



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

18 July 2023

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

RE: AOC5 MR Phase 1

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

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

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

<u>Associated Work Order(s)</u>	<u>Associated SDG ID(s)</u>
23A0206	N/A

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

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

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Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

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





23A0206  
of 2

# CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3441

Project/Client Name: LDW AOC5 MR Phase 1  
 Project Number: 210075-01.02  
 Contact Name: Amara Vandervort  
 Sampled By: Windward

Ship to: ARL  
 Attn: Sue Dunn-hoo  
 Shipper: Courier  
 Form filled out by: S. Replinger  
 Shipping Date: 1/11/2023  
 Airbill Number: —  
 Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)							Comments / Instructions (Jar tag number(s))
					PCBs	SMS SVOCs	SMS Metals	TOC/Total Solids	Dioxins/Furans	Archive		
1-11-2023	0825	LDW23-SS1021	4	Sediment	x	x	x	x	NA	x		
	0837	LDW23-SS1015	4		x	x	x	x		x		
	0918	LDW23-SS1164	4		x	x	x	x		x		
	0935	LDW23-SS1158	4		x	x	x	x		x		
	0950	LDW23-SS1151	4		x	x	x	x		x		
	1007	LDW23-SS1145	4		x	x	x	x		x		
	1020	LDW23-SS1139	4		x	x	x	x		x		
	1040	LDW23-SS1117	4		x	x	x	x		x		
	1115	LDW23-SS1103	4		x	x	x	x		x		
	1128	LDW23-SS1100	4		x	x	x	x		x		
	1143	LDW23-SS1096	4		x	x	x	x		x		
	1219	LDW23-SS1094	4		x	x	x	x	NA	x		
Total Number of Containers			48	Purchase Order / Statement of Work # APJ-110222-AOC5-ARL								

1) Released by: <u>Amara Vandervort</u> Print name: <u>Amara Vandervort</u> Signature: <u>[Signature]</u> Company: <u>Windward</u> Date/Time: <u>1/11/23 16:45</u>	1) Rec'd by: <u>Phillip [Signature]</u> Company: <u>AR</u> Date/Time: <u>1/11/23 16:45</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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\* Distribution: White copies accompany shipment; yellow retained by consignor.



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

To be completed by Laboratory upon sample receipt:

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

23A0206

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# CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3442

Project/Client Name: LDW AOC5 MR Phase 1  
 Project Number: 210075-01.02  
 Contact Name: Amara Vandervort  
 Sampled By: Windward

Ship to: ARL  
 Attn: Sue Dunning Shipping Date: 1-11-2023  
 Shipper: Courier Airbill Number: —  
 Form filled out by: S. Replinger Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)							Comments / Instructions (Jar tag number(s))			
					PCBs	SMS SVOCs	SMS Metals	TOC / Total Solids	Dioxins / Furans	Archive					
1-11-2023	1240	LDW23-SS1066	4	Sediment	x	x	x	x	x	x					
1-11-2023	1303	LDW23-SS1061	4	Sediment	x	x	x	x	NA	x					
<del>AR 1/11/23</del>															
Total Number of Containers			8	Purchase Order / Statement of Work #								APJ-110222-AOC5-ARL			
1) Released by:				1) Rec'd by:				2) Released by:				2) Rec'd by:			
Print name: <u>Amara Vandervort</u>				Print name: <u>Philip</u>				Print name:				Print name:			
Signature: <u>[Signature]</u>				Signature: <u>[Signature]</u>				Signature:				Signature:			
Company: <u>Windward</u>				Company: <u>AR</u>				Company:				Company:			
Date/Time: <u>1/11/23 1645</u>				Date/Time: <u>1/11/23 16:45</u>				Date/Time:				Date/Time:			

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



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 Seattle, WA 98119  
 206.378.1364

### To be completed by Laboratory upon sample receipt:

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





# Cooler Receipt Form

ARI Client: Anchov REA/ windward  
 COC No(s): 3441, 3442 NA  
 Assigned ARI Job No: 23A0206

Project Name: AOC5 MA Phase 1  
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_  
 Tracking No: \_\_\_\_\_ NA

**Preliminary Examination Phase:**

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

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)  
 Time 16:15 PIB 17:05 4.2 6.0 5.8 6.0 4.3  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: J009708

Cooler Accepted by: PIB Date: 1/11/23 Time: 16:15 17:05

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

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

Samples Logged by: JLW/min Date: 01/12/23 Time: 8:20 Labels checked by: TCS

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

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

**Additional Notes, Discrepancies, & Resolutions:**

By: \_\_\_\_\_ Date: \_\_\_\_\_



Anchor QEA, LLC

1201 3rd Ave, Suite 2600

Seattle, WA 98101

Project: AOC5 MR Phase 1

Project Number: 210075-01.02

Project Manager: Ali Judkins

**Reported:**

07/18/2023 18:47

**ANALYTICAL REPORT FOR SAMPLES**

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23A0206-01	LDW23-SS1021	Solid	01/11/23 08:25	01/11/23 17:05
23A0206-02	LDW23-SS1015	Solid	01/11/23 08:37	01/11/23 17:05
23A0206-03	LDW23-SS1164	Solid	01/11/23 09:18	01/11/23 17:05
23A0206-04	LDW23-SS1158	Solid	01/11/23 09:35	01/11/23 17:05
23A0206-05	LDW23-SS1151	Solid	01/11/23 09:50	01/11/23 17:05
23A0206-06	LDW23-SS1145	Solid	01/11/23 10:07	01/11/23 17:05
23A0206-07	LDW23-SS1139	Solid	01/11/23 10:20	01/11/23 17:05
23A0206-08	LDW23-SS1117	Solid	01/11/23 10:40	01/11/23 17:05
23A0206-09	LDW23-SS1103	Solid	01/11/23 11:15	01/11/23 17:05
23A0206-10	LDW23-SS1100	Solid	01/11/23 11:28	01/11/23 17:05
23A0206-11	LDW23-SS1096	Solid	01/11/23 11:43	01/11/23 17:05
23A0206-12	LDW23-SS1094	Solid	01/11/23 12:19	01/11/23 17:05
23A0206-13	LDW23-SS1066	Solid	01/11/23 12:40	01/11/23 17:05
23A0206-14	LDW23-SS1061	Solid	01/11/23 13:03	01/11/23 17:05



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Project: AOC5 MR Phase 1  
Project Number: 210075-01.02  
Project Manager: Ali Judkins

Reported:  
18-Jul-2023 18:47

## Case Narrative

**Client:** Anchor QEA, LLC  
**Project:** AOC5 MR Phase 1  
**Work Order:** 23A0206

### Sample receipt

Samples as listed on the preceding page were received 11-Jan-2023 17:05 under ARI work order 23A0206. For details regarding sample receipt, please refer to the Cooler Receipt Form. Samples were frozen on receipt to preserve holding times.

### Semivolatiles - EPA Method SW8270E

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

Initial and continuing calibrations were within method requirements. Note the standard SLC0132-CCV1 to close a bracket is the same as SLC0136-ICV1 used to open a bracket. The analyst mistakenly reprocessed the data instead of copying it, resulting in slight differences in results. As the samples are quantitated against the ICAL, the deviation is noted and no corrective action was taken.

The internal standard area for d12-chrysene was high of limits in BLA0624-MSD1. As the parent sample and matrix spike had response within limits, no corrective action was taken.

The surrogate percent recoveries were within control limits.

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

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

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

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

### Semivolatiles - EPA Method SW8270E-SIM

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

Both benzoic acid and pentachlorophenol failed low in SLC0158-ICV1 and SLC0159-ICV1. Both compounds were detected in the associated low calibration verifications, so results have been reported and "Q"-flagged without further corrective action.

Internal standard areas were all high of limits in SLC0158-ICV1. Internal standard areas for d12-chrysene and d12-perylene were high in SLC0159-ICV1.

The surrogate percent recoveries were within control limits.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries for pentachlorophenol were high of control limits. The relative percent differences (RPD) were within control limits. As the bias was high, and the matrix spike, matrix spike duplicate, and SRM had recoveries within limits, no further corrective action was taken.



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Reported:  
18-Jul-2023 18:47

### Case Narrative

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

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

#### **Pesticides - EPA Method SW8081B (Hexachlorobenzene)**

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

Initial and continuing calibrations were within method requirements.

Hexabromobiphenyl failed on the first column for some samples, attributed to matrix effect. As hexachlorobenzene is not associated with this internal standard, no corrective action was required.

The surrogate percent recoveries were within control limits.

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

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

The matrix spike duplicate (MSD) percent recovery for hexachlorobenzene is reported as "ND" as the peak could not be detected with the poor chromatography caused by the sample matrix.

#### **PCB Aroclors - EPA Method SW8082A**

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

Calibrations SLB0109-ICV2 and SLB0109-CCV2 fail low for 1260 on the ZB5 column. All associated data is reported from the ZB35 column as primary. SLB0109-CCV5 failed low on both columns for aroclor 1254. Samples with patterns determined to be aroclor 1254 were reanalyzed. SLB0109-CCV7 failed low on the ZB5 column but passed on the ZB35 column for aroclor 1248.

Calibration SLB0127-CCV1 failed low for aroclor 1248 and decachlorobiphenyl (DCBP) on the ZB5 column. All associated data is reported from the ZB35 column. SLB0127-CCV3 failed for DCBP on both columns. As no aroclor 1242 was identified, no corrective action was taken. SLB0127-ICV2 failed low for aroclor 1260 on the ZB5 column and all results are reported with the ZB35 column as primary.

The internal standard area for hexabromobiphenyl was low on the ZB5 column for SLB0109-CCV9 and SLB0109-CCVA. All associated data is reported from the ZB35 column as primary.

The surrogate percent recoveries for tetrachloro-m-xylene (TCMX) were just high of limits in SLB0109-CCV3 and SLB0109-CCV9. As TCMX is used internally for evaluation of blow-down efficiency and is not required by the method, no corrective action was taken. Failures for decachlorobiphenyl on the ZB5 column are attributed to the oily matrix and associated raw data are reported from the ZB35 column.

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

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

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



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Reported:  
18-Jul-2023 18:47

### Case Narrative

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

The analyst noted sample LDW23-SS1061 could be a mix of aroclor 1242 and aroclor 1248, but only the aroclor 1248 has been reported.

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

#### **Total Metals - EPA Method 6020B**

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

Indium was noted as slightly noisy in SLD0127-CCV3.

The analyst noted germanium to be slightly noisy in SLD0127-ICB1. SLD0127-IFA, SLD0127-IFB and SLD0147-IFA1 showed chromium 53 to be high.

Cadmium was noted as slightly noisy in LDW23-SS1066 and was not reported from the SLD0127 run.

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

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

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

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

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

#### **Total Mercury - EPA Method 7471B**

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

Initial and continuing calibrations were within method requirements.

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

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

The duplicate (DUP) relative percent difference (RPD) was high of advisory control limits and flagged on the summary sheet.

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

#### **Wet Chemistry (Total Organic Carbon and Total Solids)**

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

Initial and continuing calibrations were within method requirements.

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

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



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Reported:  
18-Jul-2023 18:47

## Case Narrative

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

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

### **Dioxin/Furans - EPA Method 1613**

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

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limits.

The cleanup surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits, with response or EMPC response below the reporting limit. Associated positive results have been "B"-flagged. Note no blank was run in analytical sequence SLC0258.

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

The duplicate (DUP) relative percent differences (RPD) were high of advisory control limits for 1,2,3,6,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, OCDF and OCDD and flagged on the summary sheet, reported under work order 23A0158.

The reference material (SRM) percent recovery for 2,3,7,8-TCDF (49.9%) was low of control limits (50-150) and flagged on the summary sheet.

*Revised 07/06/2023: Corrected PCB Calibration reference, corrected the calibration date and include the tune for GC00032.*

*Revised 07/18/2023 to include SLD0372-SCV summary and correct inconsistency between SLC0132-CCV1 and SLC0136-ICV1.*





## QUALIFIERS AND NOTES

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



## ICP-MS Metals

### Analyzed with Secondary Isotopes

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

These results were reported from a secondary ion:

<u>Labnumber</u>	<u>SampleName</u>	<u>Analyte</u>
23A0206-08	LDW23-SS1117	Copper-65
23A0206-10	LDW23-SS1100	Zinc-67
23A0206-13	LDW23-SS1066	Zinc-67



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-01 B

SDG: 23A0206

Sampled: 01/11/23 08:25

Prepared: 01/27/23 14:44

File ID: NT1003022312.D

% Solids: 48.20

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 21:22

Batch: BLA0624

Sequence: SLC0120

Initial/Final: 20.77 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1130		4.4	20.0
106-44-5	4-Methylphenol	1	11.7	J	7.4	20.0
91-20-3	Naphthalene	1	10.8	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	7.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	8.2	J	6.2	20.0
131-11-3	Dimethylphthalate	1	5.8	J	4.4	20.0
83-32-9	Acenaphthene	1	10.5	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	60.1		8.7	20.0
120-12-7	Anthracene	1	26.5		7.2	20.0
206-44-0	Fluoranthene	1	111		6.1	20.0
129-00-0	Pyrene	1	110		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	69.9		6.0	20.0
218-01-9	Chrysene	1	111		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	67.6		5.5	49.9
	Benzo(a)fluoranthene, Total	1	161		10.0	40.0
50-32-8	Benzo(a)pyrene	1	64.8		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	36.5		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	49.4		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.17	626	83.6	27 - 120	
Phenol-d5	749.17	722	96.4	29 - 120	
2-Chlorophenol-d4	749.17	702	93.7	31 - 120	
1,2-Dichlorobenzene-d4	499.44	397	79.4	32 - 120	
Nitrobenzene-d5	499.44	449	90.0	30 - 120	
2-Fluorobiphenyl	499.44	482	96.6	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-01 B

SDG: 23A0206

Sampled: 01/11/23 08:25

Prepared: 01/27/23 14:44

File ID: NT1003022312.D

% Solids: 48.20

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 21:22

Batch: BLA0624

Sequence: SLC0120

Initial/Final: 20.77 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.17	633	84.5	24 - 134	
p-Terphenyl-d14	499.44	430	86.1	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022312.D

Date: 02-MAR-2023 21:22

Client ID:

Sample Info: 23A0206-01

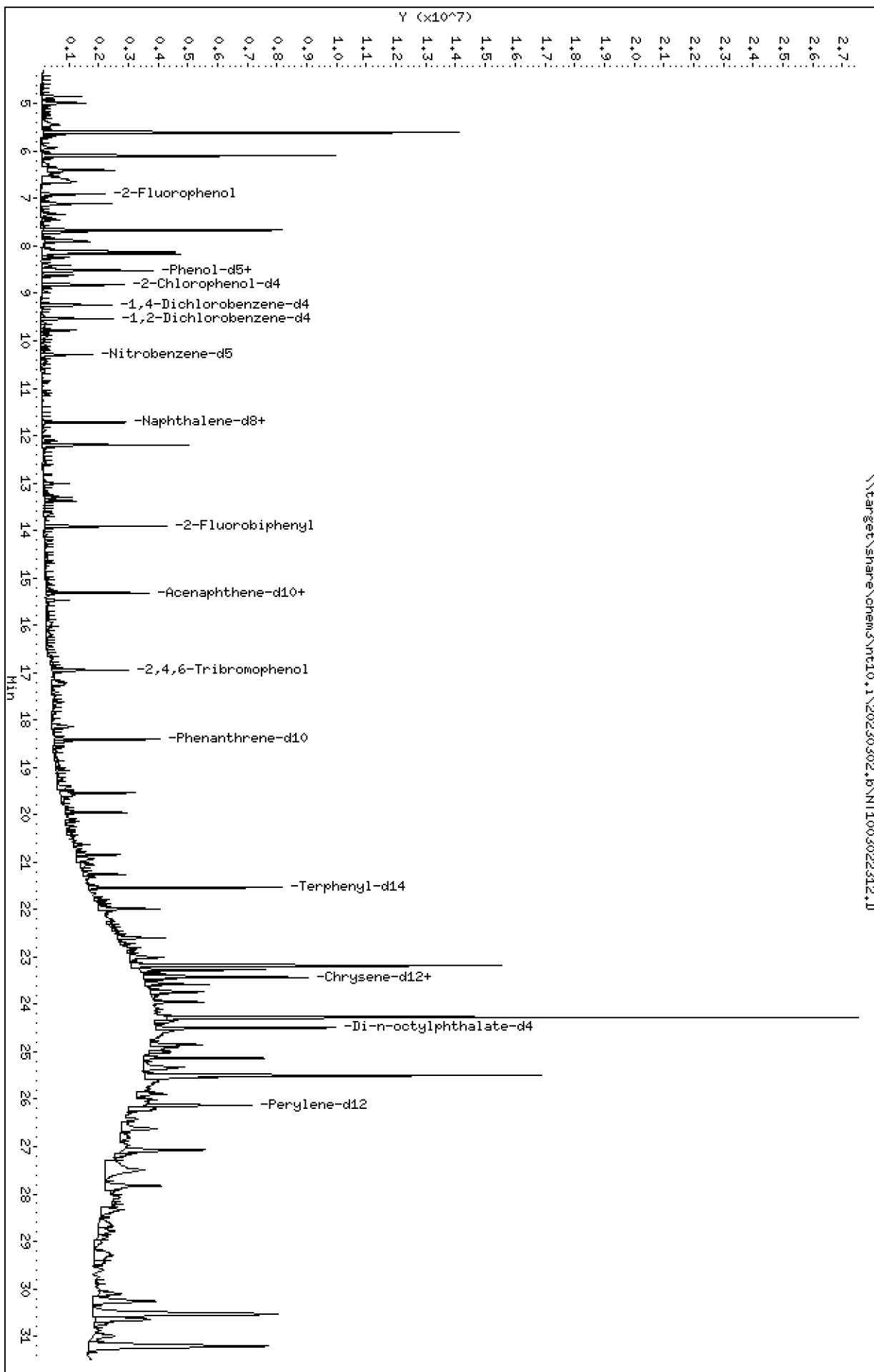
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022312.D



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

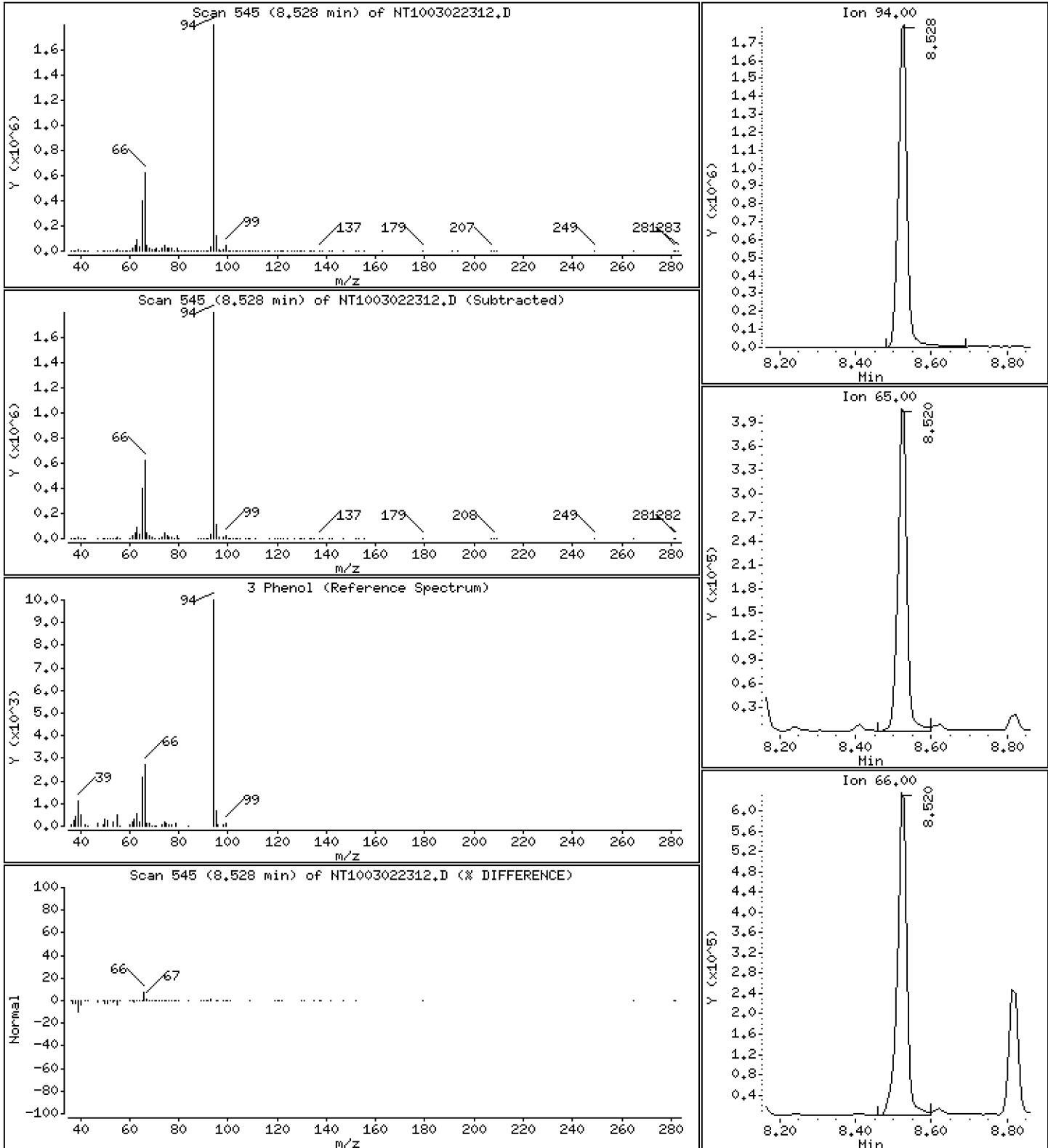
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 11,36 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

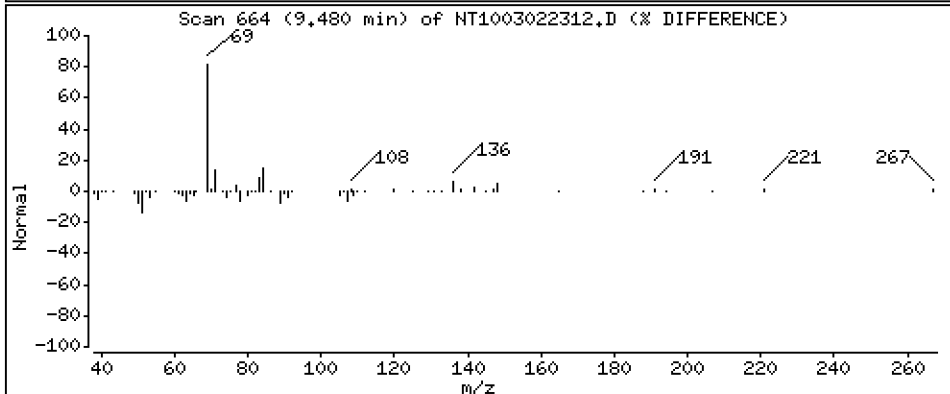
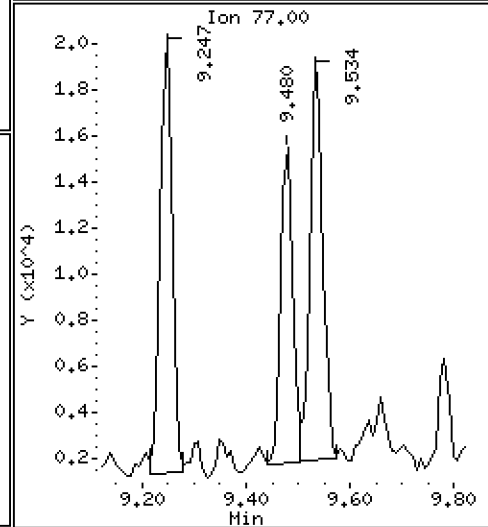
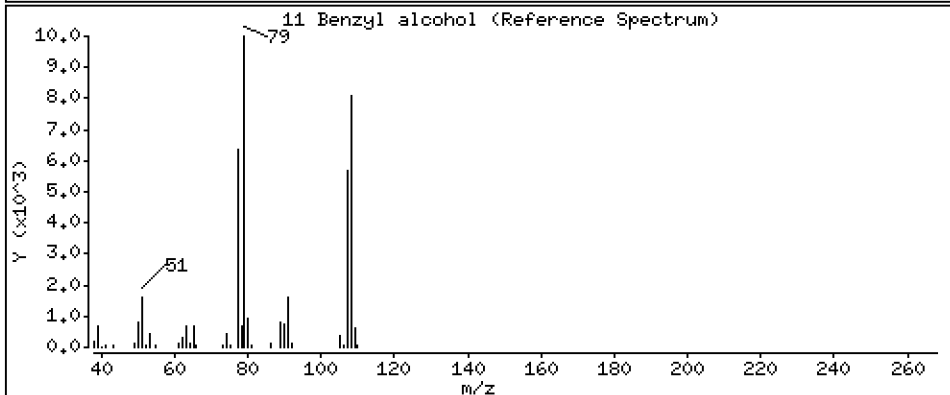
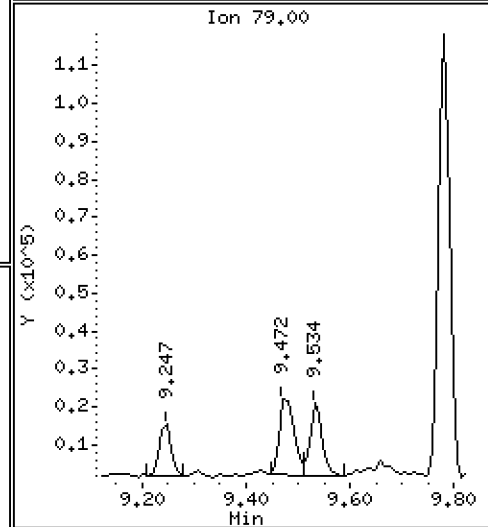
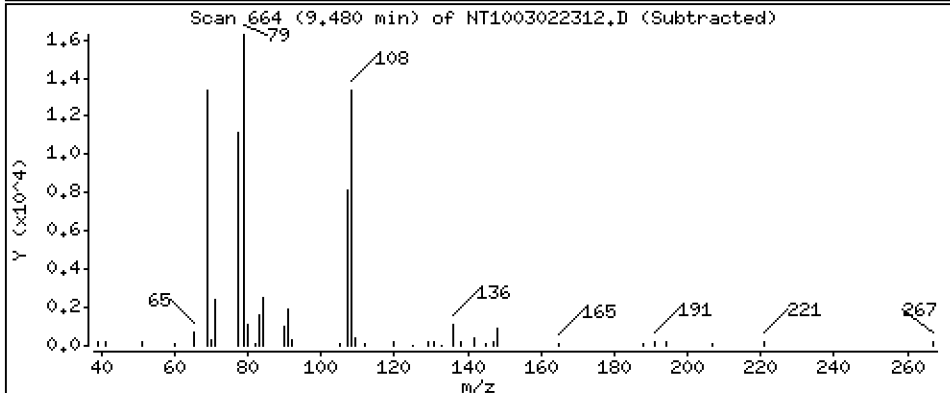
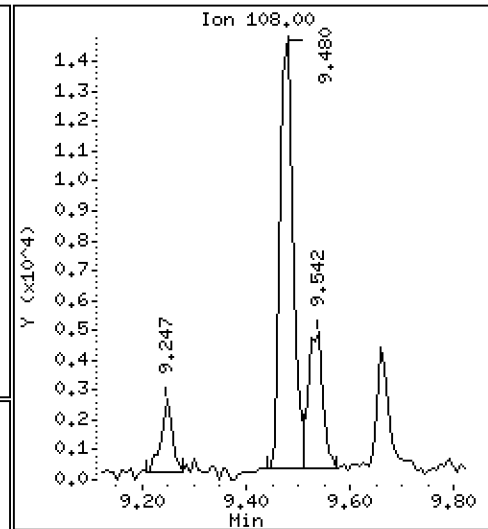
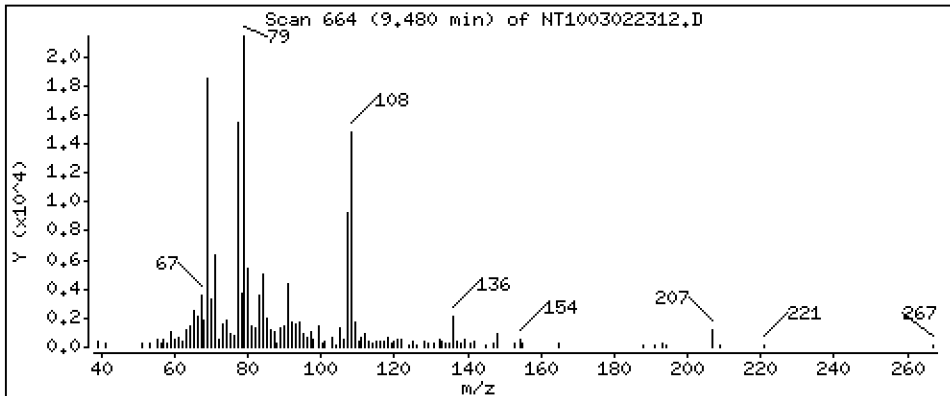
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1848 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

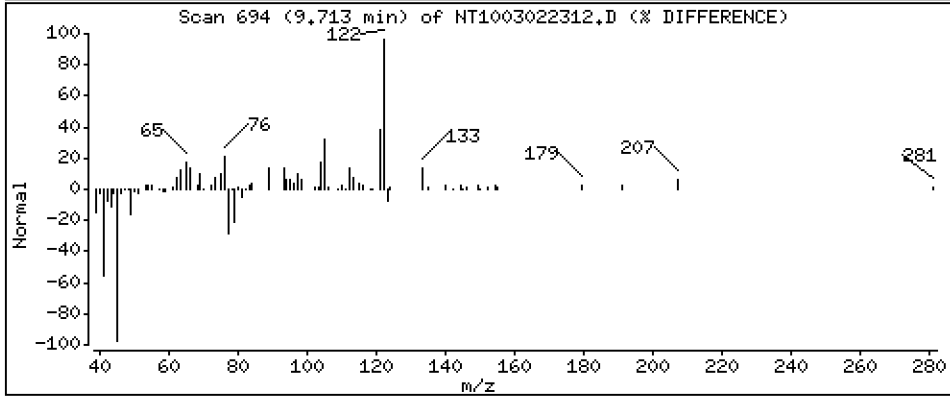
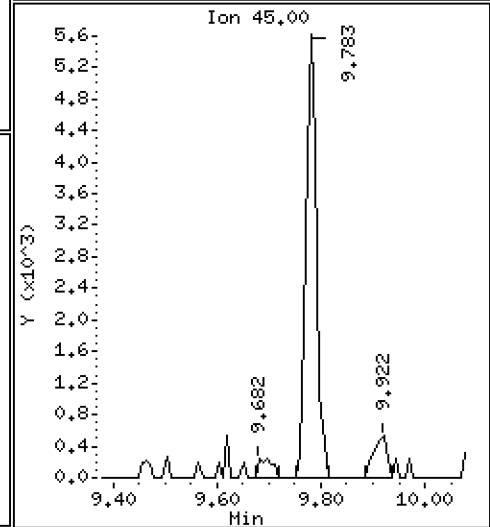
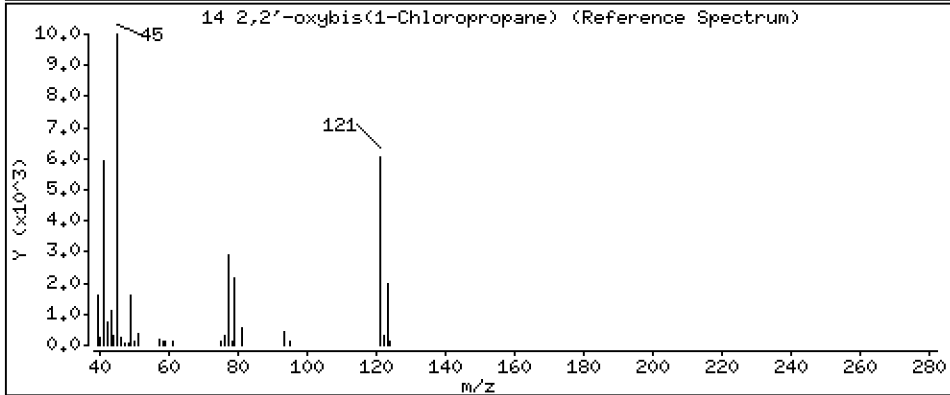
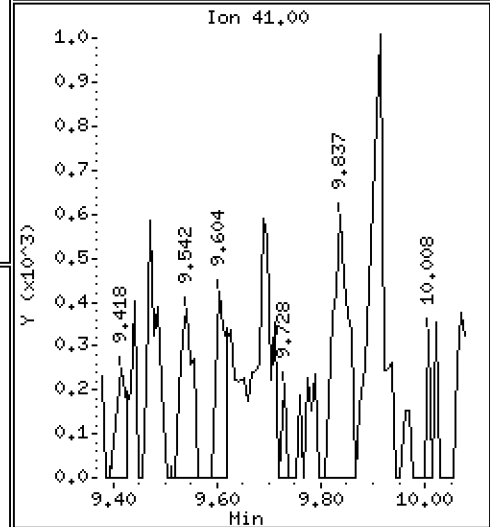
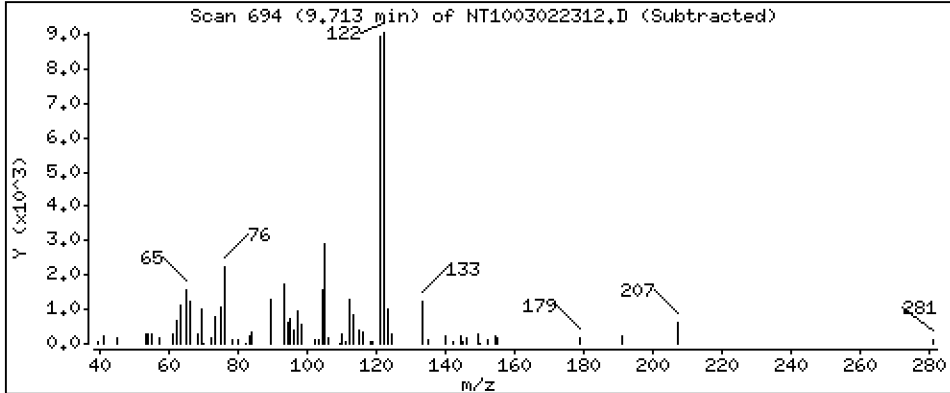
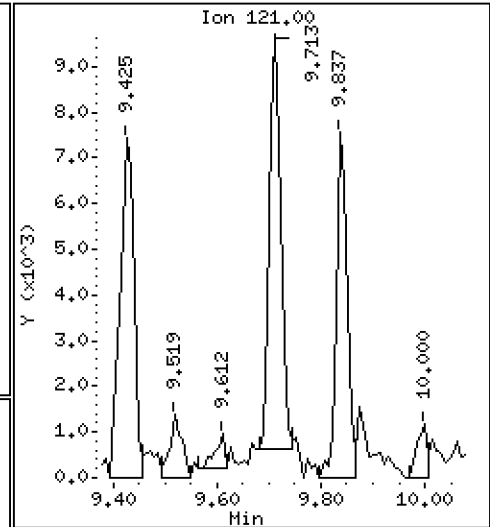
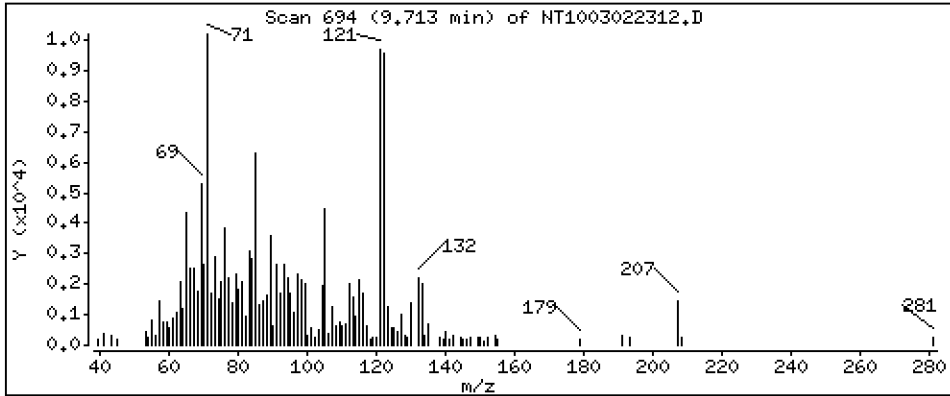
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

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

Concentration: 0.2083 ug/mL





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

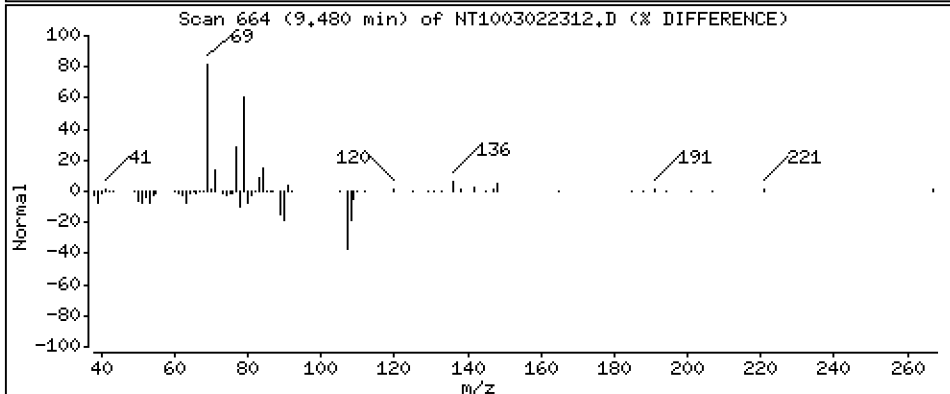
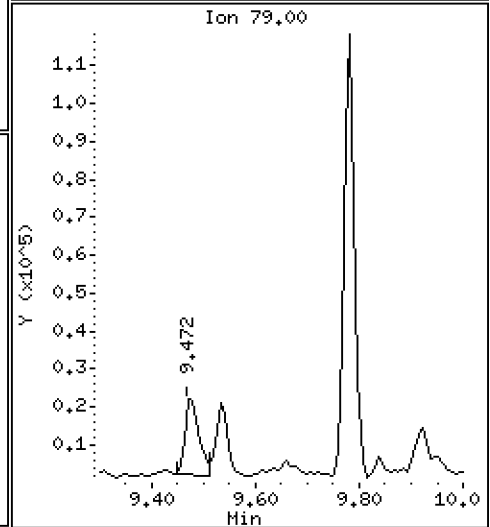
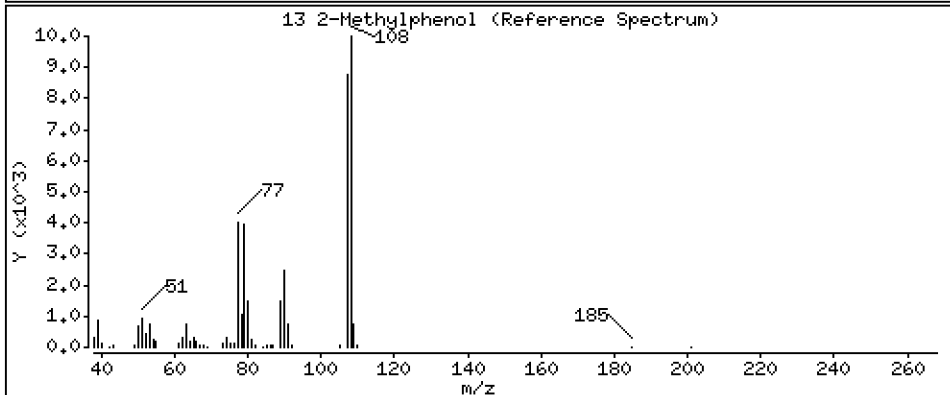
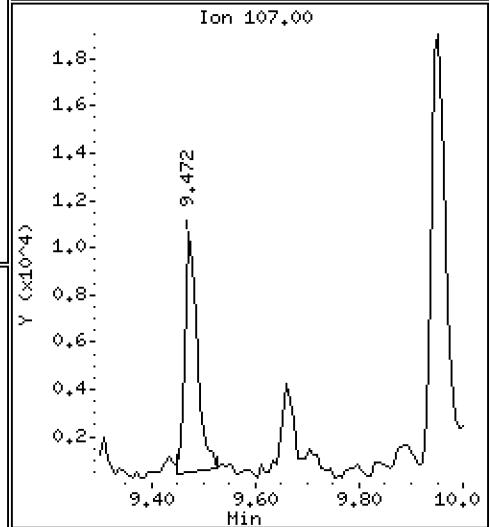
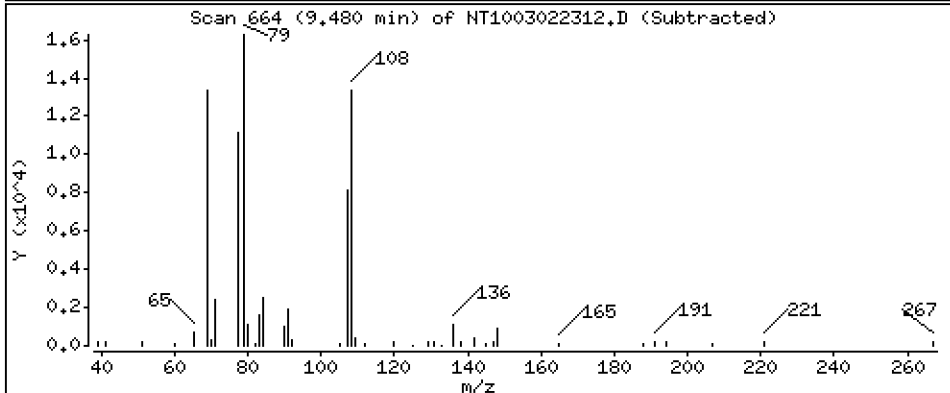
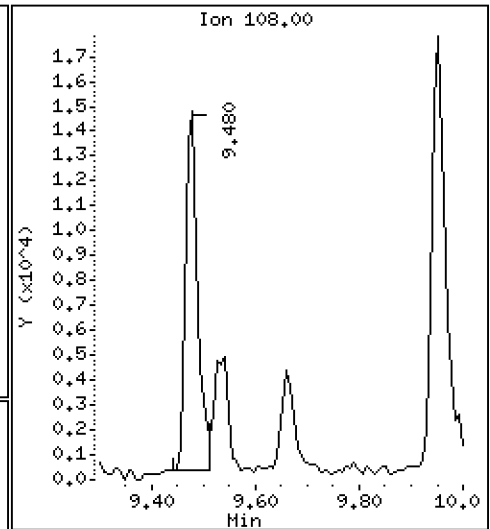
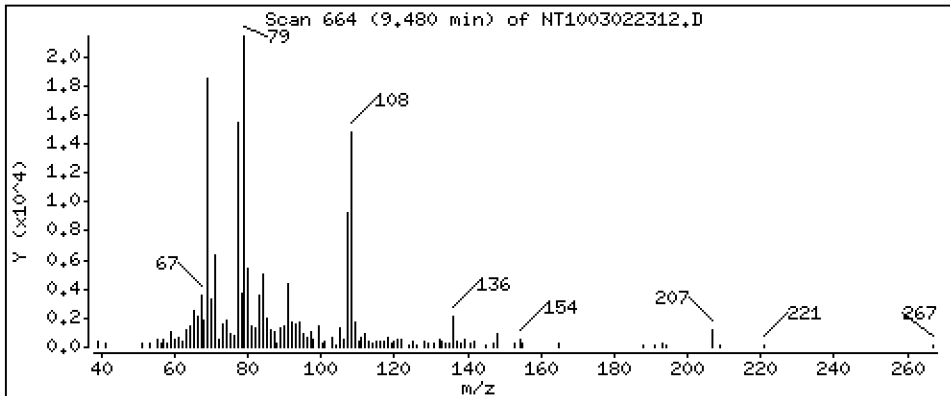
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.1224 ug/mL

13 2-Methylphenol



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

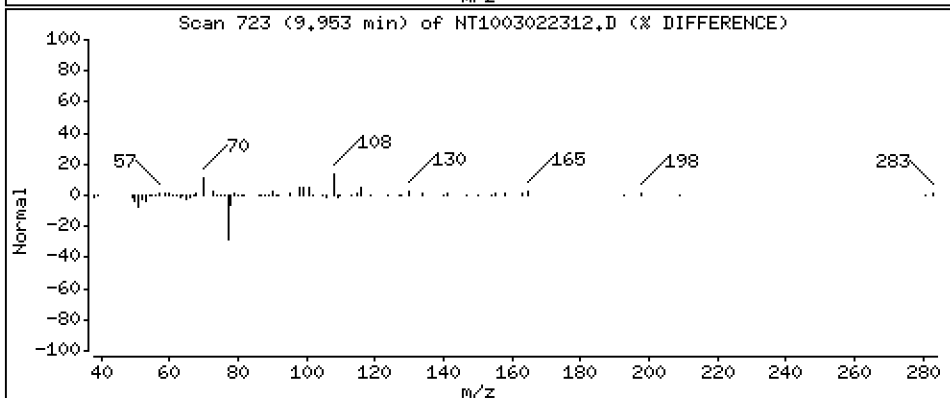
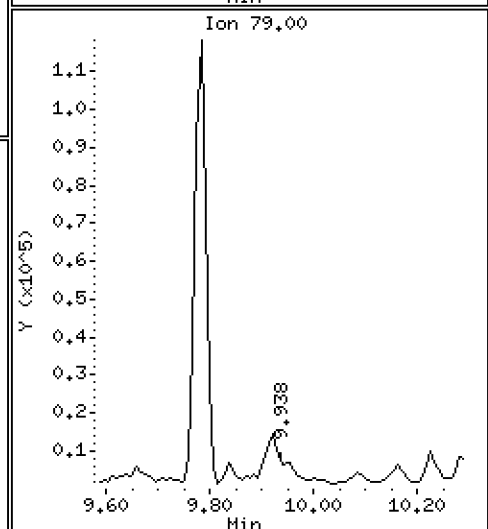
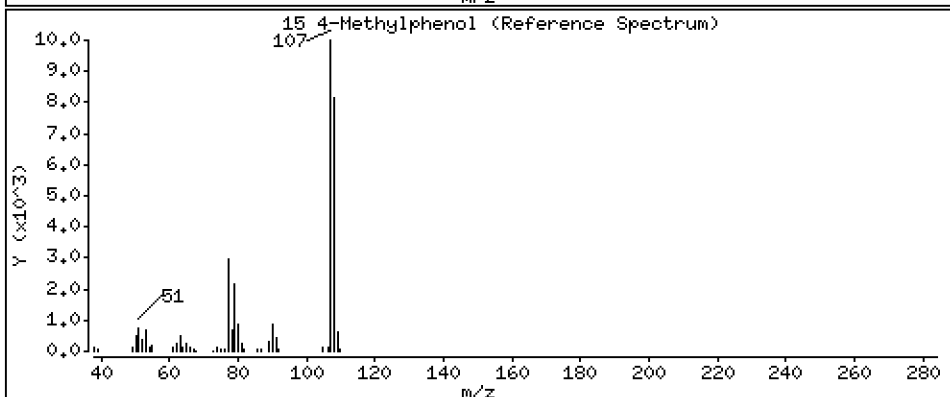
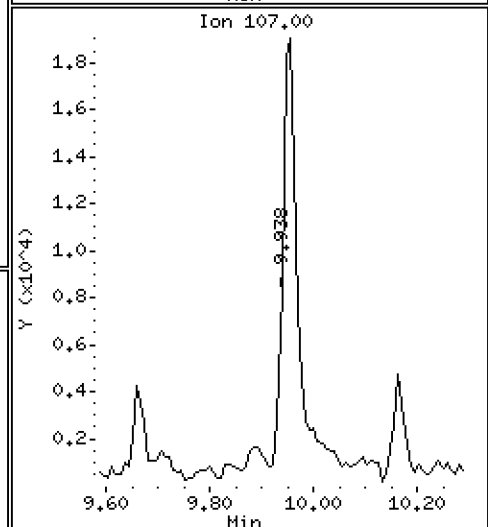
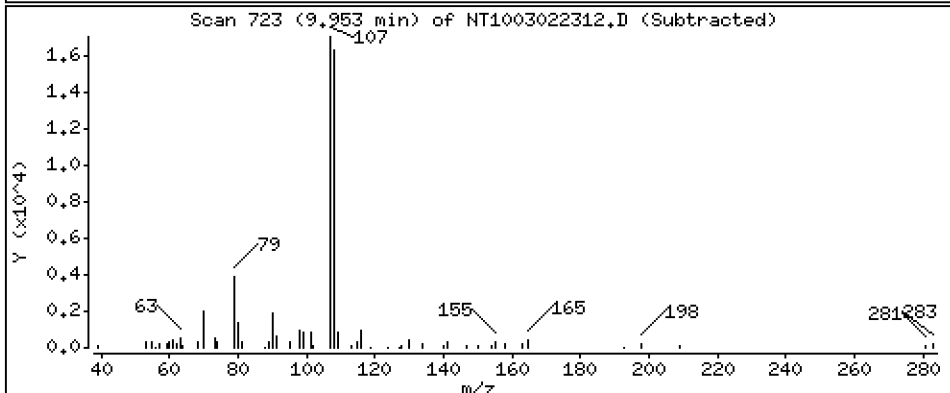
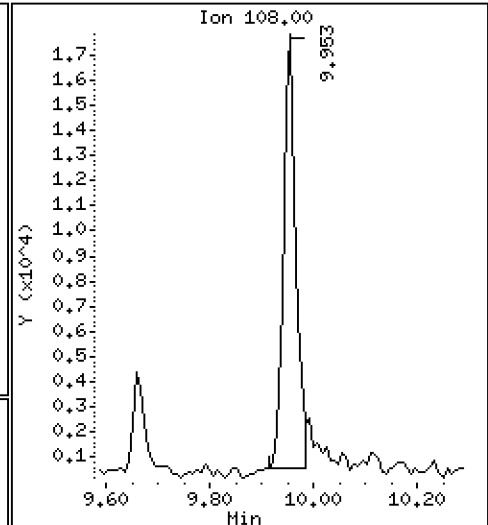
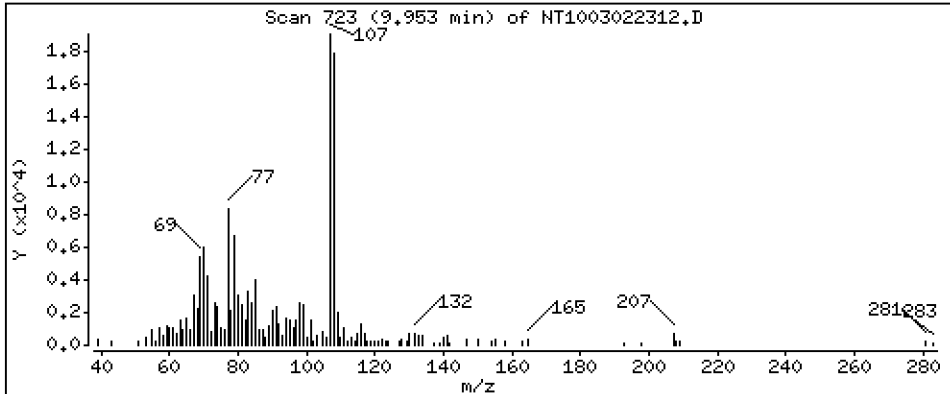
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1170 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

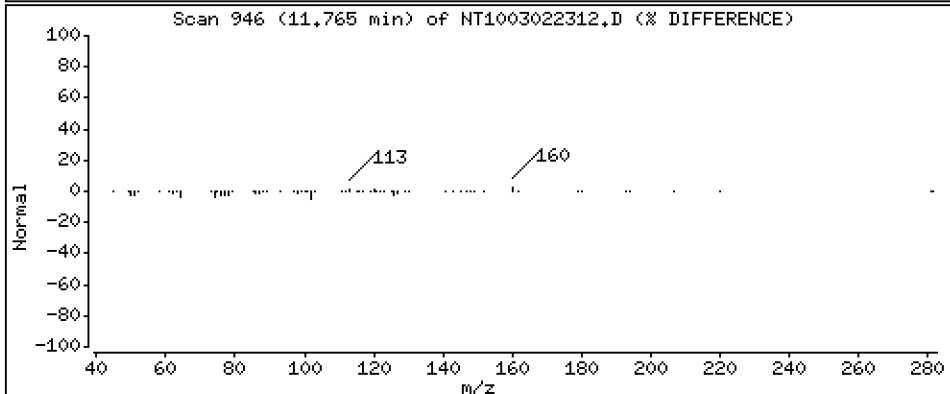
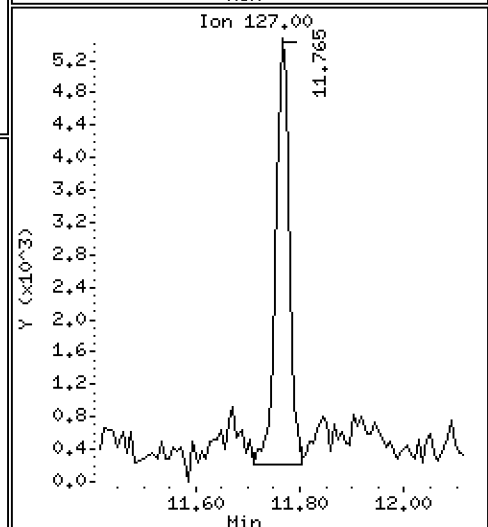
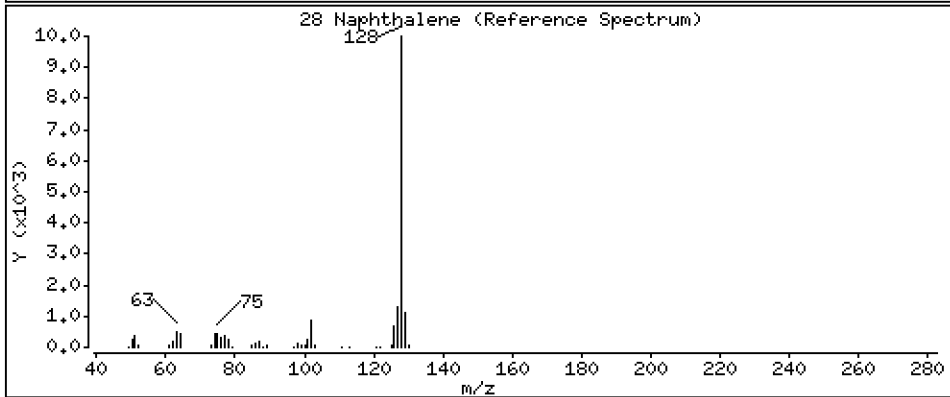
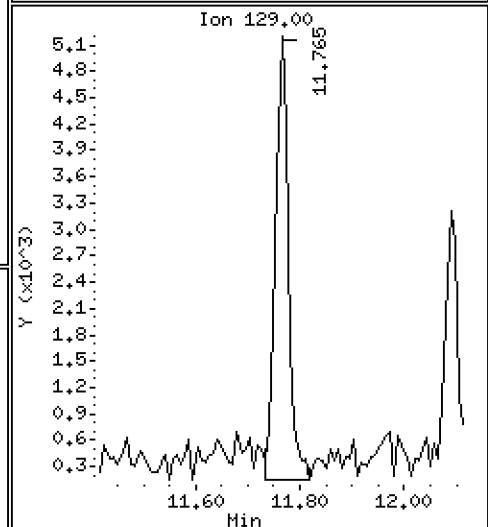
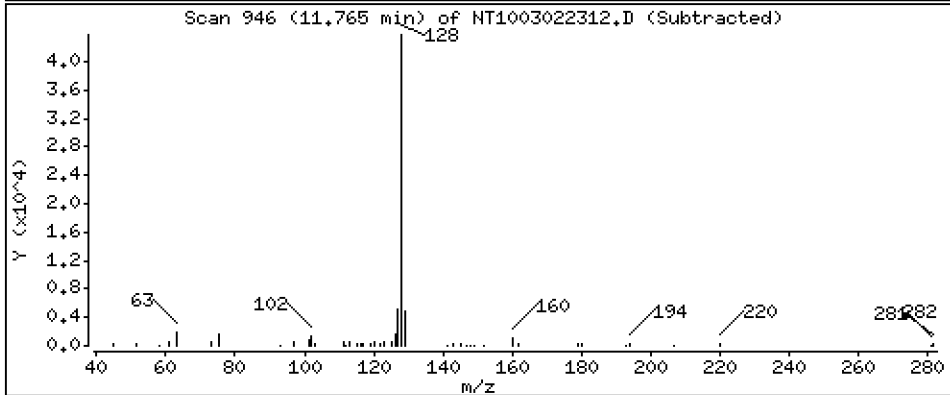
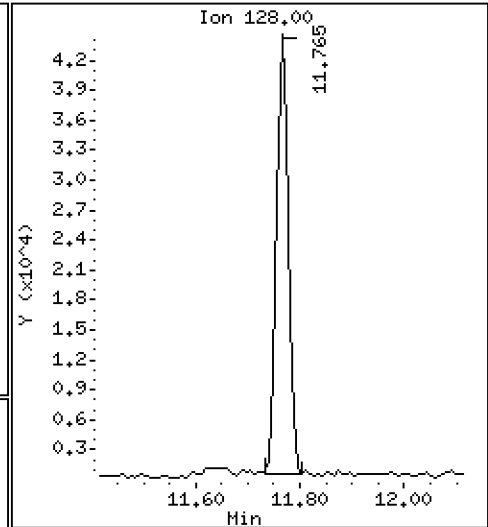
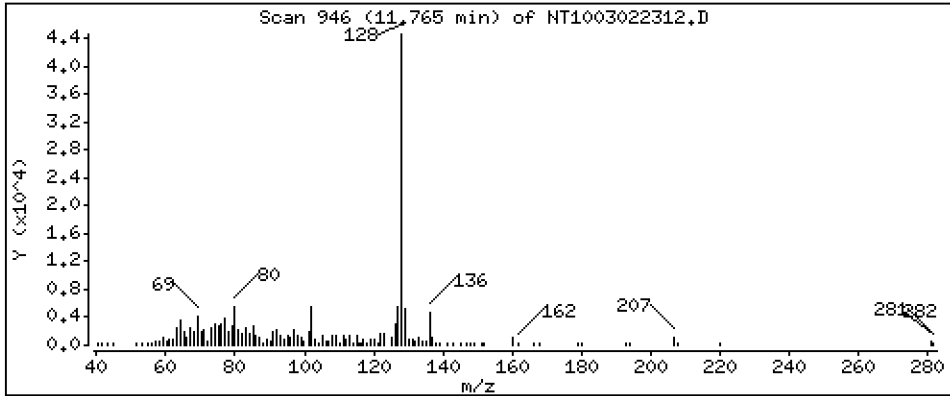
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,1077 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

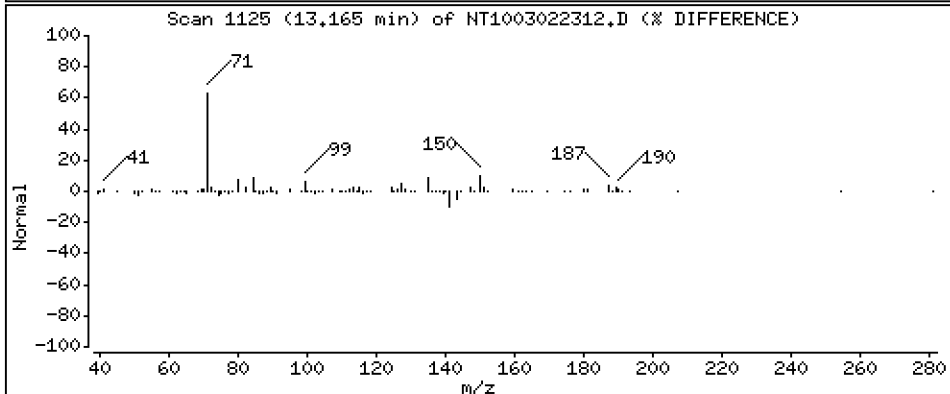
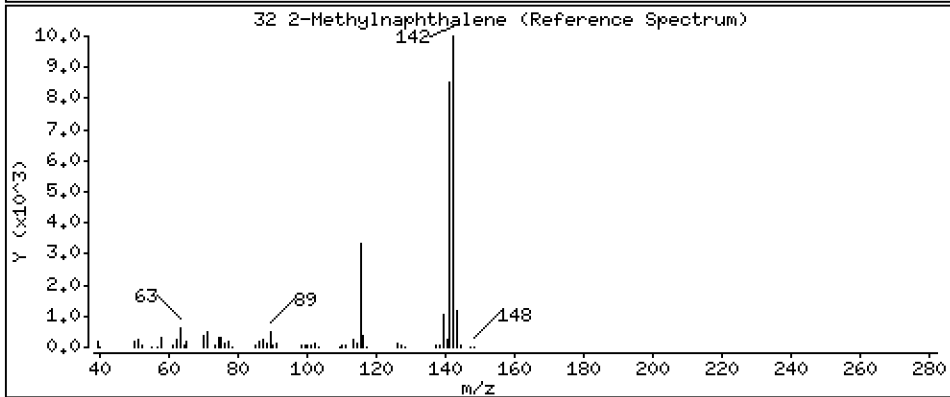
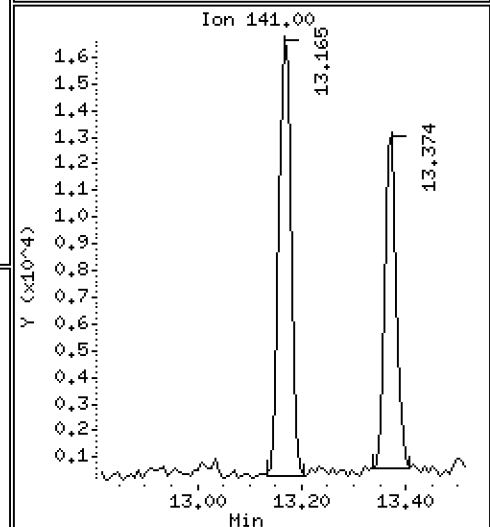
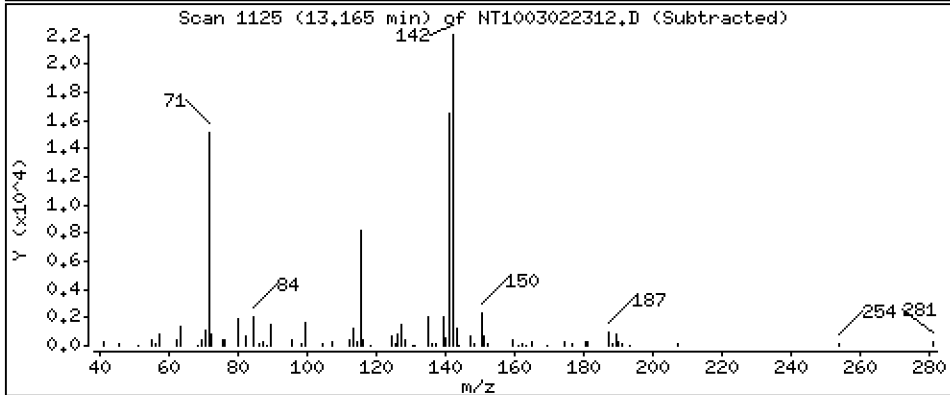
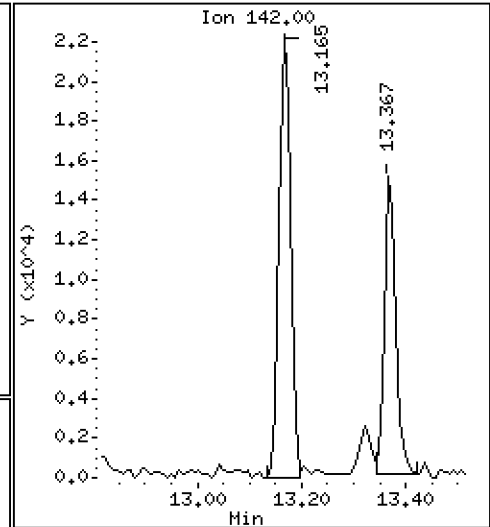
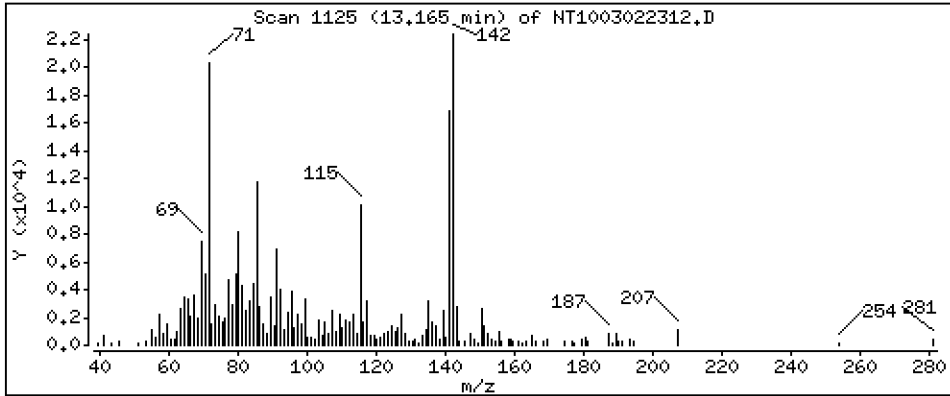
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,07630 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

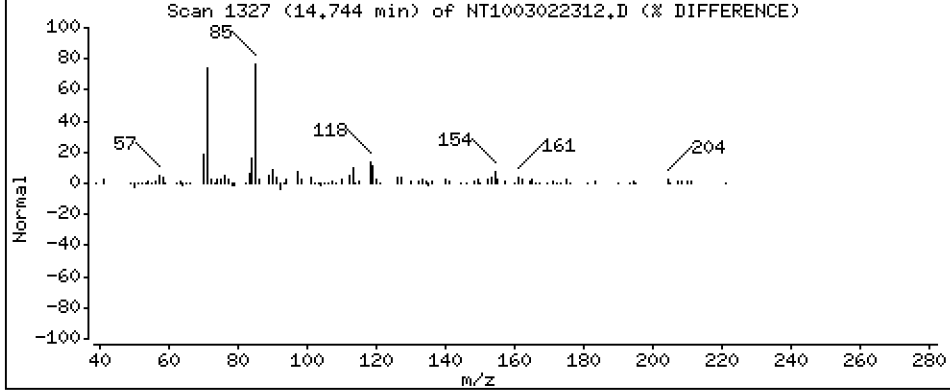
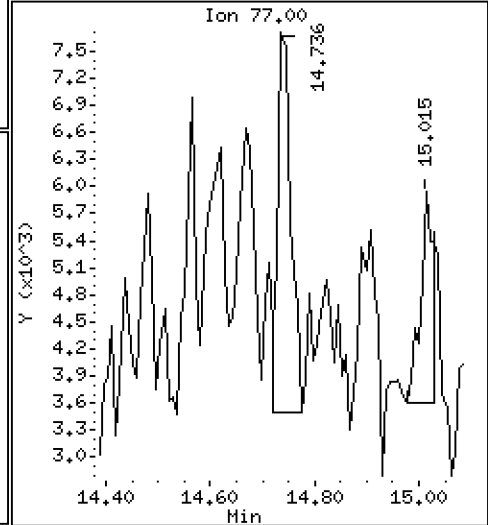
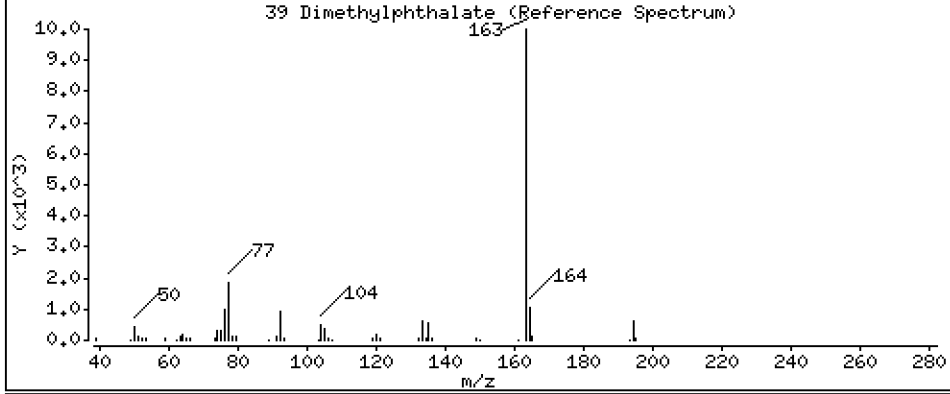
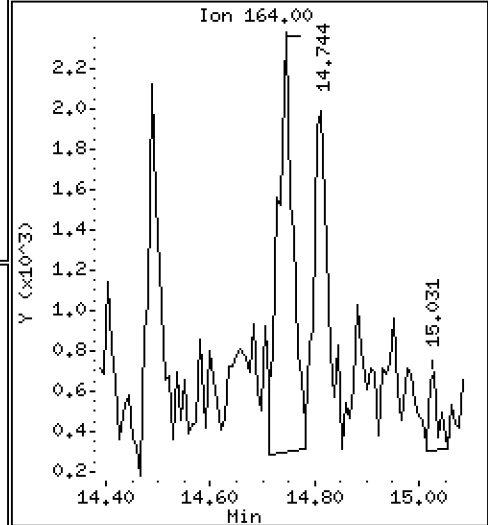
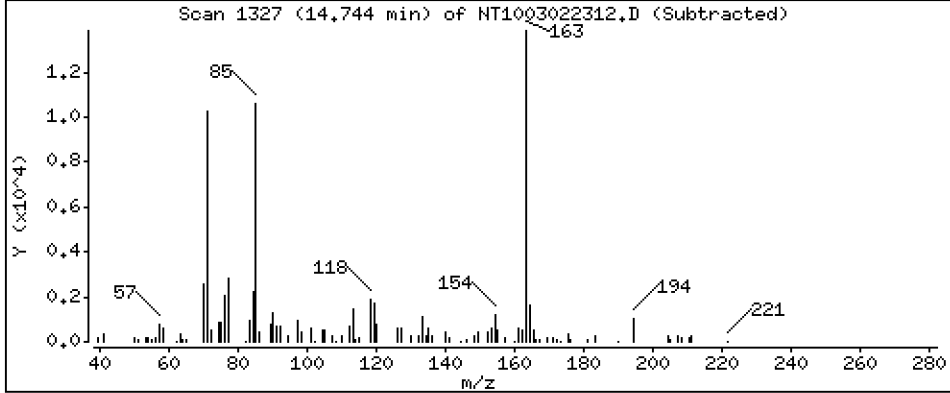
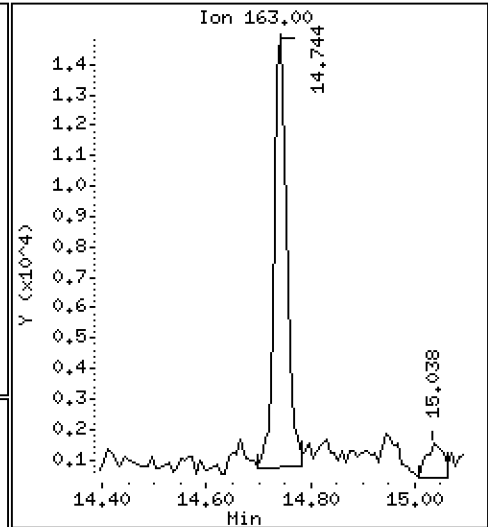
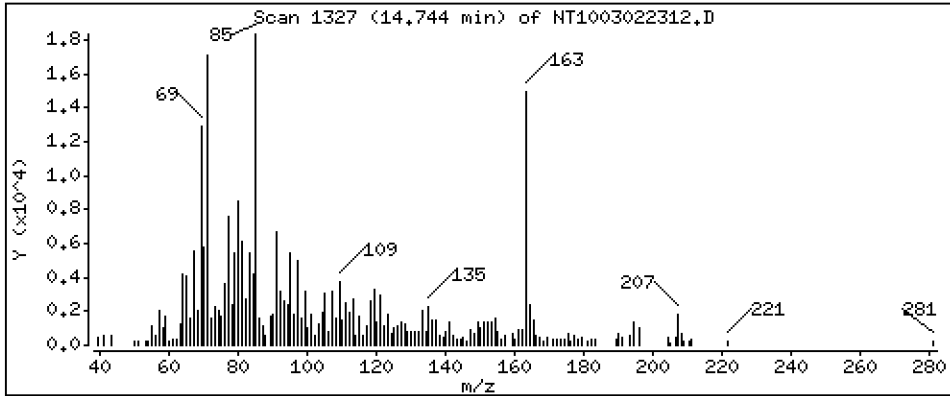
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.05851 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

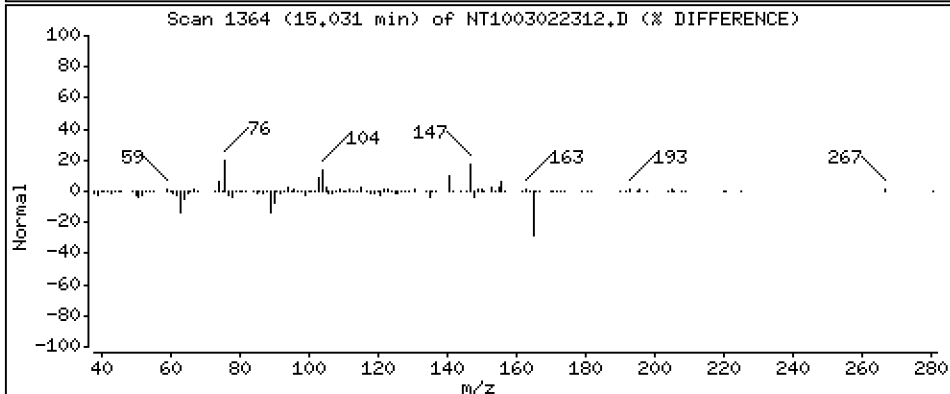
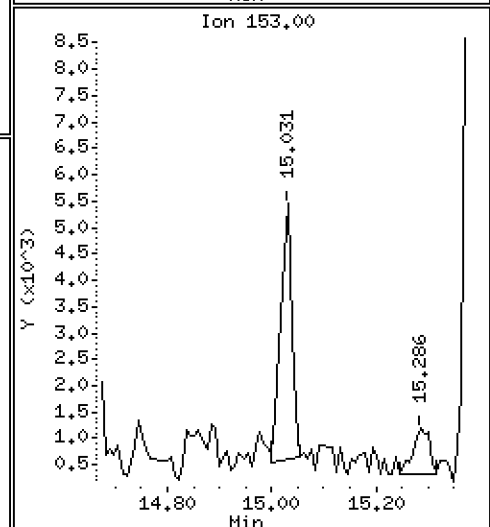
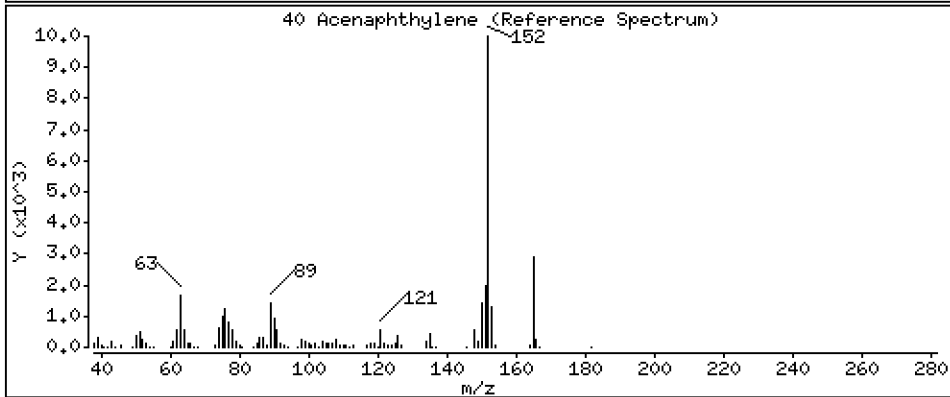
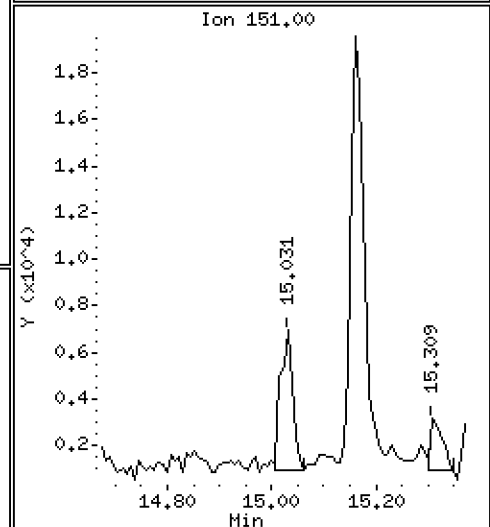
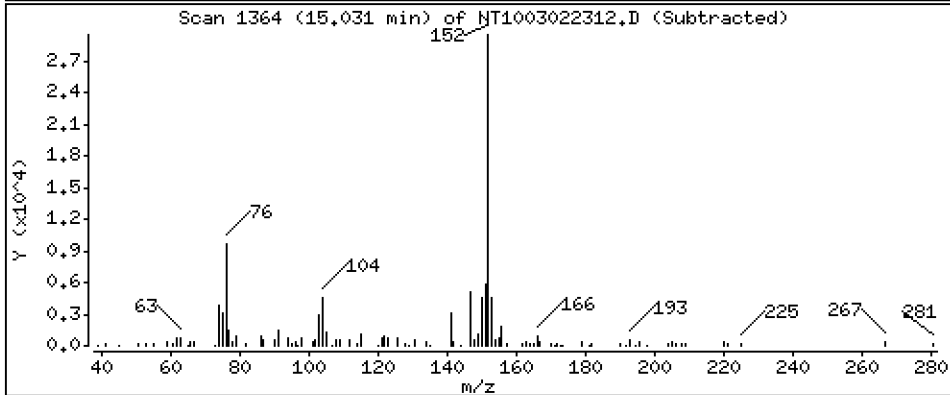
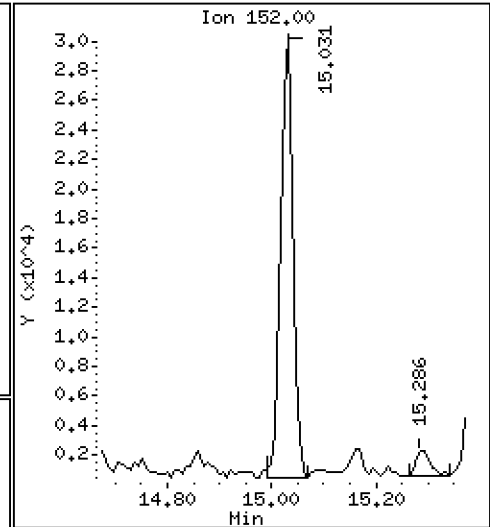
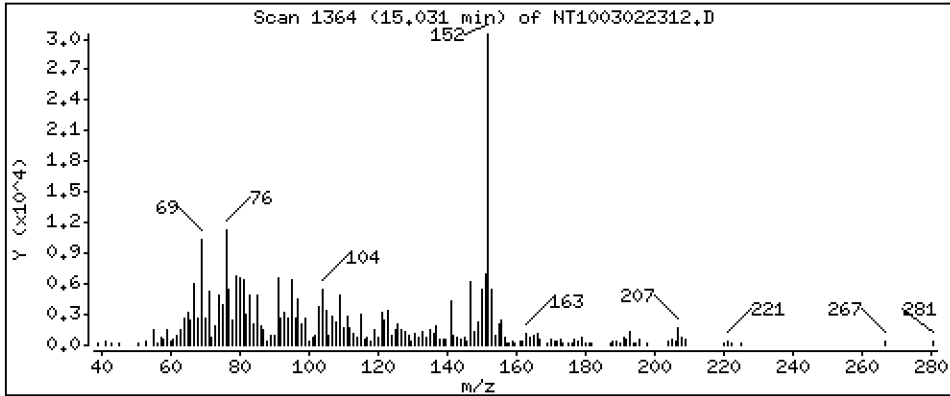
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.08185 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

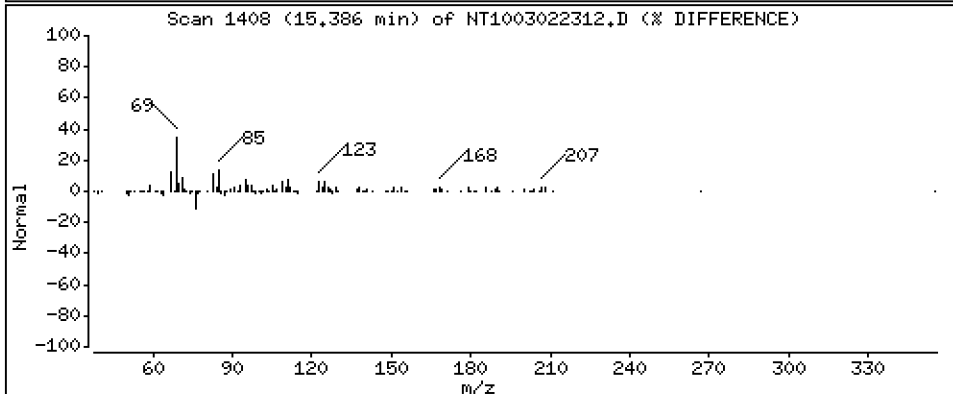
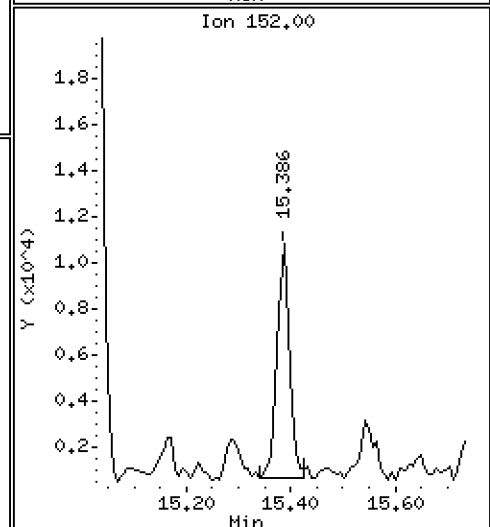
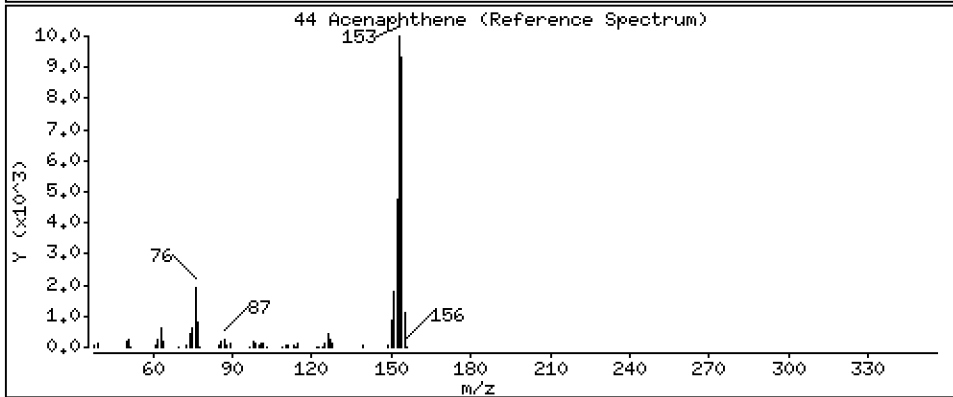
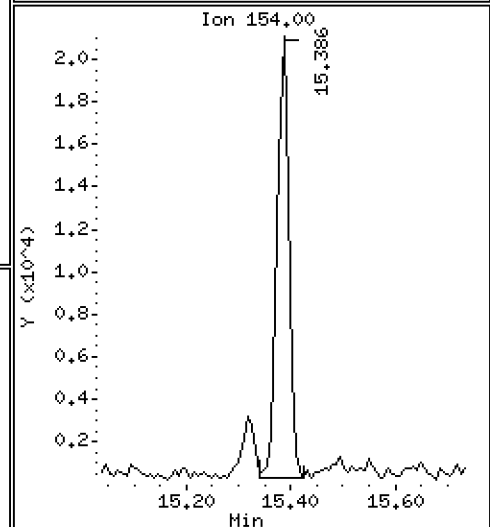
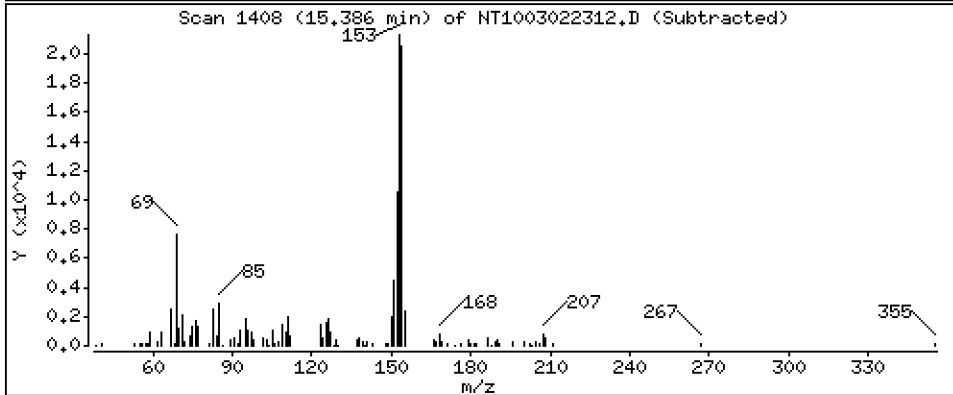
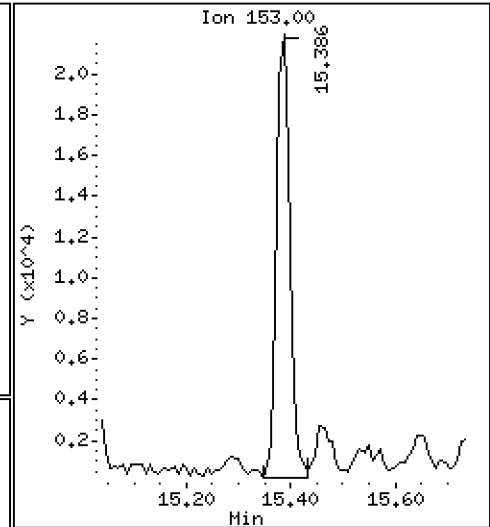
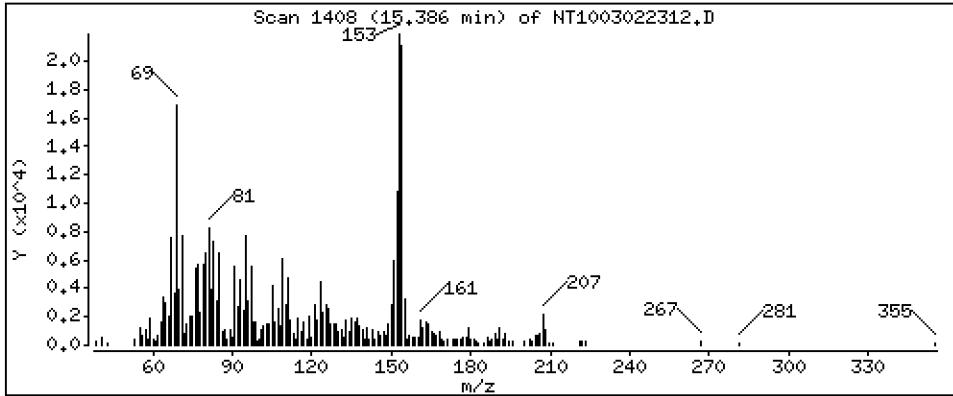
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.1054 ug/mL

44 Acenaphthene



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

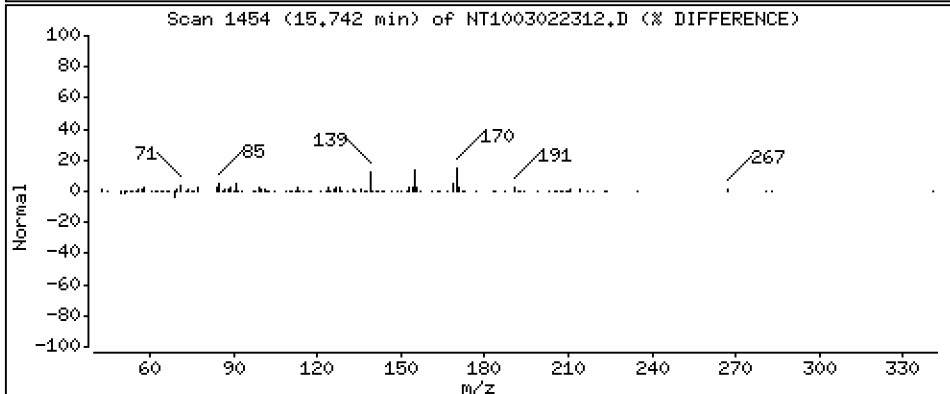
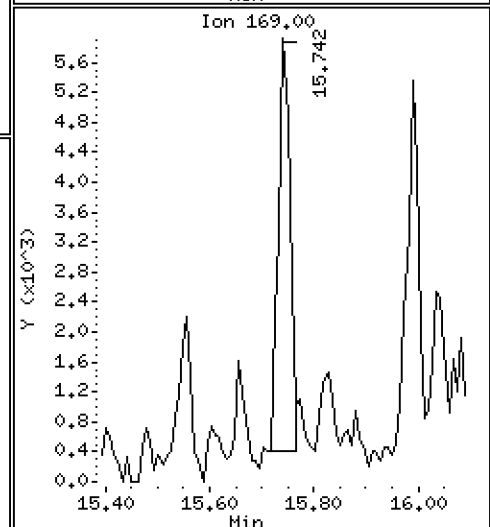
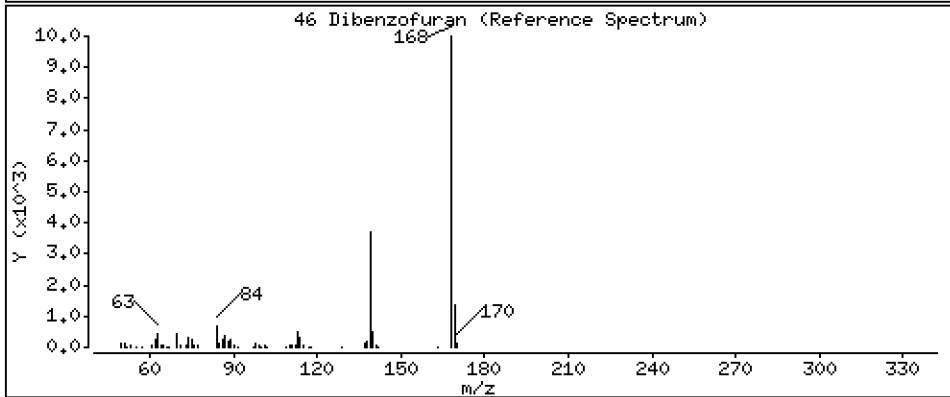
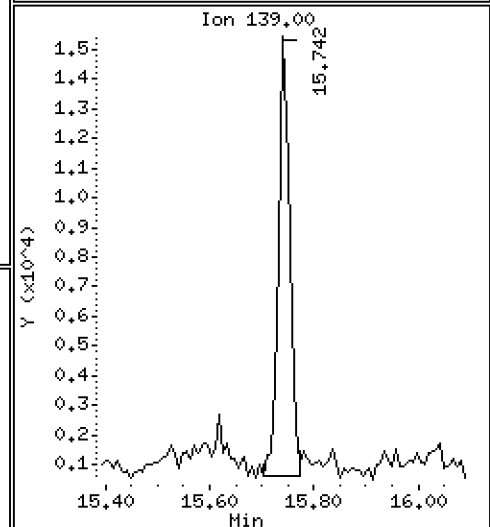
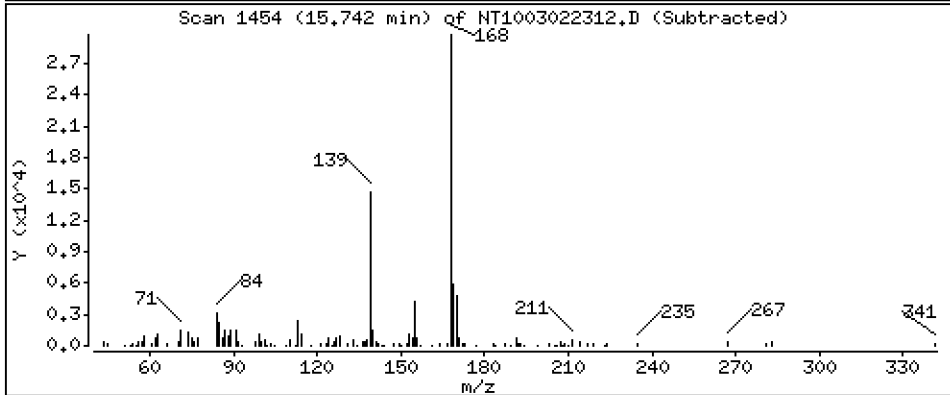
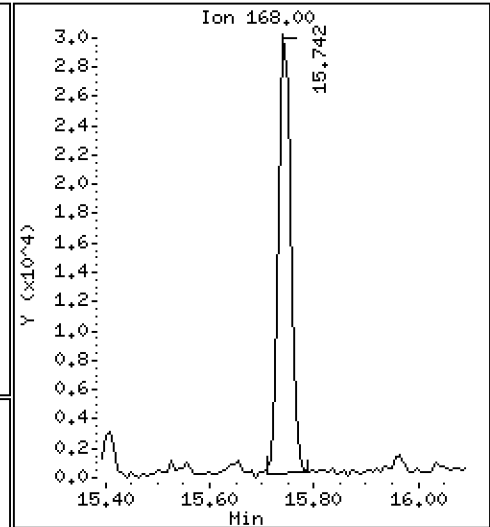
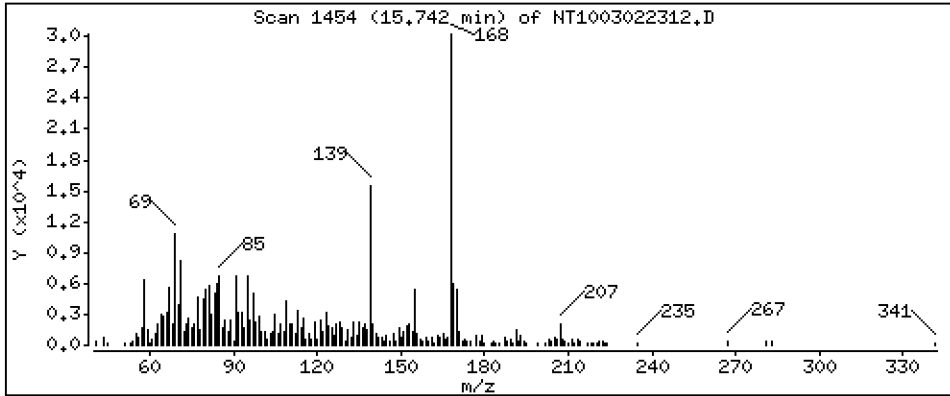
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.08846 ug/mL





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

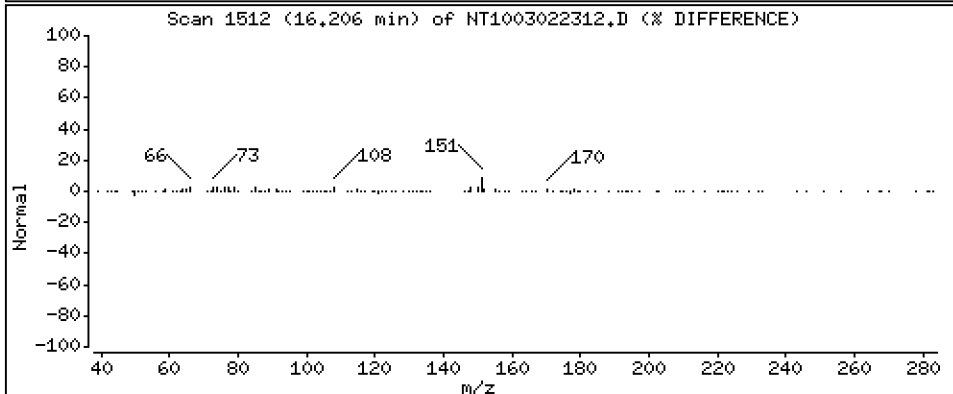
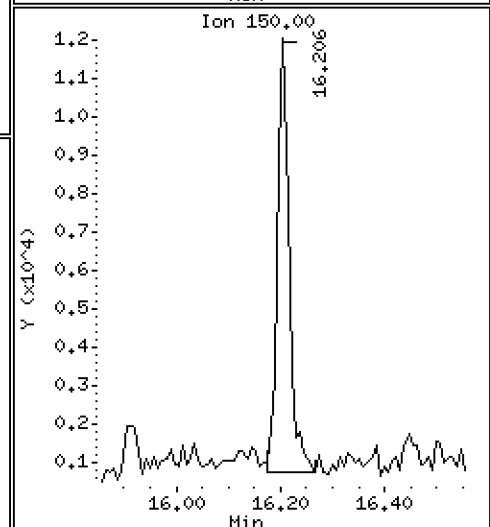
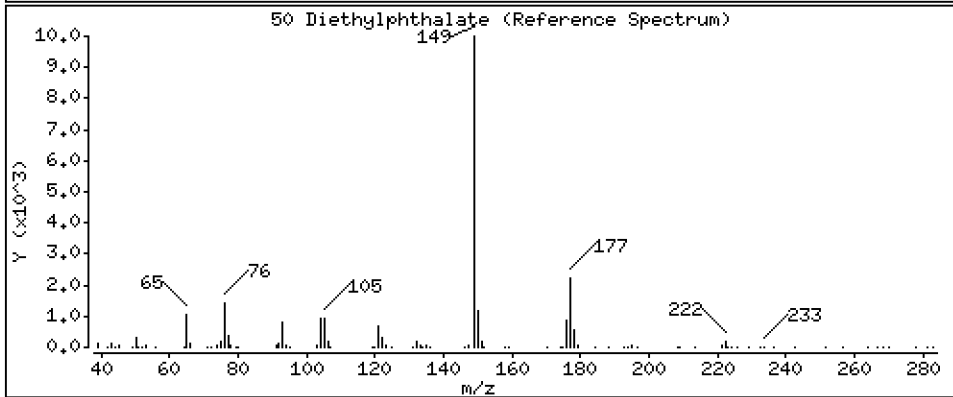
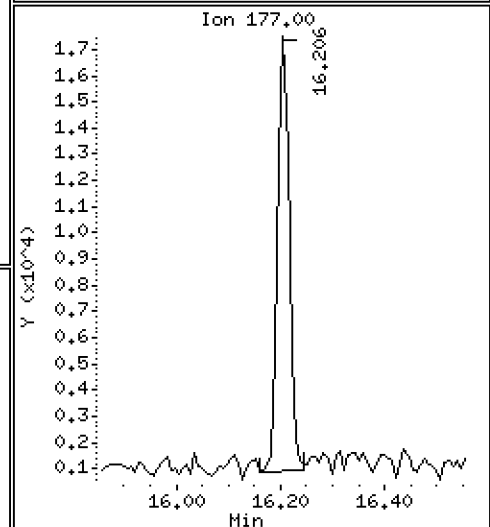
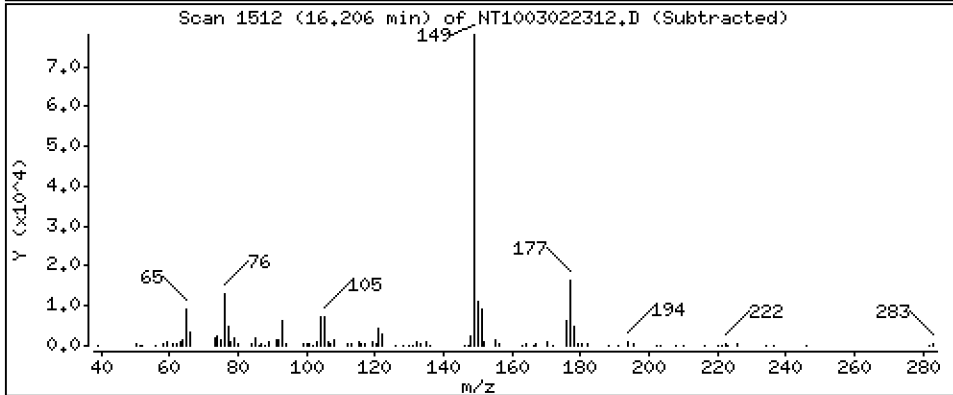
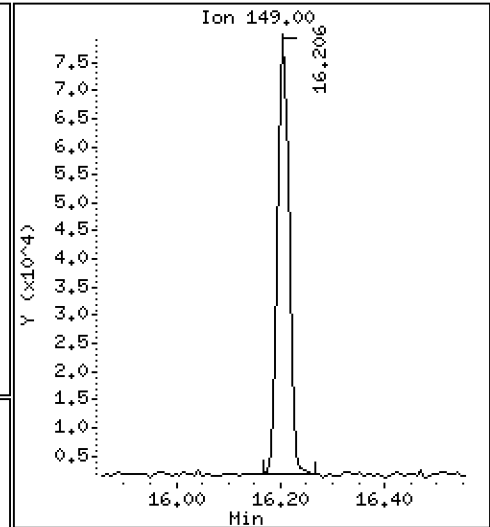
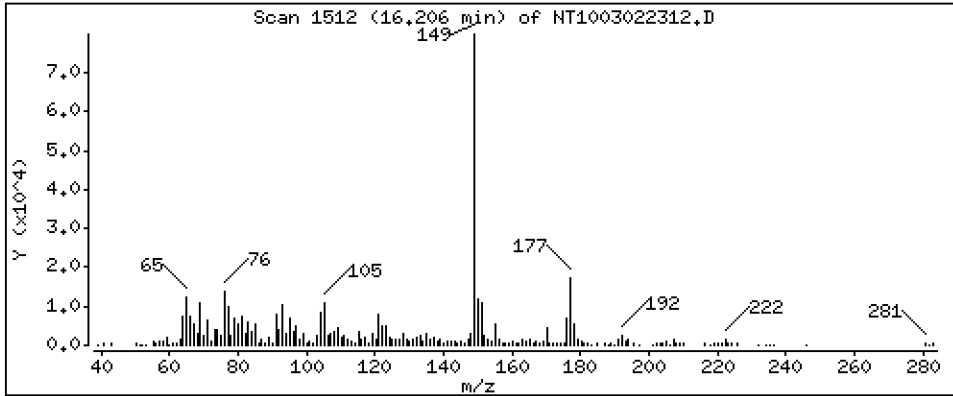
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.2748 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

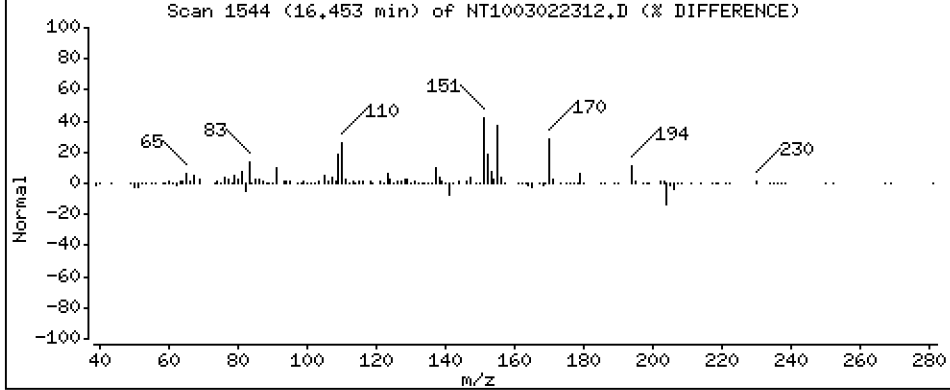
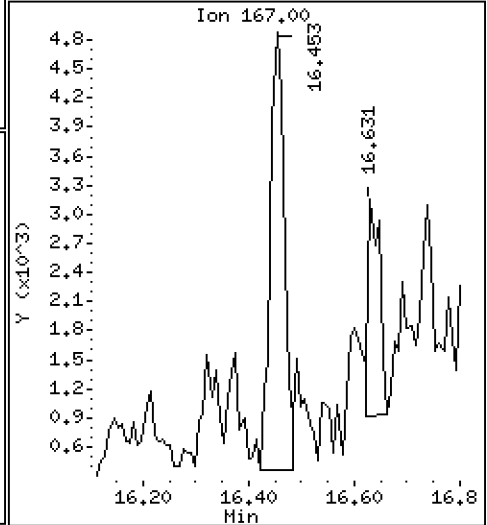
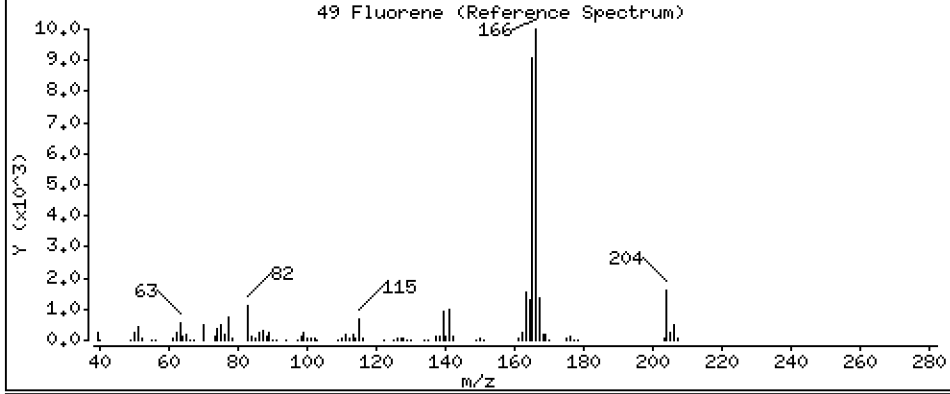
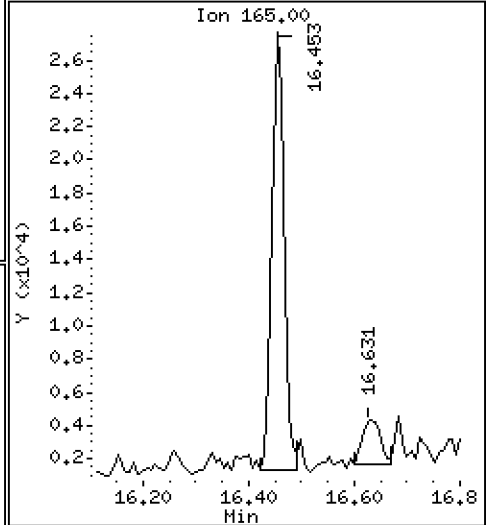
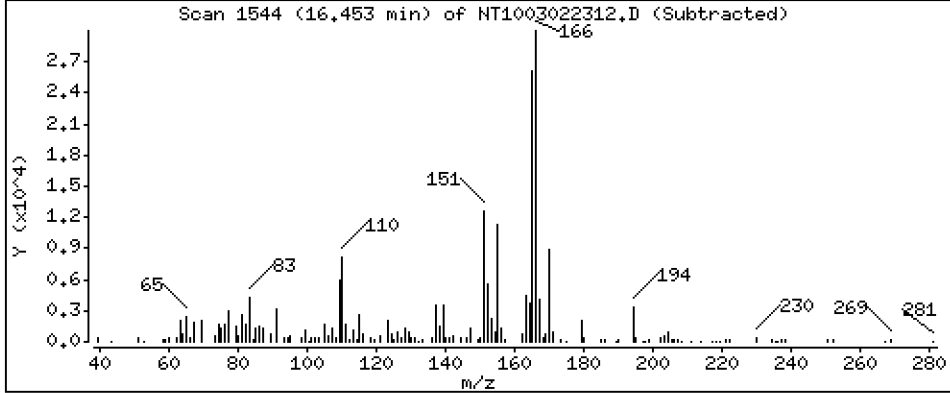
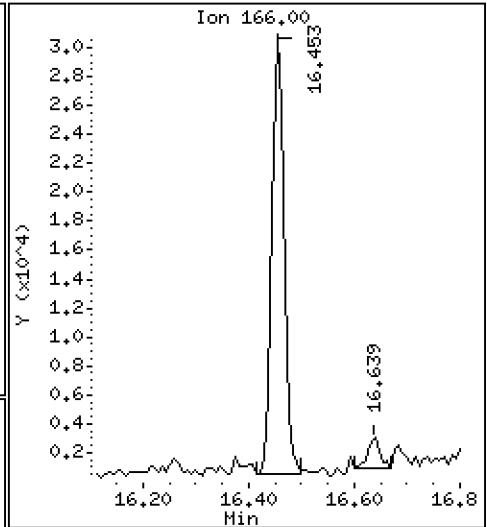
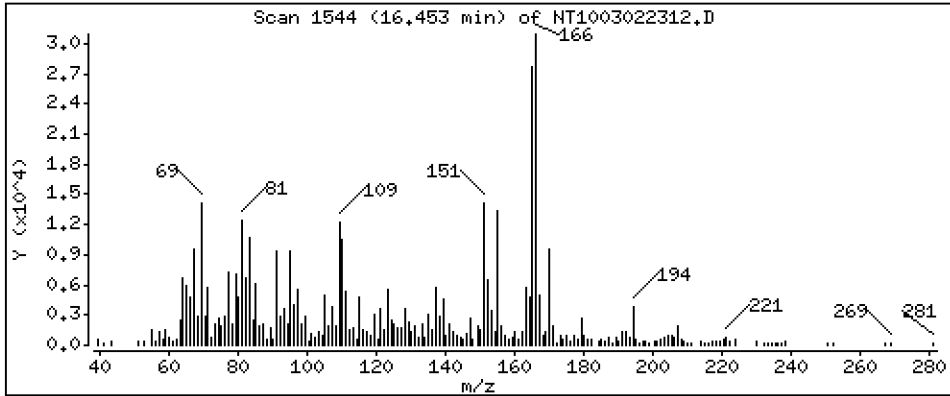
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.1083 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

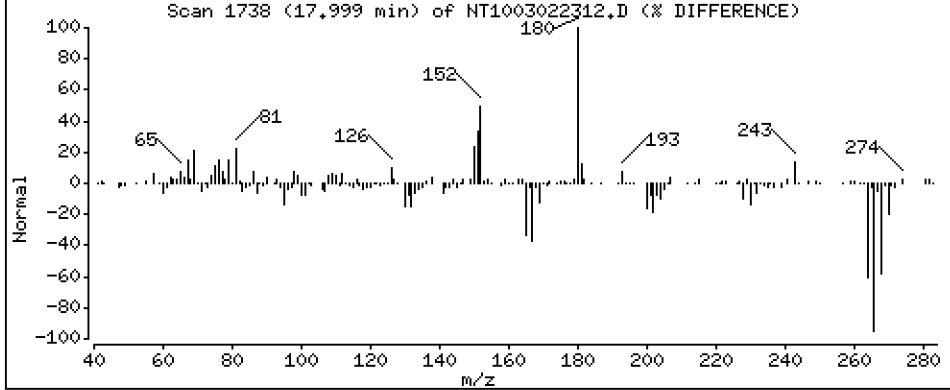
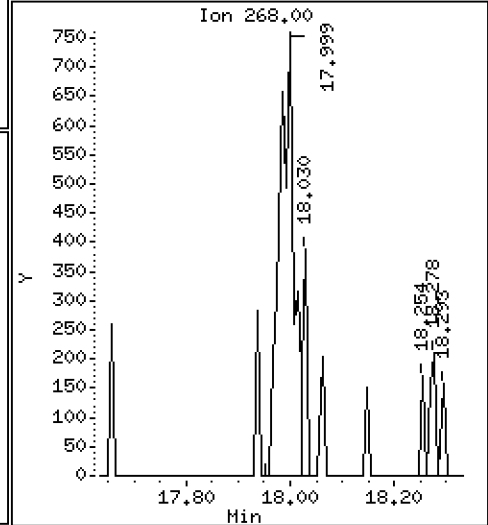
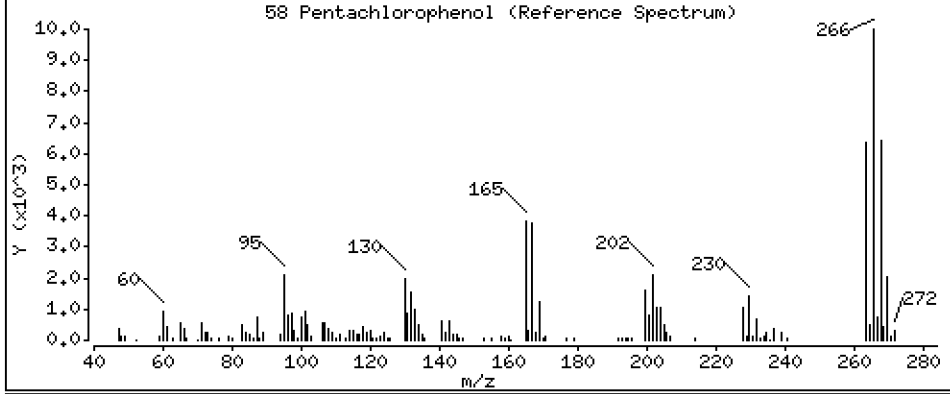
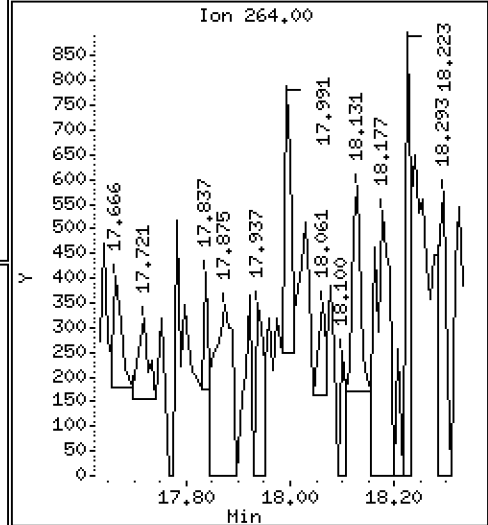
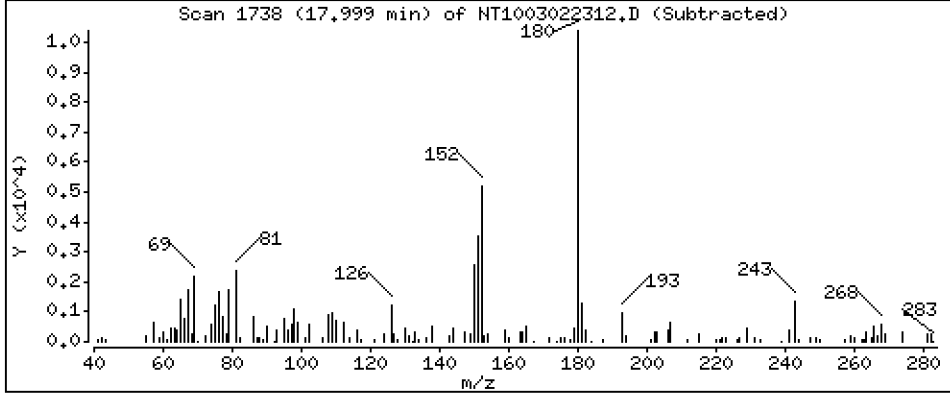
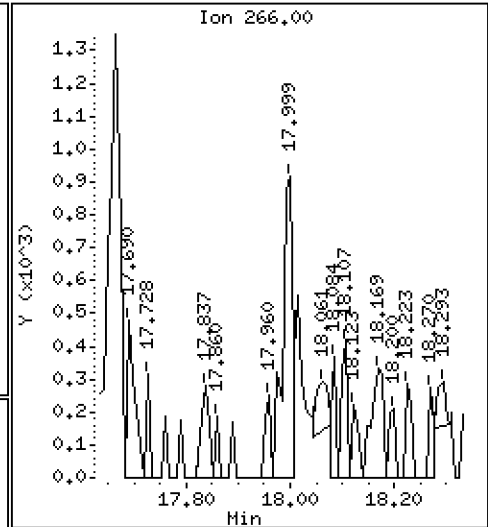
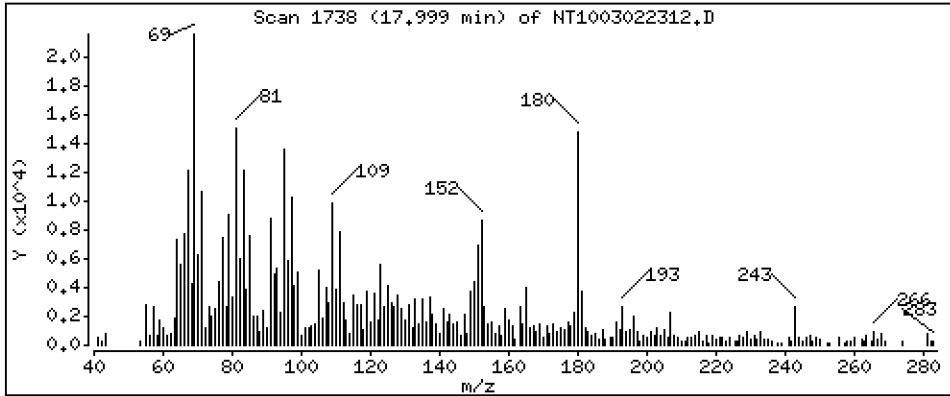
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 0.01841 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

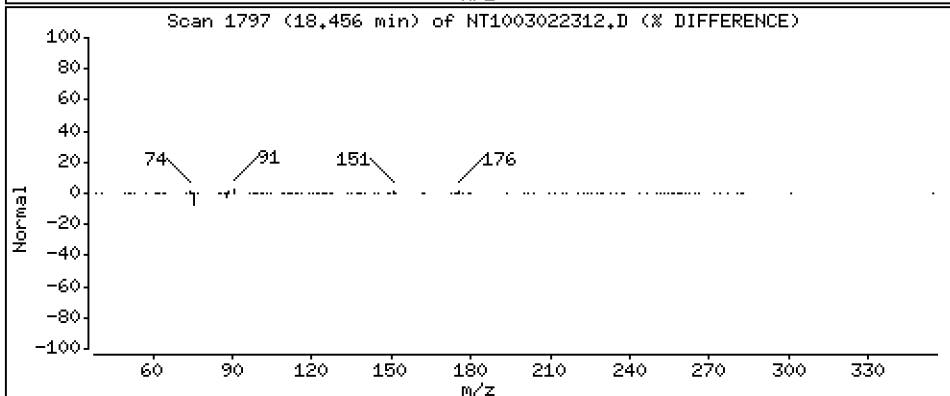
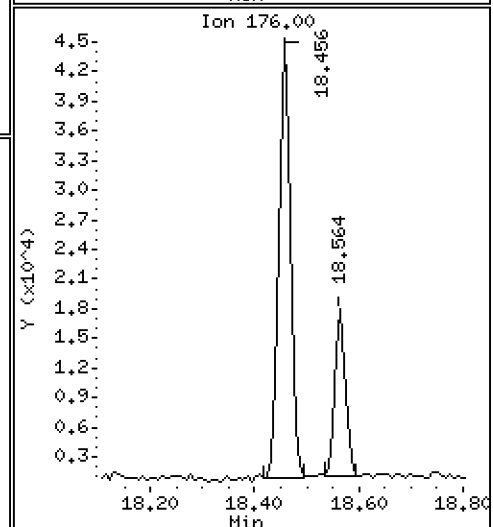
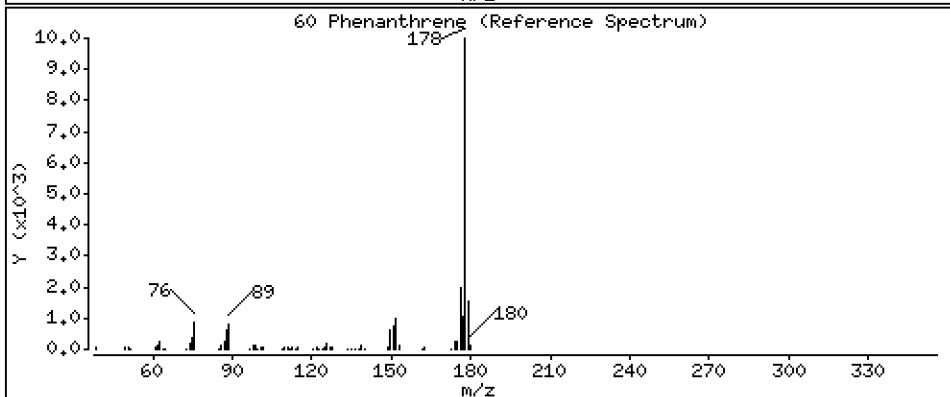
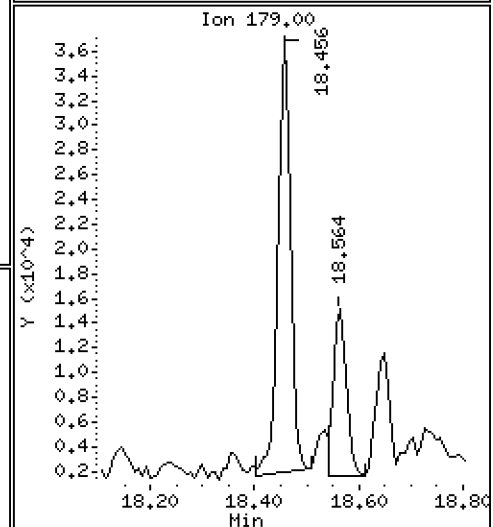
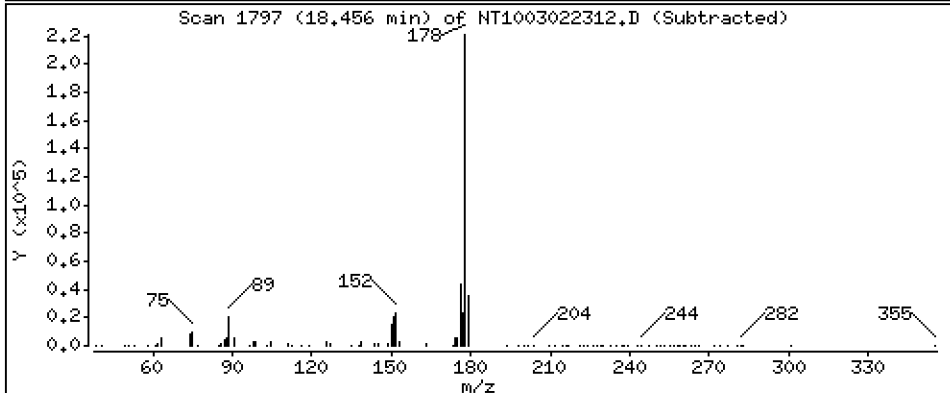
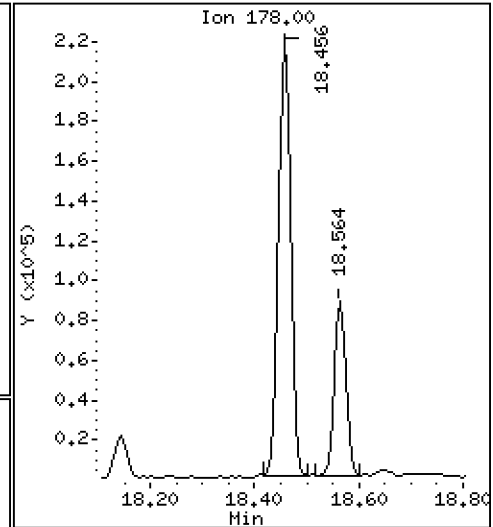
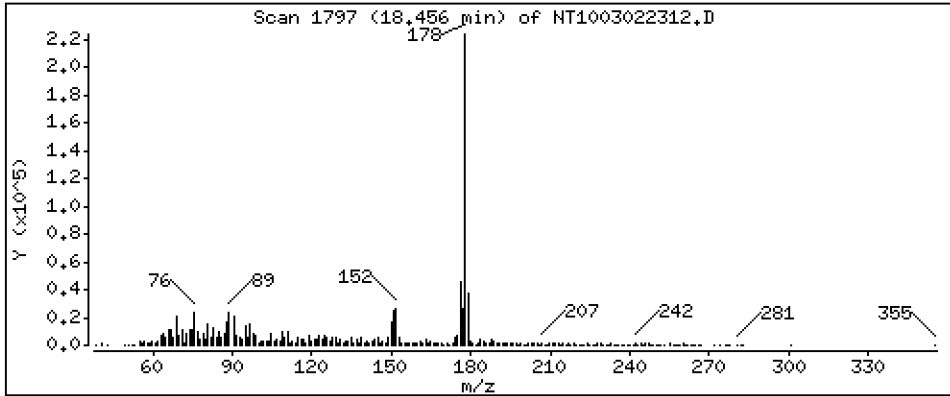
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,6021 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

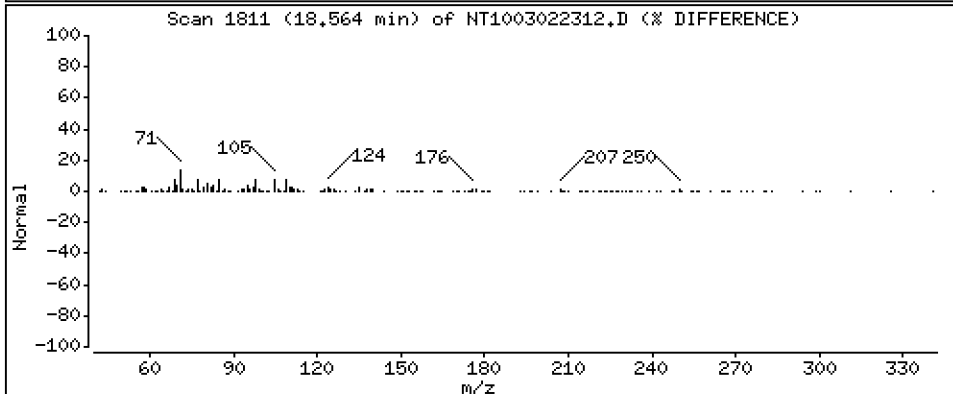
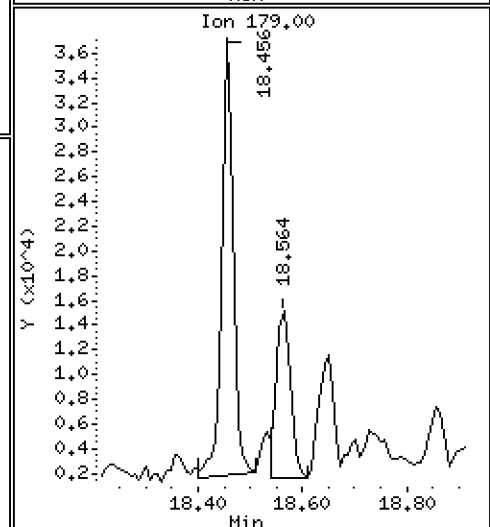
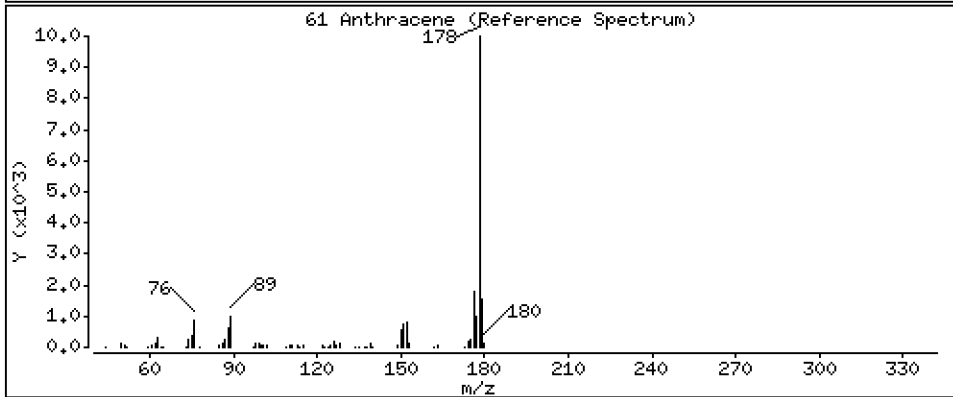
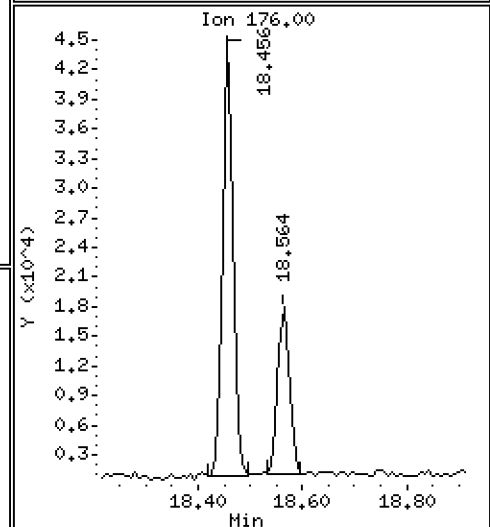
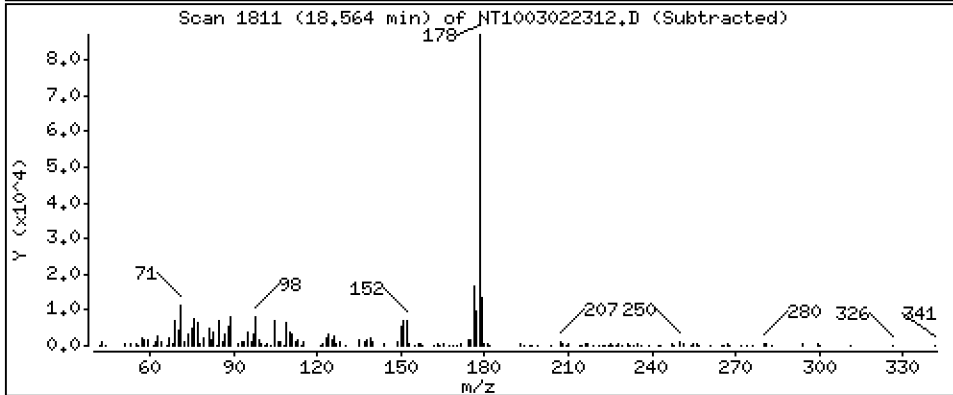
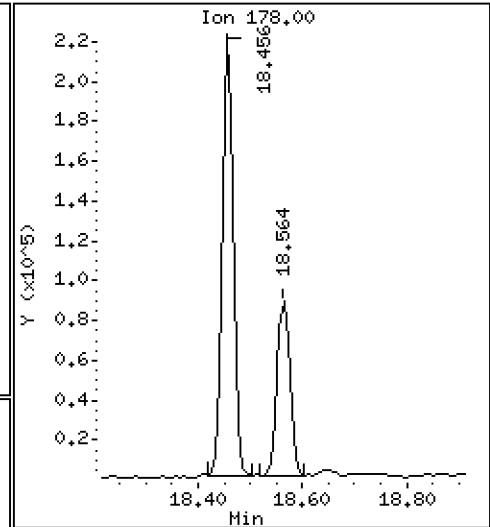
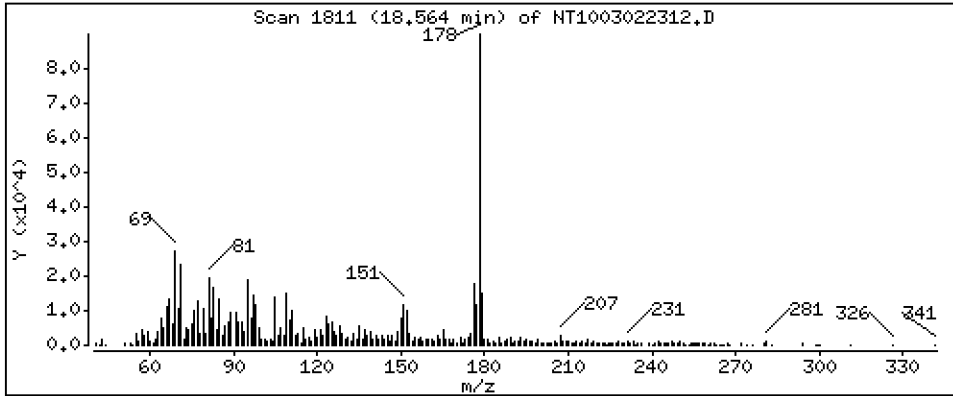
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,2652 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

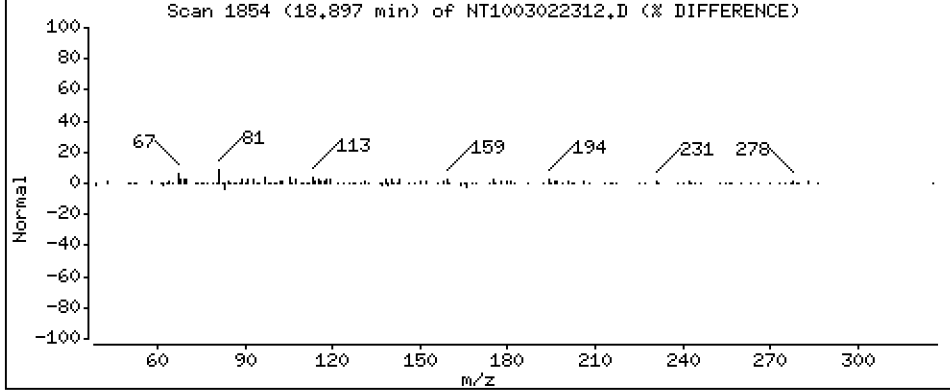
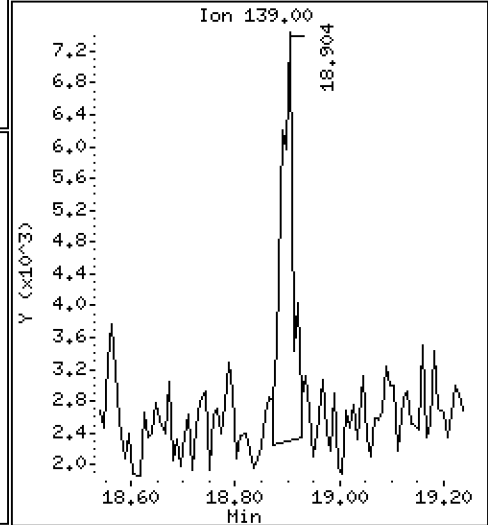
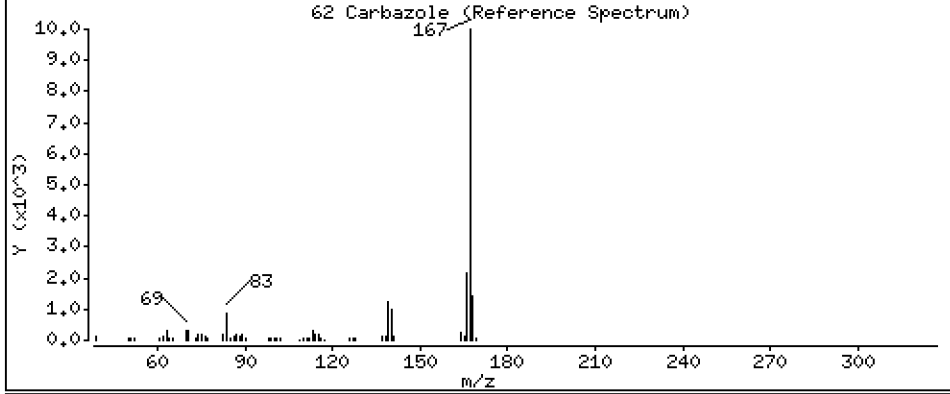
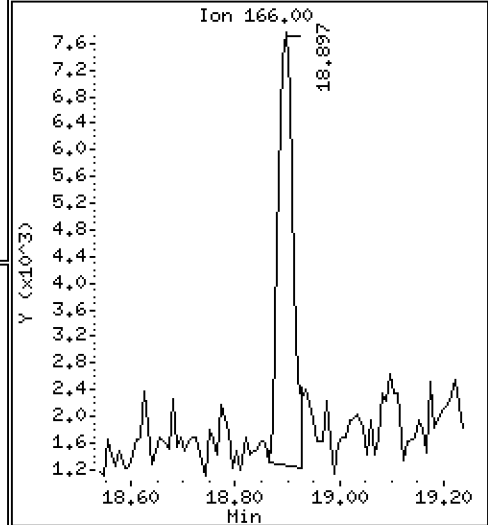
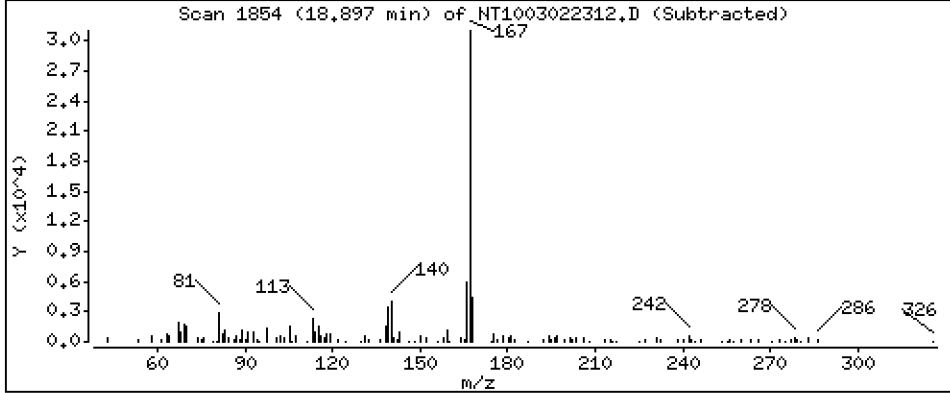
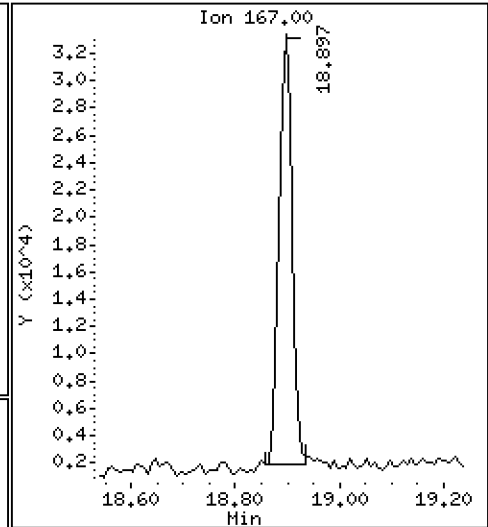
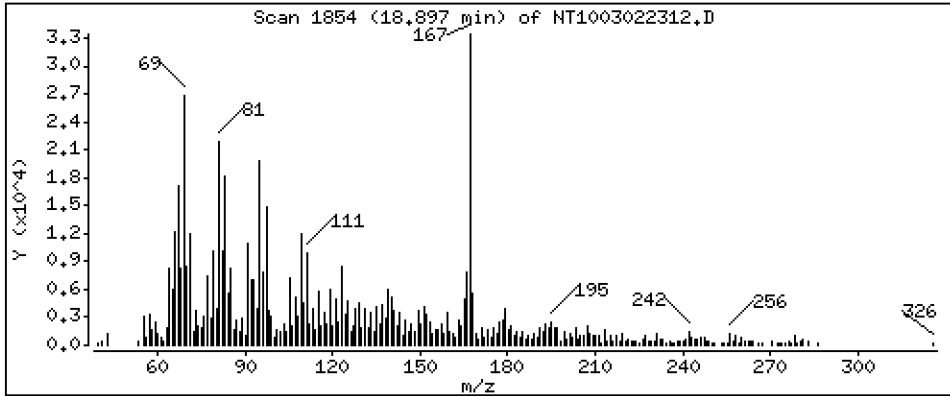
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1064 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

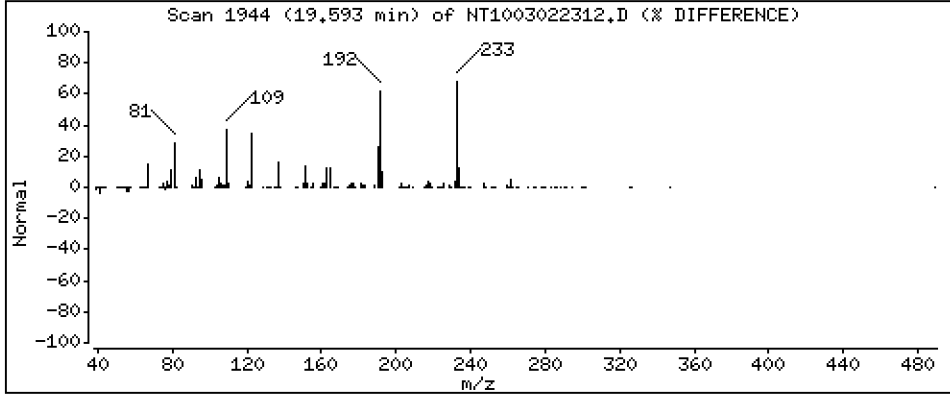
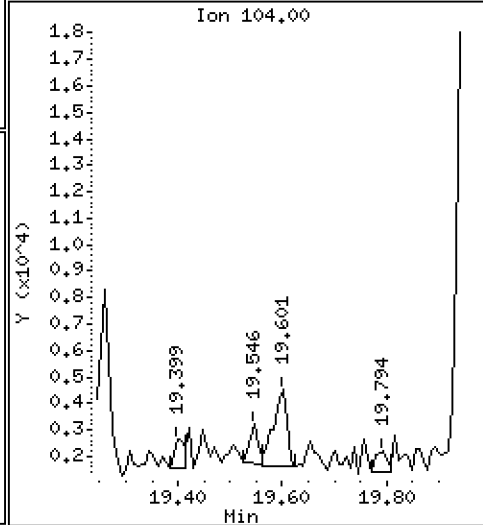
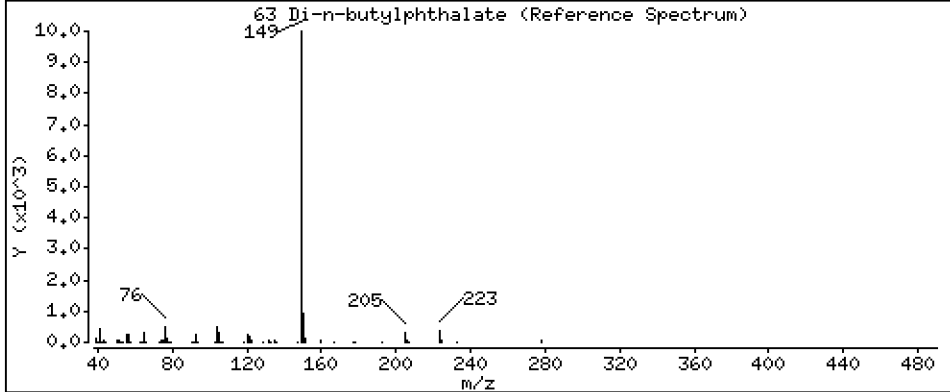
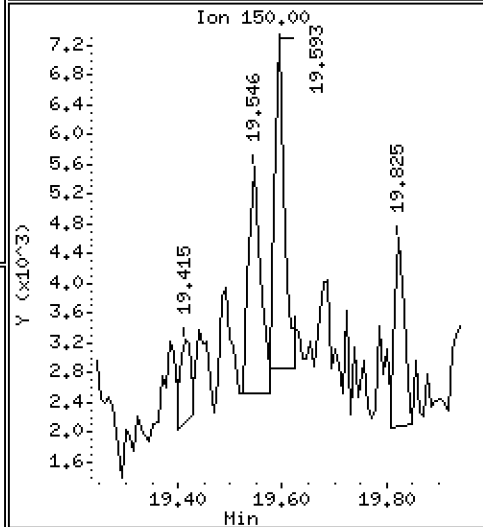
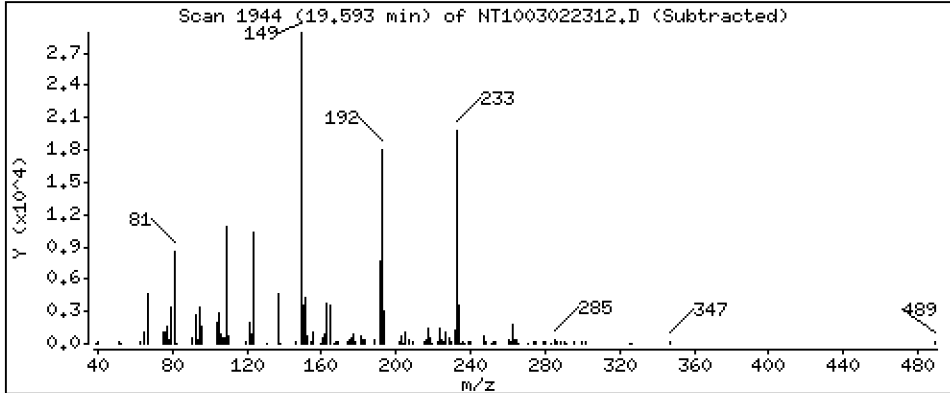
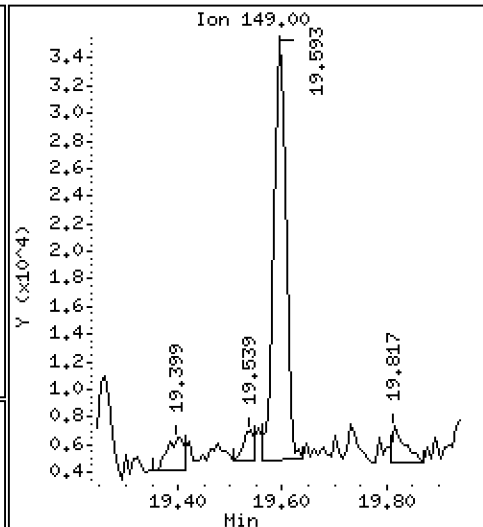
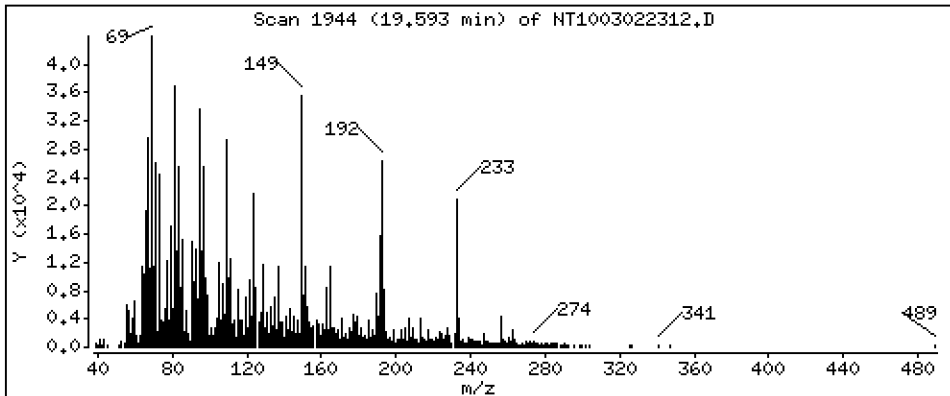
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.06960 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

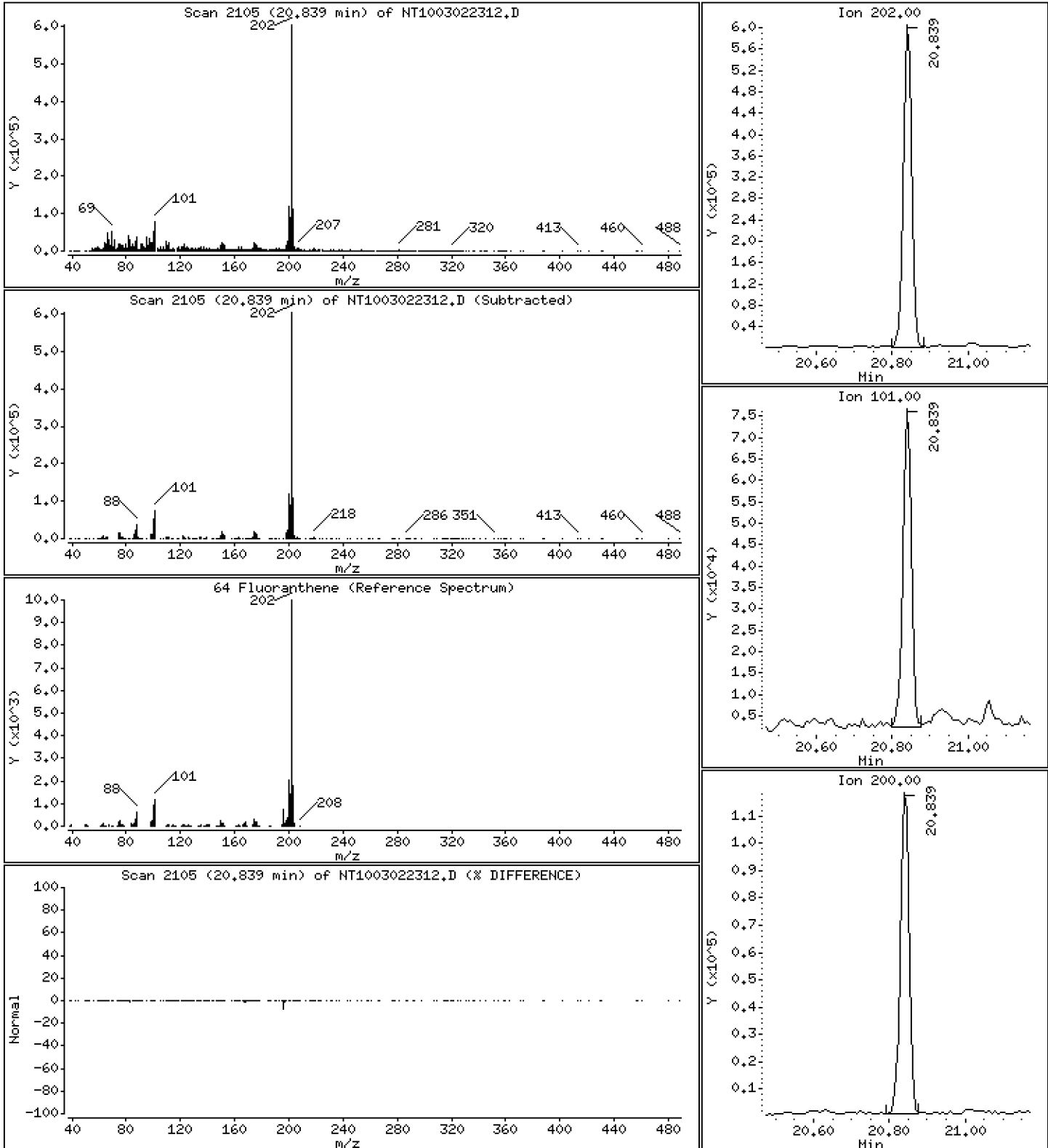
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,111 ug/mL





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

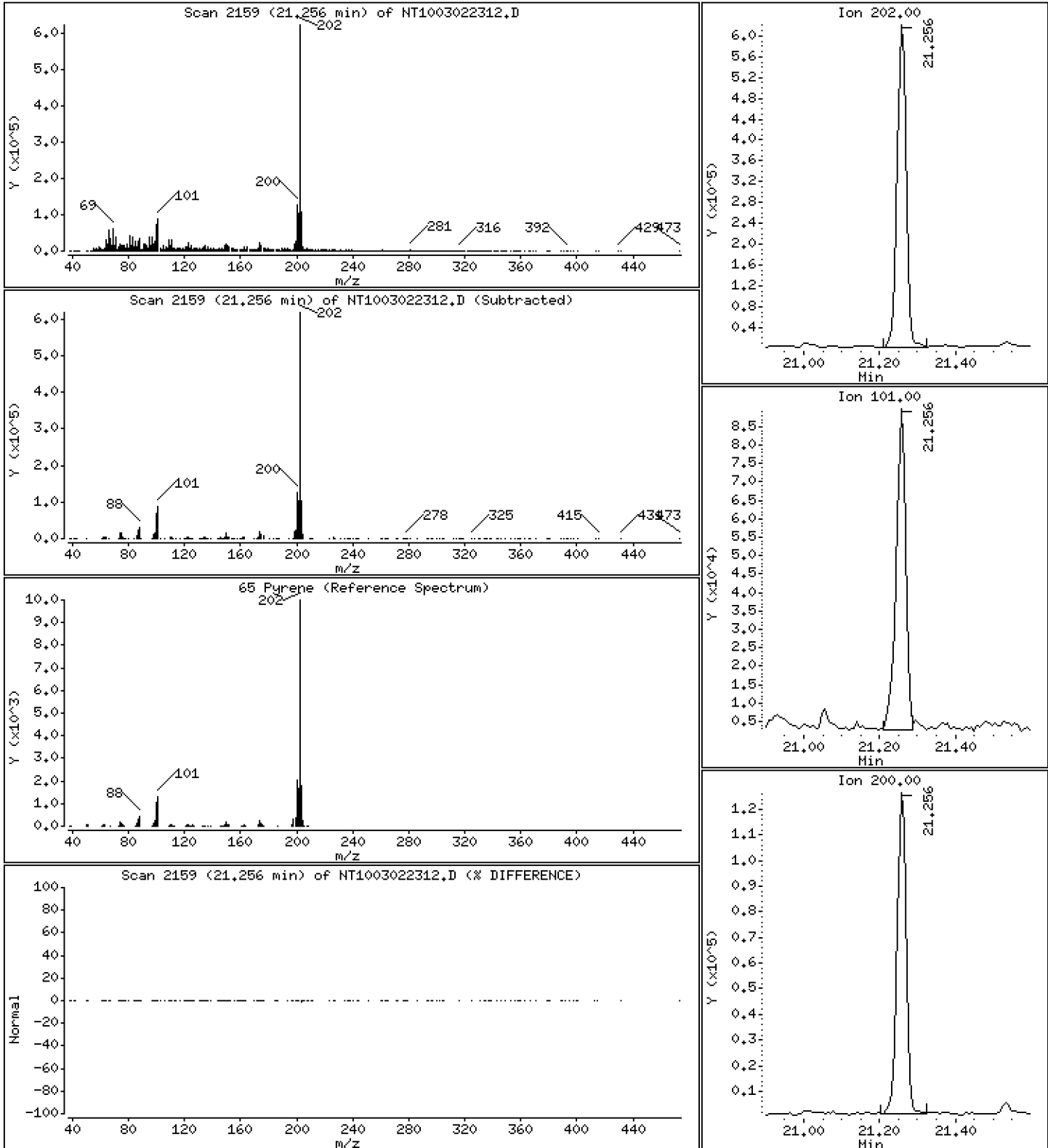
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,102 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

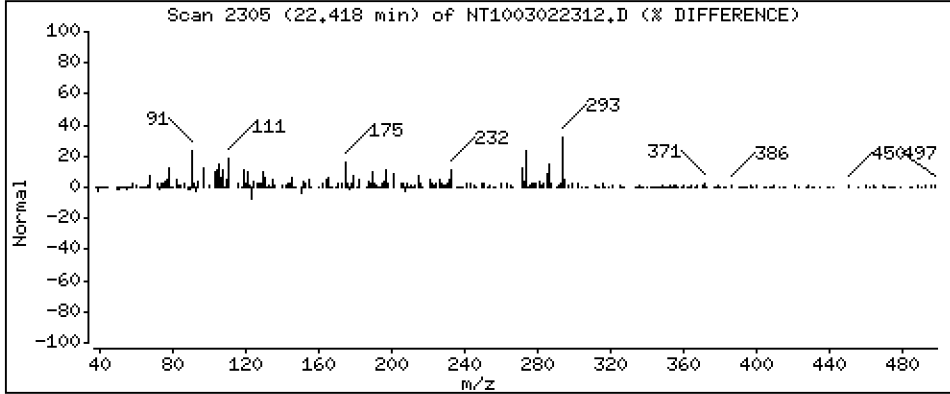
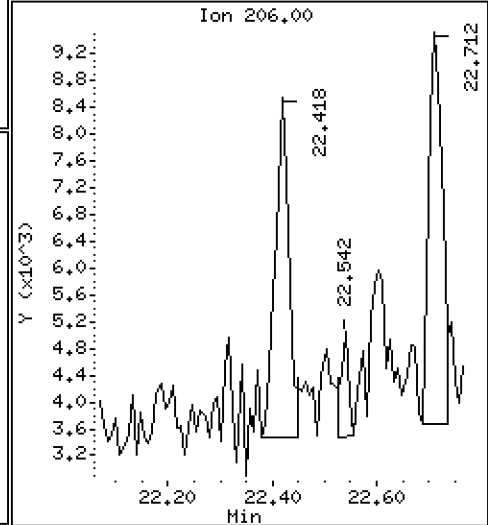
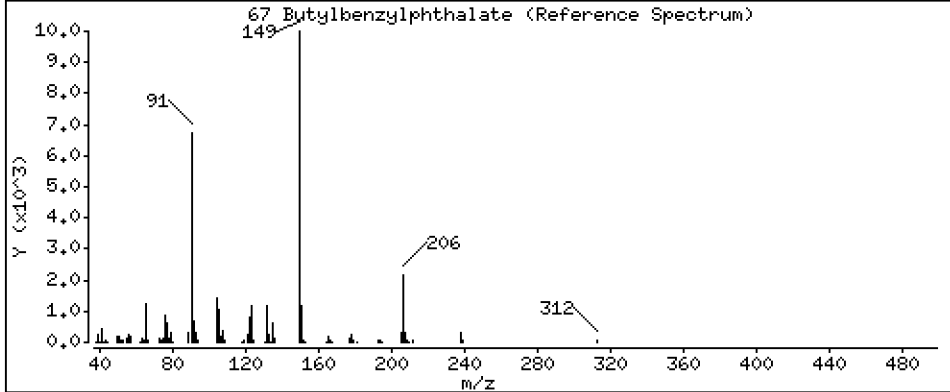
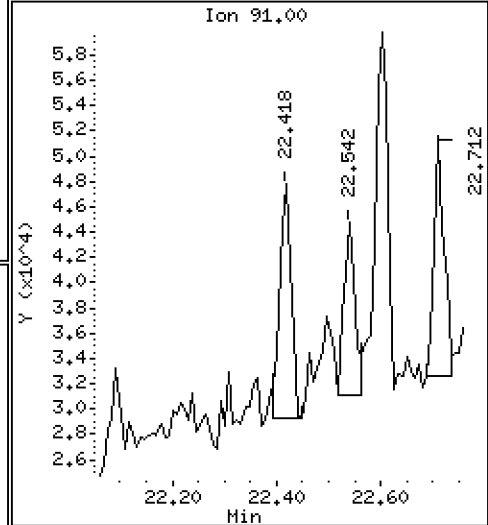
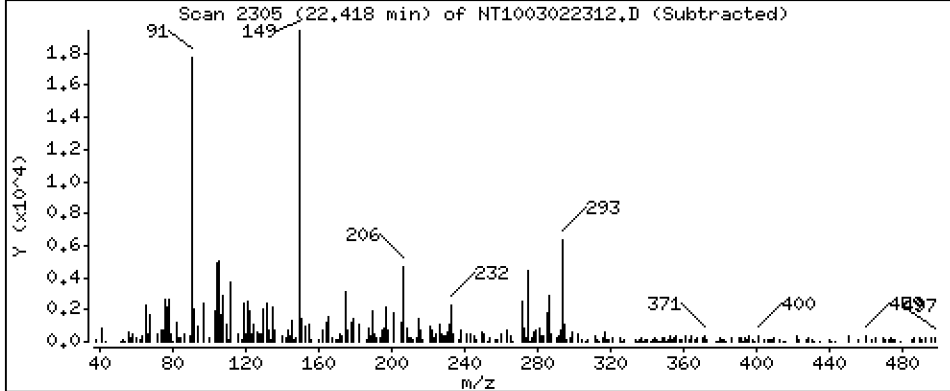
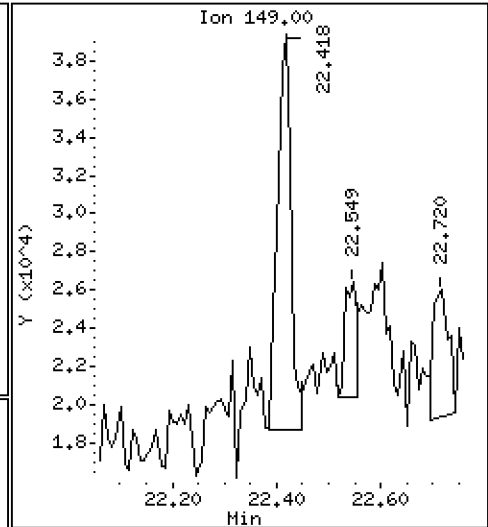
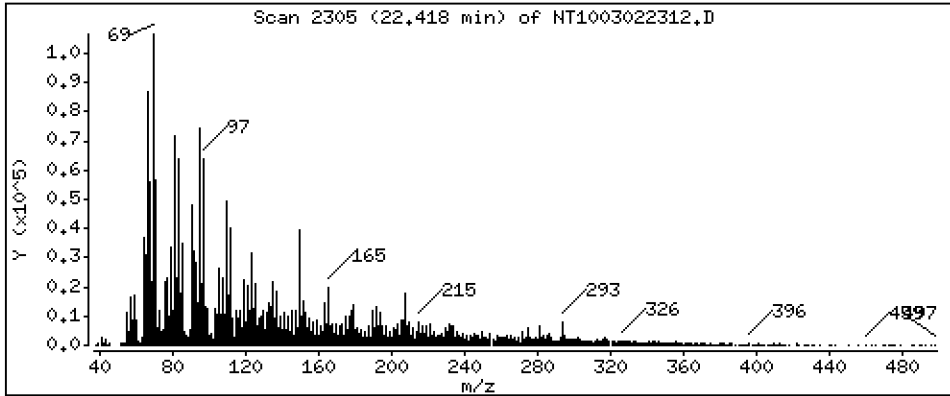
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07593 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

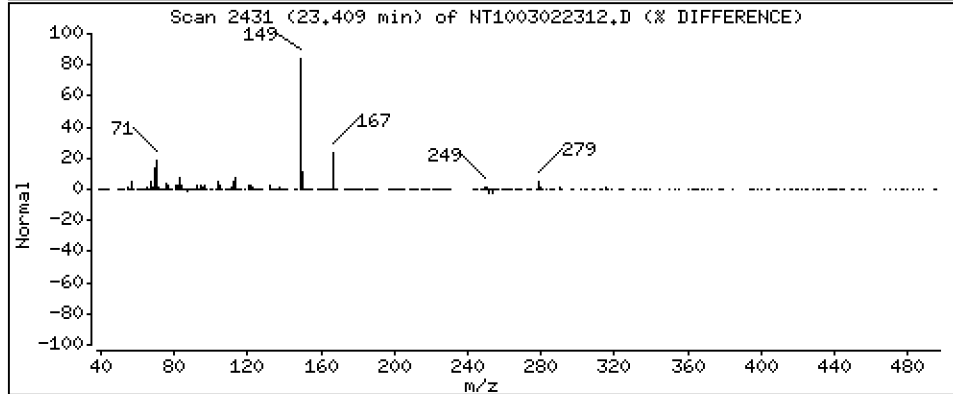
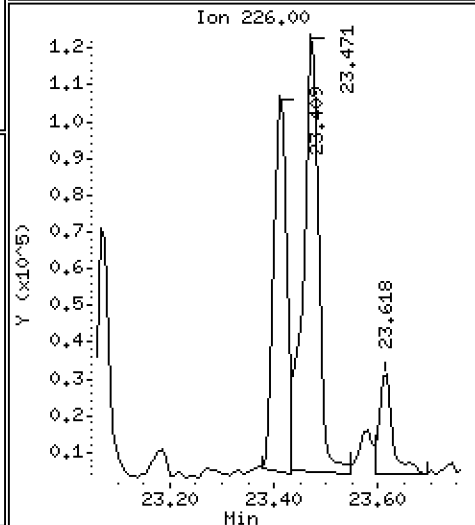
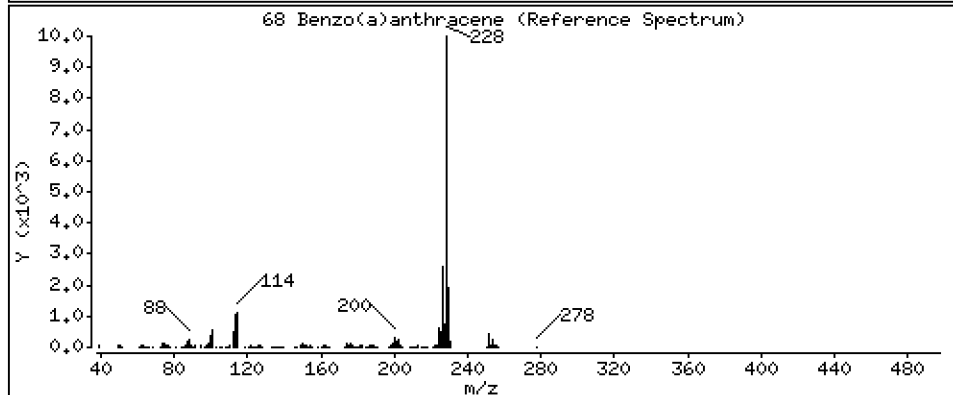
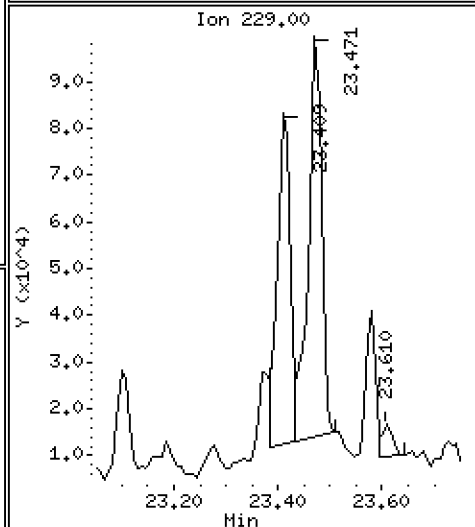
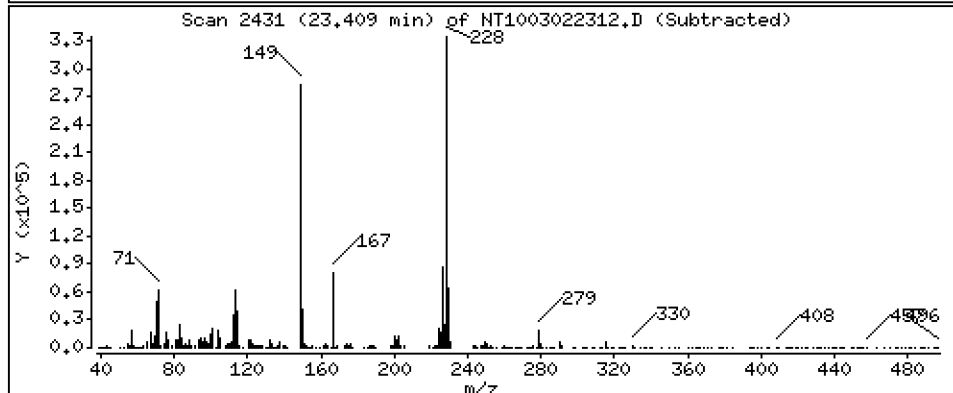
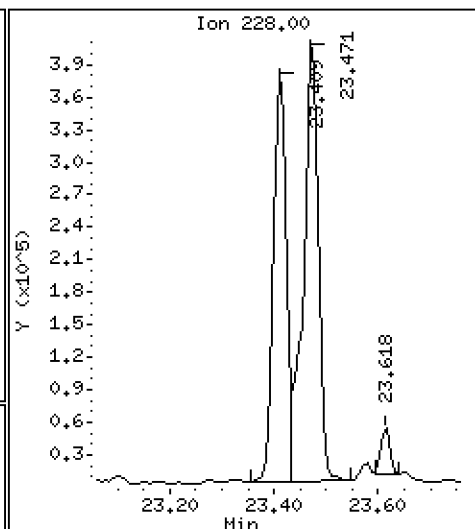
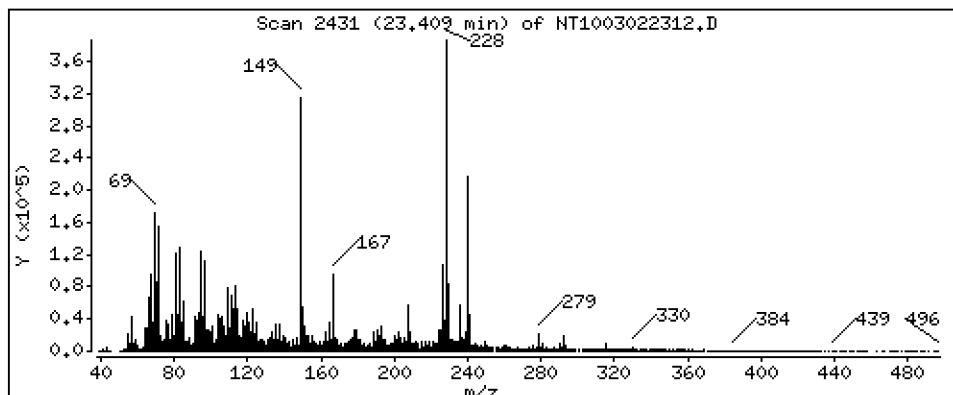
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,6993 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

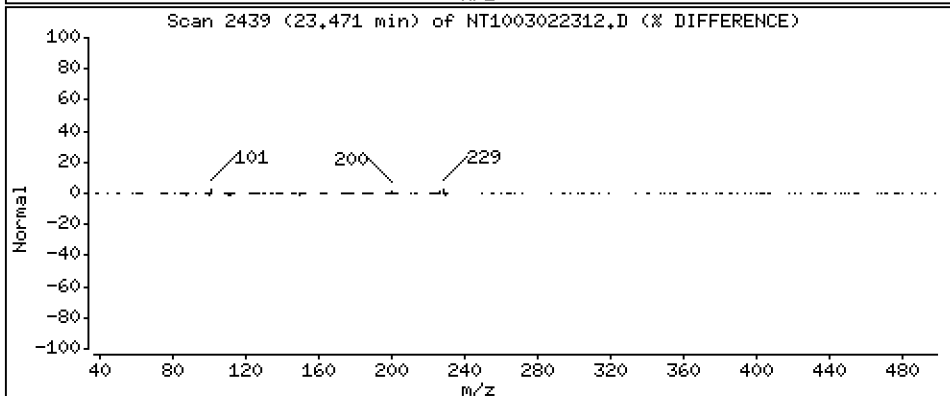
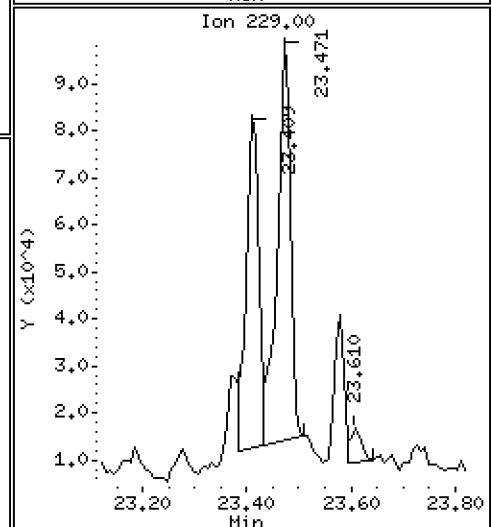
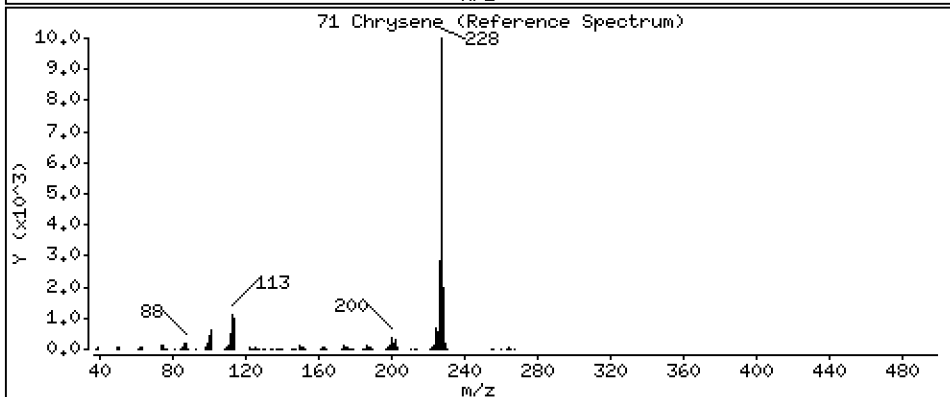
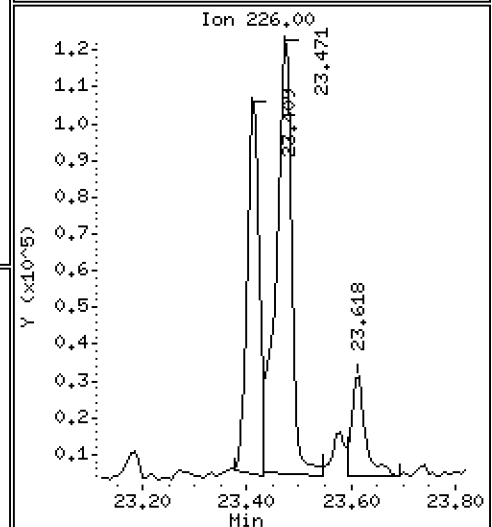
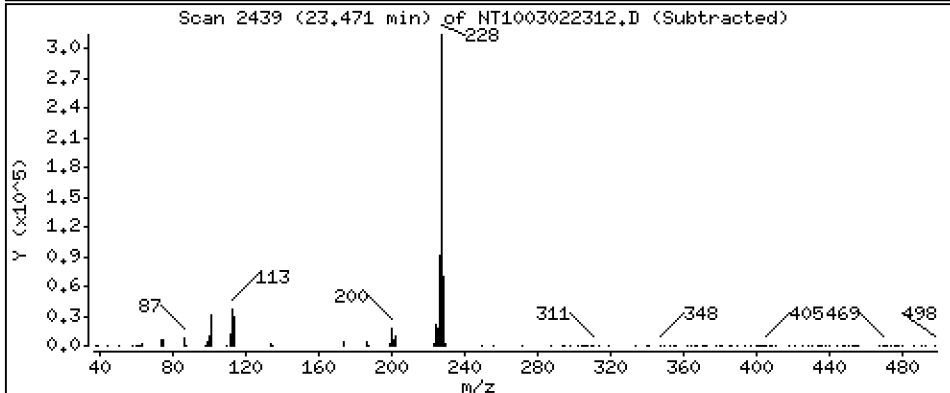
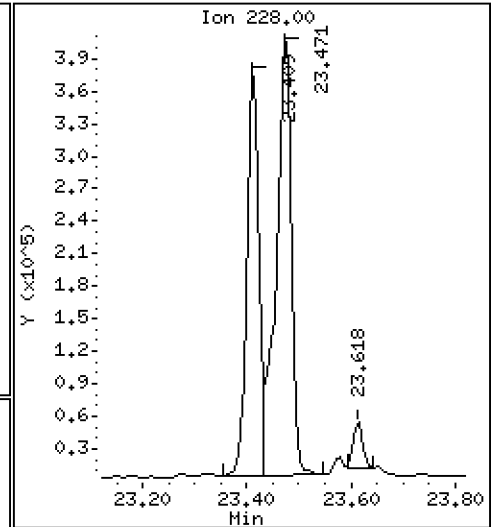
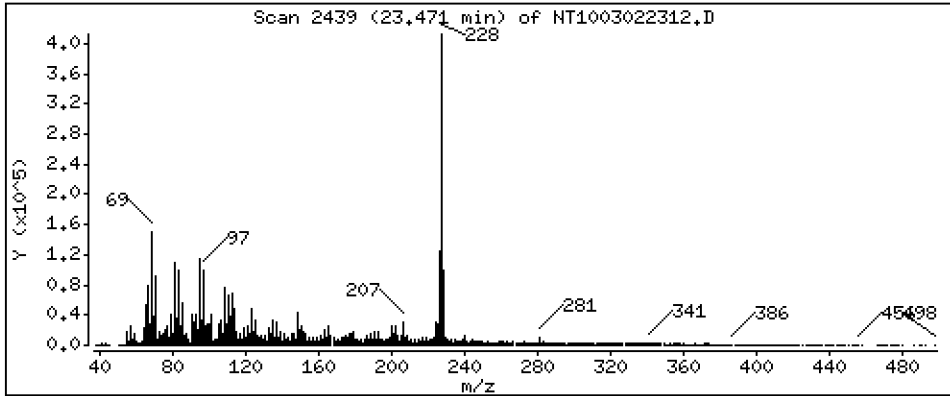
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,112 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

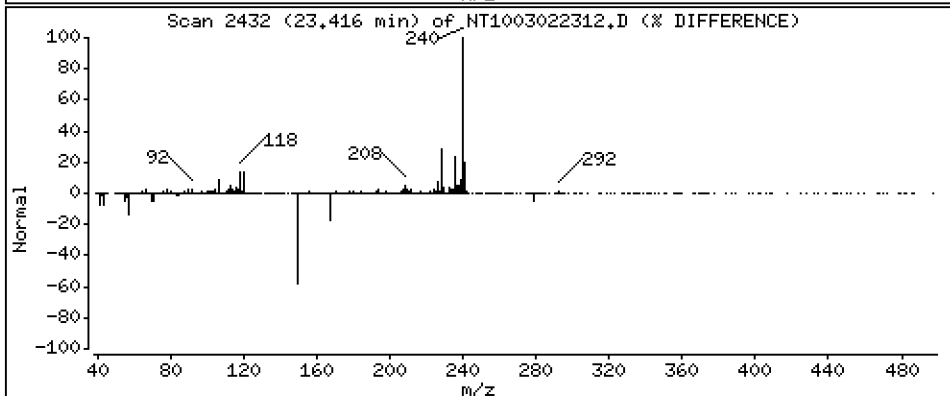
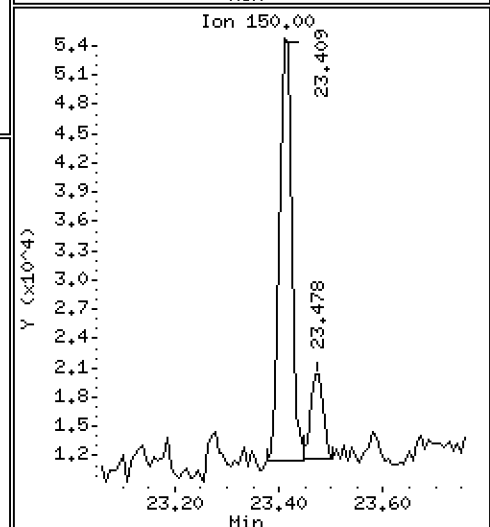
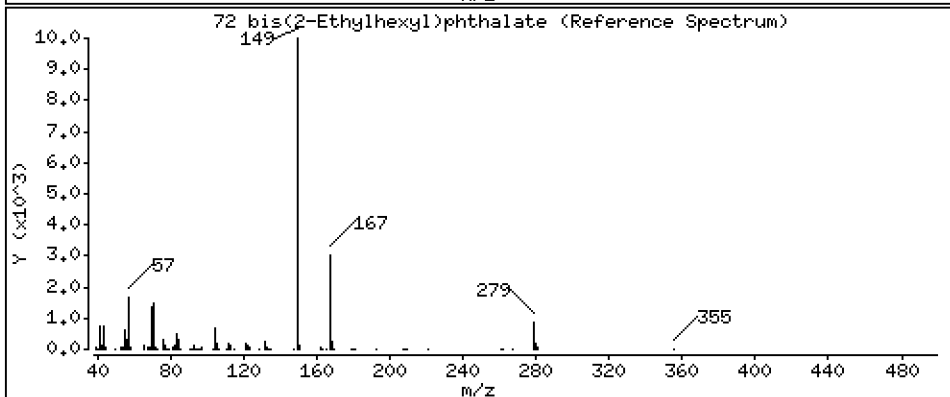
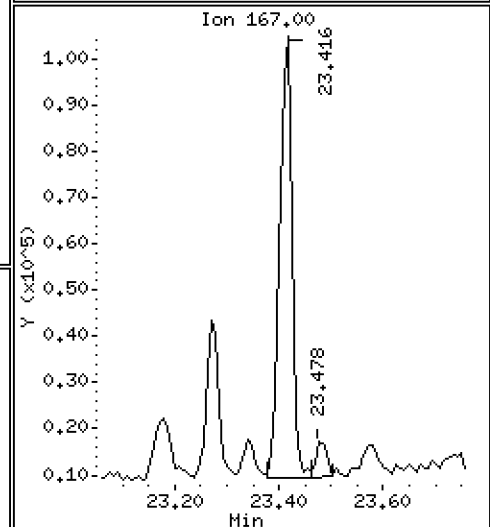
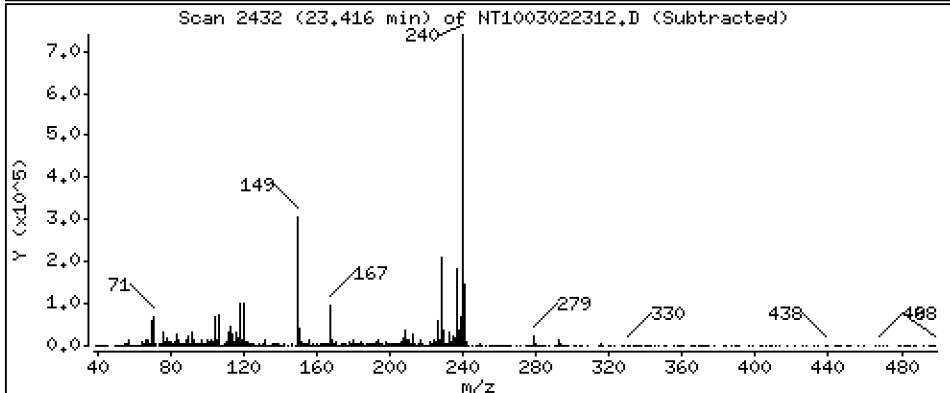
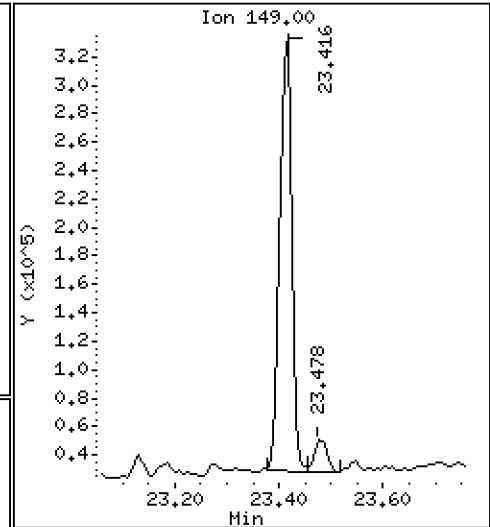
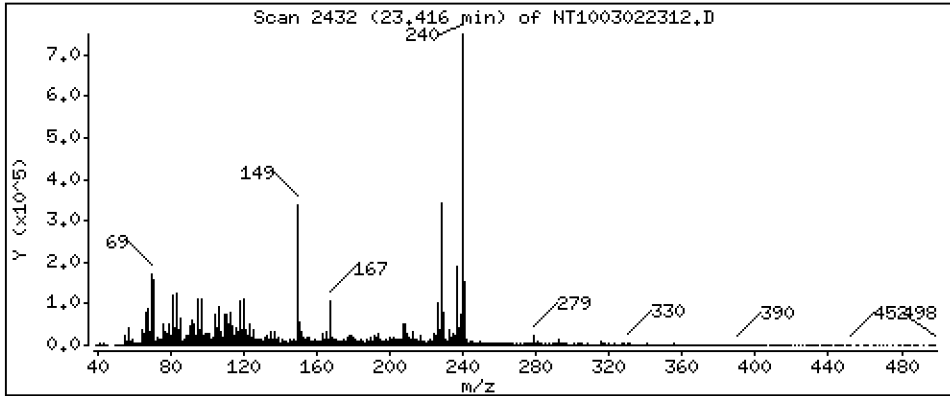
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,6767 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

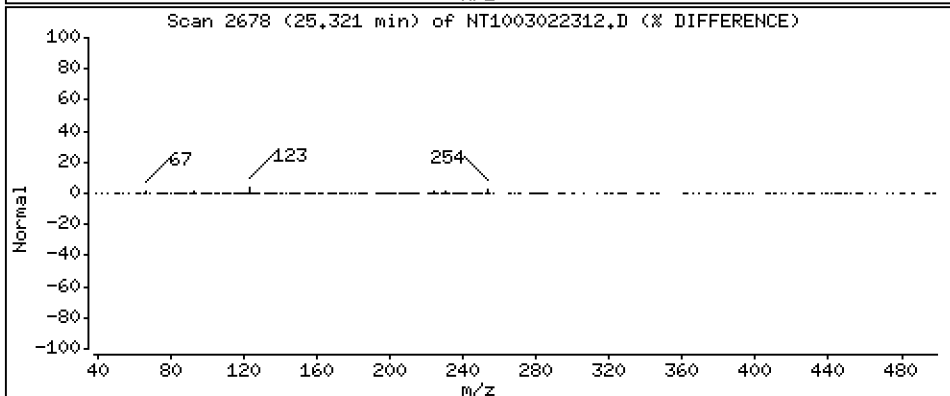
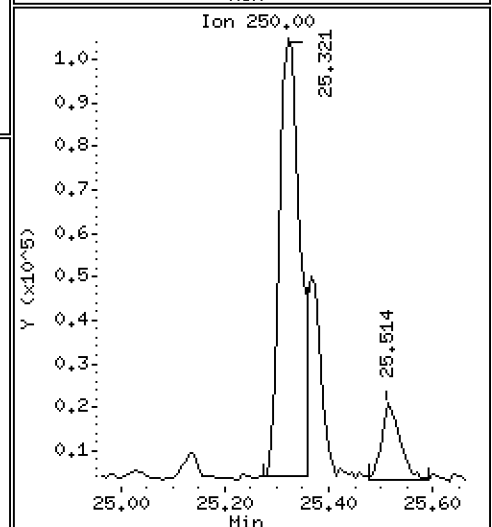
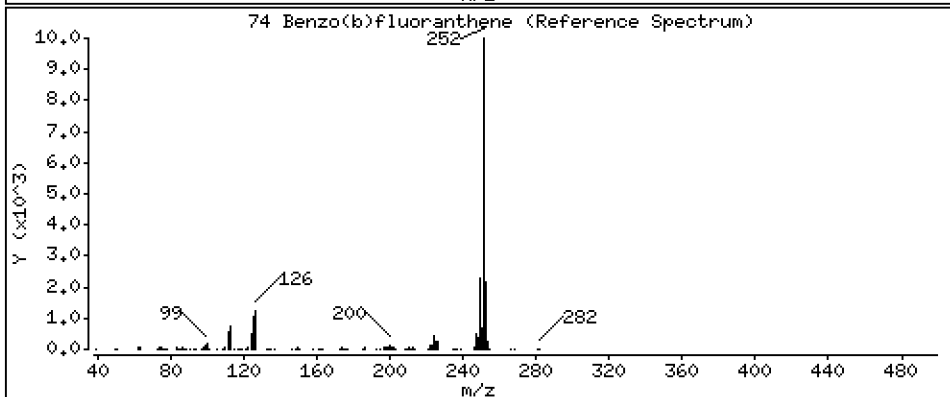
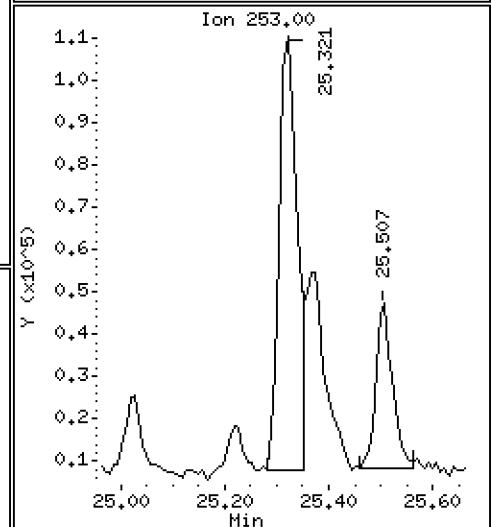
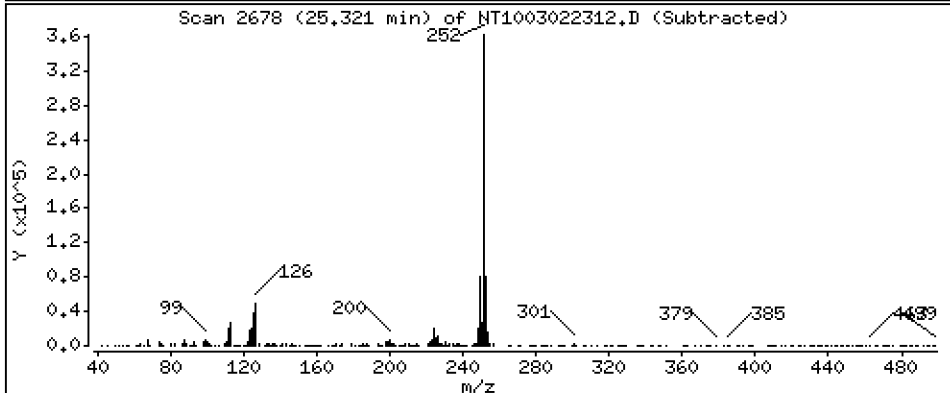
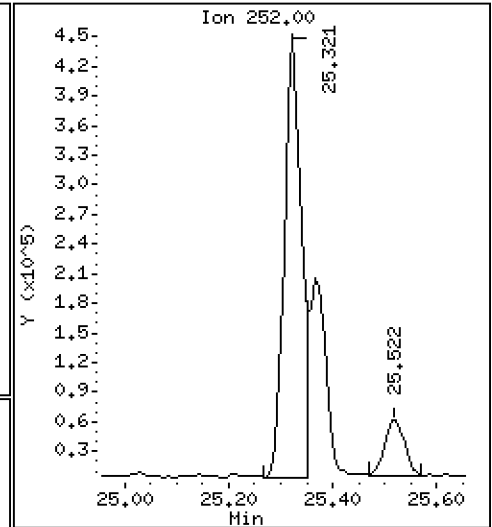
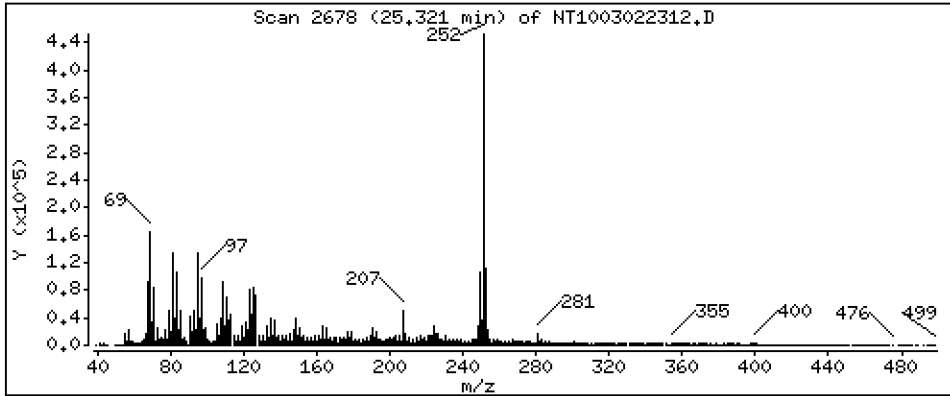
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,126 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

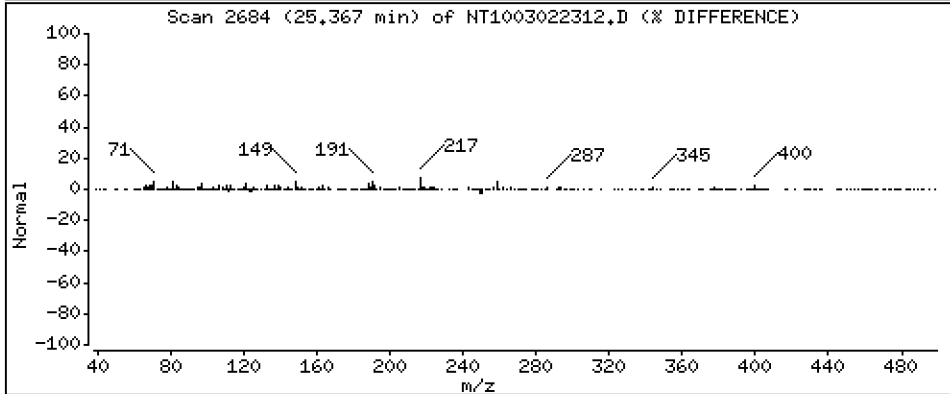
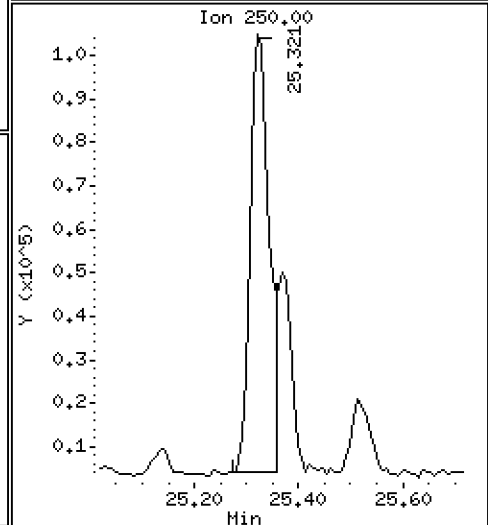
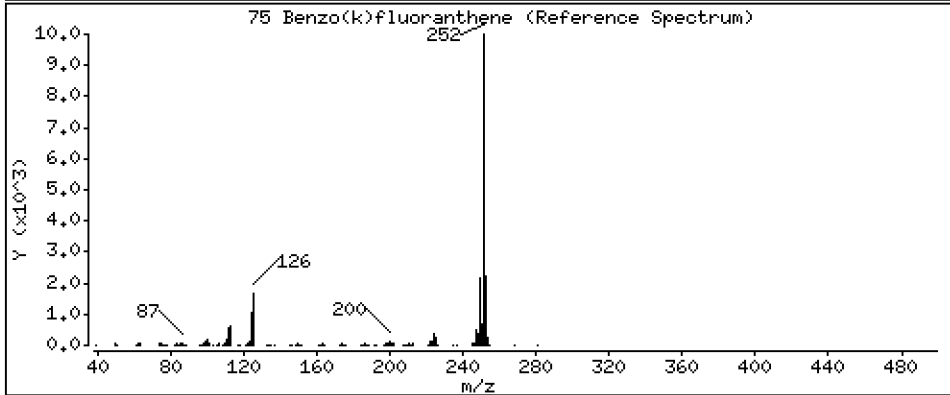
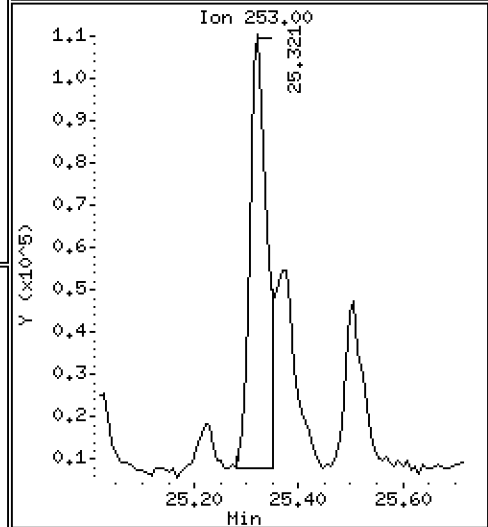
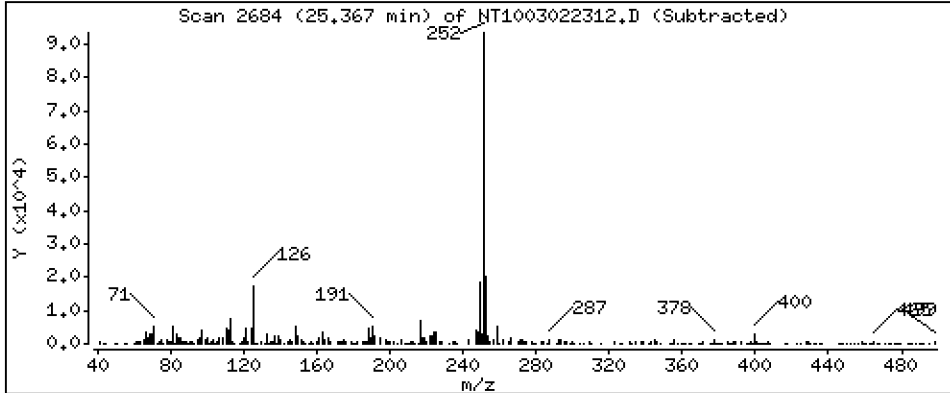
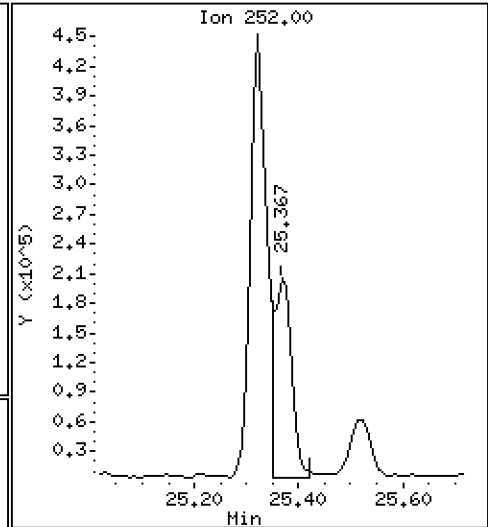
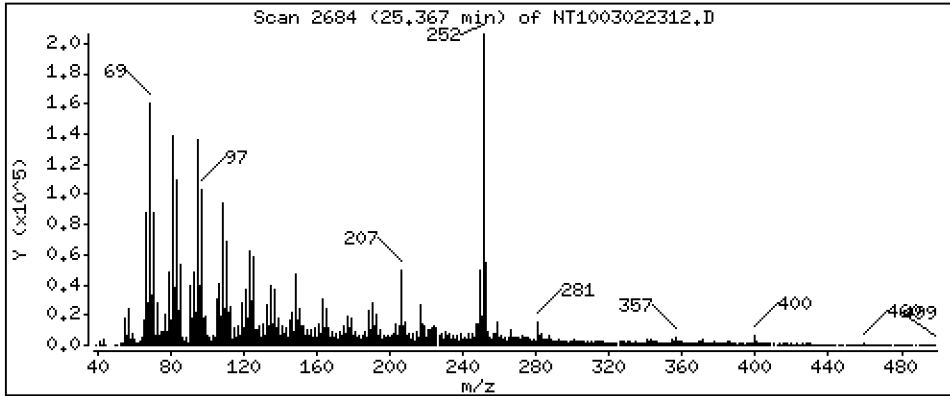
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,5309 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

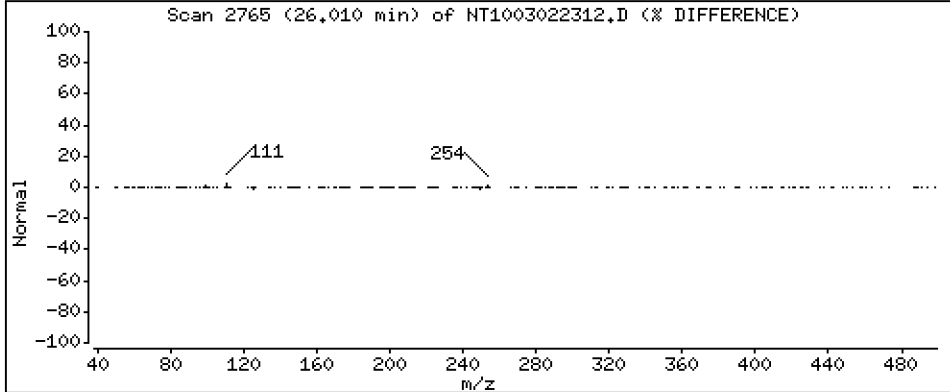
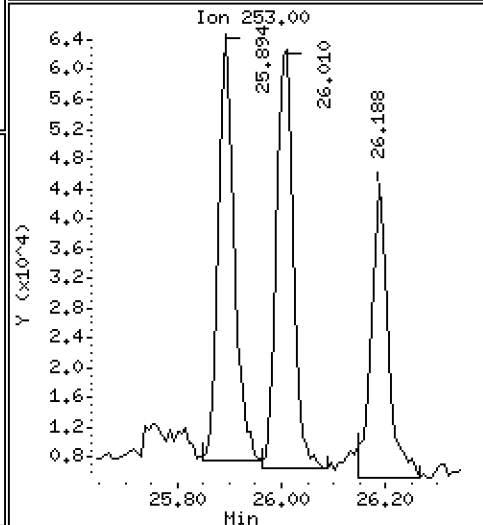
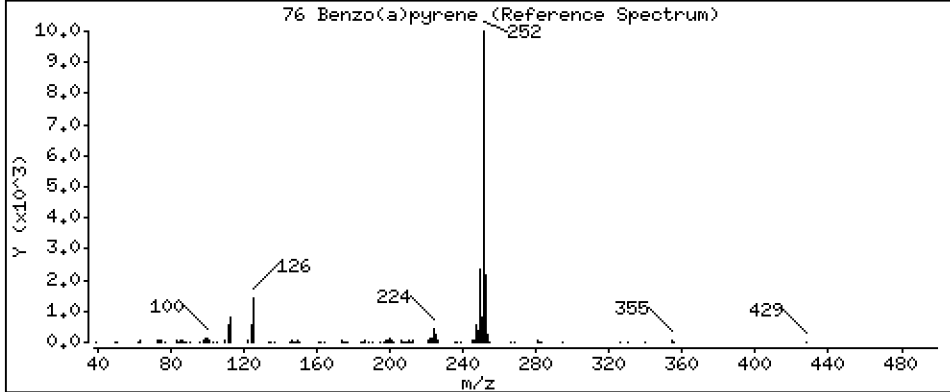
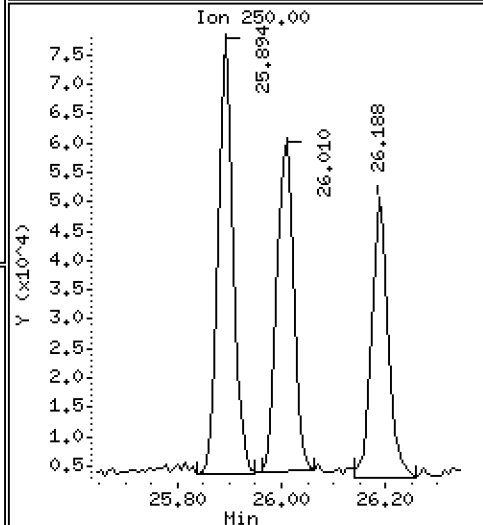
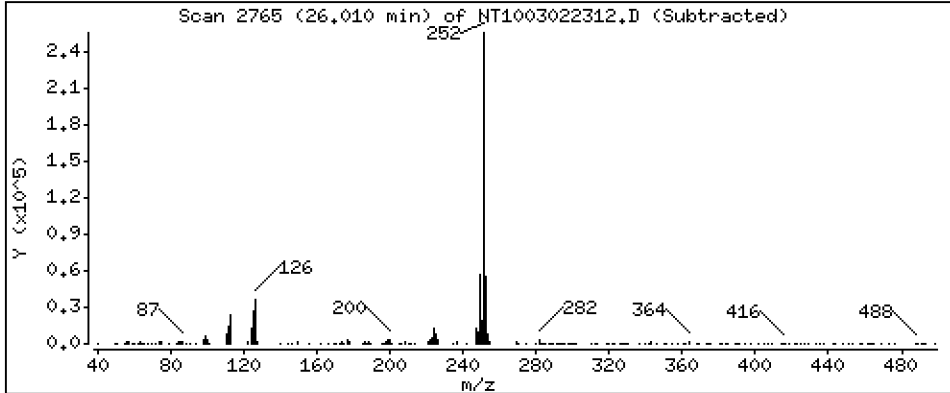
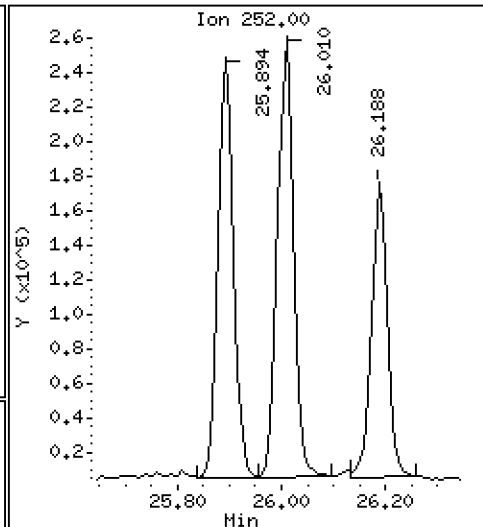
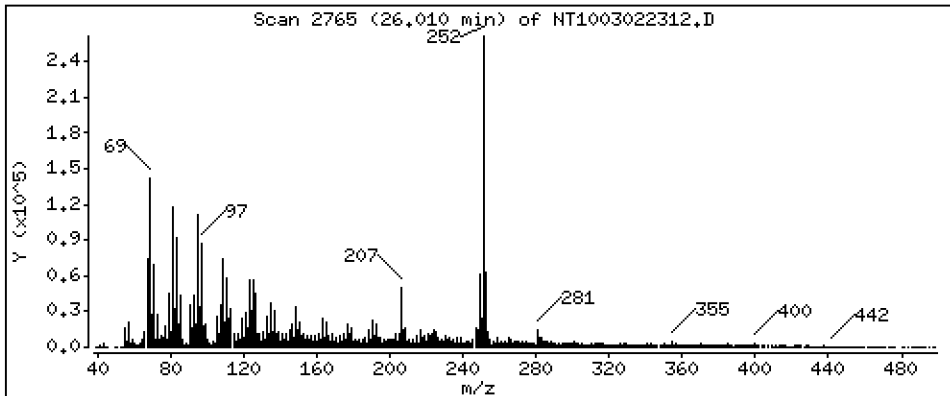
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,6487 ug/mL





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

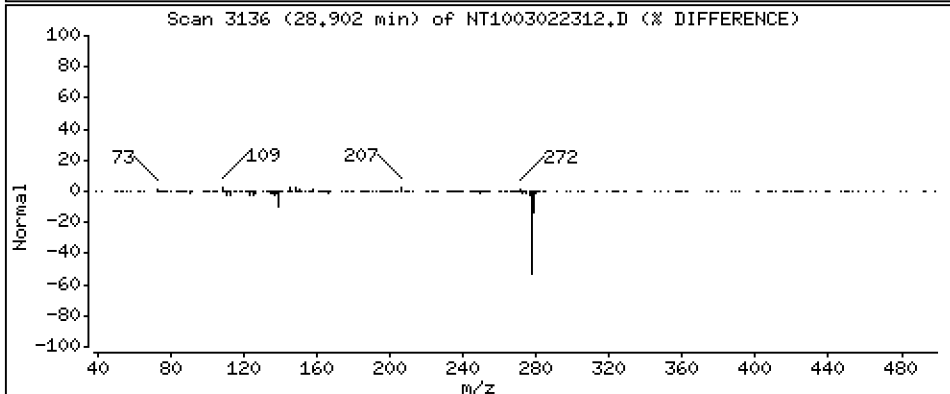
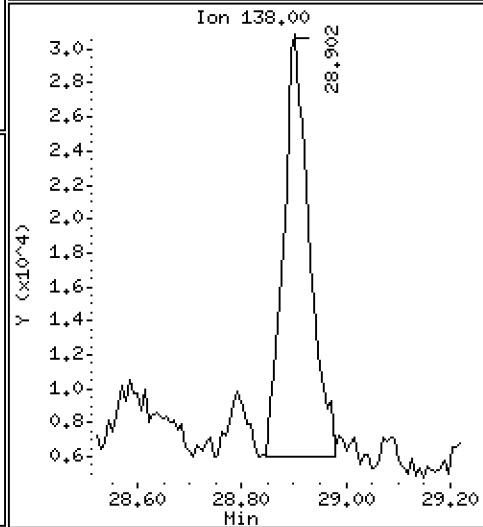
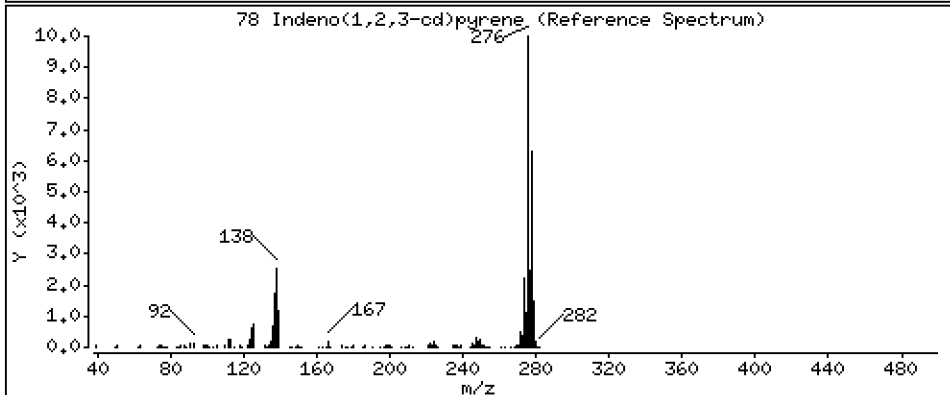
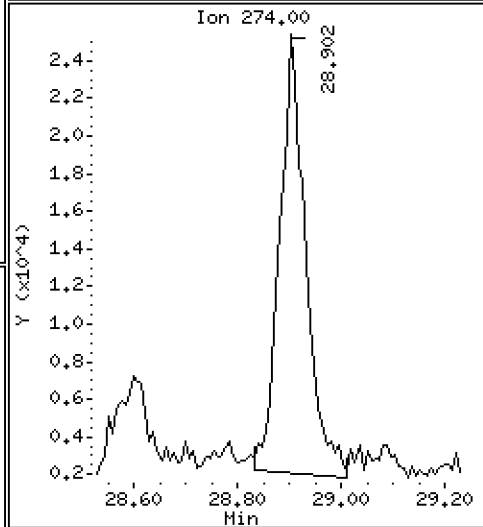
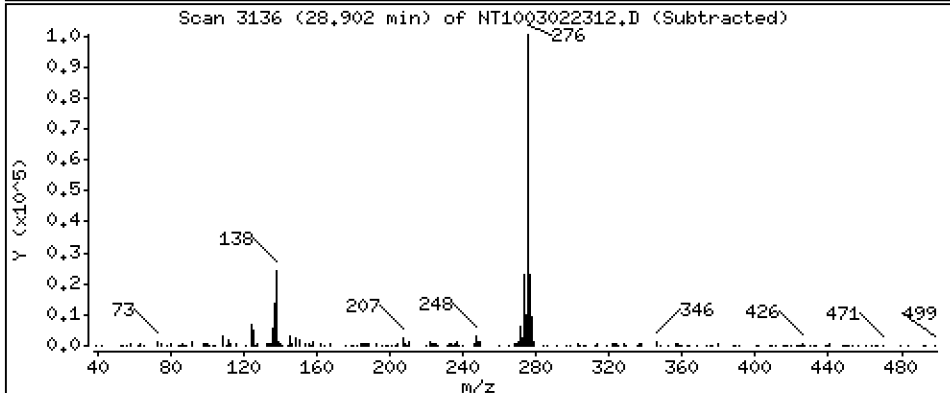
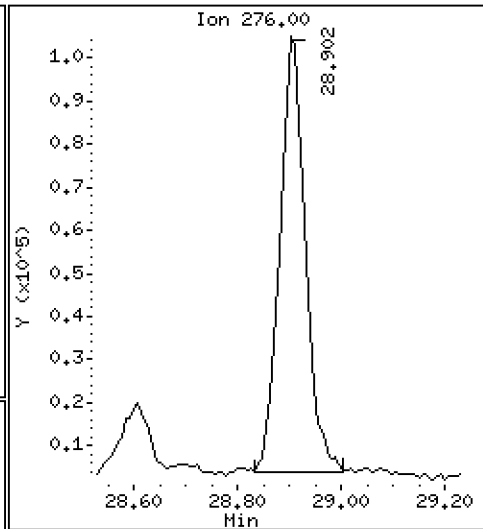
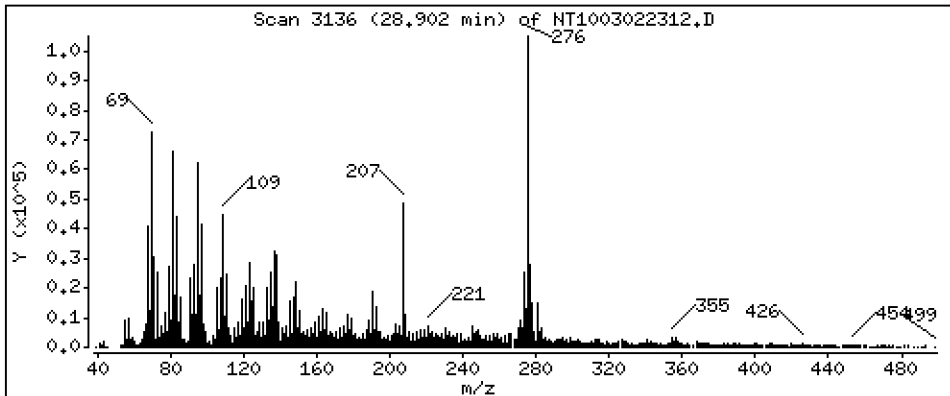
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,3656 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

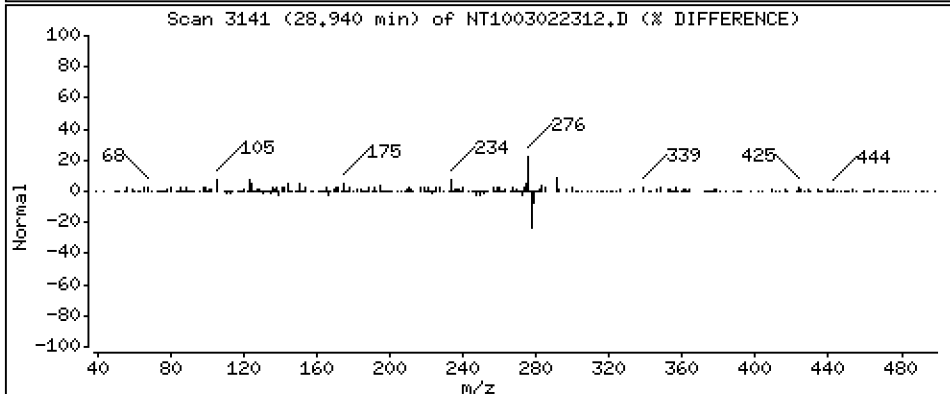
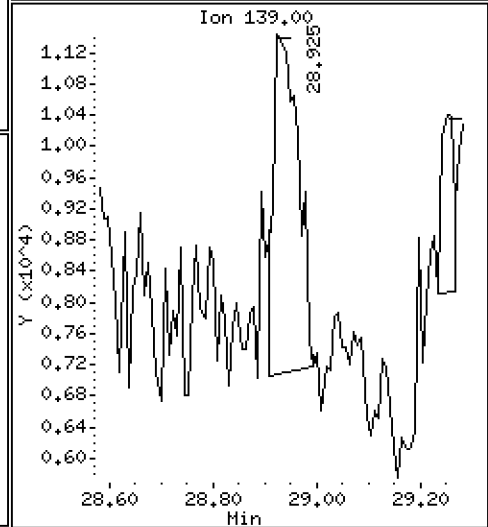
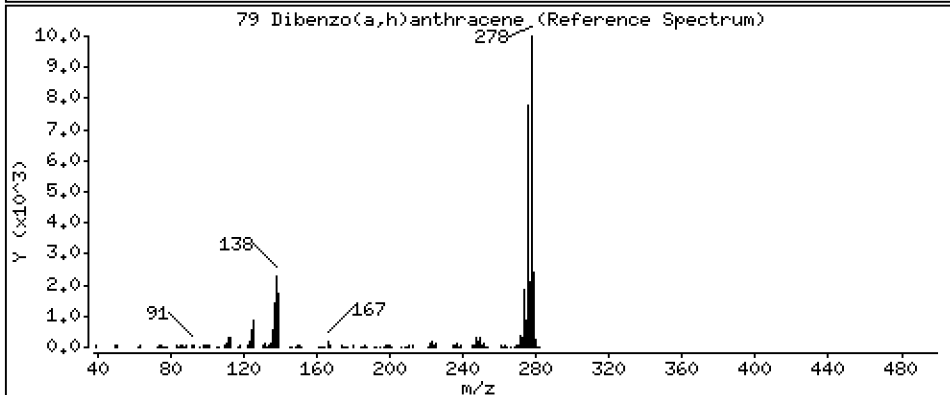
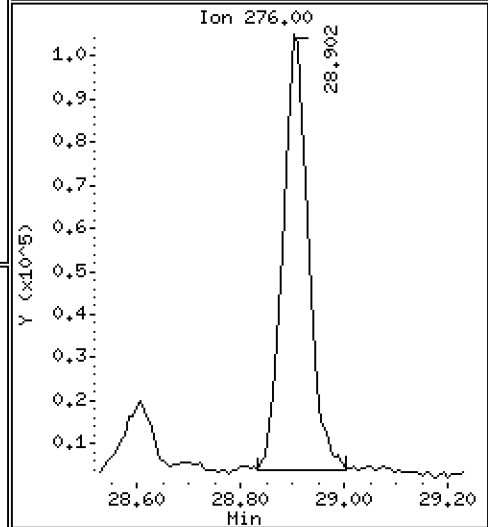
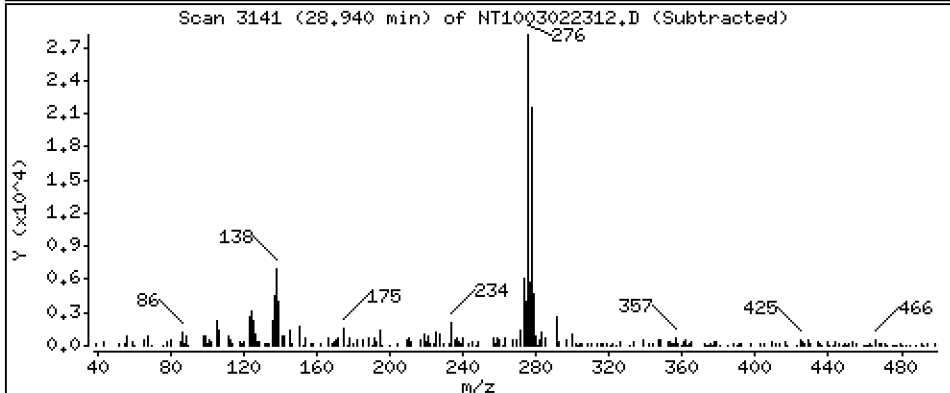
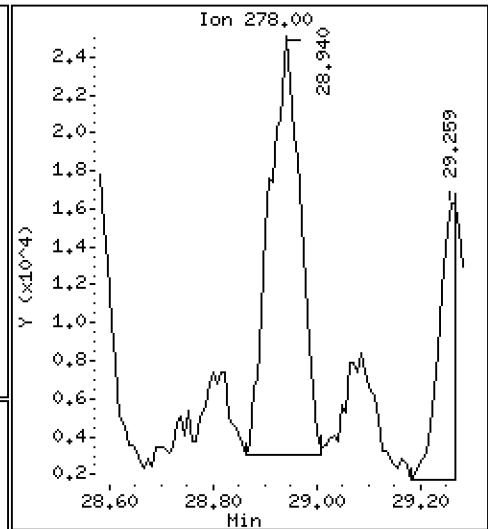
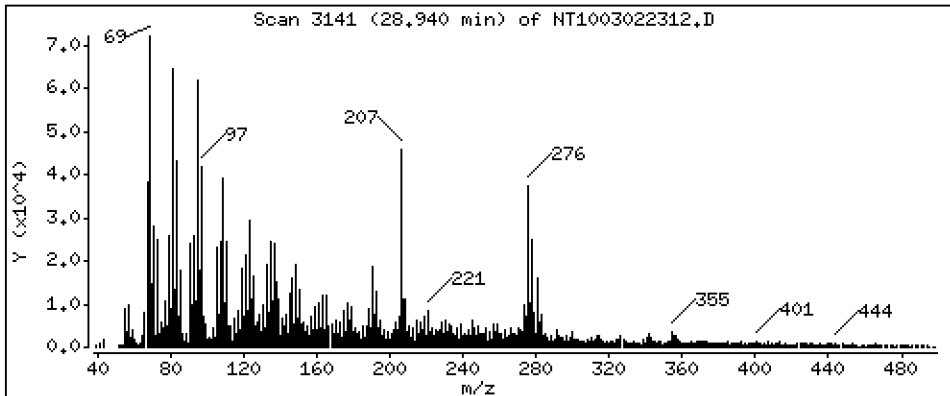
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1268 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

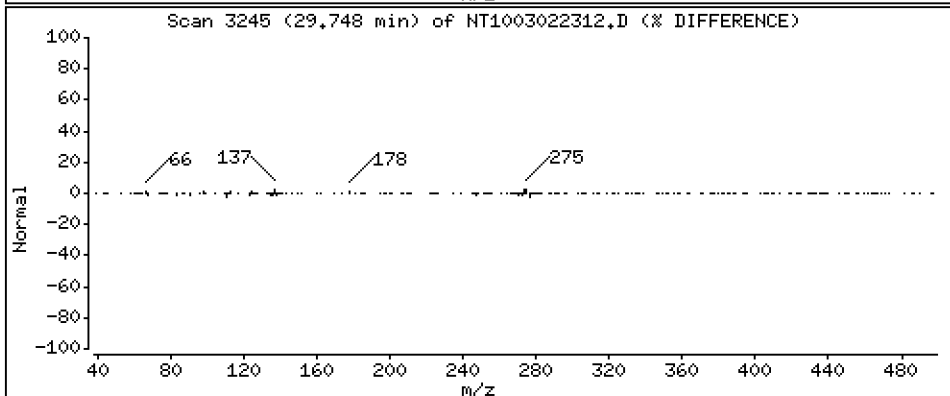
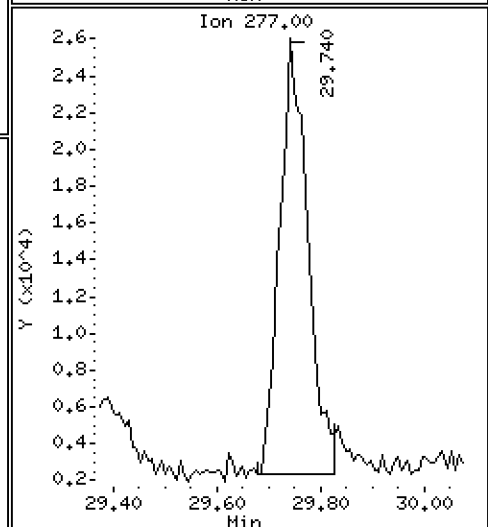
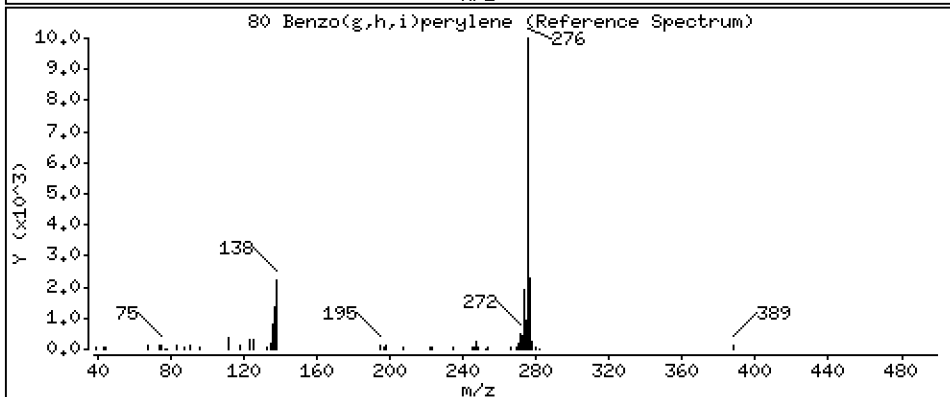
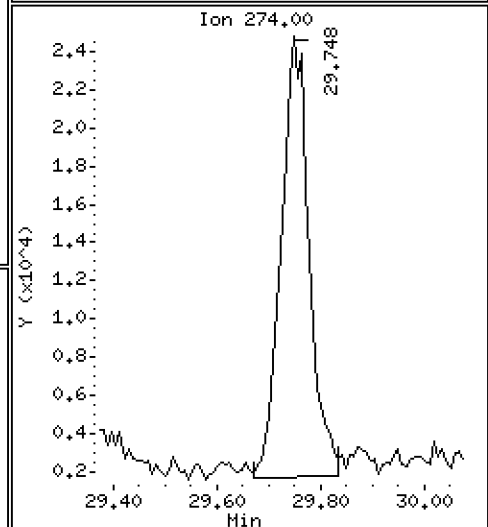
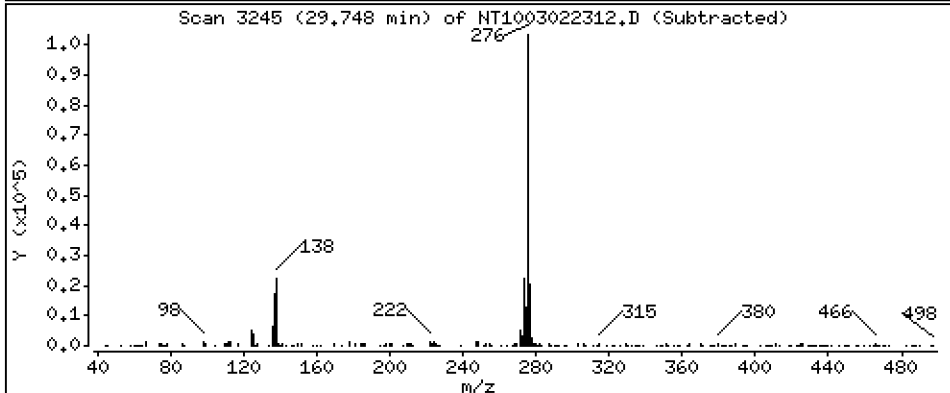
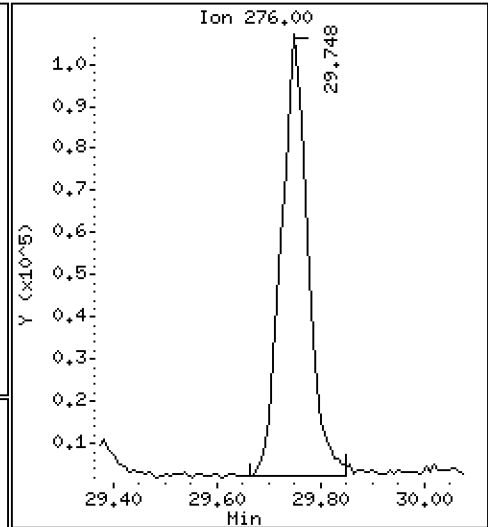
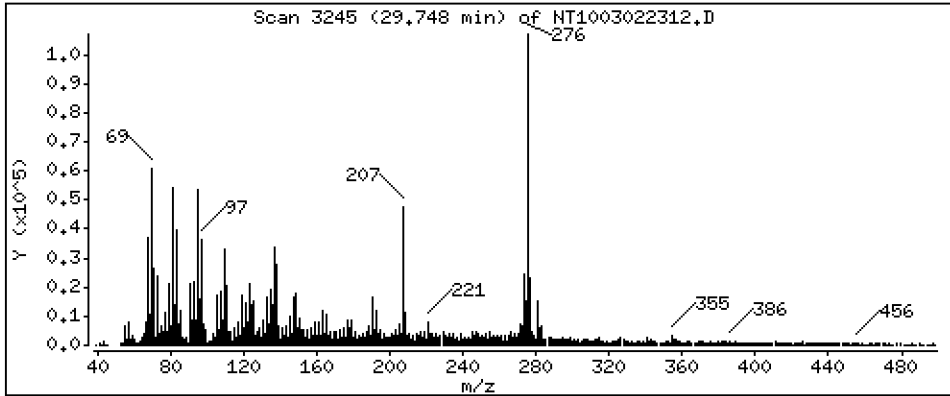
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,4949 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

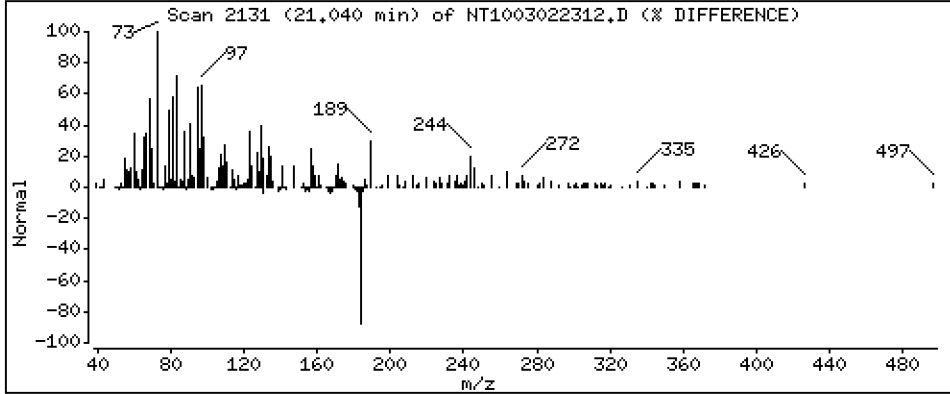
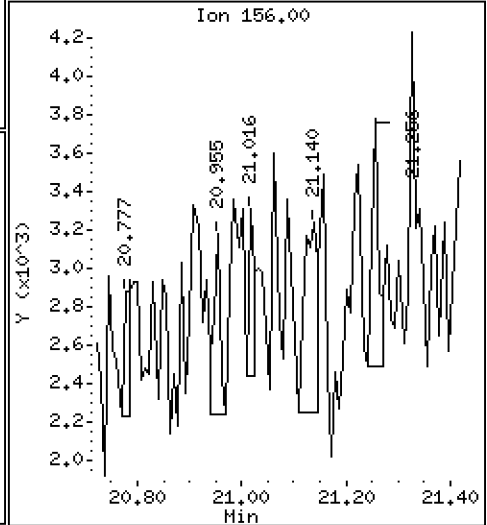
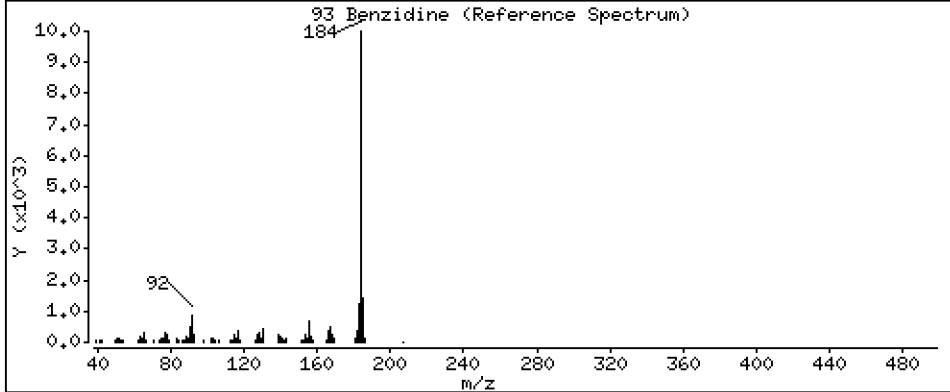
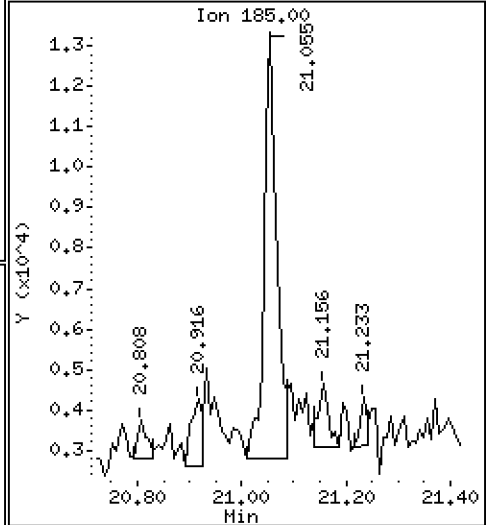
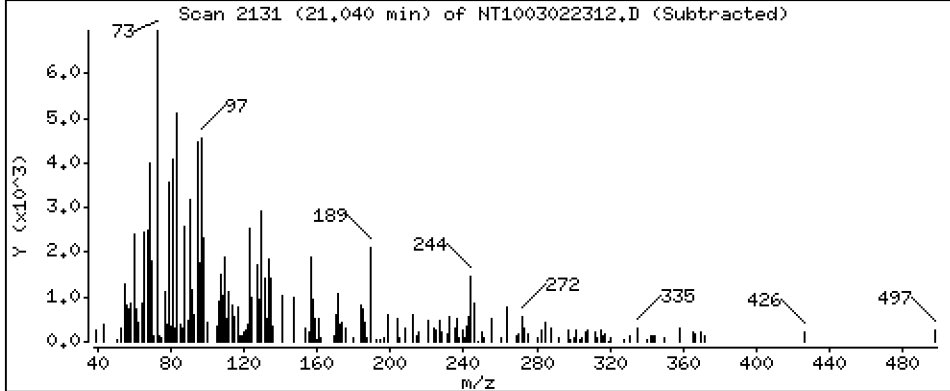
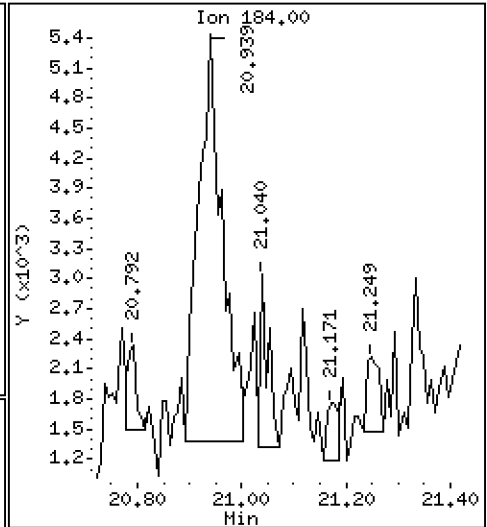
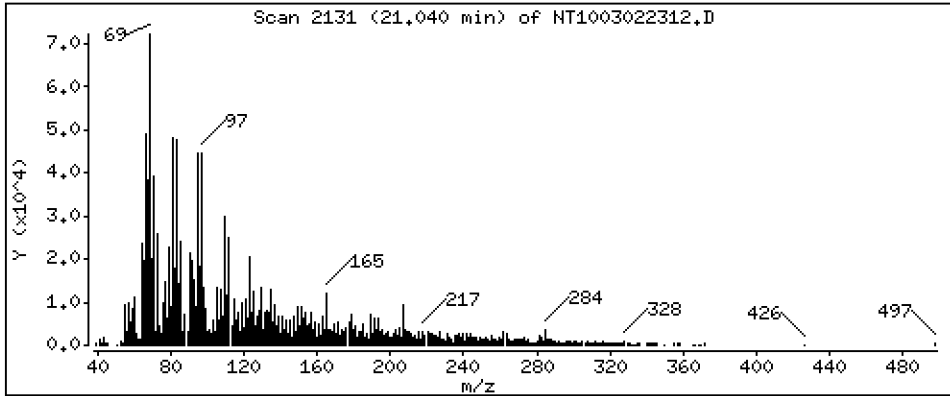
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.004863 ug/mL

93 Benzidine



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

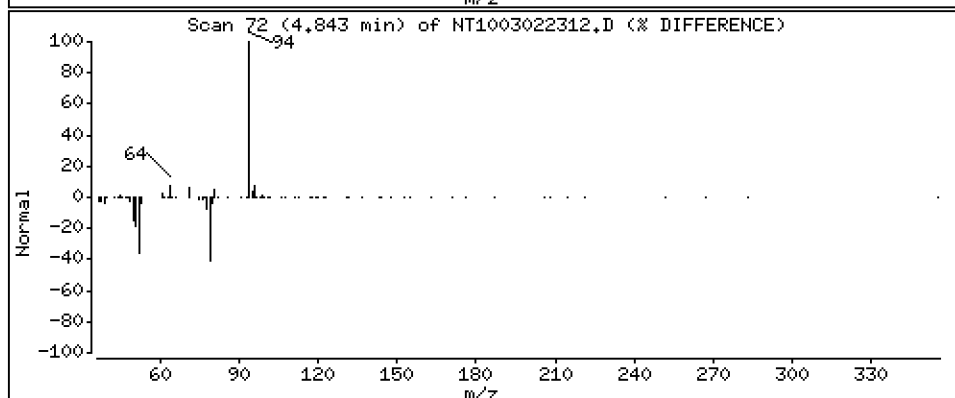
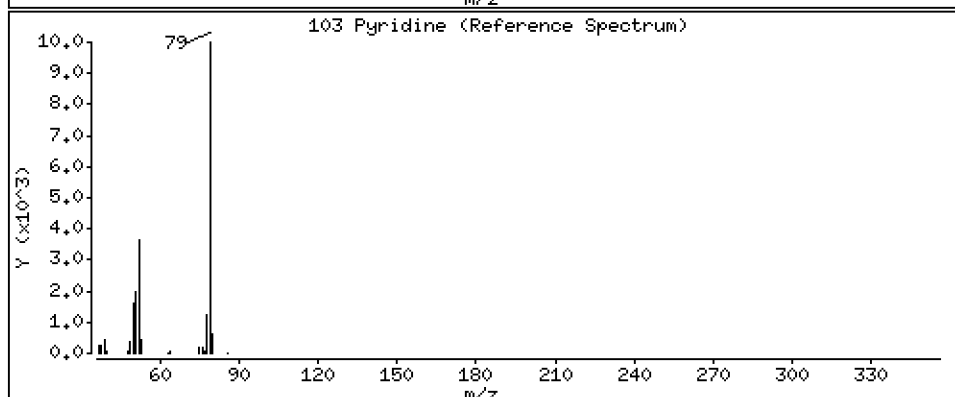
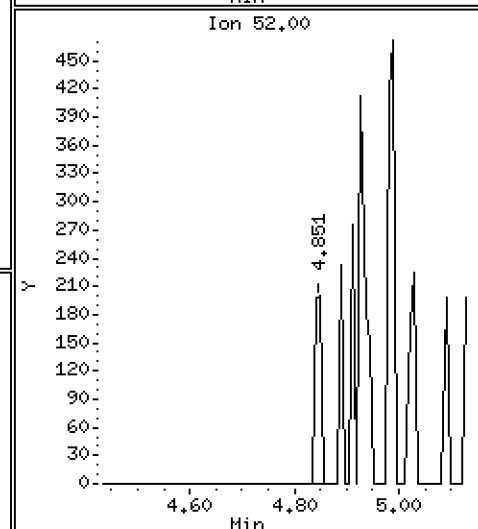
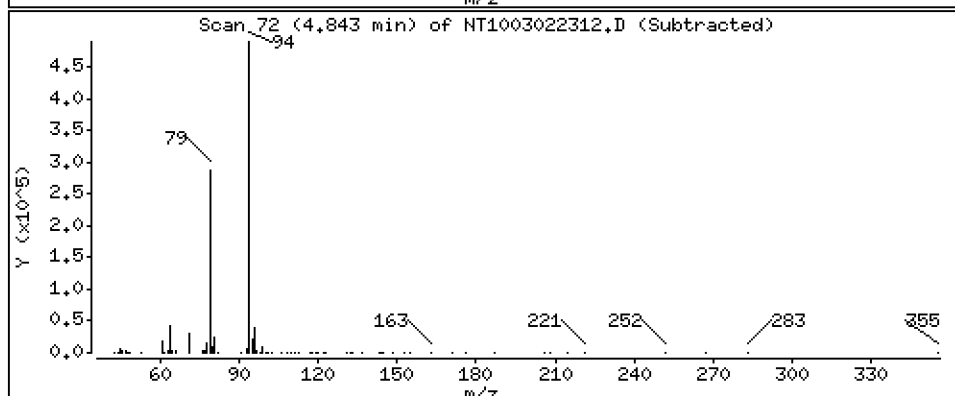
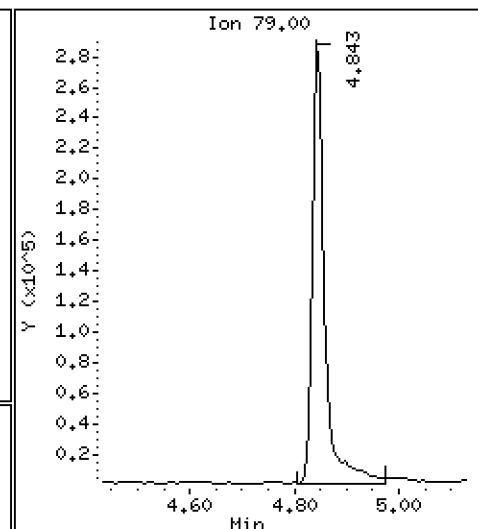
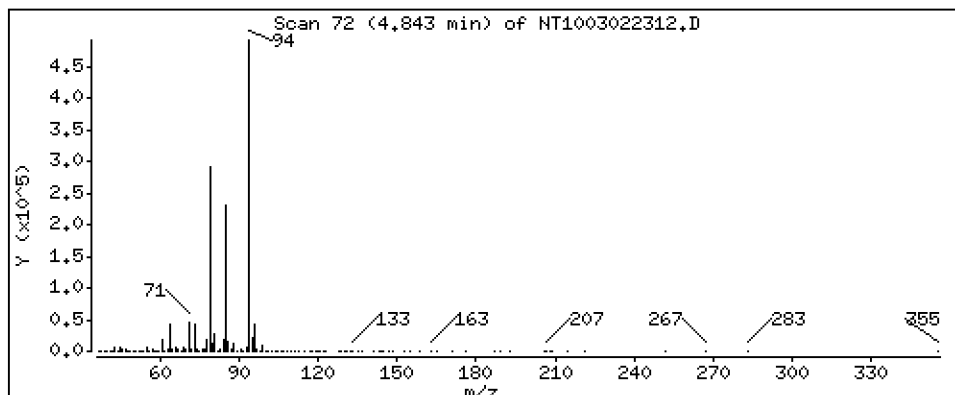
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 2,021 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

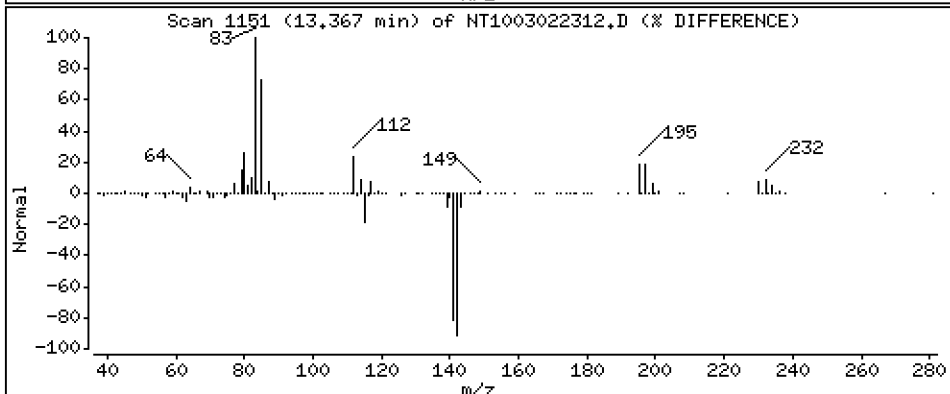
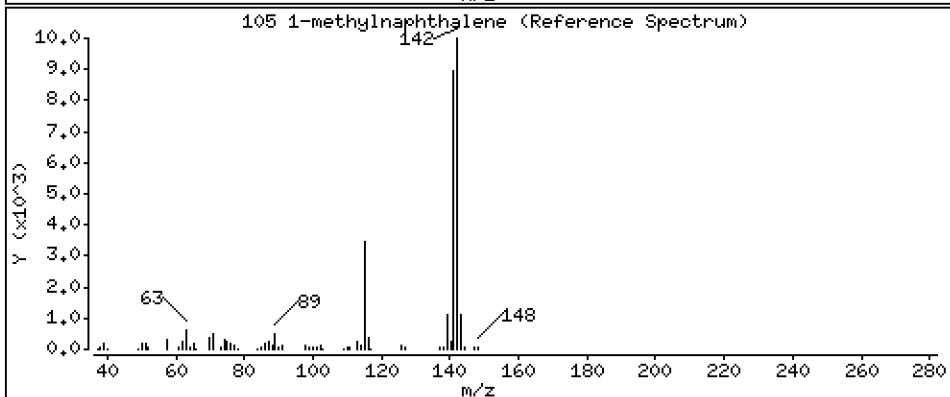
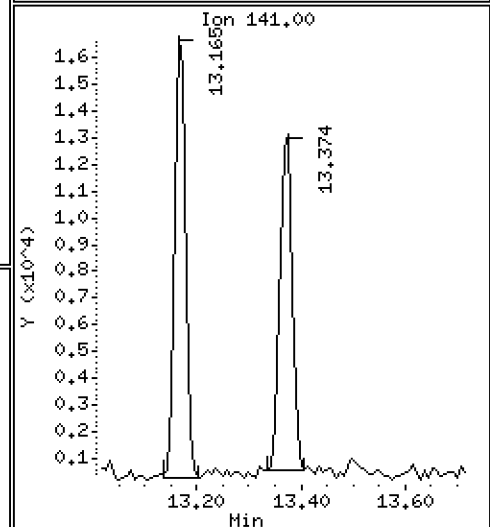
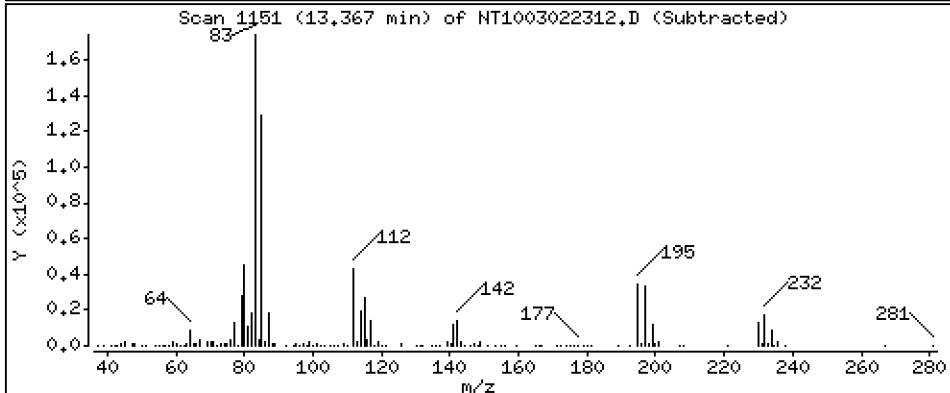
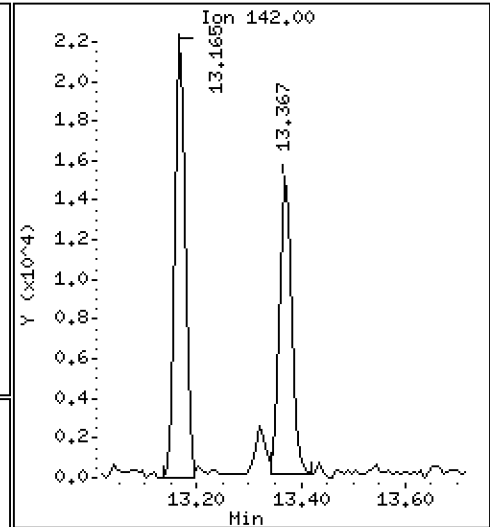
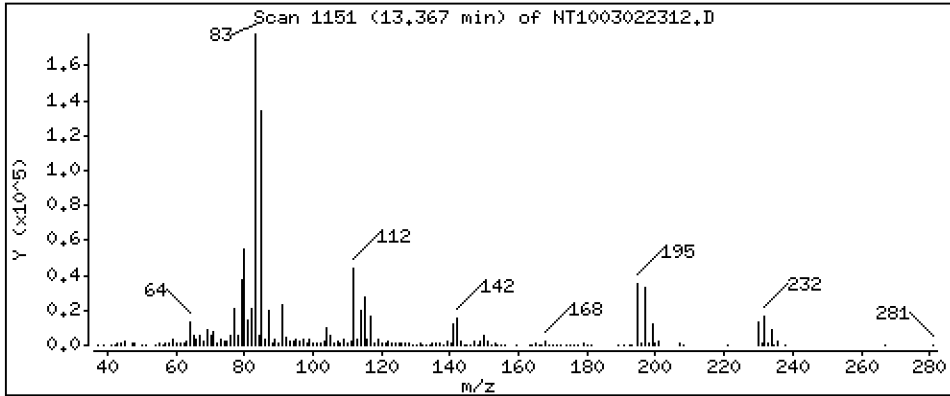
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,05962 ug/mL



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

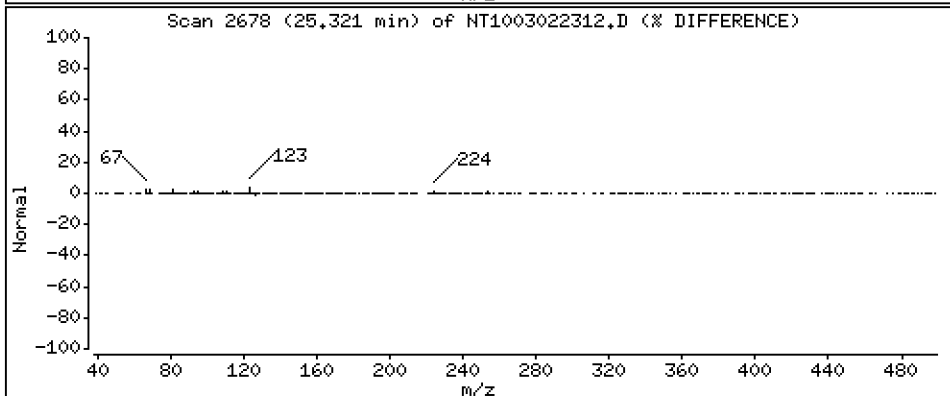
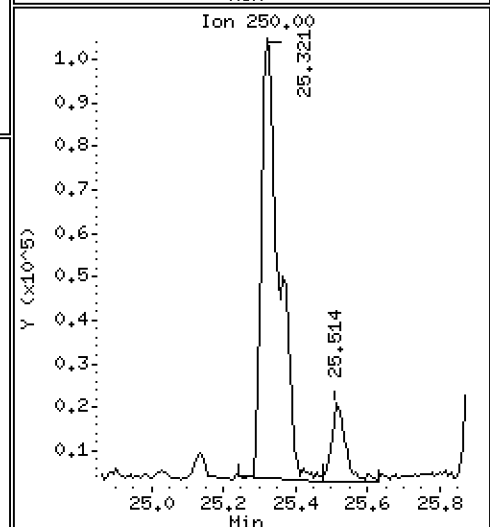
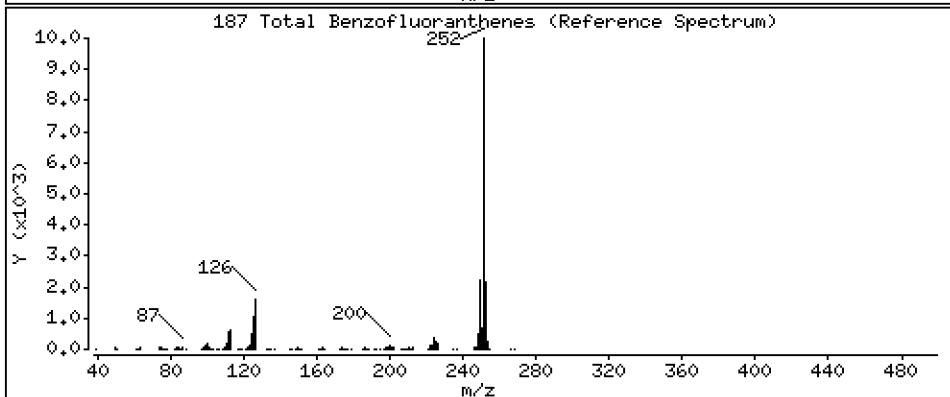
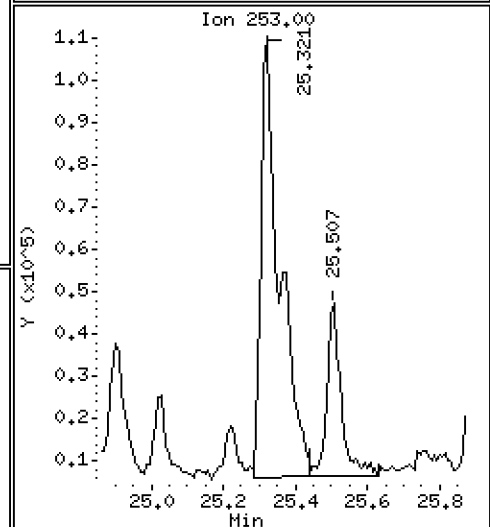
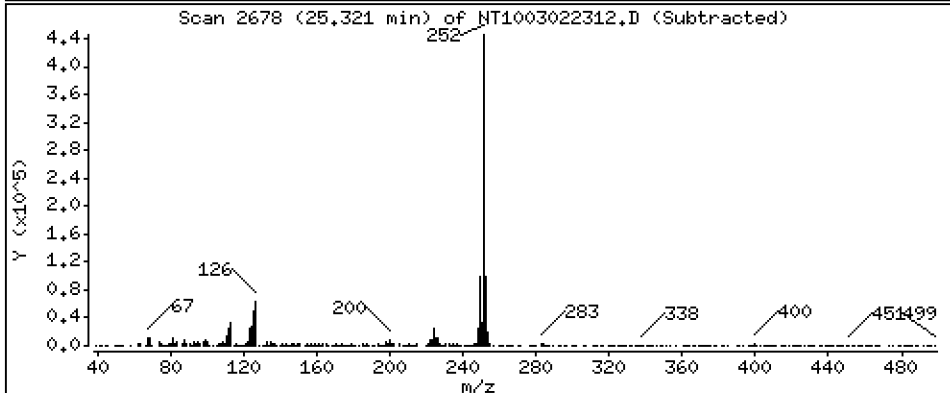
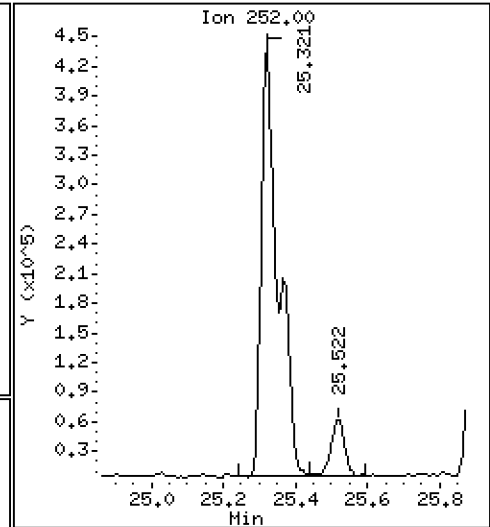
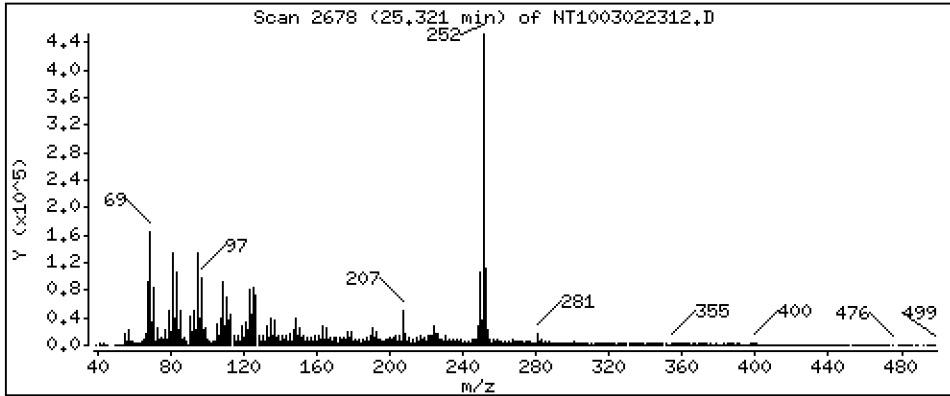
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 1,609 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022312.D  
 Lab Smp Id: 23A0206-01  
 Inj Date : 02-MAR-2023 21:22  
 Operator : VTS  
 Smp Info : 23A0206-01  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.904	6.897	(0.747)	1289377	6.26835	6.268
\$ 2 Phenol-d5	99		8.496	8.489	(0.919)	1726746	7.23058	7.231
3 Phenol	94		8.527	8.512	(0.922)	2883967	11.3585	11.36
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1431215	7.02445	7.024
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	653777	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	604306	3.96983	3.970
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.472	(1.025)	24068	0.18484	0.1848
14 2,2'-oxybis(1-Chloropropane)	121		9.712	9.728	(1.050)	13473	0.20828	0.2083
13 2-Methylphenol	108		9.479	9.650	(1.025)	24068	0.12238	0.1224
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.938	(1.076)	28876	0.11705	0.1170 (M)
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	1168067	4.49997	4.500
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.718	11.726	(1.000)	2364652	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	65358	0.10769	0.1077
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	32713	0.07630	0.07630
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					



Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2068177	4.82844	4.828
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.744	(0.963)	22692	0.05851	0.05851
40 Acenaphthylene	152		15.030	15.023	(0.981)	47446	0.08185	0.08185 (H)
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.316	15.317	(1.000)	1200880	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.005)	36852	0.10541	0.1054
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.741	15.742	(1.028)	45901	0.08846	0.08846
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.205	16.206	(1.058)	112888	0.27477	0.2748
49 Fluorene	166		16.453	16.453	(1.074)	46743	0.10827	0.1083
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.947	(1.107)	488760	6.33948	6.339
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266		17.999	17.983	(0.978)	1261	0.01841	0.01841
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2204094	4.00000	
60 Phenanthrene	178		18.455	18.455	(1.003)	339629	0.60211	0.6021
61 Anthracene	178		18.563	18.564	(1.008)	145061	0.26521	0.2652
62 Carbazole	167		18.896	18.889	(1.026)	53325	0.10642	0.1064
63 Di-n-butylphthalate	149		19.592	19.593	(1.064)	47295	0.06960	0.06960
64 Fluoranthene	202		20.838	20.815	(0.889)	963825	1.11080	1.111
65 Pyrene	202		21.256	21.248	(0.907)	974053	1.10246	1.102
\$ 66 Terphenyl-d14	244		21.534	21.527	(0.919)	3077839	4.30527	4.305
67 Butylbenzylphthalate	149		22.417	22.410	(0.957)	36136	0.07593	0.07593
68 Benzo(a)anthracene	228		23.408	23.409	(0.999)	621971	0.69934	0.6993
* 69 Chrysene-d12	240		23.431	23.424	(1.000)	2522283	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.470	23.470	(1.002)	803454	1.11160	1.112
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	469159	0.67672	0.6767
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	4928999	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.320	25.305	(0.969)	1041309	1.12650	1.126
75 Benzo(k)fluoranthene	252		25.367	25.367	(0.971)	469543	0.53093	0.5309 (M)
76 Benzo(a)pyrene	252		26.010	25.994	(0.995)	533270	0.64873	0.6487
* 77 Perylene-d12	264		26.133	26.118	(1.000)	2683214	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.901	28.878	(1.106)	350394	0.36558	0.3656
79 Dibenzo(a,h)anthracene	278		28.940	28.932	(1.107)	91948	0.12683	0.1268
80 Benzo(g,h,i)perylene	276		29.748	29.725	(1.138)	378244	0.49490	0.4949
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184		21.039	21.070	(0.898)	1873	0.00486	0.004863
103 Pyridine	79		4.843	4.781	(0.524)	475831	2.02053	2.021
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	23138	0.05962	0.05962
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.320	25.367	(0.969)	1423809	1.60883	1.609
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022312.D Calibration Time: 13:34  
 Lab Smp Id: 23A0206-01  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	653777	51.70
27 Naphthalene-d8	1609461	804731	3218922	2364652	46.92
42 Acenaphthene-d10	853113	426557	1706226	1200880	40.76
59 Phenanthrene-d10	1556648	778324	3113296	2204094	41.59
69 Chrysene-d12	1539062	769531	3078124	2522283	63.88
134 Di-n-octylphthala	2949571	1474786	5899142	4928999	67.11
77 Perylene-d12	1634059	817030	3268118	2683214	64.21

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022312.D

Lab ID: 23A0206-01  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 21:22

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.025	1.044	-0.0185	2-Methylphenol
0.524	0.517	0.0067	Pyridine

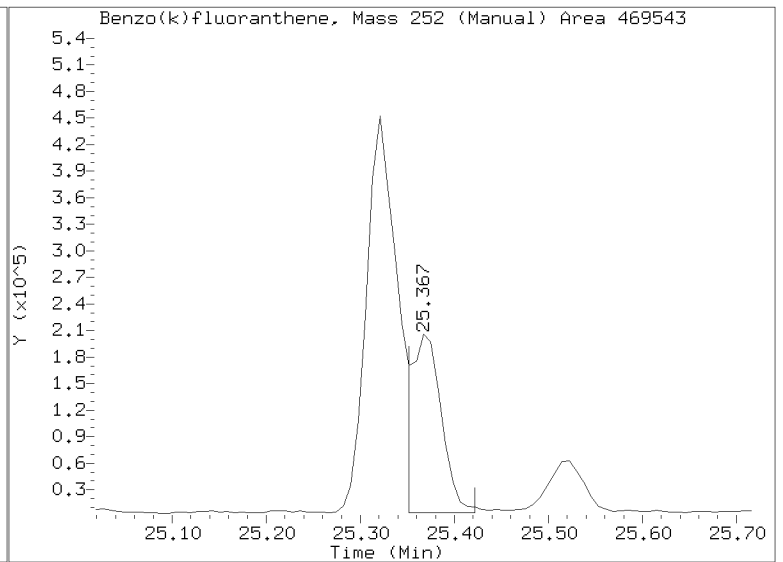
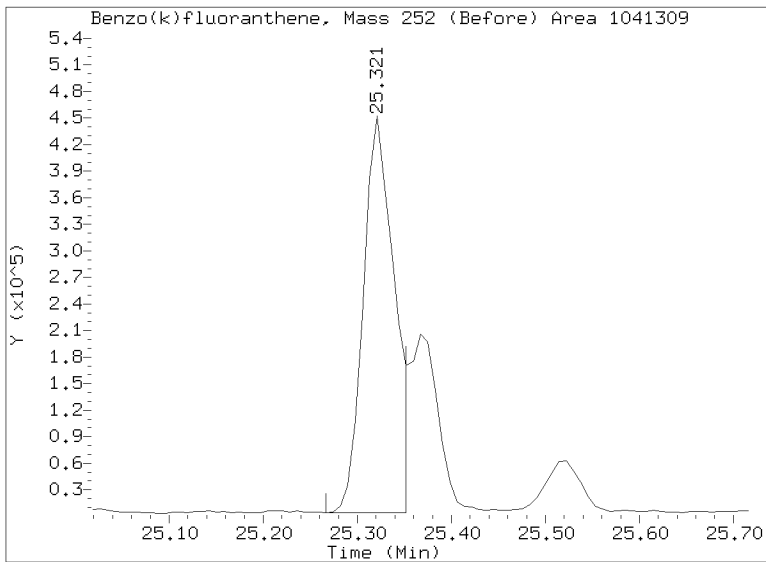
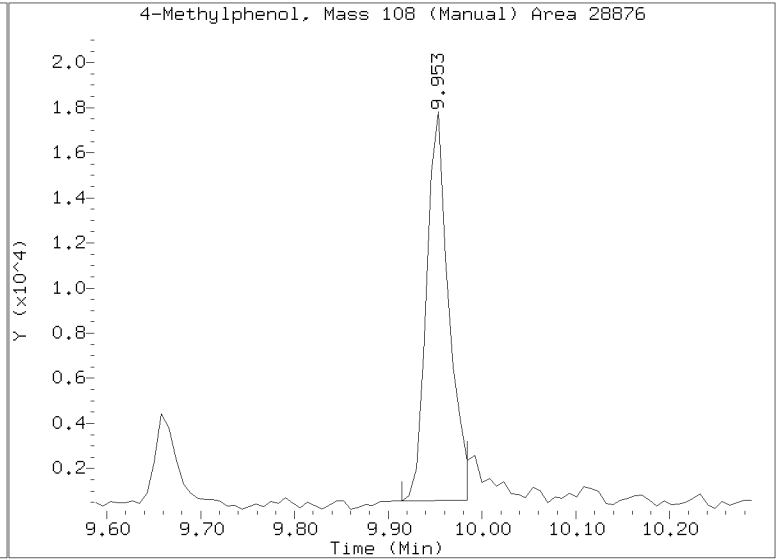
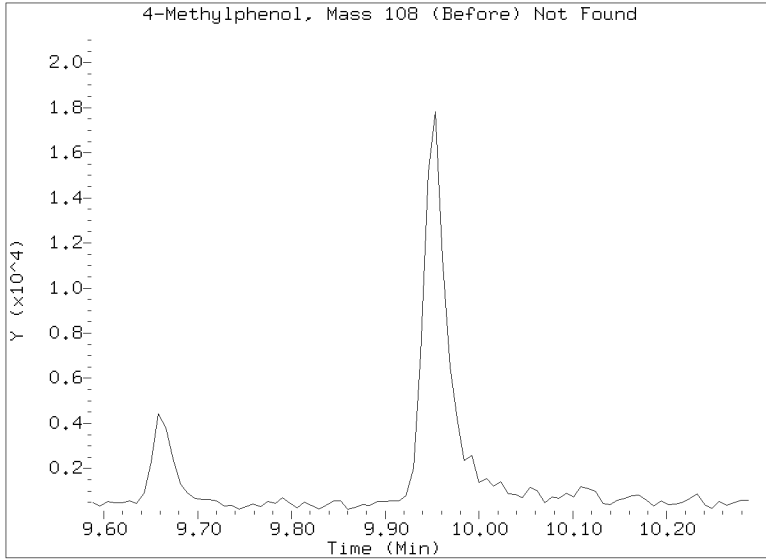
RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/NT1003022312.D  
Injection Date: 02-MAR-2023 21:22  
Lab ID:23A0206-01 Client ID:  
Report Date: 03/09/2023 11:32





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-02 B

SDG: 23A0206

Sampled: 01/11/23 08:37

Prepared: 01/27/23 14:44

File ID: NT1003022313.D

% Solids: 47.11

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 22:00

Batch: BLA0624

Sequence: SLC0120

Initial/Final: 21.28 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1100		4.4	20.0
106-44-5	4-Methylphenol	1	12.1	J	7.4	20.0
91-20-3	Naphthalene	1	10.1	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	6.3	J	4.5	20.0
208-96-8	Acenaphthylene	1	8.7	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	8.8	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	58.9		8.7	20.0
120-12-7	Anthracene	1	30.9		7.2	20.0
206-44-0	Fluoranthene	1	165		6.1	20.0
129-00-0	Pyrene	1	139		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	85.8		5.9	20.0
218-01-9	Chrysene	1	131		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	66.8		5.4	49.9
	Benzo(a)fluoranthene, Total	1	202		10.0	39.9
50-32-8	Benzo(a)pyrene	1	80.1		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	45.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	58.1		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.13	597	79.8	27 - 120	
Phenol-d5	748.13	685	91.6	29 - 120	
2-Chlorophenol-d4	748.13	685	91.5	31 - 120	
1,2-Dichlorobenzene-d4	498.75	394	78.9	32 - 120	
Nitrobenzene-d5	498.75	440	88.2	30 - 120	
2-Fluorobiphenyl	498.75	480	96.3	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-02 B

SDG: 23A0206

Sampled: 01/11/23 08:37

Prepared: 01/27/23 14:44

File ID: NT1003022313.D

% Solids: 47.11

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 22:00

Batch: BLA0624

Sequence: SLC0120

Initial/Final: 21.28 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.13	641	85.7	24 - 134	
p-Terphenyl-d14	498.75	439	88.1	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022313.D

Date: 02-MAR-2023 22:00

Client ID:

Sample Info: 23A0206-02

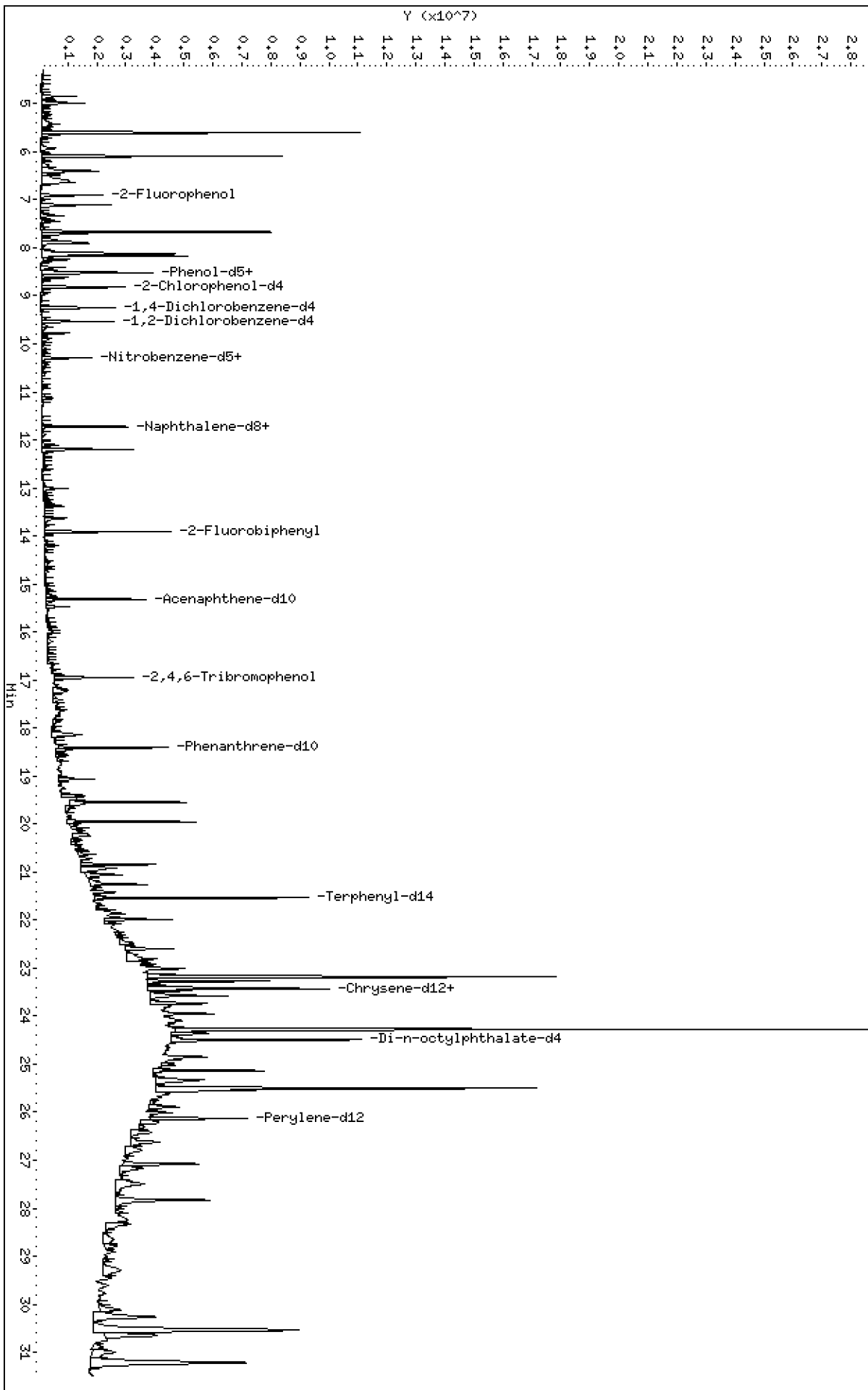
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022313.D





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

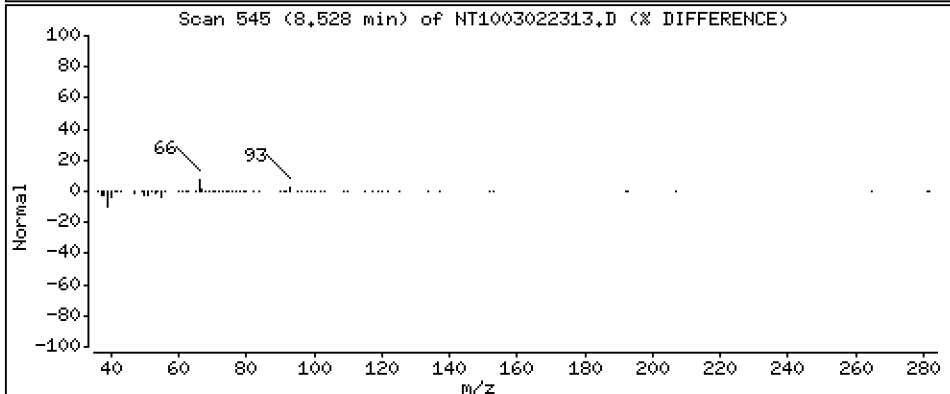
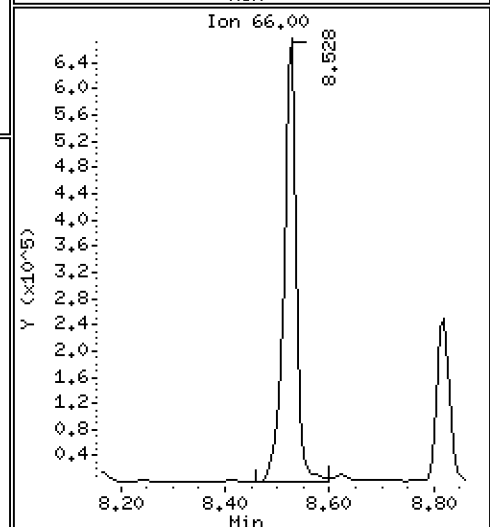
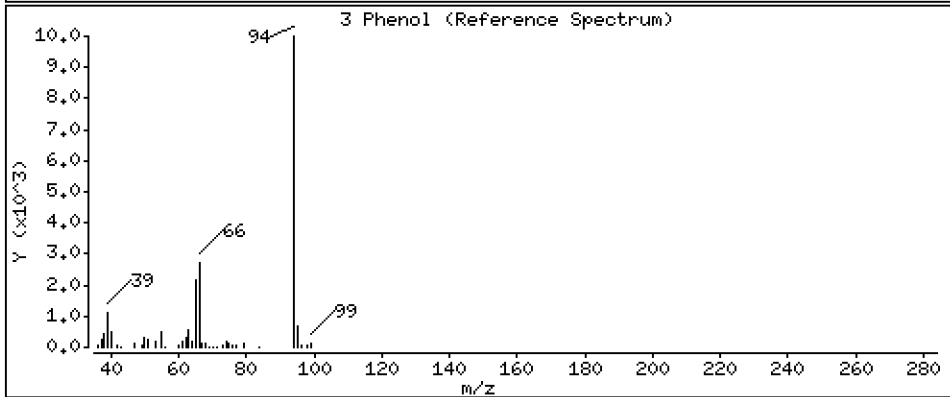
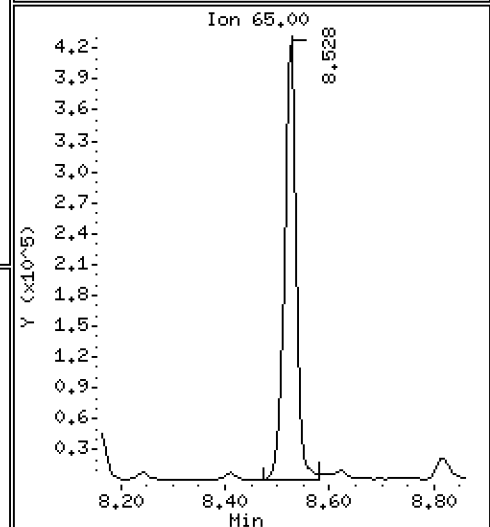
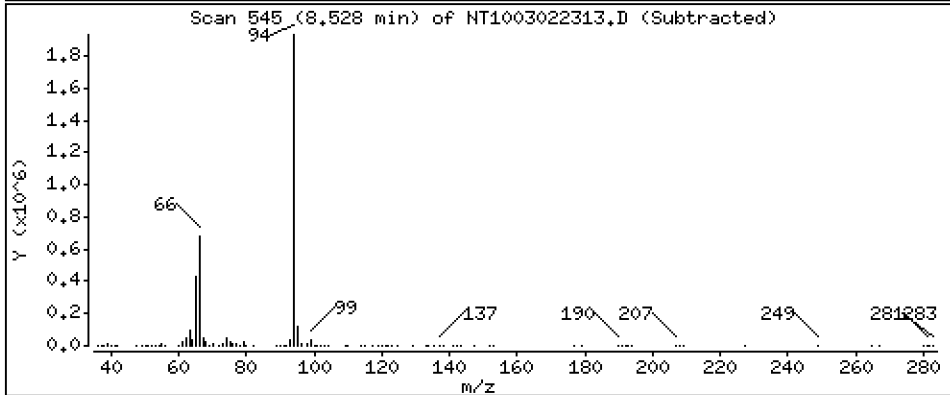
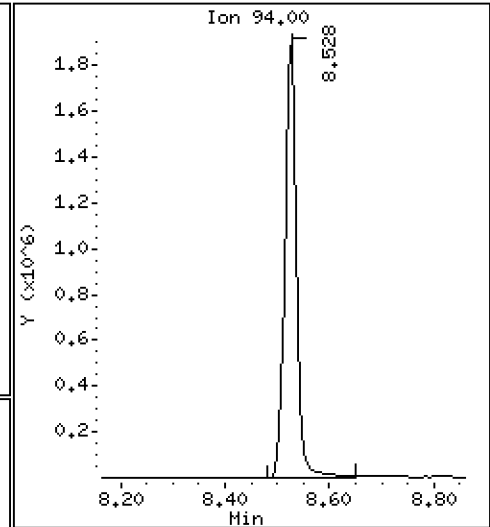
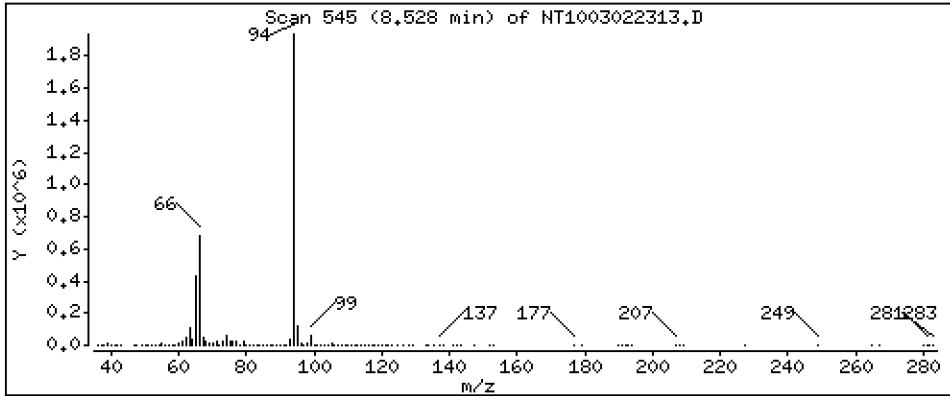
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 10,99 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

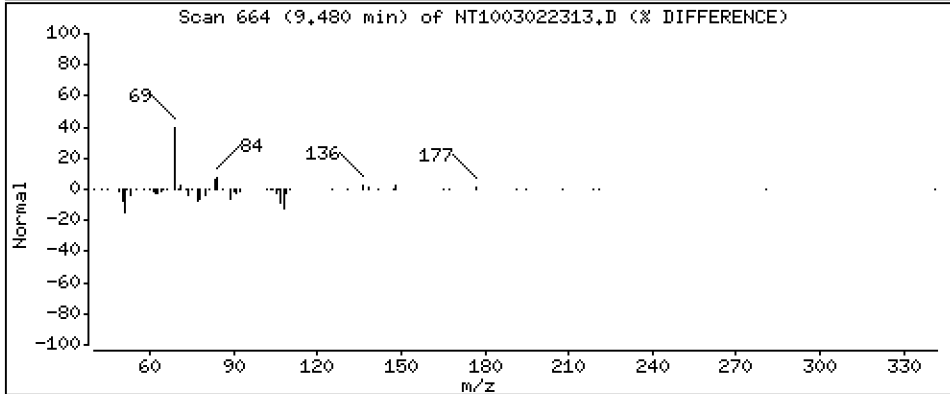
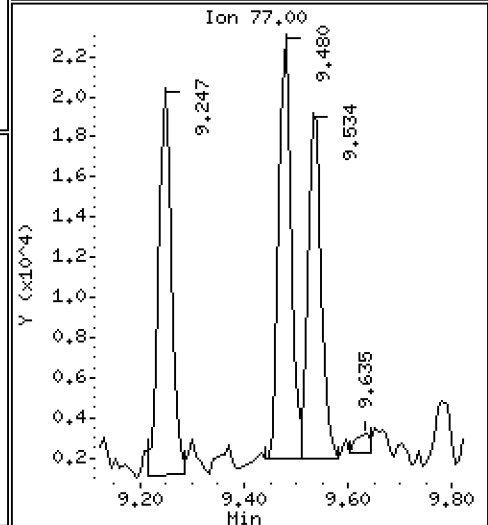
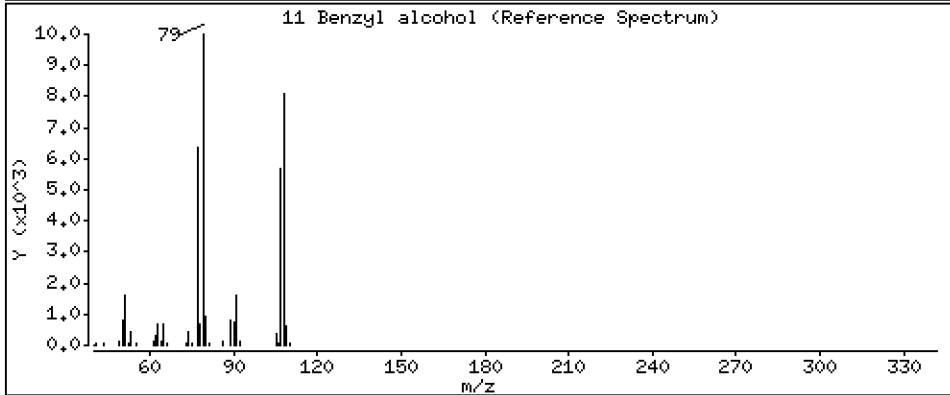
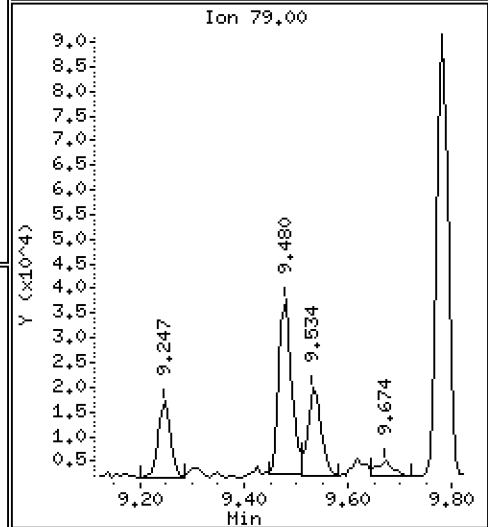
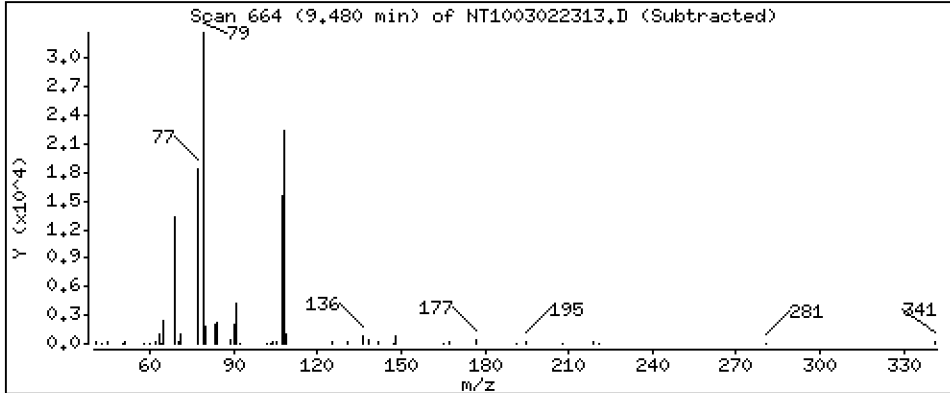
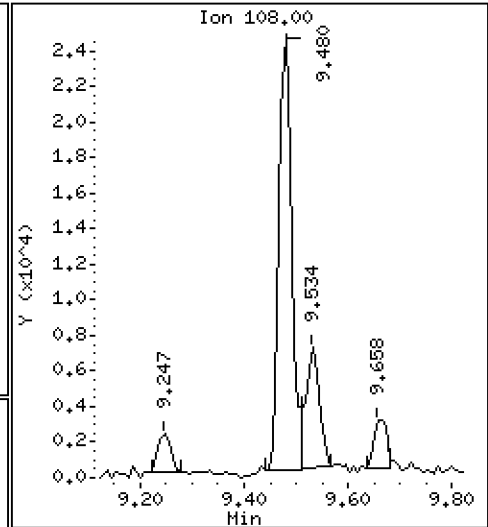
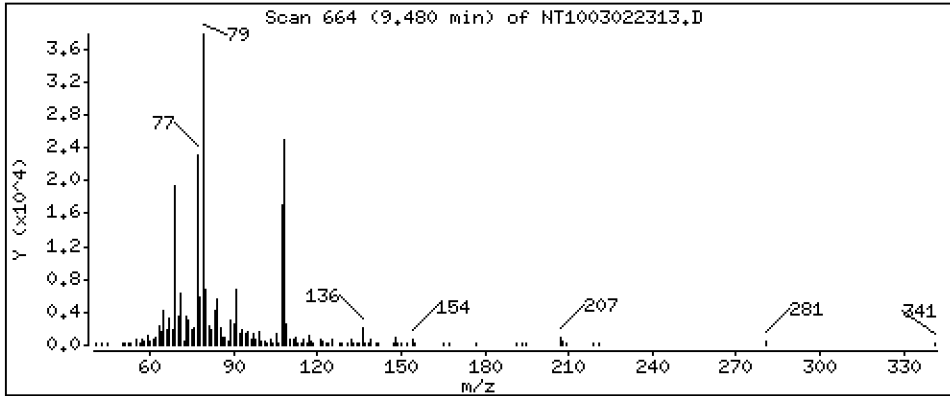
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2877 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

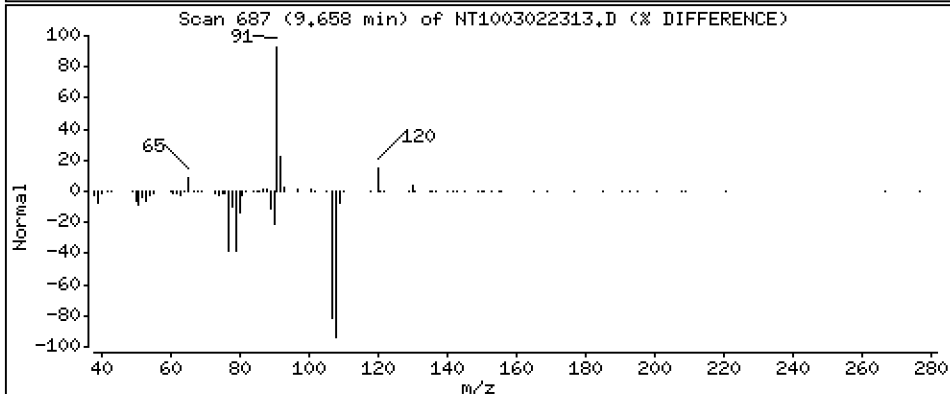
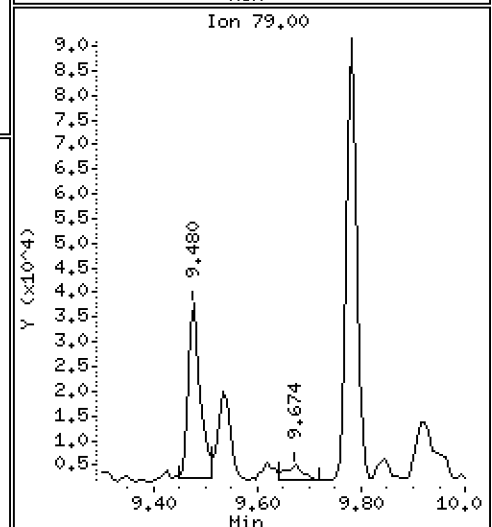
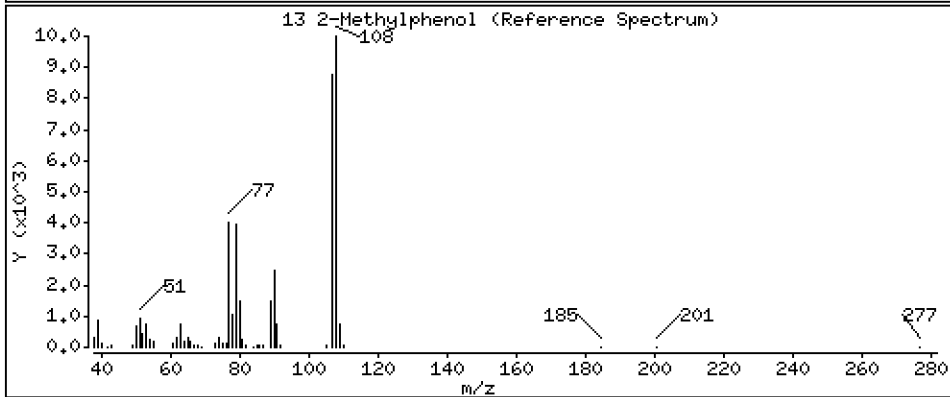
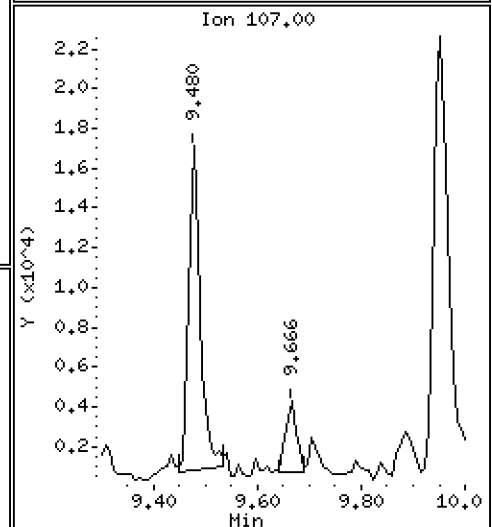
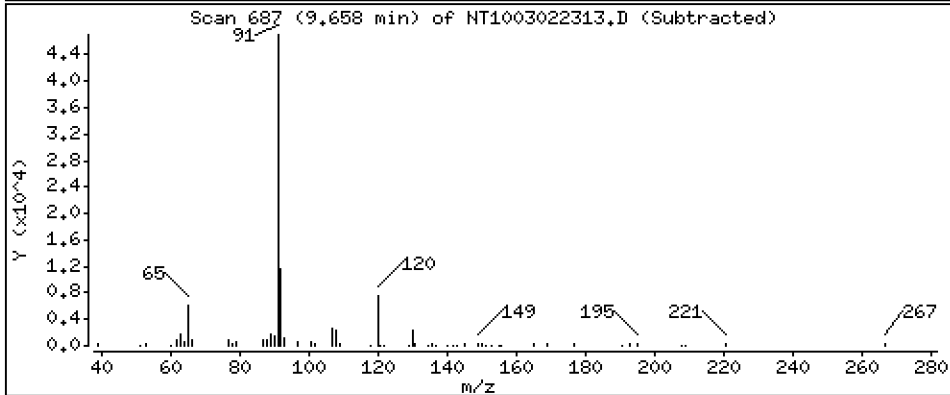
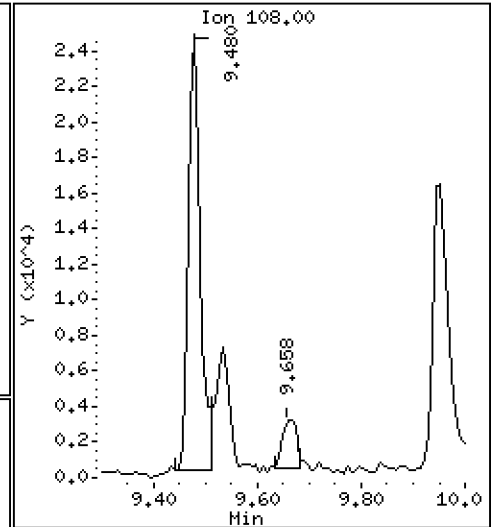
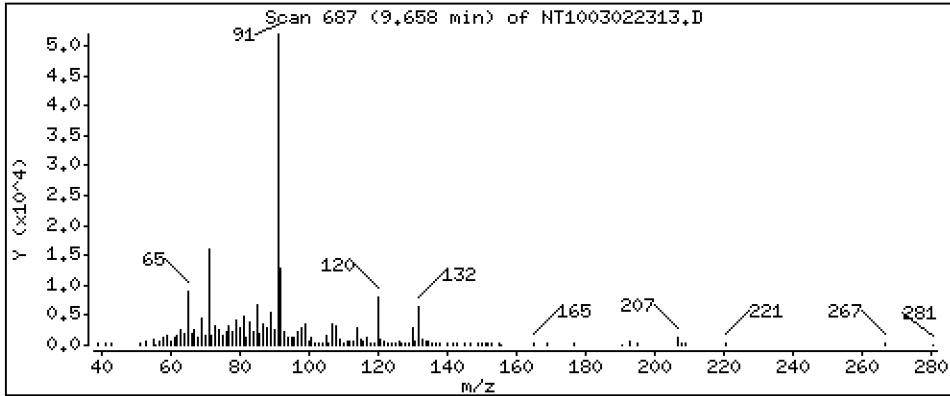
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 0,02415 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

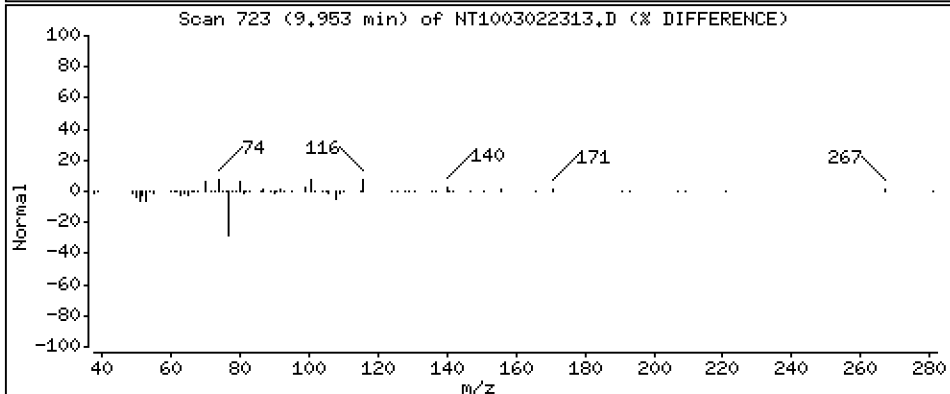
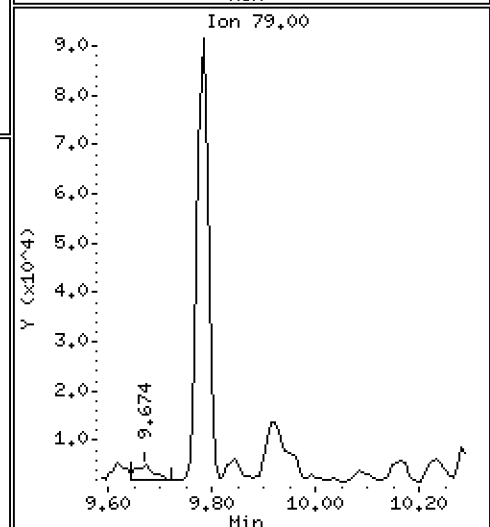
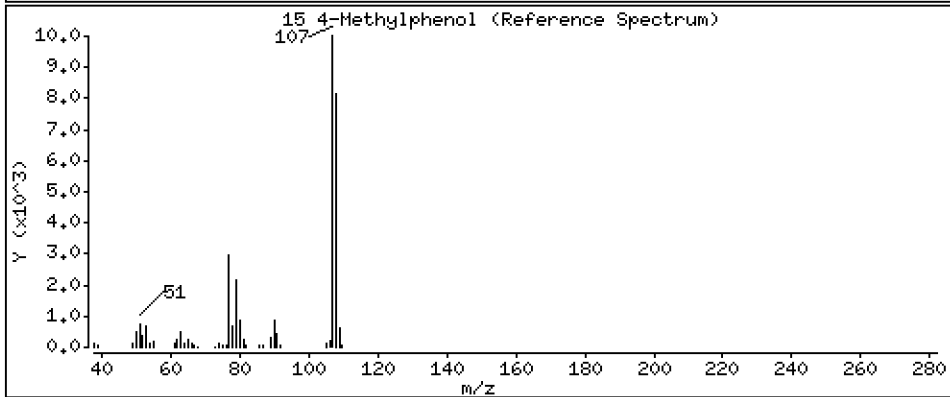
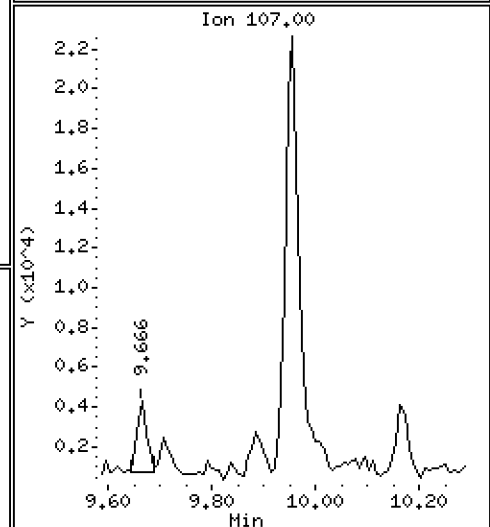
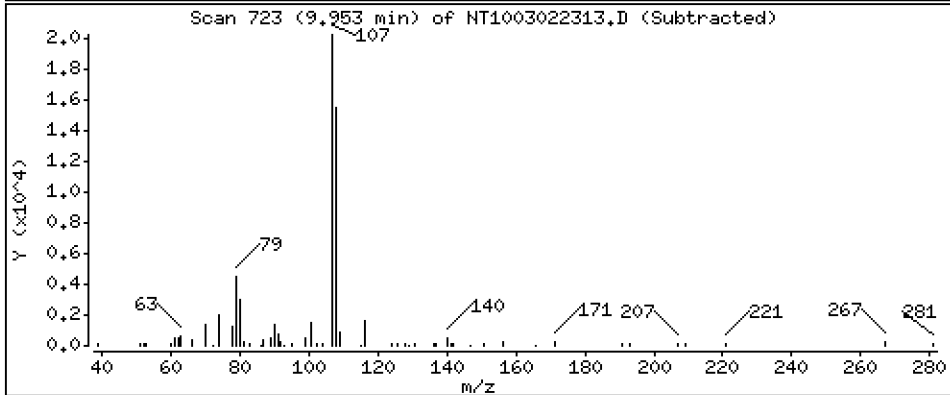
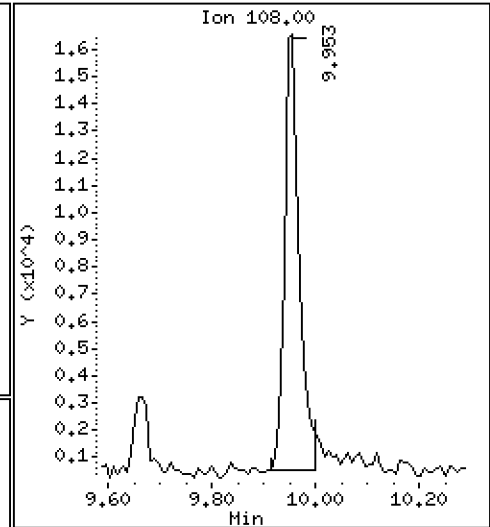
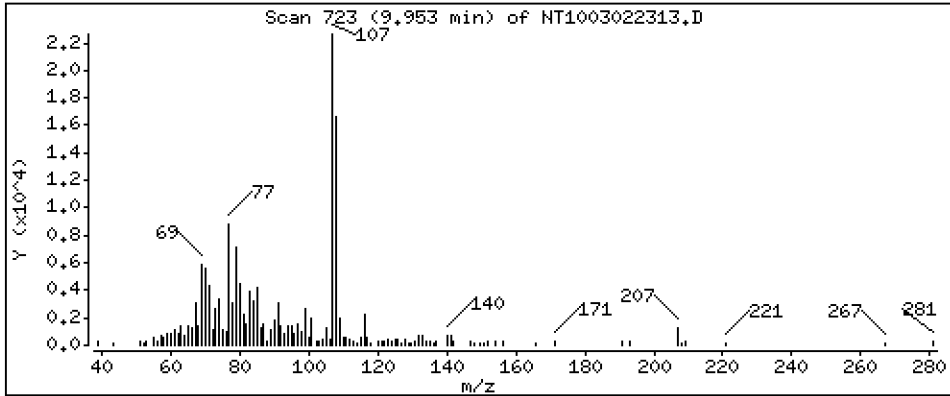
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1213 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

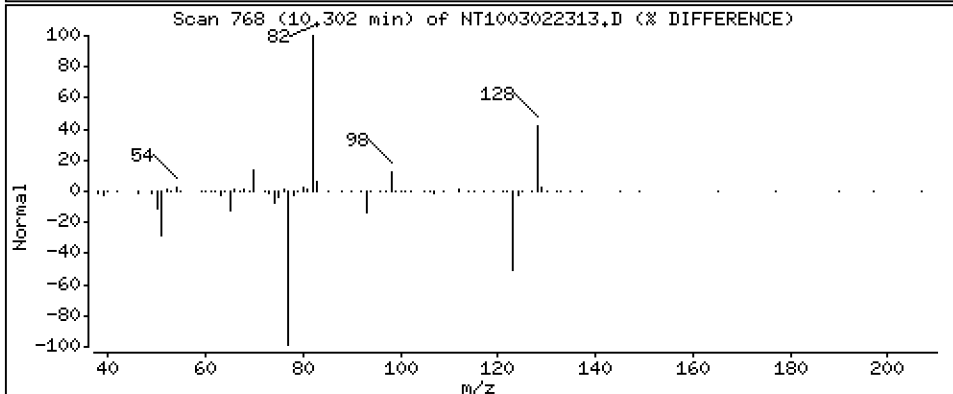
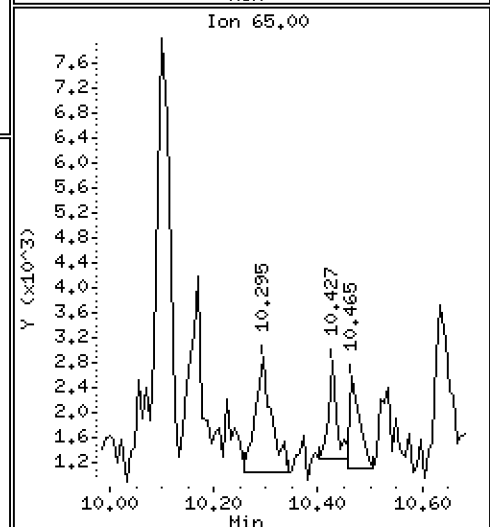
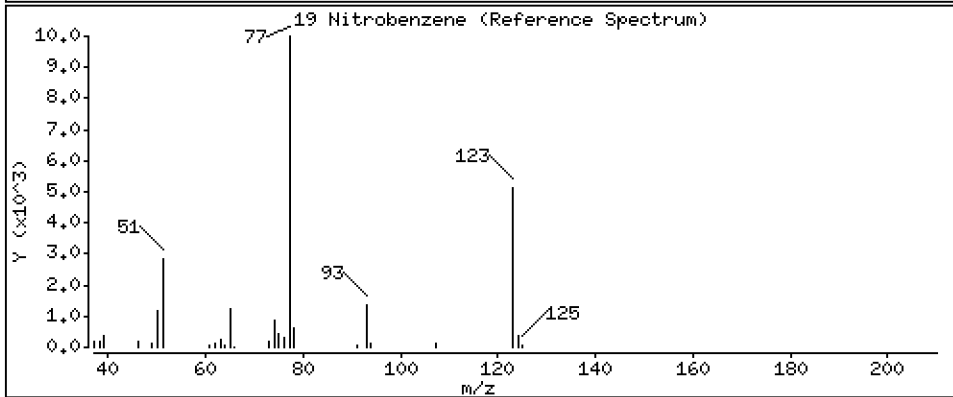
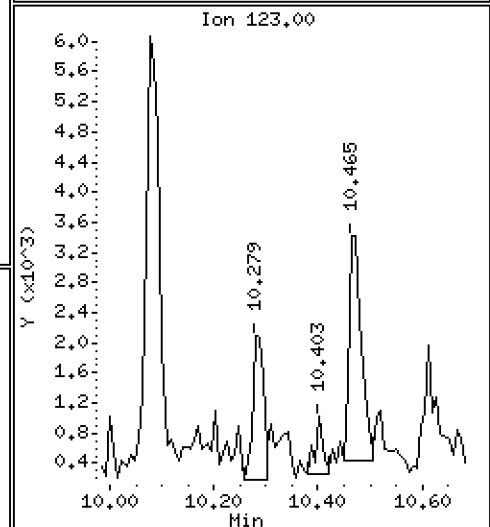
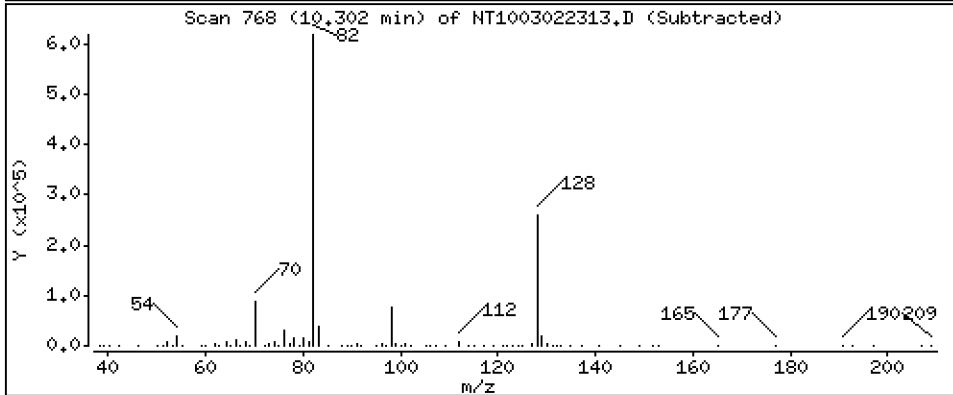
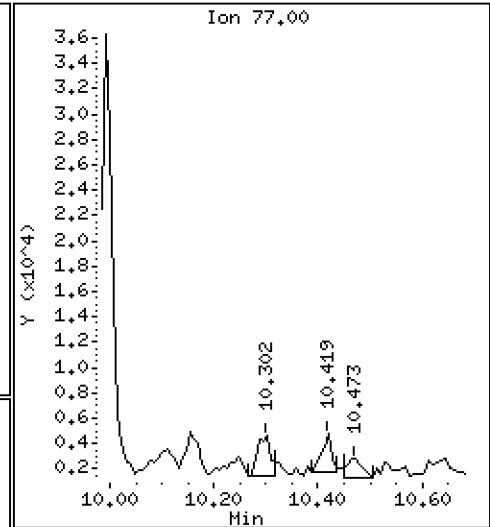
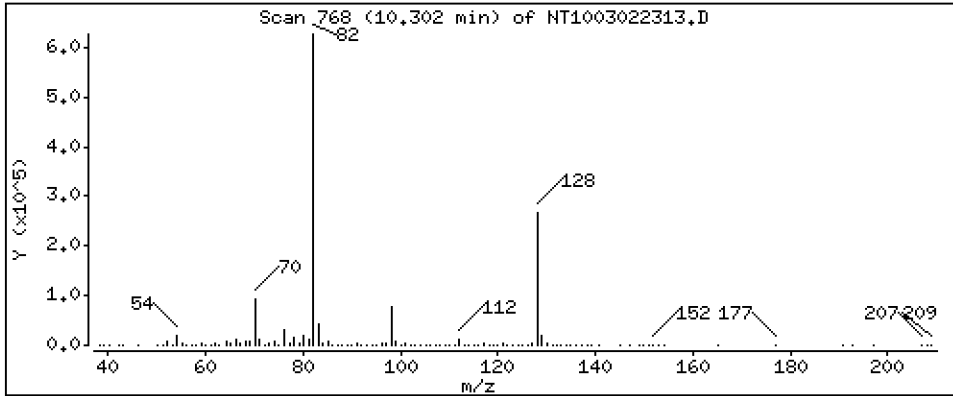
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,02261 ug/mL

19 Nitrobenzene



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

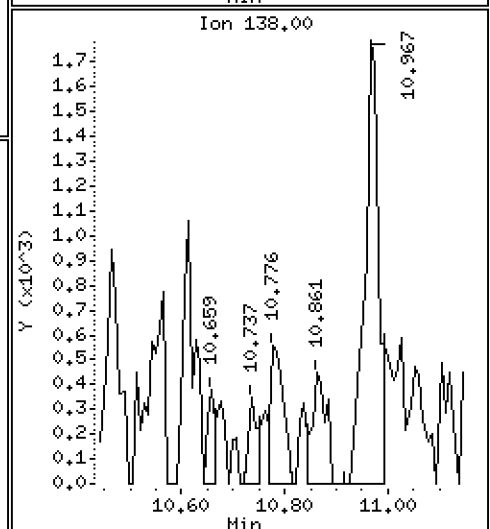
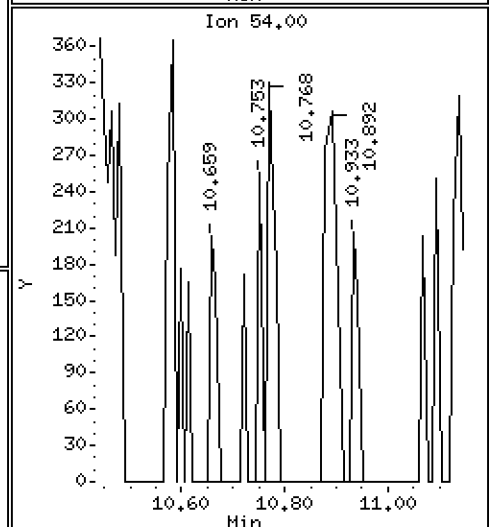
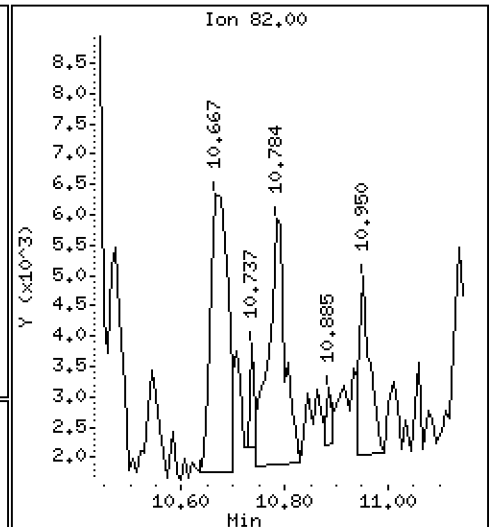
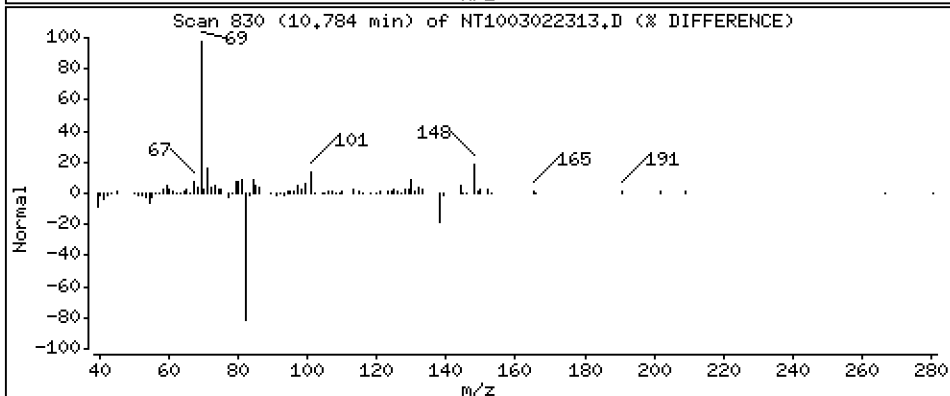
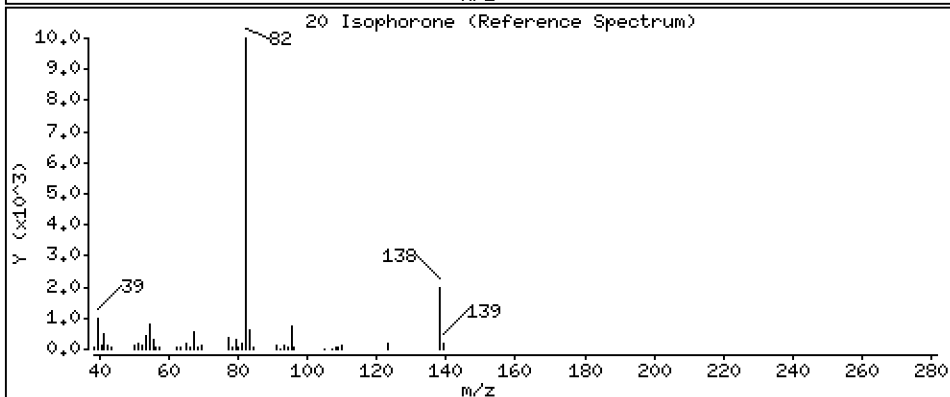
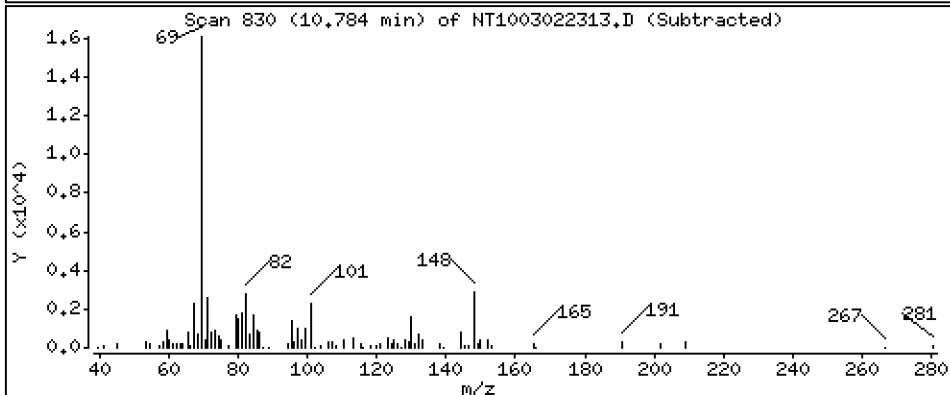
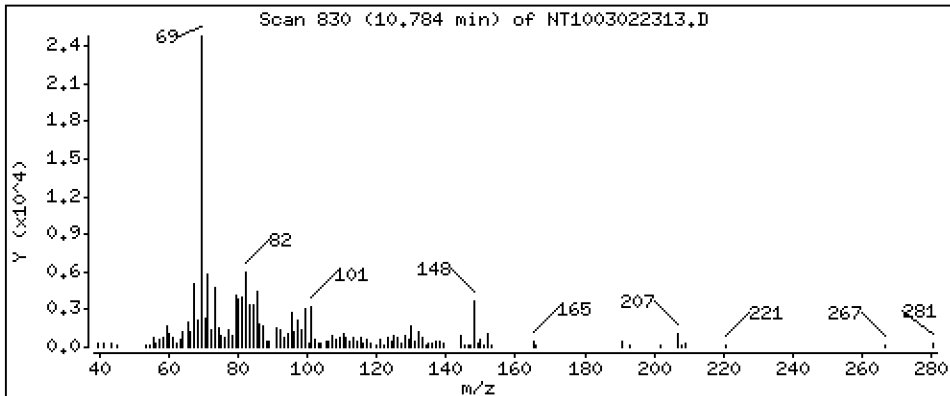
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

20 Isophorone

Concentration: 0.02891 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

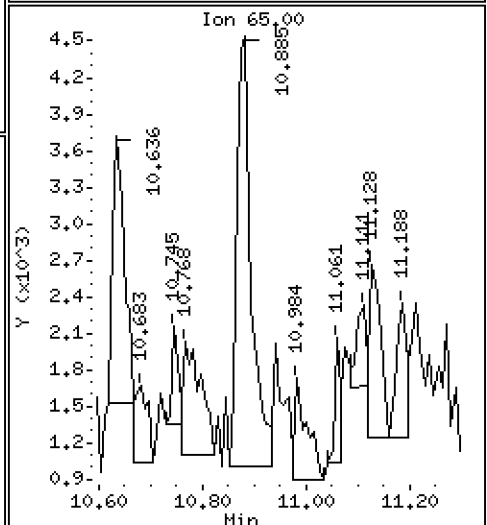
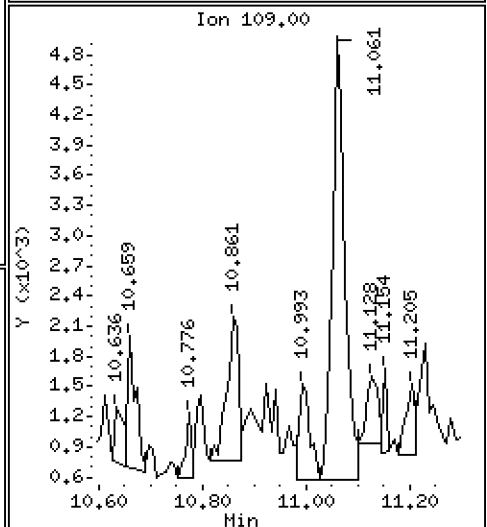
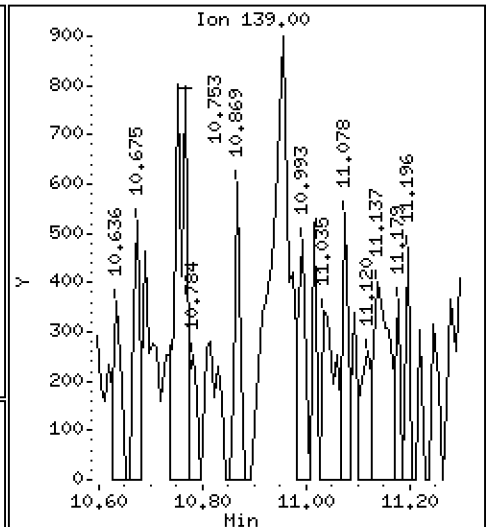
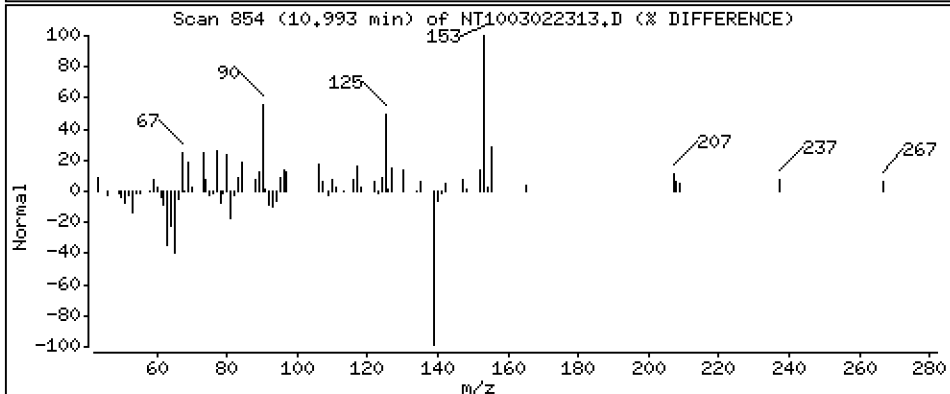
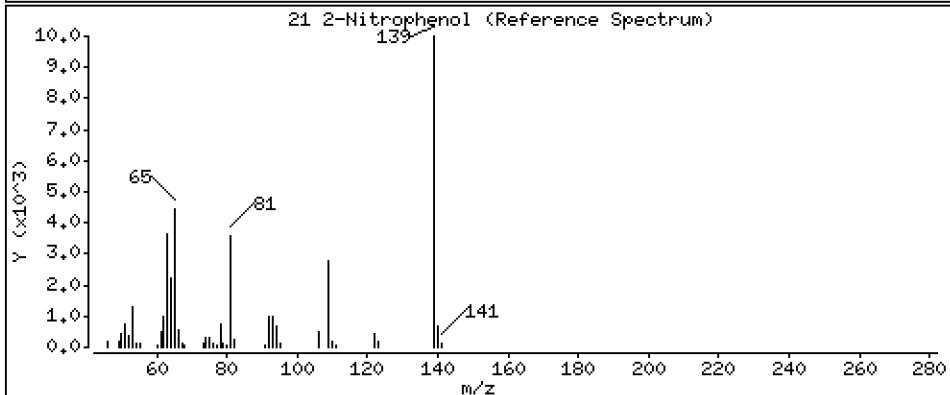
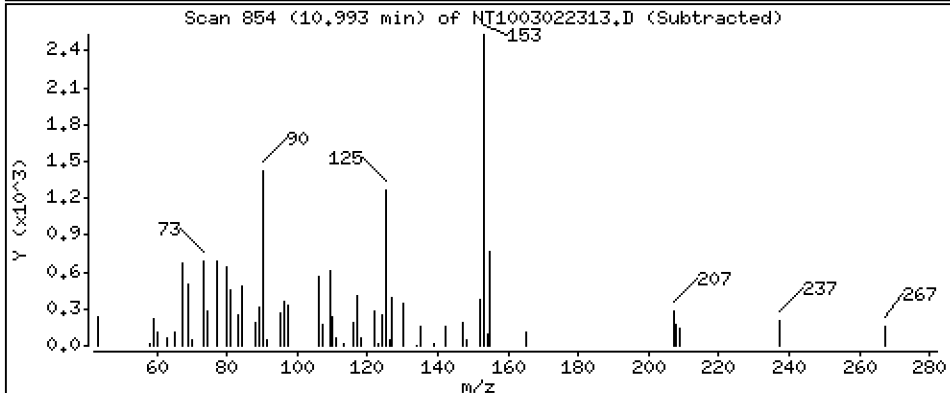
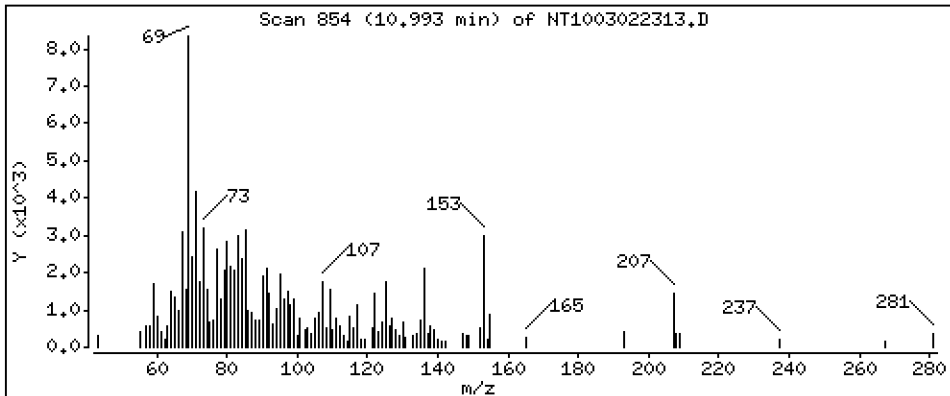
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.003571 ug/mL

21 2-Nitrophenol



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

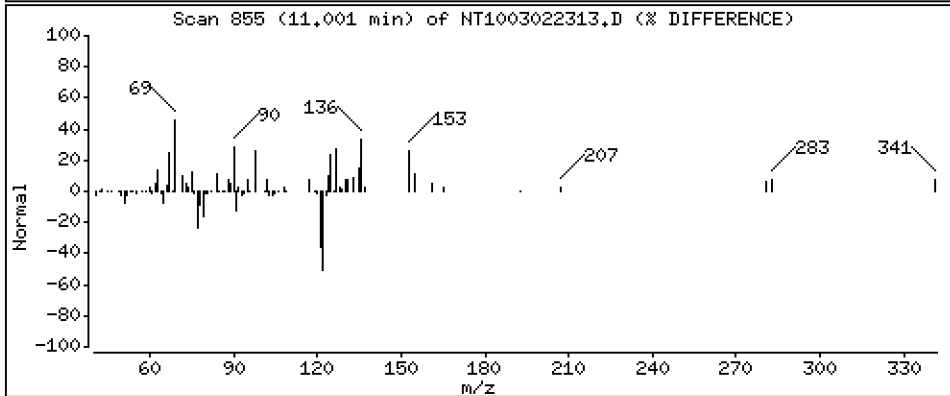
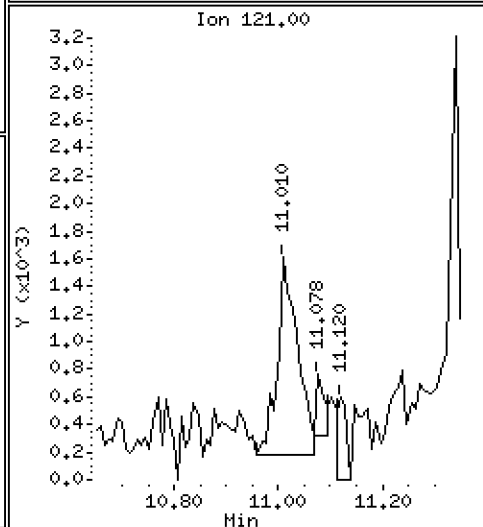
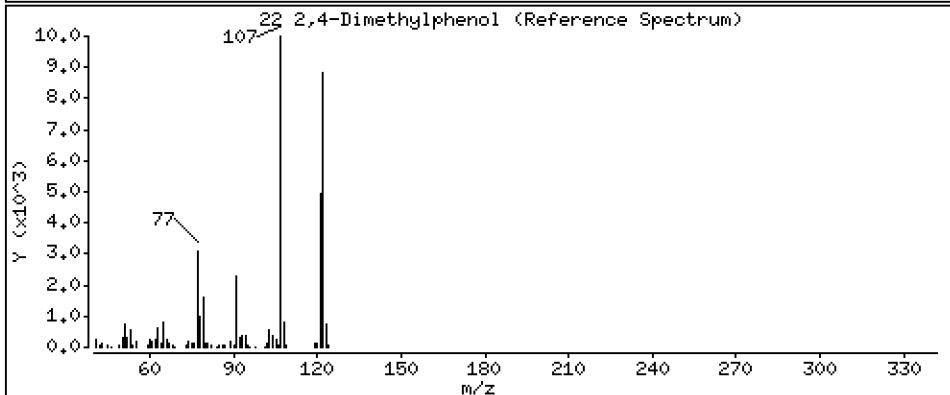
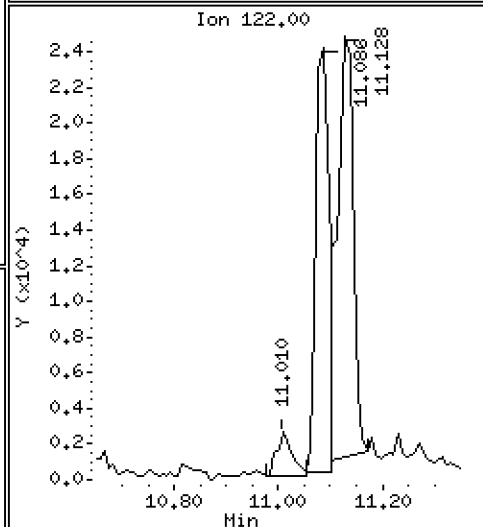
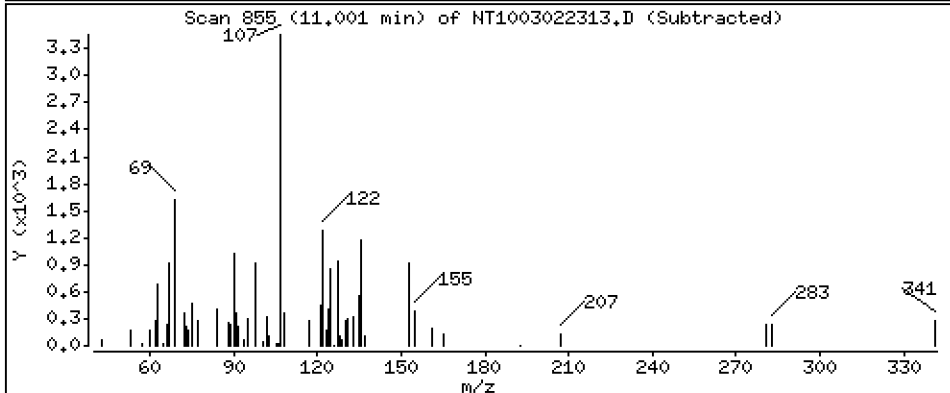
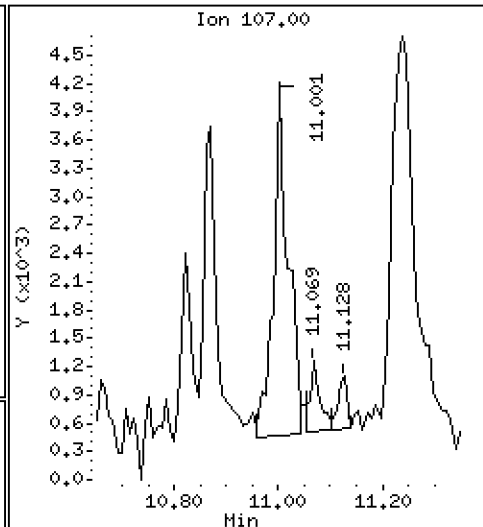
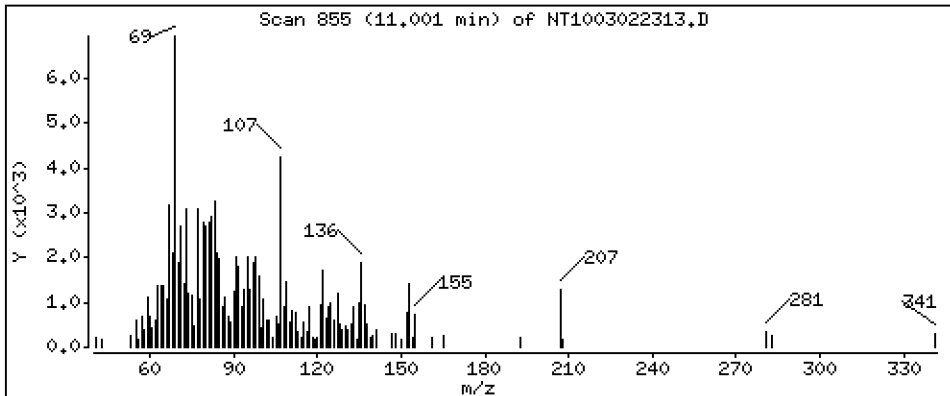
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02957 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

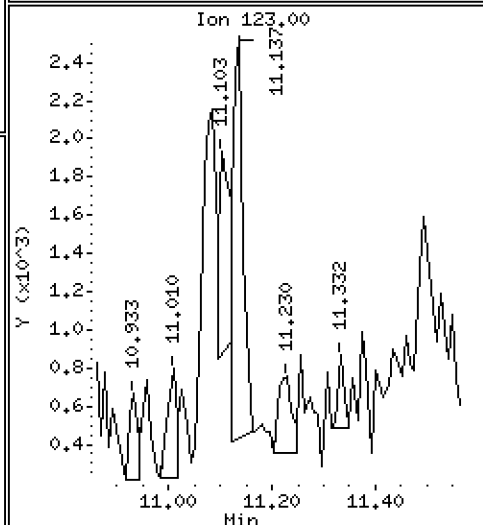
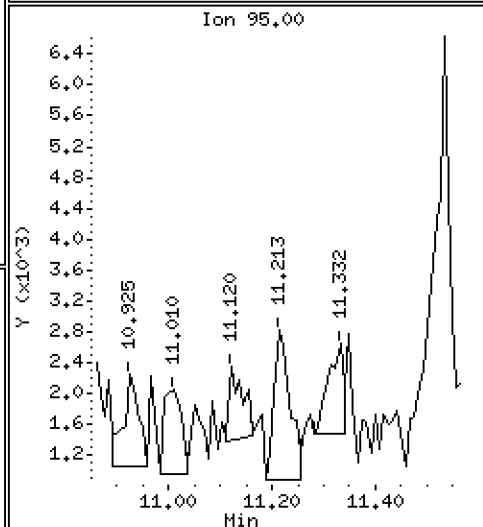
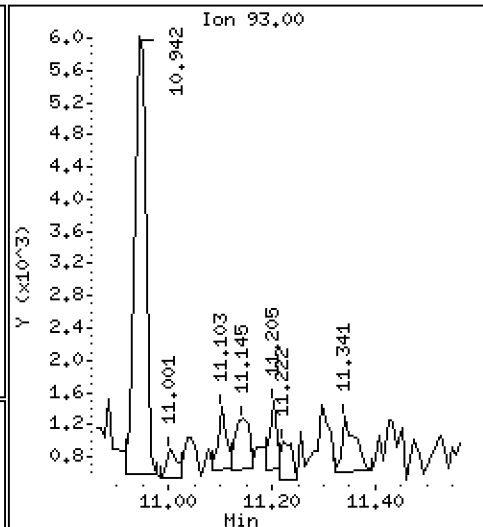
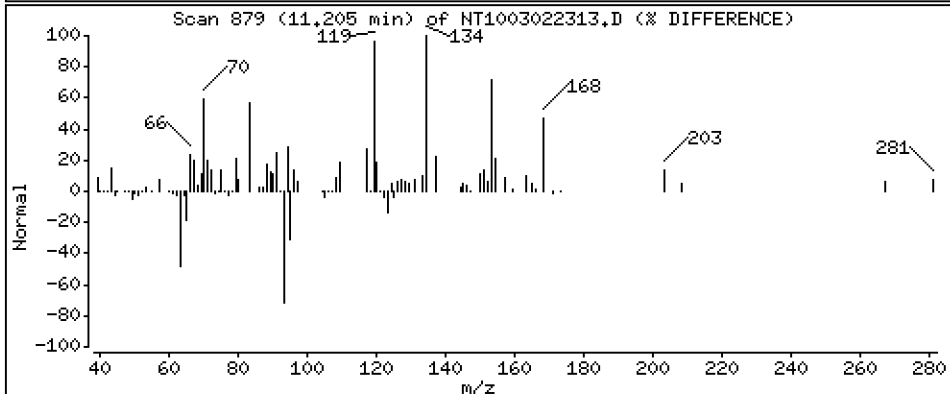
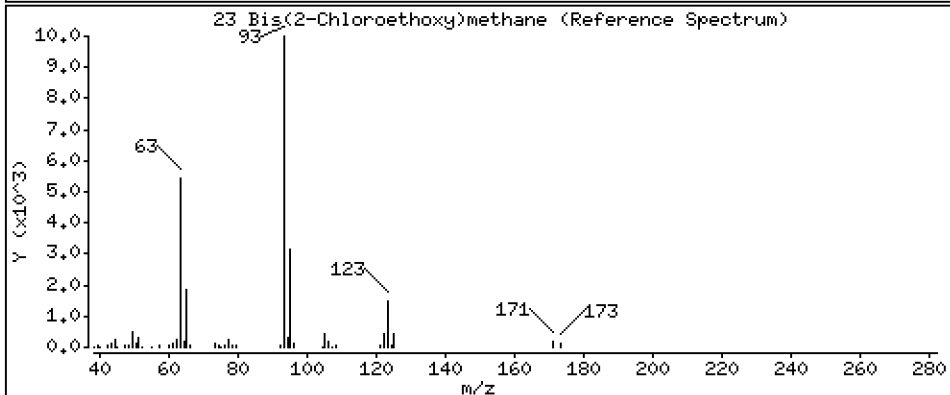
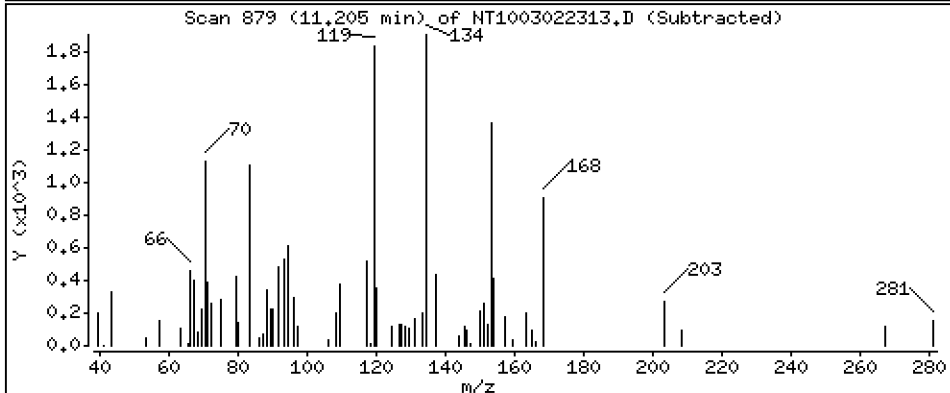
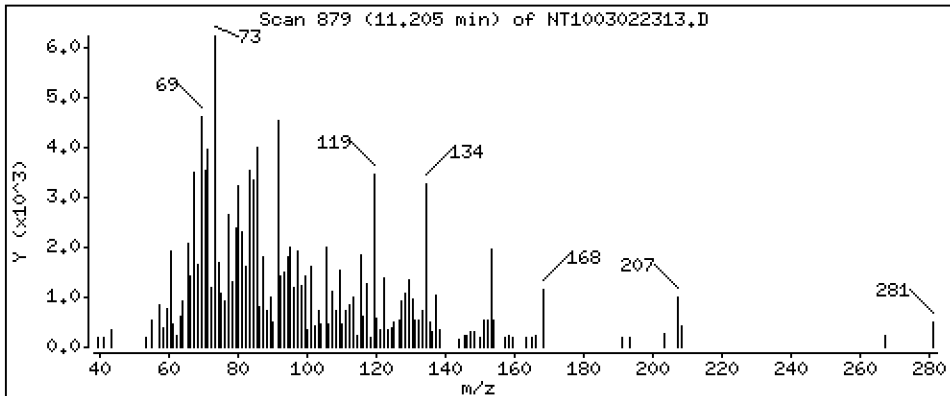
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 0,004225 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

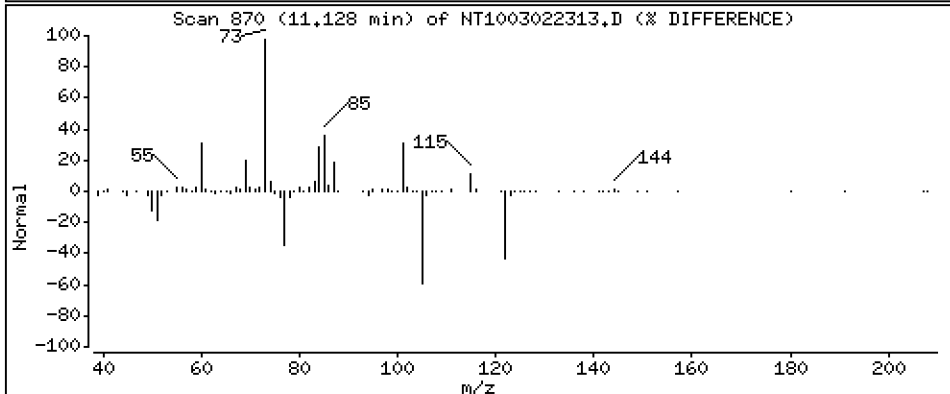
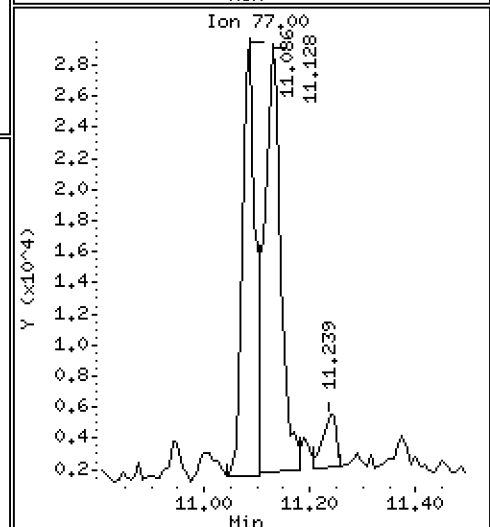
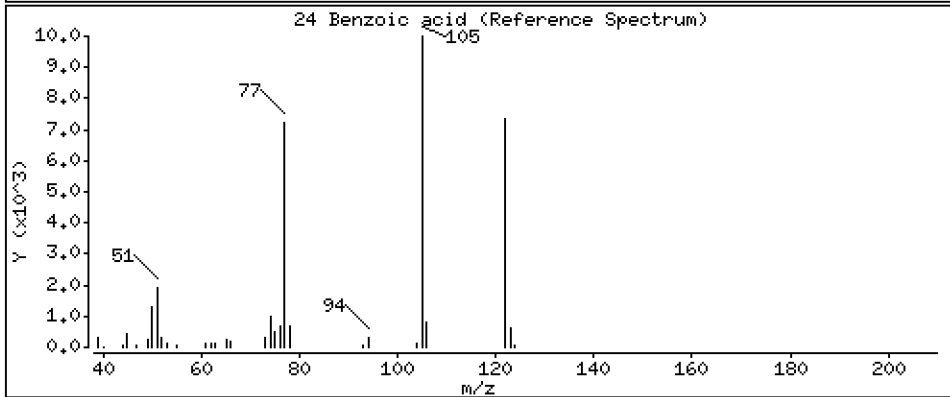
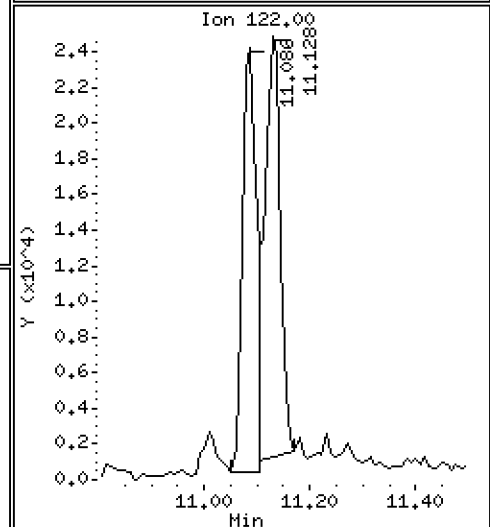
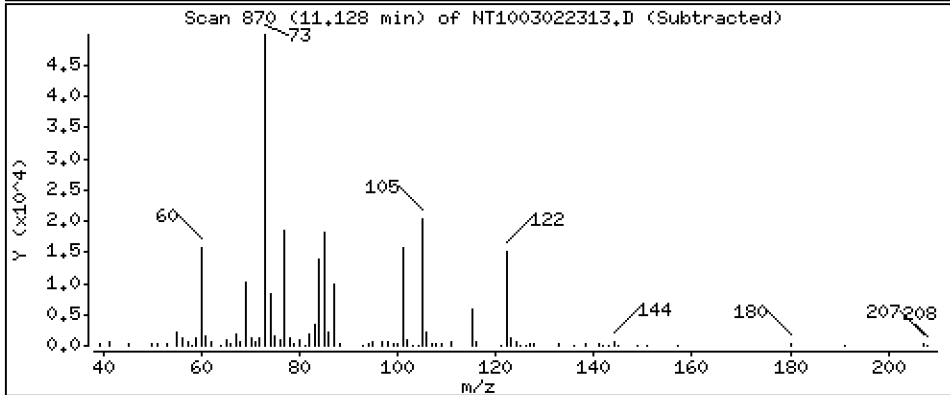
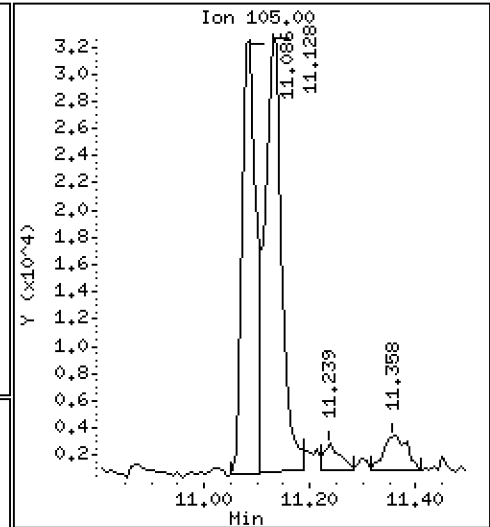
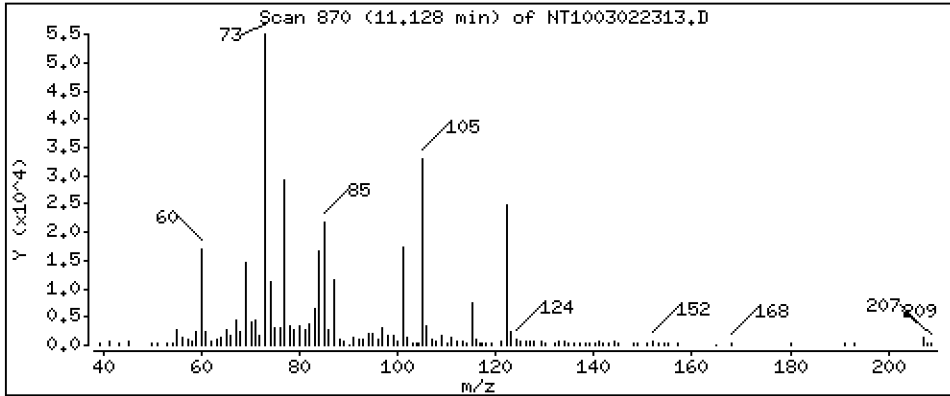
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.5315 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

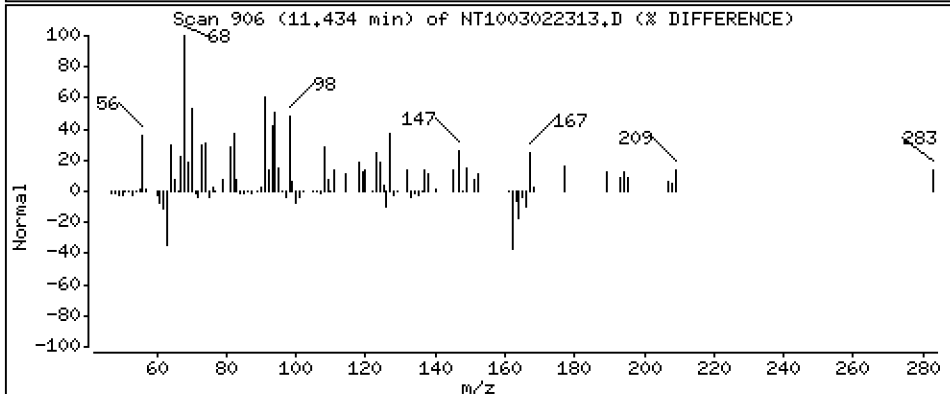
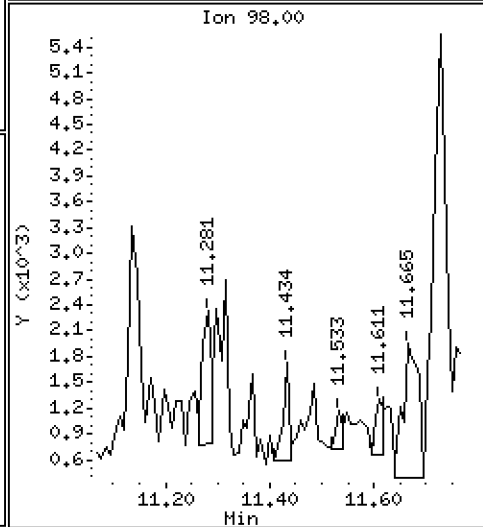
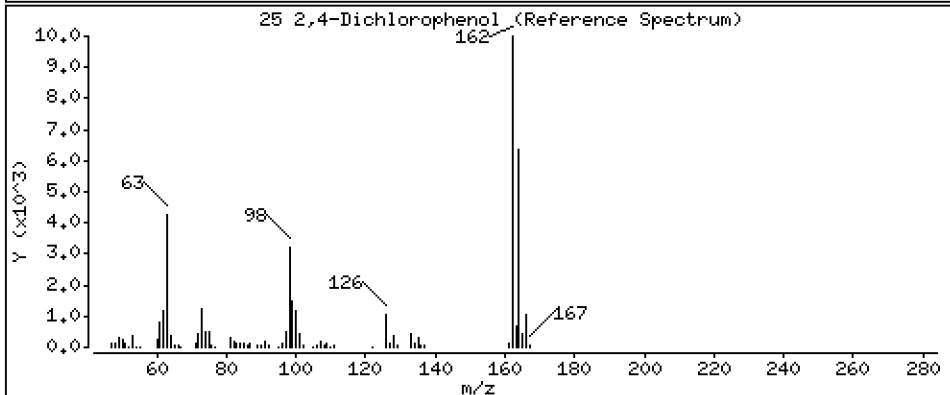
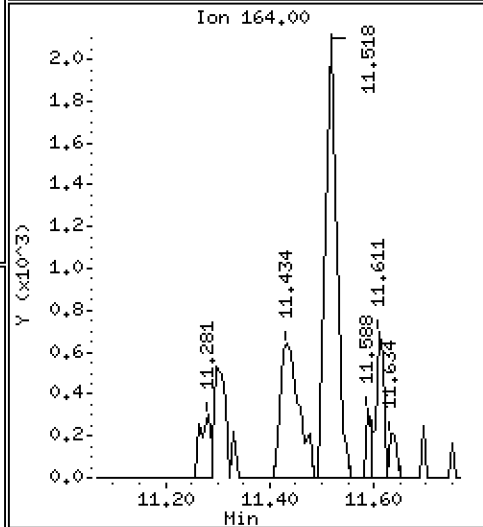
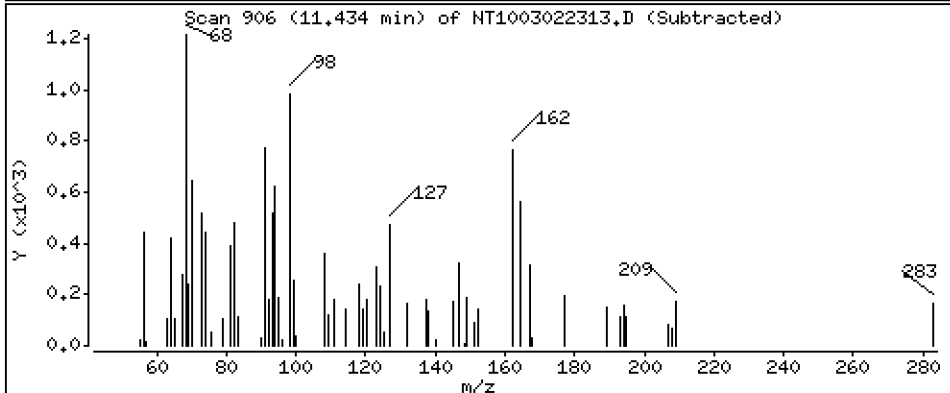
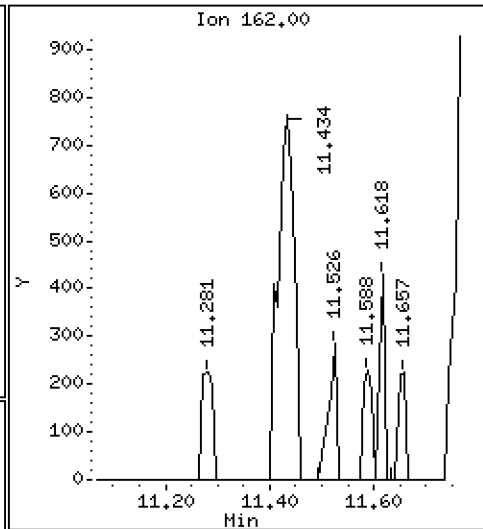
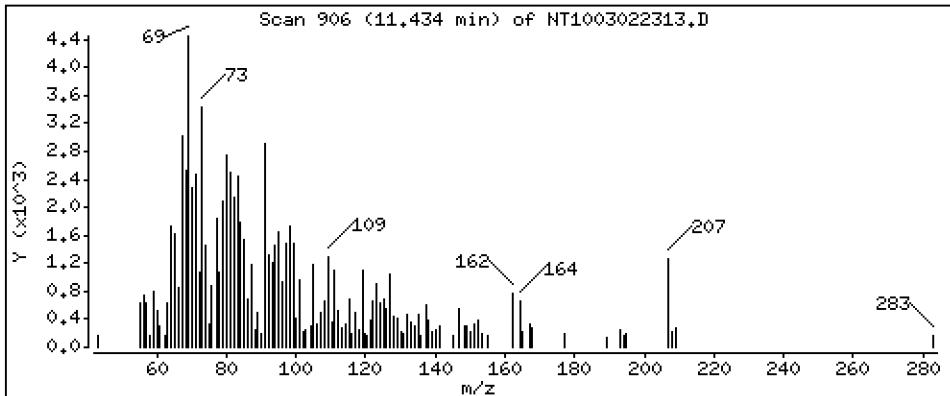
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 0,008497 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

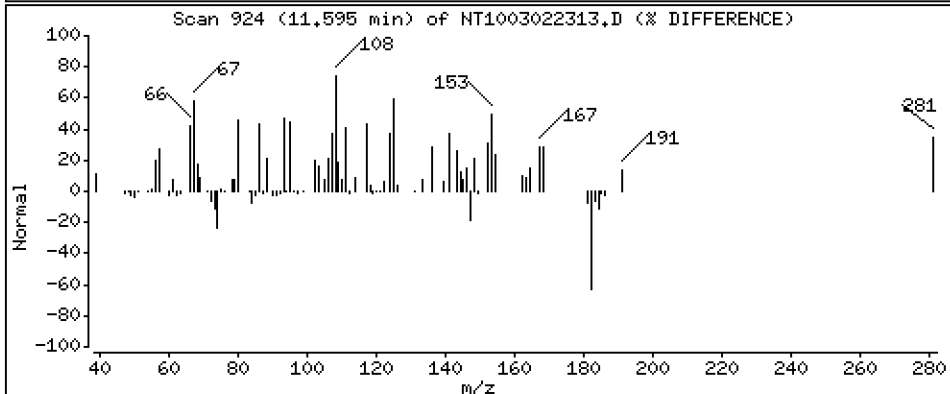
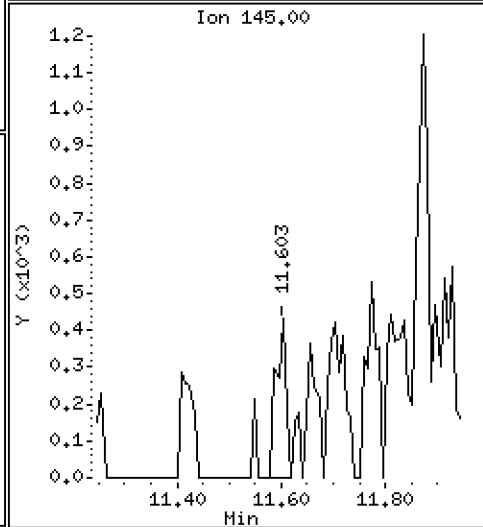
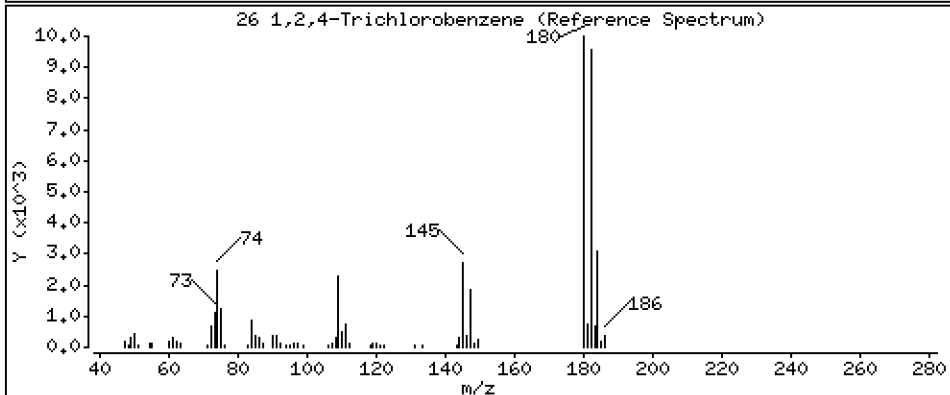
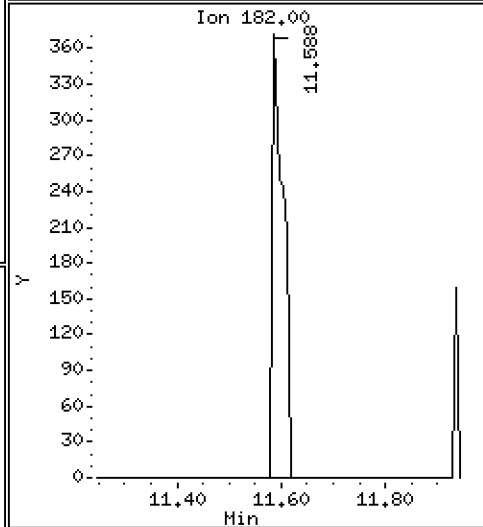
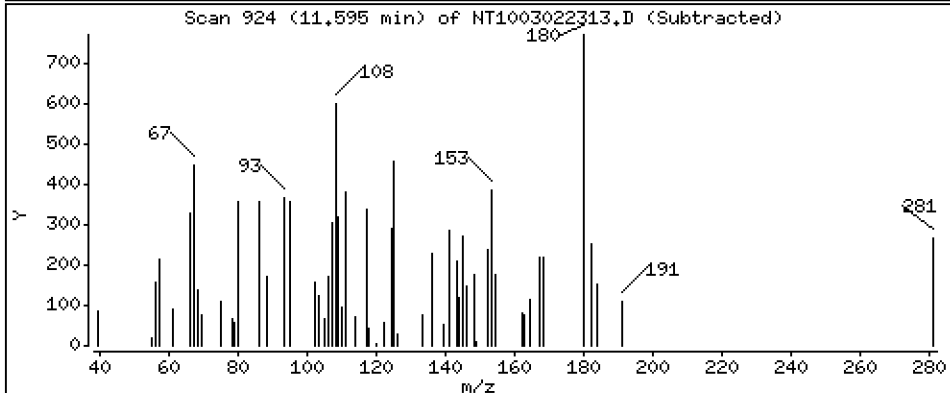
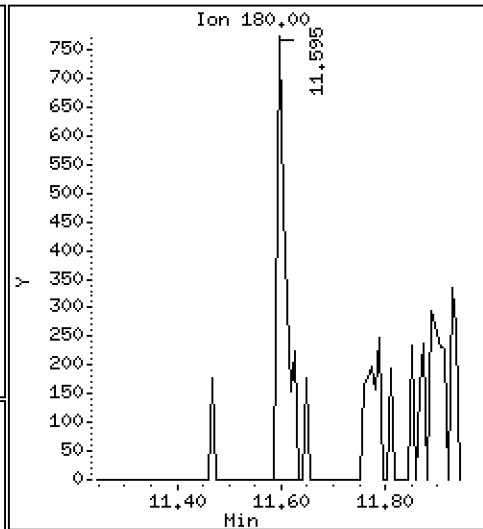
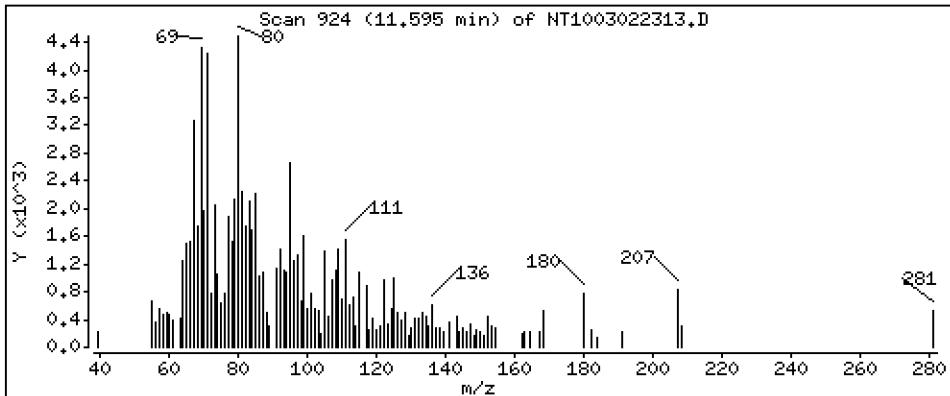
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,004665 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

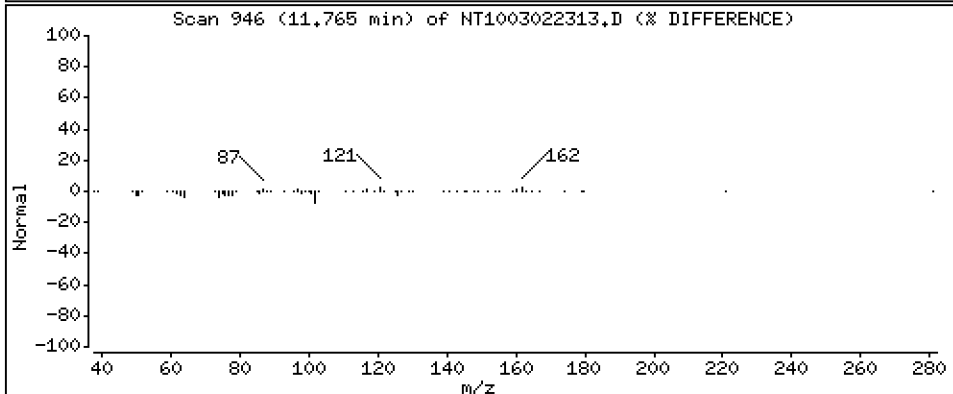
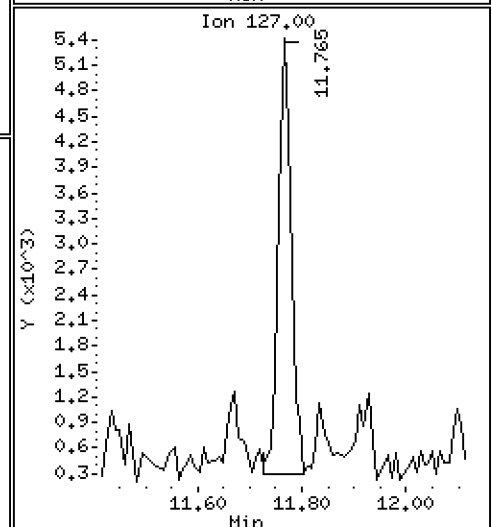
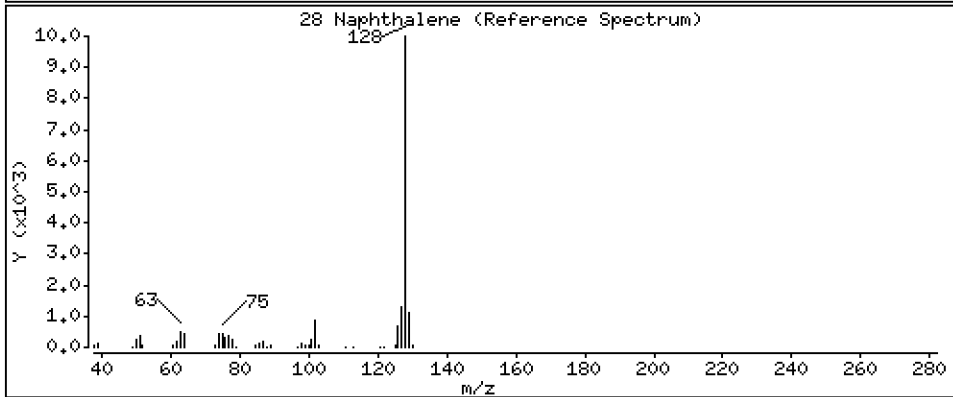
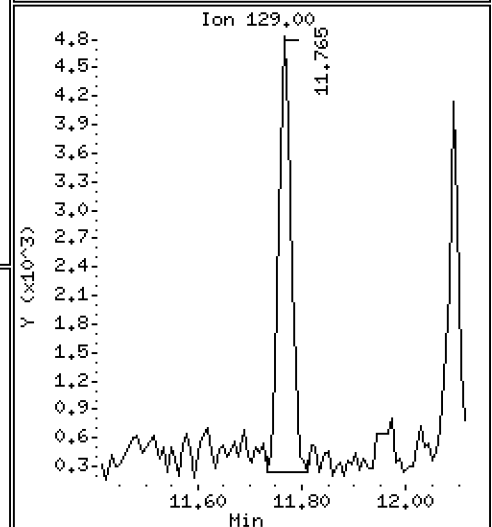
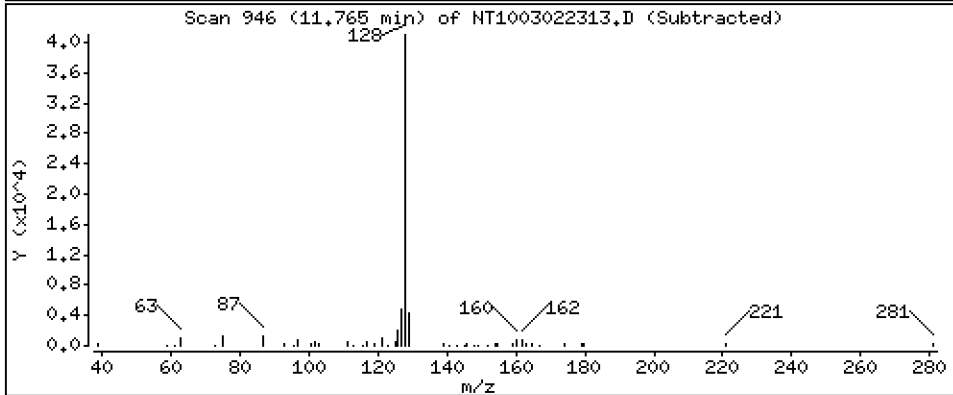
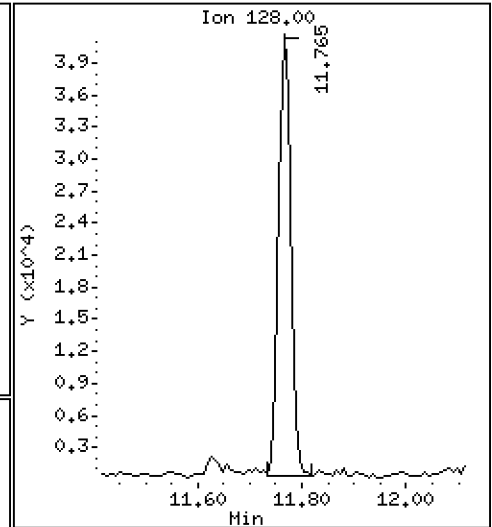
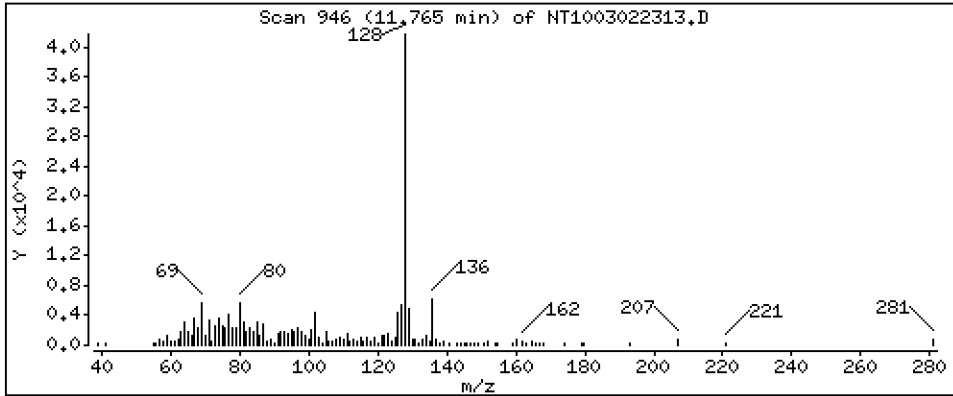
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 0.1008 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

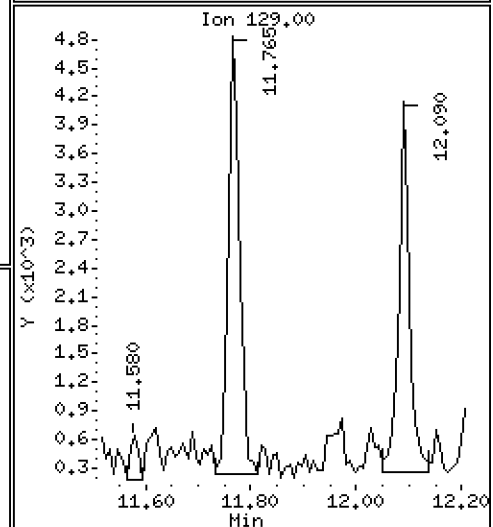
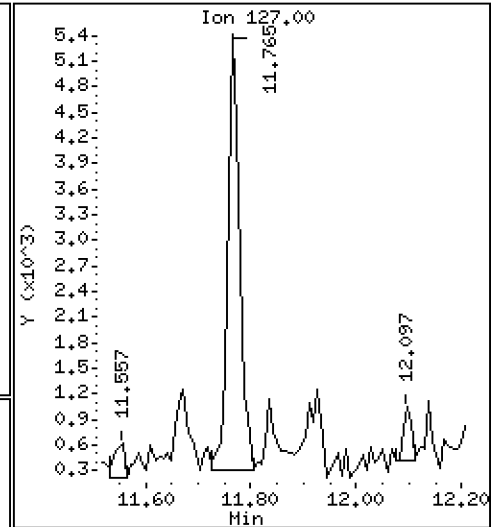
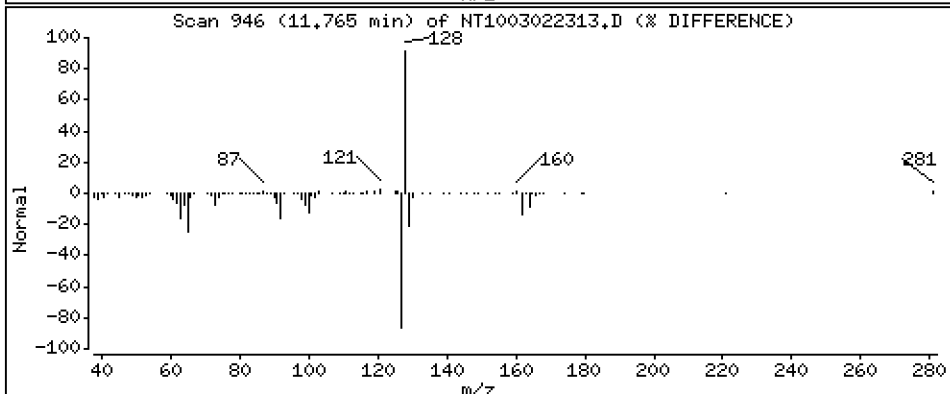
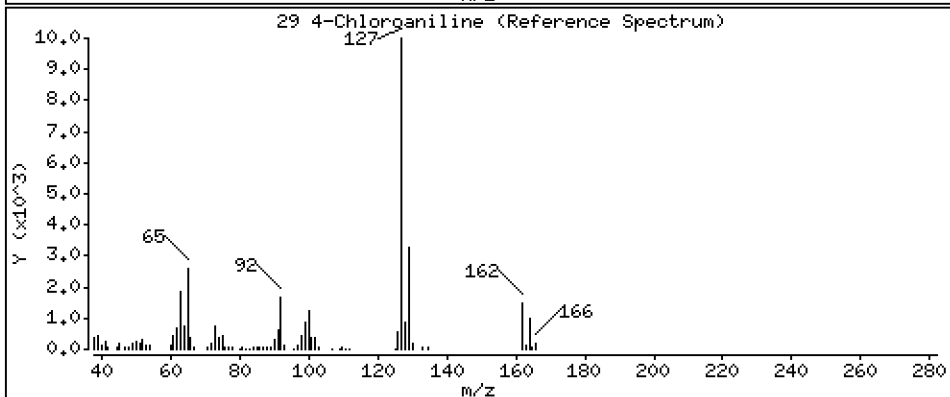
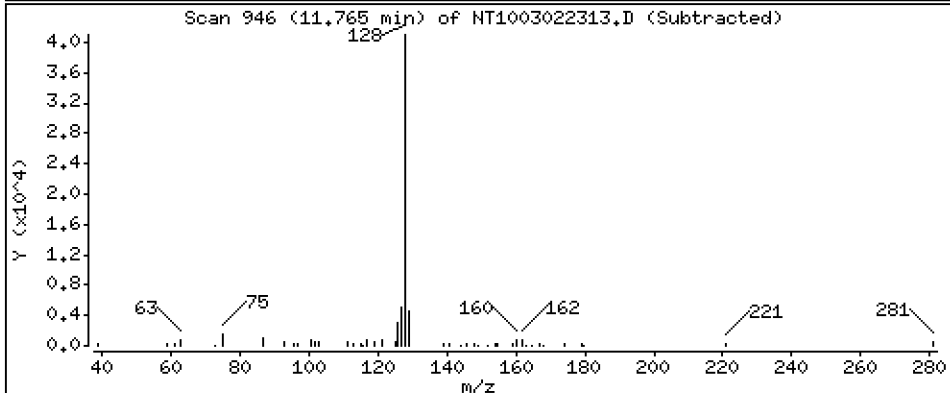
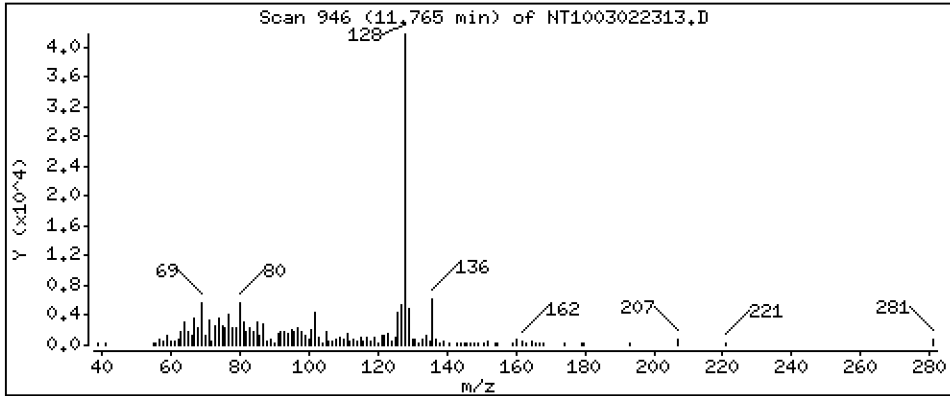
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

29 4-Chloroaniline

Concentration: 0.02988 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

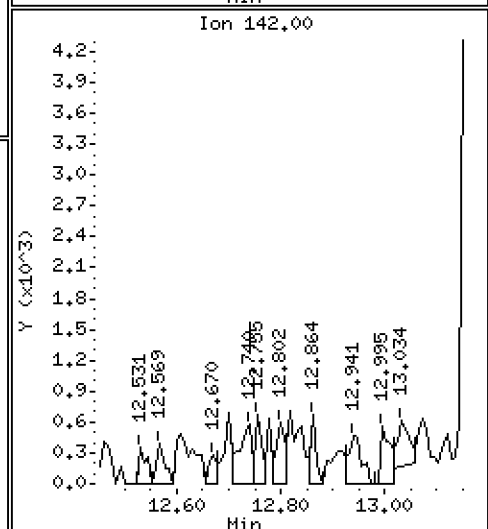
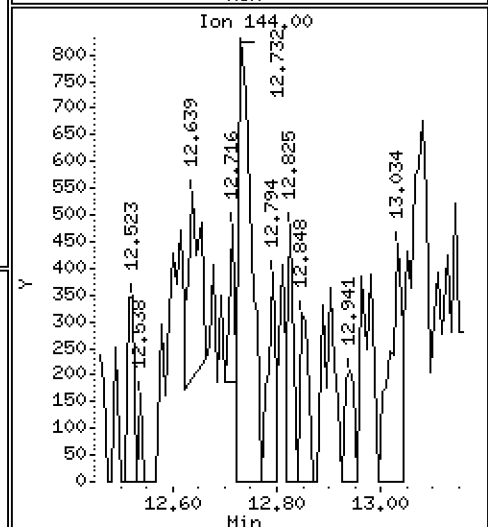
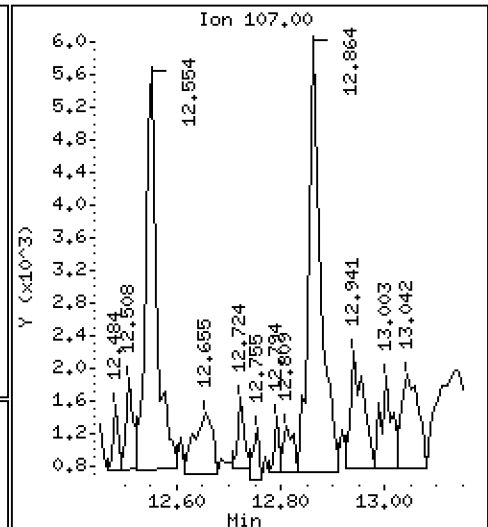
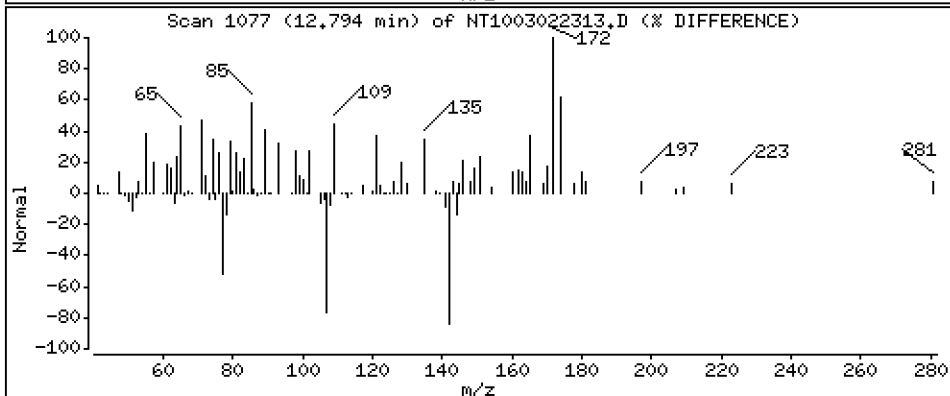
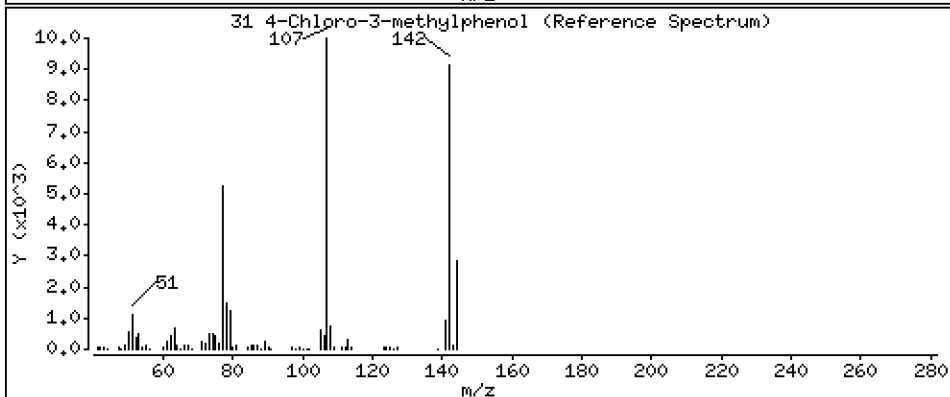
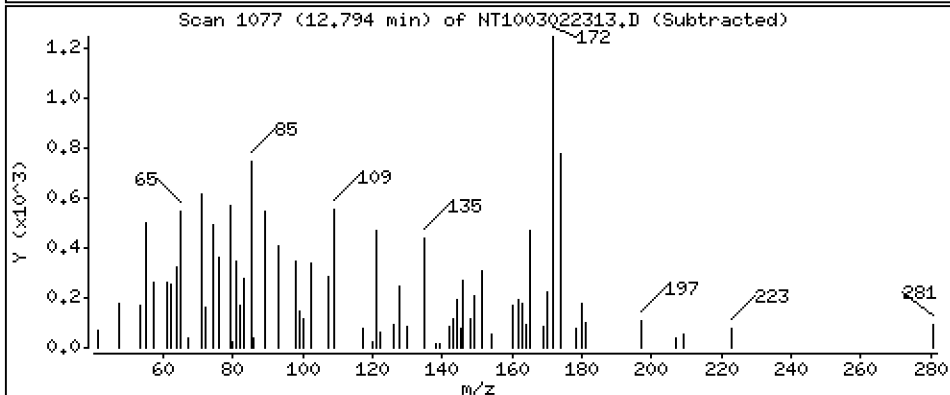
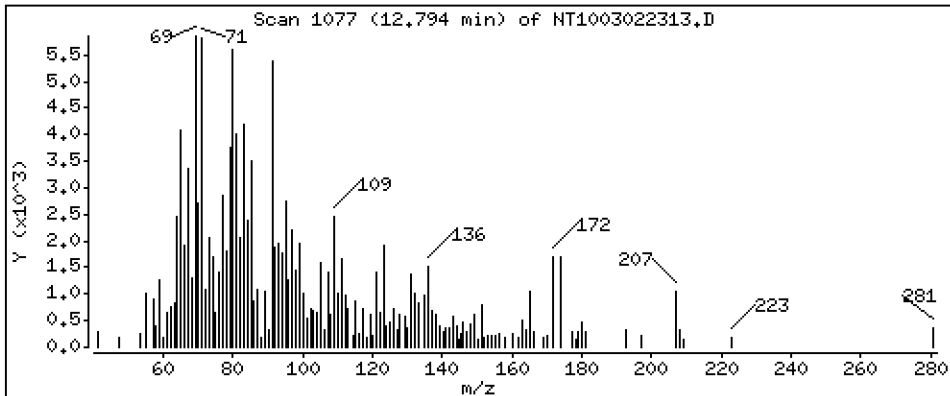
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

31 4-Chloro-3-methylphenol

Concentration: 0.002118 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

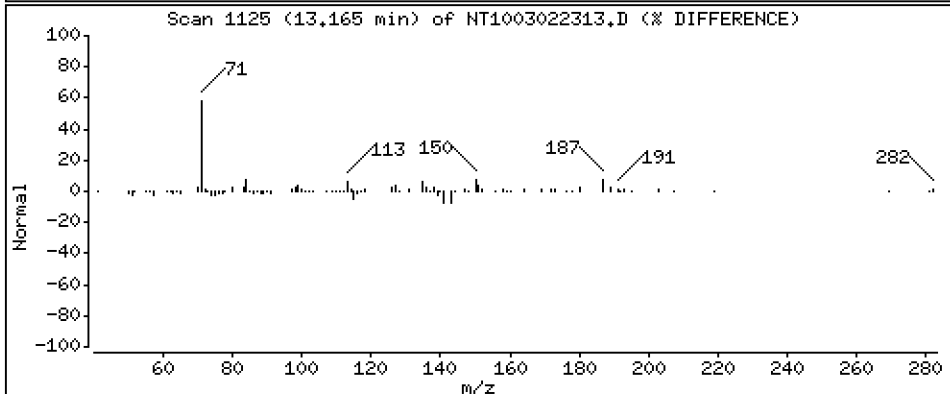
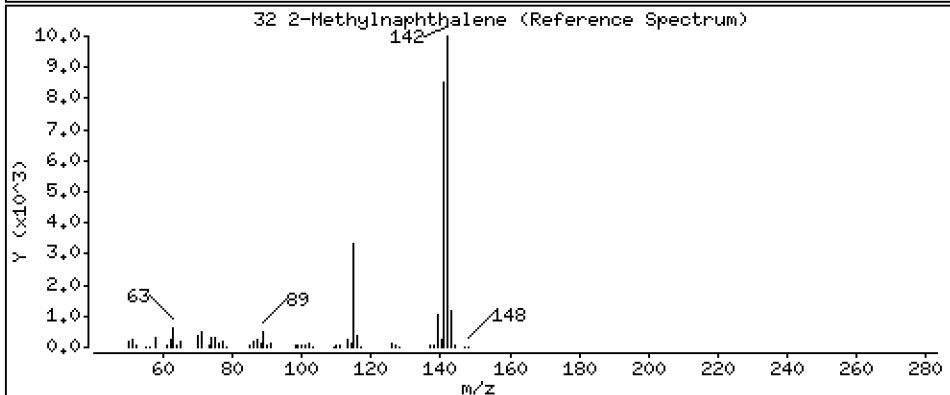
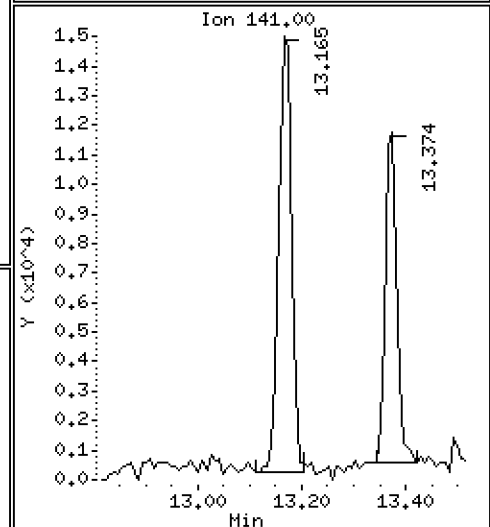
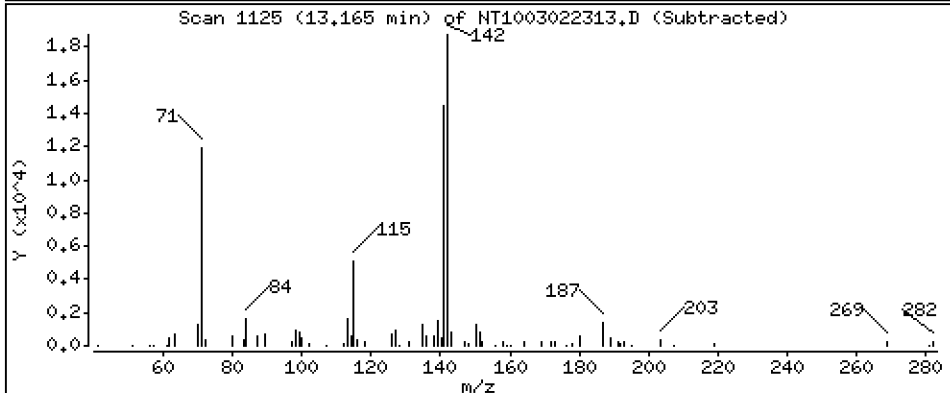
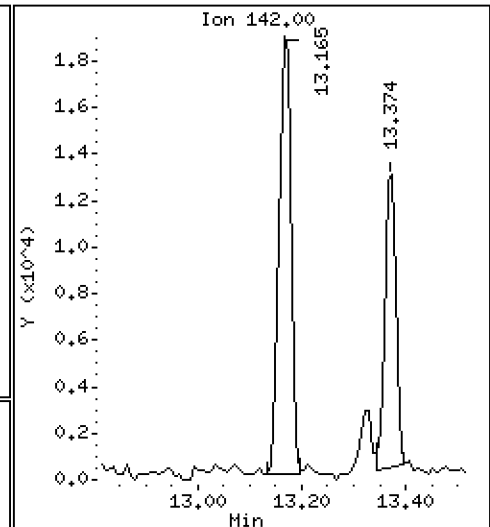
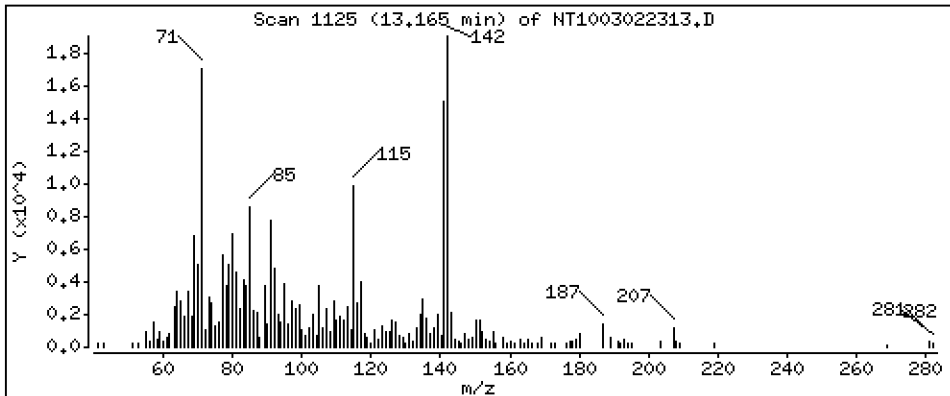
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,06351 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

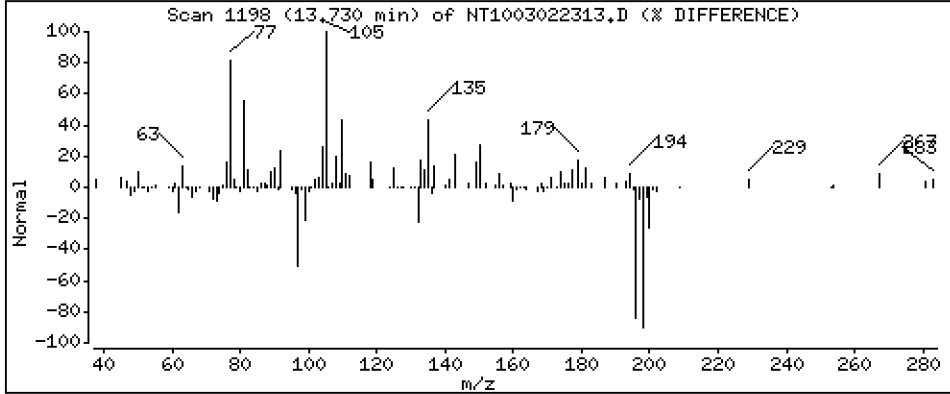
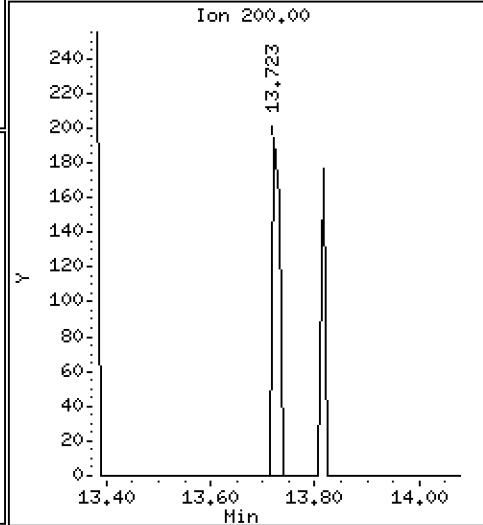
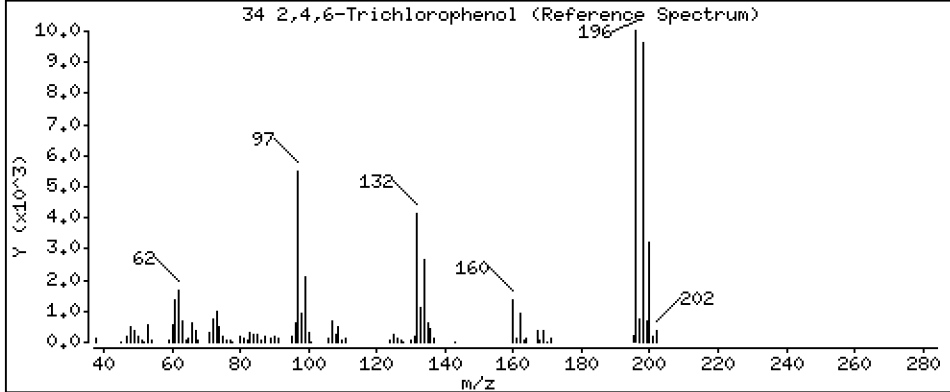
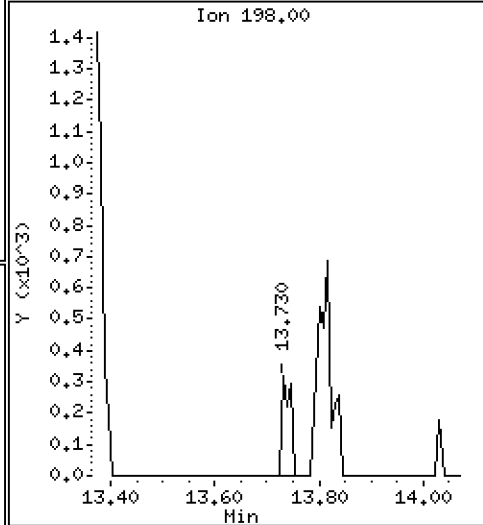
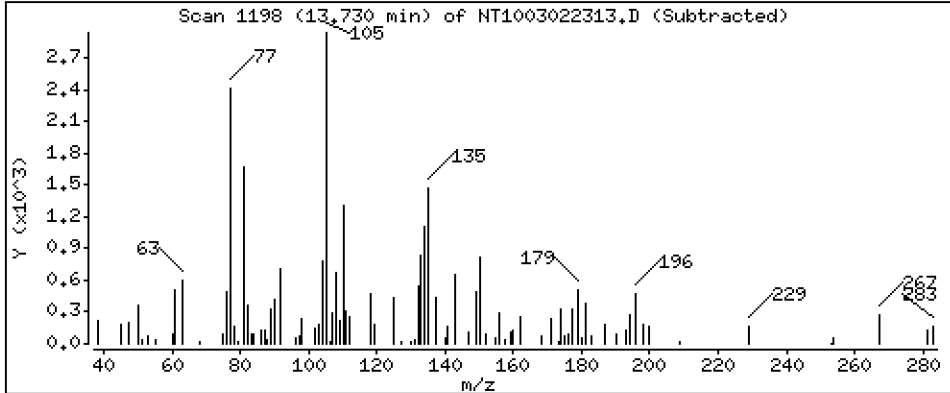
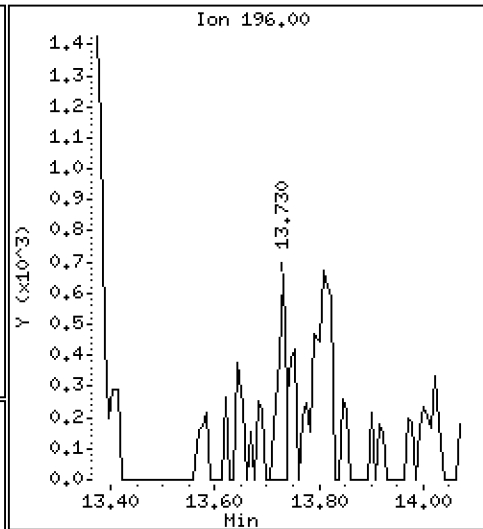
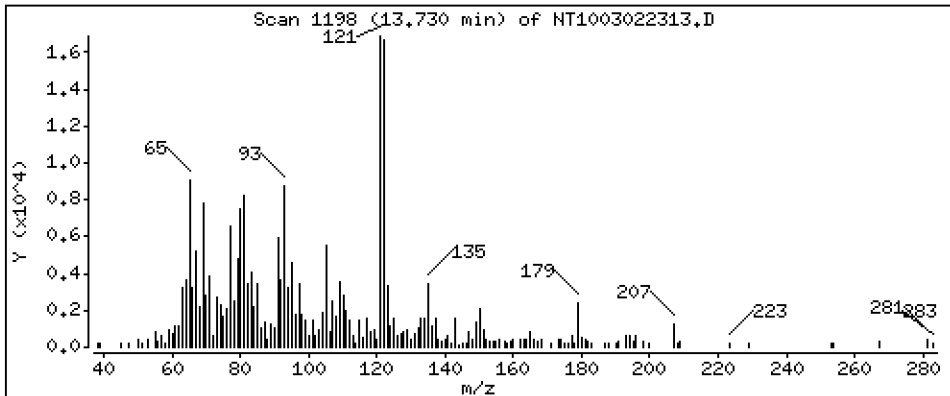
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 0,005724 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

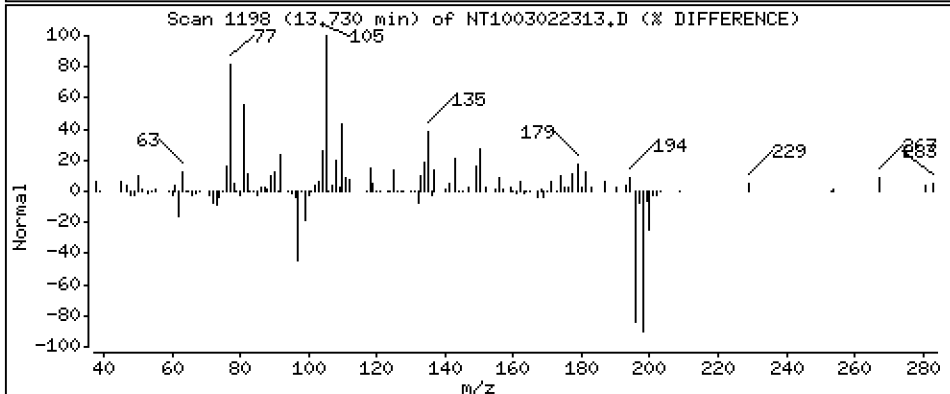
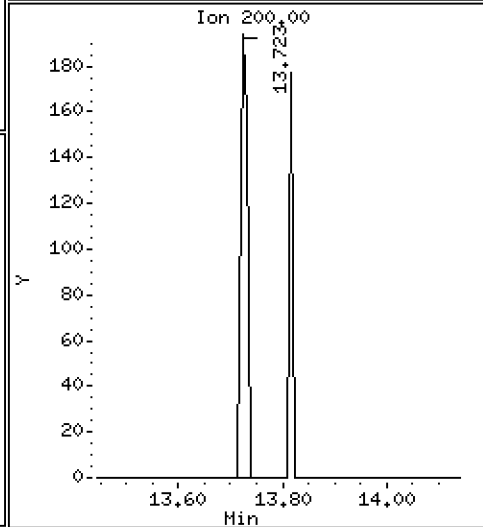
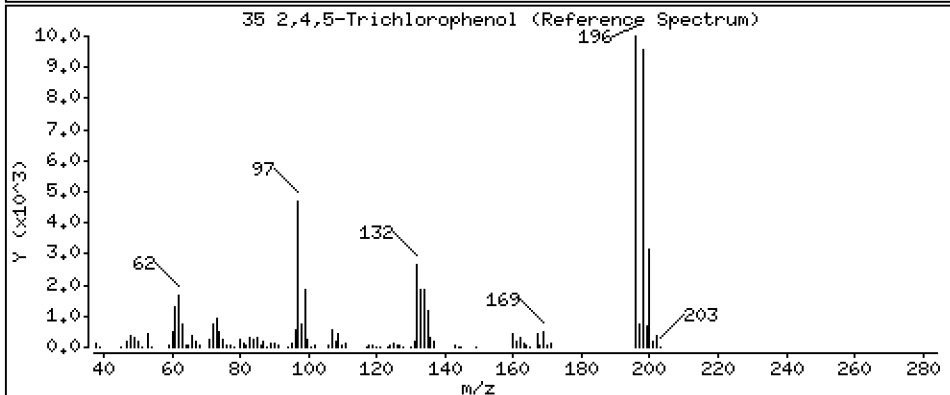
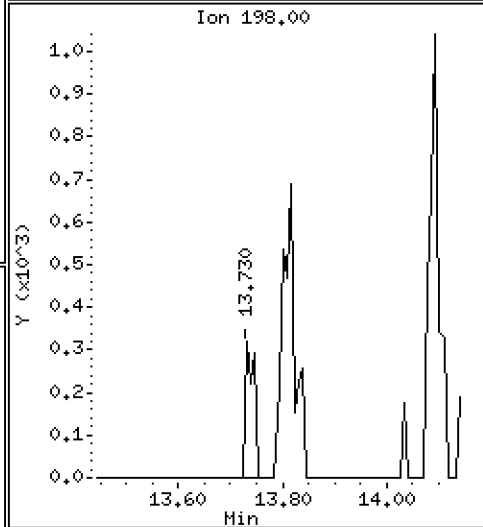
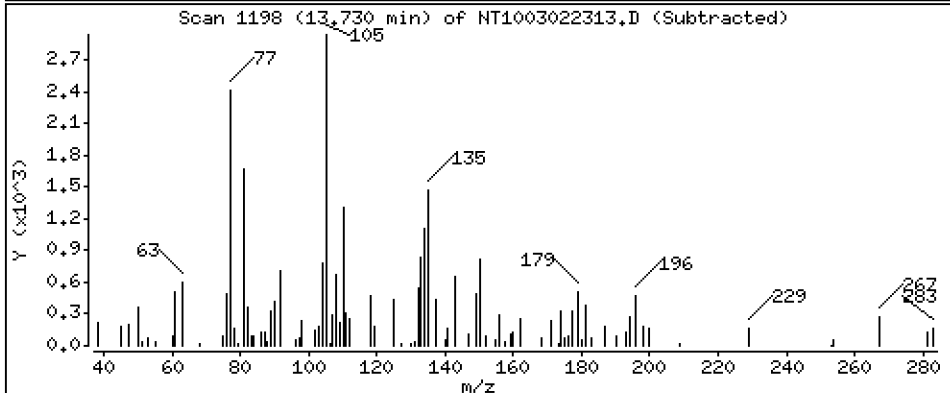
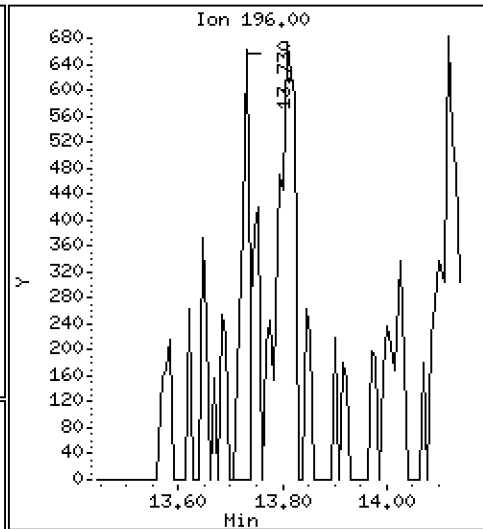
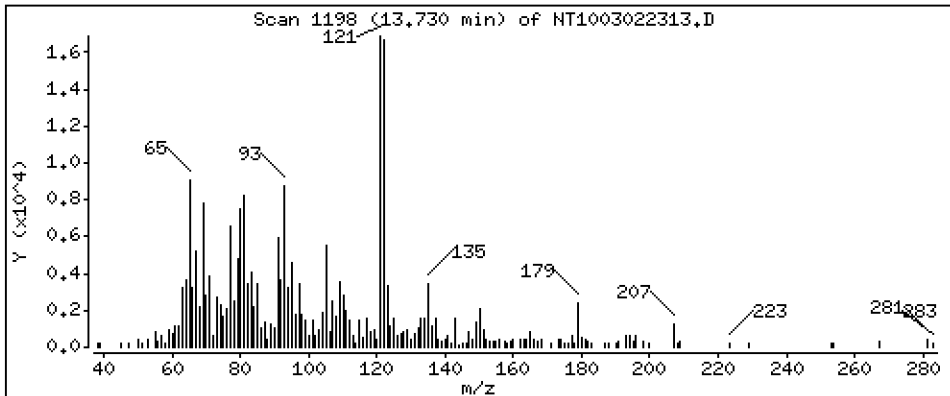
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 0,005363 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

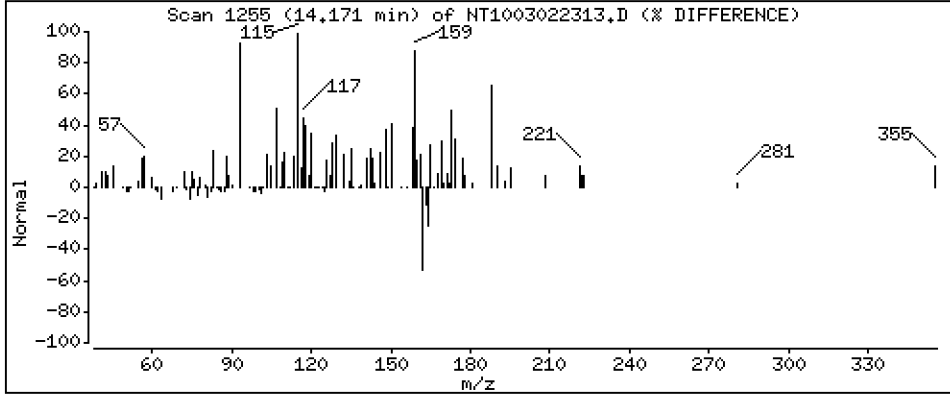
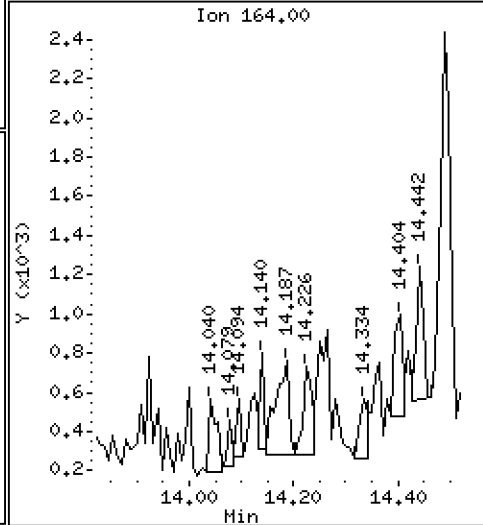
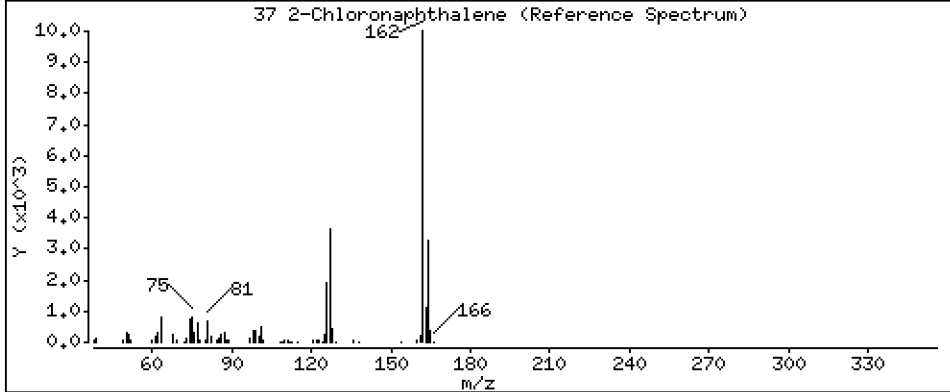
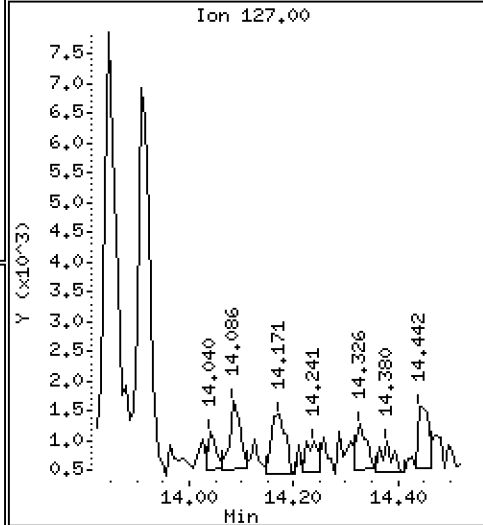
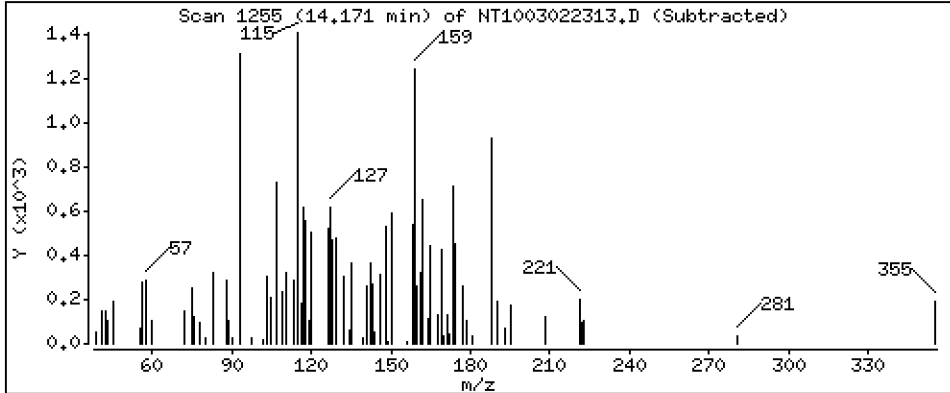
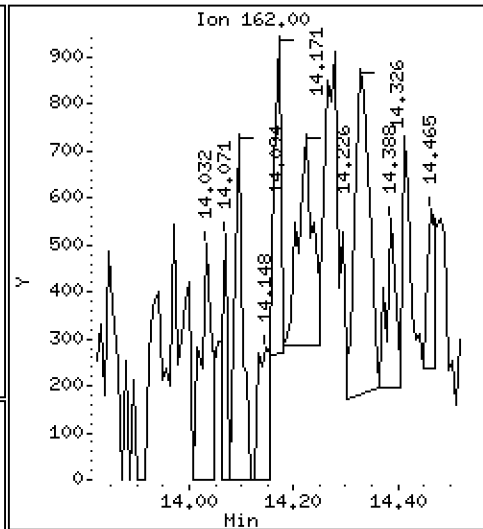
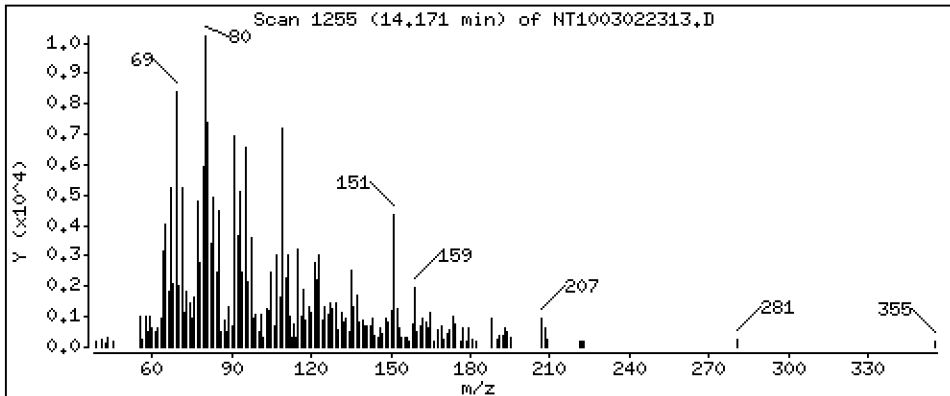
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

37 2-Chloronaphthalene

Concentration: 0.001423 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

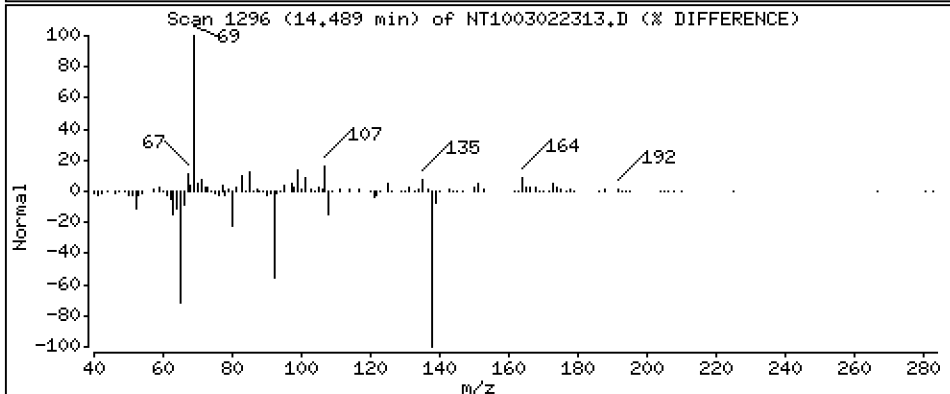
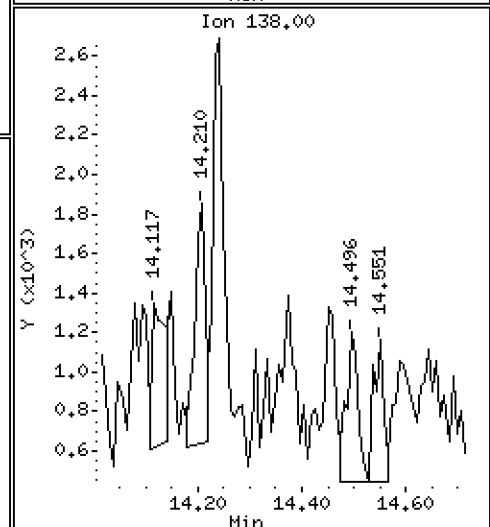
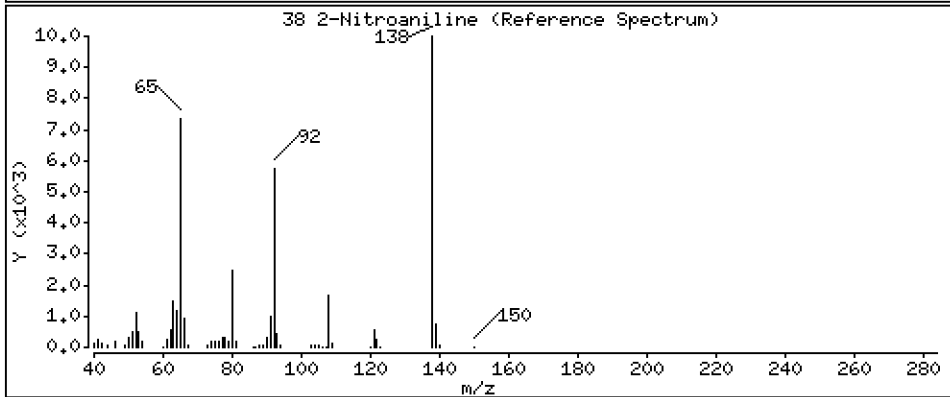
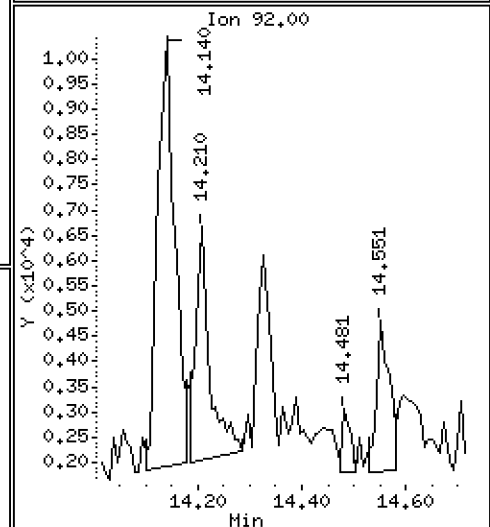
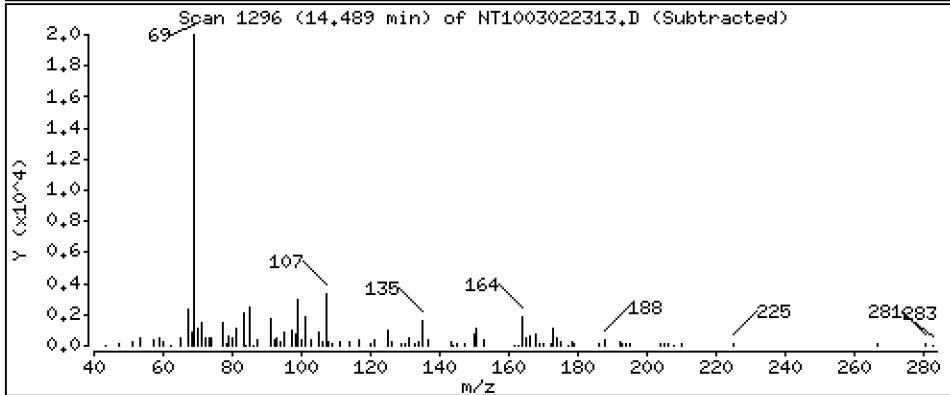
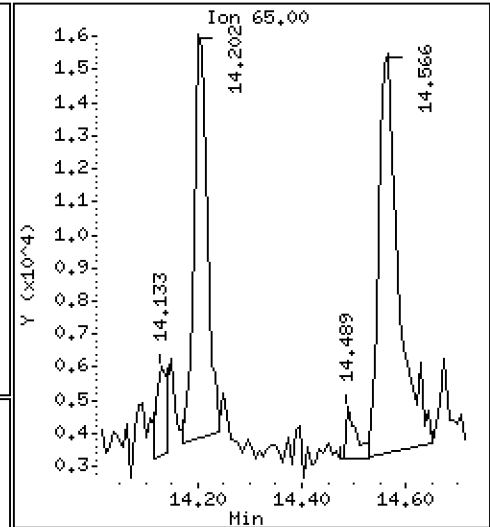
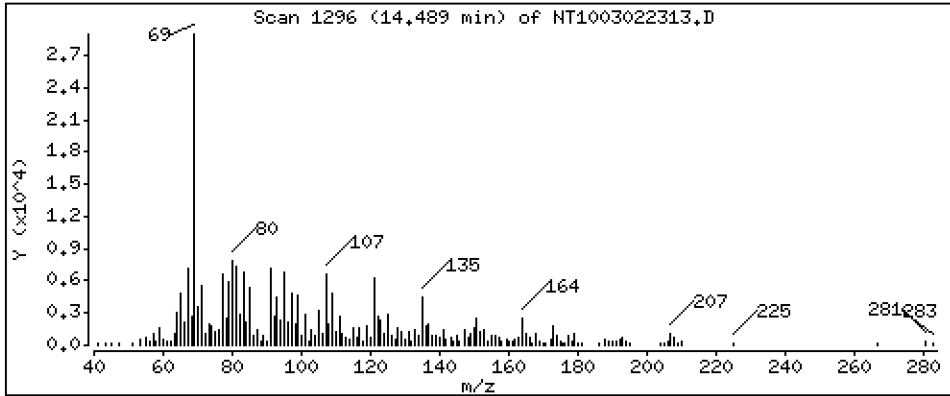
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

38 2-Nitroaniline

Concentration: 0.02319 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

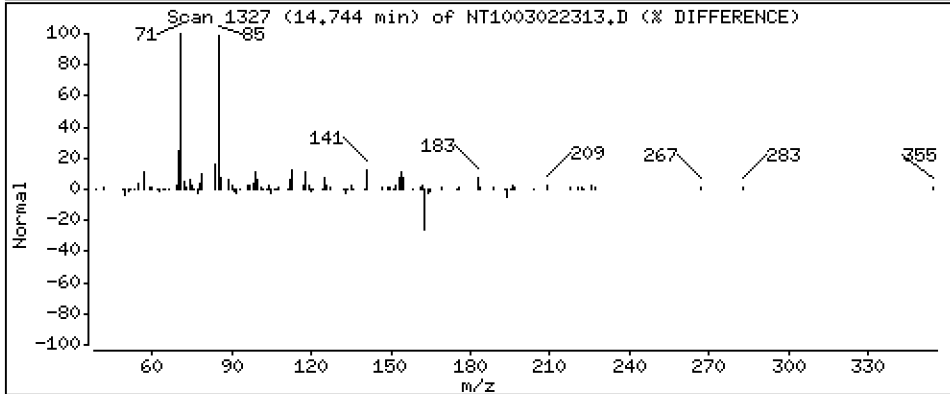
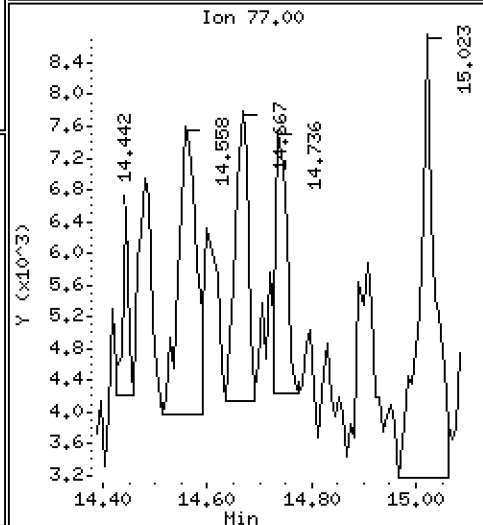
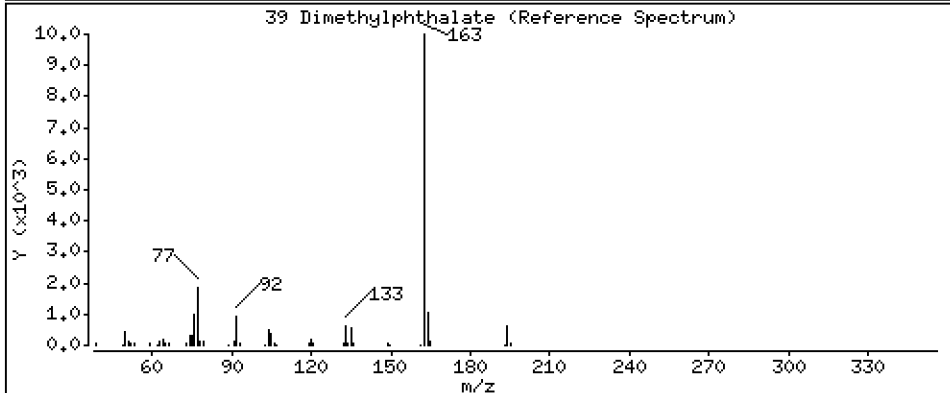
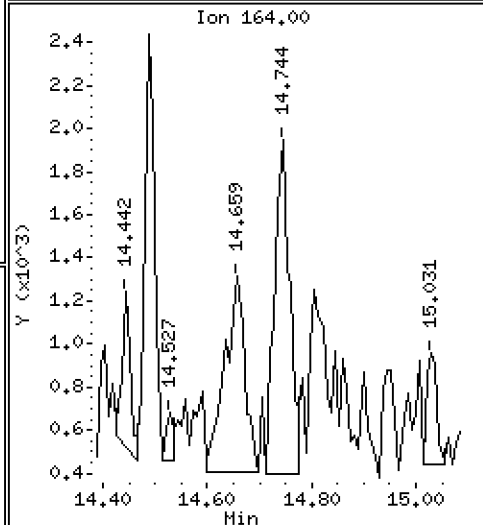
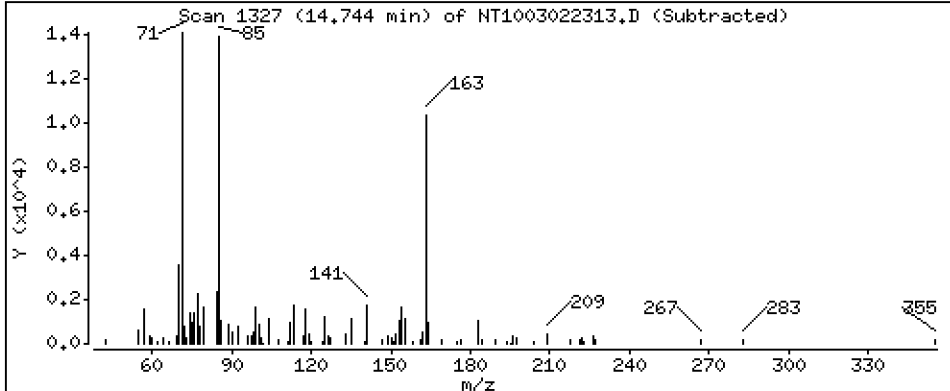
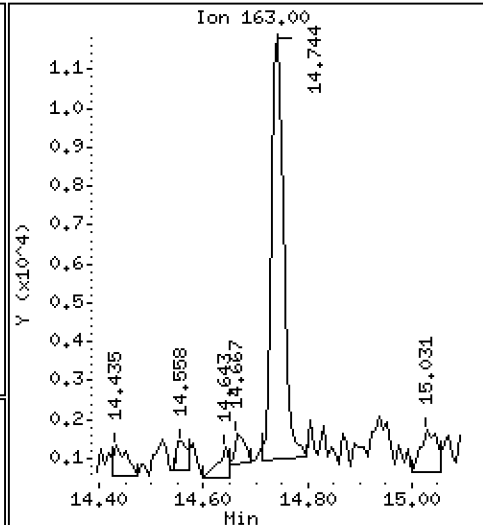
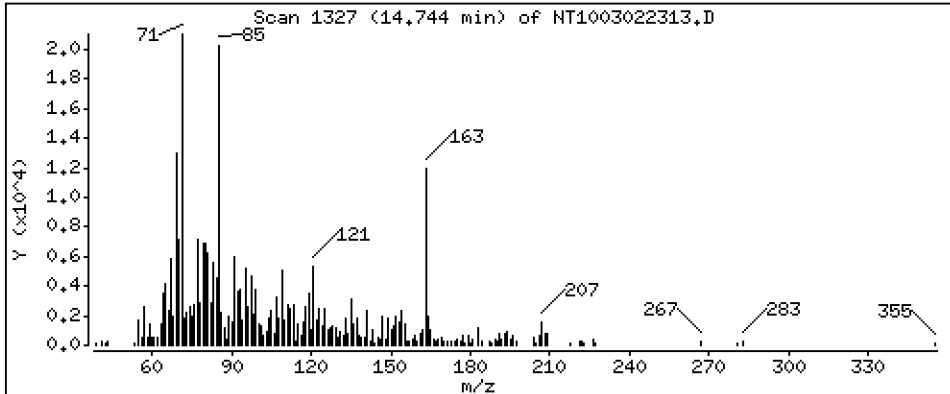
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.04074 ug/mL

39 Dimethylphthalate



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

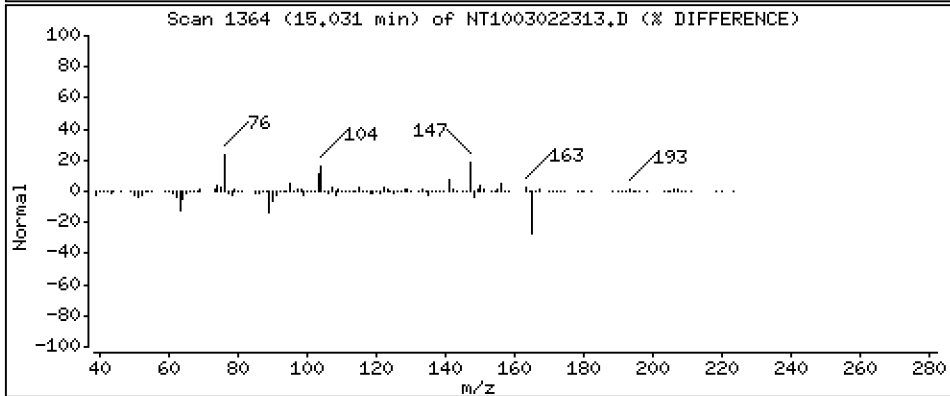
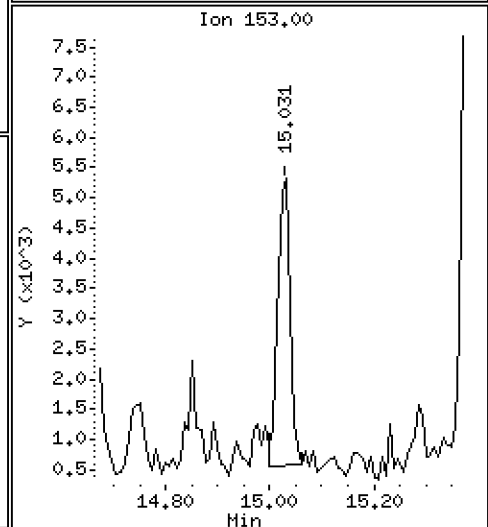
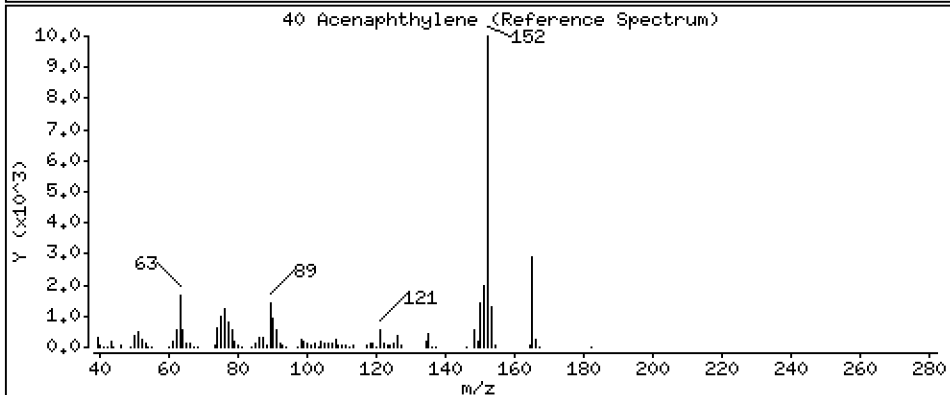
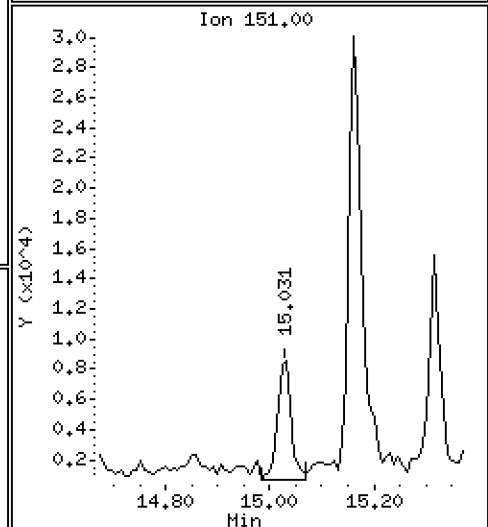
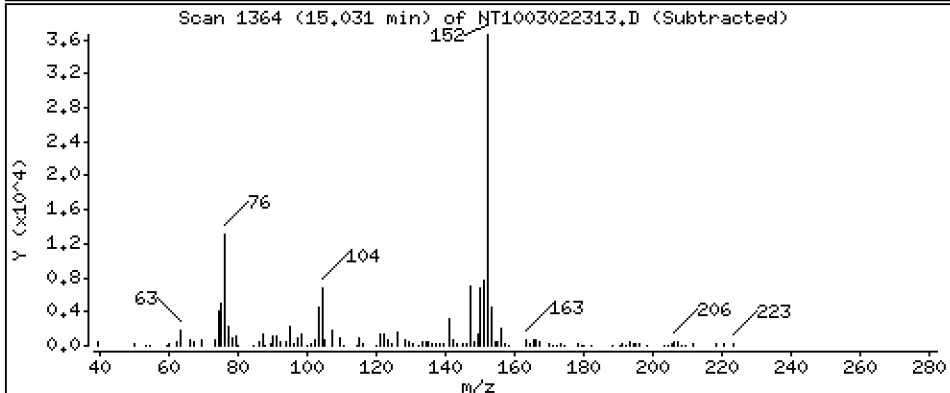
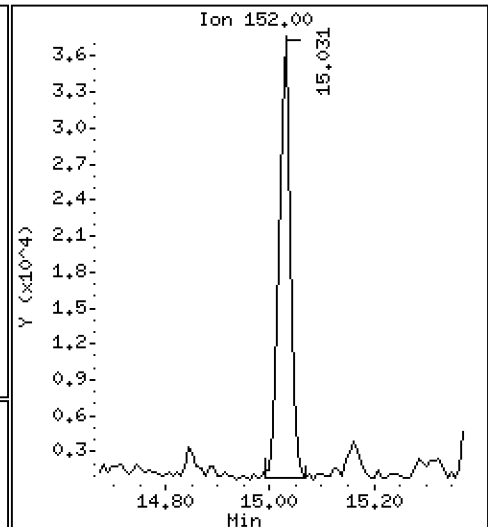
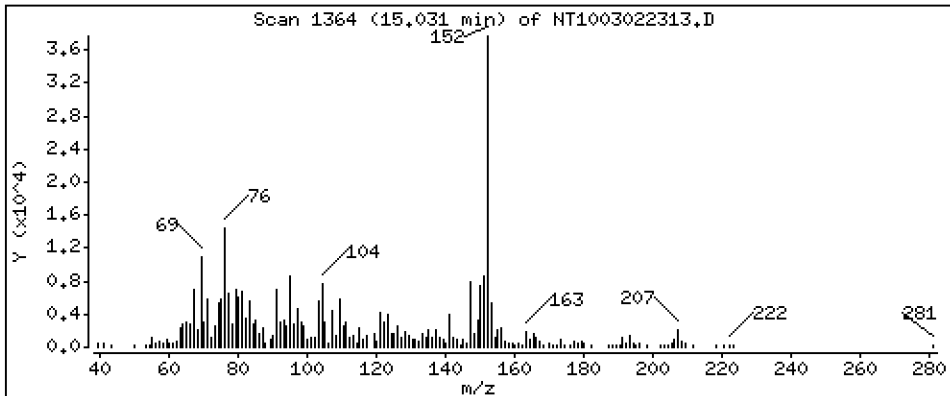
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.08749 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

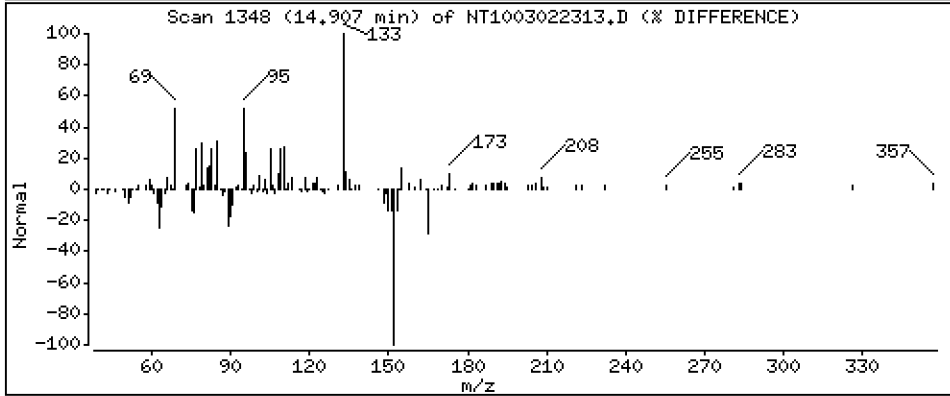
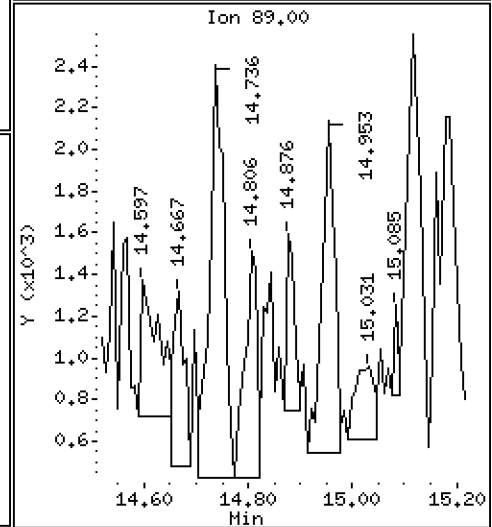
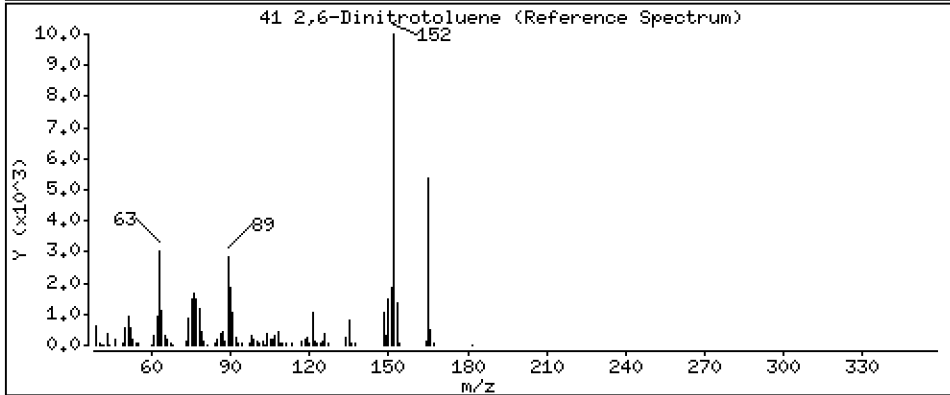
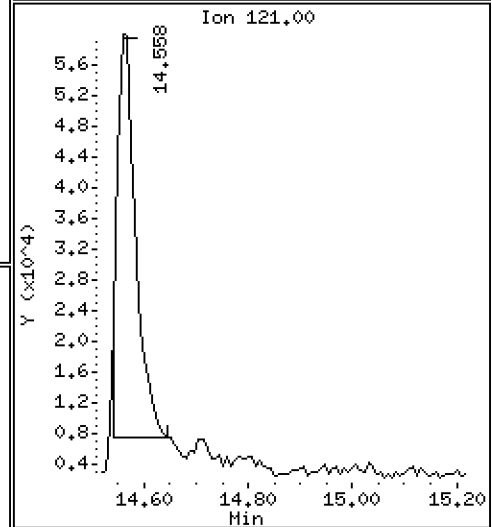
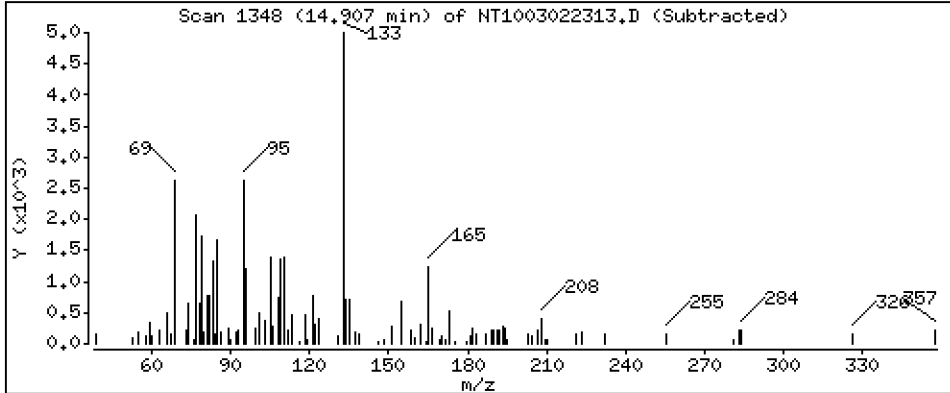
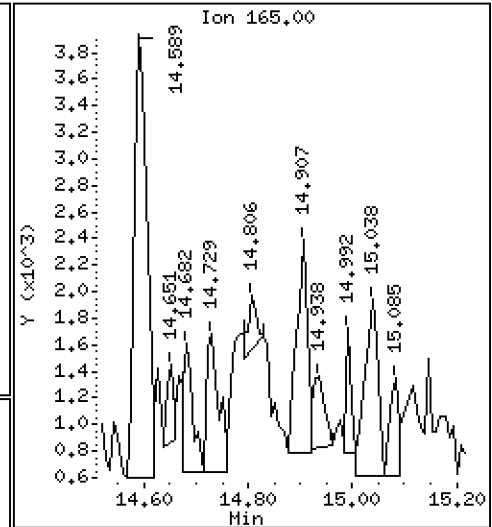
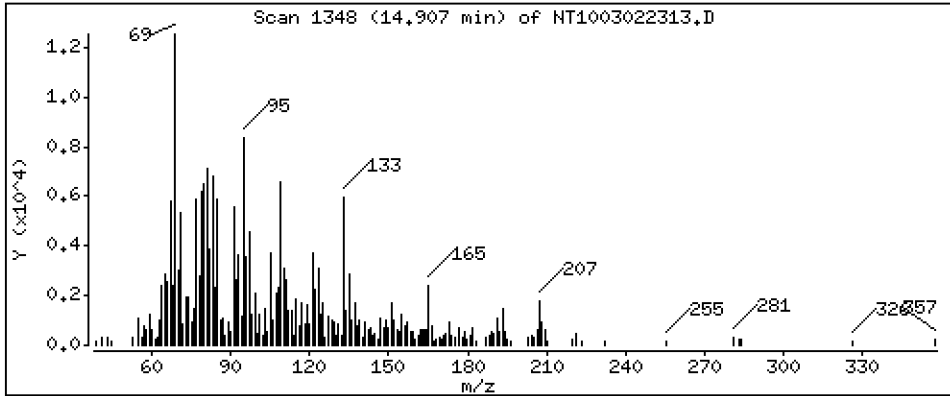
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

41 2,6-Dinitrotoluene

Concentration: 0.02759 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

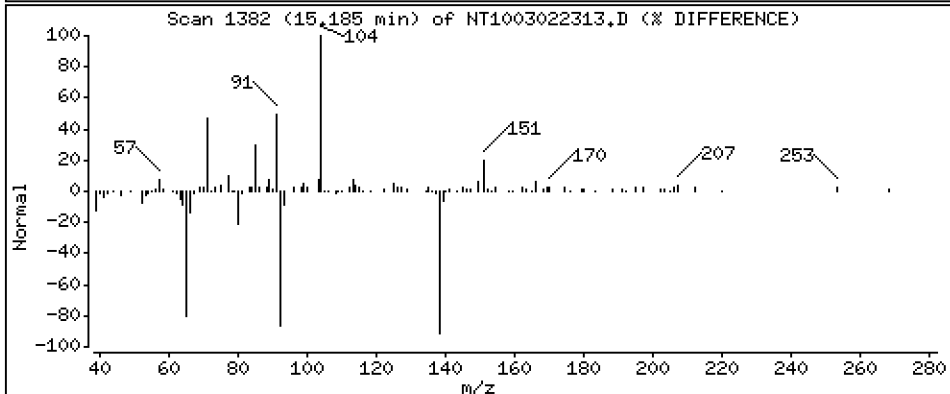
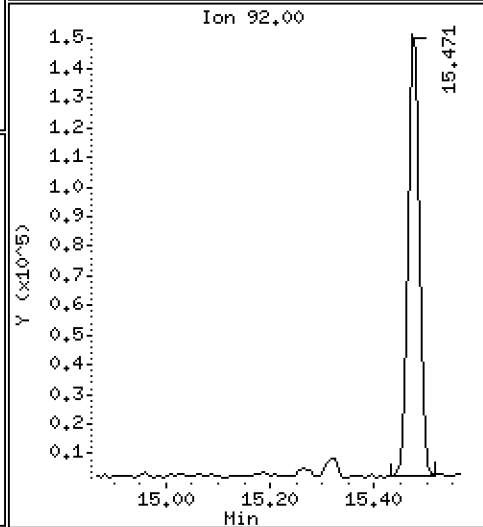
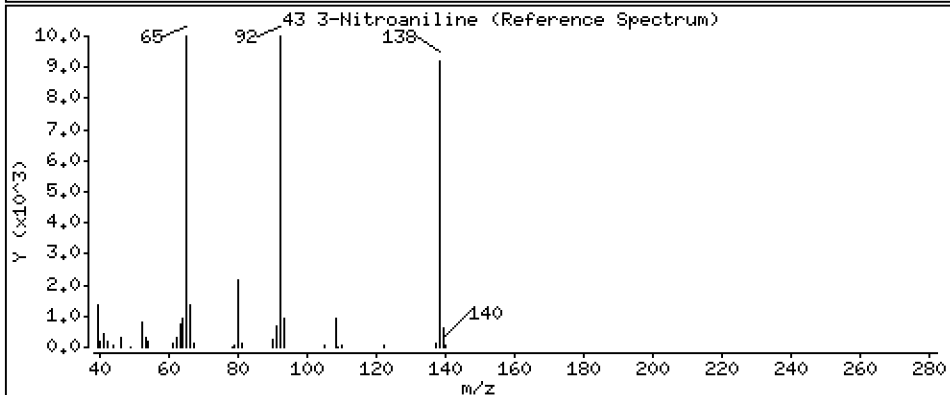
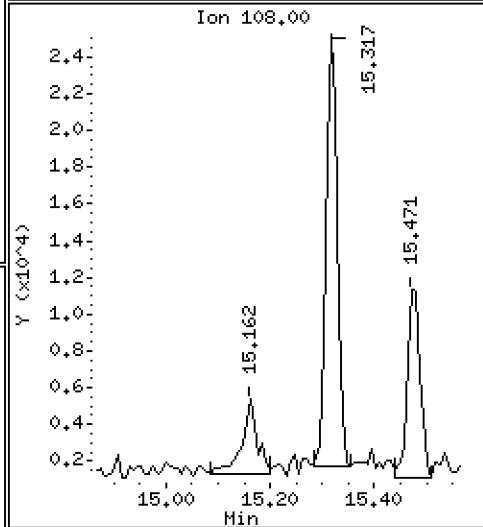
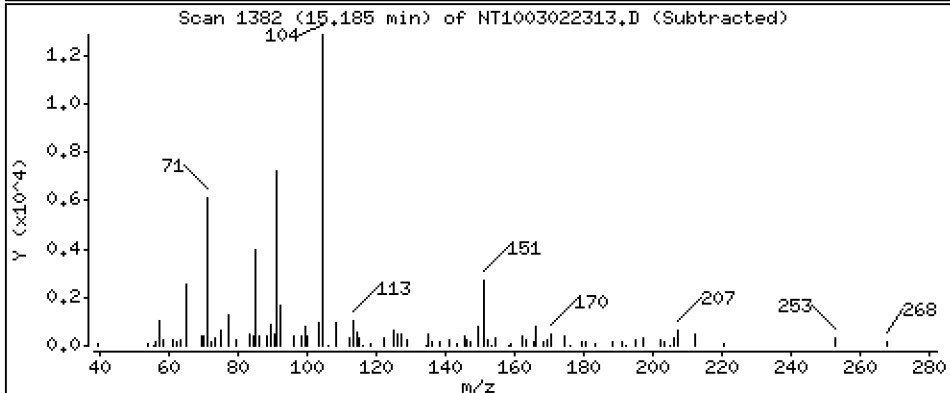
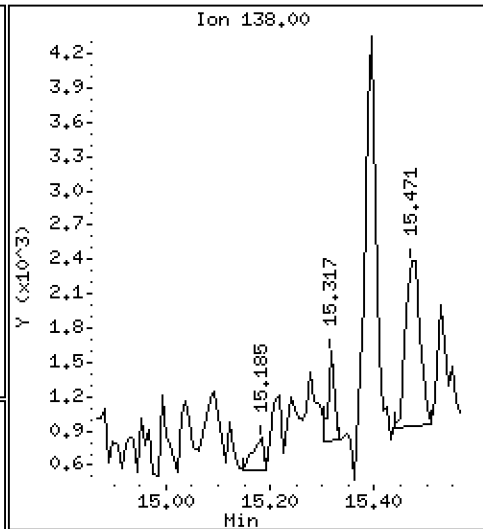
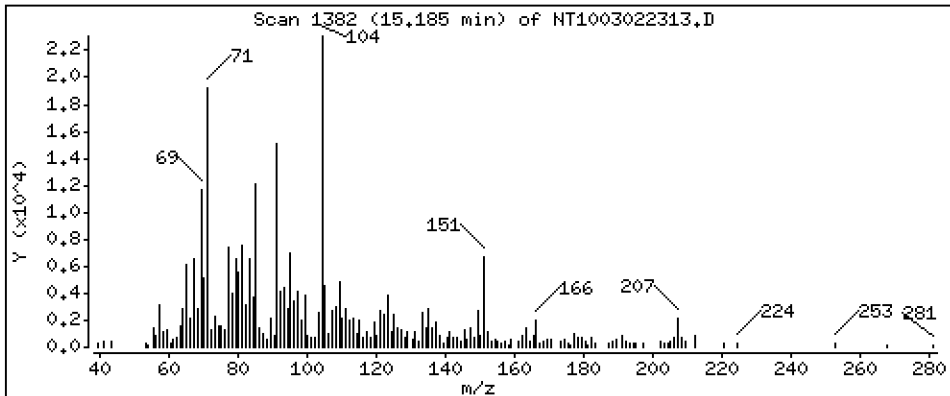
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

43 3-Nitroaniline

Concentration: 0.004139 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

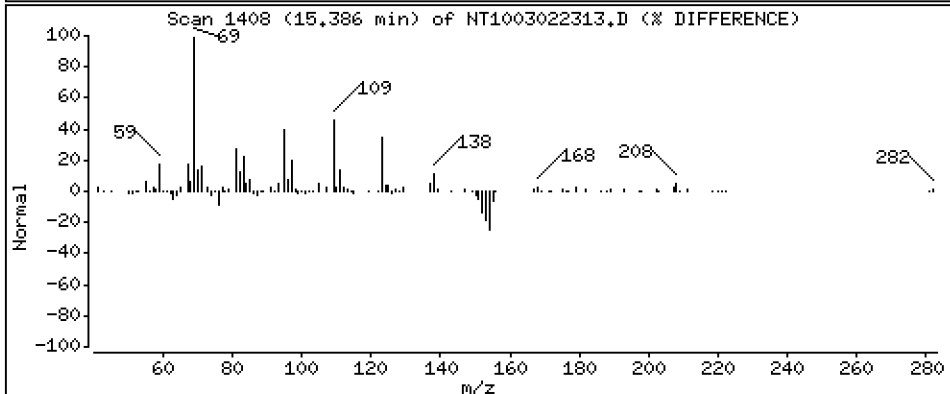
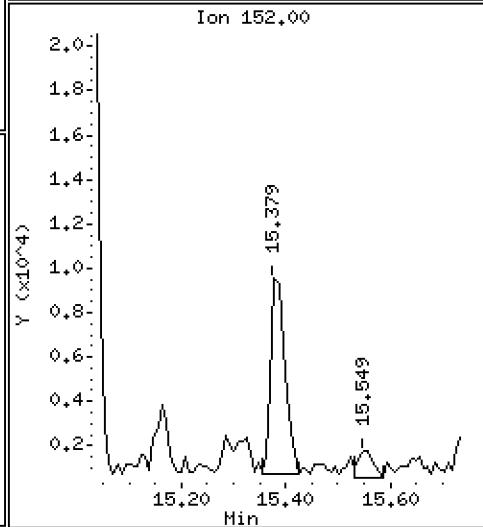
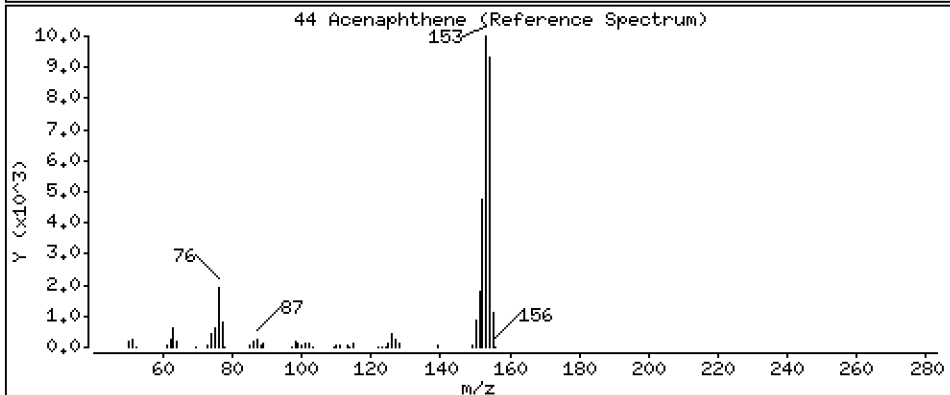
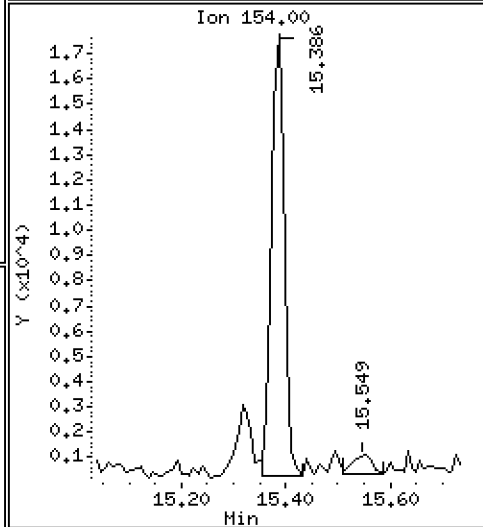
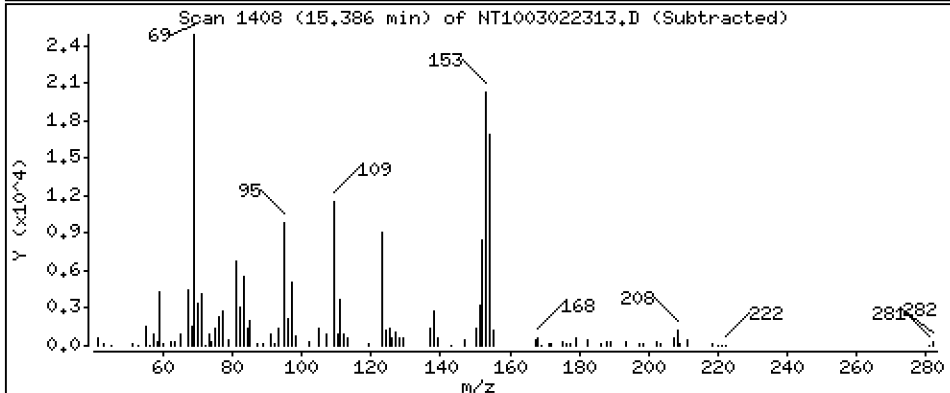
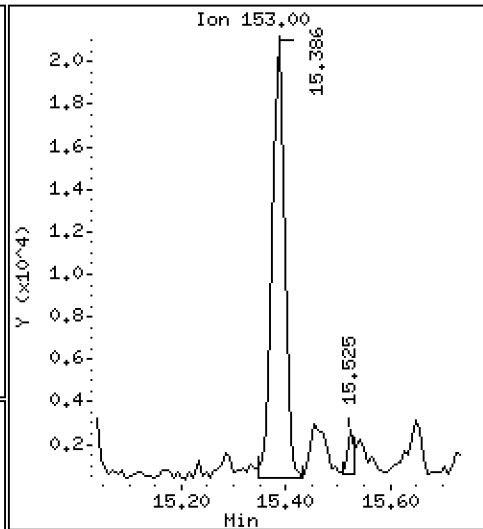
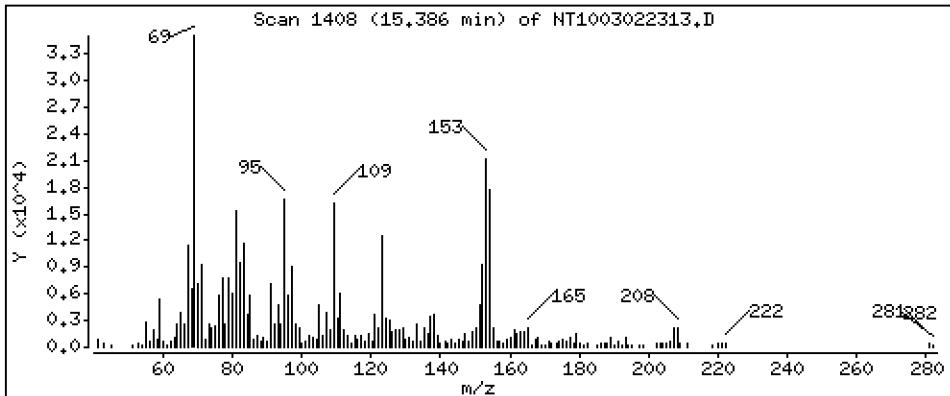
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,08800 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

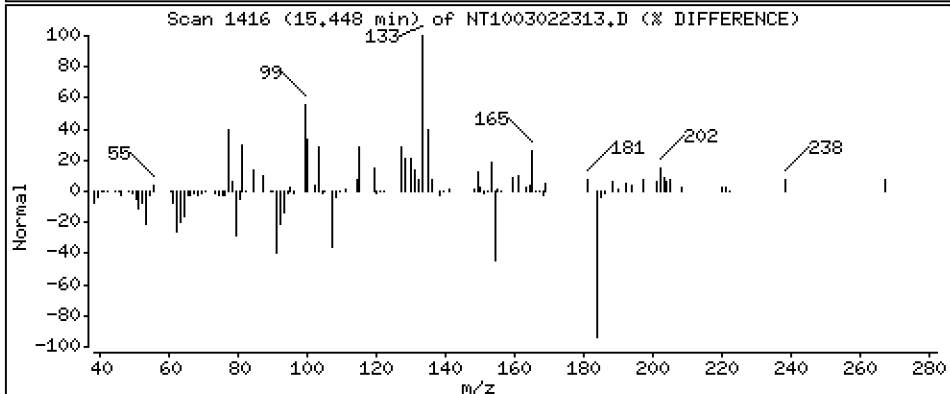
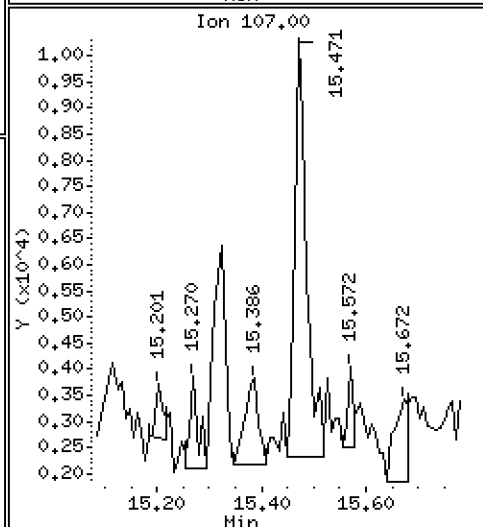
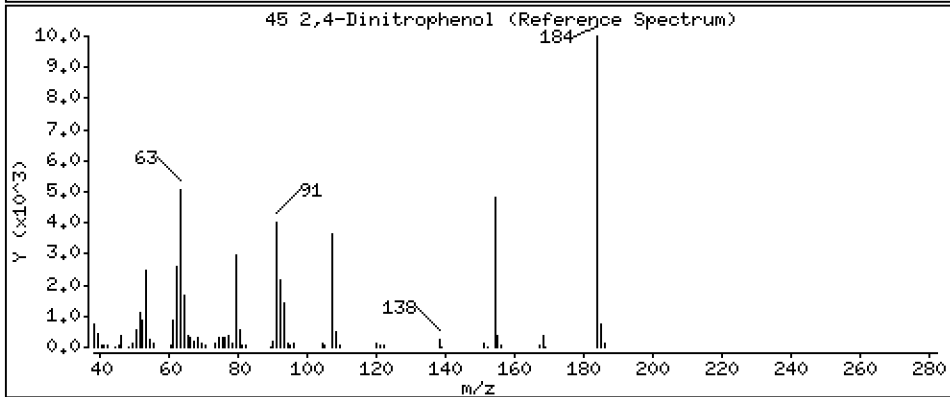
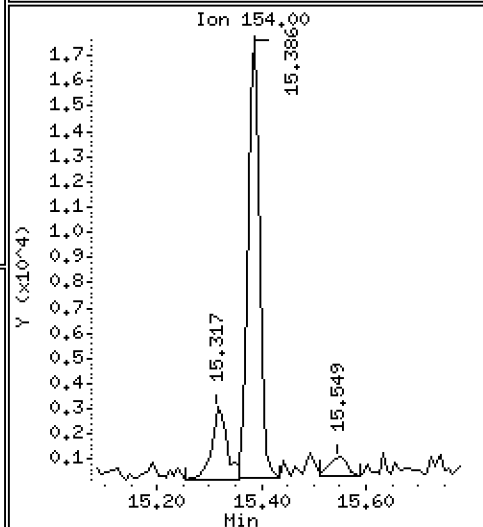
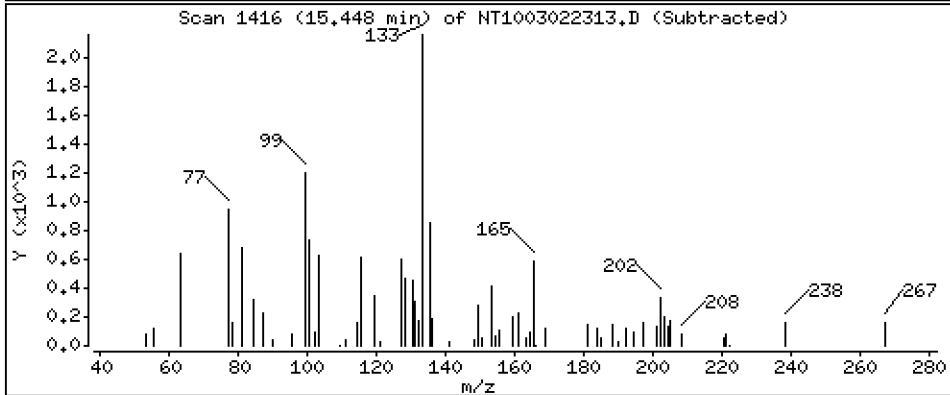
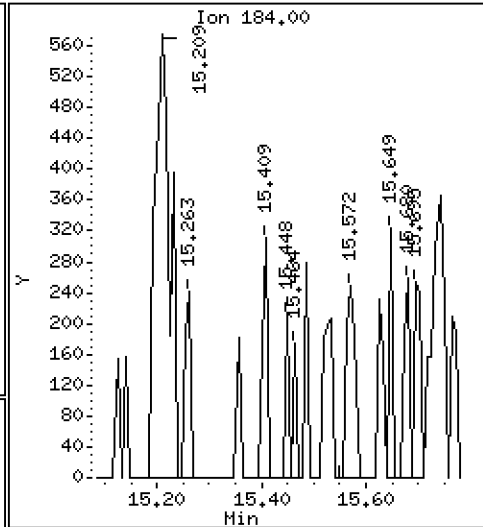
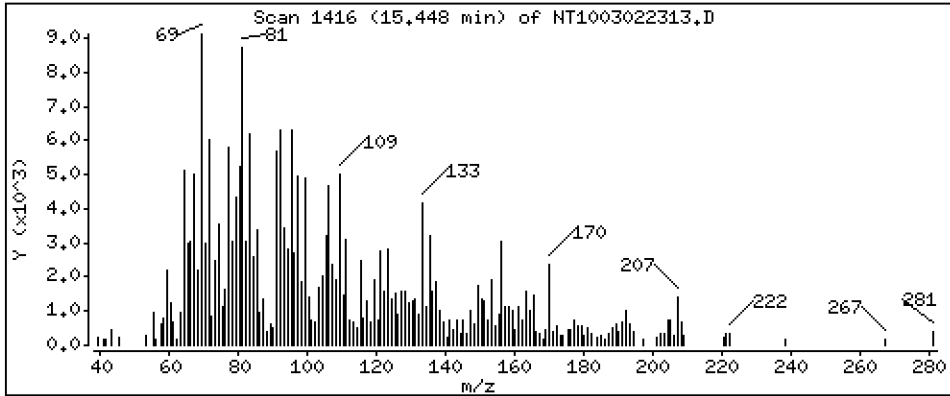
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

45 2,4-Dinitrophenol

Concentration: 0.004136 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

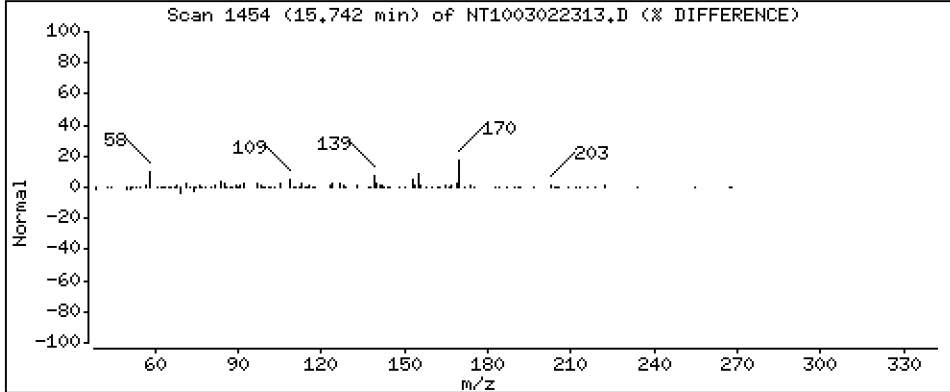
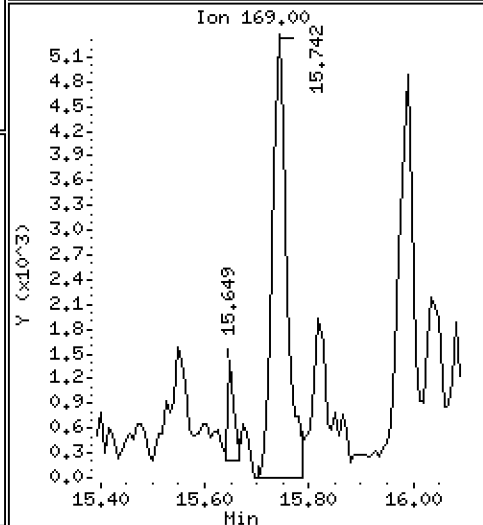
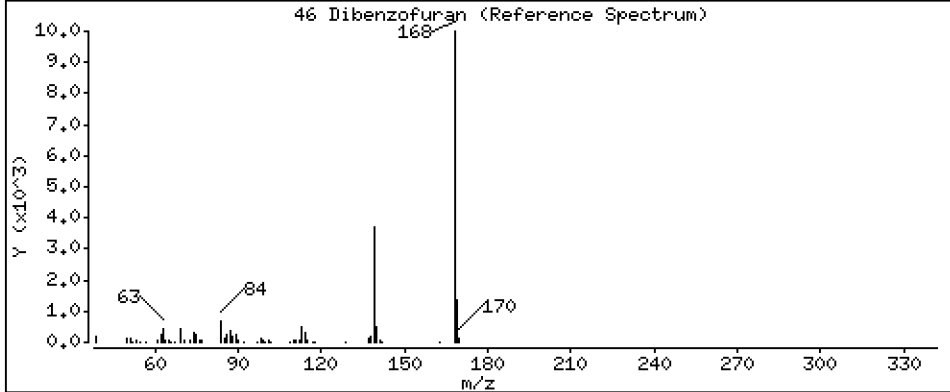
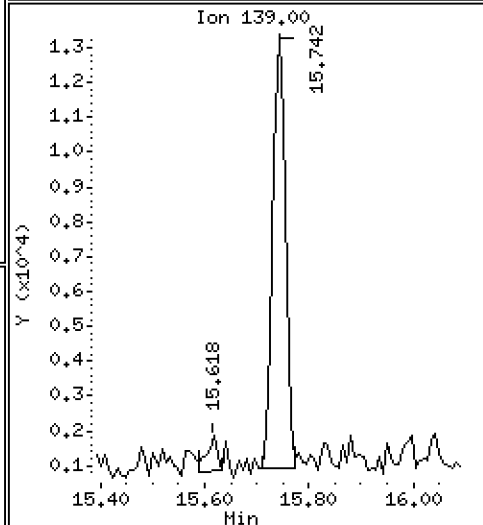
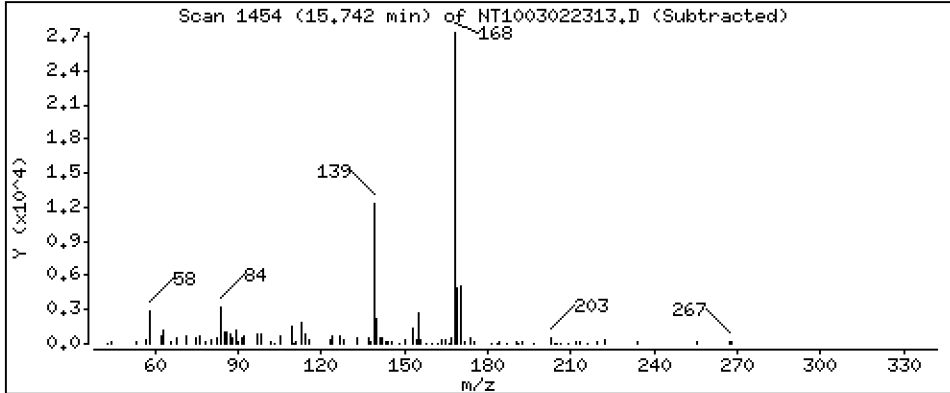
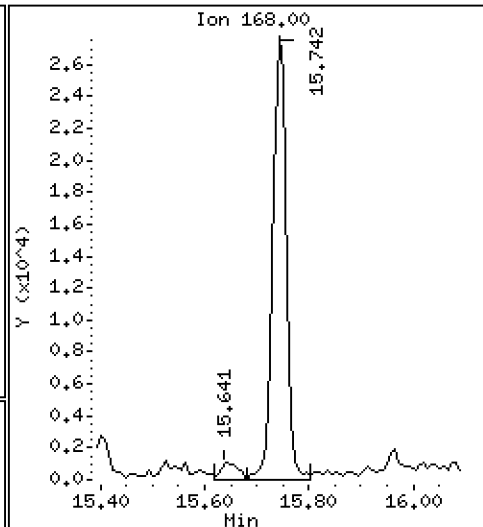
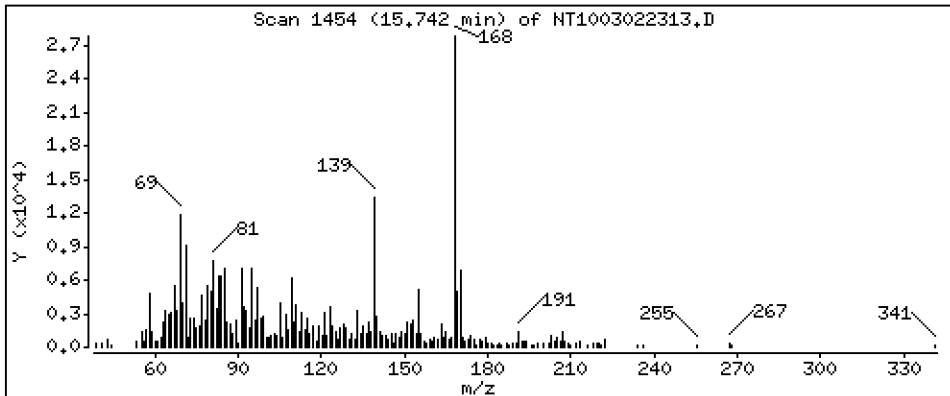
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.08677 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

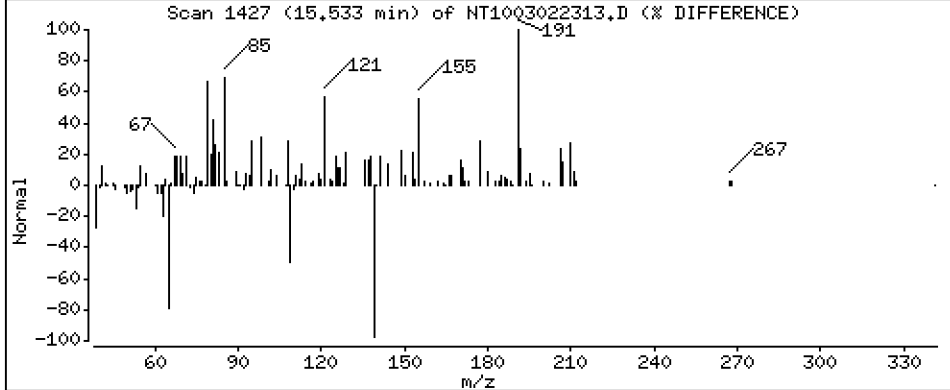
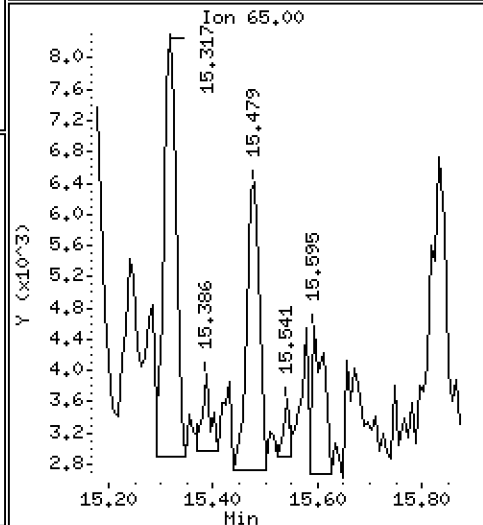
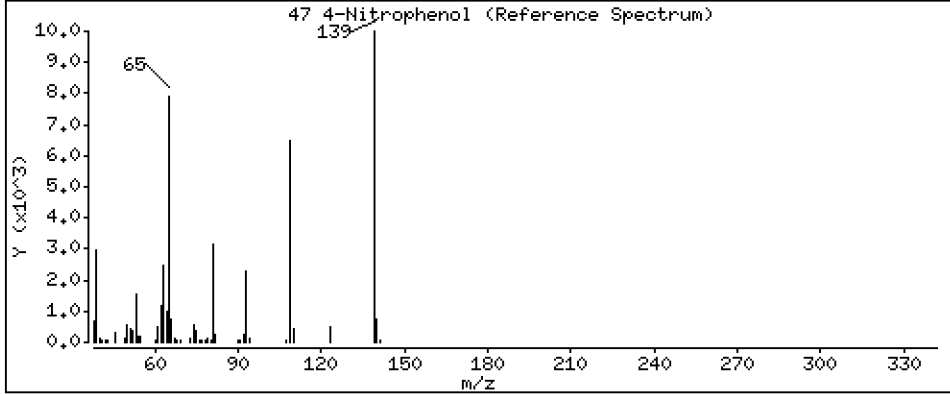
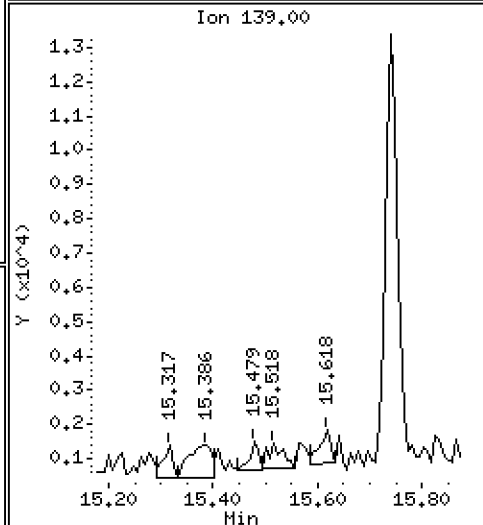
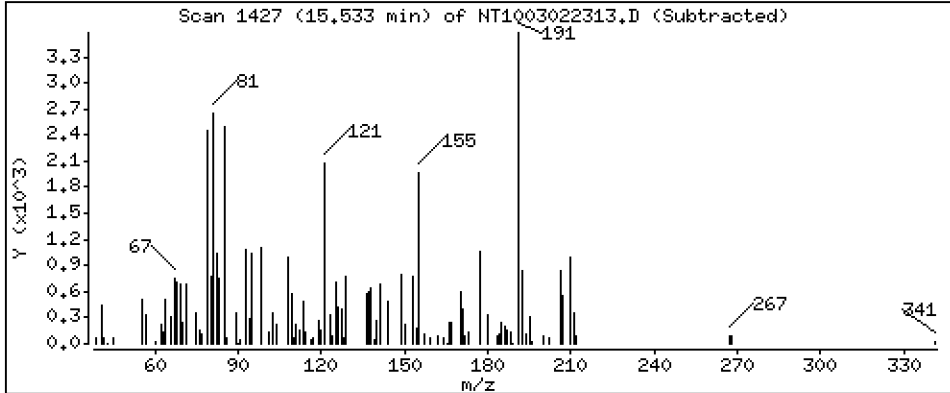
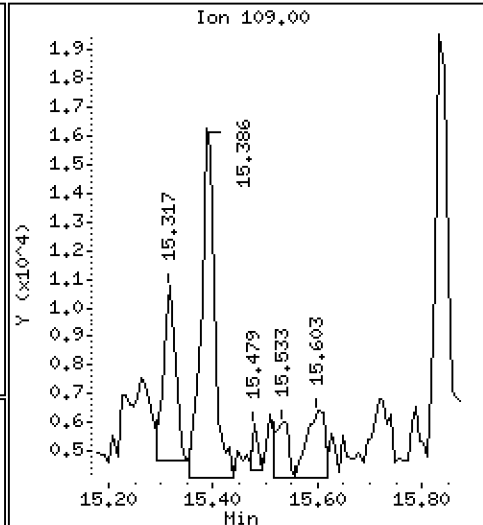
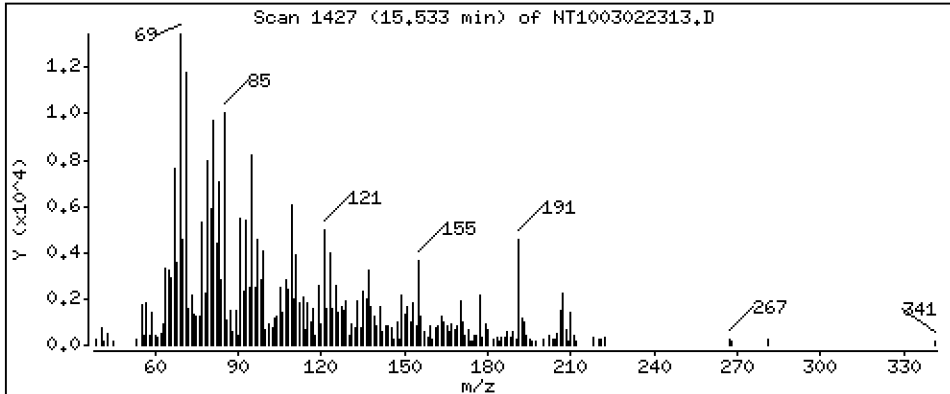
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

47 4-Nitrophenol

Concentration: 0.04717 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

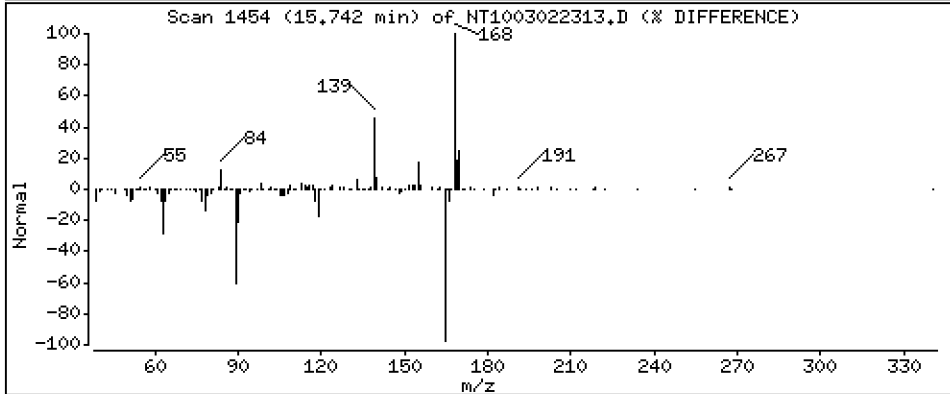
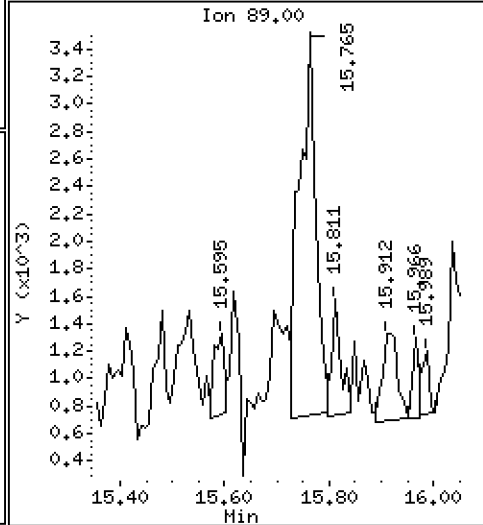
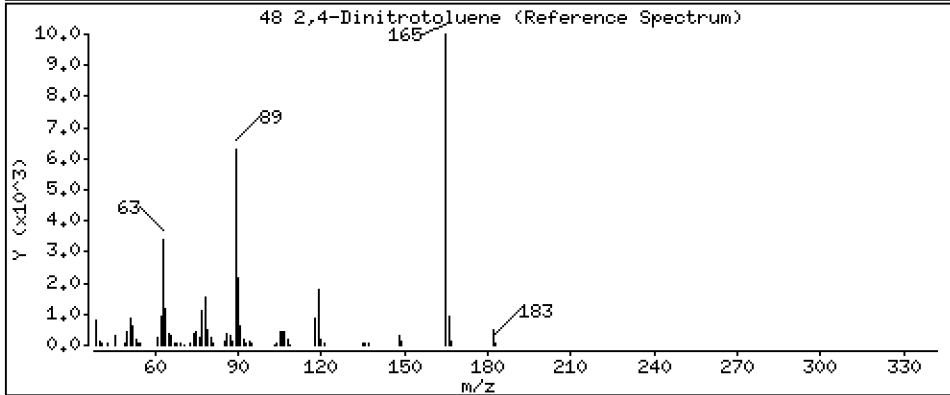
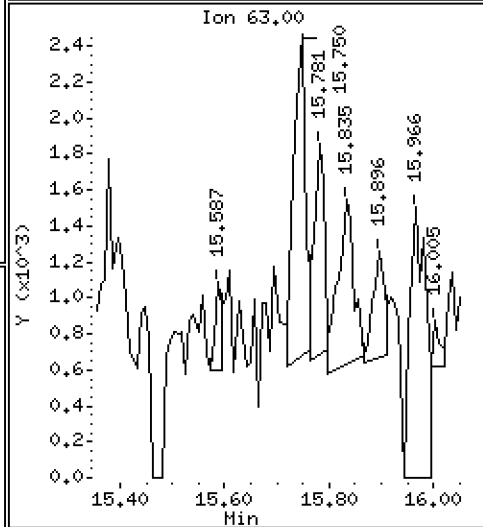
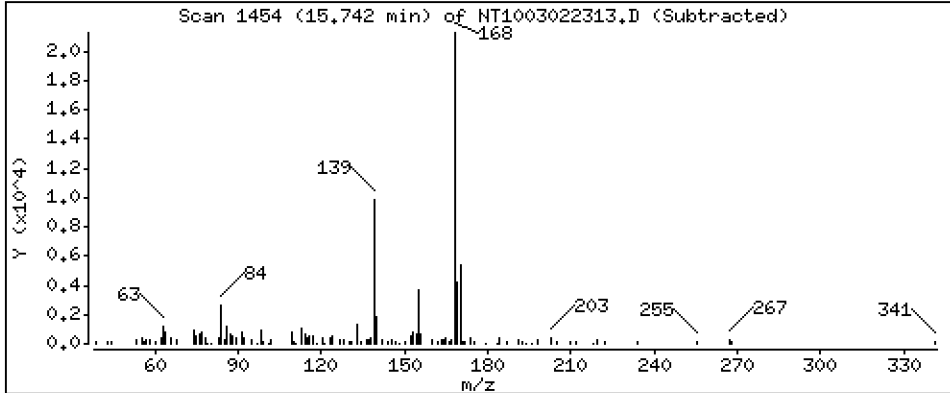
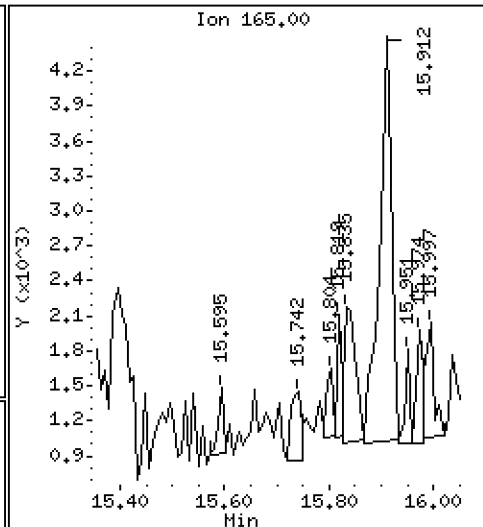
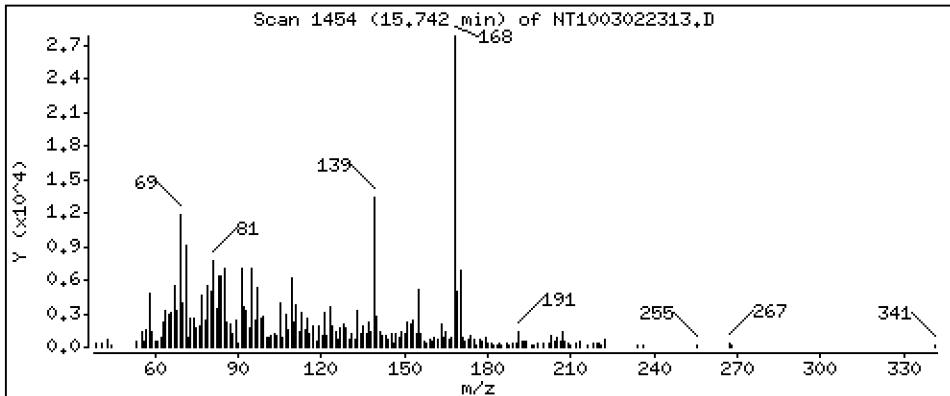
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

48 2,4-Dinitrotoluene

Concentration: 0.006697 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

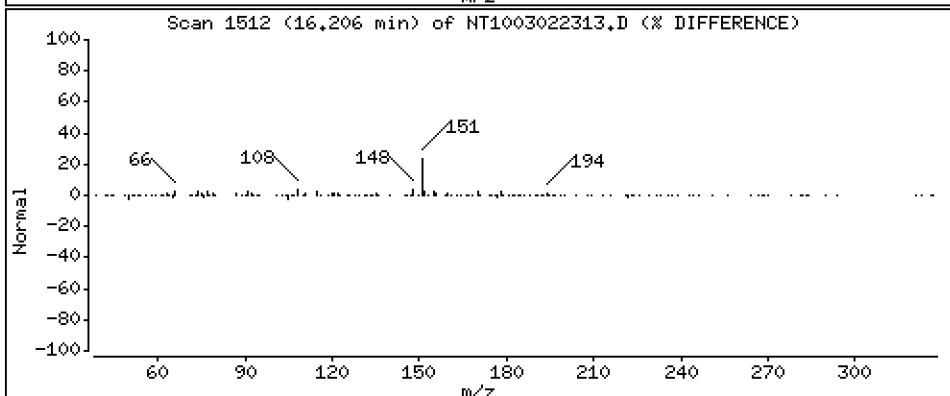
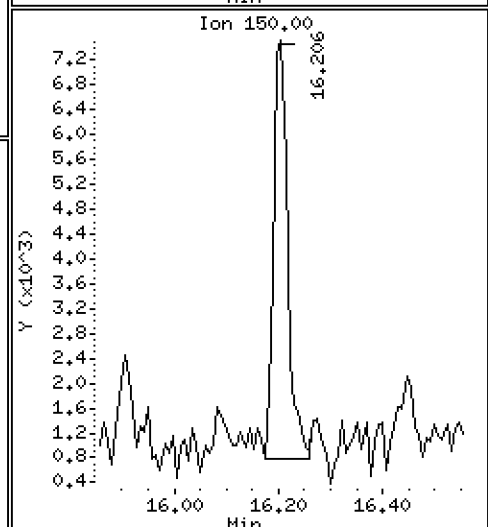
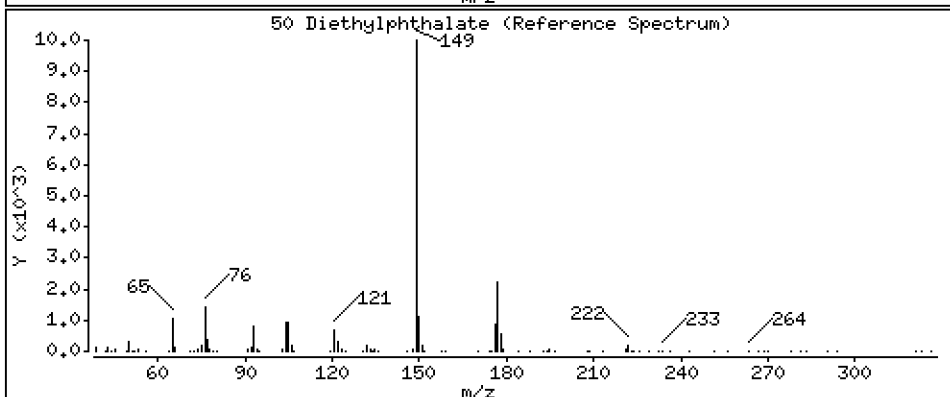
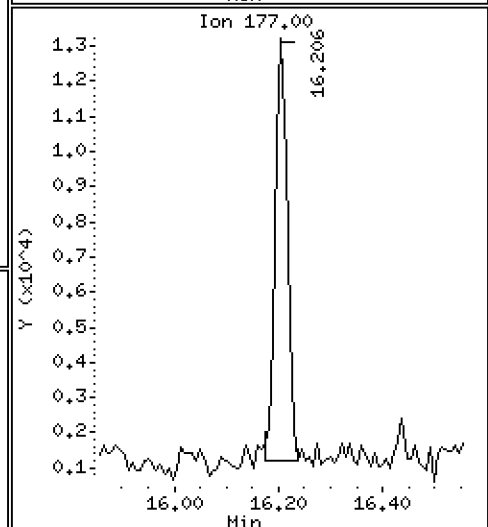
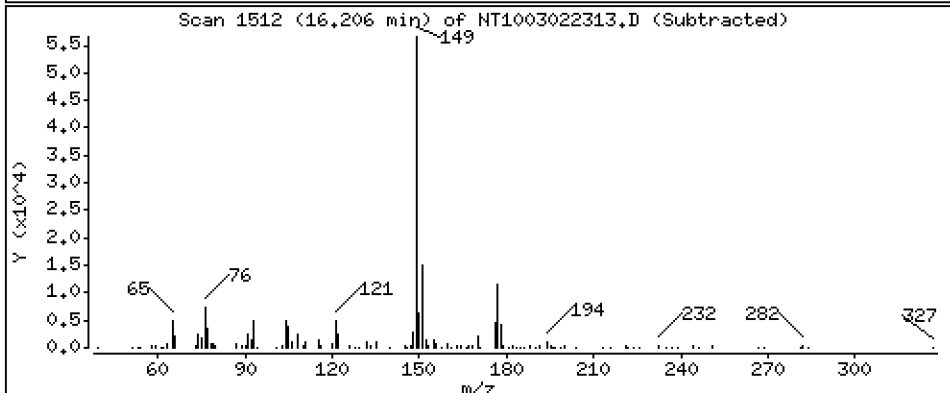
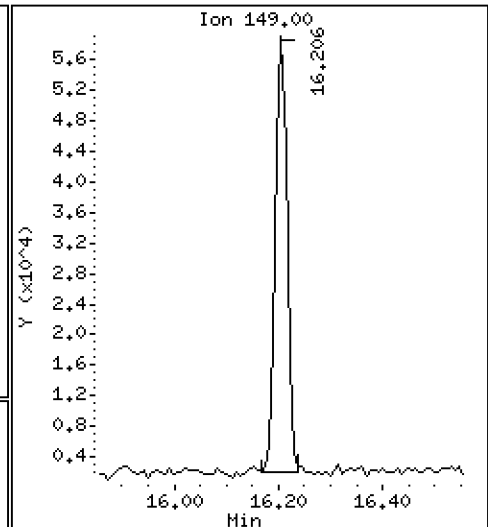
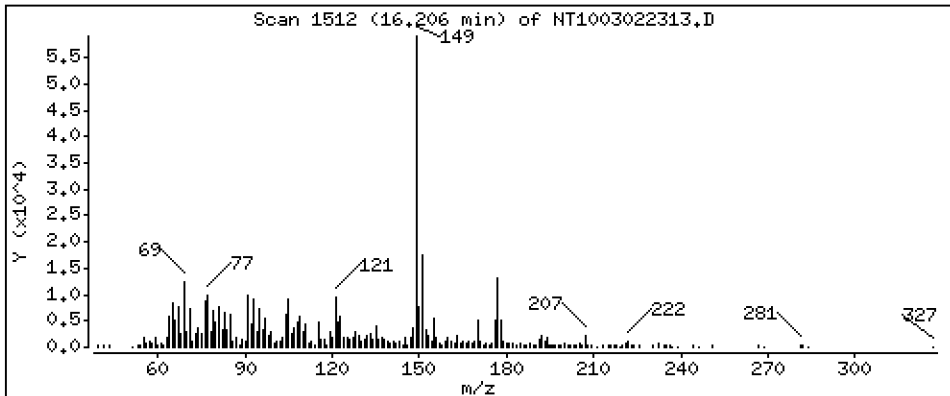
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1934 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

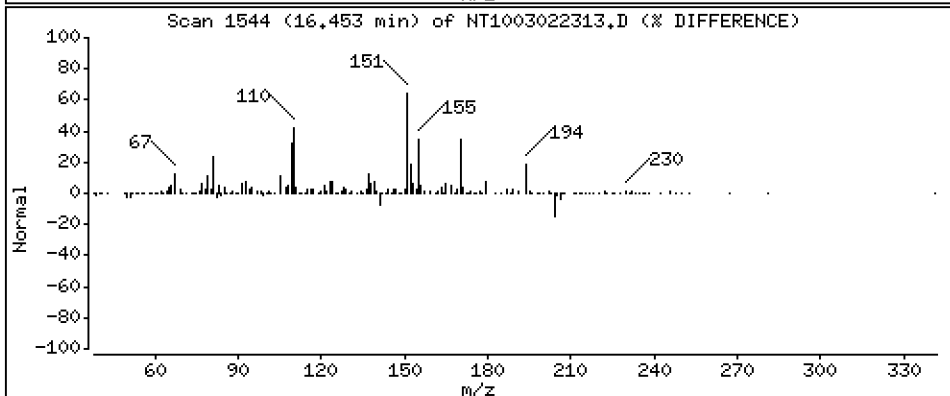
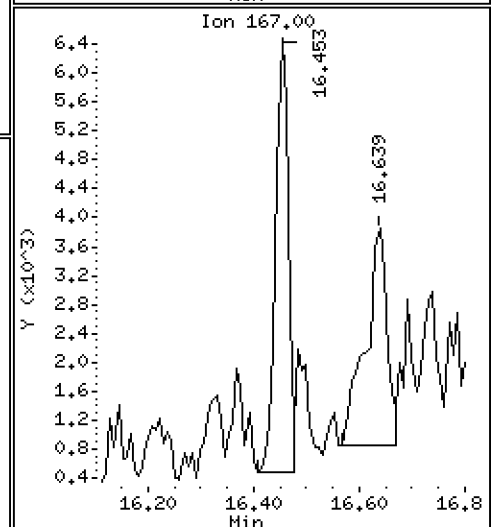
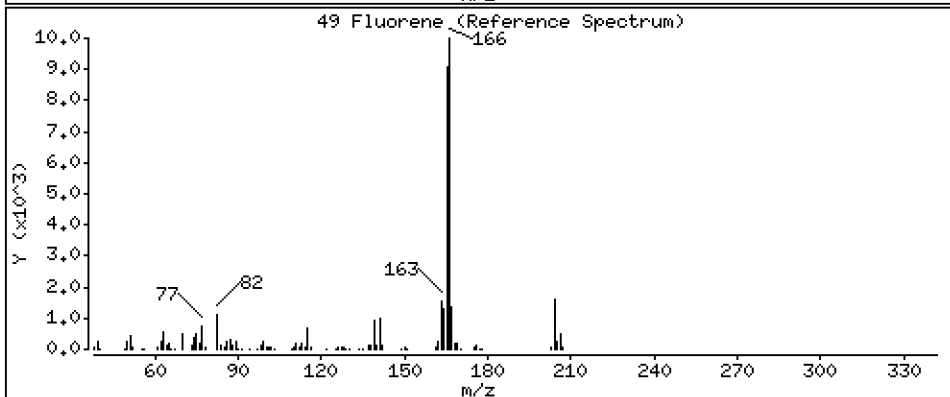
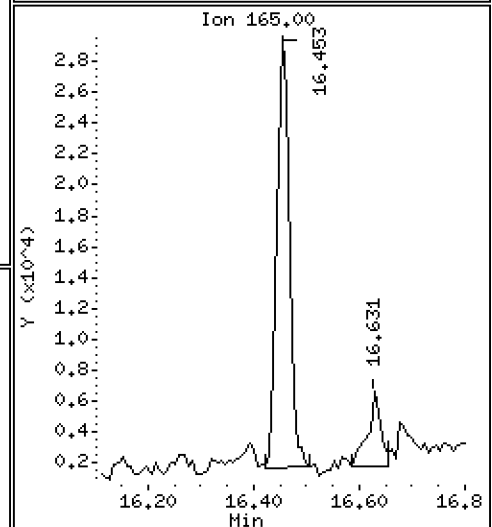
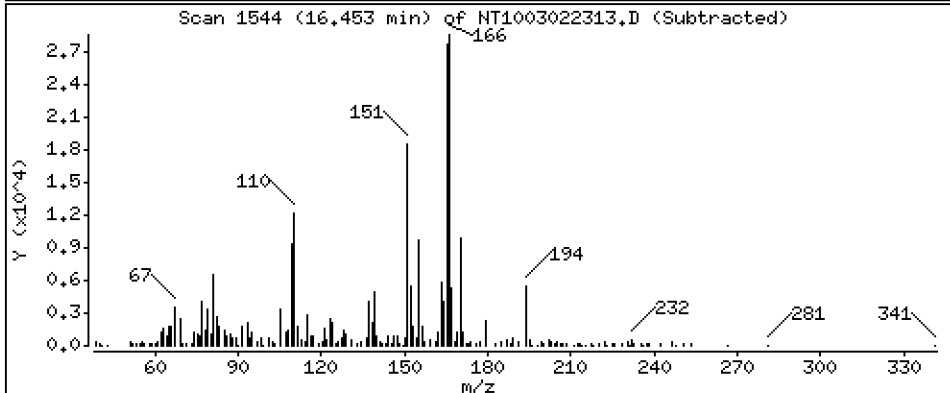
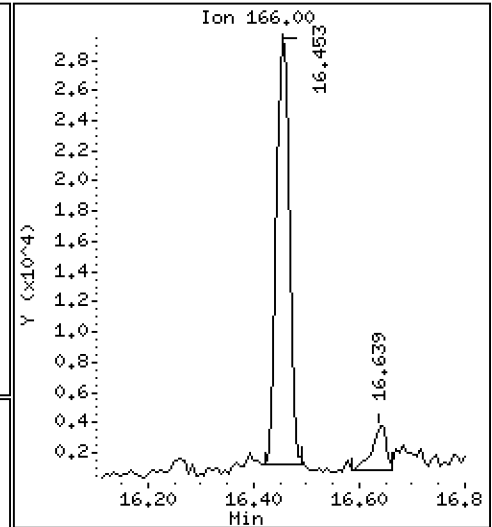
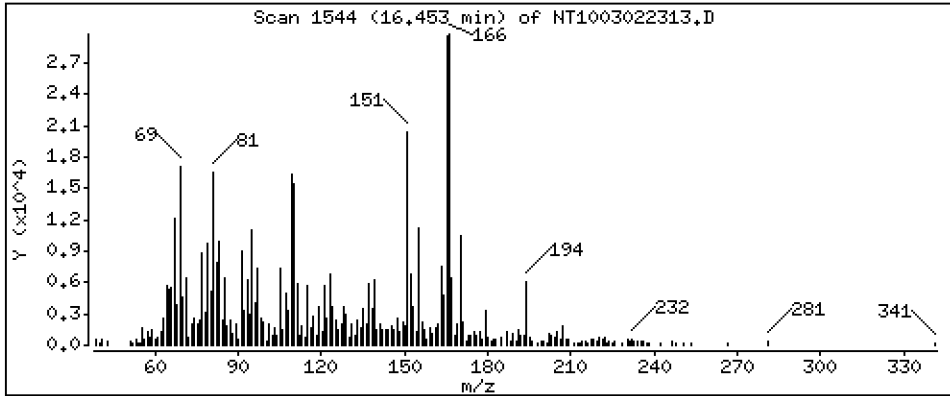
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.1022 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

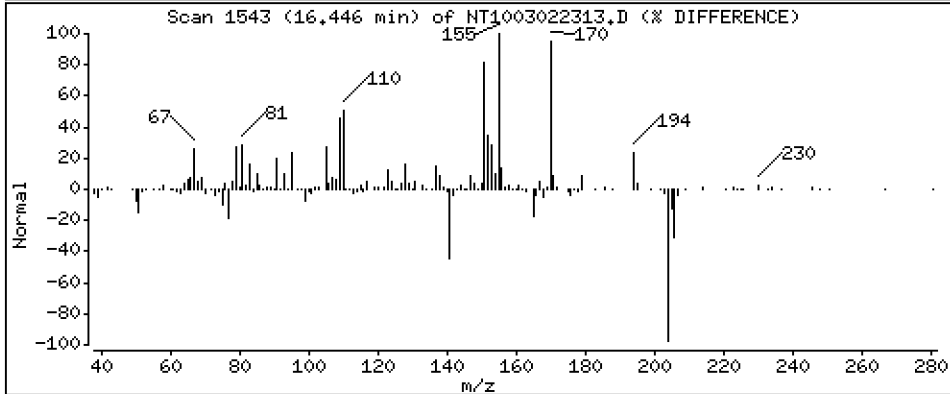
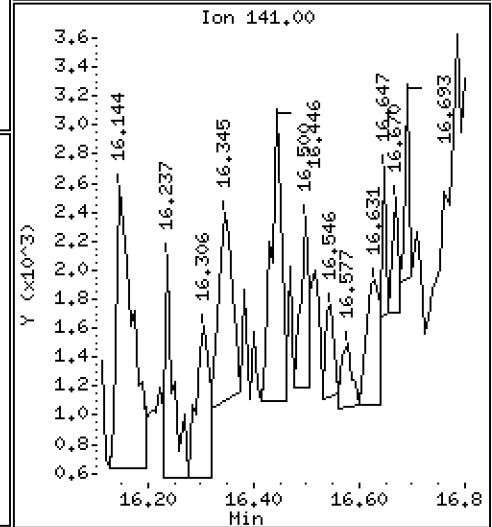
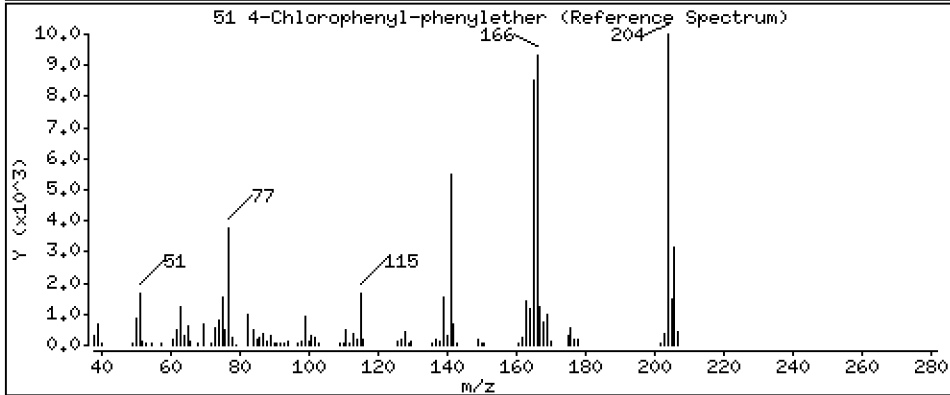
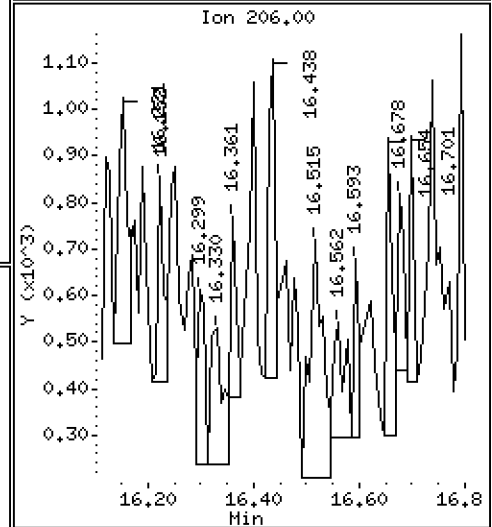
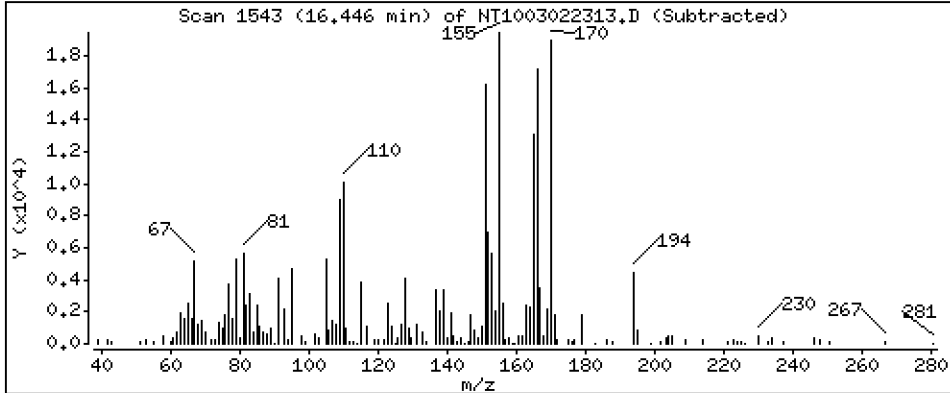
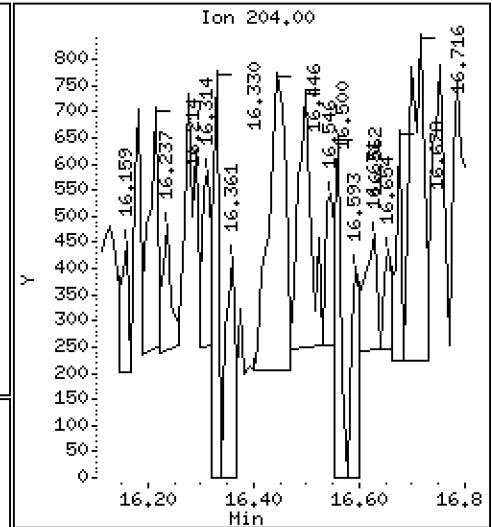
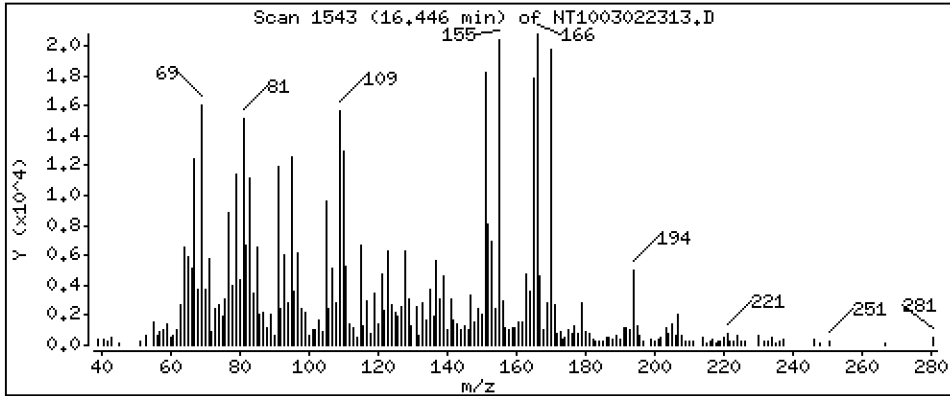
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 0,006145 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

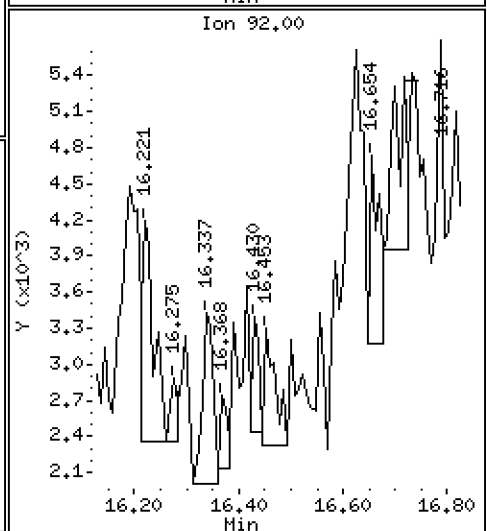
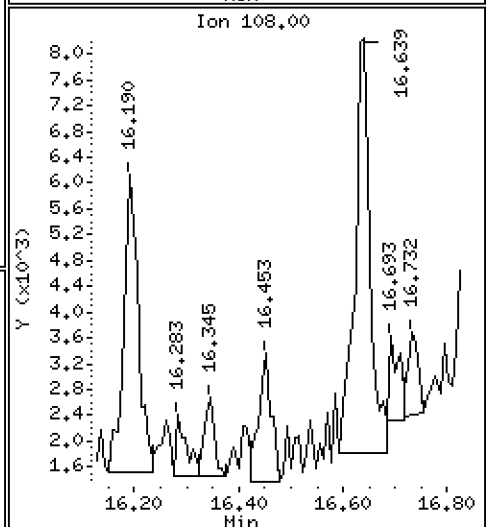
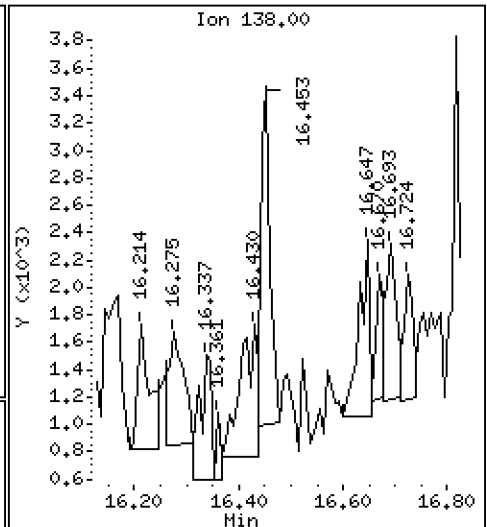
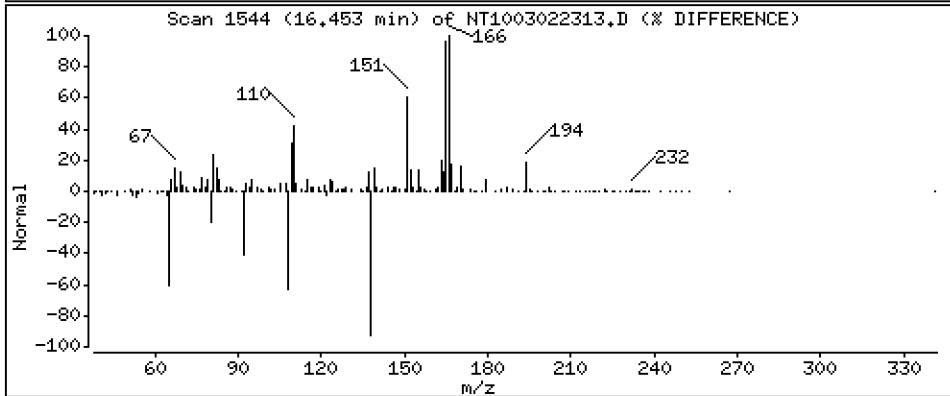
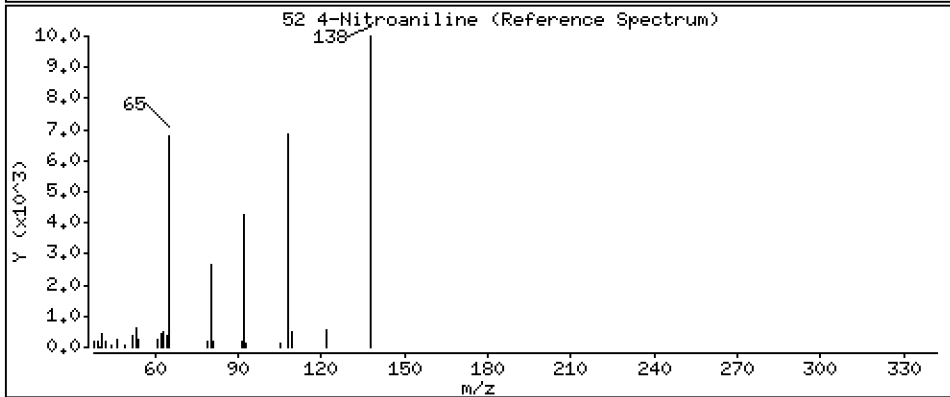
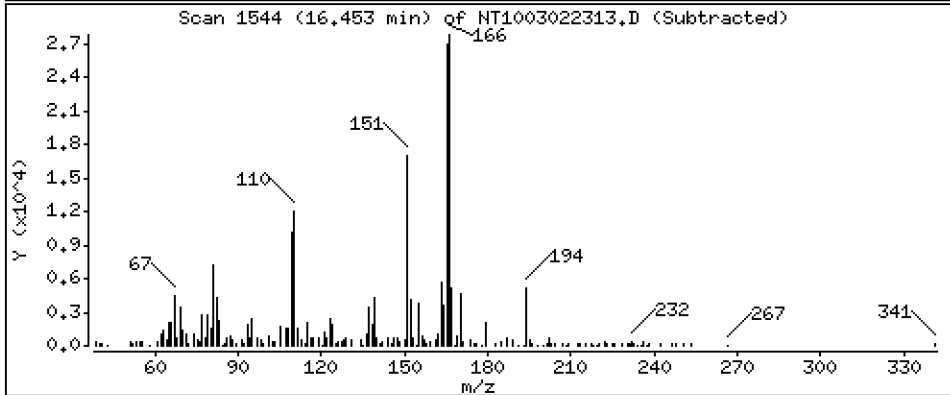
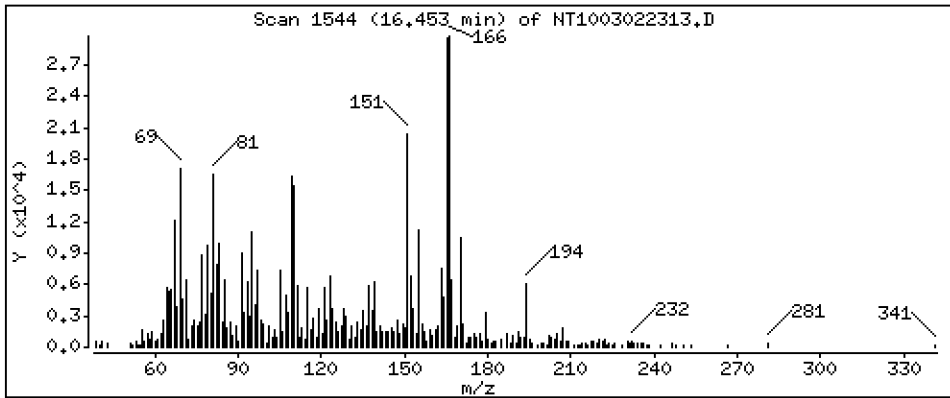
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

52 4-Nitroaniline

Concentration: 0.02778 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

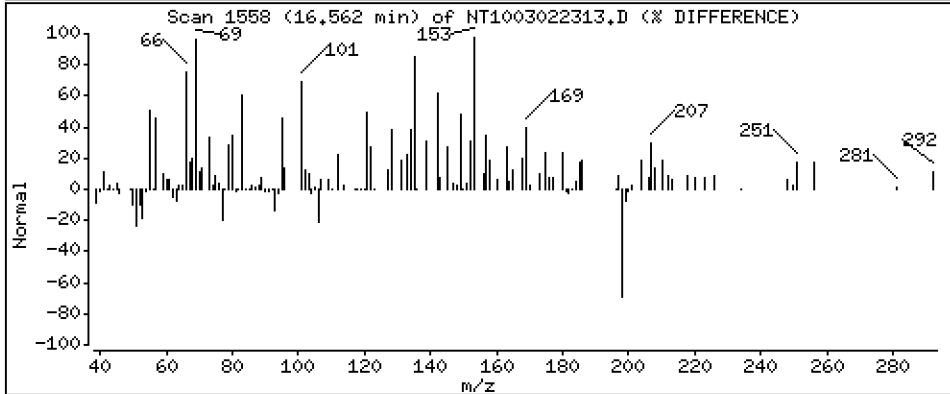
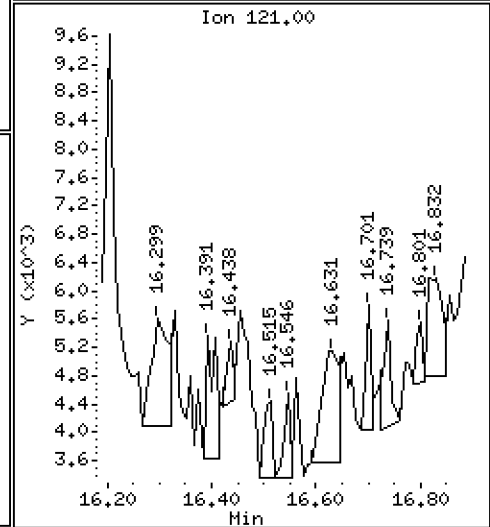
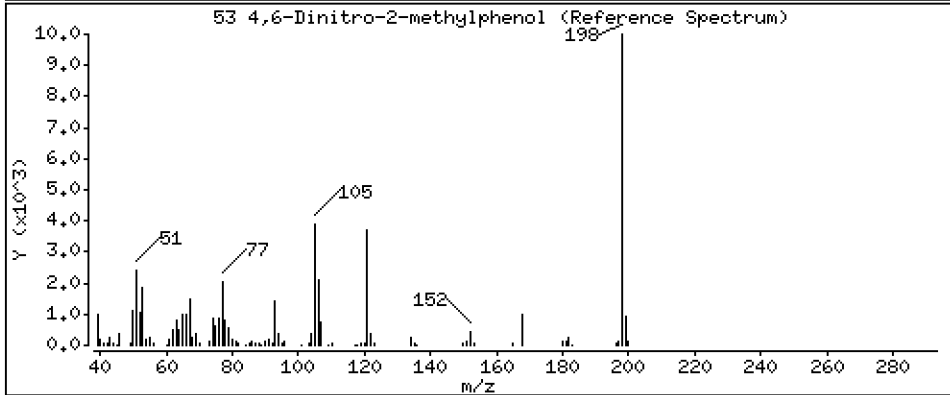
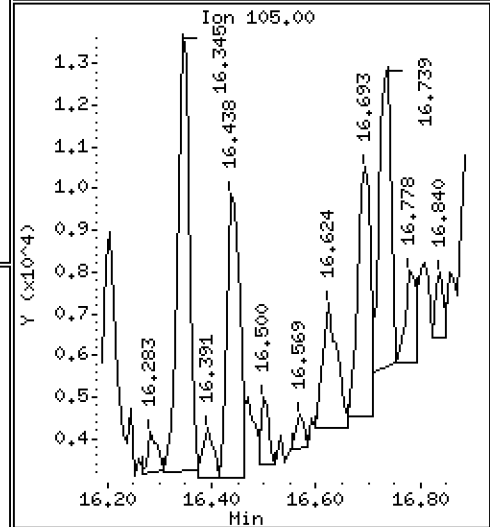
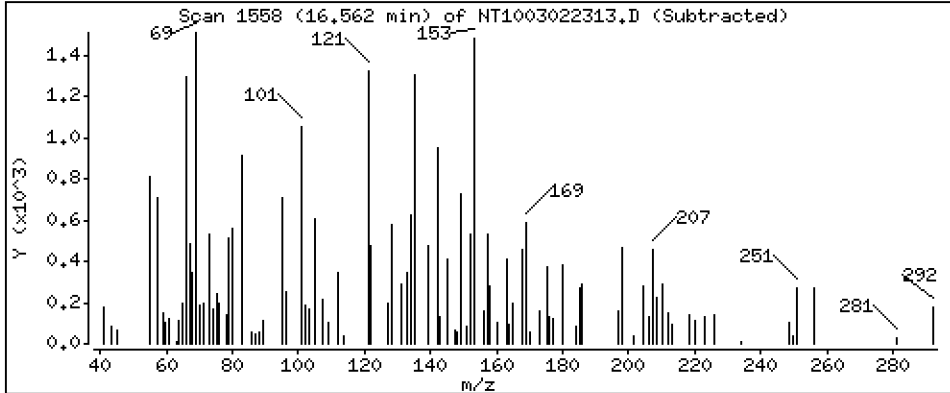
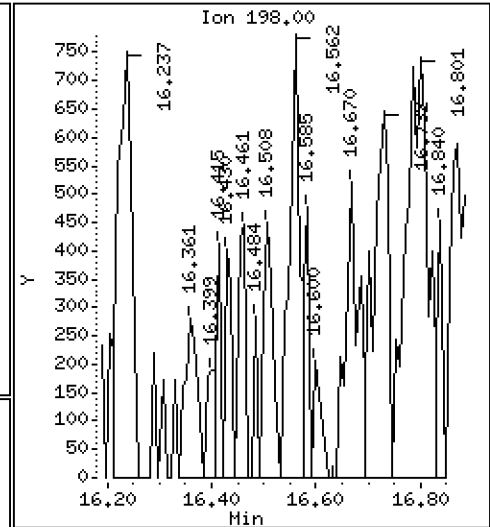
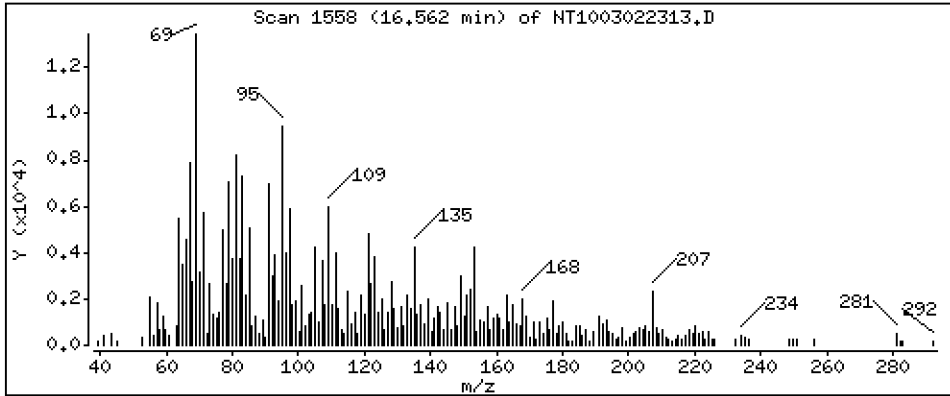
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 0,02215 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

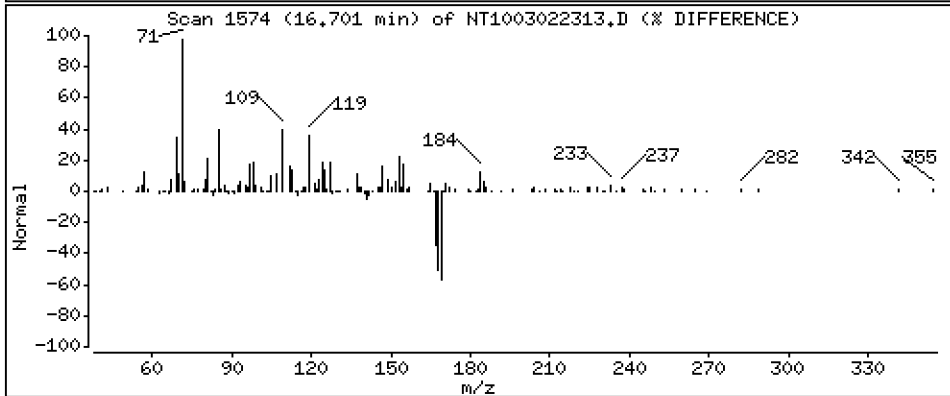
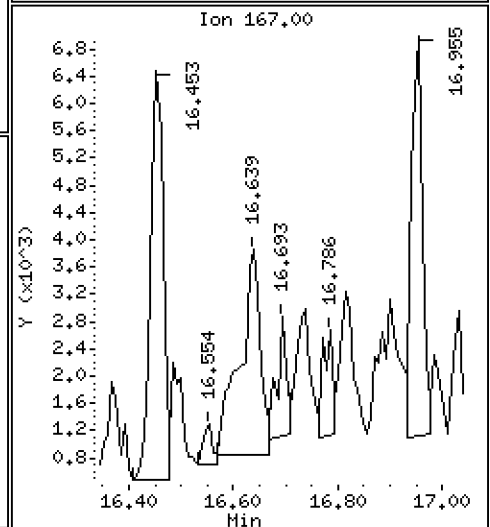
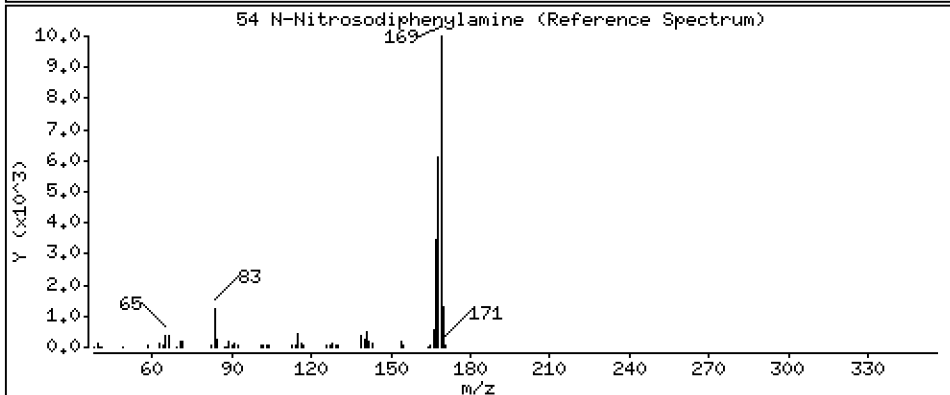
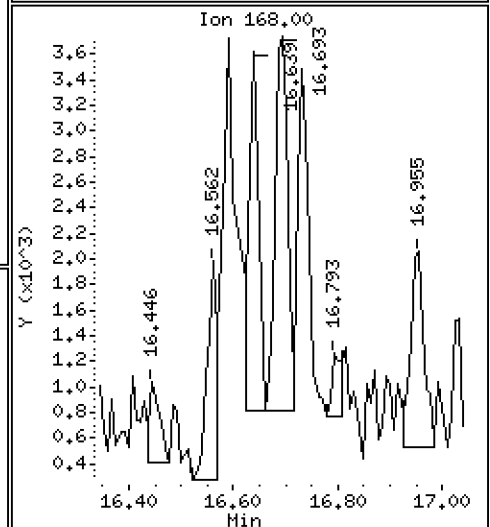
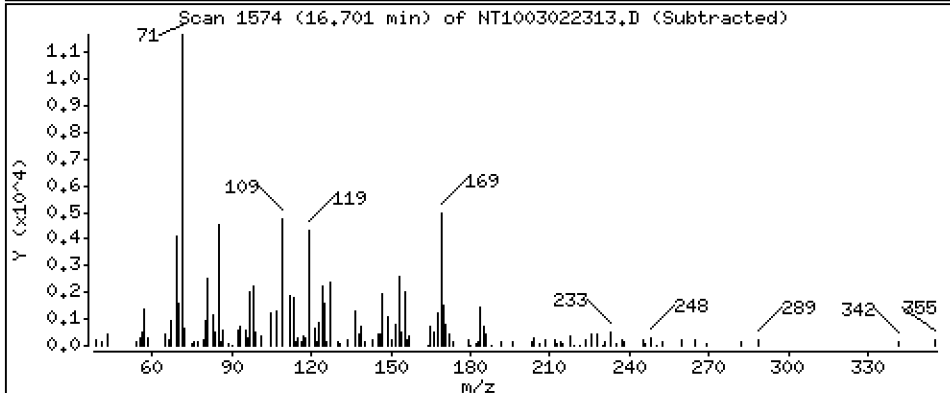
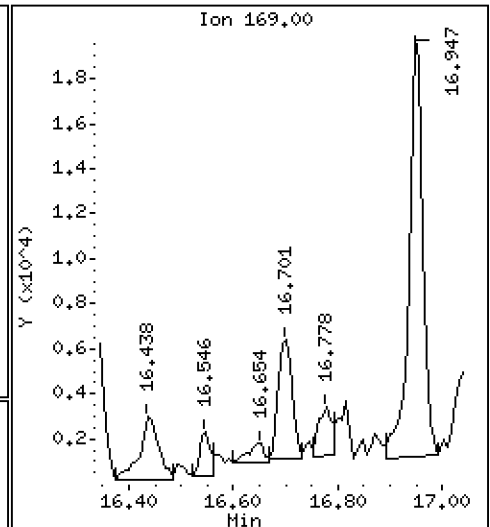
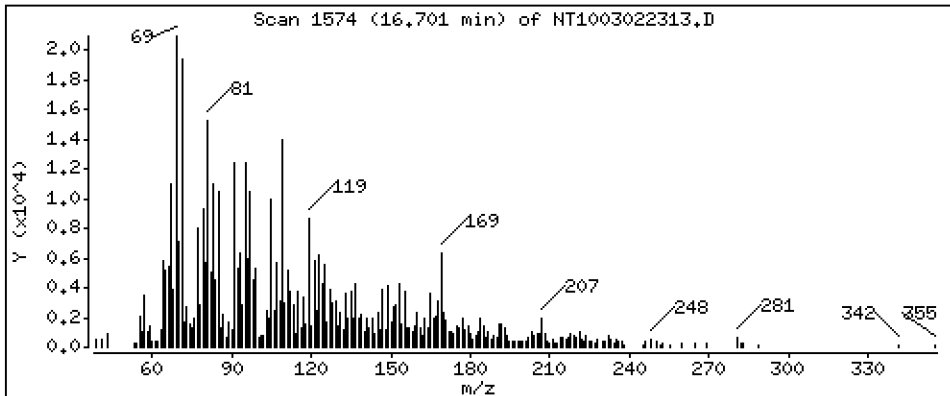
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.02890 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

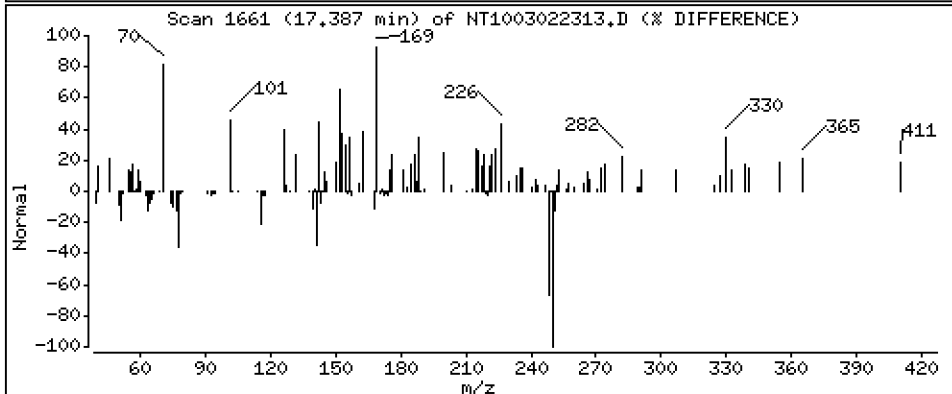
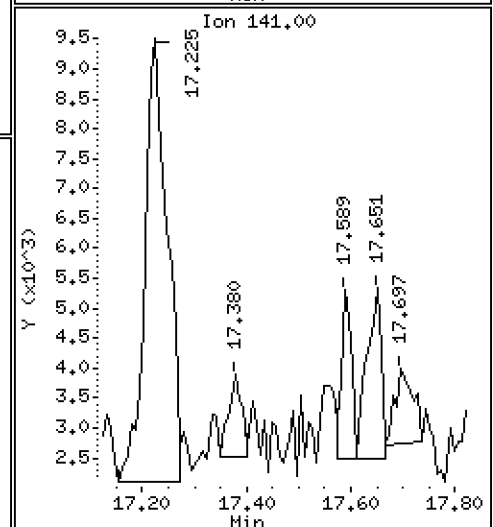
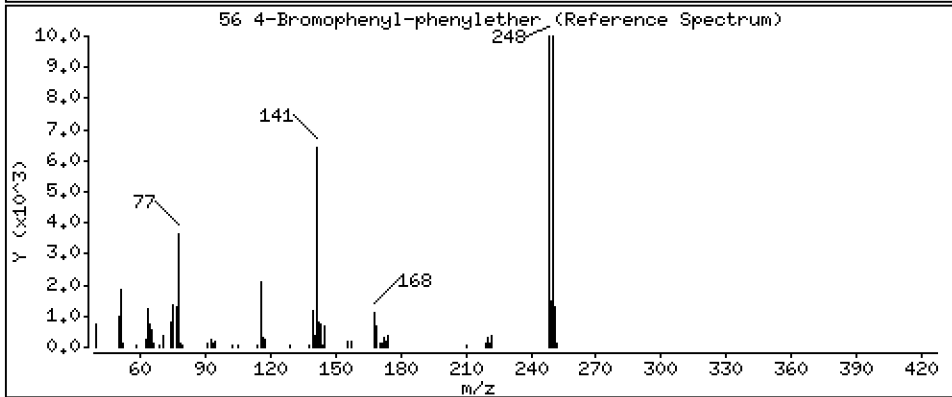
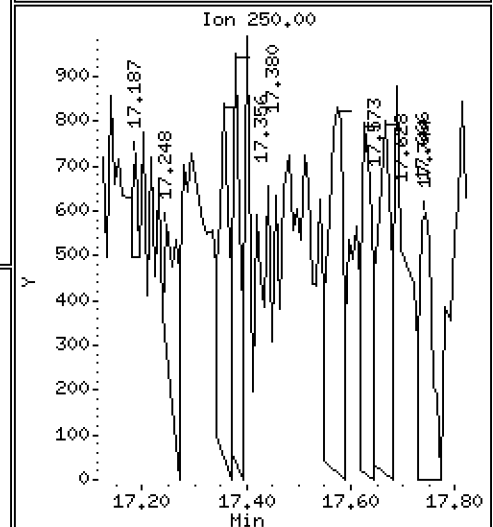
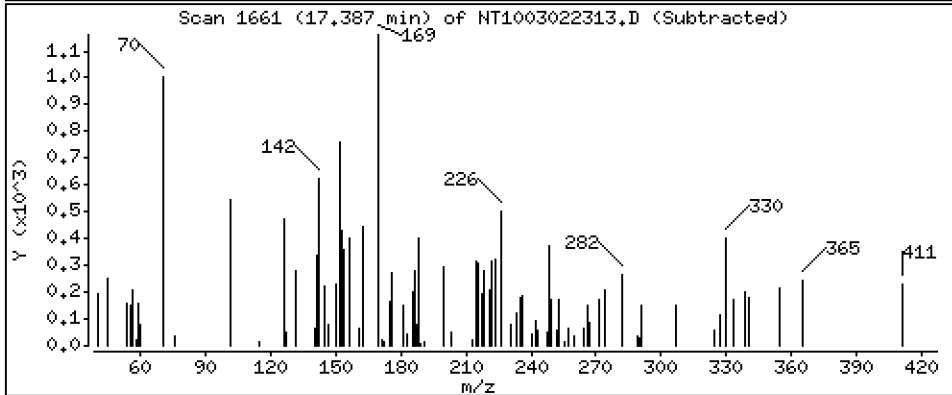
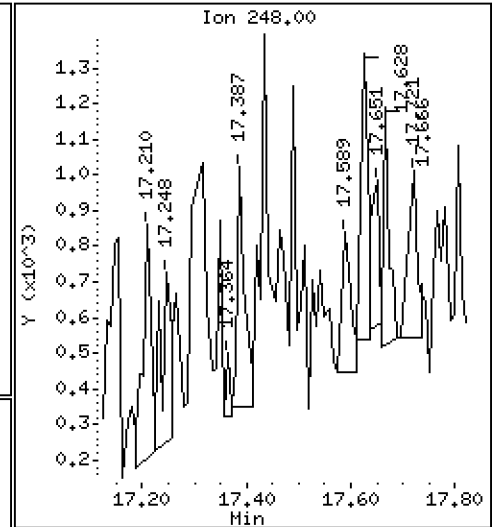
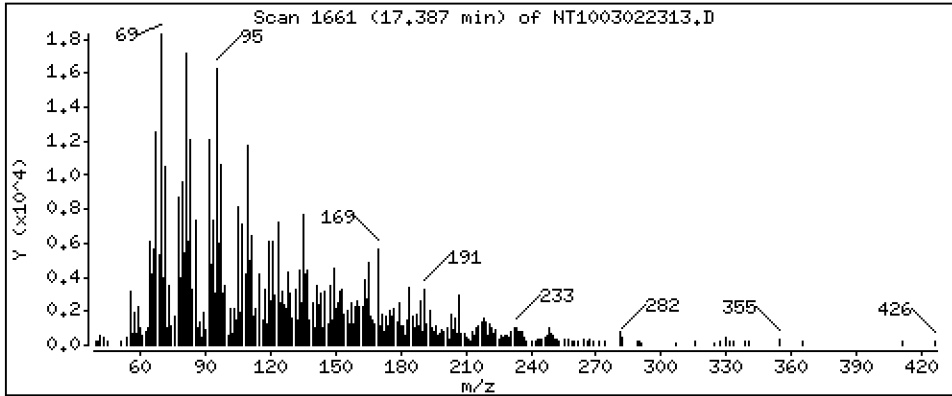
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,004825 ug/mL

56 4-Bromophenyl-phenylether



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

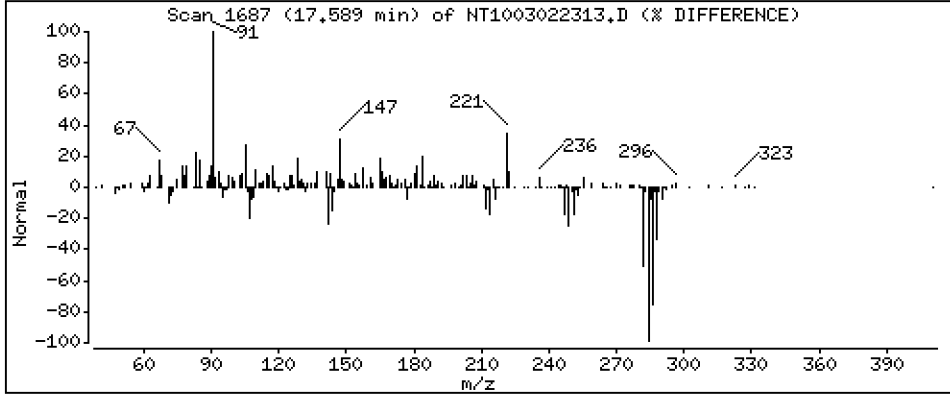
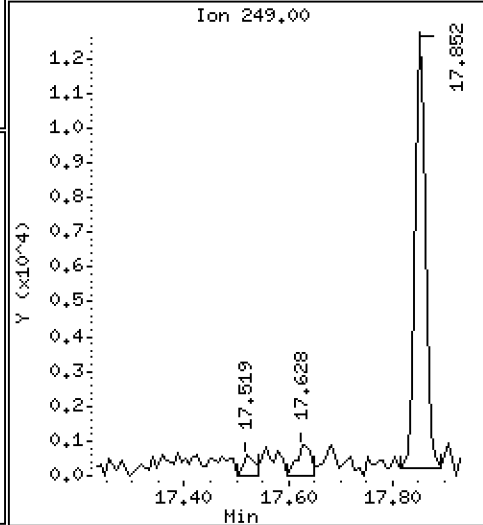
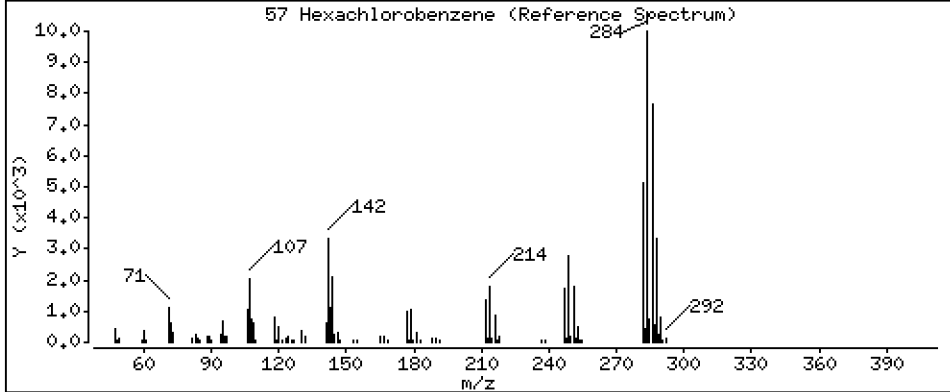
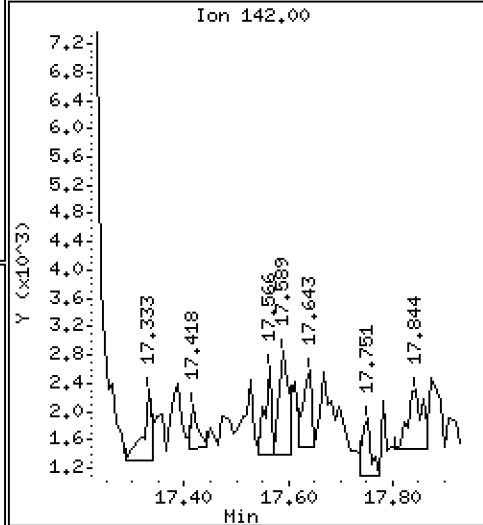
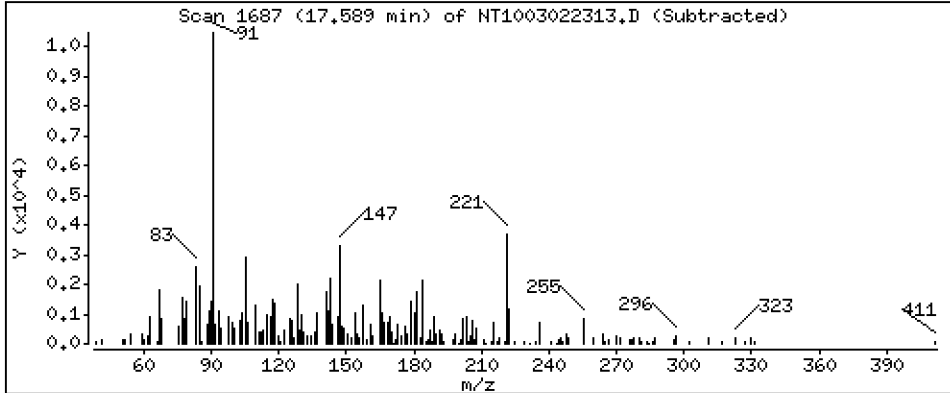
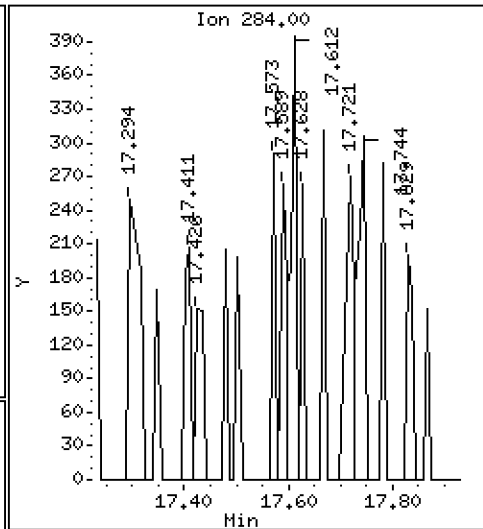
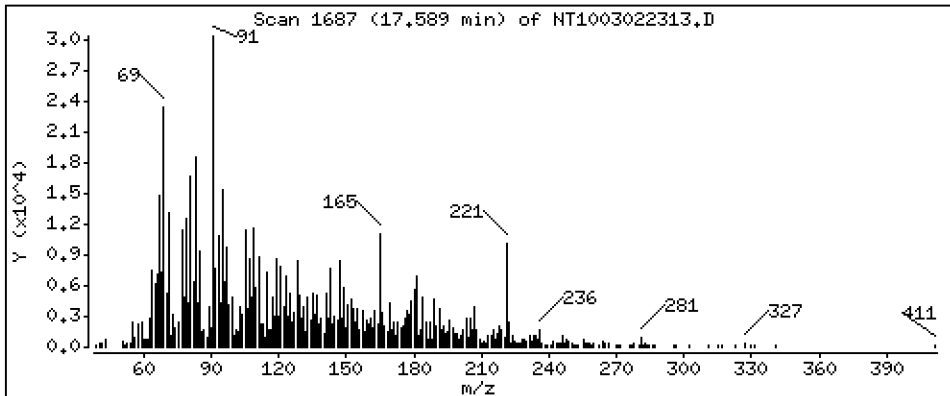
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,001267 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

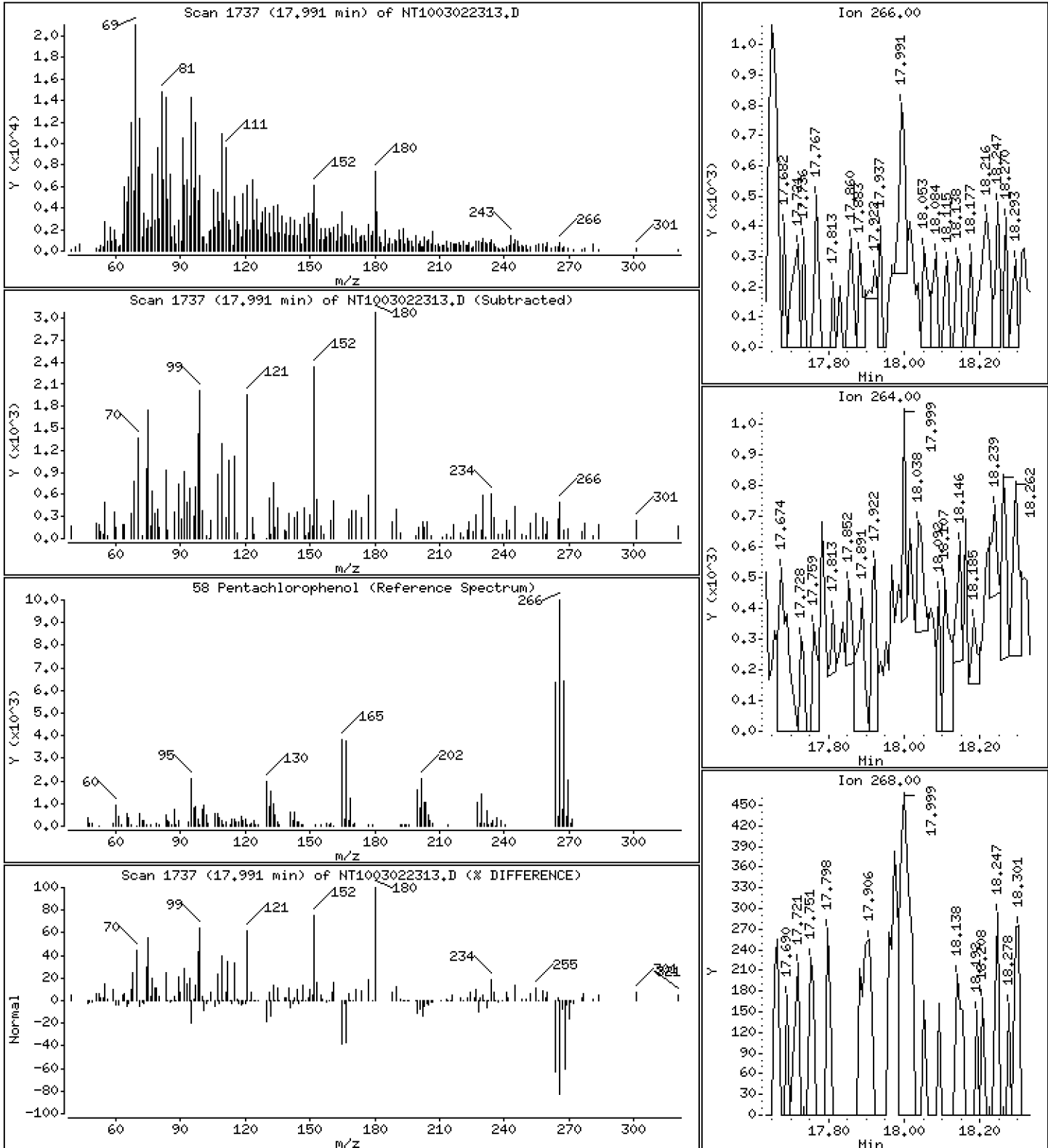
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 0.008248 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

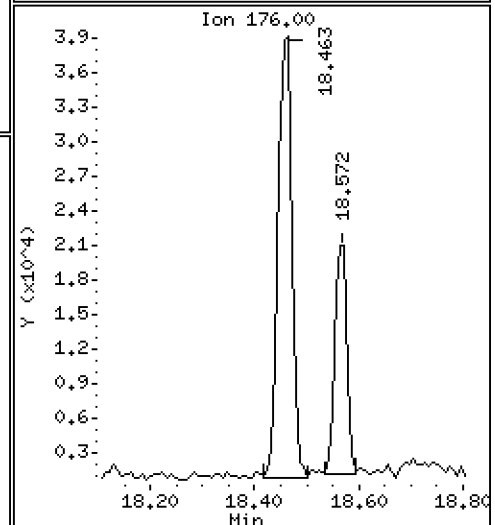
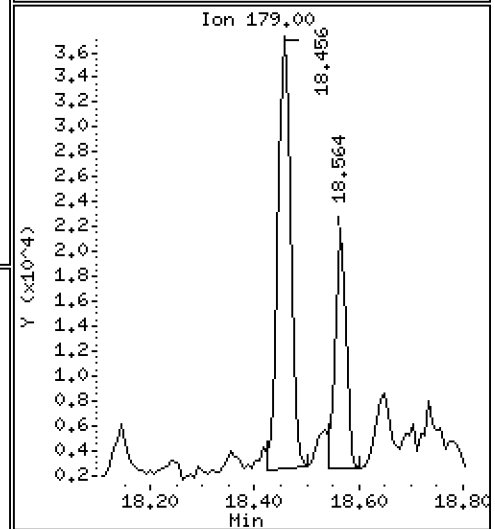
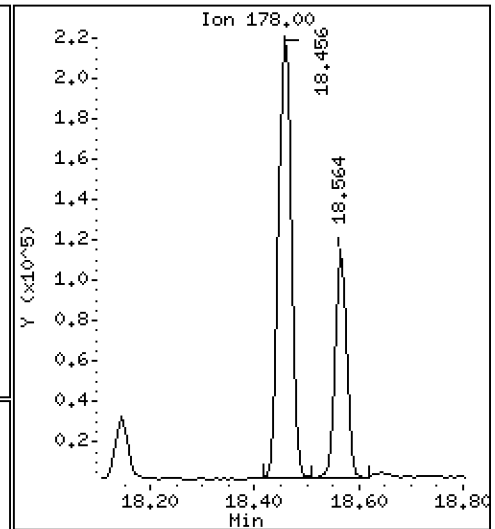
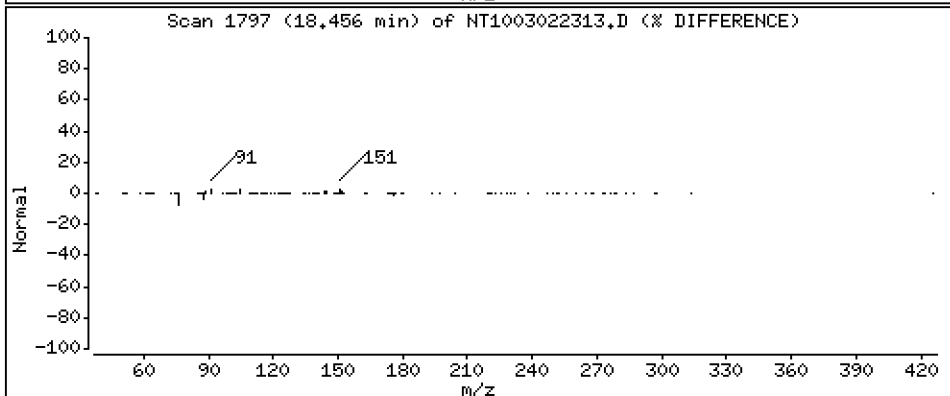
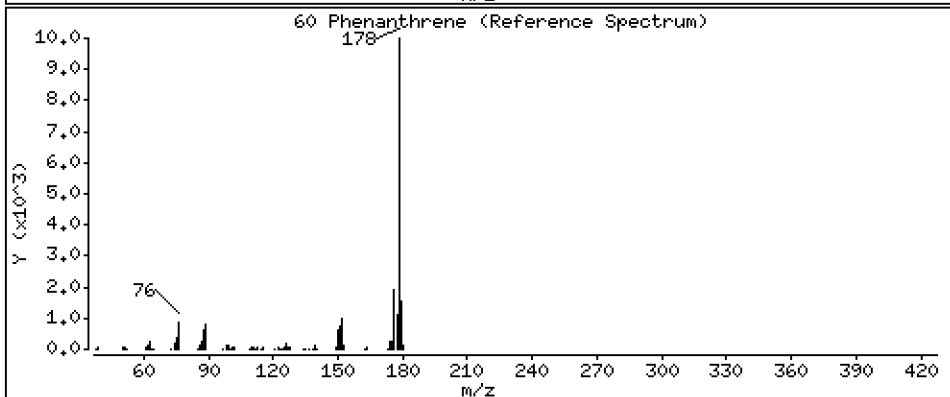
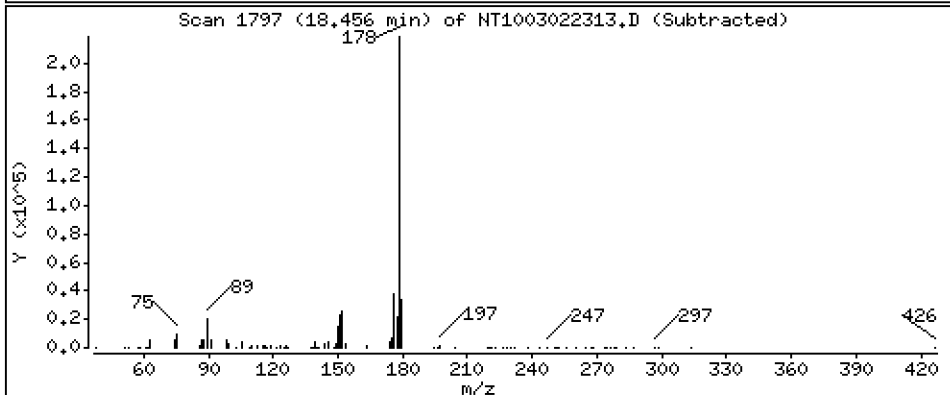
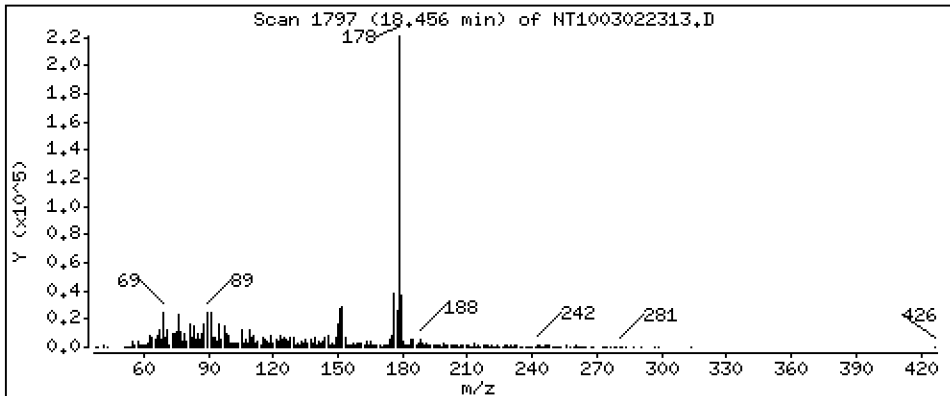
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,5909 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

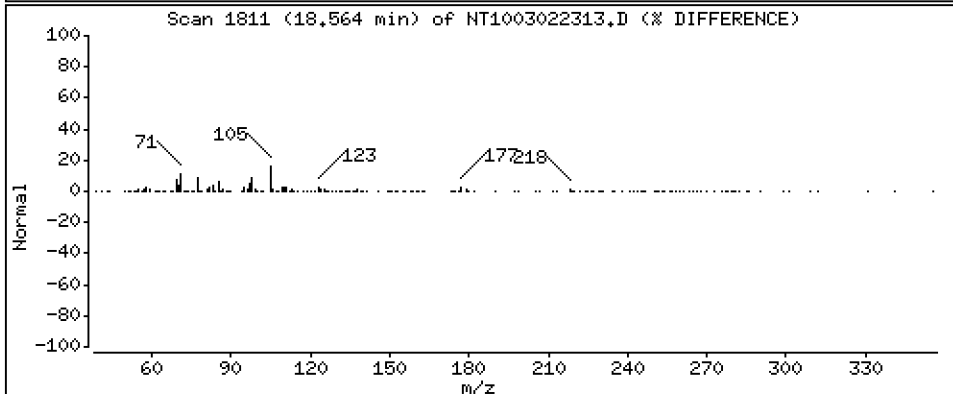
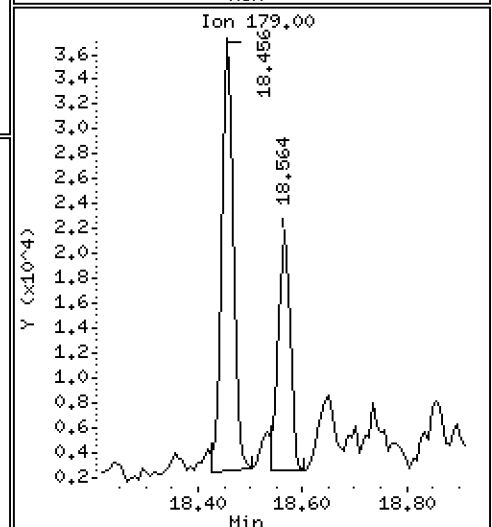
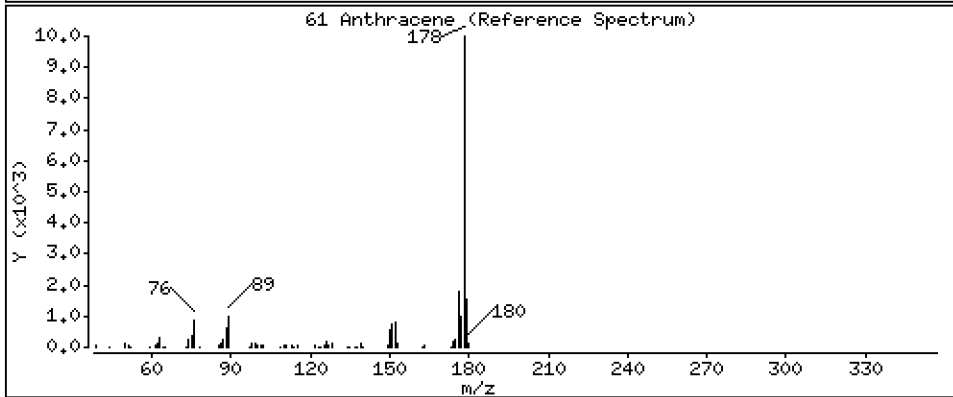
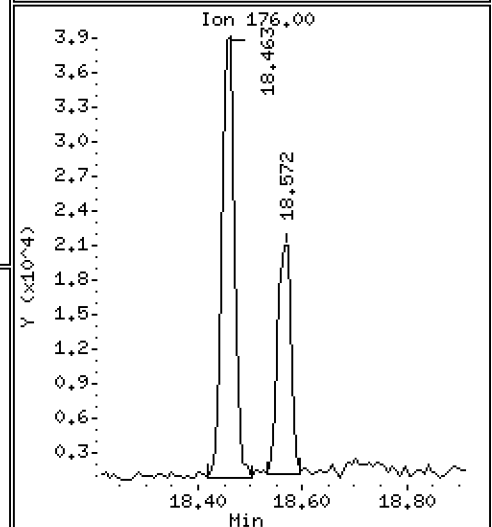
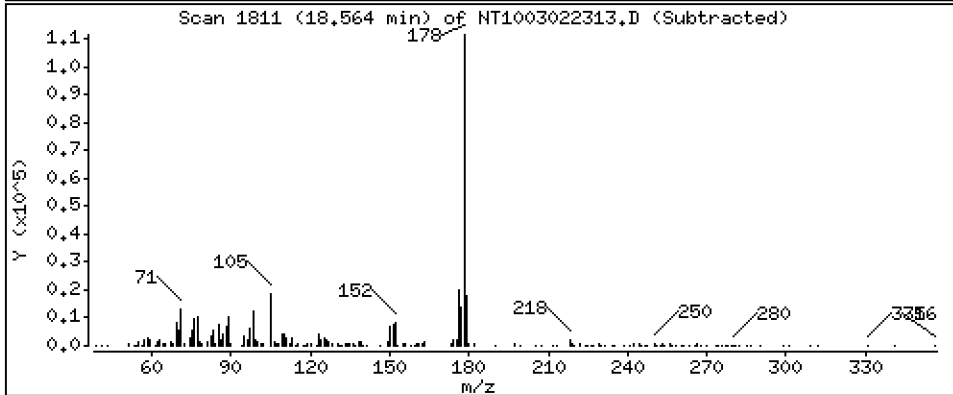
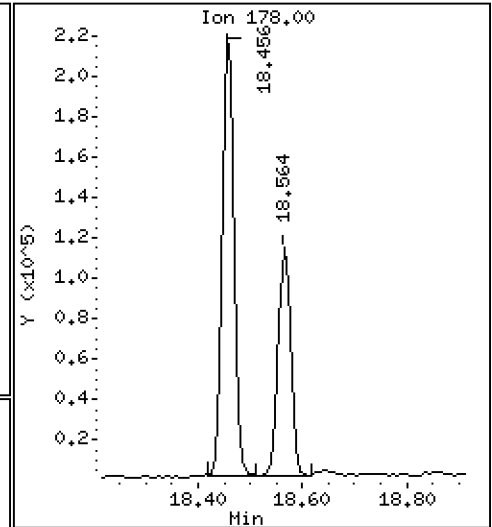
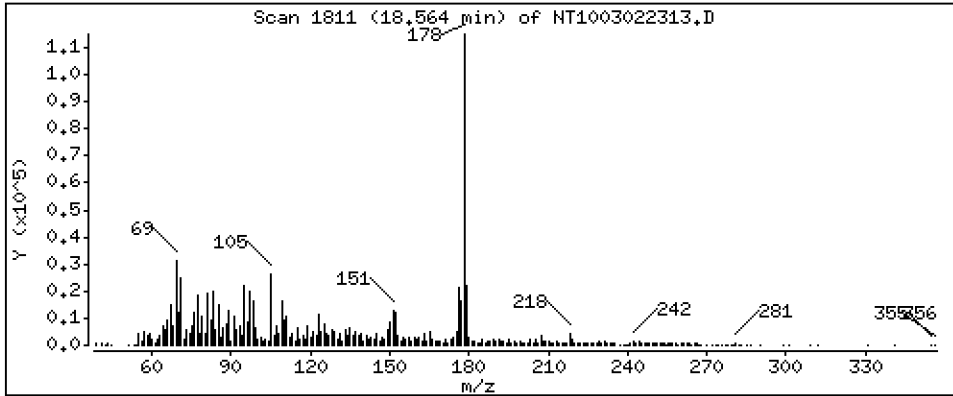
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,3095 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

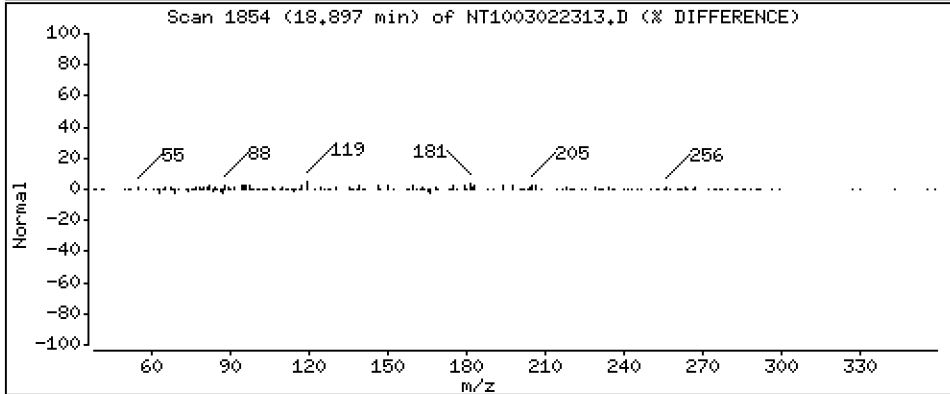
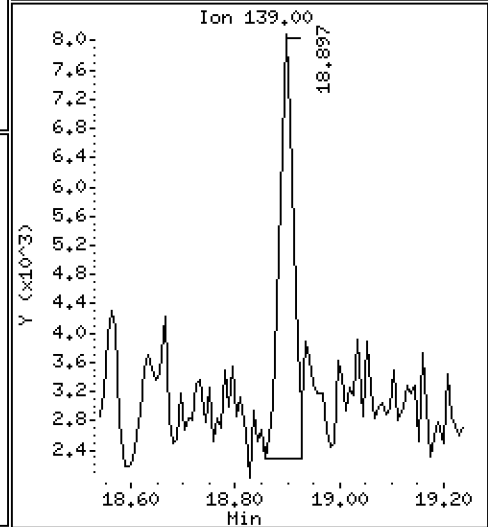
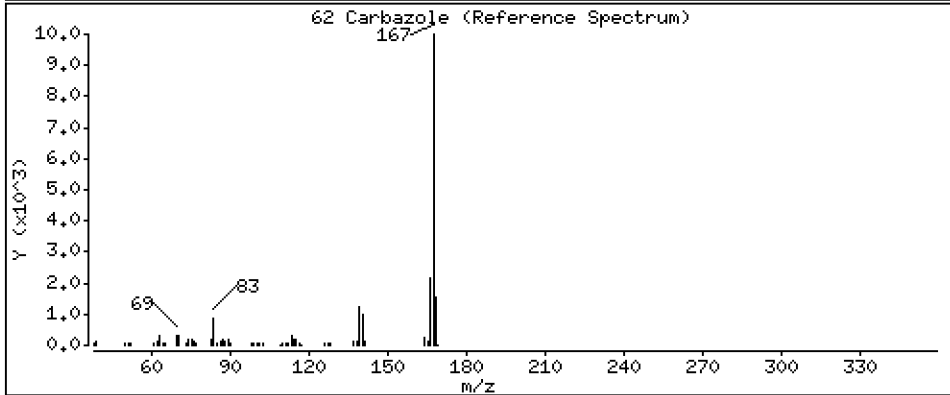
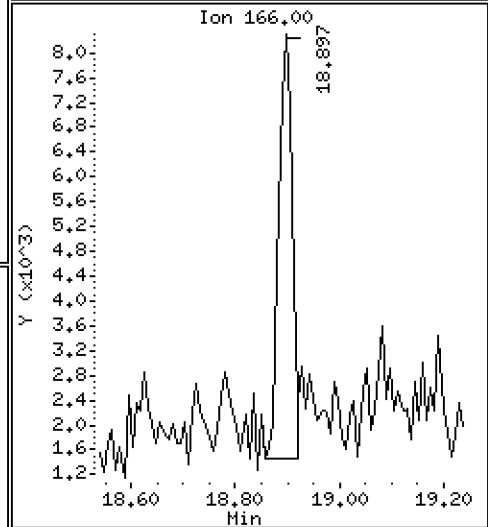
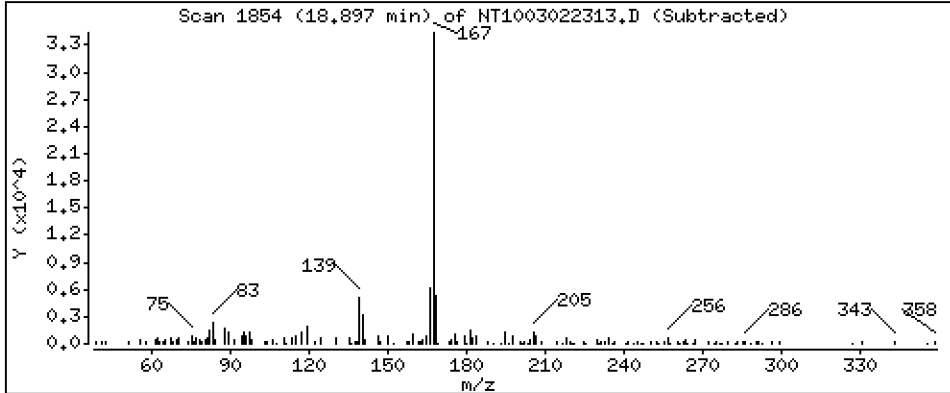
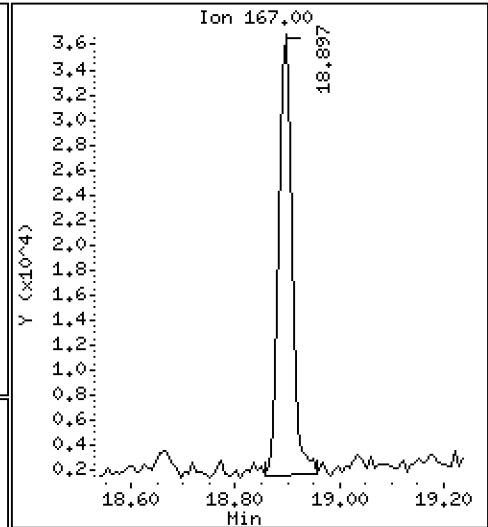
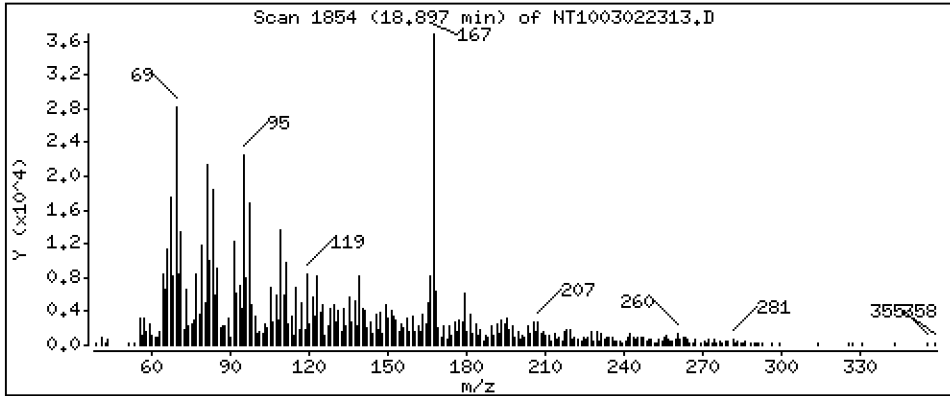
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1149 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

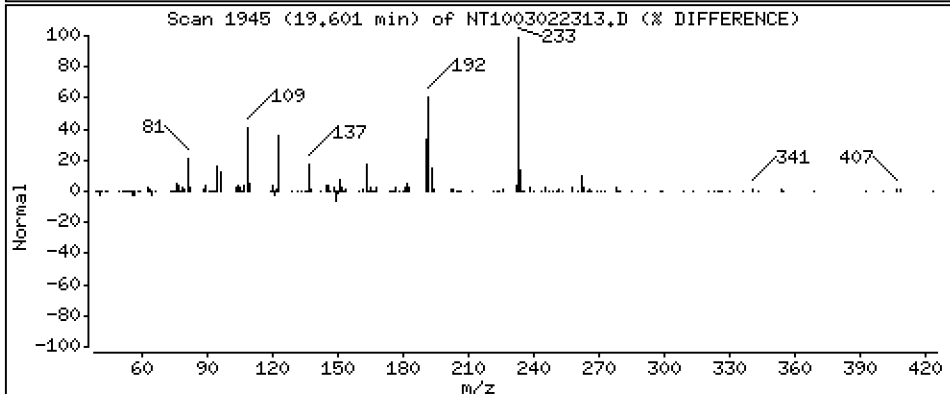
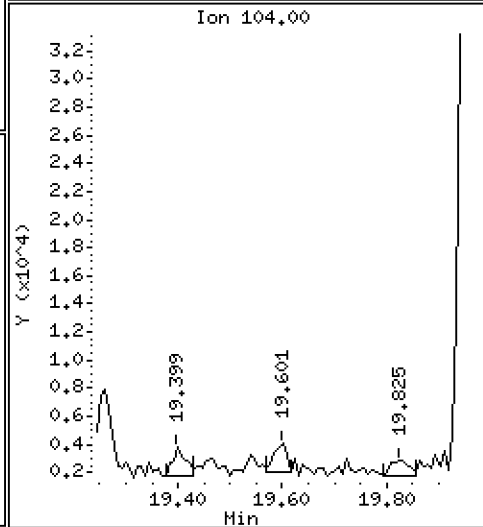
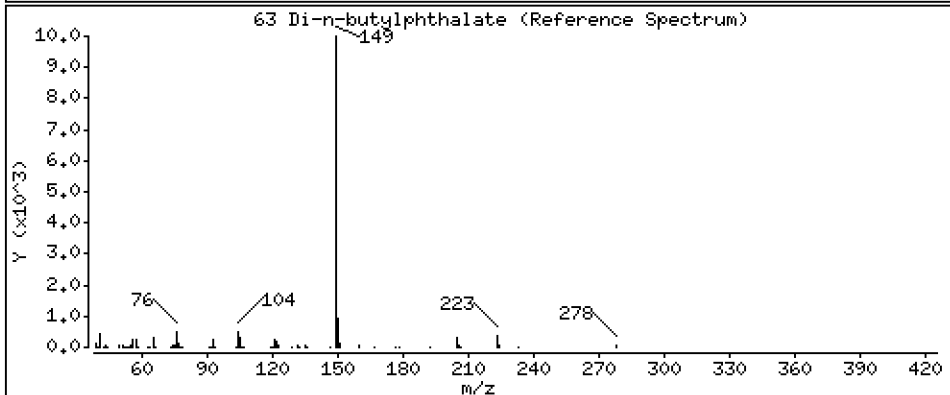
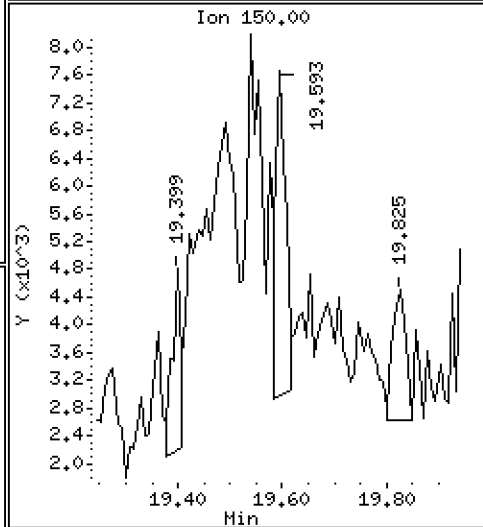
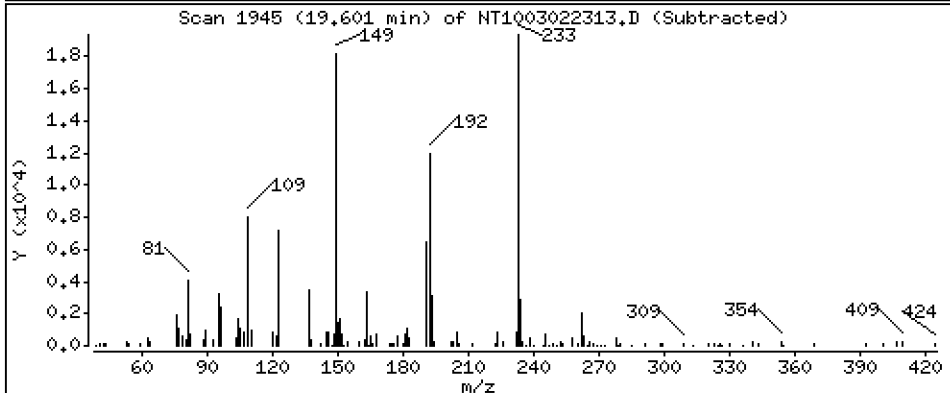
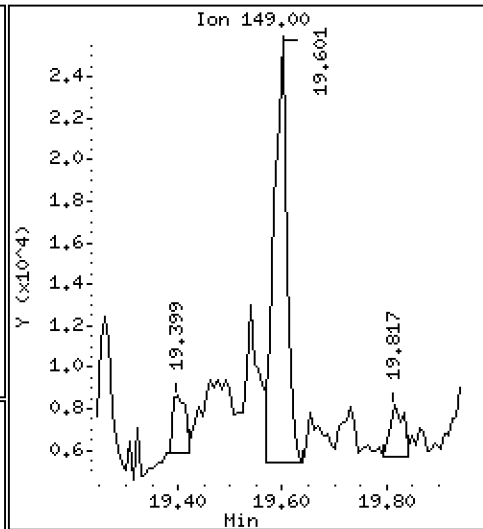
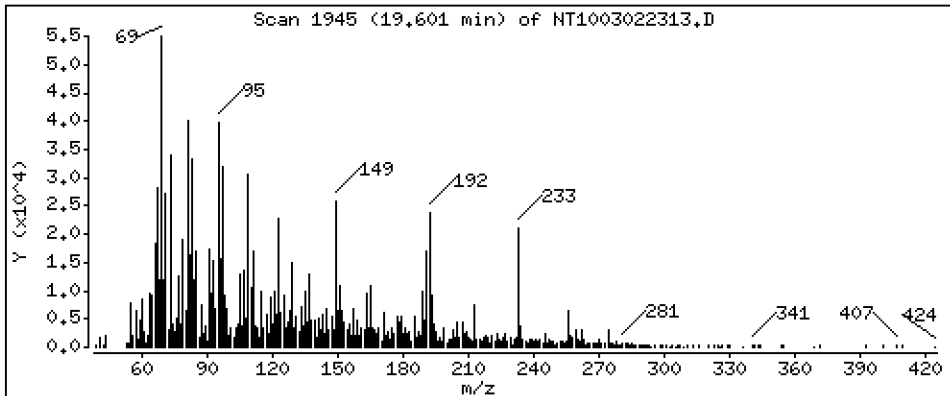
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.04720 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

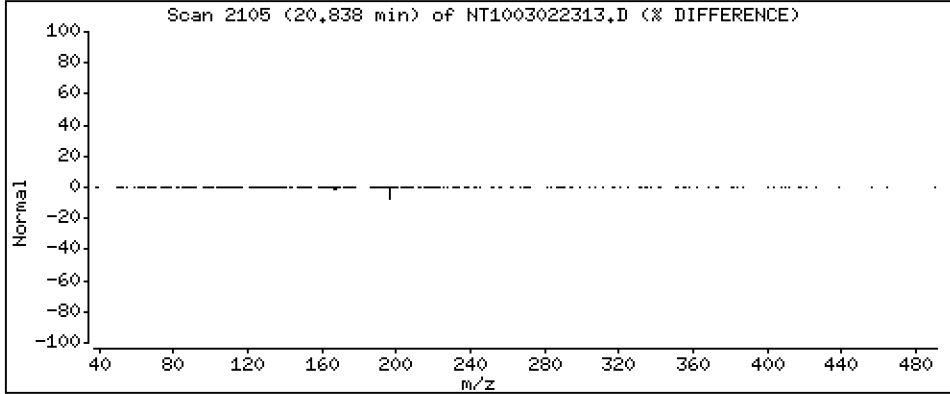
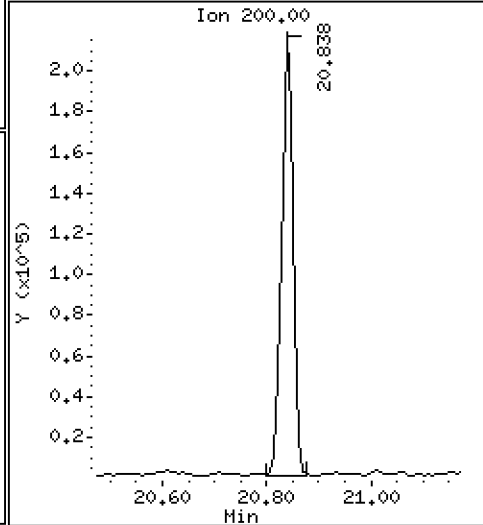
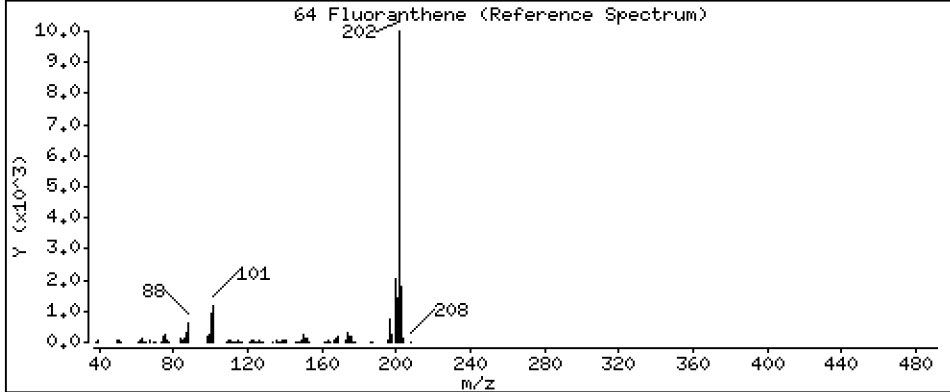
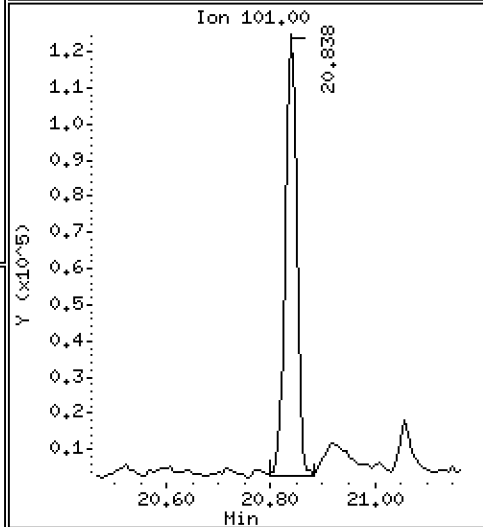
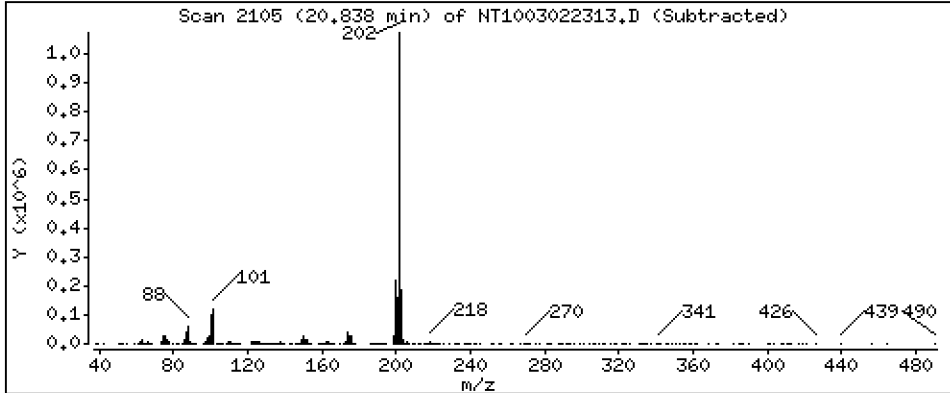
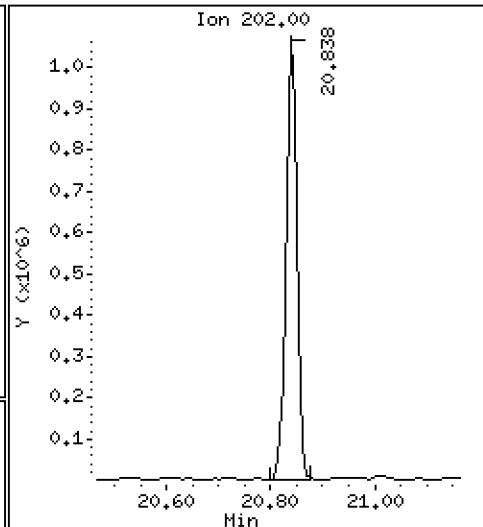
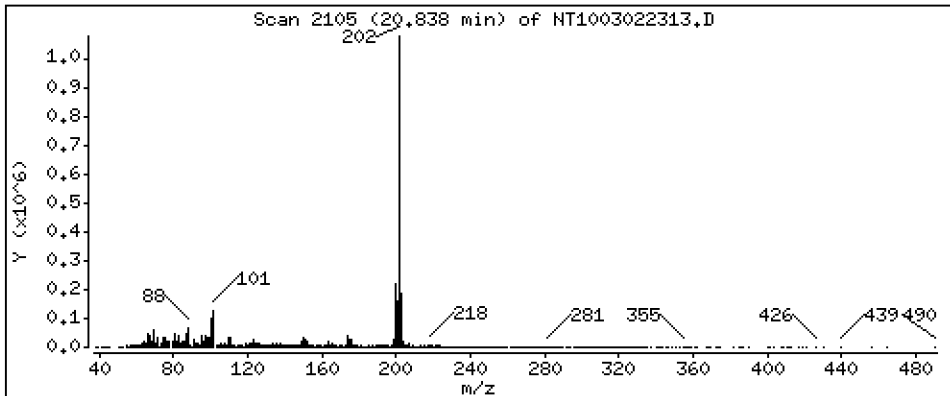
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,652 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

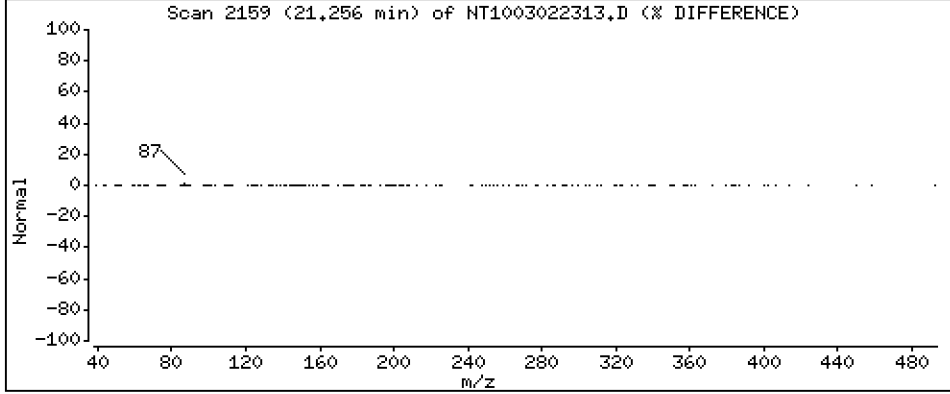
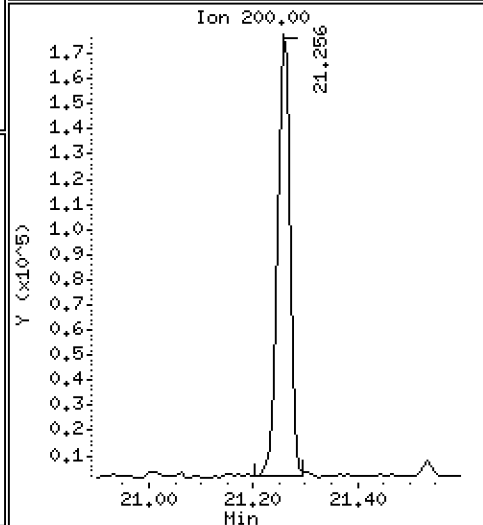
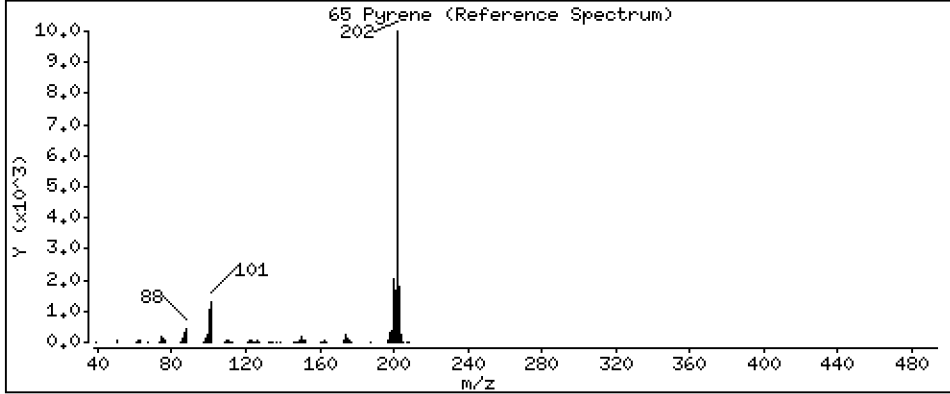
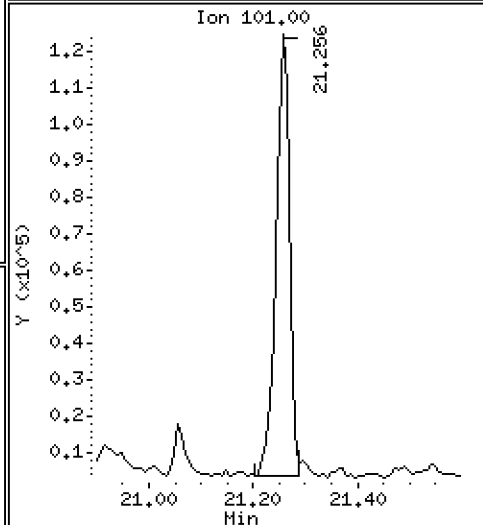
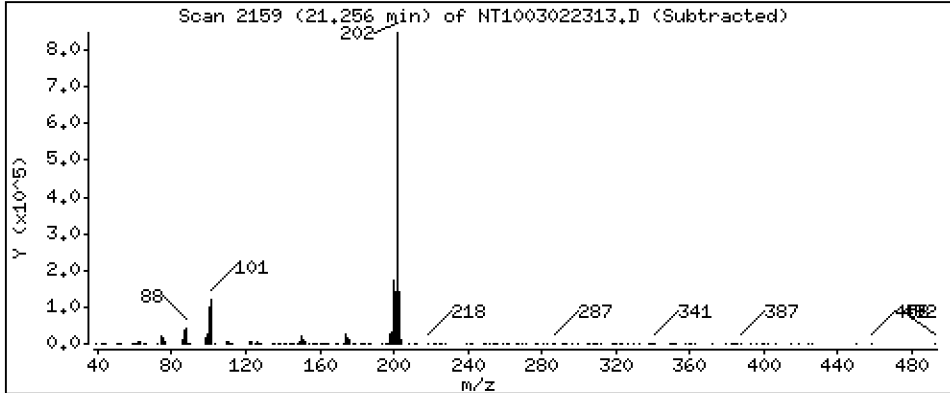
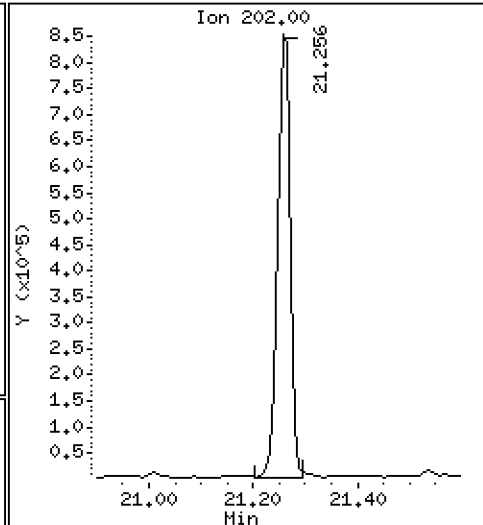
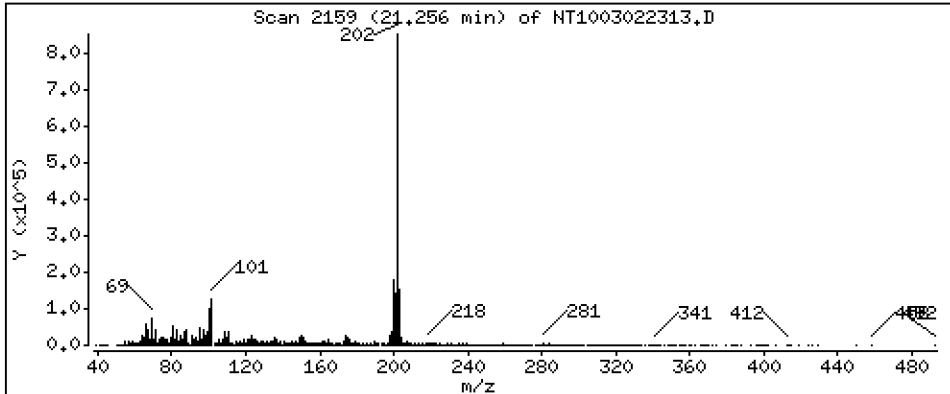
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,392 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

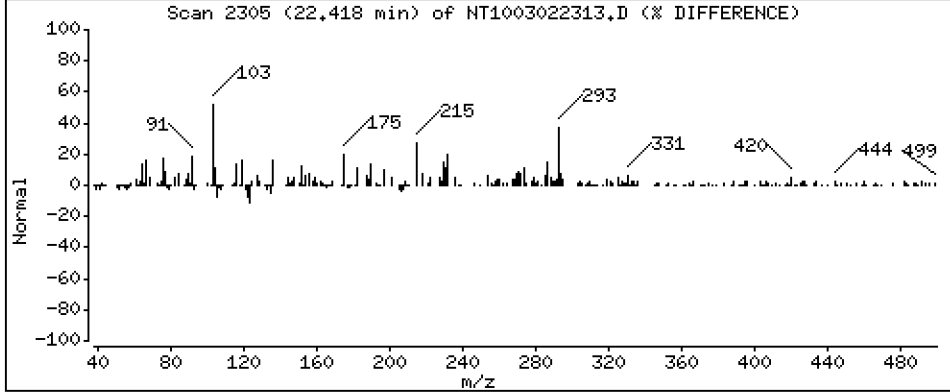
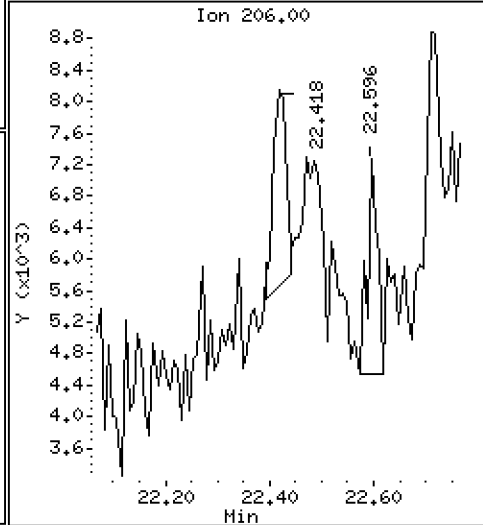
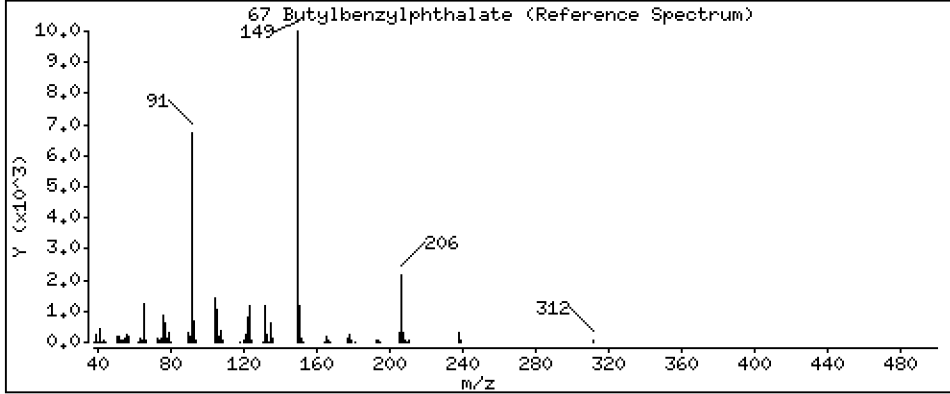
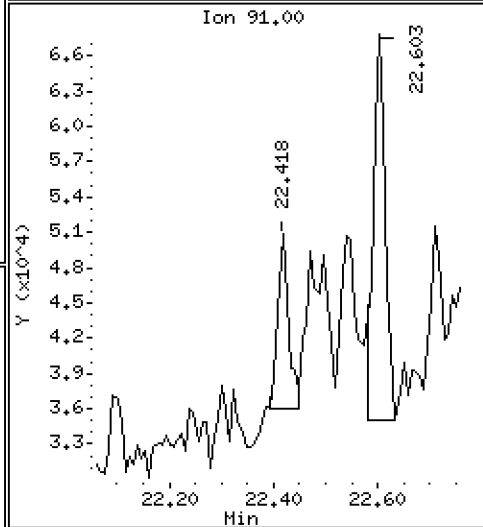
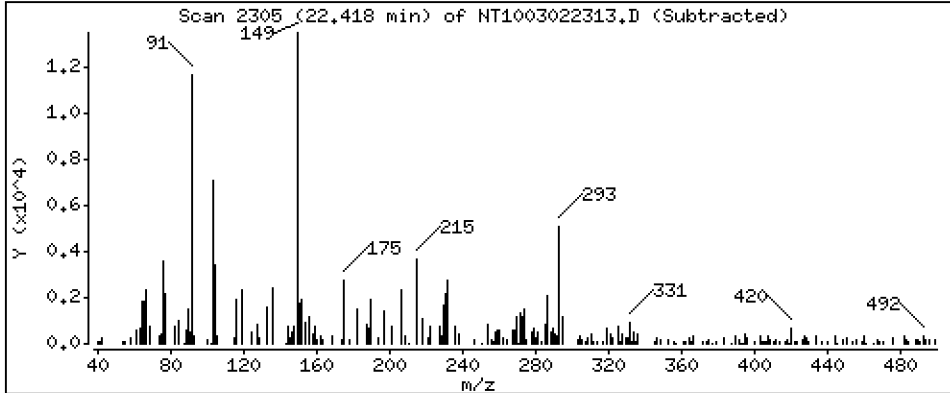
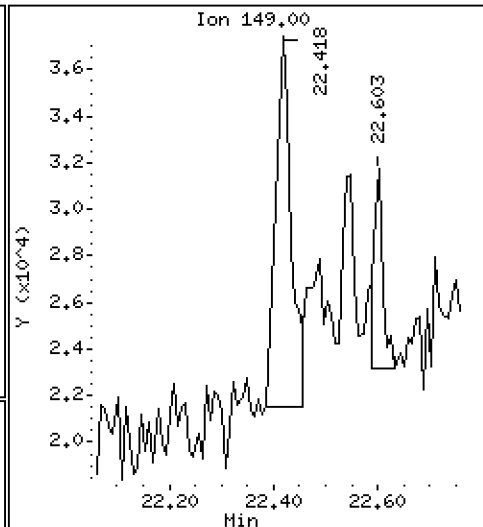
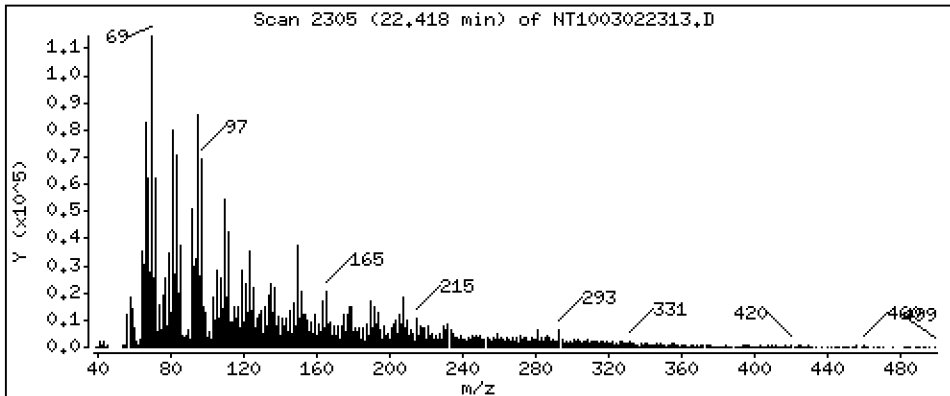
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.06228 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

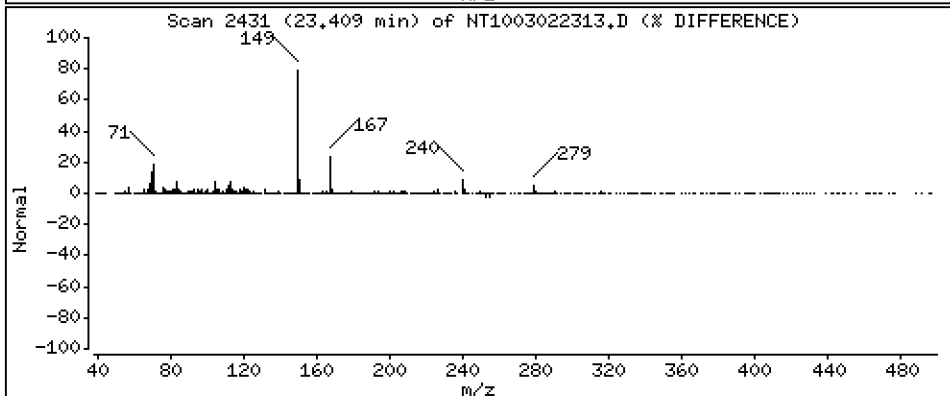
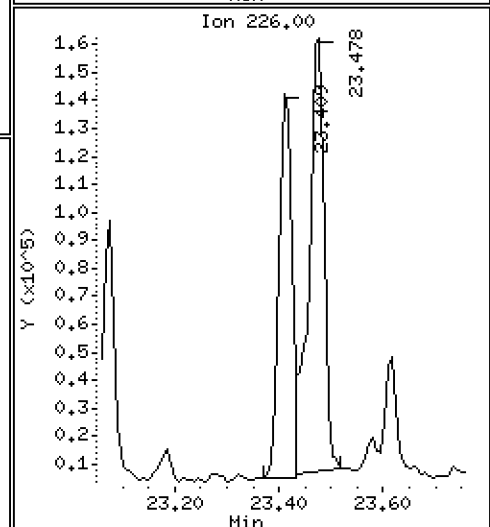
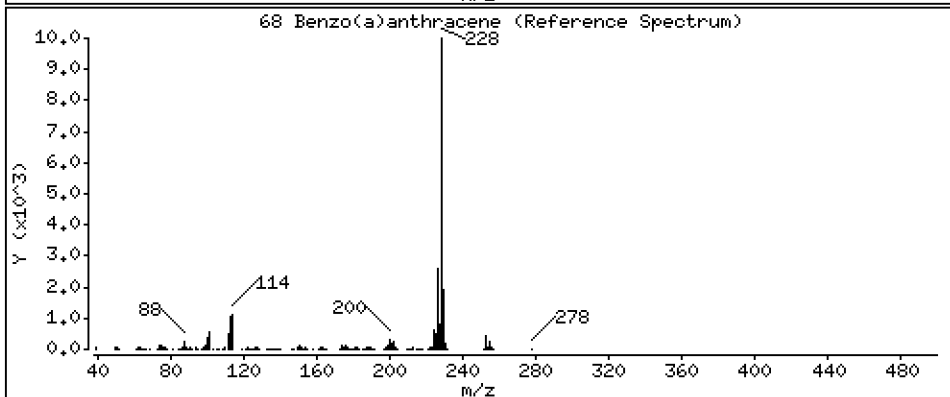
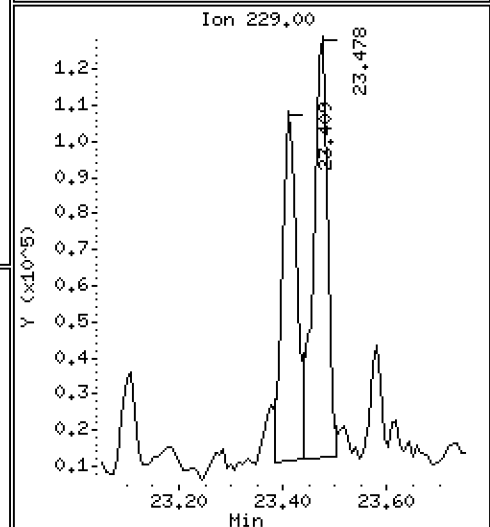
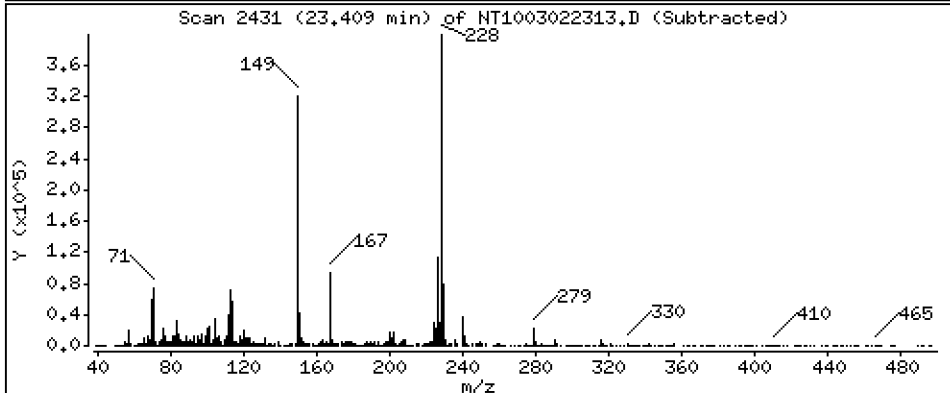
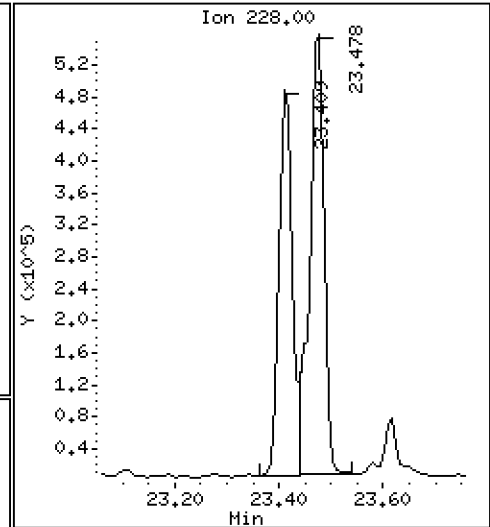
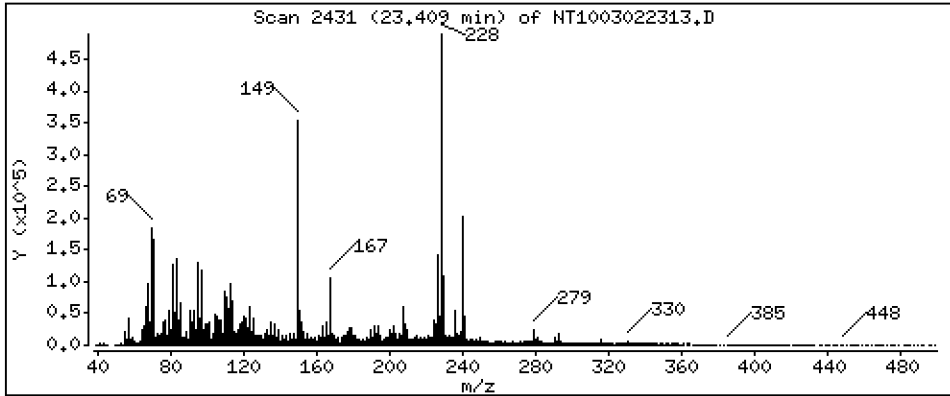
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,8606 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

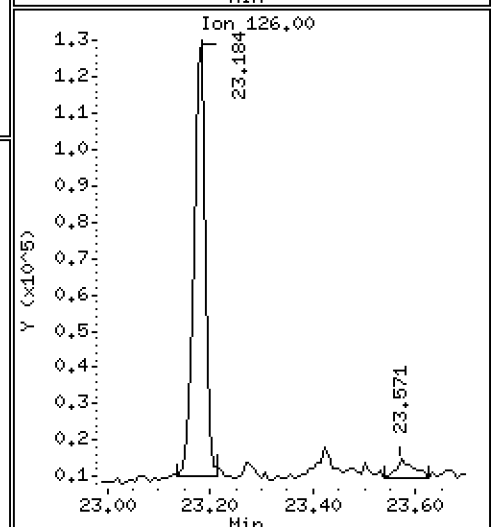
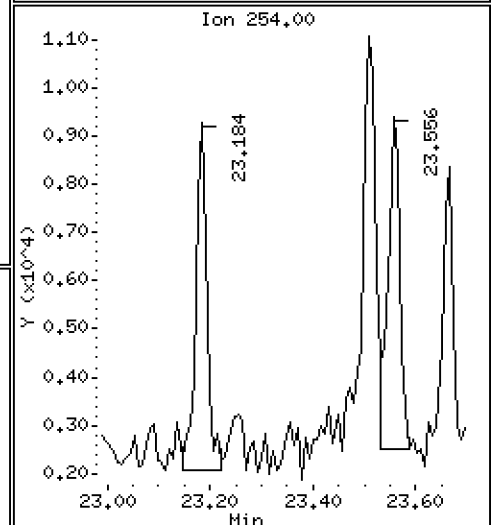
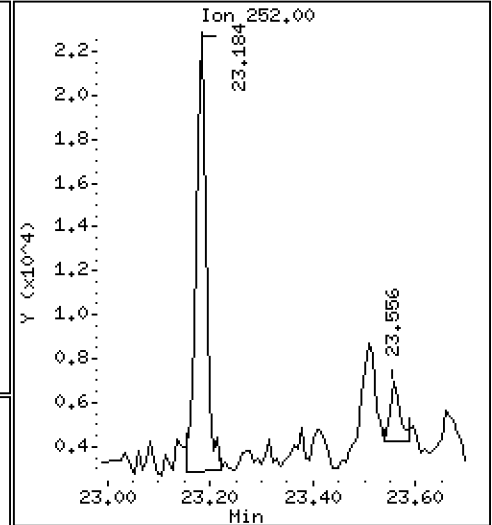
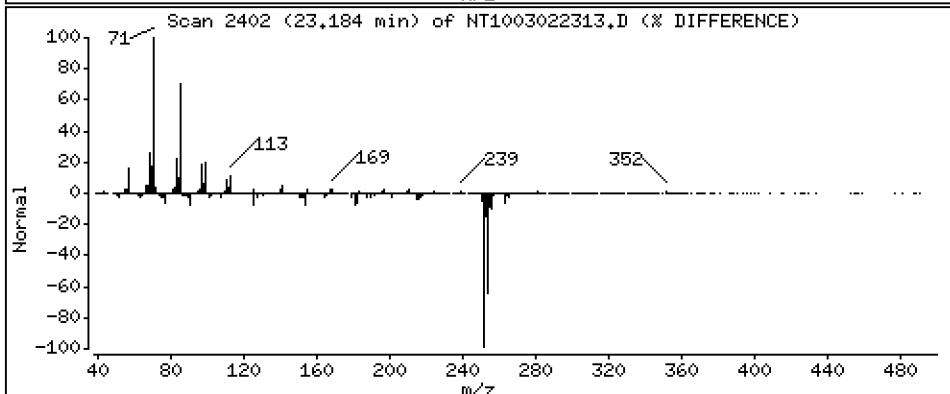
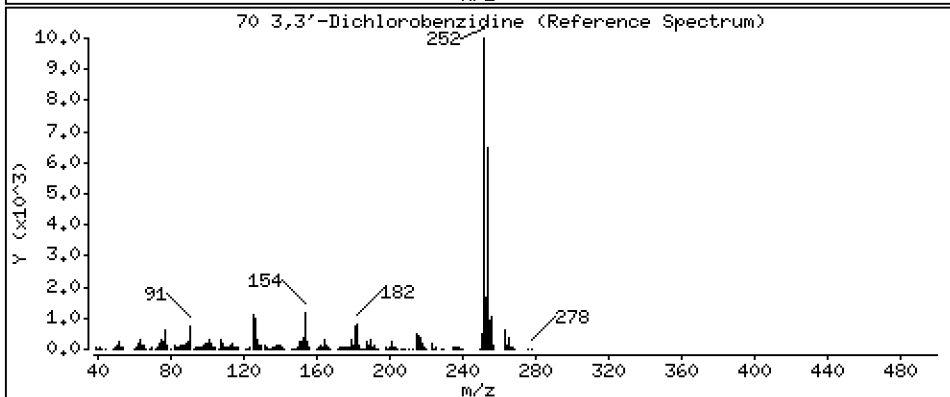
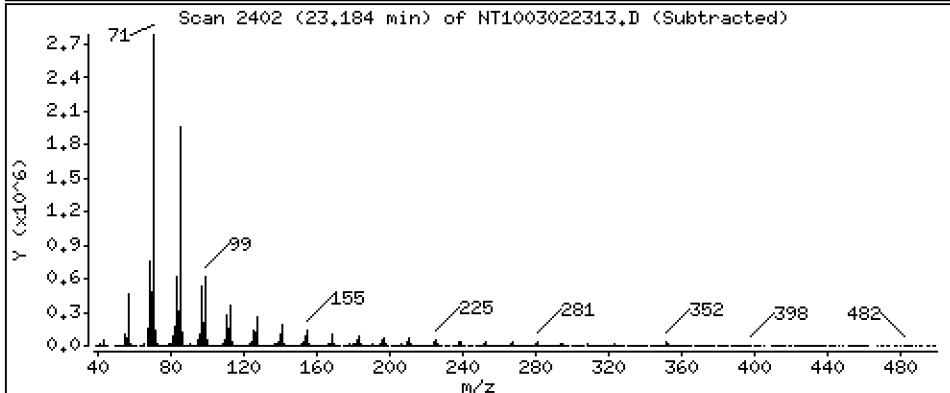
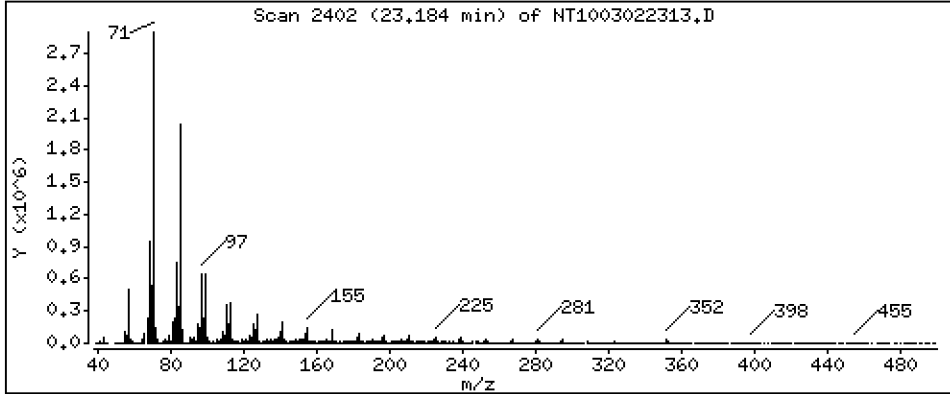
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 0,06503 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

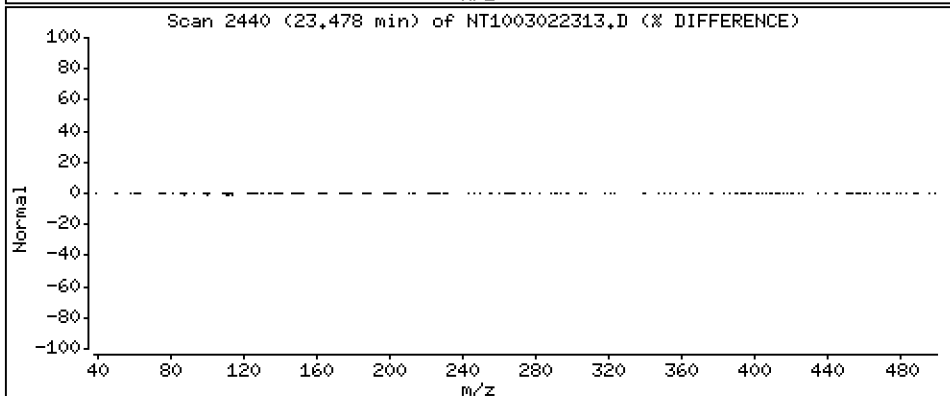
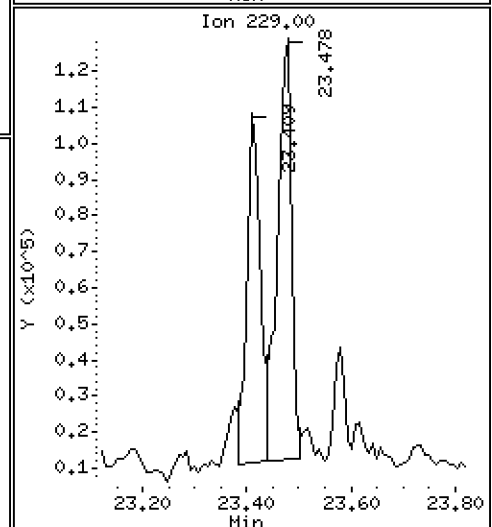
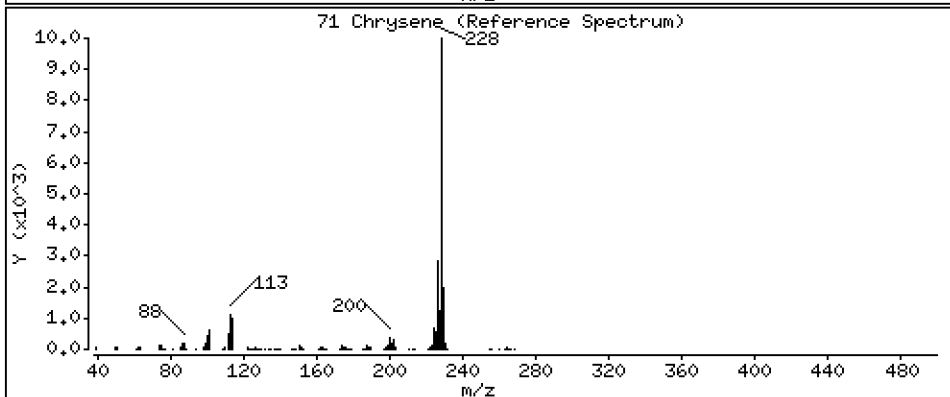
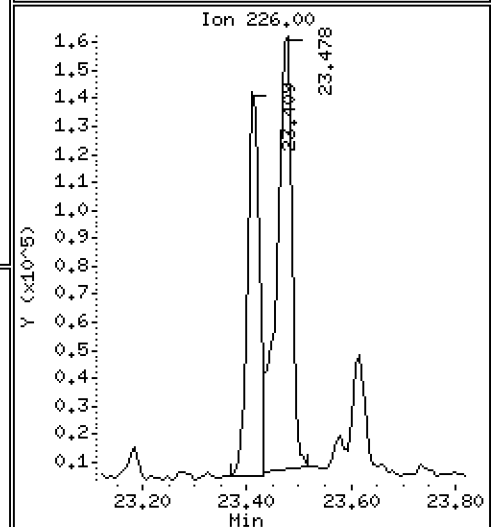
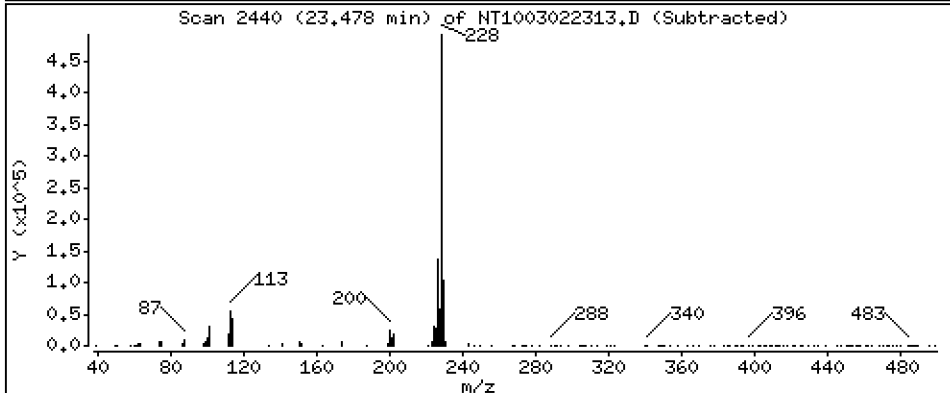
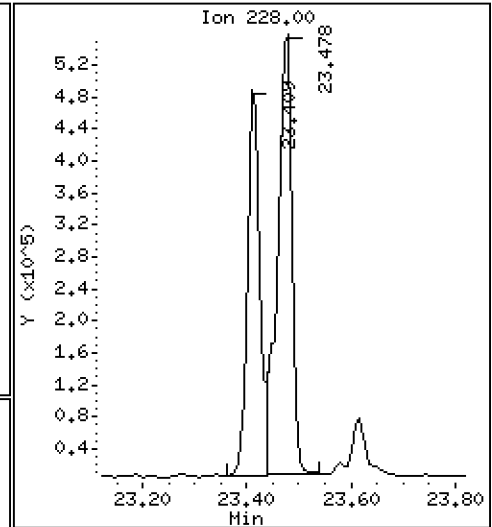
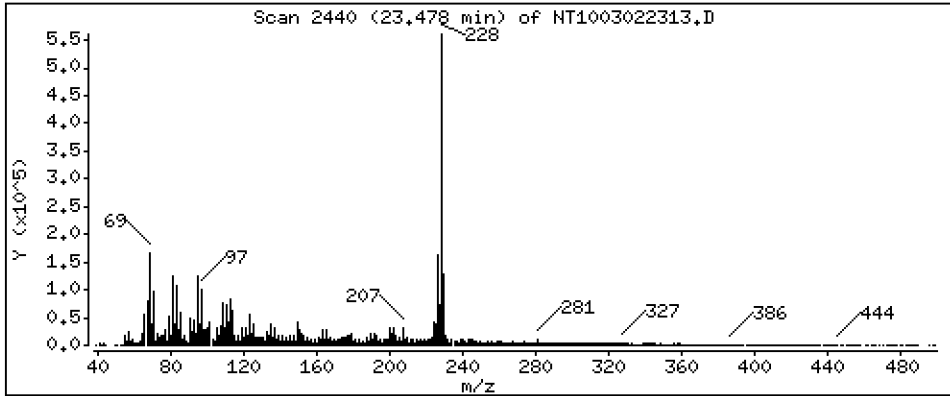
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,313 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

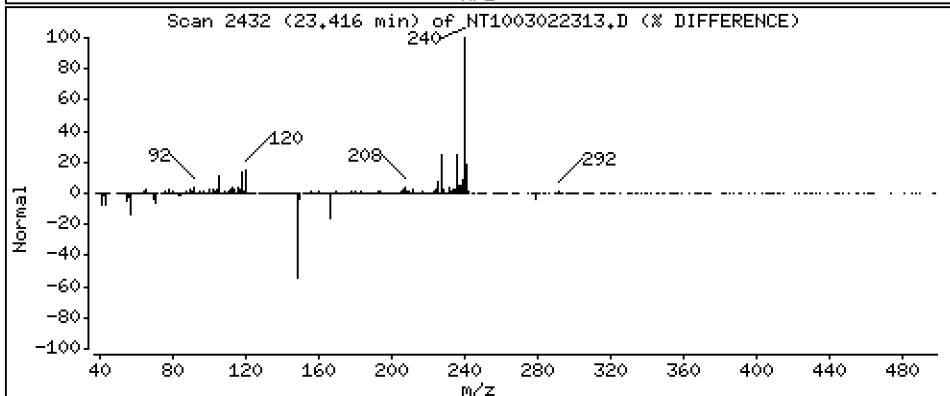
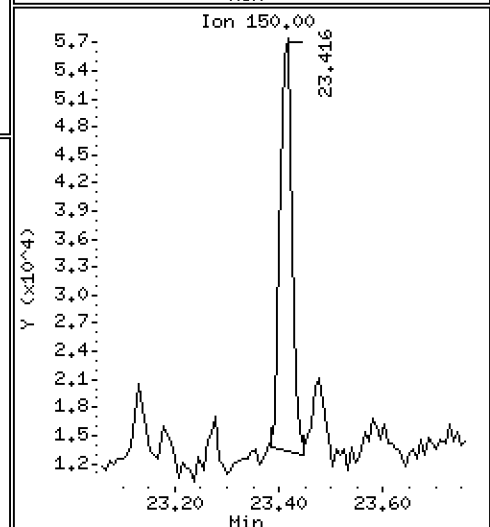
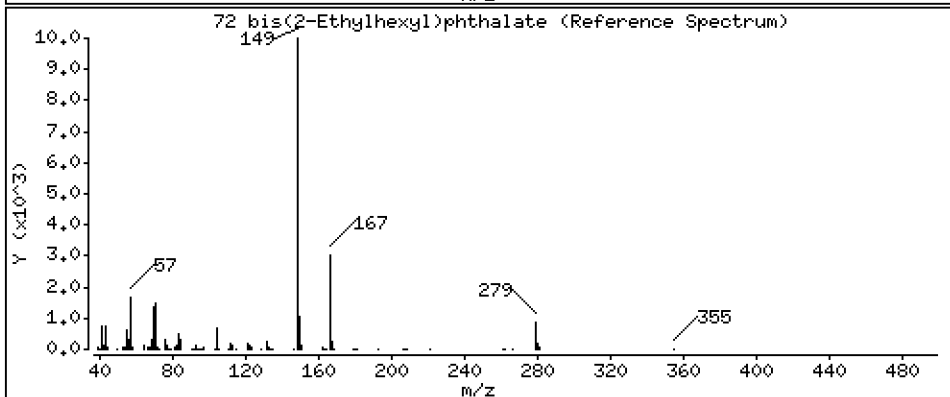
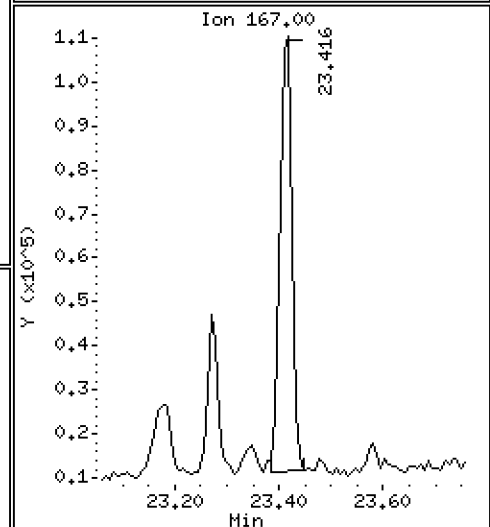
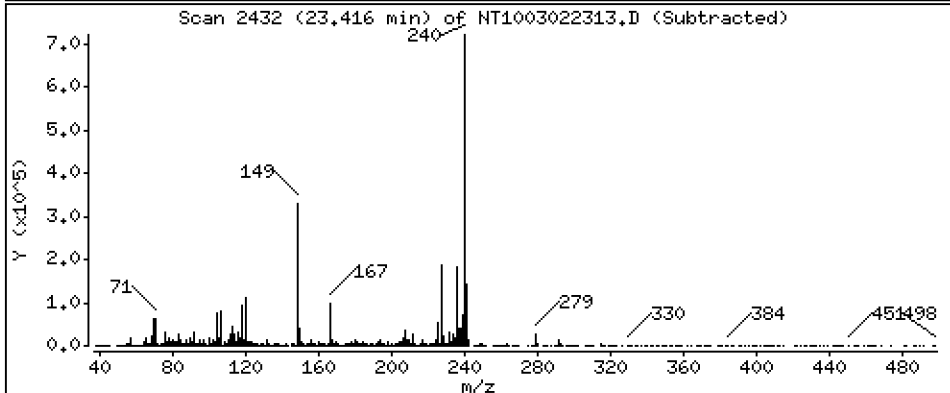
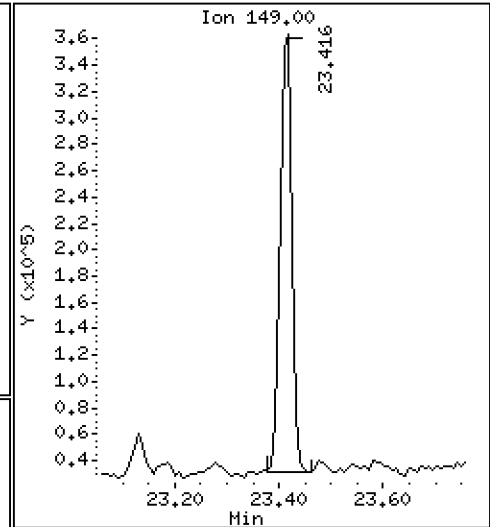
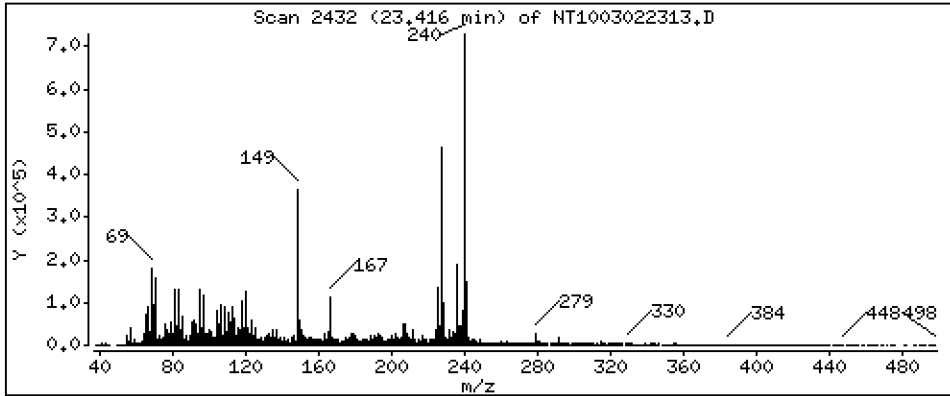
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,6695 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

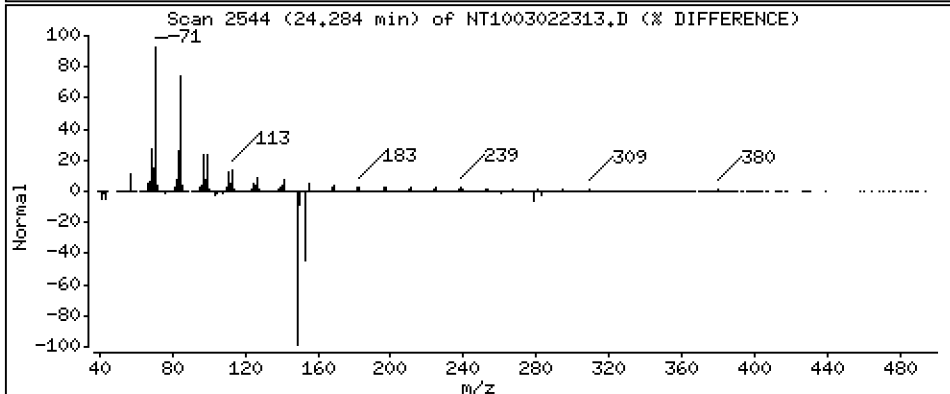
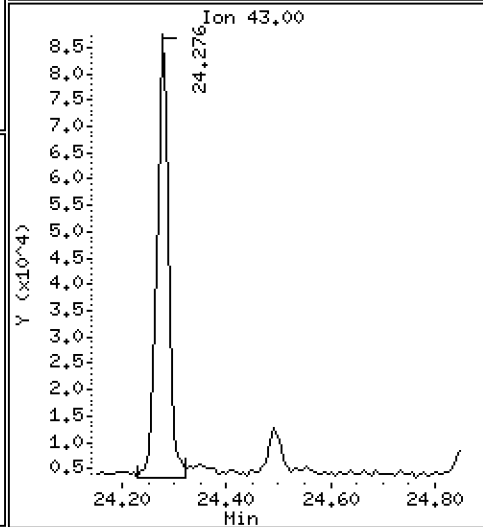
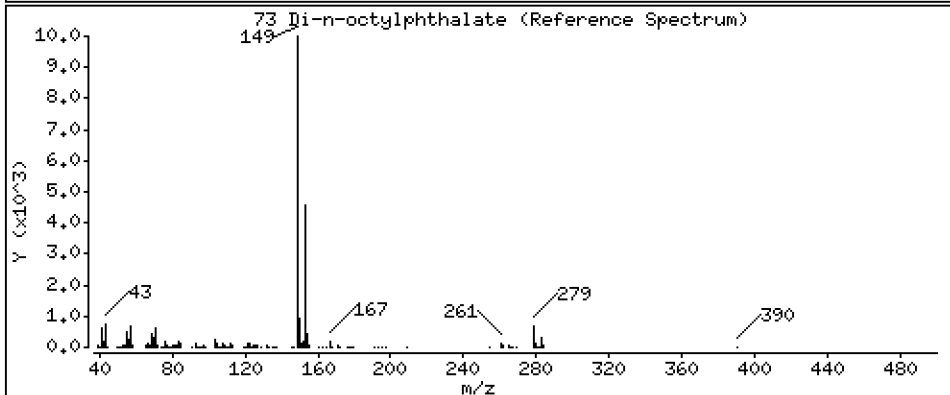
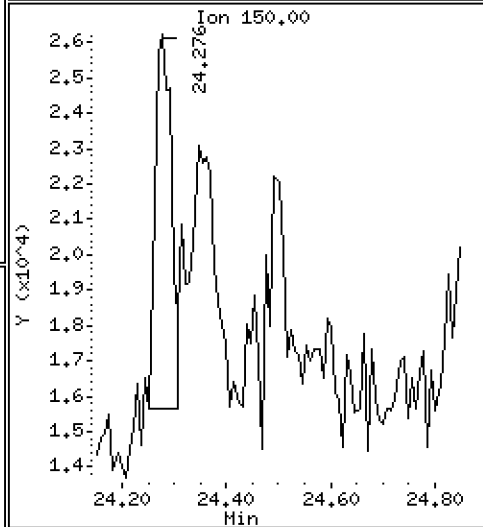
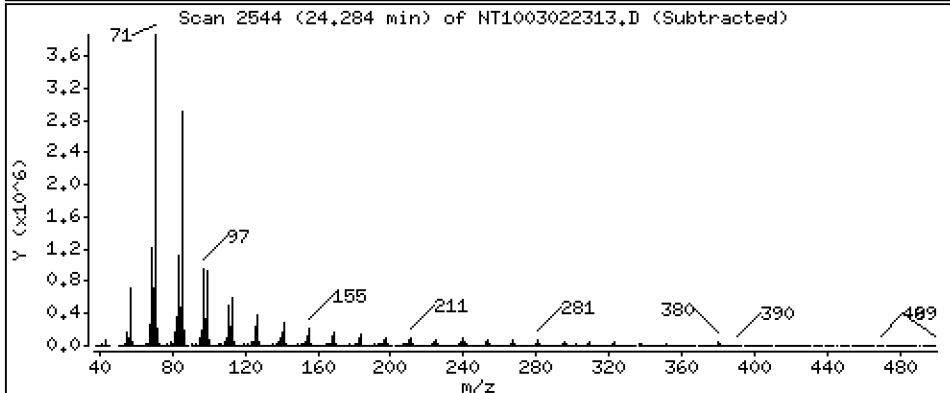
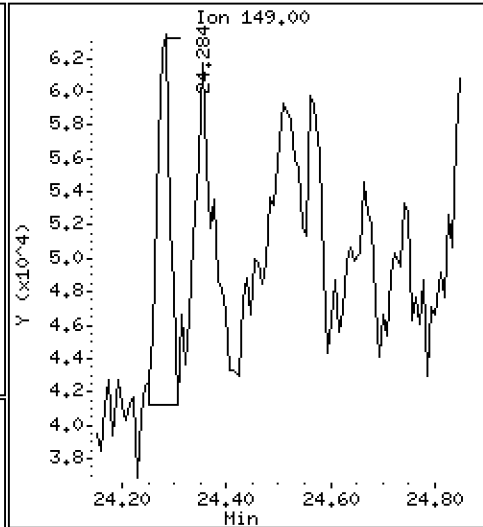
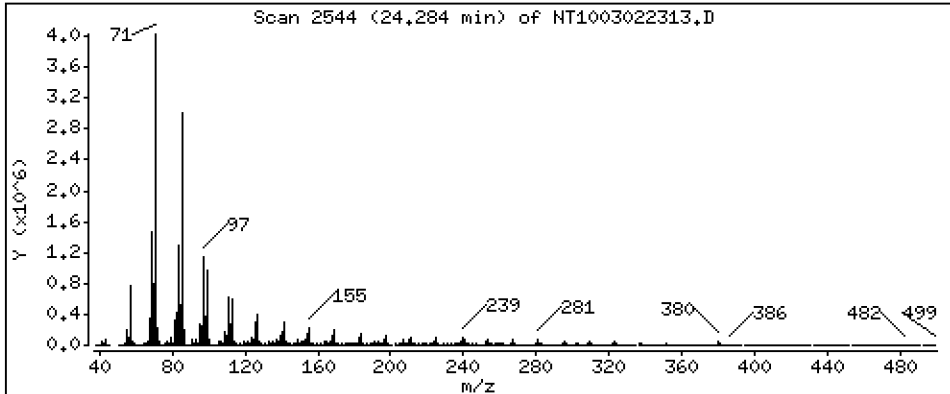
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 0,03276 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

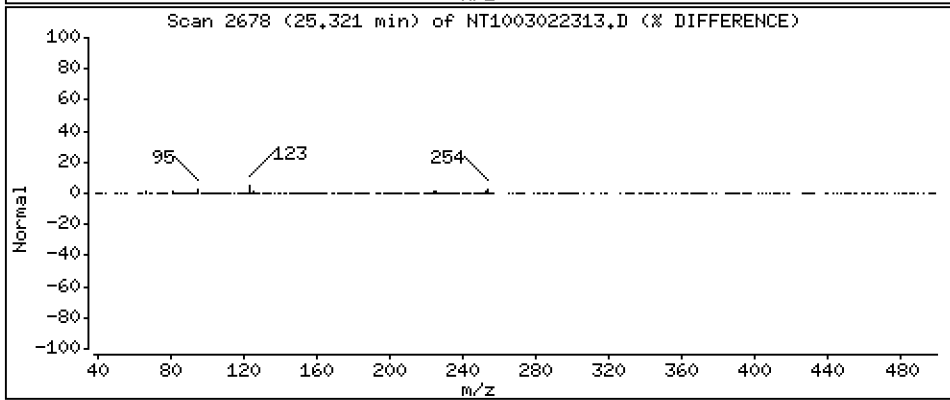
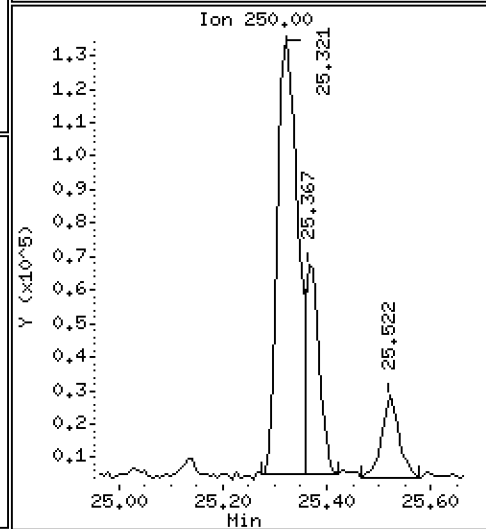
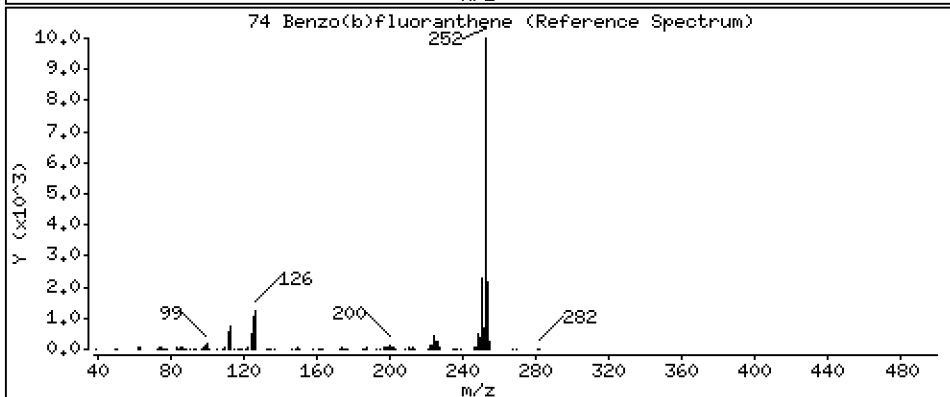
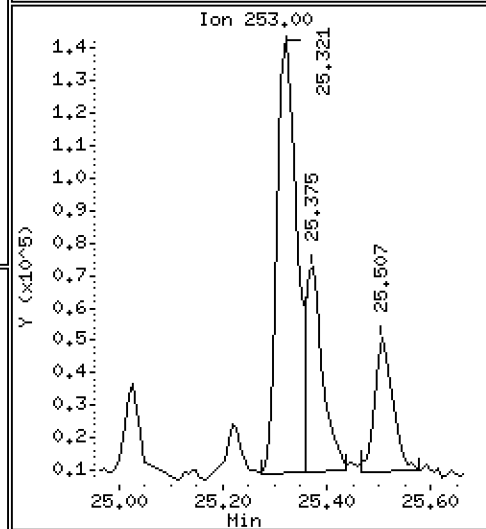
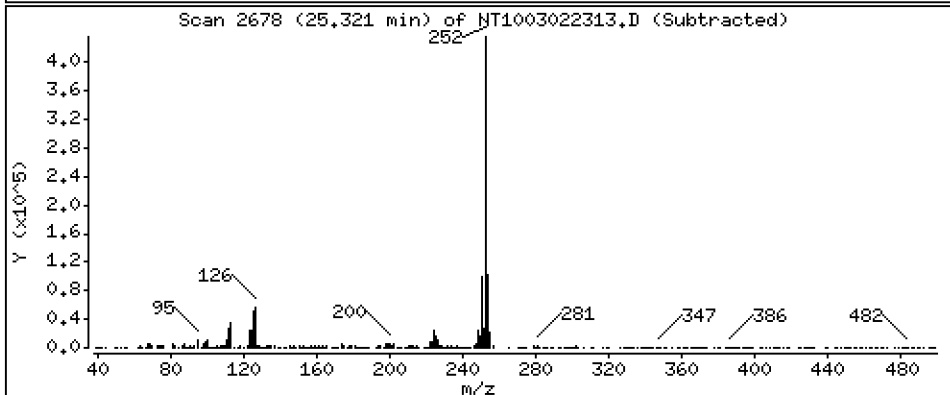
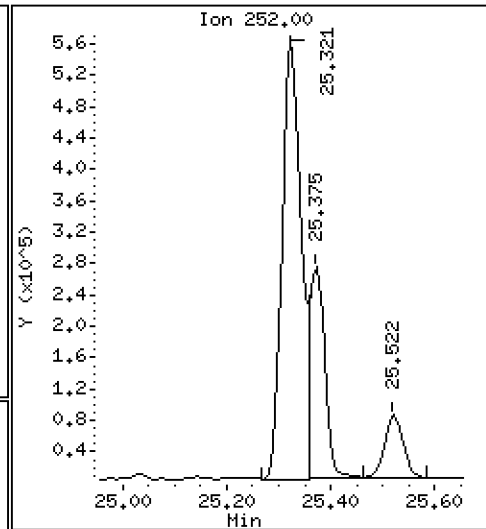
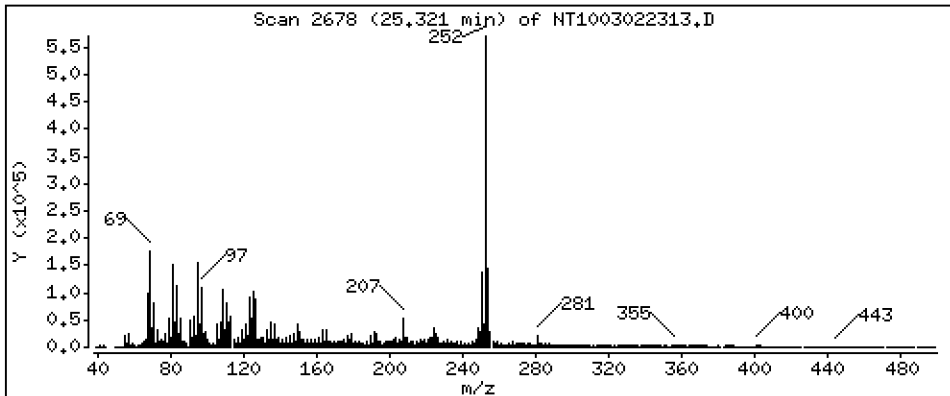
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,504 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

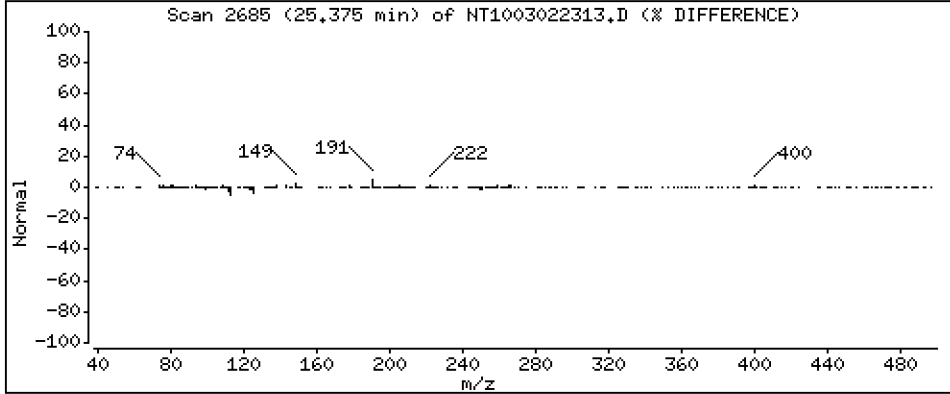
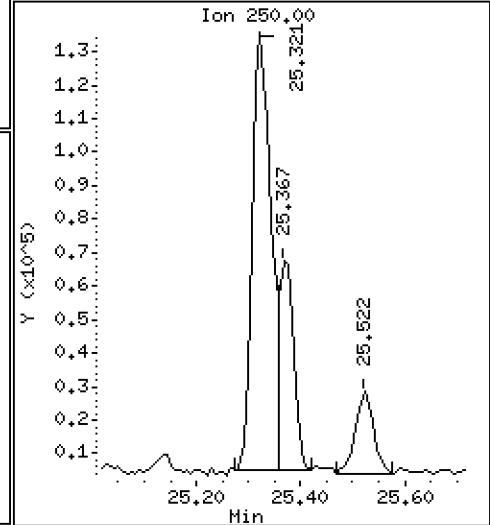
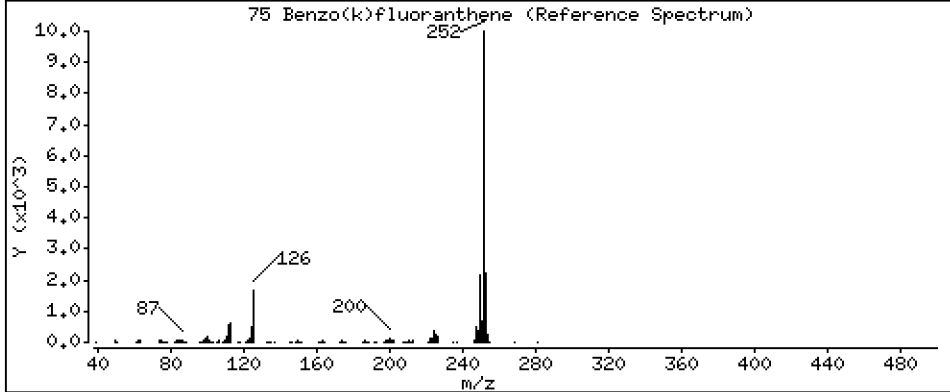
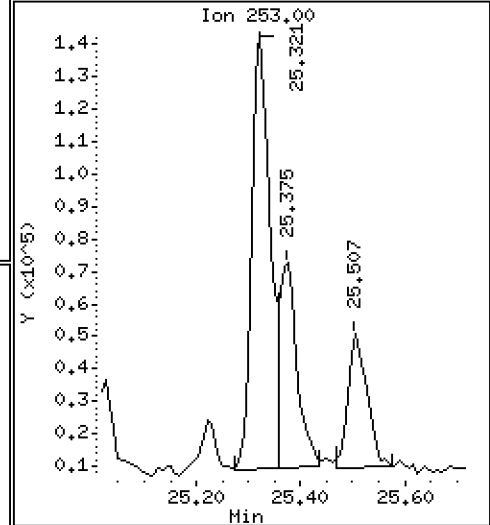
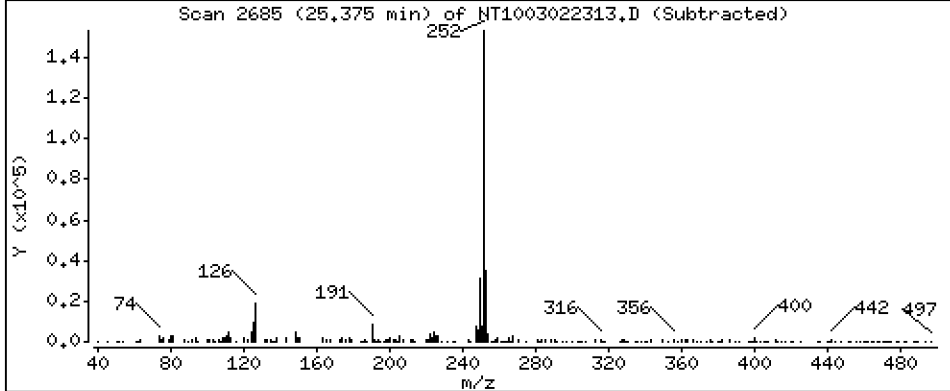
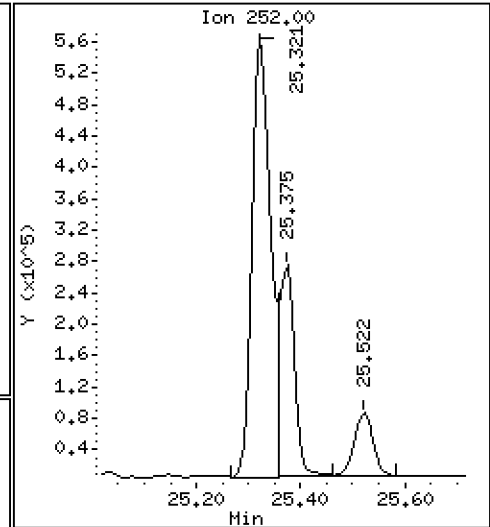
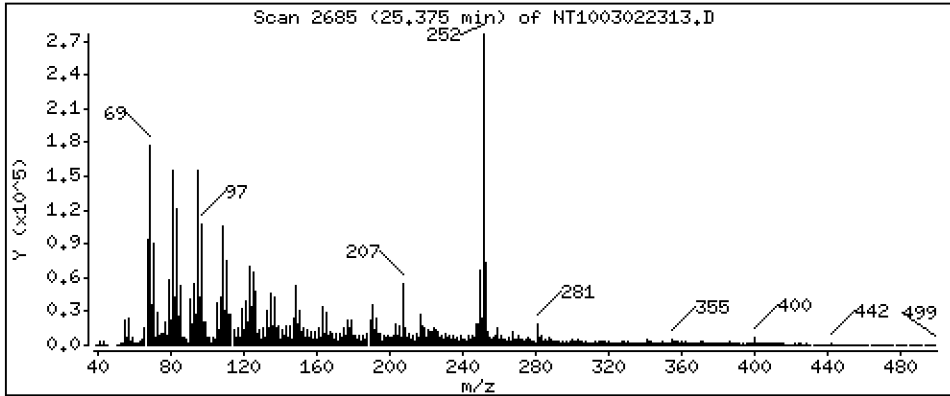
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,5624 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

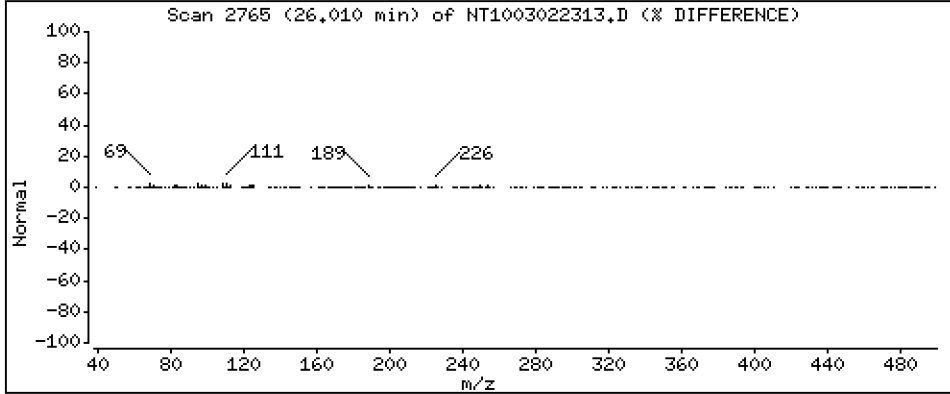
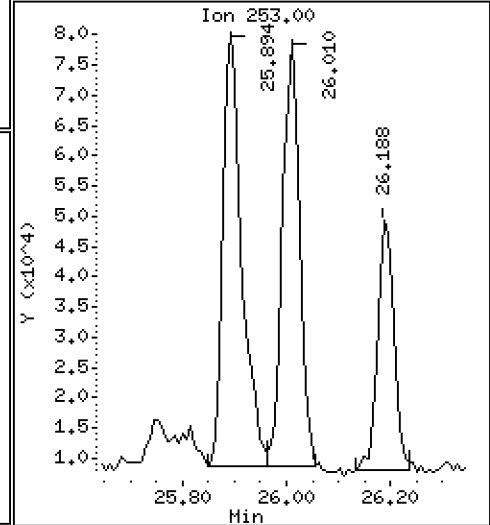
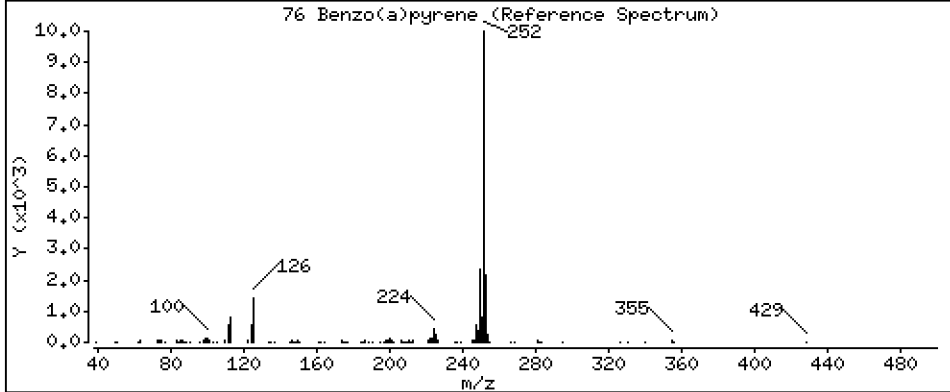
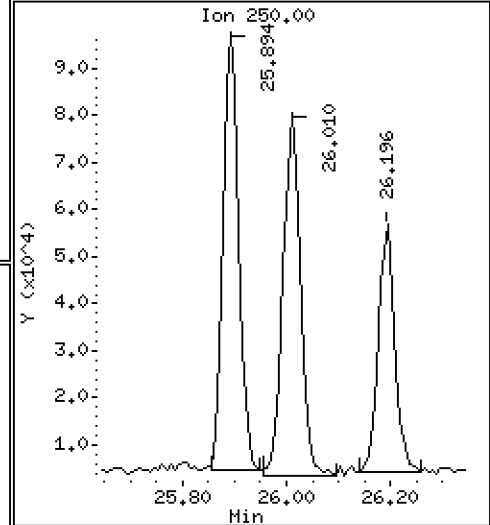
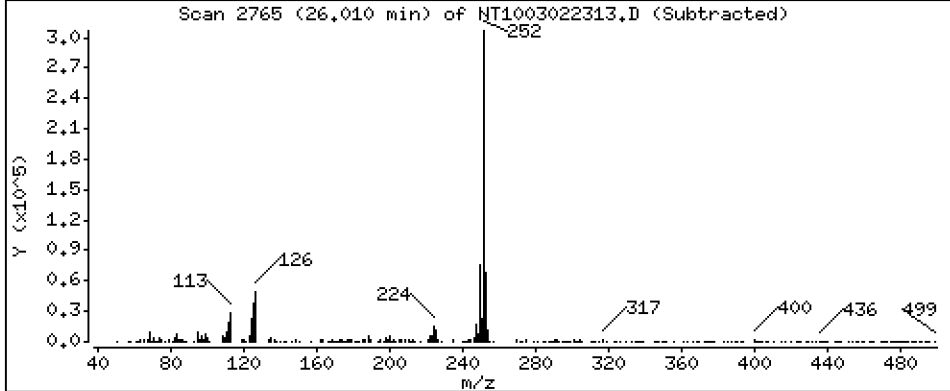
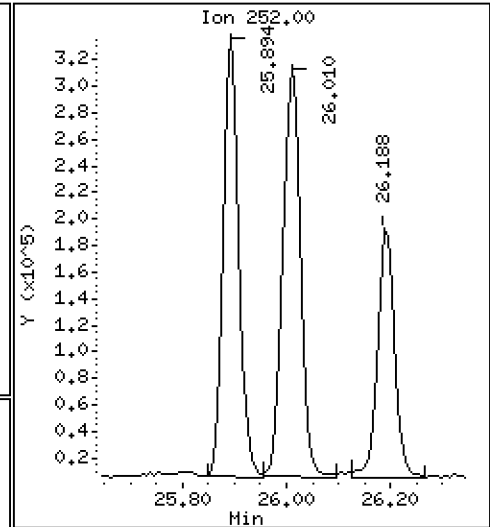
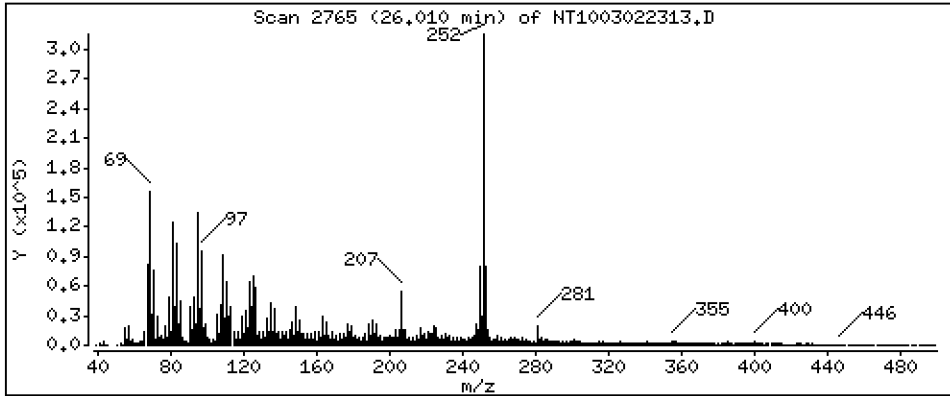
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,8035 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

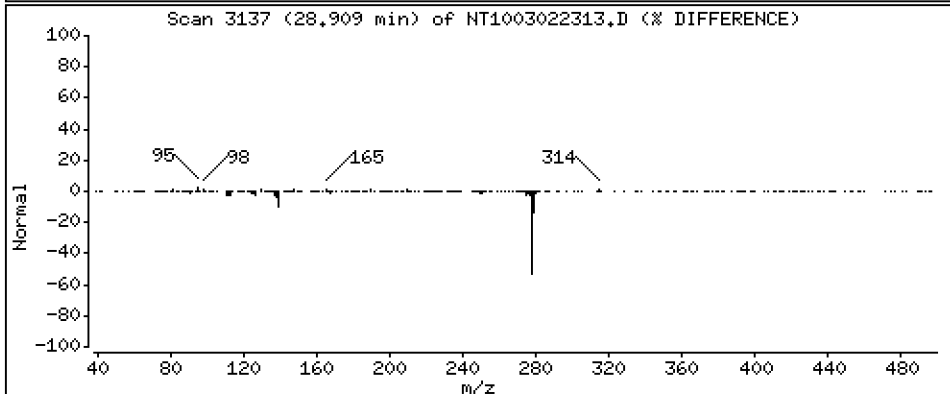
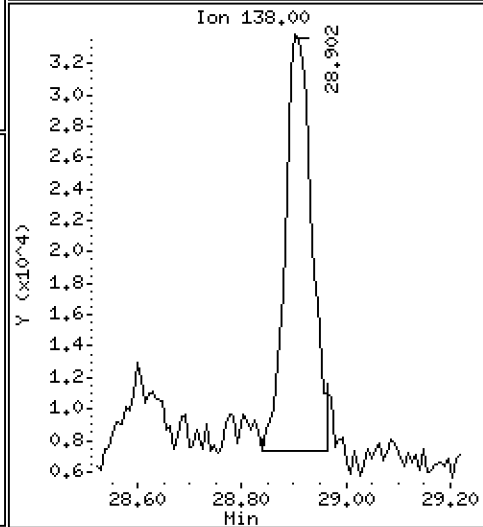
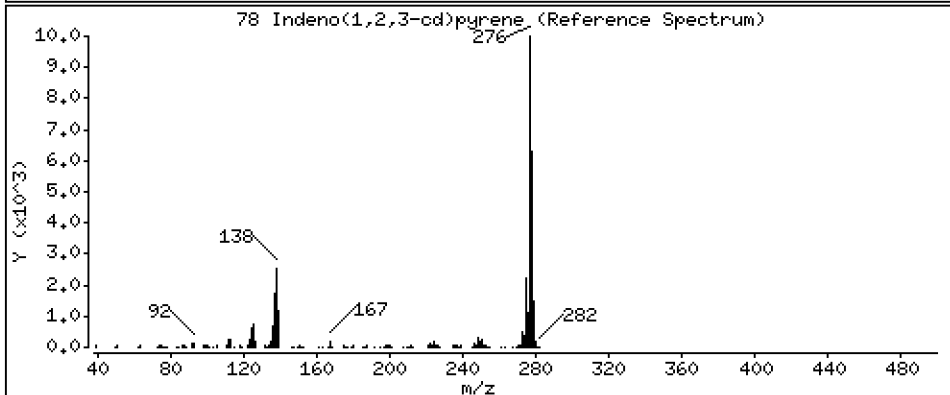
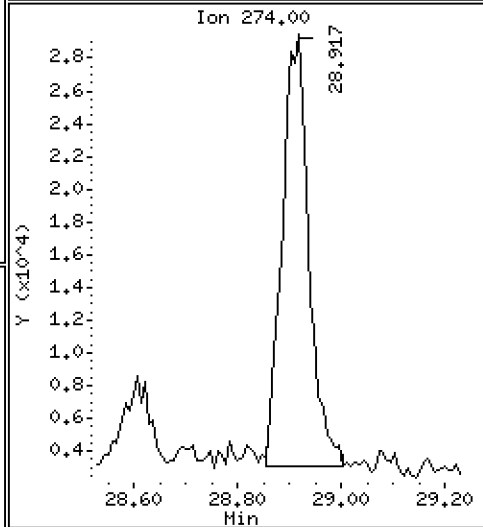
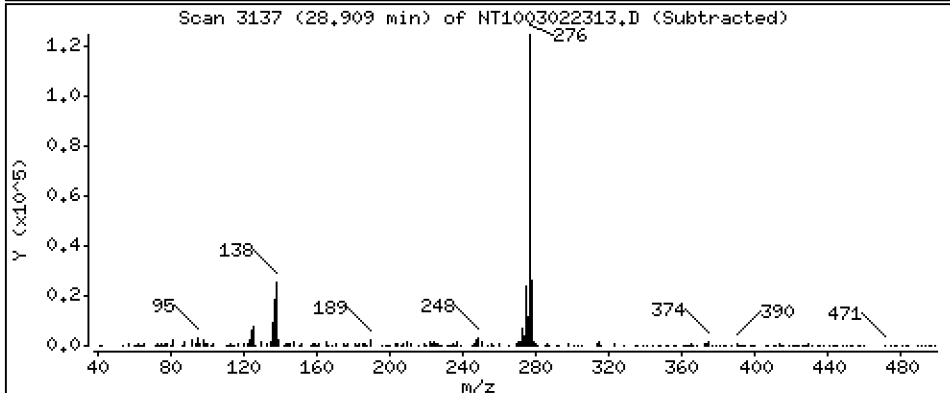
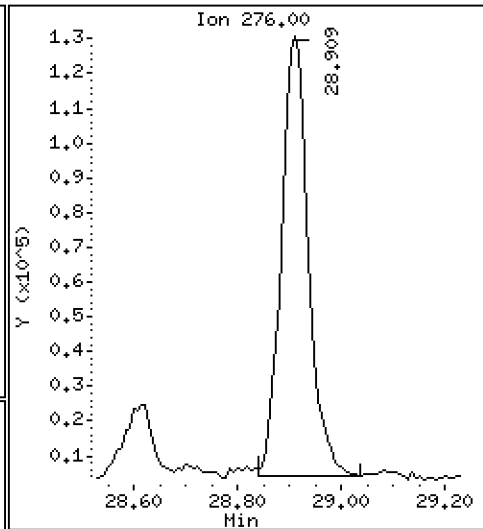
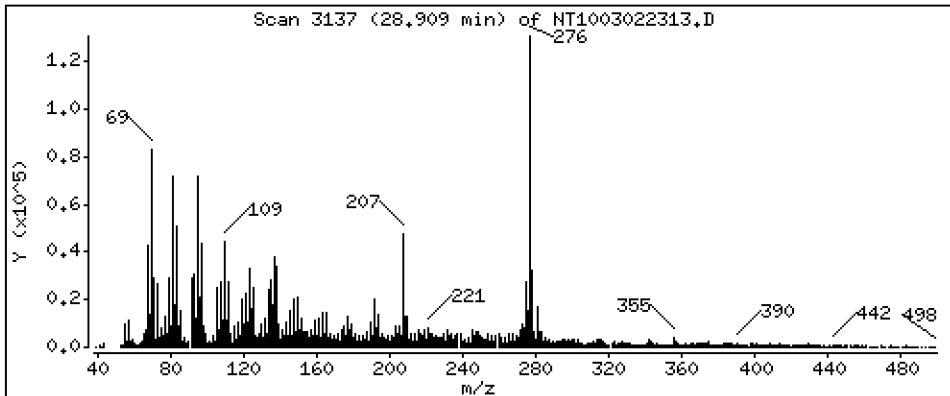
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4518 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

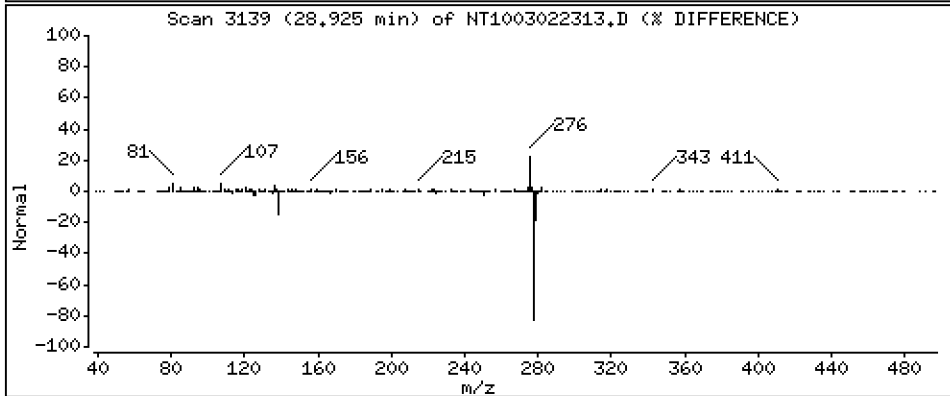
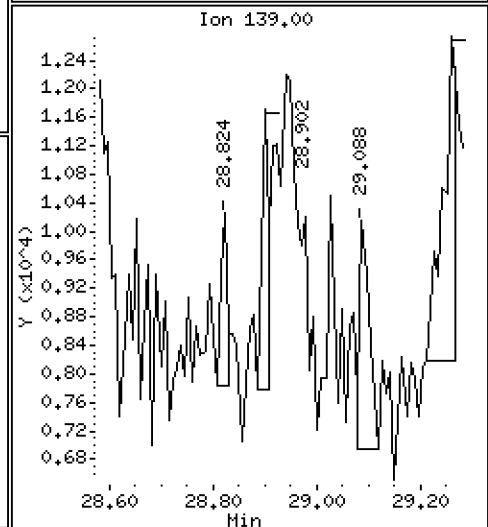
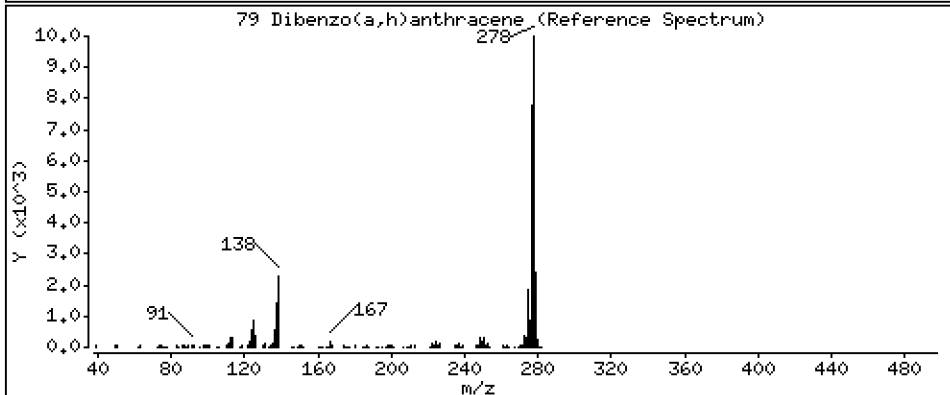
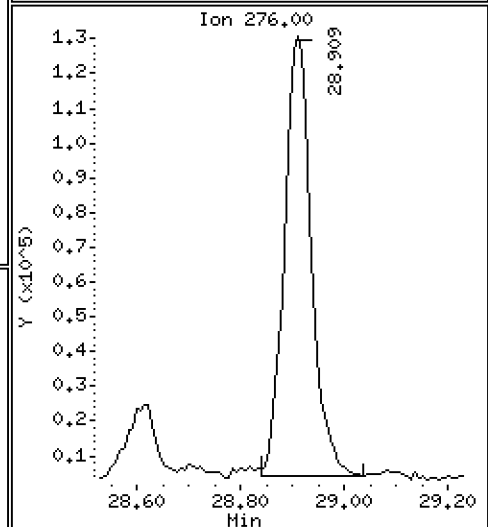
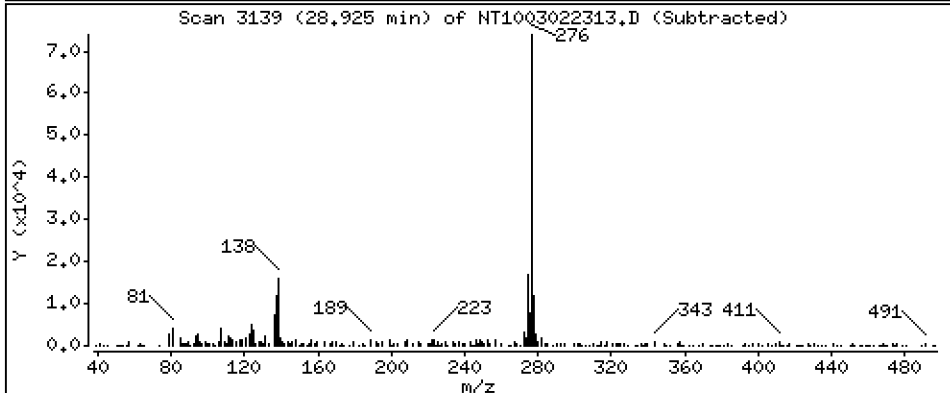
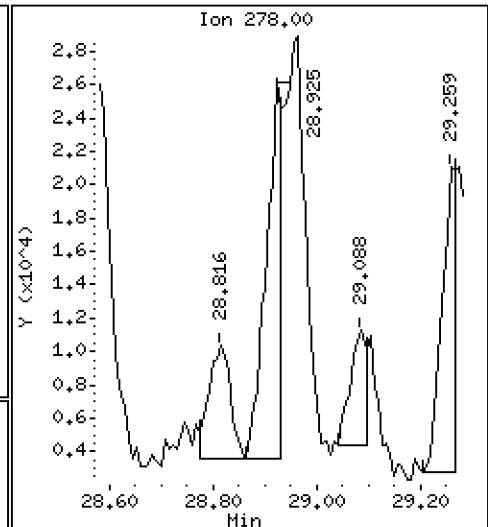
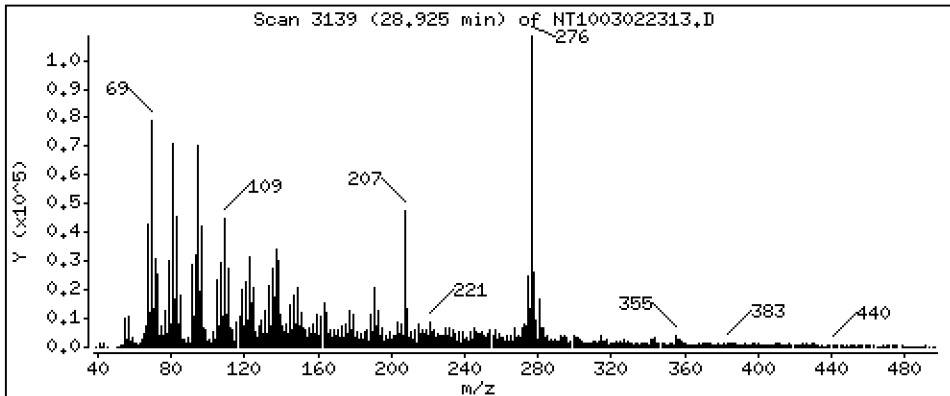
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.06166 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

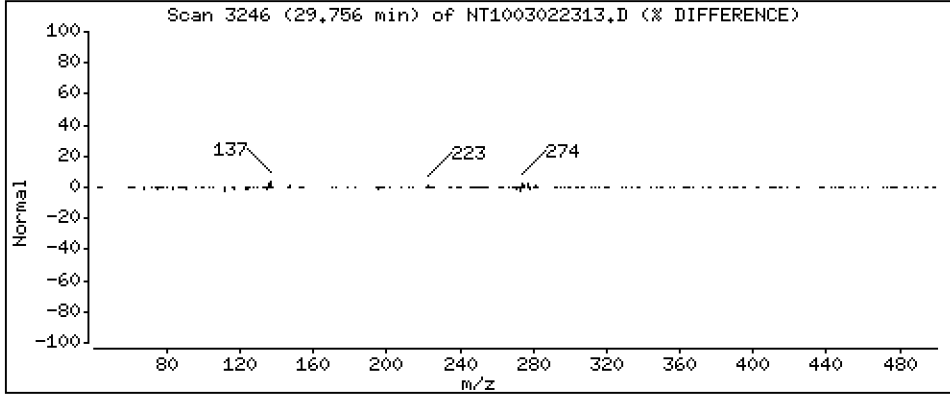
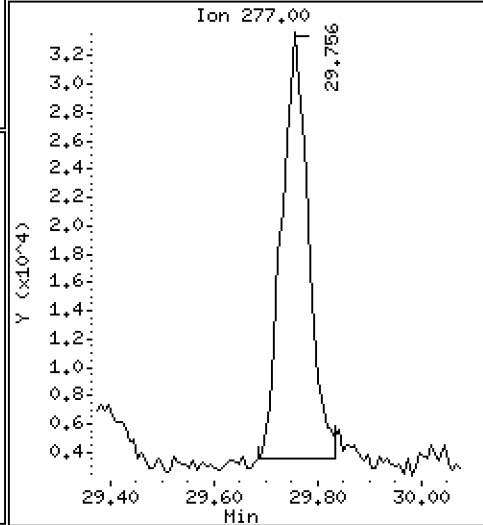
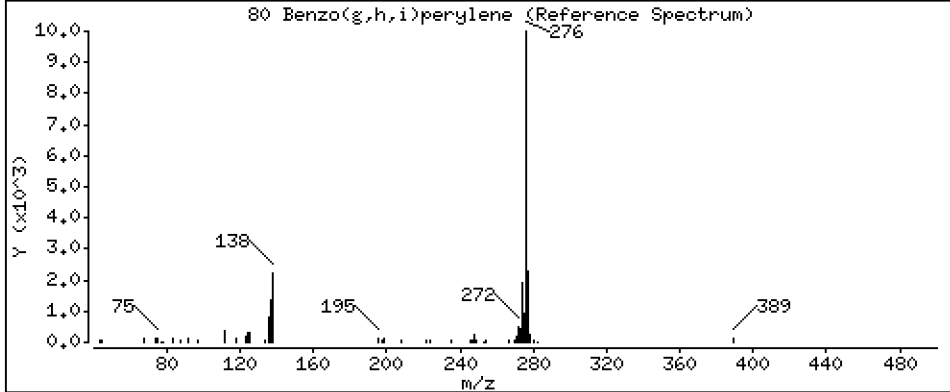
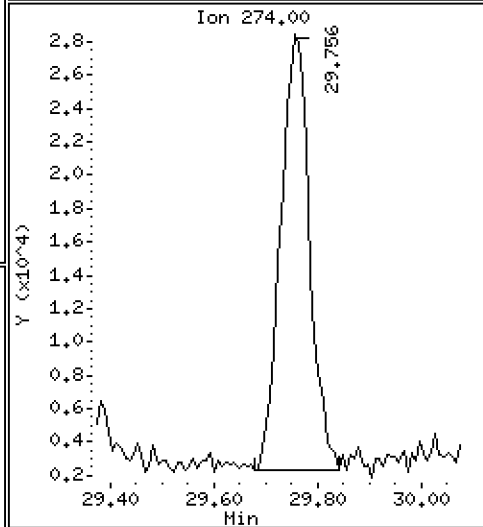
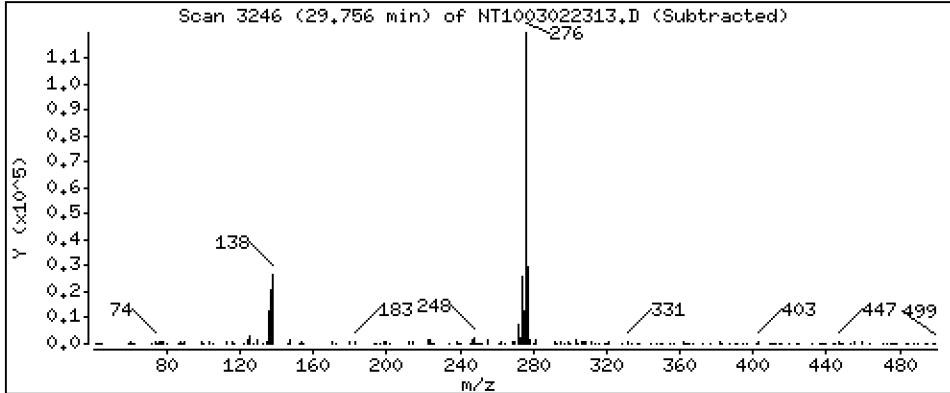
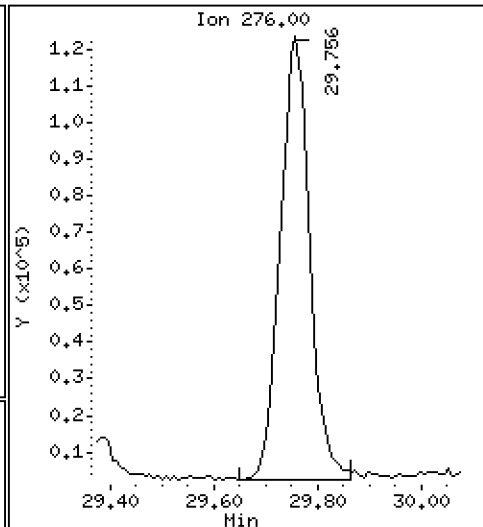
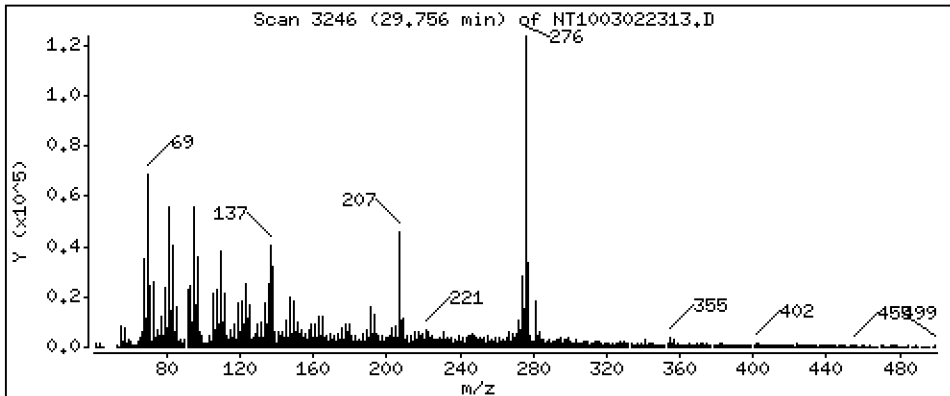
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,5824 ug/mL





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

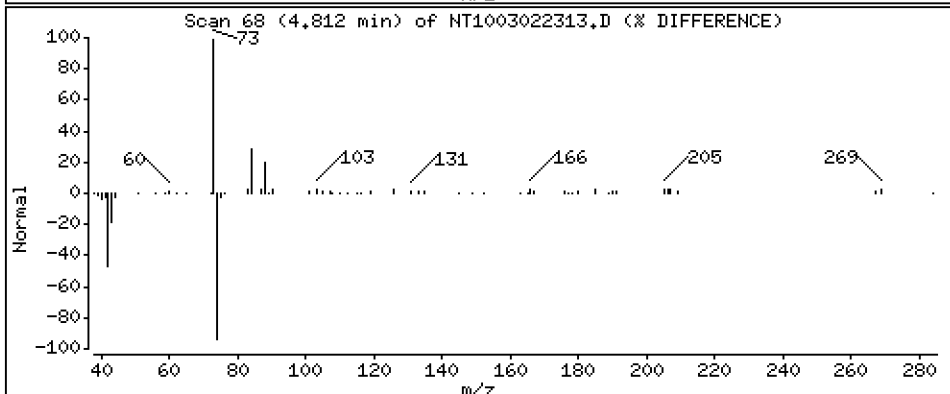
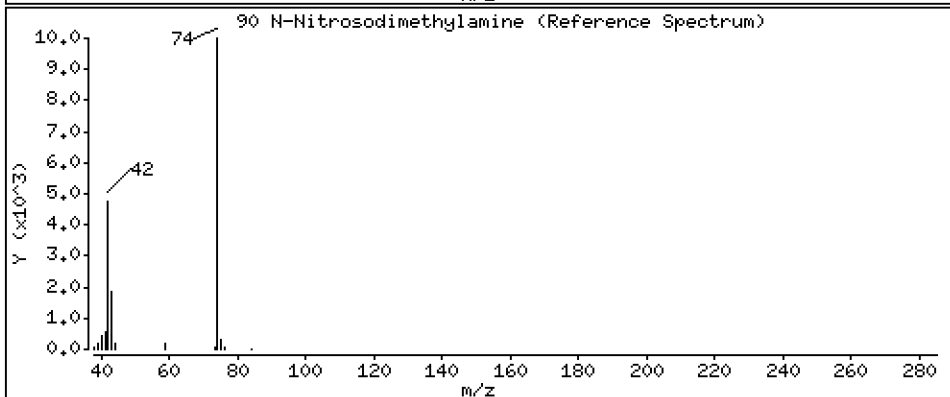
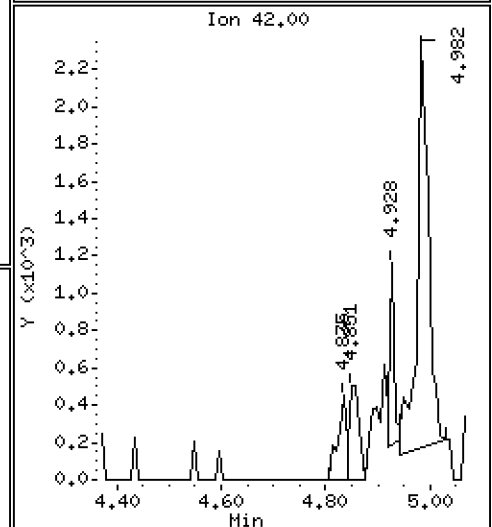
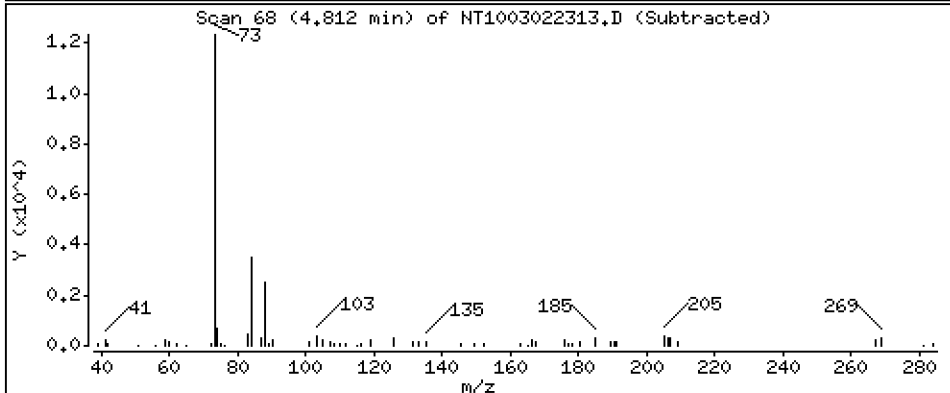
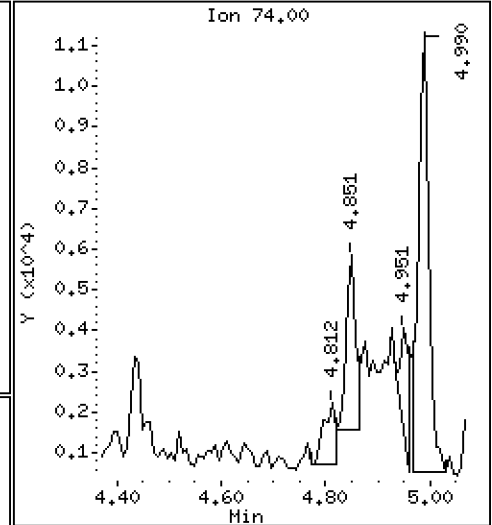
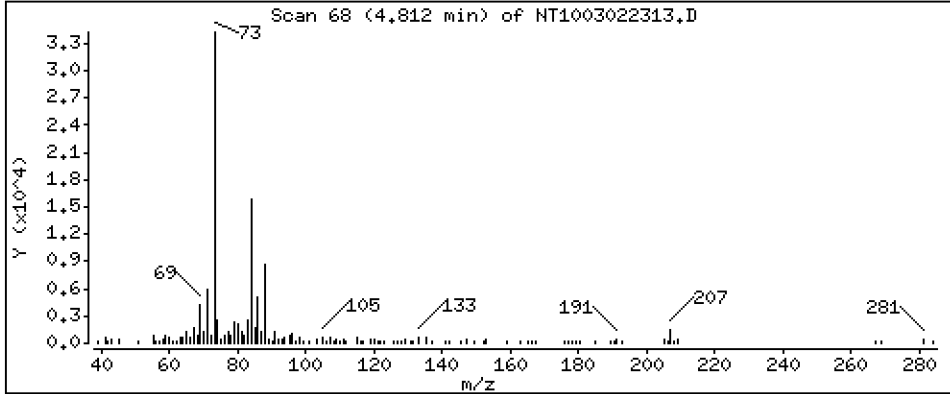
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 0,01616 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

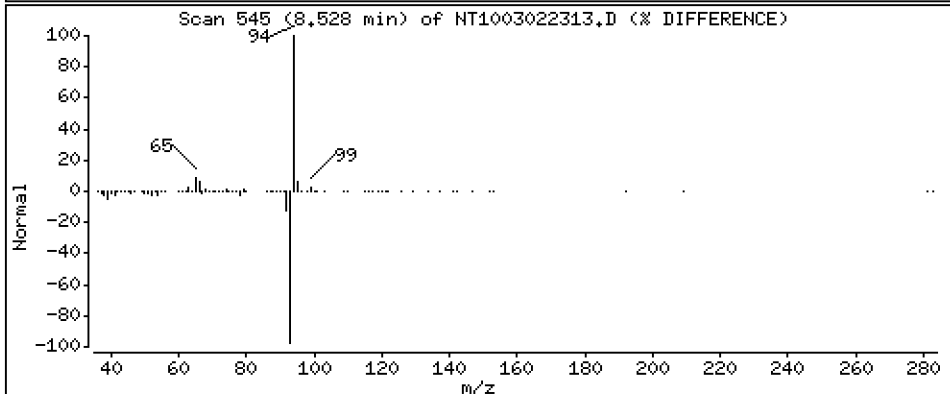
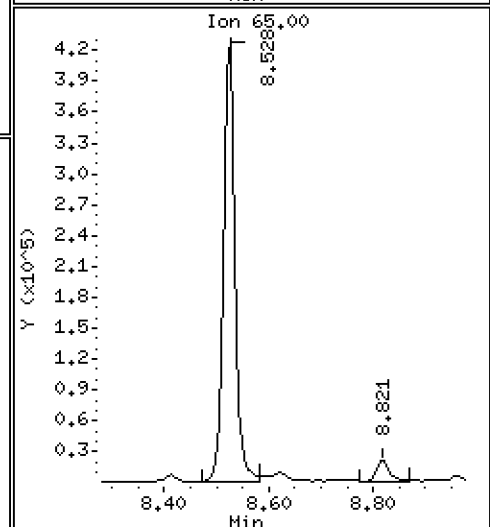
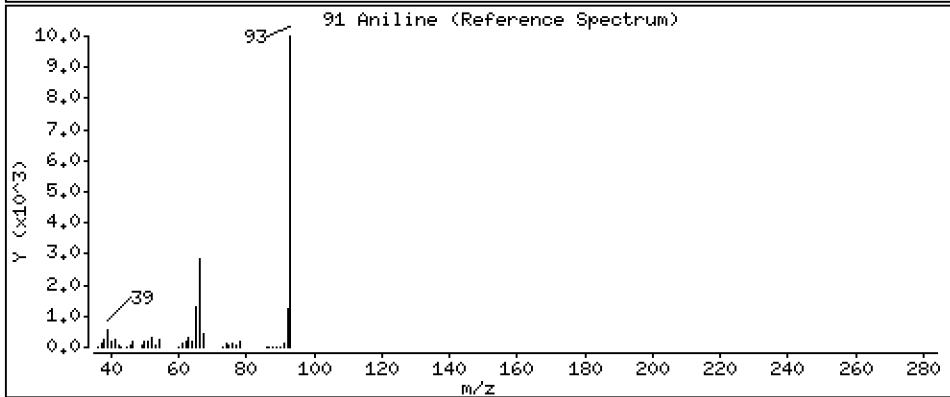
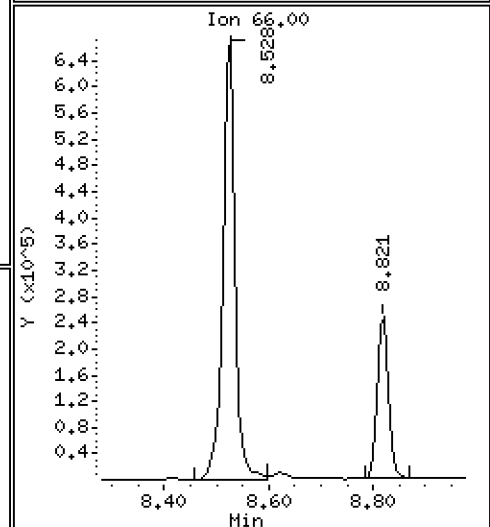
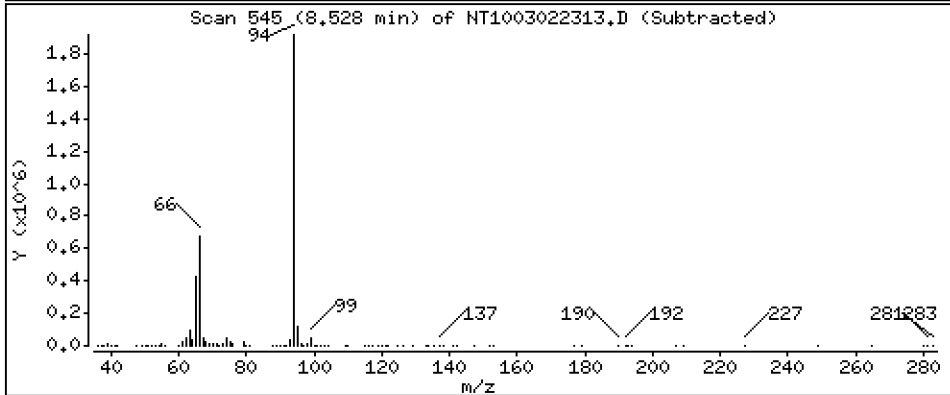
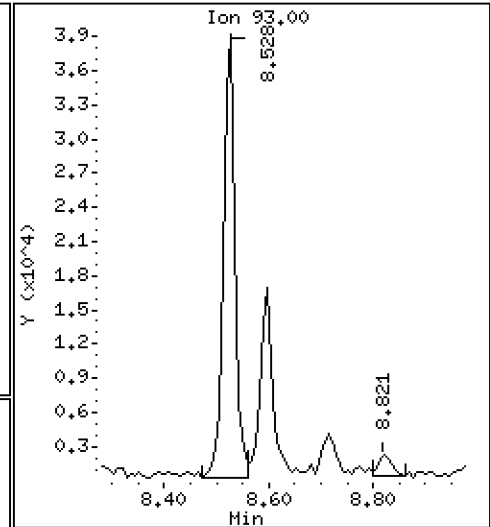
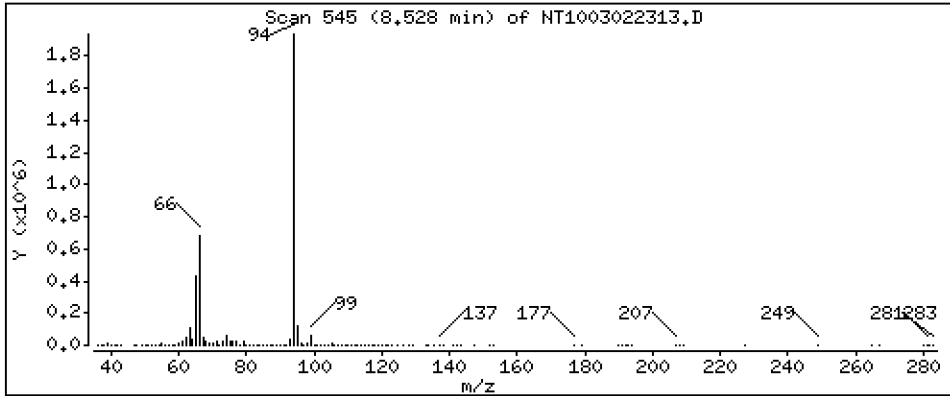
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 0,1960 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

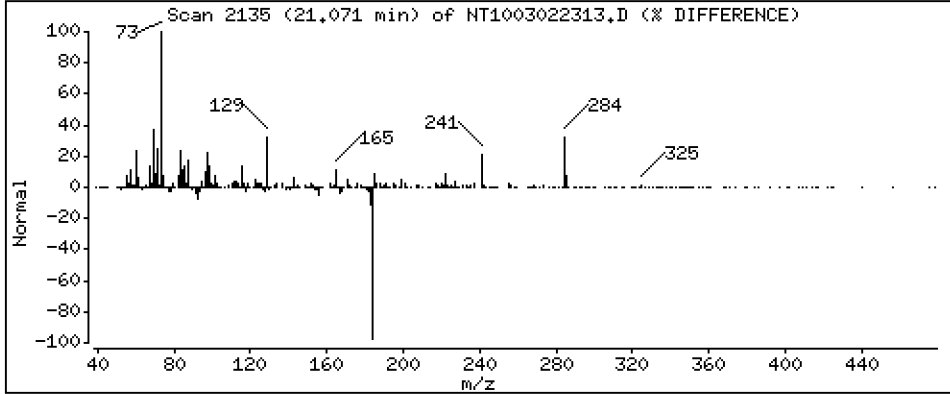
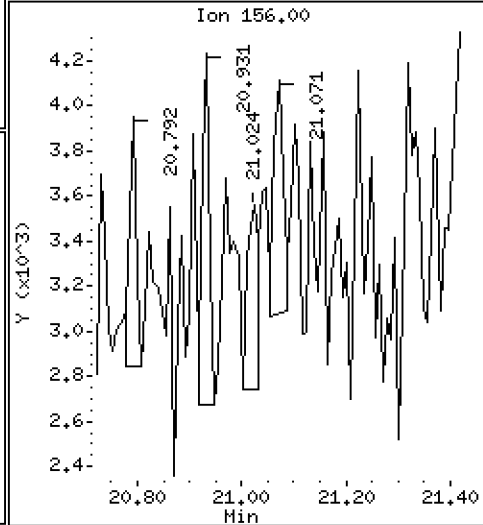
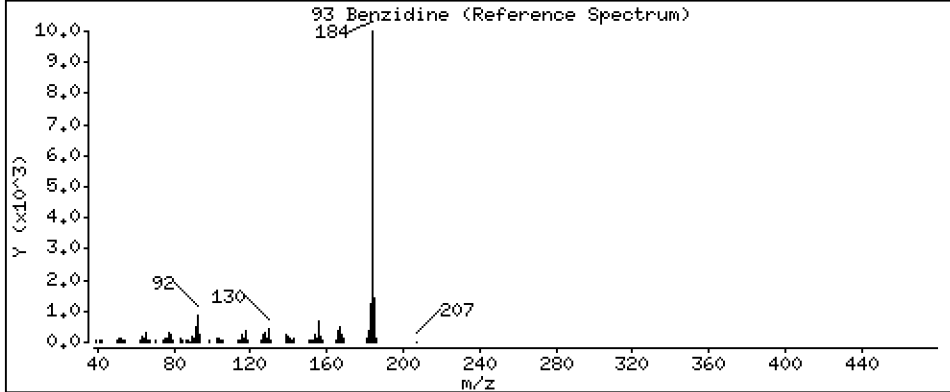
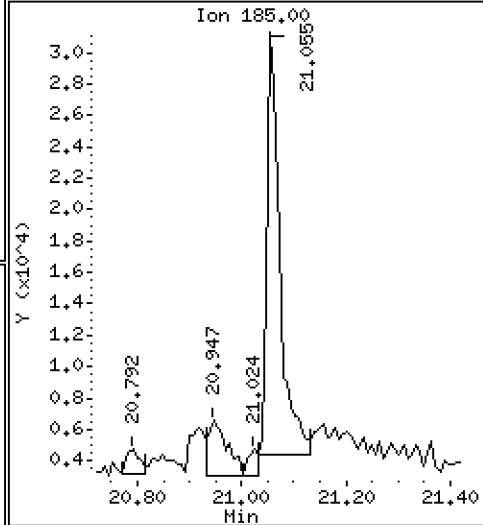
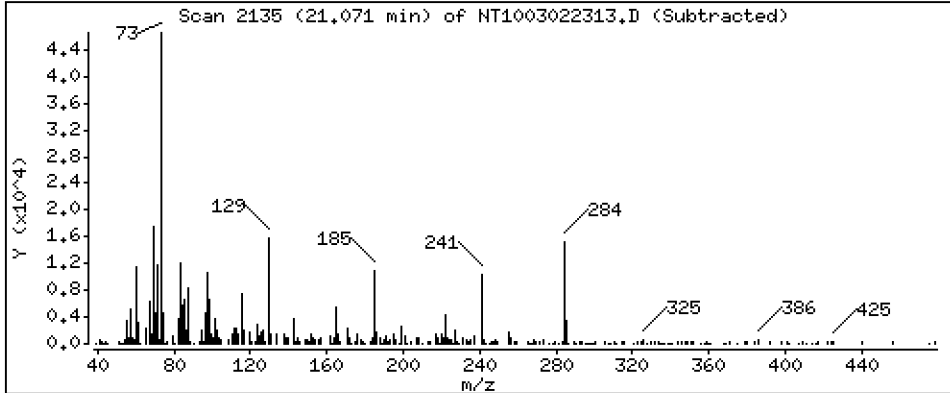
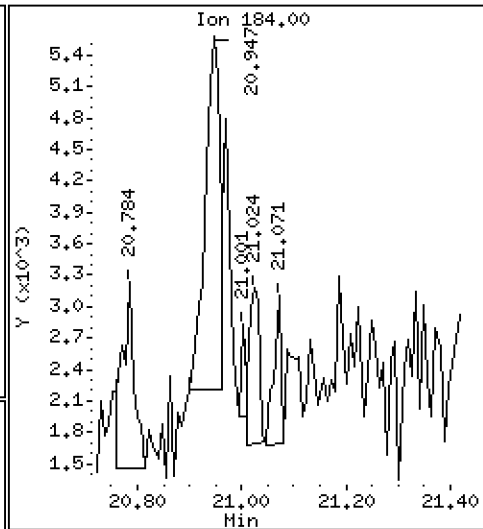
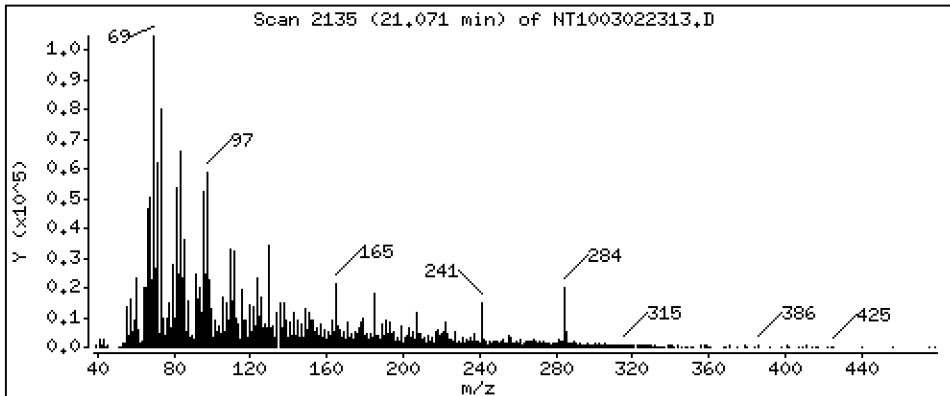
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,002796 ug/mL

93 Benzidine



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

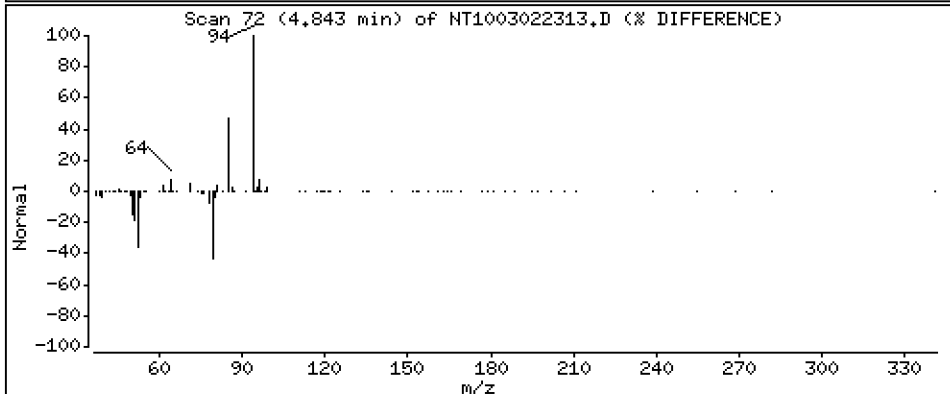
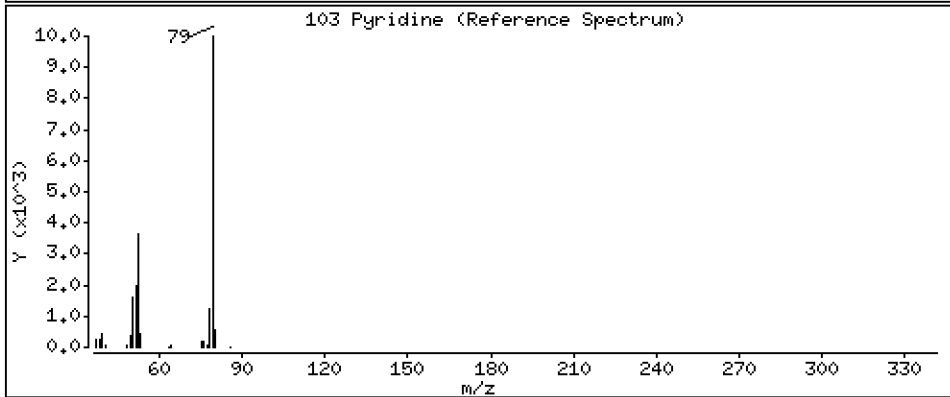
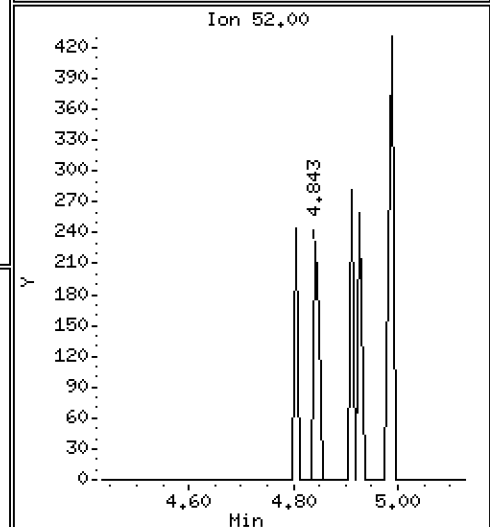
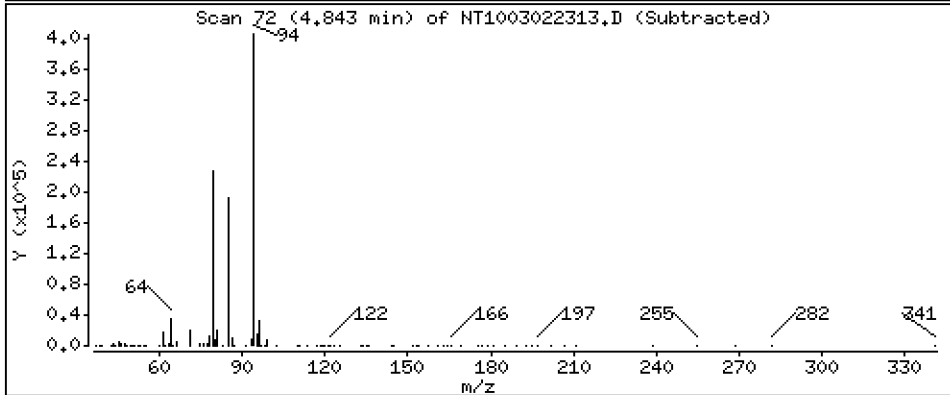
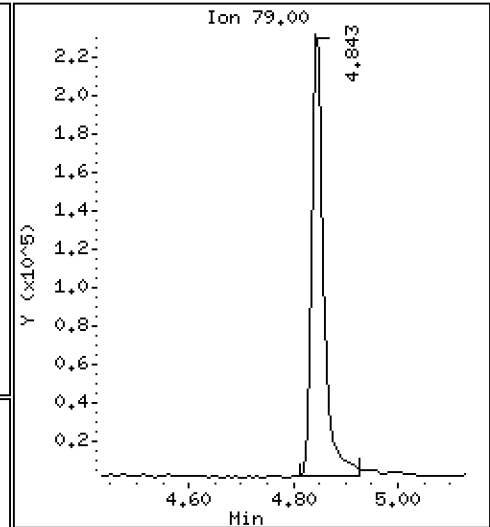
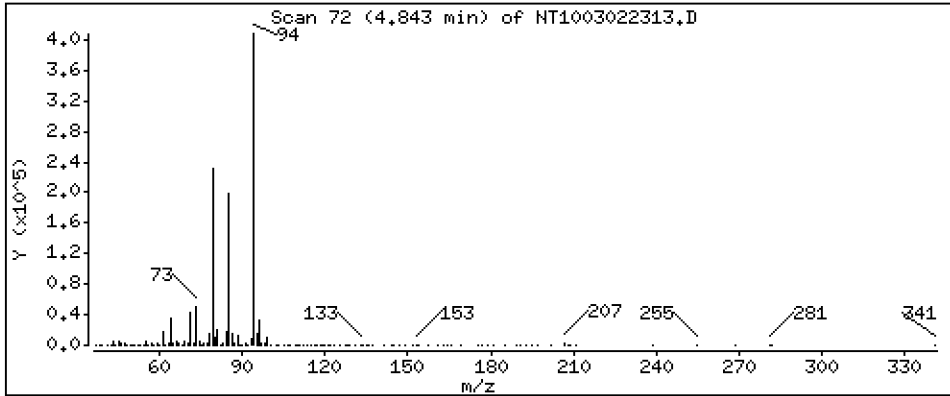
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 1,466 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

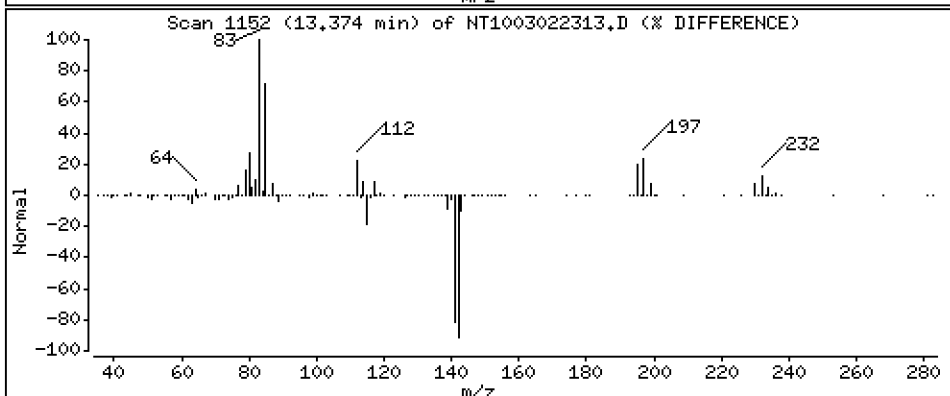
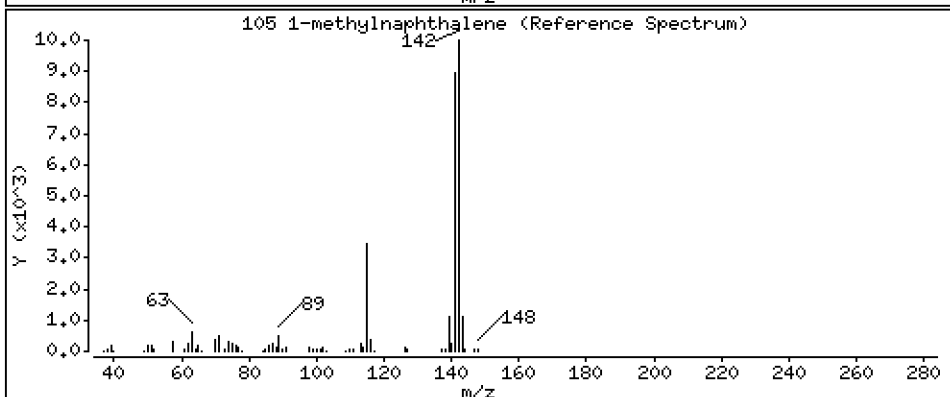
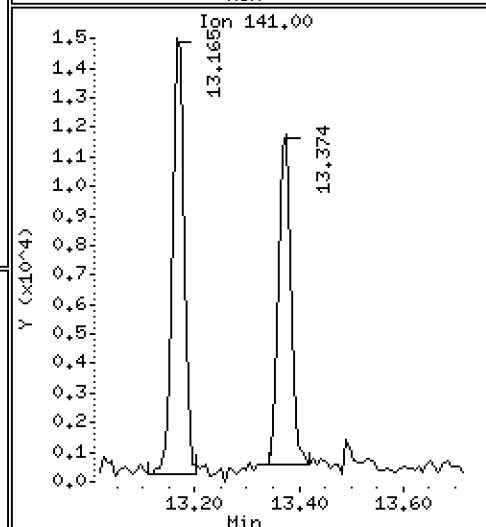
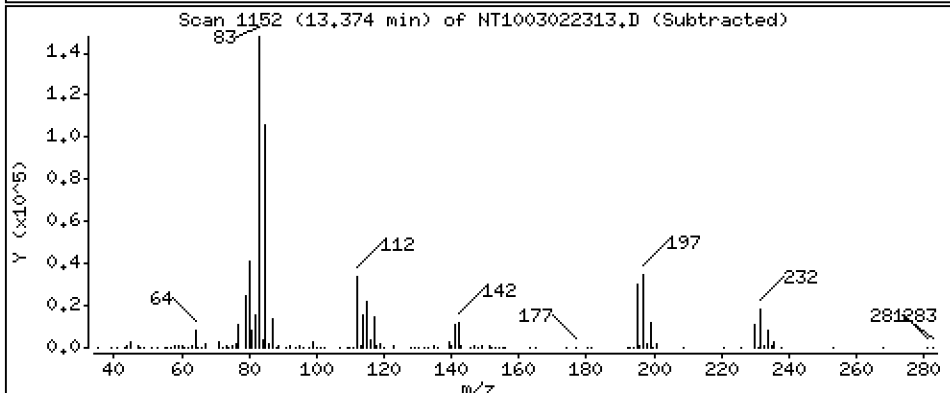
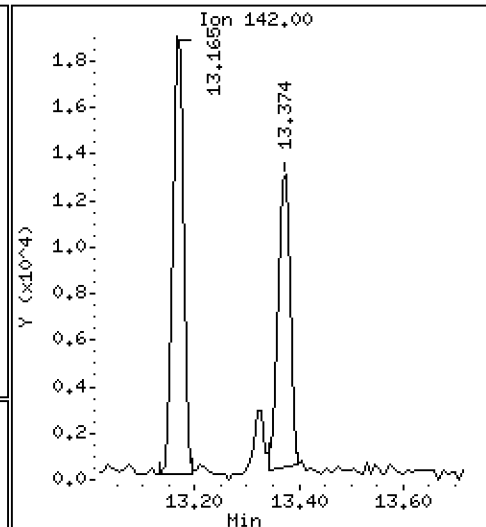
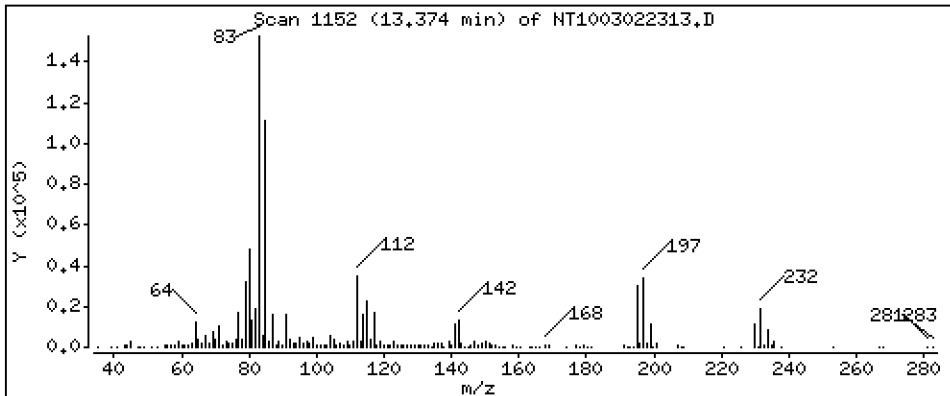
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,04830 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

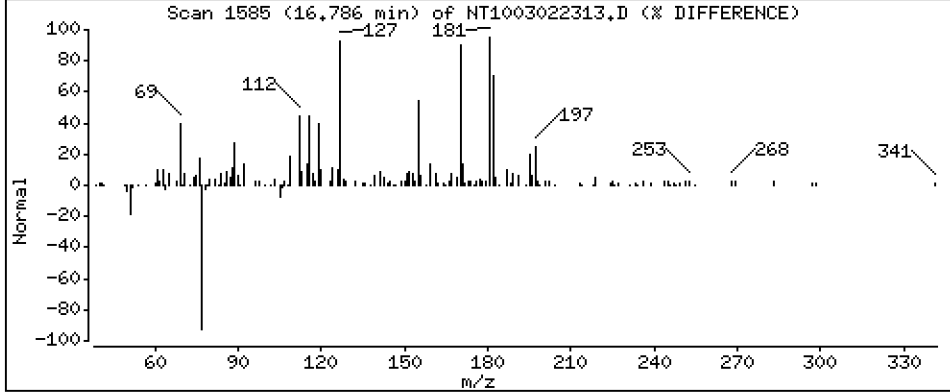
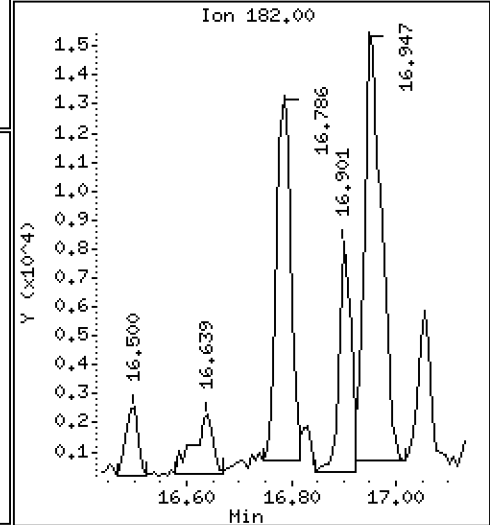
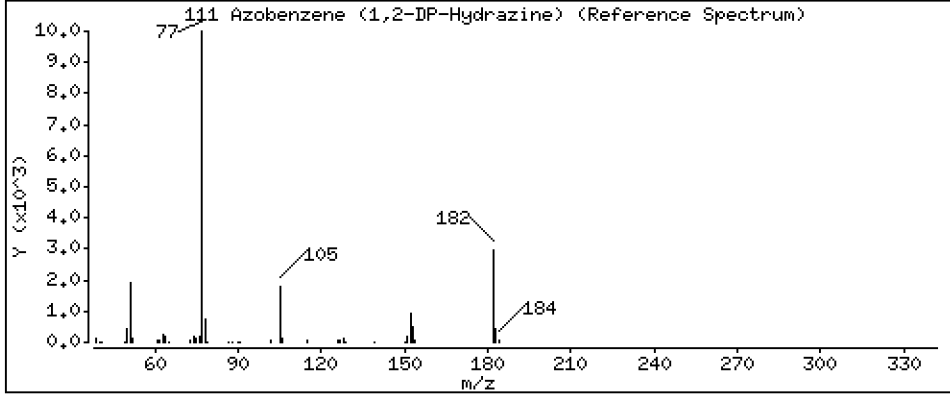
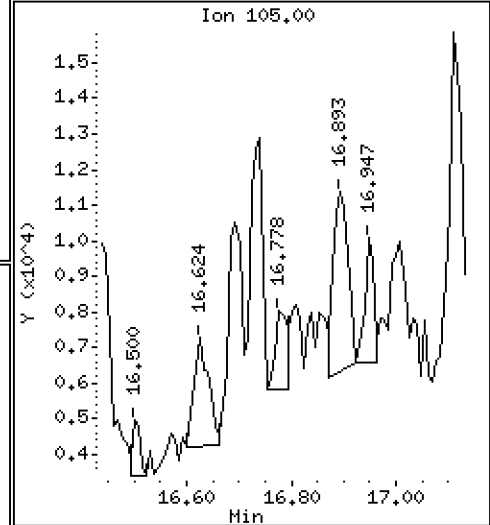
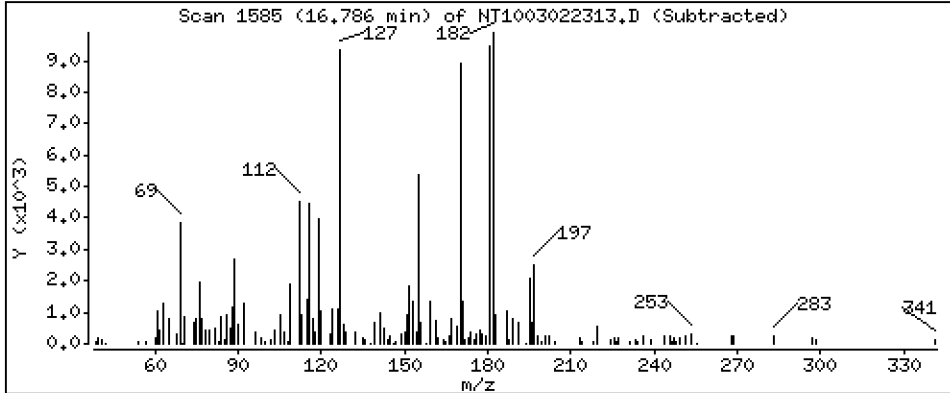
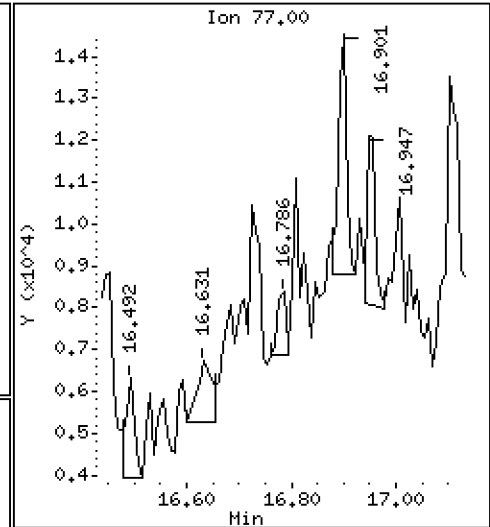
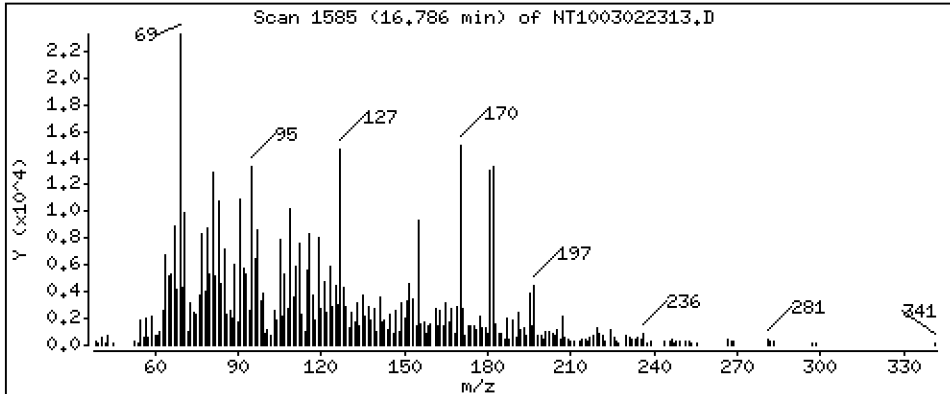
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 0.002378 ug/mL



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

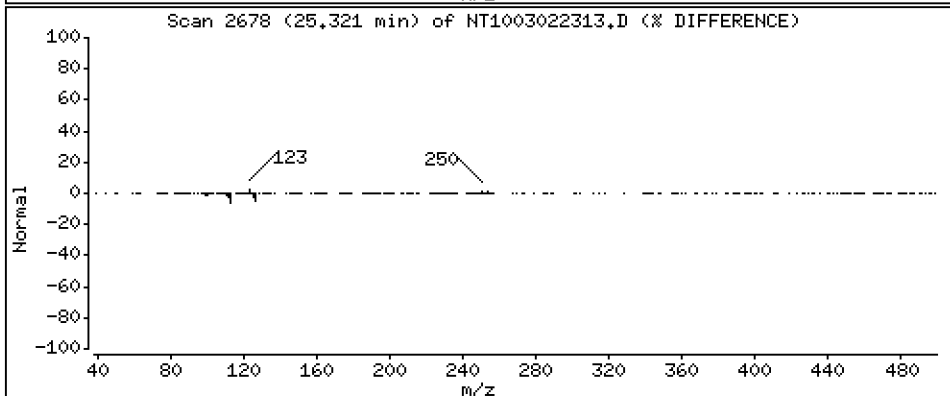
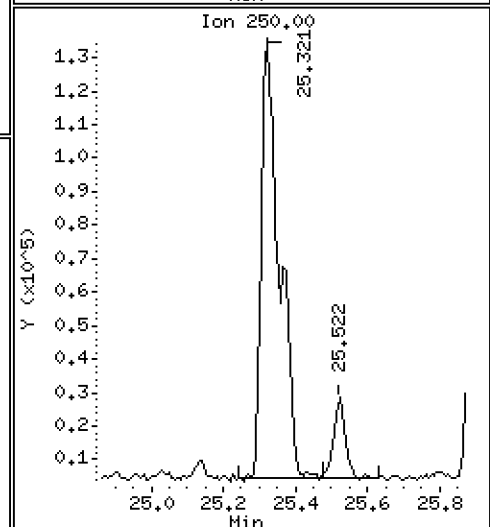
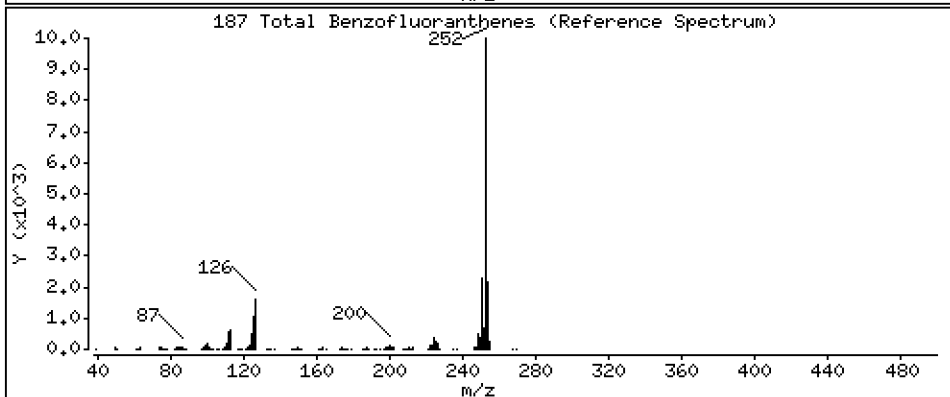
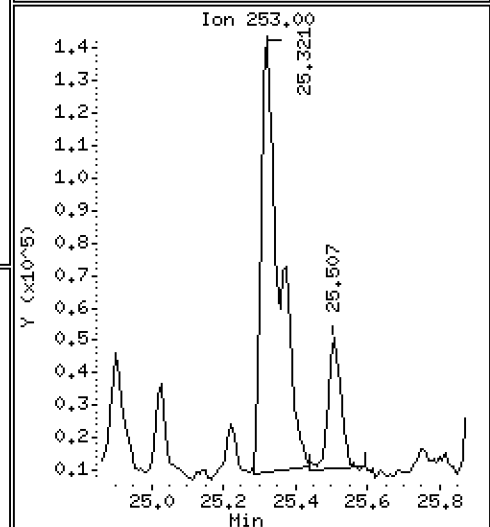
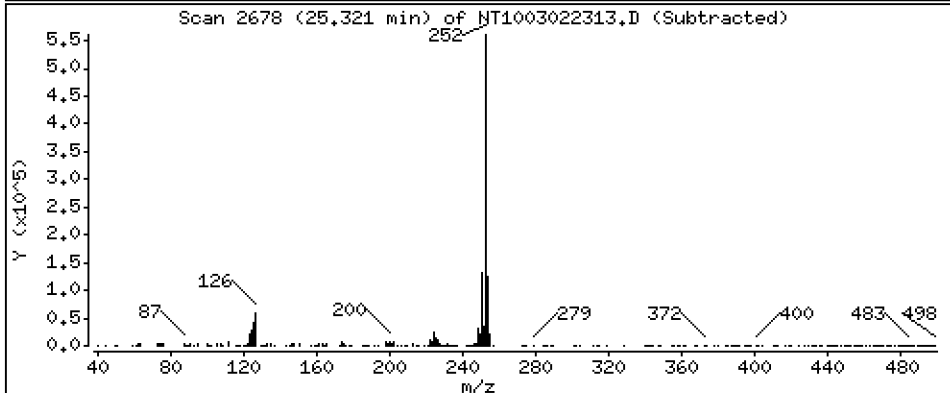
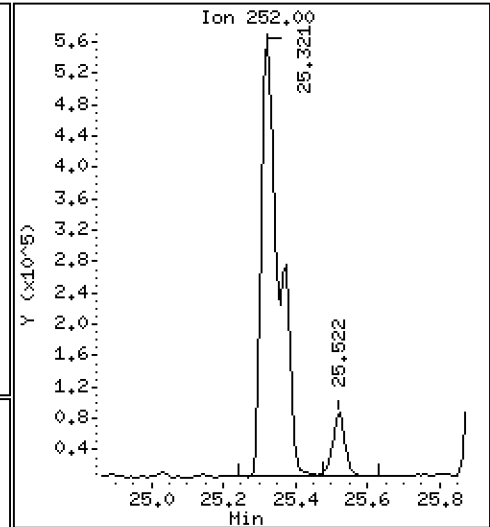
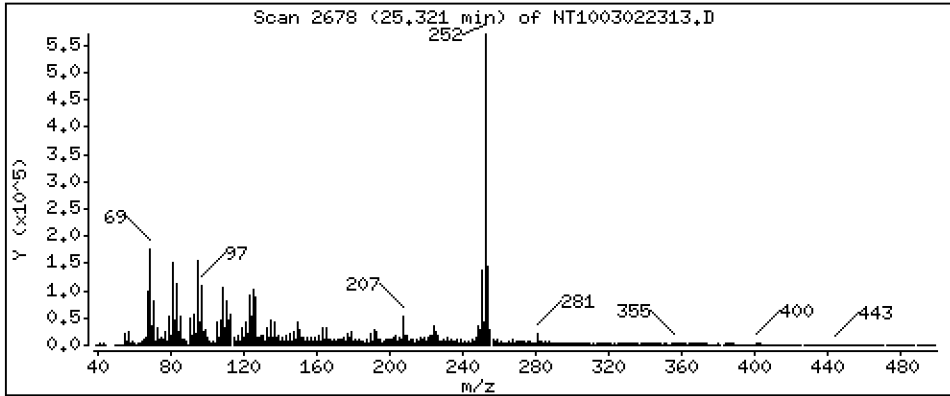
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 2,029 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022313.D  
 Lab Smp Id: 23A0206-02  
 Inj Date : 02-MAR-2023 22:00  
 Operator : VTS  
 Smp Info : 23A0206-02  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 13  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.904	6.897	(0.747)	1315709	5.98414	5.984
\$ 2 Phenol-d5	99		8.496	8.489	(0.919)	1753441	6.86916	6.869
3 Phenol	94		8.527	8.512	(0.922)	2983129	10.9918	10.99
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1494943	6.86436	6.864
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	698814	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	641969	3.94546	3.945
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.472	(1.025)	40067	0.28772	0.2877
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.658	9.650	(1.044)	5074	0.02415	0.02415
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.938	(1.076)	31990	0.12131	0.1213 (M)
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	1204755	4.41055	4.411
19 Nitrobenzene	77		10.302	10.333	(0.879)	5793	0.02261	0.02261
20 Isophorone	82		10.783	10.791	(0.920)	9455	0.02891	0.02891
21 2-Nitrophenol	139		10.992	10.950	(0.937)	508	0.00357	0.003571
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	7242	0.02957	0.02957
23 Bis(2-Chloroethoxy)methane	93		11.204	11.213	(0.956)	854	0.00423	0.004225
24 Benzoic acid	105		11.128	11.154	(0.949)	77213	0.53155	0.5315
25 2,4-Dichlorophenol	162		11.433	11.417	(0.975)	1640	0.00850	0.008497
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	897	0.00466	0.004665
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2488374	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	64358	0.10077	0.1008
29 4-Chloroaniline	127		11.765	11.858	(1.003)	8347	0.02988	0.02988
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		12.793	12.801	(1.091)	430	0.00212	0.002118
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	28656	0.06351	0.06351
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					



Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.730	13.722	(0.896)	688	0.00572	0.005724	
35 2,4,5-Trichlorophenol	196		13.730	13.792	(0.896)	688	0.00536	0.005363	
§ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2185631	4.81521	4.815	
37 2-Chloronaphthalene	162		14.171	14.171	(0.925)	507	0.00142	0.001423	
38 2-Nitroaniline	65		14.488	14.365	(0.946)	2258	0.02319	0.02319	
39 Dimethylphthalate	163		14.744	14.744	(0.963)	16744	0.04074	0.04074	
40 Acenaphthylene	152		15.030	15.023	(0.981)	53746	0.08749	0.08749	
41 2,6-Dinitrotoluene	165		14.906	14.868	(0.973)	2487	0.02759	0.02759	
* 42 Acenaphthene-d10	164		15.316	15.317	(1.000)	1272566	4.00000		
43 3-Nitroaniline	138		15.185	15.216	(0.991)	429	0.00414	0.004139	
44 Acenaphthene	153		15.386	15.386	(1.005)	32604	0.08800	0.08800	
45 2,4-Dinitrophenol	184		15.448	15.433	(1.009)	98	0.00414	0.004136	
46 Dibenzofuran	168		15.741	15.742	(1.028)	47711	0.08677	0.08677	
47 4-Nitrophenol	109		15.533	15.525	(1.014)	3381	0.04717	0.04717	
48 2,4-Dinitrotoluene	165		15.741	15.703	(1.028)	875	0.00670	0.006697	
50 Diethylphthalate	149		16.205	16.206	(1.058)	84200	0.19340	0.1934	
49 Fluorene	166		16.453	16.453	(1.074)	46759	0.10221	0.1022	
51 4-Chlorophenyl-phenylether	204		16.445	16.453	(1.074)	1222	0.00615	0.006145	
52 4-Nitroaniline	138		16.453	16.476	(1.074)	3095	0.02778	0.02778	
53 4,6-Dinitro-2-methylphenol	198		16.561	16.538	(0.900)	1218	0.02215	0.02215	
54 N-Nitrosodiphenylamine	169		16.700	16.693	(0.907)	10096	0.02890	0.02890	
§ 55 2,4,6-Tribromophenol	330		16.955	16.947	(1.107)	525453	6.42713	6.427	
56 4-Bromophenyl-phenylether	248		17.387	17.472	(0.944)	683	0.00483	0.004825	
57 Hexachlorobenzene	284		17.588	17.581	(0.955)	202	0.00127	0.001267	
58 Pentachlorophenol	266		17.991	17.983	(0.977)	605	0.00825	0.008248	
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2361043	4.00000		
60 Phenanthrene	178		18.455	18.455	(1.003)	357017	0.59086	0.5909	
61 Anthracene	178		18.563	18.564	(1.008)	181355	0.30953	0.3095	
62 Carbazole	167		18.896	18.889	(1.026)	61652	0.11486	0.1149	
63 Di-n-butylphthalate	149		19.600	19.593	(1.065)	34350	0.04720	0.04720	
64 Fluoranthene	202		20.838	20.815	(0.889)	1580193	1.65235	1.652	
65 Pyrene	202		21.256	21.248	(0.907)	1355332	1.39181	1.392	
§ 66 Terphenyl-d14	244		21.534	21.527	(0.919)	3469646	4.40347	4.403	
67 Butylbenzylphthalate	149		22.417	22.410	(0.957)	32667	0.06228	0.06228	
68 Benzo(a)anthracene	228		23.408	23.409	(0.999)	843597	0.86062	0.8606	
* 69 Chrysene-d12	240		23.431	23.424	(1.000)	2779959	4.00000		
70 3,3'-Dichlorobenzidine	252		23.184	23.347	(0.989)	28382	0.06503	0.06503	
71 Chrysene	228		23.478	23.470	(1.002)	1046211	1.31329	1.313	
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	498489	0.66950	0.6695	
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	5293891	4.00000		
73 Di-n-octylphthalate	149		24.283	24.500	(0.991)	38462	0.03276	0.03276	
74 Benzo(b)fluoranthene	252		25.320	25.305	(0.969)	1507154	1.50425	1.504	
75 Benzo(k)fluoranthene	252		25.375	25.367	(0.971)	537104	0.56241	0.5624	
76 Benzo(a)pyrene	252		26.010	25.994	(0.995)	714148	0.80348	0.8035	
* 77 Perylene-d12	264		26.133	26.118	(1.000)	2896502	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.878	(1.106)	467911	0.45184	0.4518	
79 Dibenzo(a,h)anthracene	278		28.924	28.932	(1.107)	48218	0.06166	0.06166	
80 Benzo(g,h,i)perylene	276		29.755	29.725	(1.139)	480831	0.58237	0.5824	
90 N-Nitrosodimethylamine	74		4.812	4.719	(0.520)	2293	0.01616	0.01616	
91 Aniline	93		8.527	8.628	(0.922)	61664	0.19596	0.1960	
93 Benzidine	184		21.070	21.070	(0.899)	1187	0.00280	0.002796	
103 Pyridine	79		4.843	4.781	(0.524)	369086	1.46625	1.466	
105 1-methylnaphthalene	142		13.374	13.366	(1.141)	19723	0.04830	0.04830	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.785	16.785	(1.096)	1546	0.00238	0.002378	

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.320	25.367	(0.969)	1942679	2.02886	2.029	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022313.D Calibration Time: 13:34  
 Lab Smp Id: 23A0206-02  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	698814	62.15
27 Naphthalene-d8	1609461	804731	3218922	2488374	54.61
42 Acenaphthene-d10	853113	426557	1706226	1272566	49.17
59 Phenanthrene-d10	1556648	778324	3113296	2361043	51.67
69 Chrysene-d12	1539062	769531	3078124	2779959	80.63
134 Di-n-octylphthala	2949571	1474786	5899142	5293891	79.48
77 Perylene-d12	1634059	817030	3268118	2896502	77.26

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022313.D

Lab ID: 23A0206-02  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 22:00

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.003	1.011	-0.0079	4-Chloroaniline
0.946	0.938	0.0081	2-Nitroaniline
0.944	0.950	-0.0050	4-Bromophenyl-phenylether
0.989	0.997	-0.0073	3,3'-Dichlorobenzidine
0.991	1.000	-0.0088	Di-n-octylphthalate
0.520	0.510	0.0100	N-Nitrosodimethylamine
0.922	0.933	-0.0109	Aniline
0.524	0.517	0.0067	Pyridine

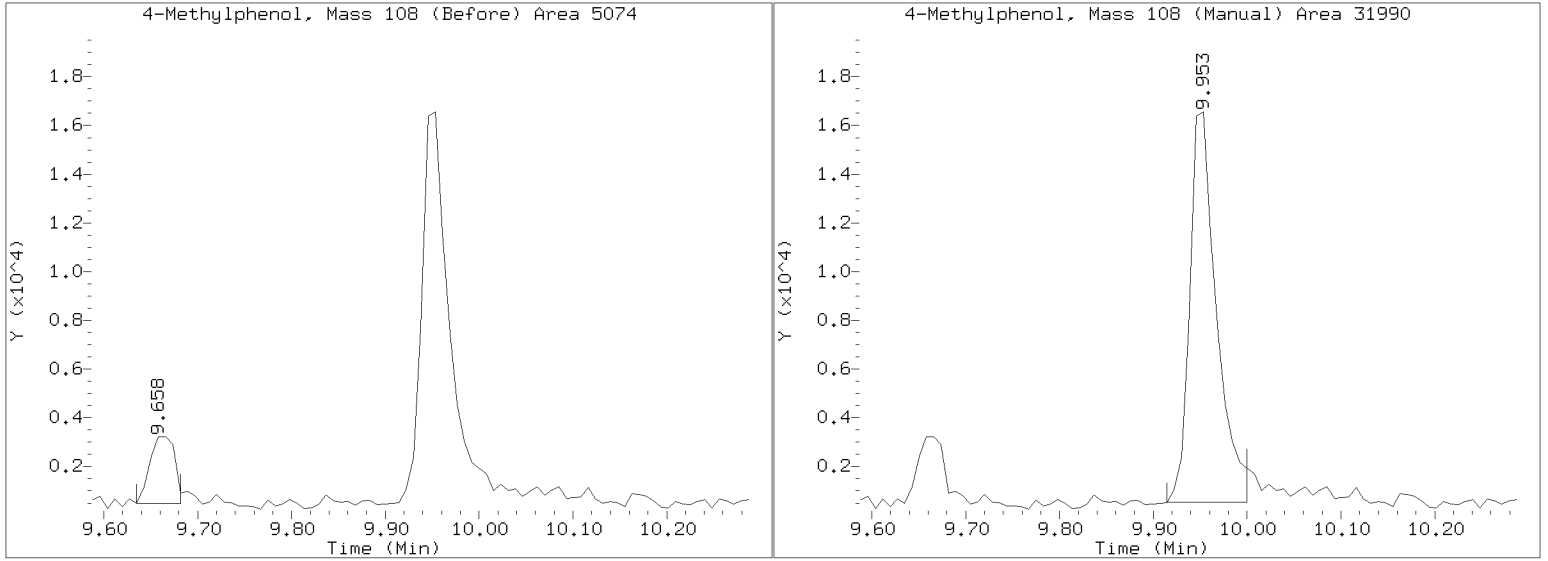
RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/NT1003022313.D  
Injection Date: 02-MAR-2023 22:00  
Lab ID:23A0206-02 Client ID:  
Report Date: 03/09/2023 11:32





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-03 B

SDG: 23A0206

Sampled: 01/11/23 09:18

Prepared: 01/27/23 14:44

File ID: NT1003022318.D

% Solids: 48.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:10

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 20.72 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	723		4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	7.0	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	5.0	J	4.5	20.0
208-96-8	Acenaphthylene	1	6.5	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	5.3	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	44.6		8.7	20.0
120-12-7	Anthracene	1	20.5		7.2	20.0
206-44-0	Fluoranthene	1	94.3		6.1	20.0
129-00-0	Pyrene	1	105		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	49.6		6.0	20.0
218-01-9	Chrysene	1	88.2		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	46.6	J	5.5	49.9
	Benzo(a)fluoranthene, Total	1	144		10.0	39.9
50-32-8	Benzo(a)pyrene	1	56.7		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	35.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	45.9		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.80	623	83.2	27 - 120	
Phenol-d5	748.80	714	95.3	29 - 120	
2-Chlorophenol-d4	748.80	702	93.7	31 - 120	
1,2-Dichlorobenzene-d4	499.20	398	79.7	32 - 120	
Nitrobenzene-d5	499.20	456	91.3	30 - 120	
2-Fluorobiphenyl	499.20	493	98.8	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-03 B

SDG: 23A0206

Sampled: 01/11/23 09:18

Prepared: 01/27/23 14:44

File ID: NT1003022318.D

% Solids: 48.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:10

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 20.72 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.80	677	90.4	24 - 134	
p-Terphenyl-d14	499.20	459	92.0	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022318.D

Date: 03-MAR-2023 01:10

Client ID:

Sample Info: 23A0206-03

Page 1

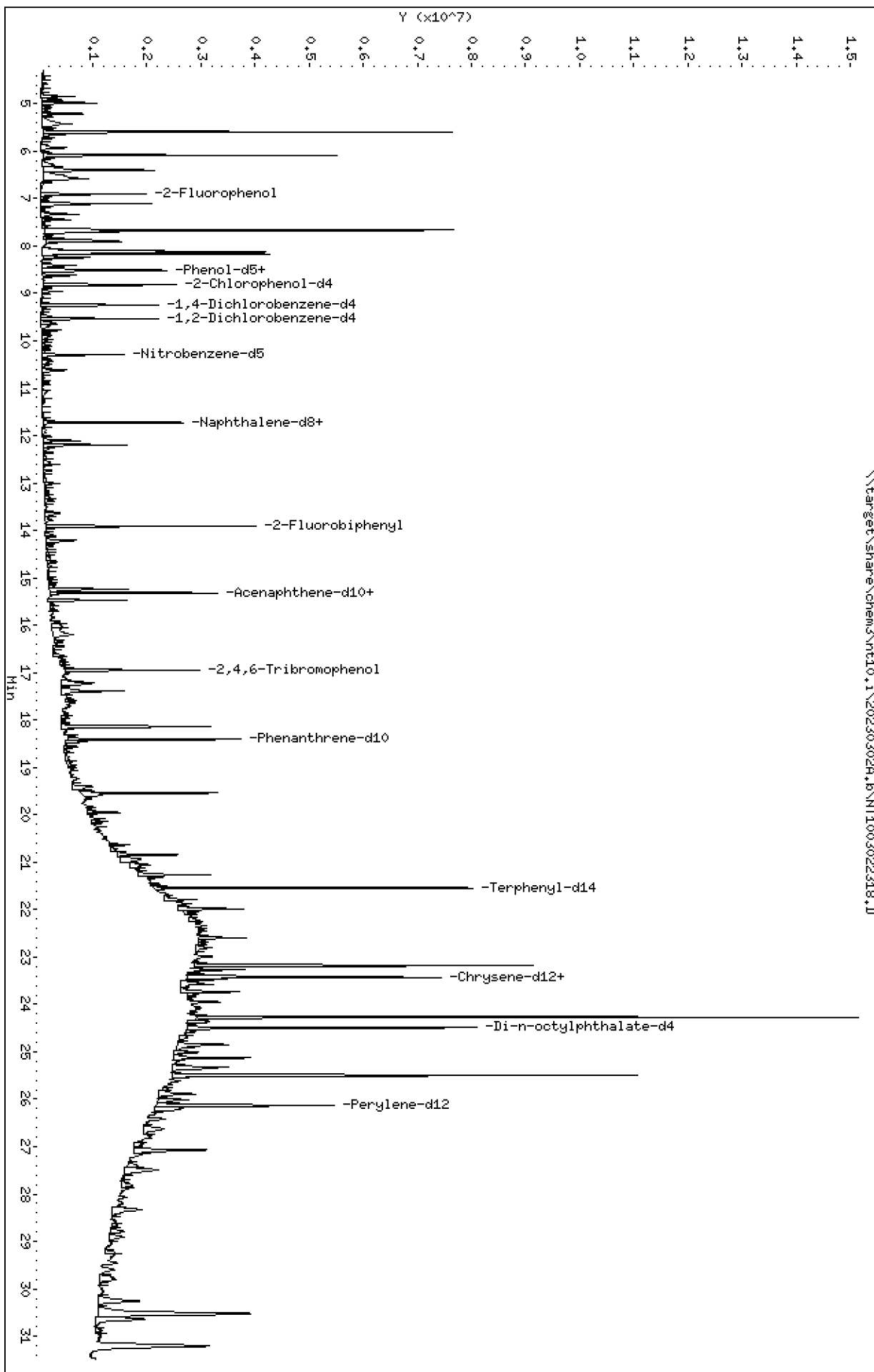
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A.B\NT1003022318.D





Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

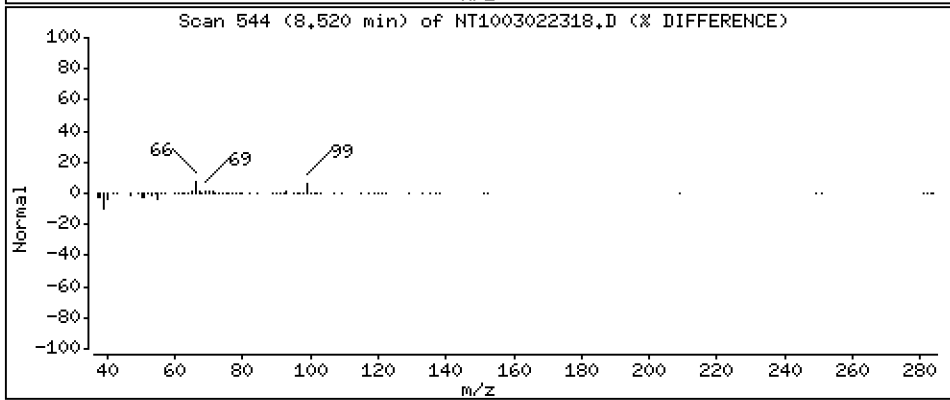
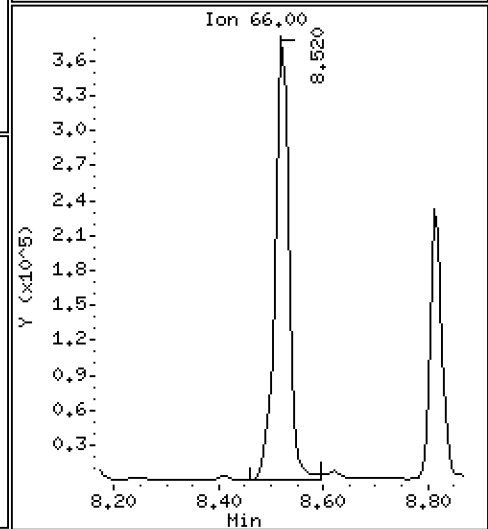
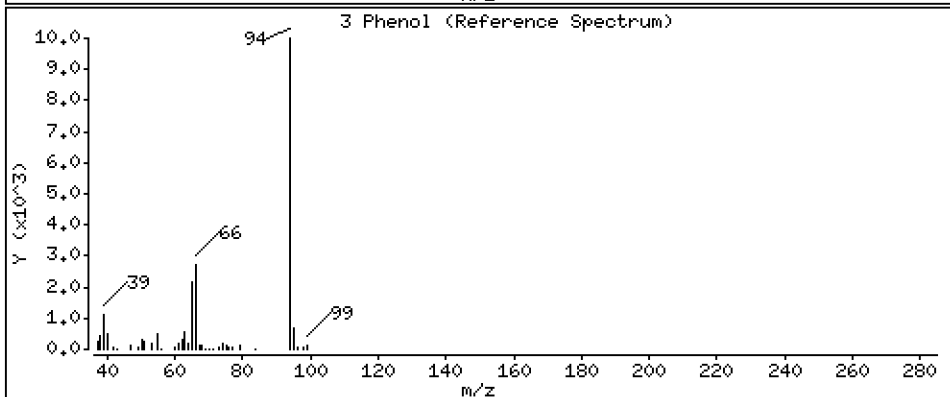
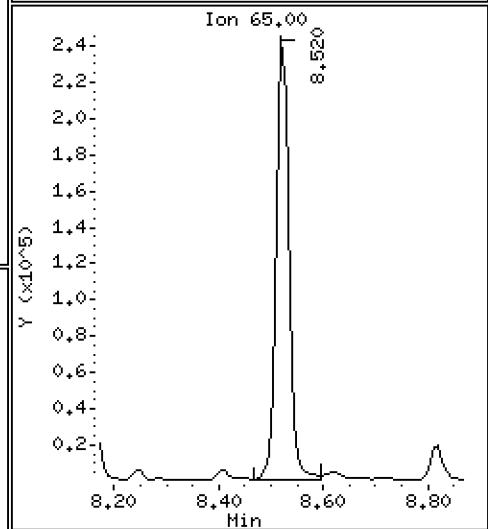
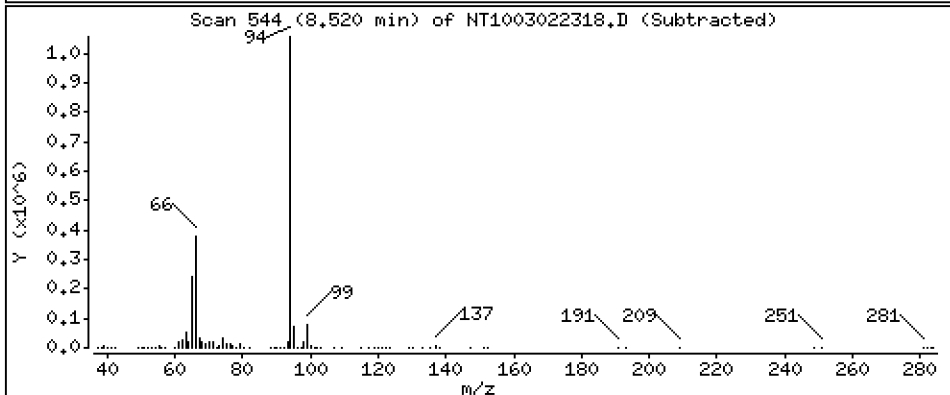
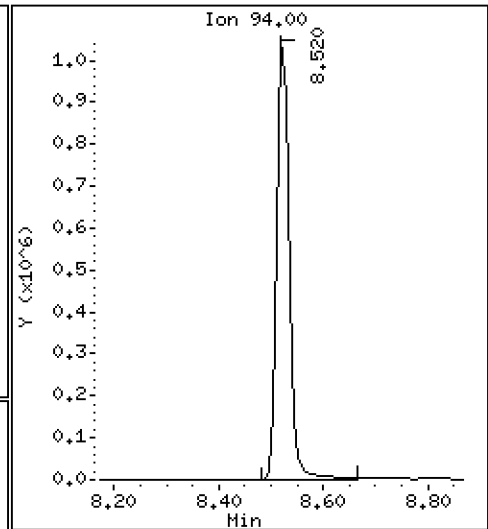
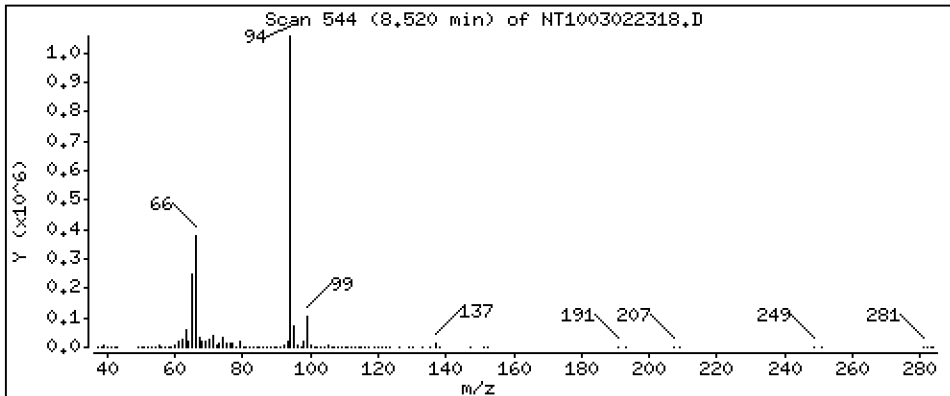
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 7,239 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

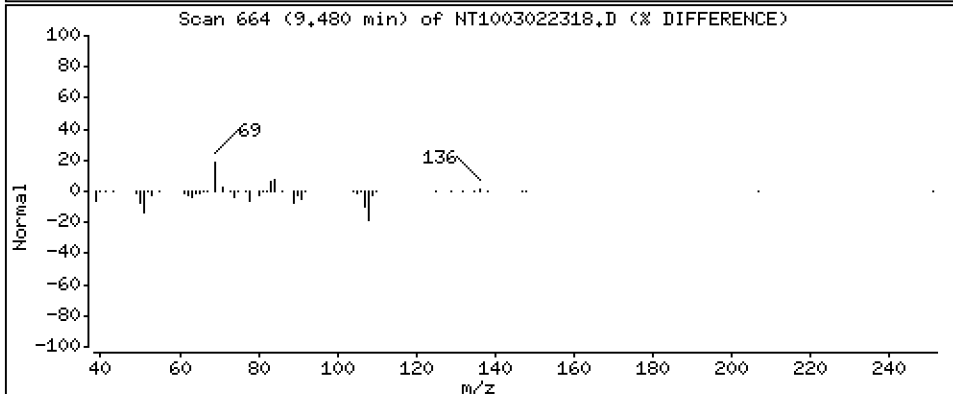
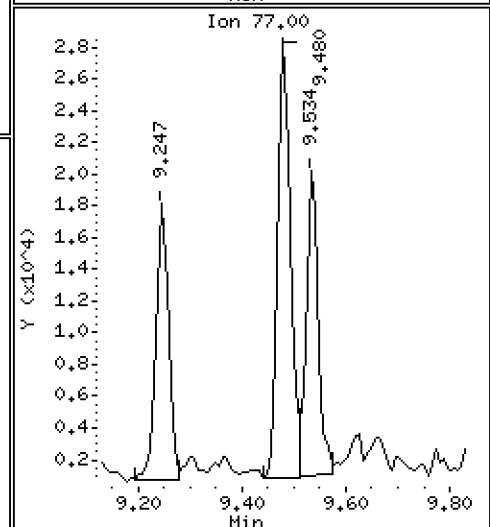
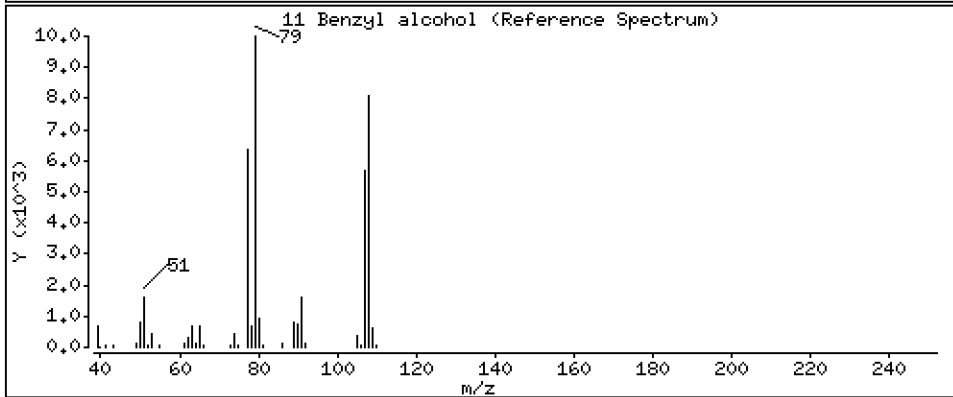
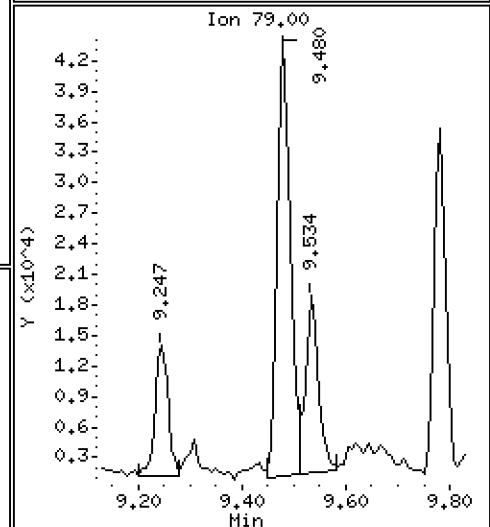
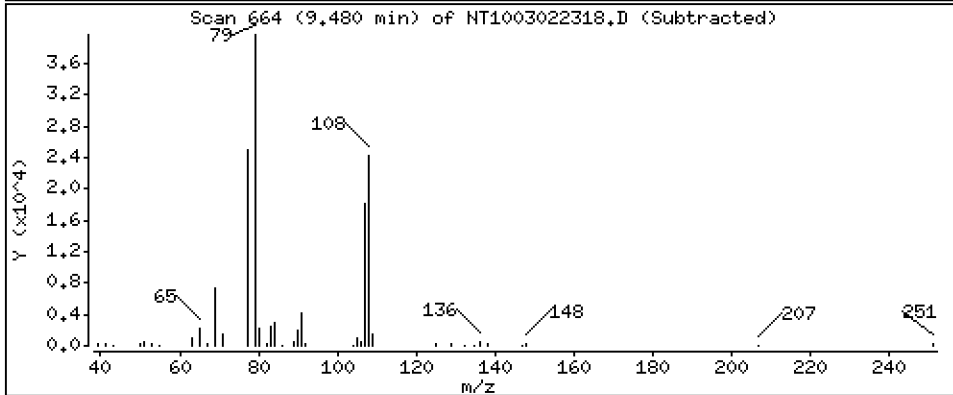
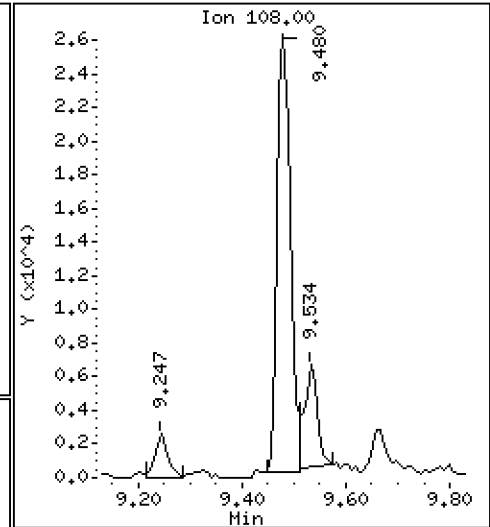
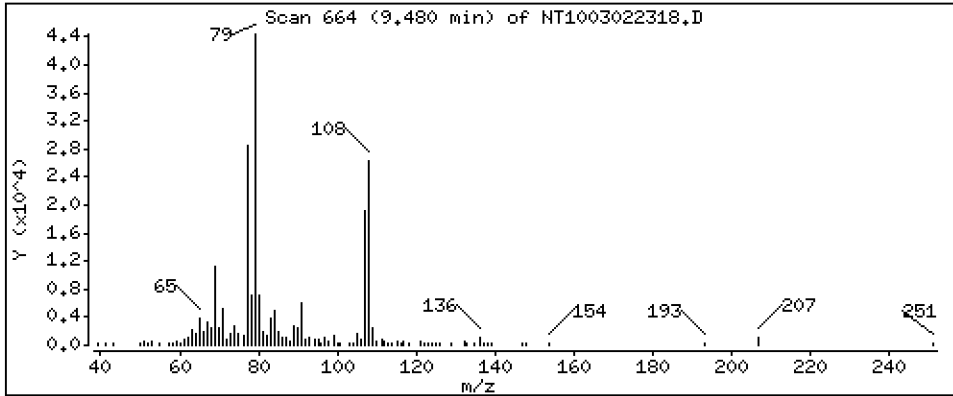
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.3862 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

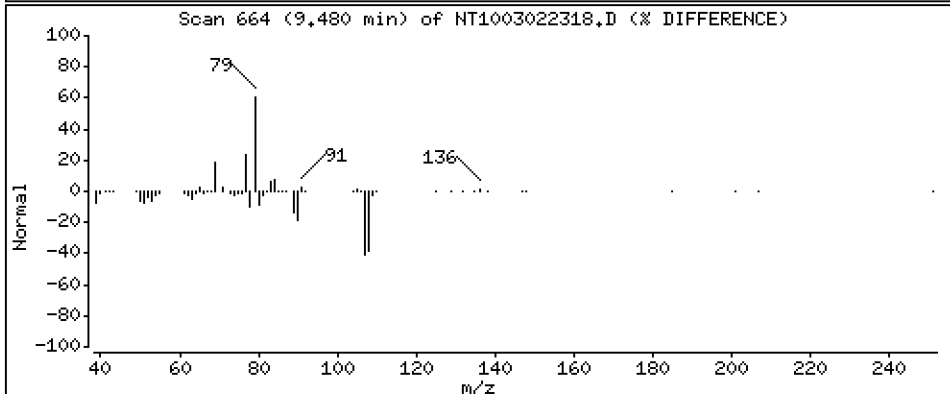
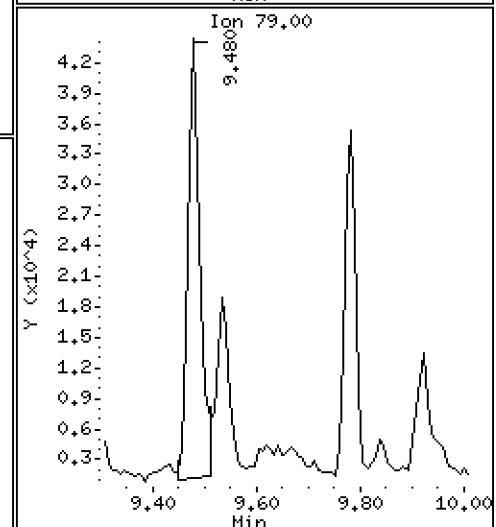
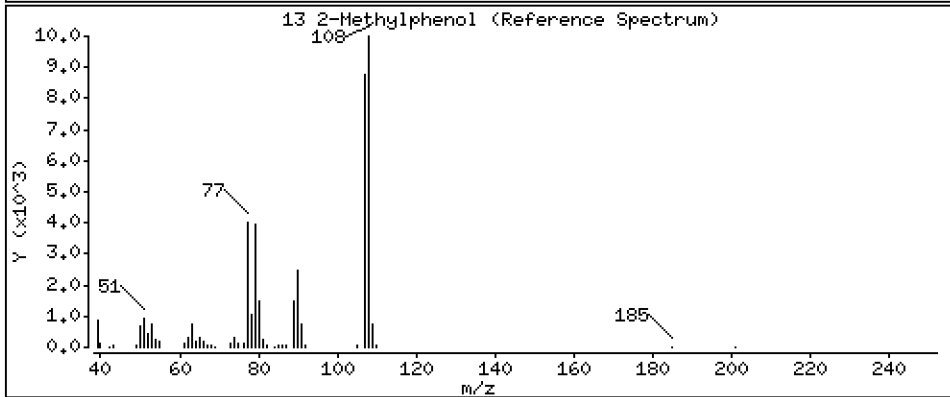
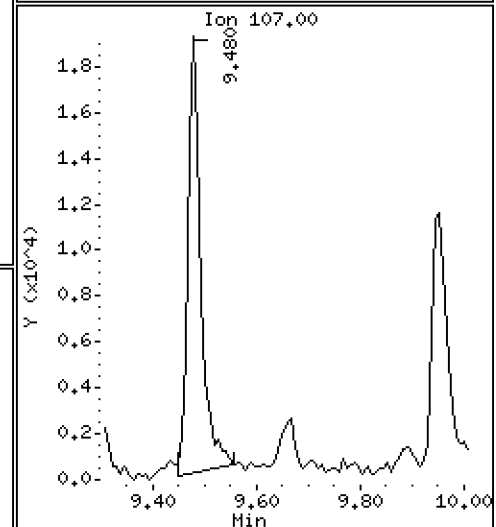
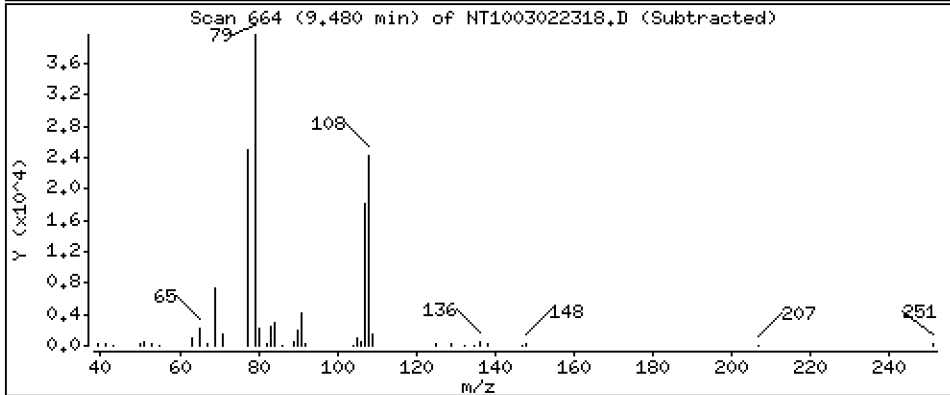
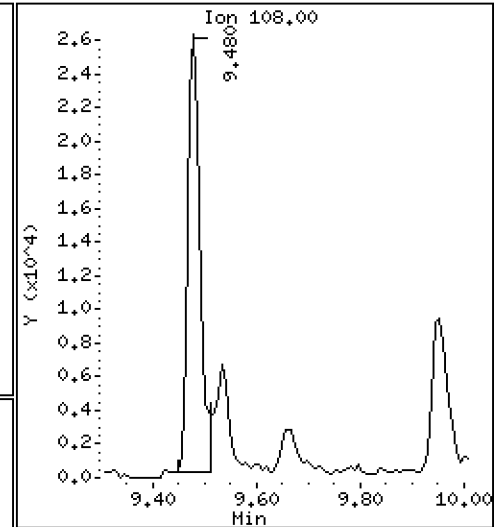
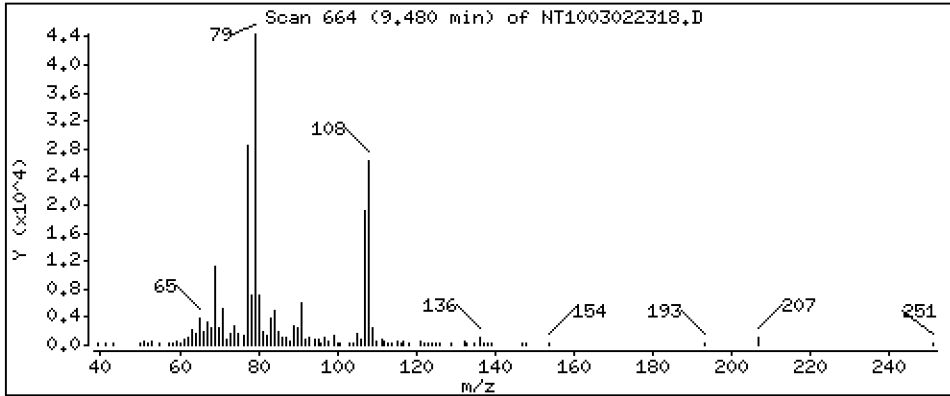
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,2558 ug/mL

13 2-Methylphenol



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

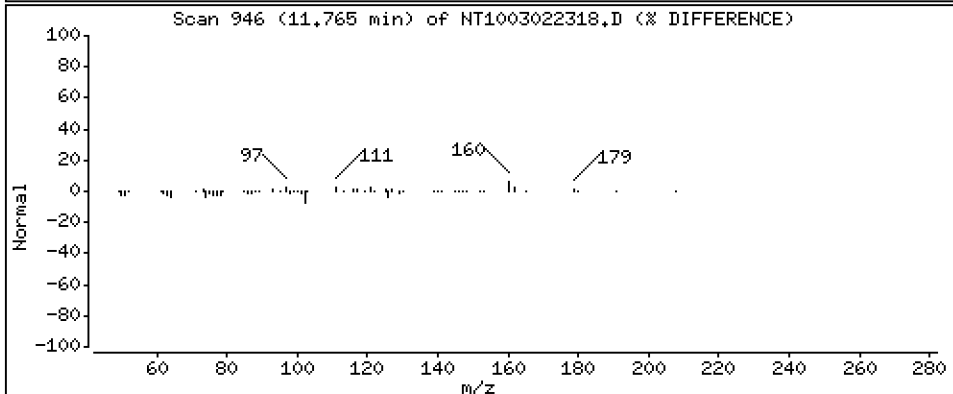
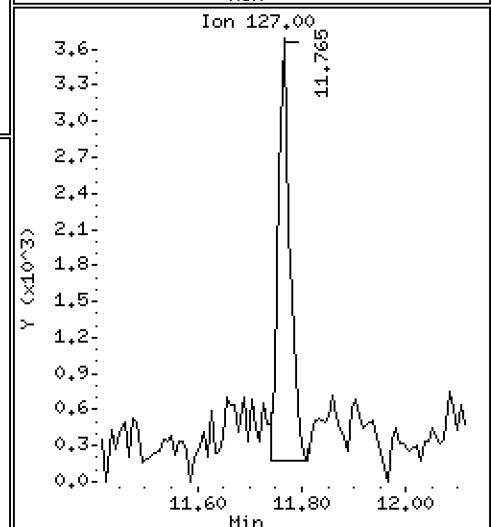
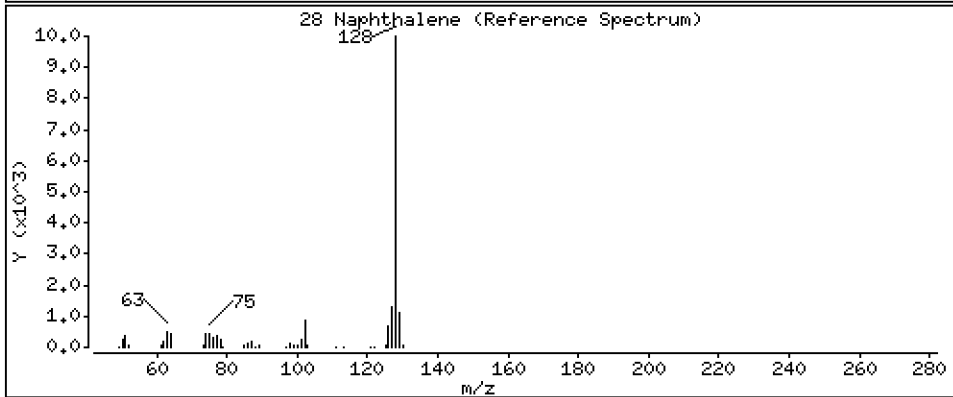
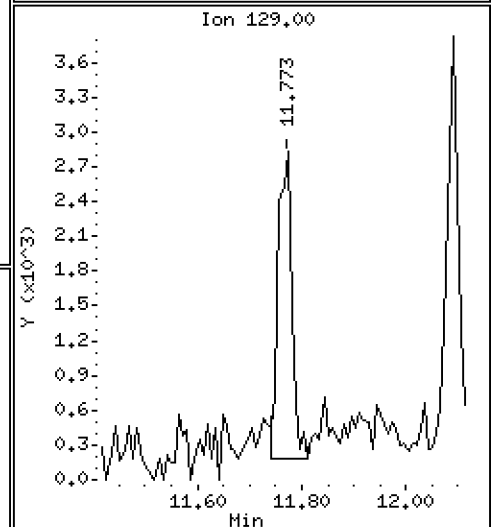
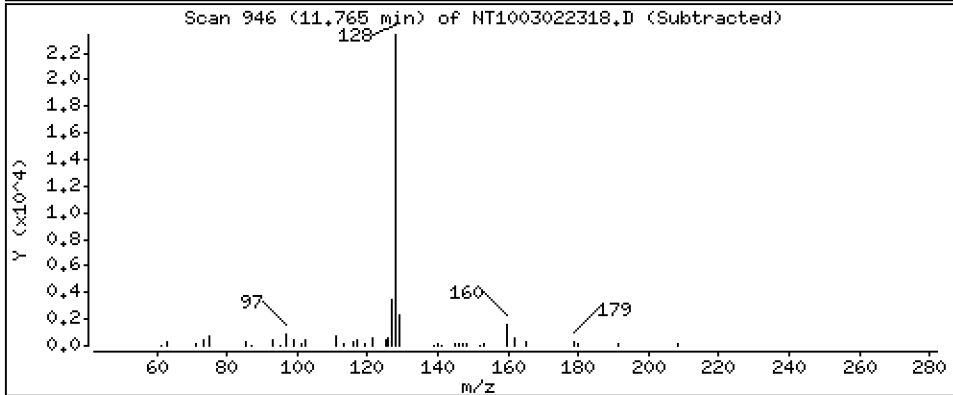
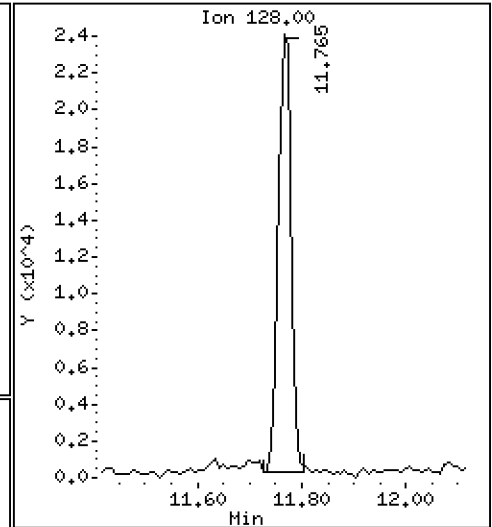
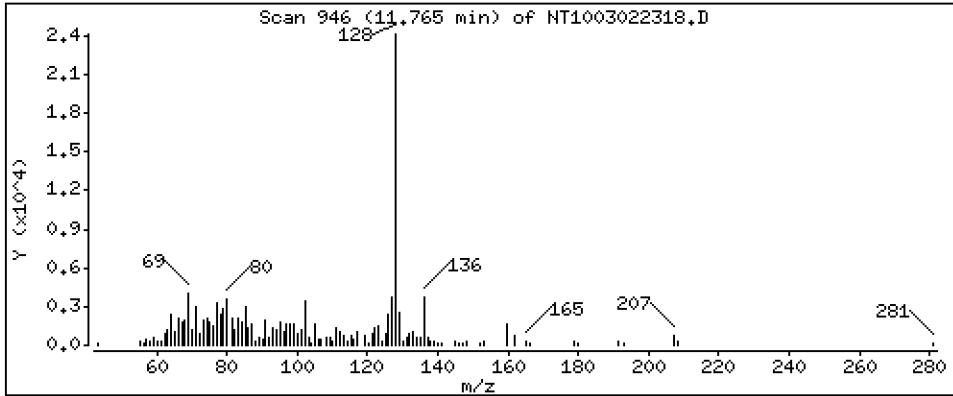
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,07061 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

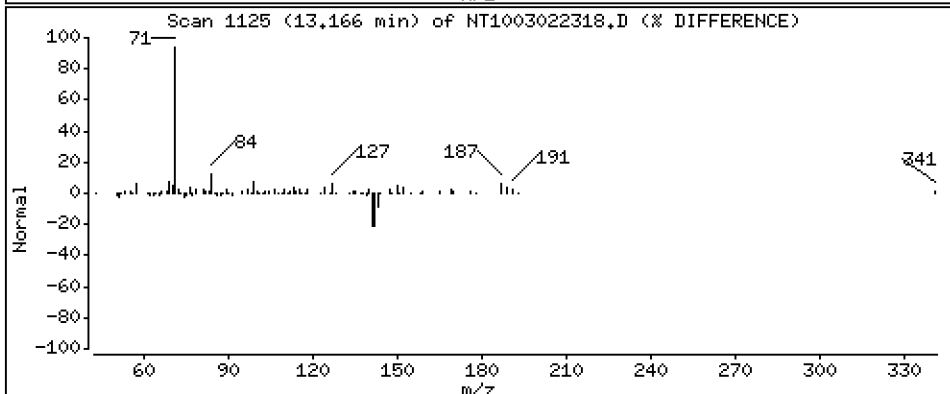
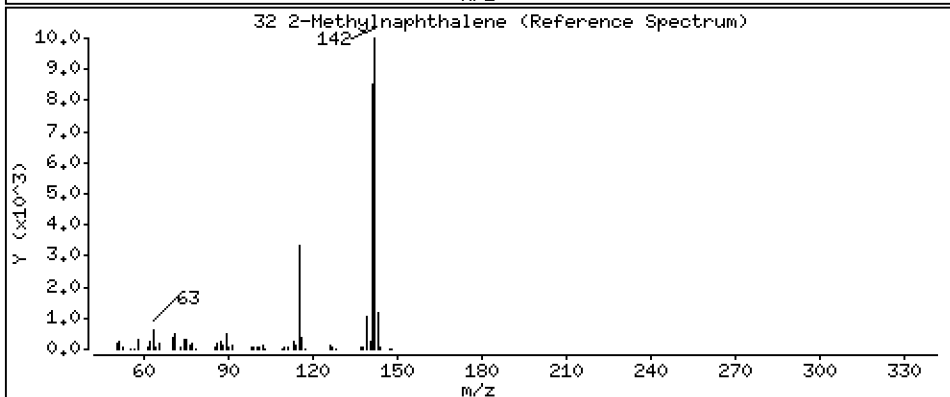
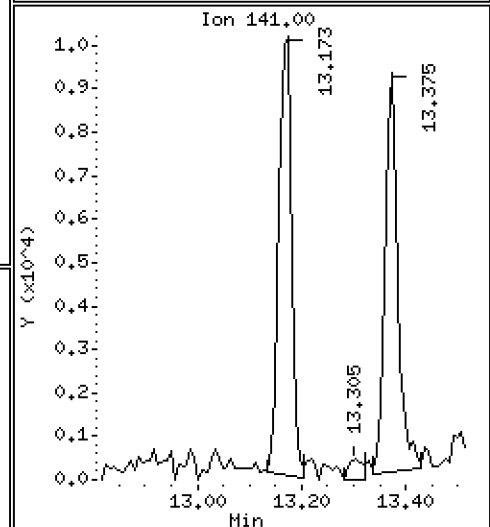
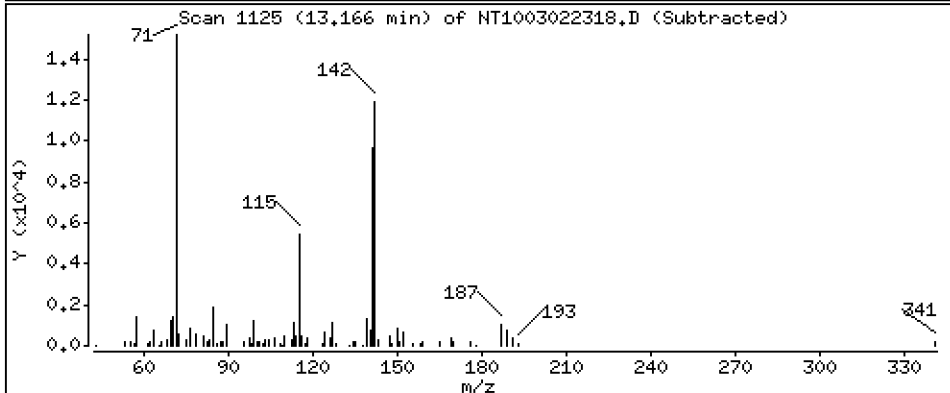
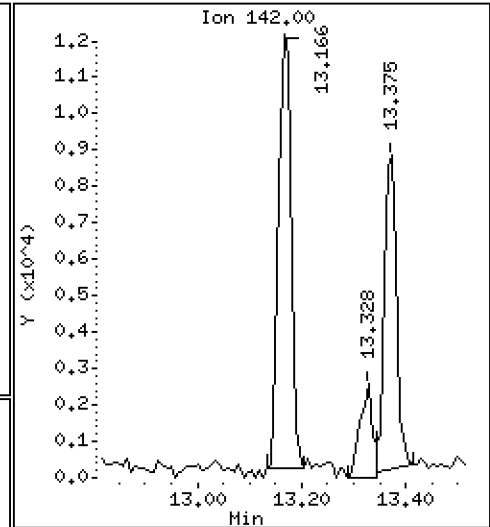
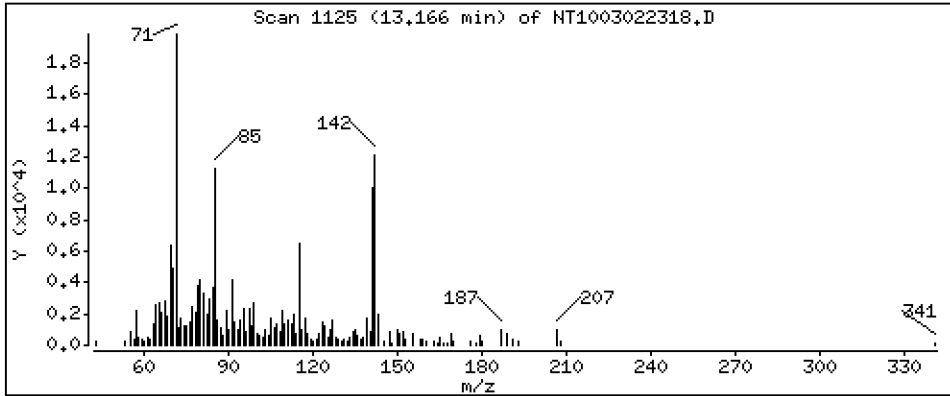
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.04987 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

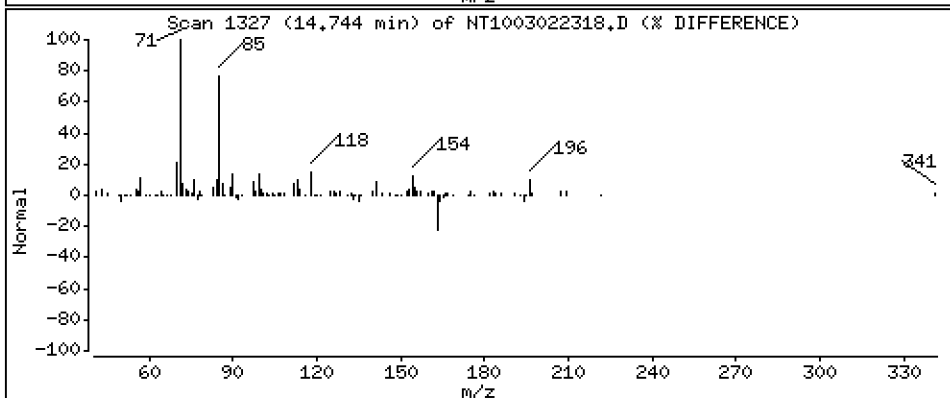
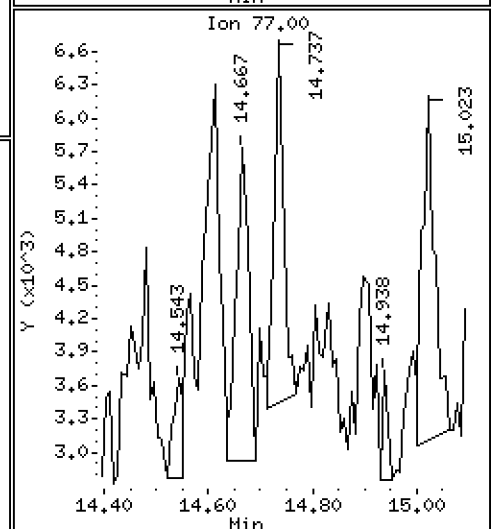
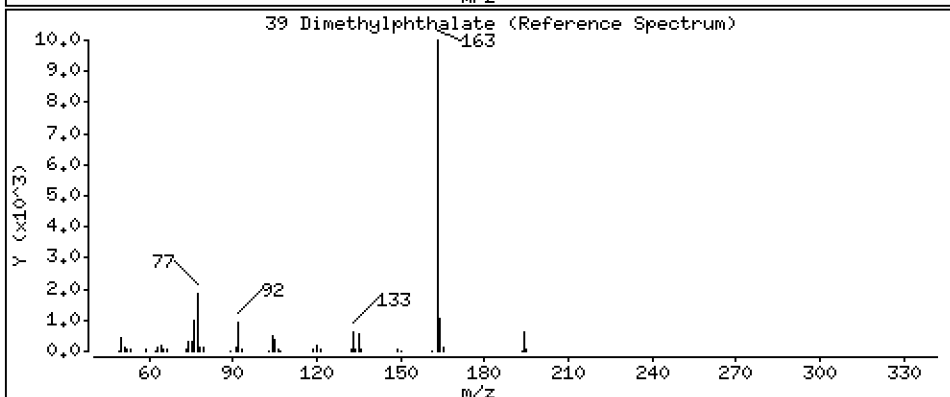
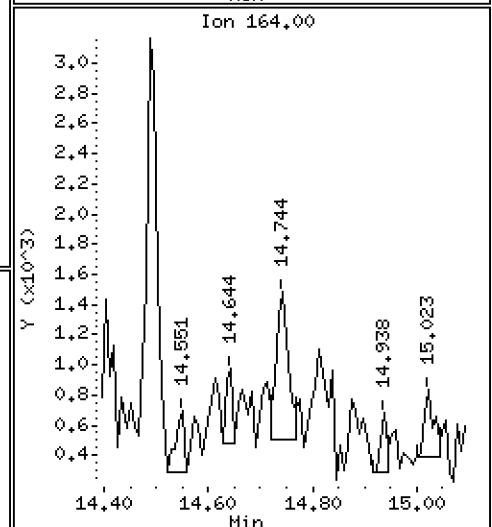
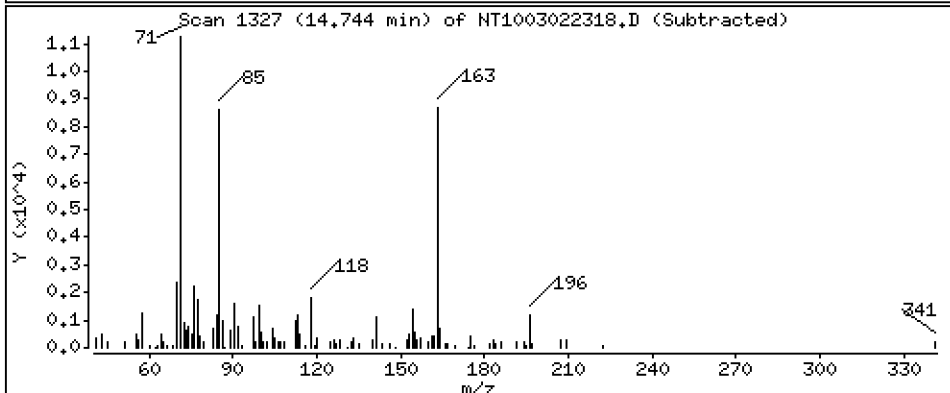
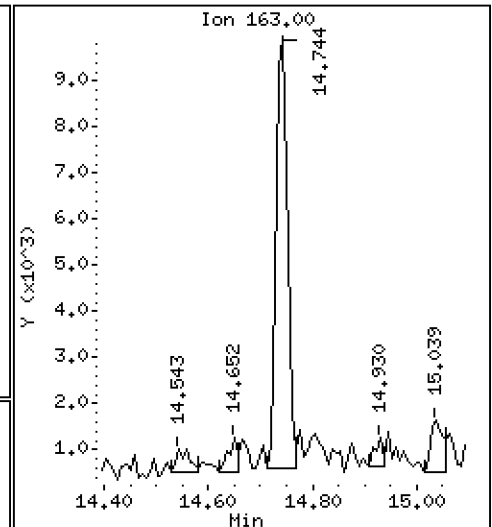
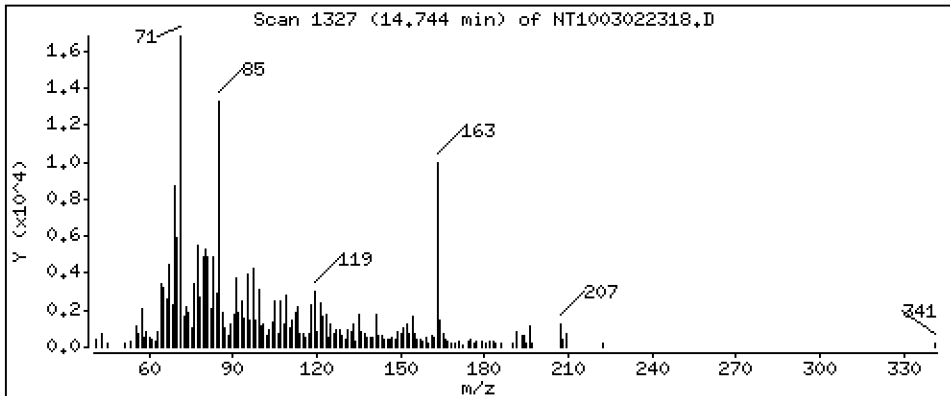
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.03833 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

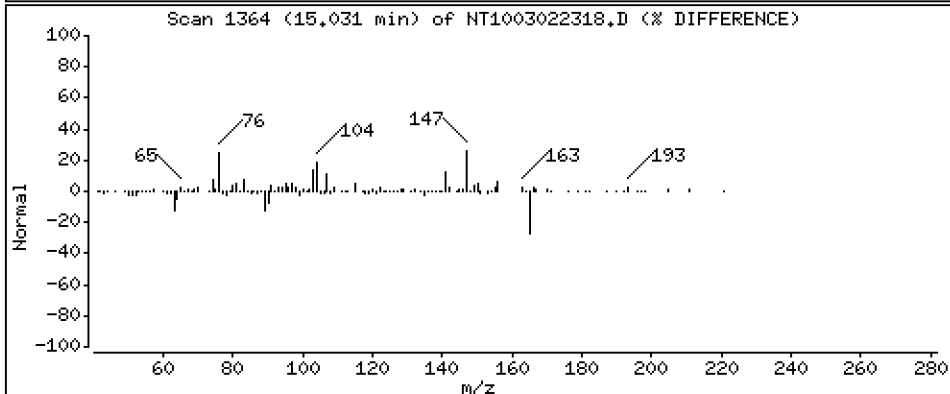
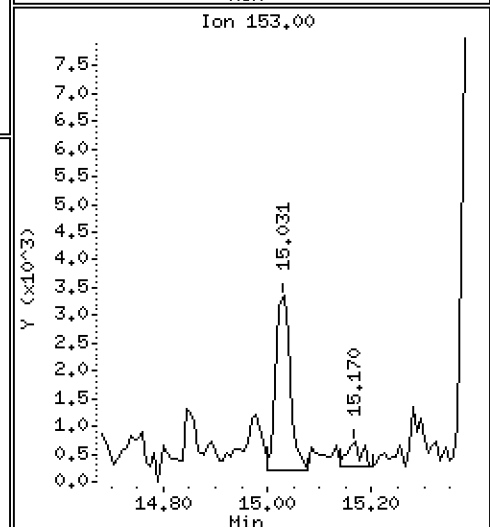
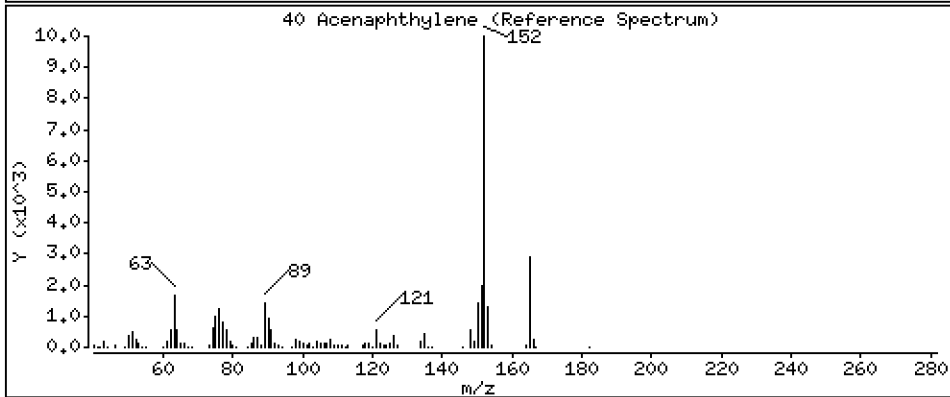
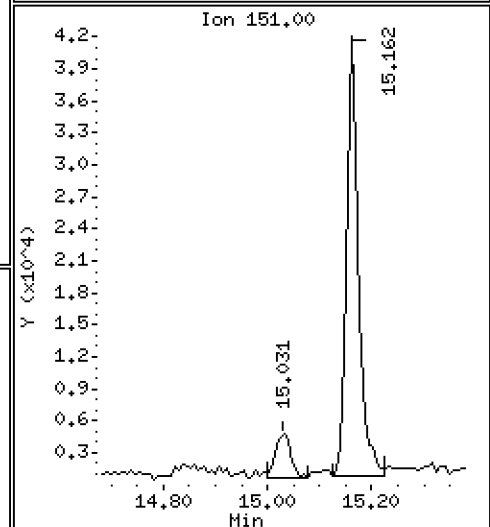
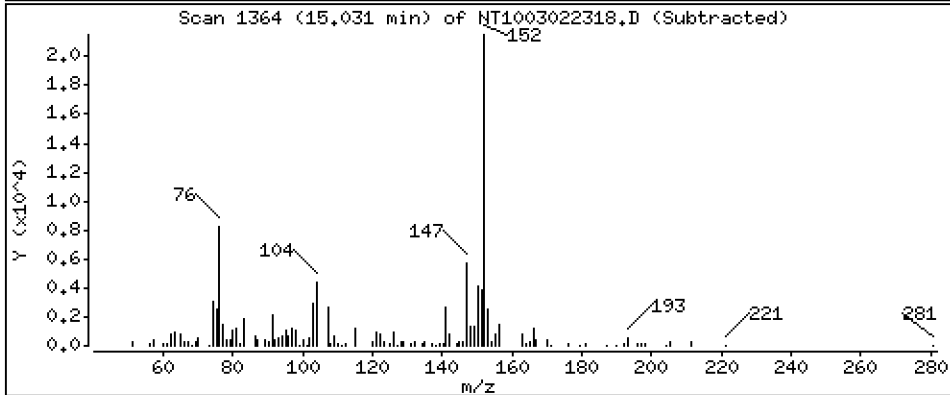
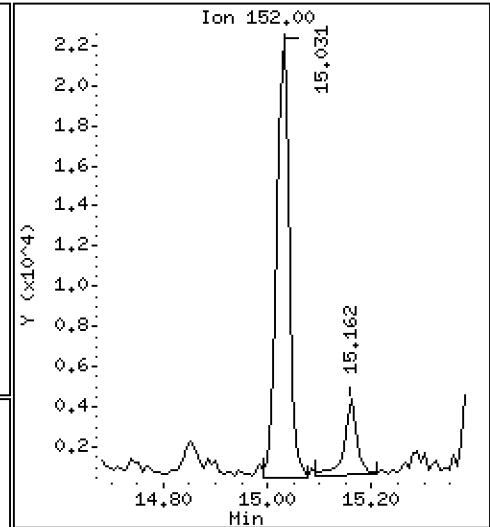
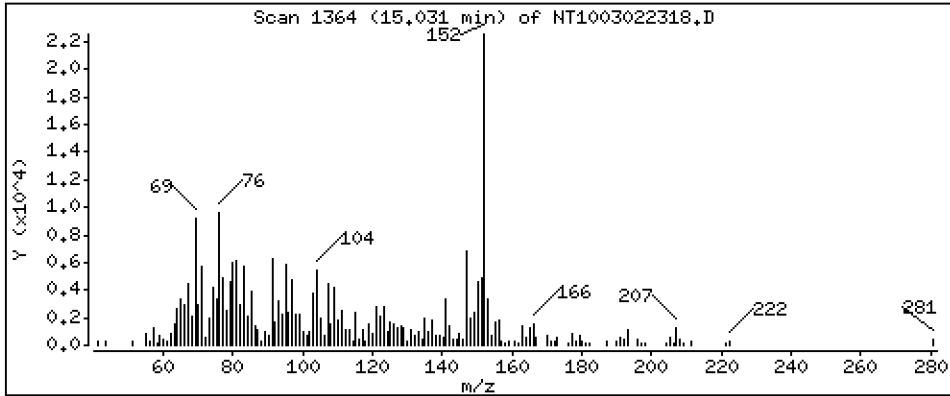
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.06523 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

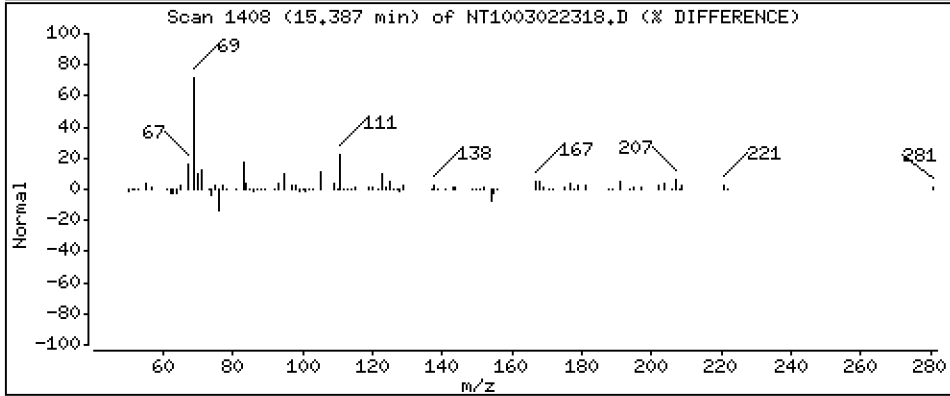
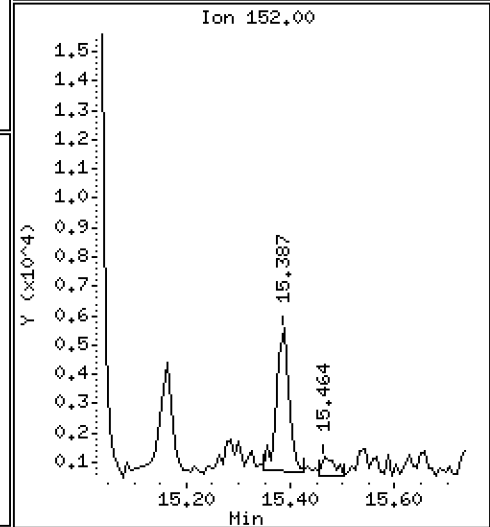
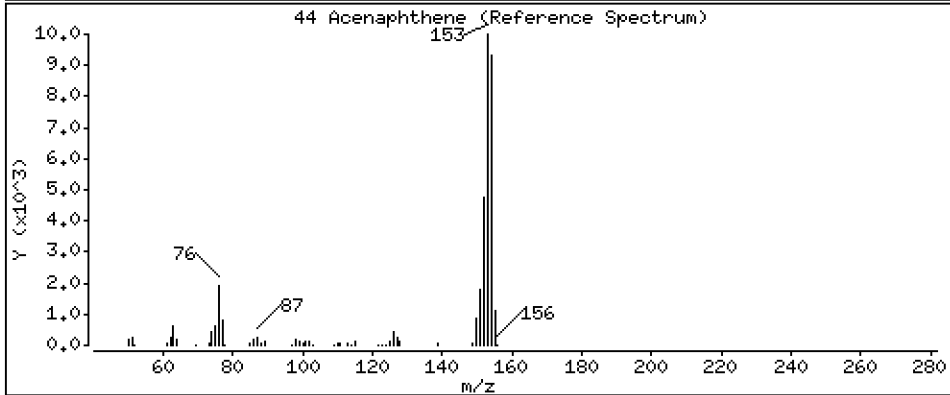
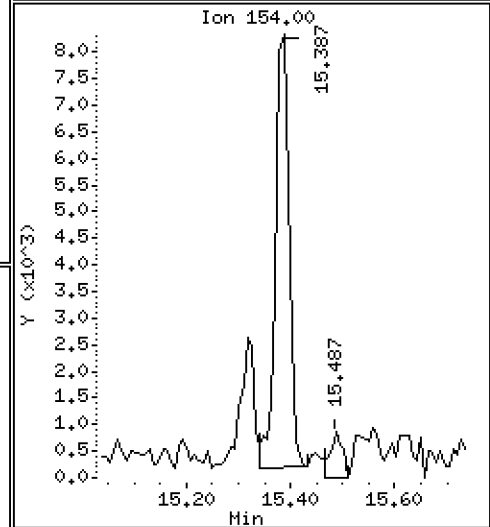
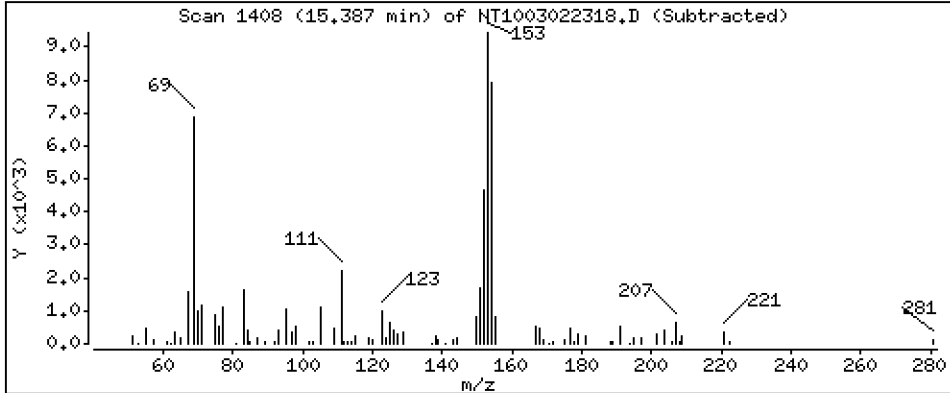
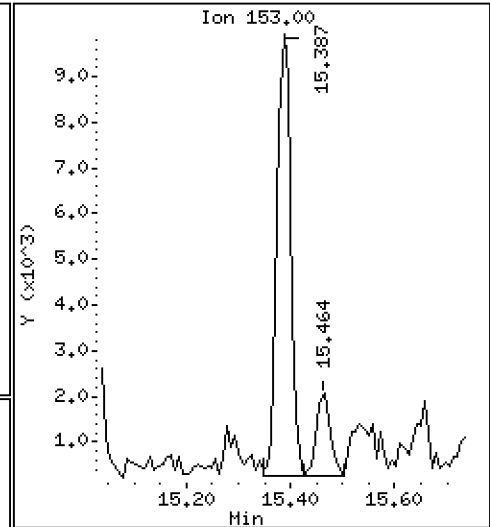
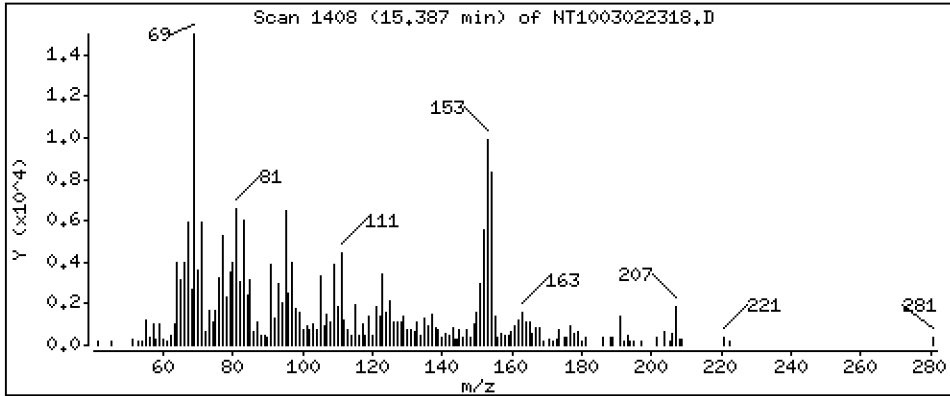
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.05288 ug/mL





Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

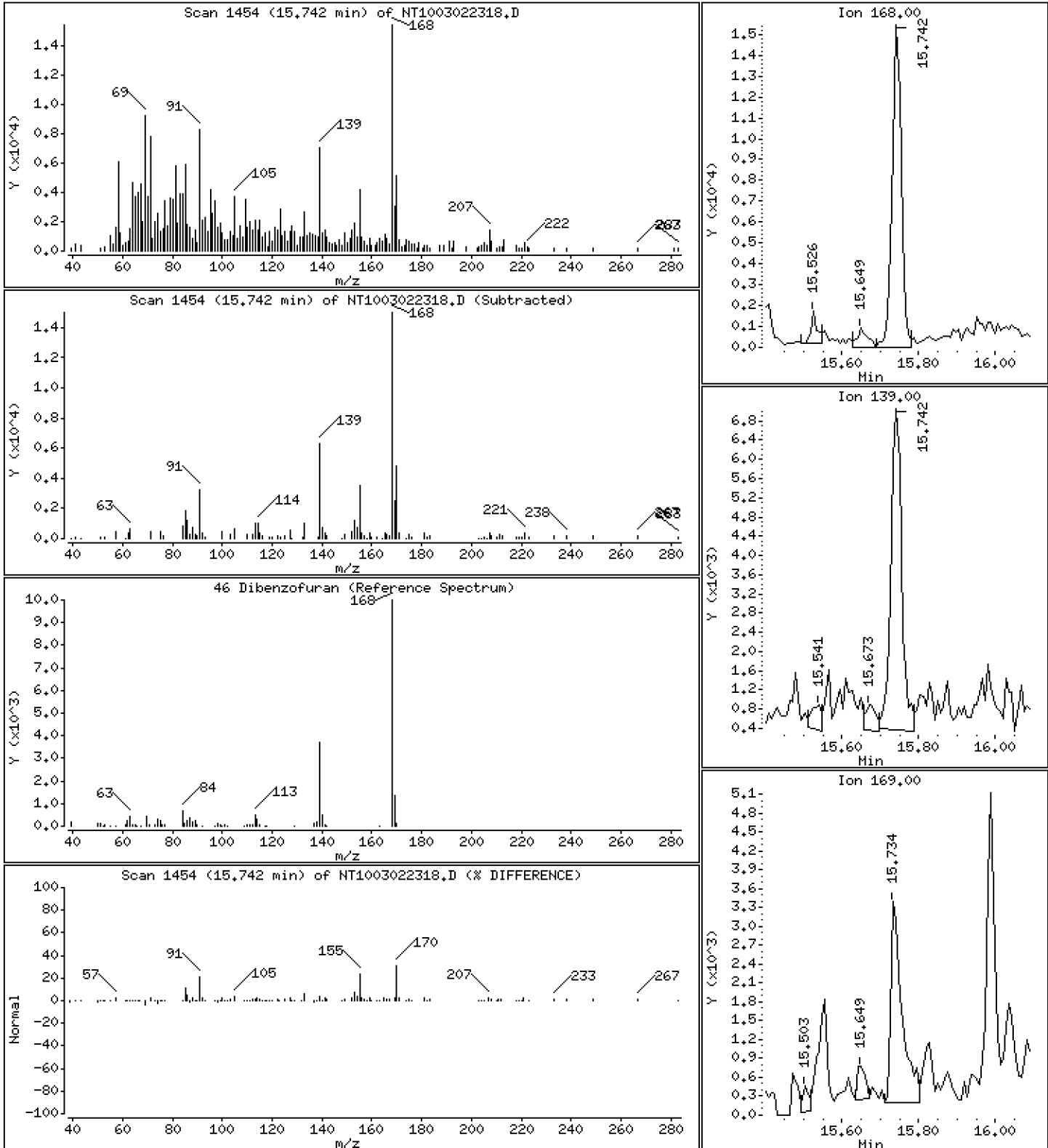
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.05166 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

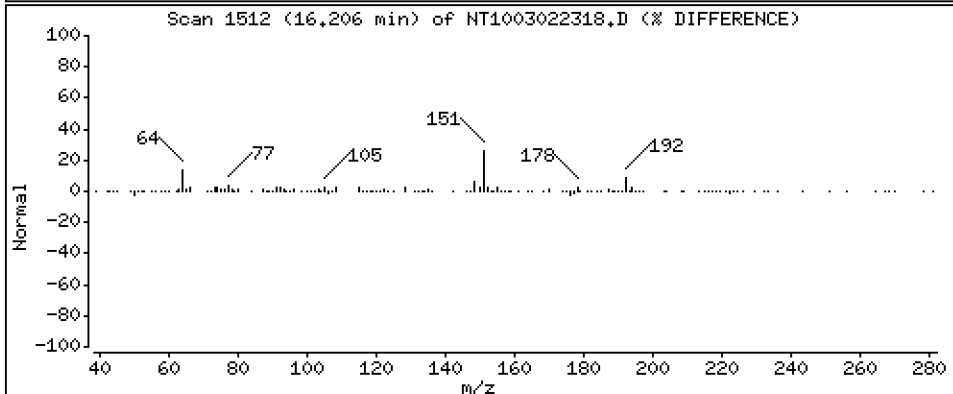
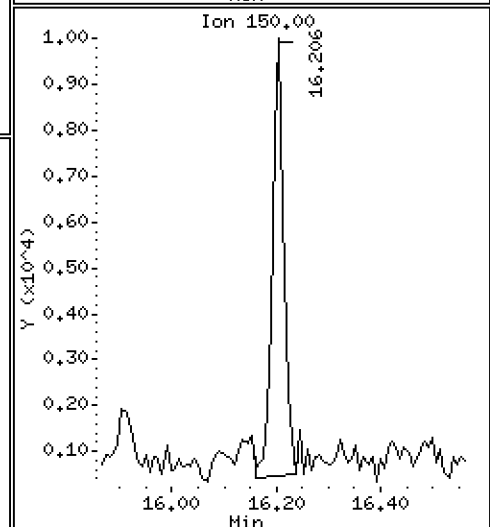
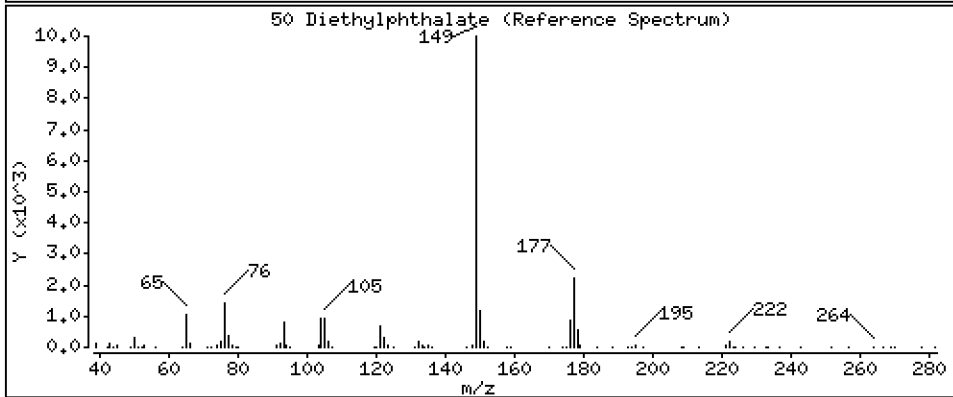
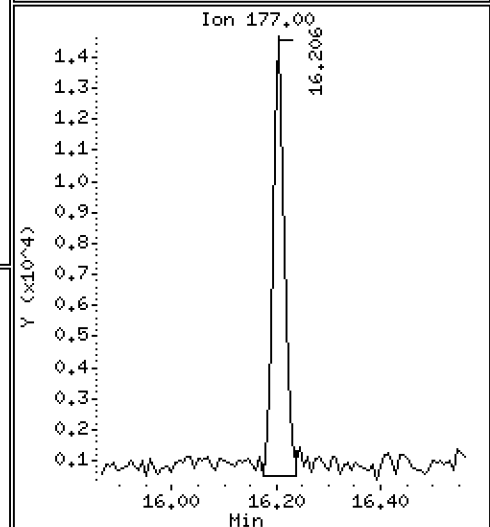
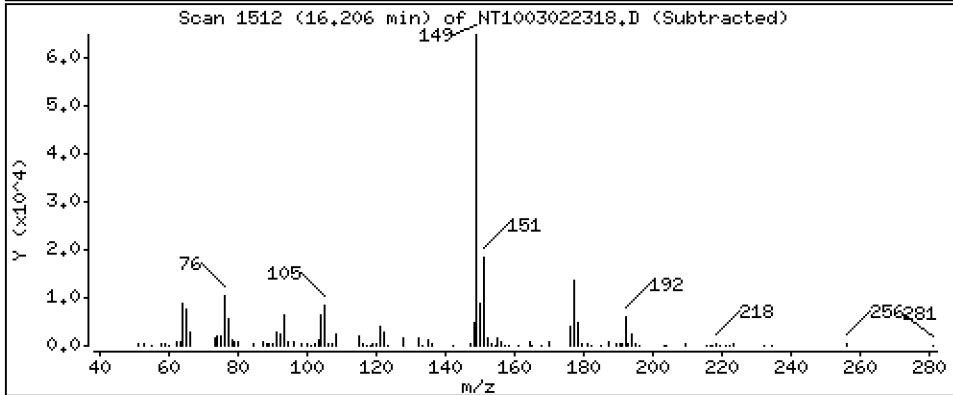
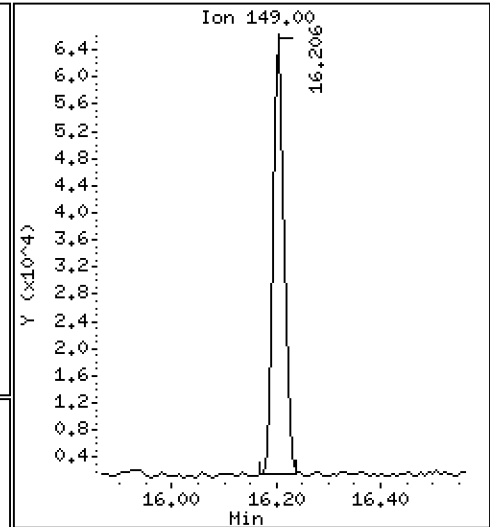
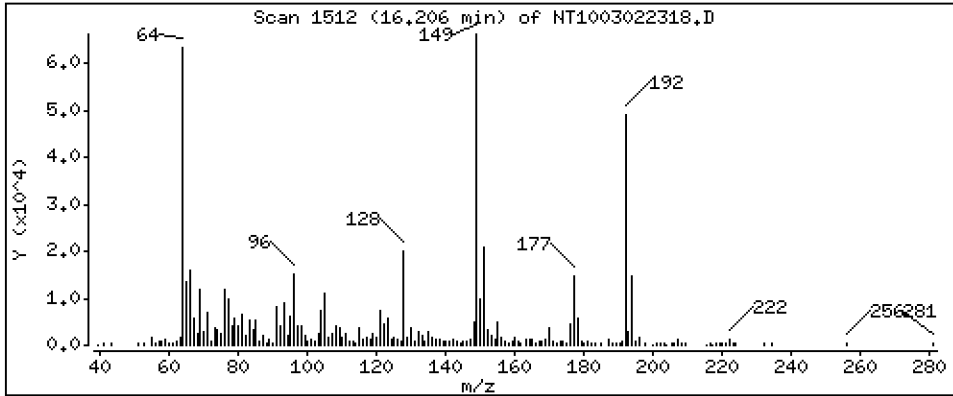
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2473 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

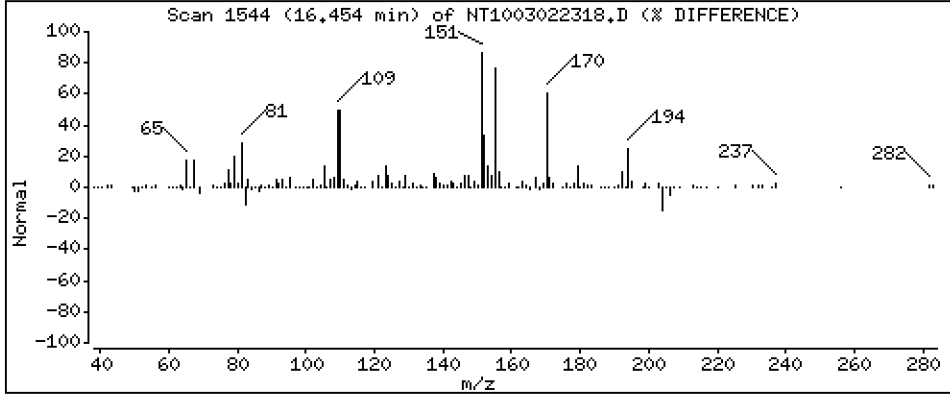
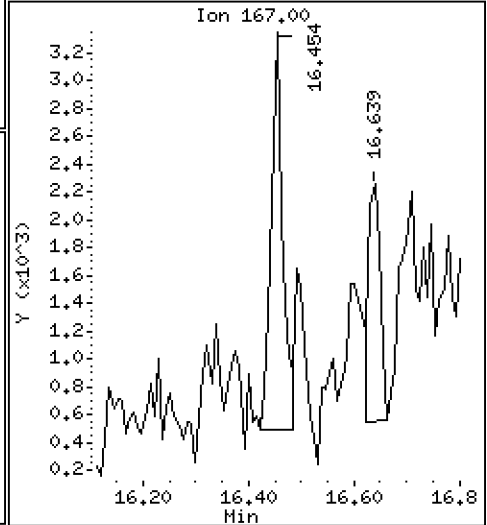
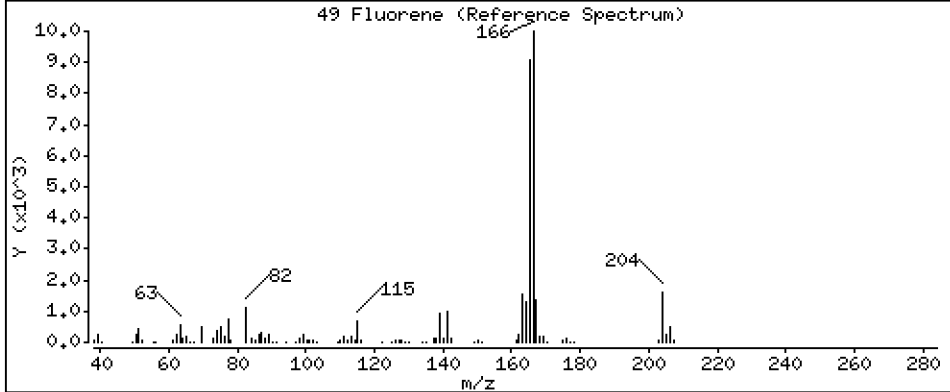
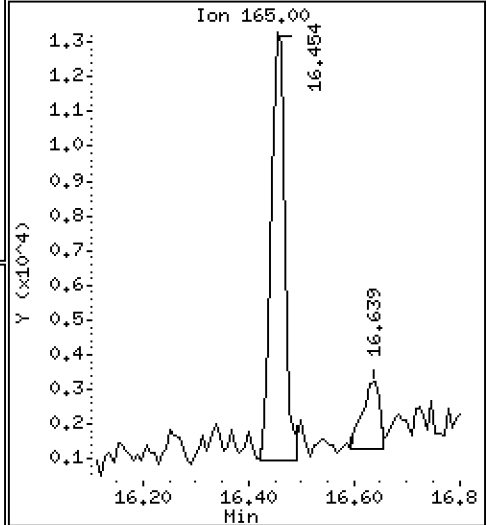
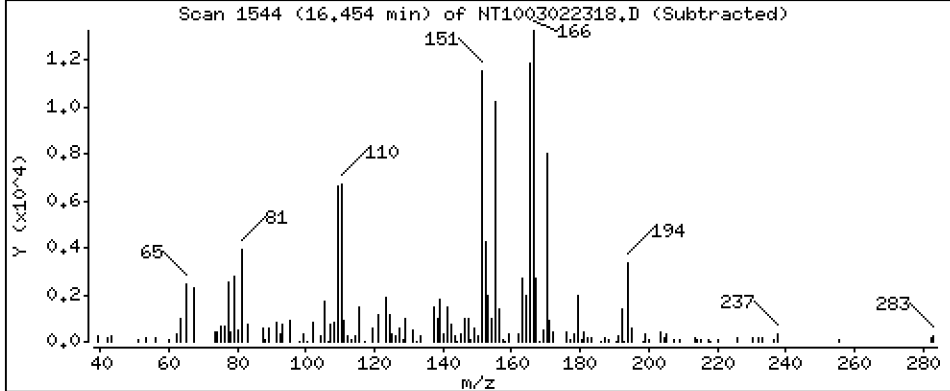
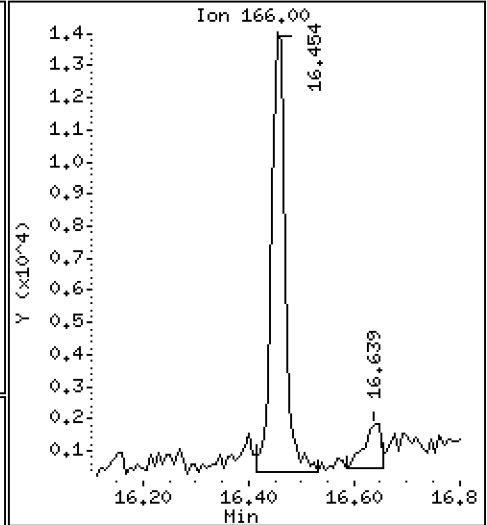
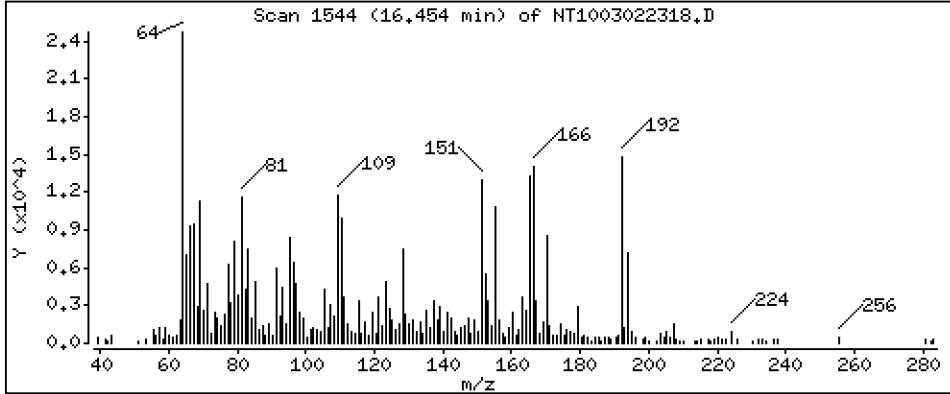
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.06138 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

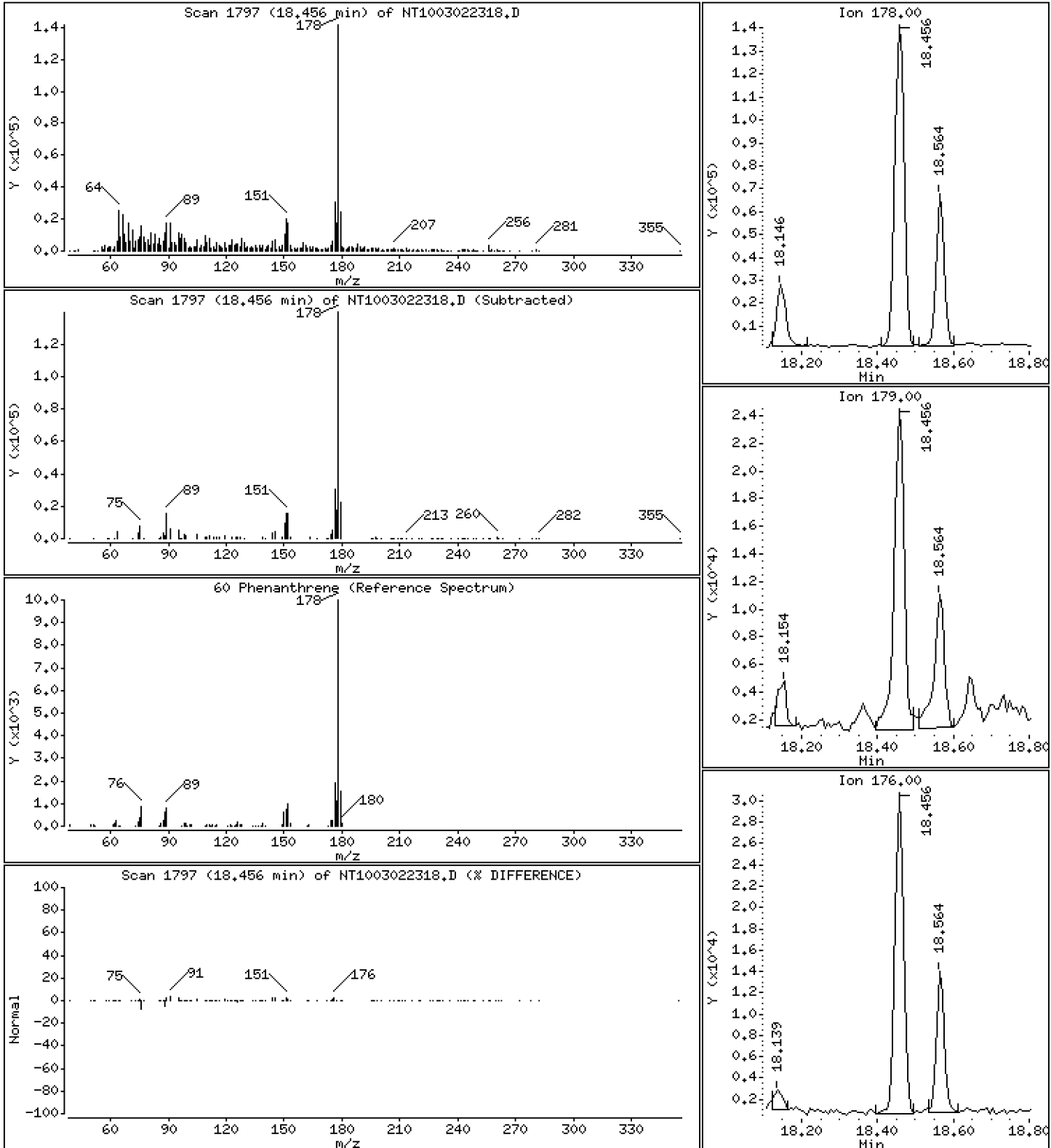
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,4469 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

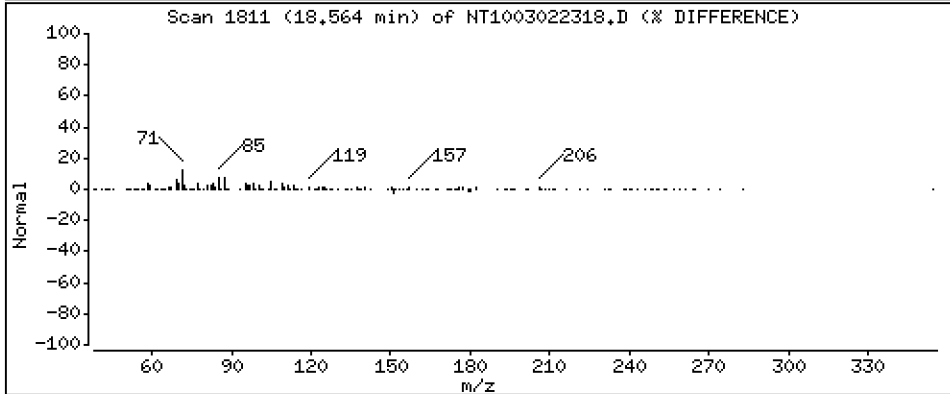
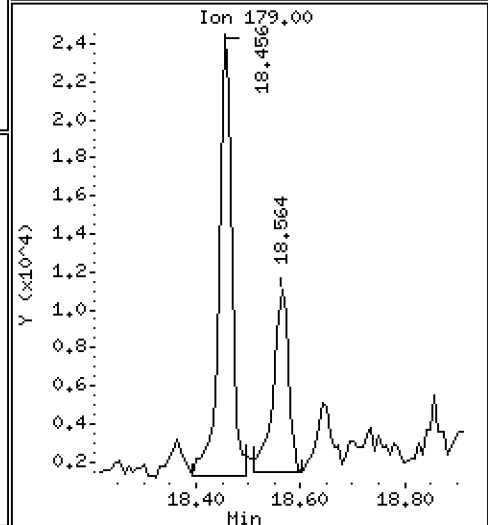
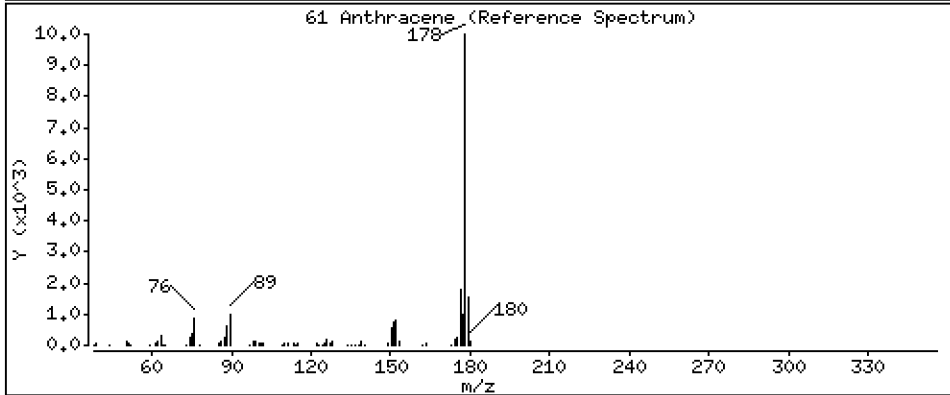
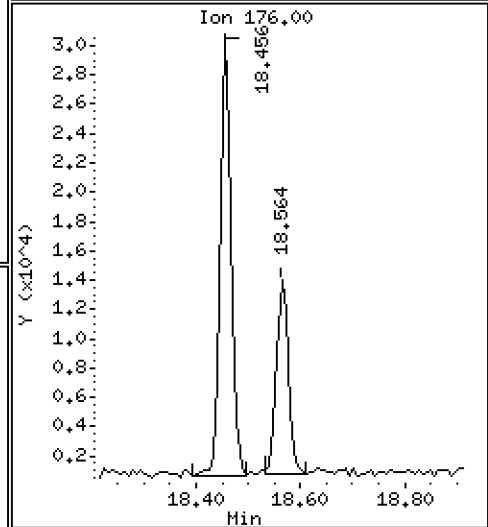
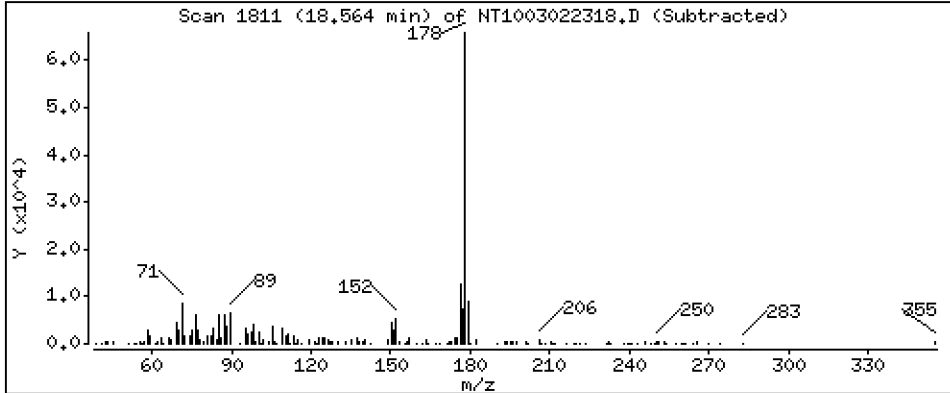
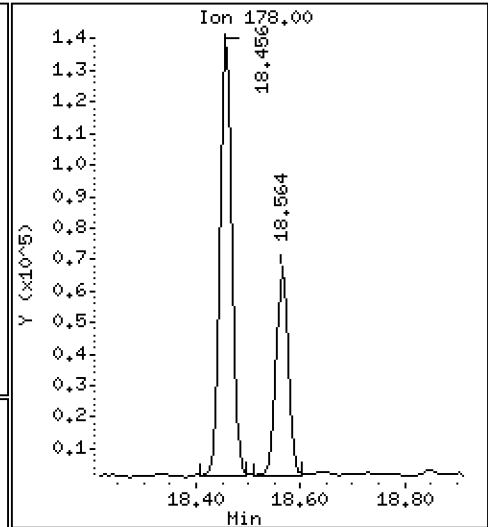
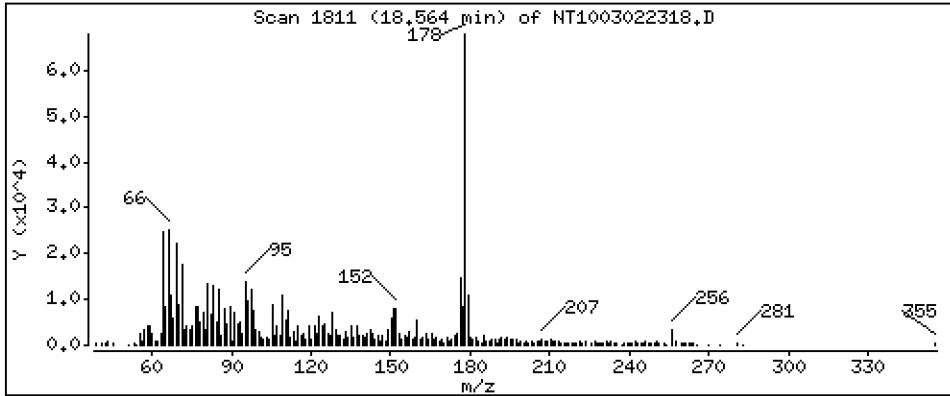
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,2055 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

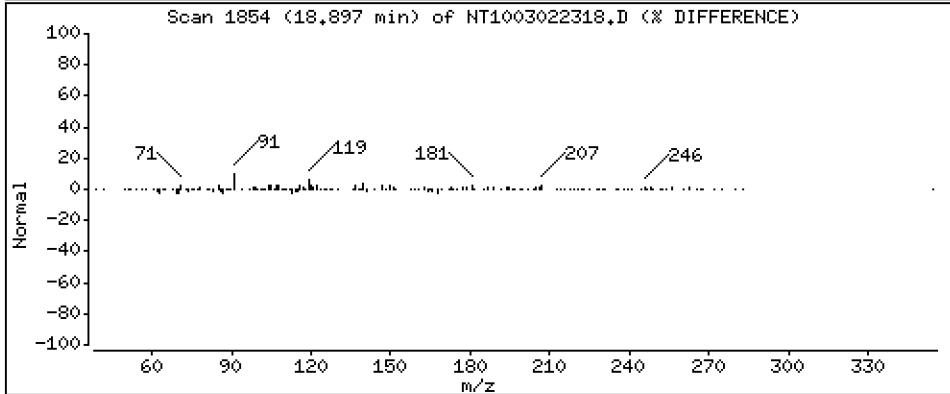
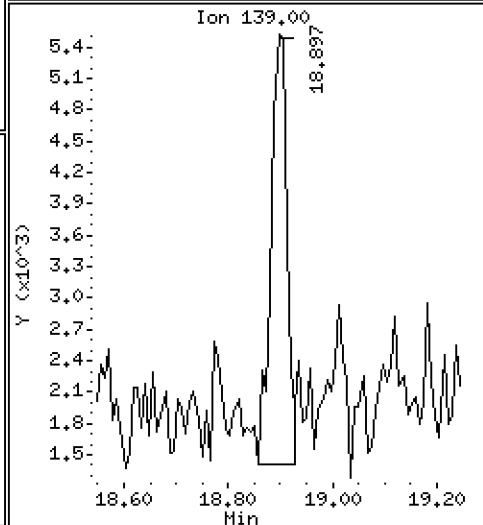
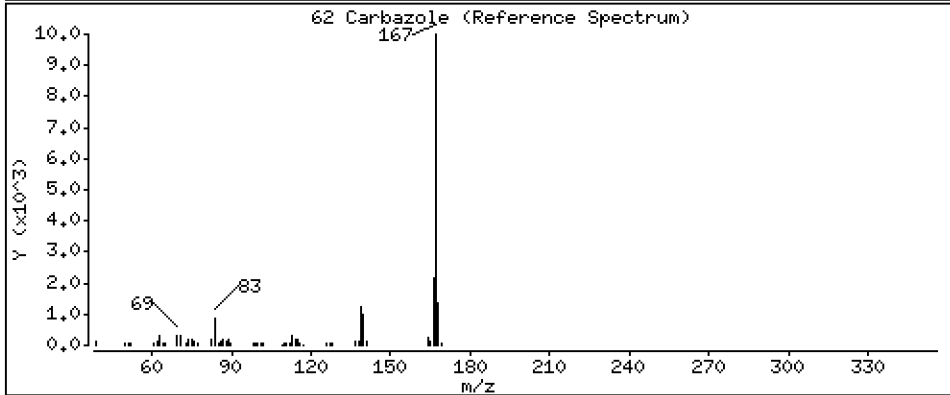
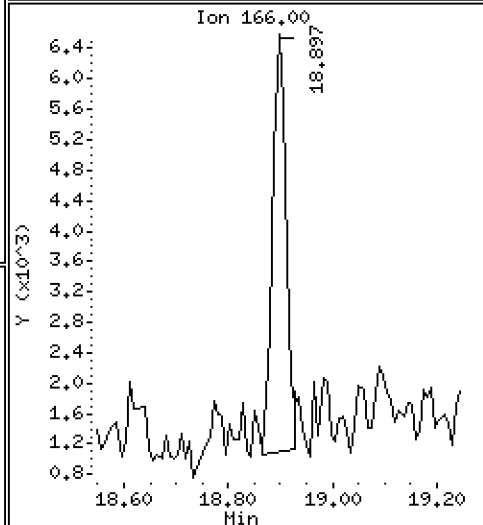
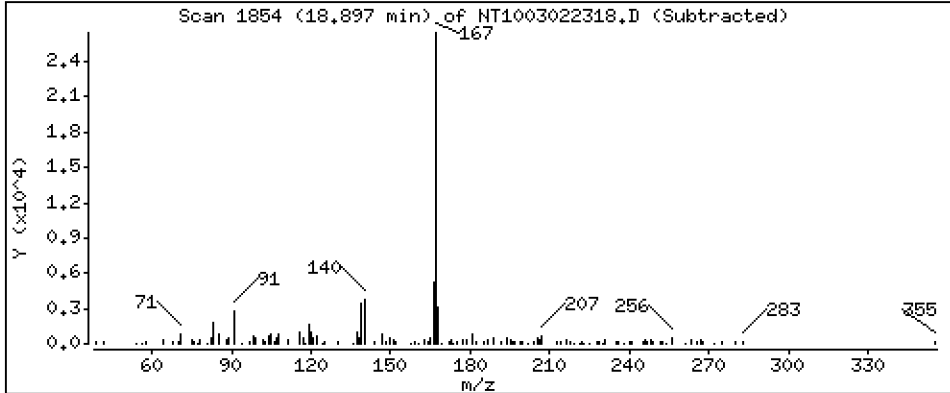
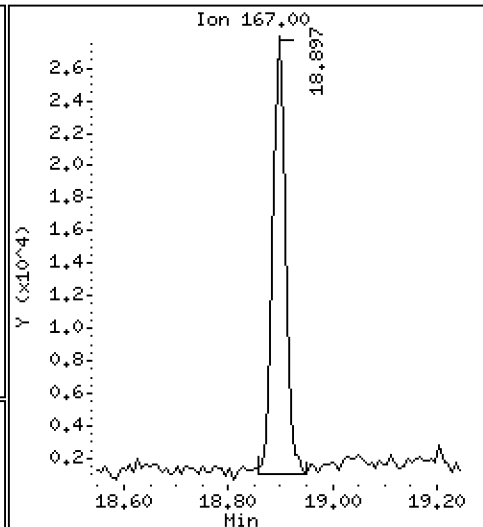
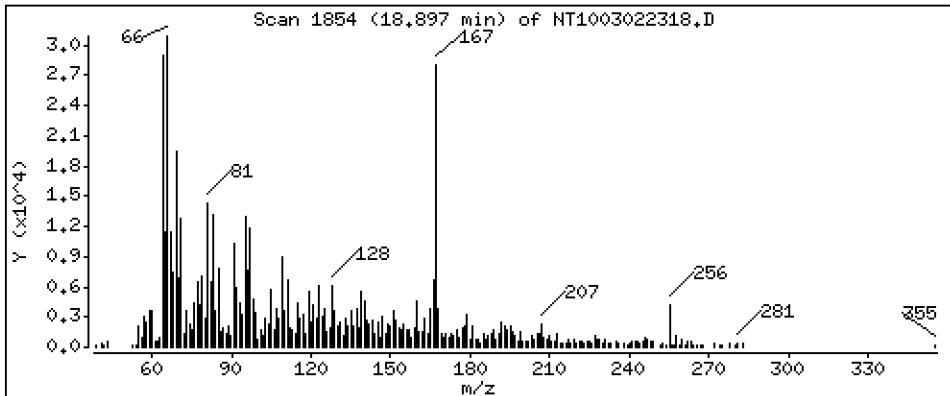
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.09593 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

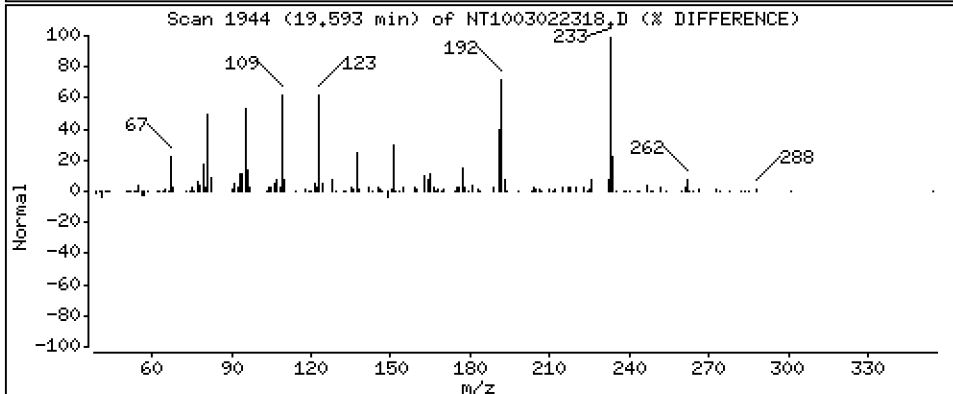
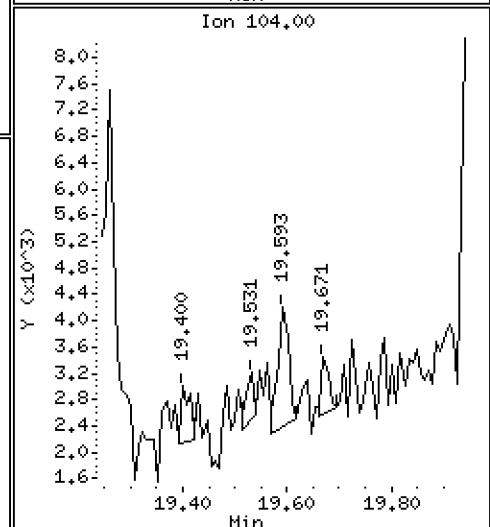
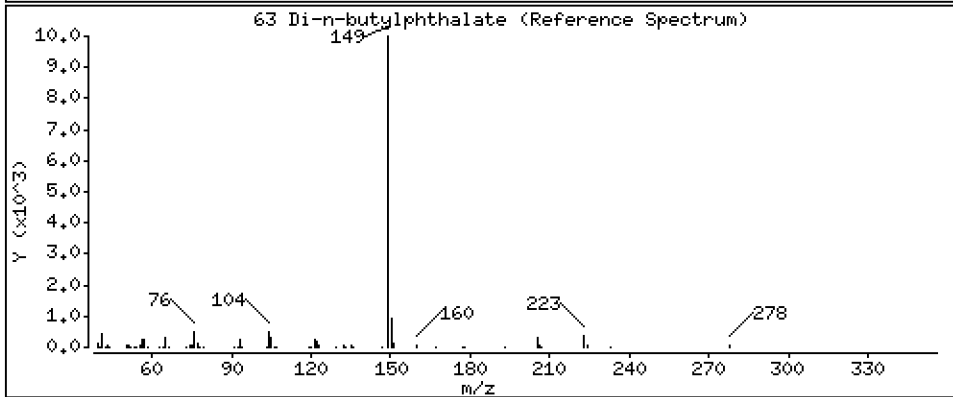
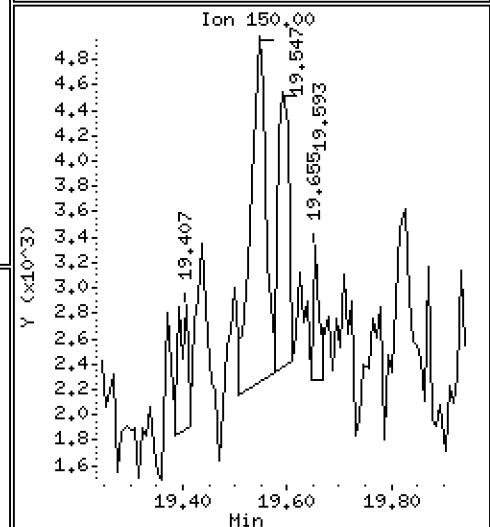
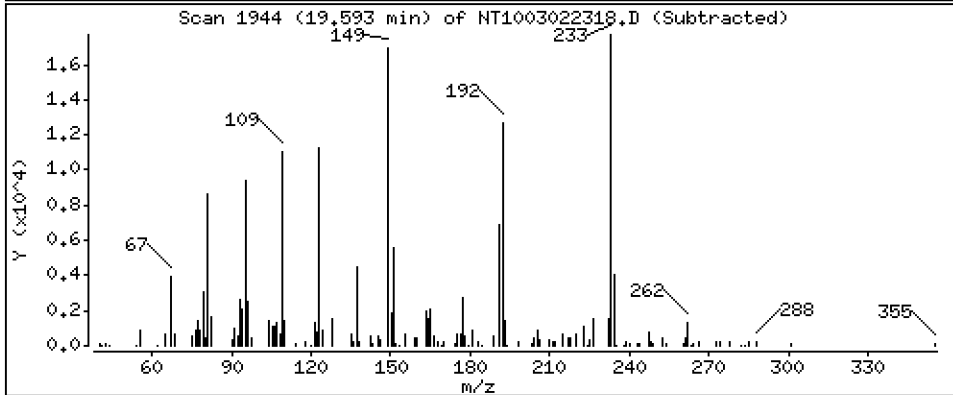
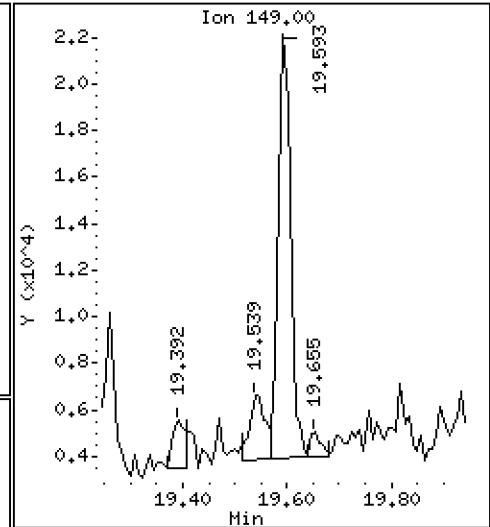
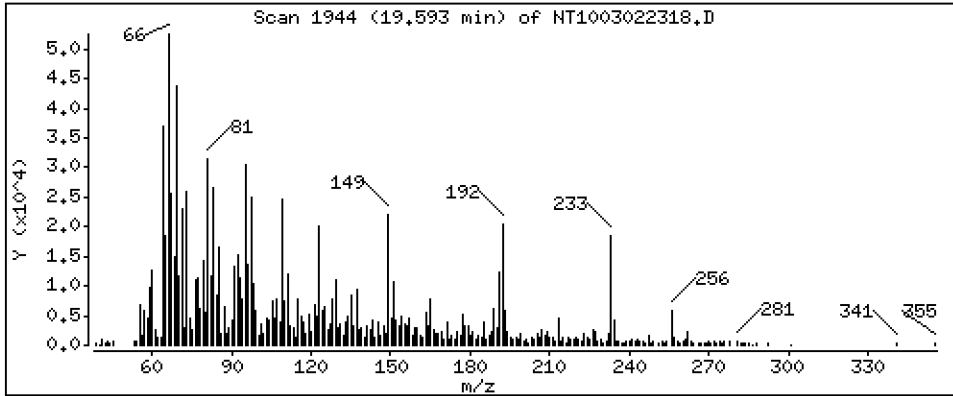
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.04618 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

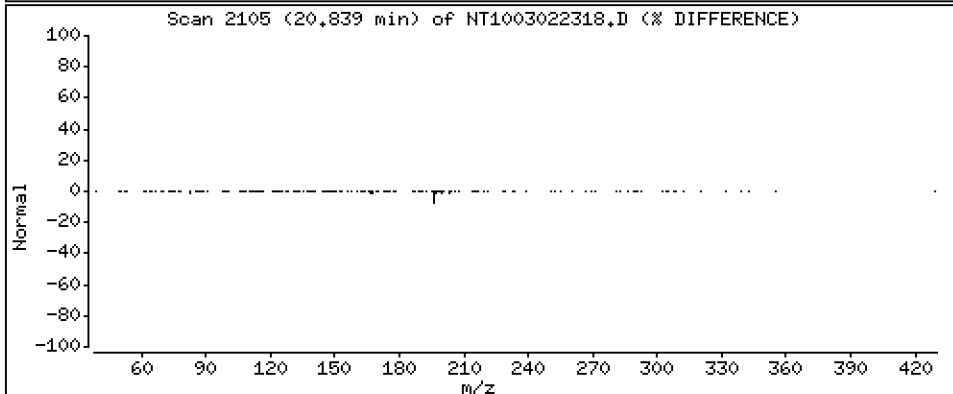
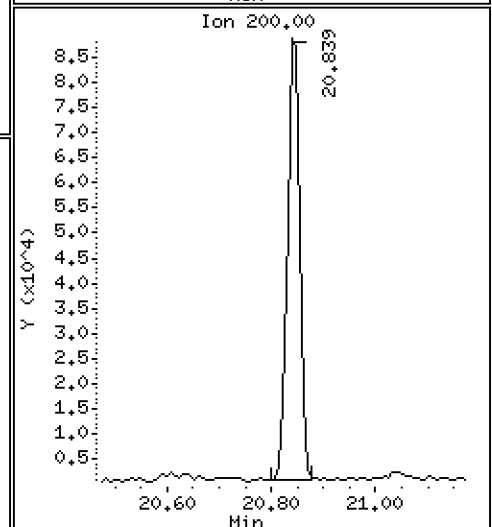
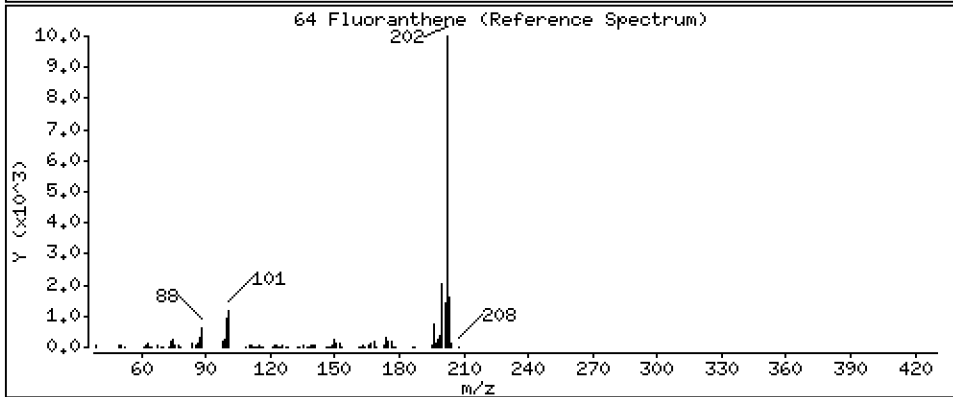
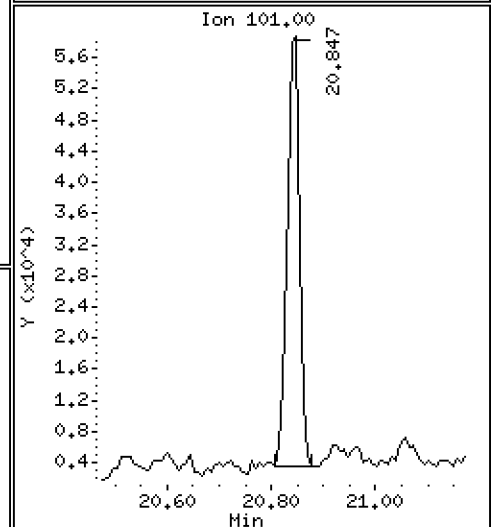
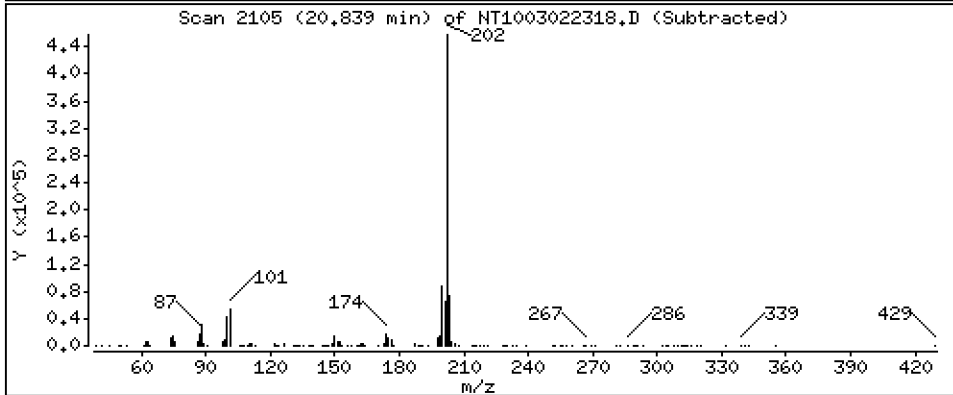
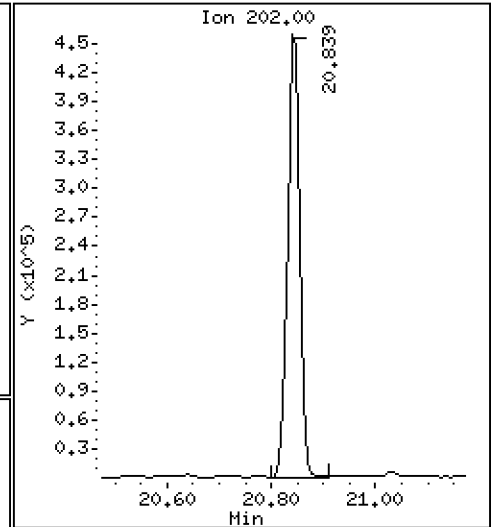
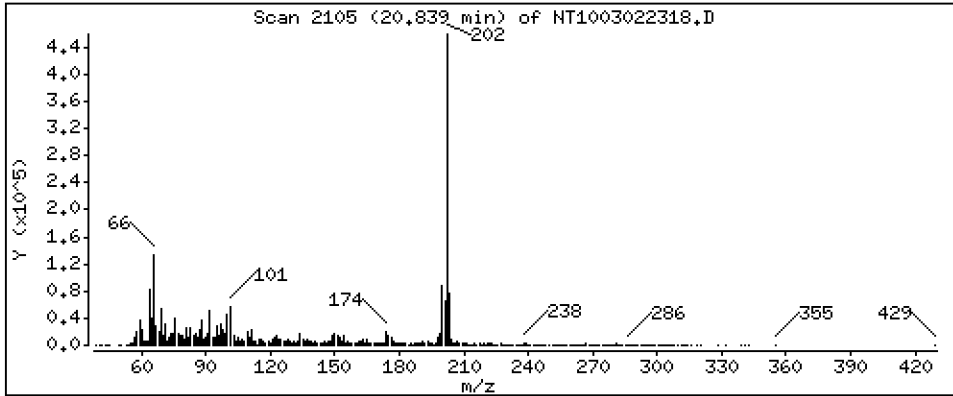
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,9447 ug/mL

64 Fluoranthene





Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

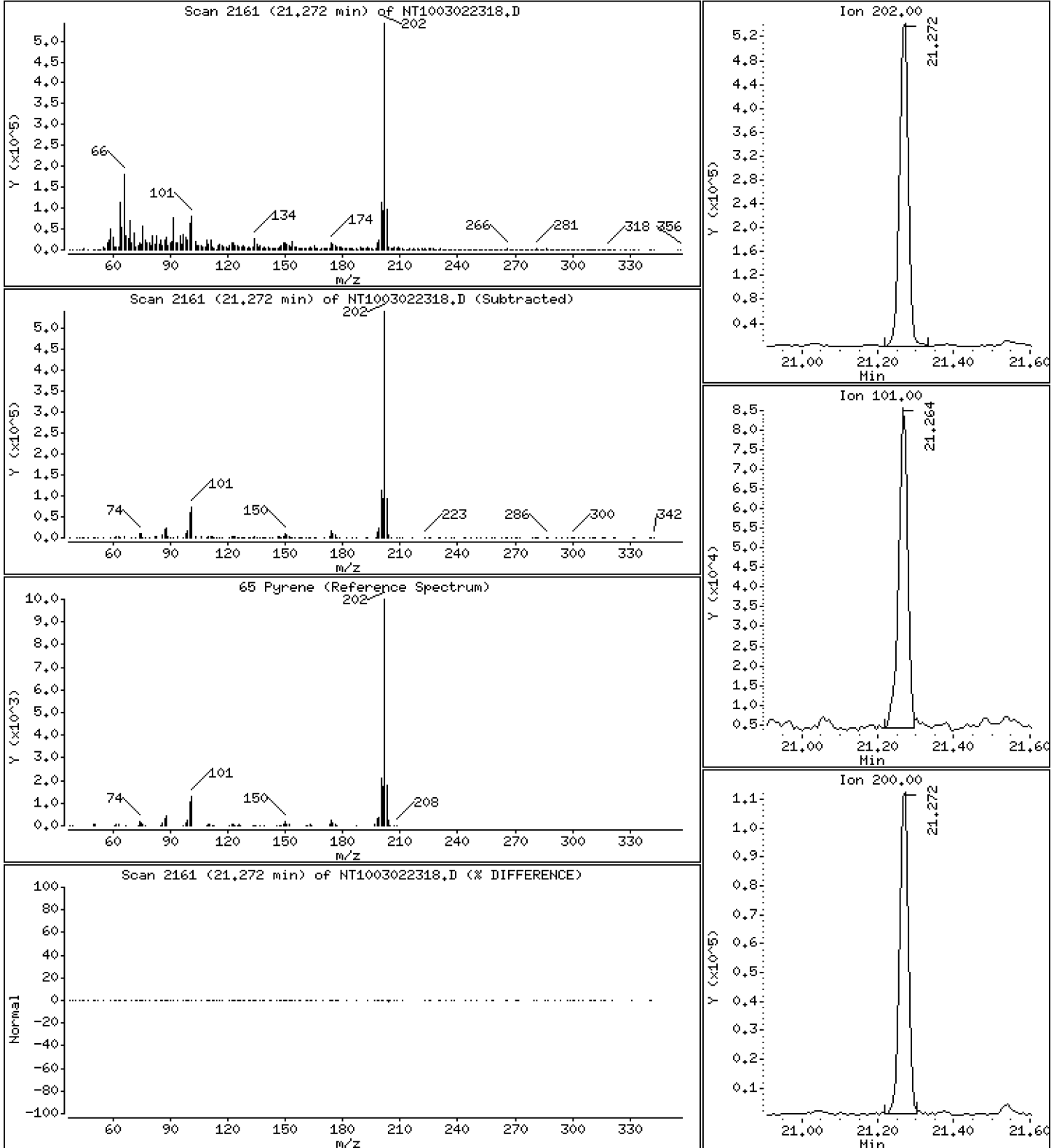
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,053 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

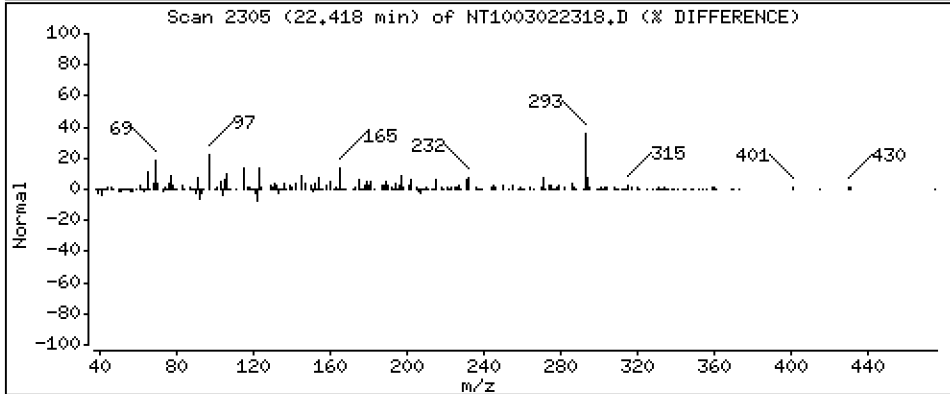
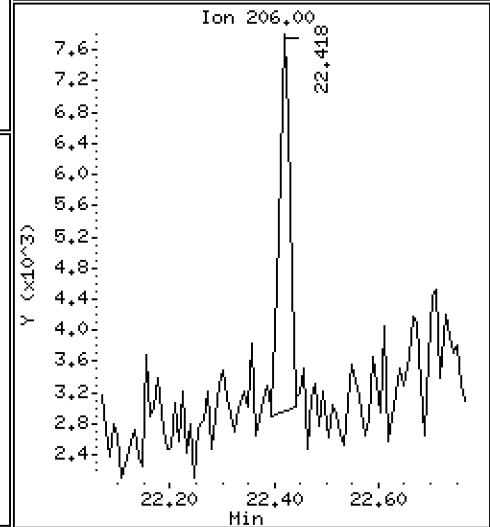
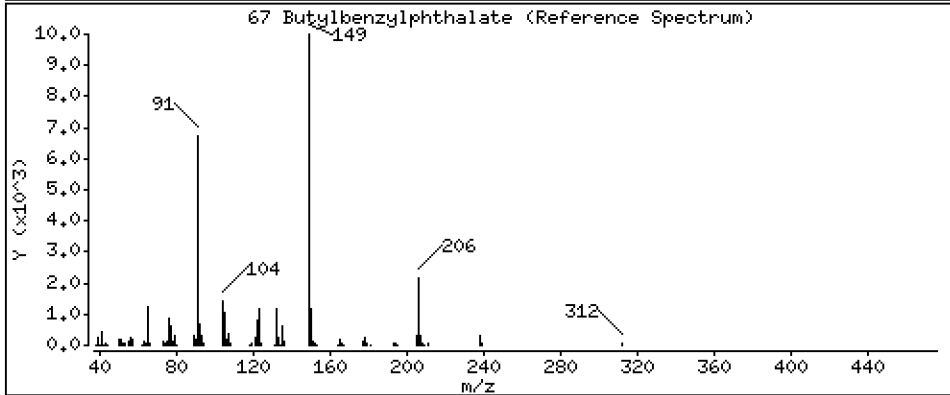
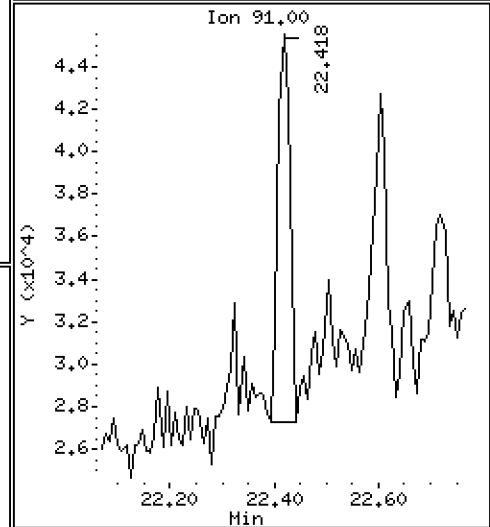
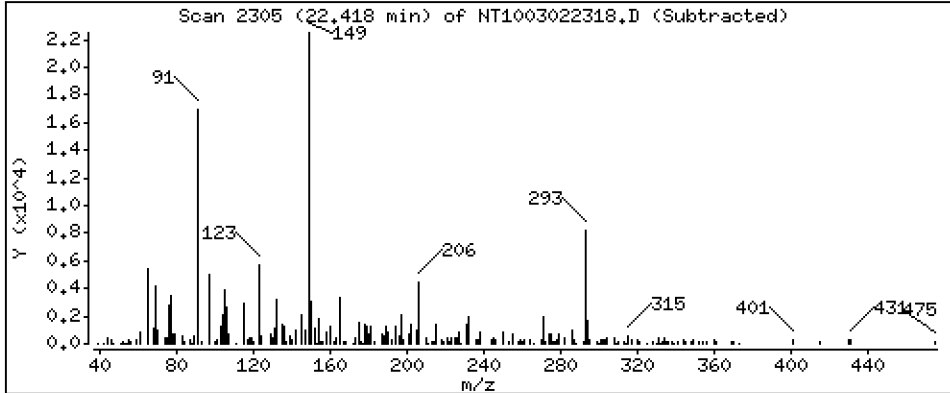
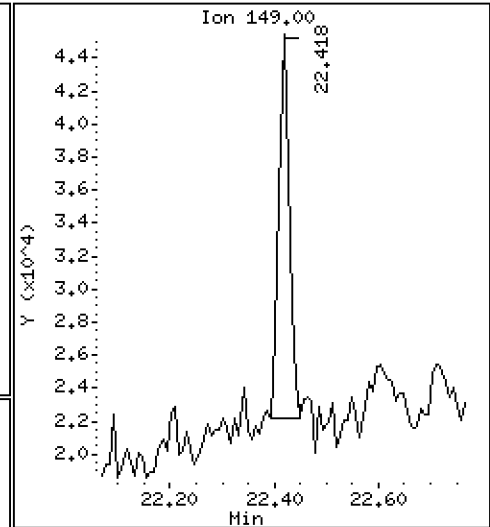
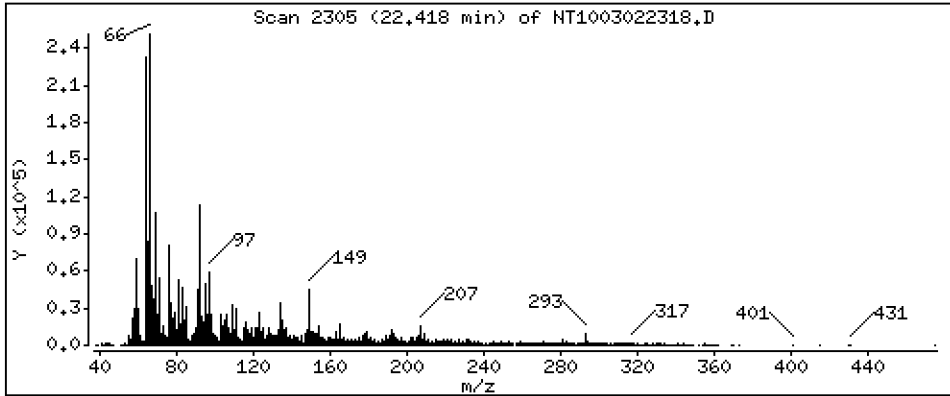
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07100 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

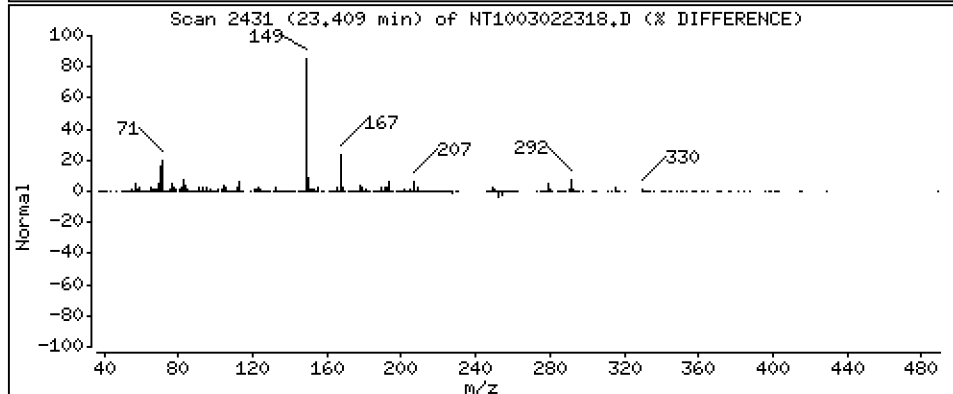
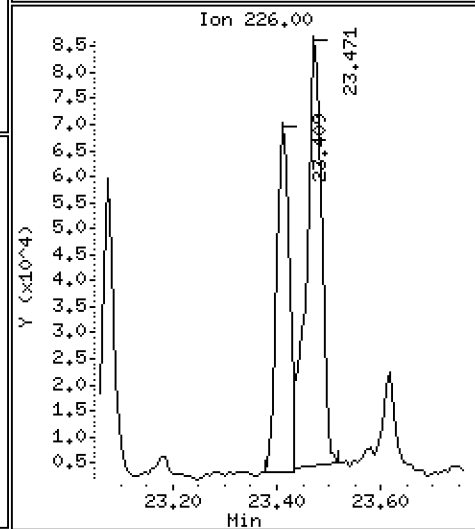
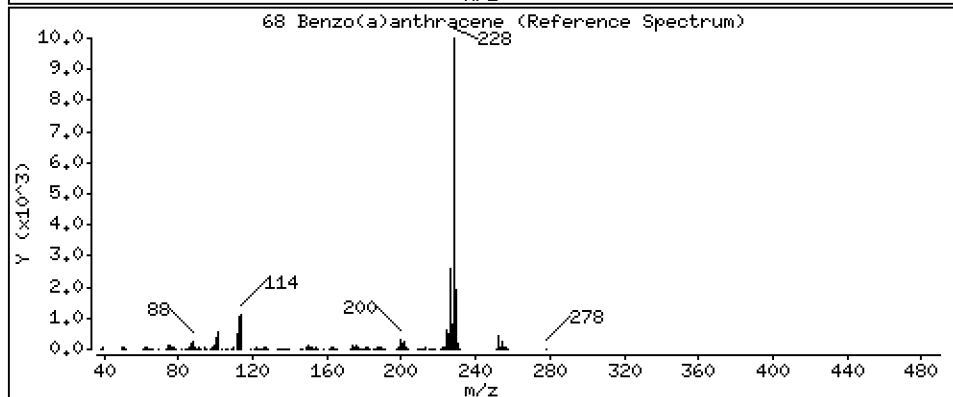
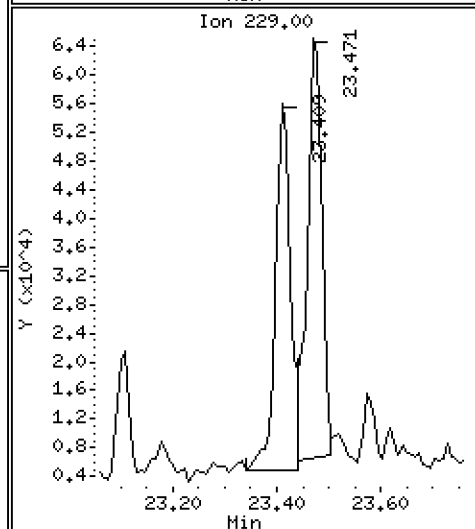
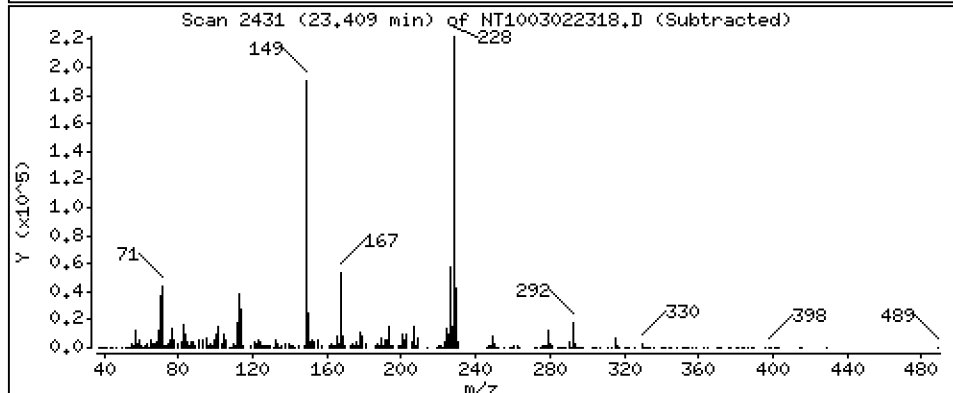
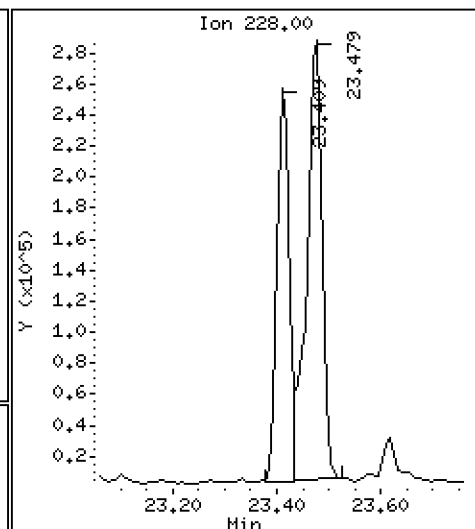
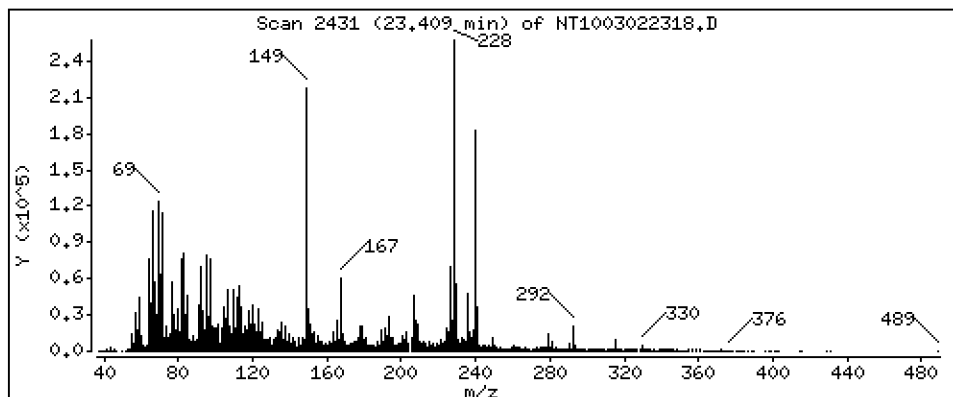
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,4970 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

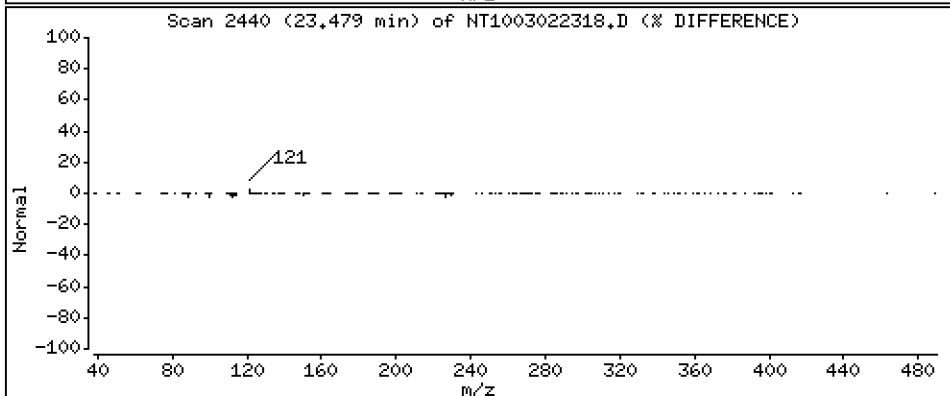
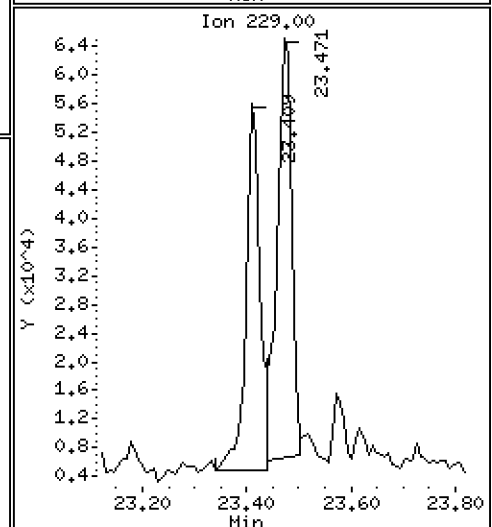
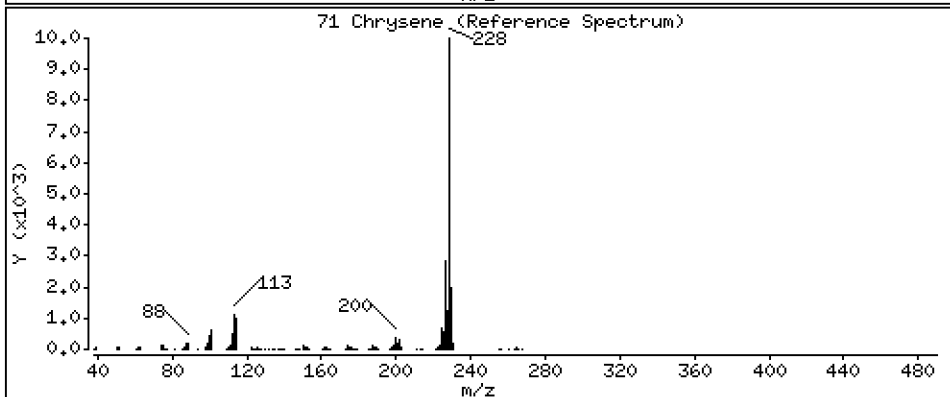
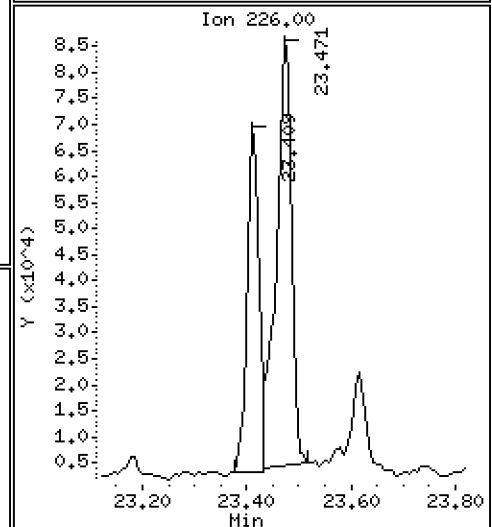
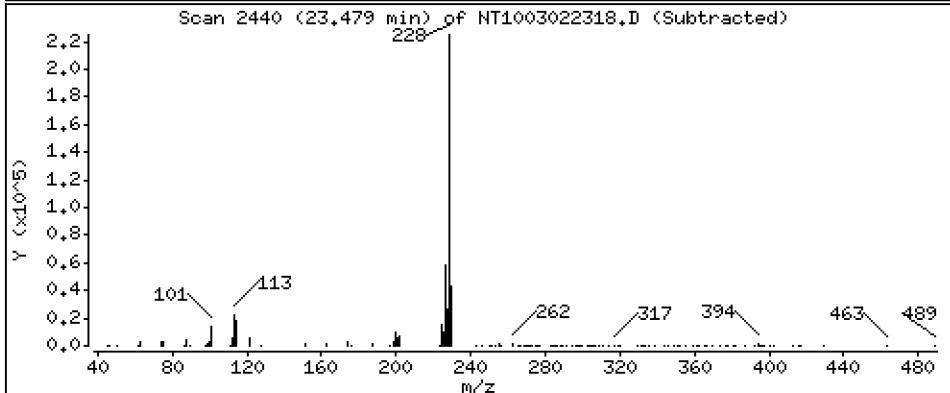
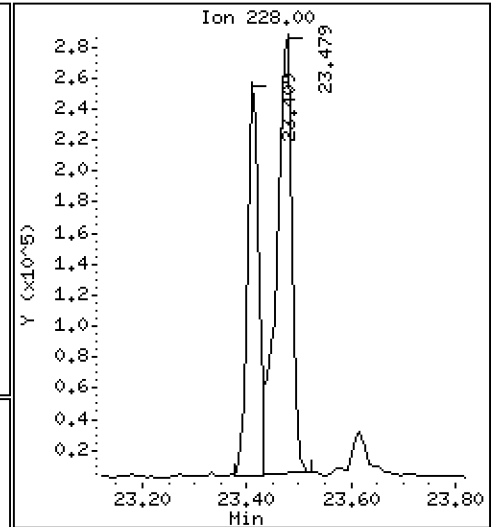
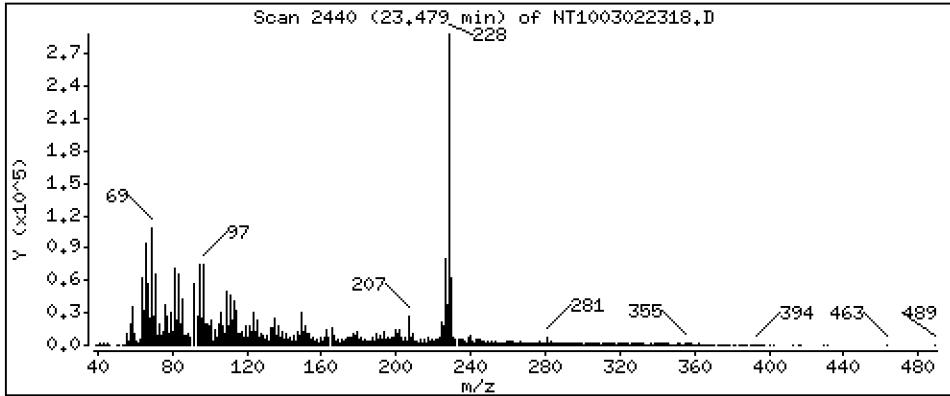
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 0,8830 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

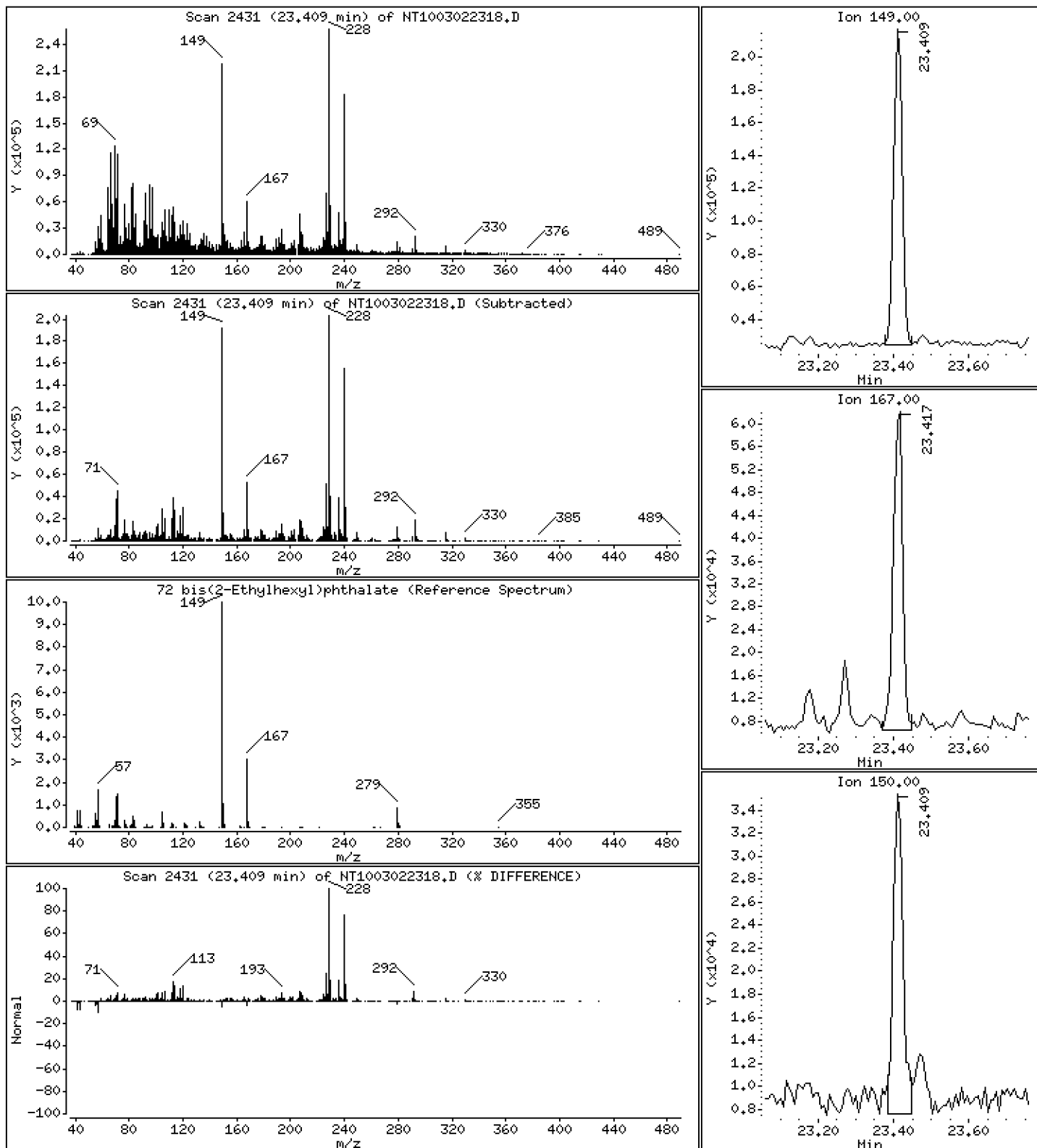
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,4664 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

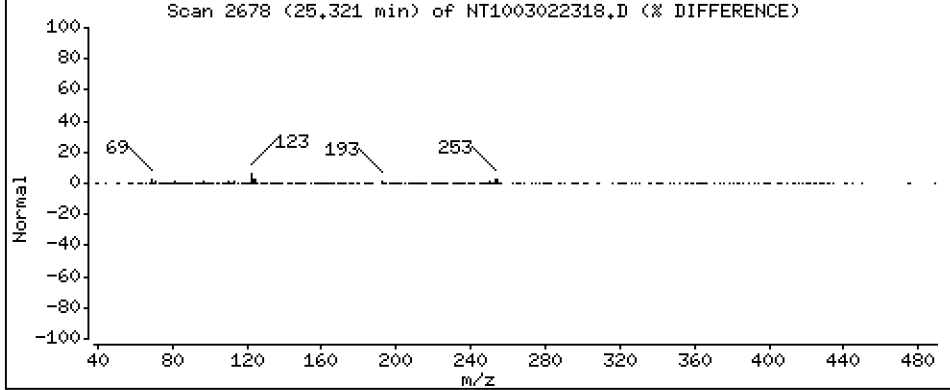
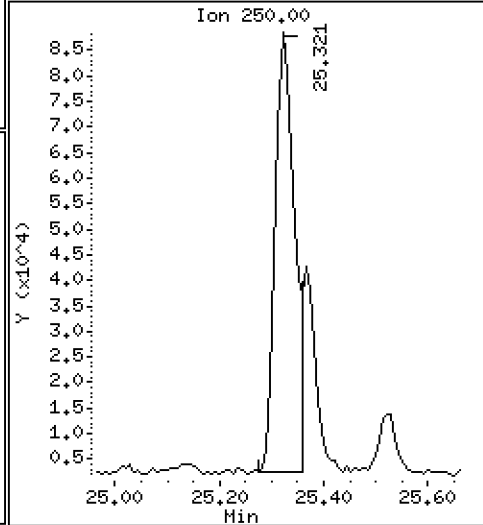
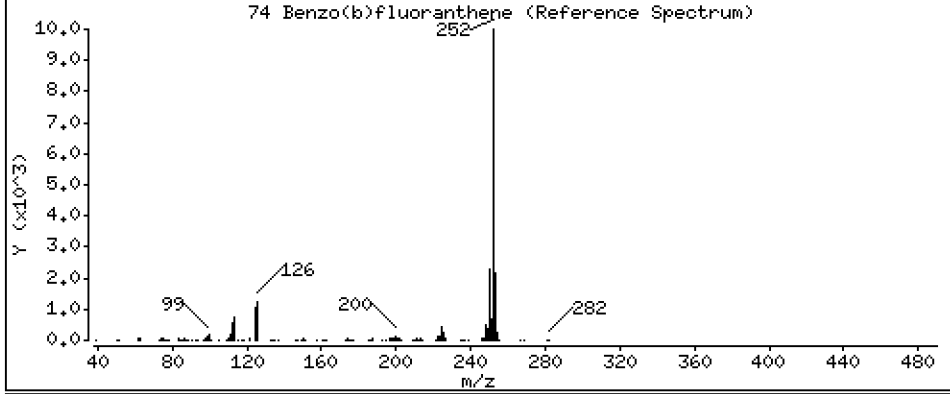
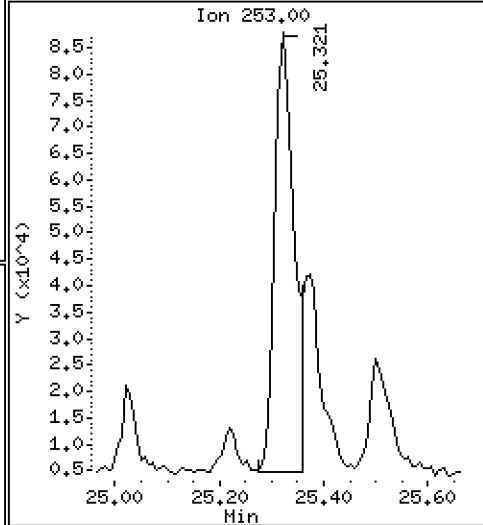
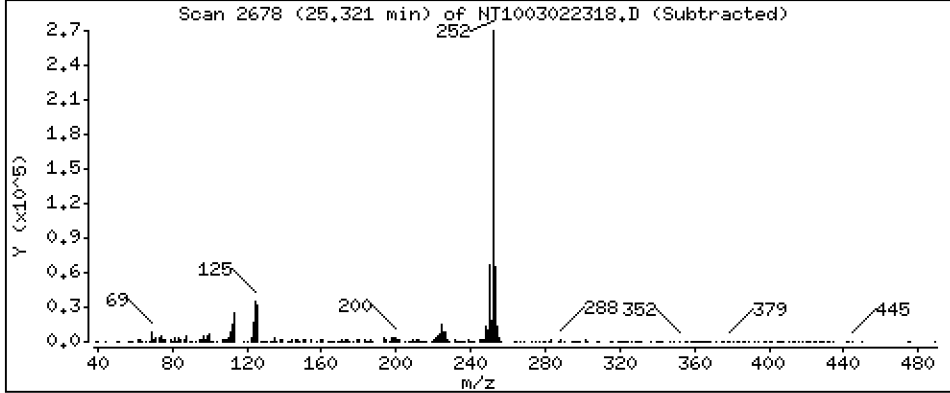
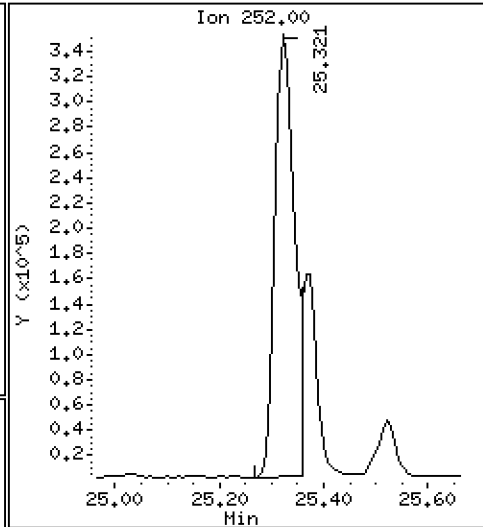
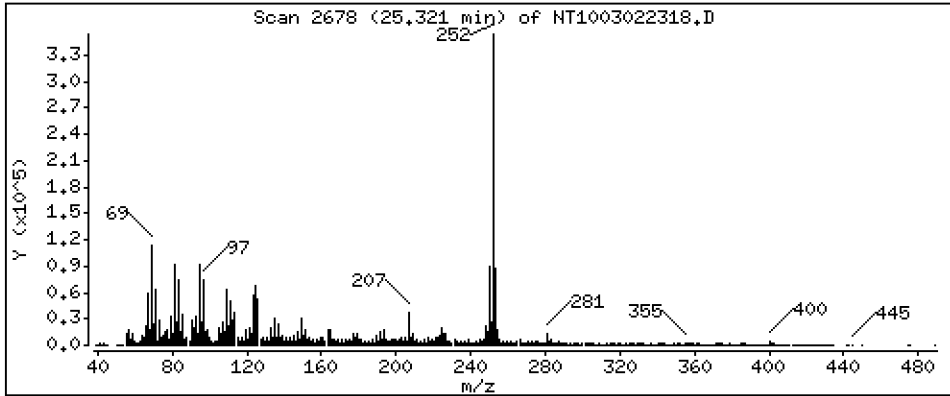
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,077 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

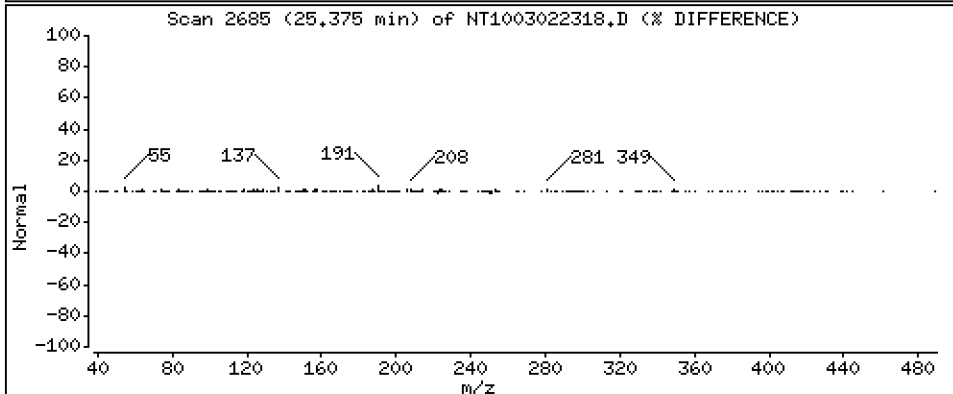
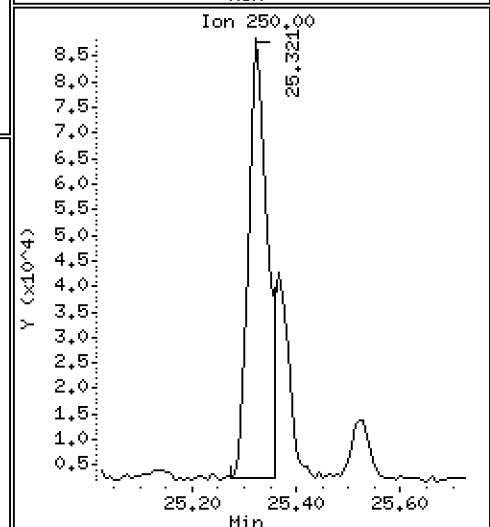
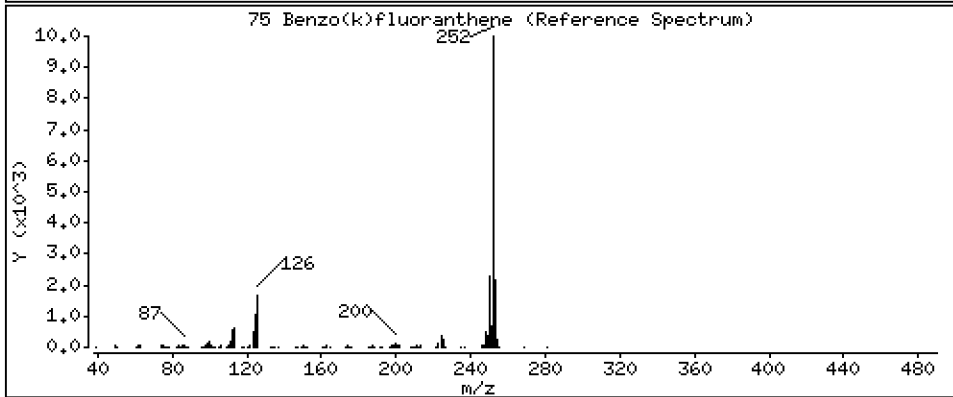
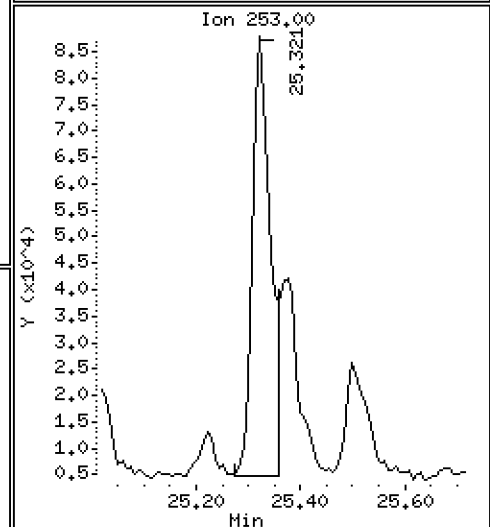
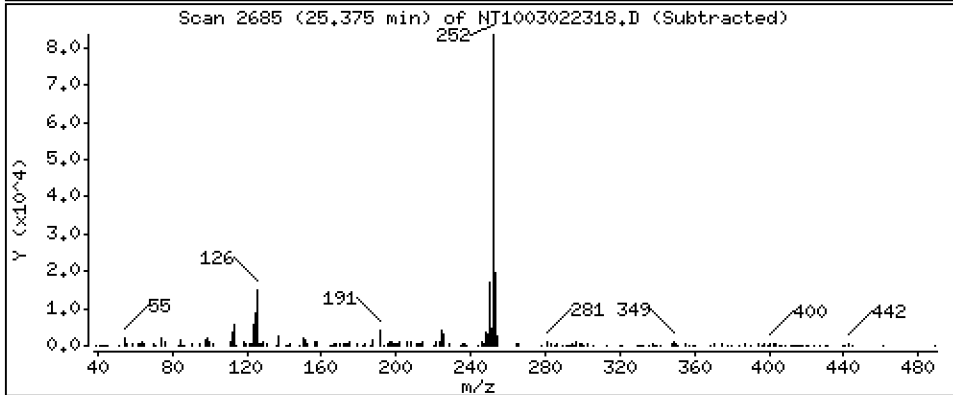
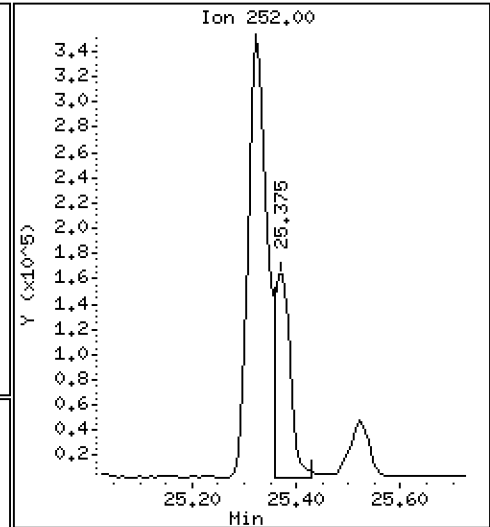
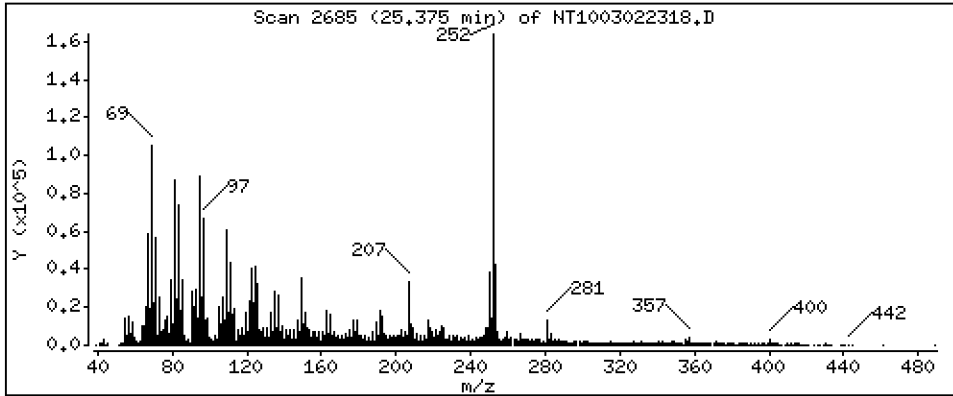
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,4011 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

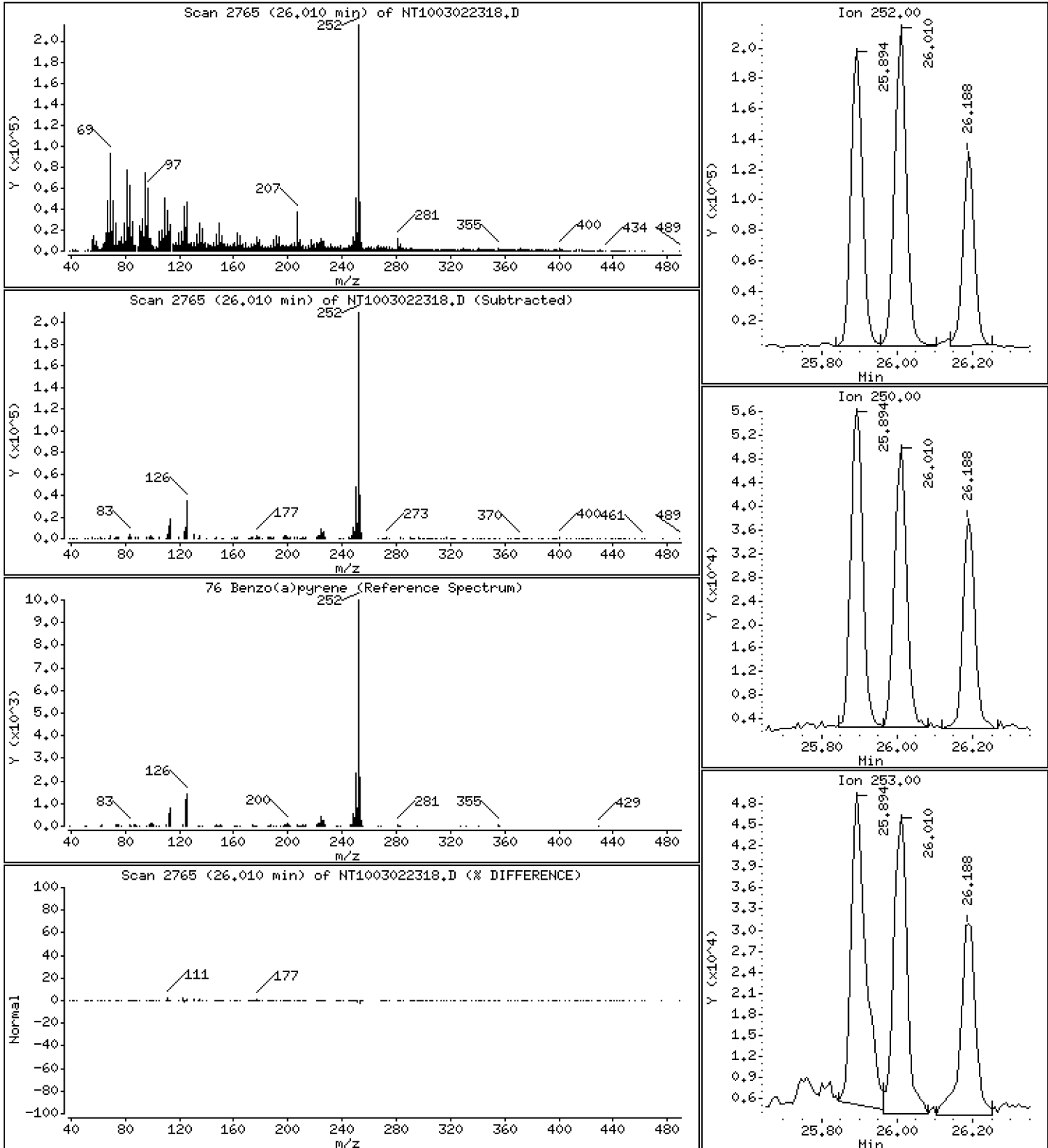
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,5676 ug/mL





Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

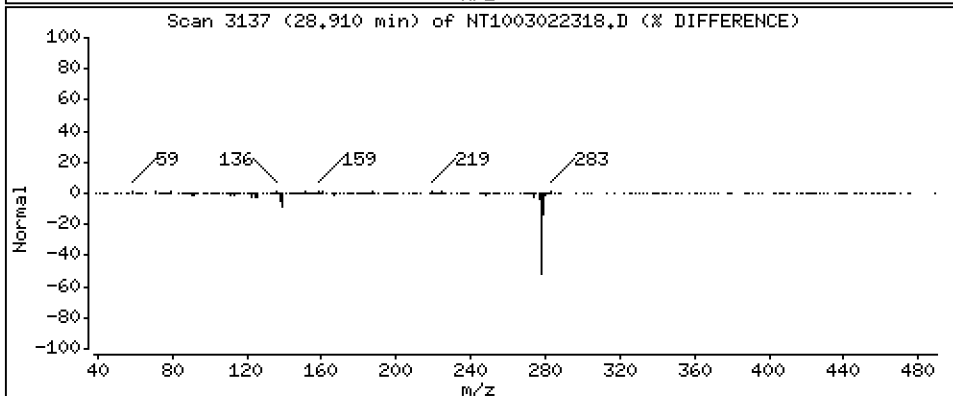
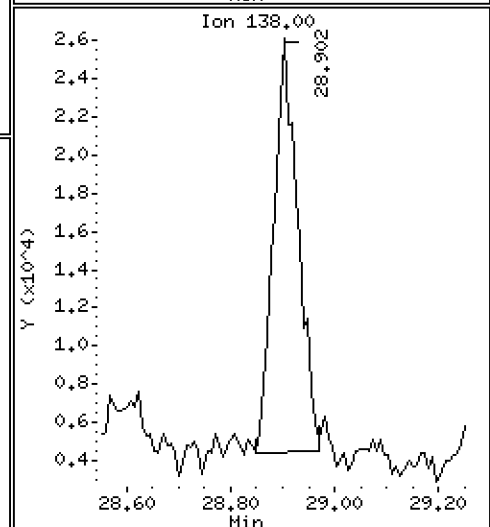
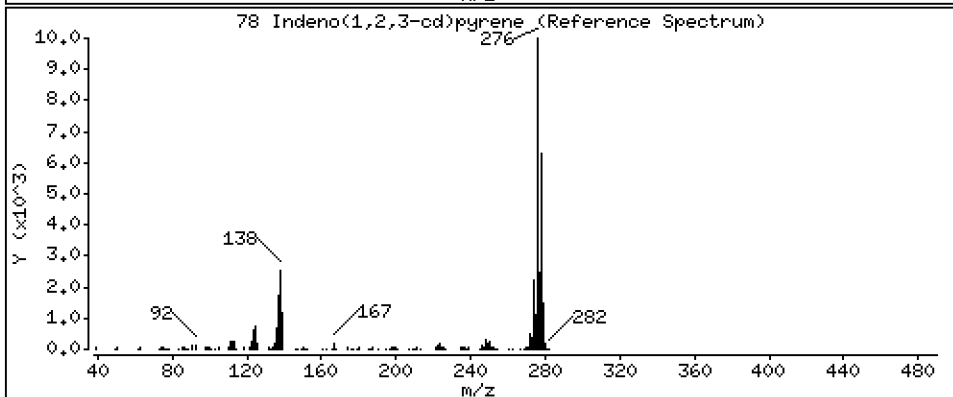
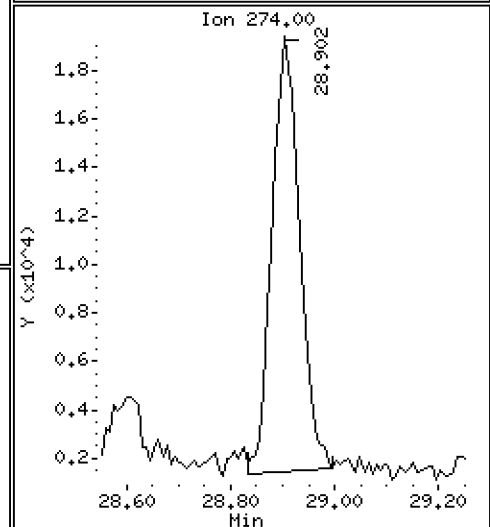
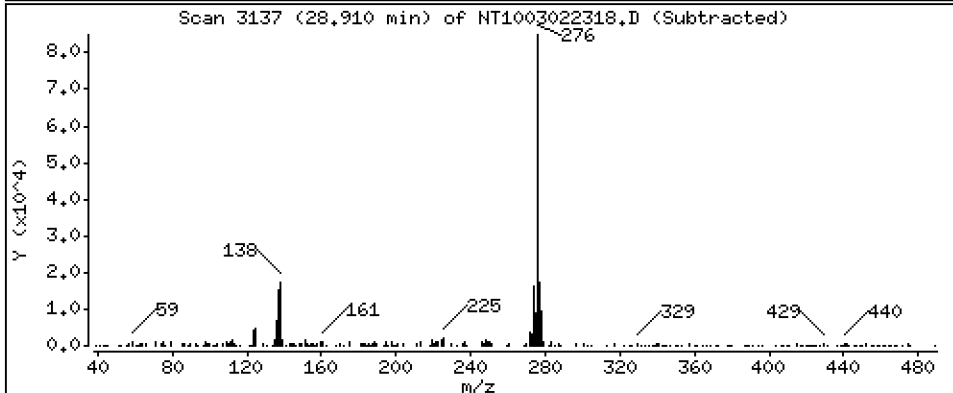
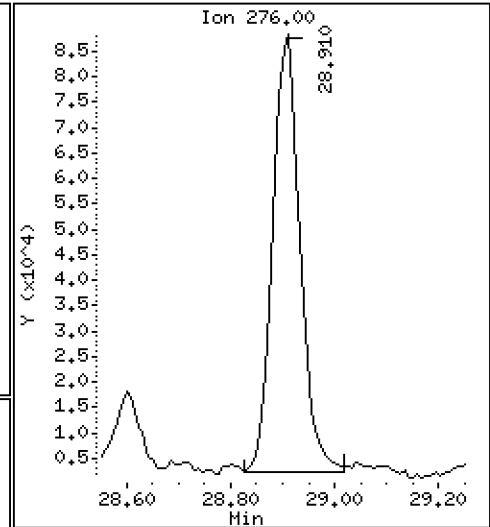
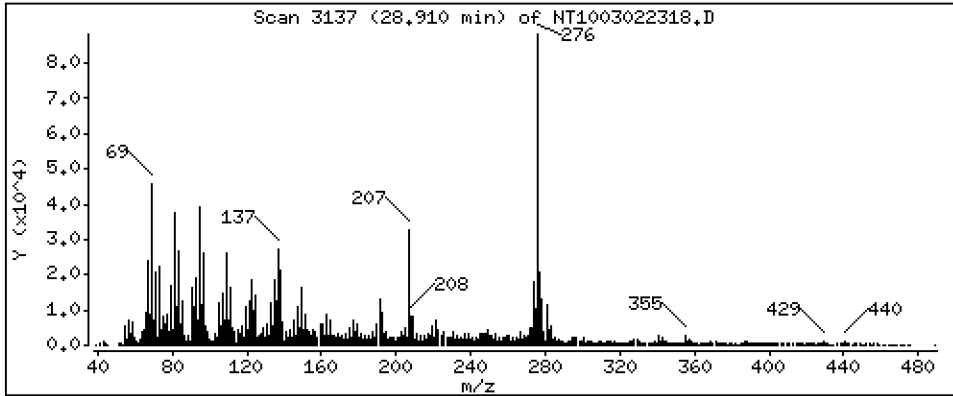
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,3511 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

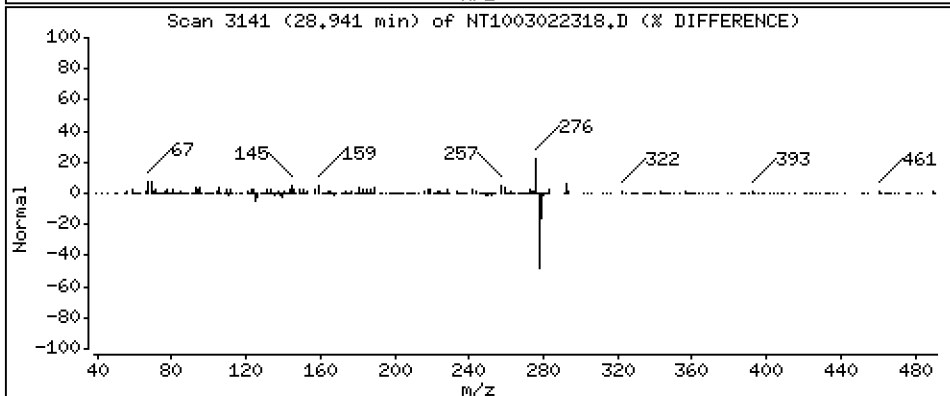
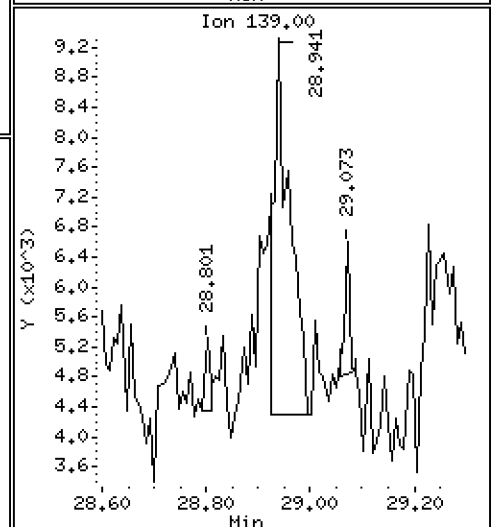
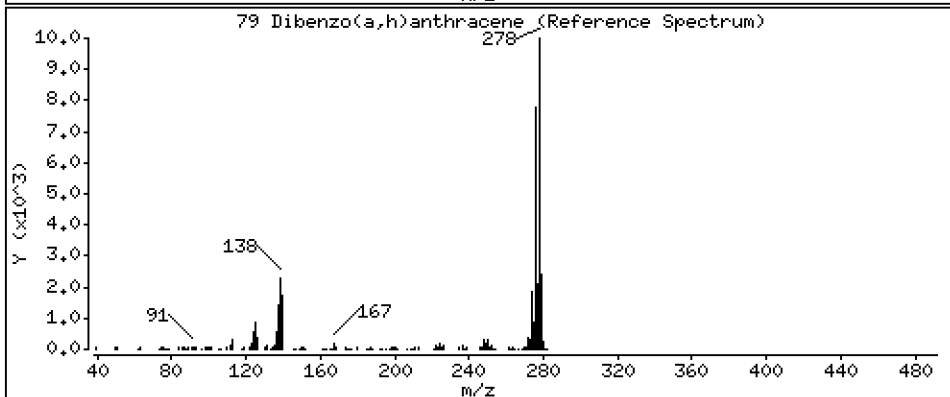
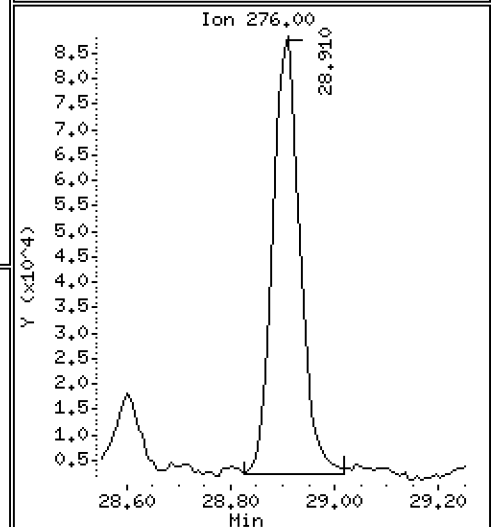
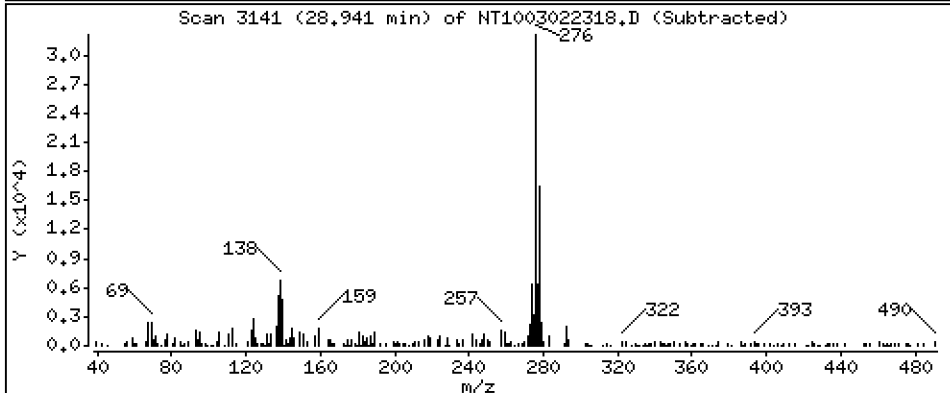
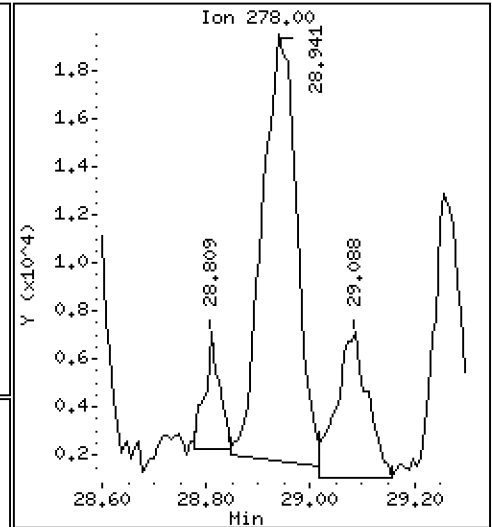
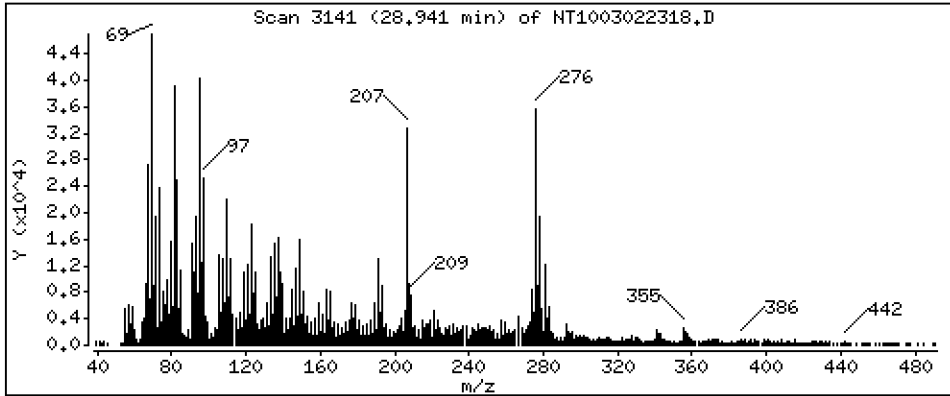
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1230 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

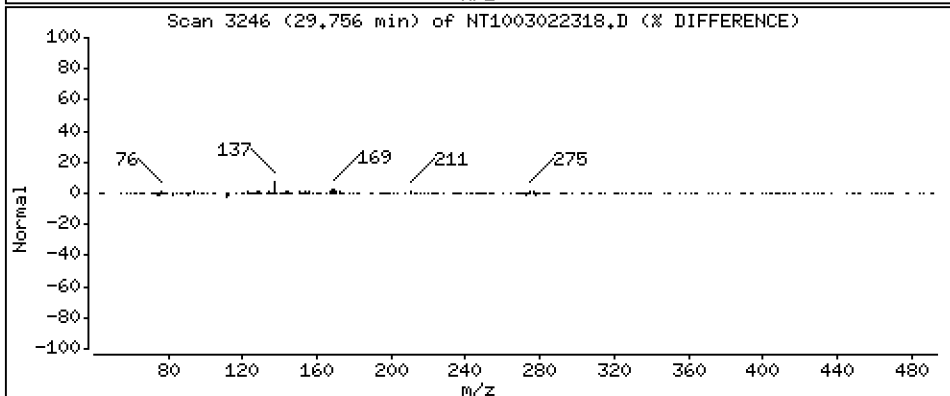
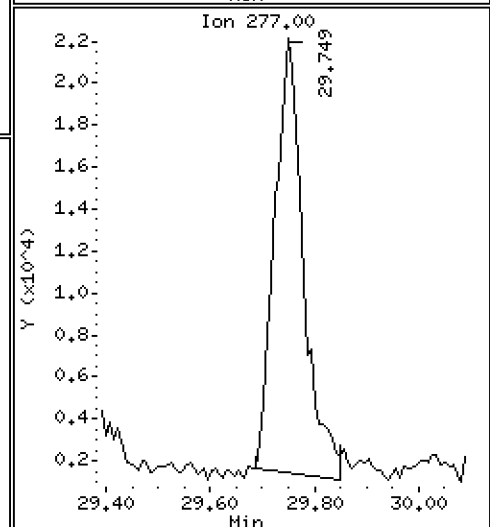
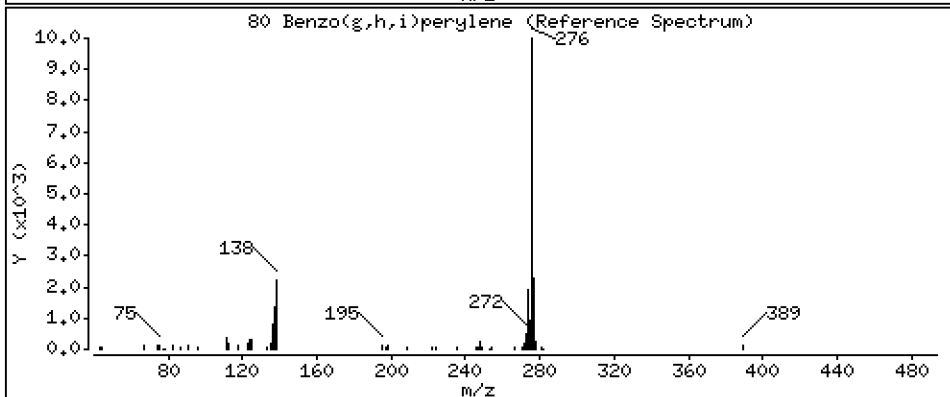
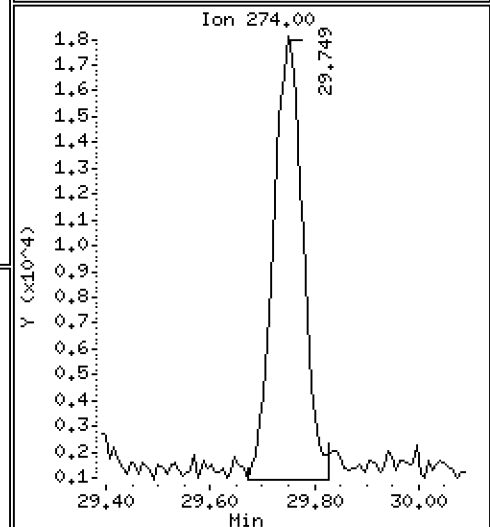
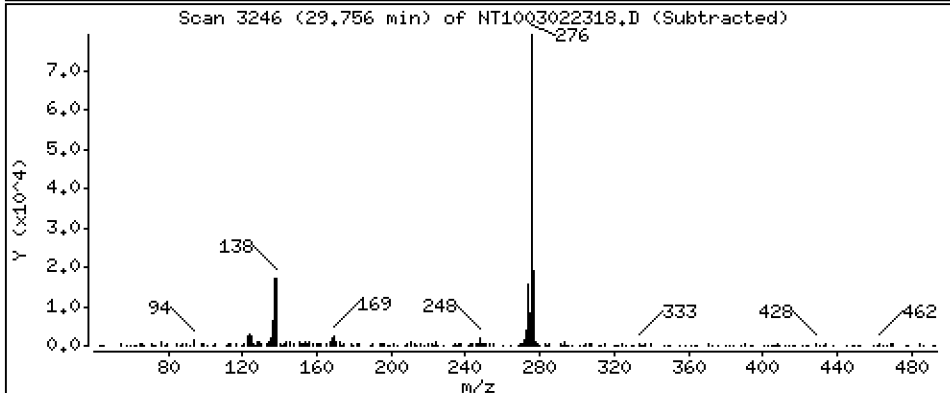
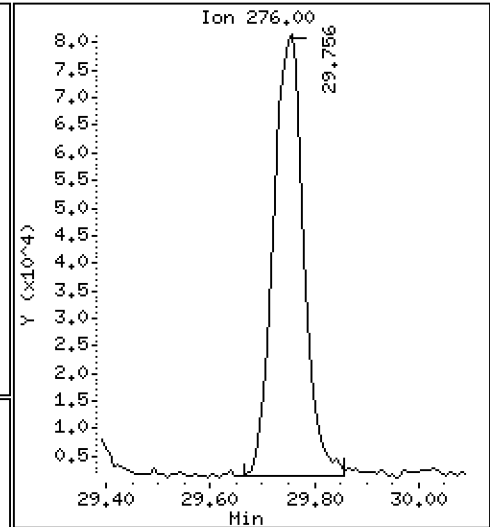
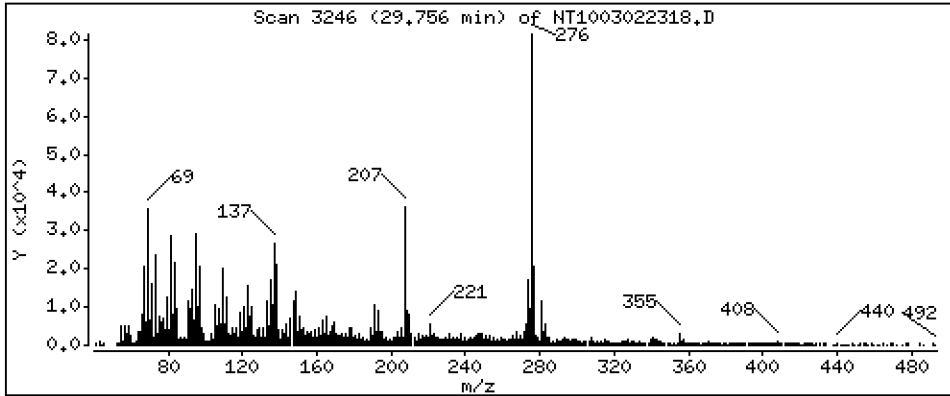
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,4597 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

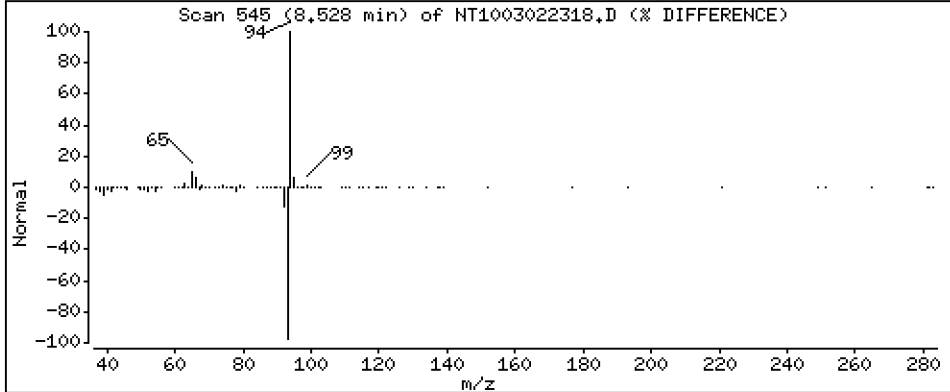
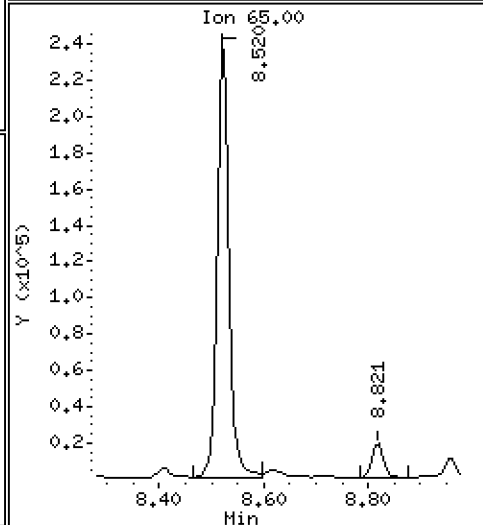
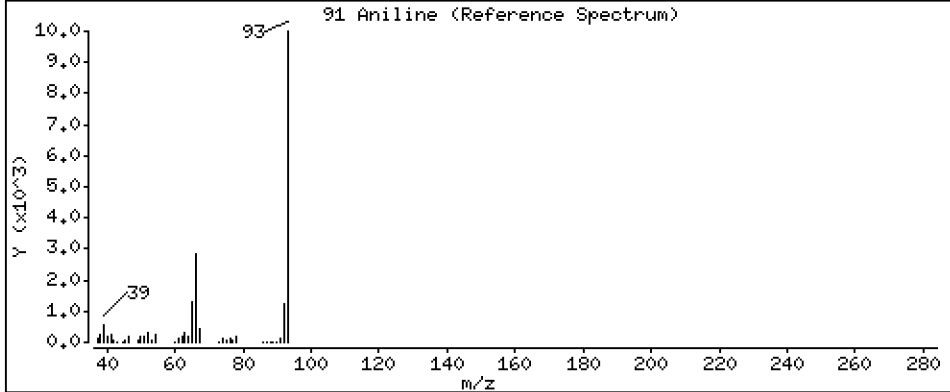
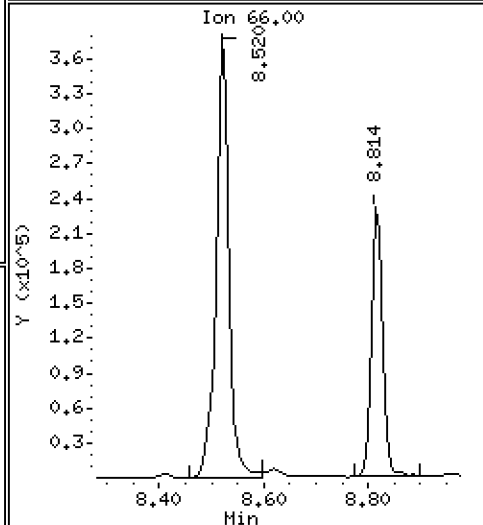
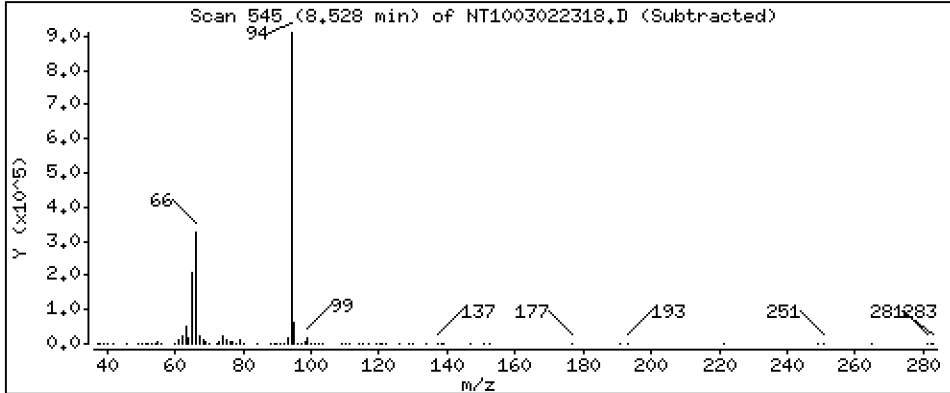
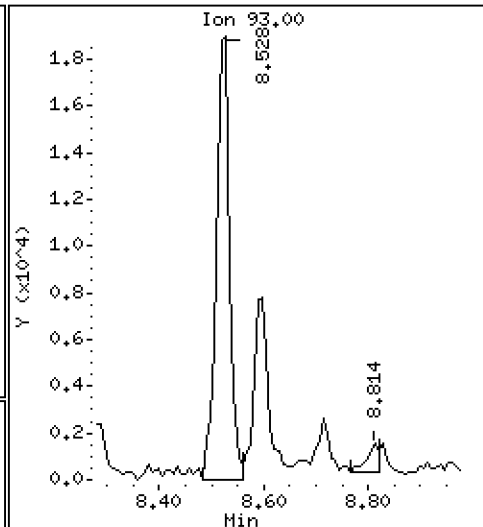
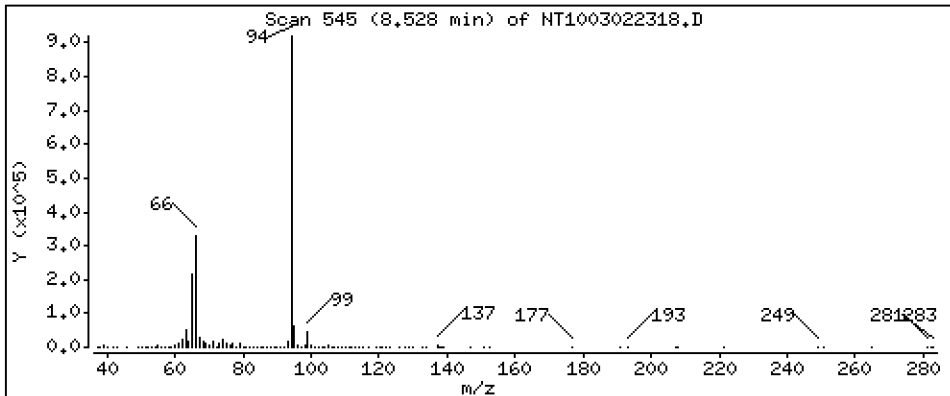
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 0,1327 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

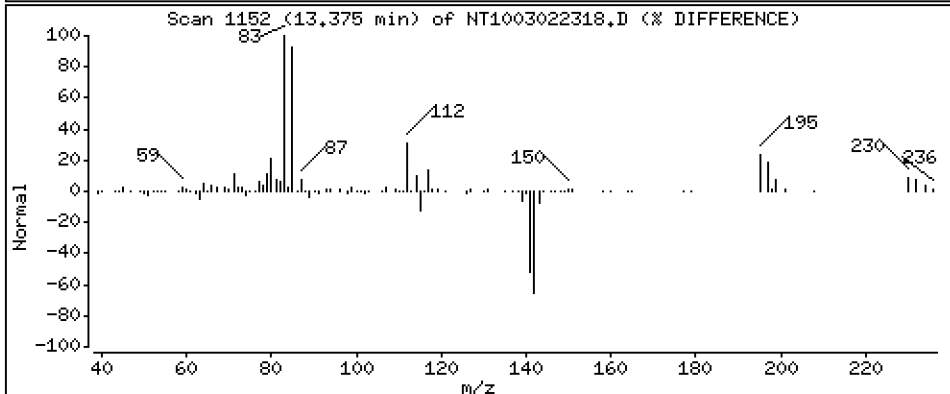
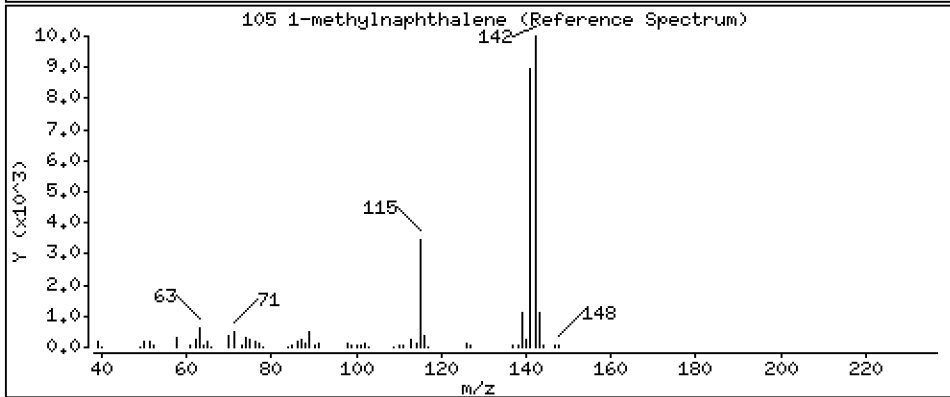
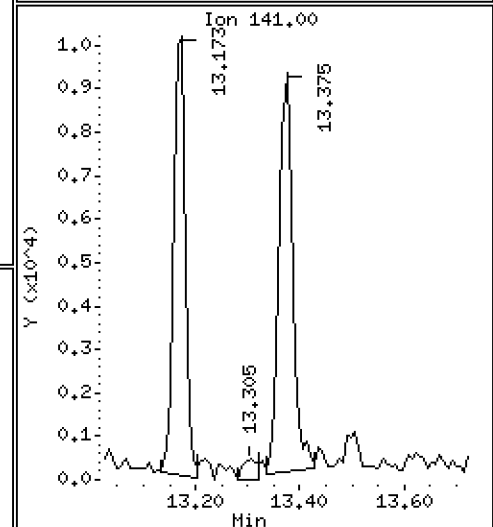
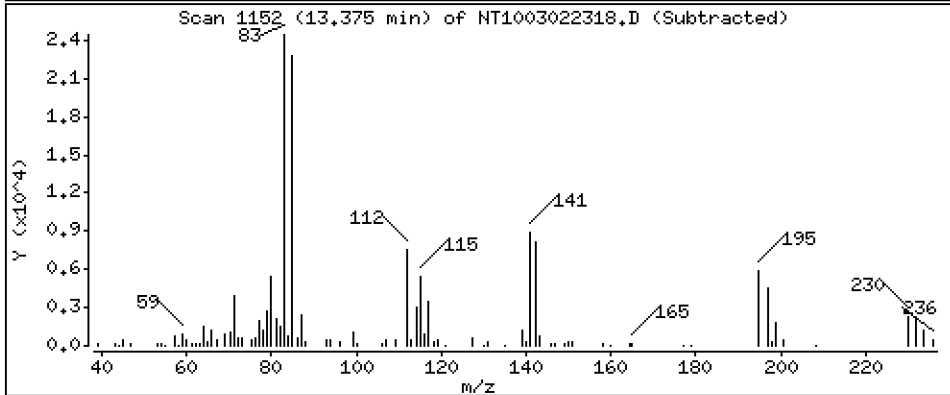
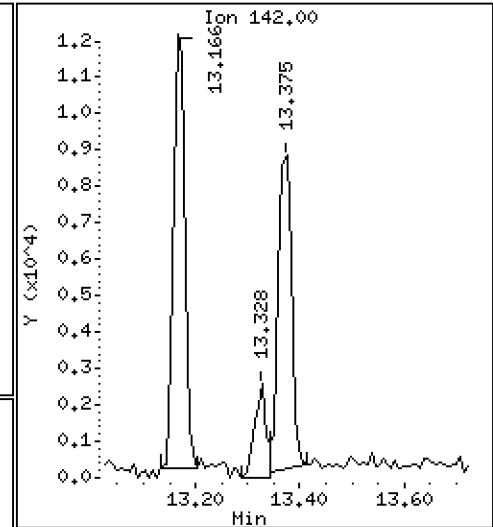
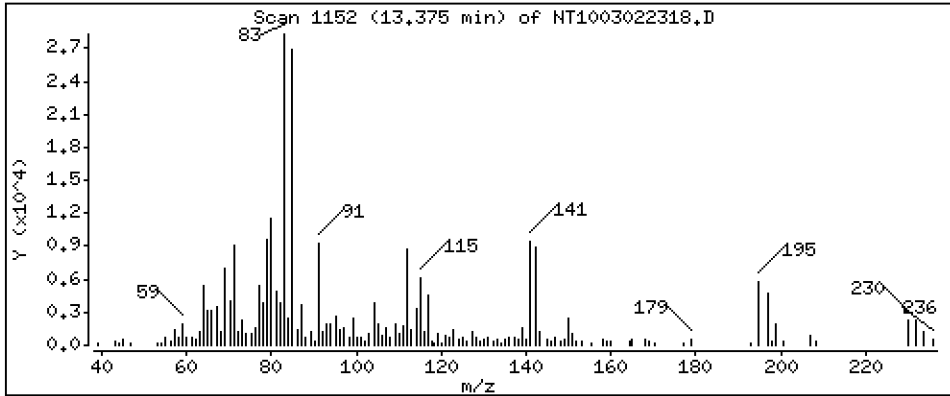
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,04260 ug/mL



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

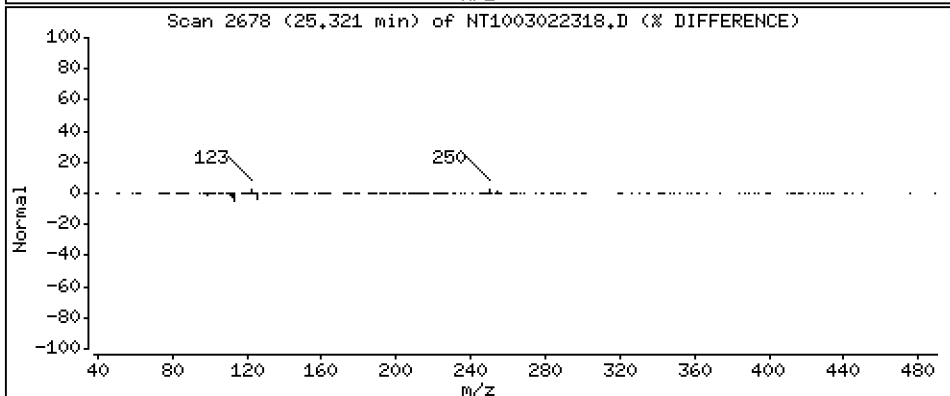
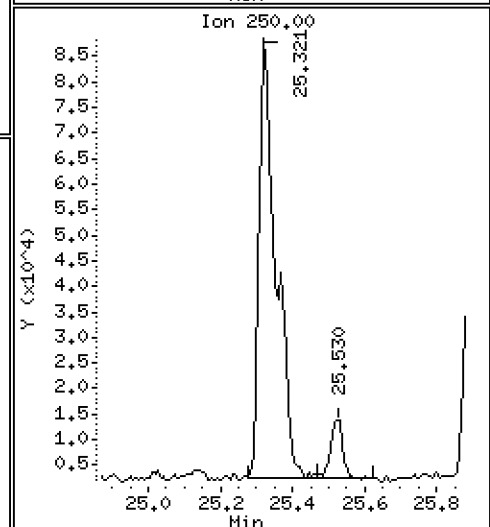
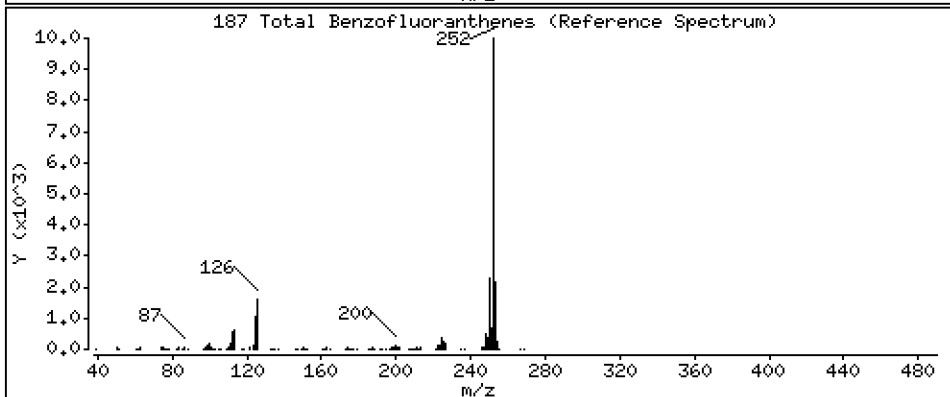
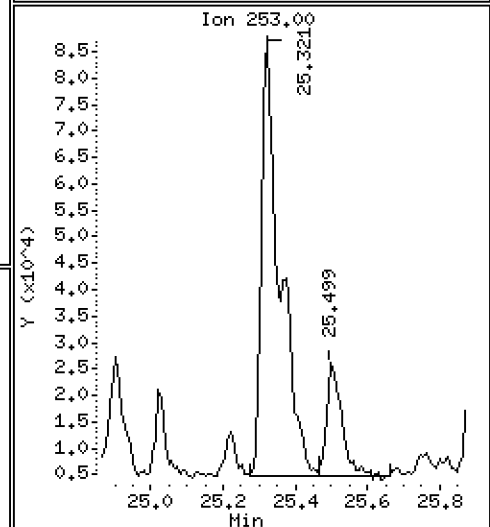
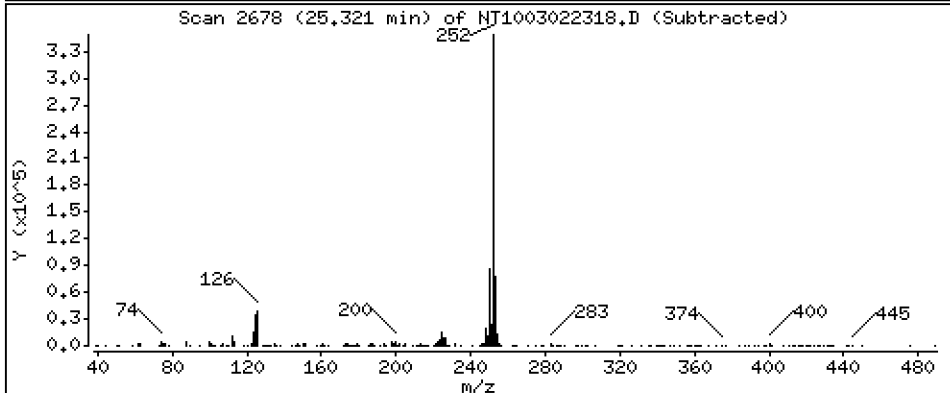
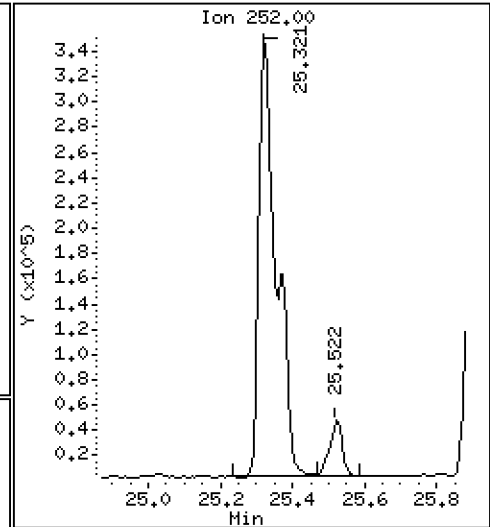
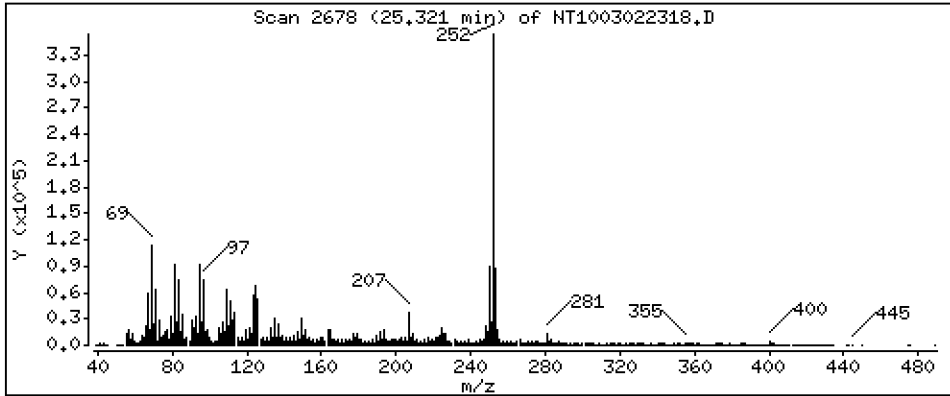
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 1,446 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022318.D

Lab Smp Id: 23A0206-03

Inj Date : 03-MAR-2023 01:10

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-03

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 14

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	1138968	6.23965	6.240
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1514929	7.14845	7.148
3 Phenol	94		8.520	8.520	(0.921)	1630981	7.23860	7.239
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1270762	7.02824	7.028
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	580169	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	538094	3.98335	3.983
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.480	(1.025)	44668	0.38616	0.3862
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.479	9.658	(1.025)	44668	0.25579	0.2558
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	1062859	4.56709	4.567
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2120045	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	38421	0.07061	0.07061
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	19170	0.04987	0.04987
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1926903	4.93816	4.938
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.744	(0.963)	13541	0.03833	0.03833
40 Acenaphthylene	152		15.030	15.031	(0.981)	34446	0.06523	0.06523
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	1093991	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.005)	16841	0.05288	0.05288
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.742	15.750	(1.028)	24418	0.05166	0.05166
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.214	(1.058)	92542	0.24725	0.2473
49 Fluorene	166		16.453	16.453	(1.074)	24140	0.06138	0.06138
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.107)	477733	6.77872	6.779
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1991133	4.00000	
60 Phenanthrene	178		18.455	18.456	(1.003)	227703	0.44686	0.4469
61 Anthracene	178		18.564	18.564	(1.008)	101522	0.20546	0.2055
62 Carbazole	167		18.896	18.897	(1.026)	43423	0.09593	0.09593
63 Di-n-butylphthalate	149		19.593	19.593	(1.064)	28343	0.04618	0.04618
64 Fluoranthene	202		20.838	20.823	(0.889)	739041	0.94471	0.9447
65 Pyrene	202		21.272	21.256	(0.908)	839040	1.05331	1.053
\$ 66 Terphenyl-d14	244		21.542	21.535	(0.919)	2966398	4.60234	4.602
67 Butylbenzylphthalate	149		22.417	22.418	(0.957)	30464	0.07100	0.07100
68 Benzo(a)anthracene	228		23.409	23.409	(0.999)	398472	0.49695	0.4970
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2274047	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.471	(1.002)	575427	0.88302	0.8830
72 bis(2-Ethylhexyl)phthalate	149		23.409	23.409	(0.956)	286157	0.46637	0.4664
* 134 Di-n-octylphthalate-d4	153		24.492	24.493	(1.000)	4368092	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.321	25.313	(0.969)	919241	1.07674	1.077 (M)
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	327364	0.40114	0.4011 (M)
76 Benzo(a)pyrene	252		26.010	26.002	(0.995)	430797	0.56762	0.5676
* 77 Perylene-d12	264		26.134	26.126	(1.000)	2479450	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.902	(1.106)	310943	0.35113	0.3511
79 Dibenzo(a,h)anthracene	278		28.940	28.948	(1.107)	82392	0.12299	0.1230
80 Benzo(g,h,i)perylene	276		29.756	29.740	(1.139)	324589	0.45974	0.4597
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93		8.527	8.628	(0.922)	34665	0.13269	0.1327
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	14822	0.04260	0.04260
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		



Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.321	25.375	(0.969)	1181751	1.44633	1.446	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022318.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-03  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	580169	-3.17
27 Naphthalene-d8	2200781	1100391	4401562	2120045	-3.67
42 Acenaphthene-d10	1135136	567568	2270272	1093991	-3.62
59 Phenanthrene-d10	2128944	1064472	4257888	1991133	-6.47
69 Chrysene-d12	2449624	1224812	4899248	2274047	-7.17
134 Di-n-octylphthala	4694735	2347368	9389470	4368092	-6.96
77 Perylene-d12	2593218	1296609	5186436	2479450	-4.39

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022318.D

Lab ID: 23A0206-03  
nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 01:10

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.025	1.044	-0.0193	2-Methylphenol
0.922	0.933	-0.0109	Aniline

RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

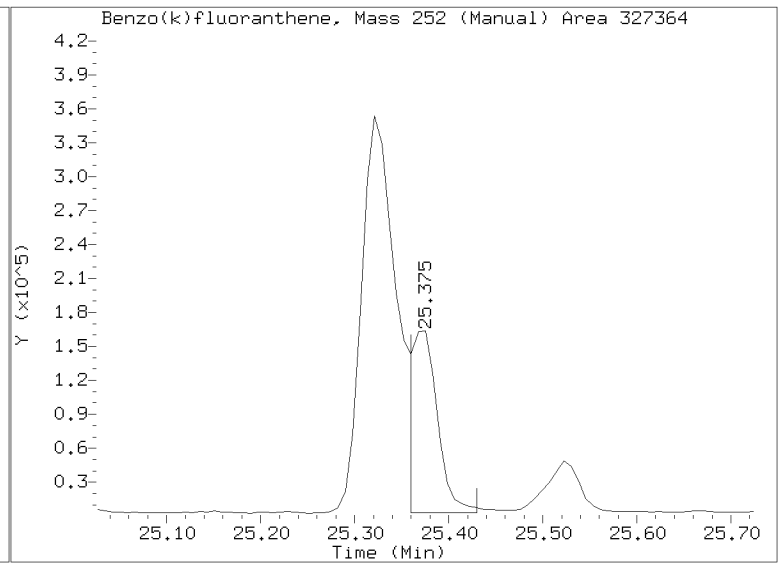
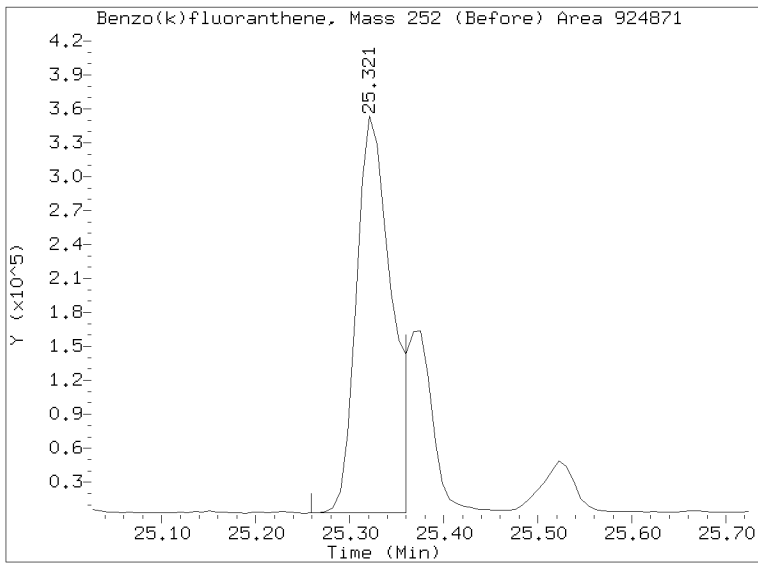
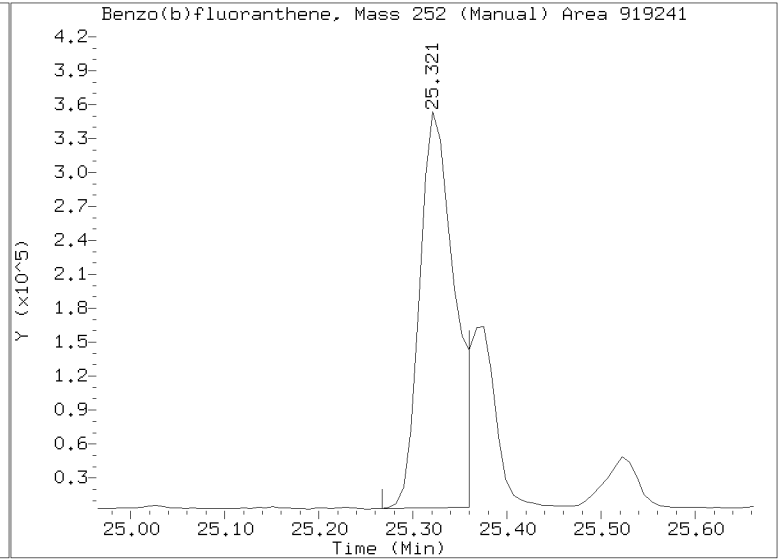
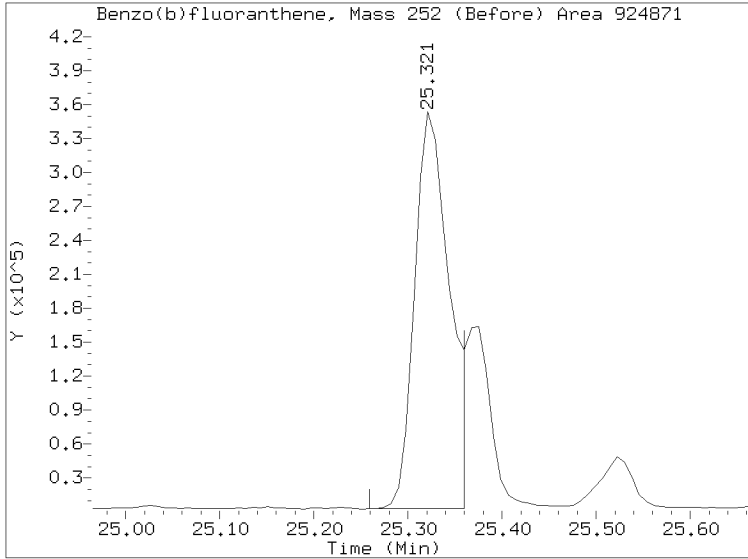
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022318.D

Injection Date: 03-MAR-2023 01:10

Lab ID: 23A0206-03 Client ID:

Report Date: 03/09/2023 15:49





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-04 B

SDG: 23A0206

Sampled: 01/11/23 09:35

Prepared: 01/27/23 14:44

File ID: NT1003022319.D

% Solids: 49.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:47

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 20.3 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	614		4.4	20.0
106-44-5	4-Methylphenol	1	12.1	J	7.4	20.0
91-20-3	Naphthalene	1	9.4	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	7.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	7.5	J	6.2	20.0
131-11-3	Dimethylphthalate	1	8.9	J	4.4	20.0
83-32-9	Acenaphthene	1	7.1	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	64.0		8.7	20.0
120-12-7	Anthracene	1	32.4		7.2	20.0
206-44-0	Fluoranthene	1	151		6.1	20.0
129-00-0	Pyrene	1	156		5.7	20.0
85-68-7	Butylbenzylphthalate	1	17.2	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	109		6.0	20.0
218-01-9	Chrysene	1	187		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	117		5.5	49.9
	Benzo(a)fluoranthene, Total	1	207		10.0	39.9
50-32-8	Benzo(a)pyrene	1	92.8		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	45.8		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	63.4		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.80	581	77.6	27 - 120	
Phenol-d5	748.80	678	90.5	29 - 120	
2-Chlorophenol-d4	748.80	661	88.3	31 - 120	
1,2-Dichlorobenzene-d4	499.20	377	75.5	32 - 120	
Nitrobenzene-d5	499.20	418	83.8	30 - 120	
2-Fluorobiphenyl	499.20	449	90.0	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-04 B

SDG: 23A0206

Sampled: 01/11/23 09:35

Prepared: 01/27/23 14:44

File ID: NT1003022319.D

% Solids: 49.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:47

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 20.3 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.80	625	83.5	24 - 134	
p-Terphenyl-d14	499.20	449	89.9	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022319.D

Date: 03-HR-2023 01:47

Client ID:

Sample Info: 23A0206-04

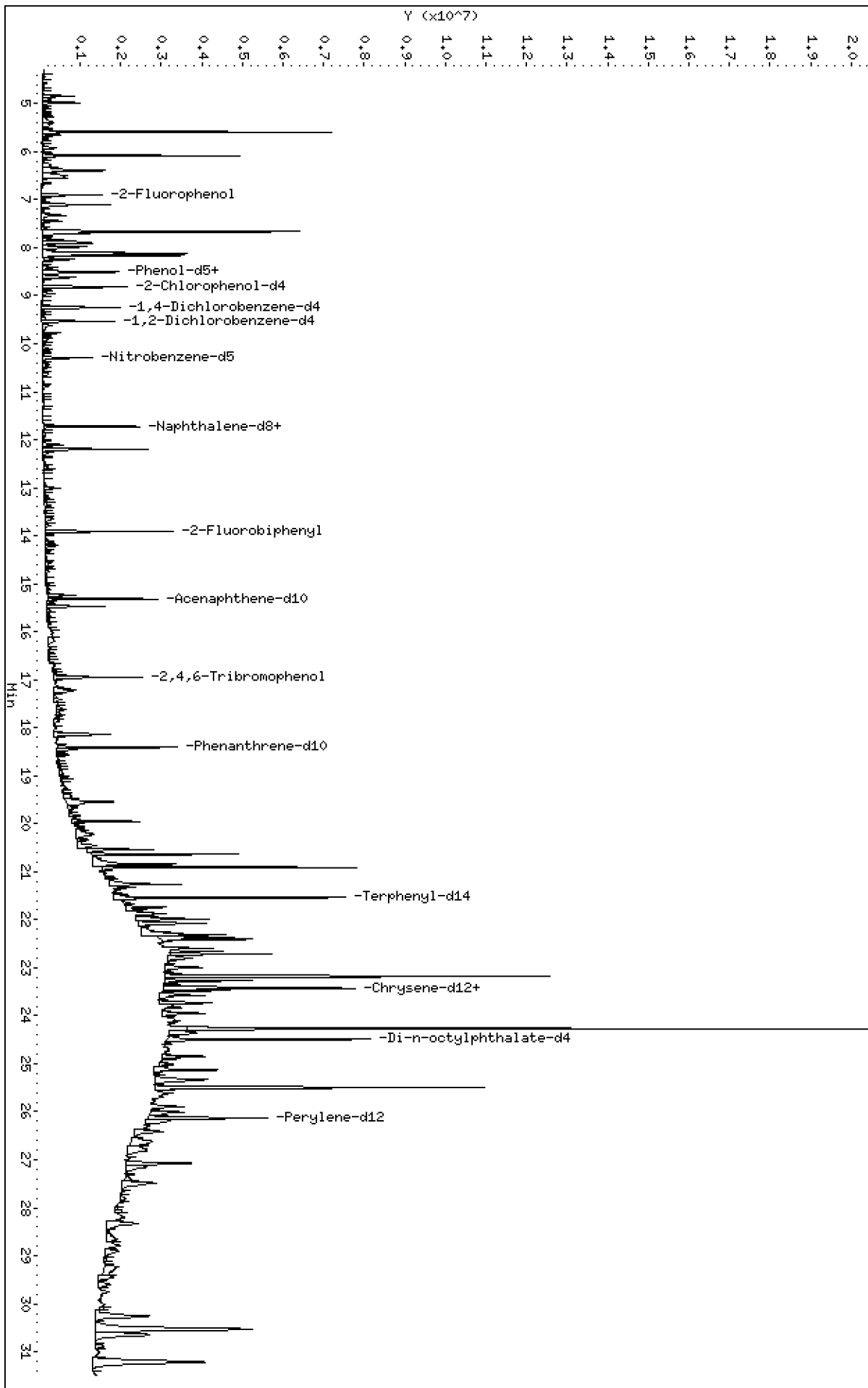
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A.B\NT1003022319.D



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

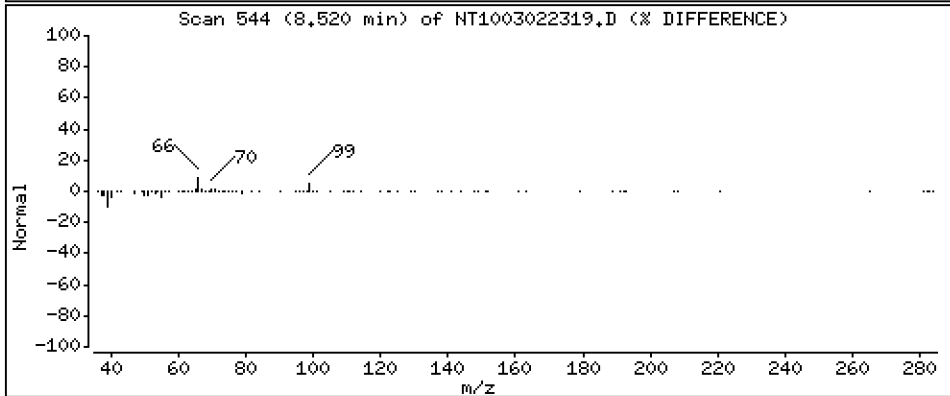
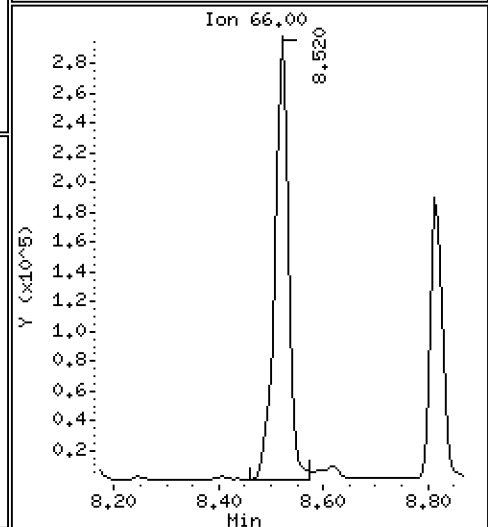
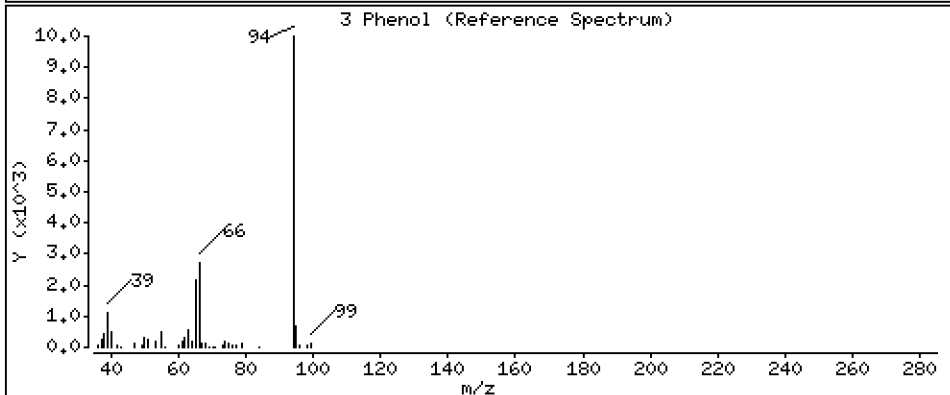
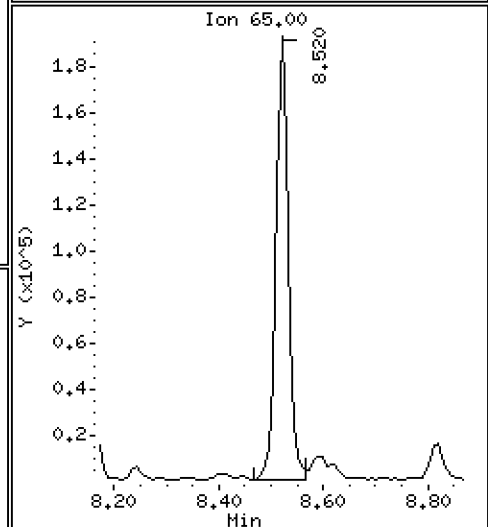
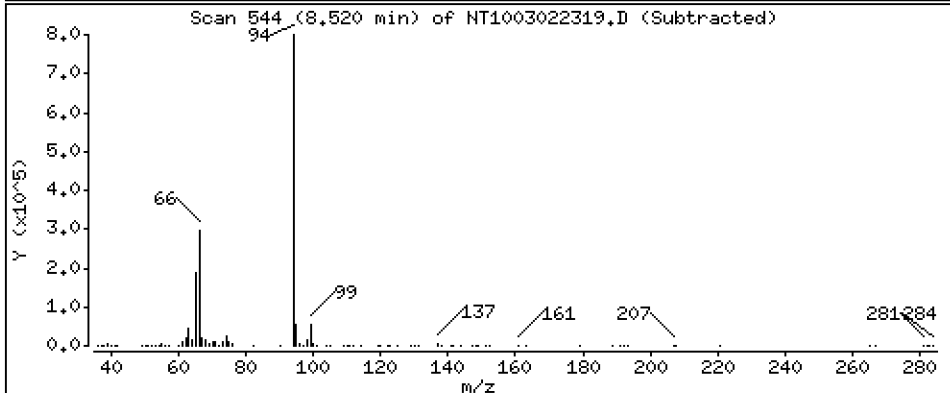
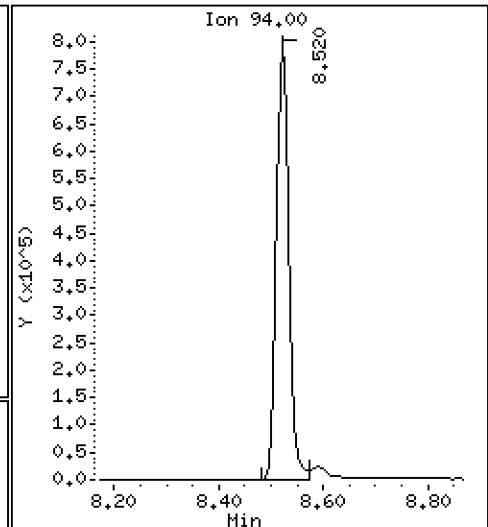
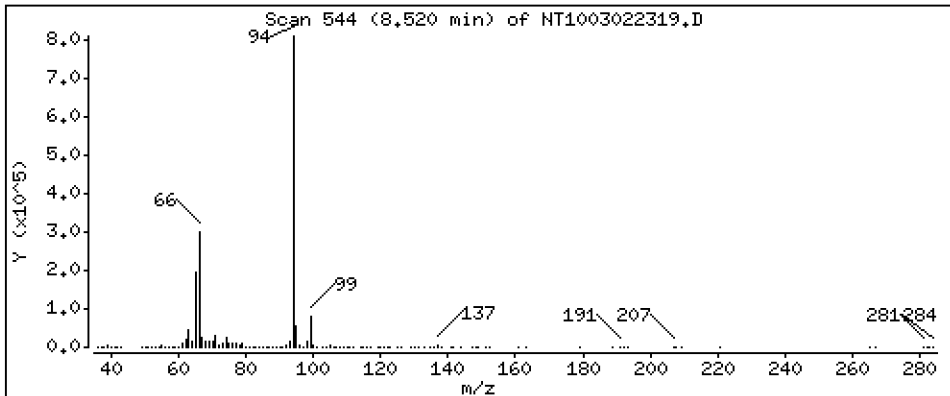
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 6,147 ug/mL





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

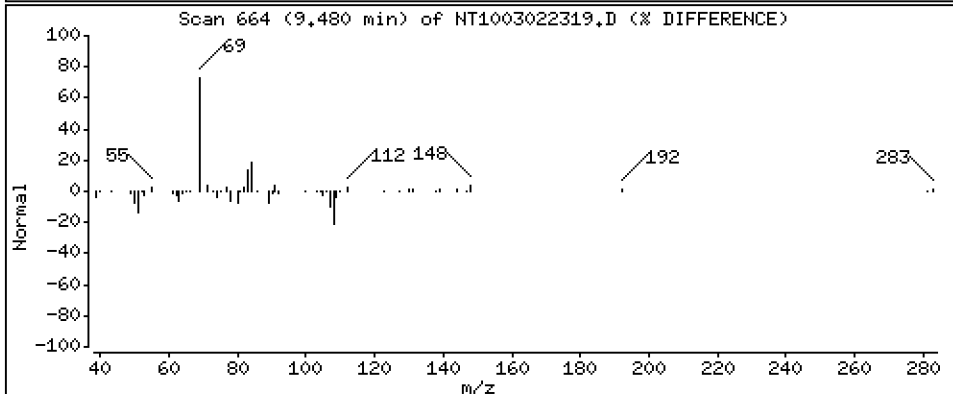
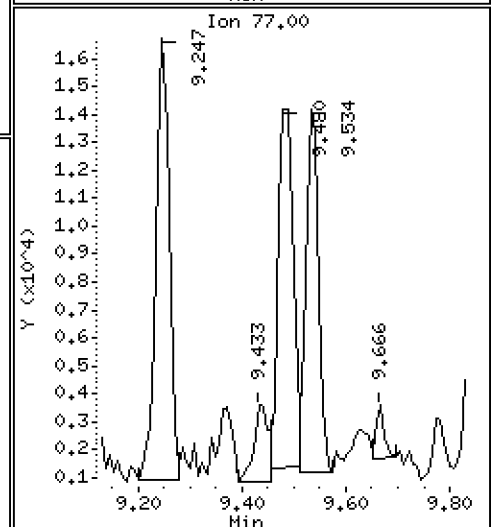
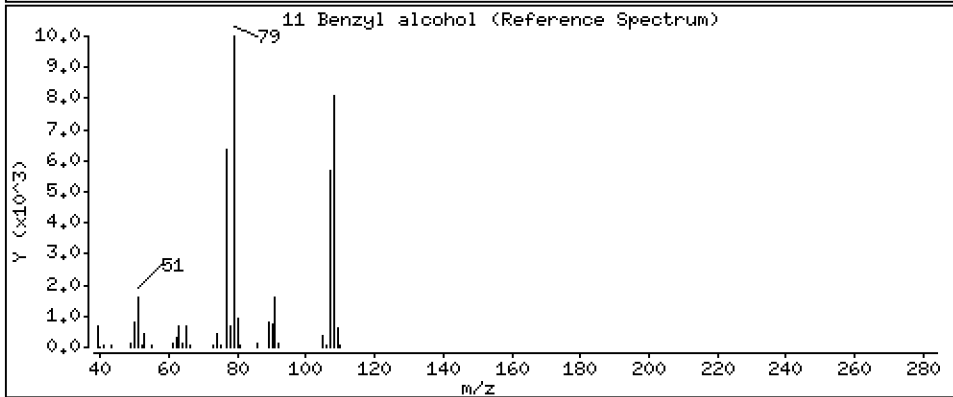
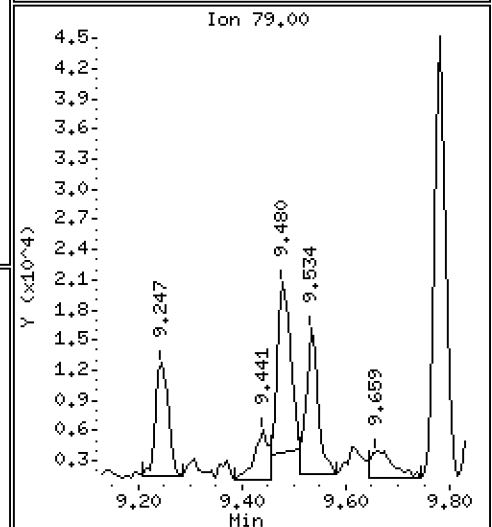
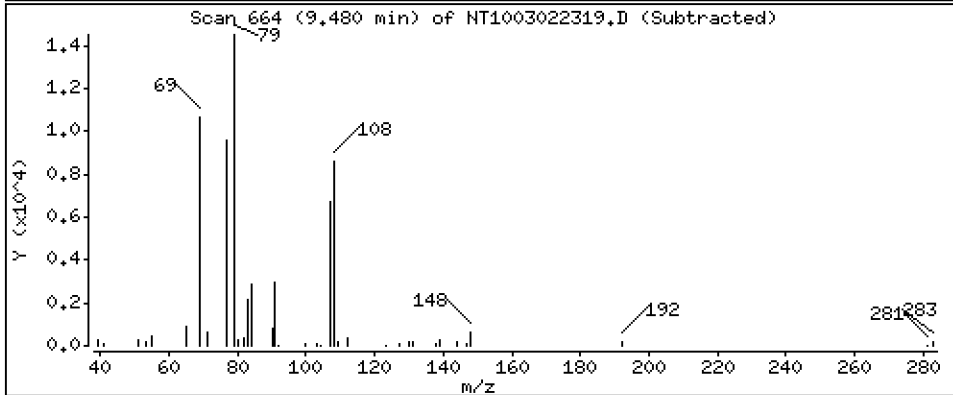
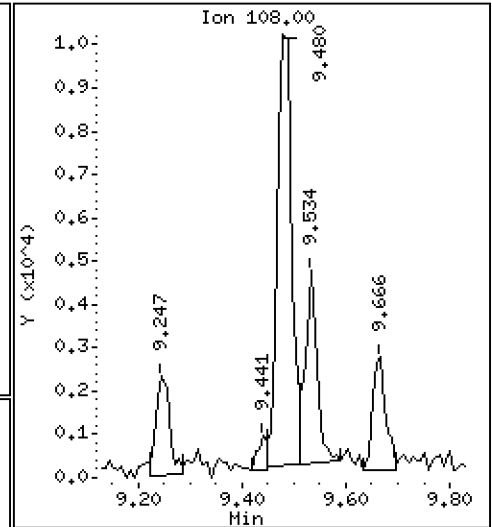
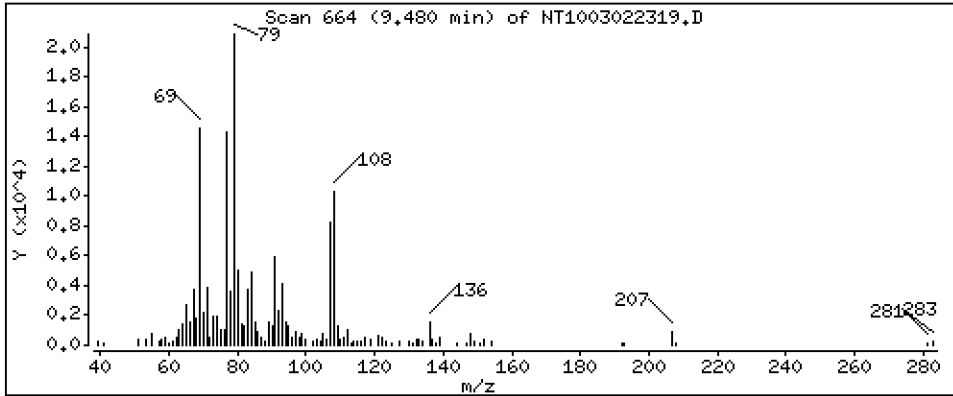
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1796 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

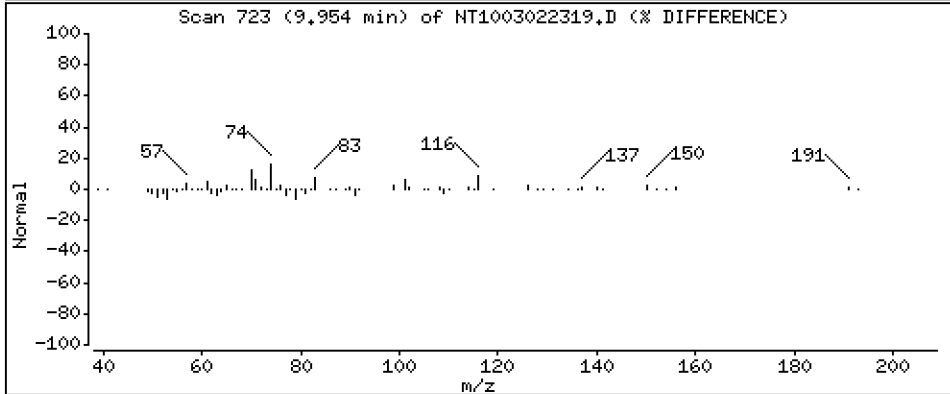
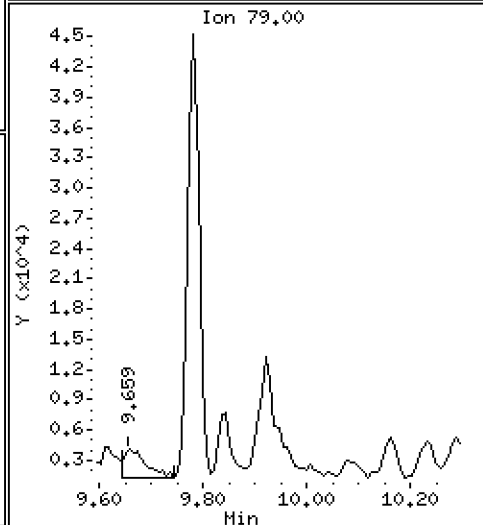
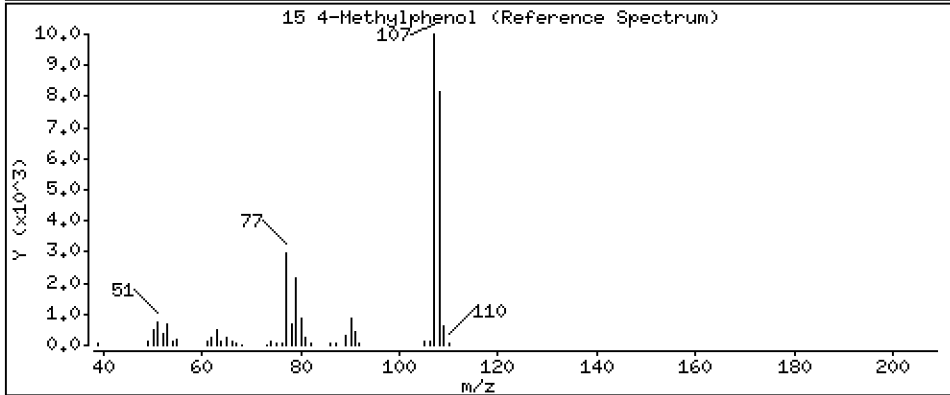
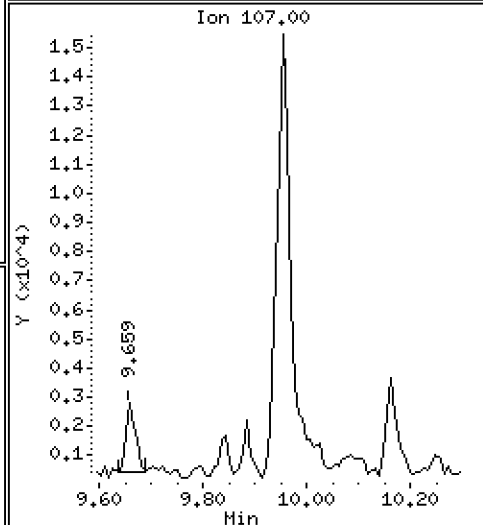
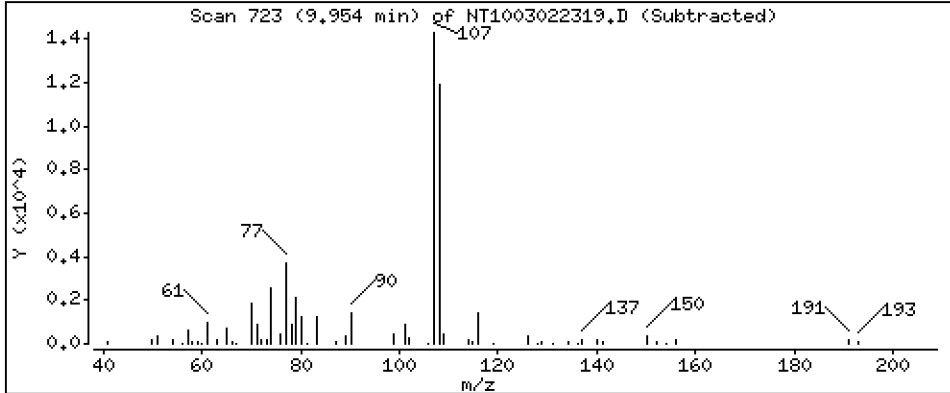
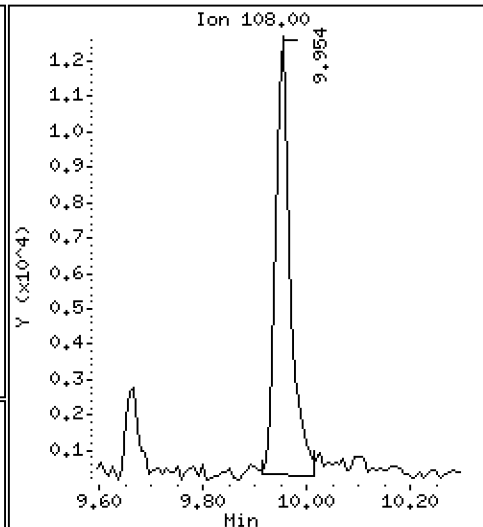
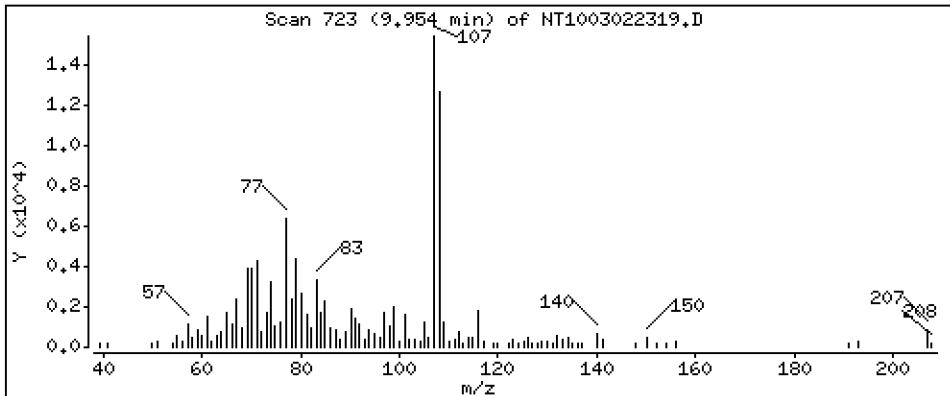
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1216 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

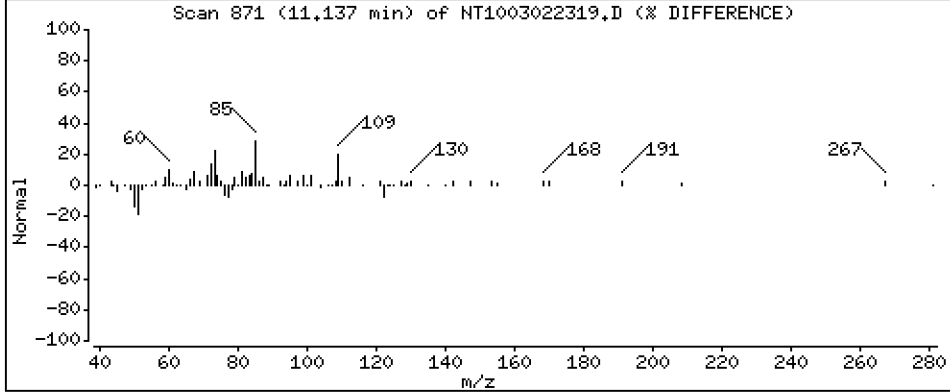
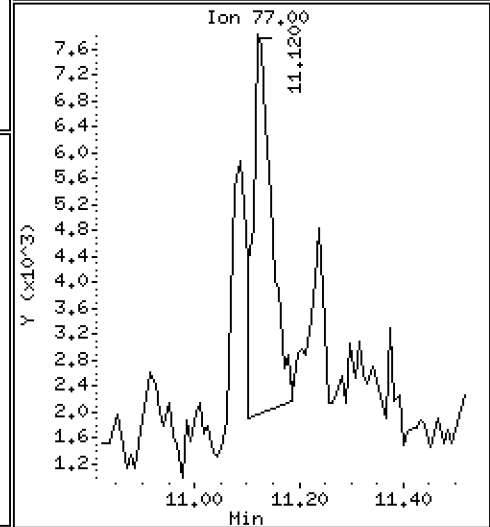
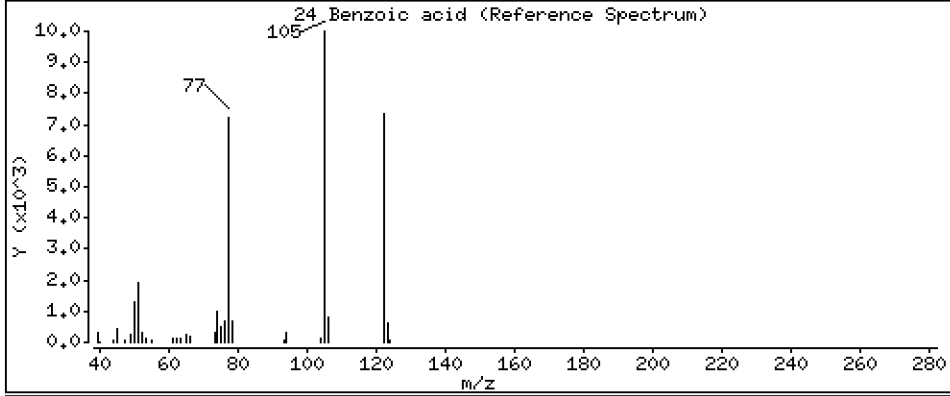
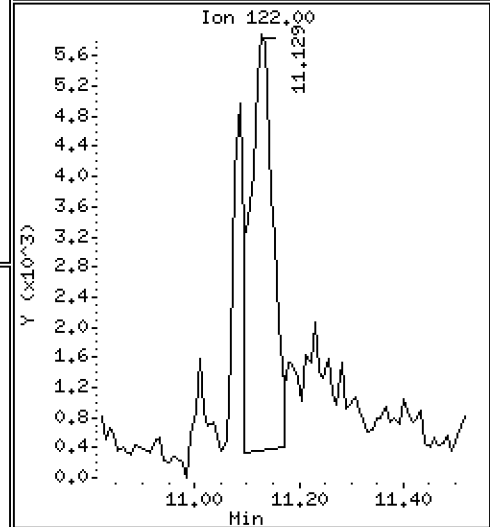
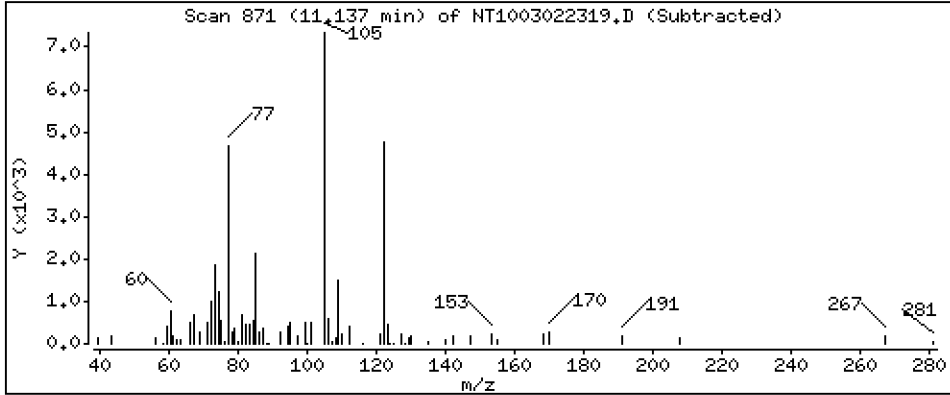
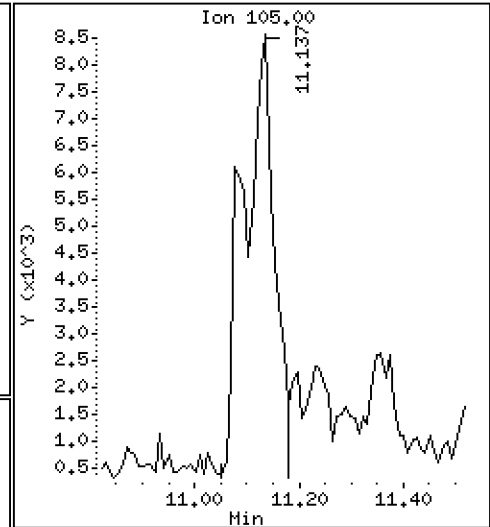
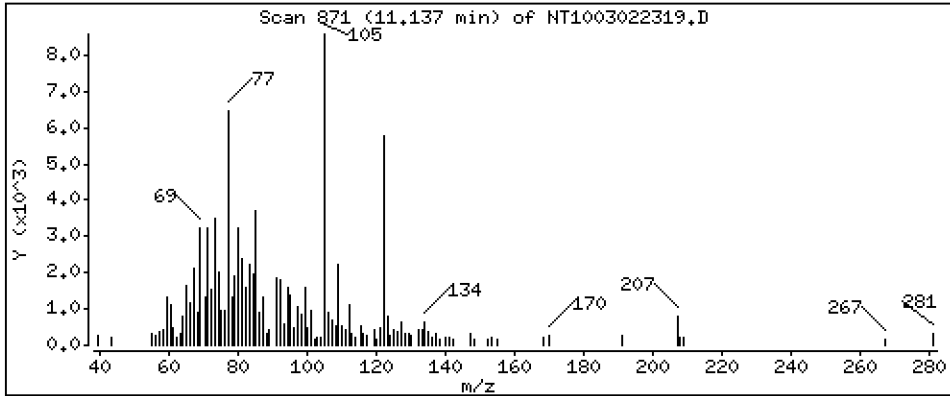
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3096 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

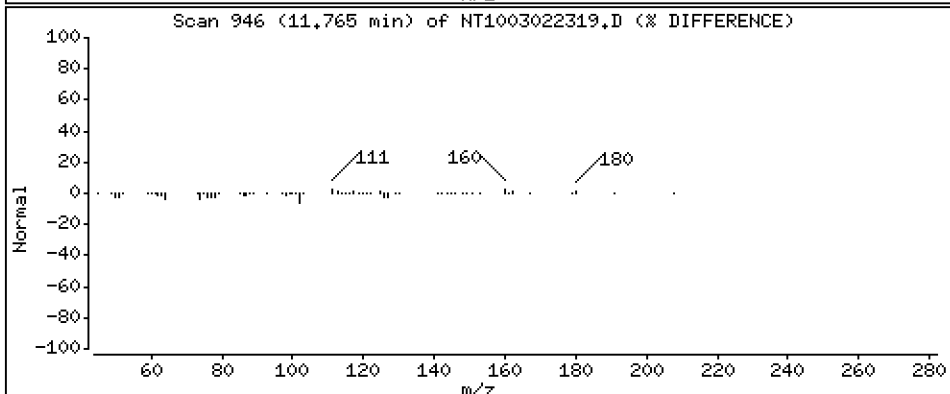
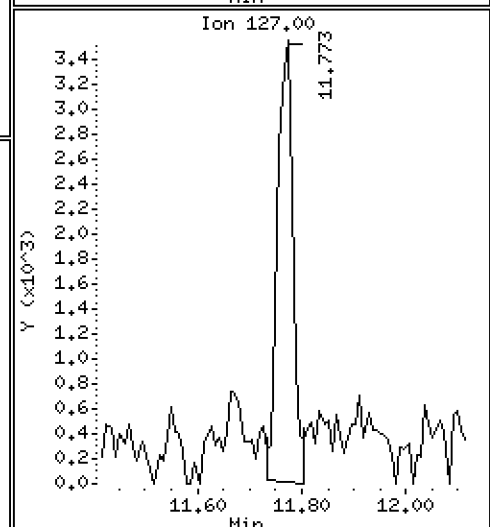
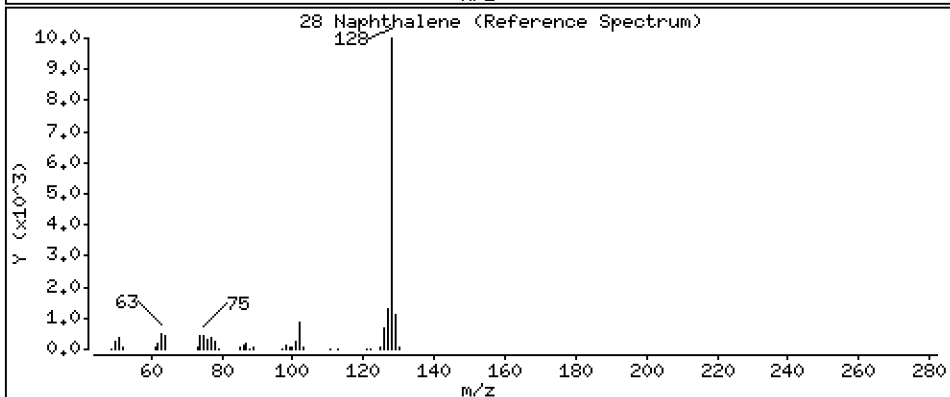
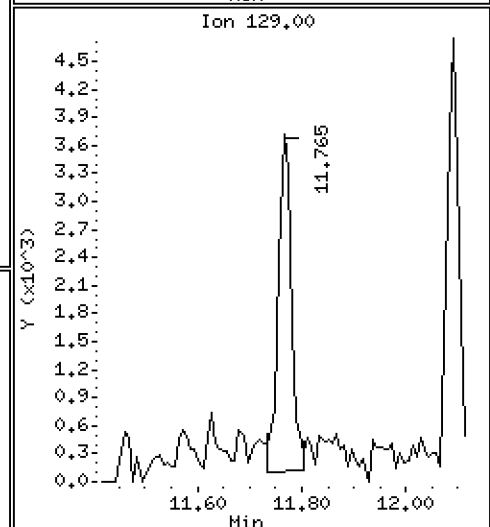
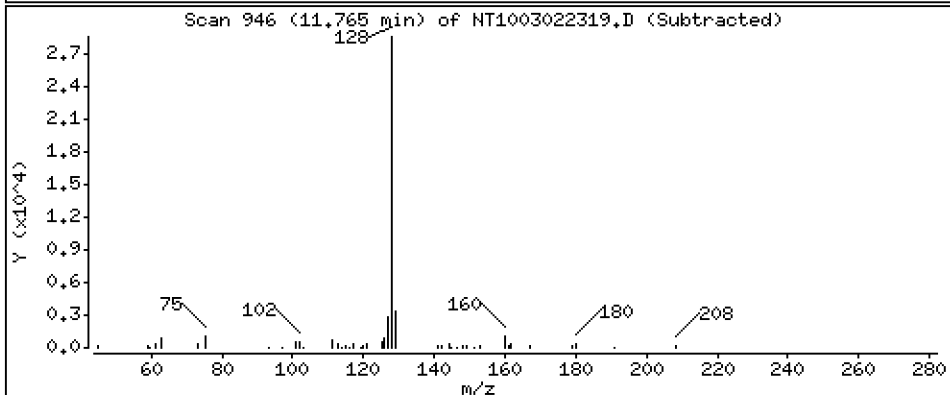
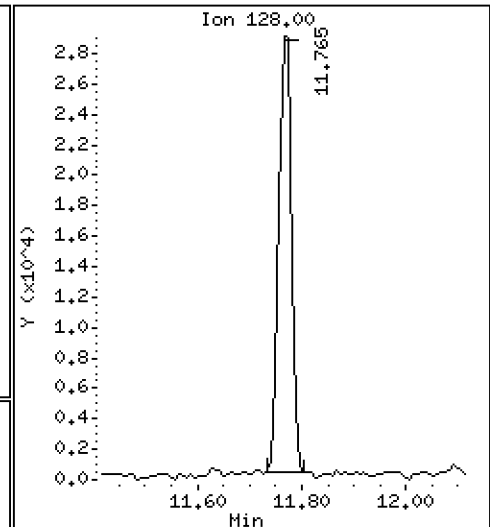
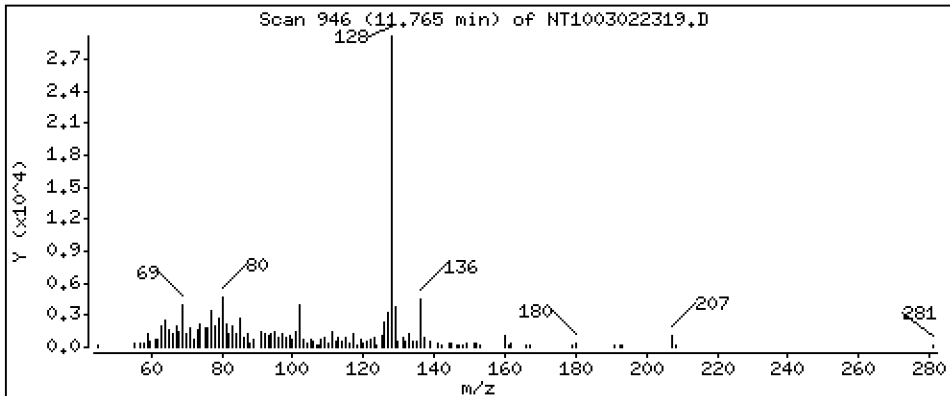
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,09391 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

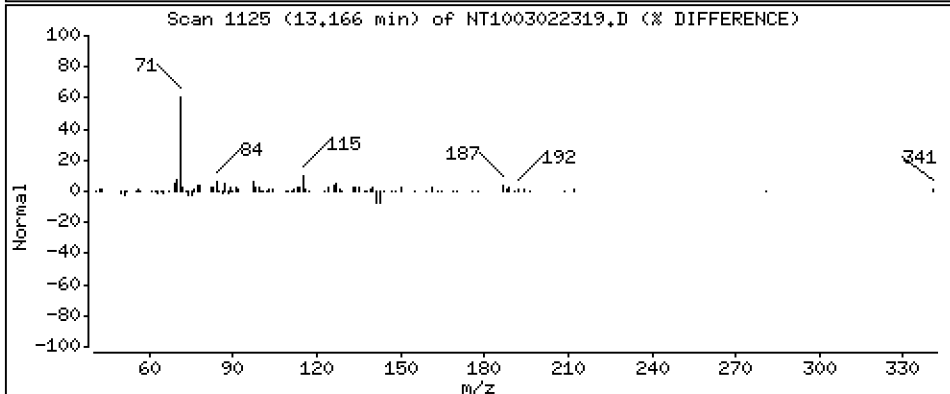
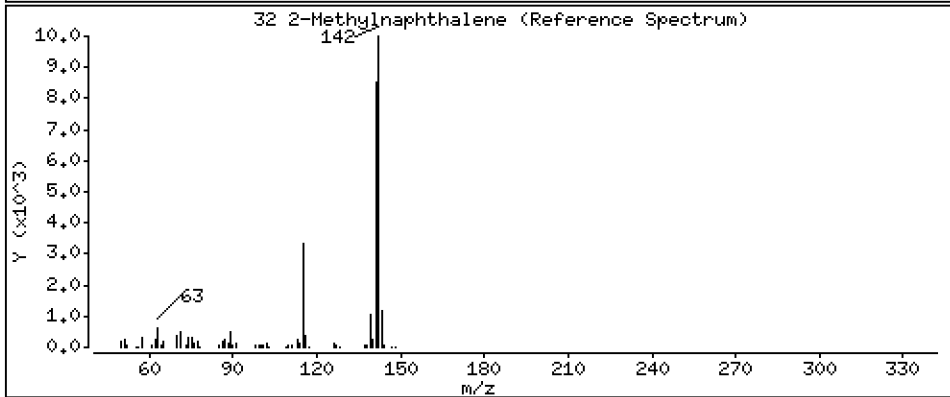
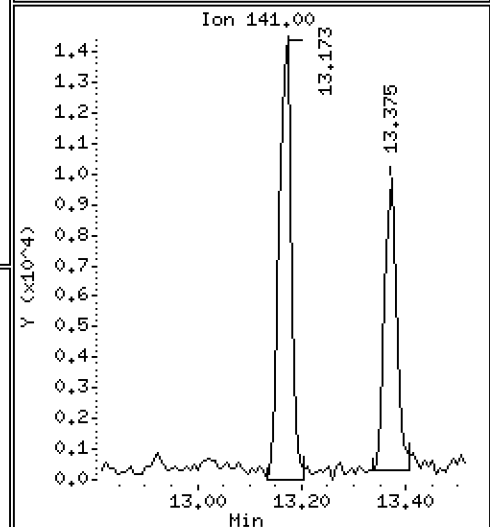
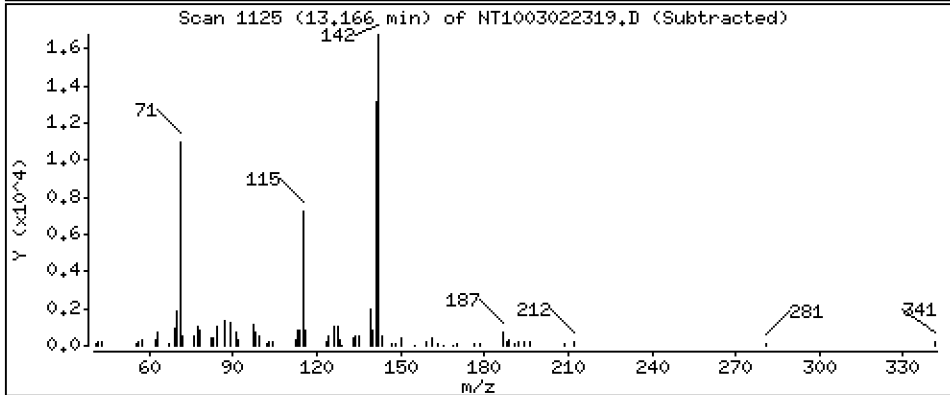
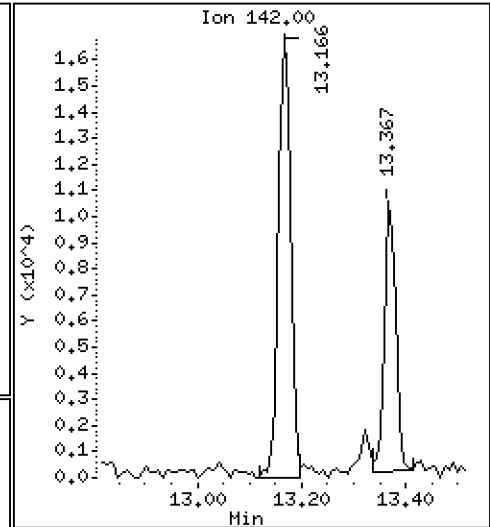
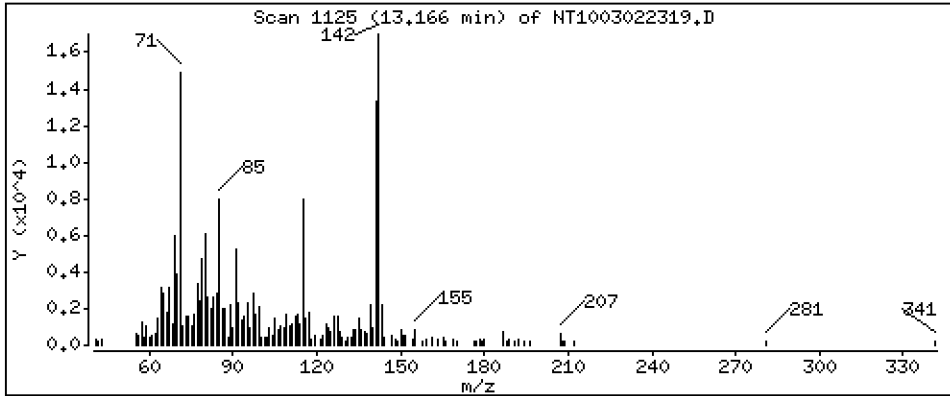
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.07656 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

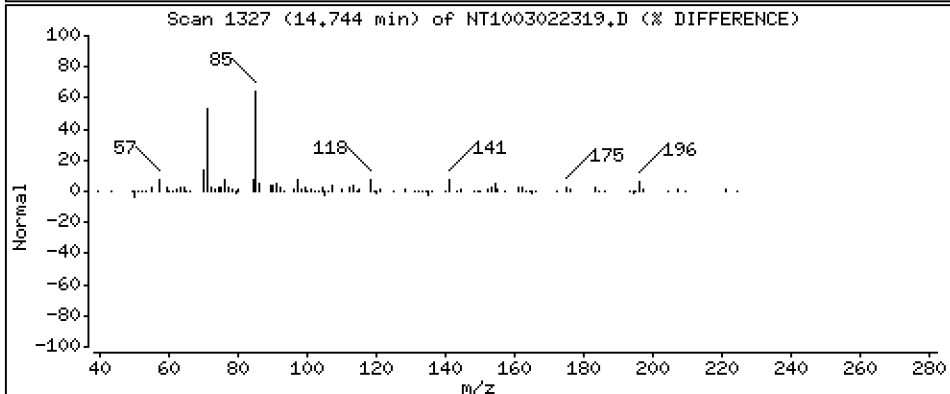
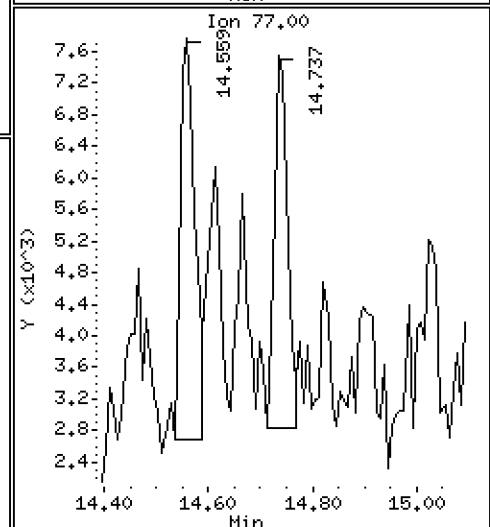
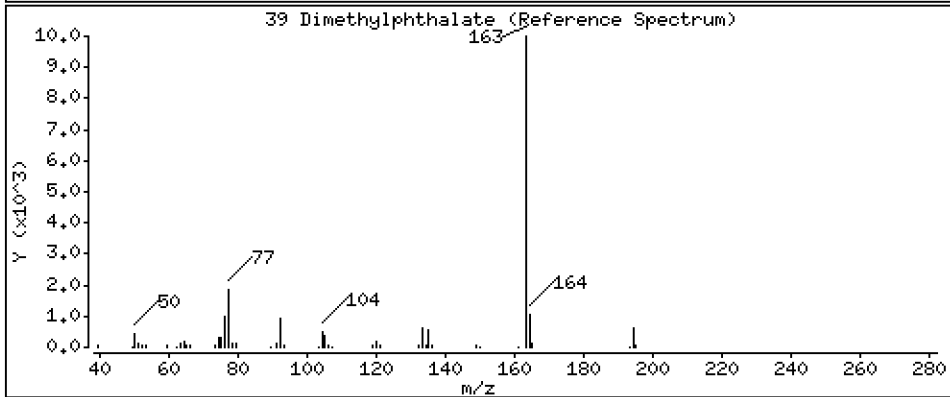
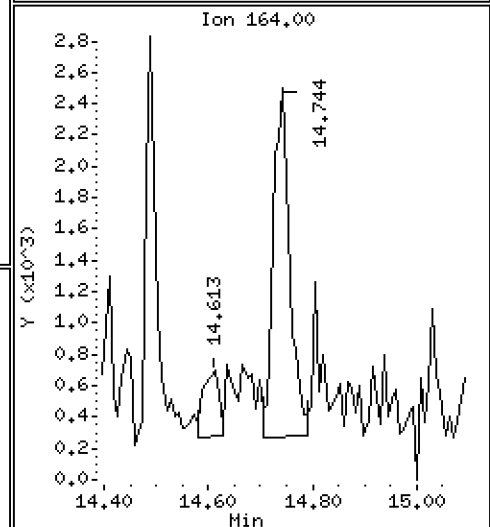
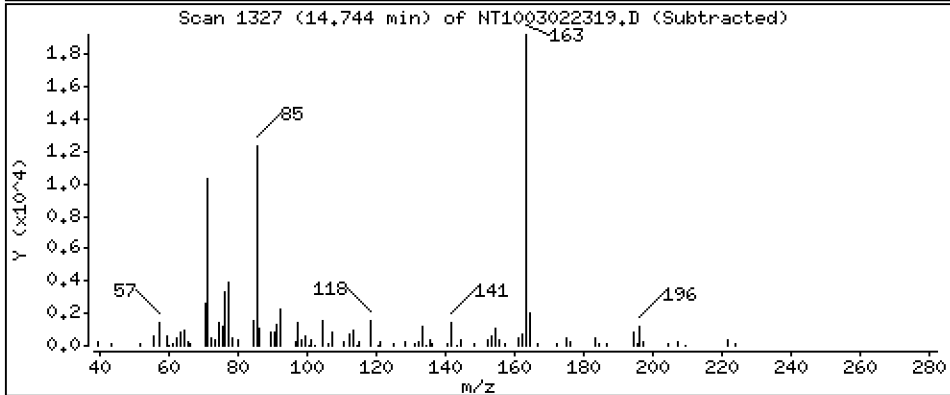
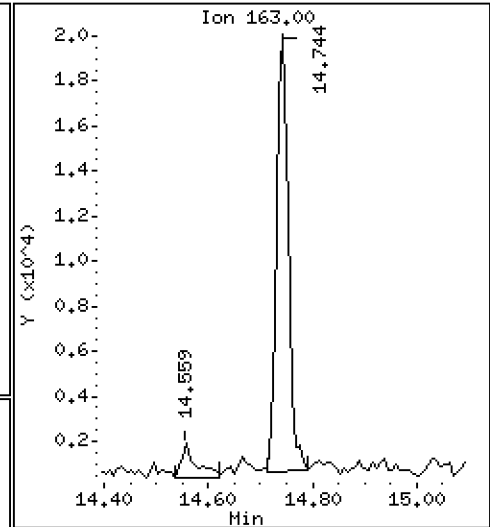
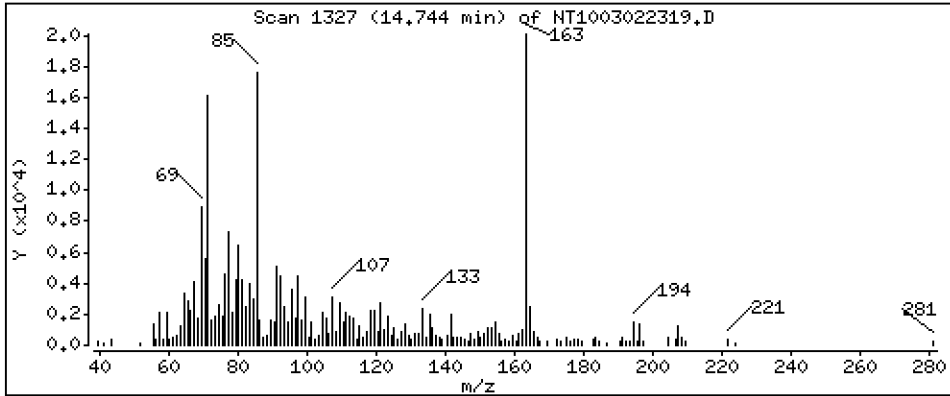
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.08923 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

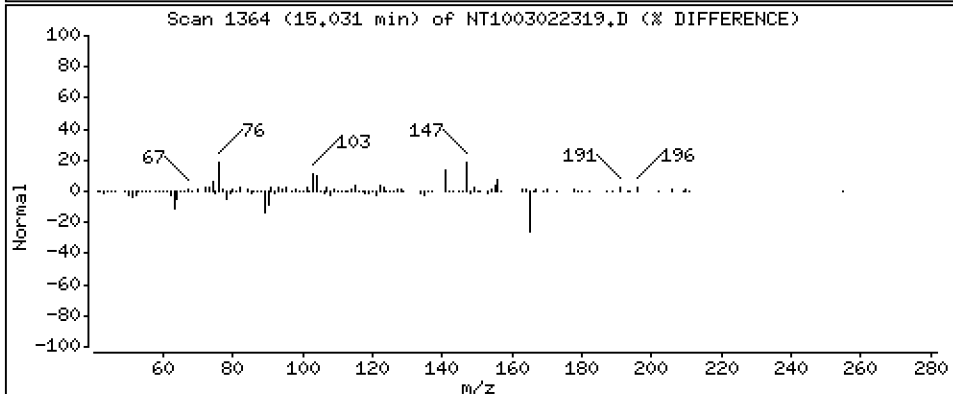
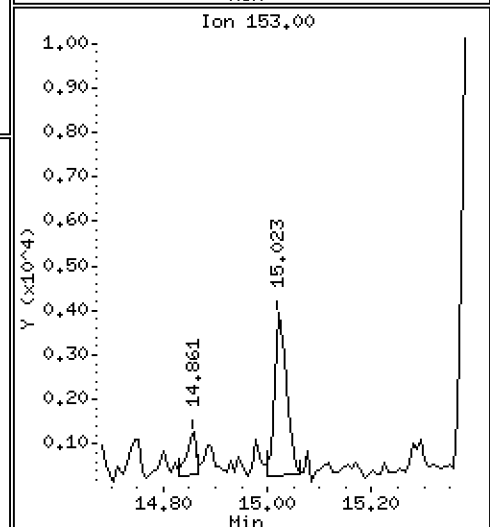
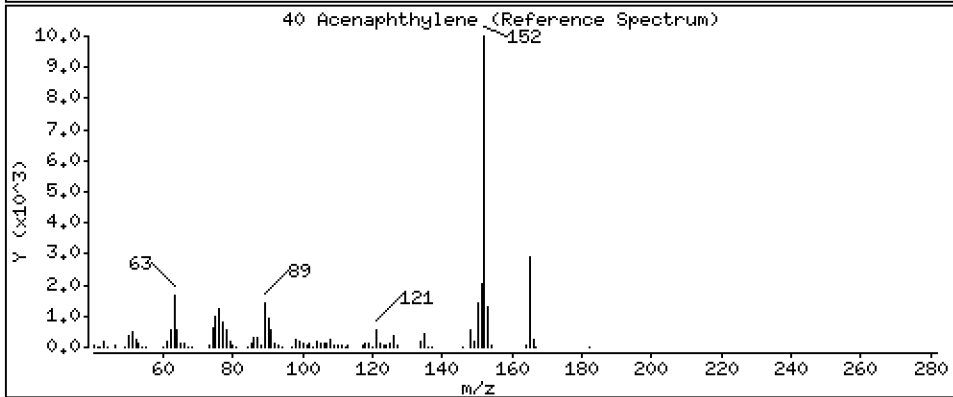
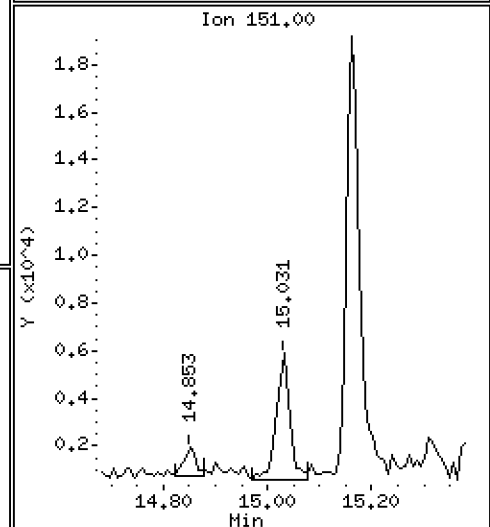
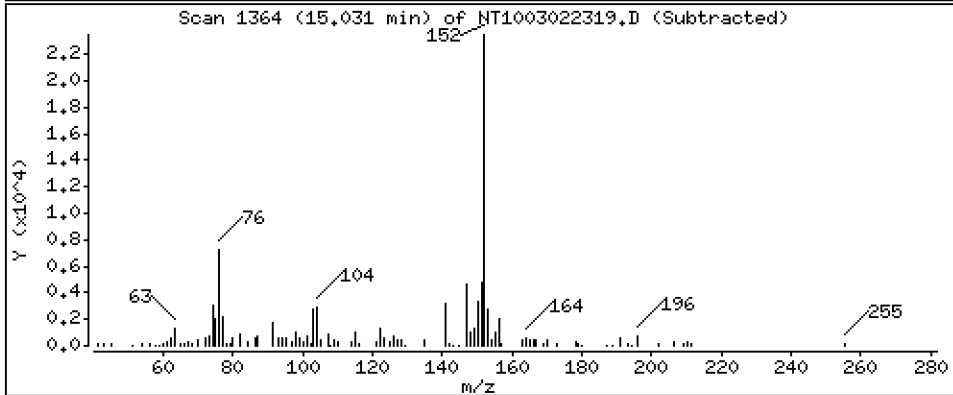
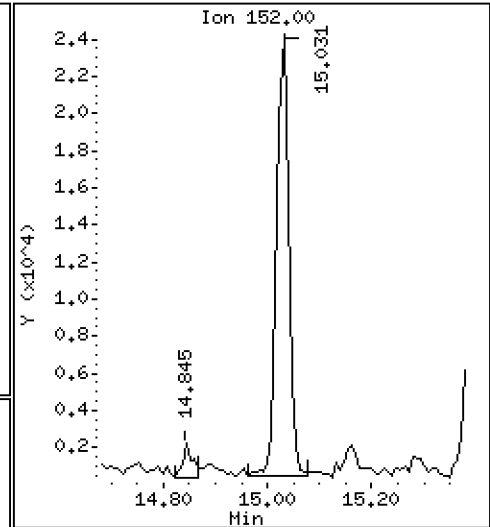
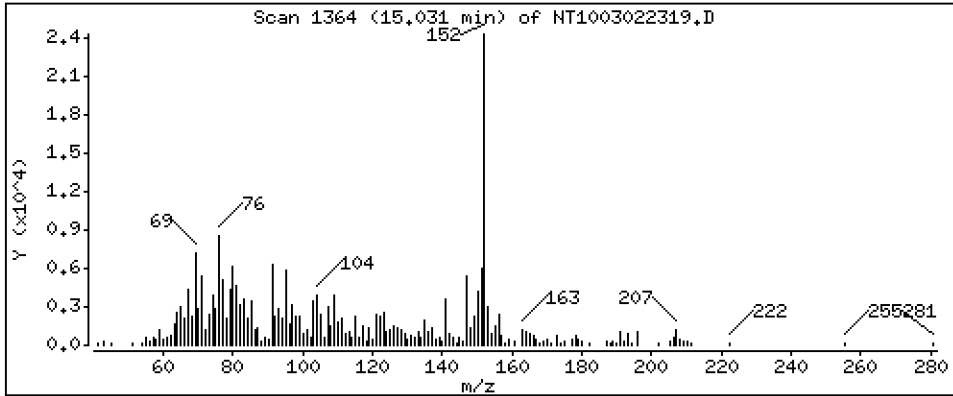
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,07560 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

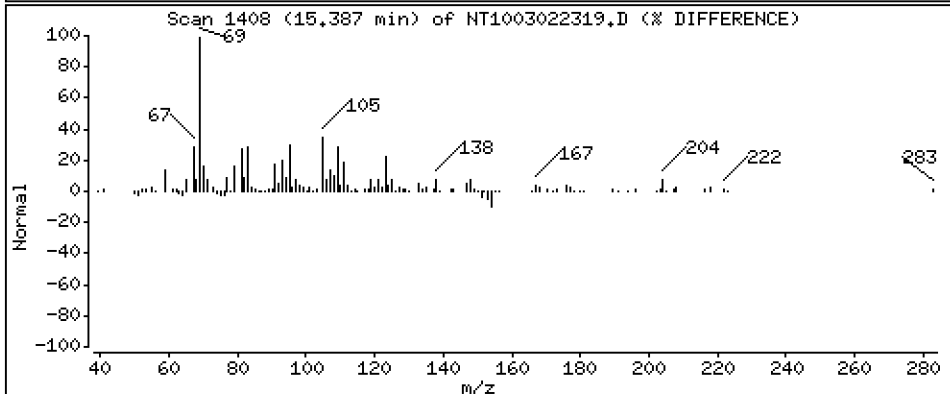
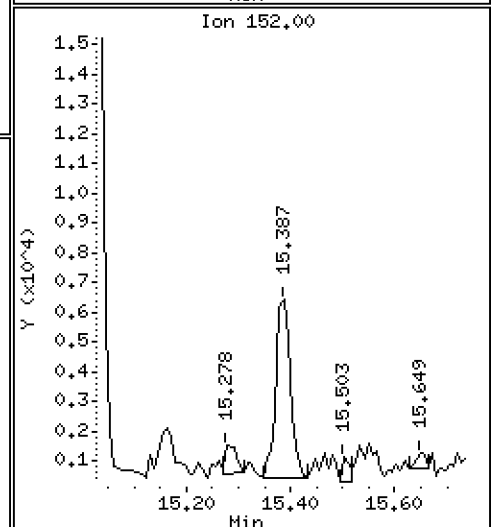
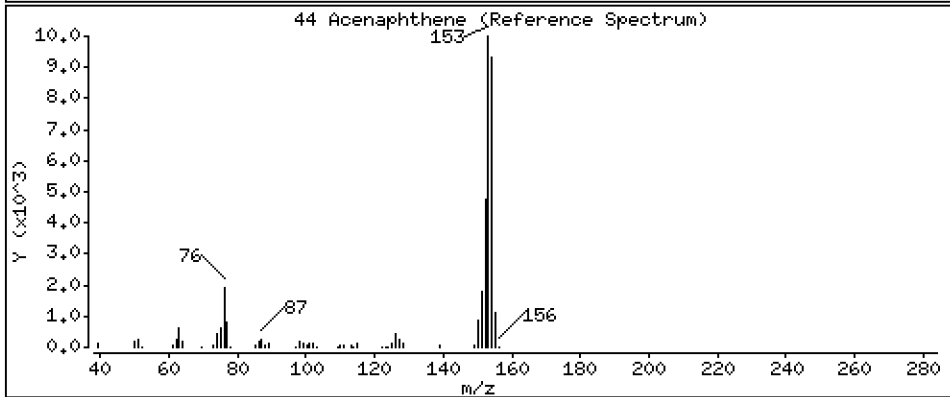
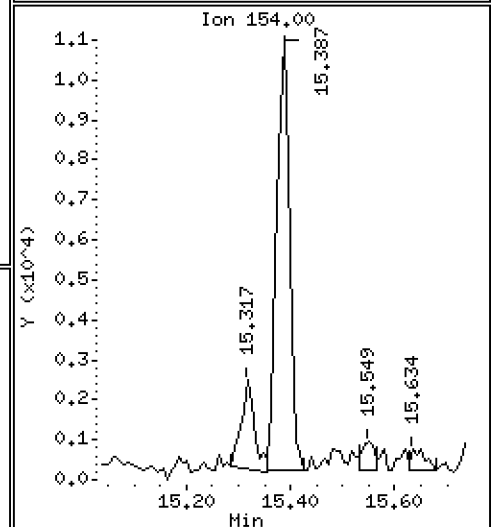
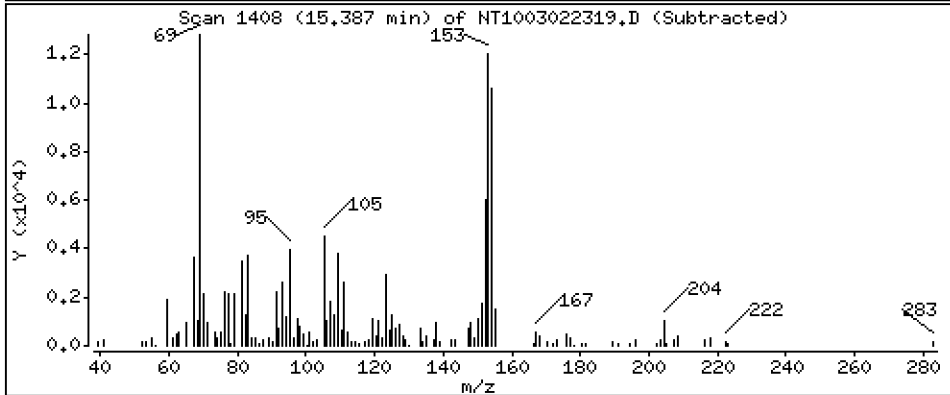
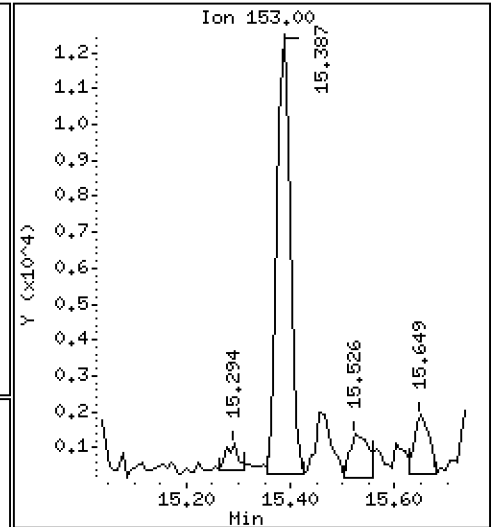
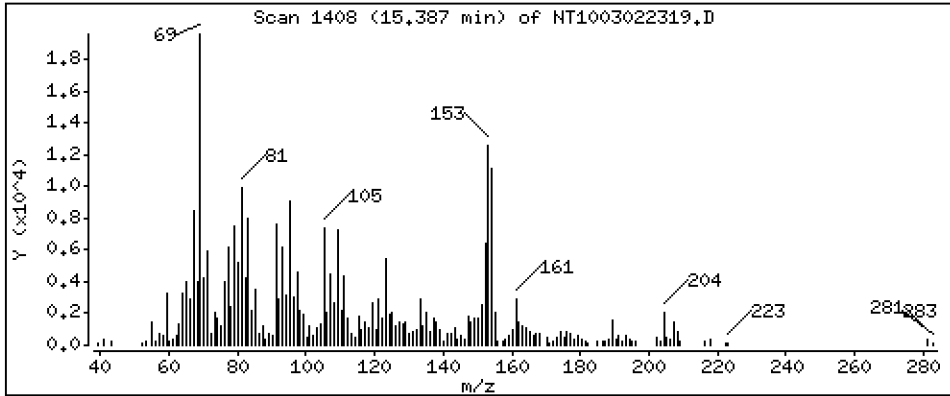
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.07096 ug/mL





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

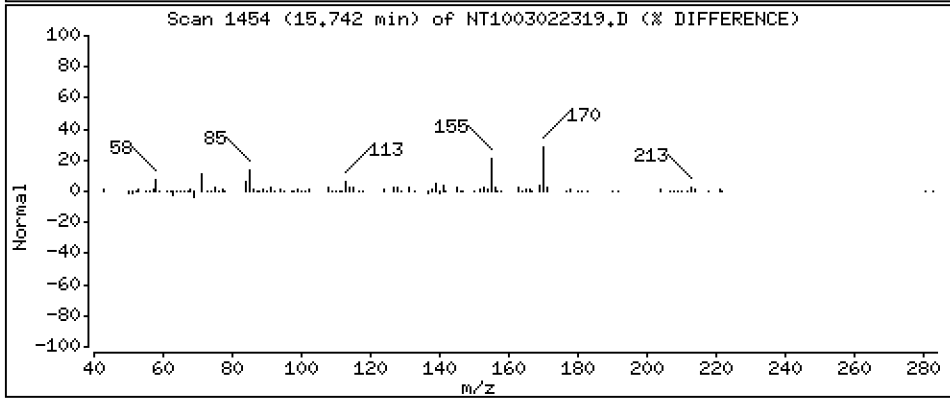
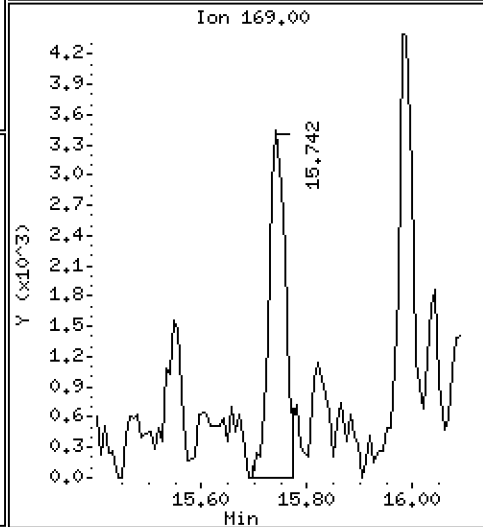
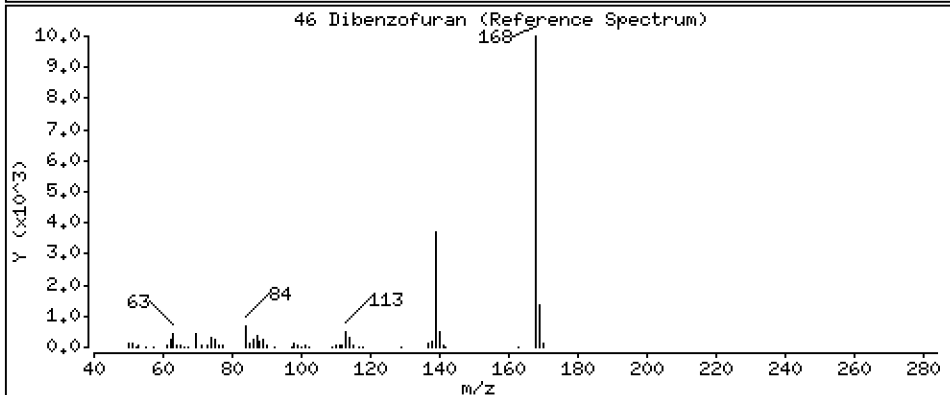
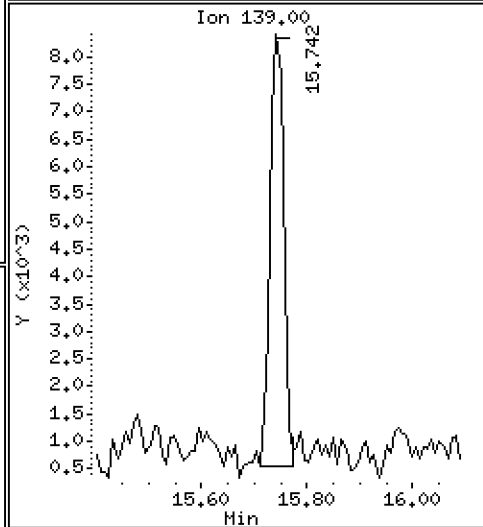
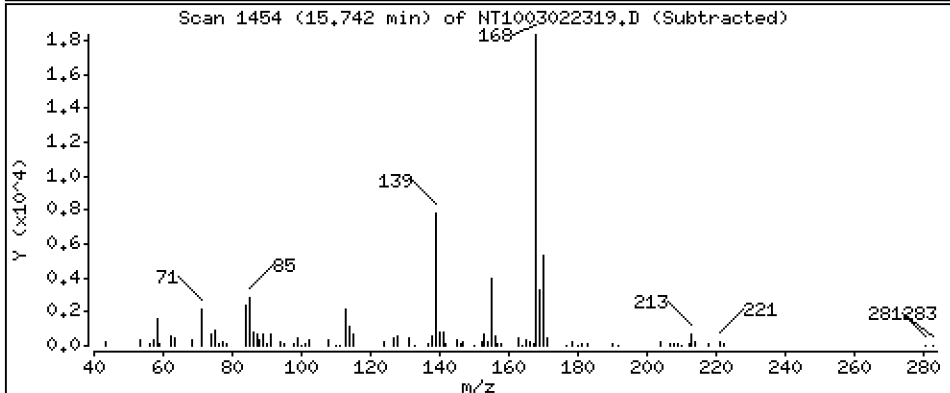
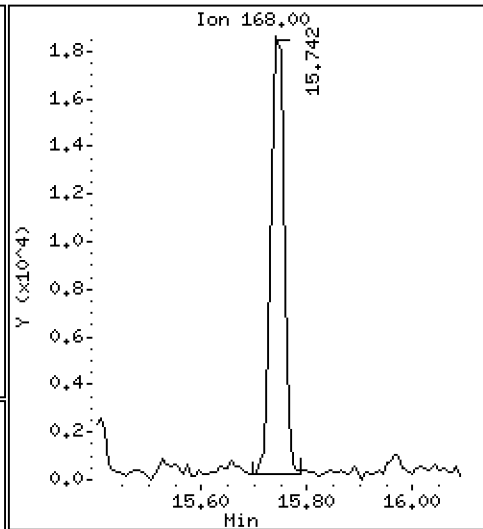
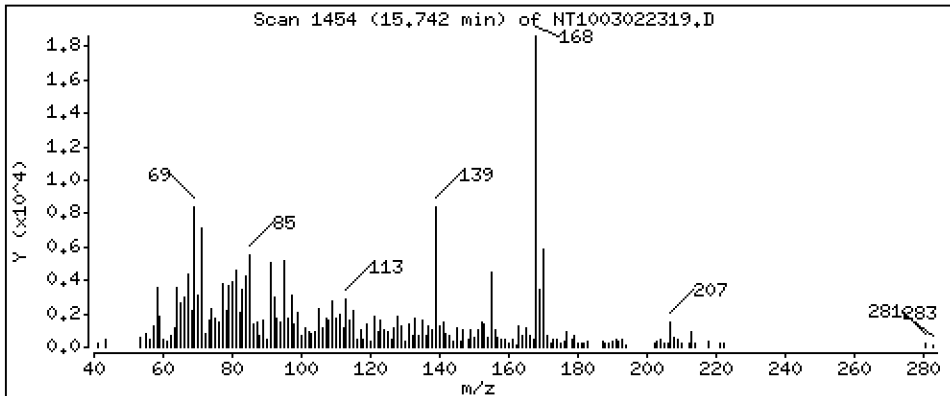
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.07137 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

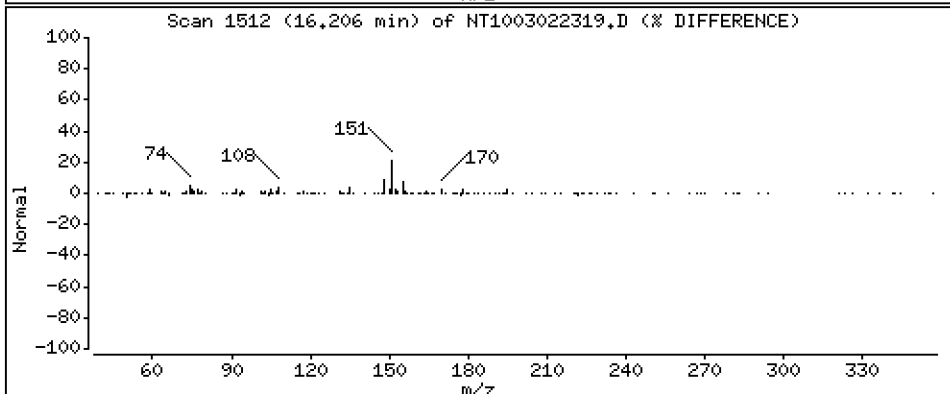
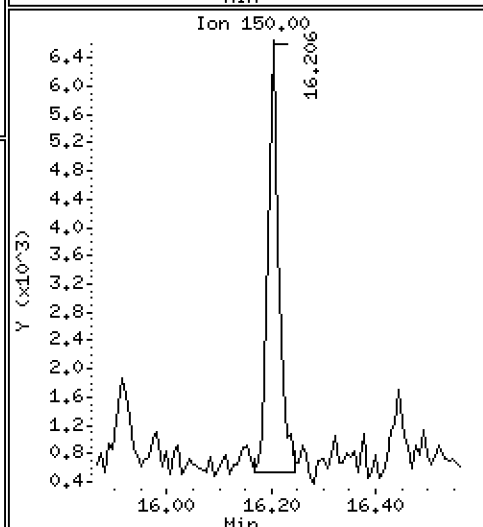
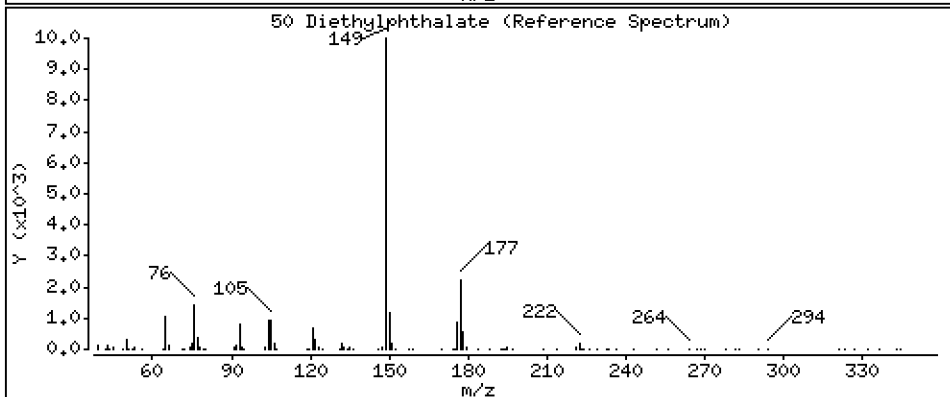
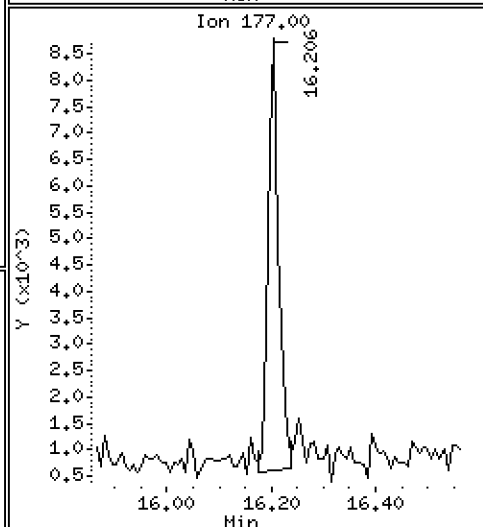
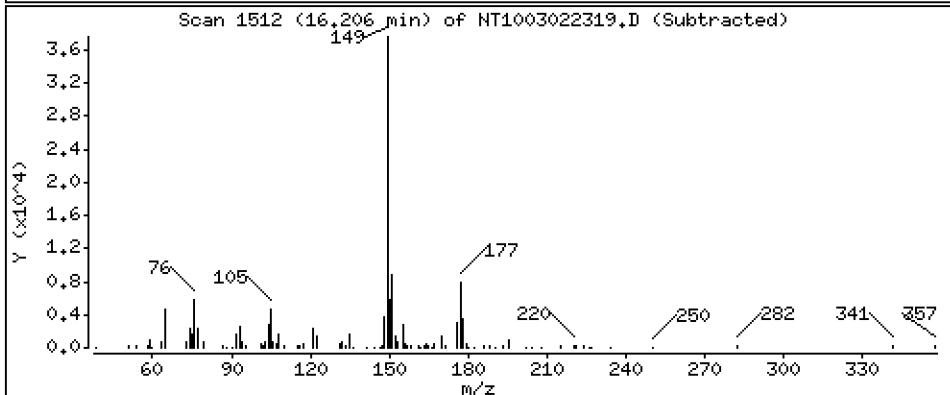
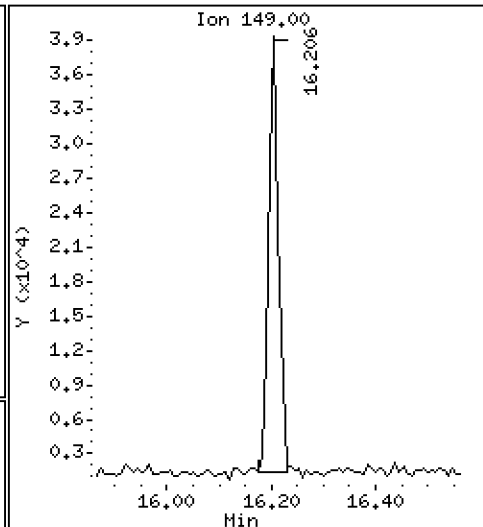
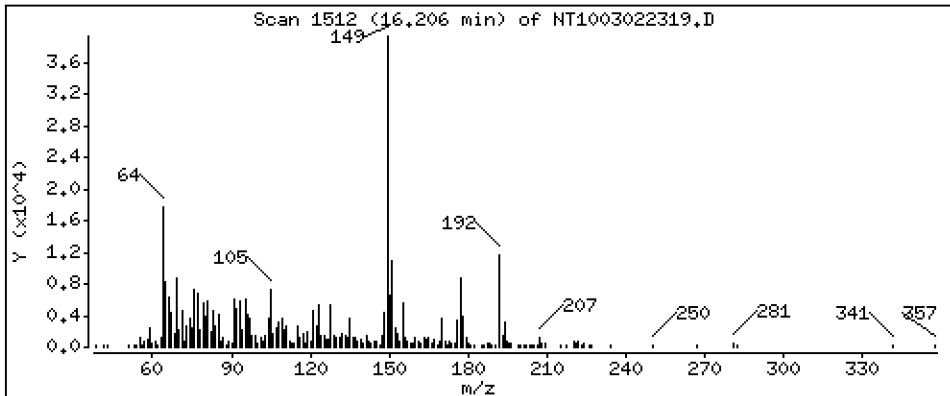
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,1428 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

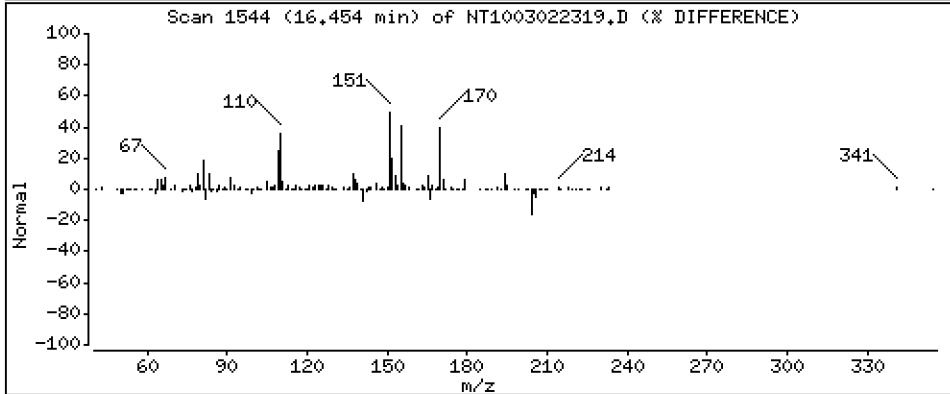
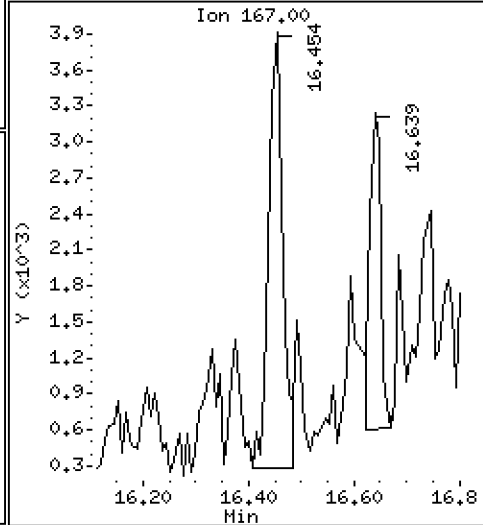
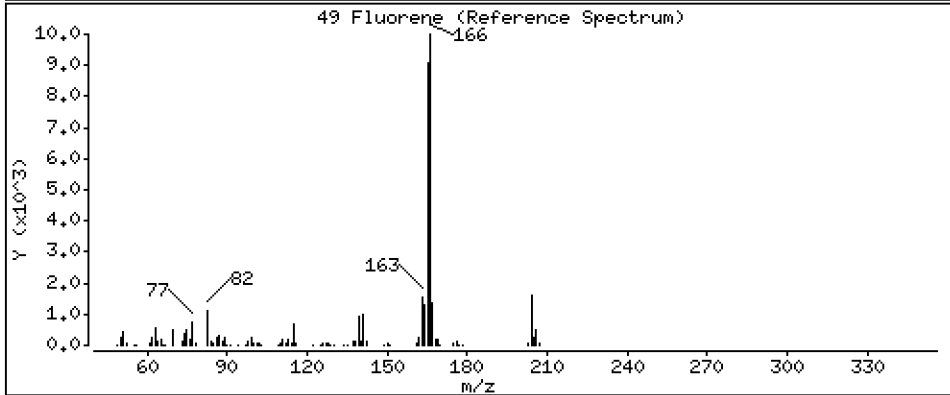
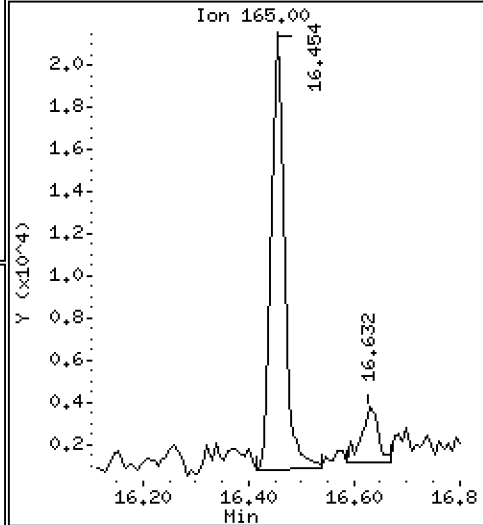
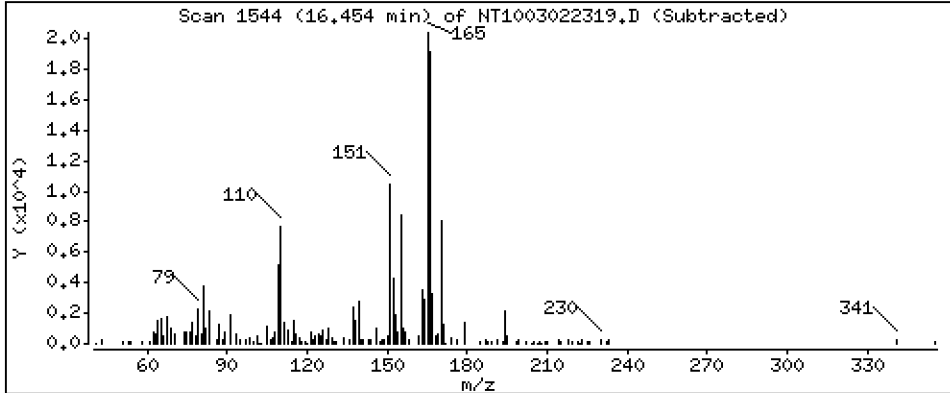
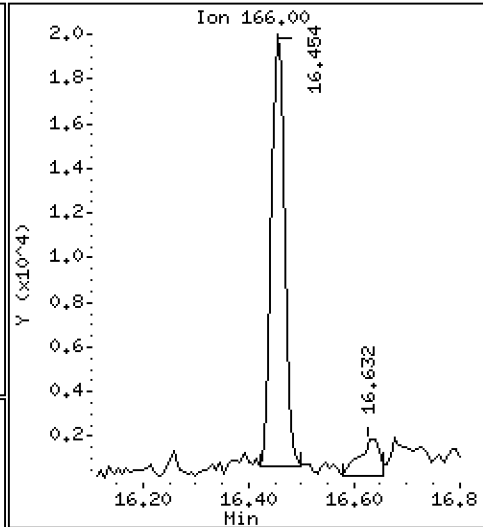
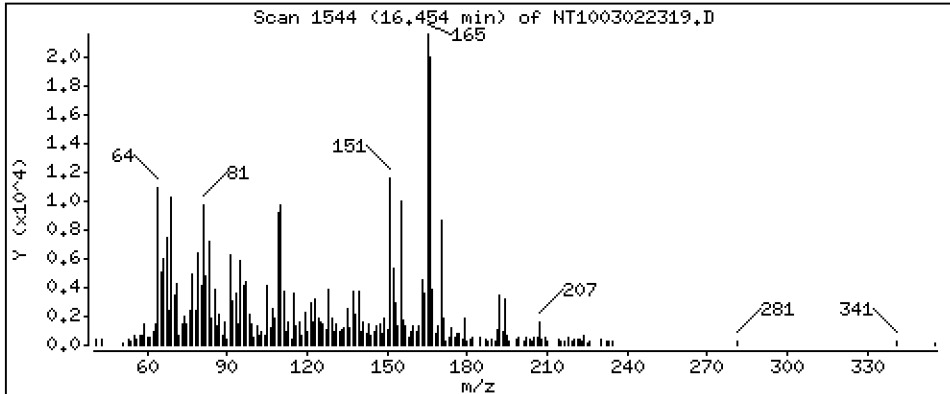
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.09060 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

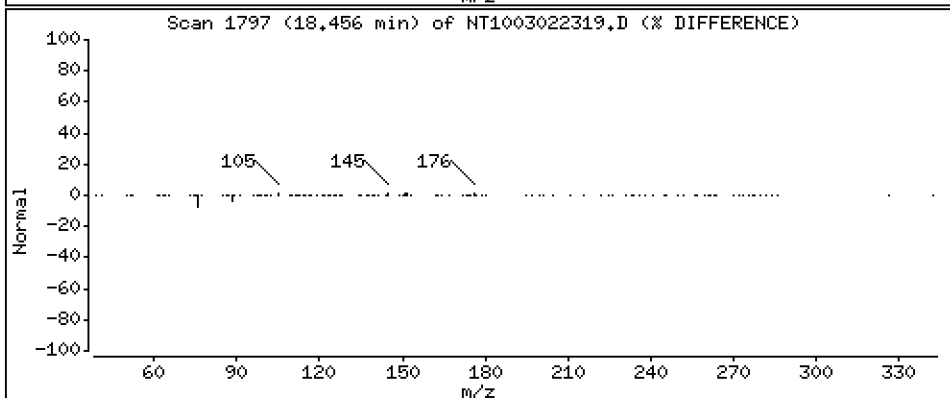
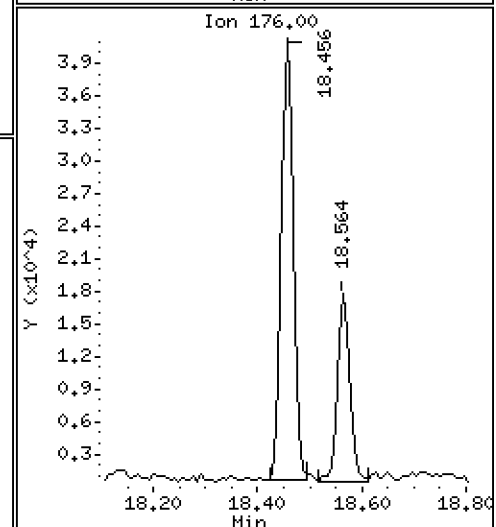
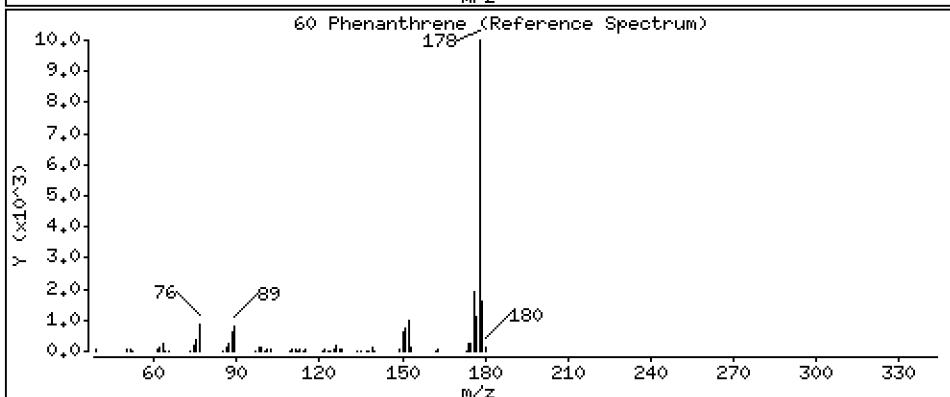
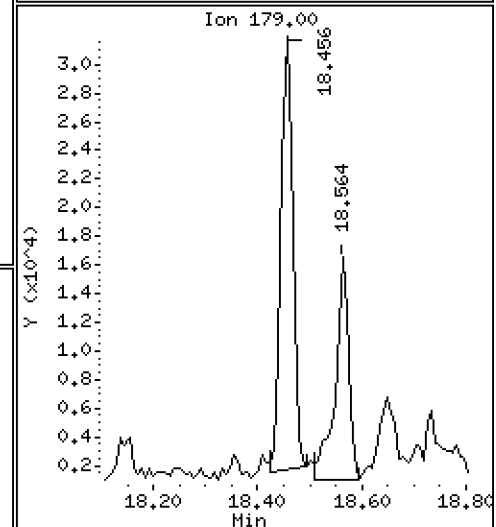
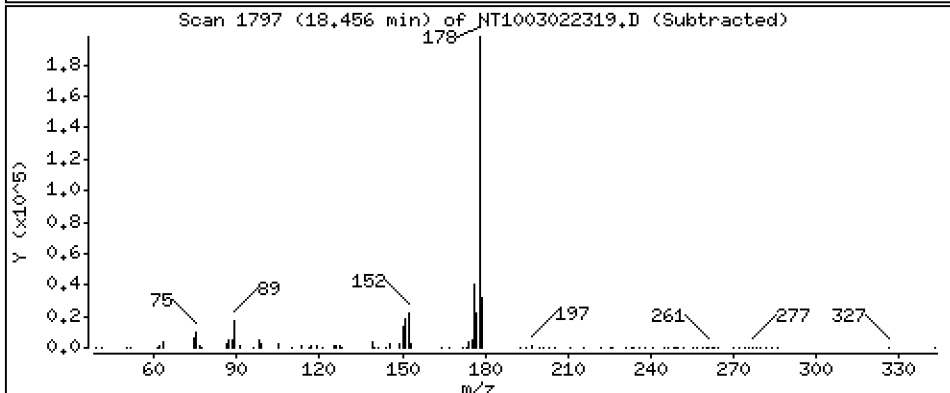
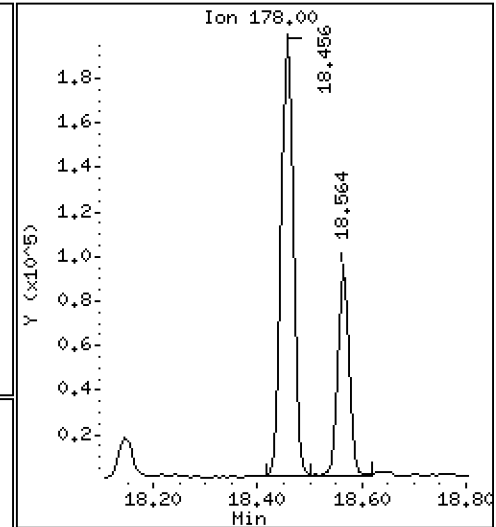
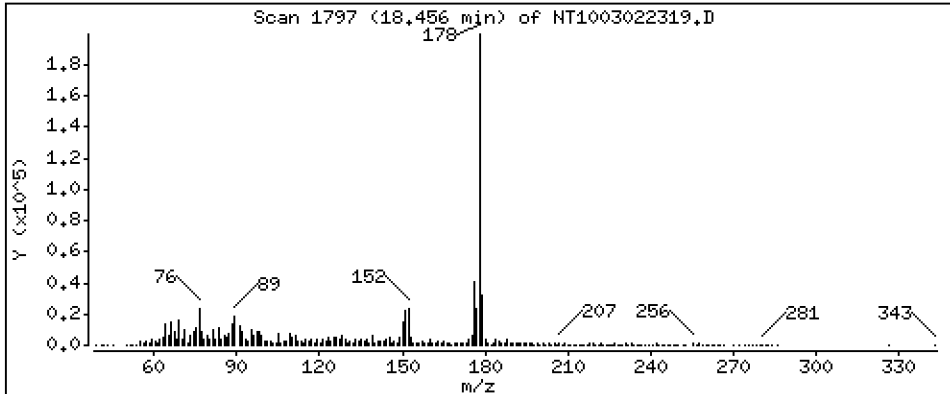
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,6413 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

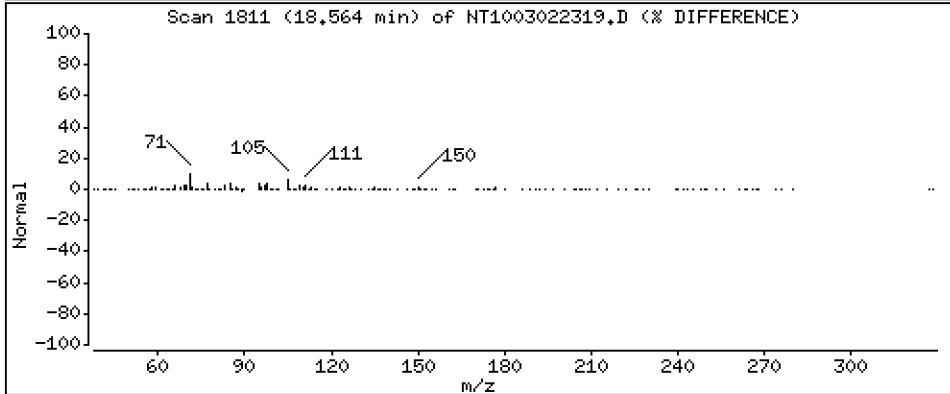
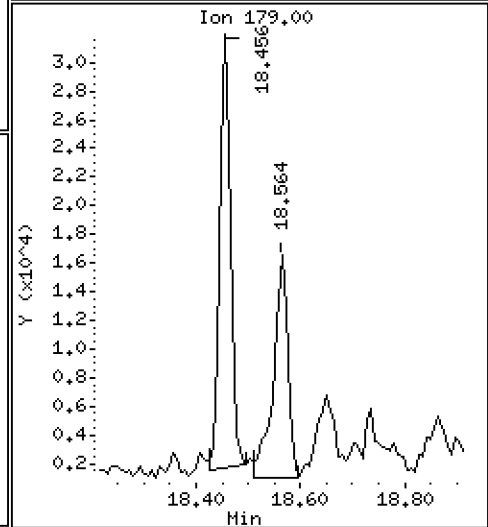
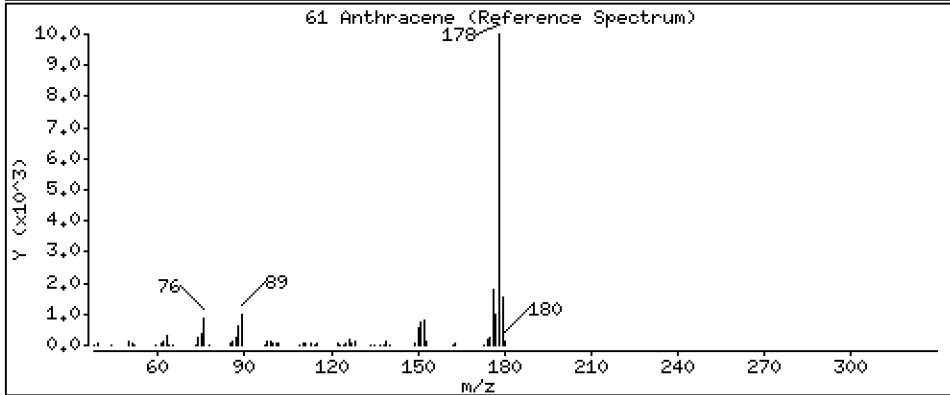
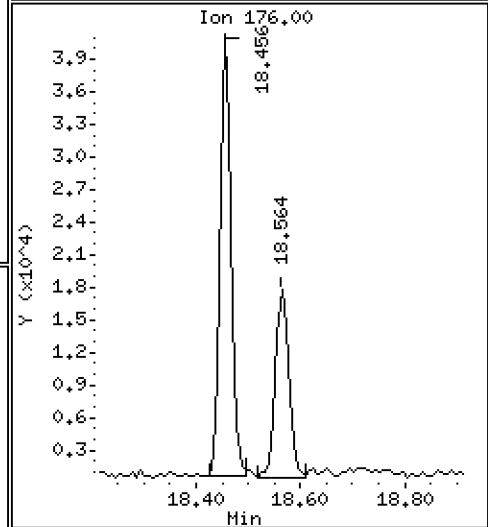
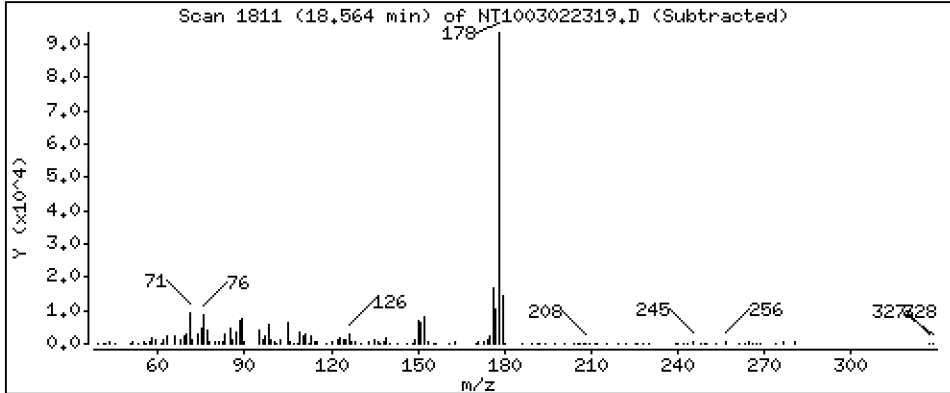
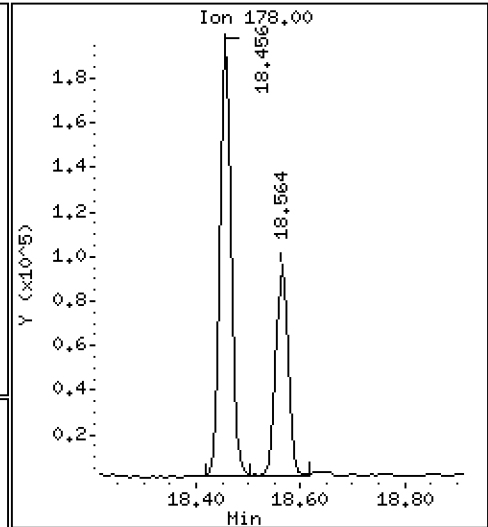
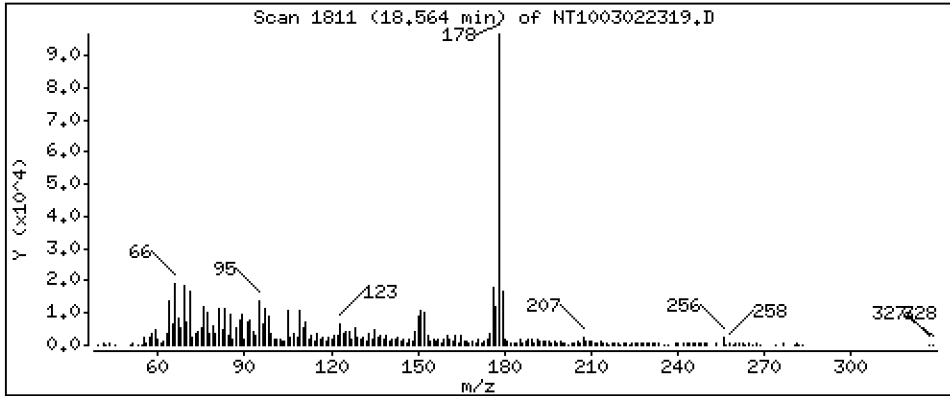
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,3241 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

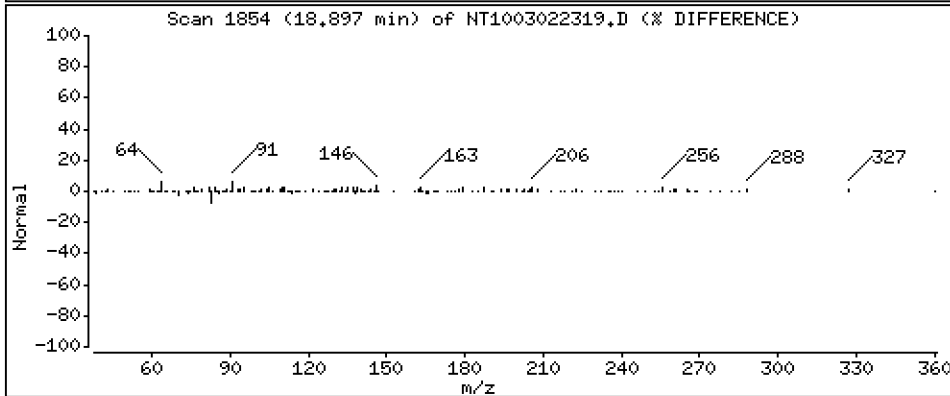
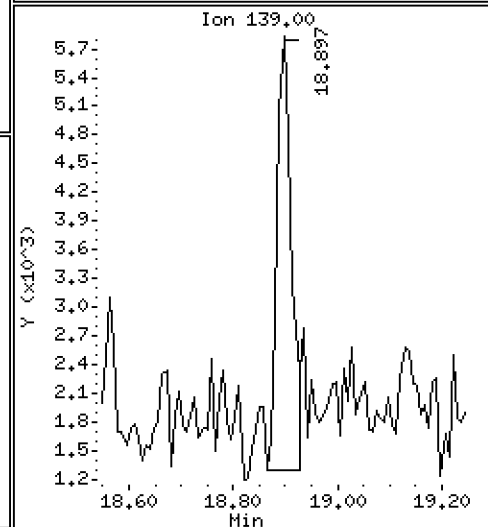
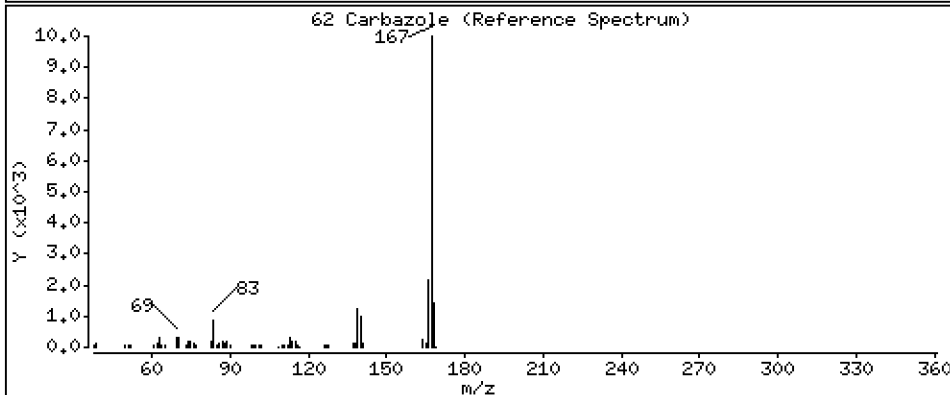
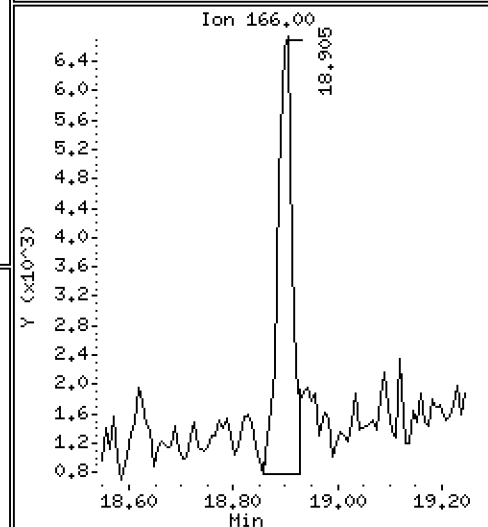
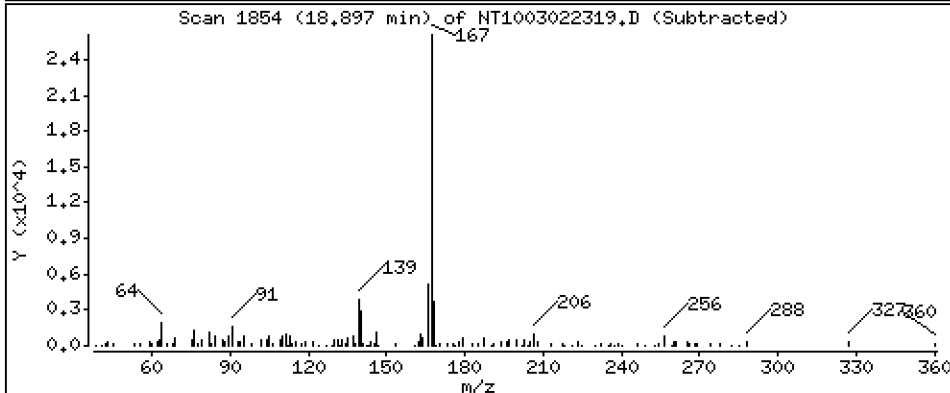
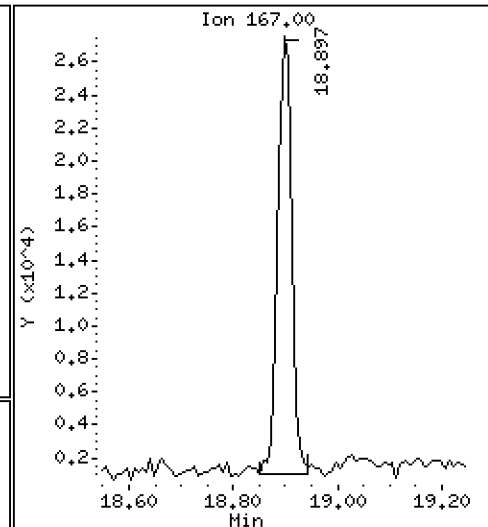
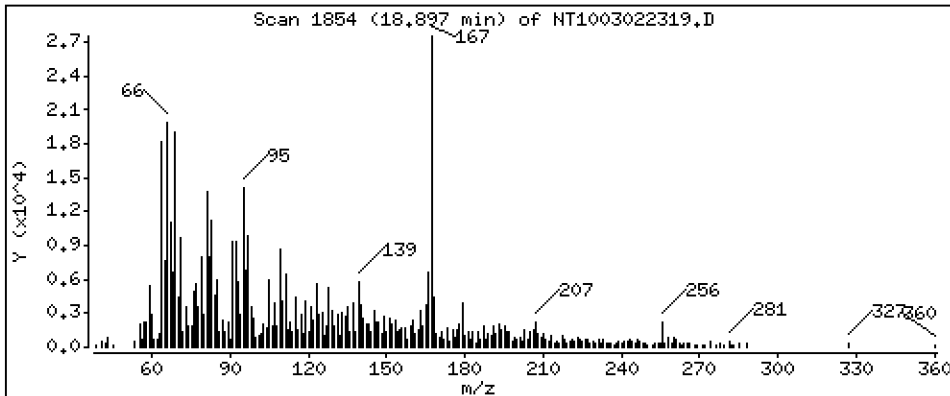
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1137 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

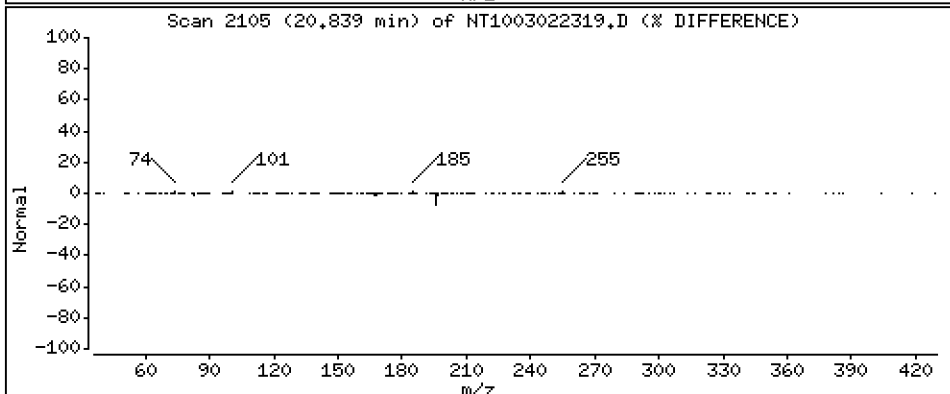
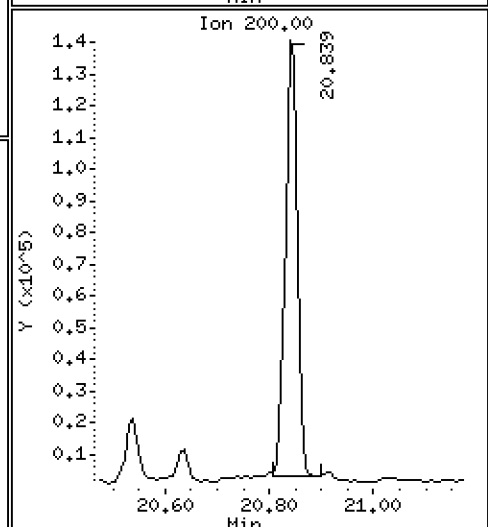
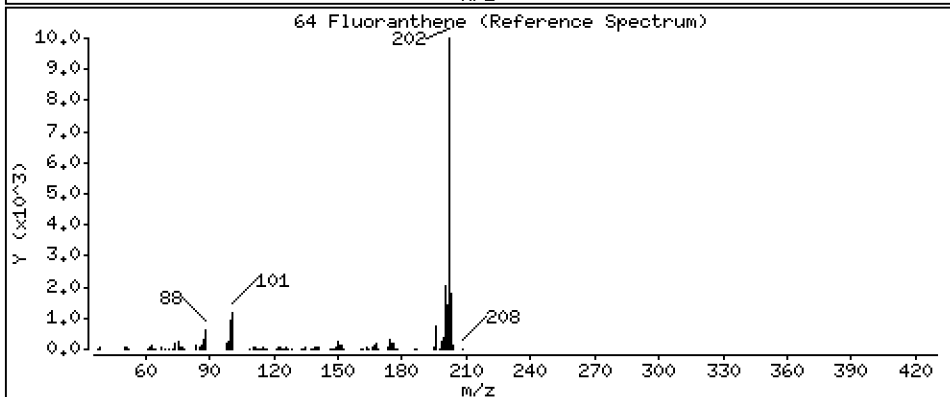
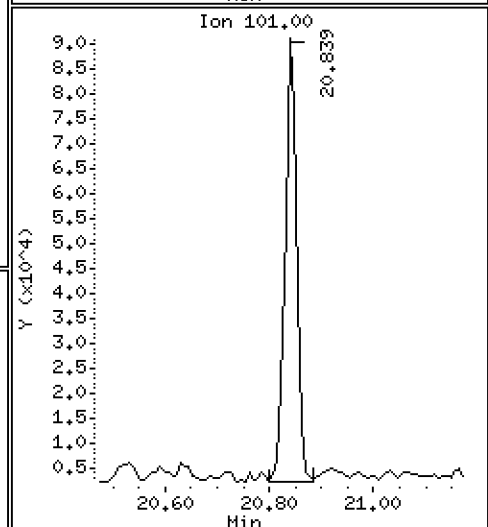
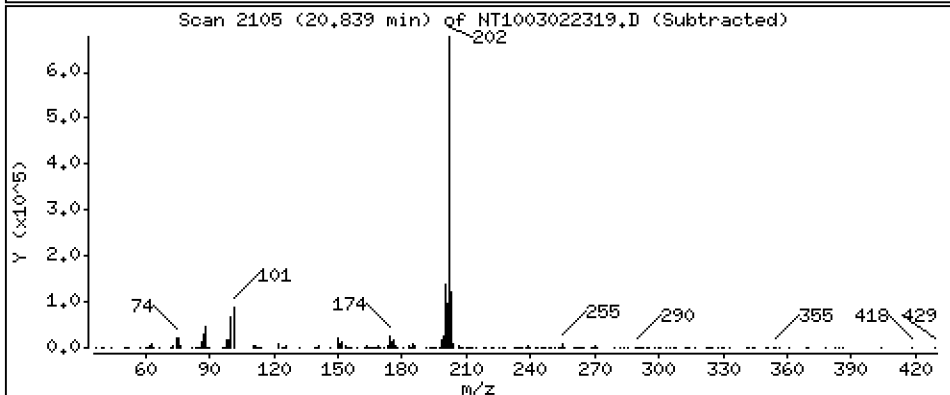
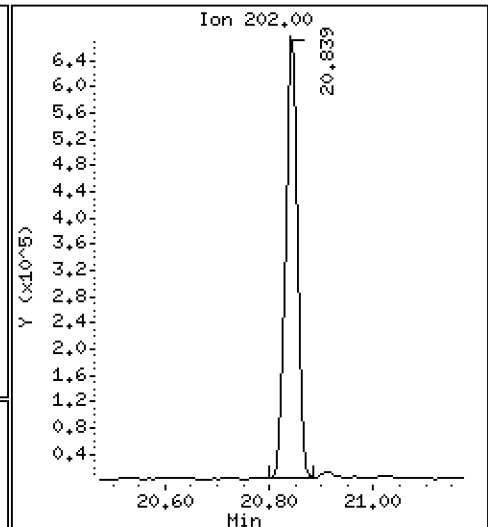
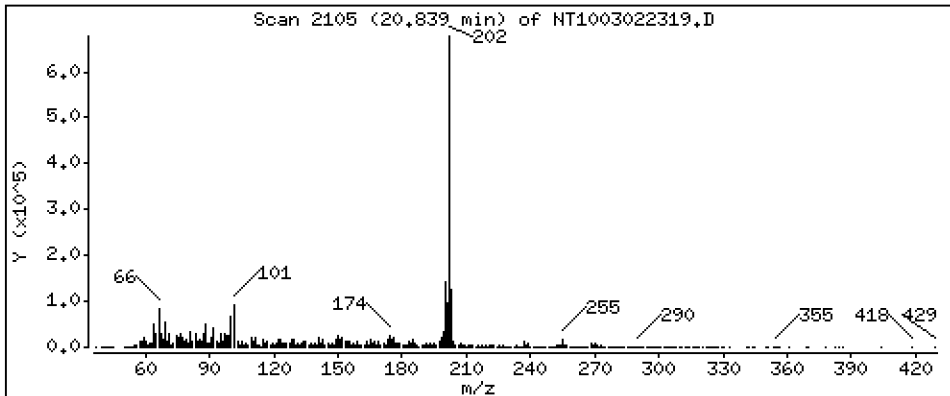
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,508 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

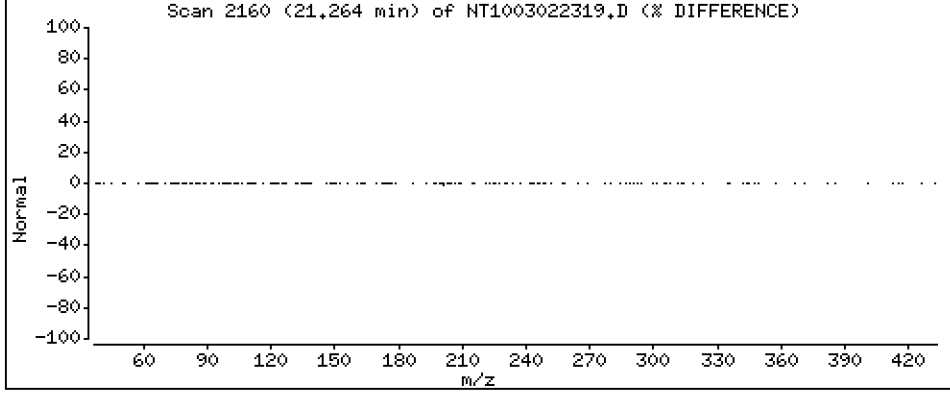
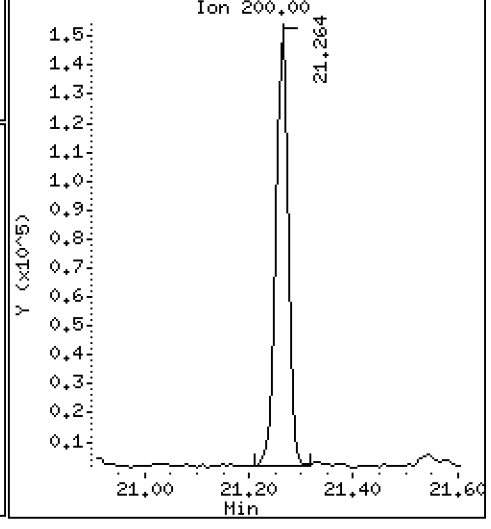
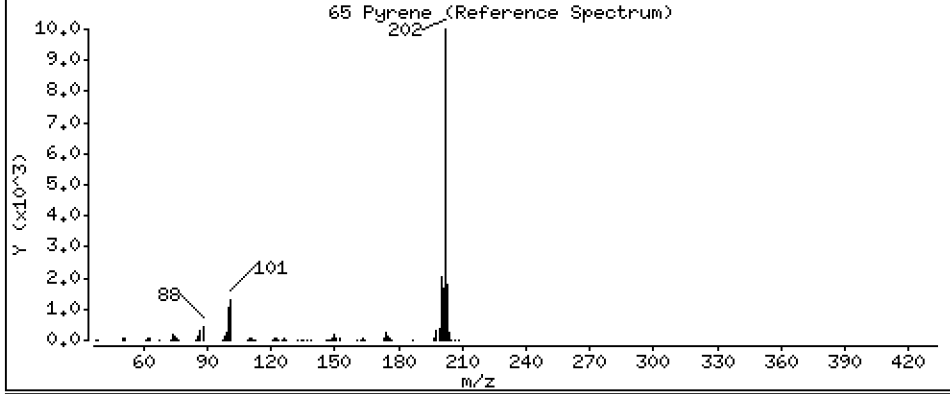
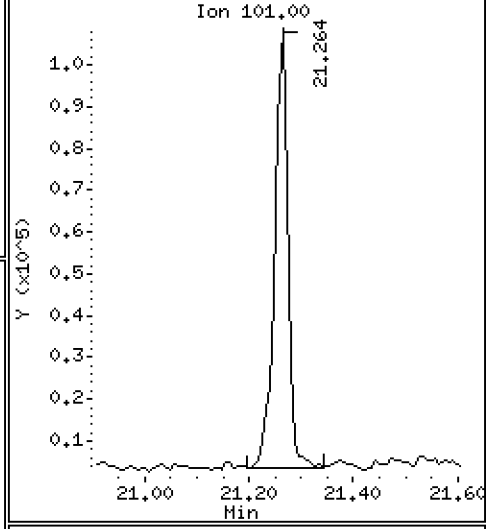
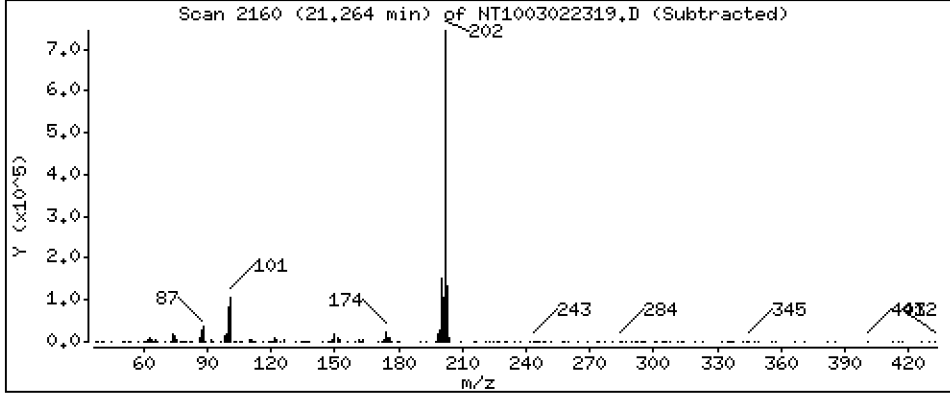
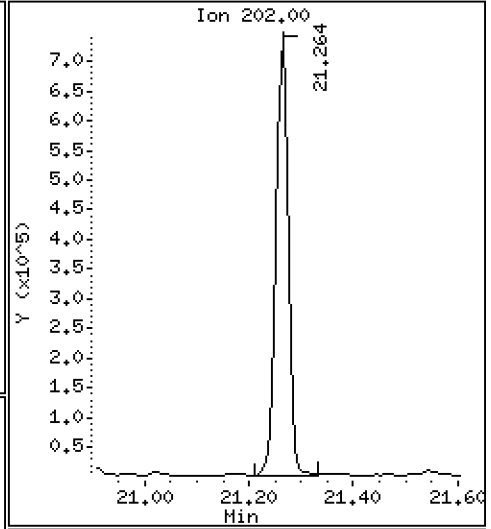
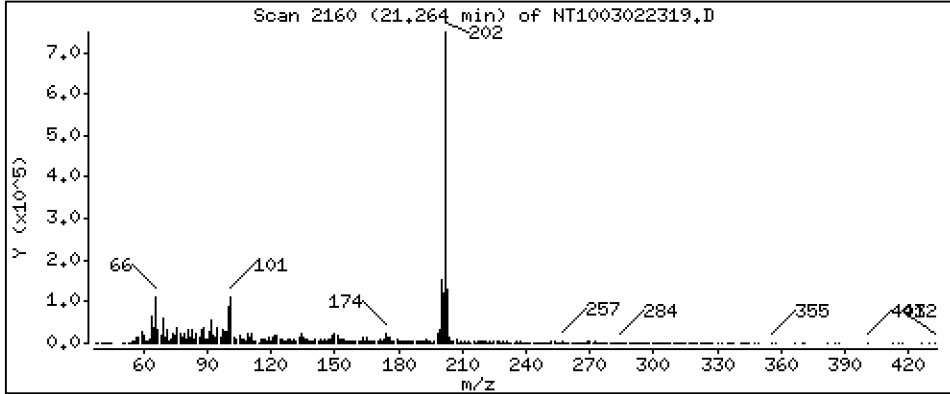
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,565 ug/mL





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

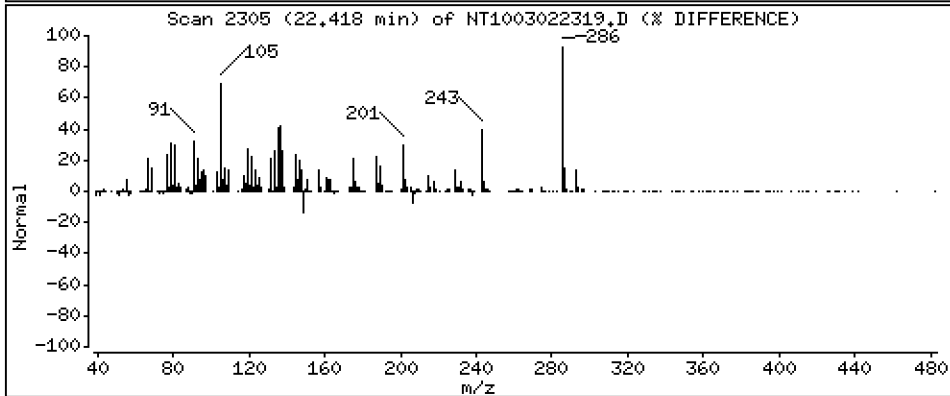
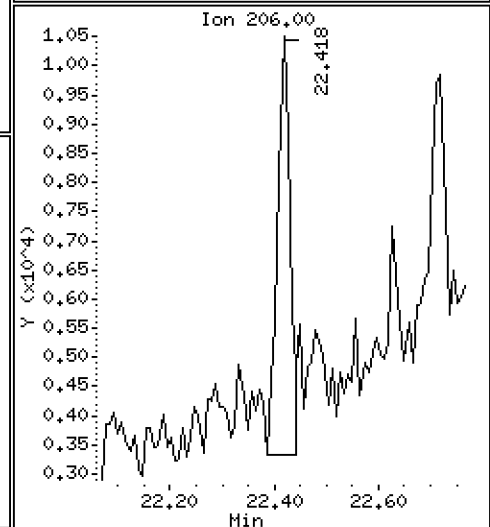
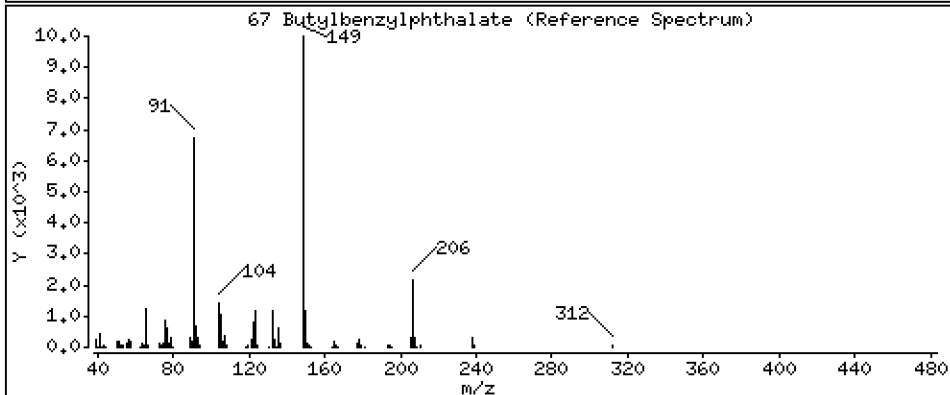
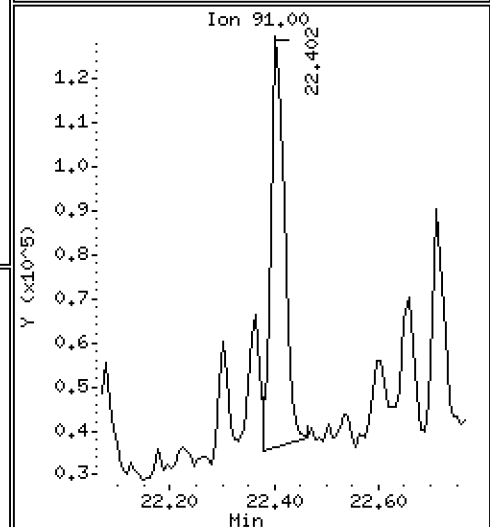
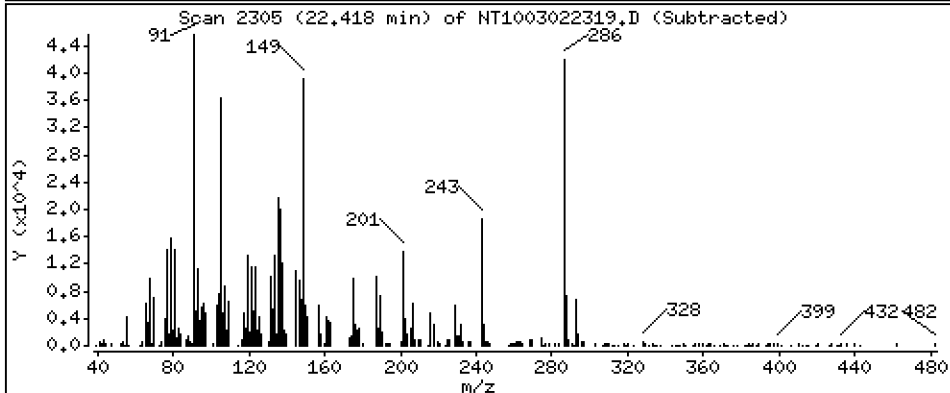
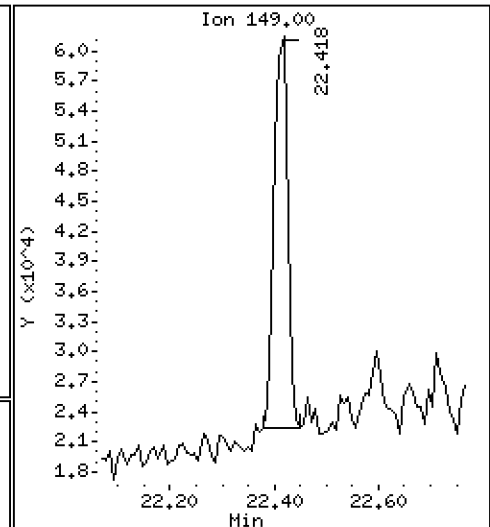
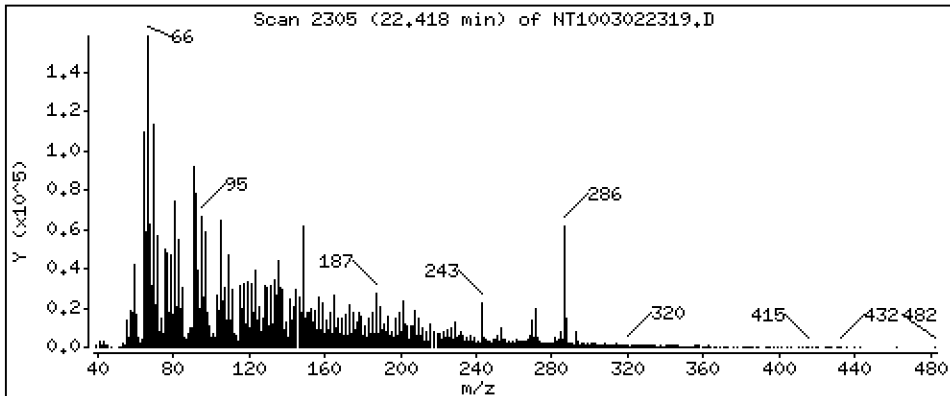
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.1721 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

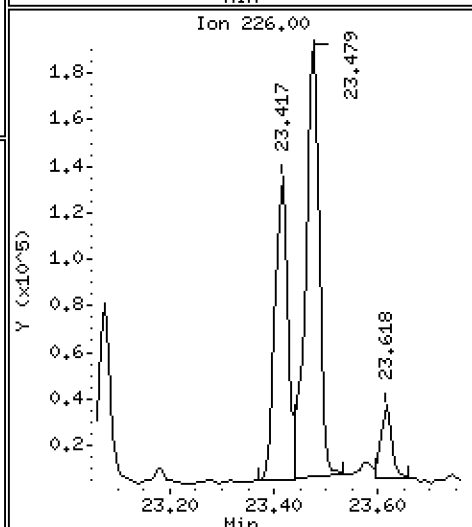
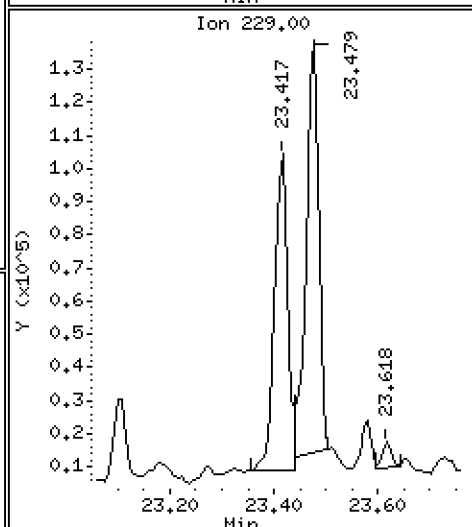
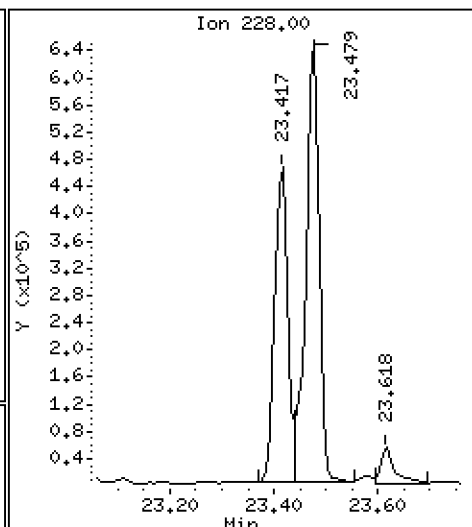
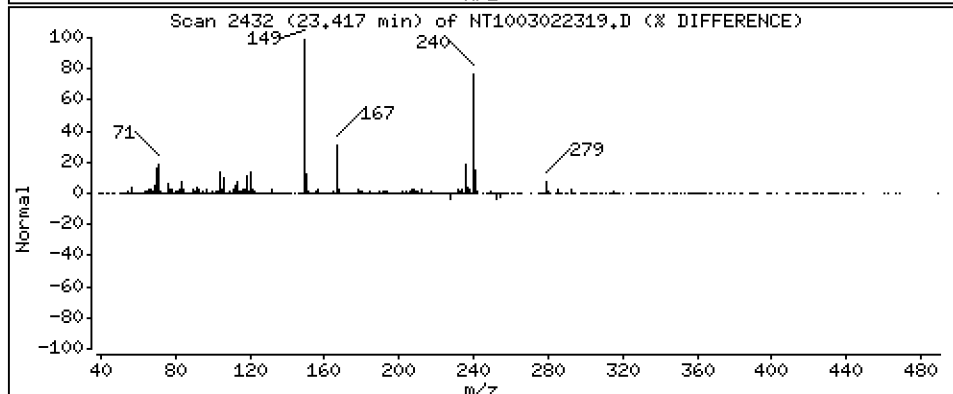
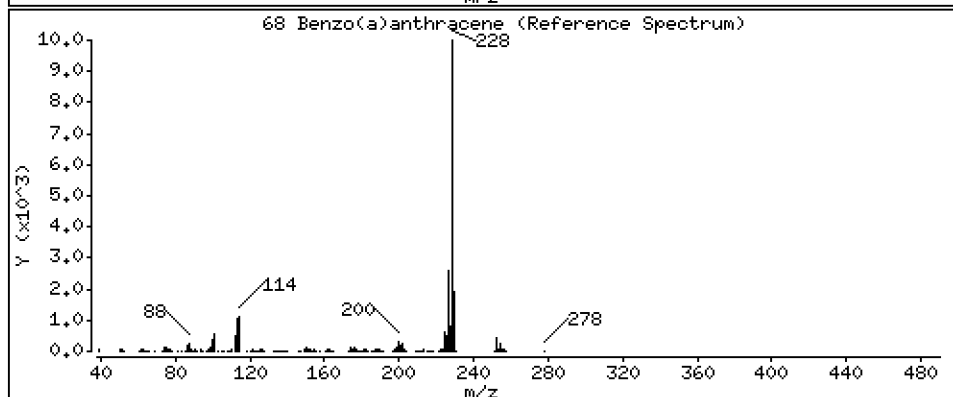
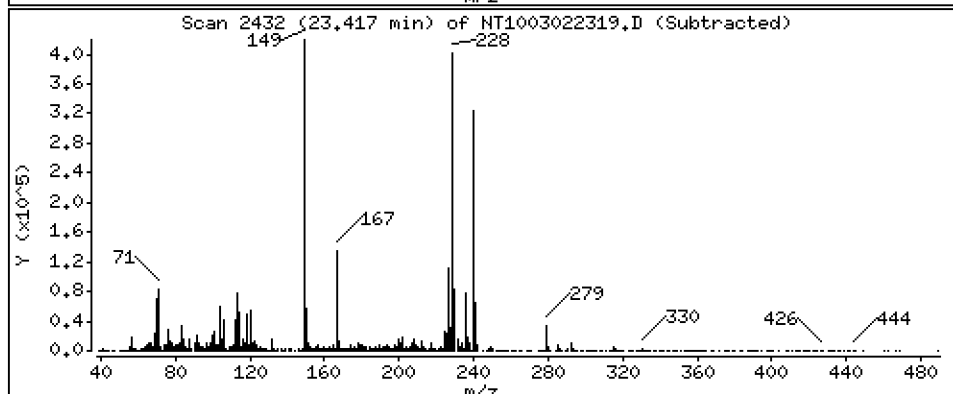
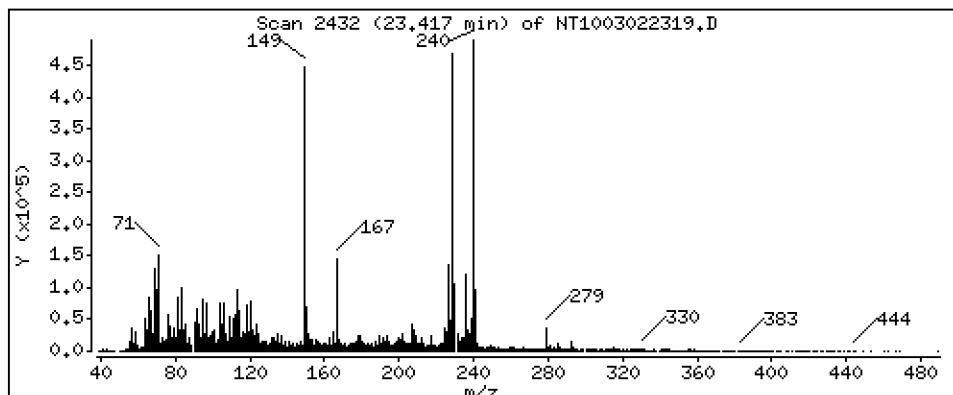
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,089 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

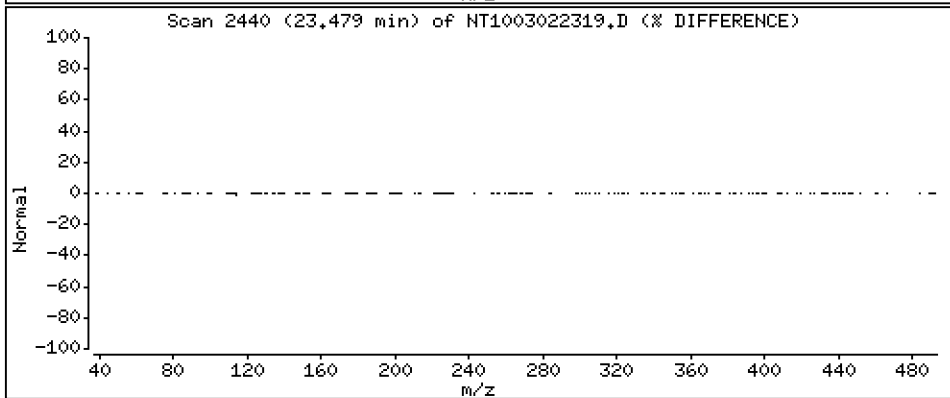
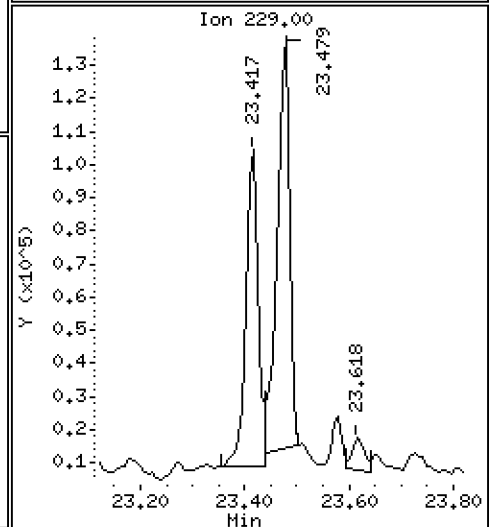
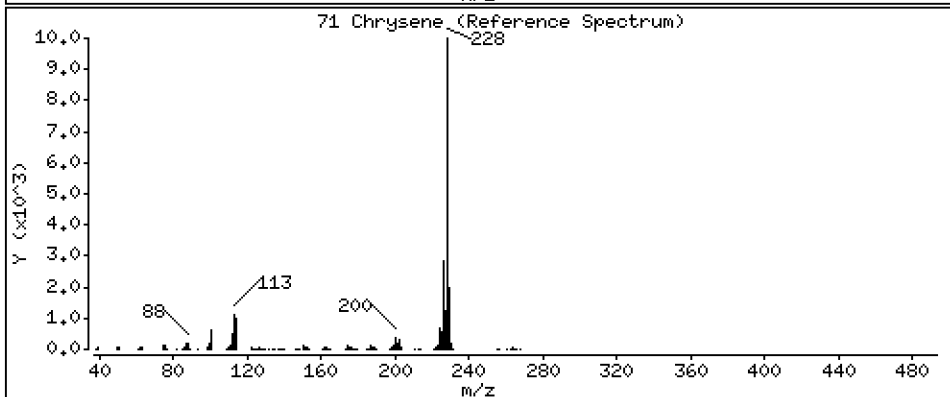
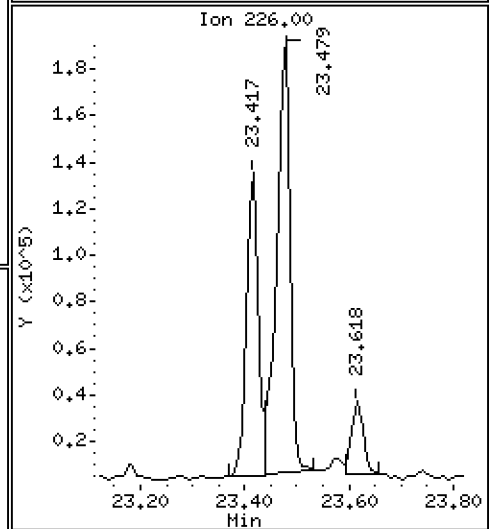
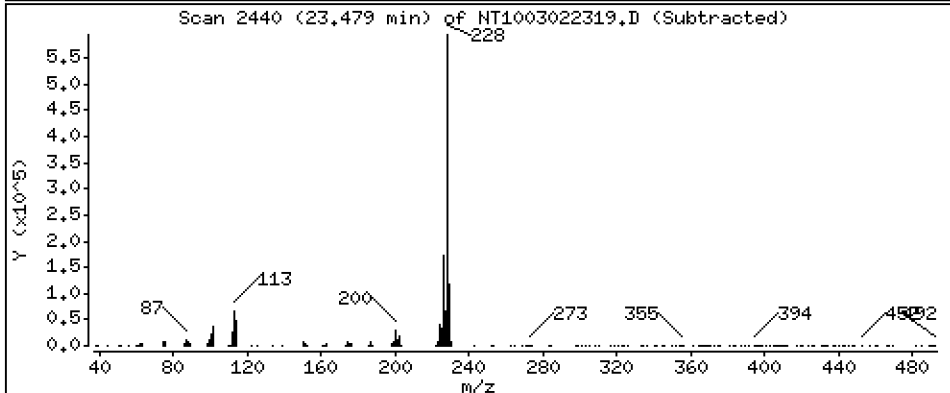
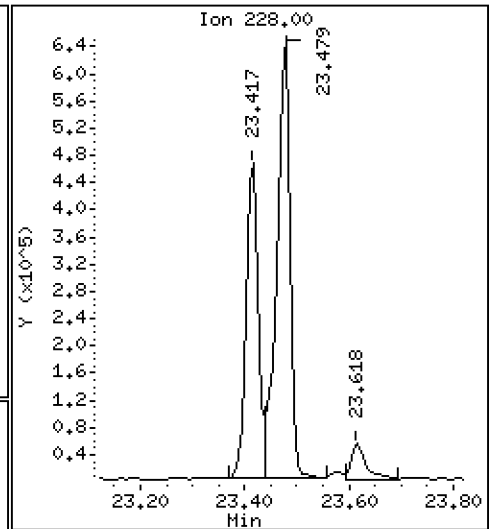
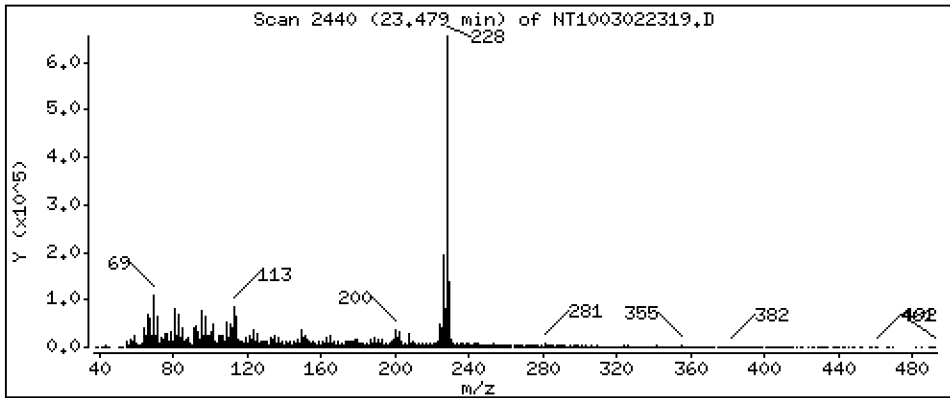
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,871 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

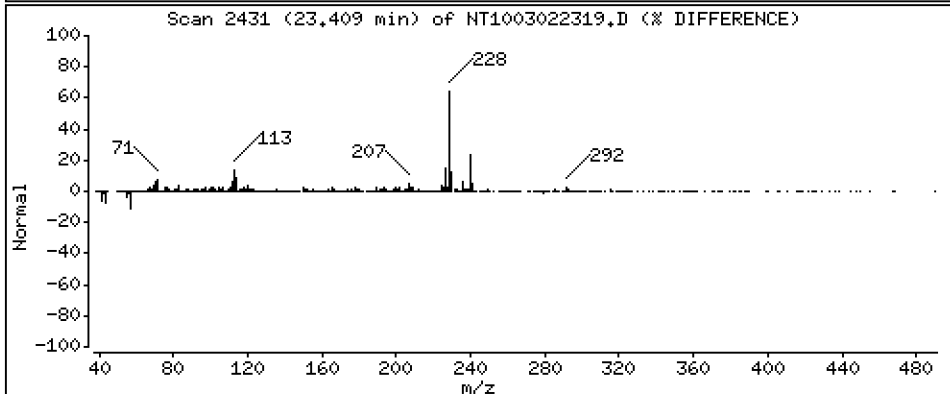
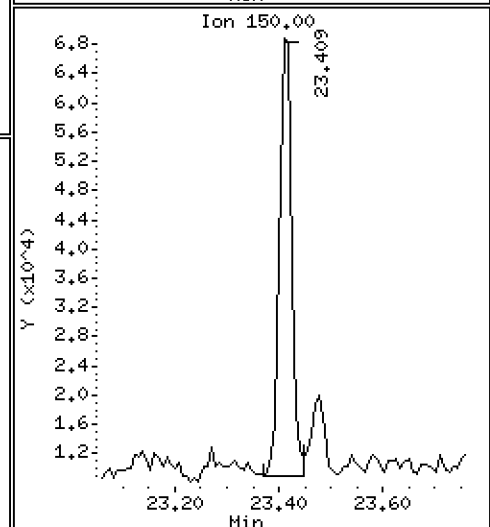
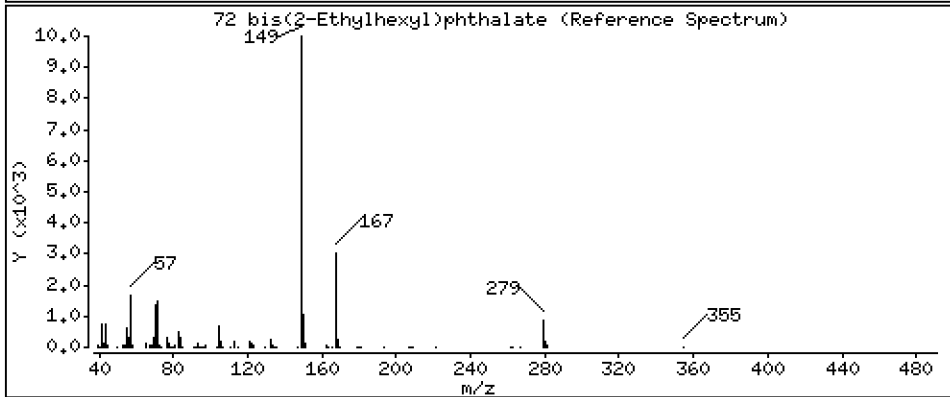
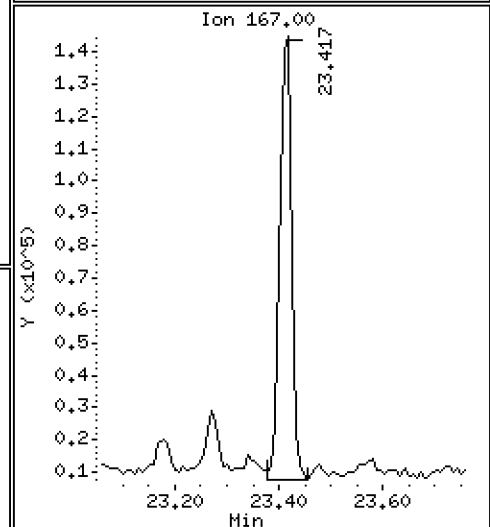
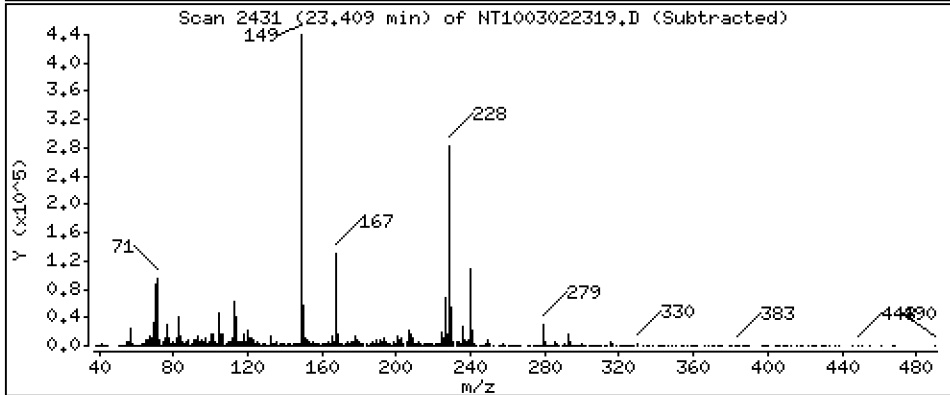
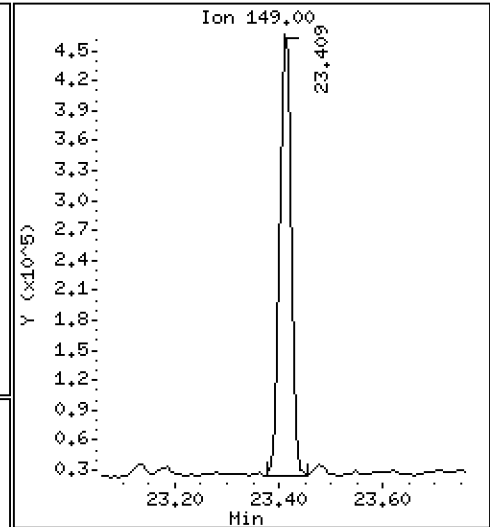
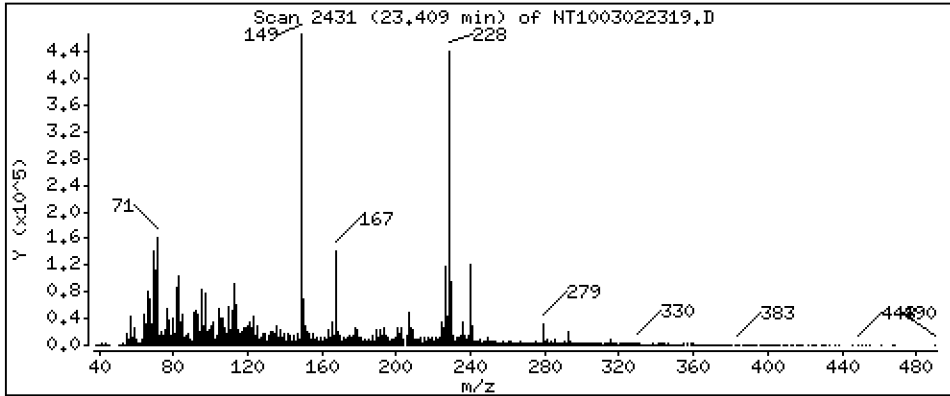
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 1,168 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

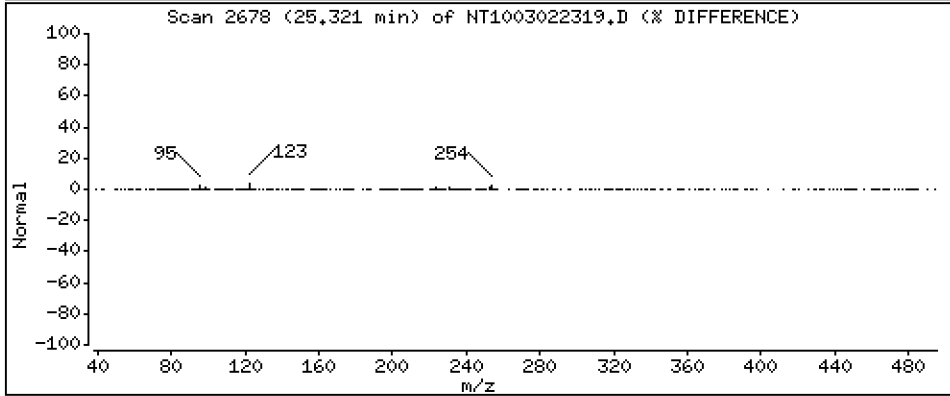
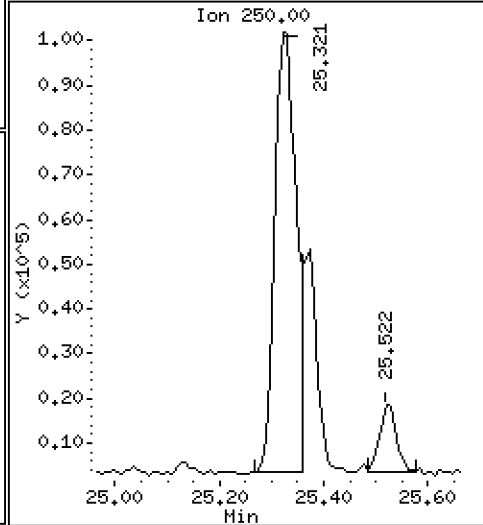
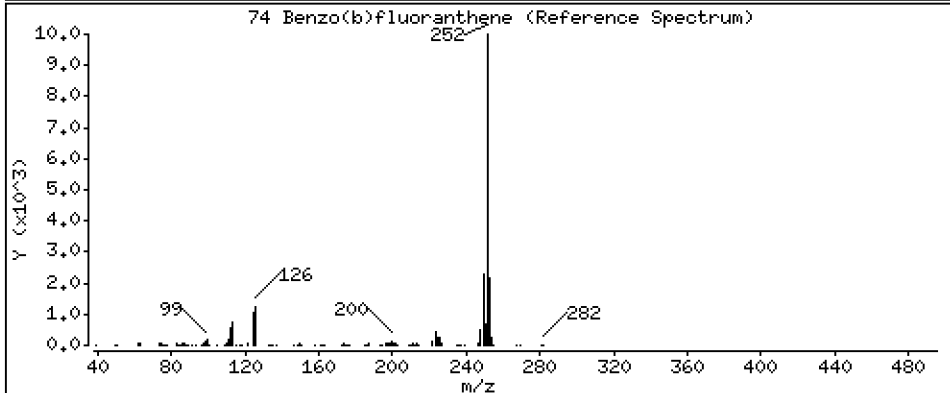
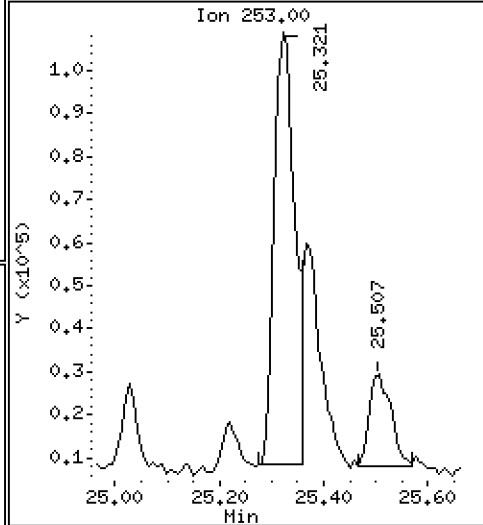
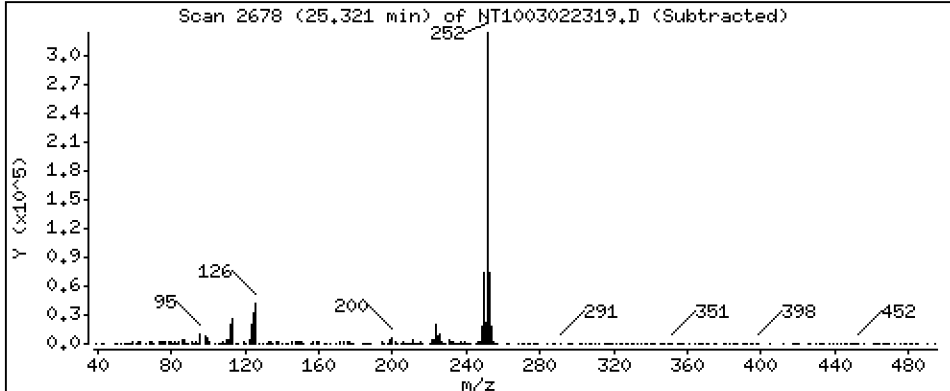
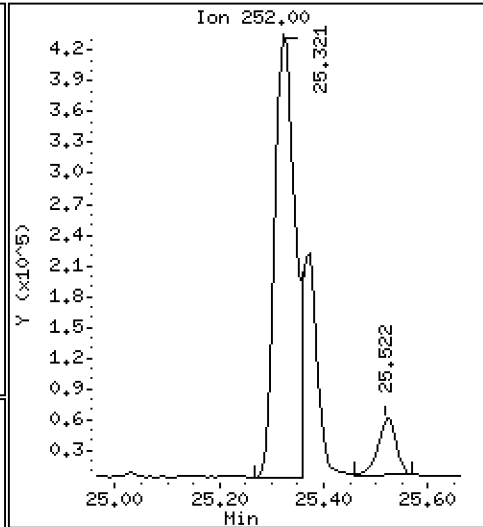
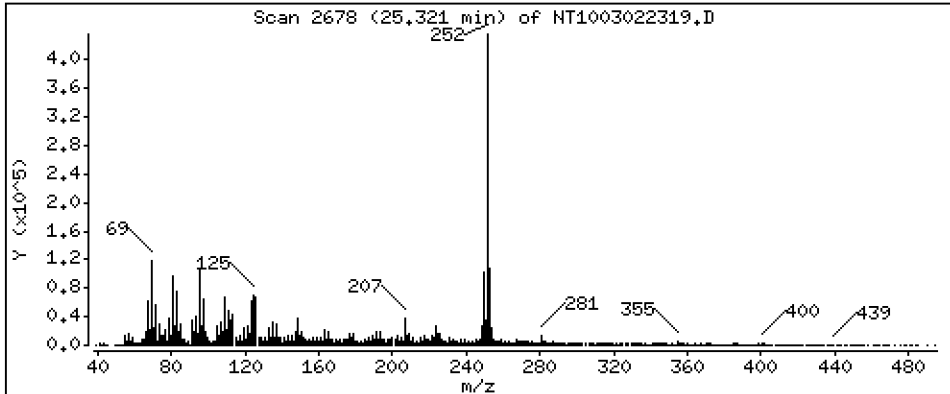
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,519 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

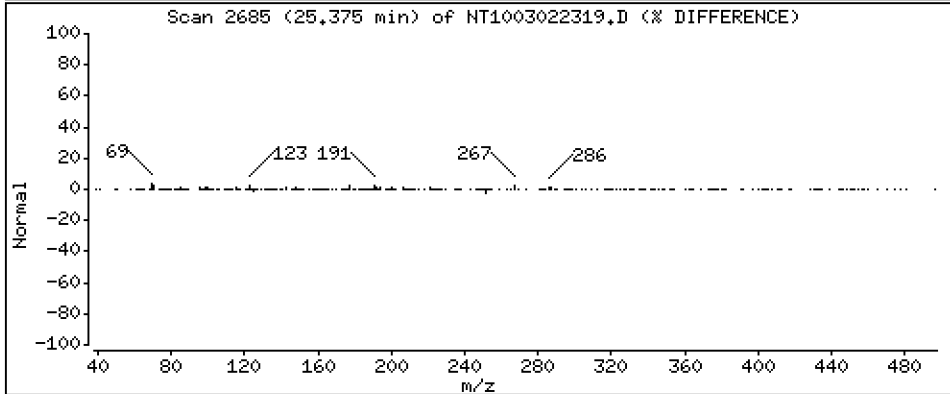
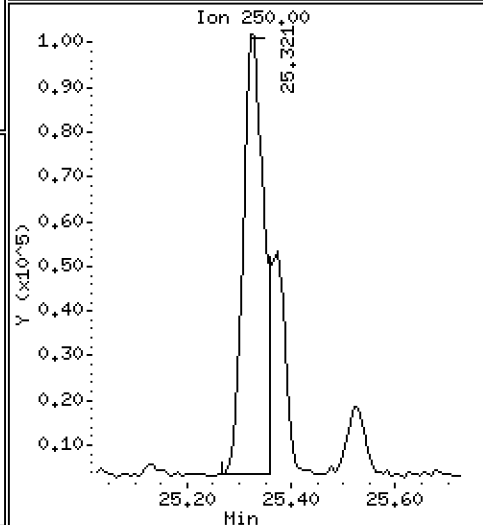
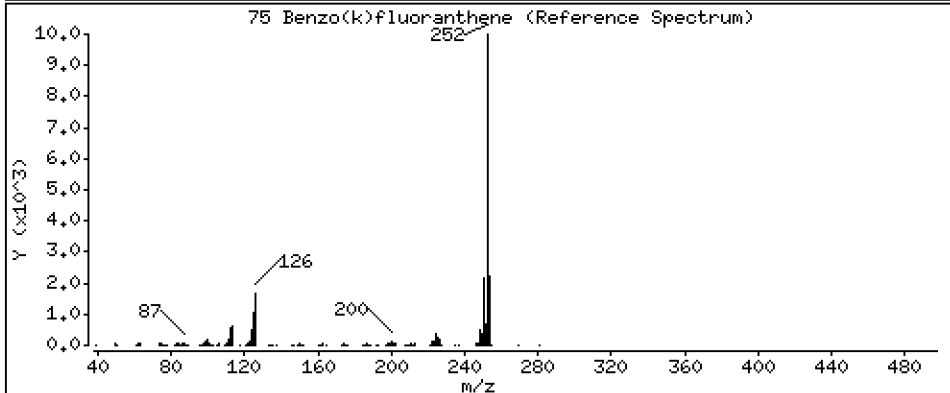
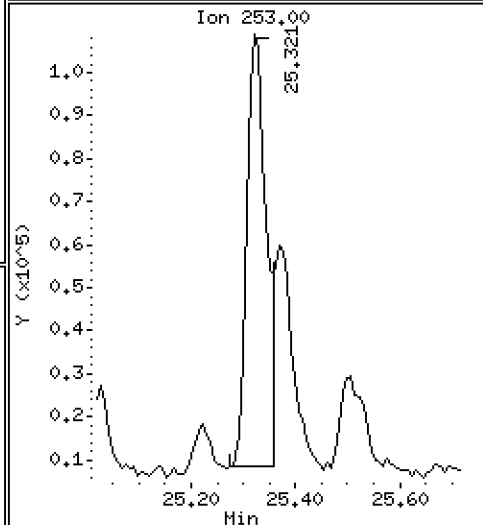
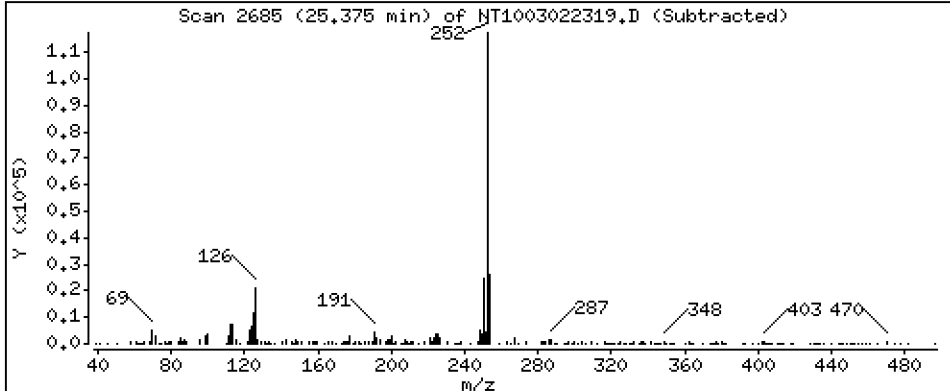
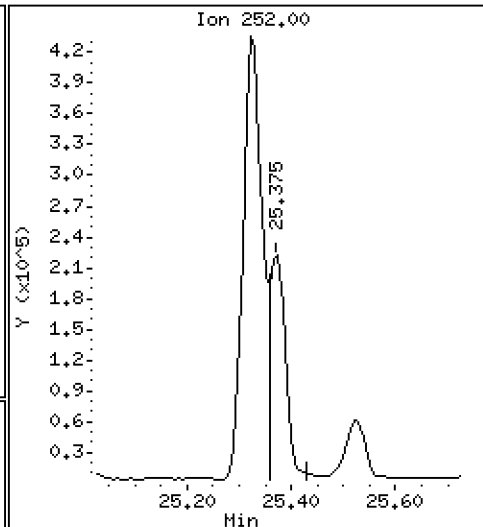
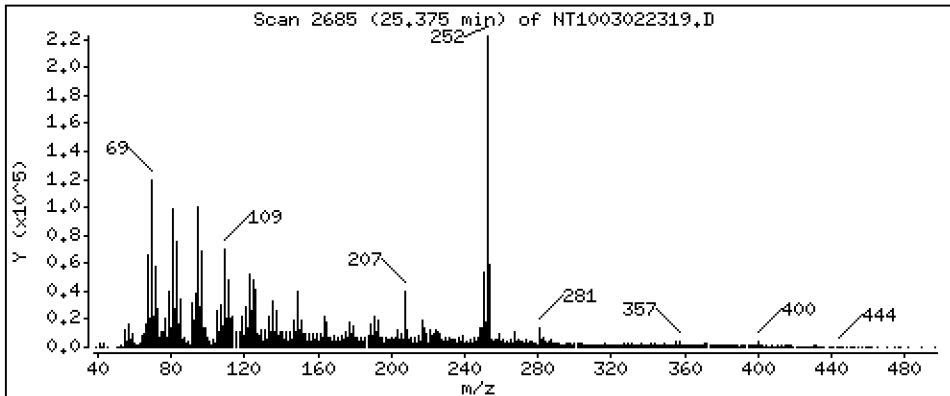
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,6183 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

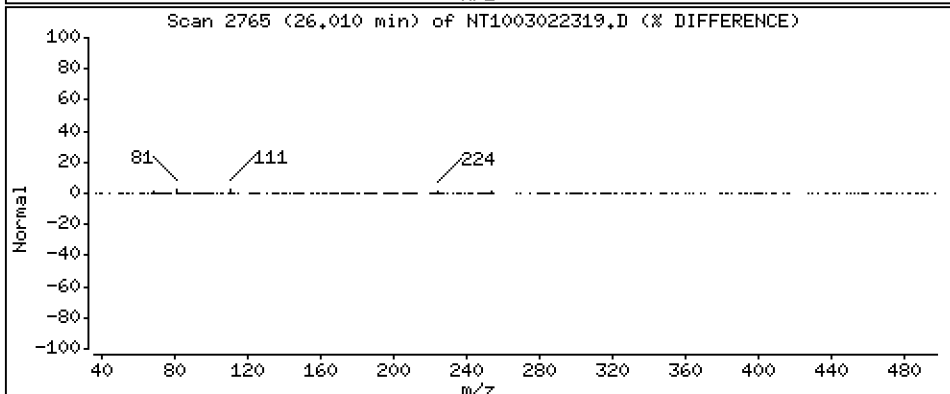
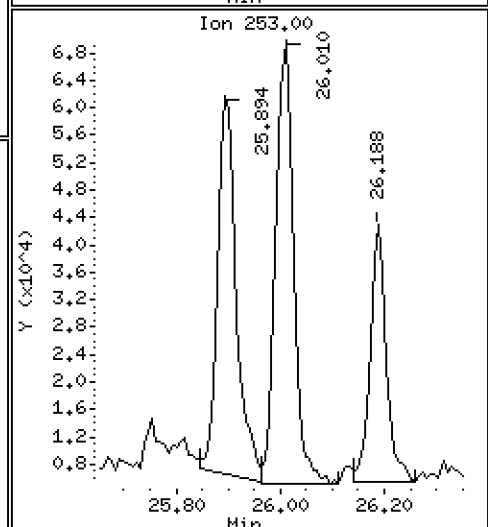
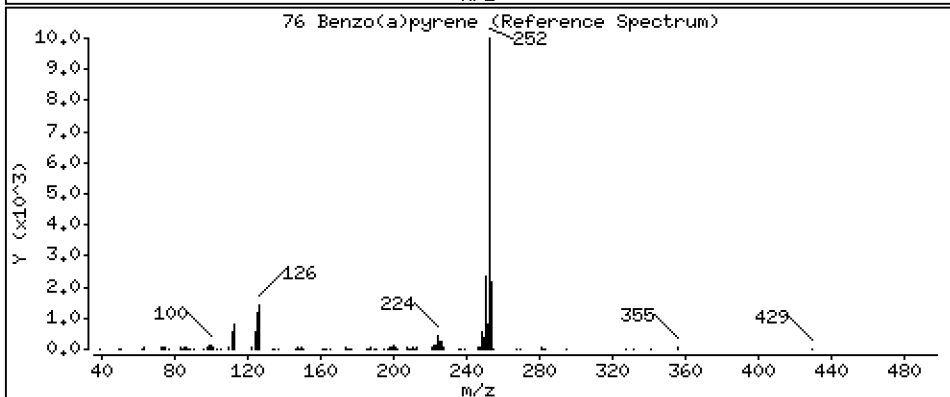
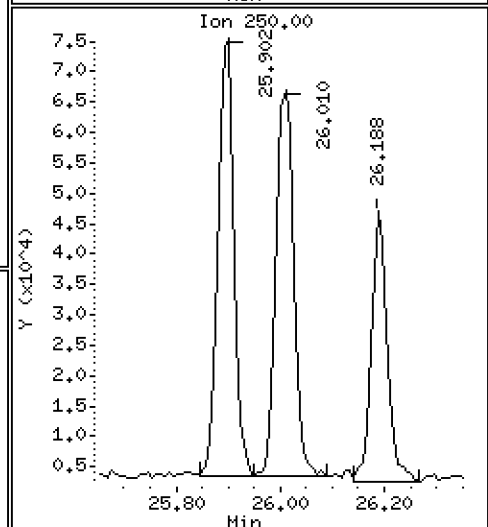
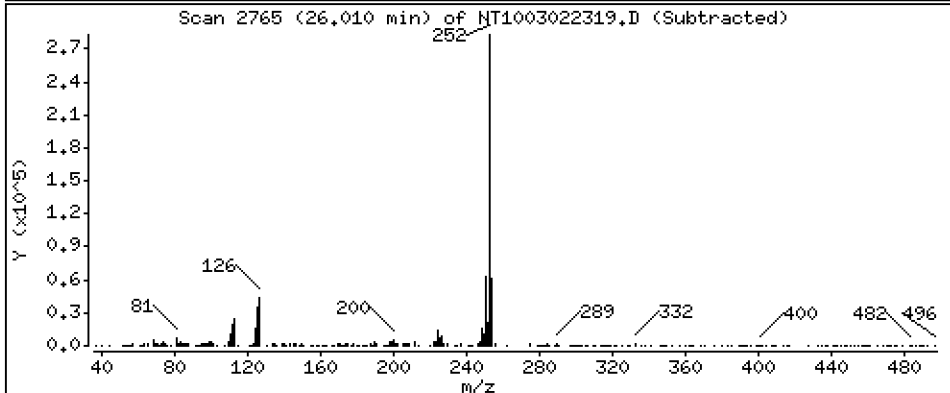
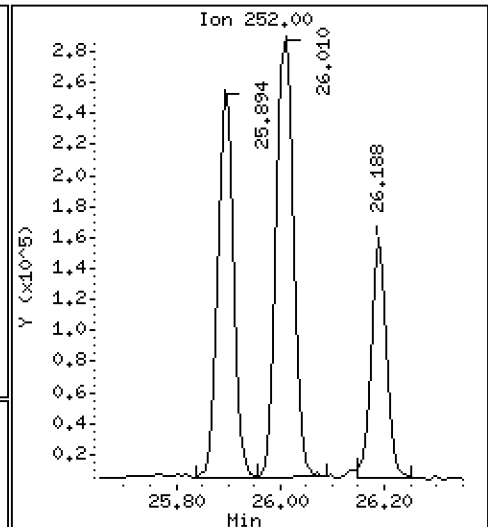
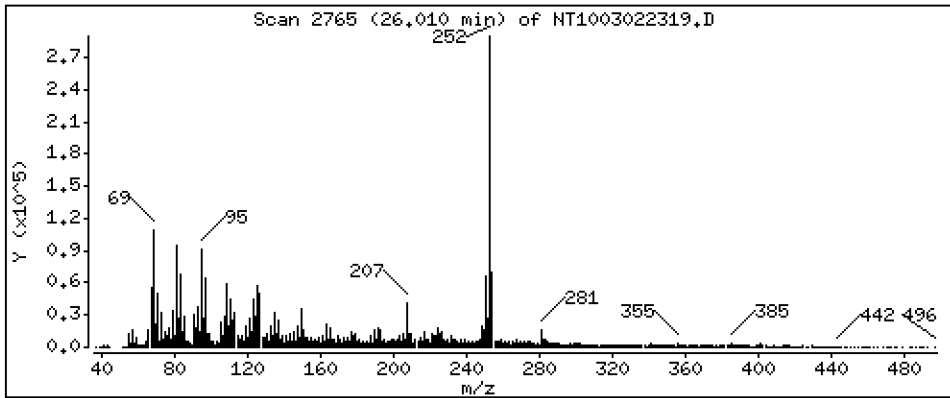
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,9299 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

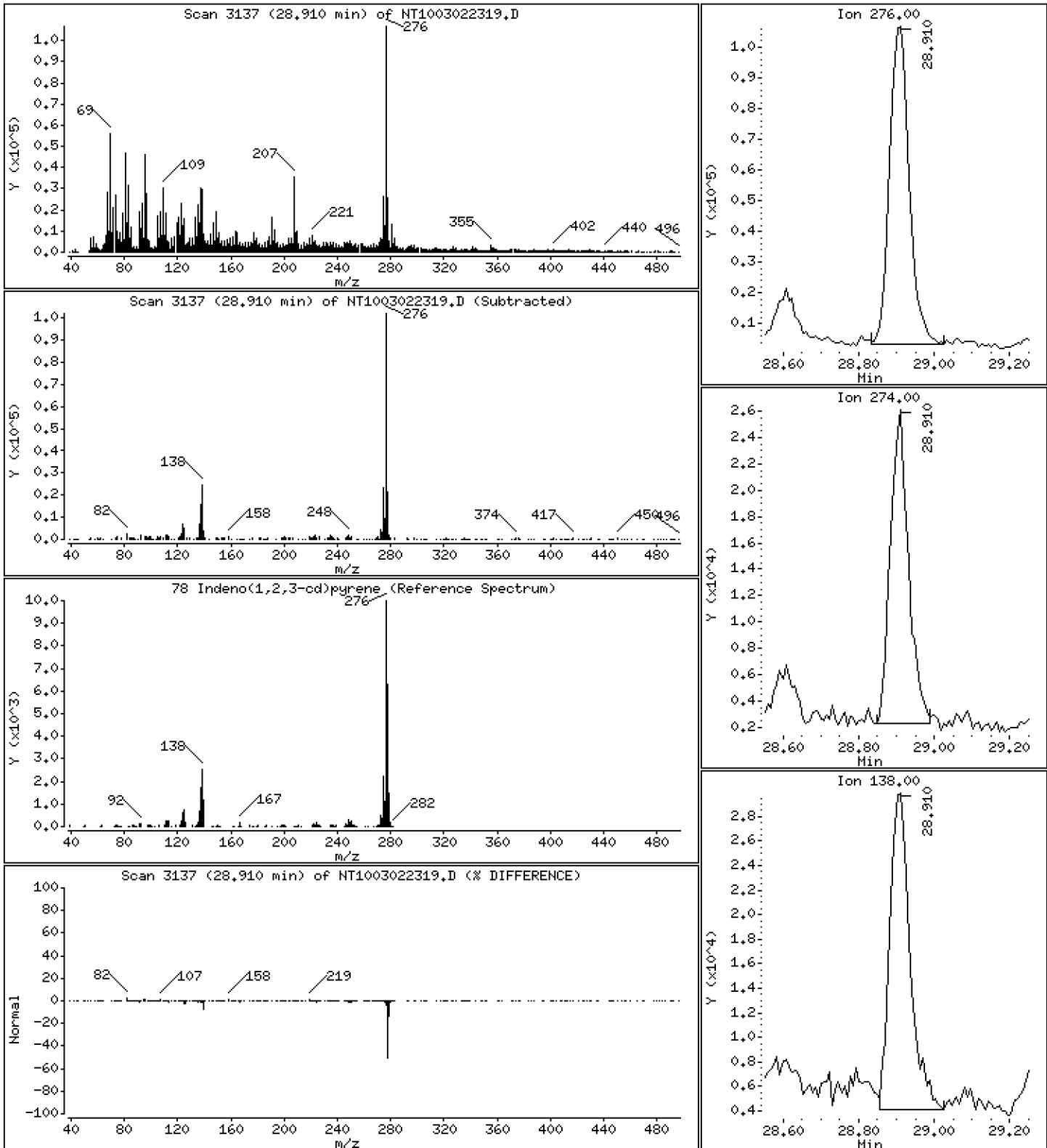
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4591 ug/mL





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

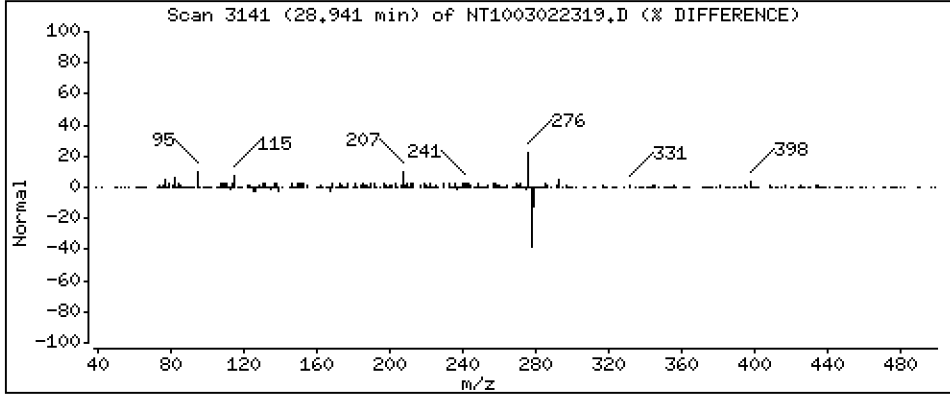
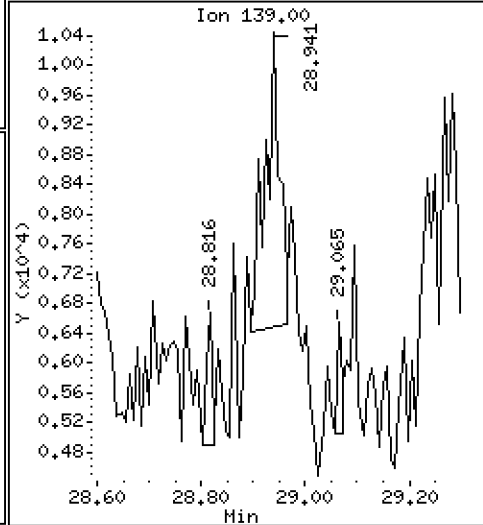
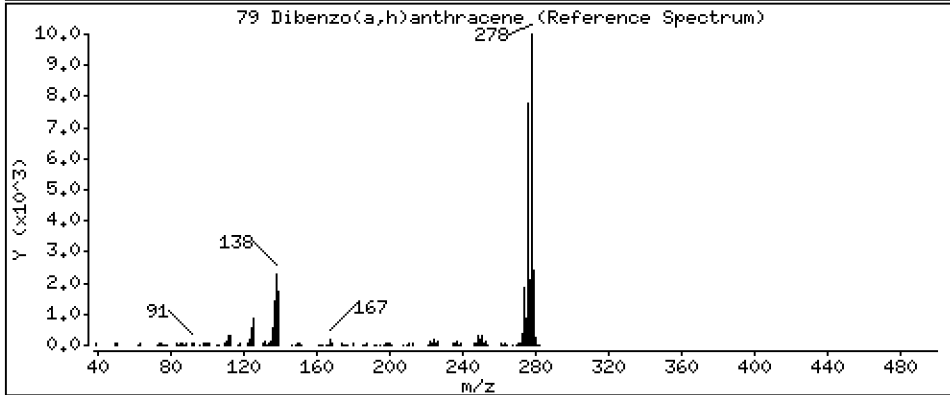
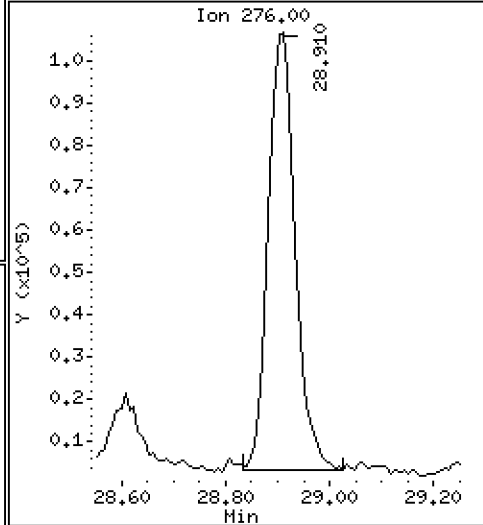
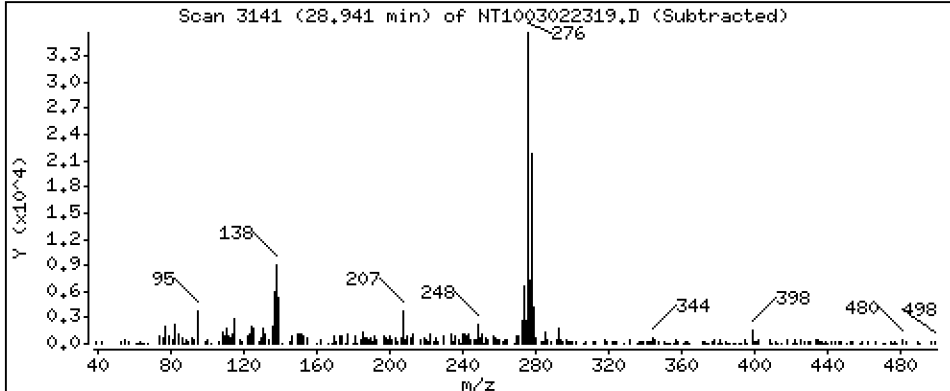
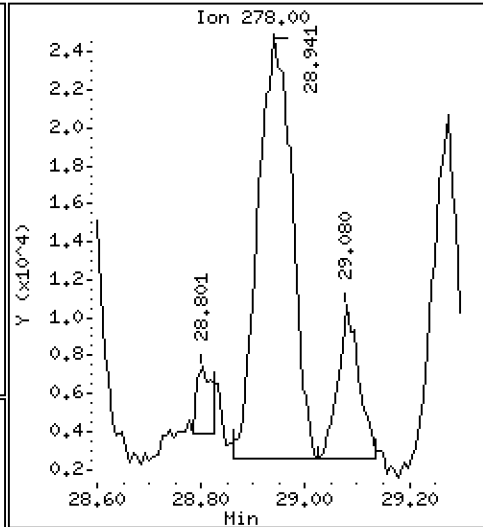
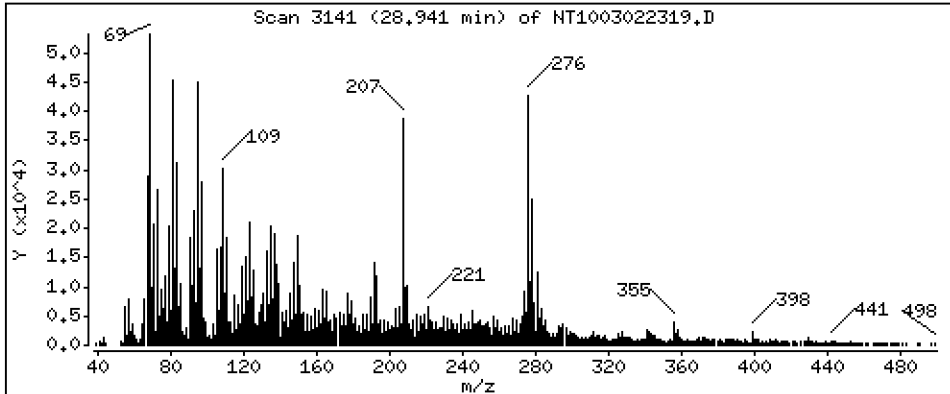
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1684 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

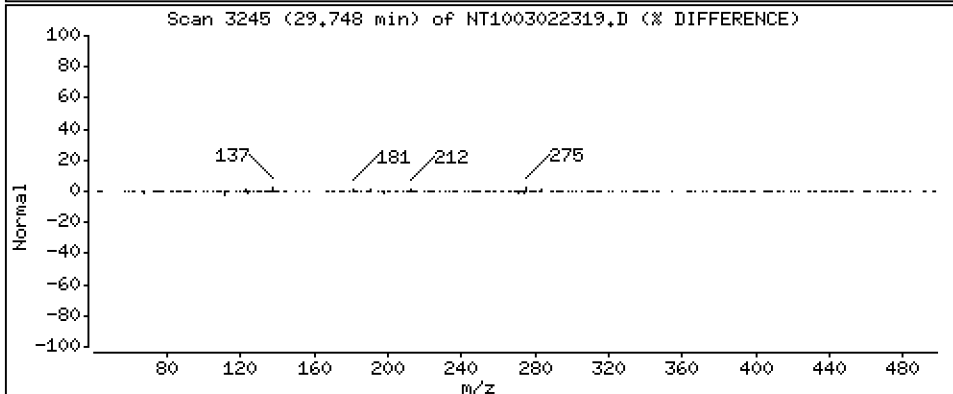
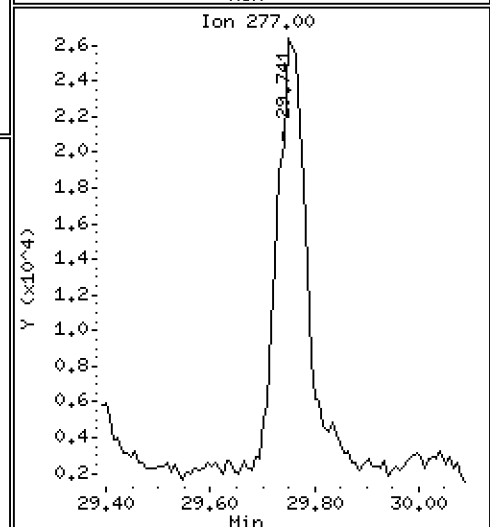
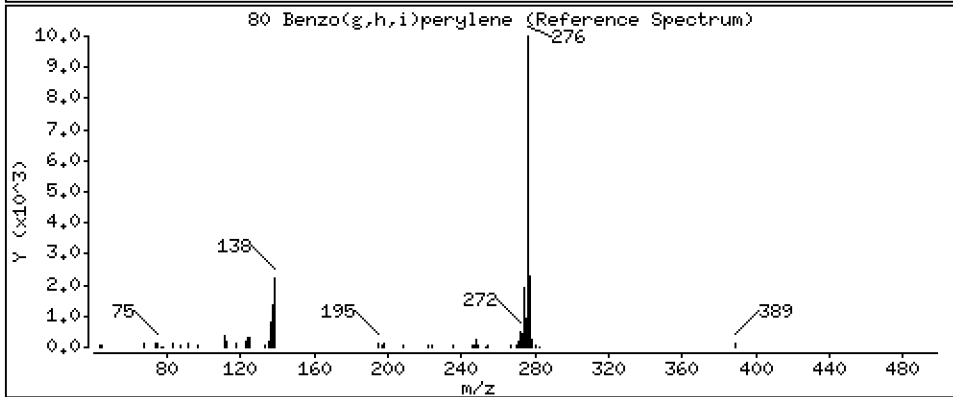
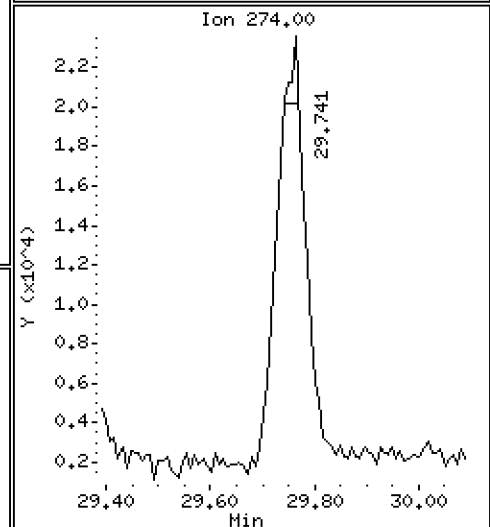
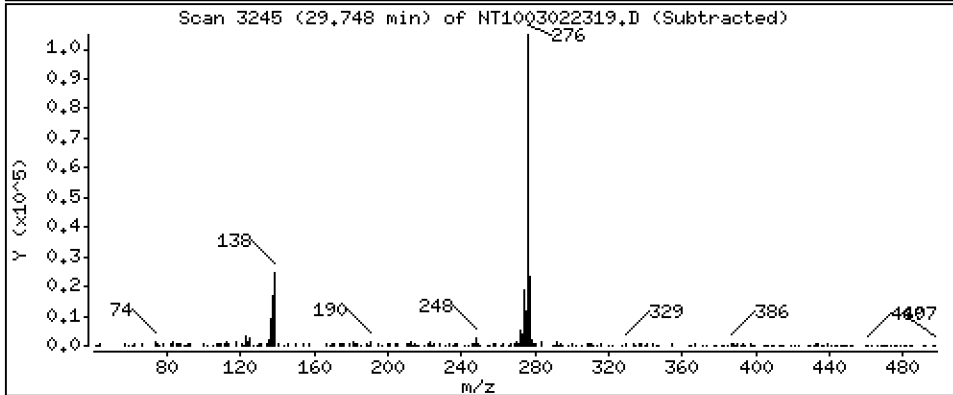
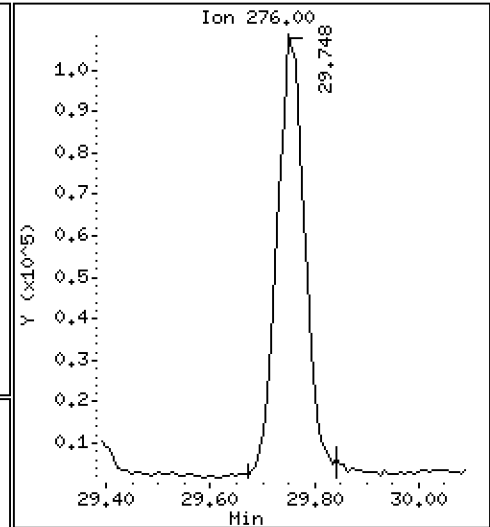
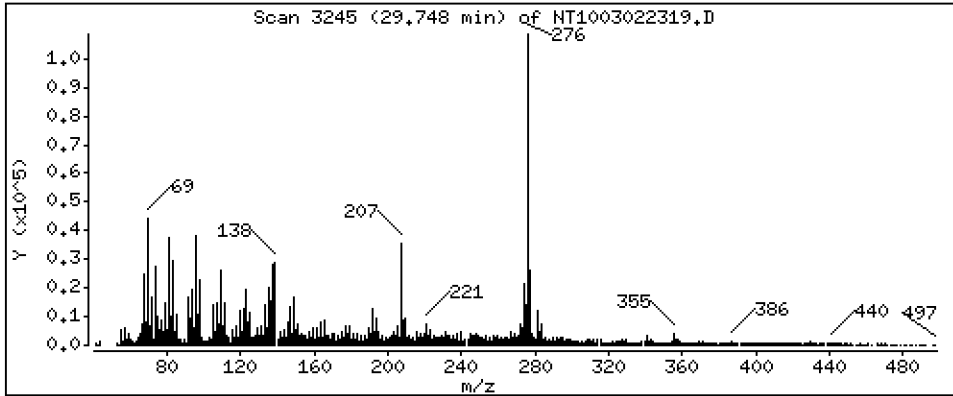
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,6354 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

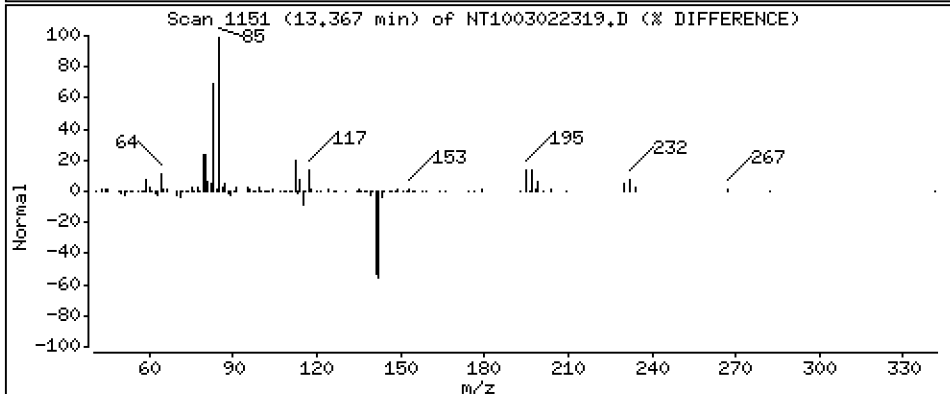
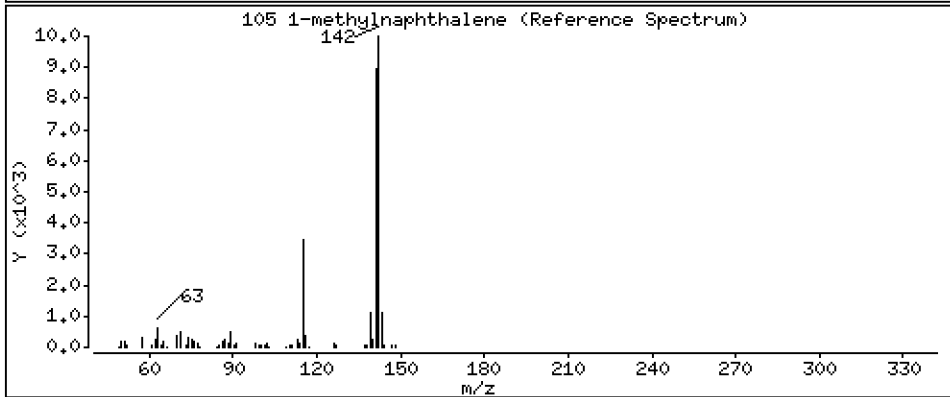
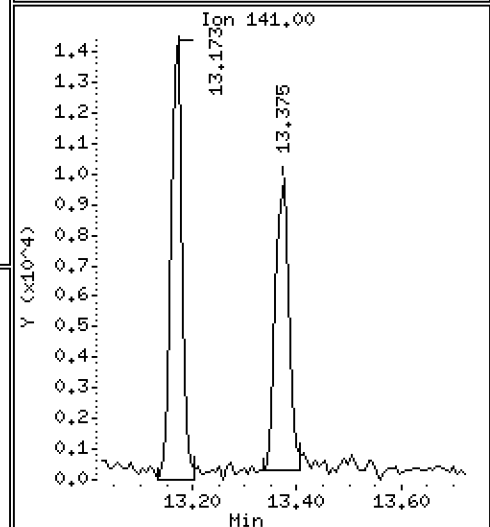
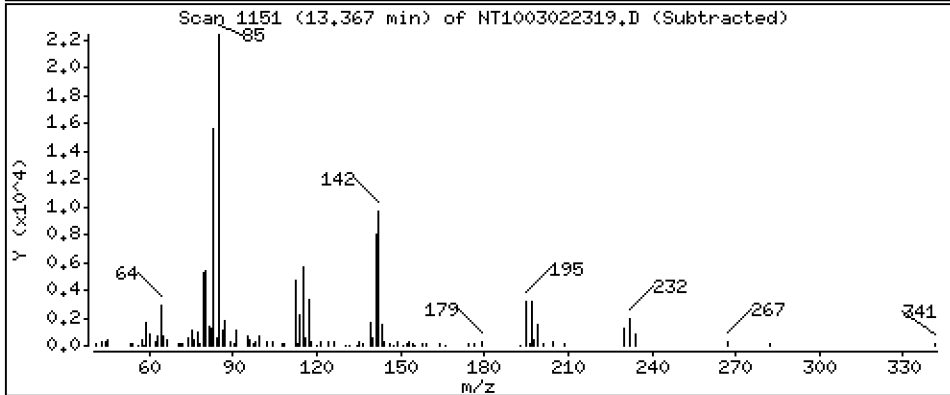
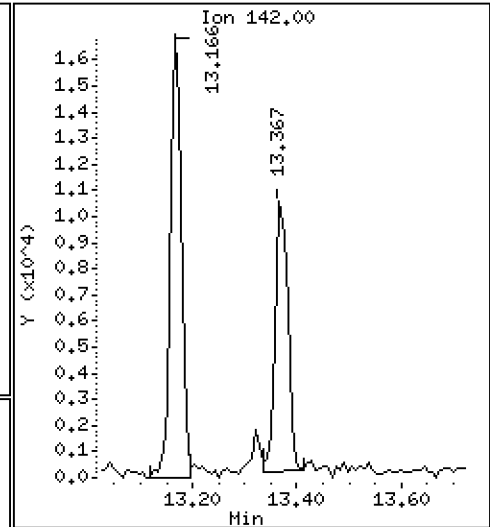
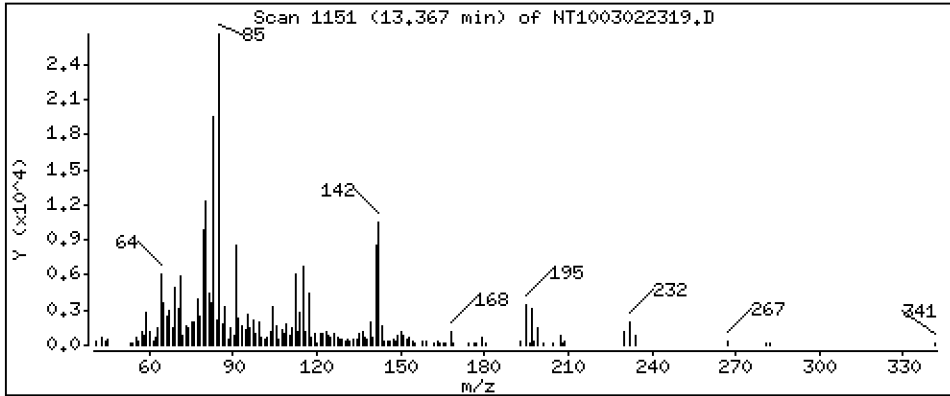
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 0.05277 ug/mL



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

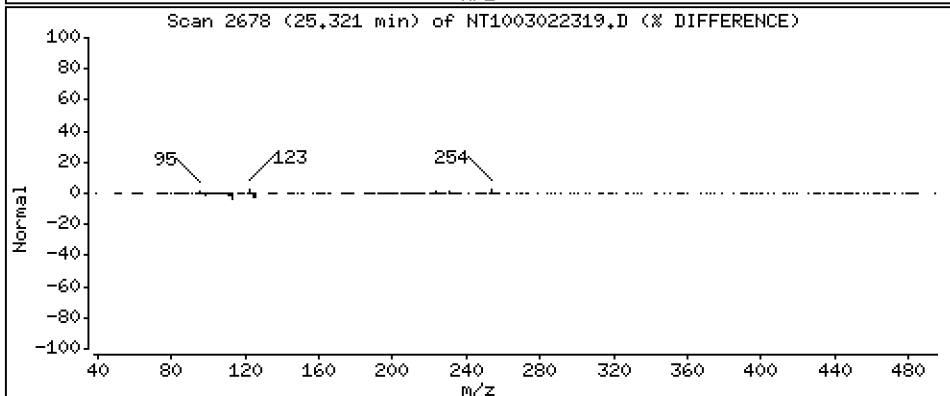
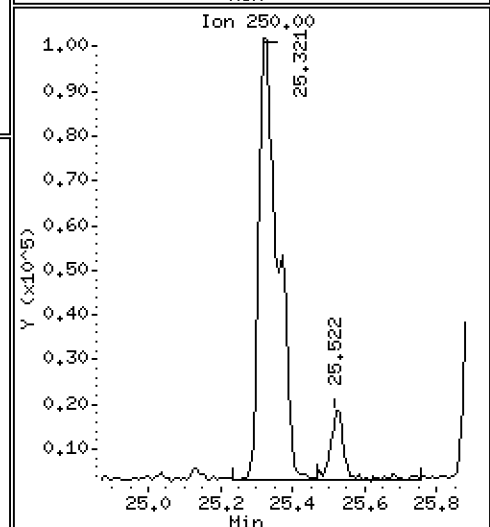
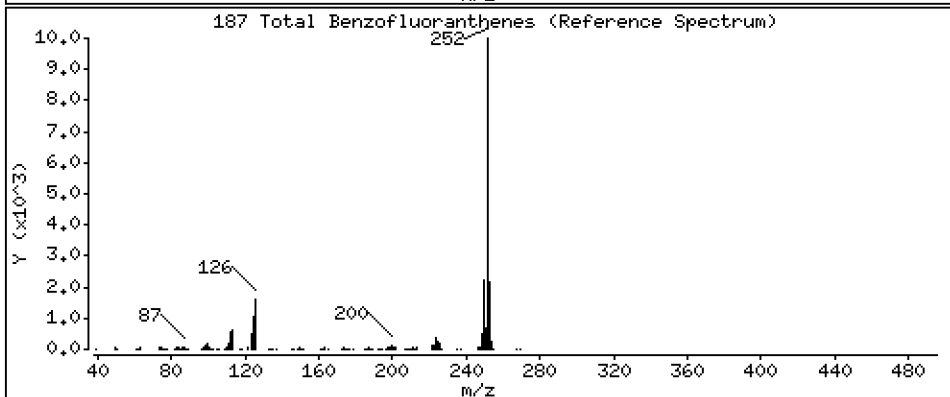
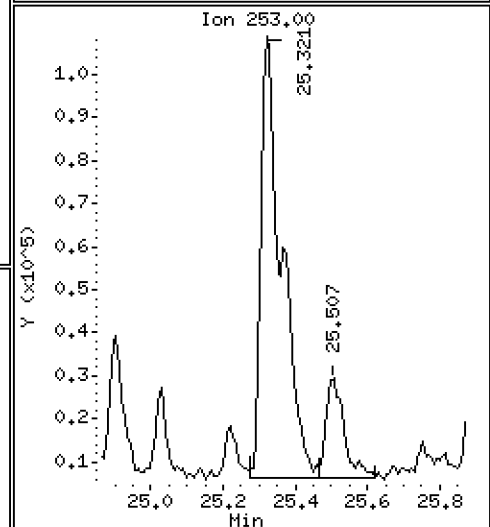
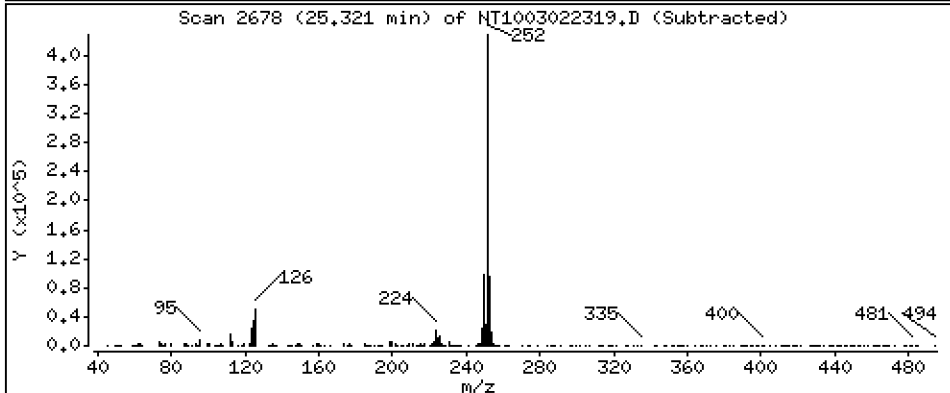
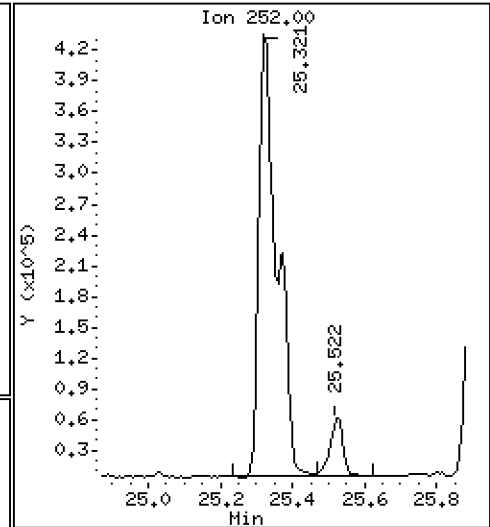
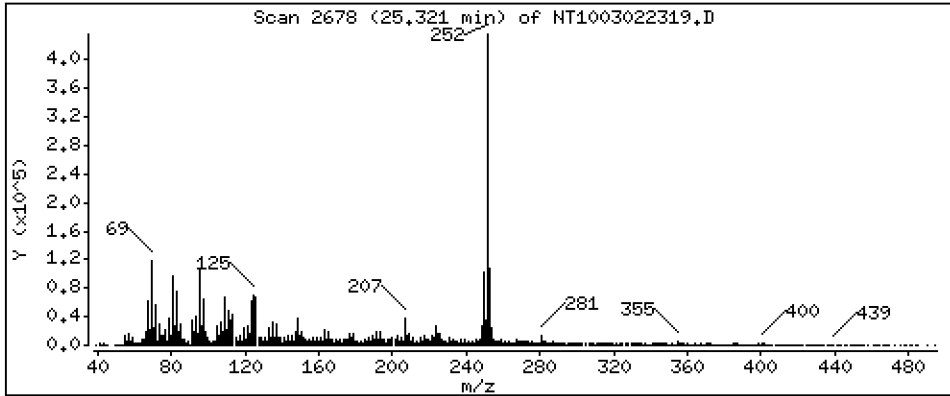
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 2,074 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022319.D

Lab Smp Id: 23A0206-04

Inj Date : 03-MAR-2023 01:47

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-04

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 15

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	953164	5.82165	5.822
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1290162	6.78725	6.787
3 Phenol	94		8.520	8.520	(0.921)	1242398	6.14747	6.147
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1073563	6.61972	6.620
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	520385	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	457250	3.77376	3.774
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.480	(1.025)	18611	0.17957	0.1796
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.946	(1.045)	23887	0.12164	0.1216 (MH)
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	877523	4.19083	4.191
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.137	11.171	(0.950)	34459	0.30961	0.3096 (M)
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1907516	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	45978	0.09391	0.09391
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	26480	0.07656	0.07656
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1605569	4.49780	4.498
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.744	(0.963)	28840	0.08923	0.08923
40 Acenaphthylene	152		15.030	15.031	(0.981)	36522	0.07560	0.07560
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.316	15.317	(1.000)	1000802	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.005)	20676	0.07096	0.07096
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.742	15.750	(1.028)	30862	0.07137	0.07137
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.214	(1.058)	48878	0.14275	0.1428
49 Fluorene	166		16.453	16.453	(1.074)	32595	0.09060	0.09060
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.107)	402171	6.26292	6.263
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1853824	4.00000	
60 Phenanthrene	178		18.455	18.456	(1.003)	304237	0.64127	0.6413
61 Anthracene	178		18.564	18.564	(1.008)	149118	0.32414	0.3241
62 Carbazole	167		18.896	18.897	(1.026)	47937	0.11374	0.1137
63 Di-n-butylphthalate	149					Compound Not Detected.		
64 Fluoranthene	202		20.838	20.823	(0.889)	1072315	1.50753	1.508
65 Pyrene	202		21.264	21.256	(0.907)	1133412	1.56485	1.565
\$ 66 Terphenyl-d14	244		21.535	21.535	(0.919)	2633192	4.49307	4.493
67 Butylbenzylphthalate	149		22.417	22.418	(0.957)	67109	0.17209	0.1721
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	793971	1.08901	1.089
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2067702	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.471	(1.002)	1108375	1.87059	1.871
72 bis(2-Ethylhexyl)phthalate	149		23.408	23.409	(0.956)	646769	1.16844	1.168
* 134 Di-n-octylphthalate-d4	153		24.492	24.493	(1.000)	3923428	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.321	25.313	(0.969)	1177759	1.51908	1.519
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	457089	0.61825	0.6183 (M)
76 Benzo(a)pyrene	252		26.010	26.002	(0.995)	640328	0.92991	0.9299
* 77 Perylene-d12	264		26.134	26.126	(1.000)	2241000	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.902	(1.106)	367885	0.45913	0.4591
79 Dibenzo(a,h)anthracene	278		28.940	28.948	(1.107)	102039	0.16844	0.1684
80 Benzo(g,h,i)perylene	276		29.748	29.740	(1.138)	406104	0.63545	0.6354 (M)
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.366	13.374	(1.140)	16518	0.05277	0.05277
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252	25.321	25.375	(0.969)	1536539	2.07358	2.074	
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

### QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022319.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-04  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	520385	-13.15
27 Naphthalene-d8	2200781	1100391	4401562	1907516	-13.33
42 Acenaphthene-d10	1135136	567568	2270272	1000802	-11.83
59 Phenanthrene-d10	2128944	1064472	4257888	1853824	-12.92
69 Chrysene-d12	2449624	1224812	4899248	2067702	-15.59
134 Di-n-octylphthala	4694735	2347368	9389470	3923428	-16.43
77 Perylene-d12	2593218	1296609	5186436	2241000	-13.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.03

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



REVIEW SUMMARY FOR FILE - NT1003022319.D

Lab ID: 23A0206-04

nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 01:47

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.045	1.076	-0.0302	4-Methylphenol

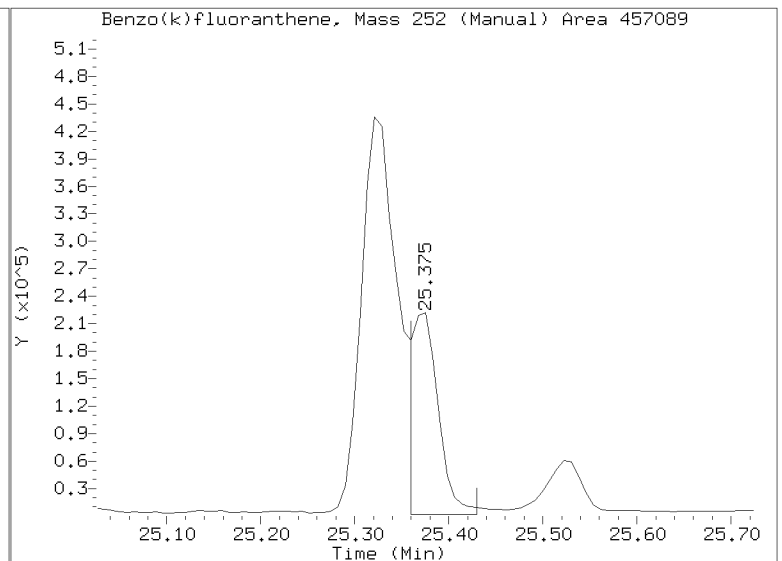
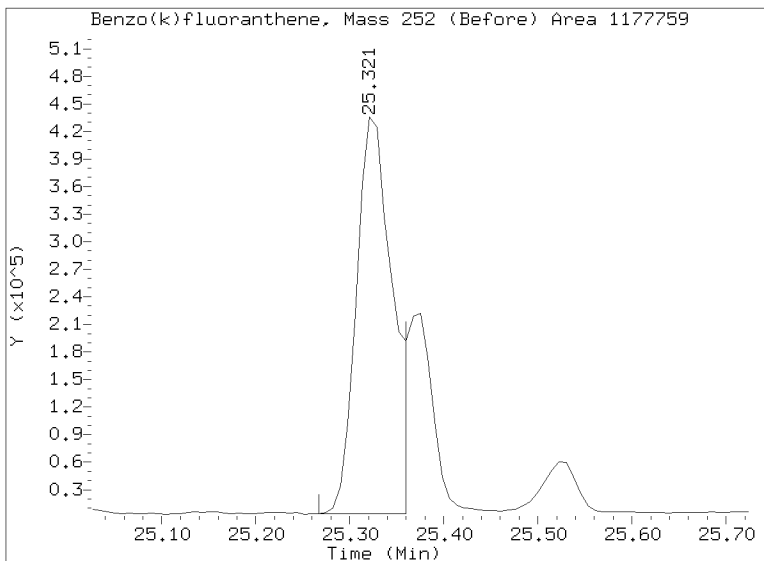
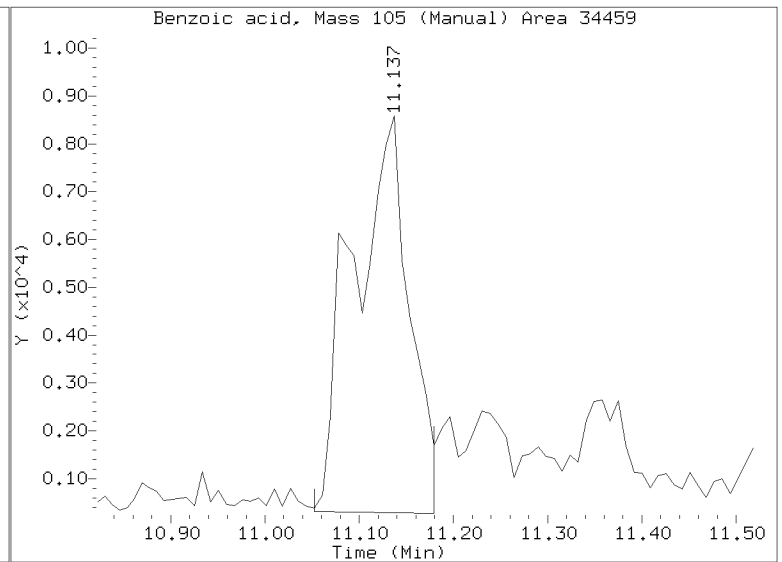
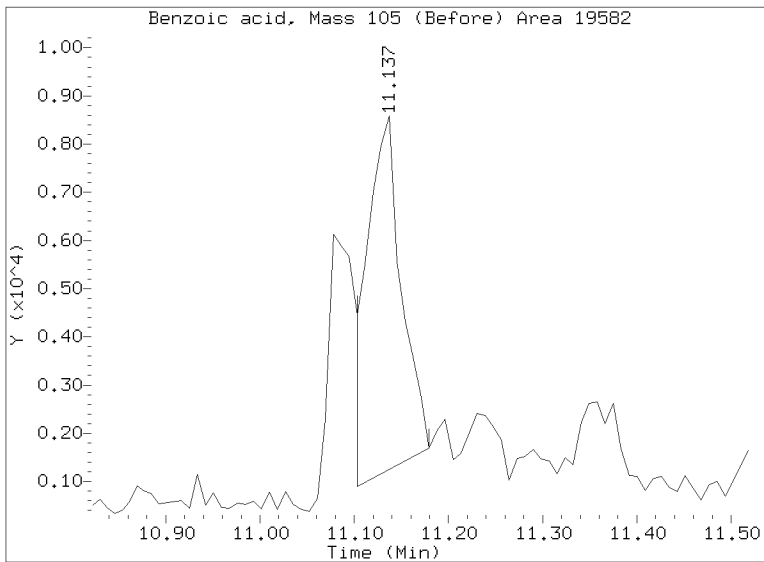
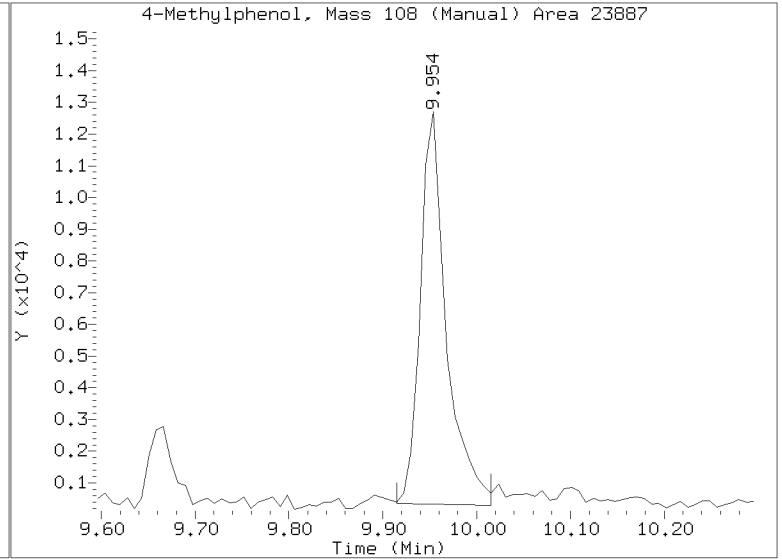
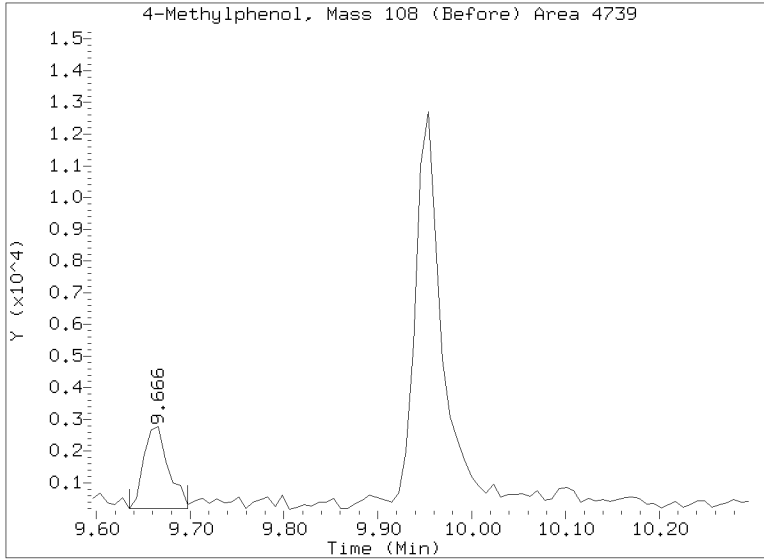
RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

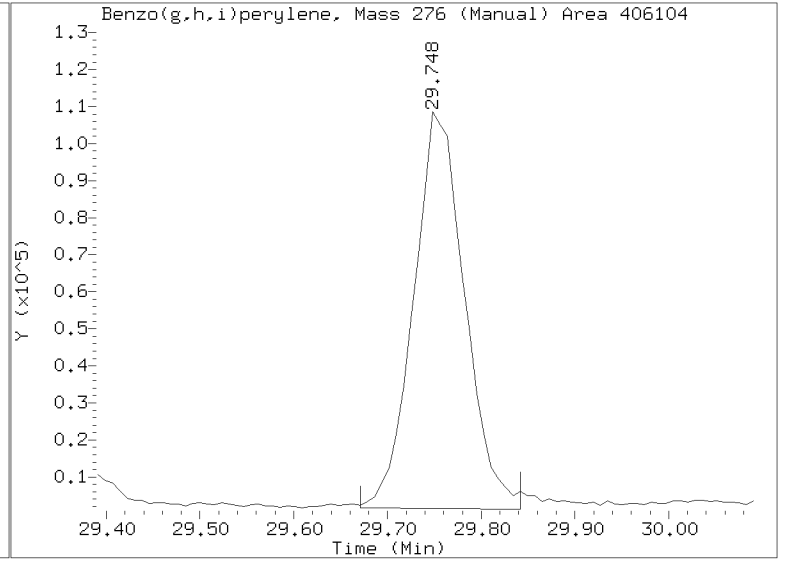
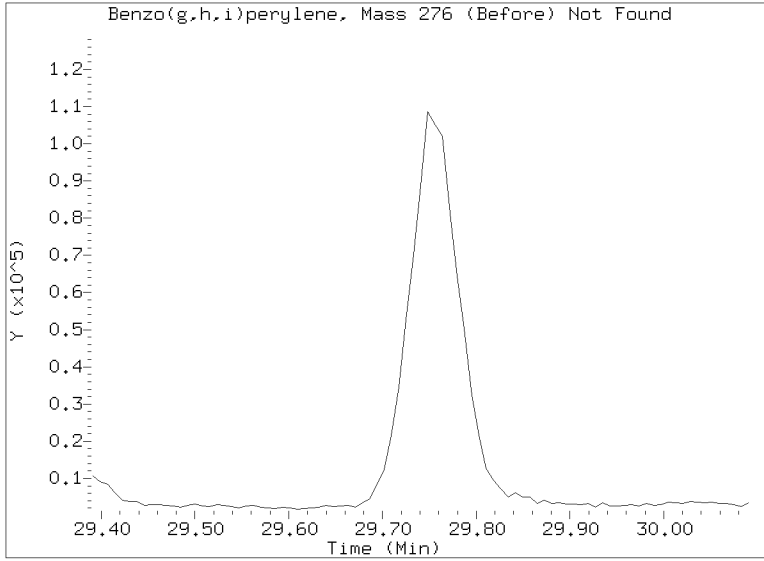
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022319.D  
Injection Date: 03-MAR-2023 01:47  
Lab ID:23A0206-04 Client ID:  
Report Date: 03/09/2023 15:49



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022319.D  
Injection Date: 03-MAR-2023 01:47  
Lab ID:23A0206-04 Client ID:  
Report Date: 03/09/2023 15:49





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-05 B

SDG: 23A0206

Sampled: 01/11/23 09:50

Prepared: 01/27/23 14:44

File ID: NT1003022320.D

% Solids: 52.94

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 02:25

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 18.89 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	627		4.4	20.0
106-44-5	4-Methylphenol	1	10.1	J	7.4	20.0
91-20-3	Naphthalene	1	10.7	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	9.2	J	4.5	20.0
208-96-8	Acenaphthylene	1	9.3	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	7.4	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	63.6		8.7	20.0
120-12-7	Anthracene	1	29.0		7.2	20.0
206-44-0	Fluoranthene	1	130		6.1	20.0
129-00-0	Pyrene	1	159		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	89.9		6.0	20.0
218-01-9	Chrysene	1	129		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	65.3		5.5	50.0
	Benzo(a)fluoranthene, Total	1	212		10.0	40.0
50-32-8	Benzo(a)pyrene	1	87.4		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	48.7		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	64.0		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.97	605	80.7	27 - 120	
Phenol-d5	749.97	704	93.8	29 - 120	
2-Chlorophenol-d4	749.97	690	92.1	31 - 120	
1,2-Dichlorobenzene-d4	499.98	389	77.8	32 - 120	
Nitrobenzene-d5	499.98	444	88.8	30 - 120	
2-Fluorobiphenyl	499.98	467	93.3	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-05 B

SDG: 23A0206

Sampled: 01/11/23 09:50

Prepared: 01/27/23 14:44

File ID: NT1003022320.D

% Solids: 52.94

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 02:25

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 18.89 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.97	667	89.0	24 - 134	
p-Terphenyl-d14	499.98	432	86.4	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022320.D

Date: 03-MAR-2023 02:25

Client ID:

Sample Info: 23A0206-05

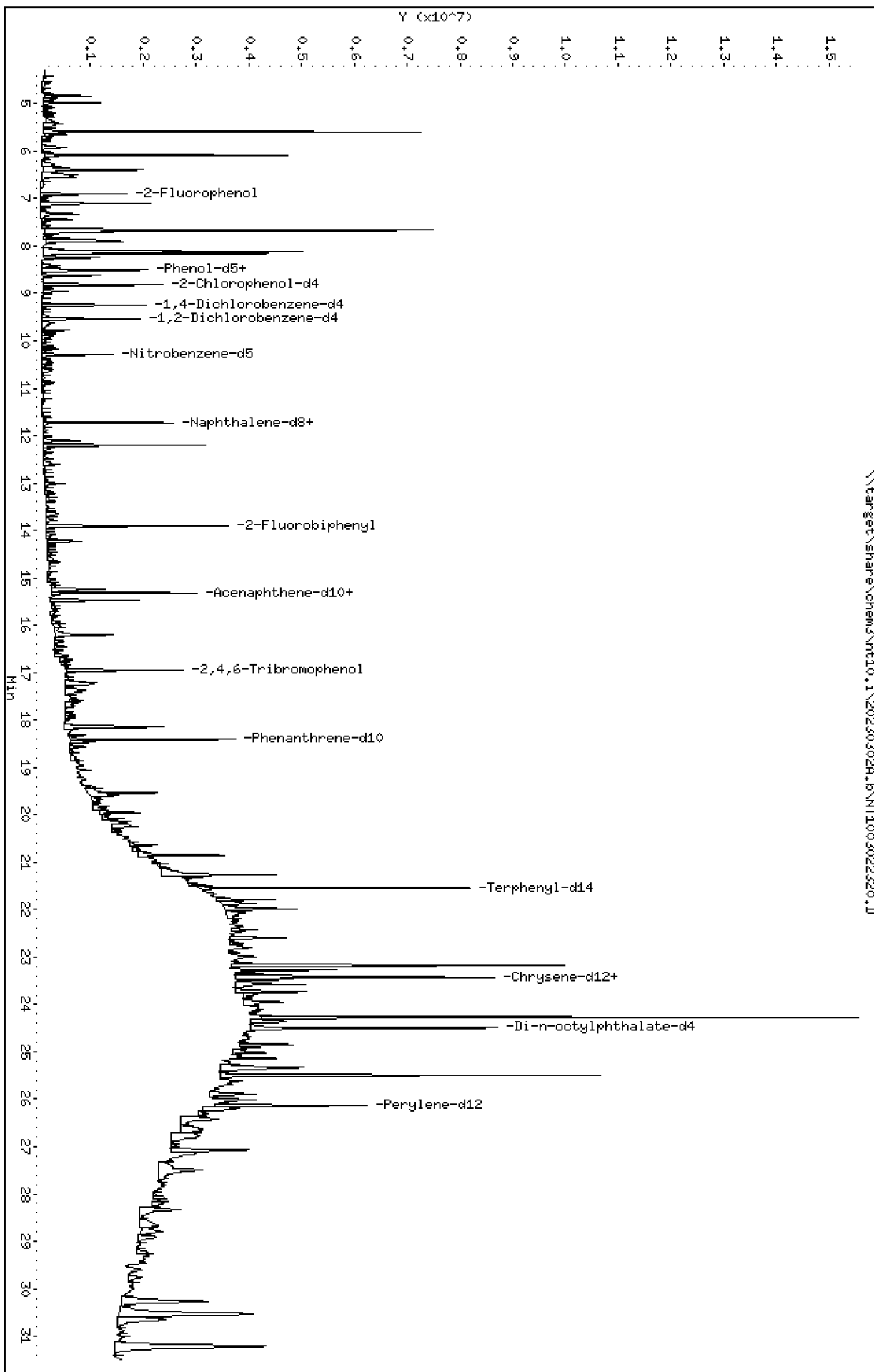
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A.B\NT1003022320.D



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

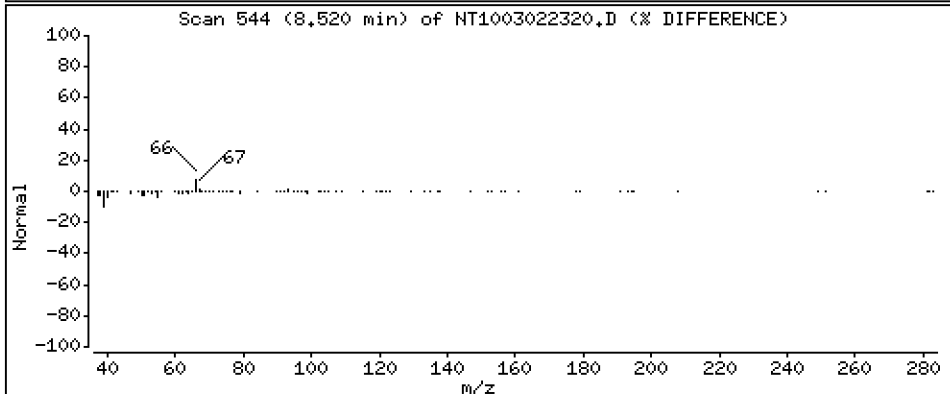
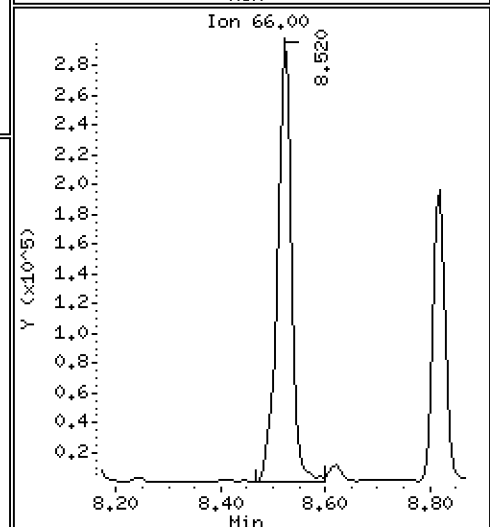
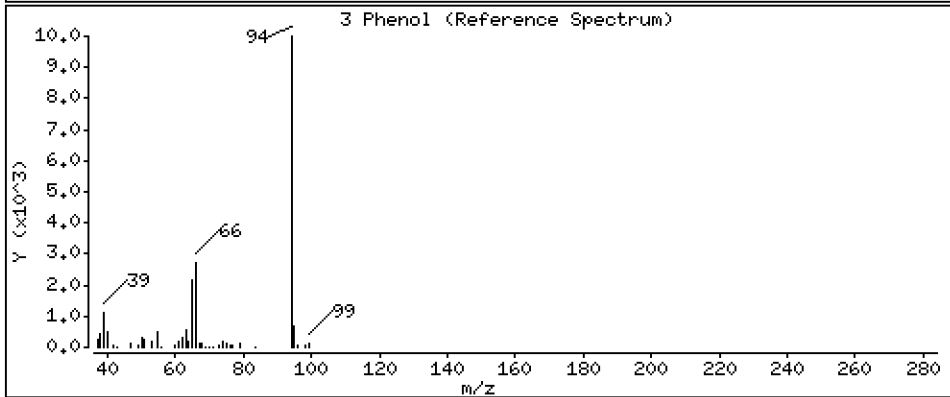
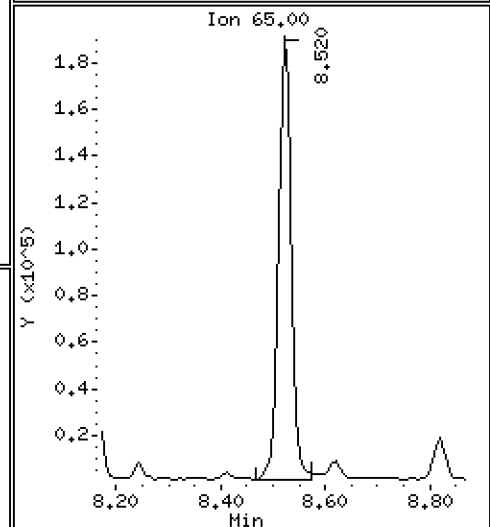
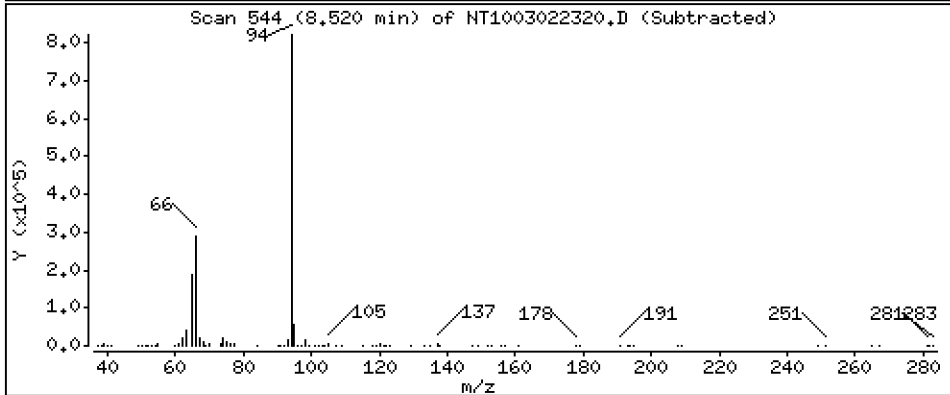
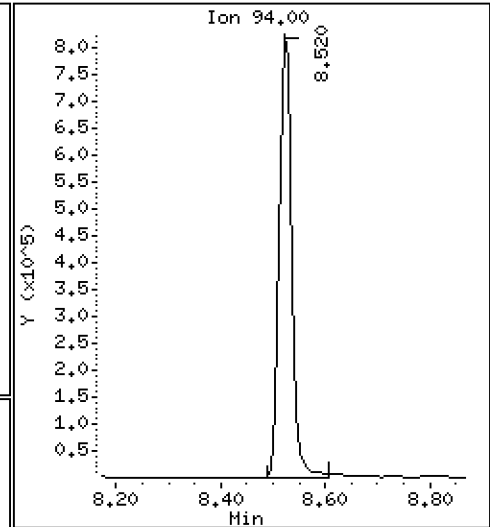
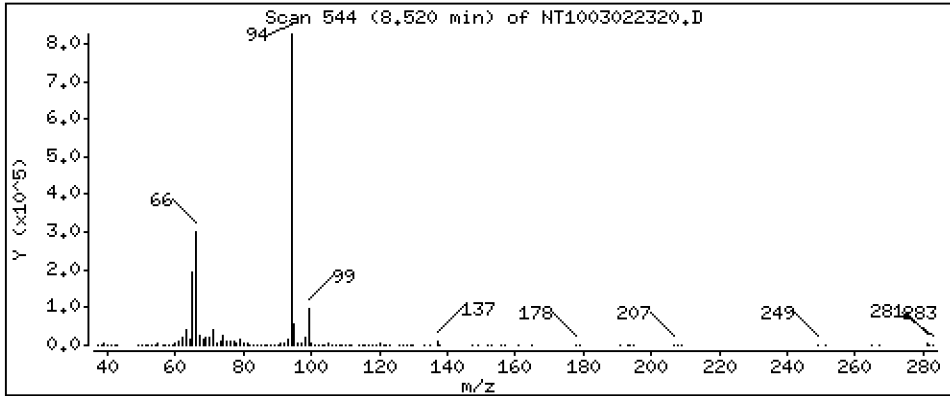
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 6,266 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

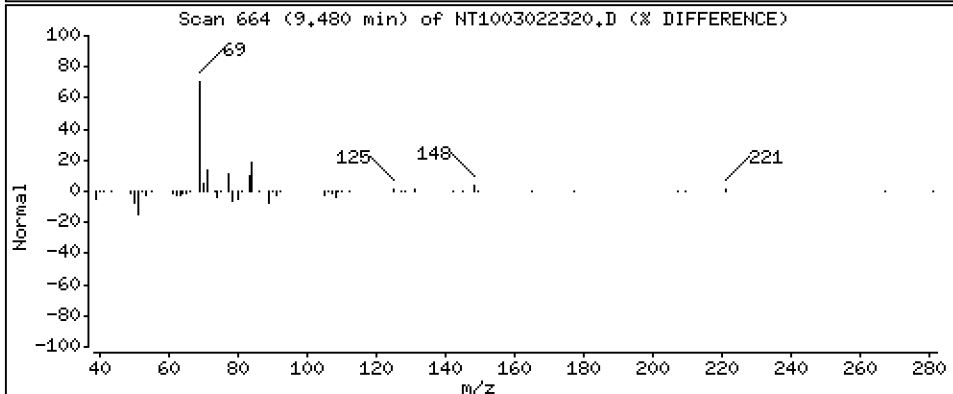
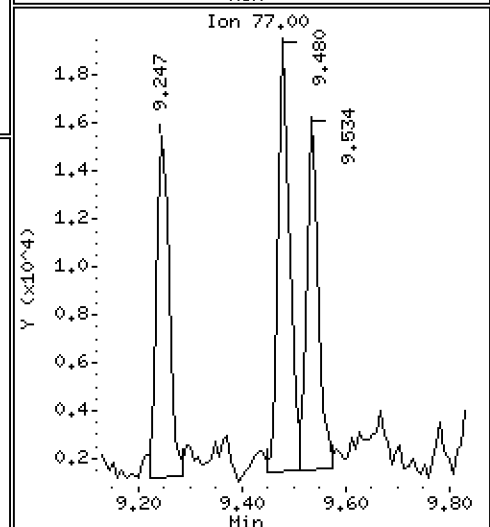
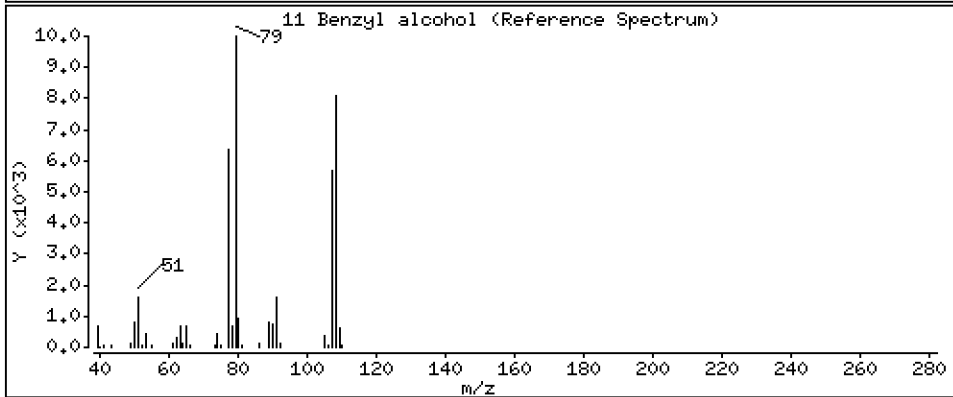
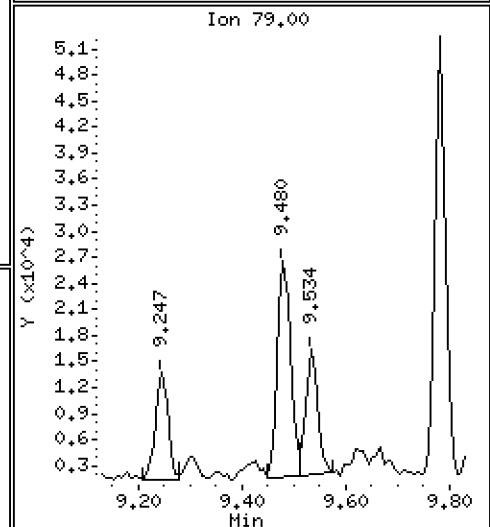
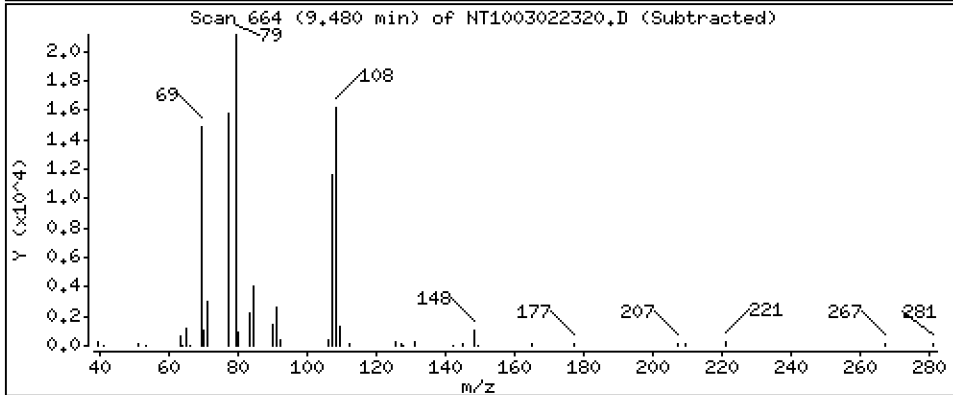
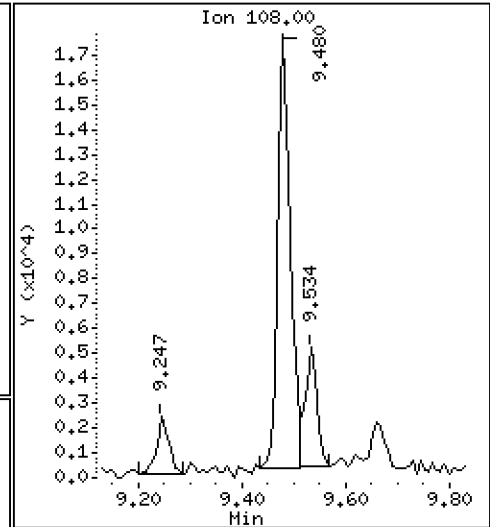
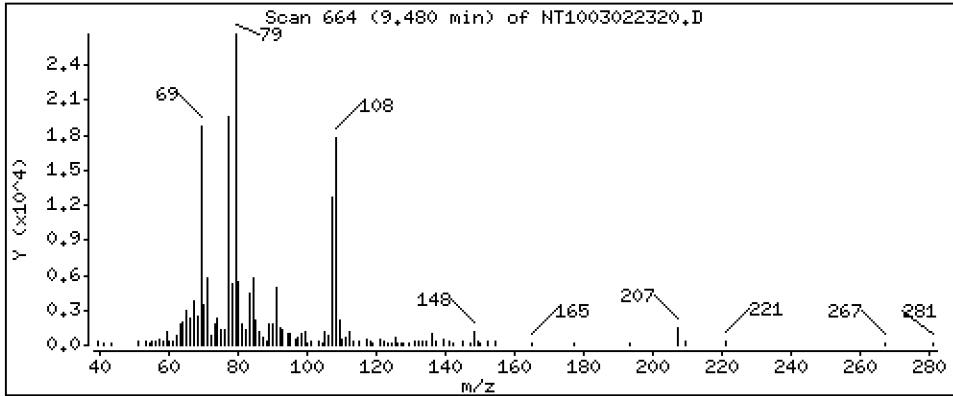
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2584 ug/mL





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

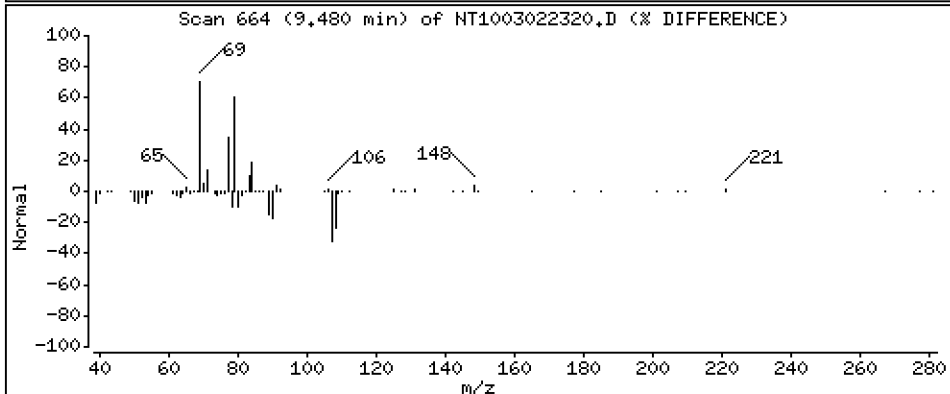
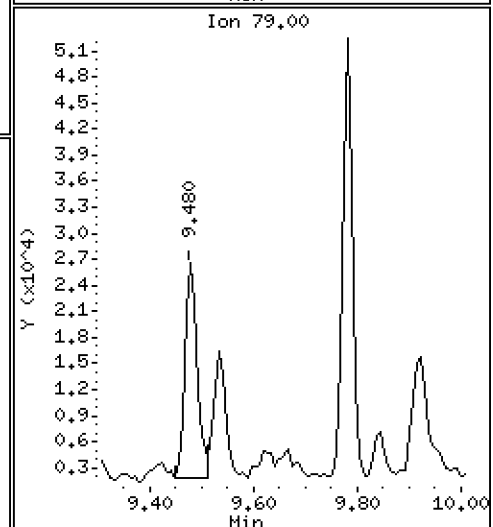
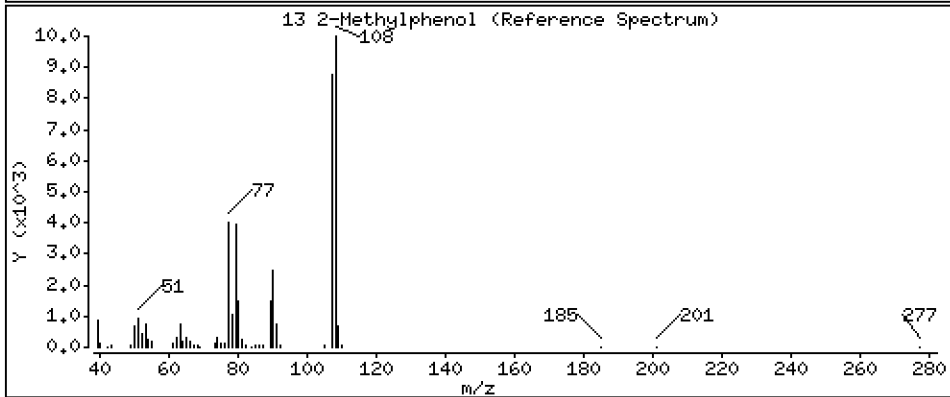
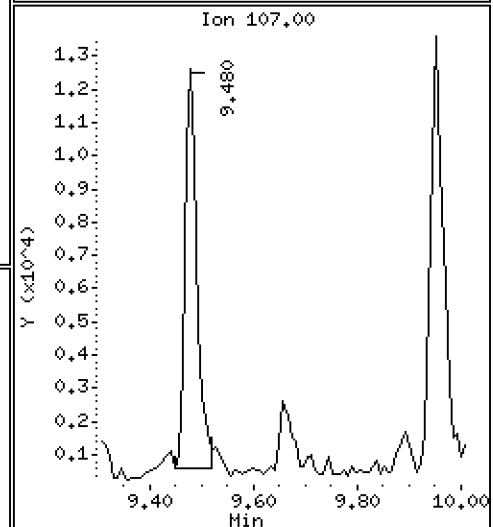
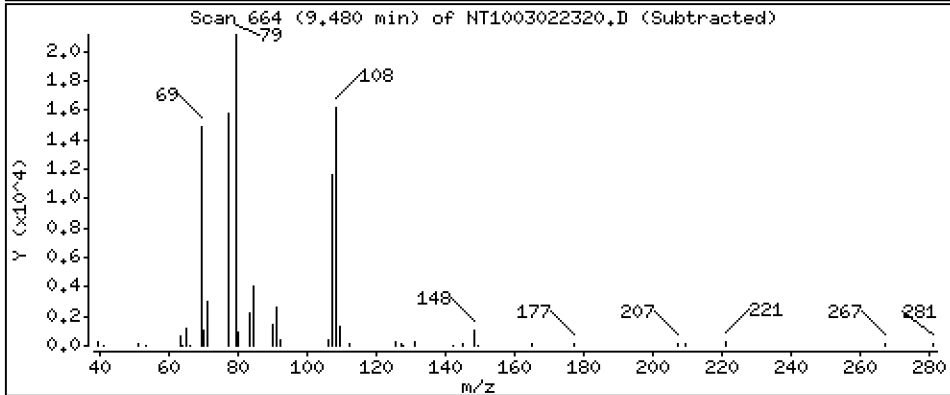
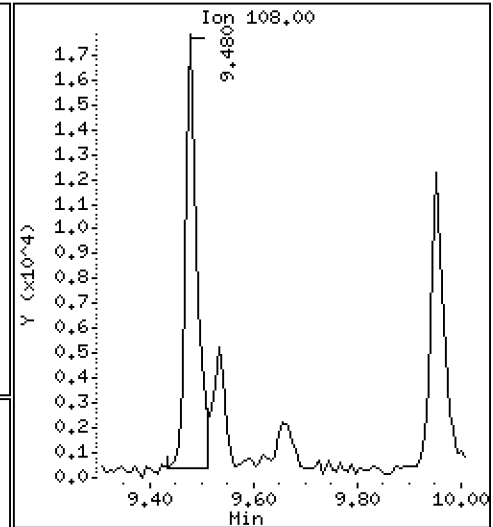
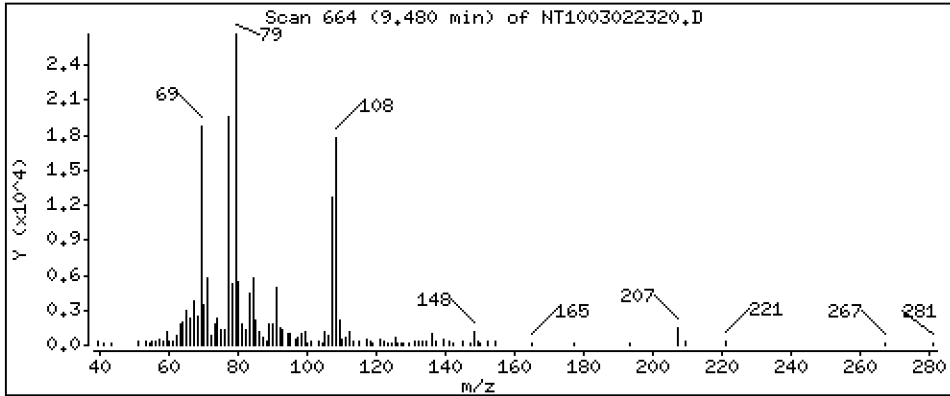
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1711 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

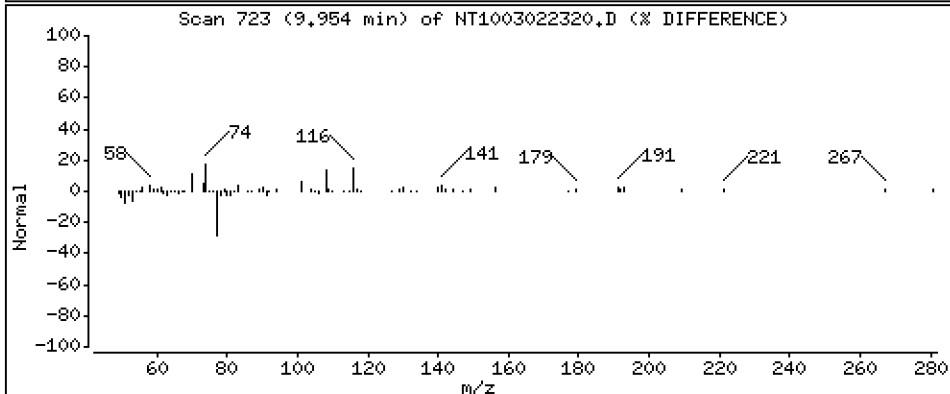
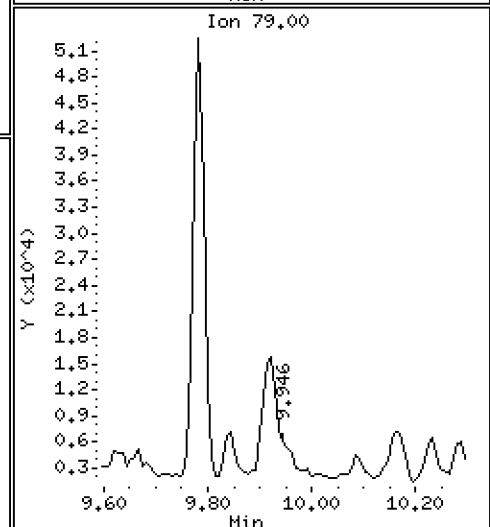
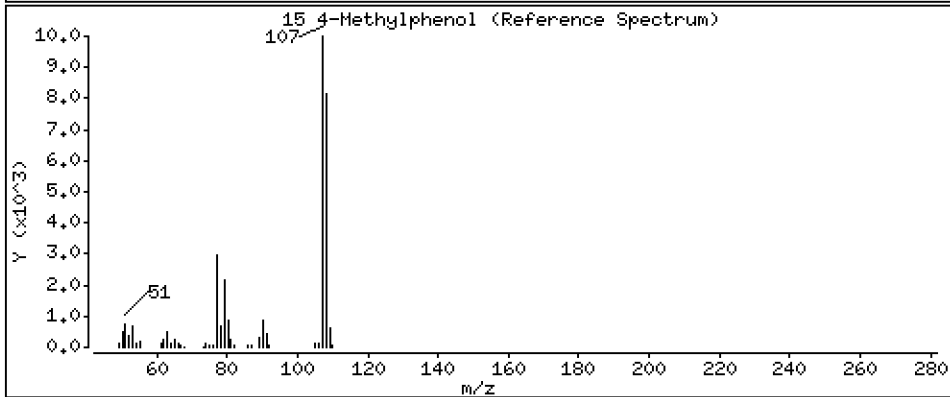
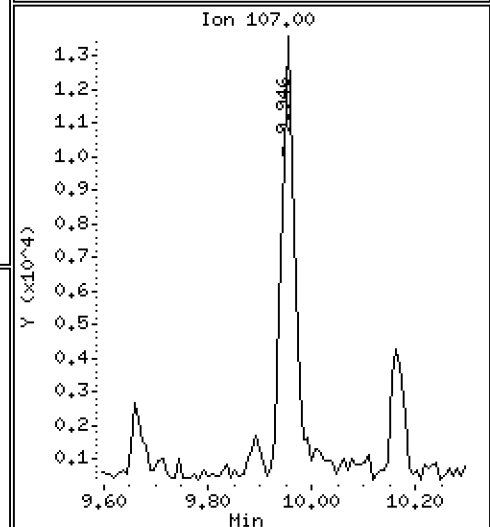
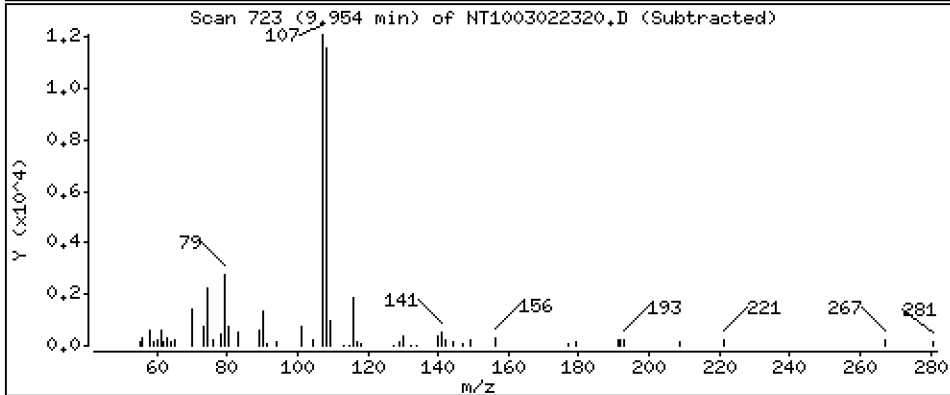
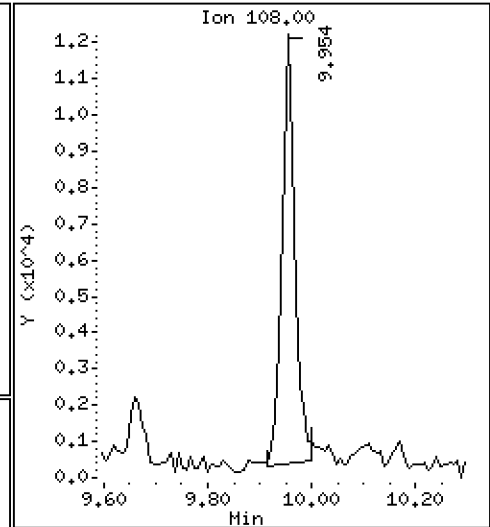
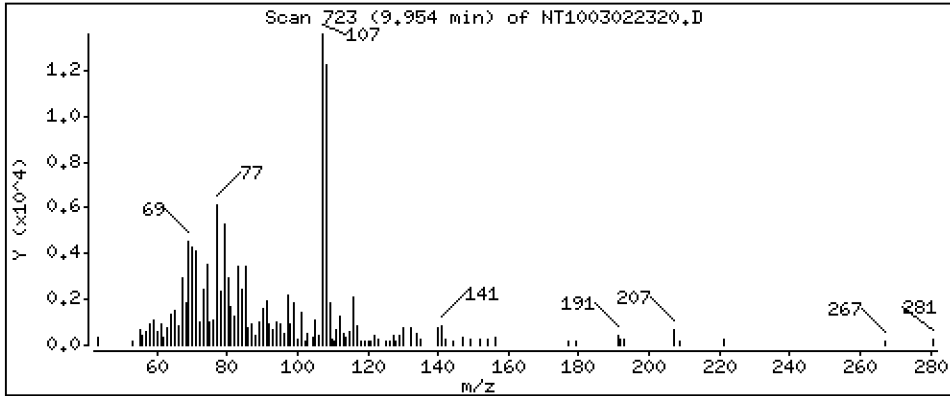
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1007 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

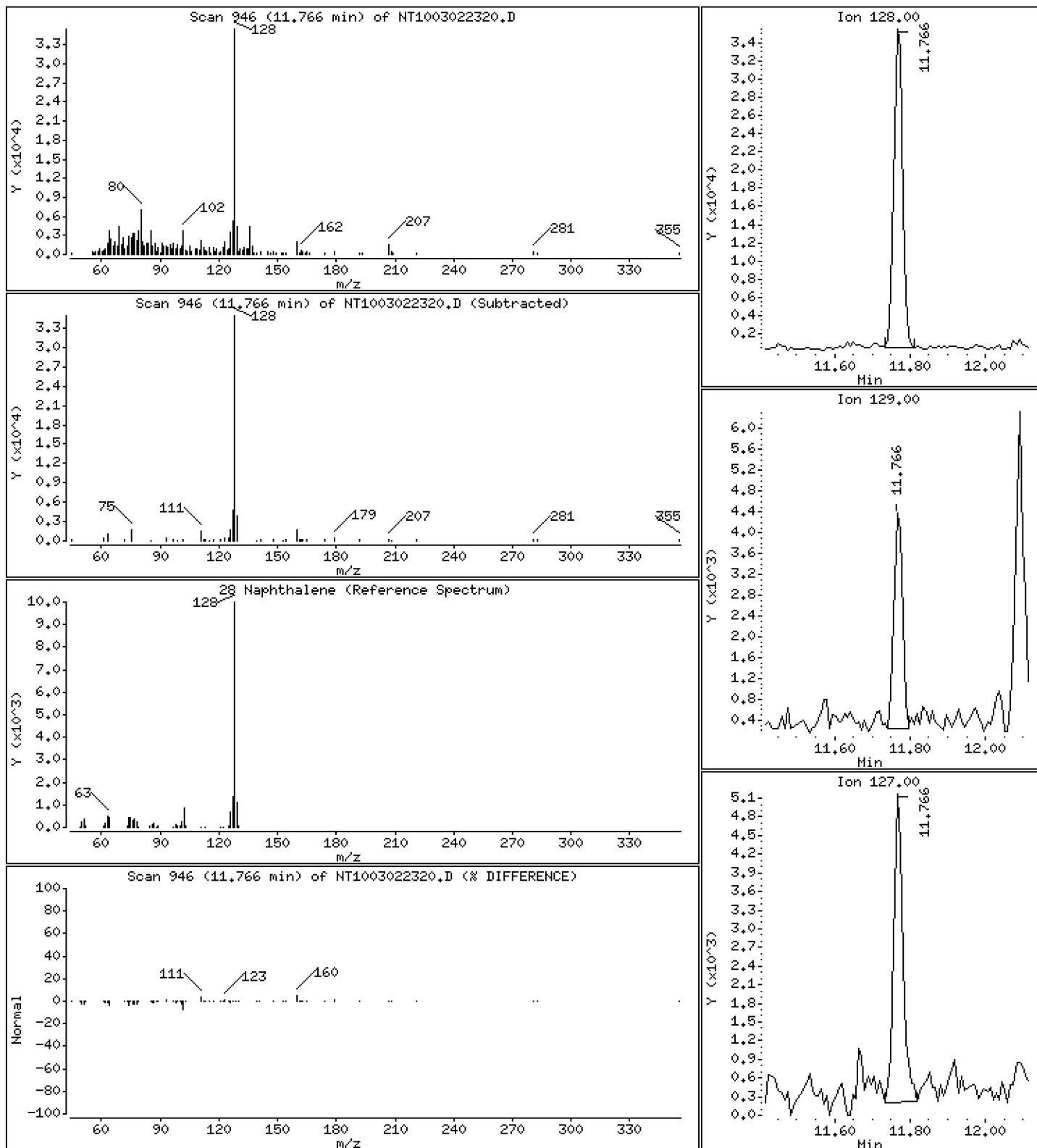
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 0.1074 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

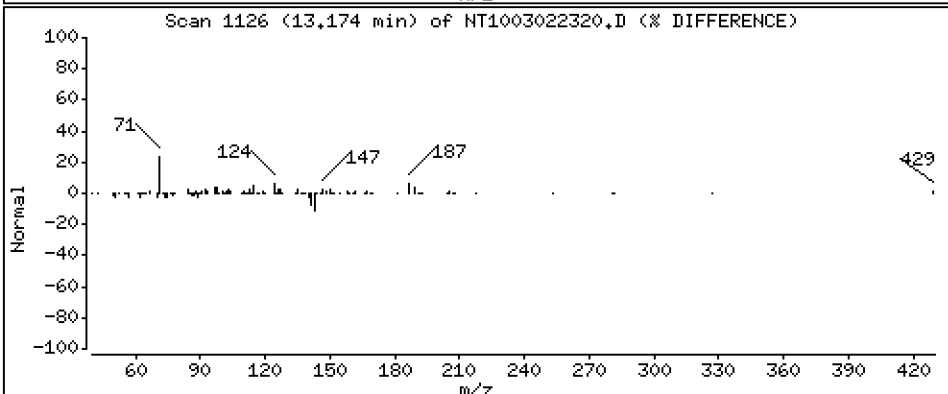
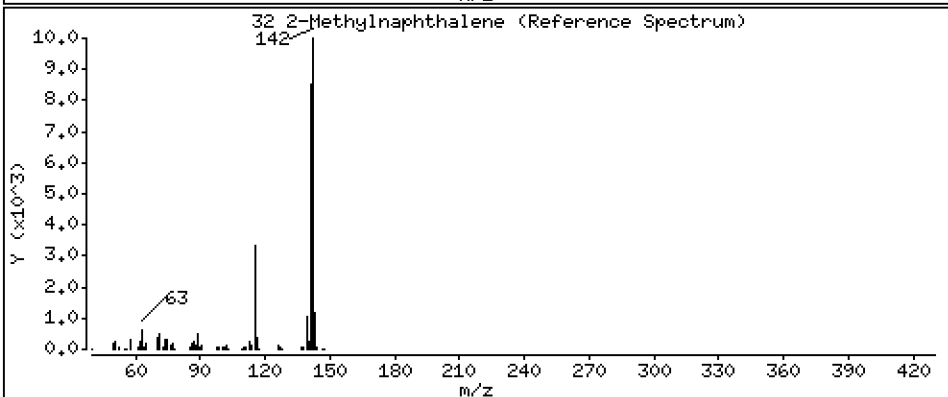
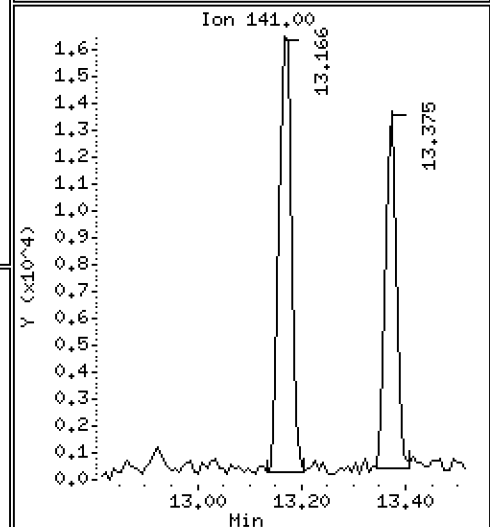
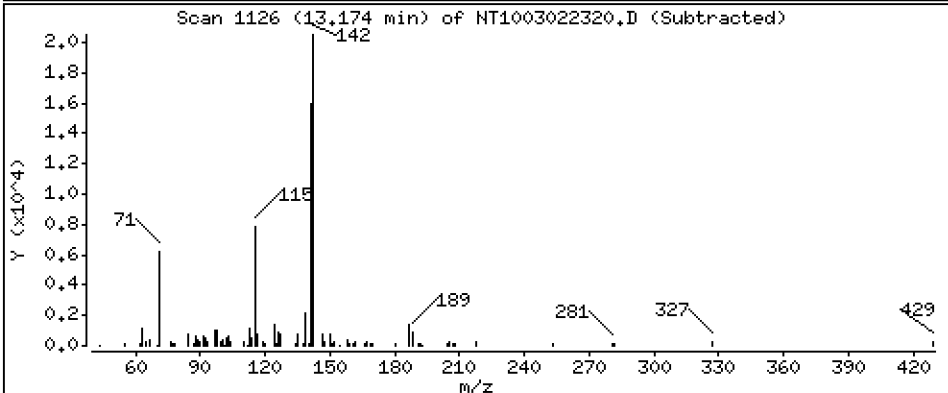
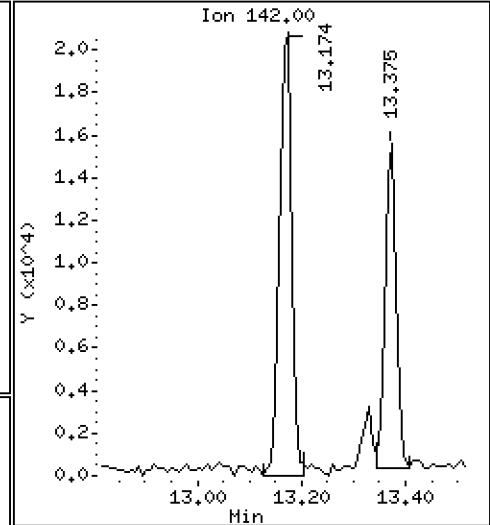
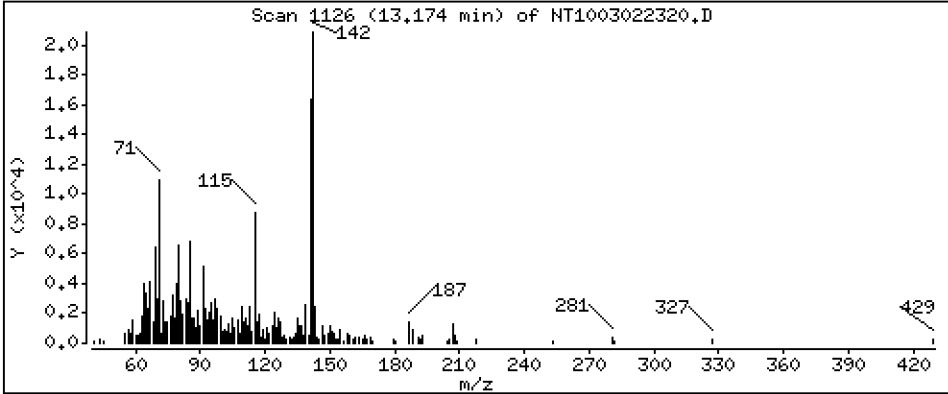
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.09153 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

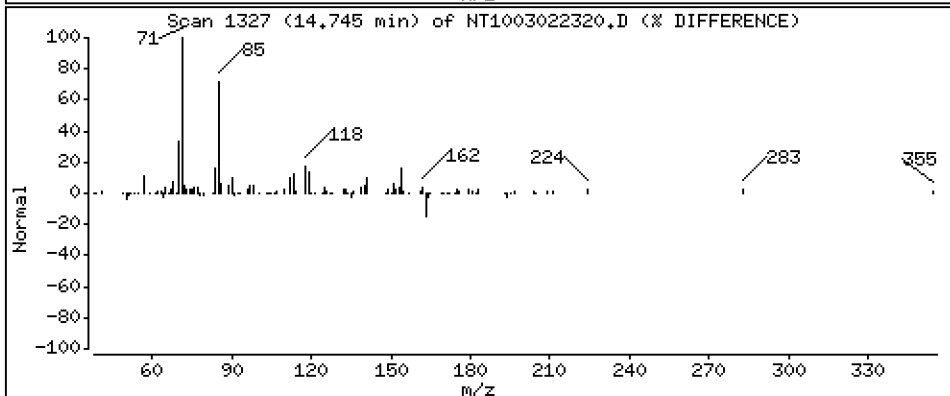
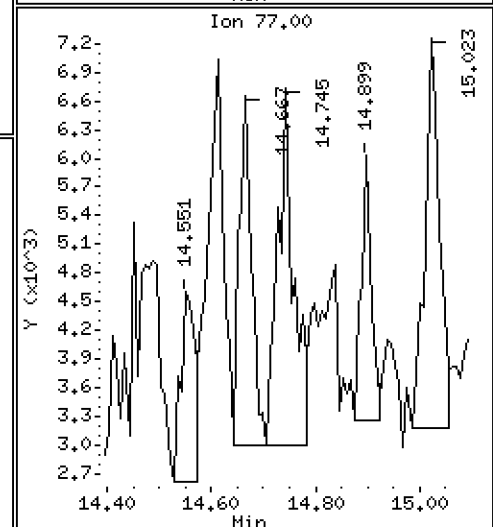
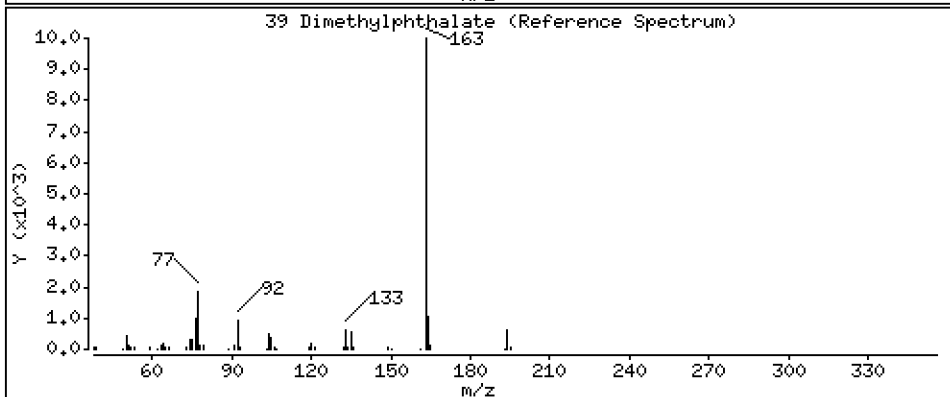
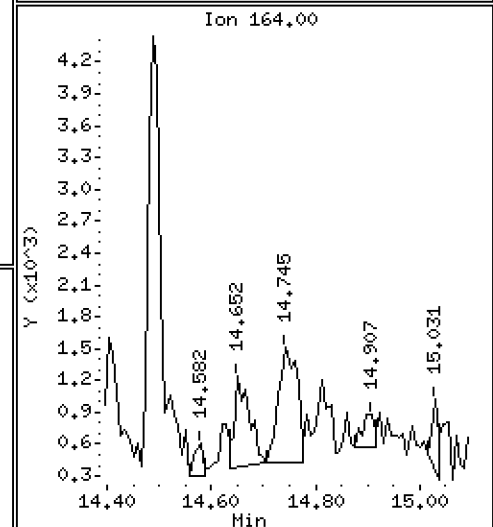
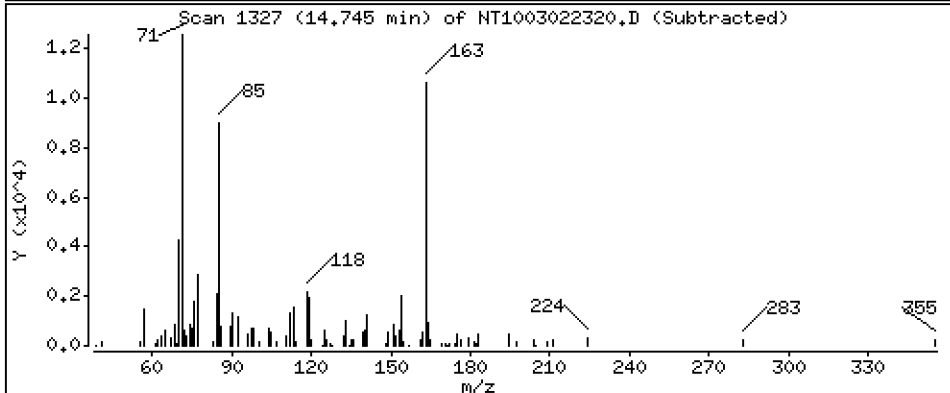
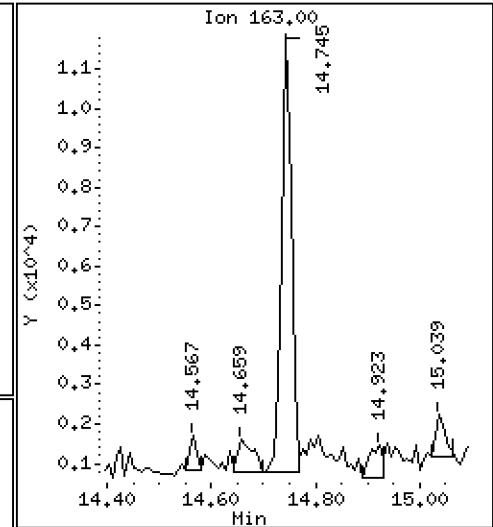
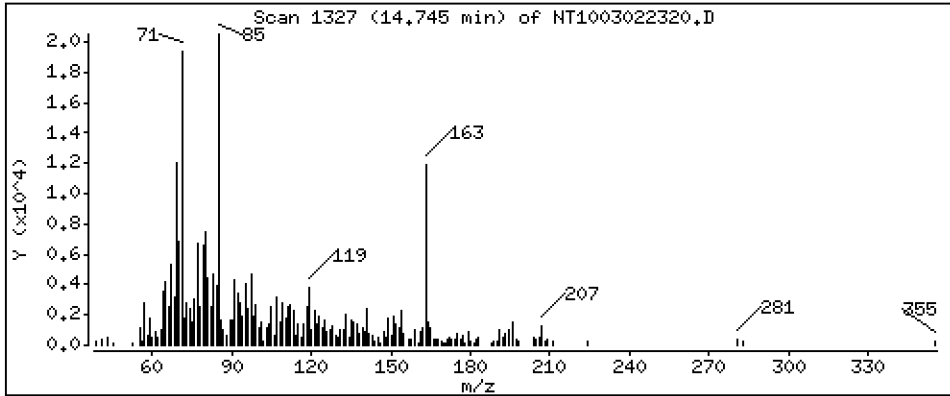
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.04124 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

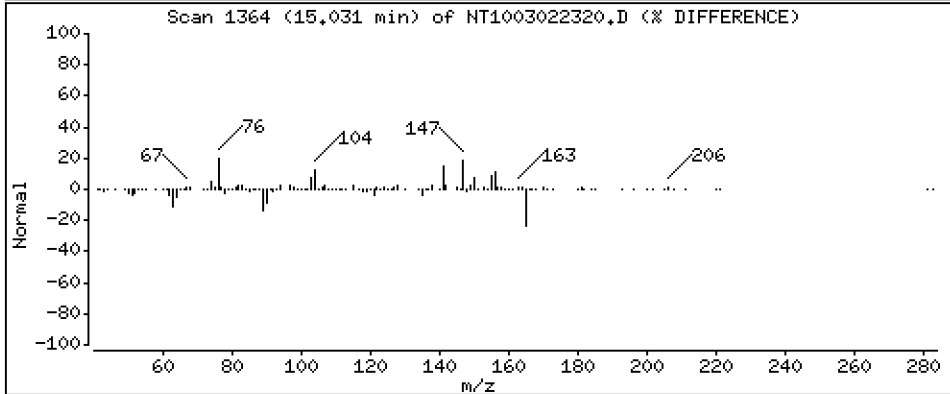
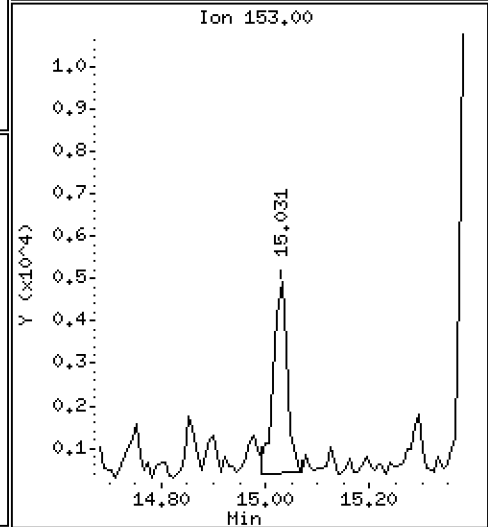
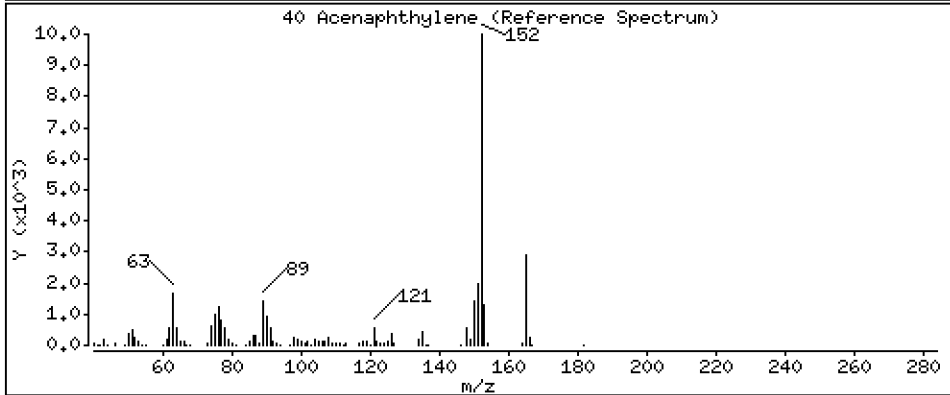
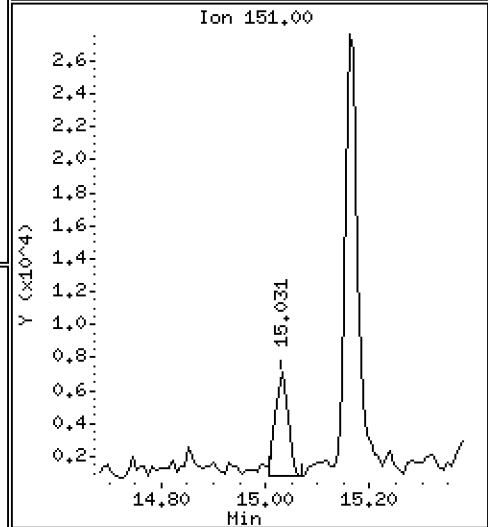
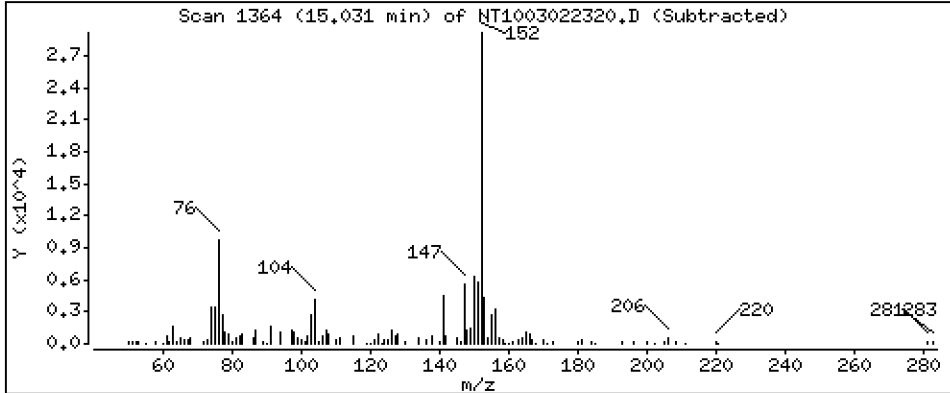
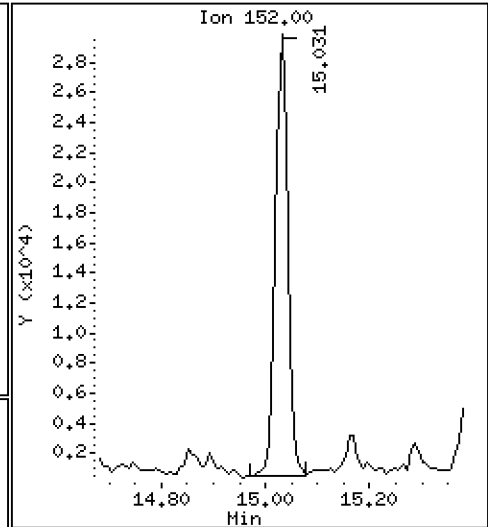
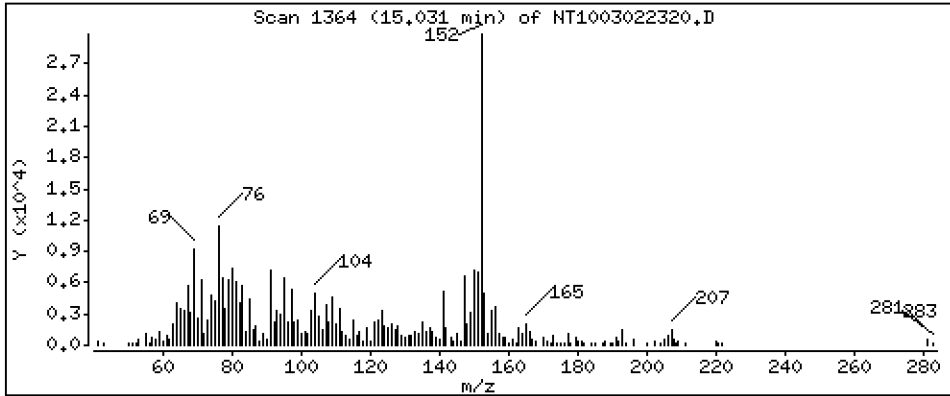
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.09319 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

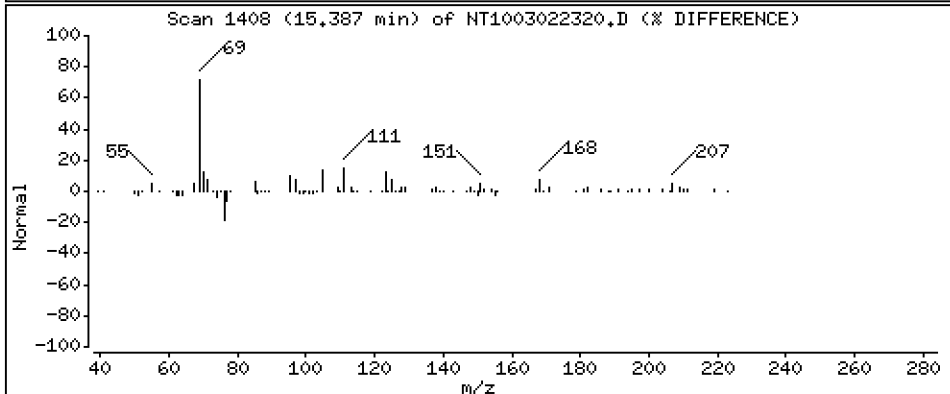
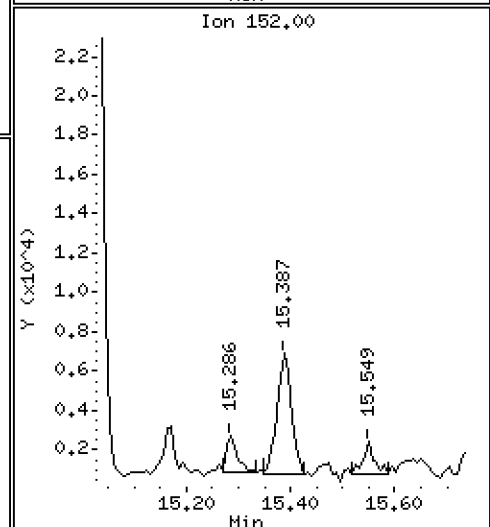
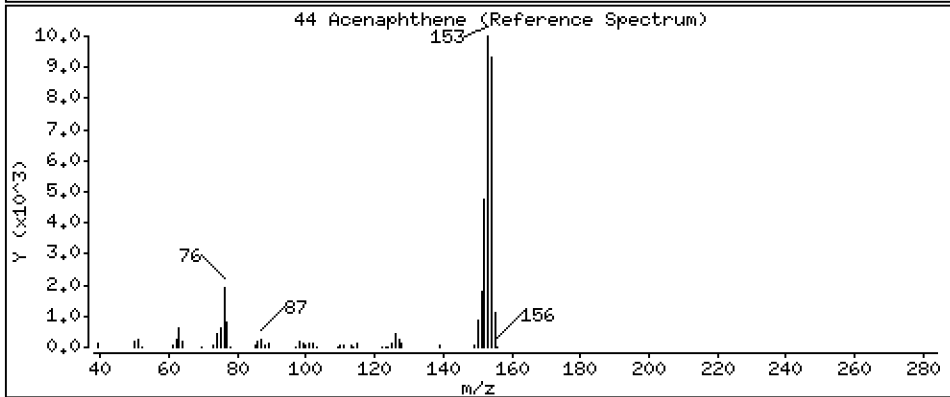
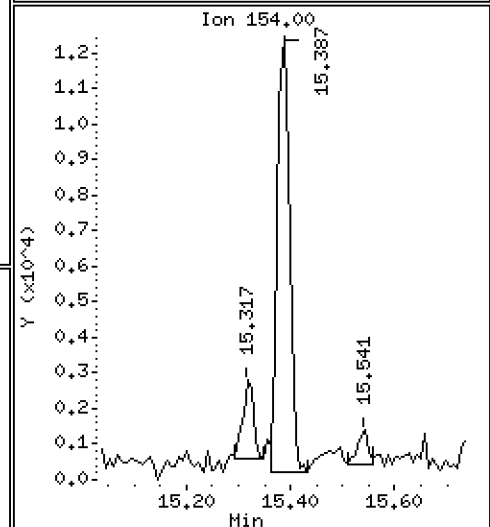
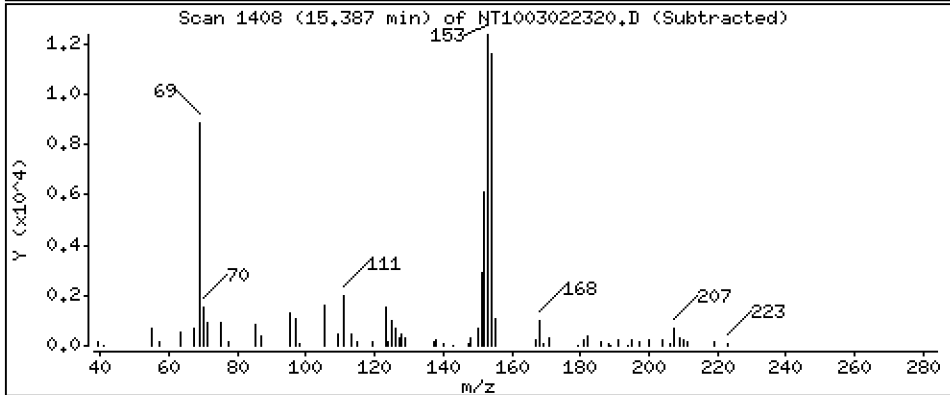
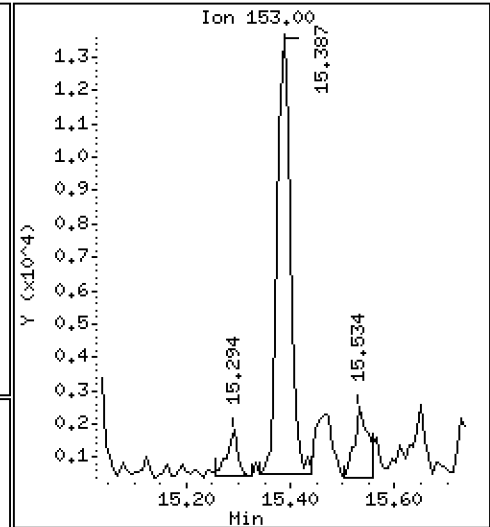
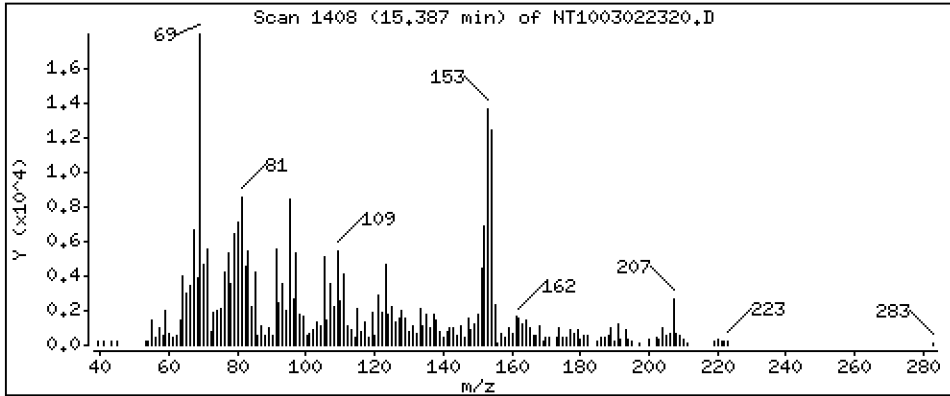
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.07396 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

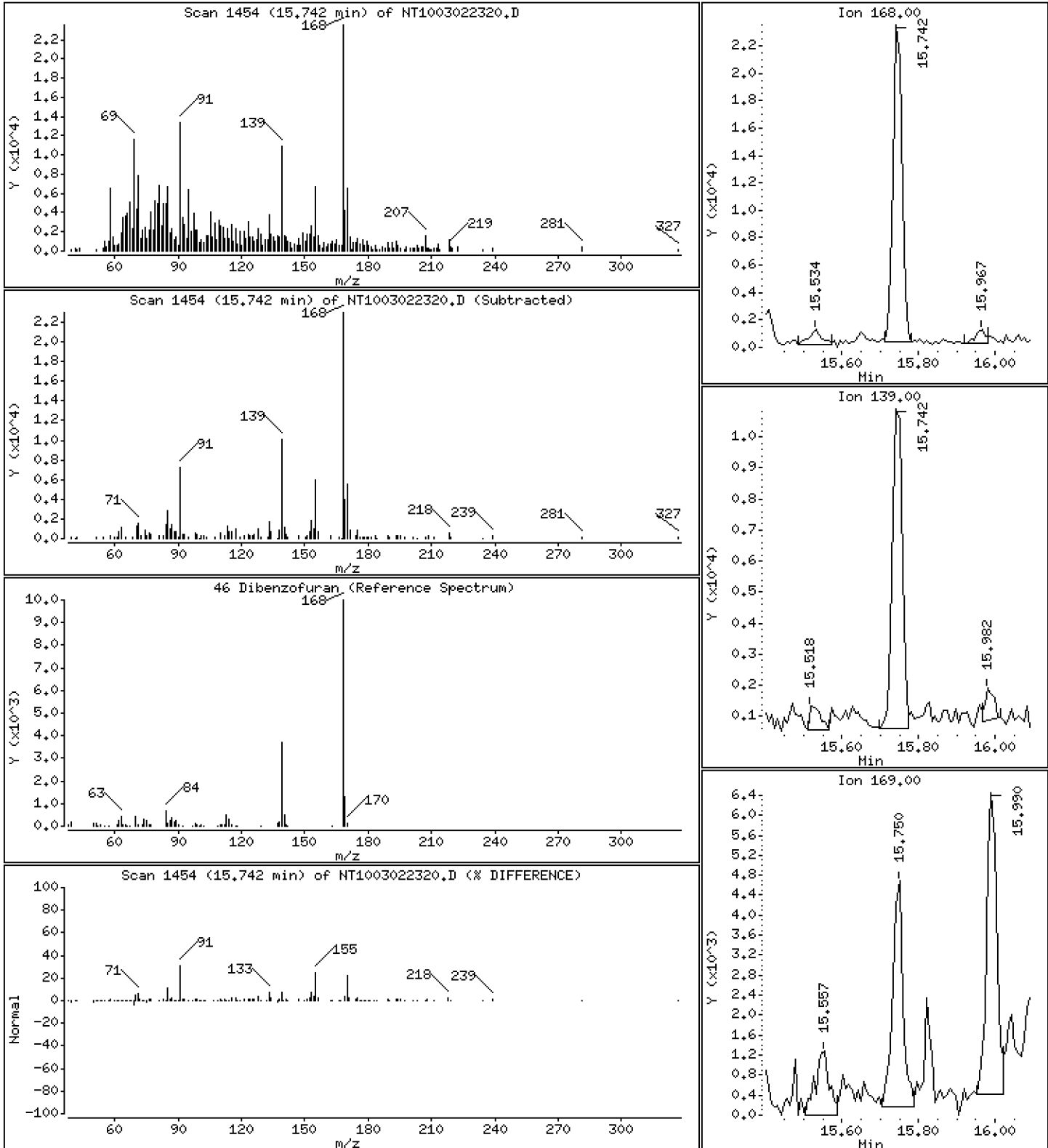
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,08045 ug/mL





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

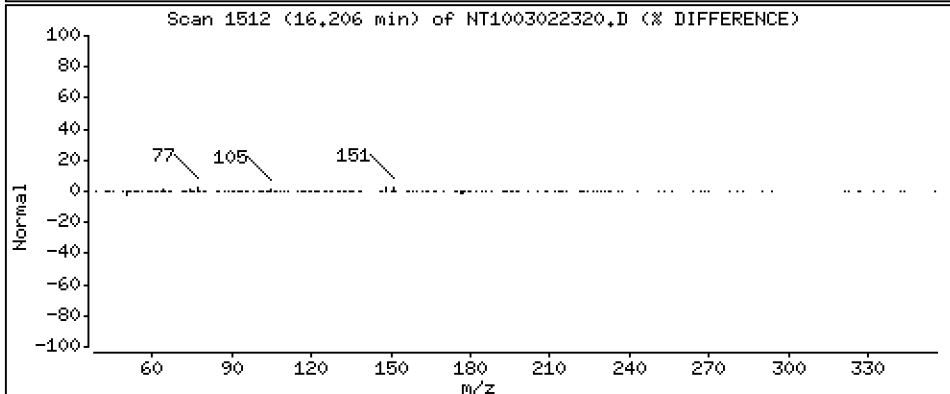
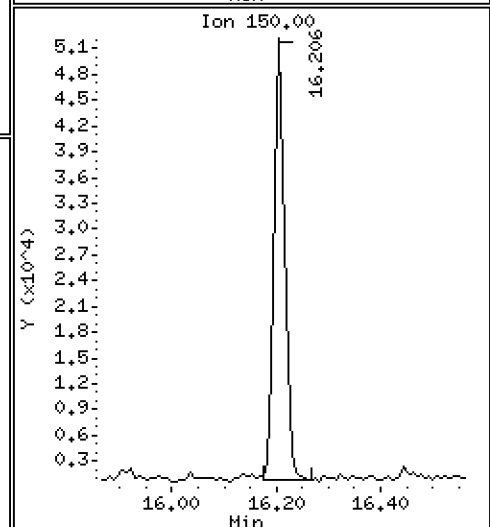
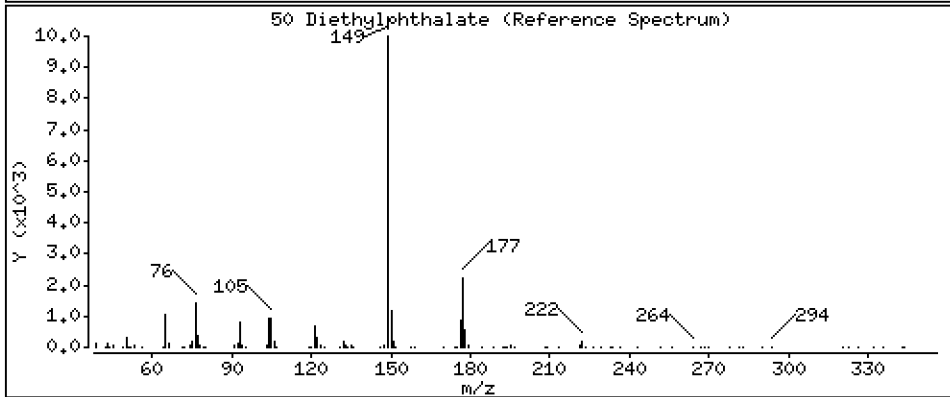
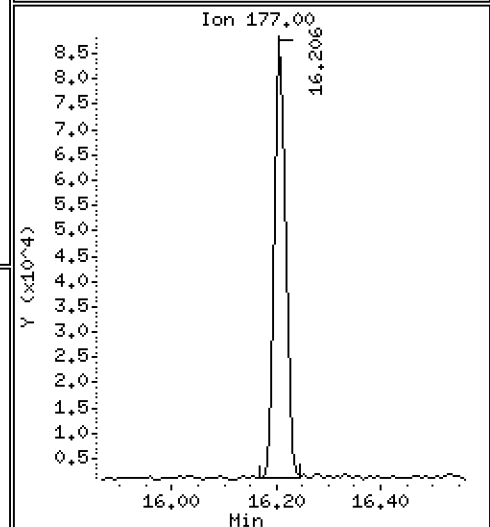
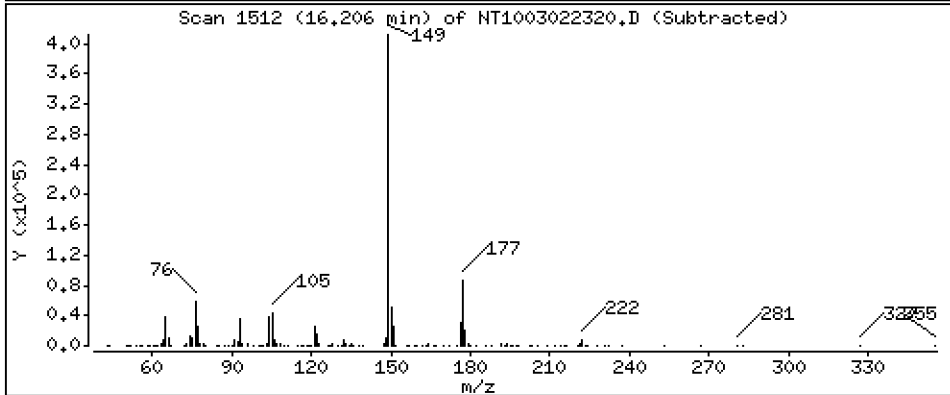
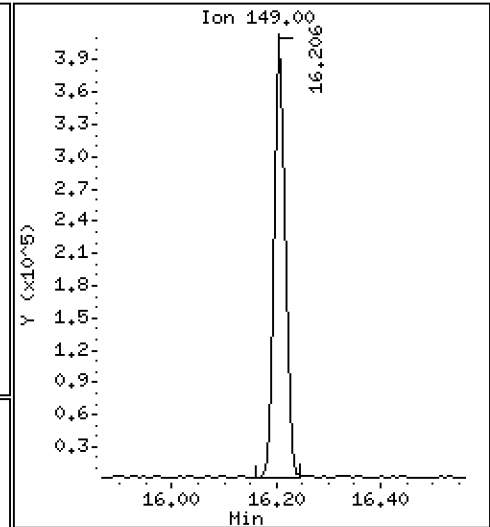
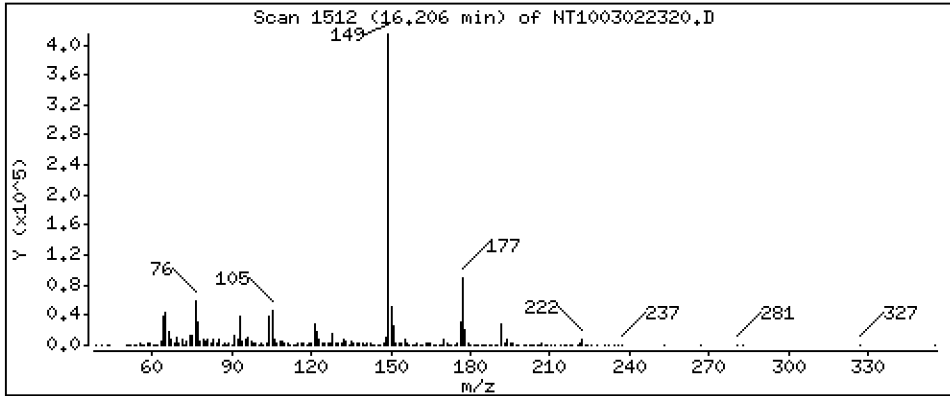
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 1,667 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

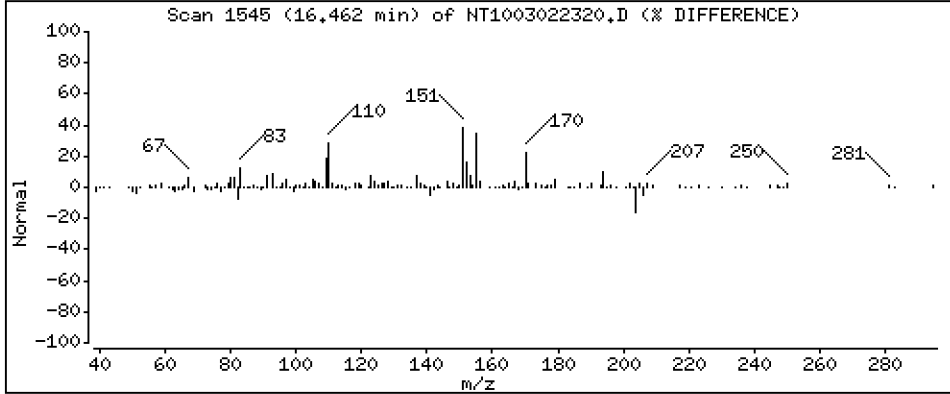
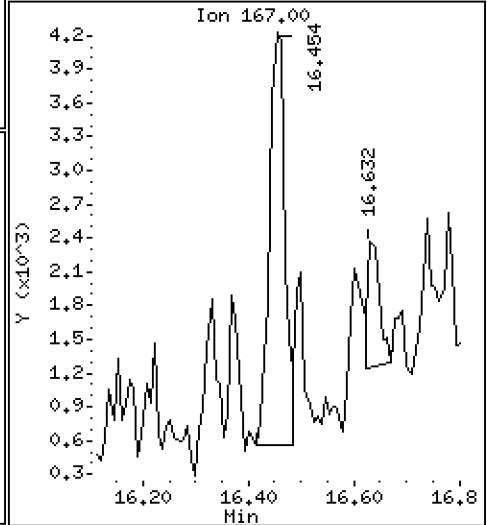
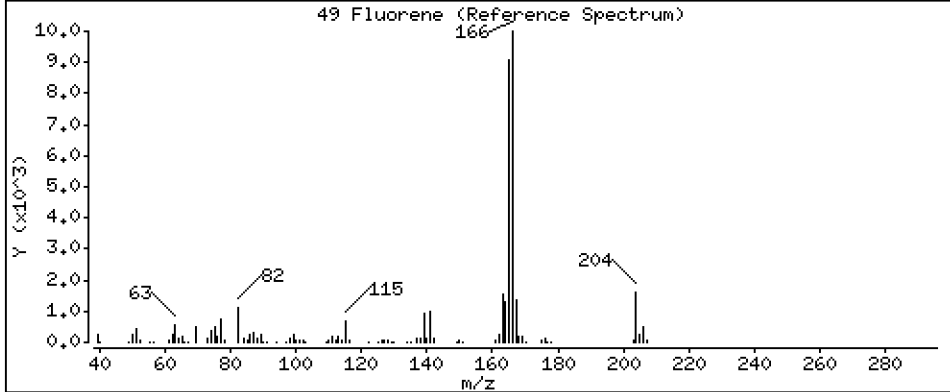
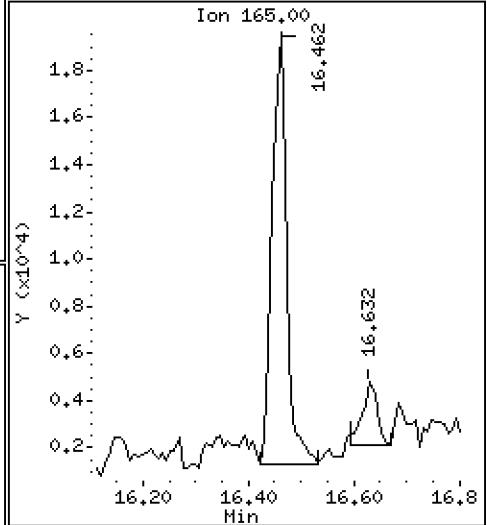
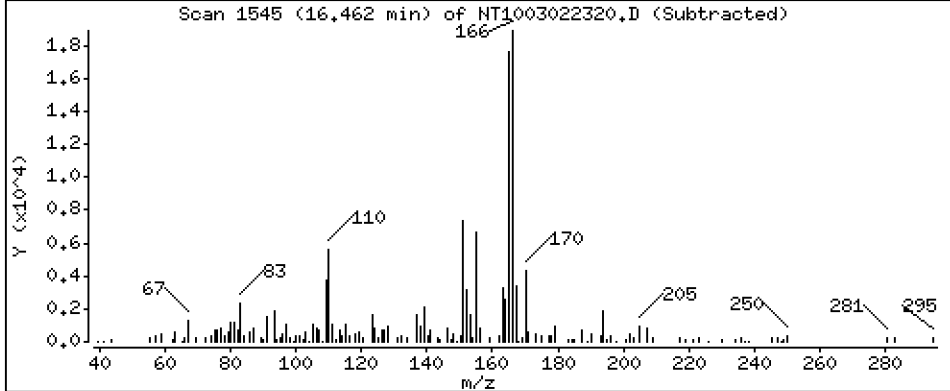
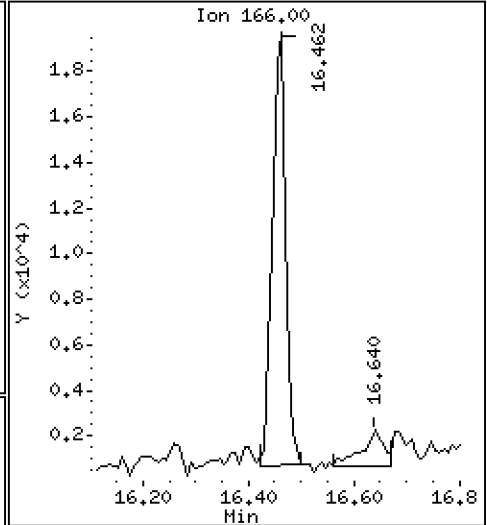
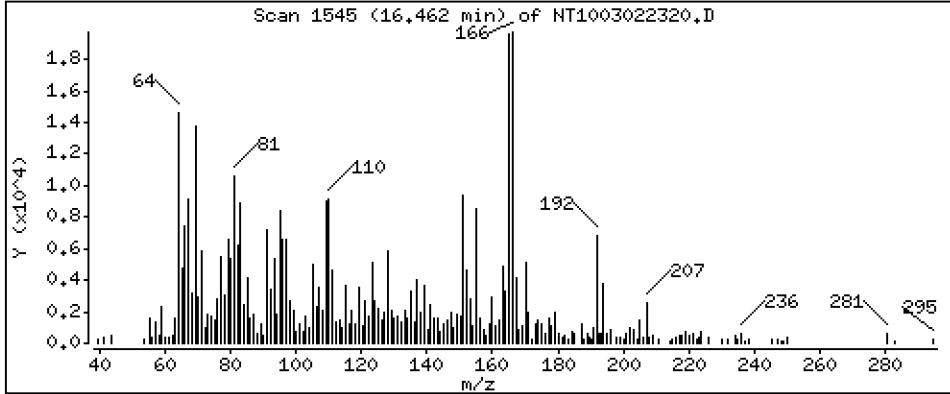
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.08772 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

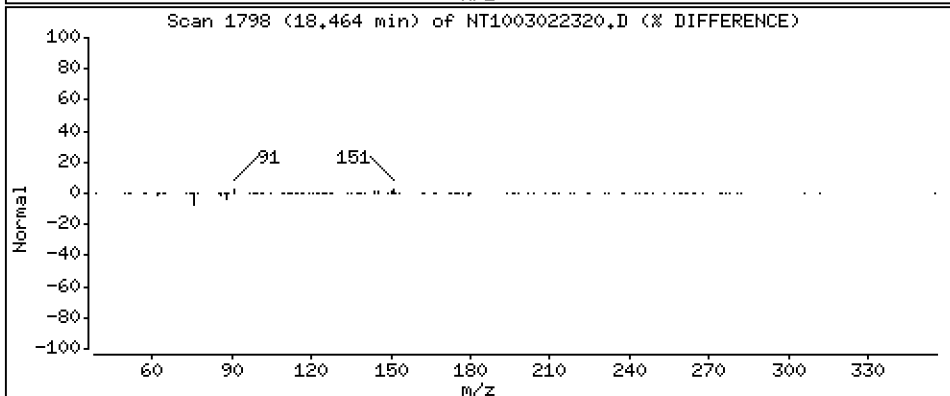
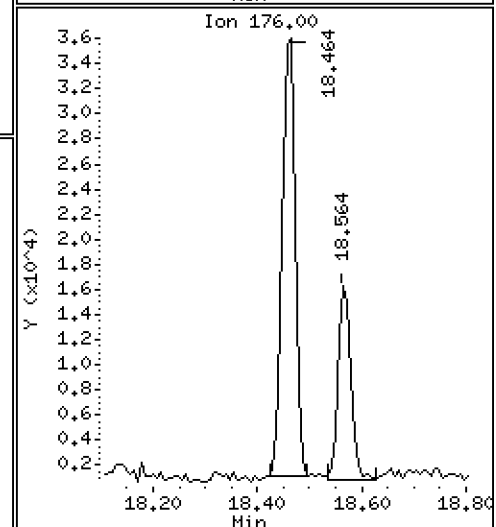
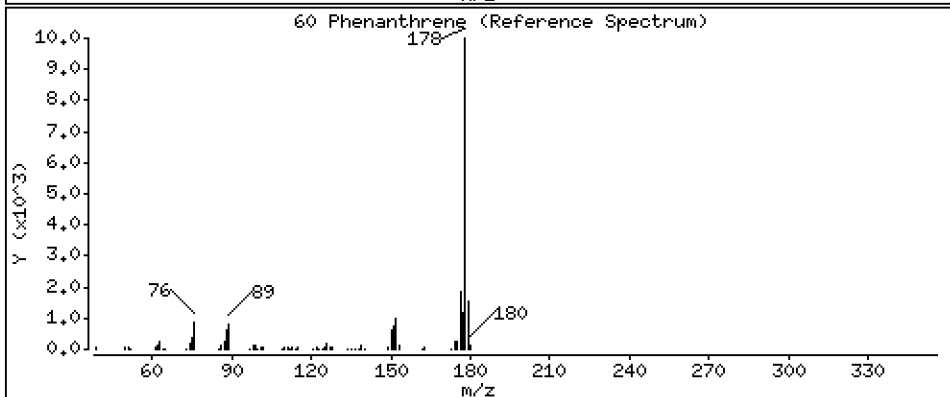
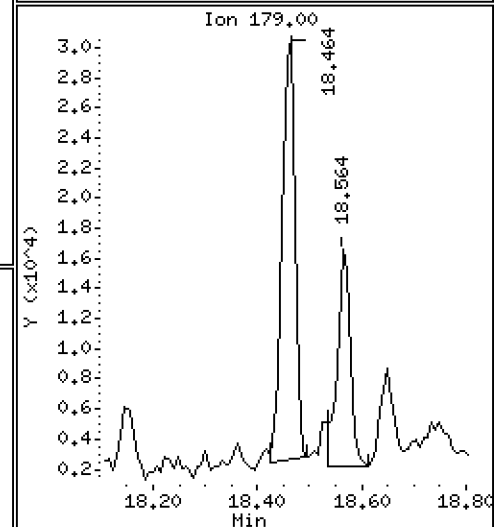
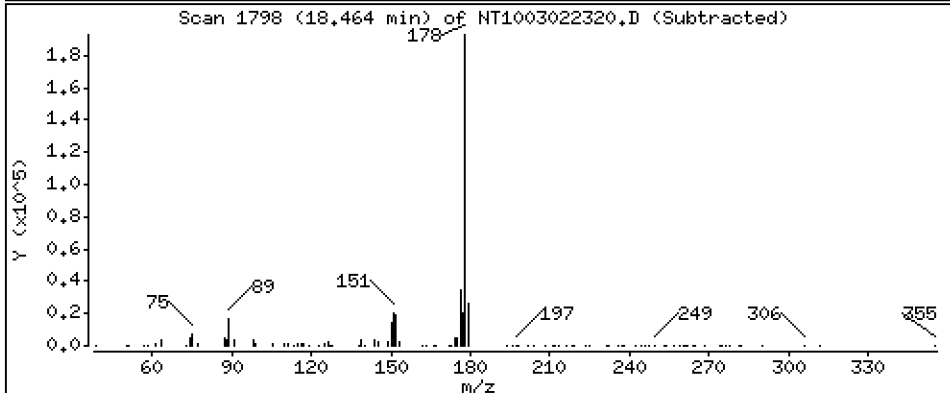
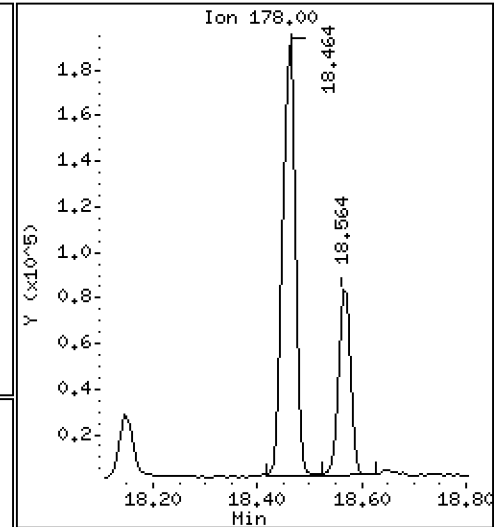
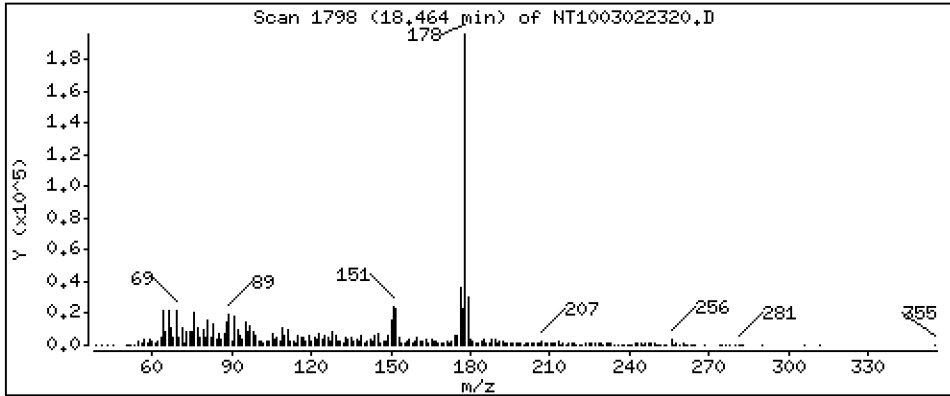
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,6364 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

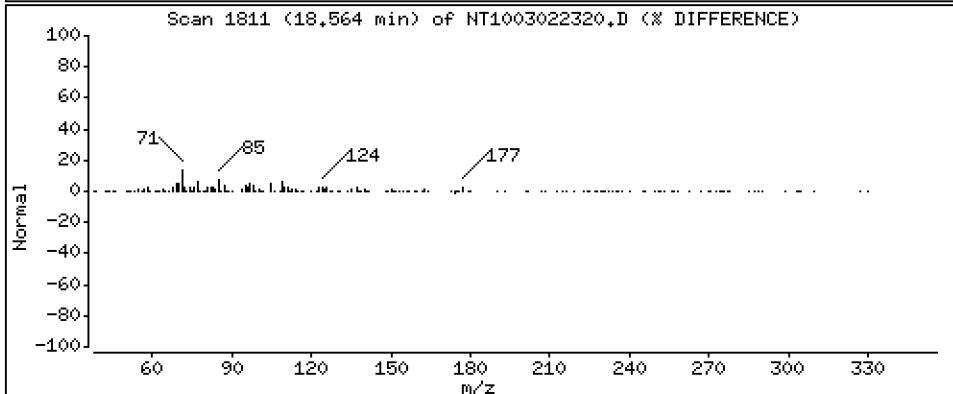
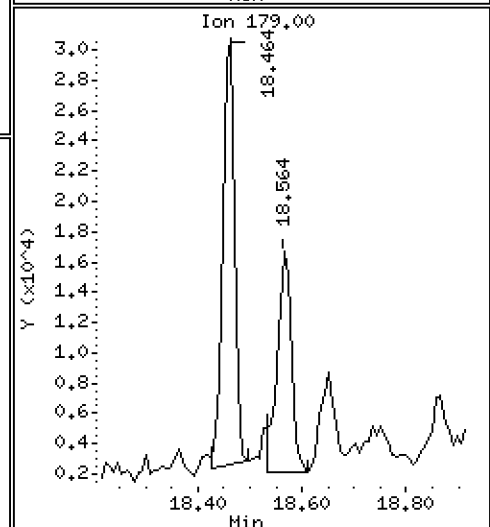
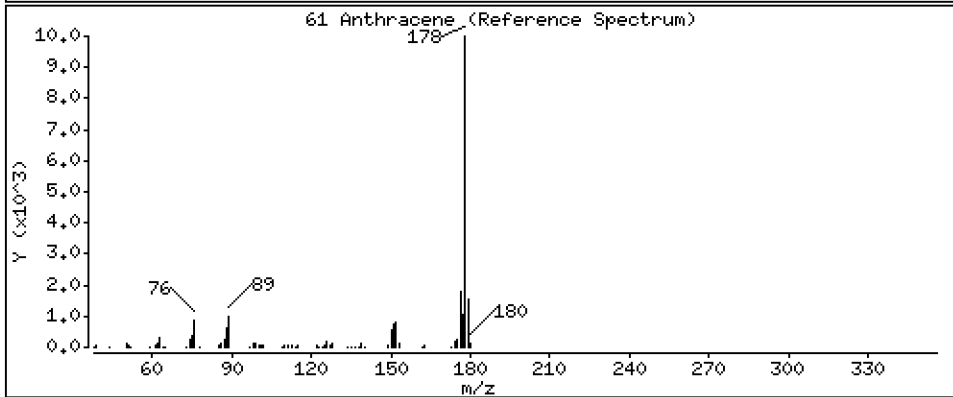
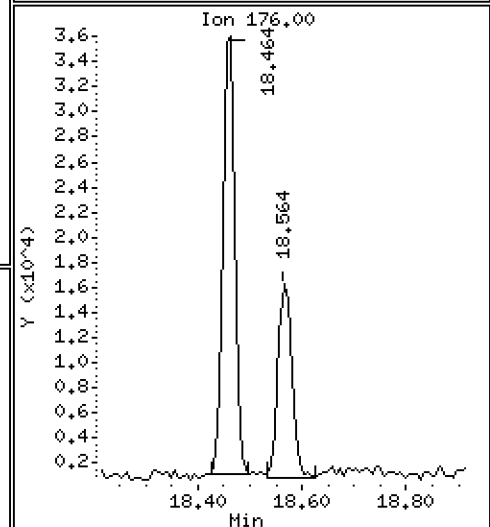
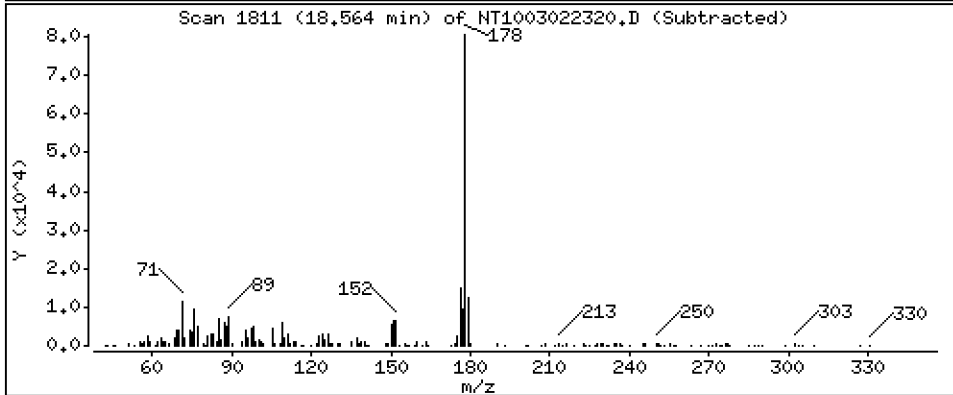
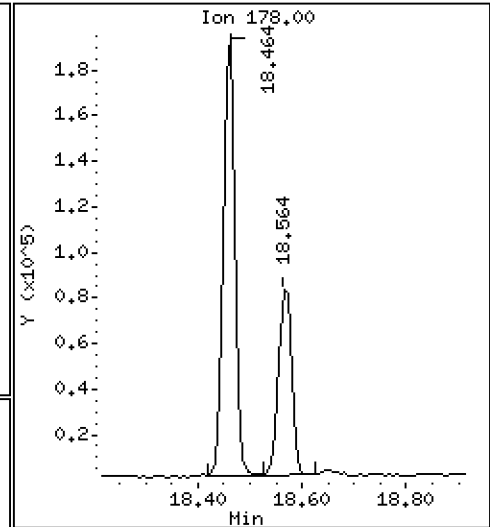
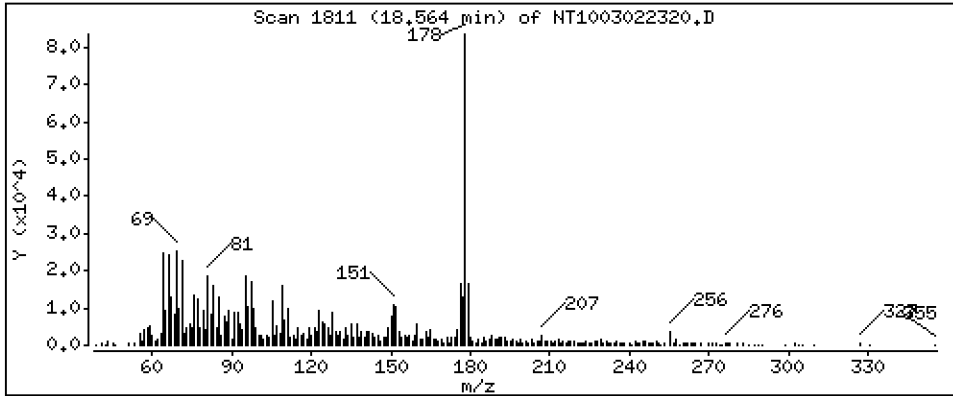
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,2899 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

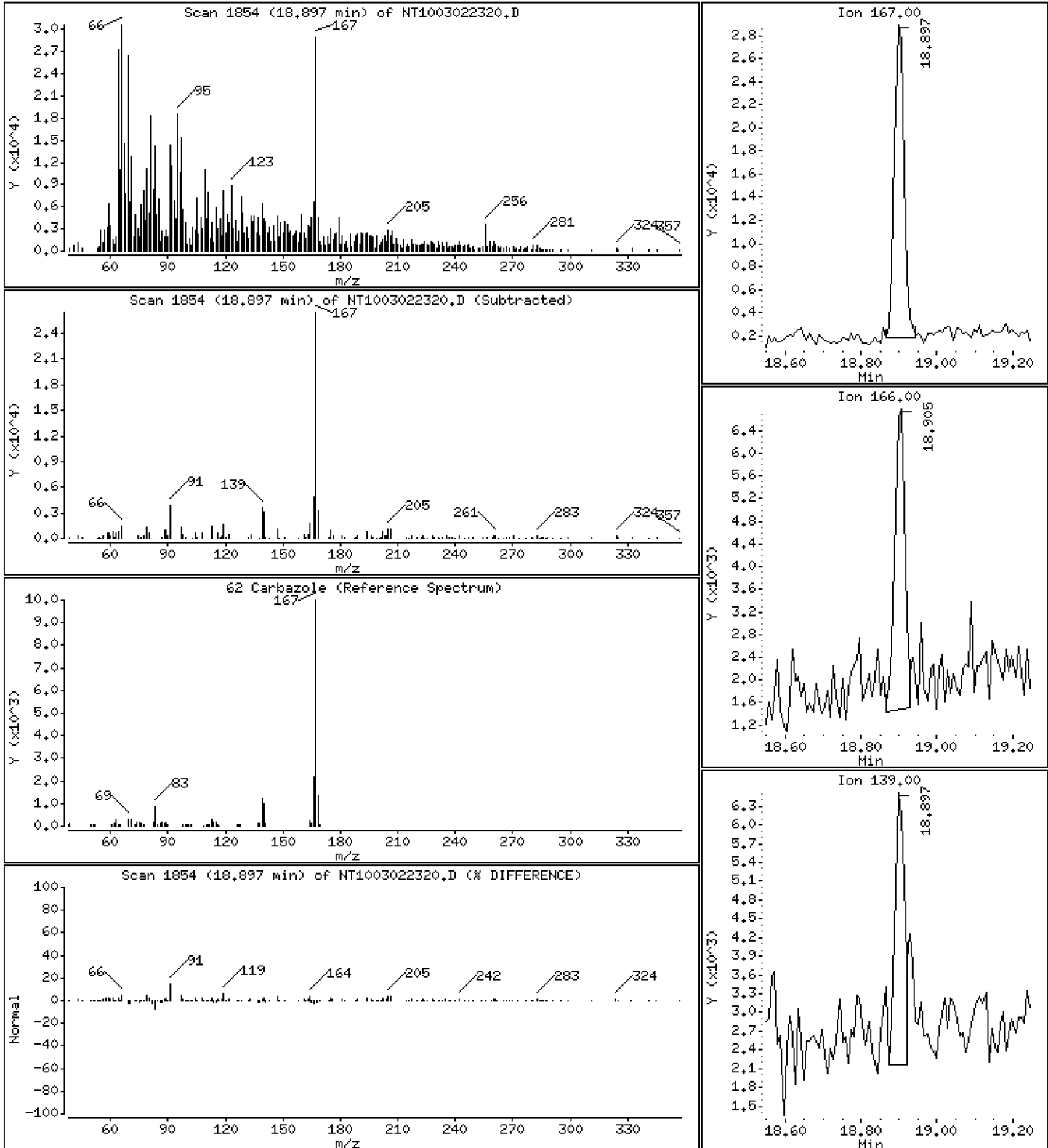
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1034 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

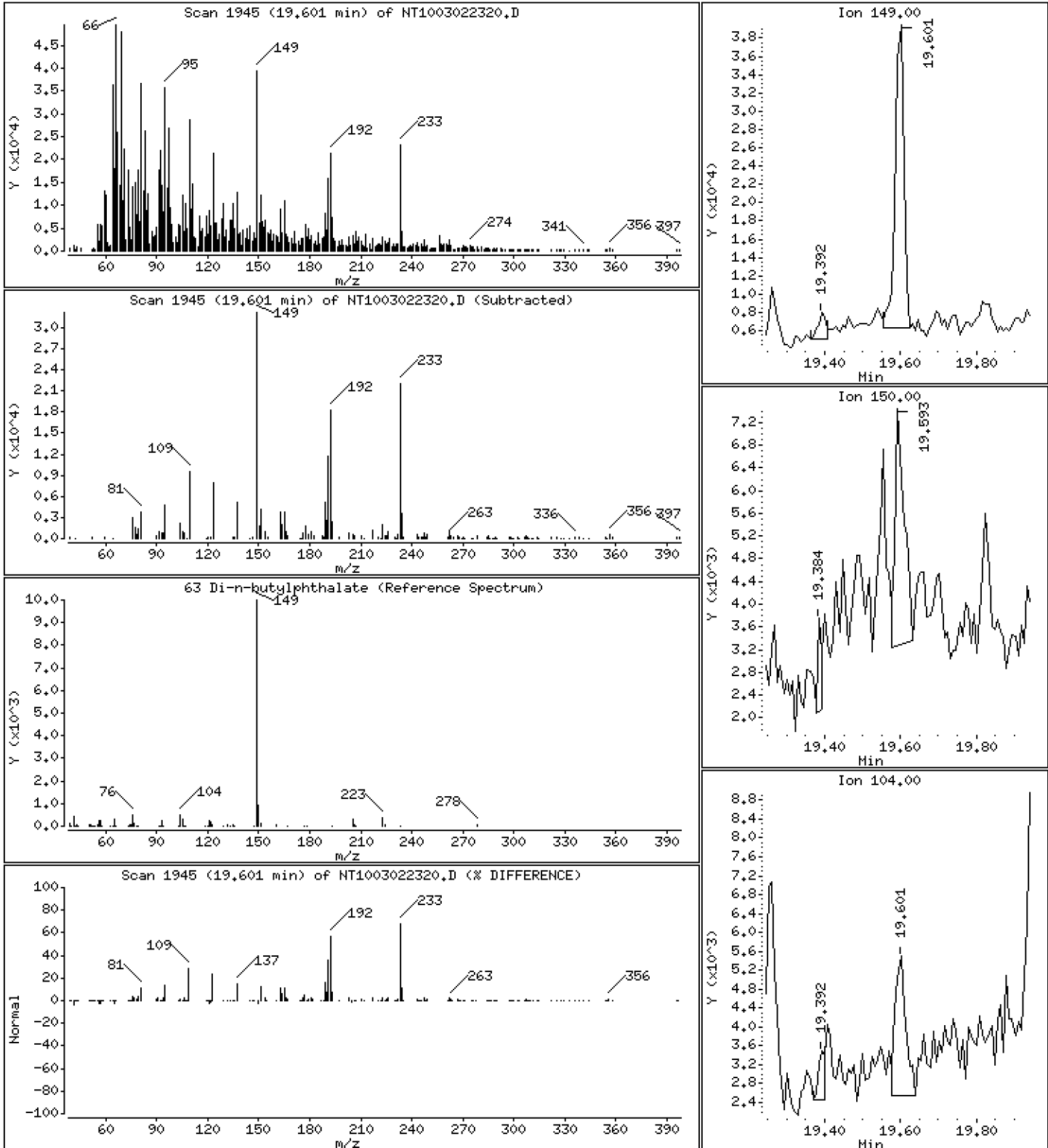
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.08290 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

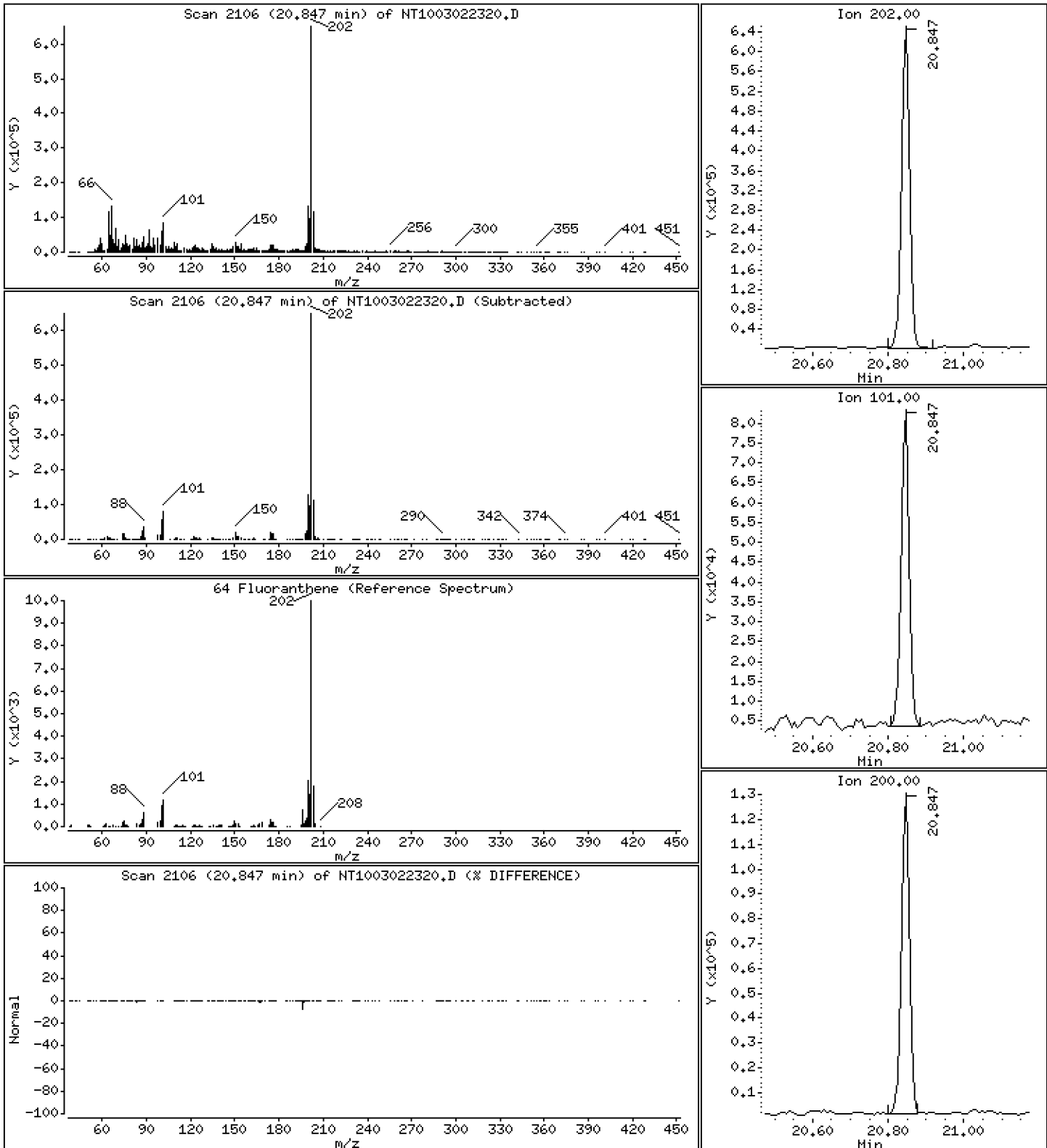
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,297 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

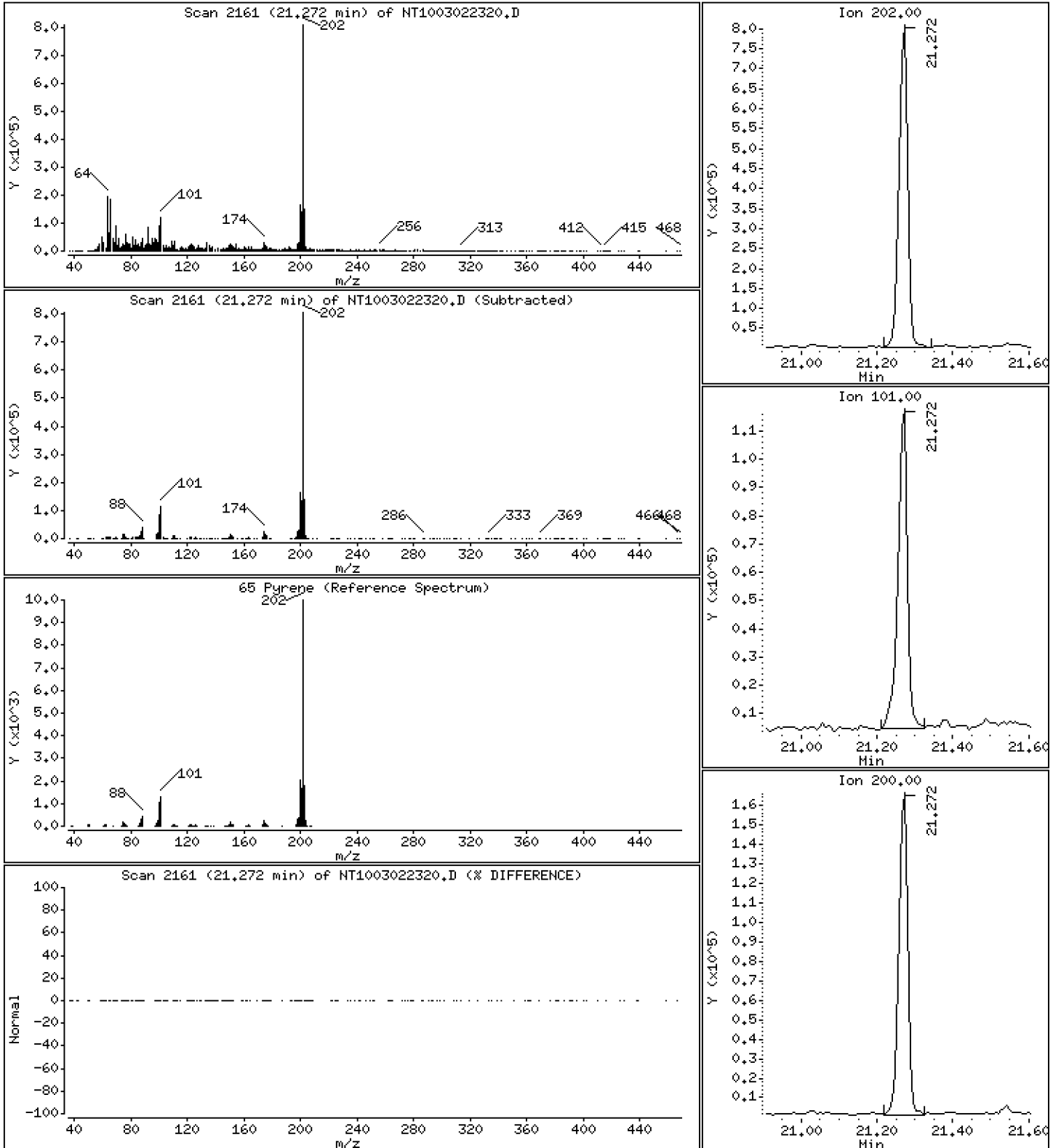
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,585 ug/mL





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

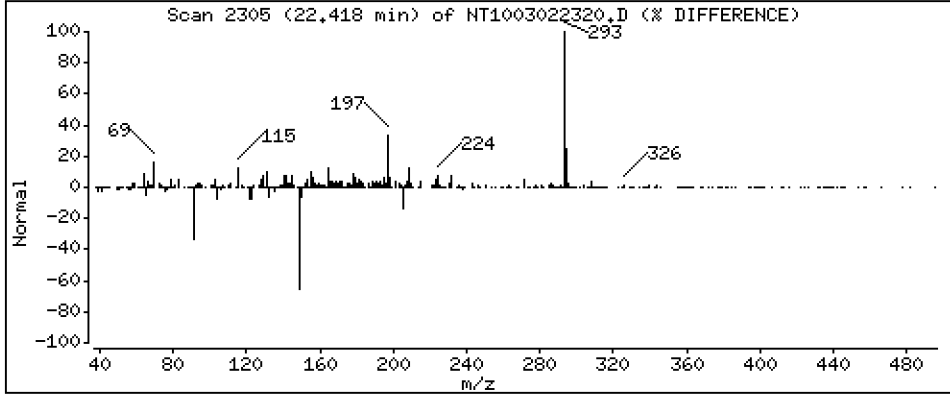
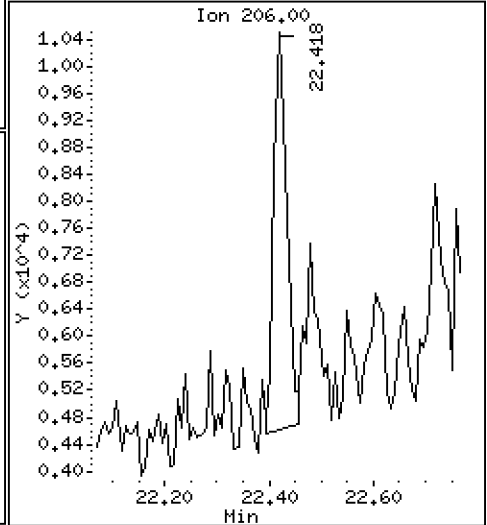
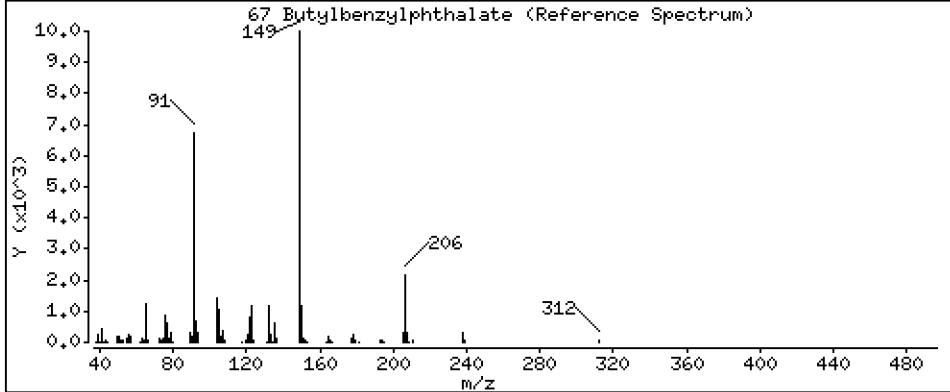
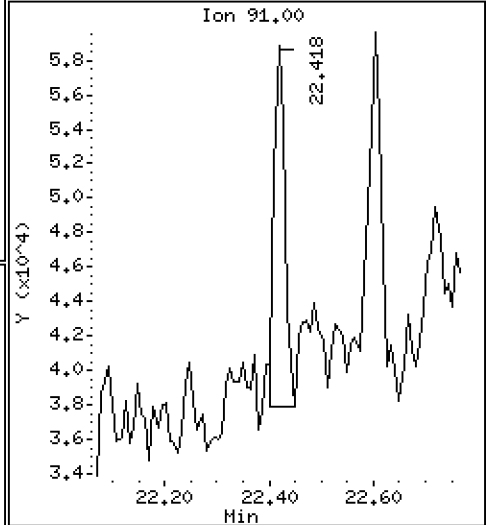
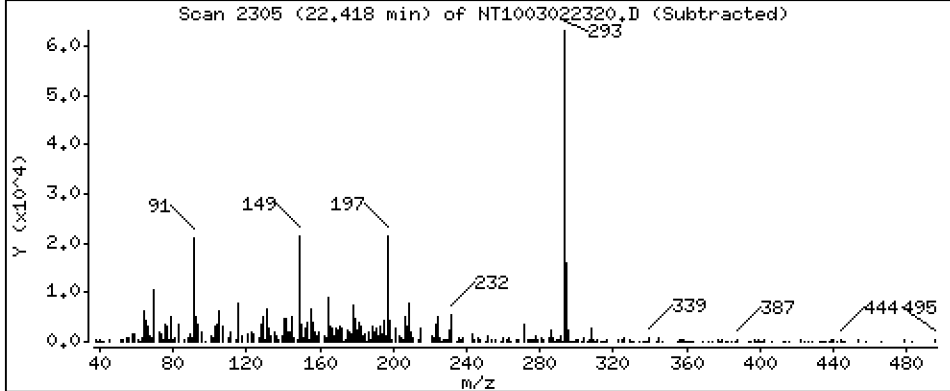
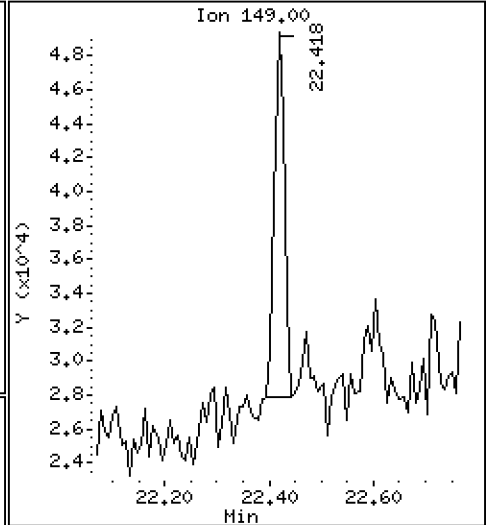
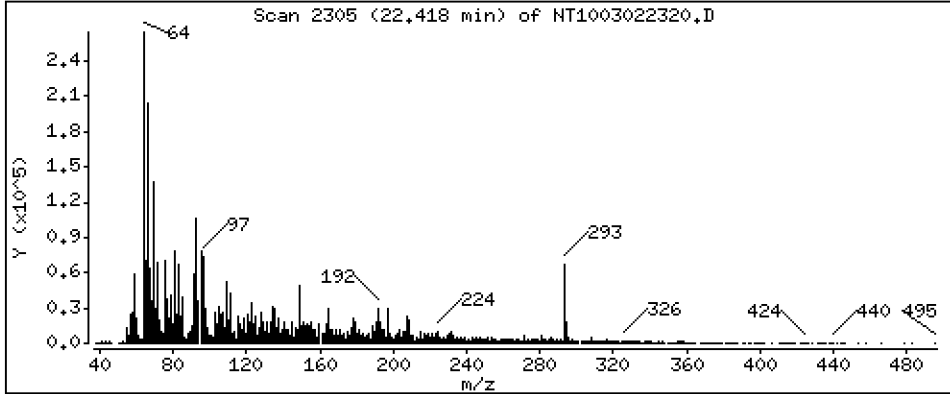
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.06466 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

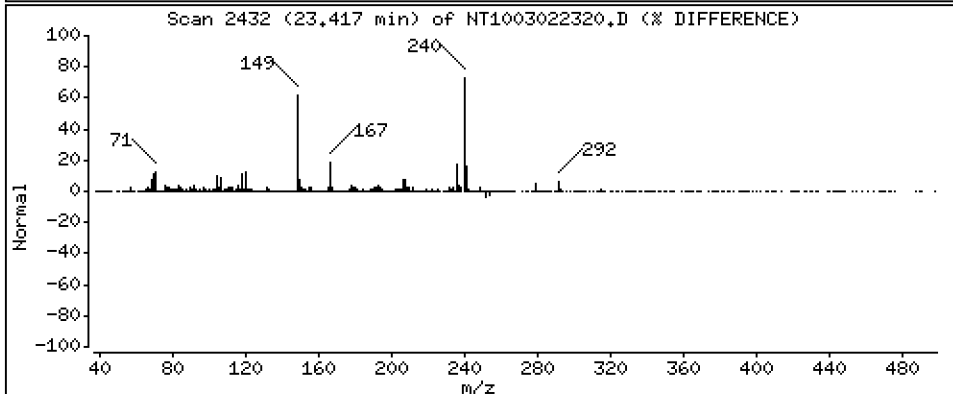
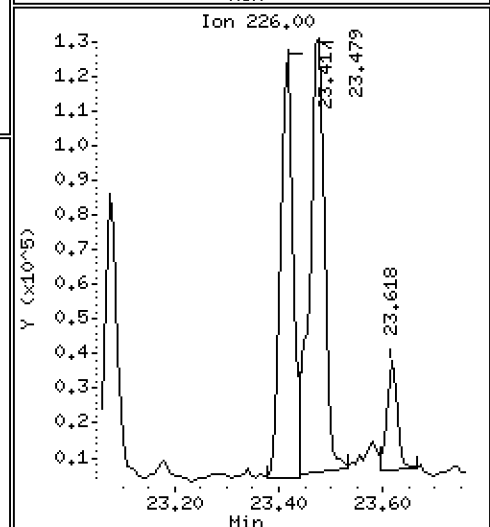
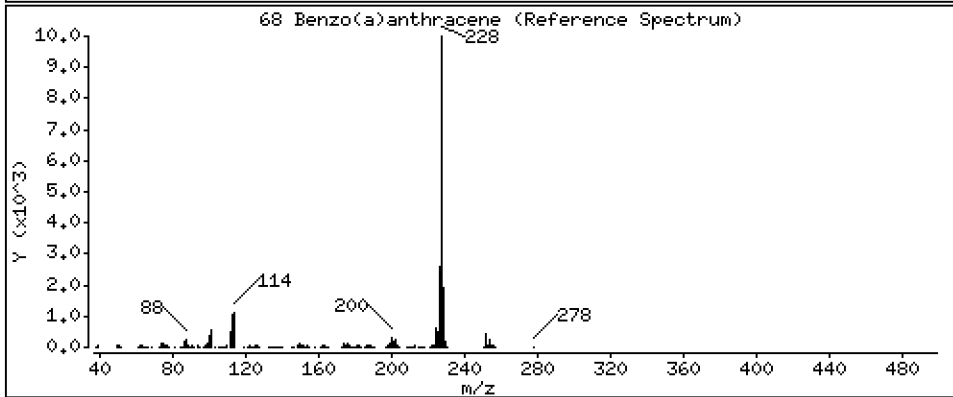
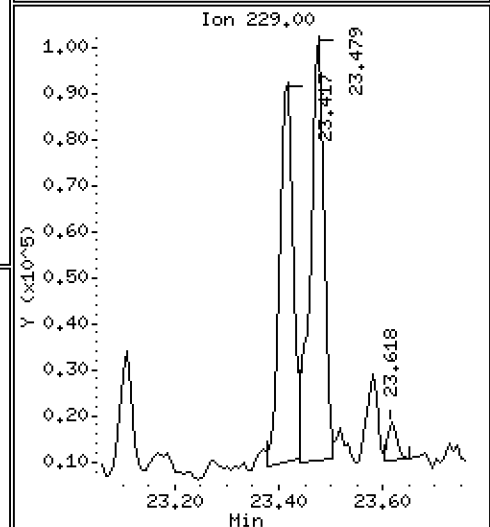
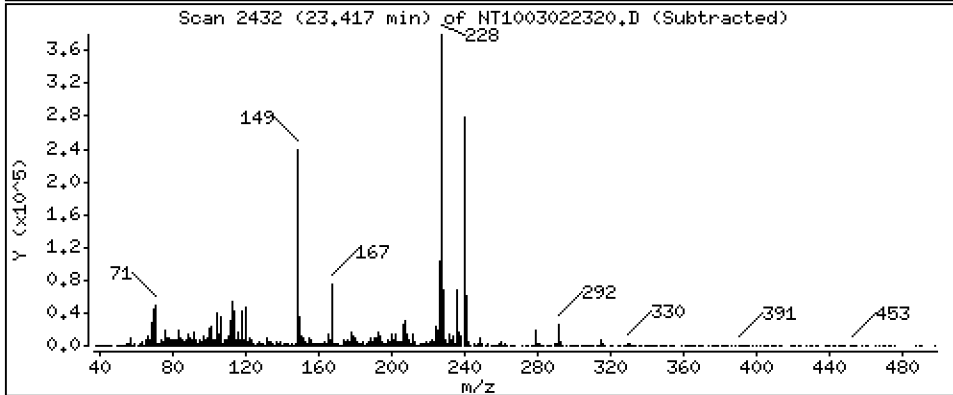
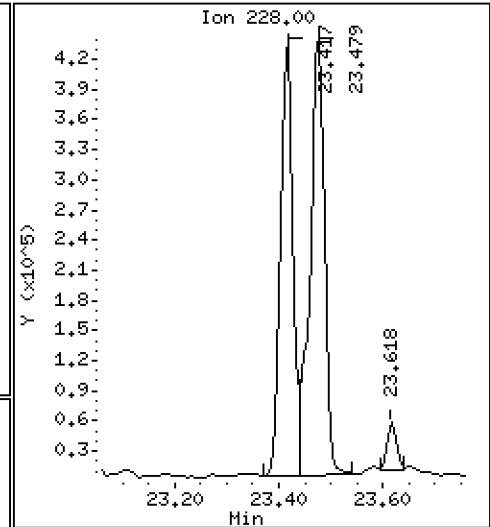
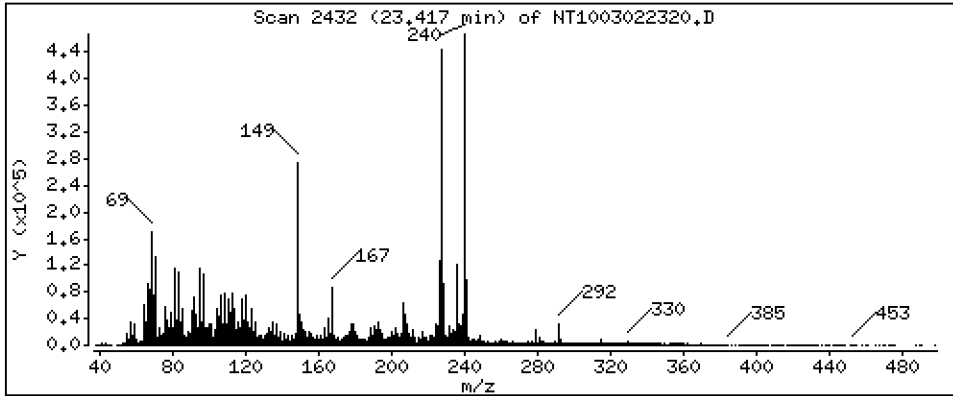
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,8989 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

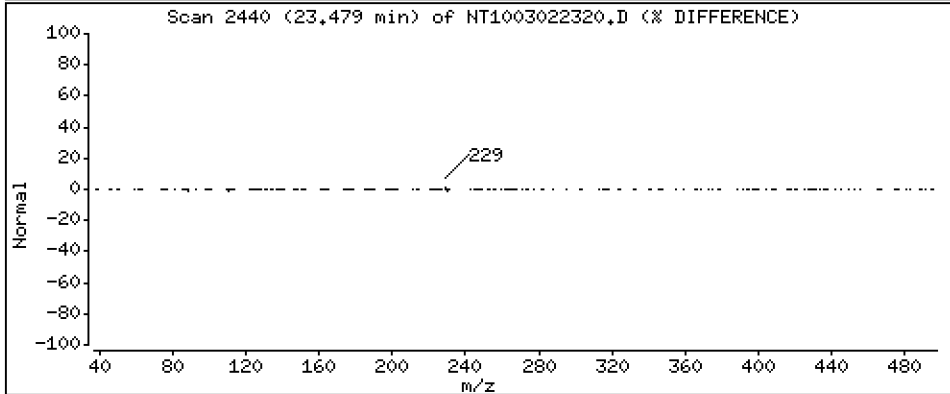
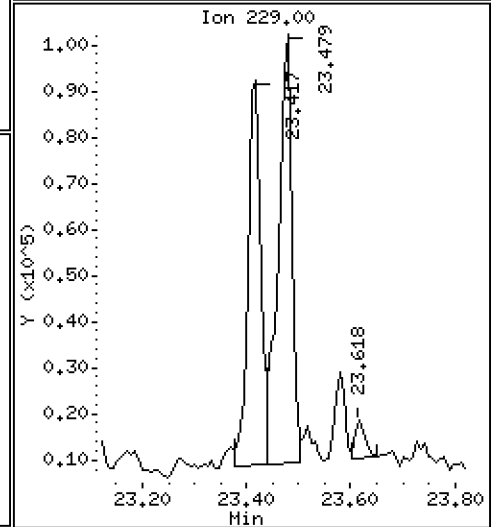
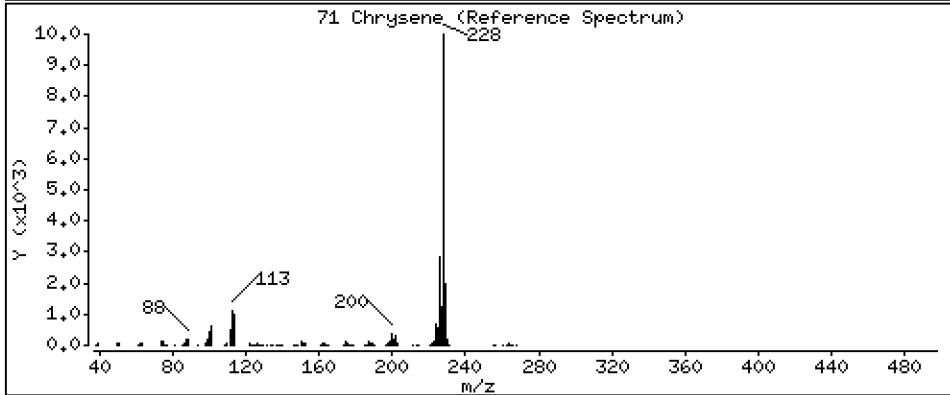
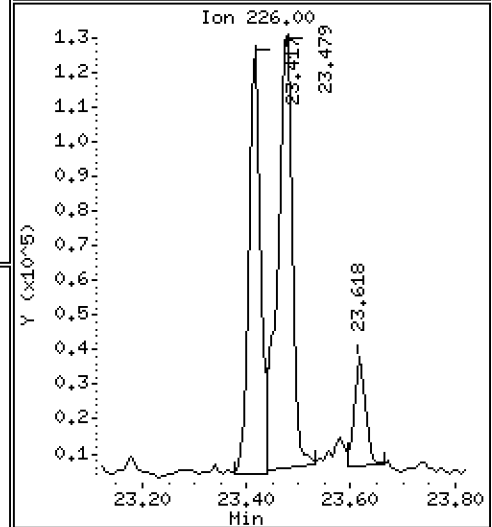
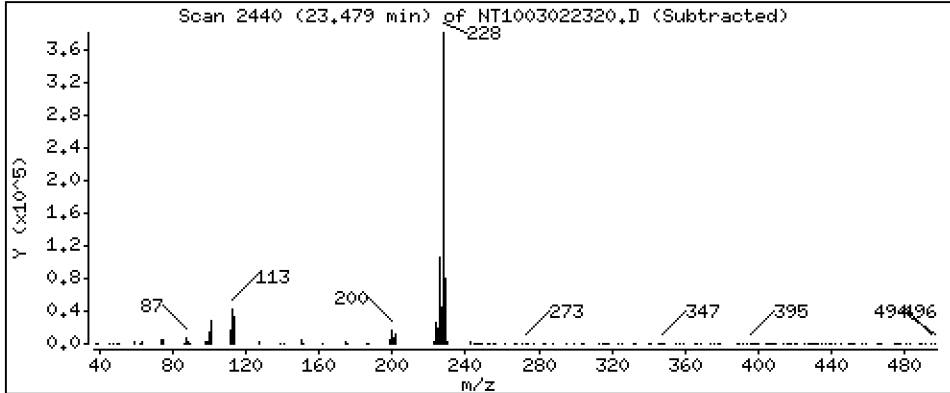
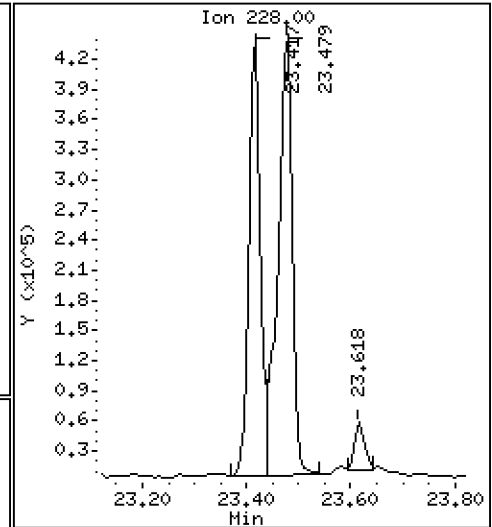
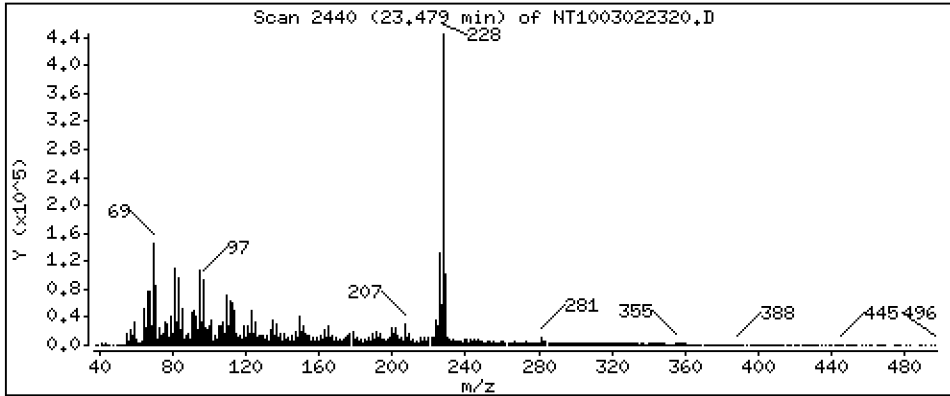
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,292 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

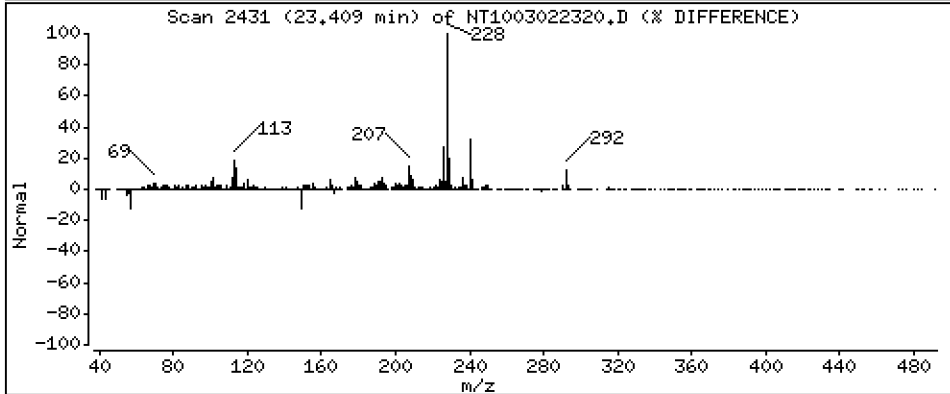
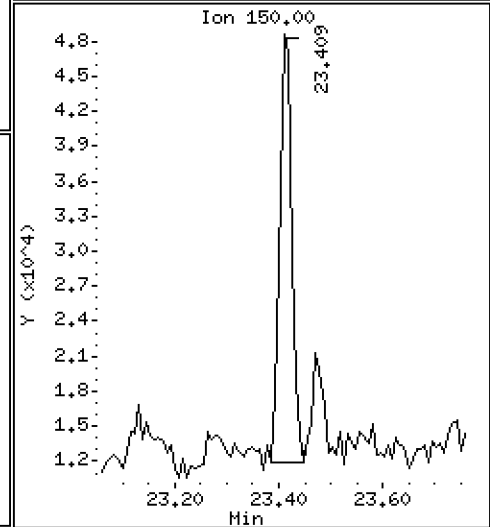
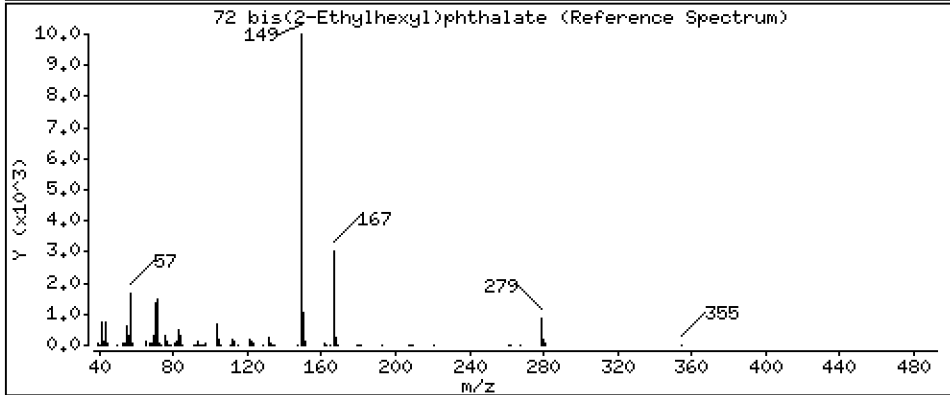
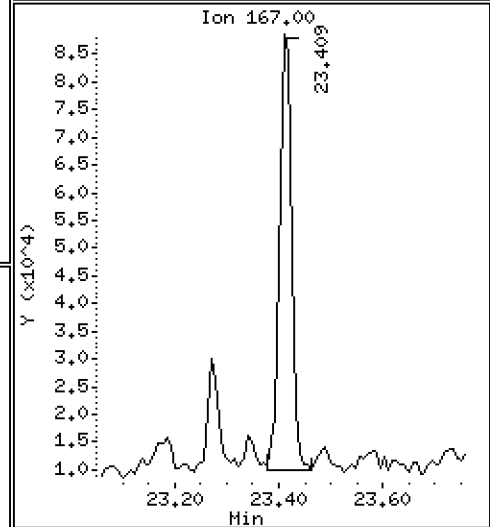
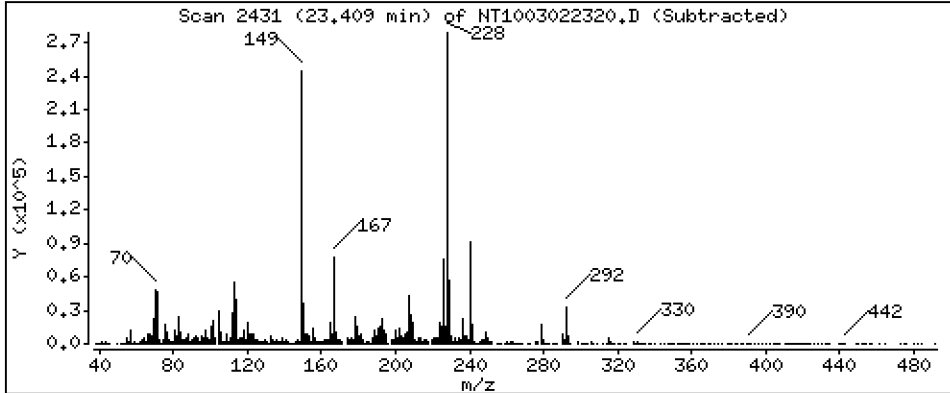
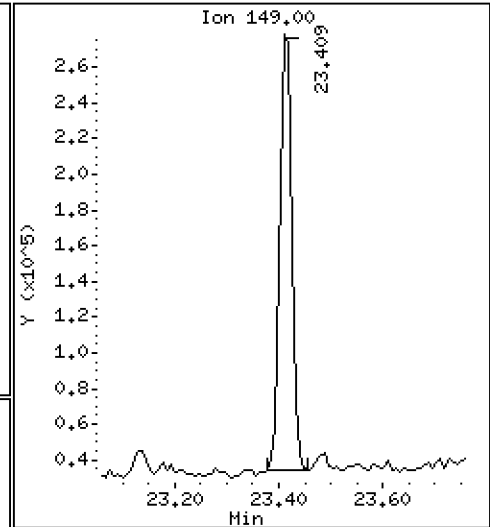
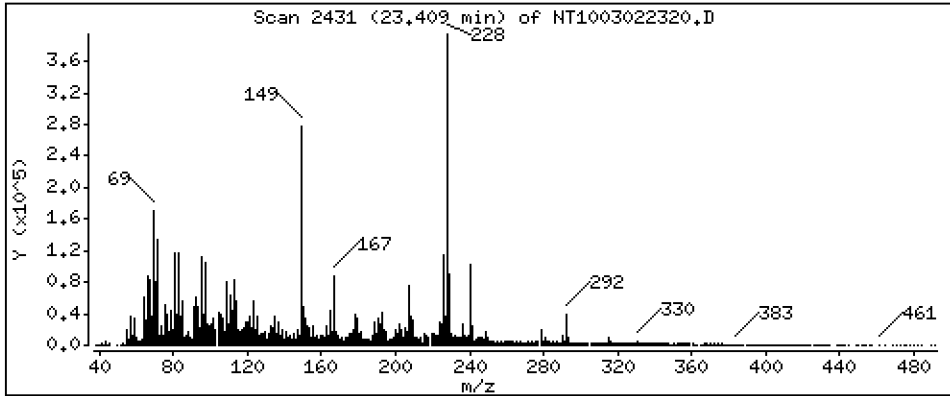
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,6530 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

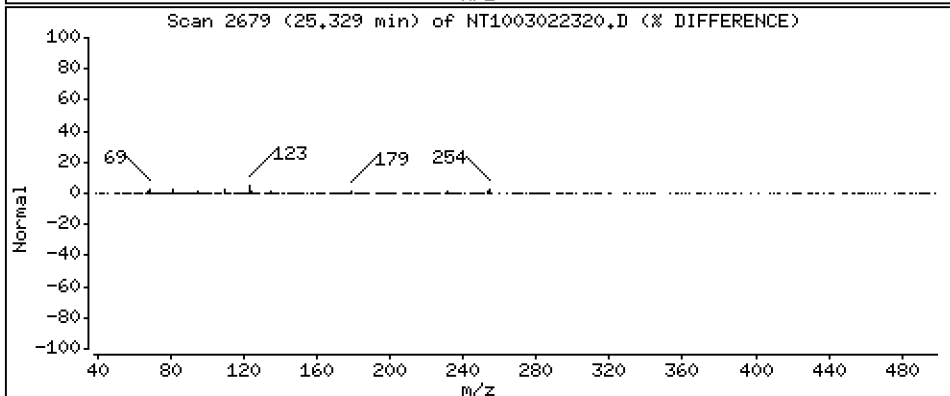
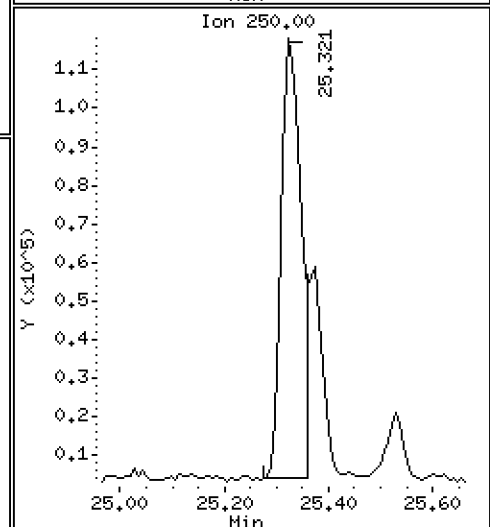
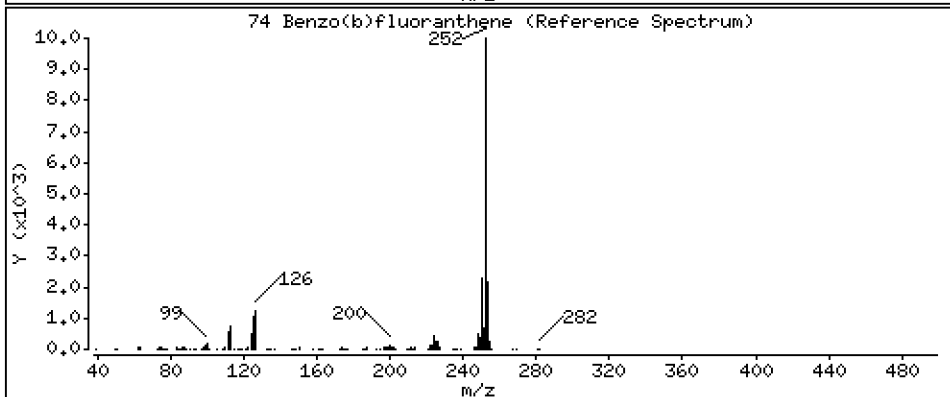
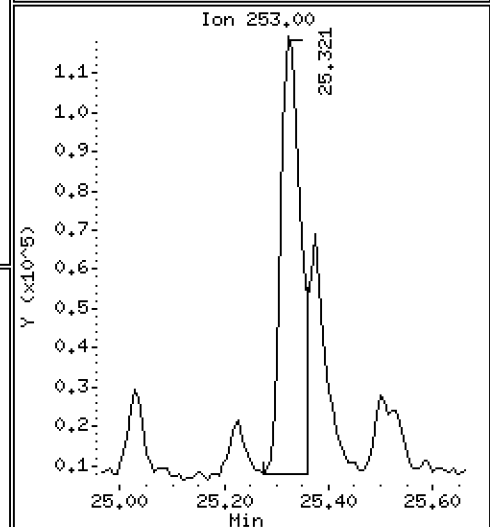
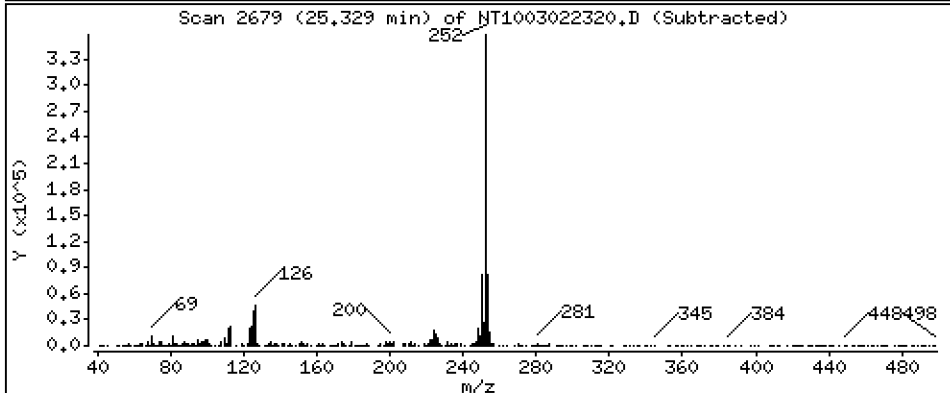
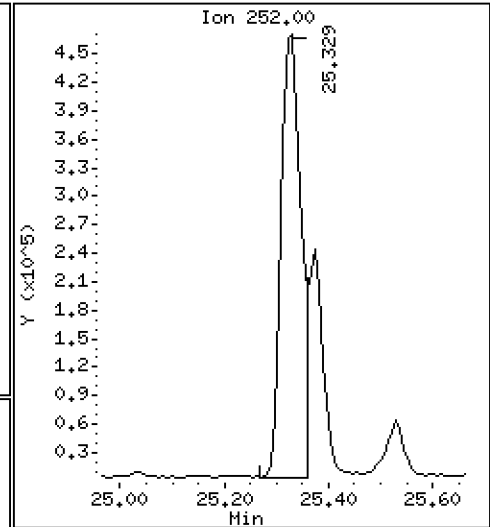
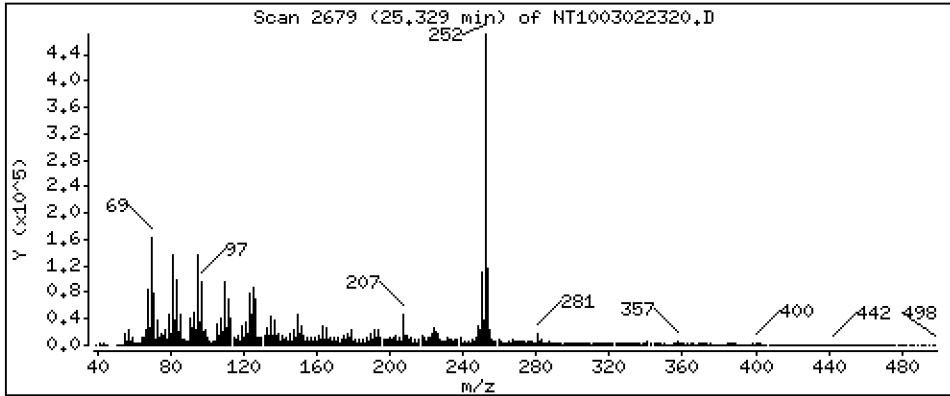
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,520 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

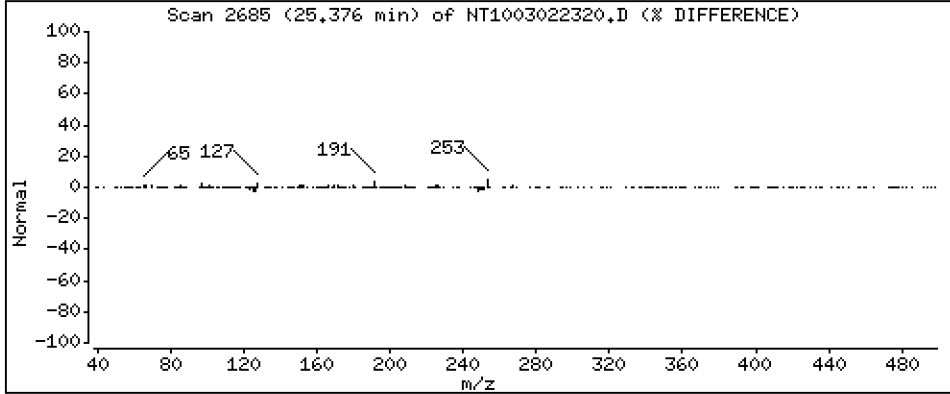
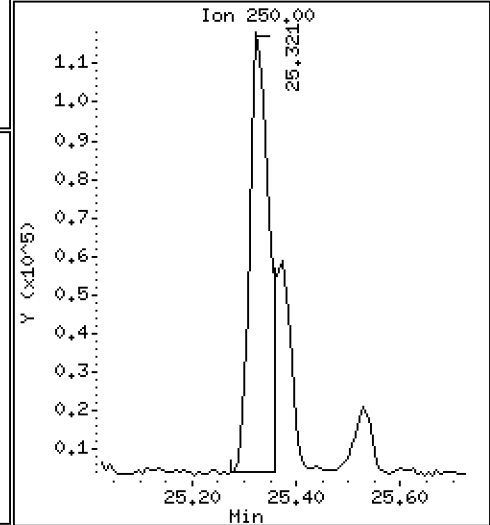
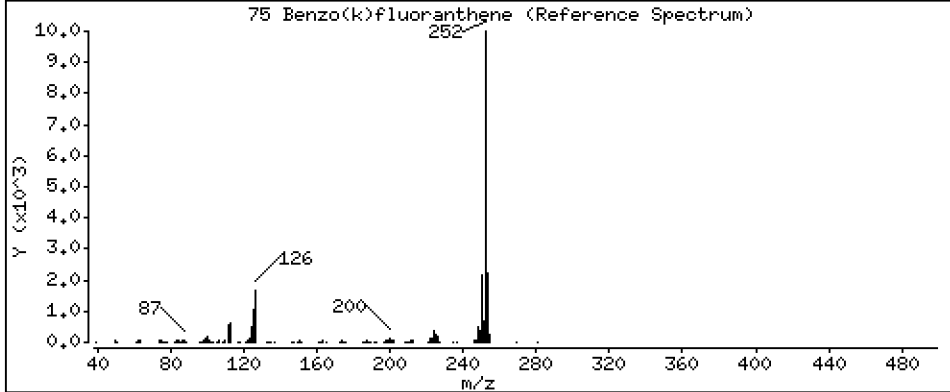
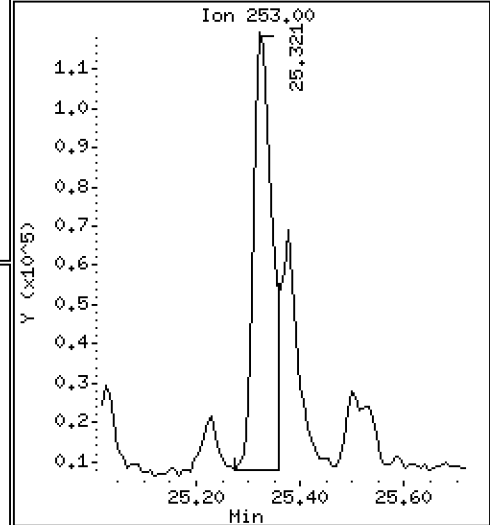
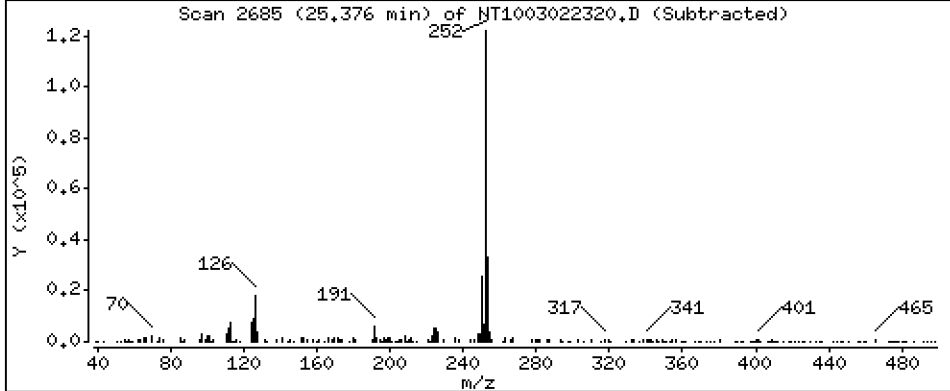
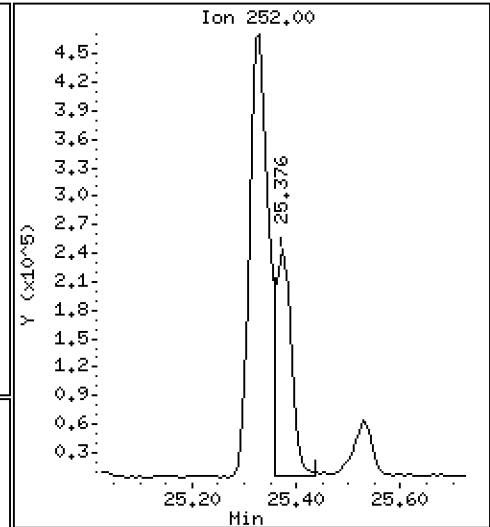
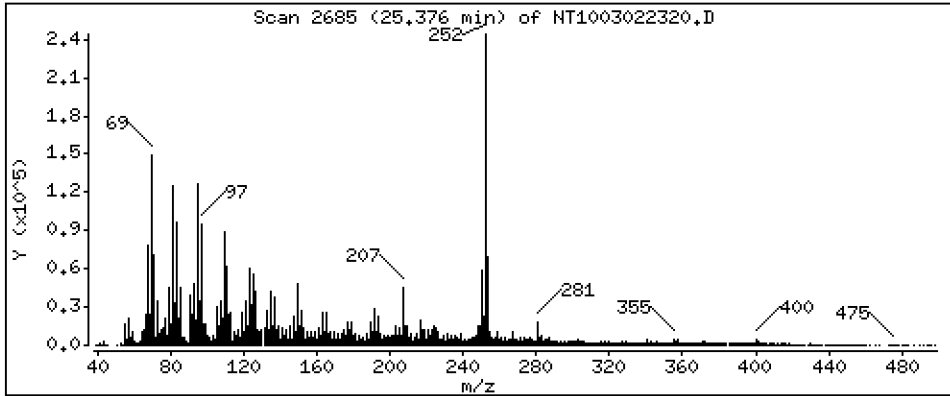
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,6454 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

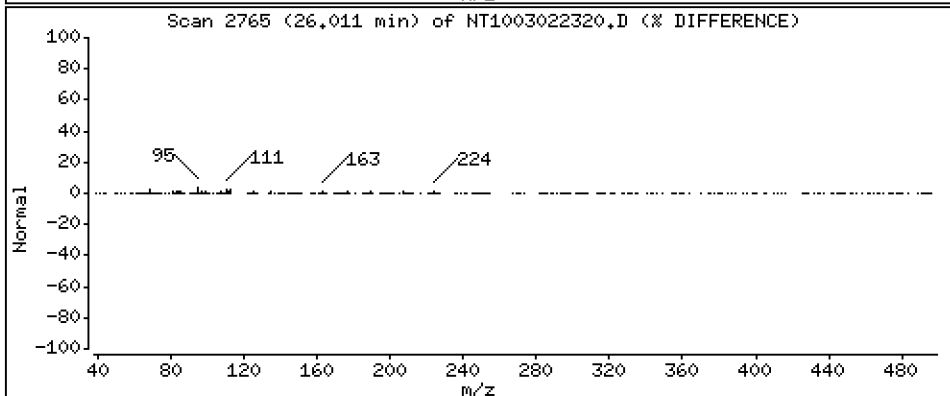
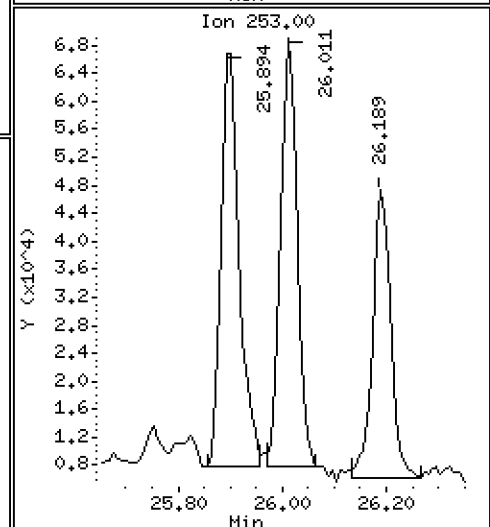
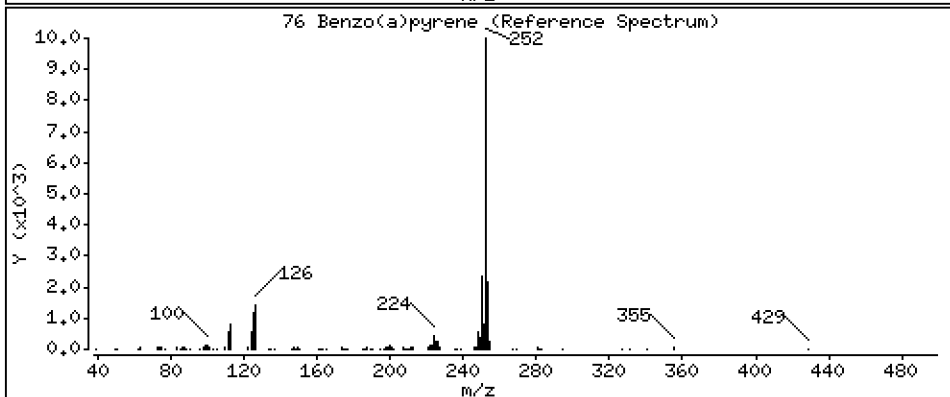
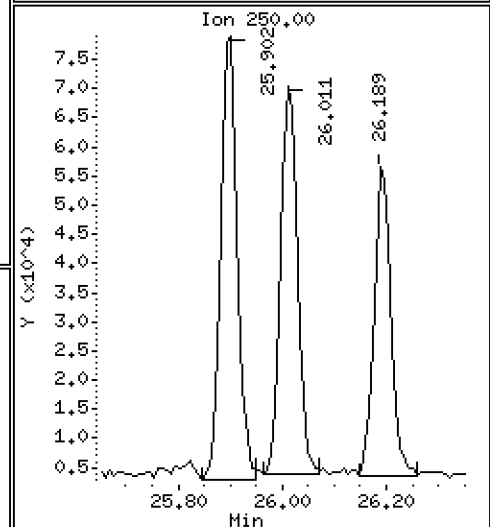
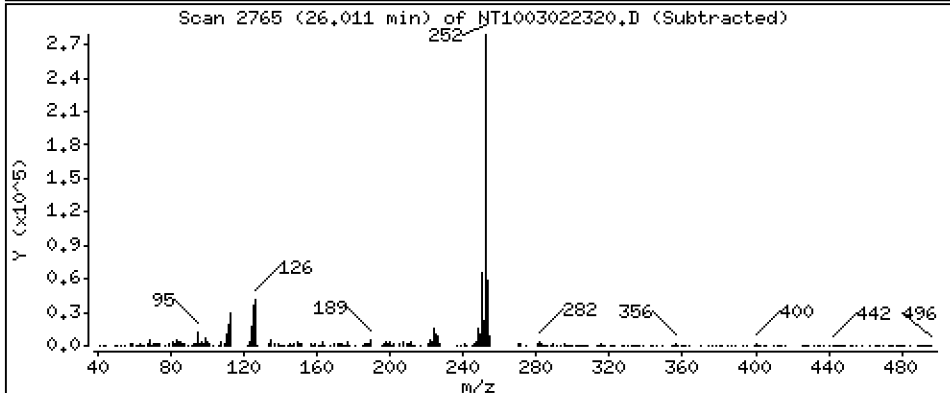
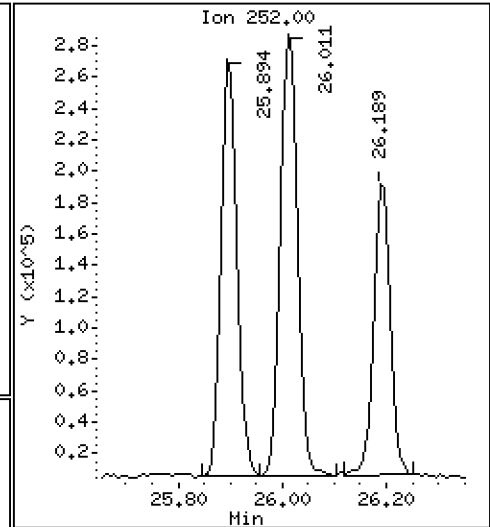
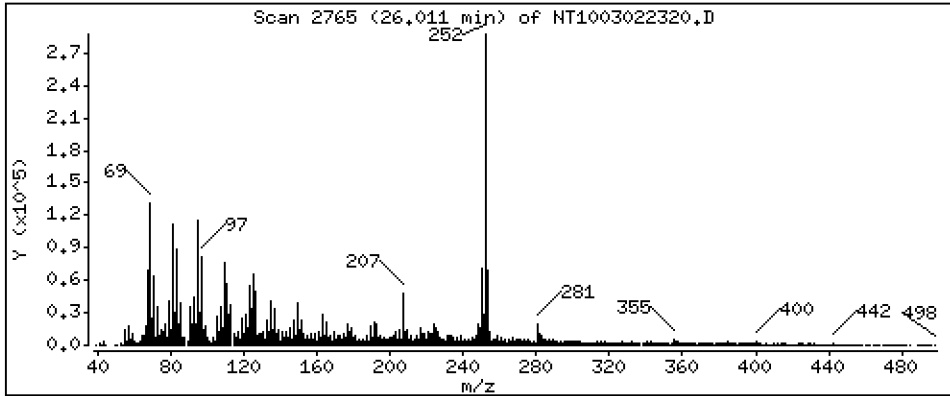
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,8737 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

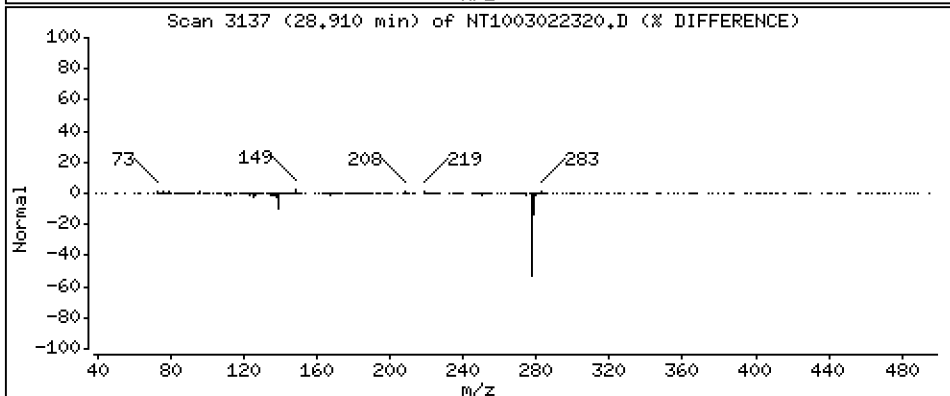
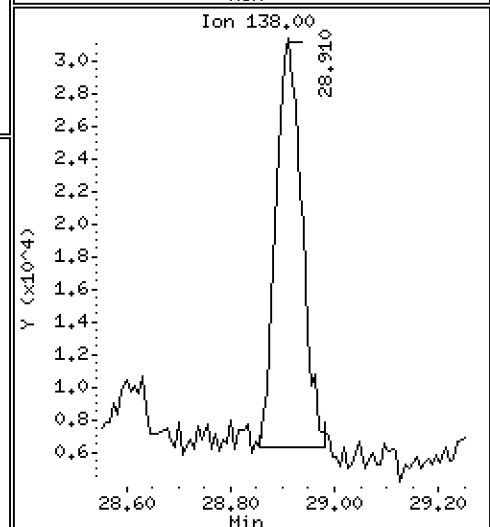
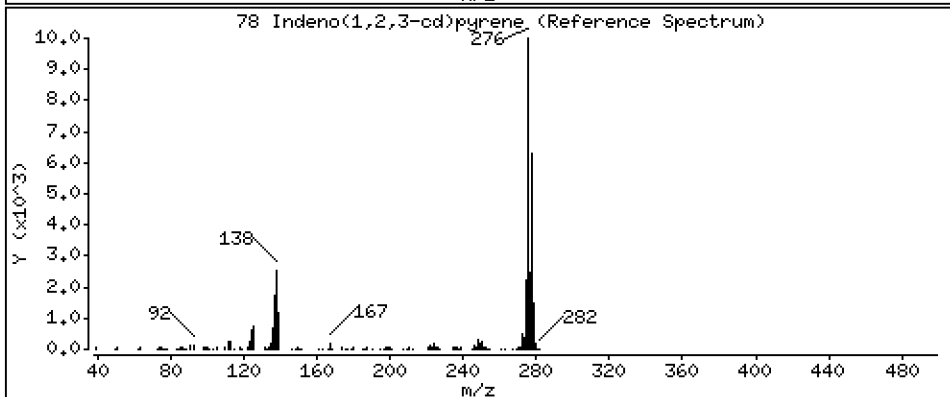
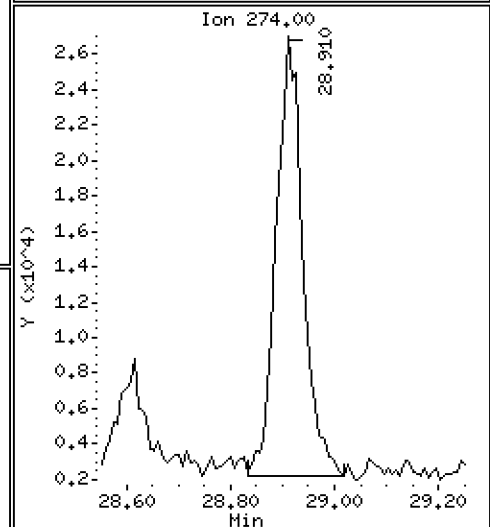
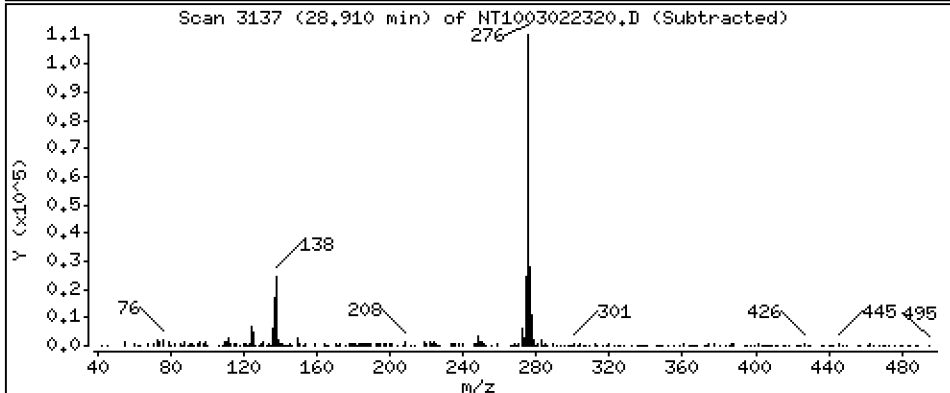
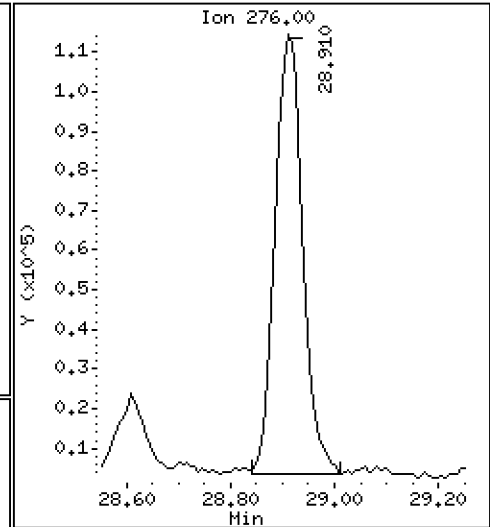
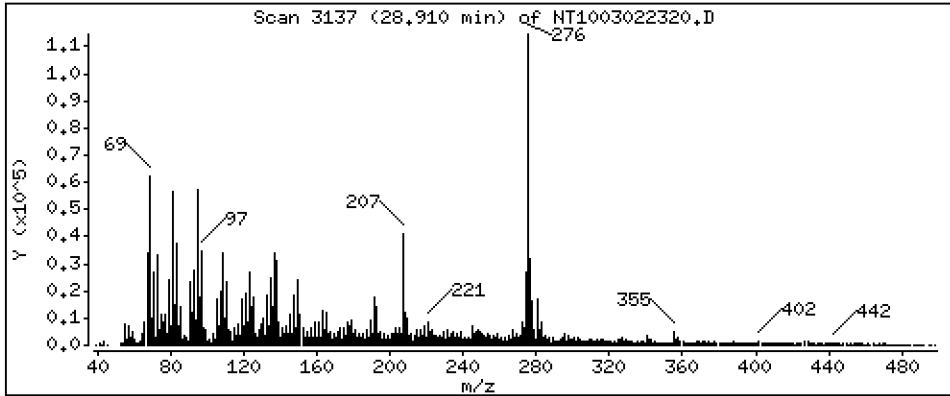
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4867 ug/mL





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

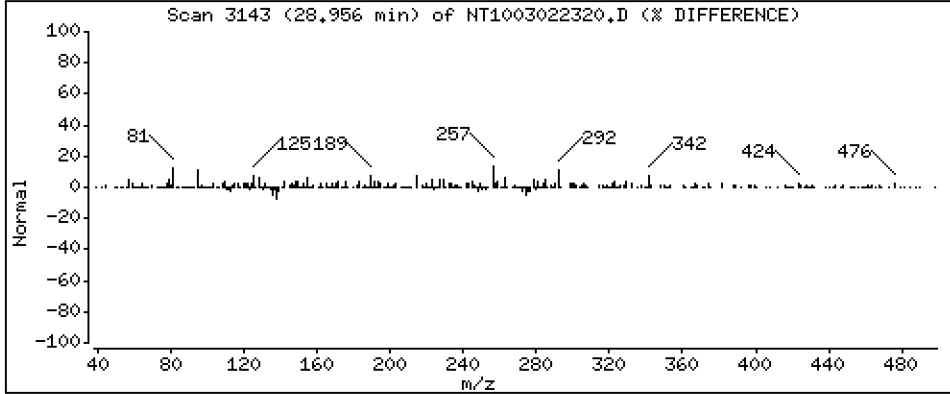
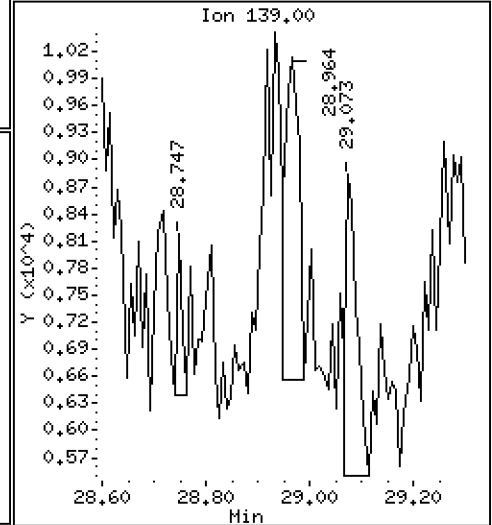
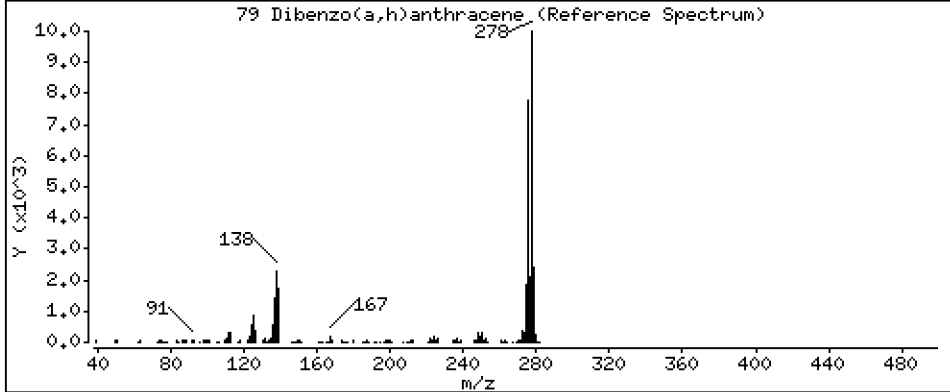
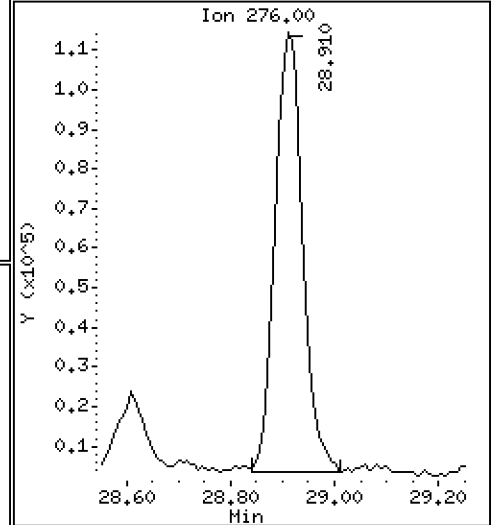
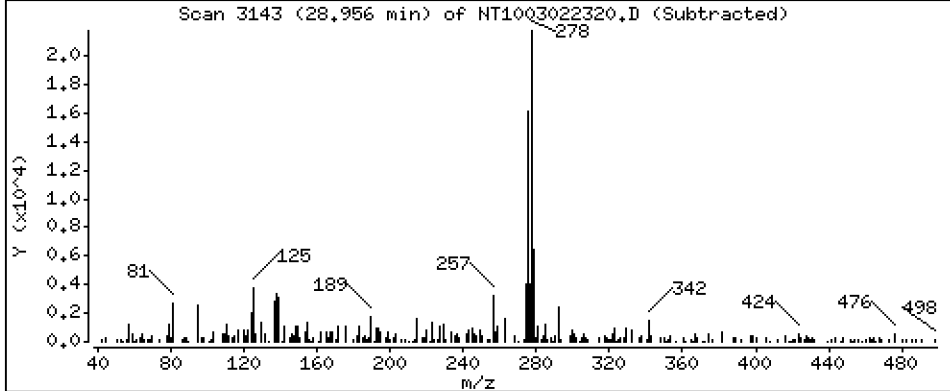
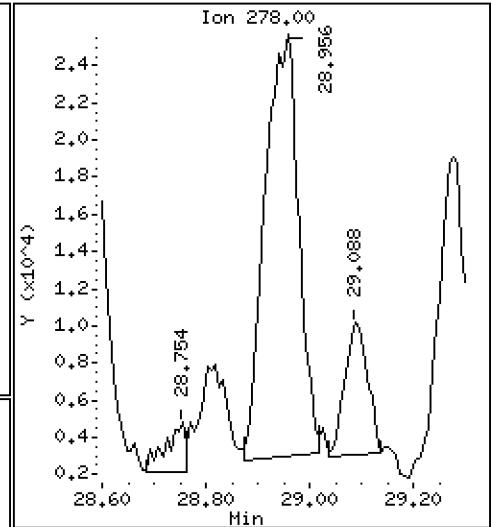
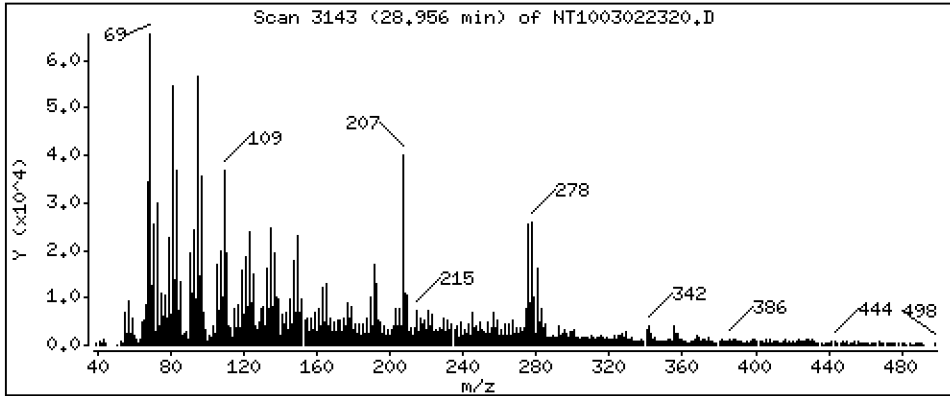
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1615 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

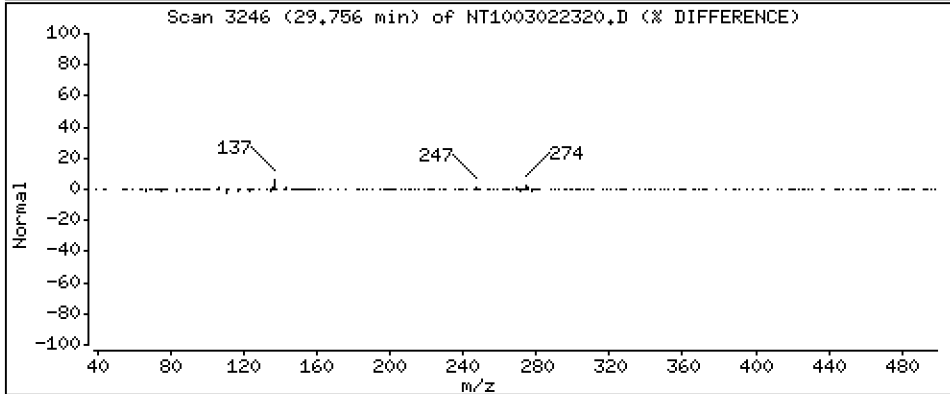
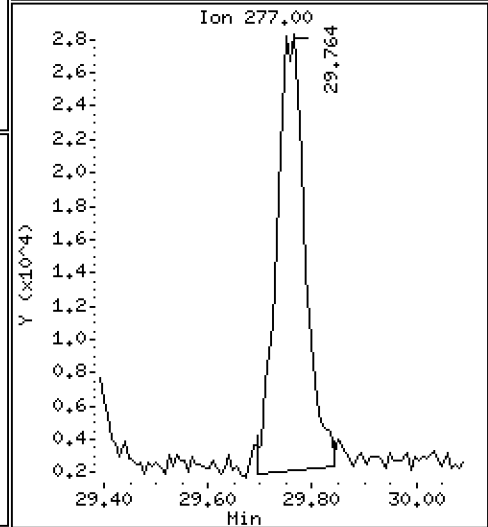
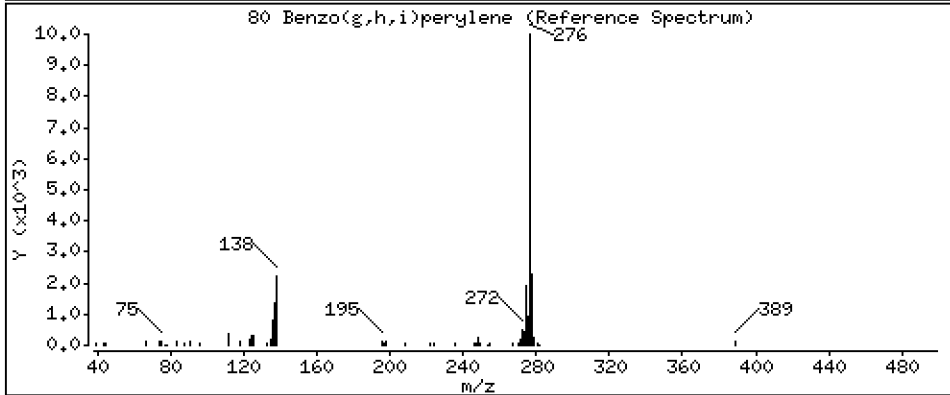
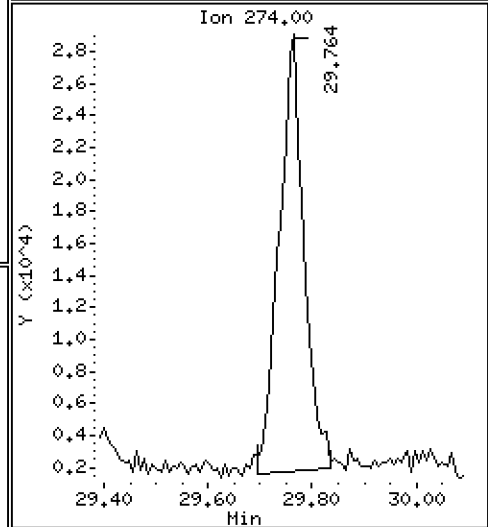
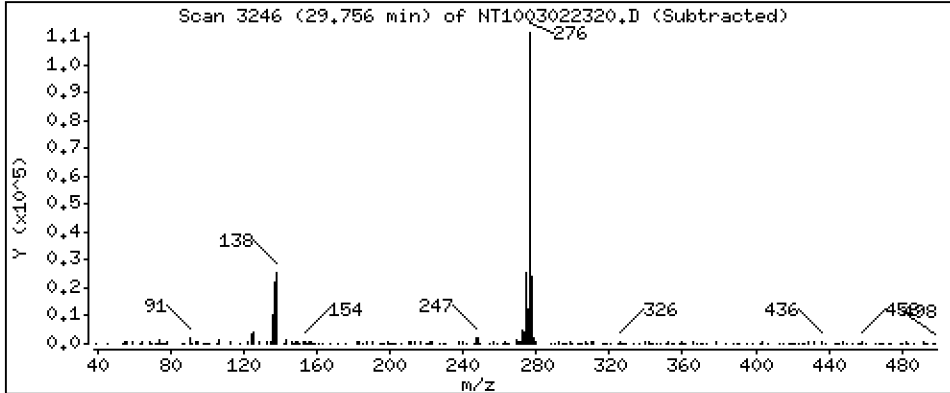
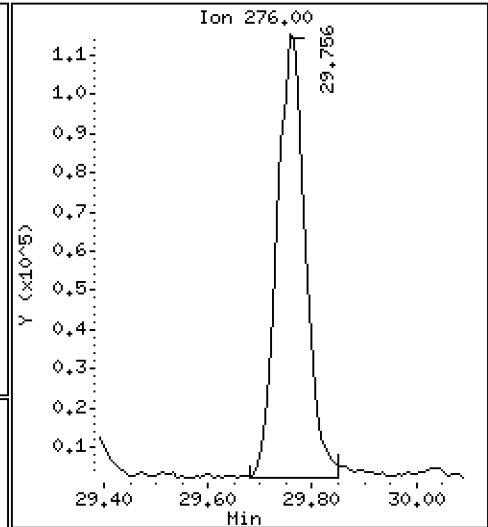
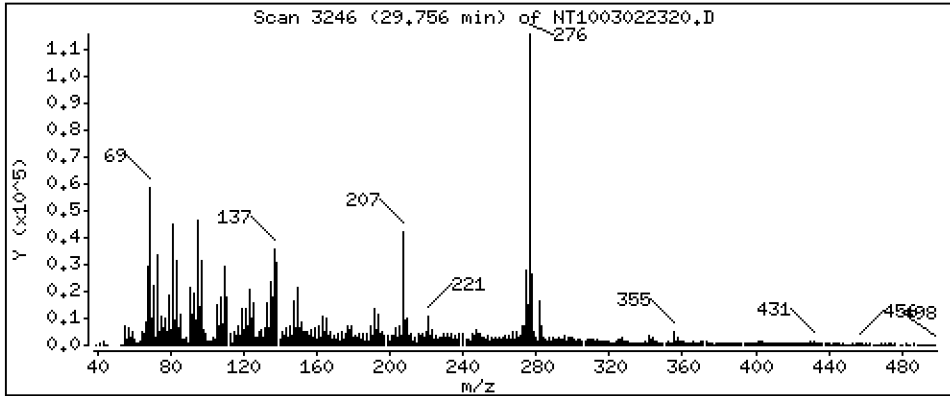
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,6400 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

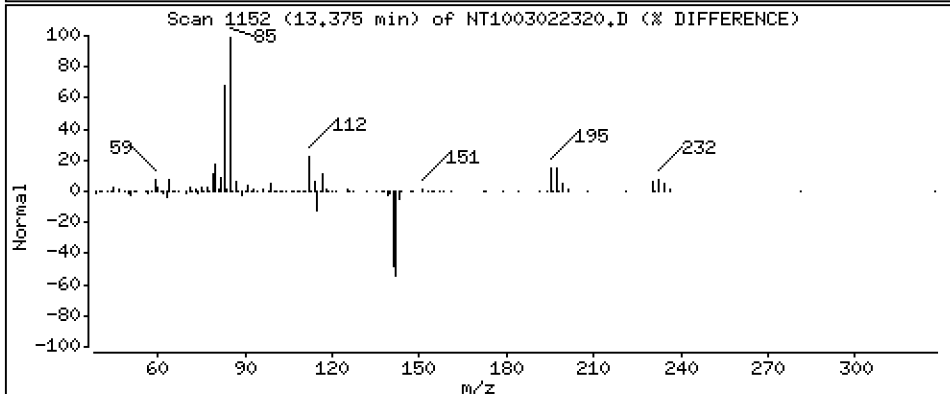
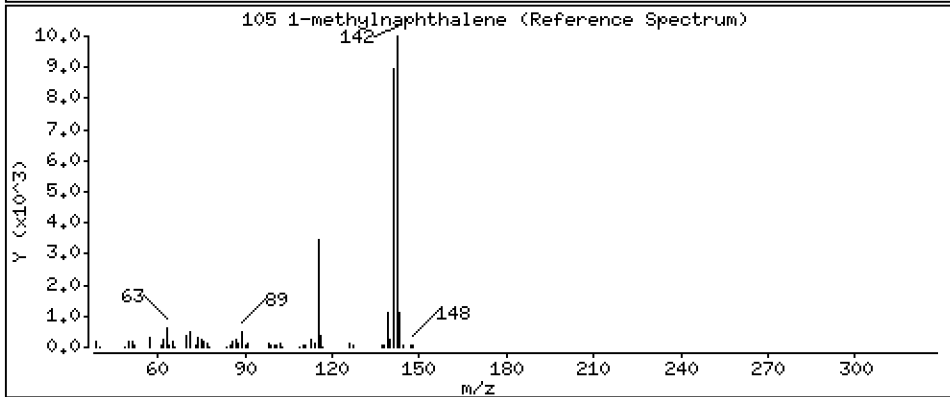
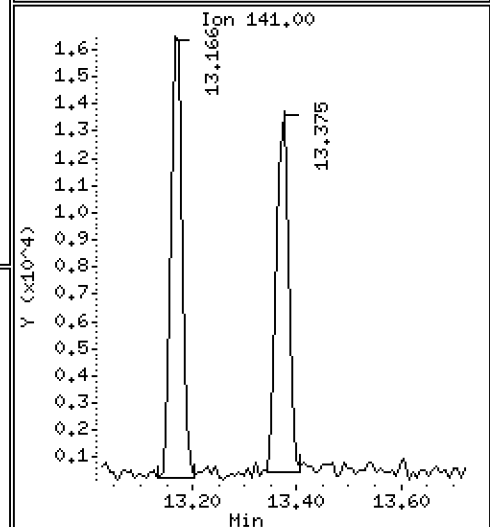
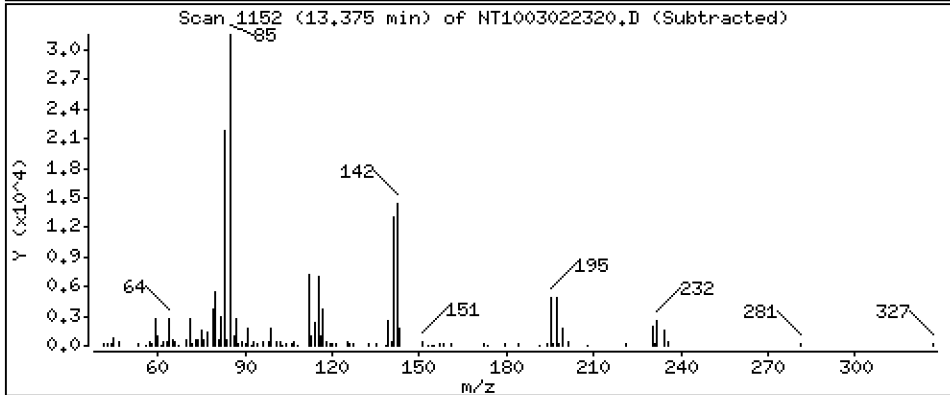
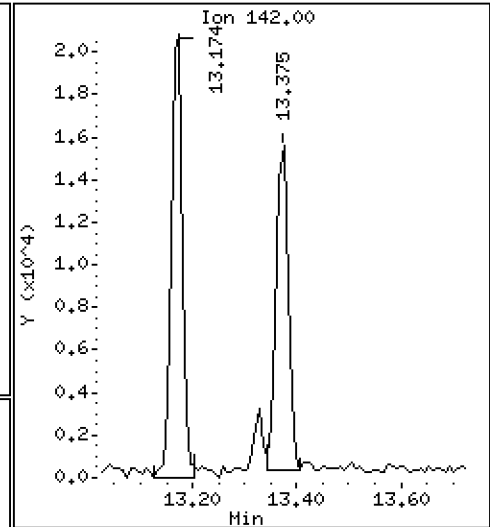
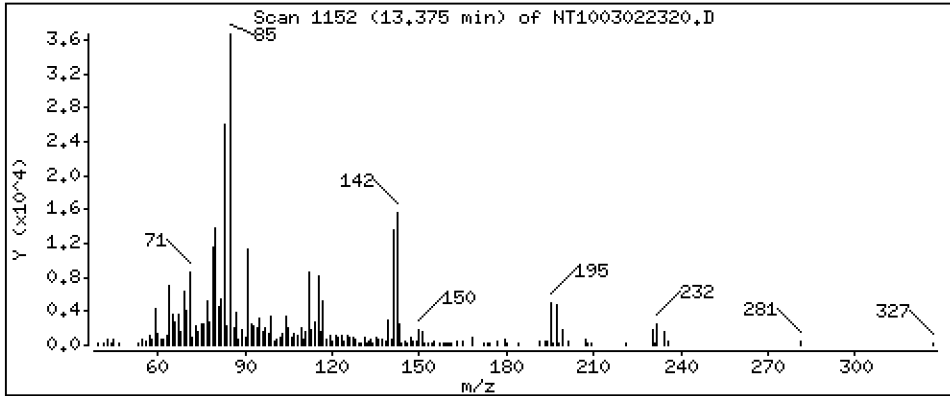
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 0.07452 ug/mL



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

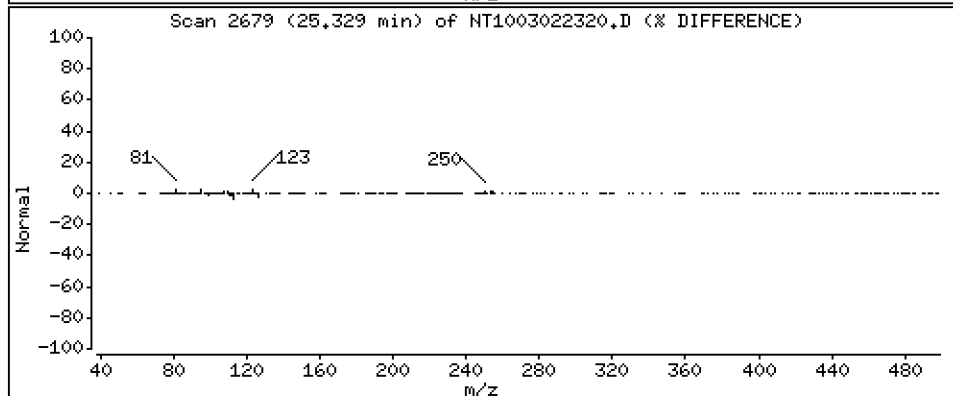
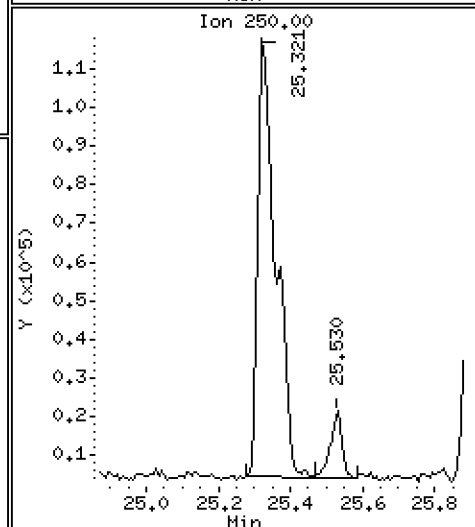
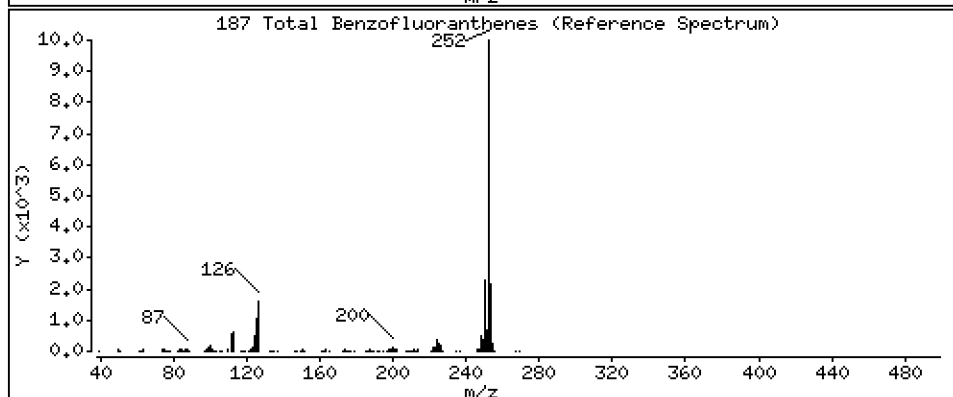
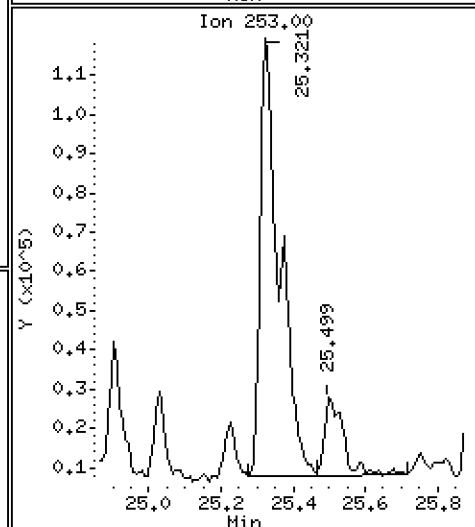
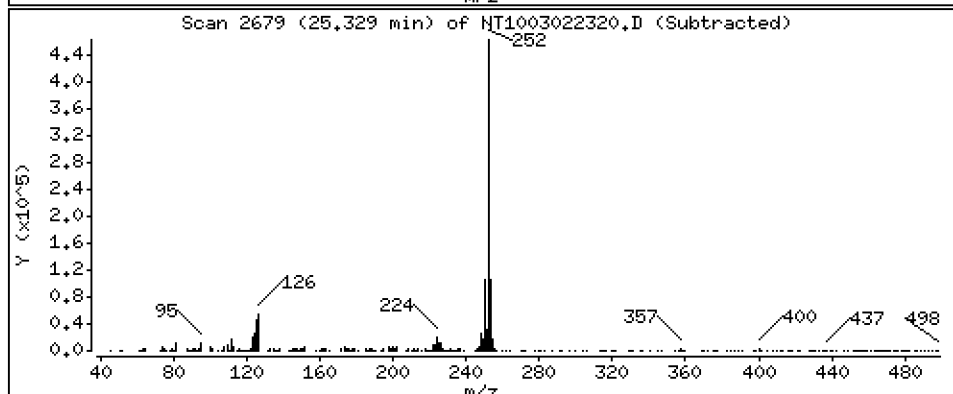
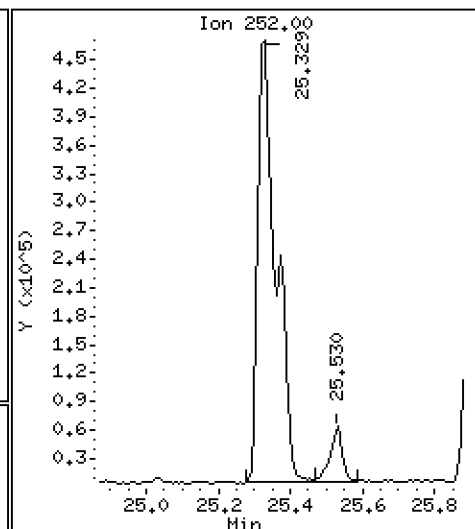
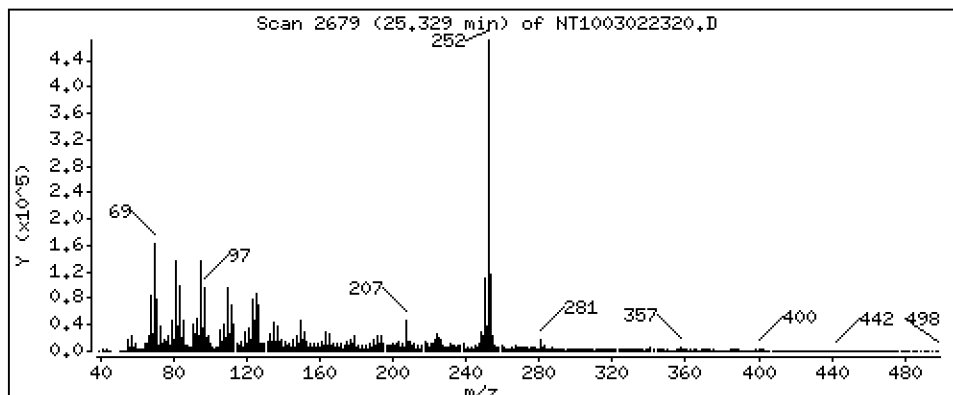
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 2,117 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022320.D

Lab Smp Id: 23A0206-05

Inj Date : 03-MAR-2023 02:25

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-05

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 16

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
1 2-Fluorophenol	112		6.905	6.897	(0.747)	1013282	6.05447	6.054
2 Phenol-d5	99		8.497	8.497	(0.919)	1367511	7.03797	7.038
3 Phenol	94		8.520	8.520	(0.921)	1294466	6.26604	6.266
5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1144611	6.90458	6.905
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	531934	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	481539	3.88793	3.888
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.480	9.480	(1.025)	27383	0.25837	0.2584 (H)
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.480	9.658	(1.025)	27383	0.17110	0.1711
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.946	(1.076)	20208	0.10067	0.1007 (M)
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	950720	4.43937	4.439
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1950925	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	53789	0.10742	0.1074
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.165	(1.123)	32378	0.09153	0.09153
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1707951	4.66598	4.666
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163		14.744	14.744	(0.963)	13667	0.04124	0.04124
40 Acenaphthylene	152		15.031	15.031	(0.981)	46166	0.09319	0.09319
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	1026247	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153		15.386	15.386	(1.005)	22096	0.07396	0.07396
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168		15.742	15.750	(1.028)	35672	0.08045	0.08045
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149		16.206	16.214	(1.058)	585426	1.66740	1.667
49 Fluorene	166		16.461	16.453	(1.075)	32361	0.08772	0.08772
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169							
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.107)	440912	6.67465	6.675
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1932962	4.00000	
60 Phenanthrene	178		18.463	18.456	(1.003)	314832	0.63644	0.6364
61 Anthracene	178		18.564	18.564	(1.008)	139079	0.28994	0.2899
62 Carbazole	167		18.897	18.897	(1.026)	45421	0.10336	0.1034
63 Di-n-butylphthalate	149		19.601	19.593	(1.065)	49409	0.08290	0.08290
64 Fluoranthene	202		20.846	20.823	(0.890)	992277	1.29683	1.297
65 Pyrene	202		21.272	21.256	(0.908)	1235104	1.58524	1.585
\$ 66 Terphenyl-d14	244		21.543	21.535	(0.919)	2723580	4.32022	4.320
67 Butylbenzylphthalate	149		22.418	22.418	(0.957)	27136	0.06466	0.06466
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	704974	0.89889	0.8989
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2224244	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228		23.478	23.471	(1.002)	823391	1.29183	1.292
72 bis(2-Ethylhexyl)phthalate	149		23.409	23.409	(0.956)	372967	0.65303	0.6530
* 134 Di-n-octylphthalate-d4	153		24.493	24.493	(1.000)	4061145	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252		25.329	25.313	(0.969)	1237523	1.51959	1.520
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	501357	0.64541	0.6454 (M)
76 Benzo(a)pyrene	252		26.010	26.002	(0.995)	631578	0.87373	0.8737
* 77 Perylene-d12	264		26.134	26.126	(1.000)	2353903	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.902	(1.106)	409741	0.48670	0.4867
79 Dibenzo(a,h)anthracene	278		28.956	28.948	(1.108)	102735	0.16147	0.1615
80 Benzo(g,h,i)perylene	276		29.756	29.740	(1.139)	429607	0.63995	0.6400
90 N-Nitrosodimethylamine	74							
91 Aniline	93							
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	23859	0.07452	0.07452
111 Azobenzene (1,2-DP-Hydrazine)	77							

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252	25.329	25.375	(0.969)	1648312	2.11722	2.117	
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

### QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022320.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-05  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	531934	-11.22
27 Naphthalene-d8	2200781	1100391	4401562	1950925	-11.35
42 Acenaphthene-d10	1135136	567568	2270272	1026247	-9.59
59 Phenanthrene-d10	2128944	1064472	4257888	1932962	-9.21
69 Chrysene-d12	2449624	1224812	4899248	2224244	-9.20
134 Di-n-octylphthala	4694735	2347368	9389470	4061145	-13.50
77 Perylene-d12	2593218	1296609	5186436	2353903	-9.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.03

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



REVIEW SUMMARY FOR FILE - NT1003022320.D

Lab ID: 23A0206-05  
nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 02:25

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.025	1.044	-0.0193	2-Methylphenol

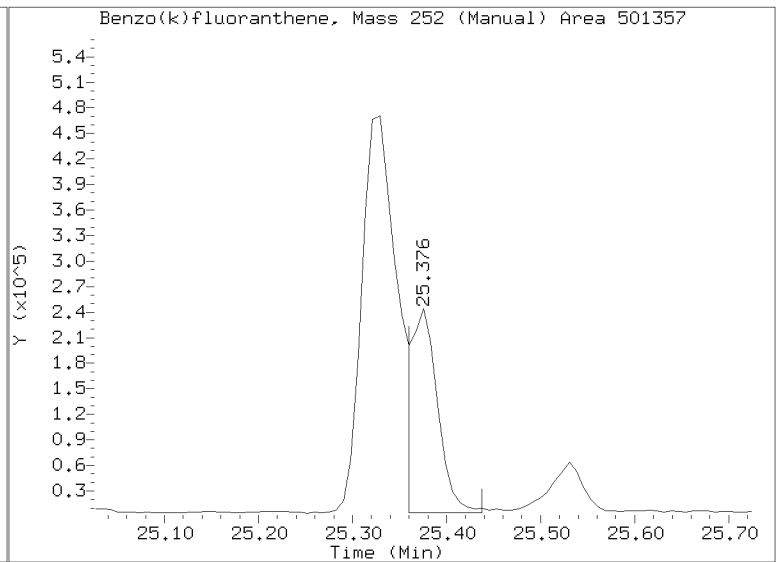
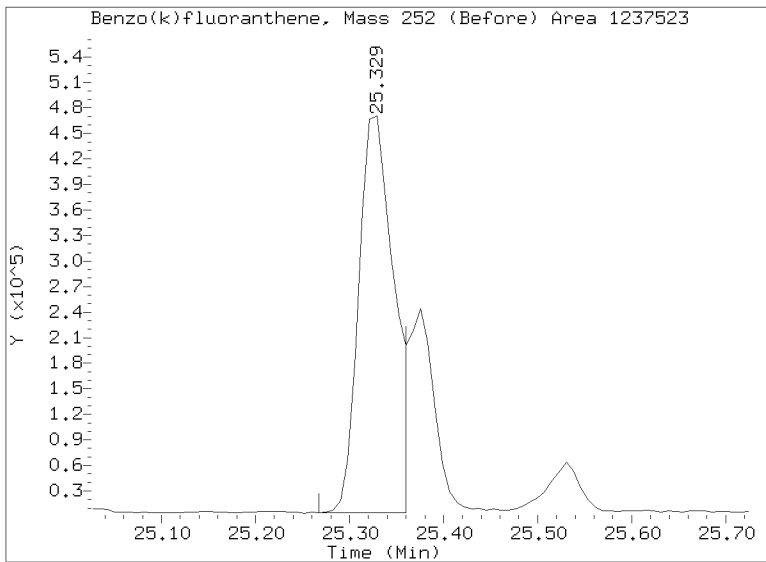
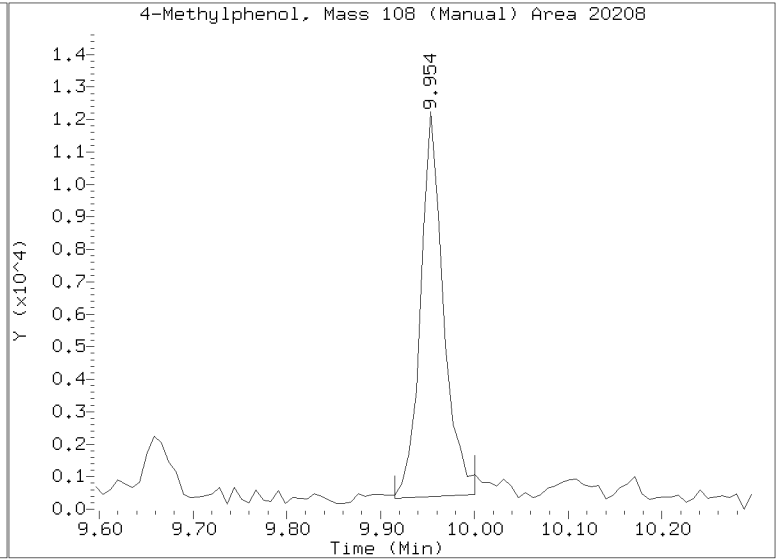
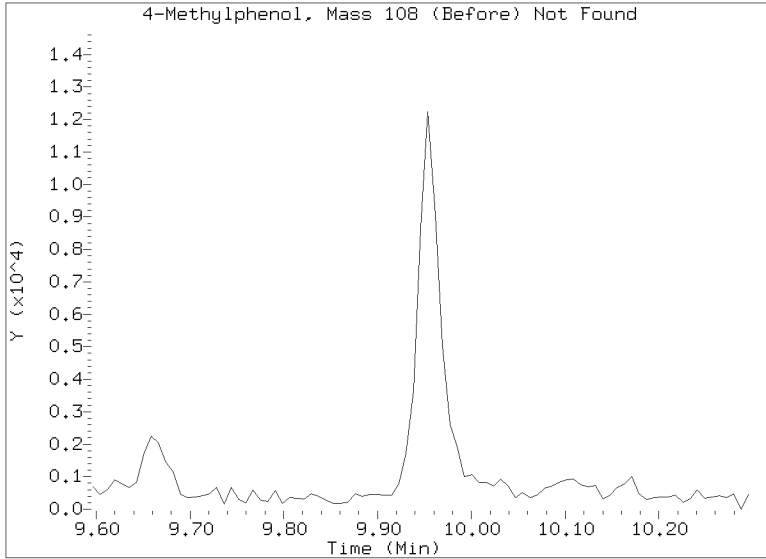
RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022320.D  
Injection Date: 03-MAR-2023 02:25  
Lab ID:23A0206-05 Client ID:  
Report Date: 03/09/2023 15:49





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-06 B

SDG: 23A0206

Sampled: 01/11/23 10:07

Prepared: 01/27/23 14:44

File ID: NT1003022321.D

% Solids: 55.16

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:03

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 18.27 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	540		4.4	19.8
106-44-5	4-Methylphenol	1	19.8	U	7.3	19.8
91-20-3	Naphthalene	1	9.8	J	4.2	19.8
91-57-6	2-Methylnaphthalene	1	8.0	J	4.5	19.8
208-96-8	Acenaphthylene	1	7.0	J	6.2	19.8
131-11-3	Dimethylphthalate	1	19.8	U	4.4	19.8
83-32-9	Acenaphthene	1	5.7	J	5.2	19.8
132-64-9	Dibenzofuran	1	19.8	U	14.0	19.8
86-73-7	Fluorene	1	19.8	U	14.5	19.8
85-01-8	Phenanthrene	1	58.5		8.7	19.8
120-12-7	Anthracene	1	31.0		7.1	19.8
206-44-0	Fluoranthene	1	136		6.0	19.8
129-00-0	Pyrene	1	164		5.6	19.8
85-68-7	Butylbenzylphthalate	1	27.1	Q	9.3	19.8
56-55-3	Benzo(a)anthracene	1	76.7		5.9	19.8
218-01-9	Chrysene	1	120		6.0	19.8
117-81-7	bis(2-Ethylhexyl)phthalate	1	77.9		5.4	49.6
	Benzo(a)fluoranthene, Total	1	189		9.9	39.7
50-32-8	Benzo(a)pyrene	1	78.4		4.2	19.8
193-39-5	Indeno(1,2,3-cd)pyrene	1	41.6		14.5	19.8
53-70-3	Dibenzo(a,h)anthracene	1	19.8	U	17.1	19.8
191-24-2	Benzo(g,h,i)perylene	1	56.6		13.5	19.8

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	744.22	569	76.5	27 - 120	
Phenol-d5	744.22	674	90.6	29 - 120	
2-Chlorophenol-d4	744.22	640	86.0	31 - 120	
1,2-Dichlorobenzene-d4	496.14	351	70.8	32 - 120	
Nitrobenzene-d5	496.14	412	83.1	30 - 120	
2-Fluorobiphenyl	496.14	434	87.5	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-06 B

SDG: 23A0206

Sampled: 01/11/23 10:07

Prepared: 01/27/23 14:44

File ID: NT1003022321.D

% Solids: 55.16

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:03

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 18.27 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	744.22	595	80.0	24 - 134	
p-Terphenyl-d14	496.14	425	85.7	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022321.D

Date: 03-HR-2023 03:03

Client ID:

Sample Info: 23A0206-06

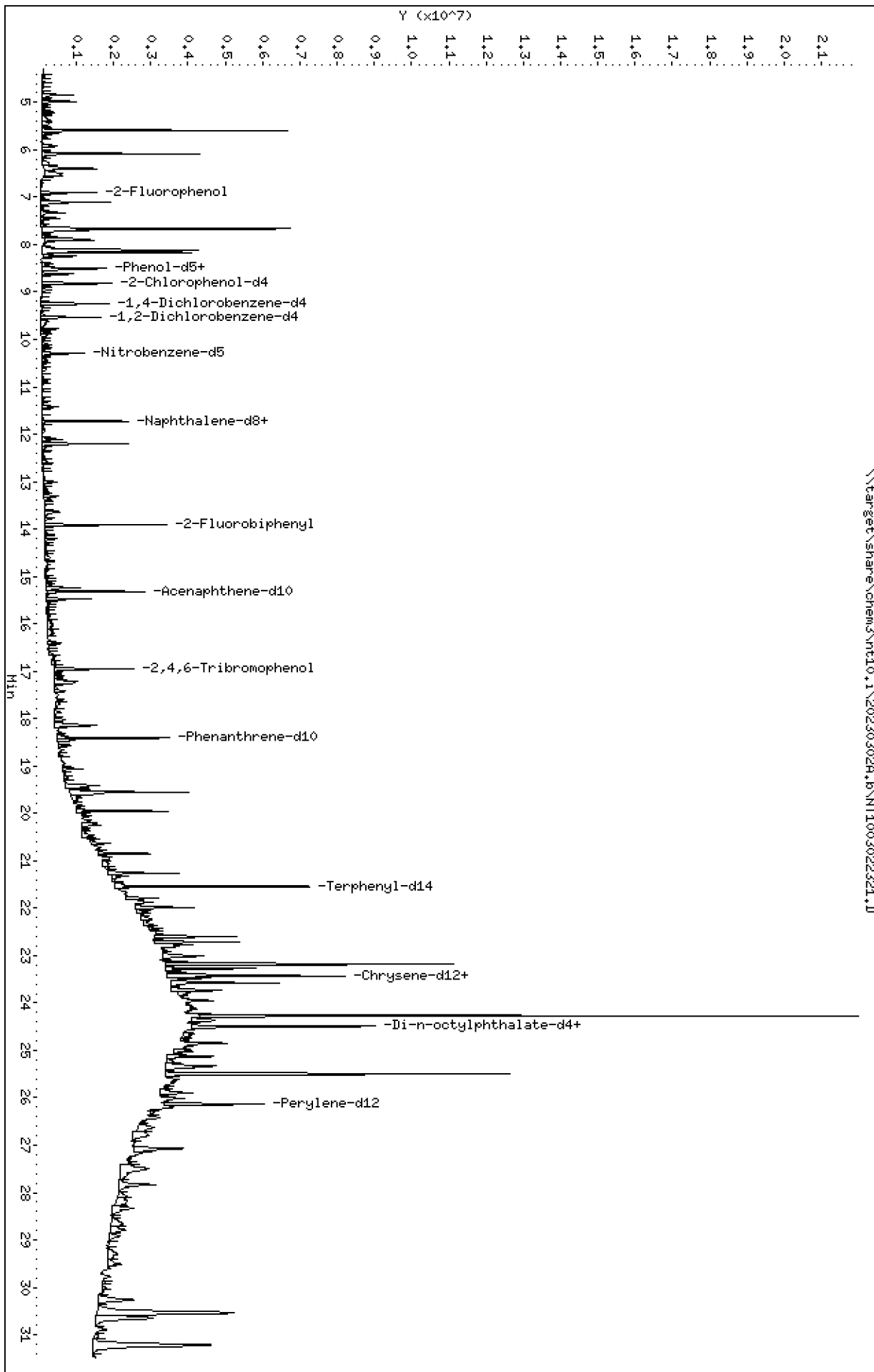
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A.B\NT1003022321.D



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

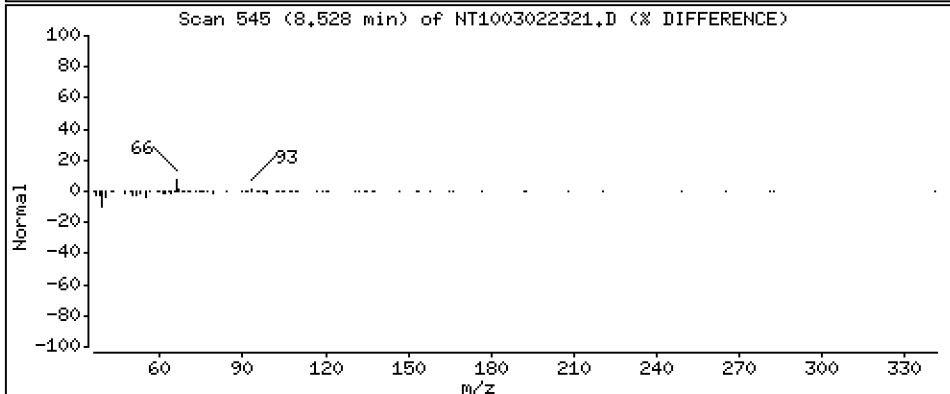
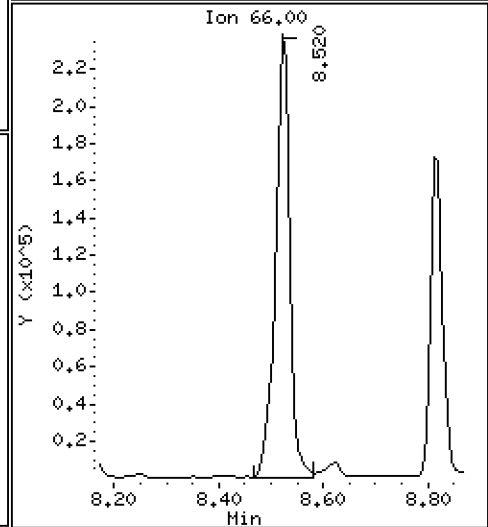
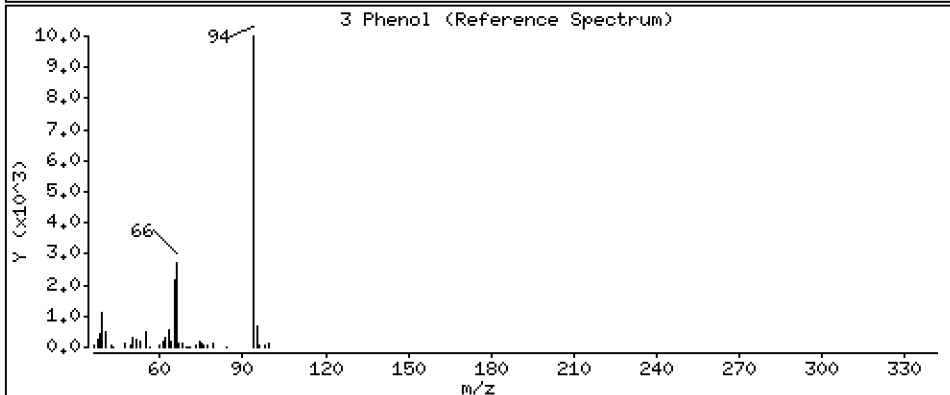
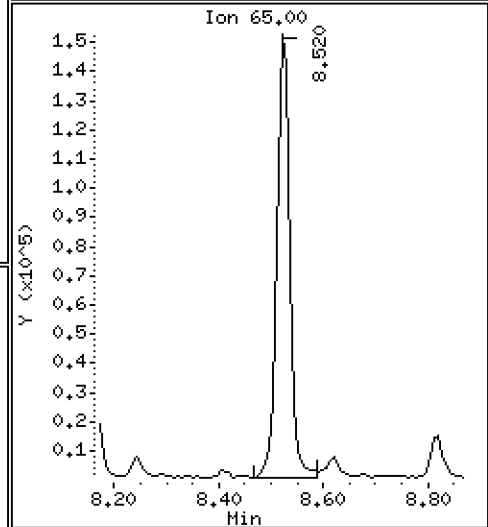
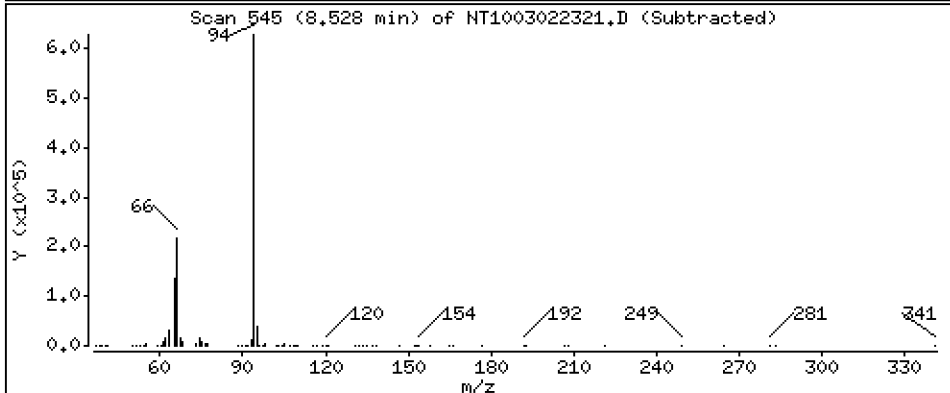
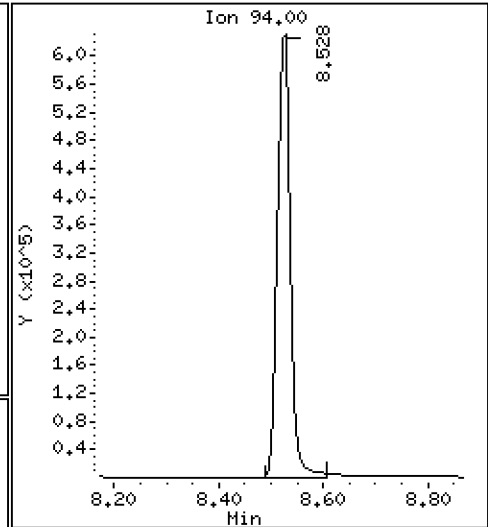
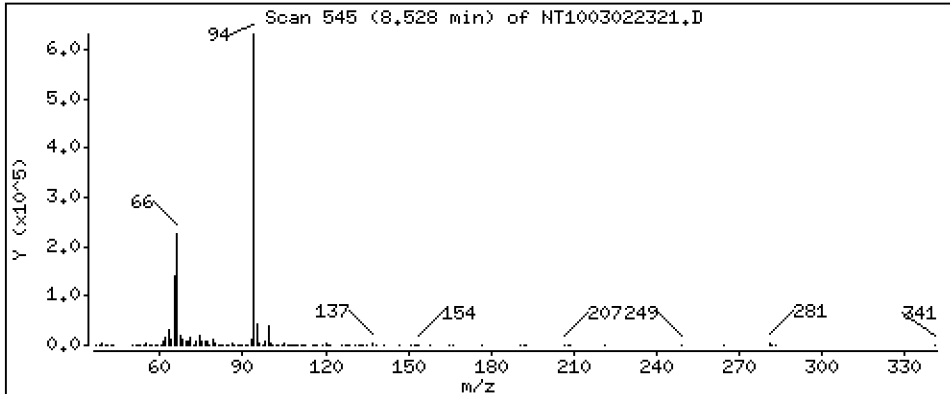
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 5.440 ug/mL



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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

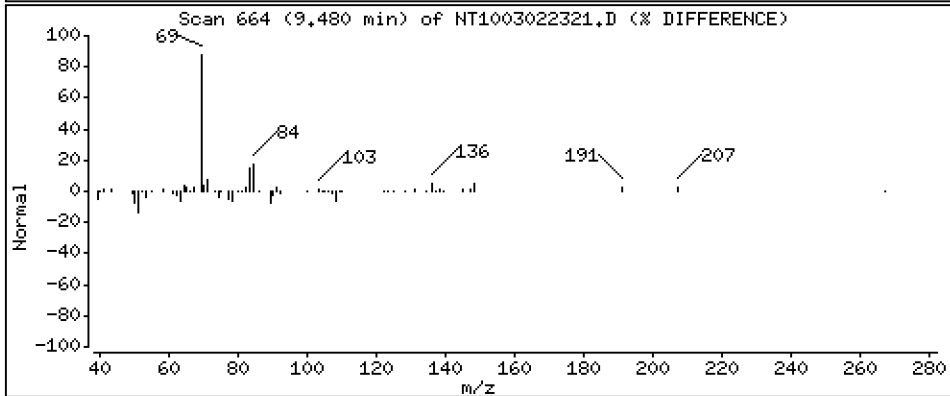
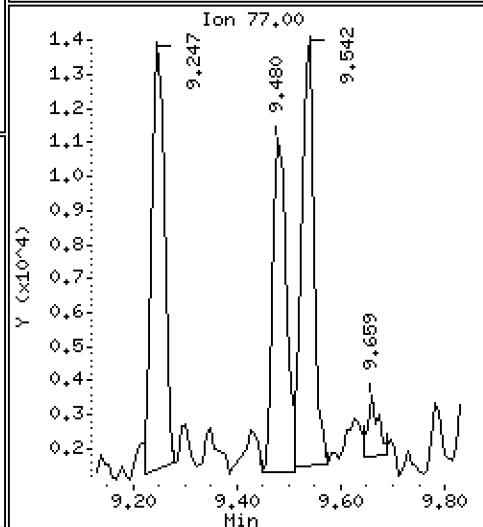
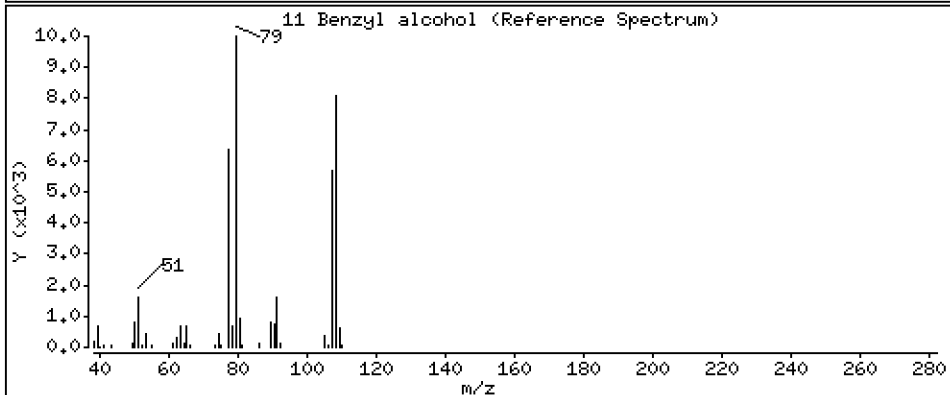
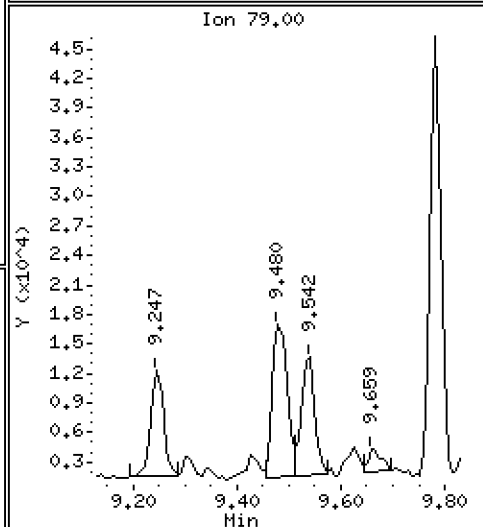
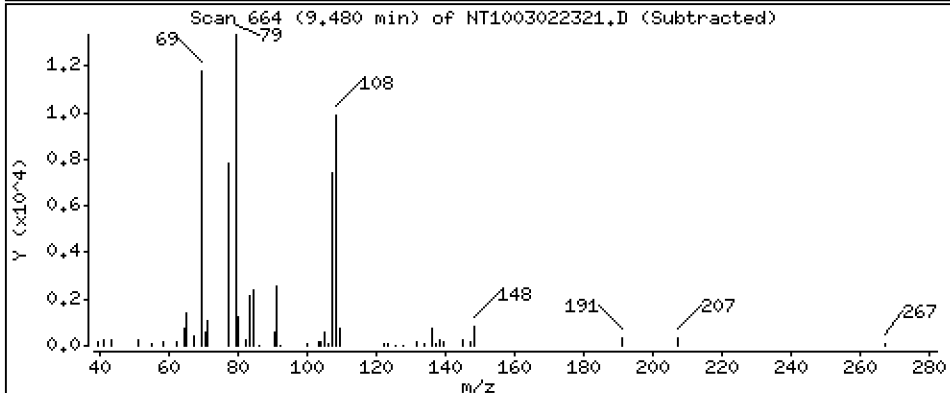
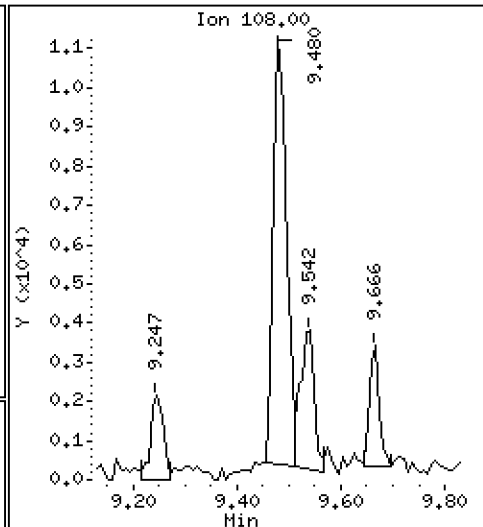
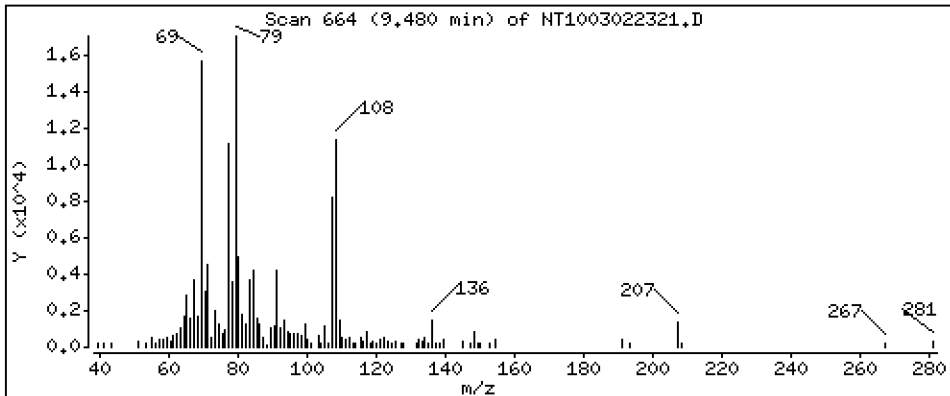
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1884 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

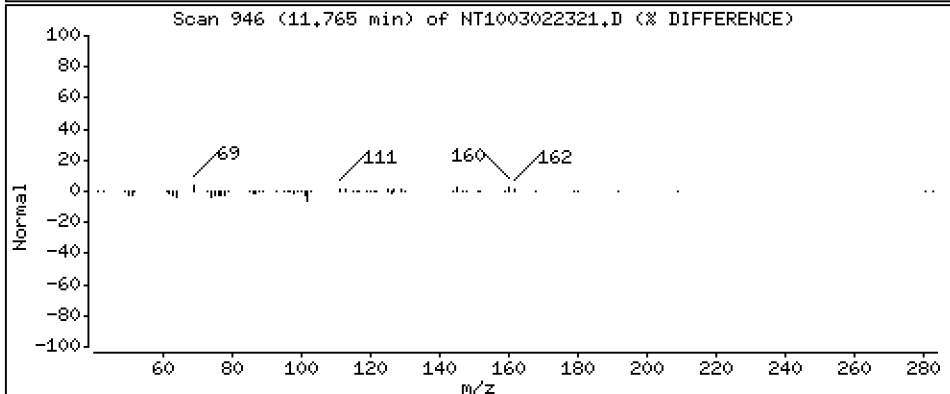
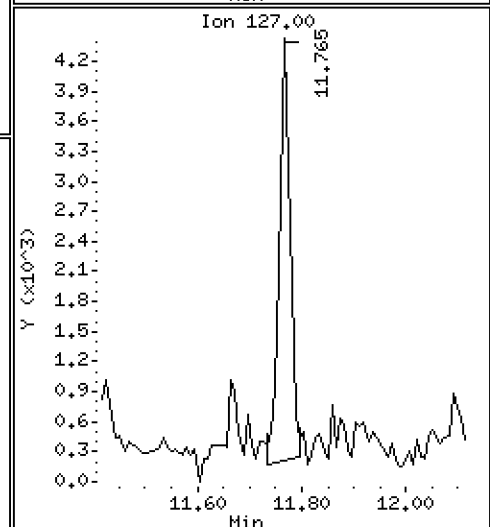
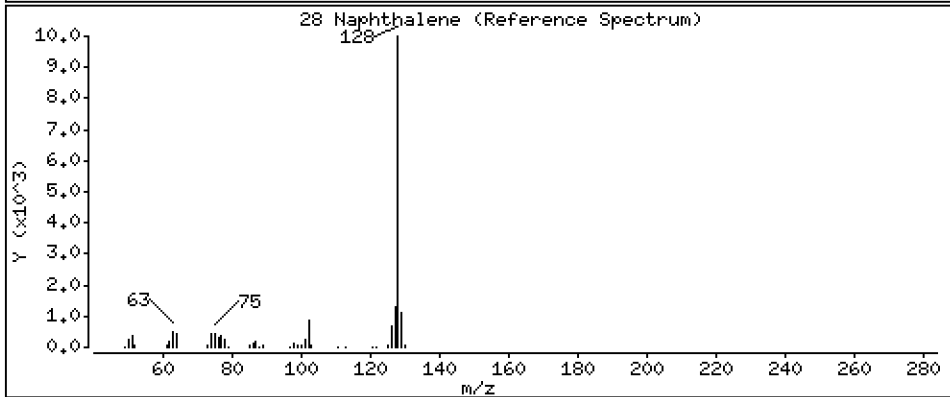
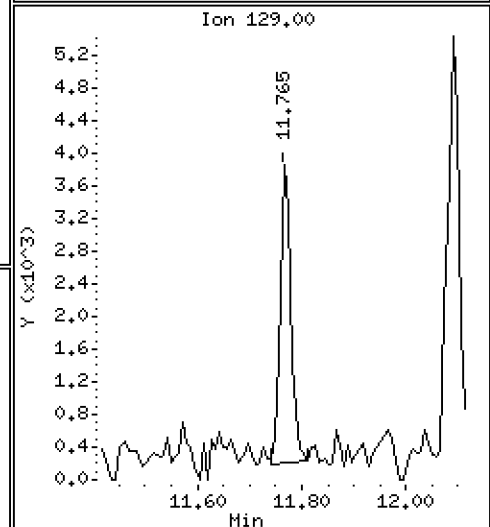
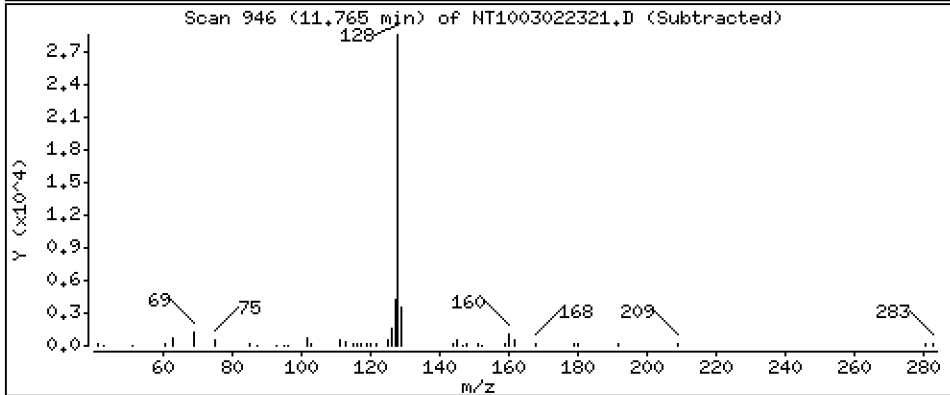
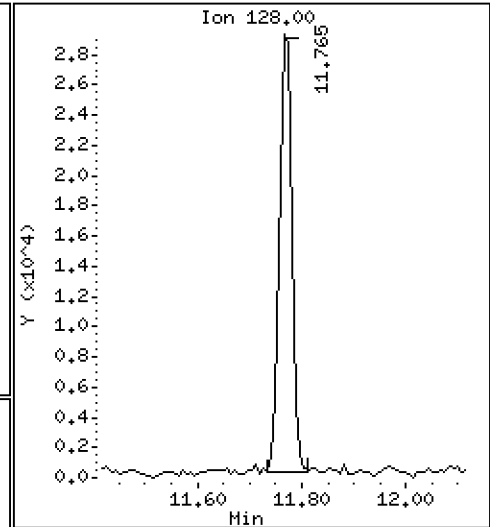
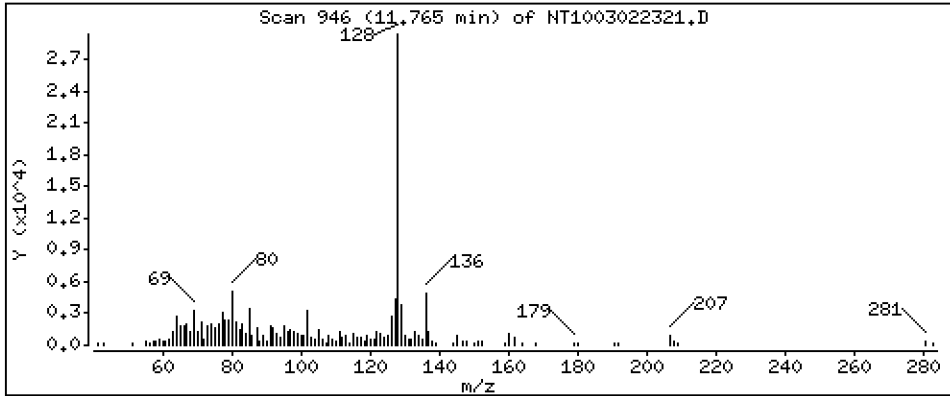
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,09858 ug/mL





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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

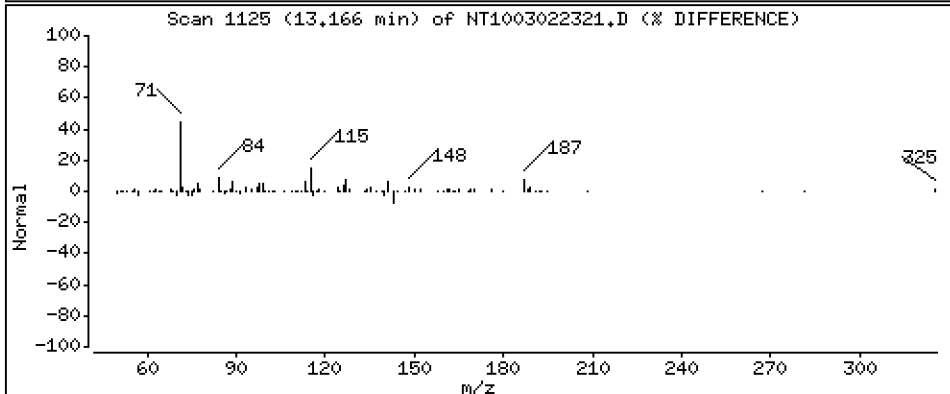
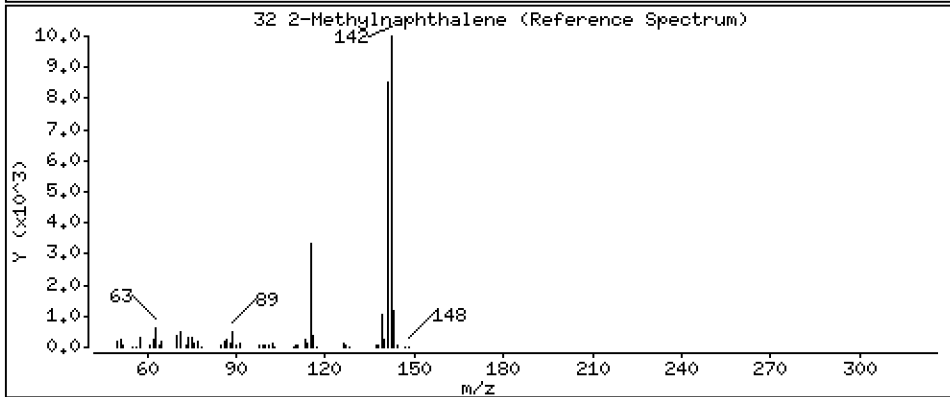
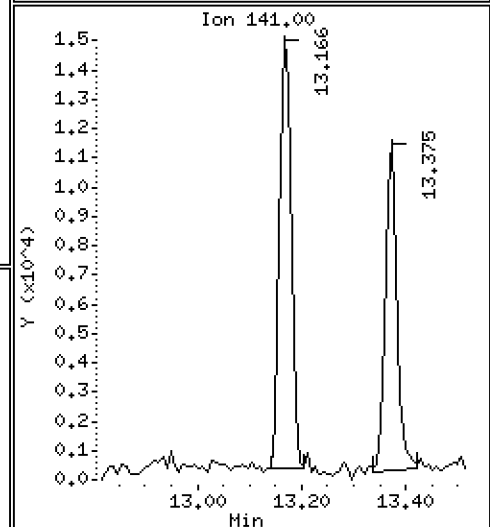
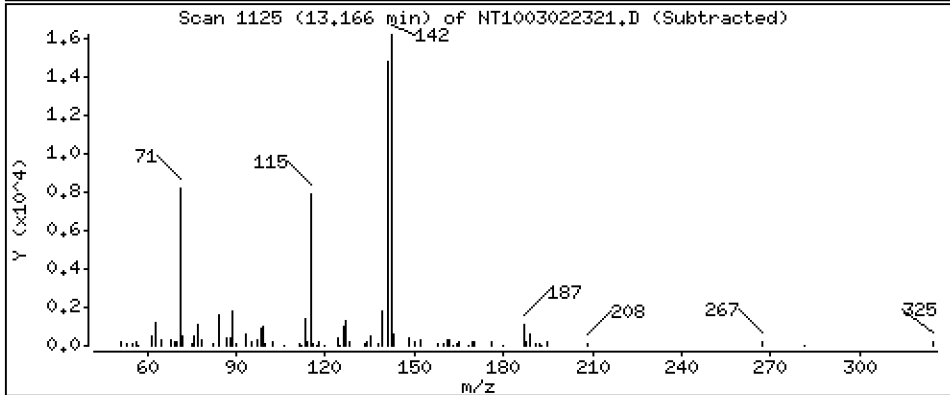
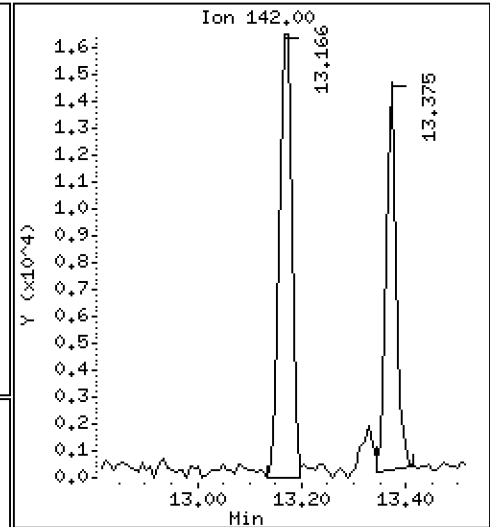
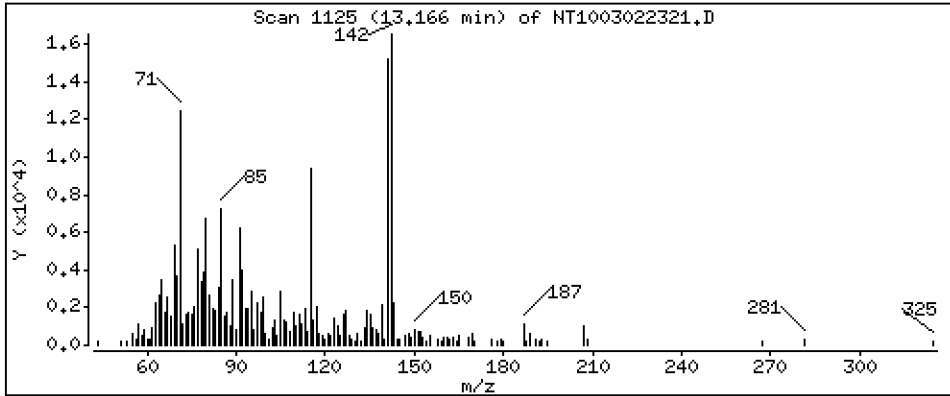
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,08093 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

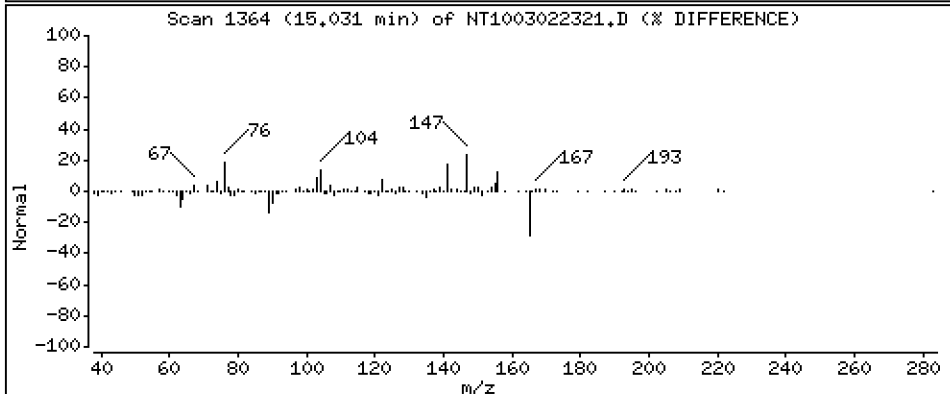
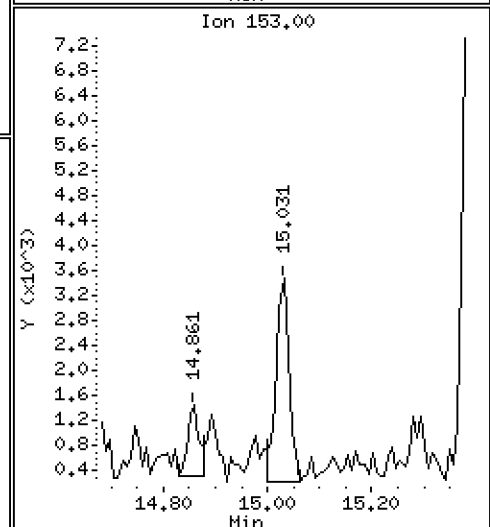
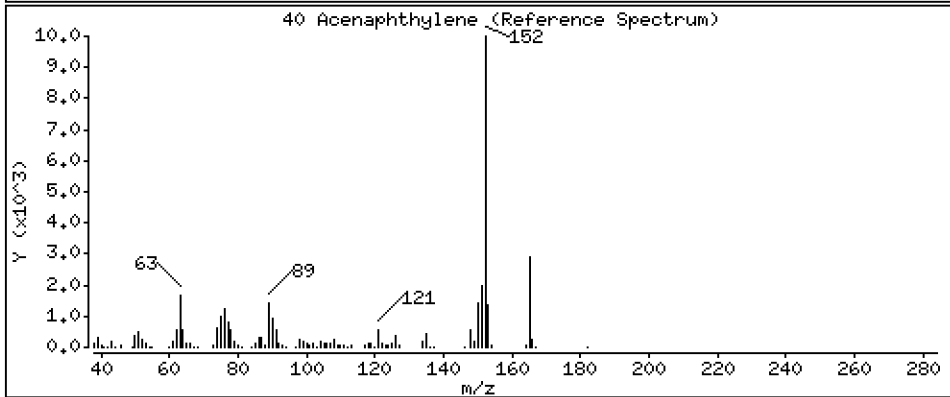
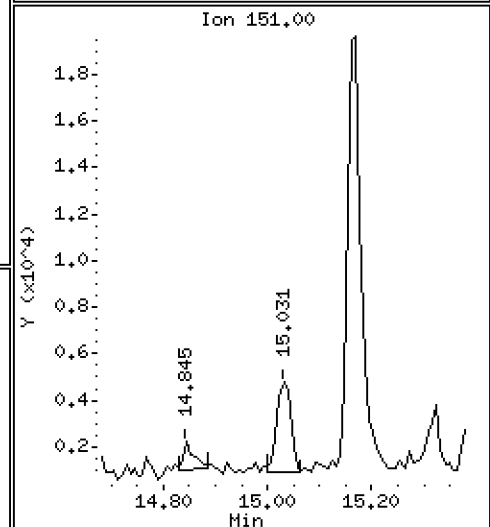
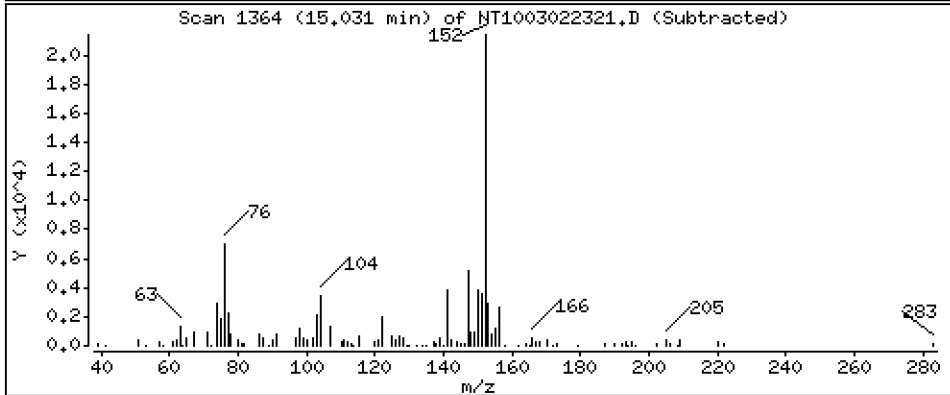
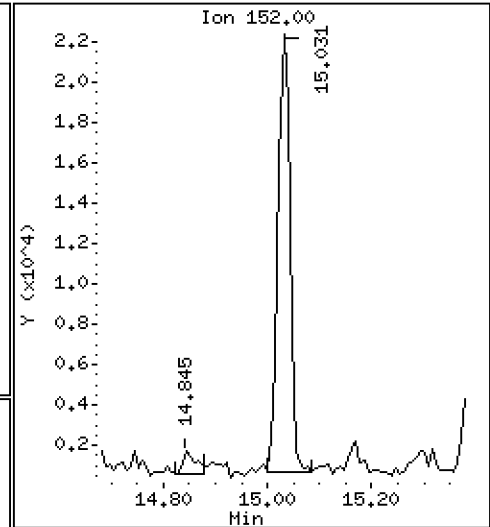
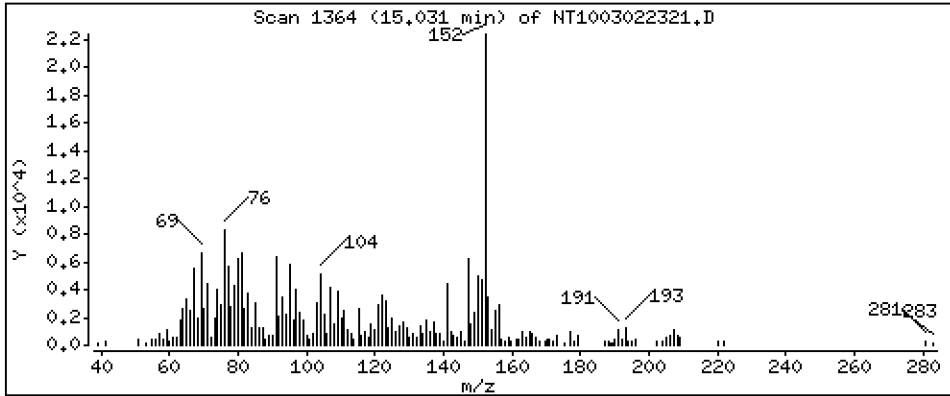
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.07096 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

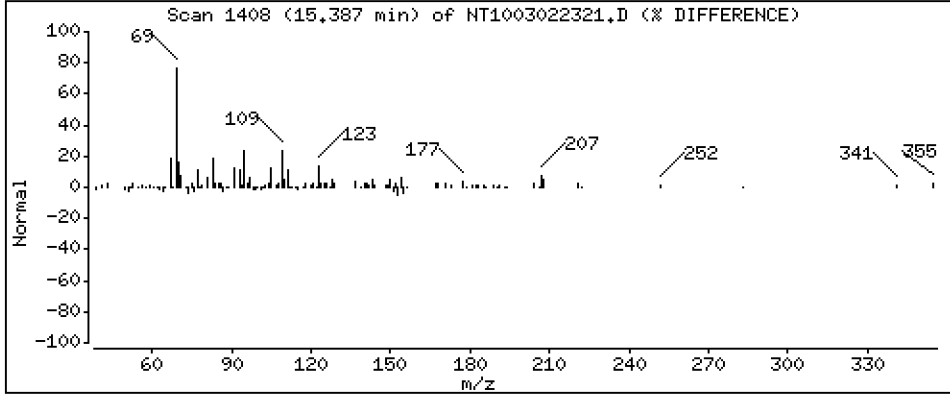
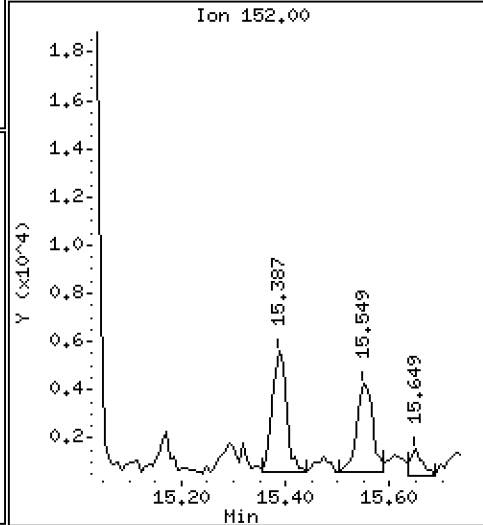
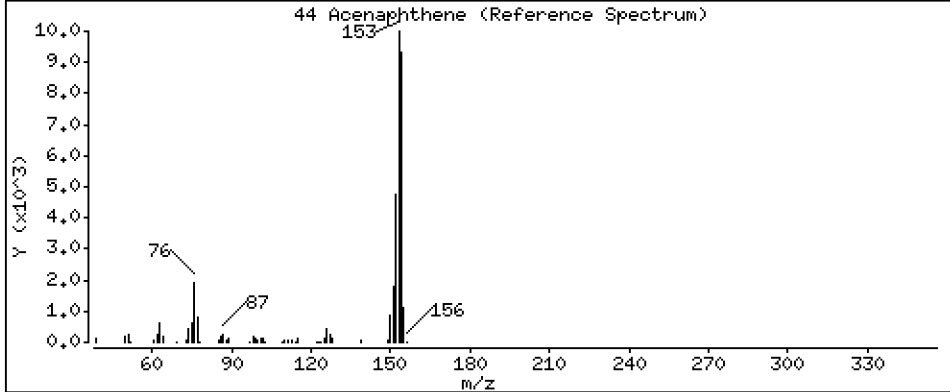
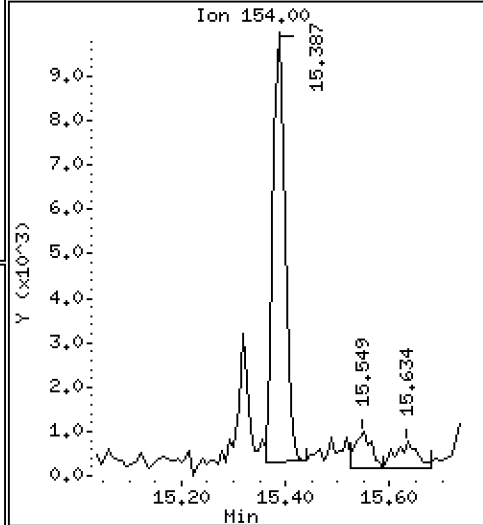
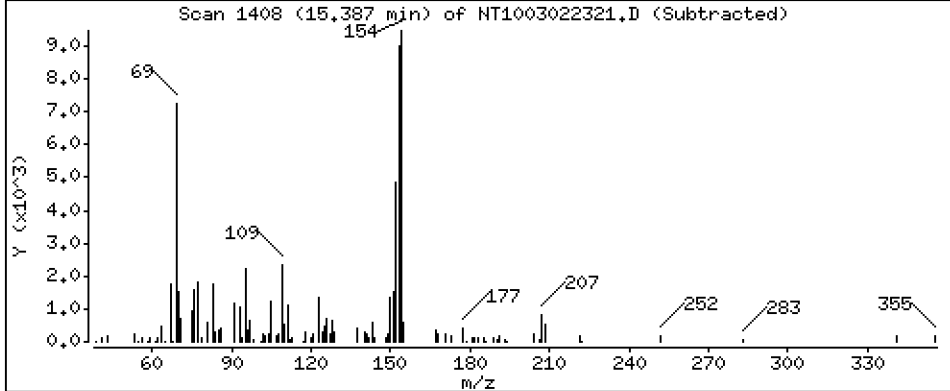
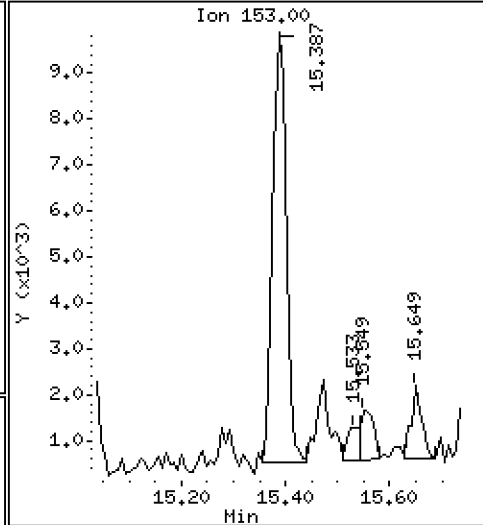
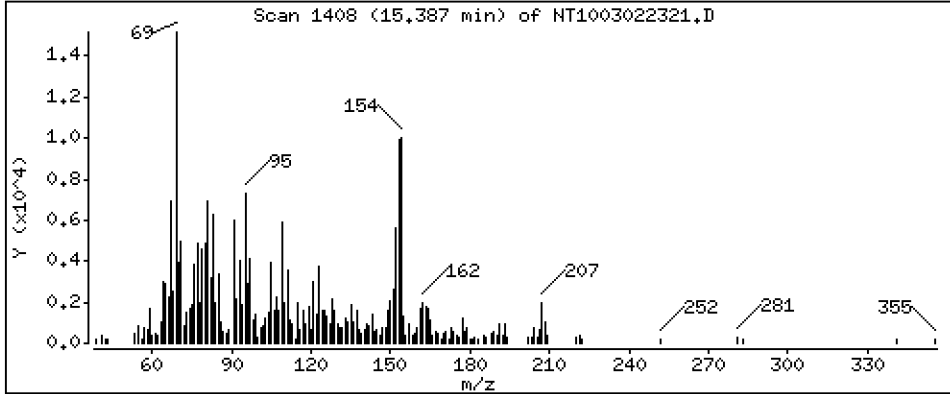
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.05792 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

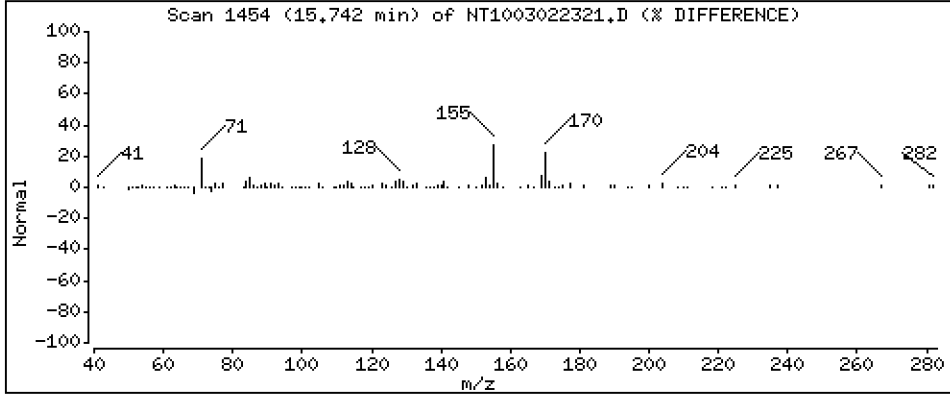
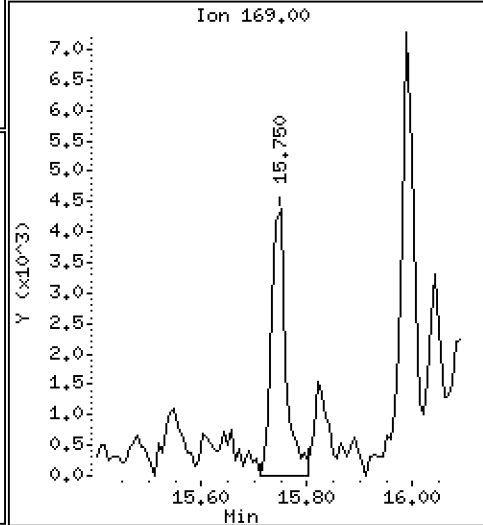
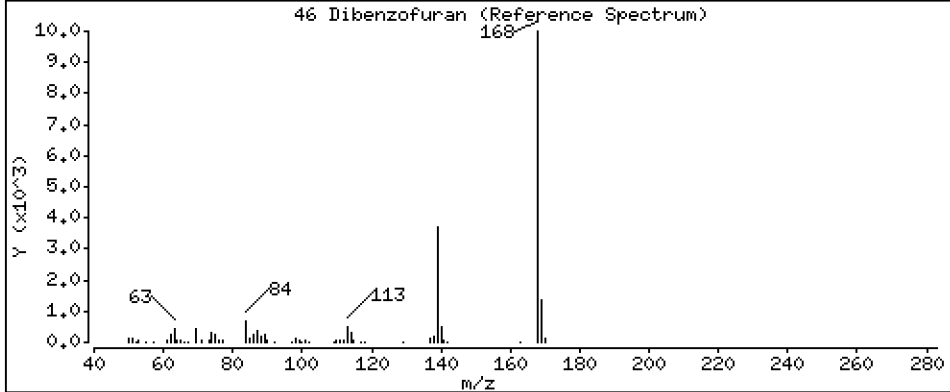
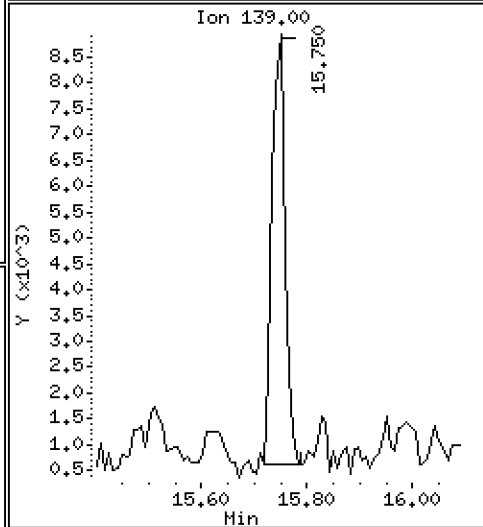
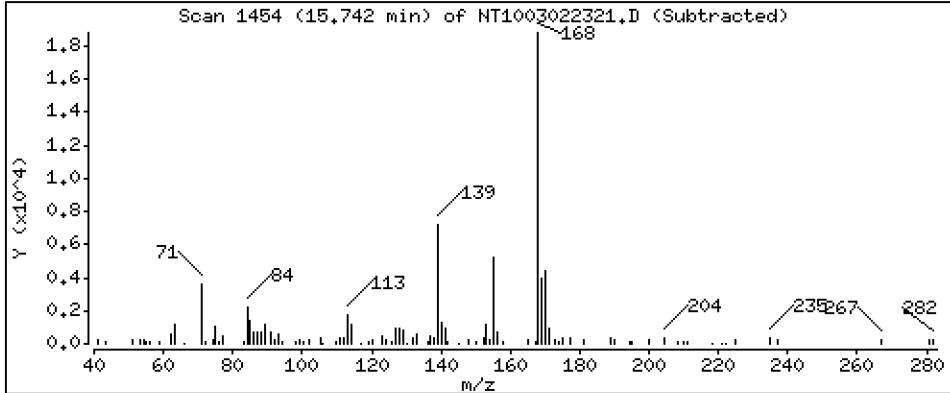
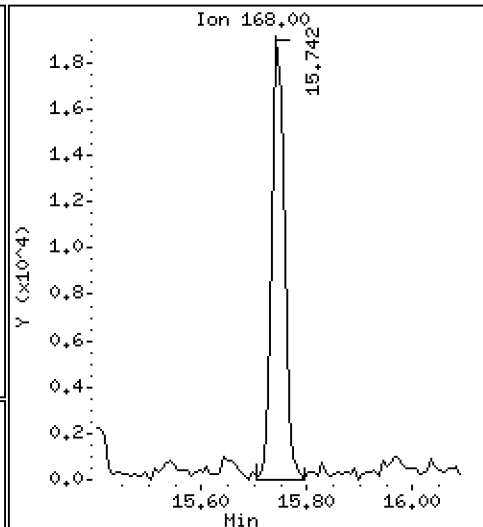
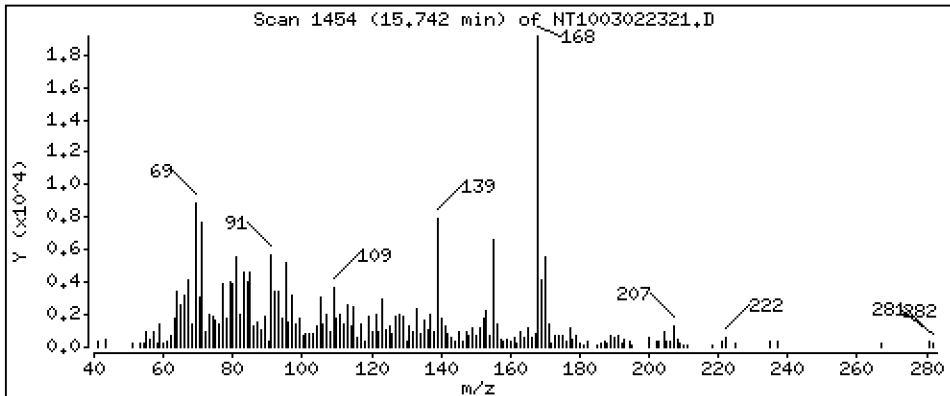
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,07298 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

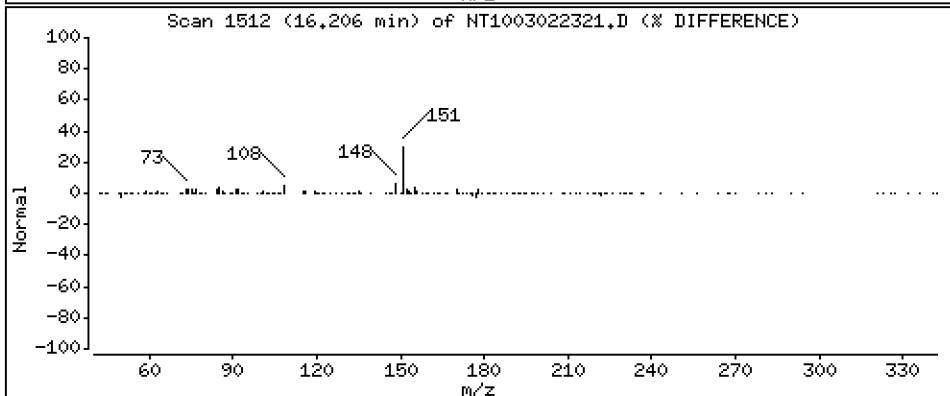
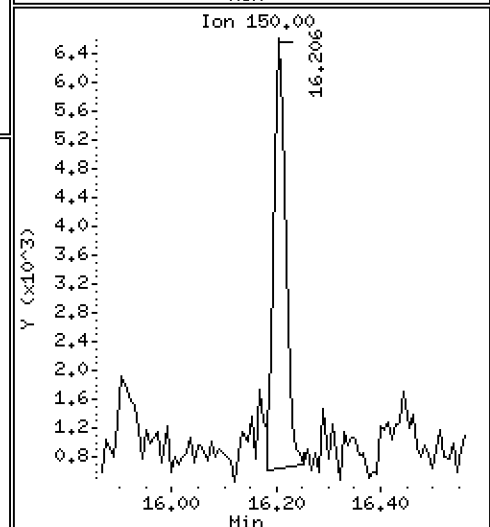
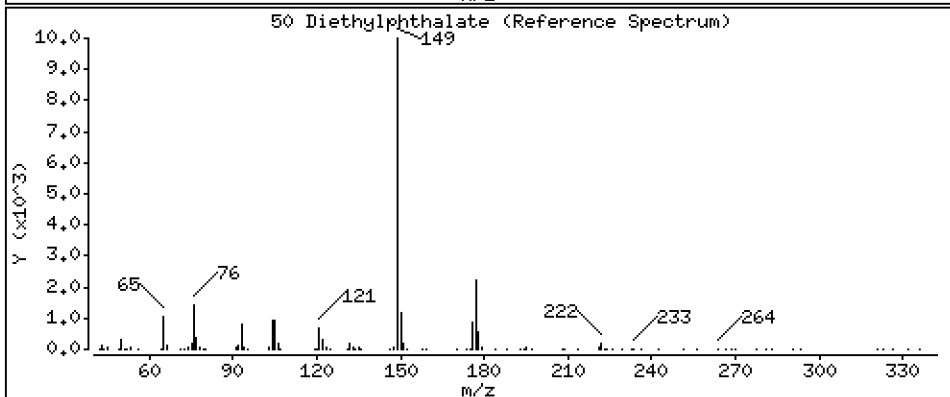
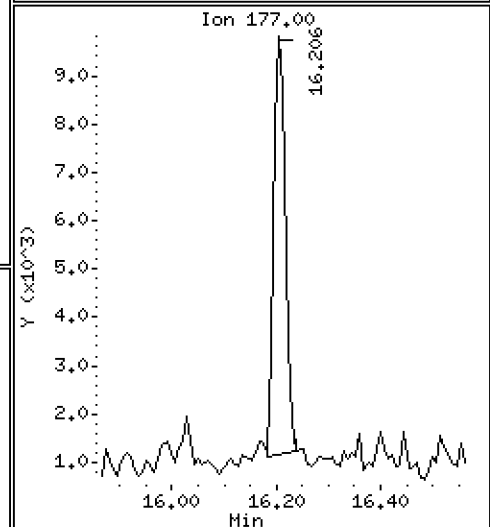
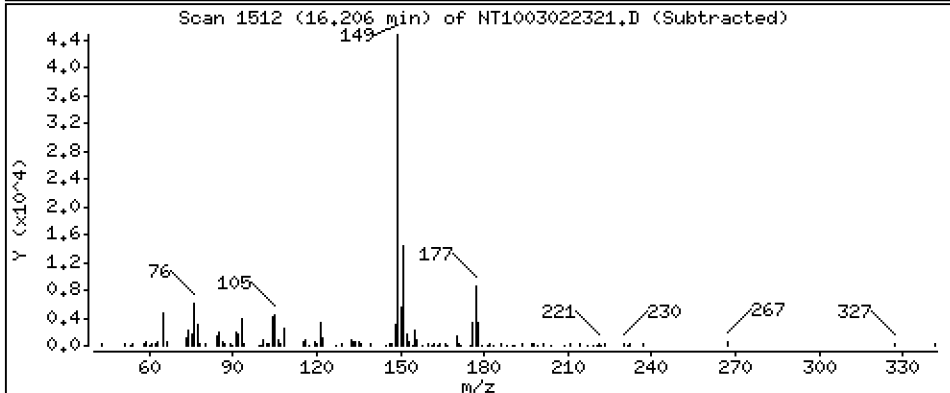
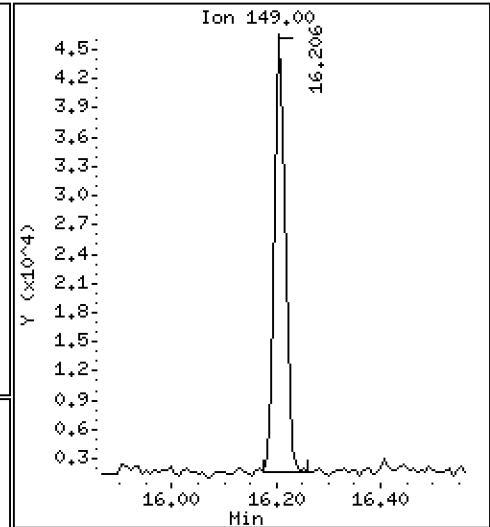
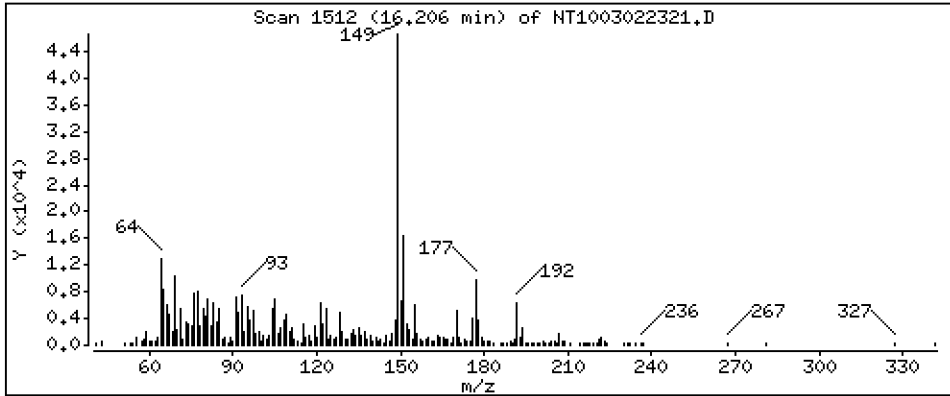
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1931 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

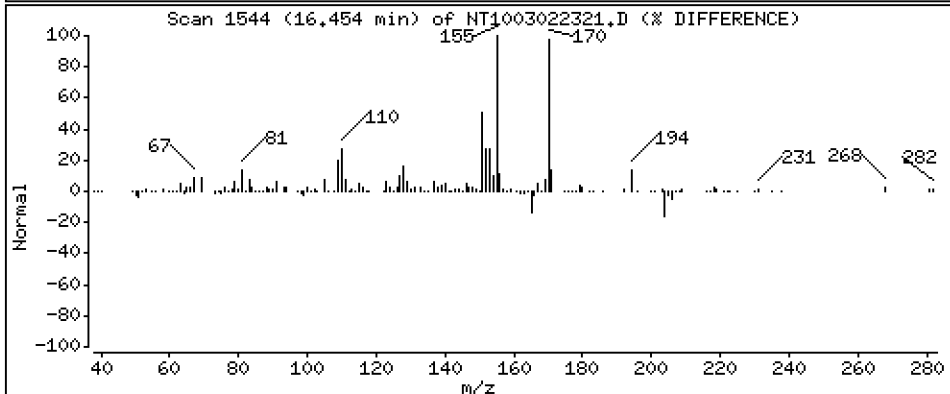
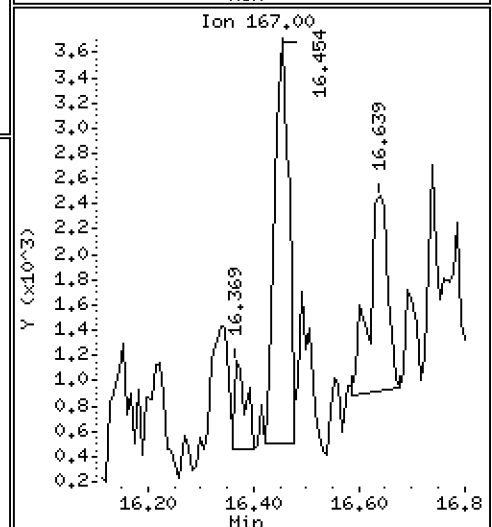
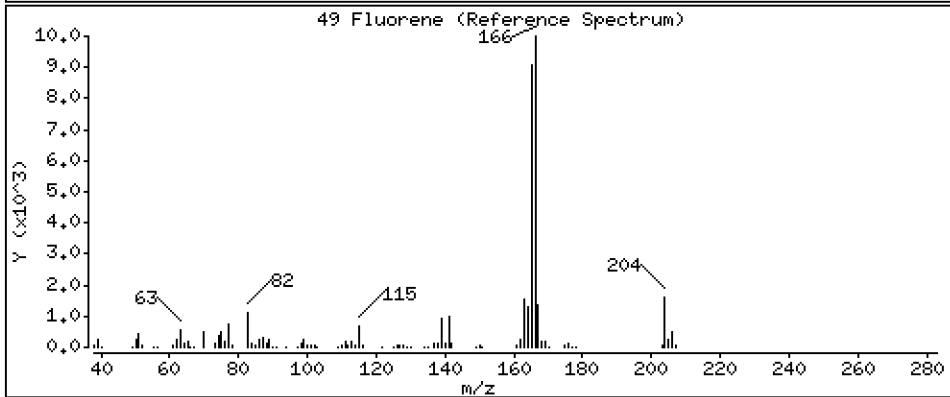
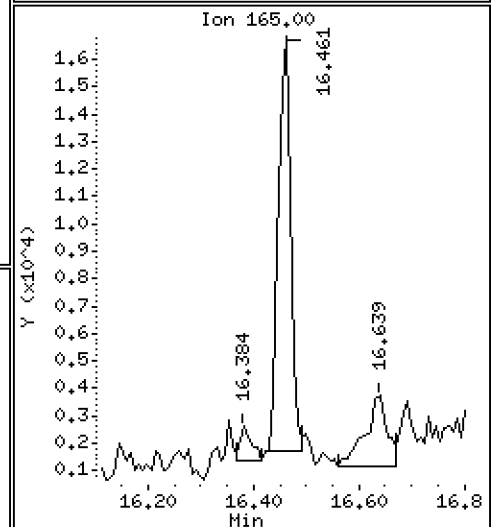
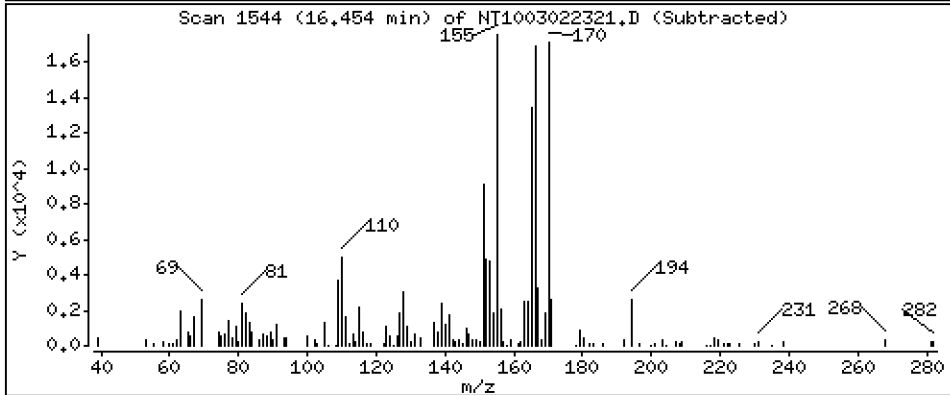
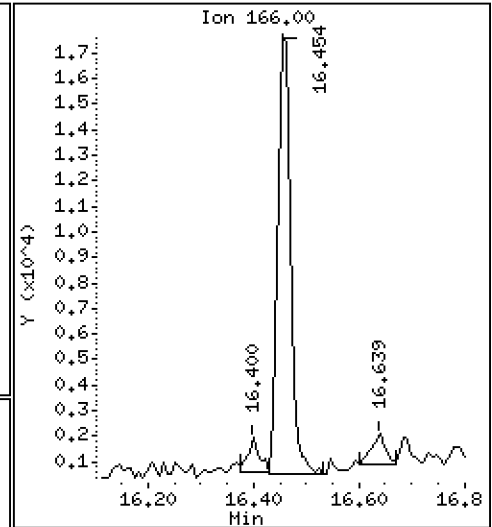
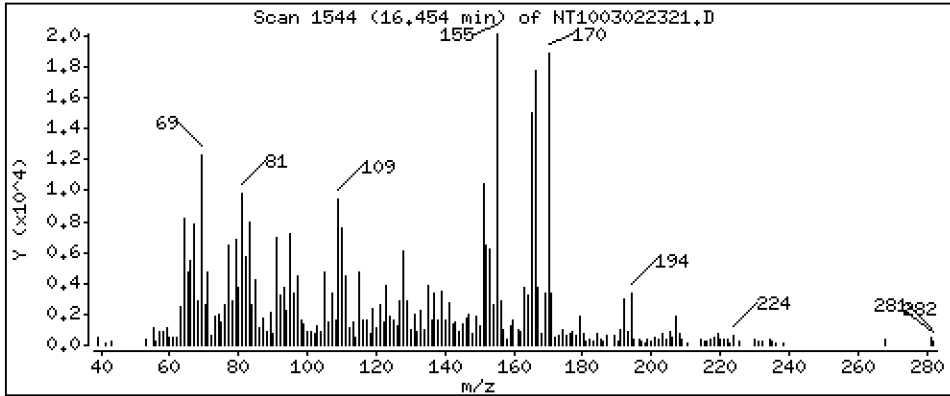
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.08154 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

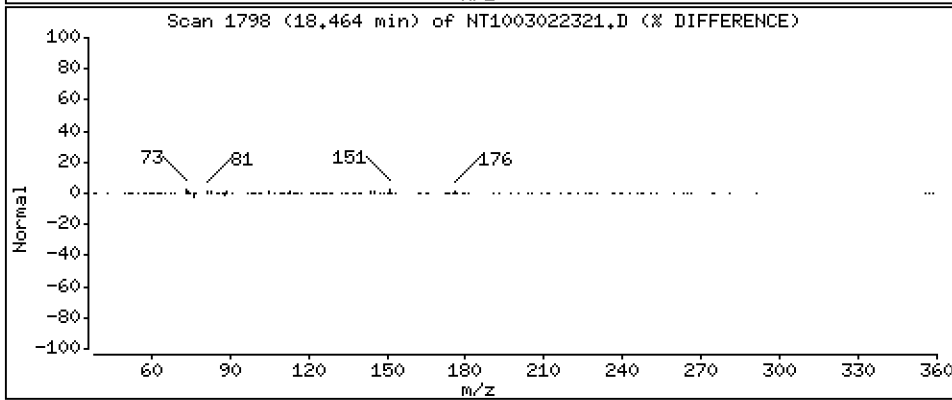
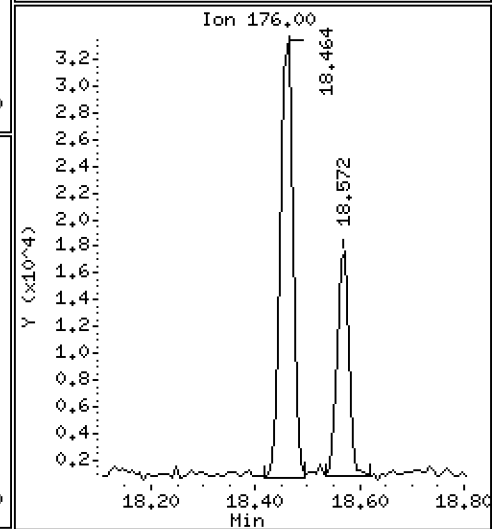
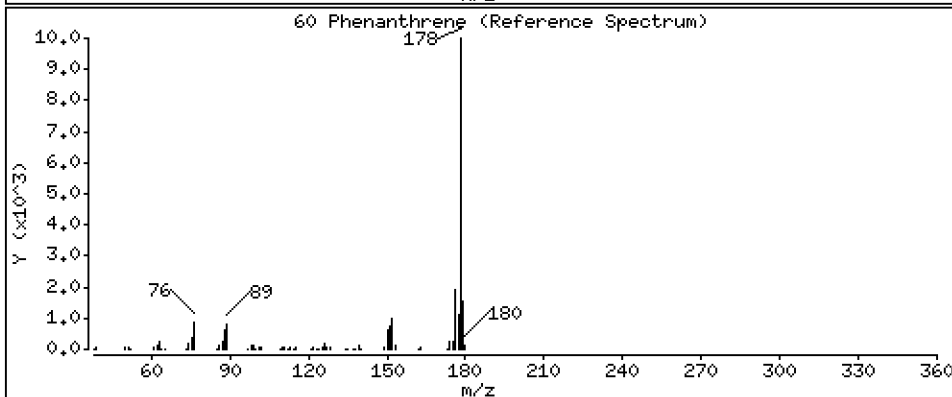
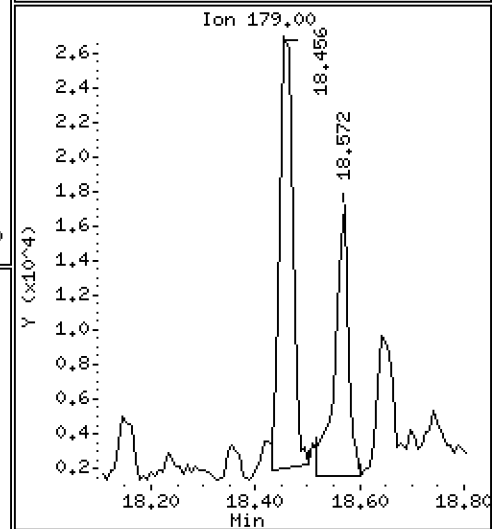
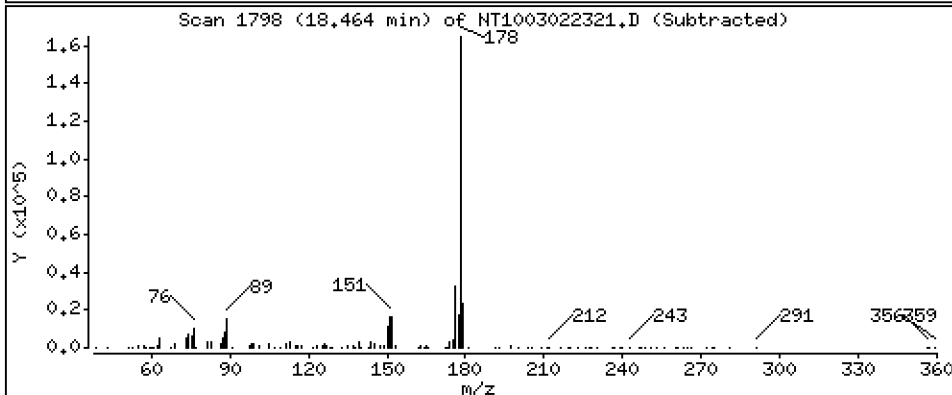
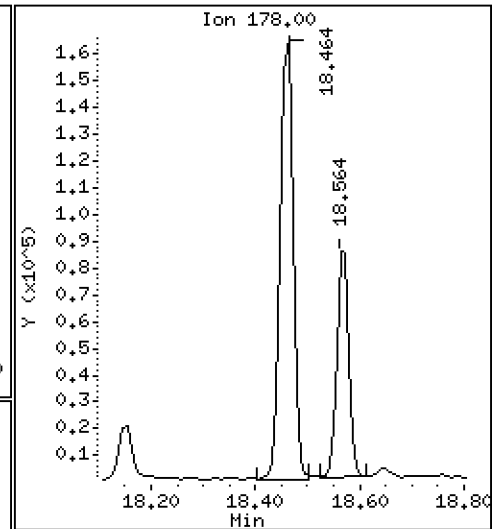
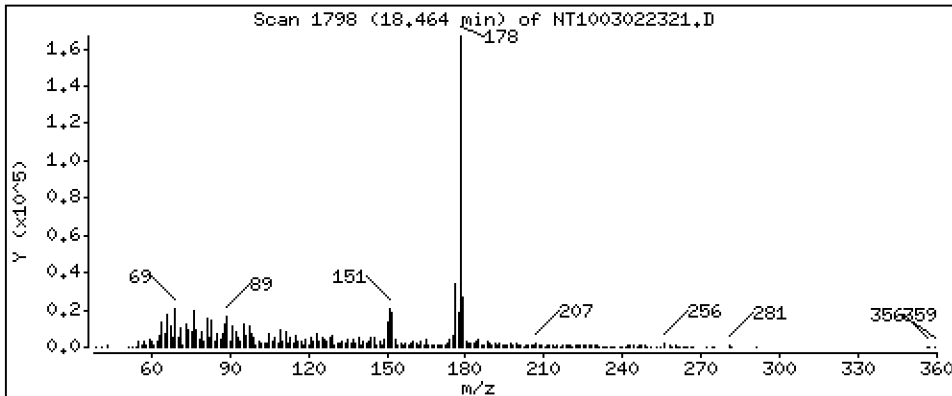
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 0.5892 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

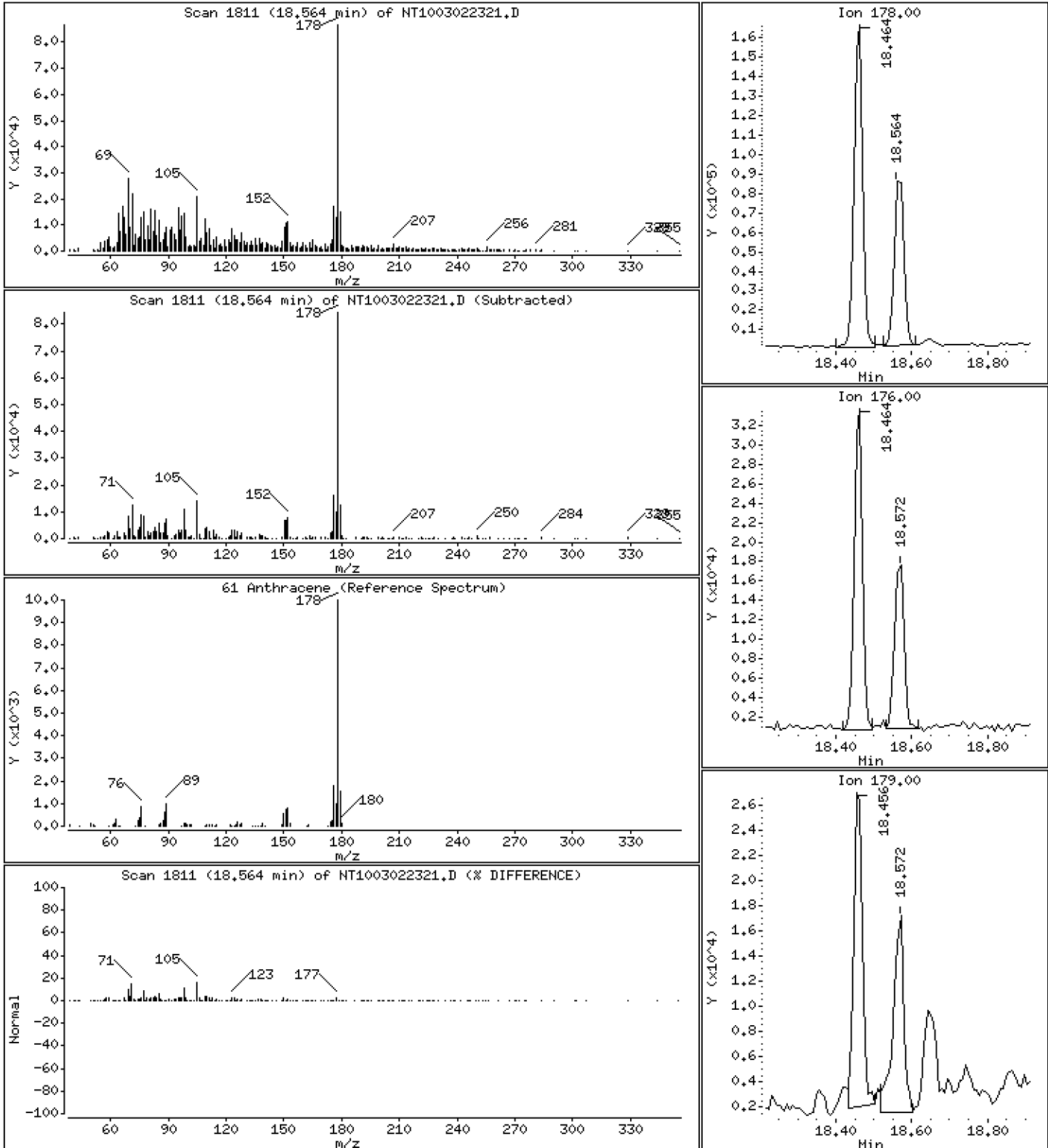
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,3126 ug/mL





Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

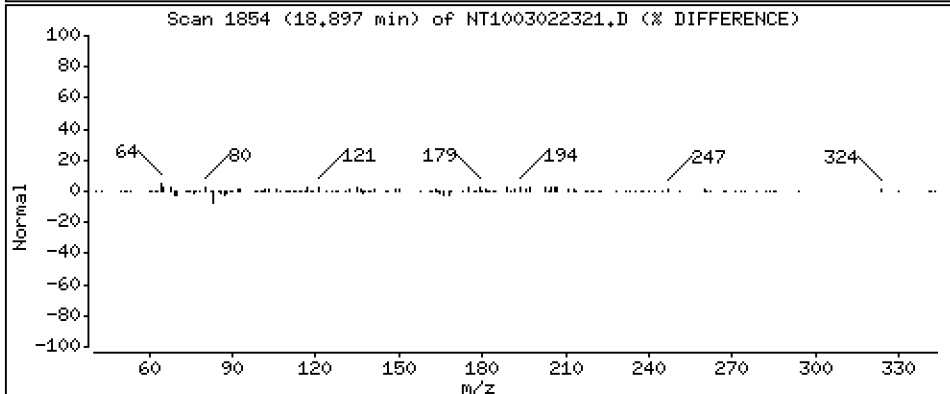
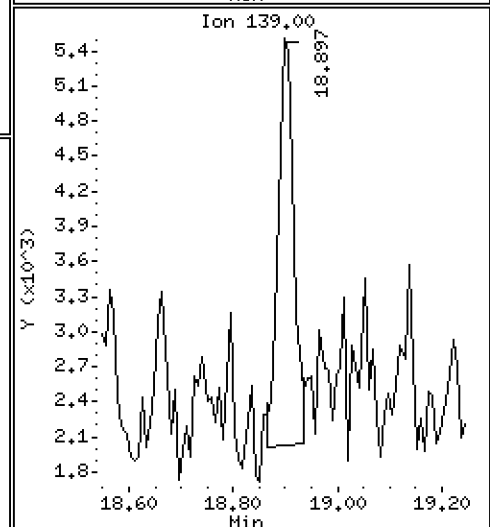
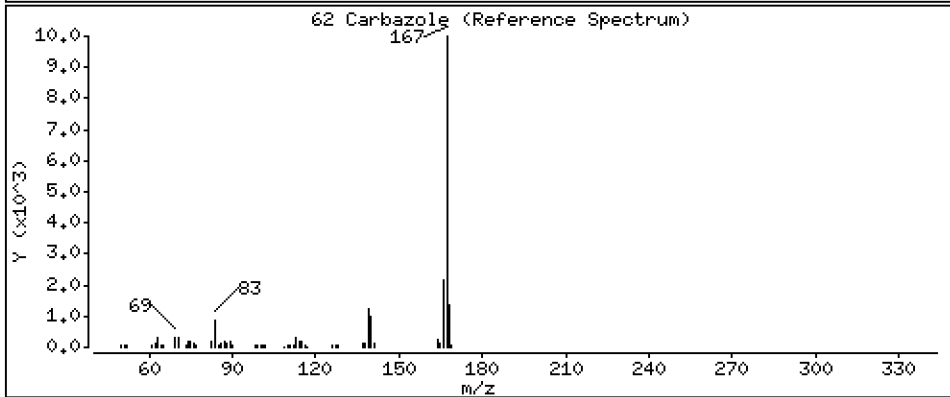
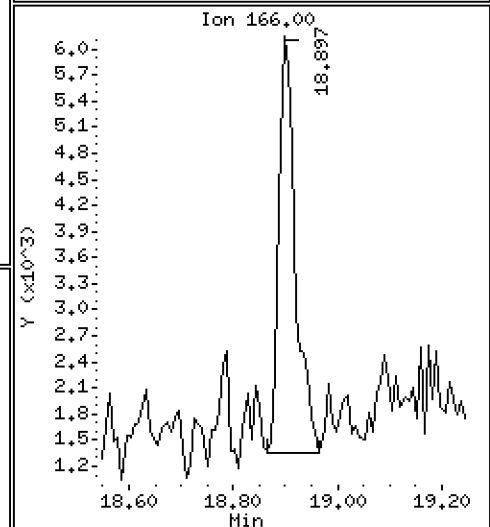
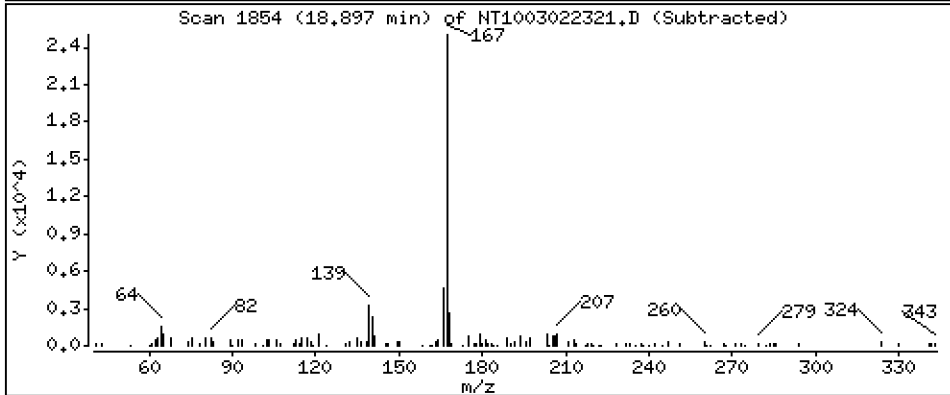
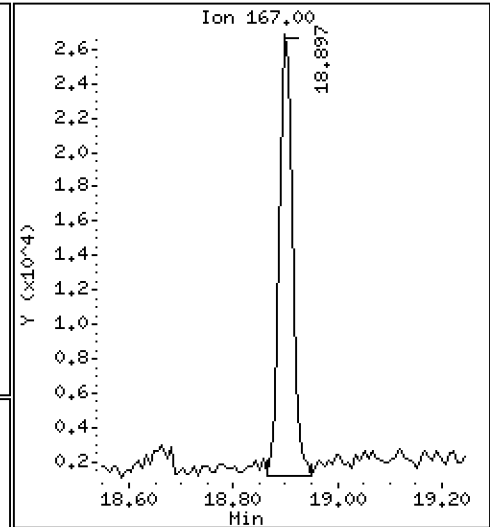
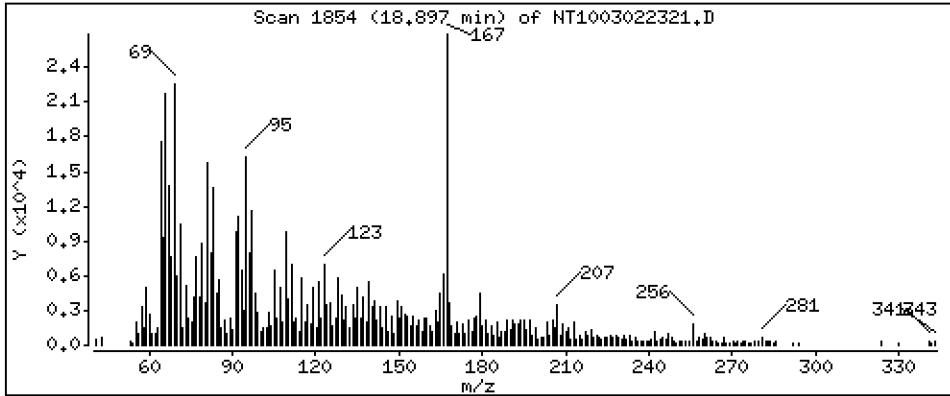
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1064 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

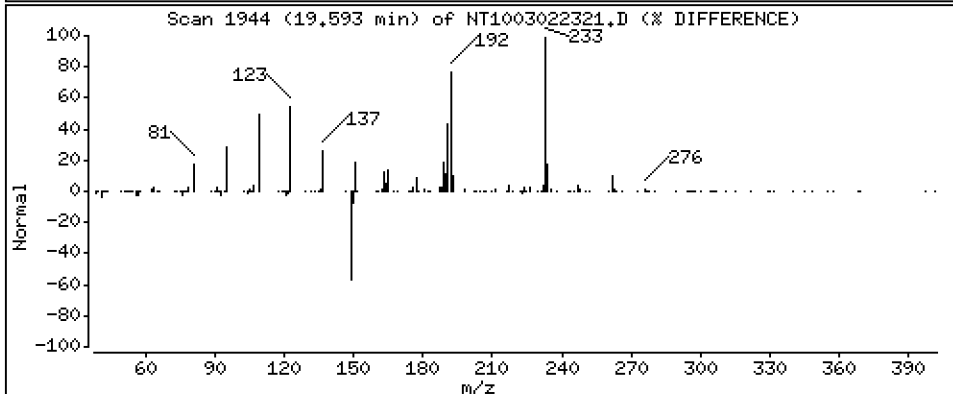
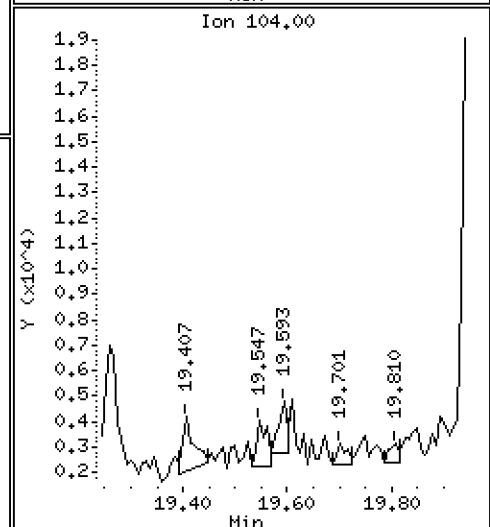
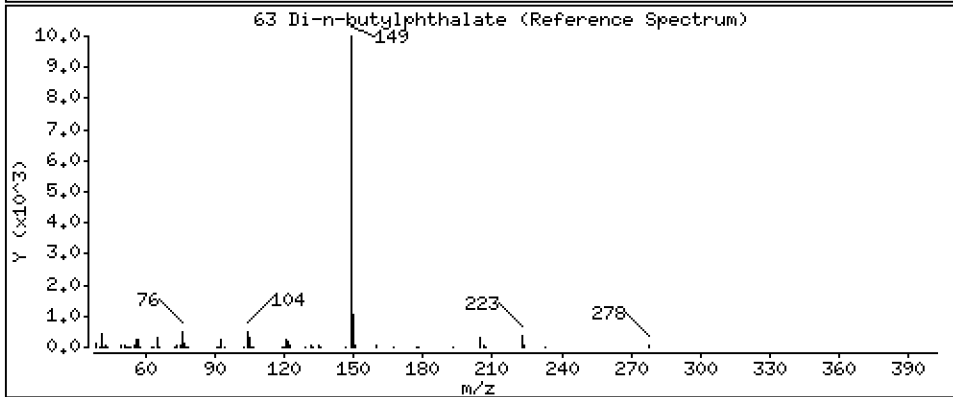
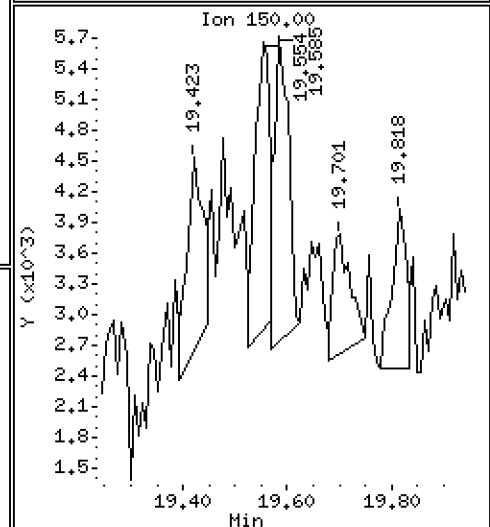
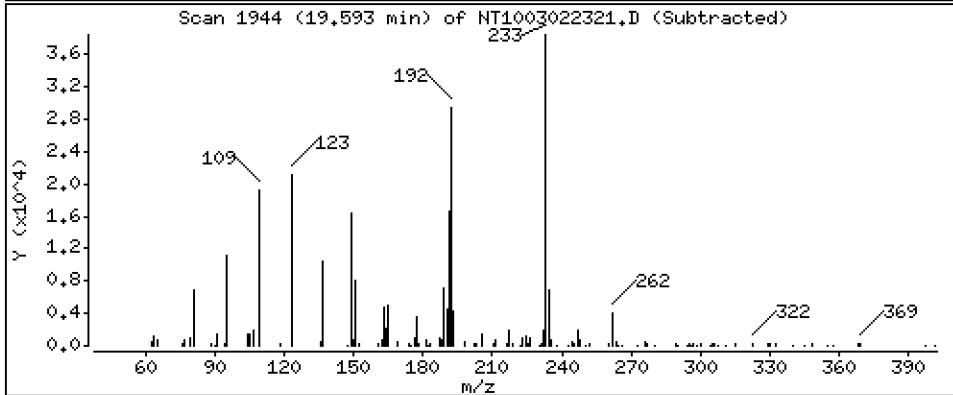
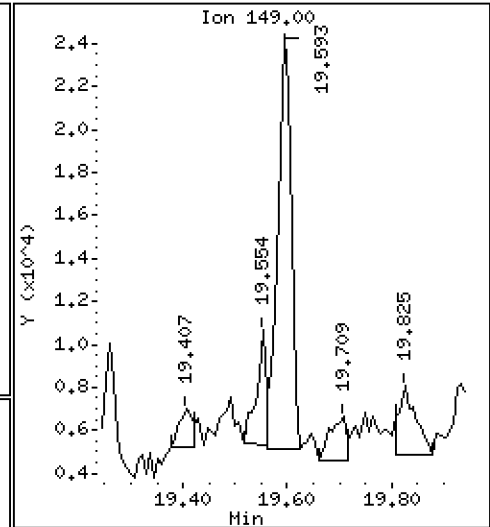
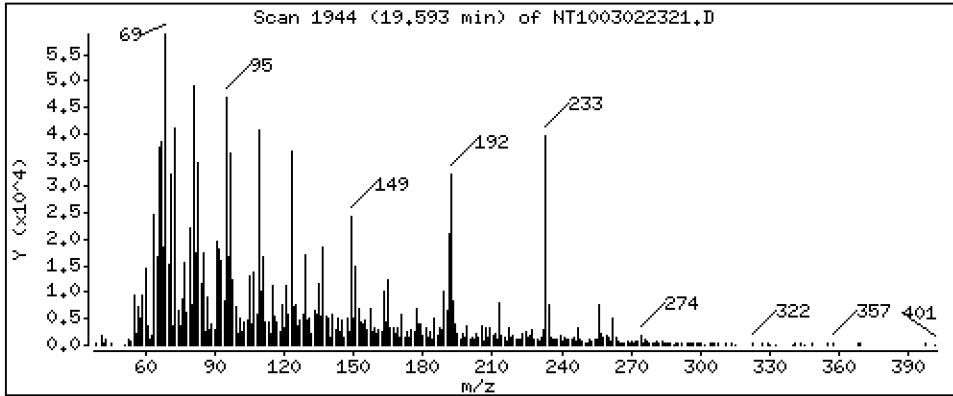
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.06076 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

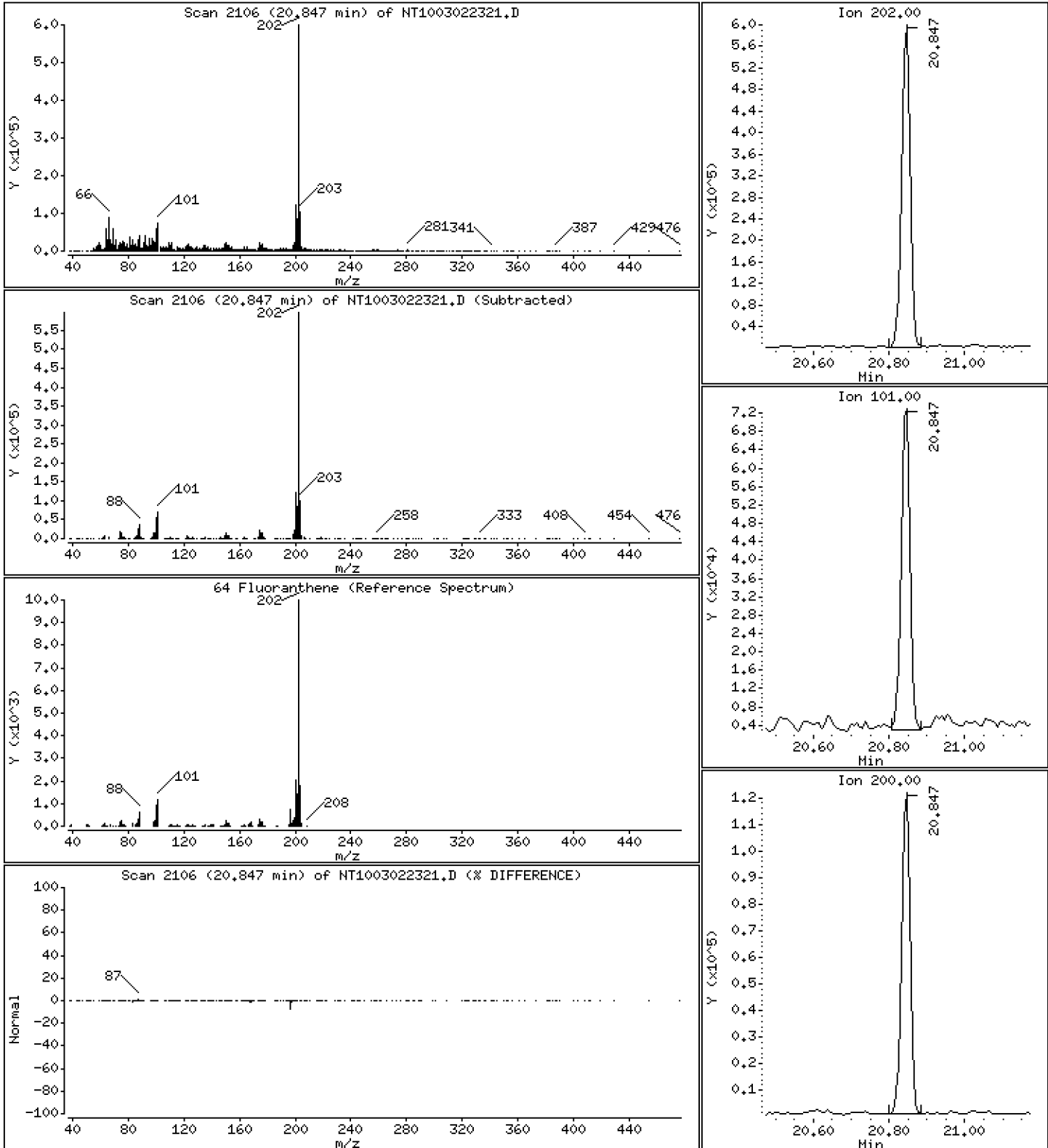
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,369 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

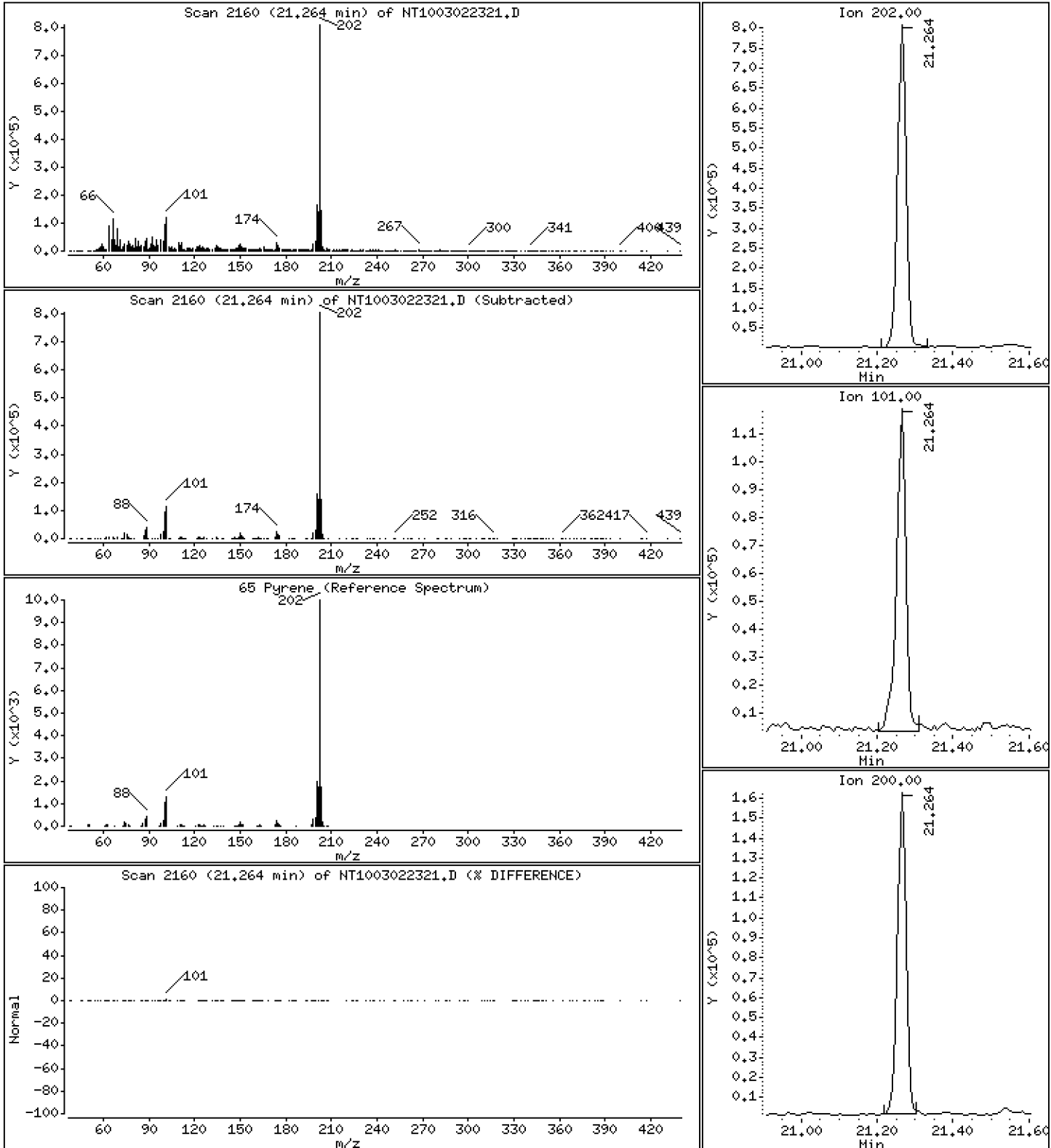
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,653 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

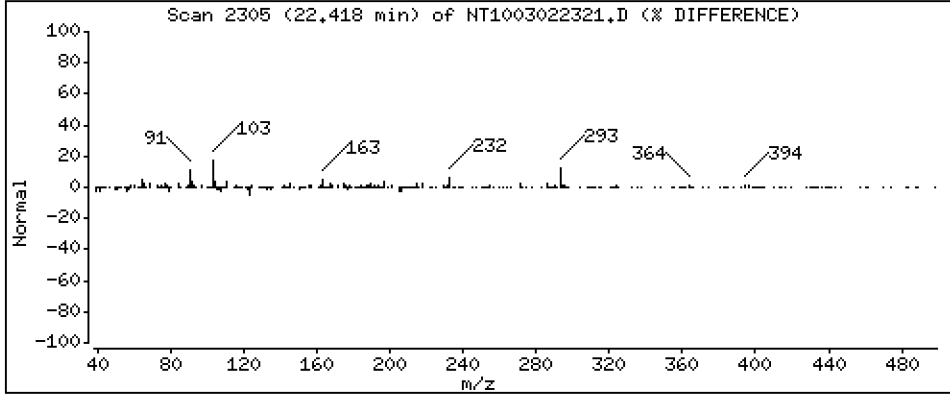
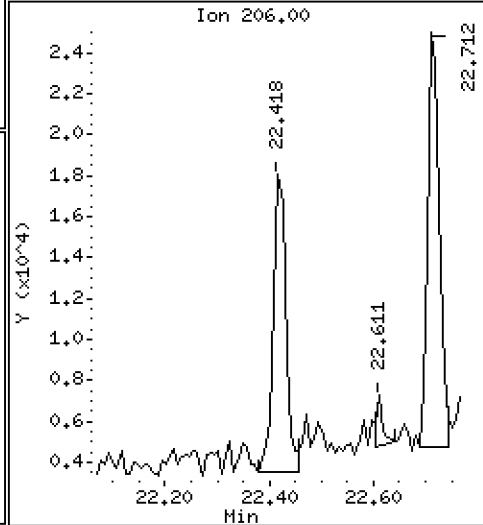
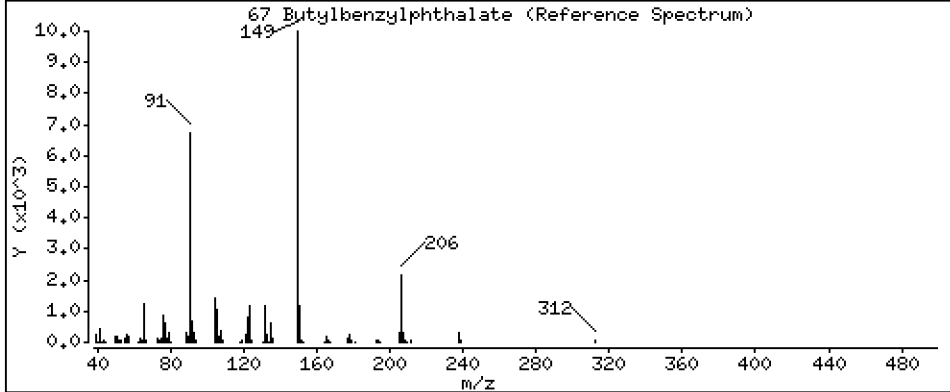
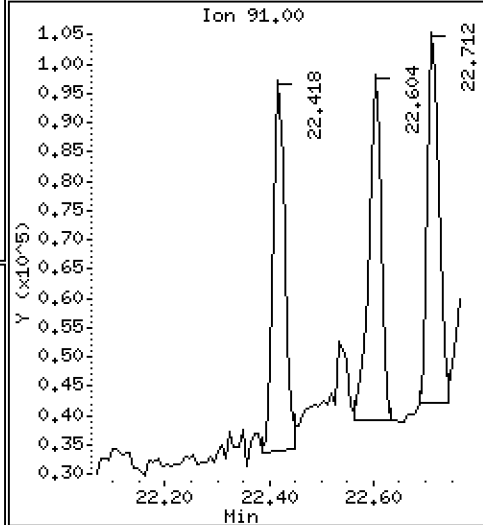
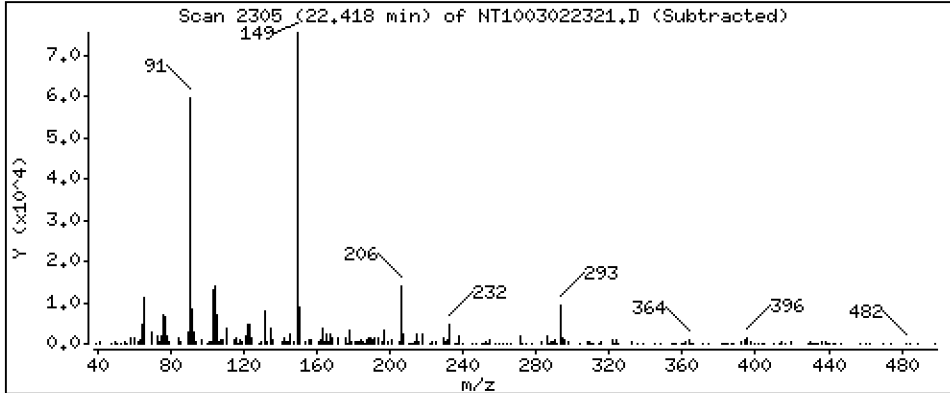
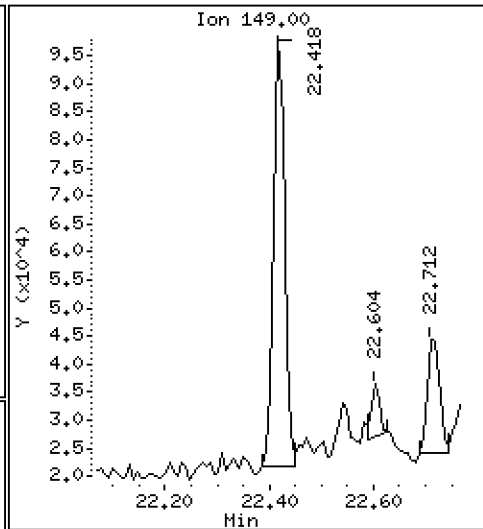
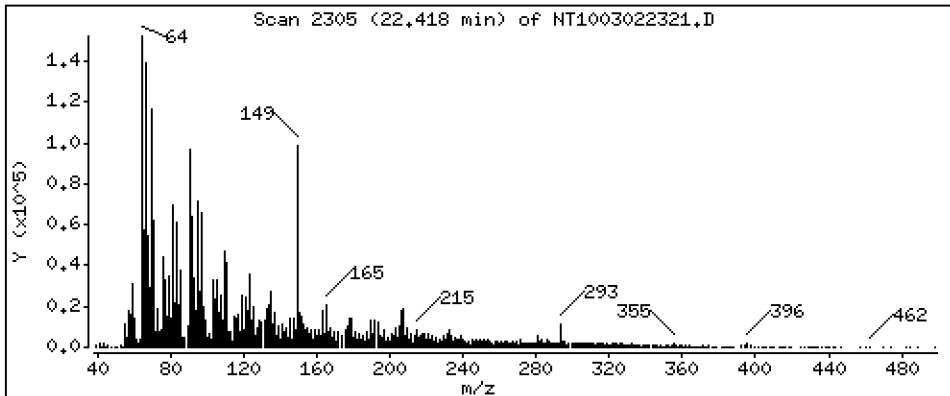
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,2734 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

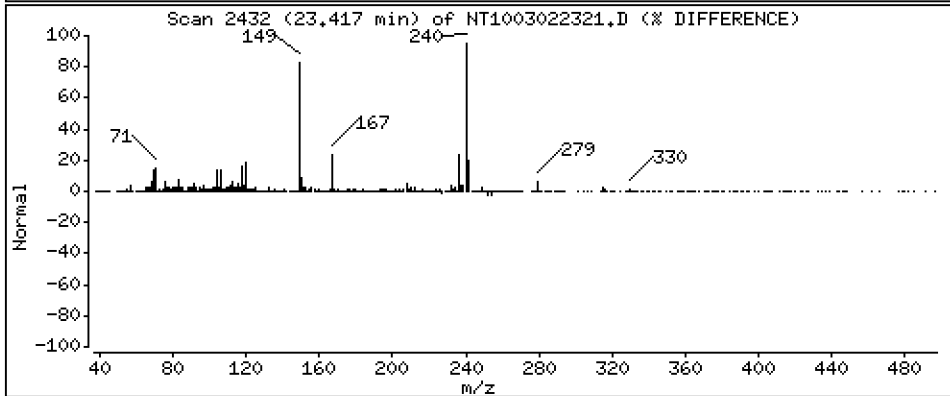
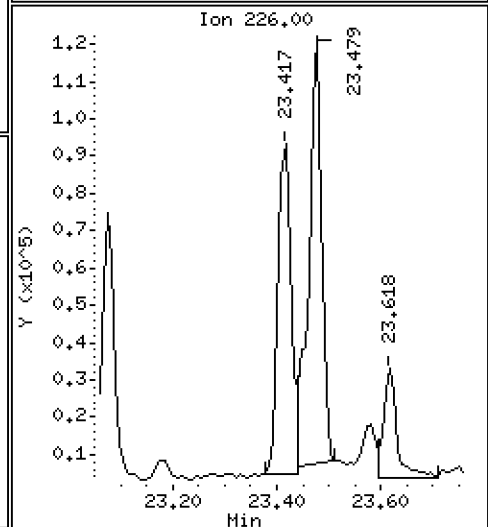
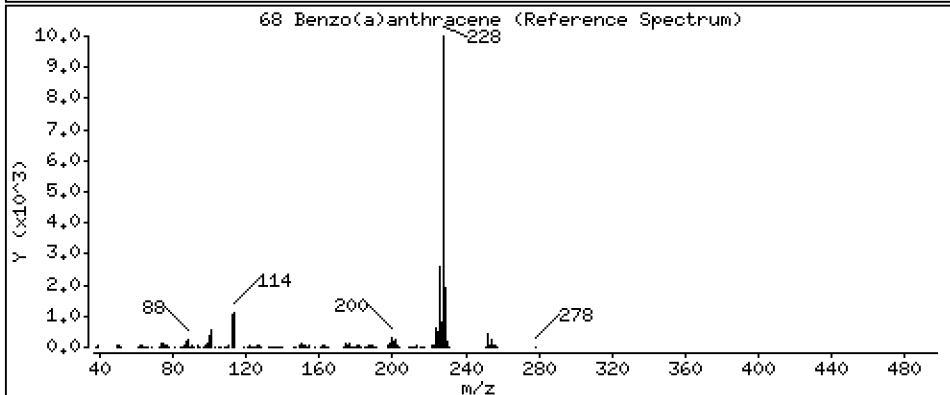
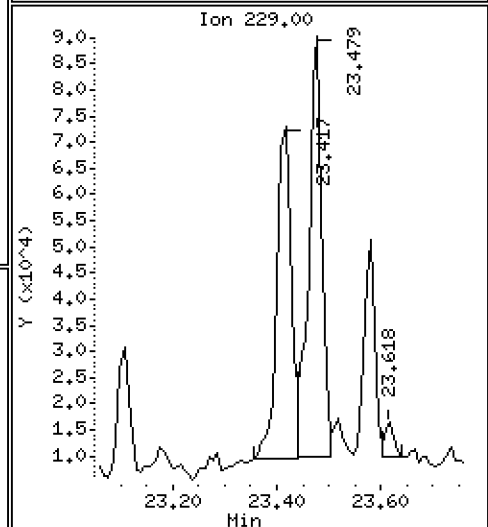
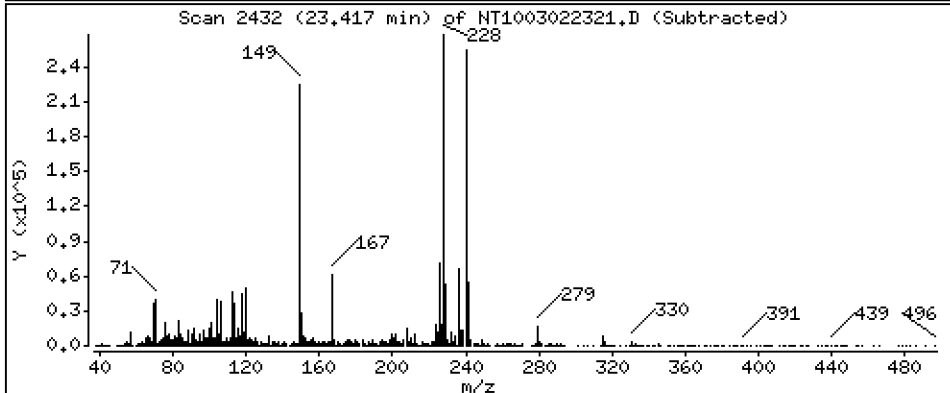
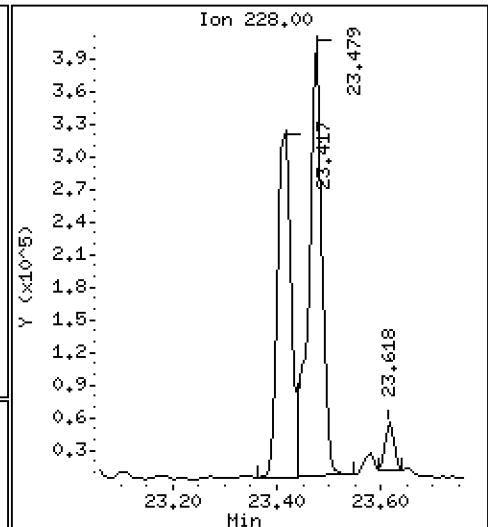
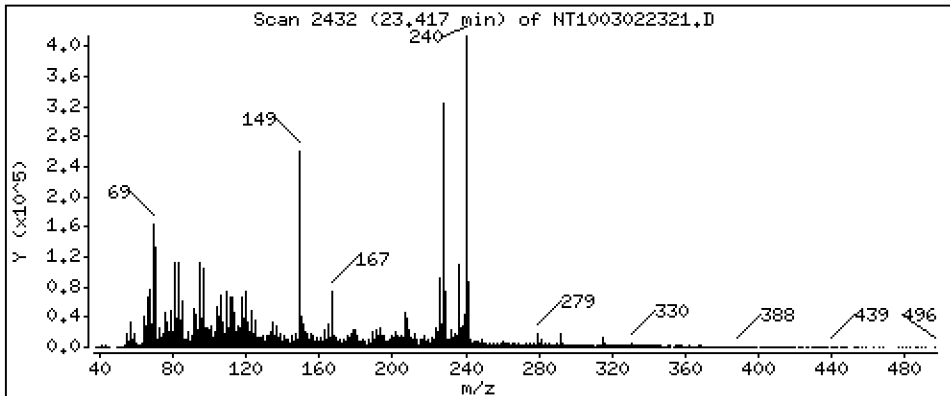
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,7734 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

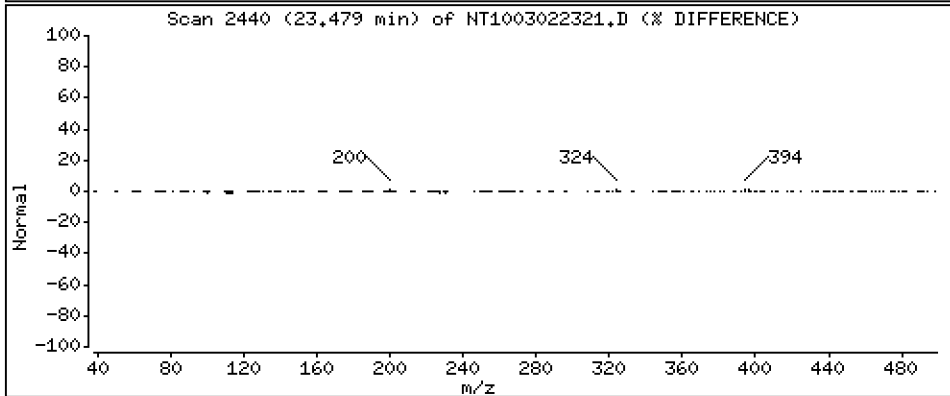
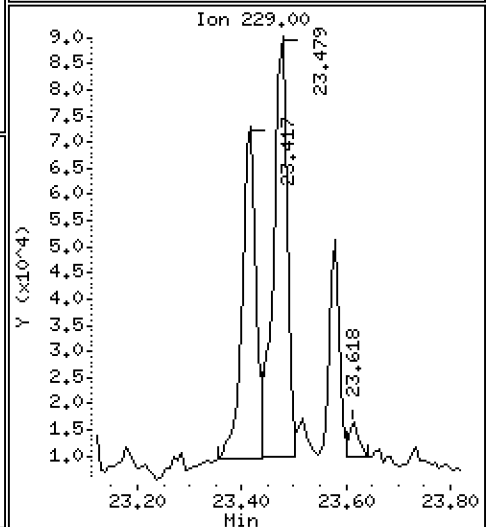
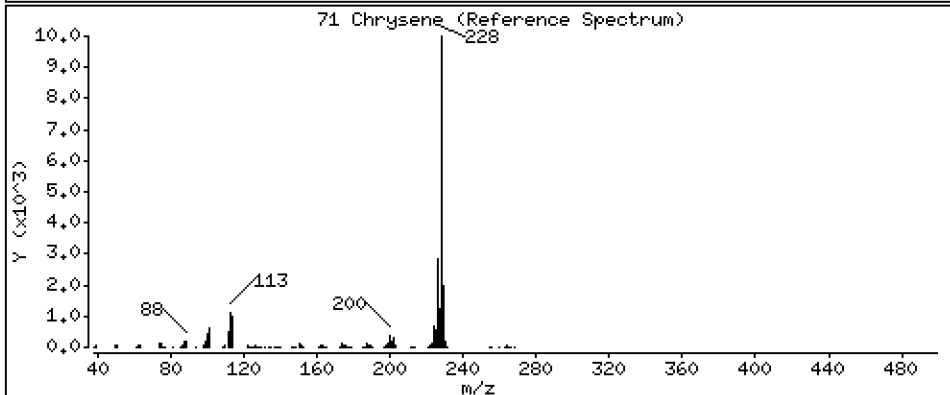
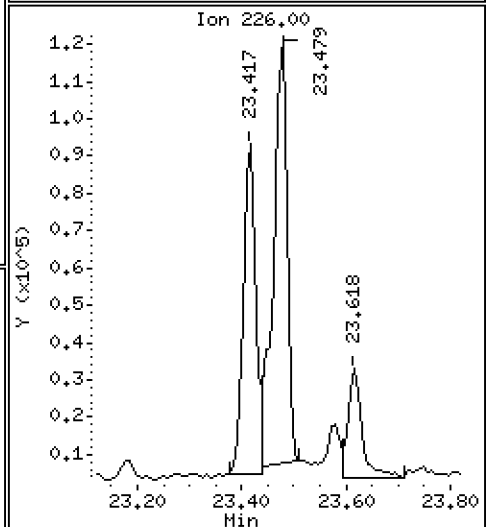
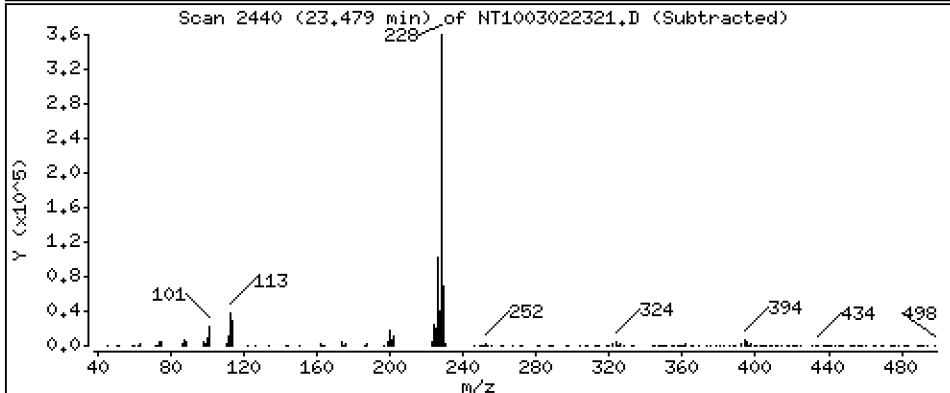
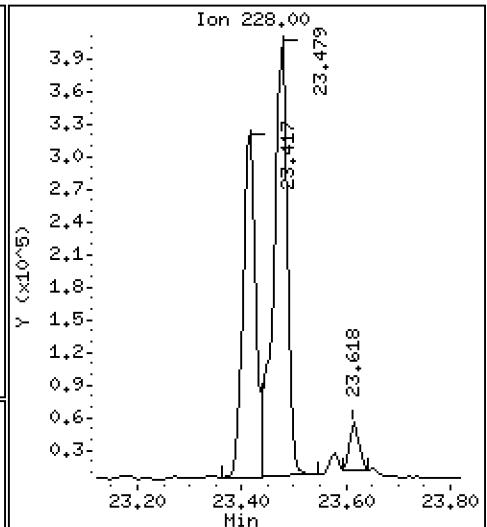
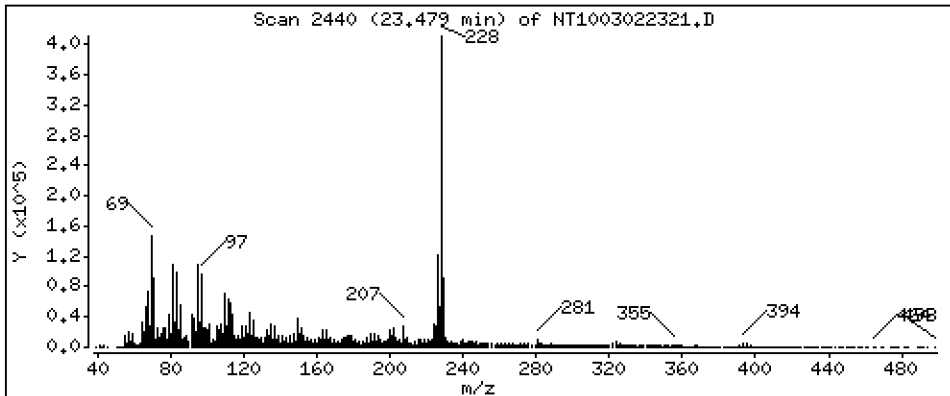
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,213 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

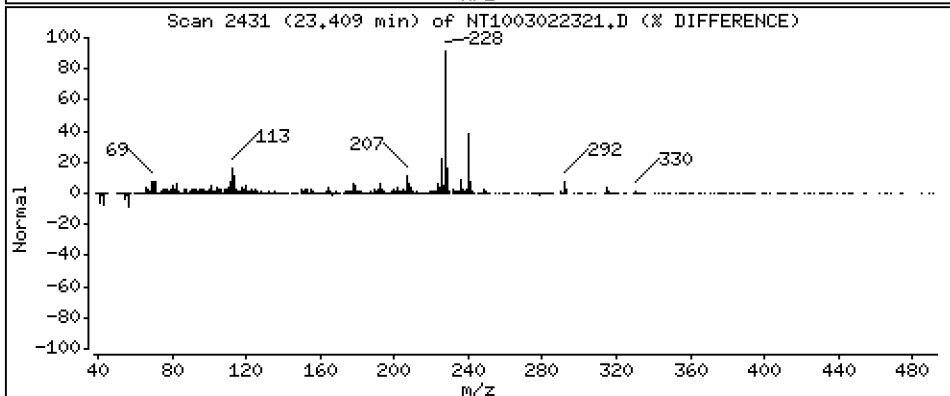
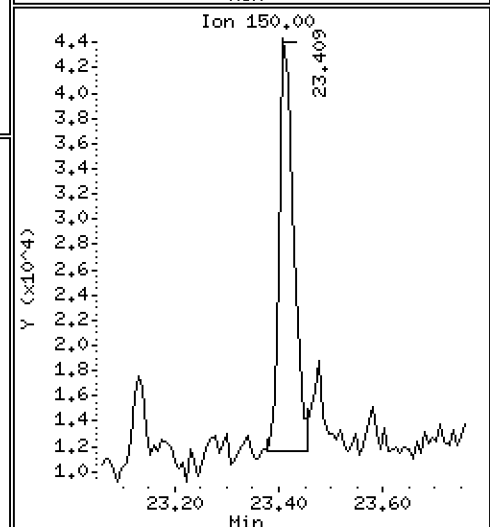
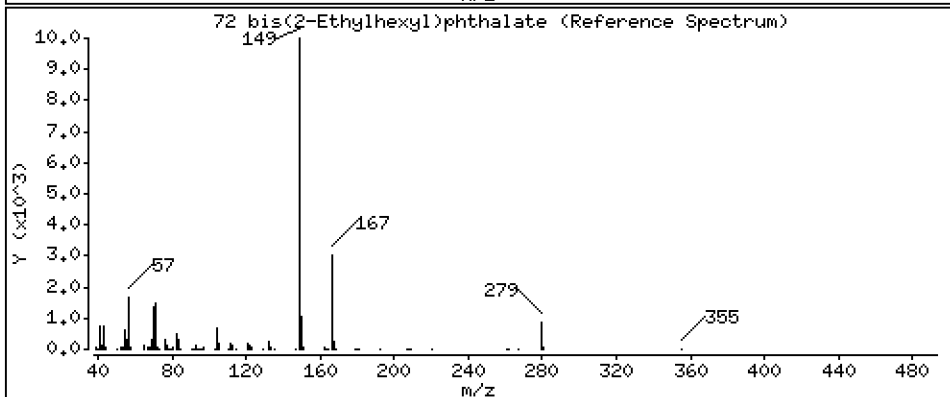
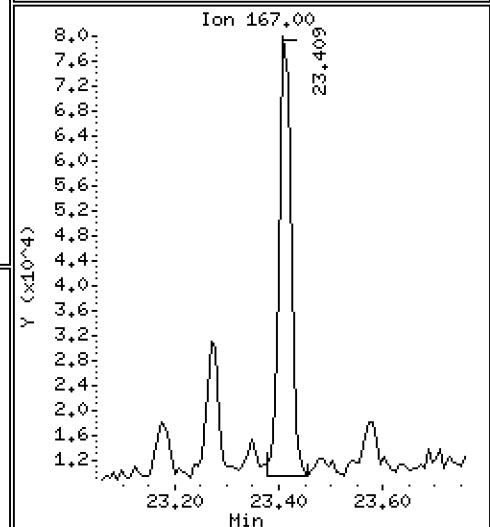
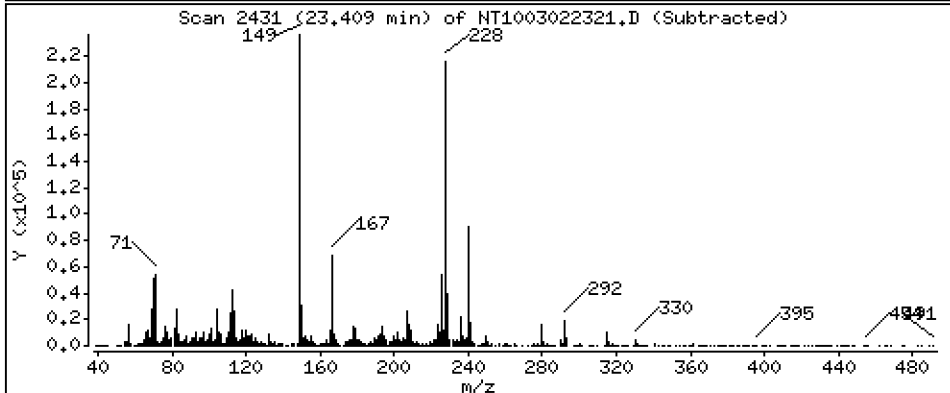
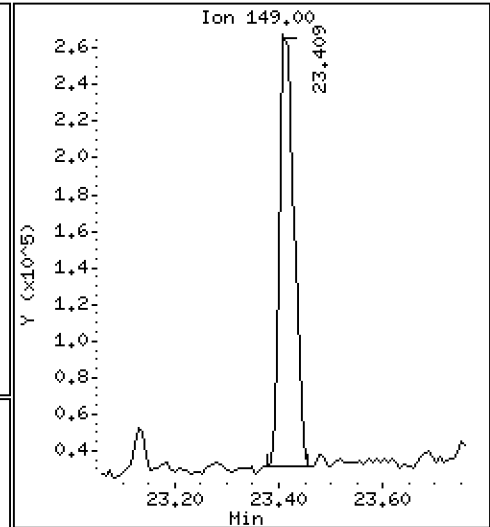
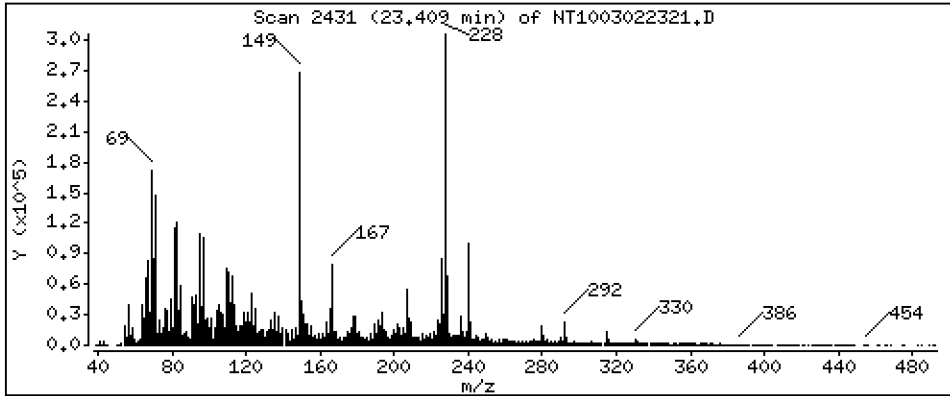
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,7853 ug/mL





Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

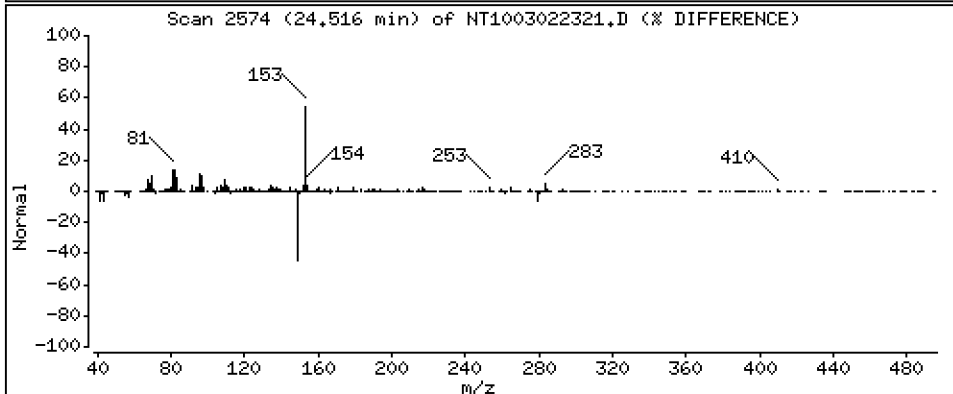
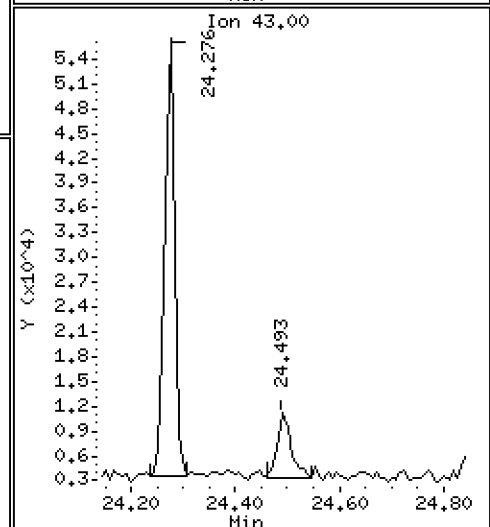
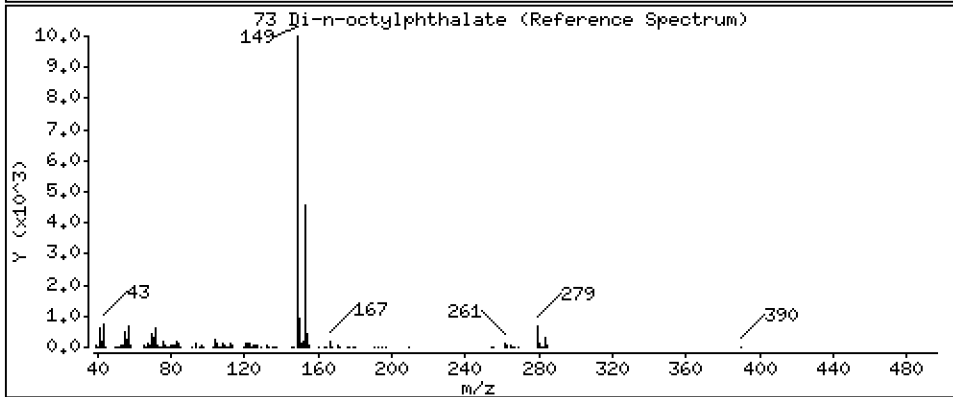
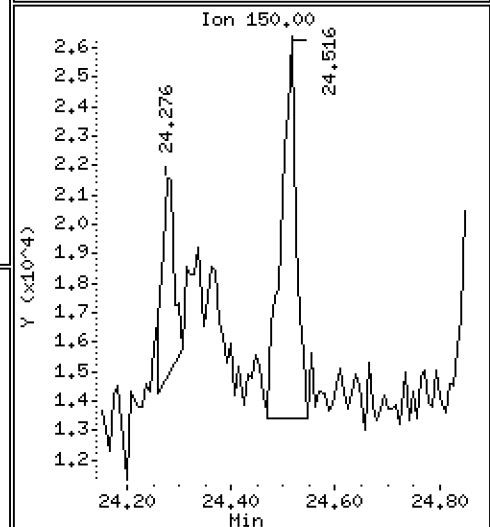
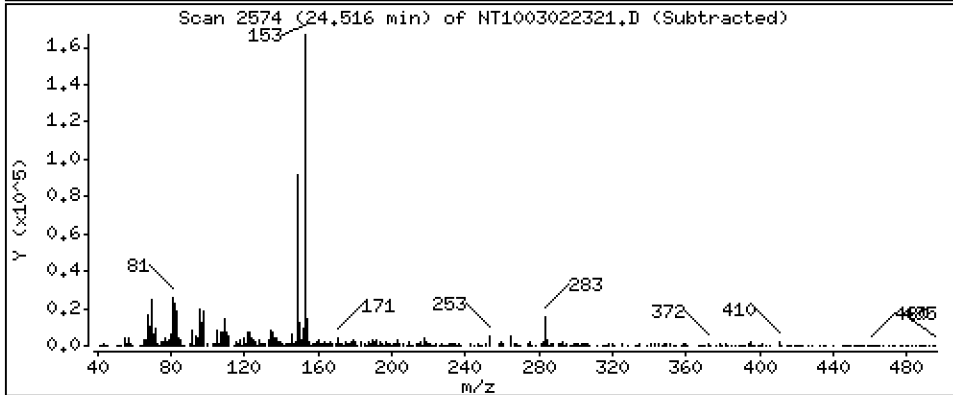
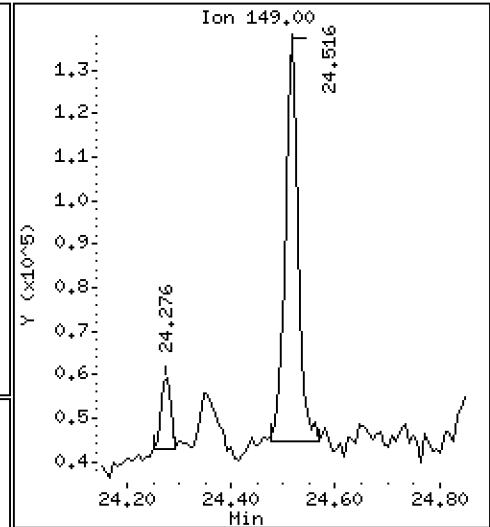
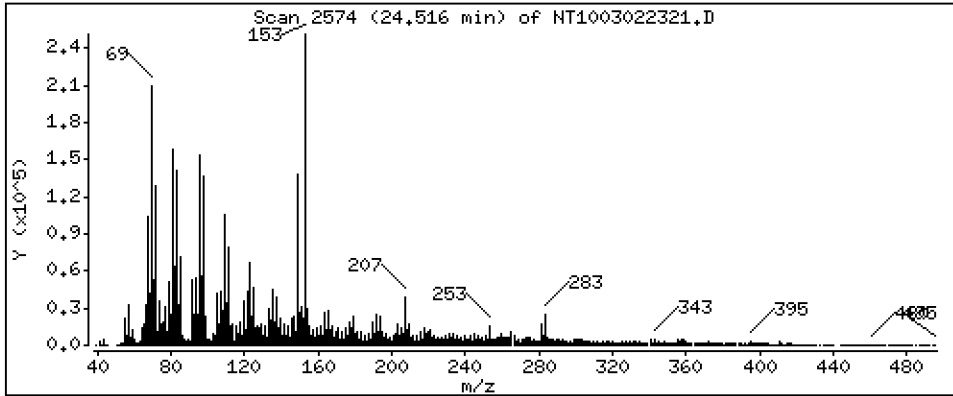
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 0,1820 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

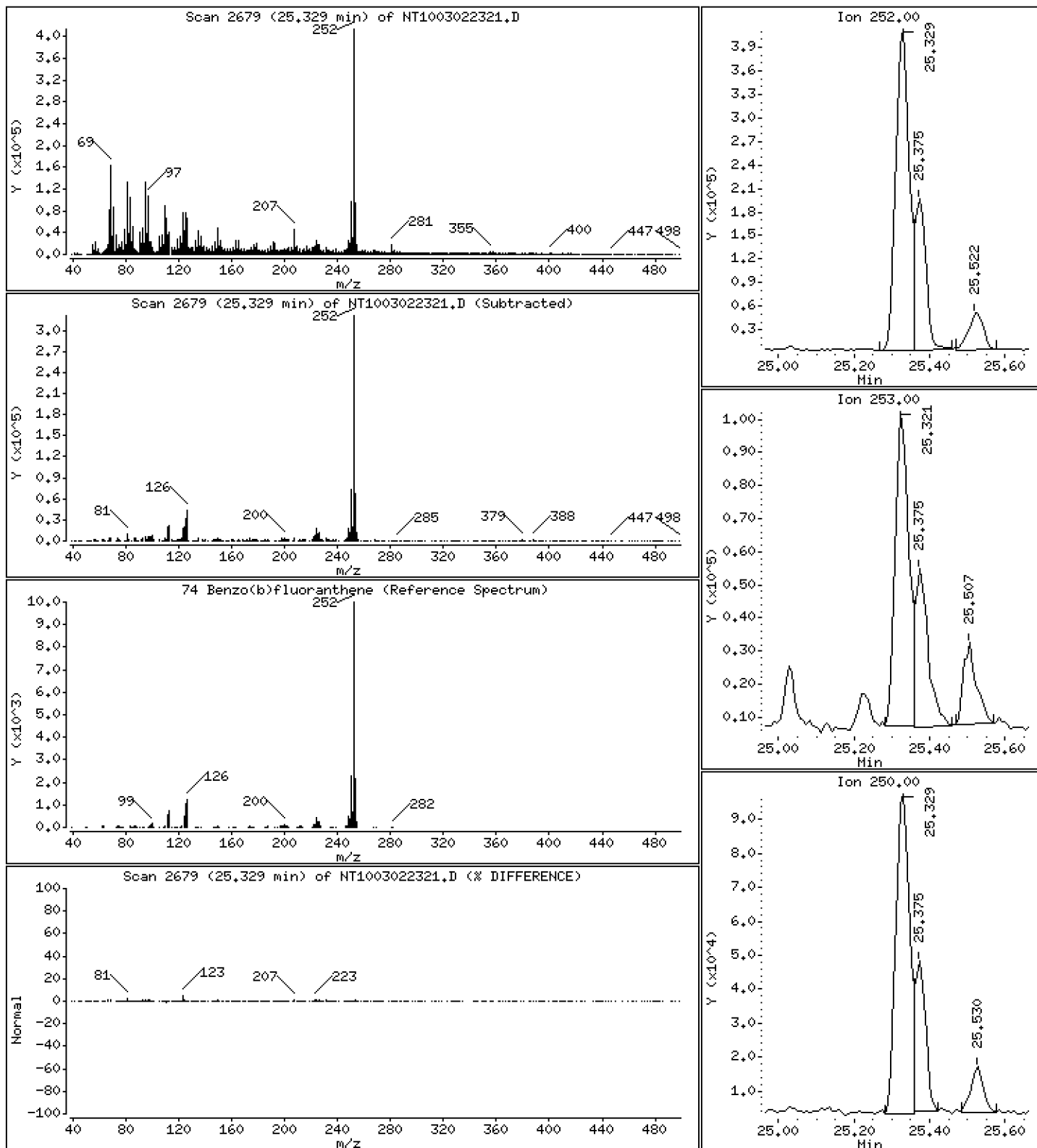
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,378 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

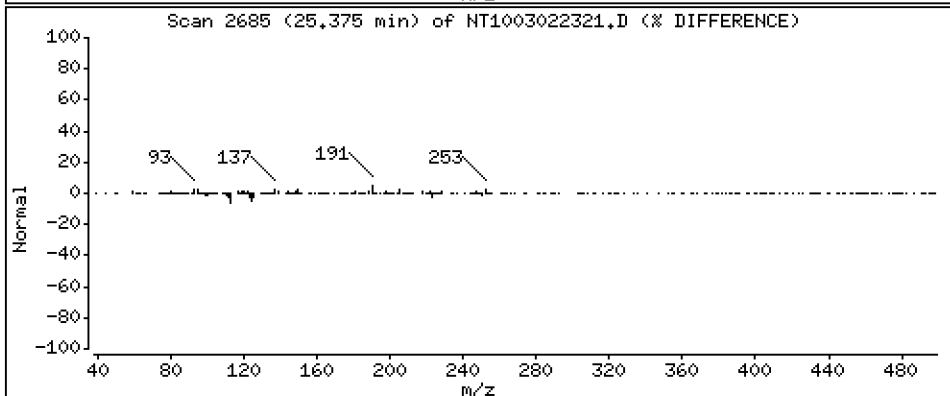
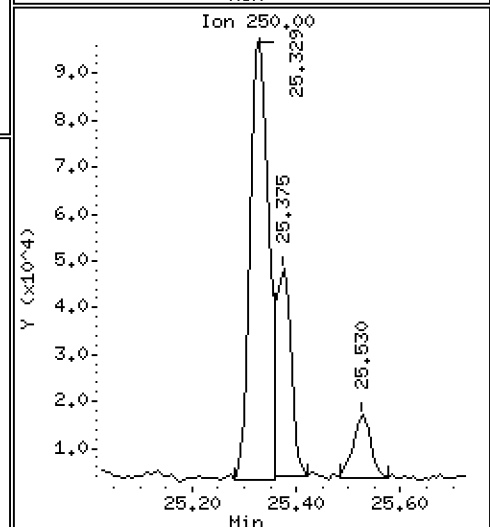
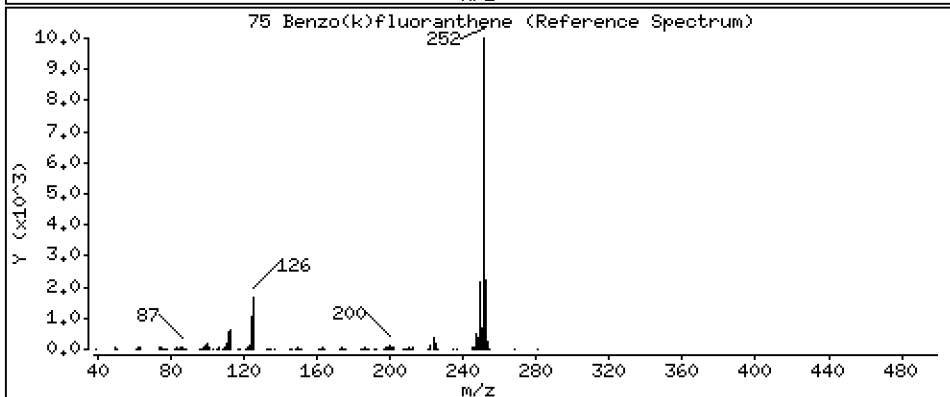
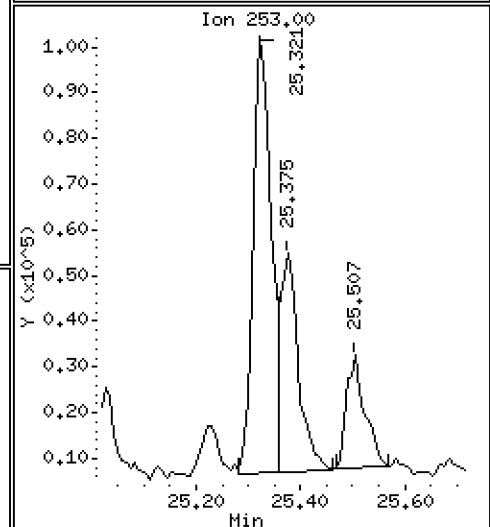
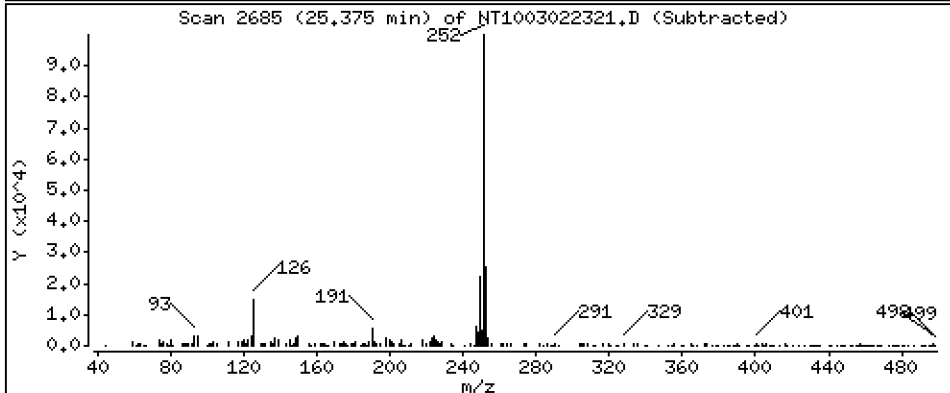
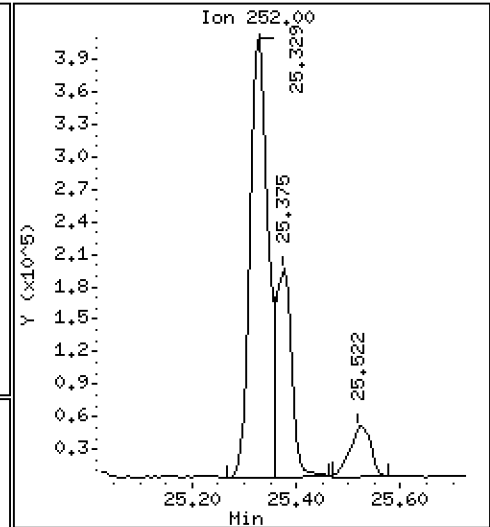
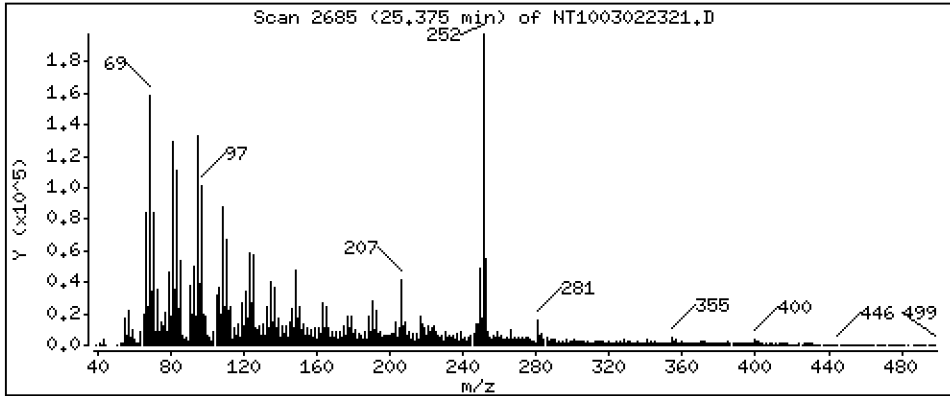
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,5590 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

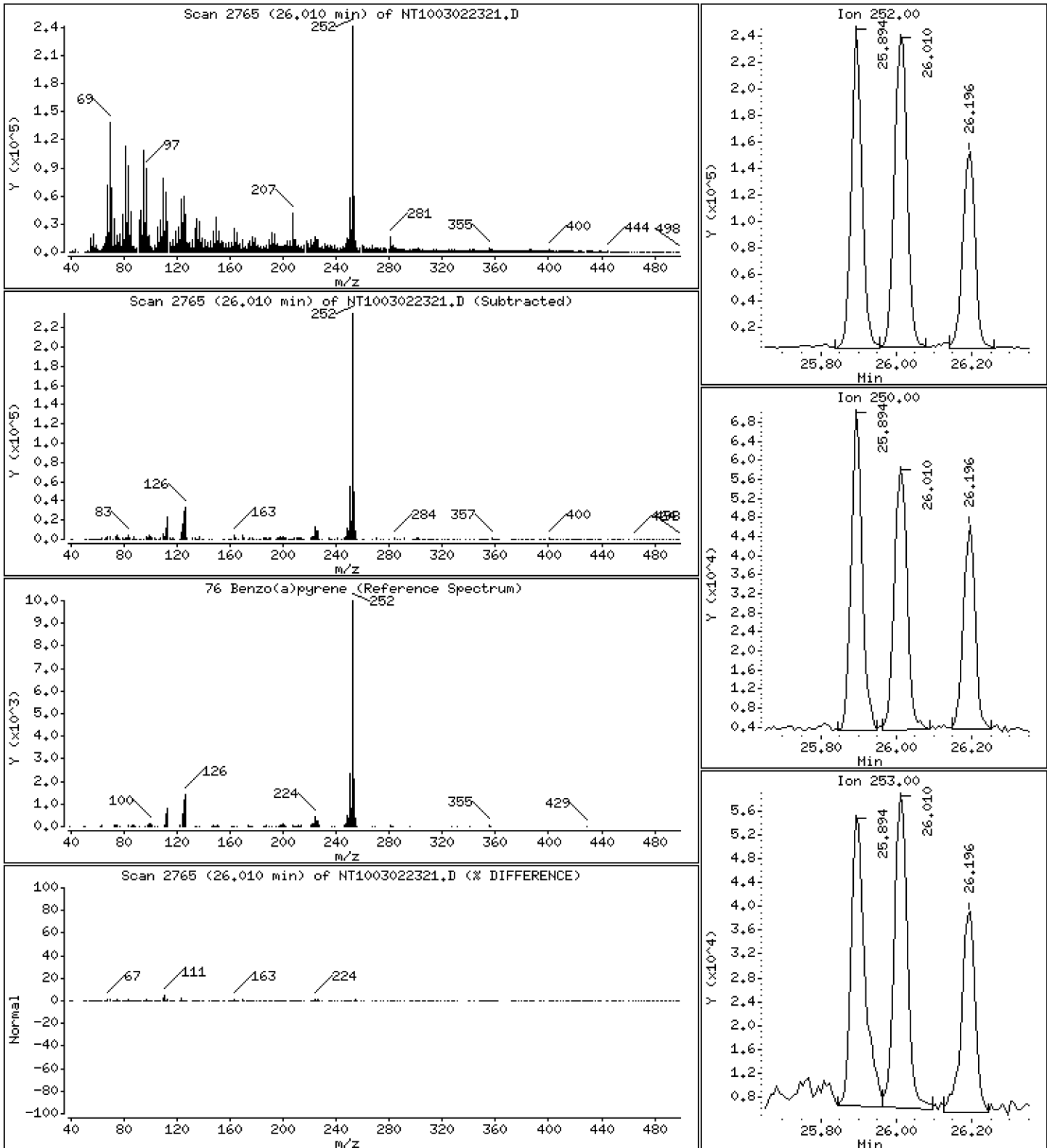
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,7897 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

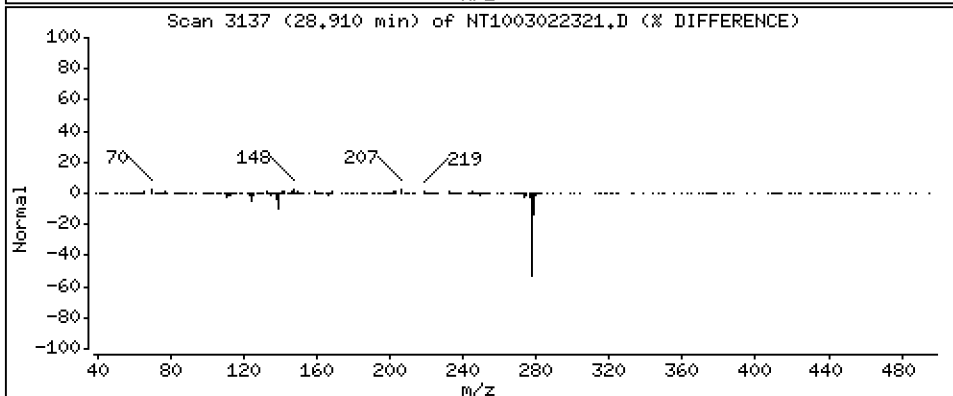
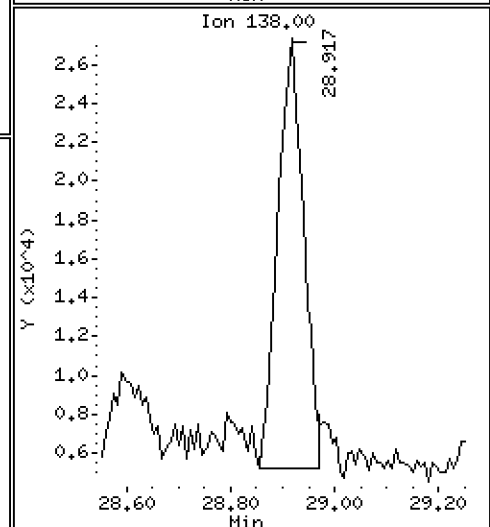
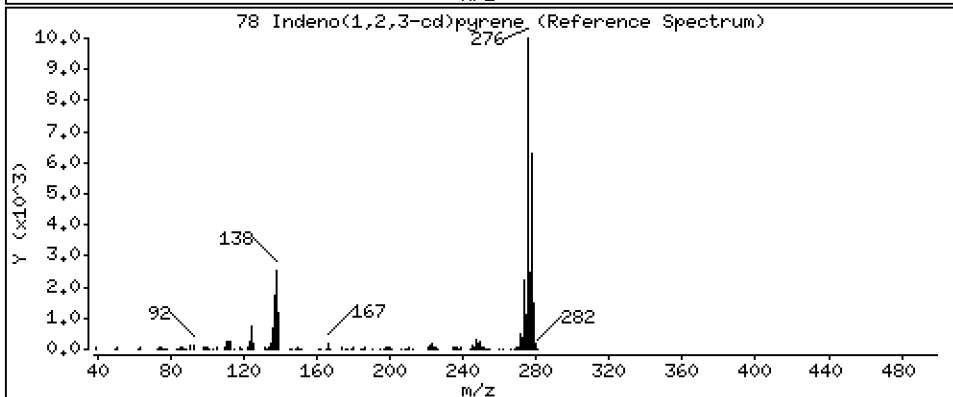
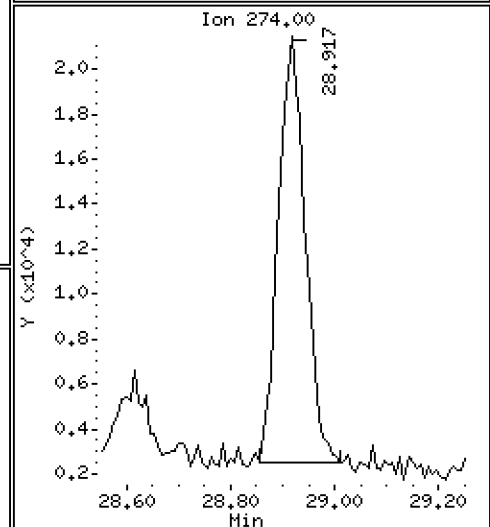
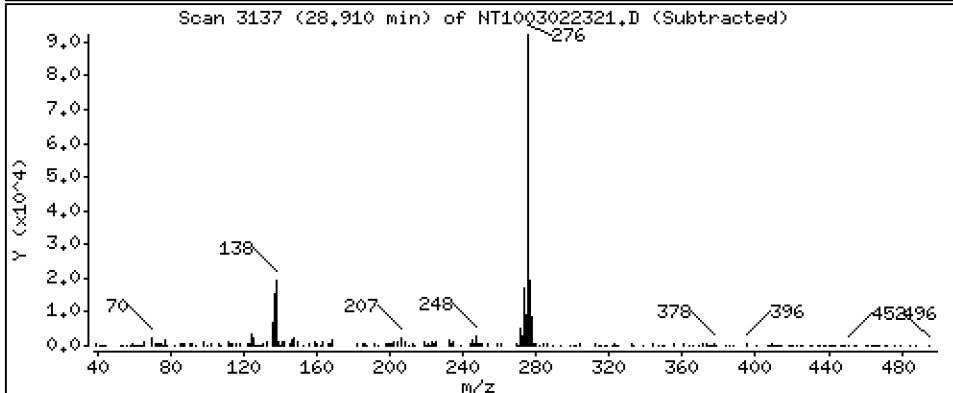
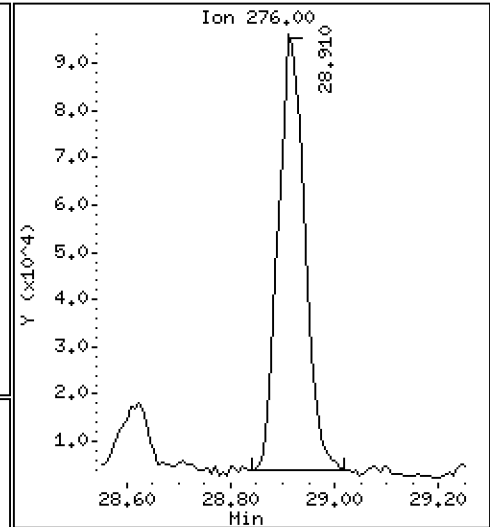
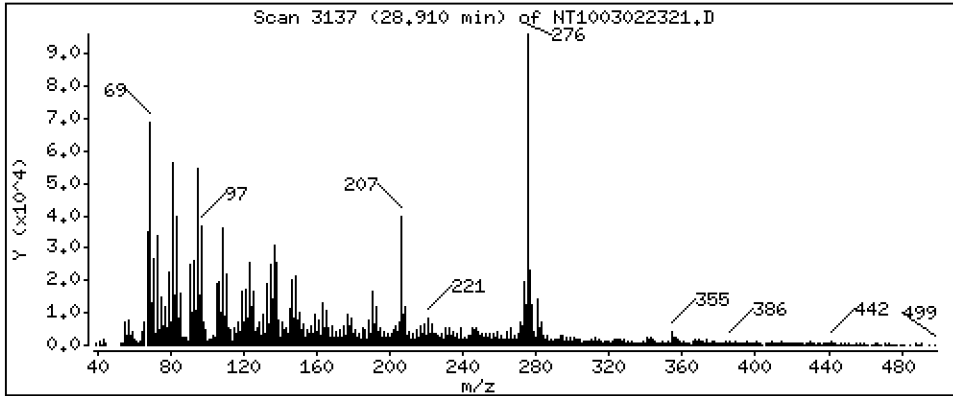
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4197 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

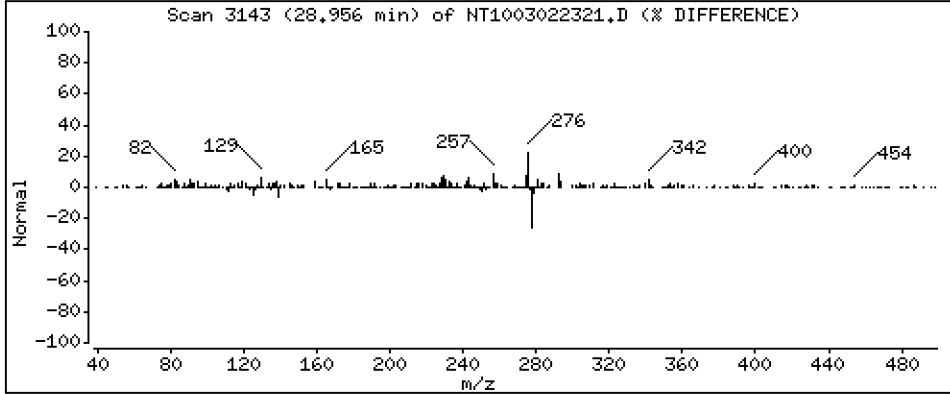
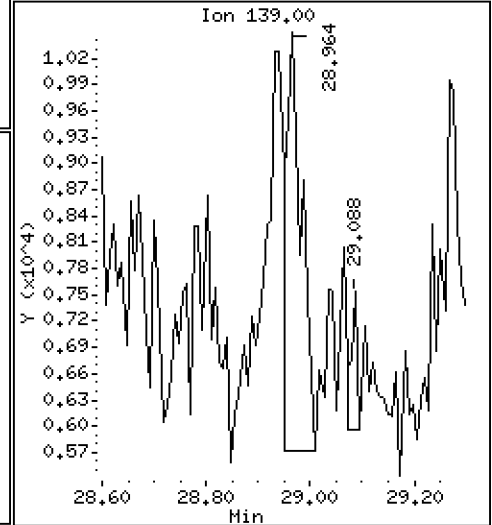
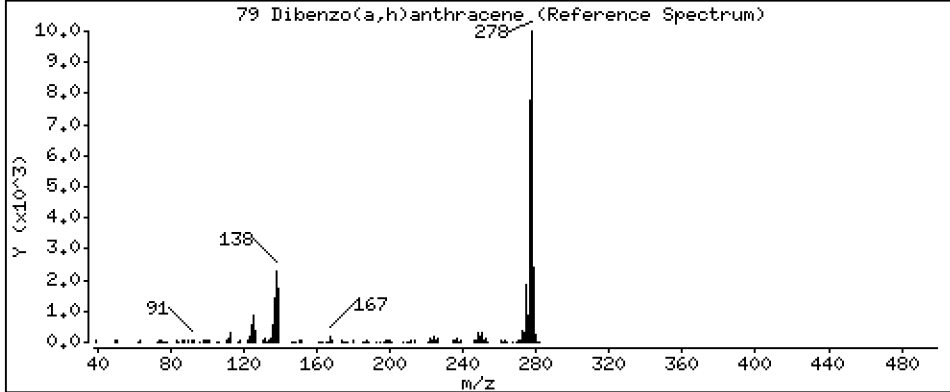
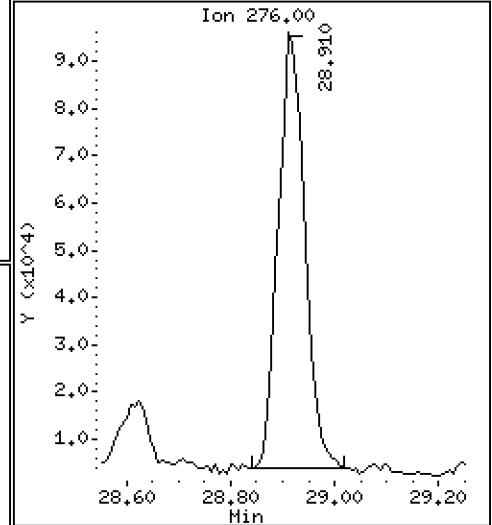
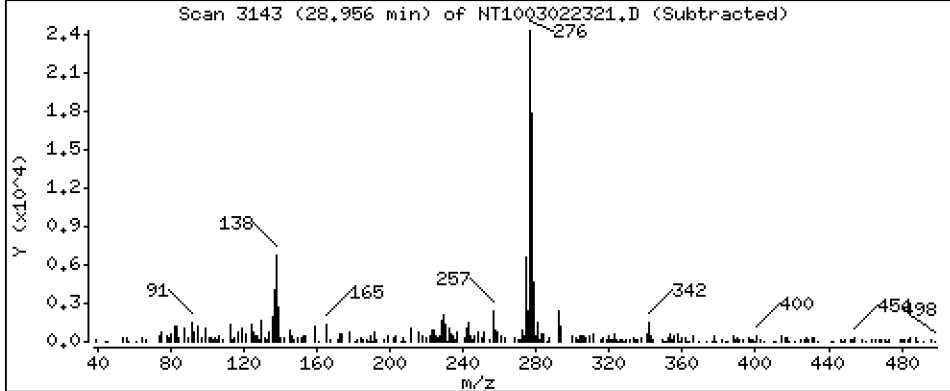
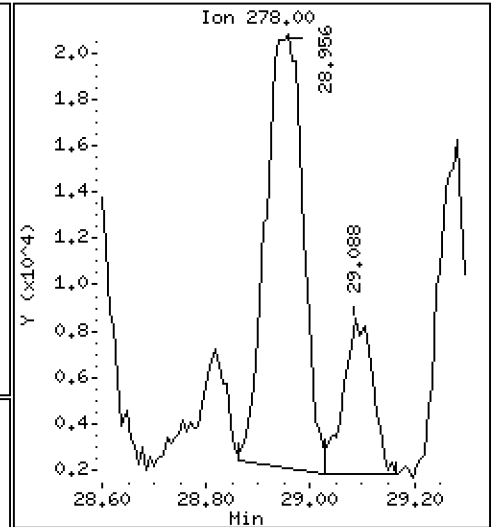
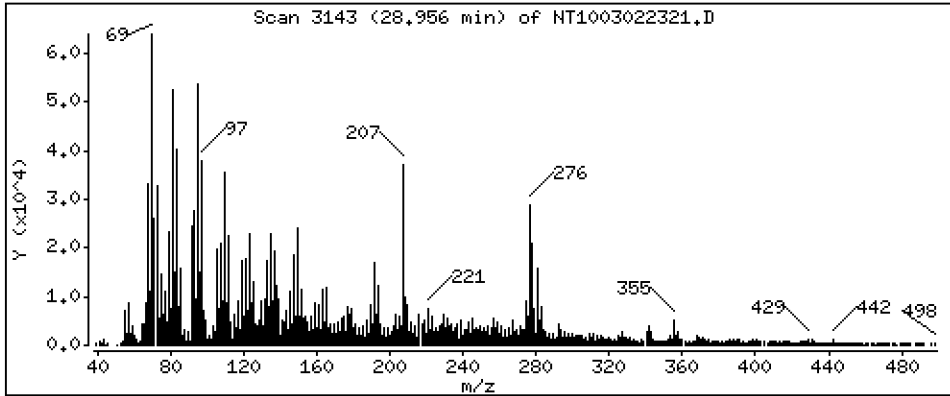
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1598 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

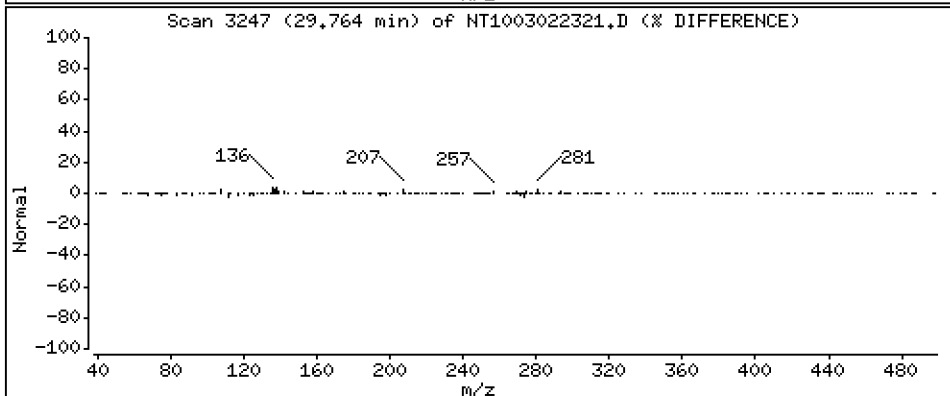
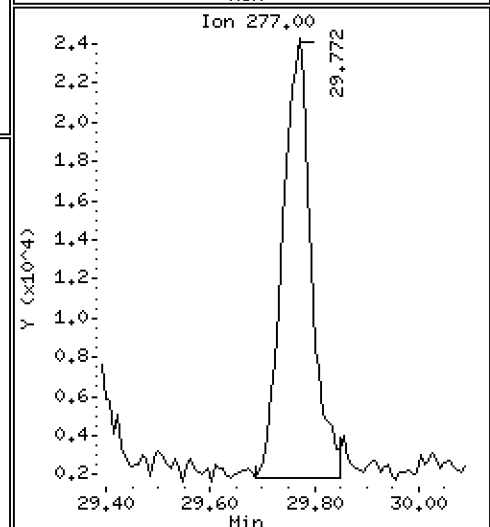
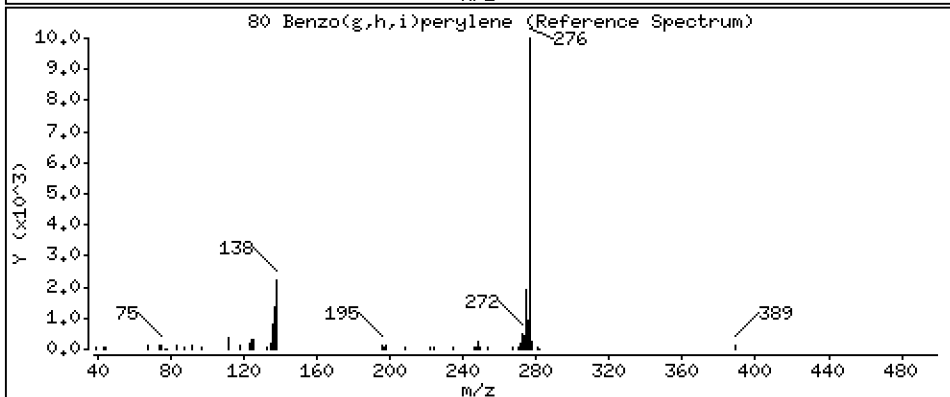
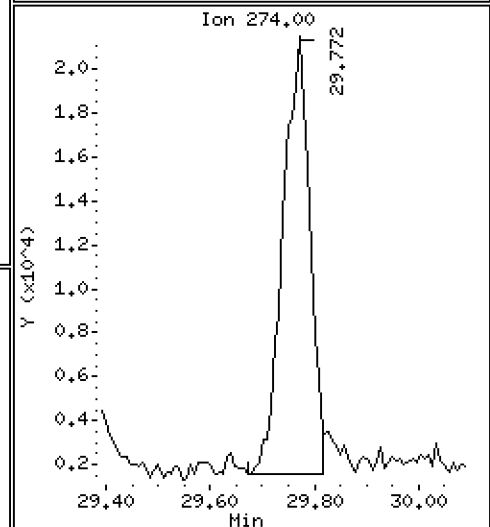
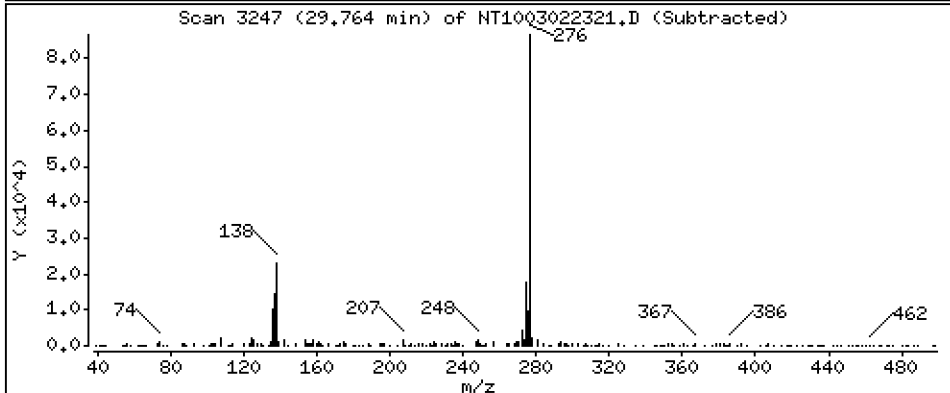
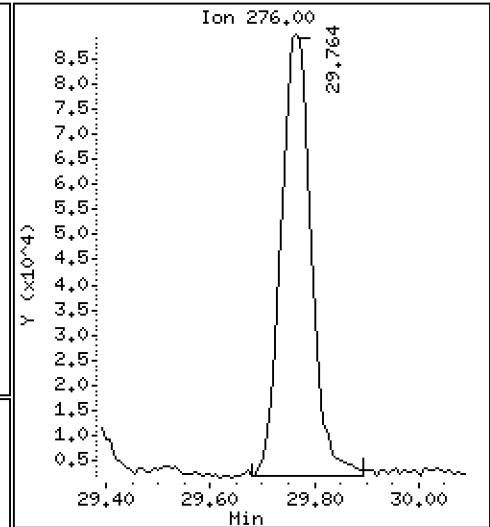
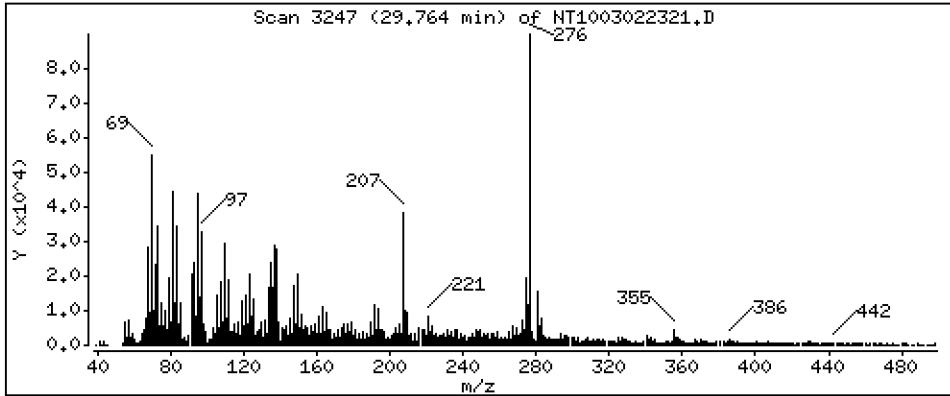
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,5706 ug/mL



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

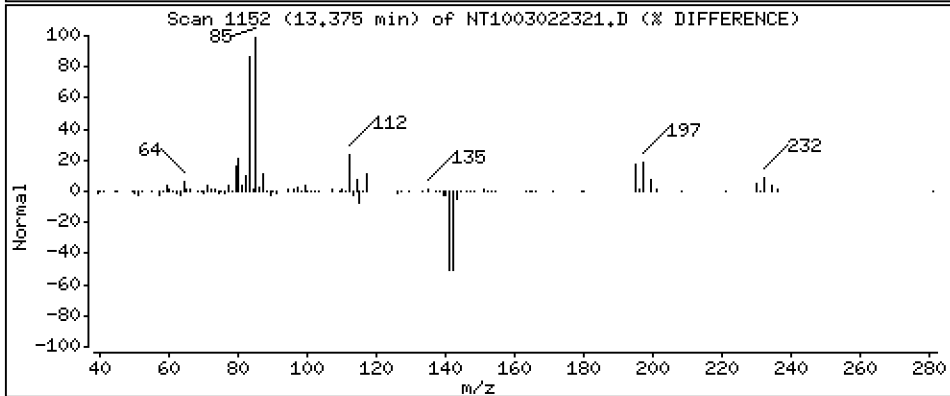
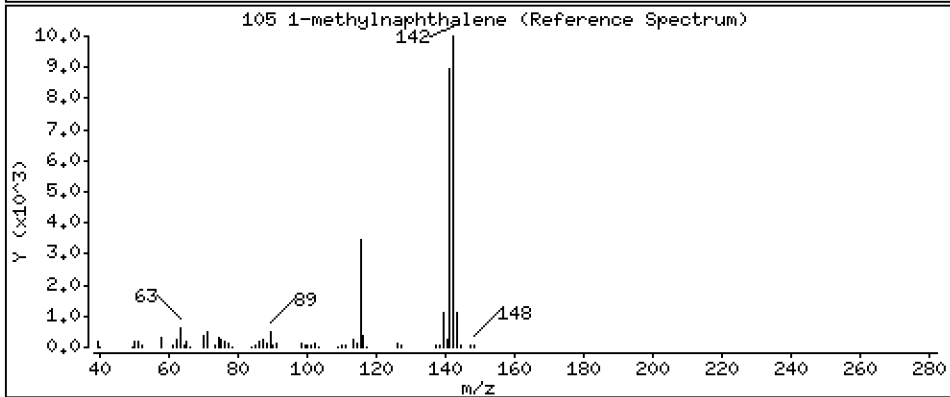
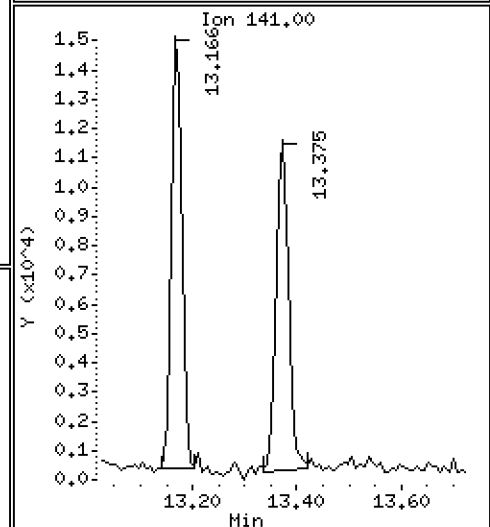
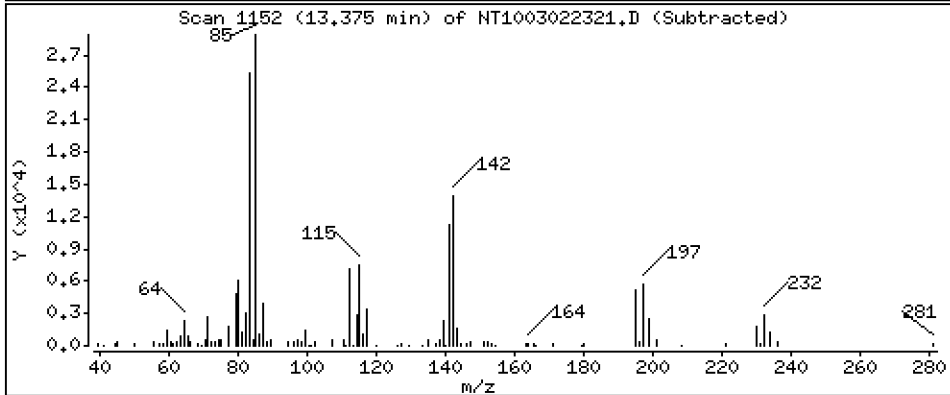
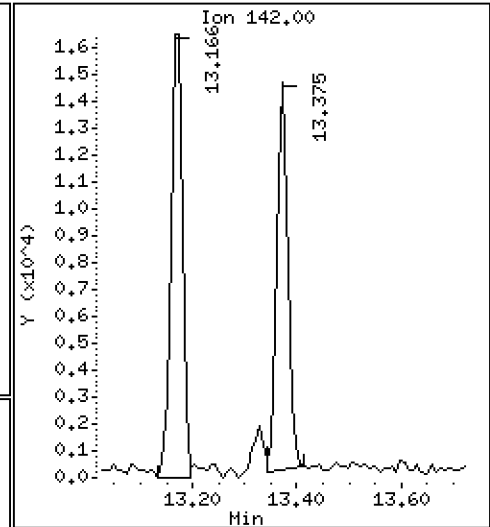
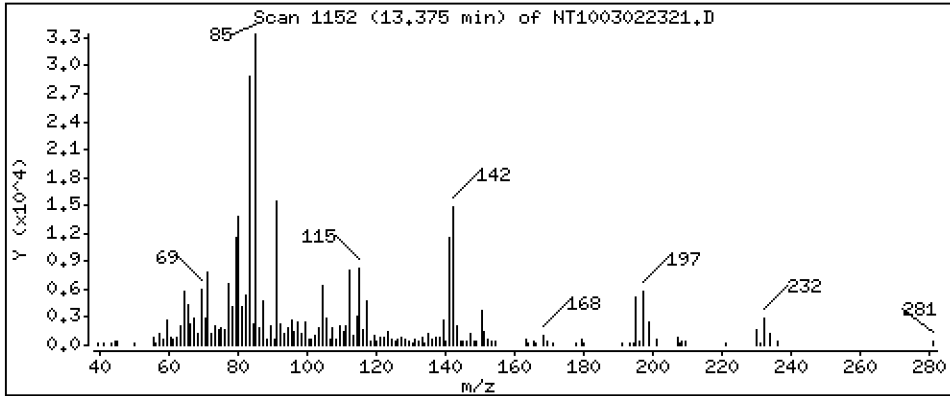
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,06715 ug/mL





Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

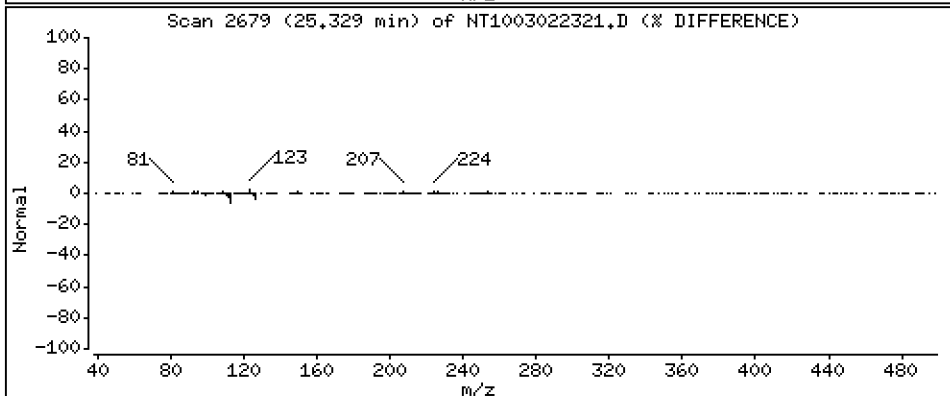
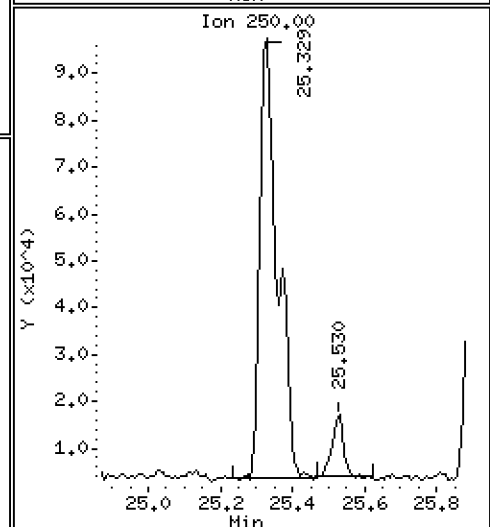
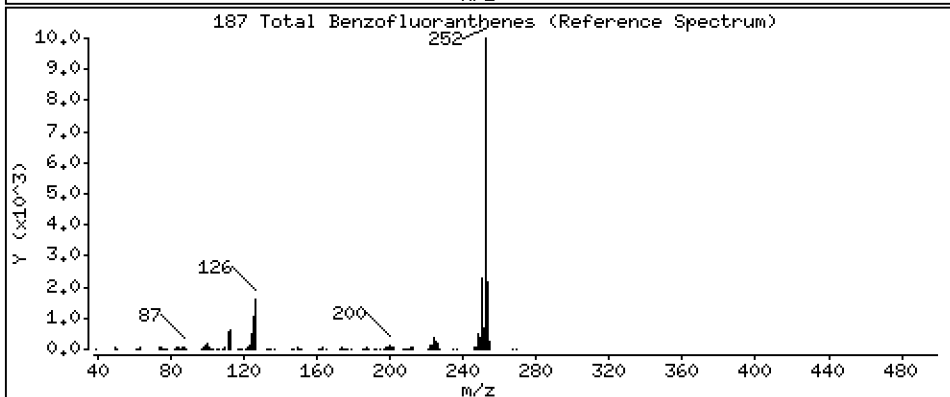
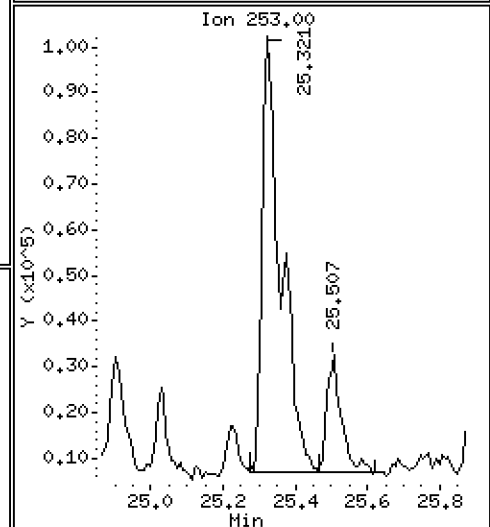
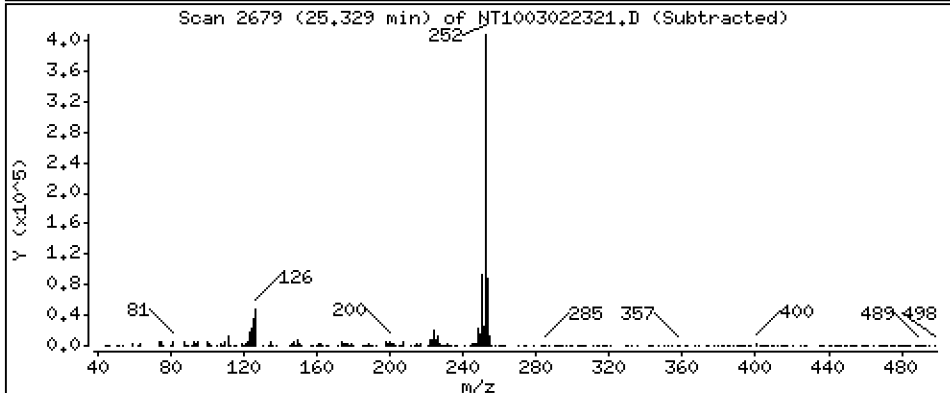
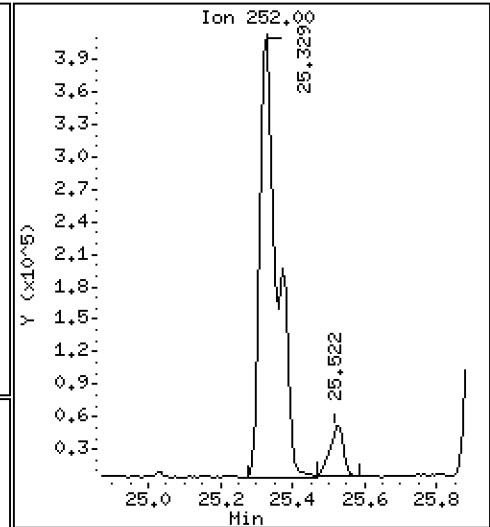
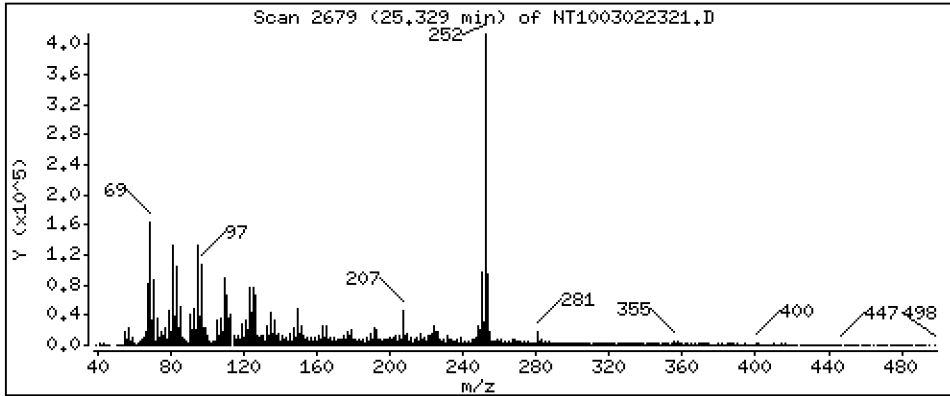
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 1,905 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022321.D

Lab Smp Id: 23A0206-06

Inj Date : 03-MAR-2023 03:03

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-06

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 17

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	884598	5.73697	5.737
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1215918	6.79222	6.792
3 Phenol	94		8.527	8.520	(0.922)	1035467	5.44038	5.440
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	984917	6.44866	6.449
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	490080	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	403727	3.53807	3.538
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.480	(1.025)	18392	0.18842	0.1884
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	829426	4.15524	4.155
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1818406	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	46009	0.09858	0.09858
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	26684	0.08093	0.08093
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1509756	4.37636	4.376
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163					Compound Not Detected.		
40 Acenaphthylene	152		15.030	15.031	(0.981)	33131	0.07096	0.07096
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	967193	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.005)	16310	0.05792	0.05792
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.742	15.750	(1.028)	30498	0.07298	0.07298
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.214	(1.058)	63884	0.19306	0.1931
49 Fluorene	166		16.453	16.453	(1.074)	28353	0.08154	0.08154
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.107)	371560	5.99943	5.999
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1799966	4.00000	
60 Phenanthrene	178		18.463	18.456	(1.003)	271395	0.58916	0.5892
61 Anthracene	178		18.564	18.564	(1.008)	139646	0.31264	0.3126
62 Carbazole	167		18.896	18.897	(1.026)	43533	0.10638	0.1064
63 Di-n-butylphthalate	149		19.593	19.593	(1.064)	33716	0.06076	0.06076
64 Fluoranthene	202		20.846	20.823	(0.890)	963243	1.36942	1.369
65 Pyrene	202		21.264	21.256	(0.907)	1184013	1.65310	1.653
\$ 66 Terphenyl-d14	244		21.542	21.535	(0.919)	2483380	4.28510	4.285
67 Butylbenzylphthalate	149		22.417	22.418	(0.957)	105369	0.27335	0.2734
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	557575	0.77337	0.7734
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2044703	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.471	(1.002)	710574	1.21272	1.213
72 bis(2-Ethylhexyl)phthalate	149		23.408	23.409	(0.956)	437488	0.78527	0.7853
* 134 Di-n-octylphthalate-d4	153		24.492	24.493	(1.000)	3958249	4.00000	
73 Di-n-octylphthalate	149		24.516	24.500	(1.001)	159791	0.18205	0.1820
74 Benzo(b)fluoranthene	252		25.328	25.313	(0.969)	1043765	1.37808	1.378
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	404128	0.55905	0.5590
76 Benzo(a)pyrene	252		26.010	26.002	(0.995)	531253	0.78972	0.7897
* 77 Perylene-d12	264		26.134	26.126	(1.000)	2192585	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.902	(1.106)	328901	0.41971	0.4197
79 Dibenzo(a,h)anthracene	278		28.956	28.948	(1.108)	94685	0.15977	0.1598
80 Benzo(g,h,i)perylene	276		29.764	29.740	(1.139)	356597	0.57062	0.5706
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	20040	0.06715	0.06715
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.328	25.375	(0.969)	1379734	1.90483	1.905	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022321.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-06  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	490080	-18.21
27 Naphthalene-d8	2200781	1100391	4401562	1818406	-17.37
42 Acenaphthene-d10	1135136	567568	2270272	967193	-14.79
59 Phenanthrene-d10	2128944	1064472	4257888	1799966	-15.45
69 Chrysene-d12	2449624	1224812	4899248	2044703	-16.53
134 Di-n-octylphthala	4694735	2347368	9389470	3958249	-15.69
77 Perylene-d12	2593218	1296609	5186436	2192585	-15.45

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022321.D

Lab ID: 23A0206-06

nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 03:03

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-07 B

SDG: 23A0206

Sampled: 01/11/23 10:20

Prepared: 01/27/23 14:44

File ID: NT1003022322.D

% Solids: 60.17

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:41

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	314		4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	8.5	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	8.5	J	4.5	20.0
208-96-8	Acenaphthylene	1	9.1	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	17.2	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	93.4		8.7	20.0
120-12-7	Anthracene	1	32.9		7.2	20.0
206-44-0	Fluoranthene	1	170		6.1	20.0
129-00-0	Pyrene	1	209		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	128		5.9	20.0
218-01-9	Chrysene	1	189		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	70.7		5.4	49.9
	Benzo(a)fluoranthene, Total	1	313		10.0	39.9
50-32-8	Benzo(a)pyrene	1	116		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	58.6		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	21.3		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	71.9		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.18	624	83.3	27 - 120	
Phenol-d5	748.18	697	93.2	29 - 120	
2-Chlorophenol-d4	748.18	689	92.1	31 - 120	
1,2-Dichlorobenzene-d4	498.79	400	80.2	32 - 120	
Nitrobenzene-d5	498.79	450	90.2	30 - 120	
2-Fluorobiphenyl	498.79	474	95.0	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-07 B

SDG: 23A0206

Sampled: 01/11/23 10:20

Prepared: 01/27/23 14:44

File ID: NT1003022322.D

% Solids: 60.17

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:41

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.18	659	88.1	24 - 134	
p-Terphenyl-d14	498.79	457	91.7	37 - 120	



Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022322.D

Date: 03-HR-2023 03:41

Client ID:

Sample Info: 23A0206-07

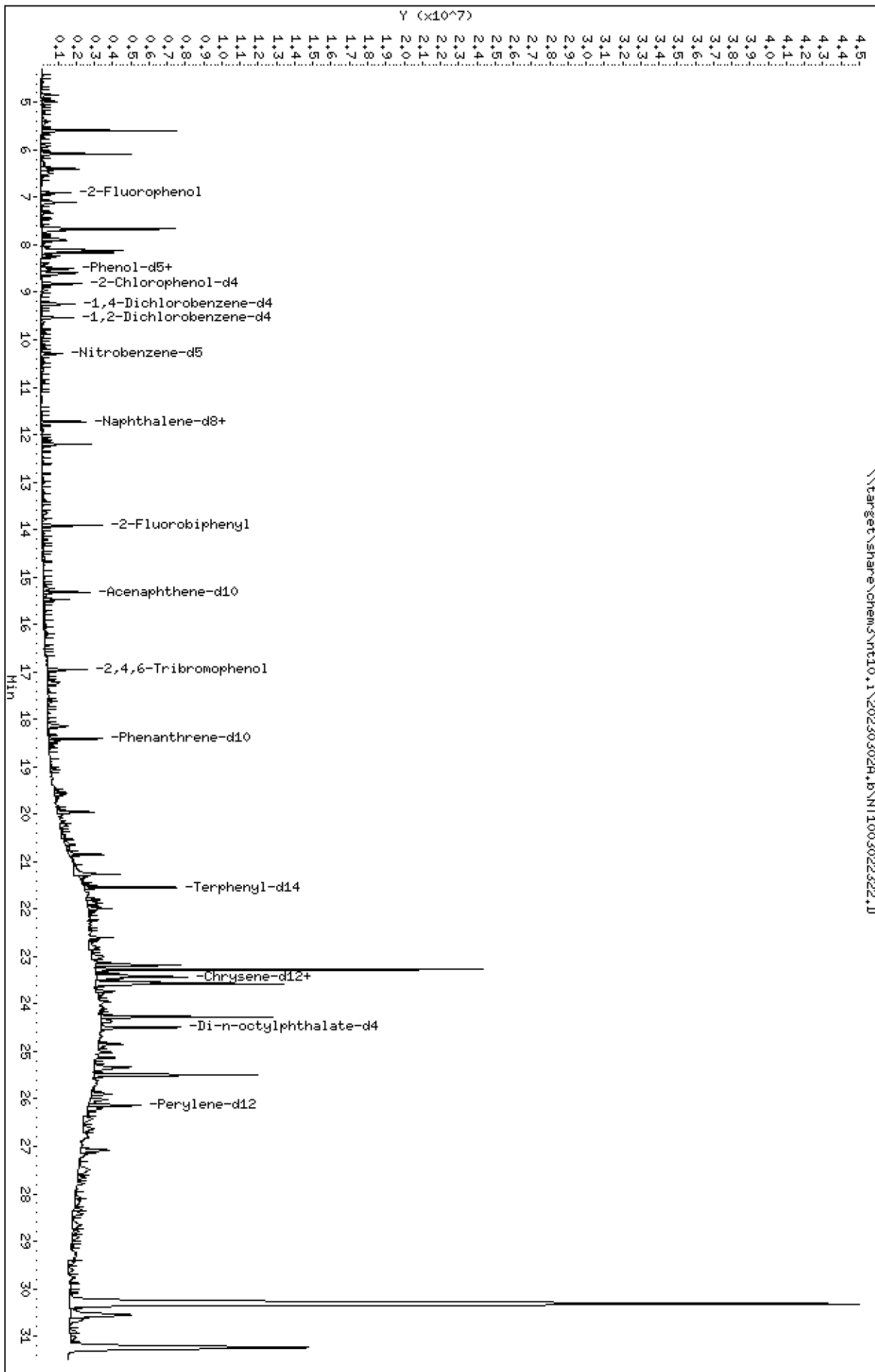
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

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Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

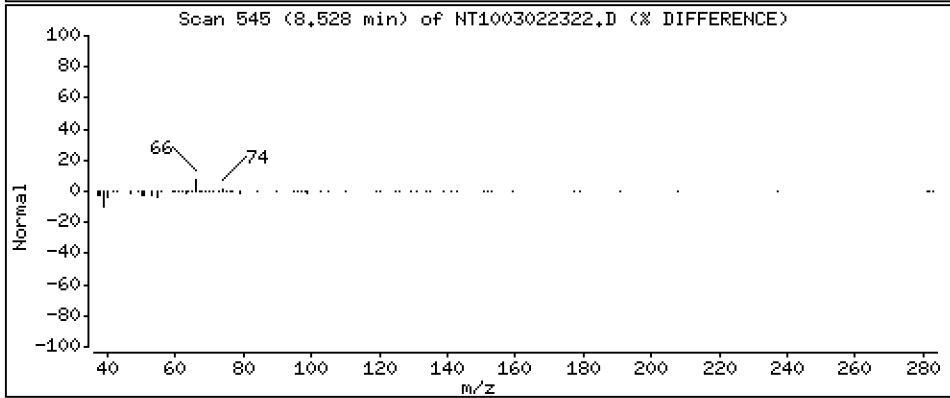
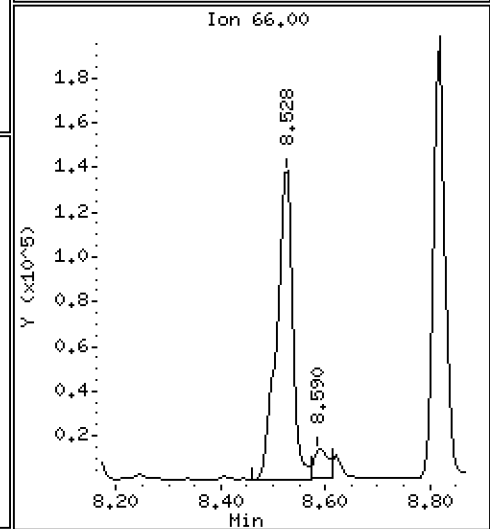
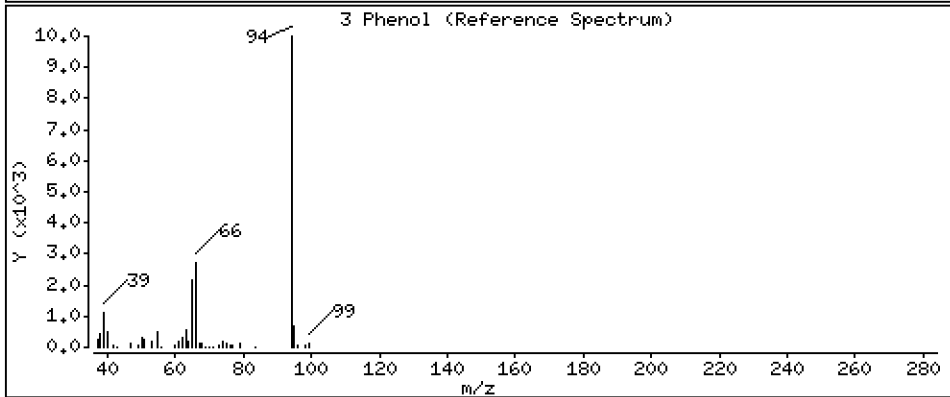
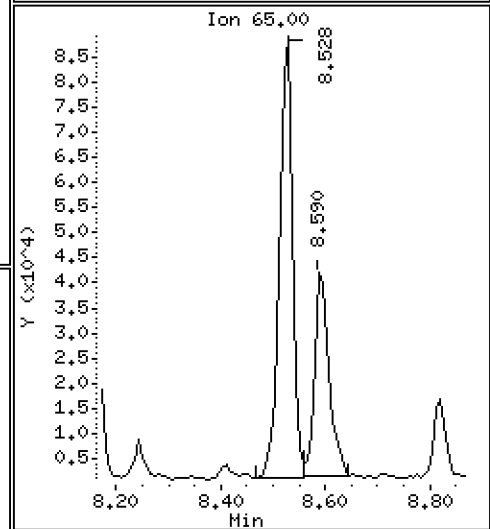
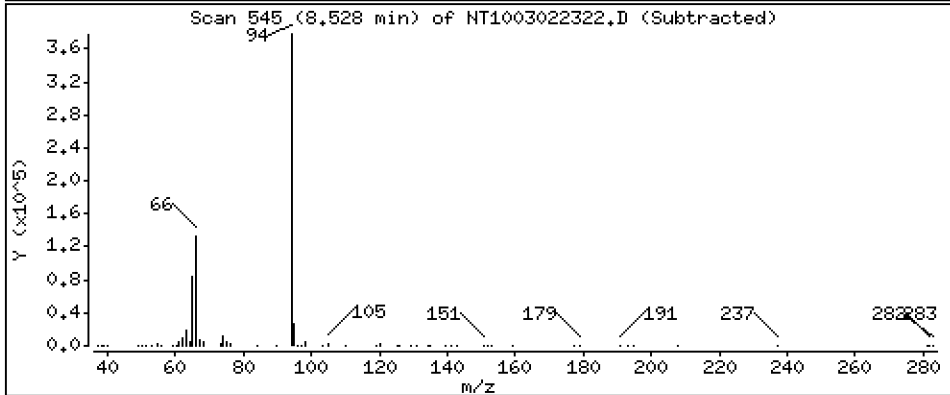
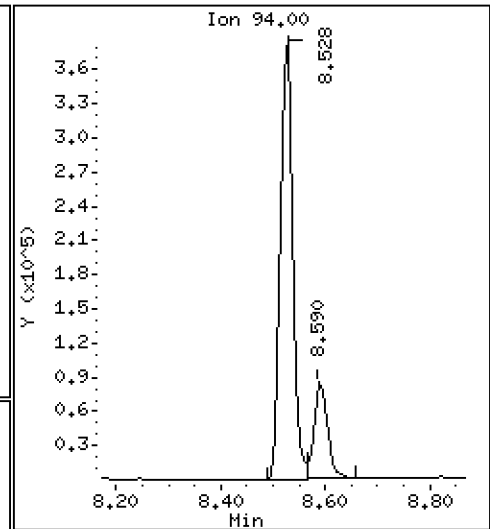
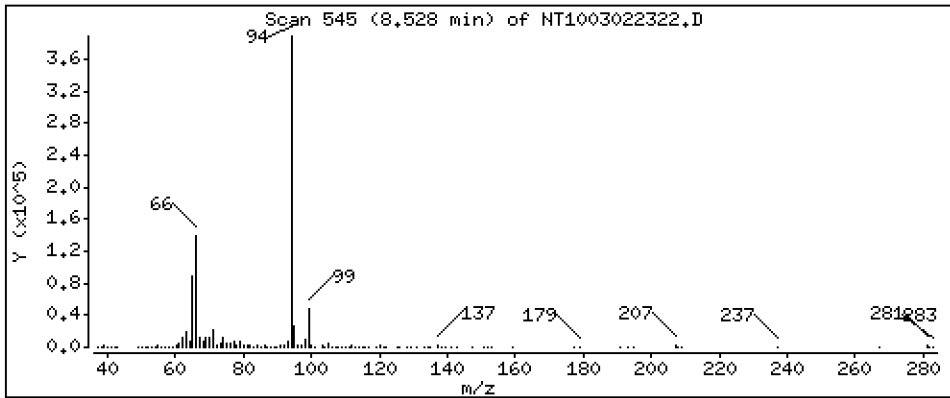
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 3,149 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

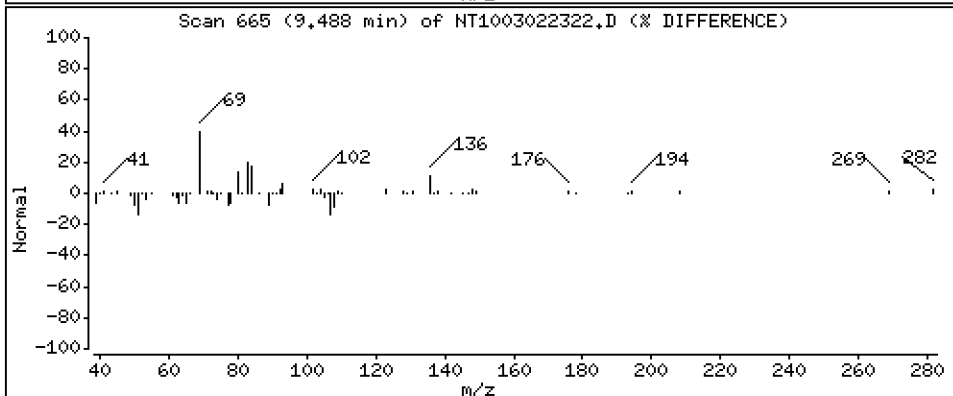
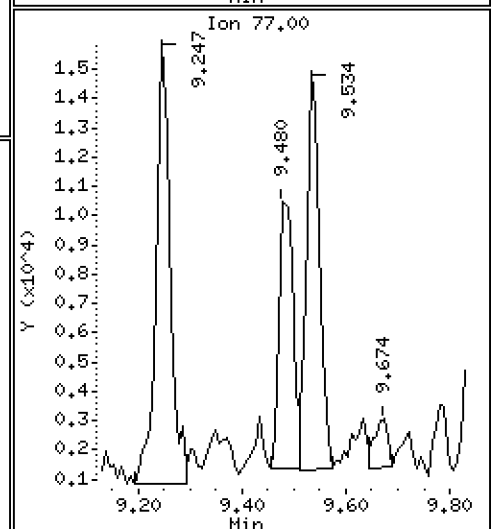
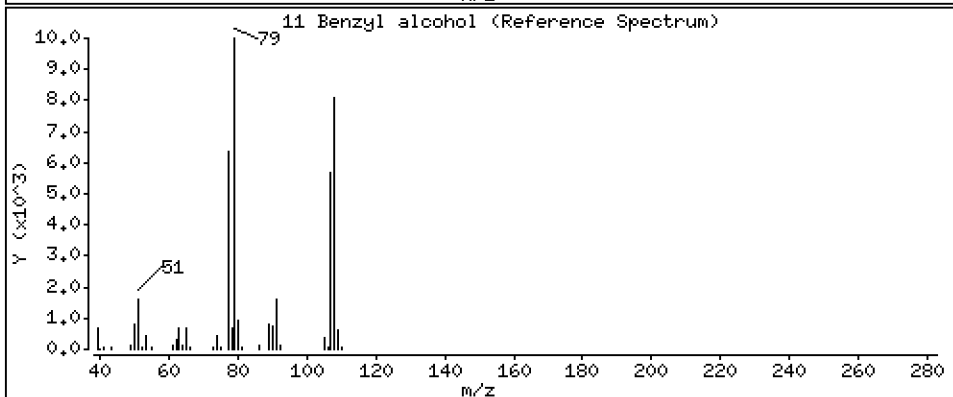
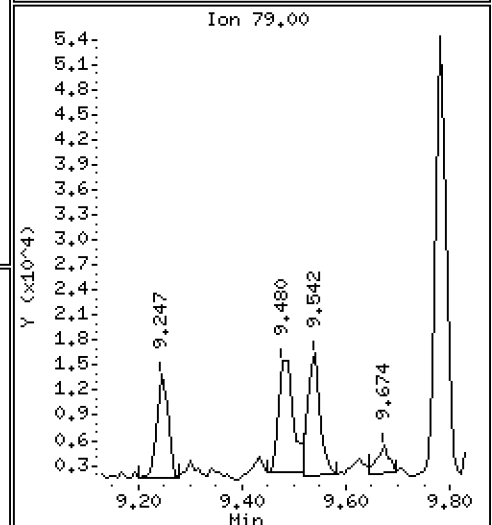
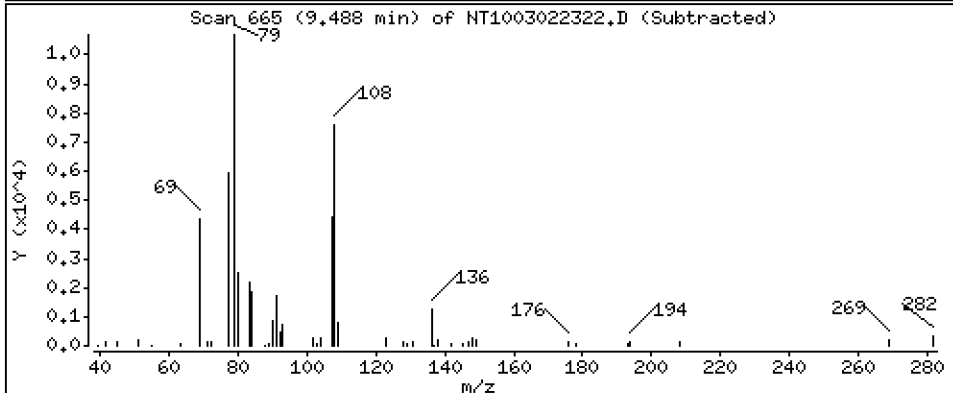
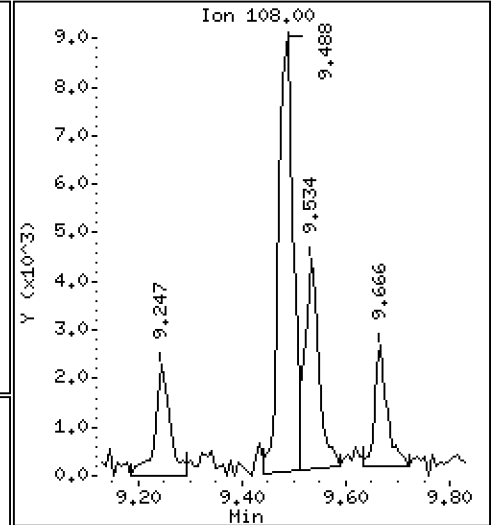
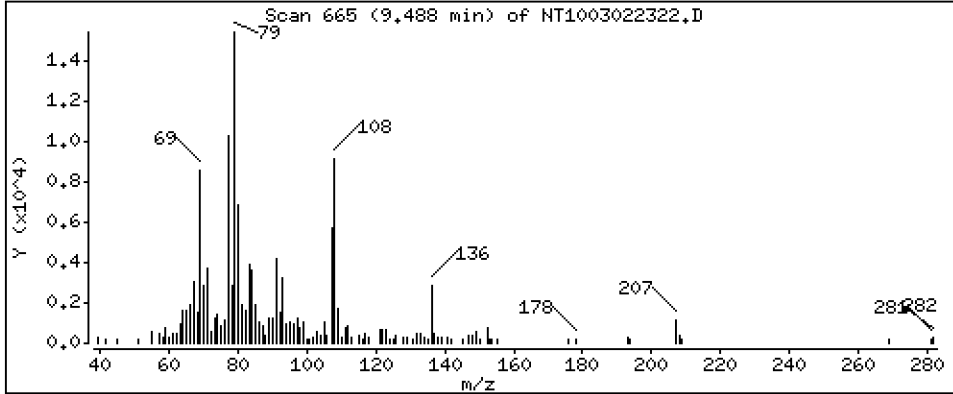
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1675 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

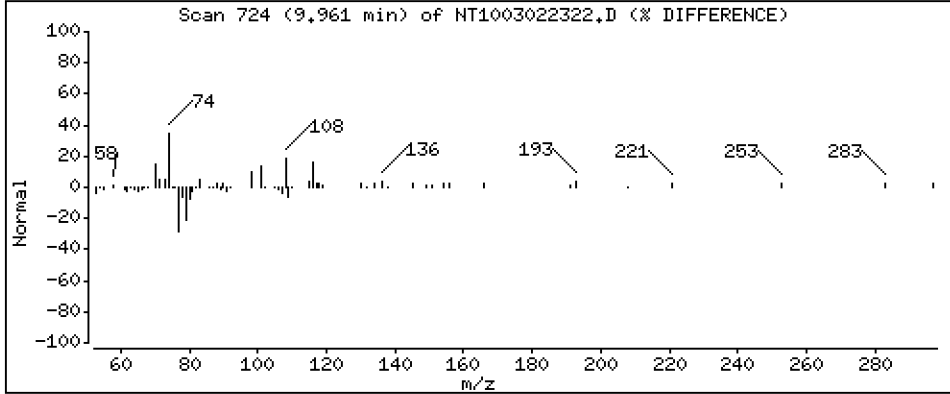
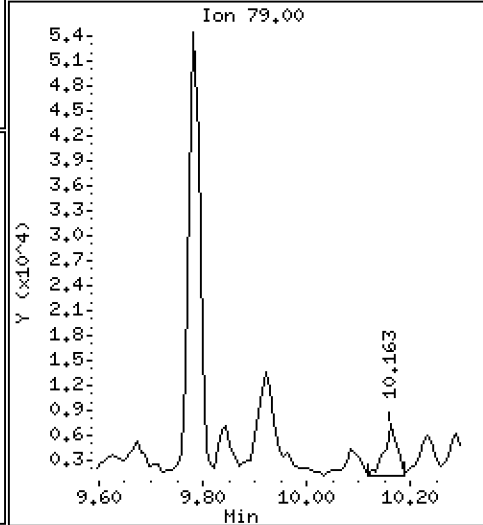
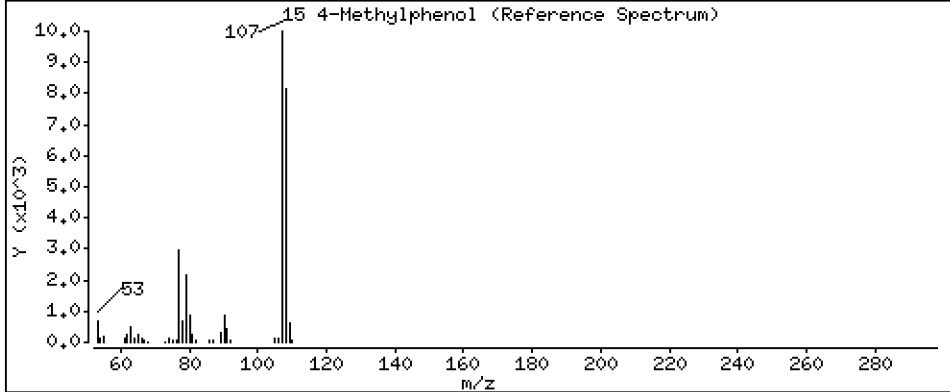
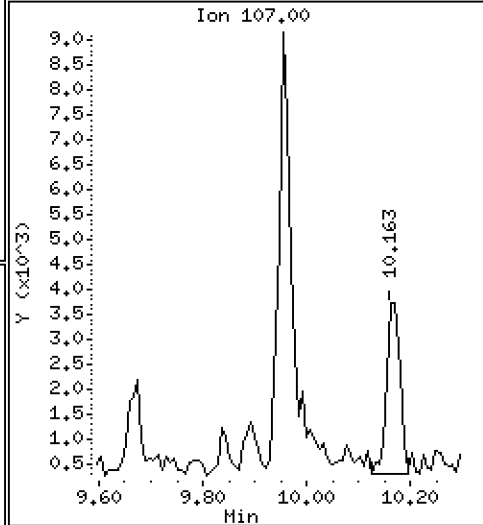
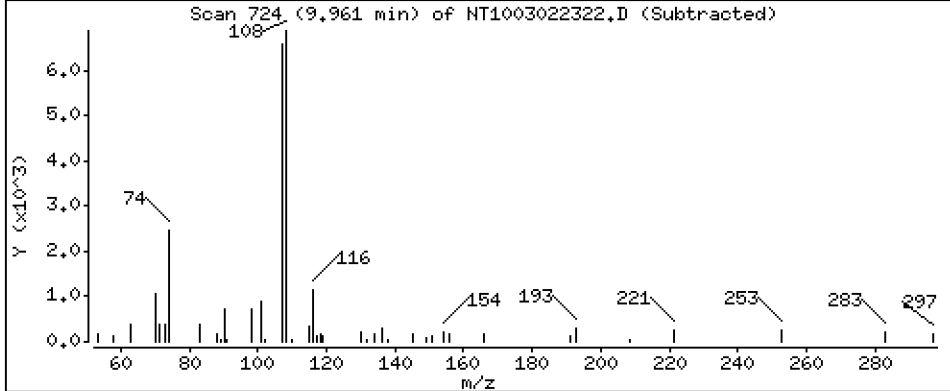
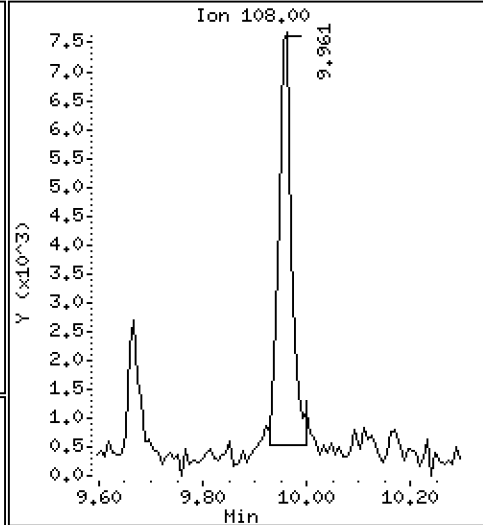
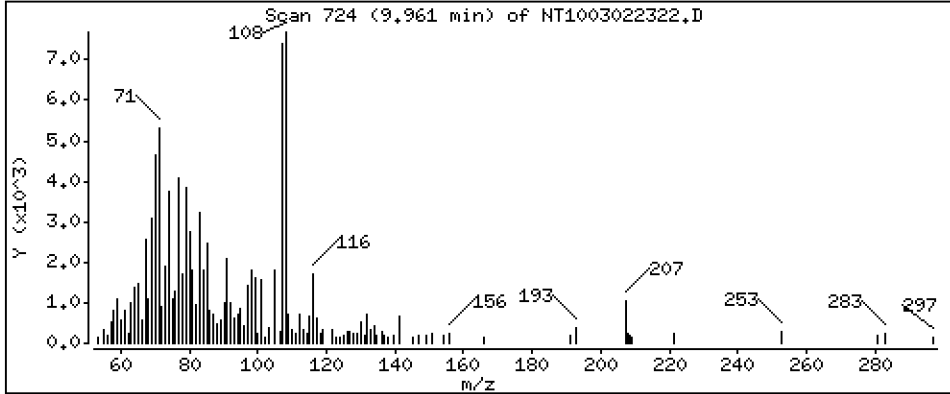
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.06544 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

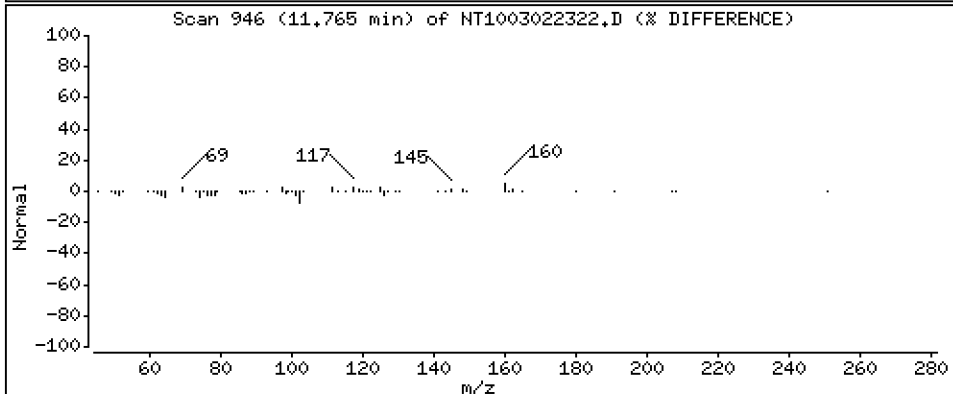
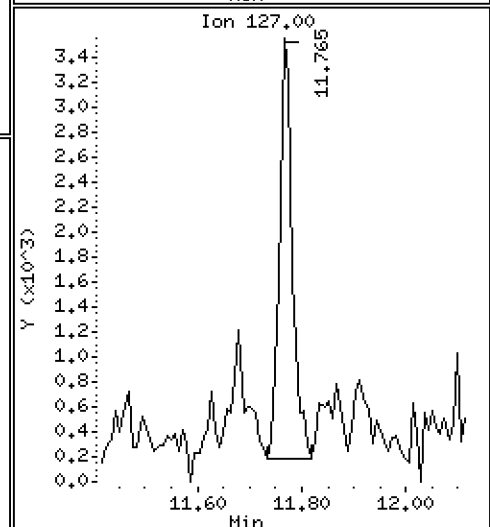
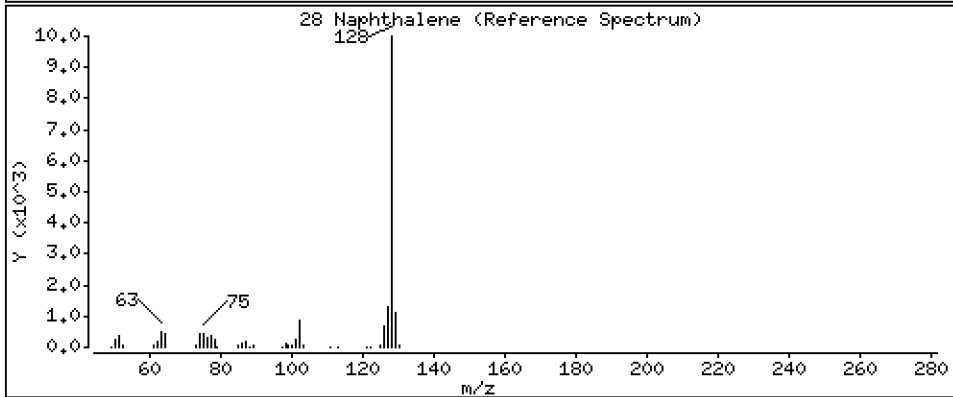
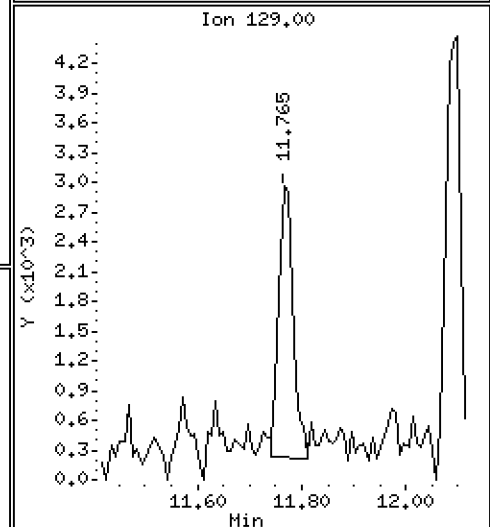
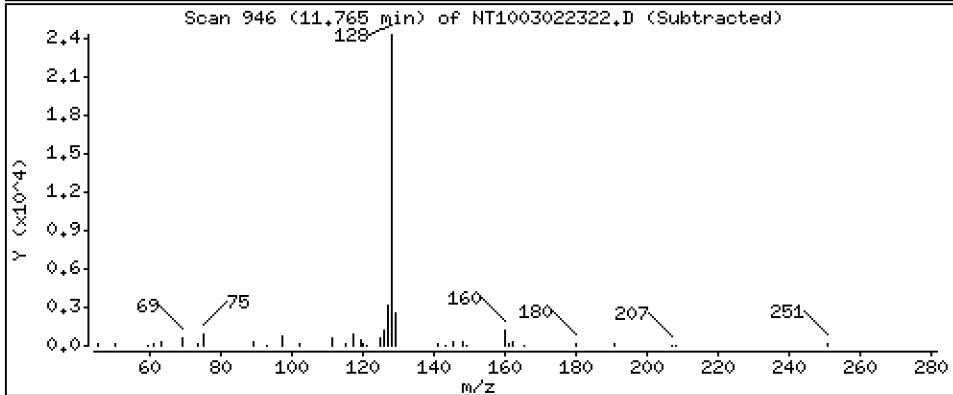
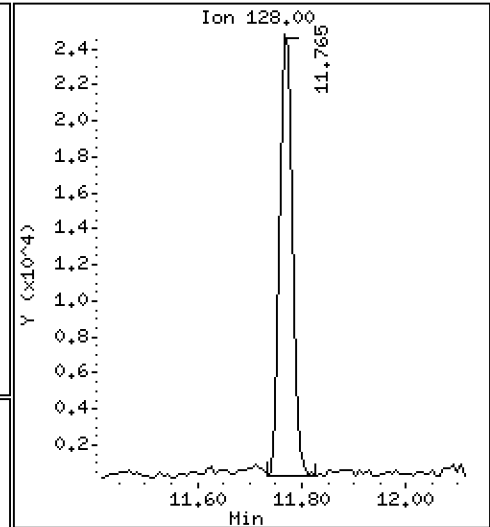
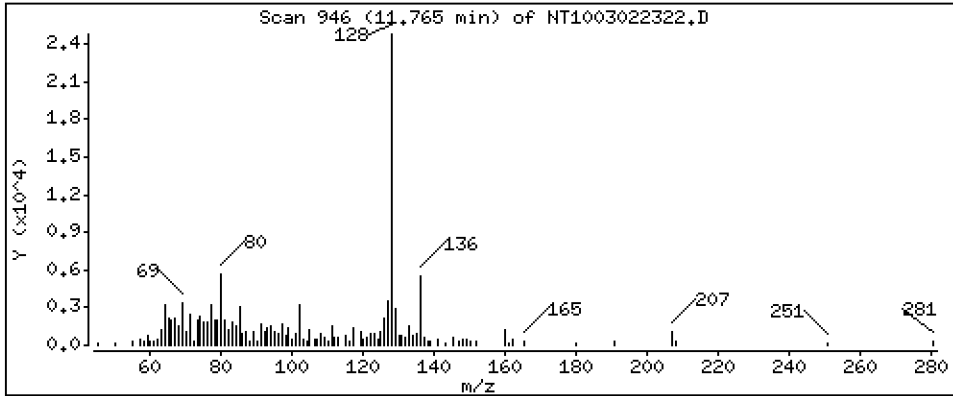
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,08539 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

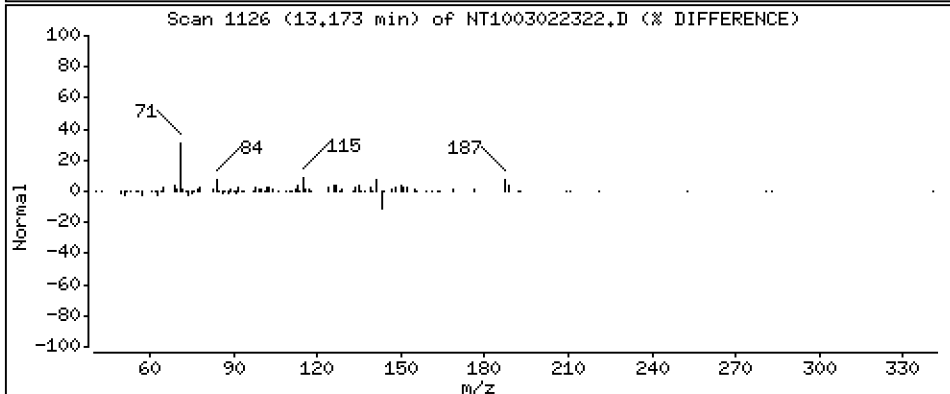
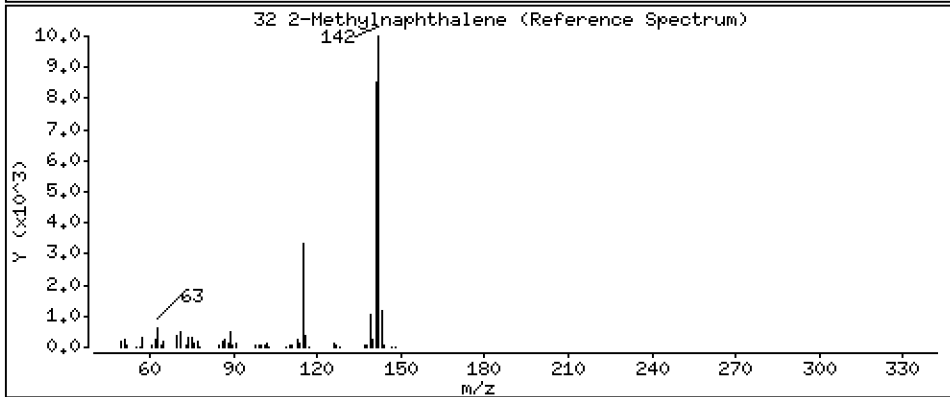
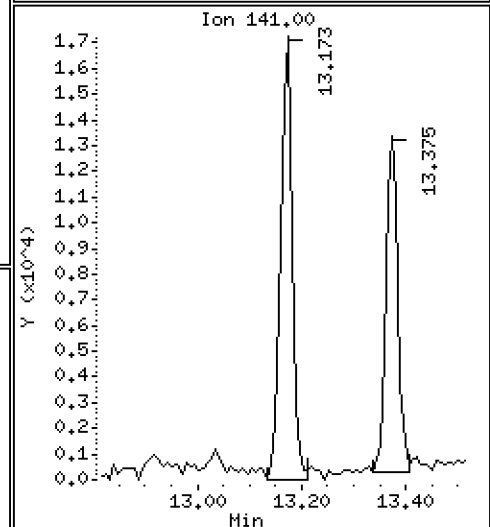
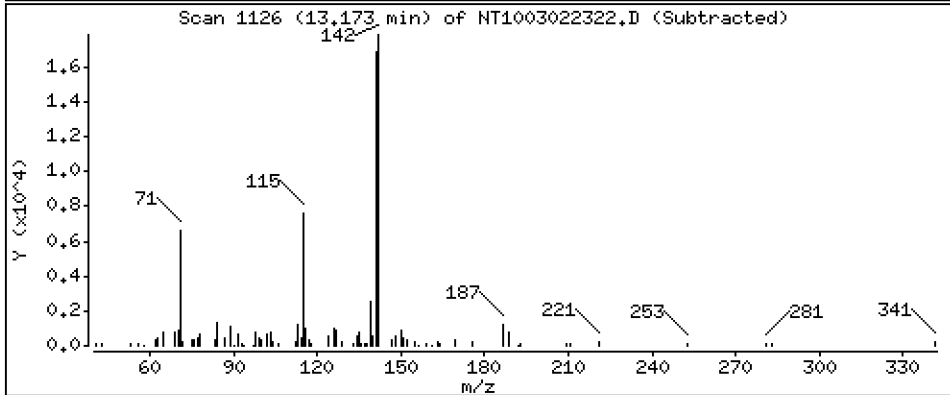
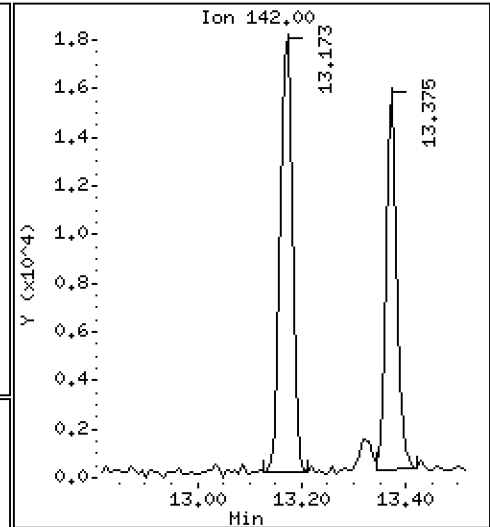
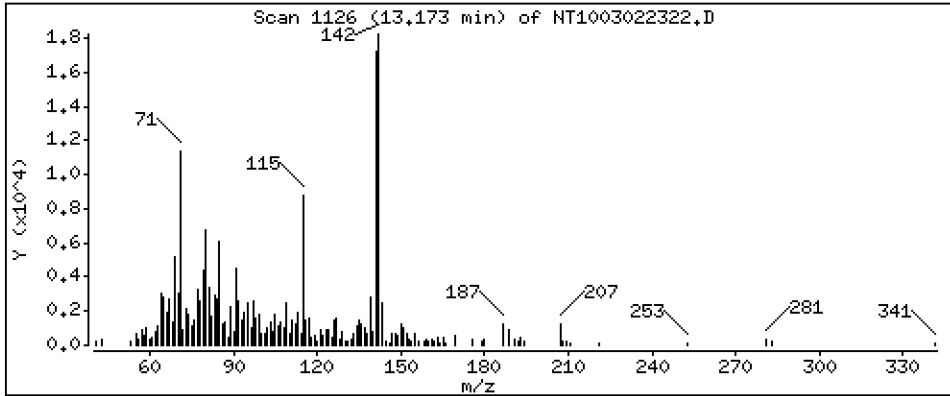
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,08489 ug/mL



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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

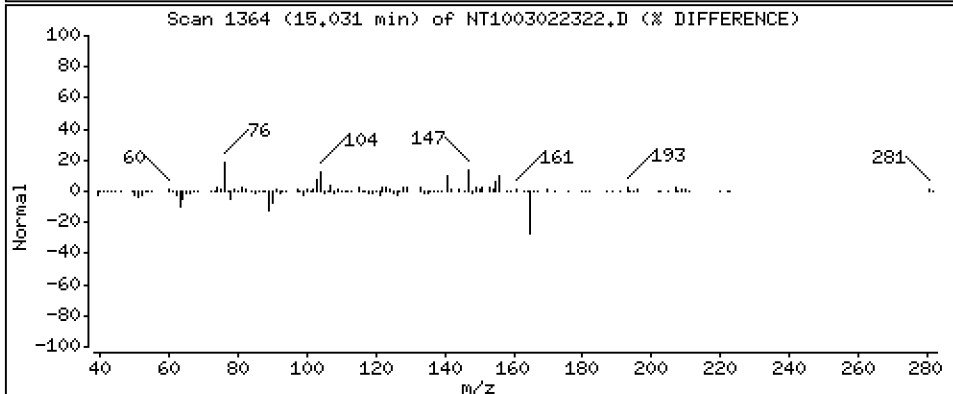
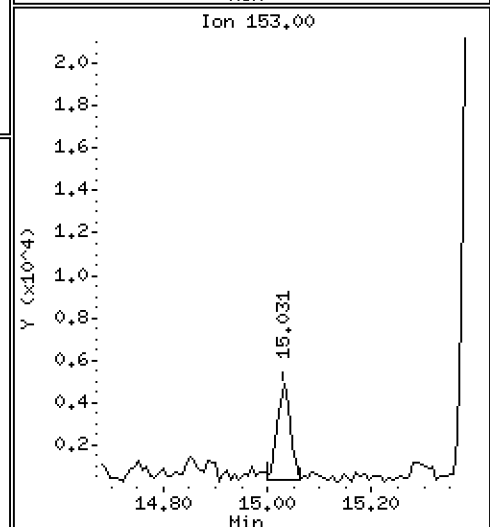
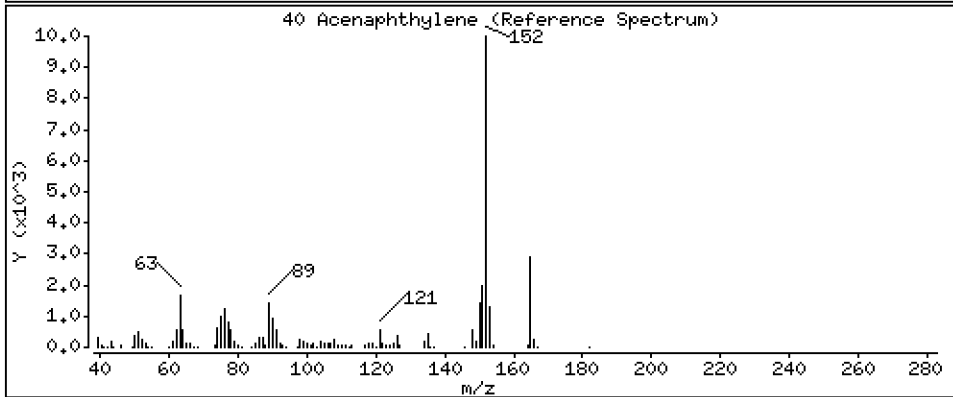
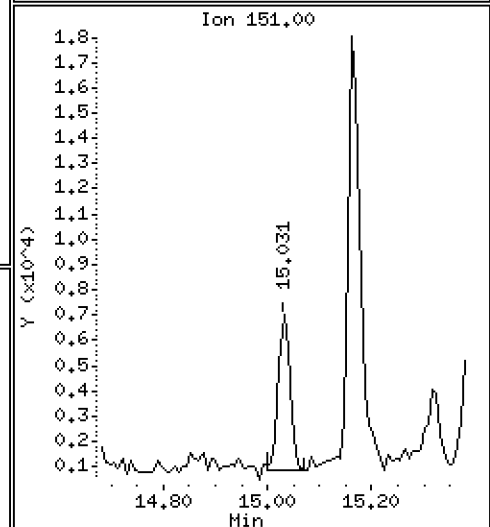
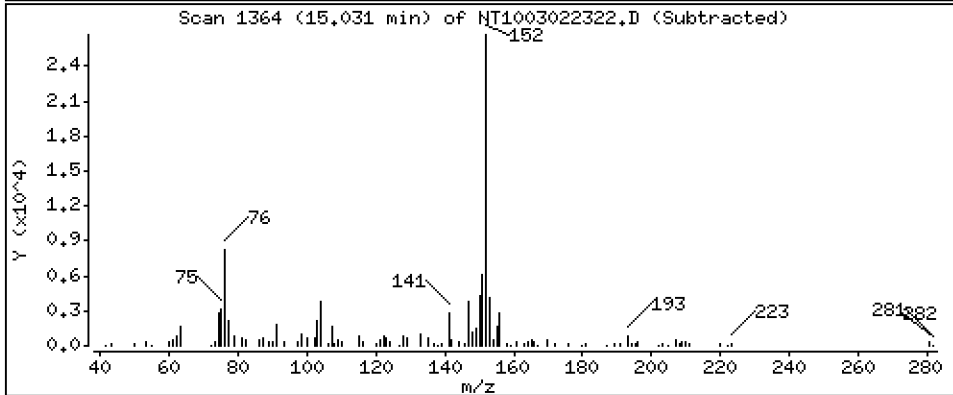
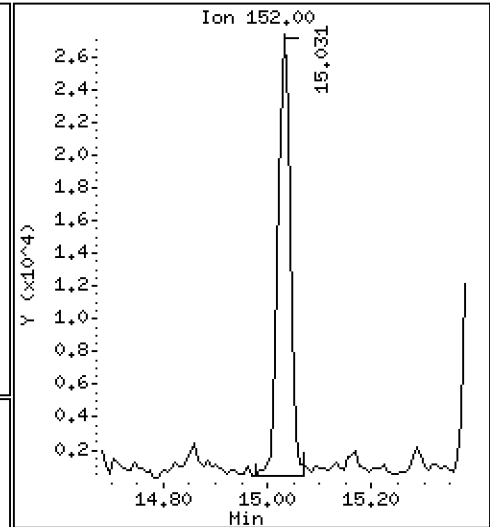
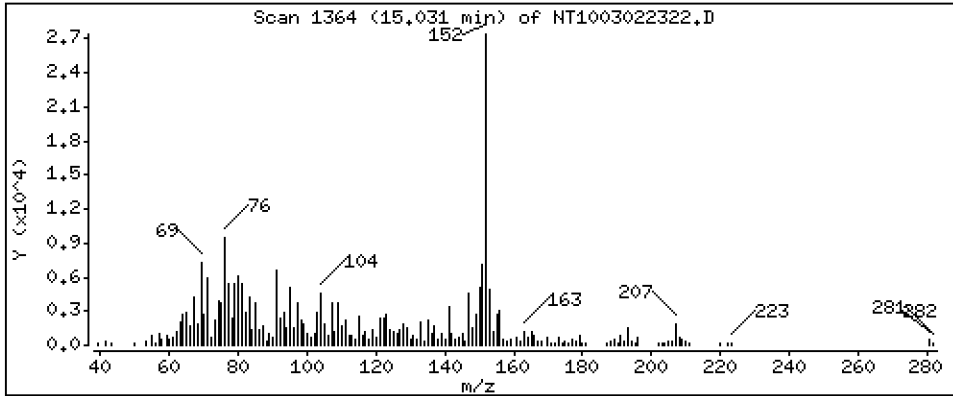
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.09107 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

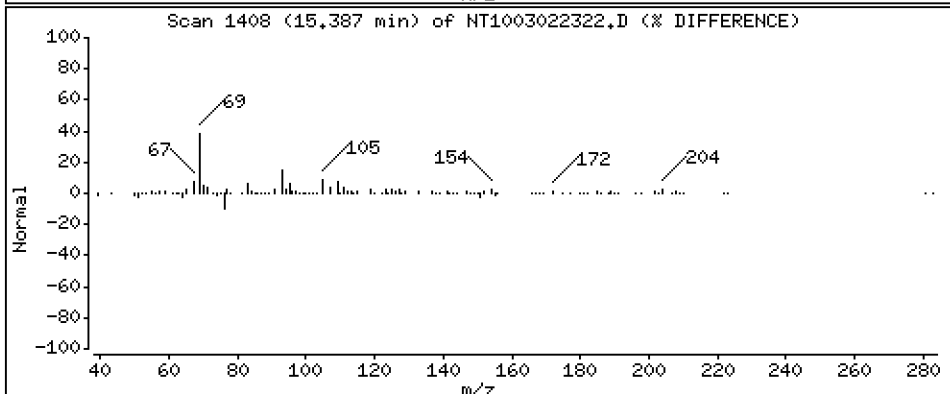
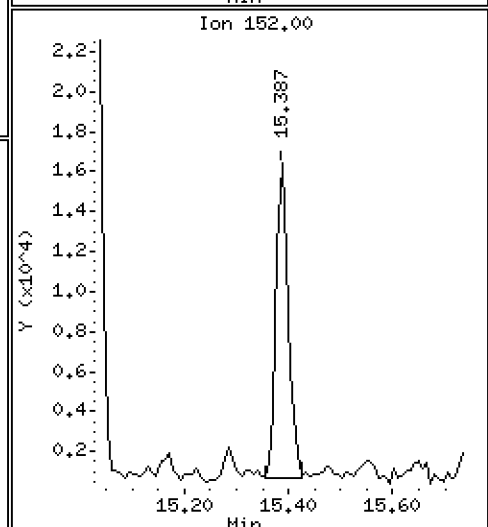
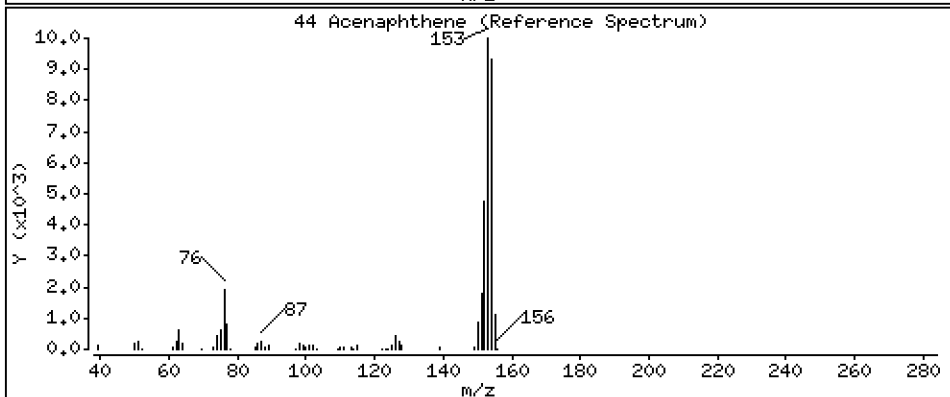
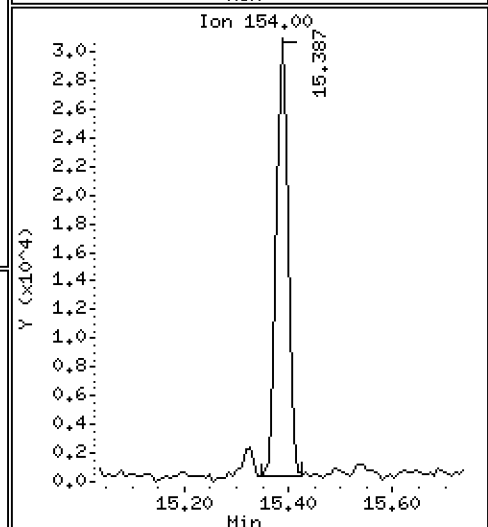
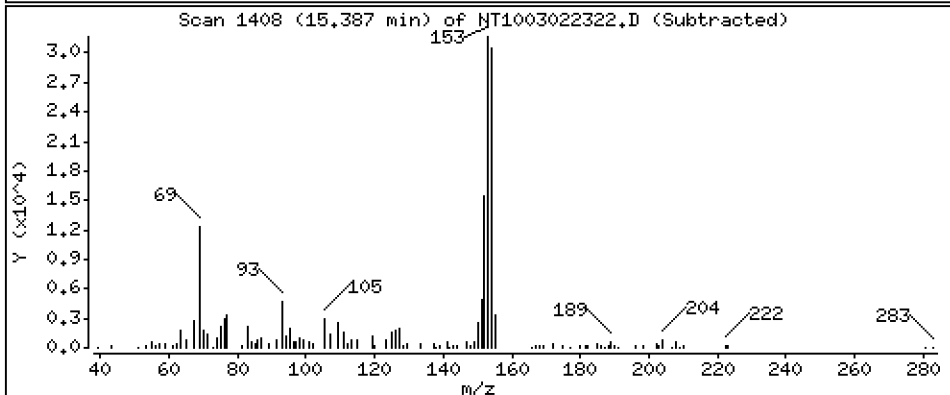
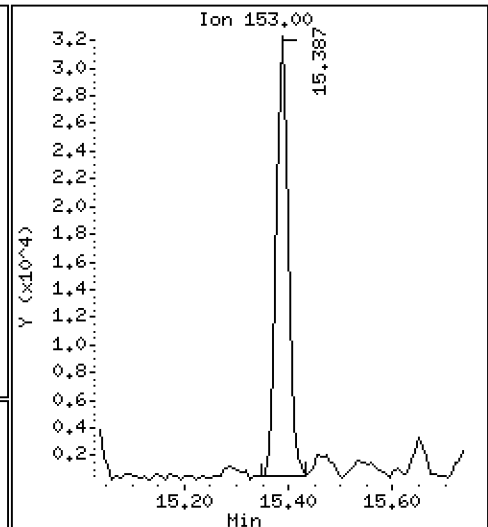
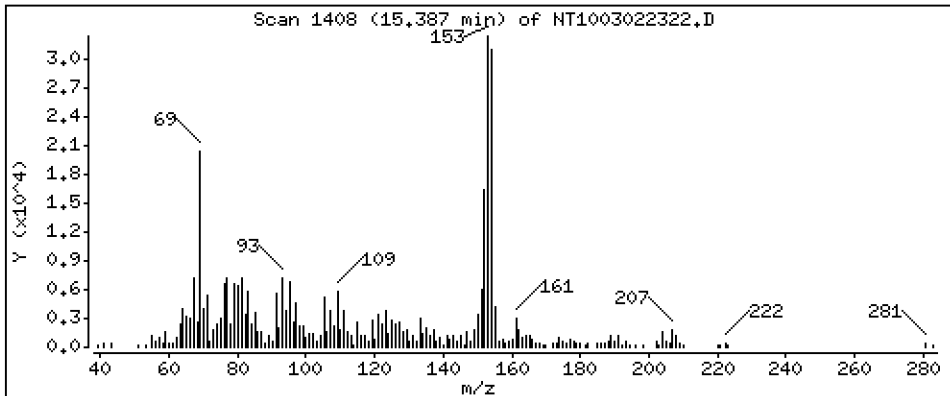
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,1722 ug/mL





Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

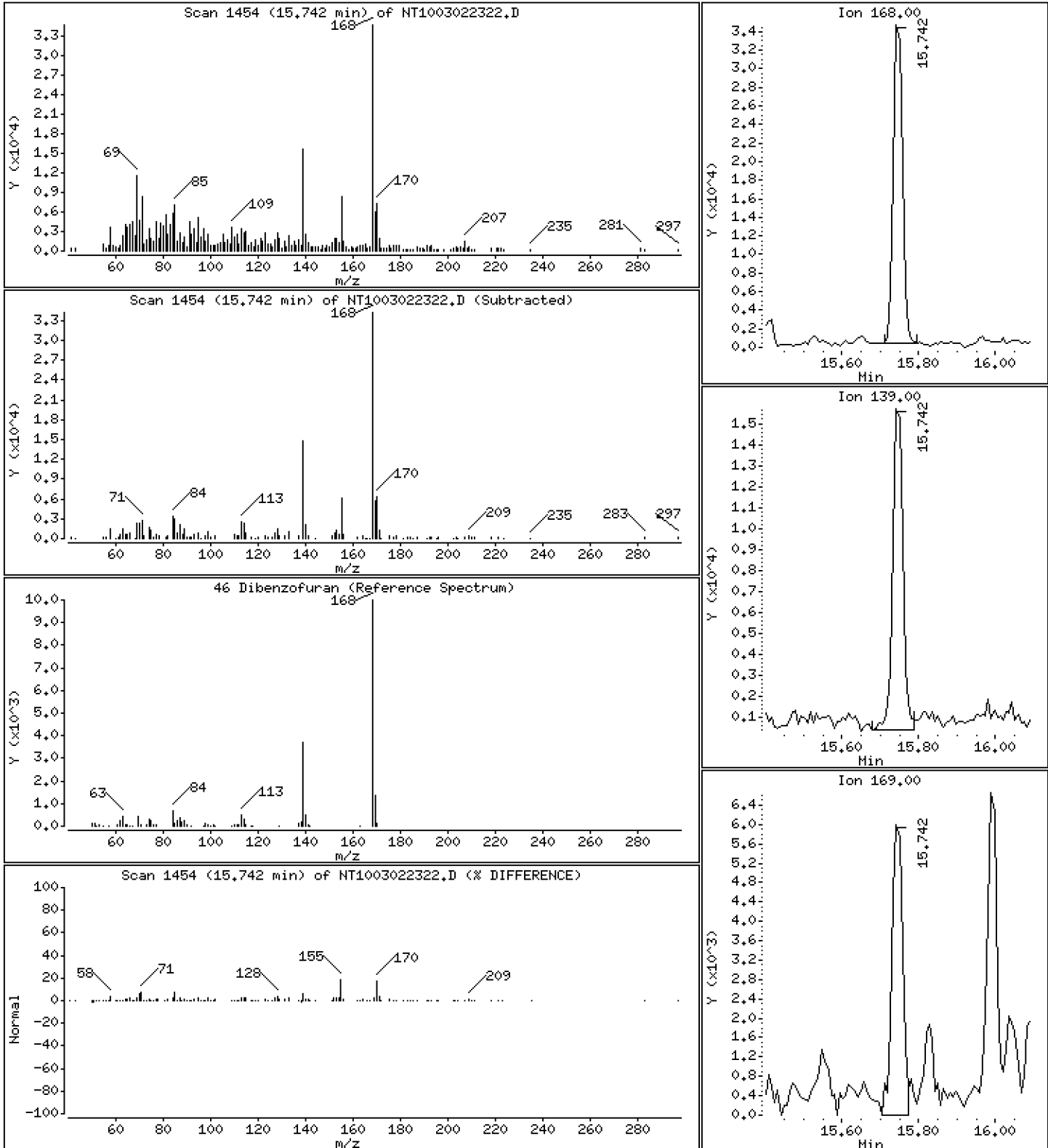
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1333 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

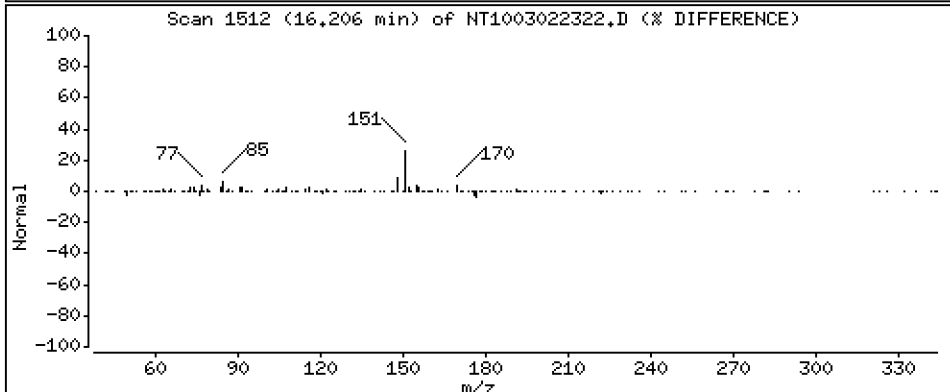
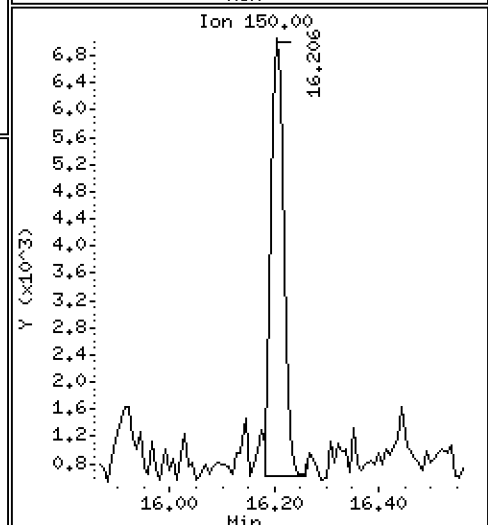
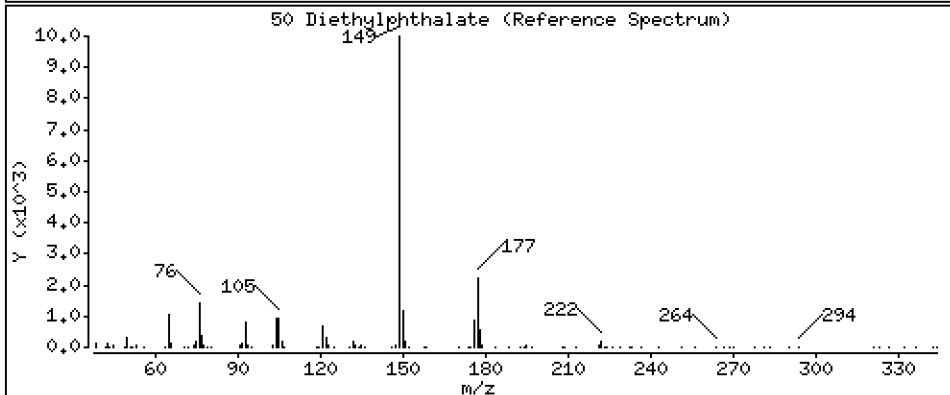
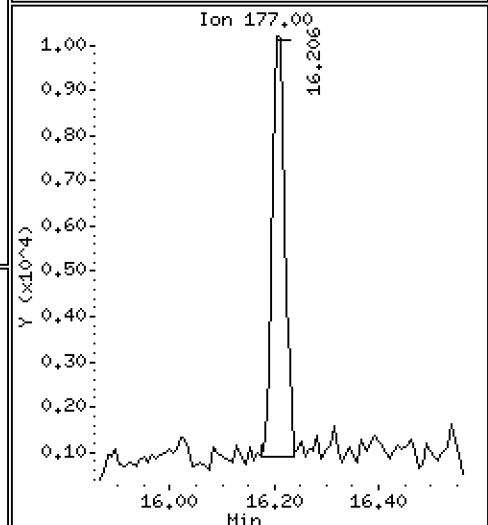
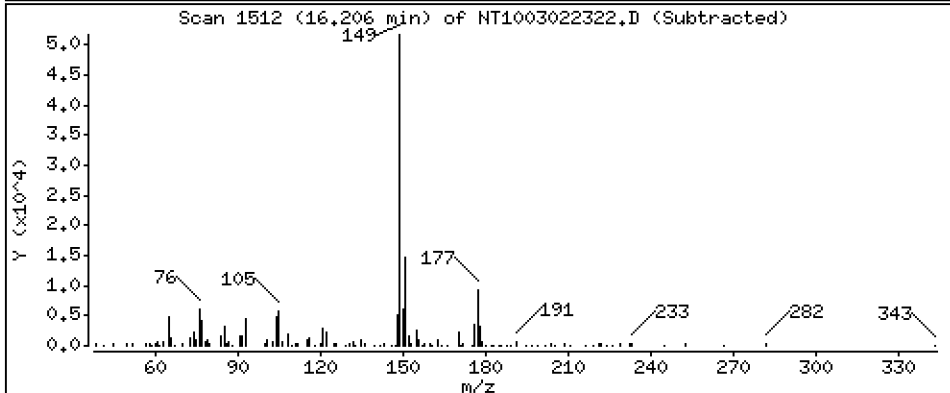
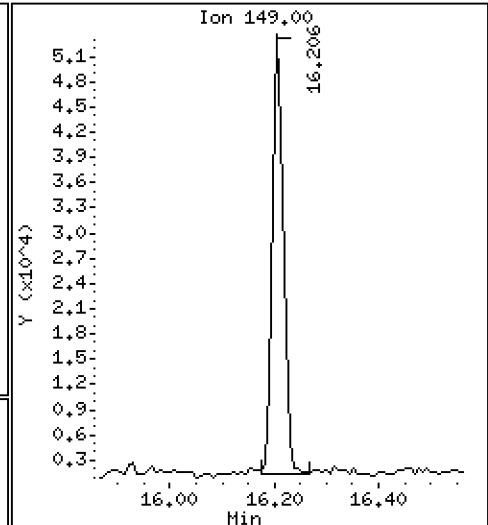
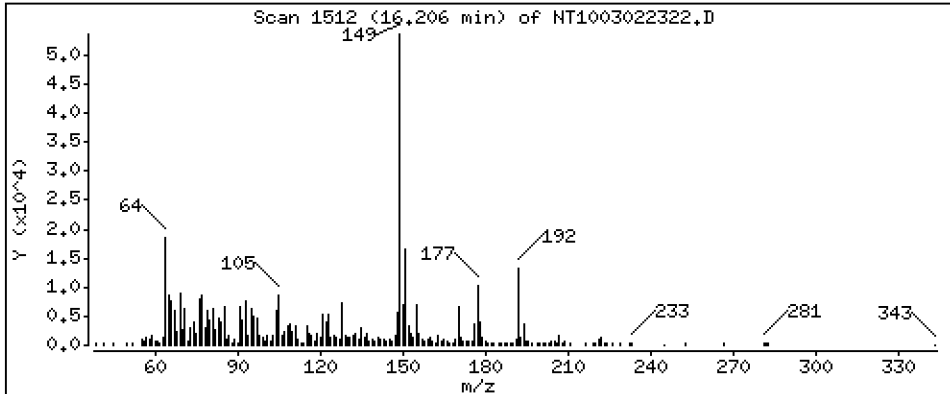
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2288 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

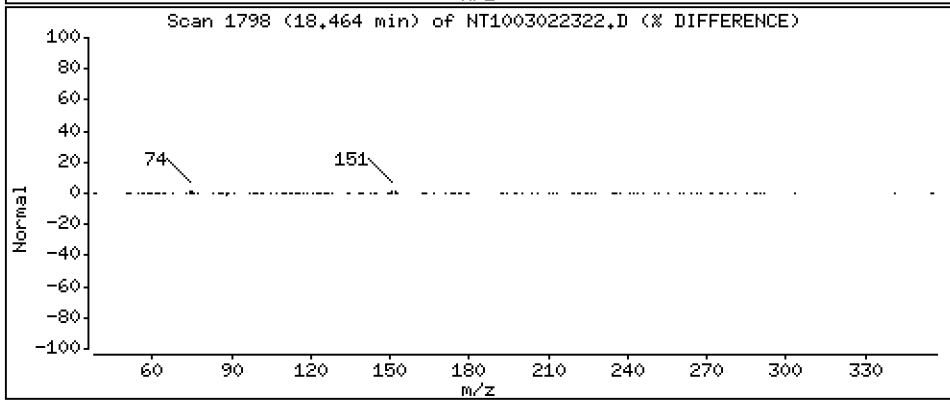
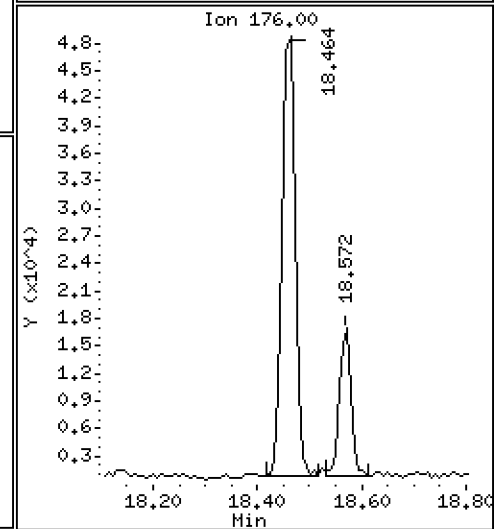
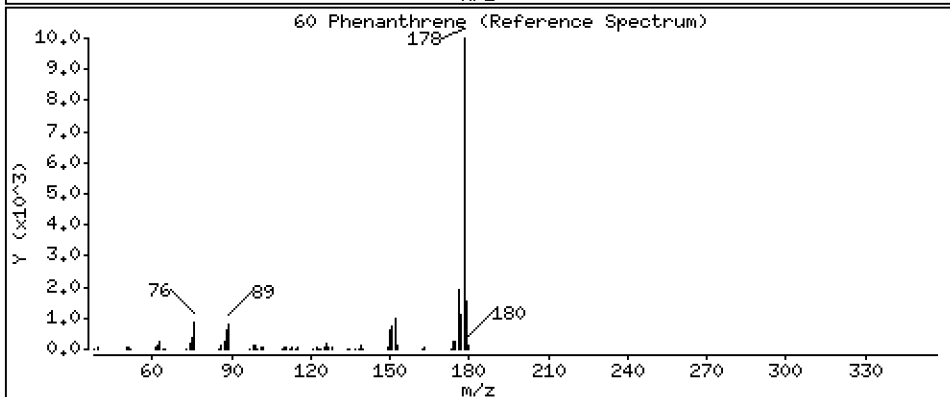
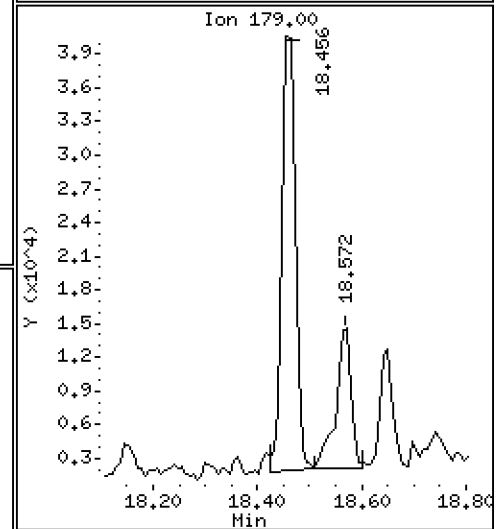
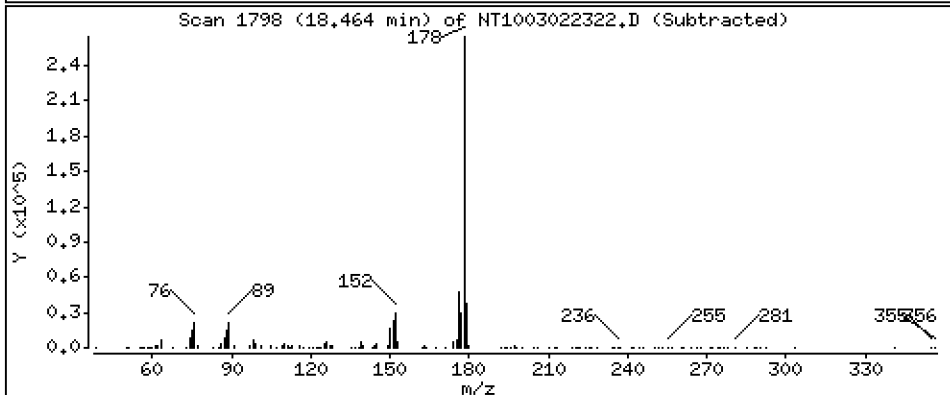
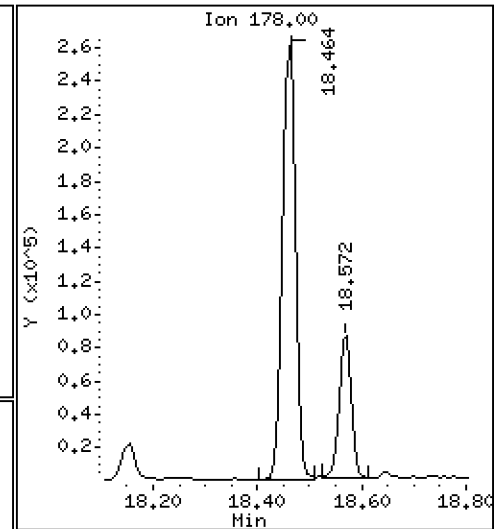
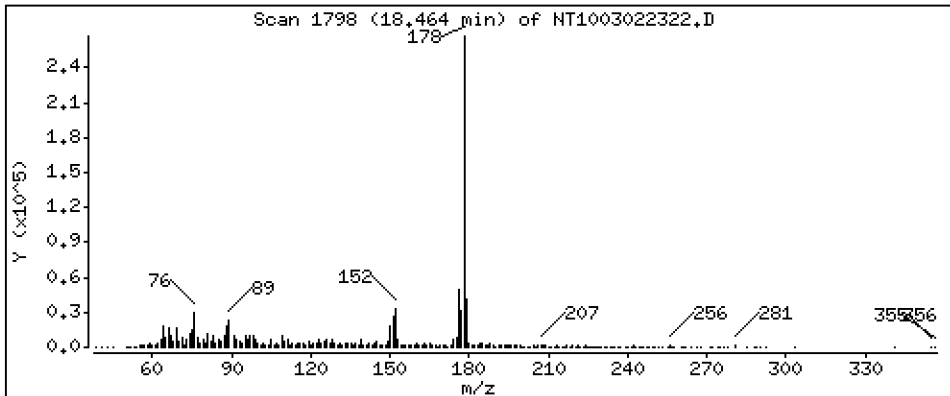
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,9366 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

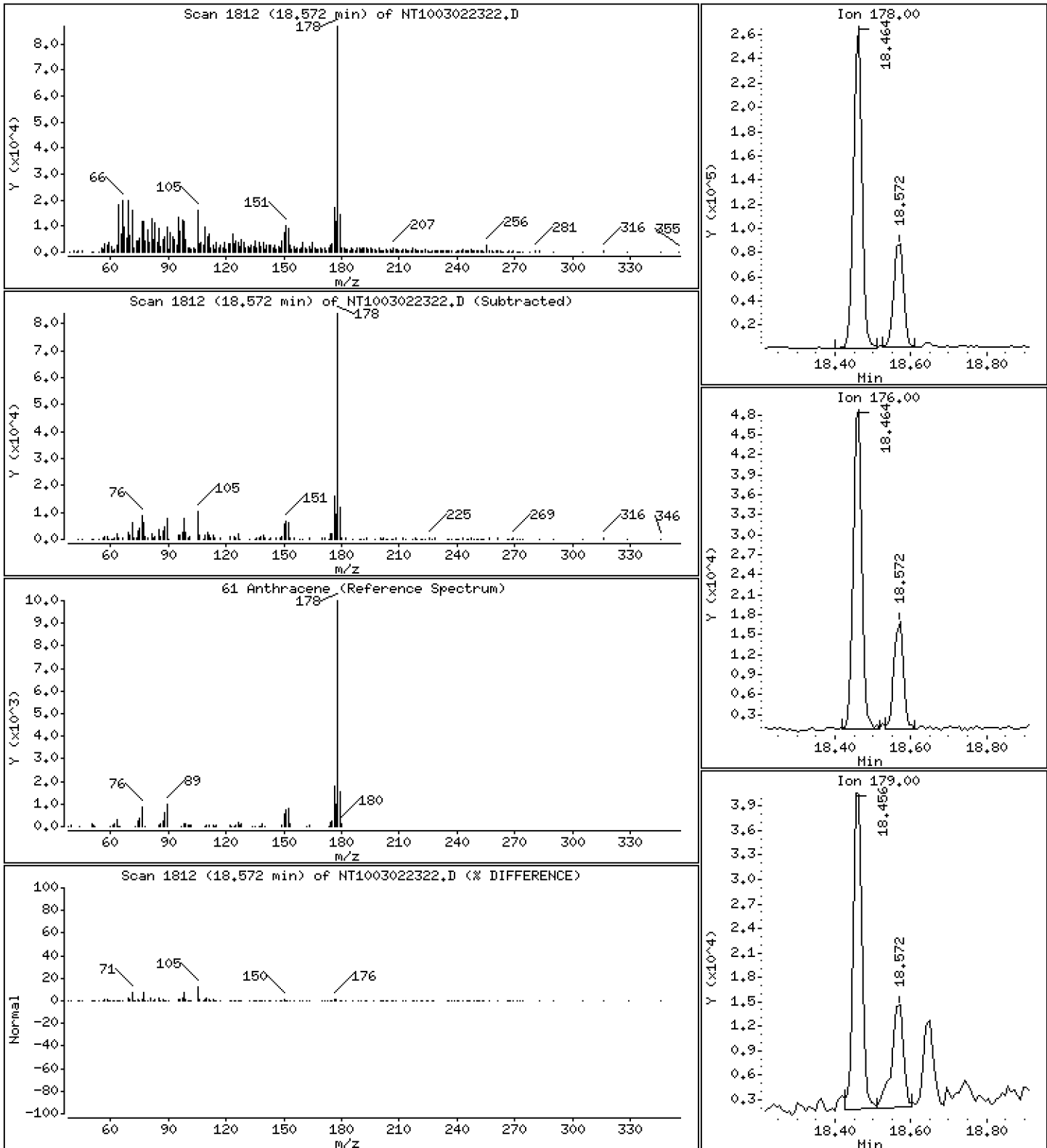
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 0.3301 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

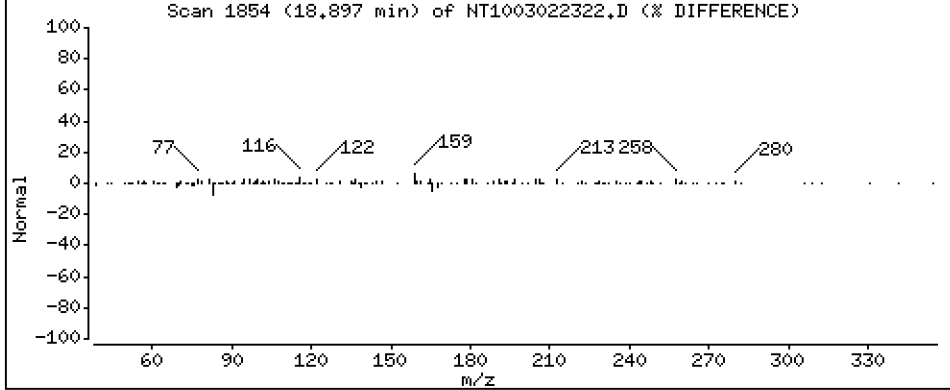
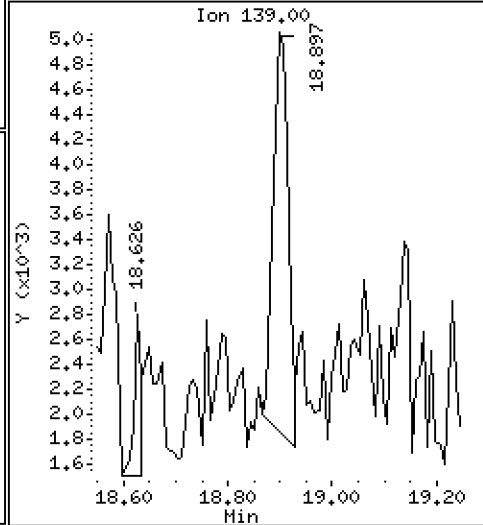
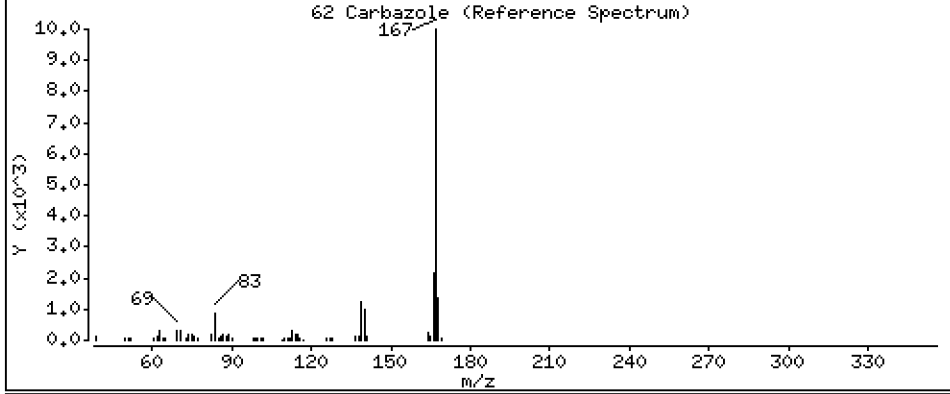
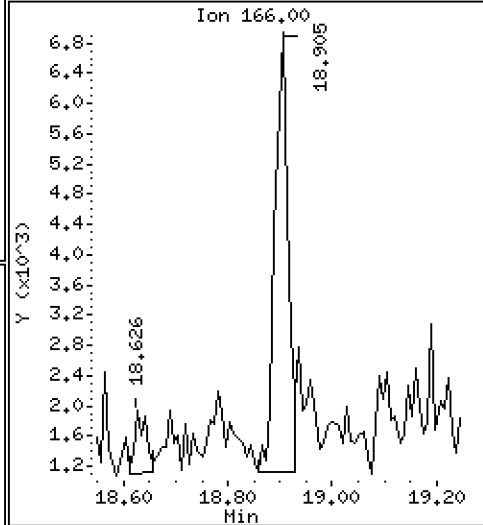
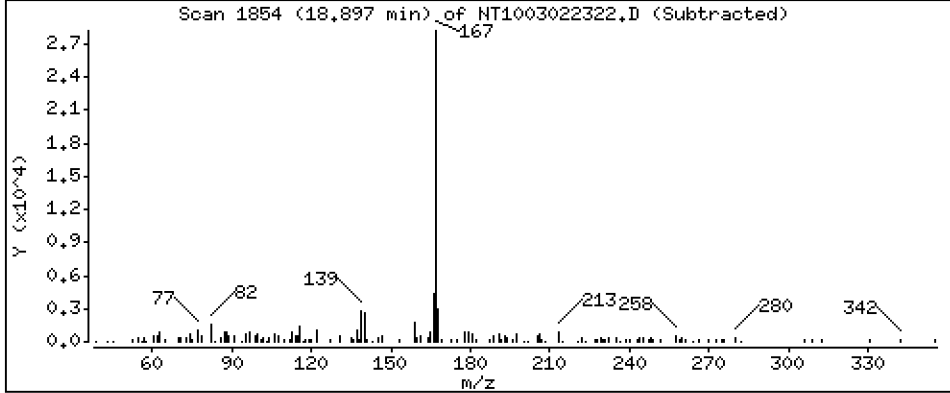
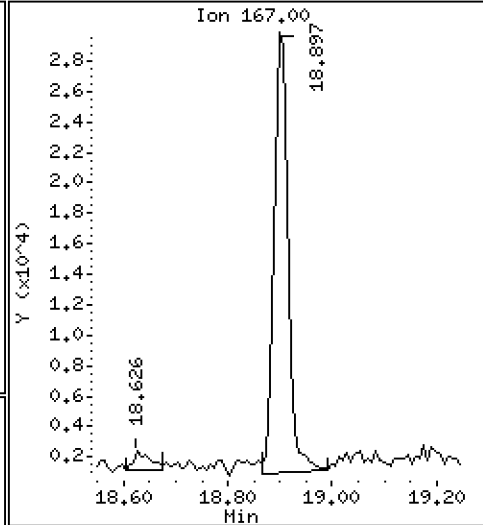
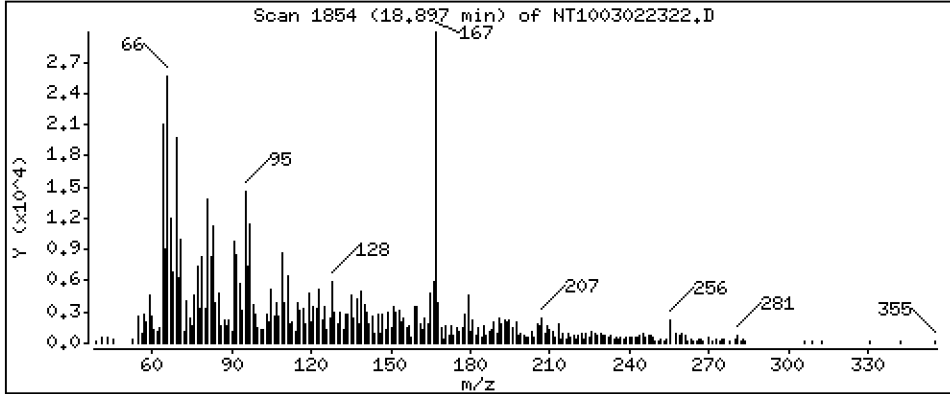
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1282 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

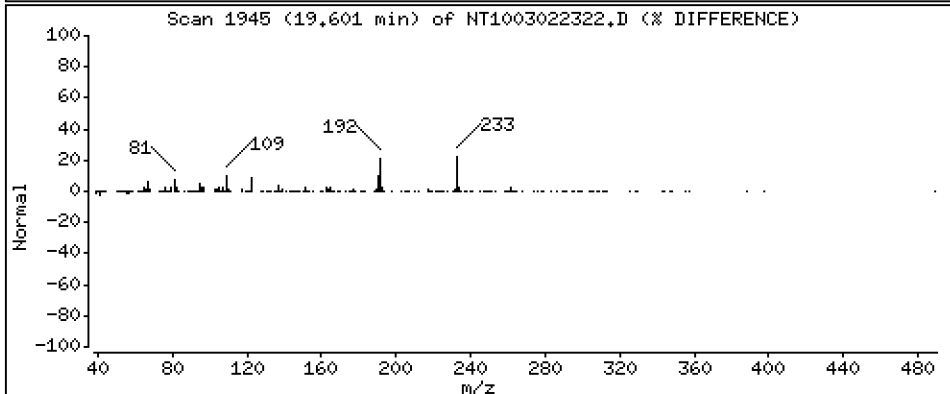
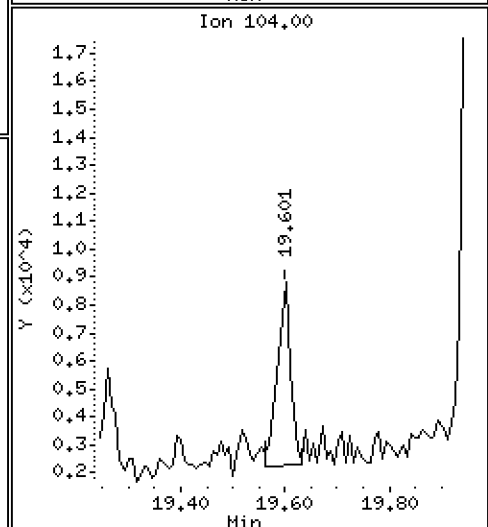
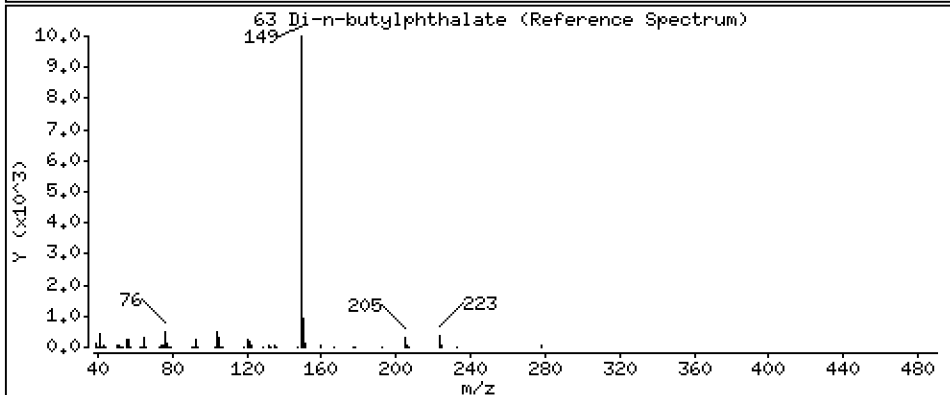
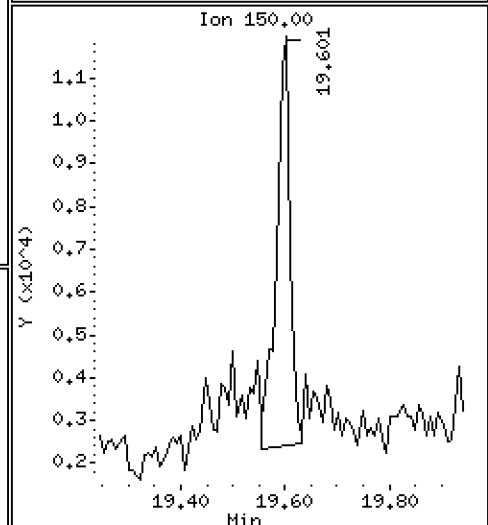
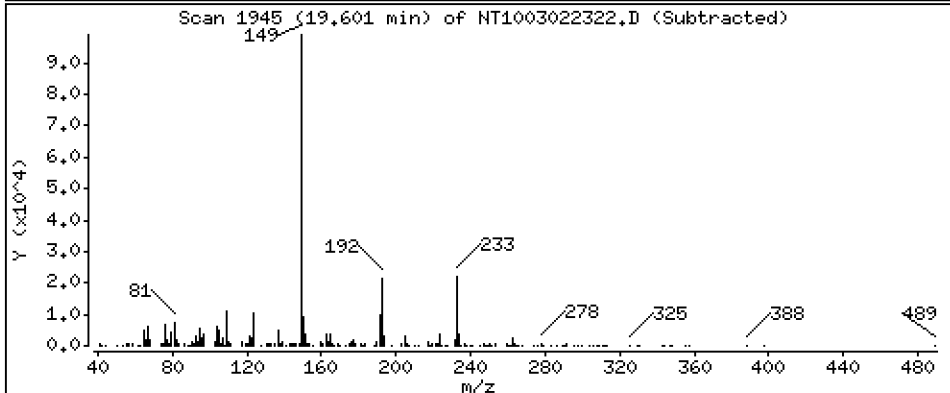
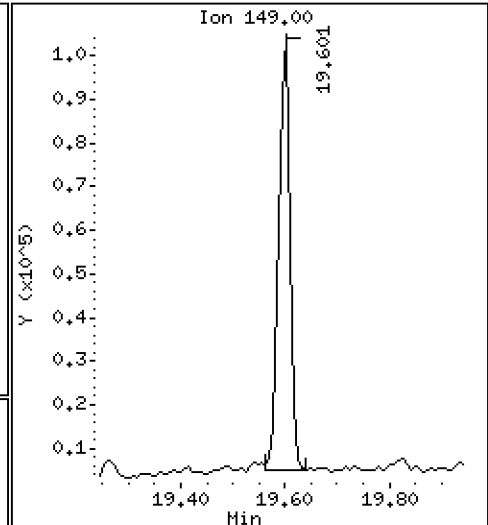
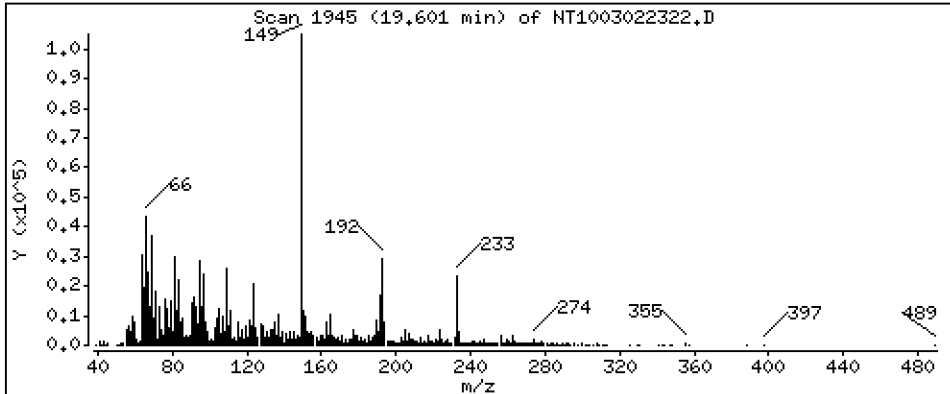
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 0,2577 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

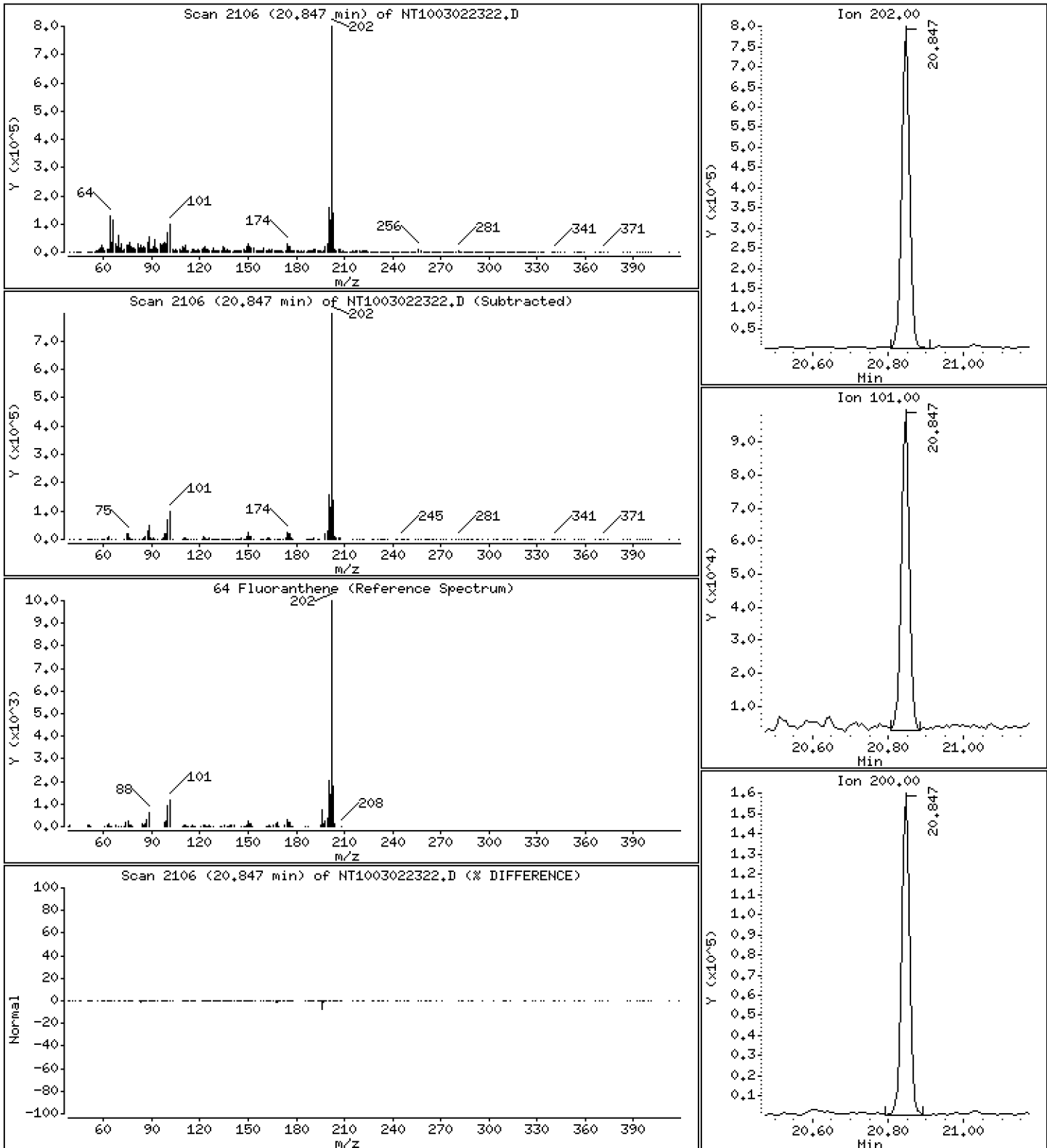
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,702 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

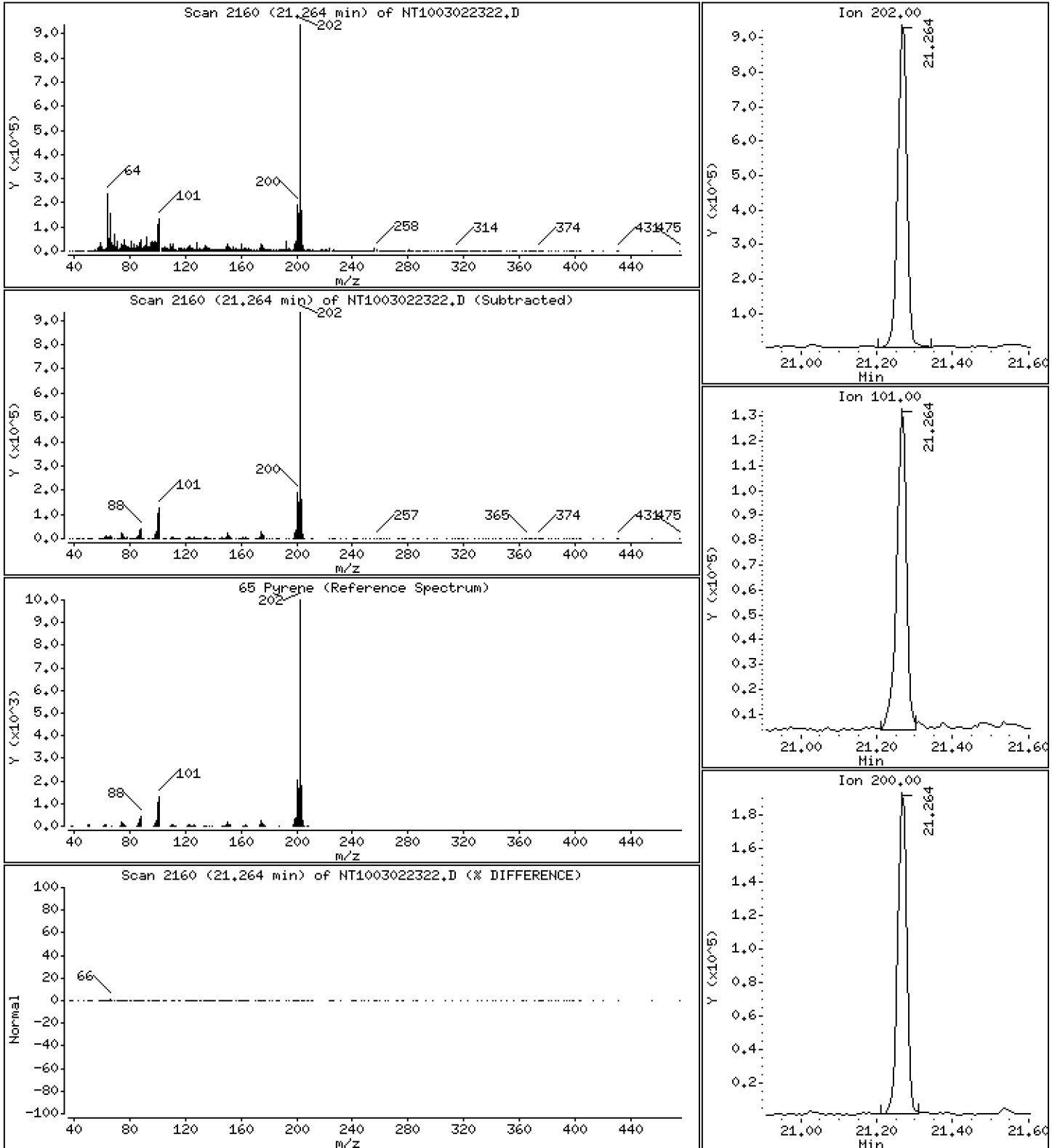
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 2,096 ug/mL





Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

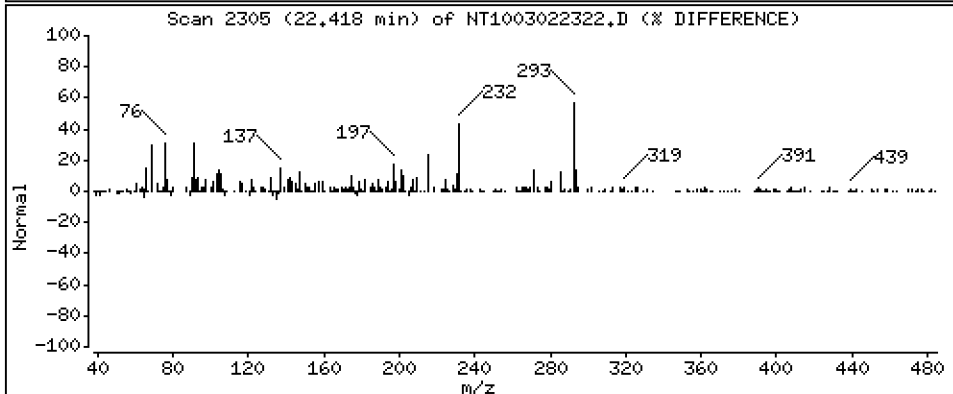
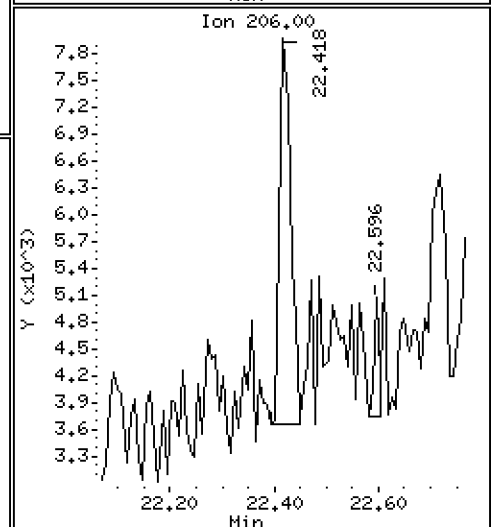
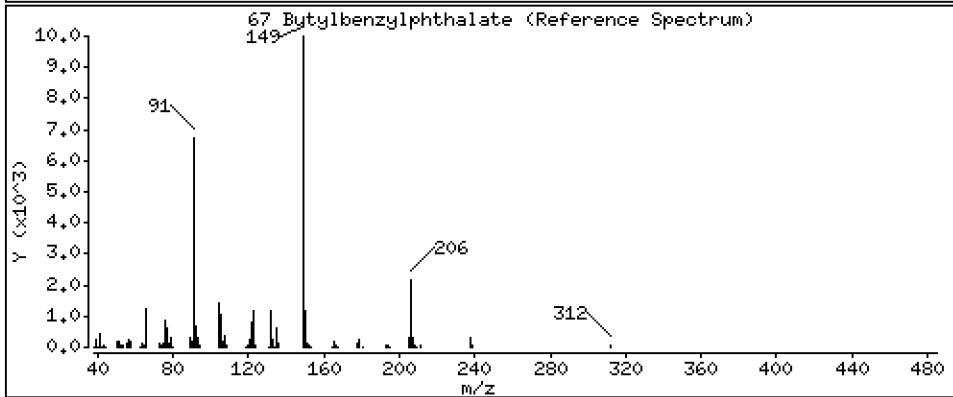
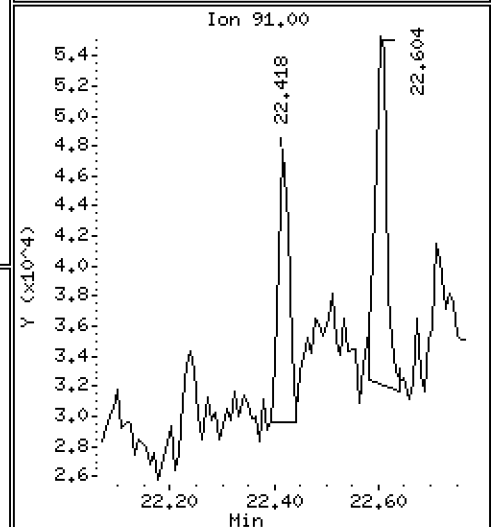
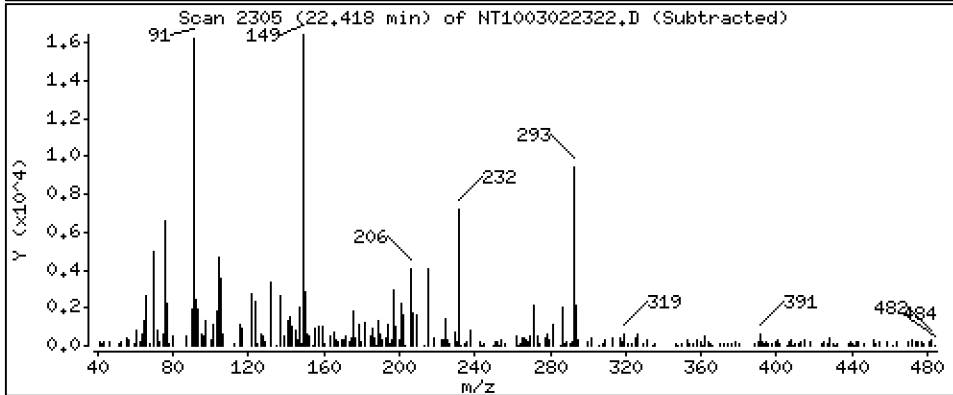
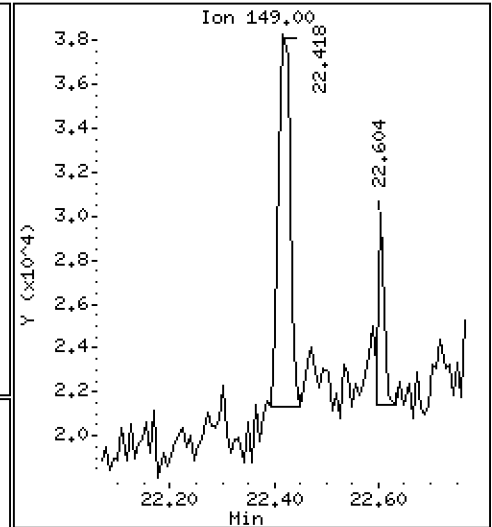
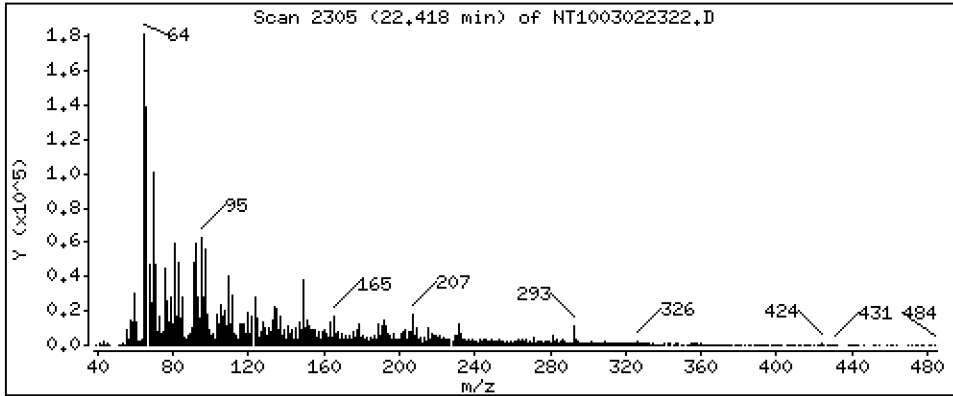
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.06539 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

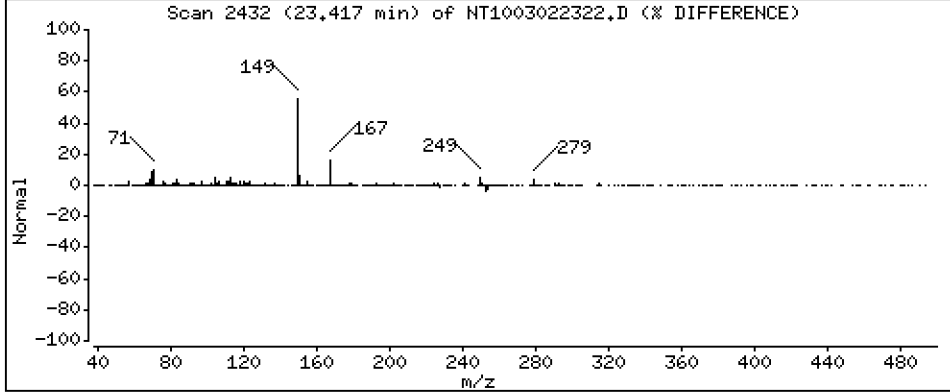
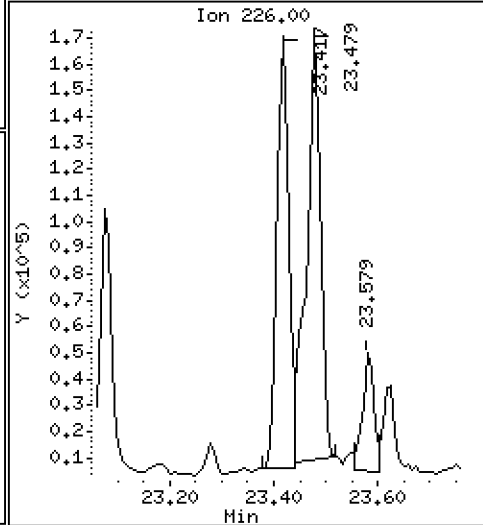
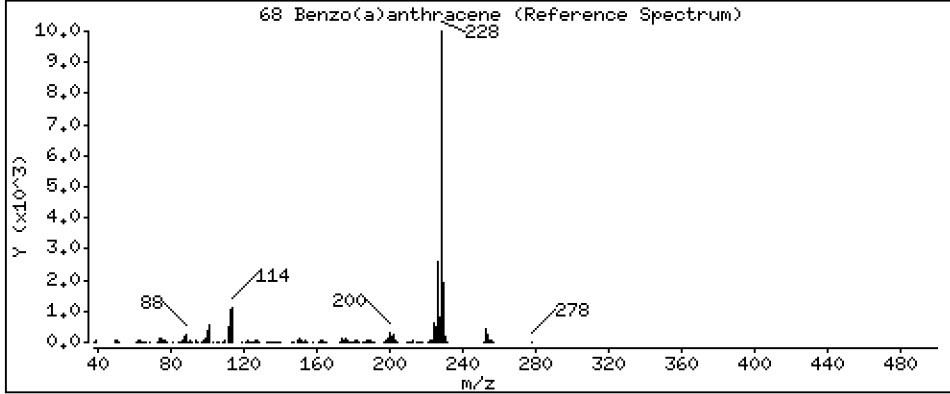
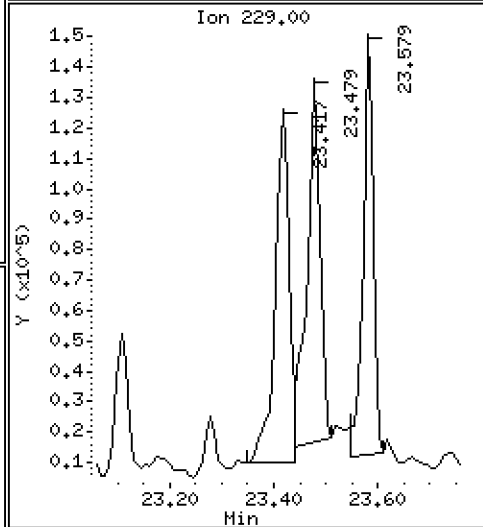
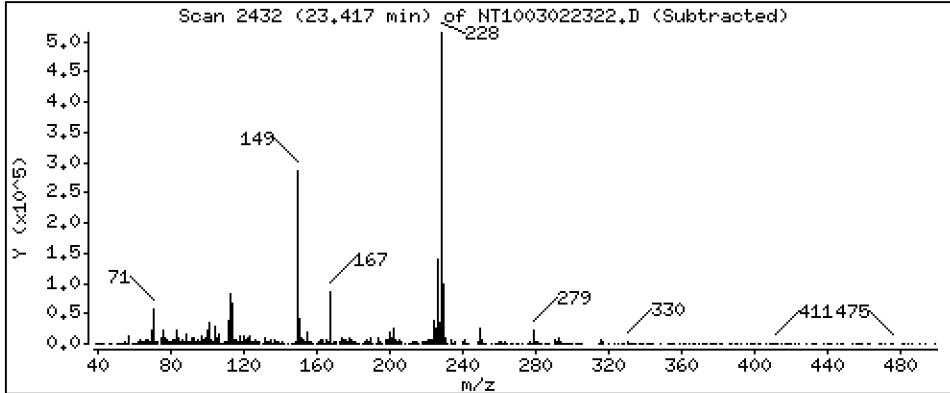
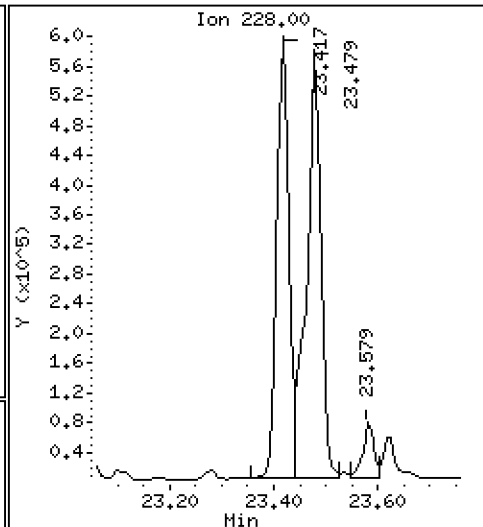
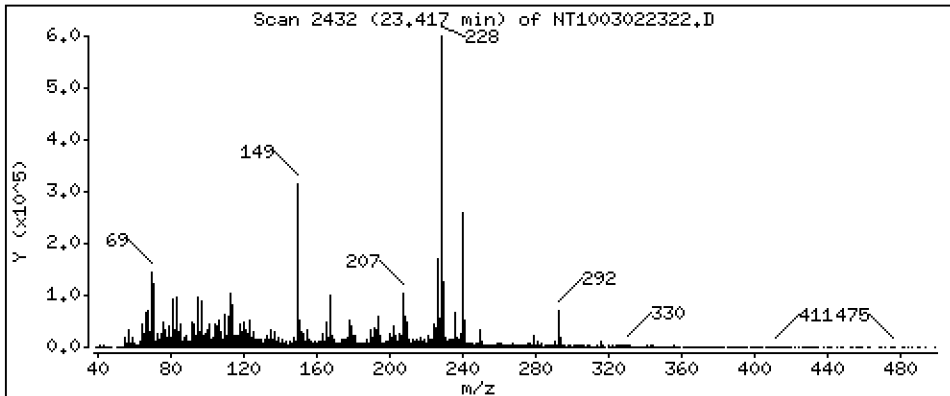
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,278 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

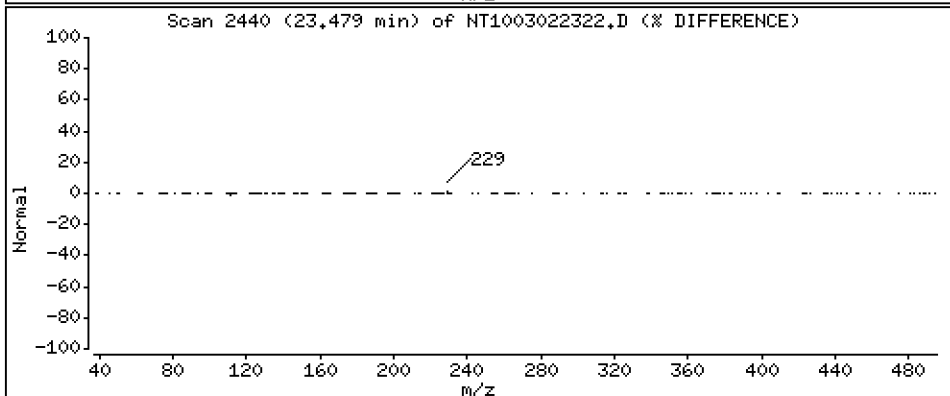
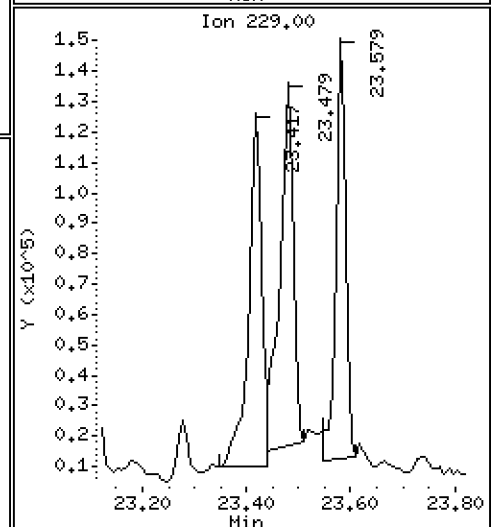
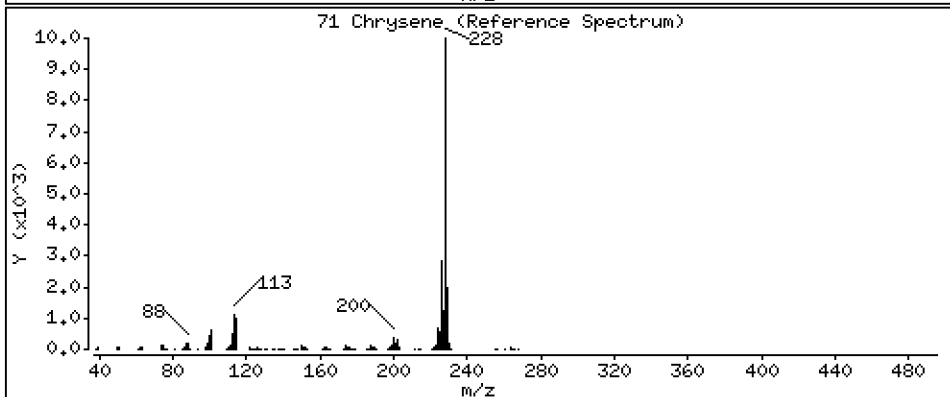
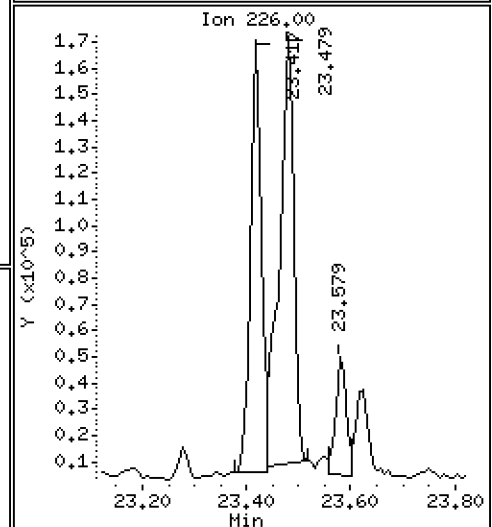
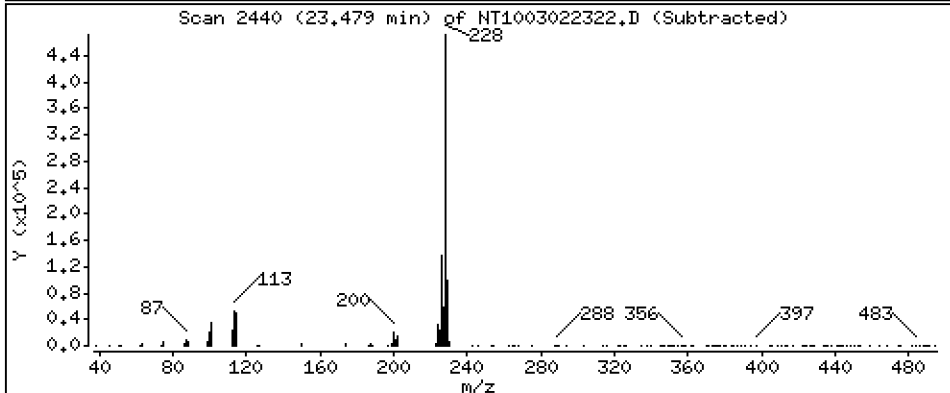
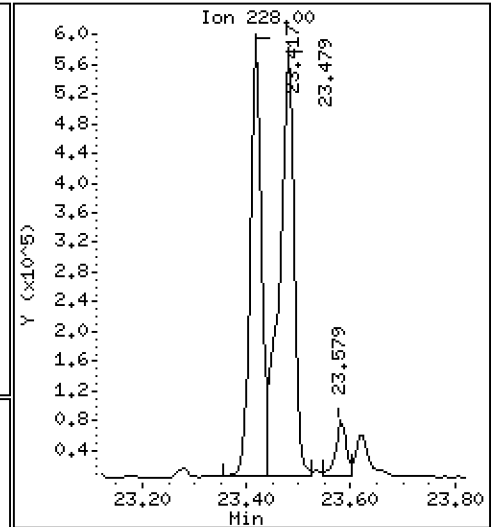
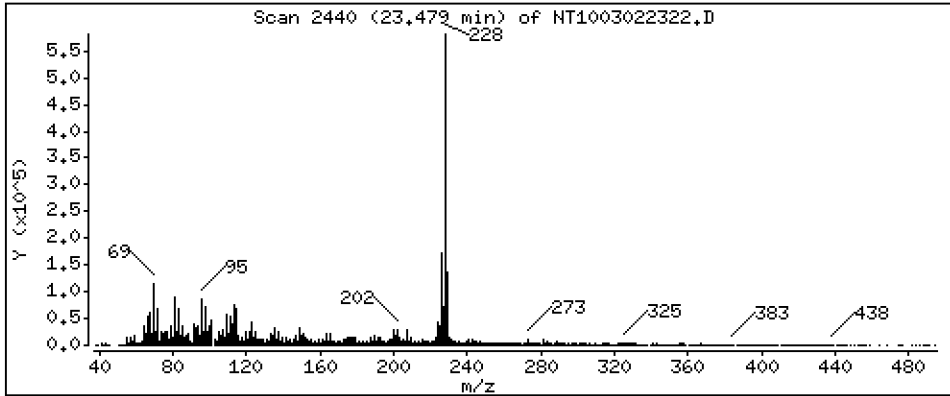
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,893 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

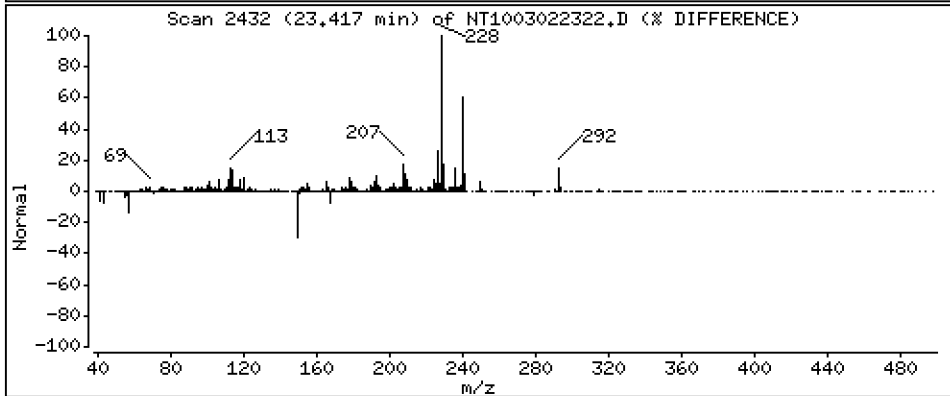
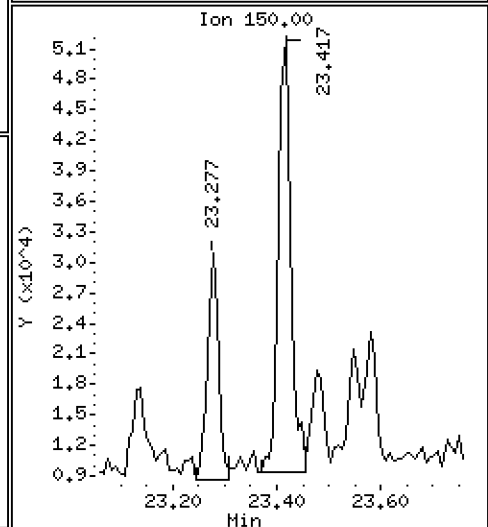
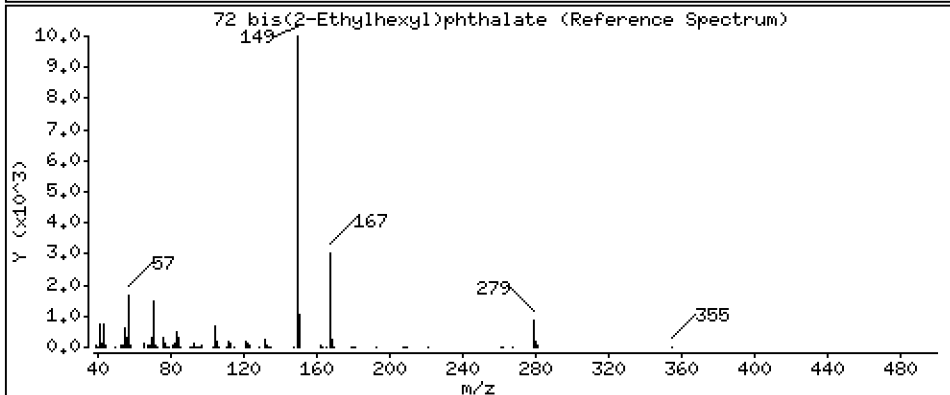
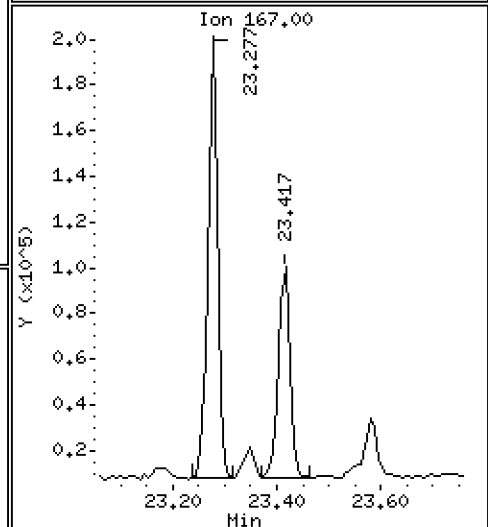
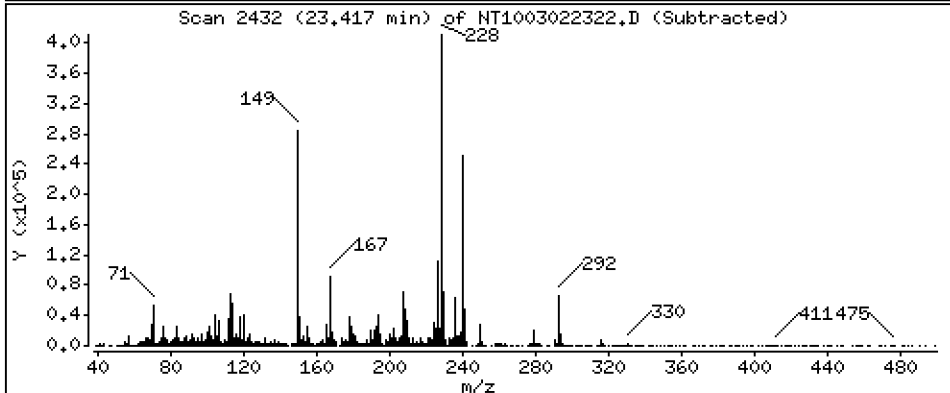
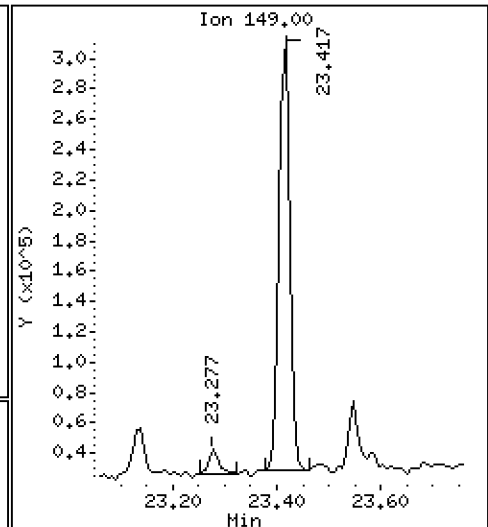
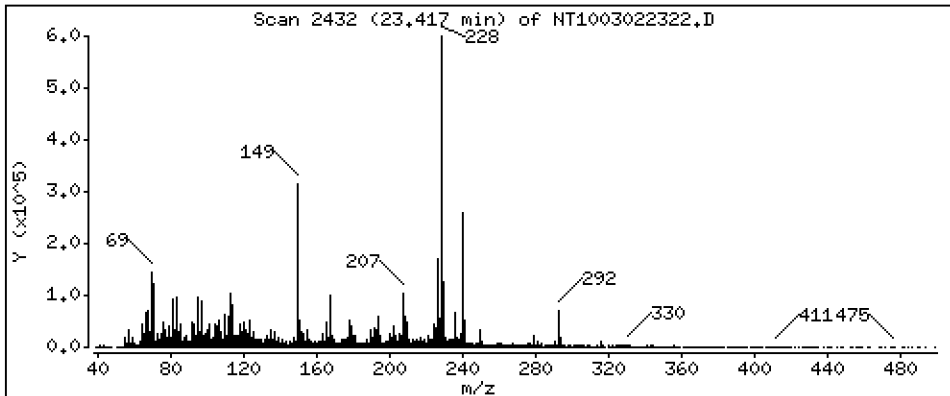
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,7085 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

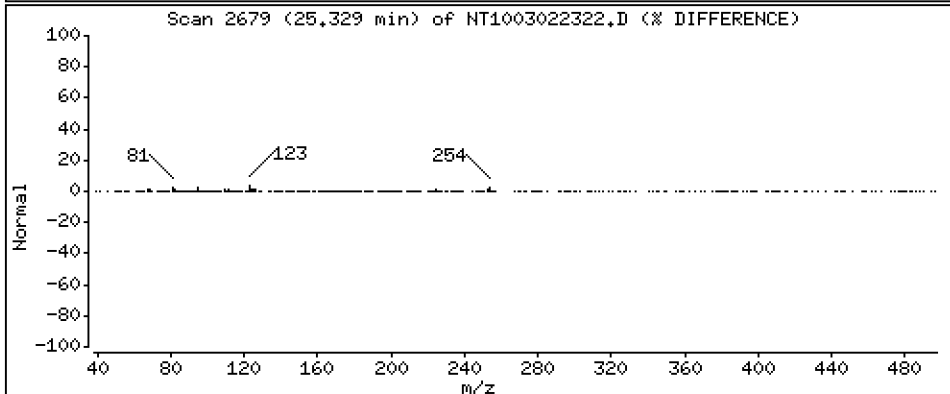
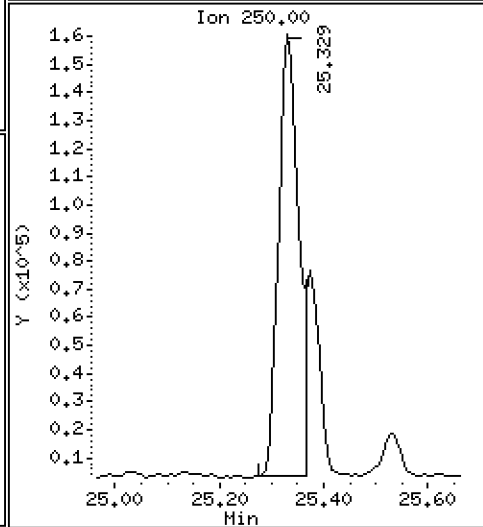
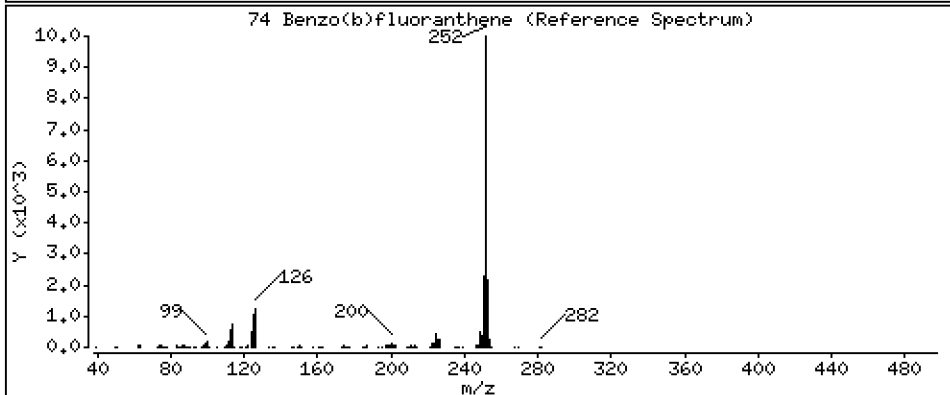
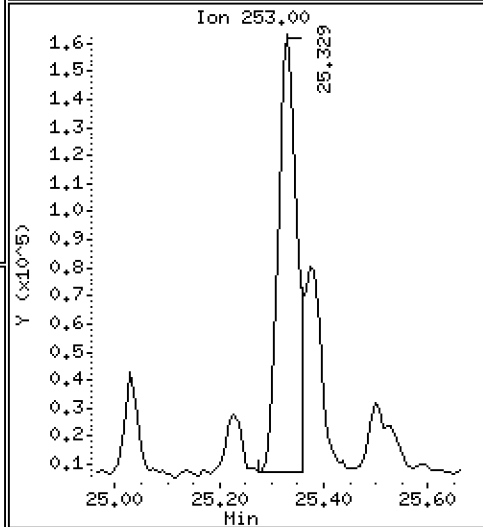
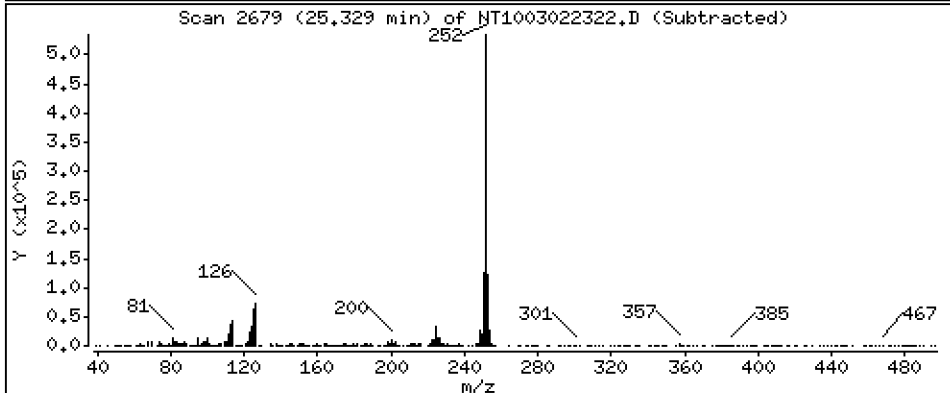
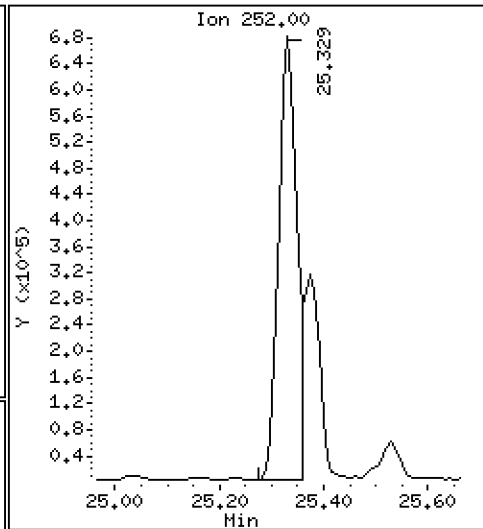
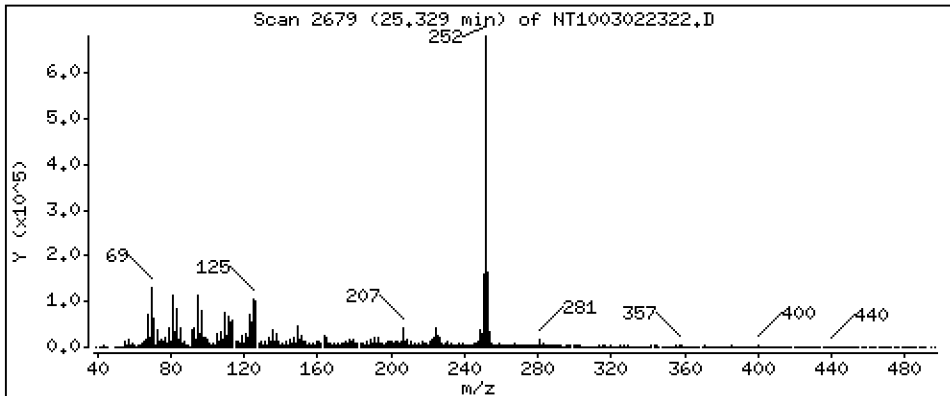
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 2,228 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

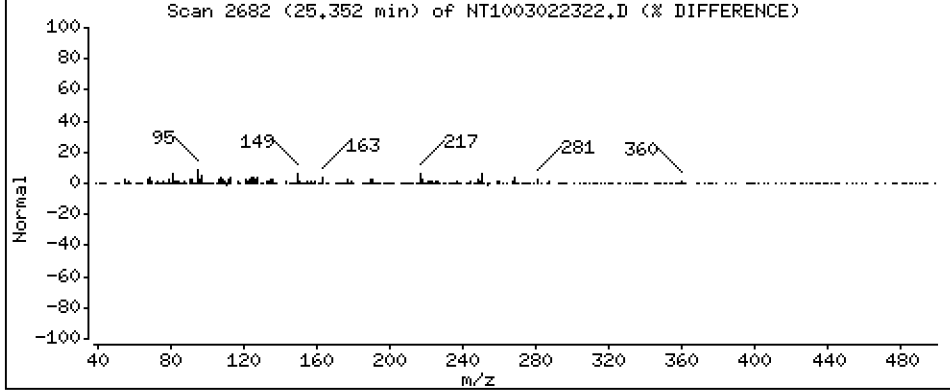
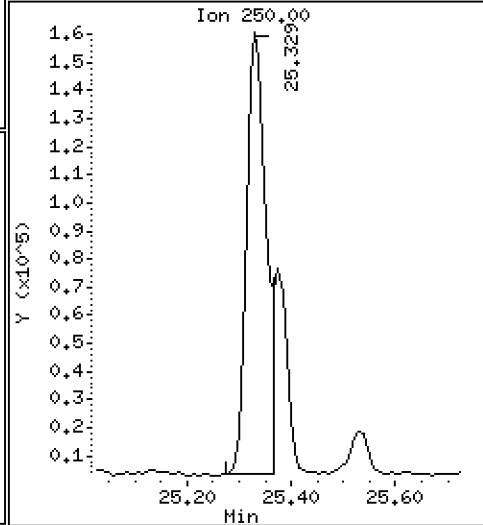
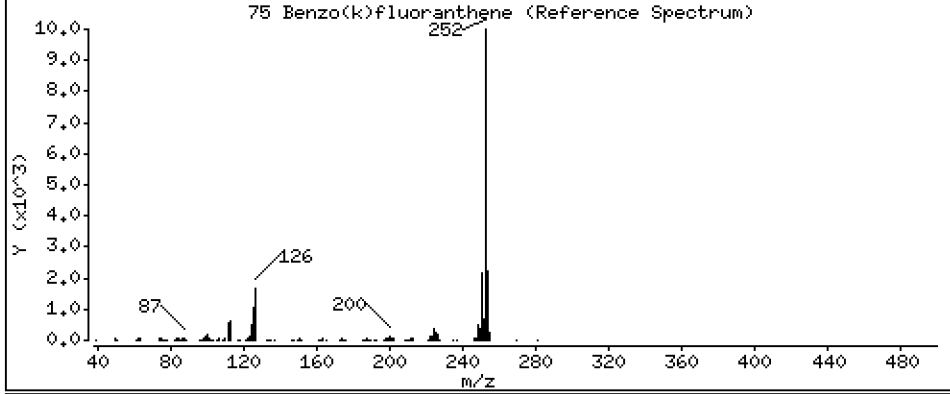
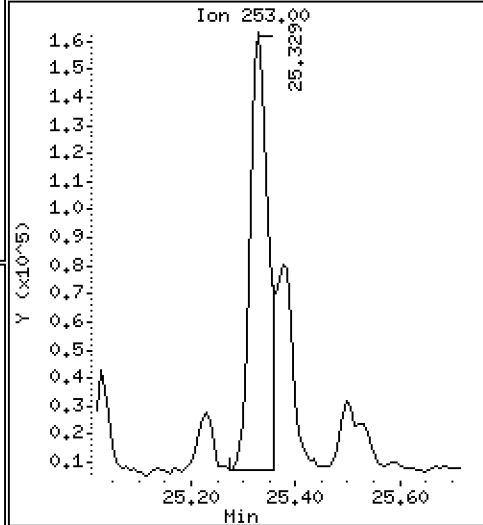
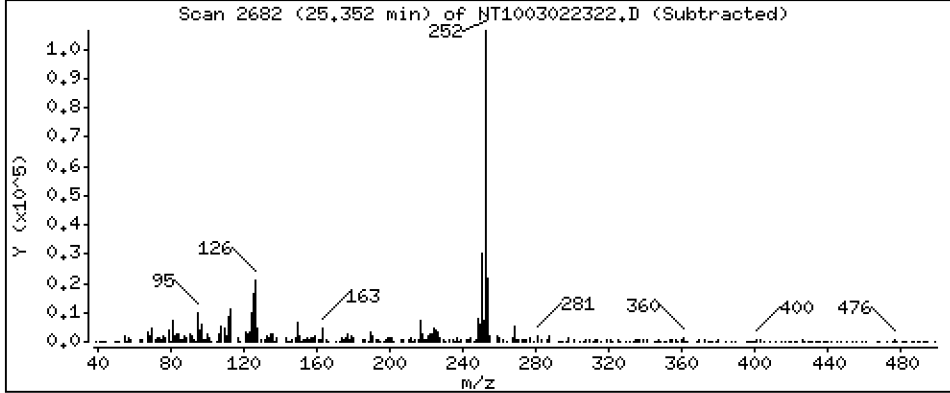
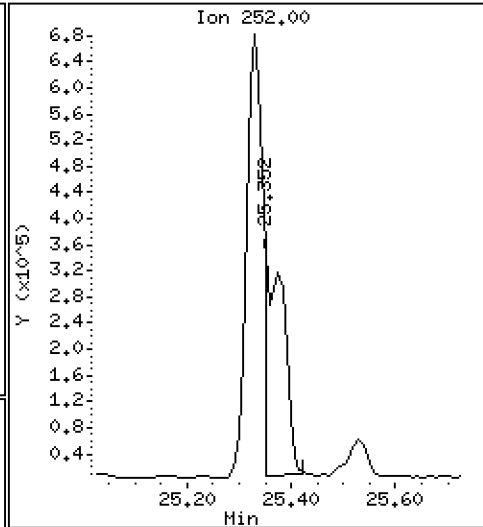
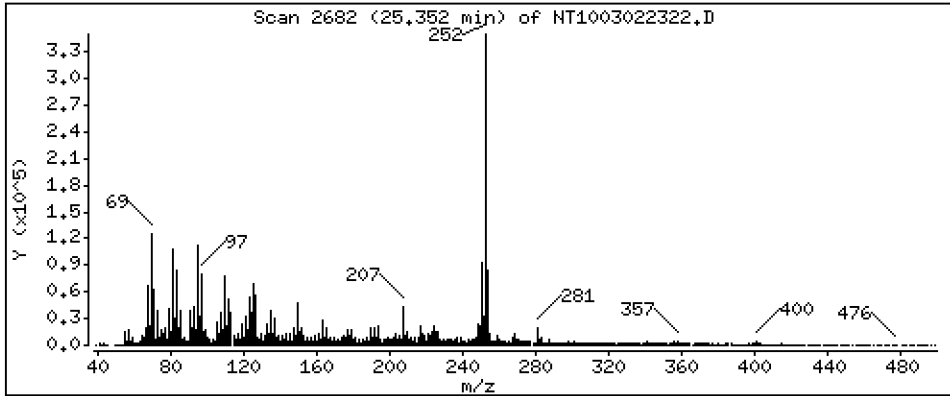
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 1,161 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

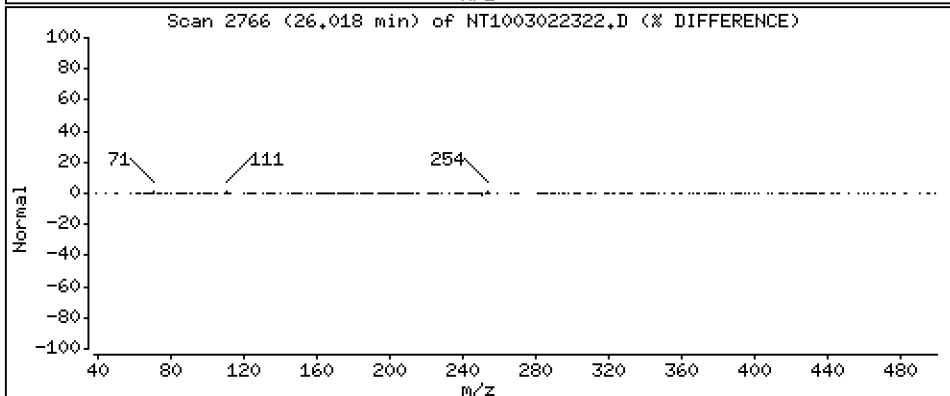
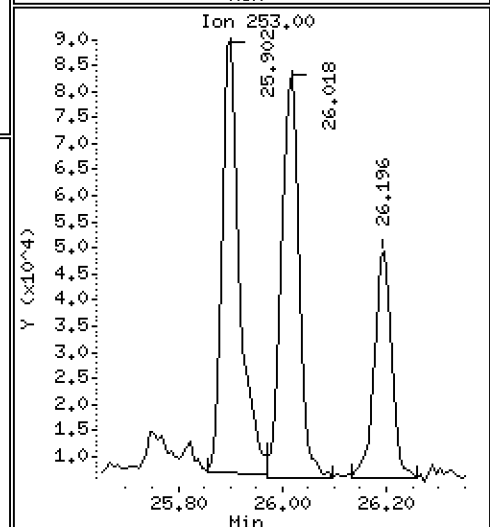
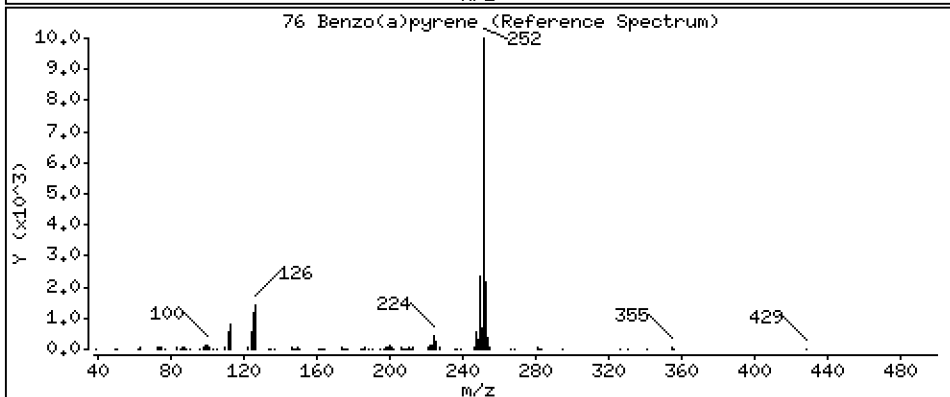
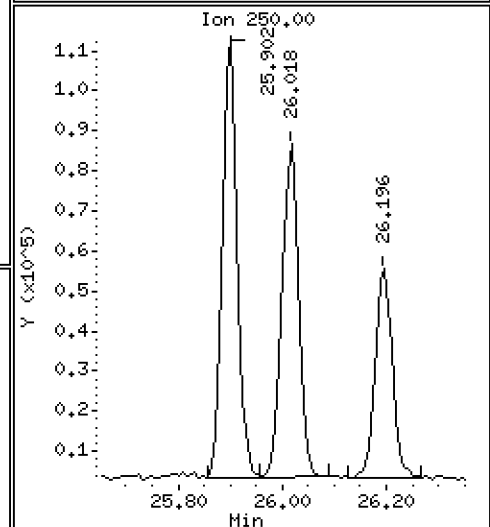
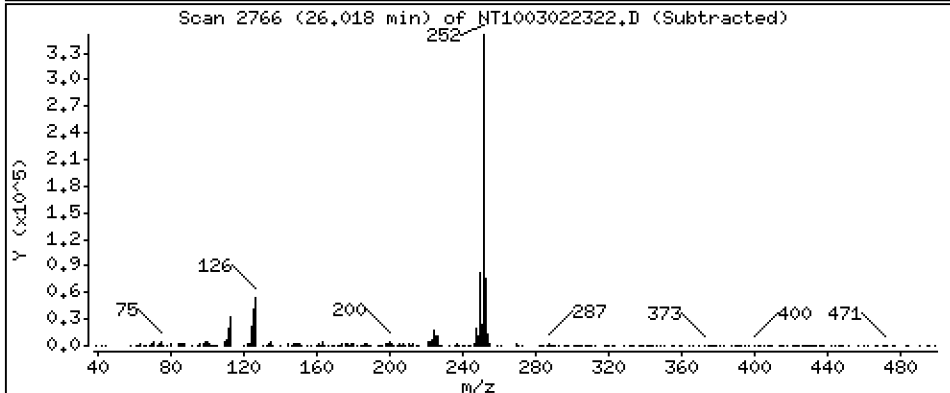
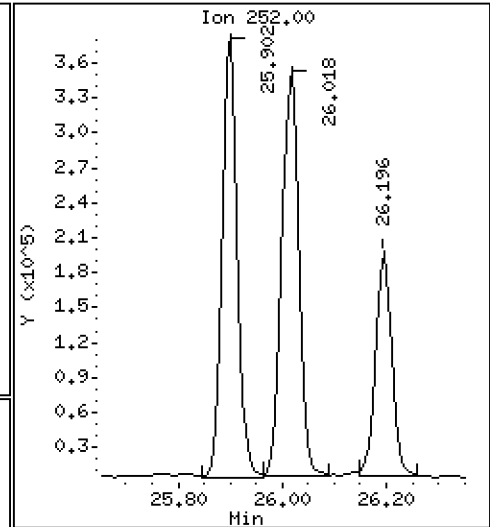
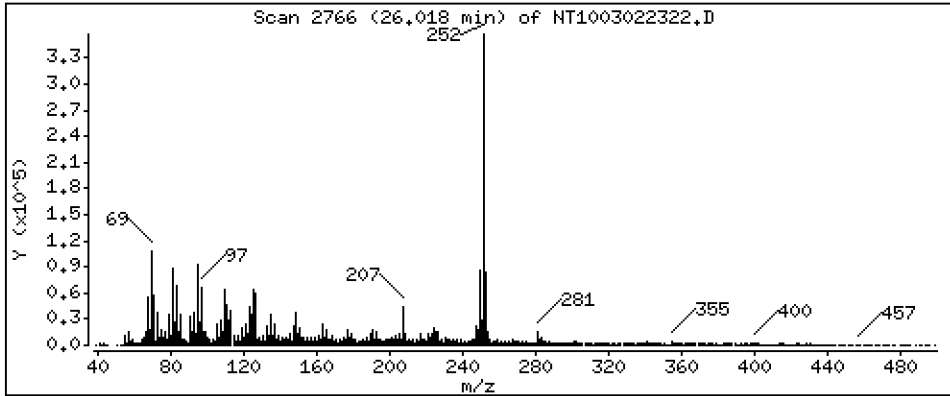
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 1,162 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

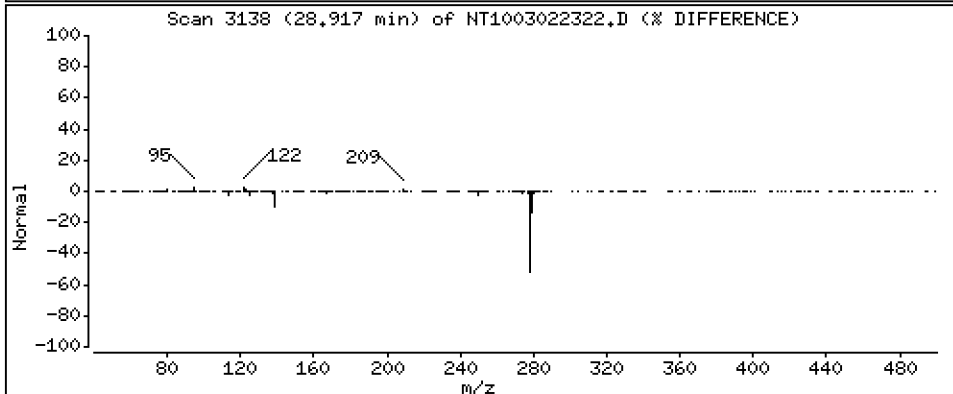
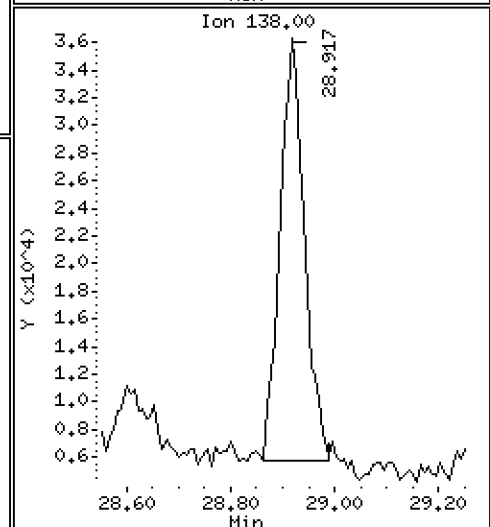
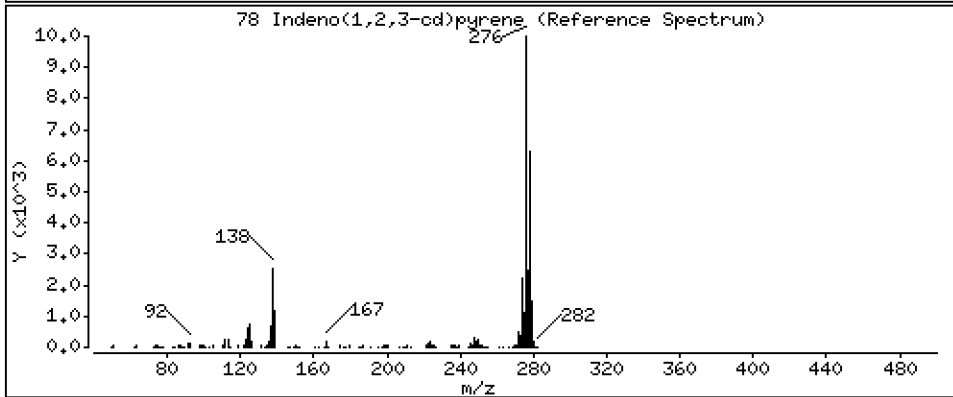
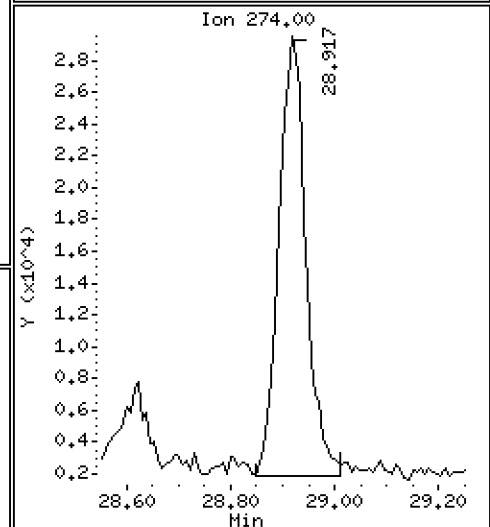
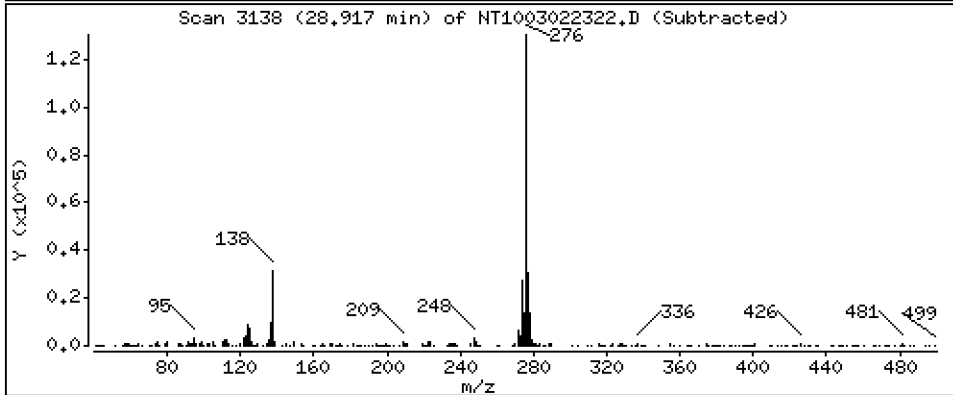
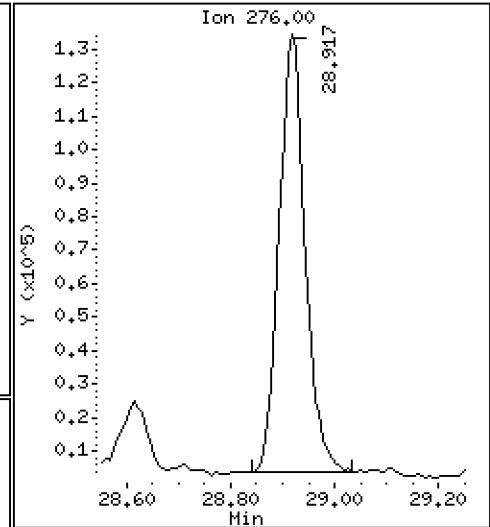
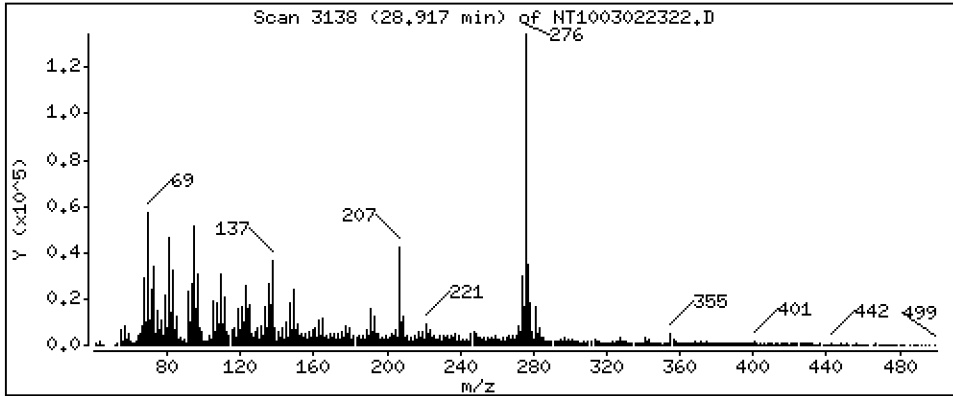
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,5878 ug/mL





Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

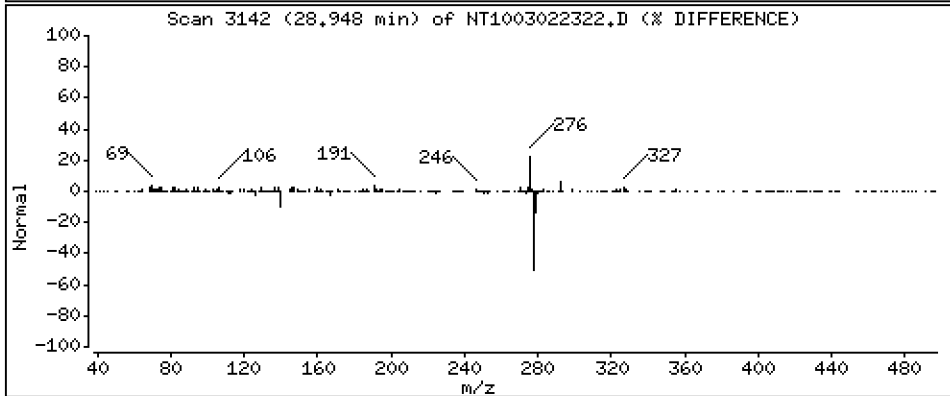
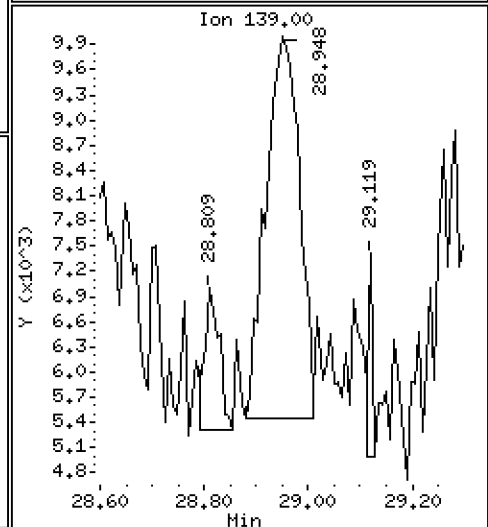
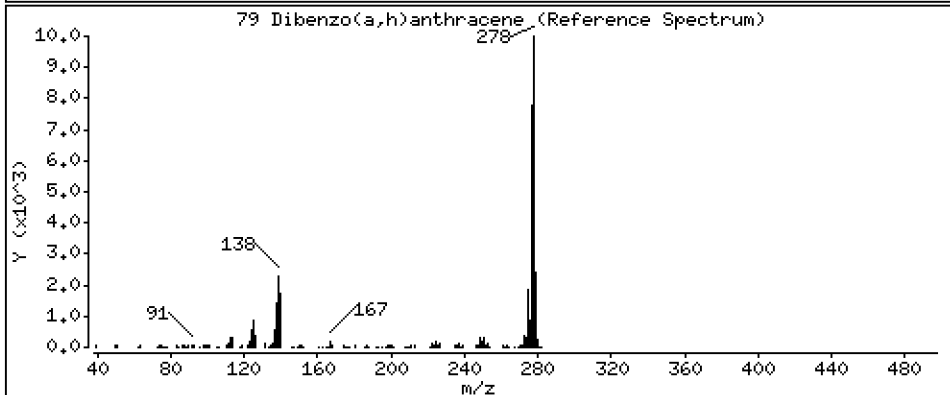
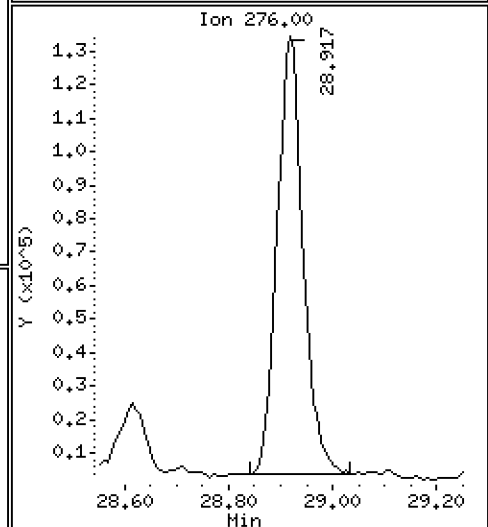
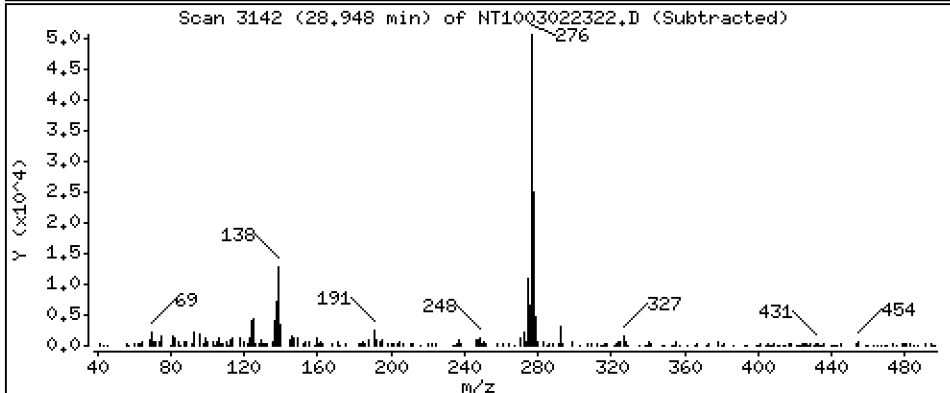
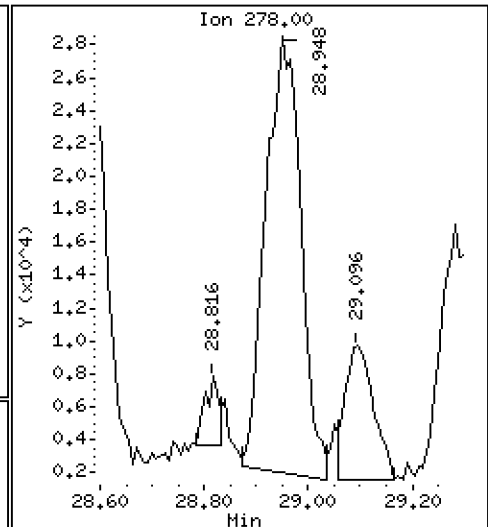
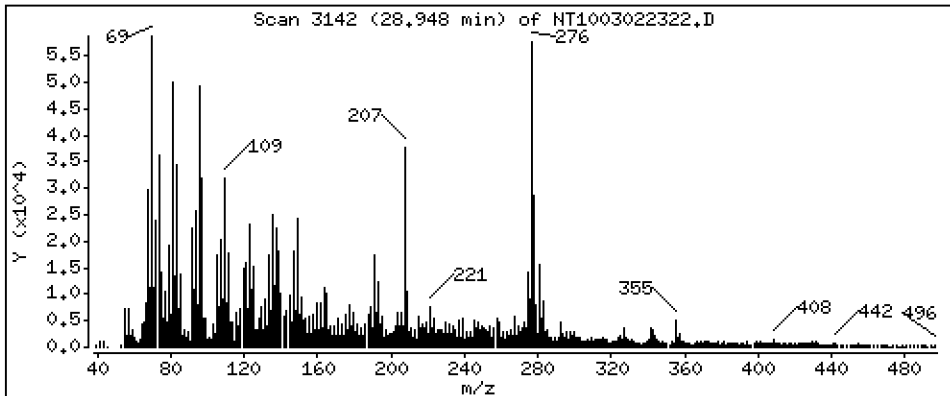
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,2136 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

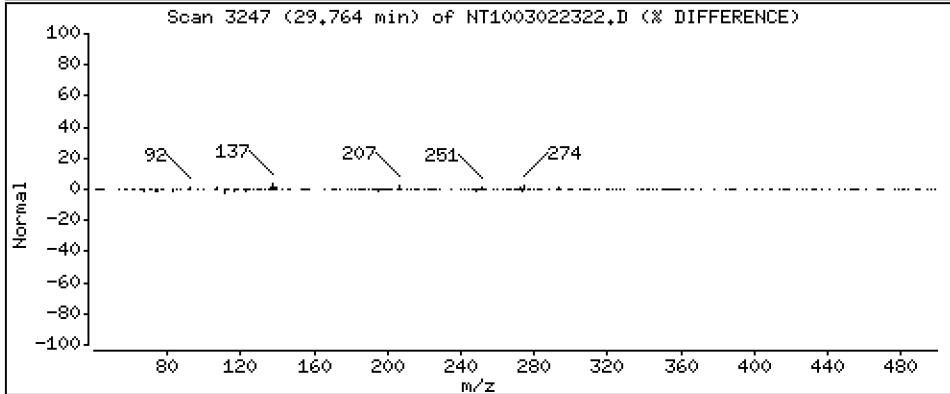
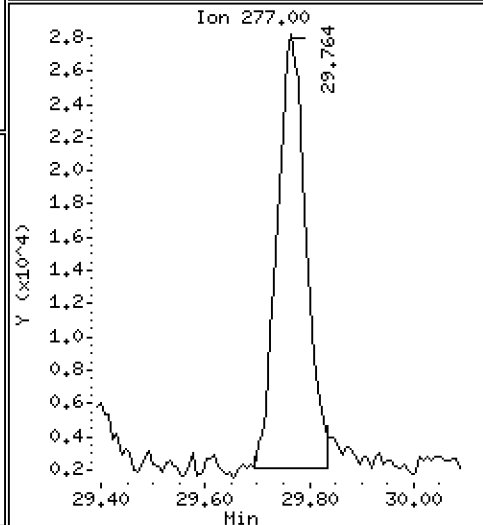
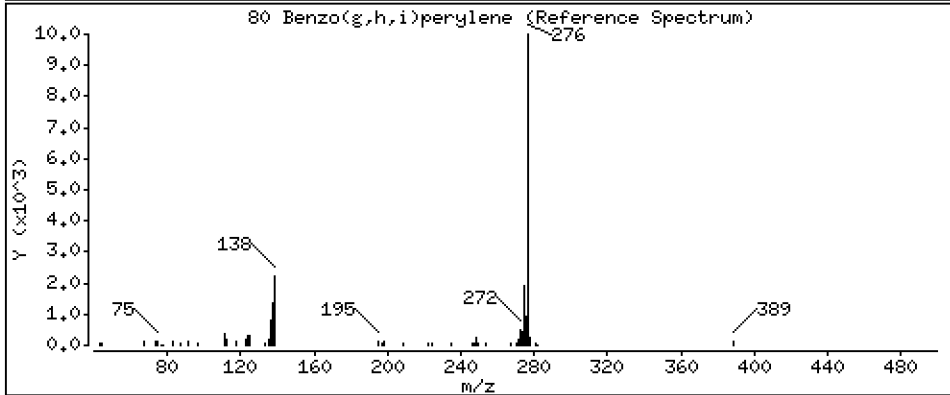
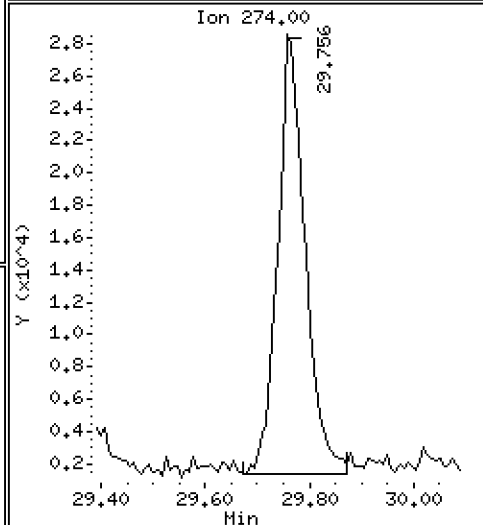
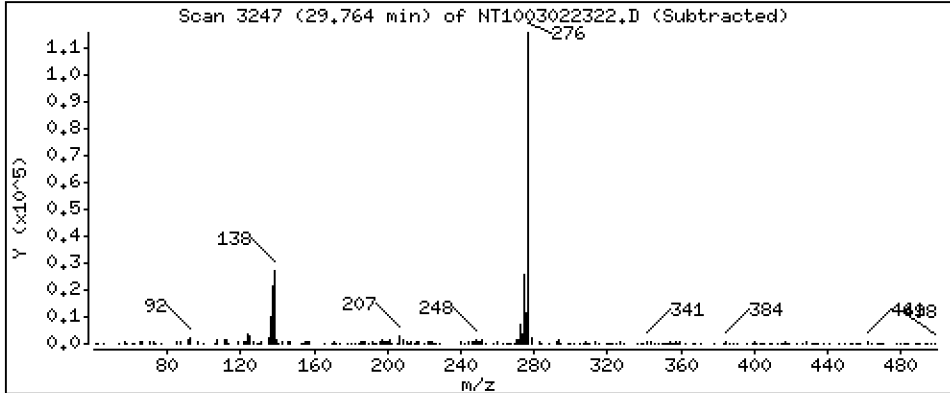
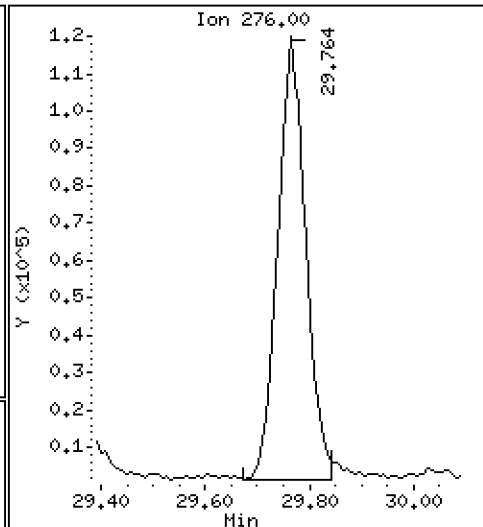
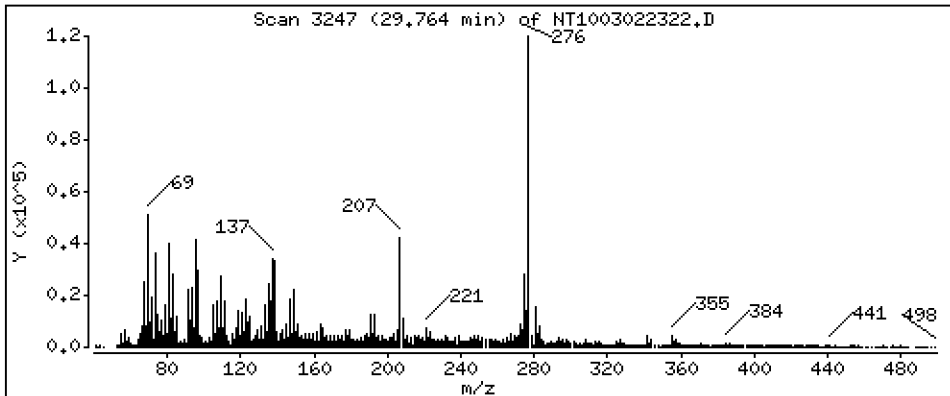
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,7205 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

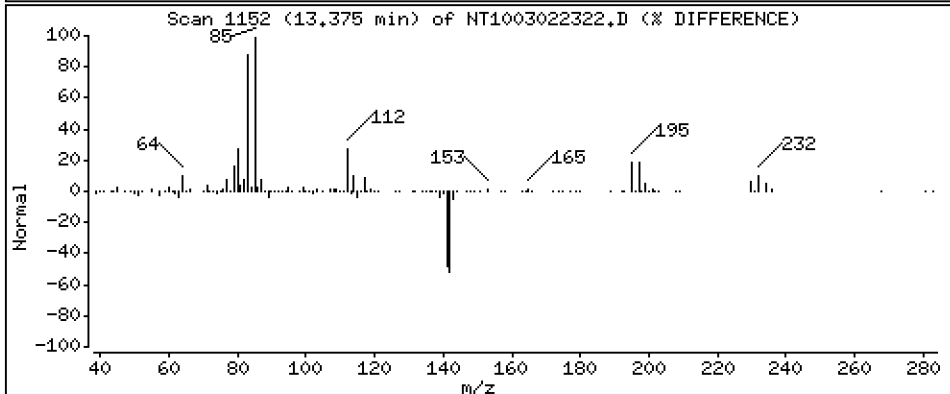
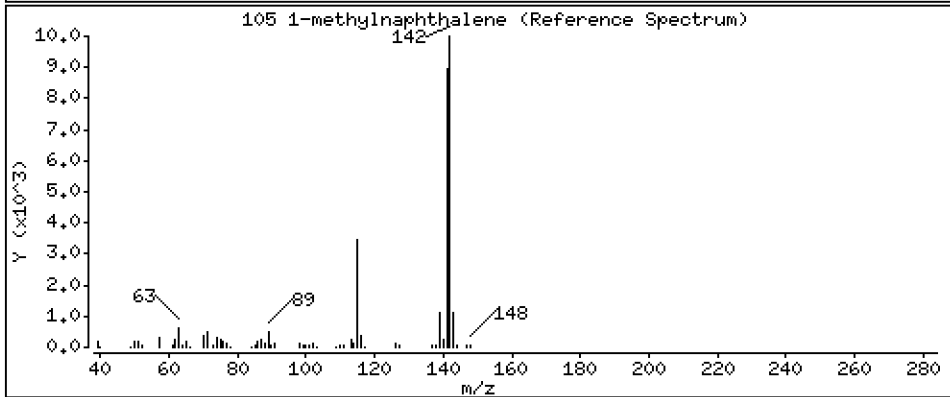
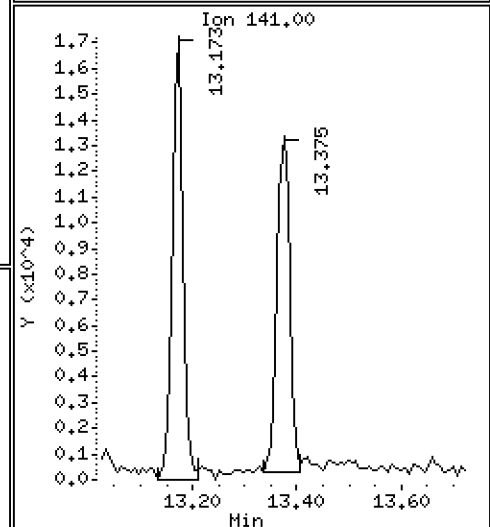
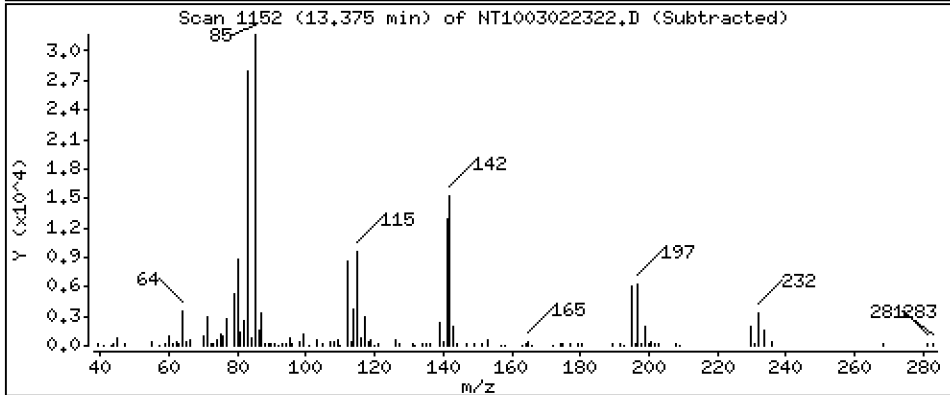
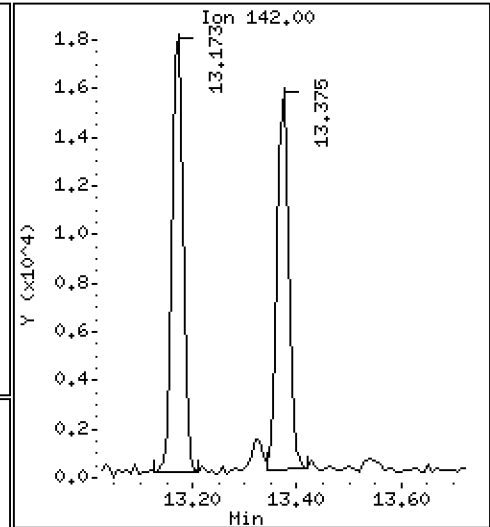
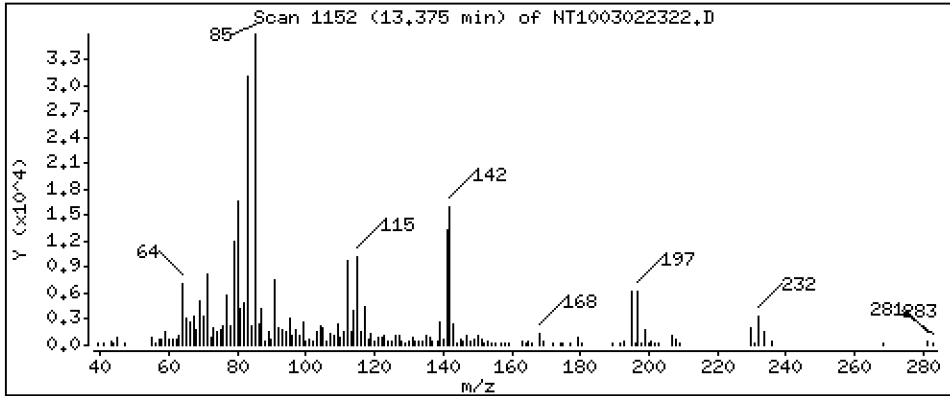
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,07542 ug/mL



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

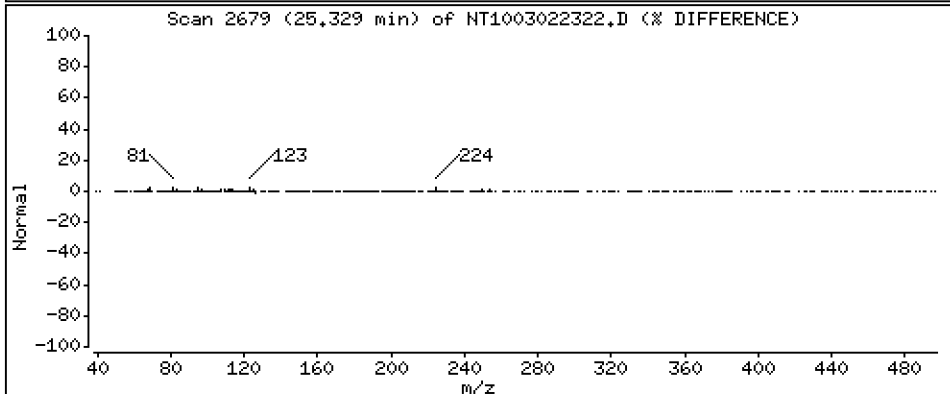
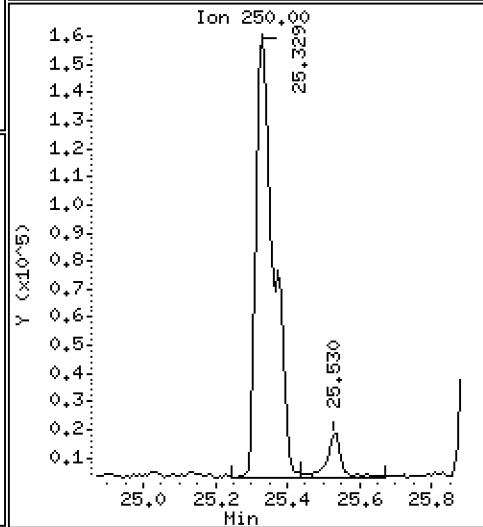
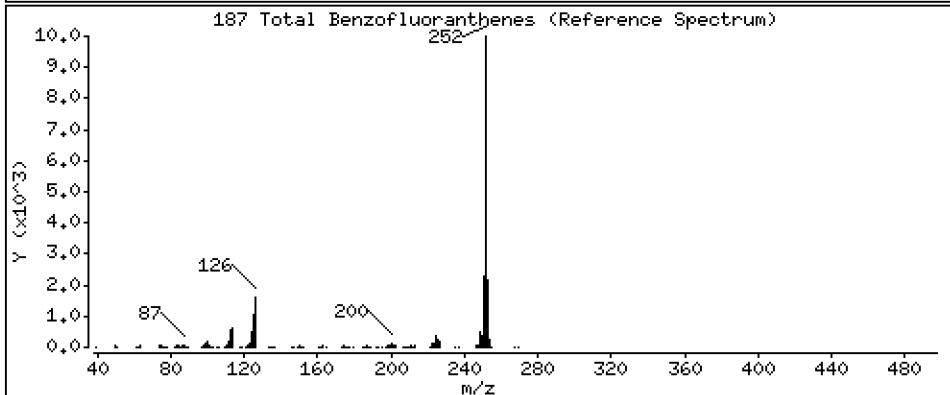
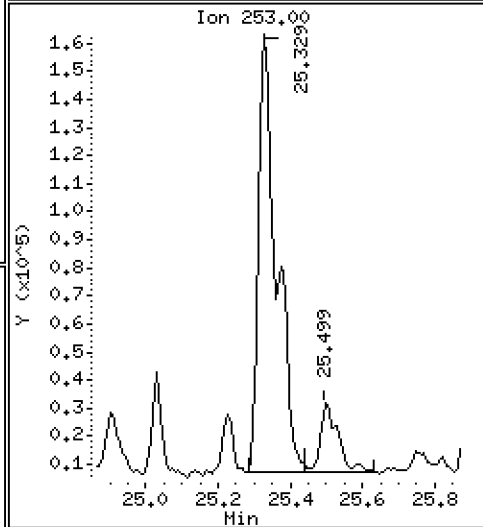
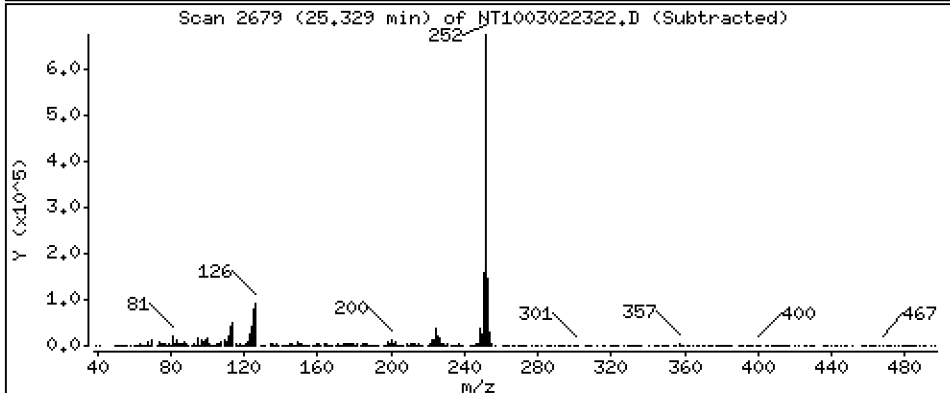
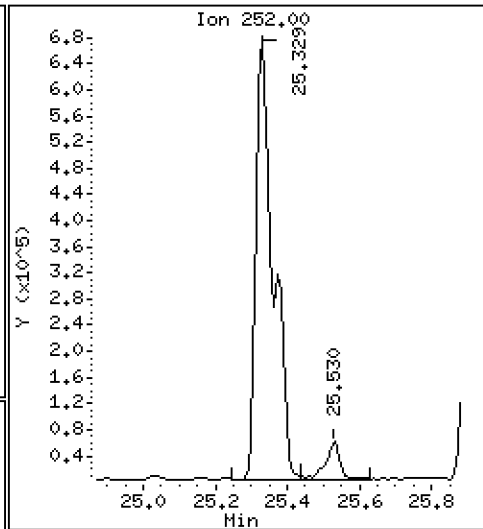
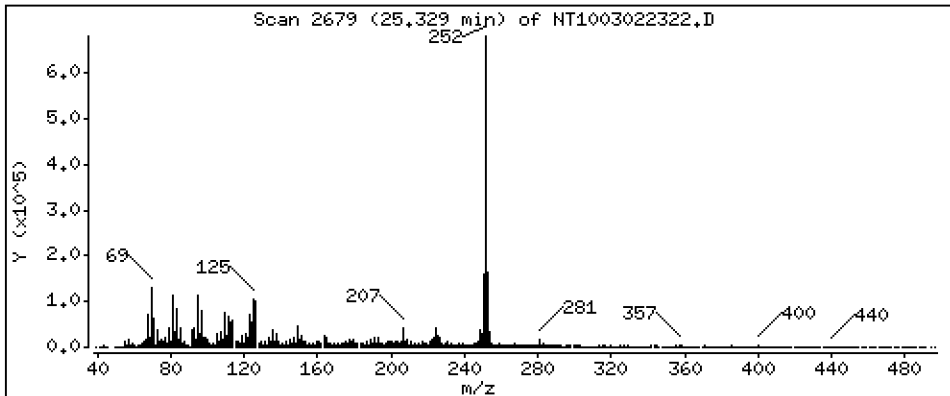
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 3,133 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022322.D

Lab Smp Id: 23A0206-07

Inj Date : 03-MAR-2023 03:41

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-07

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 18

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	990753	6.25065	6.251
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1285752	6.98696	6.987
3 Phenol	94		8.527	8.520	(0.922)	616096	3.14894	3.149
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1084220	6.90575	6.906
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	503783	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	470570	4.01168	4.012
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.480	(1.026)	16804	0.16749	0.1675
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.961	9.946	(1.077)	12442	0.06544	0.06544 (M)
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	909153	4.51018	4.510
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1836337	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	40247	0.08539	0.08539
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.165	(1.123)	28264	0.08489	0.08489
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.908)	1616510	4.75145	4.751
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163							
40 Acenaphthylene	152		15.030	15.031	(0.981)	41931	0.09107	0.09107
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.324	15.317	(1.000)	953830	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153		15.386	15.386	(1.004)	47820	0.17221	0.1722
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168		15.742	15.750	(1.027)	54948	0.13333	0.1333
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149		16.206	16.214	(1.058)	74669	0.22882	0.2288
49 Fluorene	166							
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169							
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.106)	405484	6.60781	6.608
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1793518	4.00000	
60 Phenanthrene	178		18.463	18.456	(1.003)	429888	0.93659	0.9366
61 Anthracene	178		18.571	18.564	(1.009)	146913	0.33009	0.3301
62 Carbazole	167		18.896	18.897	(1.026)	52279	0.12822	0.1282
63 Di-n-butylphthalate	149		19.600	19.593	(1.065)	142702	0.25774	0.2577
64 Fluoranthene	202		20.846	20.823	(0.890)	1185771	1.70198	1.702
65 Pyrene	202		21.264	21.256	(0.907)	1487283	2.09648	2.096
\$ 66 Terphenyl-d14	244		21.542	21.535	(0.919)	2632046	4.58527	4.585
67 Butylbenzylphthalate	149		22.417	22.418	(0.957)	24986	0.06539	0.06539
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	912869	1.27834	1.278
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2025243	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228		23.478	23.471	(1.002)	1098906	1.89350	1.893
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	382332	0.70846	0.7085
* 134 Di-n-octylphthalate-d4	153		24.492	24.493	(1.000)	3836077	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252		25.328	25.313	(0.969)	1686252	2.22820	2.228
75 Benzo(k)fluoranthene	252		25.352	25.375	(0.970)	836362	1.16112	1.161 (M)
76 Benzo(a)pyrene	252		26.018	26.002	(0.995)	777166	1.16245	1.162
* 77 Perylene-d12	264		26.142	26.126	(1.000)	2170434	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.917	28.902	(1.106)	456746	0.58779	0.5878
79 Dibenzo(a,h)anthracene	278		28.948	28.948	(1.107)	125370	0.21358	0.2136
80 Benzo(g,h,i)perylene	276		29.764	29.740	(1.139)	446264	0.72047	0.7205
90 N-Nitrosodimethylamine	74							
91 Aniline	93							
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	22729	0.07542	0.07542
111 Azobenzene (1,2-DP-Hydrazine)	77							

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.328	25.375	(0.969)	2261961	3.13348	3.133	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022322.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-07  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	503783	-15.92
27 Naphthalene-d8	2200781	1100391	4401562	1836337	-16.56
42 Acenaphthene-d10	1135136	567568	2270272	953830	-15.97
59 Phenanthrene-d10	2128944	1064472	4257888	1793518	-15.76
69 Chrysene-d12	2449624	1224812	4899248	2025243	-17.32
134 Di-n-octylphthala	4694735	2347368	9389470	3836077	-18.29
77 Perylene-d12	2593218	1296609	5186436	2170434	-16.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.14	0.06

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



REVIEW SUMMARY FOR FILE - NT1003022322.D

Lab ID: 23A0206-07

nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 03:41

RT CO-ELUTION COMPOUNDS

---

23.417 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

---

NONE

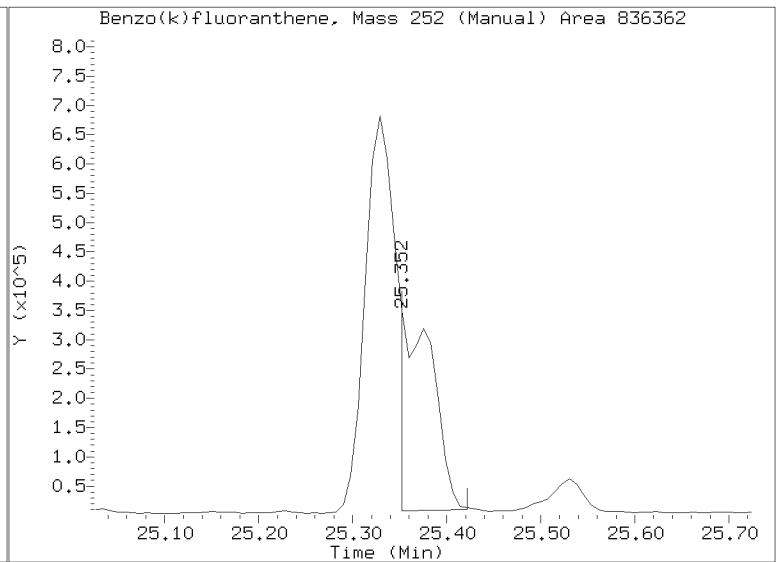
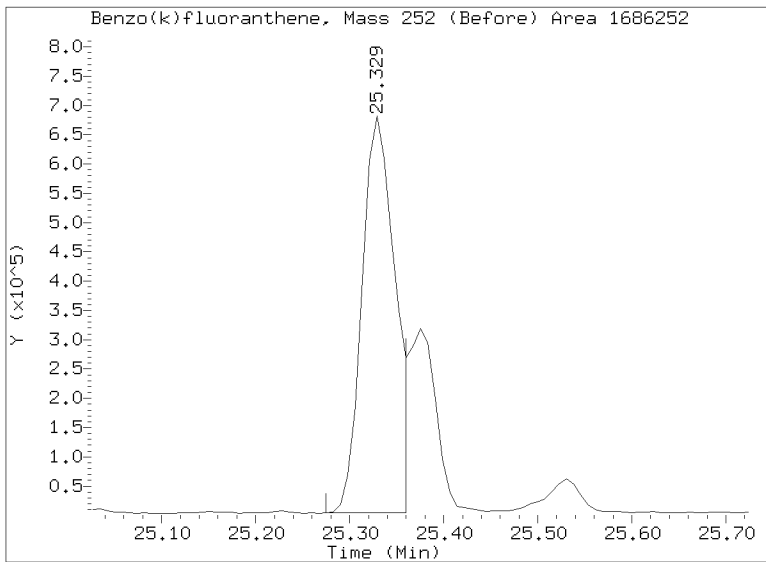
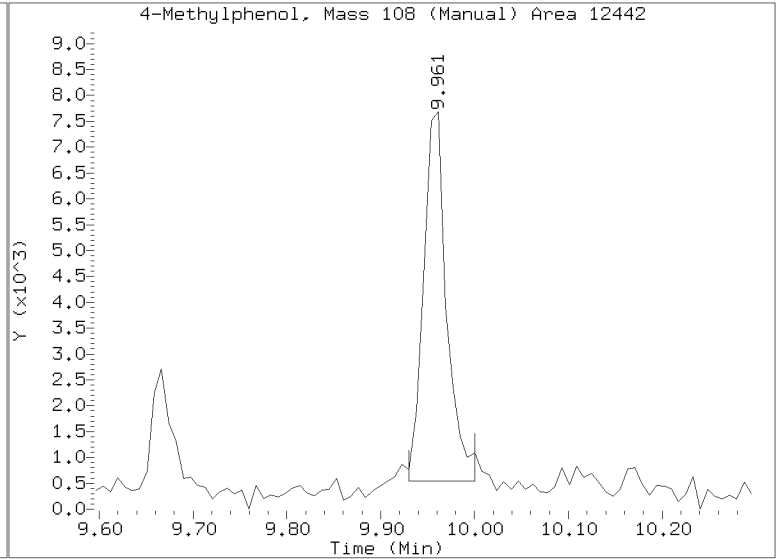
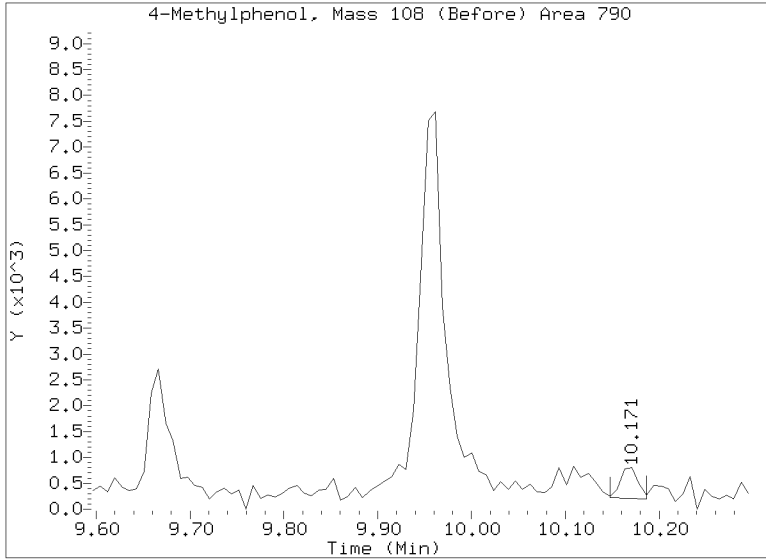
RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022322.D  
Injection Date: 03-MAR-2023 03:41  
Lab ID:23A0206-07 Client ID:  
Report Date: 03/09/2023 15:50





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-08 B

SDG: 23A0206

Sampled: 01/11/23 10:40

Prepared: 01/27/23 14:44

File ID: NT1003022323.D

% Solids: 51.97

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:19

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 19.31 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	661		4.4	19.9
106-44-5	4-Methylphenol	1	12.9	J	7.4	19.9
91-20-3	Naphthalene	1	13.1	J	4.2	19.9
91-57-6	2-Methylnaphthalene	1	11.2	J	4.5	19.9
208-96-8	Acenaphthylene	1	9.5	J	6.2	19.9
131-11-3	Dimethylphthalate	1	5.5	J	4.4	19.9
83-32-9	Acenaphthene	1	14.8	J	5.2	19.9
132-64-9	Dibenzofuran	1	15.4	J	14.1	19.9
86-73-7	Fluorene	1	16.7	J	14.5	19.9
85-01-8	Phenanthrene	1	83.5		8.7	19.9
120-12-7	Anthracene	1	37.3		7.2	19.9
206-44-0	Fluoranthene	1	182		6.1	19.9
129-00-0	Pyrene	1	177		5.7	19.9
85-68-7	Butylbenzylphthalate	1	19.9	U	9.4	19.9
56-55-3	Benzo(a)anthracene	1	102		5.9	19.9
218-01-9	Chrysene	1	160		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	65.2		5.4	49.8
	Benzo(a)fluoranthene, Total	1	225		10.0	39.9
50-32-8	Benzo(a)pyrene	1	92.4		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	47.4		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	19.9	U	17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	61.9		13.5	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.35	594	79.4	27 - 120	
Phenol-d5	747.35	682	91.3	29 - 120	
2-Chlorophenol-d4	747.35	665	89.0	31 - 120	
1,2-Dichlorobenzene-d4	498.24	379	76.0	32 - 120	
Nitrobenzene-d5	498.24	430	86.3	30 - 120	
2-Fluorobiphenyl	498.24	451	90.6	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-08 B

SDG: 23A0206

Sampled: 01/11/23 10:40

Prepared: 01/27/23 14:44

File ID: NT1003022323.D

% Solids: 51.97

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:19

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 19.31 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	747.35	613	82.0	24 - 134	
p-Terphenyl-d14	498.24	433	86.9	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A,B\NT1003022323.D

Date: 03-MAR-2023 04:19

Client ID:

Sample Info: 23A0206-08

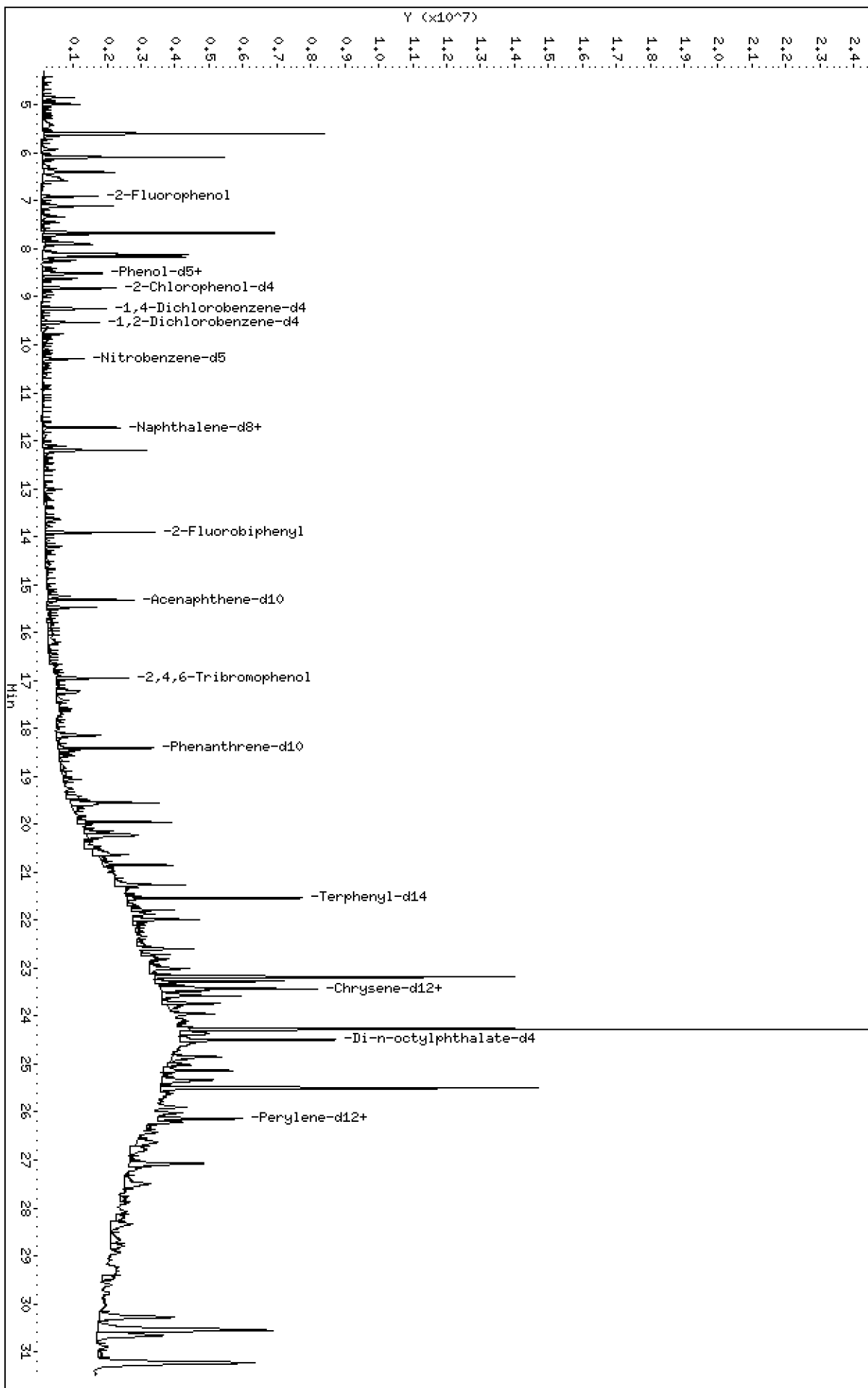
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A,B\NT1003022323.D



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

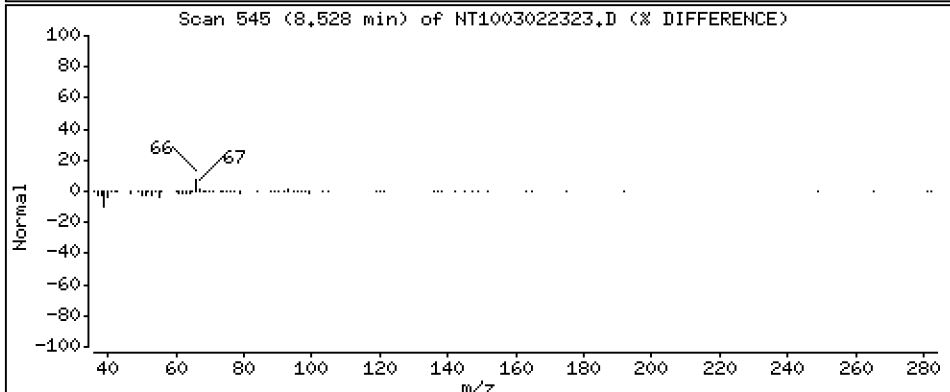
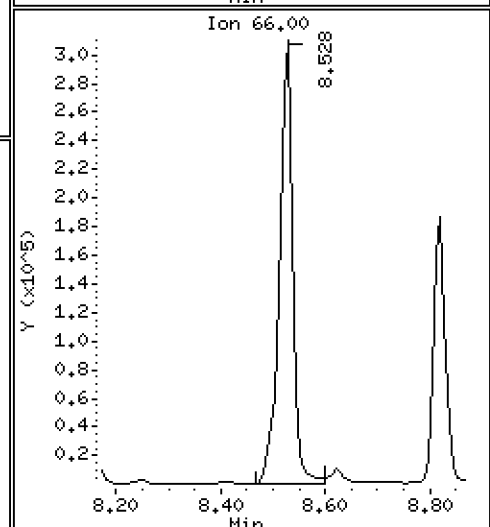
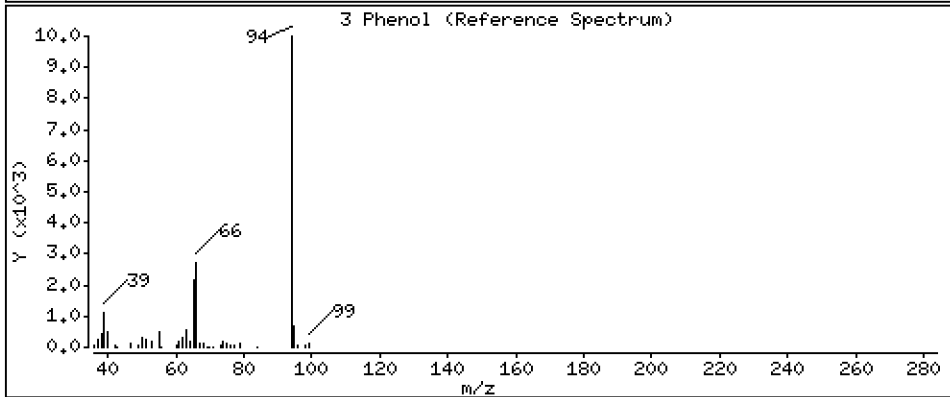
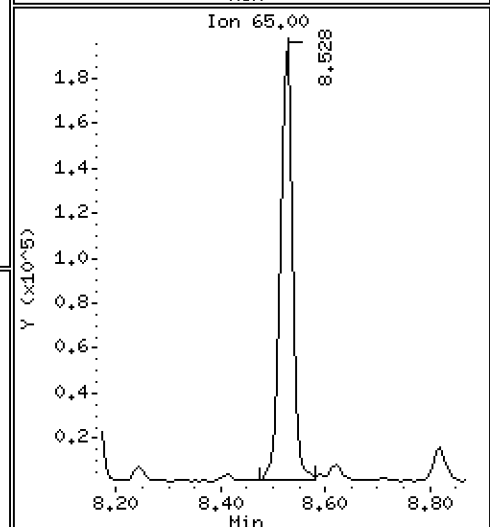
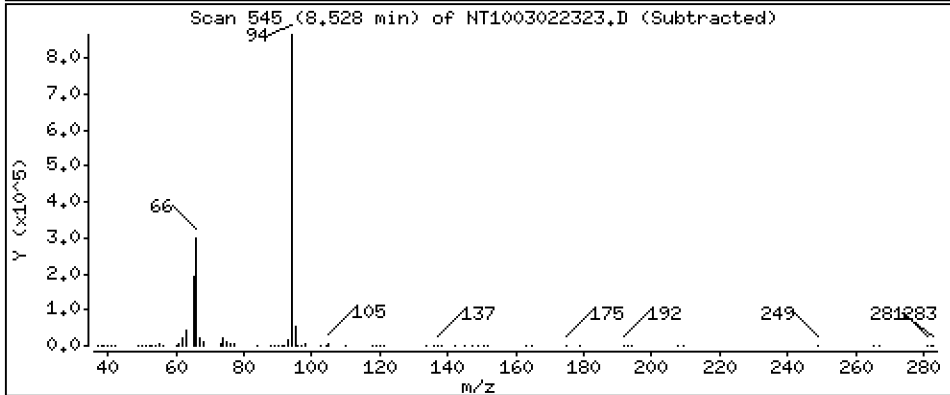
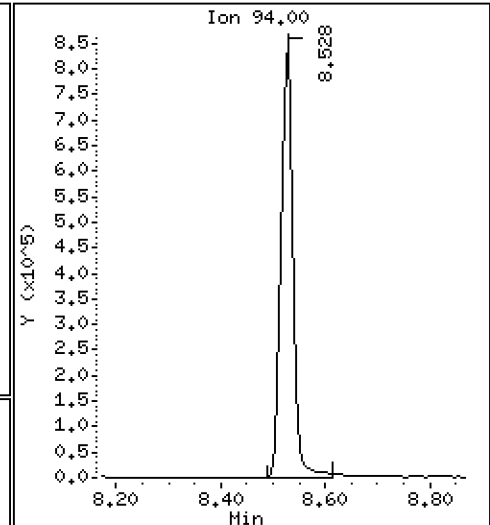
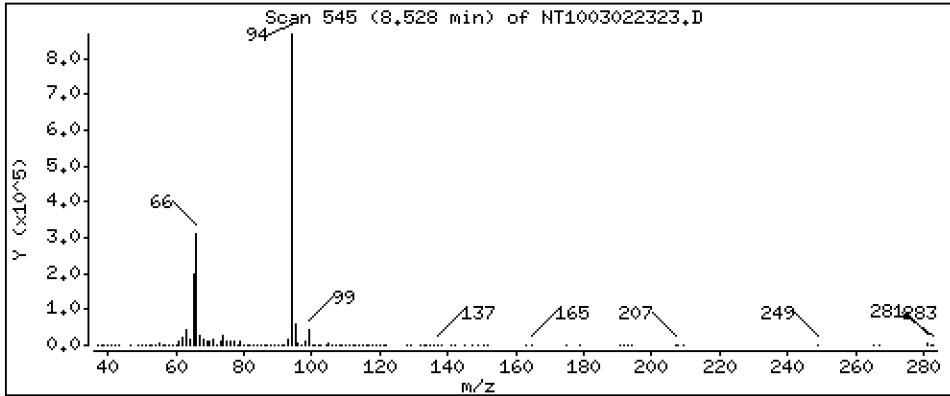
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 6,631 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

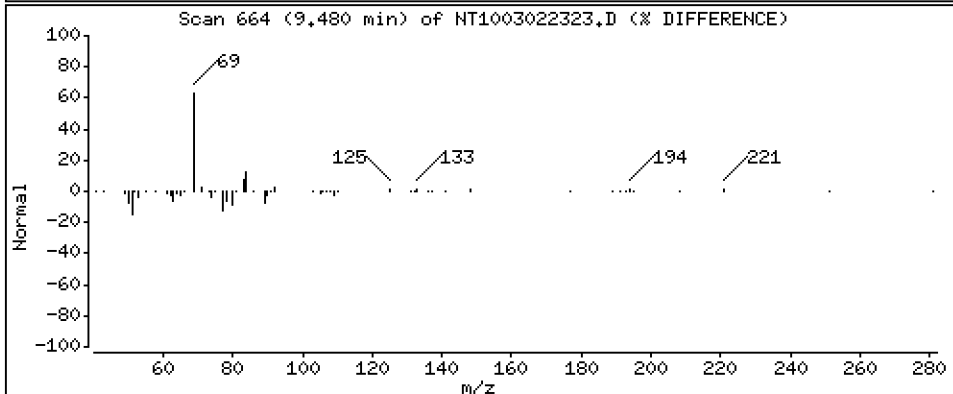
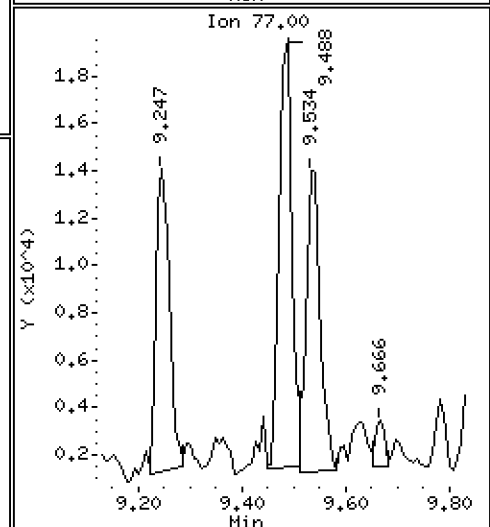
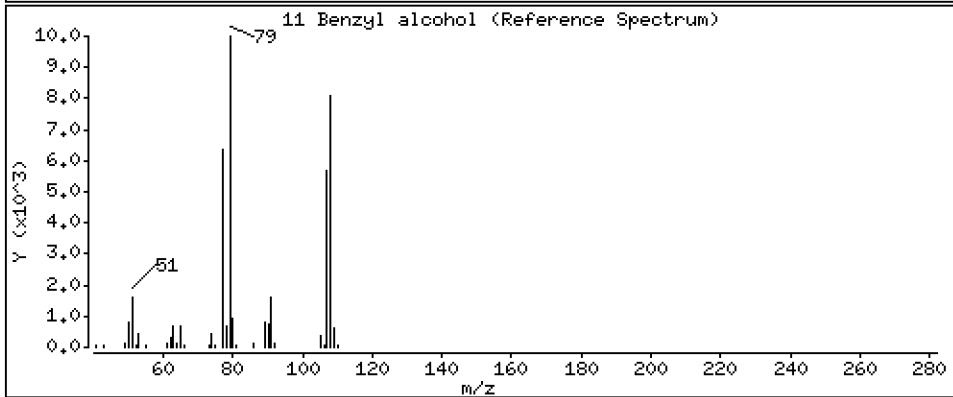
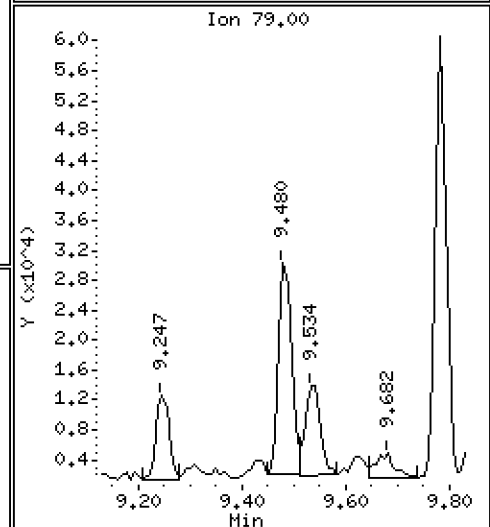
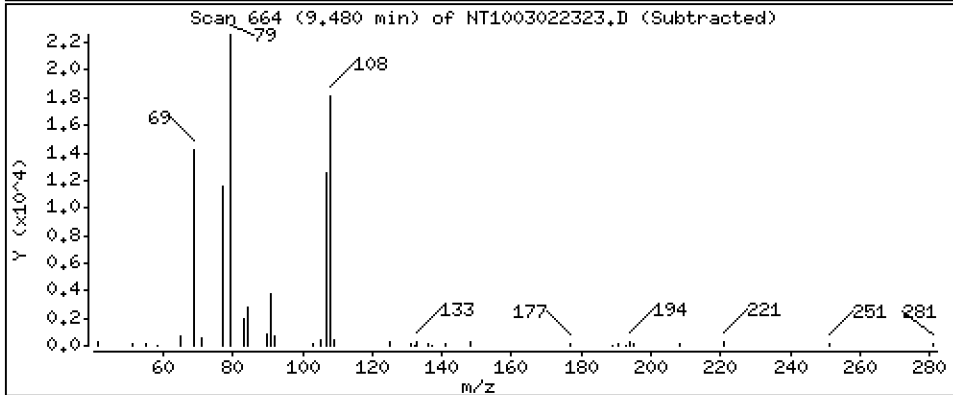
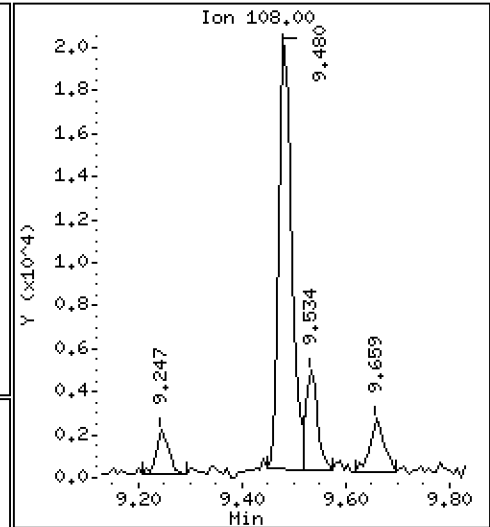
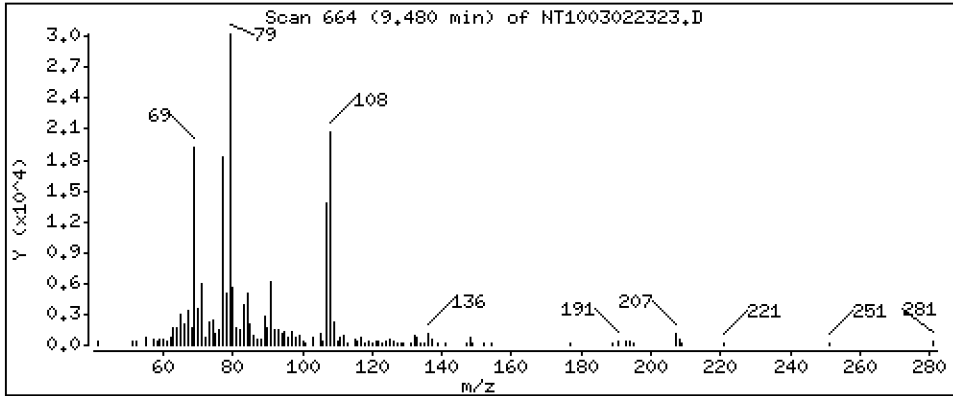
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.3249 ug/mL

11 Benzyl alcohol



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

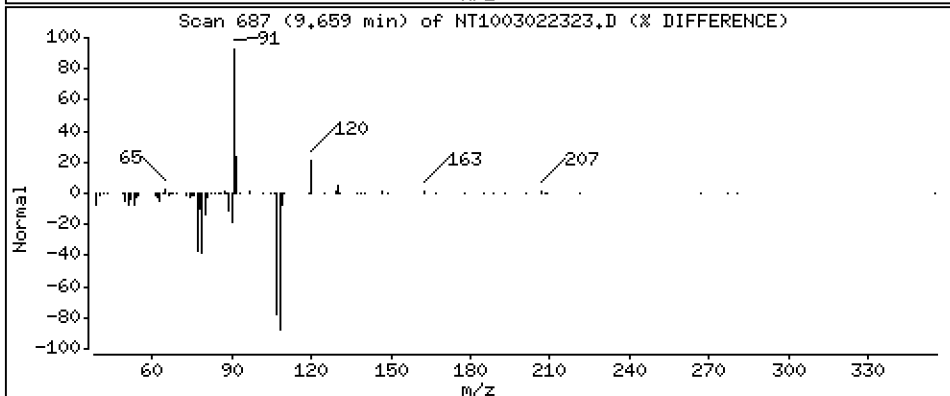
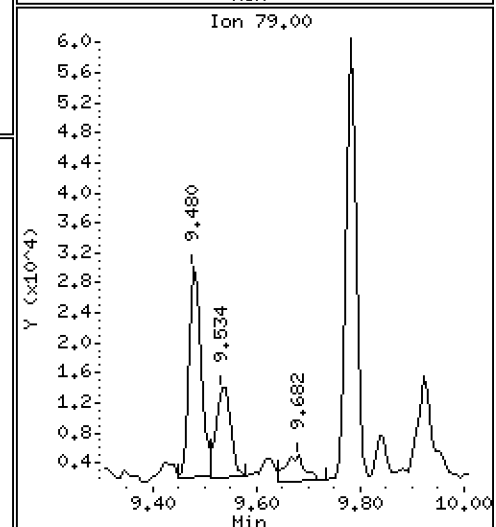
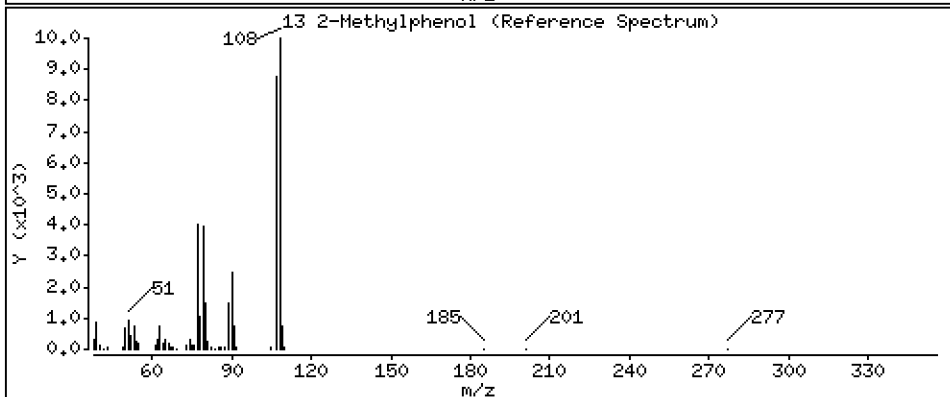
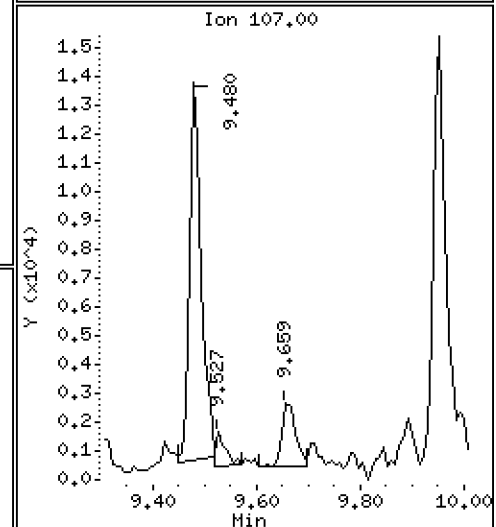
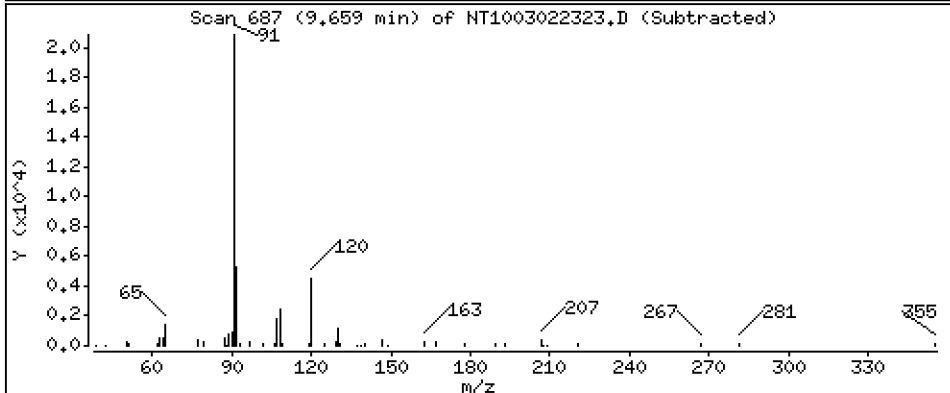
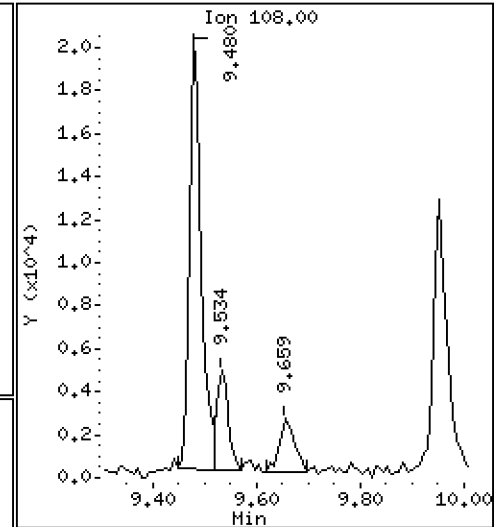
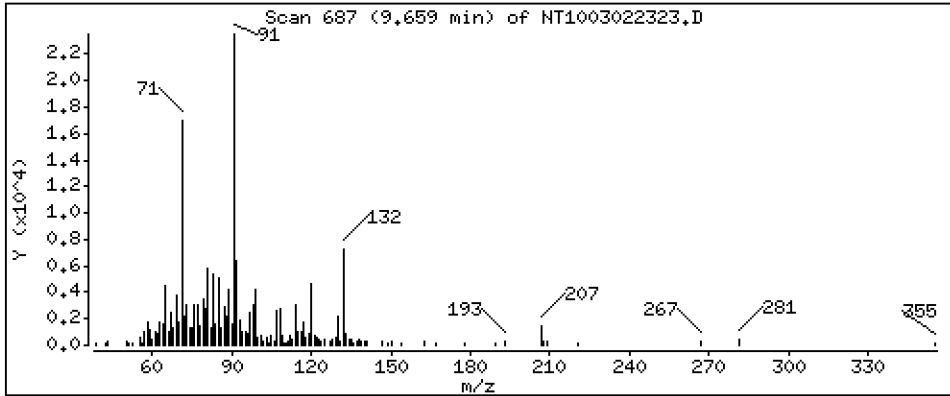
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.03198 ug/mL

13 2-Methylphenol





Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

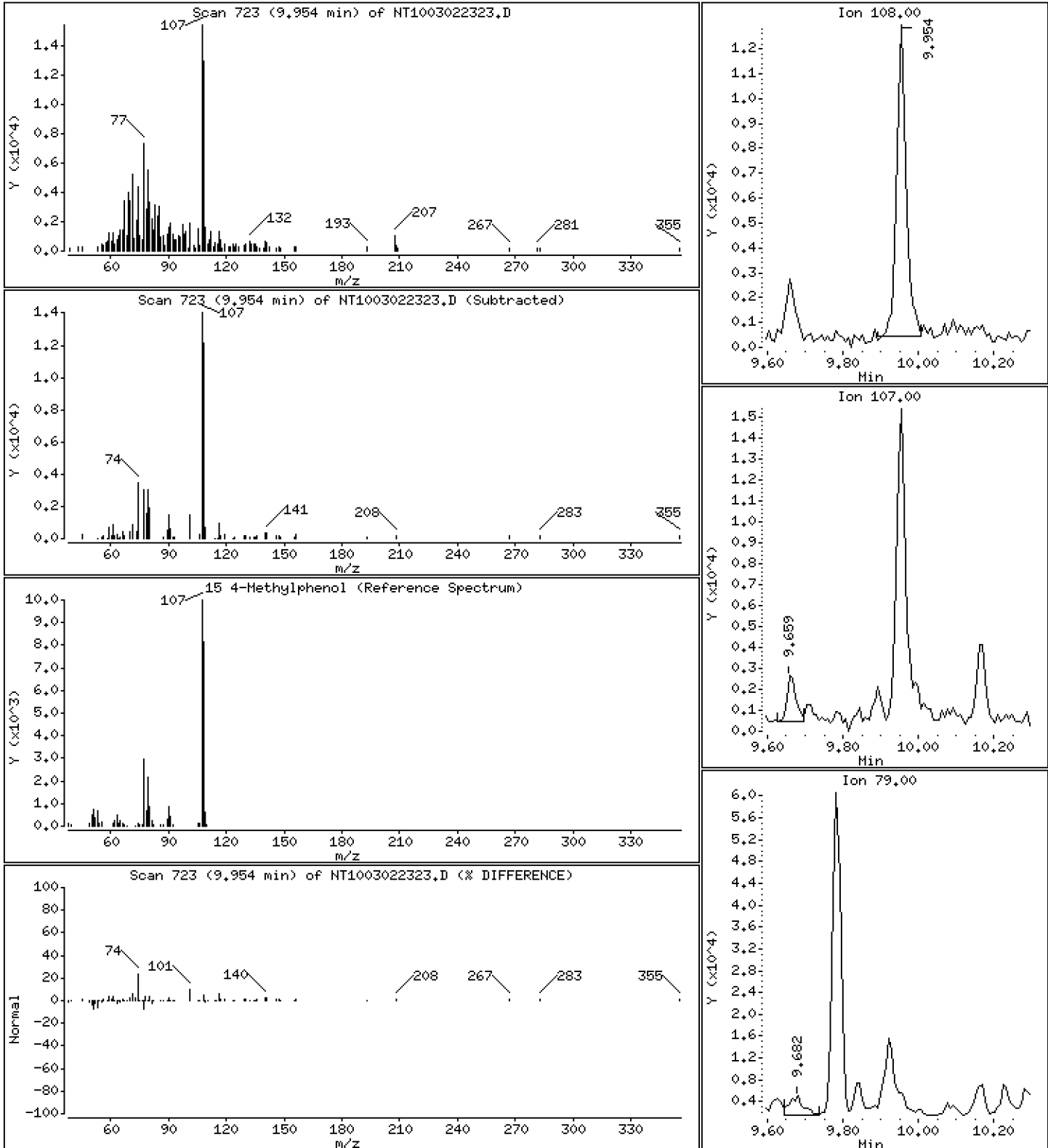
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1294 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

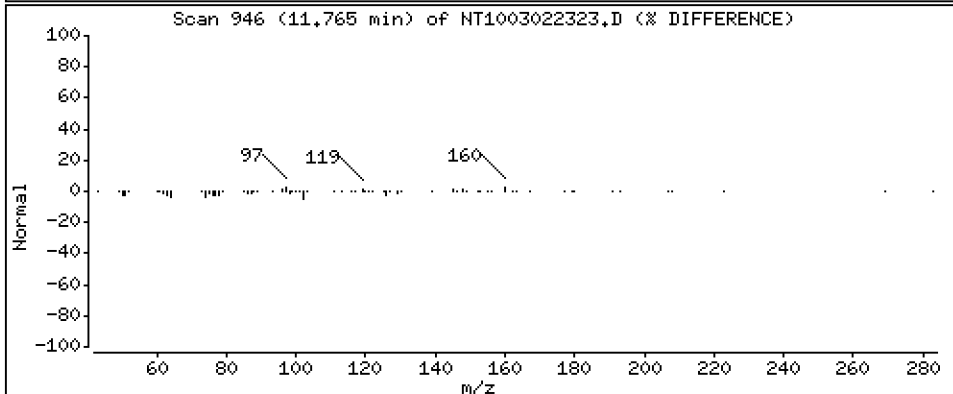
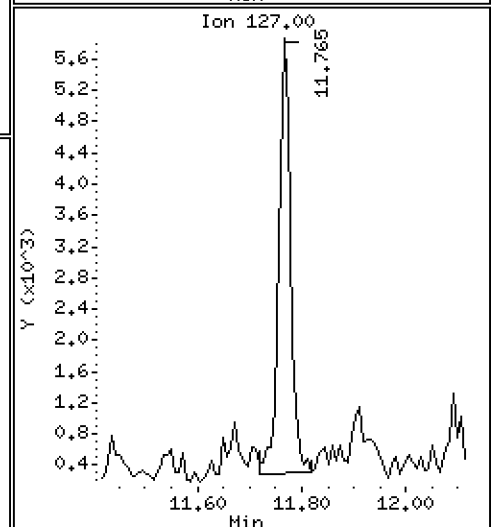
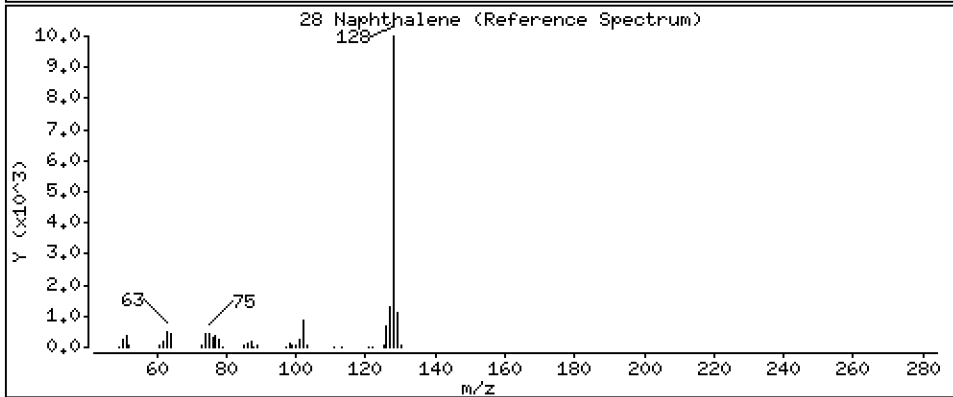
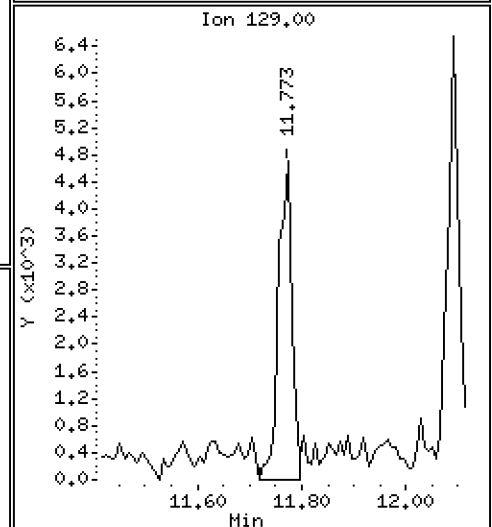
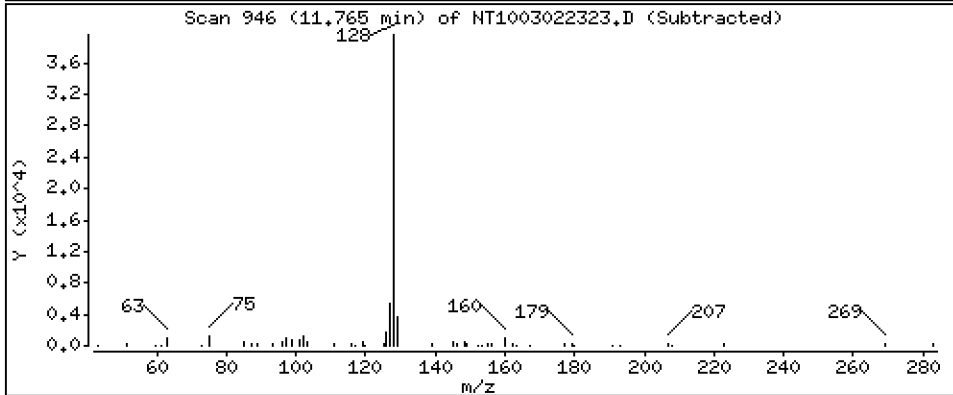
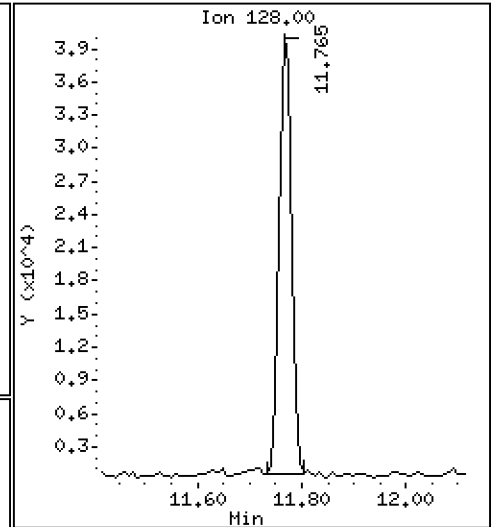
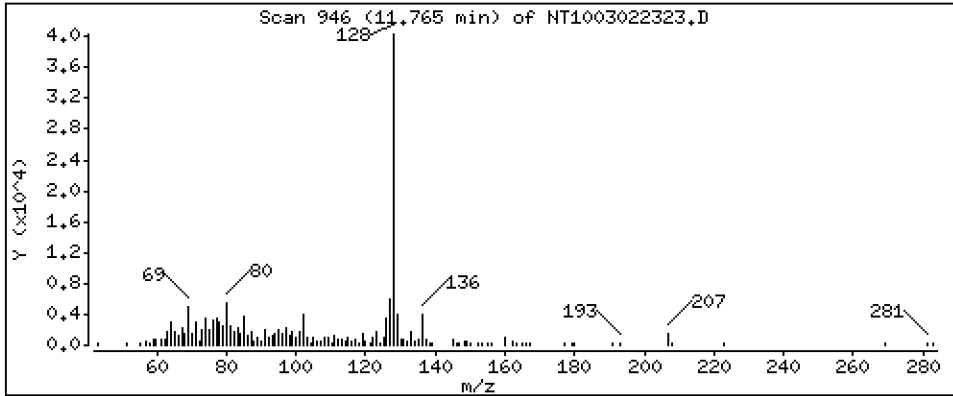
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,1314 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

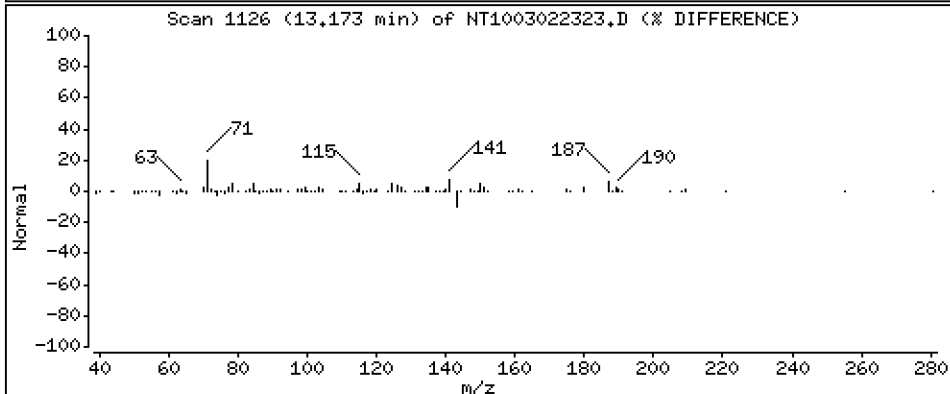
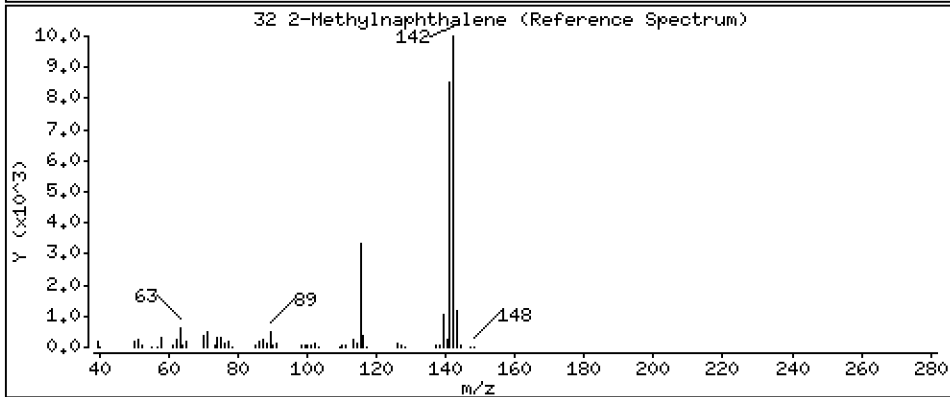
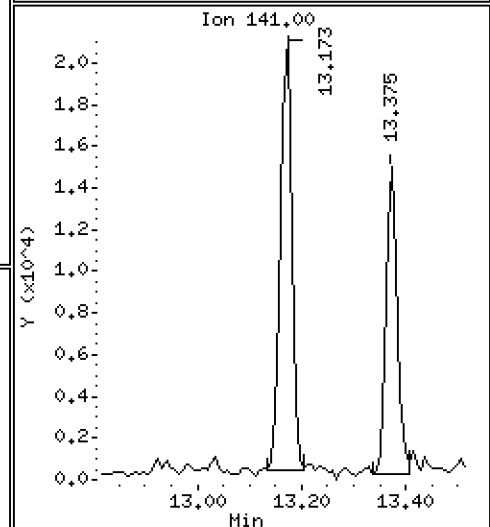
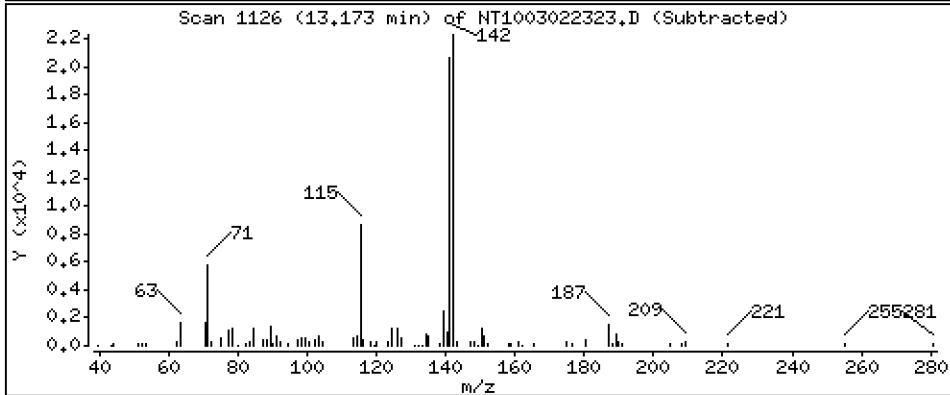
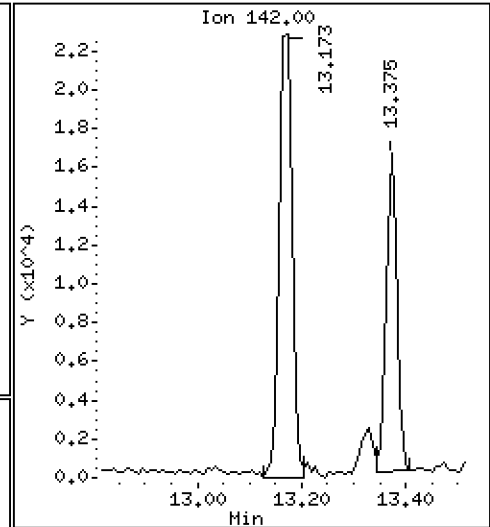
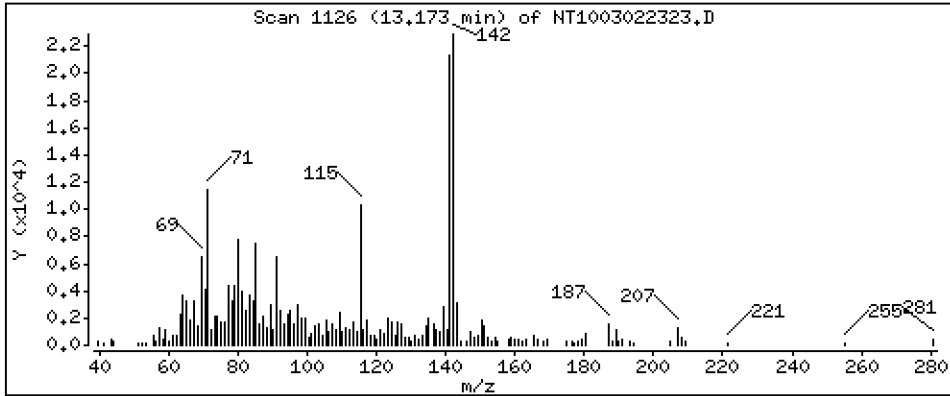
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,1125 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

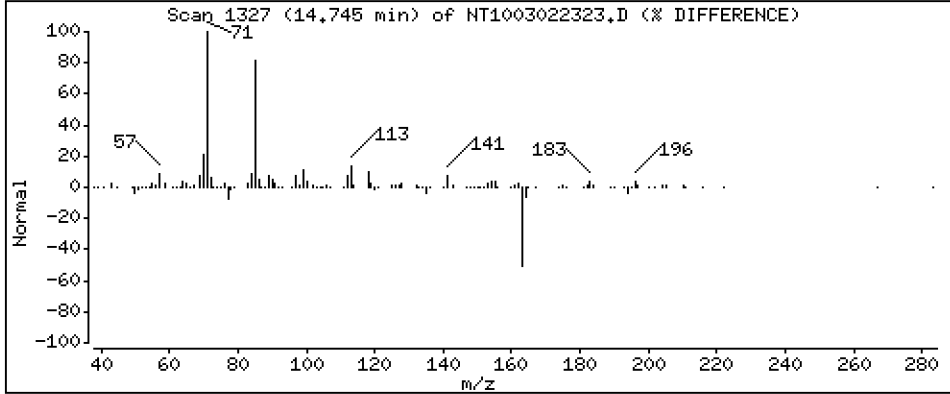
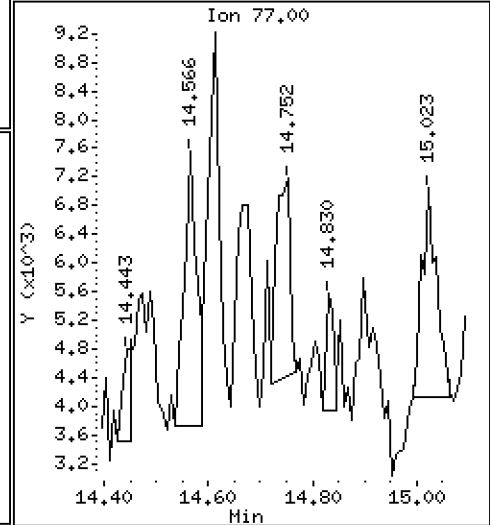
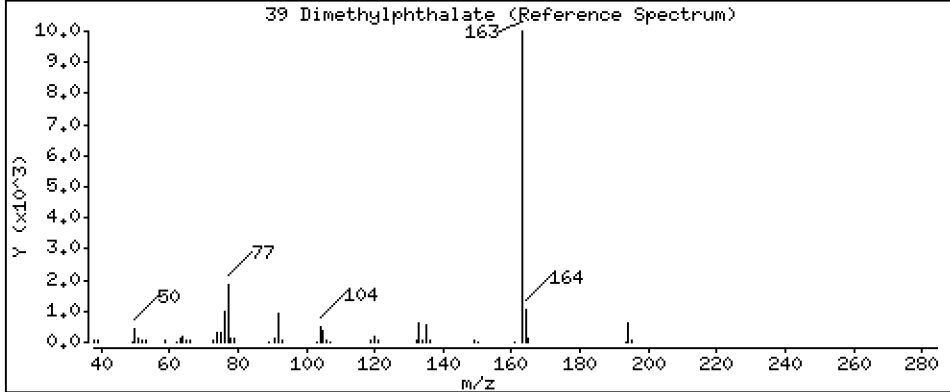
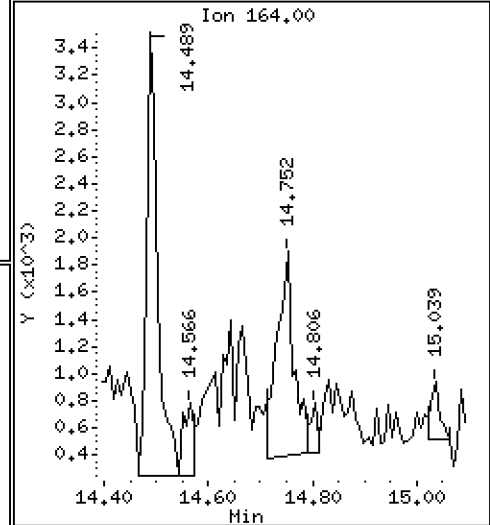
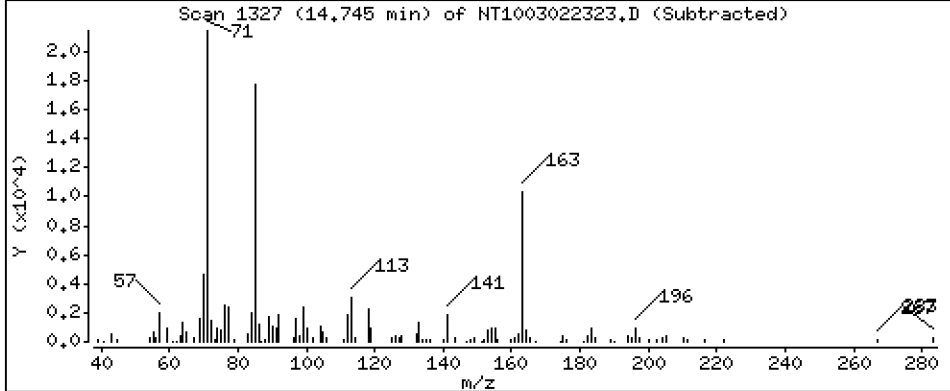
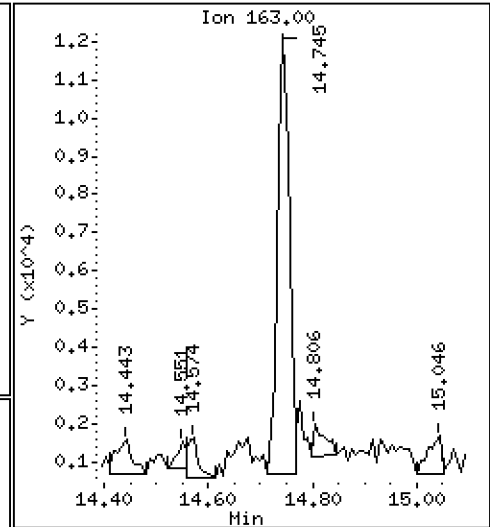
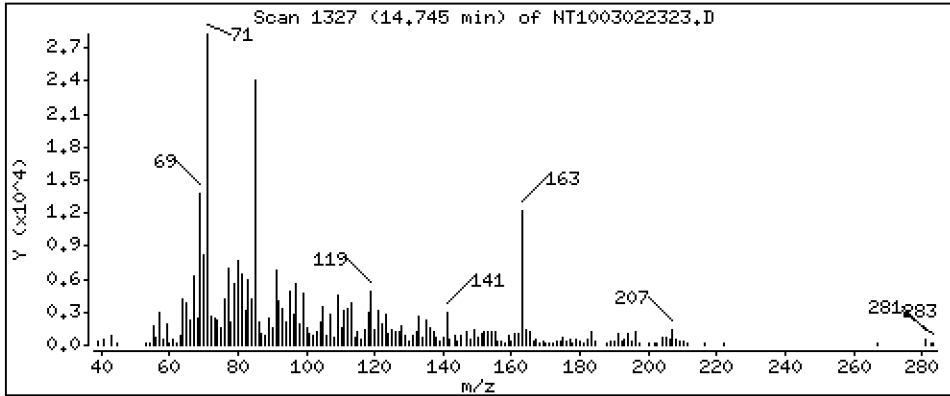
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.05560 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

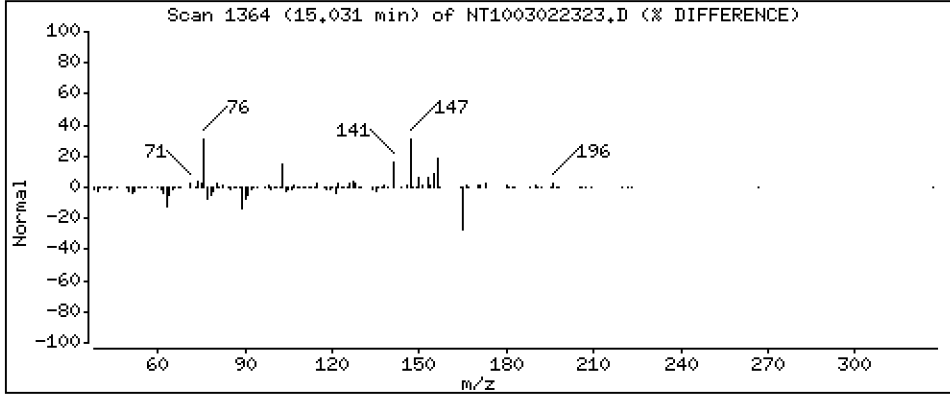
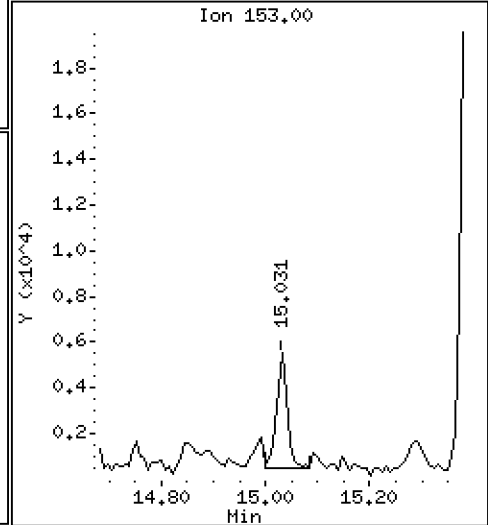
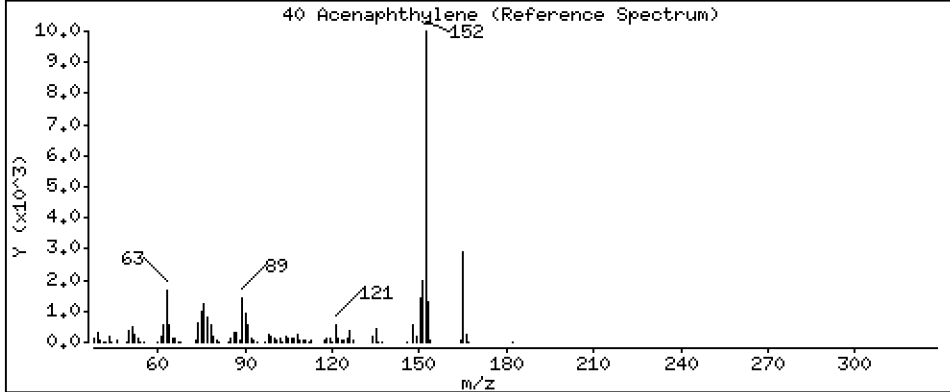
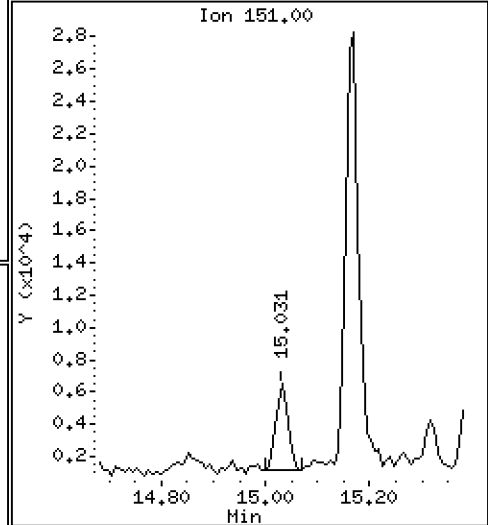
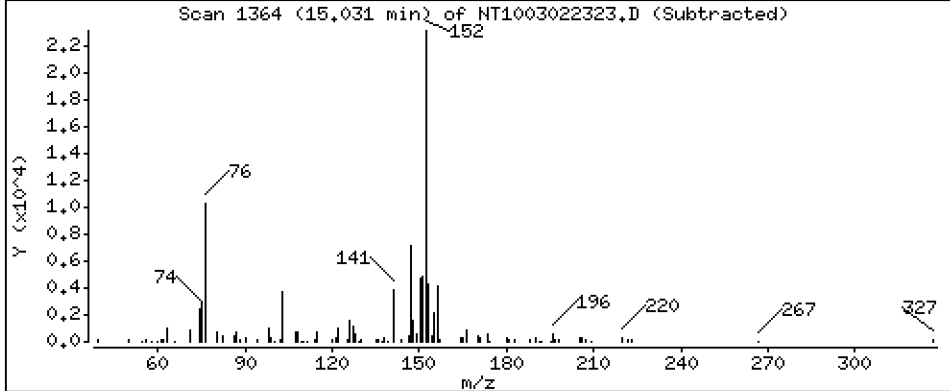
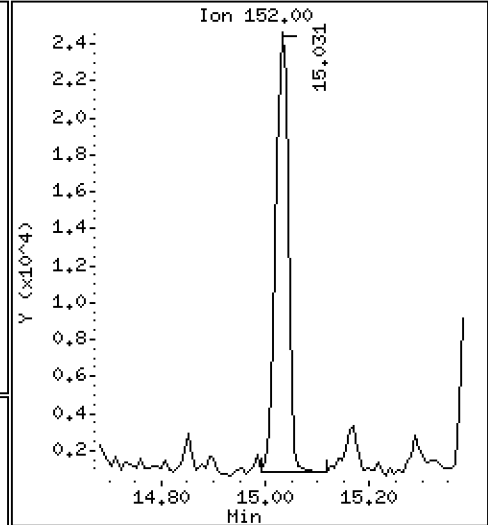
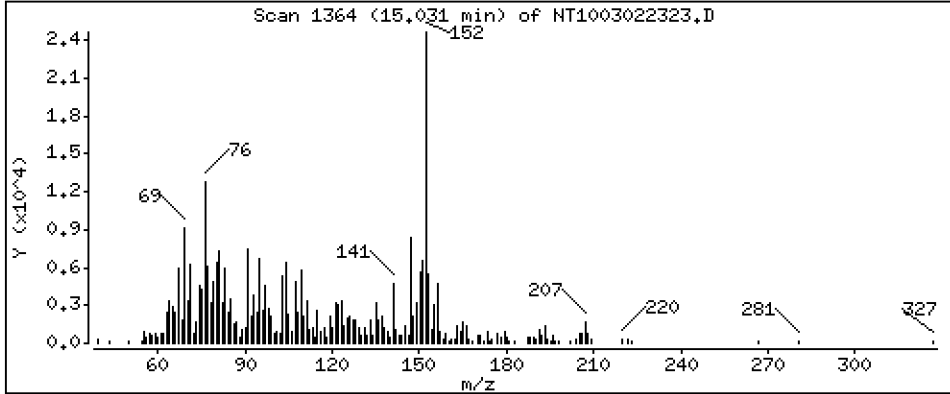
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,09511 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

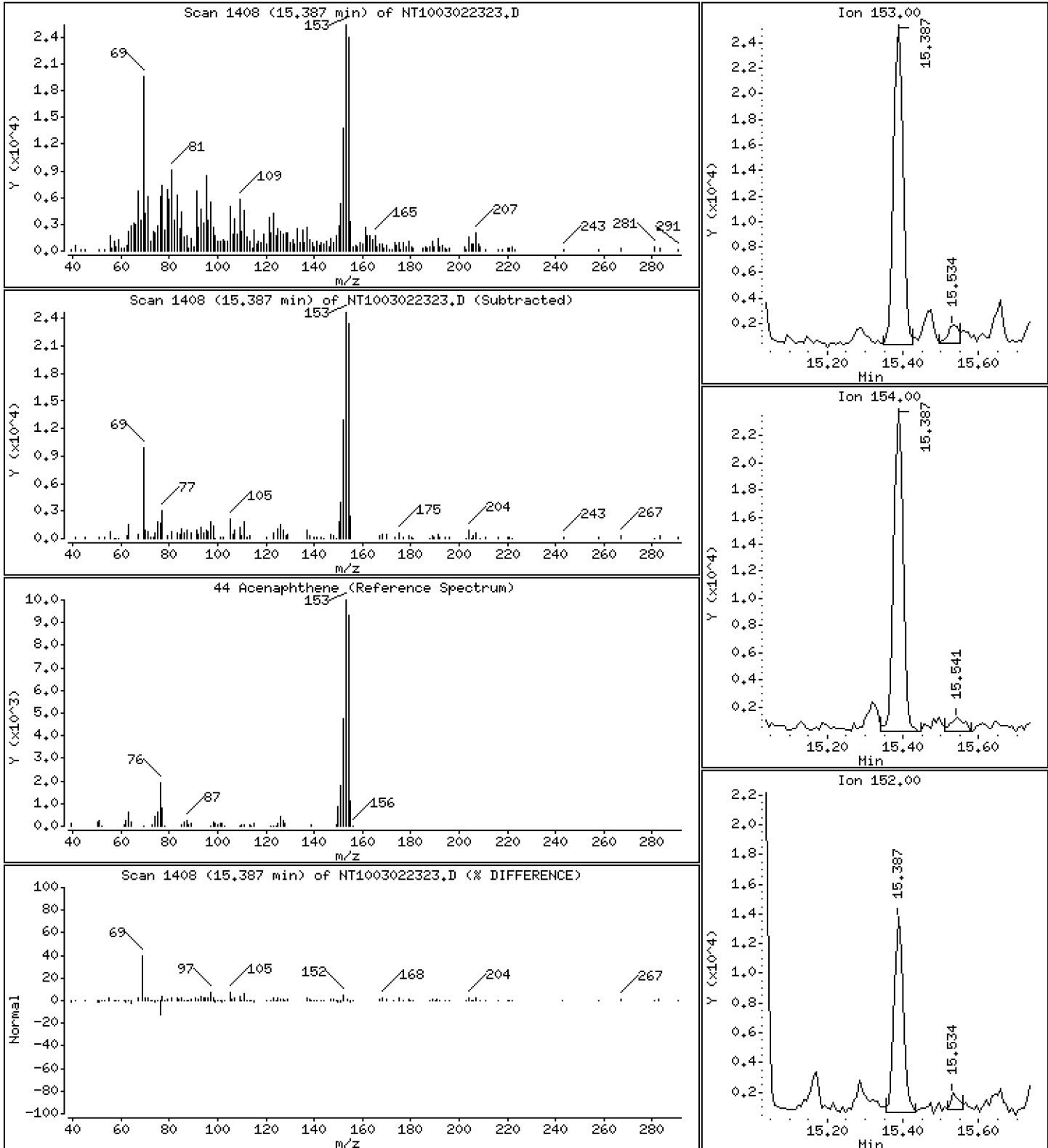
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.1484 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

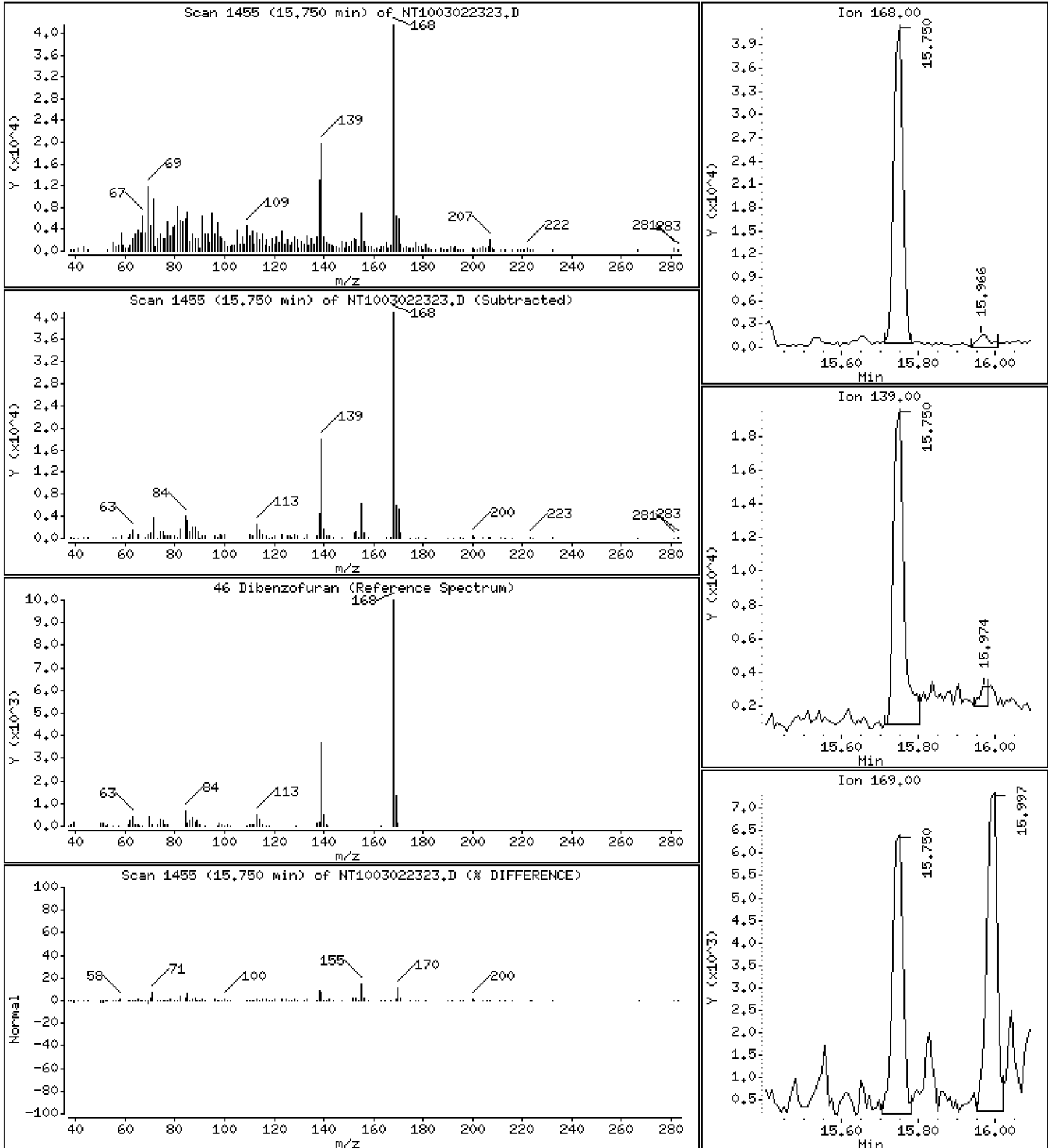
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1543 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

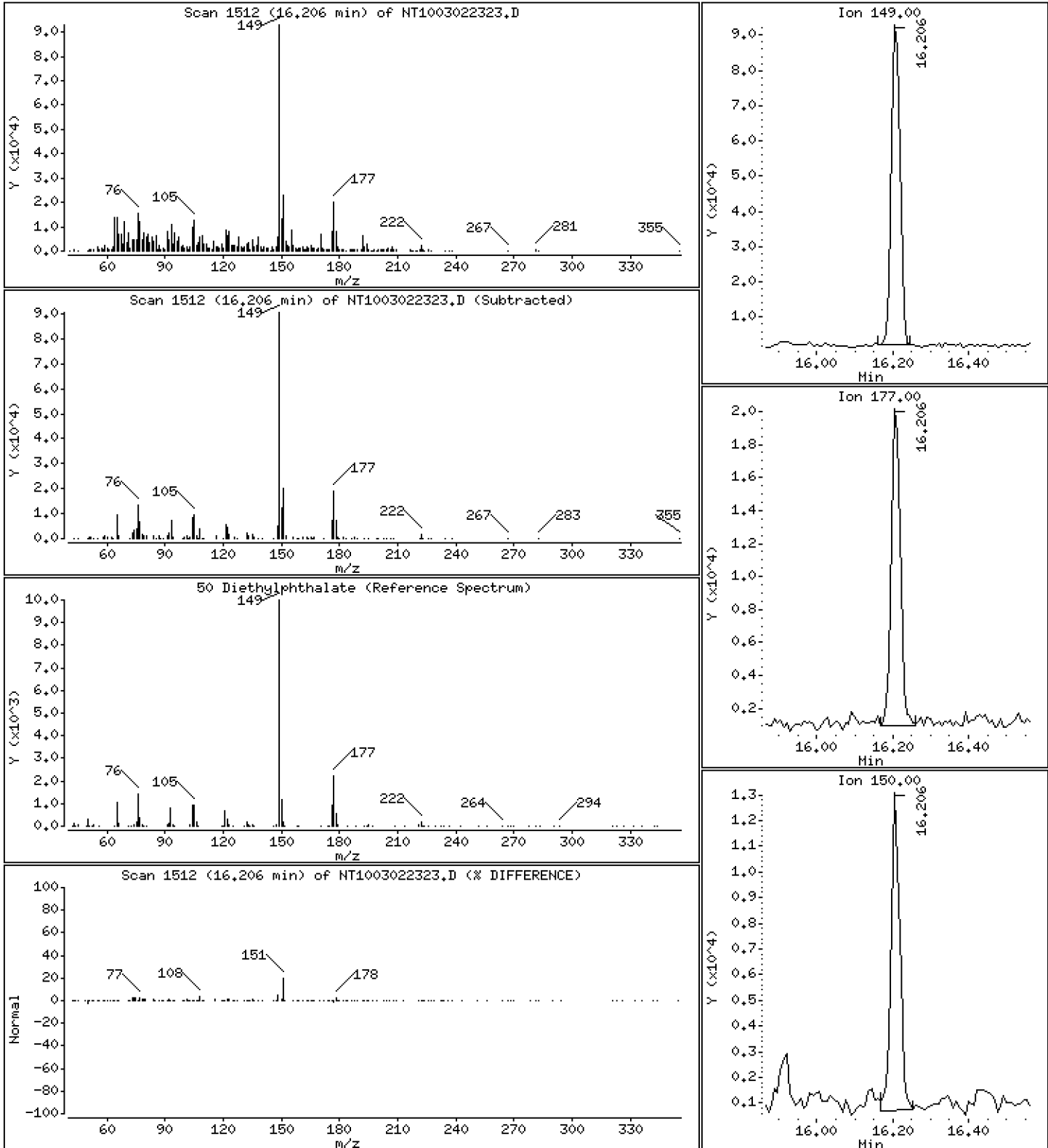
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,4329 ug/mL





Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

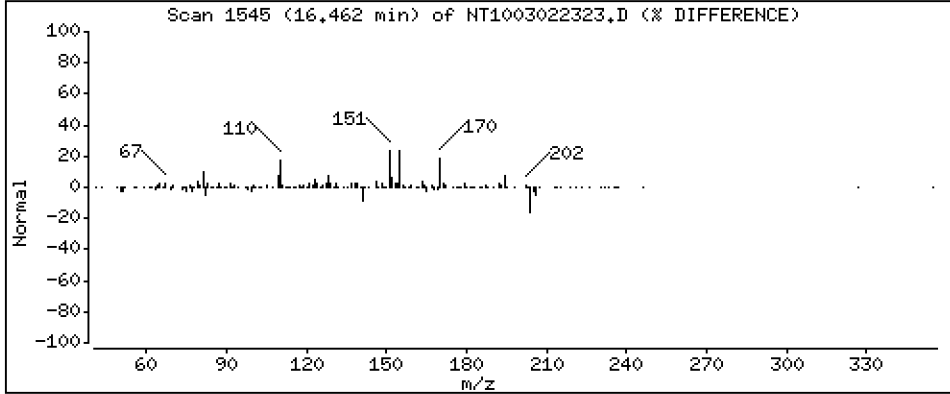
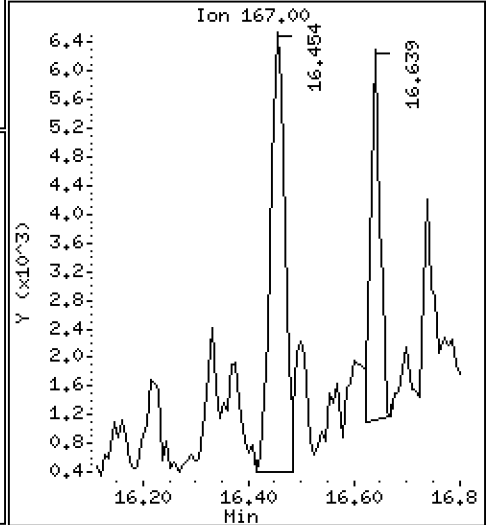
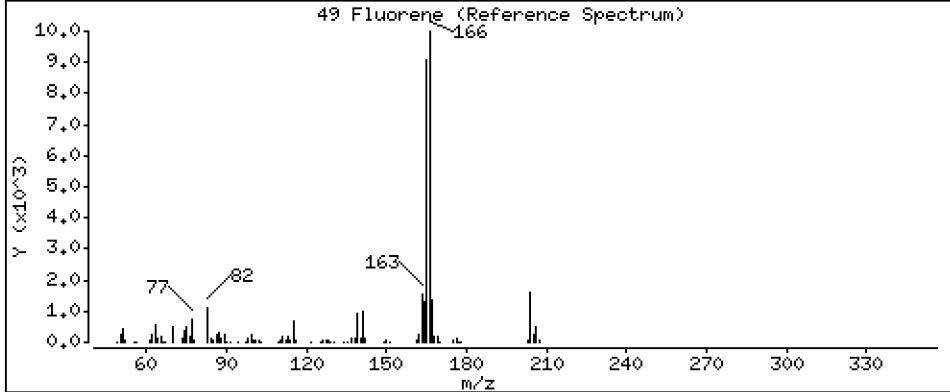
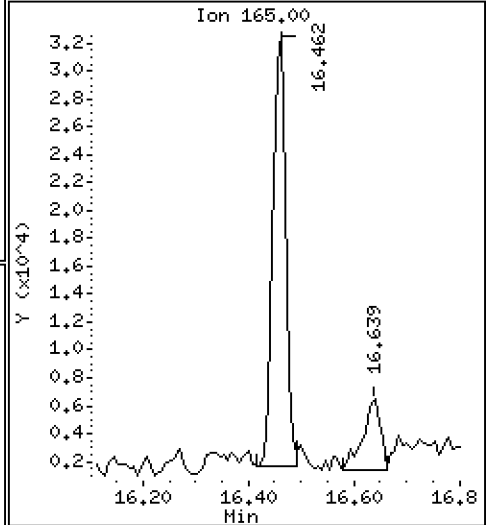
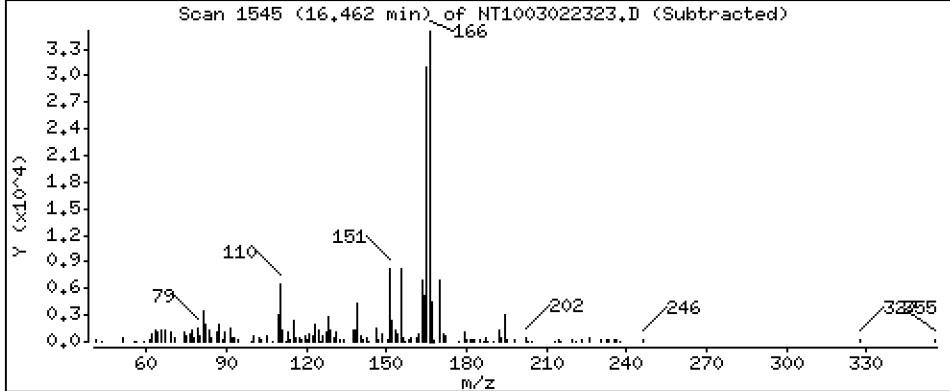
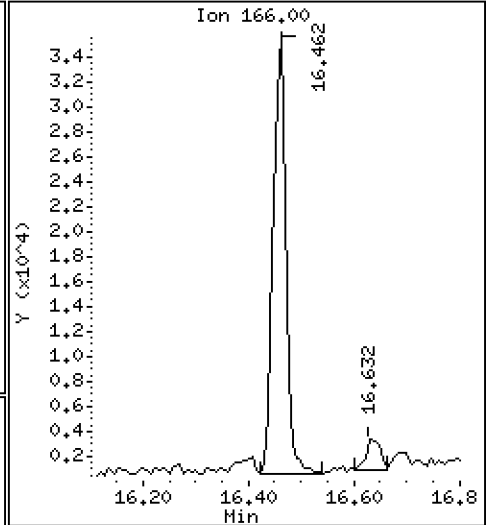
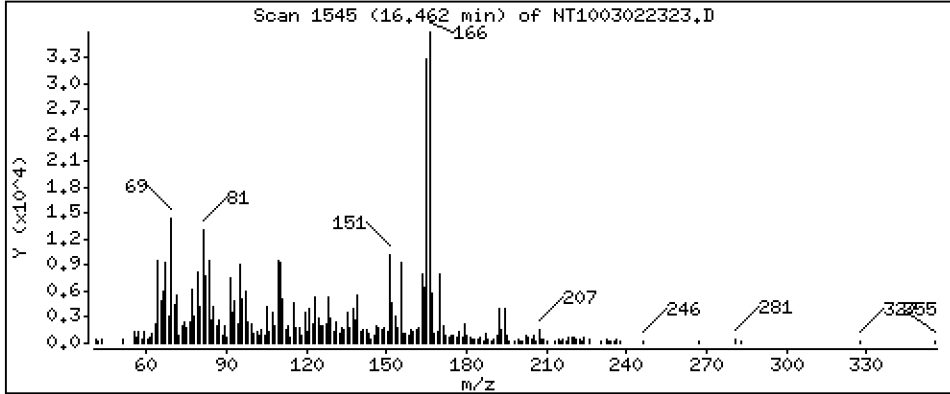
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.1674 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

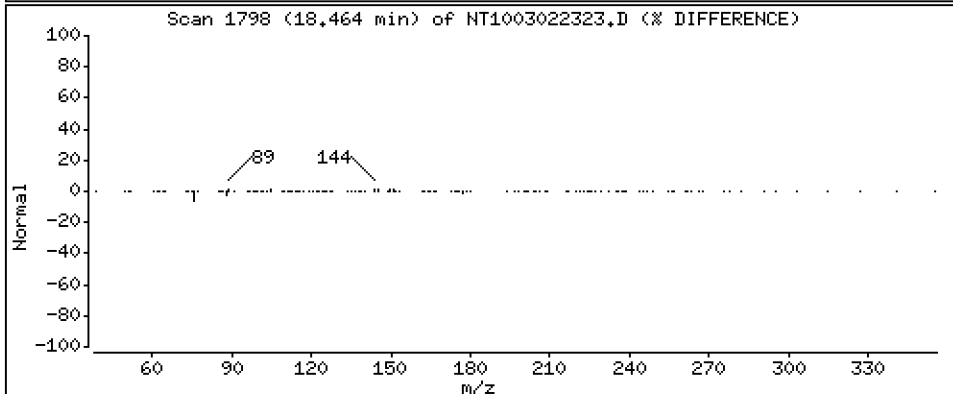
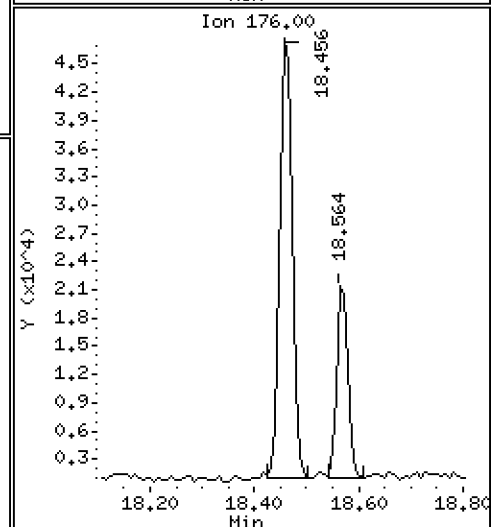
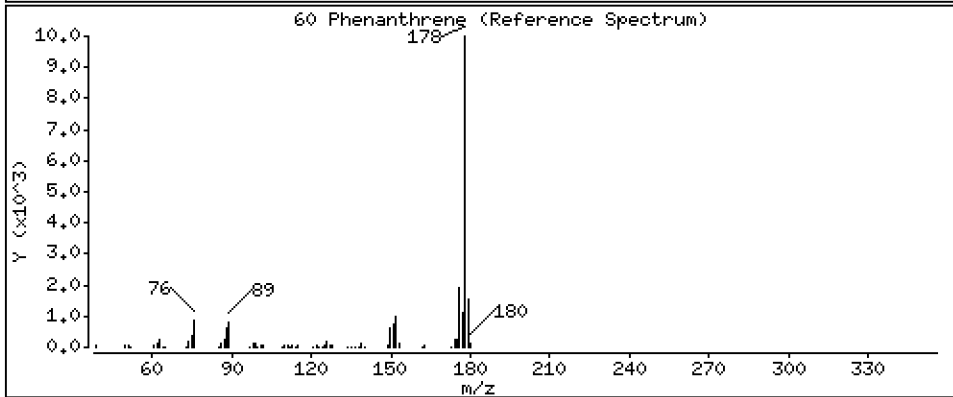
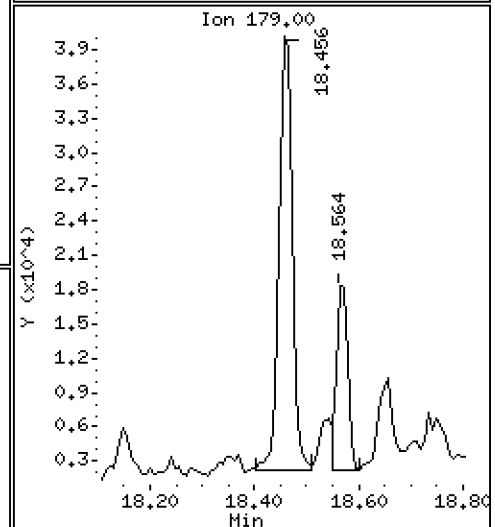
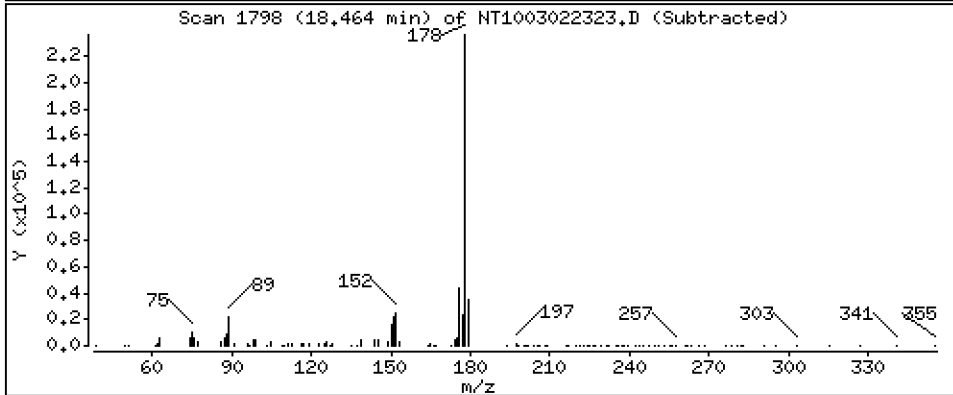
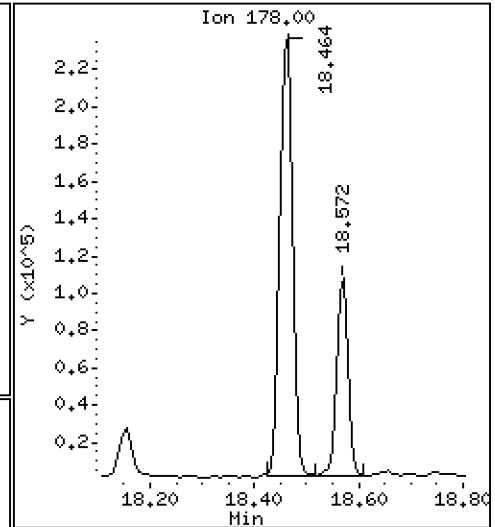
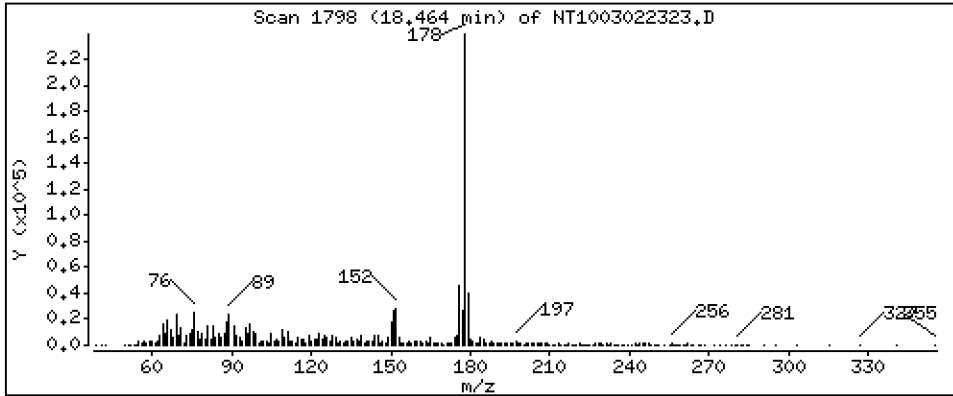
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,8380 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

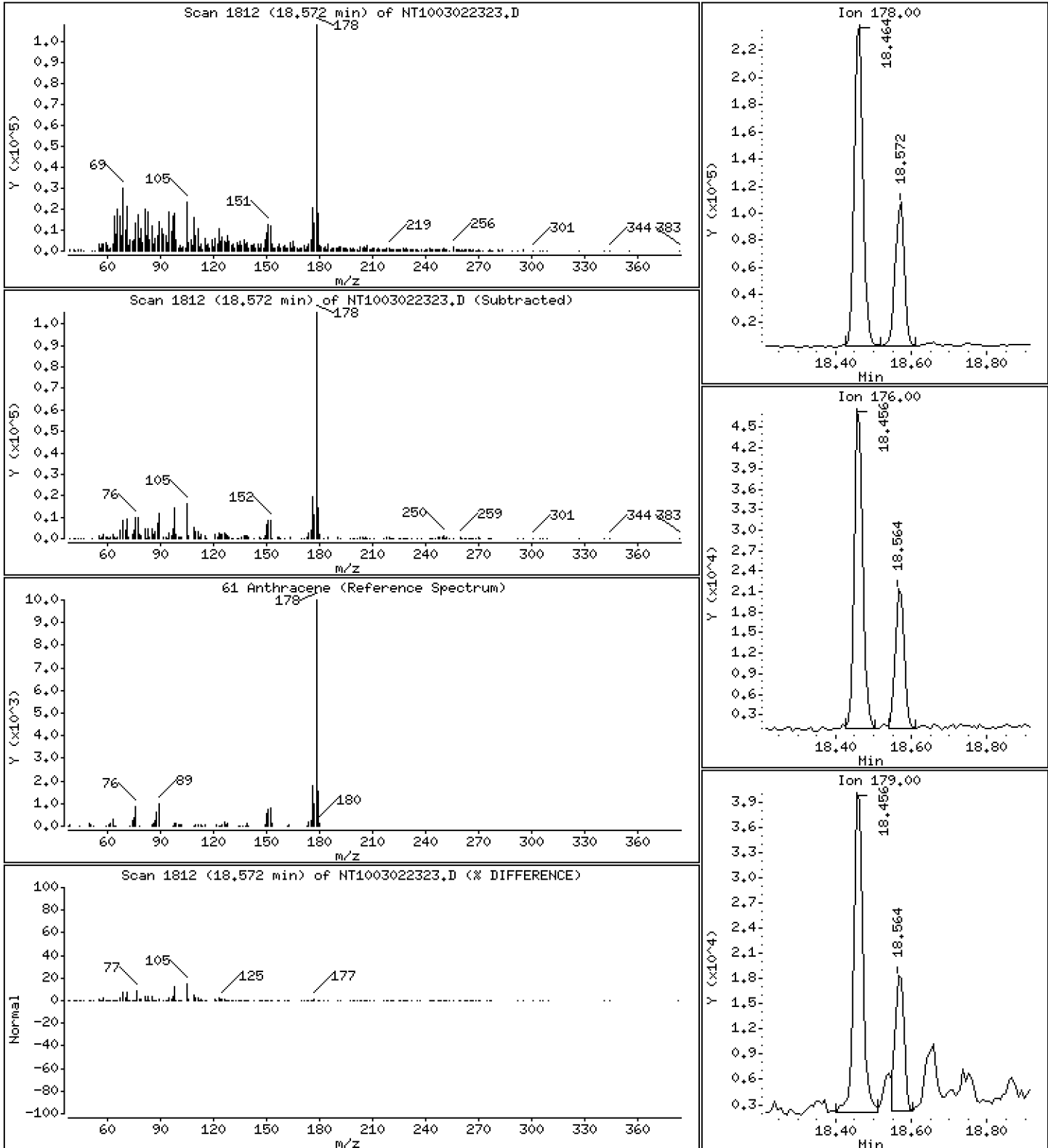
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 0.3742 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

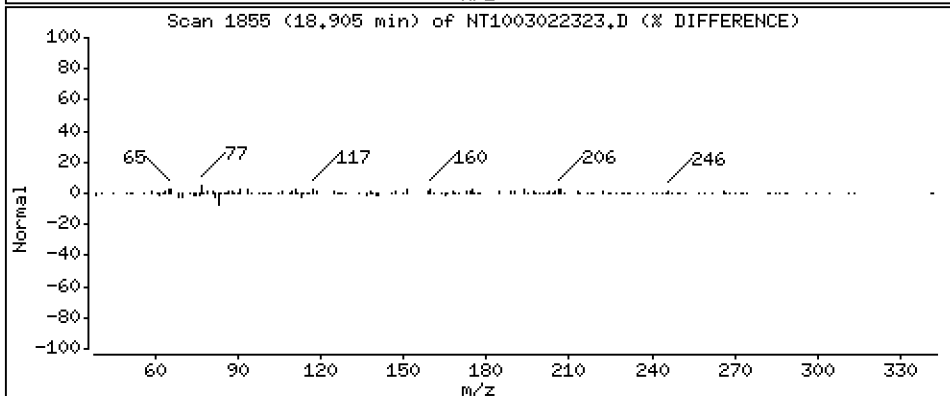
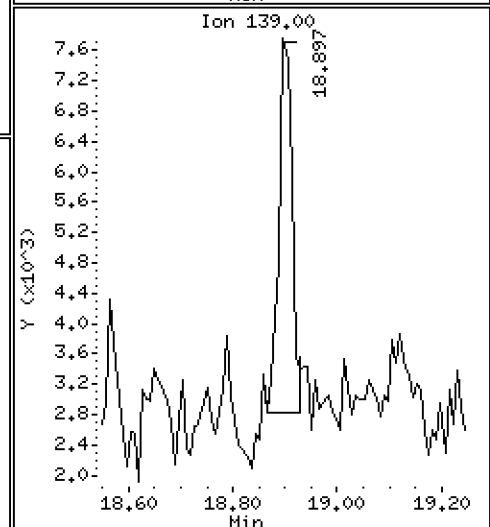
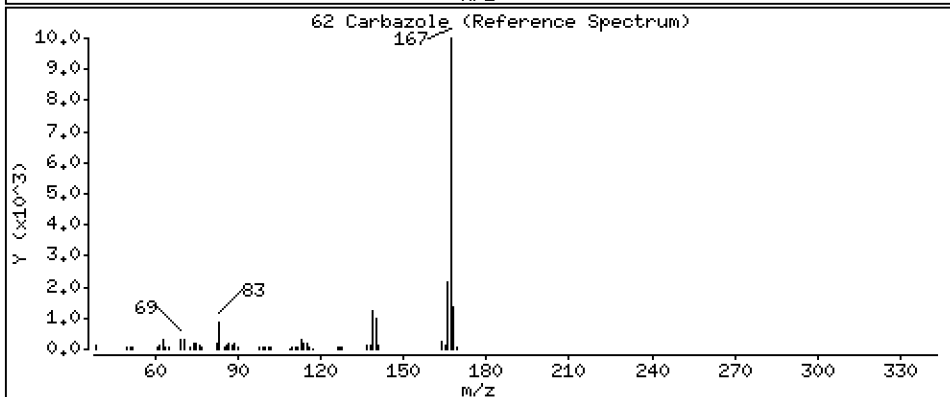
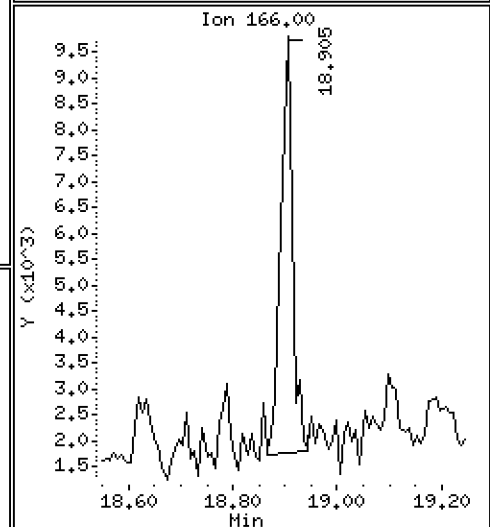
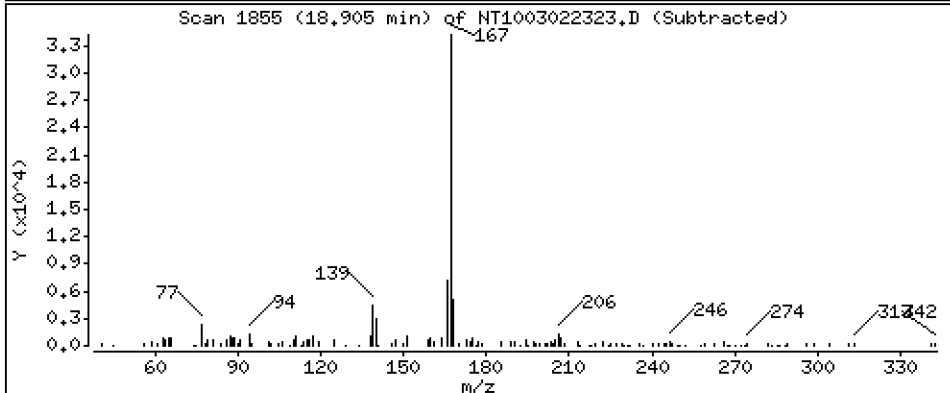
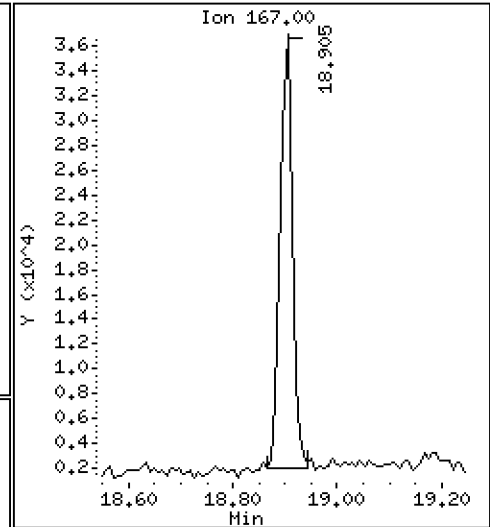
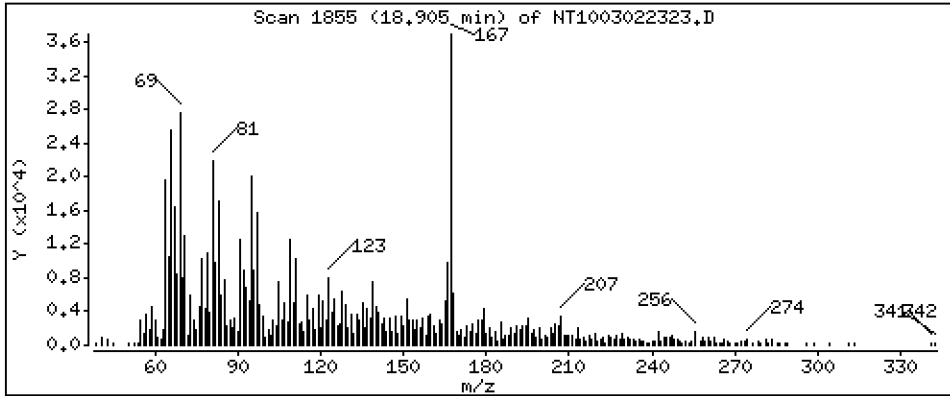
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.1302 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

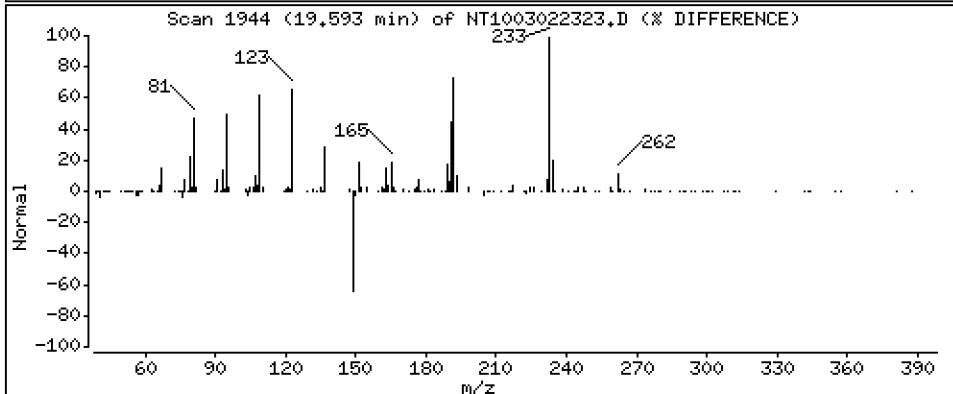
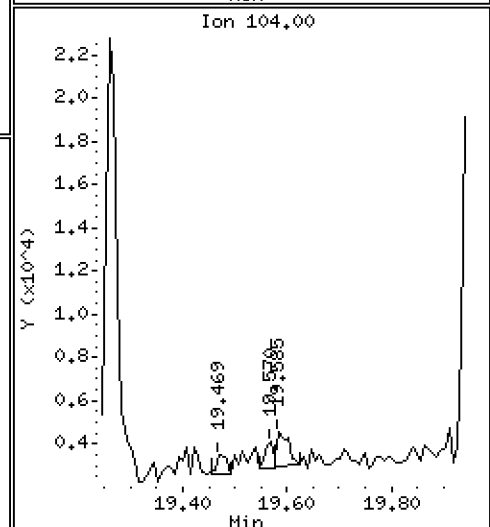
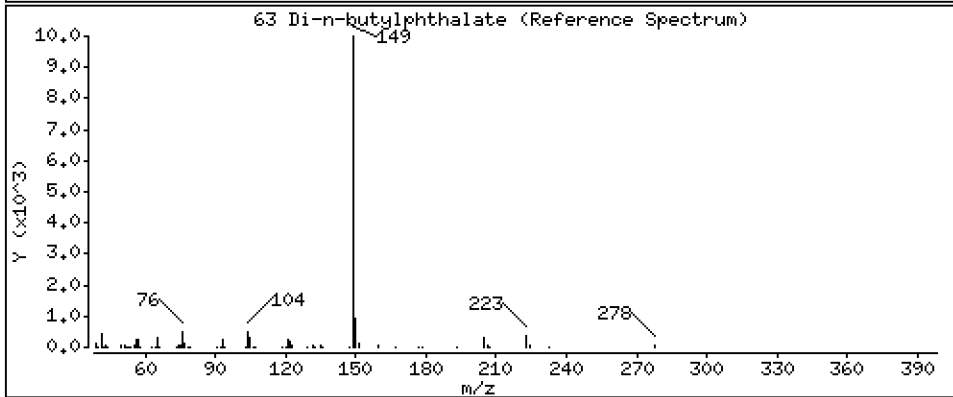
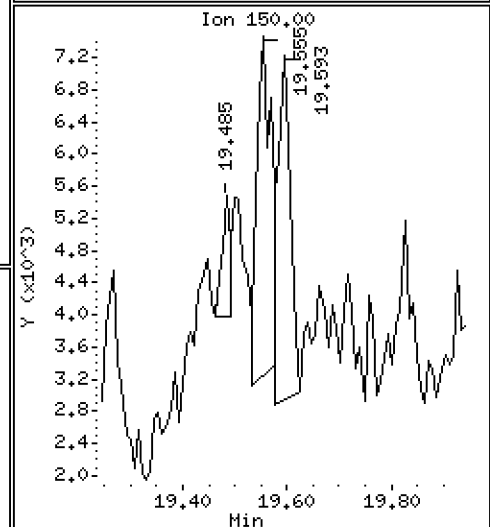
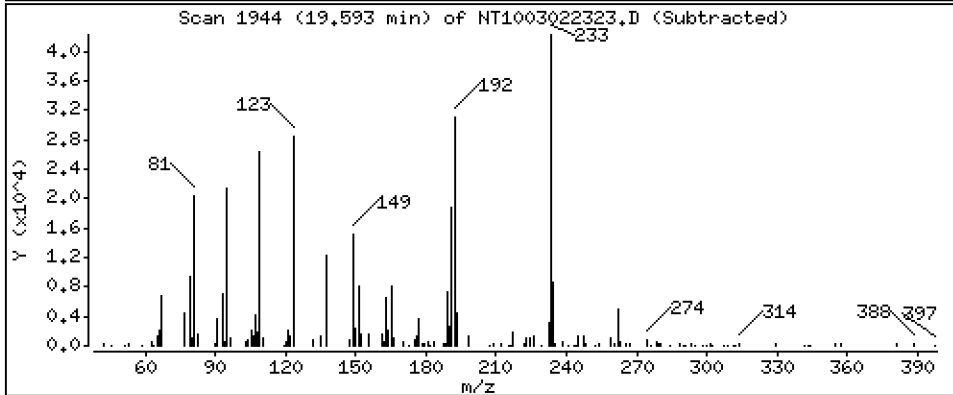
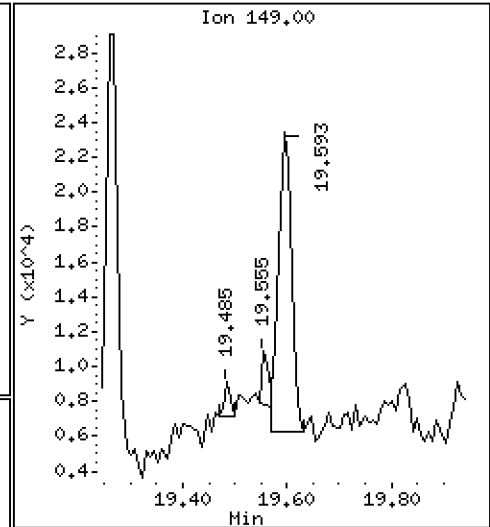
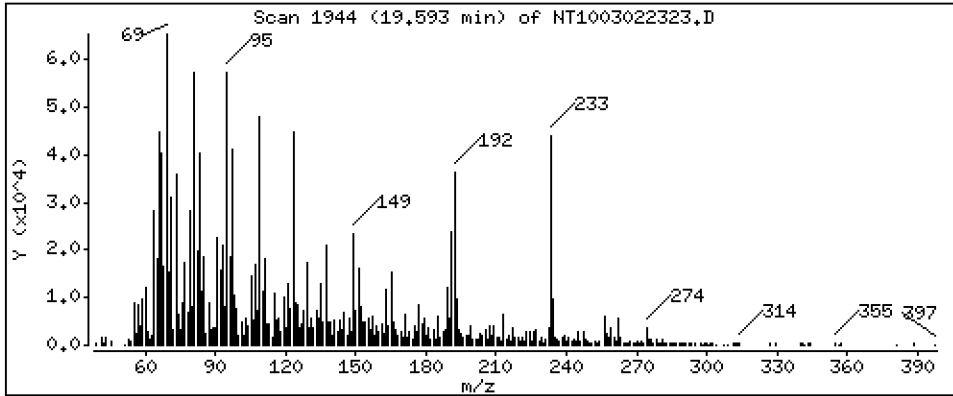
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.05239 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

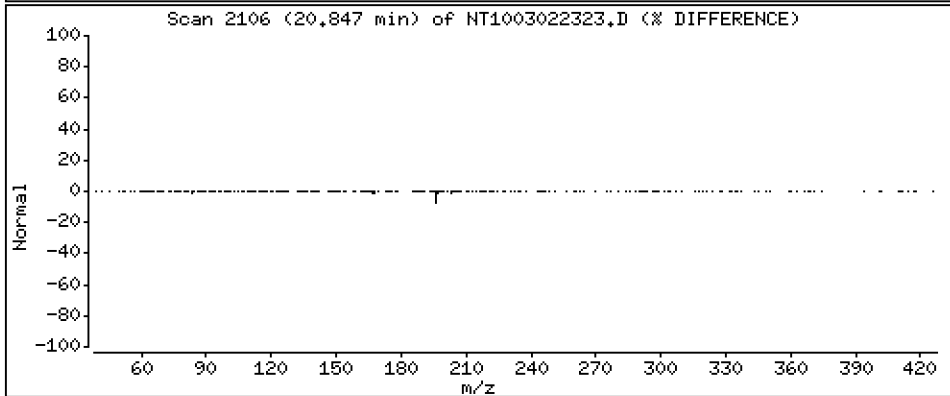
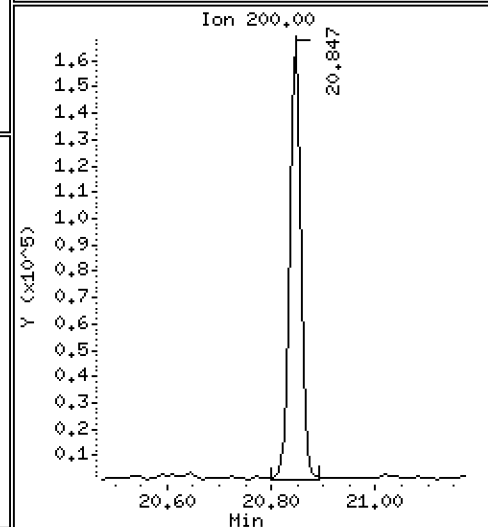
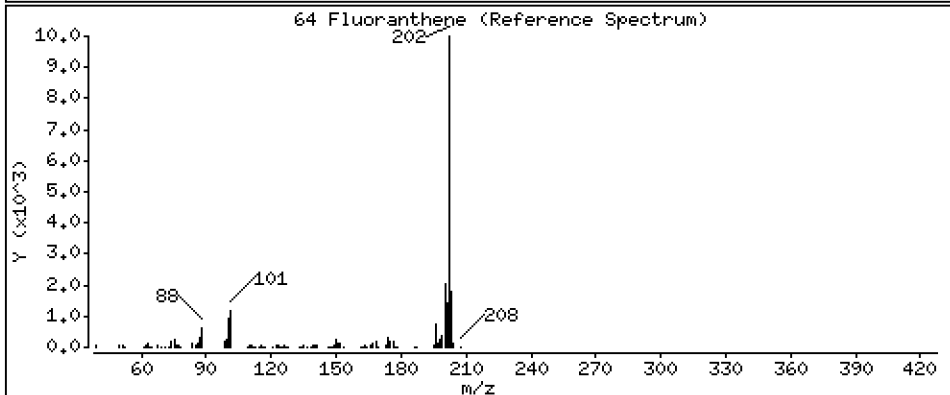
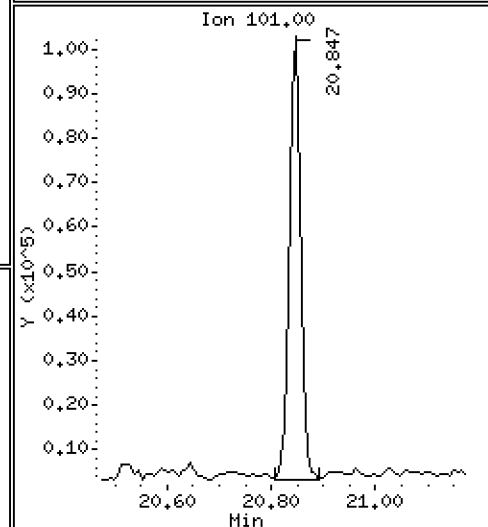
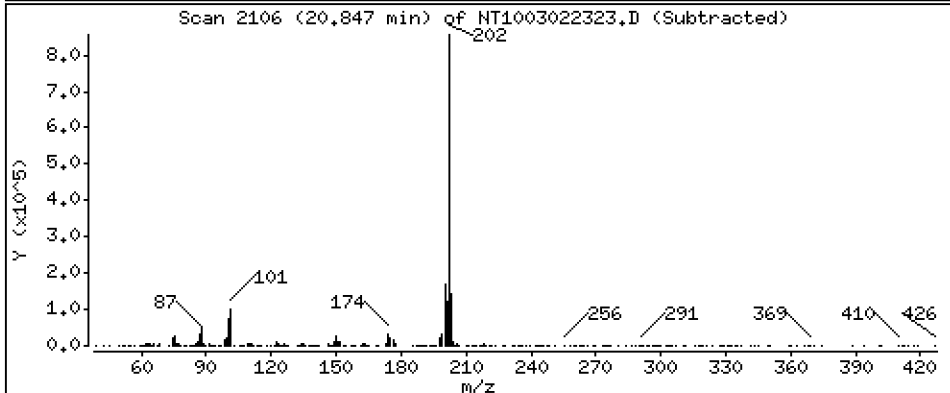
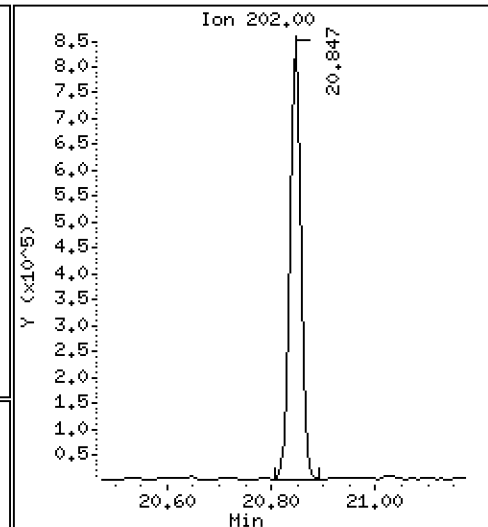
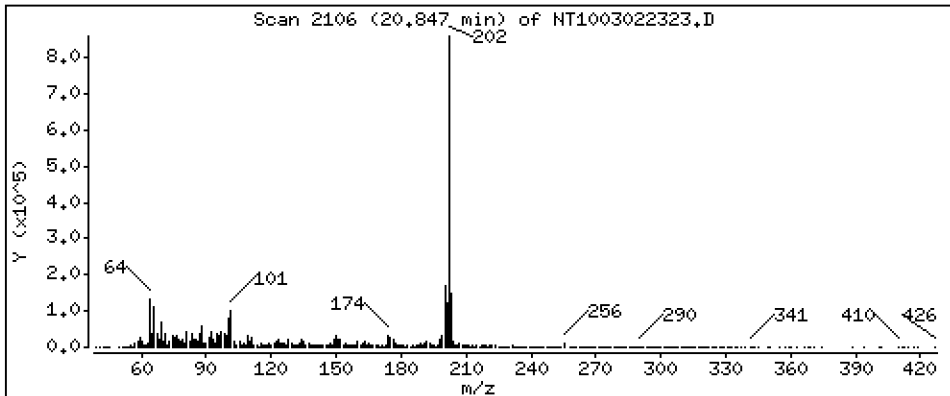
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,828 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

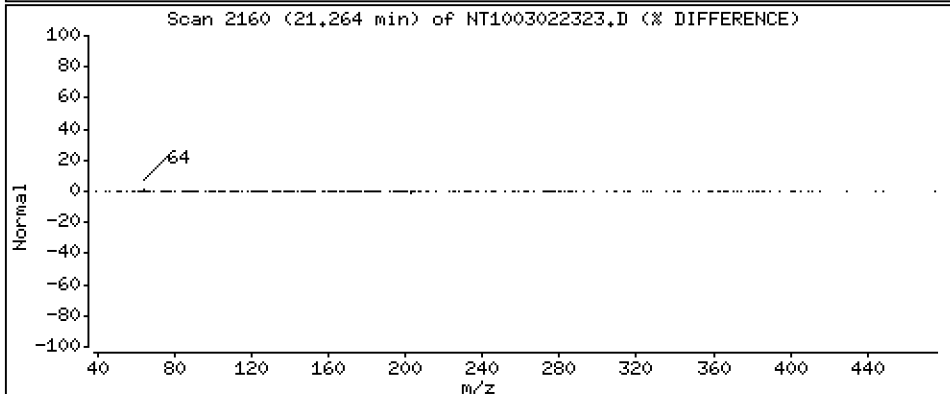
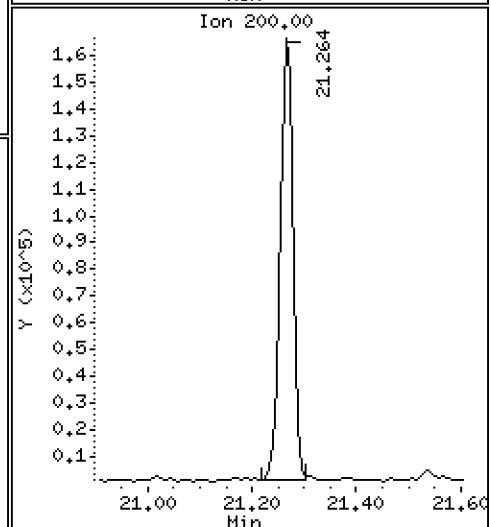
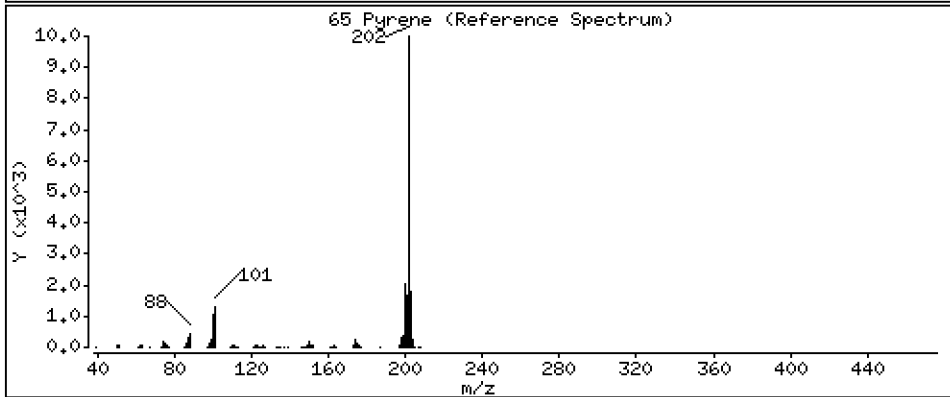
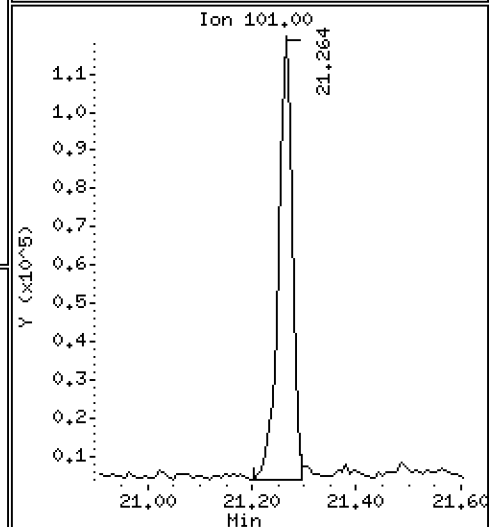
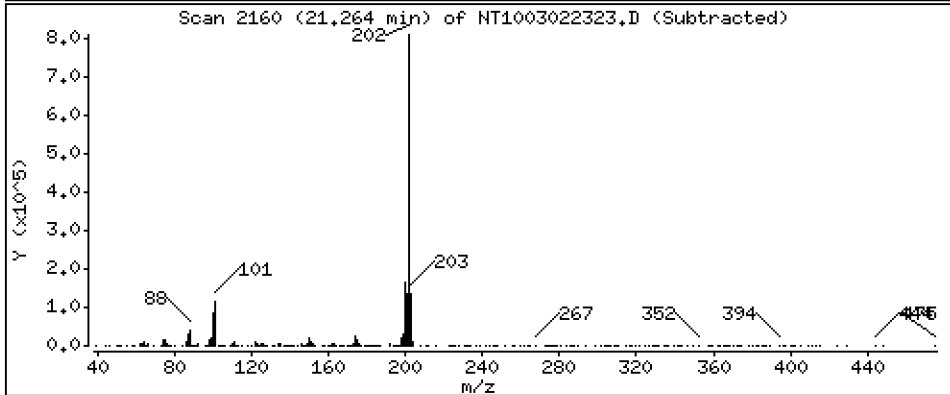
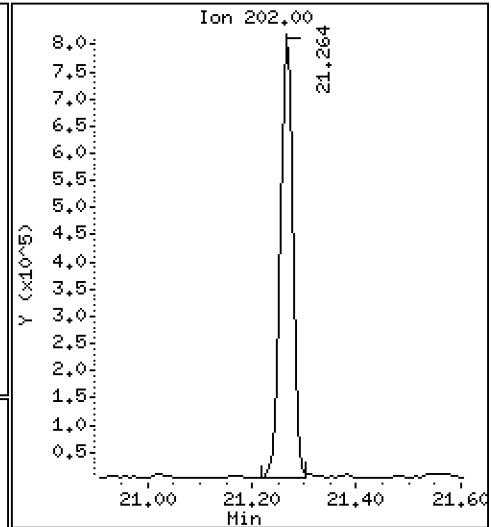
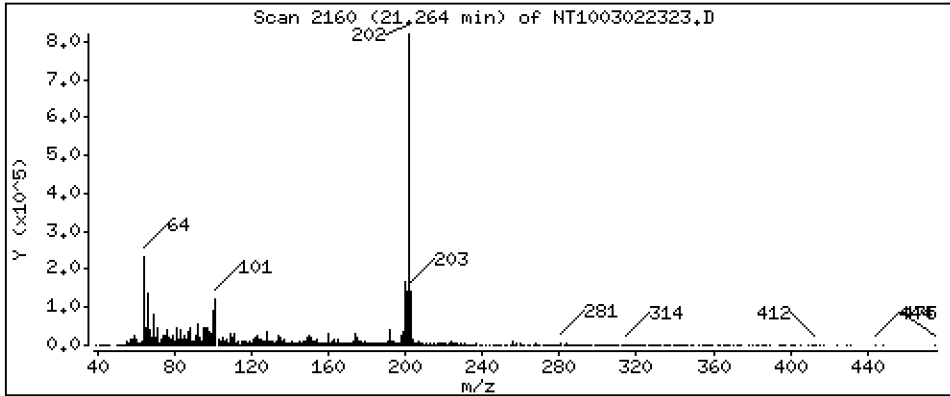
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,776 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

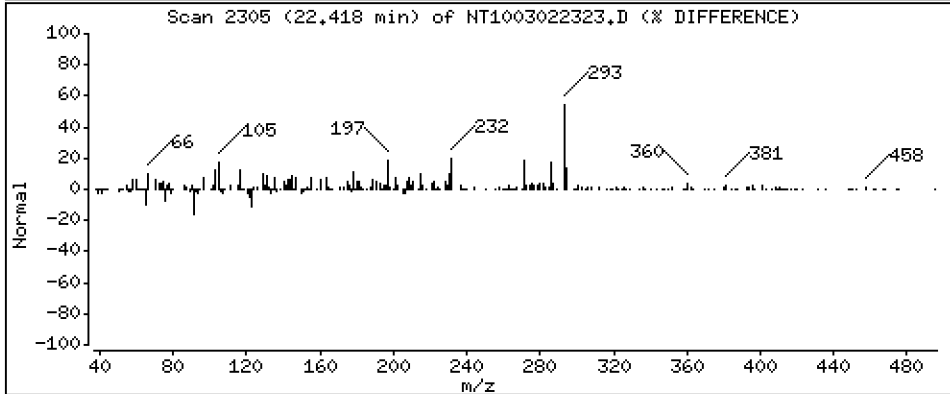
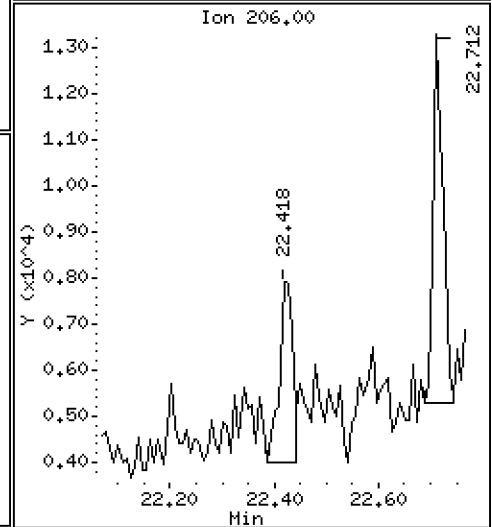
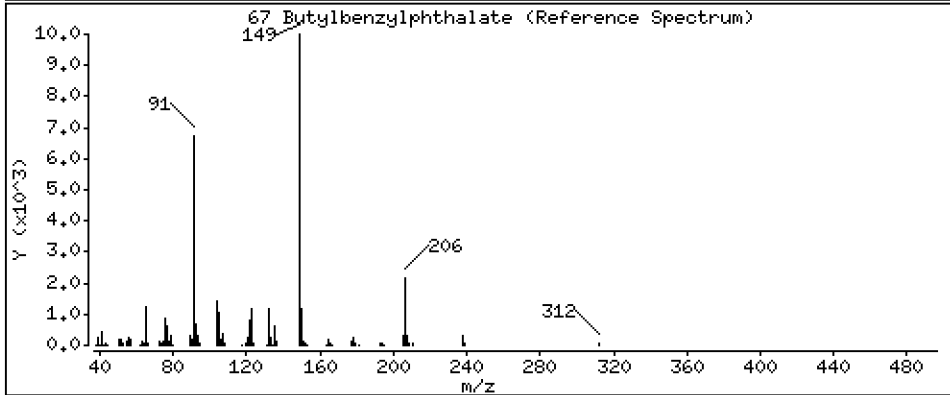
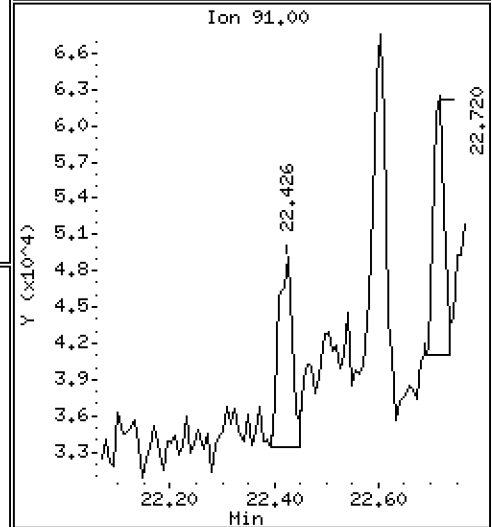
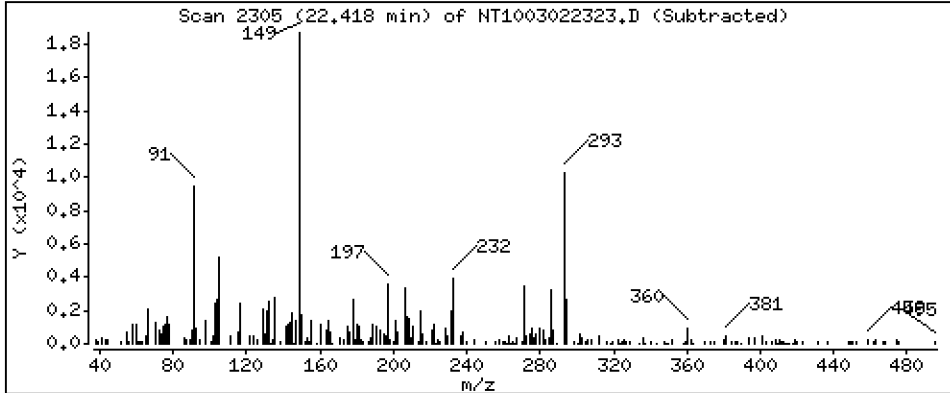
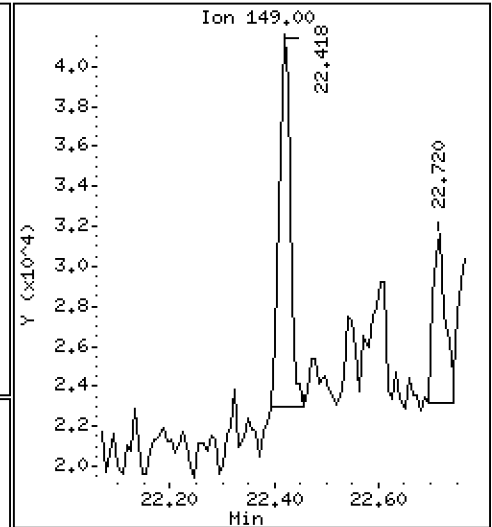
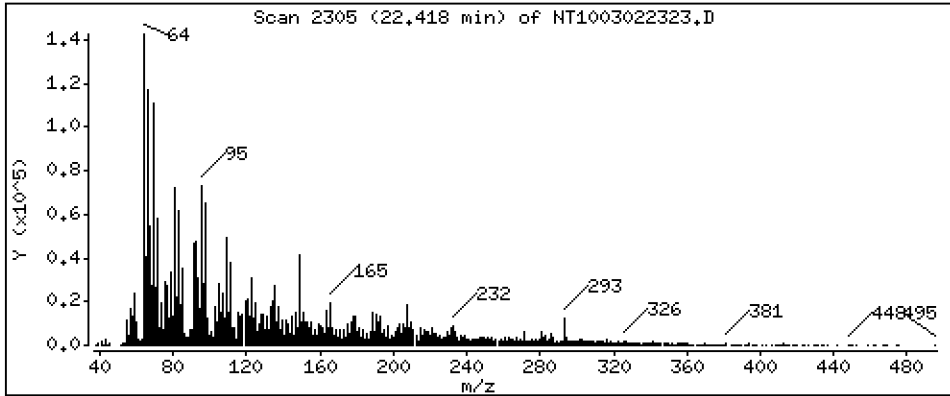
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,06679 ug/mL





Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

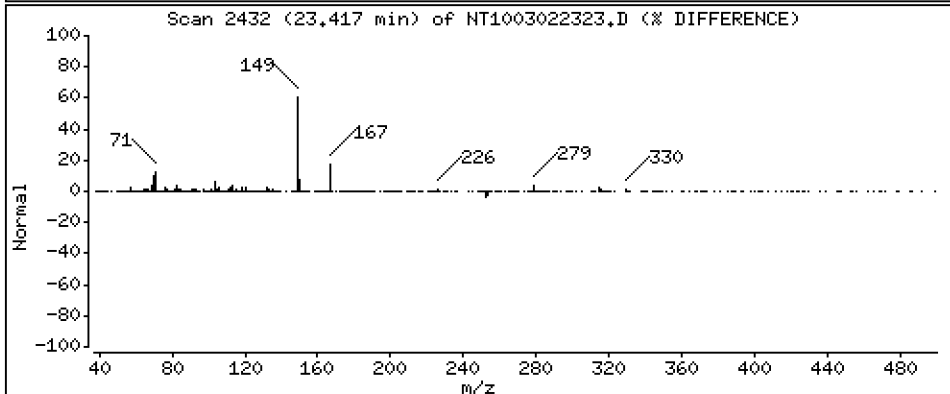
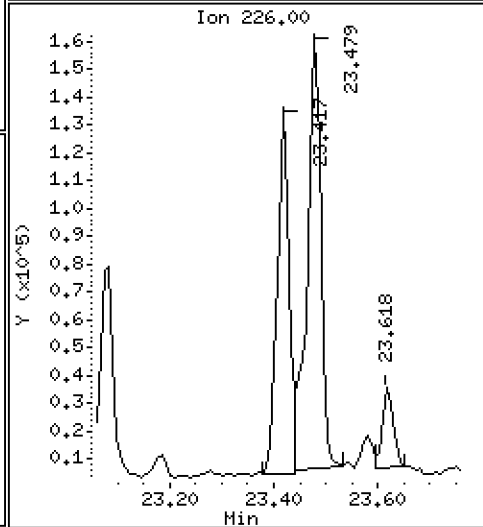
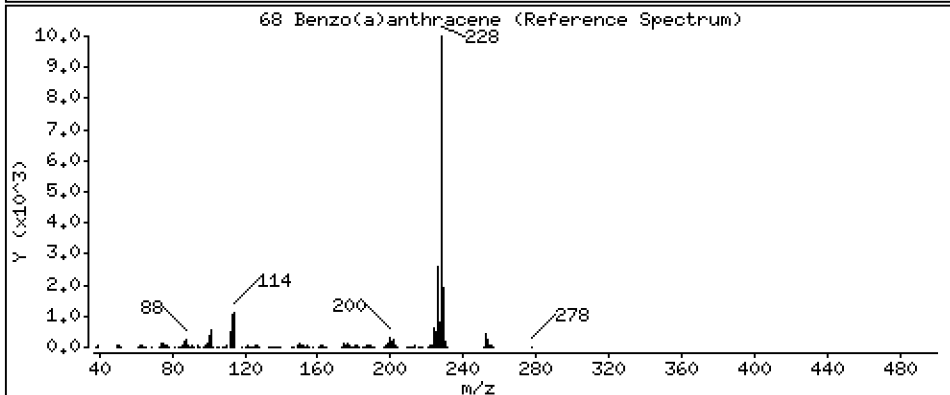
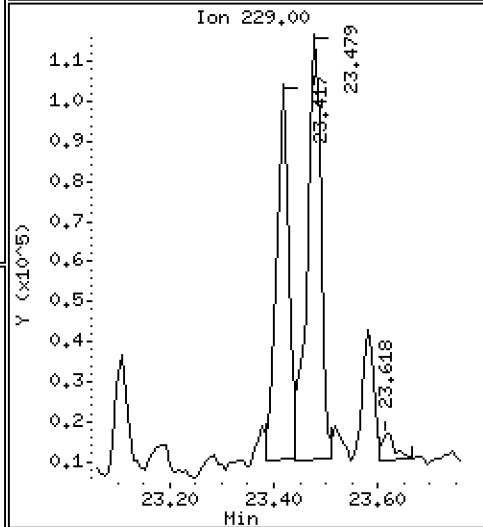
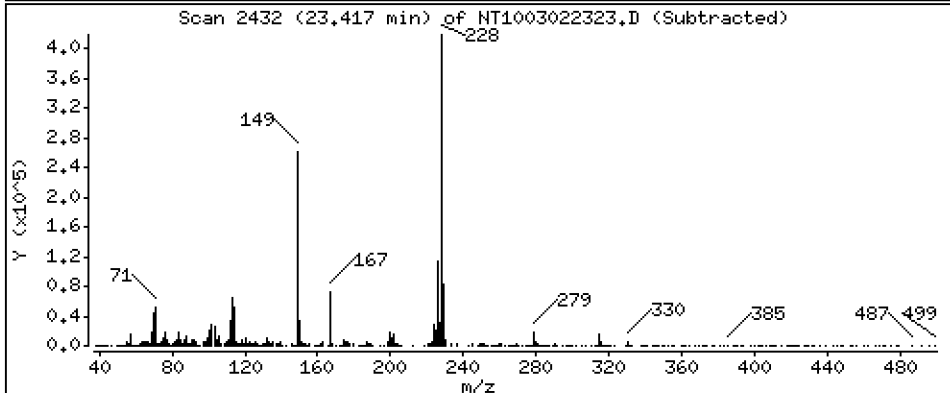
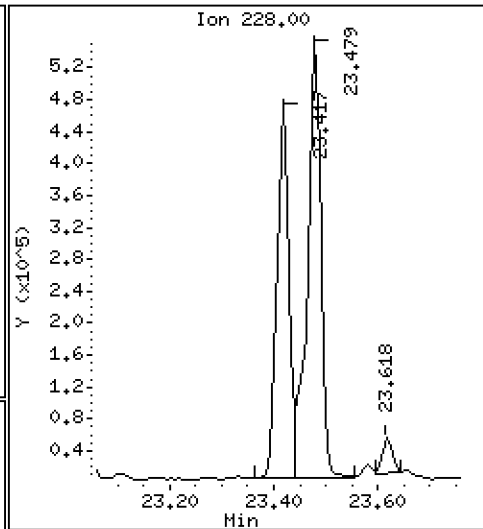
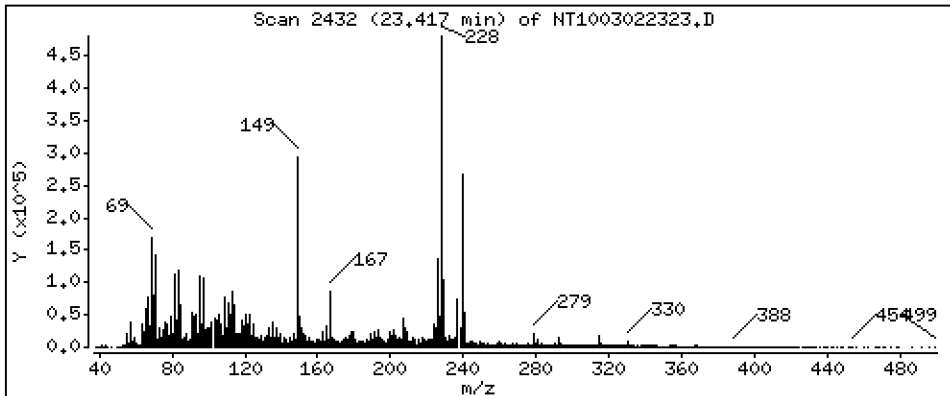
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,024 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

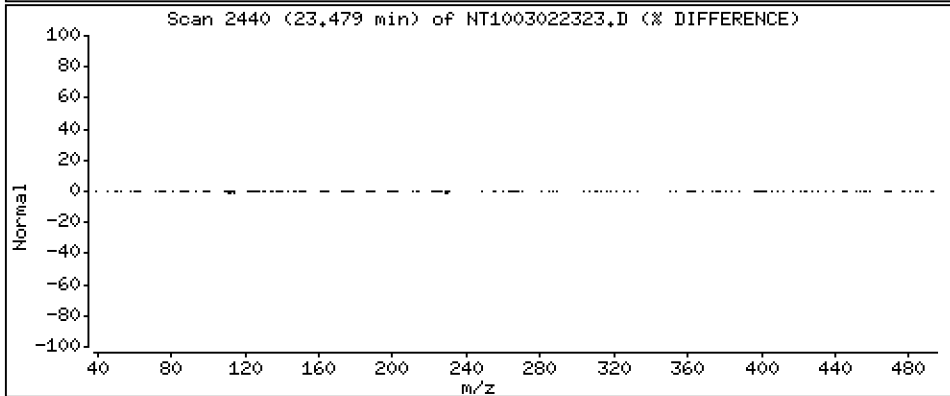
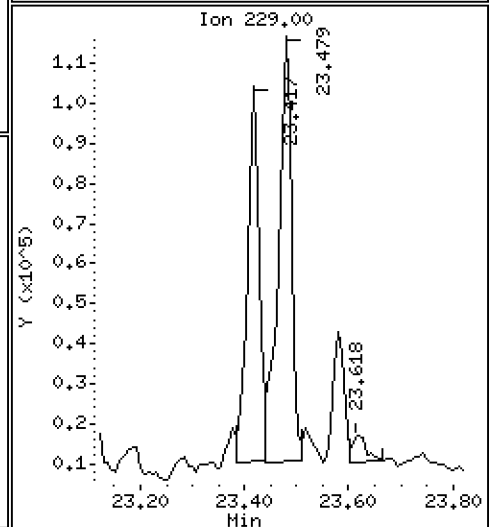
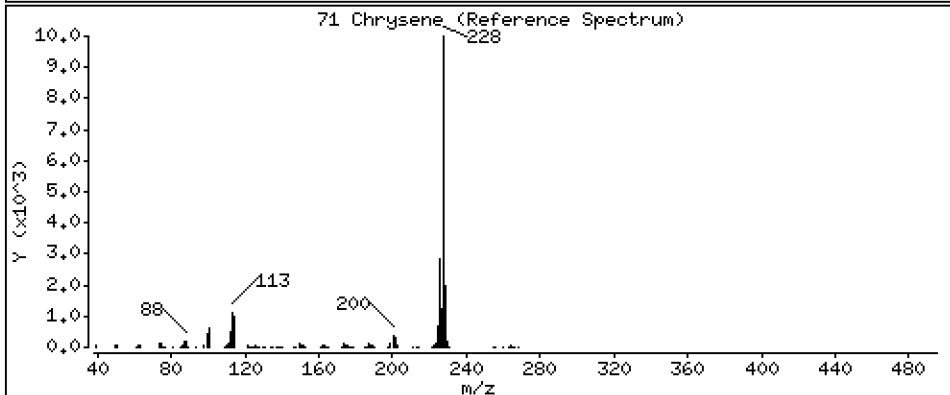
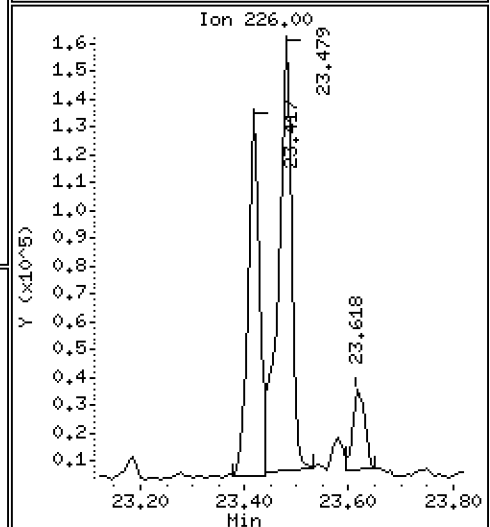
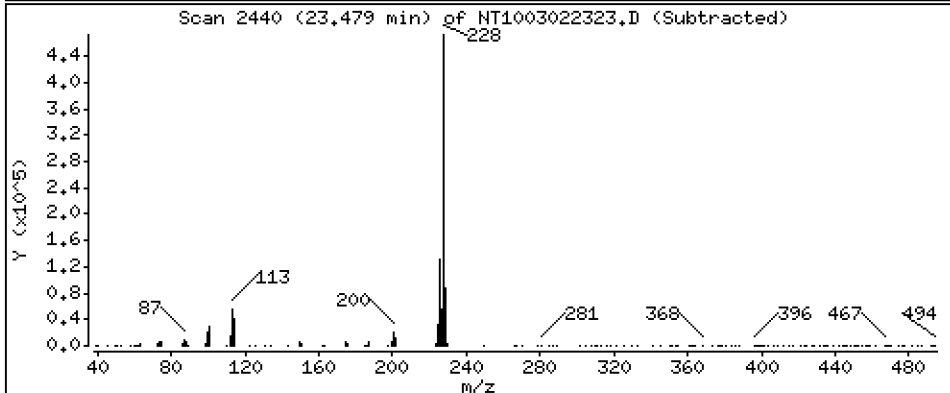
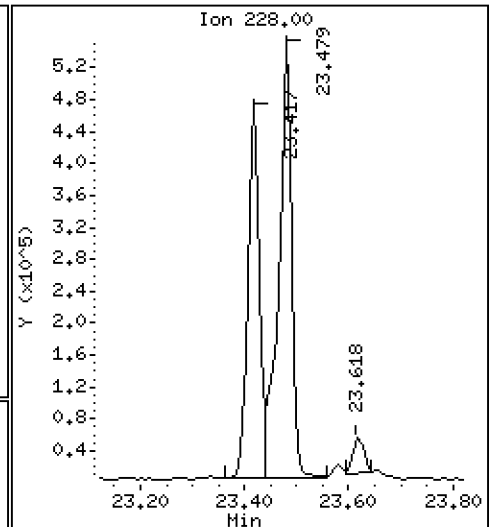
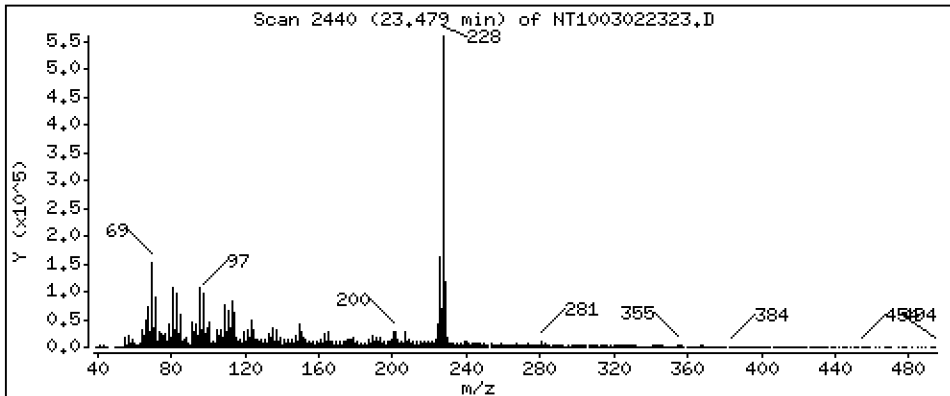
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,608 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

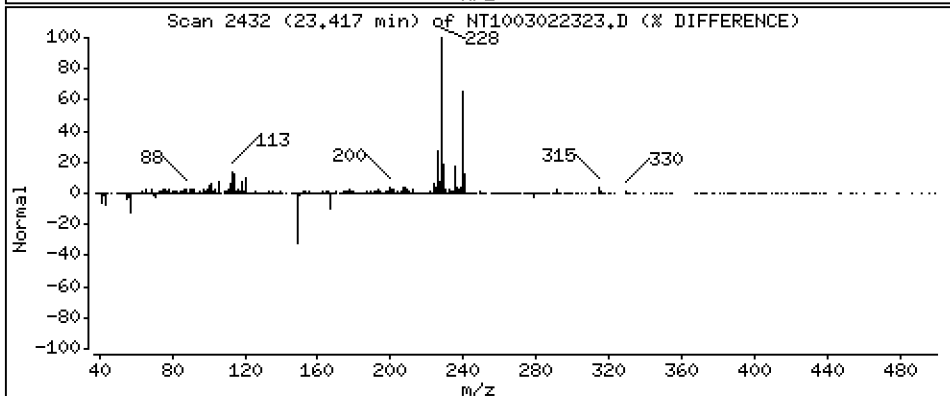
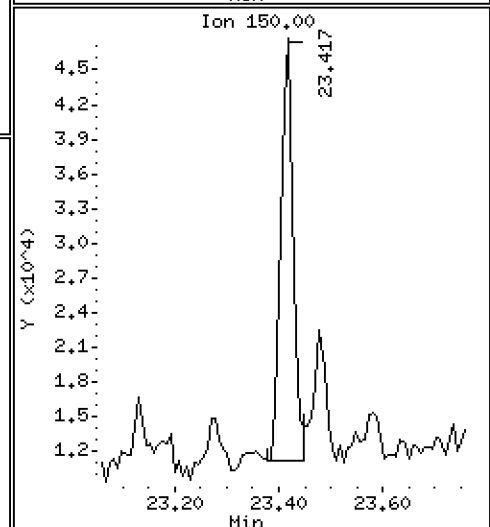
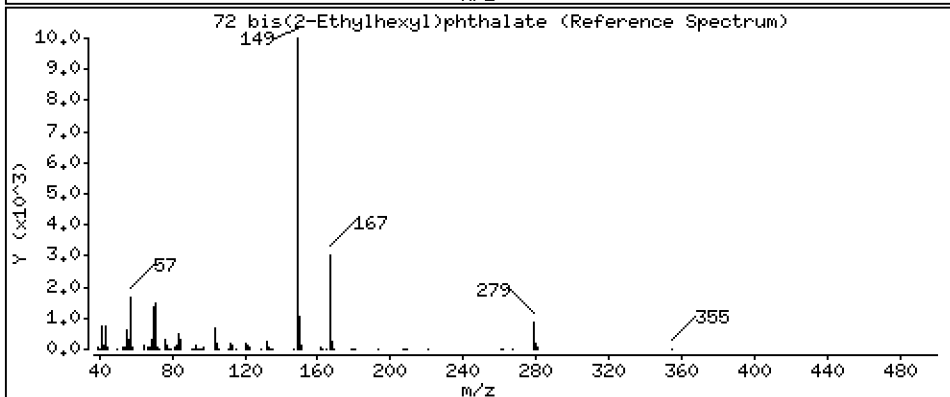
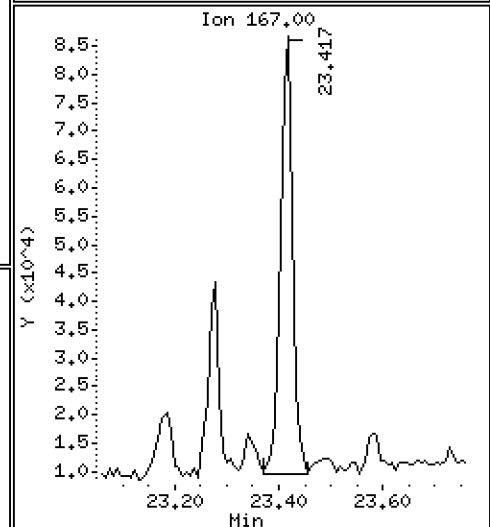
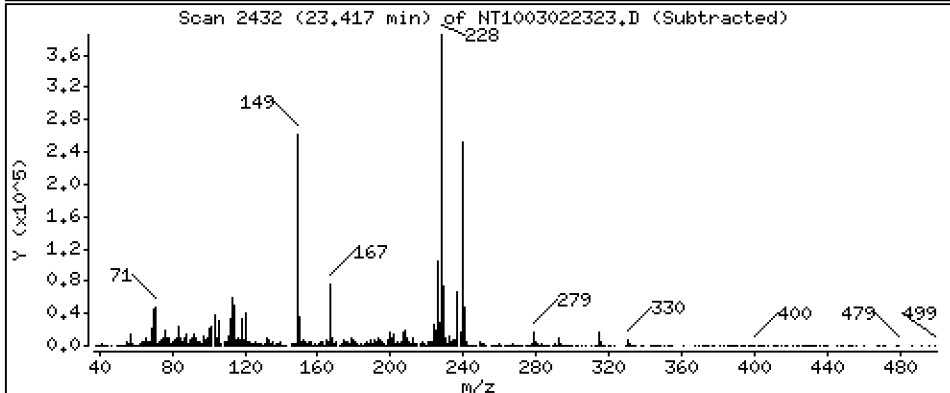
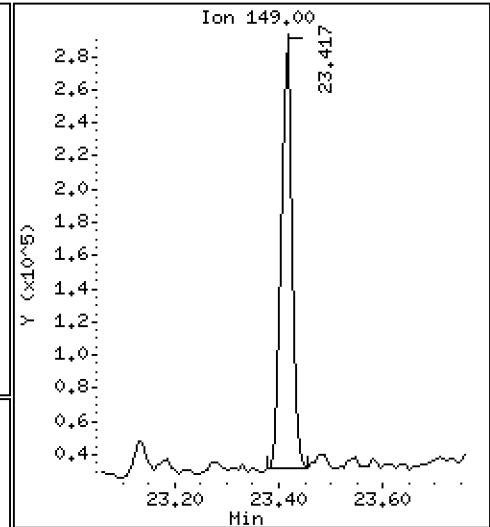
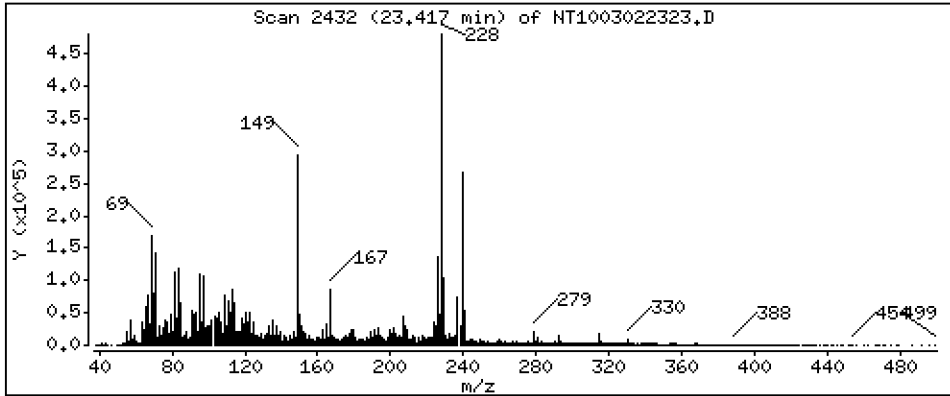
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,6538 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

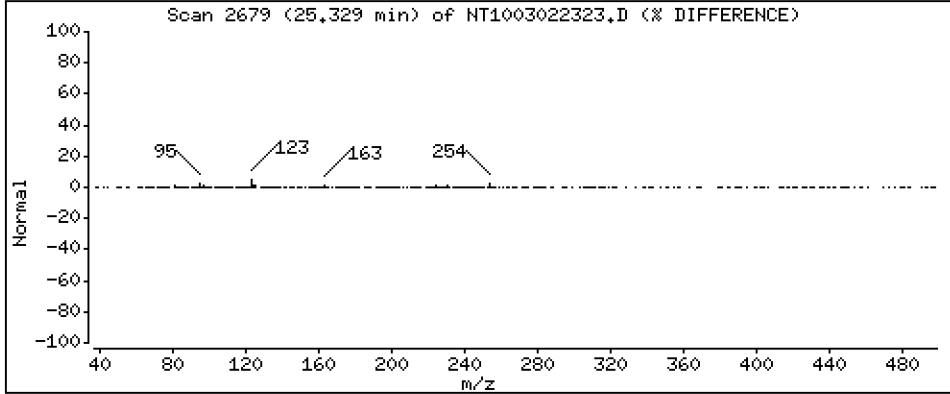
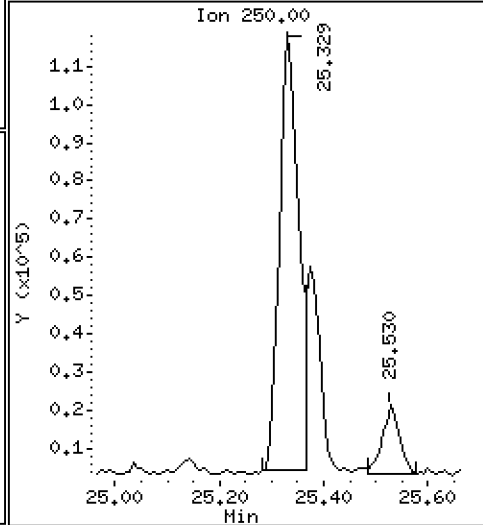
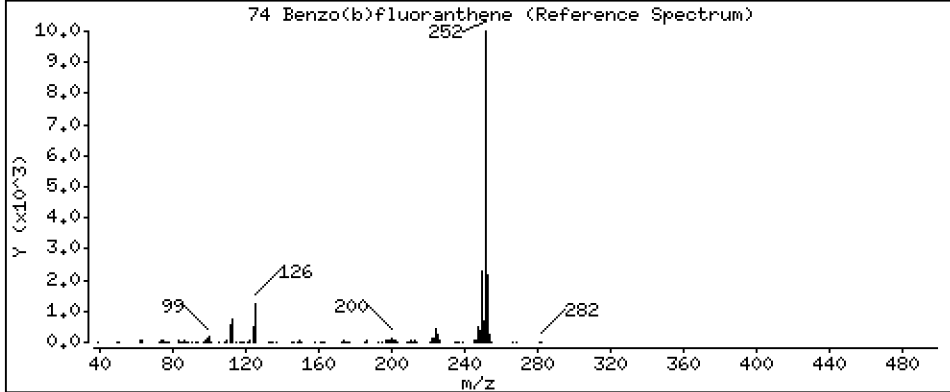
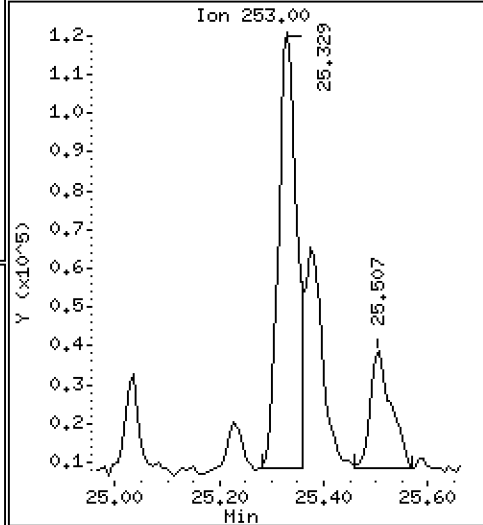
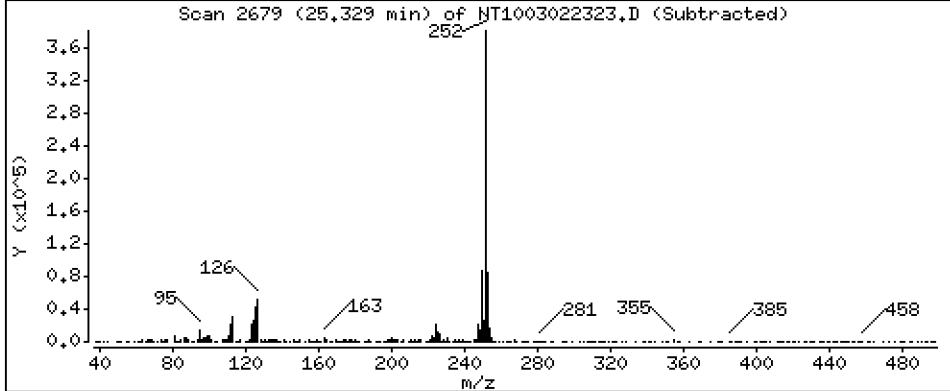
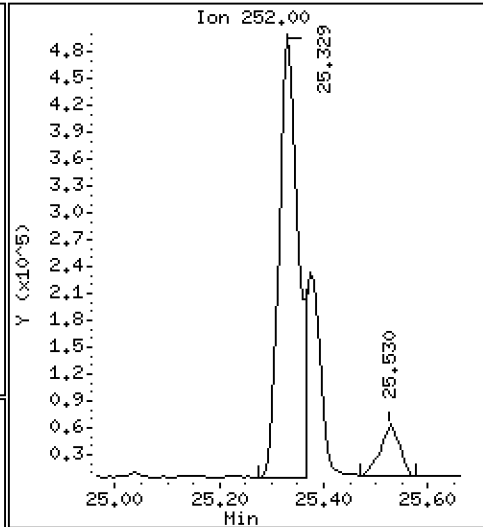
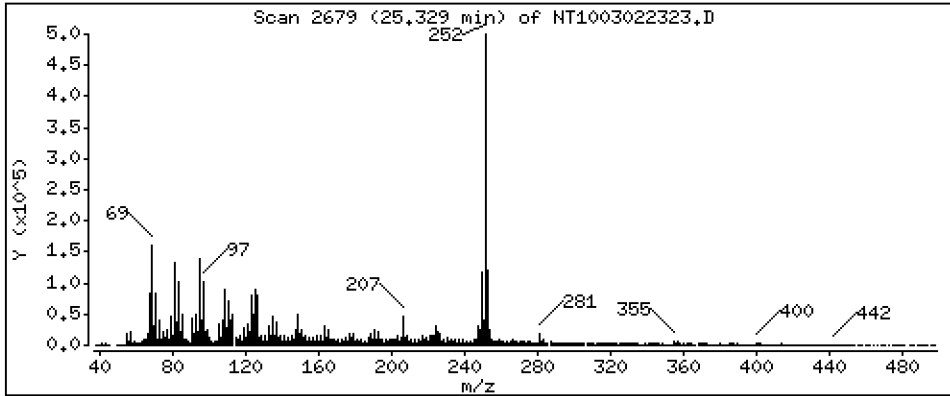
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,710 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

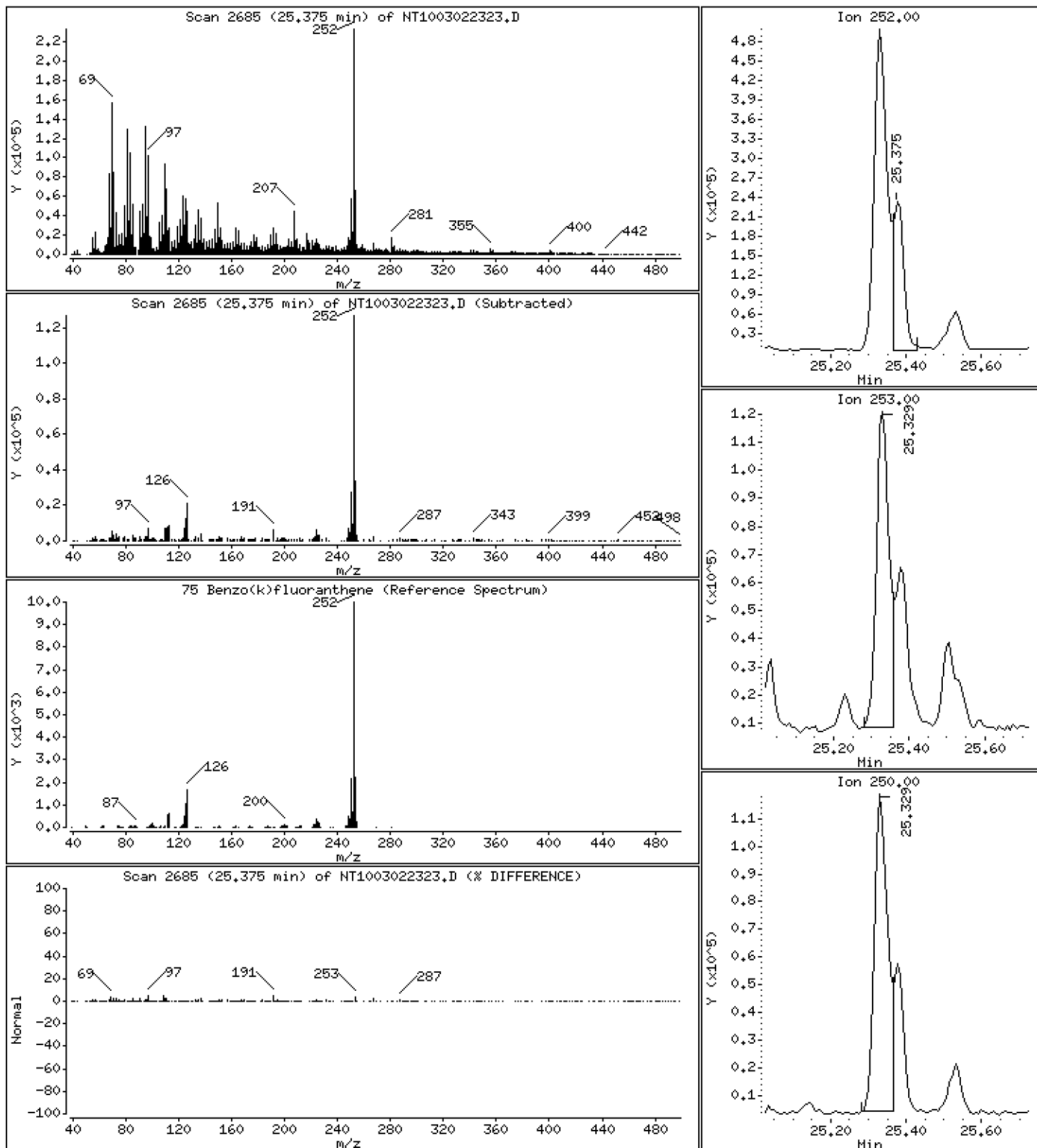
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,5898 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

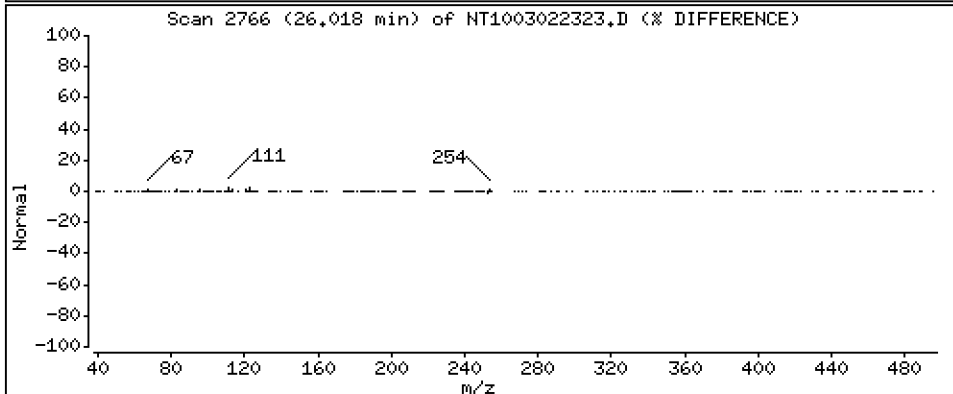
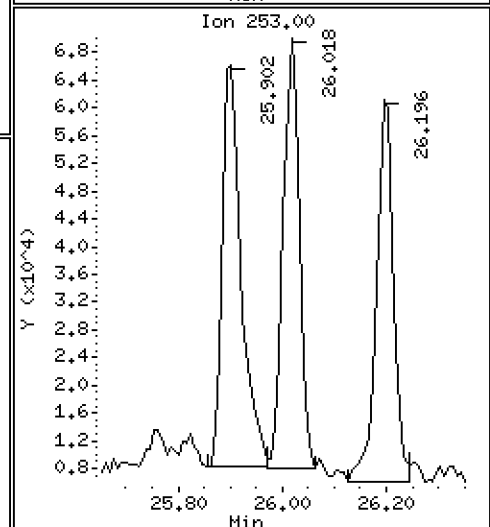
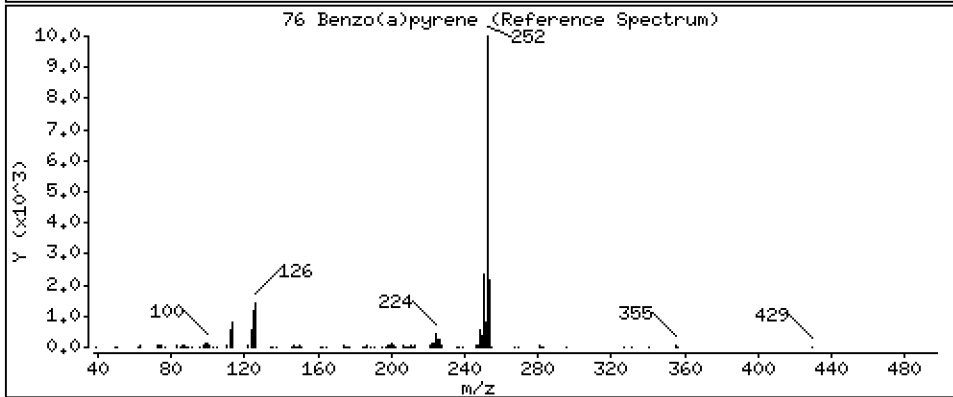
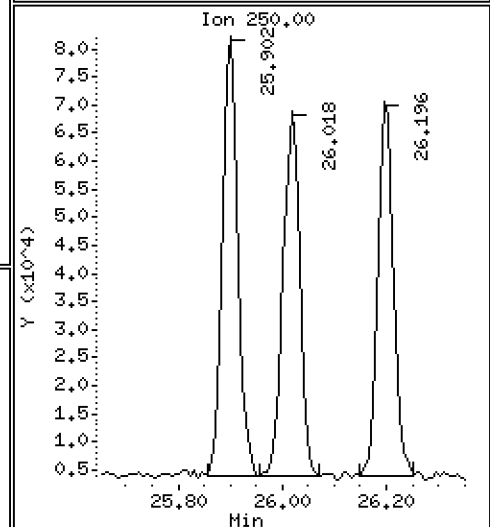
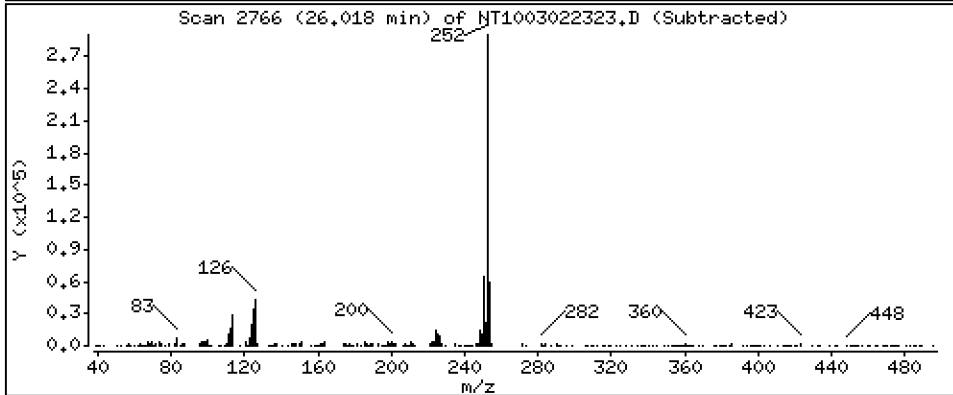
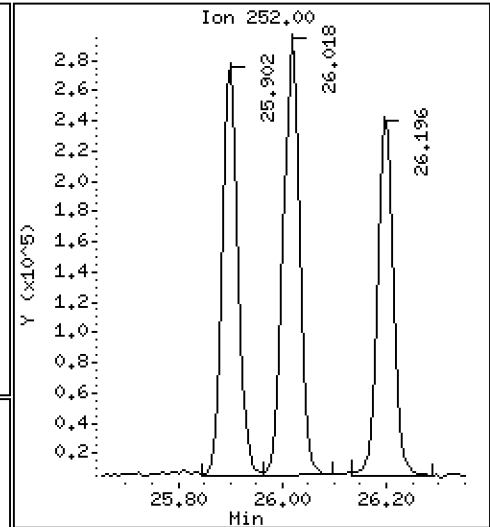
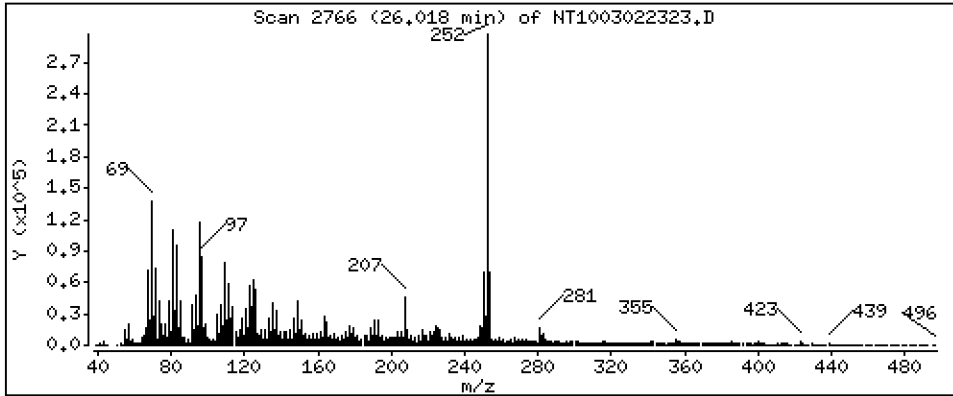
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,9276 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

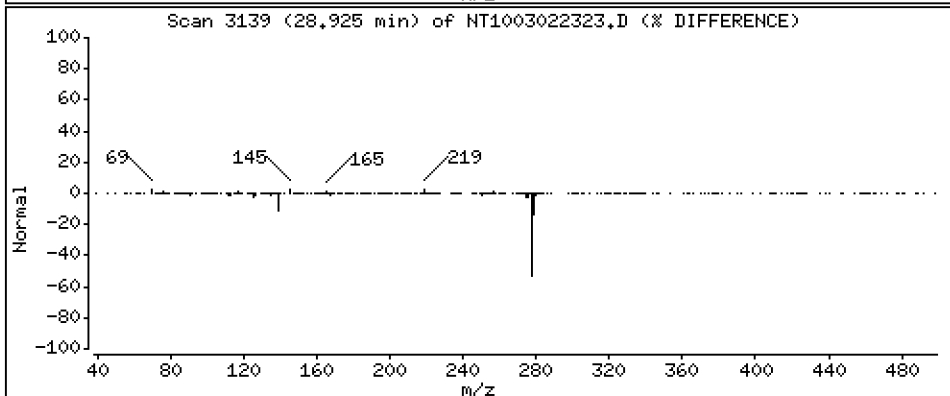
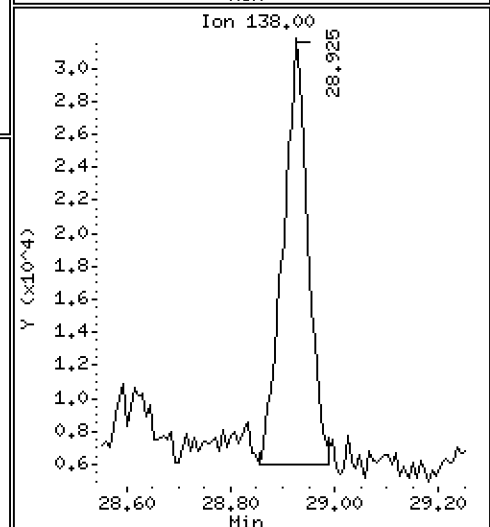
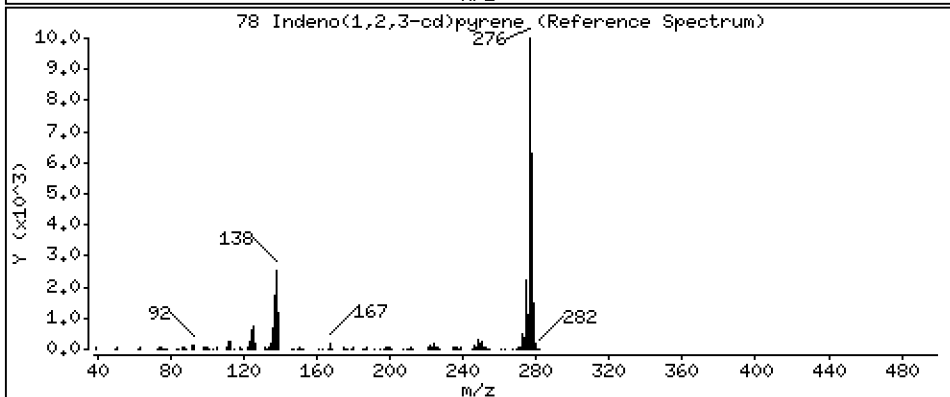
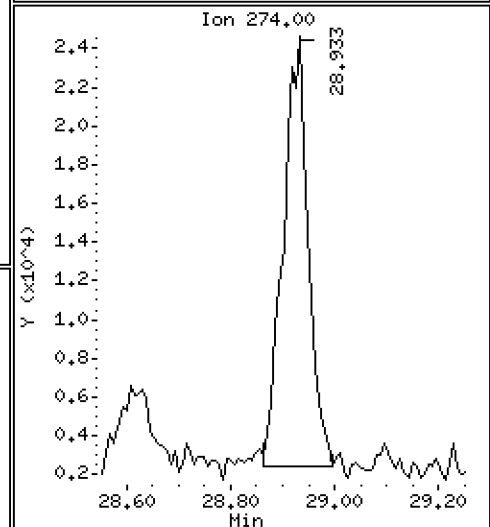
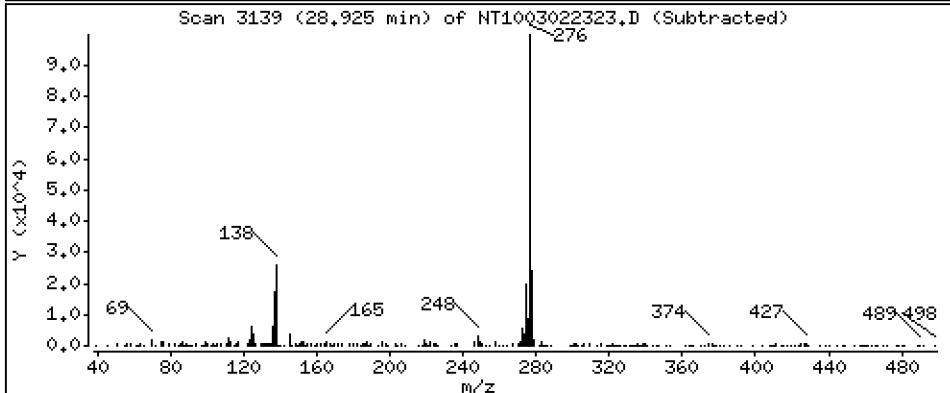
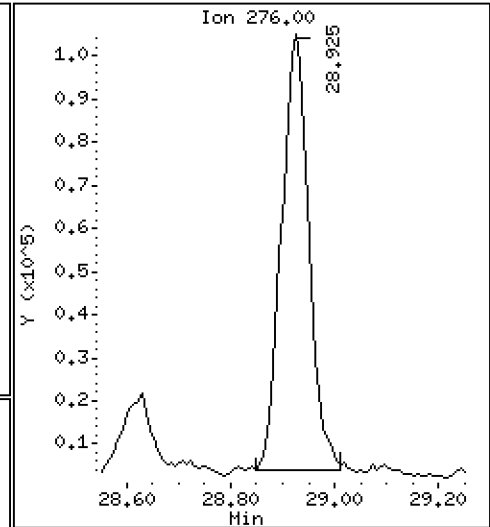
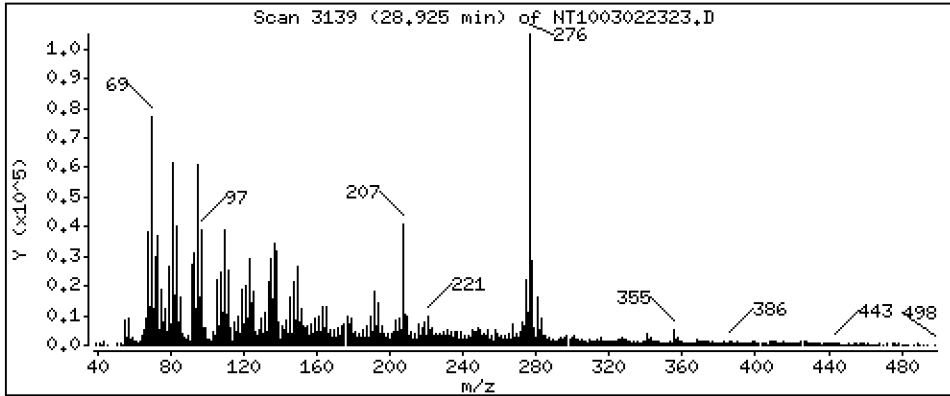
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4754 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

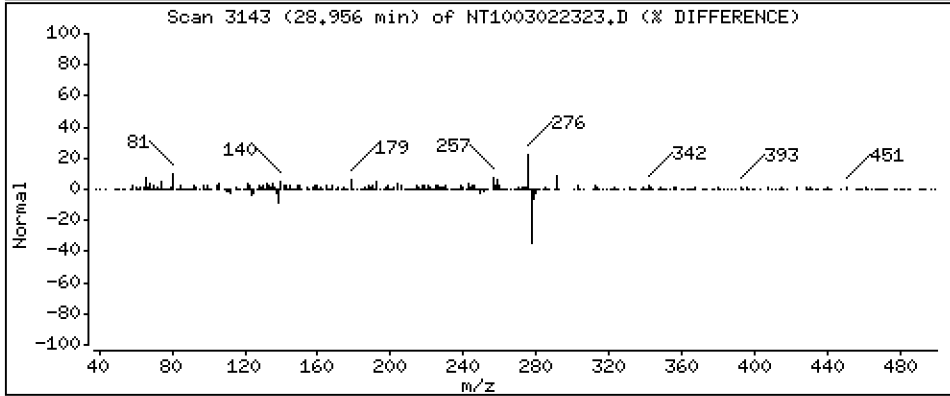
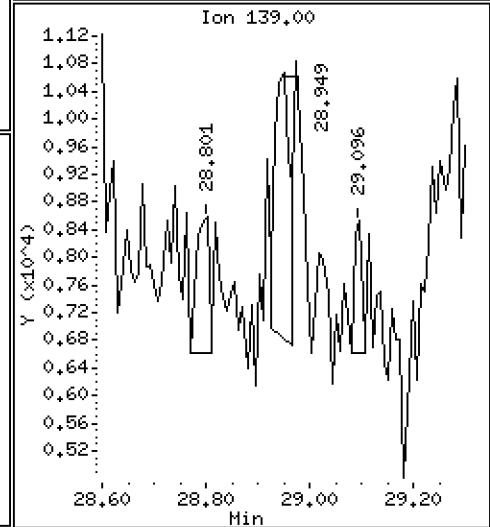
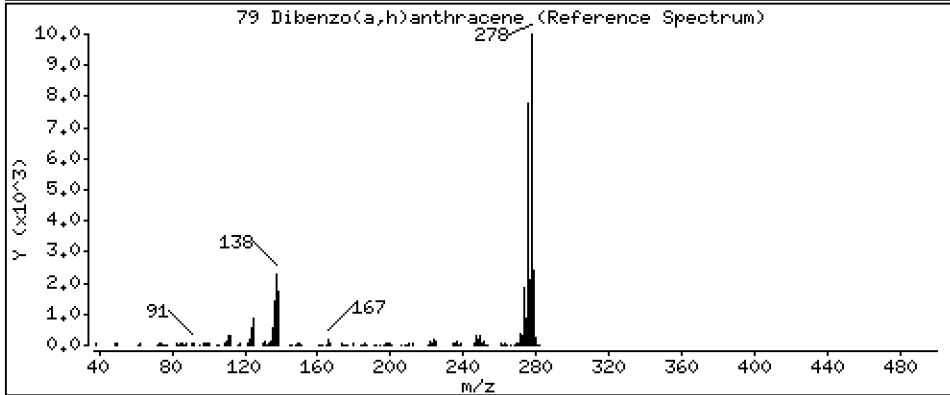
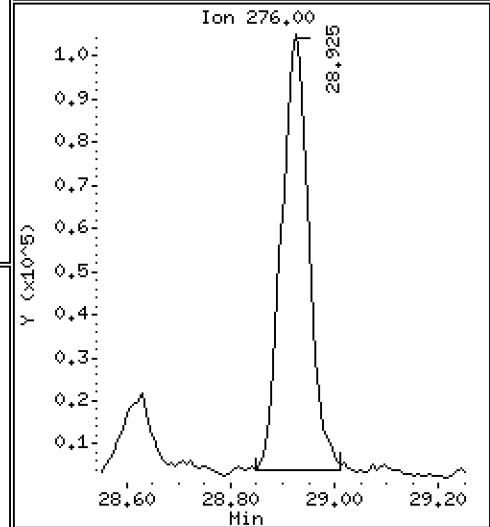
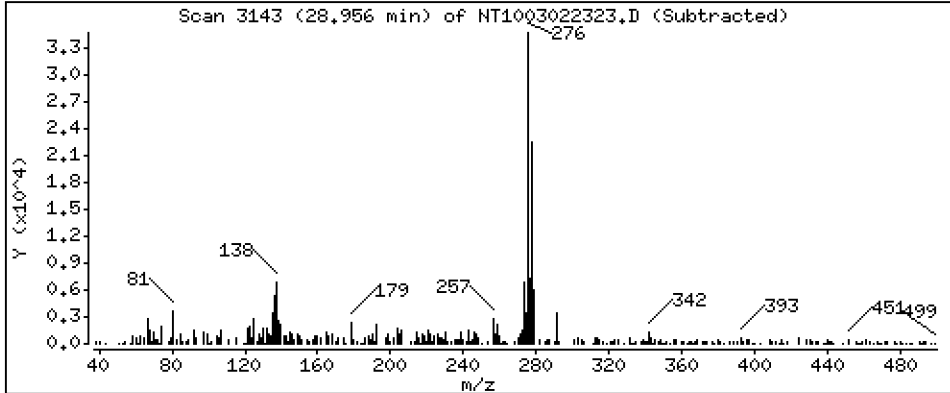
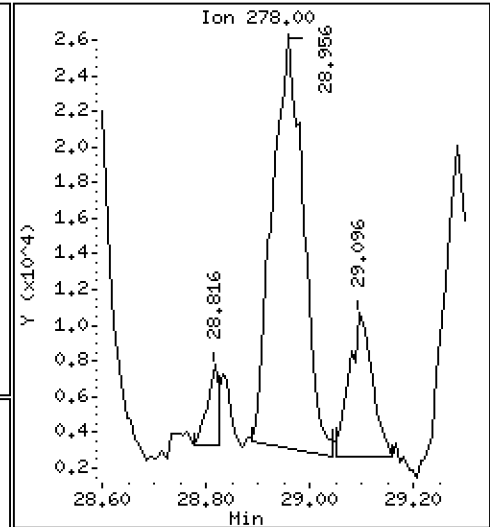
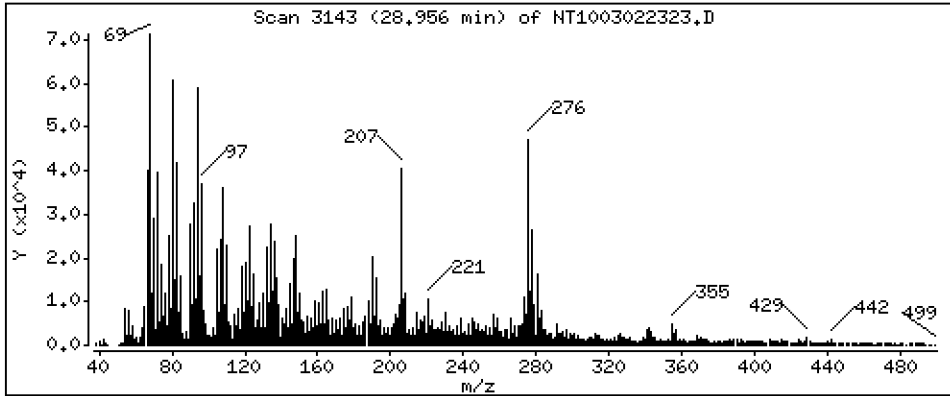
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1634 ug/mL





Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

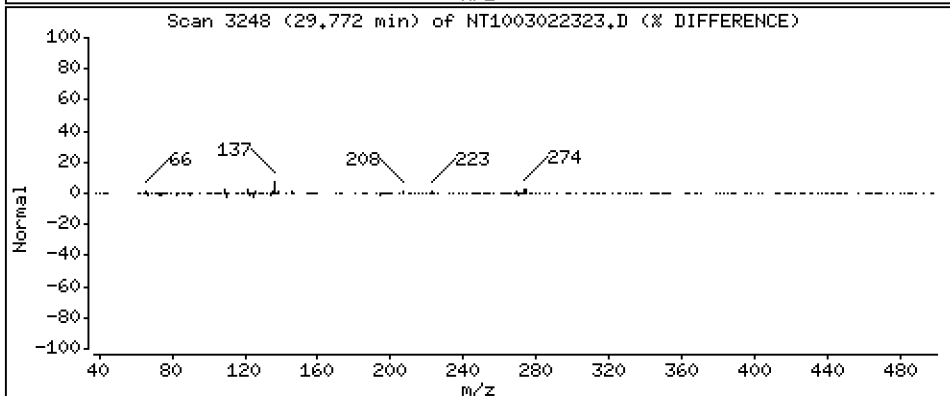
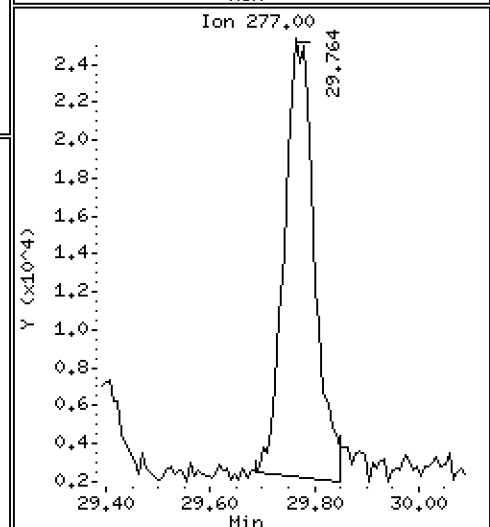
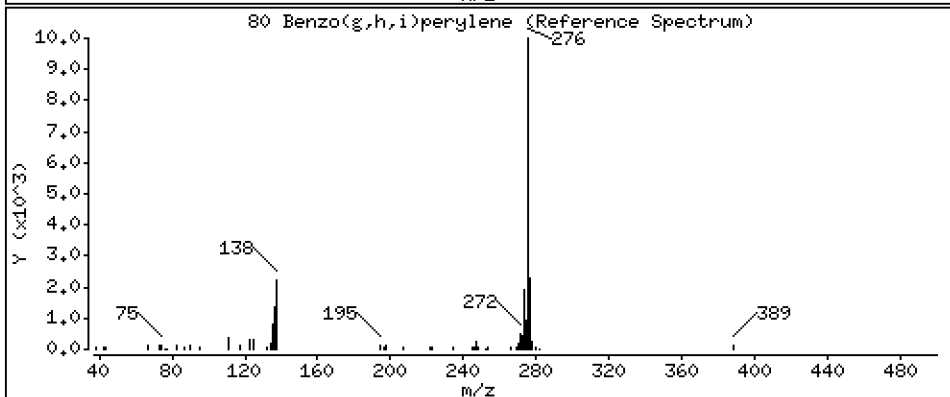
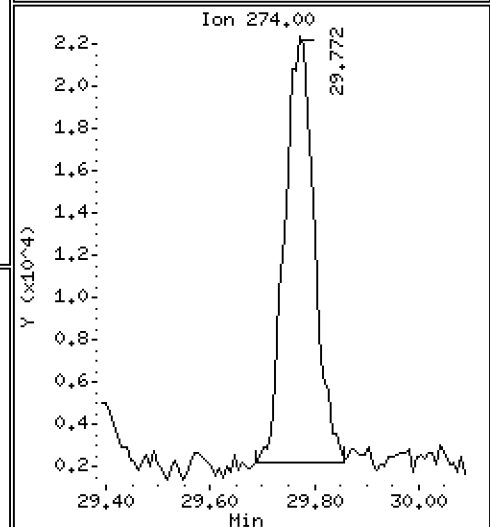
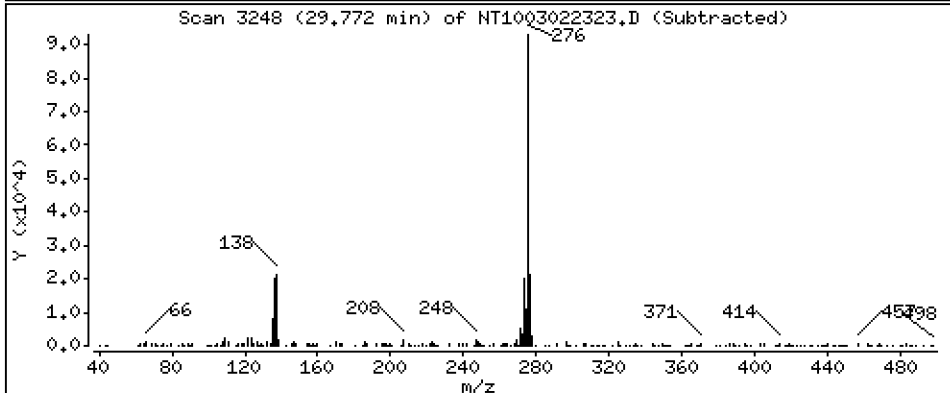
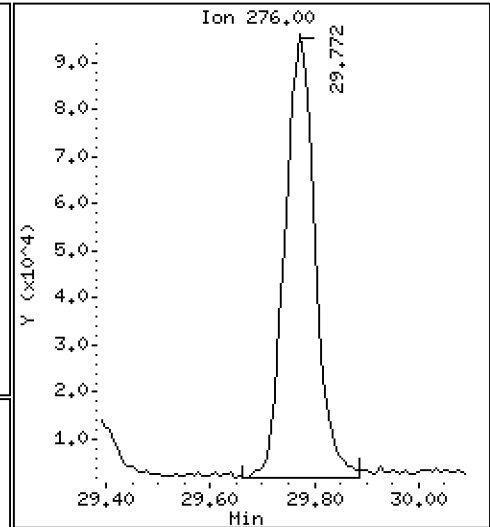
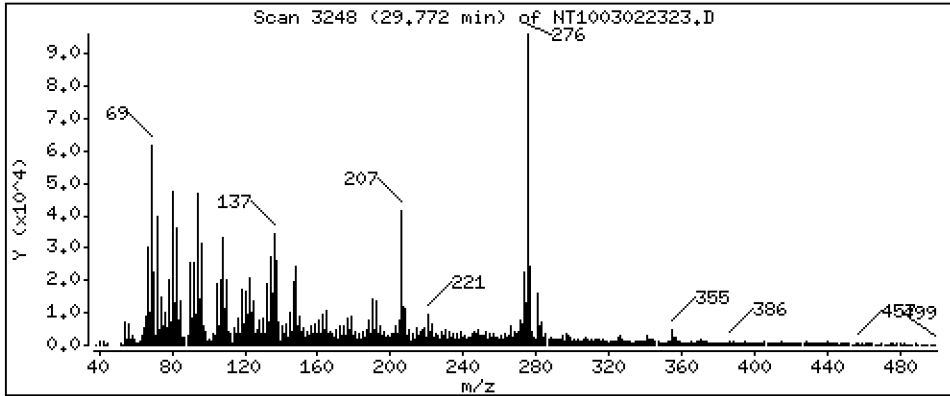
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,6209 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

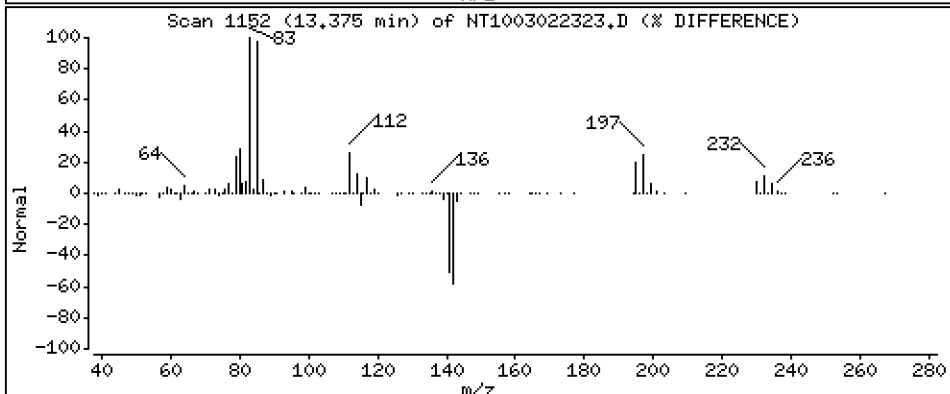
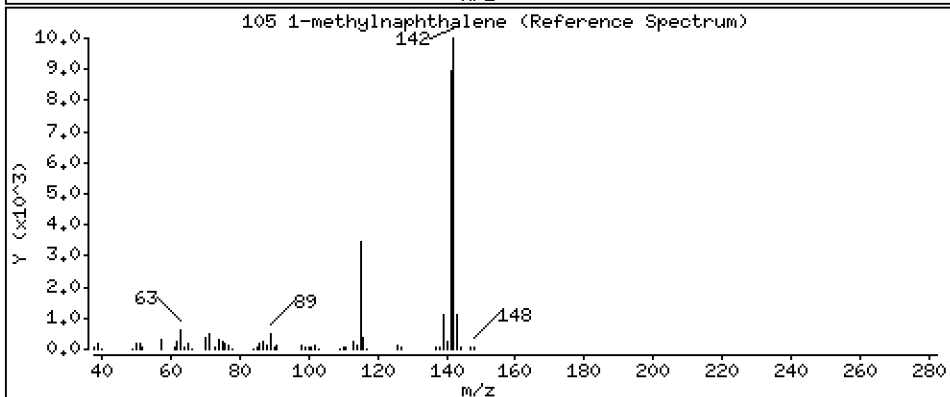
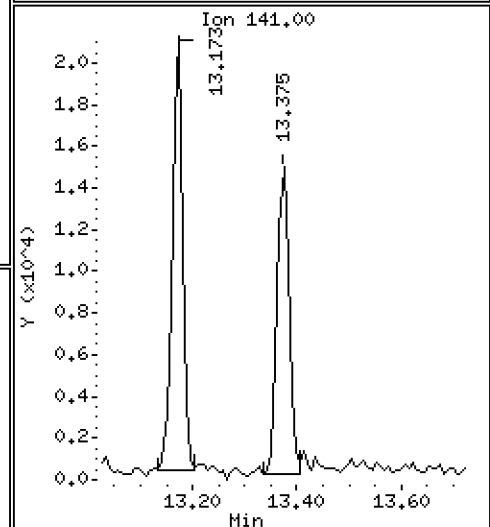
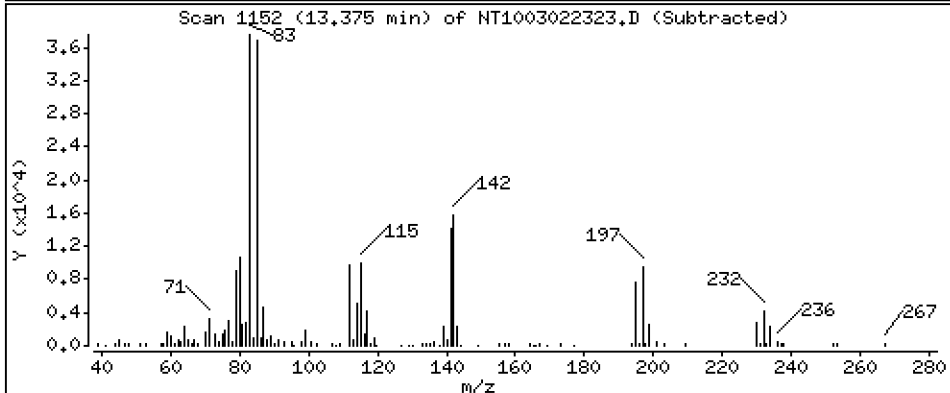
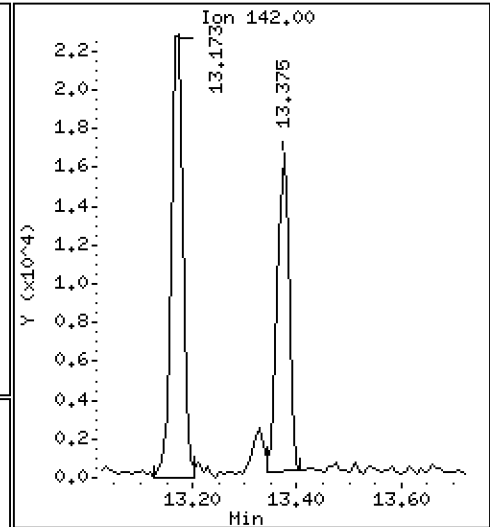
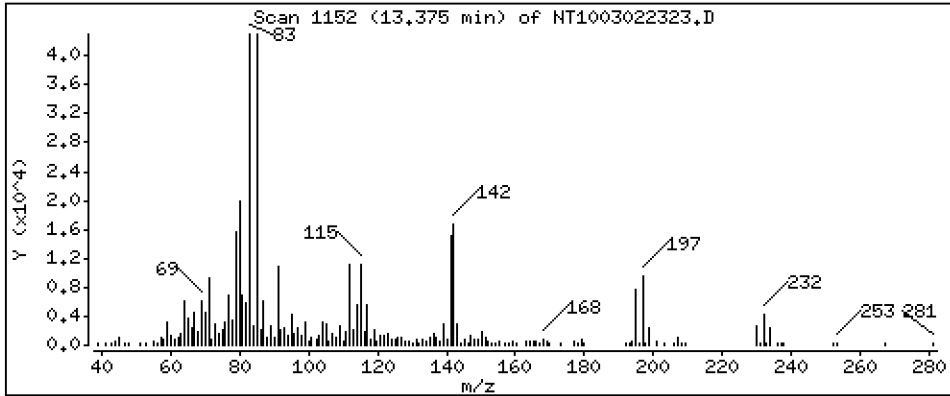
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,08054 ug/mL



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

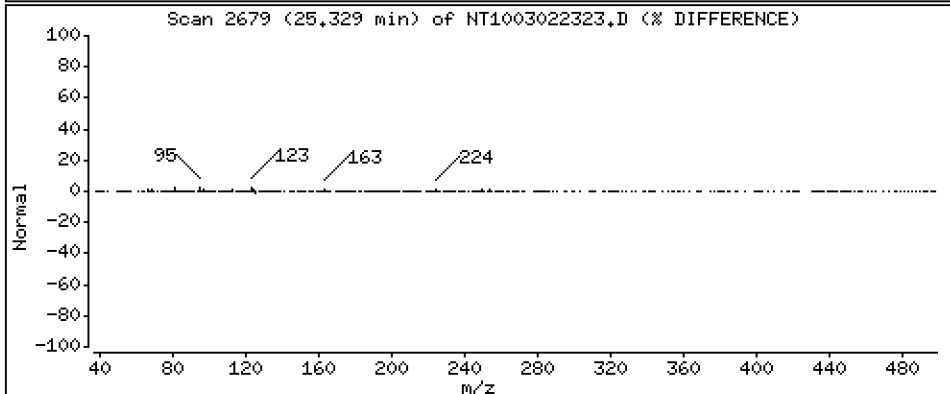
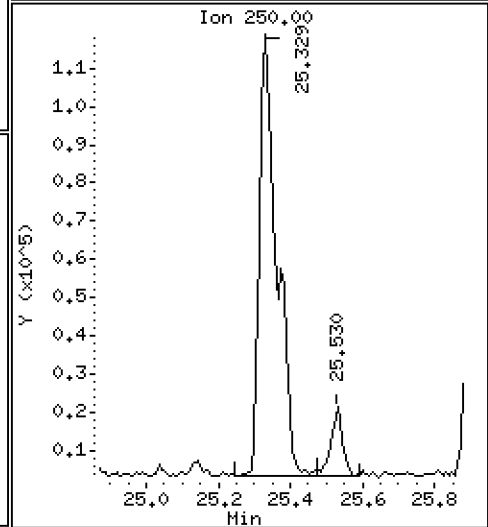
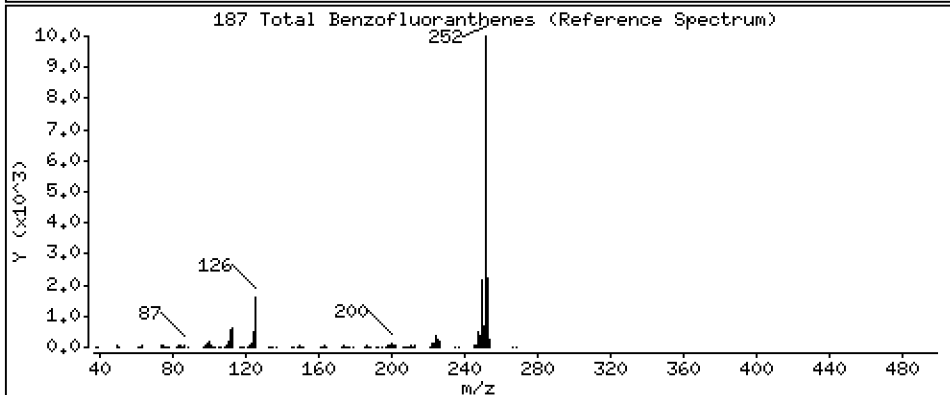
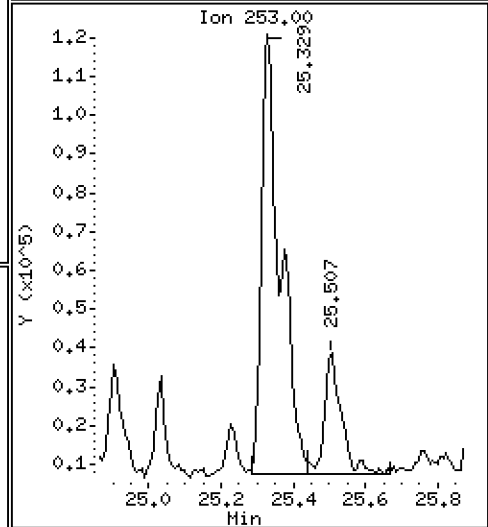
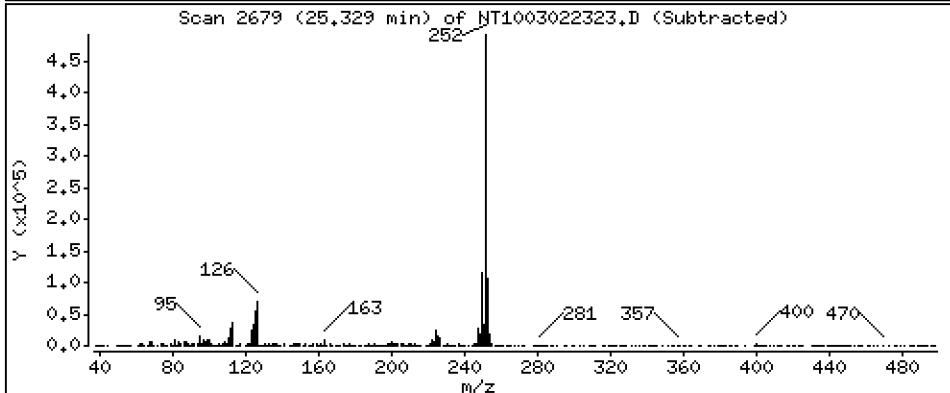
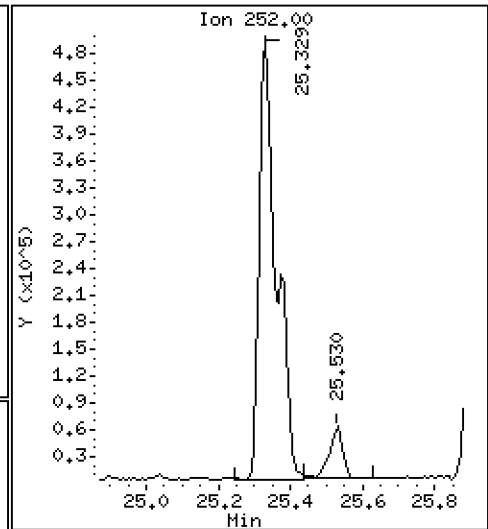
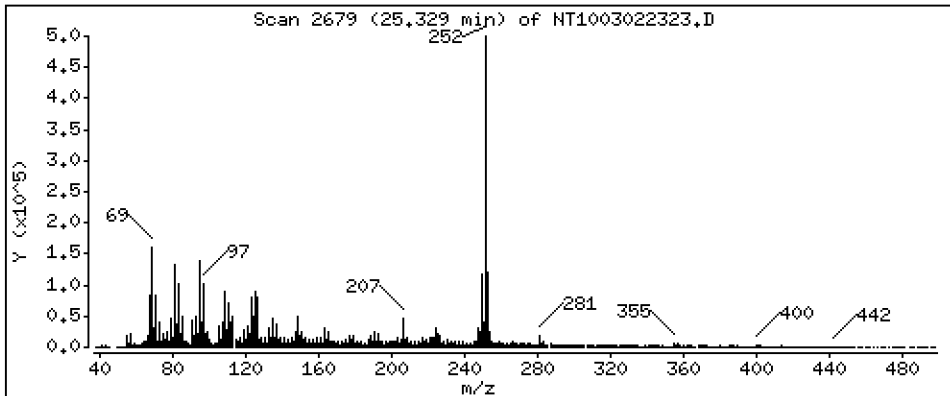
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 2,263 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022323.D

Lab Smp Id: 23A0206-08

Inj Date : 03-MAR-2023 04:19

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-08

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 19

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	950730	5.95810	5.958
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1268142	6.84525	6.845
3 Phenol	94		8.528	8.520	(0.922)	1306025	6.63069	6.631
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1054646	6.67254	6.673
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	507169	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	448755	3.80016	3.800
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.480	9.480	(1.025)	32843	0.32490	0.3249
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.658	9.658	(1.044)	4877	0.03198	0.03198
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.946	(1.076)	24771	0.12944	0.1294 (M)
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	872611	4.31607	4.316
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1841794	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	62098	0.13136	0.1314
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.165	(1.123)	37571	0.11250	0.1125
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1540765	4.53015	4.530
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.744	(0.963)	17123	0.05560	0.05560
40 Acenaphthylene	152		15.030	15.031	(0.981)	43780	0.09511	0.09511
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	953549	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.005)	41199	0.14841	0.1484
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.749	15.750	(1.028)	63580	0.15432	0.1543
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.214	(1.058)	141218	0.43288	0.4329
49 Fluorene	166		16.461	16.453	(1.075)	57399	0.16744	0.1674
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.107)	375809	6.14785	6.148
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1808356	4.00000	
60 Phenanthrene	178		18.463	18.456	(1.003)	387837	0.83804	0.8380
61 Anthracene	178		18.571	18.564	(1.009)	167905	0.37416	0.3742
62 Carbazole	167		18.904	18.897	(1.027)	53519	0.13018	0.1302
63 Di-n-butylphthalate	149		19.593	19.593	(1.064)	29202	0.05239	0.05239
64 Fluoranthene	202		20.846	20.823	(0.890)	1292173	1.82826	1.828
65 Pyrene	202		21.264	21.256	(0.907)	1278325	1.77624	1.776
\$ 66 Terphenyl-d14	244		21.543	21.535	(0.919)	2531461	4.34716	4.347
67 Butylbenzylphthalate	149		22.417	22.418	(0.957)	25892	0.06679	0.06679
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	741745	1.02389	1.024
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	2054537	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.471	(1.002)	946491	1.60762	1.608
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	358400	0.65383	0.6538
* 134 Di-n-octylphthalate-d4	153		24.492	24.493	(1.000)	3897768	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.329	25.313	(0.969)	1297369	1.71021	1.710
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	425619	0.58978	0.5898 (M)
76 Benzo(a)pyrene	252		26.018	26.002	(0.995)	623640	0.92758	0.9276
* 77 Perylene-d12	264		26.142	26.126	(1.000)	2188130	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.925	28.902	(1.106)	372018	0.47543	0.4754
79 Dibenzo(a,h)anthracene	278		28.956	28.948	(1.108)	96670	0.16344	0.1634
80 Benzo(g,h,i)perylene	276		29.771	29.740	(1.139)	387391	0.62089	0.6209
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	24343	0.08054	0.08054
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
						ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252	25.329	25.375	(0.969)	1638925	2.26285	2.263	
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022323.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-08  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	507169	-15.35
27 Naphthalene-d8	2200781	1100391	4401562	1841794	-16.31
42 Acenaphthene-d10	1135136	567568	2270272	953549	-16.00
59 Phenanthrene-d10	2128944	1064472	4257888	1808356	-15.06
69 Chrysene-d12	2449624	1224812	4899248	2054537	-16.13
134 Di-n-octylphthala	4694735	2347368	9389470	3897768	-16.98
77 Perylene-d12	2593218	1296609	5186436	2188130	-15.62

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022323.D

Lab ID: 23A0206-08  
nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 04:19

RT CO-ELUTION COMPOUNDS

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23.417 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003022314ICV.D

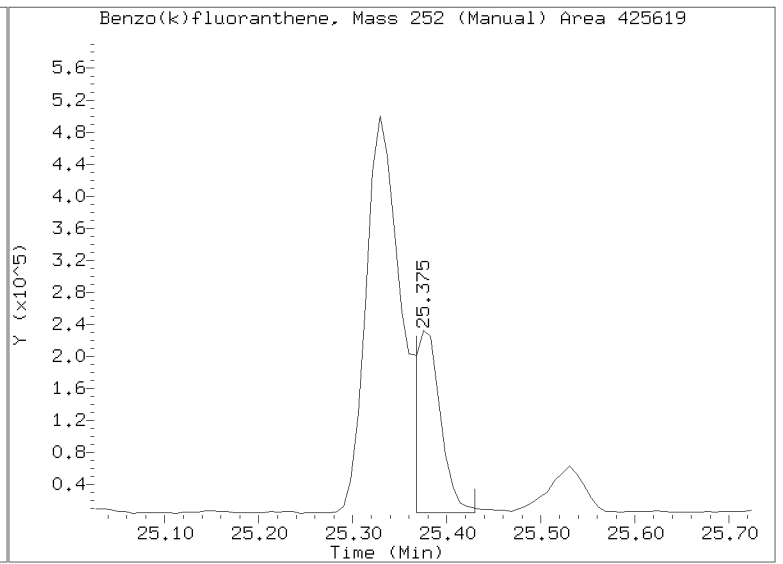
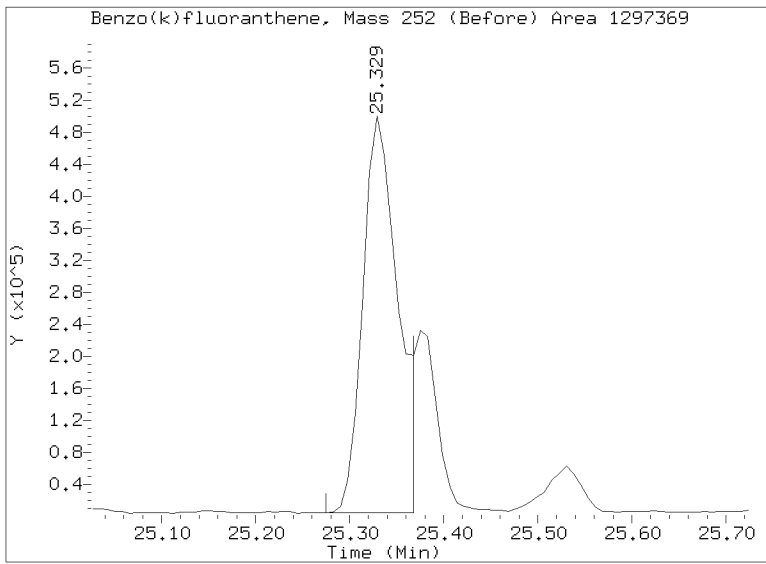
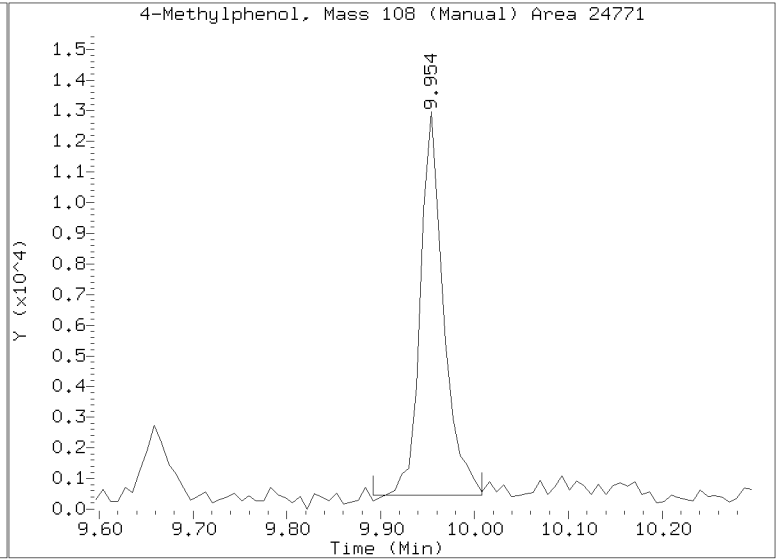
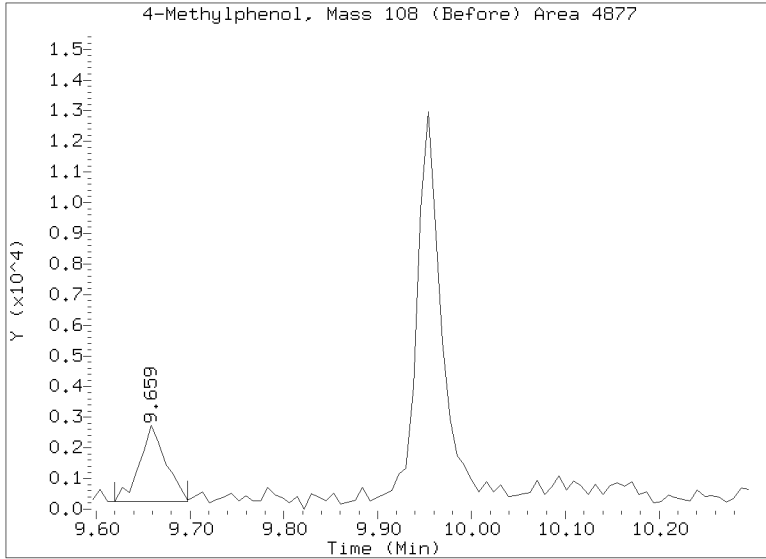
On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022323.D  
Injection Date: 03-MAR-2023 04:19  
Lab ID:23A0206-08 Client ID:  
Report Date: 03/09/2023 15:50





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-09 B

SDG: 23A0206

Sampled: 01/11/23 11:15

Prepared: 01/27/23 14:44

File ID: NT1003022324.D

% Solids: 41.88

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:58

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 23.91 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1480		4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	8.1	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	5.3	J	4.5	20.0
208-96-8	Acenaphthylene	1	8.7	J	6.2	20.0
131-11-3	Dimethylphthalate	1	7.0	J	4.4	20.0
83-32-9	Acenaphthene	1	7.1	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	52.8		8.7	20.0
120-12-7	Anthracene	1	34.1		7.2	20.0
206-44-0	Fluoranthene	1	125		6.1	20.0
129-00-0	Pyrene	1	124		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	87.1		6.0	20.0
218-01-9	Chrysene	1	152		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	54.1		5.5	49.9
	Benzo(a)fluoranthene, Total	1	196		10.0	39.9
50-32-8	Benzo(a)pyrene	1	75.3		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	42.0		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	54.6		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.99	604	80.7	27 - 120	
Phenol-d5	748.99	704	94.0	29 - 120	
2-Chlorophenol-d4	748.99	685	91.5	31 - 120	
1,2-Dichlorobenzene-d4	499.33	383	76.8	32 - 120	
Nitrobenzene-d5	499.33	442	88.5	30 - 120	
2-Fluorobiphenyl	499.33	465	93.1	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-09 B

SDG: 23A0206

Sampled: 01/11/23 11:15

Prepared: 01/27/23 14:44

File ID: NT1003022324.D

% Solids: 41.88

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:58

Batch: BLA0624

Sequence: SLC0132

Initial/Final: 23.91 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.99	624	83.3	24 - 134	
p-Terphenyl-d14	499.33	448	89.6	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022324.D

Date: 03-HR-2023 04:58

Client ID:

Sample Info: 23A0206-09

Page 1

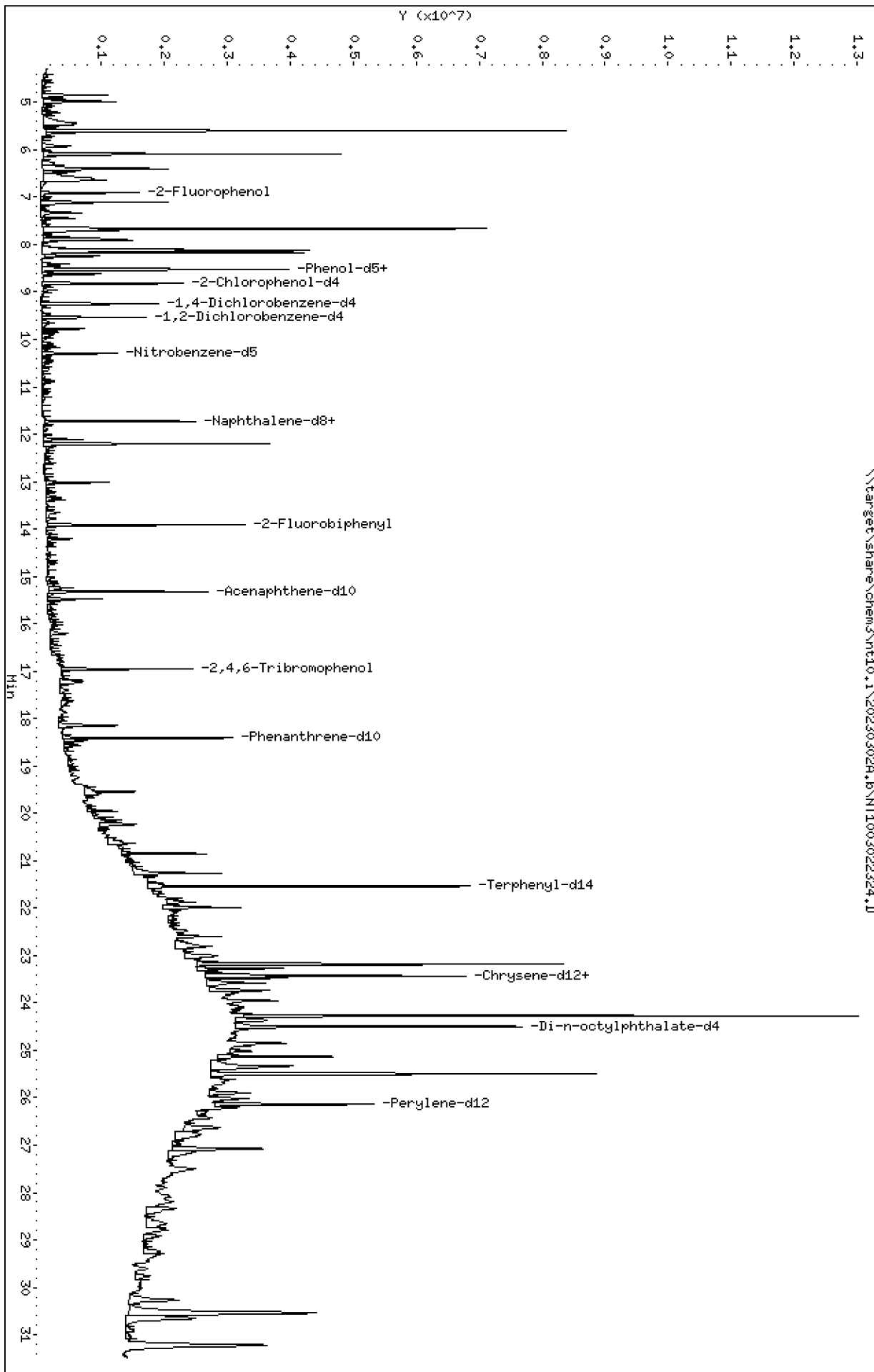
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302A.B\NT1003022324.D



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

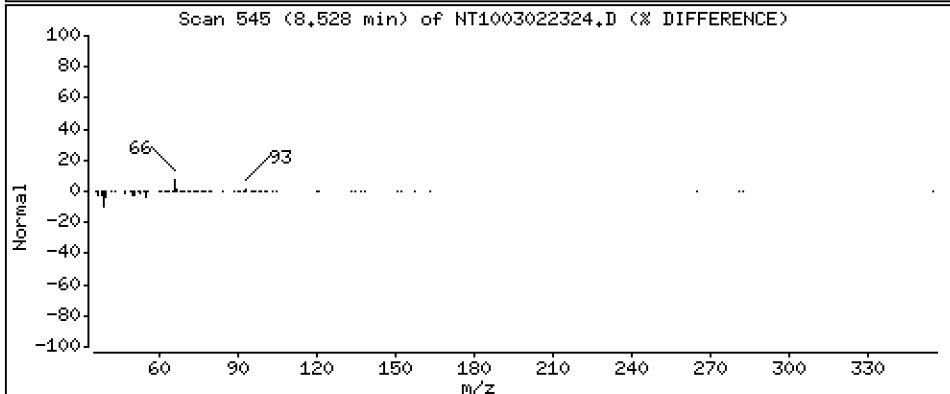
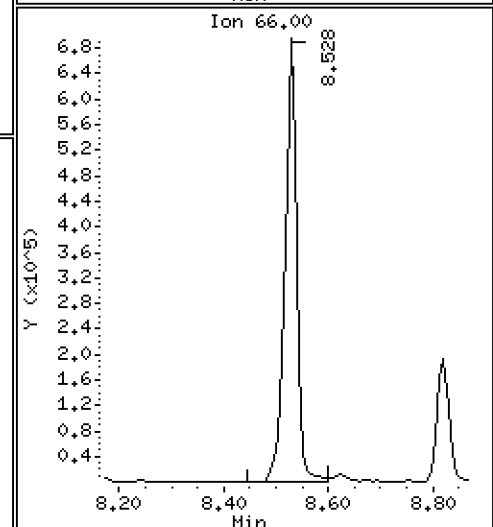
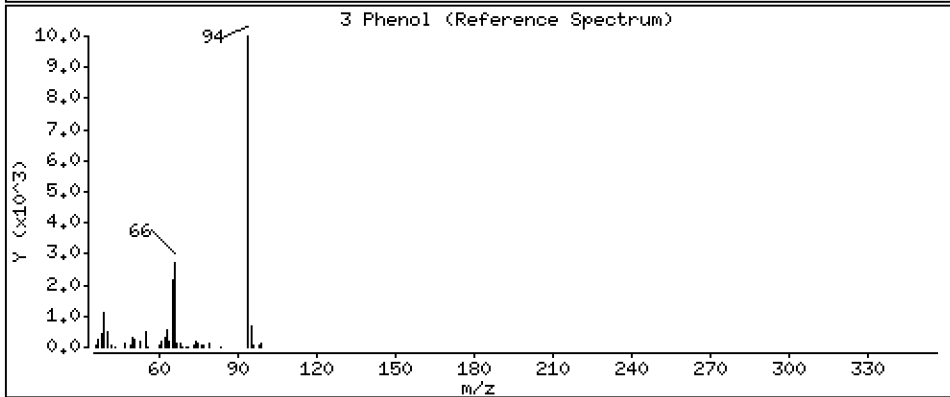
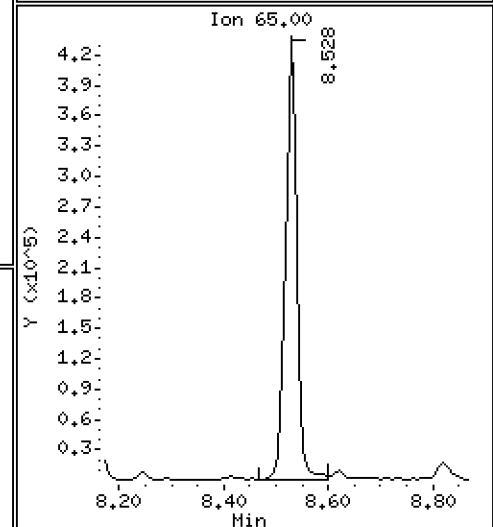
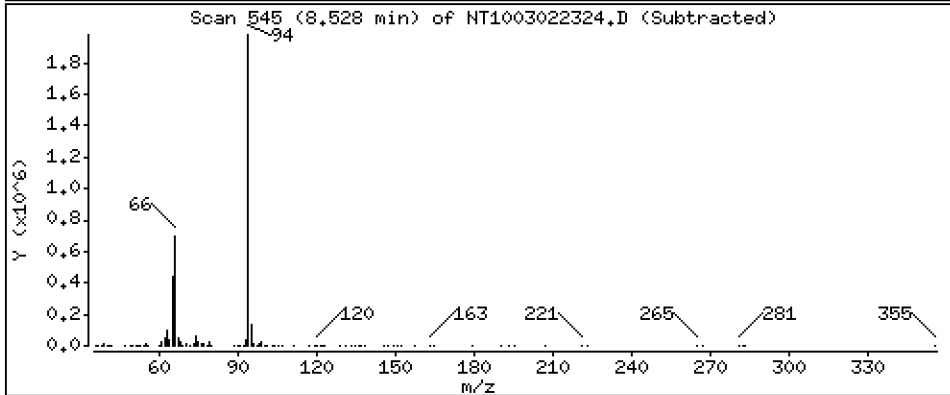
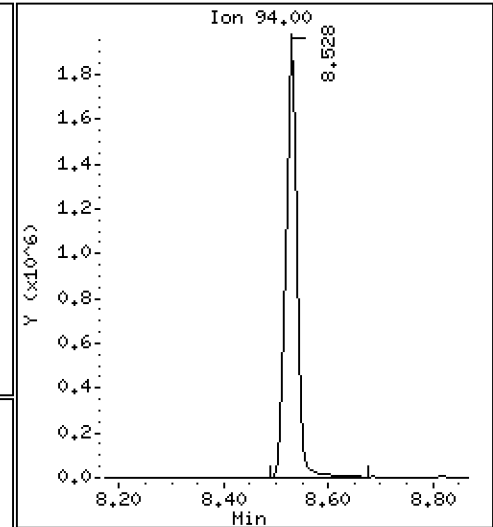
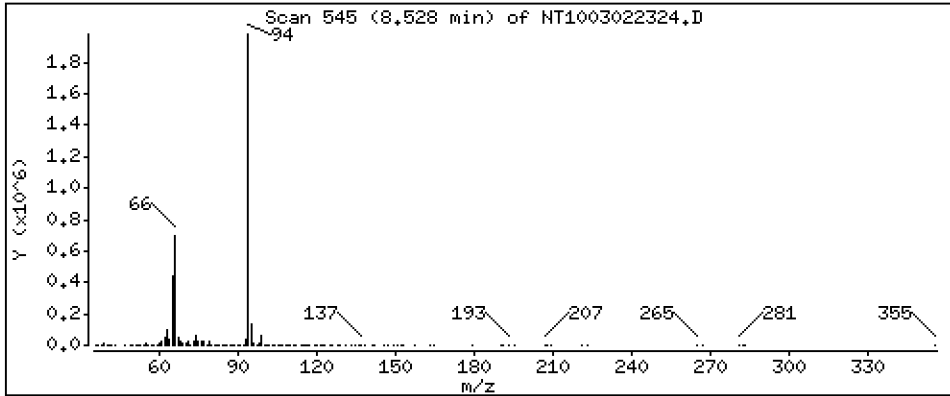
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 14,78 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

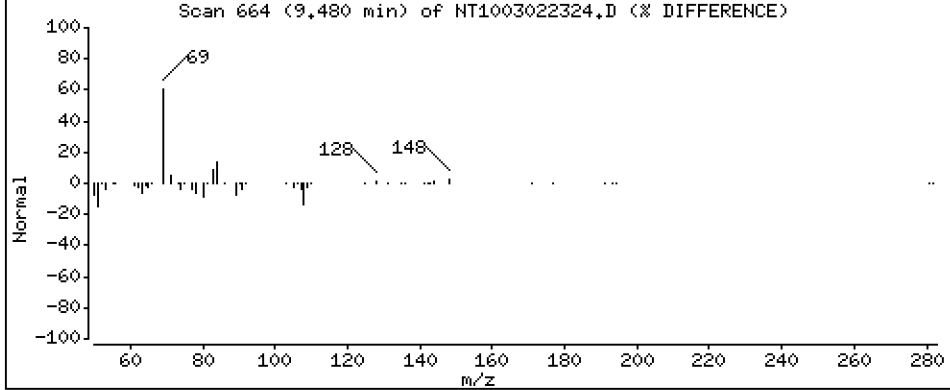
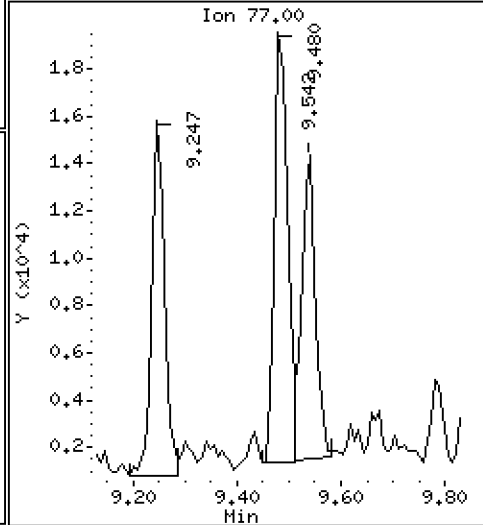
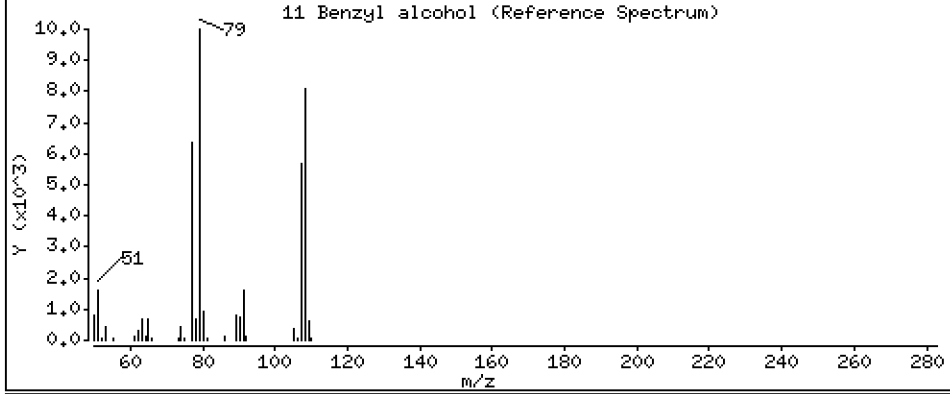
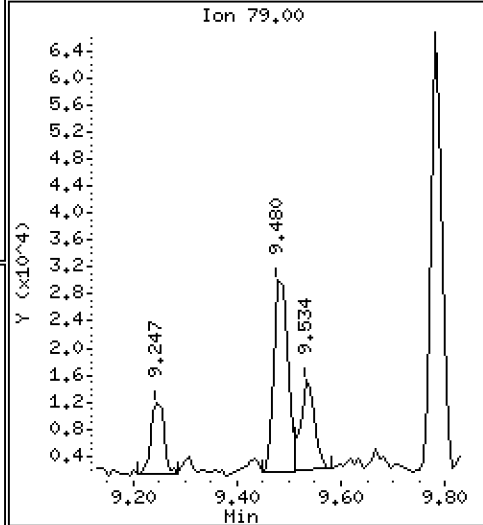
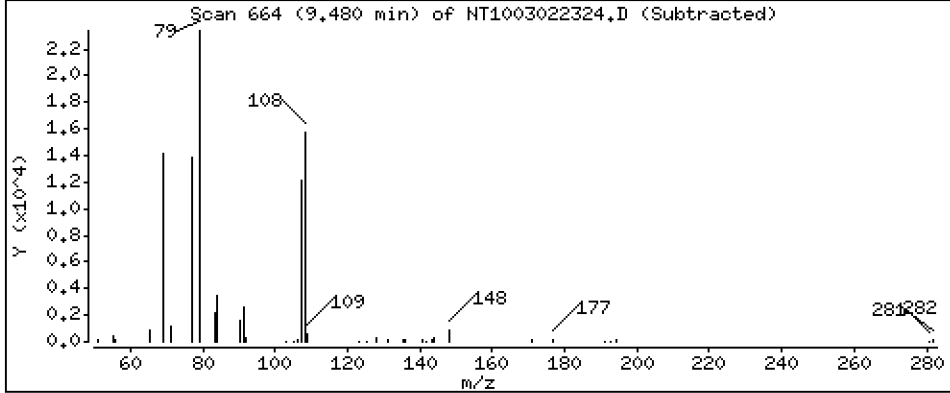
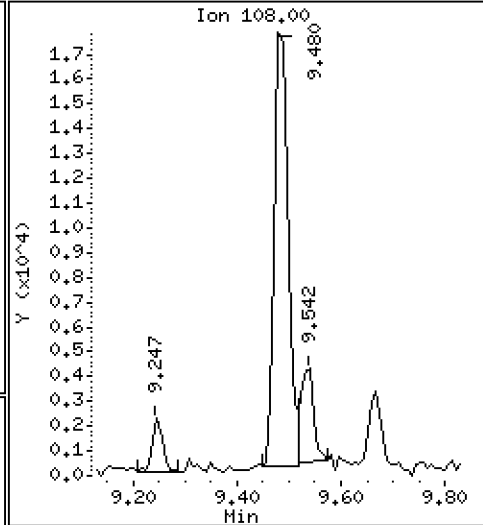
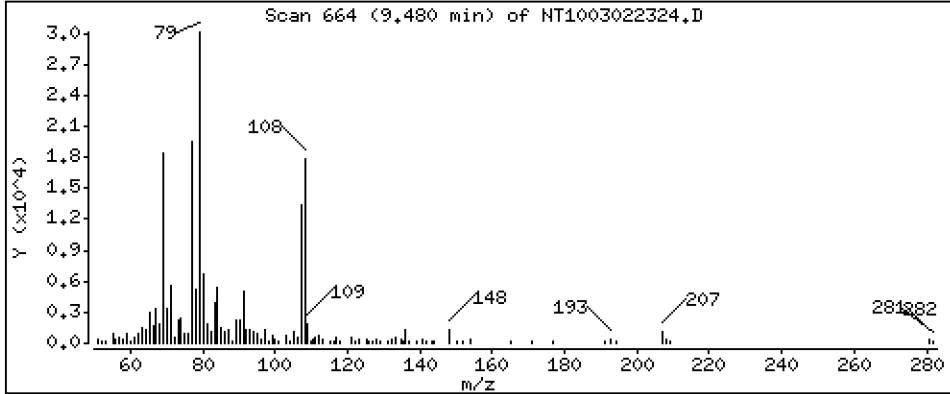
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.3176 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

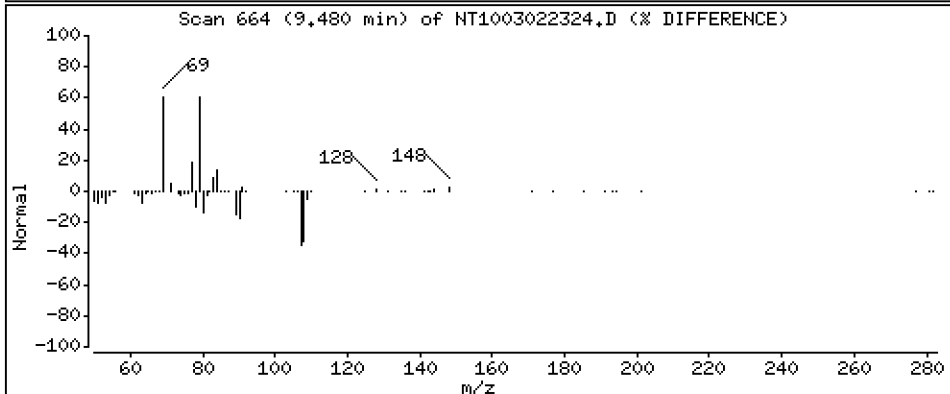
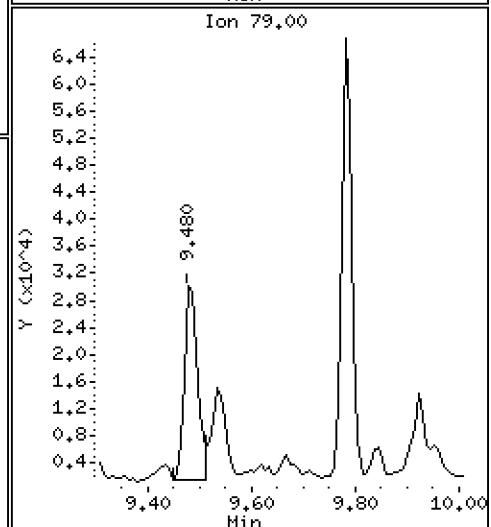
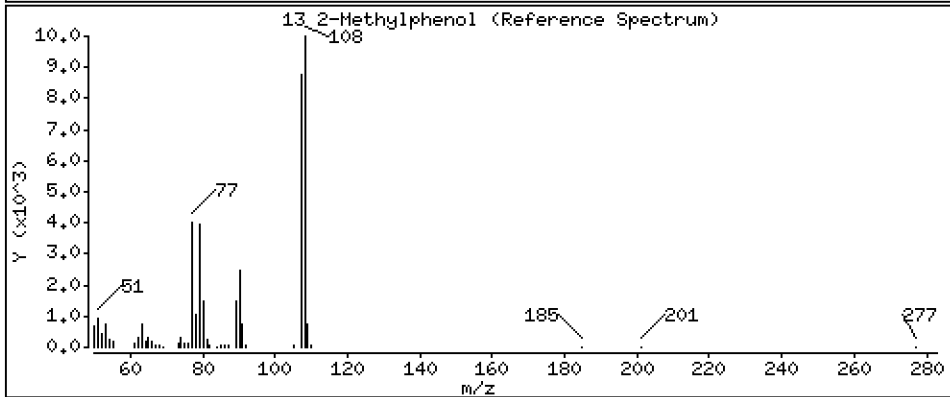
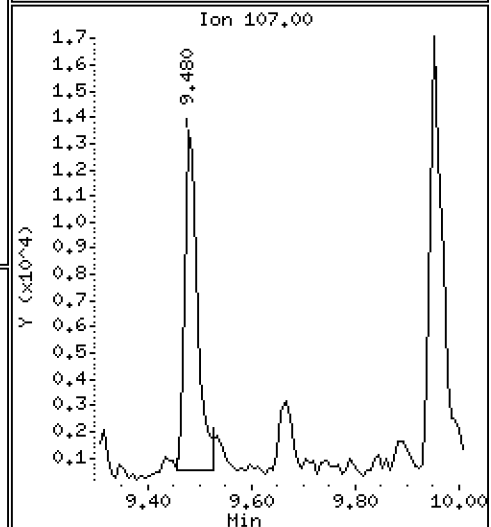
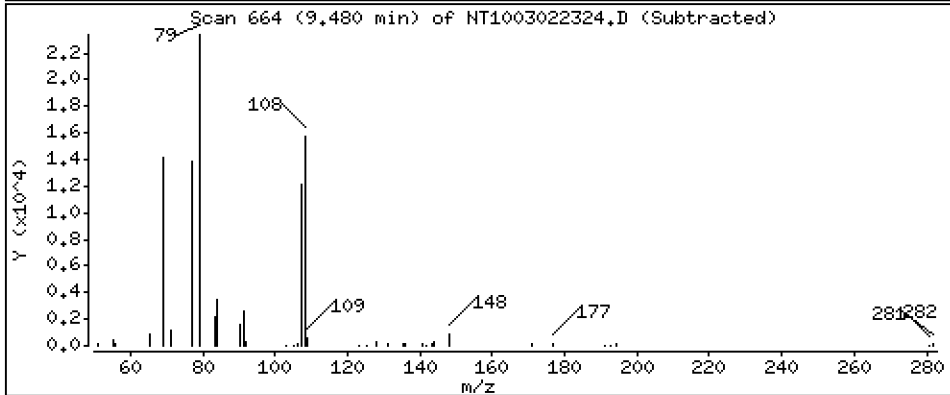
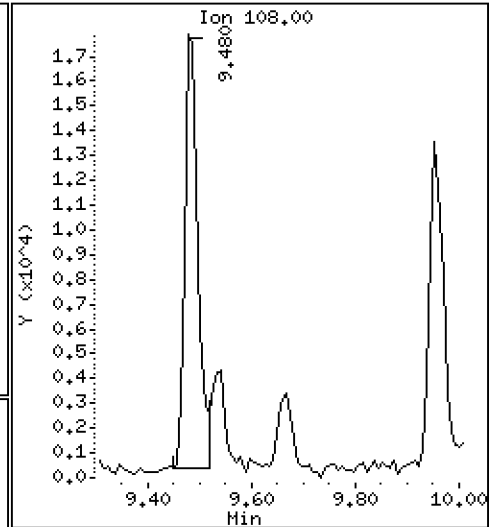
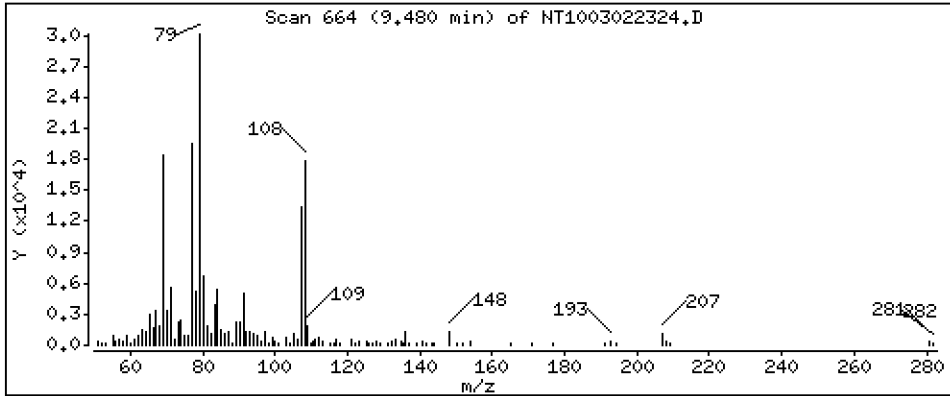
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.2103 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

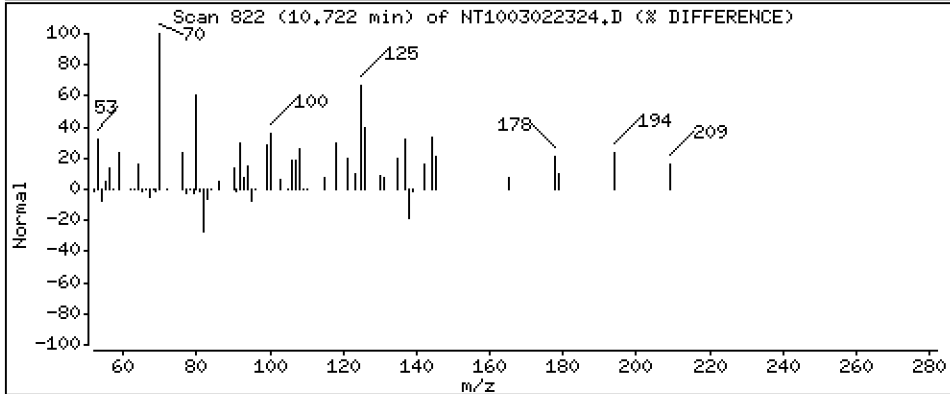
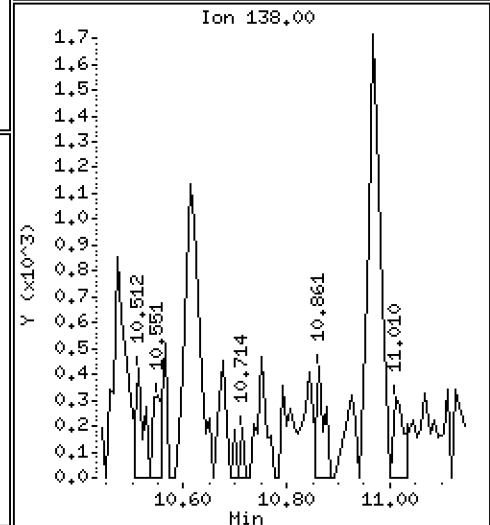
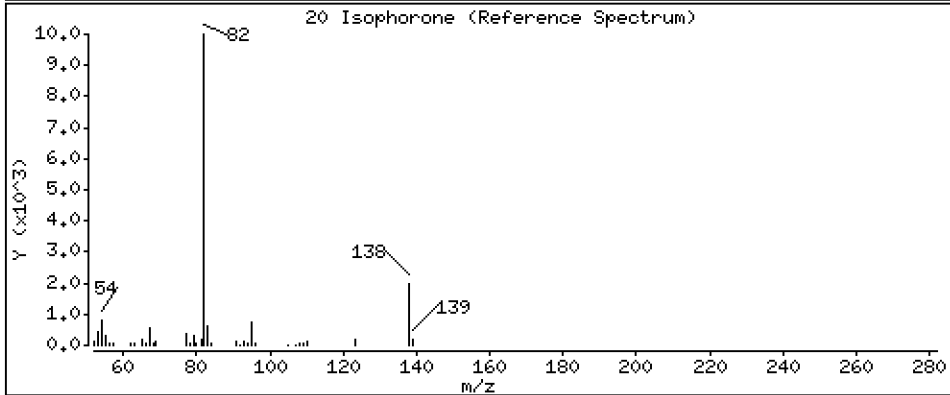
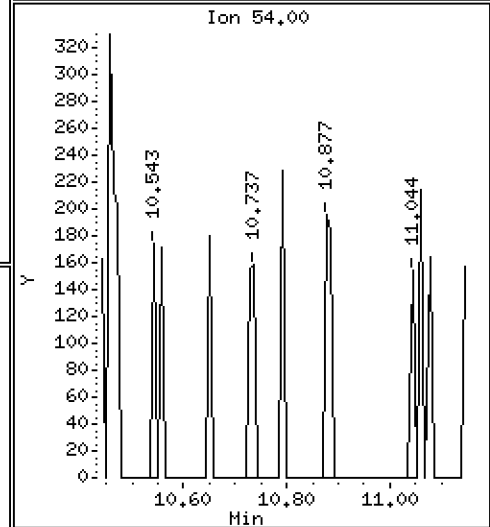
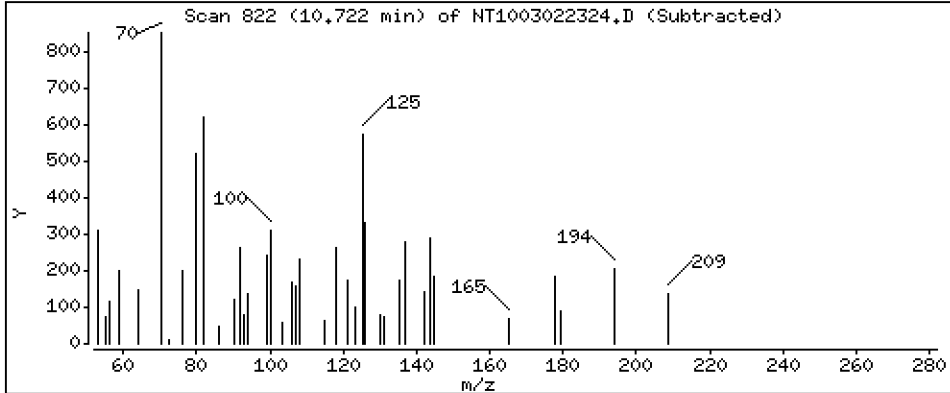
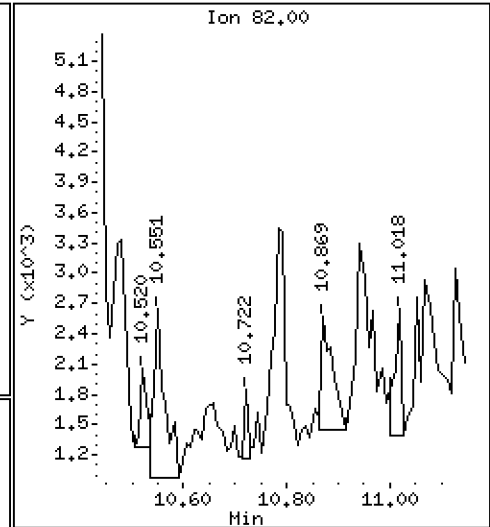
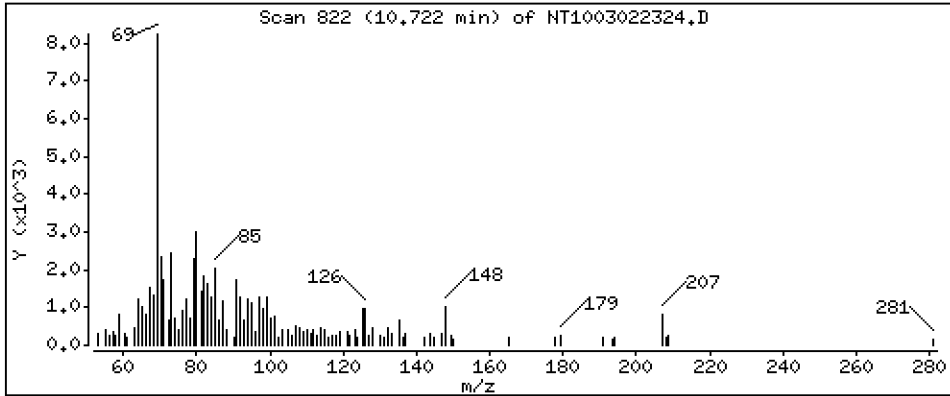
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

20 Isophorone

Concentration: 0.001590 ug/mL





Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

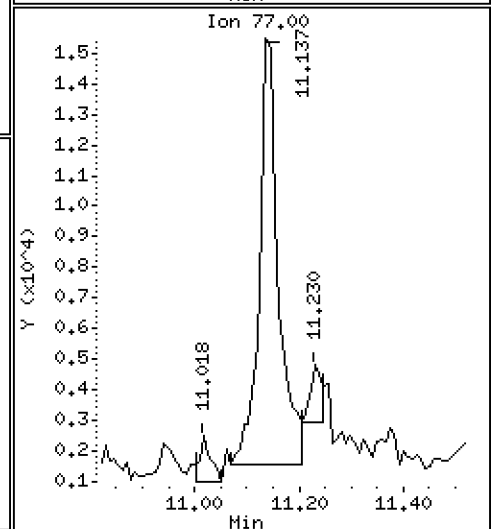
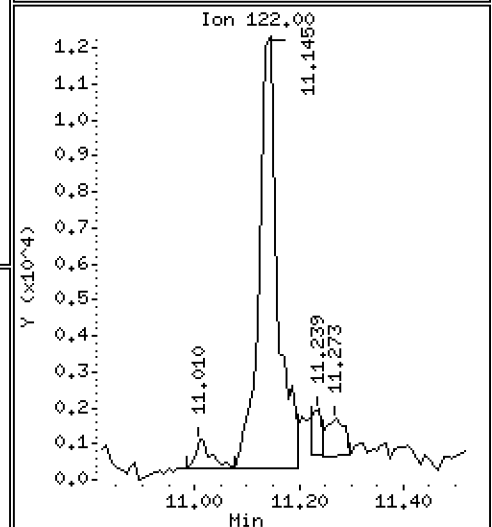
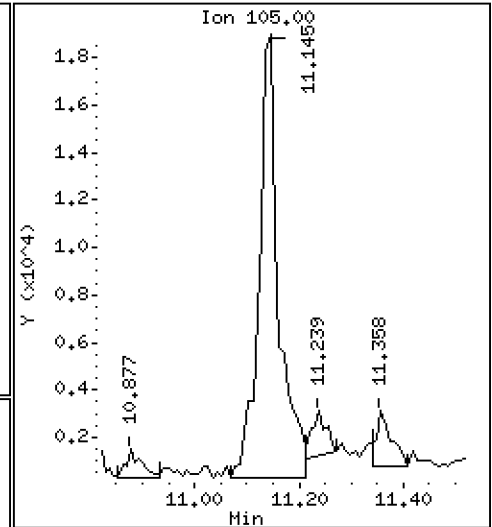
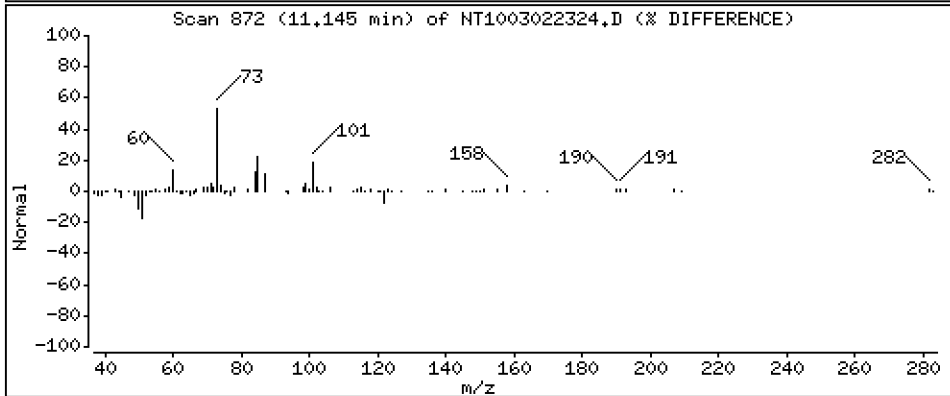
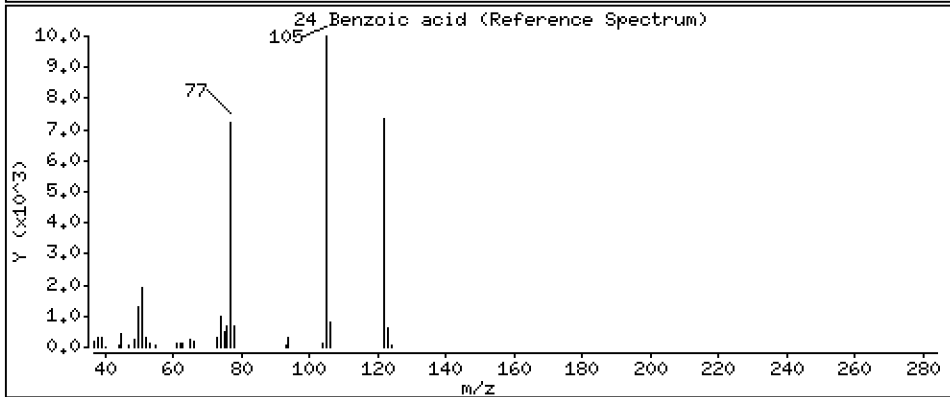
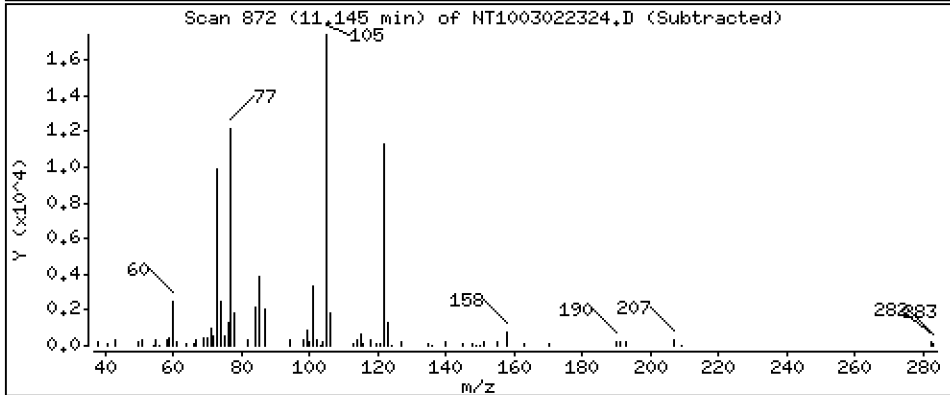
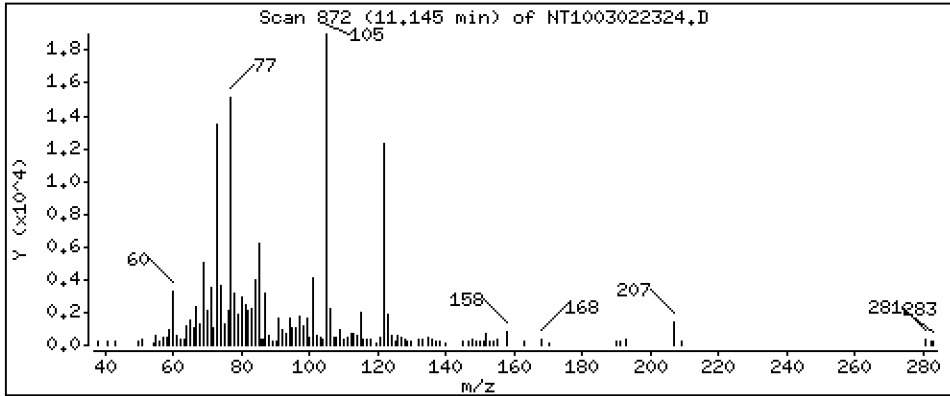
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.4603 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

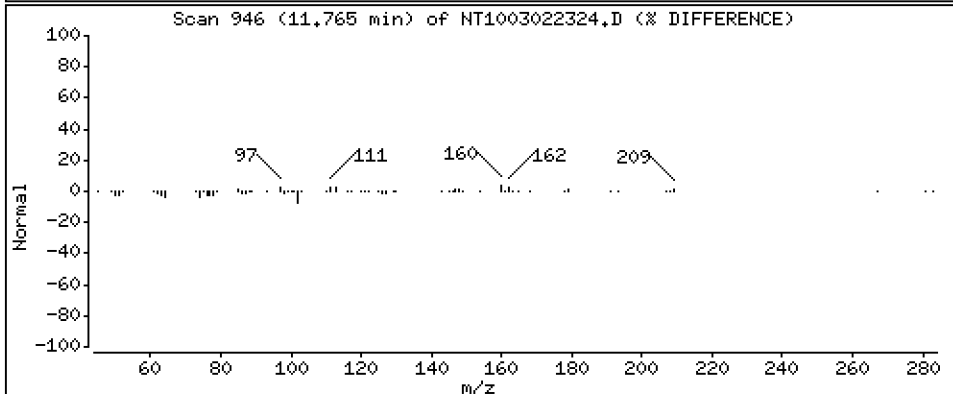
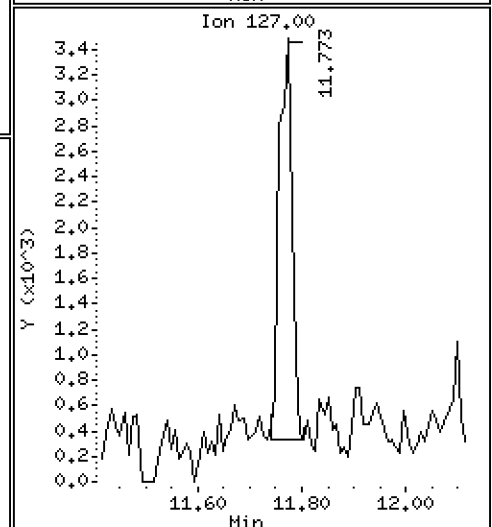
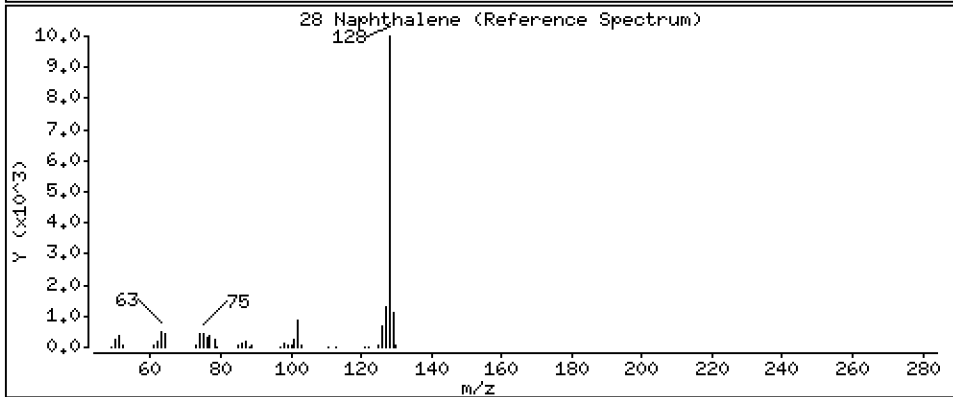
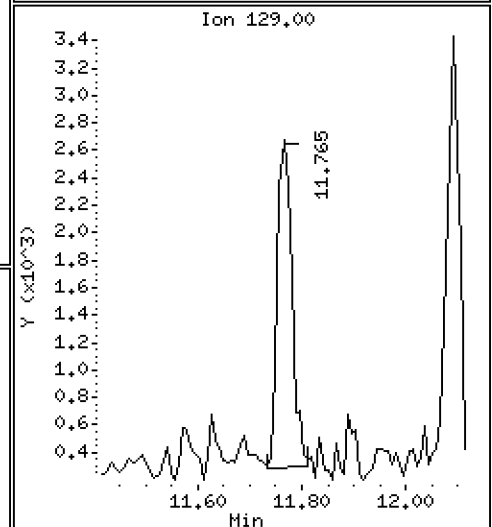
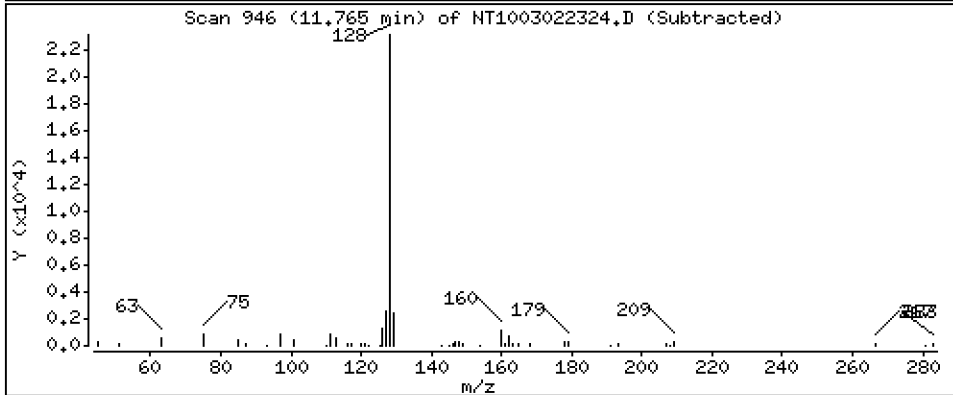
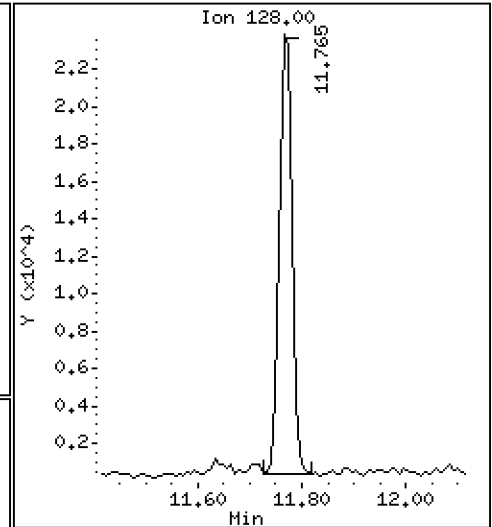
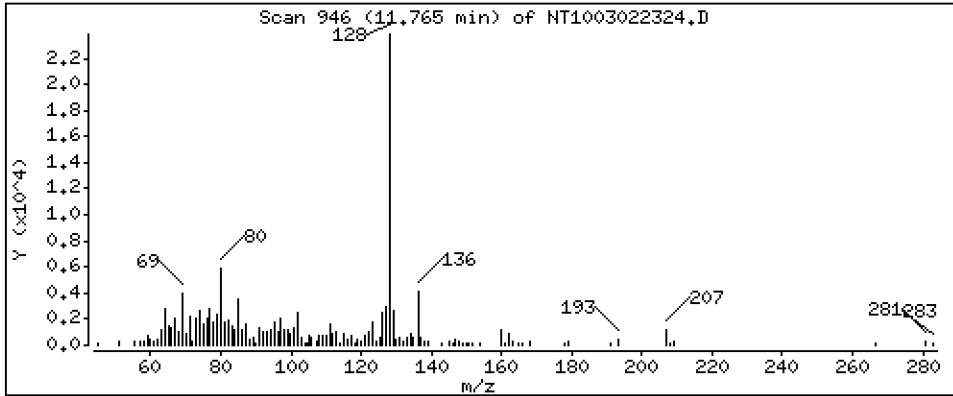
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 0.08114 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

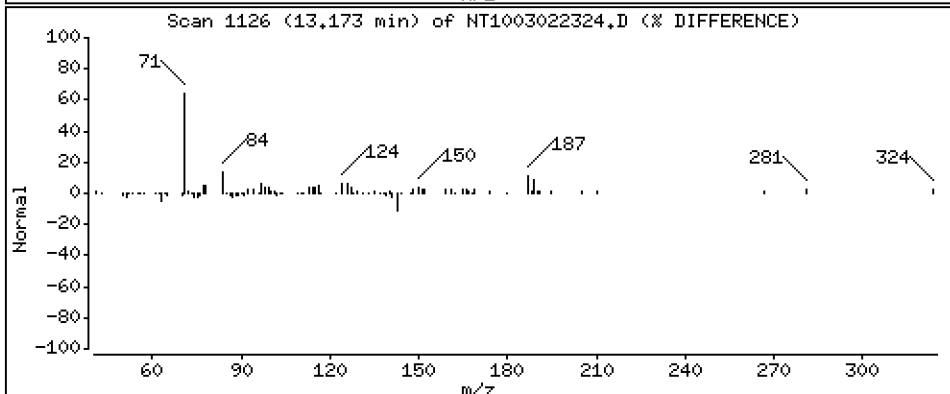
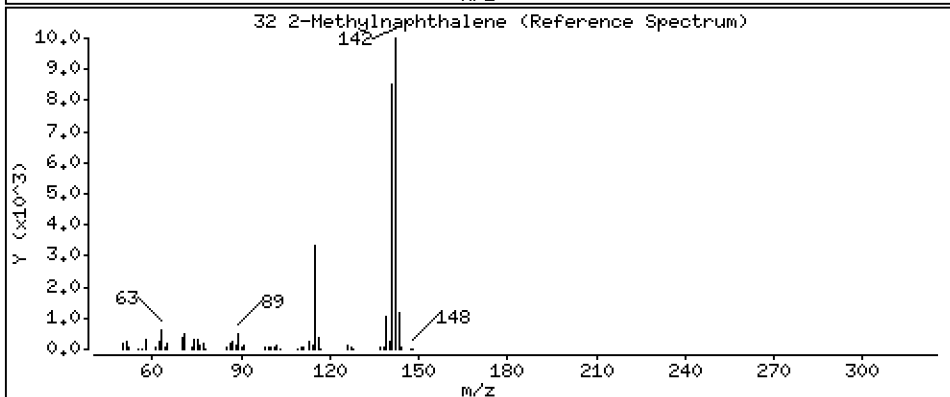
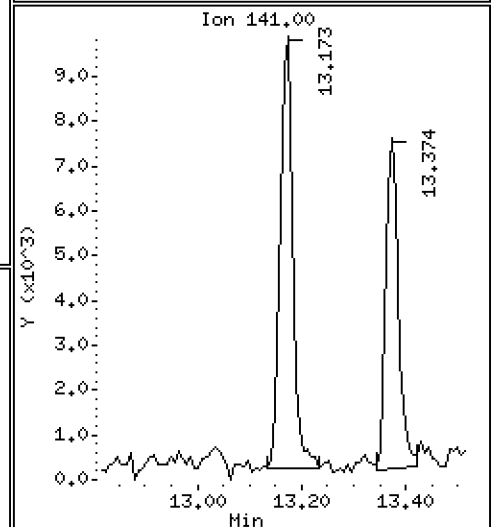
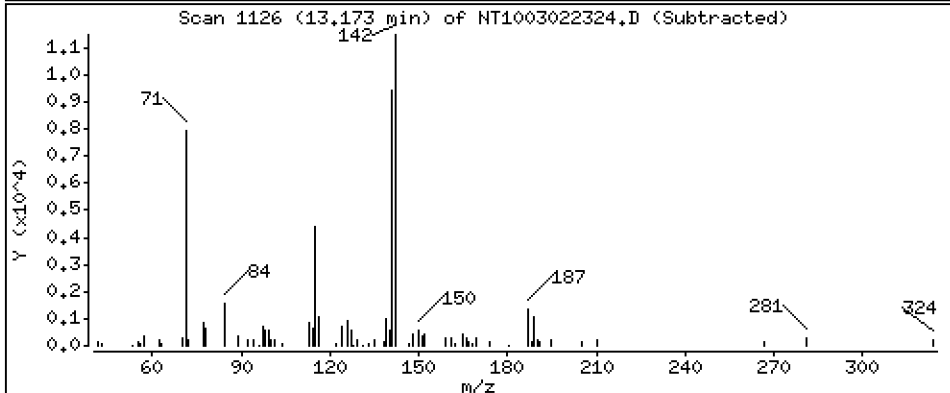
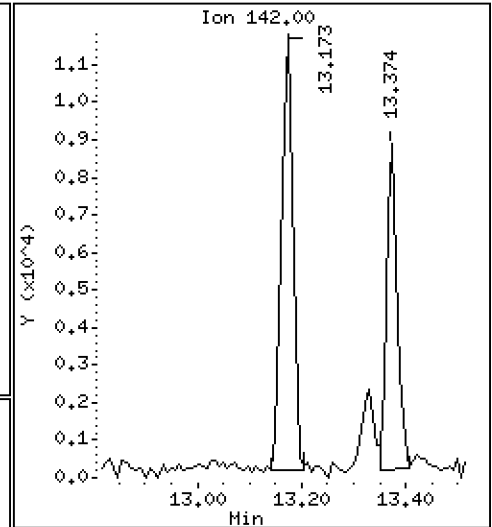
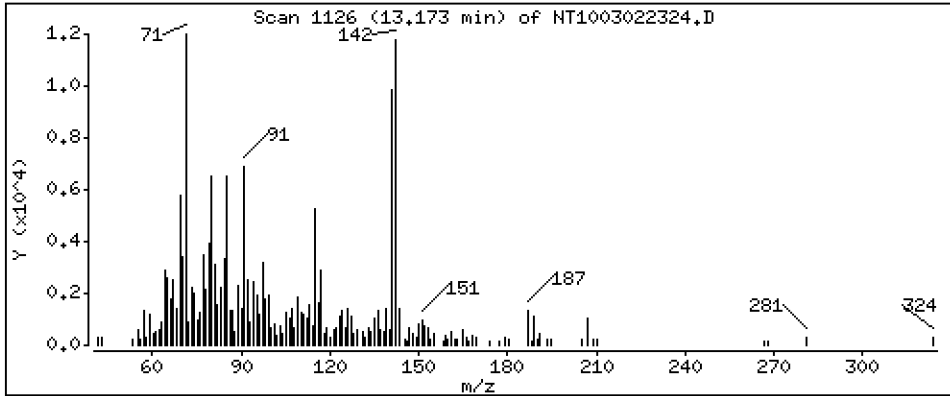
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.05266 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

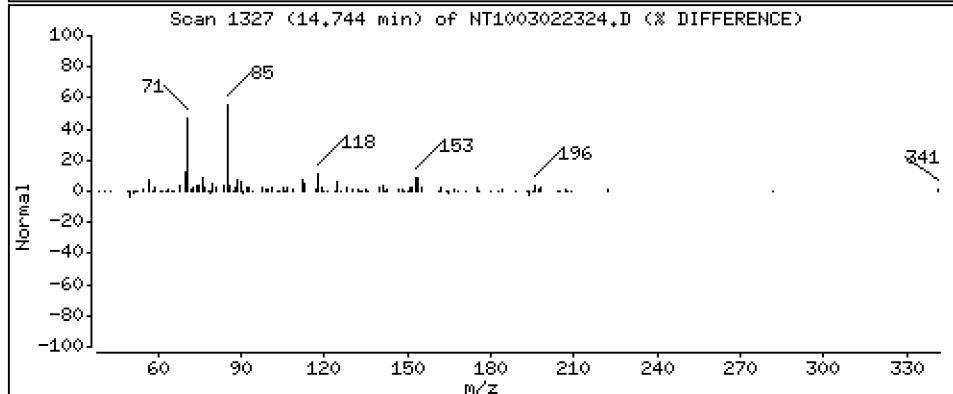
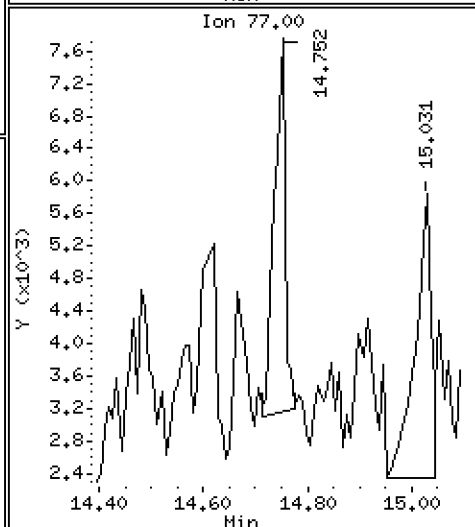
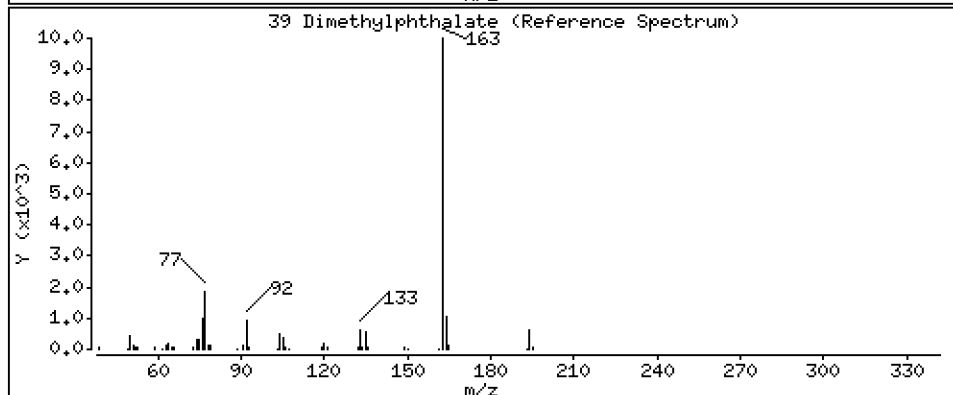
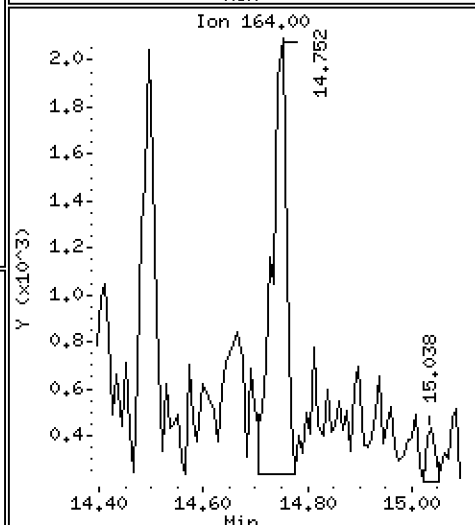
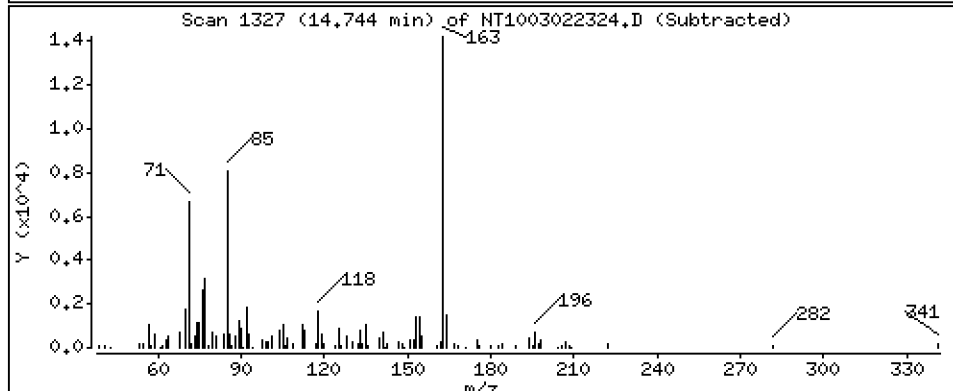
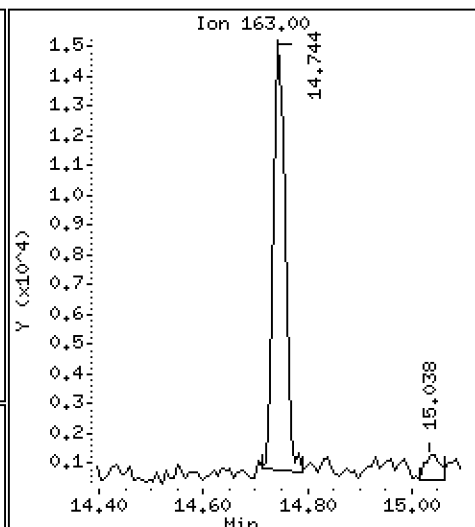
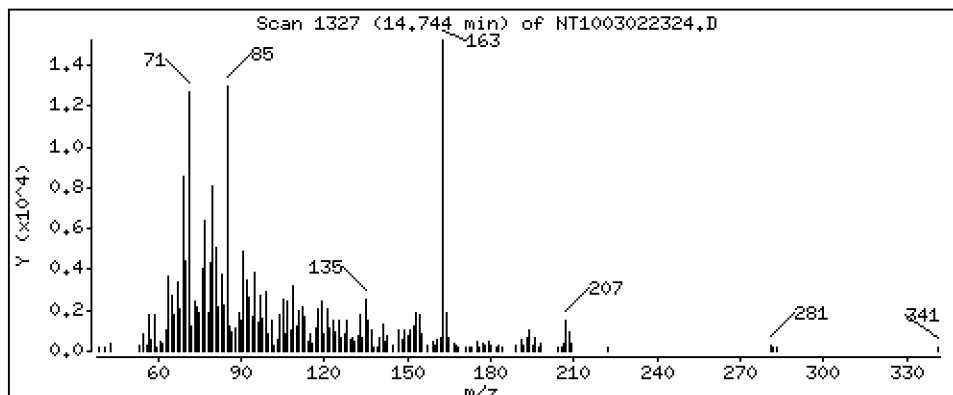
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.06982 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

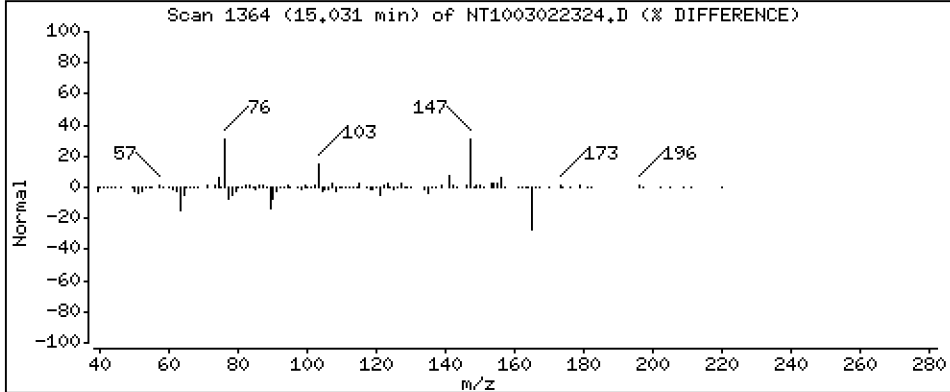
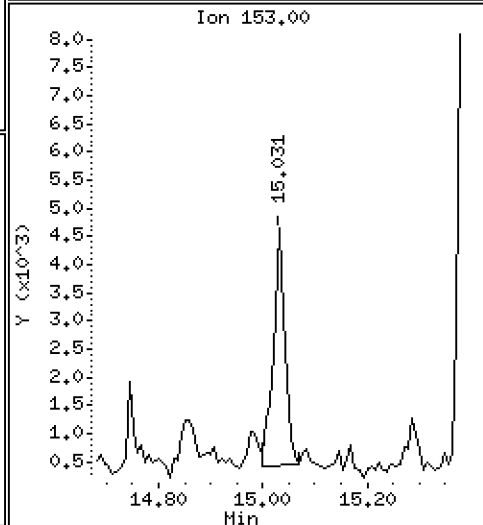
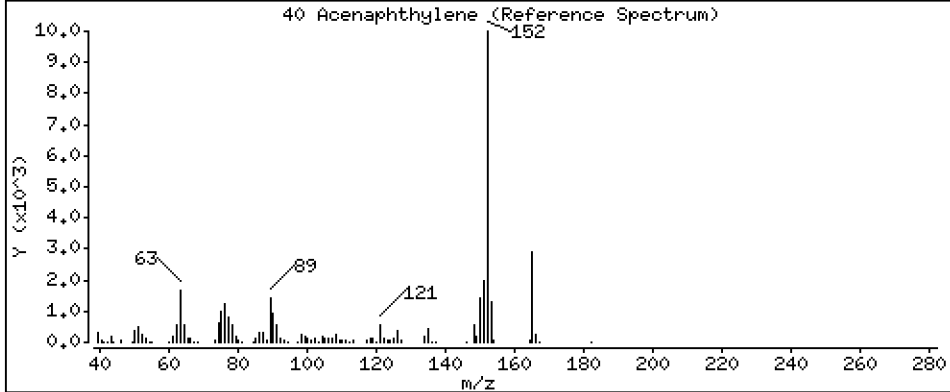
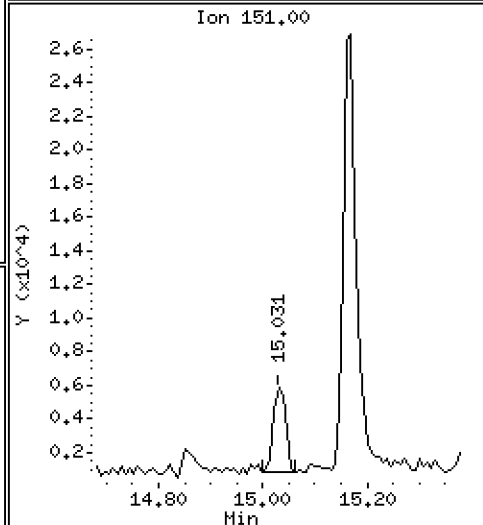
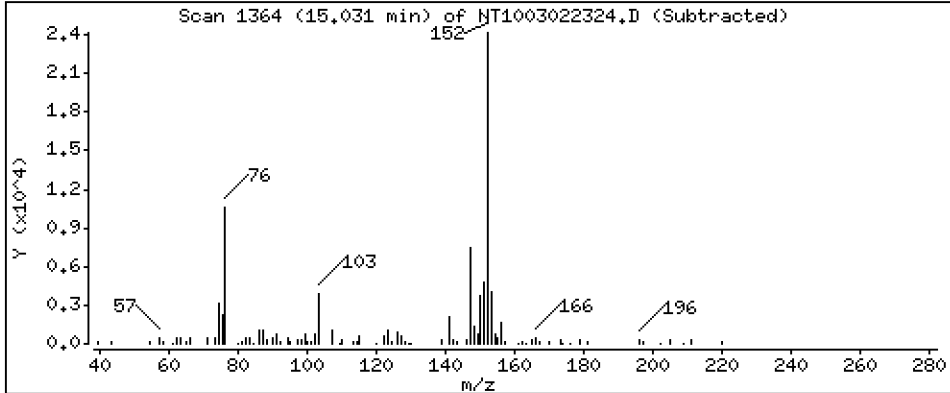
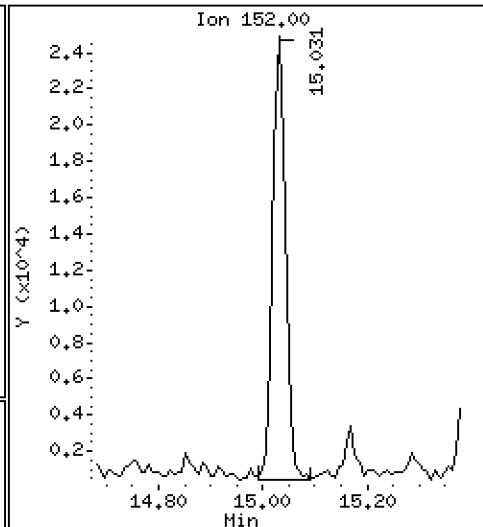
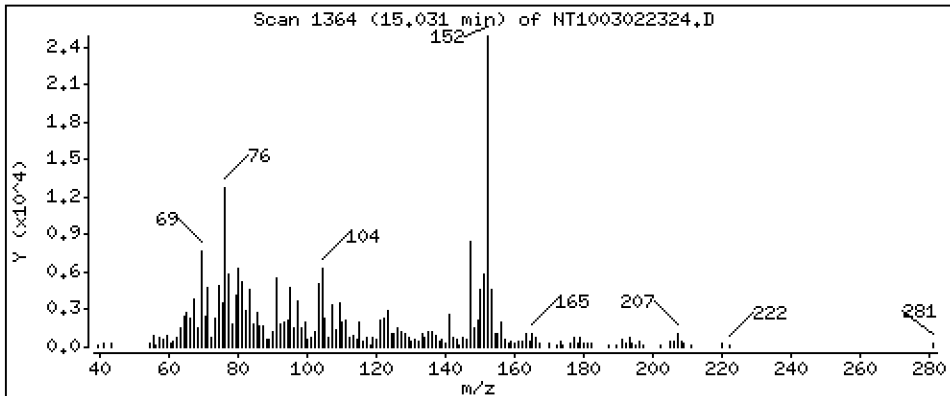
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.08760 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

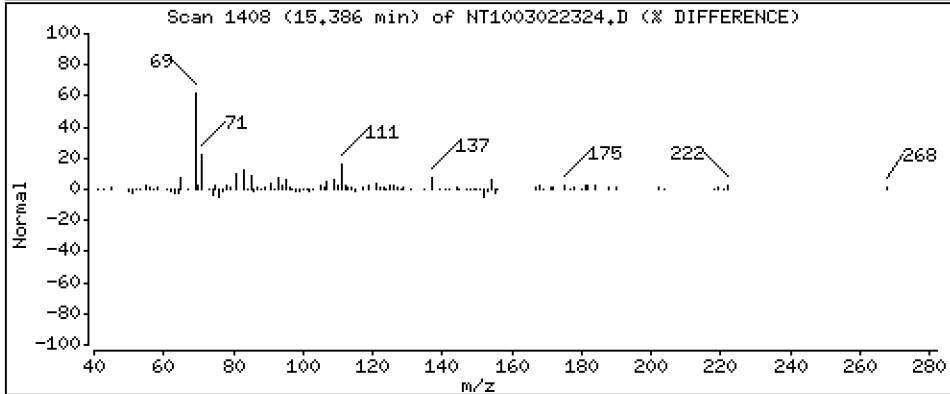
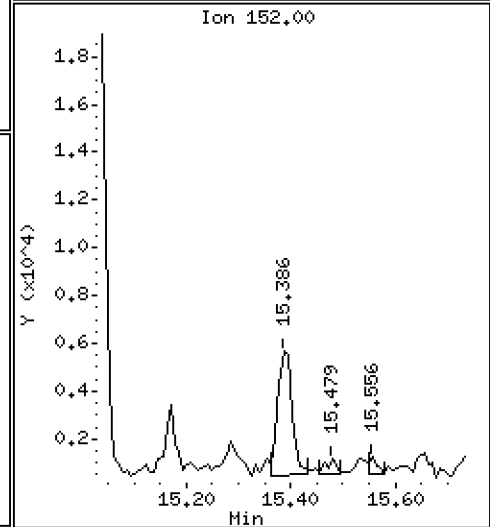
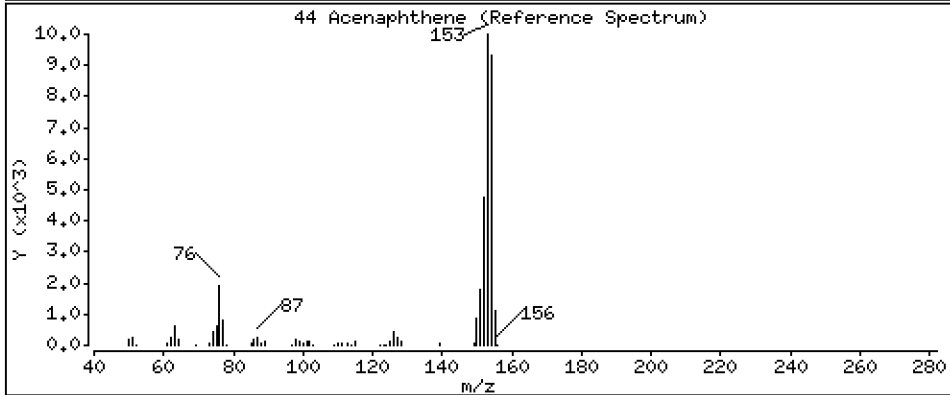
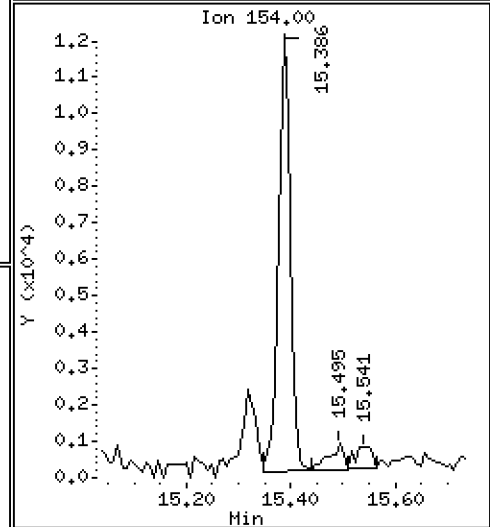
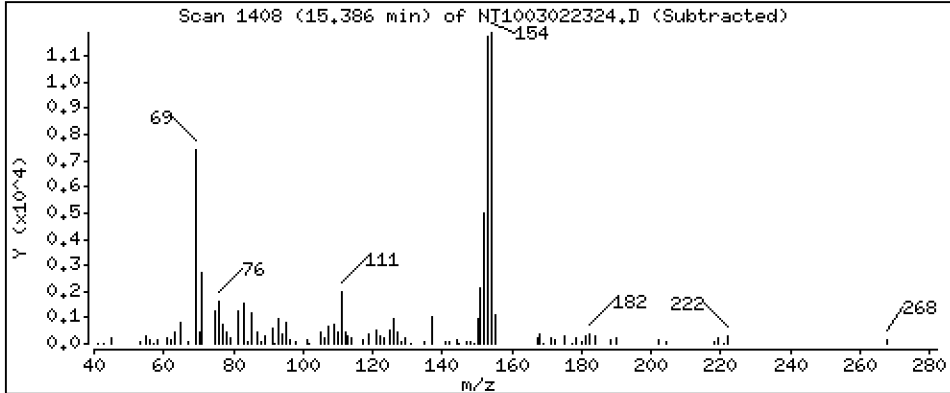
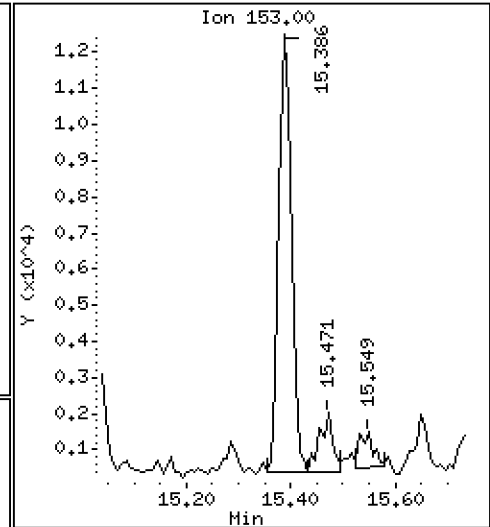
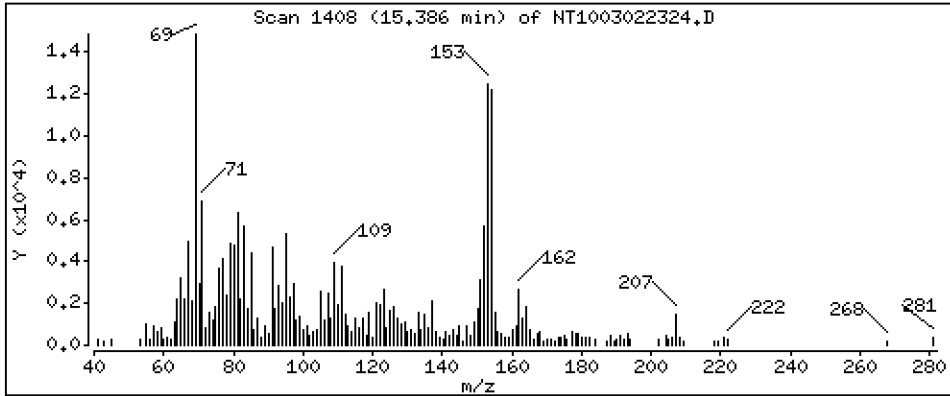
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.07126 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

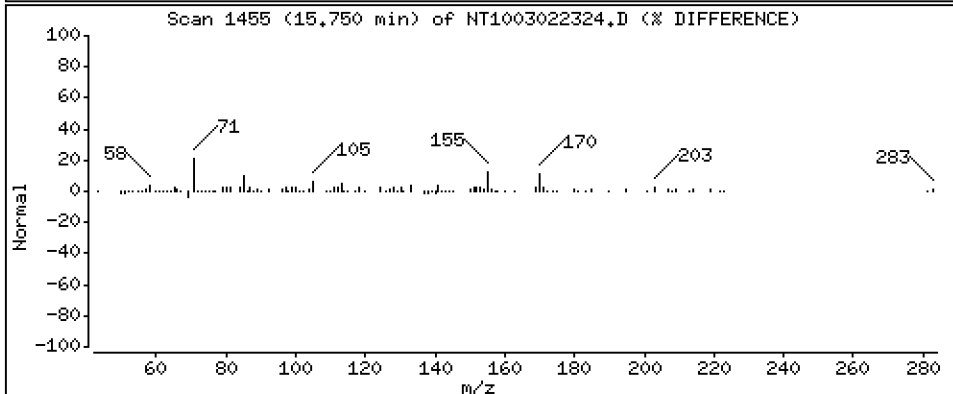
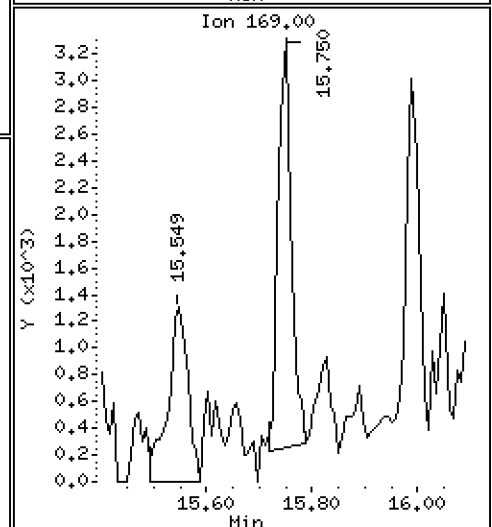
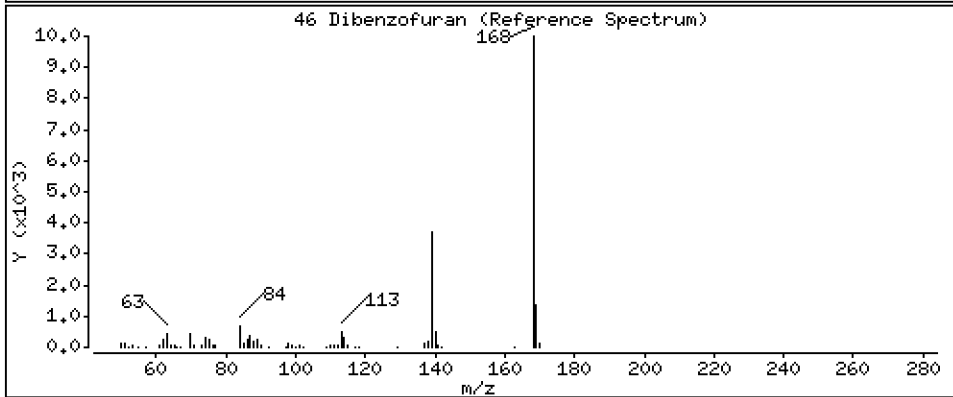
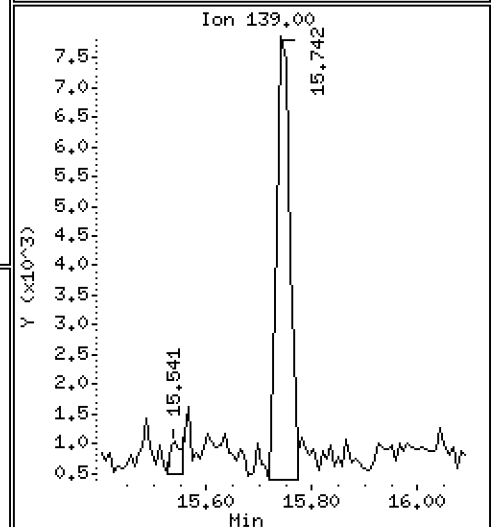
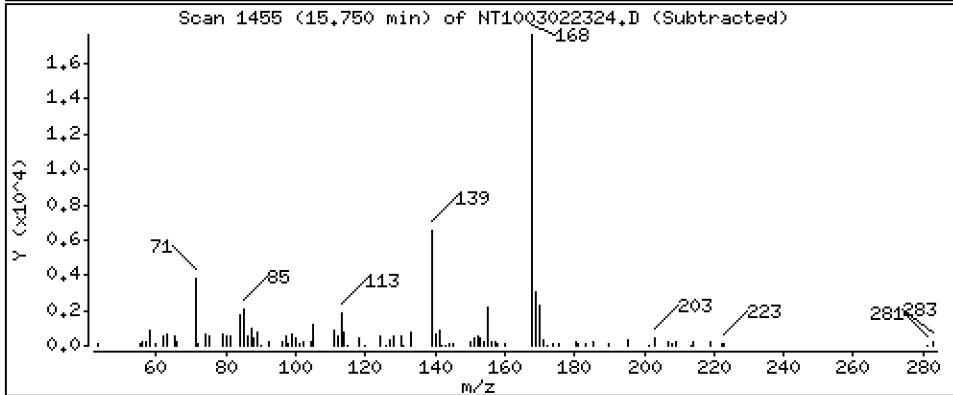
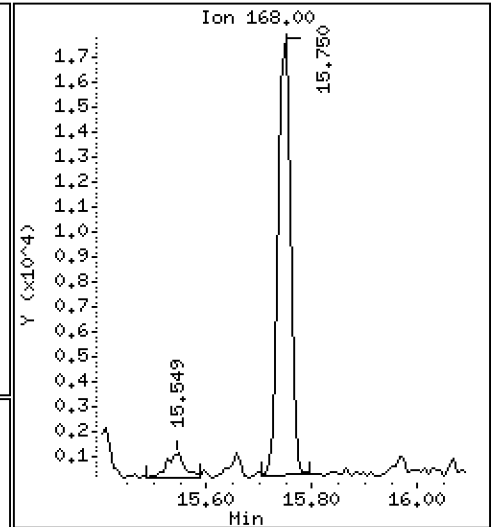
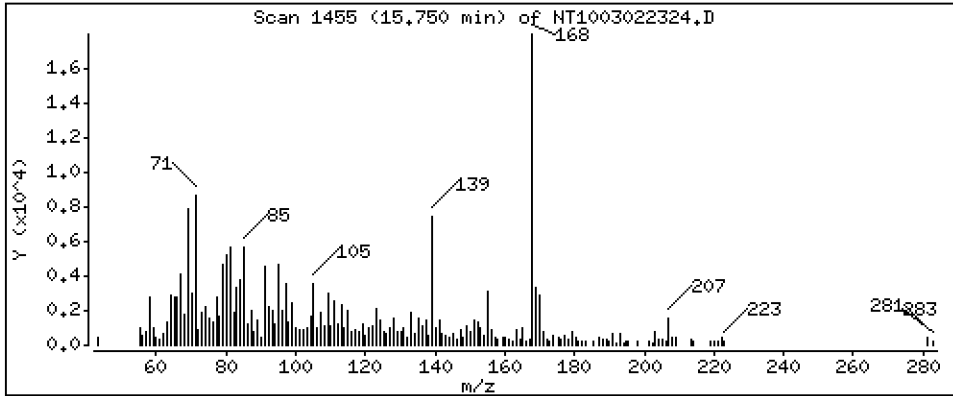
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.06729 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

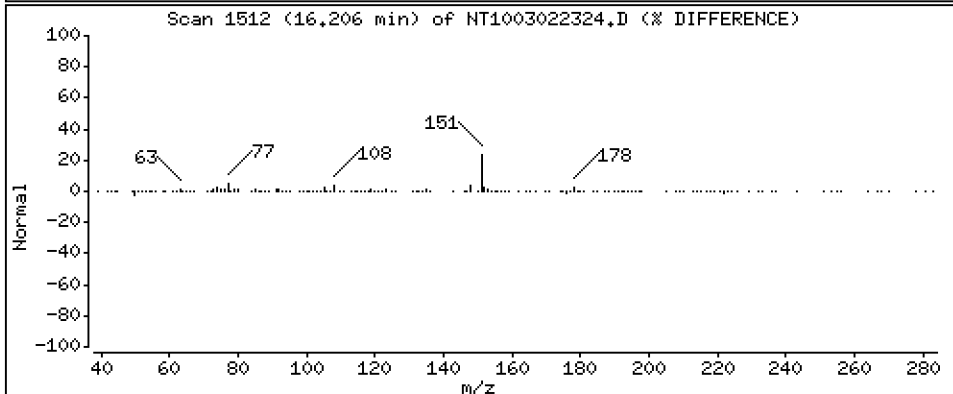
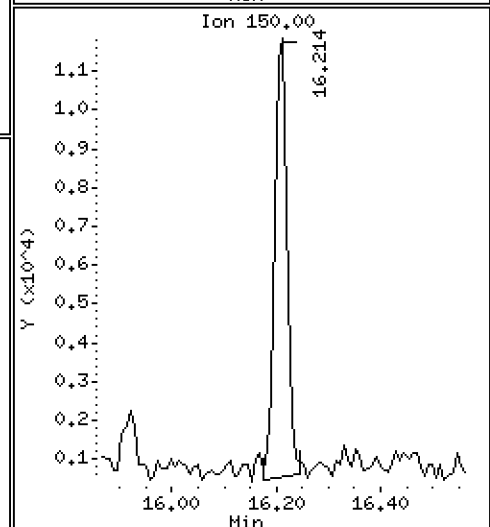
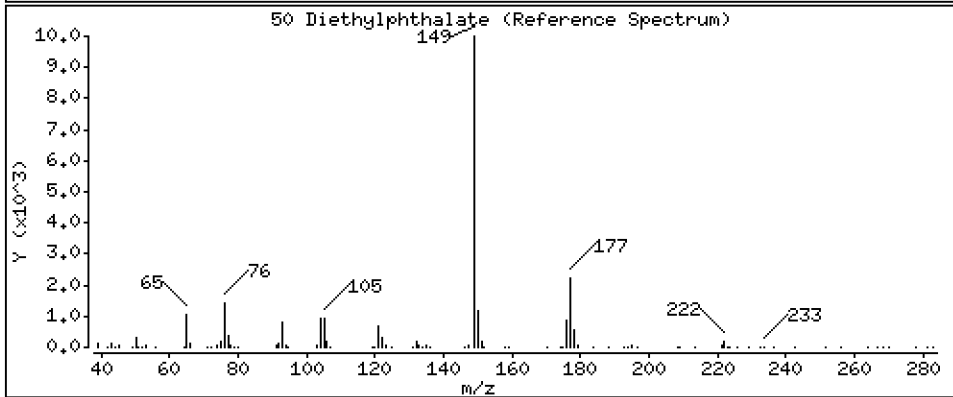
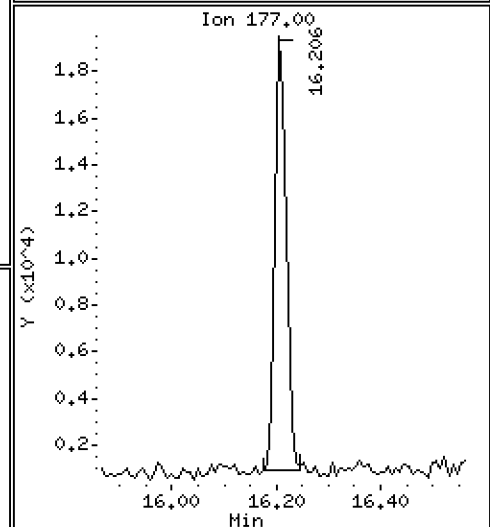
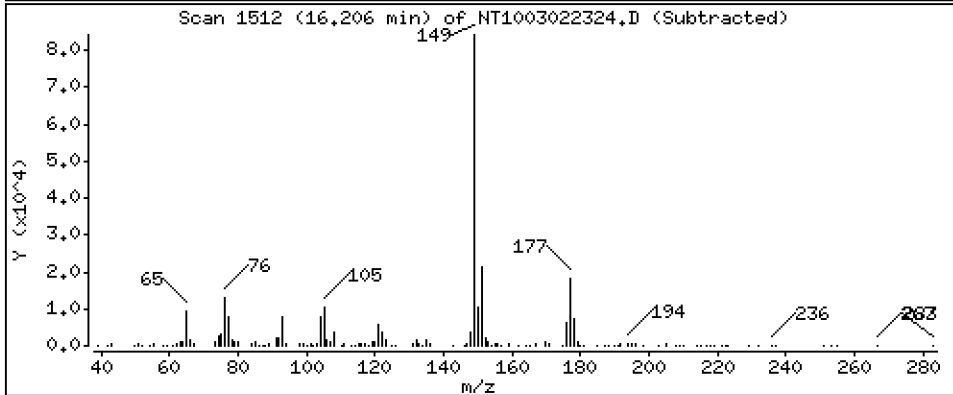
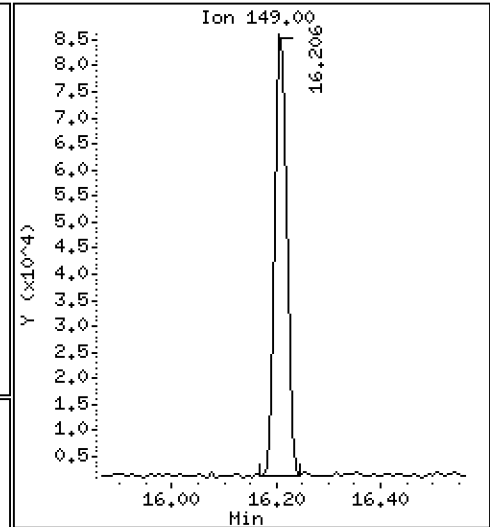
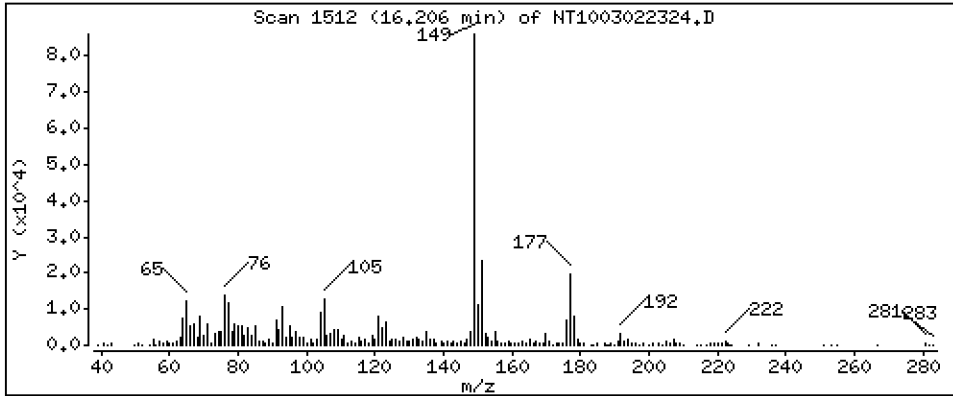
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.4036 ug/mL





Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

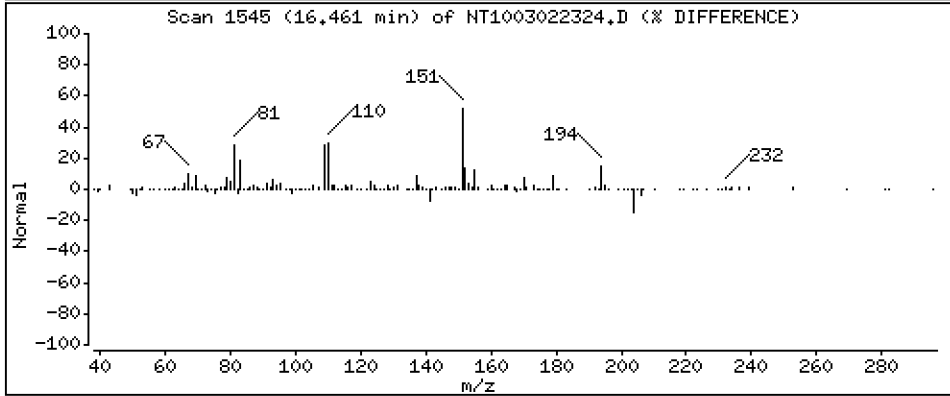
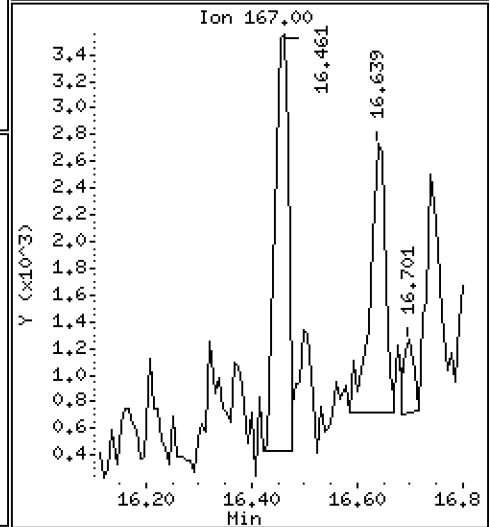
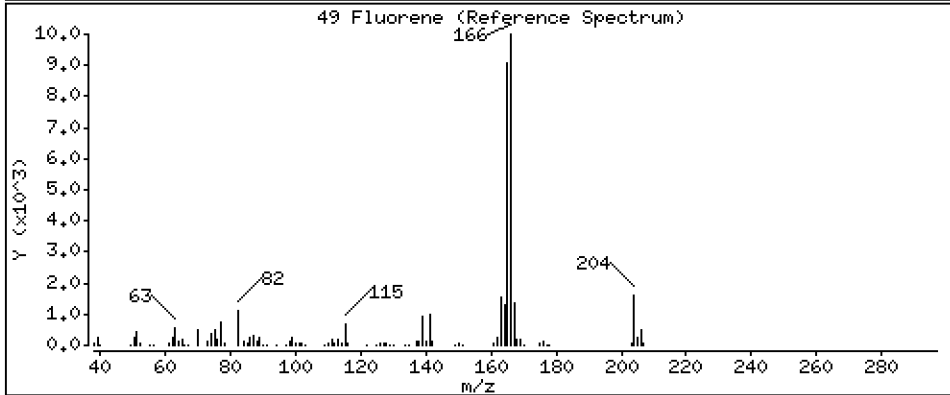
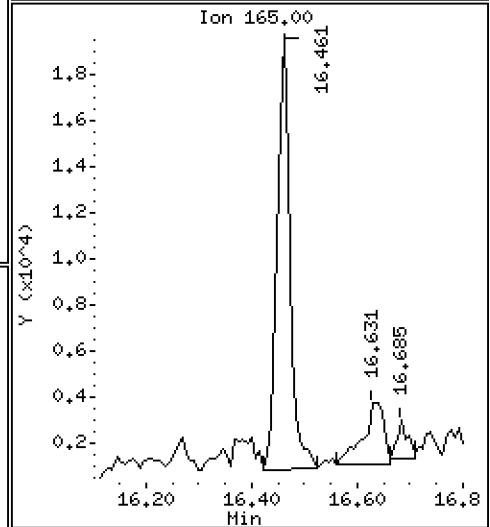
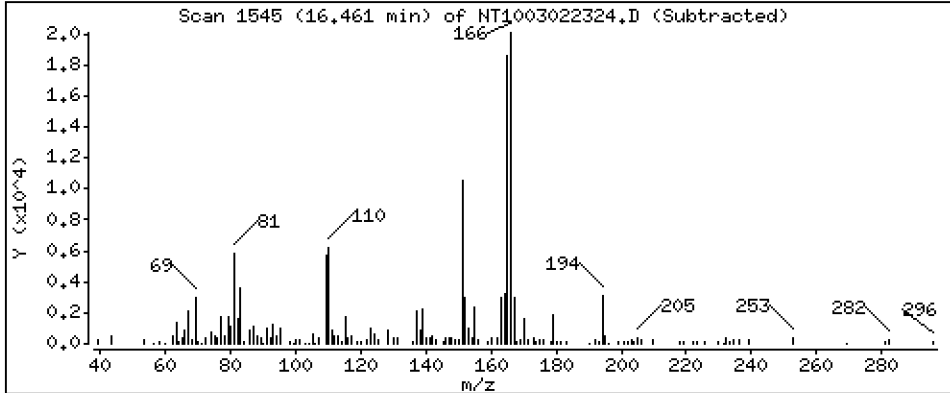
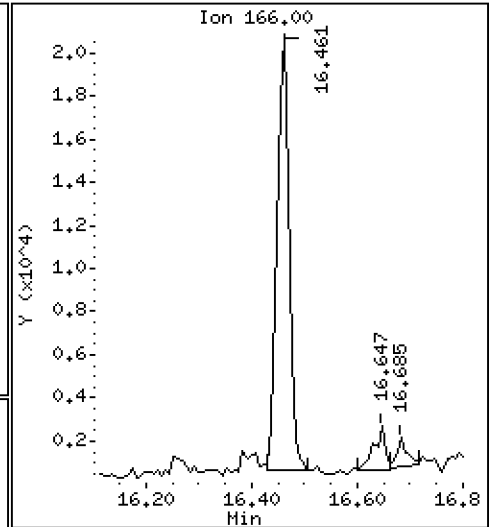
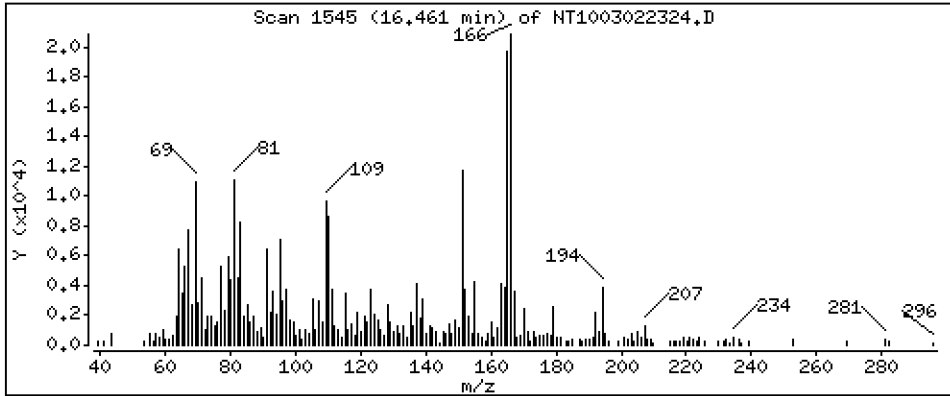
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.09356 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

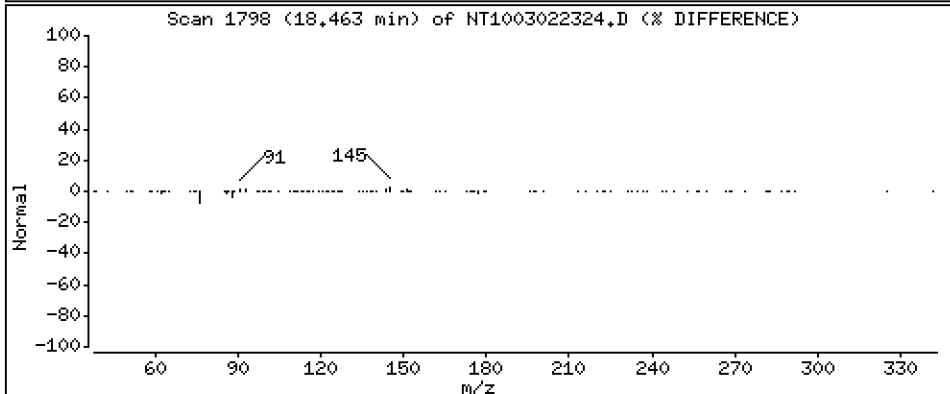
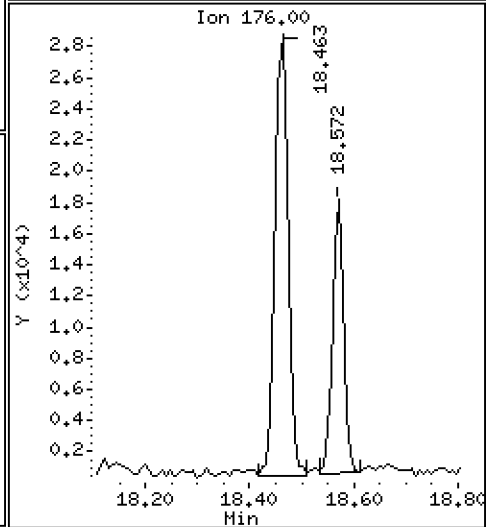
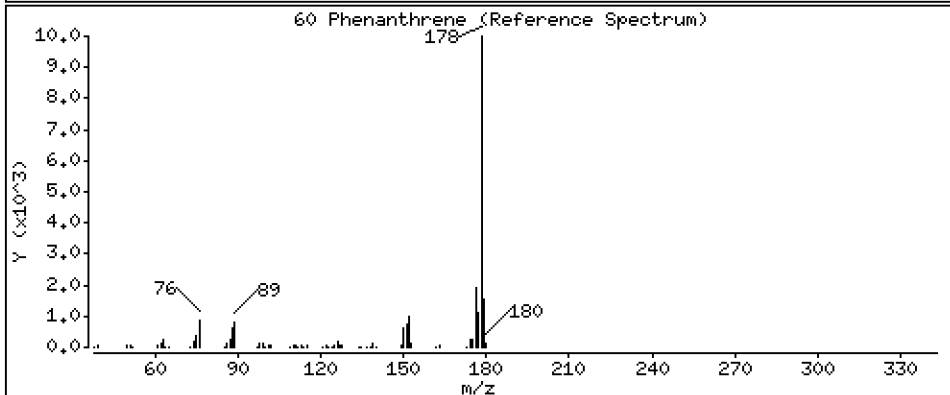
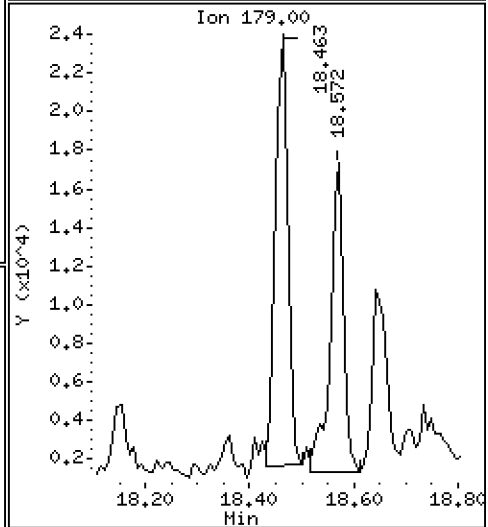
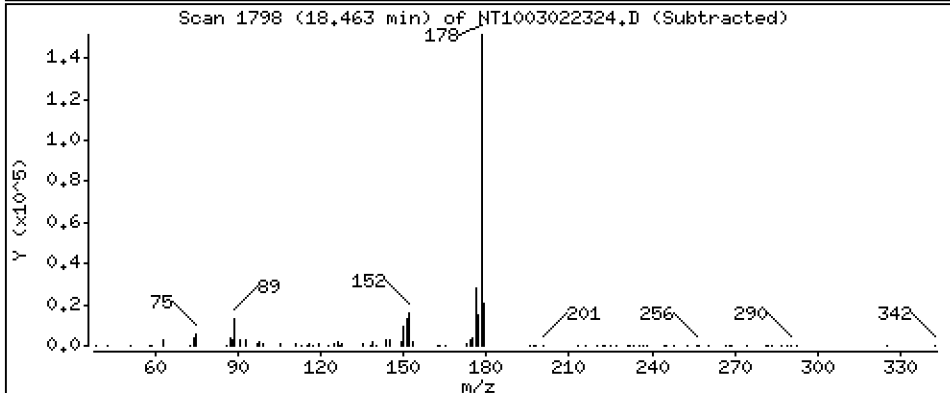
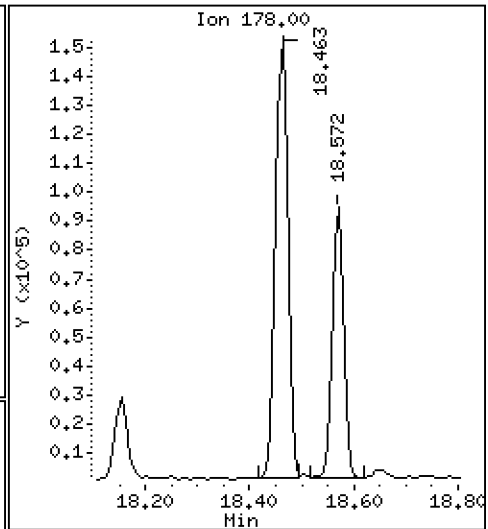
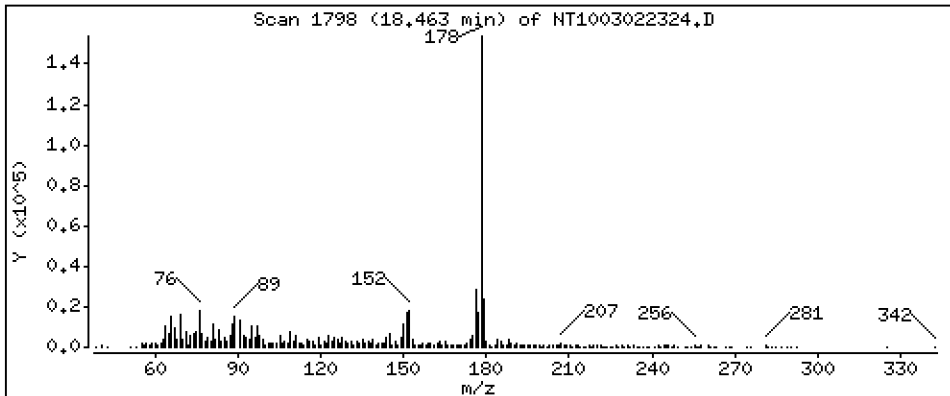
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,5283 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

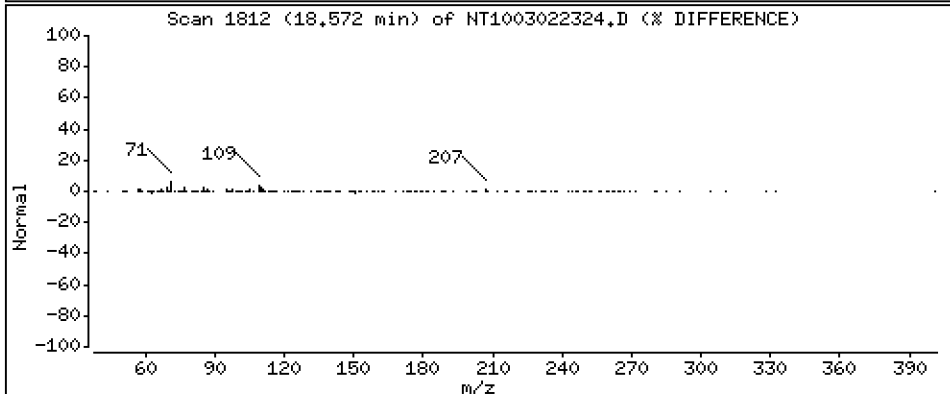
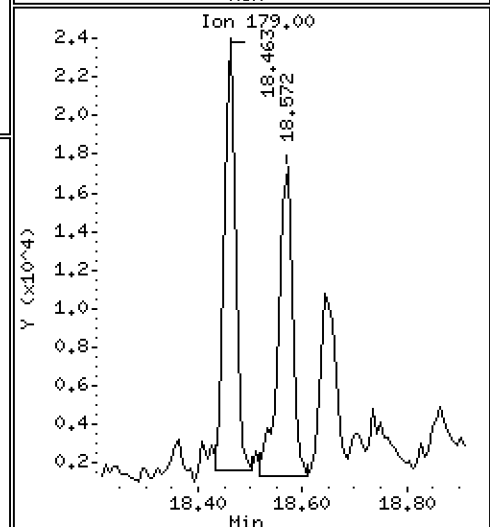
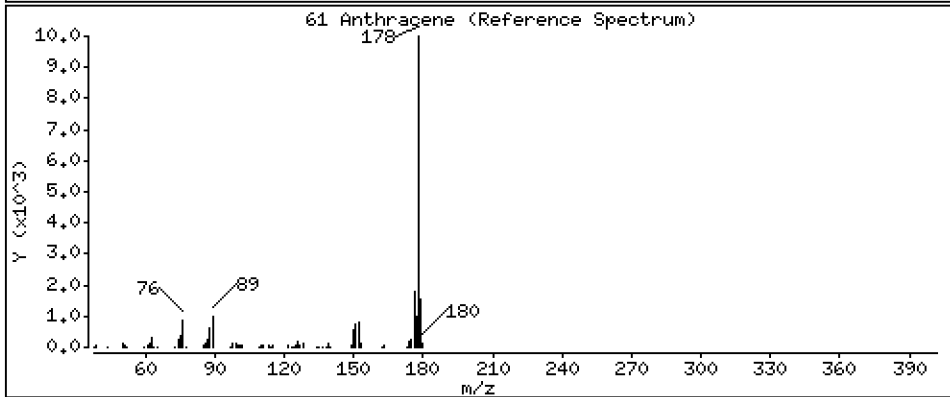
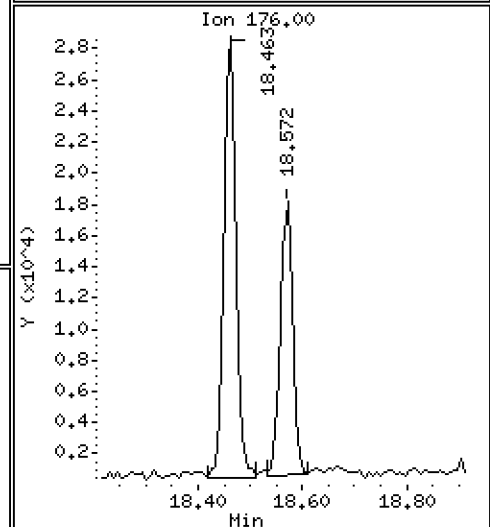
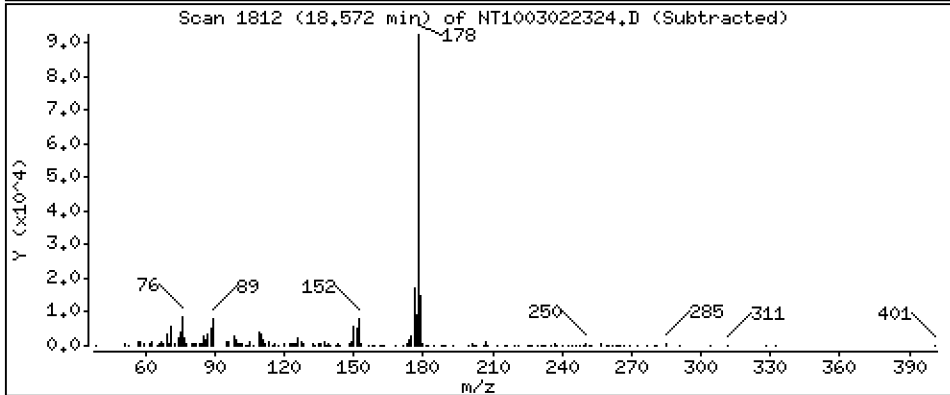
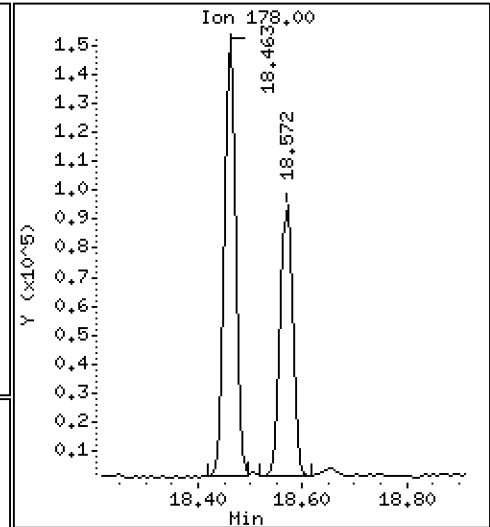
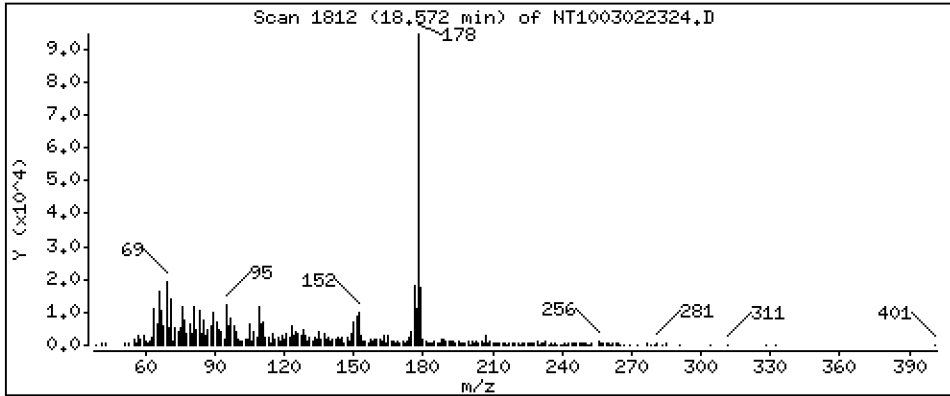
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,3419 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

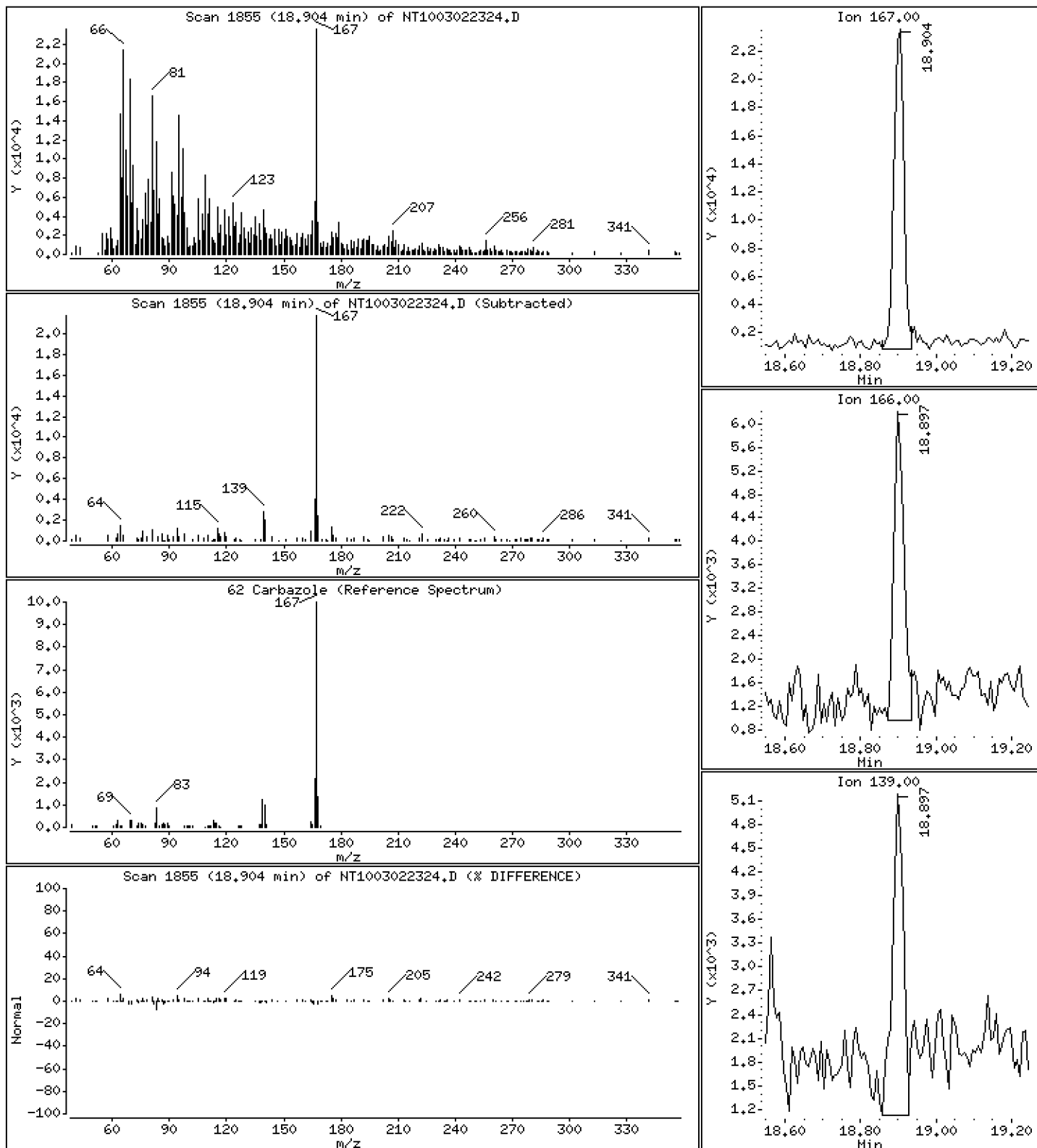
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.09869 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

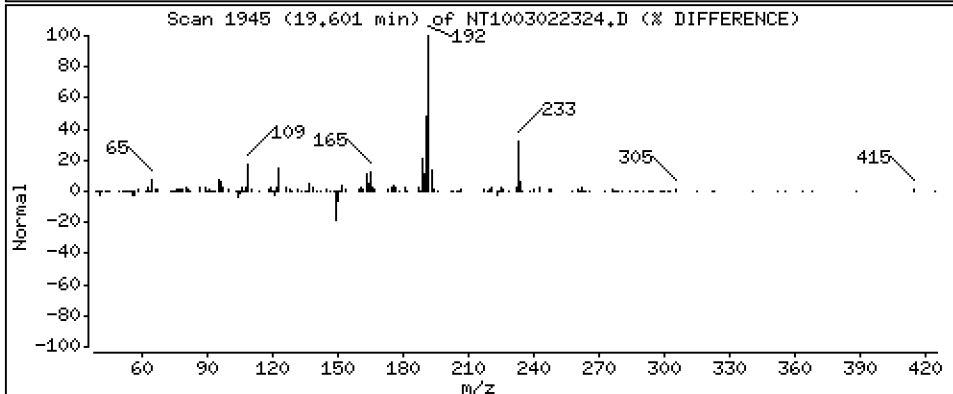
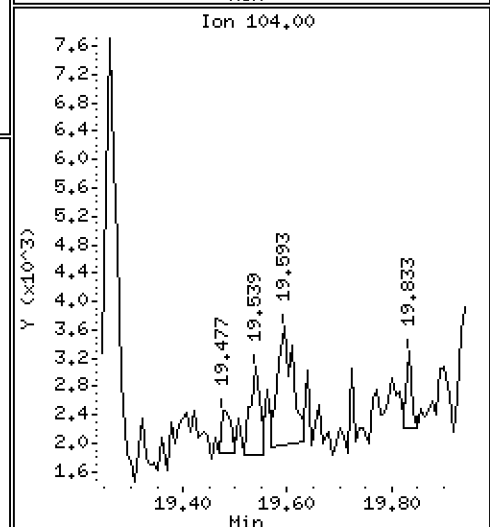
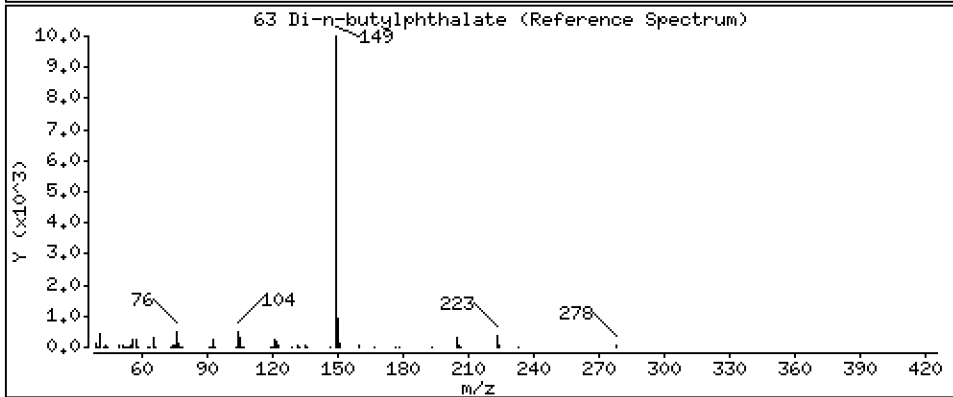
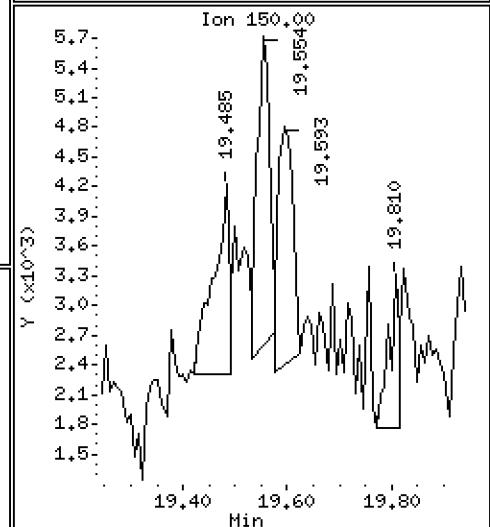
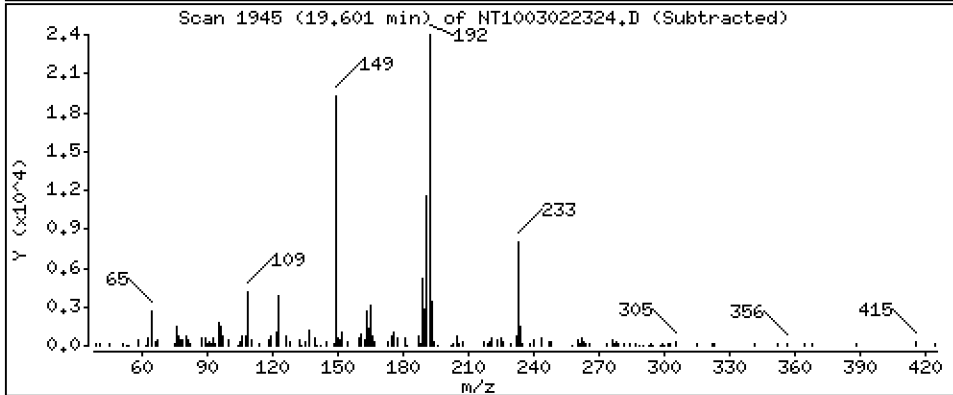
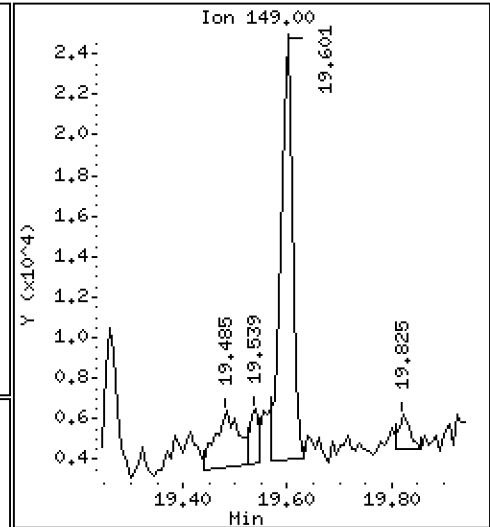
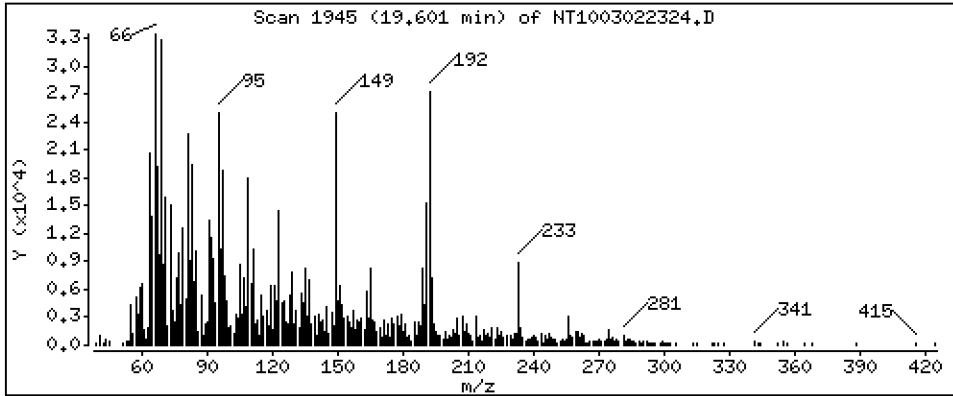
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.05879 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

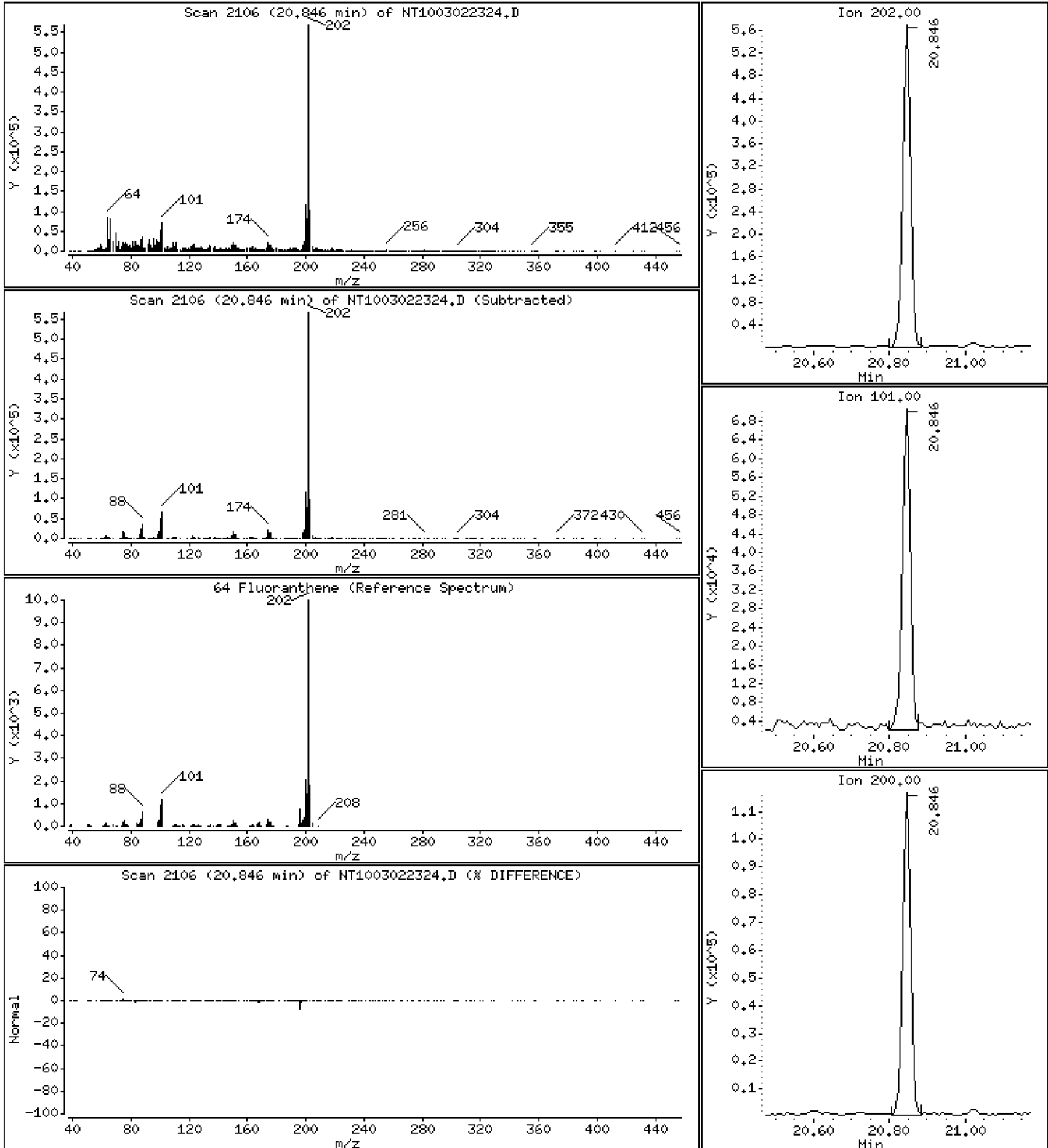
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,253 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

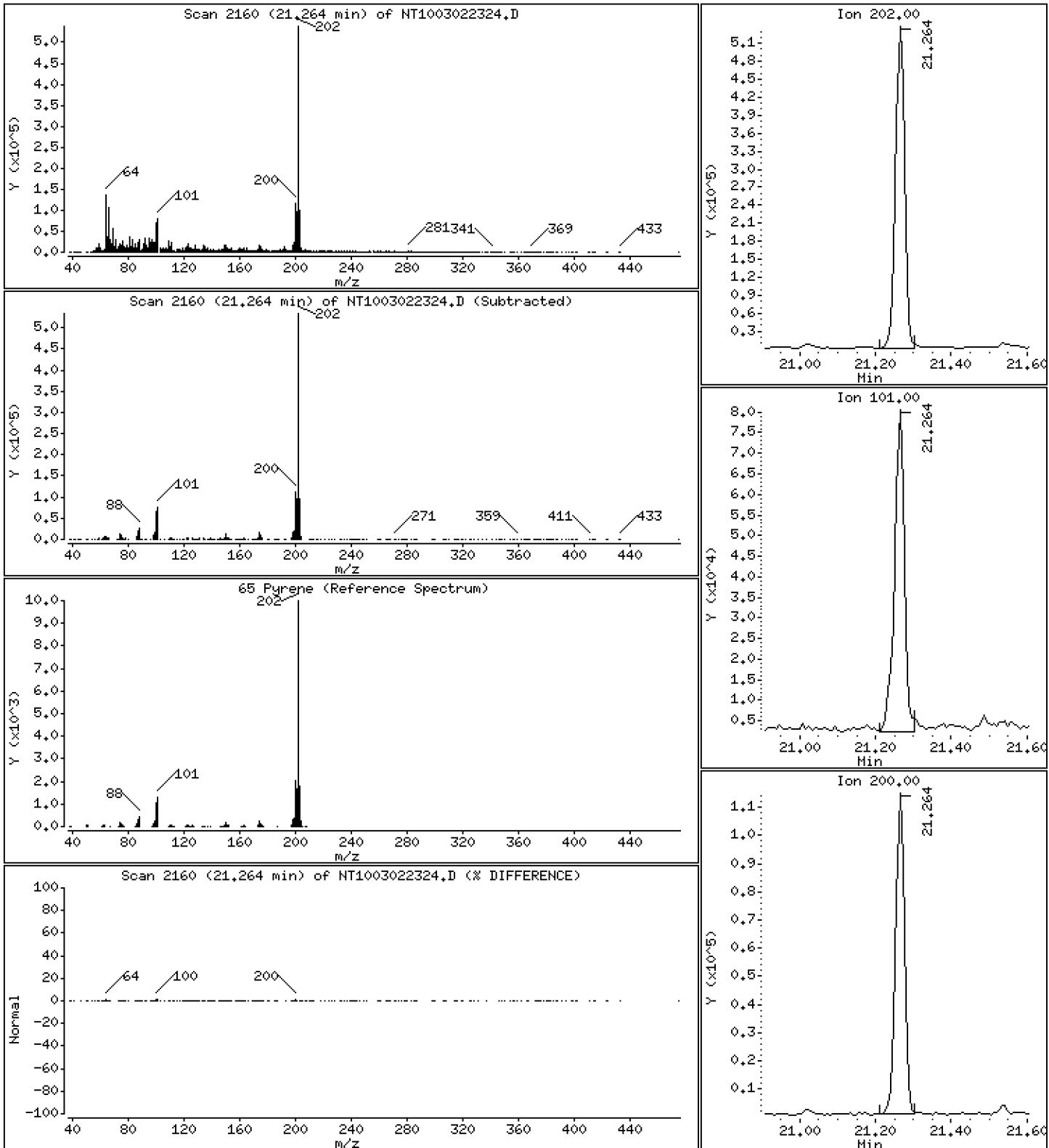
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,241 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

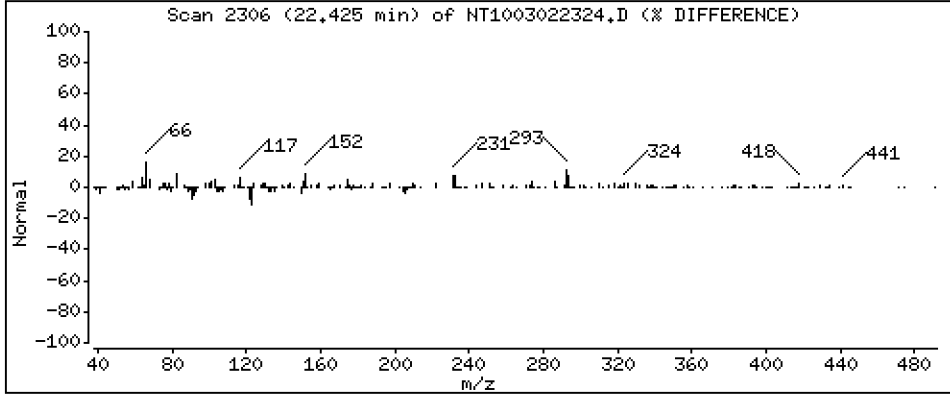
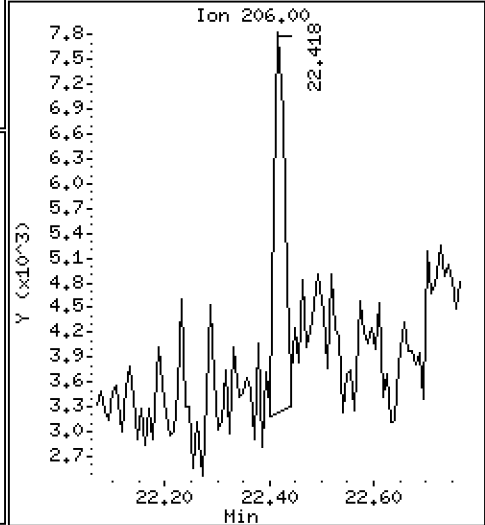
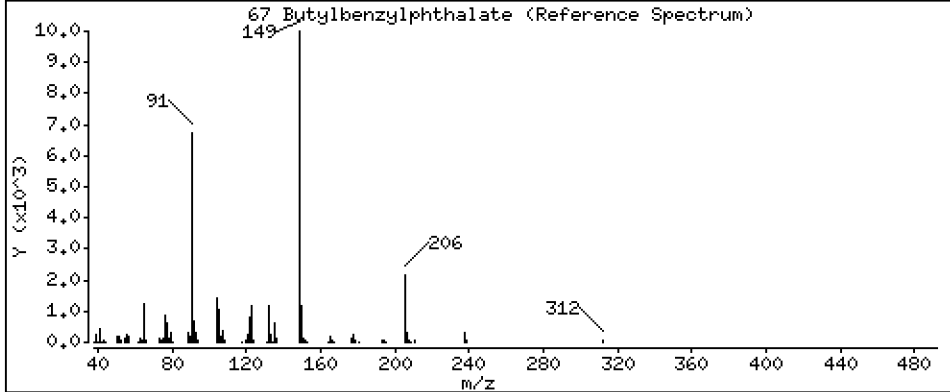
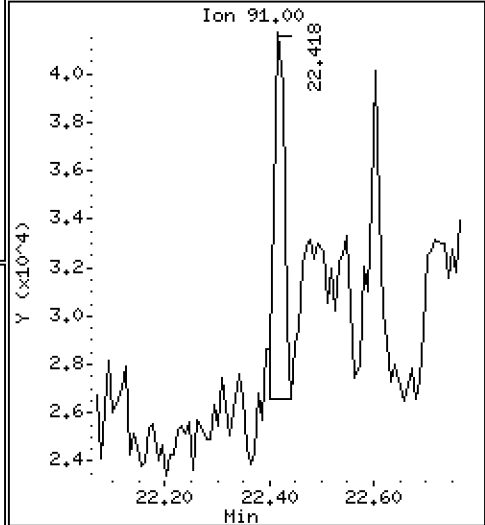
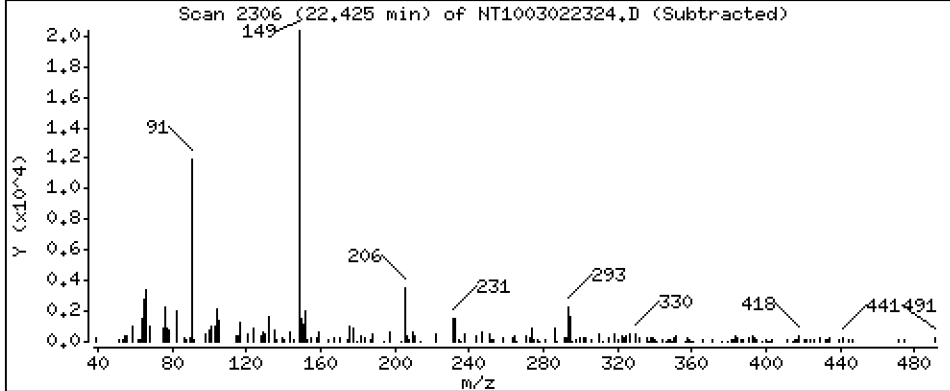
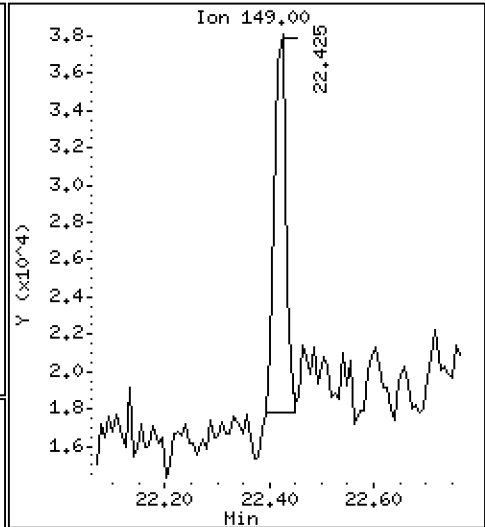
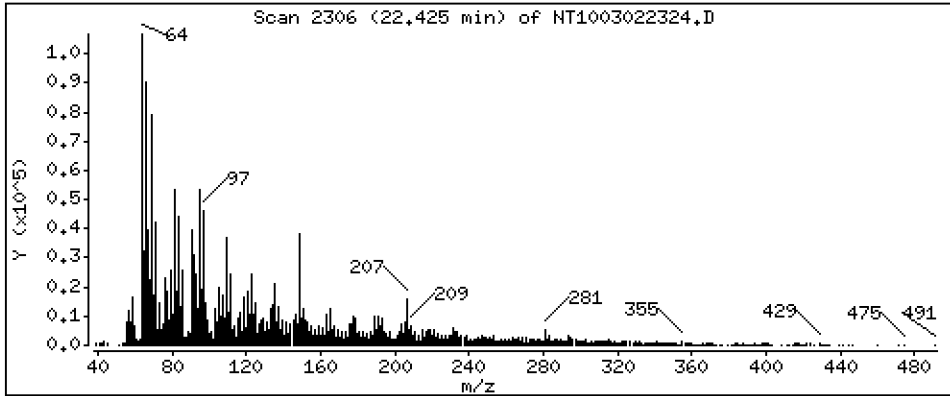
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,07874 ug/mL





Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

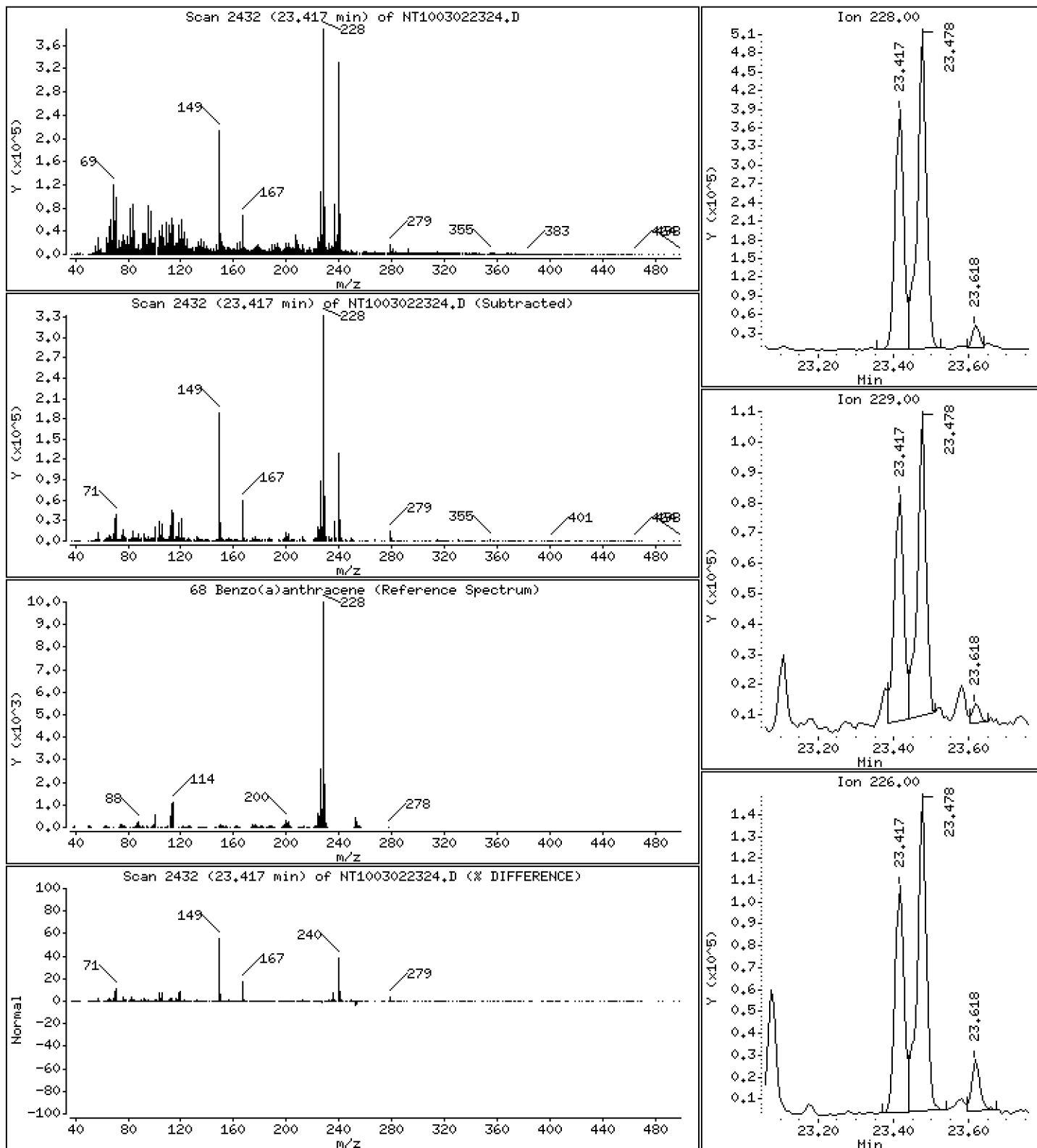
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,8720 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

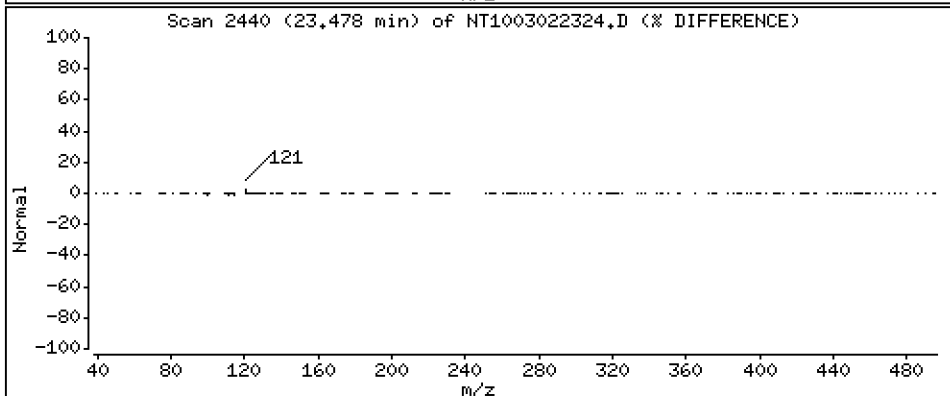
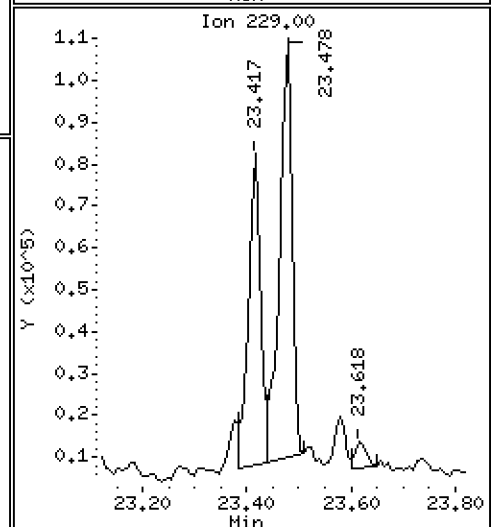
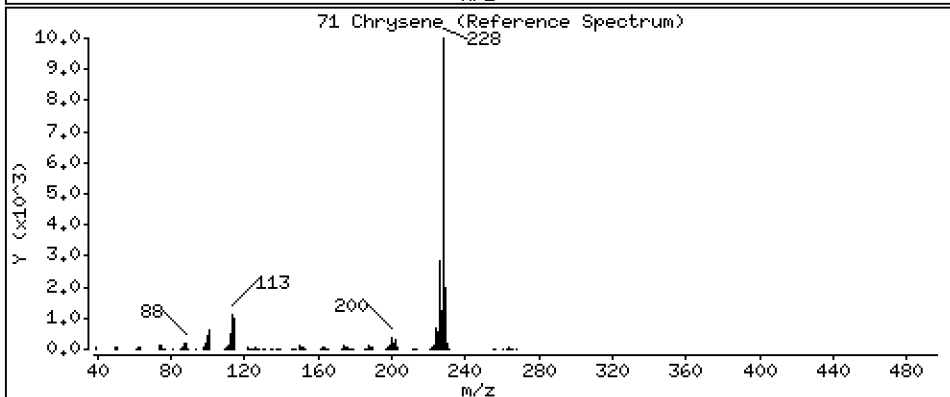
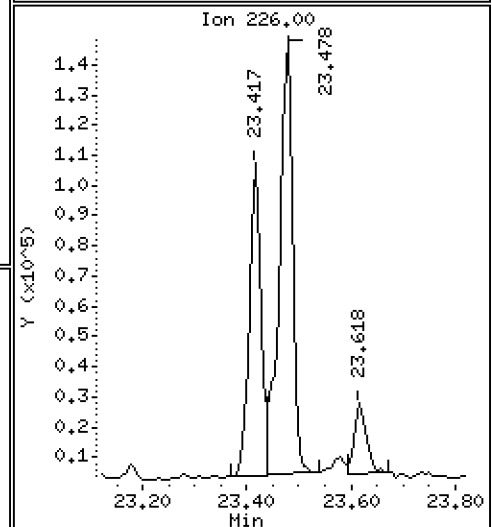
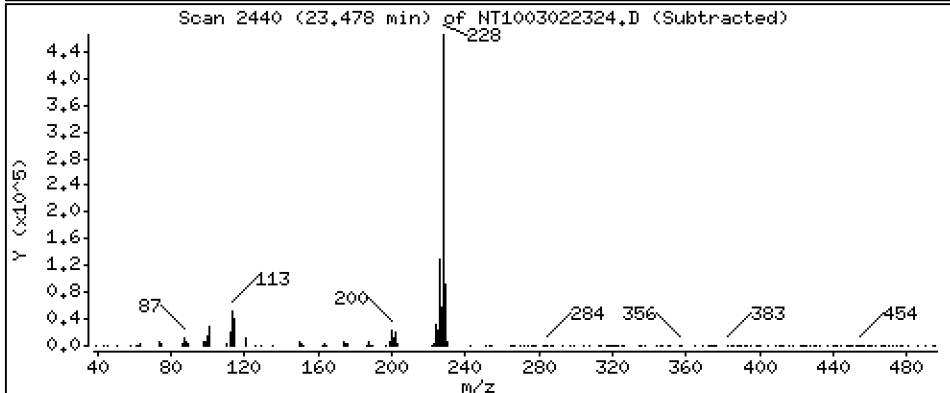
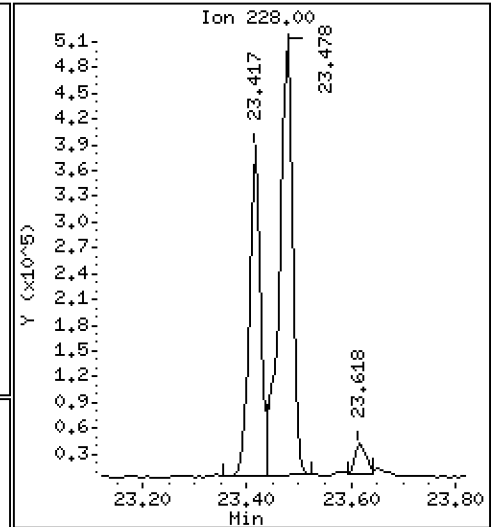
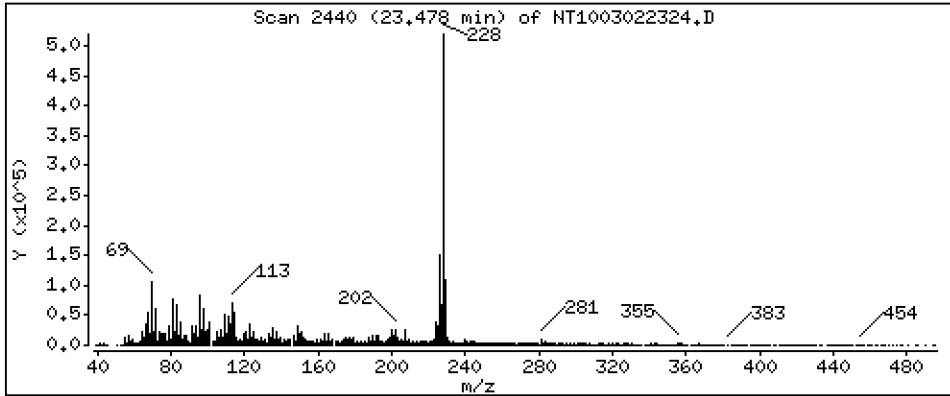
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,526 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

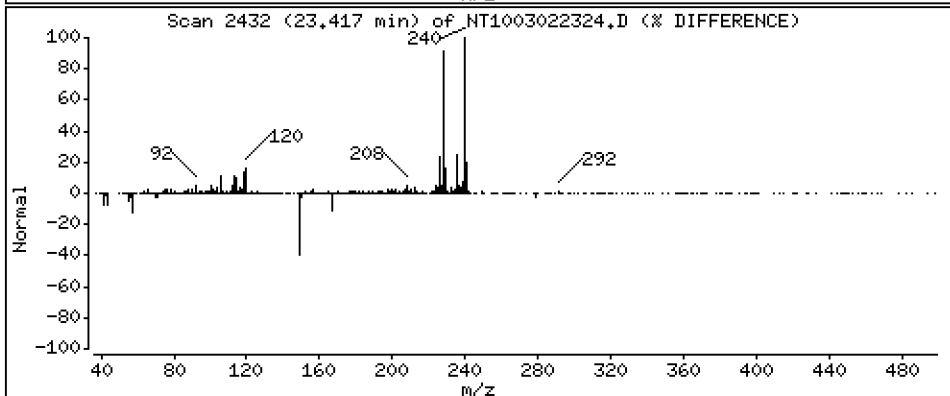
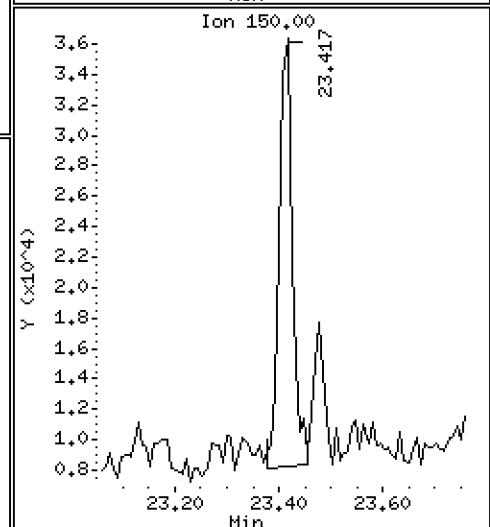
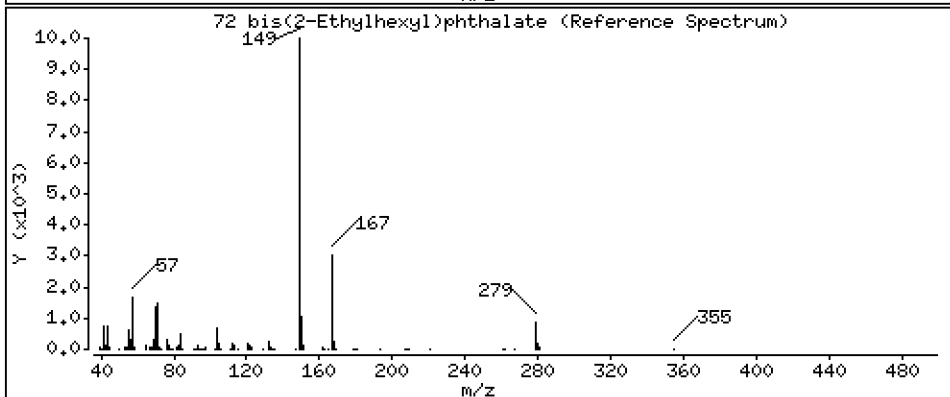
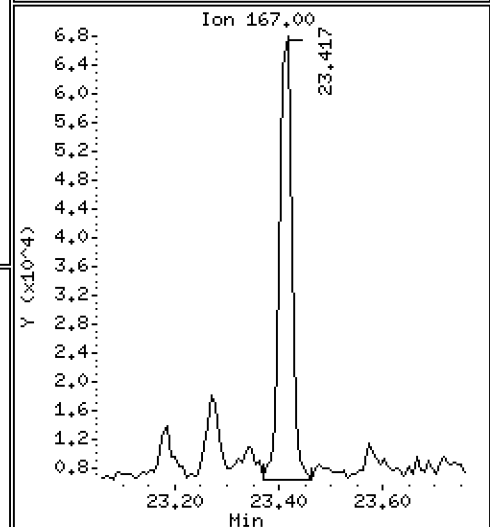
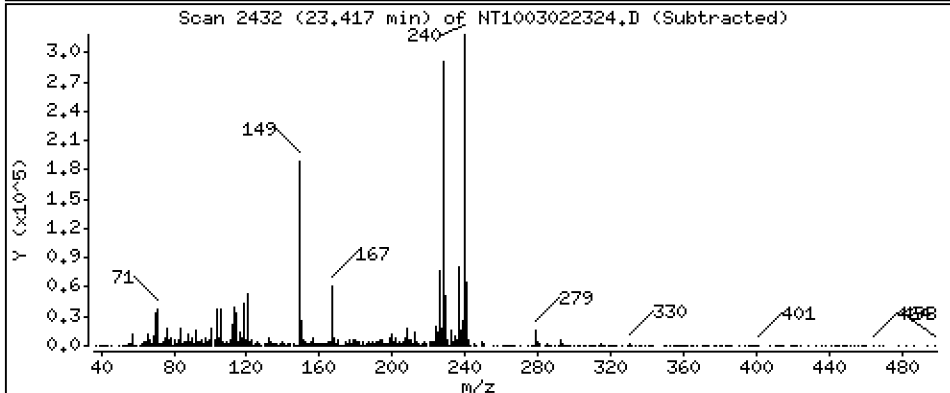
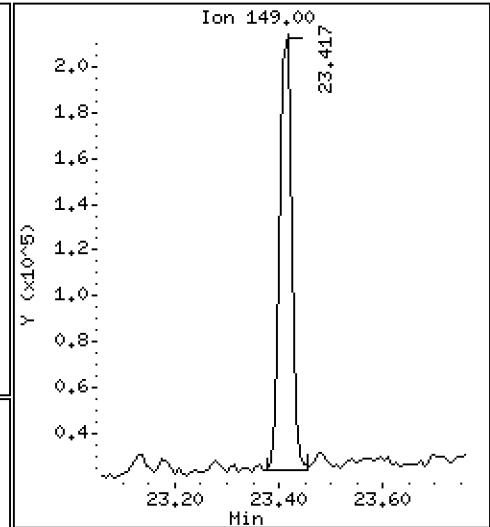
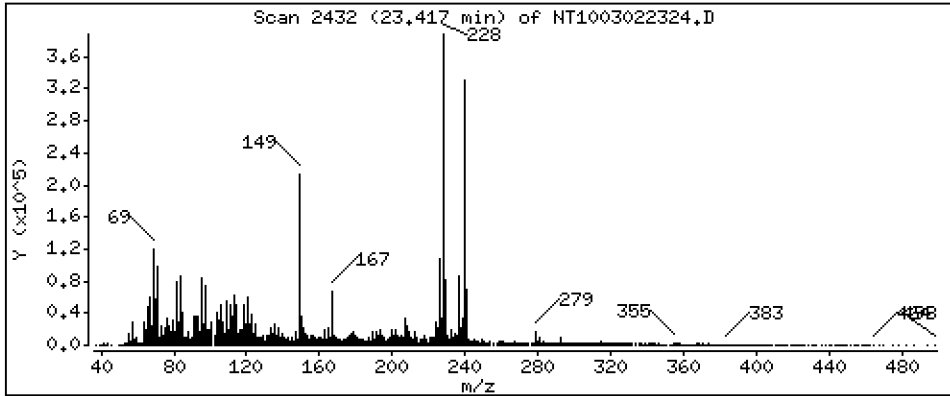
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,5420 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

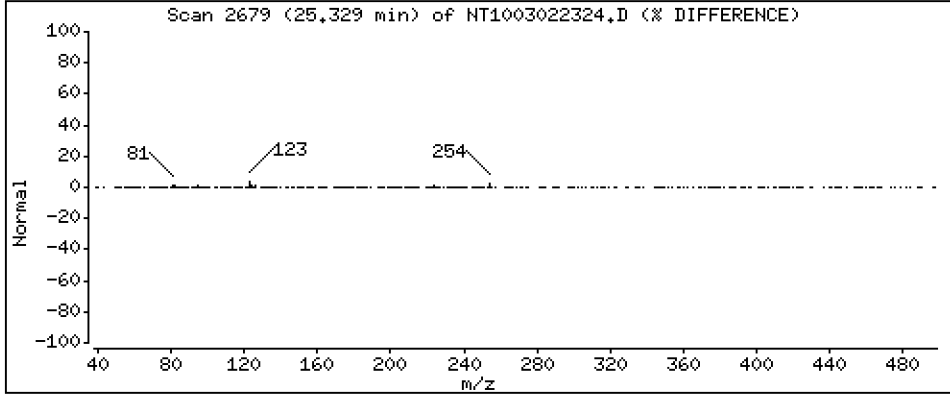
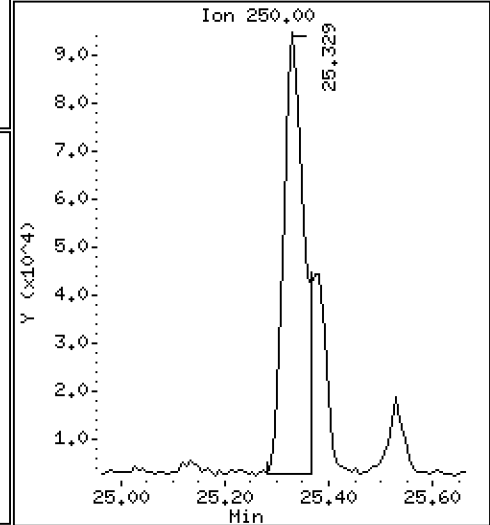
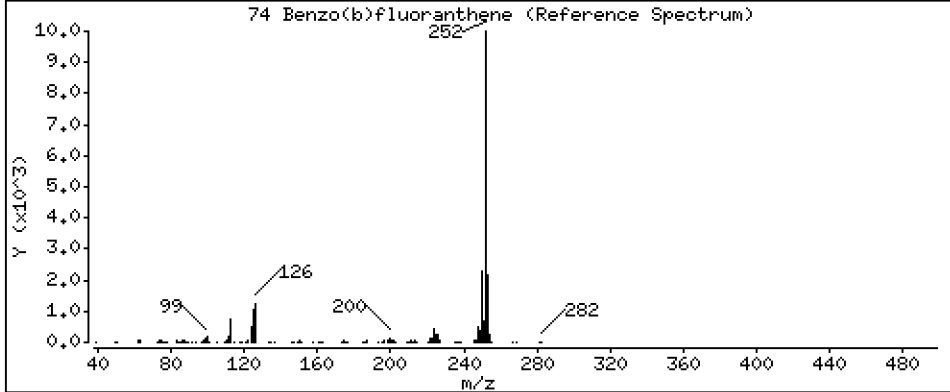
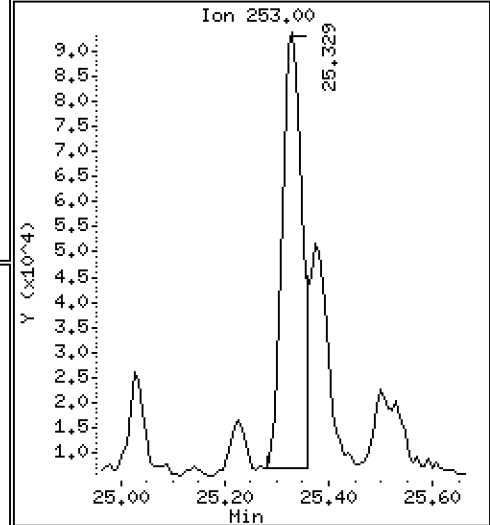
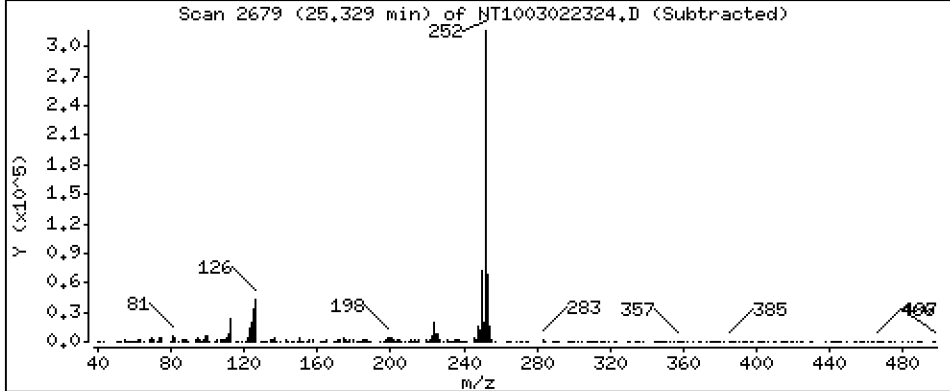
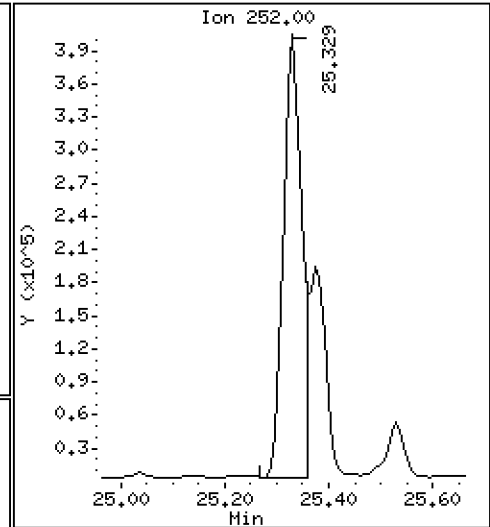
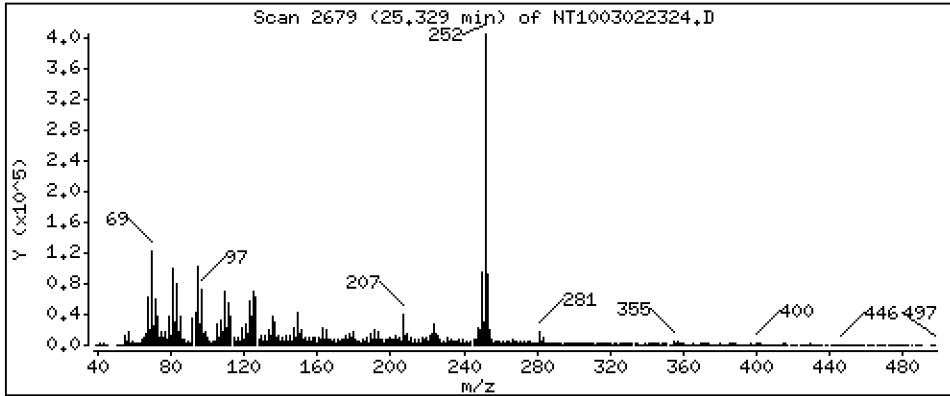
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,378 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

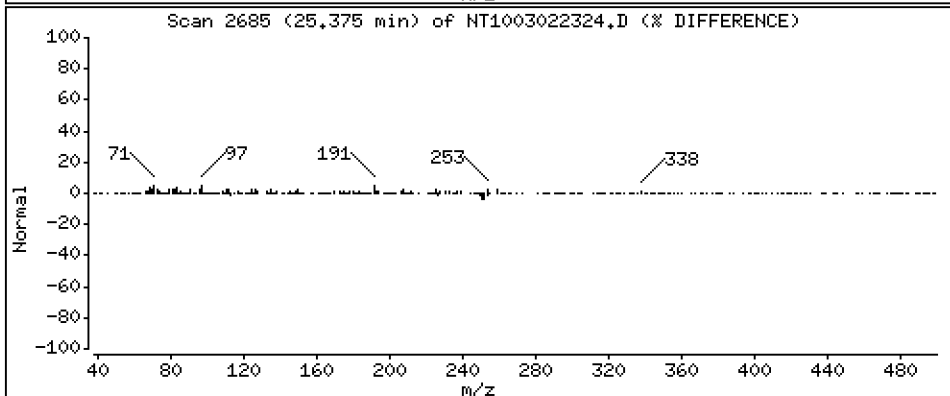
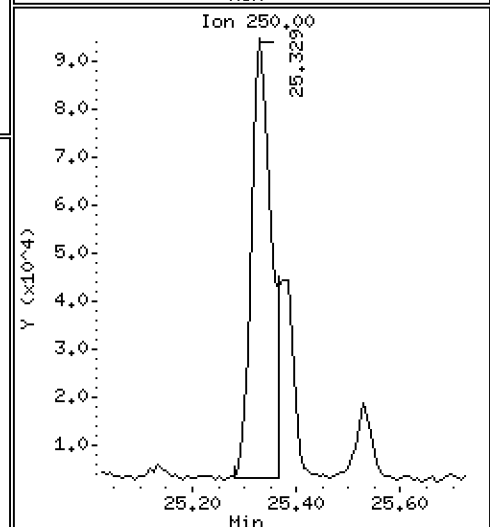
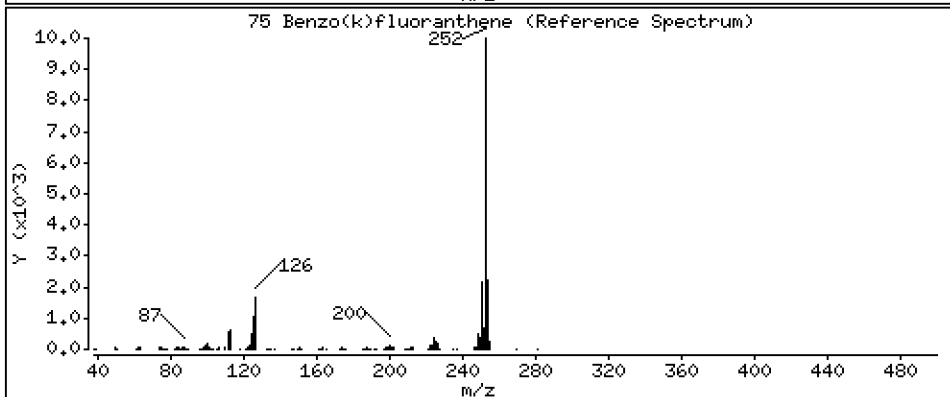
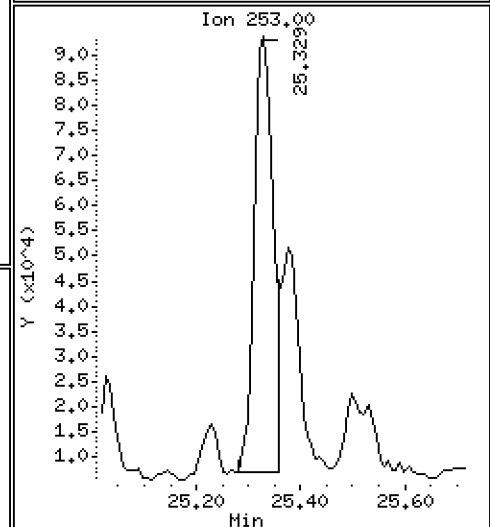
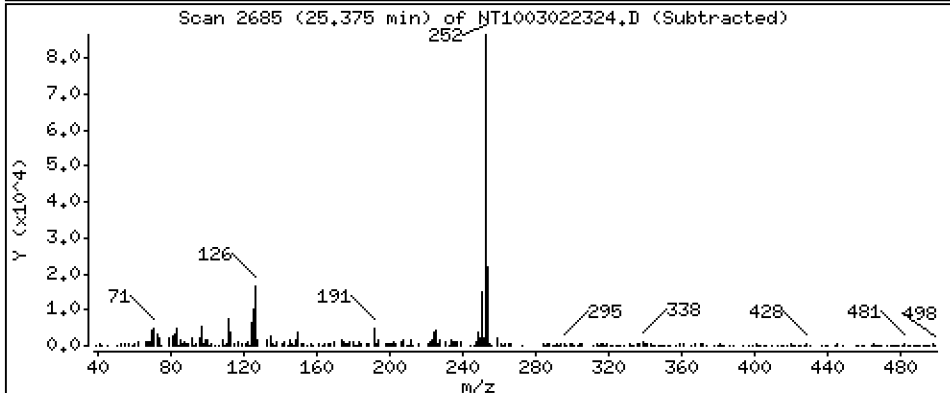
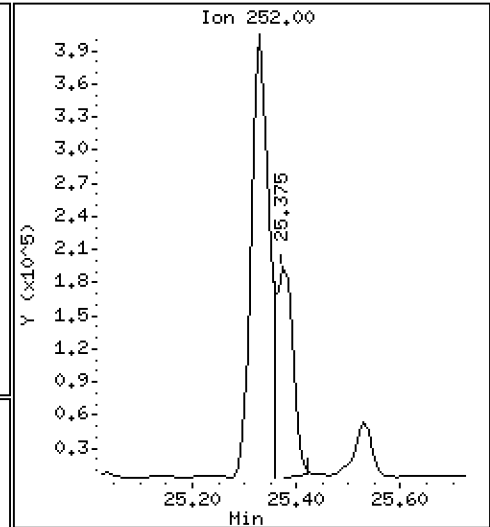
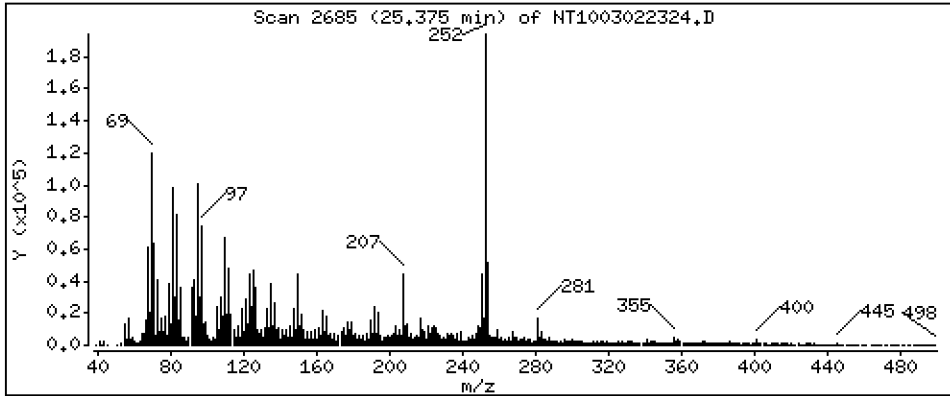
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,6340 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

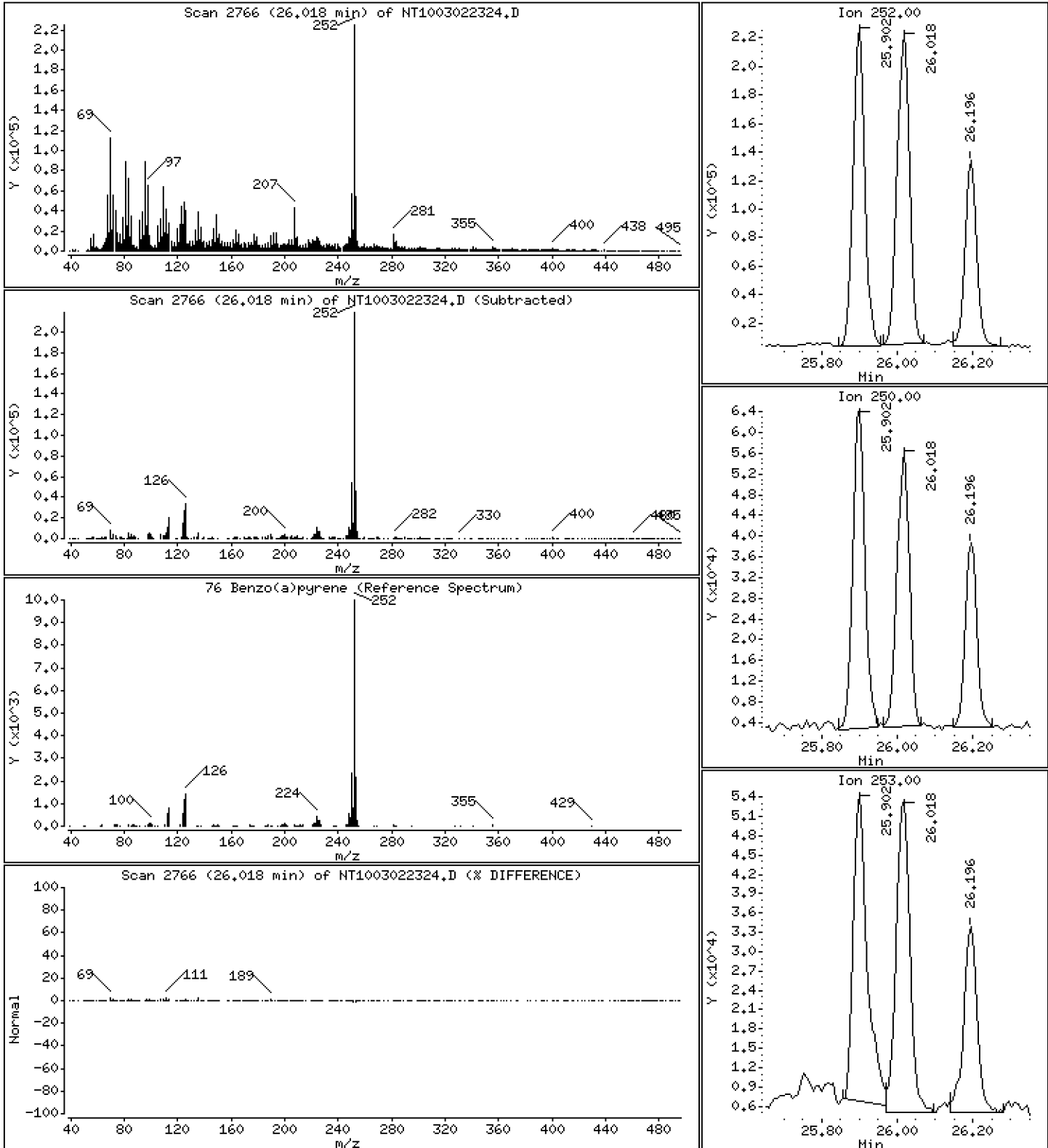
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,7539 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

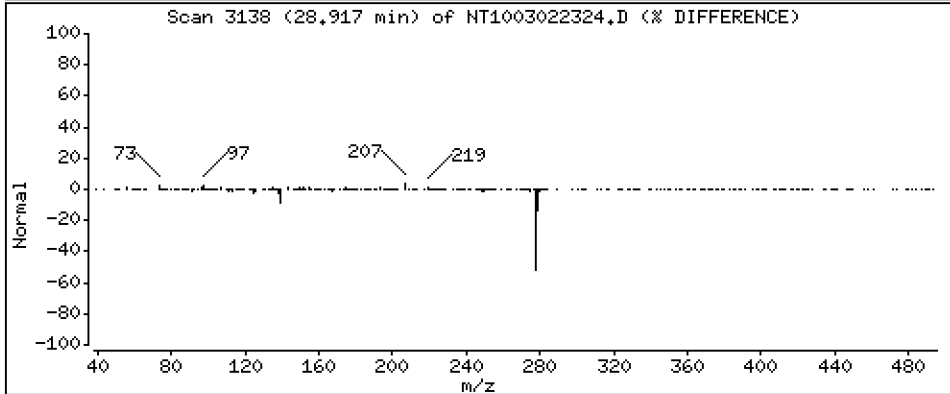
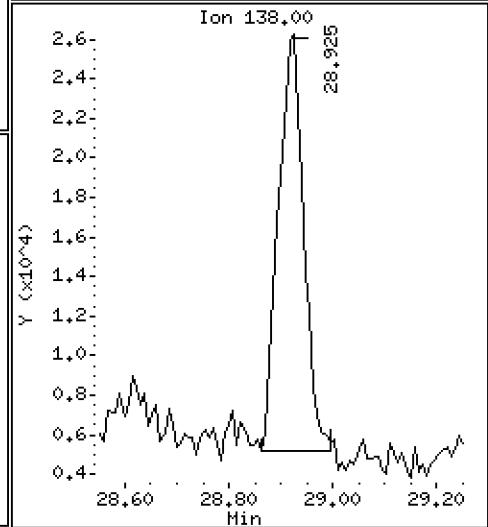
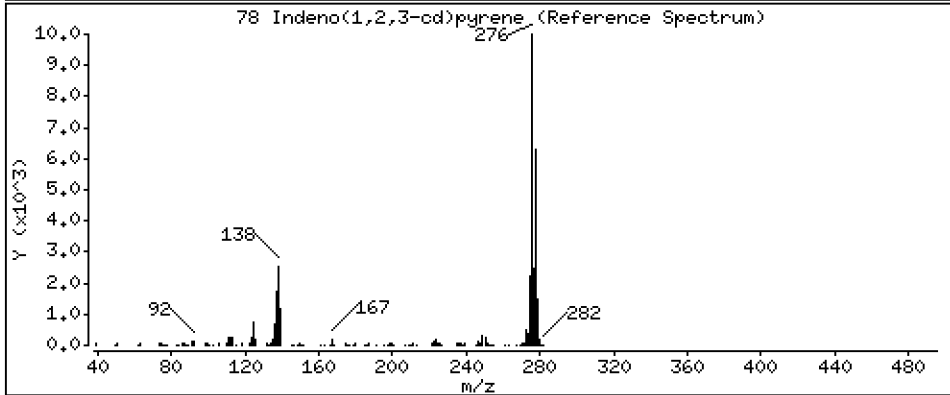
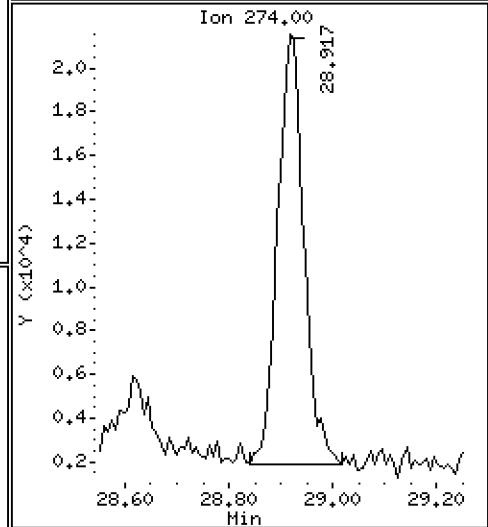
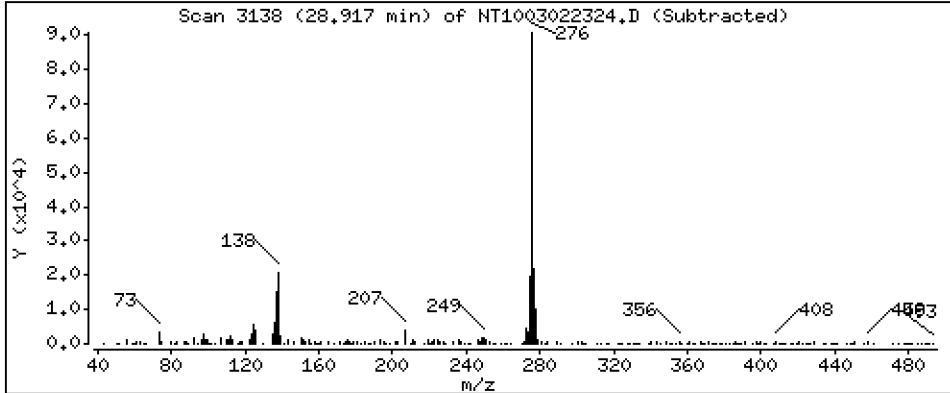
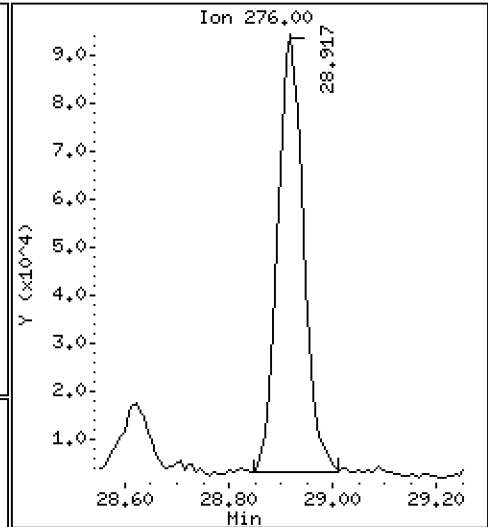
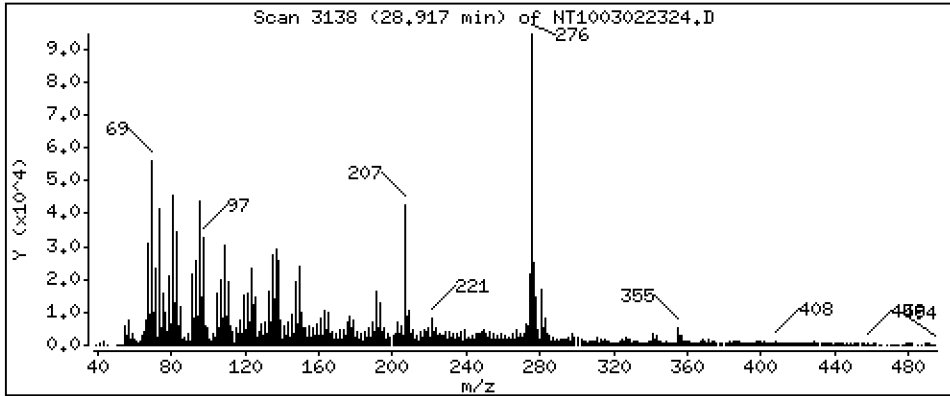
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4210 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

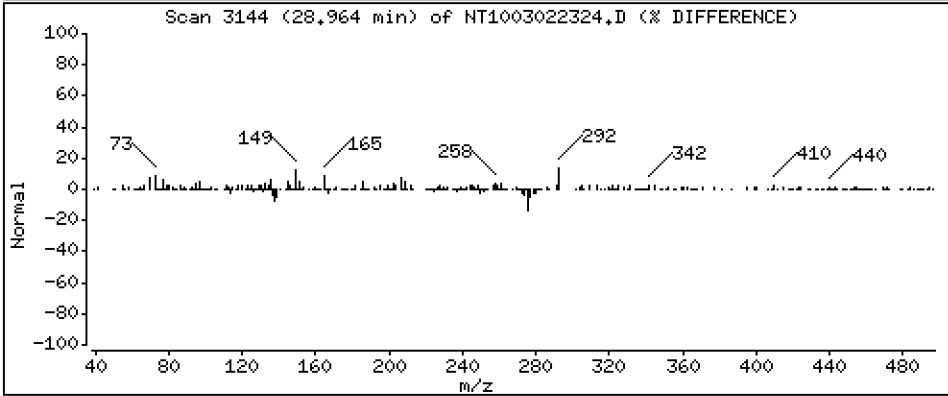
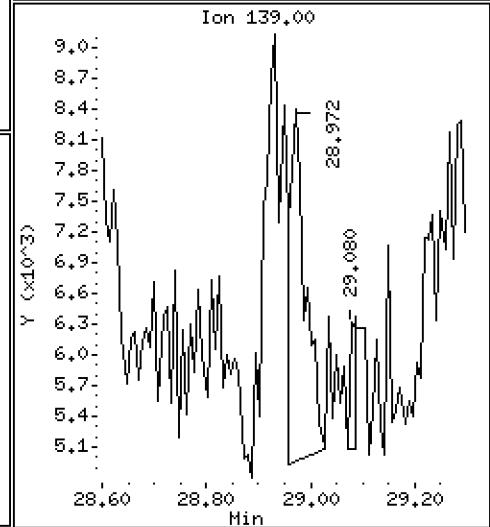
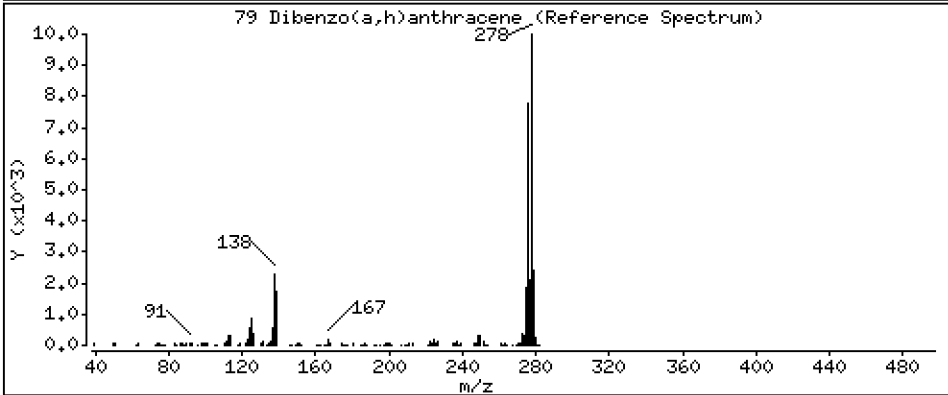
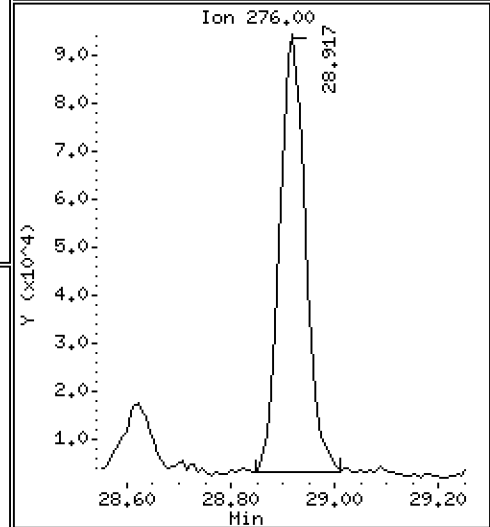
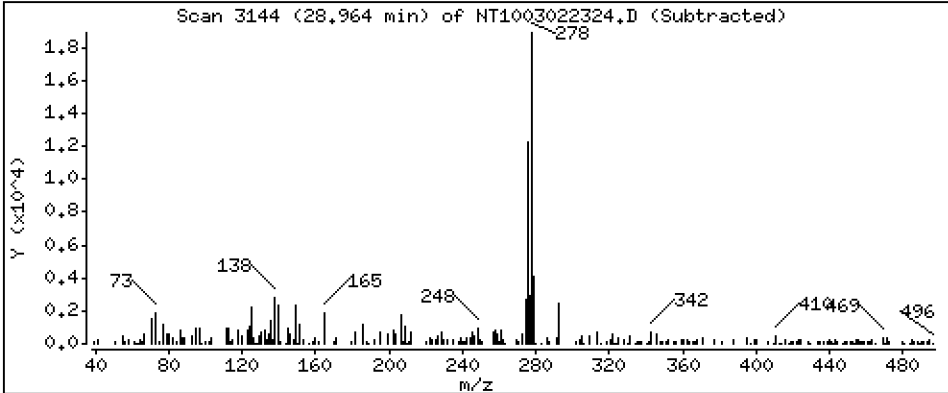
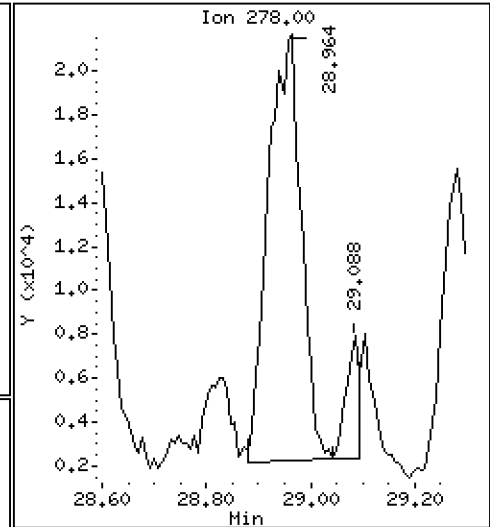
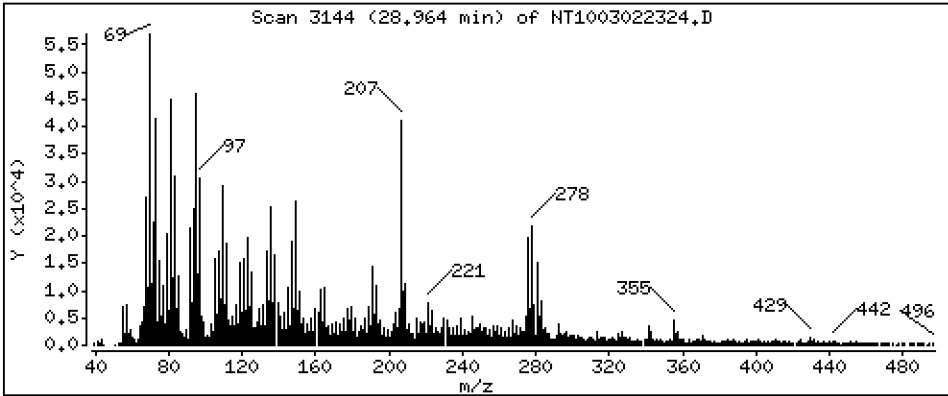
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1518 ug/mL





Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

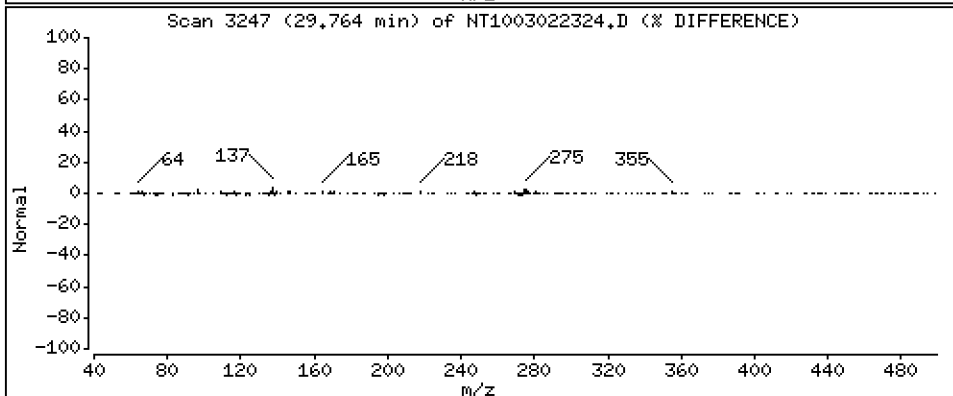
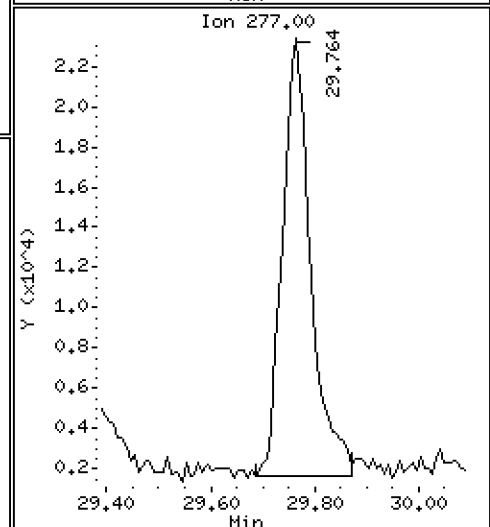
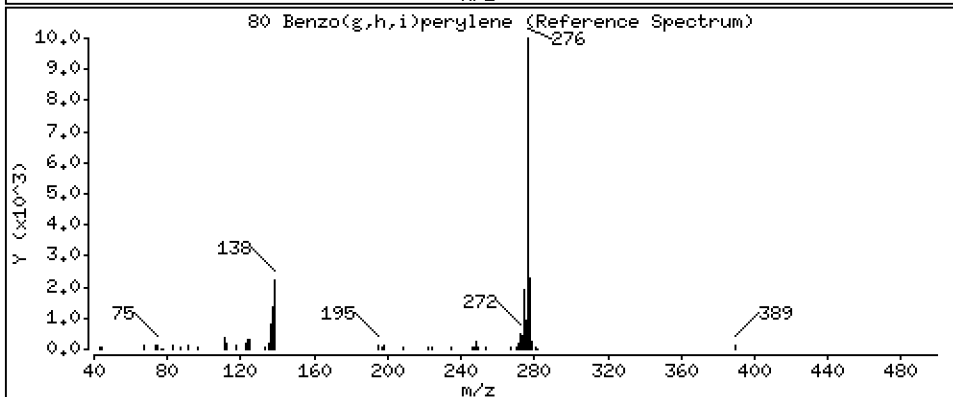
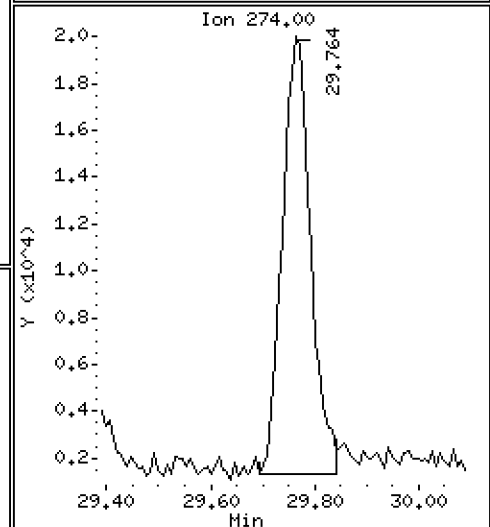
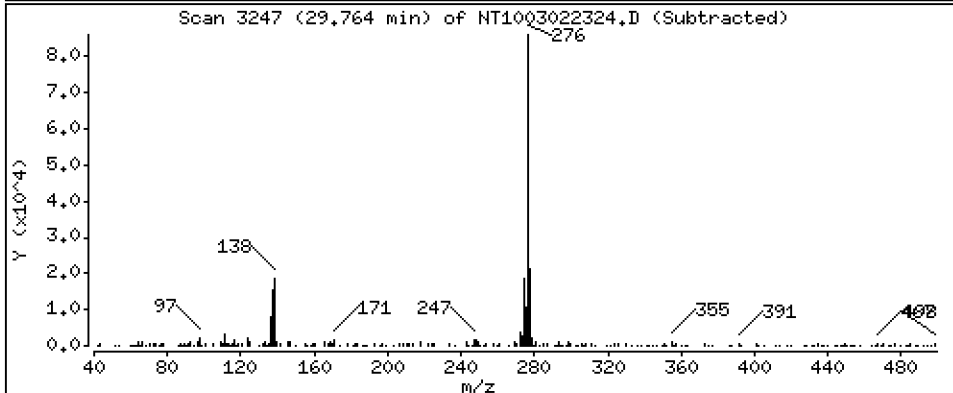
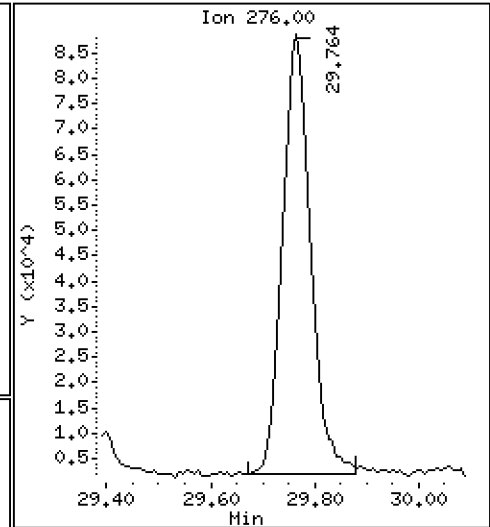
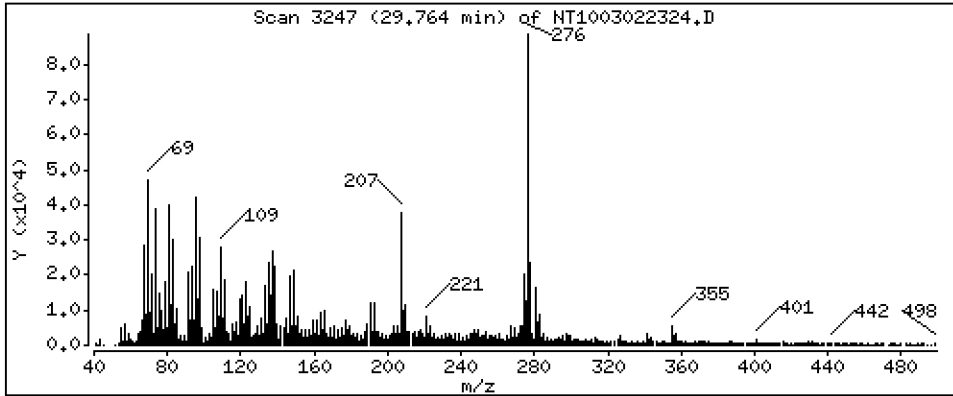
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,5469 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

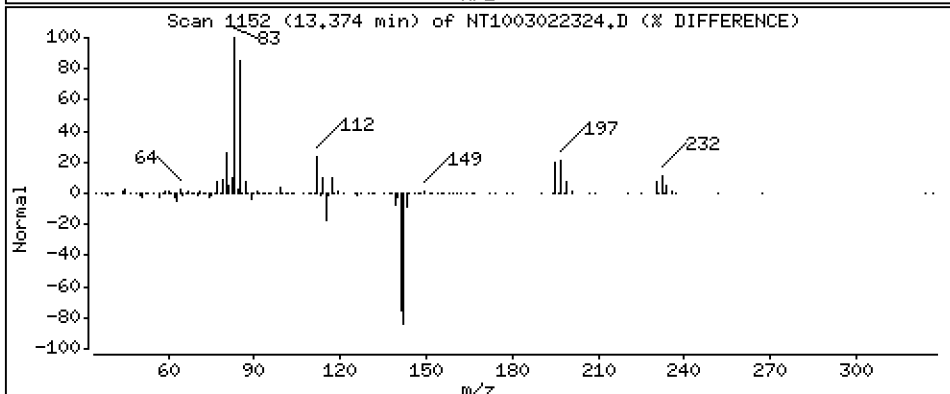
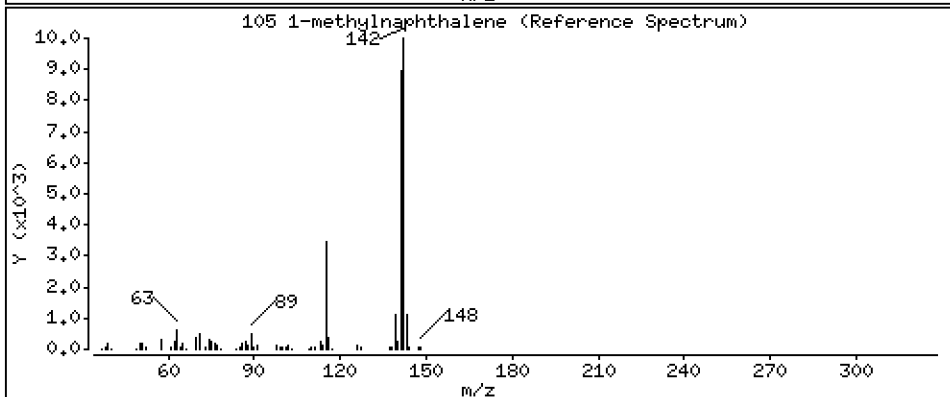
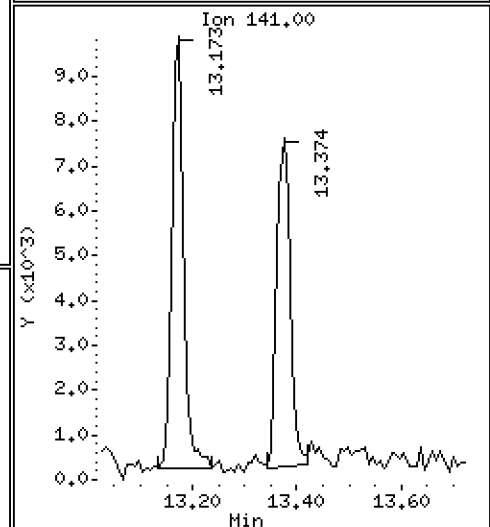
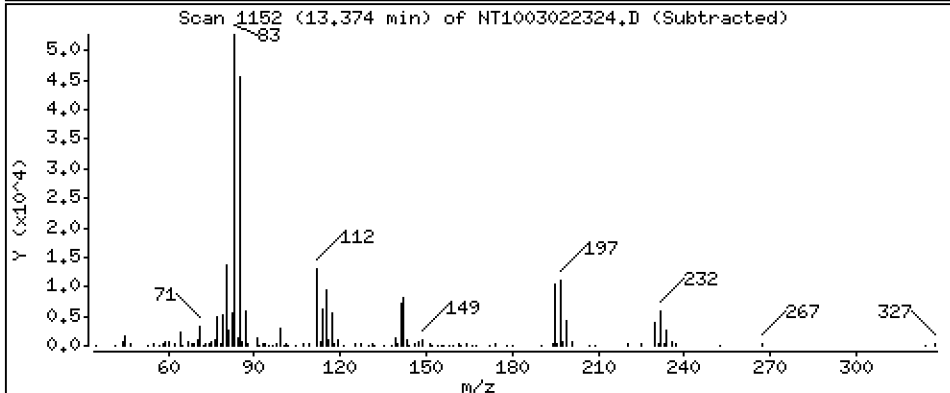
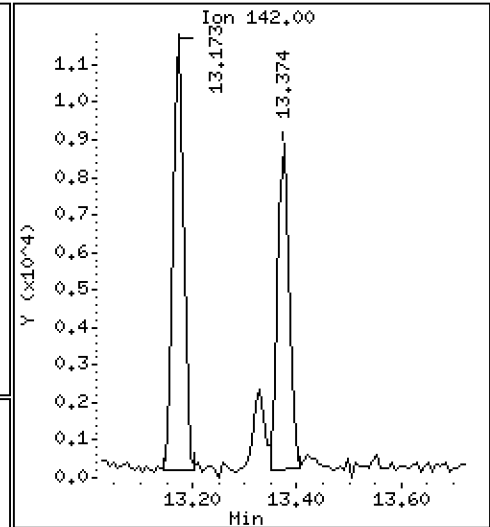
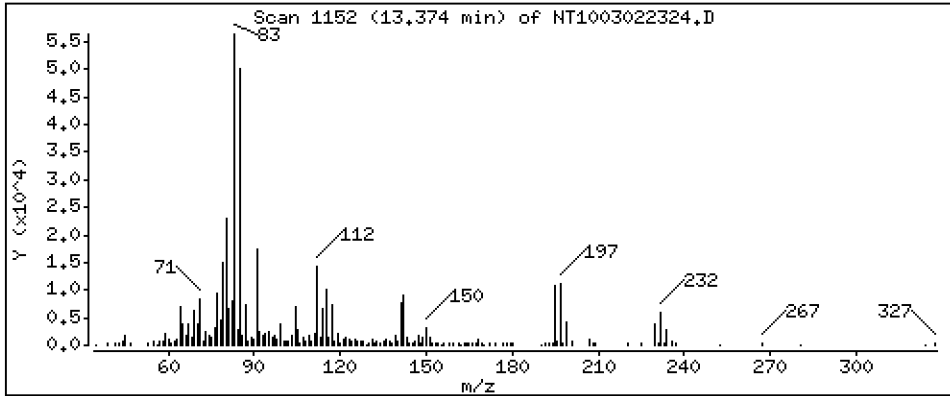
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,04186 ug/mL



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

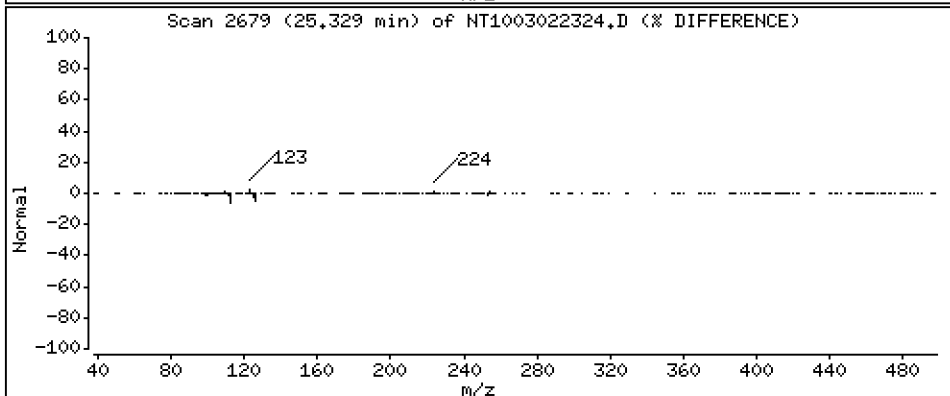
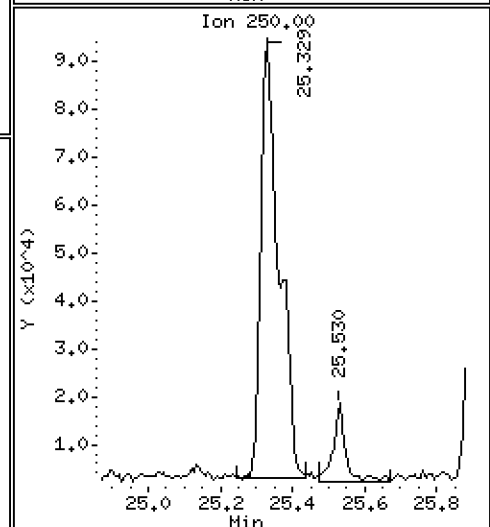
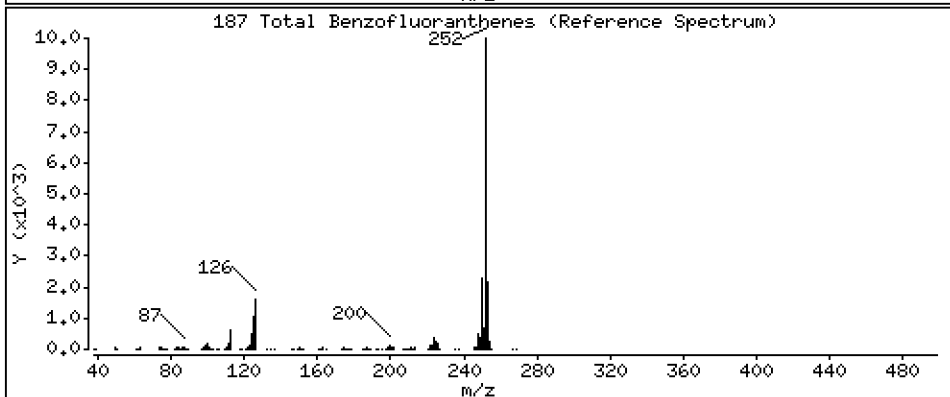
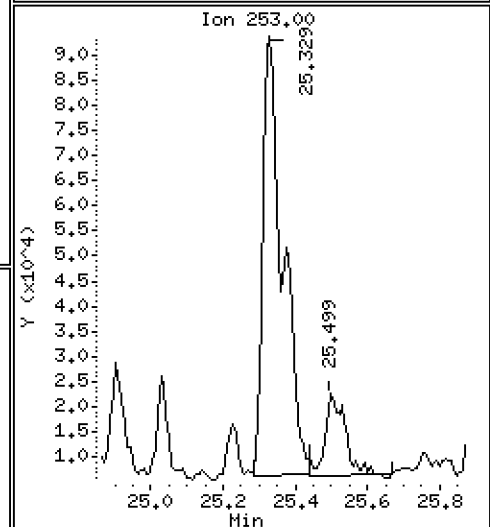
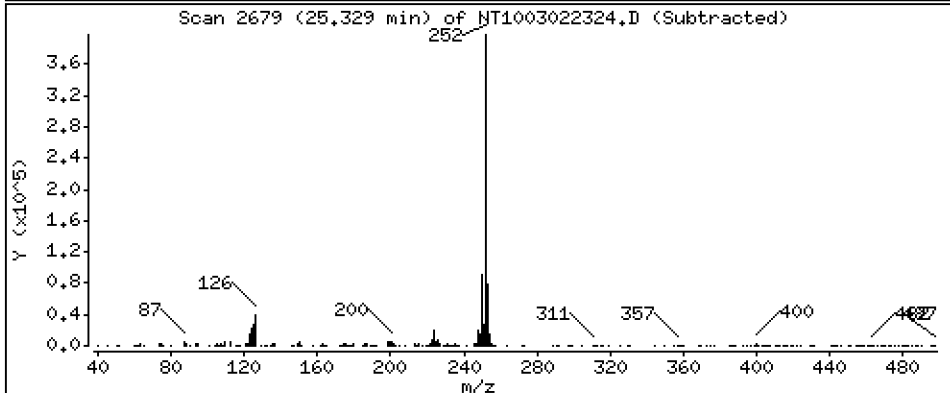
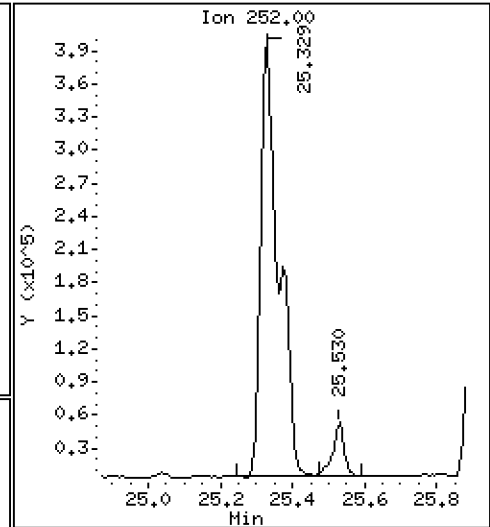
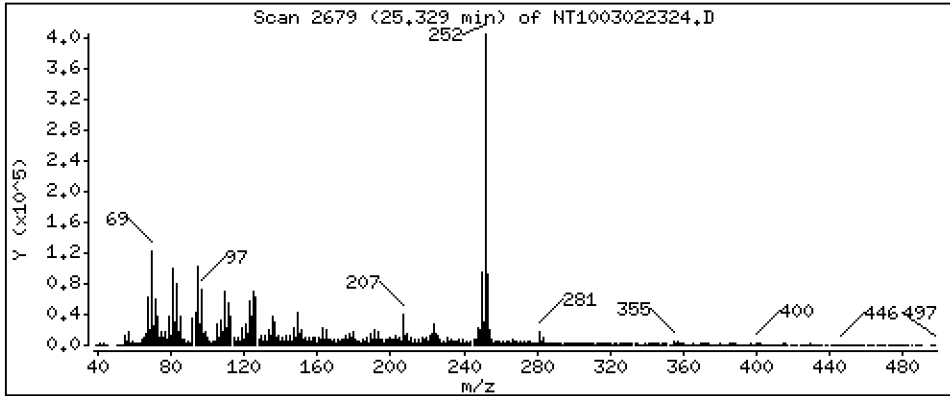
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 1,958 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022324.D

Lab Smp Id: 23A0206-09

Inj Date : 03-MAR-2023 04:58

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-09

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 20

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
\$ 1 2-Fluorophenol	112		6.905	6.897	(0.747)	946688	6.05109	6.051
\$ 2 Phenol-d5	99		8.504	8.497	(0.920)	1281161	7.05345	7.053
3 Phenol	94		8.527	8.520	(0.922)	2854319	14.7804	14.78
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1063155	6.86052	6.861
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	497252	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	444490	3.83911	3.839
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.479	9.480	(1.025)	31471	0.31755	0.3176
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.479	9.658	(1.025)	31471	0.21031	0.2103
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.302	10.295	(0.879)	885197	4.42314	4.423
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		10.721	10.791	(0.914)	381	0.00159	0.001590
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.145	11.171	(0.950)	48978	0.46027	0.4603
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1823135	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	37966	0.08114	0.08114
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.165	(1.123)	17408	0.05266	0.05266
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.908)	1569231	4.65257	4.653
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.744	(0.962)	21322	0.06982	0.06982
40 Acenaphthylene	152		15.030	15.031	(0.981)	39988	0.08760	0.08760
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.324	15.317	(1.000)	945613	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.386	(1.004)	19618	0.07126	0.07126
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.749	15.750	(1.028)	27492	0.06729	0.06729
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.205	16.214	(1.058)	130580	0.40363	0.4036
49 Fluorene	166		16.461	16.453	(1.074)	31806	0.09356	0.09356
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.955	(1.106)	379167	6.24993	6.250
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.409	(1.000)	1770879	4.00000	
60 Phenanthrene	178		18.463	18.456	(1.003)	239415	0.52828	0.5283
61 Anthracene	178		18.571	18.564	(1.009)	150264	0.34193	0.3419
62 Carbazole	167		18.904	18.897	(1.027)	39730	0.09869	0.09869
63 Di-n-butylphthalate	149		19.600	19.593	(1.065)	32095	0.05879	0.05879
64 Fluoranthene	202		20.846	20.823	(0.890)	839983	1.25324	1.253
65 Pyrene	202		21.264	21.256	(0.907)	847073	1.24116	1.241
\$ 66 Terphenyl-d14	244		21.534	21.535	(0.919)	2475089	4.48200	4.482
67 Butylbenzylphthalate	149		22.425	22.418	(0.957)	28946	0.07874	0.07874
68 Benzo(a)anthracene	228		23.416	23.409	(0.999)	599044	0.87198	0.8720
* 69 Chrysene-d12	240		23.432	23.424	(1.000)	1948351	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.471	(1.002)	852132	1.52623	1.526
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	286035	0.54201	0.5420
* 134 Di-n-octylphthalate-d4	153		24.500	24.493	(1.000)	3755148	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.328	25.313	(0.969)	1003582	1.37794	1.378
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	441063	0.63399	0.6340 (M)
76 Benzo(a)pyrene	252		26.017	26.002	(0.995)	487493	0.75389	0.7539
* 77 Perylene-d12	264		26.141	26.126	(1.000)	2108390	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.917	28.902	(1.106)	317240	0.42099	0.4210
79 Dibenzo(a,h)anthracene	278		28.963	28.948	(1.108)	86508	0.15181	0.1518
80 Benzo(g,h,i)perylene	276		29.763	29.740	(1.139)	328566	0.54687	0.5469
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	12523	0.04186	0.04186
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.328	25.375	(0.969)	1364471	1.95841	1.958	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022324.D Calibration Time: 22:38  
 Lab Smp Id: 23A0206-09  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	497252	-17.01
27 Naphthalene-d8	2200781	1100391	4401562	1823135	-17.16
42 Acenaphthene-d10	1135136	567568	2270272	945613	-16.70
59 Phenanthrene-d10	2128944	1064472	4257888	1770879	-16.82
69 Chrysene-d12	2449624	1224812	4899248	1948351	-20.46
134 Di-n-octylphthala	4694735	2347368	9389470	3755148	-20.01
77 Perylene-d12	2593218	1296609	5186436	2108390	-18.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.50	0.03
77 Perylene-d12	26.13	25.63	26.63	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022324.D

Lab ID: 23A0206-09

nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 04:58

RT CO-ELUTION COMPOUNDS

---

23.417 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.025	1.044	-0.0193	2-Methylphenol
0.914	0.920	-0.0060	Isophorone

RRT check based on Ccal File: NT1003022314ICV.D

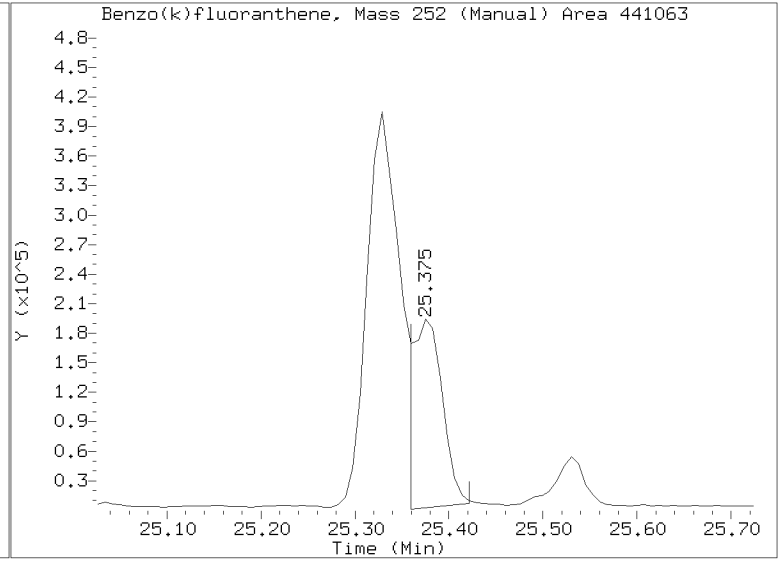
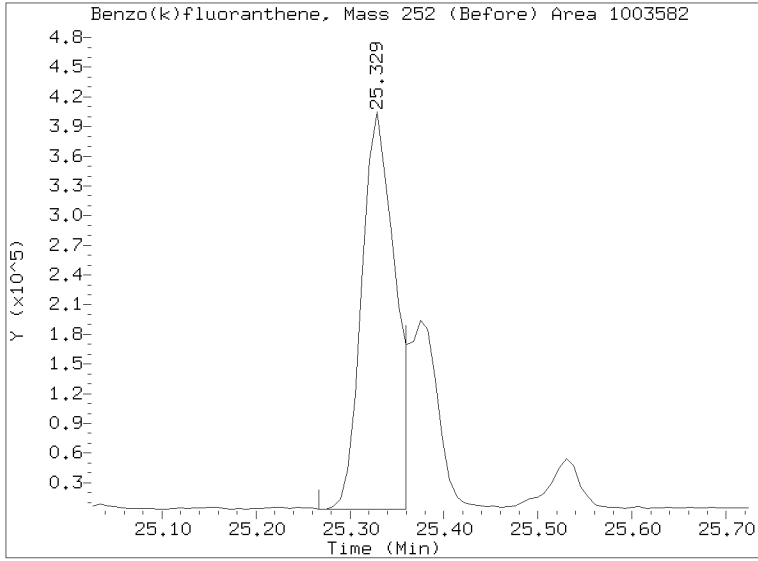
On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/NT1003022324.D  
Injection Date: 03-MAR-2023 04:58  
Lab ID:23A0206-09 Client ID:  
Report Date: 03/09/2023 15:50





Form I  
ORGANIC ANALYSIS DATA SHEET

EPA 8270E  
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-10 B

SDG: 23A0206

Sampled: 01/11/23 11:28

Prepared: 01/27/23 14:44

File ID: NT1003022329.D

% Solids: 42.92

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:08

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 23.38 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1440		4.4	19.9
106-44-5	4-Methylphenol	1	13.7	J	7.4	19.9
91-20-3	Naphthalene	1	9.2	J	4.2	19.9
91-57-6	2-Methylnaphthalene	1	5.7	J	4.5	19.9
208-96-8	Acenaphthylene	1	8.7	J	6.2	19.9
131-11-3	Dimethylphthalate	1	6.8	J	4.4	19.9
83-32-9	Acenaphthene	1	6.3	J	5.2	19.9
132-64-9	Dibenzofuran	1	19.9	U	14.1	19.9
86-73-7	Fluorene	1	19.9	U	14.5	19.9
85-01-8	Phenanthrene	1	49.2		8.7	19.9
120-12-7	Anthracene	1	26.1		7.2	19.9
206-44-0	Fluoranthene	1	112		6.1	19.9
129-00-0	Pyrene	1	112		5.7	19.9
85-68-7	Butylbenzylphthalate	1	19.9	U	9.4	19.9
56-55-3	Benzo(a)anthracene	1	75.0		5.9	19.9
218-01-9	Chrysene	1	150		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	38.5	J	5.4	49.8
	Benzo(a)fluoranthene, Total	1	187		10.0	39.9
50-32-8	Benzo(a)pyrene	1	75.9		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	42.1		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	19.9	U	17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	50.9	Q	13.5	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.41	579	77.5	27 - 120	
Phenol-d5	747.41	676	90.5	29 - 120	
2-Chlorophenol-d4	747.41	666	89.1	31 - 120	
1,2-Dichlorobenzene-d4	498.27	380	76.3	32 - 120	
Nitrobenzene-d5	498.27	423	84.8	30 - 120	
2-Fluorobiphenyl	498.27	468	93.9	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-10 B

SDG: 23A0206

Sampled: 01/11/23 11:28

Prepared: 01/27/23 14:44

File ID: NT1003022329.D

% Solids: 42.92

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:08

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 23.38 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

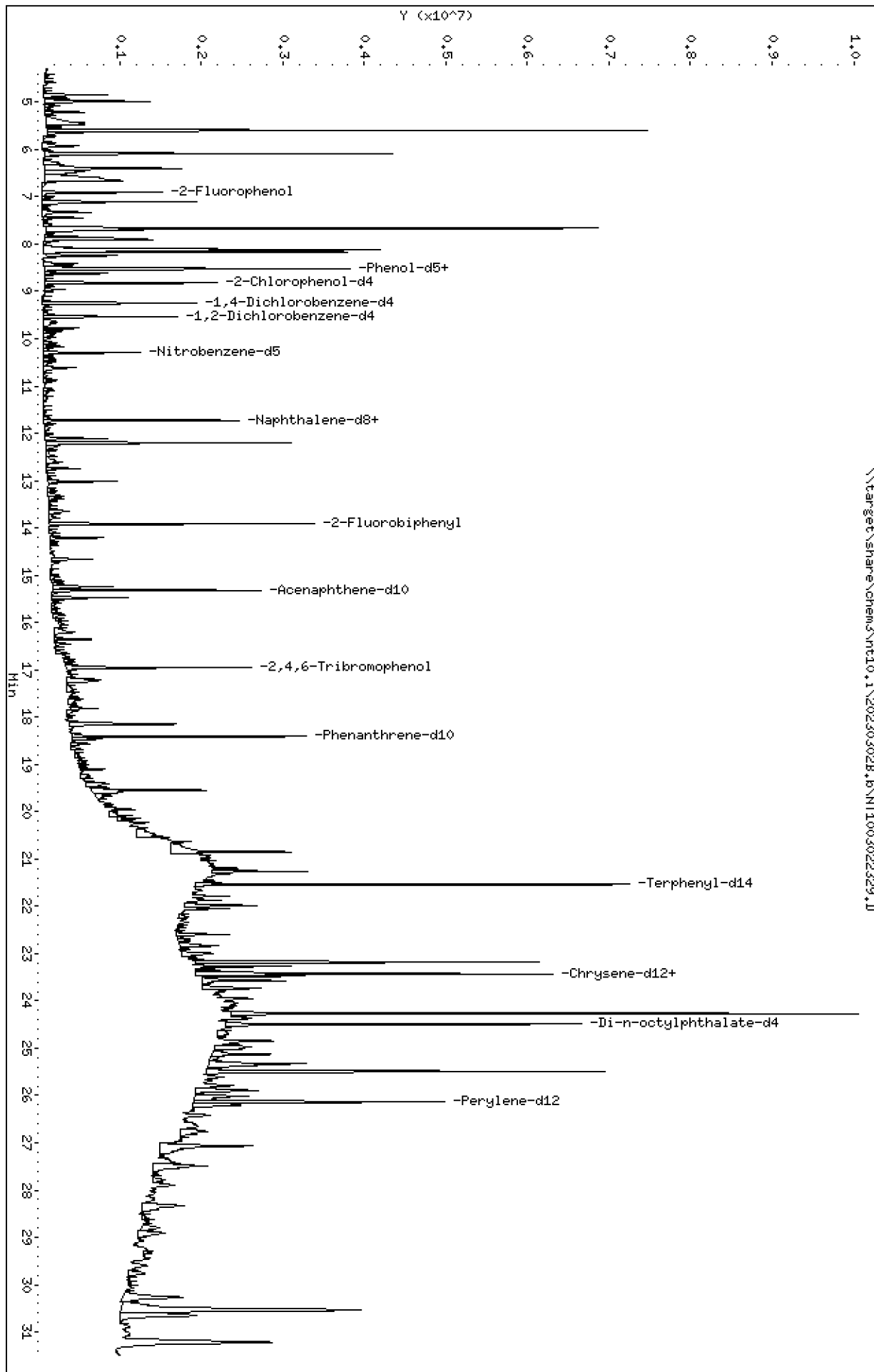
Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	747.41	659	88.2	24 - 134	
p-Terphenyl-d14	498.27	454	91.2	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B.B\NT1003022329.D  
 Date: 03-MAR-2023 08:08  
 Client ID:  
 Sample Info: 23A0206-10  
 Column phase: ZB-Smsi

Instrument: nt10.1  
 Operator: VTS  
 Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.B\NT1003022329.D



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

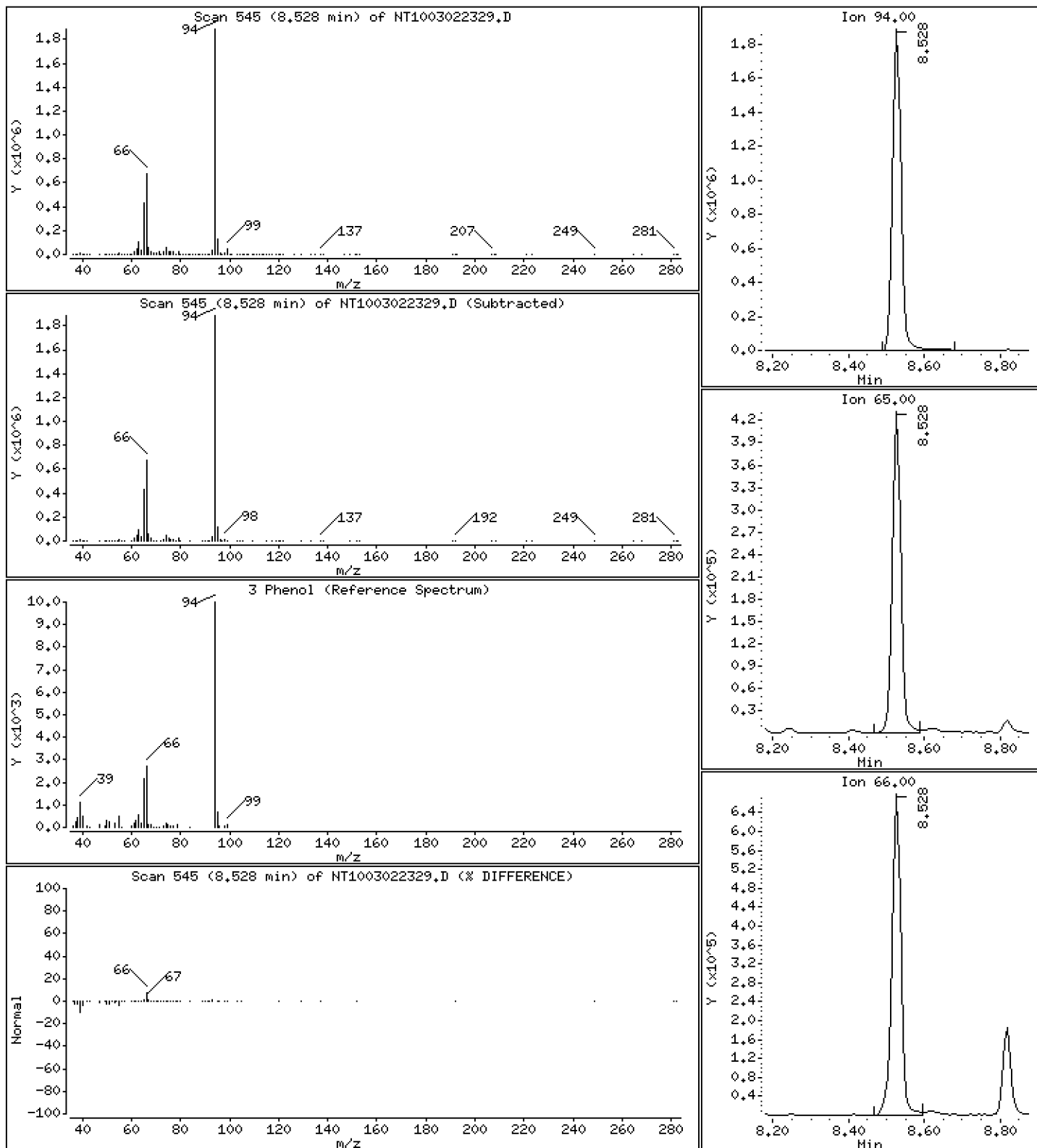
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 14,44 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

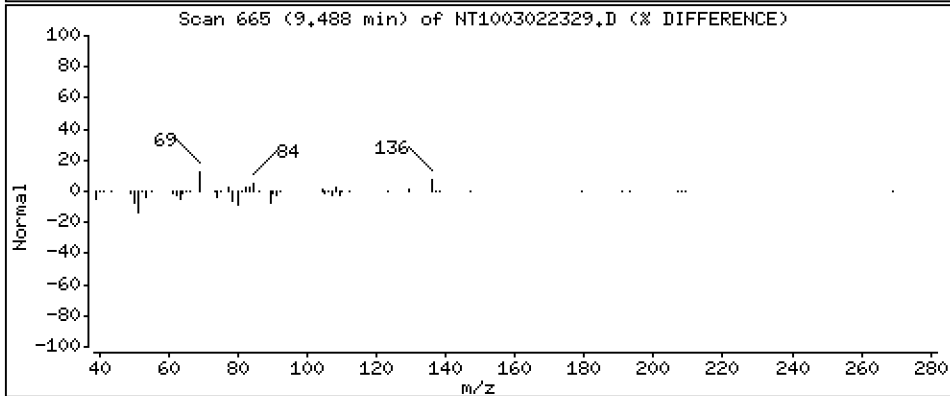
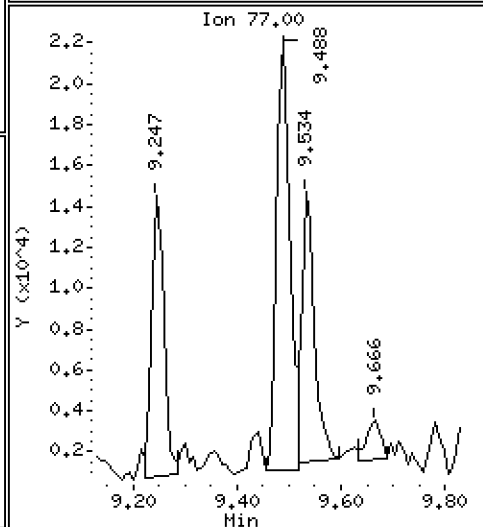
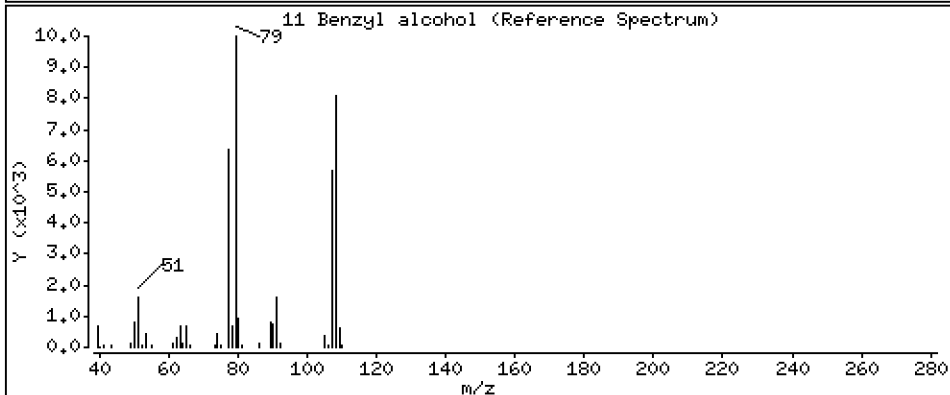
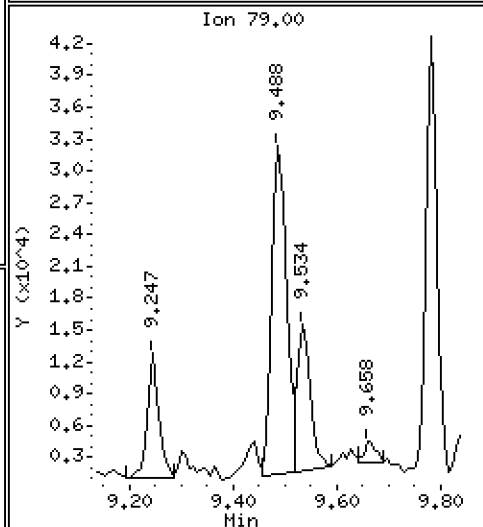
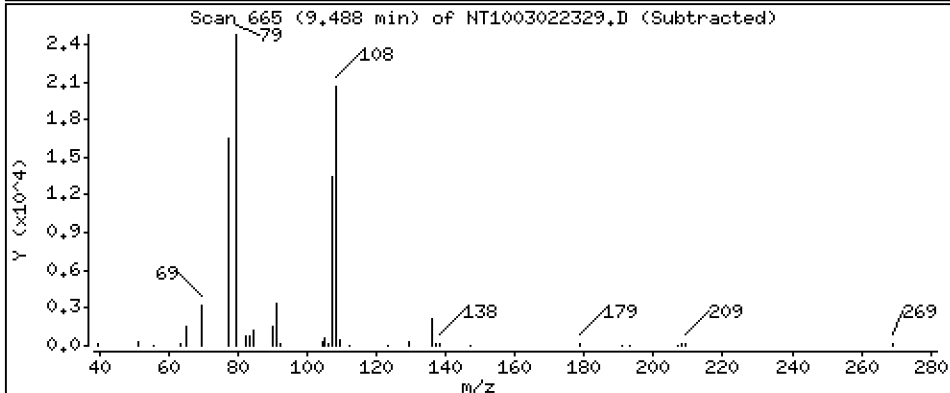
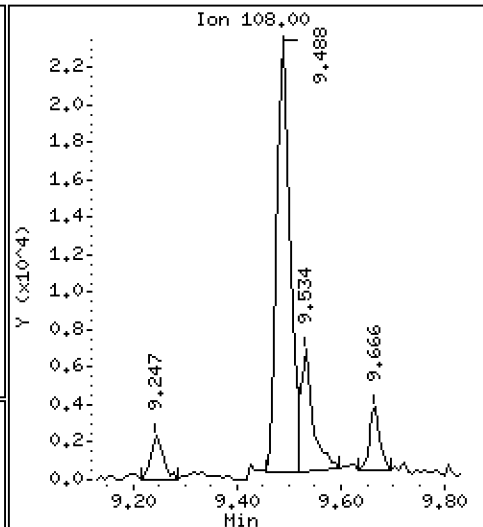
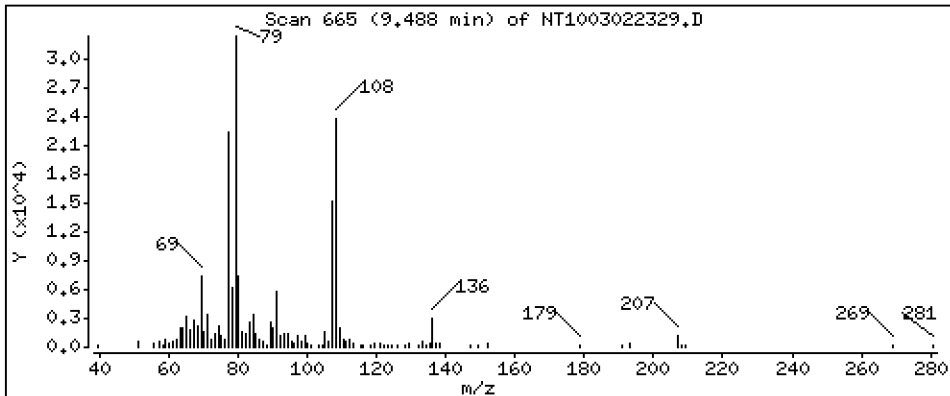
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.4032 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

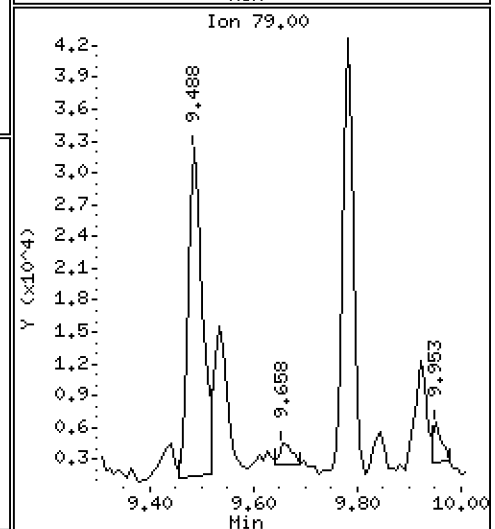
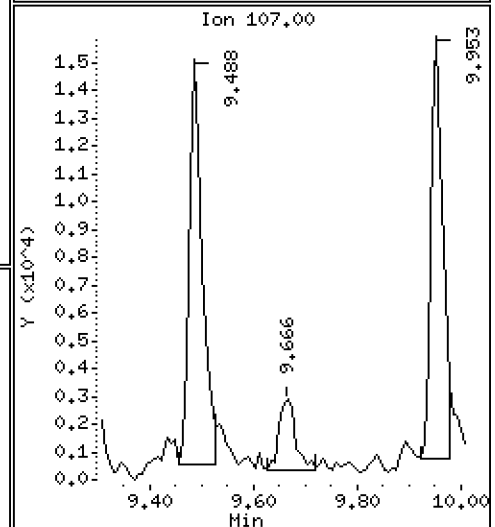
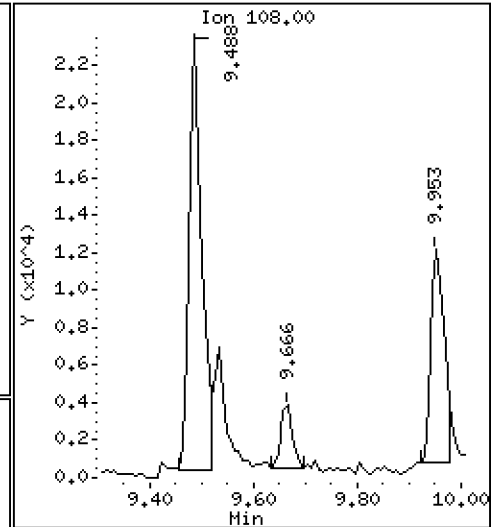
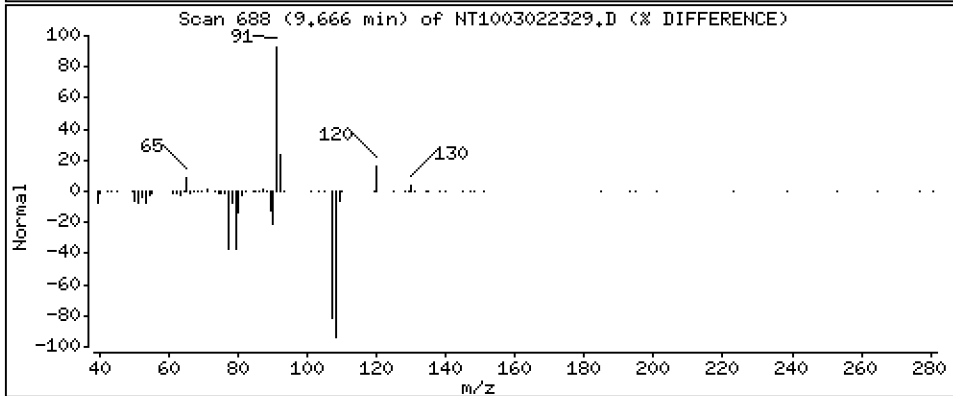
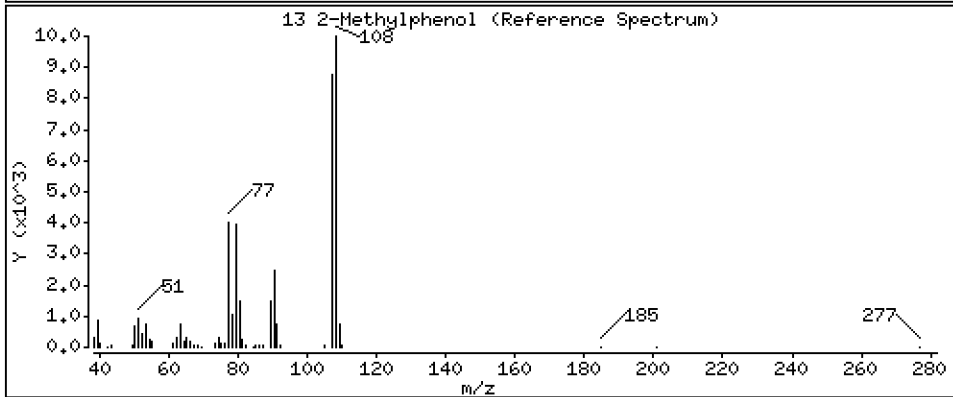
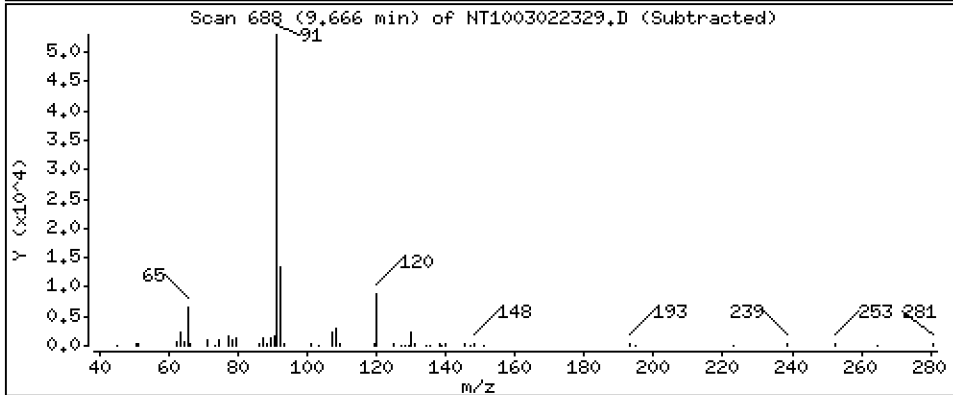
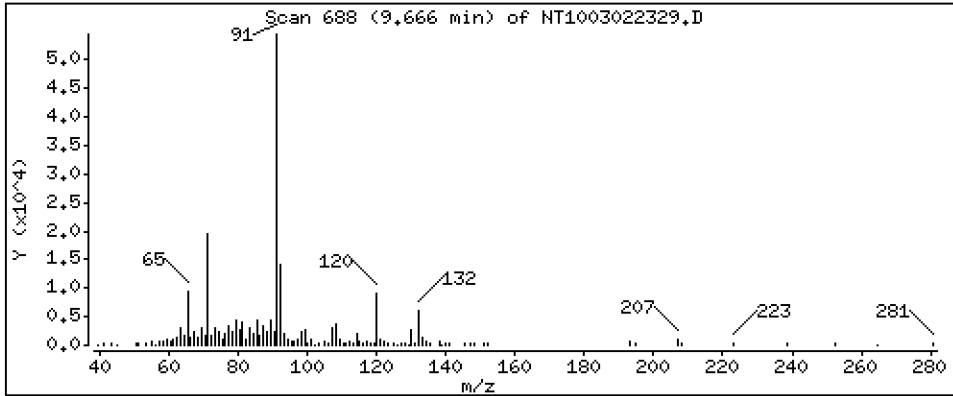
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.03279 ug/mL

13 2-Methylphenol



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

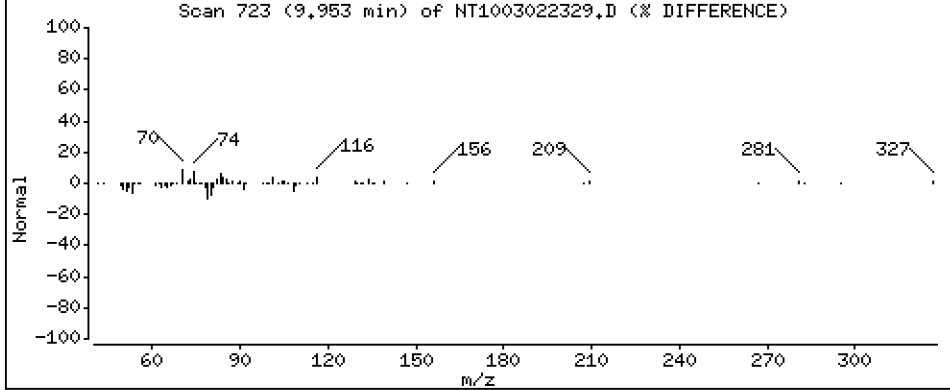
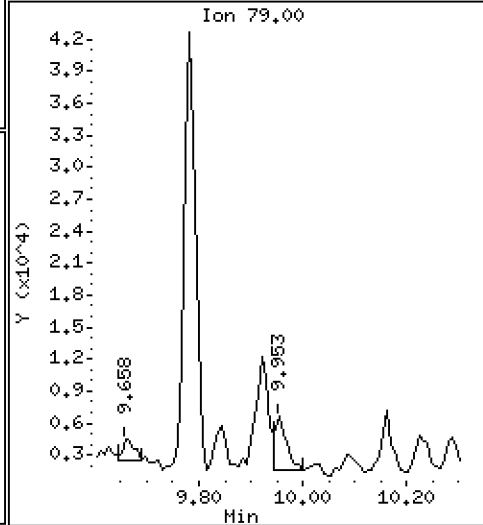
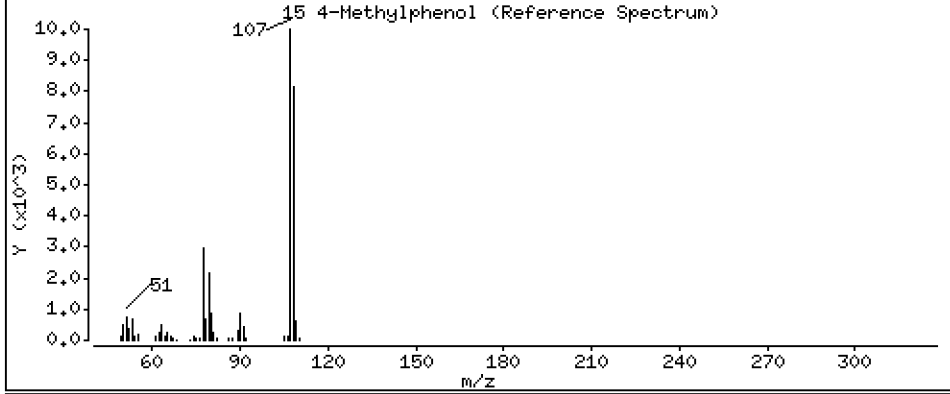
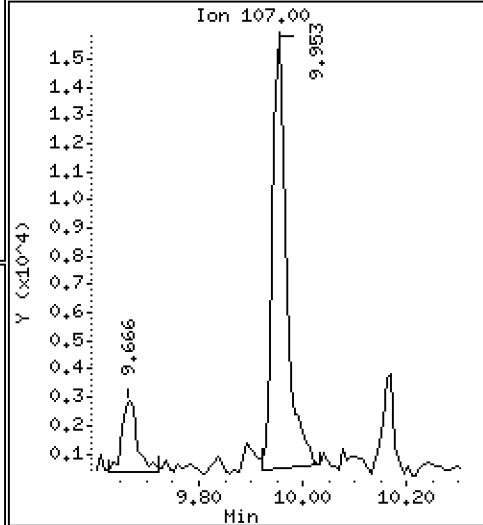
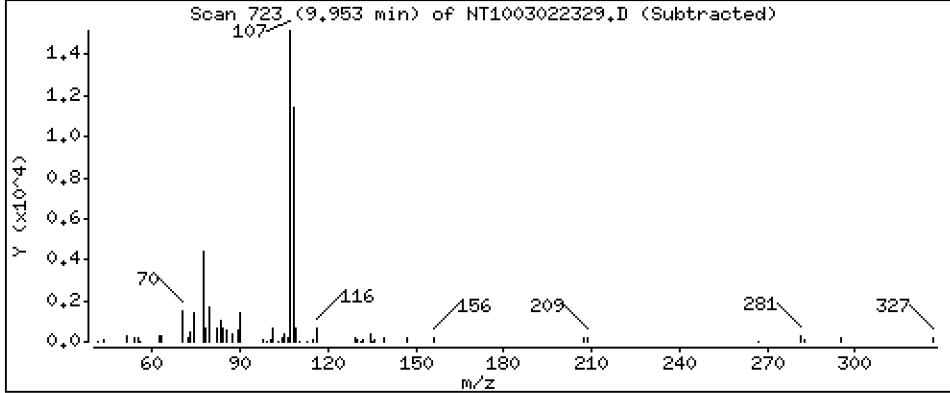
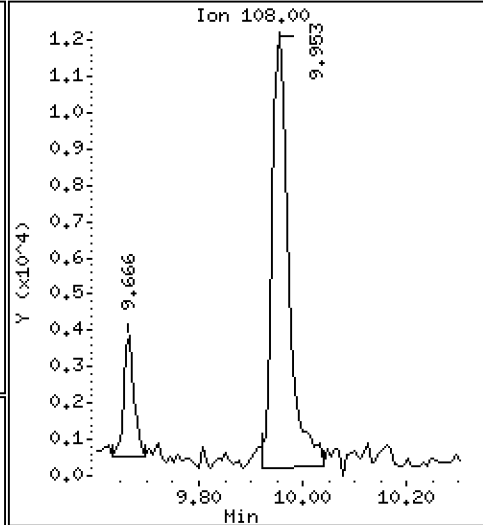
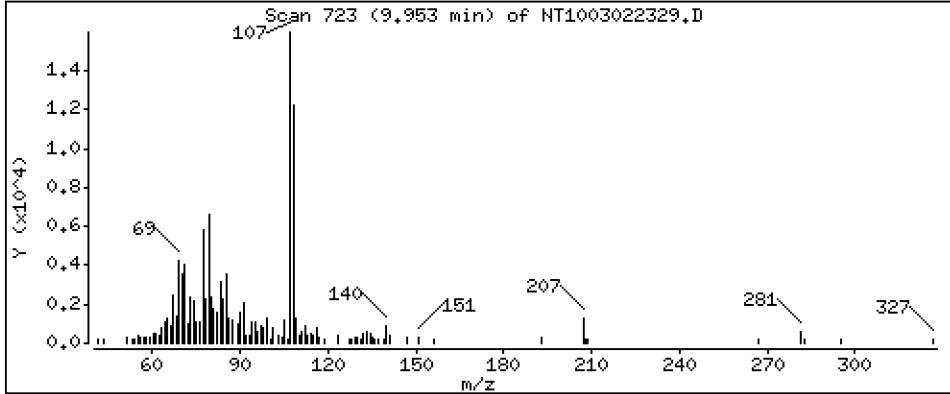
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1371 ug/mL





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

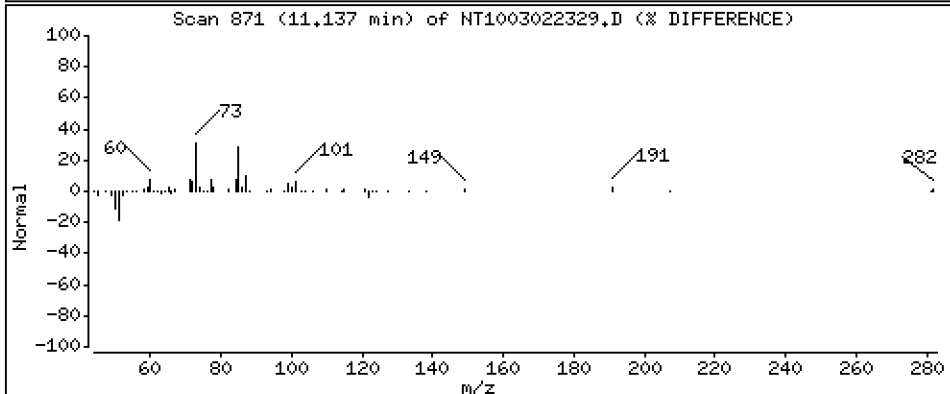
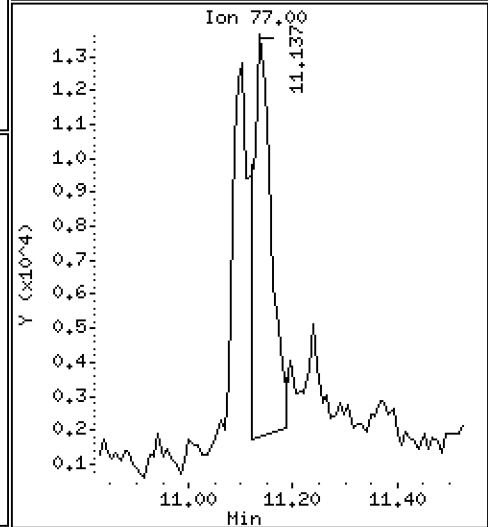
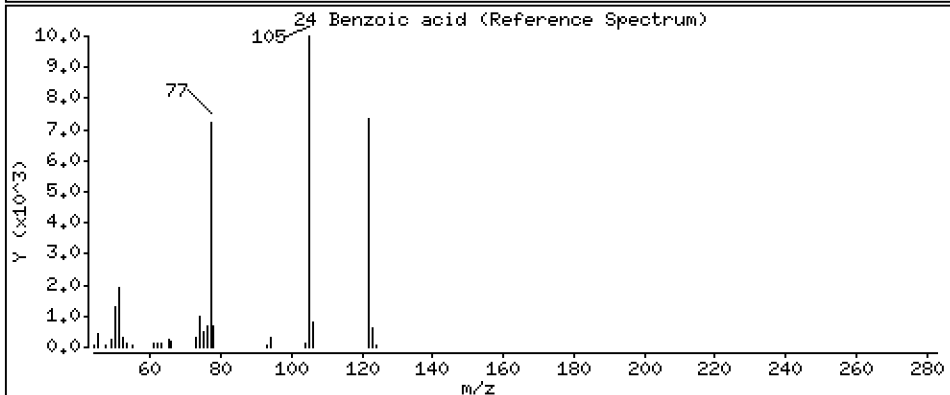
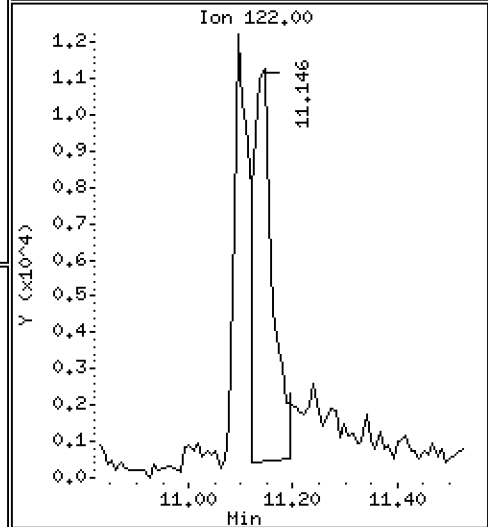
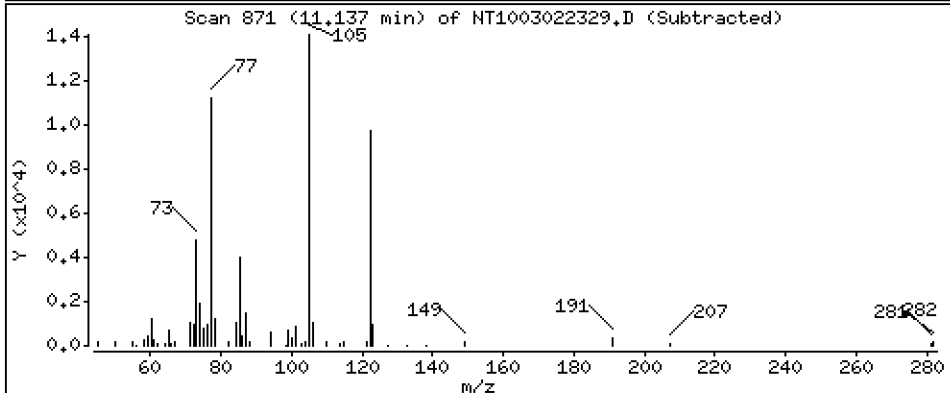
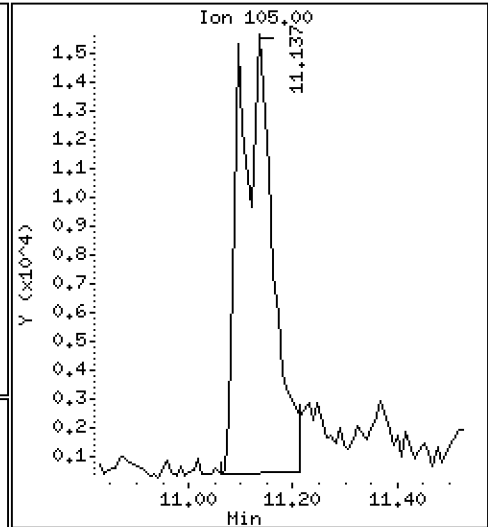
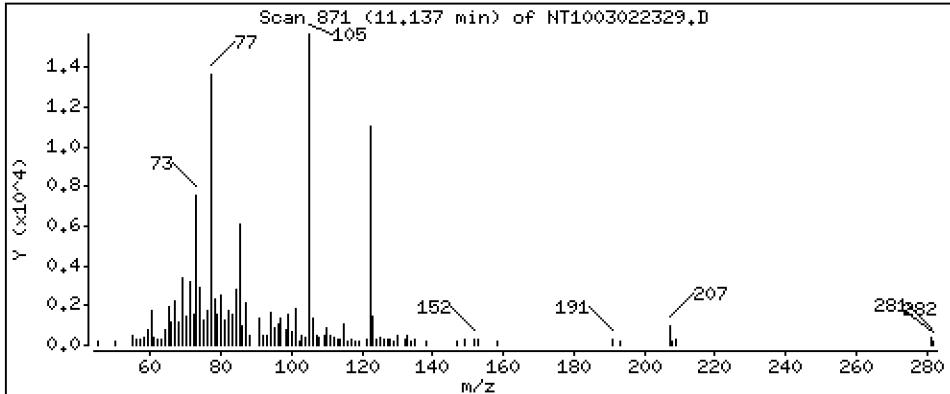
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.6378 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

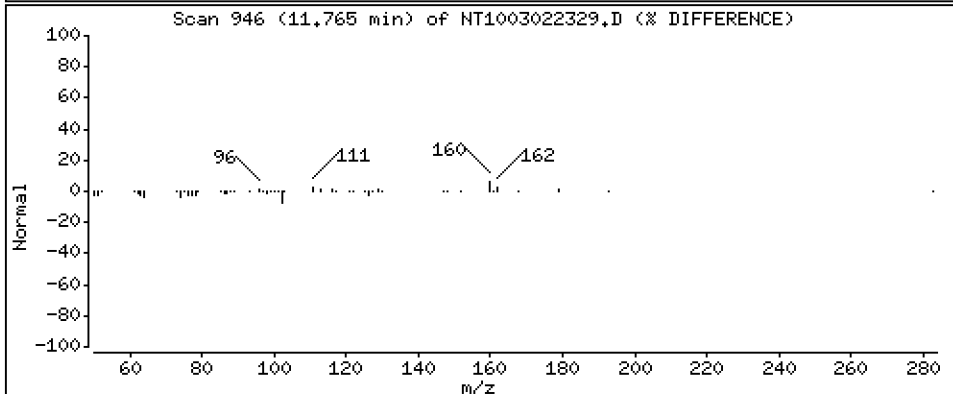
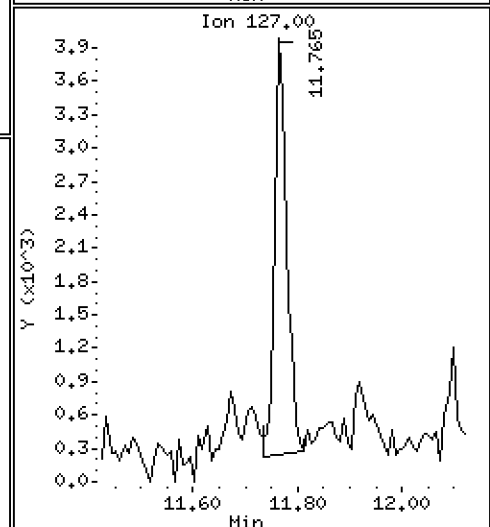
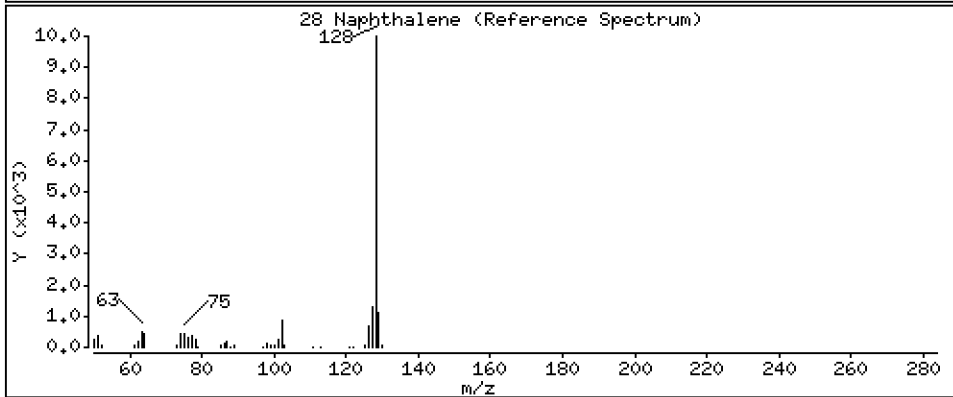
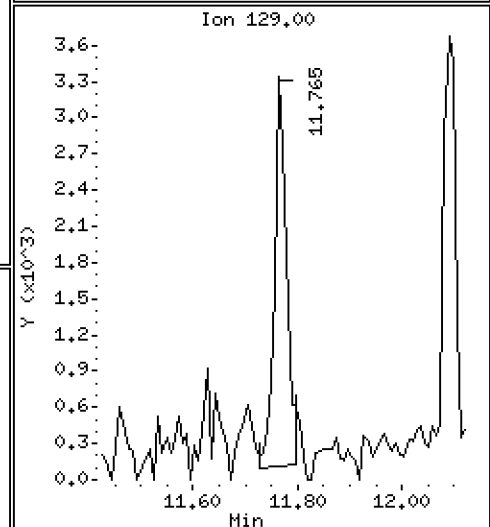
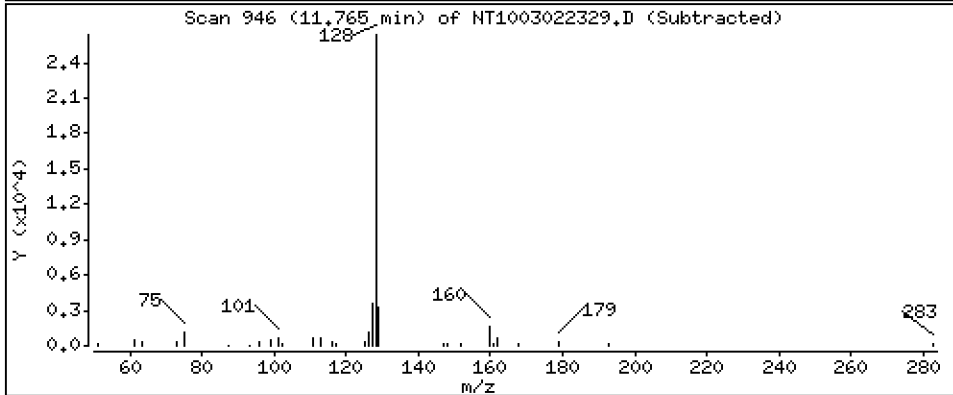
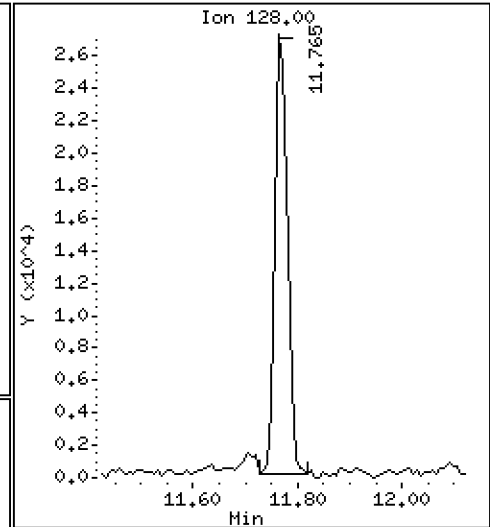
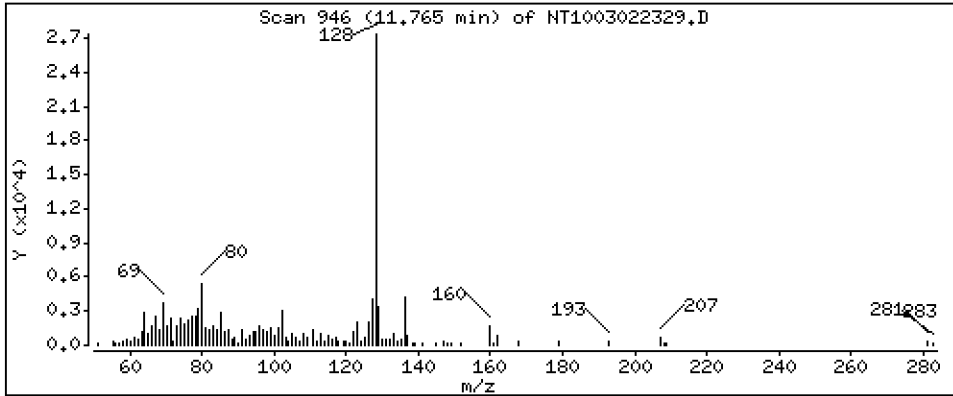
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,09190 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

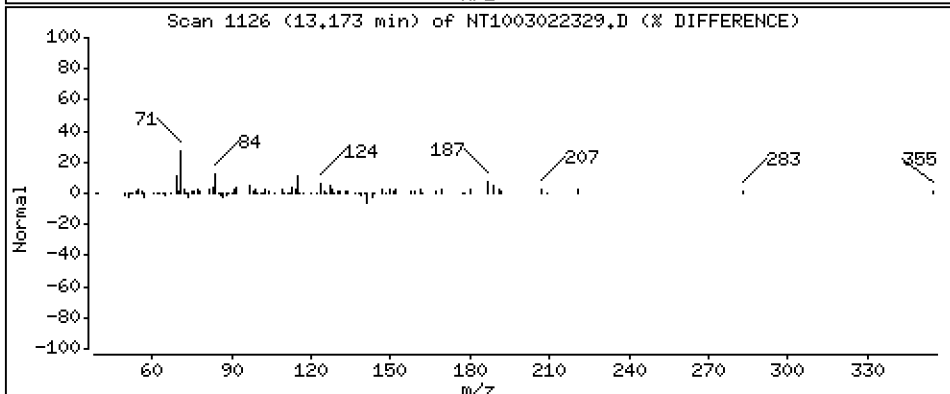
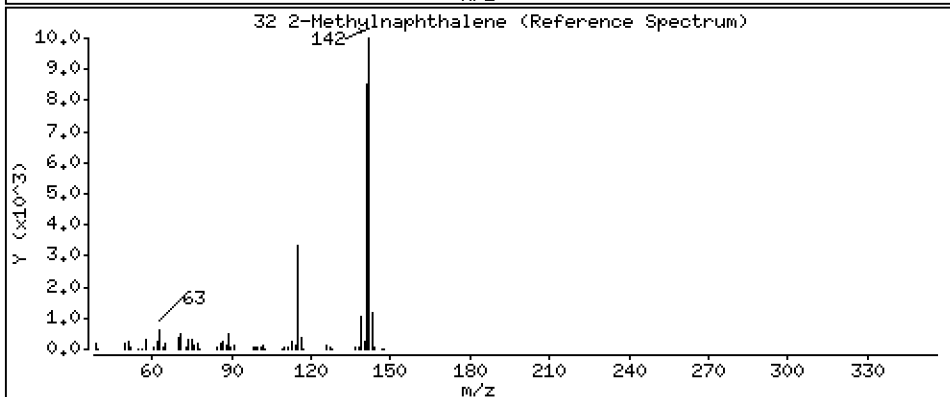
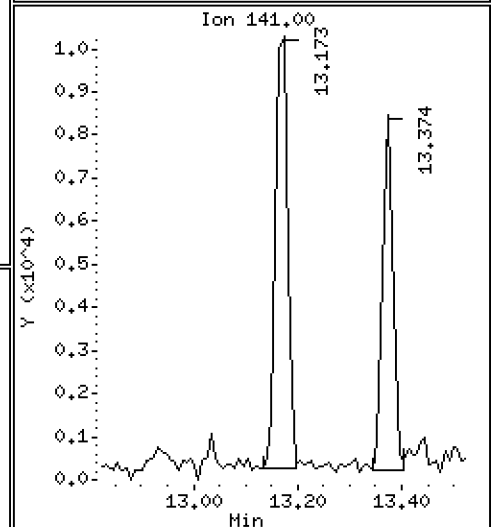
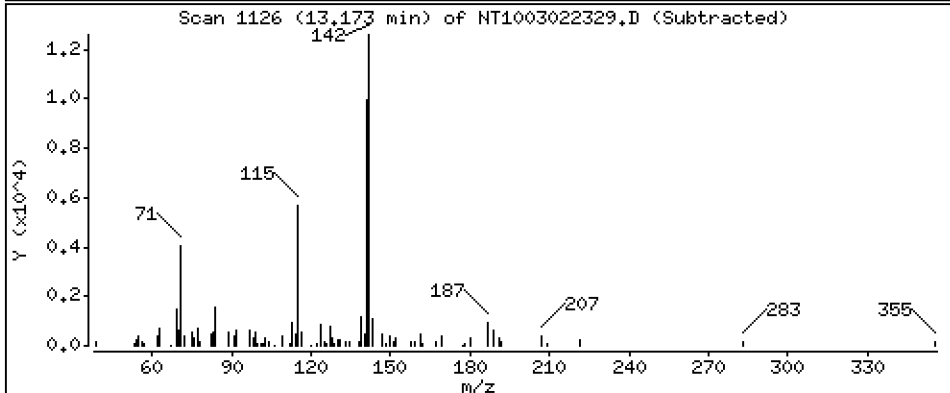
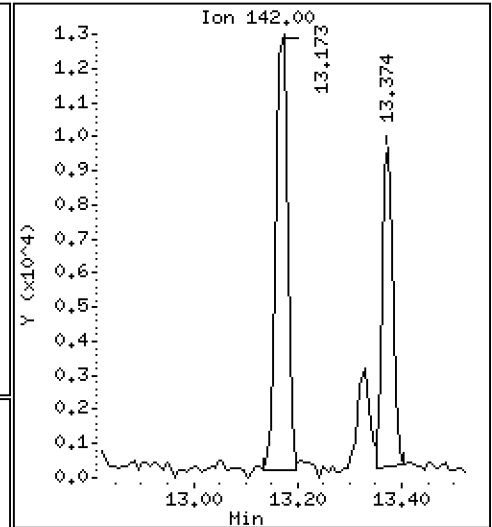
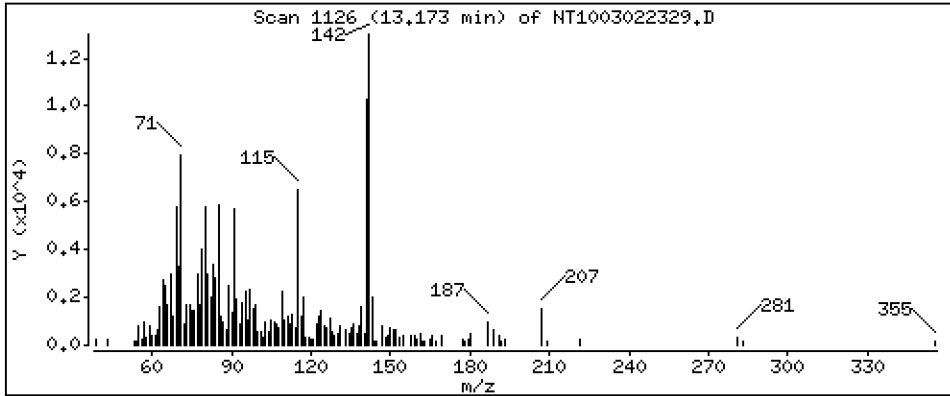
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.05684 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

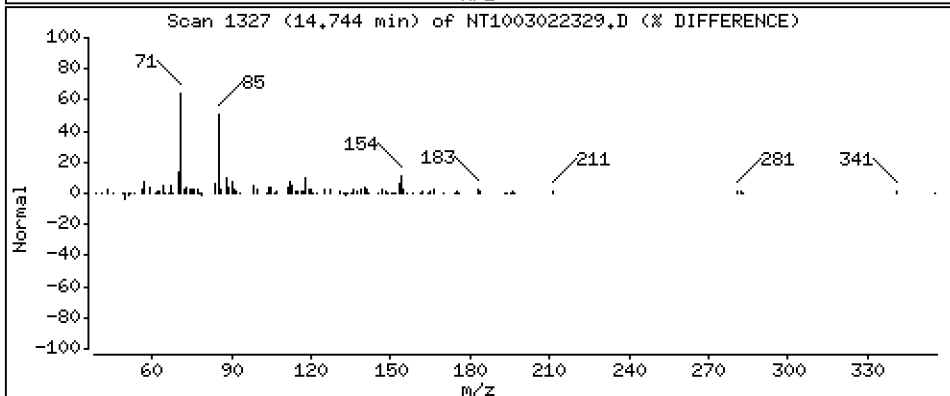
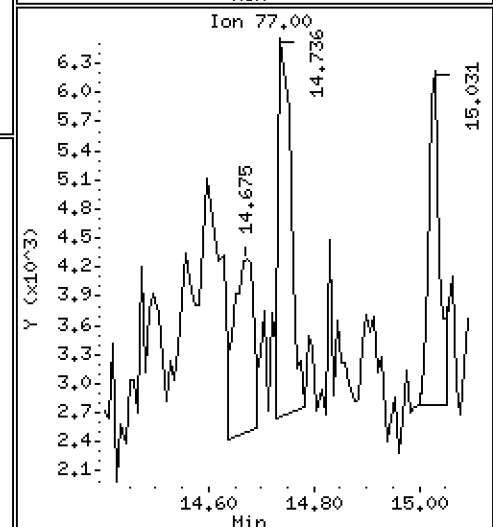
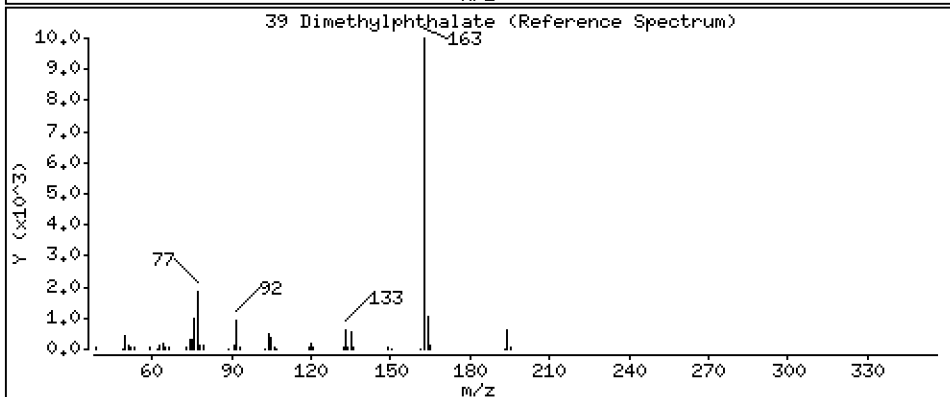
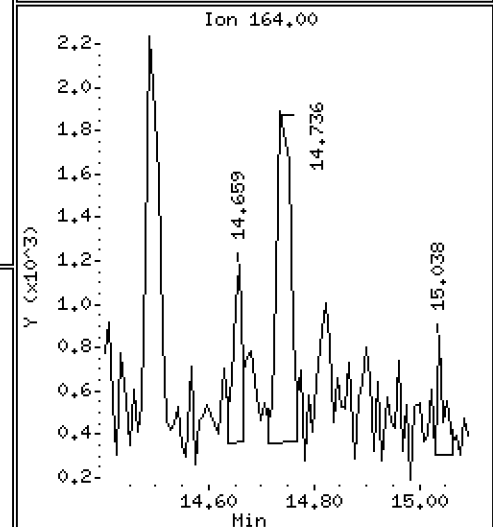
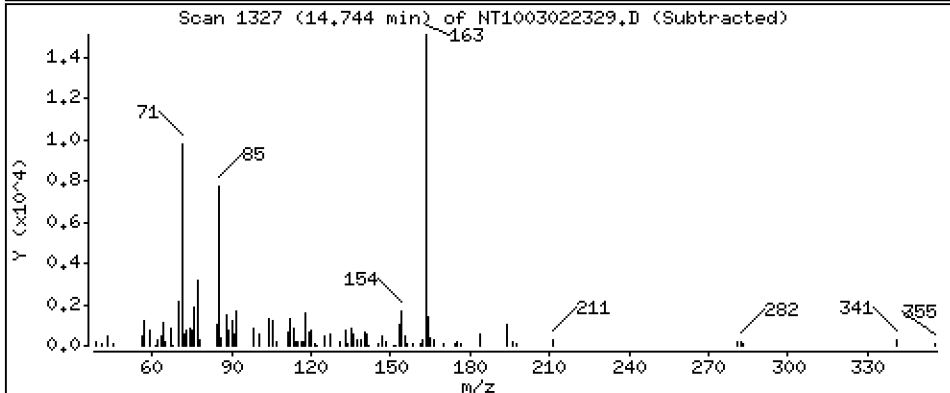
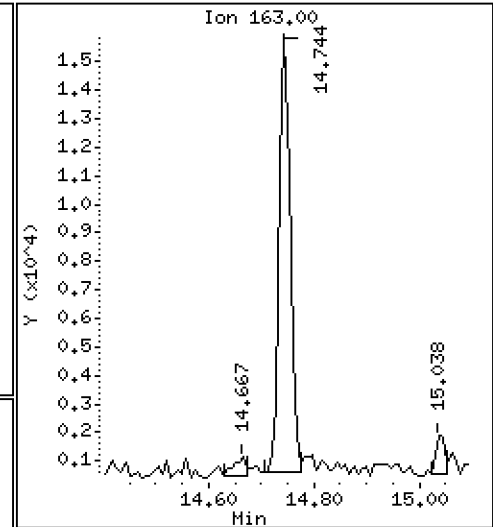
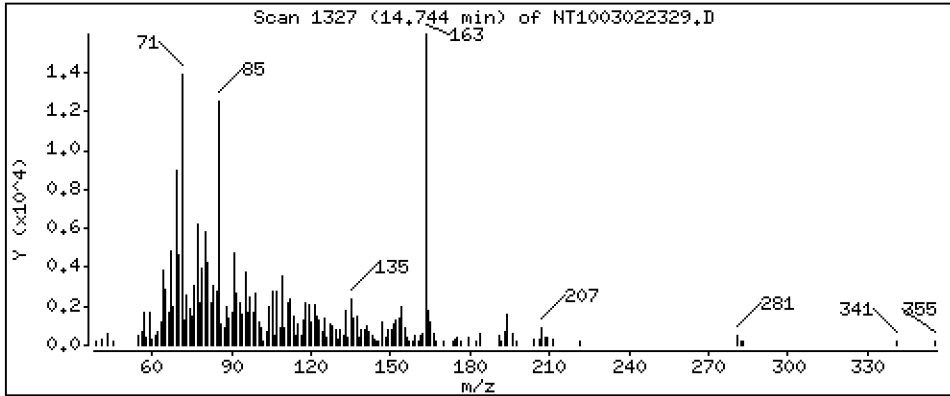
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.06817 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

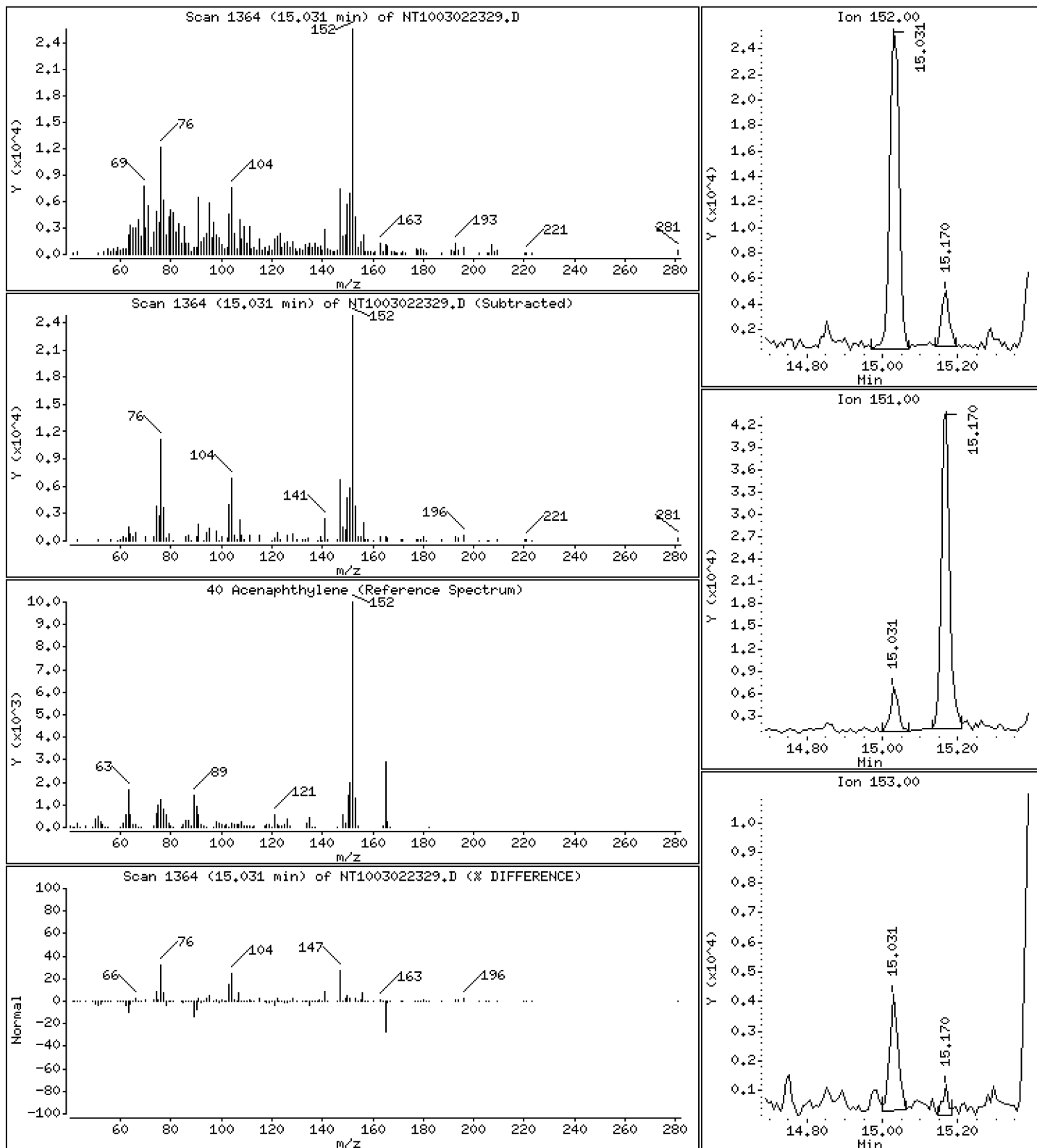
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.08760 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

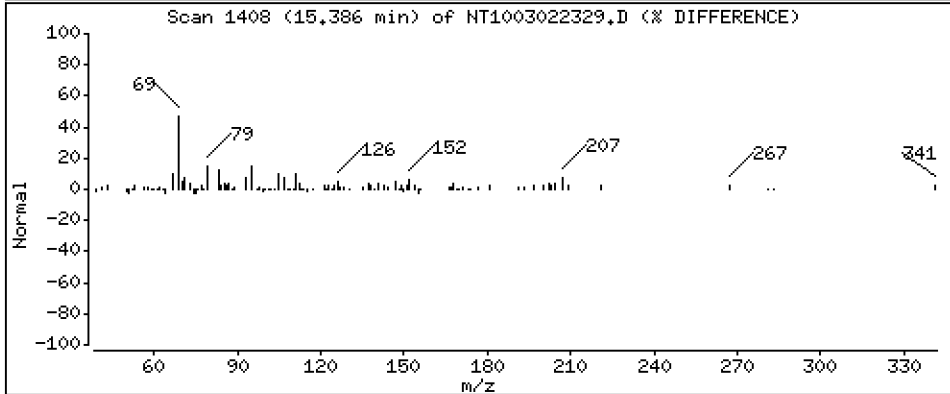
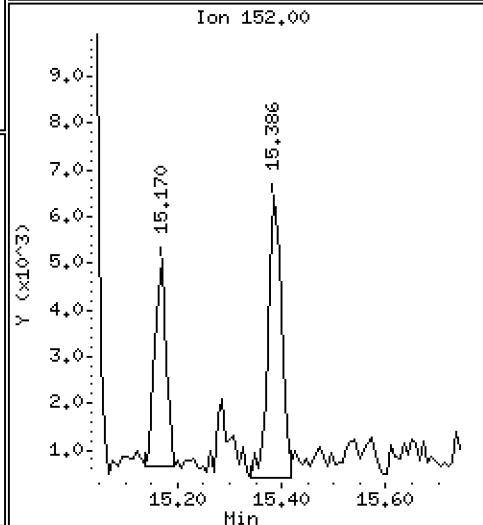
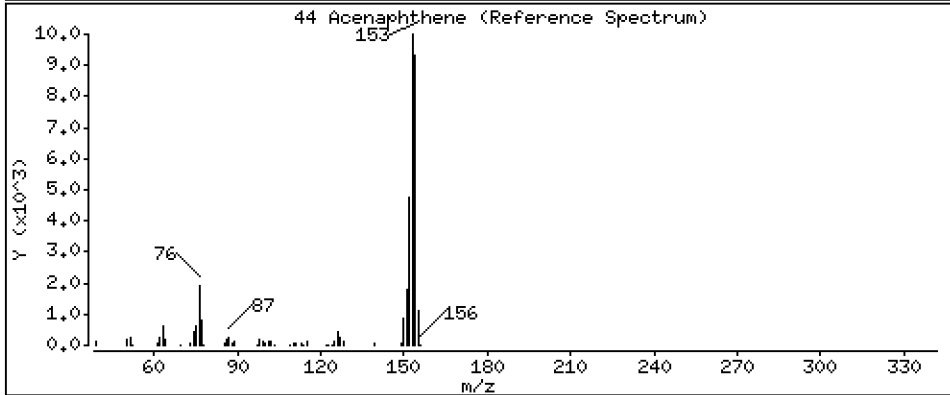
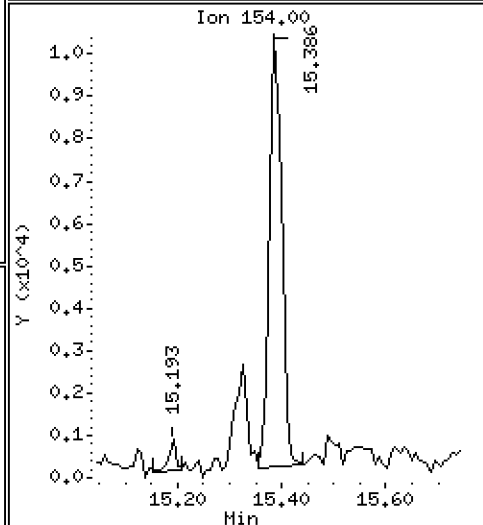
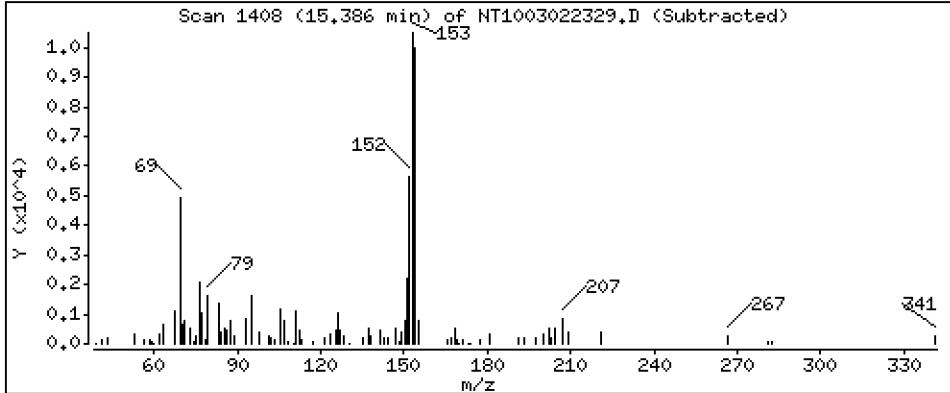
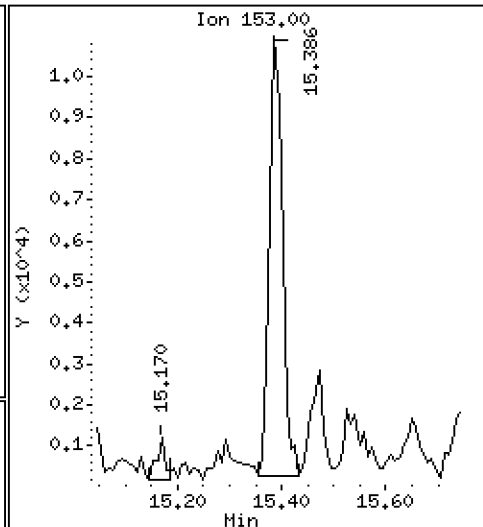
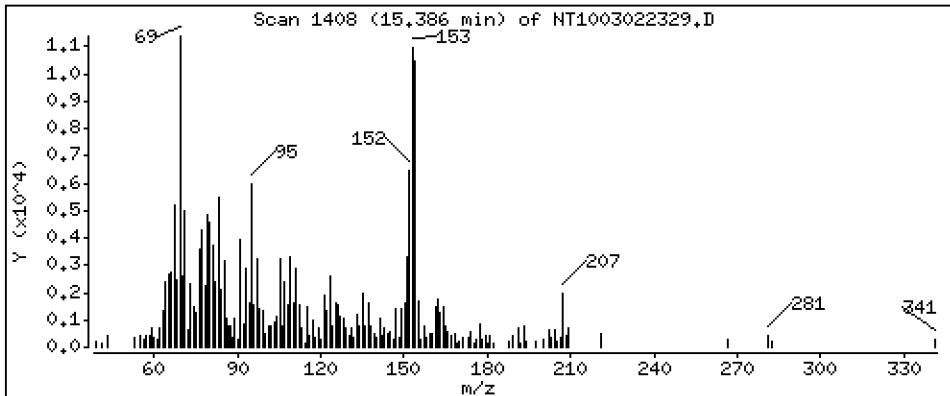
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.06347 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

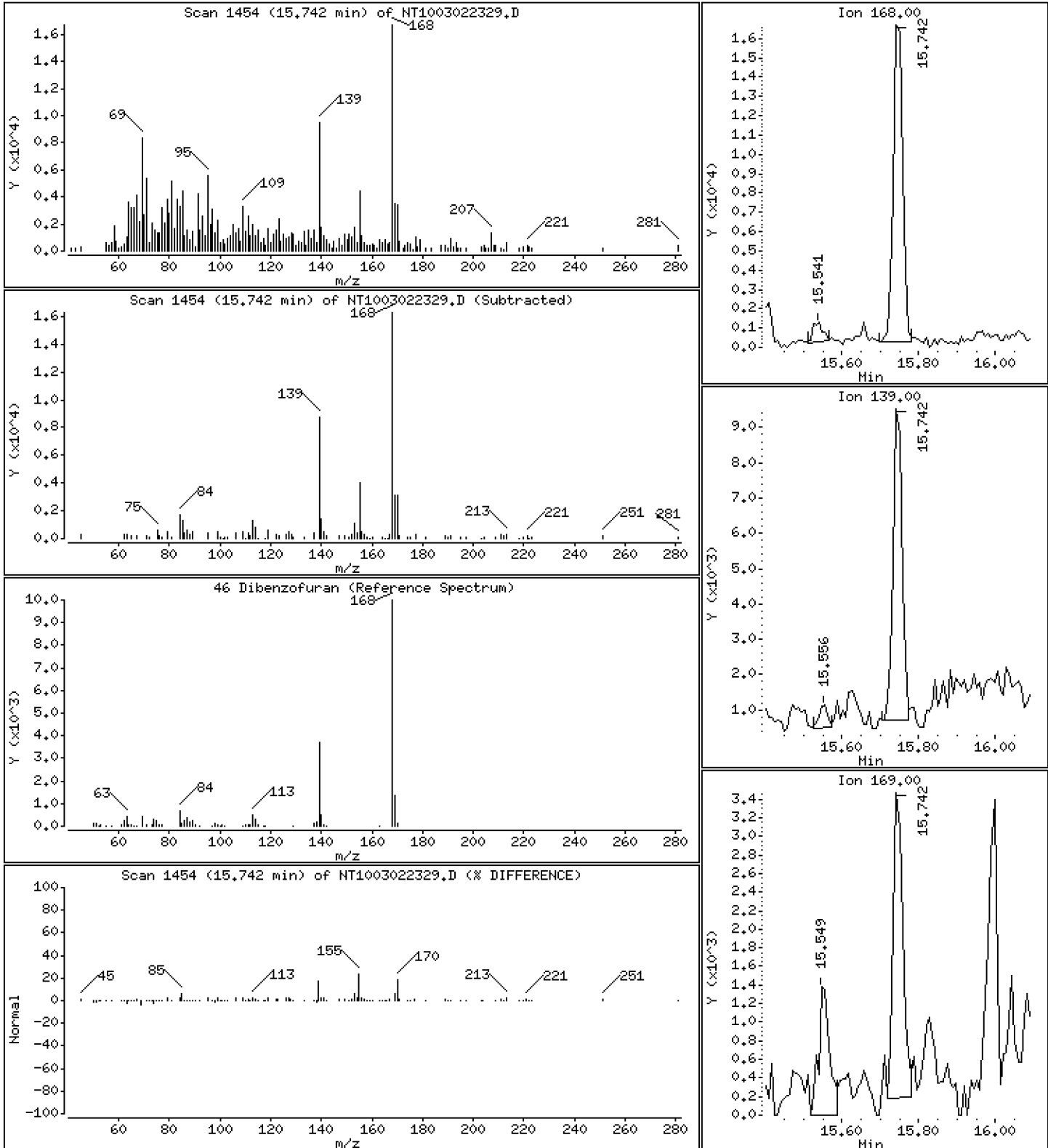
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,06441 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

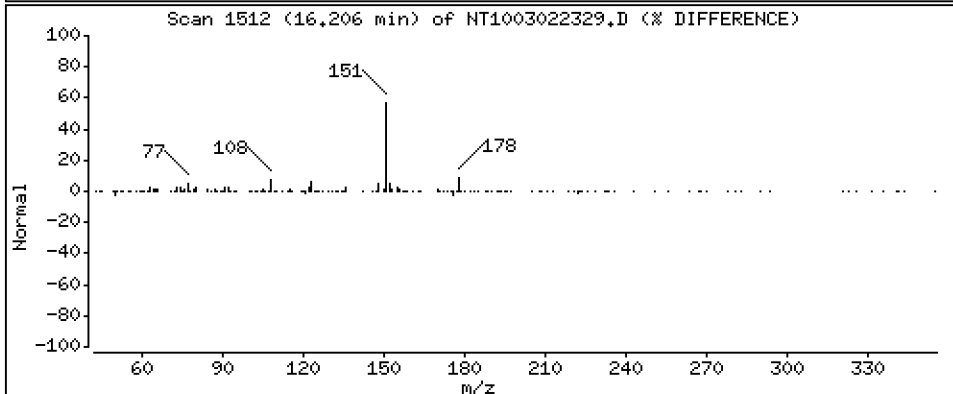
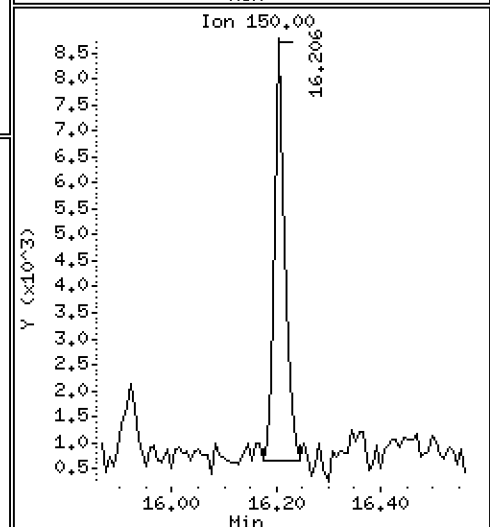
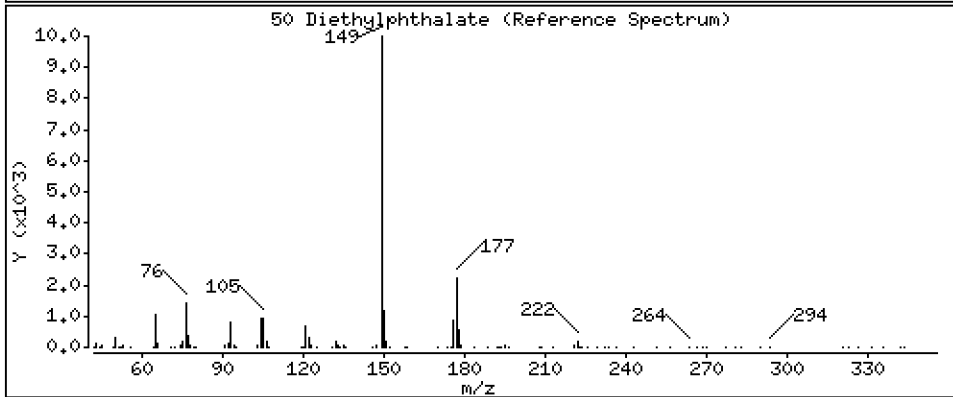
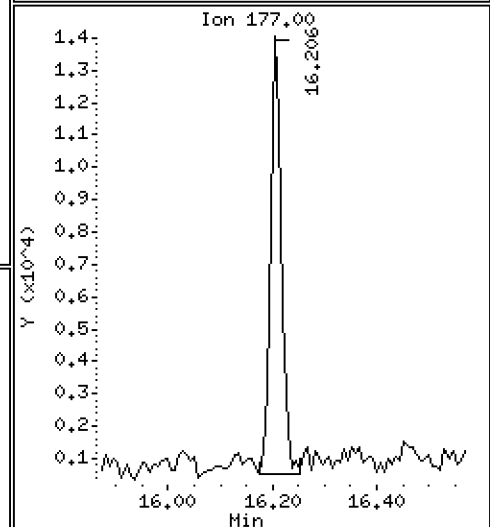
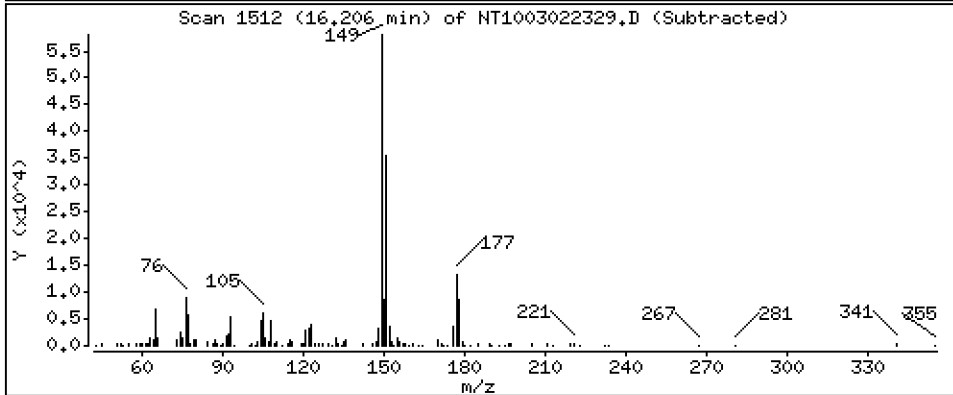
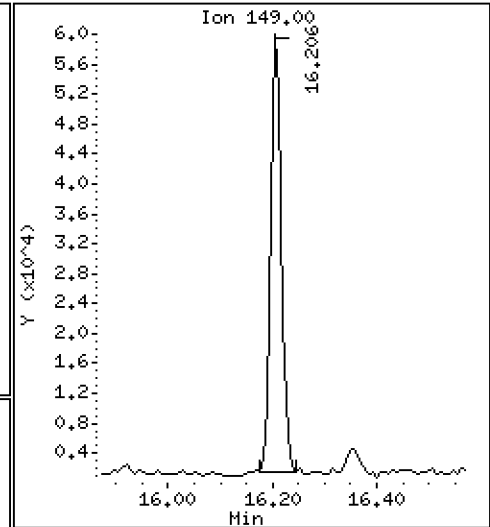
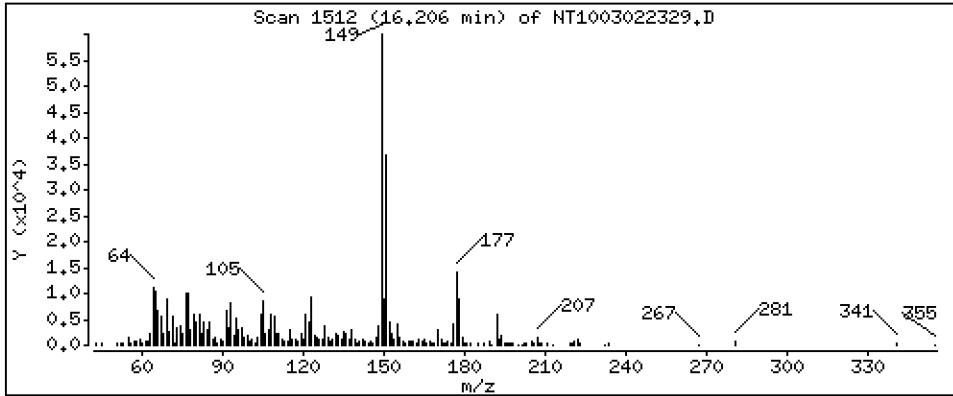
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2552 ug/mL





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

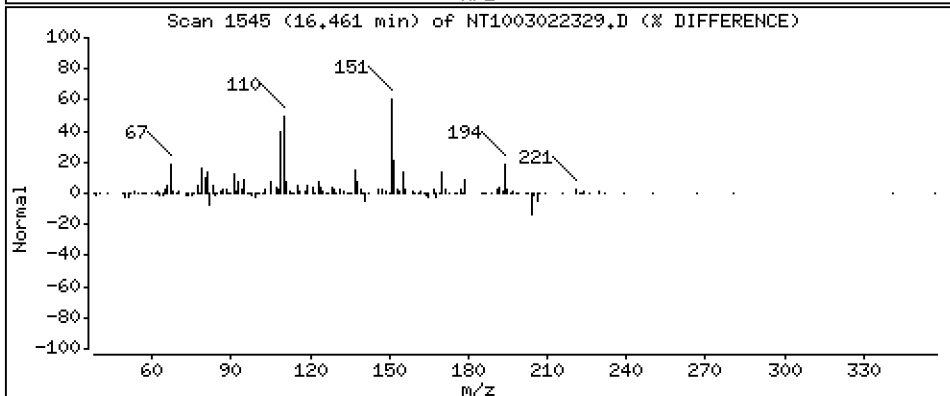
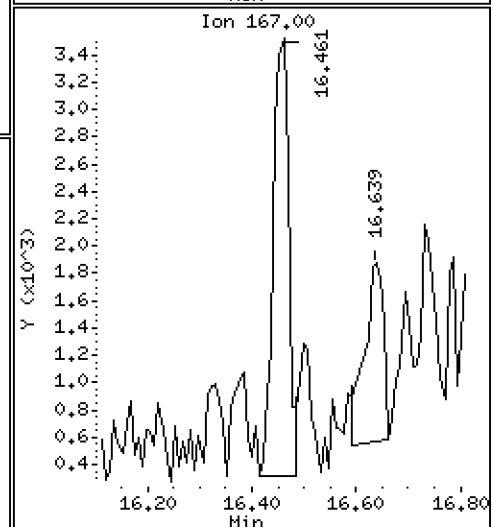
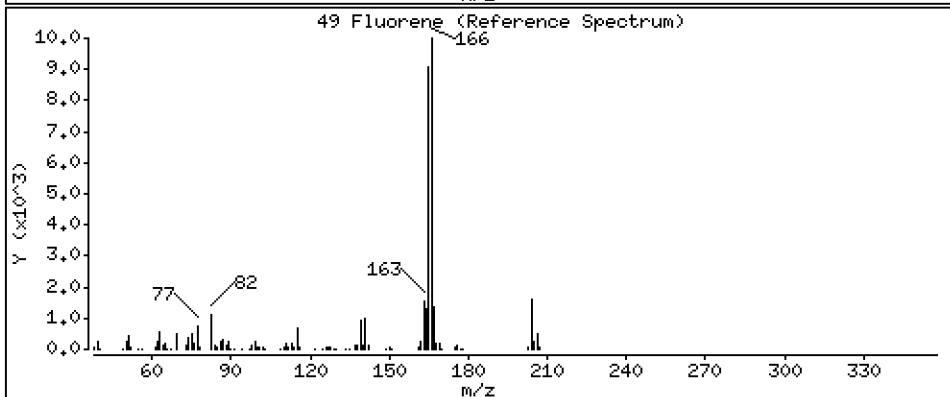
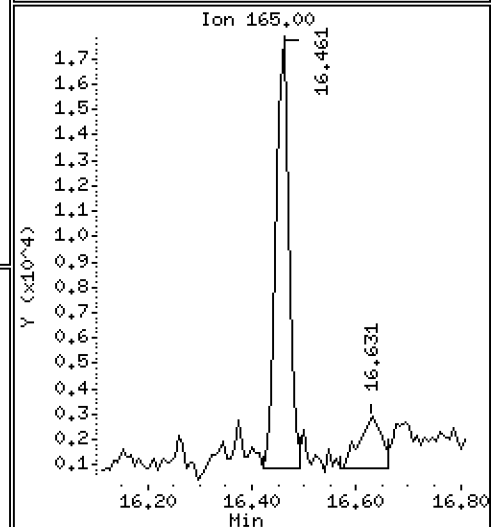
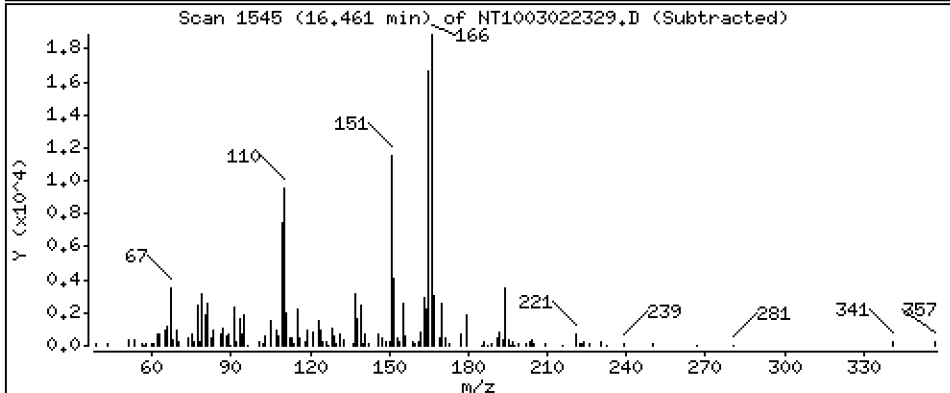
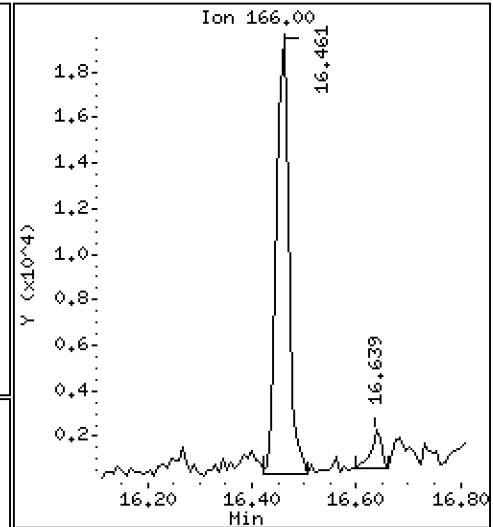
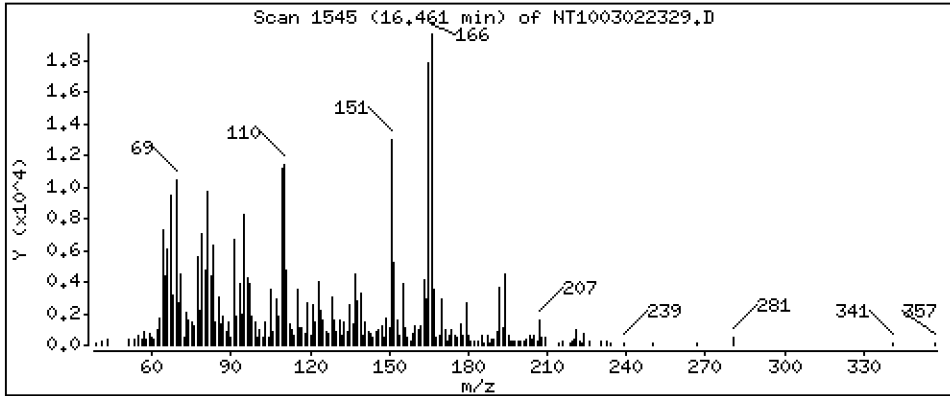
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.08697 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

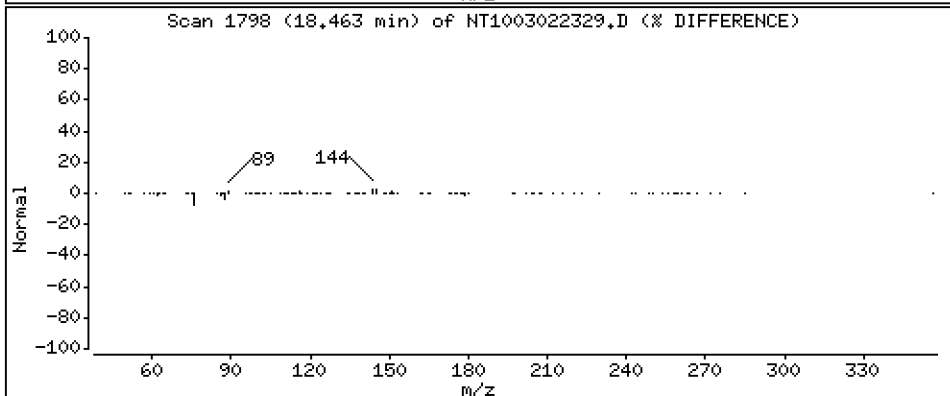
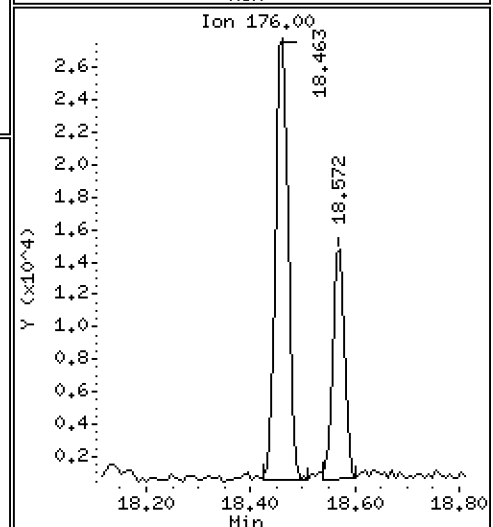
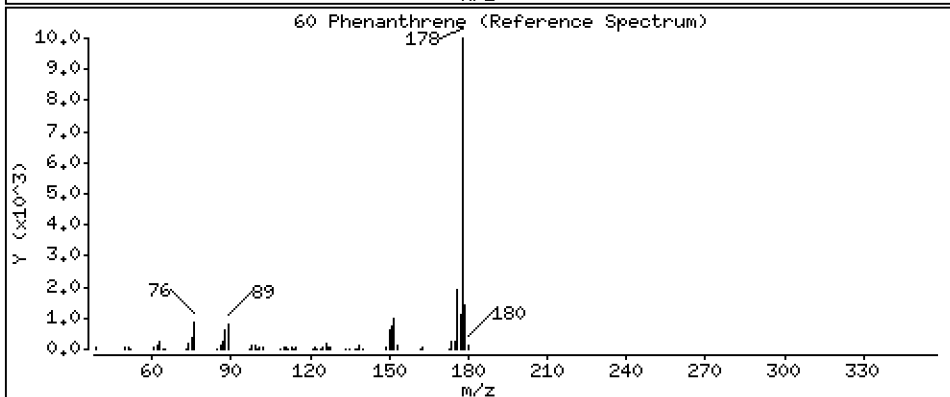
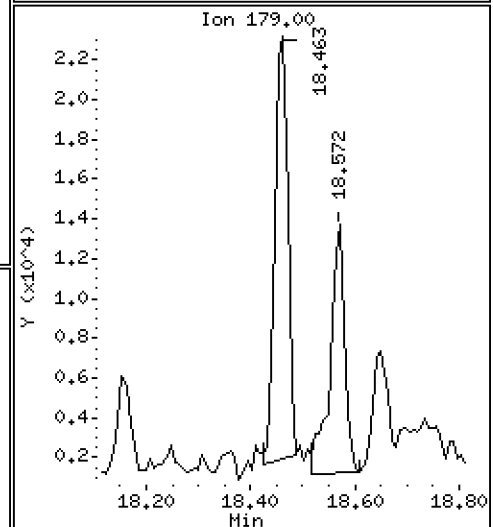
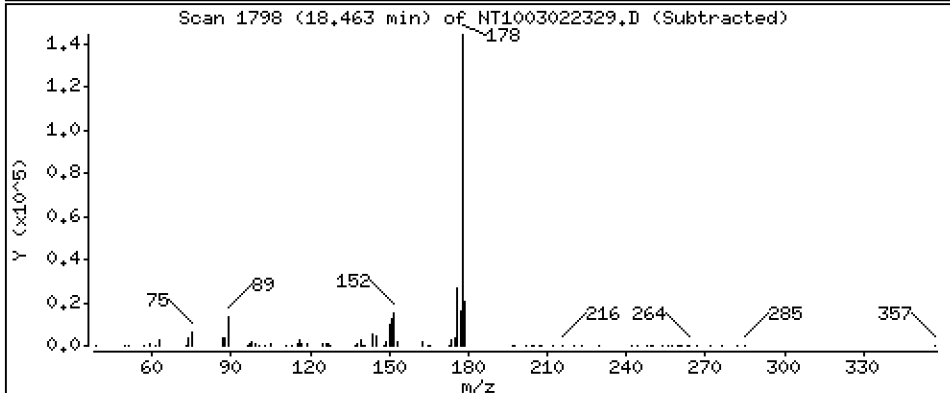
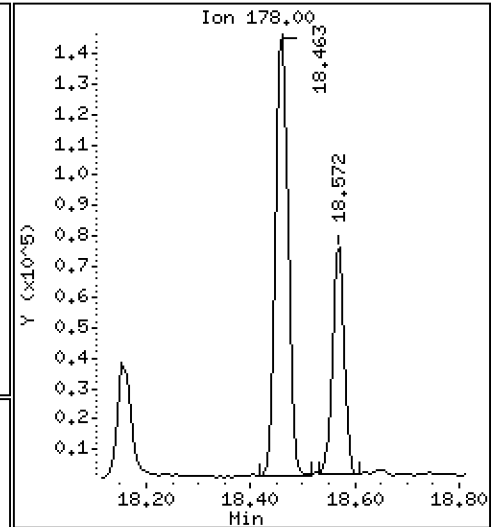
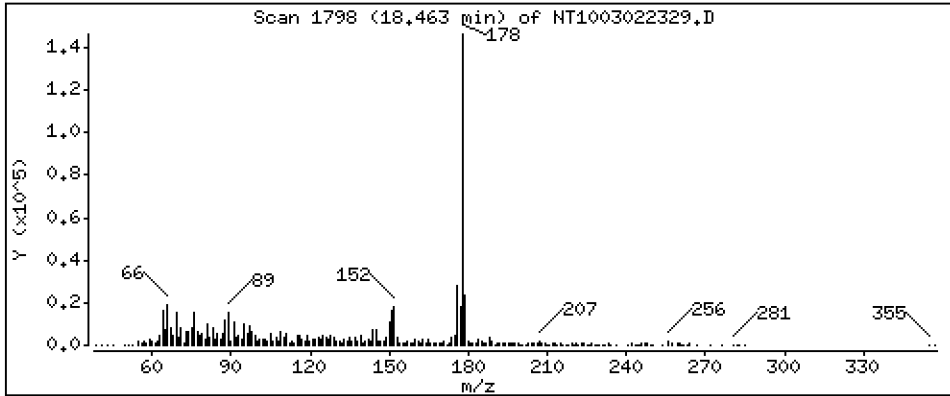
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,4939 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

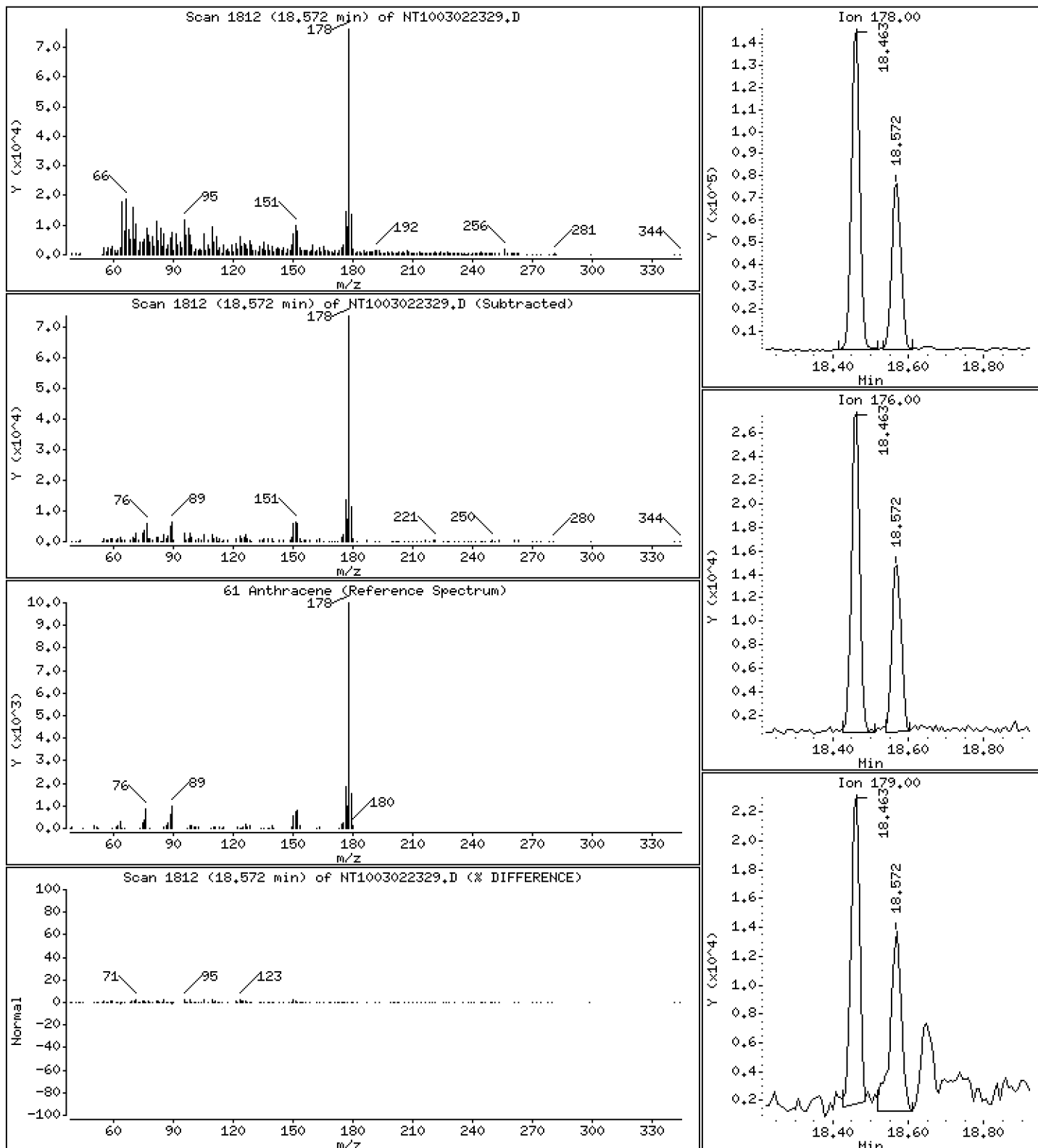
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,2624 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

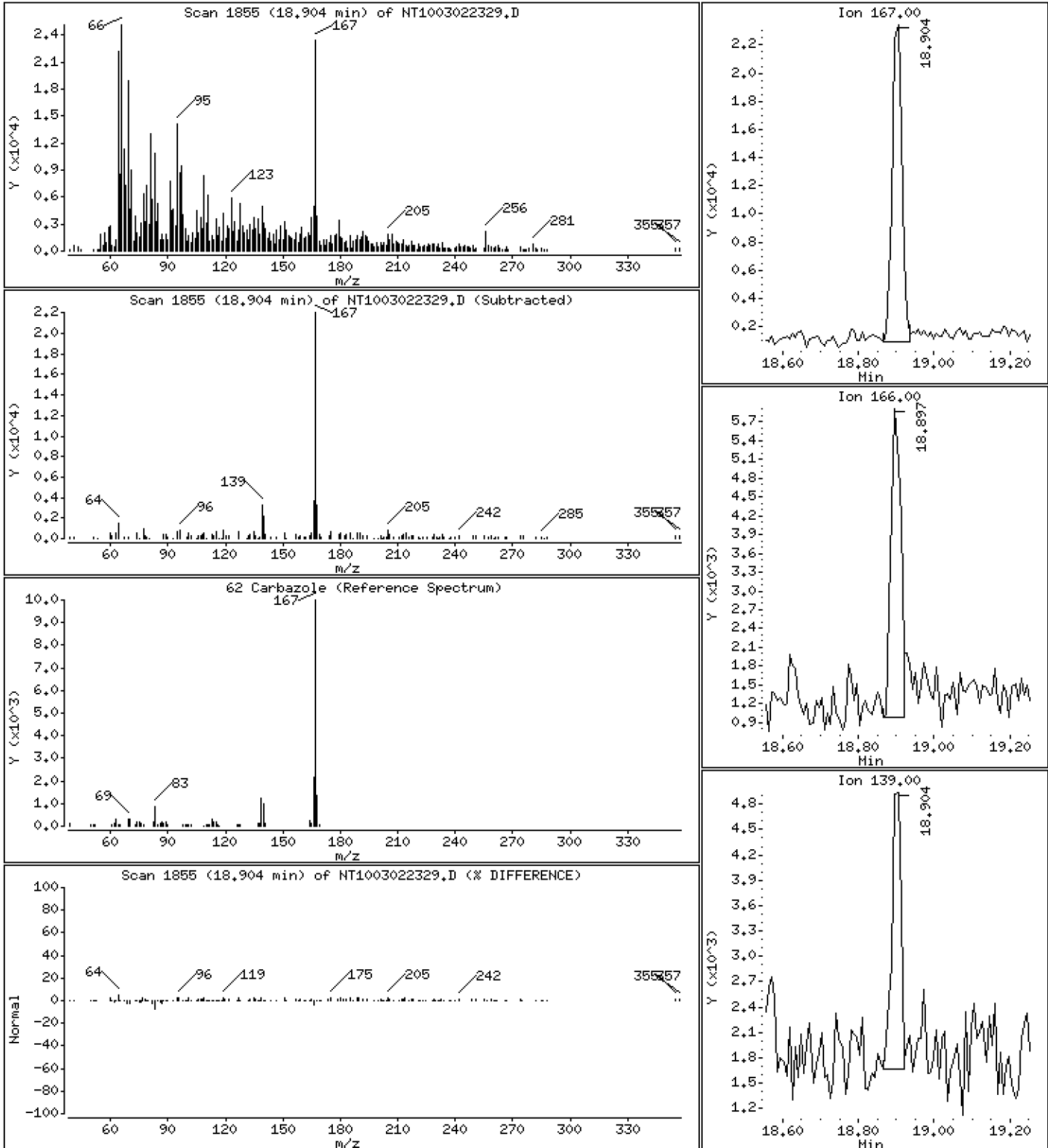
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

62 Carbazole

Concentration: 0.09109 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

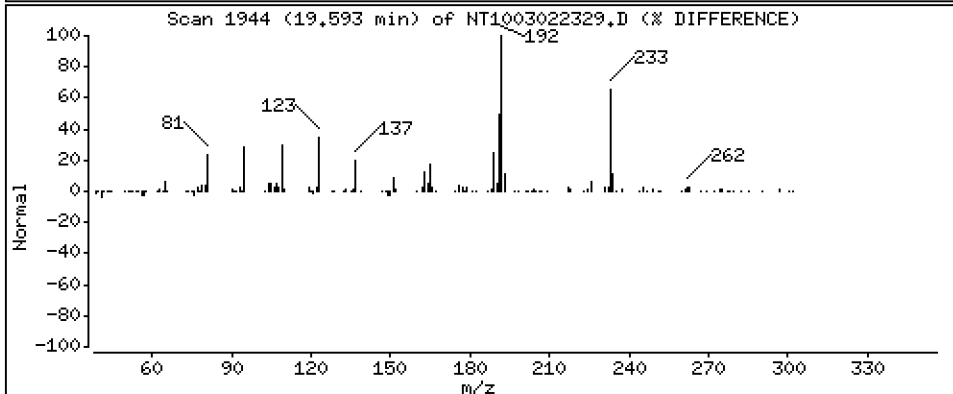
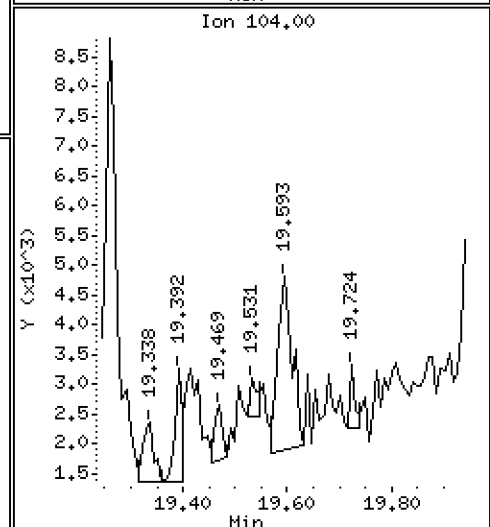
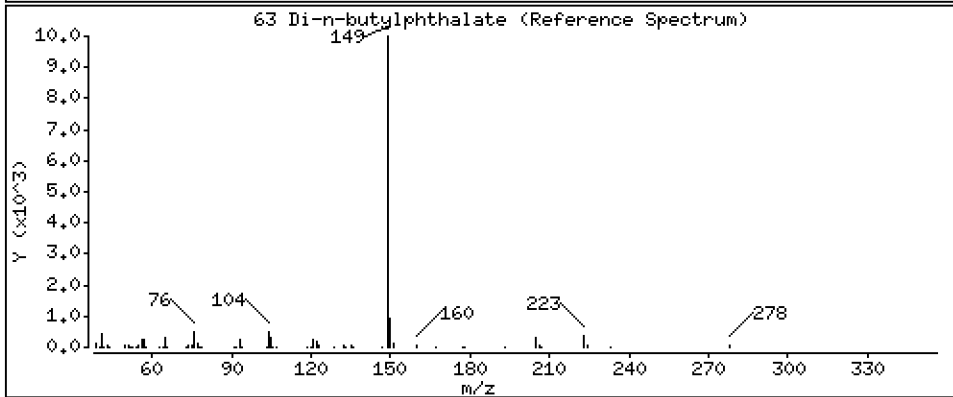
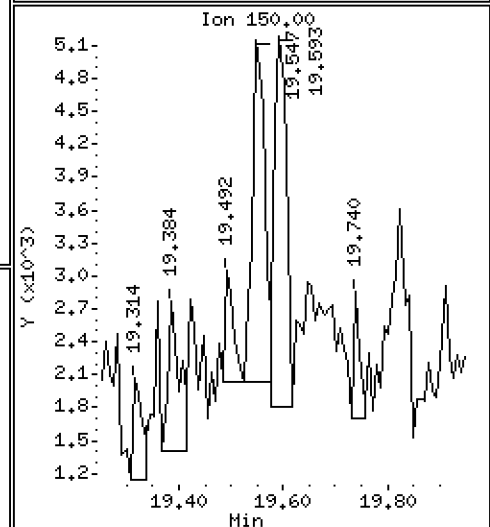
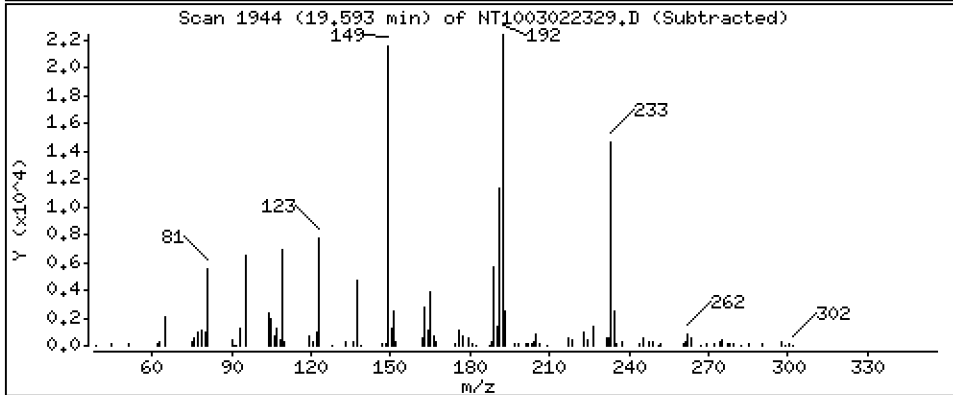
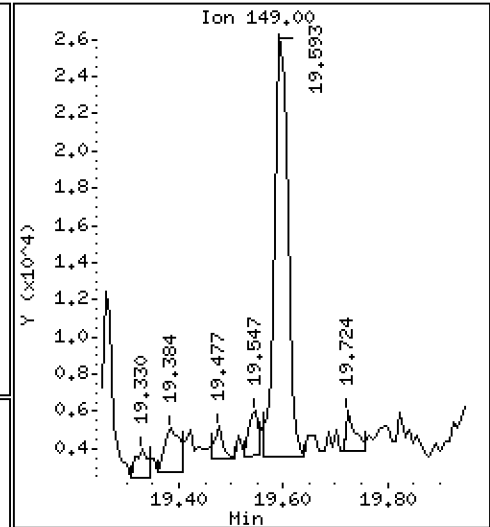
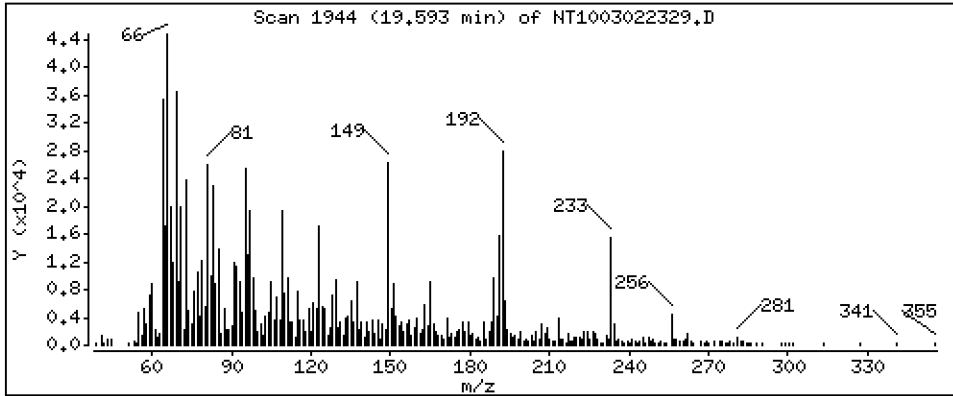
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 0,06723 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

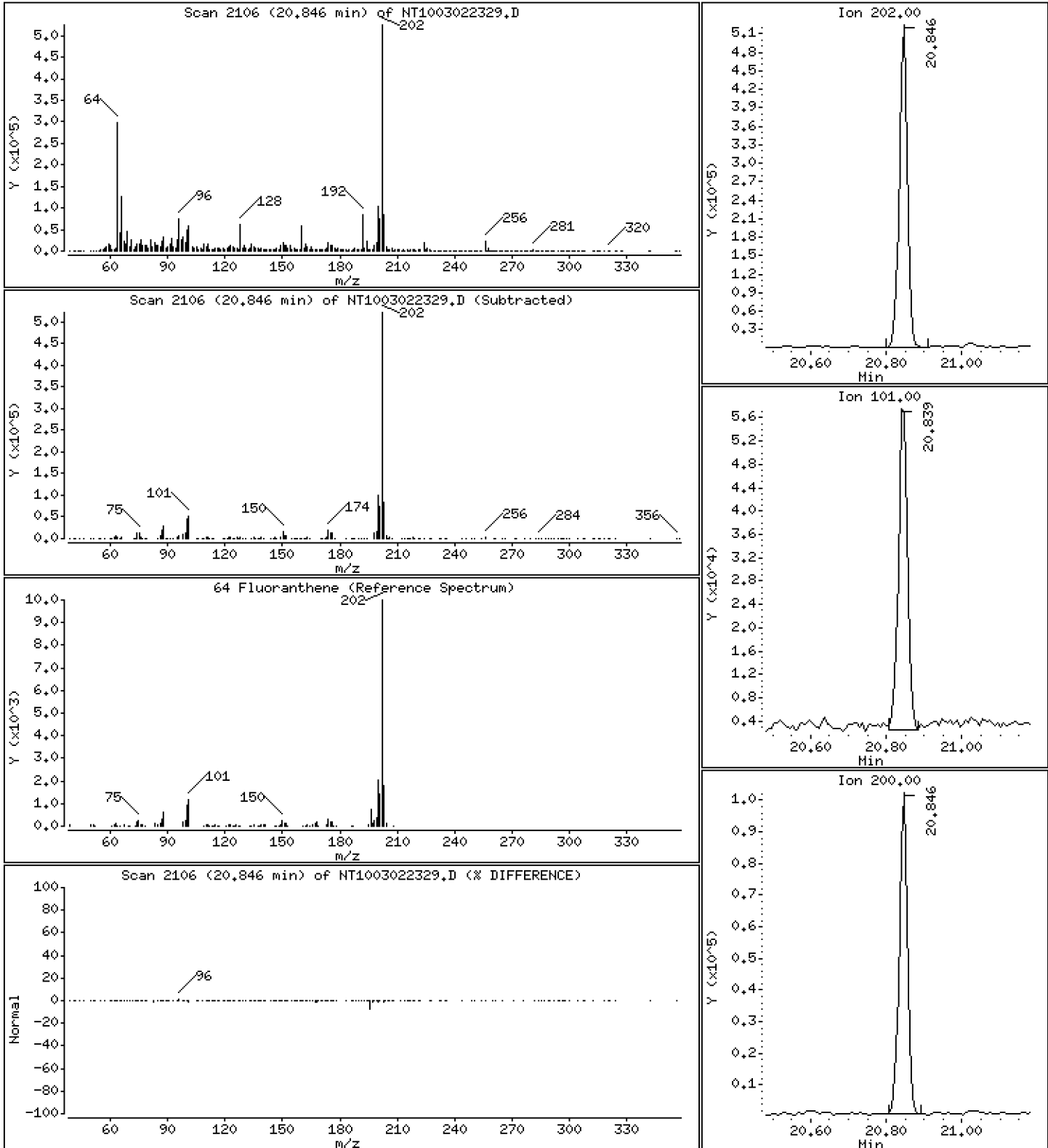
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 1,120 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

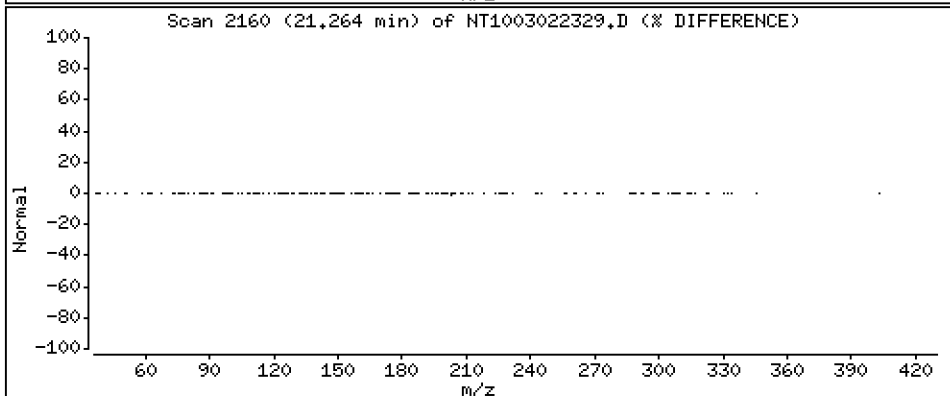
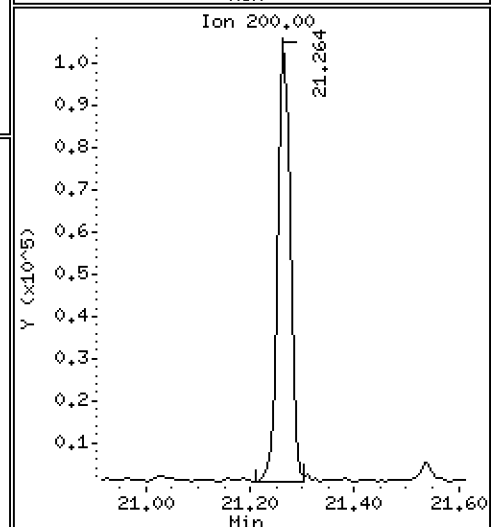
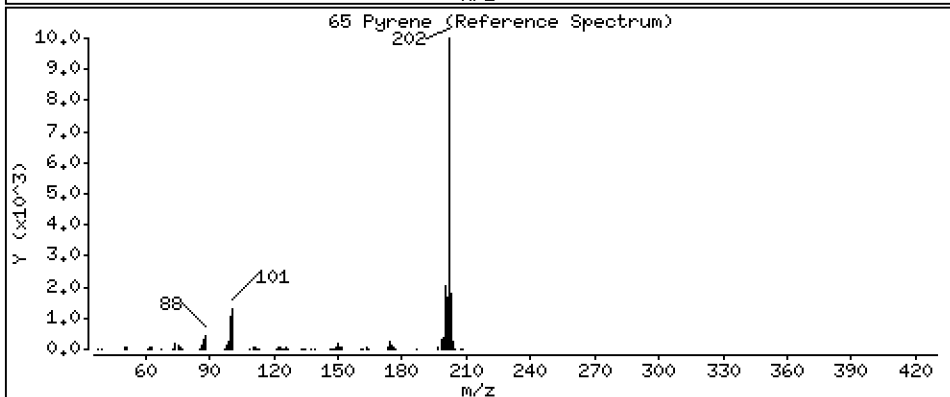
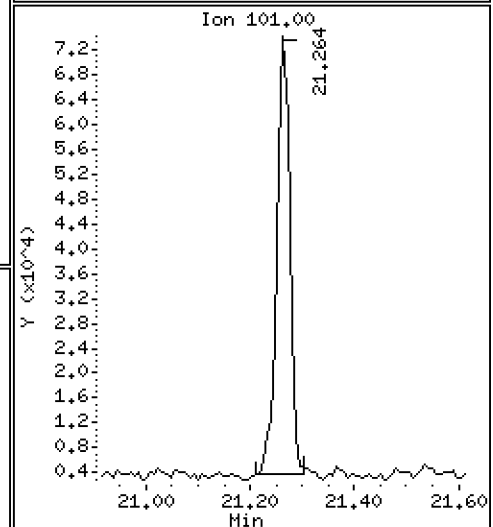
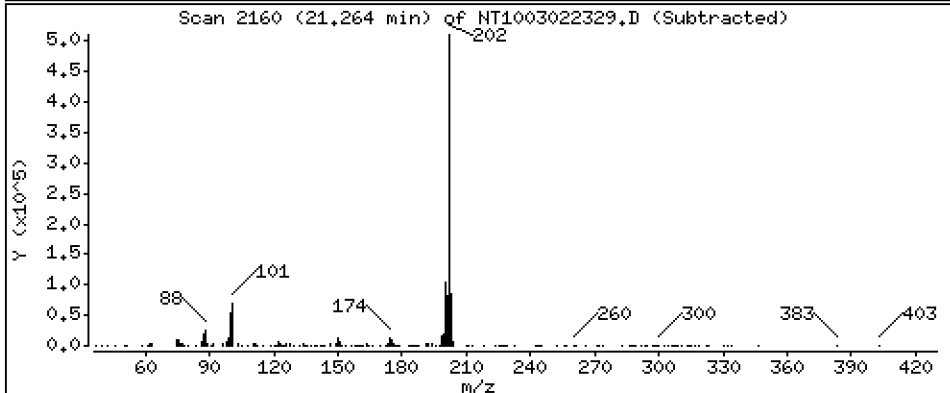
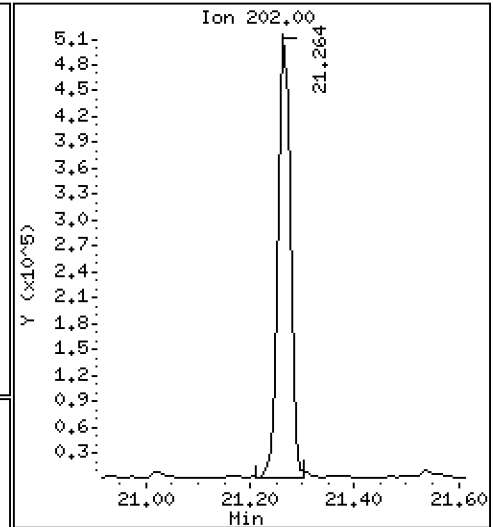
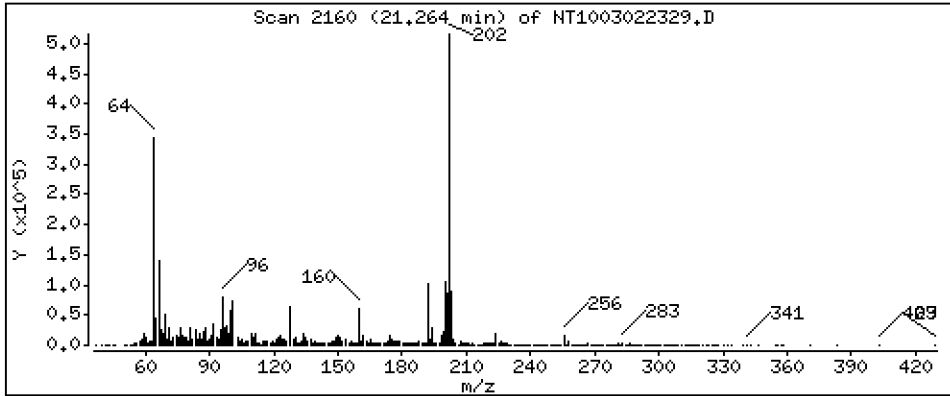
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,119 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

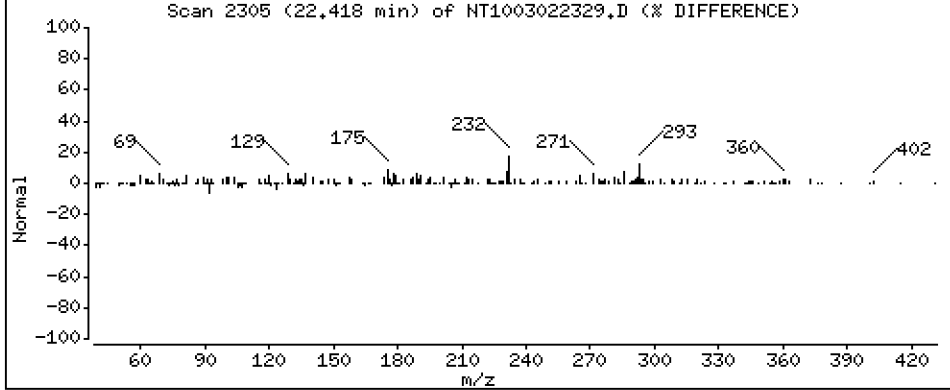
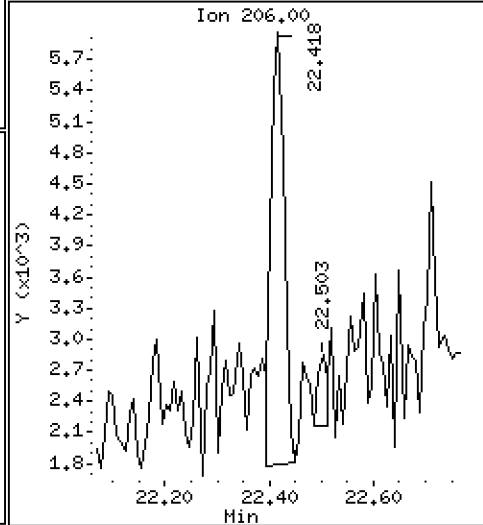
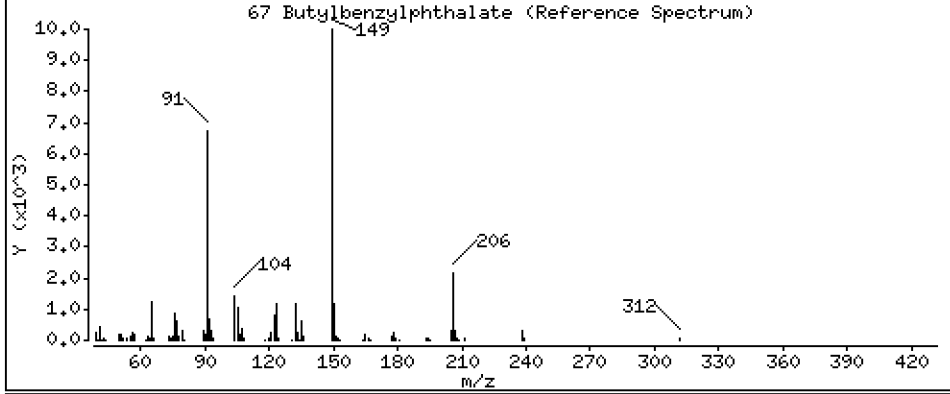
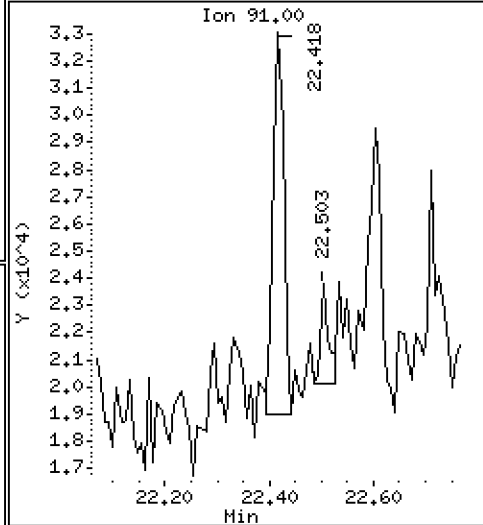
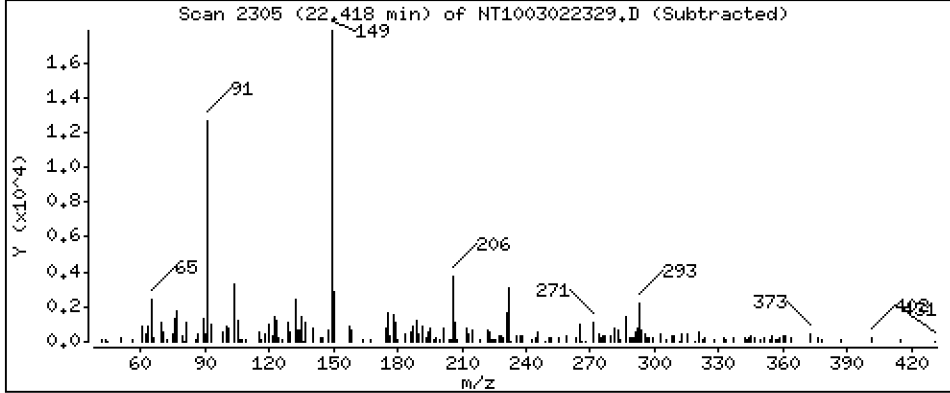
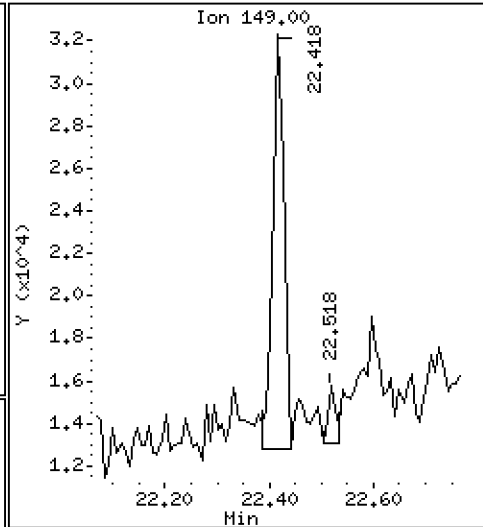
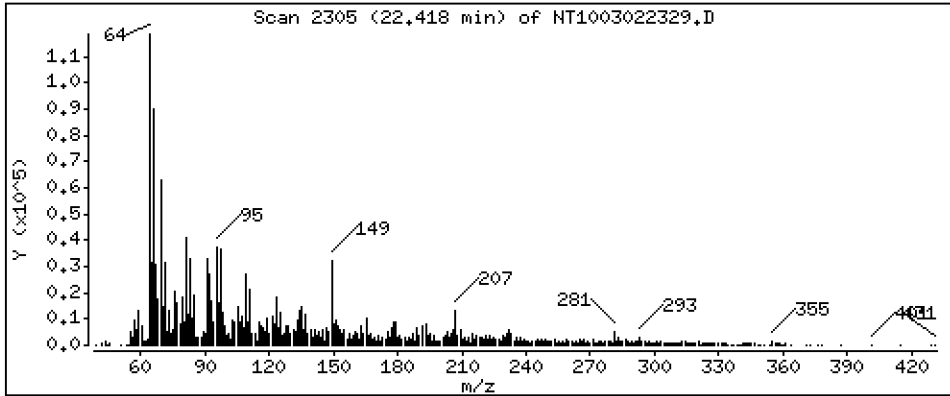
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07188 ug/mL





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

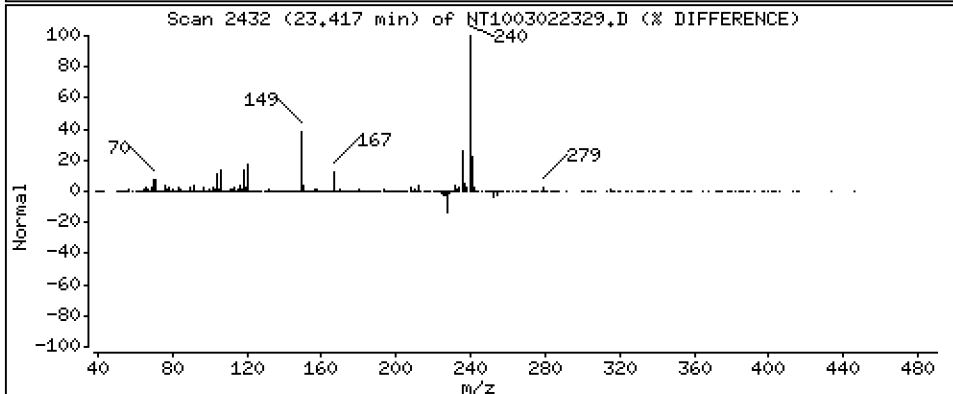
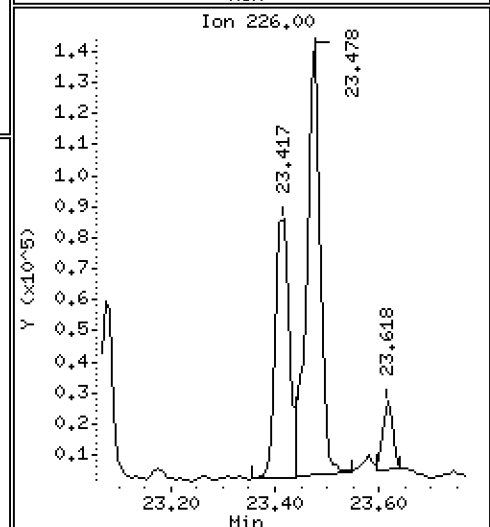
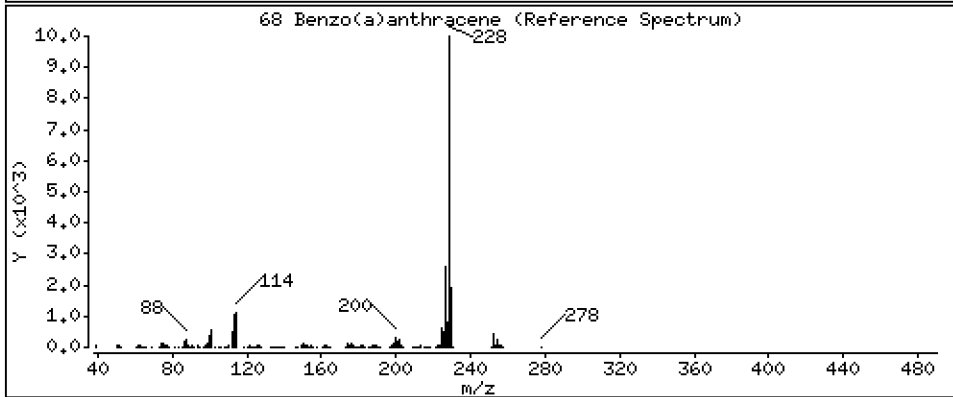
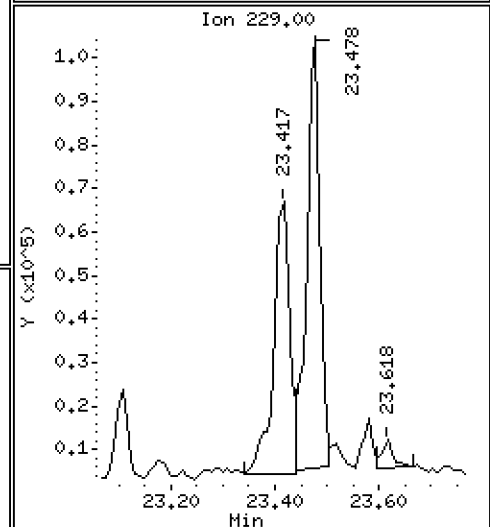
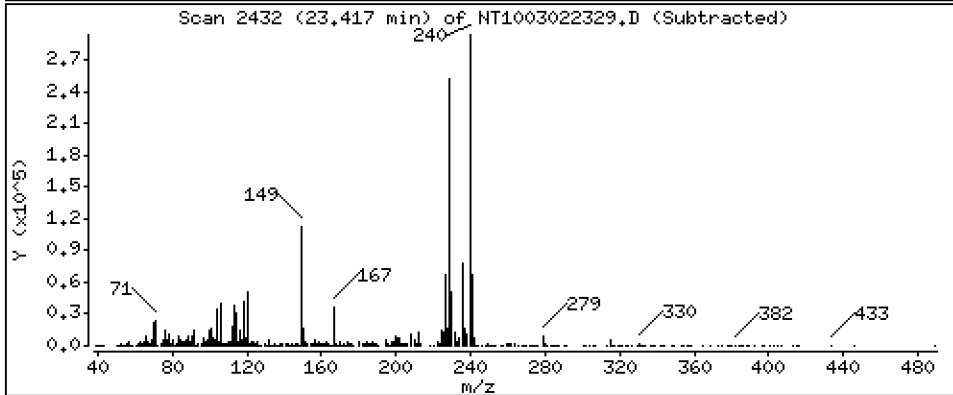
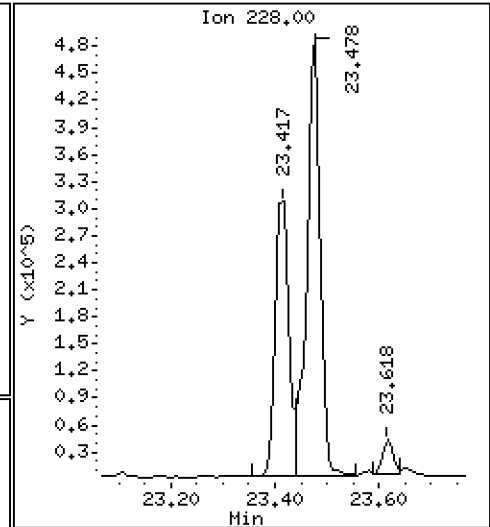
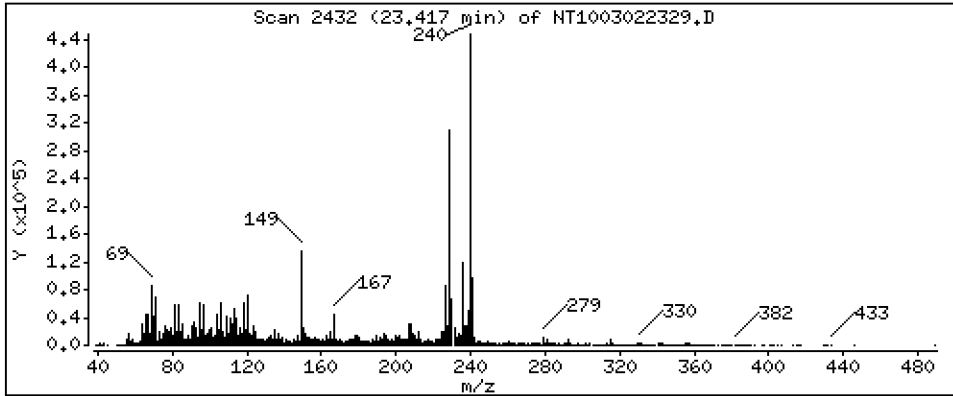
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,7525 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

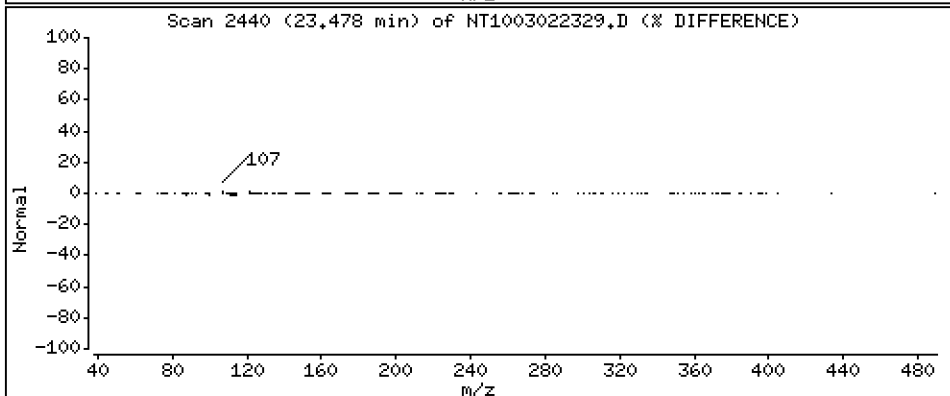
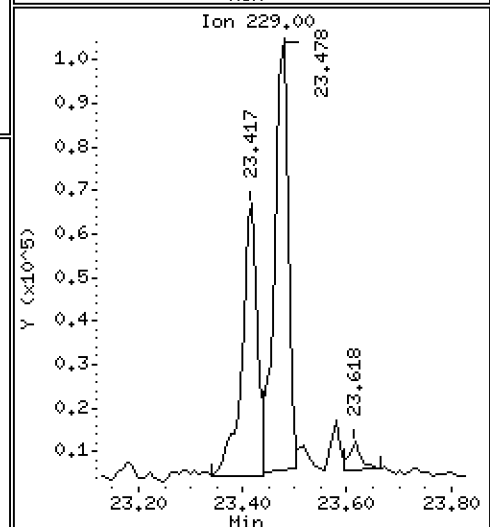
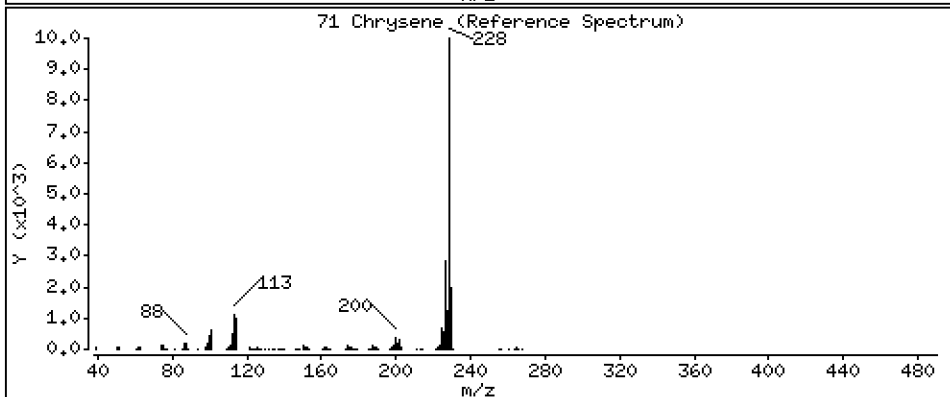
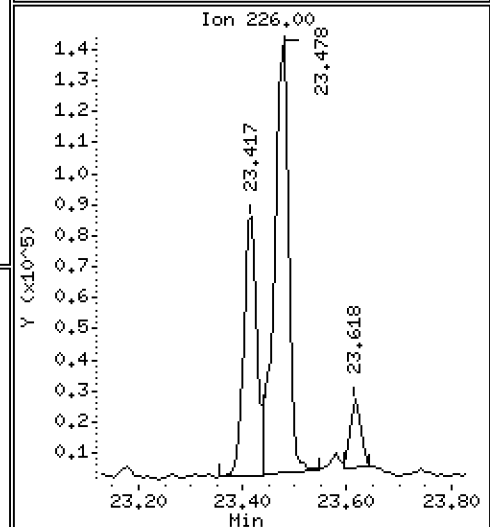
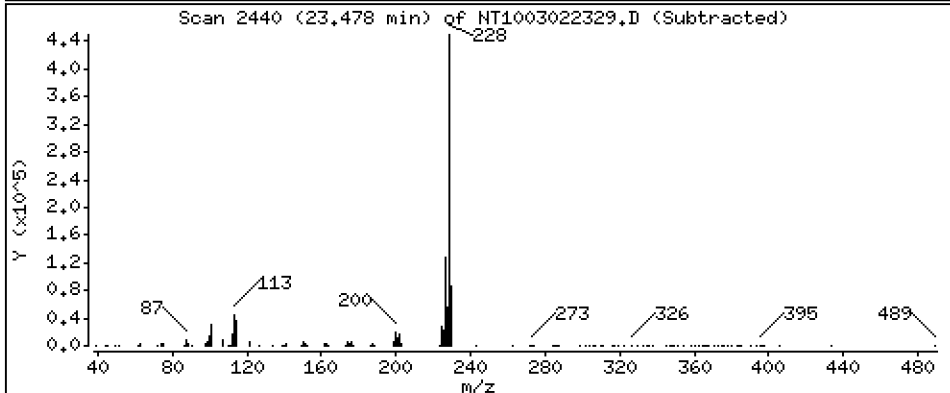
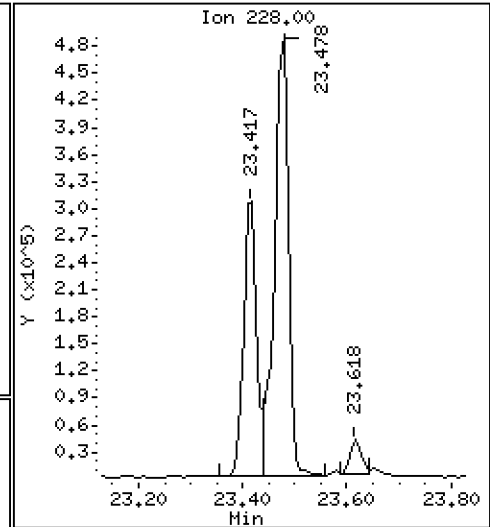
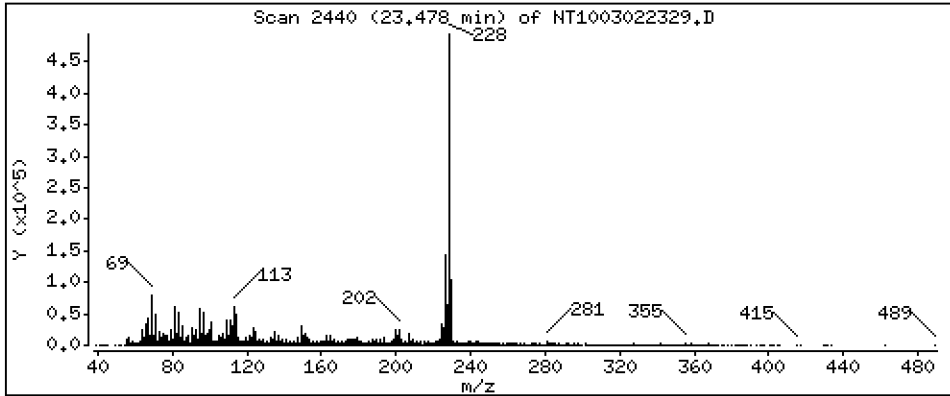
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,505 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

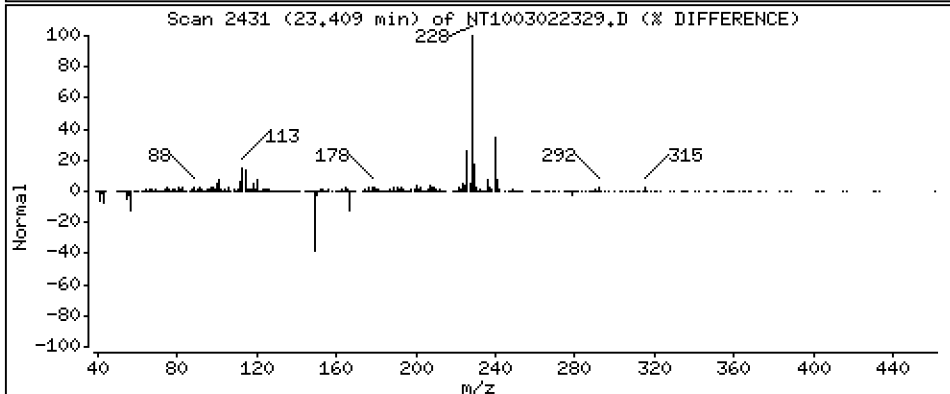
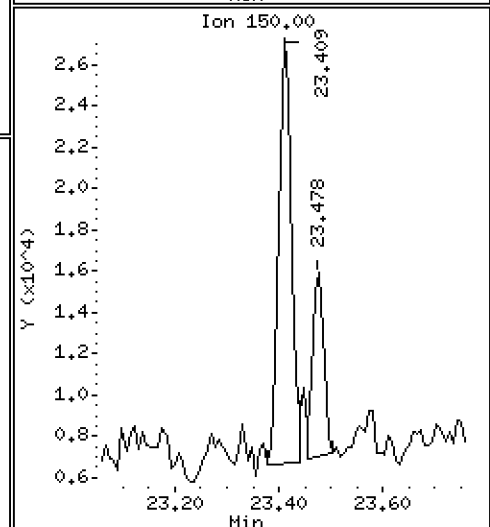
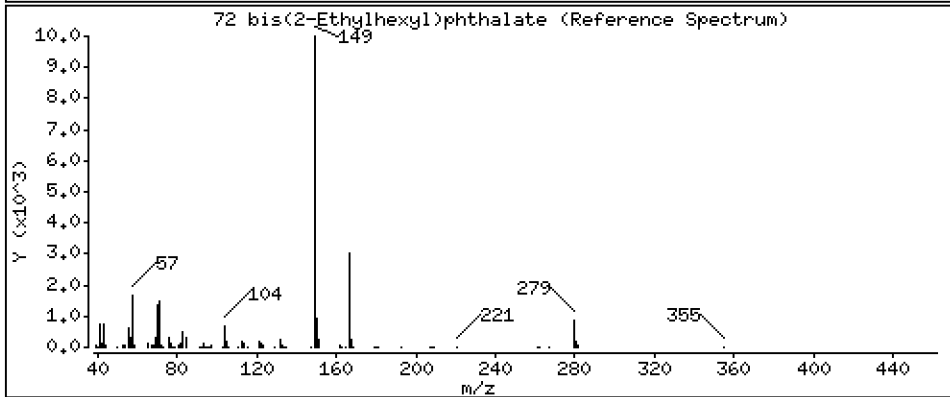
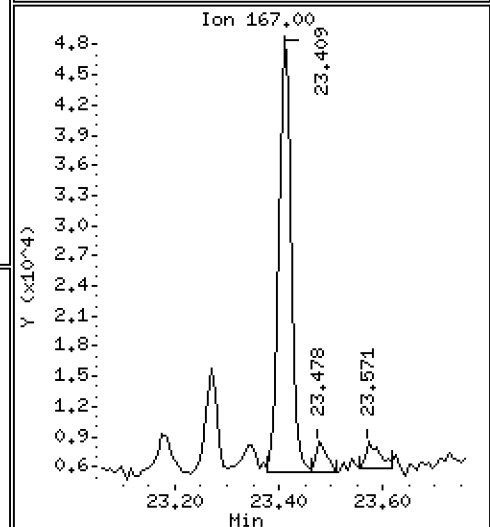
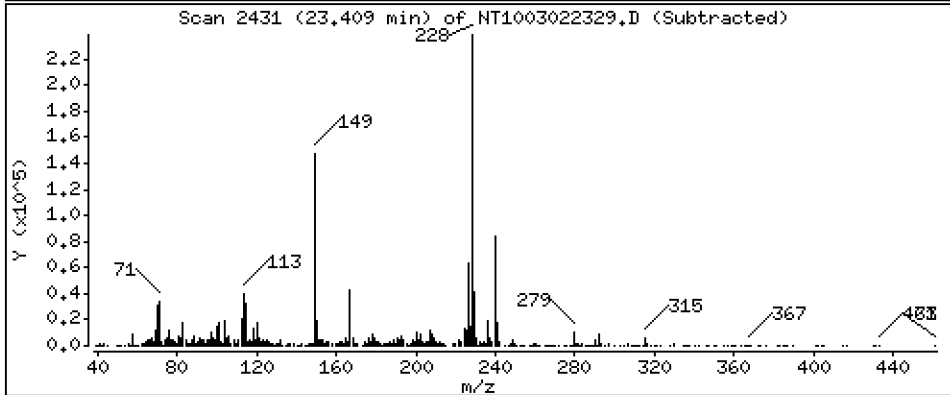
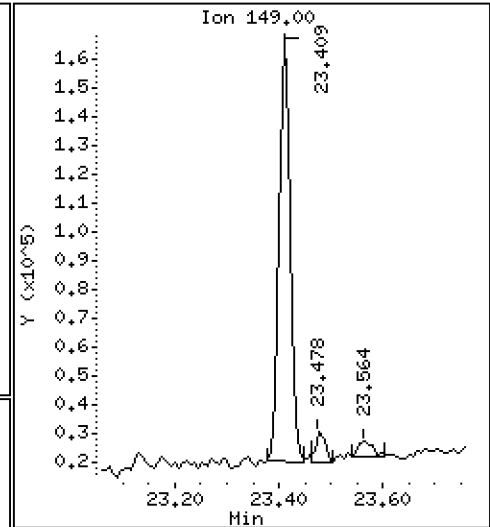
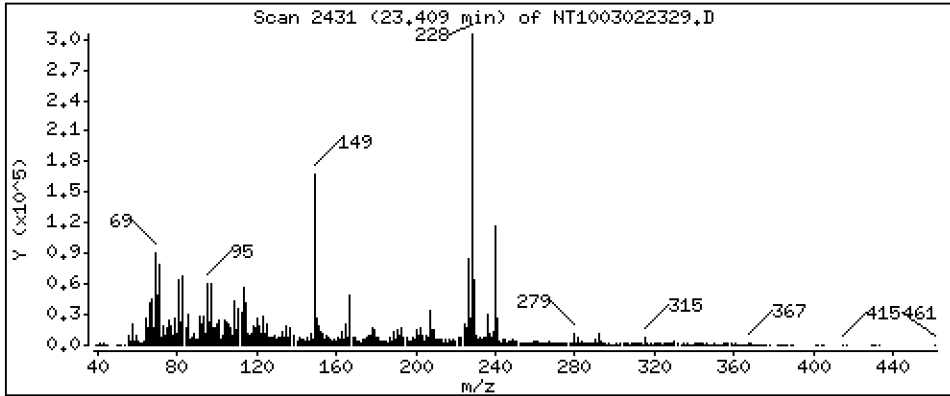
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,3861 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

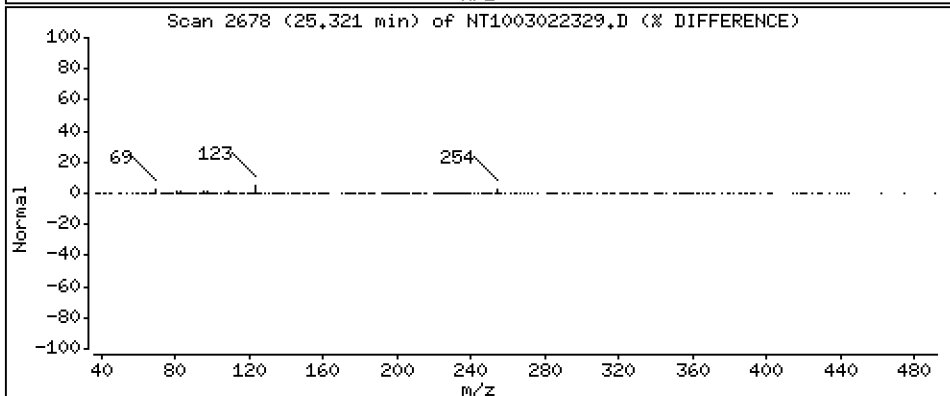
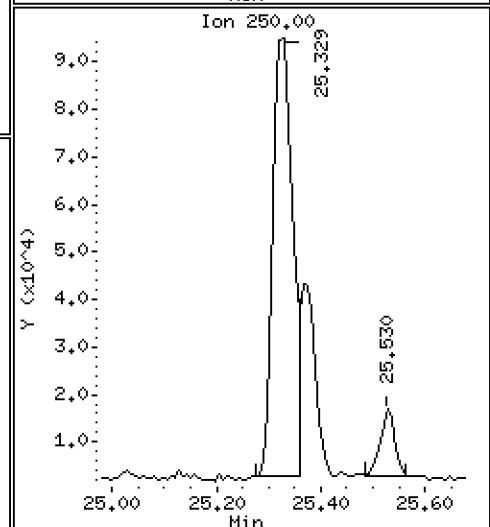
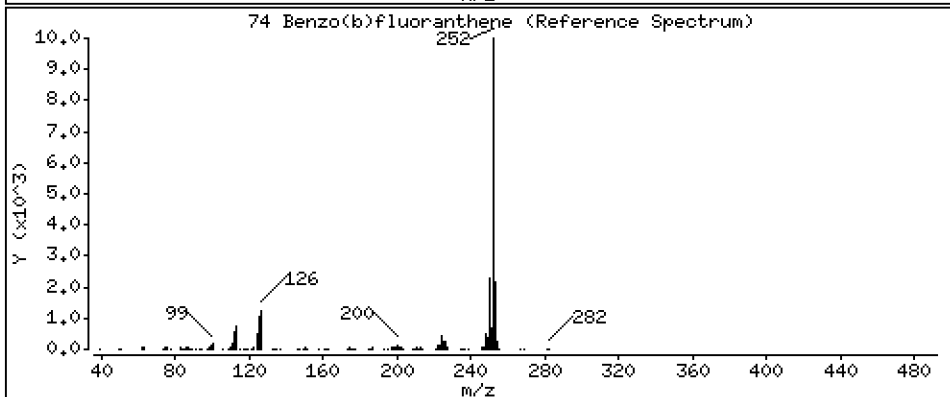
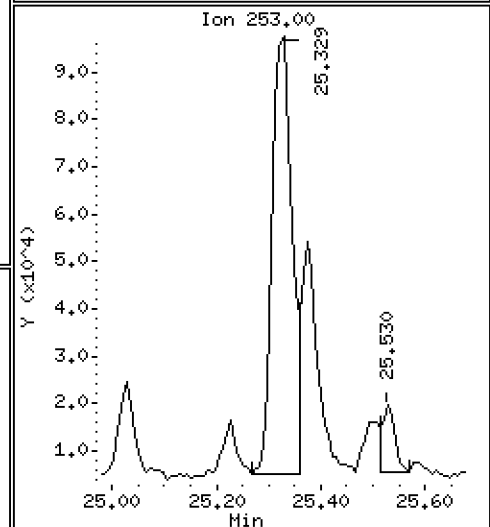
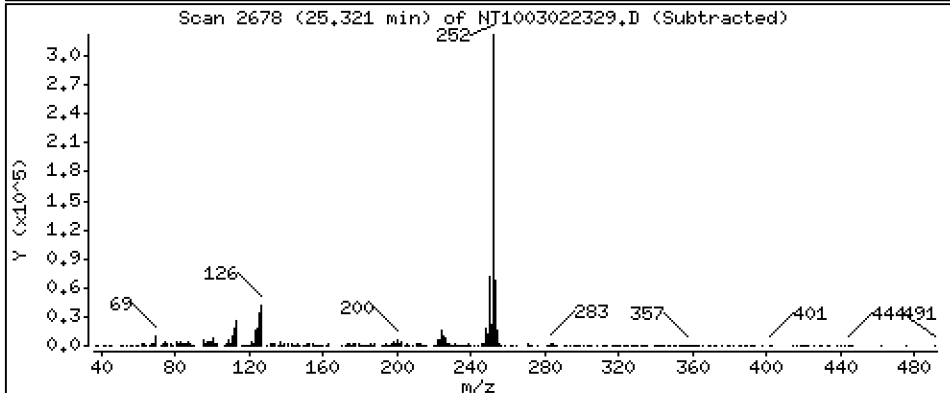
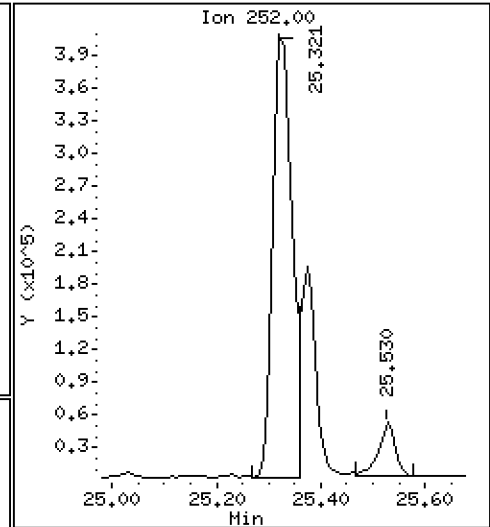
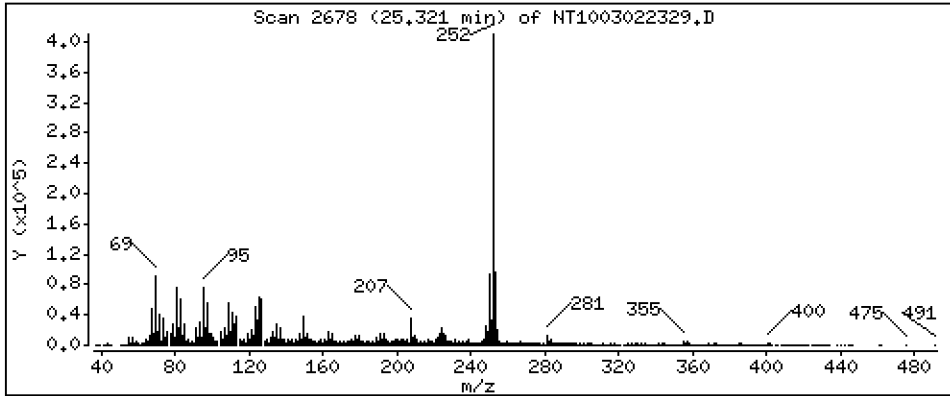
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 1,341 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

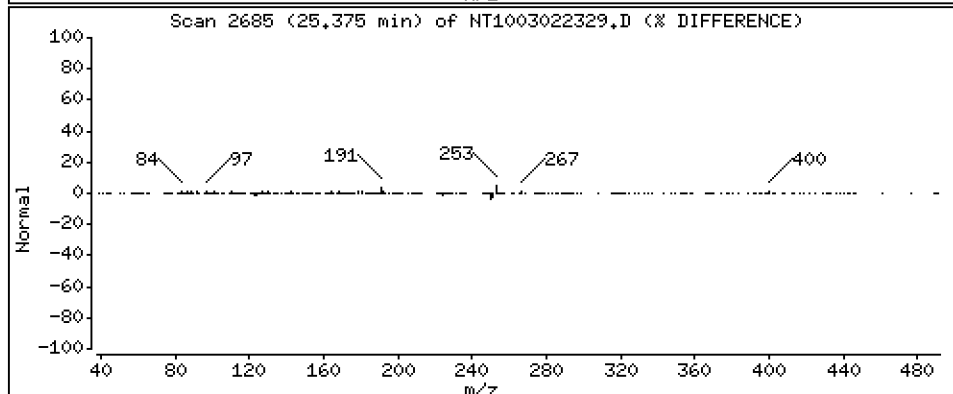
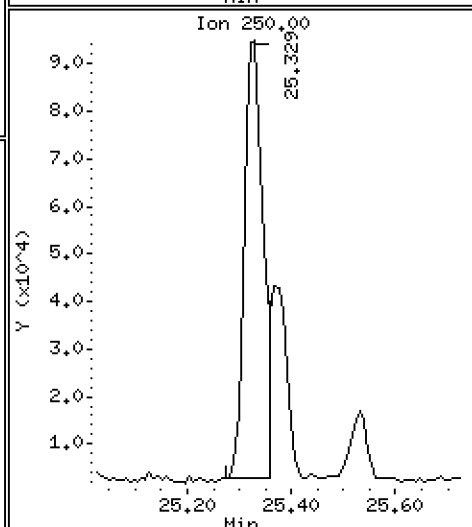
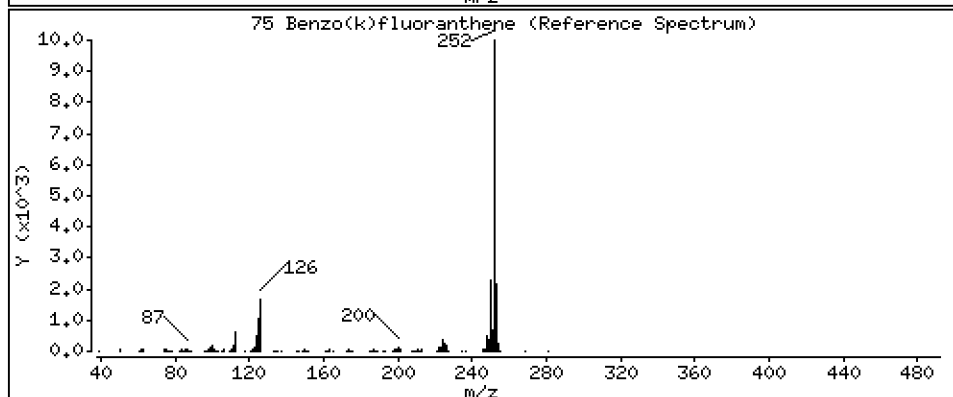
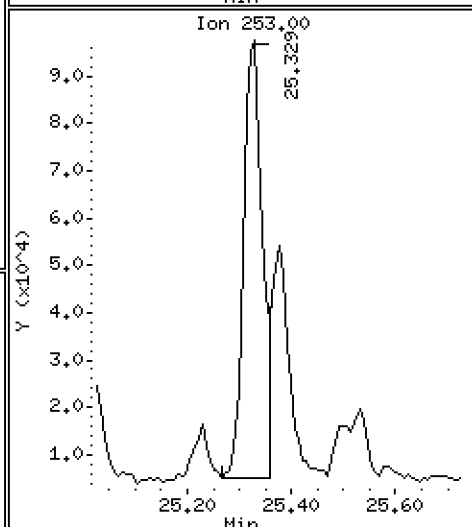
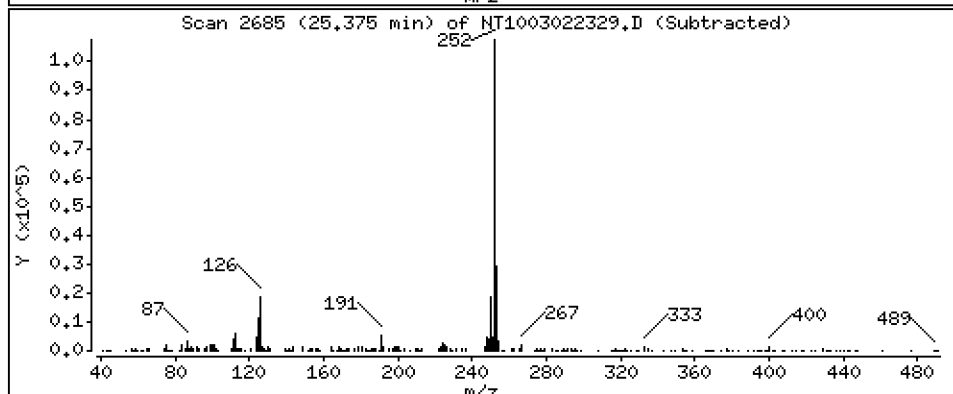
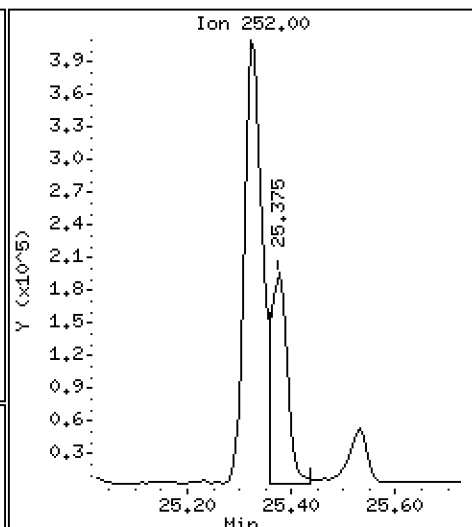
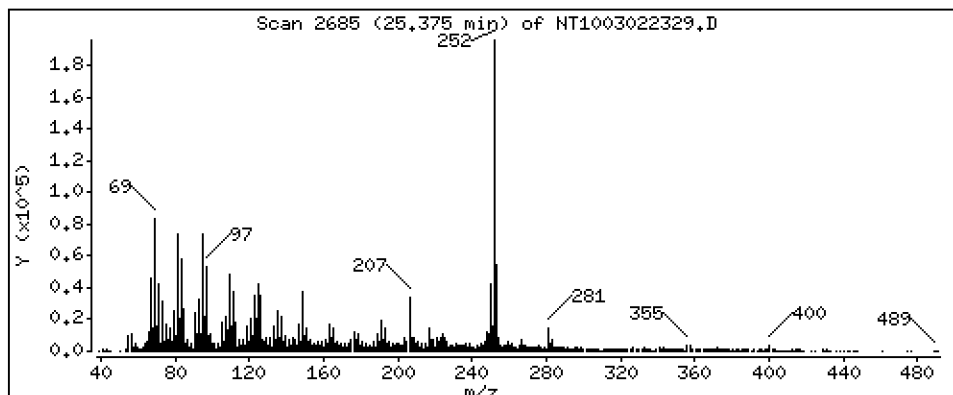
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,5623 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

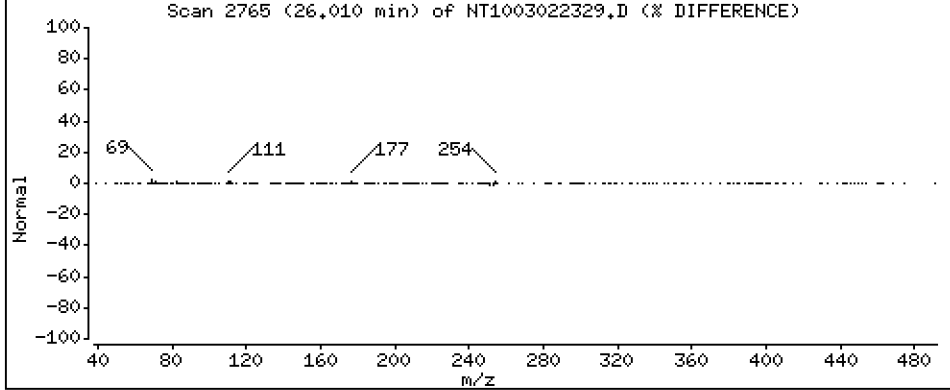
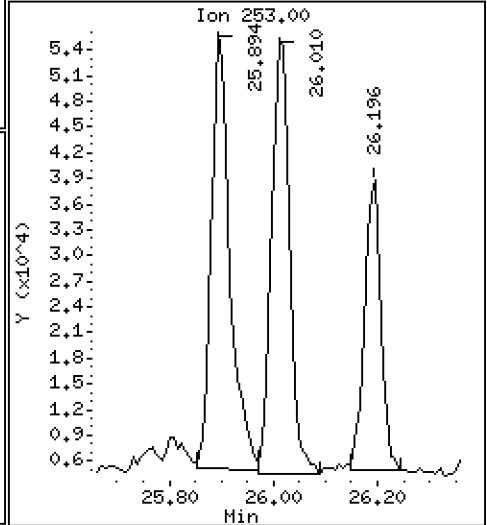
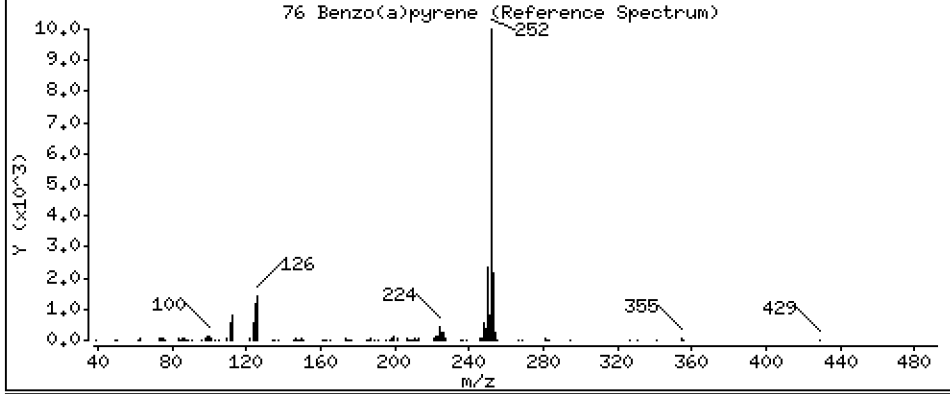
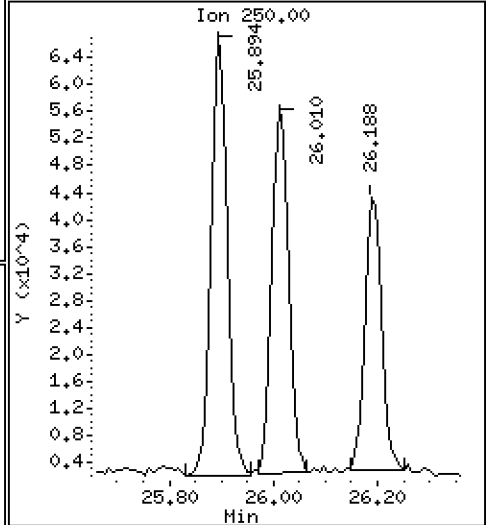
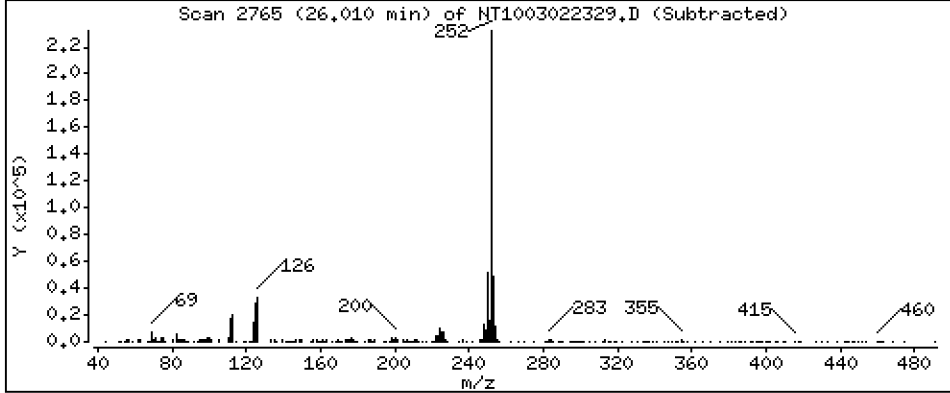
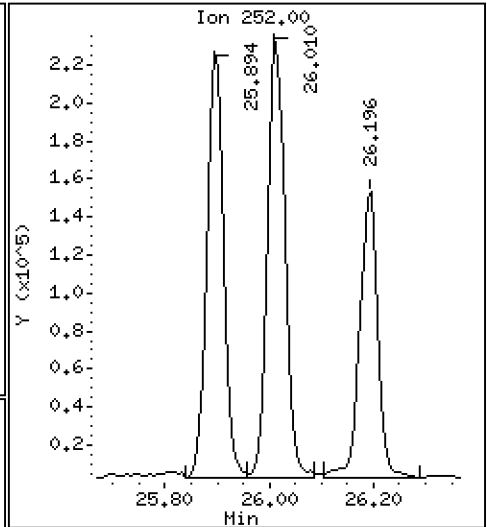
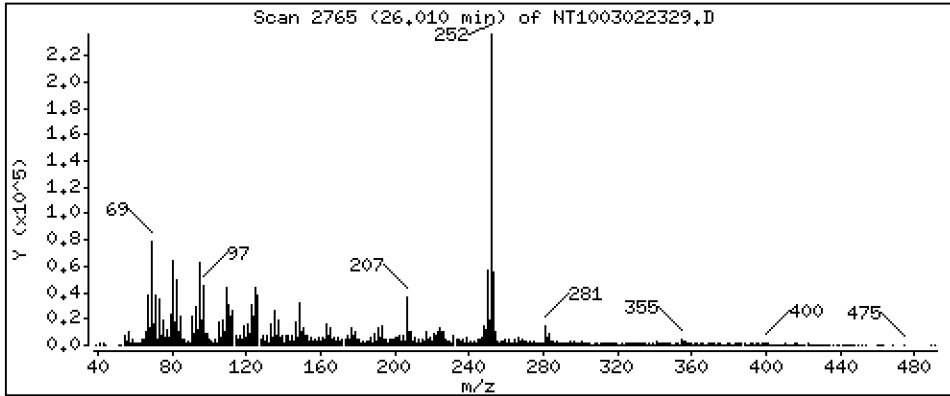
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,7614 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

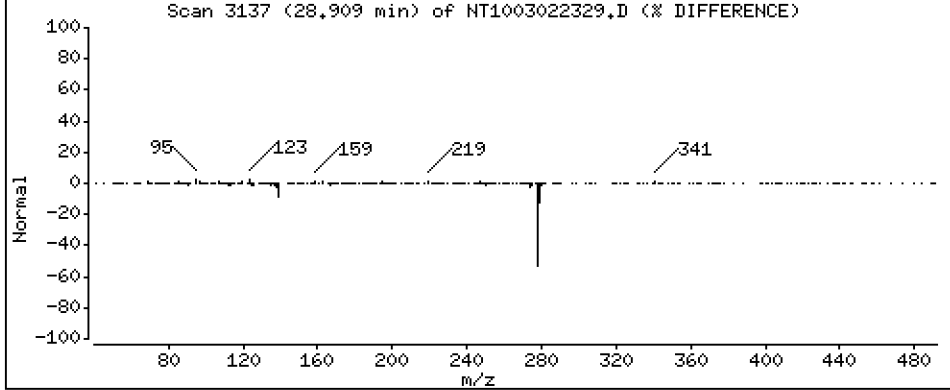
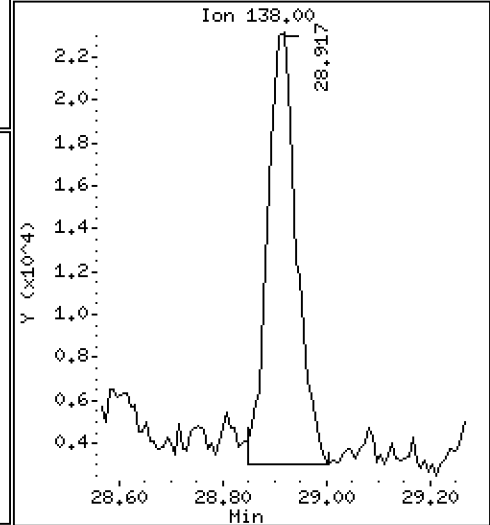
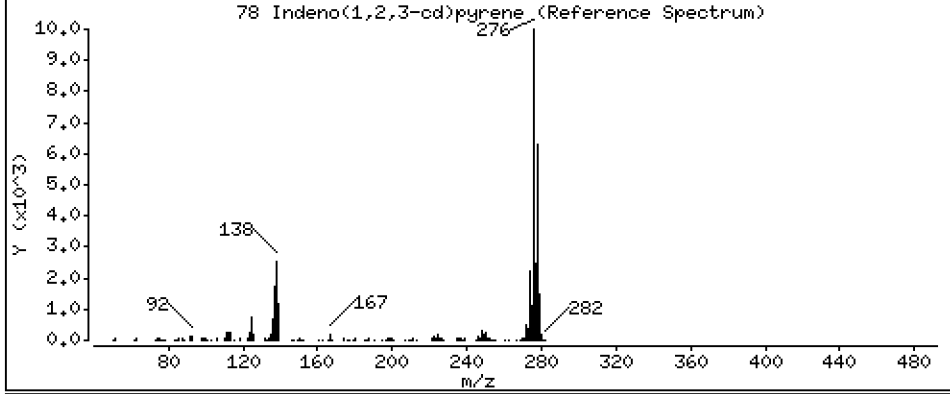
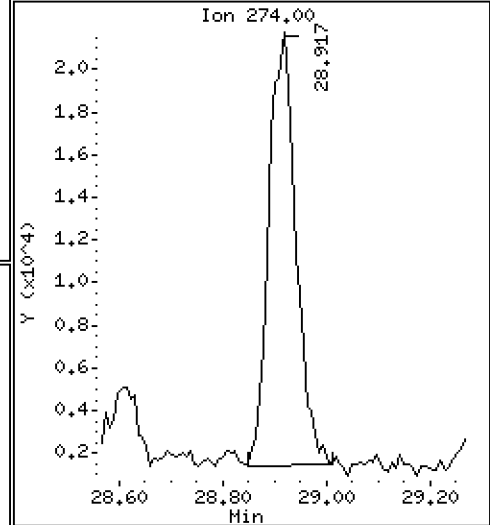
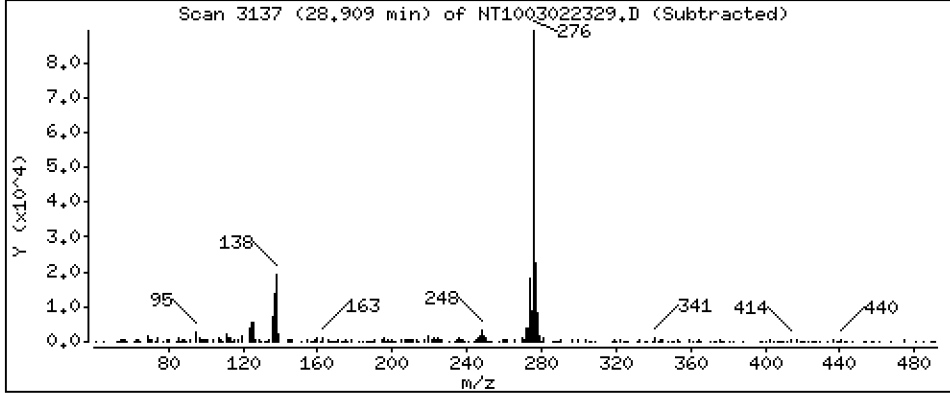
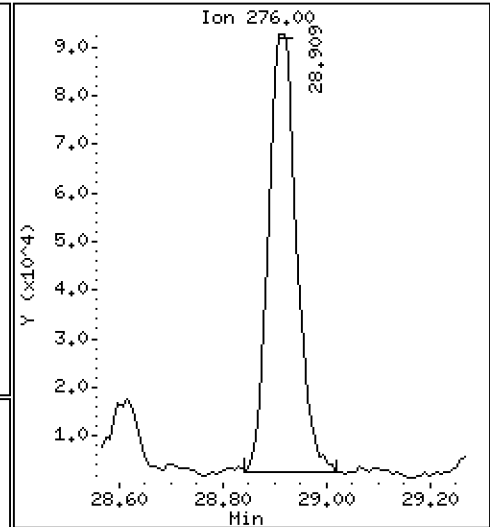
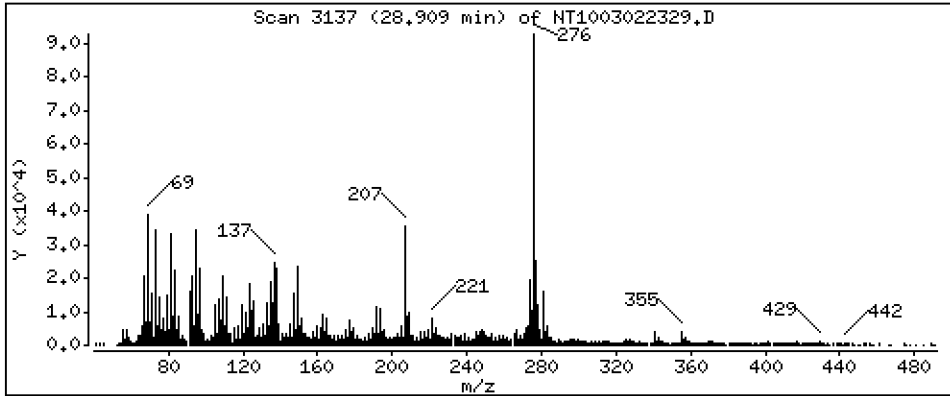
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,4228 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

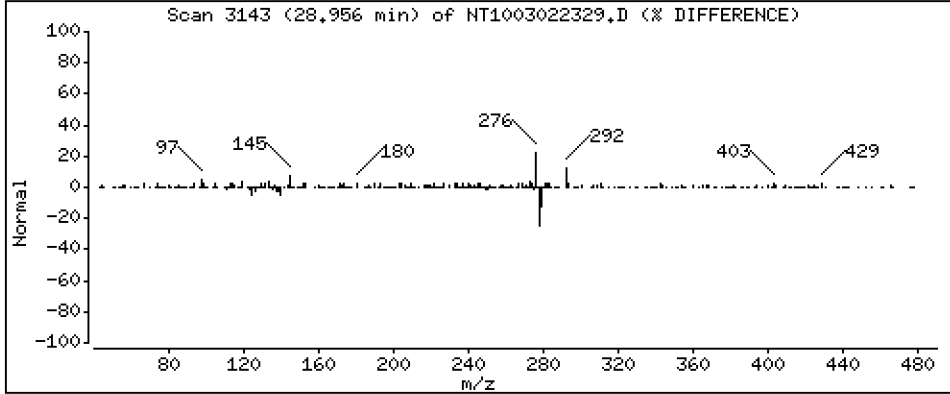
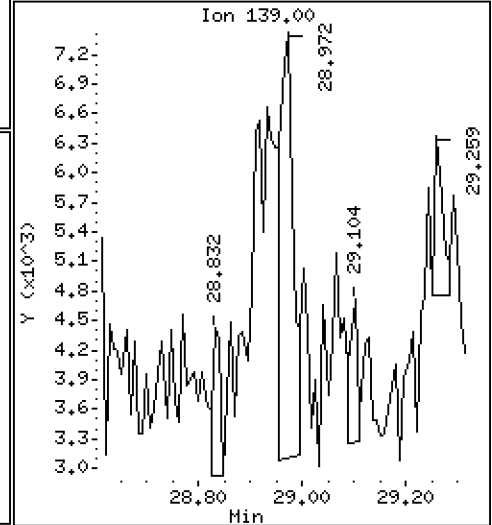
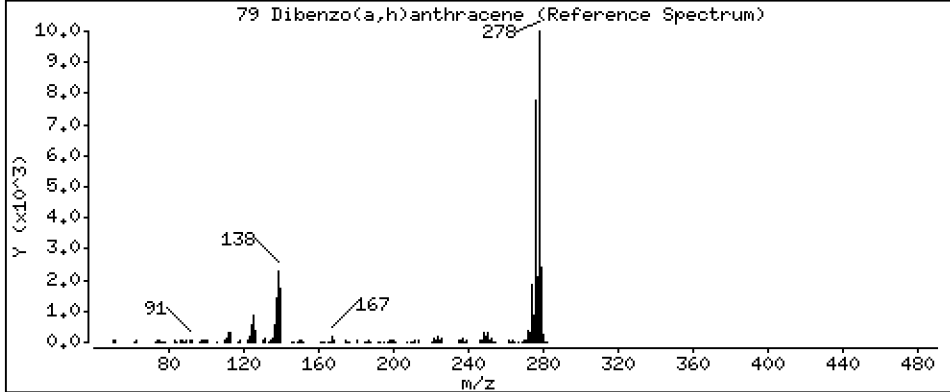
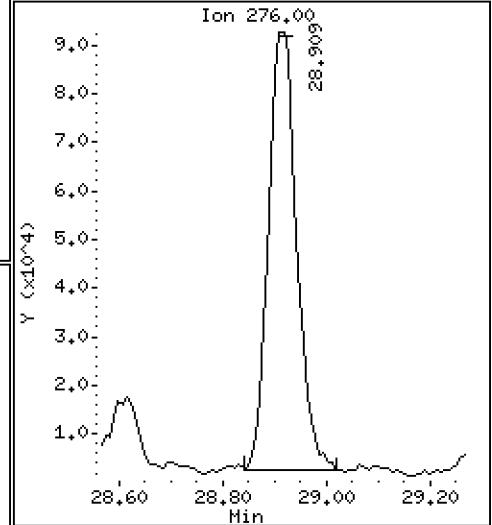
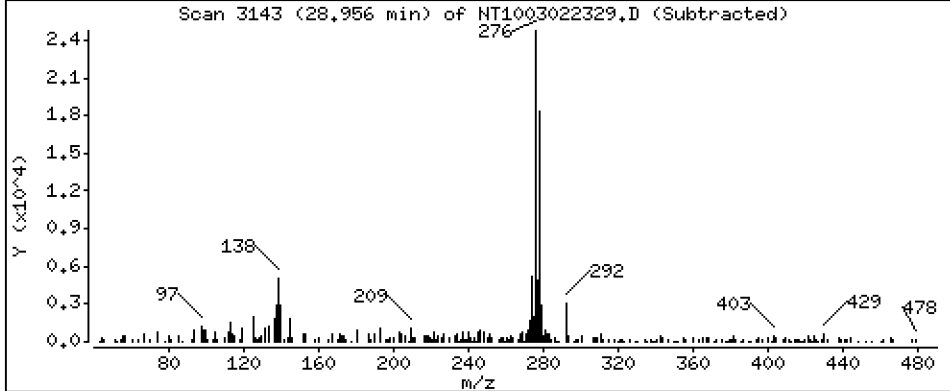
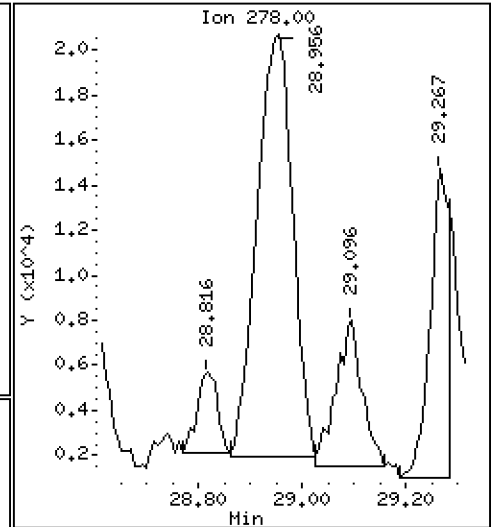
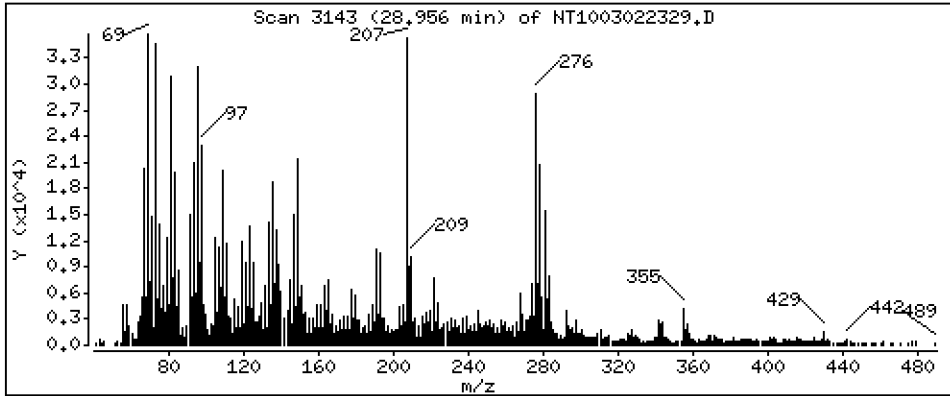
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1458 ug/mL





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

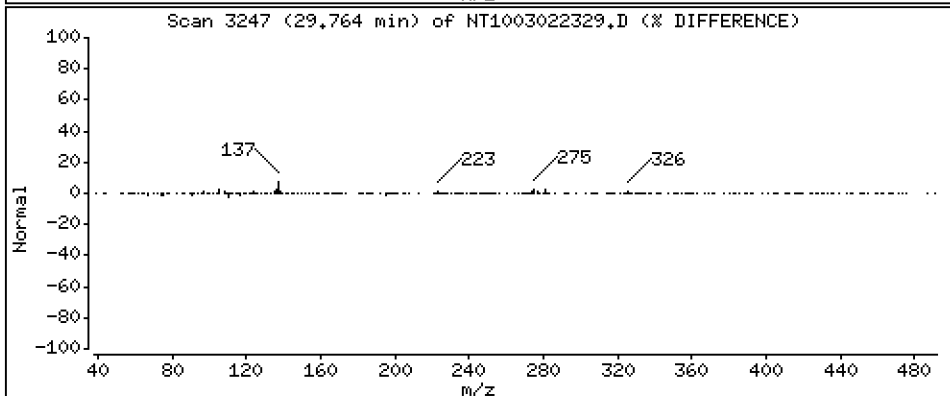
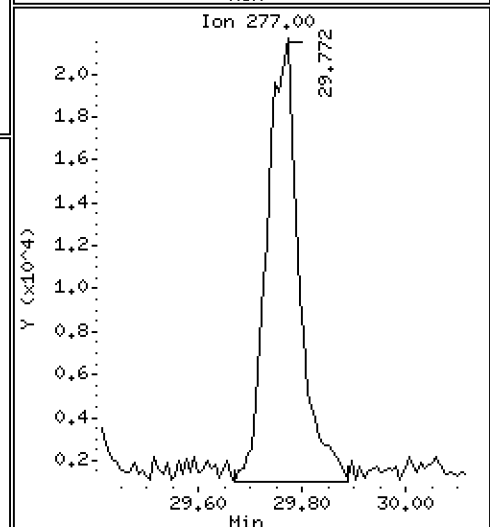
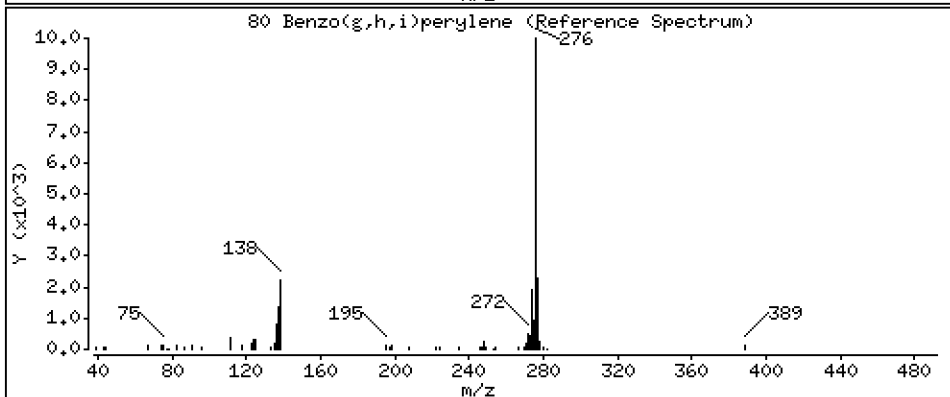
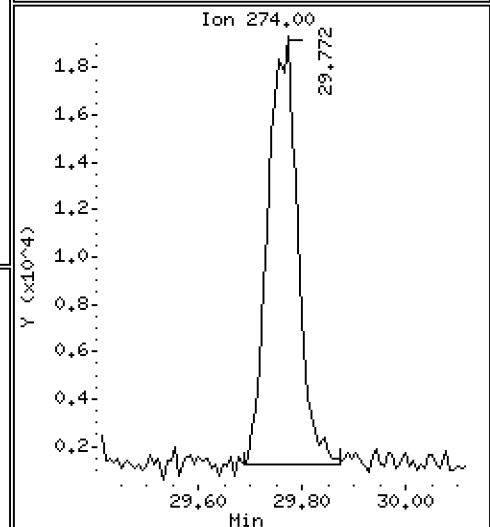
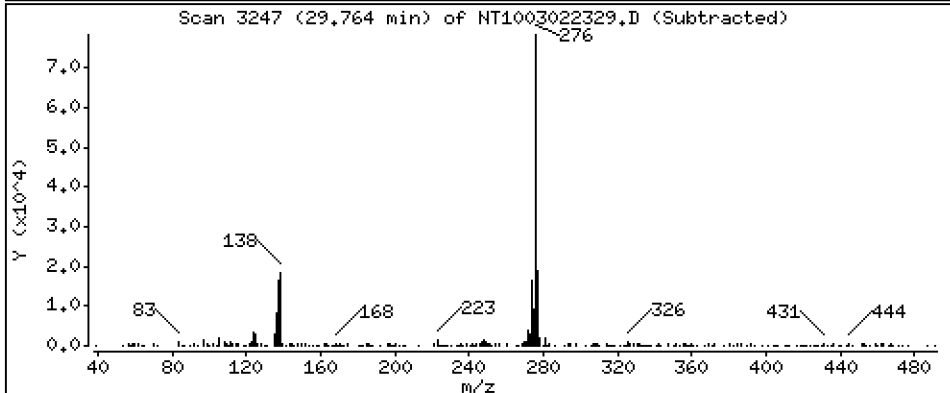
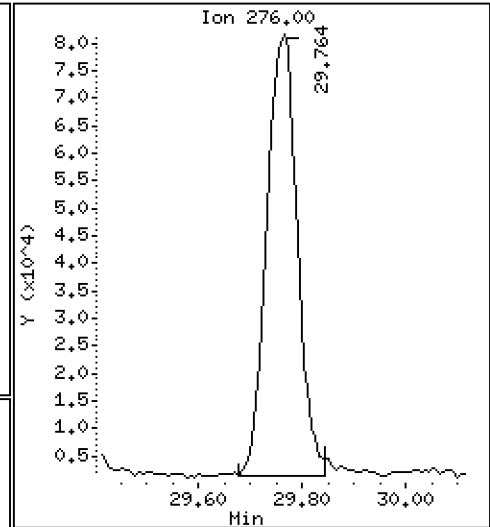
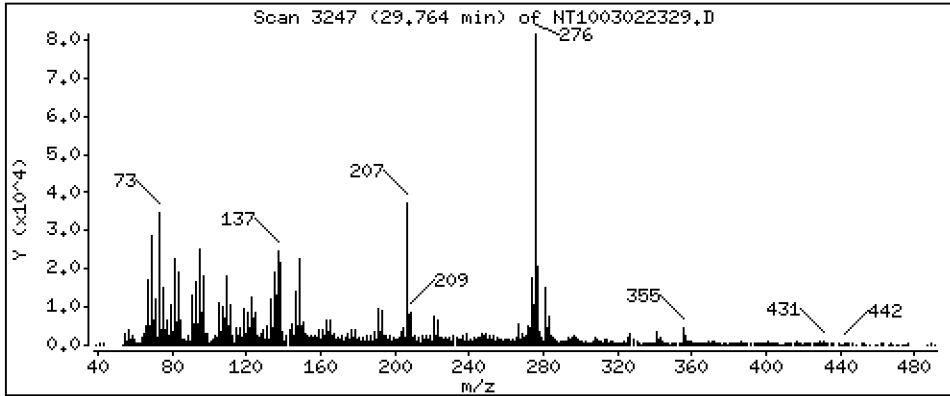
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,5105 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

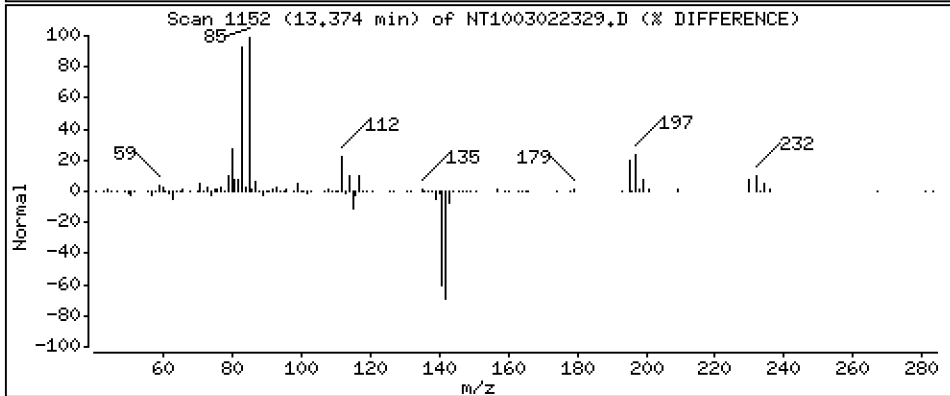
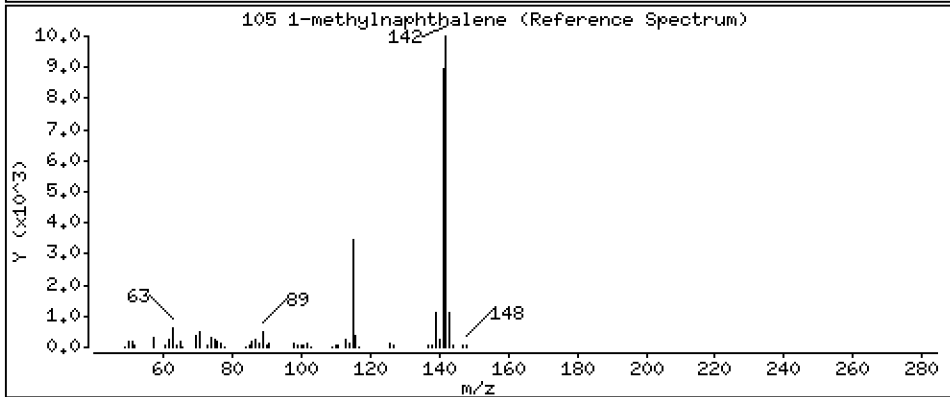
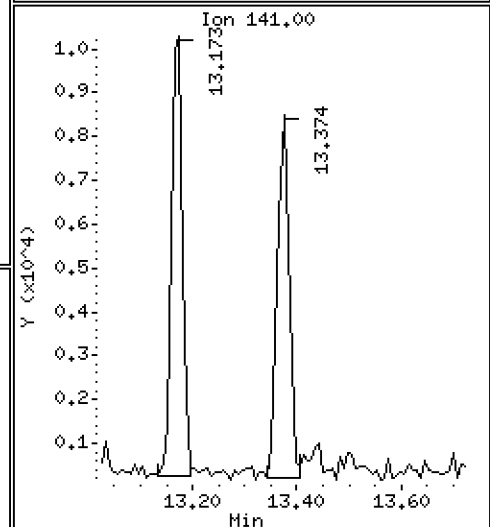
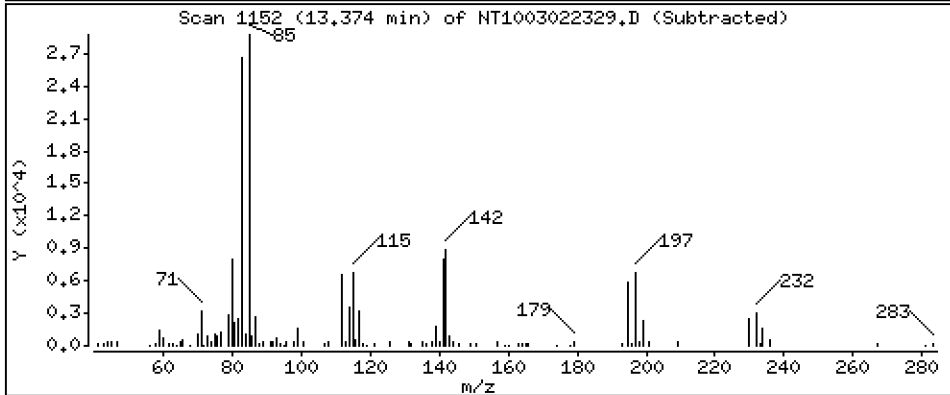
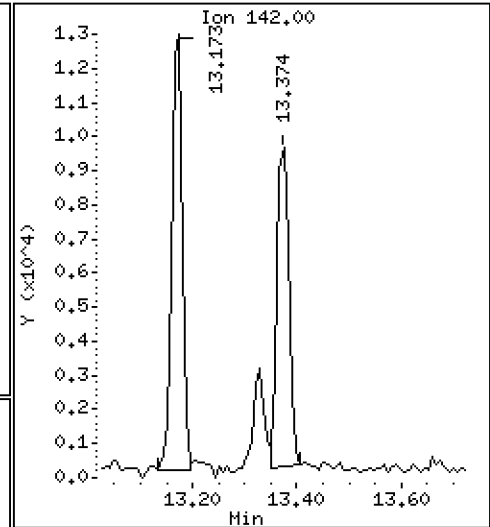
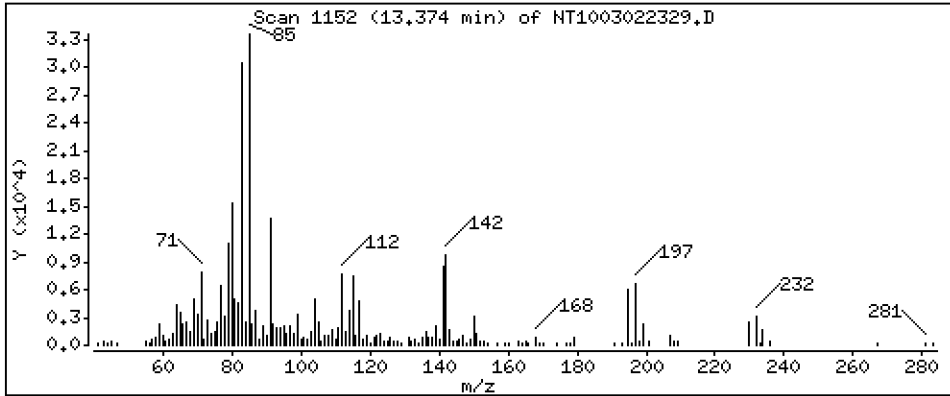
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,04679 ug/mL



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

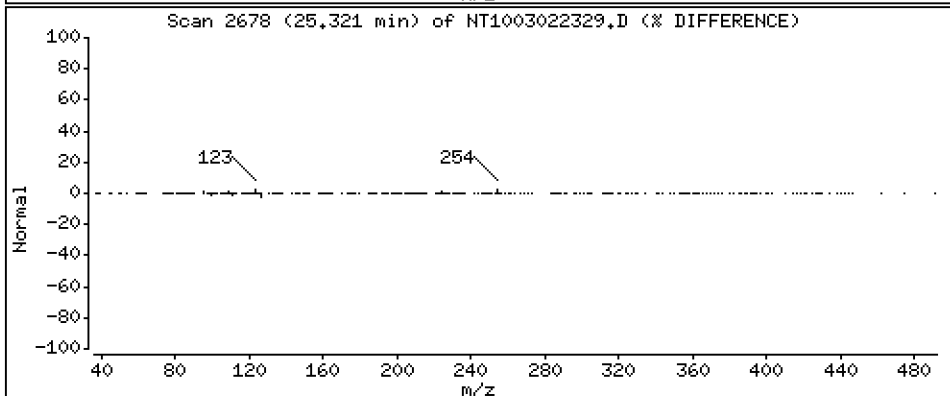
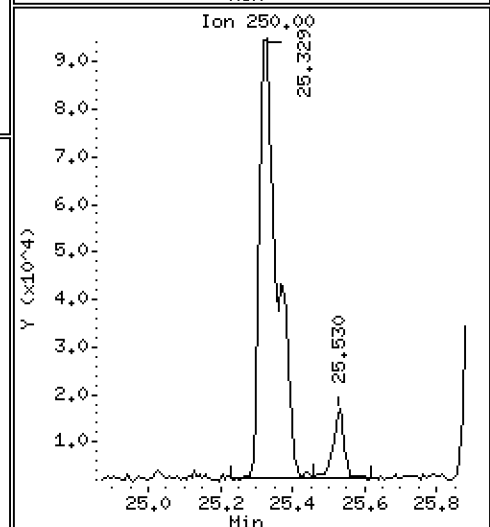
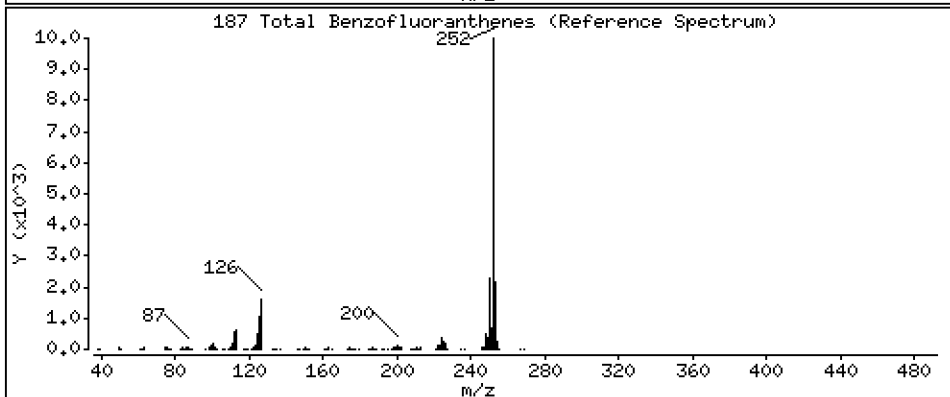
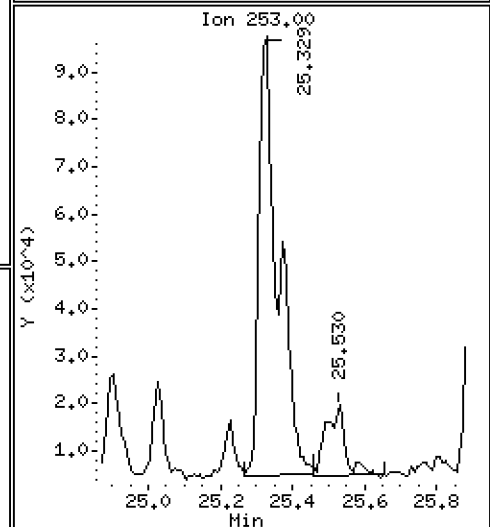
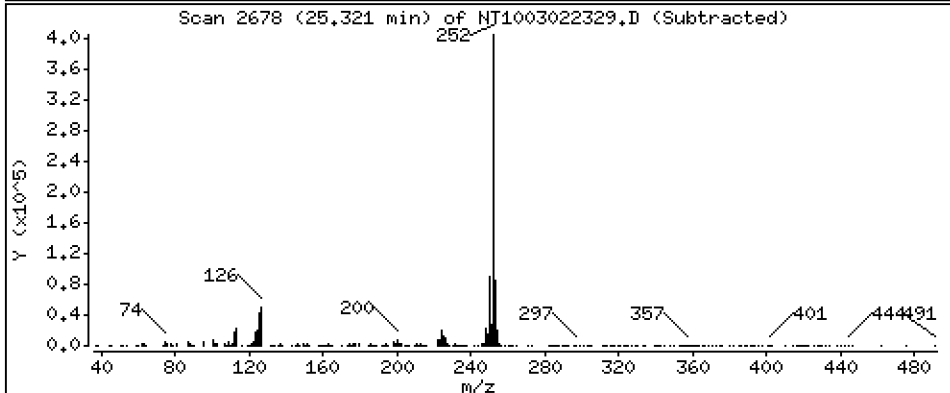
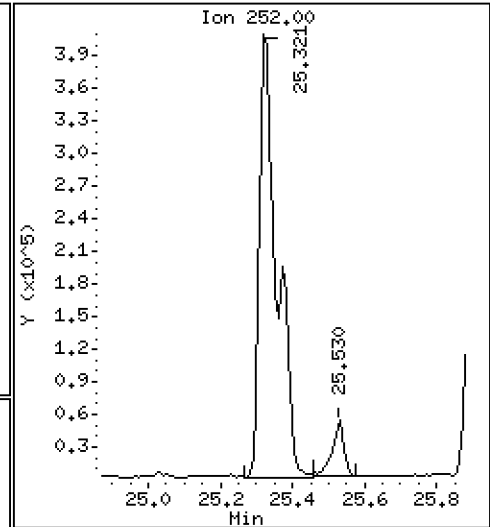
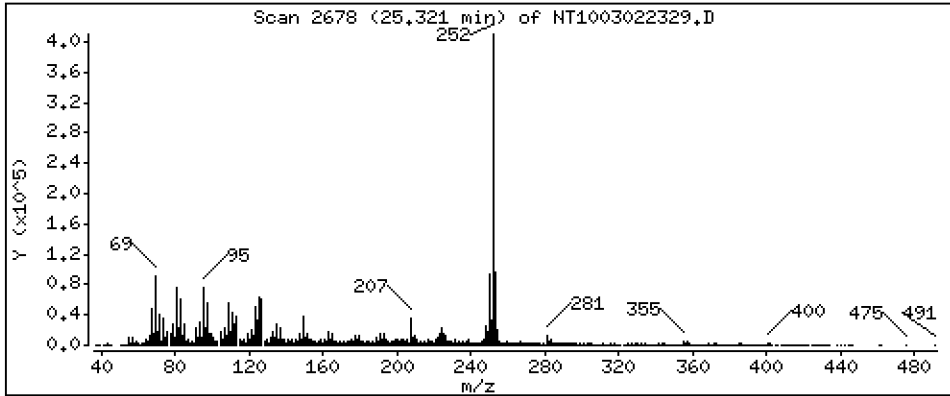
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 1,875 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022329.D

Lab Smp Id: 23A0206-10

Inj Date : 03-MAR-2023 08:08

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-10

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 21

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	904059	5.81213	5.812
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	1225616	6.78679	6.787
3 Phenol	94		8.527	8.527	(0.922)	2771620	14.4354	14.44
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1029836	6.68406	6.684
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	494384	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.541	(1.031)	439108	3.81463	3.815
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.479	(1.026)	39747	0.40321	0.4032
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.666	9.658	(1.045)	4874	0.03279	0.03279
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.953	(1.076)	25577	0.13711	0.1371
\$ 18 Nitrobenzene-d5	82		10.294	10.302	(0.878)	853839	4.24171	4.242
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.137	11.179	(0.950)	68288	0.63777	0.6378 (M)
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1833766	4.00000	
28 Naphthalene	128		11.765	11.772	(1.003)	43254	0.09190	0.09190
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	18899	0.05684	0.05684
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1608631	4.69300	4.693
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.751	(0.963)	21156	0.06817	0.06817
40 Acenaphthylene	152		15.030	15.038	(0.981)	40640	0.08760	0.08760
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.316	15.324	(1.000)	961004	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.394	(1.005)	17758	0.06347	0.06347
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.741	15.749	(1.028)	26744	0.06441	0.06441
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.205	16.221	(1.058)	83920	0.25525	0.2552
49 Fluorene	166		16.461	16.461	(1.075)	30046	0.08697	0.08697
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.962	(1.107)	408800	6.61190	6.612
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.409	18.416	(1.000)	1847254	4.00000	
60 Phenanthrene	178		18.463	18.463	(1.003)	233478	0.49388	0.4939
61 Anthracene	178		18.571	18.571	(1.009)	120263	0.26235	0.2624
62 Carbazole	167		18.904	18.904	(1.027)	38255	0.09109	0.09109
63 Di-n-butylphthalate	149		19.592	19.600	(1.064)	38287	0.06723	0.06723
64 Fluoranthene	202		20.846	20.830	(0.890)	784650	1.11984	1.120
65 Pyrene	202		21.264	21.264	(0.907)	798293	1.11888	1.119
\$ 66 Terphenyl-d14	244		21.534	21.534	(0.919)	2631761	4.55872	4.559
67 Butylbenzylphthalate	149		22.417	22.417	(0.957)	27624	0.07188	0.07188
68 Benzo(a)anthracene	228		23.416	23.416	(0.999)	540420	0.75248	0.7525
* 69 Chrysene-d12	240		23.432	23.431	(1.000)	2036818	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.478	(1.002)	878419	1.50498	1.505
72 bis(2-Ethylhexyl)phthalate	149		23.408	23.408	(0.956)	202010	0.38606	0.3861
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	3726906	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.320	25.328	(0.969)	1042452	1.34059	1.341
75 Benzo(k)fluoranthene	252		25.375	25.375	(0.971)	417505	0.56230	0.5623 (M)
76 Benzo(a)pyrene	252		26.010	26.017	(0.995)	525911	0.76138	0.7614
* 77 Perylene-d12	264		26.134	26.134	(1.000)	2251982	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.917	(1.106)	340272	0.42276	0.4228
79 Dibenzo(a,h)anthracene	278		28.956	28.963	(1.108)	88727	0.14579	0.1458
80 Benzo(g,h,i)perylene	276		29.763	29.763	(1.139)	327495	0.51049	0.5105
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	14082	0.04679	0.04679
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.320	25.375	(0.969)	1394350	1.87455	1.875	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022329.D Calibration Time: 05:36  
 Lab Smp Id: 23A0206-10  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	494384	-26.59
27 Naphthalene-d8	2475080	1237540	4950160	1833766	-25.91
42 Acenaphthene-d10	1248864	624432	2497728	961004	-23.05
59 Phenanthrene-d10	2356836	1178418	4713672	1847254	-21.62
69 Chrysene-d12	2717731	1358866	5435462	2036818	-25.05
134 Di-n-octylphthala	4948440	2474220	9896880	3726906	-24.69
77 Perylene-d12	2801934	1400967	5603868	2251982	-19.63

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.41	-0.04
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022329.D

Lab ID: 23A0206-10  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 08:08

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003022325ICV.D

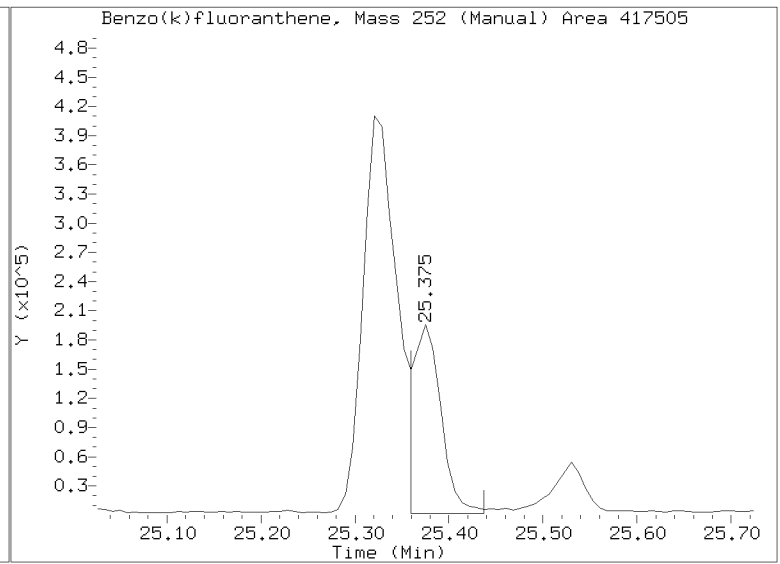
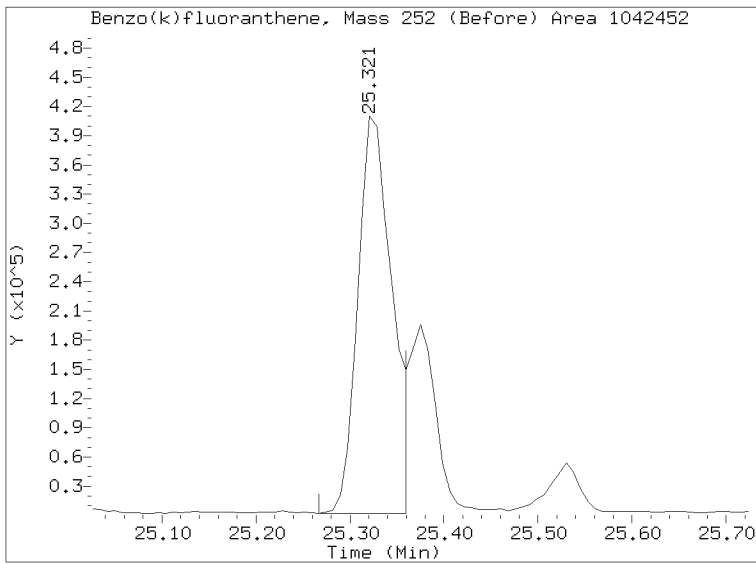
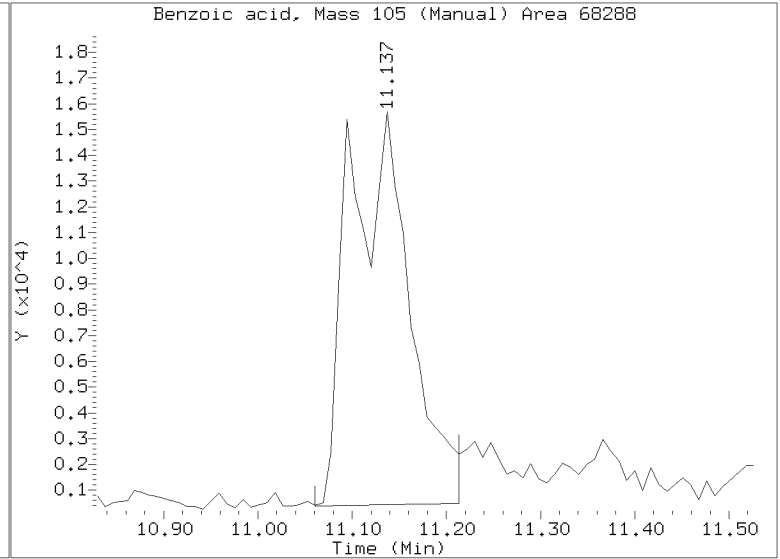
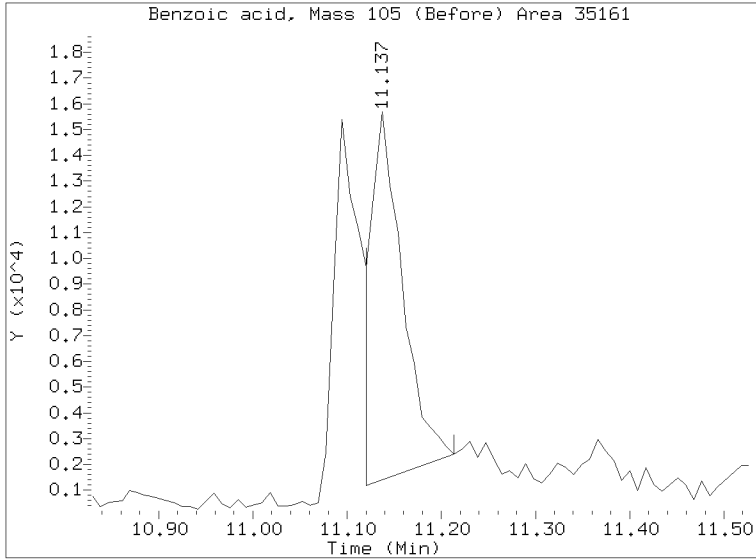
On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022329.D  
Injection Date: 03-MAR-2023 08:08  
Lab ID:23A0206-10 Client ID:  
Report Date: 03/10/2023 07:35





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-11 B

SDG: 23A0206

Sampled: 01/11/23 11:43

Prepared: 01/27/23 14:44

File ID: NT1003022330.D

% Solids: 42.95

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:46

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 23.35 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1100		4.4	19.9
106-44-5	4-Methylphenol	1	19.9	U	7.4	19.9
91-20-3	Naphthalene	1	11.8	J	4.2	19.9
91-57-6	2-Methylnaphthalene	1	8.6	J	4.5	19.9
208-96-8	Acenaphthylene	1	14.7	J	6.2	19.9
131-11-3	Dimethylphthalate	1	19.9	U	4.4	19.9
83-32-9	Acenaphthene	1	9.0	J	5.2	19.9
132-64-9	Dibenzofuran	1	19.9	U	14.1	19.9
86-73-7	Fluorene	1	19.9	U	14.5	19.9
85-01-8	Phenanthrene	1	79.2		8.7	19.9
120-12-7	Anthracene	1	45.1		7.2	19.9
206-44-0	Fluoranthene	1	202		6.1	19.9
129-00-0	Pyrene	1	189		5.7	19.9
85-68-7	Butylbenzylphthalate	1	19.9	U	9.4	19.9
56-55-3	Benzo(a)anthracene	1	113		5.9	19.9
218-01-9	Chrysene	1	217		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	76.9		5.4	49.9
	Benzo(a)fluoranthene, Total	1	318		10.0	39.9
50-32-8	Benzo(a)pyrene	1	114		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	60.8		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	22.6		17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	78.7	Q	13.6	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.84	594	79.5	27 - 120	
Phenol-d5	747.84	688	92.0	29 - 120	
2-Chlorophenol-d4	747.84	680	91.0	31 - 120	
1,2-Dichlorobenzene-d4	498.56	379	76.1	32 - 120	
Nitrobenzene-d5	498.56	431	86.5	30 - 120	
2-Fluorobiphenyl	498.56	469	94.1	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-11 B

SDG: 23A0206

Sampled: 01/11/23 11:43

Prepared: 01/27/23 14:44

File ID: NT1003022330.D

% Solids: 42.95

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:46

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 23.35 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	747.84	683	91.4	24 - 134	
p-Terphenyl-d14	498.56	468	93.8	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B JB\NT1003022330.D

Date: 03-MAR-2023 08:46

Client ID:

Sample Info: 23A0206-11

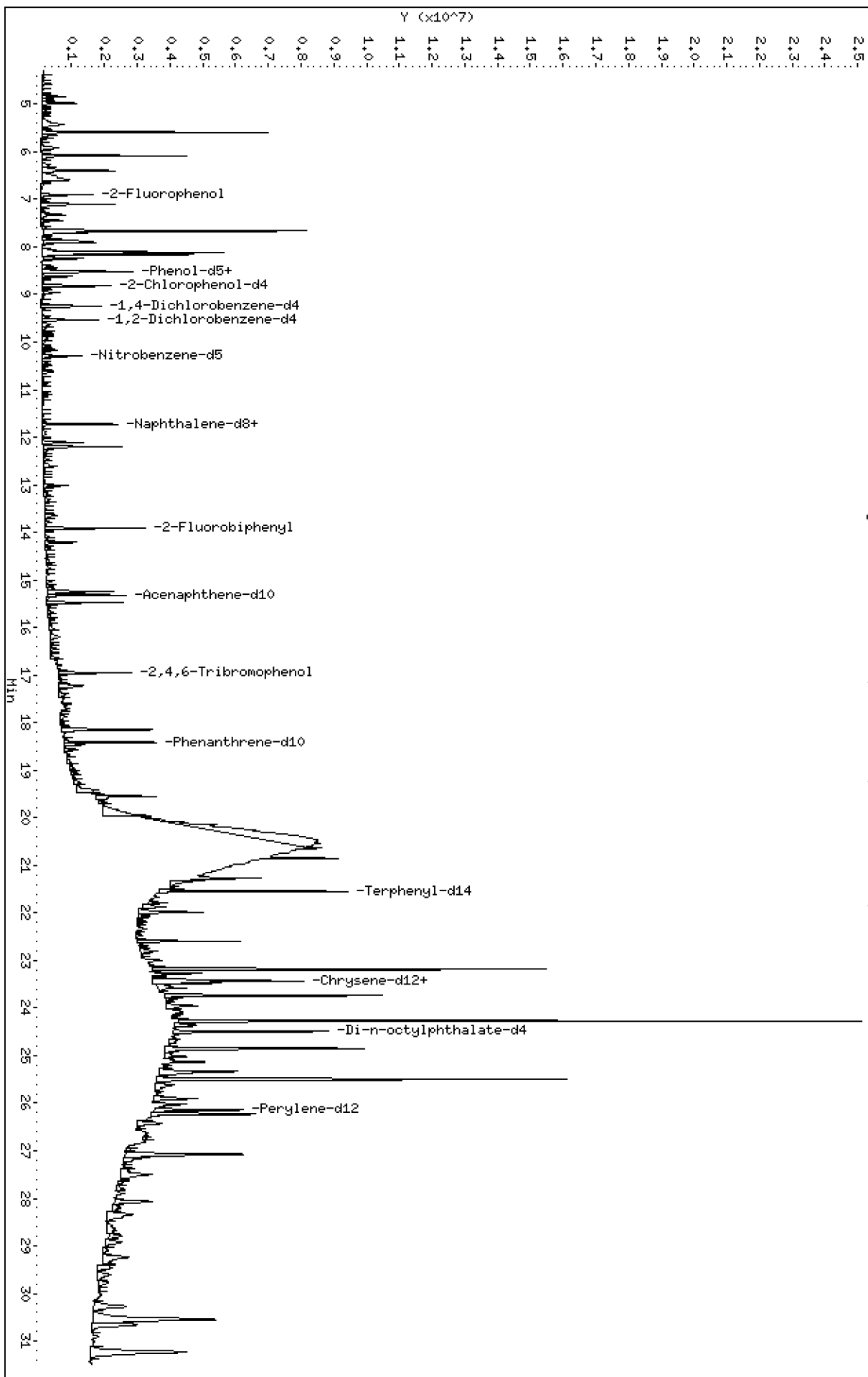
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B JB\NT1003022330.D



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

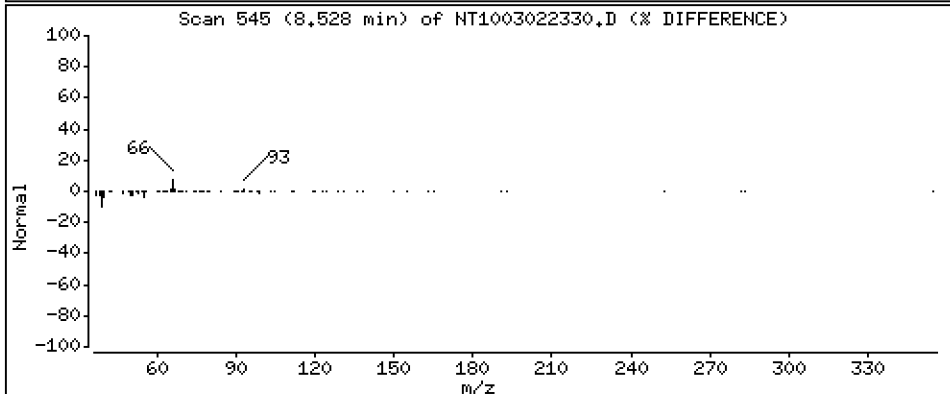
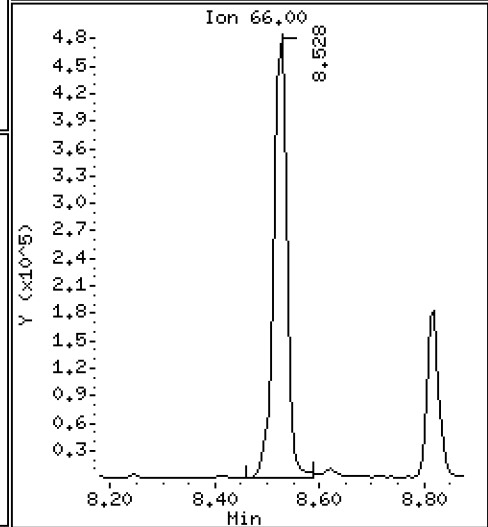
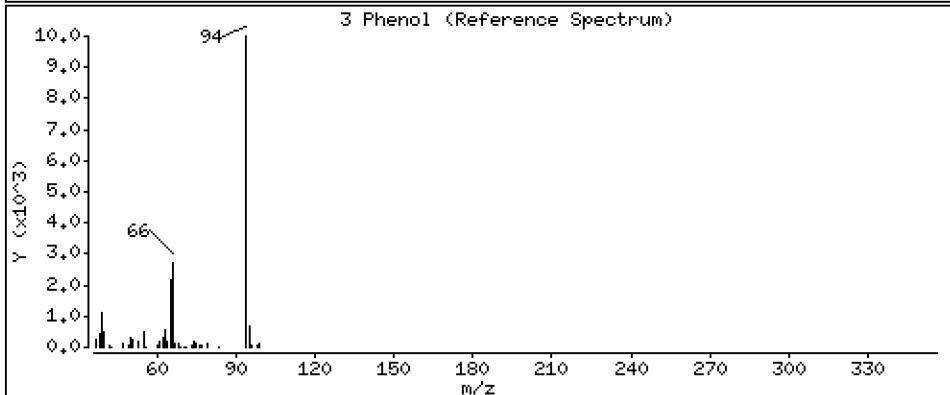
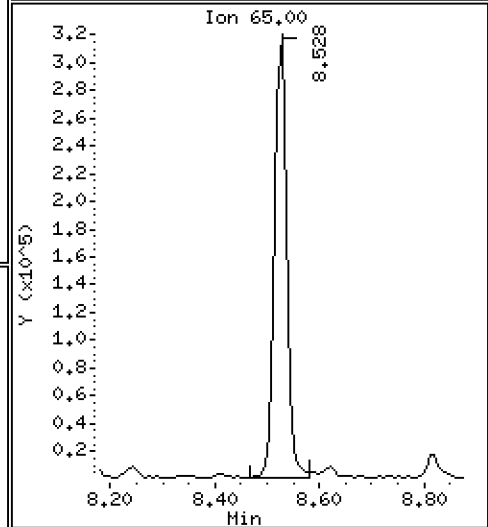
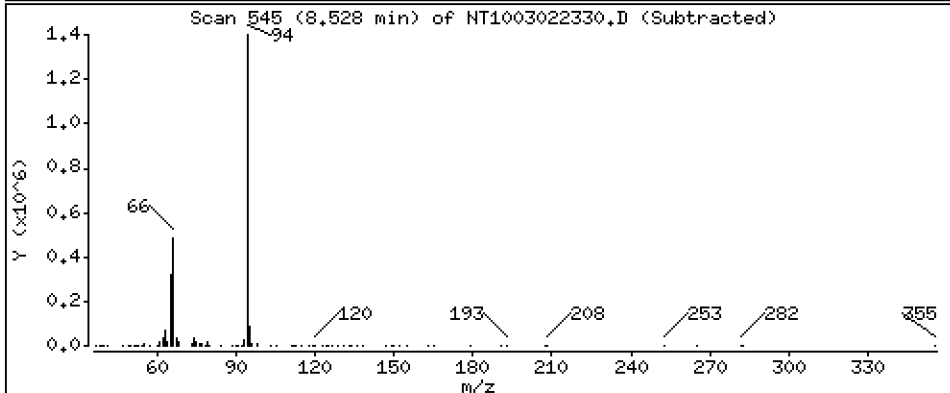
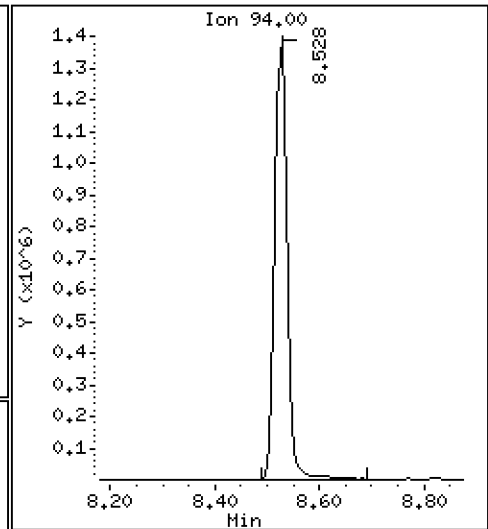
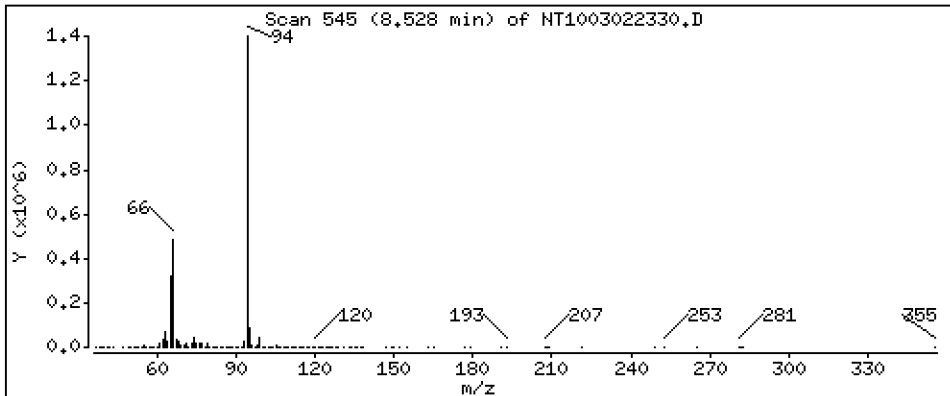
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 11,05 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

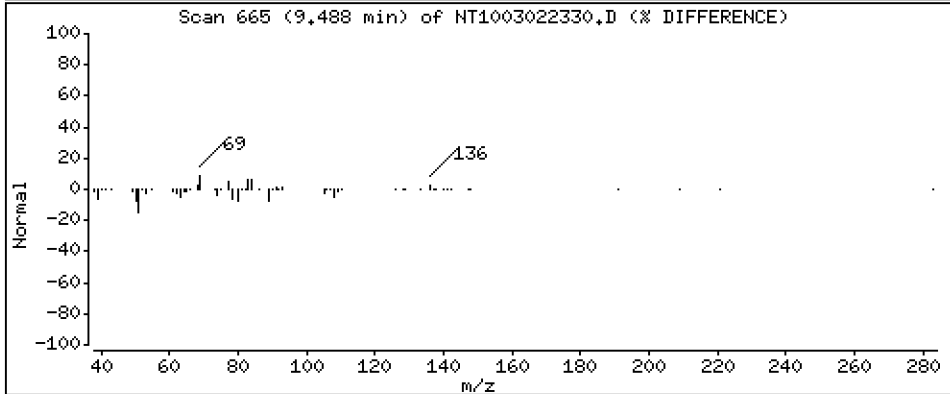
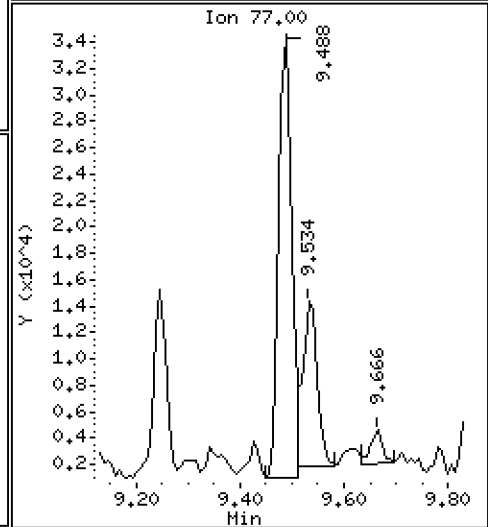
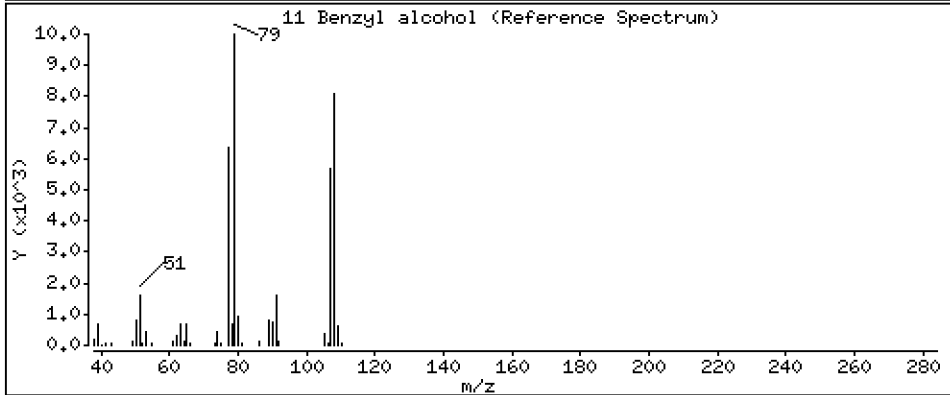
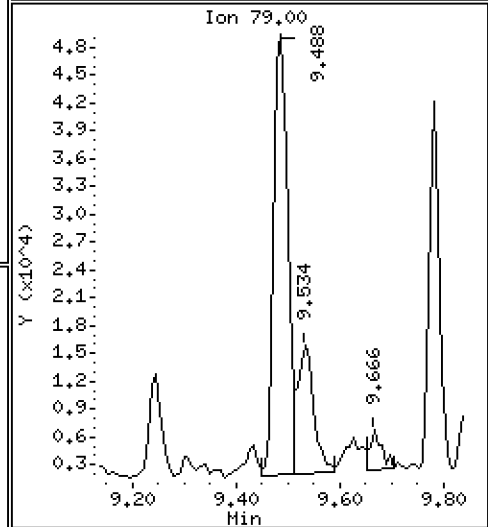
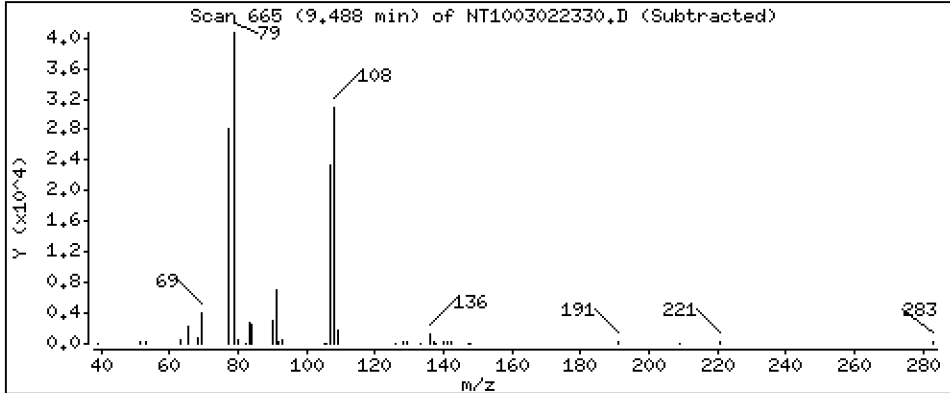
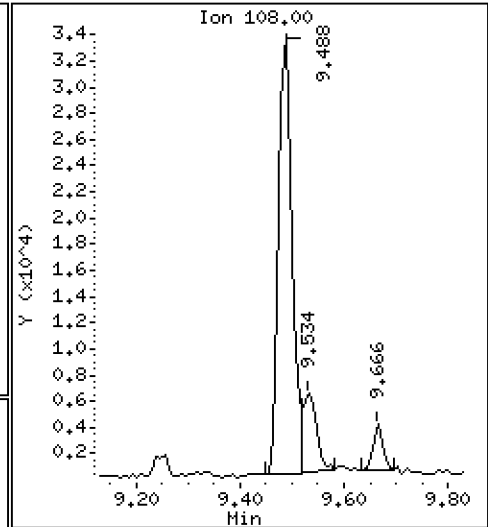
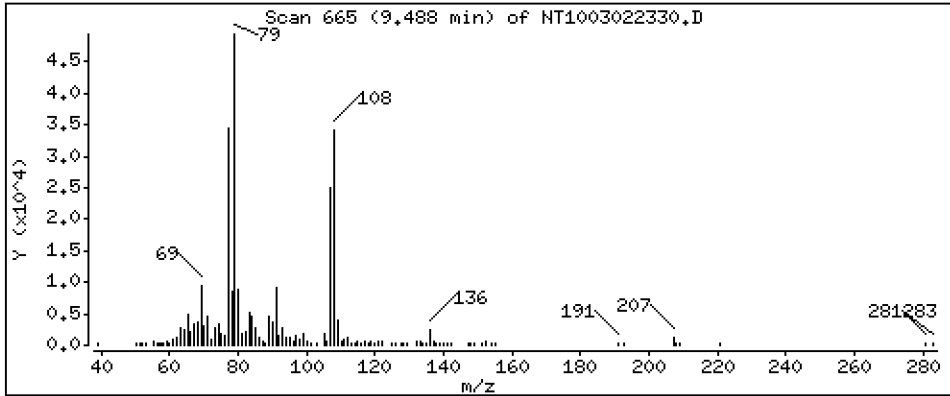
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.5824 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

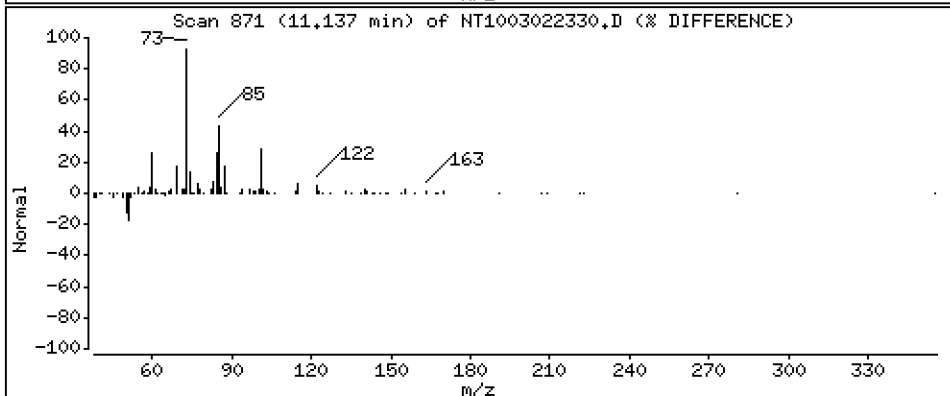
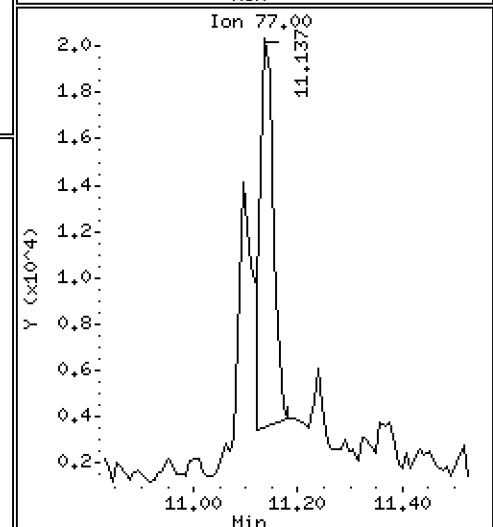
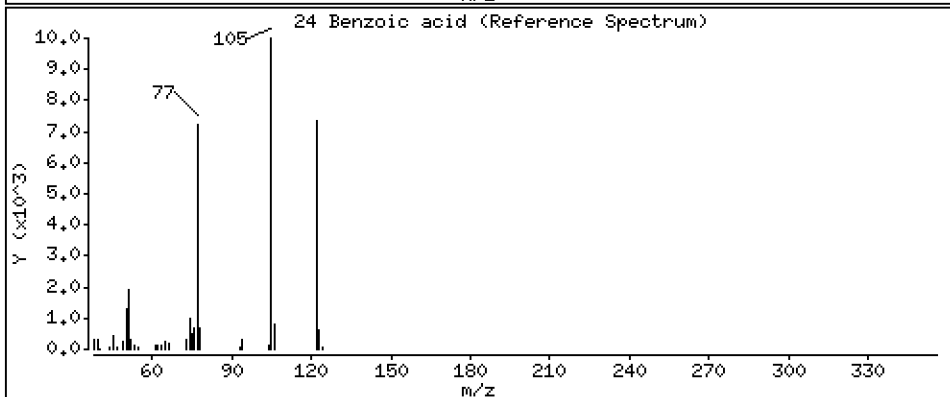
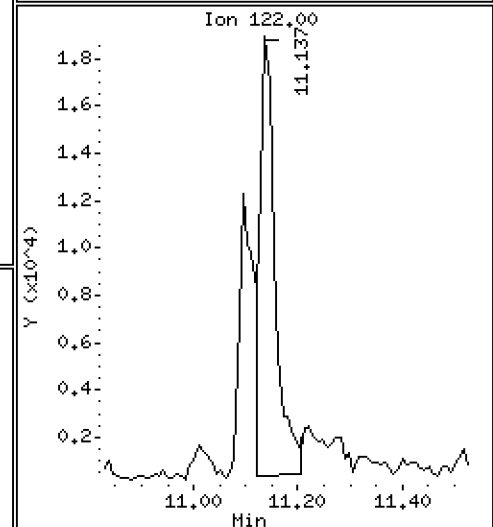
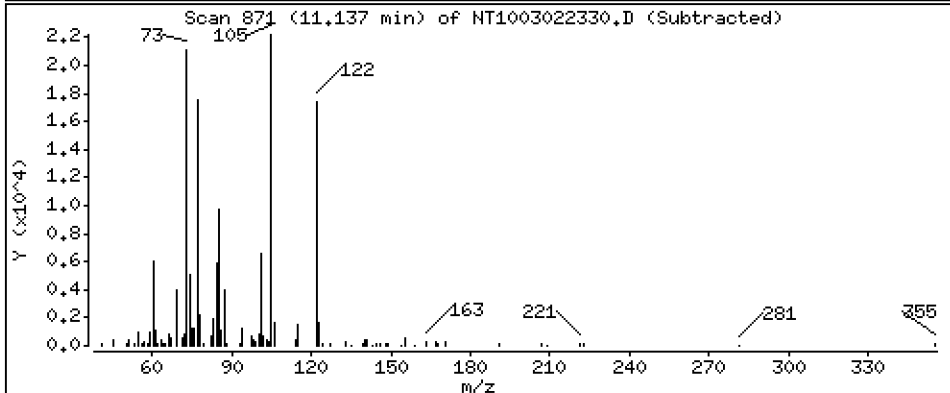
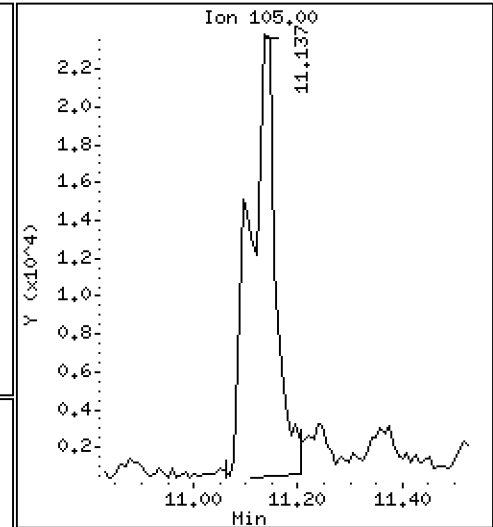
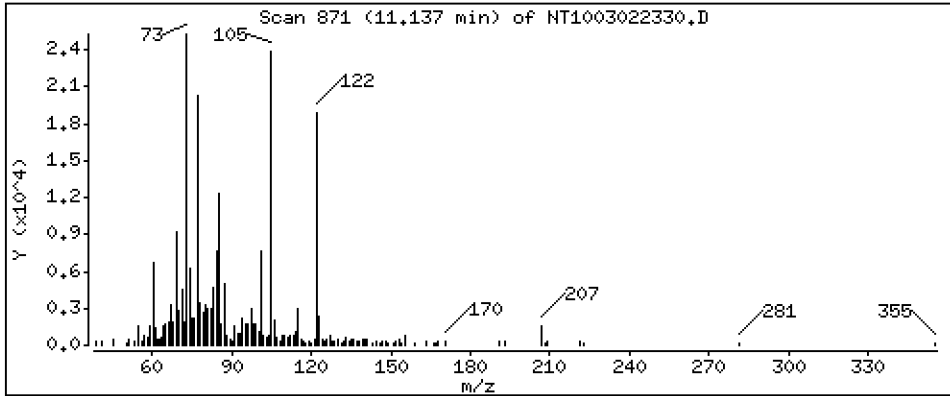
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 0,7731 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

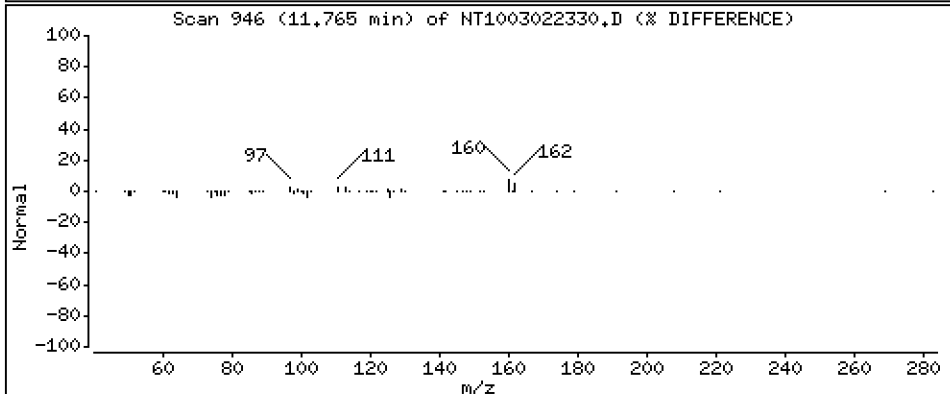
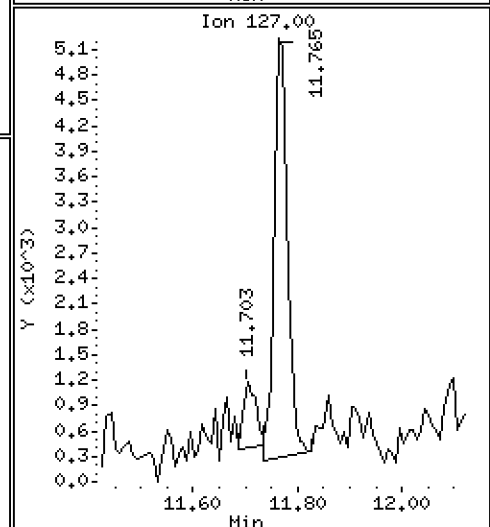
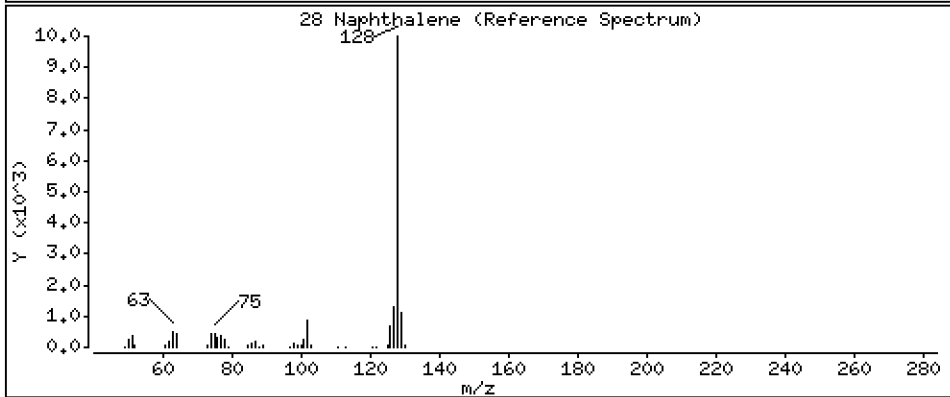
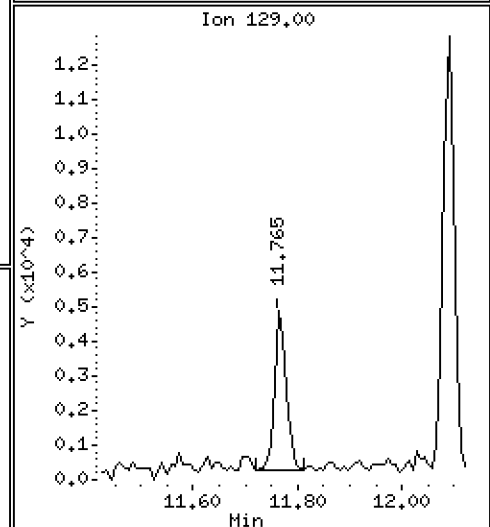
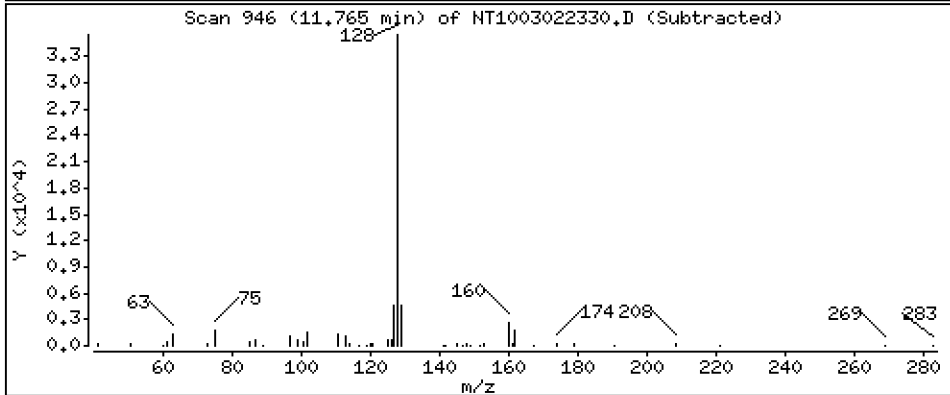
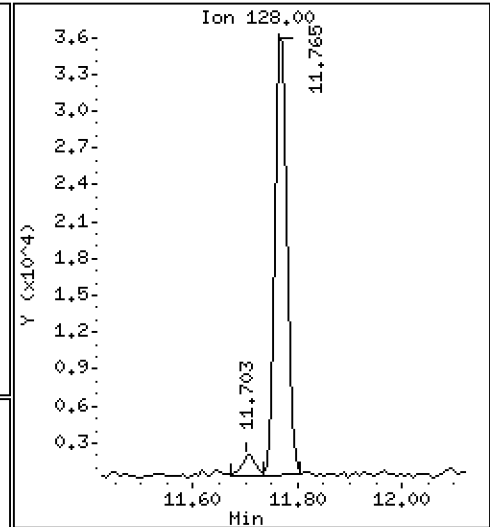
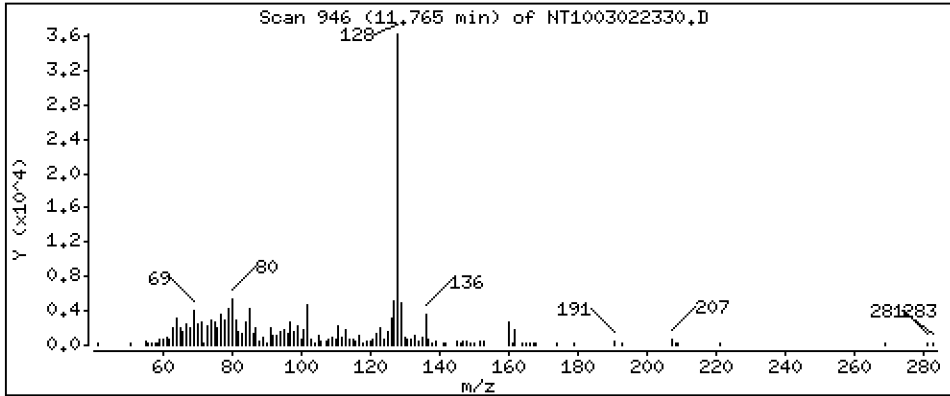
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 0.1188 ug/mL





Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

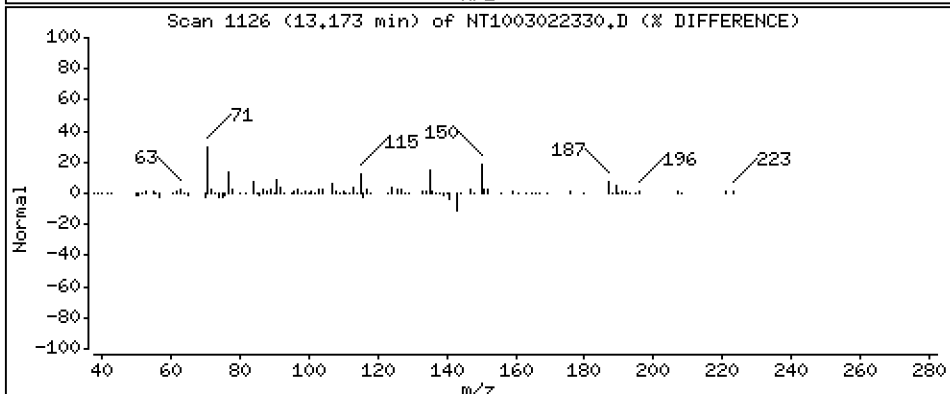
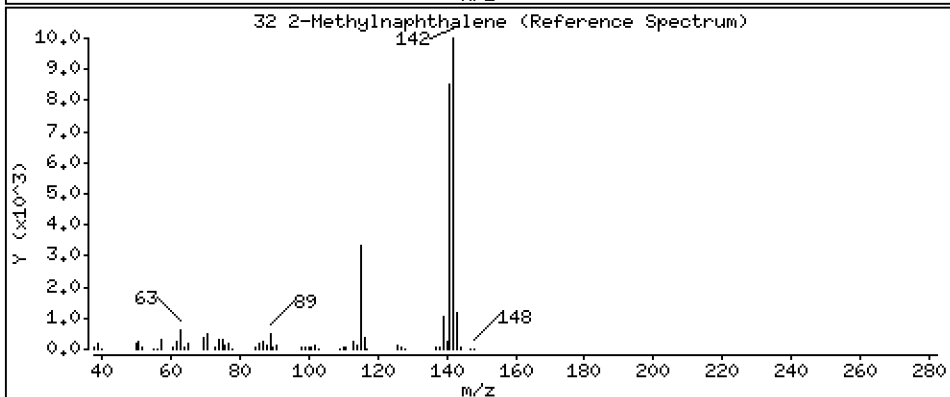
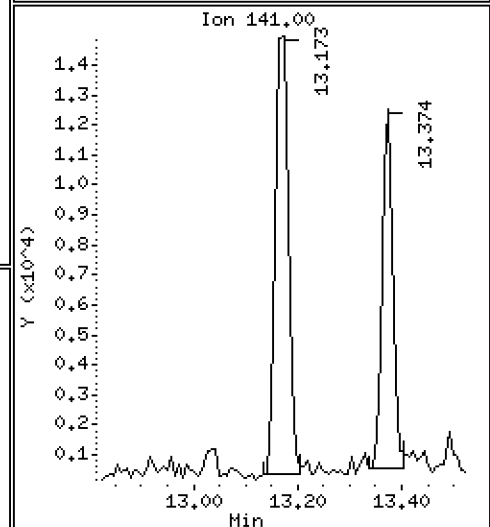
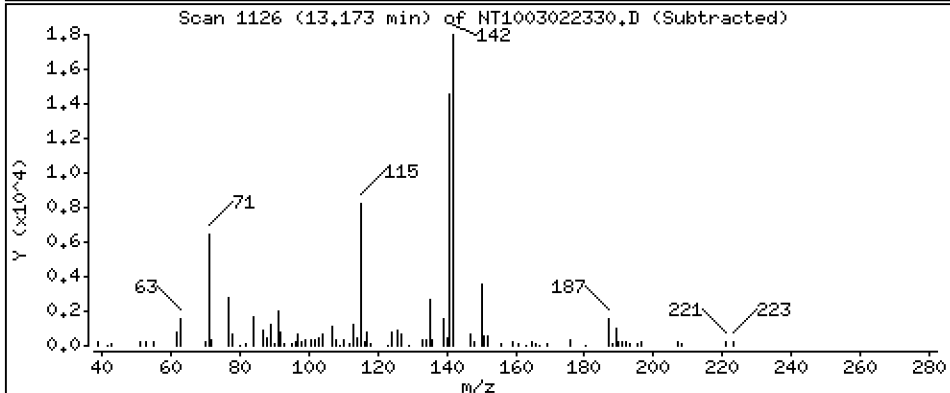
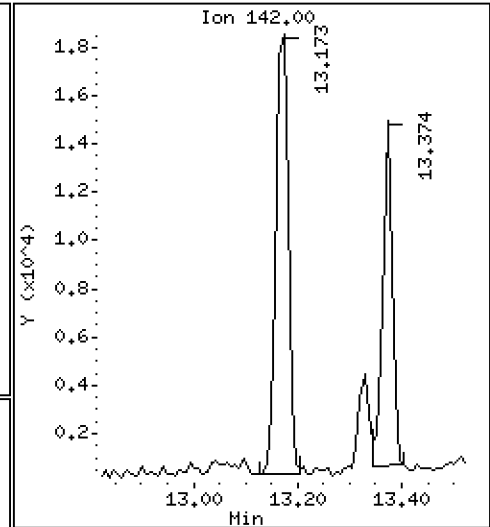
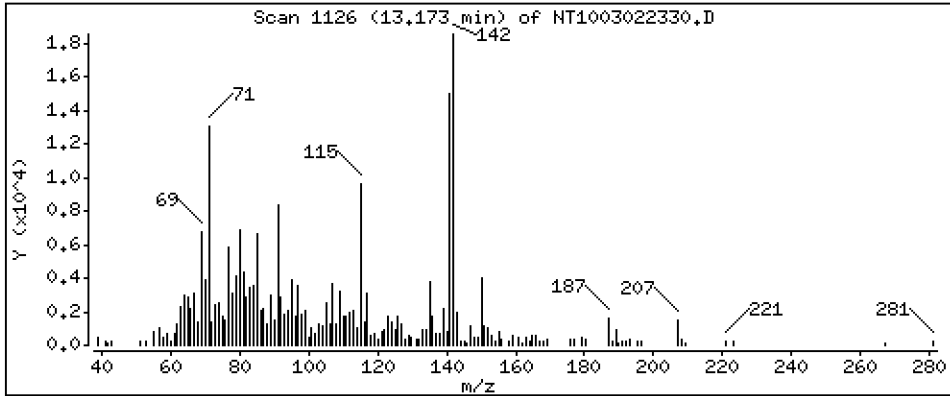
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.08651 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

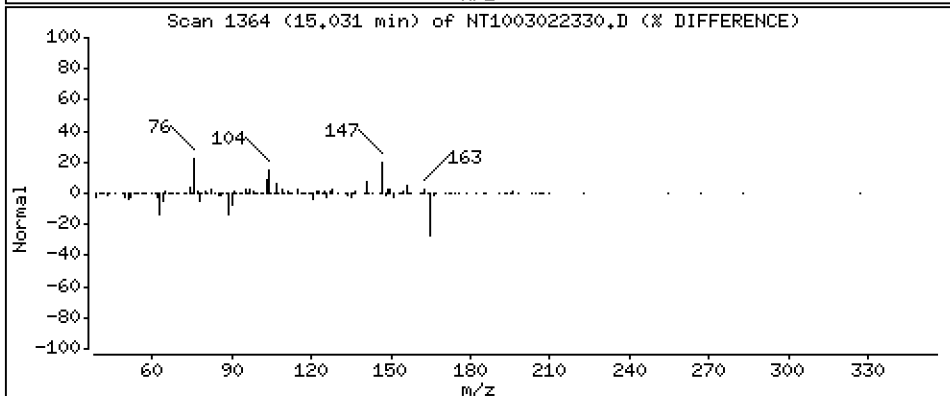
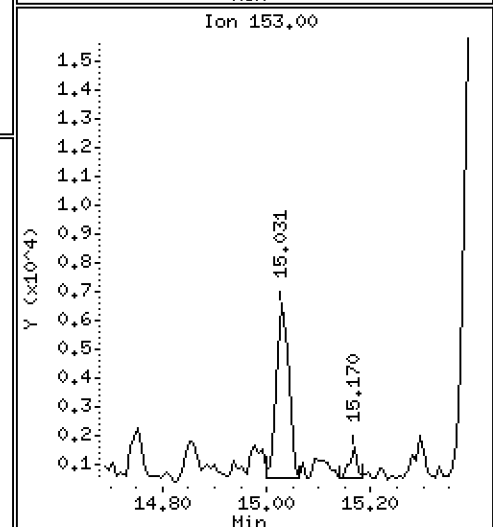
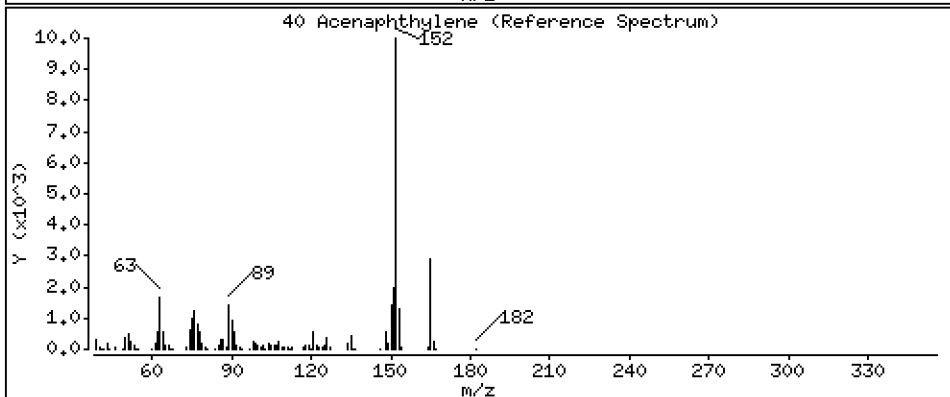
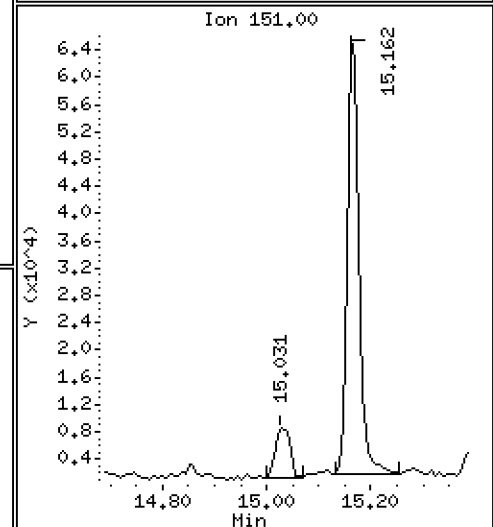
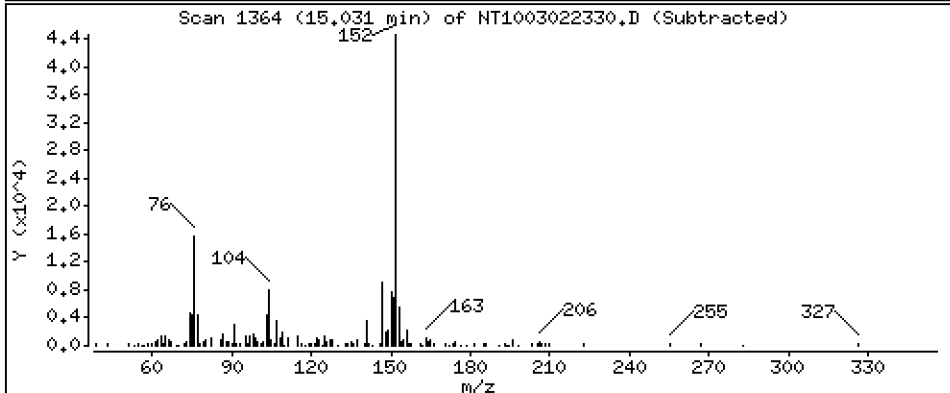
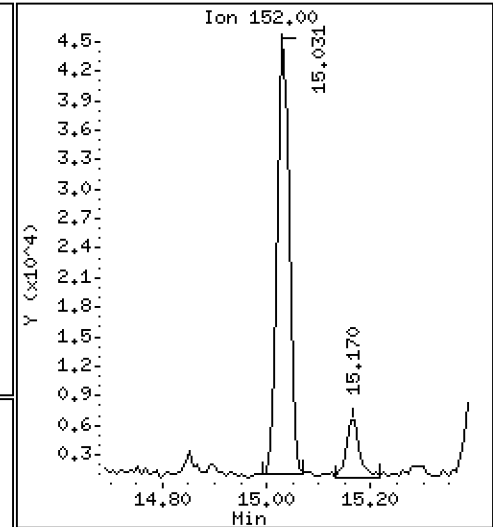
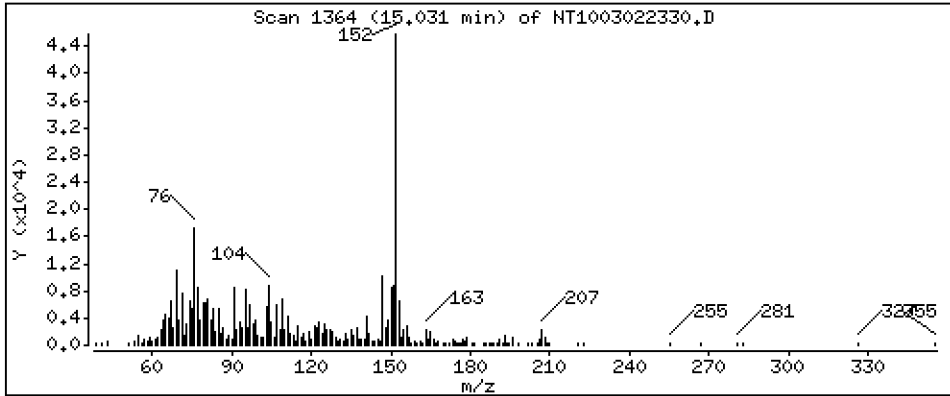
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,1470 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

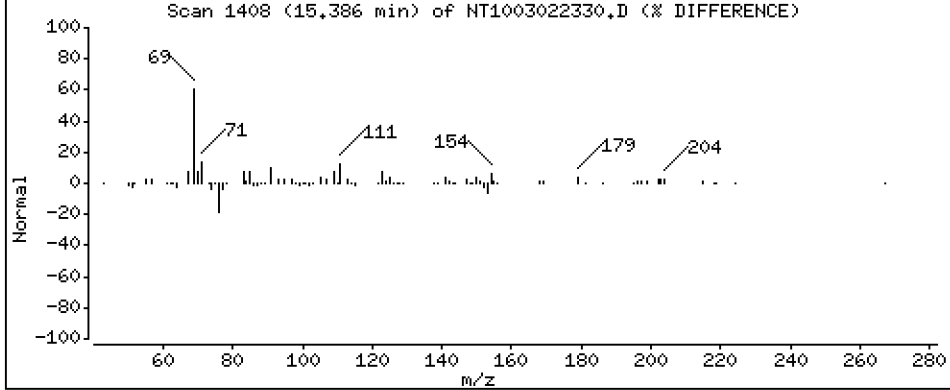
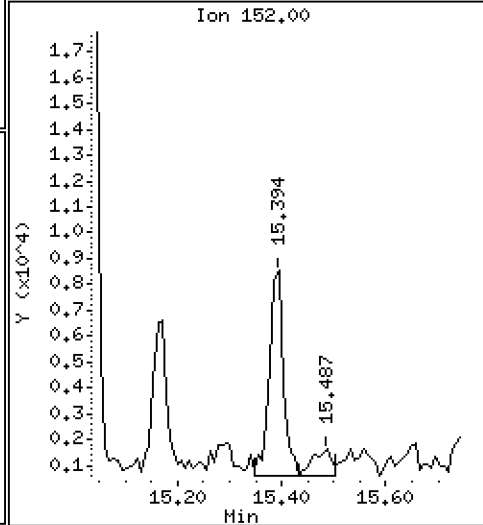
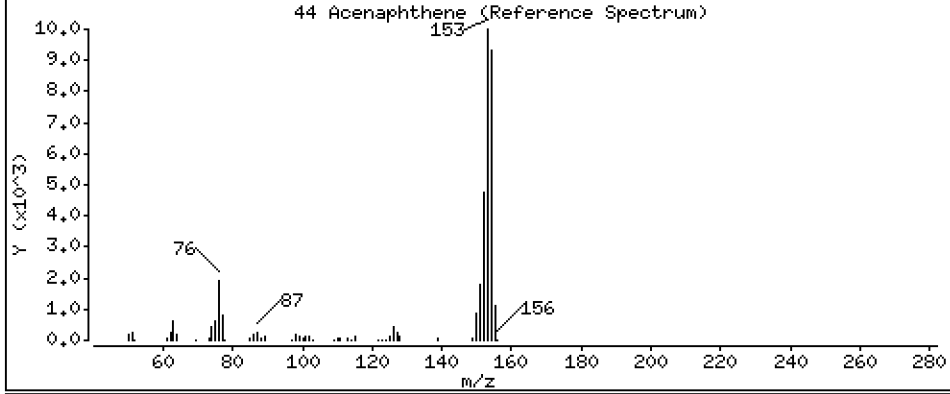
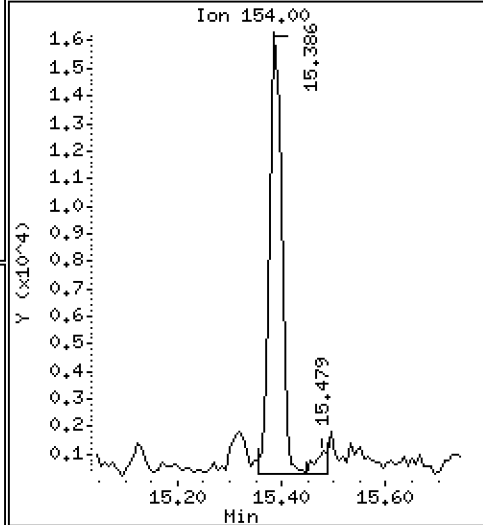
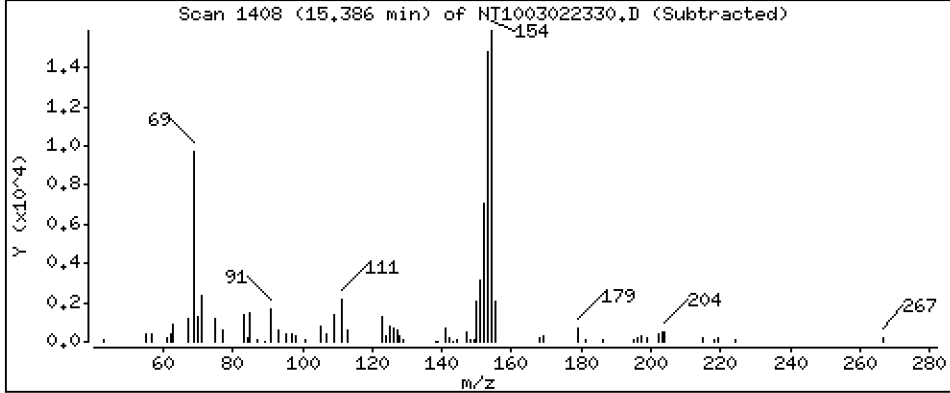
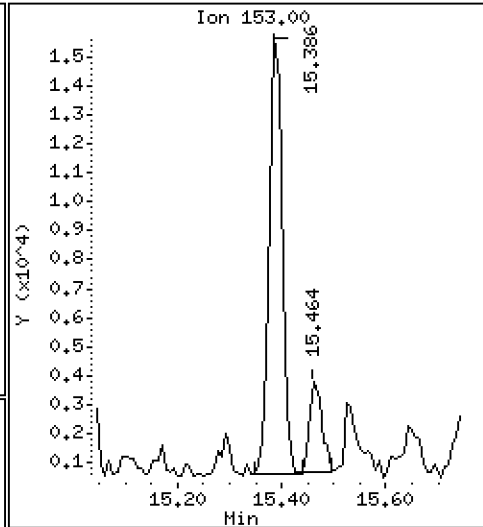
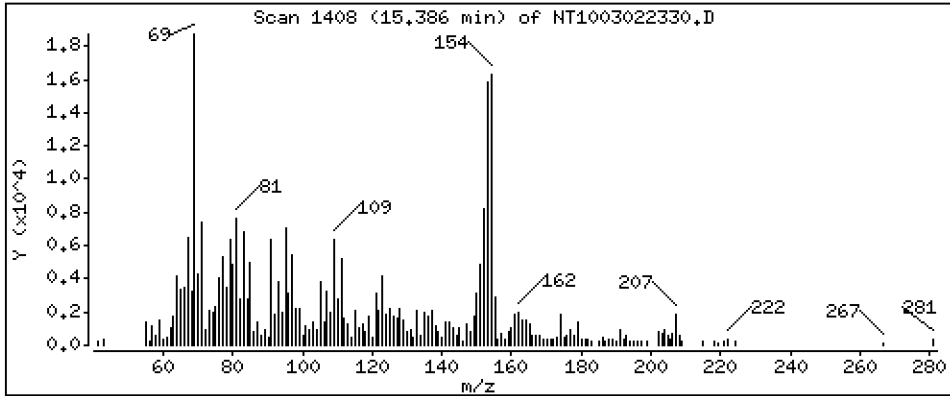
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.09072 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

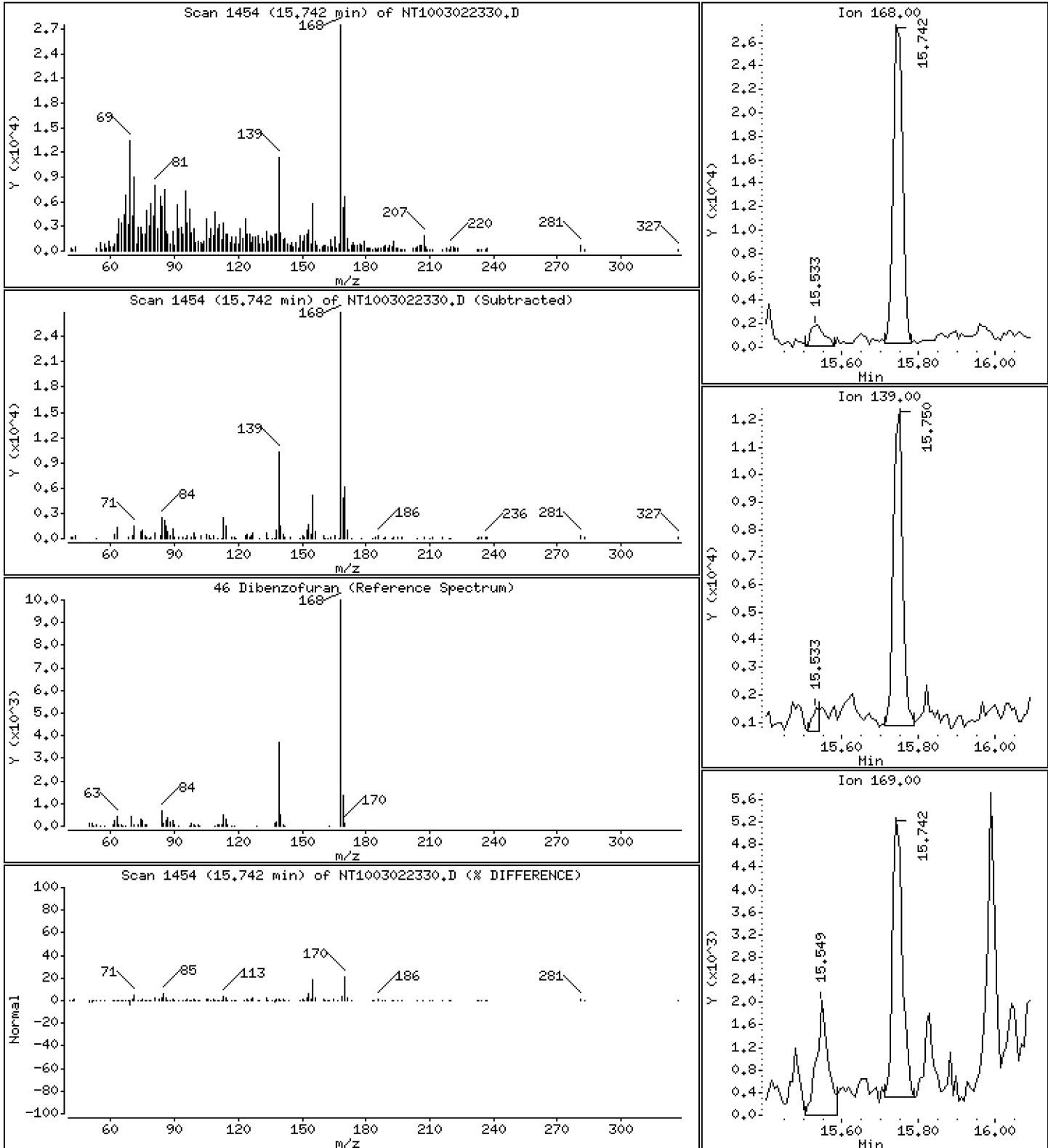
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1083 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

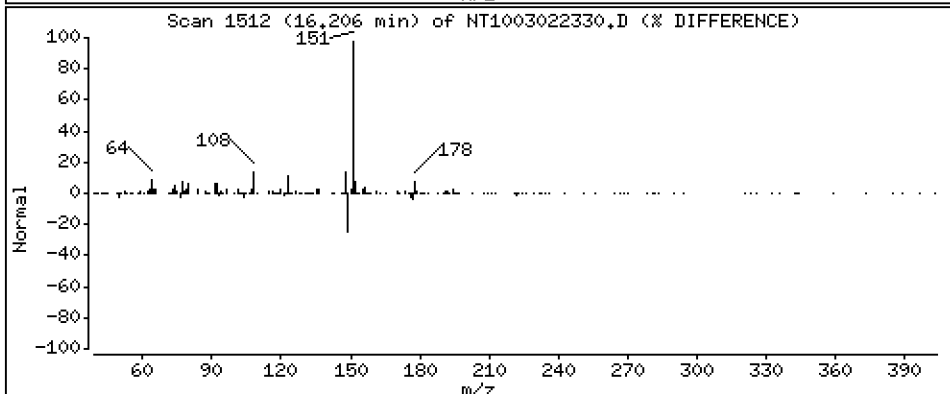
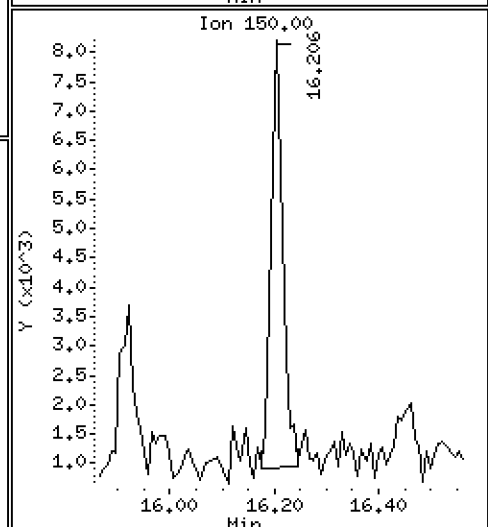
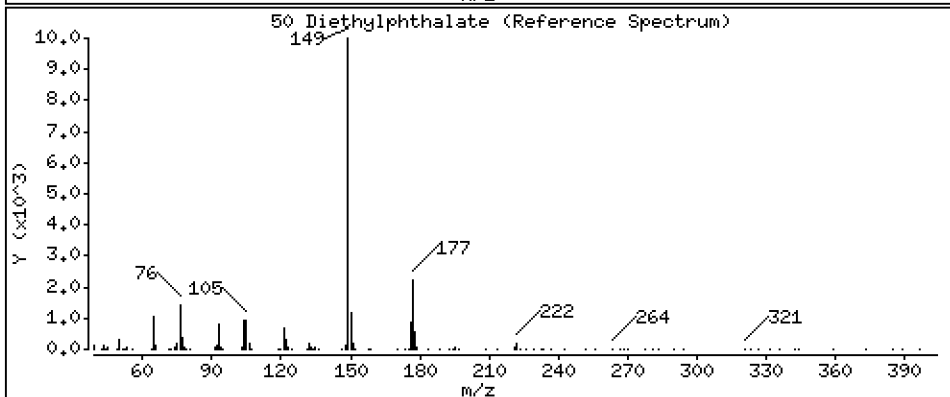
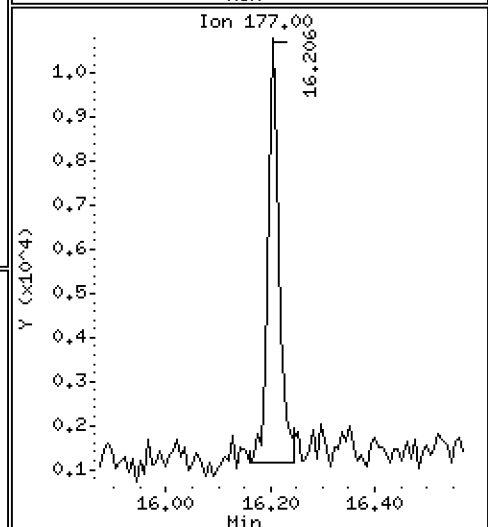
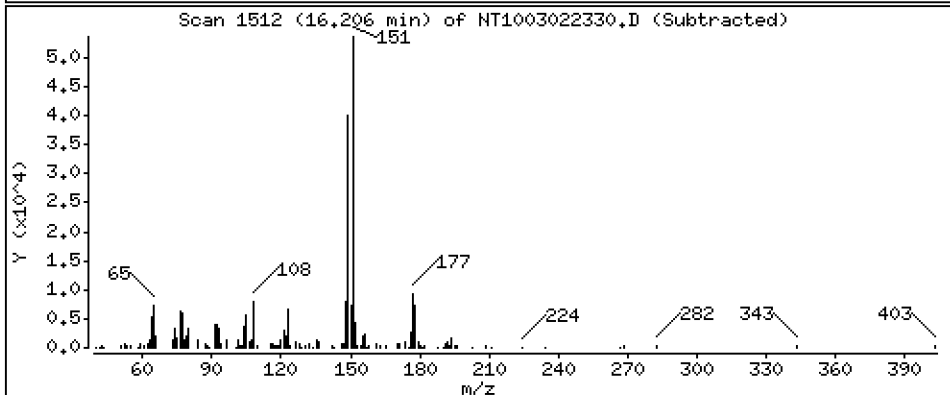
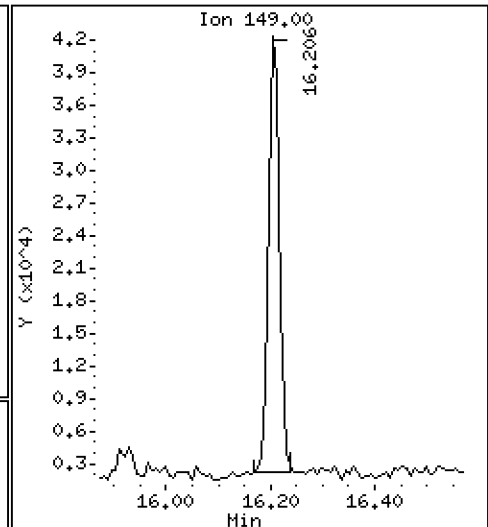
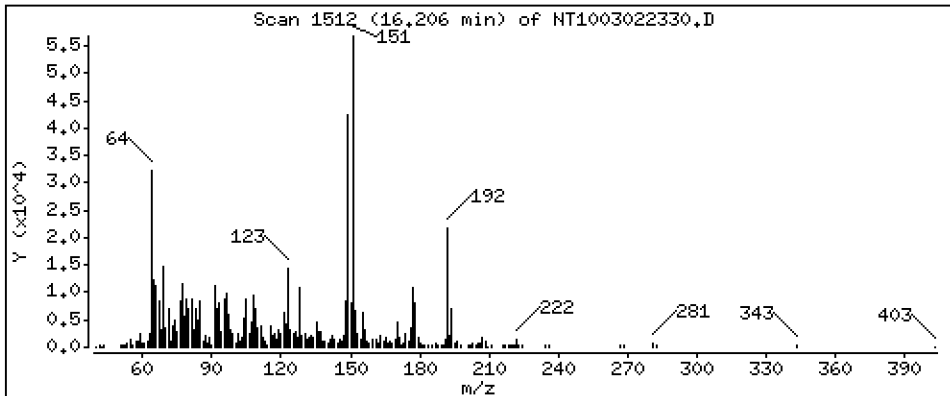
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1862 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

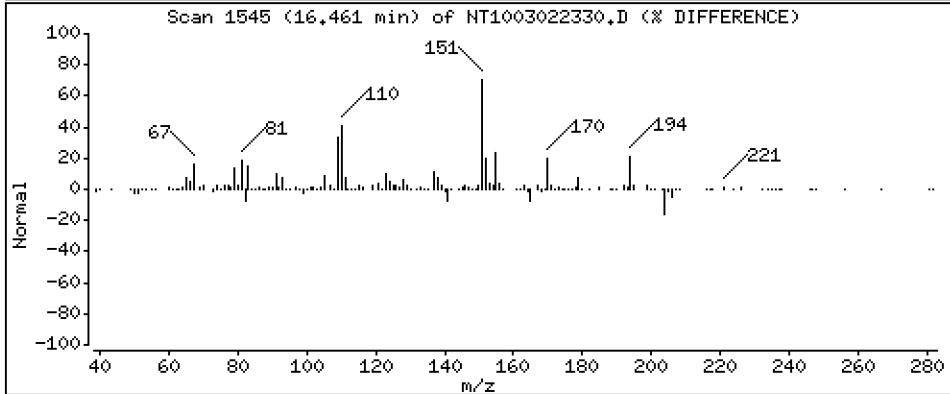
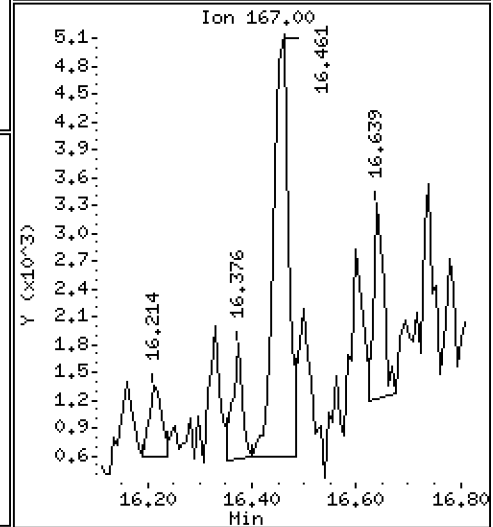
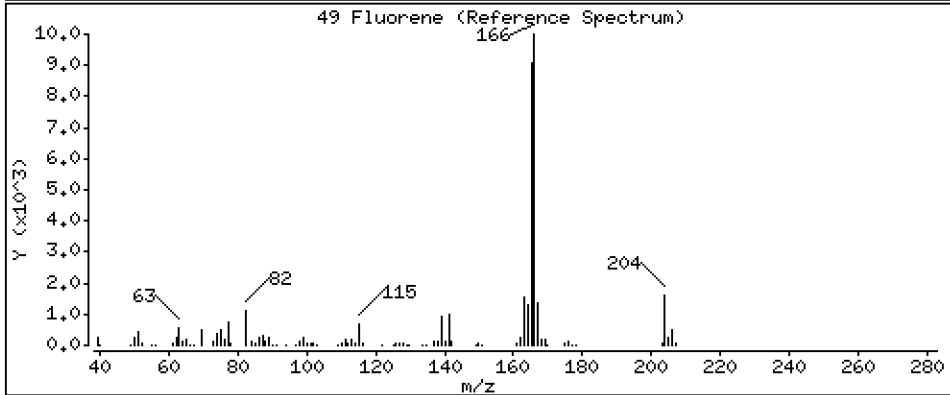
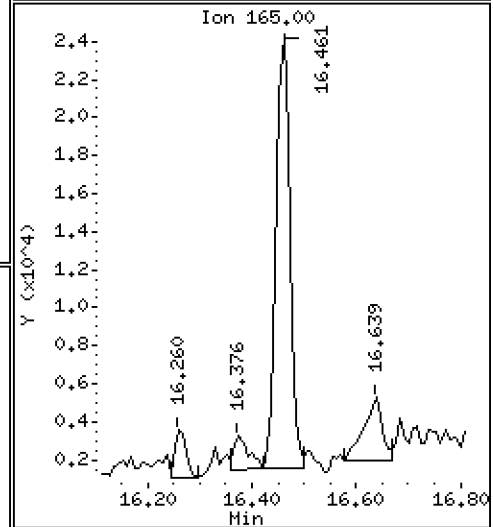
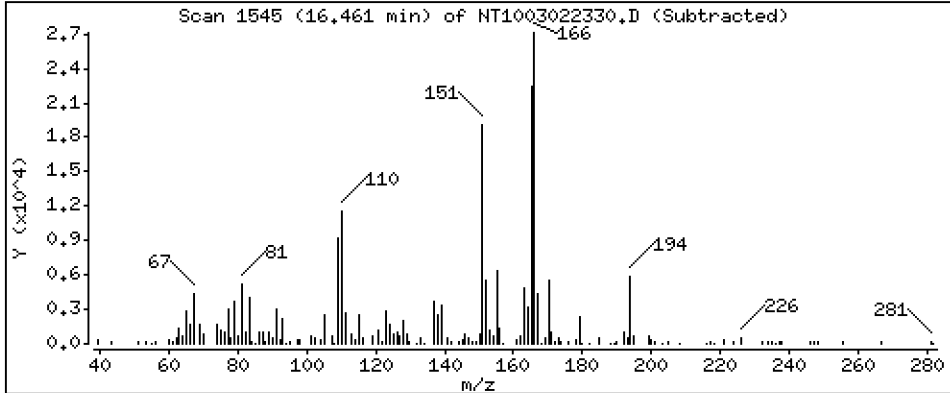
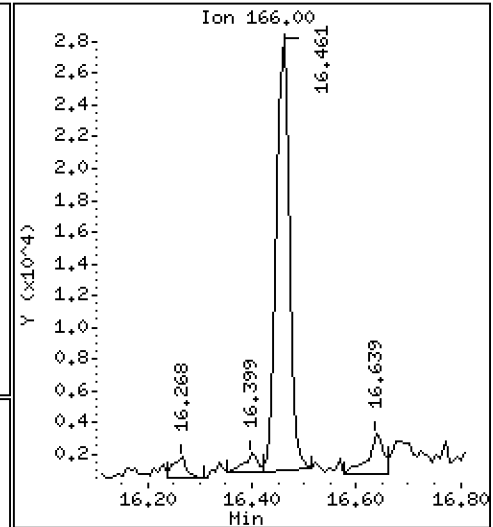
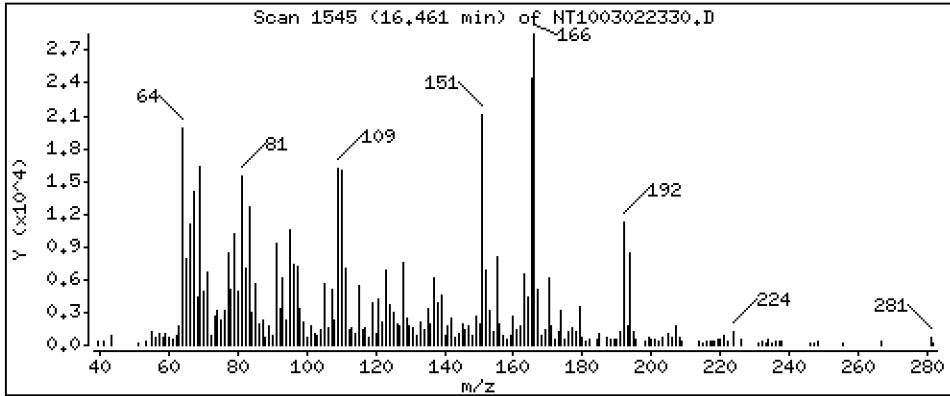
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.1345 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

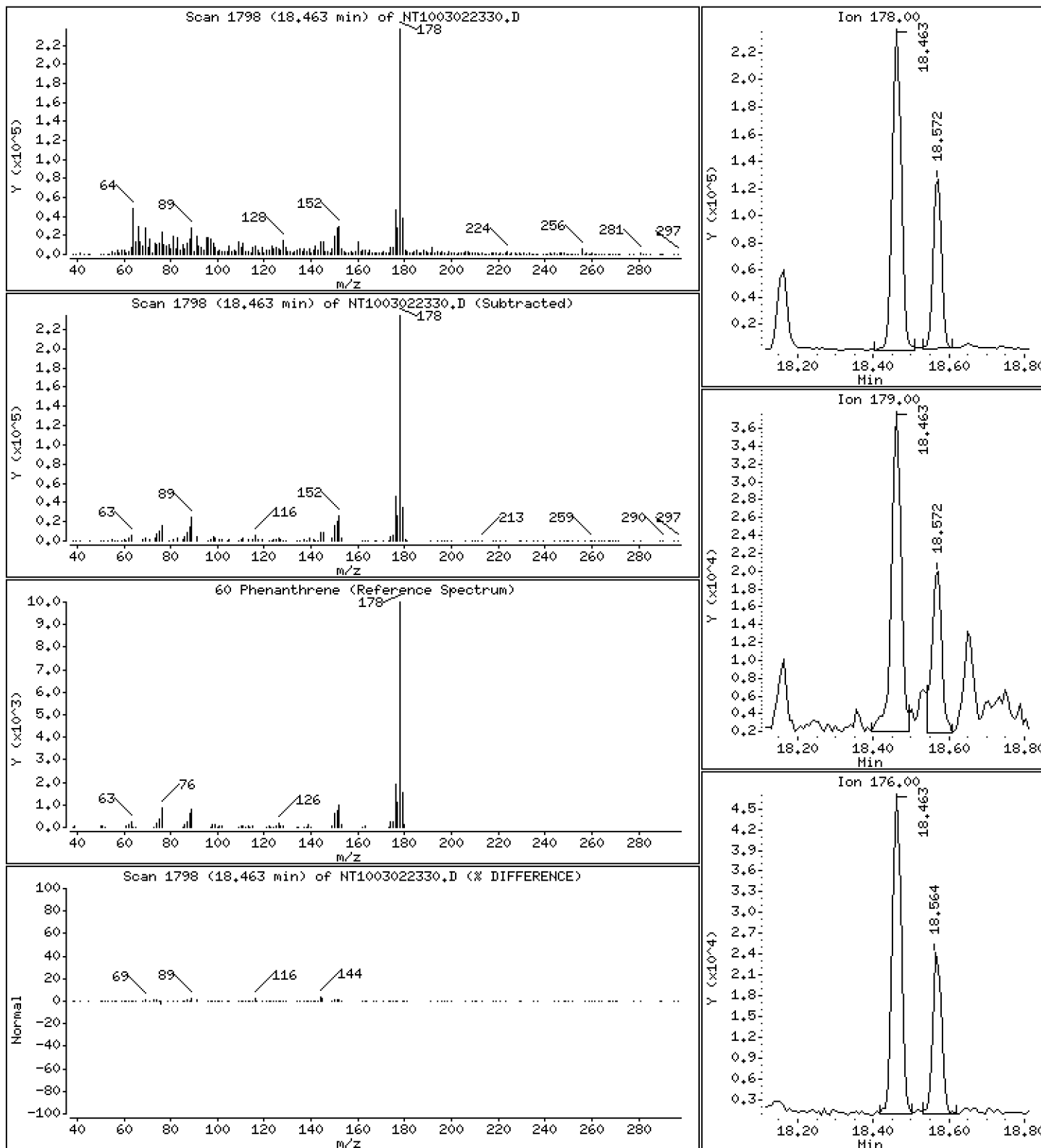
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 0.7940 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

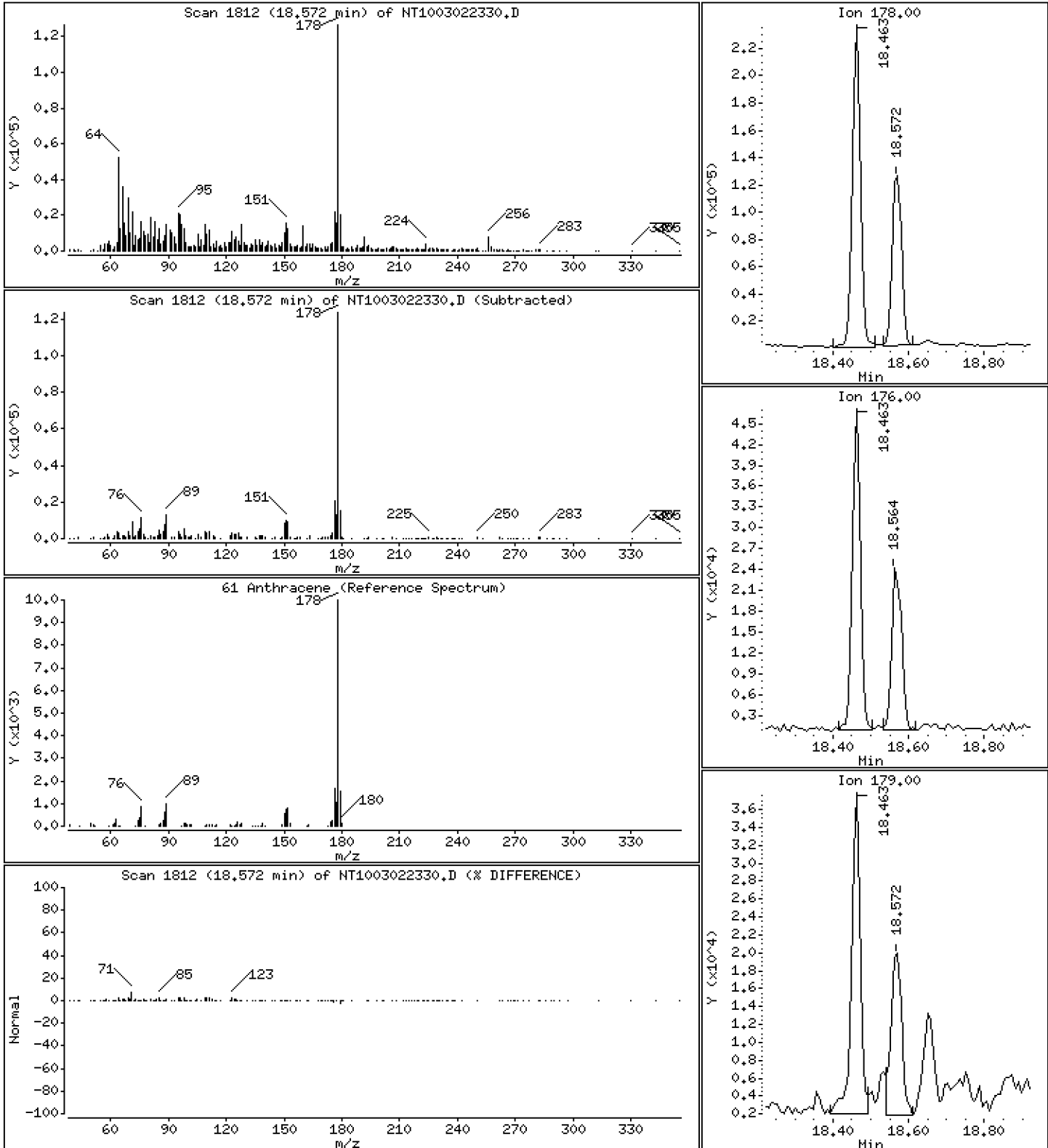
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,4521 ug/mL





Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

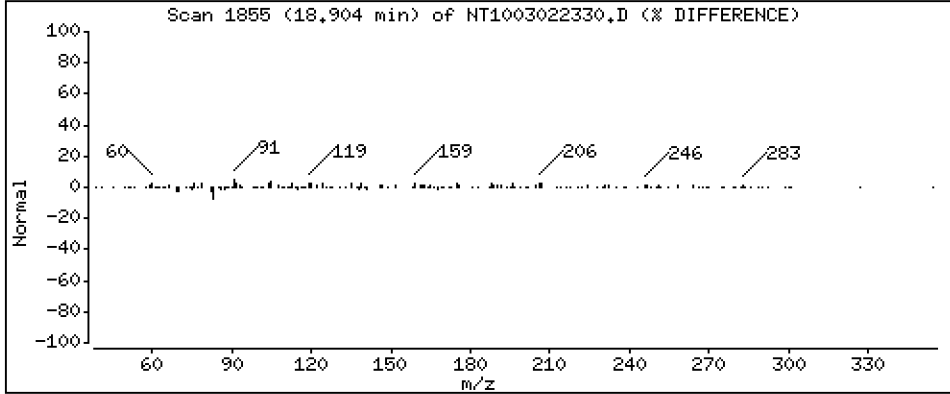
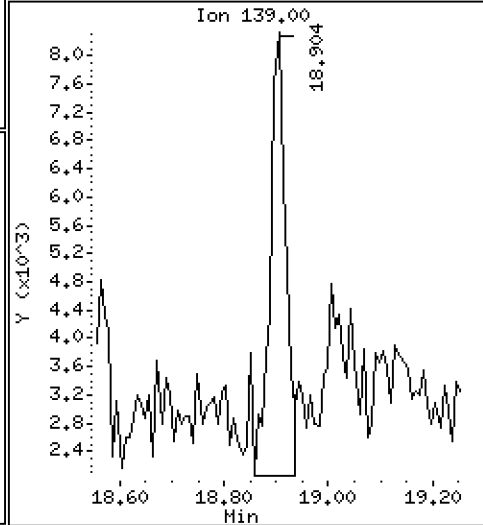
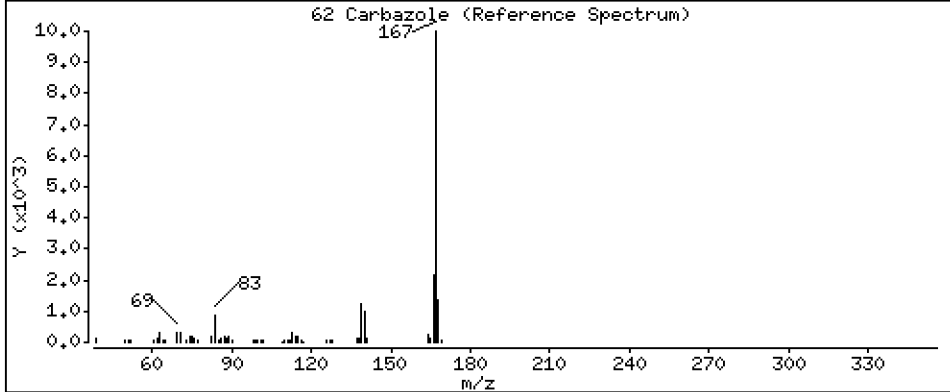
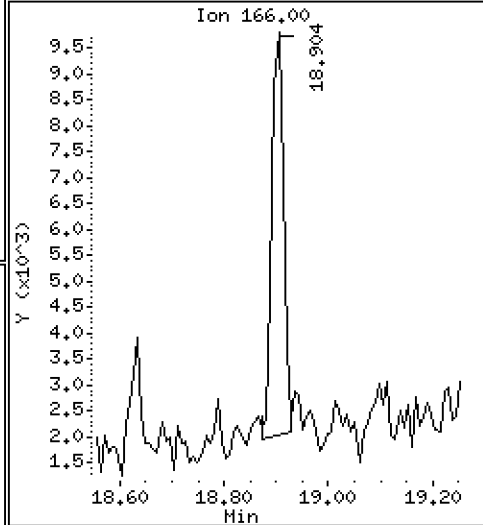
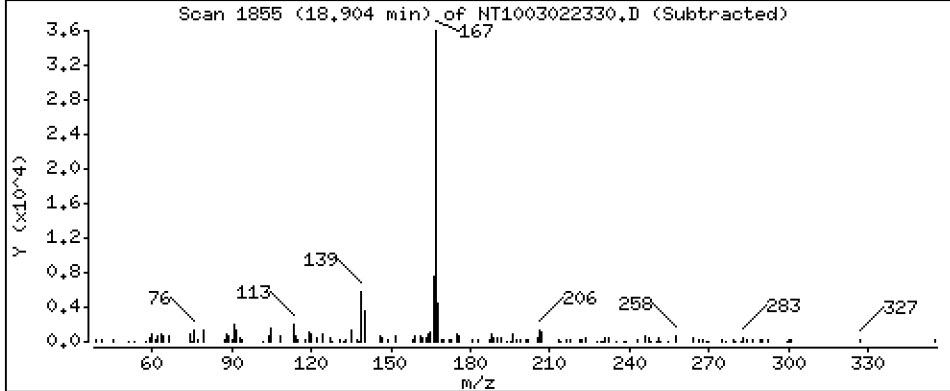
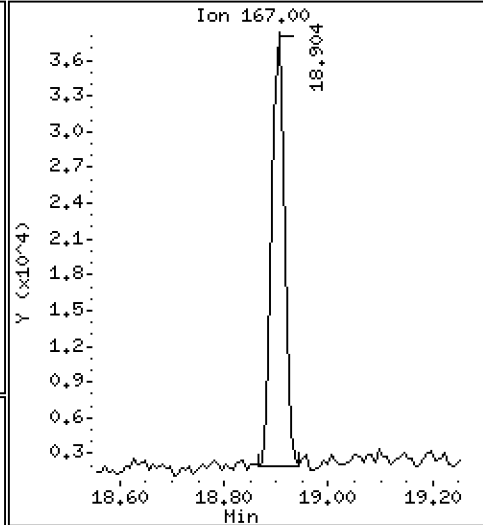
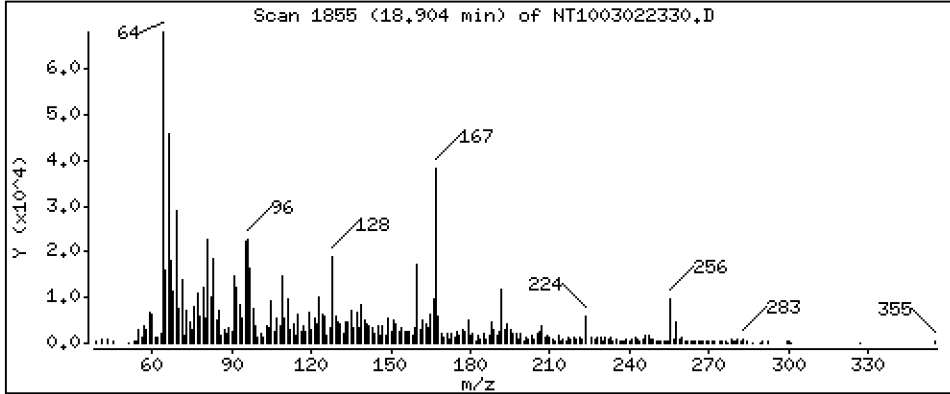
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,1435 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

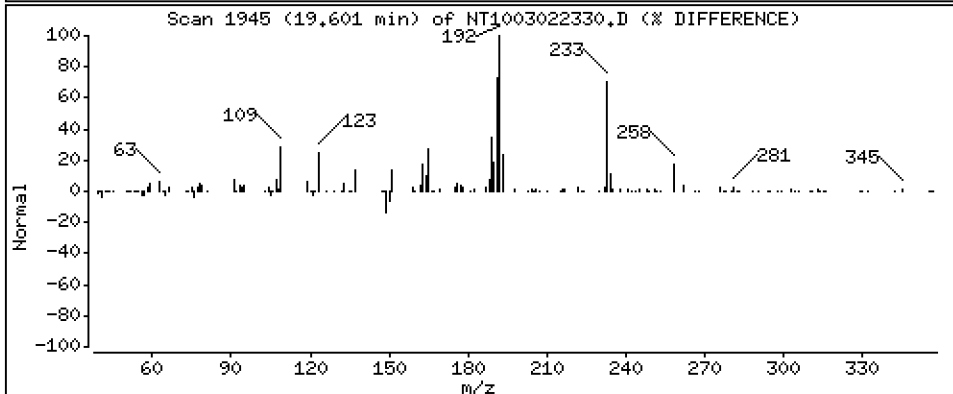
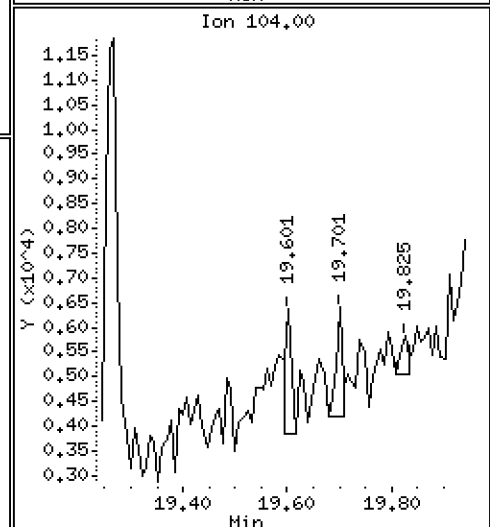
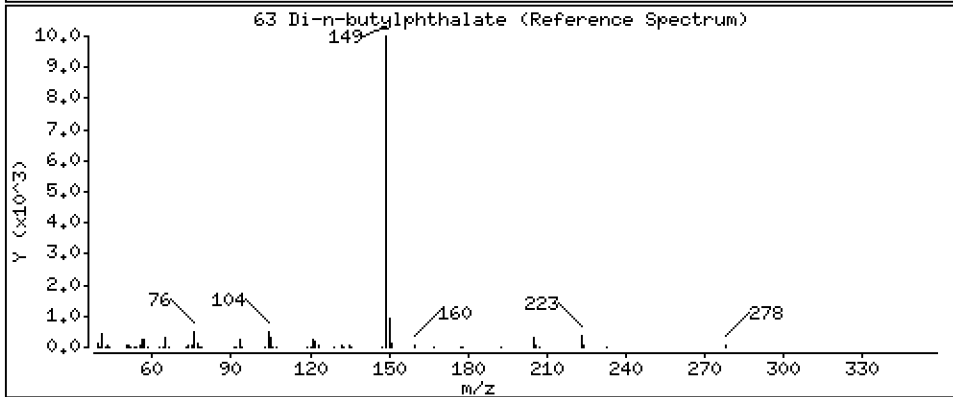
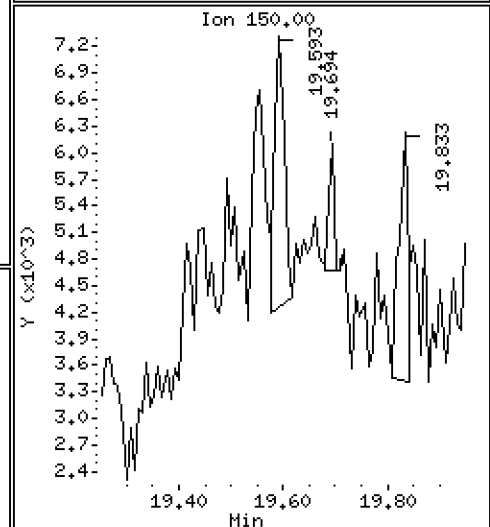
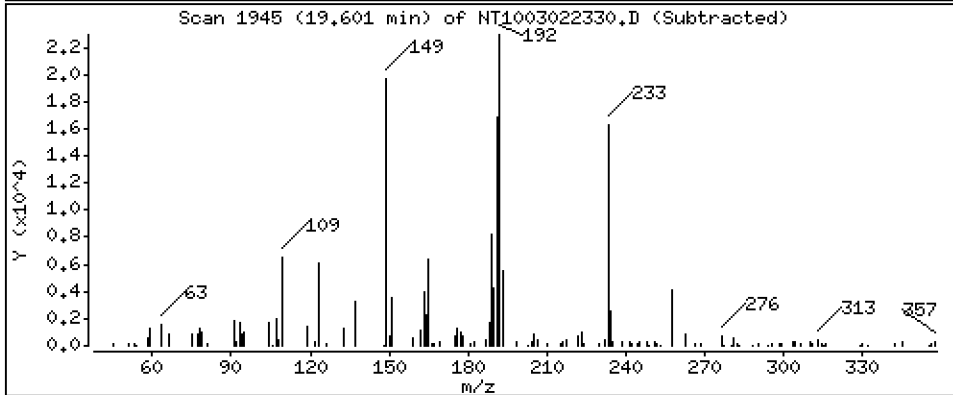
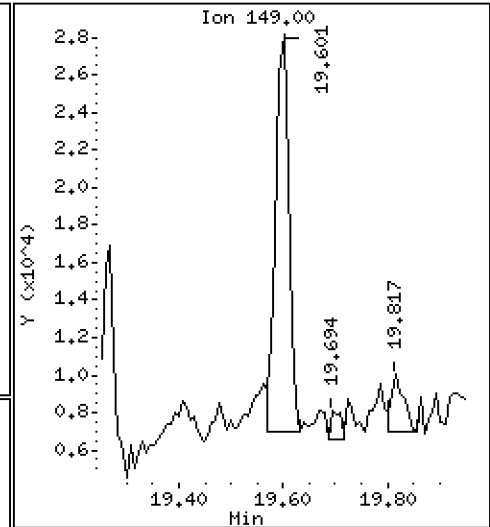
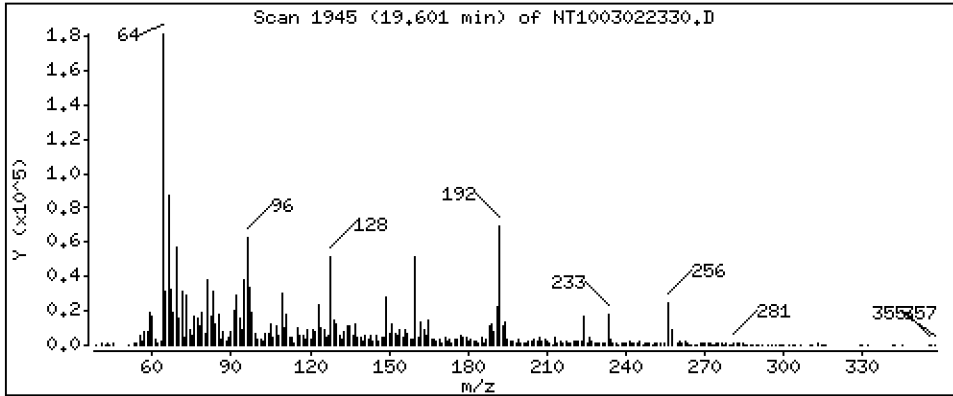
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.06463 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

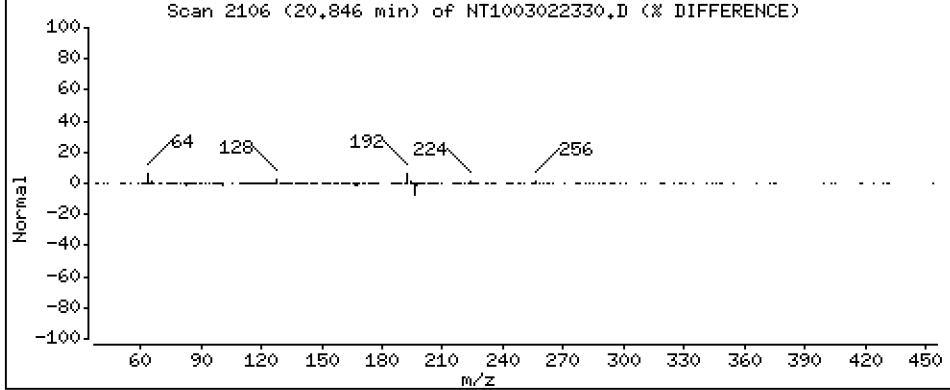
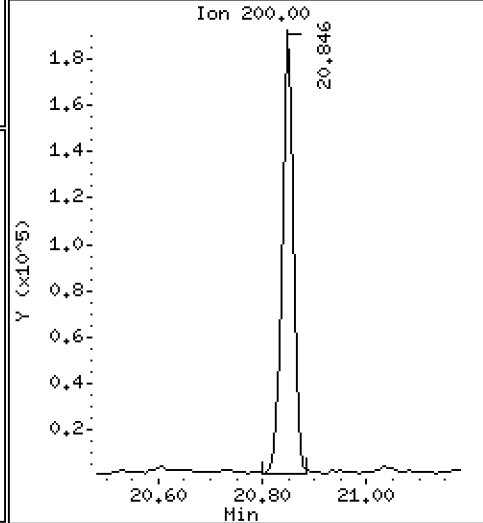
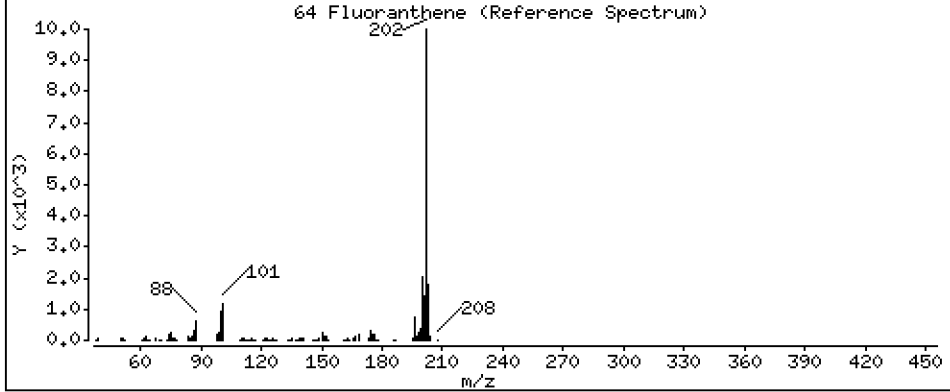
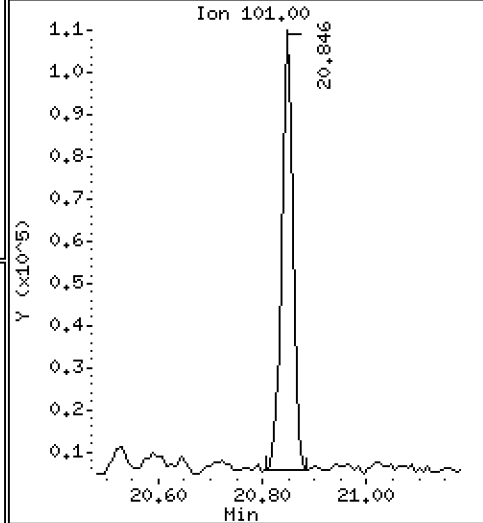
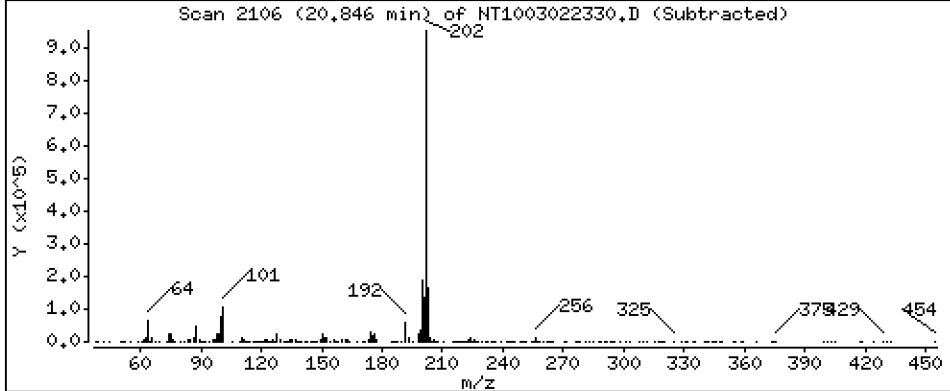
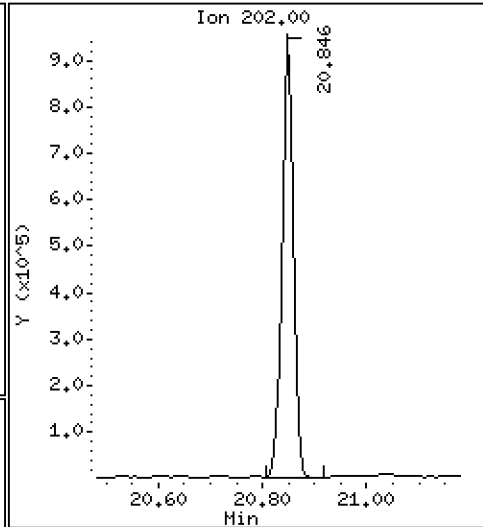
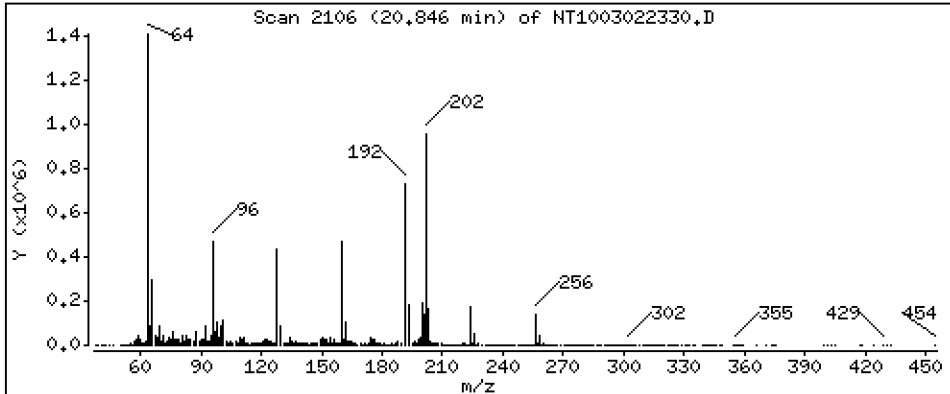
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 2,023 ug/mL

64 Fluoranthene



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

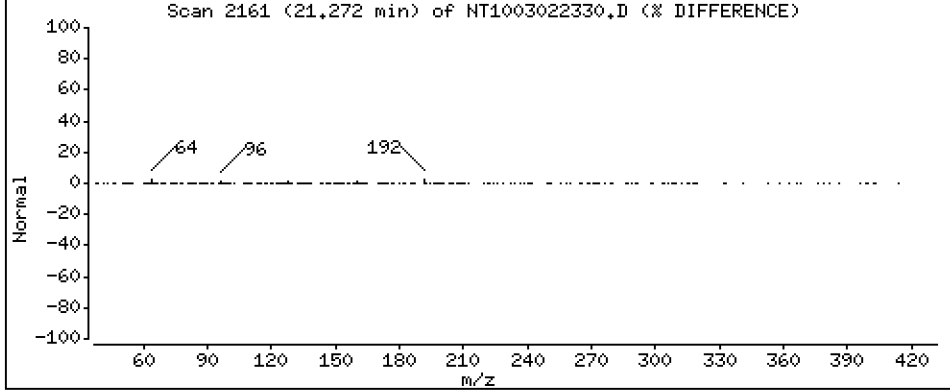
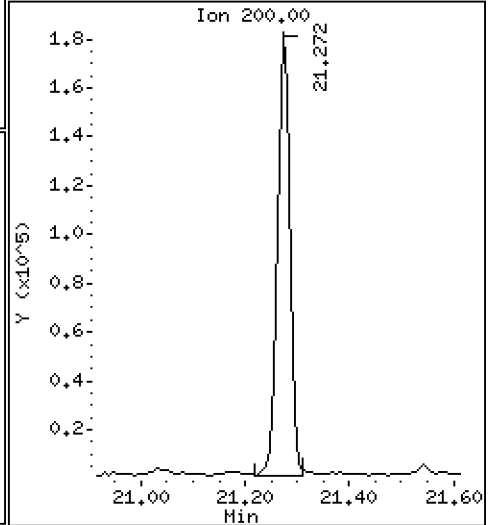
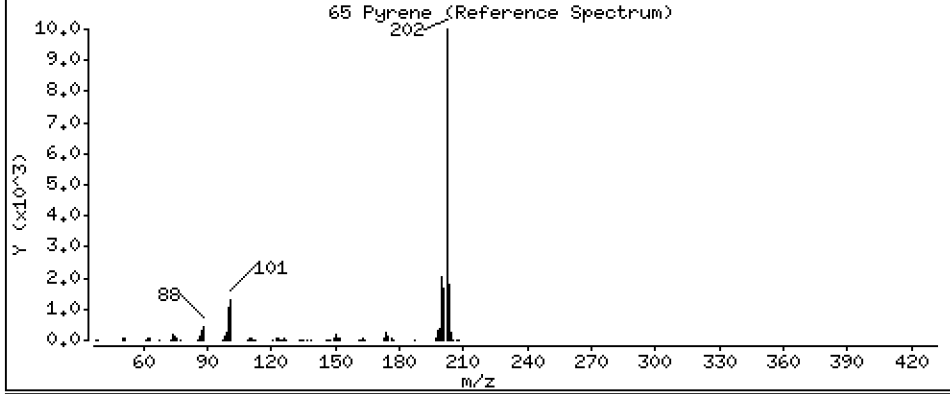
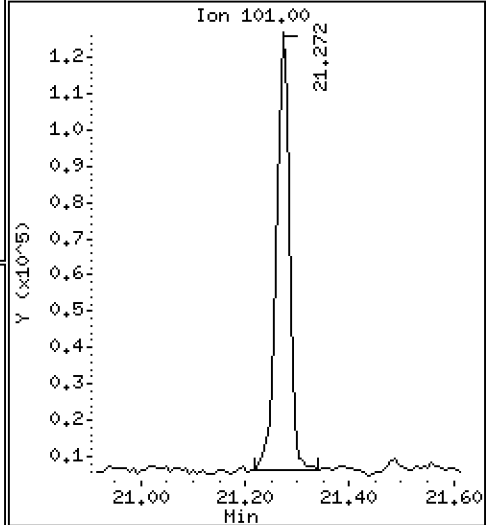
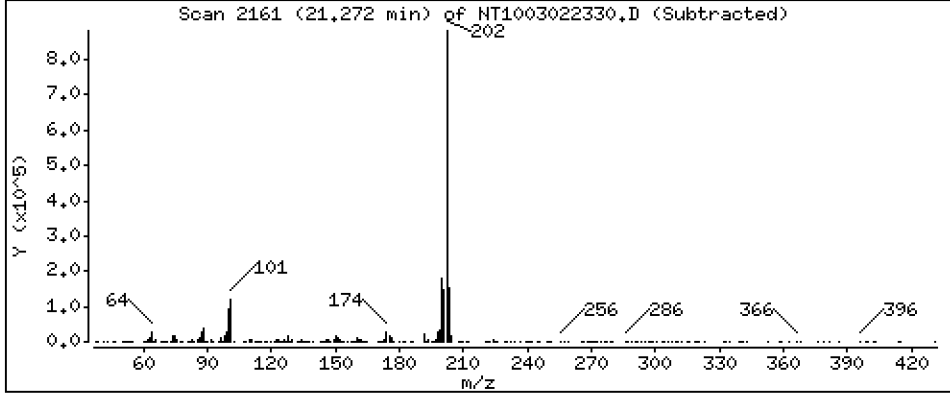
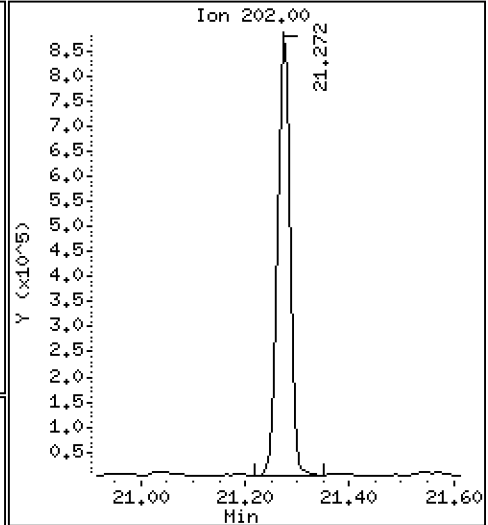
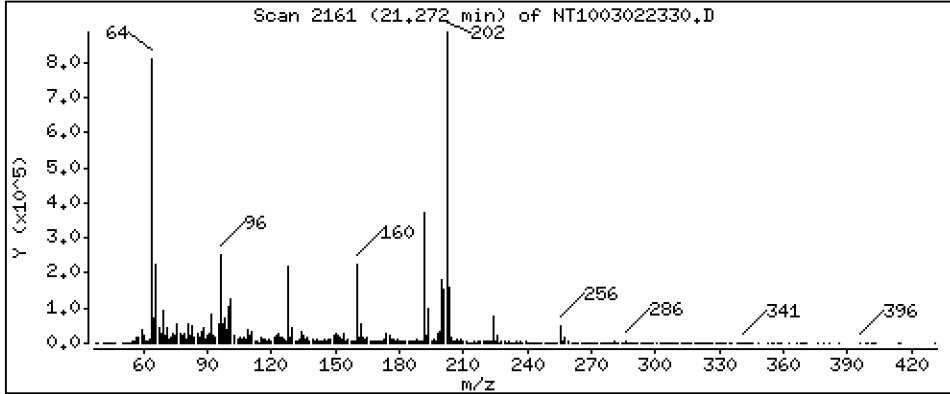
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 1,898 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

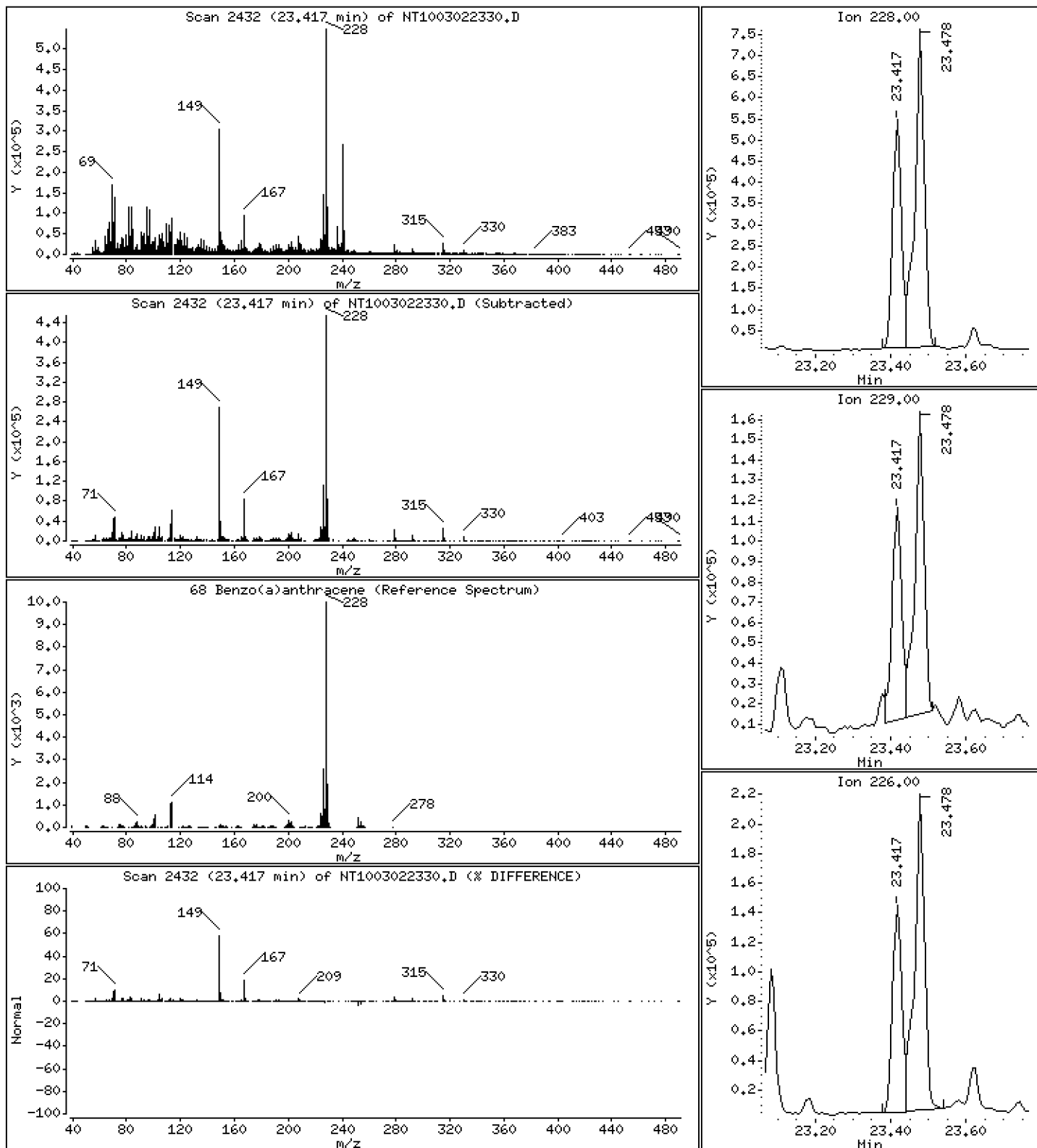
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,129 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

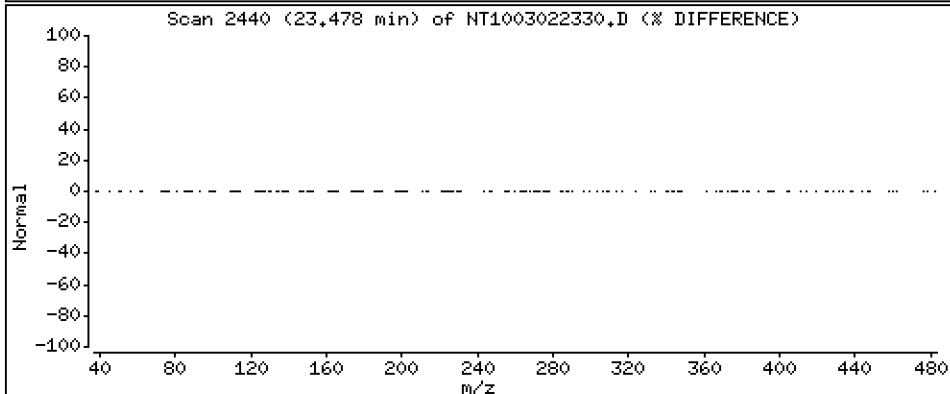
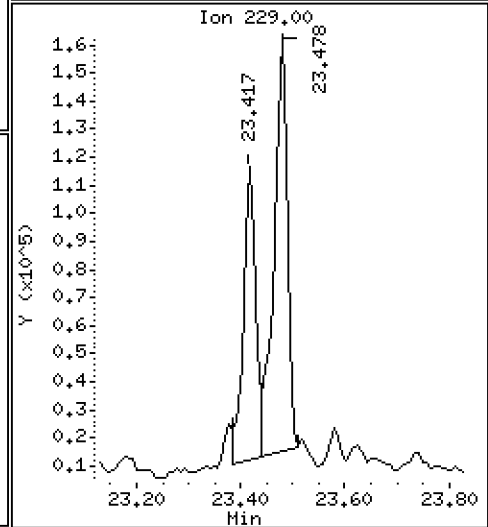
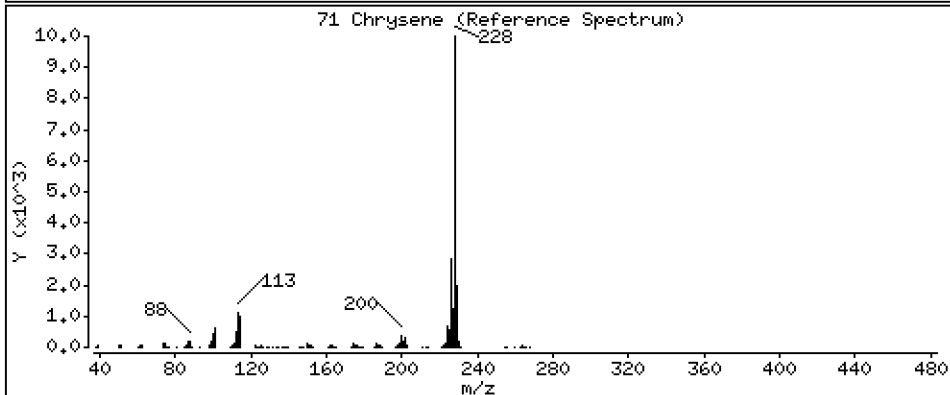
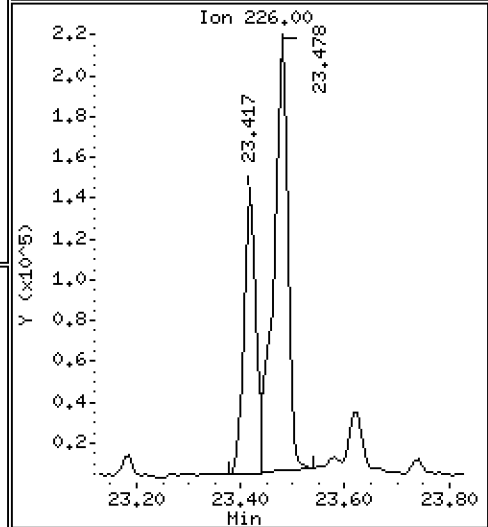
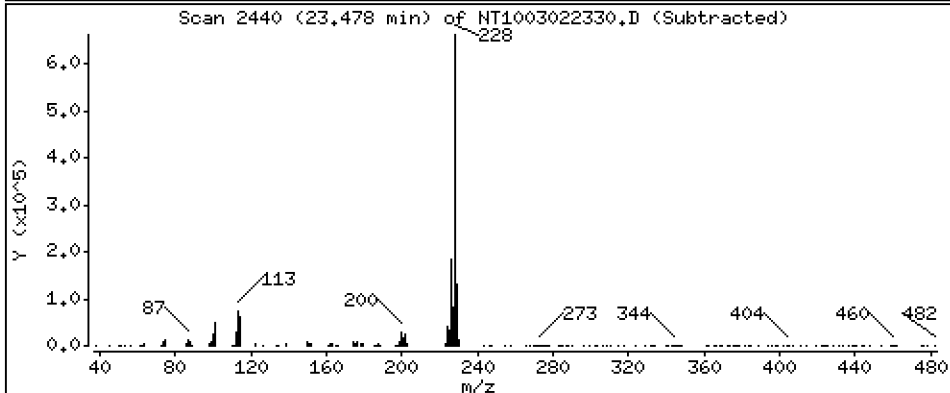
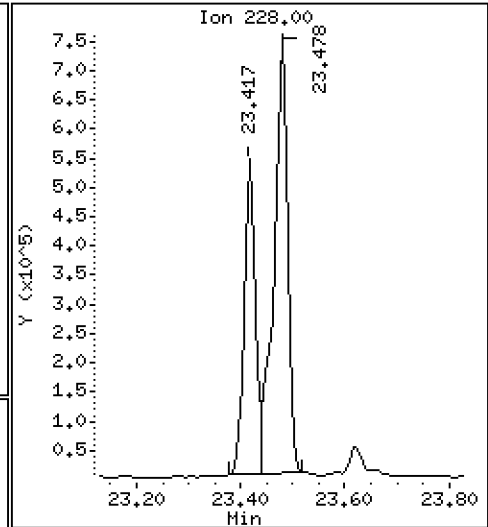
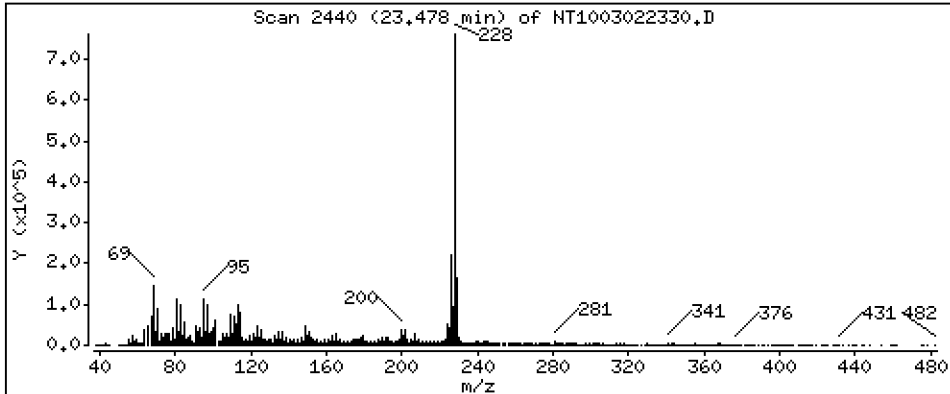
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 2,180 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

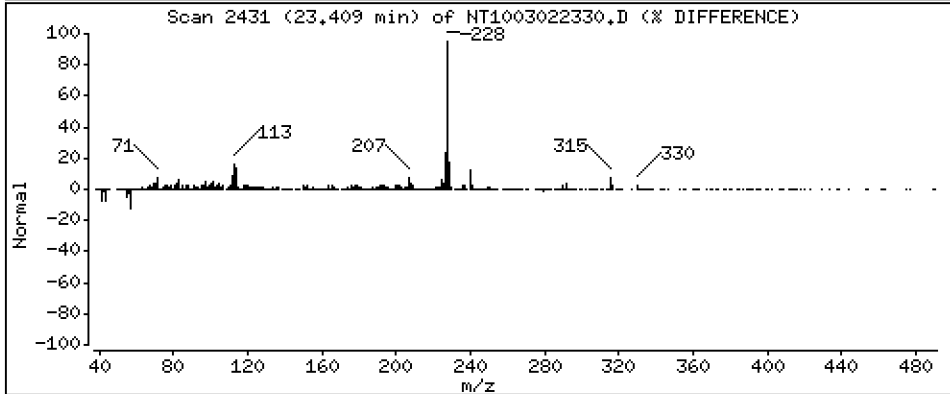
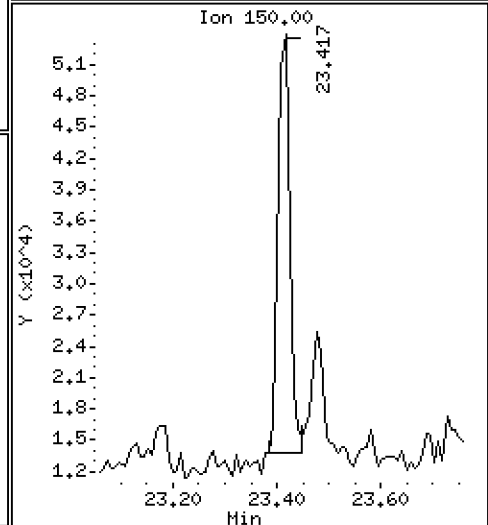
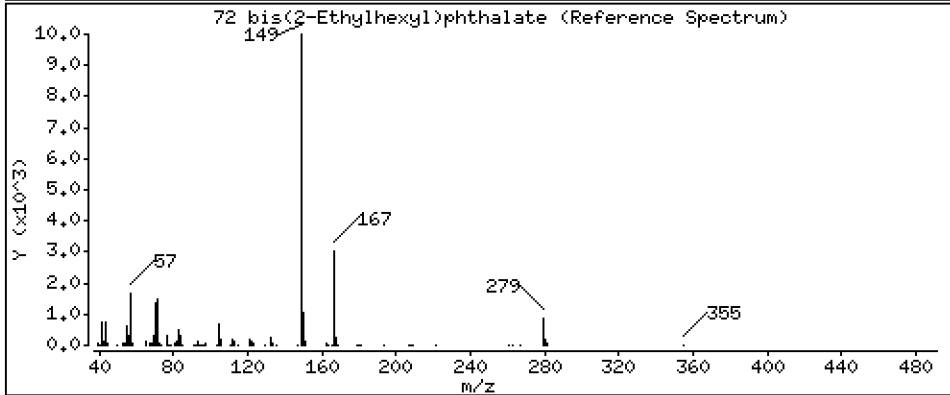
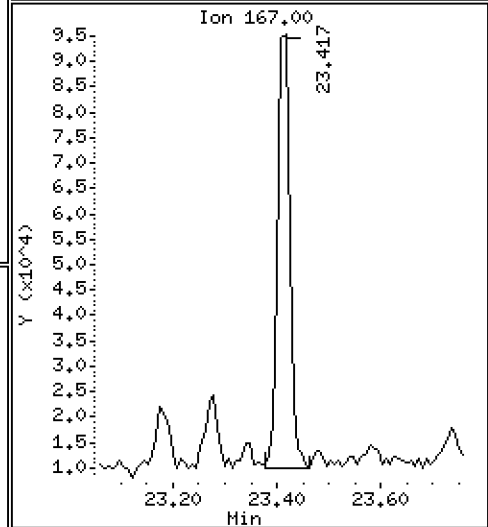
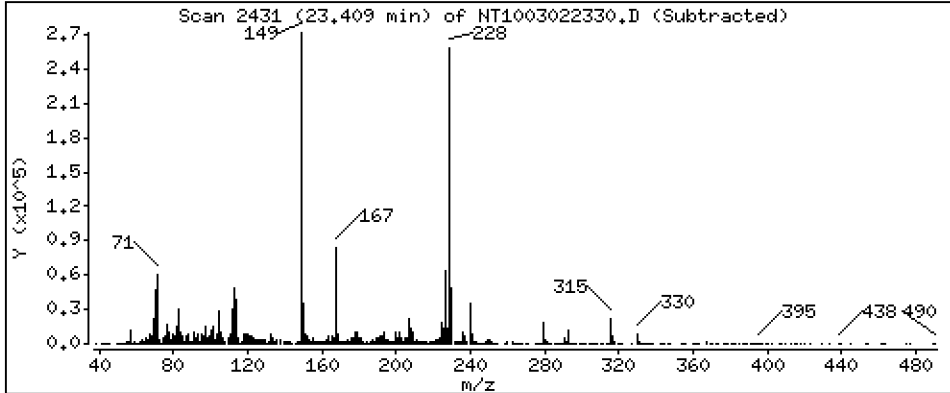
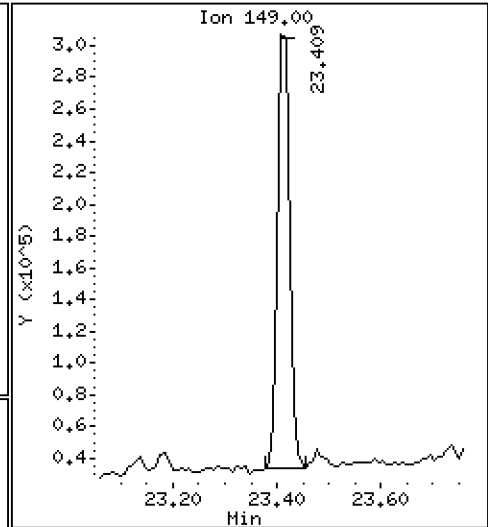
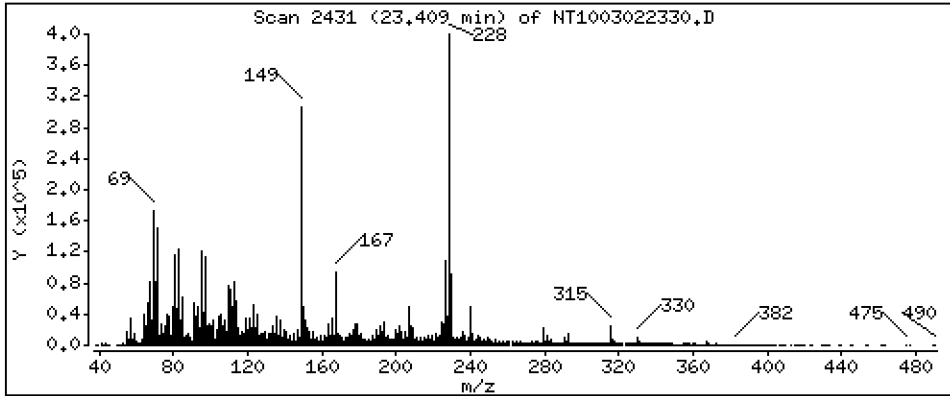
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,7709 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

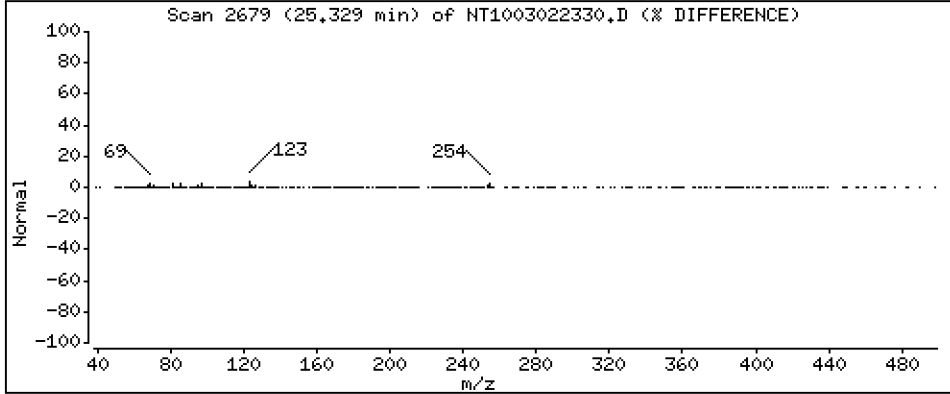
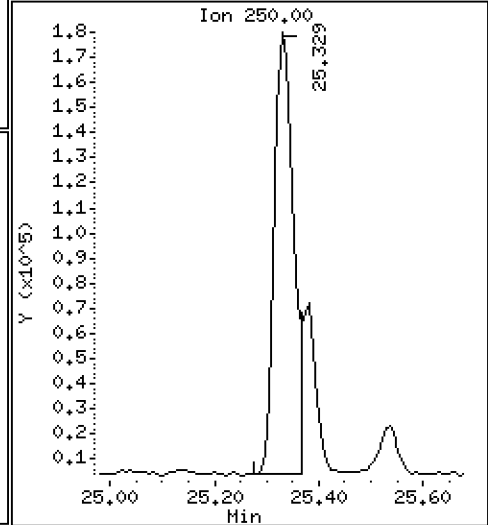
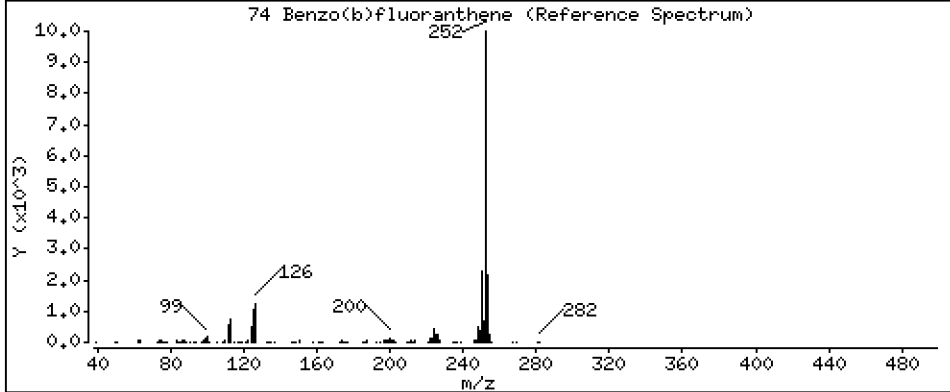
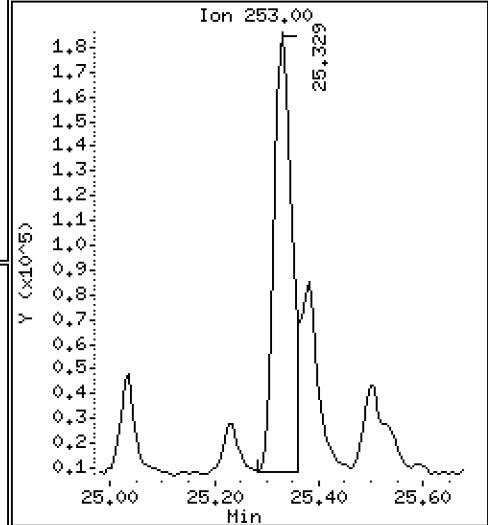
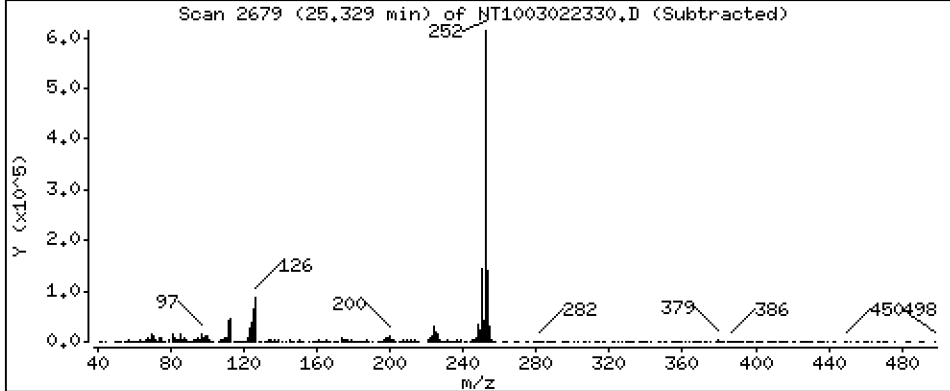
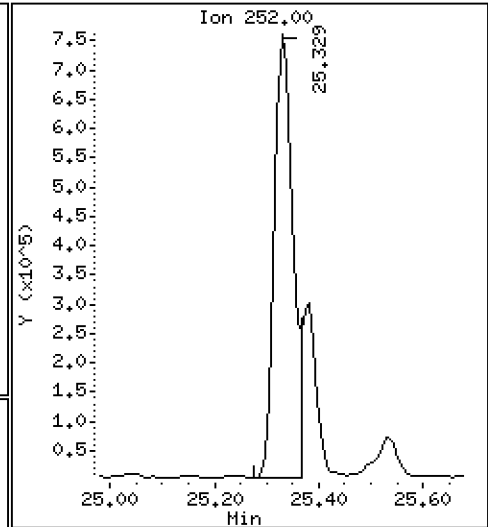
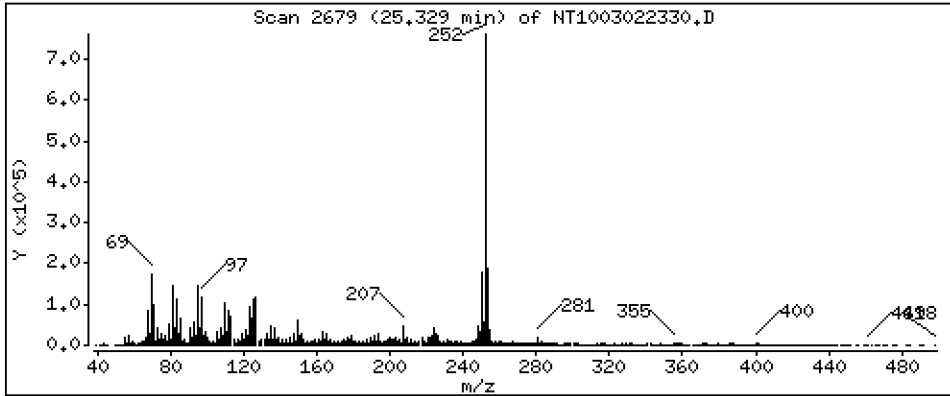
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 2,401 ug/mL





Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

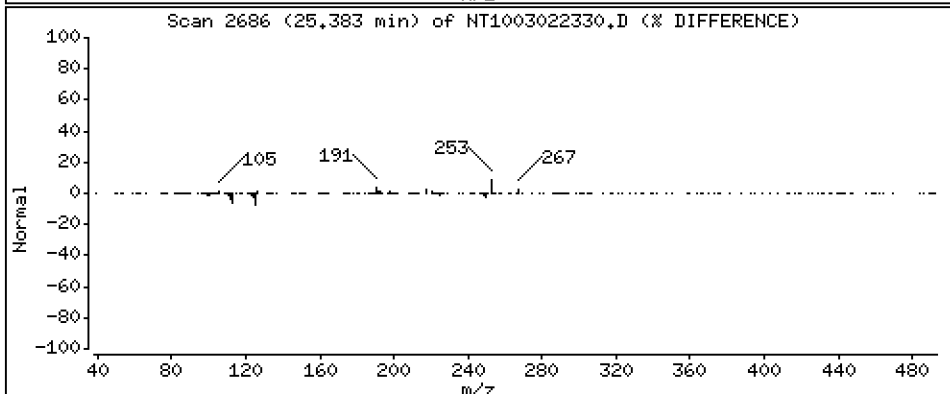
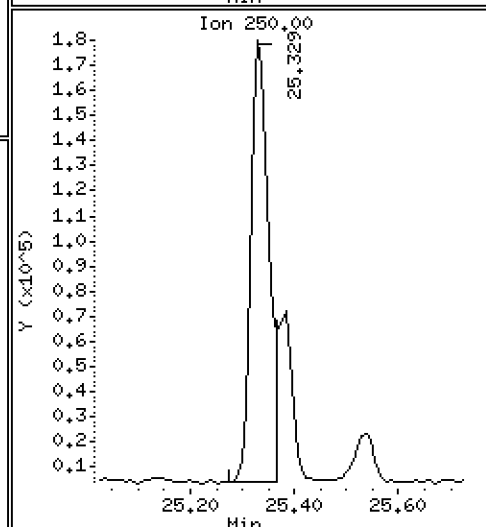
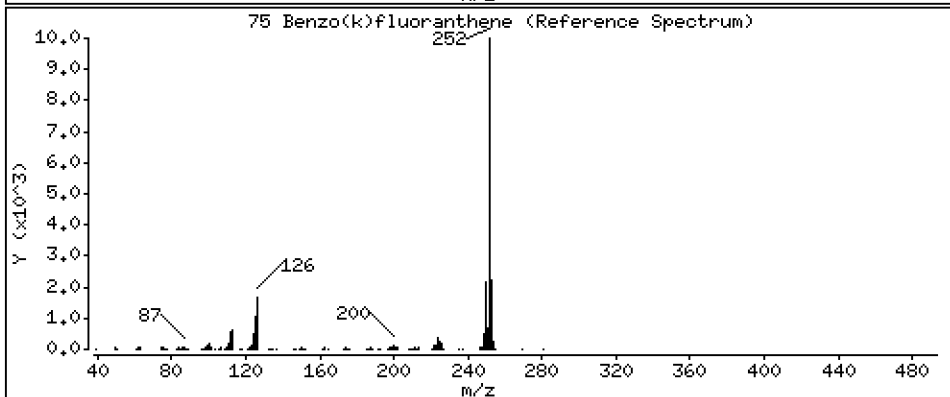
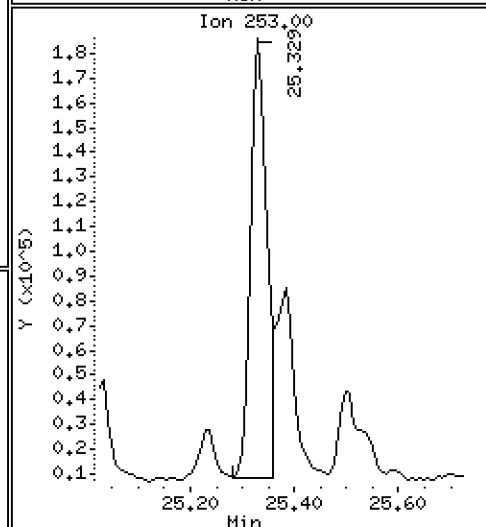
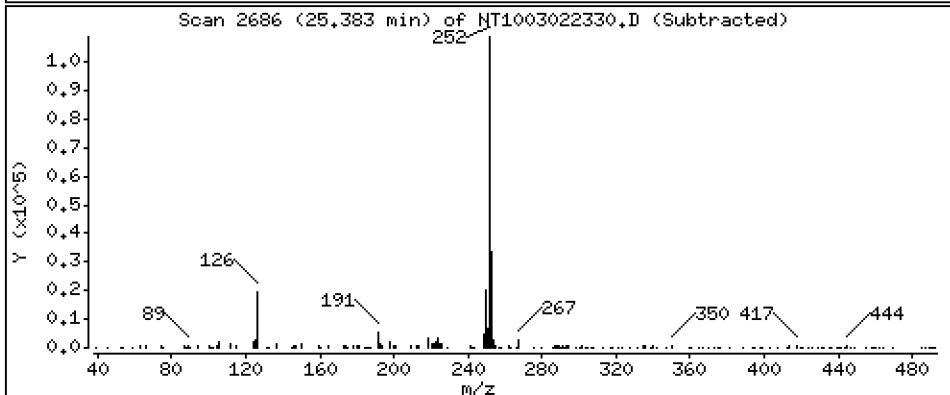
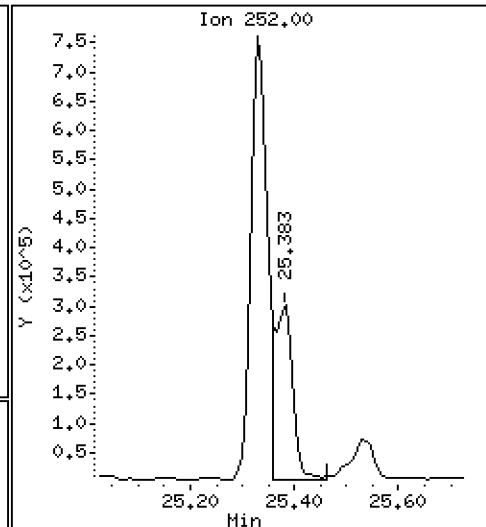
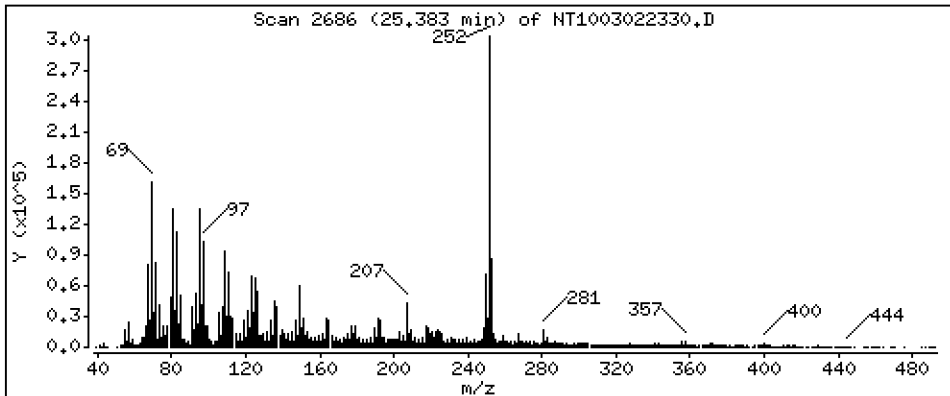
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 1,007 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

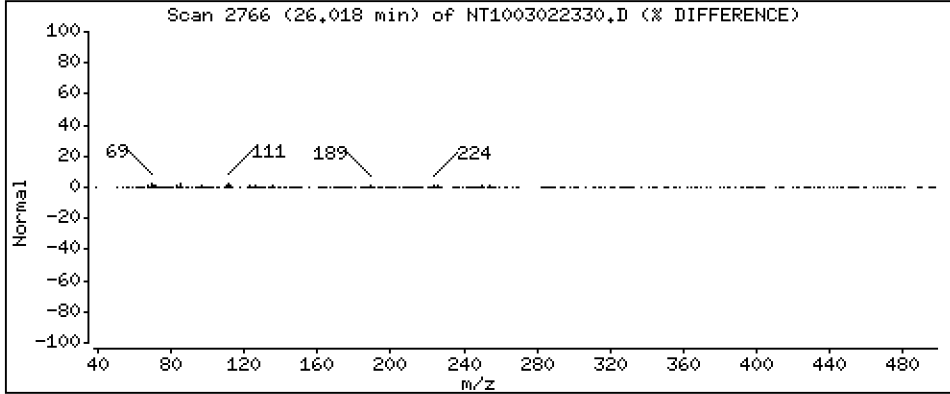
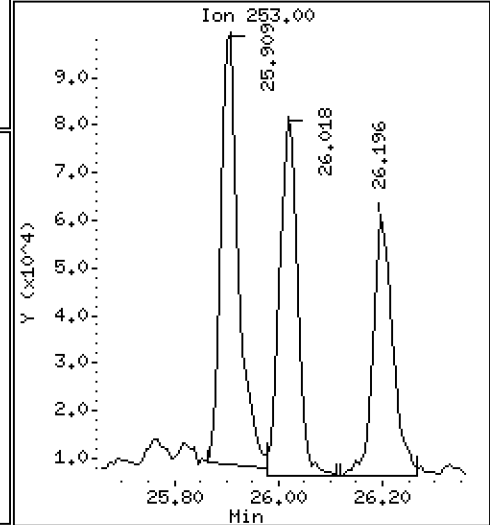
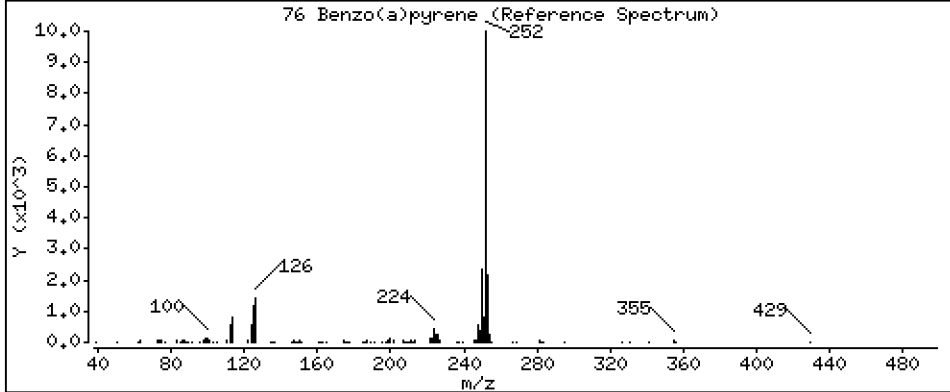
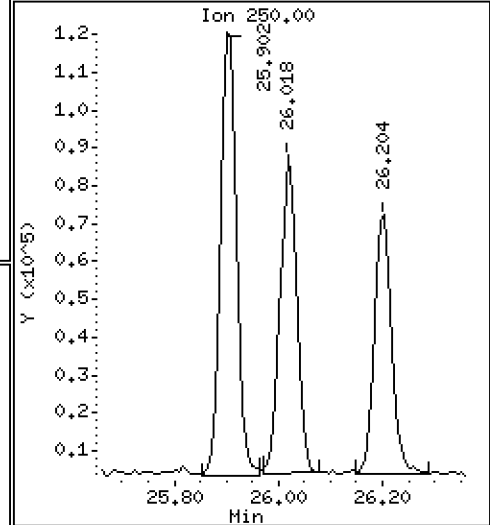
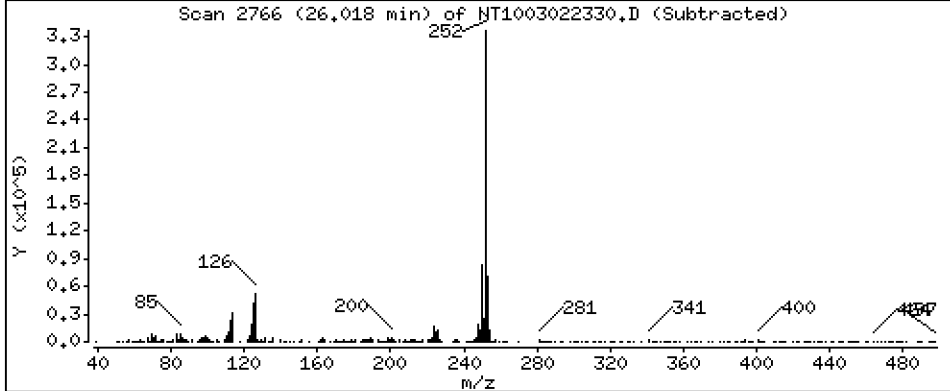
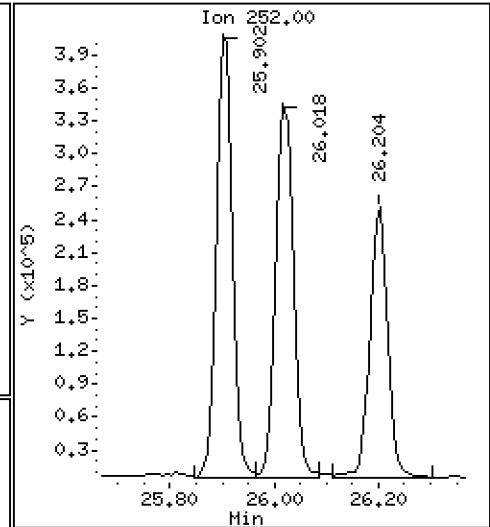
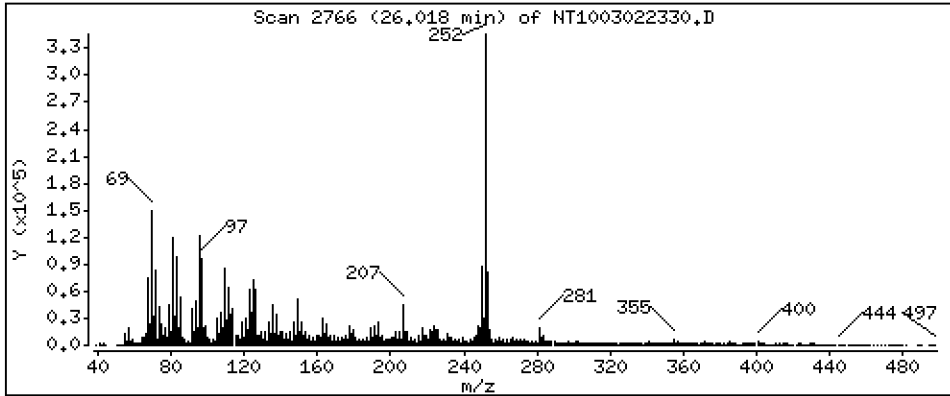
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 1,147 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

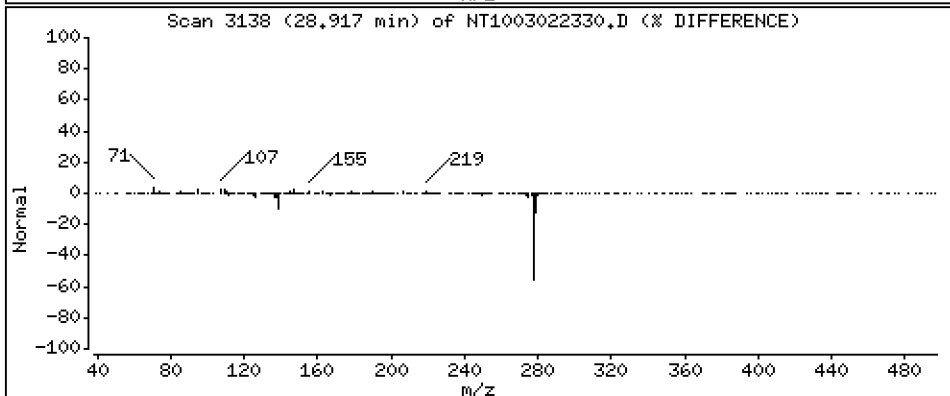
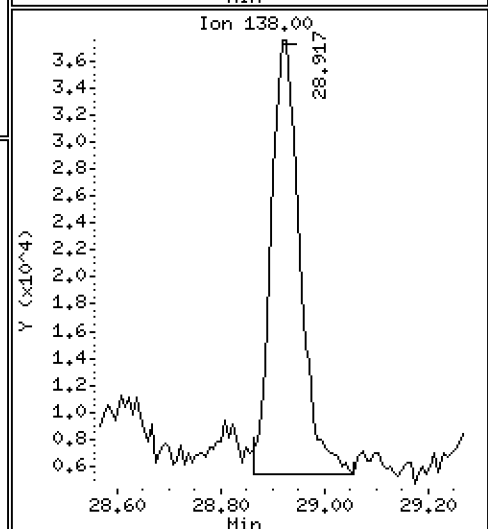
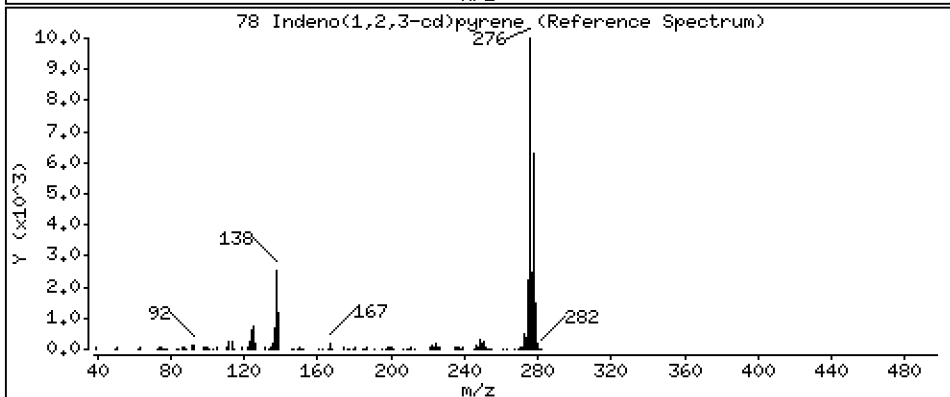
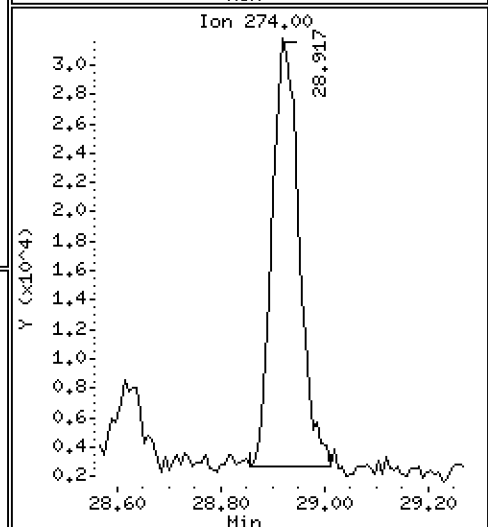
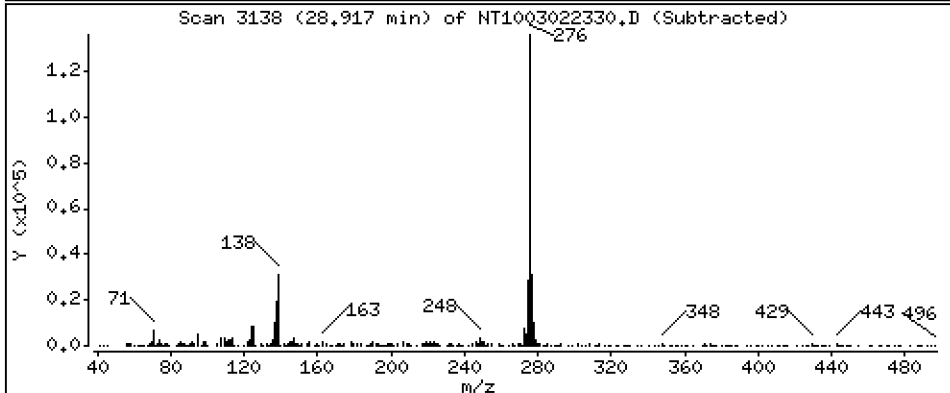
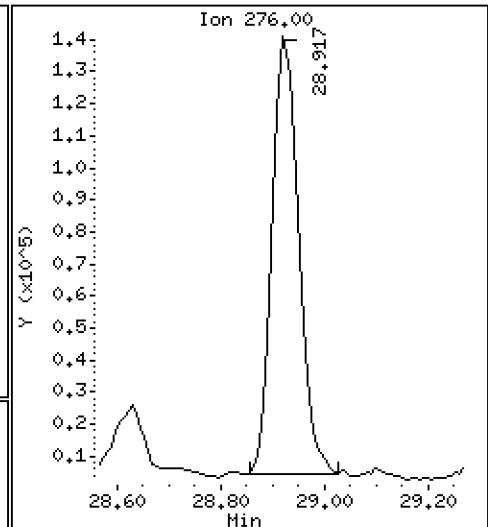
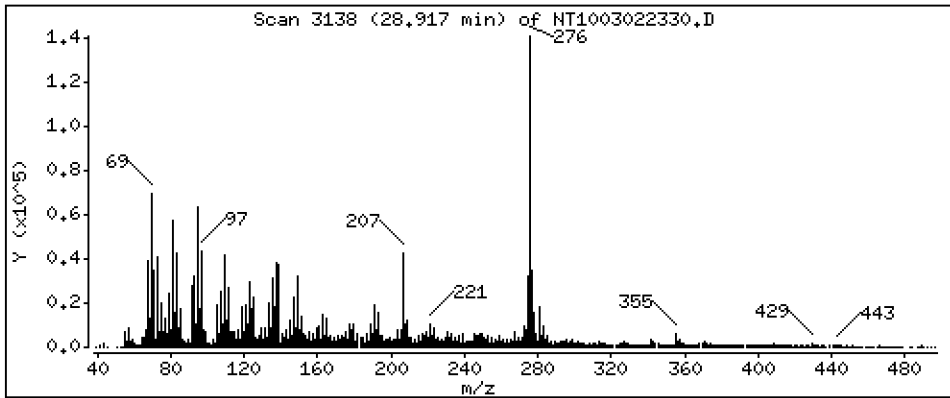
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,6098 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

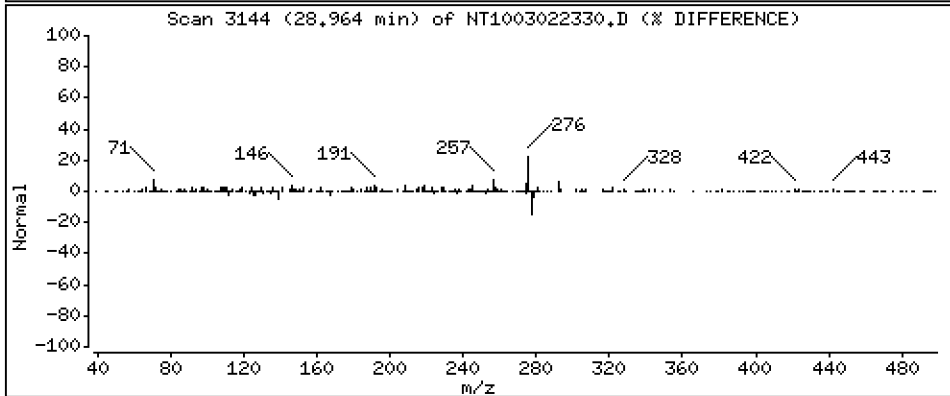
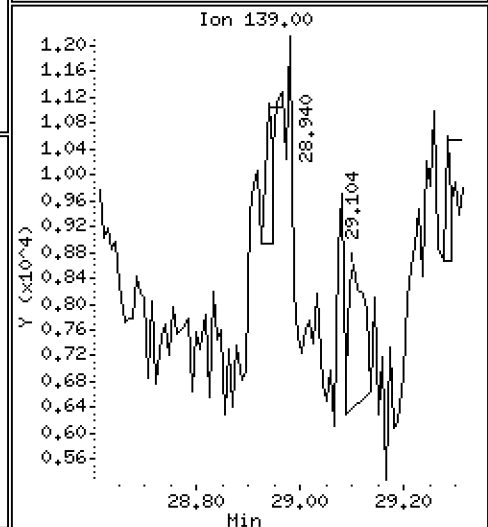
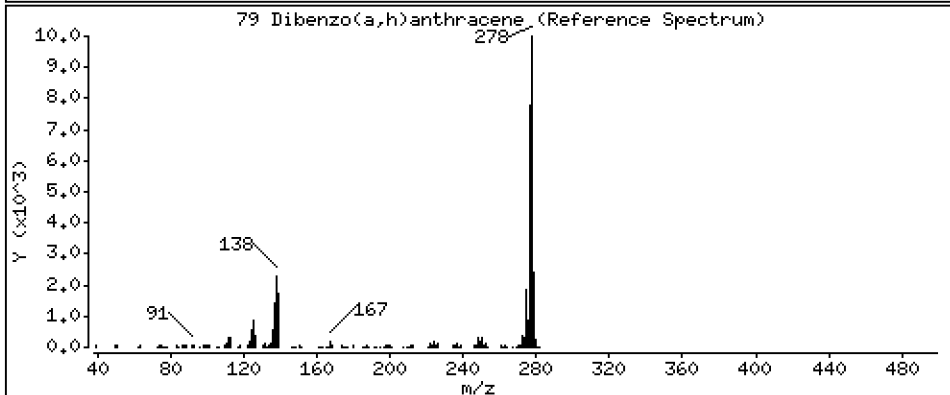
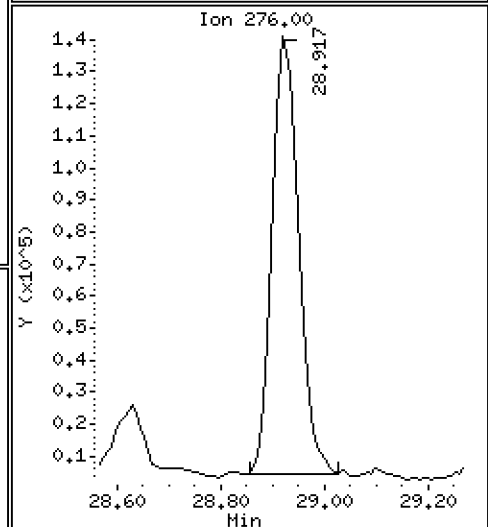
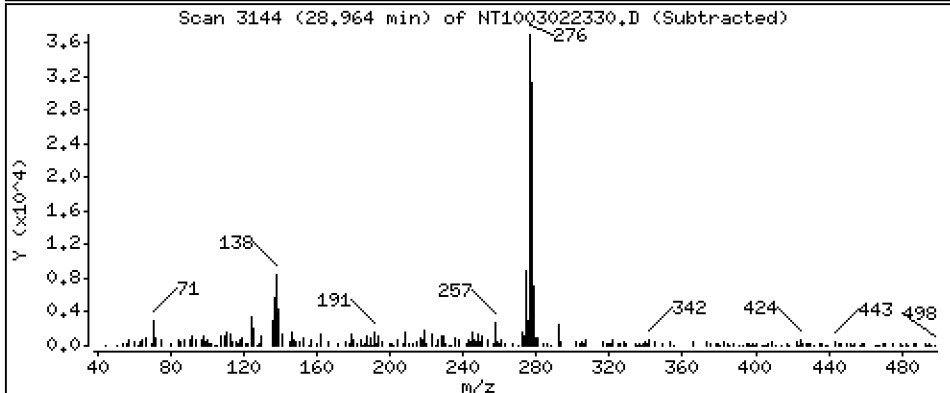
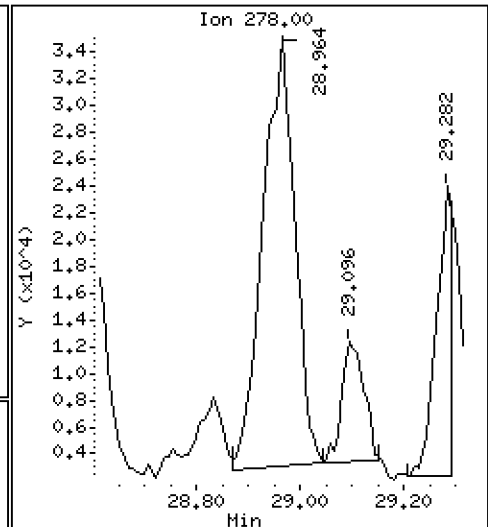
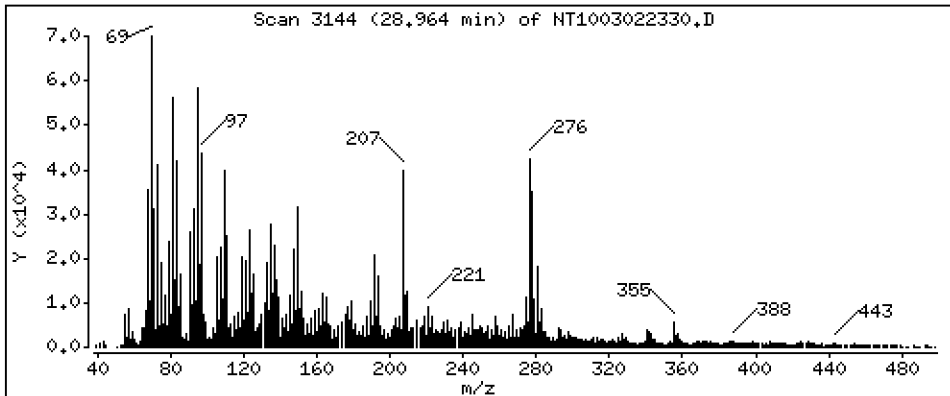
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,2268 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

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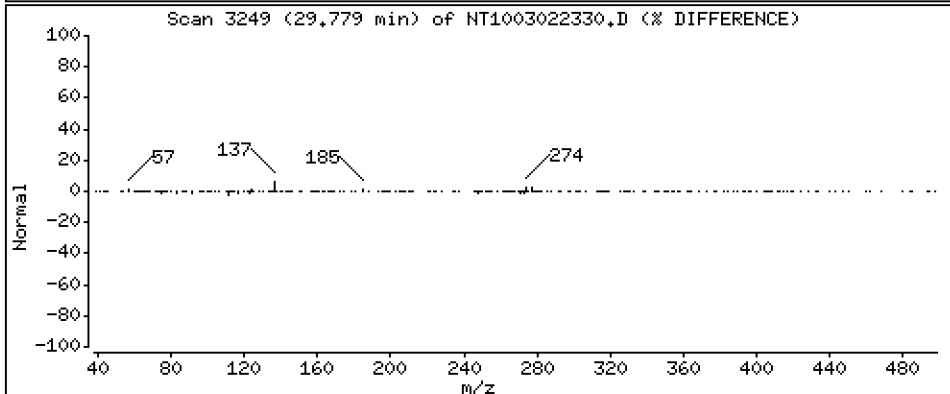
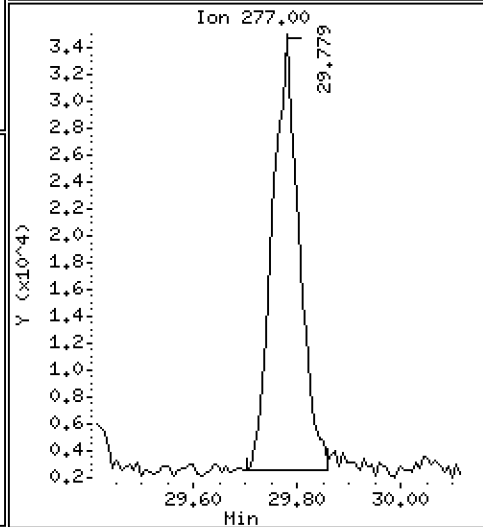
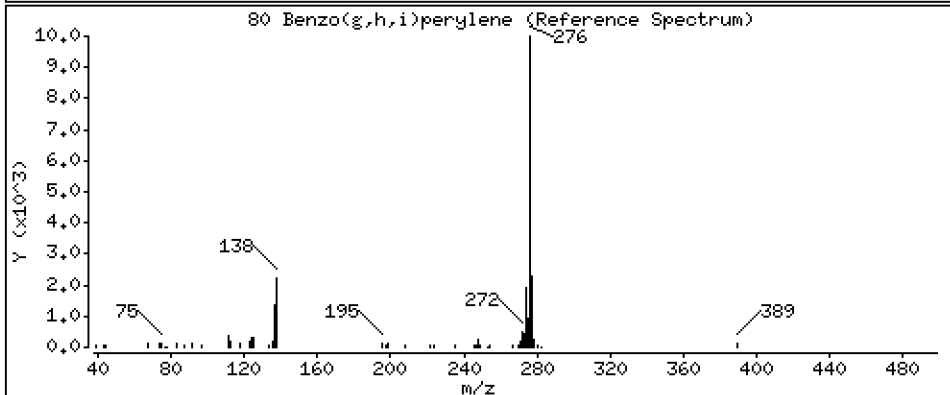
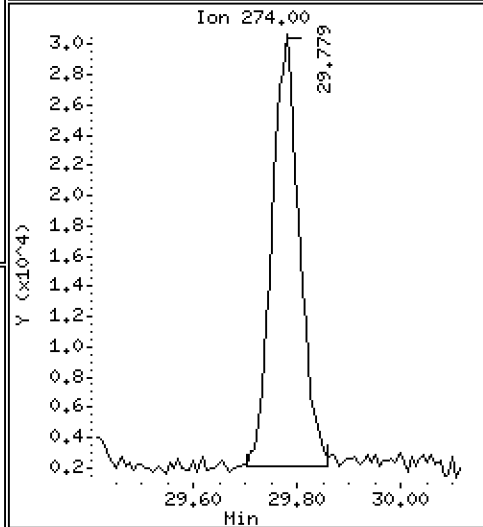
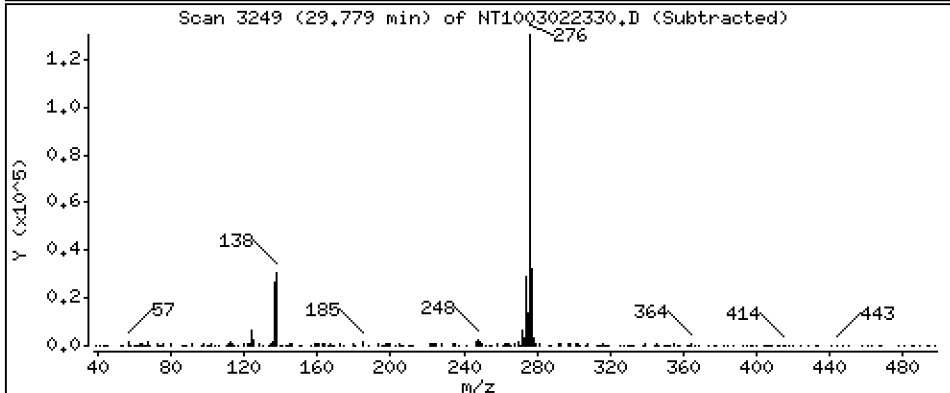
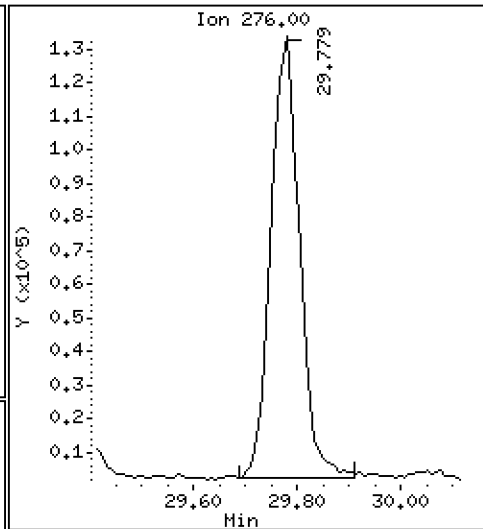
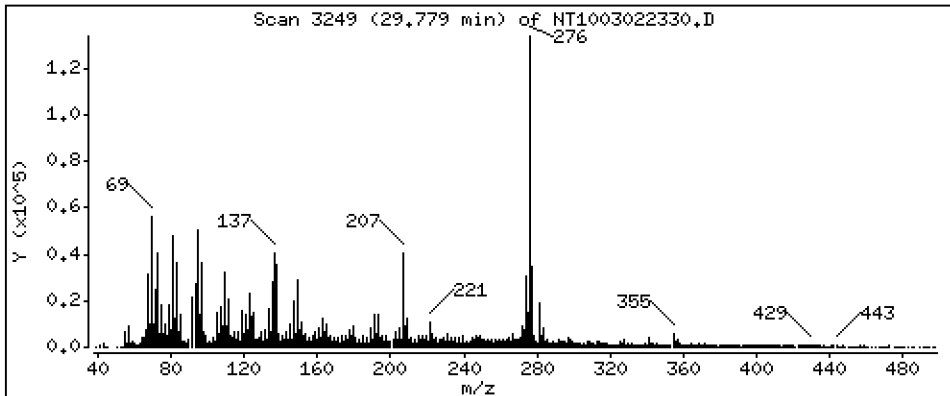
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,7888 ug/mL



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

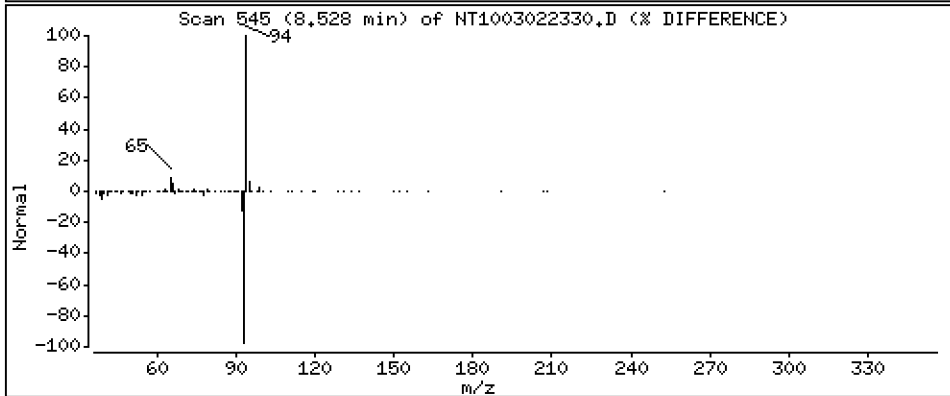
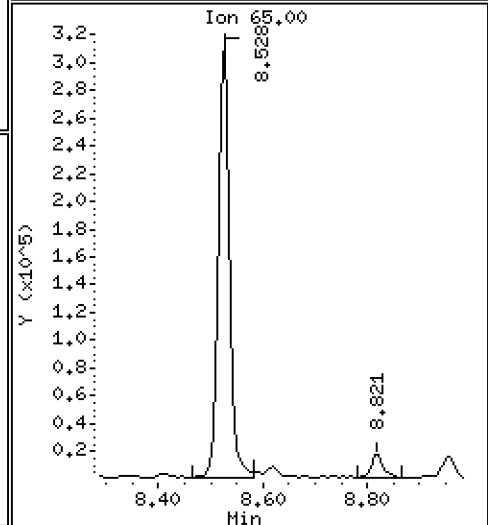
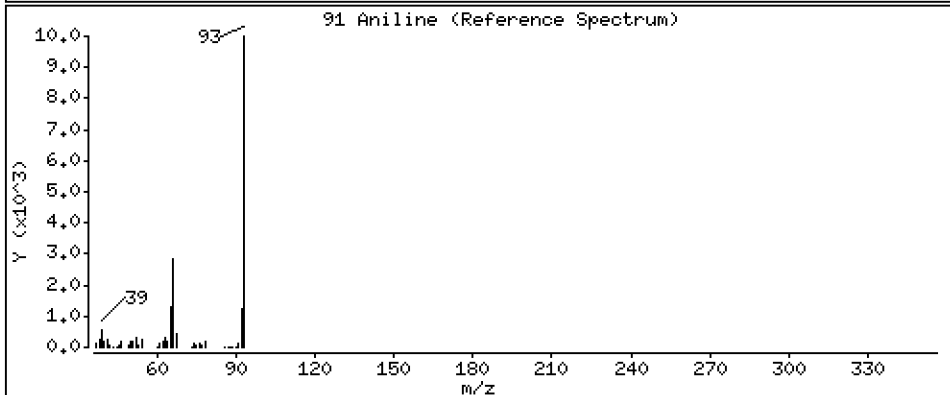
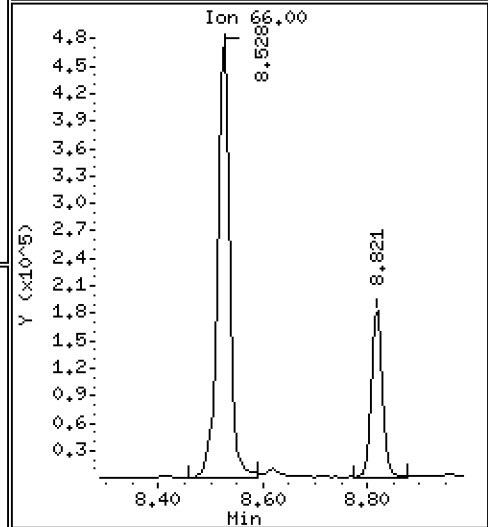
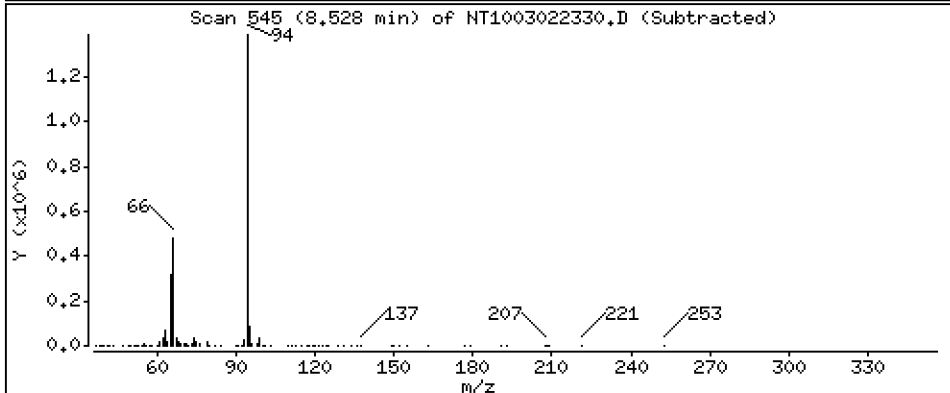
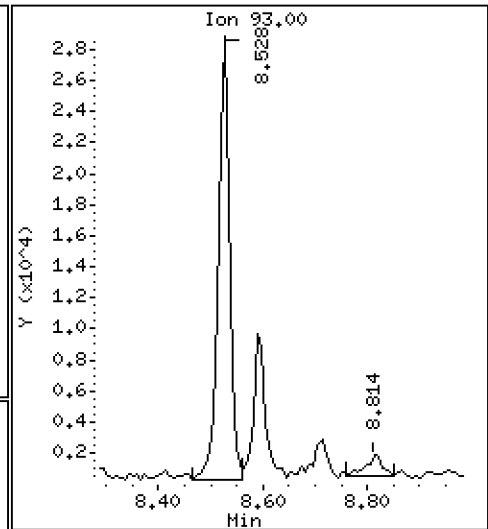
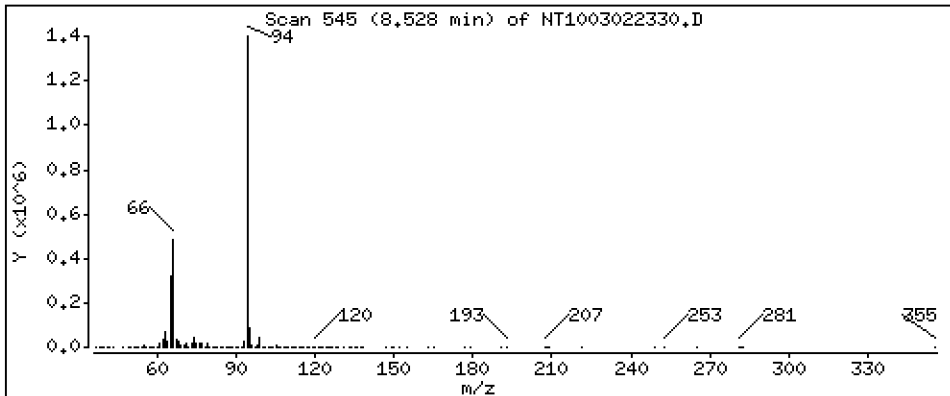
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,1978 ug/mL

91 Aniline



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

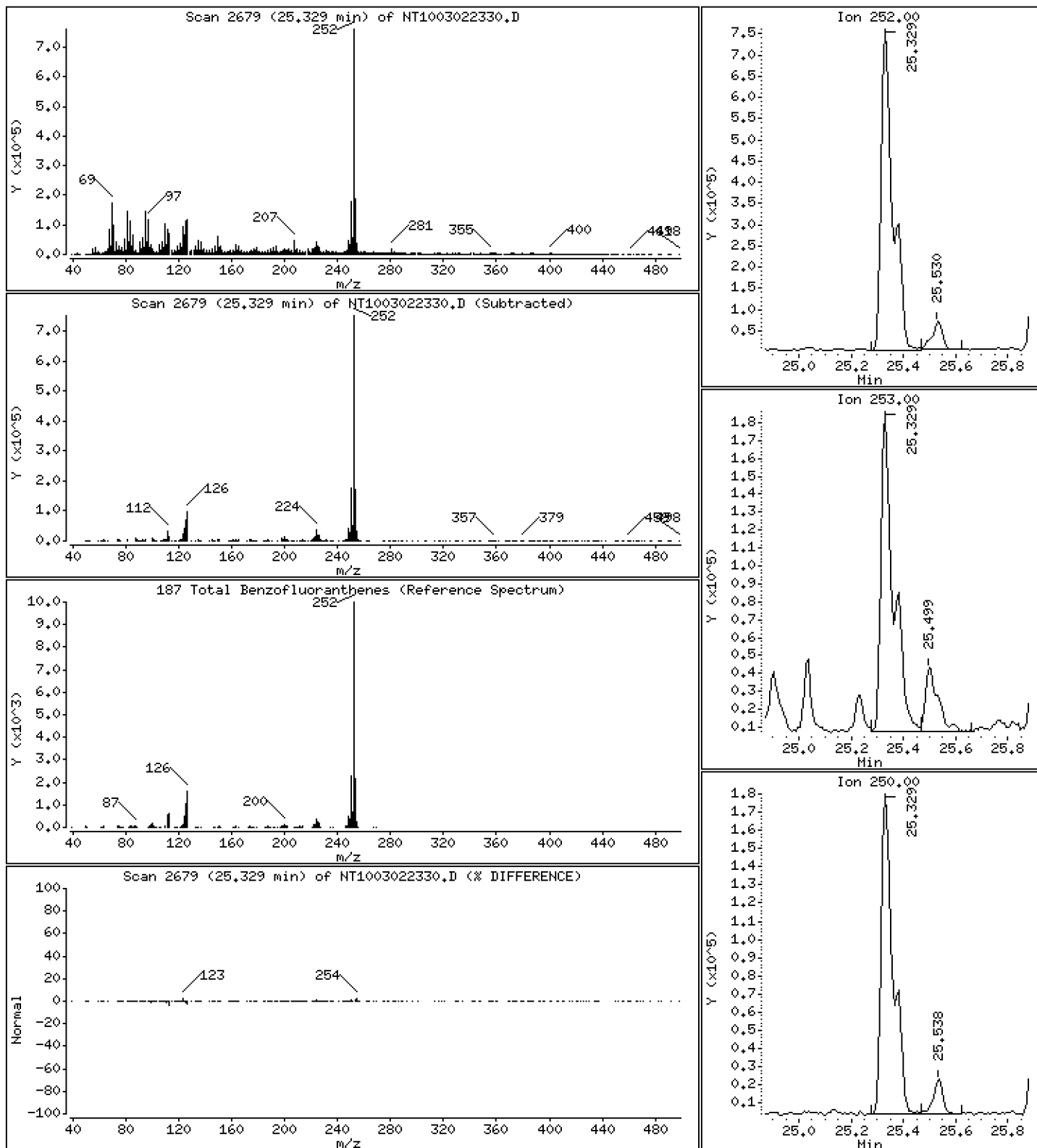
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 3,185 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022330.D

Lab Smp Id: 23A0206-11

Inj Date : 03-MAR-2023 08:46

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-11

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 22

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	944165	5.96012	5.960
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	1269598	6.90311	6.903
3 Phenol	94		8.527	8.527	(0.922)	2160397	11.0484	11.05
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1070459	6.82199	6.822
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	503496	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.541	(1.031)	445965	3.80408	3.804
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.479	(1.026)	58521	0.58238	0.5824
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.294	10.302	(0.878)	857928	4.32593	4.326
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.137	11.179	(0.950)	81579	0.77309	0.7731 (M)
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1806678	4.00000	
28 Naphthalene	128		11.765	11.772	(1.003)	55104	0.11883	0.1188
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	28340	0.08651	0.08651
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					



Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	1569153	4.70420	4.704
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163							
40 Acenaphthylene	152		15.030	15.038	(0.981)	66363	0.14700	0.1470
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.316	15.324	(1.000)	935187	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153		15.386	15.394	(1.005)	24700	0.09072	0.09072
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168		15.741	15.749	(1.028)	43781	0.10835	0.1083
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149		16.205	16.221	(1.058)	59573	0.18620	0.1862
49 Fluorene	166		16.461	16.461	(1.075)	45217	0.13450	0.1345
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169							
\$ 55 2,4,6-Tribromophenol	330		16.955	16.962	(1.107)	413182	6.85430	6.854
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.409	18.416	(1.000)	1808982	4.00000	
60 Phenanthrene	178		18.463	18.463	(1.003)	367587	0.79401	0.7940
61 Anthracene	178		18.571	18.571	(1.009)	202937	0.45207	0.4521
62 Carbazole	167		18.904	18.904	(1.027)	59021	0.14352	0.1435
63 Di-n-butylphthalate	149		19.600	19.600	(1.065)	36045	0.06463	0.06463
64 Fluoranthene	202		20.846	20.830	(0.890)	1452842	2.02331	2.023
65 Pyrene	202		21.271	21.264	(0.908)	1388029	1.89839	1.898
\$ 66 Terphenyl-d14	244		21.542	21.534	(0.919)	2775556	4.69149	4.691
67 Butylbenzylphthalate	149							
68 Benzo(a)anthracene	228		23.416	23.416	(0.999)	831036	1.12914	1.129
* 69 Chrysene-d12	240		23.432	23.431	(1.000)	2087313	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228		23.478	23.478	(1.002)	1304177	2.18037	2.180
72 bis(2-Ethylhexyl)phthalate	149		23.408	23.408	(0.956)	412918	0.77091	0.7709
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	3805907	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252		25.328	25.328	(0.969)	1868490	2.40128	2.401
75 Benzo(k)fluoranthene	252		25.382	25.375	(0.971)	742817	1.00661	1.007 (M)
76 Benzo(a)pyrene	252		26.017	26.017	(0.995)	786688	1.14682	1.147
* 77 Perylene-d12	264		26.141	26.134	(1.000)	2227344	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.917	28.917	(1.106)	486400	0.60982	0.6098
79 Dibenzo(a,h)anthracene	278		28.963	28.963	(1.108)	136658	0.22682	0.2268
80 Benzo(g,h,i)perylene	276		29.779	29.763	(1.139)	501680	0.78878	0.7888
90 N-Nitrosodimethylamine	74							
91 Aniline	93		8.527	8.635	(0.922)	44840	0.19777	0.1978
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142							
111 Azobenzene (1,2-DP-Hydrazine)	77							

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.328	25.375	(0.969)	2360415	3.18541	3.185	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022330.D Calibration Time: 05:36  
 Lab Smp Id: 23A0206-11  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	503496	-25.24
27 Naphthalene-d8	2475080	1237540	4950160	1806678	-27.01
42 Acenaphthene-d10	1248864	624432	2497728	935187	-25.12
59 Phenanthrene-d10	2356836	1178418	4713672	1808982	-23.25
69 Chrysene-d12	2717731	1358866	5435462	2087313	-23.20
134 Di-n-octylphthala	4948440	2474220	9896880	3805907	-23.09
77 Perylene-d12	2801934	1400967	5603868	2227344	-20.51

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.41	-0.04
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.13	25.63	26.63	26.14	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022330.D

Lab ID: 23A0206-11  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 08:46

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.922	0.934	-0.0117	Aniline

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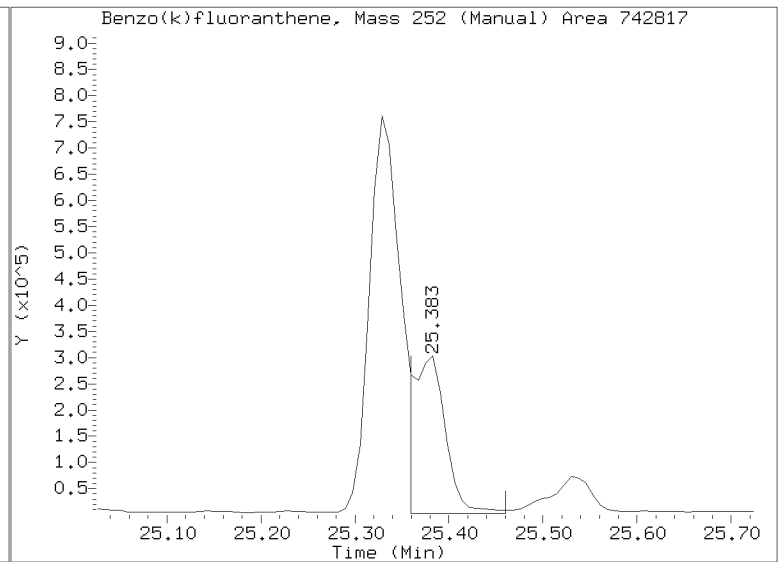
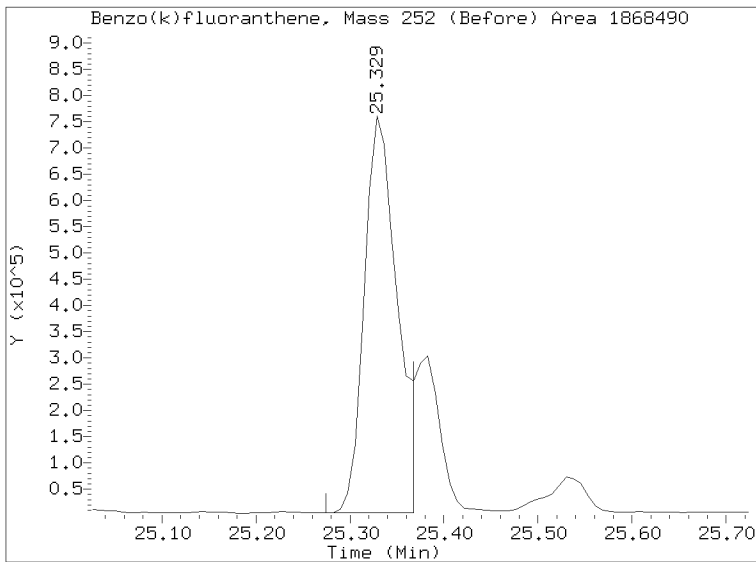
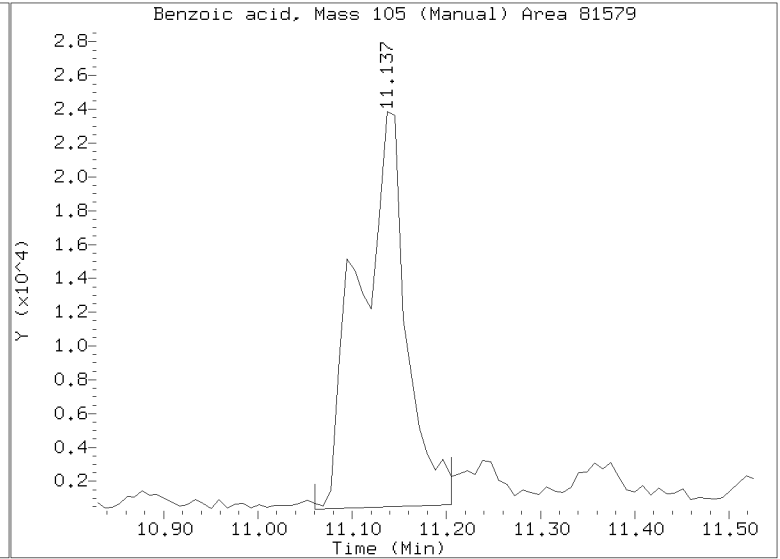
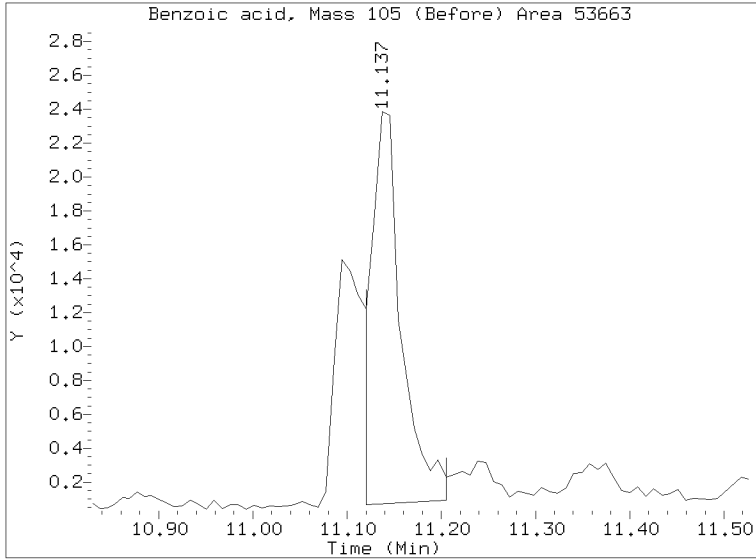
RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022330.D  
Injection Date: 03-MAR-2023 08:46  
Lab ID:23A0206-11 Client ID:  
Report Date: 03/10/2023 07:35





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-12 B

SDG: 23A0206

Sampled: 01/11/23 12:19

Prepared: 01/27/23 14:44

File ID: NT1003022331.D

% Solids: 48.05

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 09:24

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 20.88 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	687		4.4	19.9
106-44-5	4-Methylphenol	1	19.9	U	7.4	19.9
91-20-3	Naphthalene	1	10.6	J	4.2	19.9
91-57-6	2-Methylnaphthalene	1	8.6	J	4.5	19.9
208-96-8	Acenaphthylene	1	13.3	J	6.2	19.9
131-11-3	Dimethylphthalate	1	7.4	J	4.4	19.9
83-32-9	Acenaphthene	1	9.8	J	5.2	19.9
132-64-9	Dibenzofuran	1	19.9	U	14.1	19.9
86-73-7	Fluorene	1	14.6	J	14.5	19.9
85-01-8	Phenanthrene	1	90.7		8.7	19.9
120-12-7	Anthracene	1	51.1		7.2	19.9
206-44-0	Fluoranthene	1	200		6.1	19.9
129-00-0	Pyrene	1	213		5.7	19.9
85-68-7	Butylbenzylphthalate	1	19.9	U	9.4	19.9
56-55-3	Benzo(a)anthracene	1	132		5.9	19.9
218-01-9	Chrysene	1	214		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	80.0		5.4	49.8
	Benzo(a)fluoranthene, Total	1	324		10.0	39.9
50-32-8	Benzo(a)pyrene	1	129		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	64.7		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	22.3		17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	80.3	Q	13.5	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.55	613	82.0	27 - 120	
Phenol-d5	747.55	708	94.7	29 - 120	
2-Chlorophenol-d4	747.55	704	94.2	31 - 120	
1,2-Dichlorobenzene-d4	498.36	405	81.3	32 - 120	
Nitrobenzene-d5	498.36	457	91.7	30 - 120	
2-Fluorobiphenyl	498.36	491	98.5	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-12 B

SDG: 23A0206

Sampled: 01/11/23 12:19

Prepared: 01/27/23 14:44

File ID: NT1003022331.D

% Solids: 48.05

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 09:24

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 20.88 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	747.55	686	91.8	24 - 134	
p-Terphenyl-d14	498.36	462	92.6	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B.B\NT1003022331.D

Date: 03-HR-2023 09:24

Client ID:

Sample Info: 23A0206-12

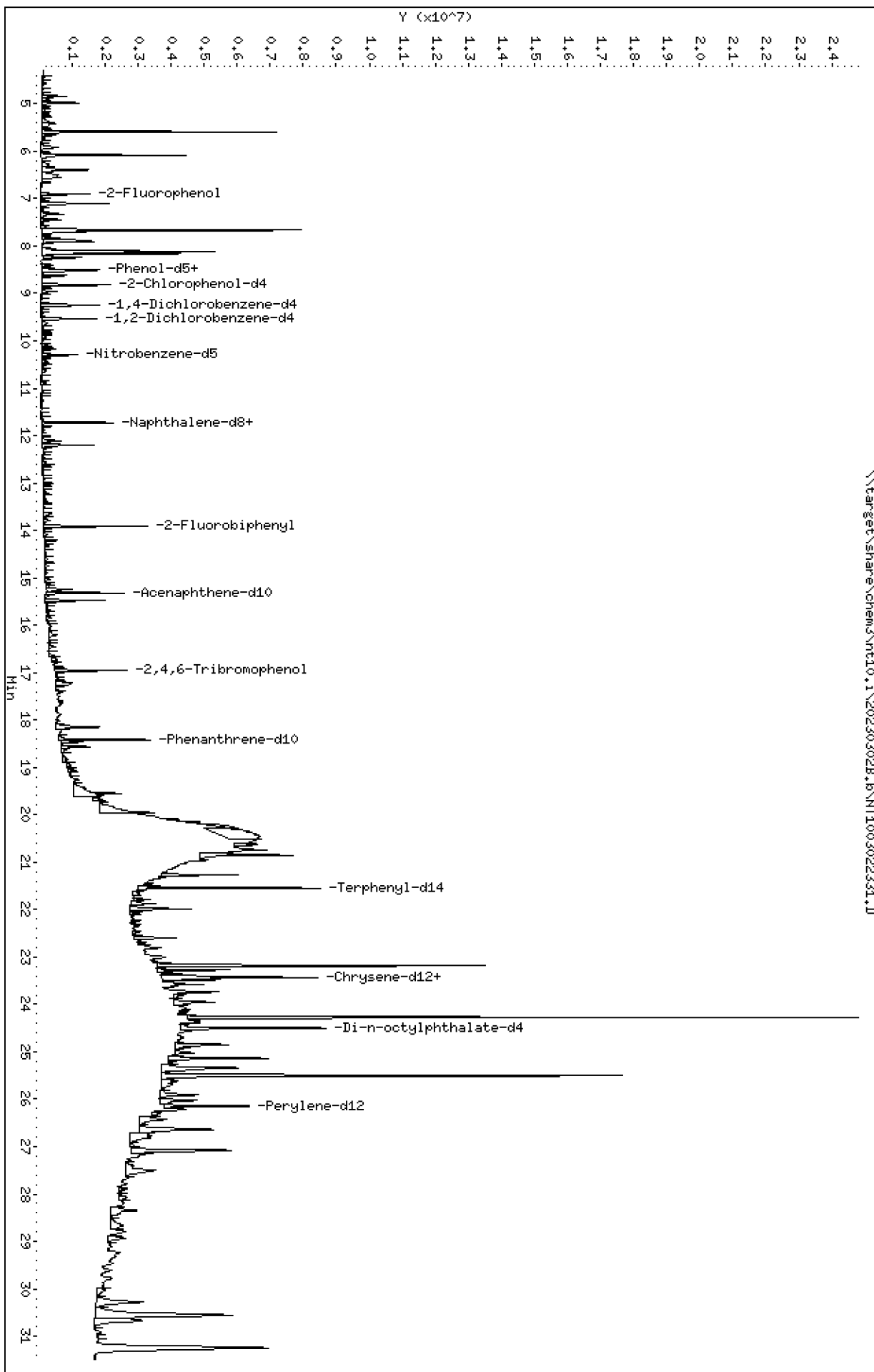
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.B\NT1003022331.D





Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

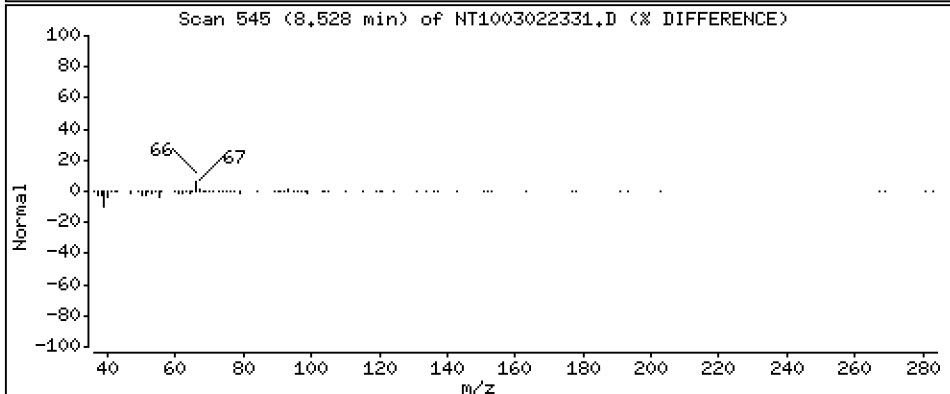
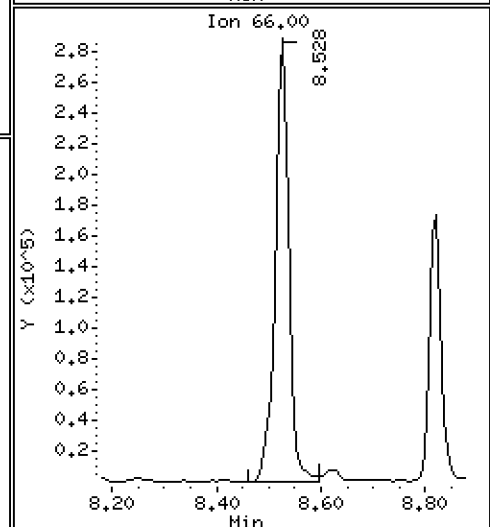
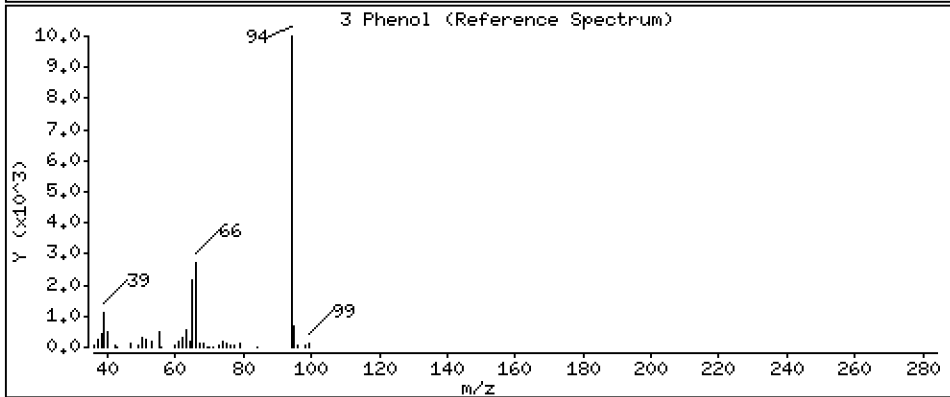
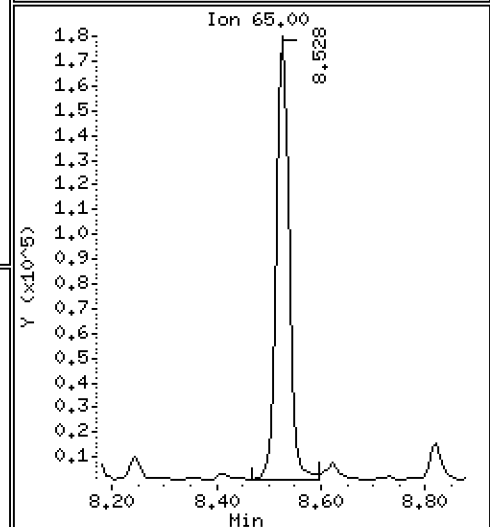
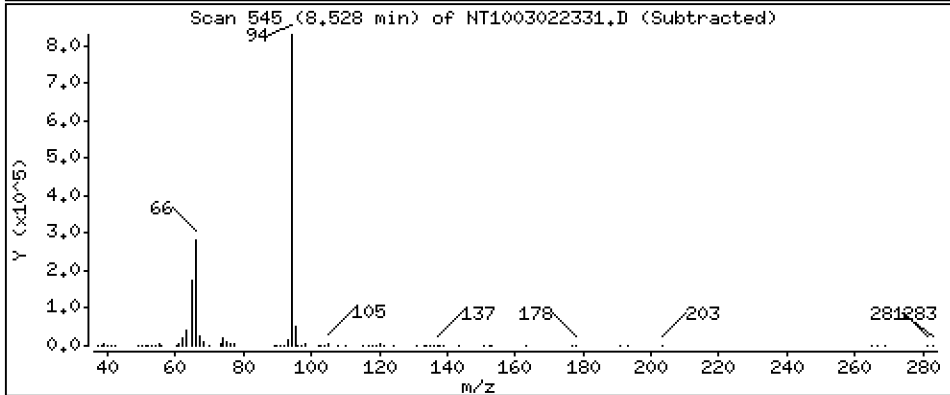
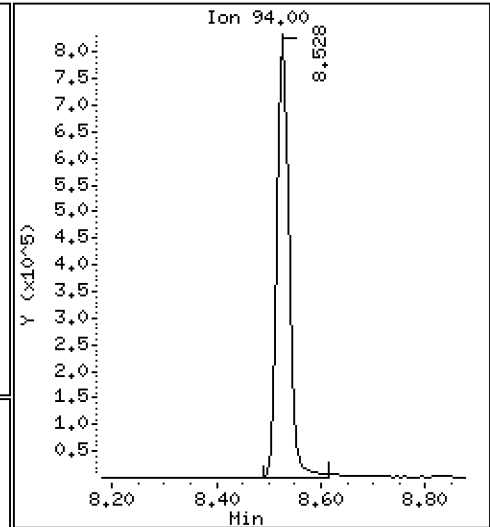
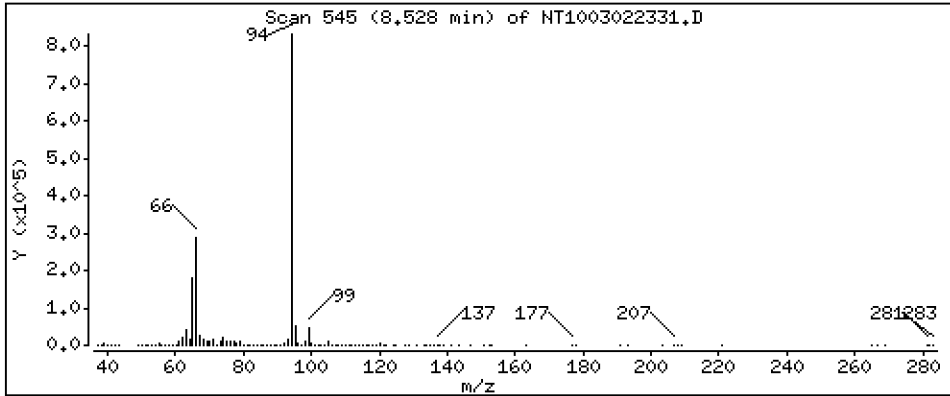
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 6,891 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

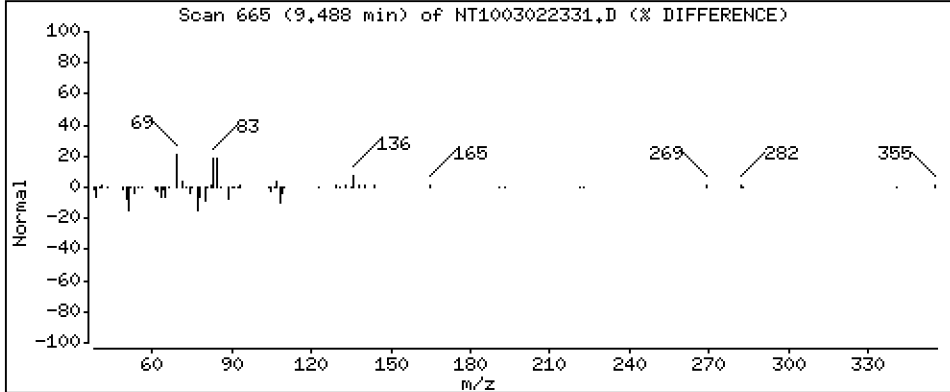
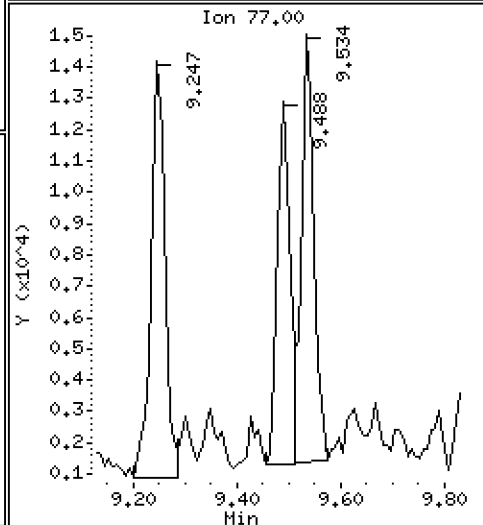
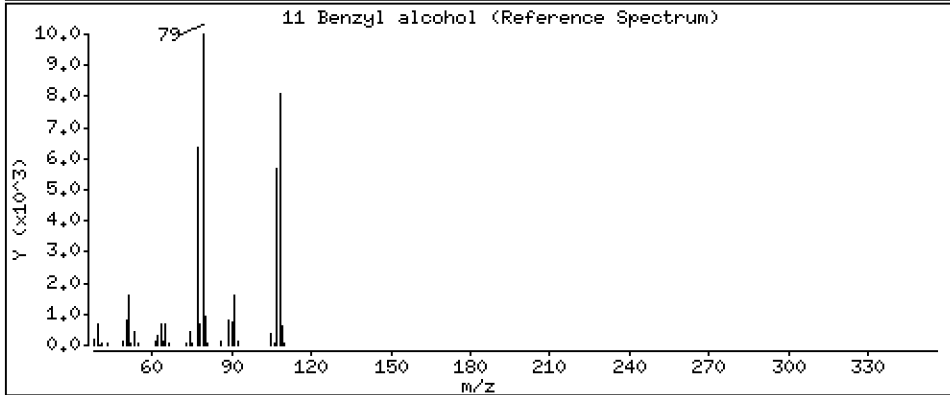
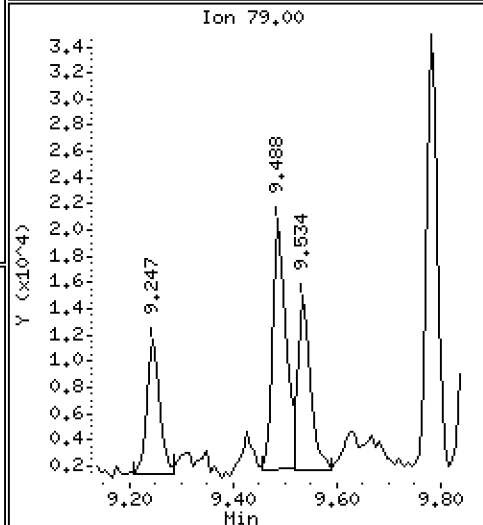
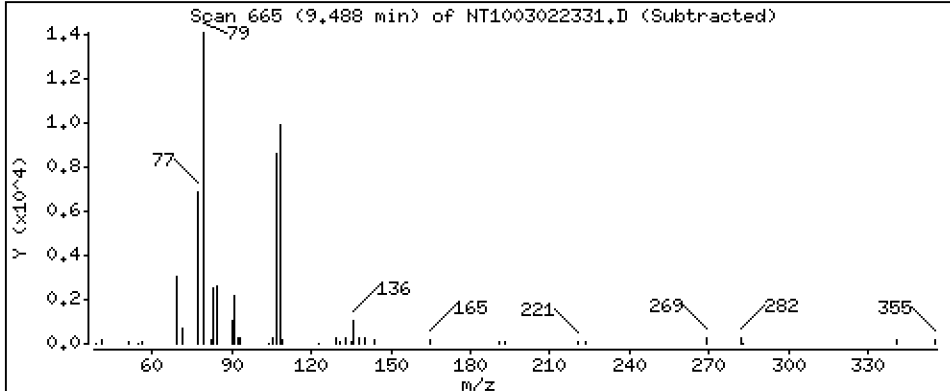
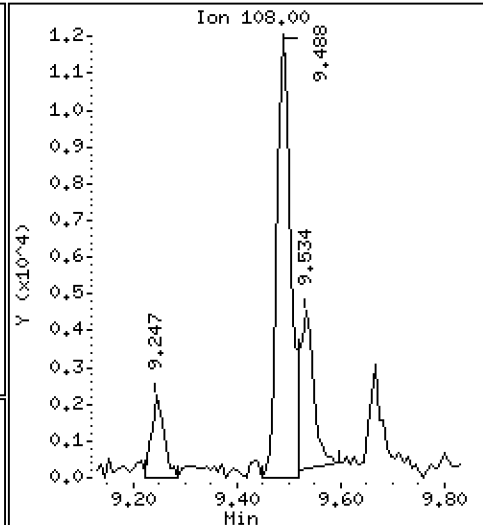
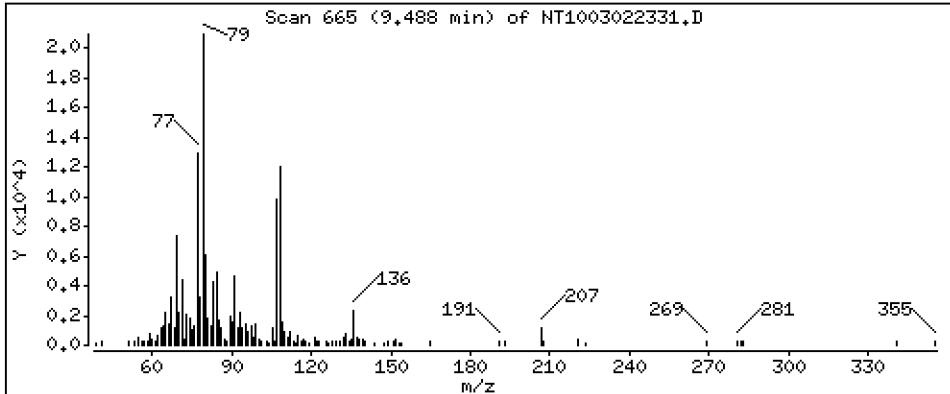
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2329 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

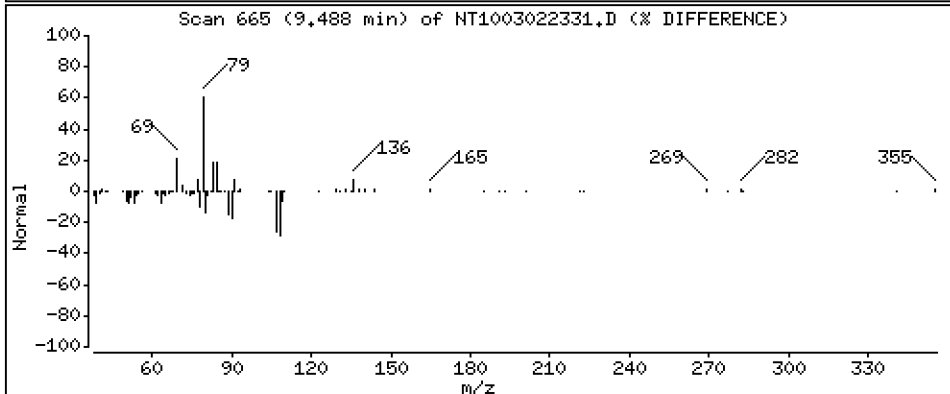
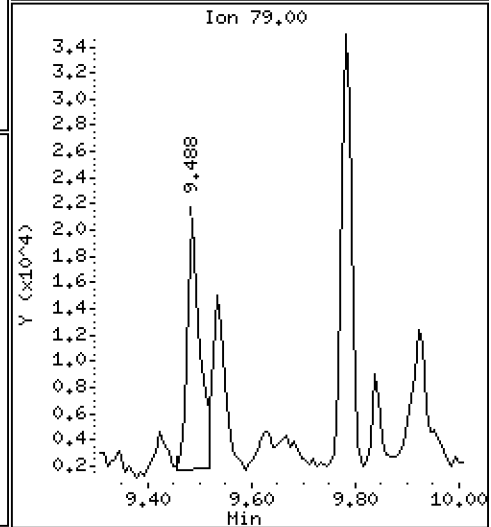
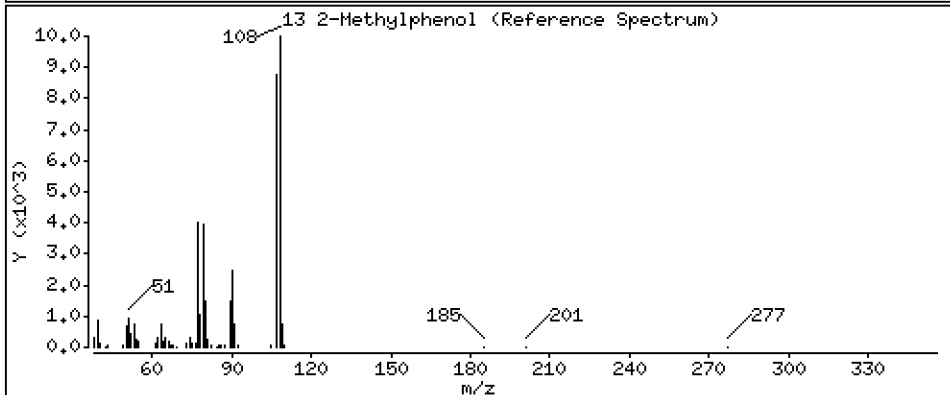
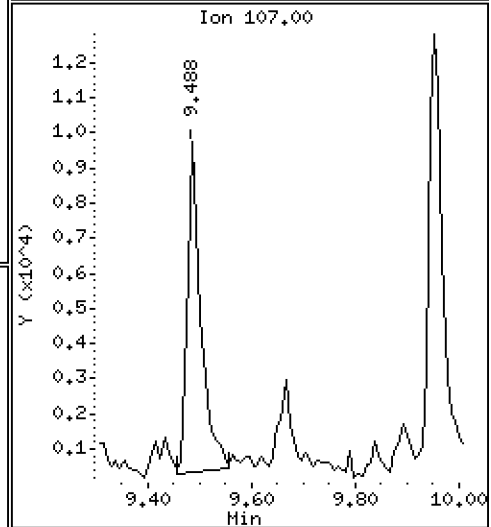
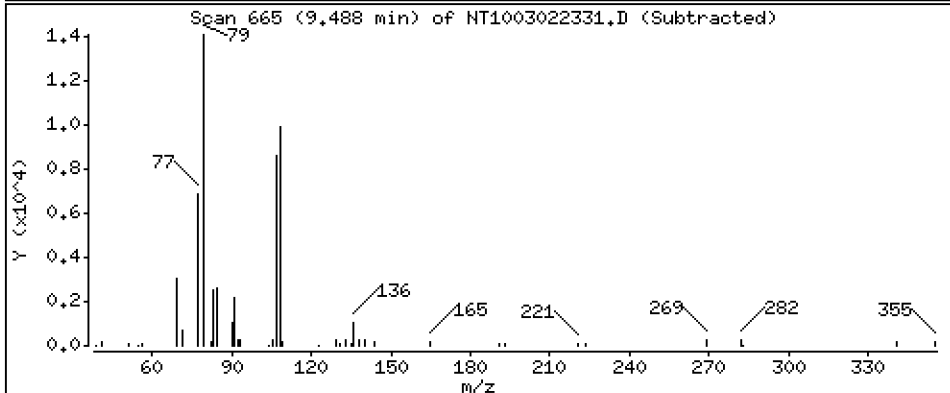
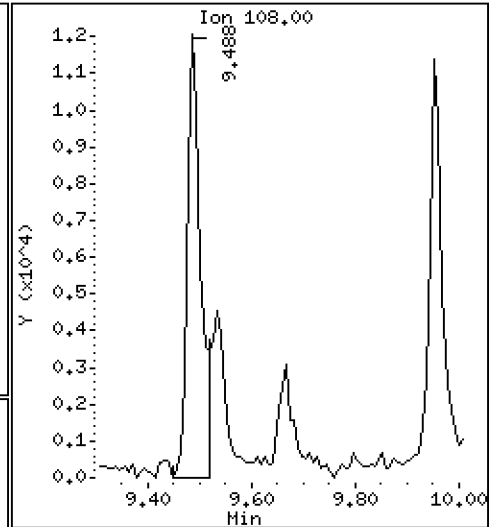
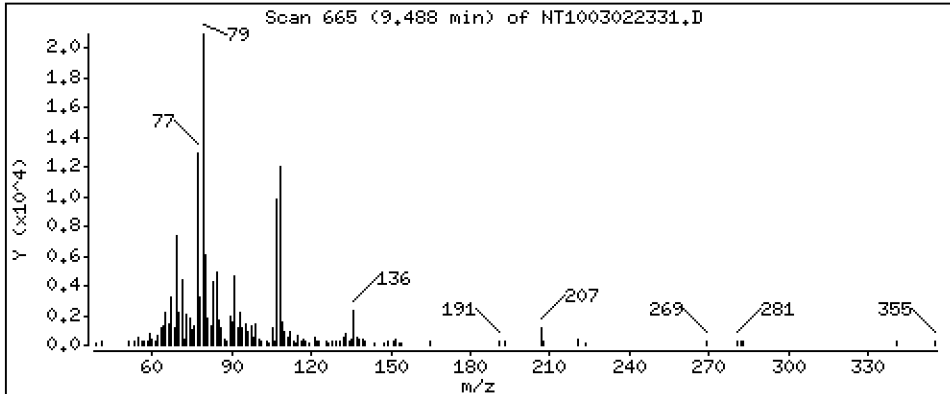
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1542 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

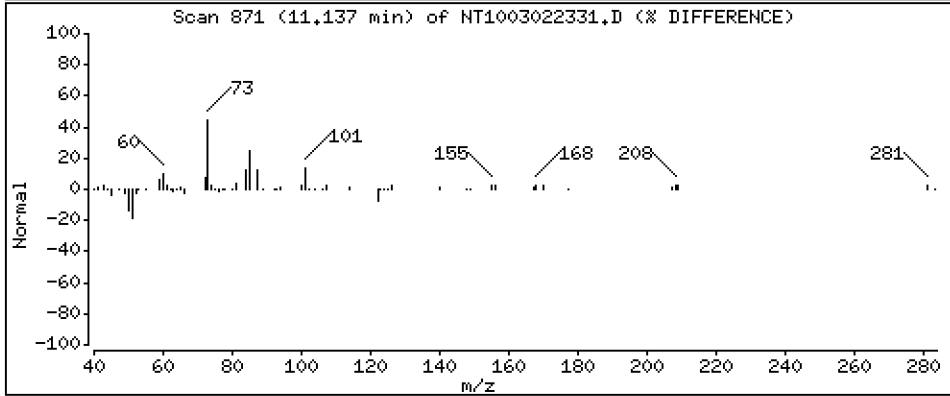
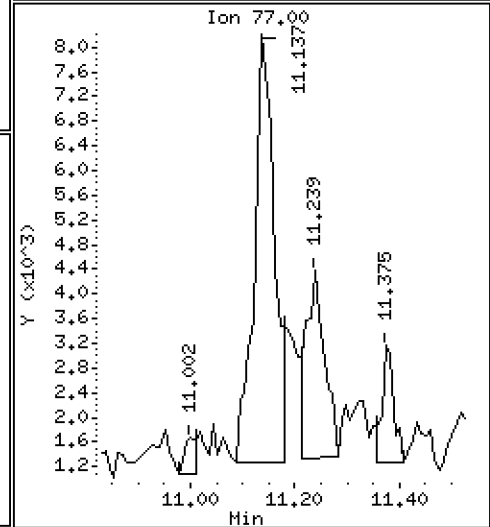
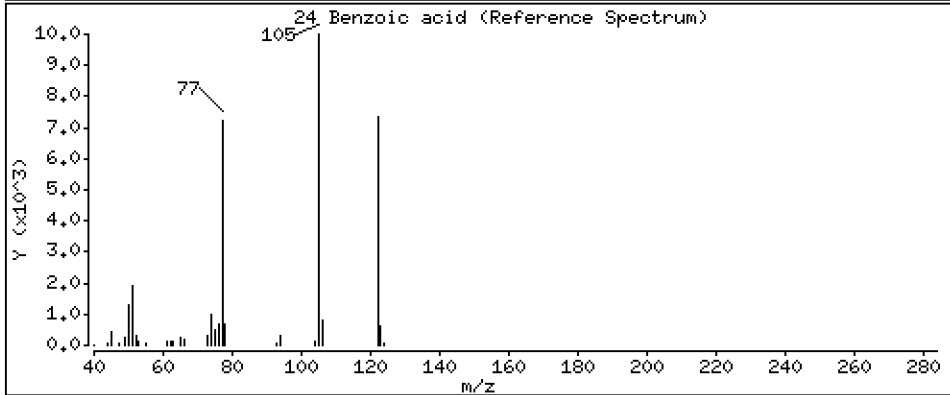
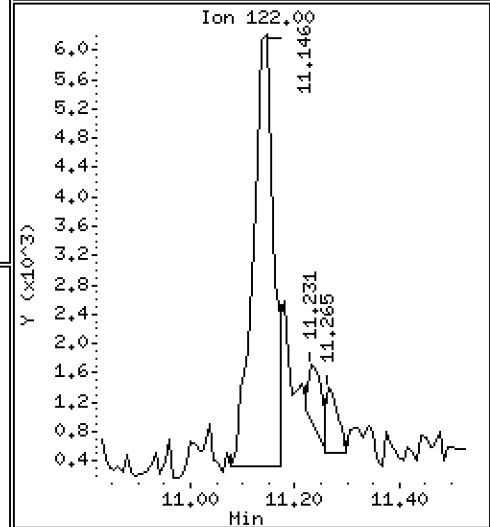
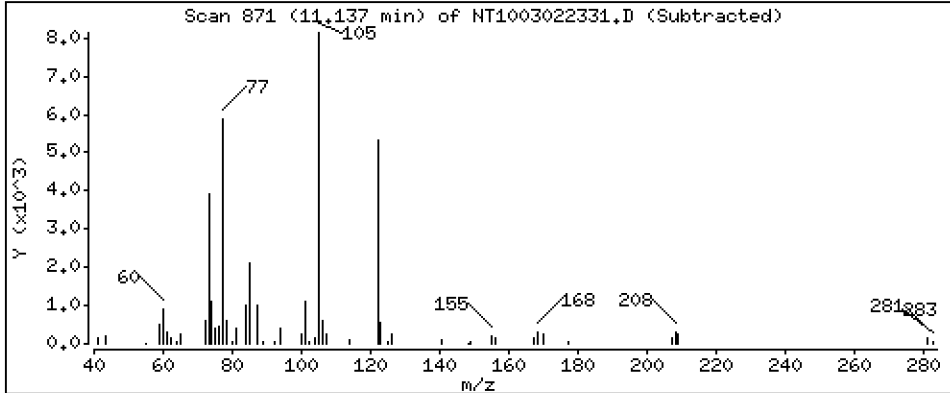
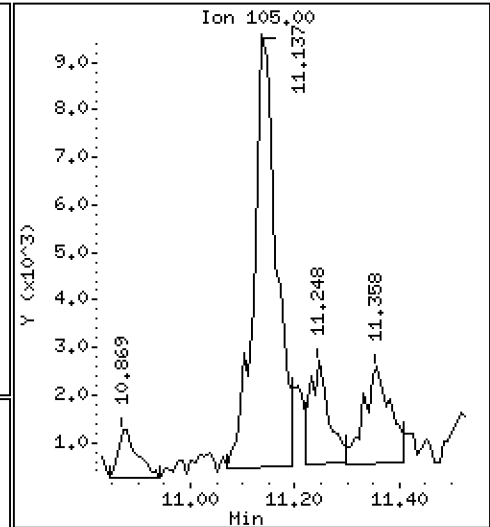
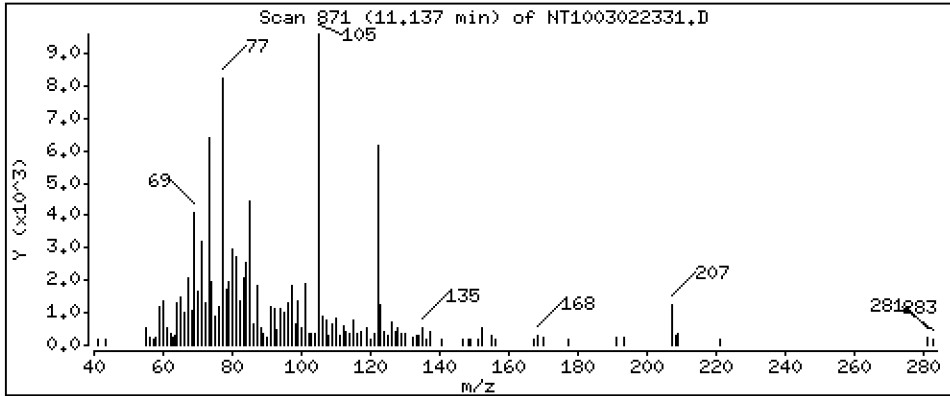
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.2831 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

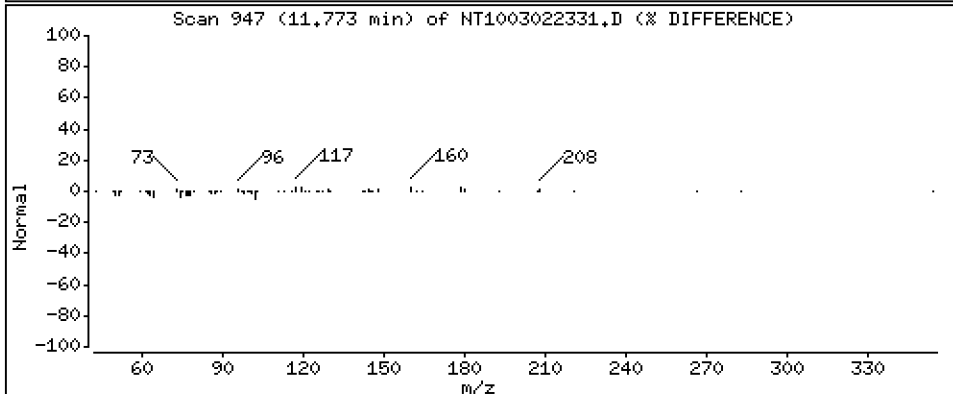
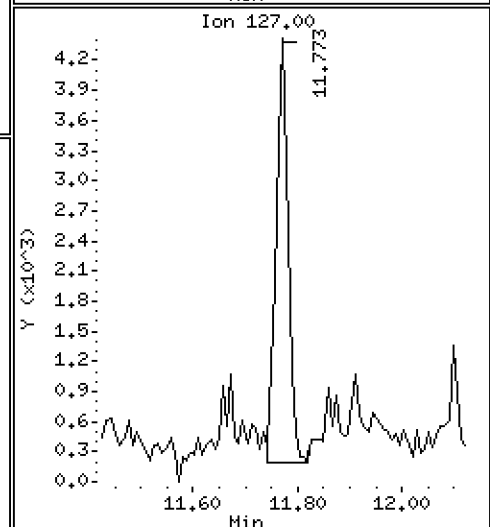
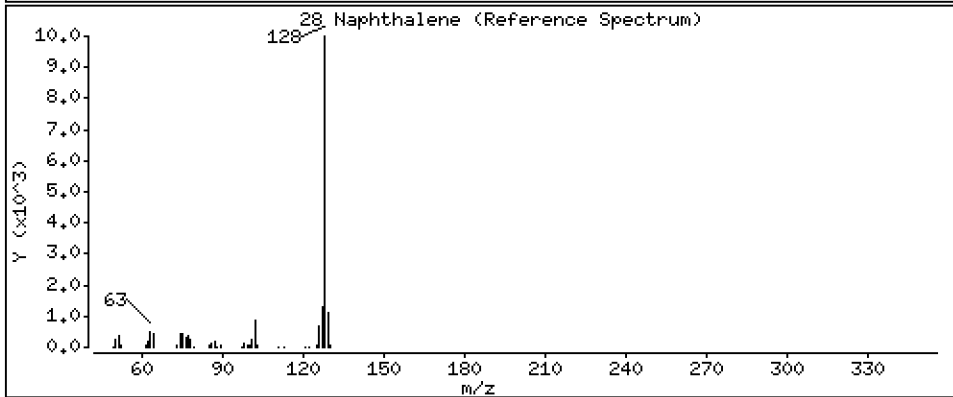
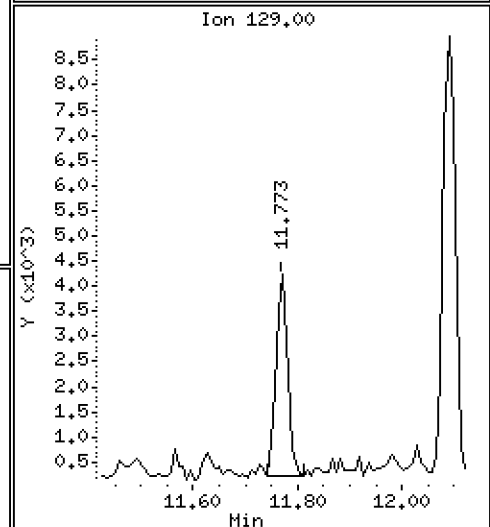
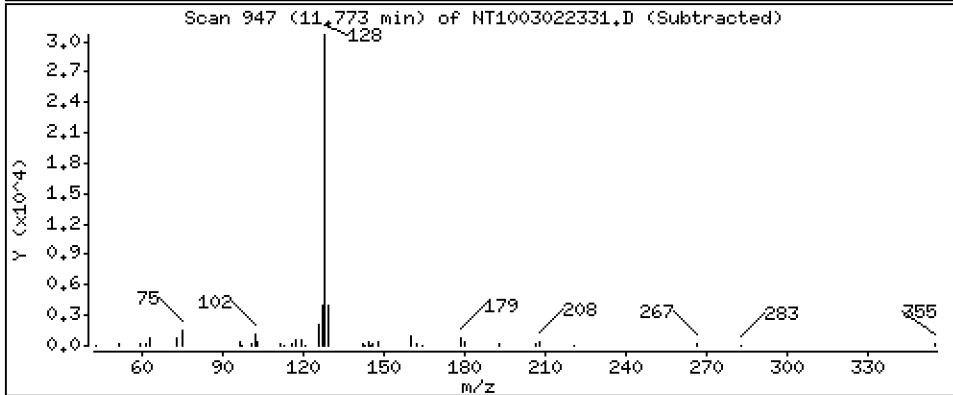
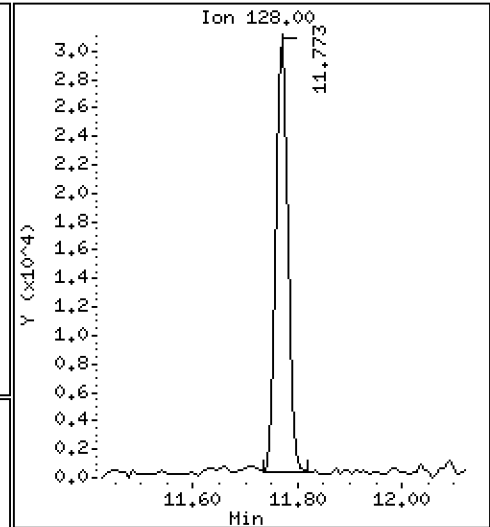
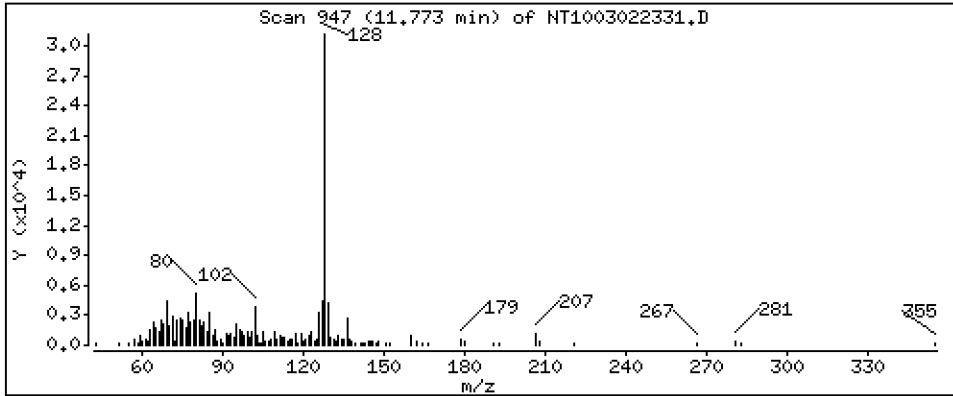
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,1060 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

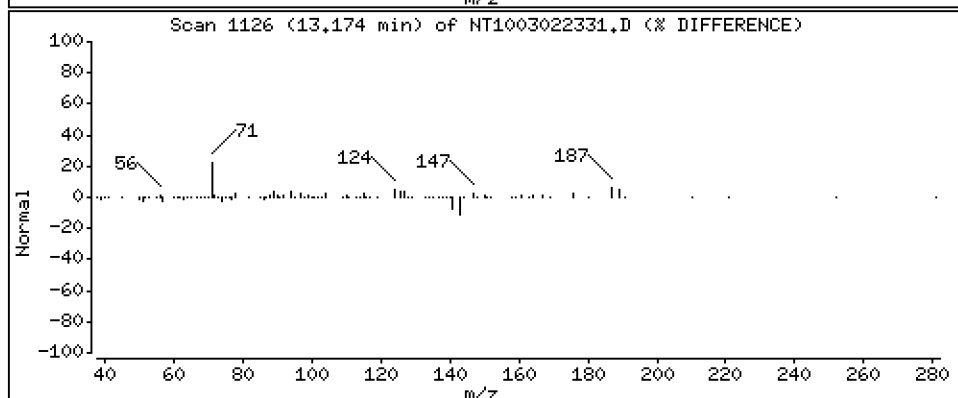
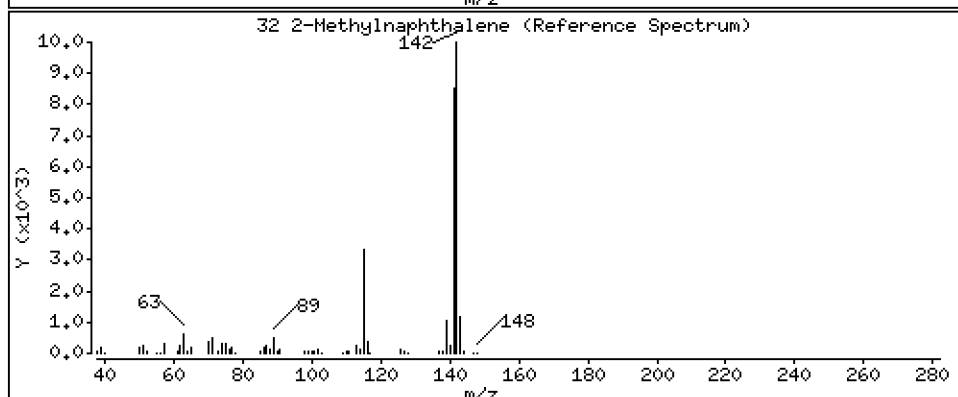
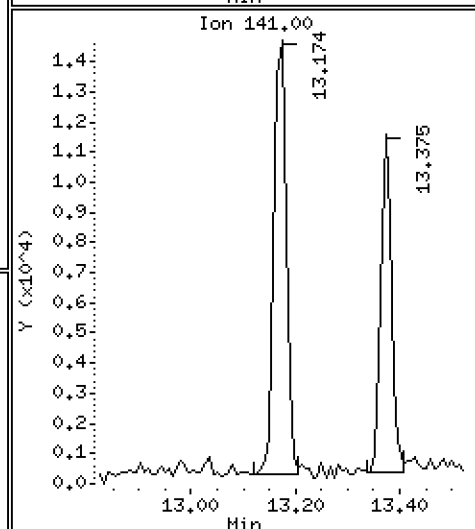
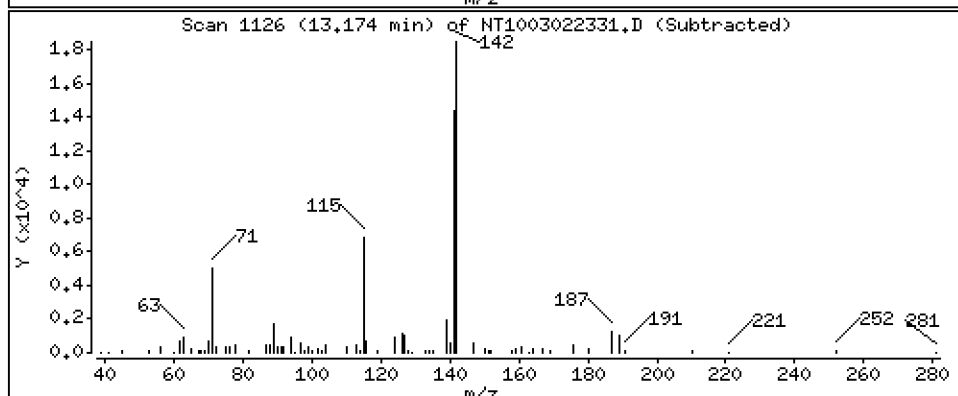
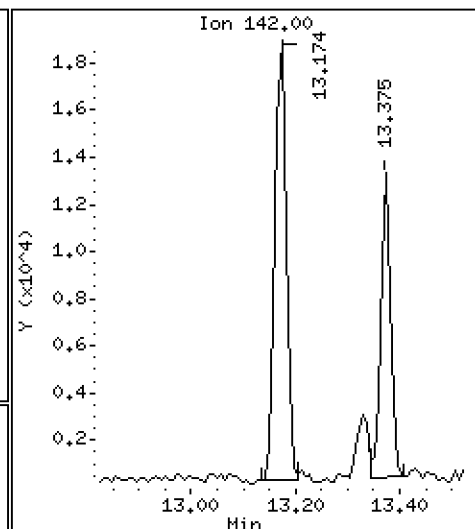
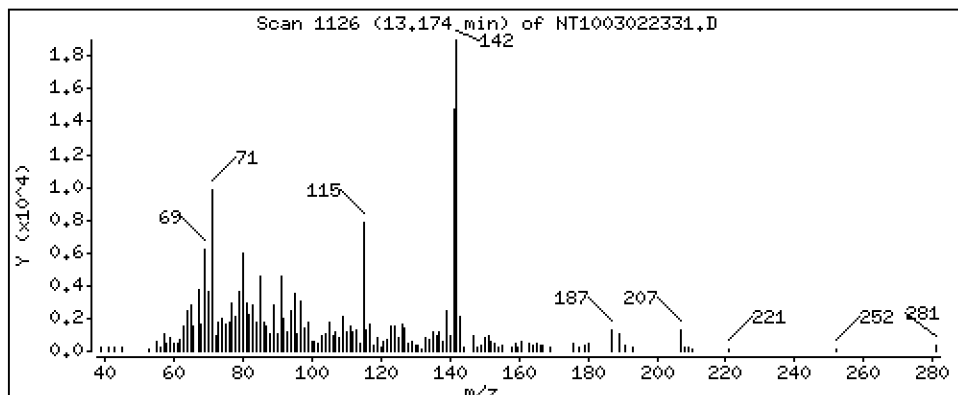
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,08627 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

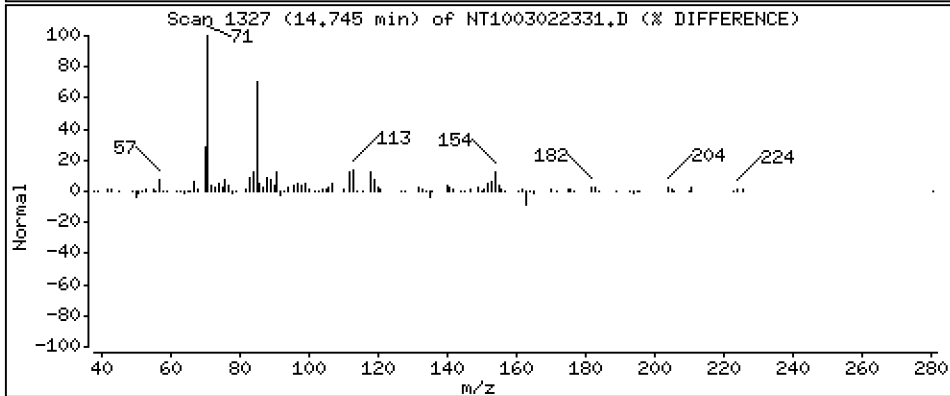
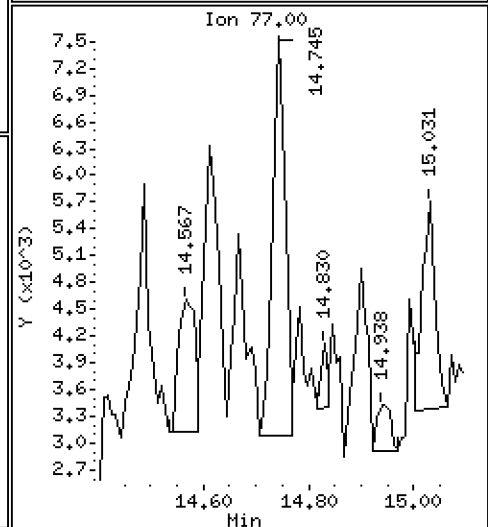
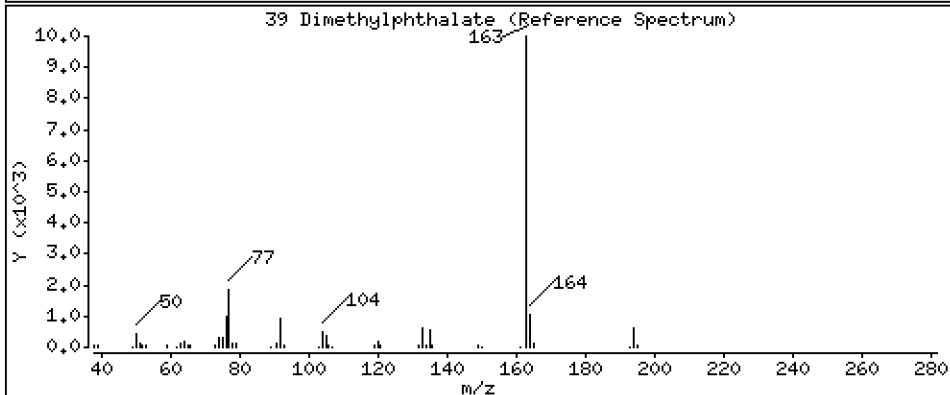
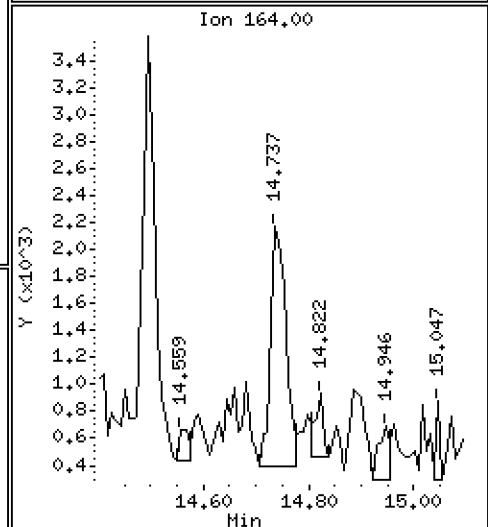
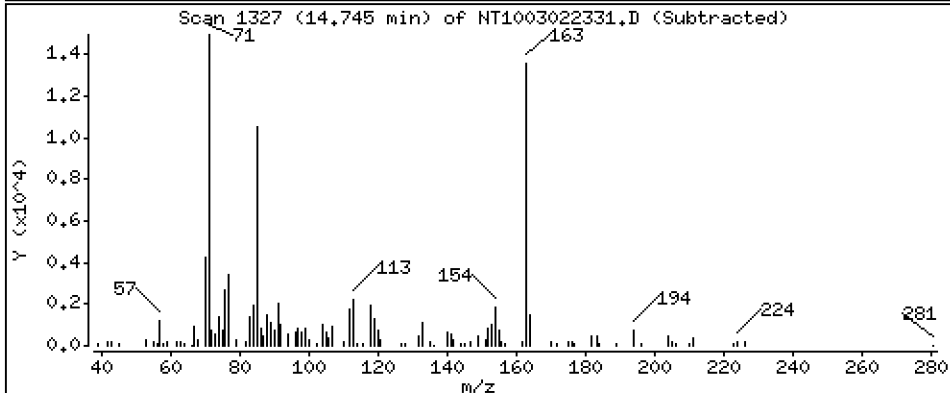
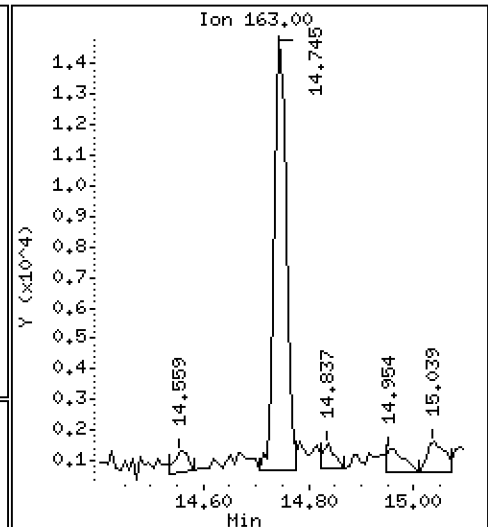
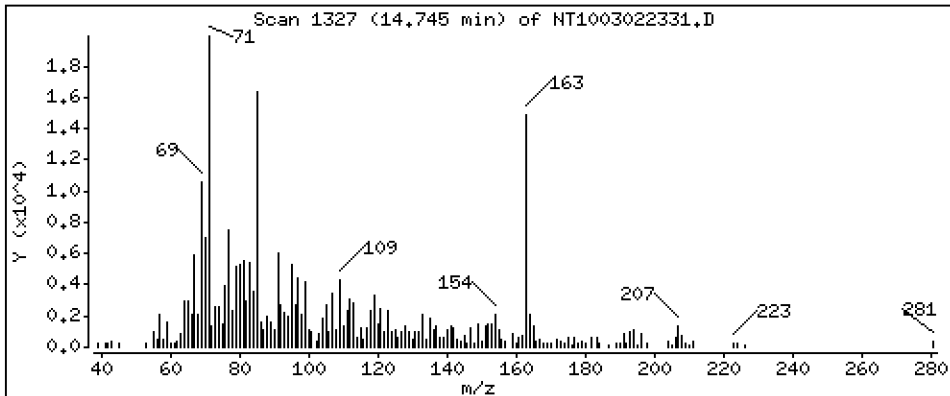
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.07447 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

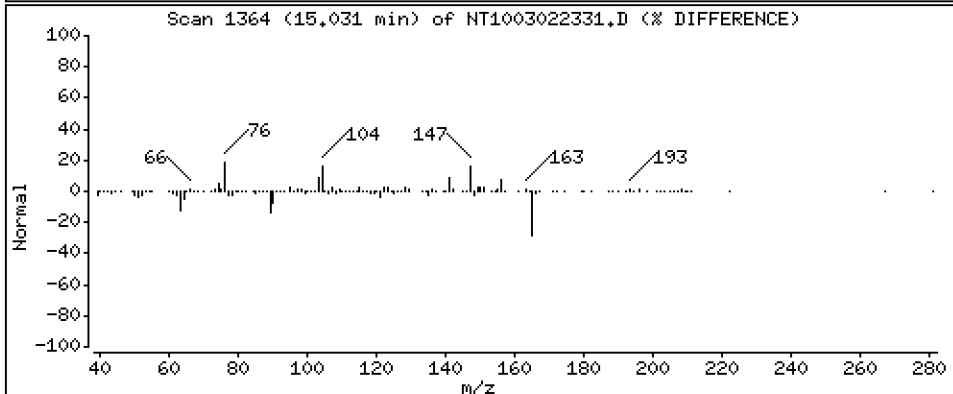
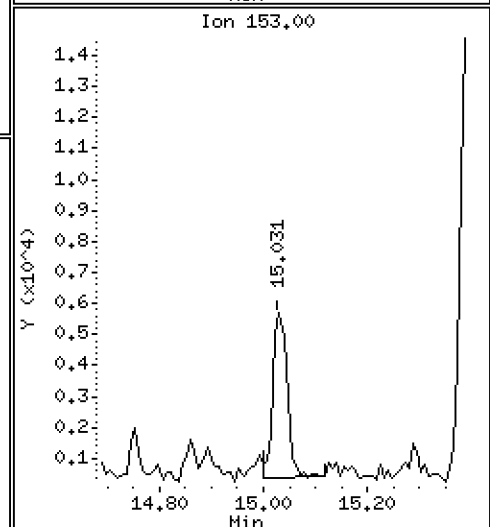
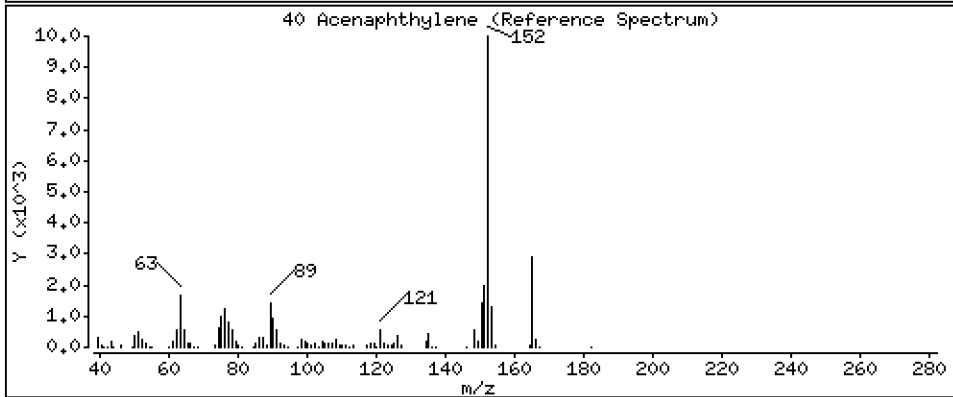
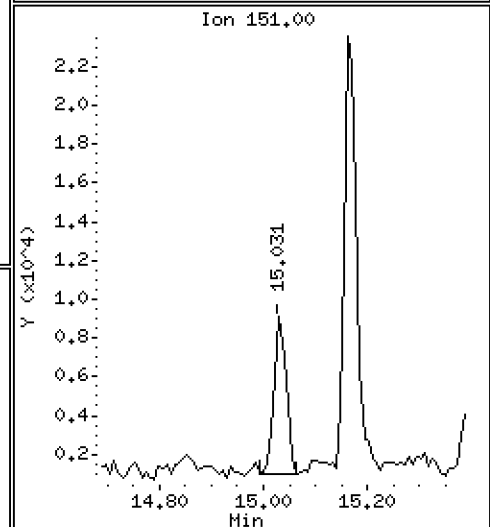
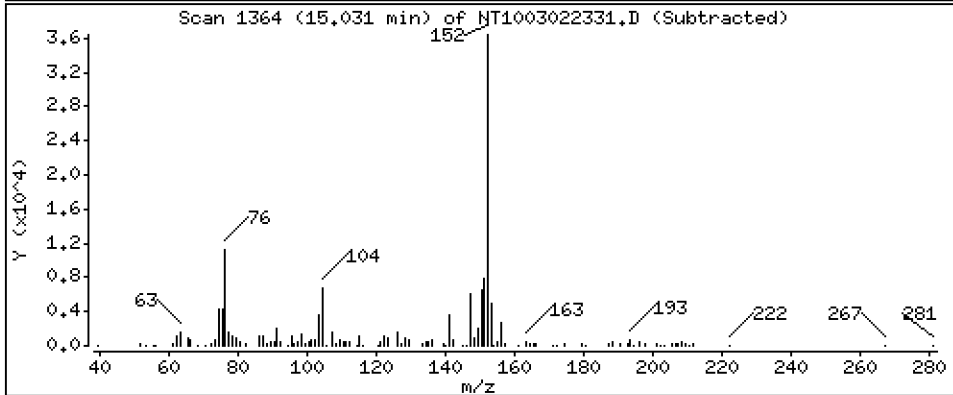
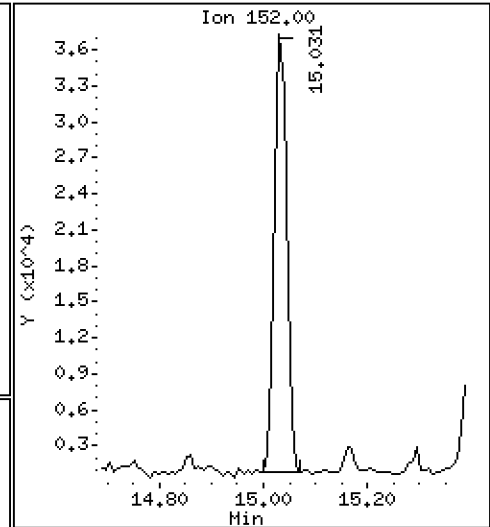
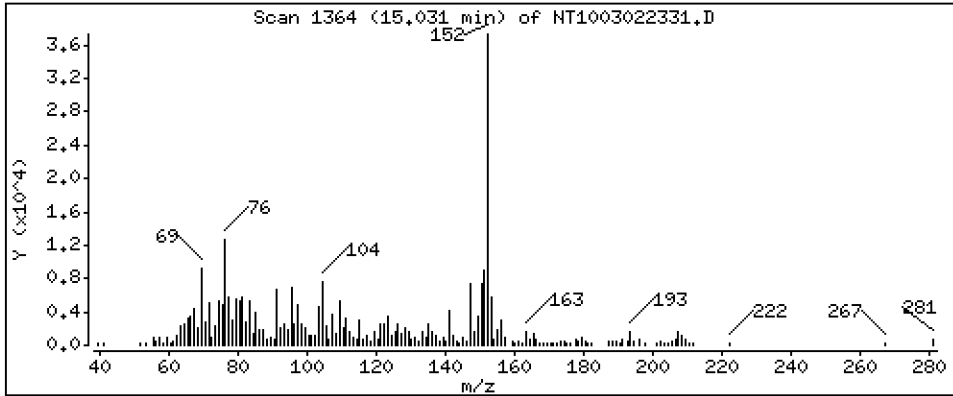
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,1331 ug/mL





Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

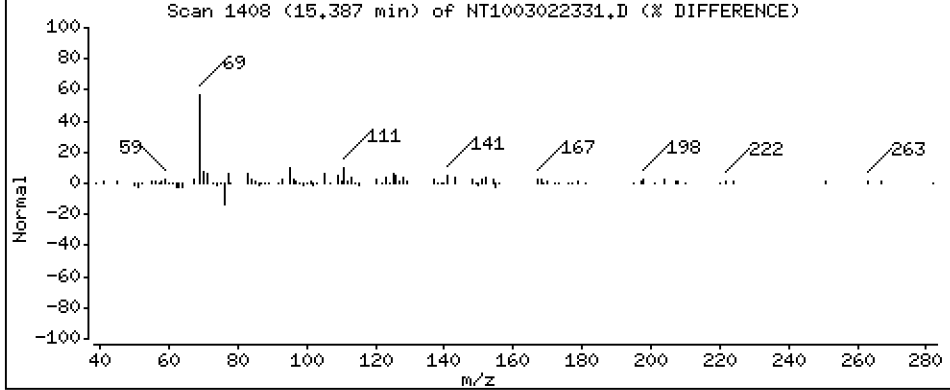
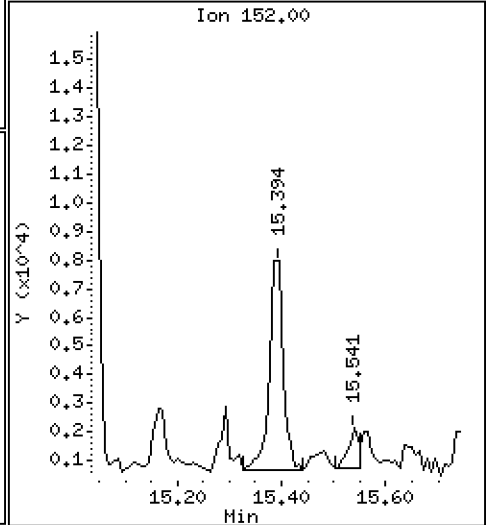
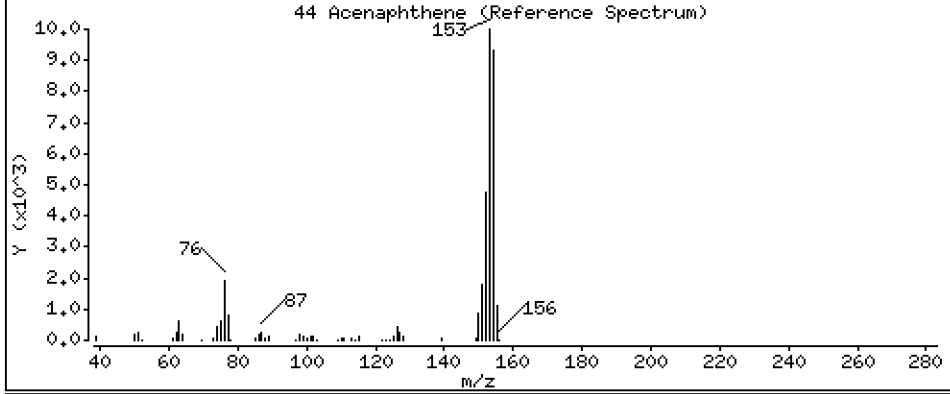
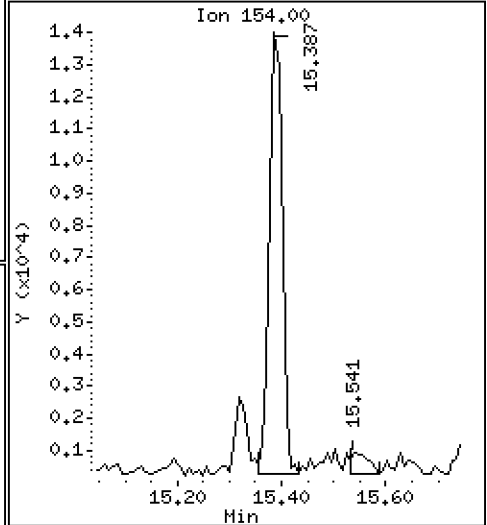
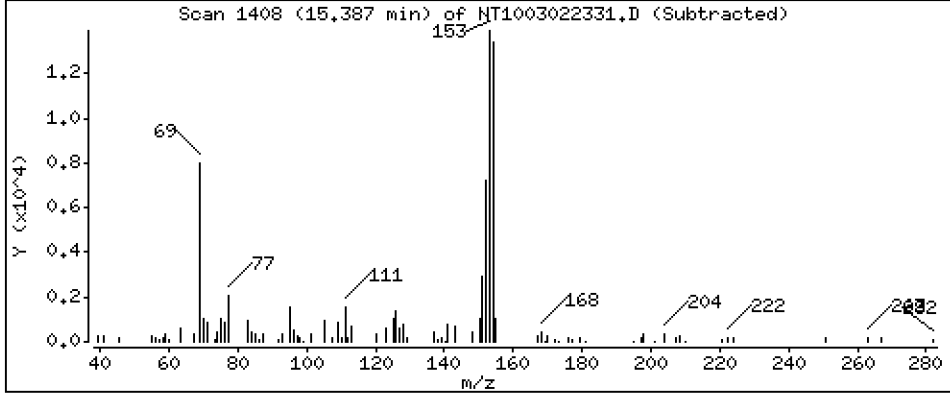
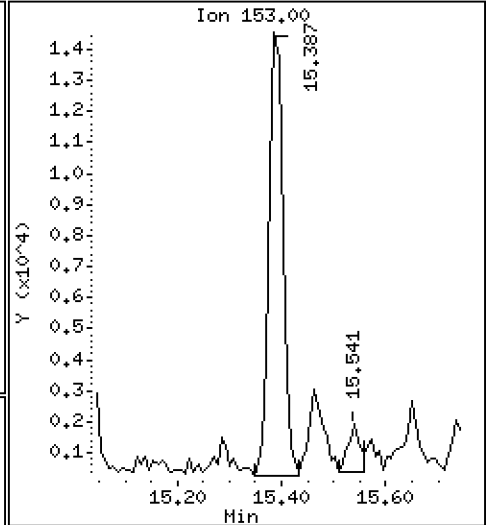
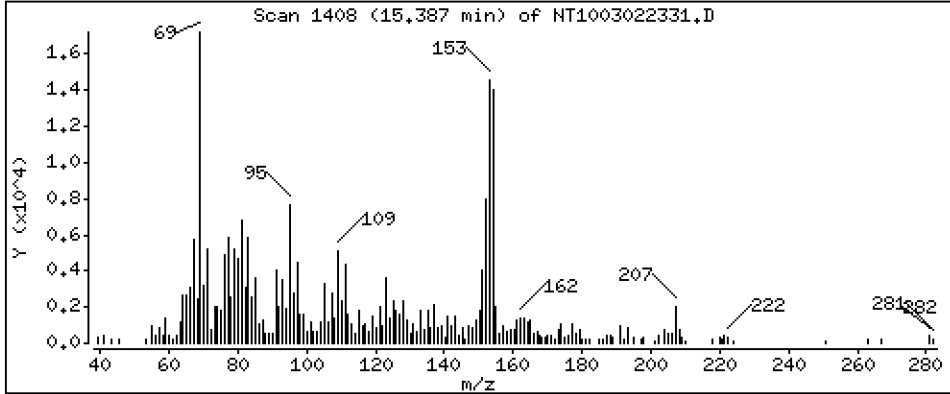
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 0.09851 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

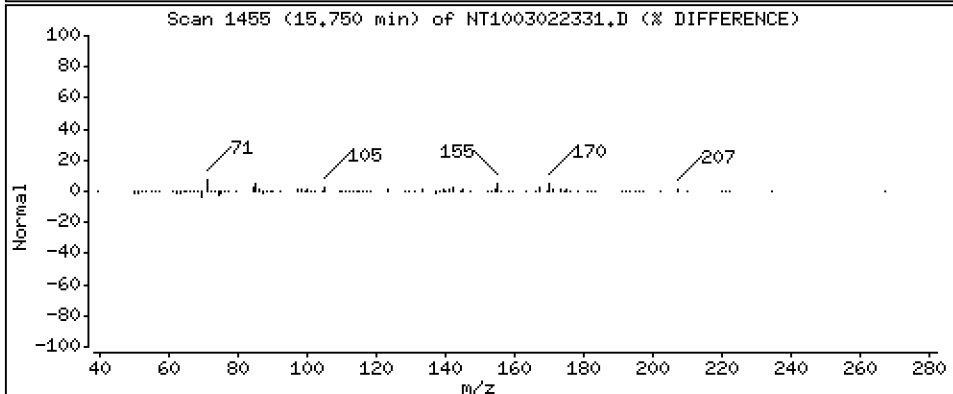
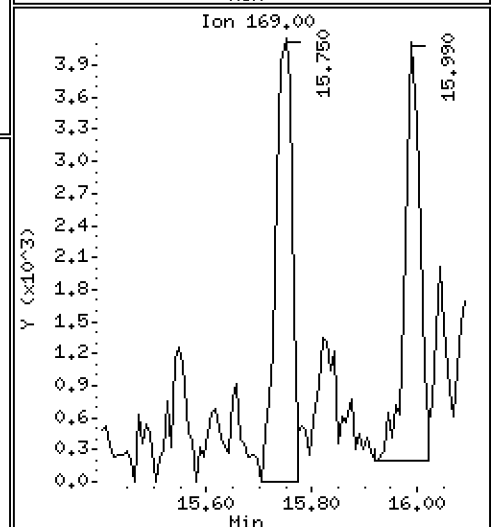
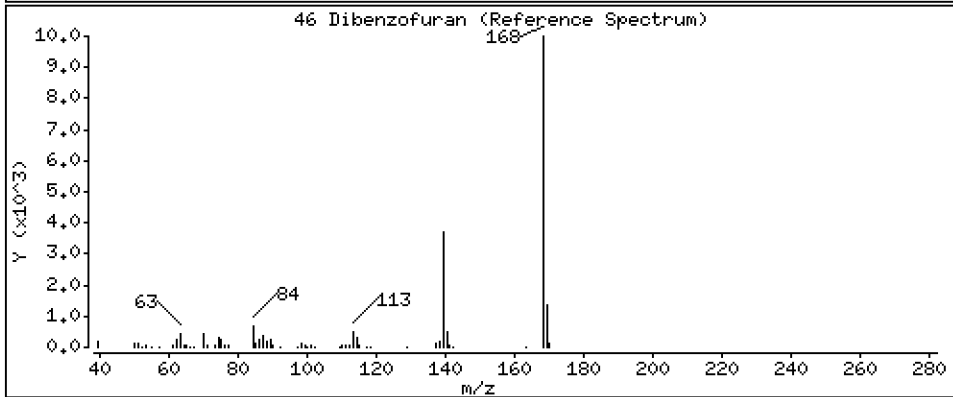
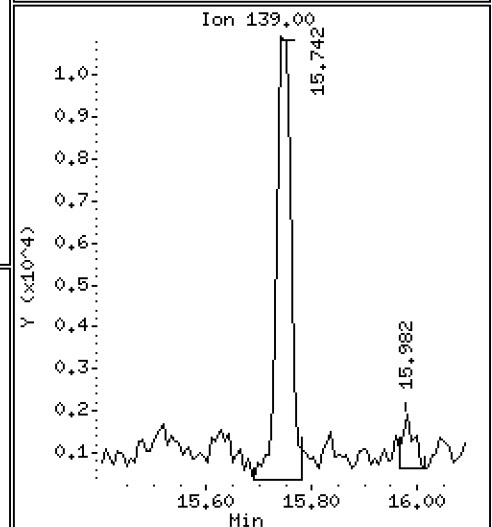
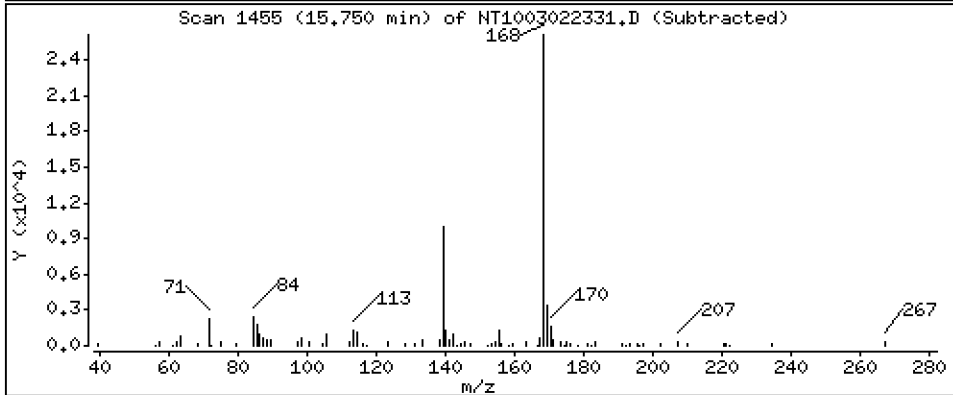
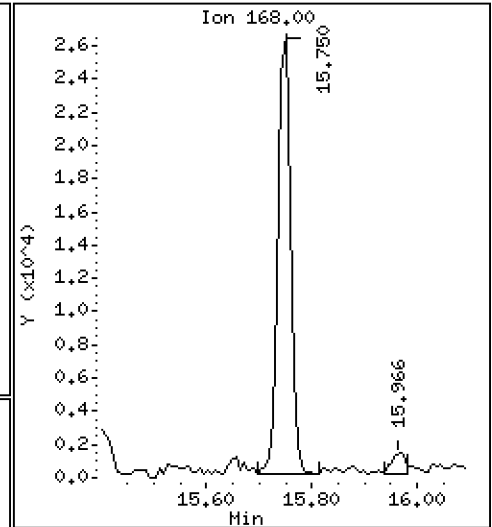
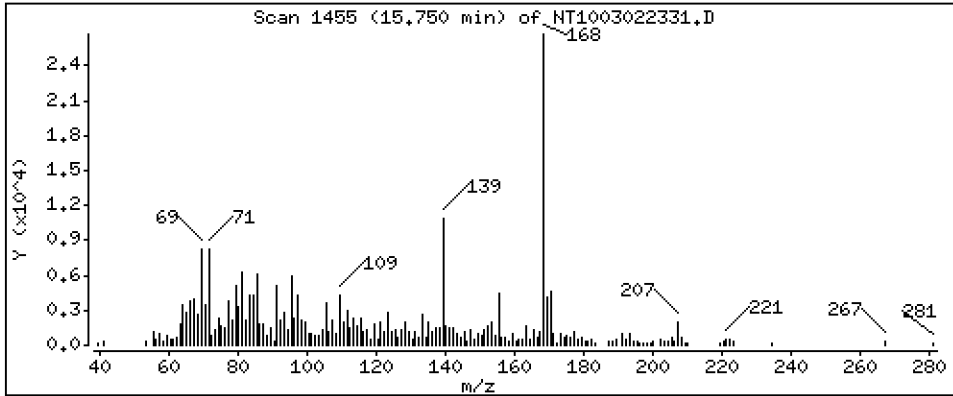
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 0.1101 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

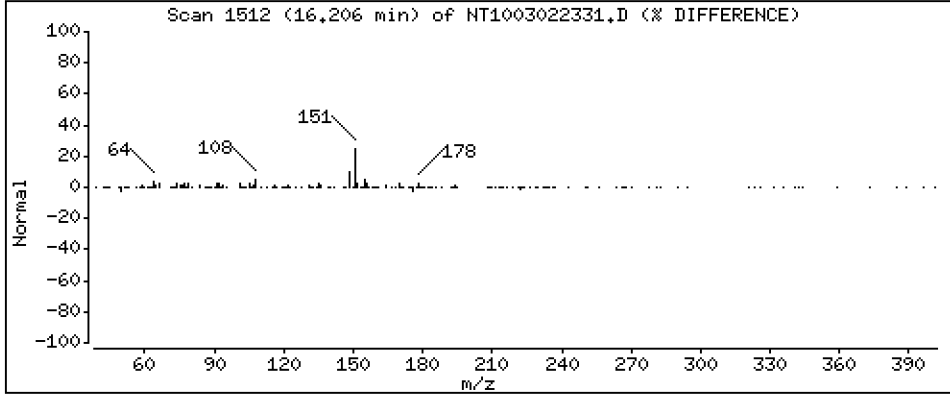
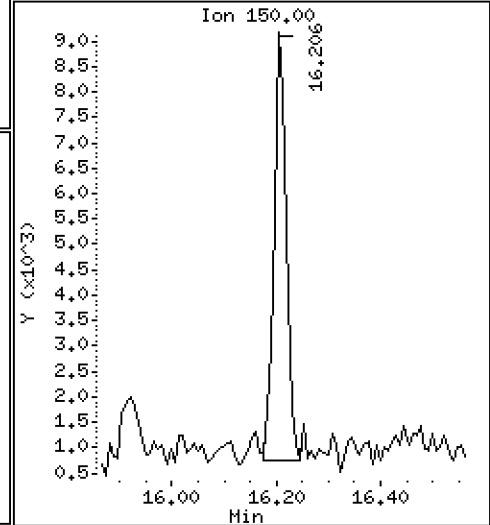
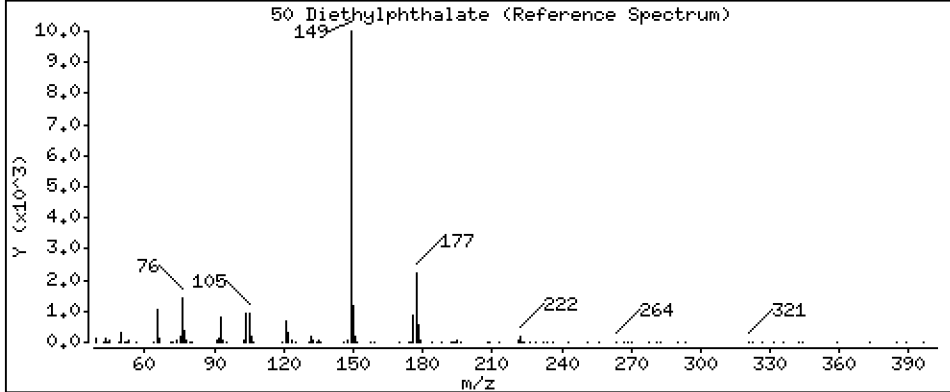
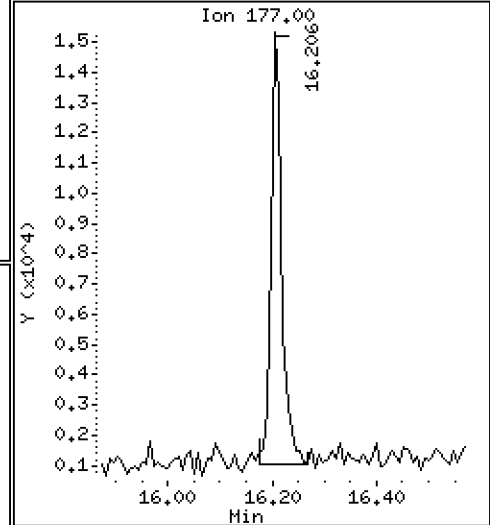
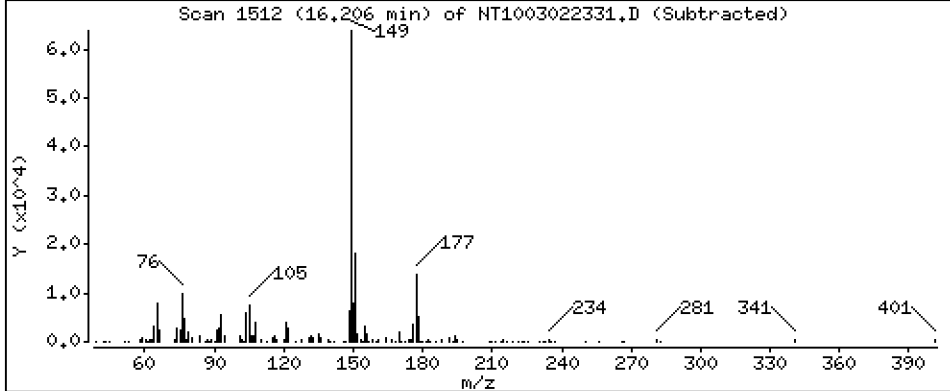
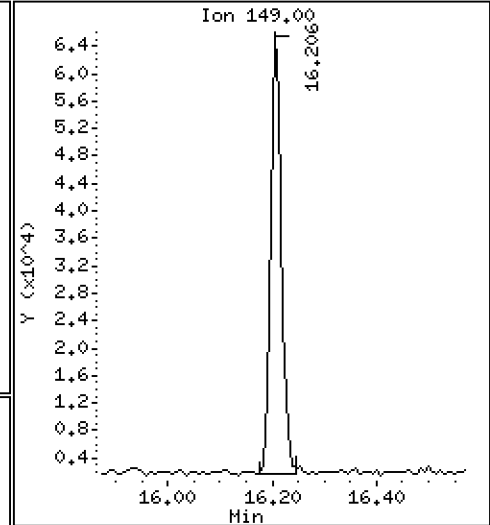
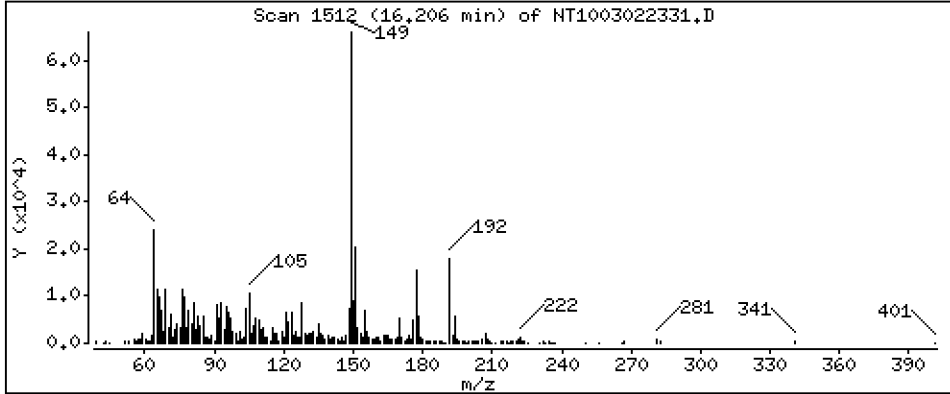
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,3040 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

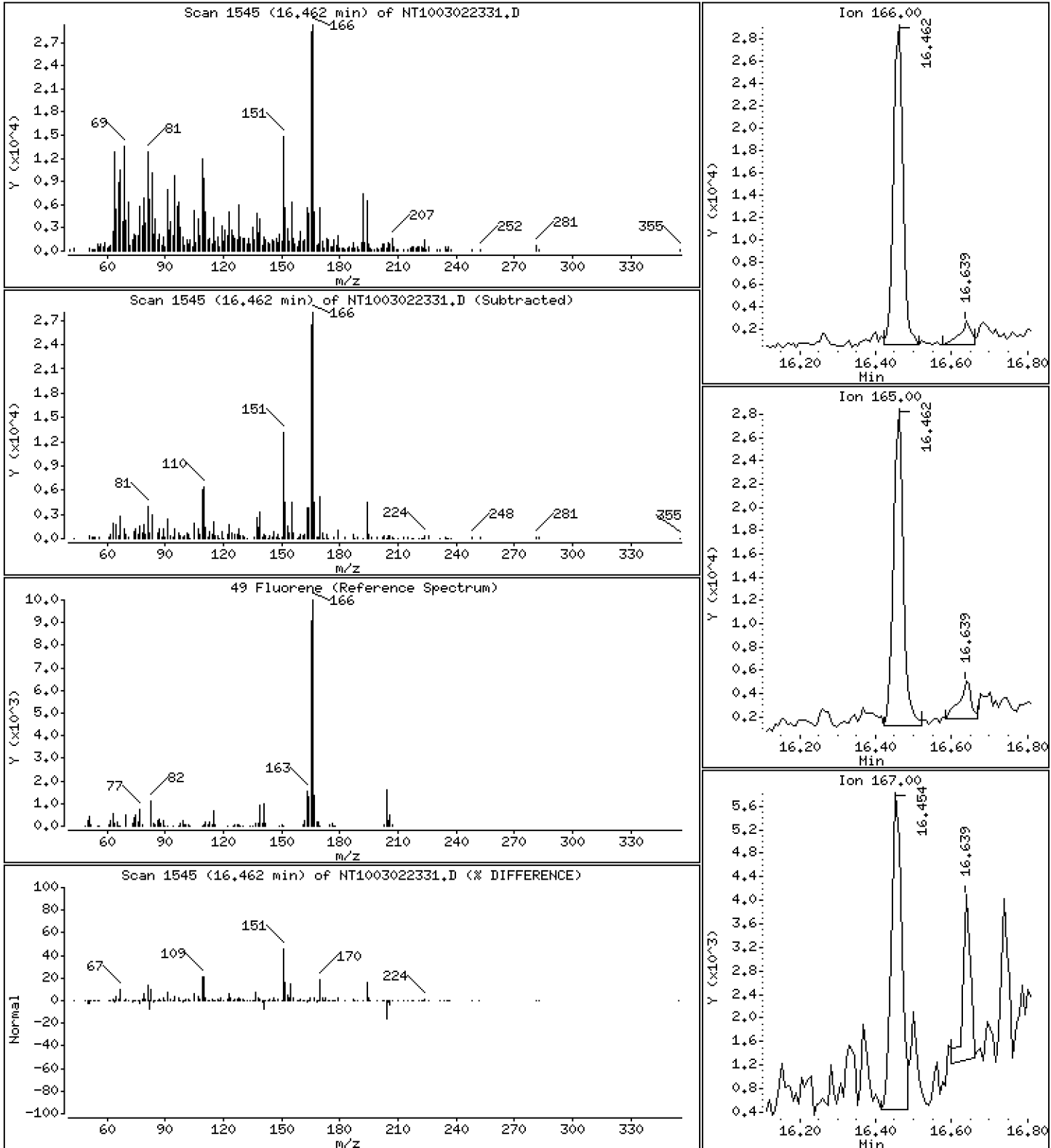
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 0.1465 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

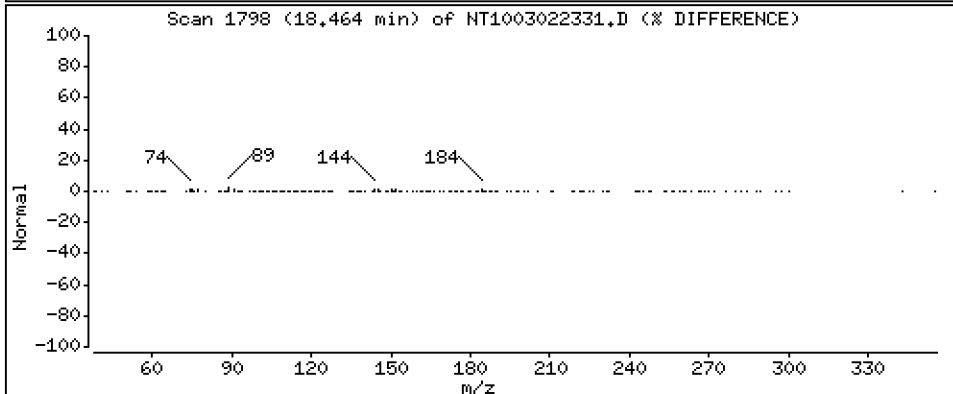
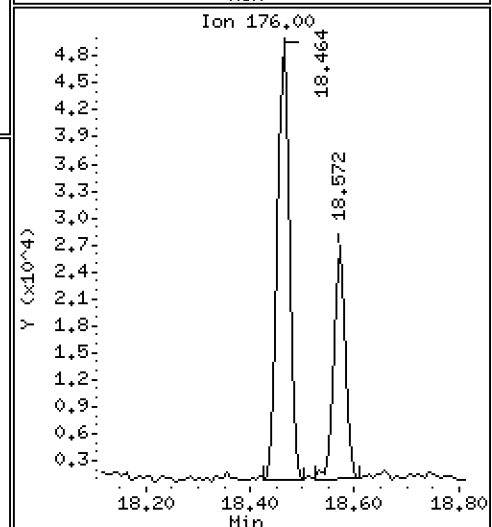
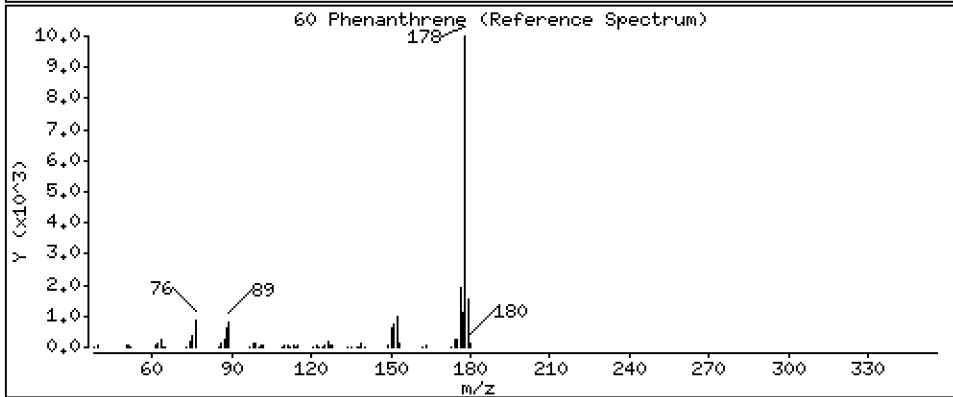
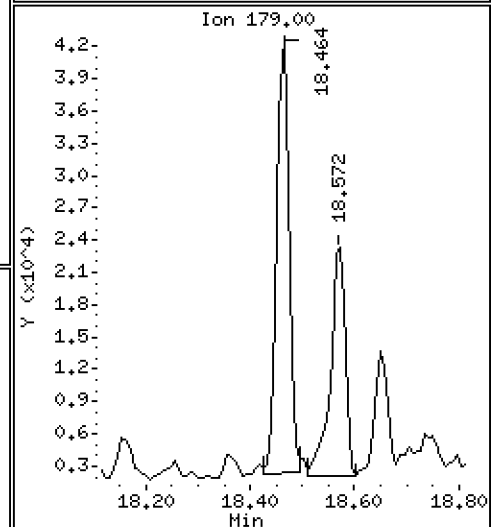
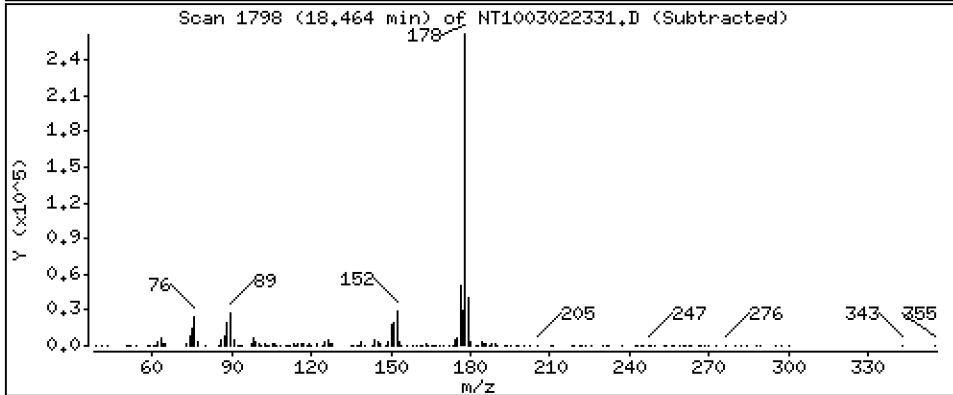
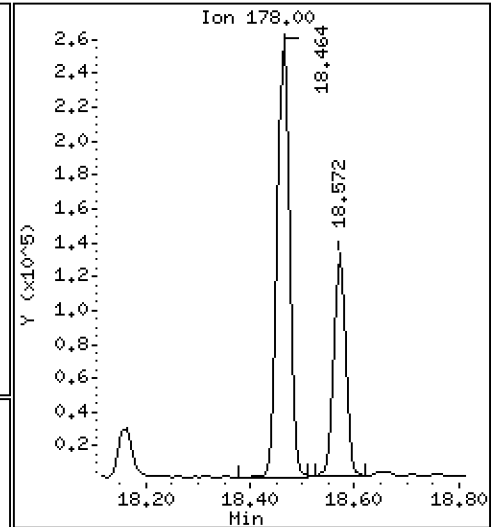
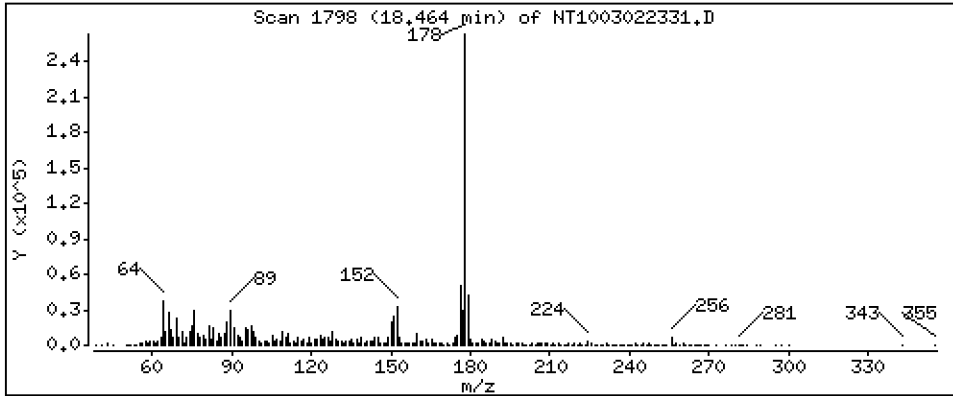
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,9102 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

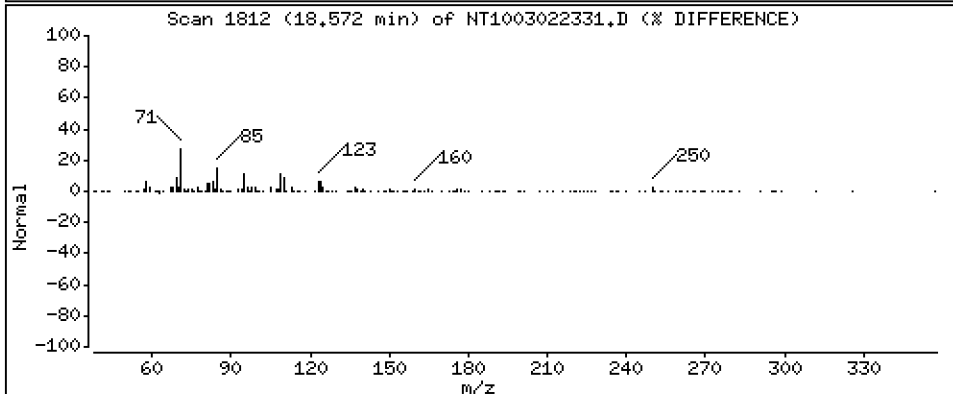
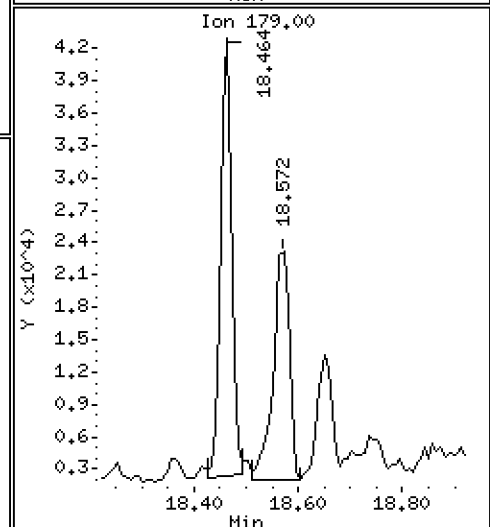
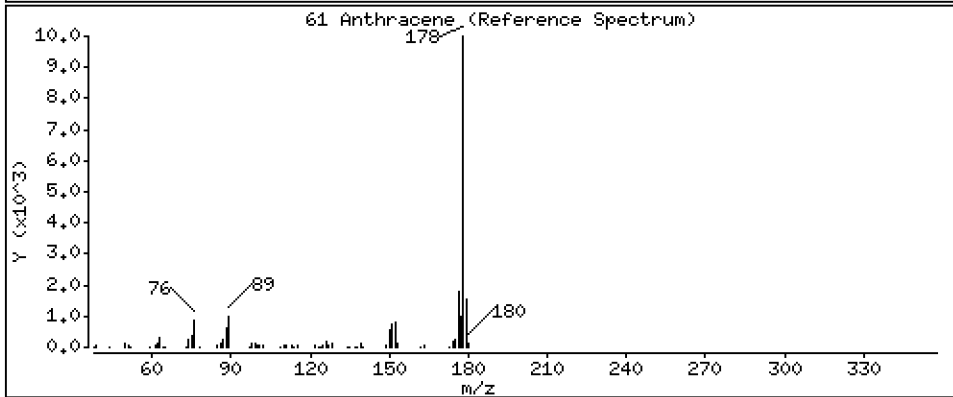
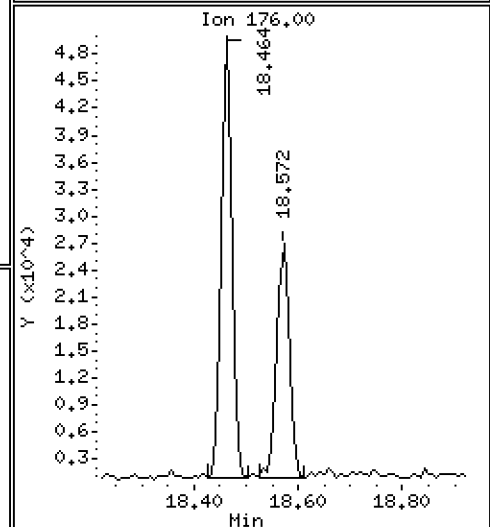
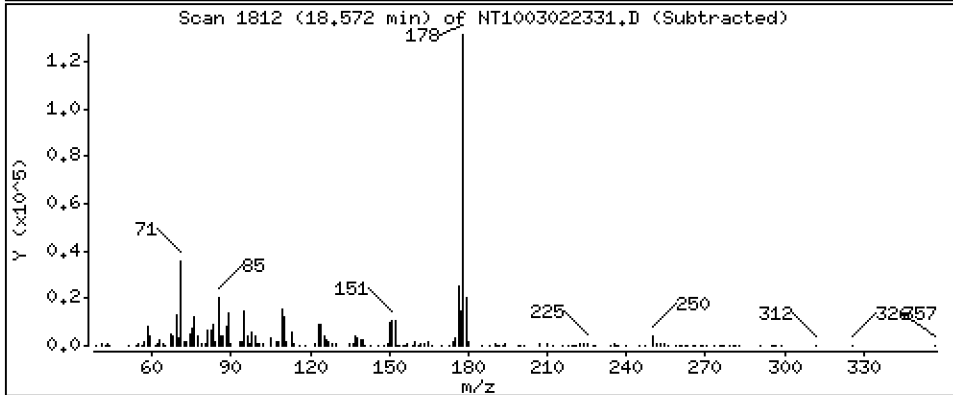
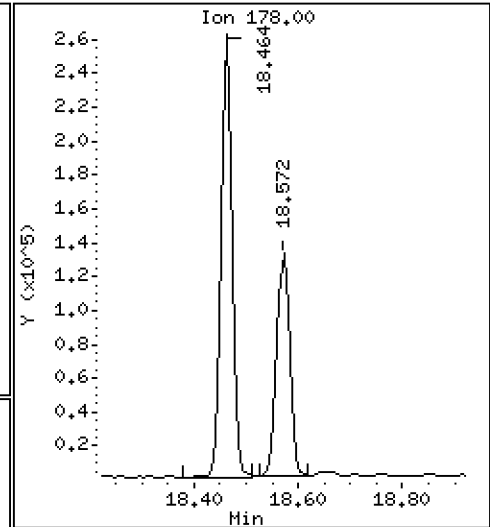
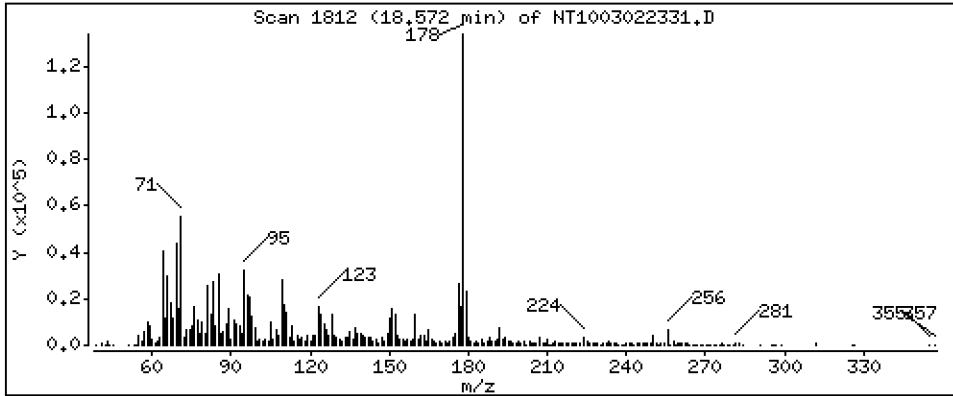
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,5125 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

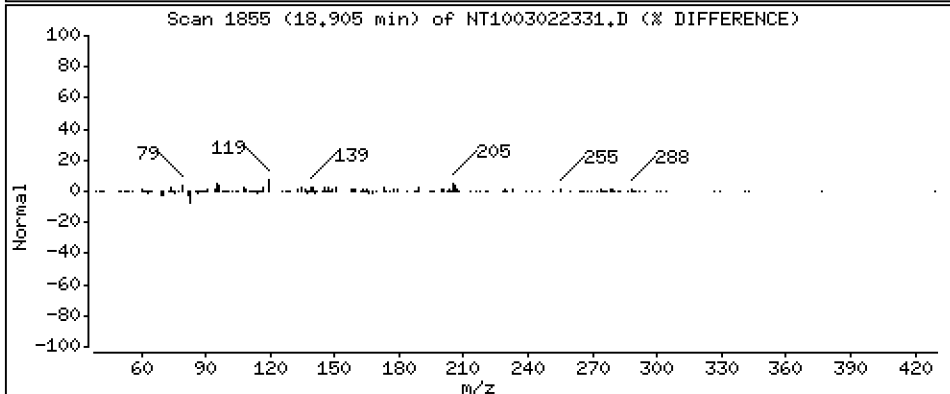
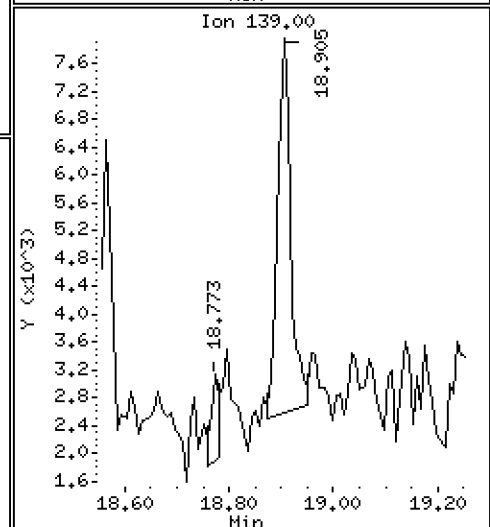
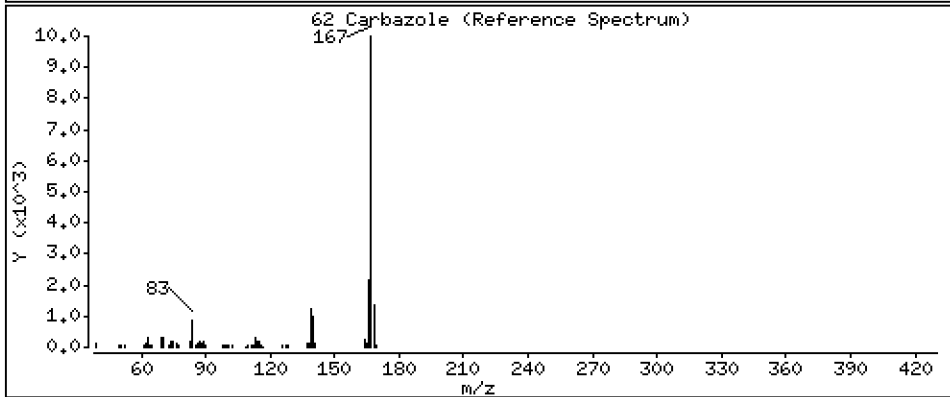
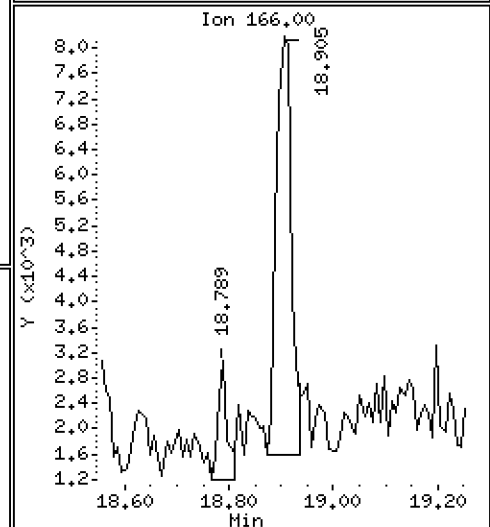
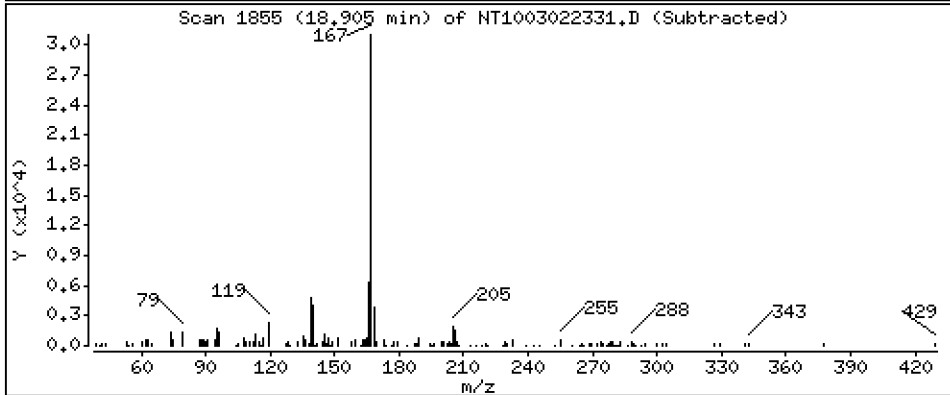
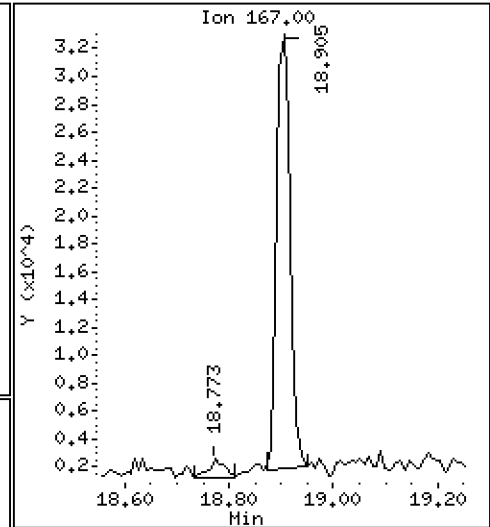
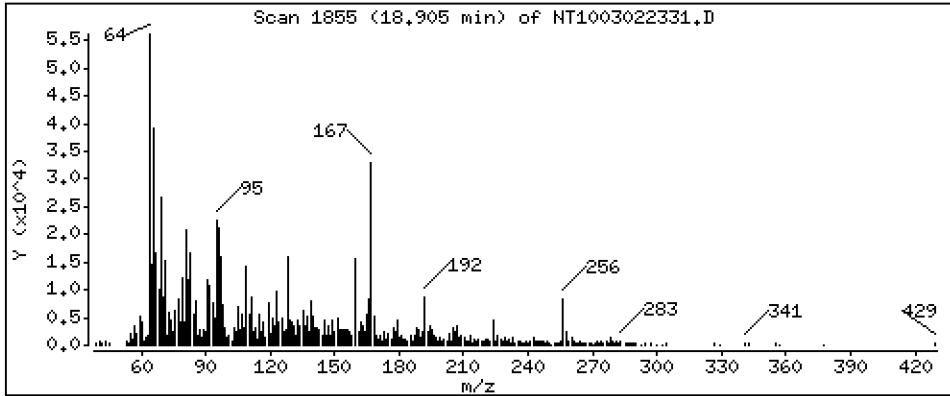
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,1344 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

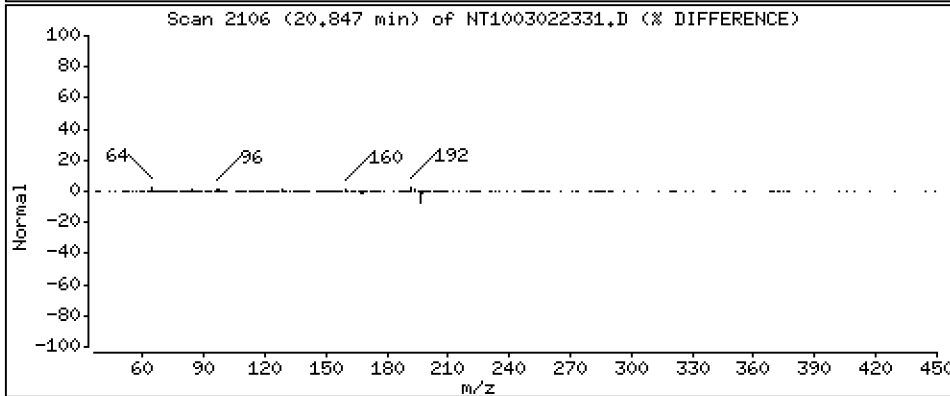
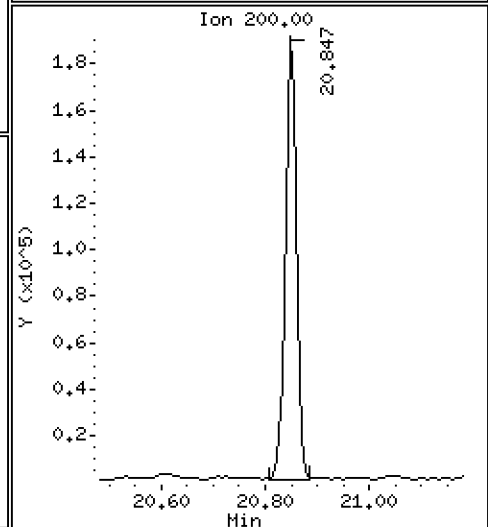
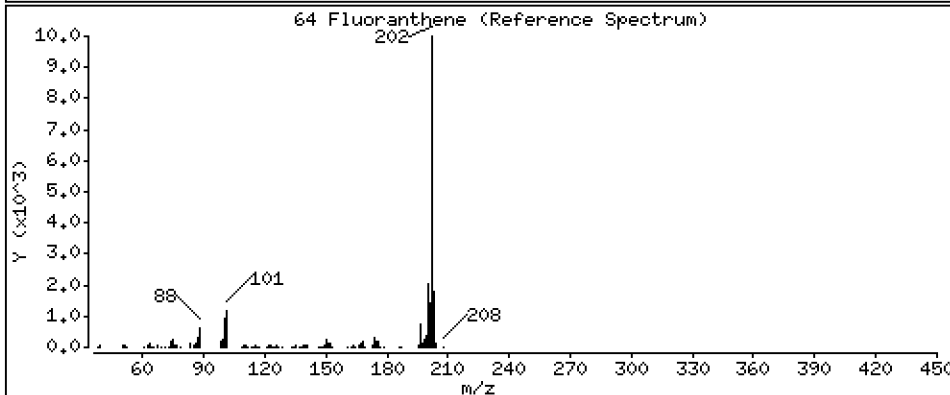
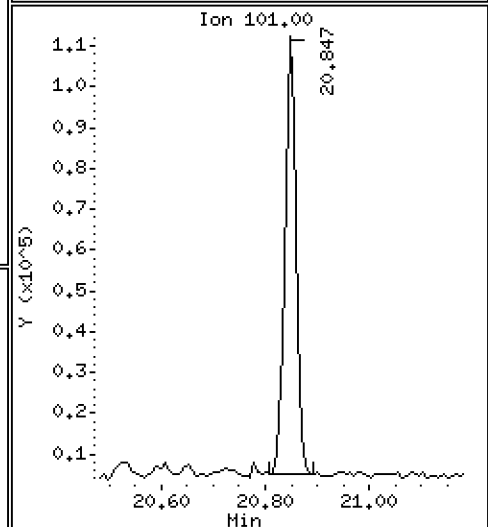
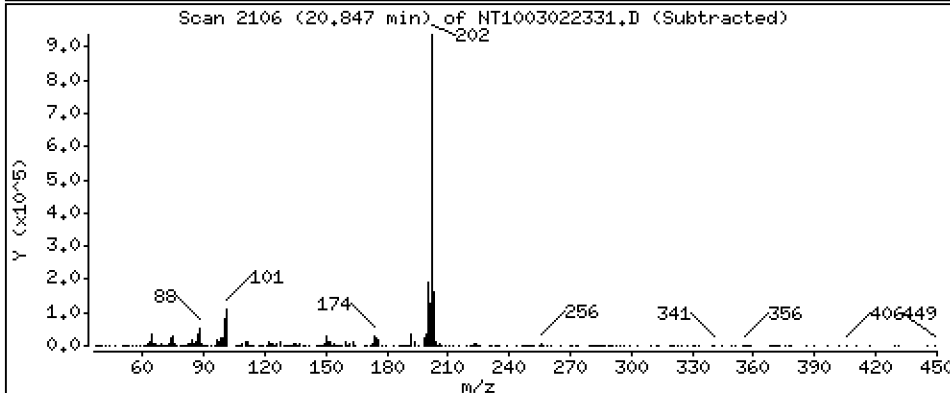
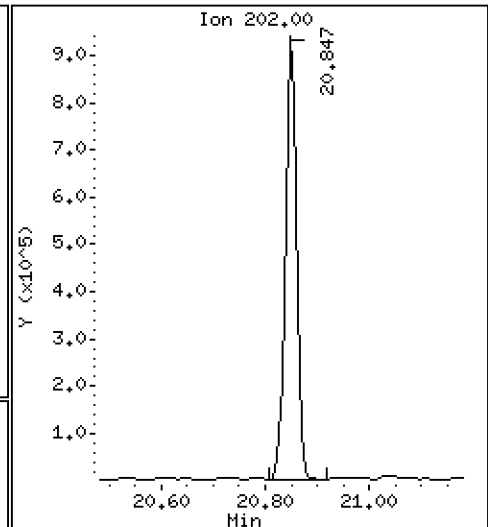
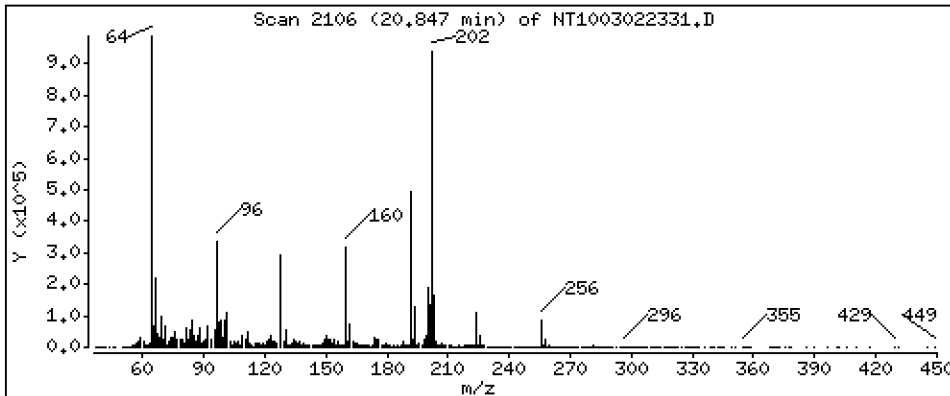
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 2,010 ug/mL





Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

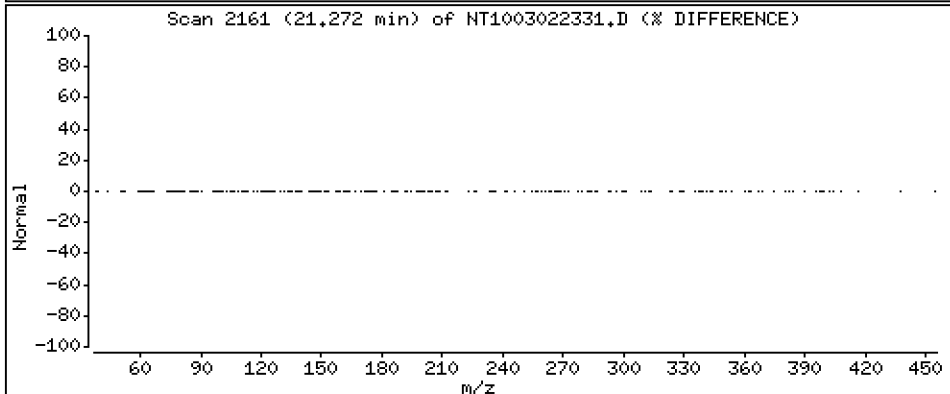
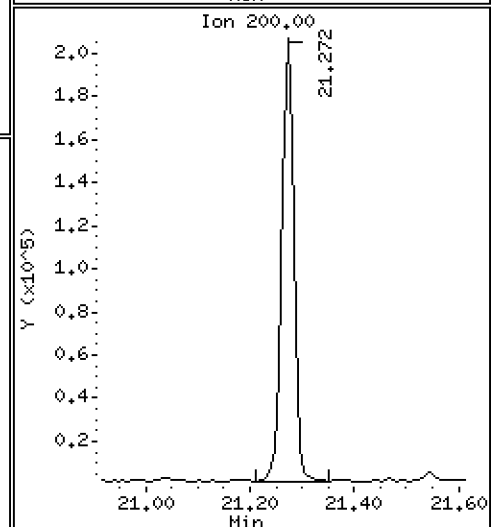
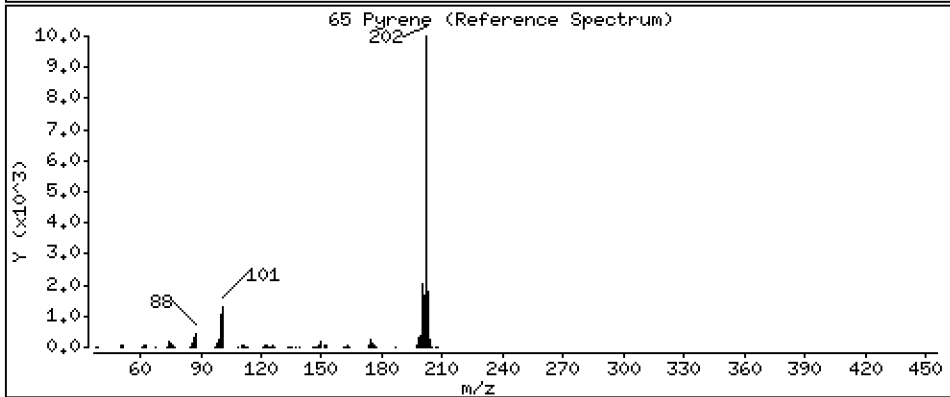
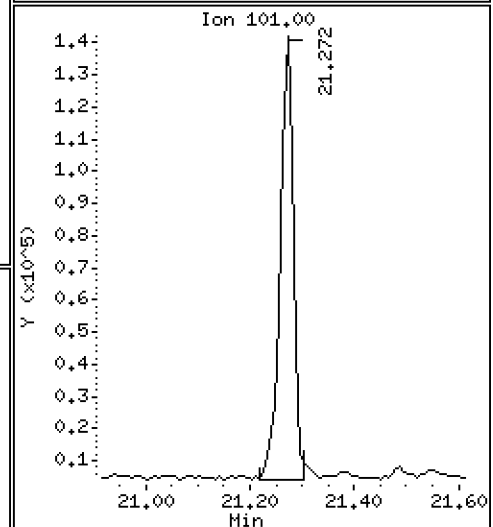
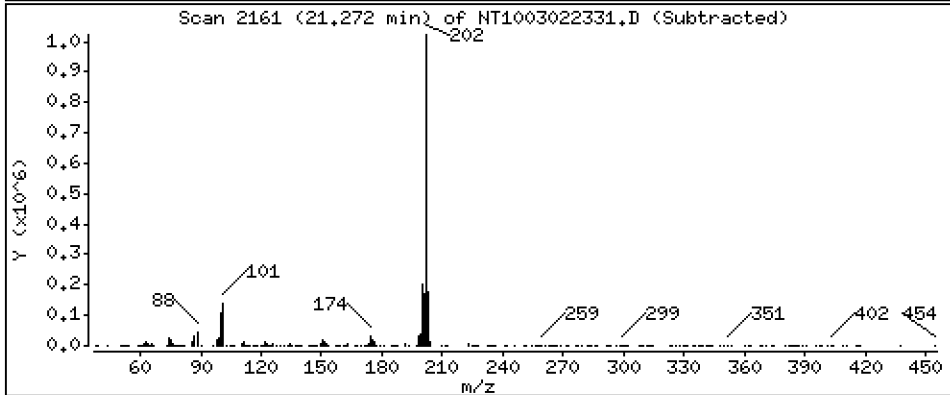
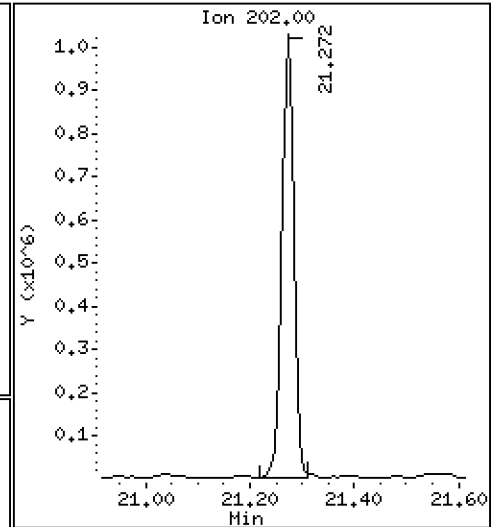
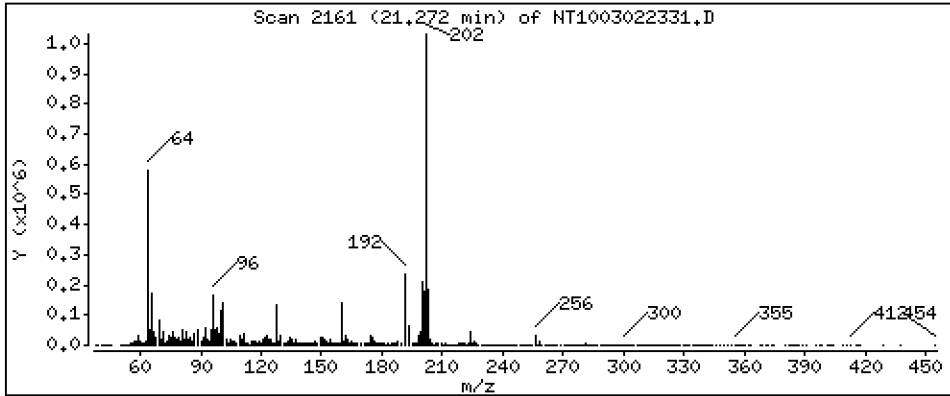
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 2,133 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

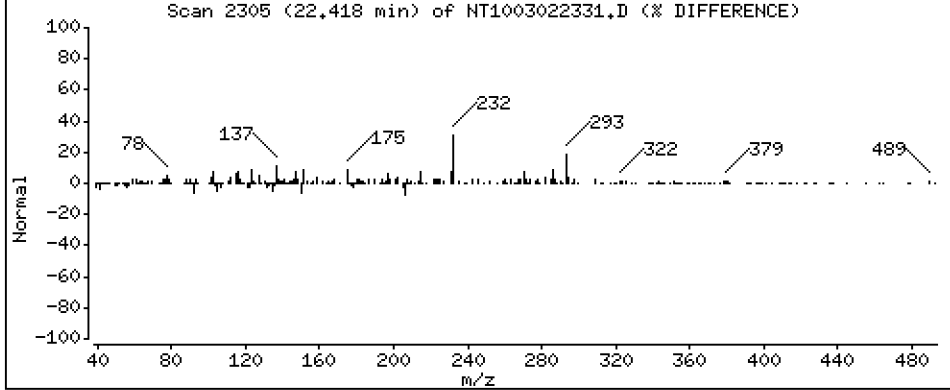
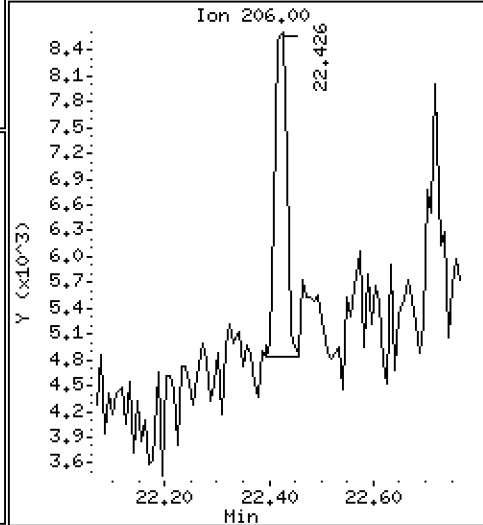
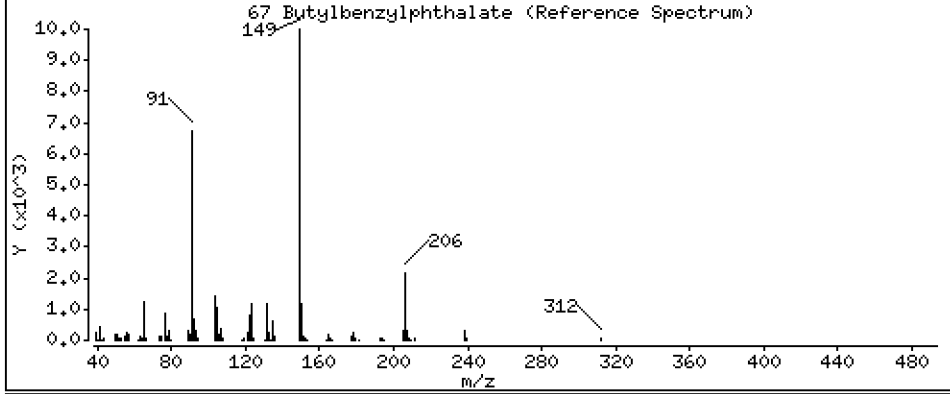
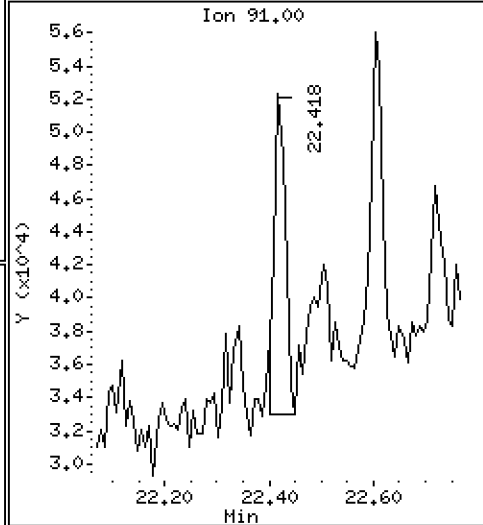
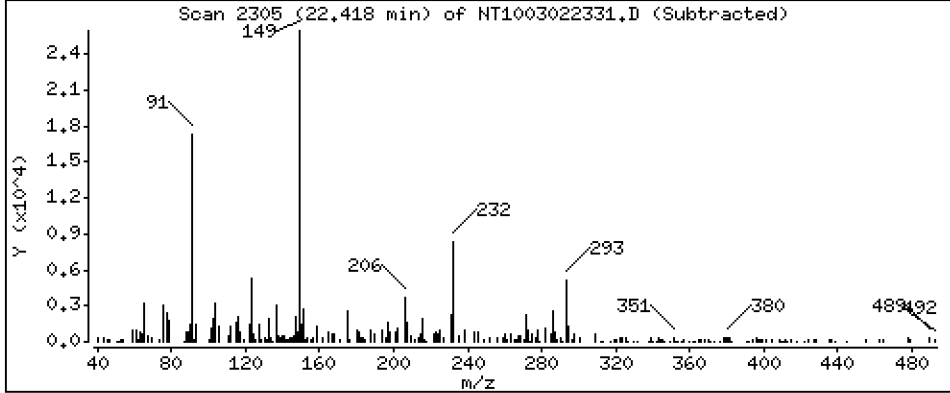
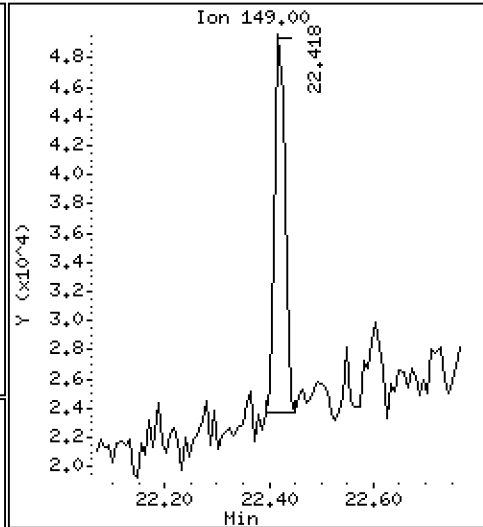
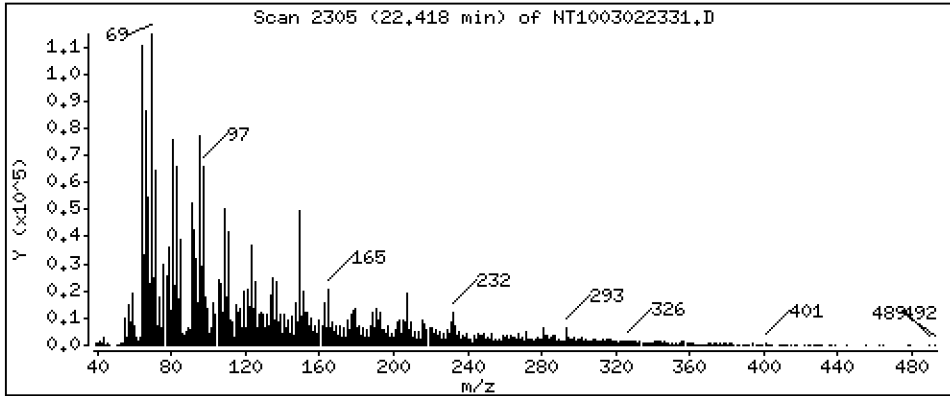
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.08491 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

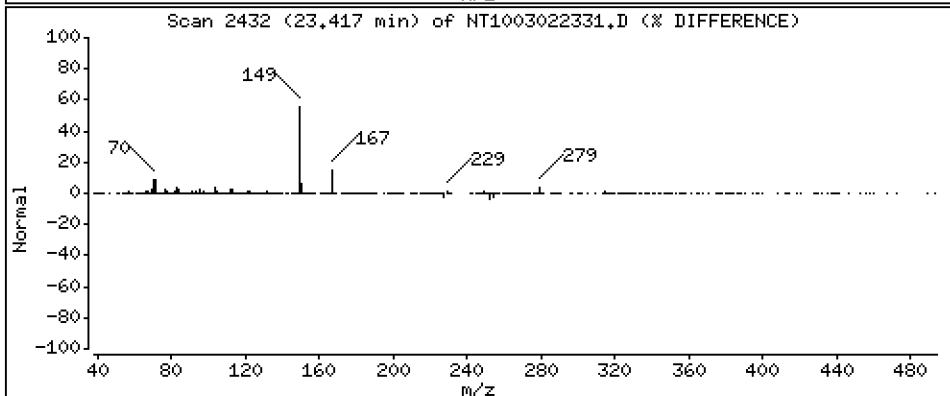
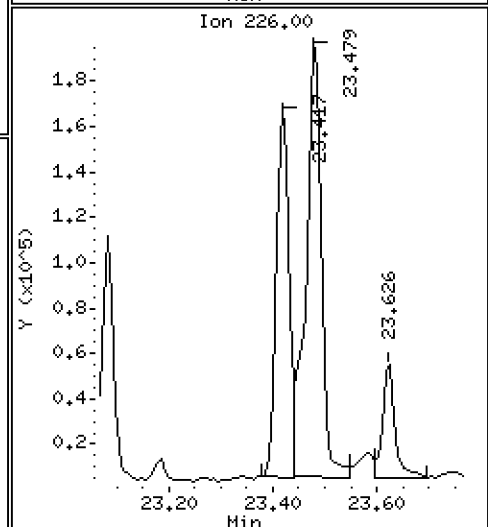
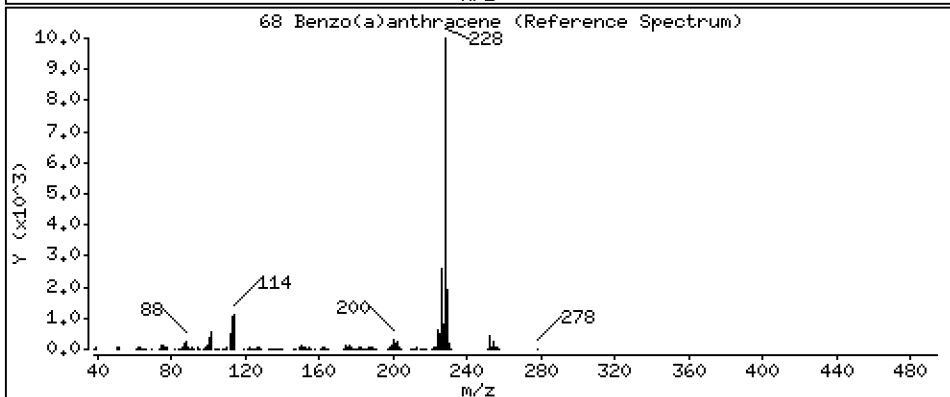
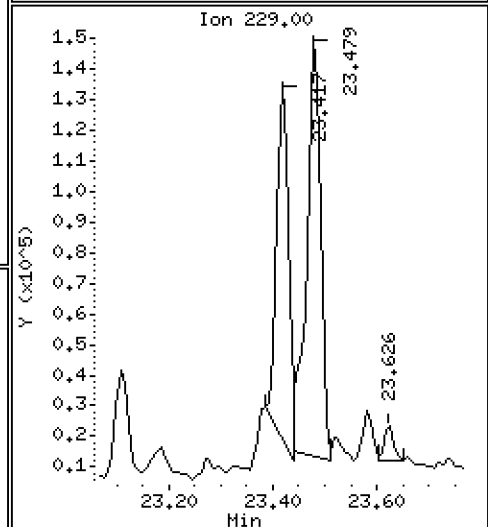
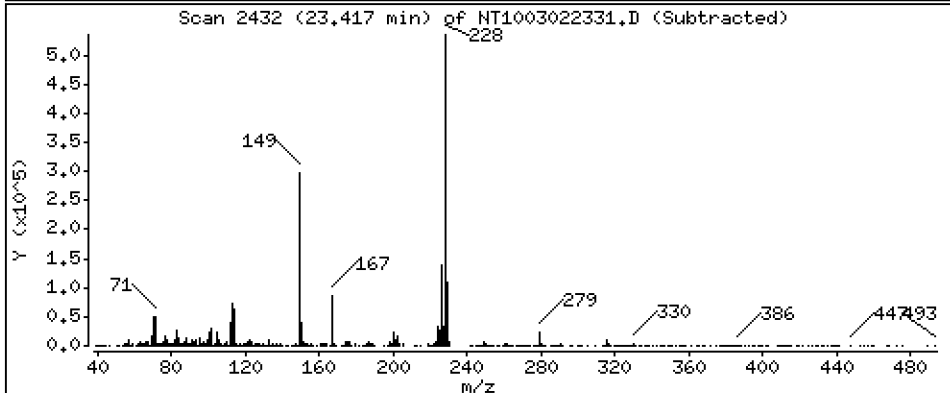
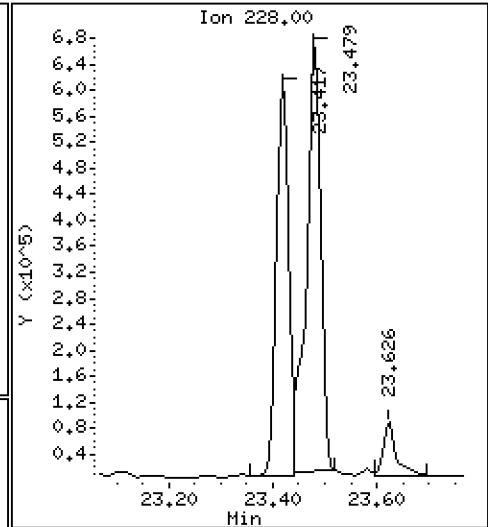
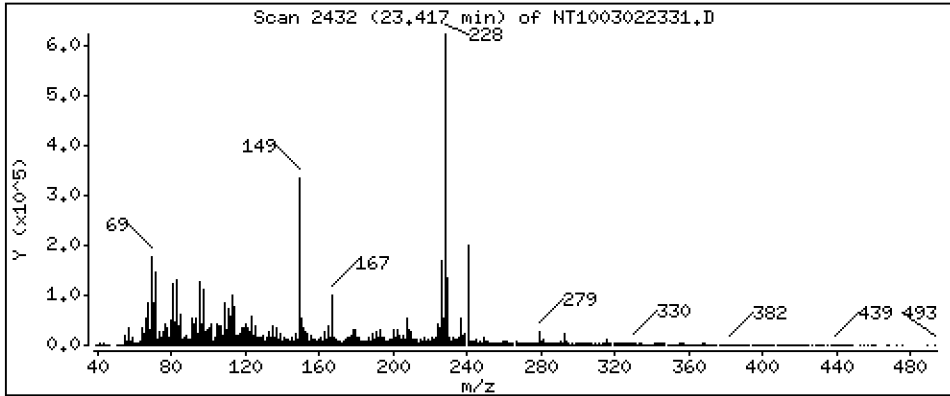
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,326 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

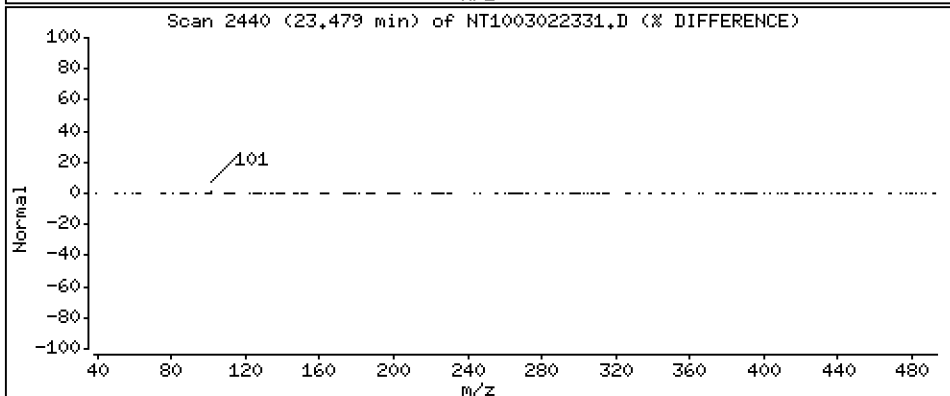
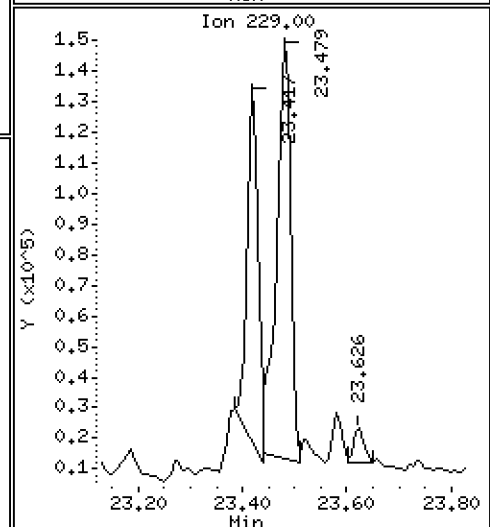
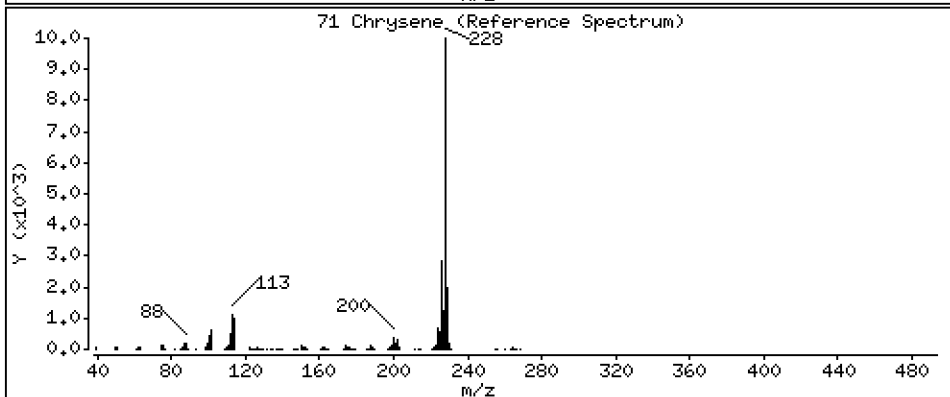
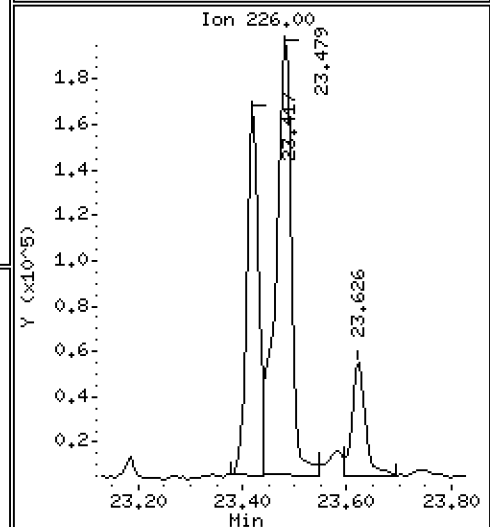
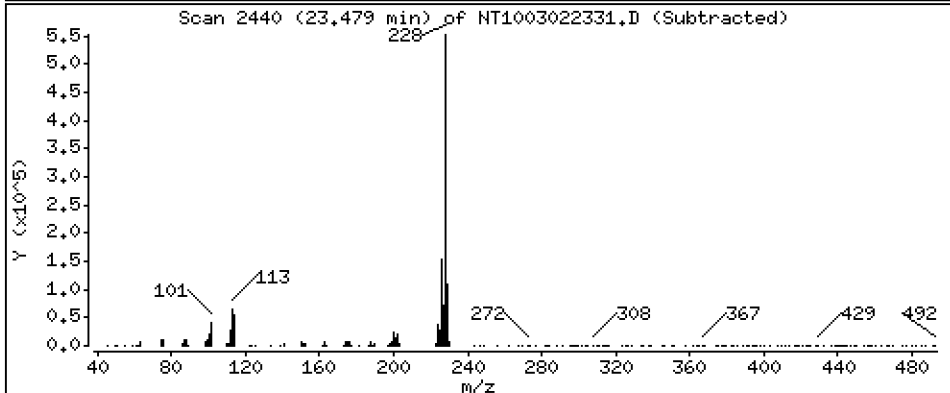
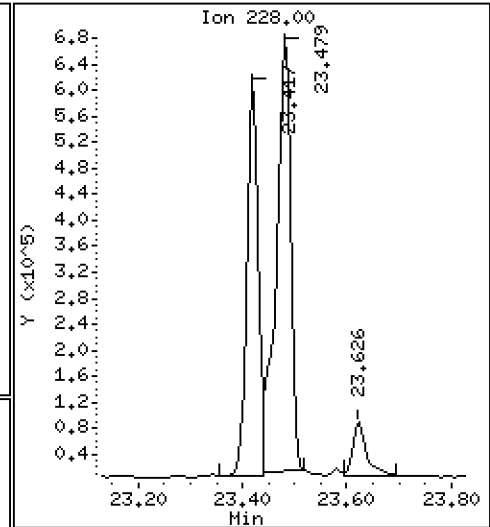
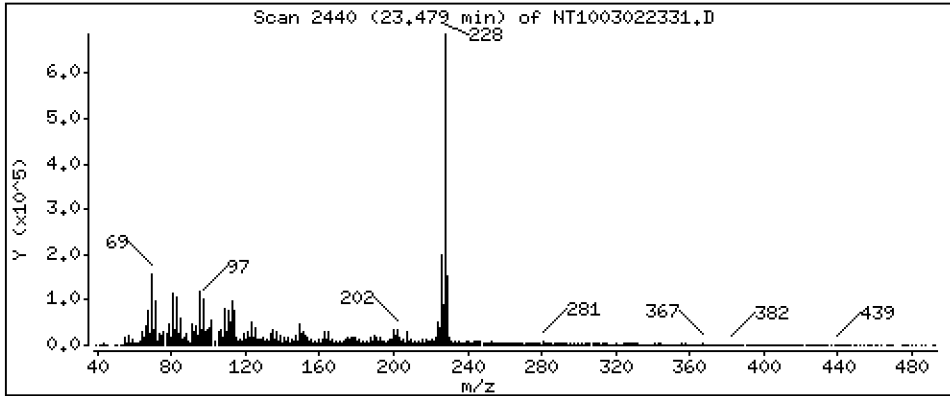
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 2,152 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

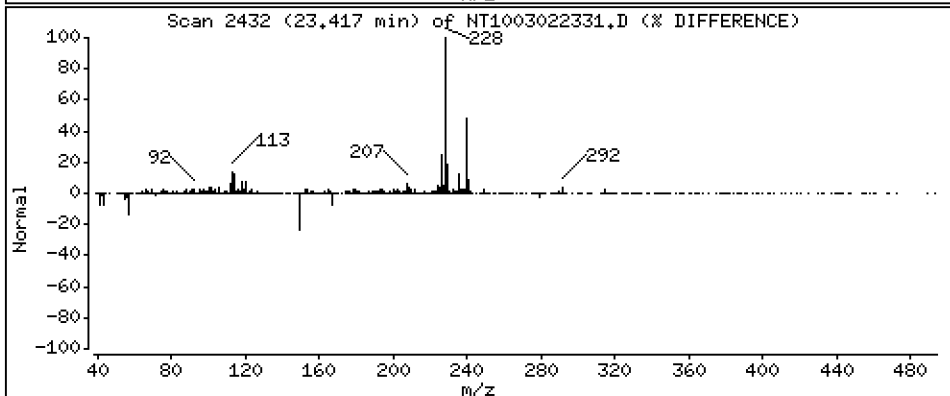
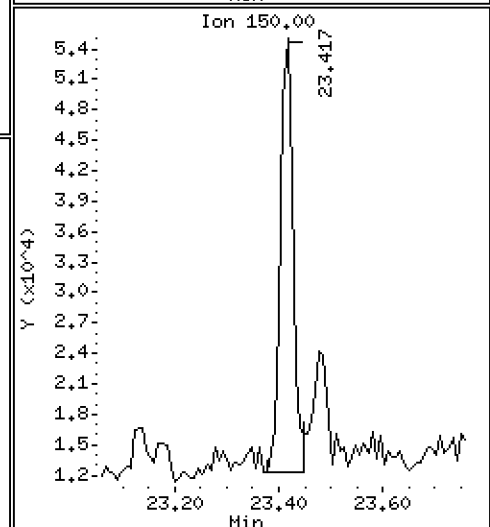
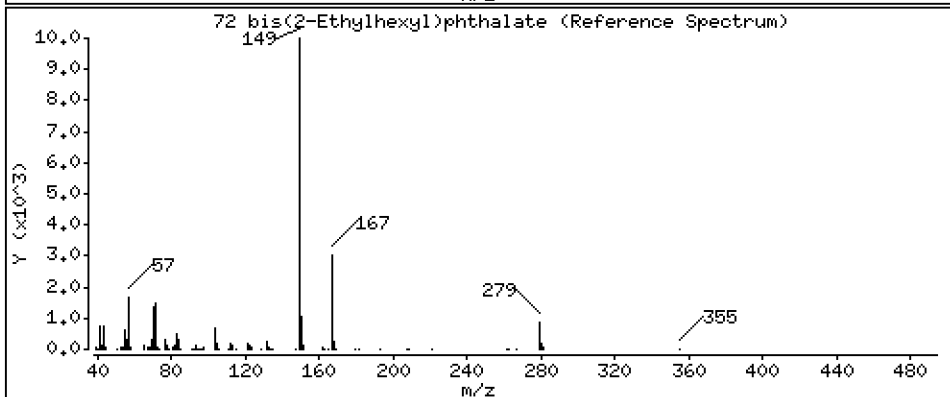
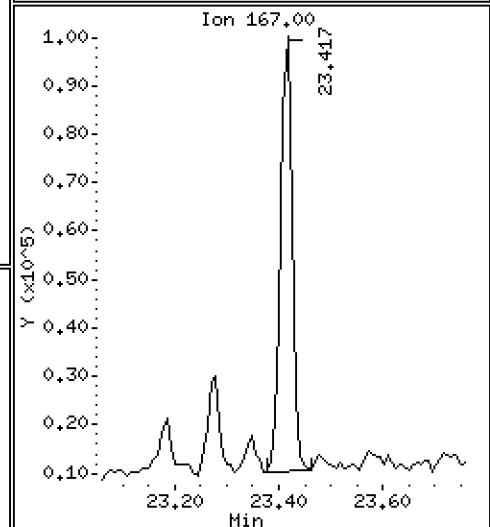
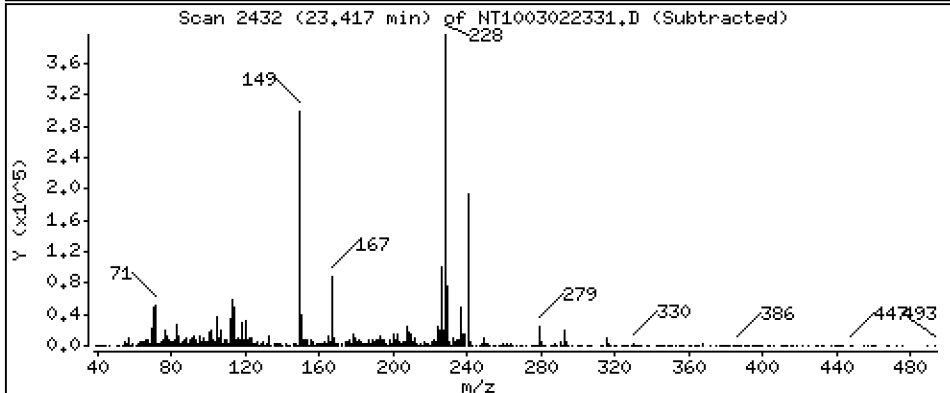
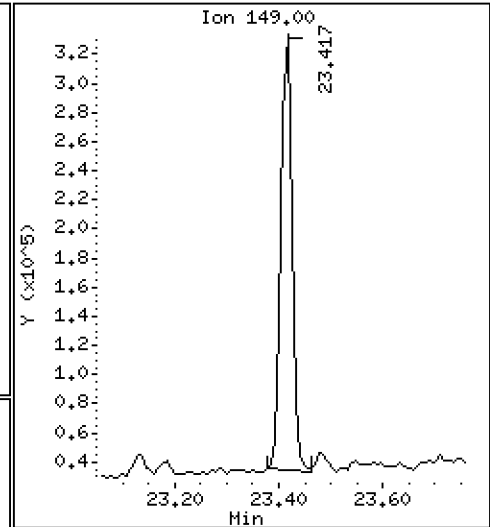
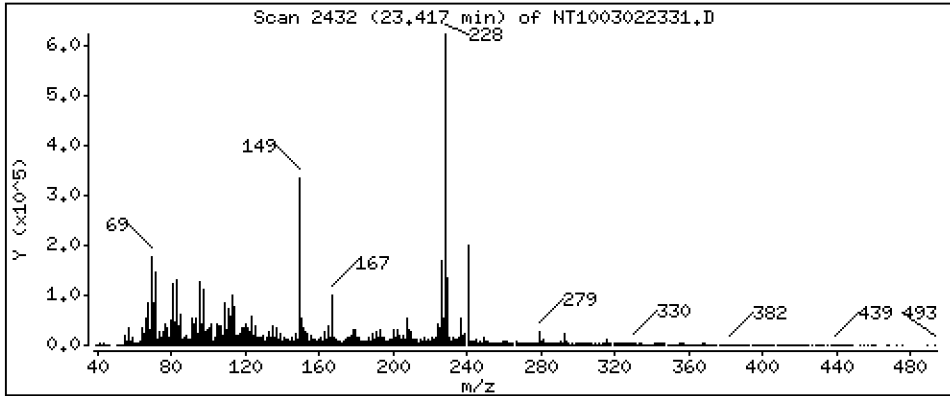
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,8025 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

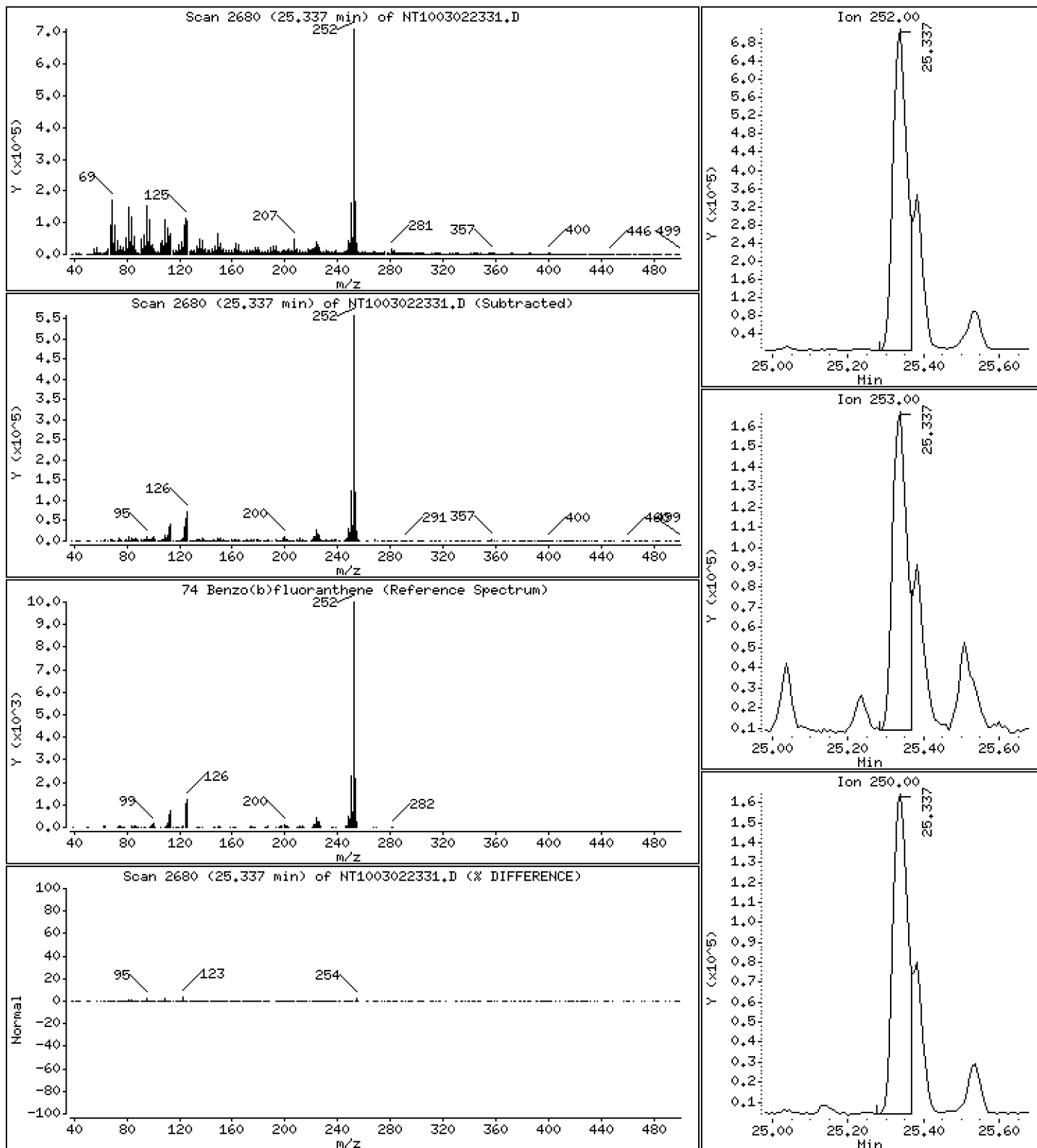
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 2,340 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

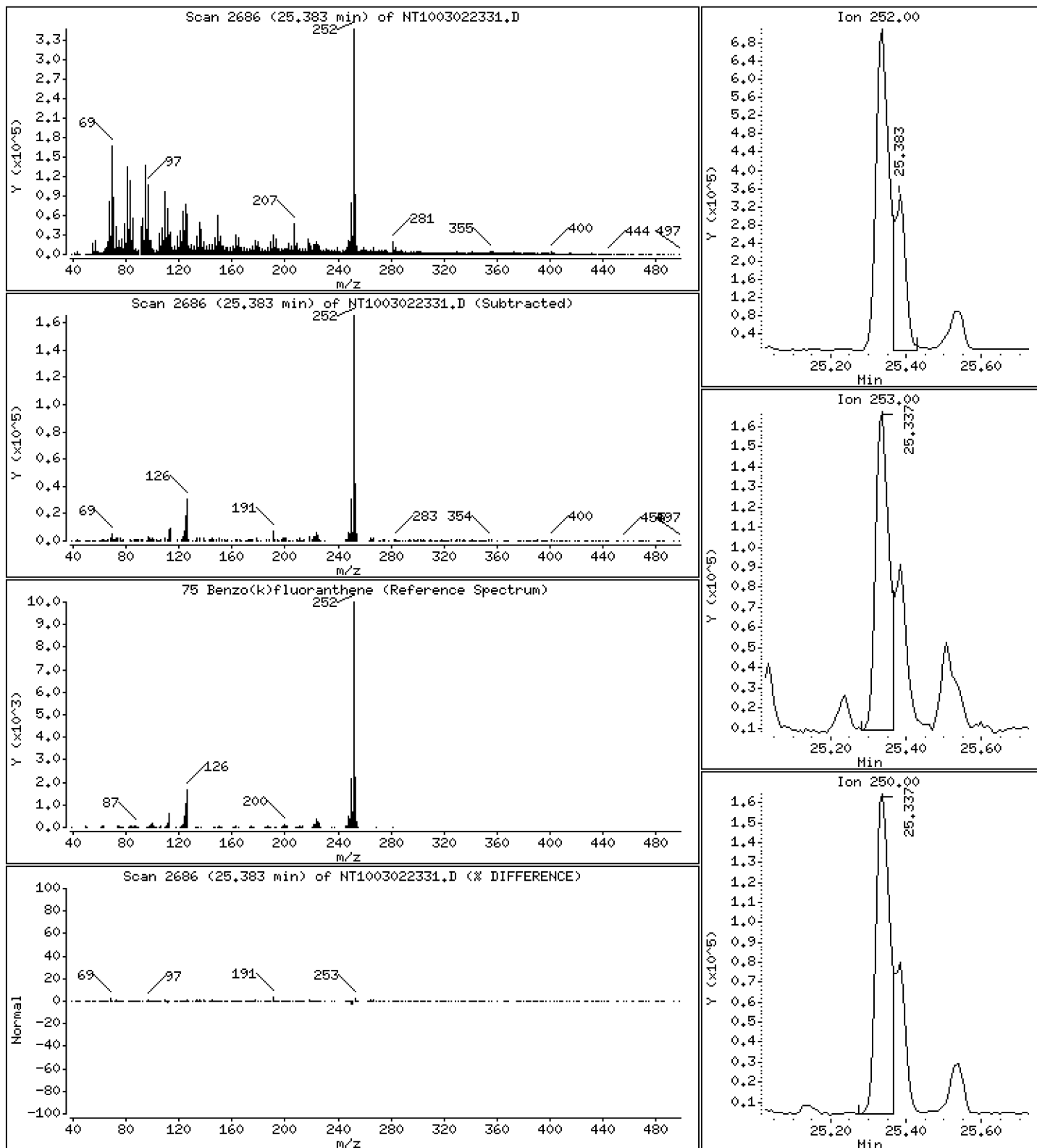
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,9678 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

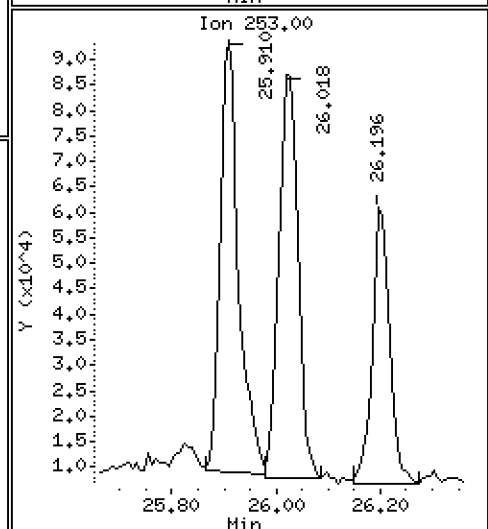
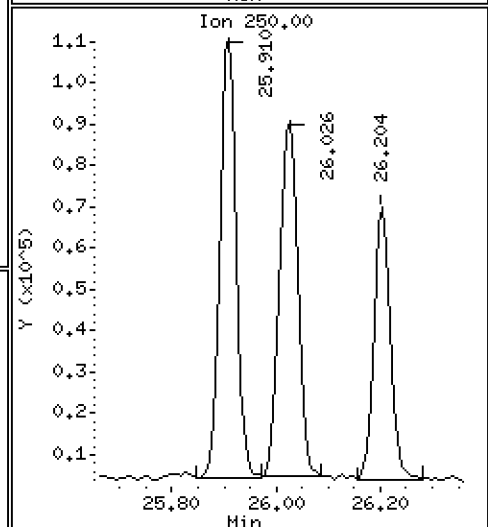
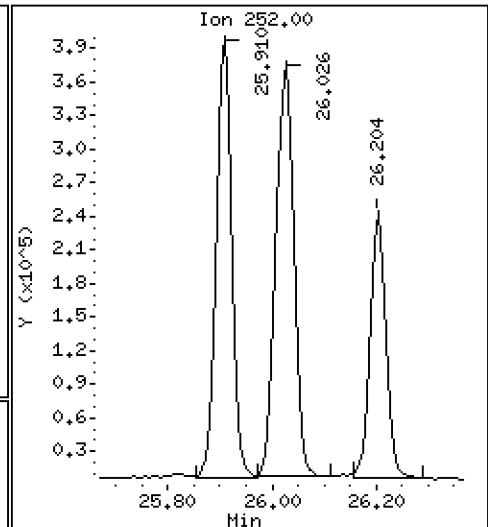
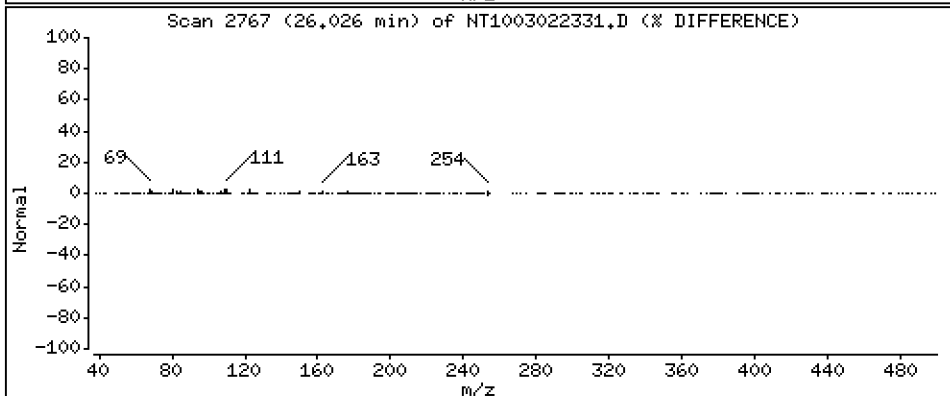
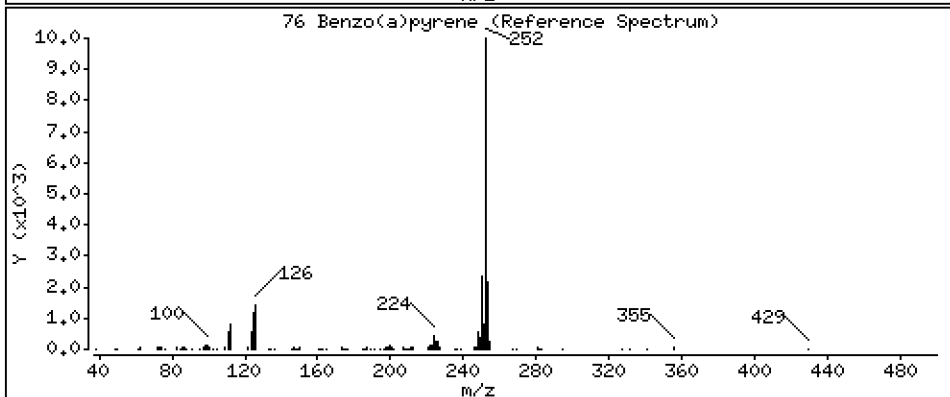
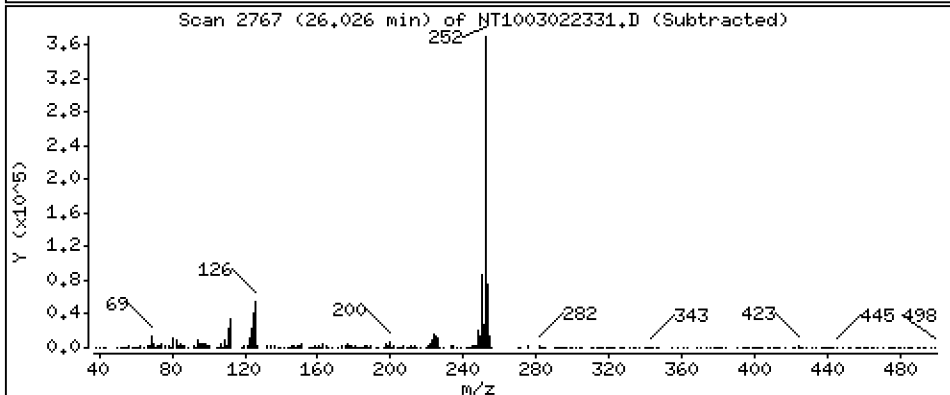
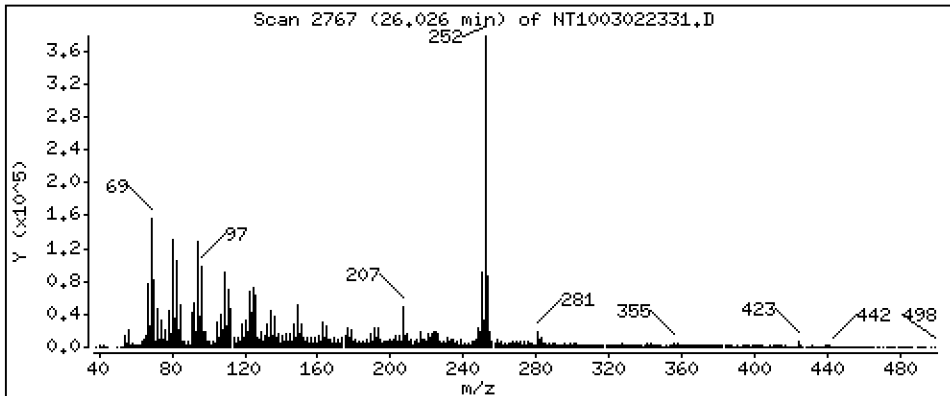
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 1,298 ug/mL





Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

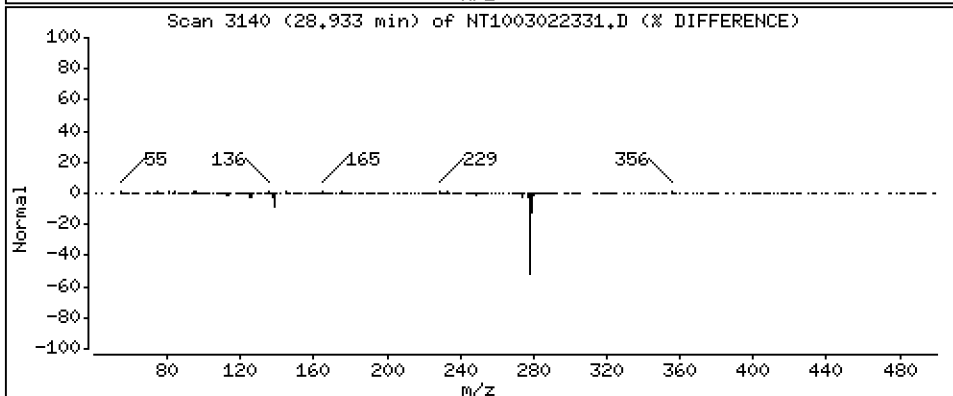
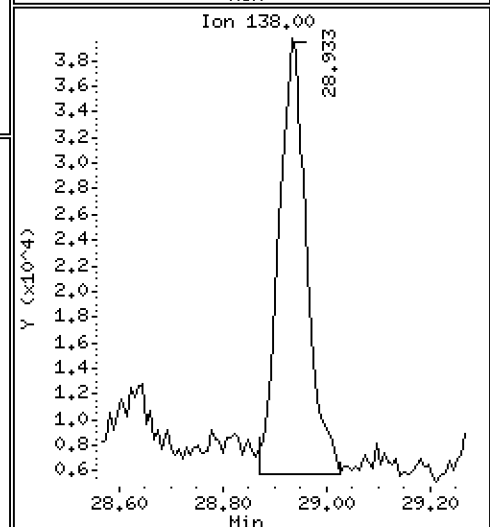
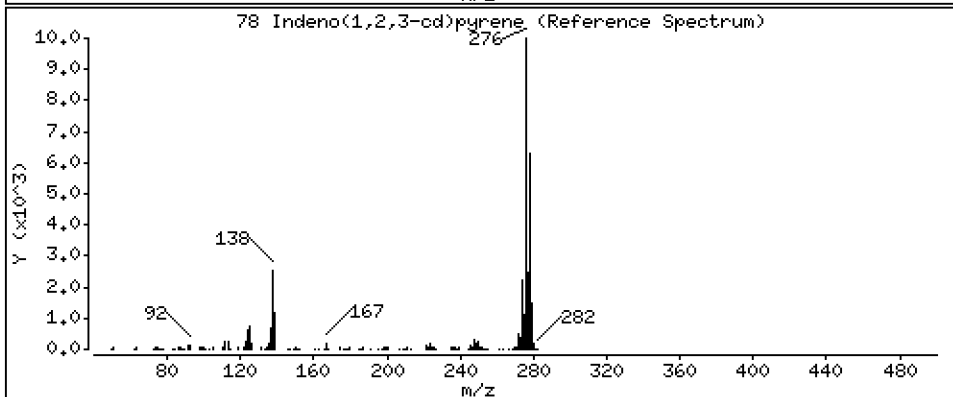
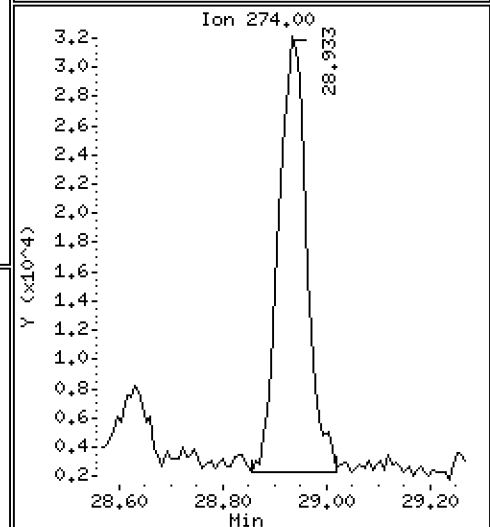
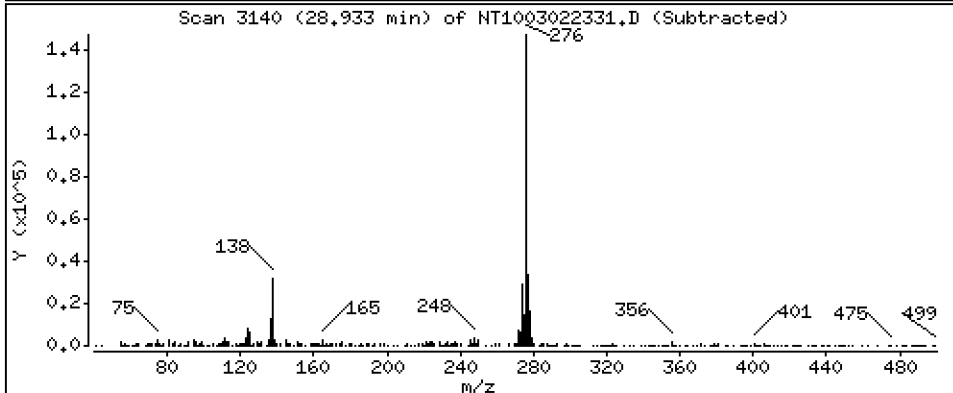
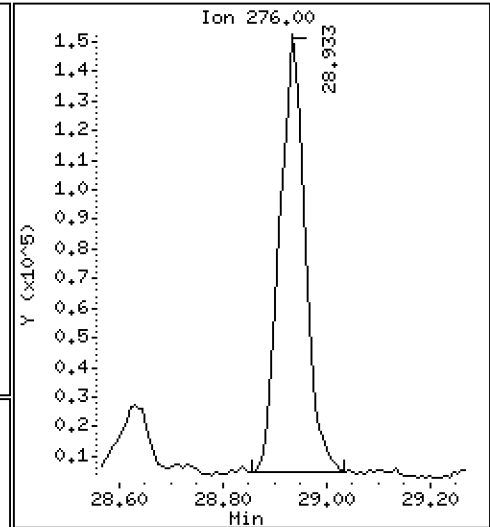
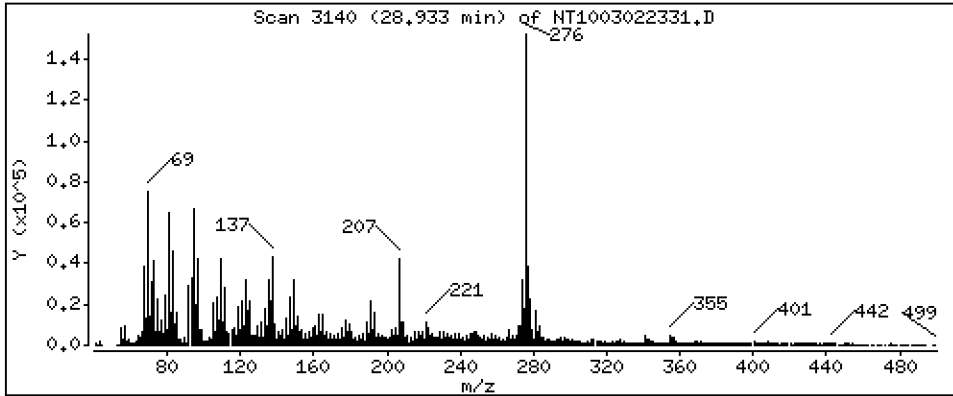
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,6489 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

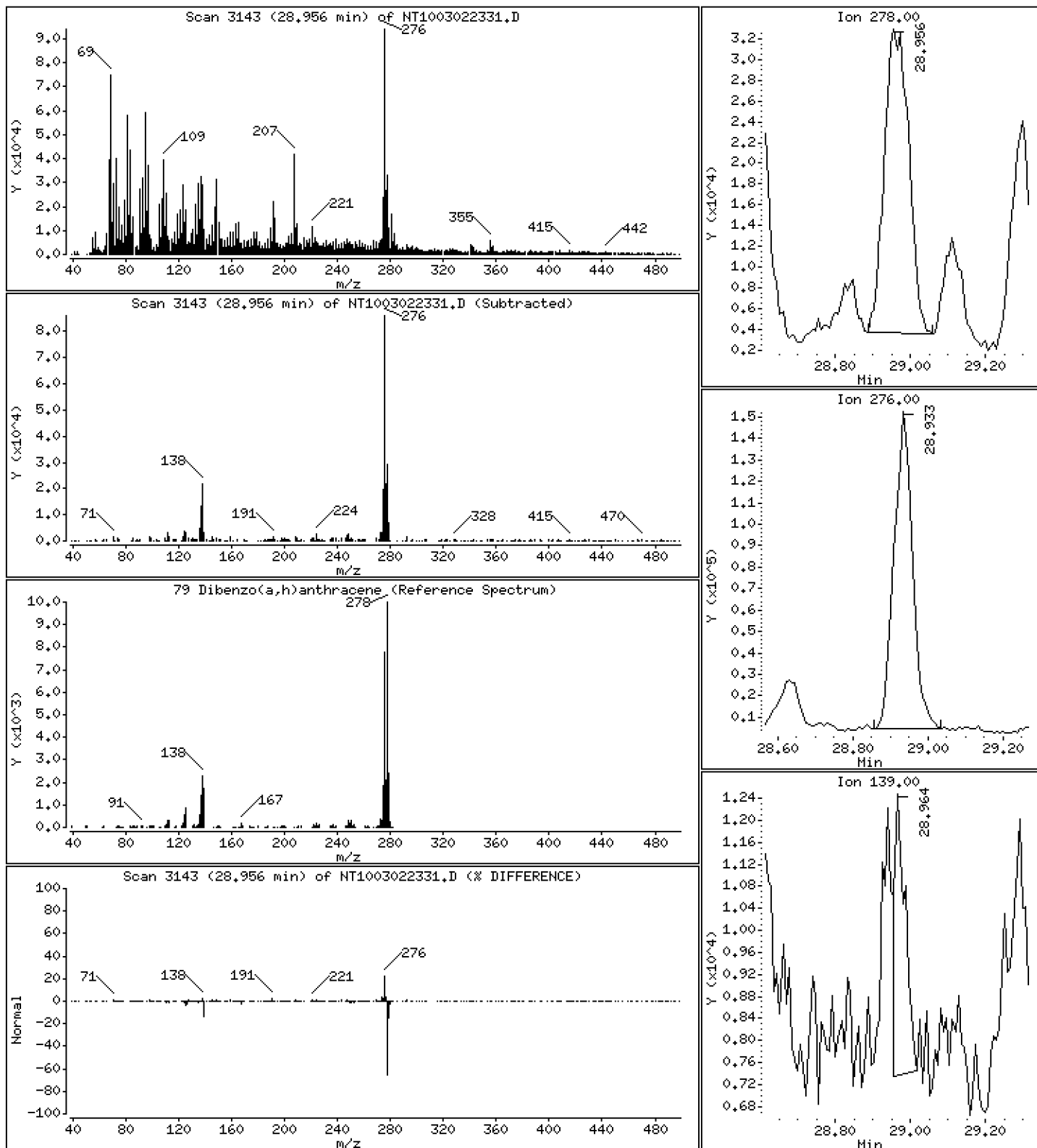
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,2238 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

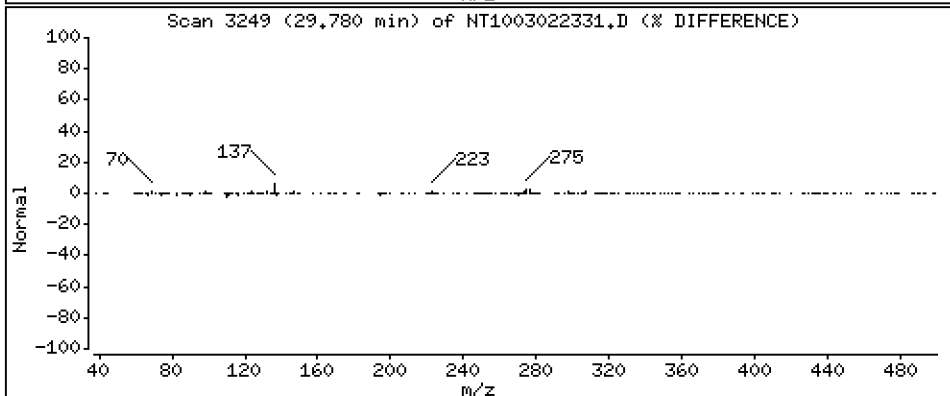
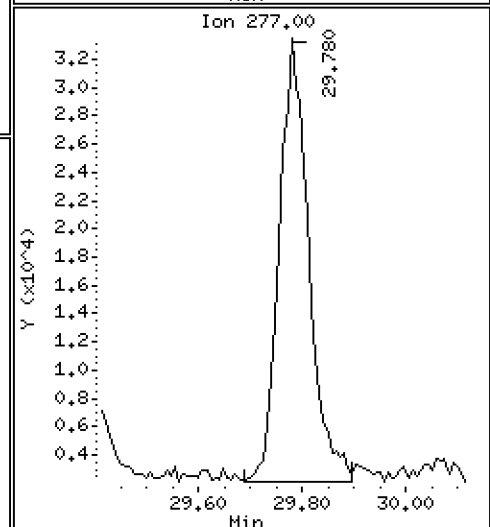
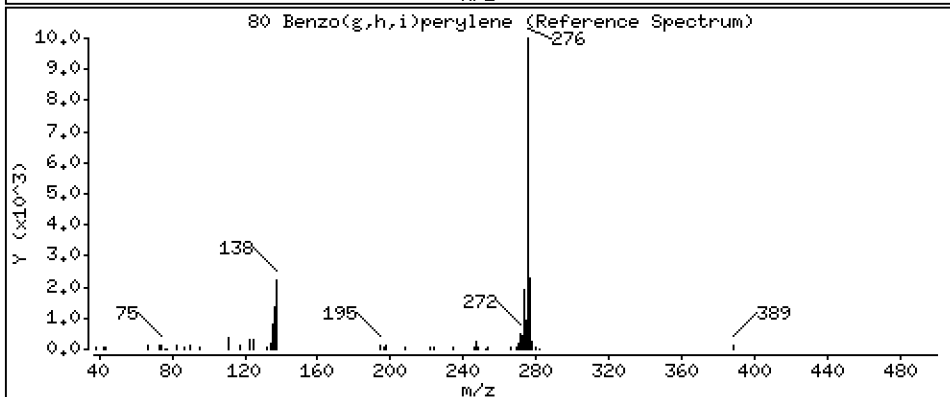
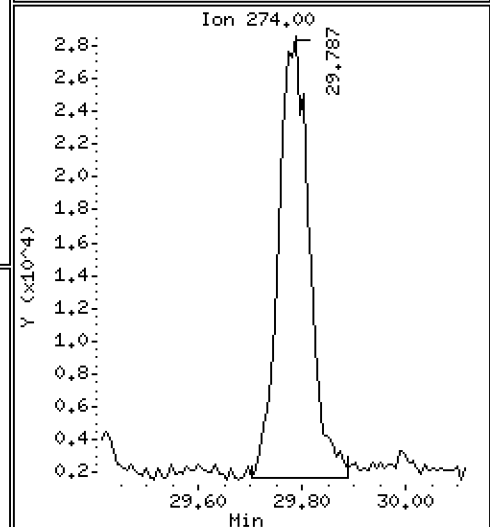
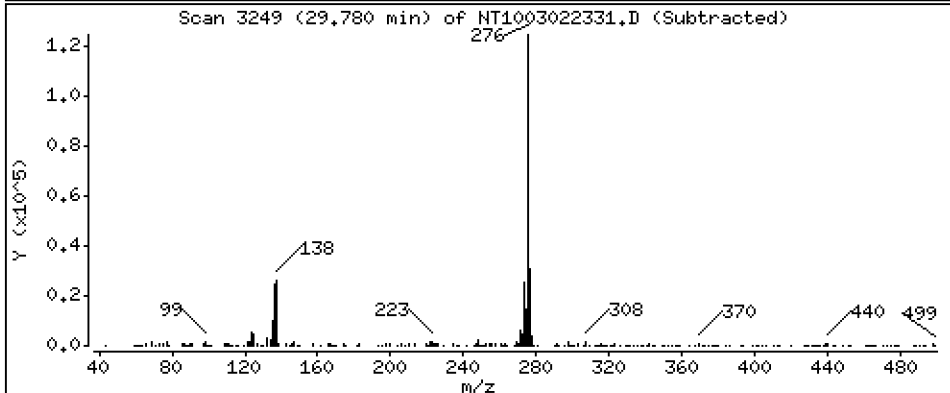
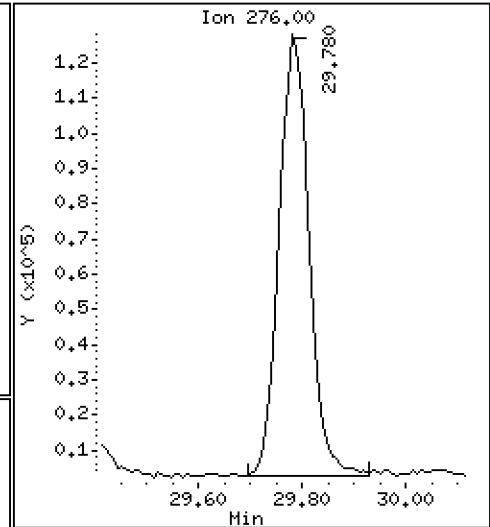
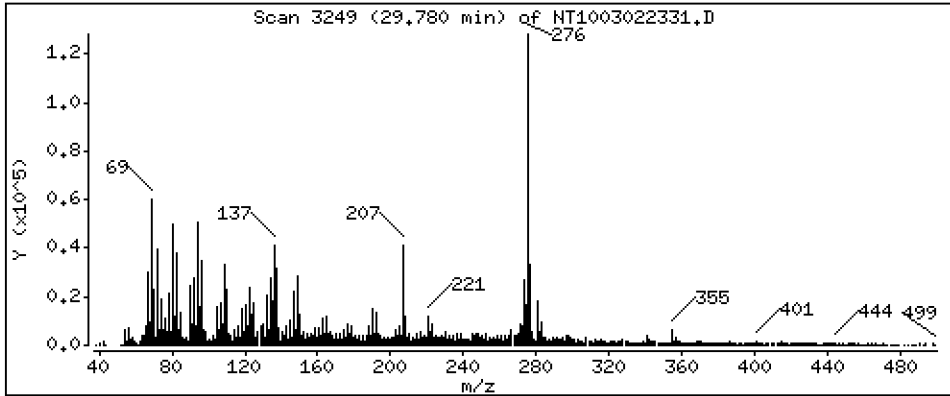
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,8054 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

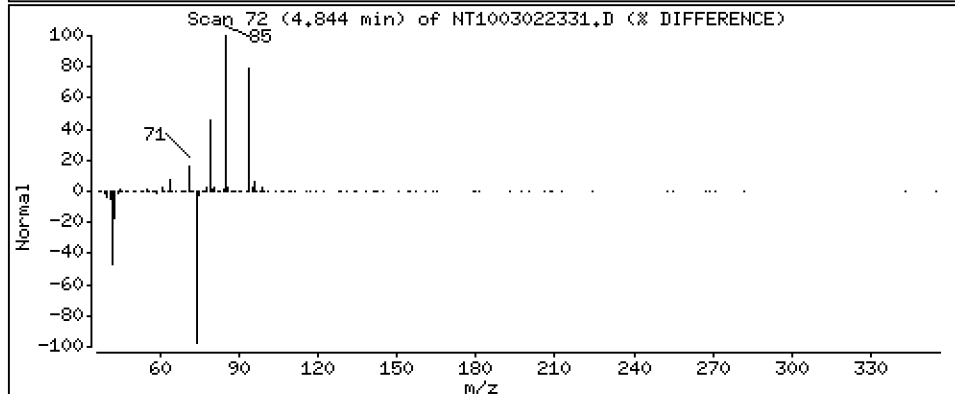
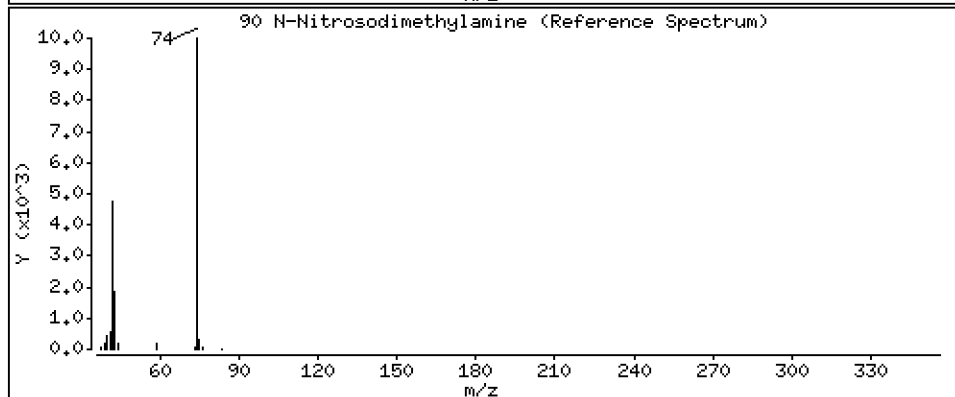
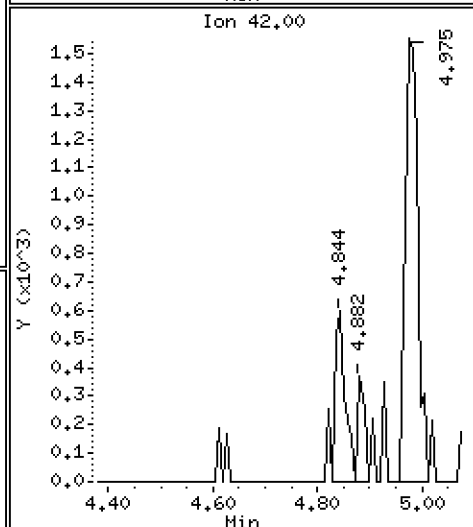
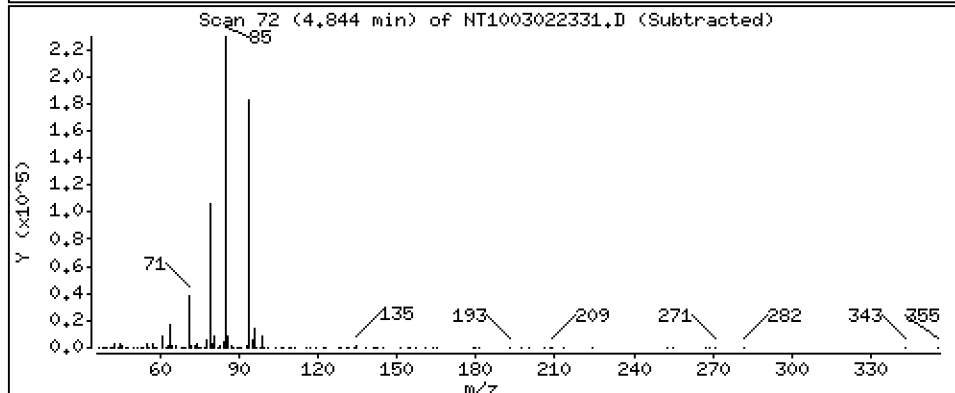
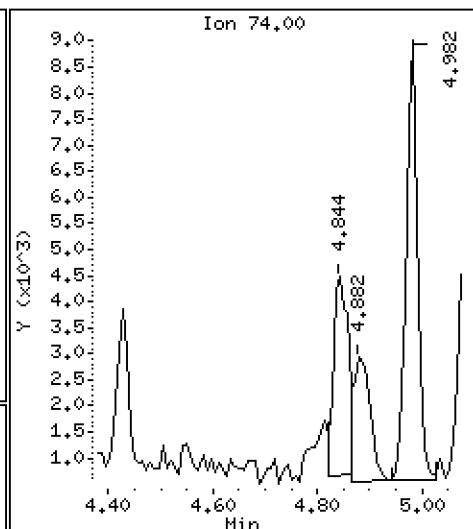
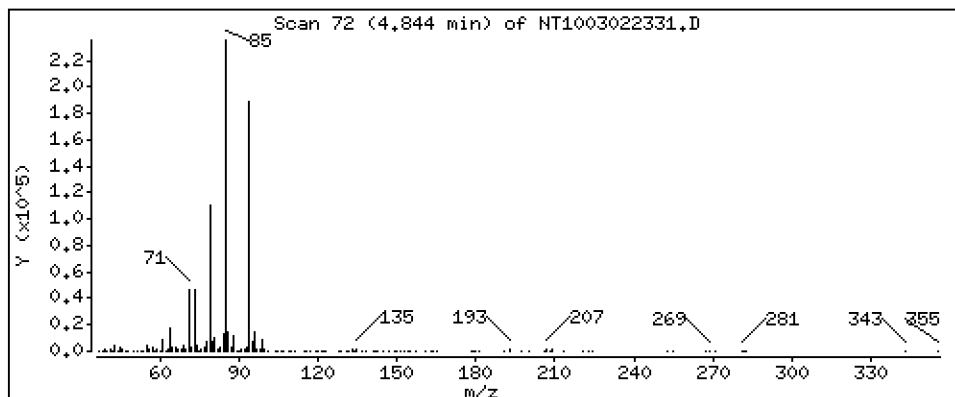
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 0,08555 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

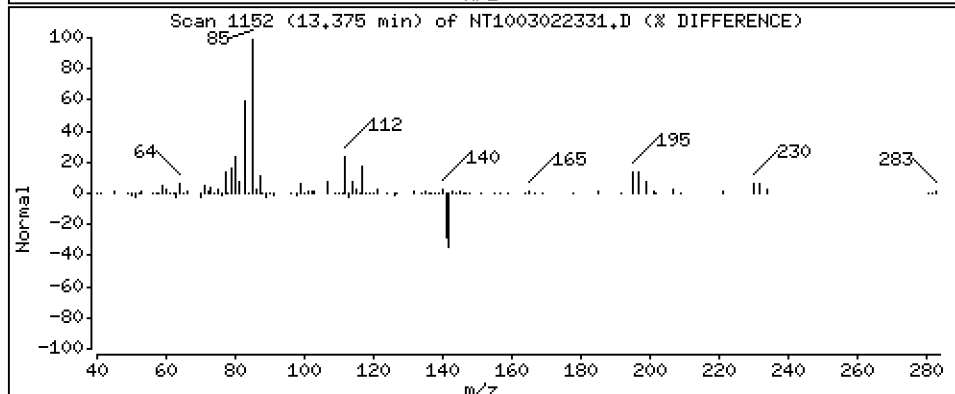
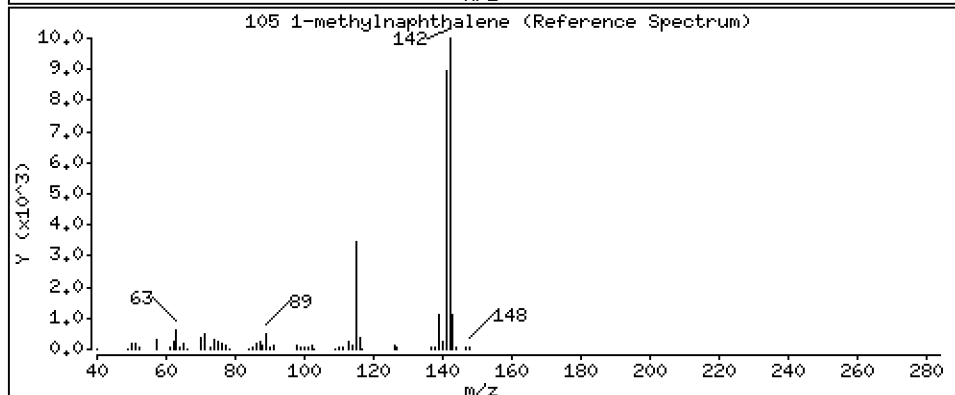
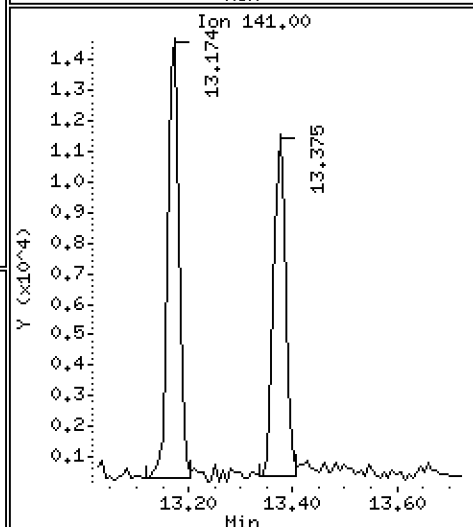
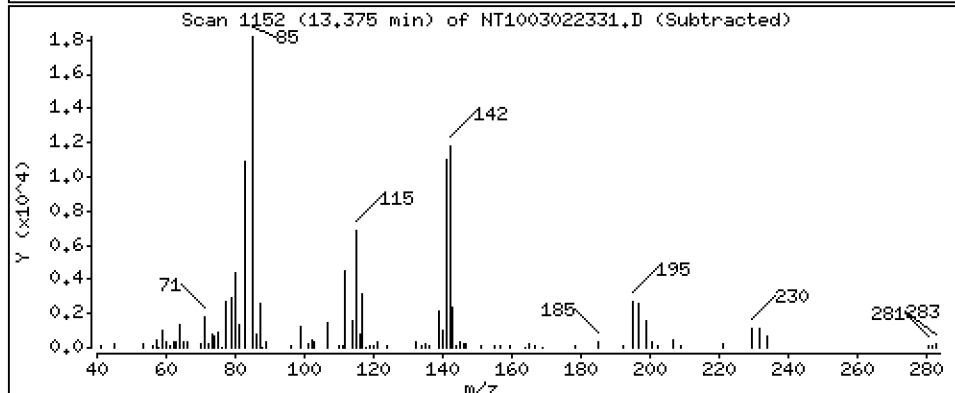
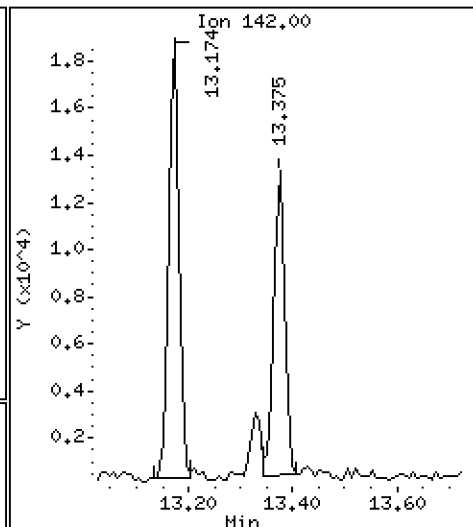
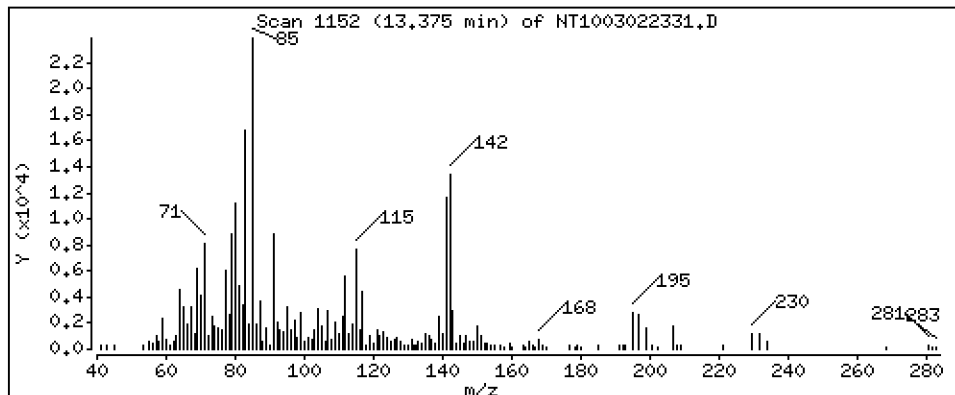
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,06328 ug/mL



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

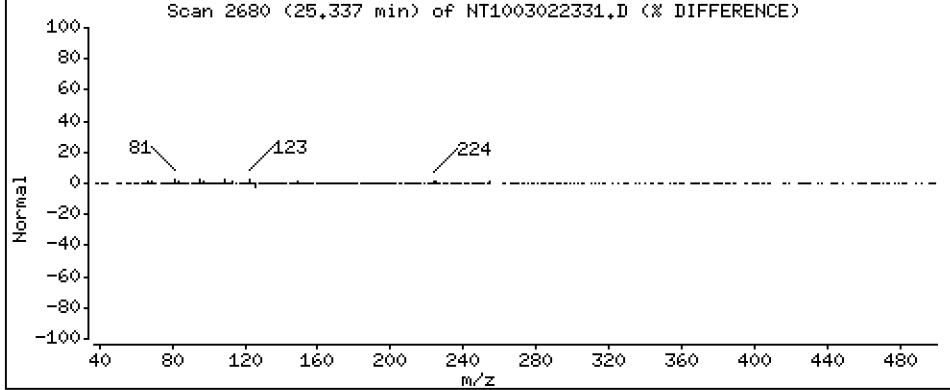
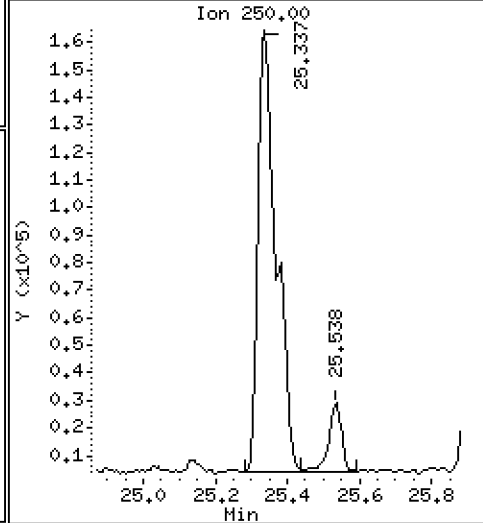
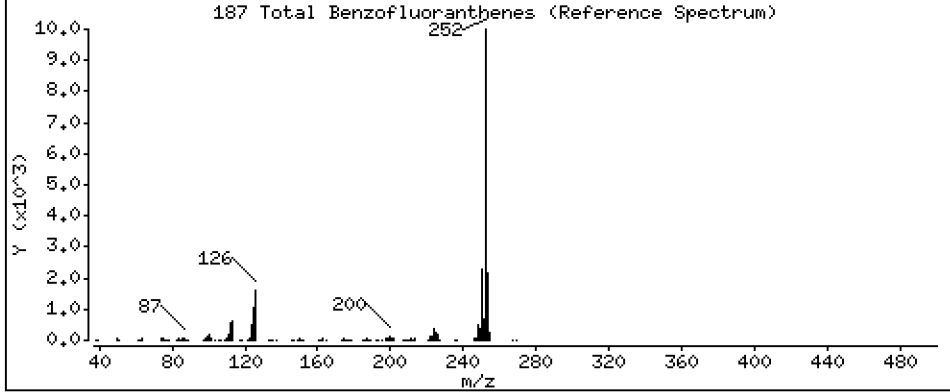
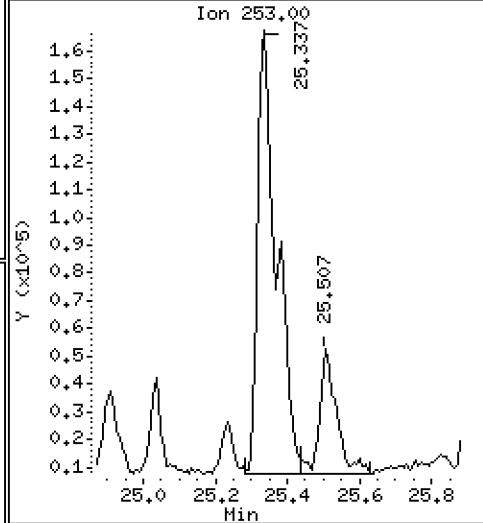
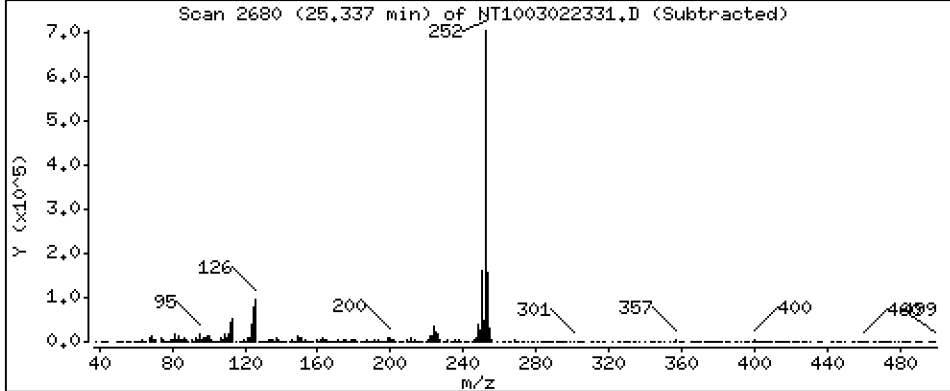
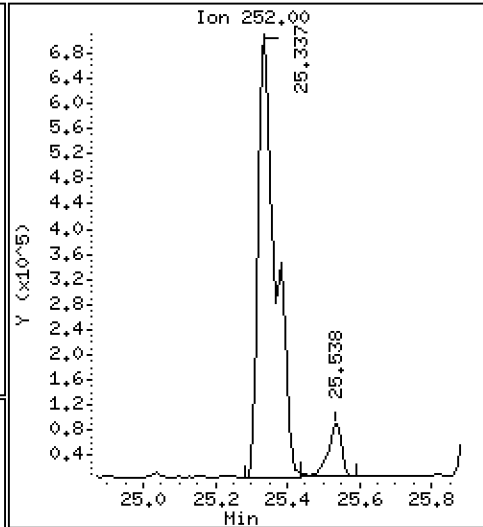
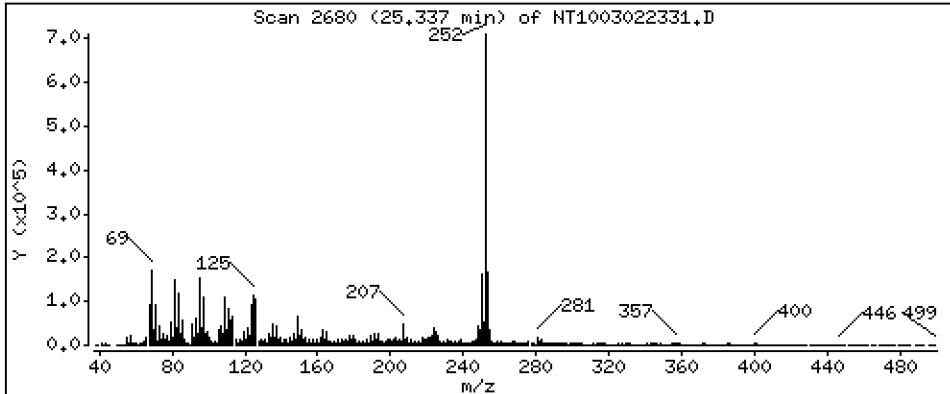
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 3,249 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022331.D

Lab Smp Id: 23A0206-12

Inj Date : 03-MAR-2023 09:24

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-12

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 23

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	909266	6.15066	6.151
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	1218983	7.10231	7.102
3 Phenol	94		8.528	8.527	(0.922)	1257482	6.89112	6.891
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1034903	7.06748	7.067
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	469864	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.541	(1.031)	444835	4.06604	4.066
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.479	(1.026)	21798	0.23287	0.2329
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.487	9.658	(1.026)	21798	0.15420	0.1542
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	855050	4.58626	4.586
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.137	11.179	(0.950)	28056	0.28313	0.2831
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1698409	4.00000	
28 Naphthalene	128		11.773	11.772	(1.004)	46189	0.10596	0.1060
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	26566	0.08627	0.08627
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.908)	1563348	4.92675	4.927
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163		14.744	14.751	(0.962)	21397	0.07447	0.07447
40 Acenaphthylene	152		15.031	15.038	(0.981)	57179	0.13314	0.1331
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.324	15.324	(1.000)	889640	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.386	15.394	(1.004)	25515	0.09851	0.09851
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.750	15.749	(1.028)	42335	0.11013	0.1101
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.221	(1.058)	92536	0.30403	0.3040
49 Fluorene	166		16.461	16.461	(1.074)	46865	0.14653	0.1465
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.962	(1.106)	394889	6.88458	6.885
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.417	18.416	(1.000)	1734623	4.00000	
60 Phenanthrene	178		18.463	18.463	(1.003)	404053	0.91019	0.9102
61 Anthracene	178		18.572	18.571	(1.008)	220617	0.51252	0.5125
62 Carbazole	167		18.904	18.904	(1.026)	52981	0.13435	0.1344
63 Di-n-butylphthalate	149					Compound Not Detected.		
64 Fluoranthene	202		20.846	20.830	(0.889)	1424310	2.01022	2.010
65 Pyrene	202		21.272	21.264	(0.908)	1538810	2.13288	2.133
\$ 66 Terphenyl-d14	244		21.543	21.534	(0.919)	2703308	4.63075	4.631
67 Butylbenzylphthalate	149		22.418	22.417	(0.956)	32994	0.08491	0.08491
68 Benzo(a)anthracene	228		23.416	23.416	(0.999)	962917	1.32590	1.326
* 69 Chrysene-d12	240		23.440	23.431	(1.000)	2059646	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.478	23.478	(1.002)	1269919	2.15161	2.152
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.408	(0.956)	419168	0.80253	0.8025
* 134 Di-n-octylphthalate-d4	153		24.500	24.492	(1.000)	3710575	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.336	25.328	(0.969)	1786311	2.34014	2.340
75 Benzo(k)fluoranthene	252		25.383	25.375	(0.971)	700801	0.96782	0.9678 (M)
76 Benzo(a)pyrene	252		26.025	26.017	(0.995)	875785	1.29843	1.298
* 77 Perylene-d12	264		26.149	26.134	(1.000)	2186509	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.933	28.917	(1.106)	508252	0.64885	0.6489
79 Dibenzo(a,h)anthracene	278		28.956	28.963	(1.107)	132355	0.22379	0.2238 (M)
80 Benzo(g,h,i)perylene	276		29.779	29.763	(1.139)	502959	0.80544	0.8054
90 N-Nitrosodimethylamine	74		4.843	4.727	(0.524)	8164	0.08555	0.08555
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	17637	0.06328	0.06328
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		



Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.336	25.375	(0.969)	2363889	3.24853	3.249	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022331.D Calibration Time: 05:36  
 Lab Smp Id: 23A0206-12  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	469864	-30.23
27 Naphthalene-d8	2475080	1237540	4950160	1698409	-31.38
42 Acenaphthene-d10	1248864	624432	2497728	889640	-28.76
59 Phenanthrene-d10	2356836	1178418	4713672	1734623	-26.40
69 Chrysene-d12	2717731	1358866	5435462	2059646	-24.21
134 Di-n-octylphthala	4948440	2474220	9896880	3710575	-25.02
77 Perylene-d12	2801934	1400967	5603868	2186509	-21.96

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.50	0.03
77 Perylene-d12	26.13	25.63	26.63	26.15	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022331.D

Lab ID: 23A0206-12

nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 09:24

RT CO-ELUTION COMPOUNDS

-----  
23.417 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.026	1.044	-0.0185	2-Methylphenol
0.524	0.511	0.0126	N-Nitrosodimethylamine

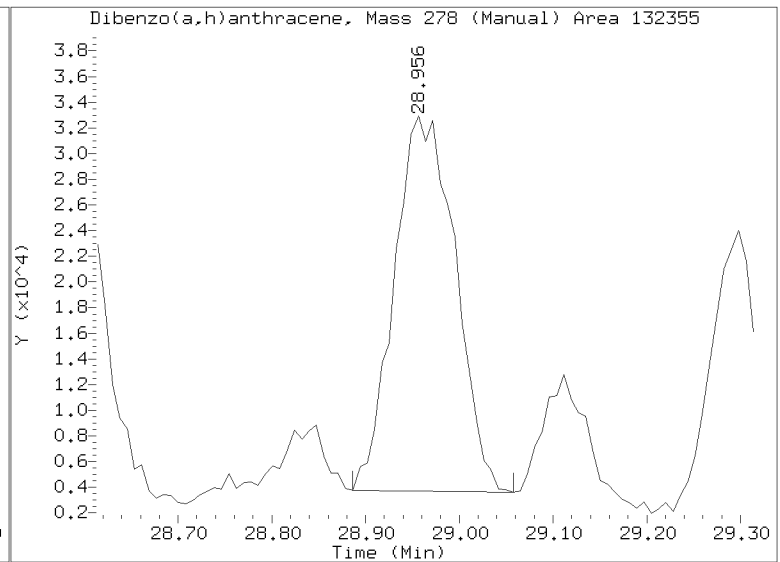
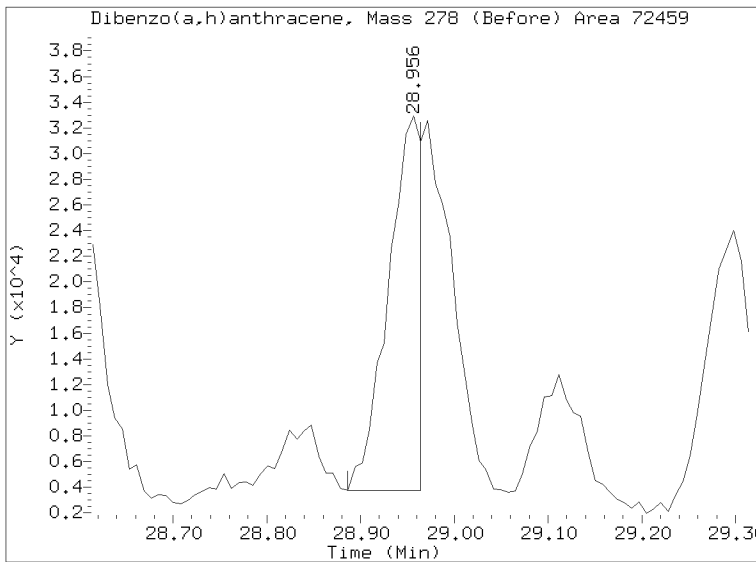
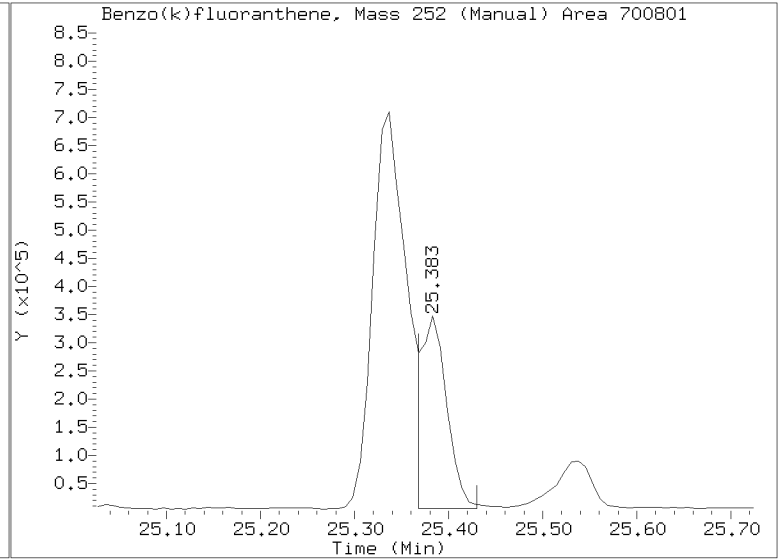
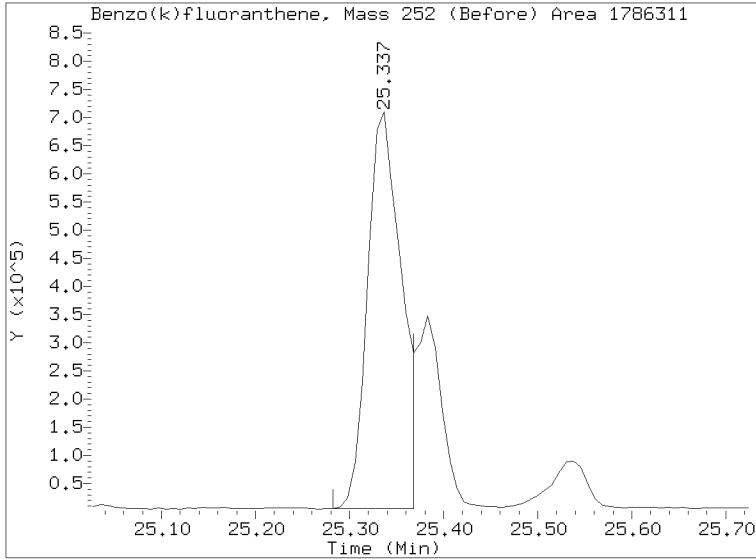
RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022331.D  
Injection Date: 03-MAR-2023 09:24  
Lab ID:23A0206-12 Client ID:  
Report Date: 03/10/2023 09:36





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-13 B

SDG: 23A0206

Sampled: 01/11/23 12:40

Prepared: 01/27/23 14:44

File ID: NT1003022332.D

% Solids: 60.13

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:02

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	813		4.4	20.0
106-44-5	4-Methylphenol	1	112		7.4	20.0
91-20-3	Naphthalene	1	21.0		4.2	20.0
91-57-6	2-Methylnaphthalene	1	23.8		4.5	20.0
208-96-8	Acenaphthylene	1	14.0	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	23.8		5.2	20.0
132-64-9	Dibenzofuran	1	16.0	J	14.1	20.0
86-73-7	Fluorene	1	21.6		14.5	20.0
85-01-8	Phenanthrene	1	215		8.7	20.0
120-12-7	Anthracene	1	61.4		7.2	20.0
206-44-0	Fluoranthene	1	474		6.1	20.0
129-00-0	Pyrene	1	449		5.7	20.0
85-68-7	Butylbenzylphthalate	1	21.7	Q	9.4	20.0
56-55-3	Benzo(a)anthracene	1	187		5.9	20.0
218-01-9	Chrysene	1	315		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	322		5.5	49.9
	Benzo(a)fluoranthene, Total	1	415		10.0	39.9
50-32-8	Benzo(a)pyrene	1	189		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	91.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	28.9		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	116	Q	13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.68	620	82.8	27 - 120	
Phenol-d5	748.68	731	97.7	29 - 120	
2-Chlorophenol-d4	748.68	712	95.1	31 - 120	
1,2-Dichlorobenzene-d4	499.12	407	81.6	32 - 120	
Nitrobenzene-d5	499.12	434	86.9	30 - 120	
2-Fluorobiphenyl	499.12	470	94.2	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-13 B

SDG: 23A0206

Sampled: 01/11/23 12:40

Prepared: 01/27/23 14:44

File ID: NT1003022332.D

% Solids: 60.13

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:02

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.68	695	92.9	24 - 134	
p-Terphenyl-d14	499.12	440	88.1	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B.B\NT1003022332.D

Date: 03-MAR-2023 10:02

Client ID:

Sample Info: 23A0206-13

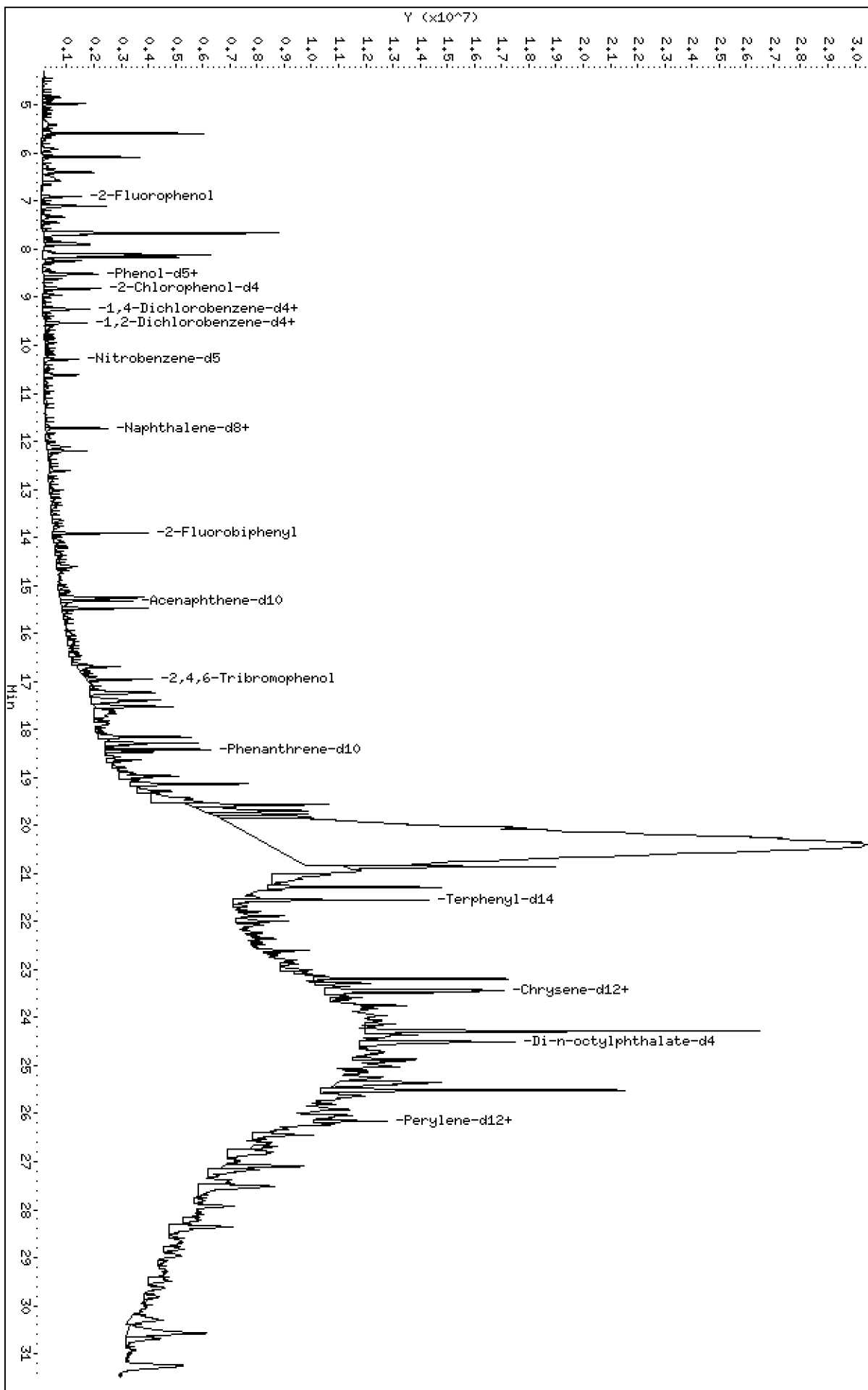
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.B\NT1003022332.D



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

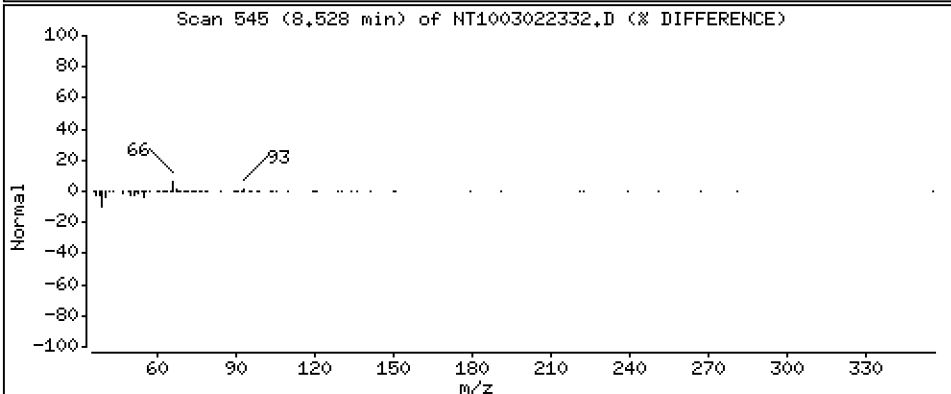
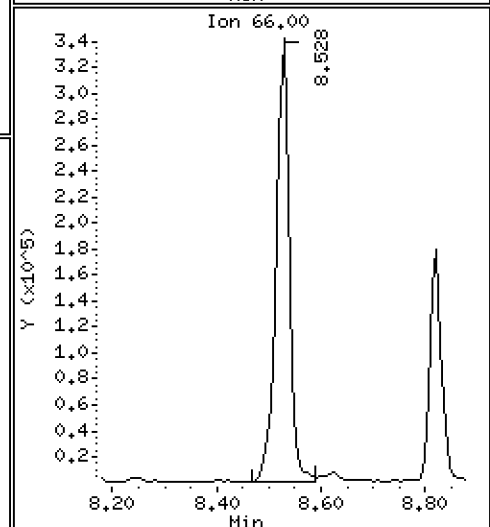
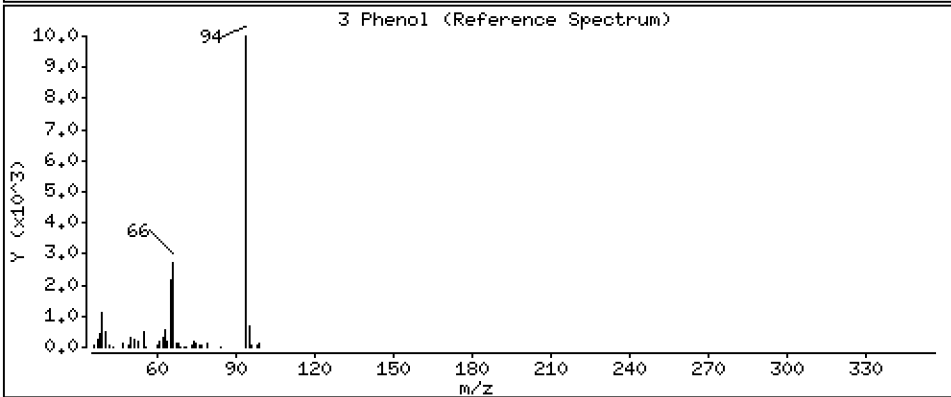
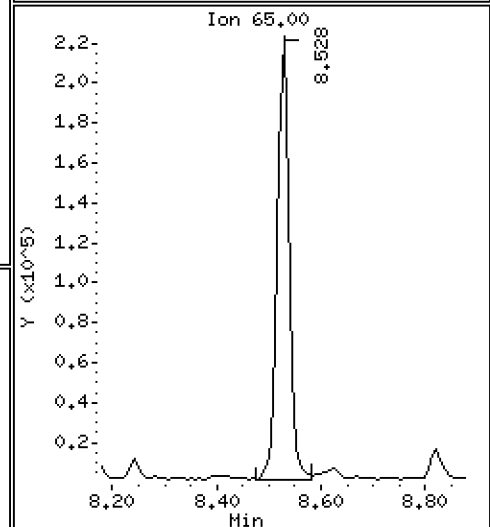
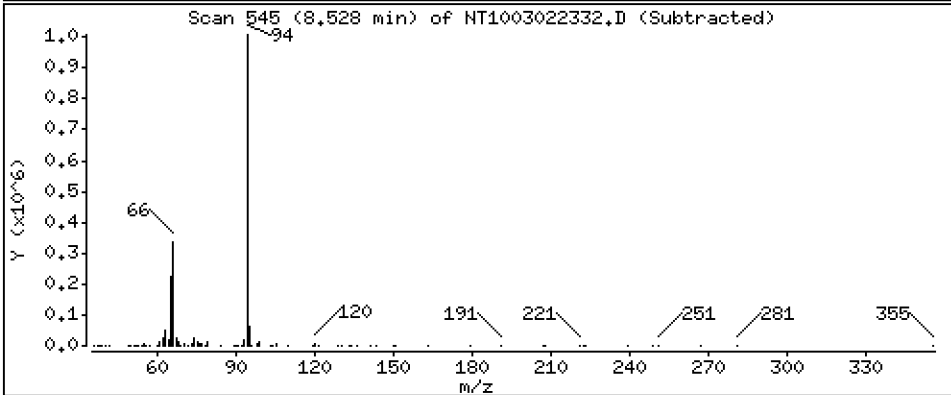
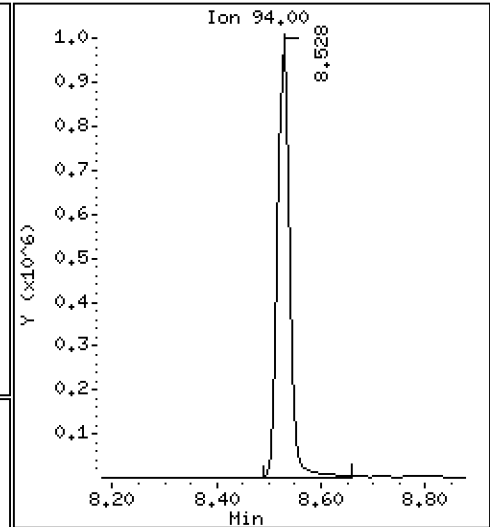
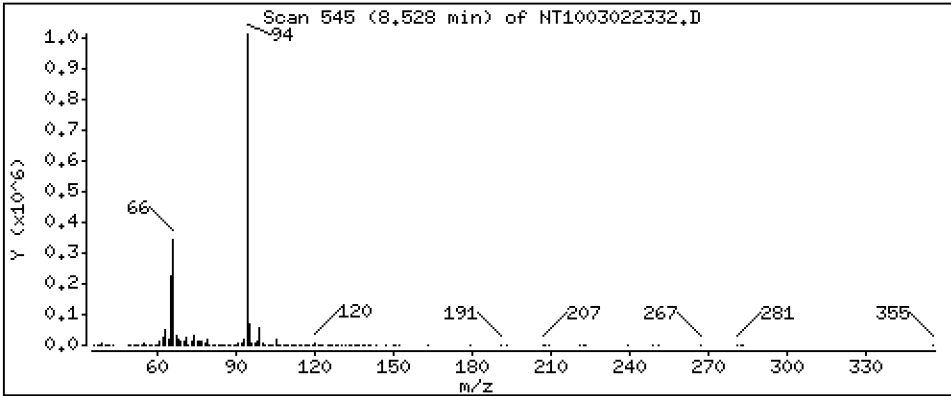
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 8,145 ug/mL





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

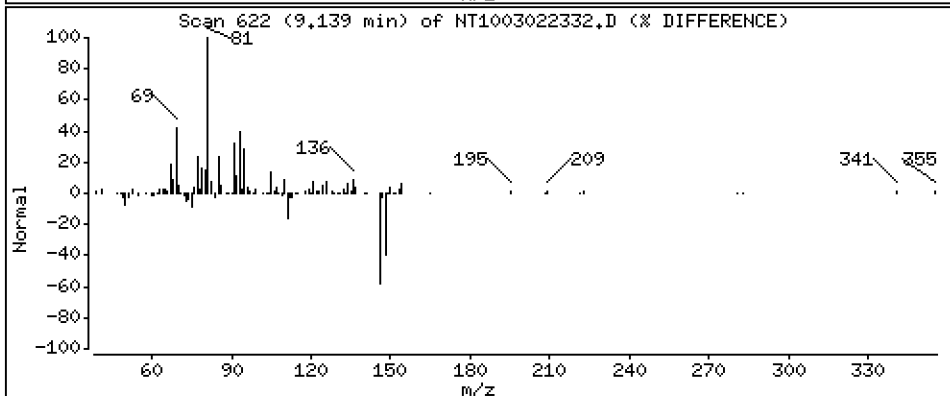
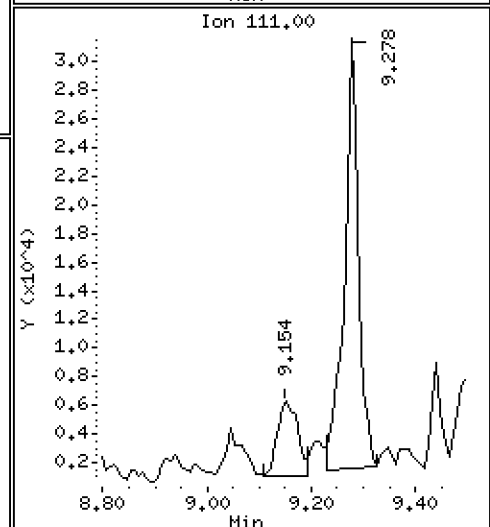
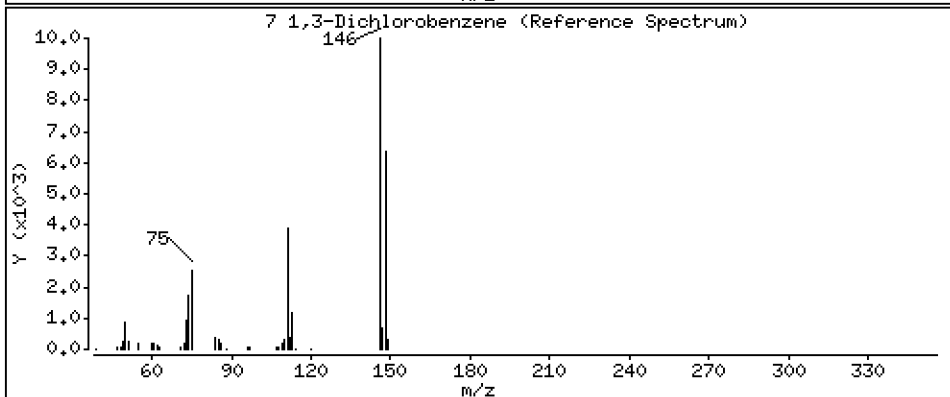
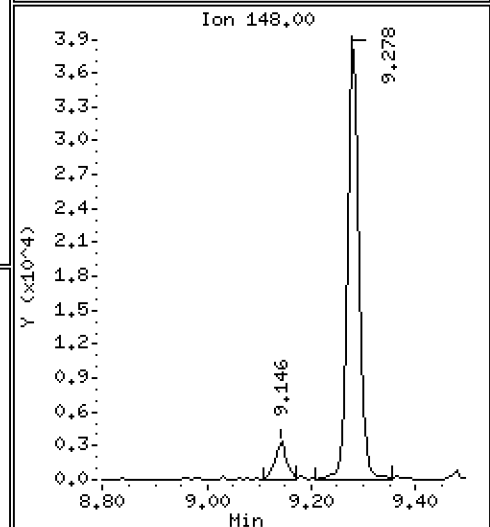
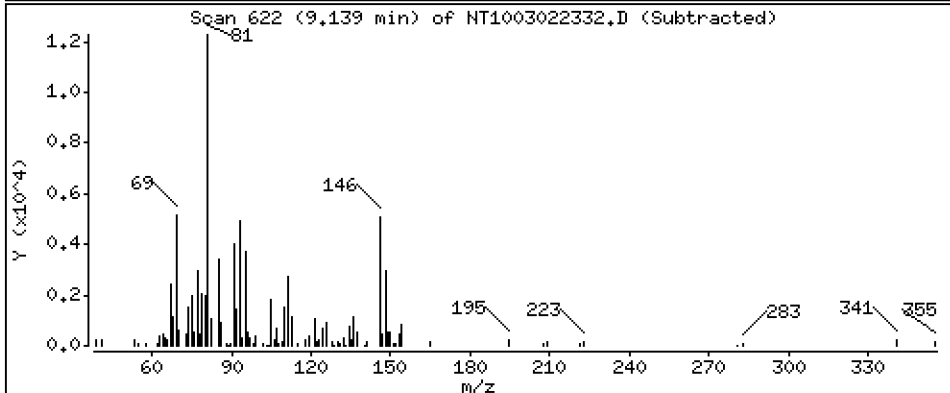
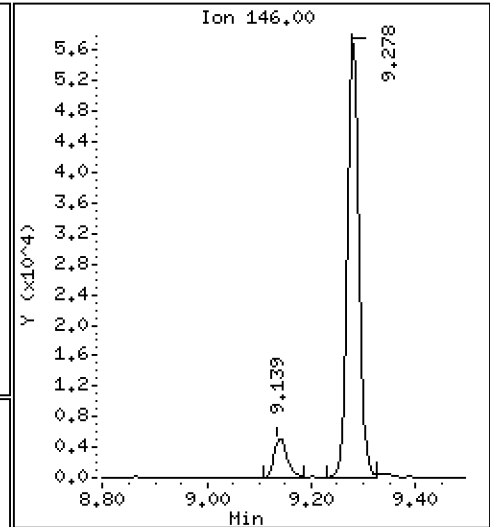
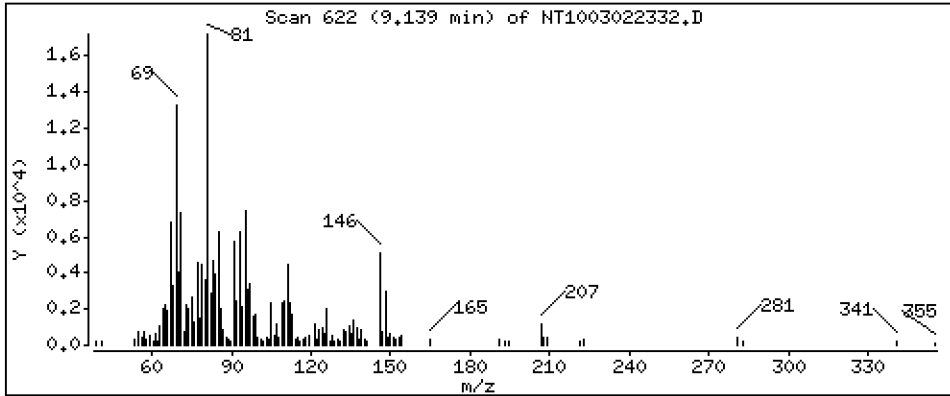
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 0,05373 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

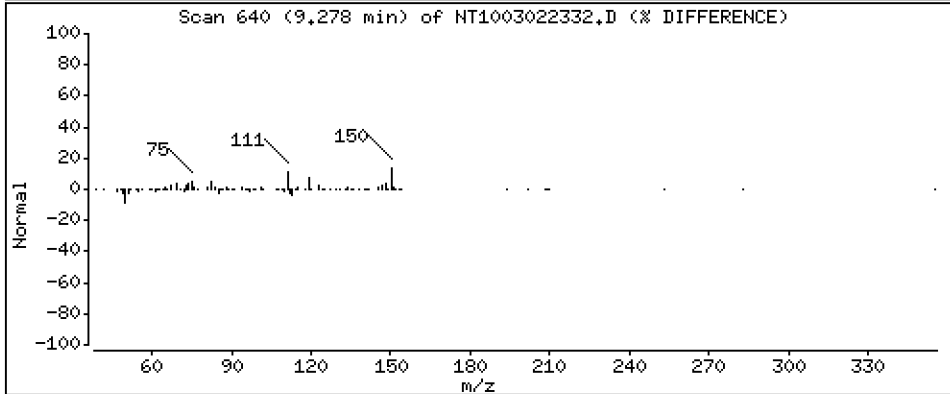
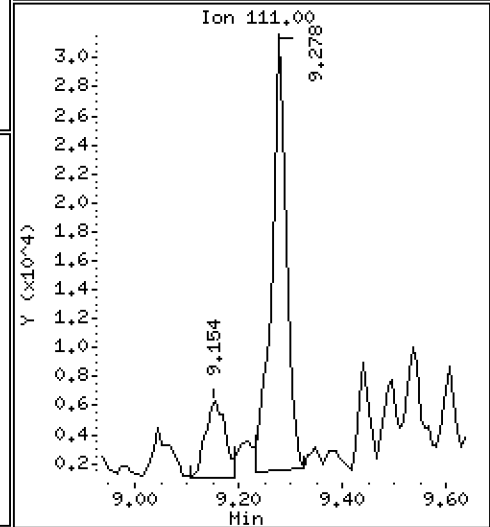
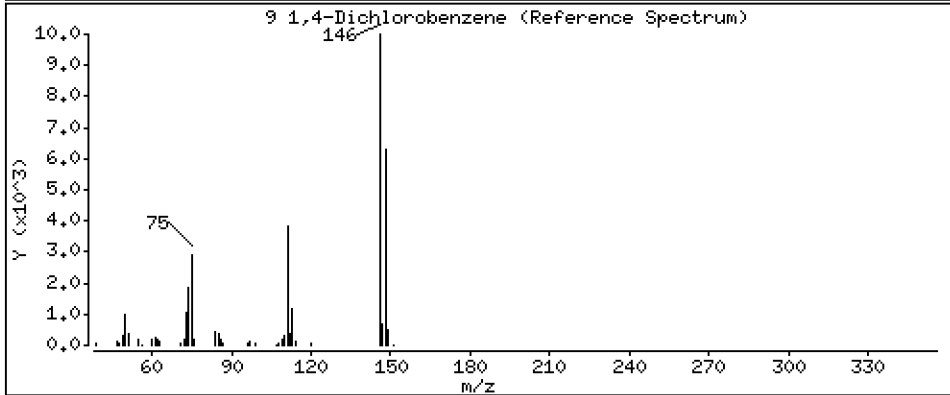
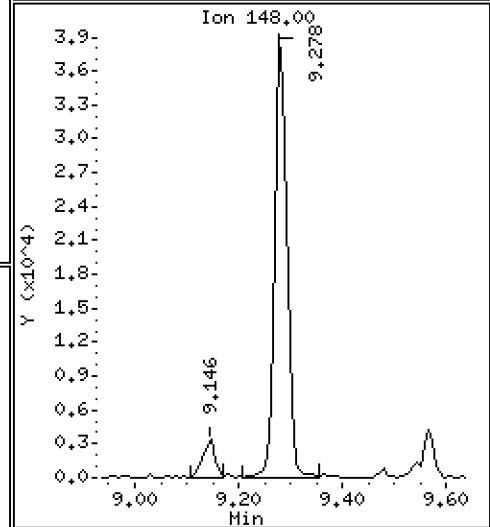
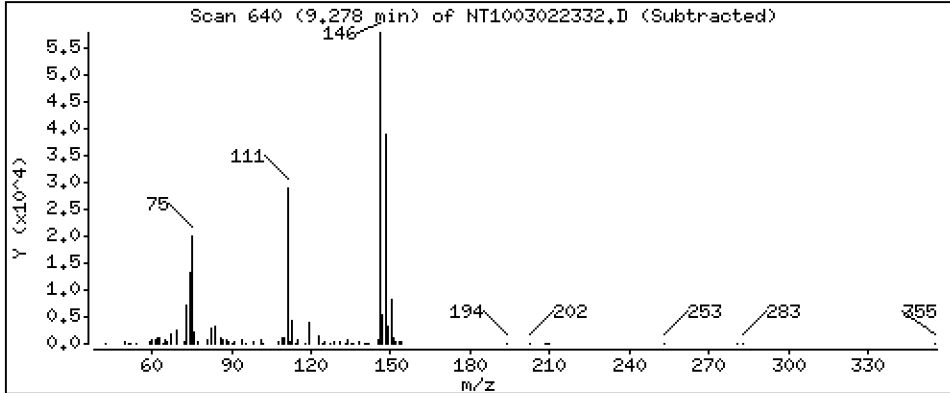
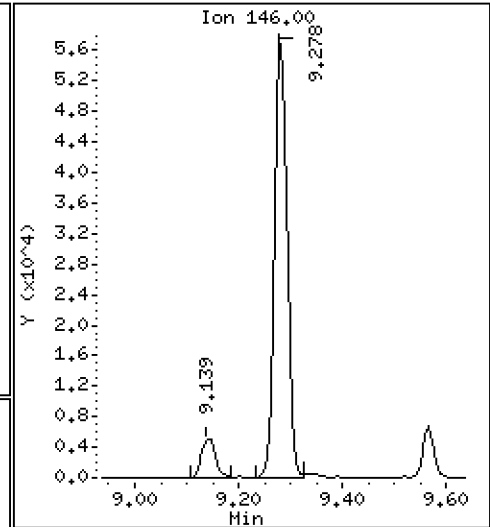
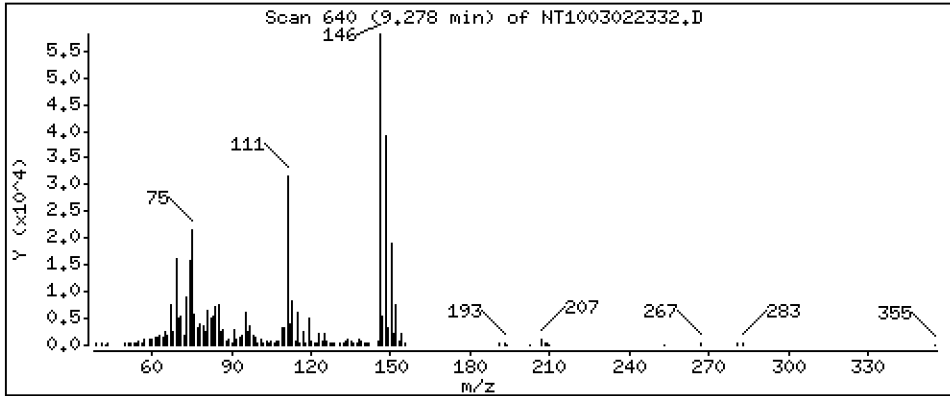
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 0,5480 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

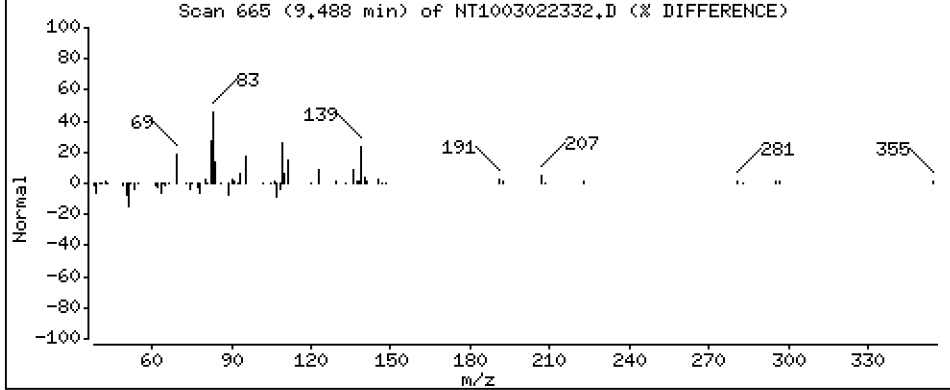
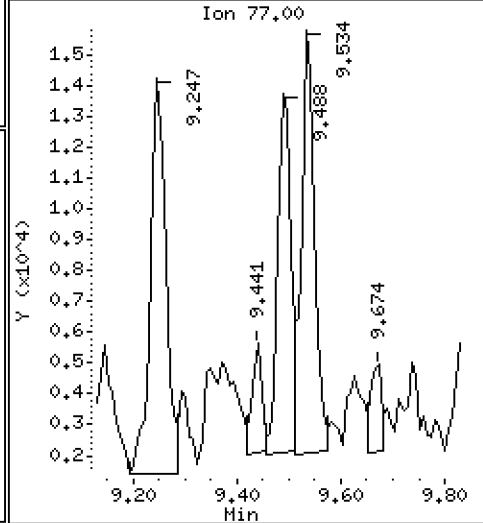
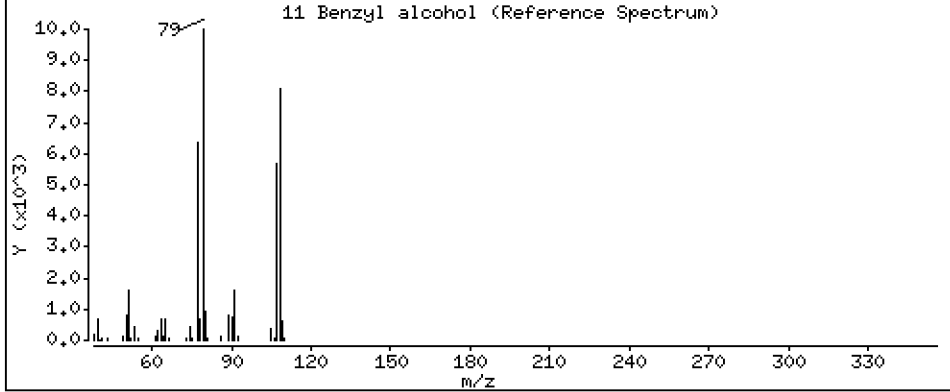
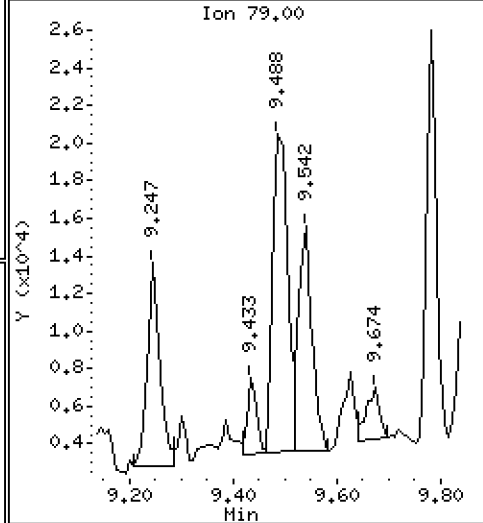
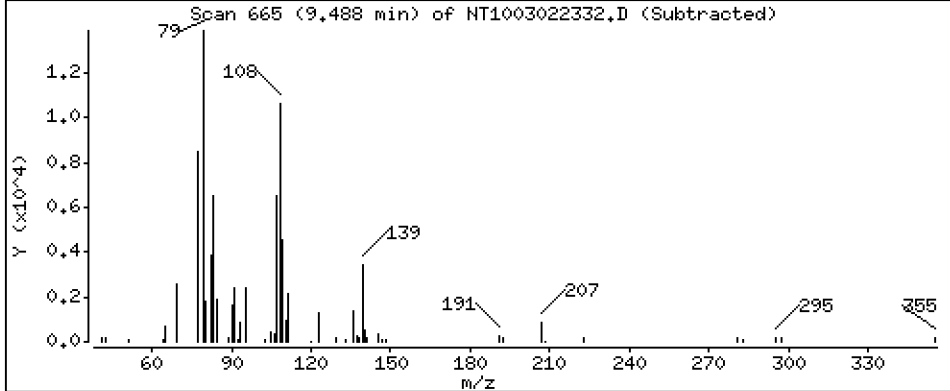
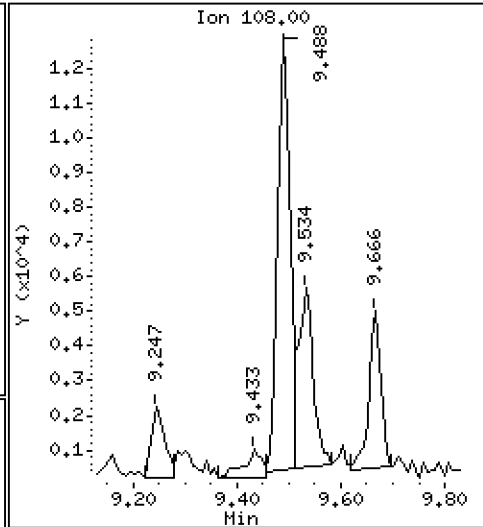
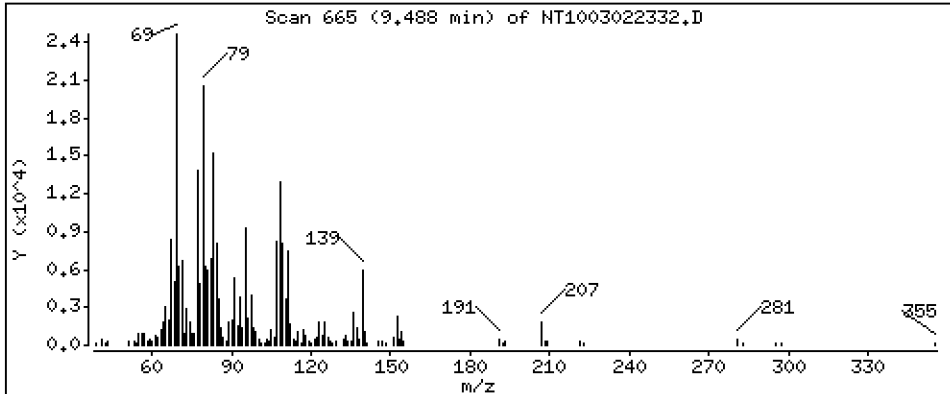
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2124 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

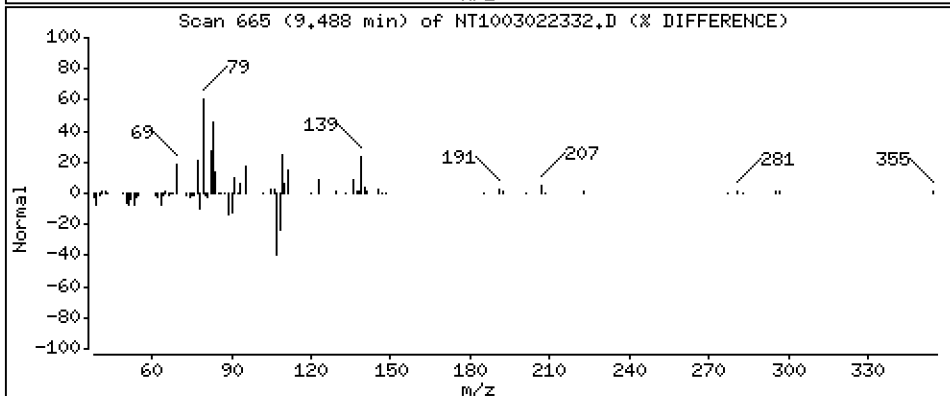
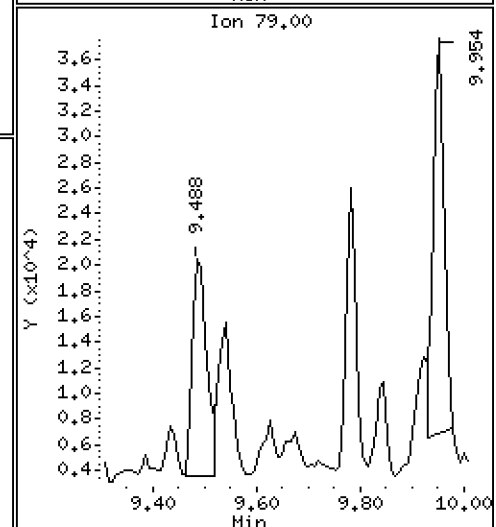
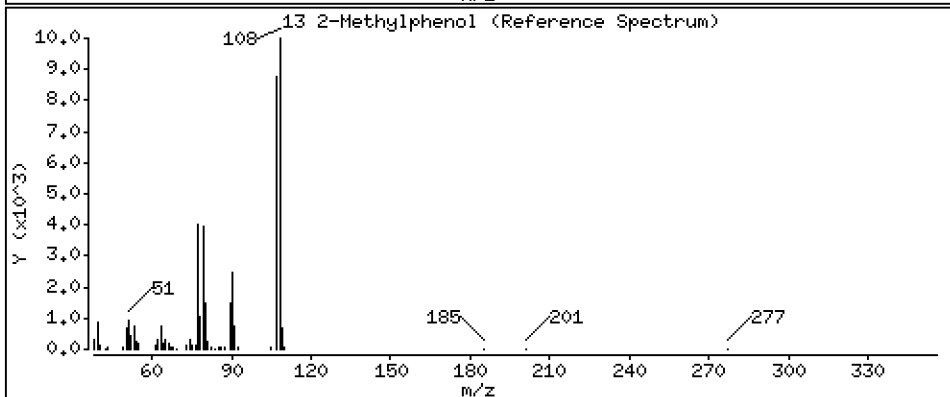
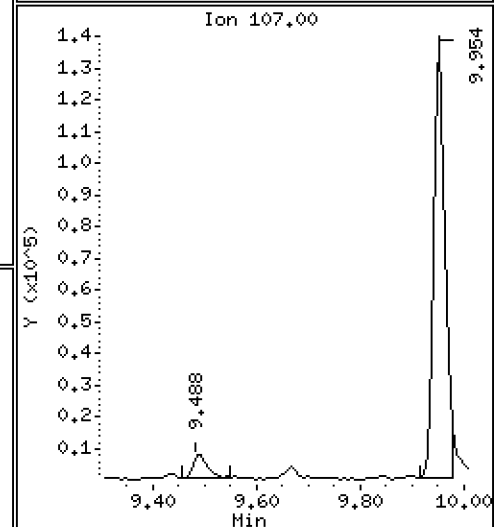
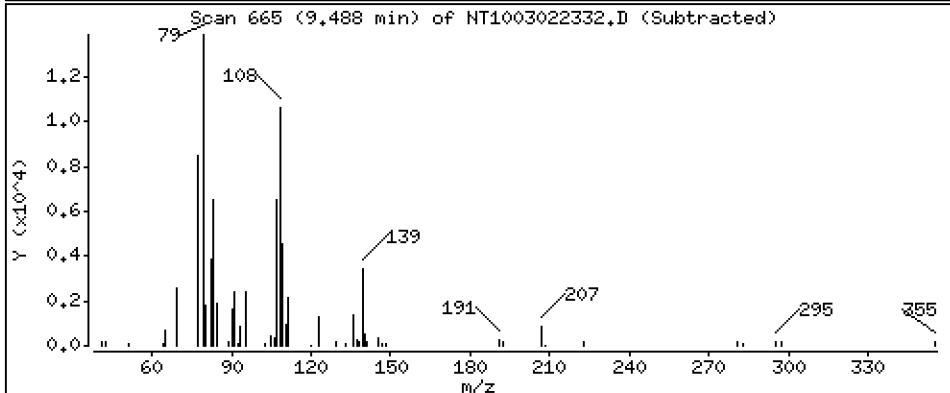
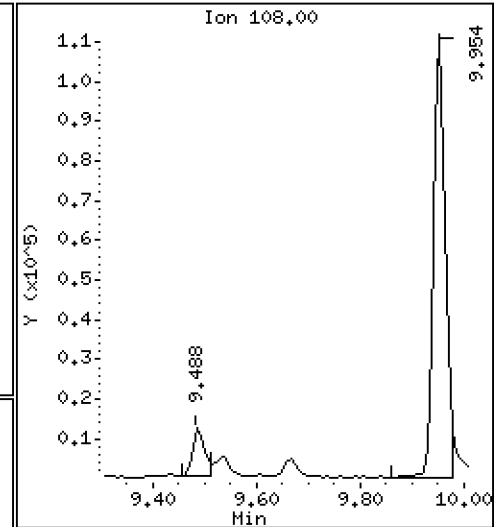
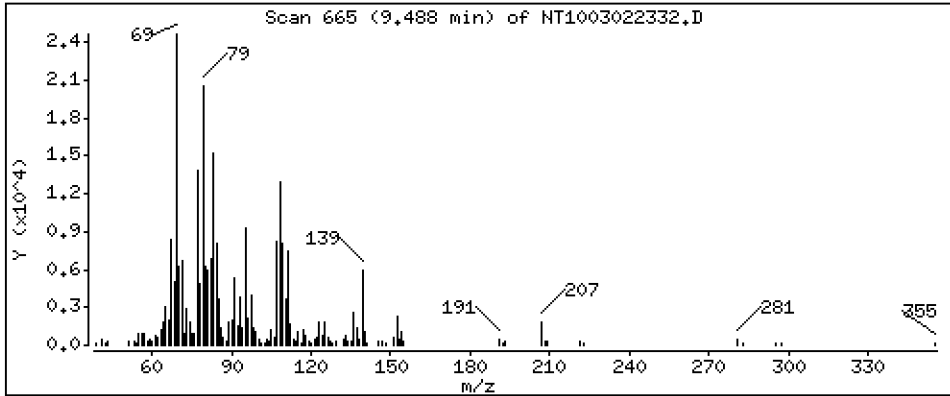
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,1382 ug/mL

13 2-Methylphenol



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

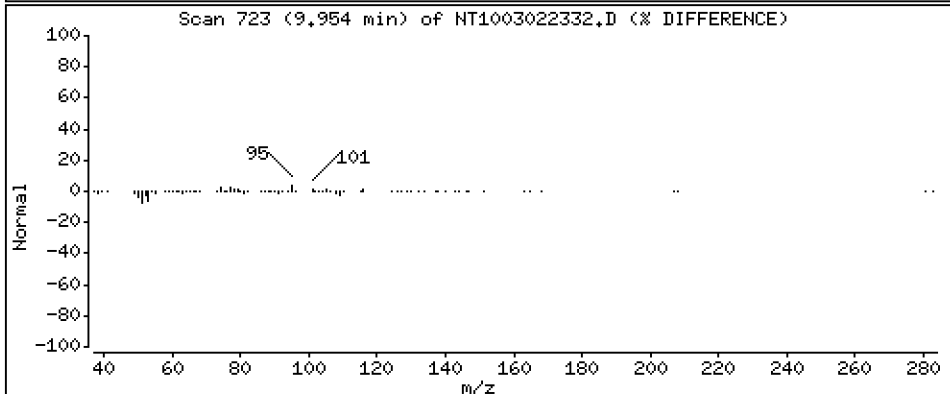
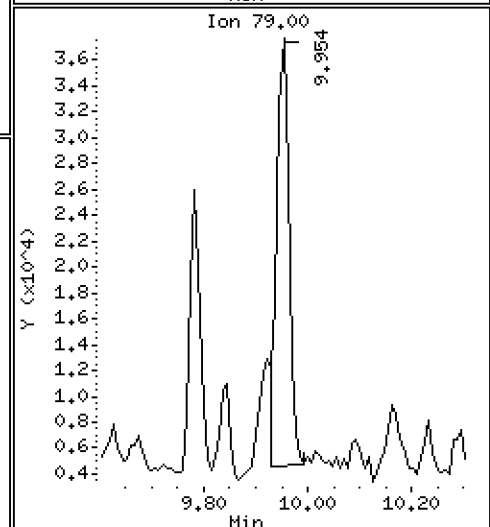
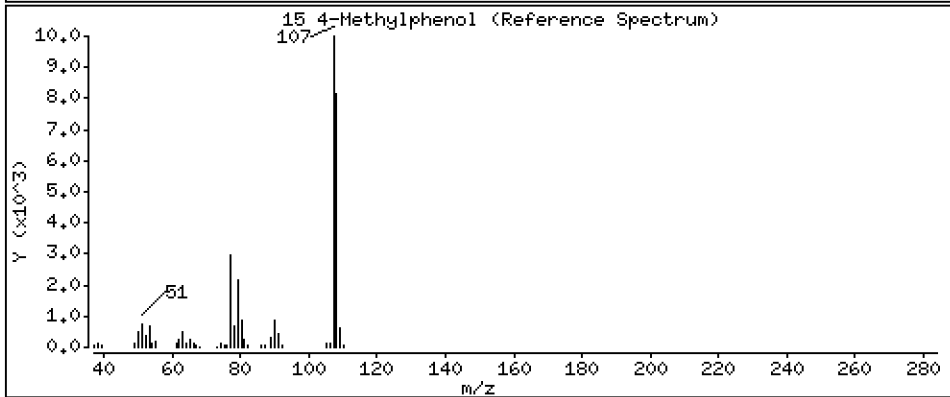
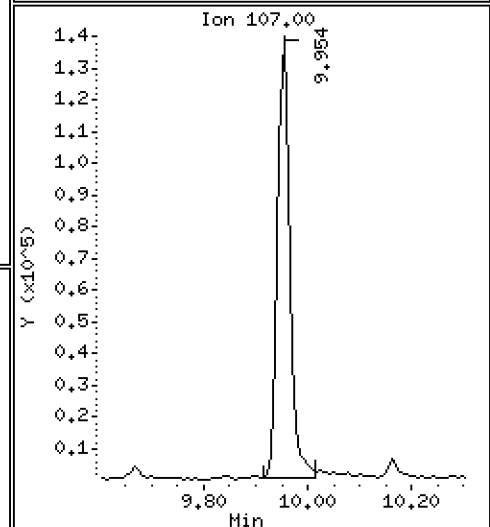
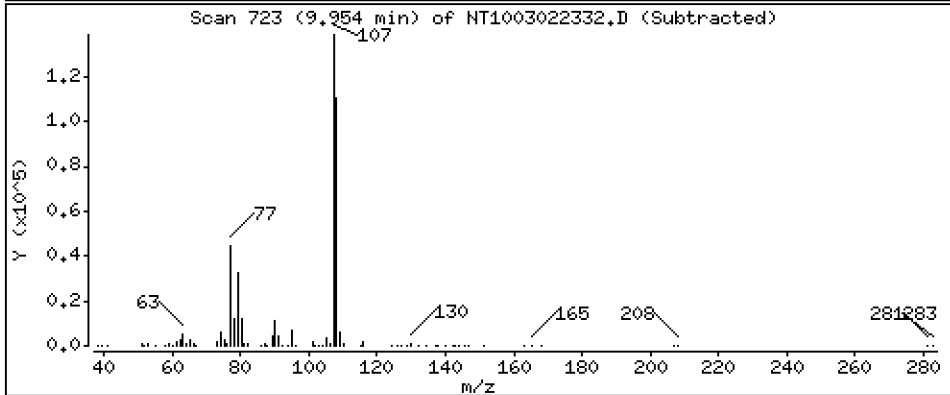
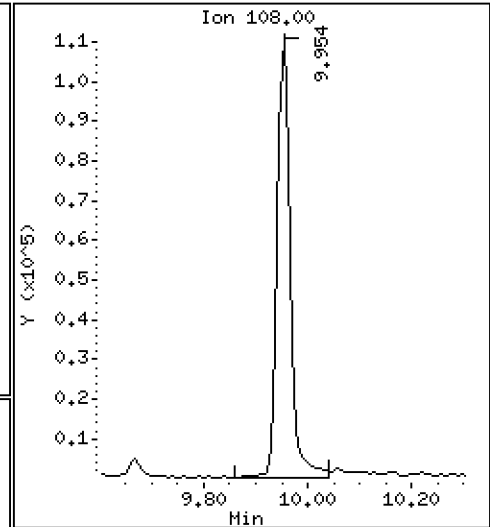
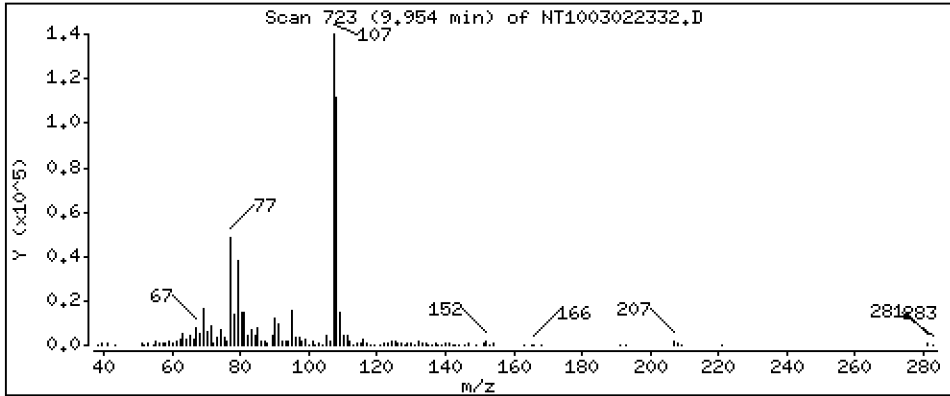
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 1,126 ug/mL



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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

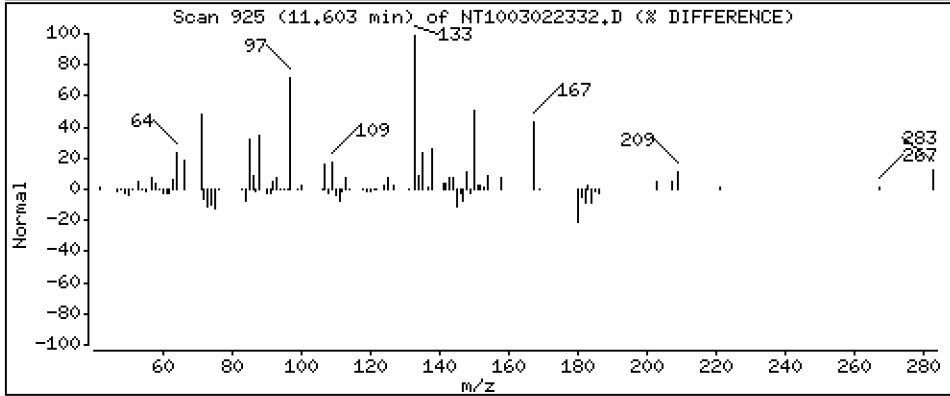
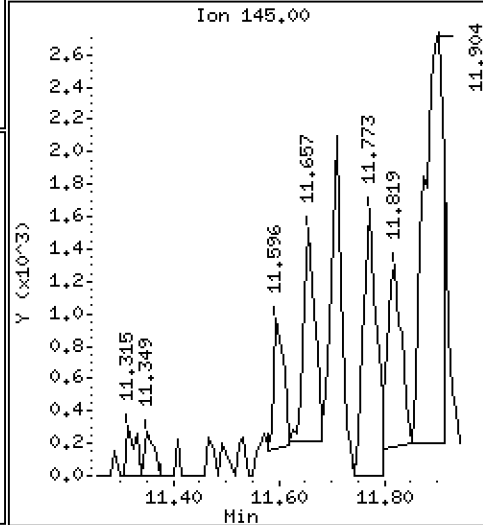
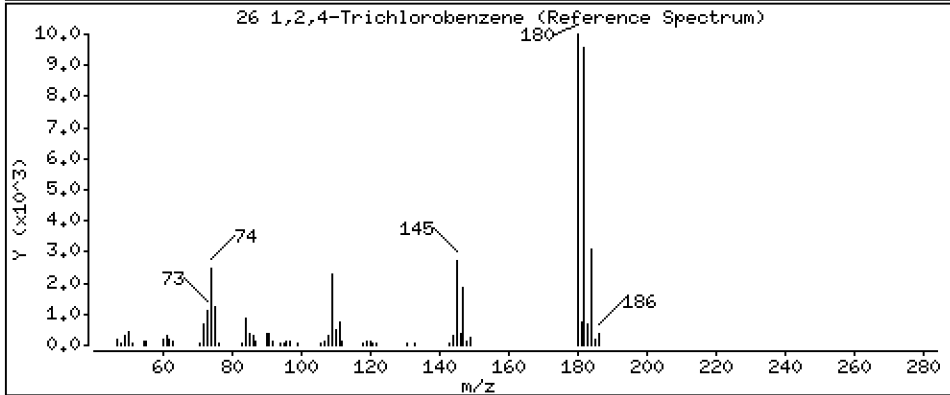
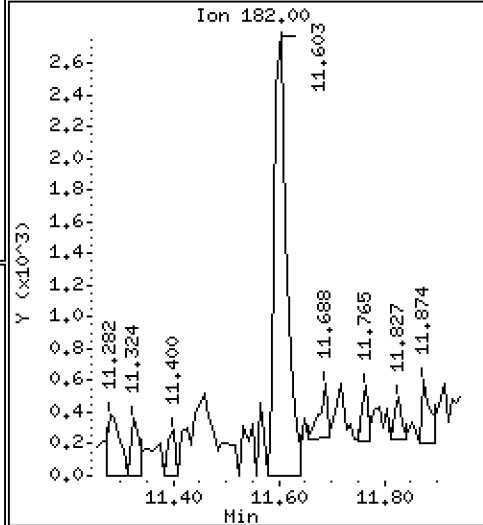
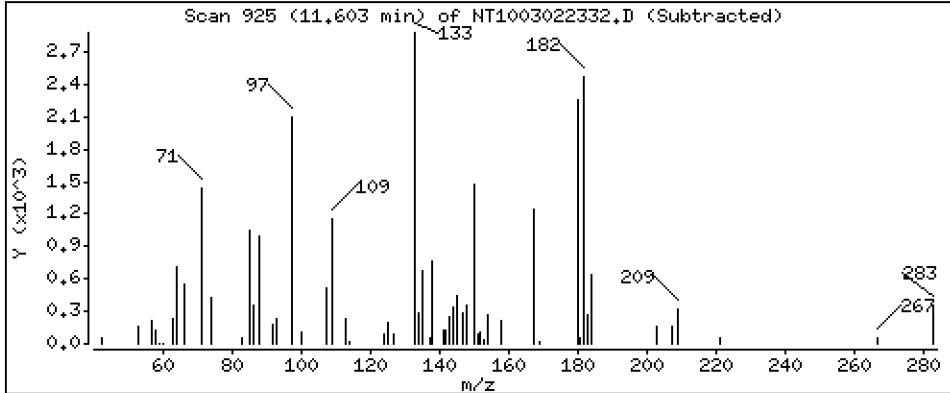
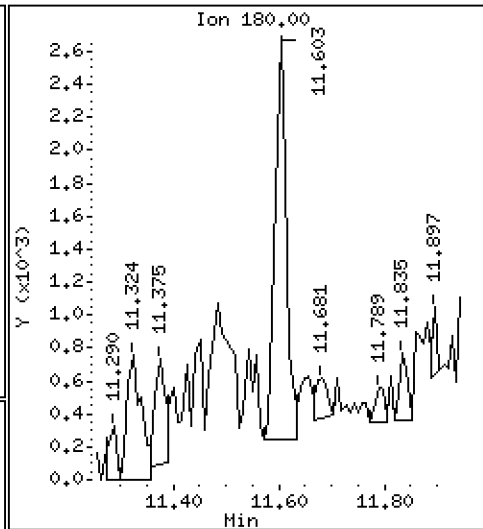
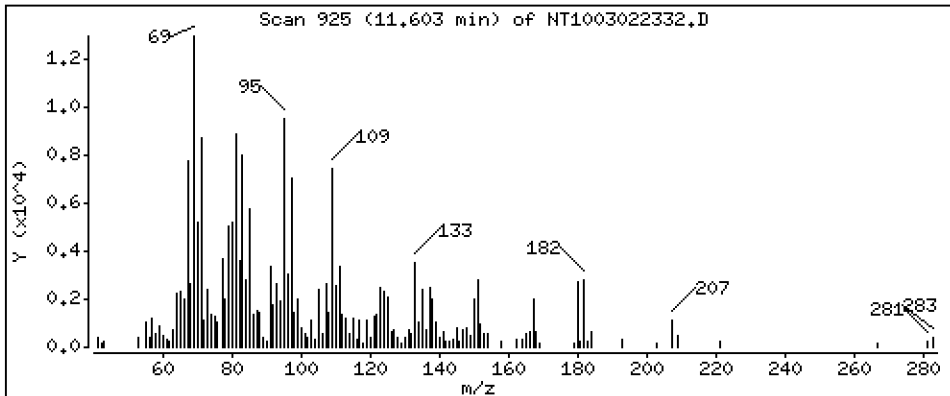
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.02552 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

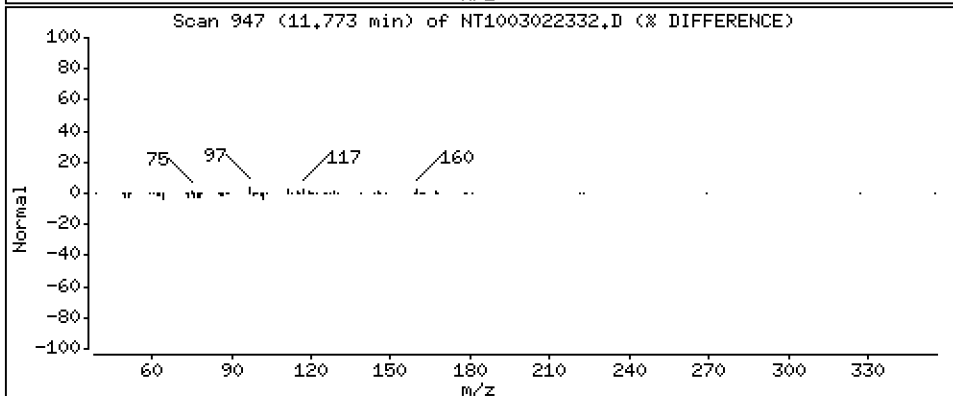
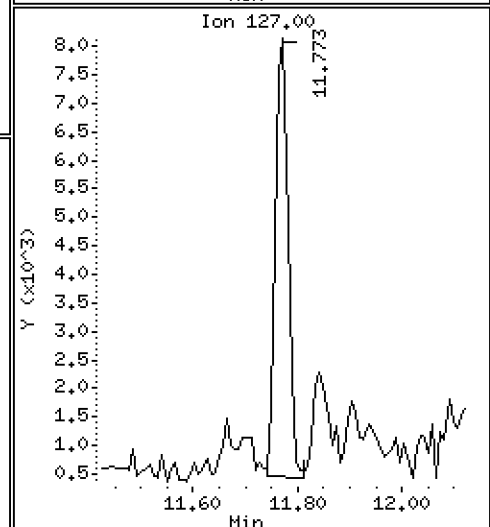
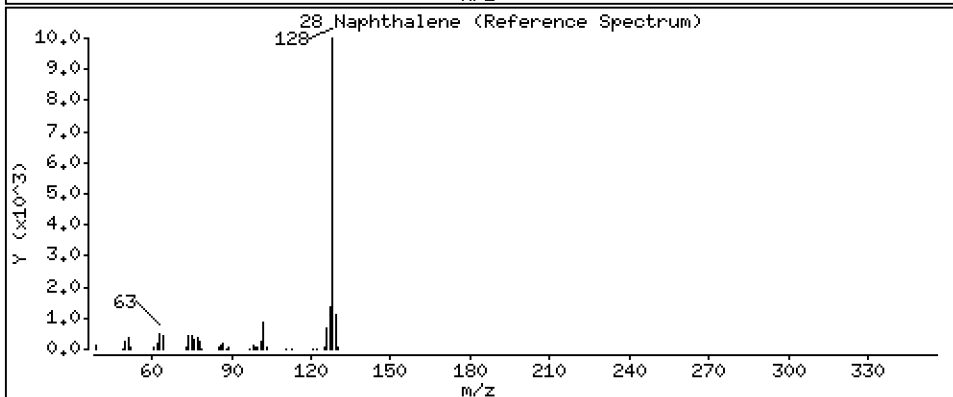
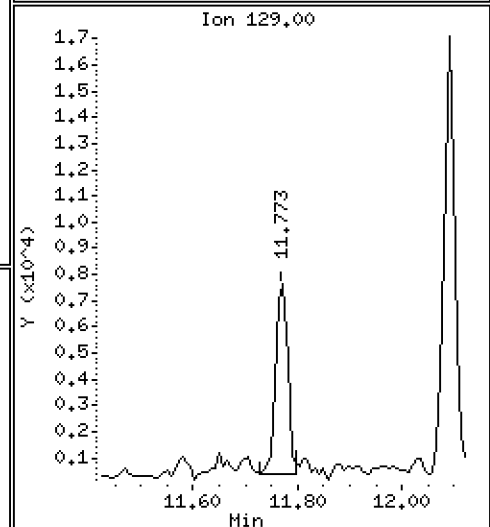
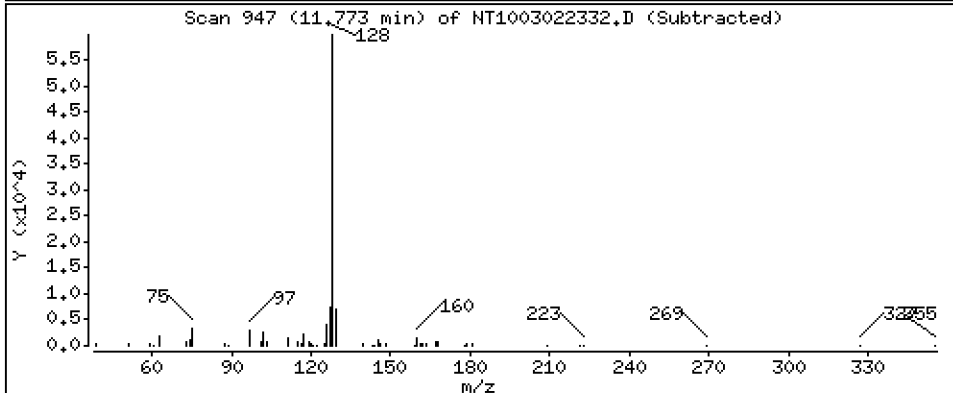
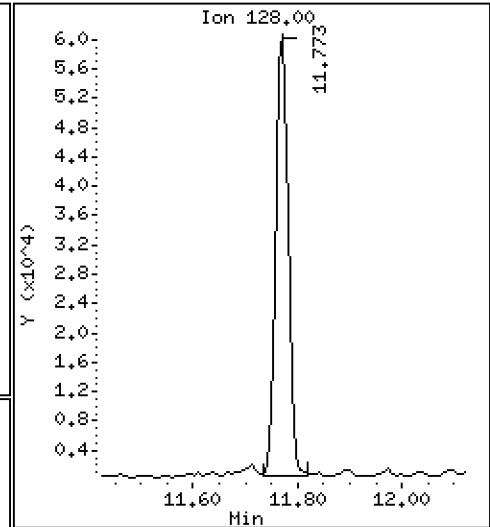
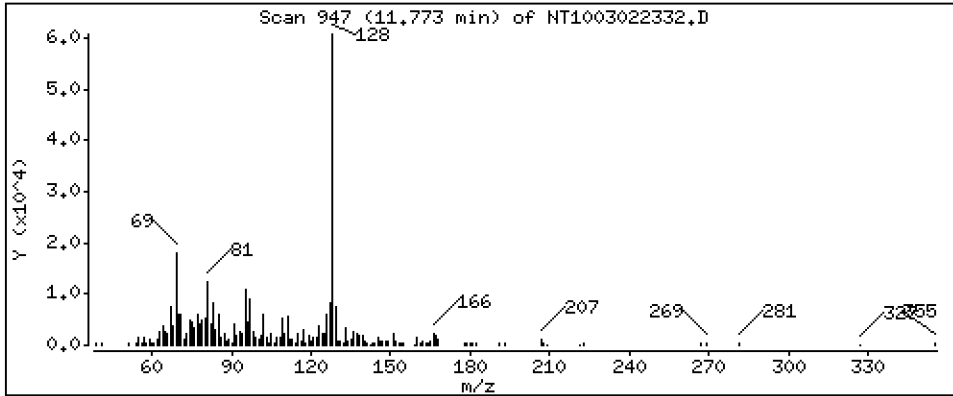
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,2104 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

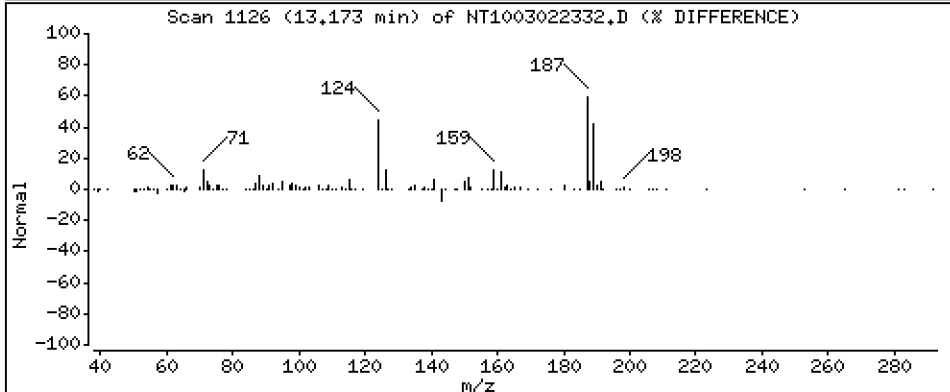
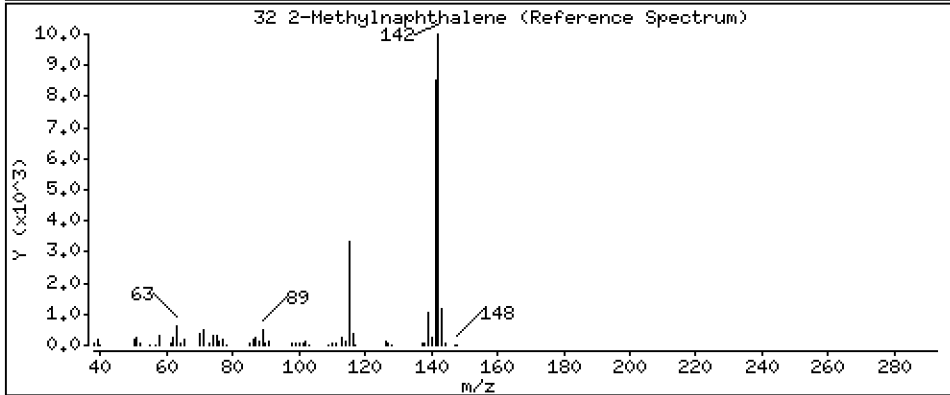
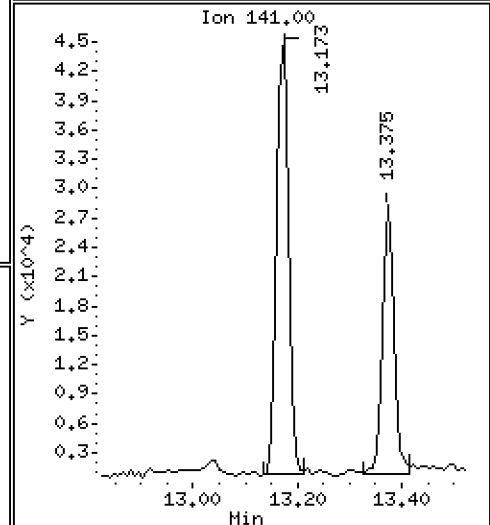
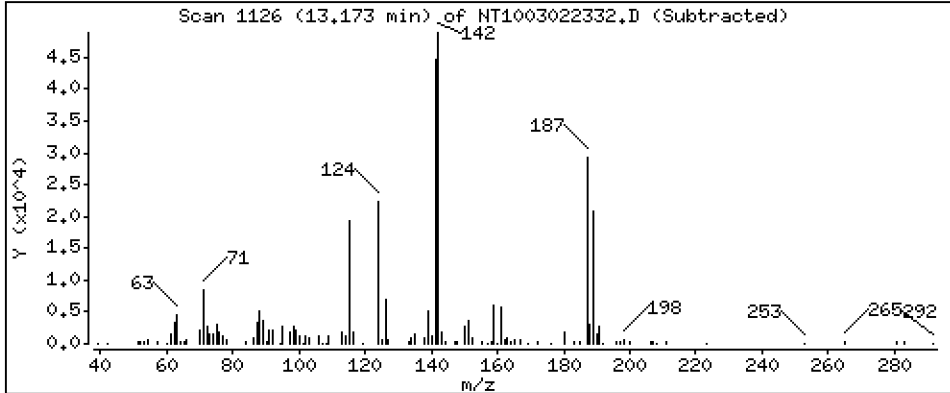
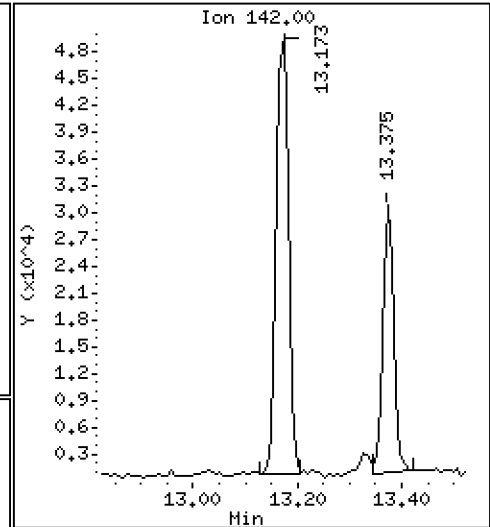
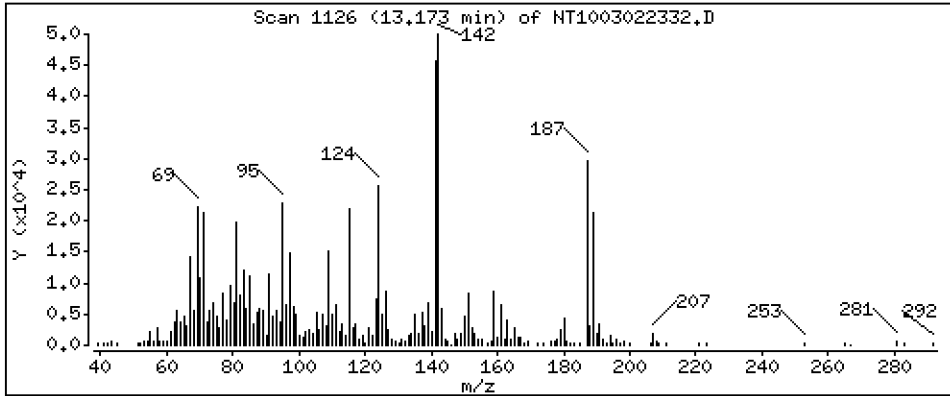
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,2388 ug/mL





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

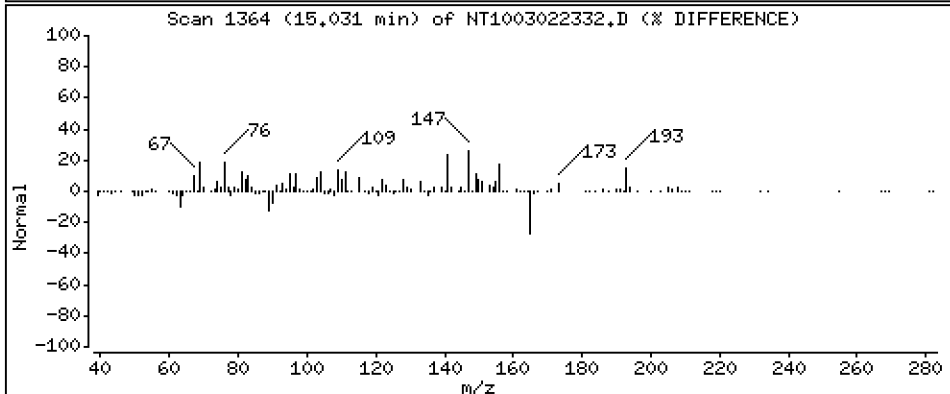
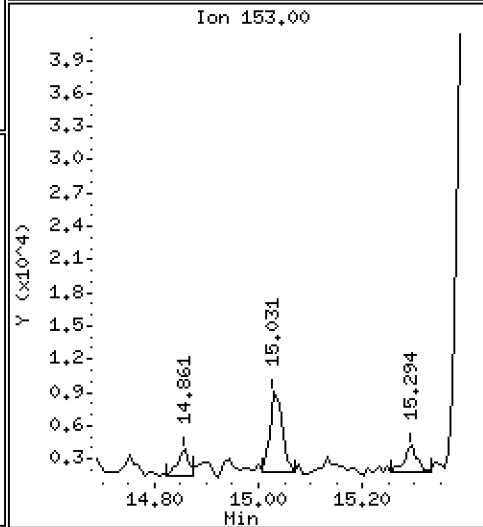
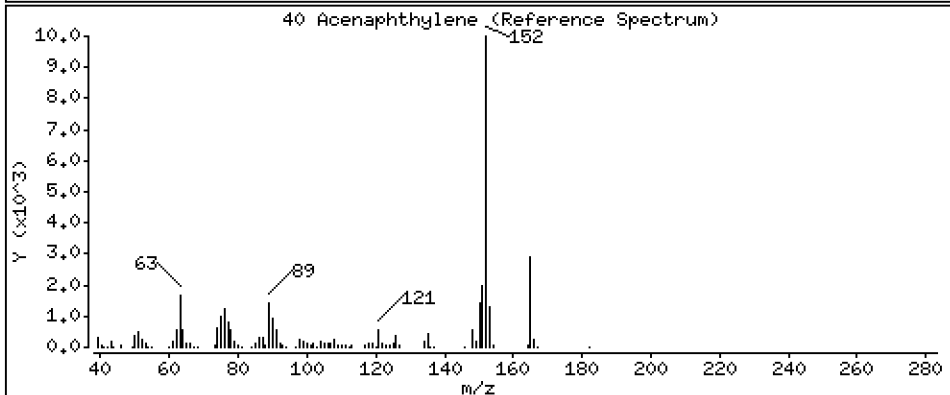
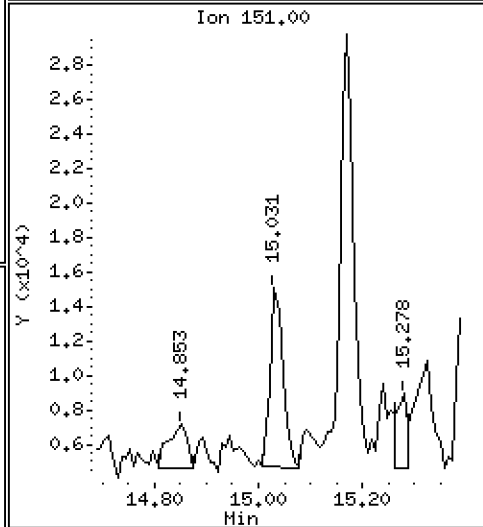
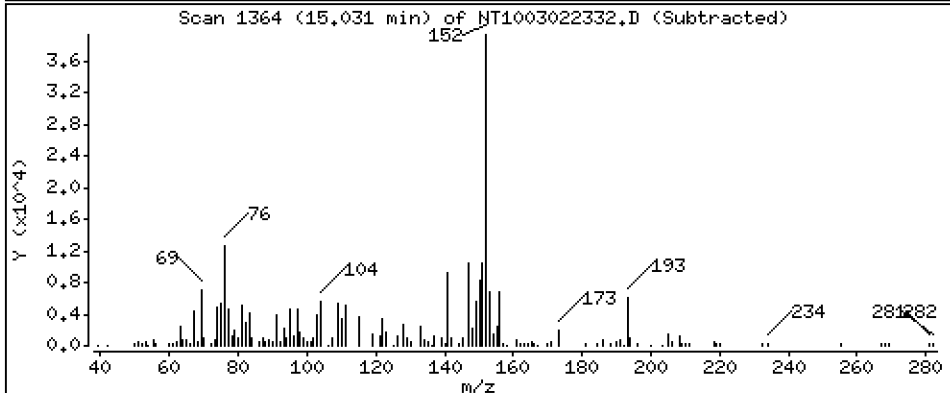
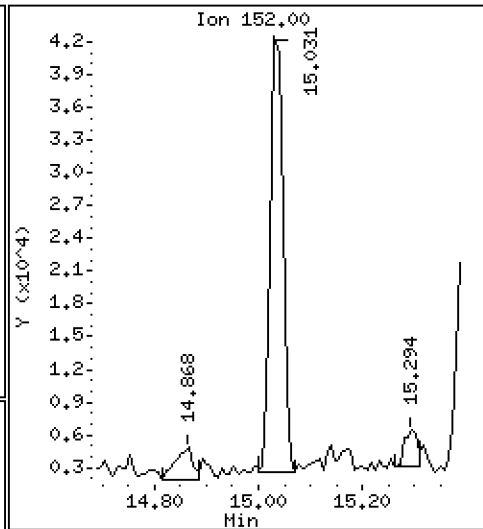
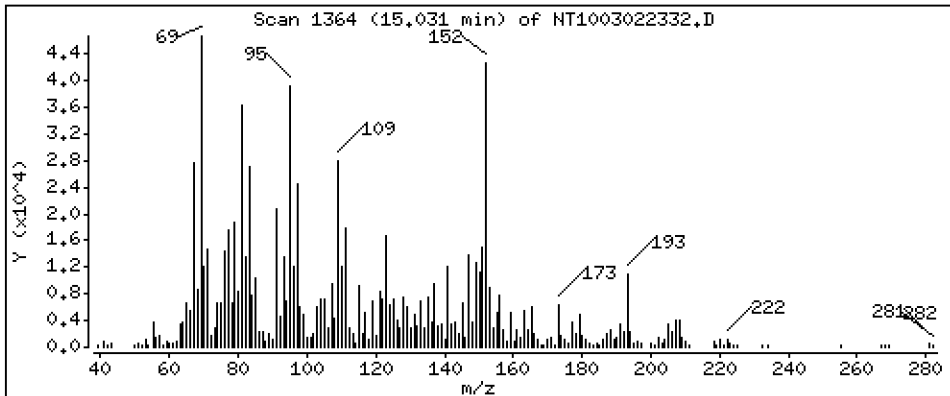
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,1398 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

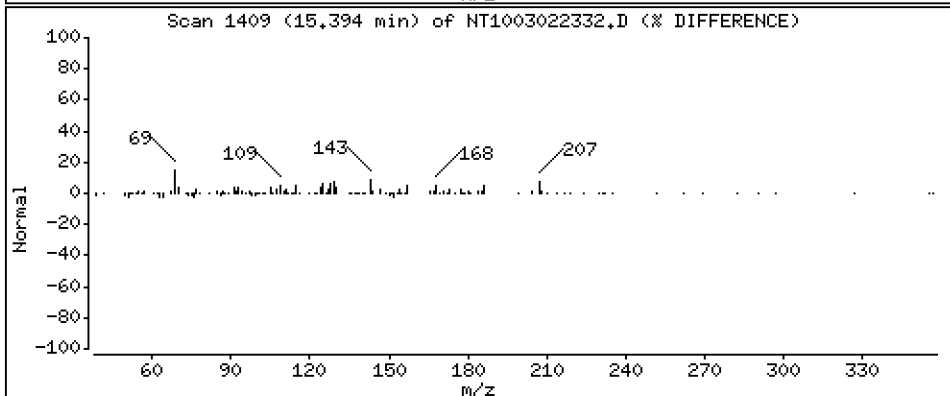
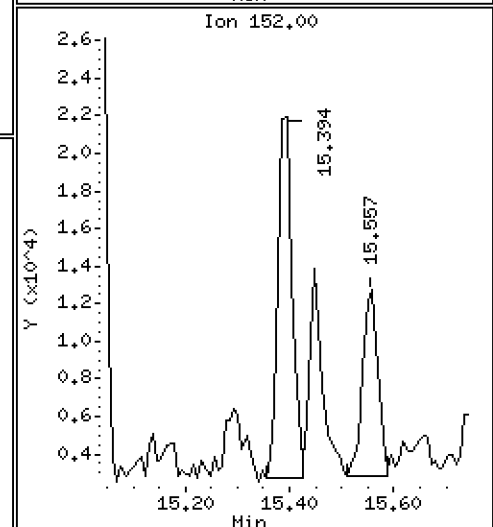
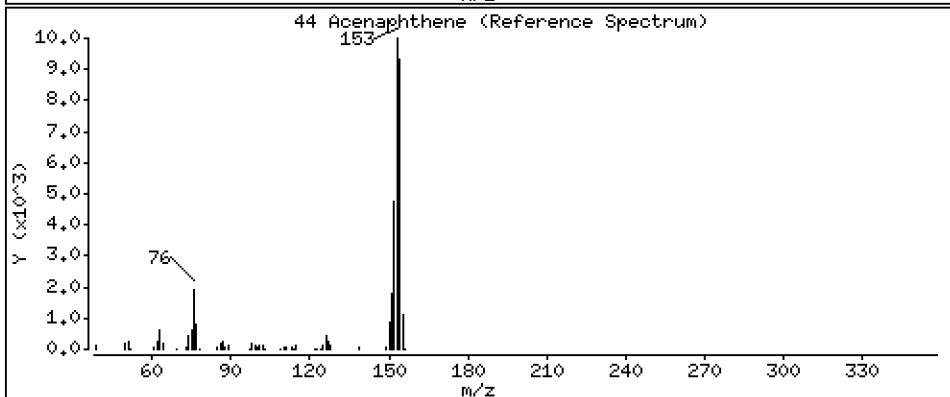
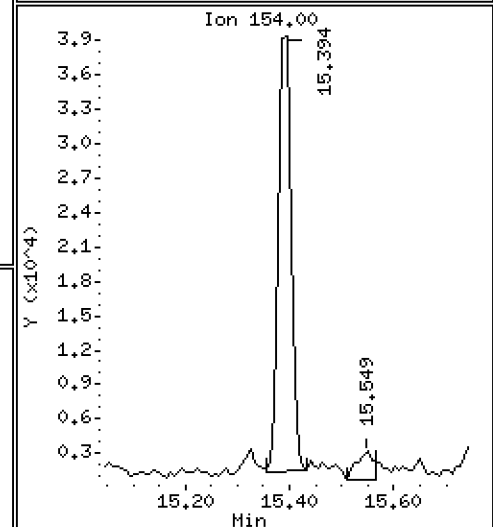
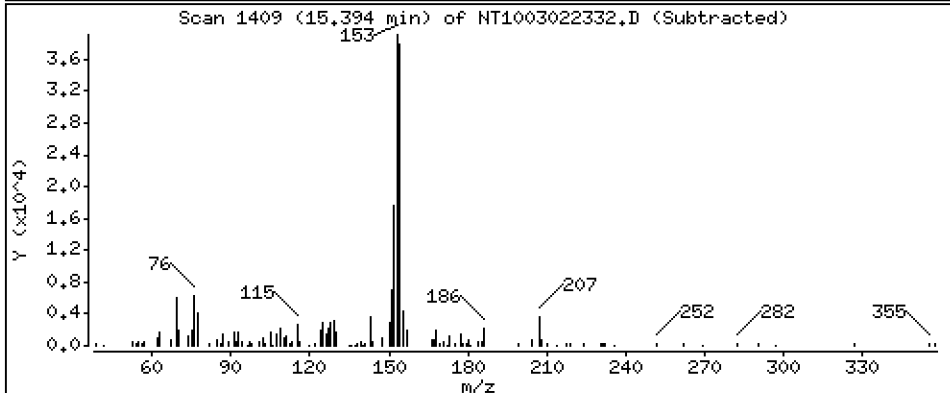
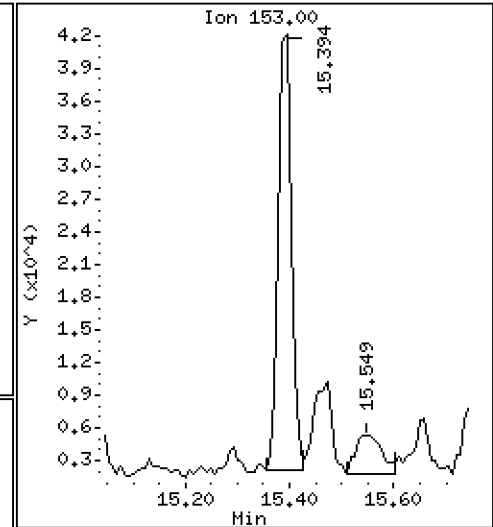
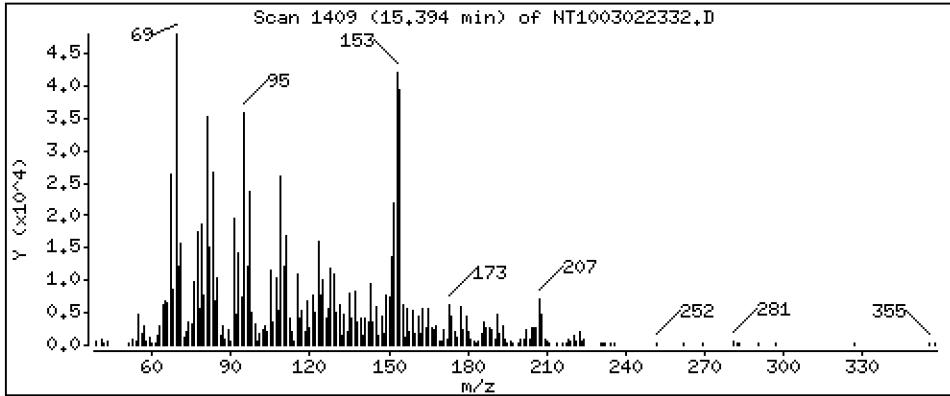
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,2387 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

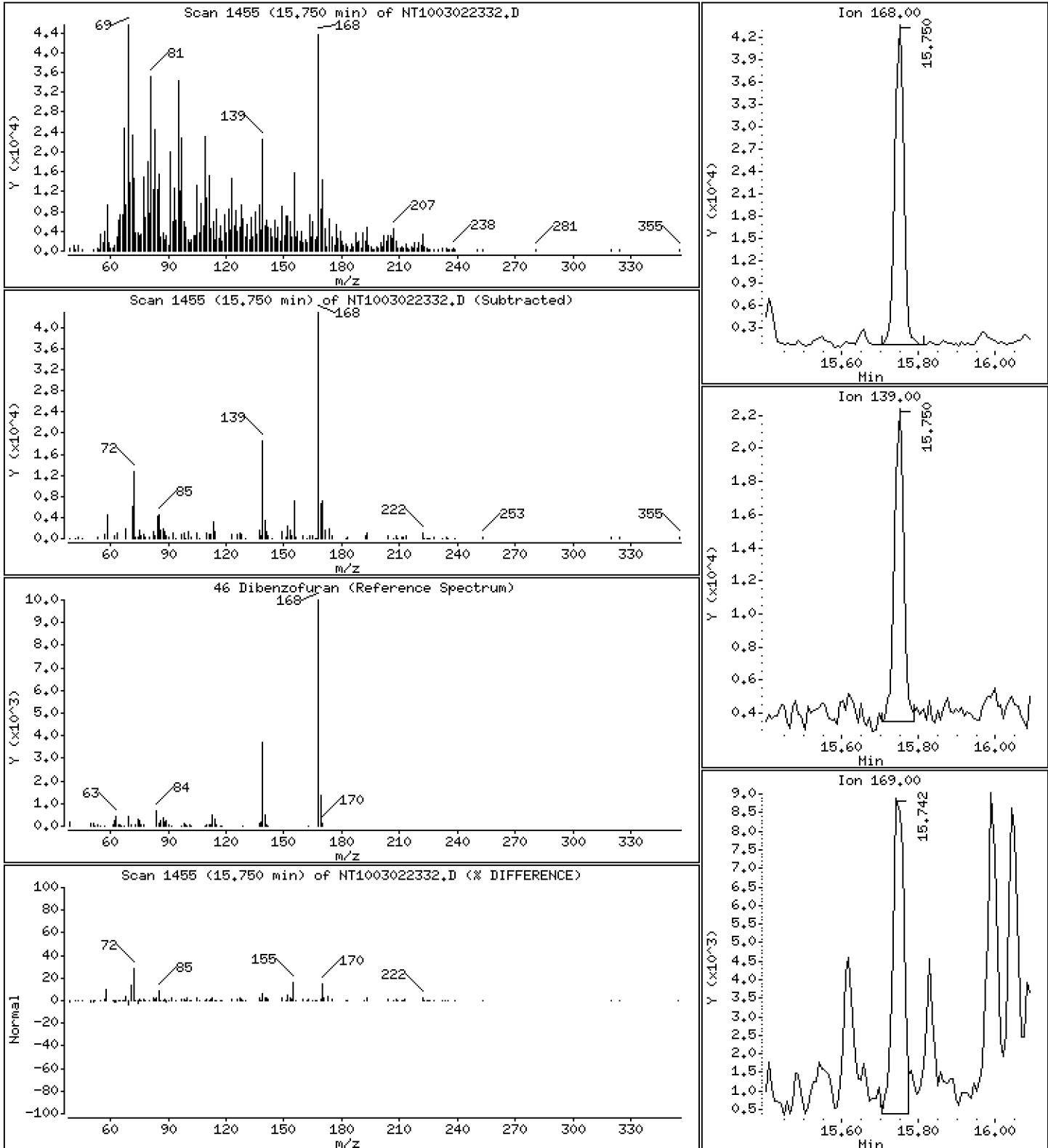
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1605 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

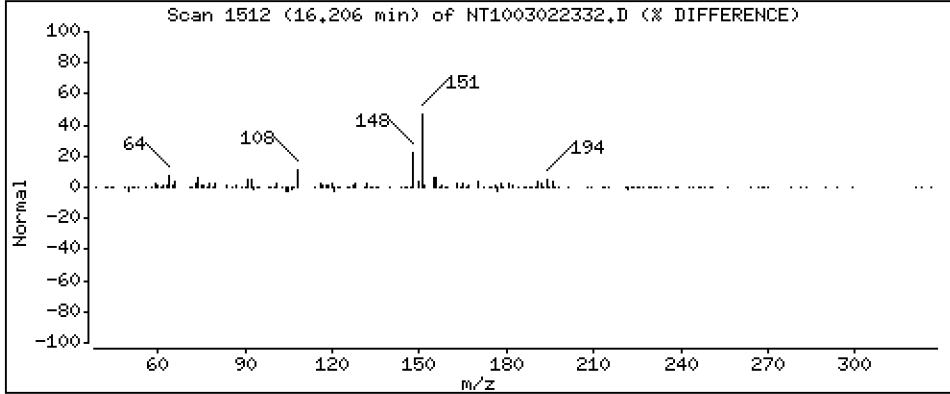
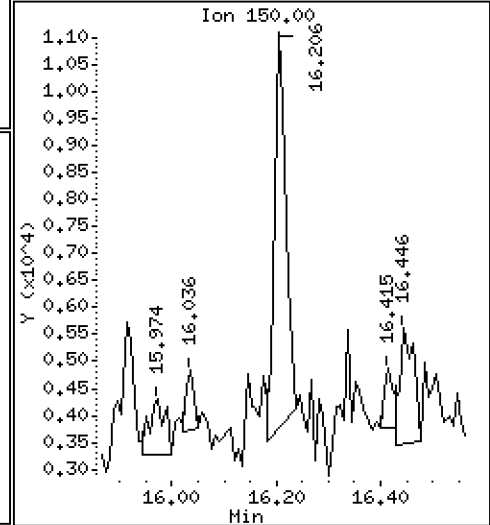
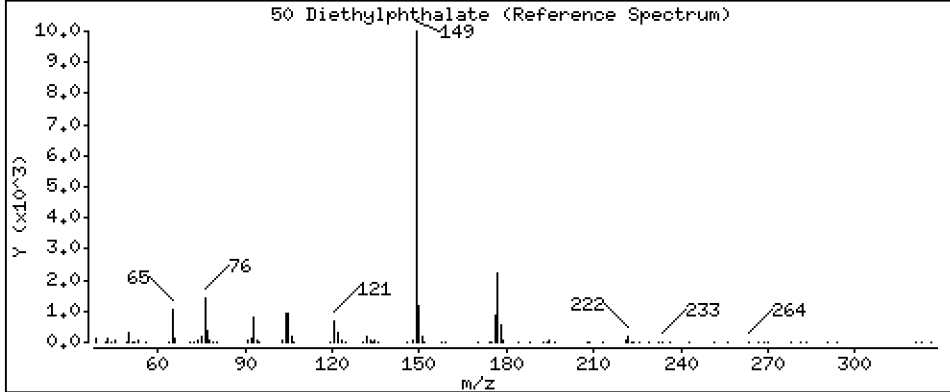
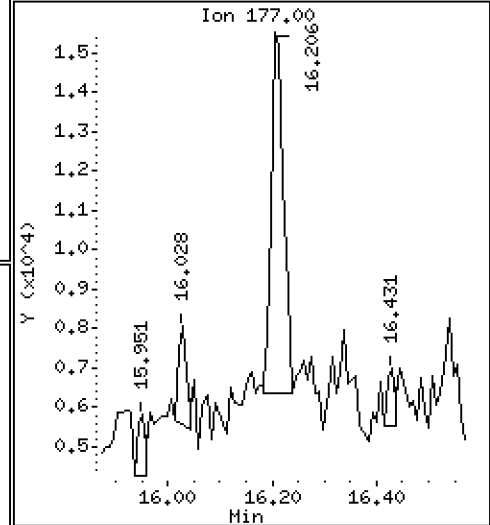
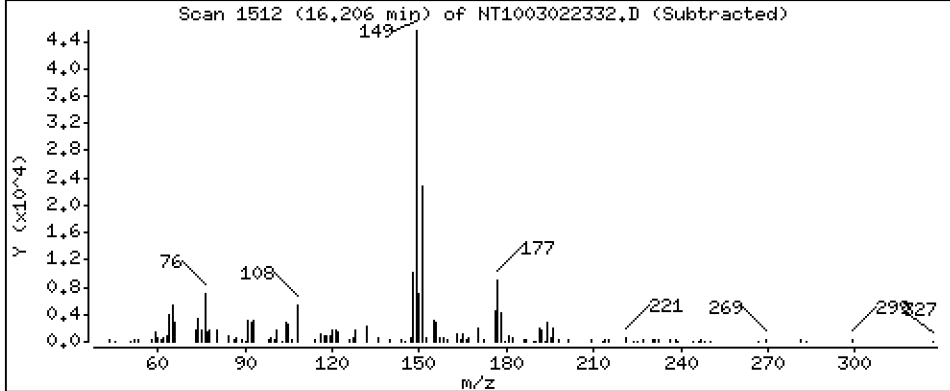
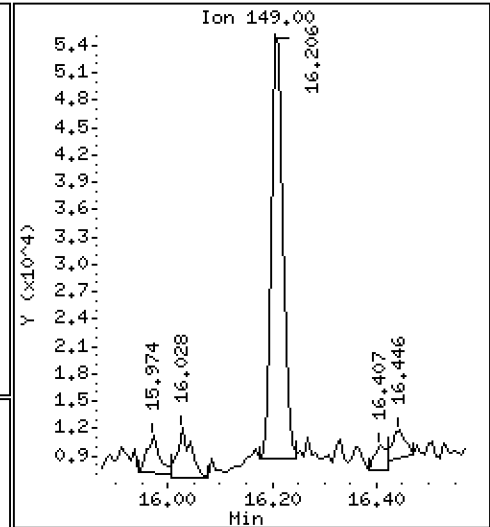
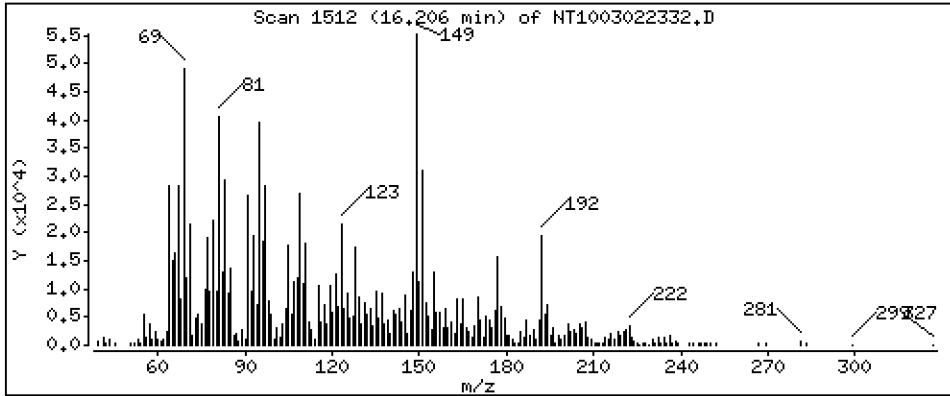
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2189 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

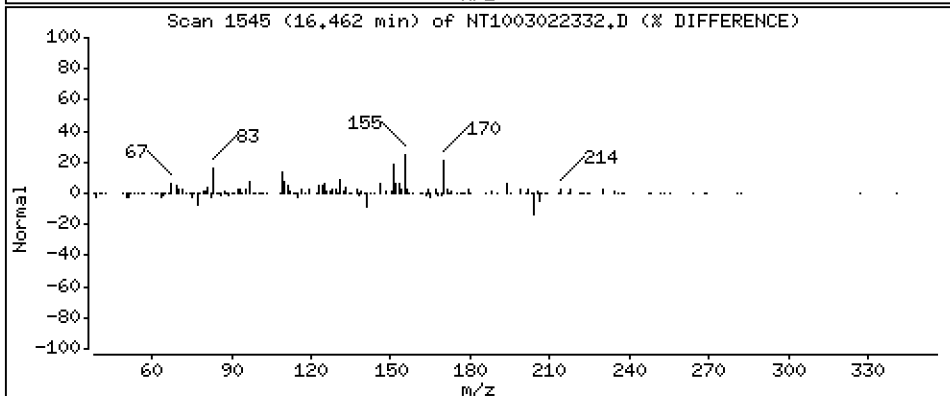
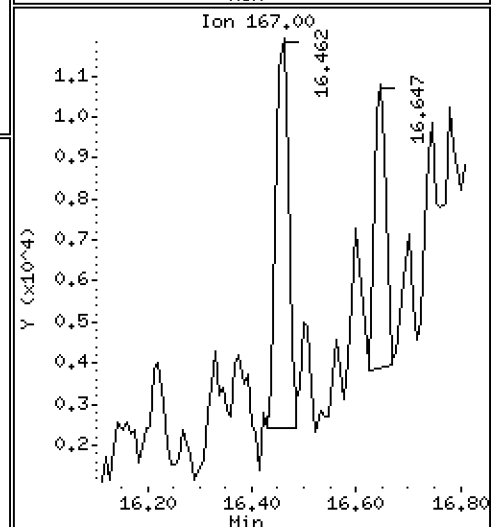
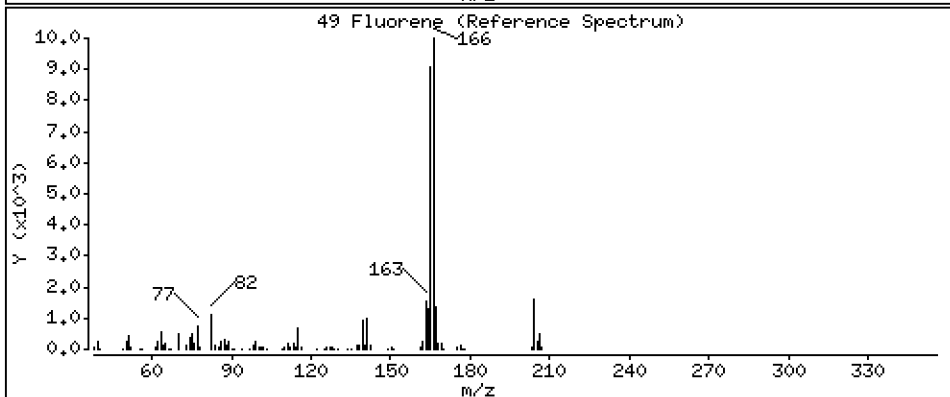
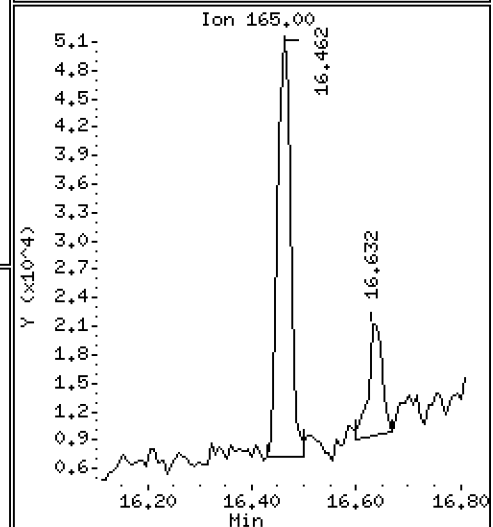
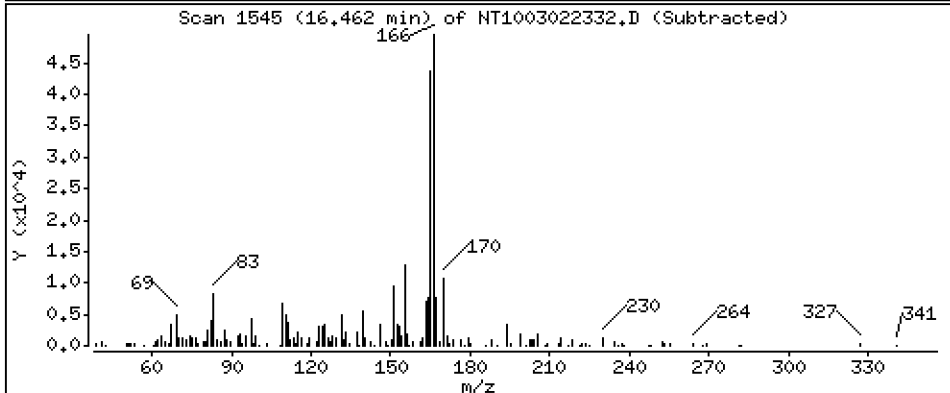
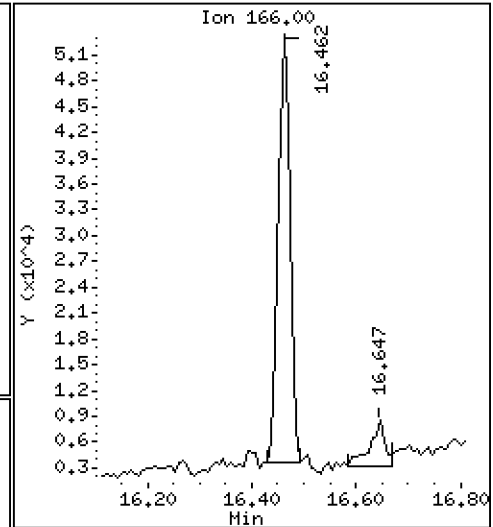
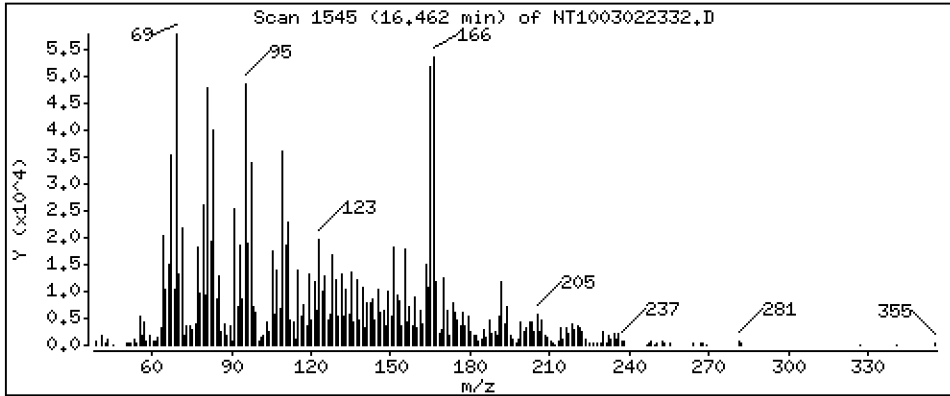
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 0,2164 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

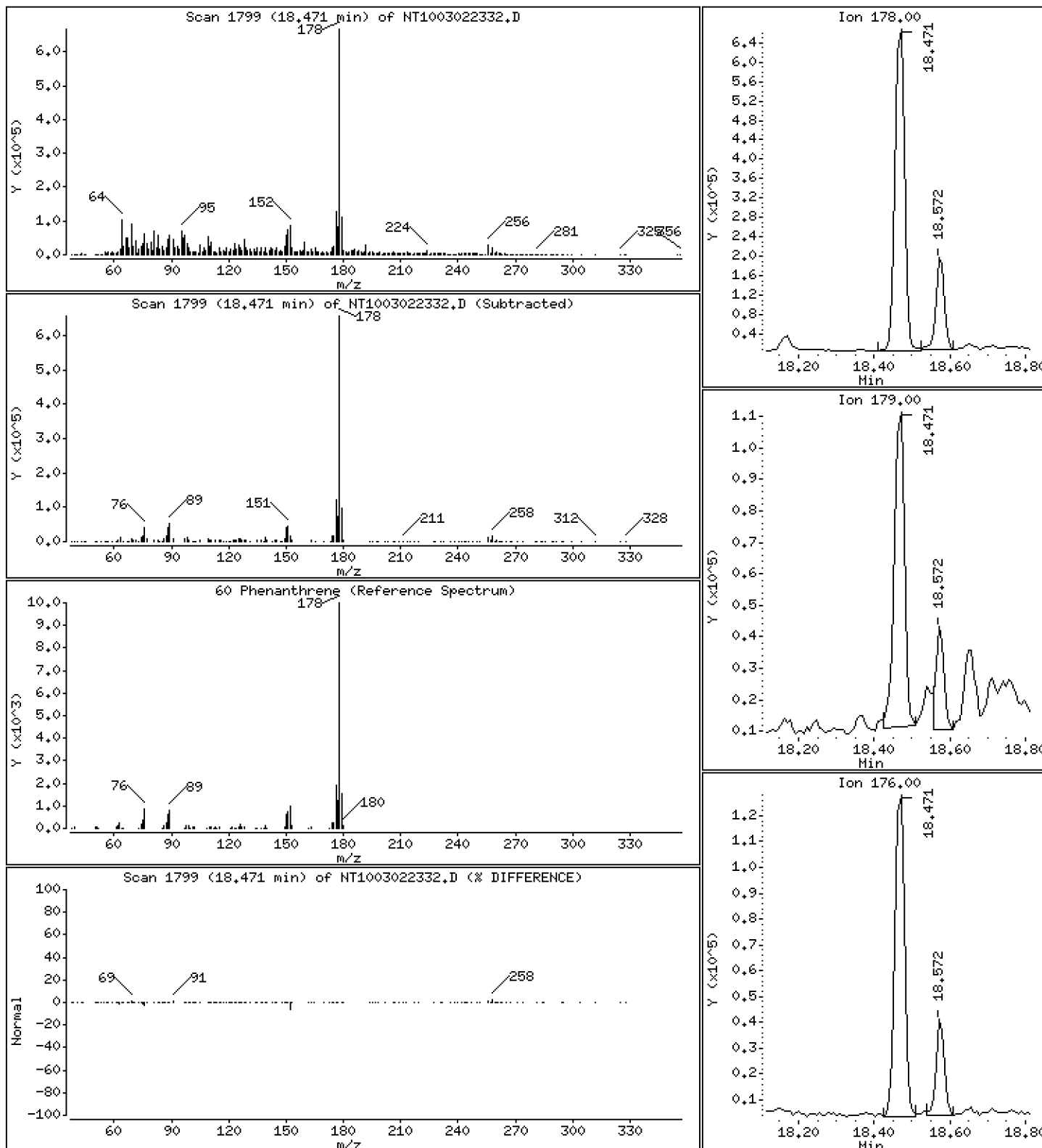
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 2,158 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

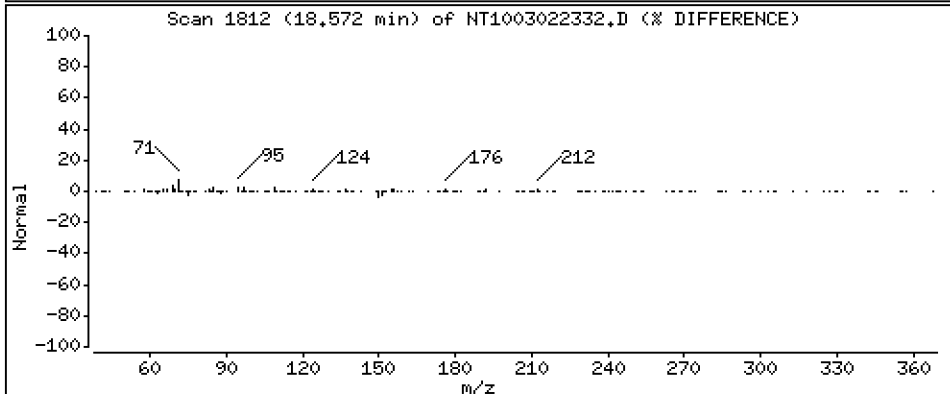
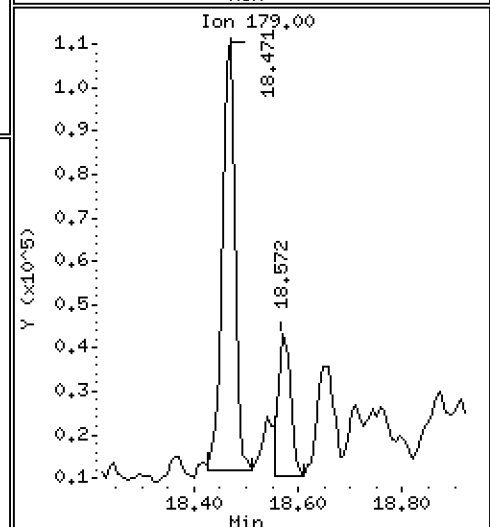
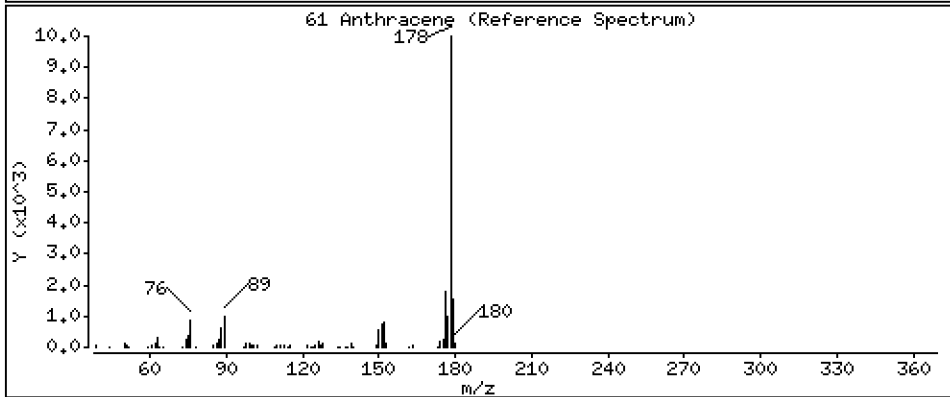
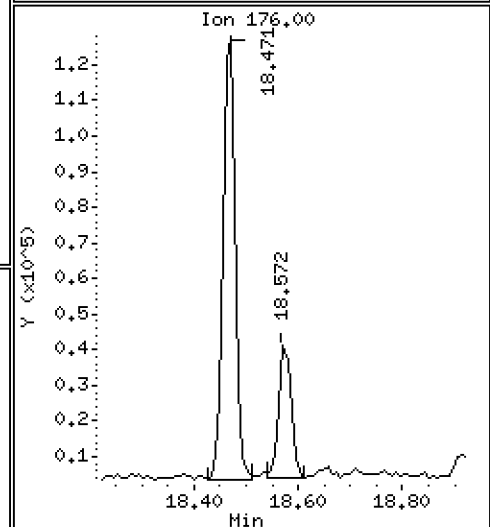
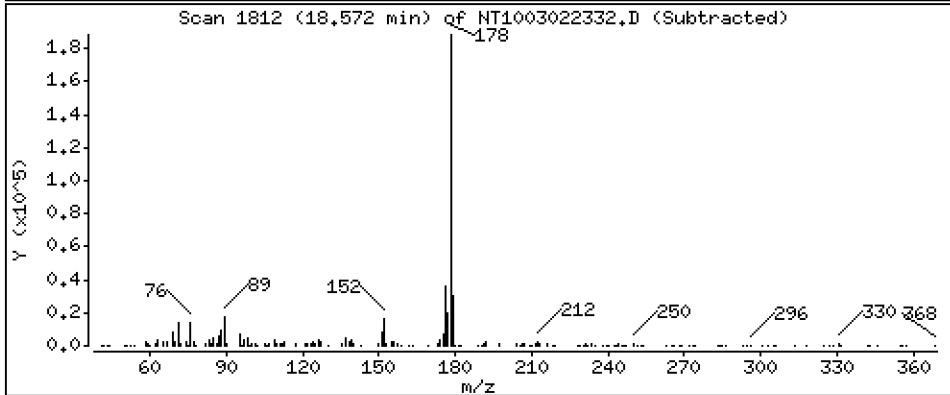
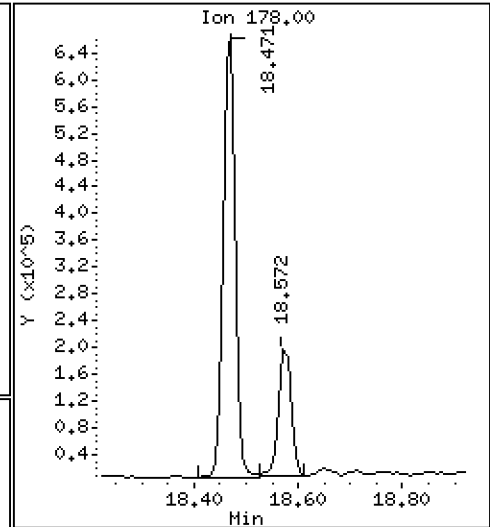
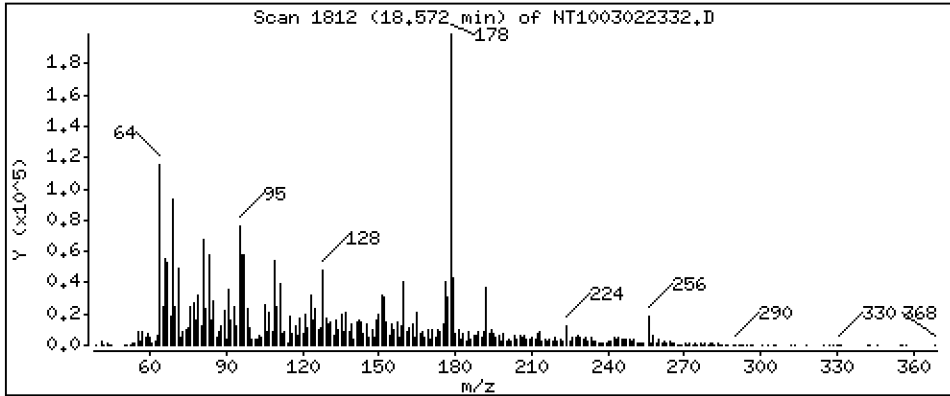
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,6148 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

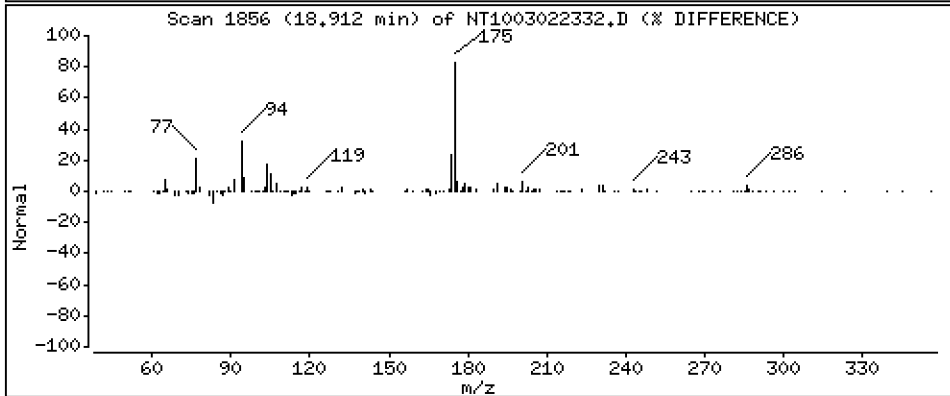
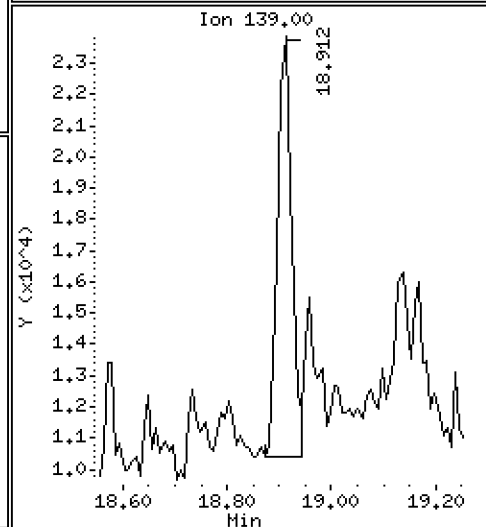
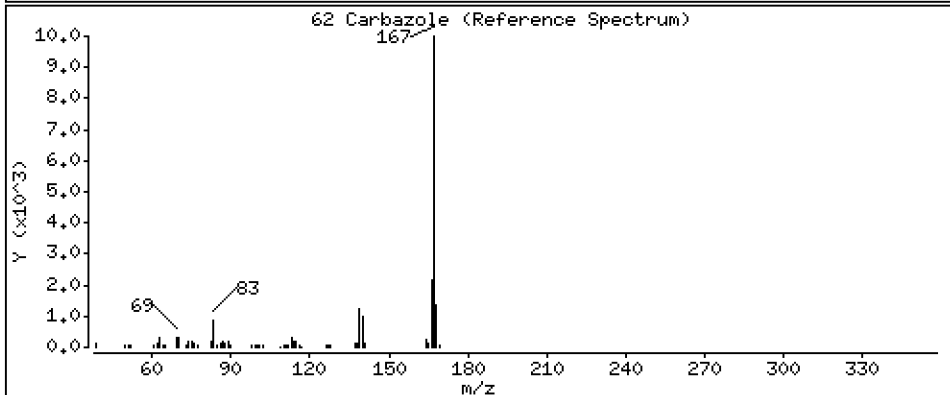
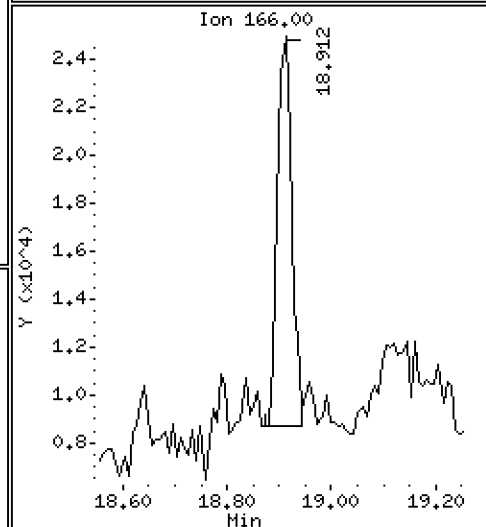
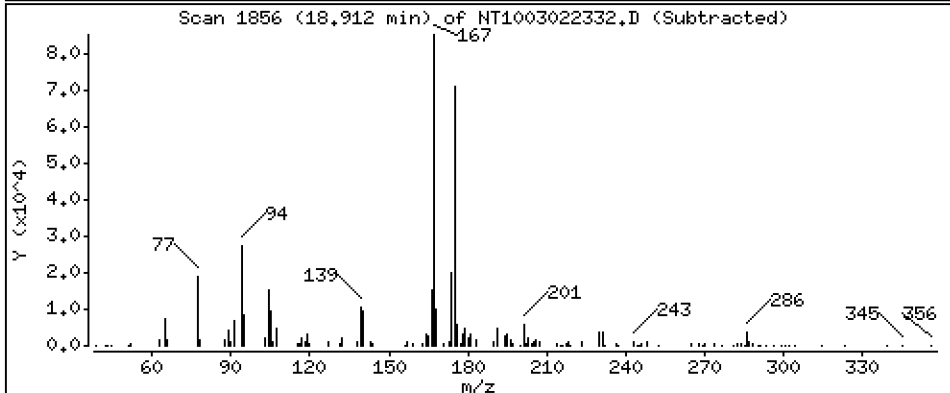
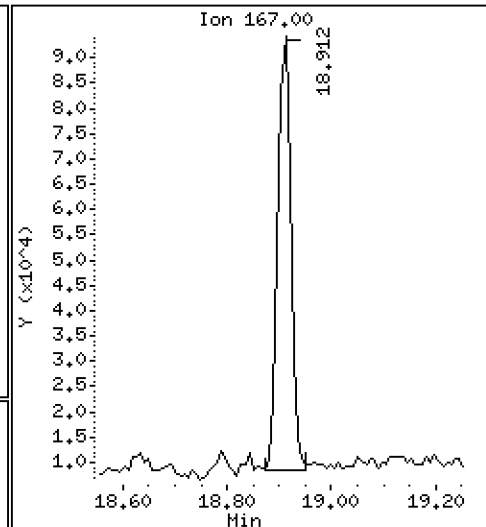
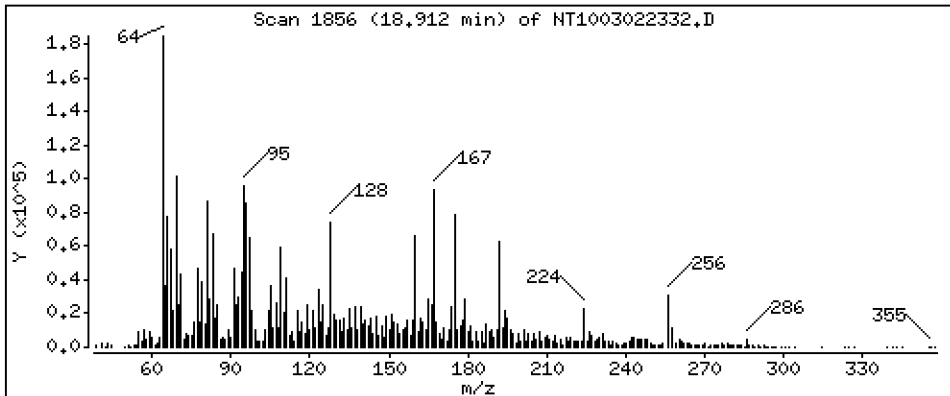
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,3159 ug/mL





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

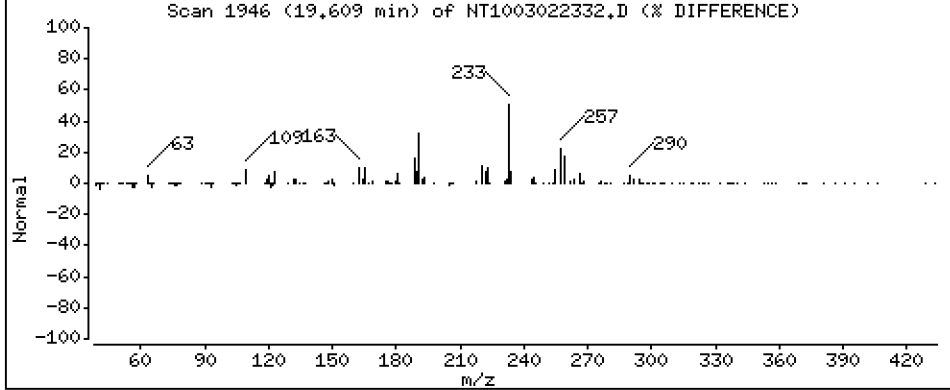
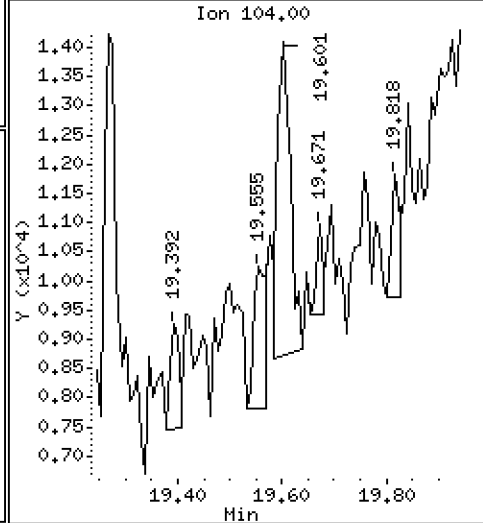
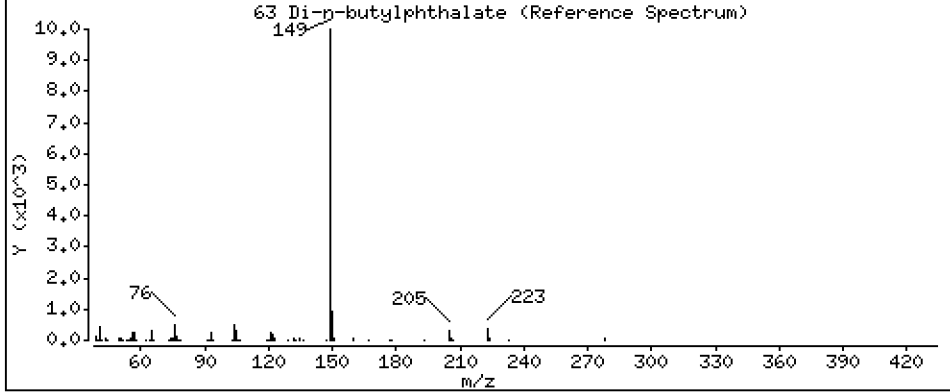
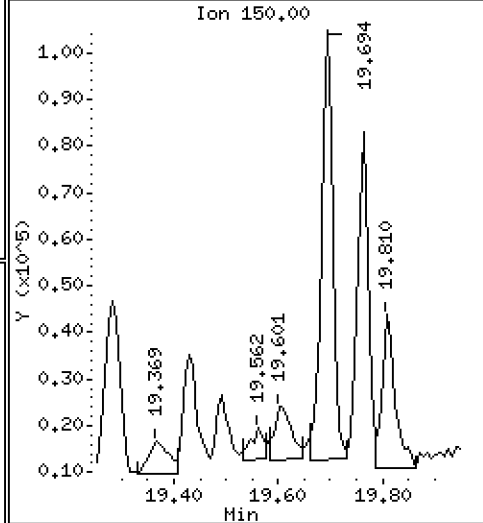
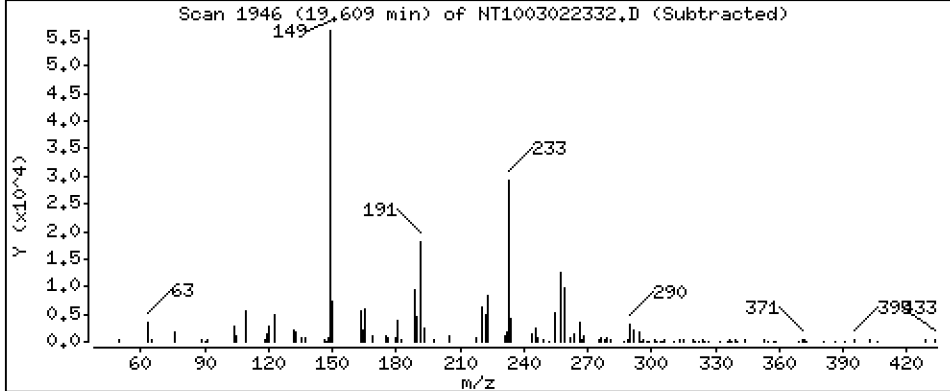
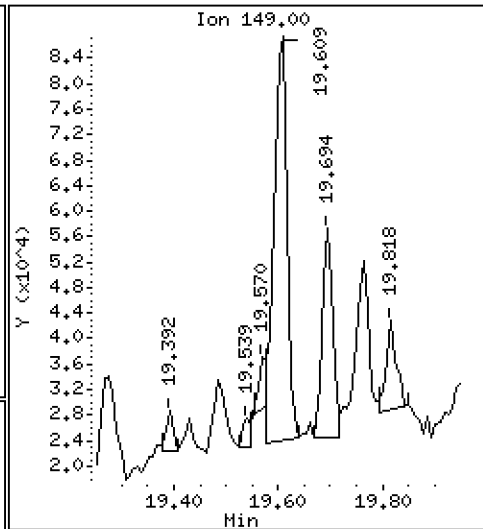
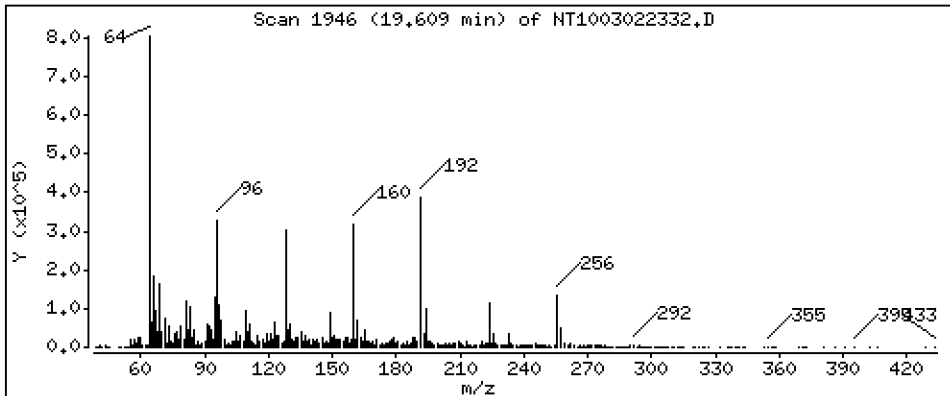
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.1784 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

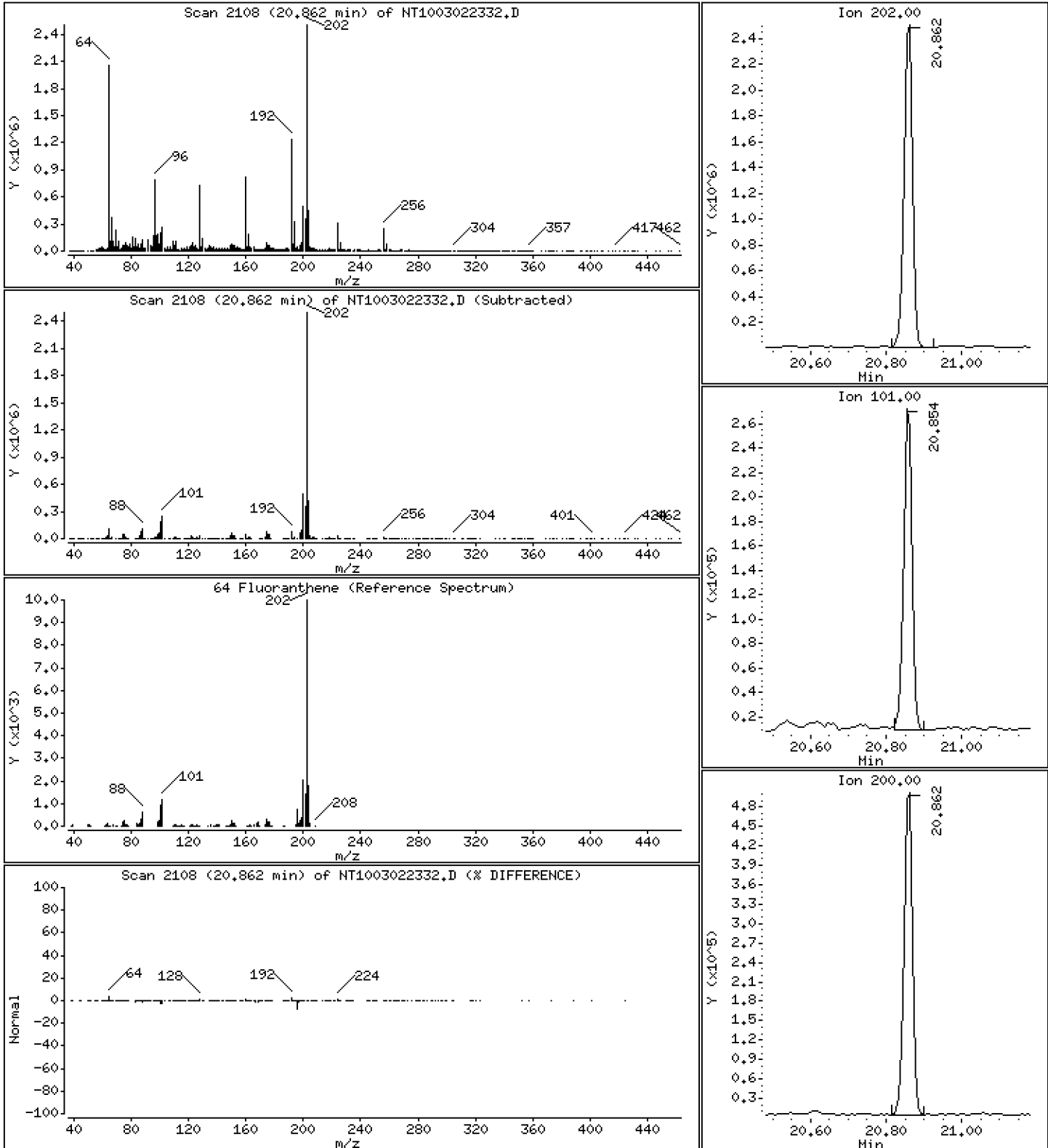
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,748 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

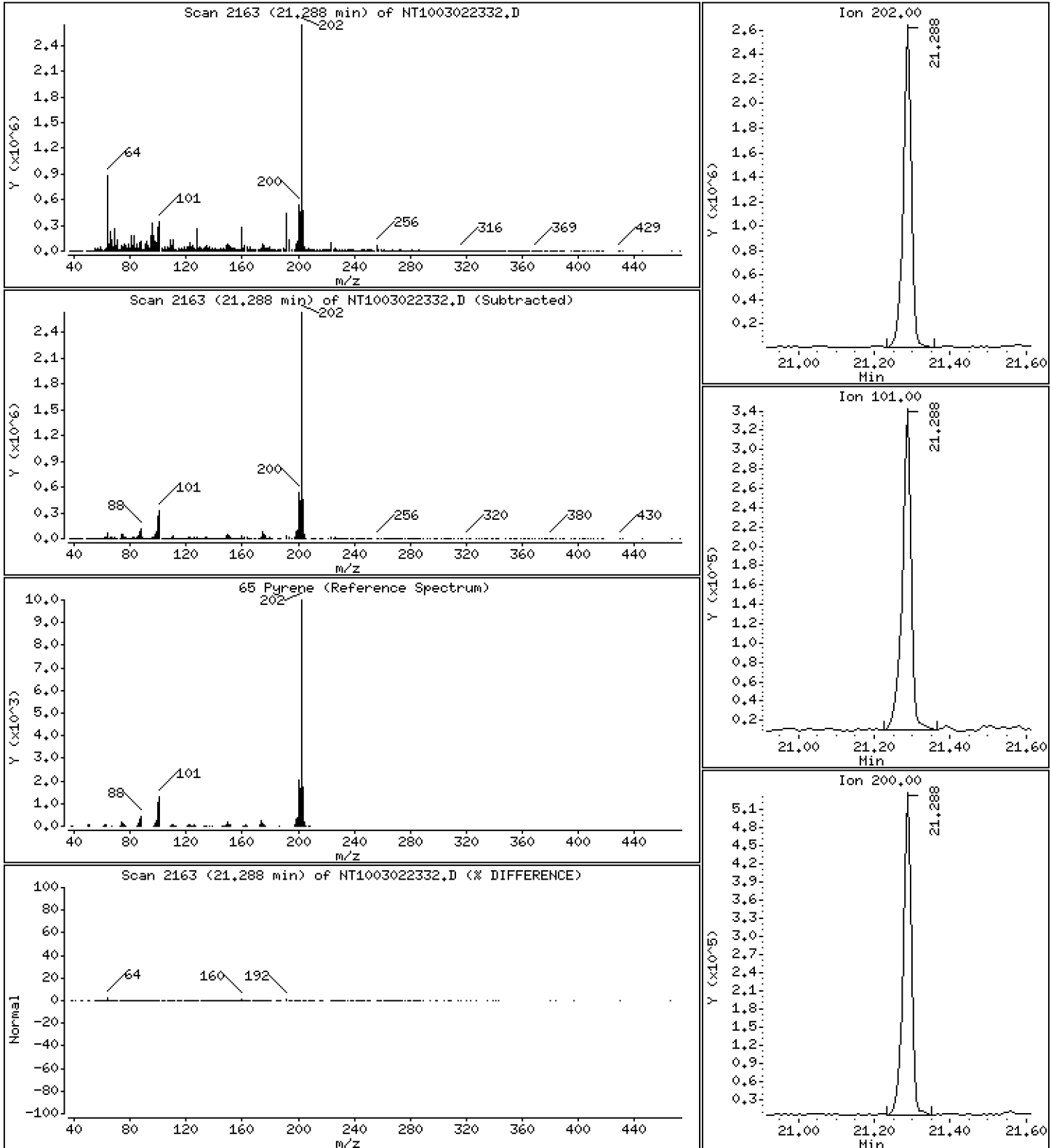
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,497 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

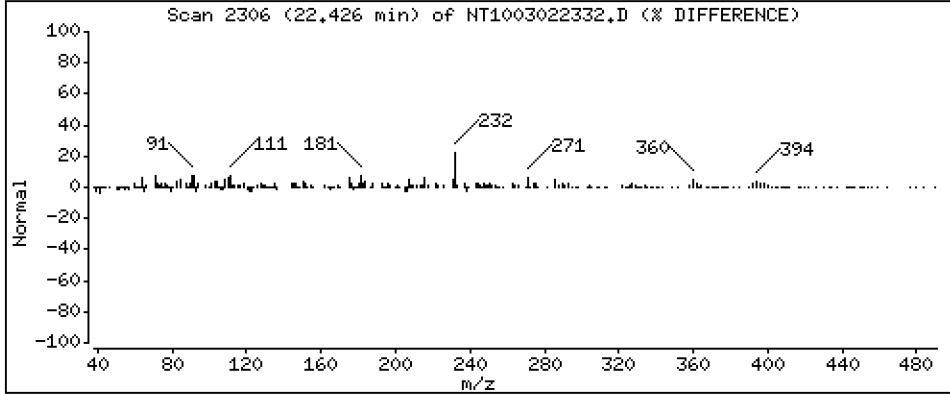
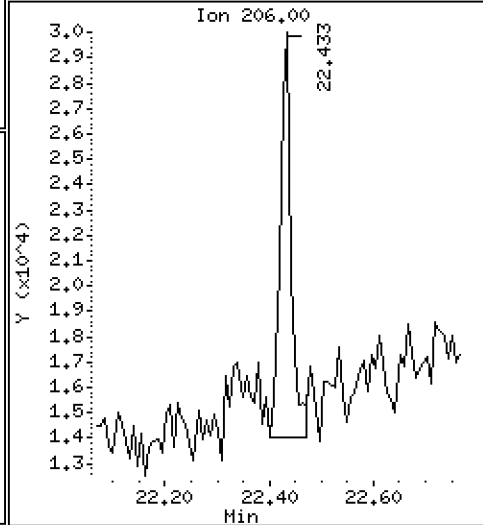
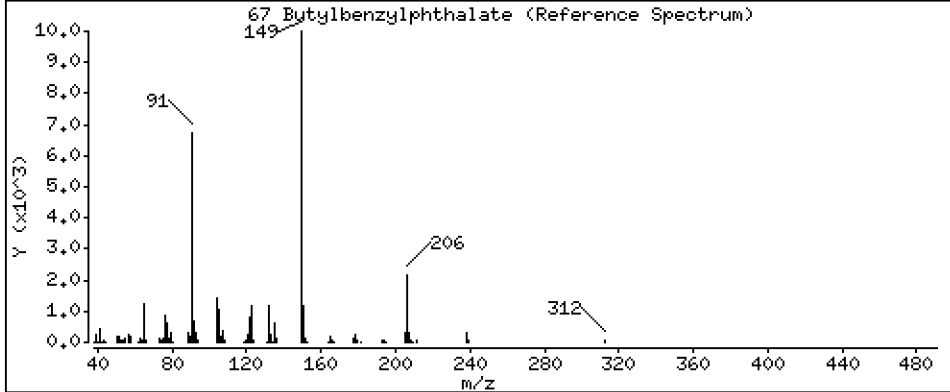
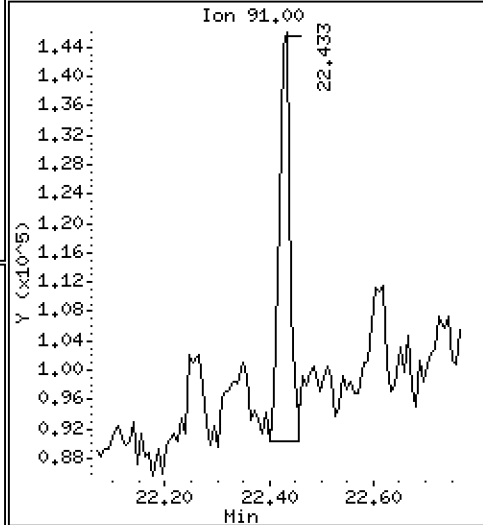
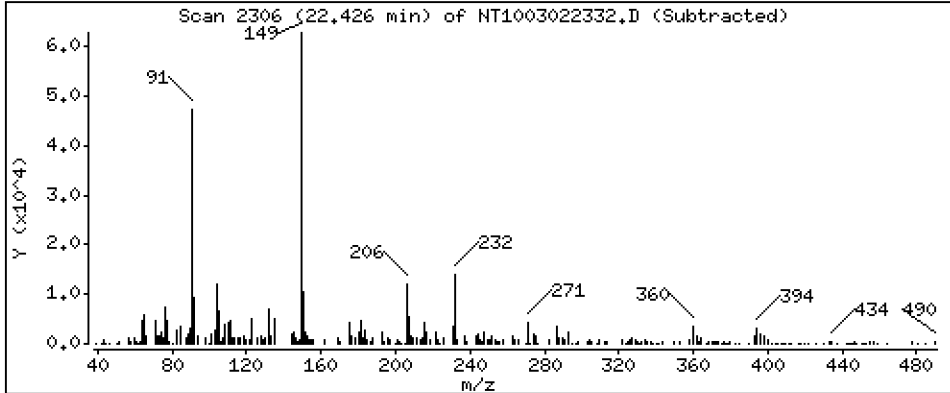
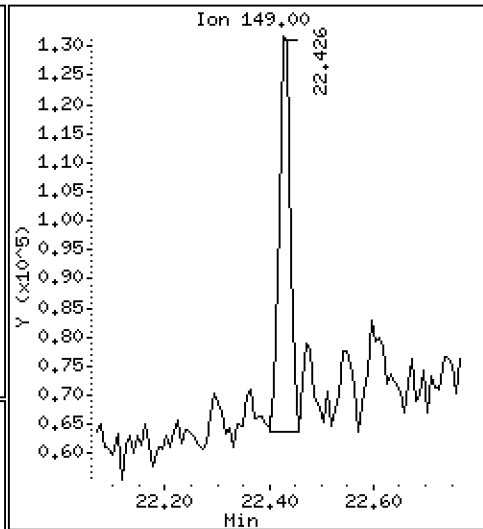
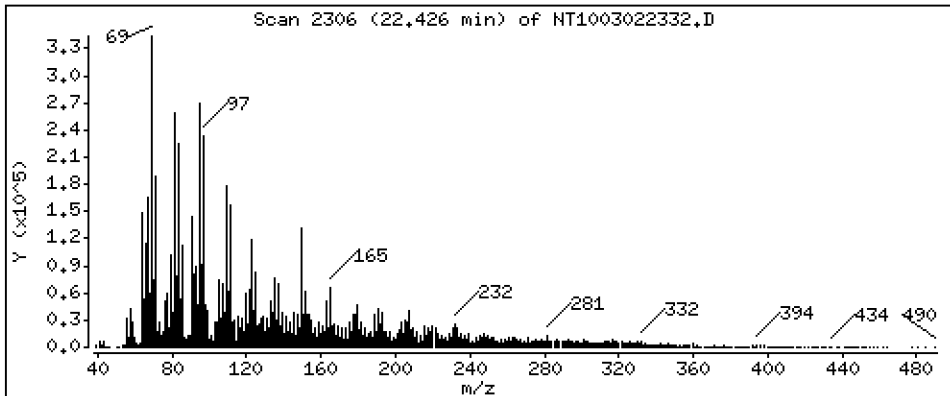
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,2175 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

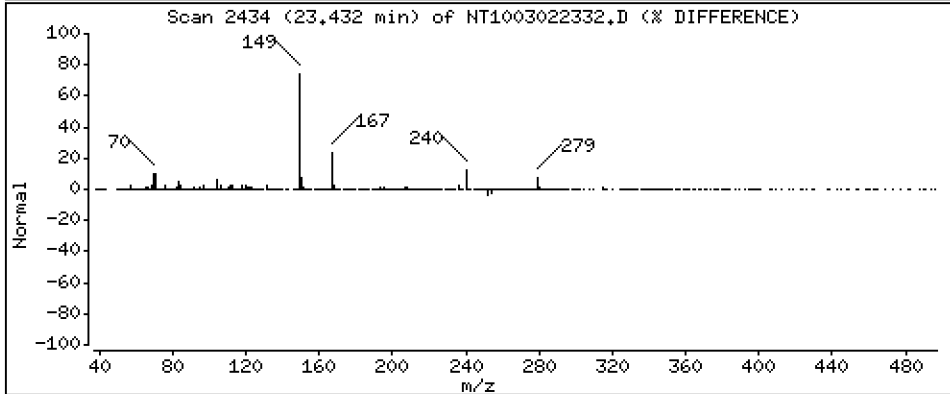
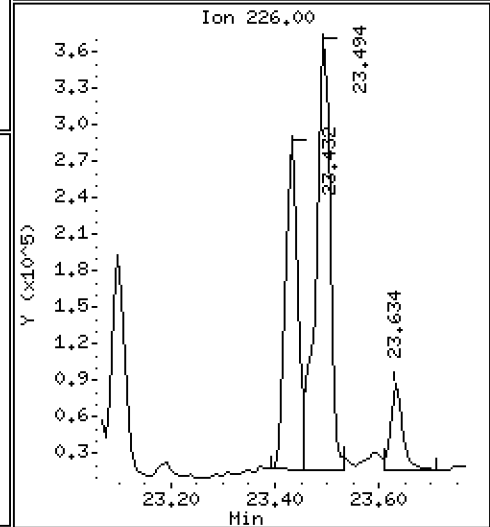
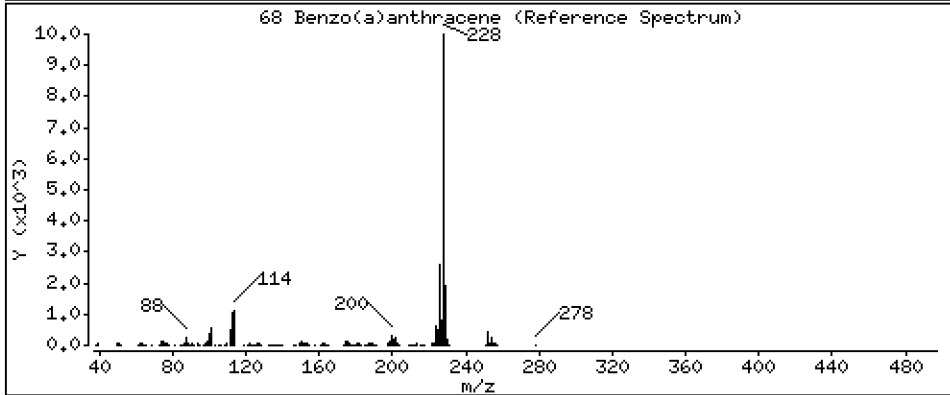
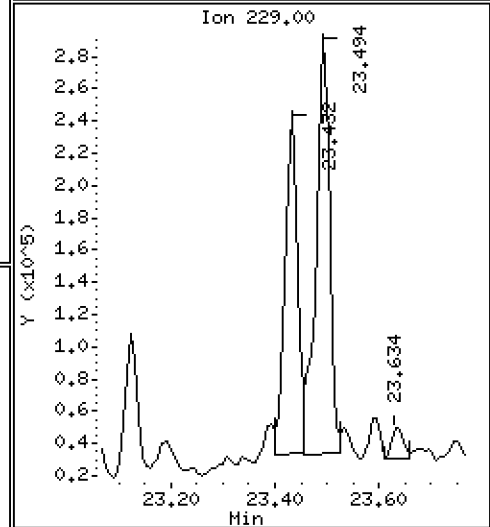
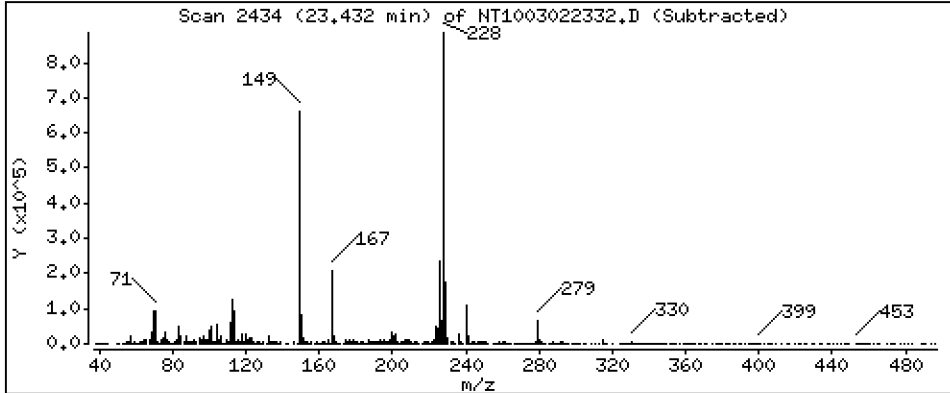
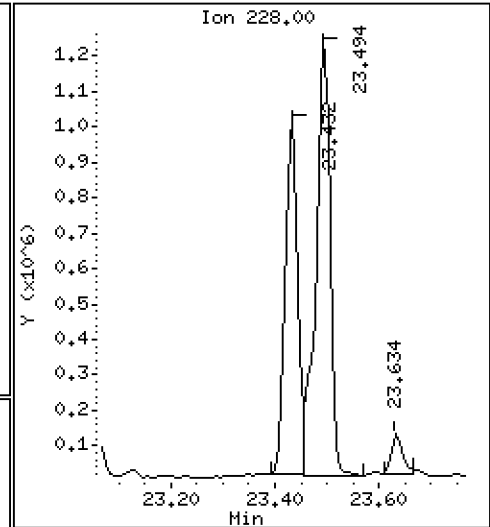
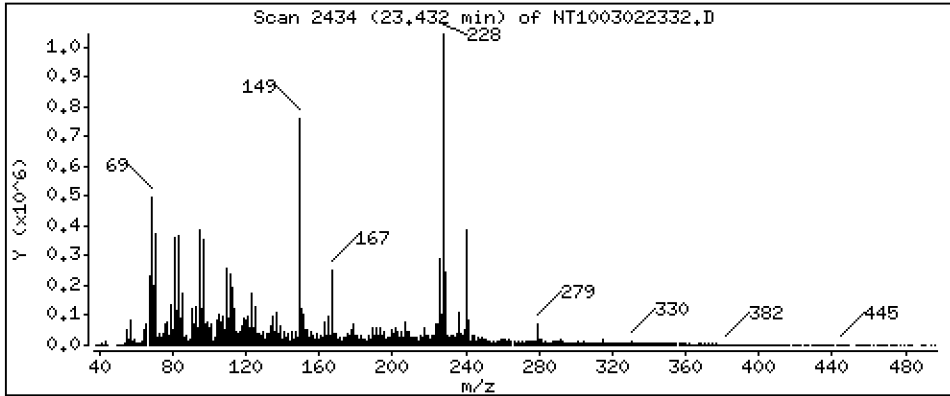
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 1,876 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

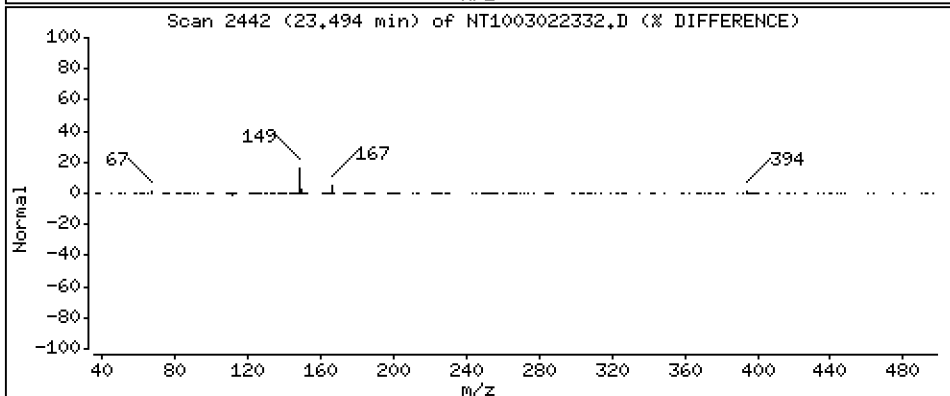
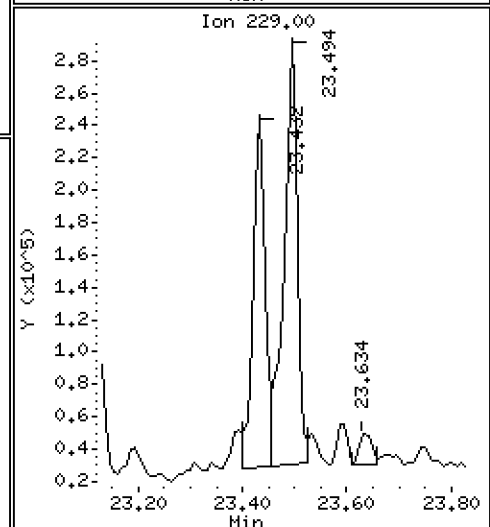
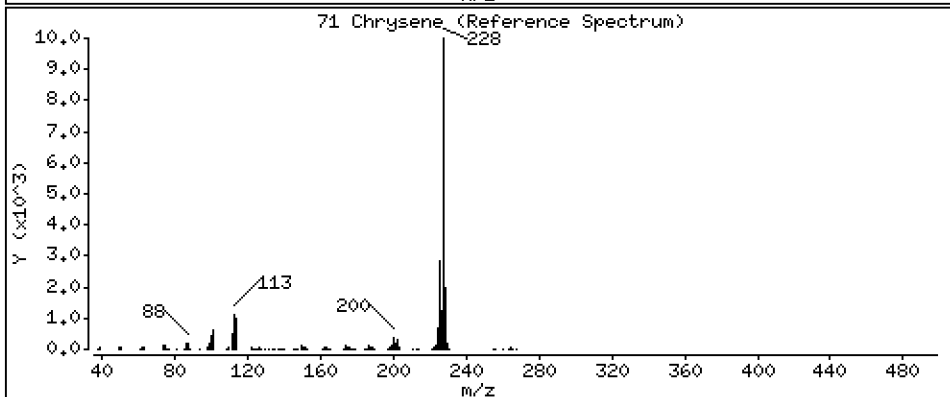
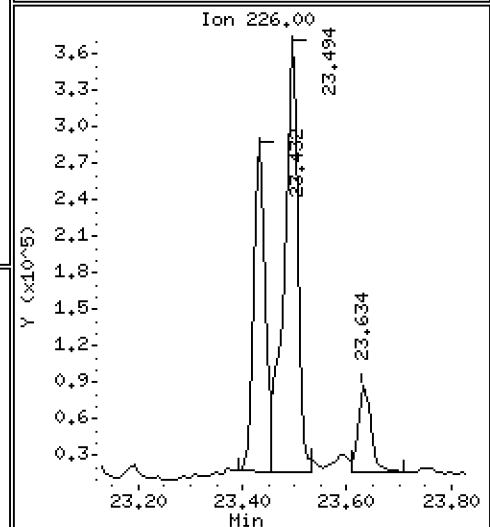
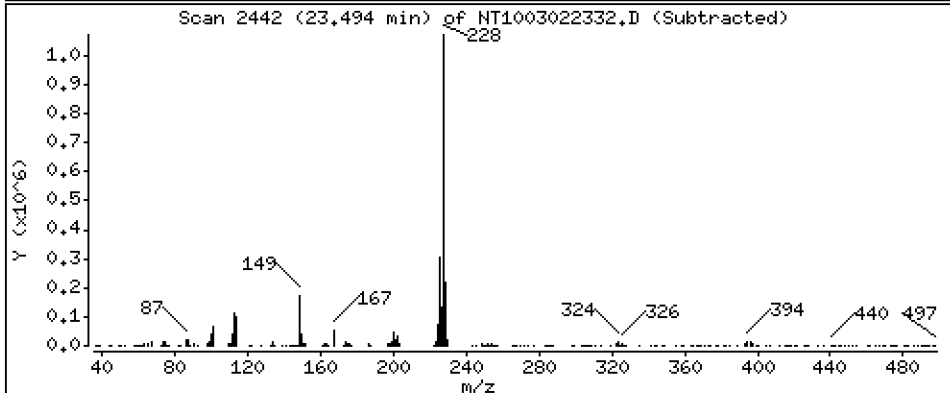
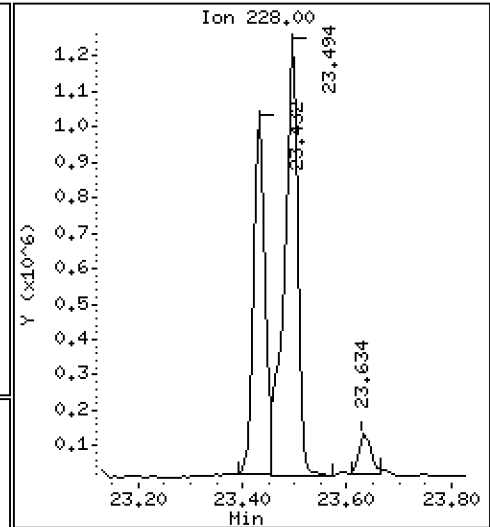
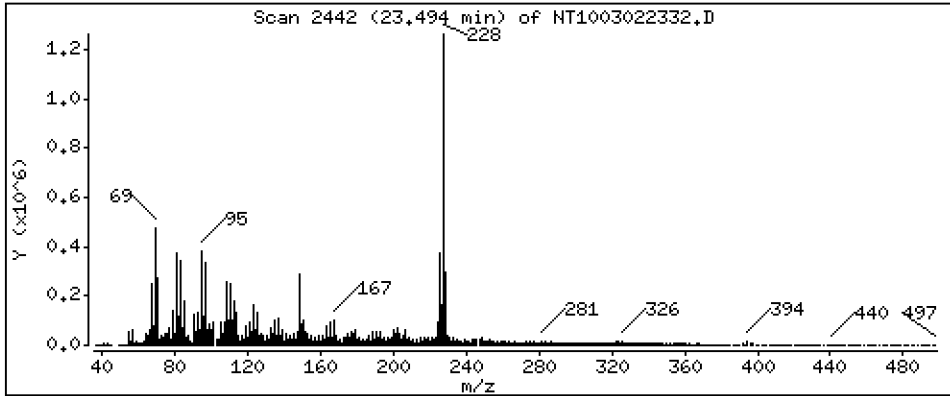
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 3,157 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

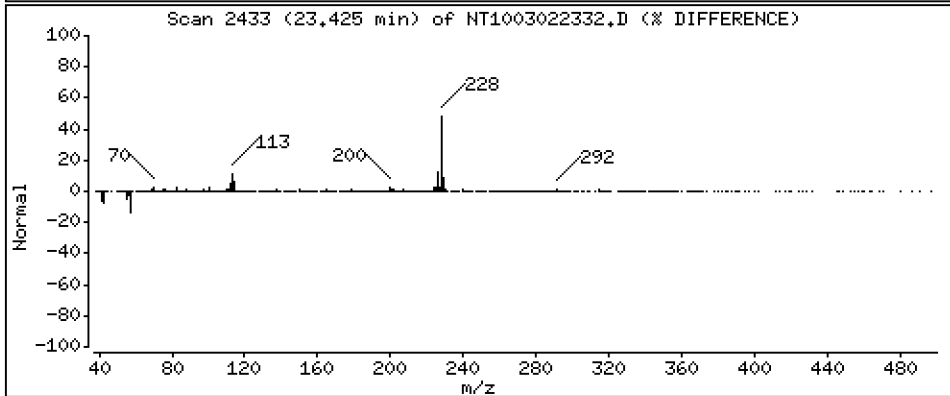
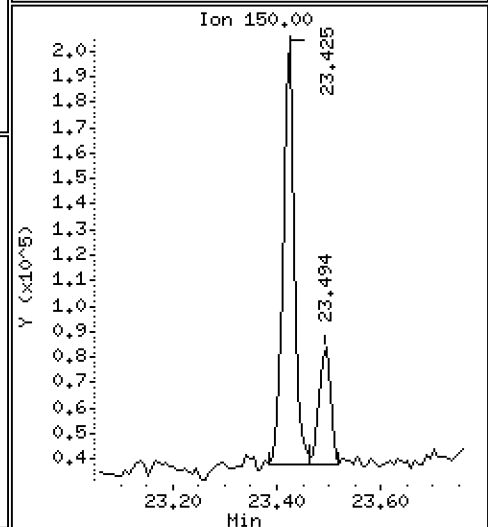
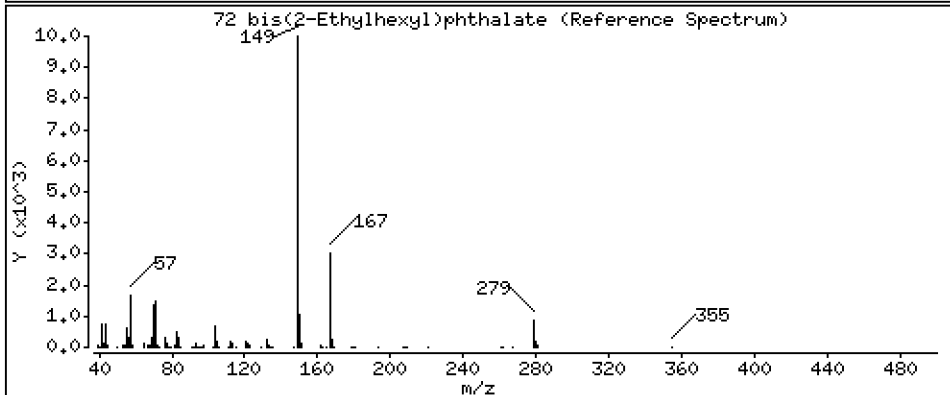
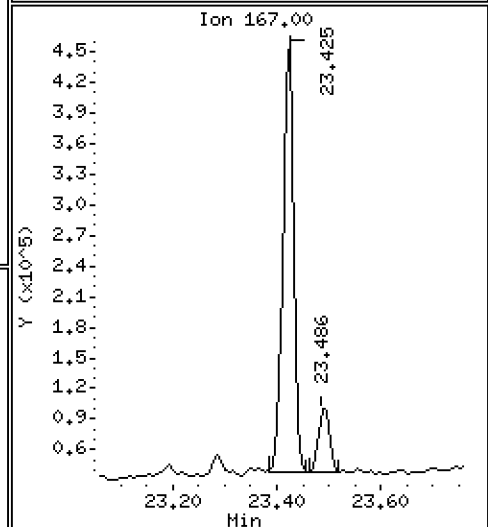
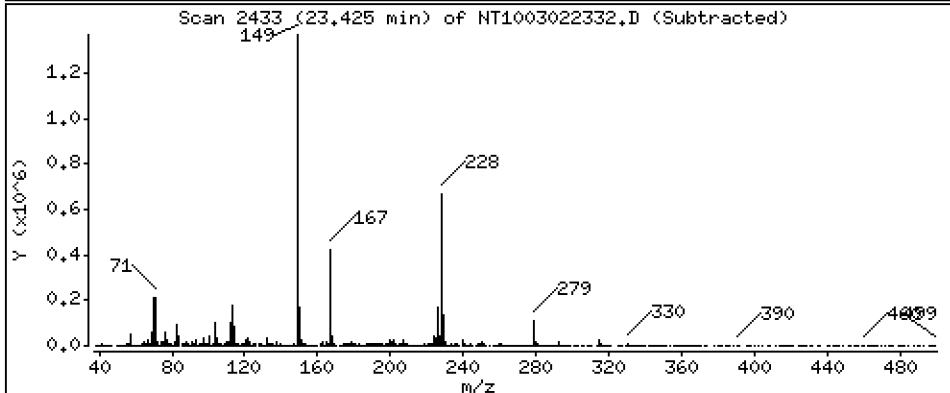
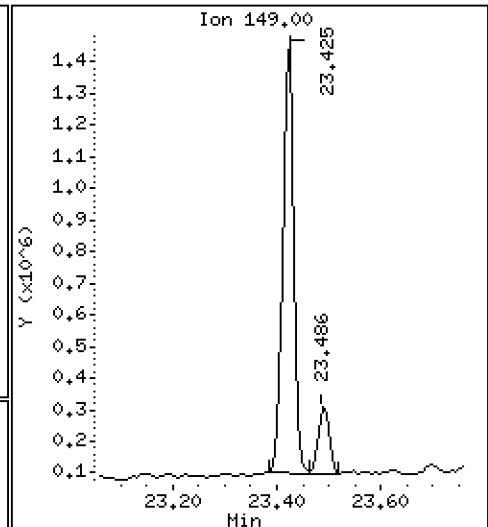
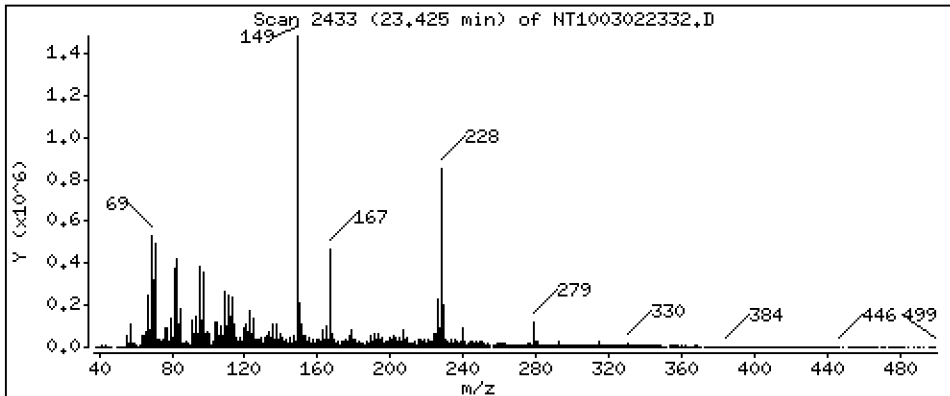
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 3,224 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

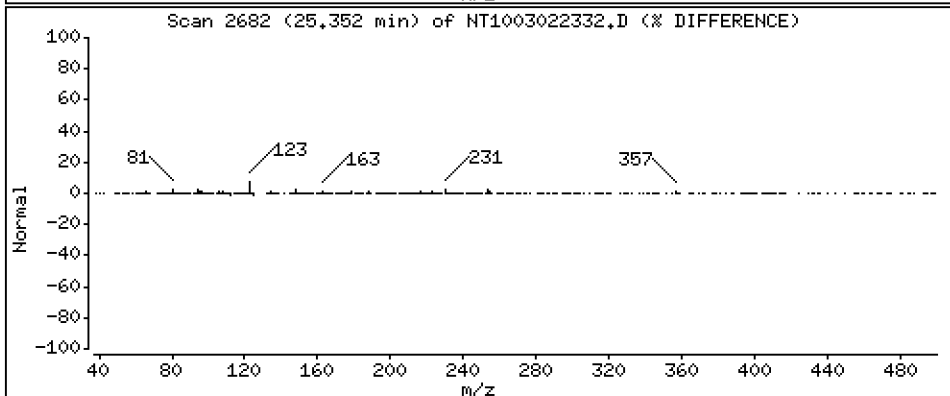
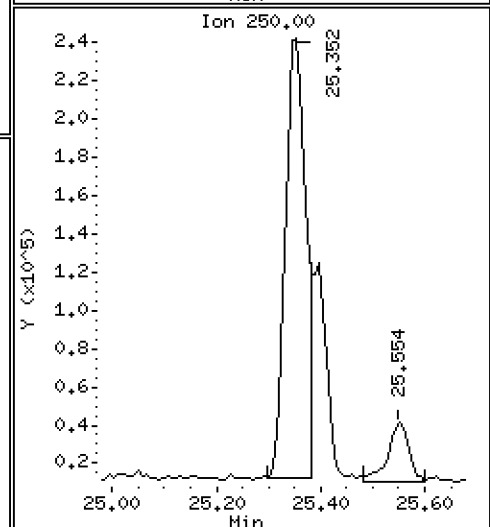
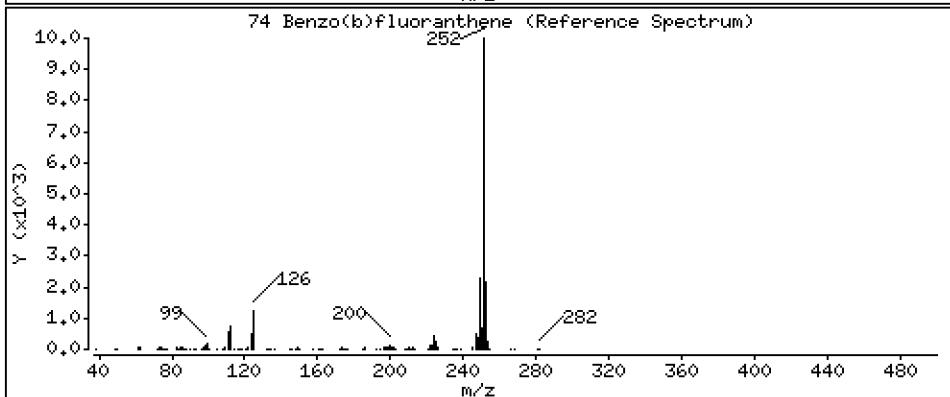
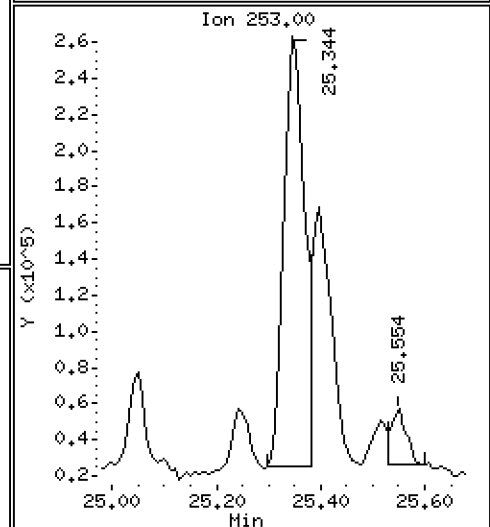
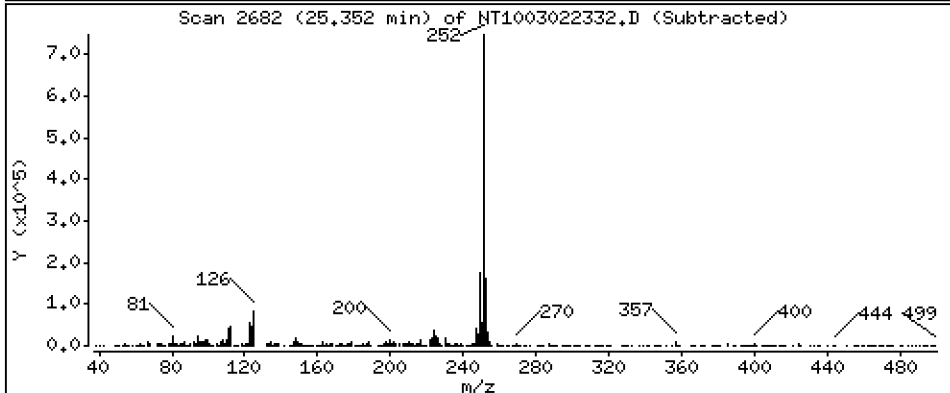
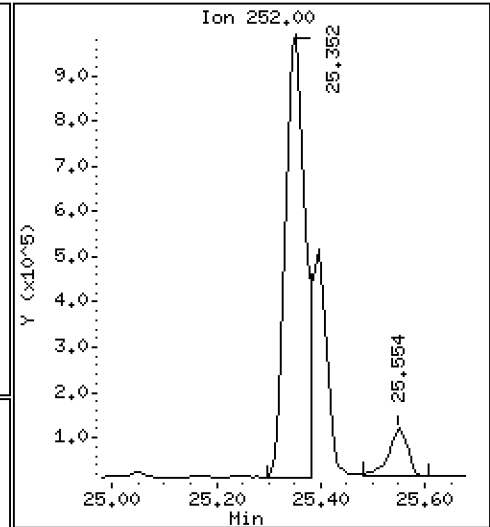
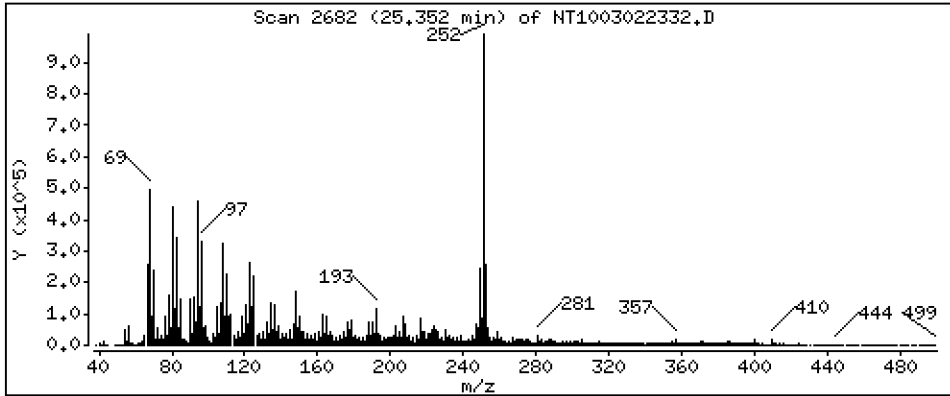
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 3,002 ug/mL





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

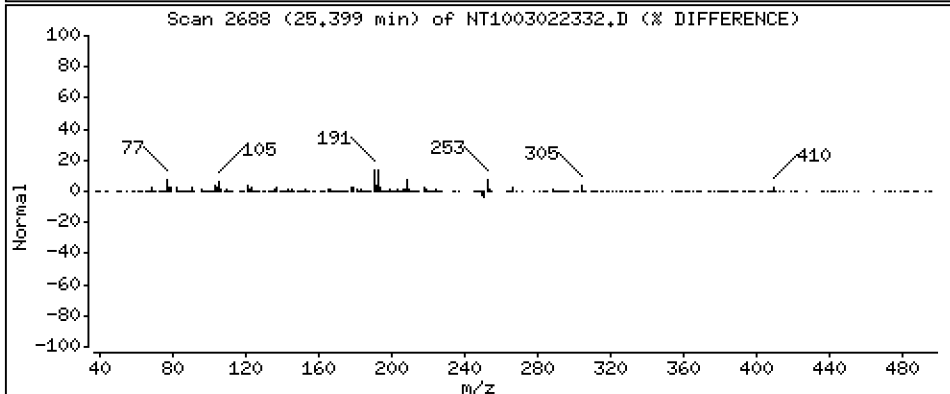
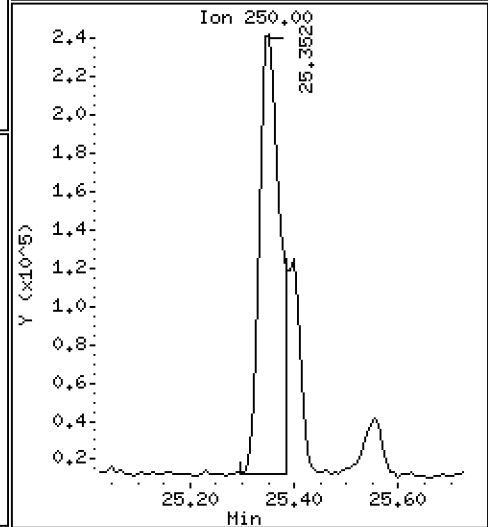
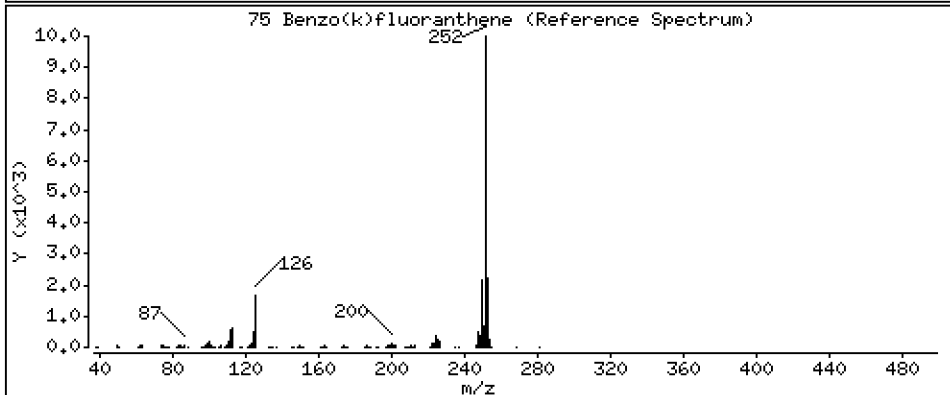
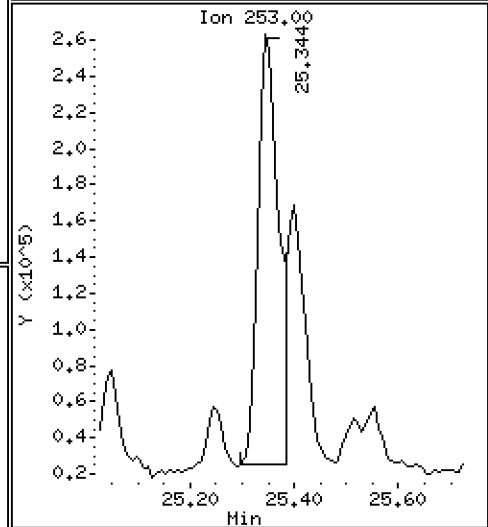
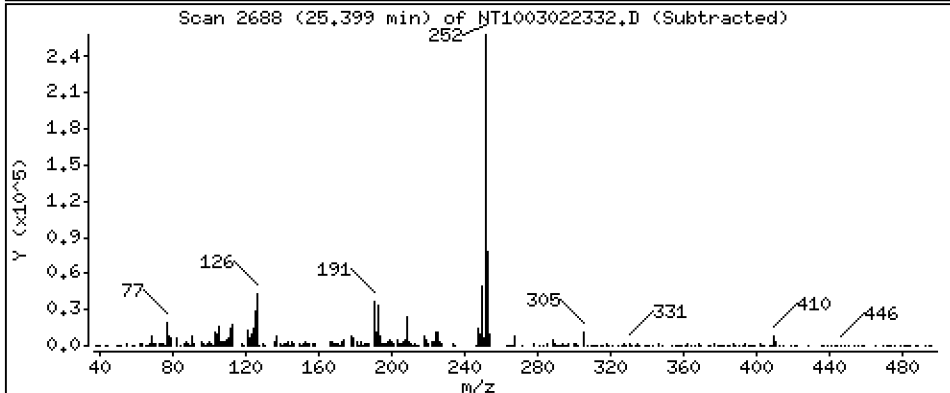
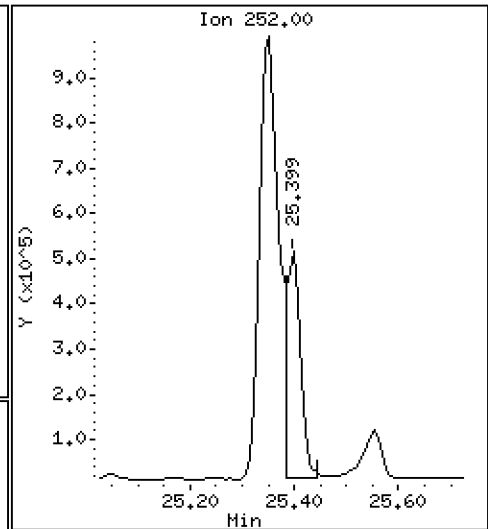
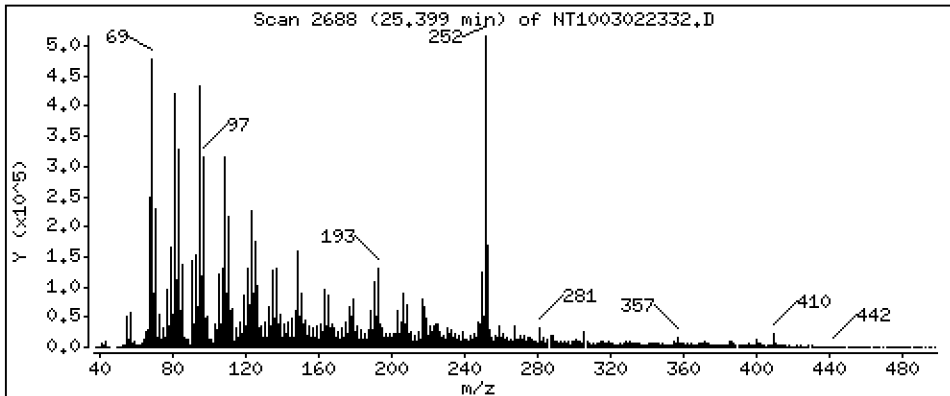
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 1,218 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

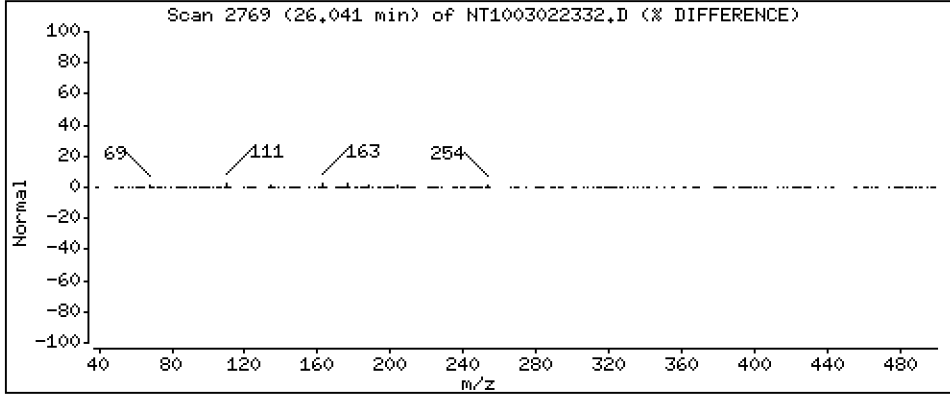
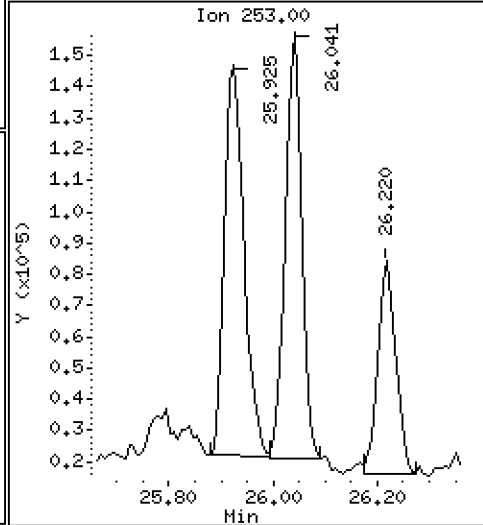
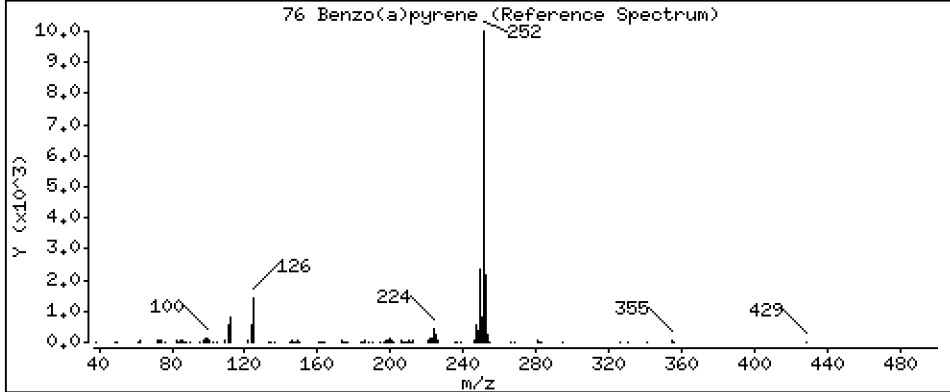
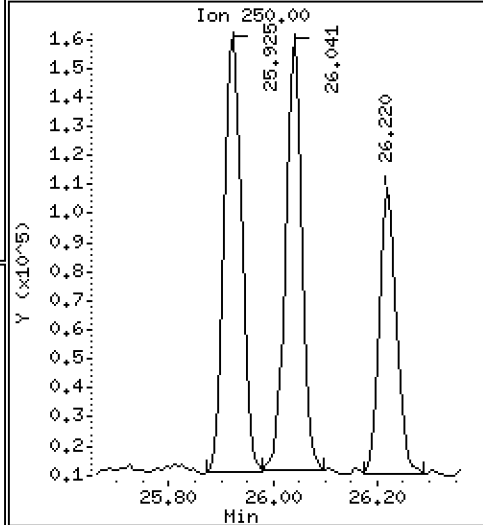
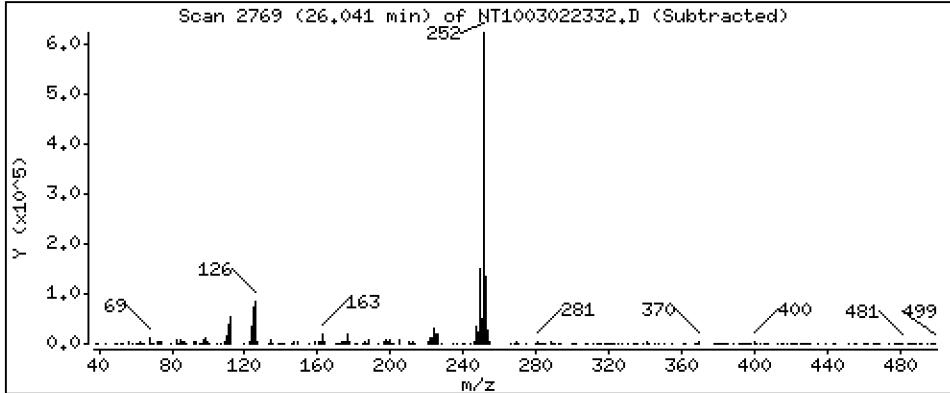
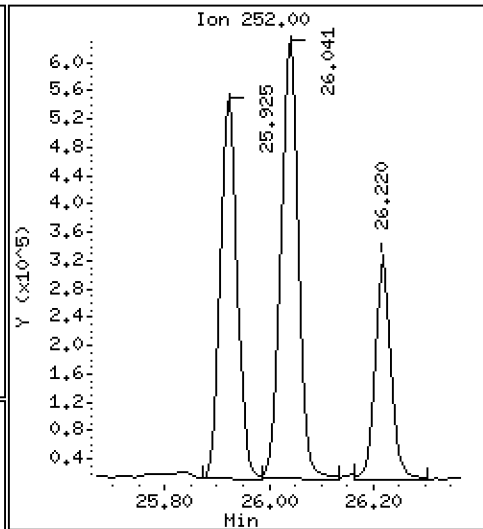
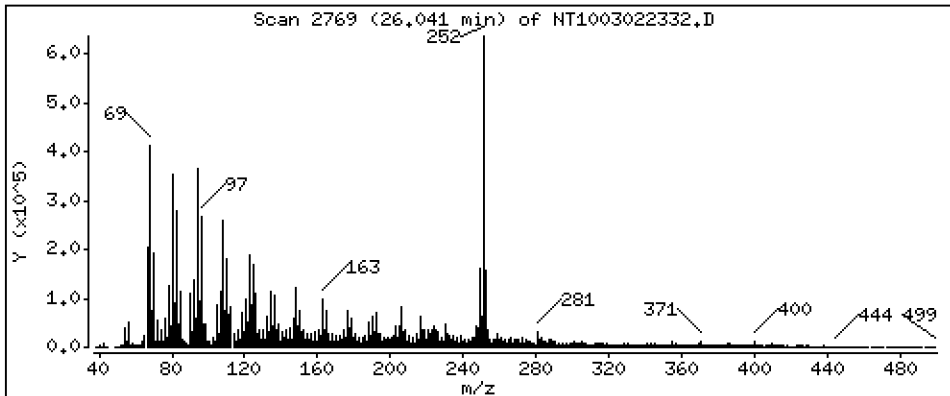
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 1,890 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

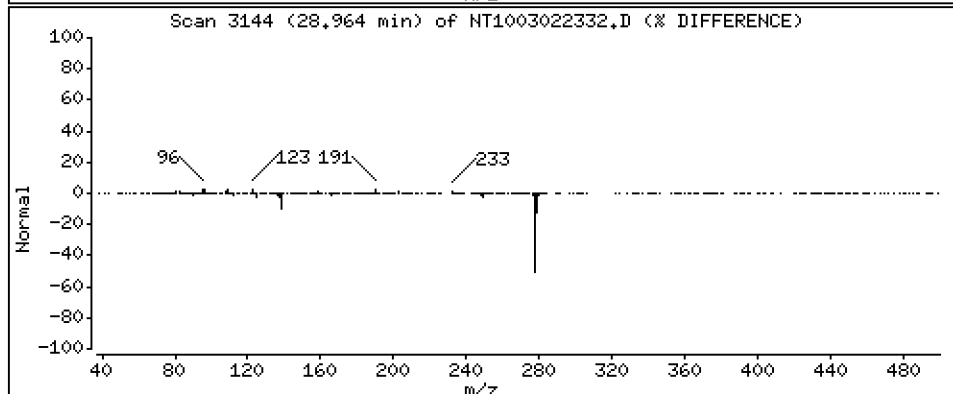
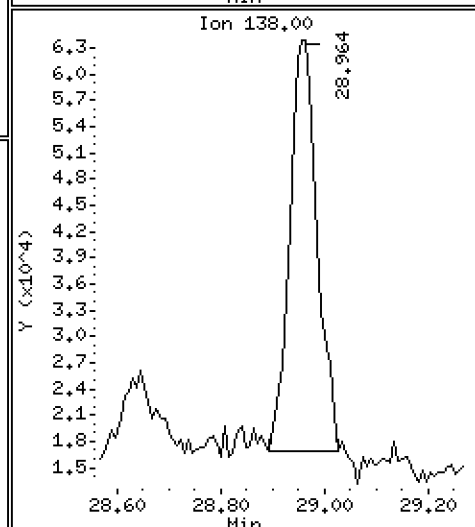
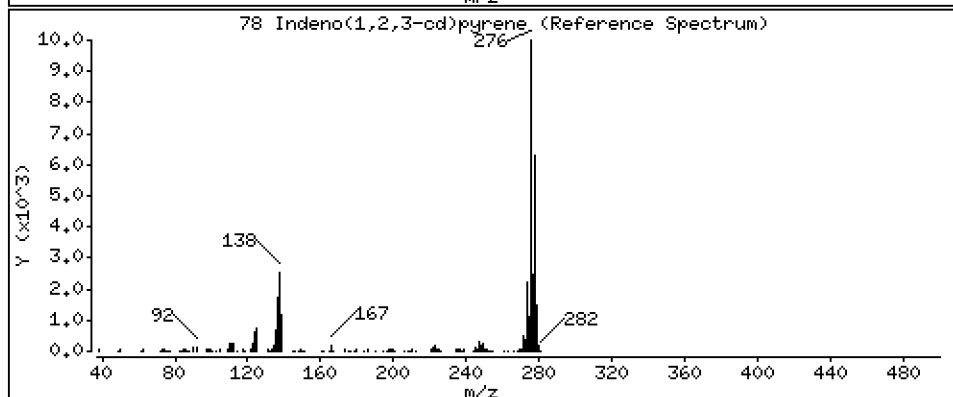
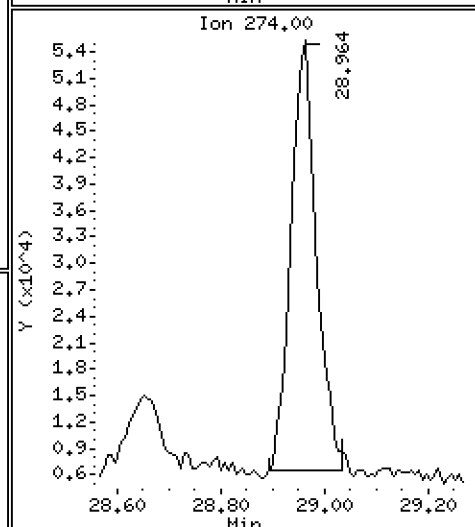
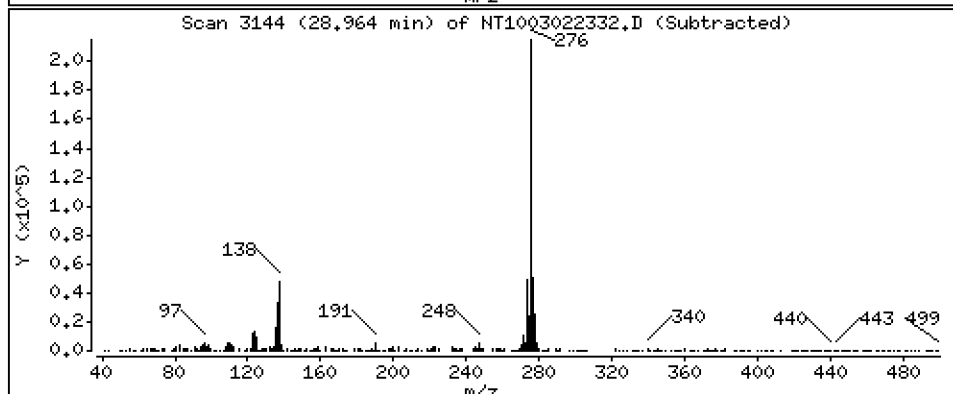
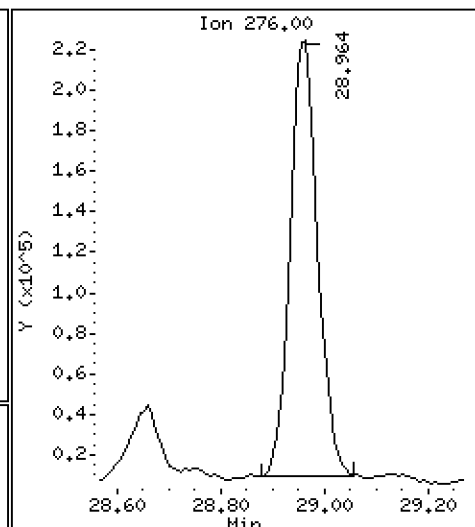
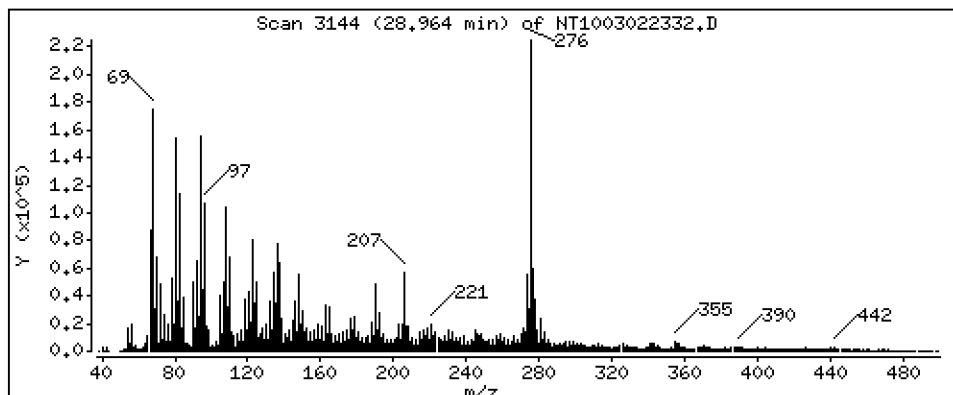
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,9130 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

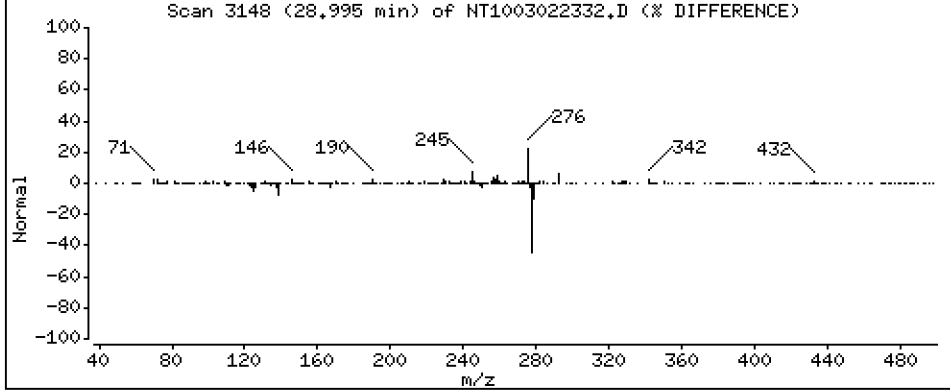
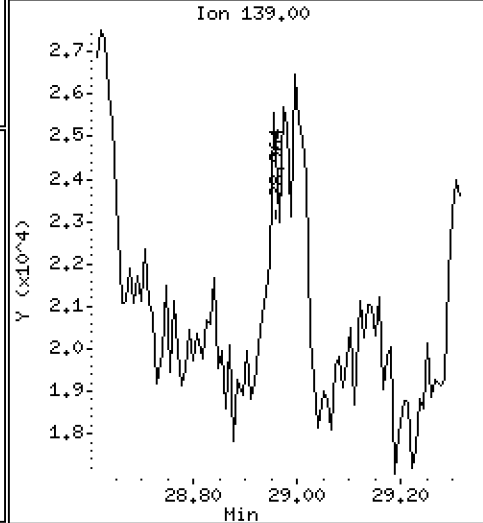
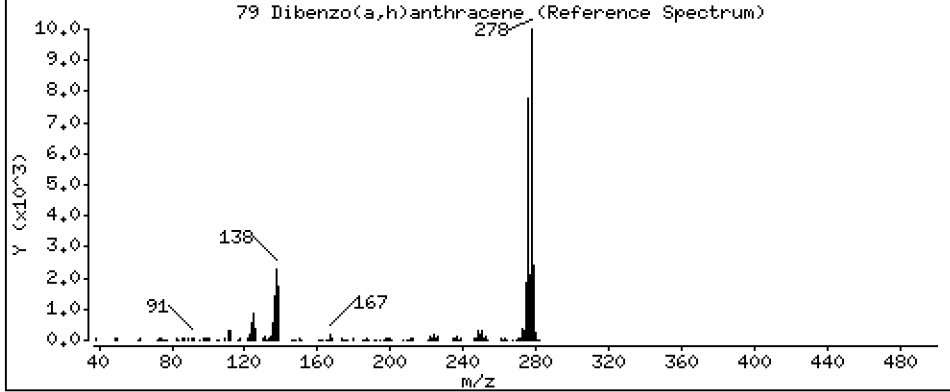
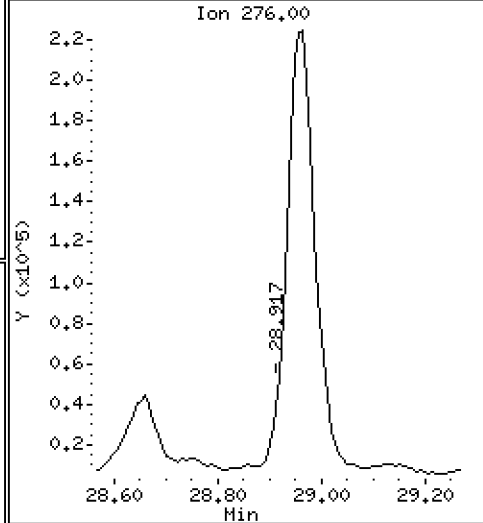
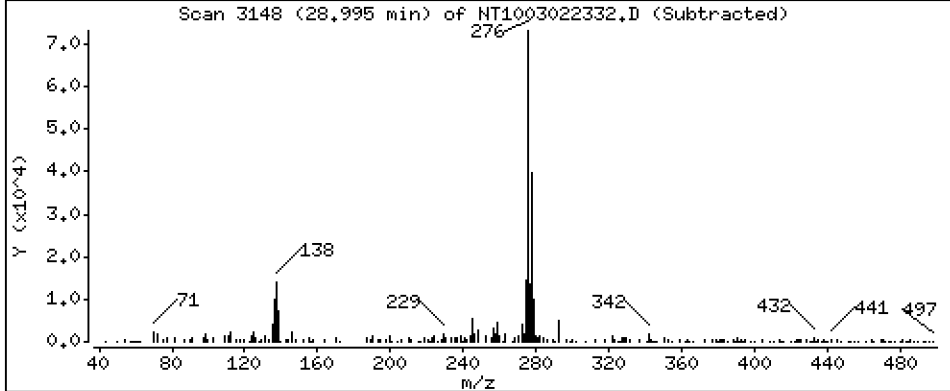
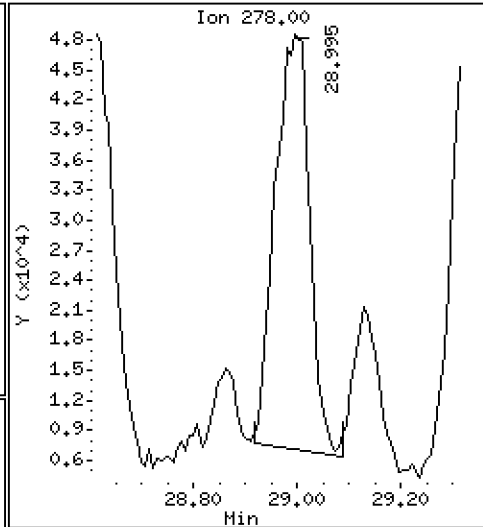
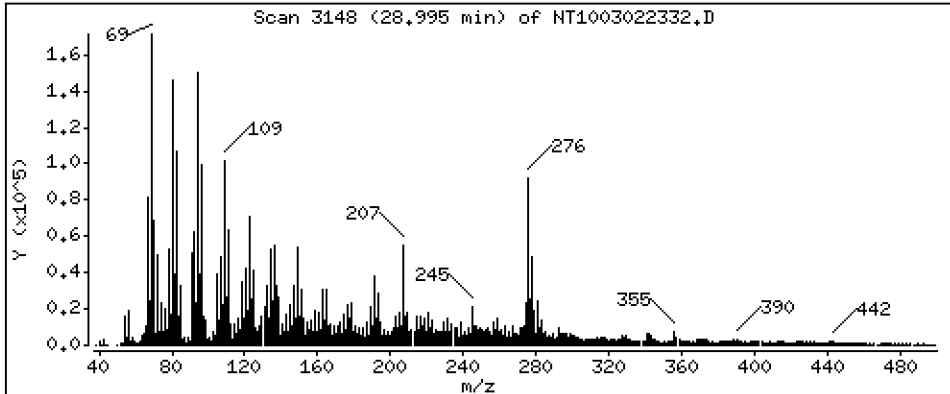
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,2890 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

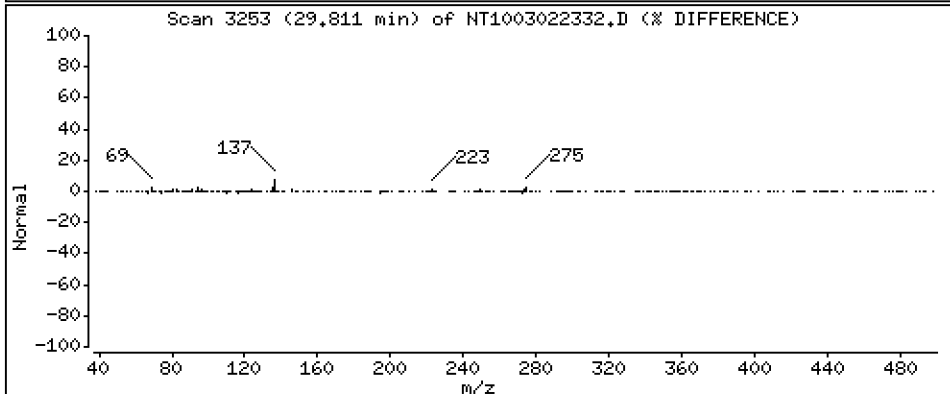
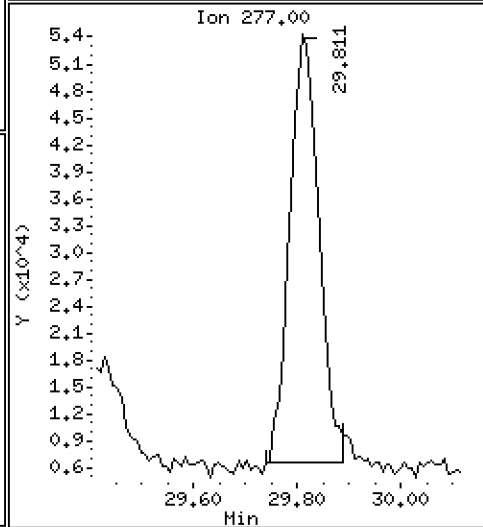
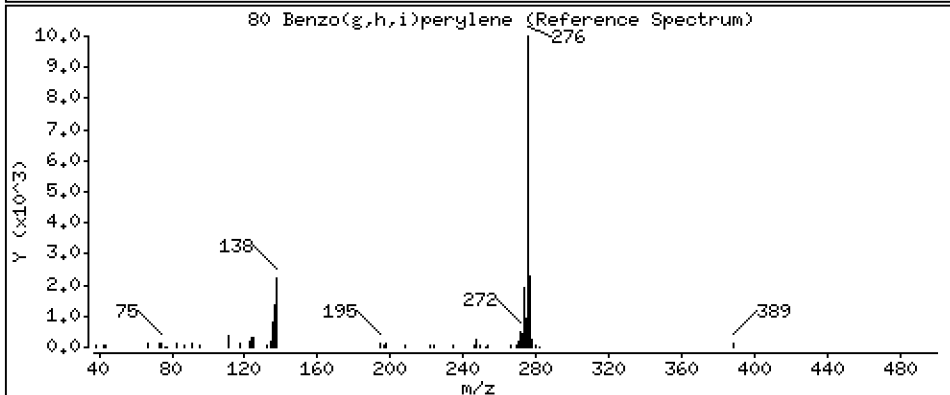
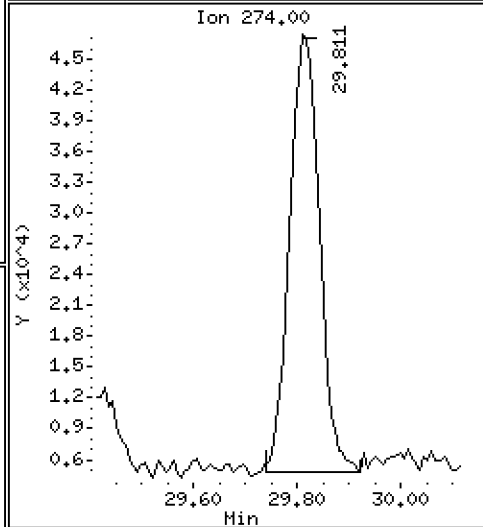
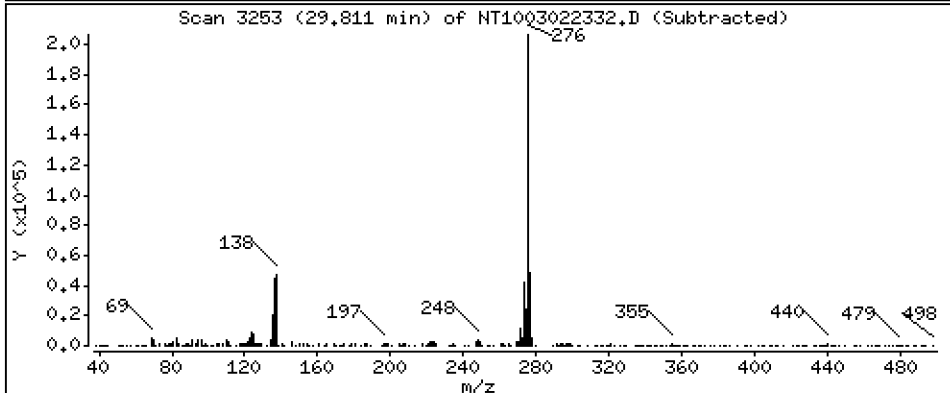
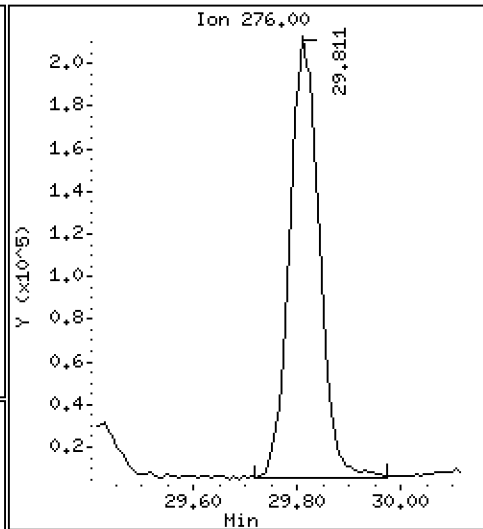
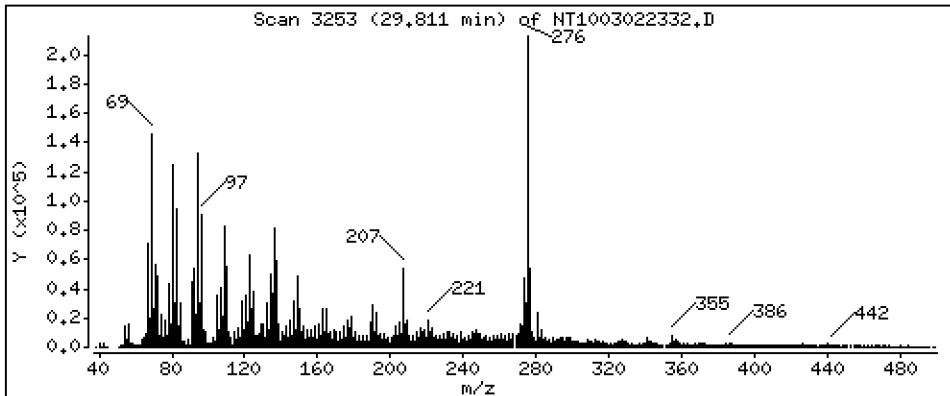
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 1,165 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

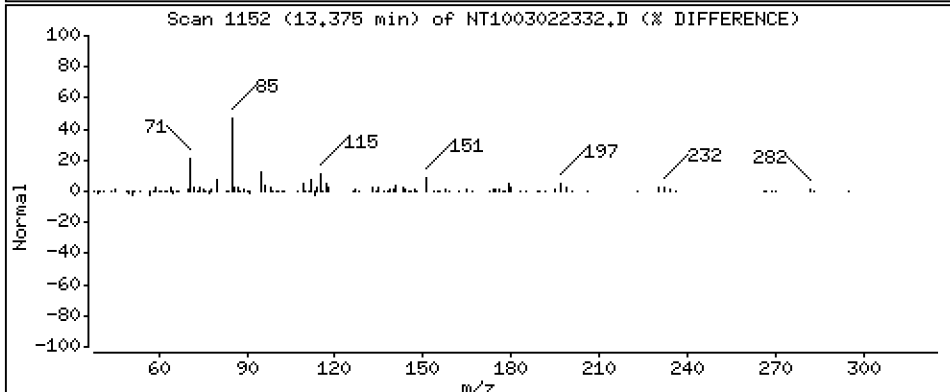
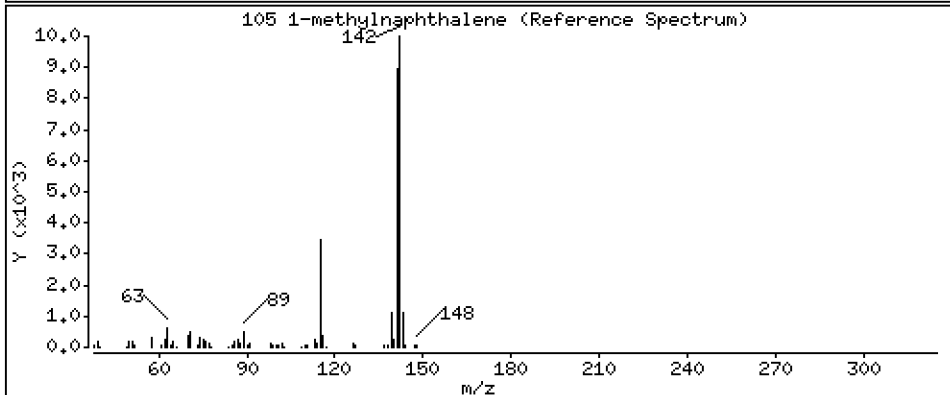
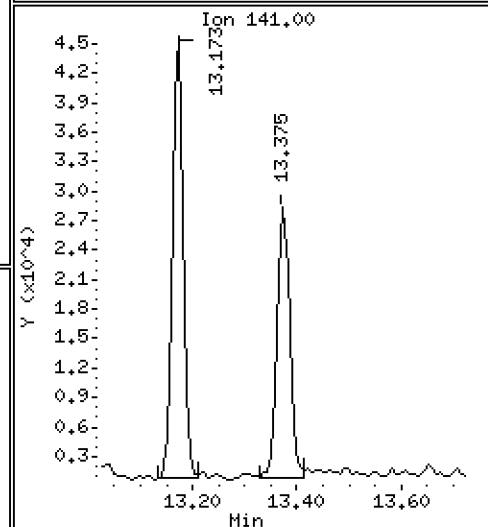
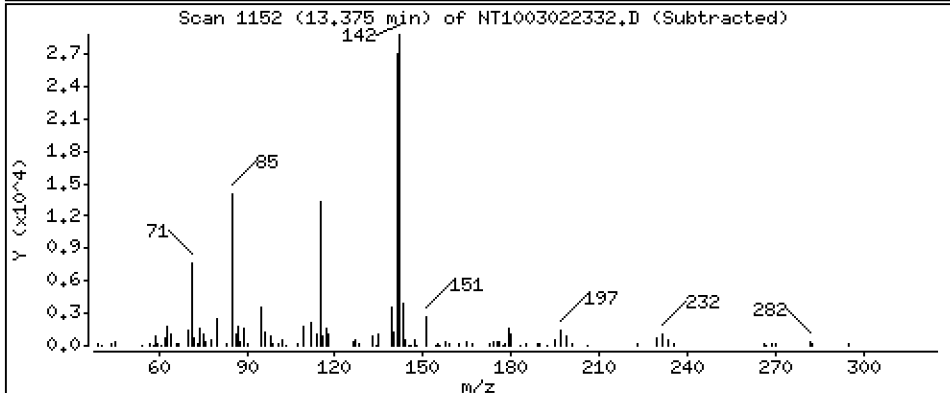
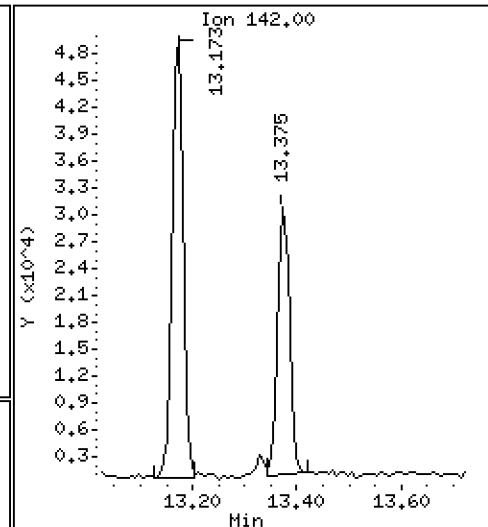
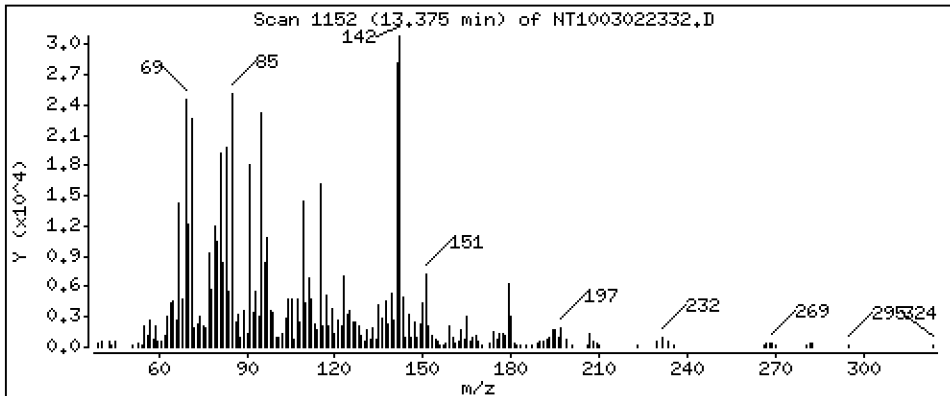
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,1567 ug/mL



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

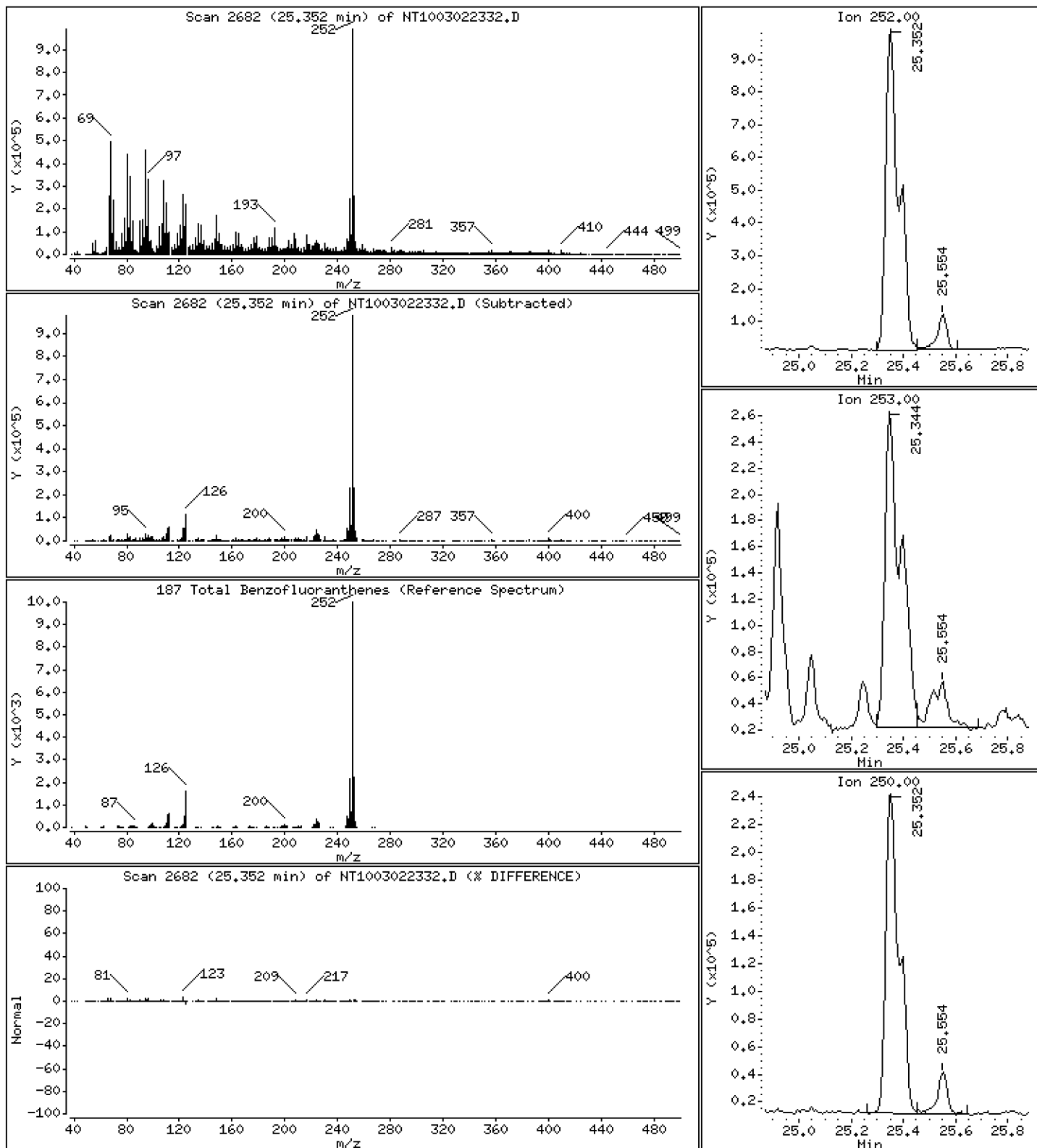
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 4,156 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022332.D

Lab Smp Id: 23A0206-13

Inj Date : 03-MAR-2023 10:02

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-13

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 24

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	928872	6.21194	6.212
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	1271786	7.32582	7.326
3 Phenol	94		8.528	8.527	(0.922)	1503368	8.14504	8.145
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1056122	7.13048	7.130
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		9.138	9.146	(0.988)	9116	0.05373	0.05373
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	475261	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.285	(1.003)	92337	0.54796	0.5480
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.541	(1.031)	451510	4.08019	4.080
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.479	(1.026)	20112	0.21244	0.2124
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.487	9.658	(1.026)	19753	0.13816	0.1382
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.953	(1.076)	201437	1.12607	1.126
\$ 18 Nitrobenzene-d5	82		10.295	10.302	(0.878)	837857	4.34727	4.347
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	3462	0.02552	0.02552
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1755750	4.00000	
28 Naphthalene	128		11.773	11.772	(1.004)	94802	0.21037	0.2104
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	76011	0.23876	0.2388
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					



Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196					Compound Not Detected.		
35 2,4,5-Trichlorophenol	196					Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.908)	1608557	4.71131	4.711
37 2-Chloronaphthalene	162					Compound Not Detected.		
38 2-Nitroaniline	65					Compound Not Detected.		
39 Dimethylphthalate	163					Compound Not Detected.		
40 Acenaphthylene	152		15.030	15.038	(0.981)	64577	0.13975	0.1398
41 2,6-Dinitrotoluene	165					Compound Not Detected.		
* 42 Acenaphthene-d10	164		15.324	15.324	(1.000)	957224	4.00000	
43 3-Nitroaniline	138					Compound Not Detected.		
44 Acenaphthene	153		15.394	15.394	(1.005)	66521	0.23870	0.2387
45 2,4-Dinitrophenol	184					Compound Not Detected.		
46 Dibenzofuran	168		15.749	15.749	(1.028)	66386	0.16051	0.1605
47 4-Nitrophenol	109					Compound Not Detected.		
48 2,4-Dinitrotoluene	165					Compound Not Detected.		
50 Diethylphthalate	149		16.206	16.221	(1.058)	71698	0.21893	0.2189
49 Fluorene	166		16.461	16.461	(1.074)	74470	0.21641	0.2164
51 4-Chlorophenyl-phenylether	204					Compound Not Detected.		
52 4-Nitroaniline	138					Compound Not Detected.		
53 4,6-Dinitro-2-methylphenol	198					Compound Not Detected.		
54 N-Nitrosodiphenylamine	169					Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330		16.955	16.962	(1.106)	430222	6.96654	6.967
56 4-Bromophenyl-phenylether	248					Compound Not Detected.		
57 Hexachlorobenzene	284					Compound Not Detected.		
58 Pentachlorophenol	266					Compound Not Detected.		
* 59 Phenanthrene-d10	188		18.417	18.416	(1.000)	1999034	4.00000	
60 Phenanthrene	178		18.471	18.463	(1.003)	1103794	2.15758	2.158
61 Anthracene	178		18.571	18.571	(1.008)	304979	0.61479	0.6148
62 Carbazole	167		18.912	18.904	(1.027)	143557	0.31589	0.3159
63 Di-n-butylphthalate	149		19.608	19.600	(1.065)	110015	0.17837	0.1784
64 Fluoranthene	202		20.862	20.830	(0.890)	4038829	4.74792	4.748
65 Pyrene	202		21.287	21.264	(0.908)	3895339	4.49713	4.497
\$ 66 Terphenyl-d14	244		21.550	21.534	(0.919)	3087326	4.40502	4.405
67 Butylbenzylphthalate	149		22.425	22.417	(0.956)	101406	0.21748	0.2175
68 Benzo(a)anthracene	228		23.432	23.416	(0.999)	1635982	1.87633	1.876
* 69 Chrysene-d12	240		23.447	23.431	(1.000)	2472766	4.00000	
70 3,3'-Dichlorobenzidine	252					Compound Not Detected.		
71 Chrysene	228		23.494	23.478	(1.002)	2237343	3.15741	3.157
72 bis(2-Ethylhexyl)phthalate	149		23.424	23.408	(0.956)	1980351	3.22411	3.224
* 134 Di-n-octylphthalate-d4	153		24.508	24.492	(1.000)	4297033	4.00000	
73 Di-n-octylphthalate	149					Compound Not Detected.		
74 Benzo(b)fluoranthene	252		25.352	25.328	(0.969)	2621386	3.00236	3.002
75 Benzo(k)fluoranthene	252		25.398	25.375	(0.971)	1004295	1.21831	1.218 (M)
76 Benzo(a)pyrene	252		26.041	26.017	(0.995)	1456307	1.88967	1.890
* 77 Perylene-d12	264		26.165	26.134	(1.000)	2482313	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.964	28.917	(1.107)	814105	0.91296	0.9130
79 Dibenzo(a,h)anthracene	278		28.995	28.963	(1.108)	194192	0.28901	0.2890 (M)
80 Benzo(g,h,i)perylene	276		29.810	29.763	(1.139)	828146	1.16455	1.165
90 N-Nitrosodimethylamine	74					Compound Not Detected.		
91 Aniline	93					Compound Not Detected.		
93 Benzidine	184					Compound Not Detected.		
103 Pyridine	79					Compound Not Detected.		
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	45150	0.15669	0.1567
111 Azobenzene (1,2-DP-Hydrazine)	77					Compound Not Detected.		

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.352	25.375	(0.969)	3450999	4.15616	4.156	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022332.D Calibration Time: 05:36  
 Lab Smp Id: 23A0206-13  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	475261	-29.43
27 Naphthalene-d8	2475080	1237540	4950160	1755750	-29.06
42 Acenaphthene-d10	1248864	624432	2497728	957224	-23.35
59 Phenanthrene-d10	2356836	1178418	4713672	1999034	-15.18
69 Chrysene-d12	2717731	1358866	5435462	2472766	-9.01
134 Di-n-octylphthala	4948440	2474220	9896880	4297033	-13.16
77 Perylene-d12	2801934	1400967	5603868	2482313	-11.41

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.45	0.07
134 Di-n-octylphthala	24.49	23.99	24.99	24.51	0.06
77 Perylene-d12	26.13	25.63	26.63	26.17	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022332.D

Lab ID: 23A0206-13  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 10:02

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.026	1.044	-0.0185	2-Methylphenol

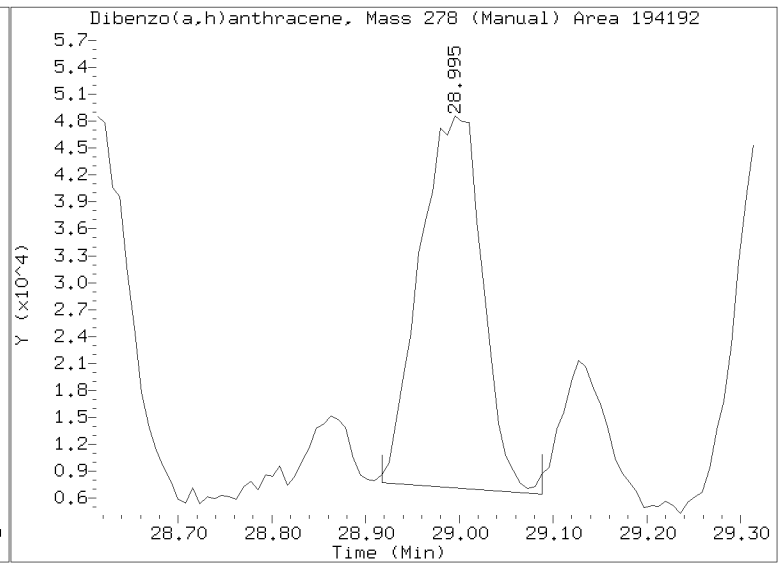
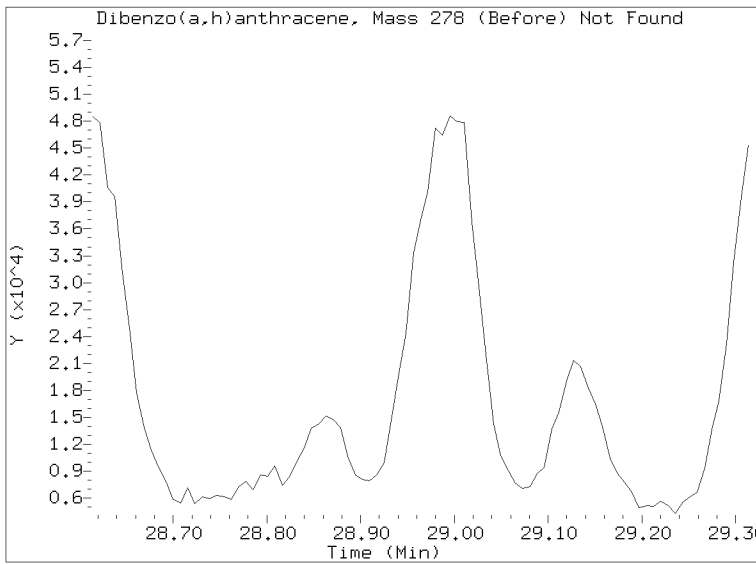
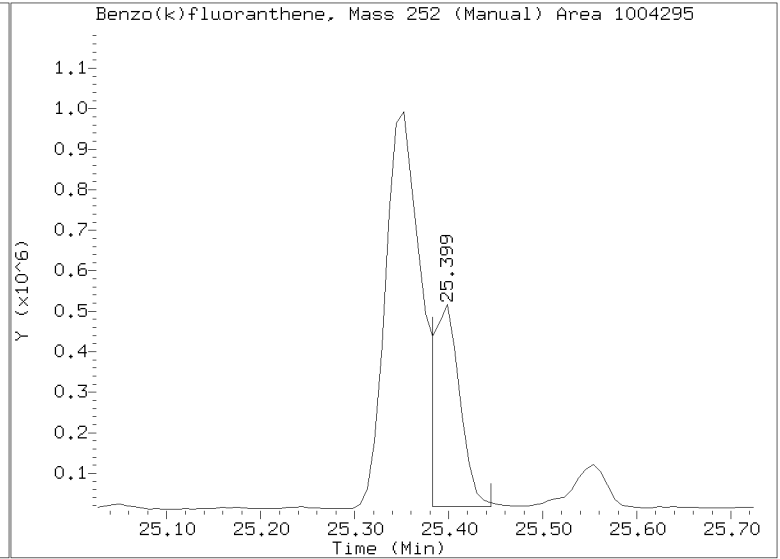
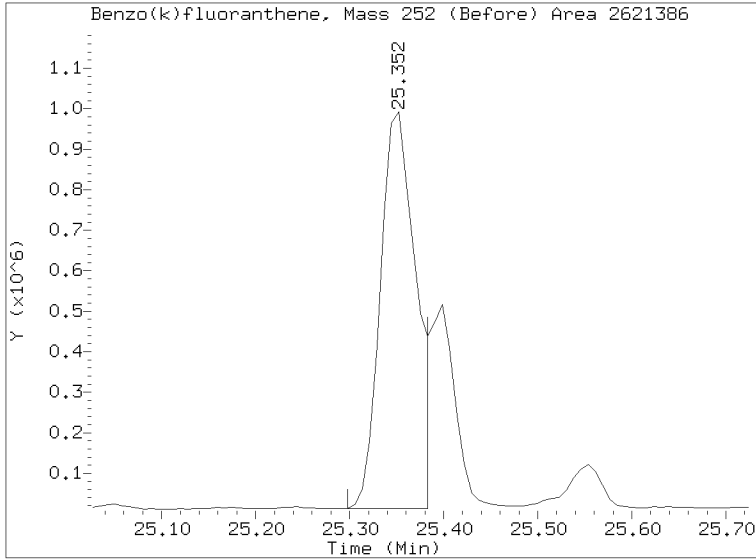
RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022332.D  
Injection Date: 03-MAR-2023 10:02  
Lab ID:23A0206-13 Client ID:  
Report Date: 03/10/2023 07:35





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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-14 B

SDG: 23A0206

Sampled: 01/11/23 13:03

Prepared: 01/27/23 14:44

File ID: NT1003022333.D

% Solids: 51.18

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:40

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 19.95 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	987		4.3	19.6
106-44-5	4-Methylphenol	1	22.4		7.2	19.6
91-20-3	Naphthalene	1	18.6	J	4.2	19.6
91-57-6	2-Methylnaphthalene	1	14.8	J	4.4	19.6
208-96-8	Acenaphthylene	1	31.6		6.1	19.6
131-11-3	Dimethylphthalate	1	19.6	U	4.3	19.6
83-32-9	Acenaphthene	1	27.3		5.1	19.6
132-64-9	Dibenzofuran	1	24.3		13.8	19.6
86-73-7	Fluorene	1	30.1		14.3	19.6
85-01-8	Phenanthrene	1	262		8.5	19.6
120-12-7	Anthracene	1	92.5		7.0	19.6
206-44-0	Fluoranthene	1	755		6.0	19.6
129-00-0	Pyrene	1	580		5.6	19.6
85-68-7	Butylbenzylphthalate	1	77.1	Q	9.2	19.6
56-55-3	Benzo(a)anthracene	1	283		5.8	19.6
218-01-9	Chrysene	1	434		5.9	19.6
117-81-7	bis(2-Ethylhexyl)phthalate	1	308		5.3	49.0
	Benzo(a)fluoranthene, Total	1	514		9.8	39.2
50-32-8	Benzo(a)pyrene	1	207		4.1	19.6
193-39-5	Indeno(1,2,3-cd)pyrene	1	91.2		14.3	19.6
53-70-3	Dibenzo(a,h)anthracene	1	31.0		16.9	19.6
191-24-2	Benzo(g,h,i)perylene	1	107	Q	13.3	19.6

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	734.54	564	76.8	27 - 120	
Phenol-d5	734.54	658	89.6	29 - 120	
2-Chlorophenol-d4	734.54	636	86.6	31 - 120	
1,2-Dichlorobenzene-d4	489.70	353	72.2	32 - 120	
Nitrobenzene-d5	489.70	394	80.4	30 - 120	
2-Fluorobiphenyl	489.70	412	84.1	35 - 120	



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

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-14 B

SDG: 23A0206

Sampled: 01/11/23 13:03

Prepared: 01/27/23 14:44

File ID: NT1003022333.D

% Solids: 51.18

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:40

Batch: BLA0624

Sequence: SLC0136

Initial/Final: 19.95 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00019

Cleanups: GPC

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	734.54	603	82.0	24 - 134	
p-Terphenyl-d14	489.70	379	77.3	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B.B\NT1003022333.D

Date: 03-HR-2023 10:40

Client ID:

Sample Info: 23A0206-14

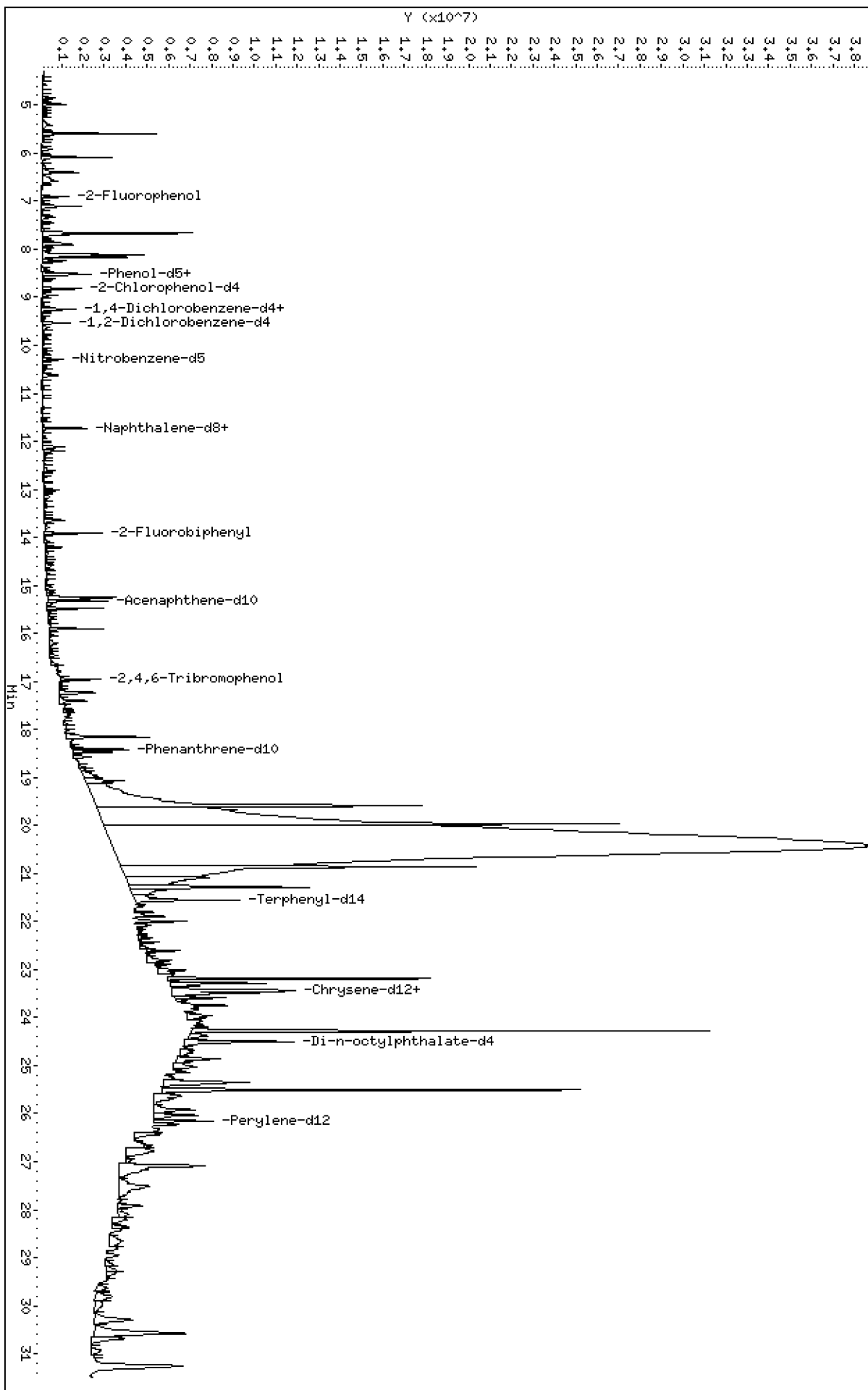
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.B\NT1003022333.D





Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

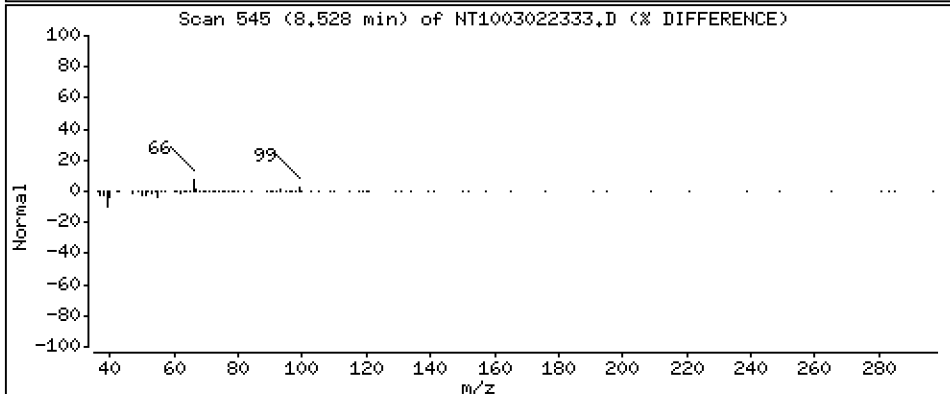
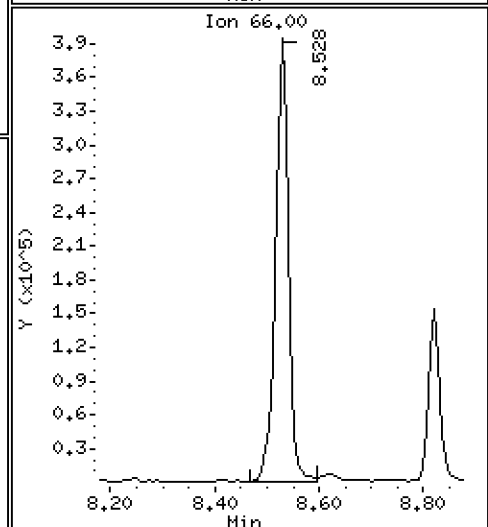
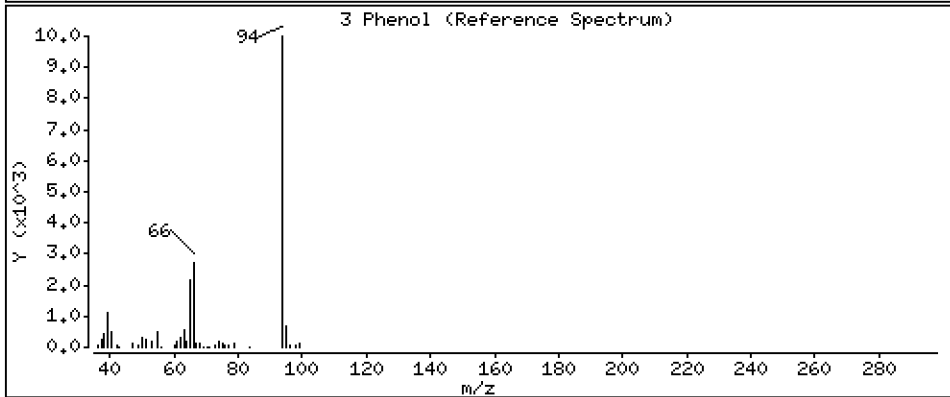
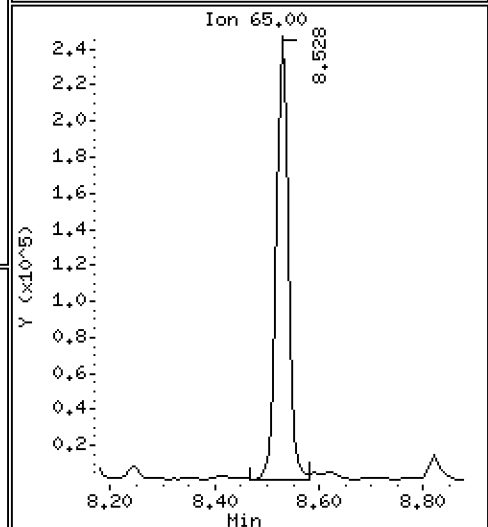
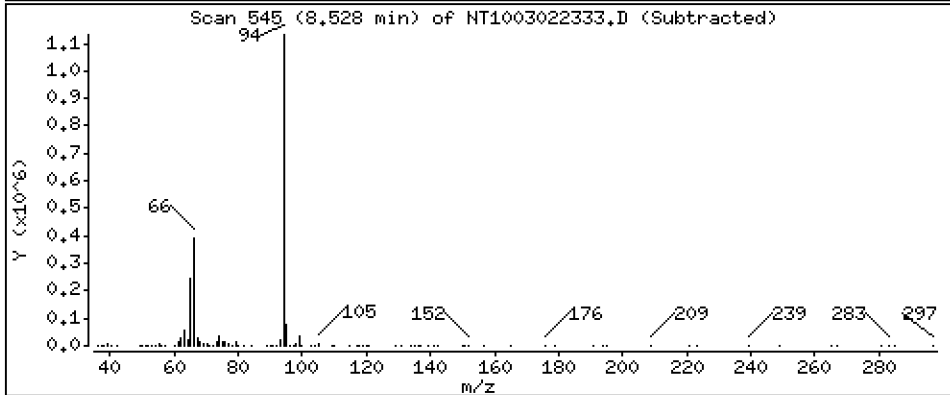
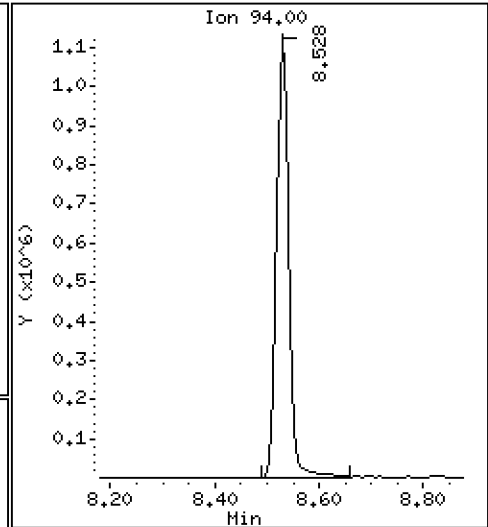
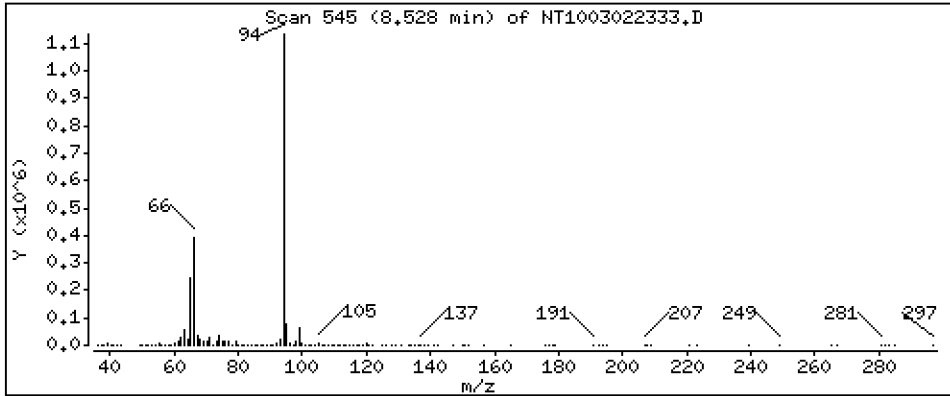
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 10,08 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

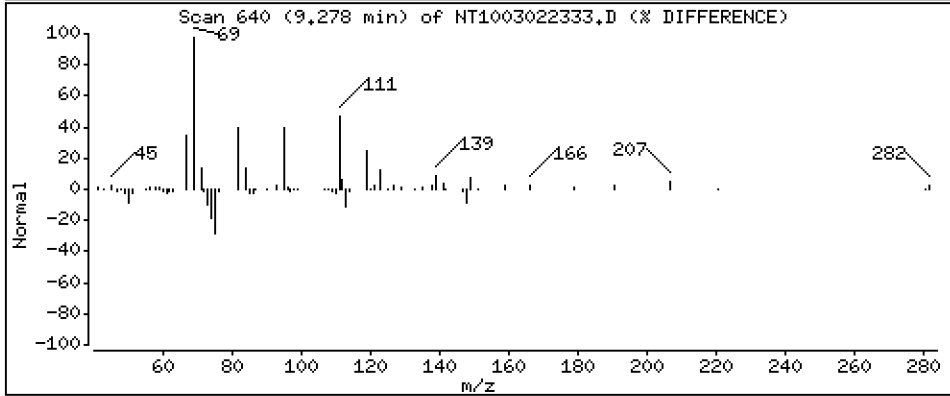
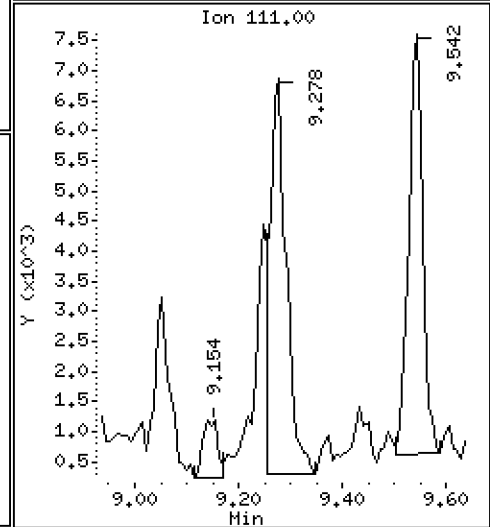
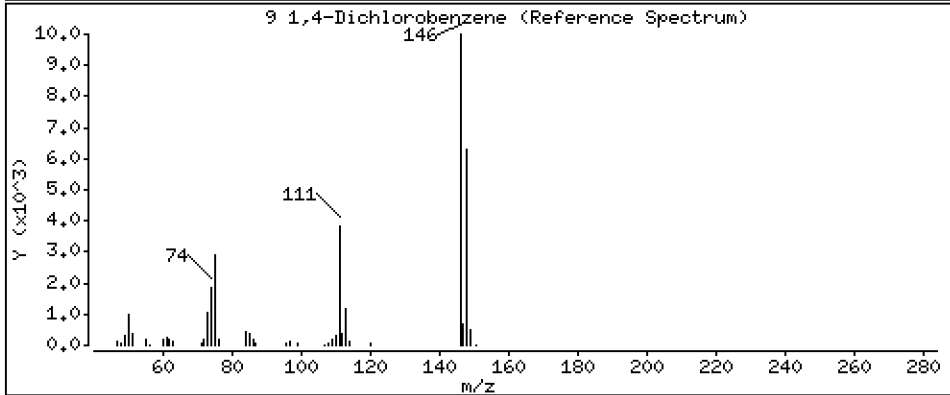
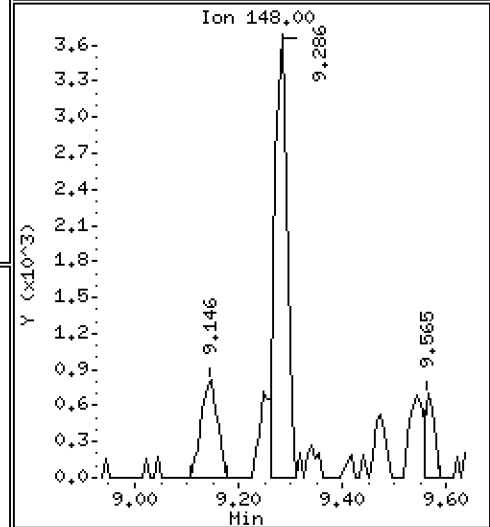
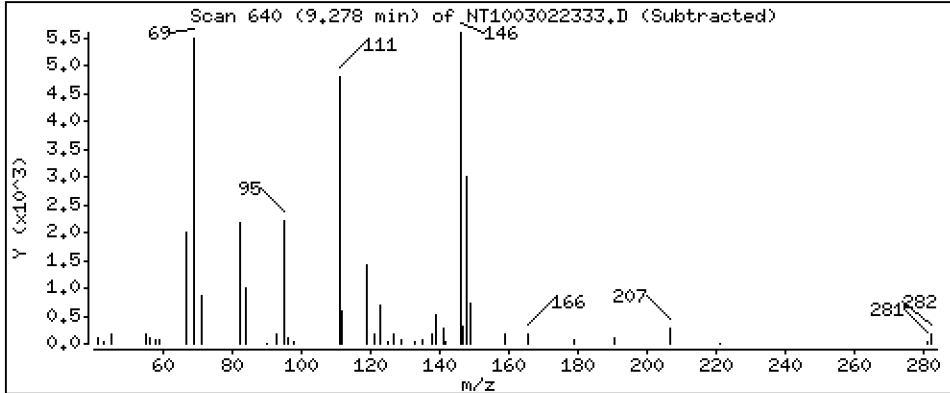
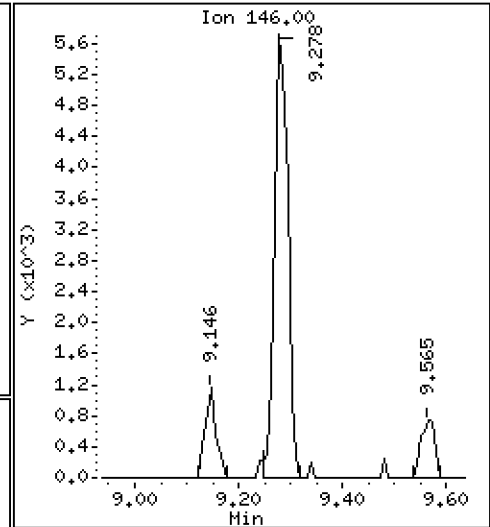
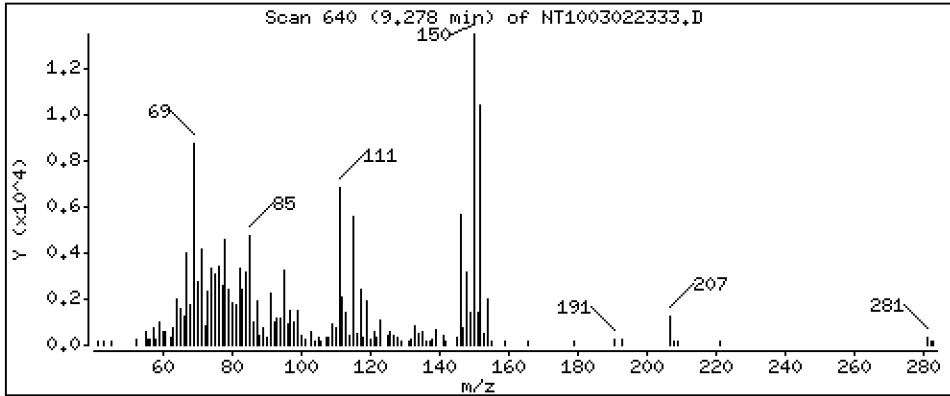
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.06323 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

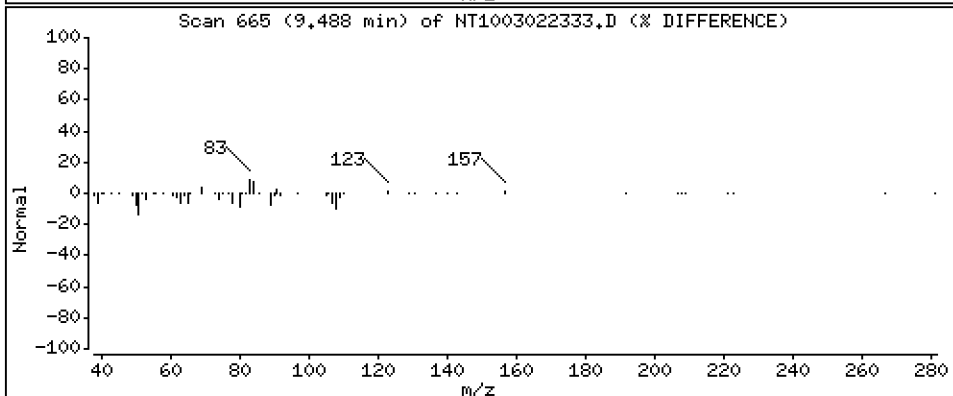
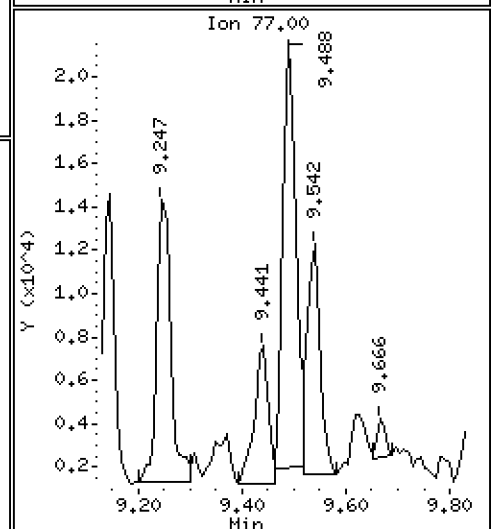
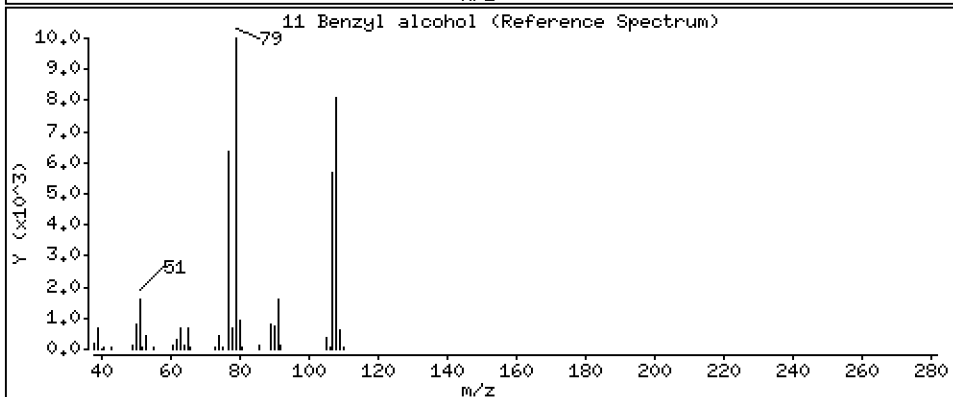
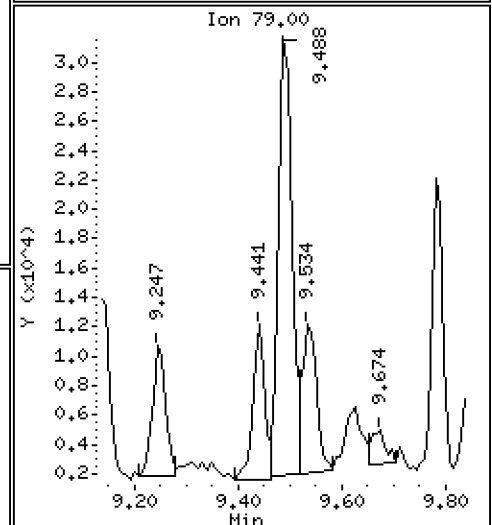
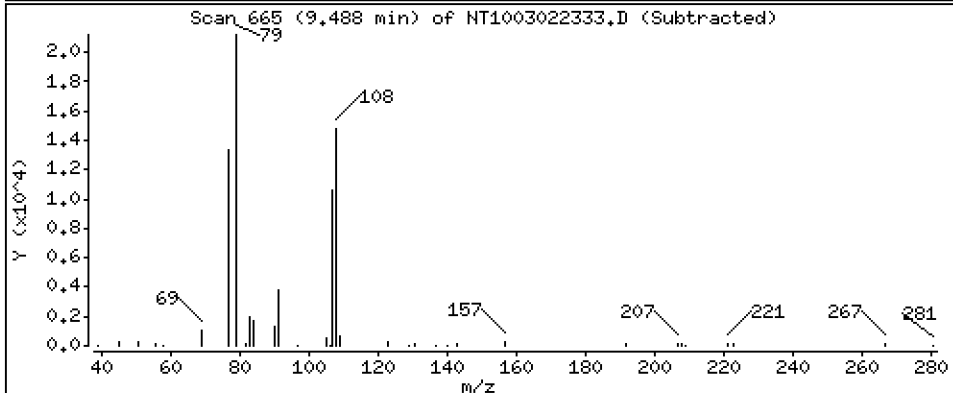
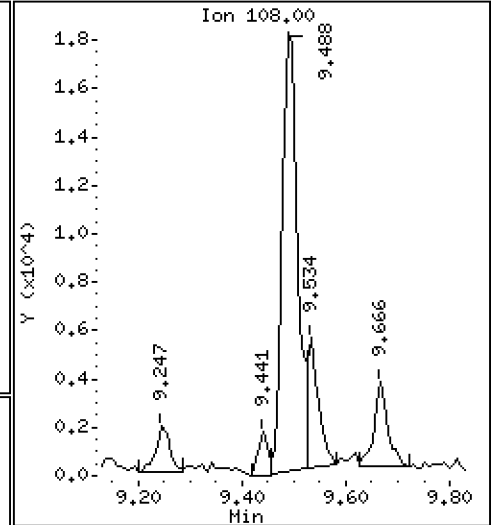
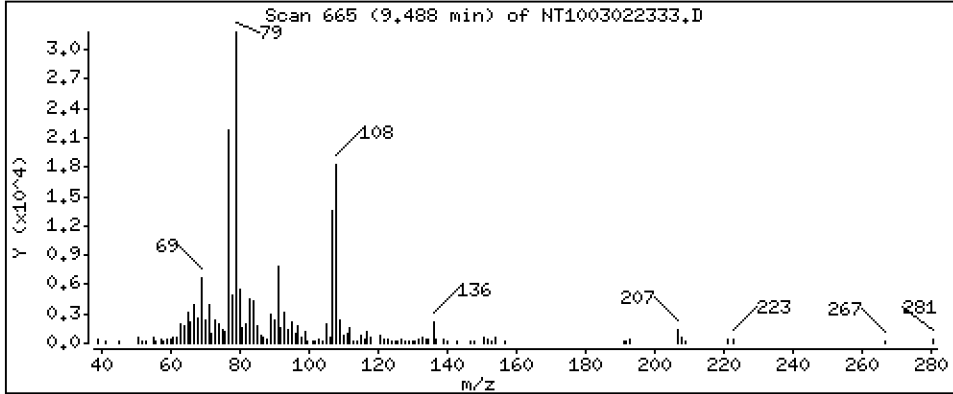
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.4208 ug/mL

11 Benzyl alcohol



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

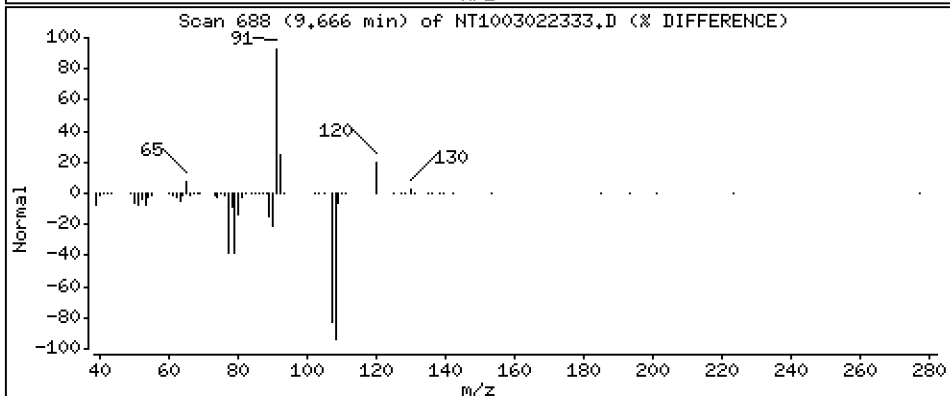
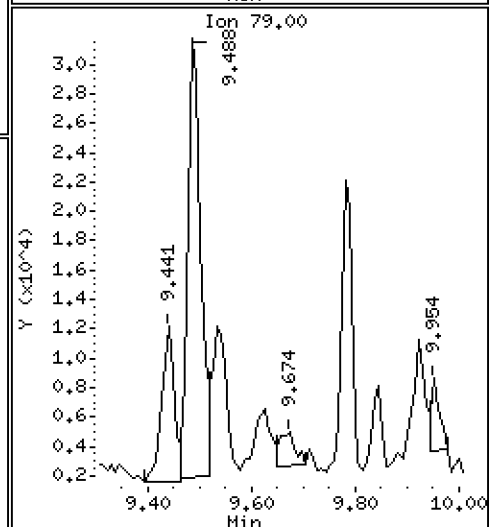
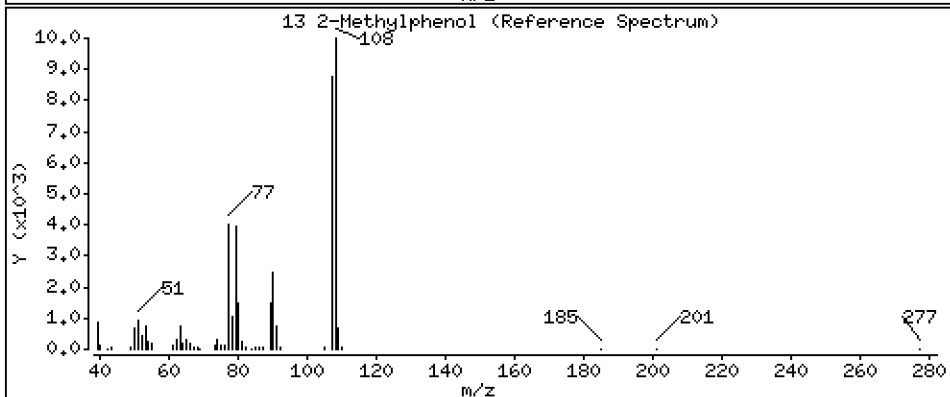
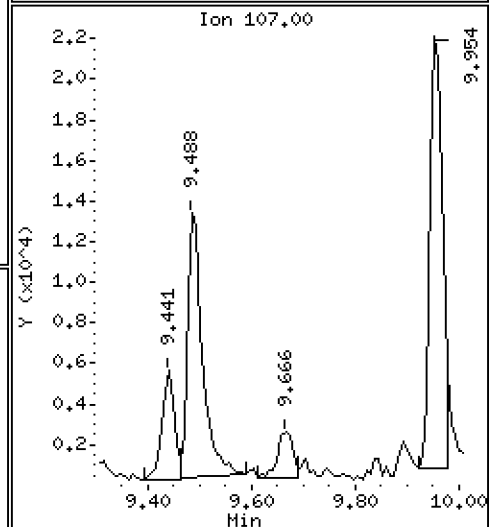
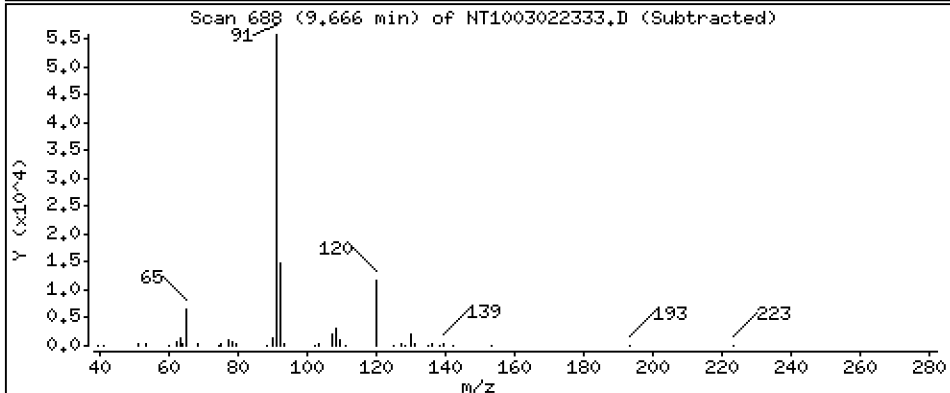
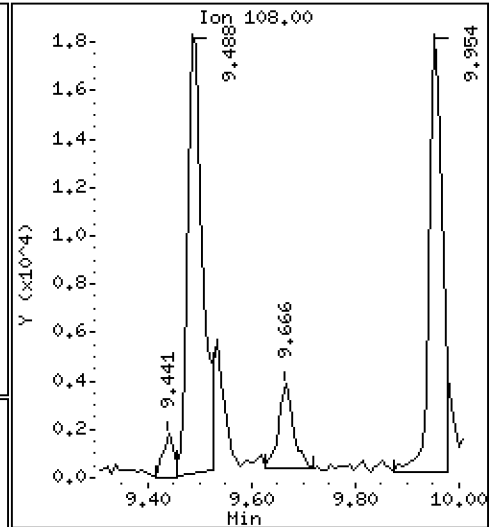
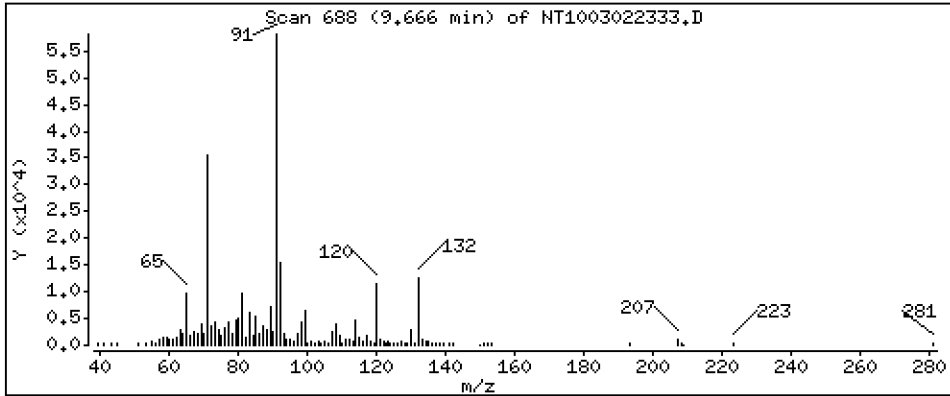
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.04796 ug/mL

13 2-Methylphenol



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

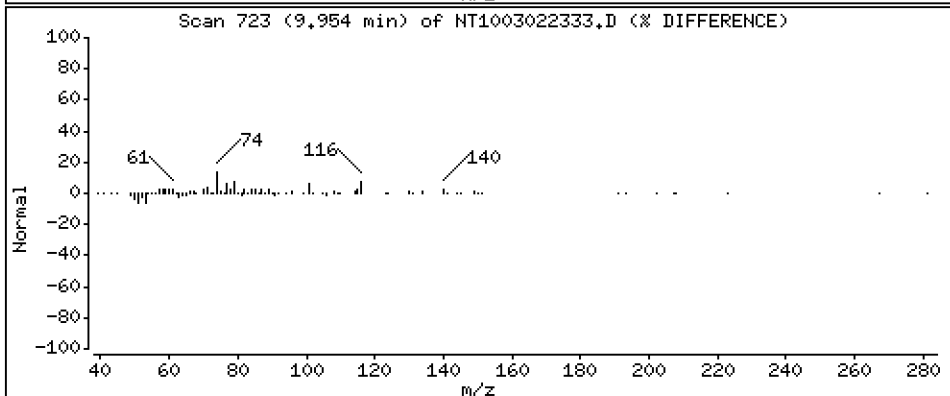
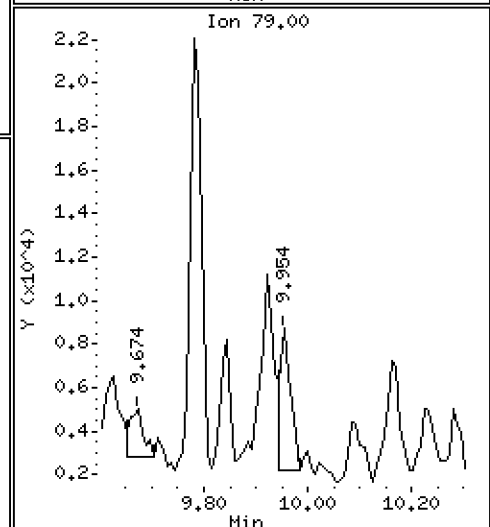
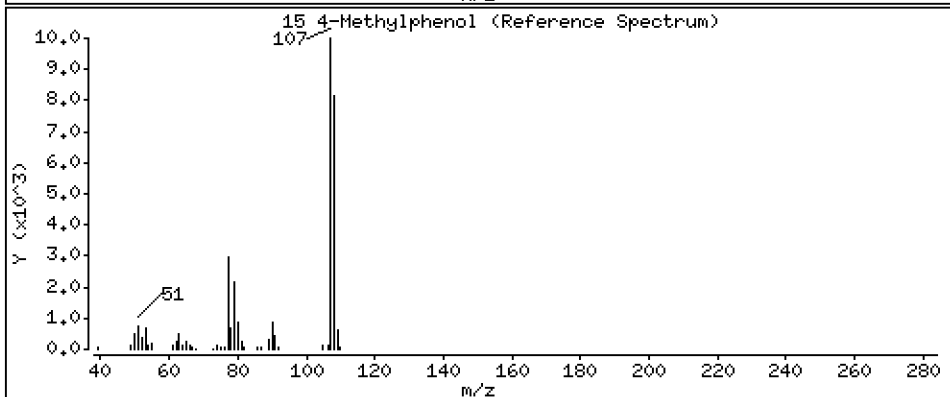
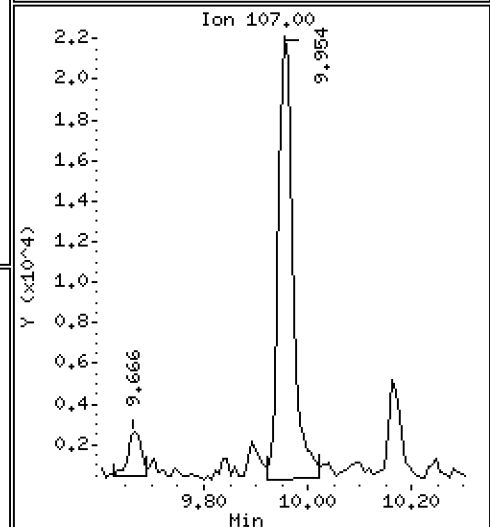
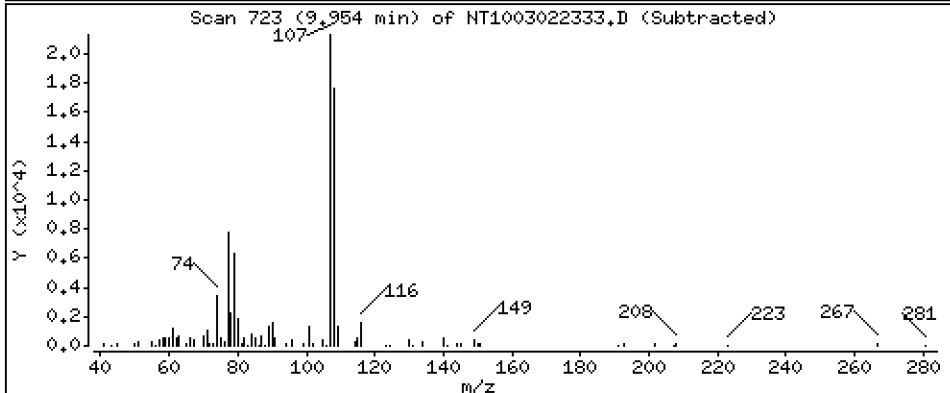
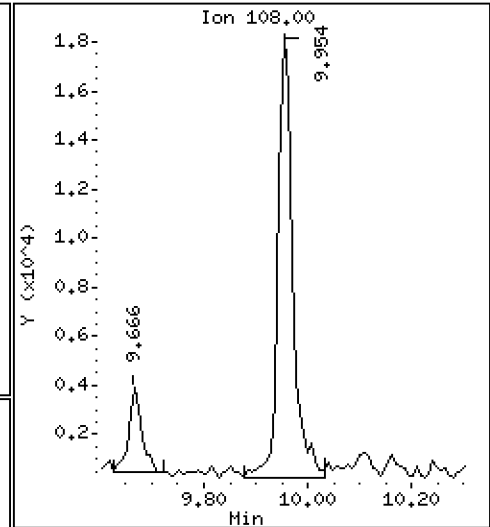
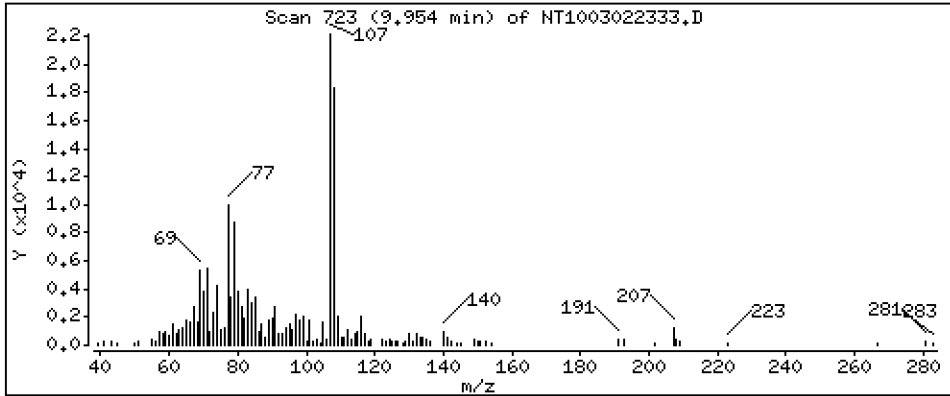
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 0.2290 ug/mL

15 4-Methylphenol



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

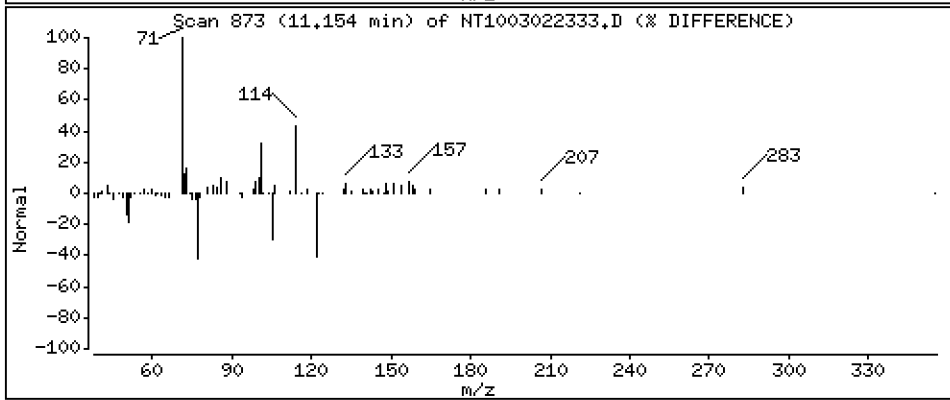
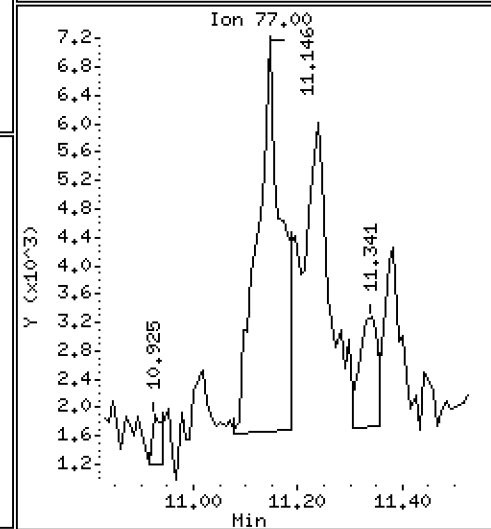
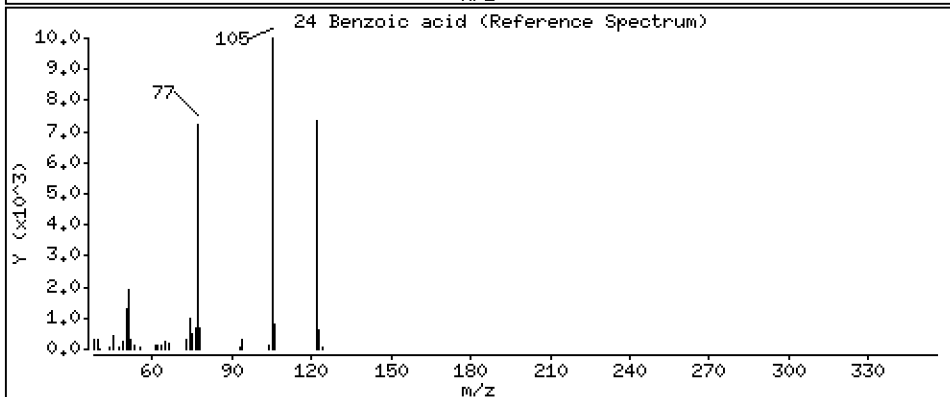
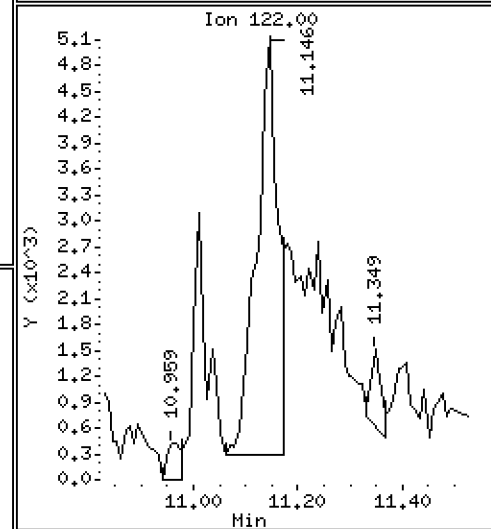
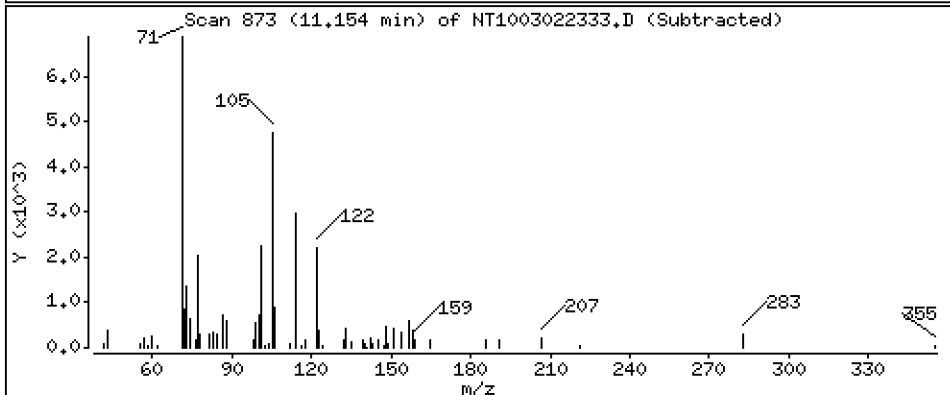
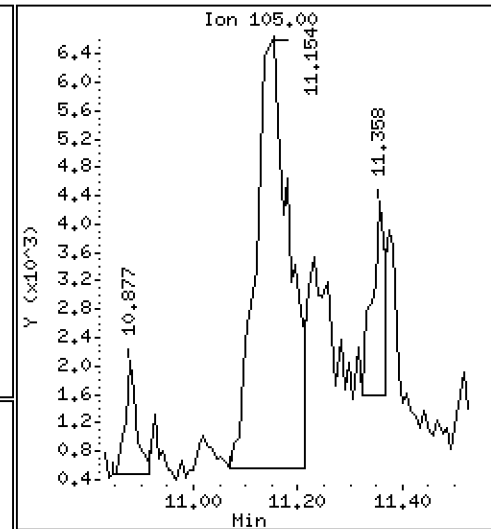
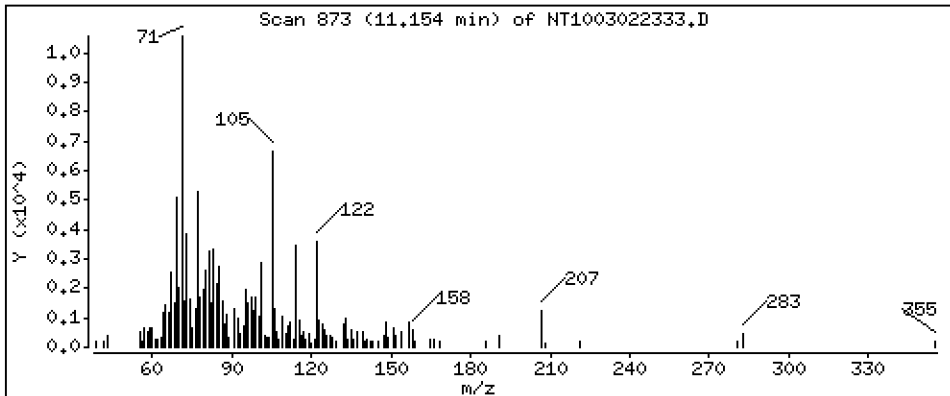
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.2854 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

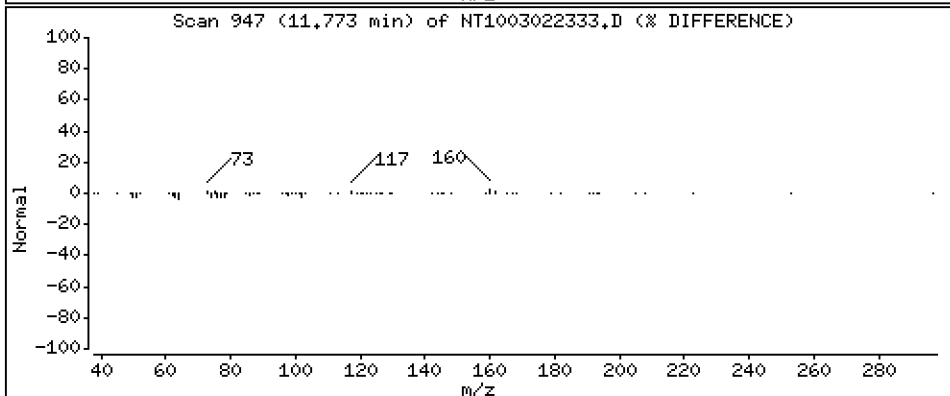
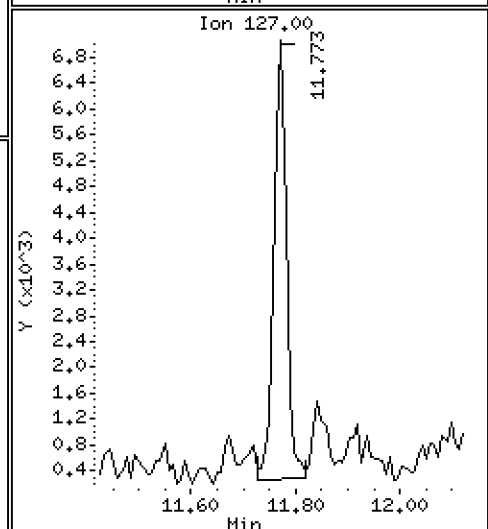
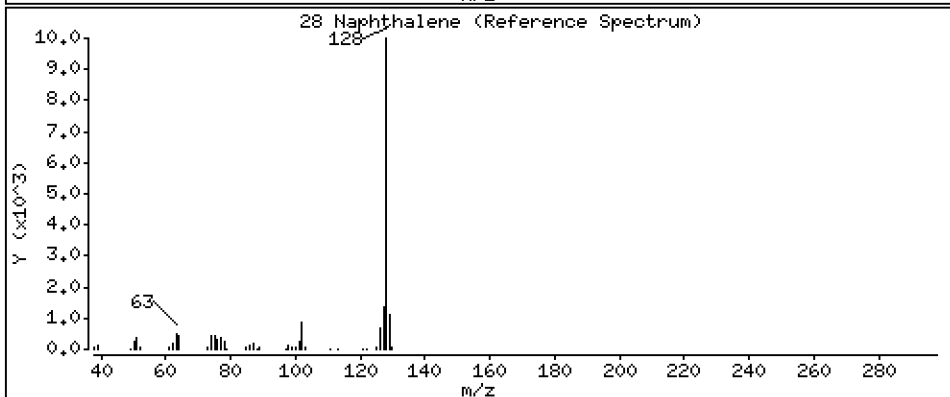
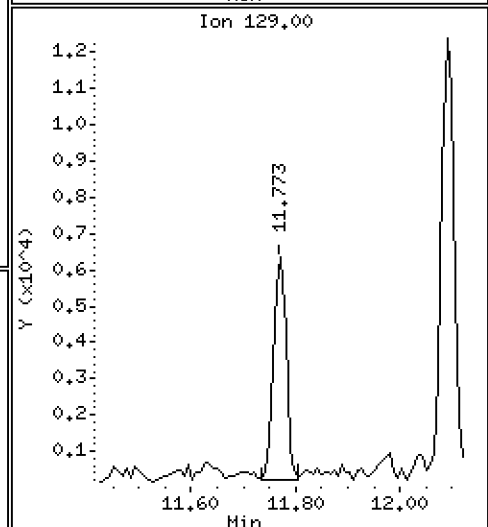
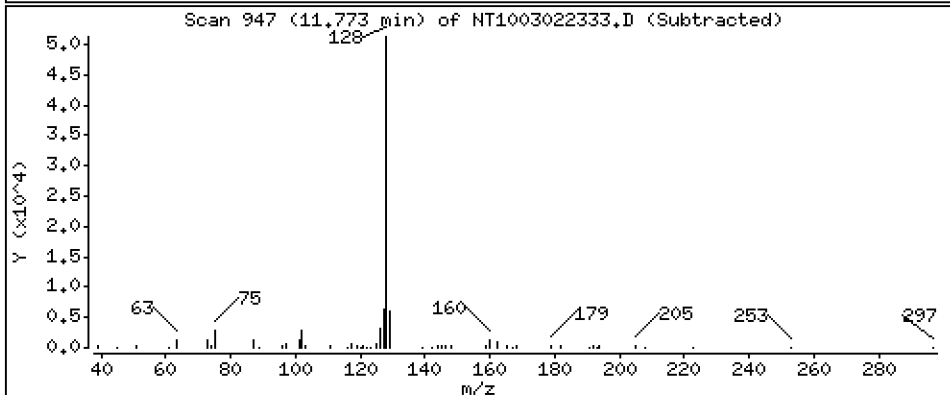
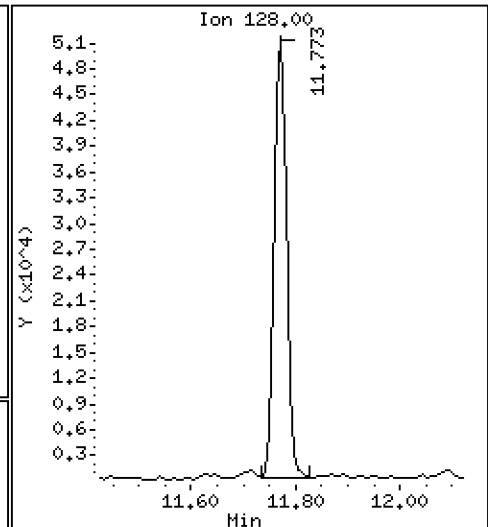
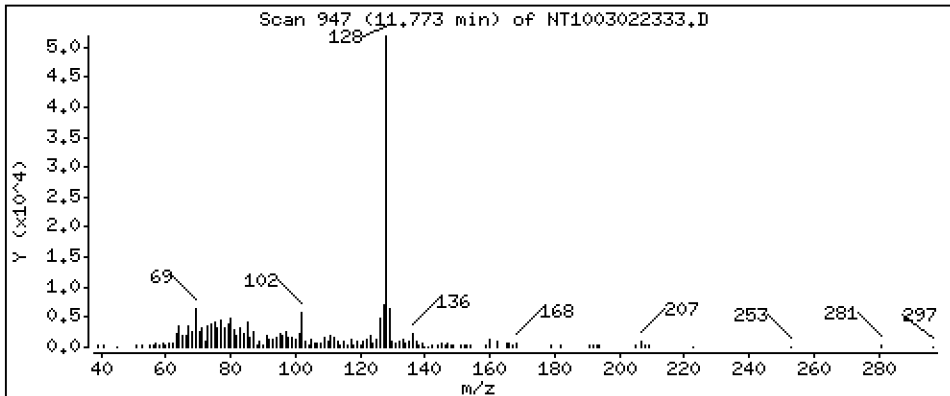
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 0.1901 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

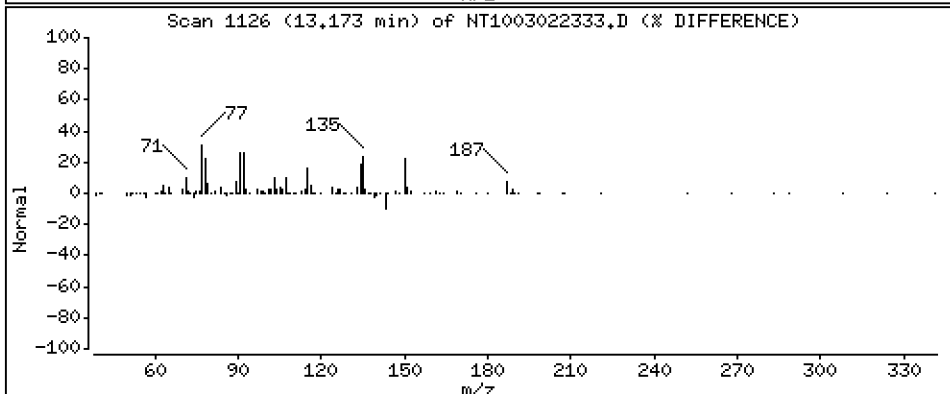
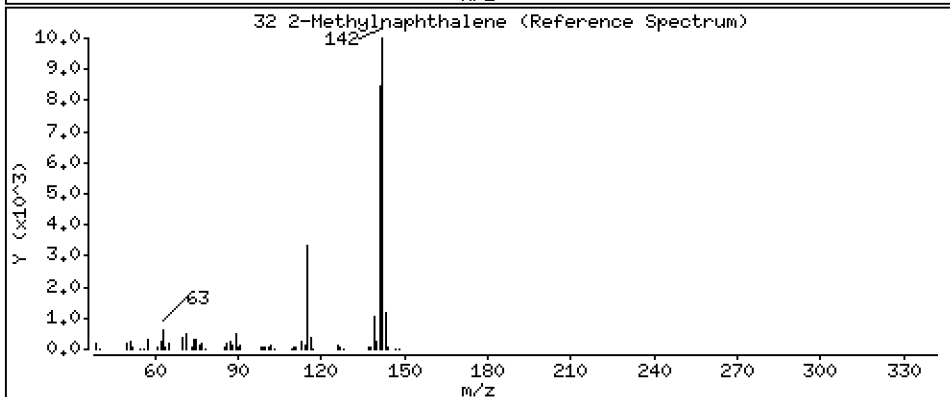
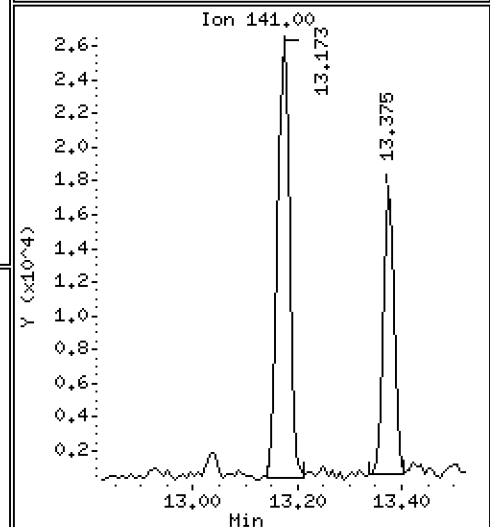
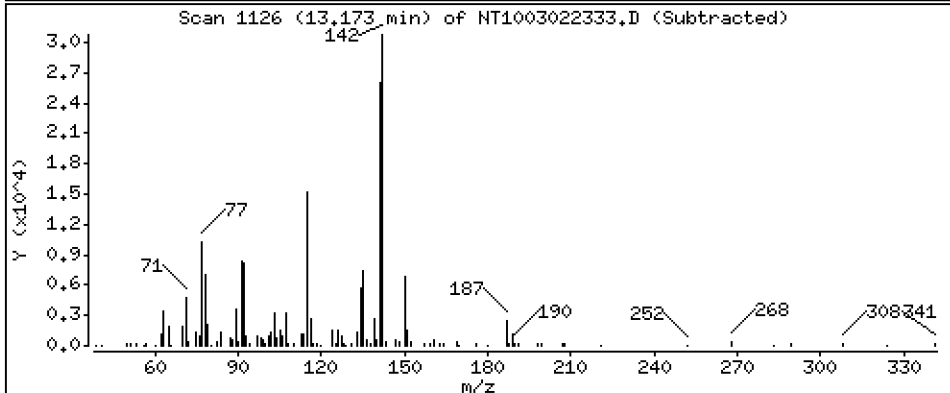
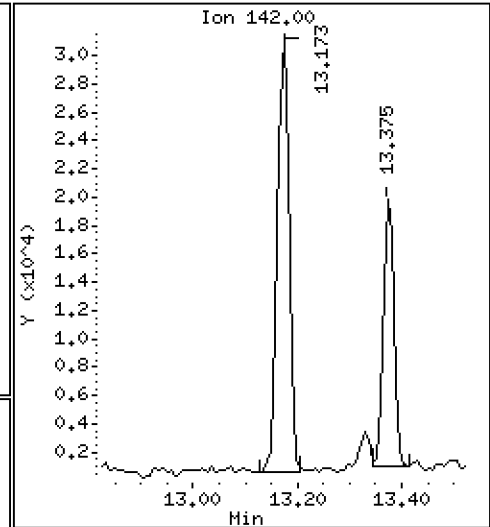
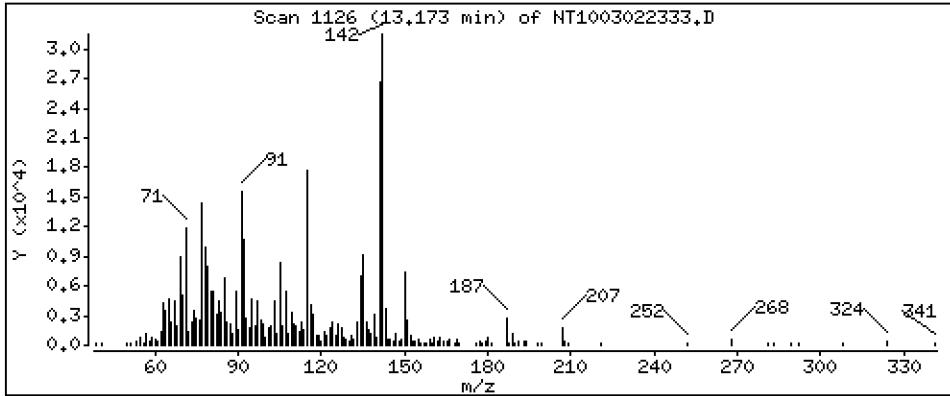
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 0.1515 ug/mL





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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

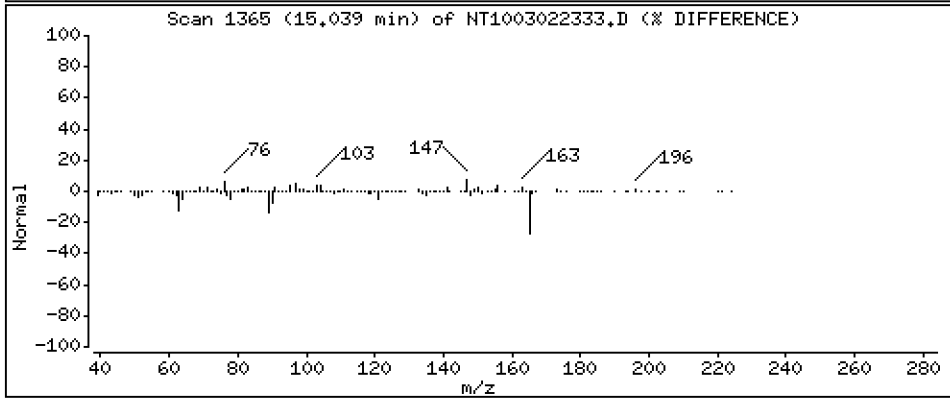
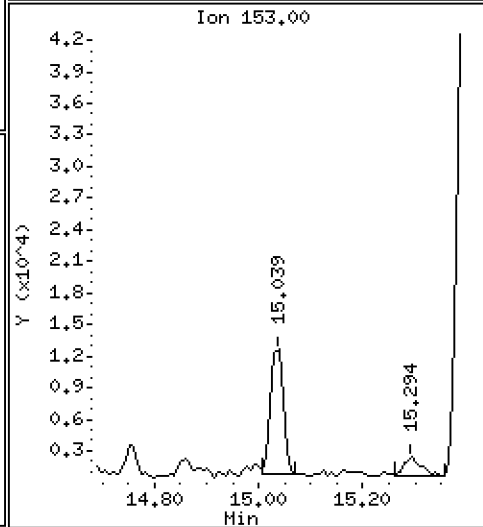
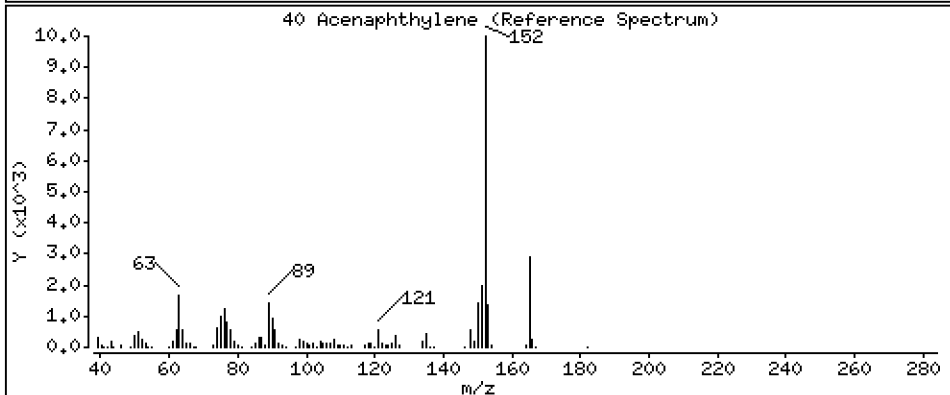
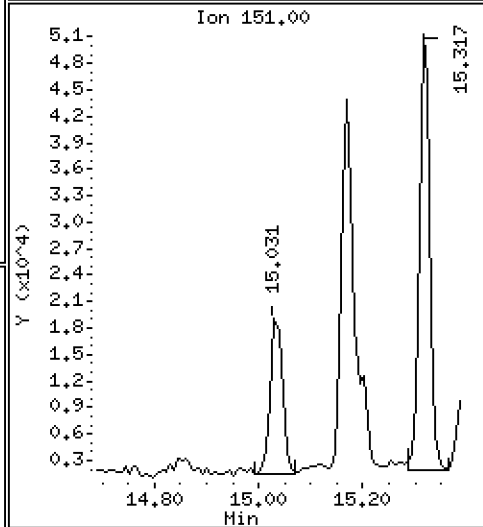
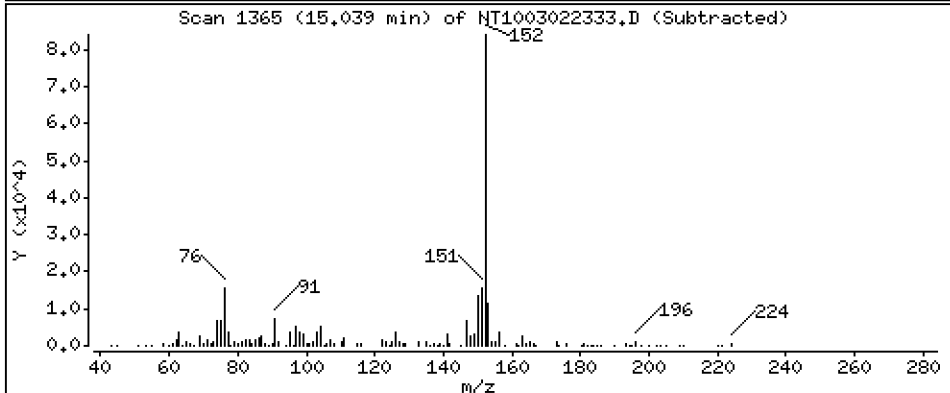
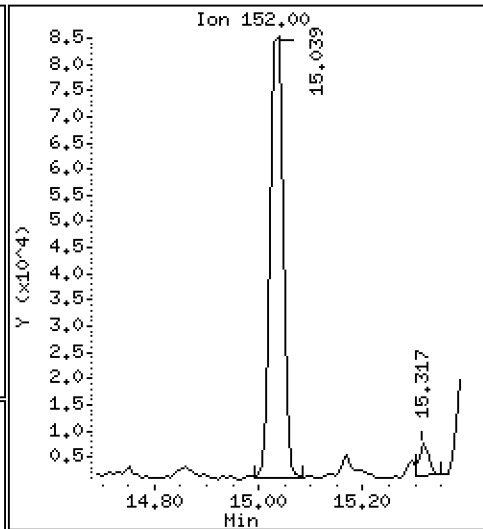
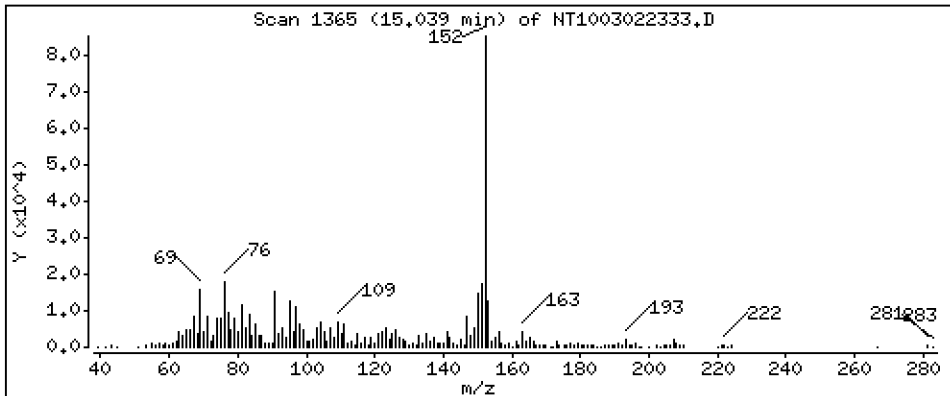
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 0,3222 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

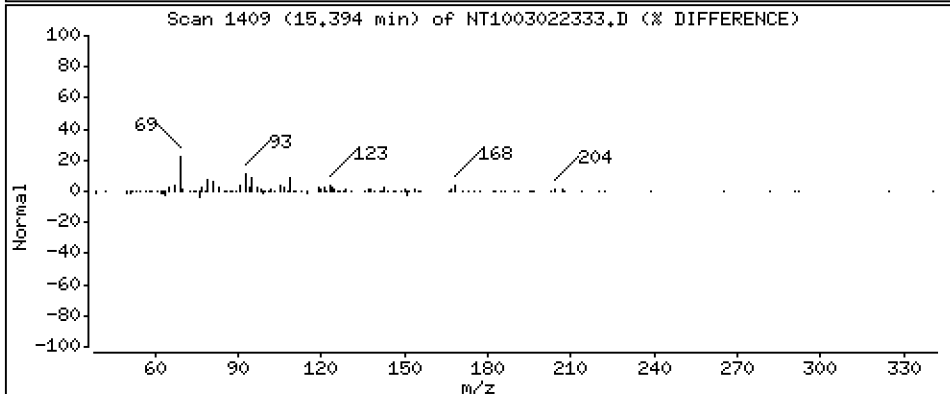
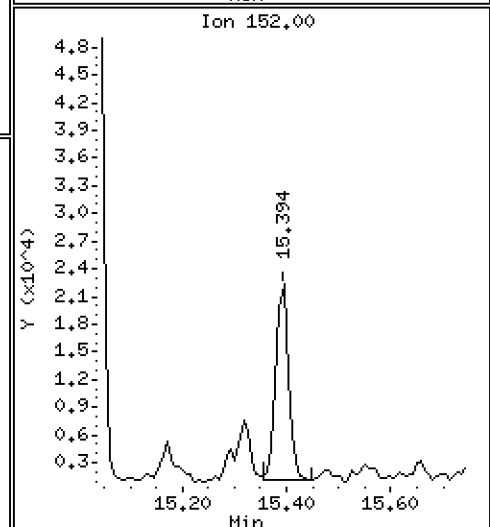
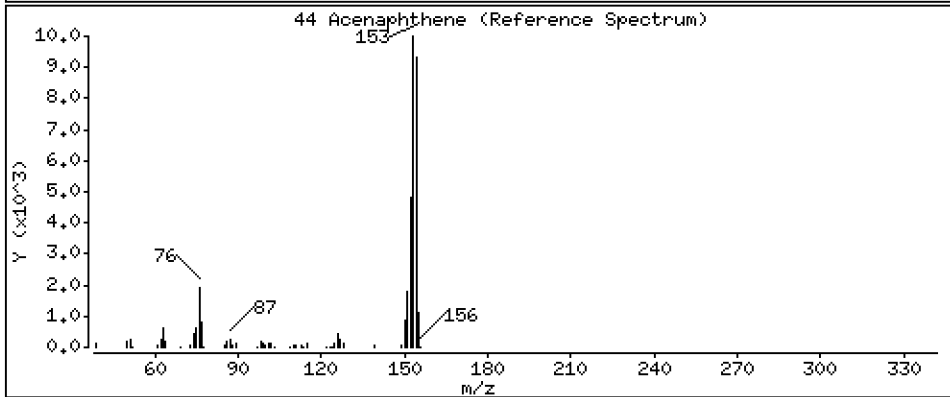
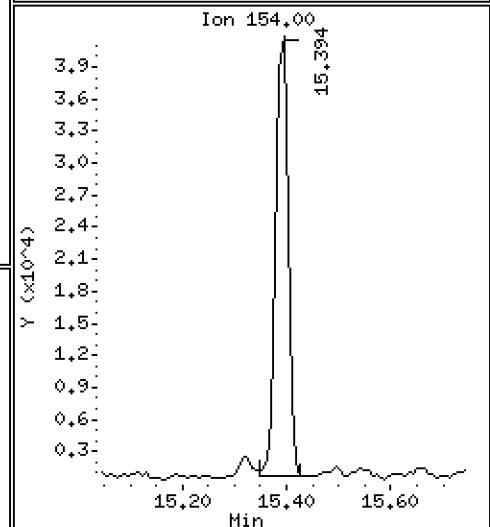
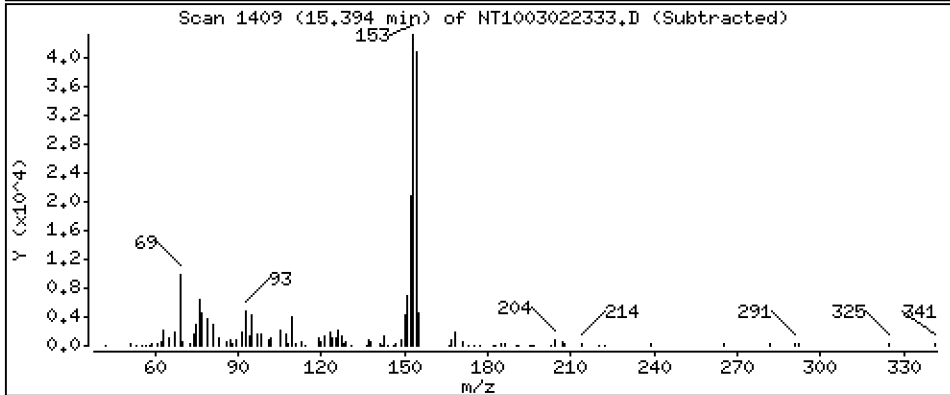
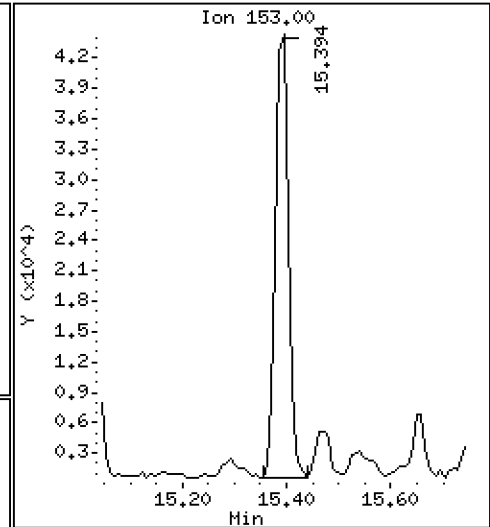
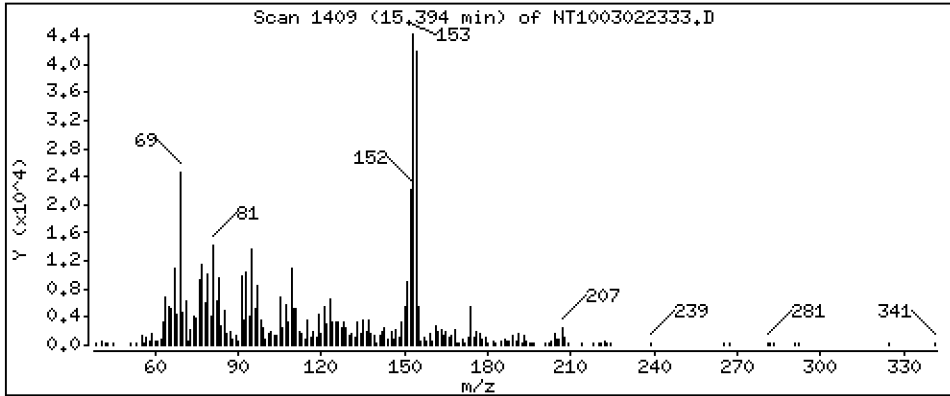
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,2788 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

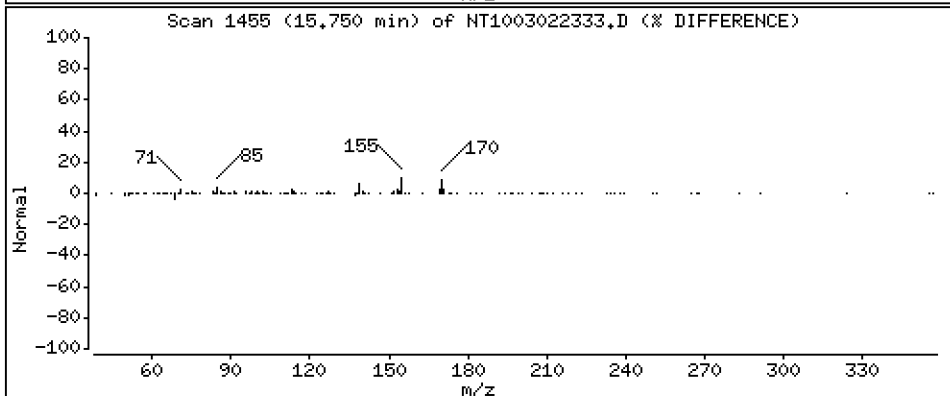
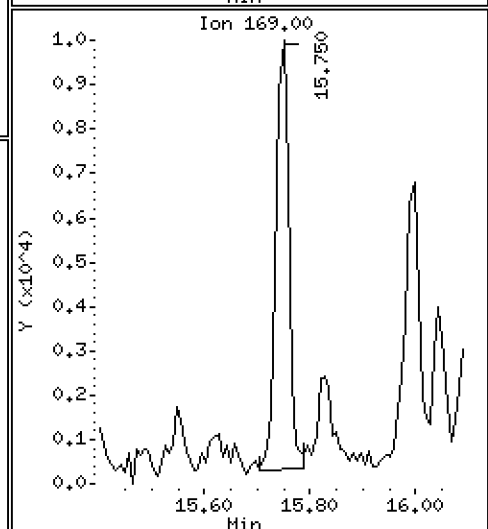
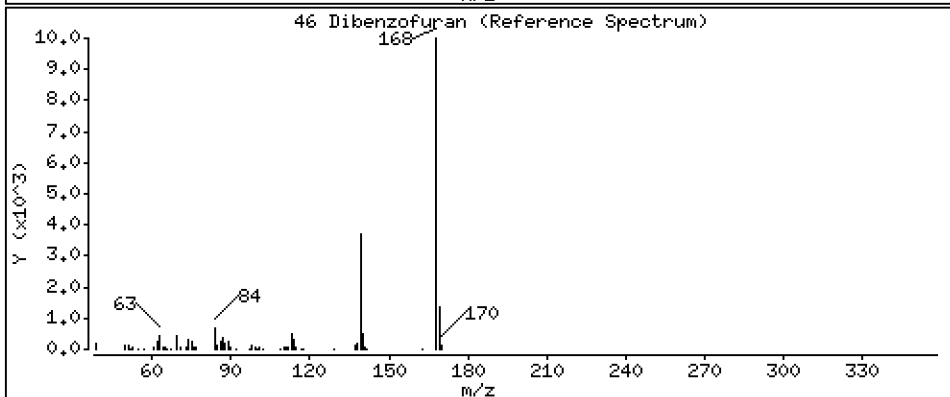
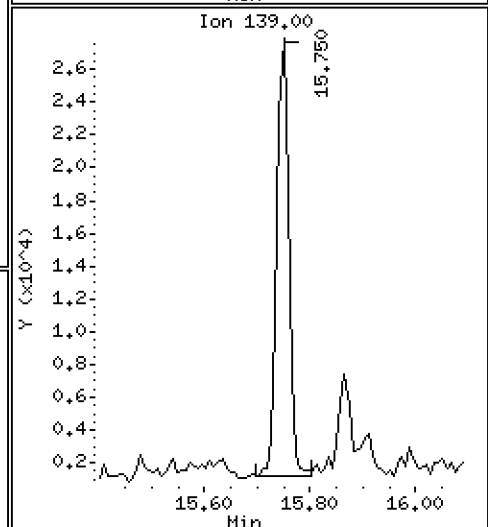
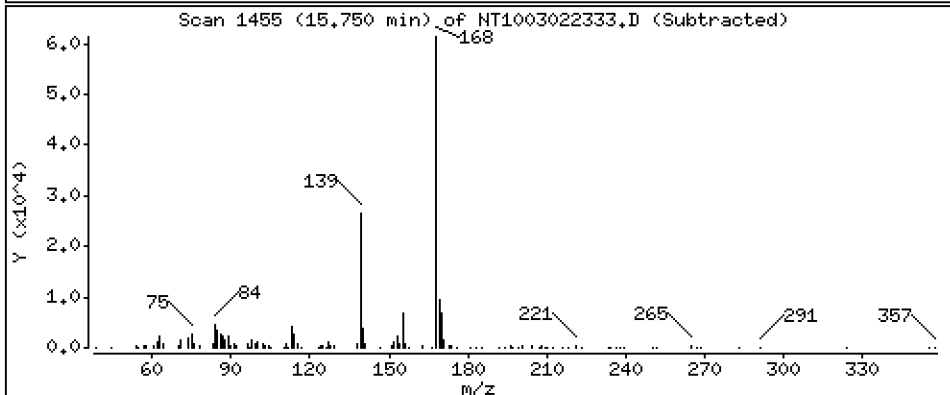
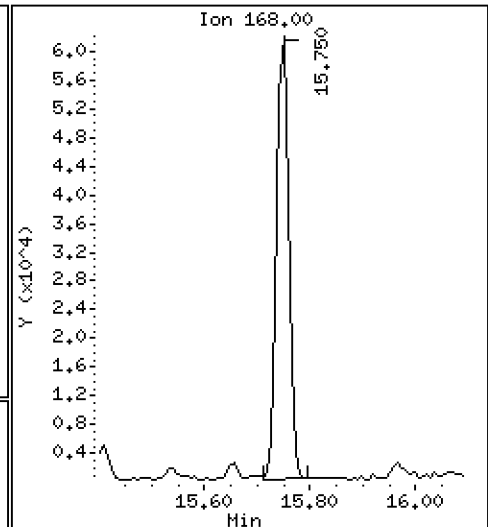
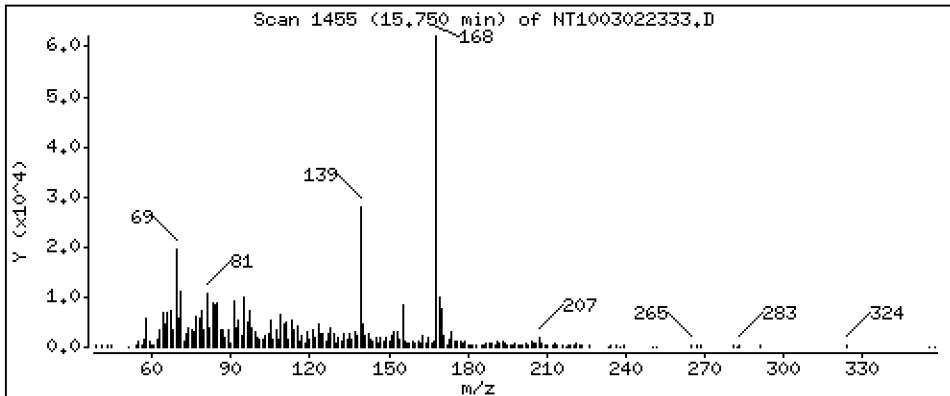
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,2478 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

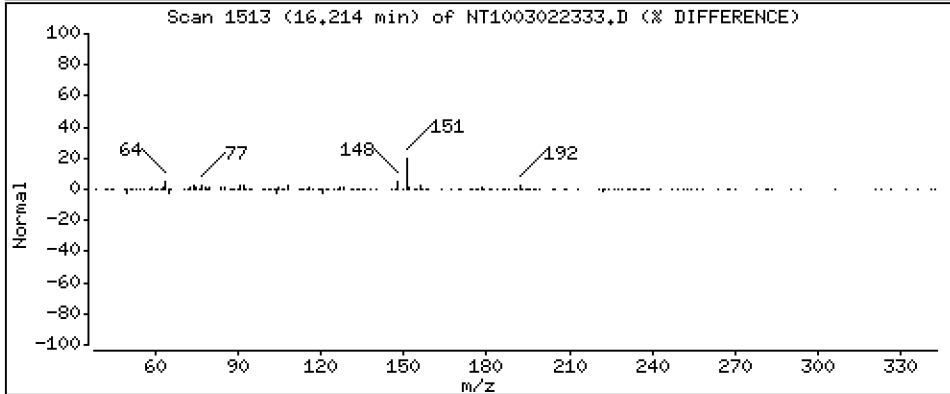
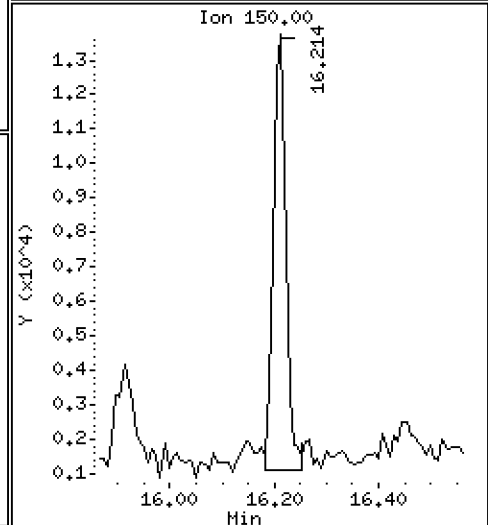
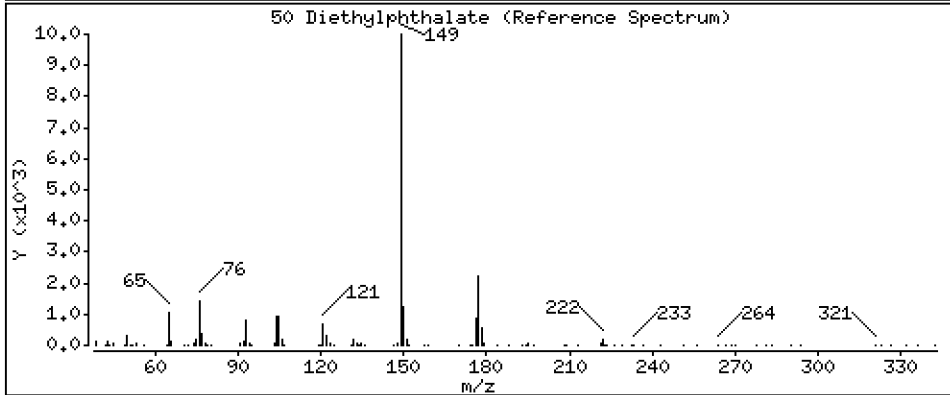
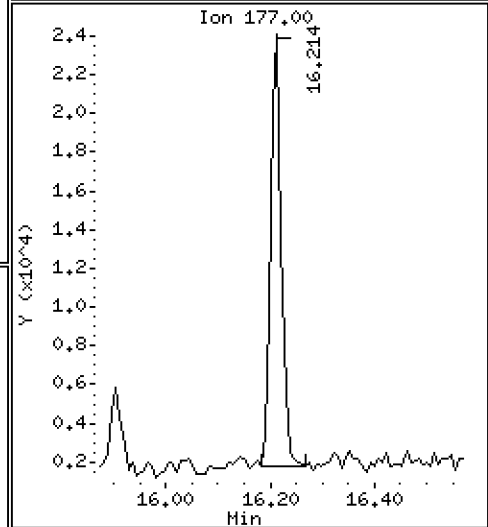
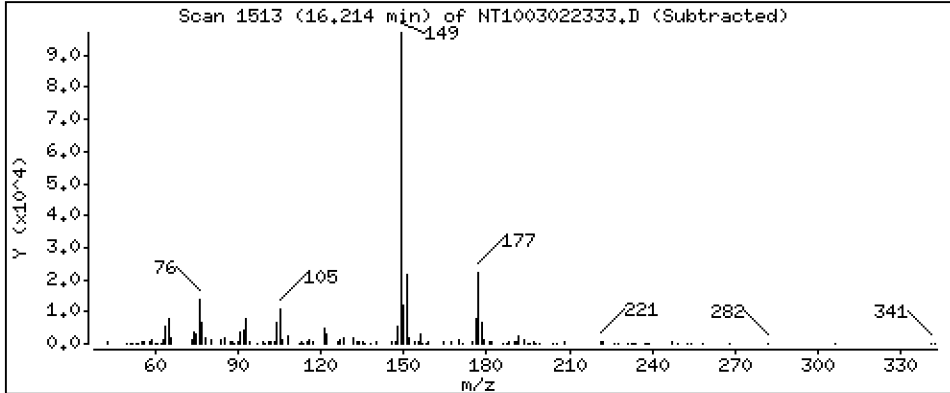
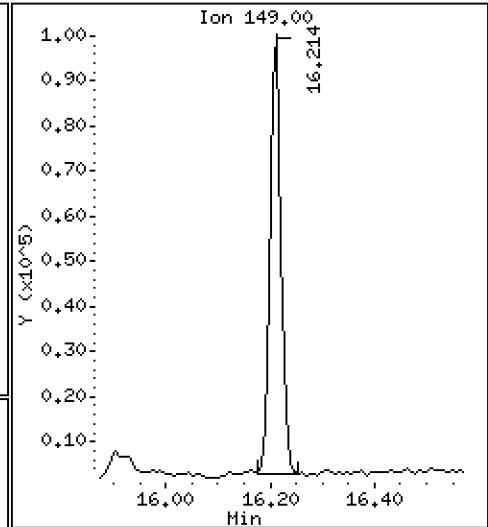
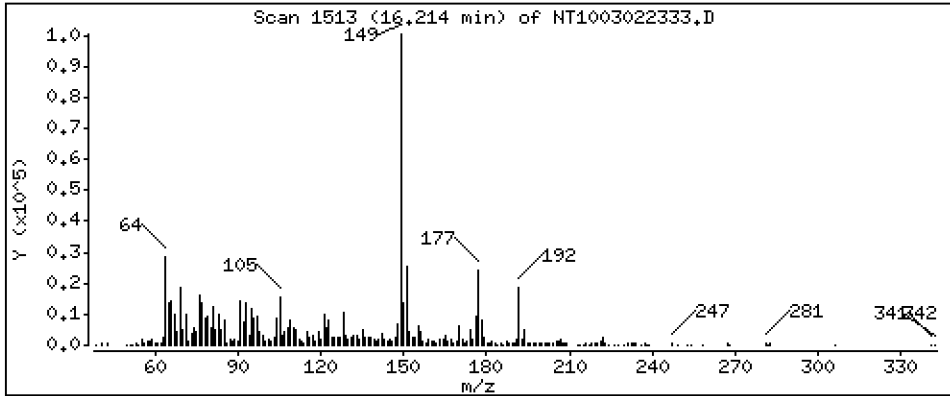
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,4616 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

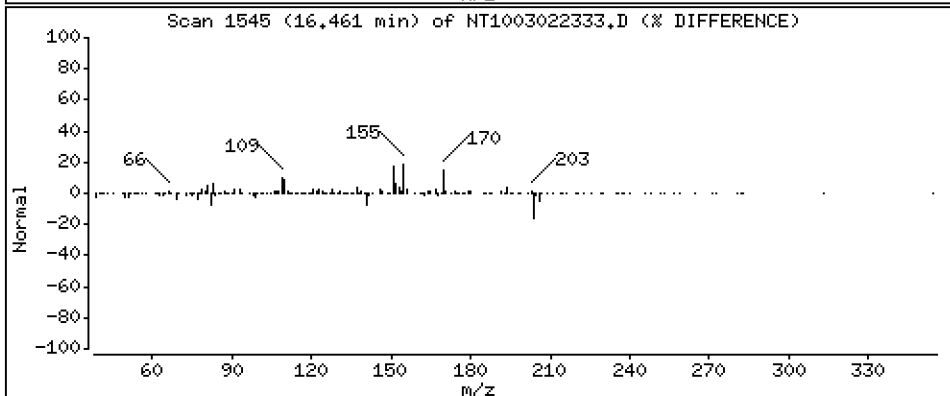
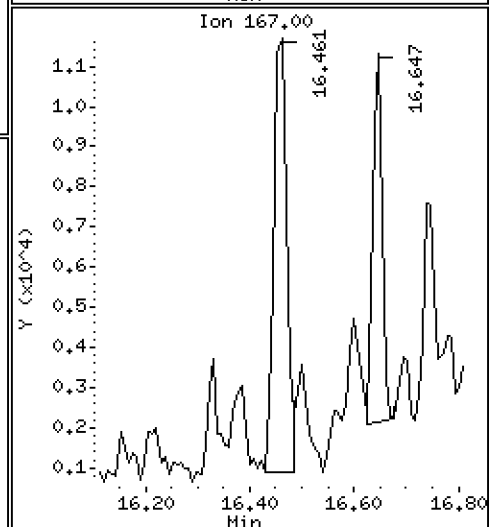
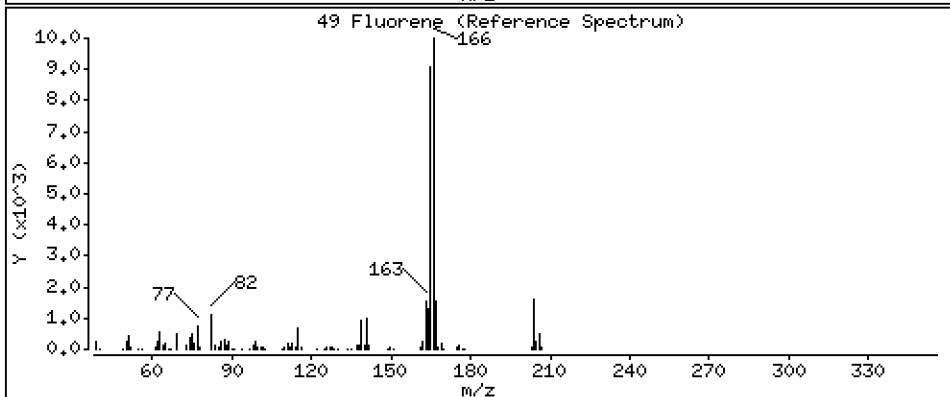
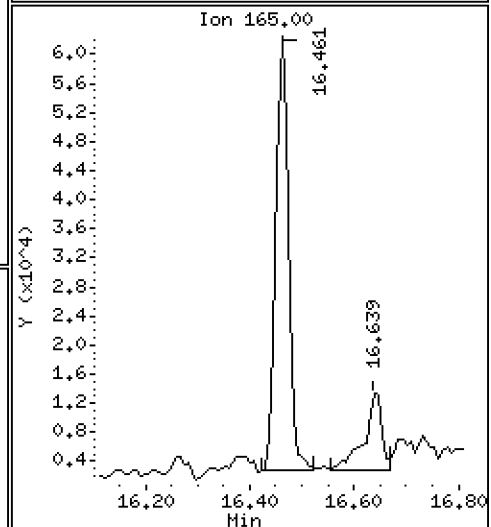
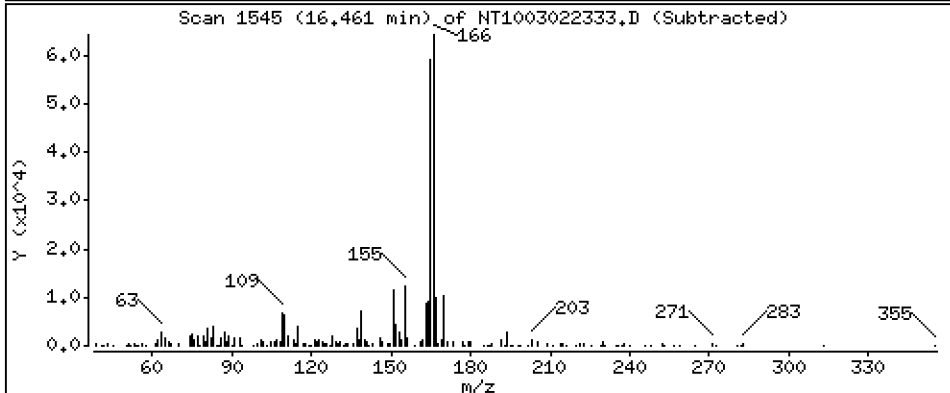
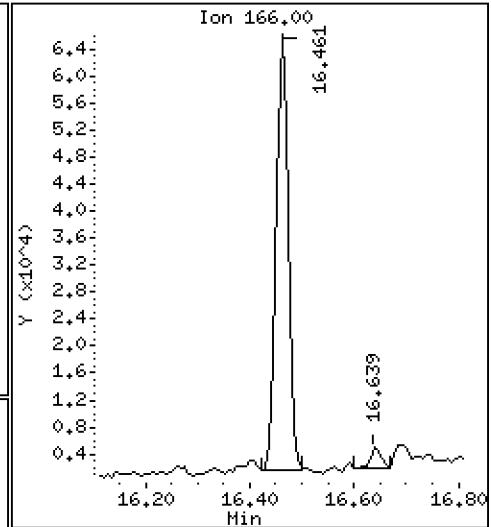
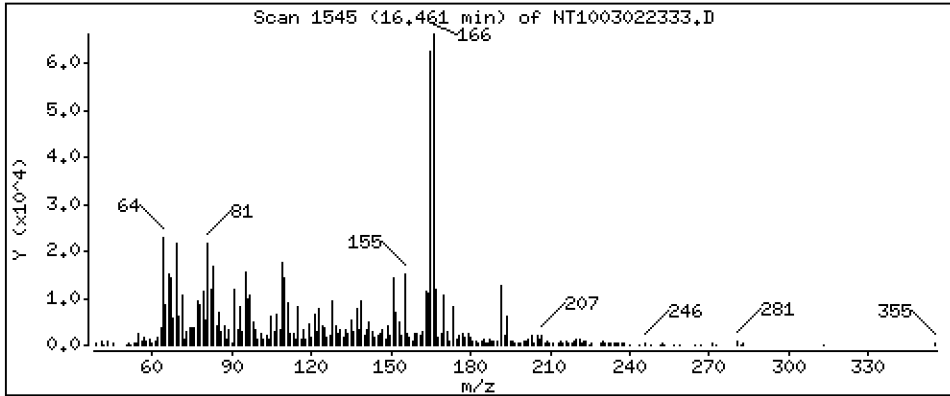
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 0,3074 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

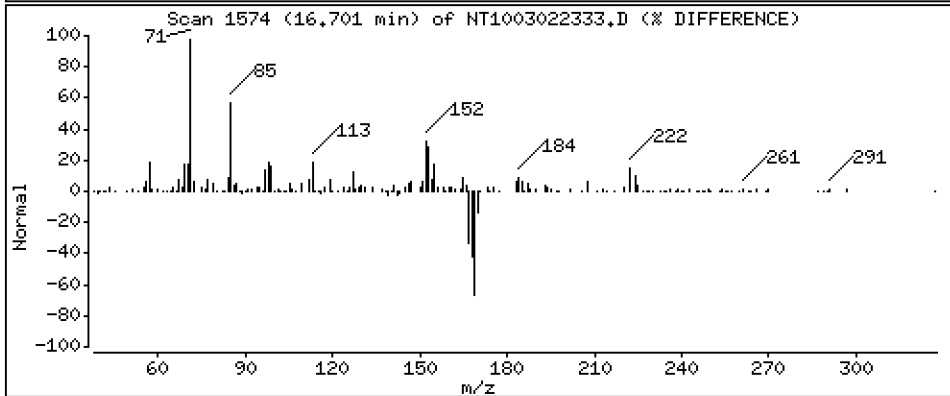
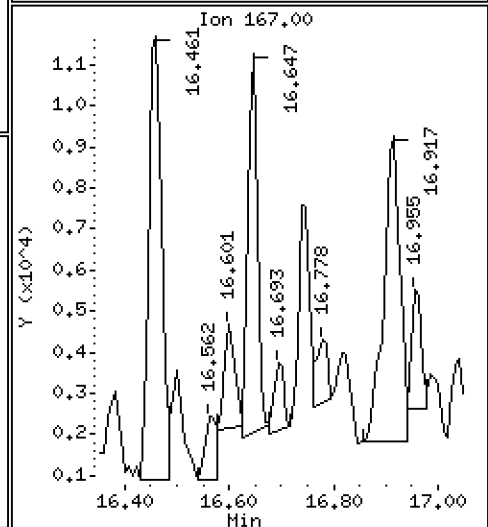
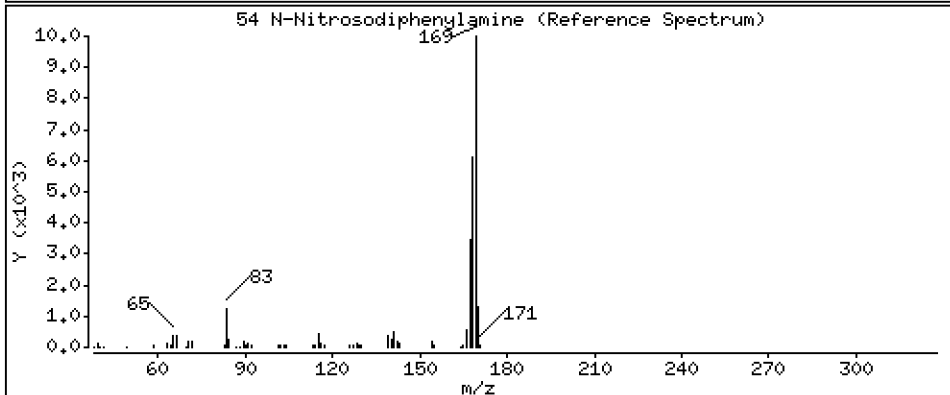
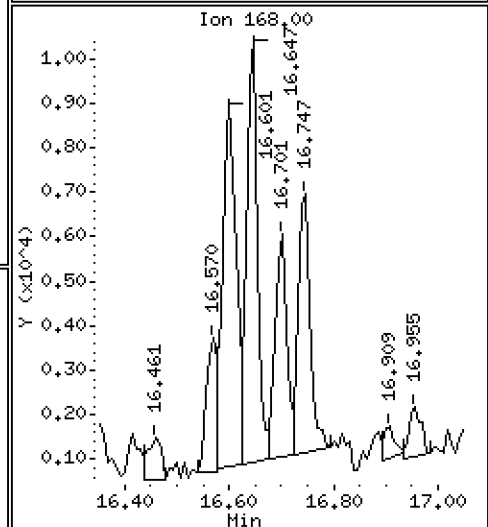
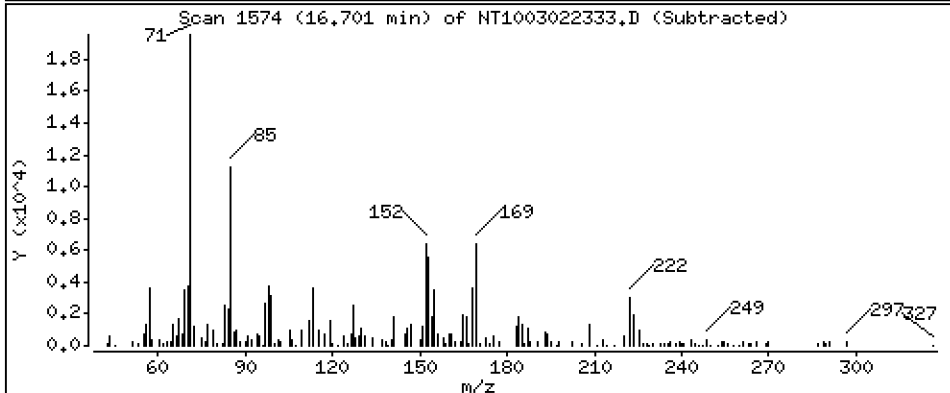
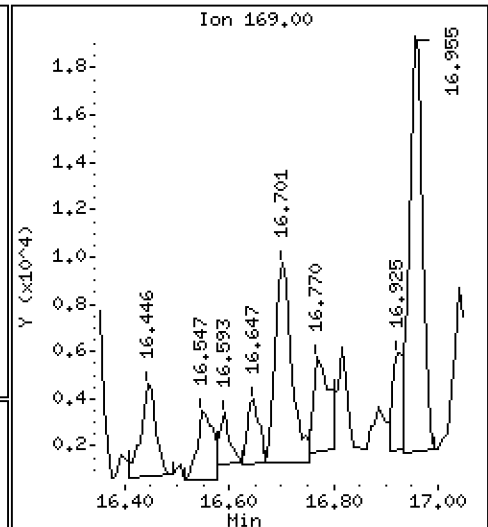
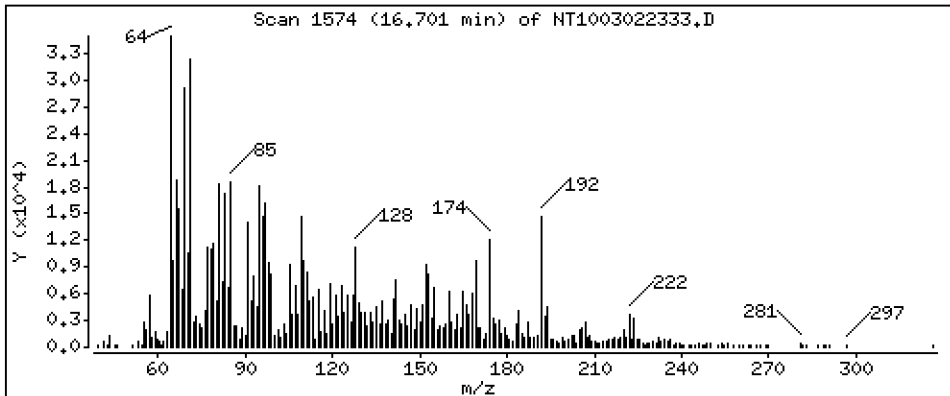
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.07178 ug/mL



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Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

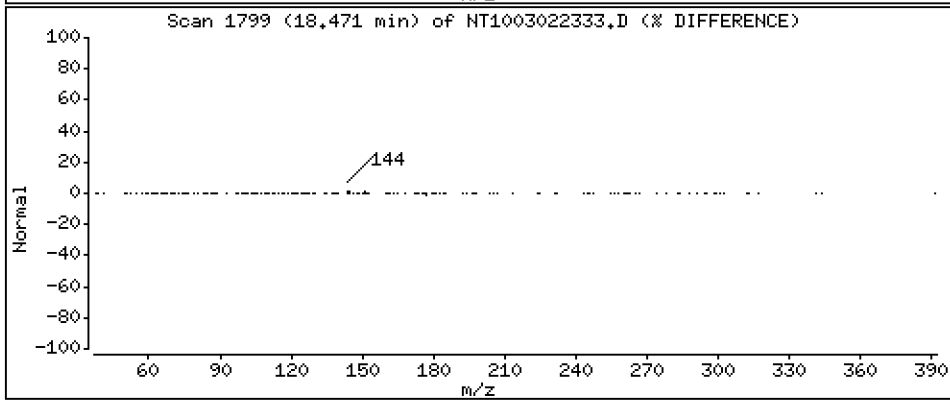
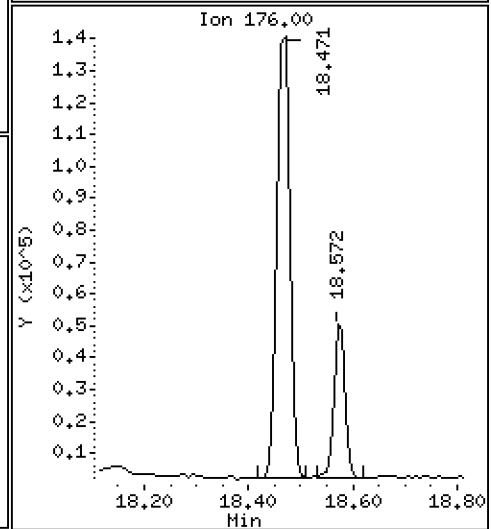
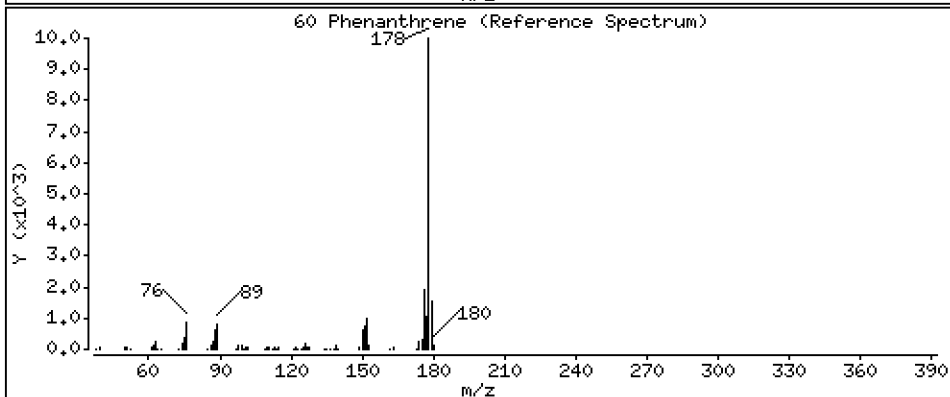
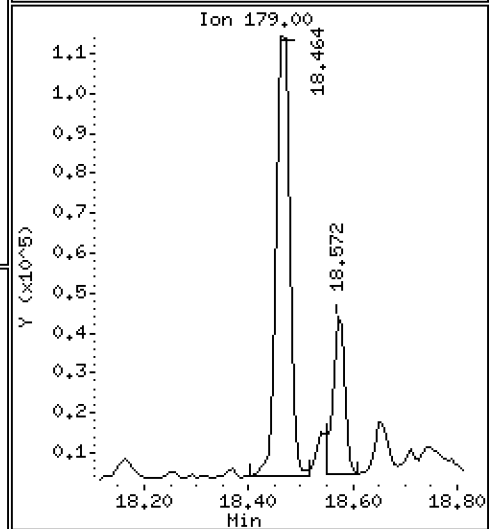
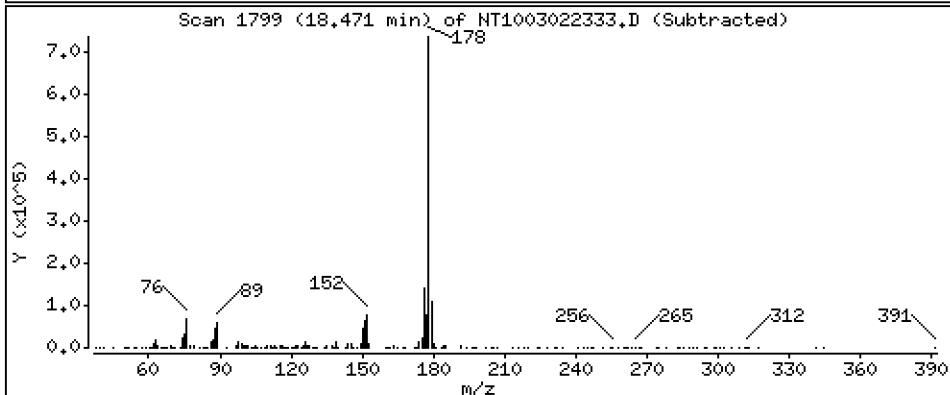
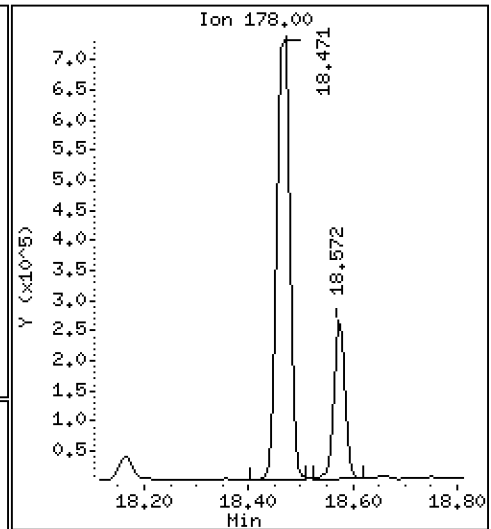
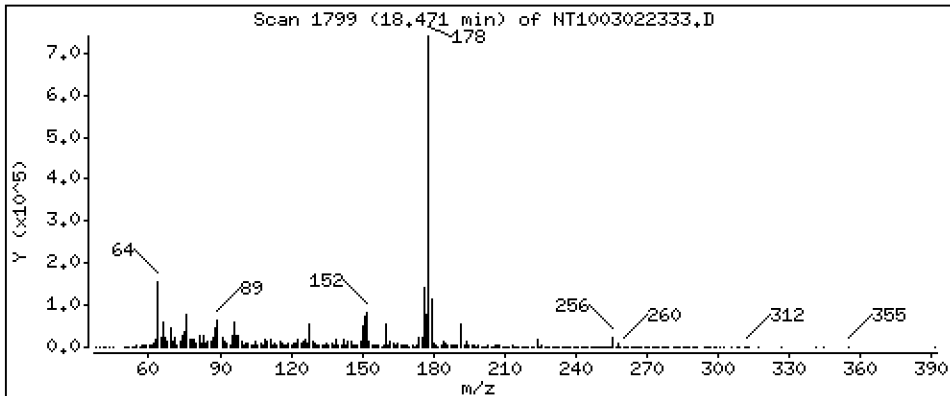
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 2,678 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

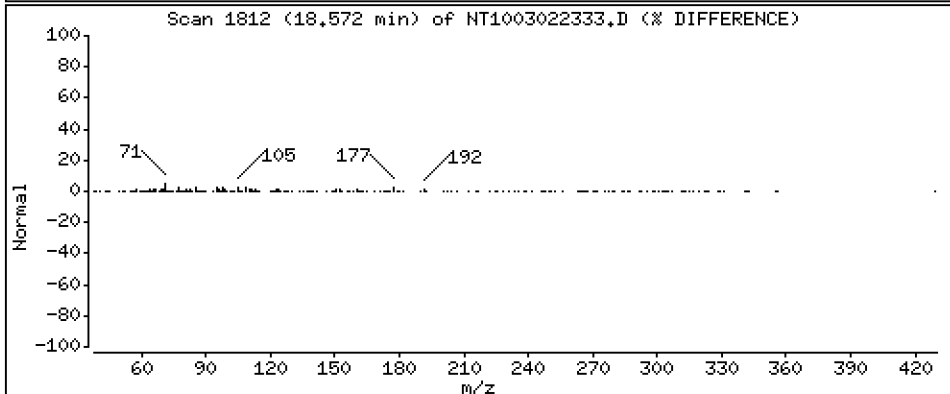
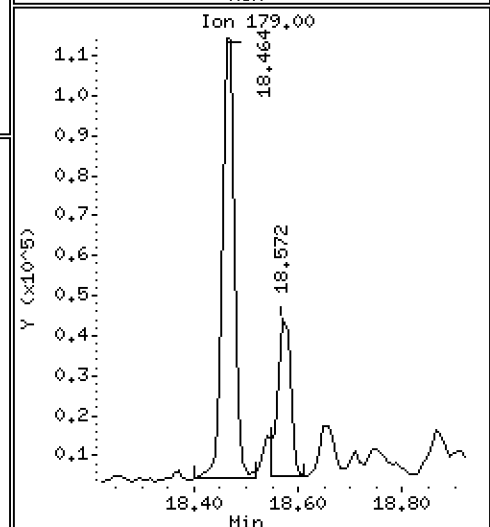
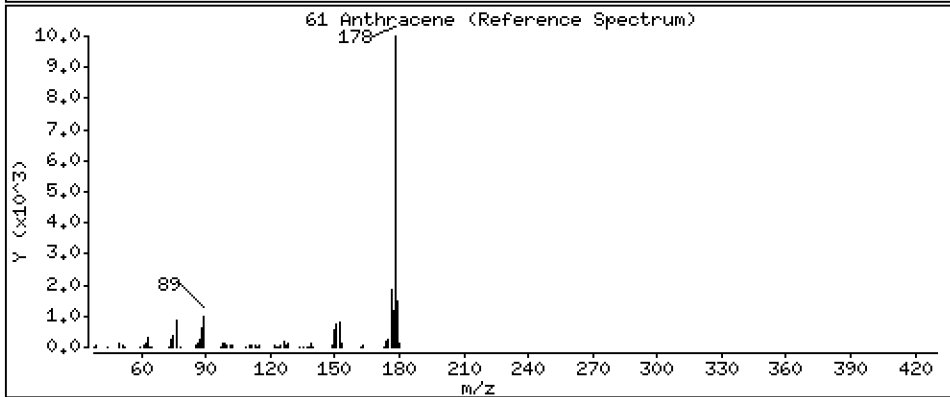
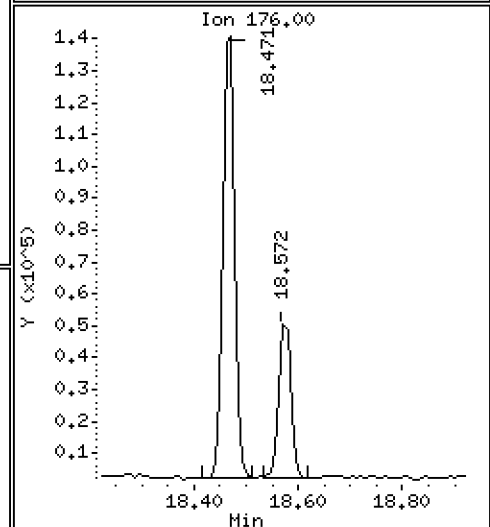
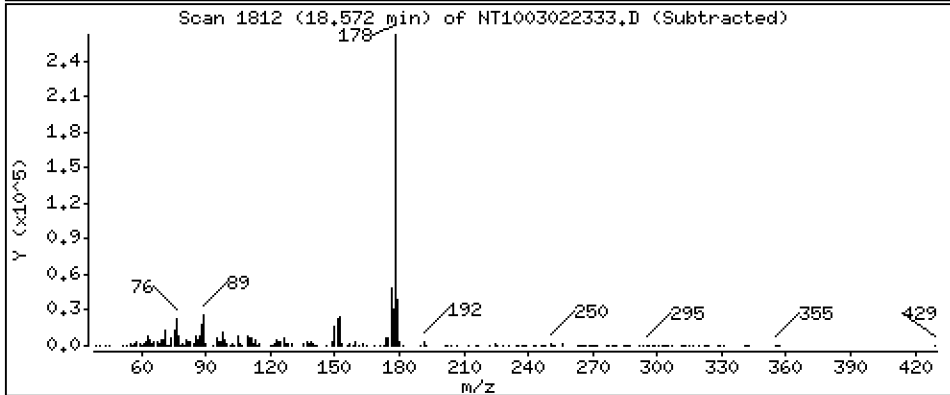
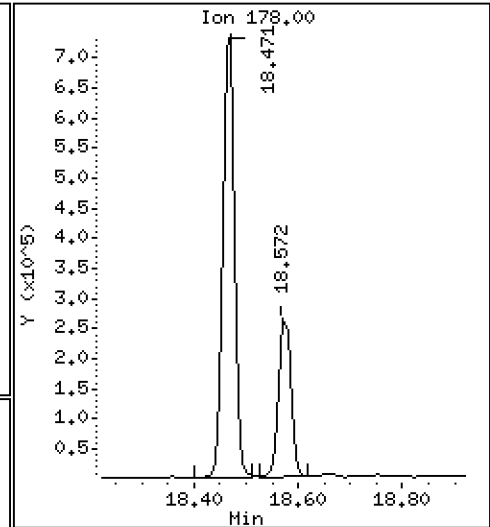
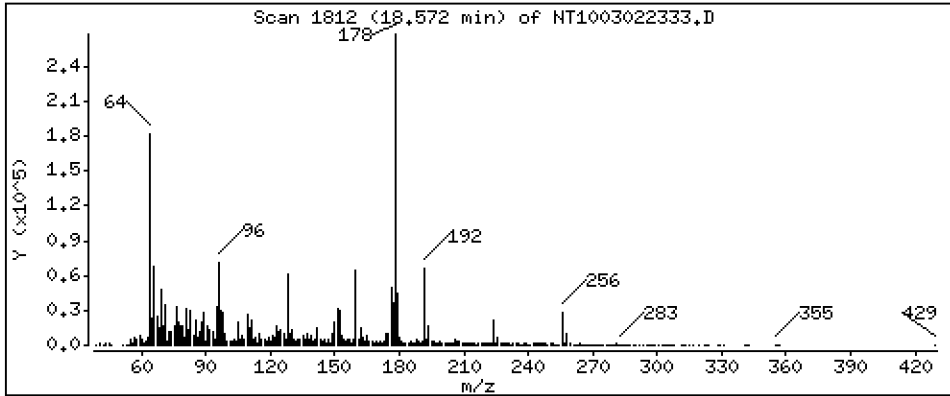
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,9442 ug/mL





Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

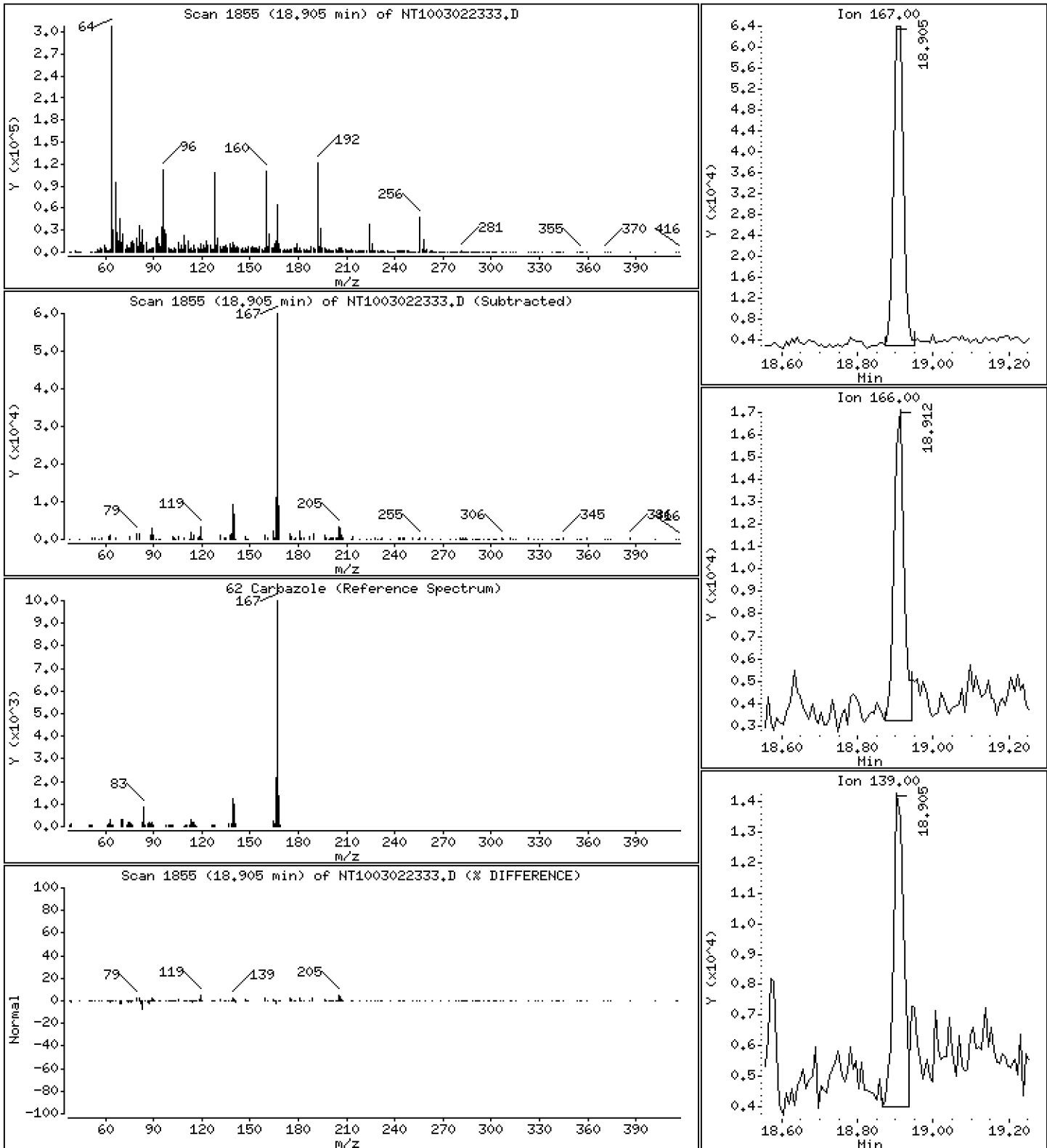
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,2582 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

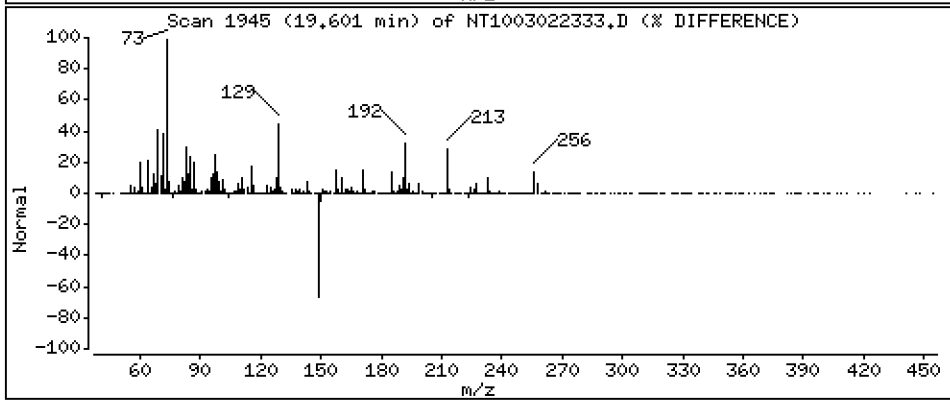
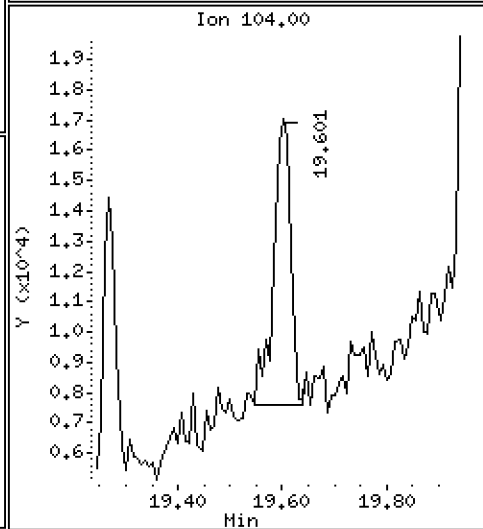
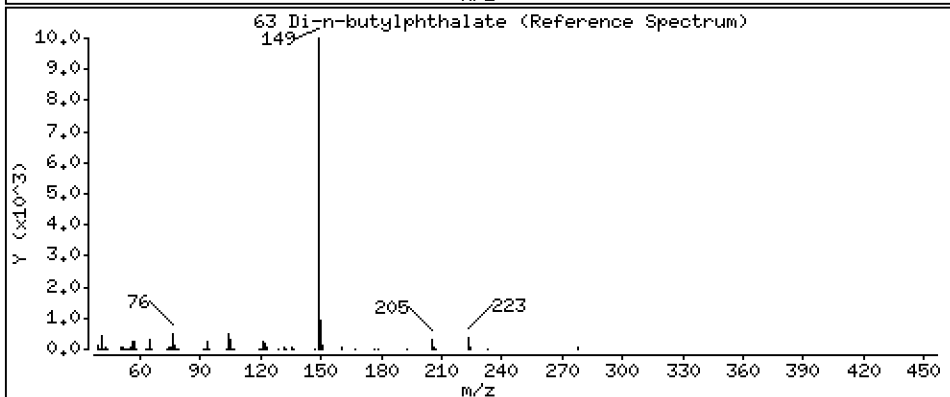
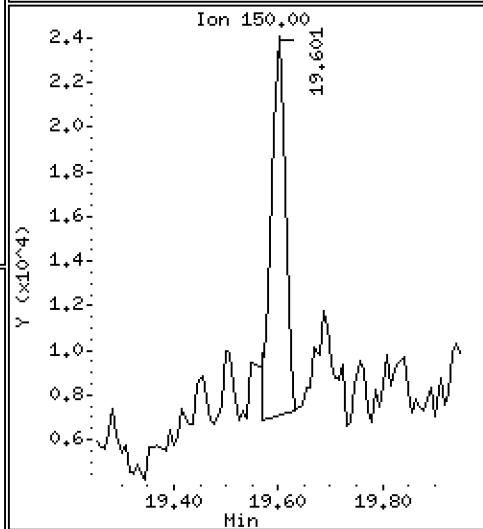
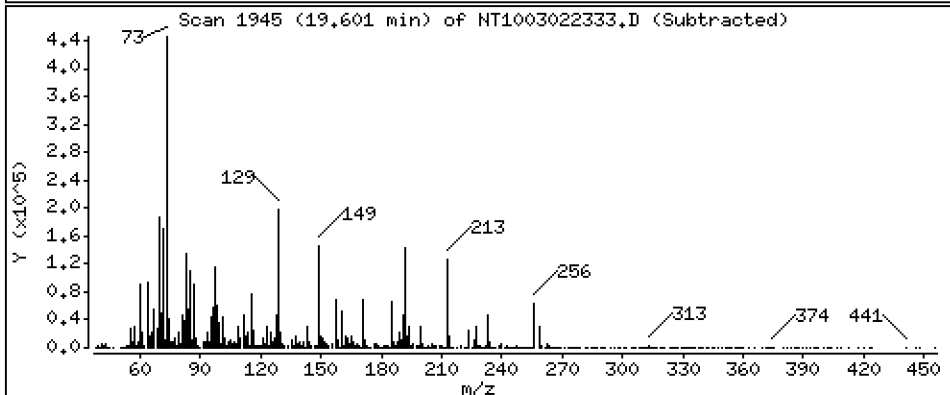
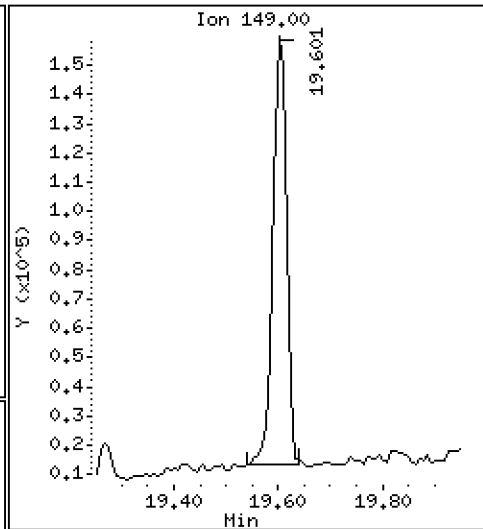
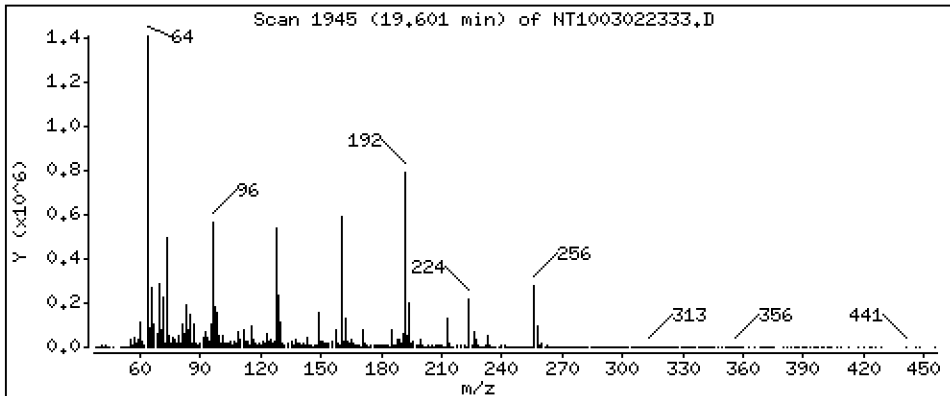
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.4746 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

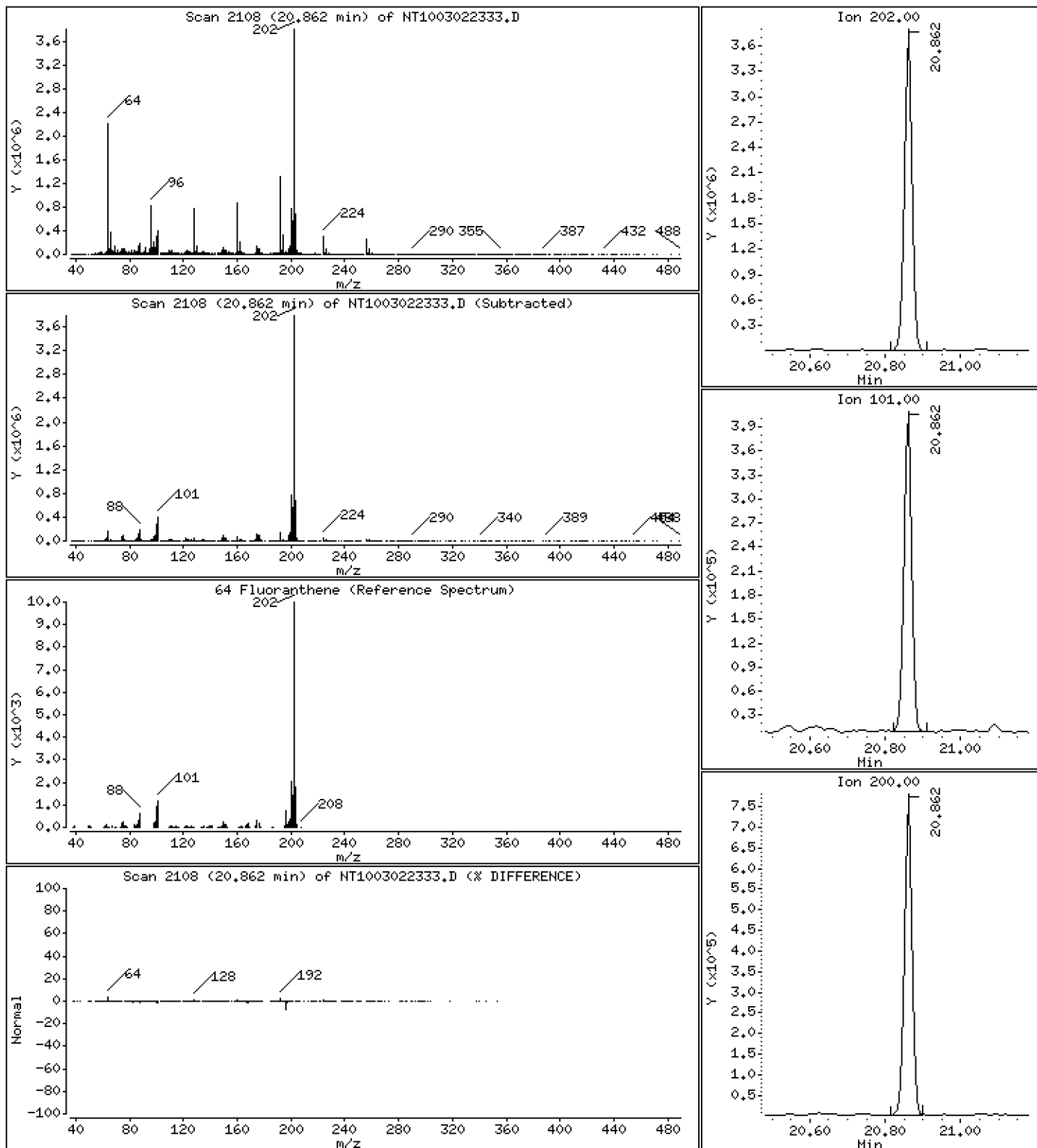
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 7,709 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

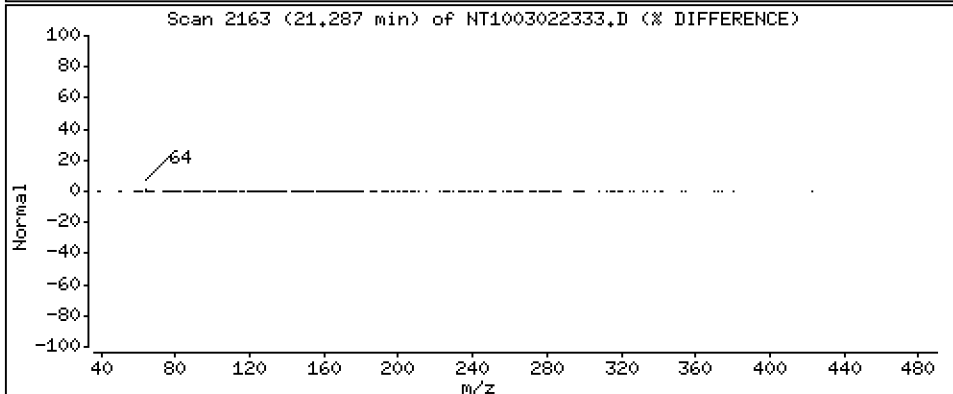
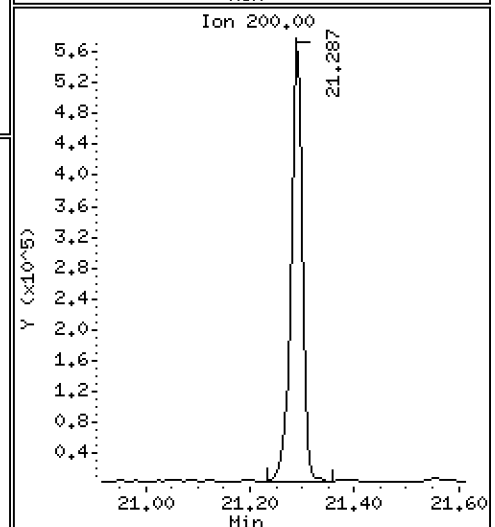
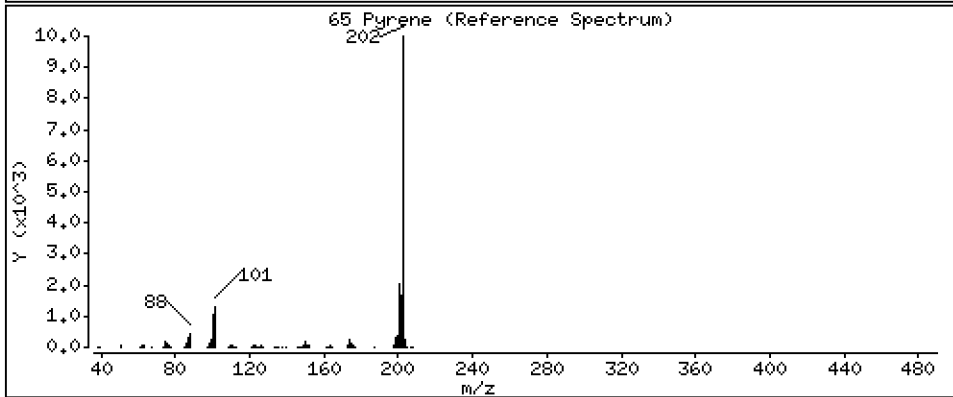
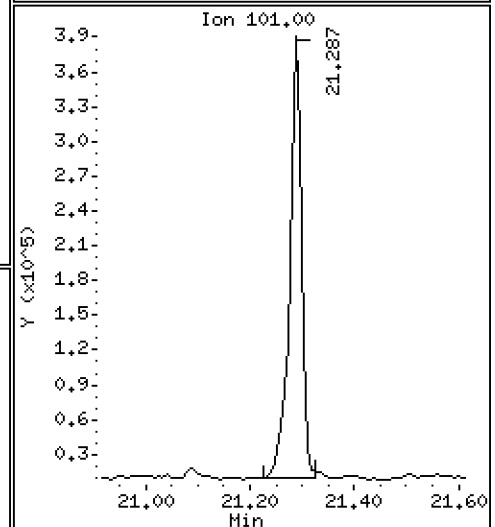
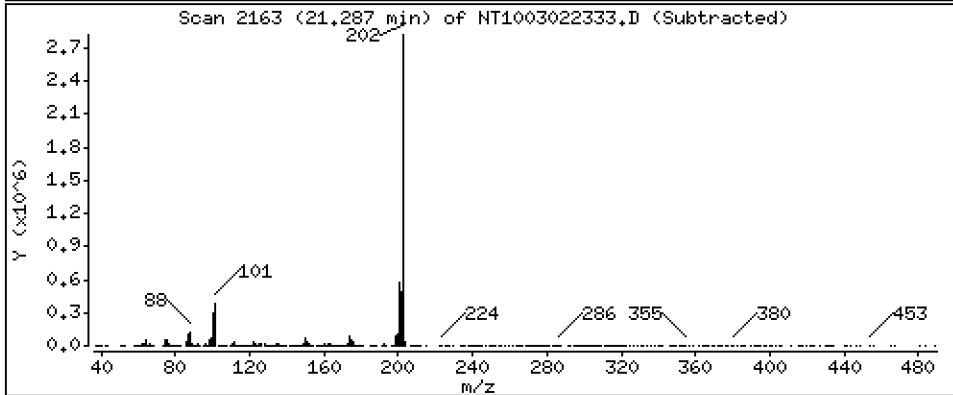
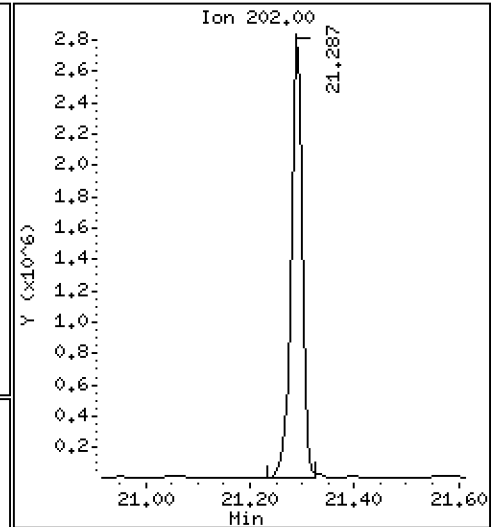
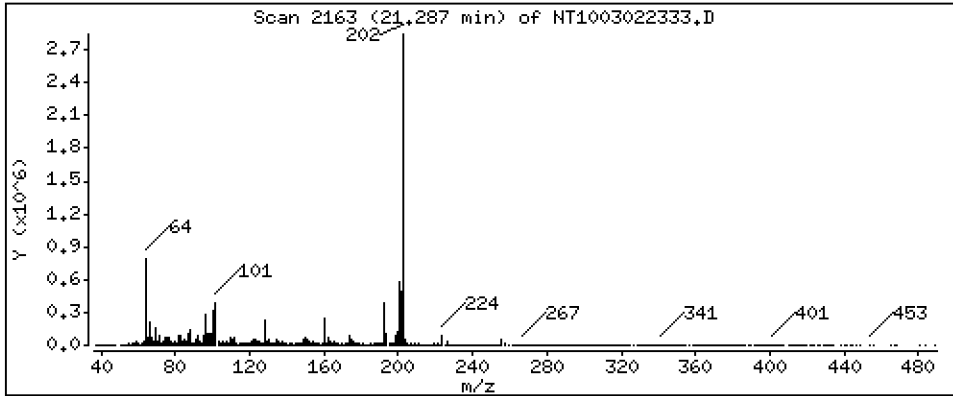
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 5,920 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

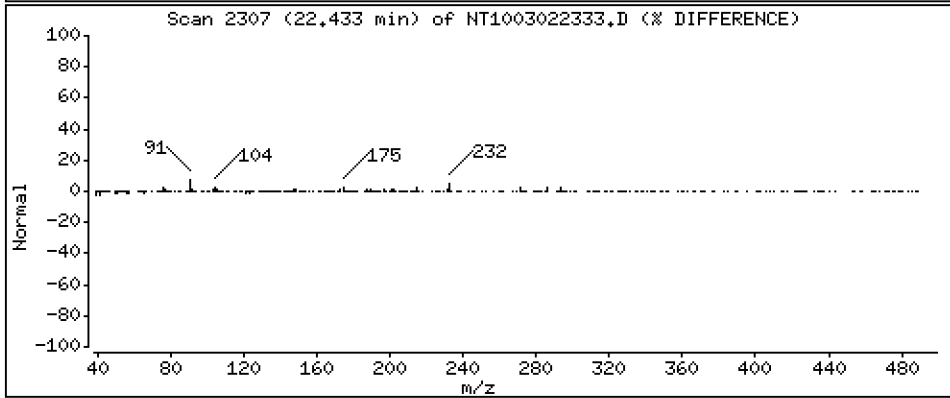
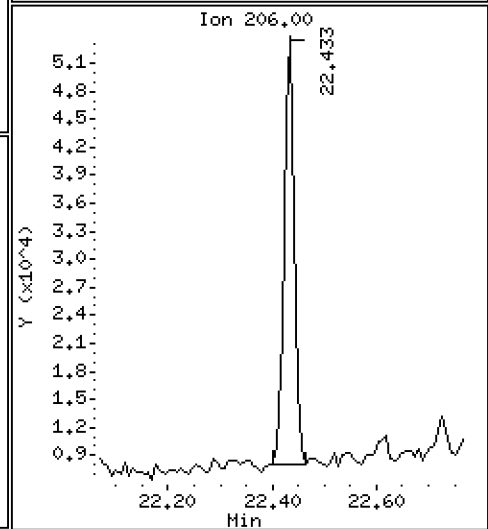
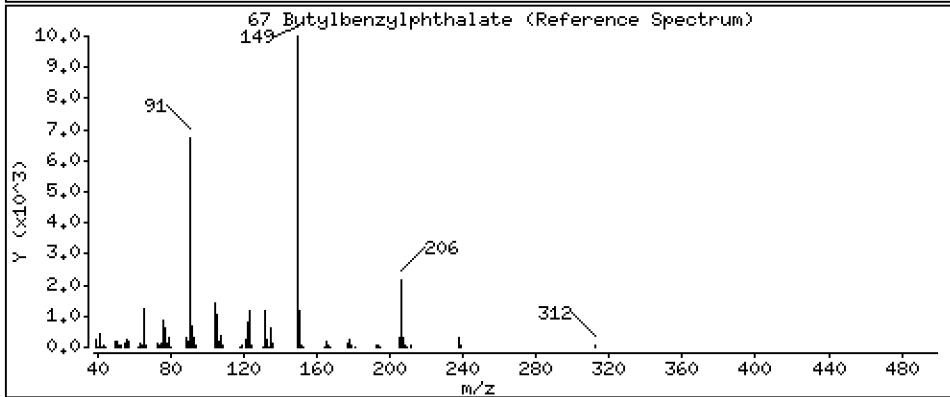
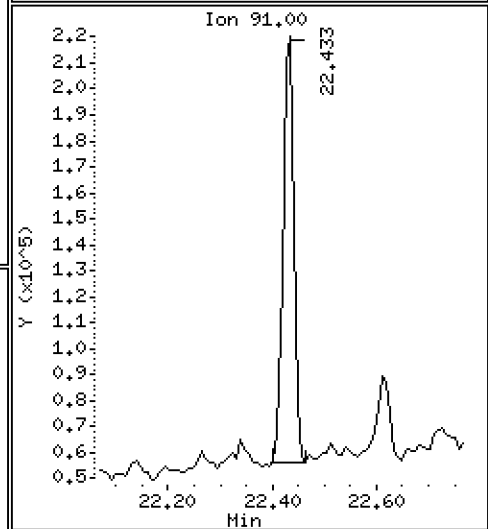
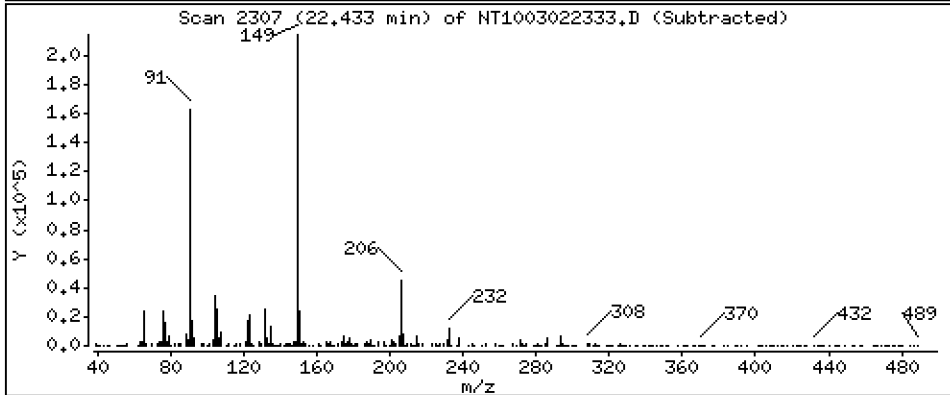
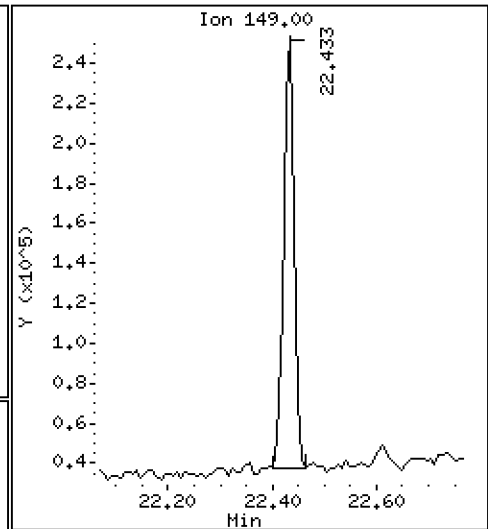
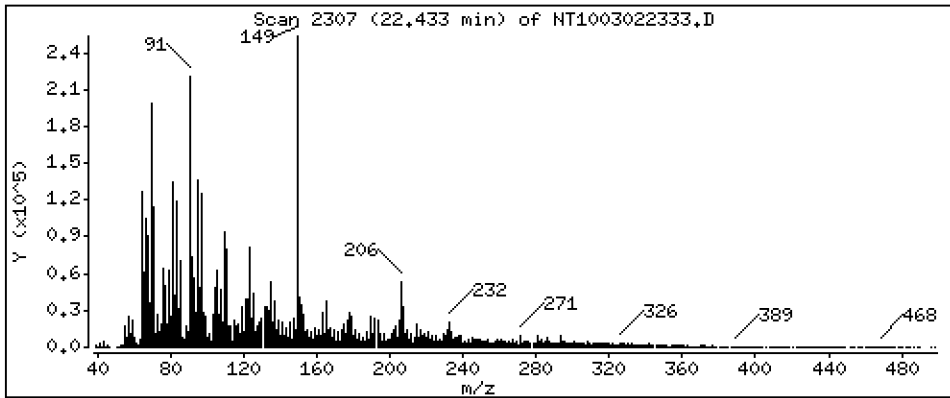
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,7869 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

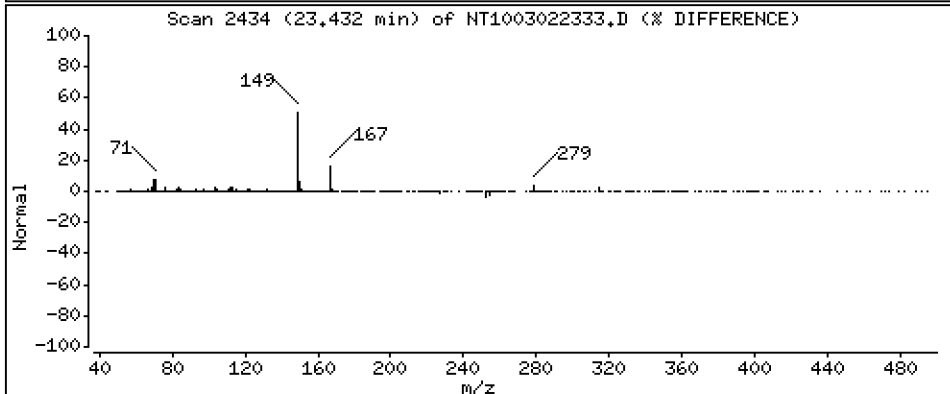
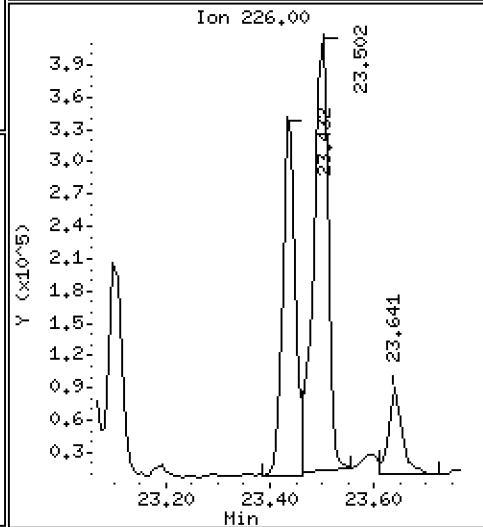
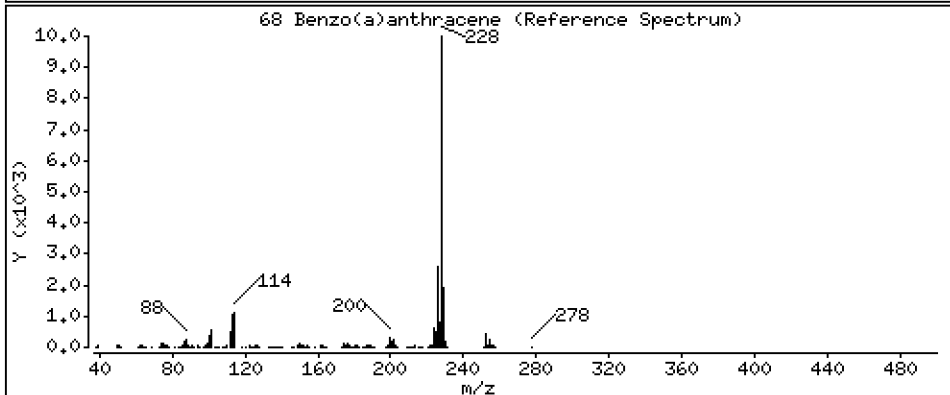
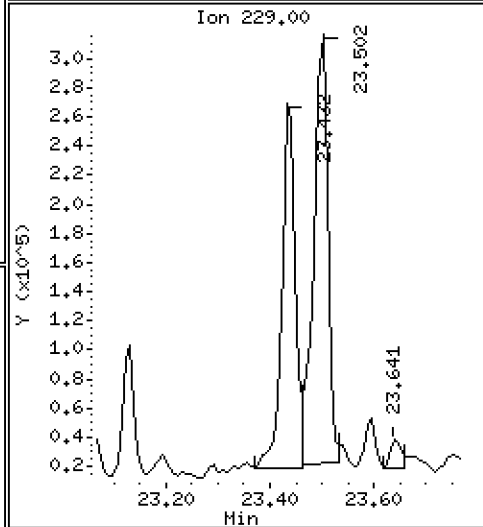
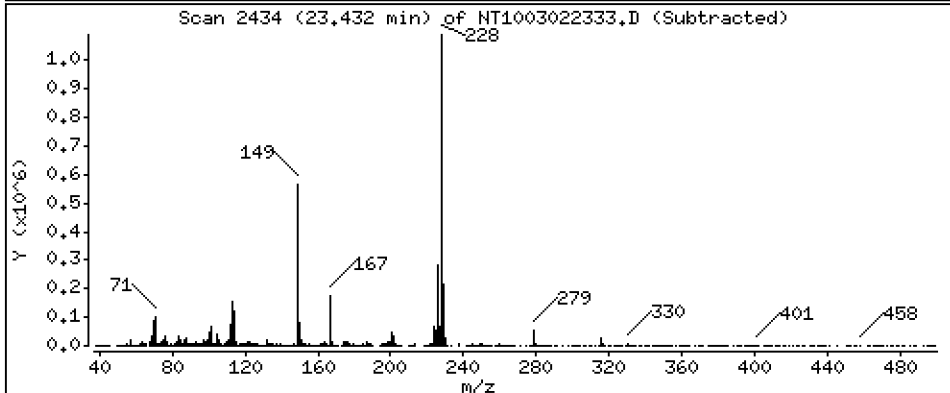
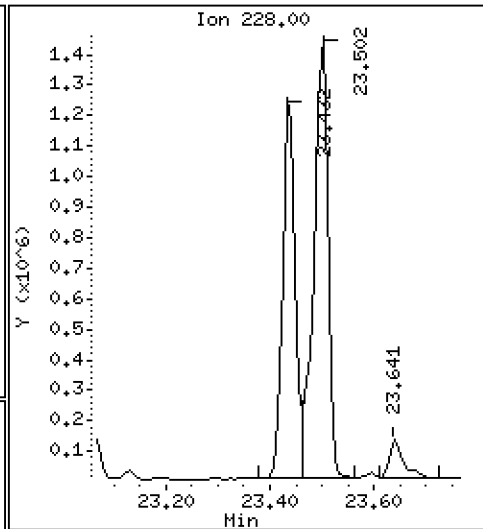
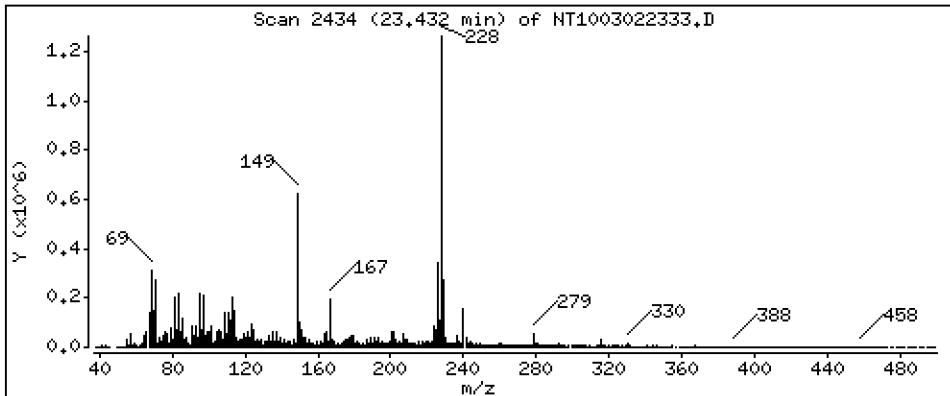
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 2,890 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

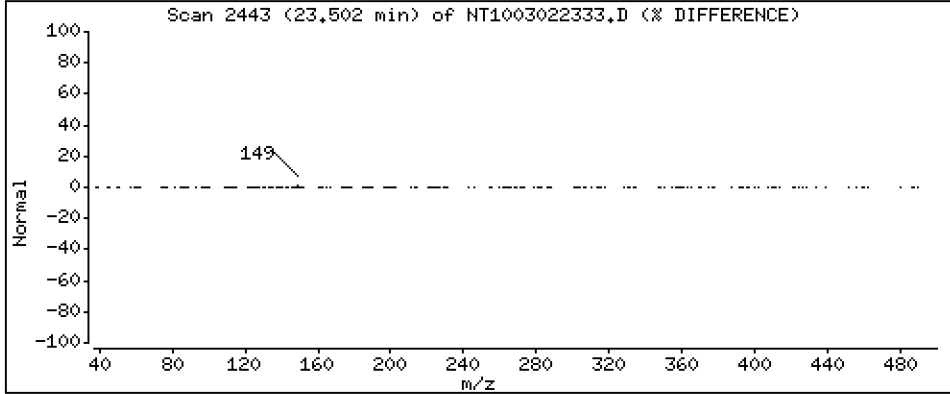
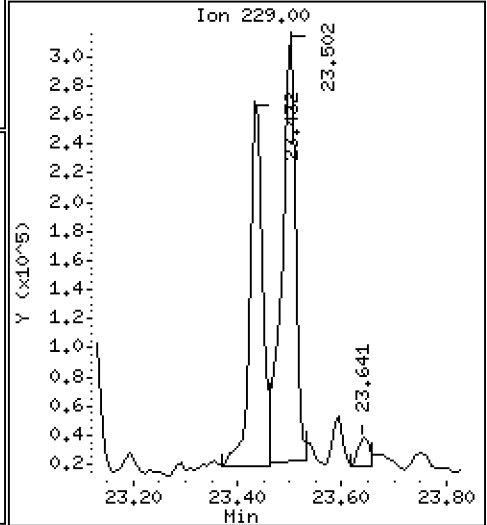
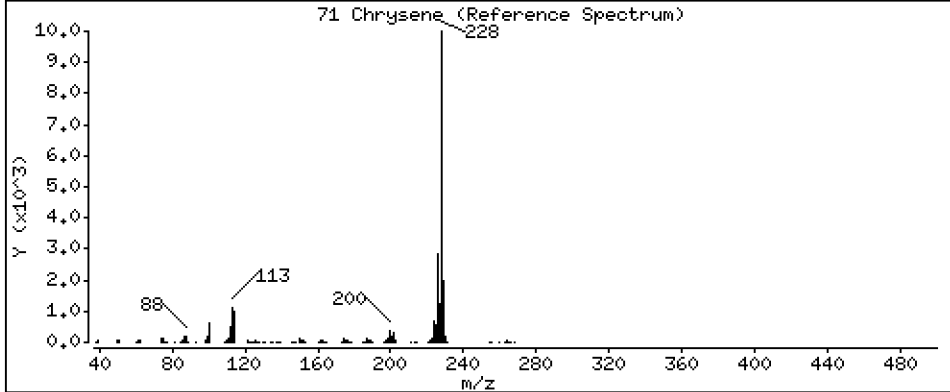
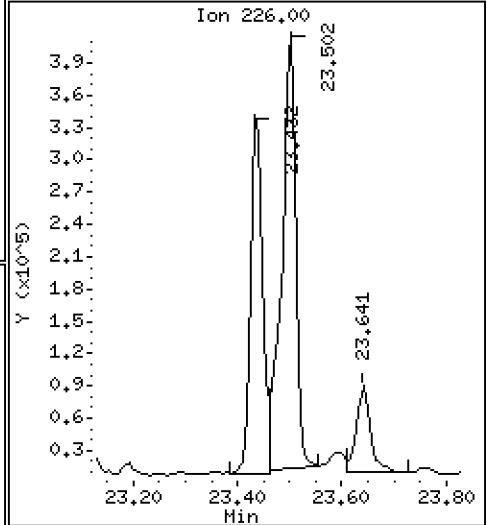
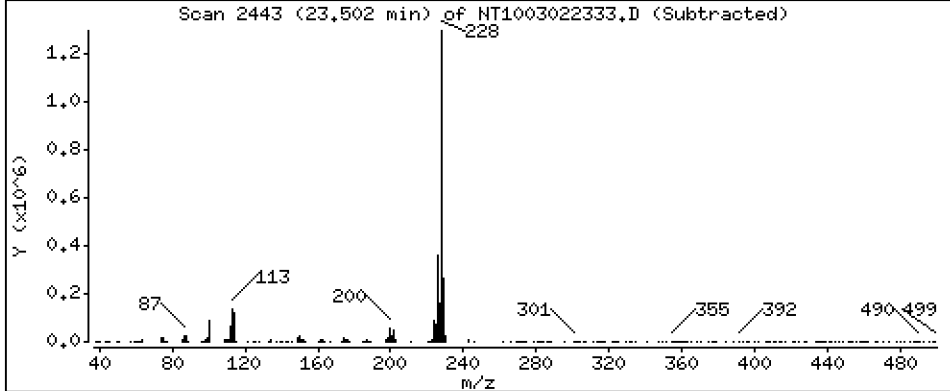
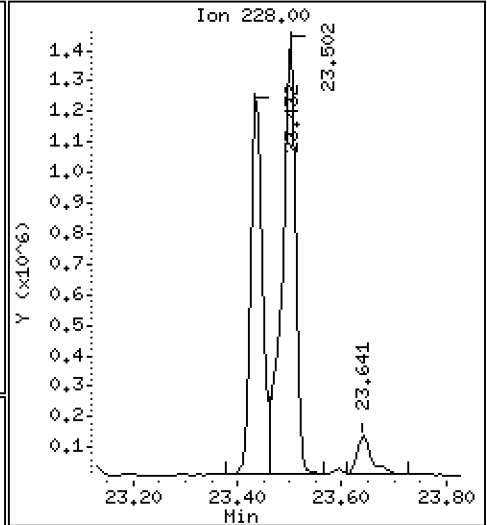
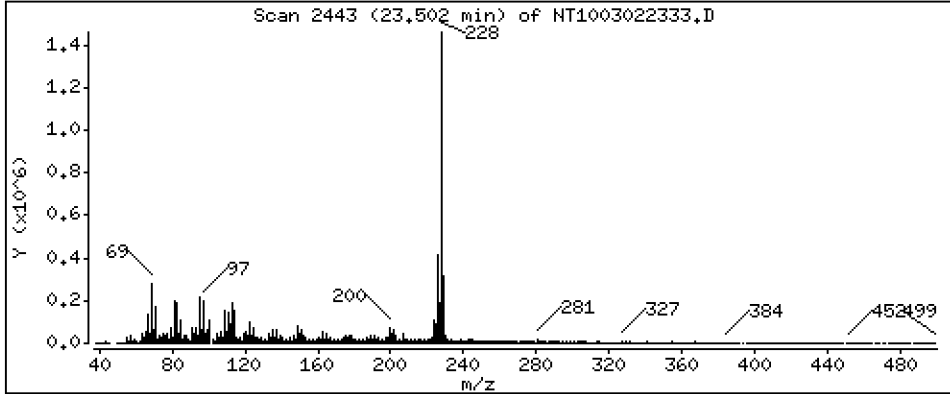
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,430 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

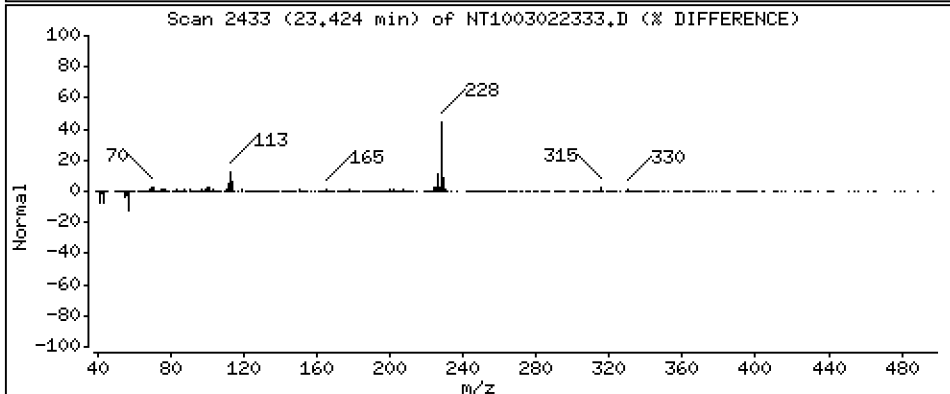
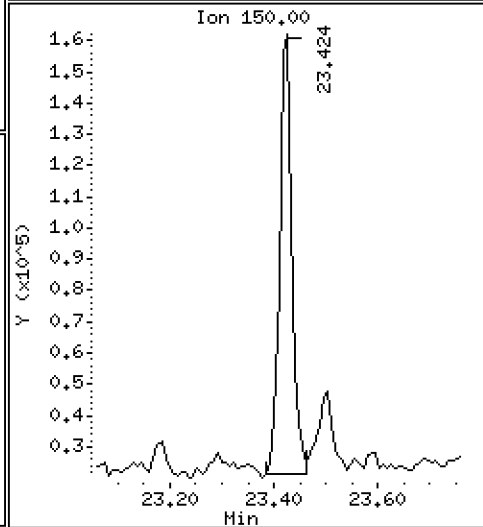
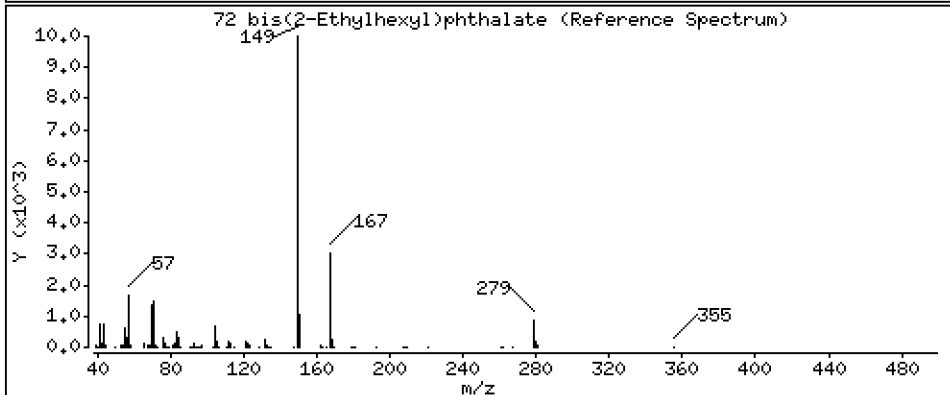
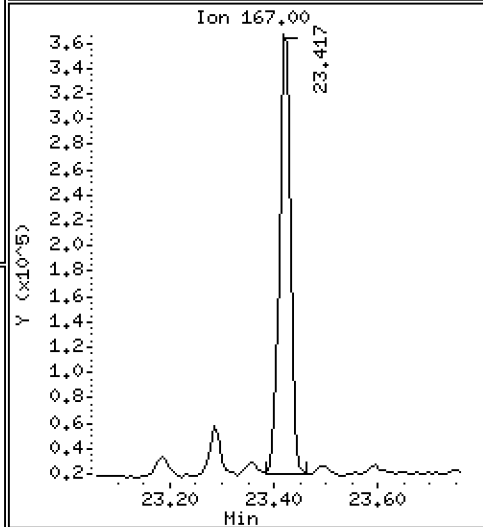
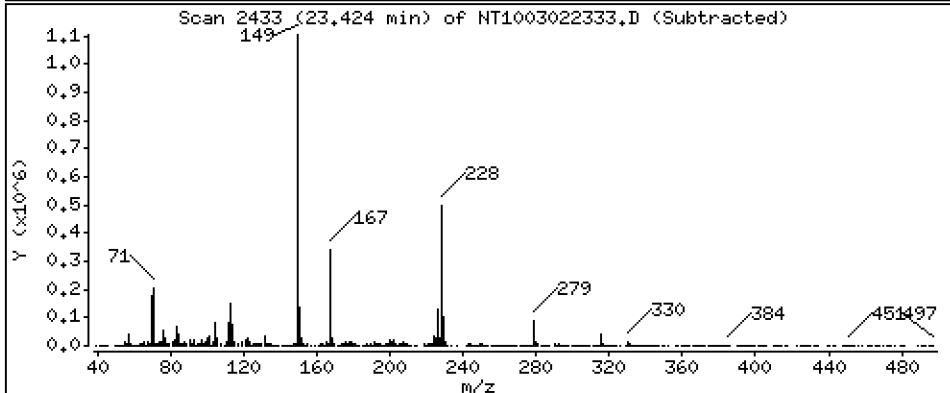
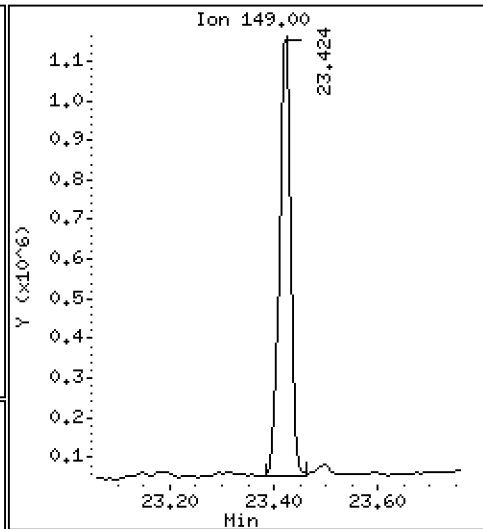
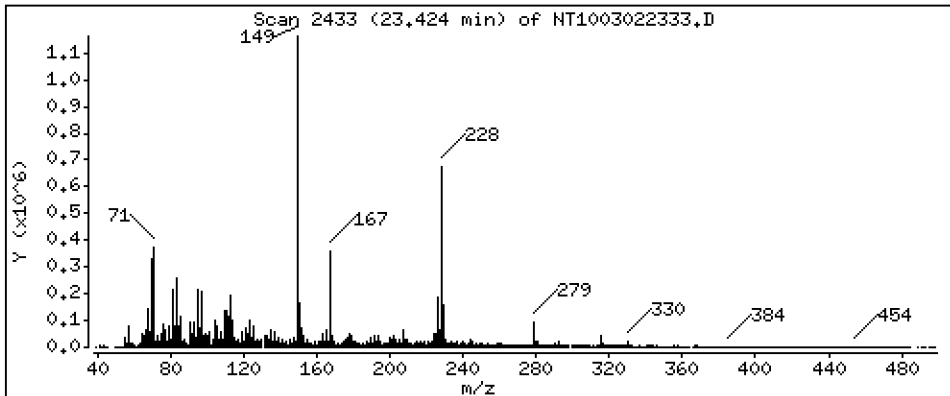
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 3,142 ug/mL





Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

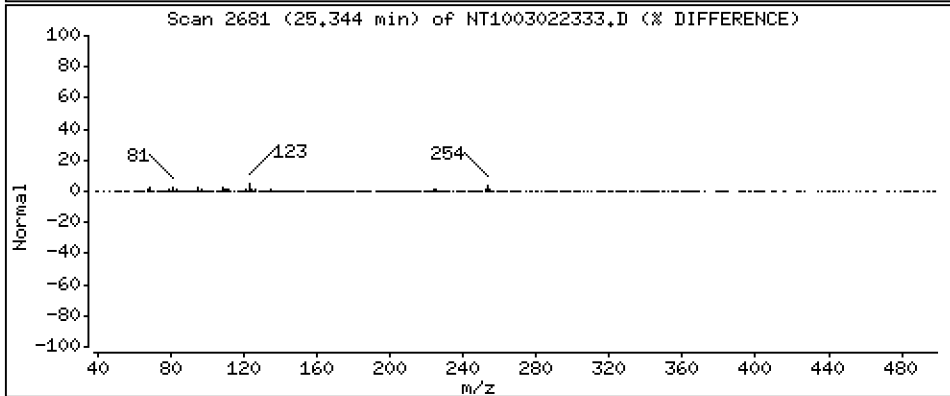
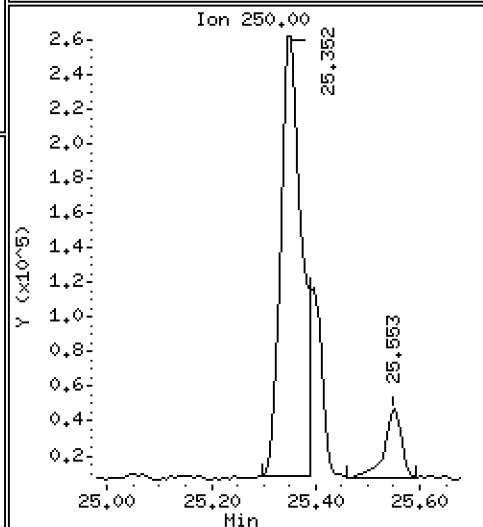
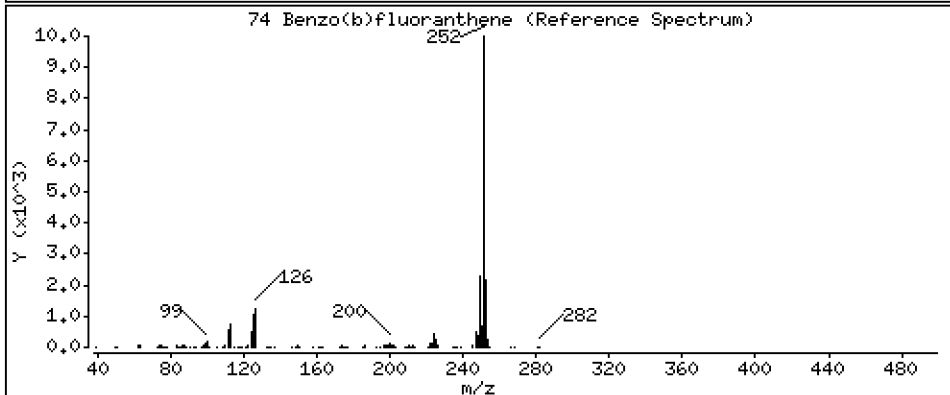
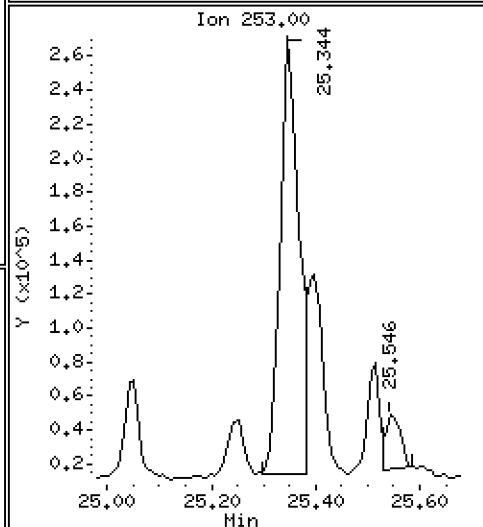
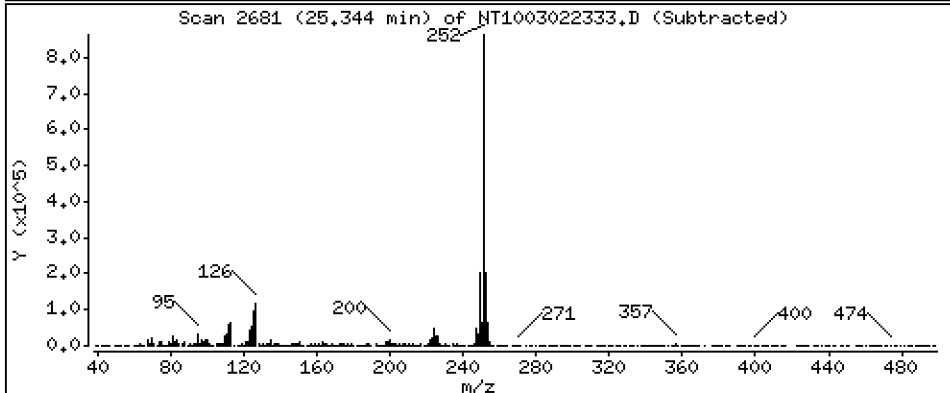
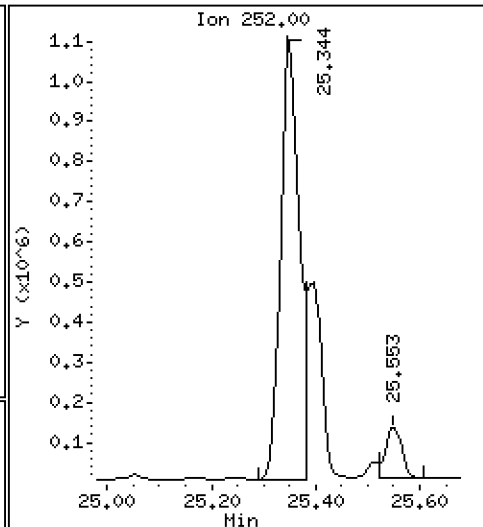
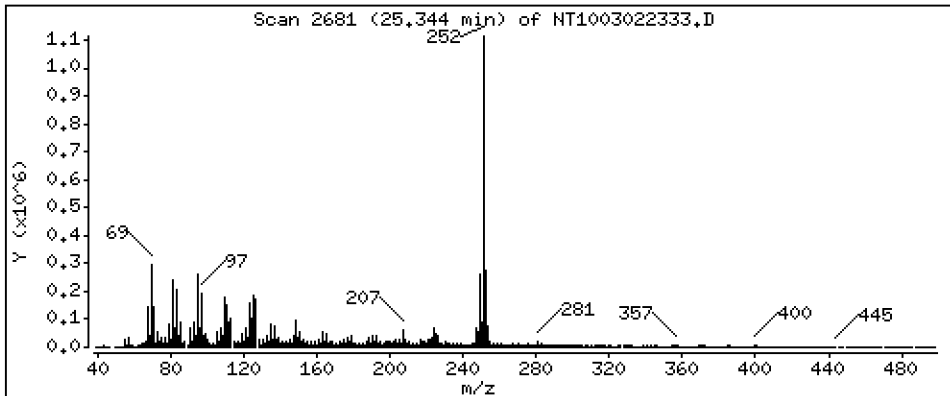
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 3,888 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

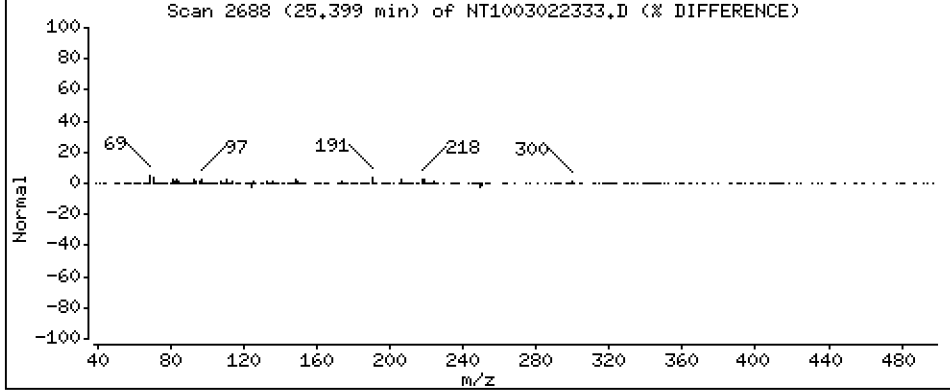
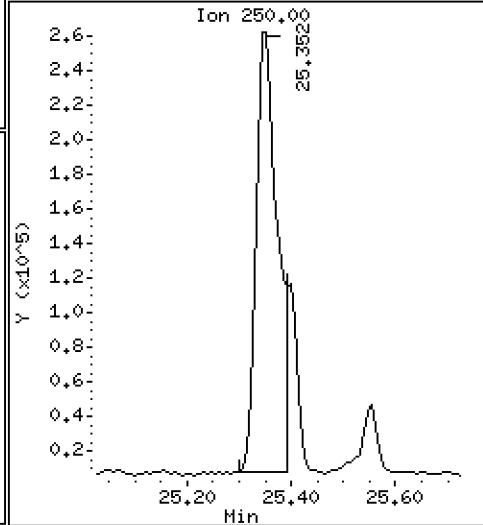
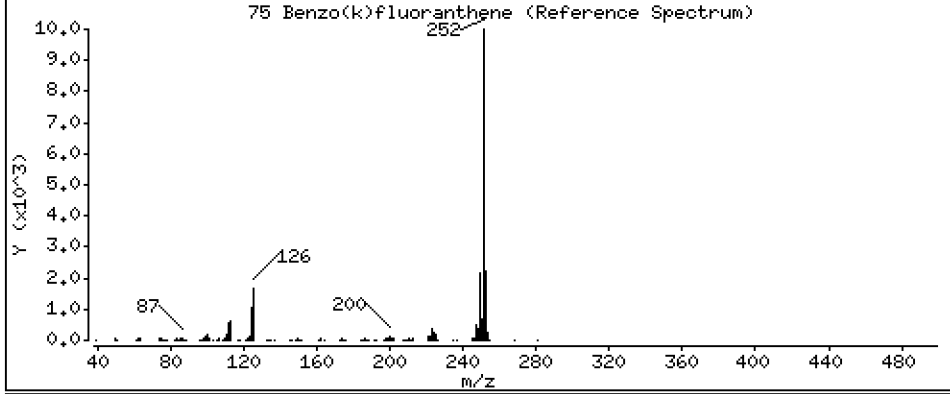
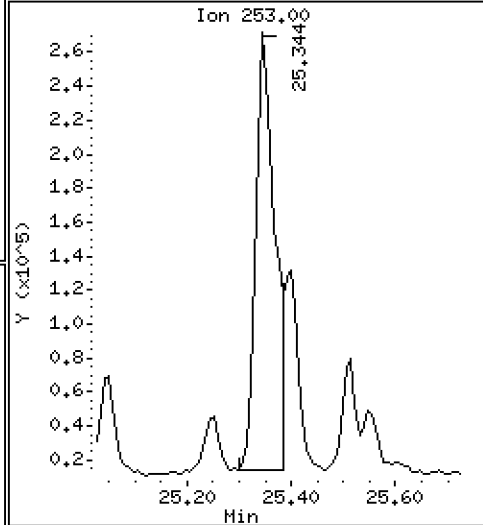
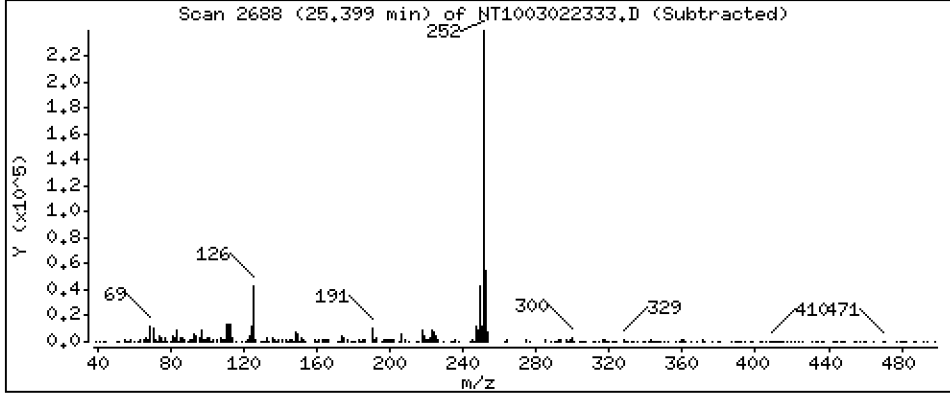
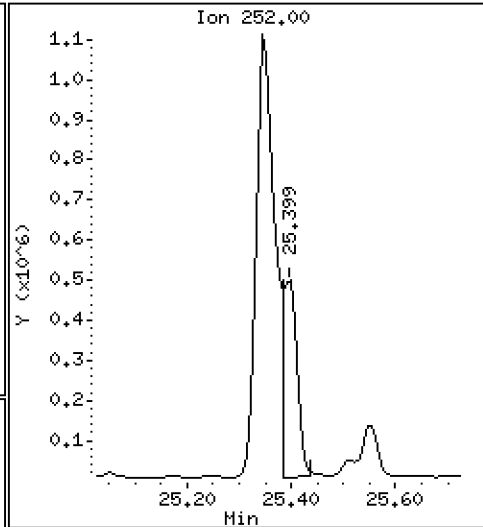
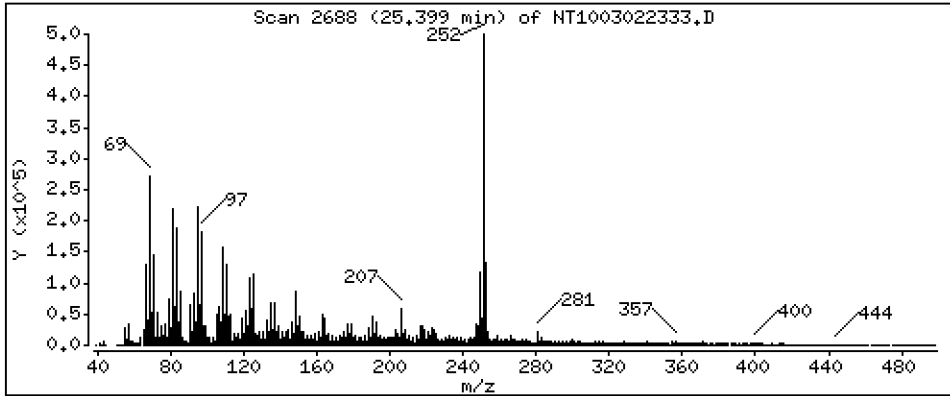
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 1,464 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

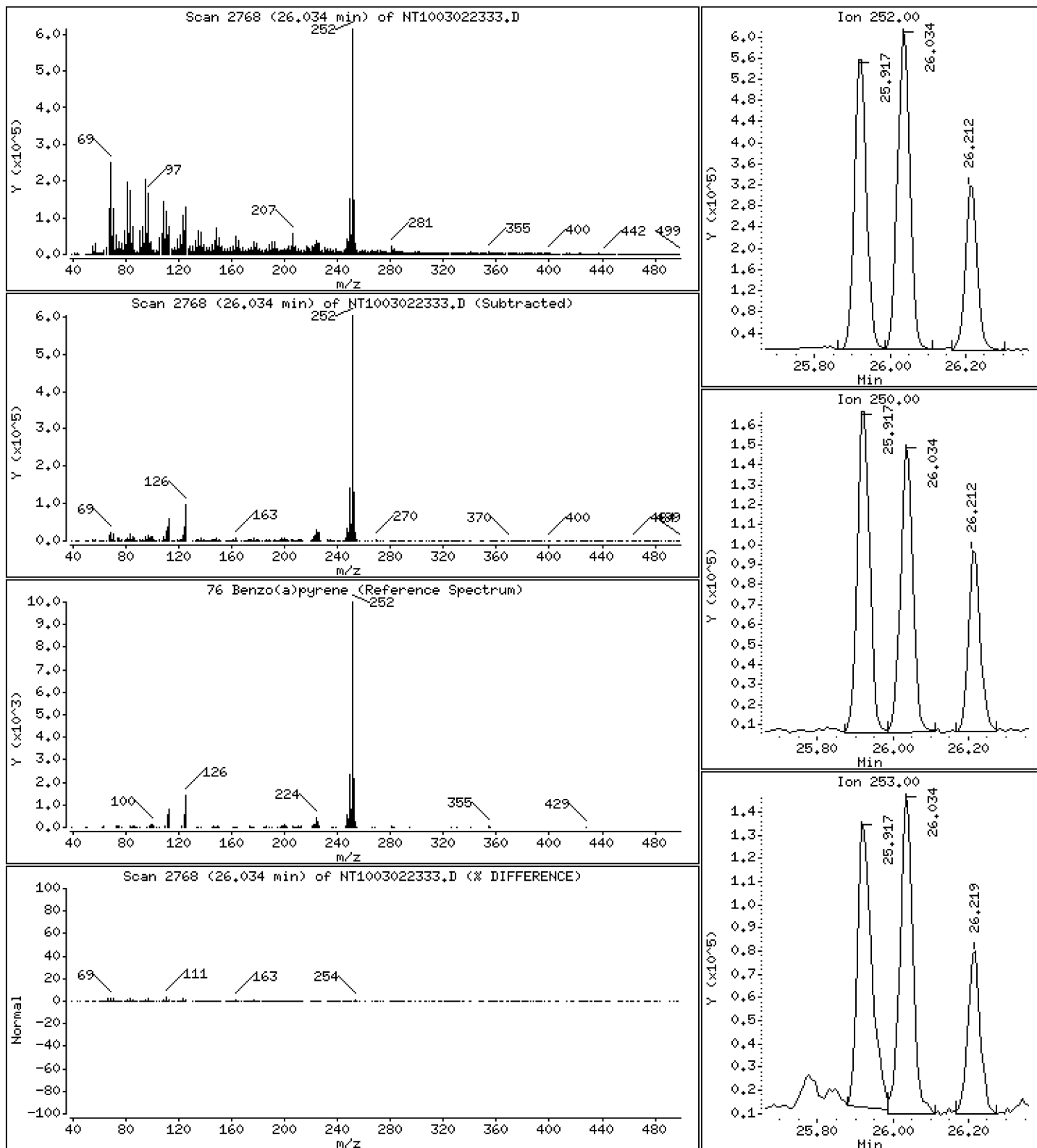
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 2,112 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

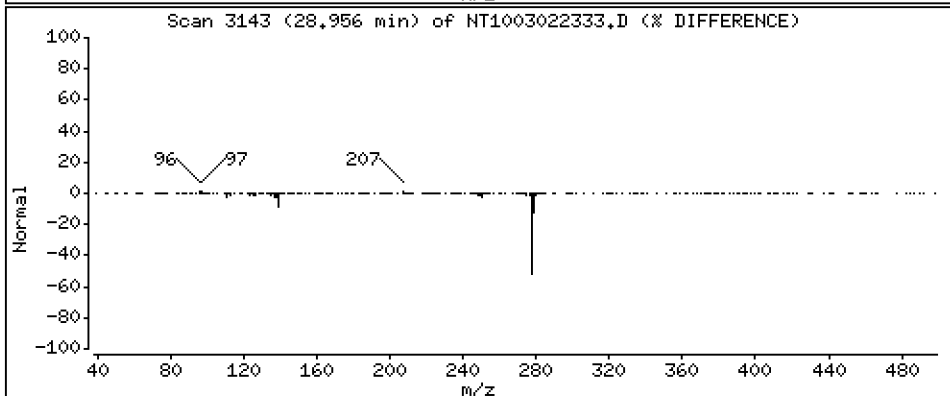
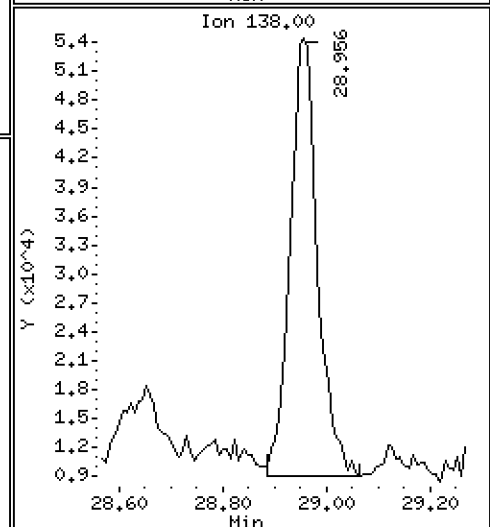
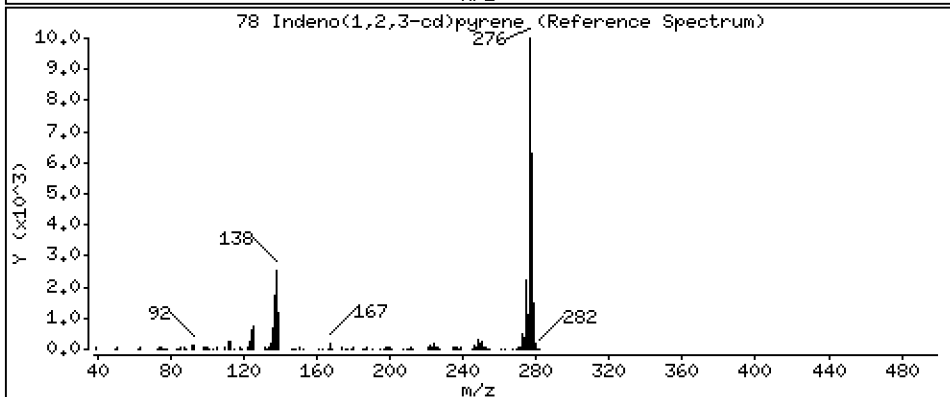
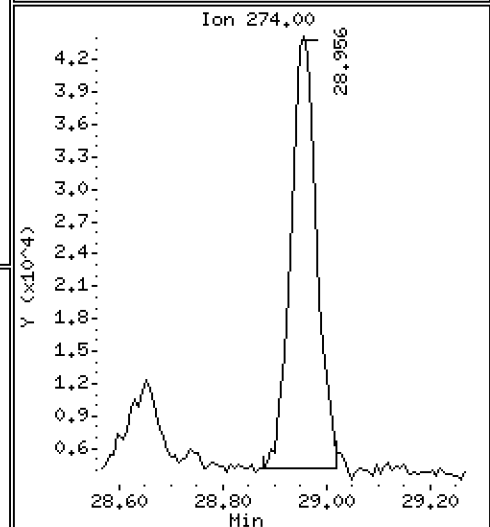
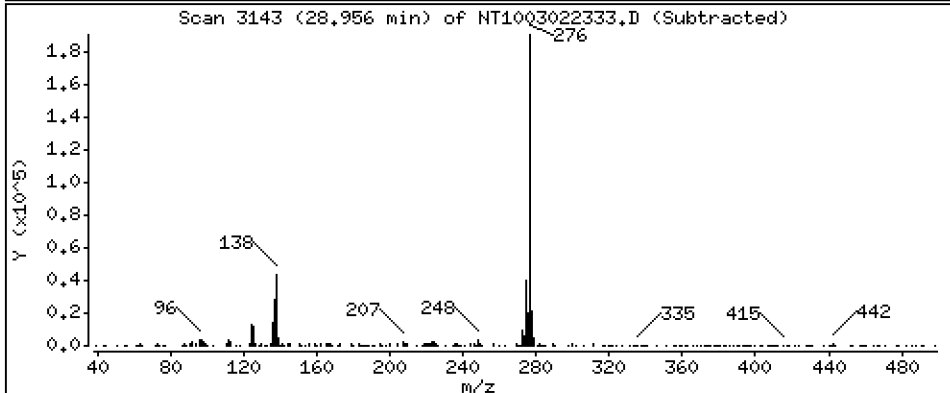
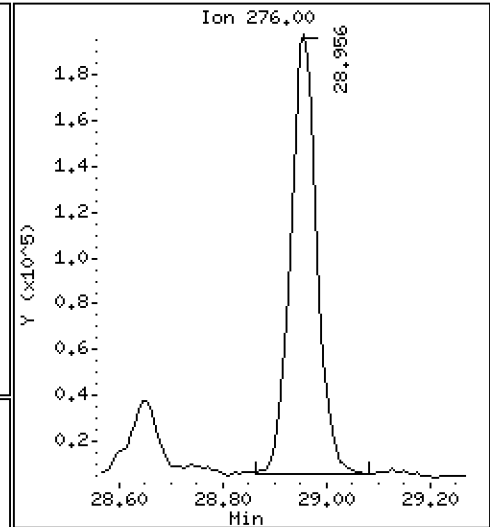
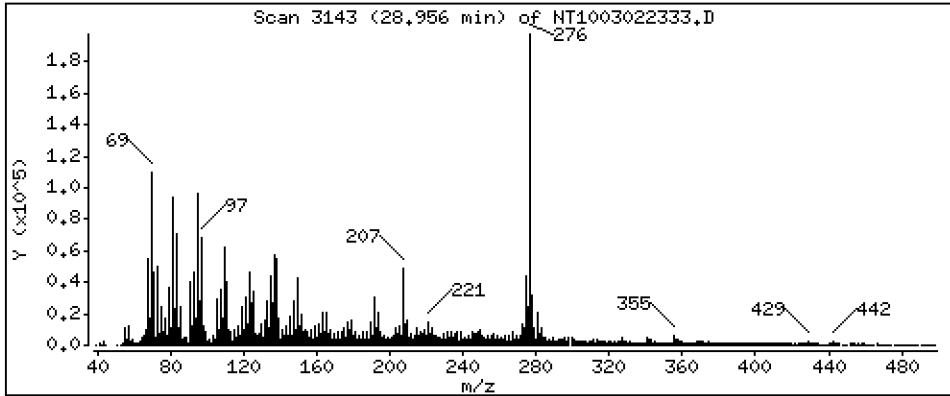
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,9315 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

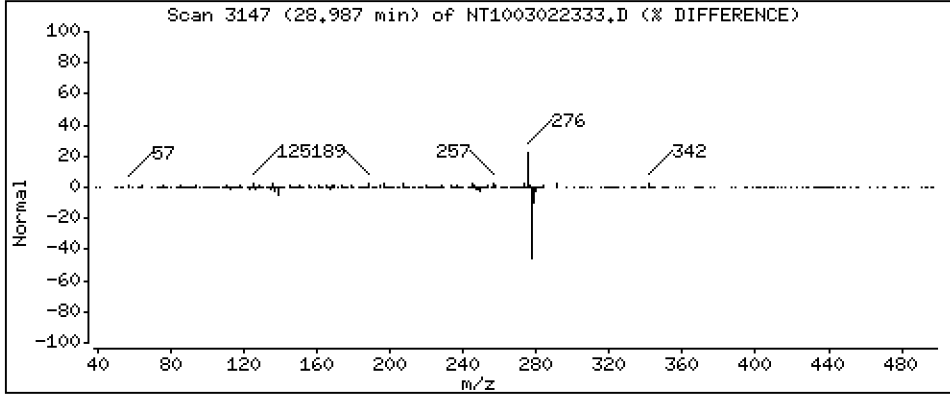
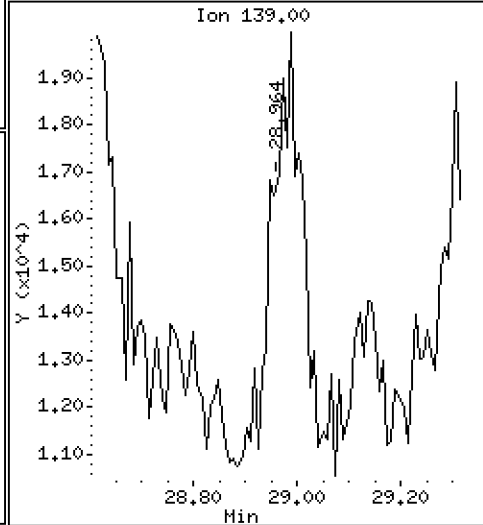
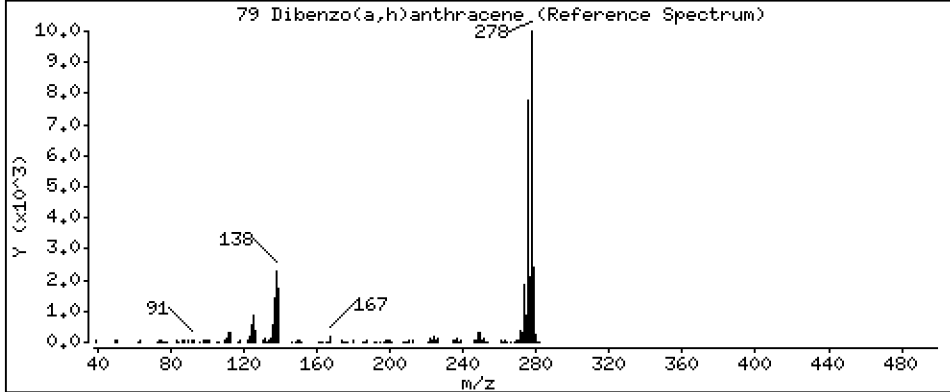
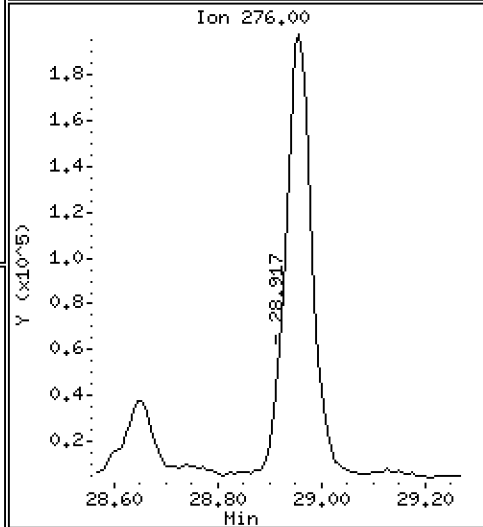
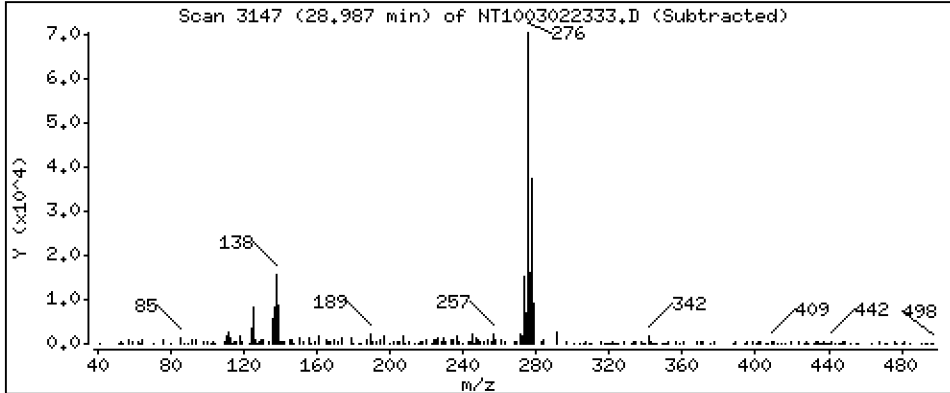
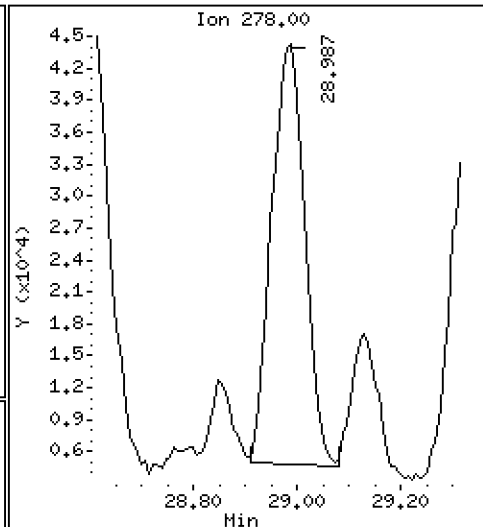
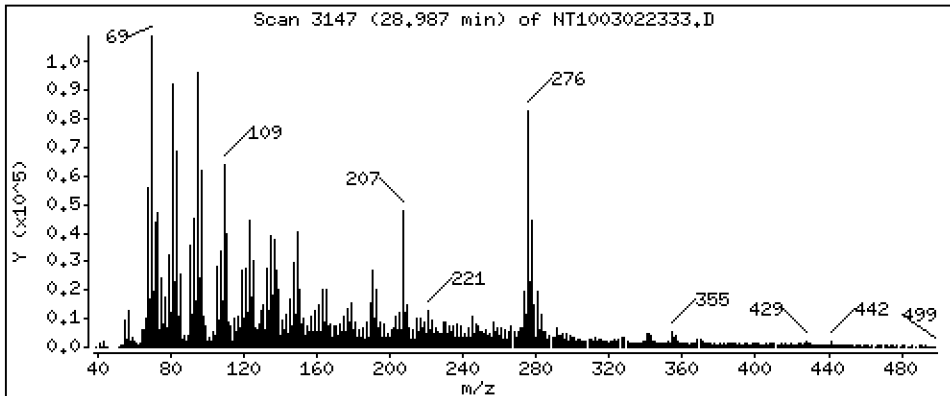
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,3163 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

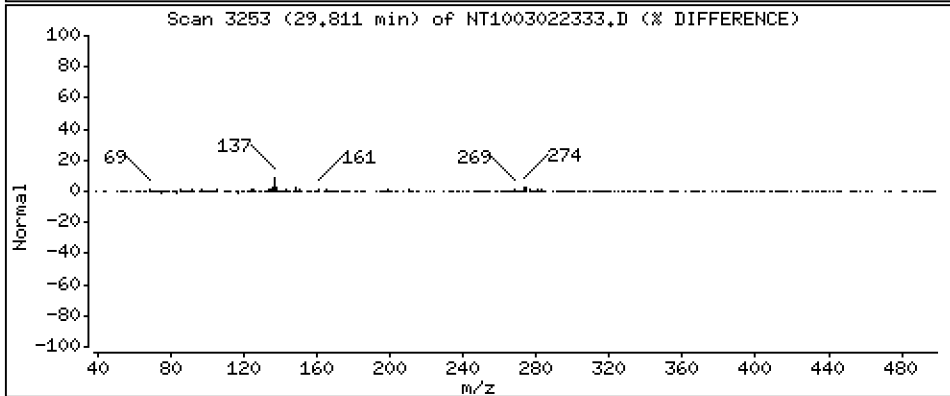
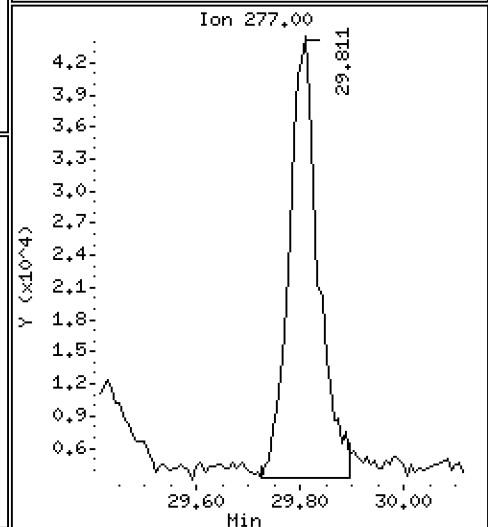
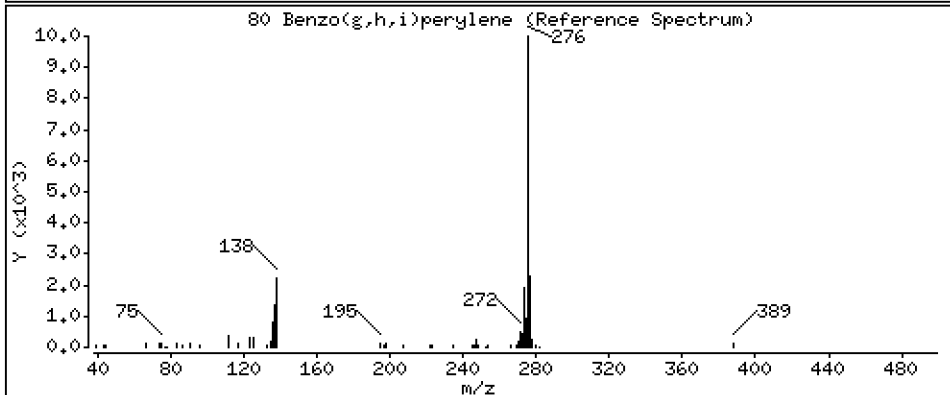
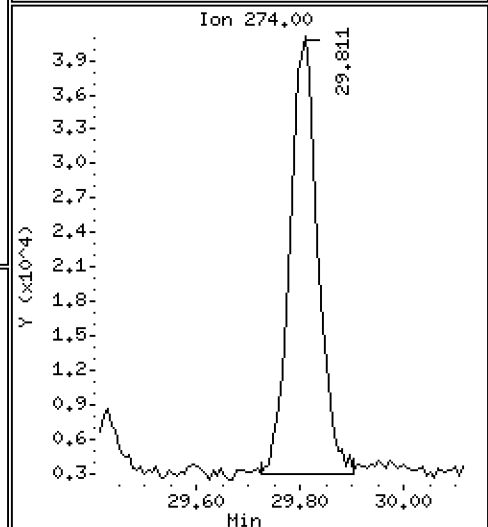
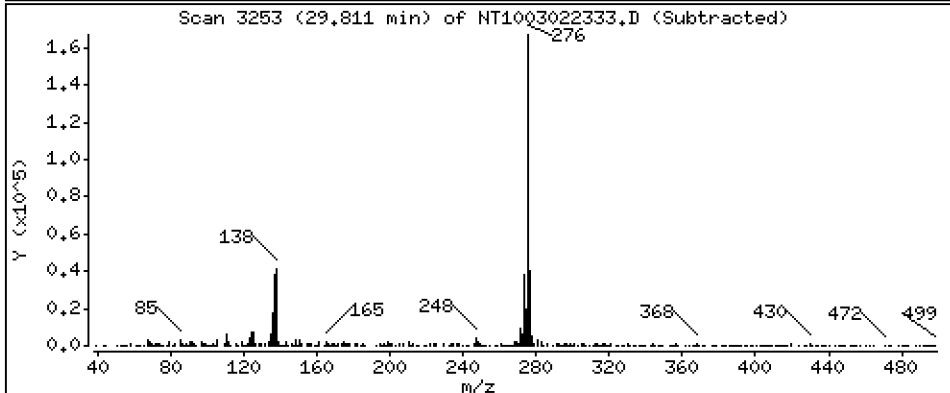
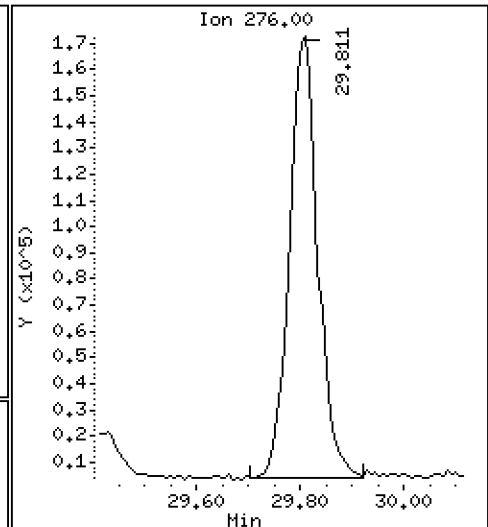
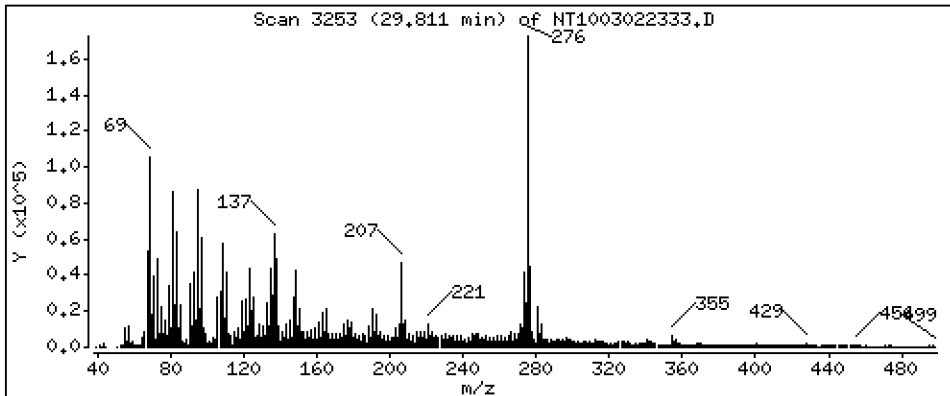
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 1,097 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

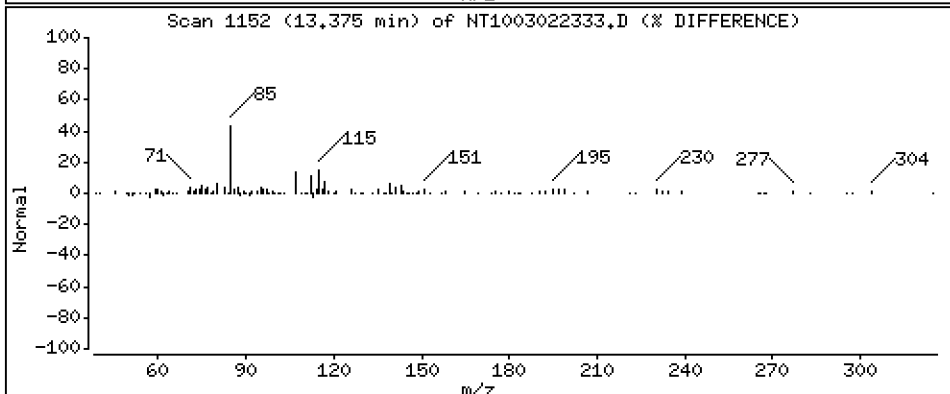
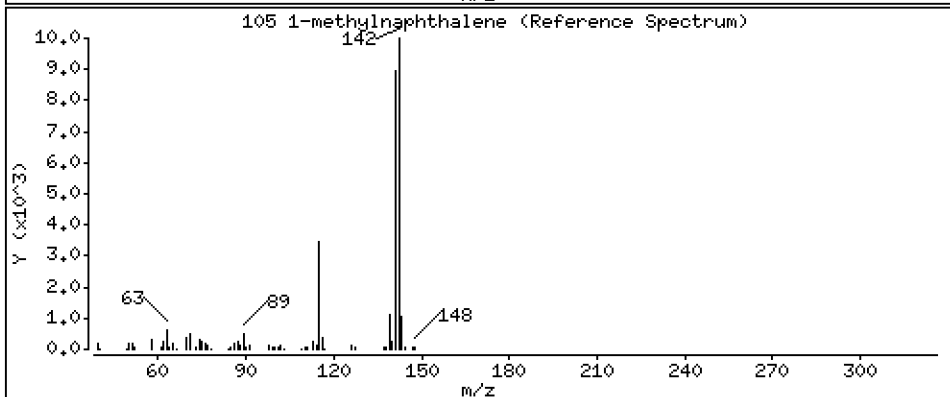
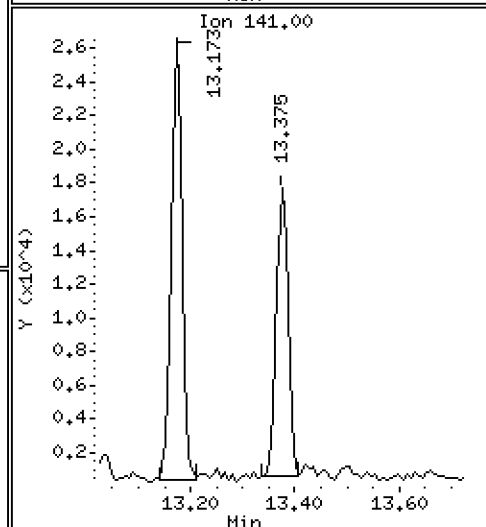
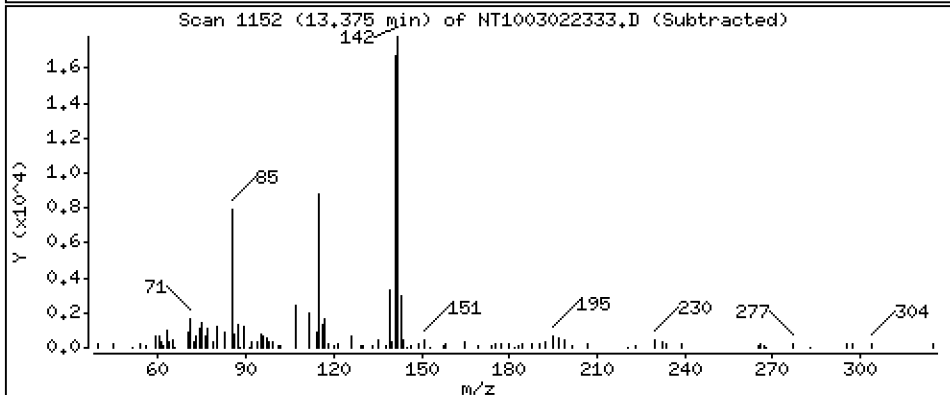
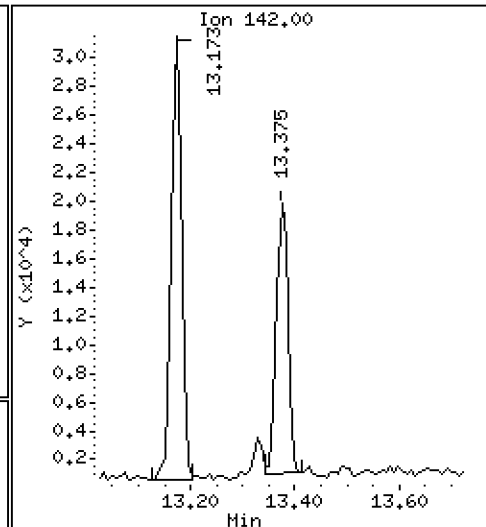
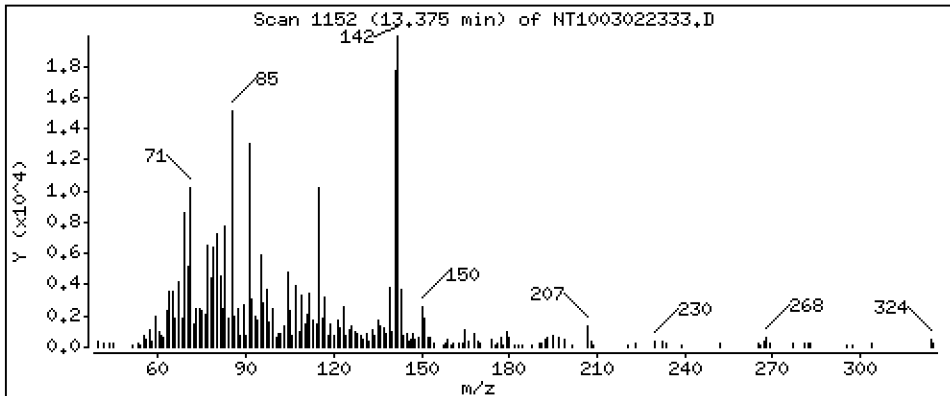
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,1040 ug/mL



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

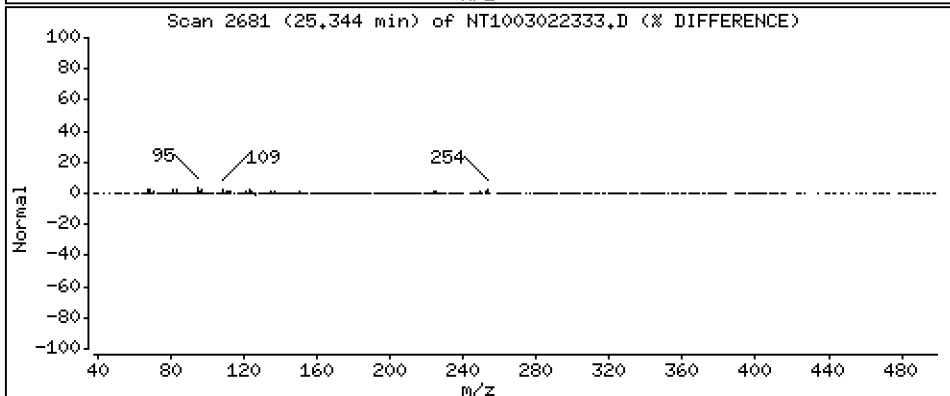
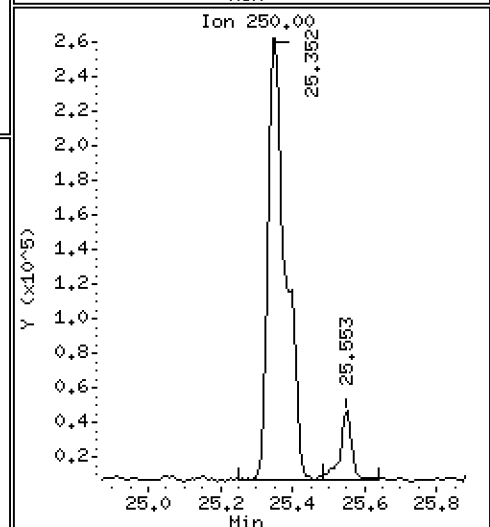
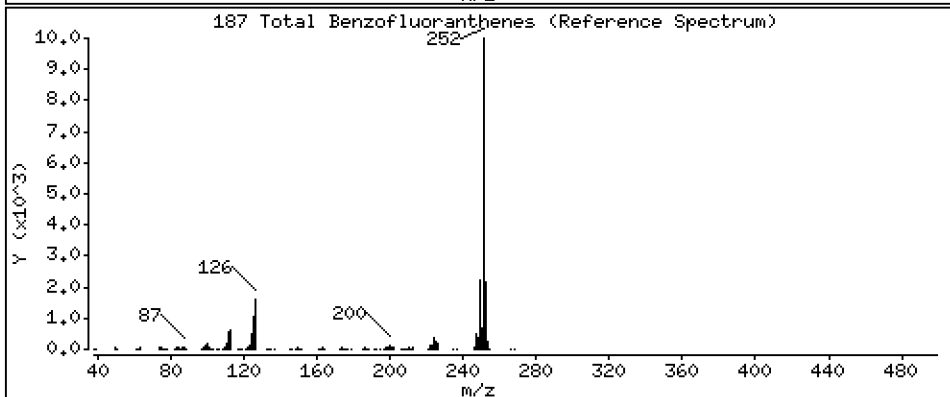
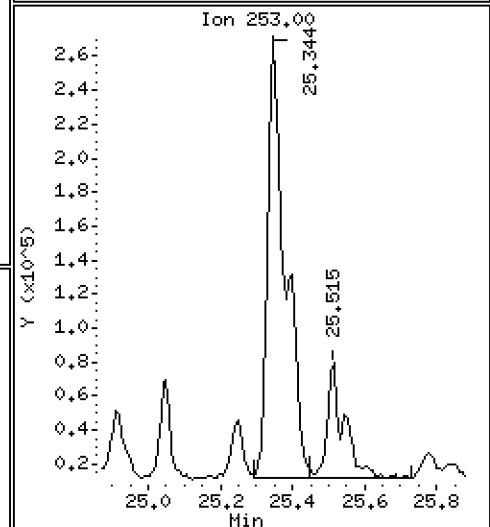
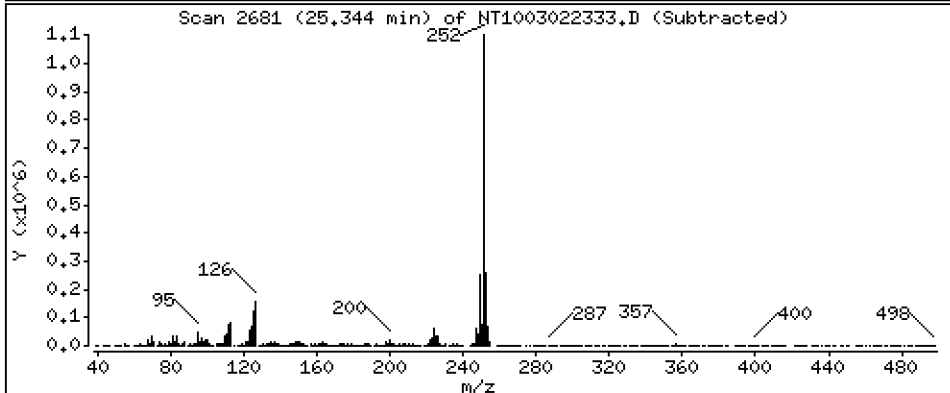
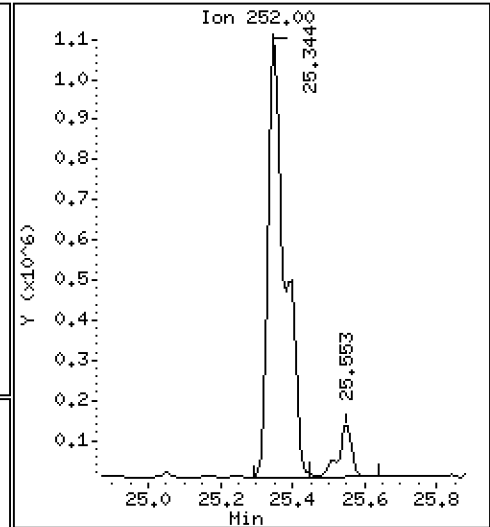
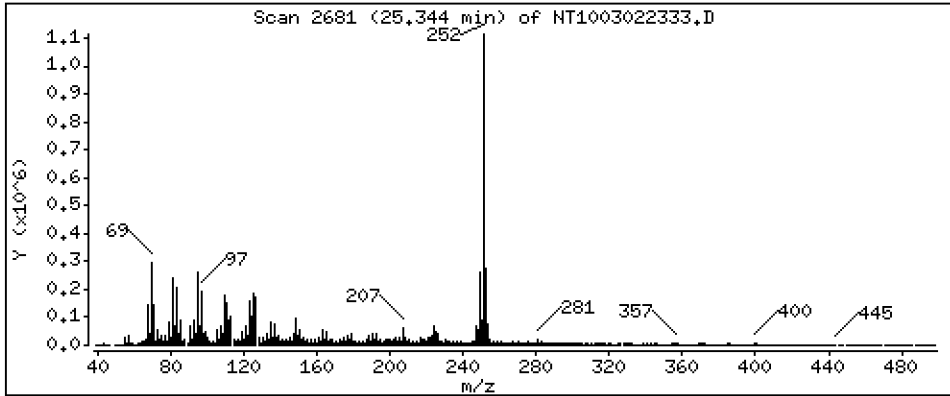
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 5,250 ug/mL





ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022333.D

Lab Smp Id: 23A0206-14

Inj Date : 03-MAR-2023 10:40

Operator : VTS

Inst ID: nt10.i

Smp Info : 23A0206-14

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 25

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	796182	5.76044	5.760
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	1078717	6.72236	6.722
3 Phenol	94		8.527	8.527	(0.922)	1718887	10.0751	10.08
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	889245	6.49528	6.495
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	439299	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.285	(1.003)	9849	0.06323	0.06323
\$ 10 1,2-Dichlorobenzene-d4	152		9.542	9.541	(1.032)	369019	3.60773	3.608
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.487	9.479	(1.026)	36863	0.42081	0.4208
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		9.666	9.658	(1.045)	6336	0.04796	0.04796
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.953	9.953	(1.076)	37949	0.22899	0.2290
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	722466	4.02025	4.020
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		11.154	11.179	(0.951)	27263	0.28543	0.2854
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1637095	4.00000	
28 Naphthalene	128		11.773	11.772	(1.004)	79870	0.19008	0.1901
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	44982	0.15154	0.1515
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
§ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.908)	1325997	4.20333	4.203
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163							
40 Acenaphthylene	152		15.038	15.038	(0.981)	137545	0.32216	0.3222
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.324	15.324	(1.000)	884440	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153		15.394	15.394	(1.005)	71780	0.27877	0.2788
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168		15.749	15.749	(1.028)	94702	0.24781	0.2478
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149		16.213	16.221	(1.058)	139668	0.46158	0.4616
49 Fluorene	166		16.461	16.461	(1.074)	97747	0.30743	0.3074
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169		16.701	16.700	(0.907)	18584	0.07178	0.07178
§ 55 2,4,6-Tribromophenol	330		16.963	16.962	(1.107)	348844	6.15243	6.152
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.417	18.416	(1.000)	1749820	4.00000	
60 Phenanthrene	178		18.471	18.463	(1.003)	1199329	2.67820	2.678
61 Anthracene	178		18.571	18.571	(1.008)	410019	0.94425	0.9442
62 Carbazole	167		18.904	18.904	(1.026)	102714	0.25820	0.2582
63 Di-n-butylphthalate	149		19.600	19.600	(1.064)	256781	0.47464	0.4746
64 Fluoranthene	202		20.861	20.830	(0.889)	5464468	7.70932	7.709
65 Pyrene	202		21.287	21.264	(0.908)	4272723	5.91992	5.920
§ 66 Terphenyl-d14	244		21.558	21.534	(0.919)	2257558	3.86567	3.866
67 Butylbenzylphthalate	149		22.433	22.417	(0.956)	305024	0.78688	0.7869
68 Benzo(a)anthracene	228		23.432	23.416	(0.999)	2099742	2.89013	2.890
* 69 Chrysene-d12	240		23.455	23.431	(1.000)	2060453	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228		23.501	23.478	(1.002)	2615746	4.43010	4.430
72 bis(2-Ethylhexyl)phthalate	149		23.424	23.408	(0.956)	1684072	3.14199	3.142
* 134 Di-n-octylphthalate-d4	153		24.500	24.492	(1.000)	3751655	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252		25.344	25.328	(0.969)	2862860	3.88766	3.888
75 Benzo(k)fluoranthene	252		25.398	25.375	(0.971)	1009939	1.46363	1.464 (M)
76 Benzo(a)pyrene	252		26.033	26.017	(0.995)	1362182	2.11216	2.112
* 77 Perylene-d12	264		26.157	26.134	(1.000)	2072216	4.00000	
78 Indeno(1,2,3-cd)pyrene	276		28.956	28.917	(1.107)	693573	0.93154	0.9315
79 Dibenzo(a,h)anthracene	278		28.987	28.963	(1.108)	177496	0.31634	0.3163 (M)
80 Benzo(g,h,i)perylene	276		29.810	29.763	(1.140)	650661	1.09669	1.097
90 N-Nitrosodimethylamine	74							
91 Aniline	93							
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	27954	0.10405	0.1040
111 Azobenzene (1,2-DP-Hydrazine)	77							

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ug/mL)	FINAL (ug/mL)	
187 Total Benzofluoranthenes	252		25.344	25.375	(0.969)	3661714	5.24986	5.250	
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022333.D Calibration Time: 05:36  
 Lab Smp Id: 23A0206-14  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	439299	-34.77
27 Naphthalene-d8	2475080	1237540	4950160	1637095	-33.86
42 Acenaphthene-d10	1248864	624432	2497728	884440	-29.18
59 Phenanthrene-d10	2356836	1178418	4713672	1749820	-25.76
69 Chrysene-d12	2717731	1358866	5435462	2060453	-24.18
134 Di-n-octylphthala	4948440	2474220	9896880	3751655	-24.19
77 Perylene-d12	2801934	1400967	5603868	2072216	-26.04

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.46	0.10
134 Di-n-octylphthala	24.49	23.99	24.99	24.50	0.03
77 Perylene-d12	26.13	25.63	26.63	26.16	0.09

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

REVIEW SUMMARY FOR FILE - NT1003022333.D

Lab ID: 23A0206-14  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 10:40

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

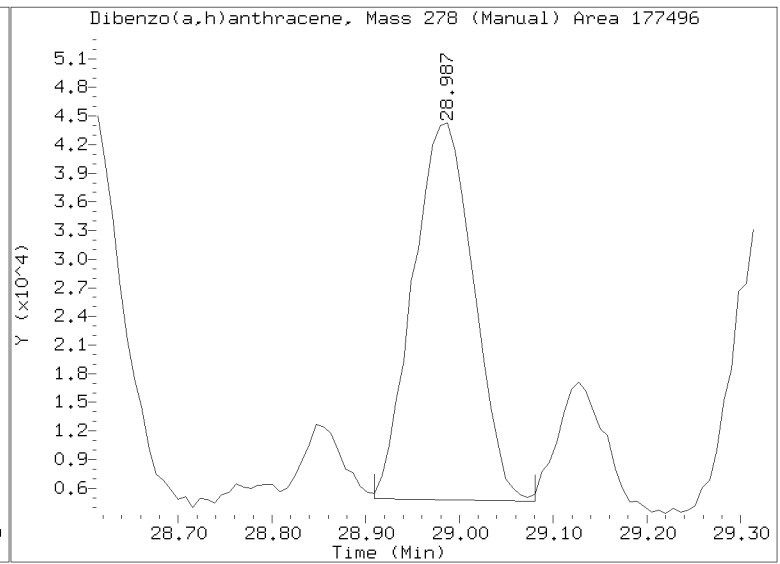
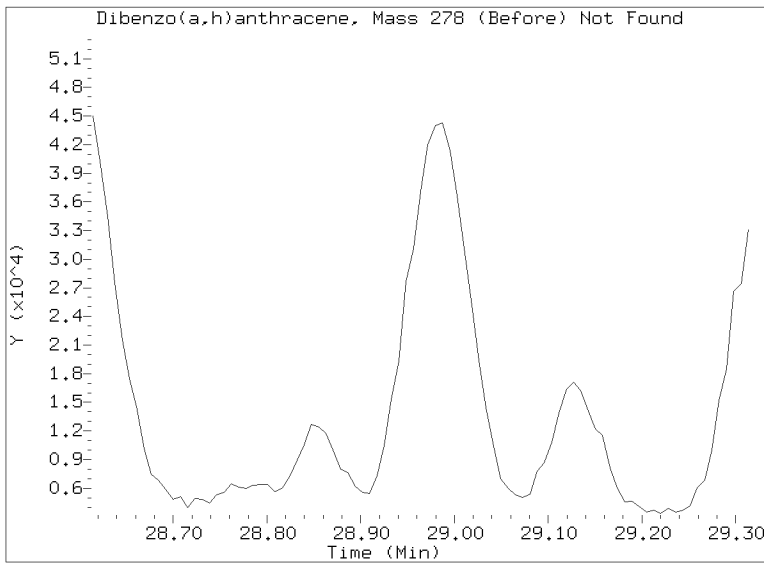
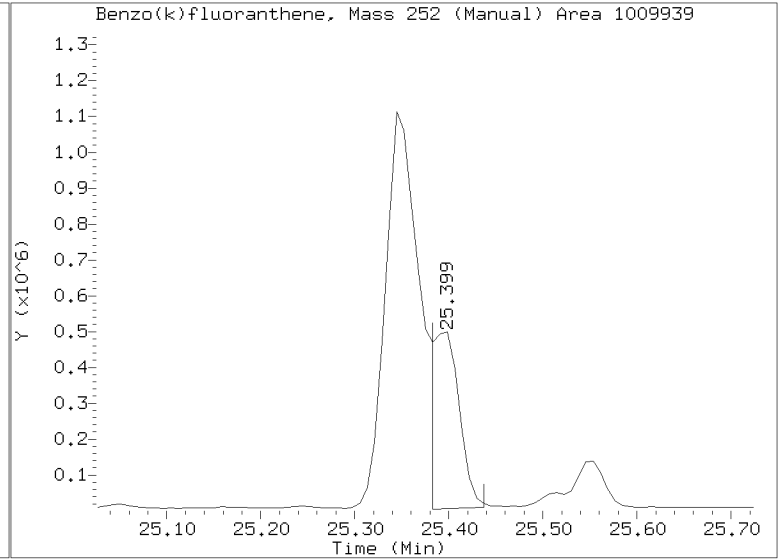
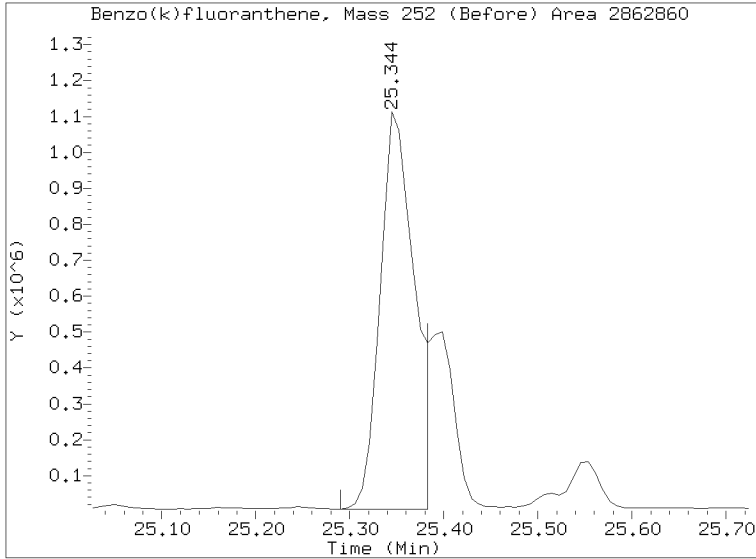
RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022333.D  
Injection Date: 03-MAR-2023 10:40  
Lab ID:23A0206-14 Client ID:  
Report Date: 03/10/2023 07:35





**PREPARATION BATCH SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0624 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	NT1003022312.D	01/27/23 14:44	
LDW23-SS1015	23A0206-02	NT1003022313.D	01/27/23 14:44	
LDW23-SS1164	23A0206-03	NT1003022318.D	01/27/23 14:44	
LDW23-SS1158	23A0206-04	NT1003022319.D	01/27/23 14:44	
LDW23-SS1151	23A0206-05	NT1003022320.D	01/27/23 14:44	
LDW23-SS1145	23A0206-06	NT1003022321.D	01/27/23 14:44	
LDW23-SS1139	23A0206-07	NT1003022322.D	01/27/23 14:44	
LDW23-SS1117	23A0206-08	NT1003022323.D	01/27/23 14:44	
LDW23-SS1103	23A0206-09	NT1003022324.D	01/27/23 14:44	
LDW23-SS1100	23A0206-10	NT1003022329.D	01/27/23 14:44	
LDW23-SS1096	23A0206-11	NT1003022330.D	01/27/23 14:44	
LDW23-SS1094	23A0206-12	NT1003022331.D	01/27/23 14:44	
LDW23-SS1066	23A0206-13	NT1003022332.D	01/27/23 14:44	
LDW23-SS1061	23A0206-14	NT1003022333.D	01/27/23 14:44	
Blank	BLA0624-BLK1	NT1003022306.D	01/27/23 14:44	
LCS	BLA0624-BS1	NT1003022307.D	01/27/23 14:44	
LCS Dup	BLA0624-BSD1	NT1003022308.D	01/27/23 14:44	
LDW23-SS1066	BLA0624-MS1	NT1003022309.D	01/27/23 14:44	
LDW23-SS1066	BLA0624-MSD1	NT1003022310.D	01/27/23 14:44	
Reference	BLA0624-SRM1	NT1003022311.D	01/27/23 14:44	



Analytical Resources, LLC  
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:A0C4 List)

Matrix: Solid

Date Prepared: 01/27/23

Balance ID: BL46462614

Set Up By: ESD/1/2/23

WO Comments  
23A0206: <C>BPR SRM: MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43, 7935-36, K011477-79, MS/MSD </E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ) GPC C/U (1:1)	Water Wash (mL)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0206-01 B	48.2	(20.75)	<u>20.77</u>	(1:1)	1mL	1	0.5	
23A0206-02 B	47.1	(21.23)	<u>21.28</u>	(1:1)	1mL	1	0.5	
23A0206-03 B	48.3	(20.69)	<u>20.72</u>	(1:1)	1mL	1	0.5	
23A0206-04 B	49.3	(20.27)	<u>20.30</u>	(1:1)	1mL	1	0.5	
23A0206-05 B	52.9	(18.89)	<u>18.89</u>	(1:1)	1mL	1	0.5	
23A0206-06 B	55.2	(18.13)	<u>18.27</u>	(1:1)	1mL	1	0.5	
23A0206-07 B	60.2	(16.62)	<u>16.66</u>	(1:1)	1mL	1	0.5	
23A0206-08 B	52.0	(19.24)	<u>19.31</u>	(1:1)	1mL	1	0.5	
23A0206-09 B	41.9	(23.88)	<u>23.91</u>	(1:1)	1mL	1	0.5	
23A0206-10 B	42.9	(23.30)	<u>23.38</u>	(1:1)	1mL	1	0.5	
23A0206-11 B	43.0	(23.28)	<u>23.35</u>	(1:1)	1mL	1	0.5	
23A0206-12 B	48.1	(20.81)	<u>20.88</u>	(1:1)	1mL	1	0.5	
23A0206-13 B	60.1	(16.63)	<u>16.66</u>	(1:1)	1mL	1	0.5	
23A0206-14 B	51.2	(19.54)	<u>19.95</u>	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ) GPC C/U (1:1)	Water Wash (mL)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0624-BLK1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-BS1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-BSD1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-MS1	60.1	(16.63)	<u>16.64</u>	(1:1)	1mL	1	0.5	Use 23A0206-13
BLA0624-MSD1	60.1	(16.63)	<u>16.64</u>	(1:1)	1mL	1	0.5	Use 23A0206-13
BLA0624-SRMI	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use K003477

+1g DI WATER

Client: AP Verified By: WJ

Date: 01/27/23

Preparation Reviewed By: LS

Date: 2/18/23

Extraction Date and Time: 01/27/23

14:44





Analytical Resources, LLC  
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:A0C4 List)

WO Comments  
23.MD206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <N> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43,  
7935-36,K011477-79, MS/MSD <I>E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup <H> Store in freezer (except GS)

Prep Steps

Microwave	Station/Reagent	Standard ID
② 3 ① 11/23/23 Analyst/Date	Microwave Analyst: <i>GT/ML</i> Date: 2/1/23/23	
	Anhydrous Sodium Sulfate	L0000759
	1:1 Methylene Chloride/Acetone	L0000281
	Methylene Chloride	L0000848
	Pre-Deactivated Glass Wool	L0000752
Pre-GPC KD 100°C Exchange to Hexane (add 10 mL to KD)	Pre-GPC KD Analyst: <i>GH</i> Date: 2/23/23	
	Pre-Deactivated Glass Wool	N/A
TurboVap Pre-GPC	Anhydrous Sodium Sulfate	L0000984
	Methylene Chloride	L0000848
	Hexane	L011373
1 2 3 ④ 5 ① 2/5/23 Analyst/Date	GPC Filter Prep Analyst: <i>GH</i> Date: 2/5/23	
	Methylene Chloride	L0000808
Post GPC KD 80-85°C ① 0 ② 4 5 6 ① 2/9/23 Analyst/Date	GPC Analyst: <i>SRD</i> Date: 2/6/23	
	Methylene Chloride	L0000808
TurboVap	GPC Calibration File	CA0006
① ② ③ ④ ⑤ ⑥ ① 2/9/23 Analyst/Date	Post GPC KD Analyst: <i>GH/MLD</i> Date: 2/9/23	
	Methylene Chloride	L0000808
Water Wash ① ② ③ ④ ① 2/8/23 Analyst/Date	Vialing Analyst: <i>GH</i> Date: 2/8/23	
	Methylene Chloride	L0000808

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate	A Exp Date: 5/19/2023 K010466	50uL	GT	ML
Full List Spike (Freezer)	7 Exp Date: 8/31/2023 K011297	50uL	GT	ML
Base Spike	56 Exp Date: 4/19/2023 K011369	50uL	GT	ML
Acid Spike	38 Exp Date: 4/19/2023 K011369	50uL	GT	ML

MANUALLY ENTER EXPIRATION DATES!

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

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

Post GPC KD 80-85°C ① 0 ② 4 5 6 ① 2/9/23 Analyst/Date	GPC Analyst: <i>SRD</i> Date: 2/6/23	
TurboVap	GPC Calibration File	CA0006
① ② ③ ④ ⑤ ⑥ ① 2/9/23 Analyst/Date	Post GPC KD Analyst: <i>GH/MLD</i> Date: 2/9/23	
	Methylene Chloride	L0000808
Water Wash ① ② ③ ④ ① 2/8/23 Analyst/Date	Vialing Analyst: <i>GH</i> Date: 2/8/23	
	Methylene Chloride	L0000808



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**ORGANICS PREPARATION BENCH SHEET**

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

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

**WO Comments**

23A0206: <B>BPR SRM, MS, DUP <C><A>BPR PS, MSMSD <M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM 1006840-43, 7935-36 K.011477-79, MS/MSD <B> <H>BPR 1006840-43, 7935-36, K.011477-79, Dup <H> Store in Freezer (except GS)

**Prep Instructions**

**SPECIAL INSTRUCTIONS:**

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

A. Need Total Solids Y  N

B. Archive/Freeze  N



Extraction Parameter: SUDA Extraction Batch BLA0624

Total Solids Batch: BLA0562 Work Order(s): 23A0206

Screens:	Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=		
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= 206-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14		DP 1/25/23
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=		
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=		
<input type="checkbox"/> Rocks (%+size)?		
<input type="checkbox"/> Organics (Leaves/sticks/grass)=		
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=		
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=		
<input checked="" type="checkbox"/> Previously Frozen = All samples		WOB 1/26/23
<input type="checkbox"/> Other (Details)=		
<b>Aqueous:</b>		
<input type="checkbox"/> No Anomalies		
<input type="checkbox"/> Turbid/Color=		
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)		
<input type="checkbox"/> Emulsions (%)=		
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=		
<input type="checkbox"/> Other (Details)=		
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=		
<input checked="" type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).		
Vol of 206-10 CWC open white vorking for water work,		WJ 2/6/23
<input type="checkbox"/> Share Samples Y / N		
<input type="checkbox"/> Multiple Jars Y / N		
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=		
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=		



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0074

Cleanup Type: GPC

Cleanup Method: EPA 3640A GPC Cleanup 1:1

Analysis: EPA 8270E

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	NT1003022312.D	02/08/2023	
Reference	BLA0624-SRM1	NT1003022311.D	02/08/2023	
Matrix Spike Dup	BLA0624-MSD1	NT1003022310.D	02/08/2023	
Matrix Spike	BLA0624-MS1	NT1003022309.D	02/08/2023	
LCS	BLA0624-BS1	NT1003022307.D	02/08/2023	
LDW23-SS1164	23A0206-03	NT1003022318.D	02/08/2023	
LDW23-SS1117	23A0206-08	NT1003022323.D	02/08/2023	
LCS Dup	BLA0624-BSD1	NT1003022308.D	02/08/2023	
Blank	BLA0624-BLK1	NT1003022306.D	02/08/2023	
LDW23-SS1015	23A0206-02	NT1003022313.D	02/08/2023	
LDW23-SS1151	23A0206-05	NT1003022320.D	02/08/2023	
LDW23-SS1061	23A0206-14	NT1003022333.D	02/08/2023	
LDW23-SS1066	23A0206-13	NT1003022332.D	02/08/2023	
LDW23-SS1094	23A0206-12	NT1003022331.D	02/08/2023	
LDW23-SS1096	23A0206-11	NT1003022330.D	02/08/2023	
LDW23-SS1145	23A0206-06	NT1003022321.D	02/08/2023	
LDW23-SS1100	23A0206-10	NT1003022329.D	02/08/2023	
LDW23-SS1158	23A0206-04	NT1003022319.D	02/08/2023	
LDW23-SS1139	23A0206-07	NT1003022322.D	02/08/2023	
LDW23-SS1103	23A0206-09	NT1003022324.D	02/08/2023	





**CLEANUP BENCH SHEET**

CLB0074

Matrix: Solid      Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1      Check Standard: CLA0086-GPC1      Printed: 2/8/2023 6:18:42PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-01	B	LDW23-SS1021	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	



**CLEANUP BENCH SHEET**

CLB0074

Matrix: Solid      Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1      Check Standard: CLA0086-GPC1      Printed: 2/8/2023 6:18:42PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-12	B	LDW23-SS1094	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-12	B	LDW23-SS1094	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
BLA0624-BLK1	-	Blank	-	1	1	-	2/8/2023	LMJ	
BLA0624-BLK2	-	Blank	-	1	1	-	2/8/2023	LMJ	
BLA0624-BS1	-	LCS	-	1	1	-	2/8/2023	LMJ	
BLA0624-BS2	-	LCS	-	1	1	-	2/8/2023	LMJ	
BLA0624-BSD1	-	LCS Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-BSD2	-	LCS Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-MS1	-	Matrix Spike	-	1	1	-	2/8/2023	LMJ	
BLA0624-MS2	-	Matrix Spike	-	1	1	-	2/8/2023	LMJ	
BLA0624-MSD1	-	Matrix Spike Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-MSD2	-	Matrix Spike Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-SRM1	-	Reference	-	1	1	-	2/8/2023	LMJ	
BLA0624-SRM2	-	Reference	-	1	1	-	2/8/2023	LMJ	



Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022306.D

Date: 02-MAR-2023 17:34

Client ID:

Sample Info: BLR0624-BLK1

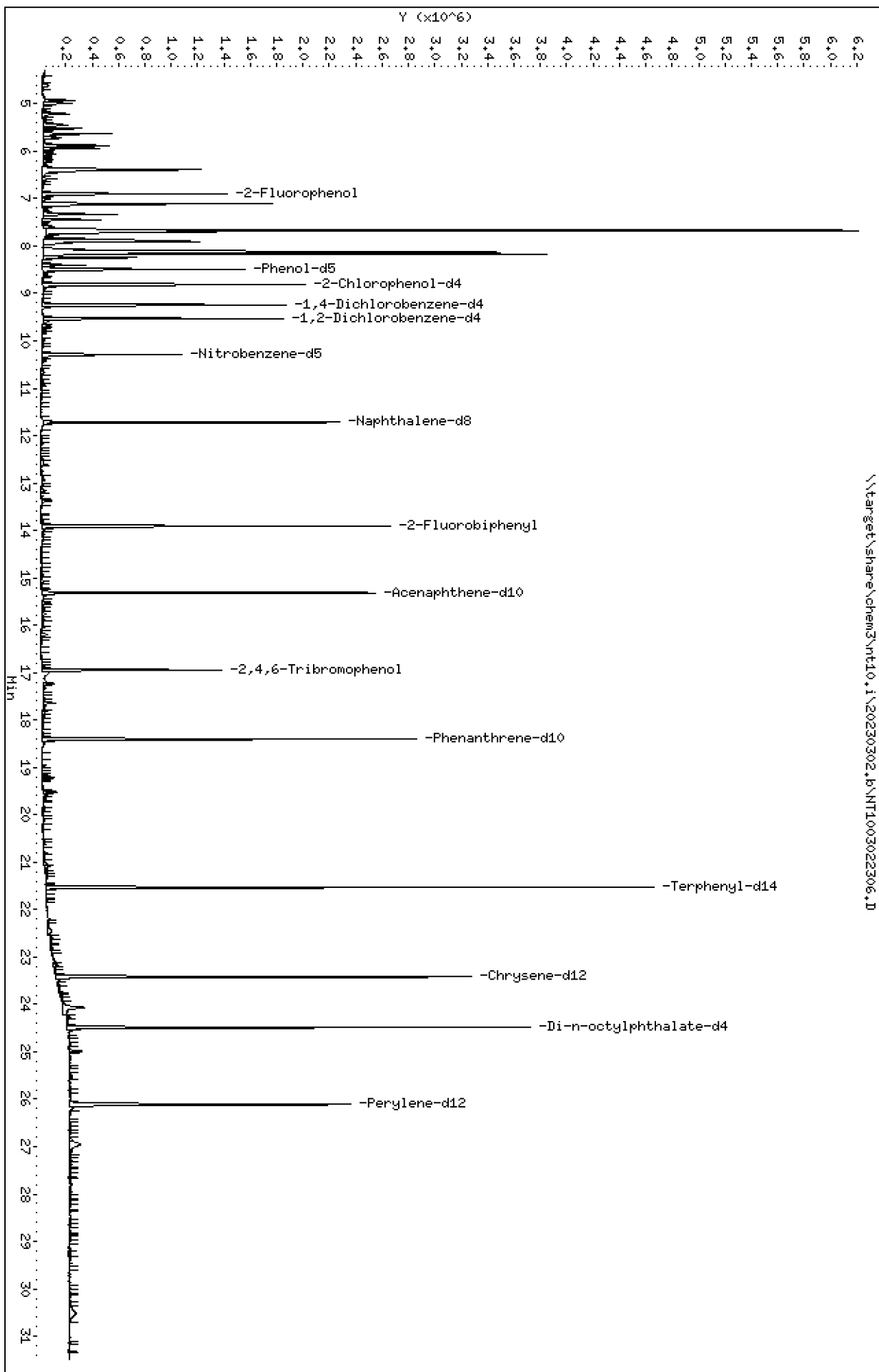
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022306.D





Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

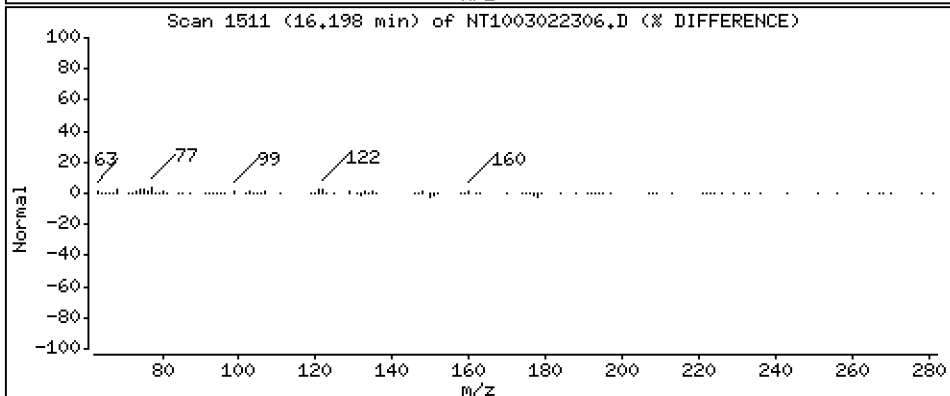
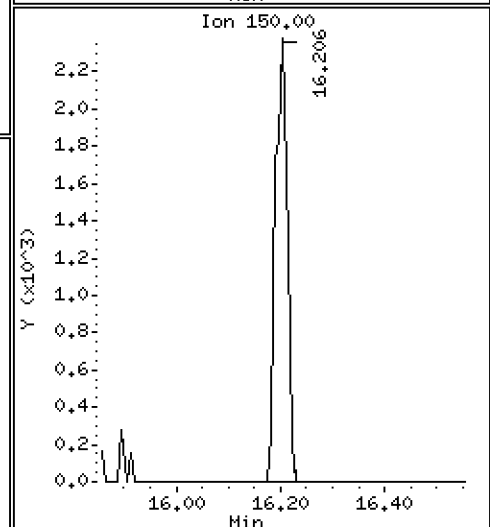
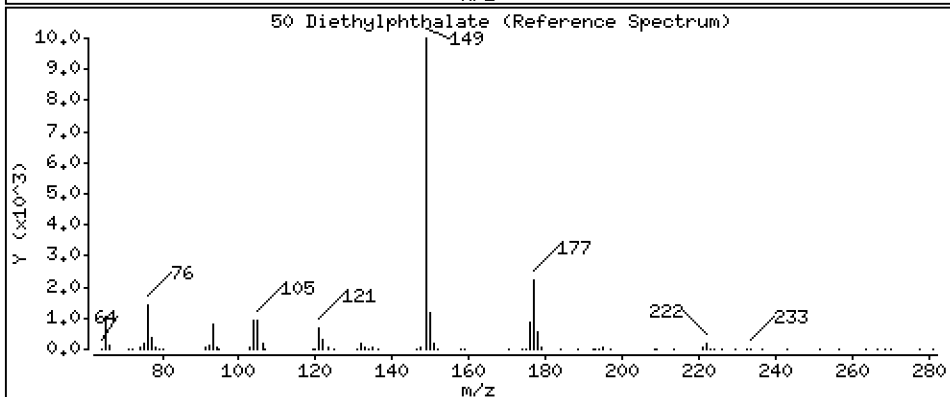
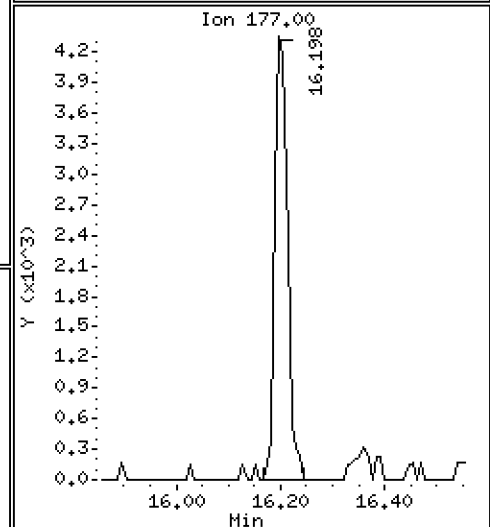
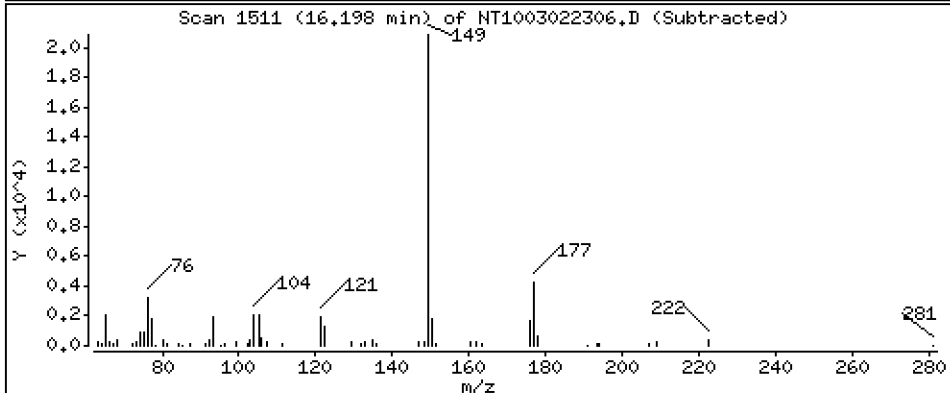
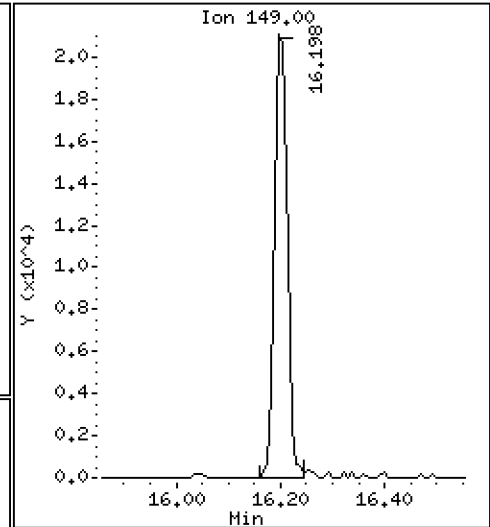
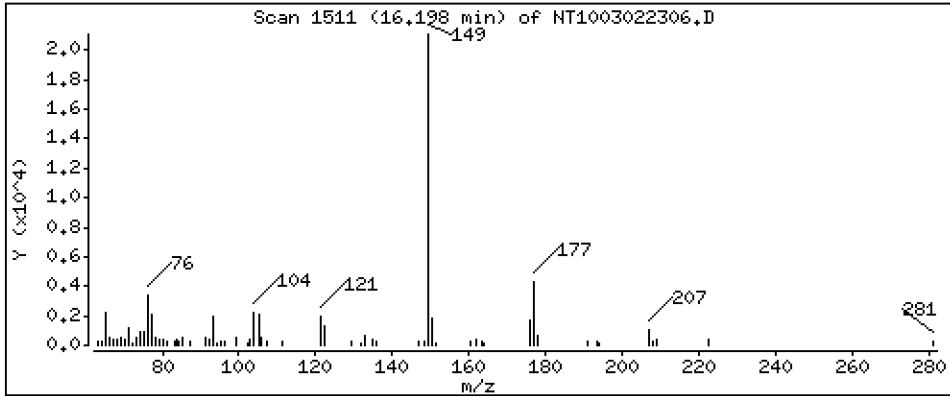
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,1034 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022306.D  
 Lab Smp Id: BLA0624-BLK1  
 Inj Date : 02-MAR-2023 17:34  
 Operator : VTS  
 Smp Info : BLA0624-BLK1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	842967	5.26554	5.266
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	1096254	5.89813	5.898
3 Phenol	94		Compound Not Detected.					
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	942240	5.94193	5.942
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	508828	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	453064	3.82414	3.824
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		Compound Not Detected.					
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	825036	4.03728	4.037
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.719	11.726	(1.000)	1861629	4.00000	
28 Naphthalene	128		Compound Not Detected.					
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		Compound Not Detected.					
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
\$ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	1423271	4.06991	4.070
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163							
40 Acenaphthylene	152							
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	980442	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153							
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168							
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149		16.198	16.206	(1.058)	34673	0.10337	0.1034(H)
49 Fluorene	166							
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169							
\$ 55 2,4,6-Tribromophenol	330		16.947	16.947	(1.106)	256383	4.14109	4.141
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1866785	4.00000	
60 Phenanthrene	178							
61 Anthracene	178							
62 Carbazole	167							
63 Di-n-butylphthalate	149							
64 Fluoranthene	202							
65 Pyrene	202							
\$ 66 Terphenyl-d14	244		21.527	21.527	(0.919)	2254227	4.70490	4.705
67 Butylbenzylphthalate	149							
68 Benzo(a)anthracene	228							
* 69 Chrysene-d12	240		23.416	23.424	(1.000)	1690423	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228							
72 bis(2-Ethylhexyl)phthalate	149							
* 134 Di-n-octylphthalate-d4	153		24.485	24.492	(1.000)	3025357	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252							
75 Benzo(k)fluoranthene	252							
76 Benzo(a)pyrene	252							
* 77 Perylene-d12	264		26.111	26.118	(1.000)	1765137	4.00000	
78 Indeno(1,2,3-cd)pyrene	276							
79 Dibenzo(a,h)anthracene	278							
80 Benzo(g,h,i)perylene	276							
90 N-Nitrosodimethylamine	74							
91 Aniline	93							
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142							
111 Azobenzene (1,2-DP-Hydrazine)	77							

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

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022306.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-BLK1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	508828	18.07
27 Naphthalene-d8	1609461	804731	3218922	1861629	15.67
42 Acenaphthene-d10	853113	426557	1706226	980442	14.93
59 Phenanthrene-d10	1556648	778324	3113296	1866785	19.92
69 Chrysene-d12	1539062	769531	3078124	1690423	9.83
134 Di-n-octylphthala	2949571	1474786	5899142	3025357	2.57
77 Perylene-d12	1634059	817030	3268118	1765137	8.02

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	-0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.03
77 Perylene-d12	26.12	25.62	26.62	26.11	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022306.D

Lab ID: BLA0624-BLK1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 17:34

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

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NONE

RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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





**LCS / LCS DUPLICATE RECOVERY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Analyzed: 03/02/23 18:50

Batch: BLA0624

Laboratory ID: BLA0624-BSD1

Preparation: EPA 3546 (Microwave)

Sequence Name: LCS Dup

Initial/Final: 10 g / 1 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Dibenzofuran	500	455		91.0	3.27	30	43 - 120
Fluorene	500	473		94.5	6.26	30	45 - 120
Phenanthrene	500	492		98.4	5.12	30	49 - 120
Anthracene	500	418		83.6	3.73	30	45 - 120
Fluoranthene	500	445		89.1	4.31	30	53 - 145
Pyrene	500	445		89.0	12.3	30	52 - 134
Butylbenzylphthalate	500	413		82.7	8.94	30	45 - 132
Benzo(a)anthracene	500	441		88.2	5.52	30	49 - 120
Chrysene	500	497		99.3	5.98	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	320		63.9	1.40	30	34 - 130
Benzo(a)fluoranthene, Total	1000	918		91.8	5.09	30	30 - 160
Benzo(a)pyrene	500	403		80.6	6.53	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	434		86.8	4.36	30	42 - 163
Dibenzo(a,h)anthracene	500	470		93.9	3.52	30	30 - 133
Benzo(g,h,i)perylene	500	455		90.9	6.33	30	46 - 148

\* Indicates values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022307.D

Date: 02-MAR-2023 18:12

Client ID:

Sample Info: BLR0624-BS1

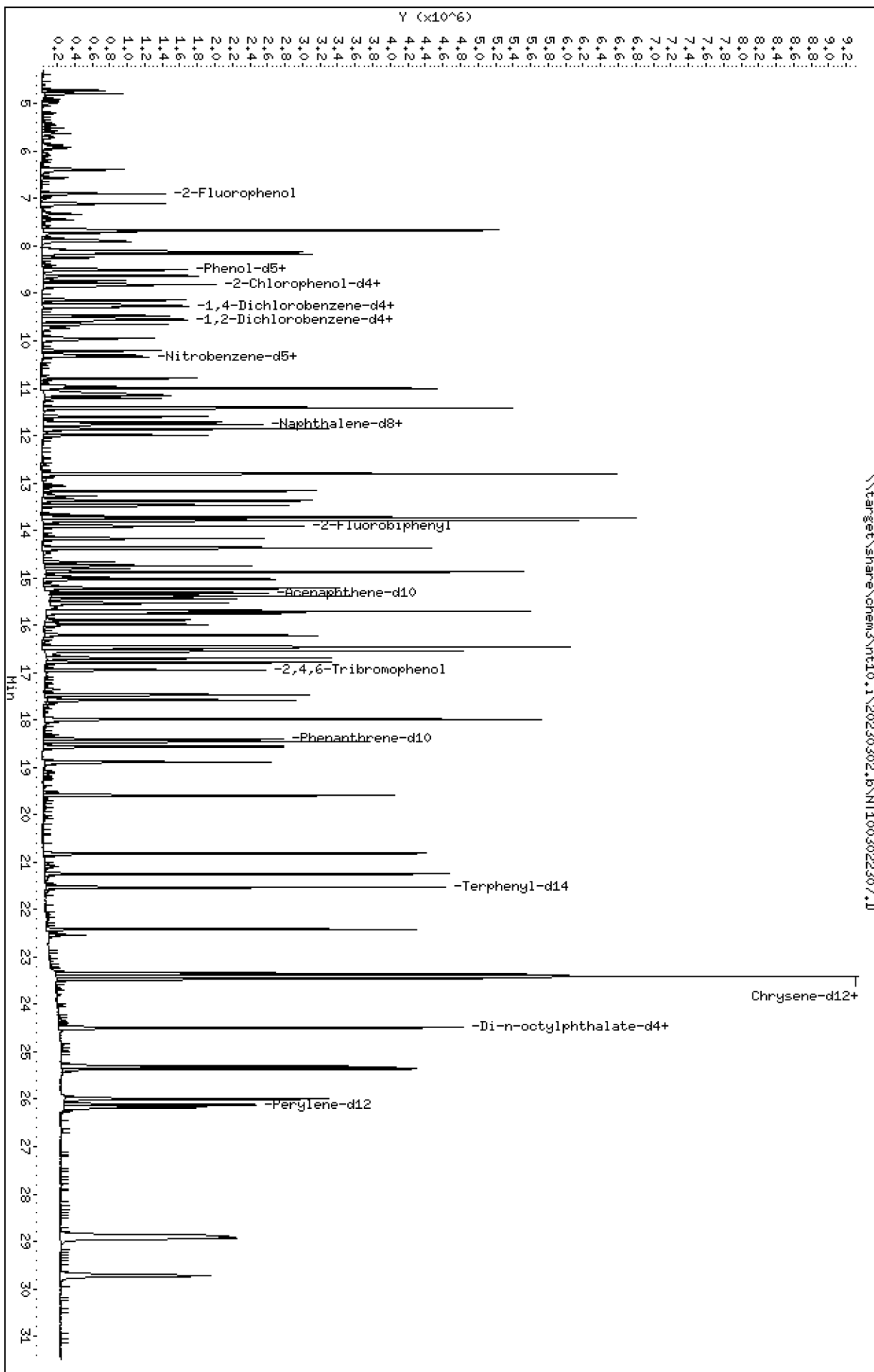
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022307.D



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

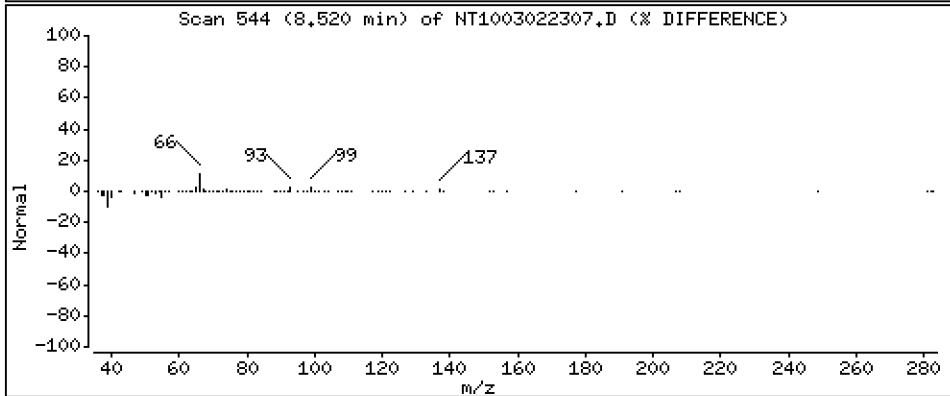
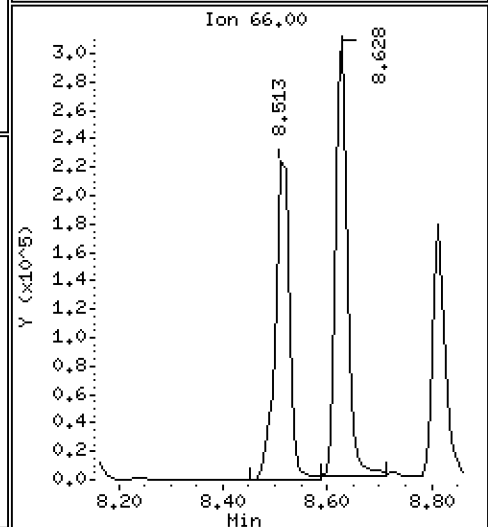
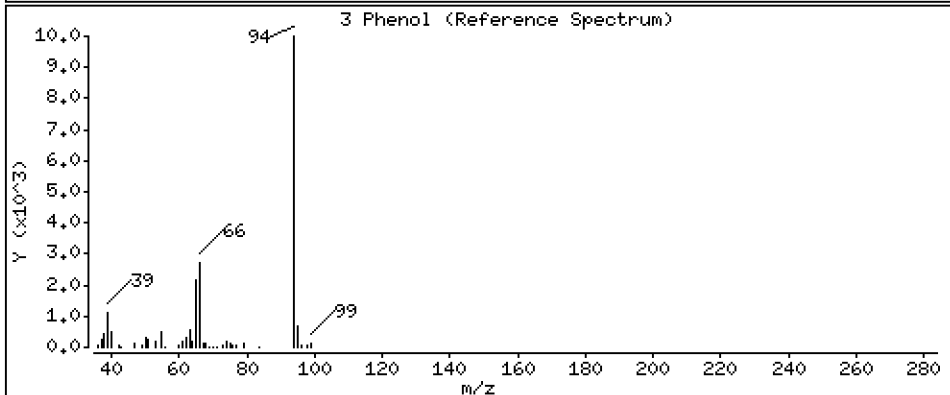
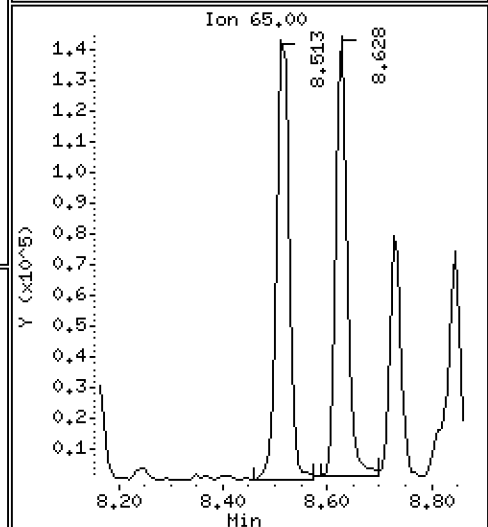
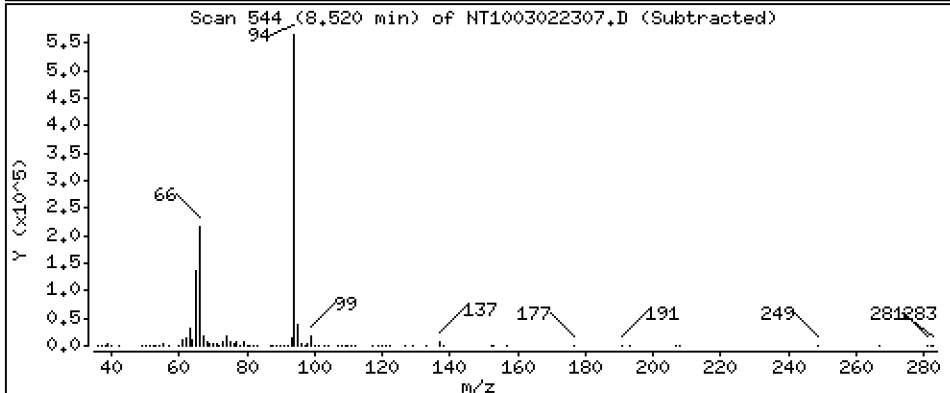
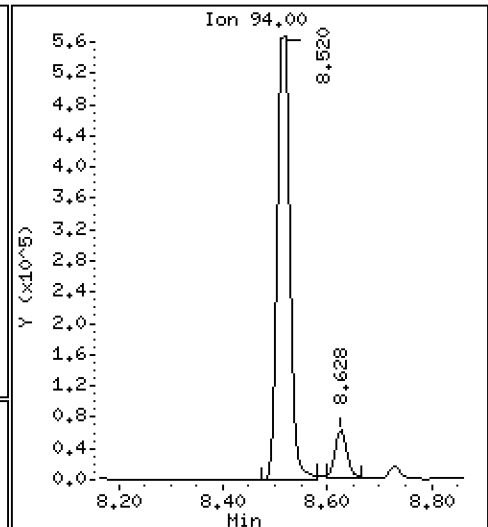
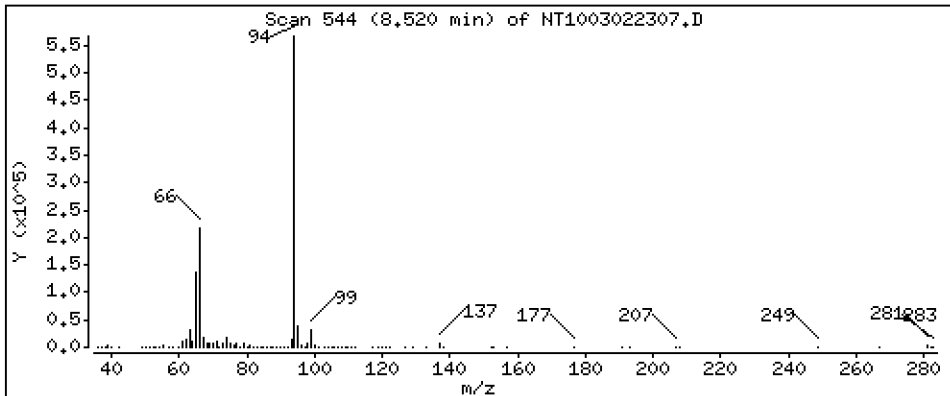
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 5,520 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

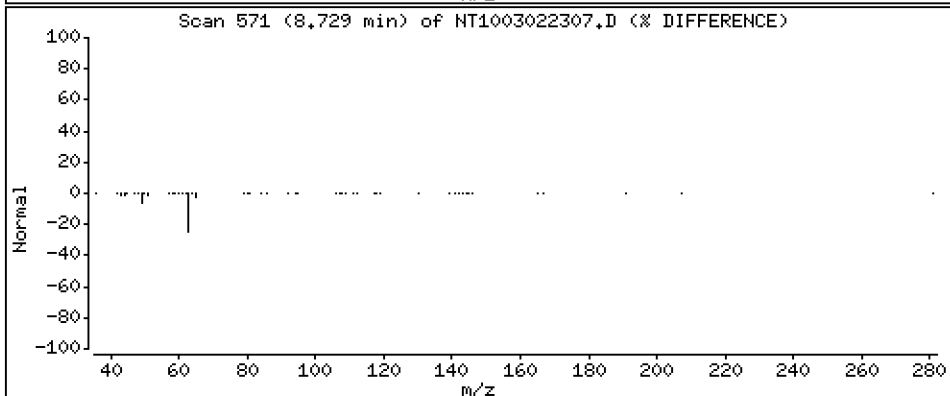
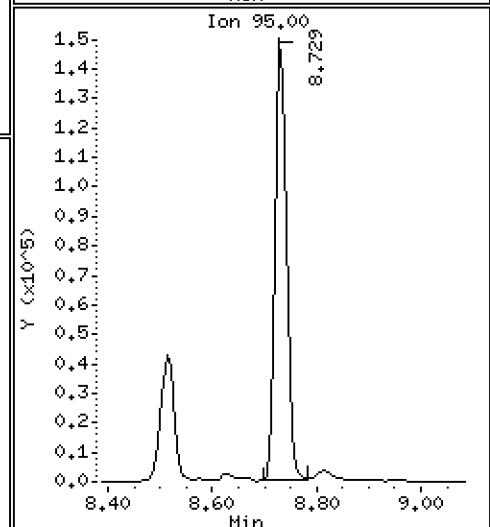
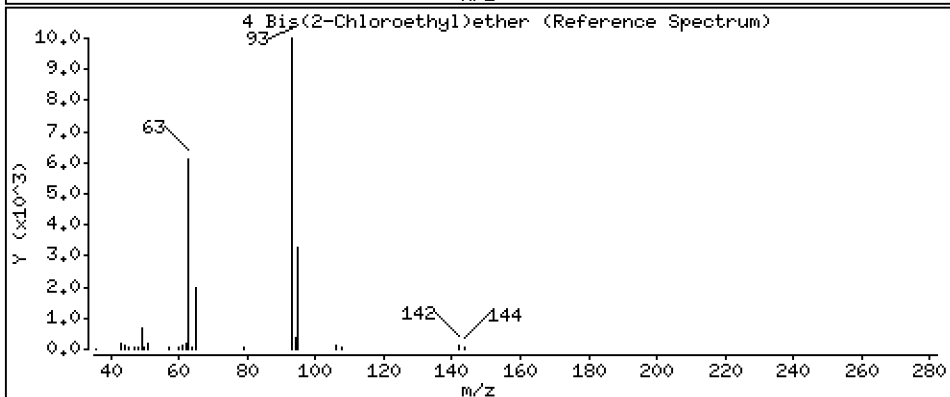
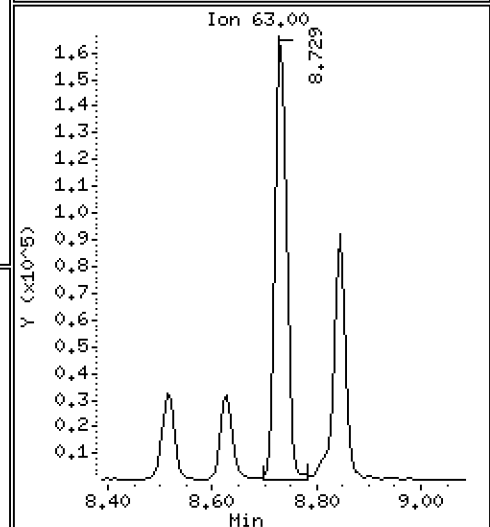
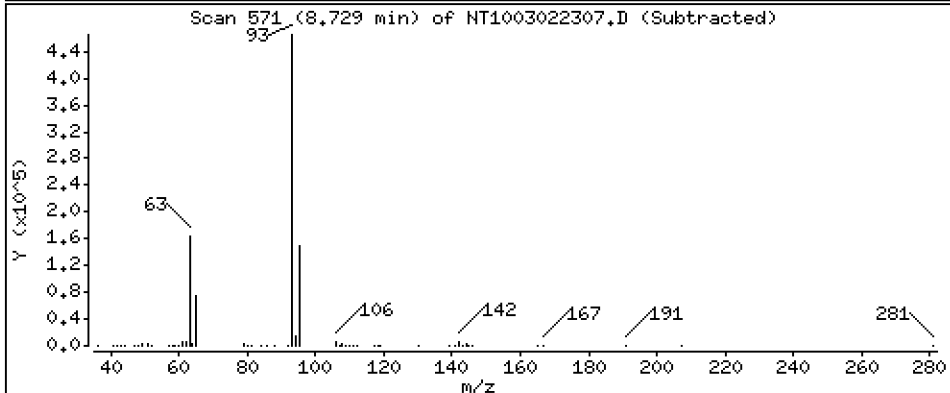
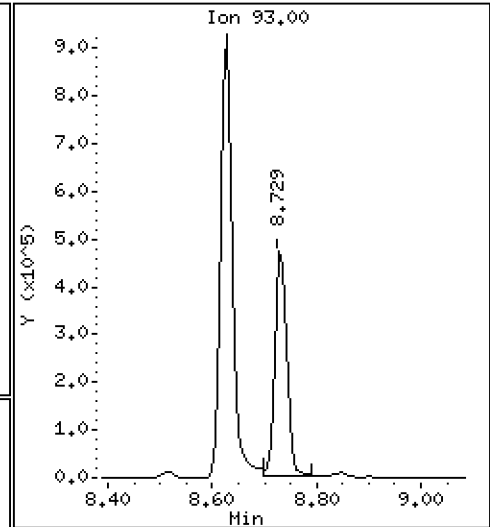
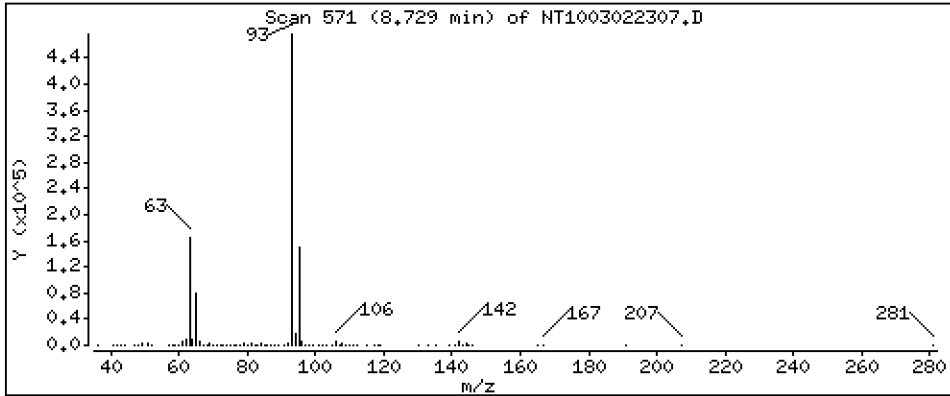
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,799 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

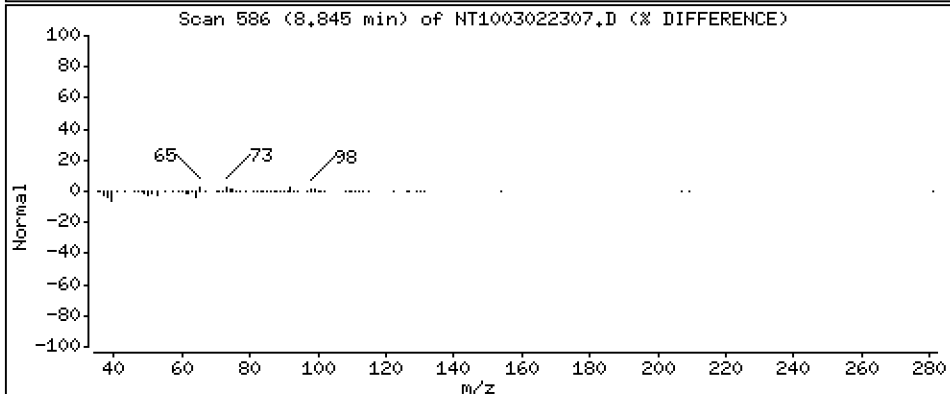
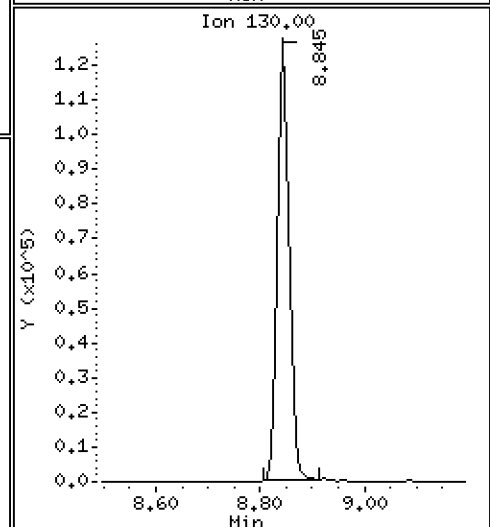
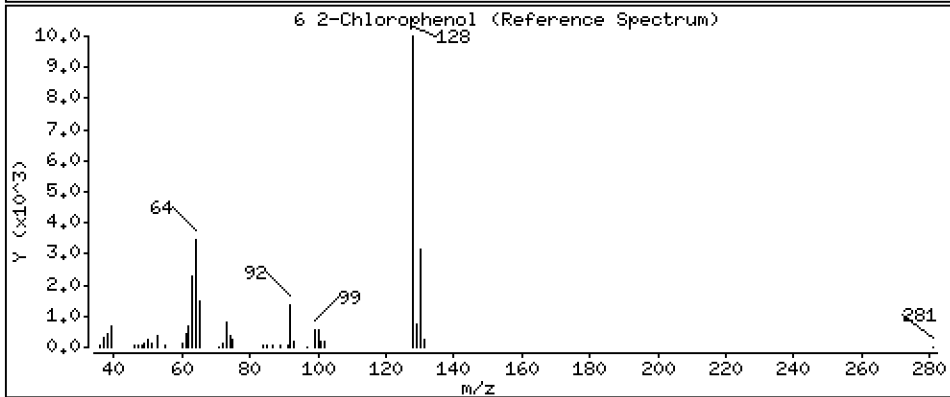
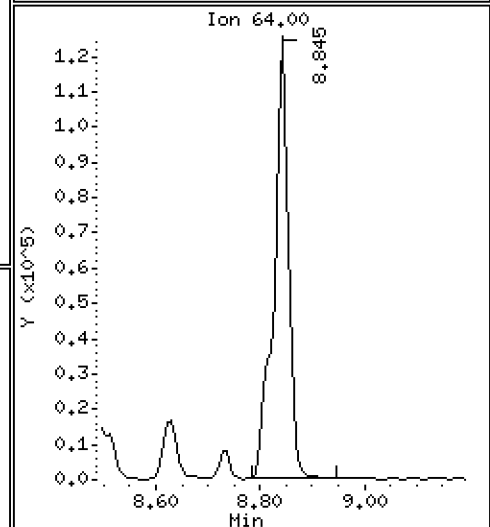
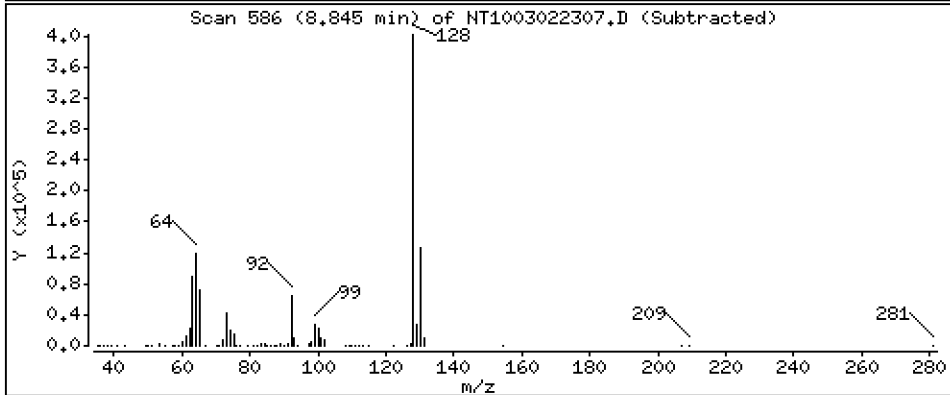
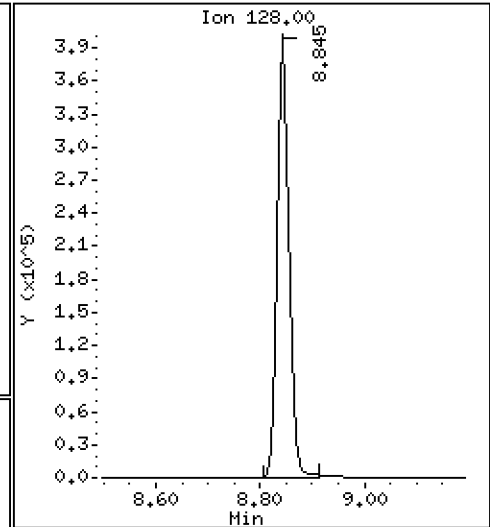
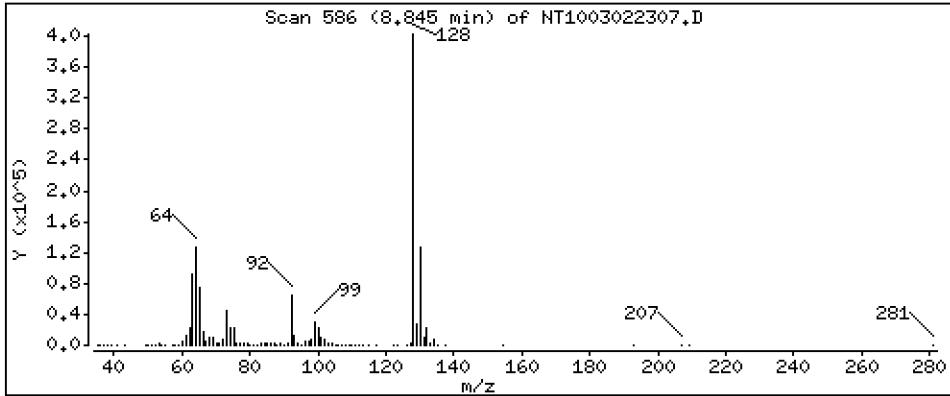
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 4,505 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

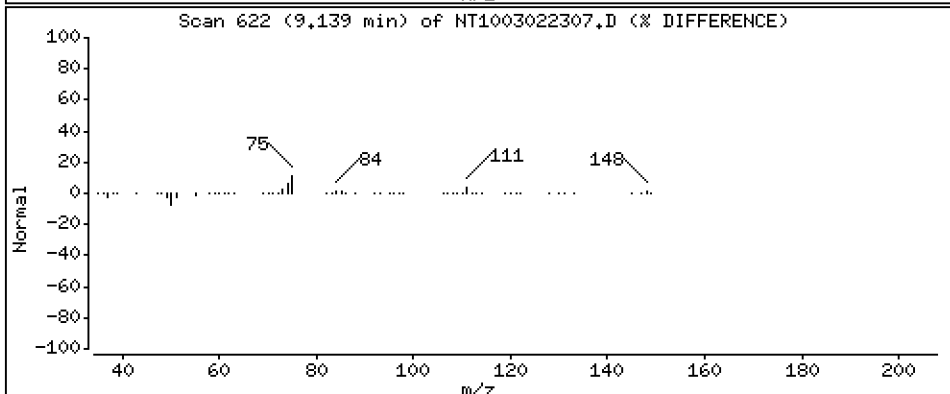
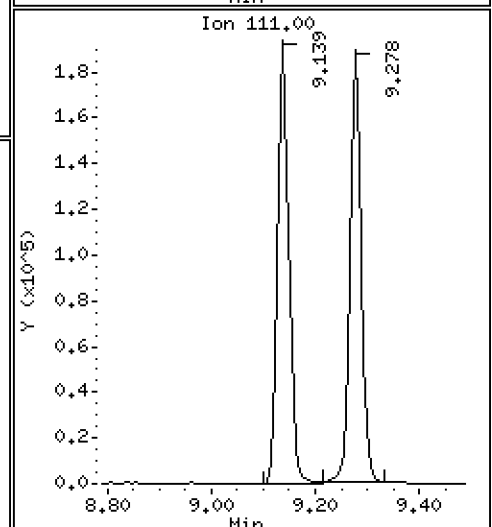
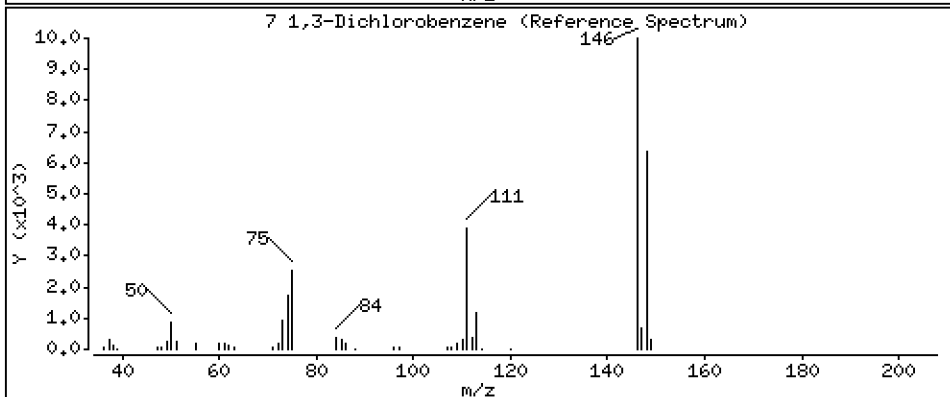
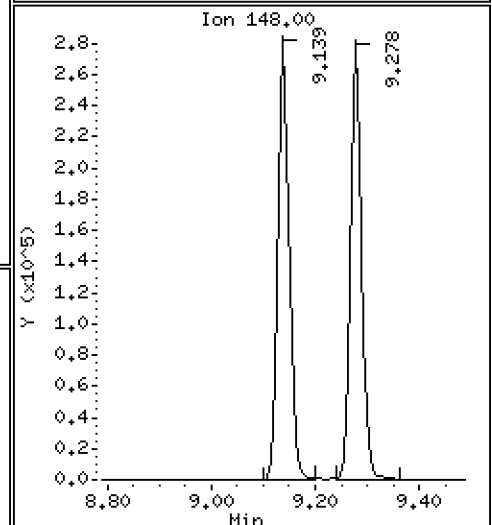
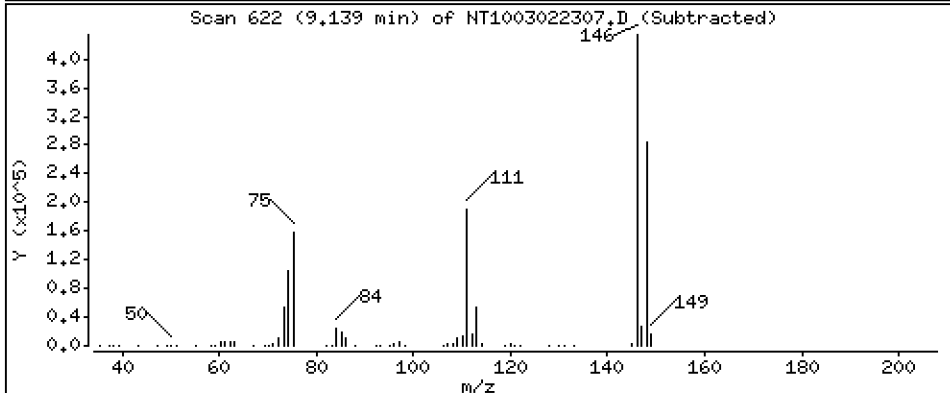
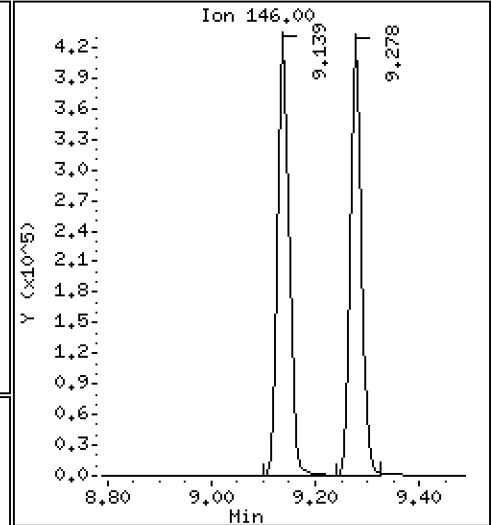
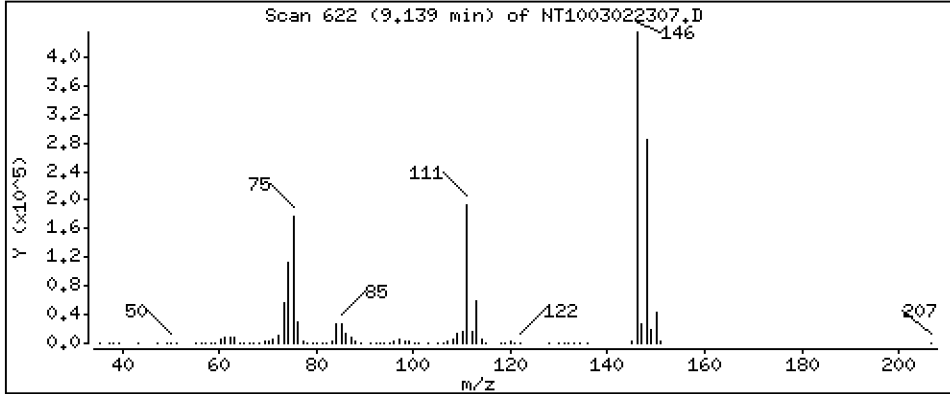
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,394 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

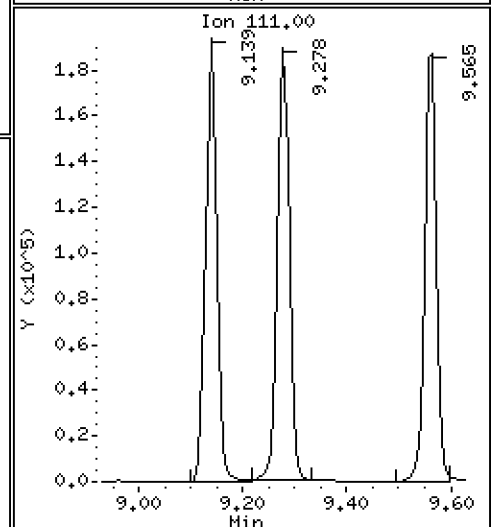
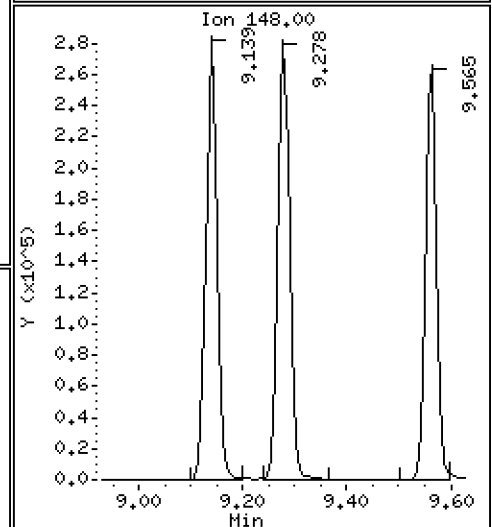
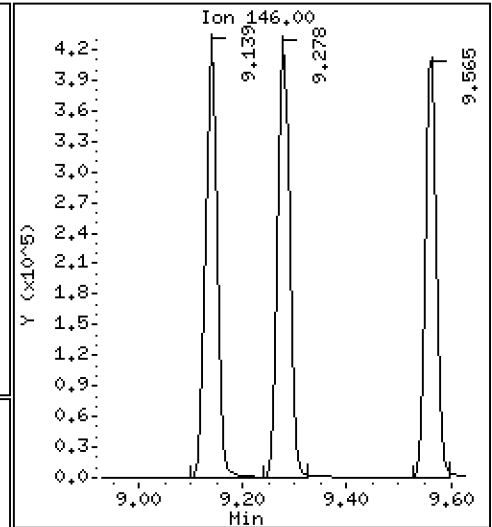
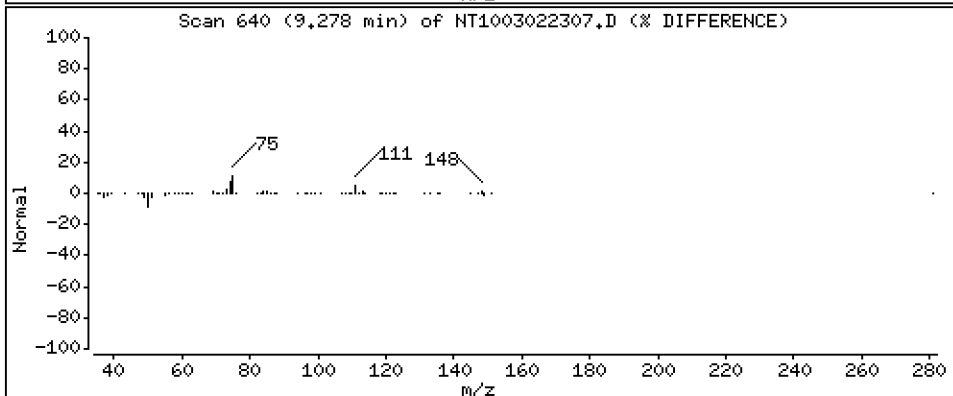
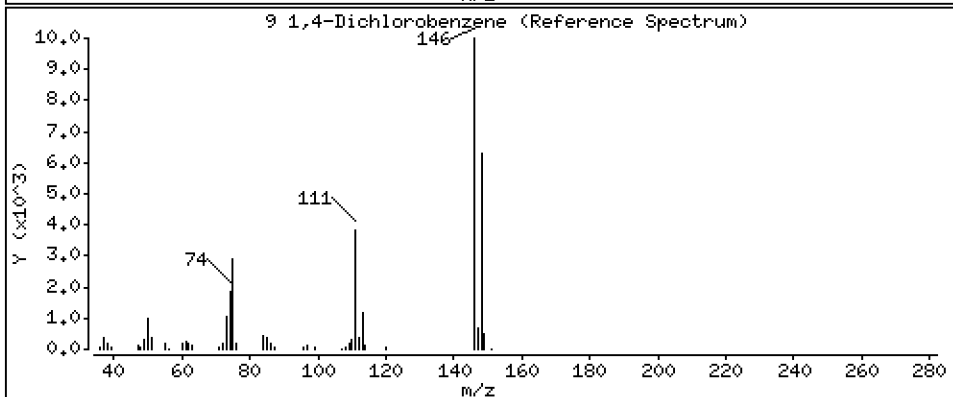
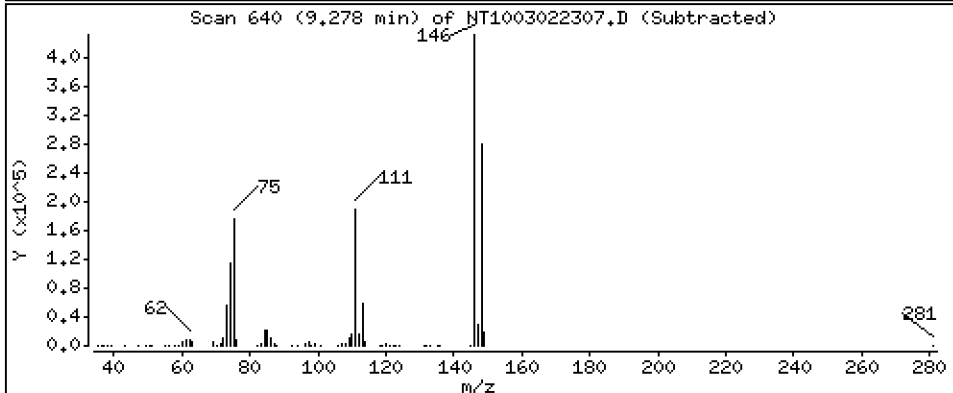
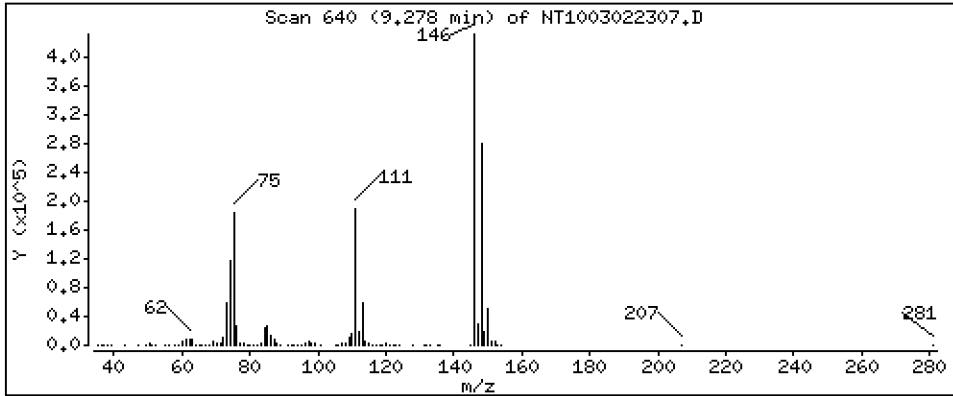
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 4,364 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

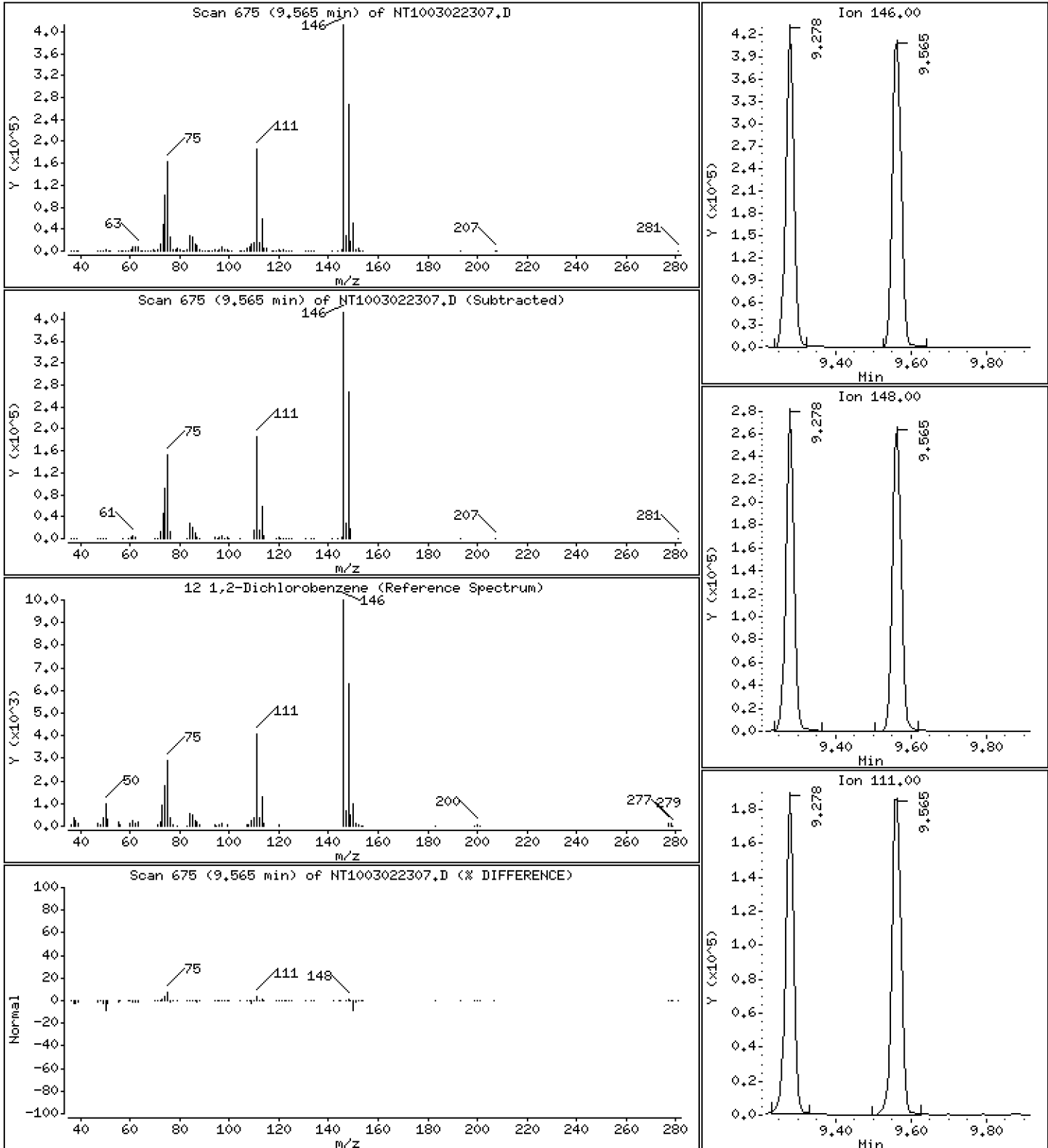
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.506 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

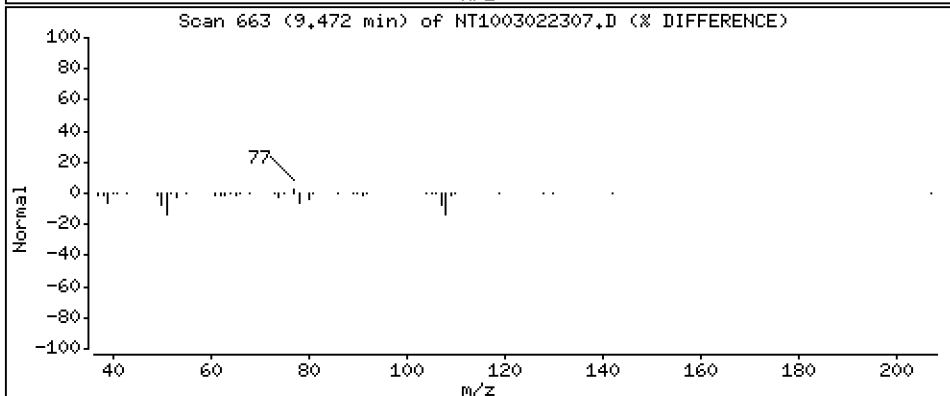
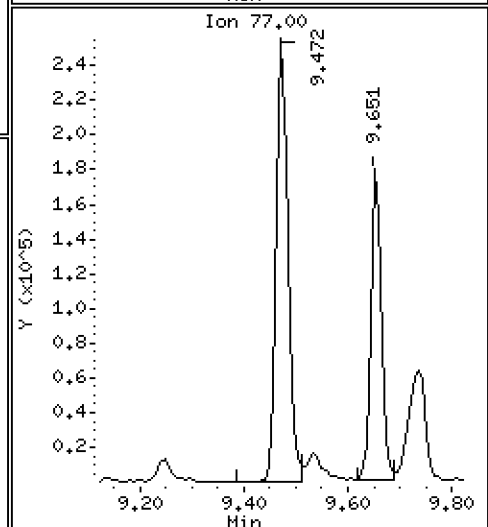
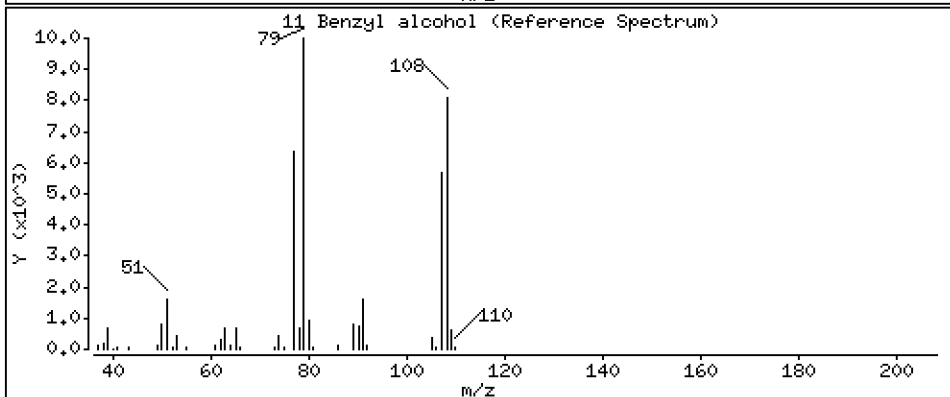
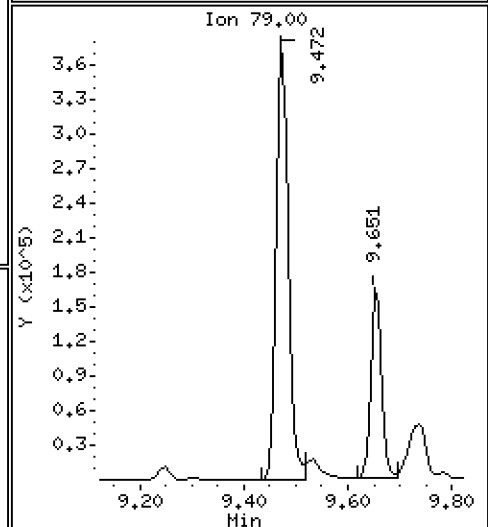
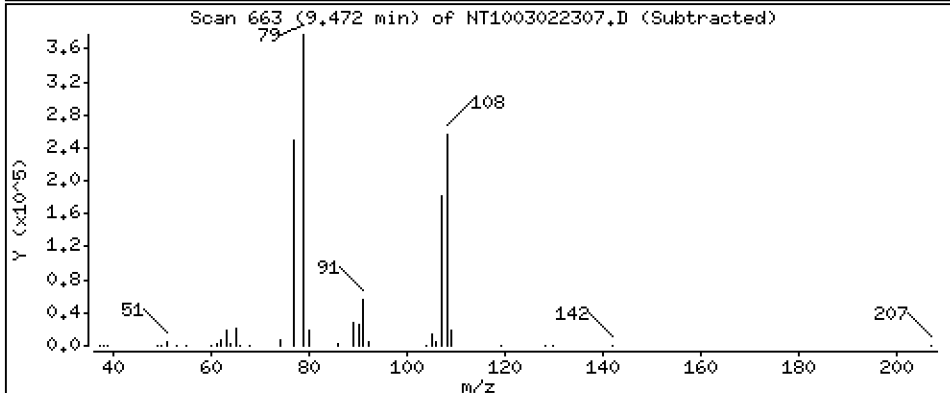
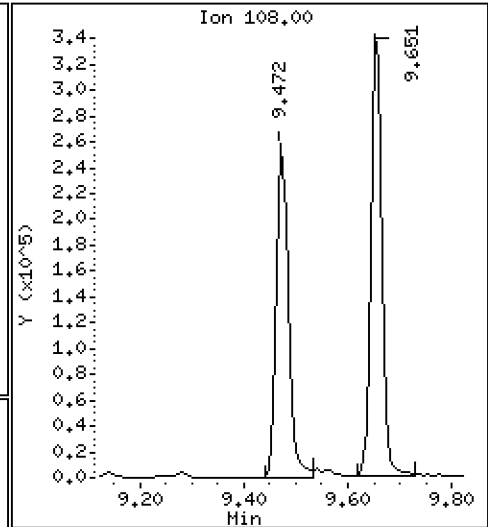
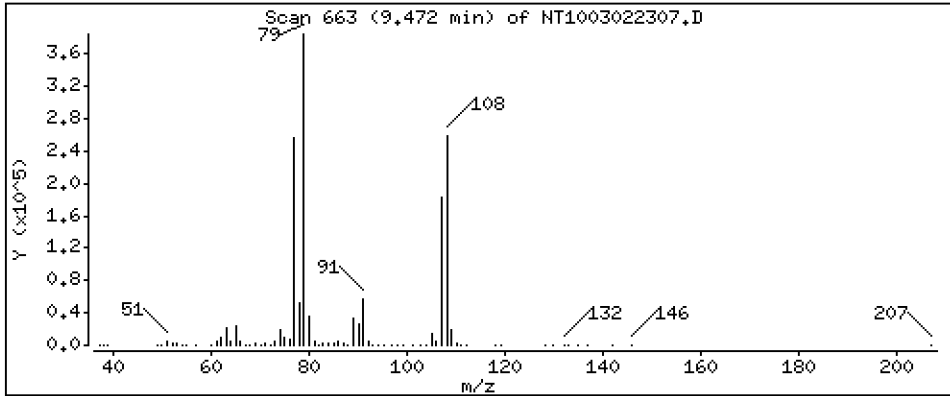
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.639 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

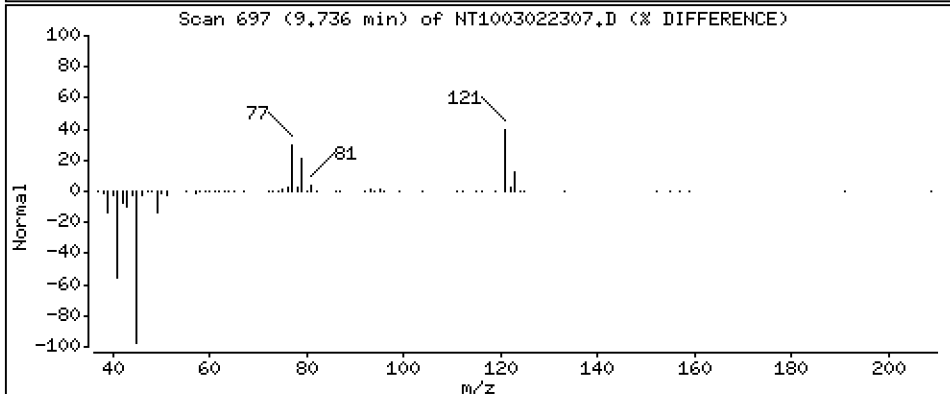
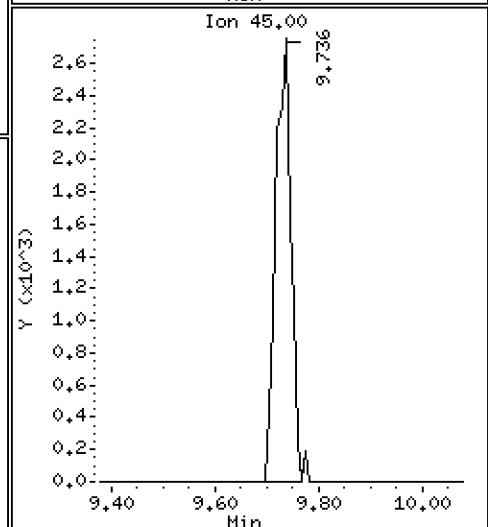
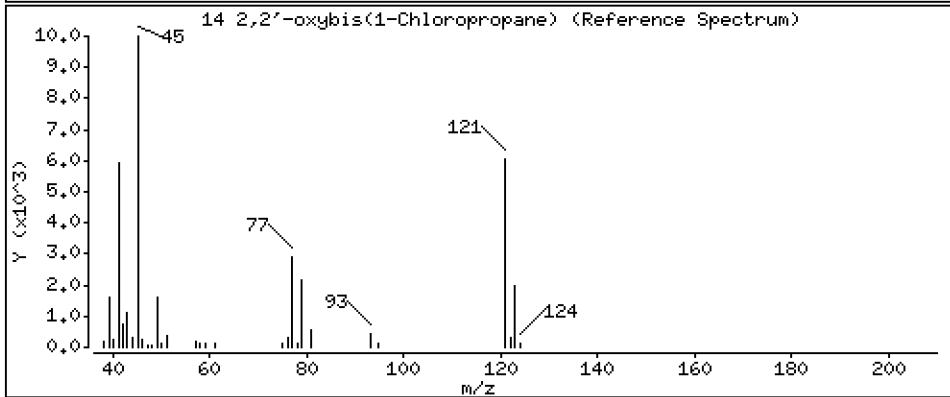
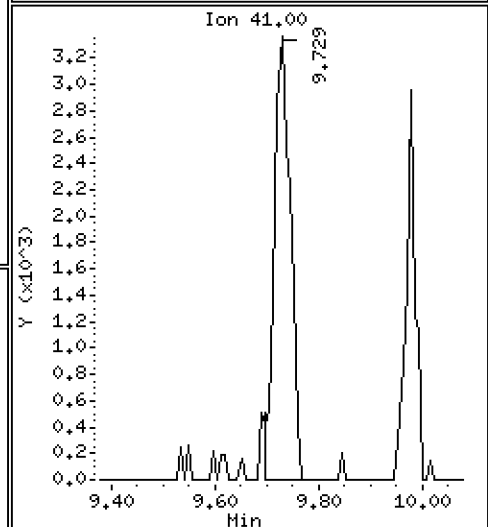
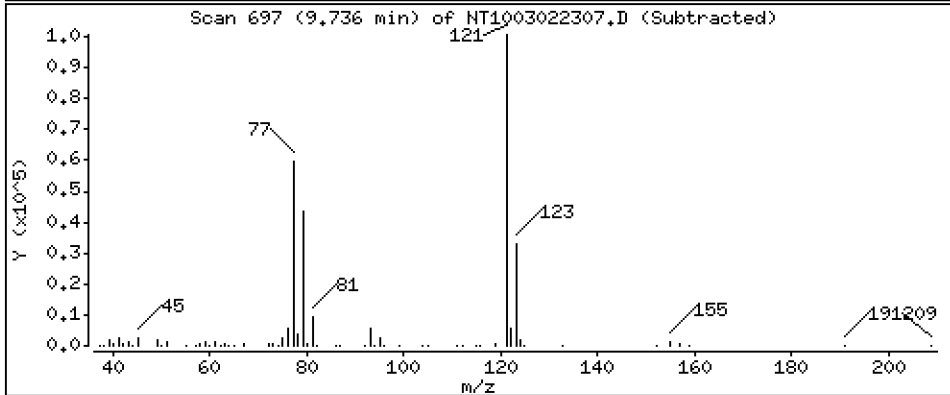
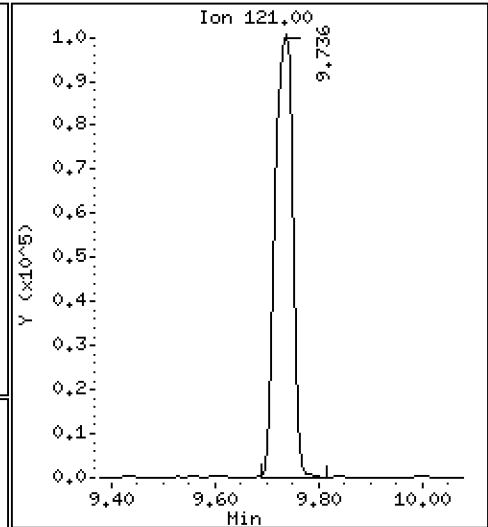
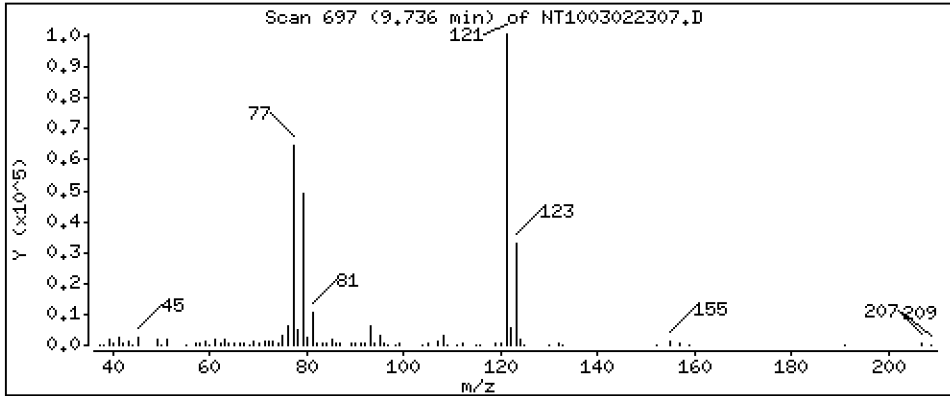
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 5,642 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

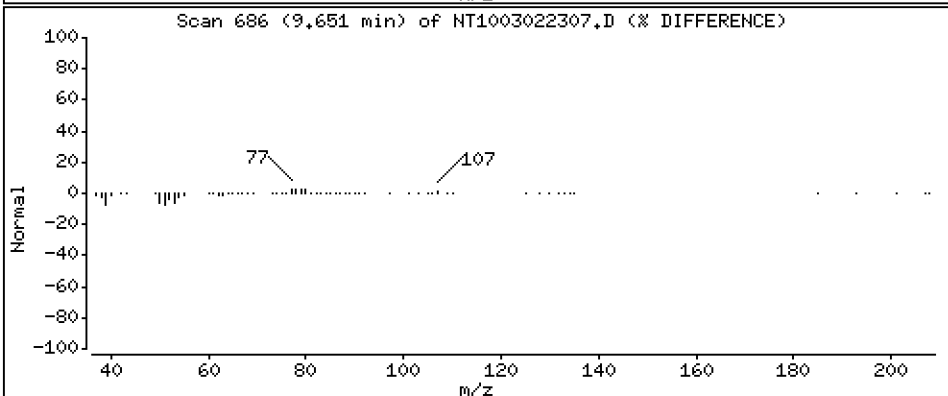
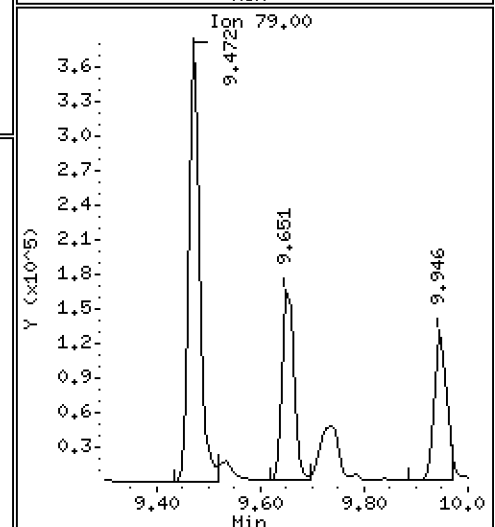
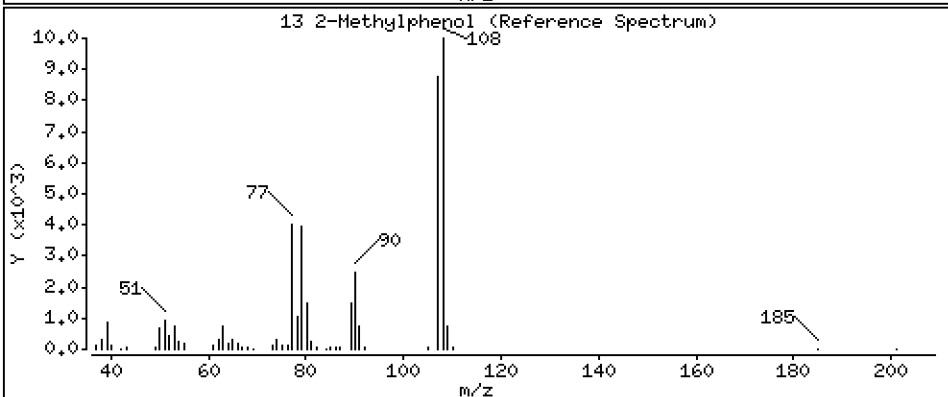
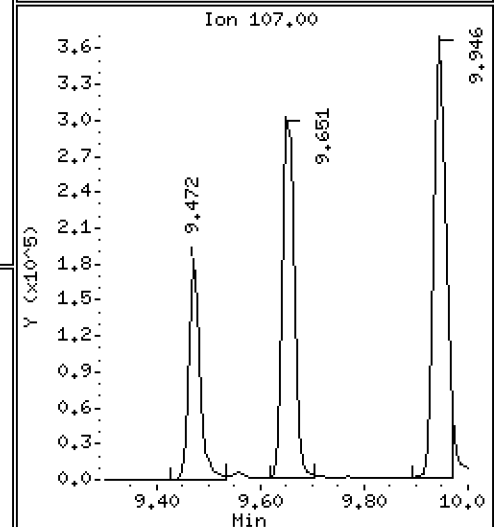
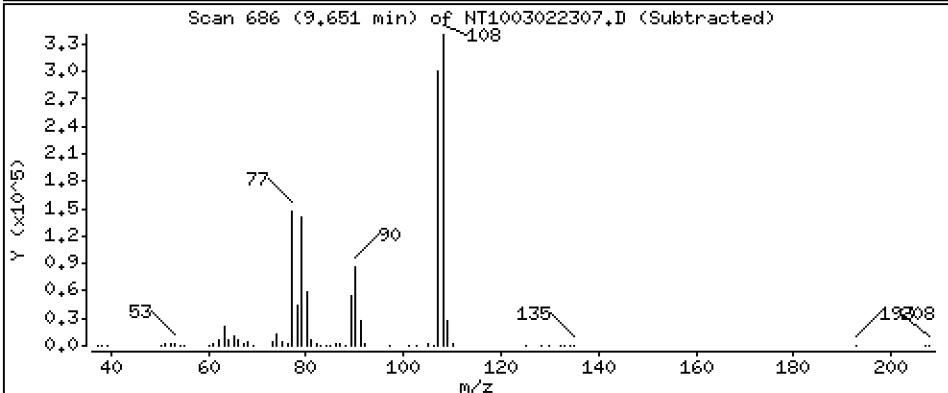
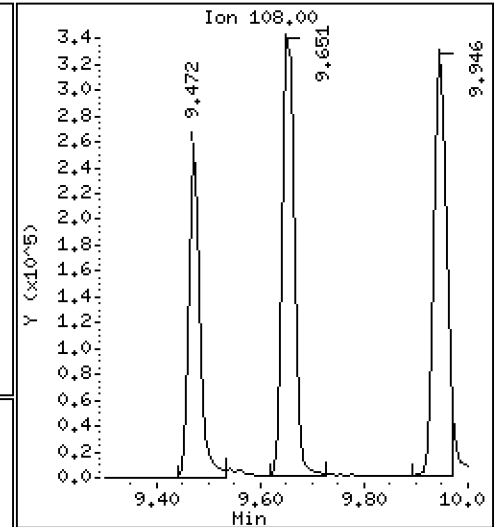
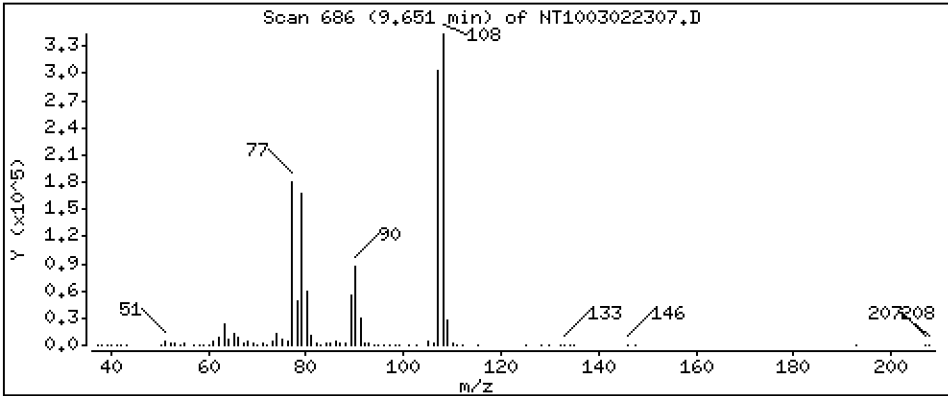
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 4,067 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

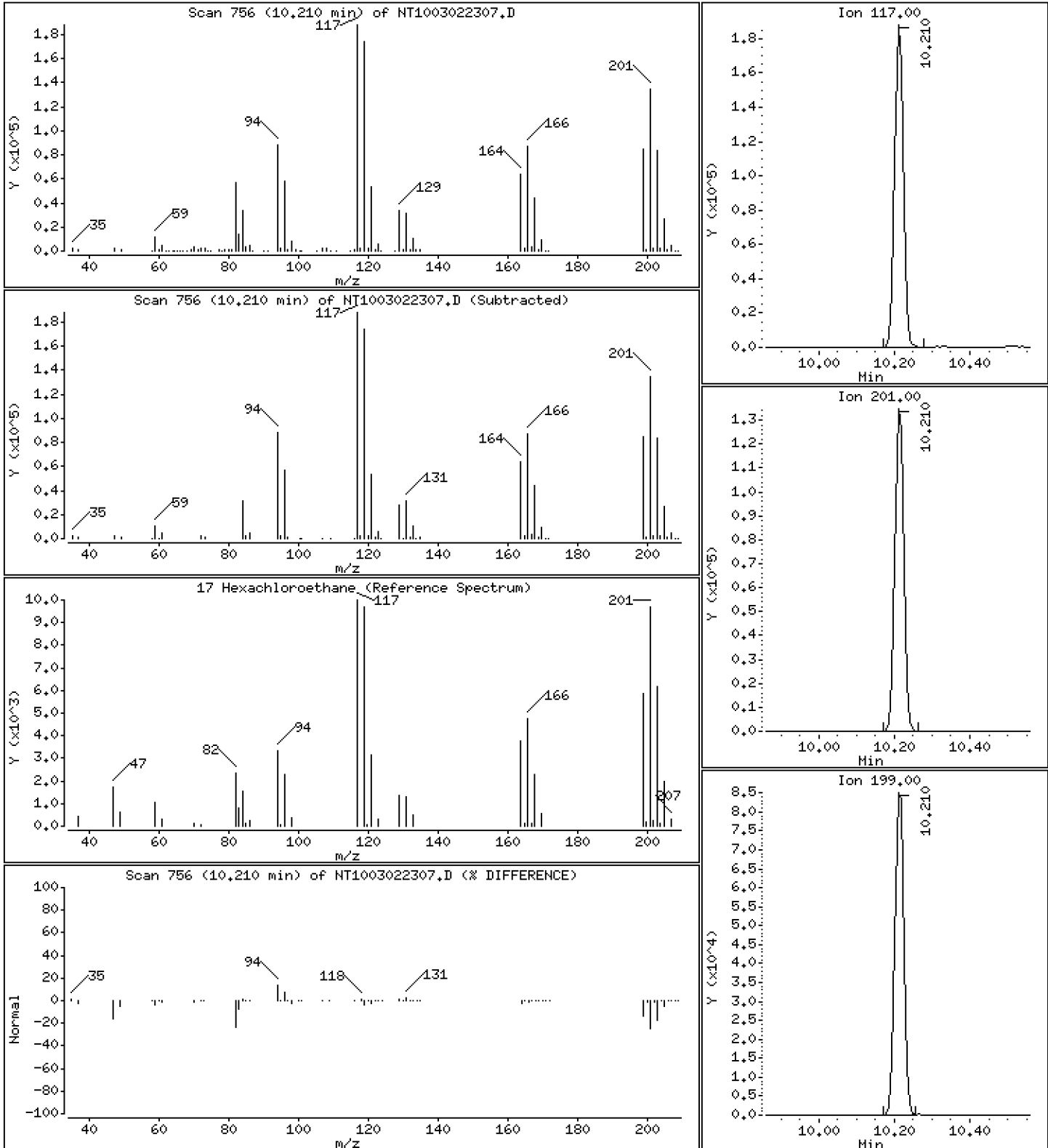
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 4,727 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

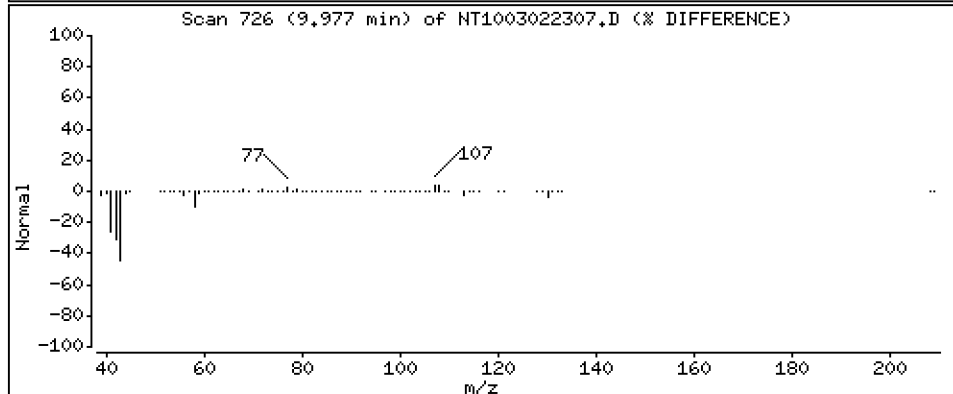
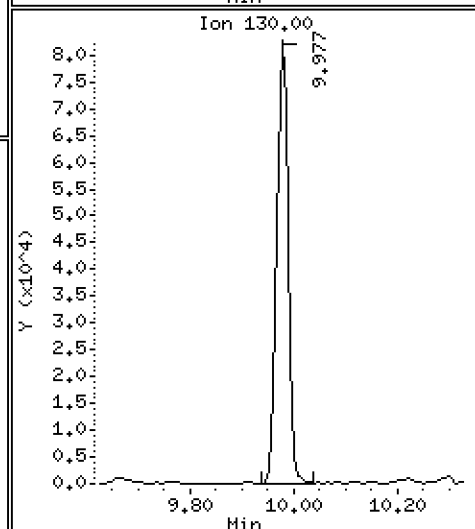
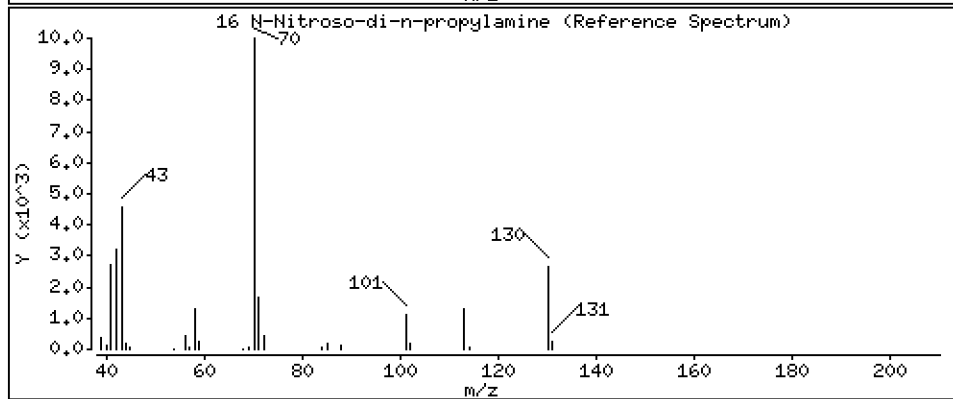
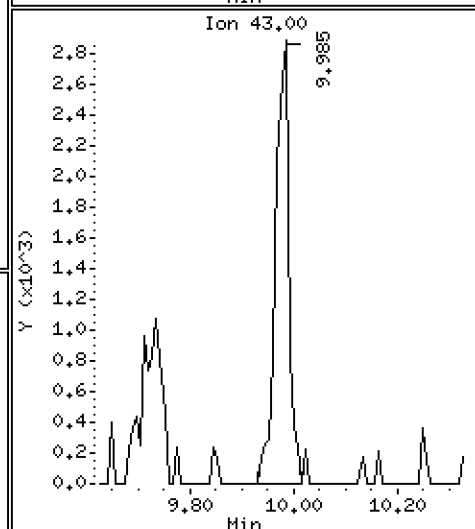
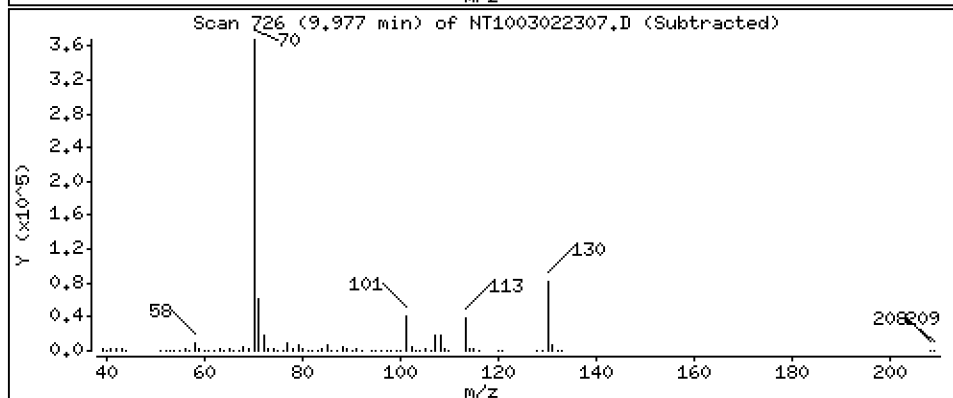
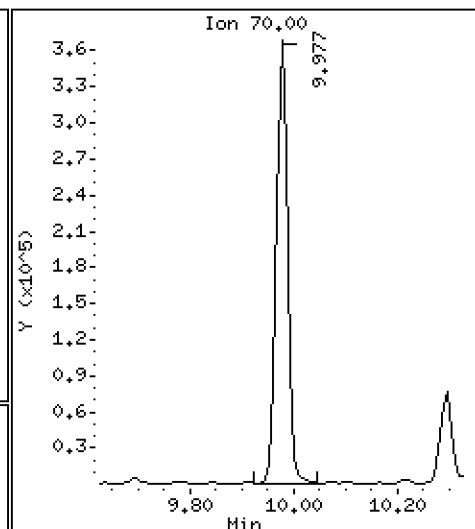
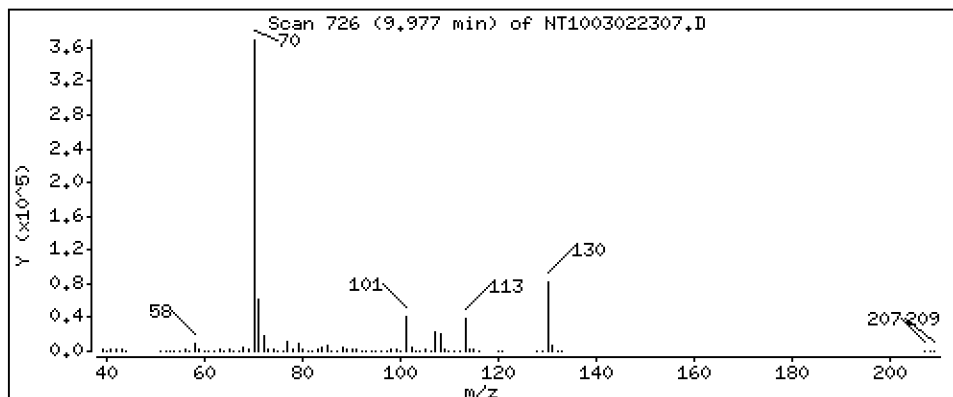
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,352 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

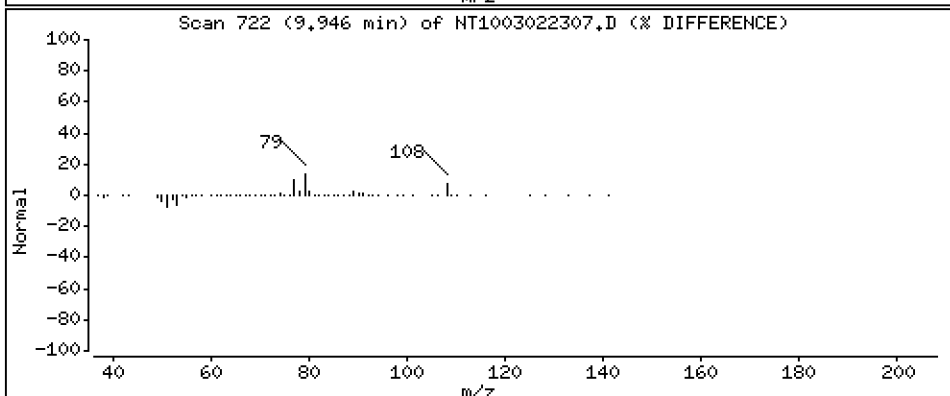
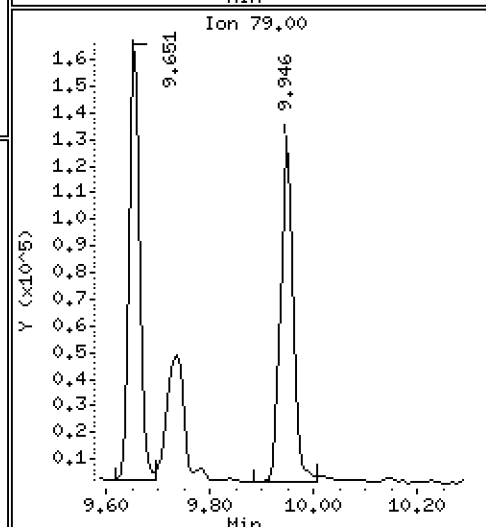
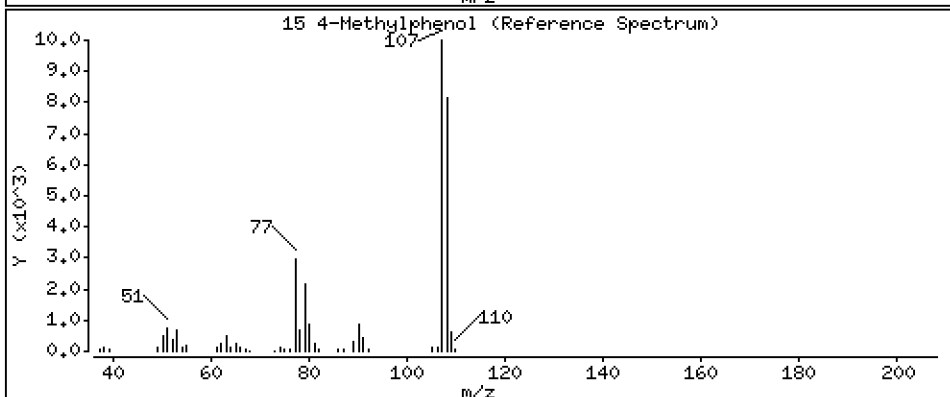
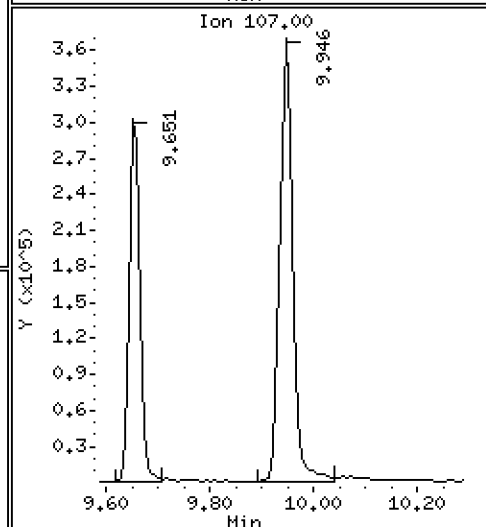
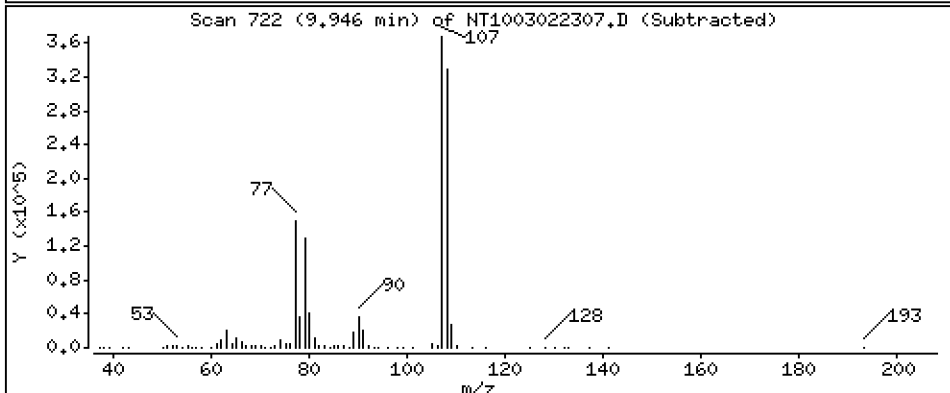
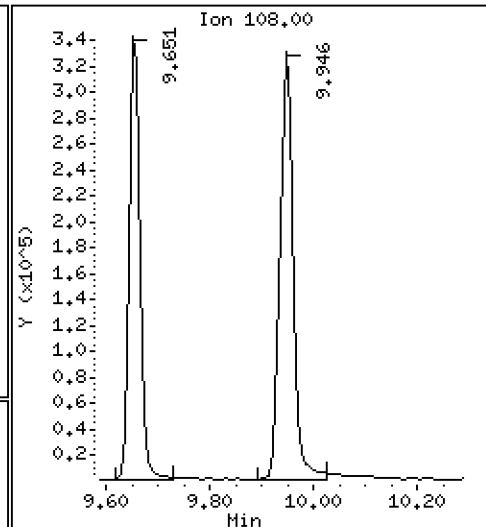
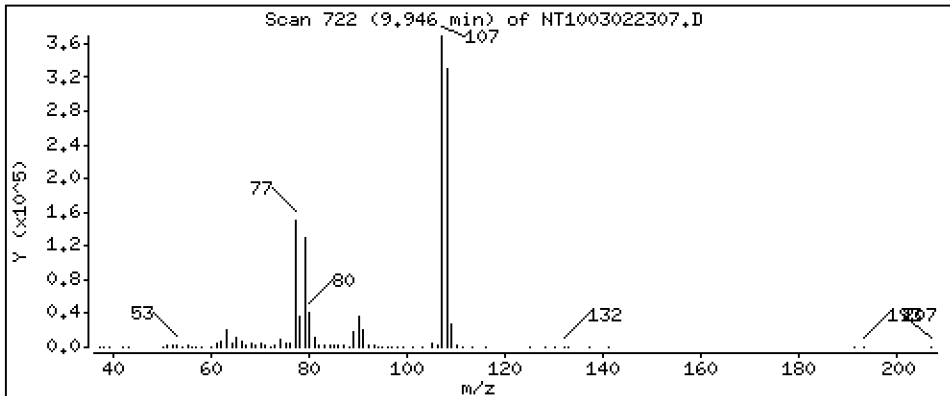
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,172 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

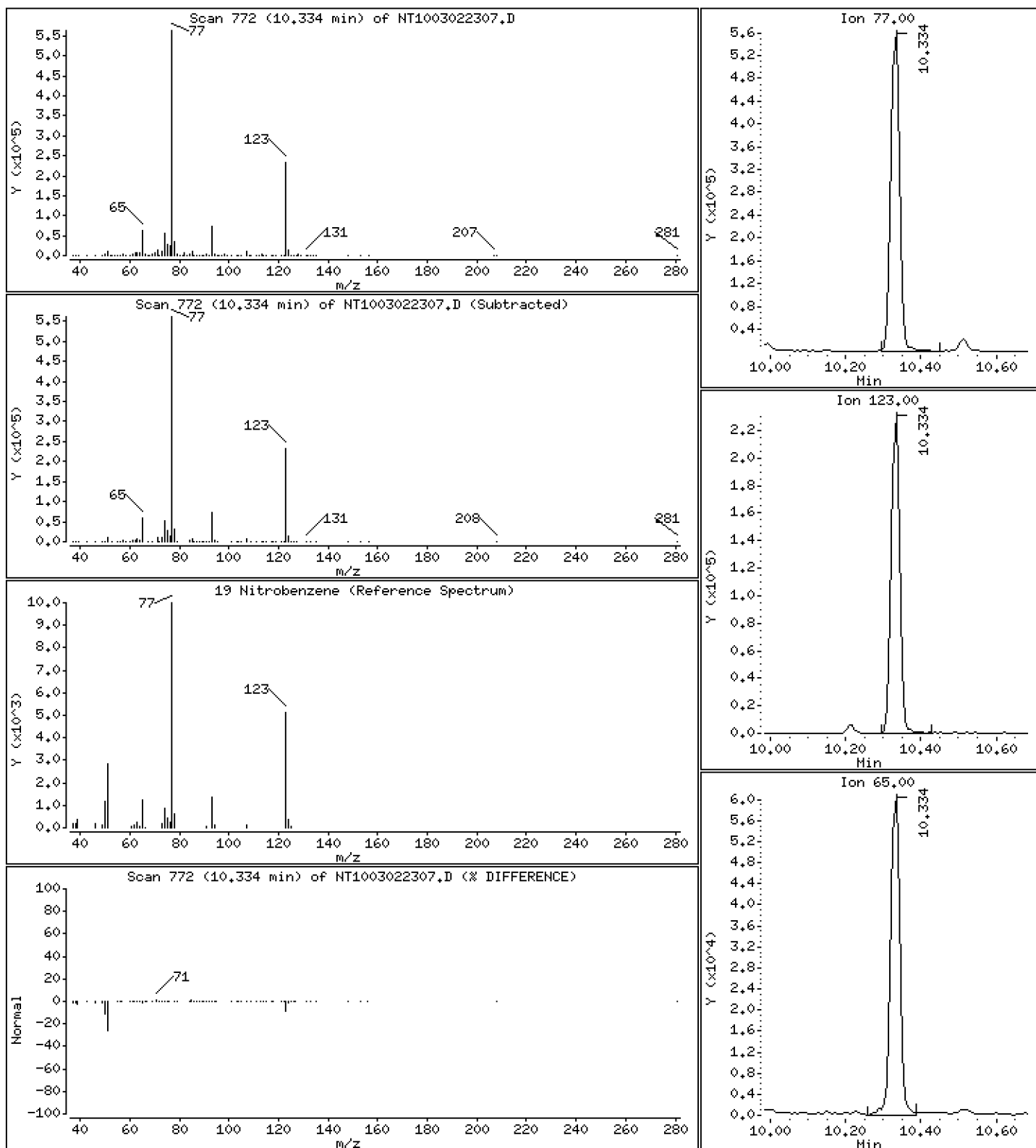
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,027 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

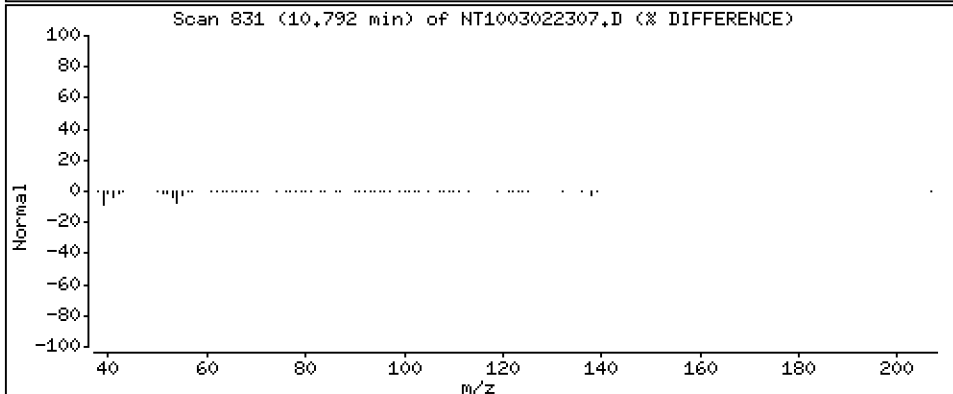
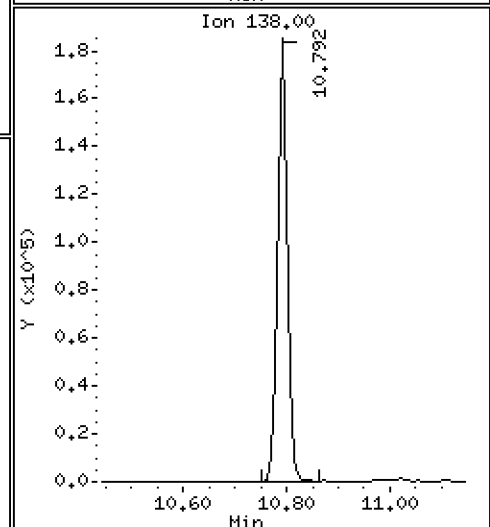
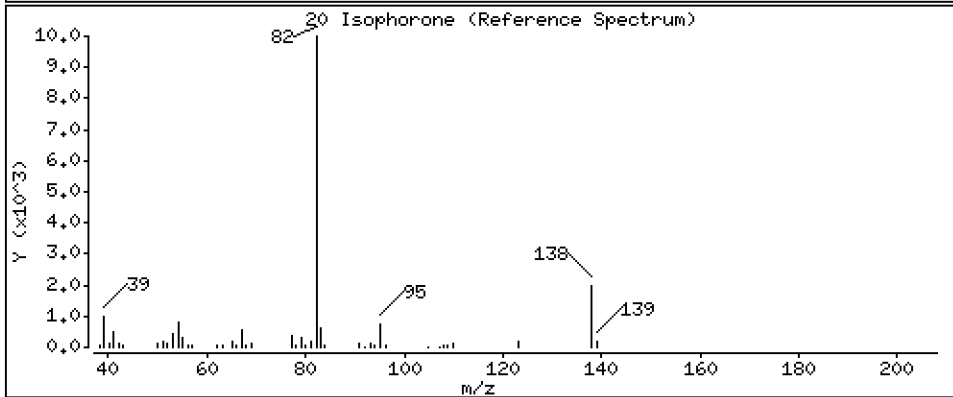
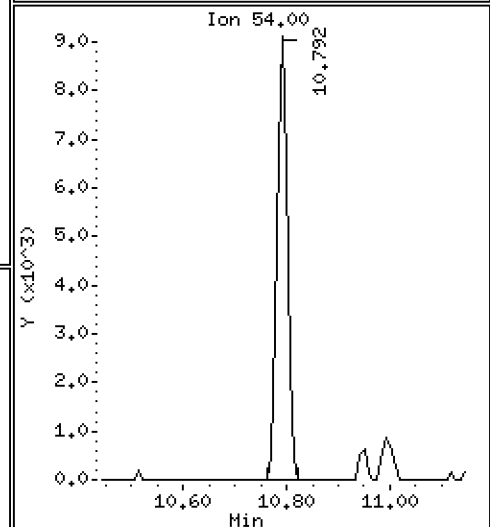
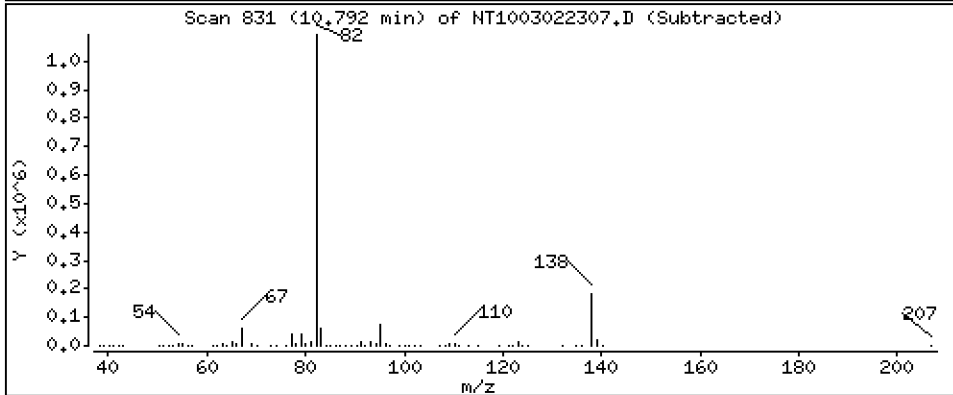
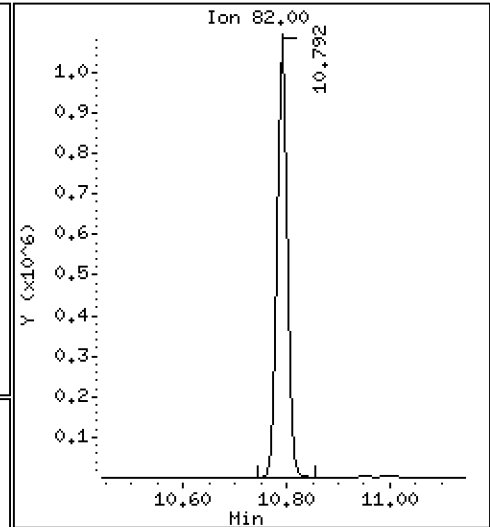
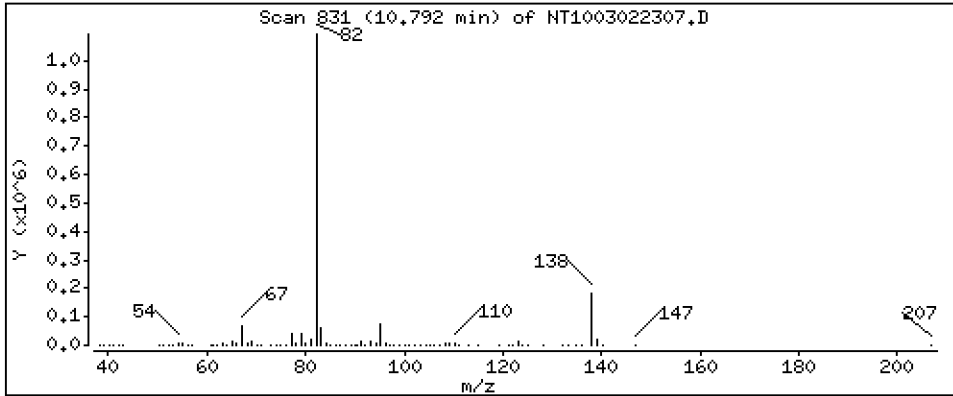
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,171 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

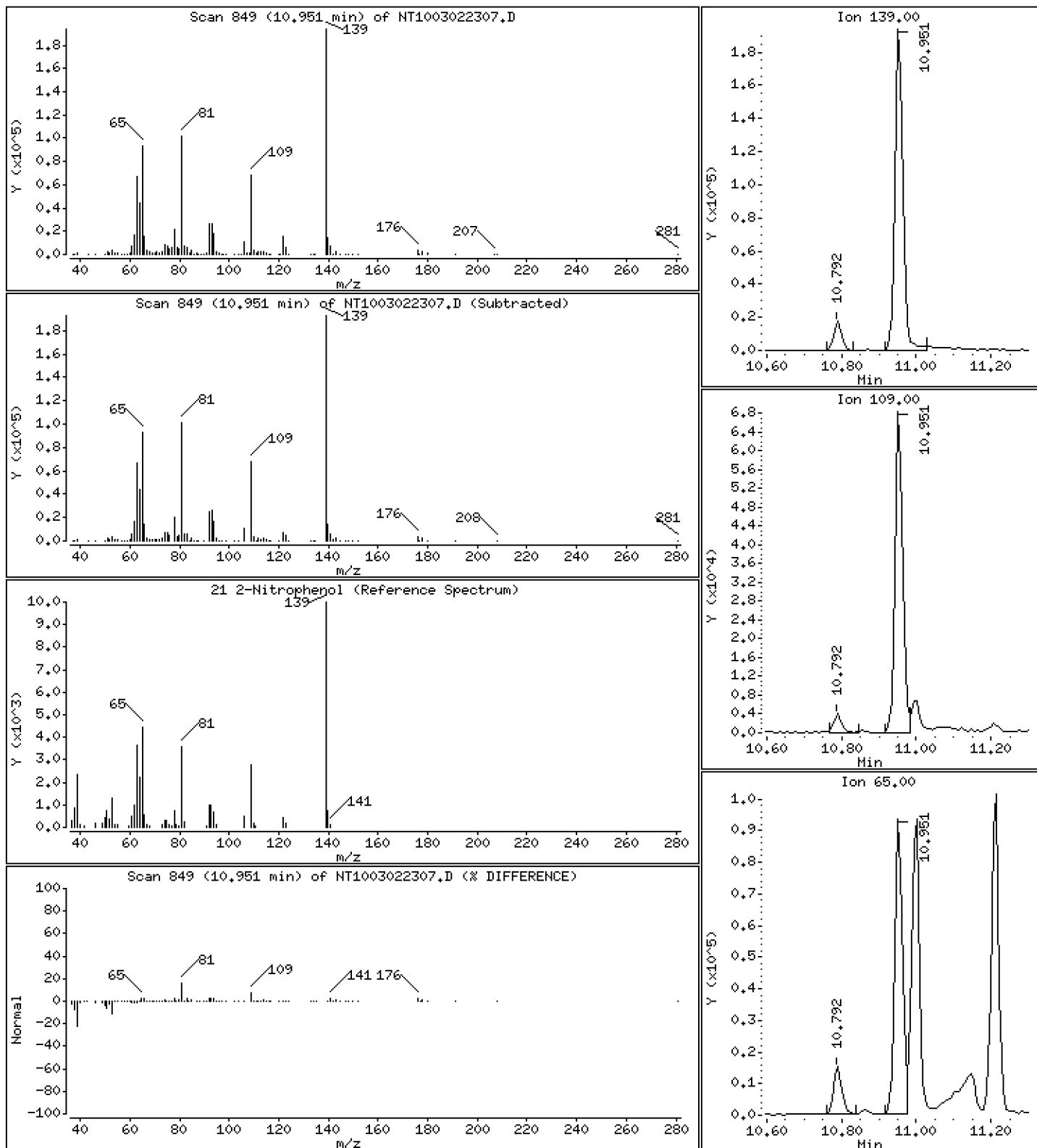
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,187 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

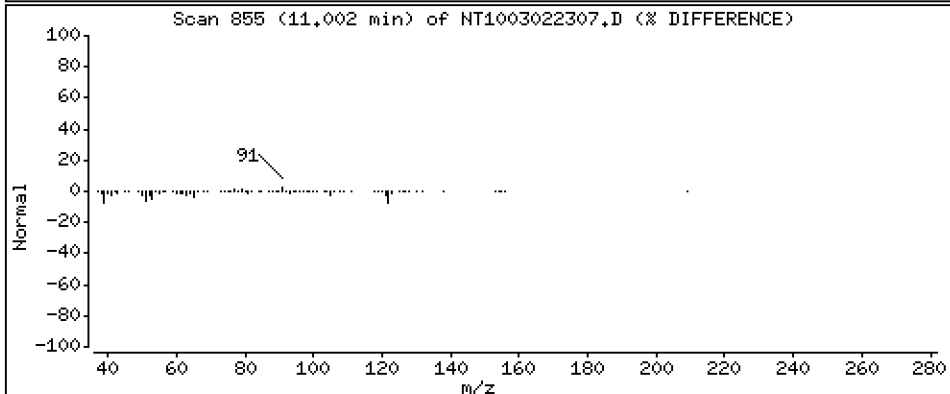
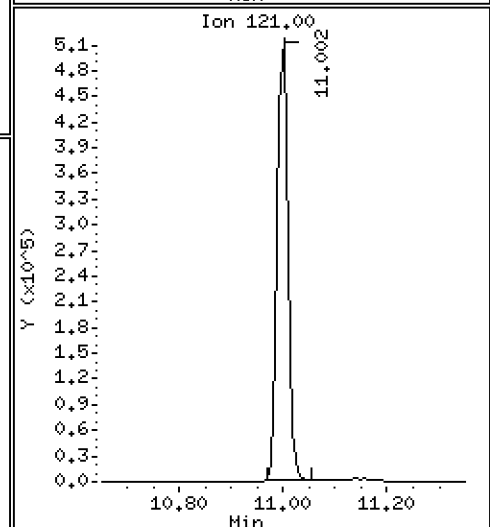
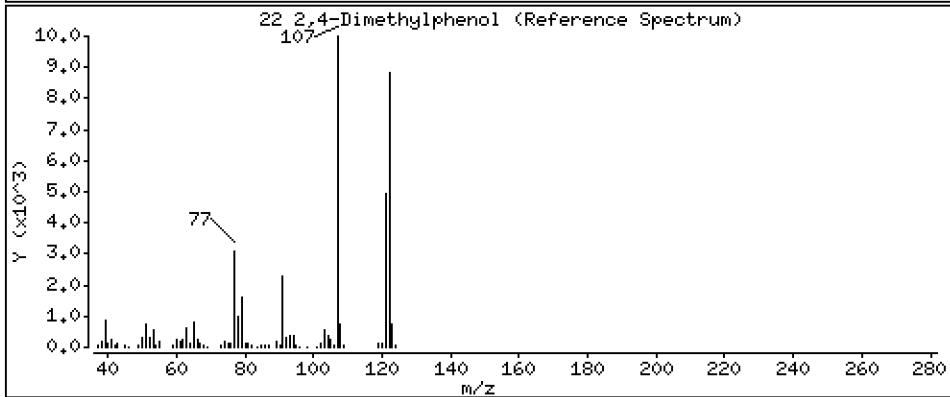
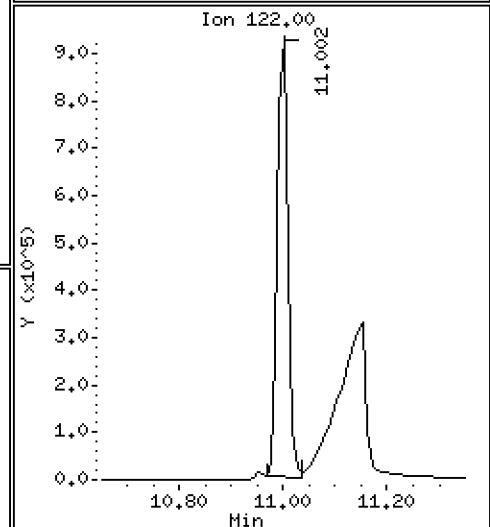
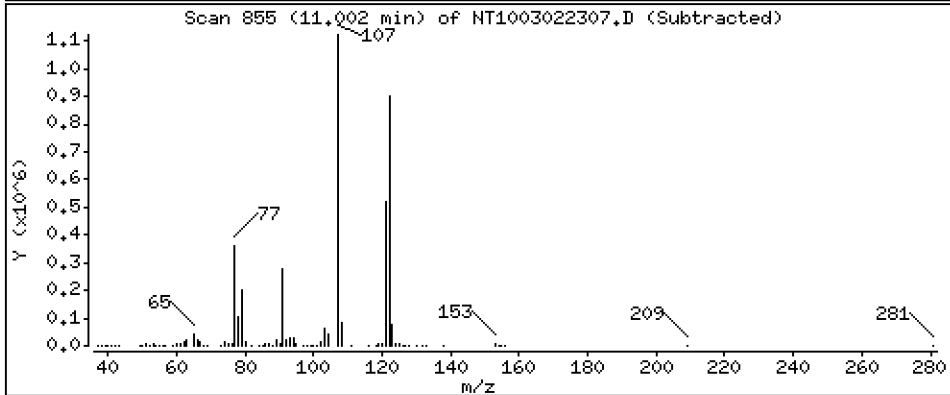
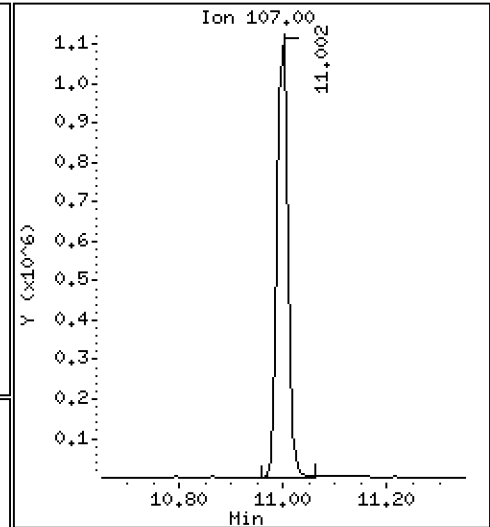
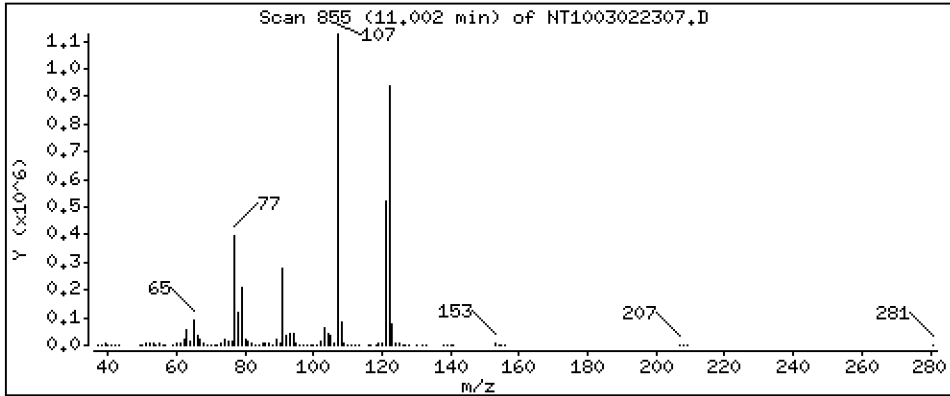
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 9,692 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

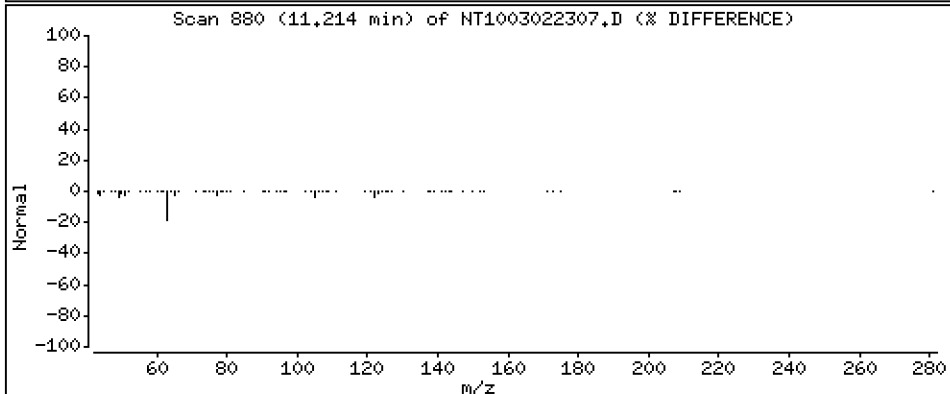
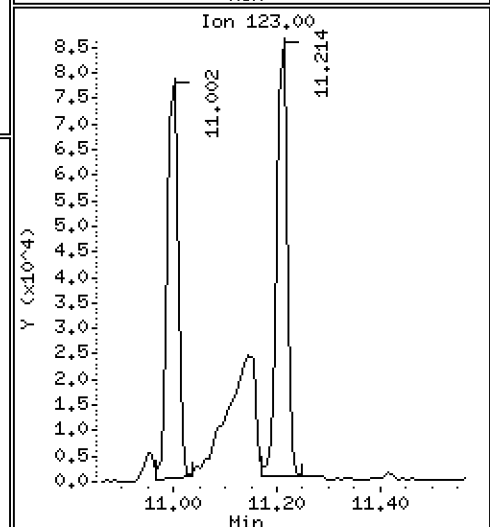
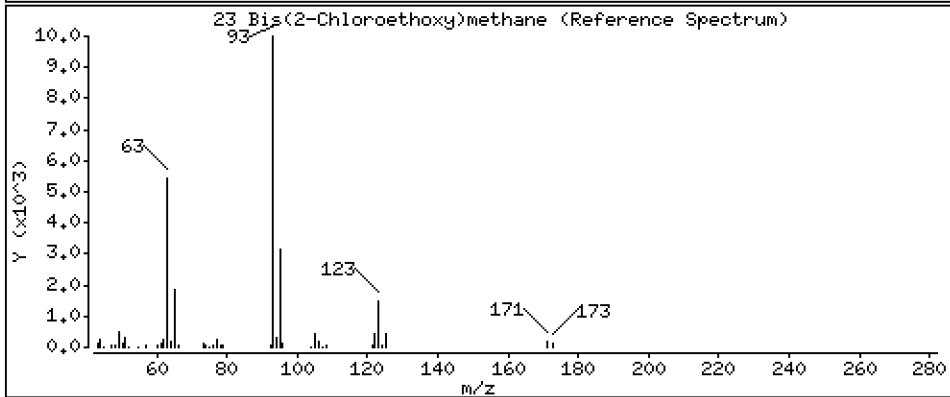
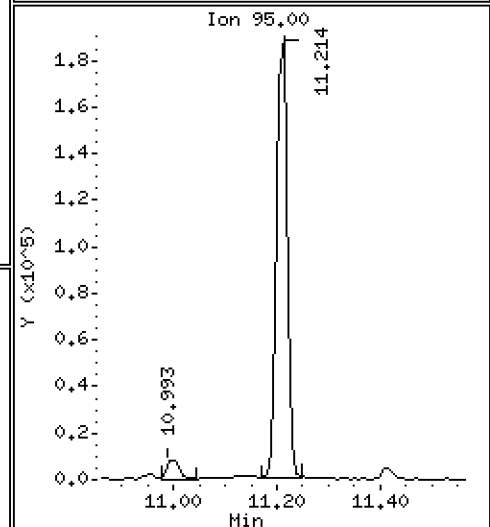
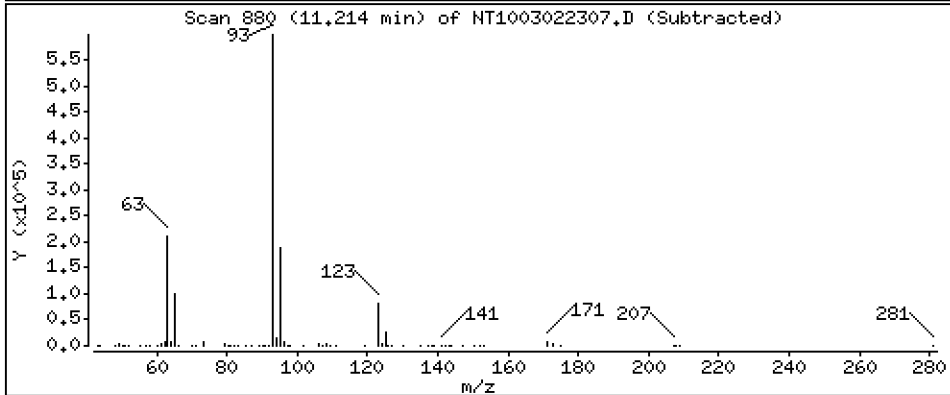
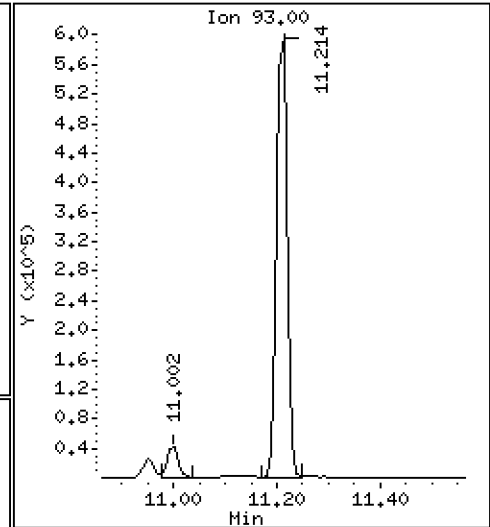
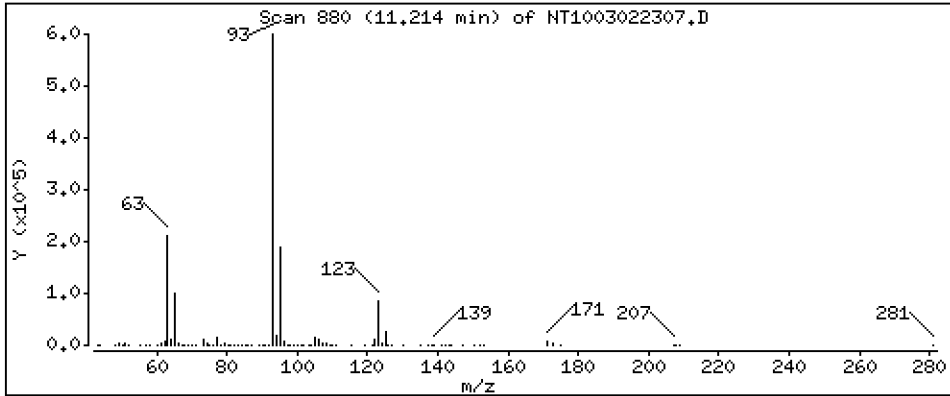
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,416 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

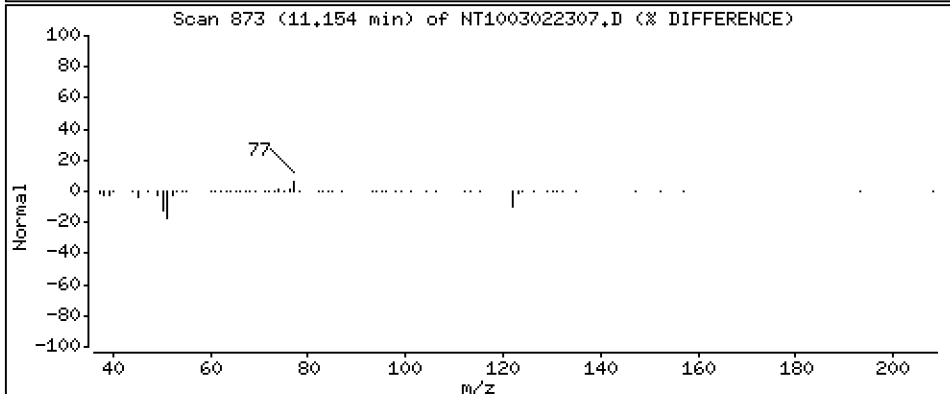
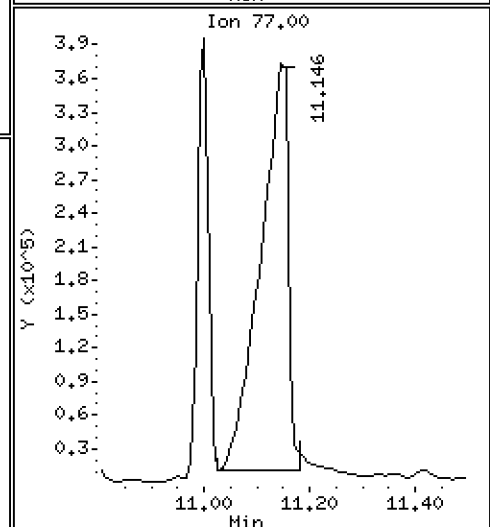
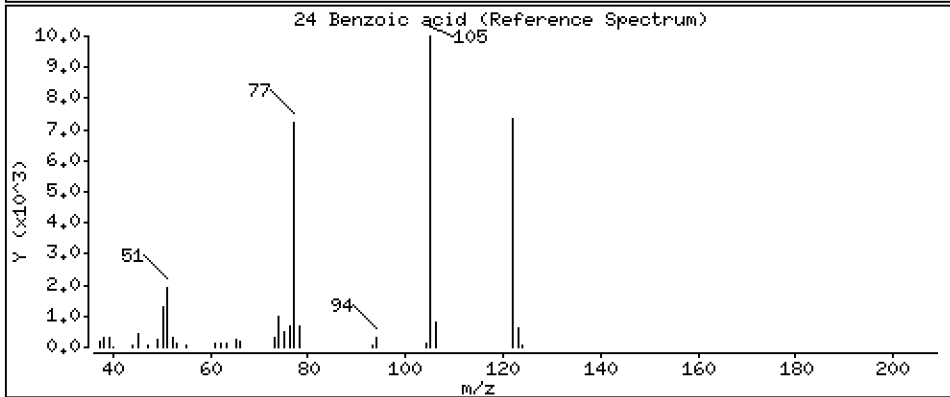
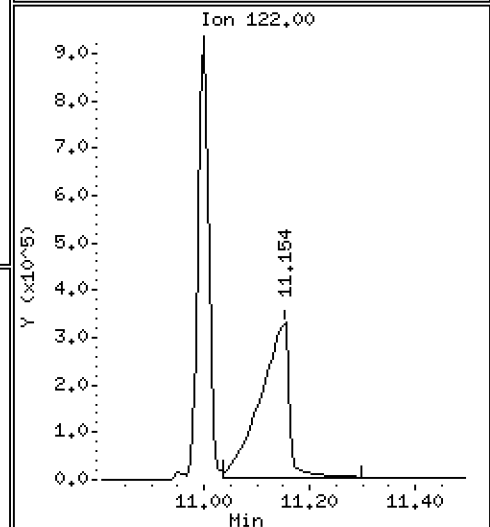
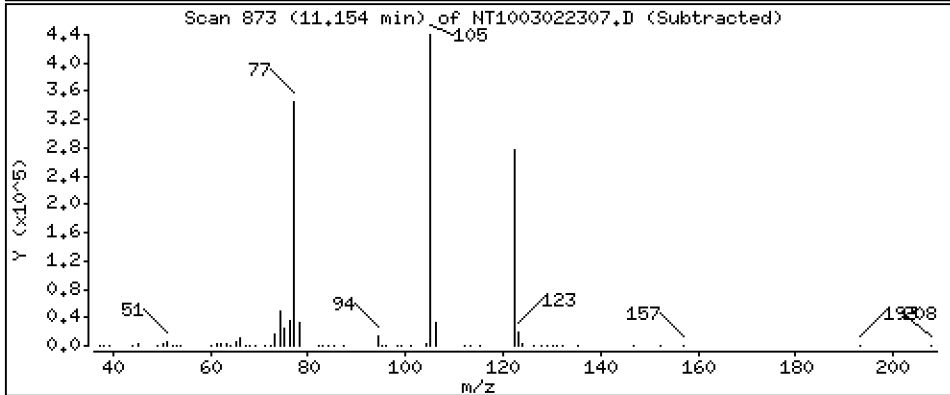
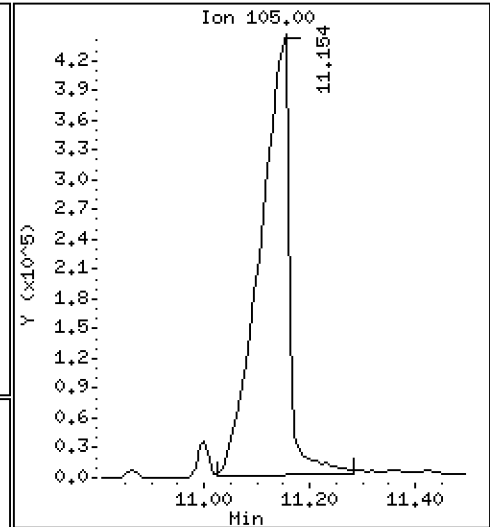
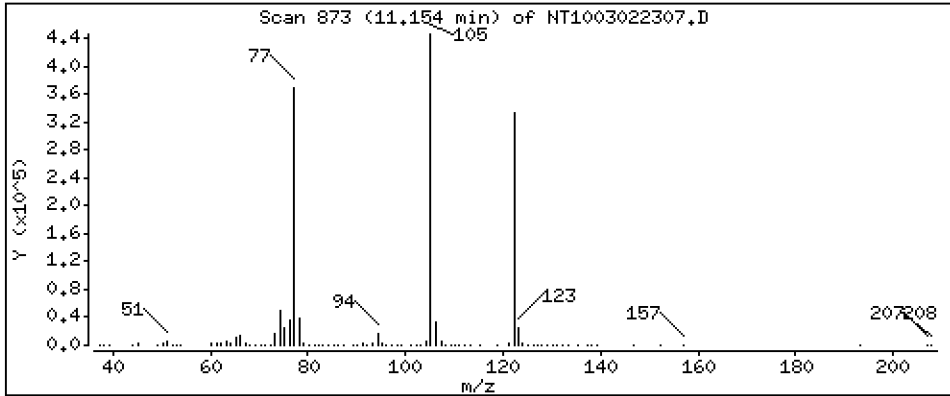
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 17,18 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

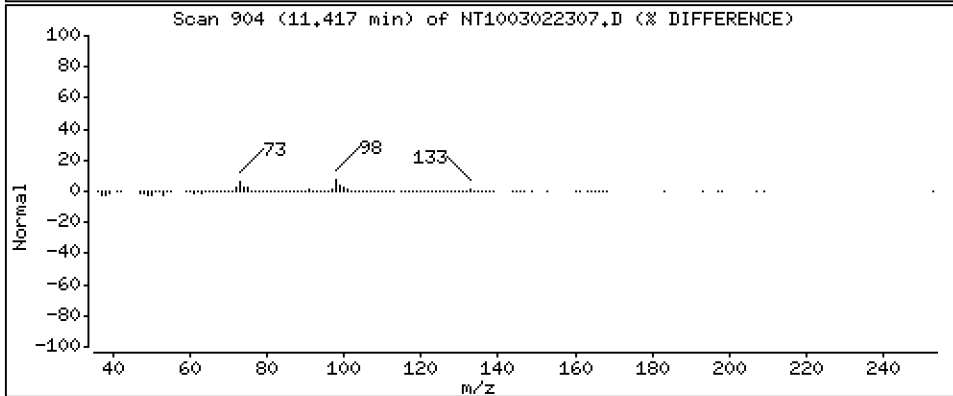
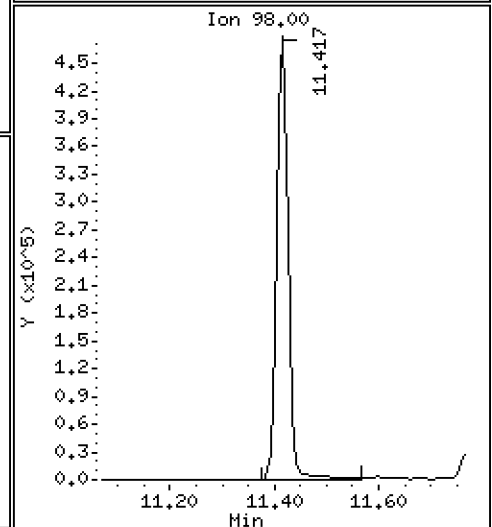
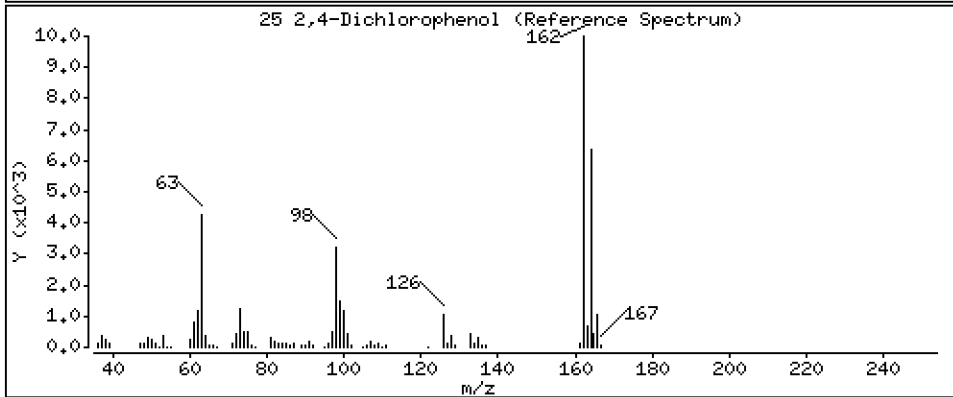
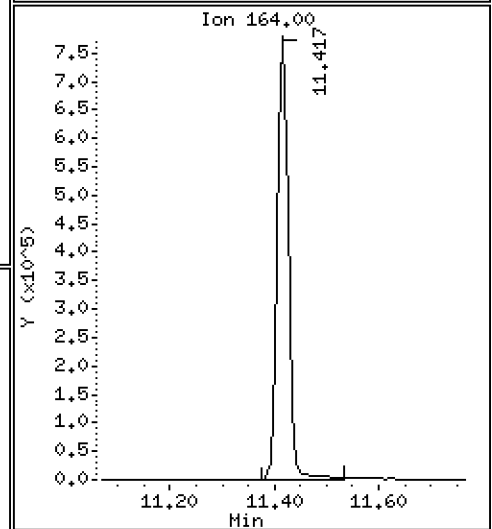
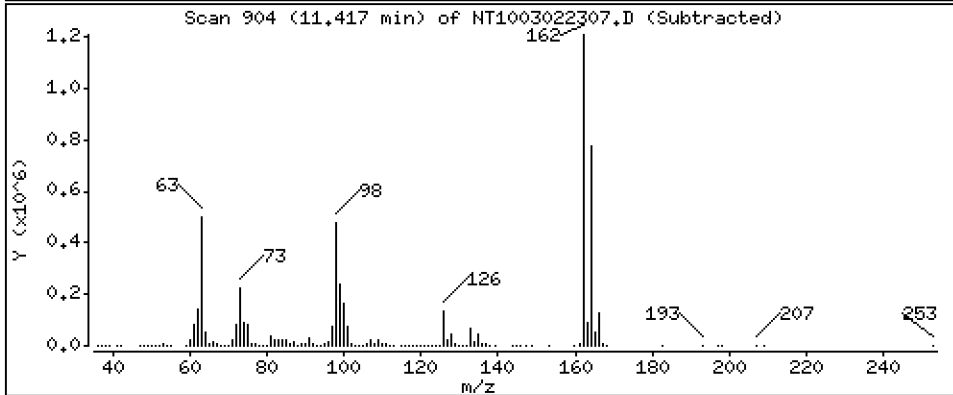
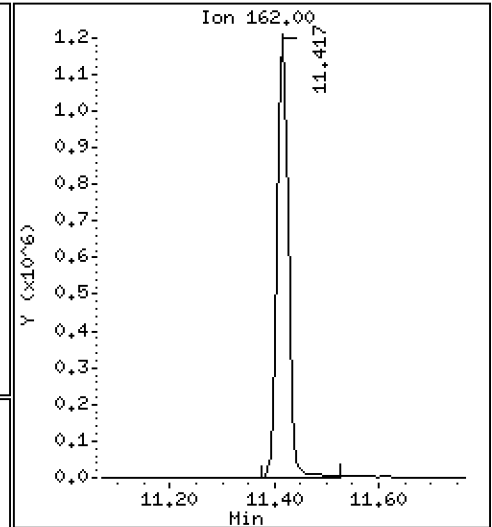
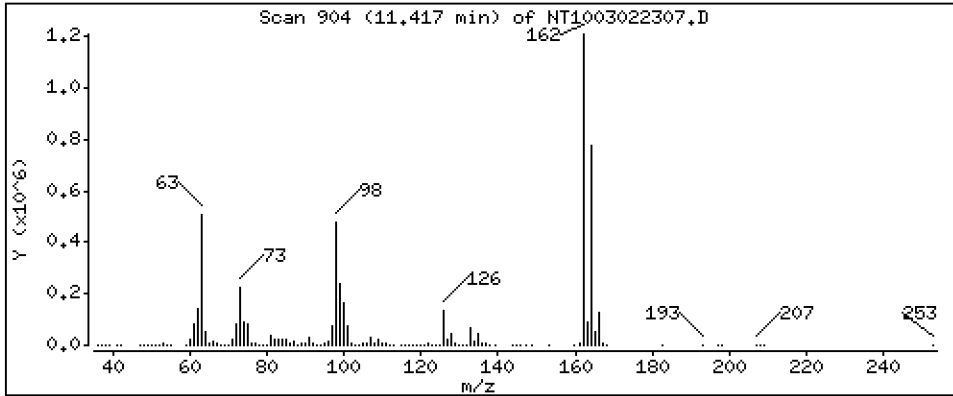
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 15,36 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

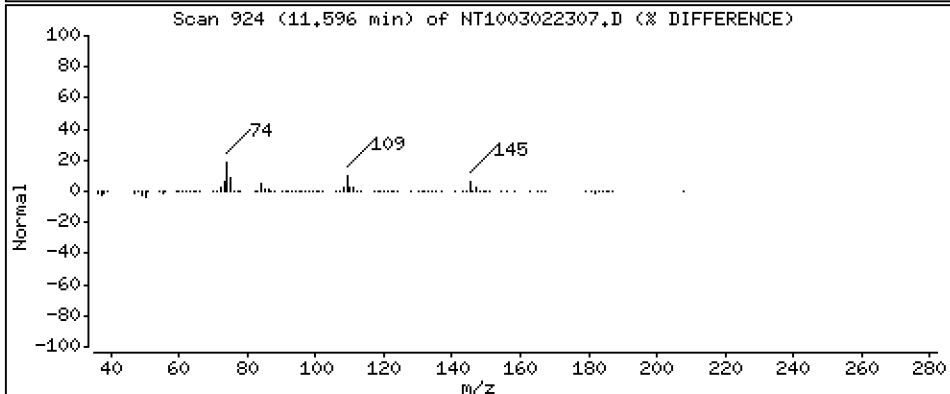
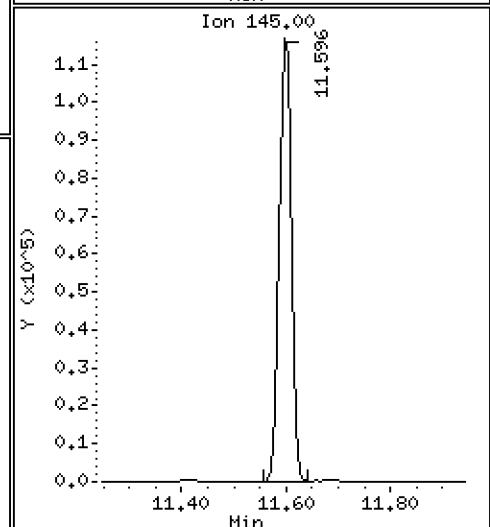
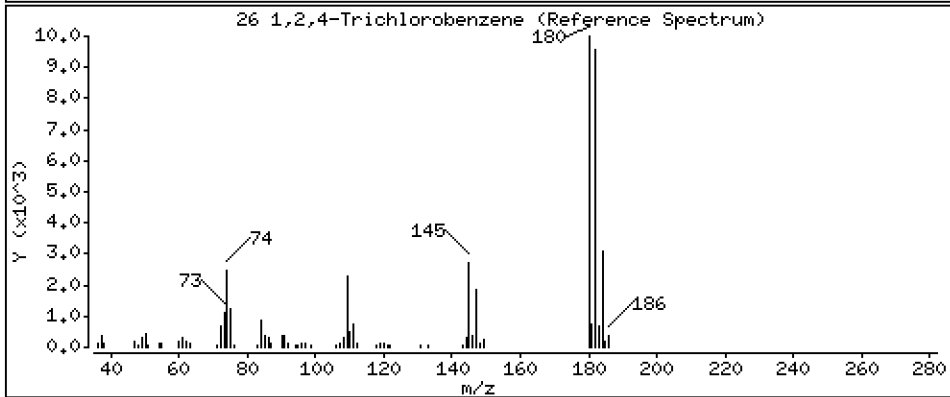
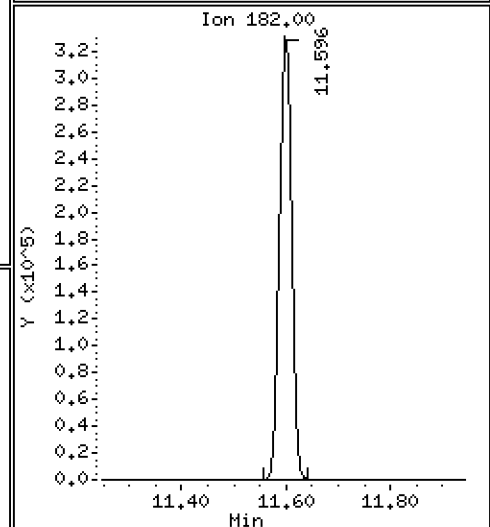
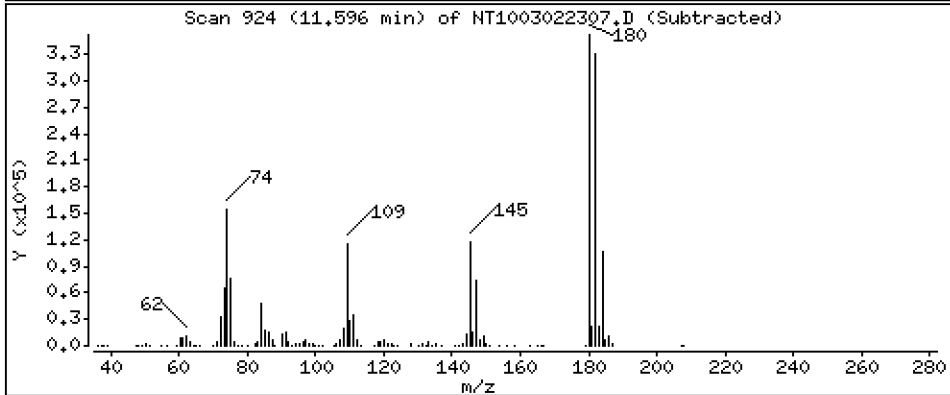
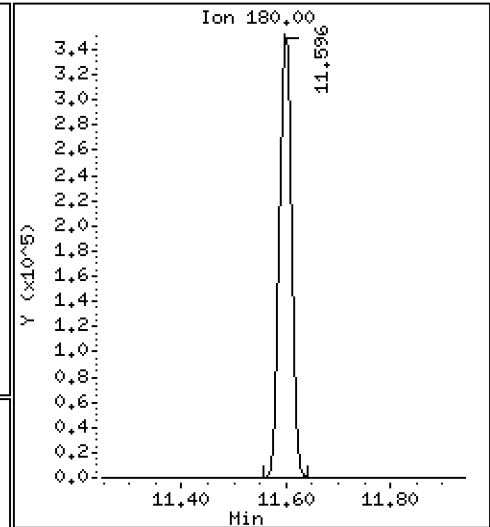
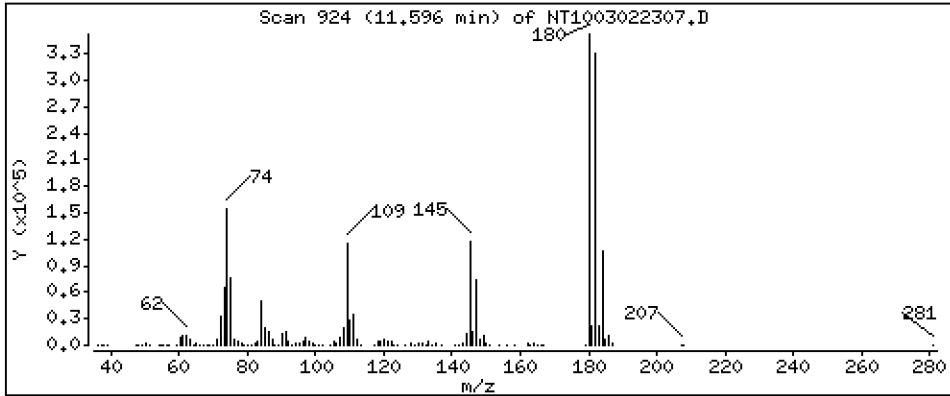
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,264 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

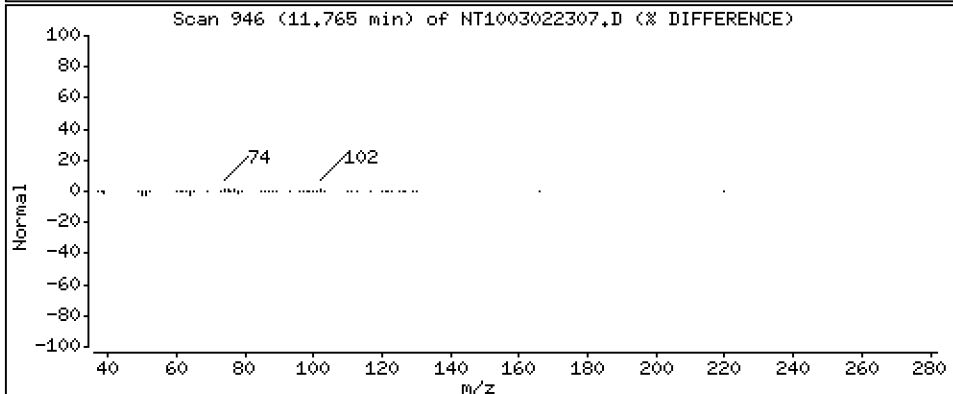
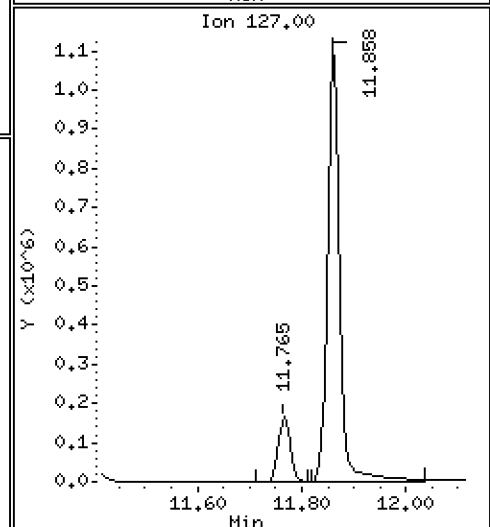
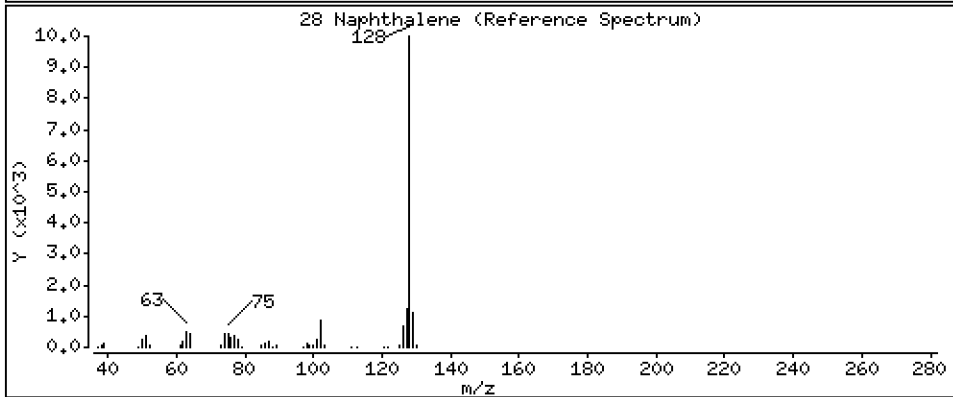
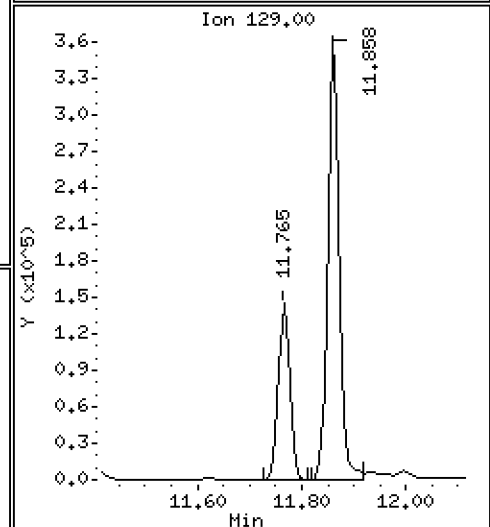
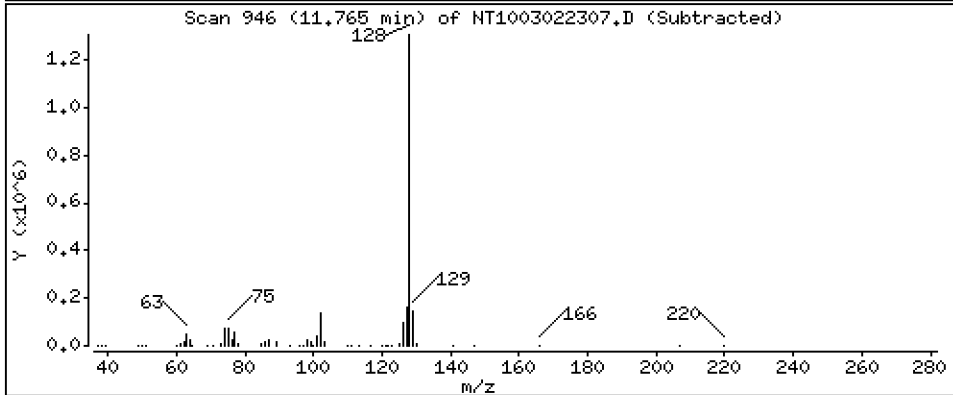
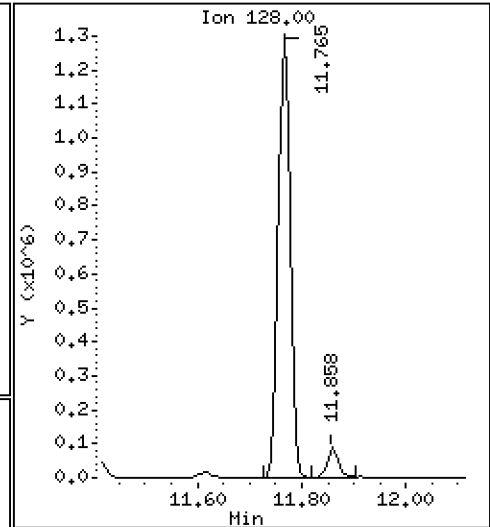
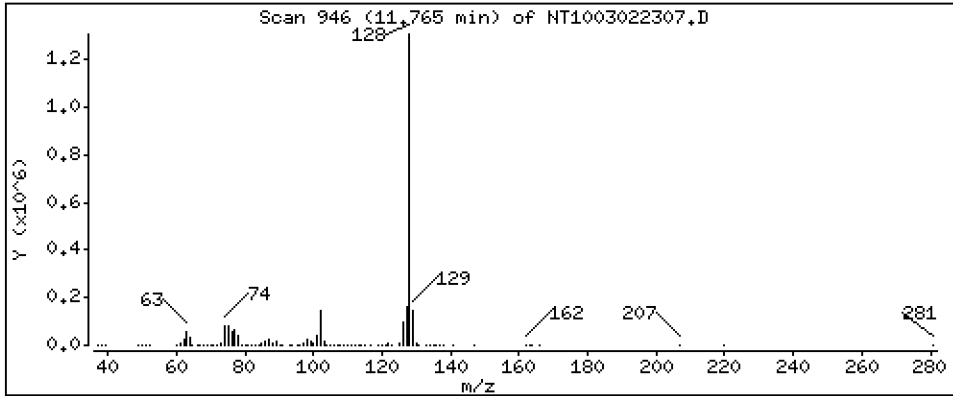
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,613 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

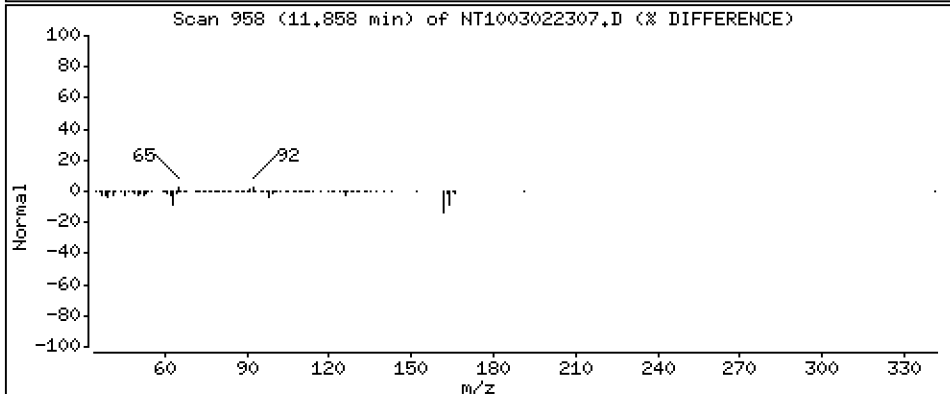
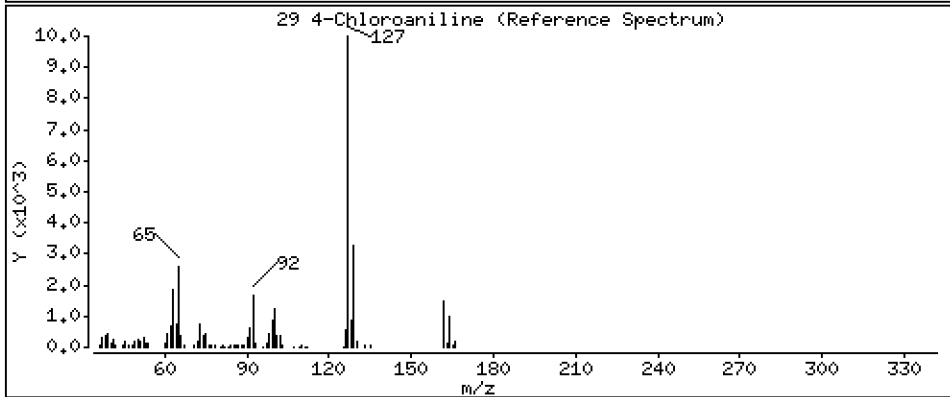
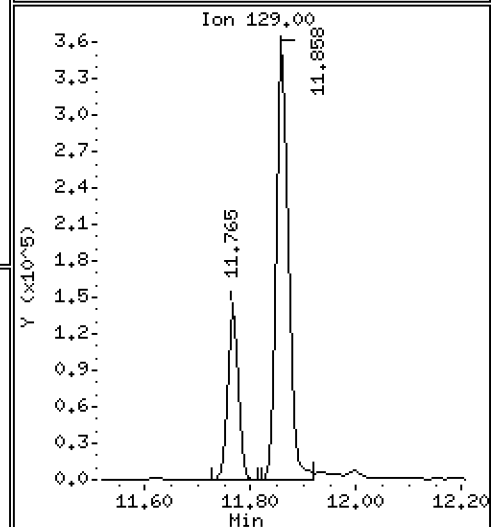
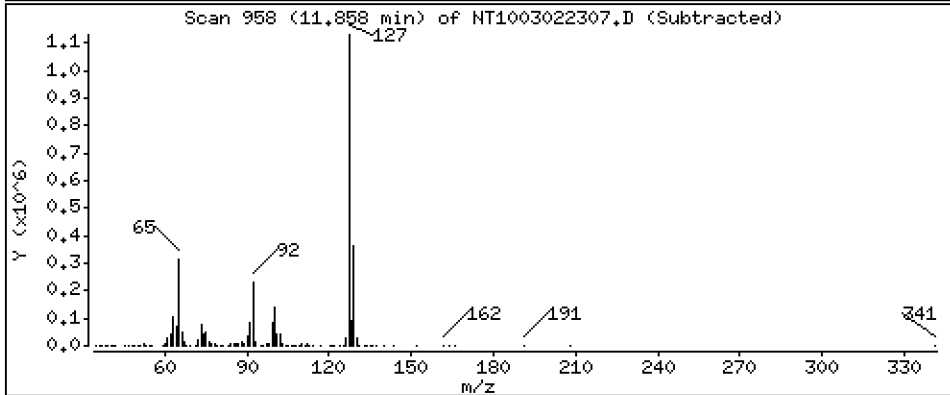
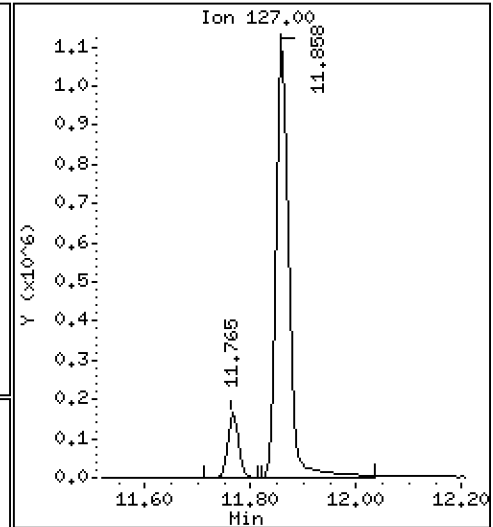
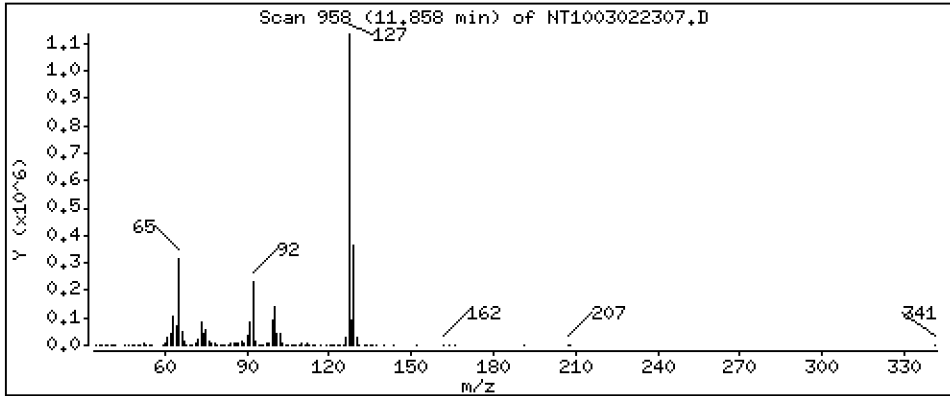
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 10,24 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

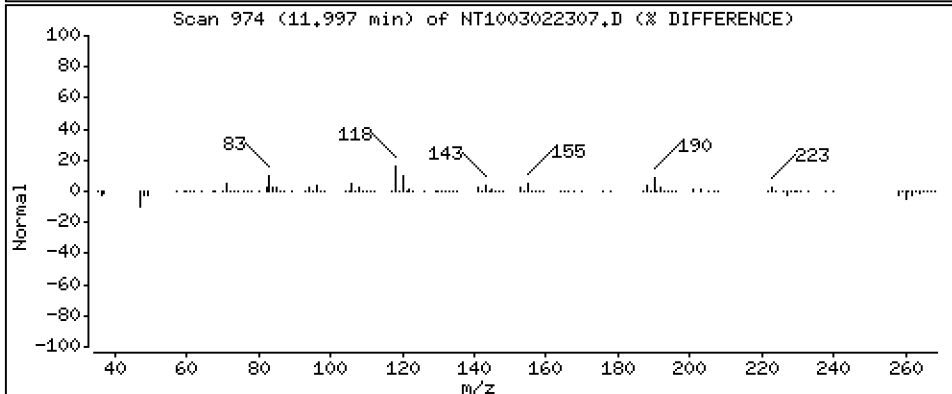
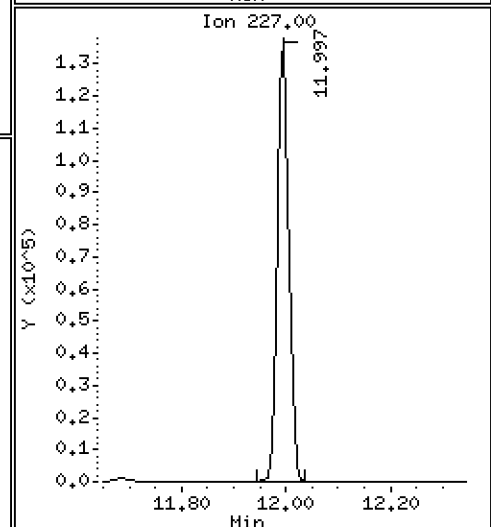
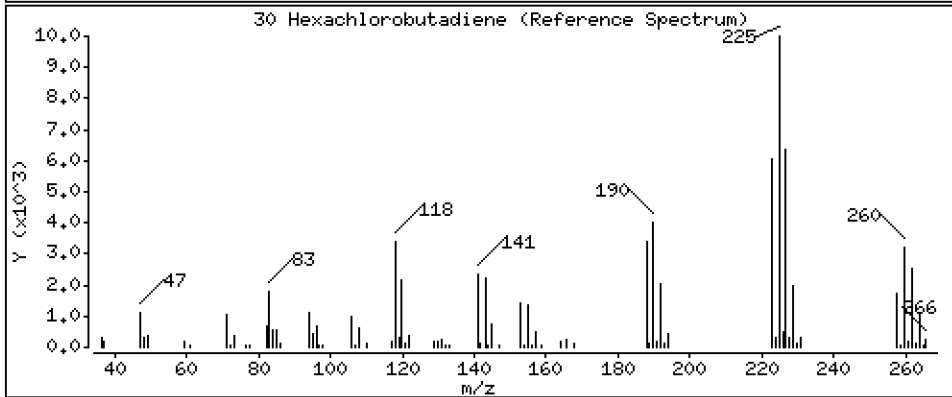
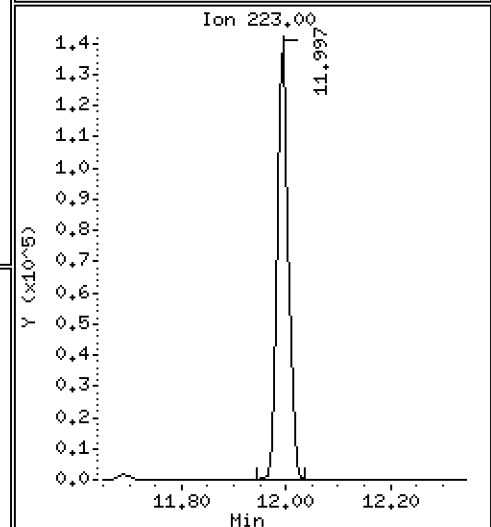
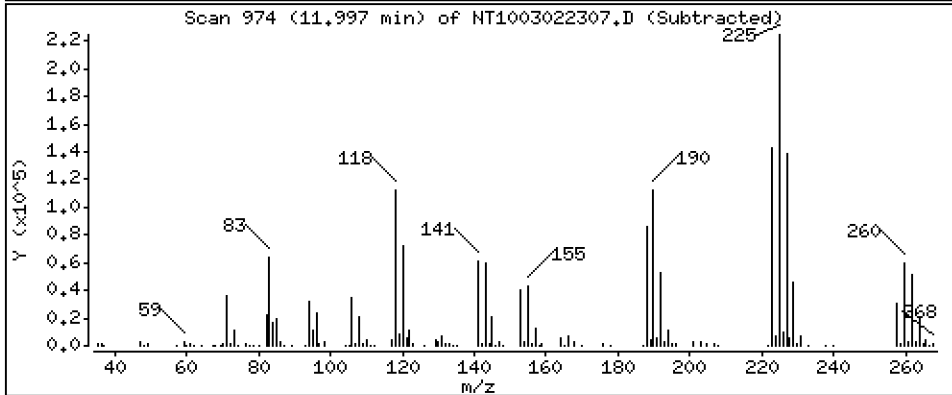
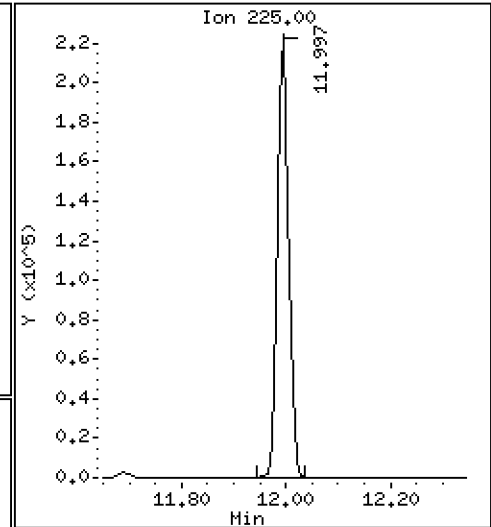
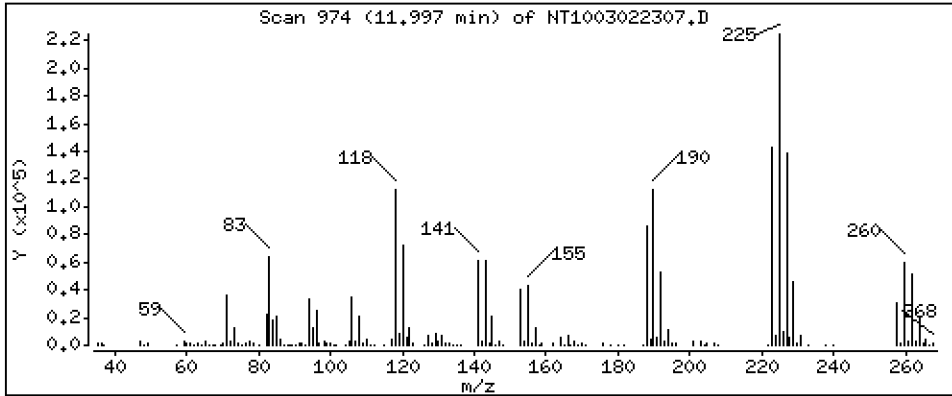
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,246 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

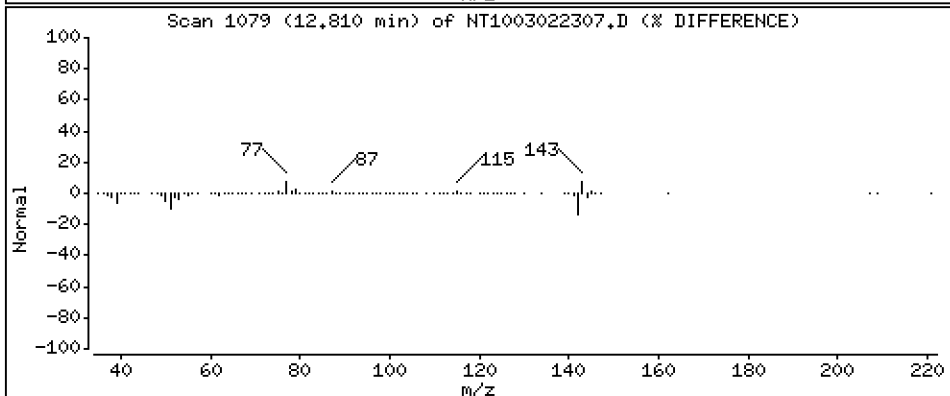
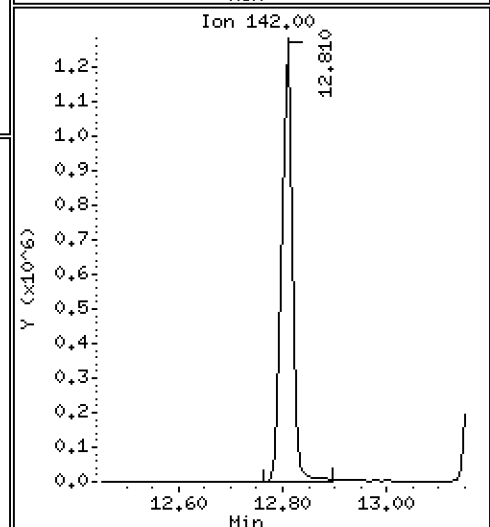
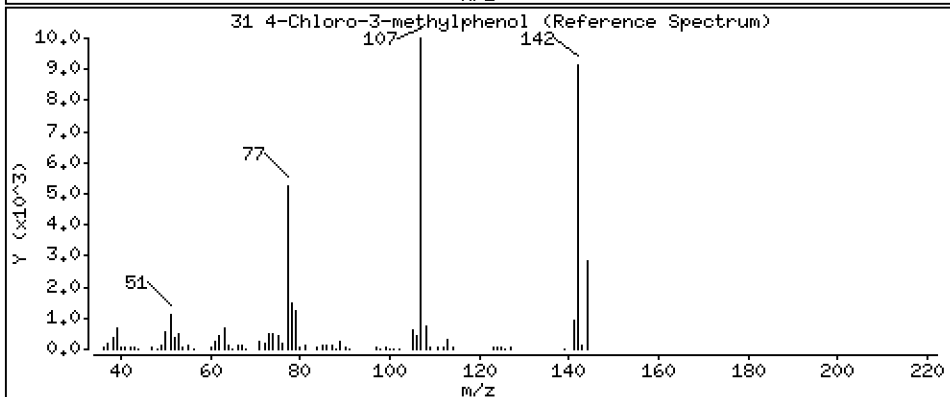
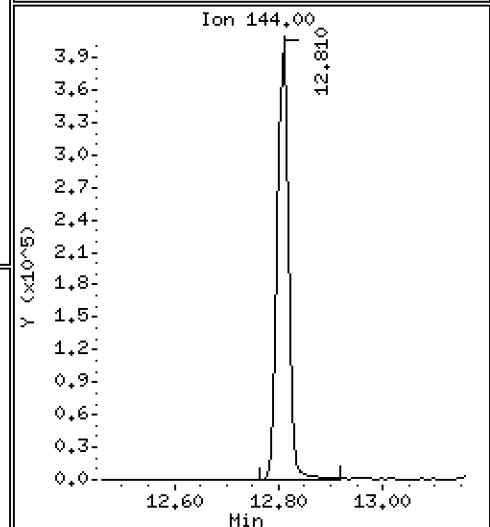
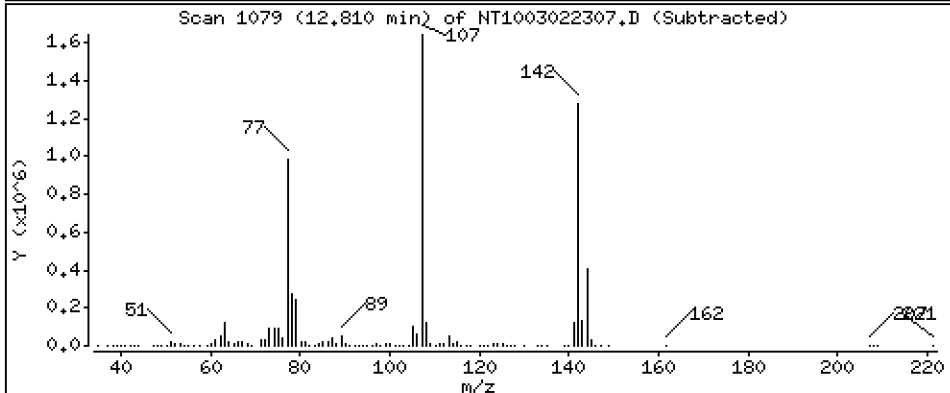
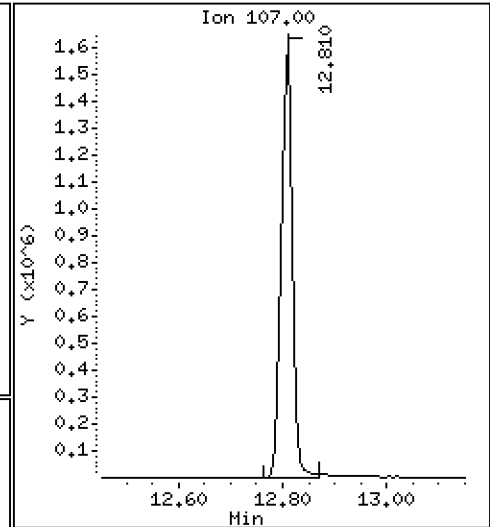
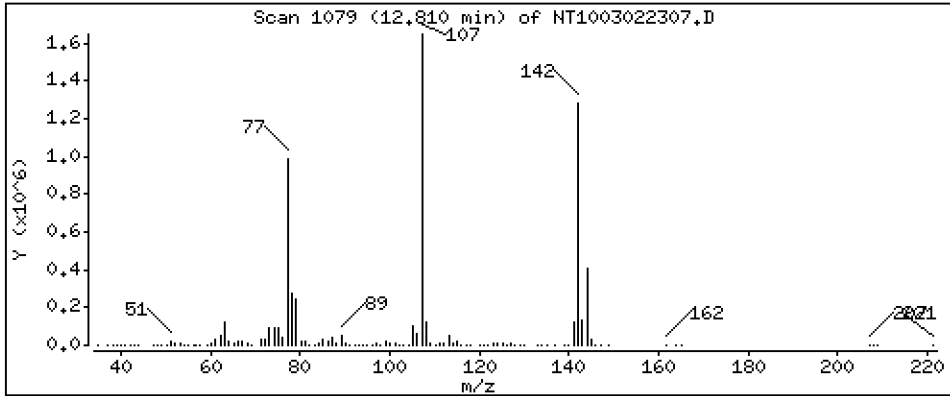
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 15,96 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

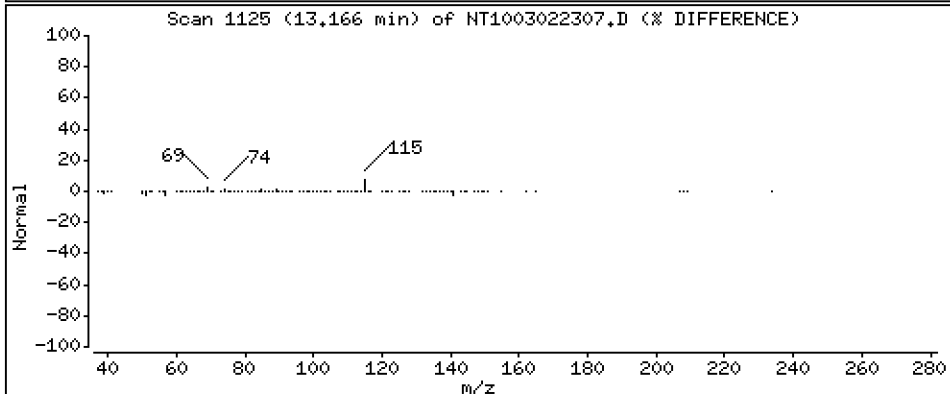
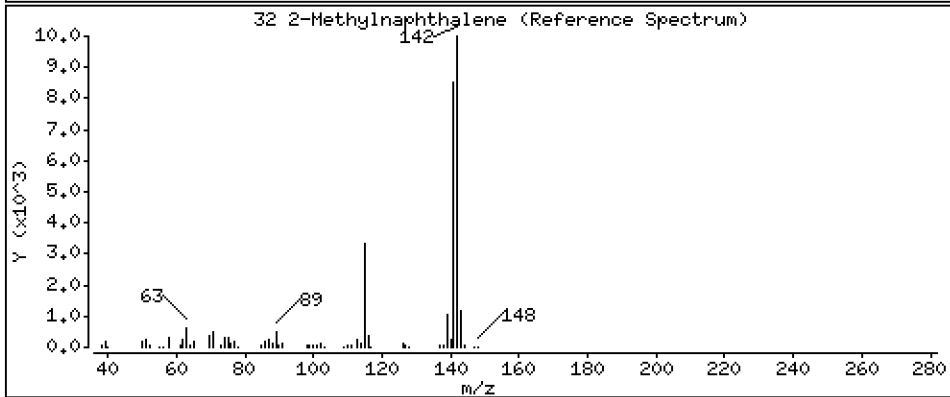
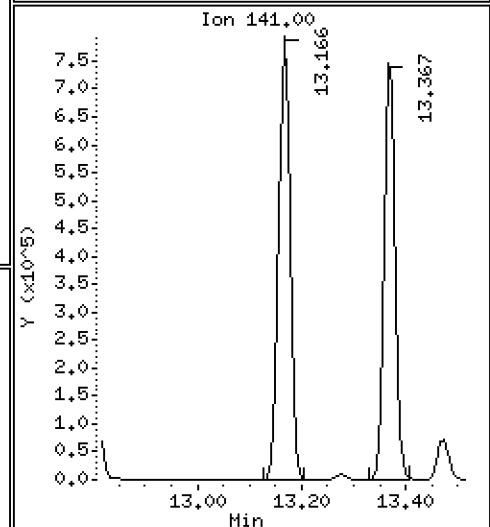
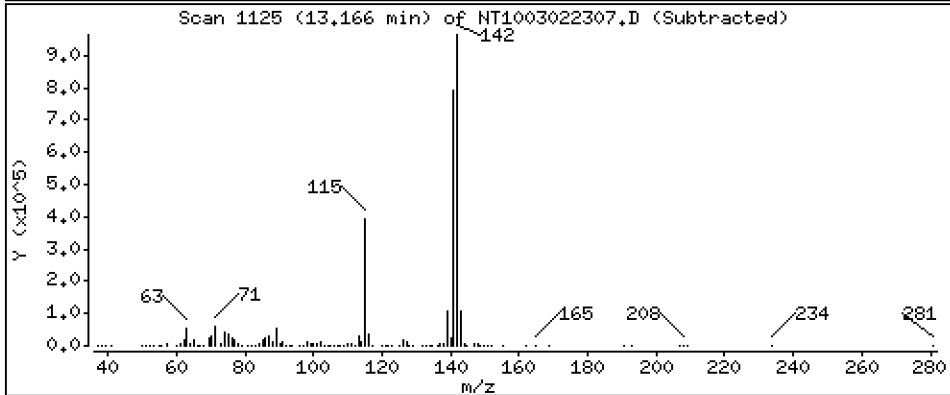
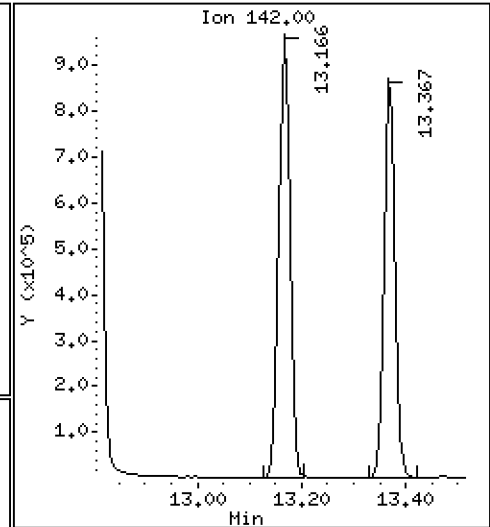
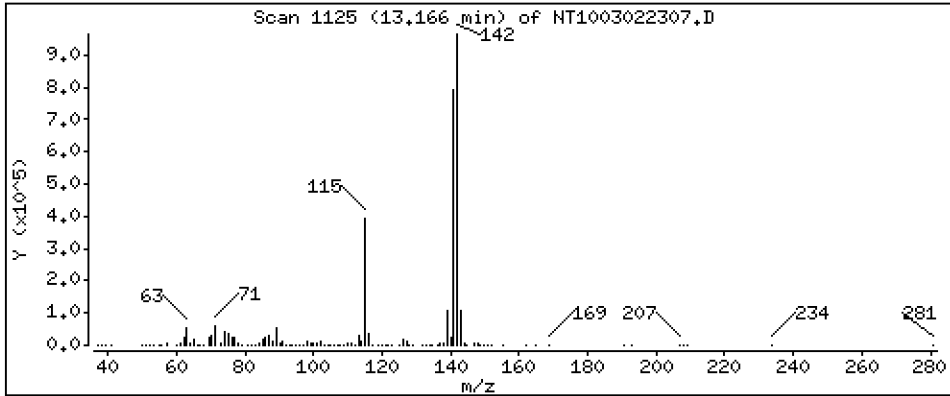
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,530 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

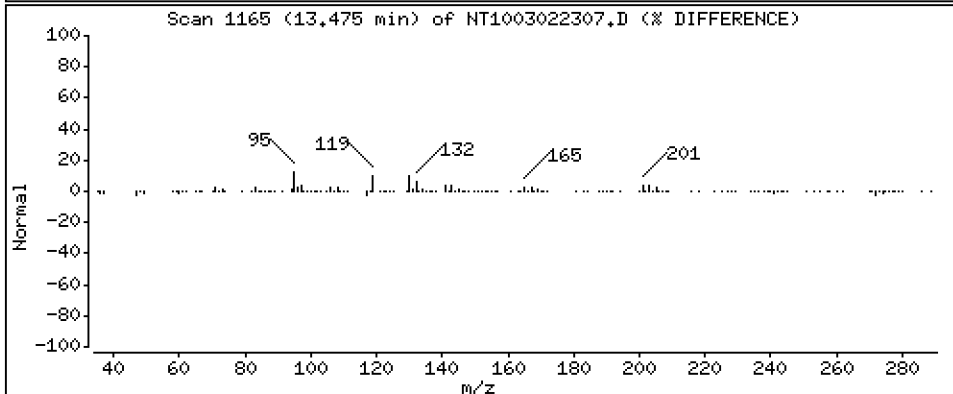
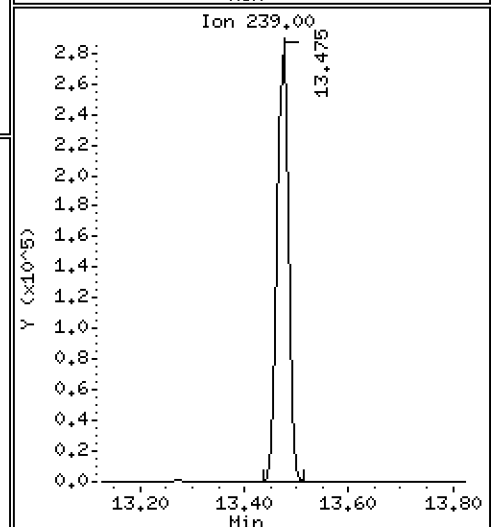
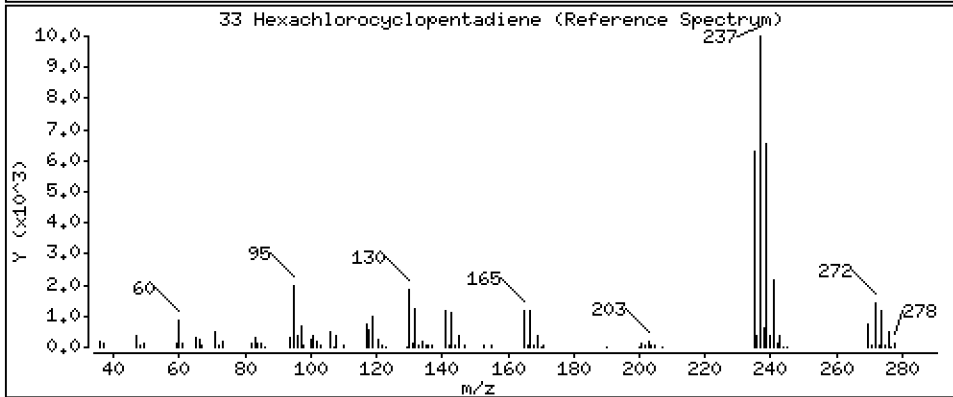
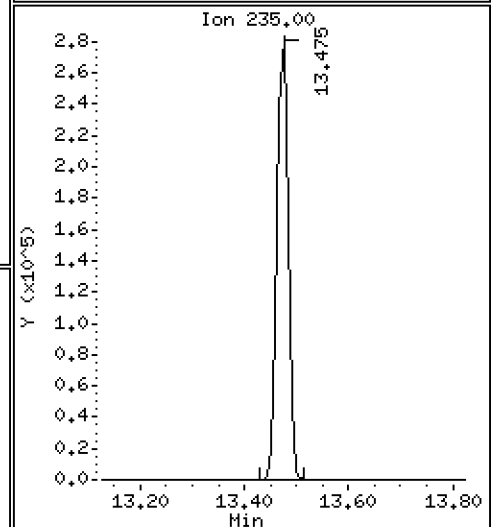
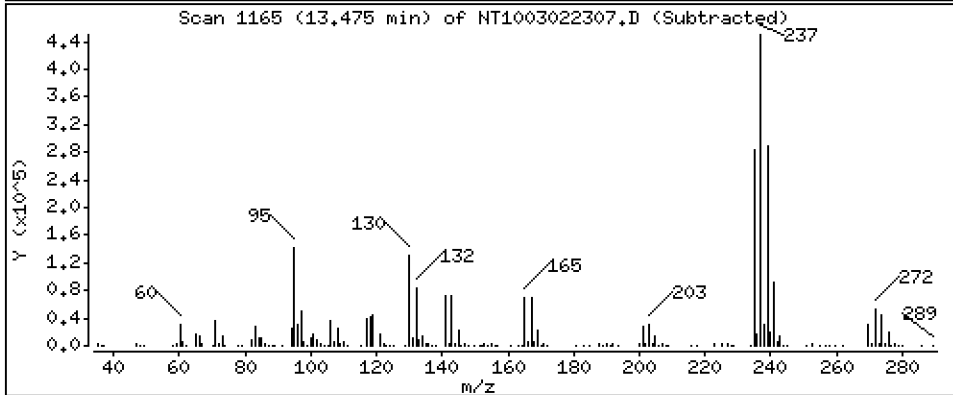
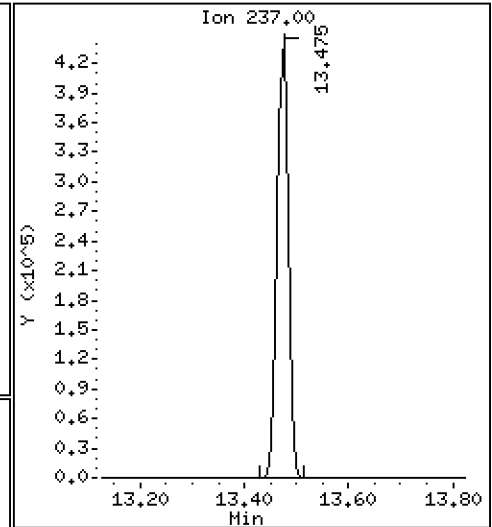
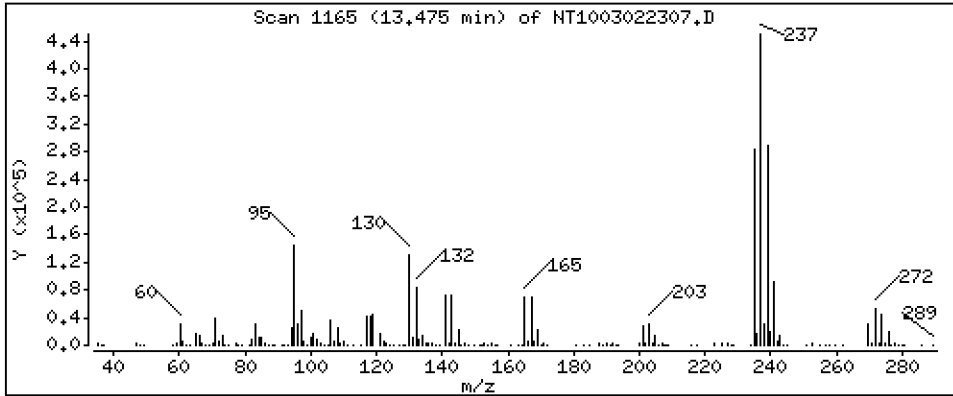
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 18,01 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

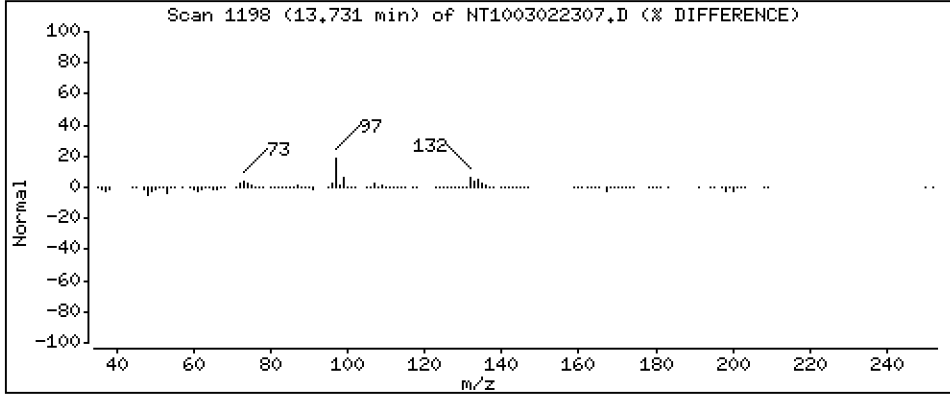
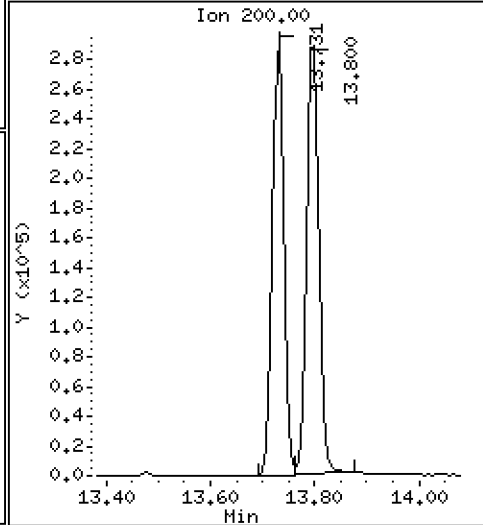
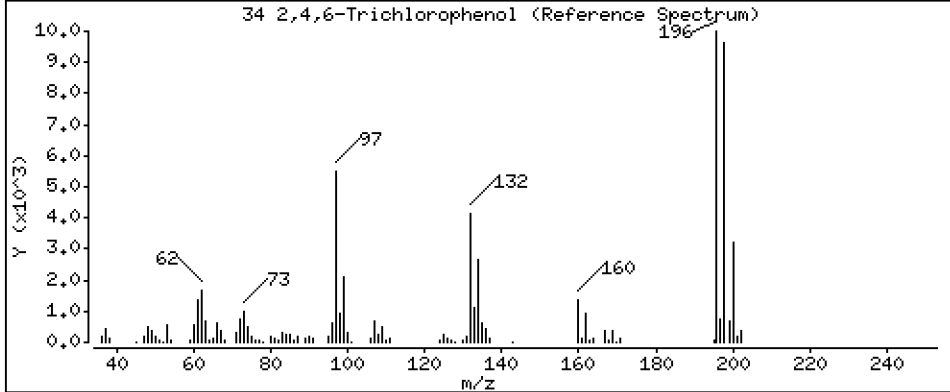
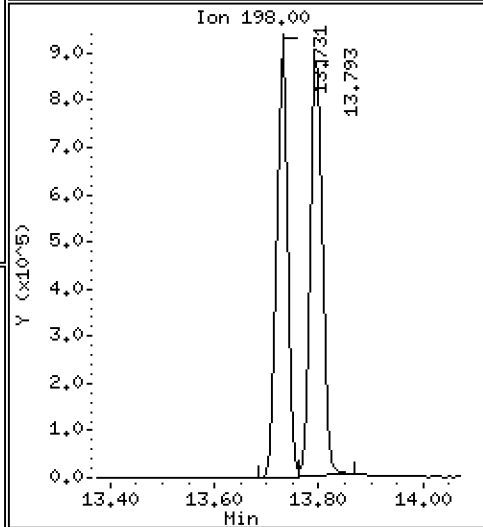
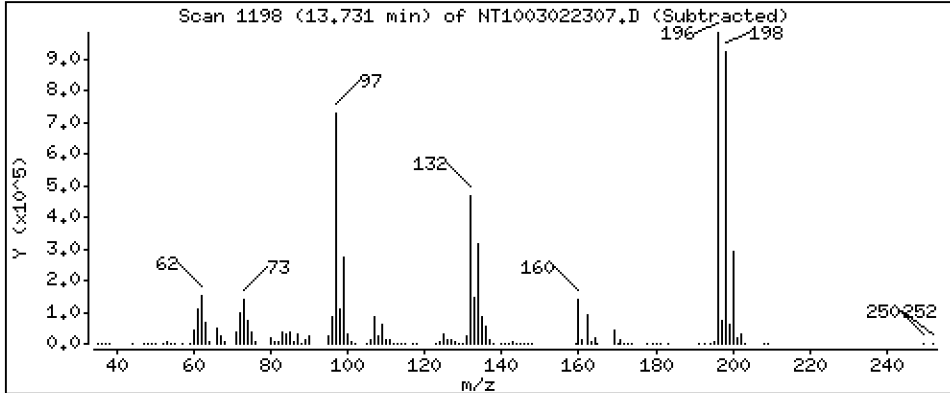
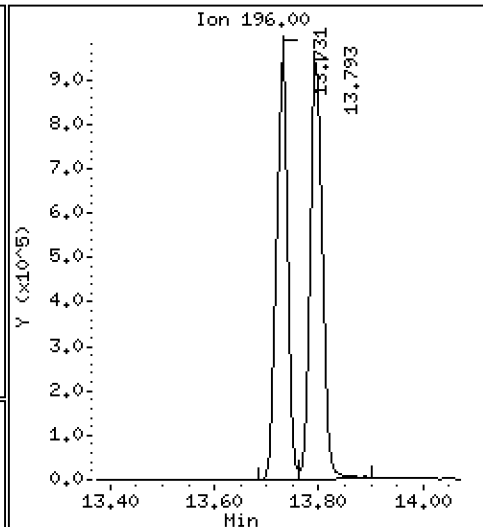
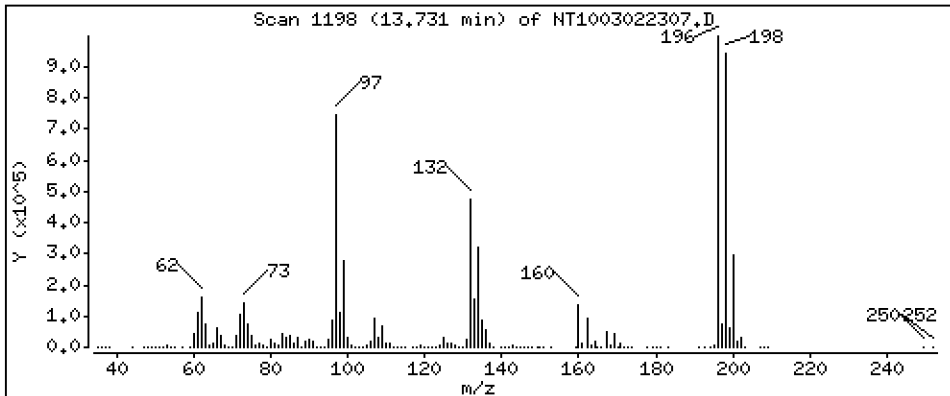
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 14,83 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

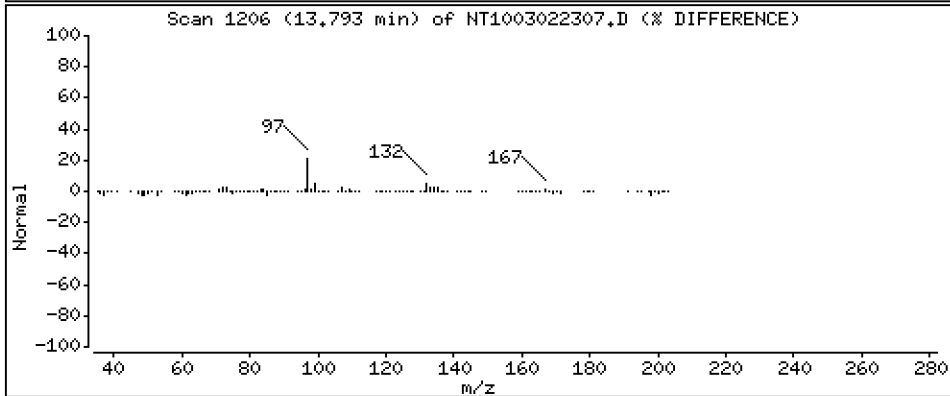
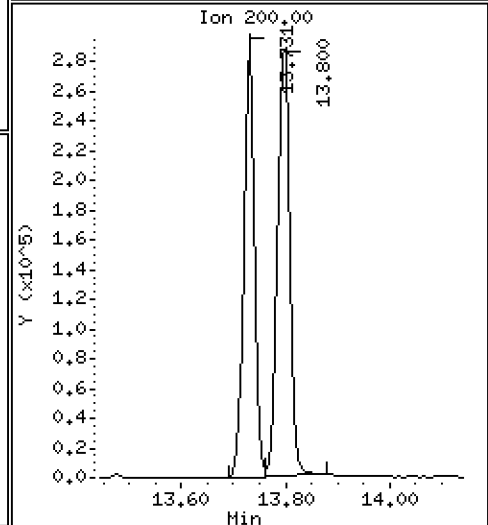
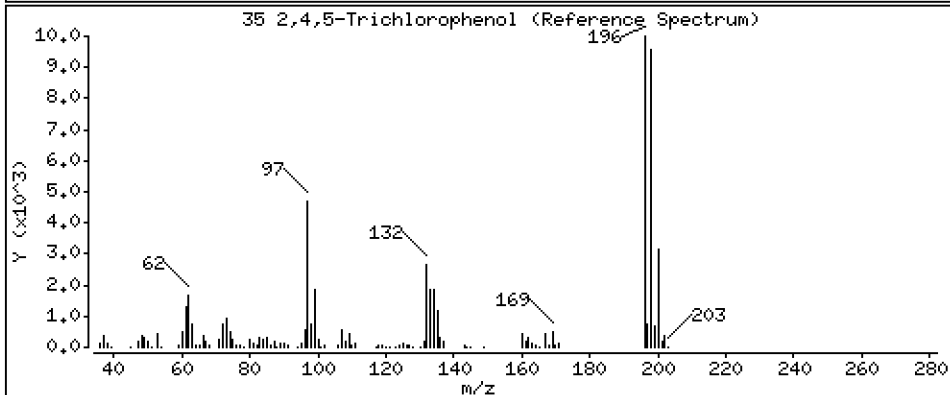
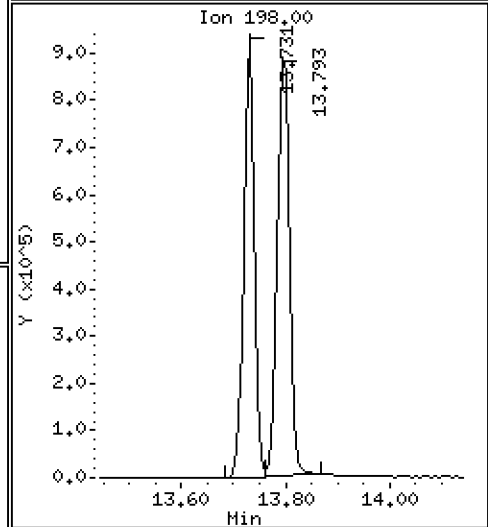
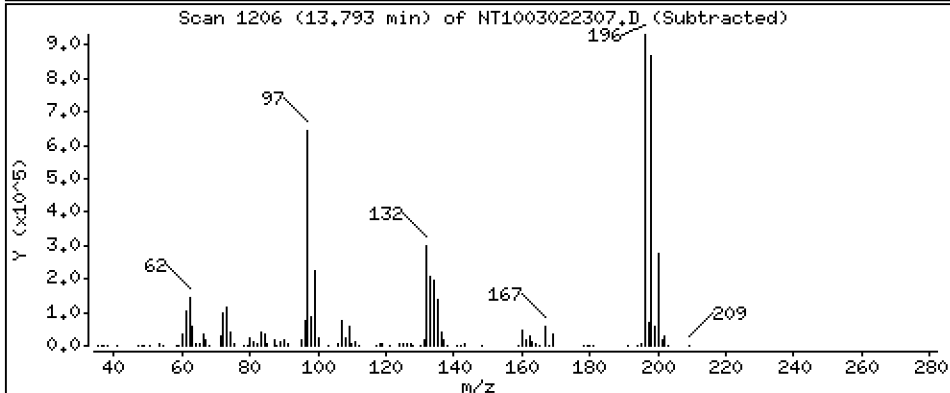
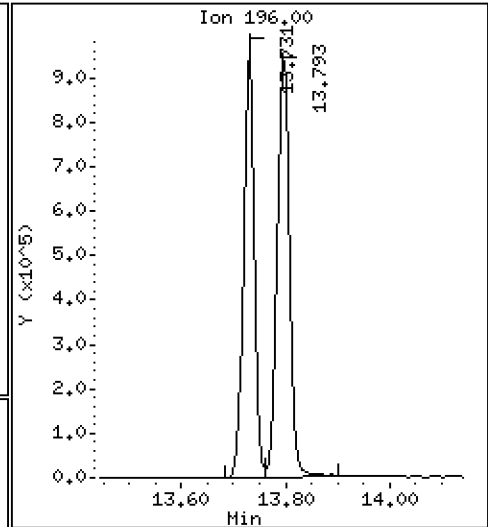
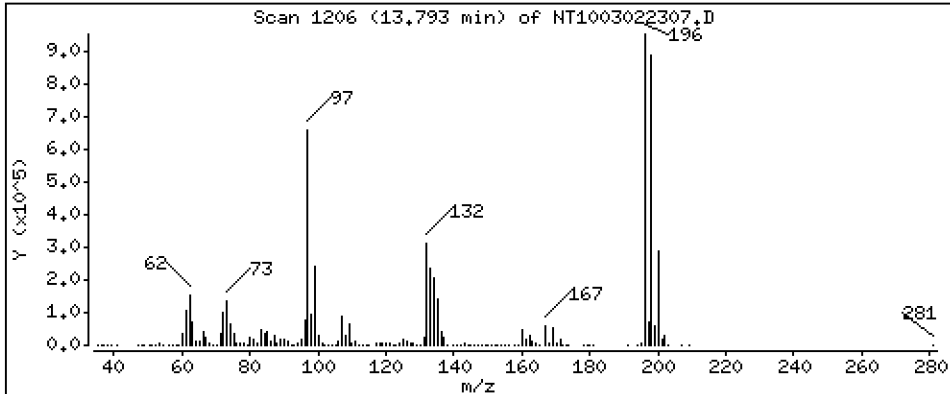
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 14,79 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

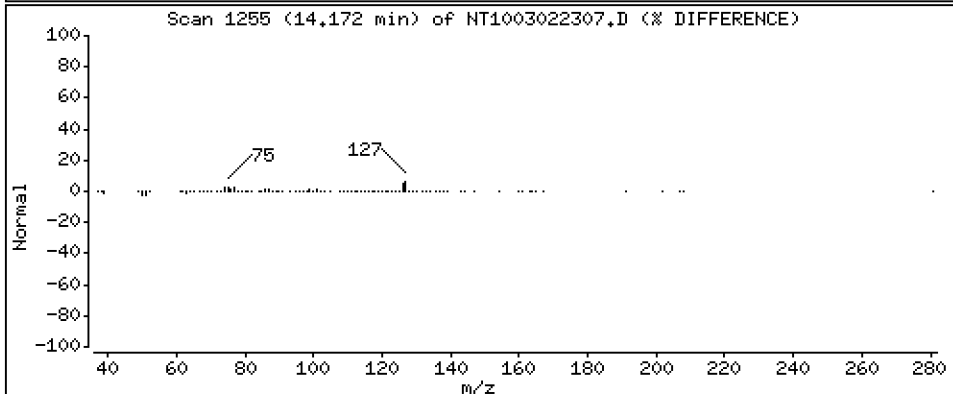
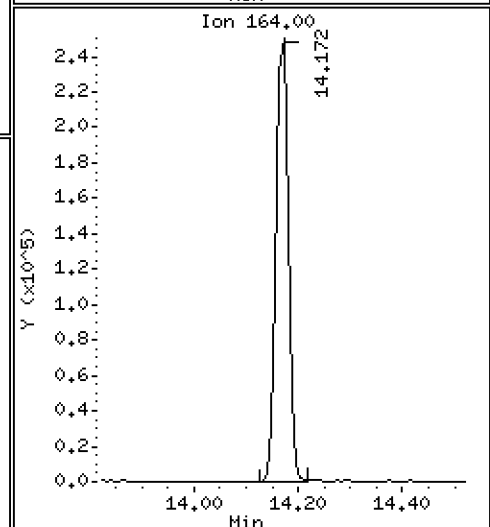
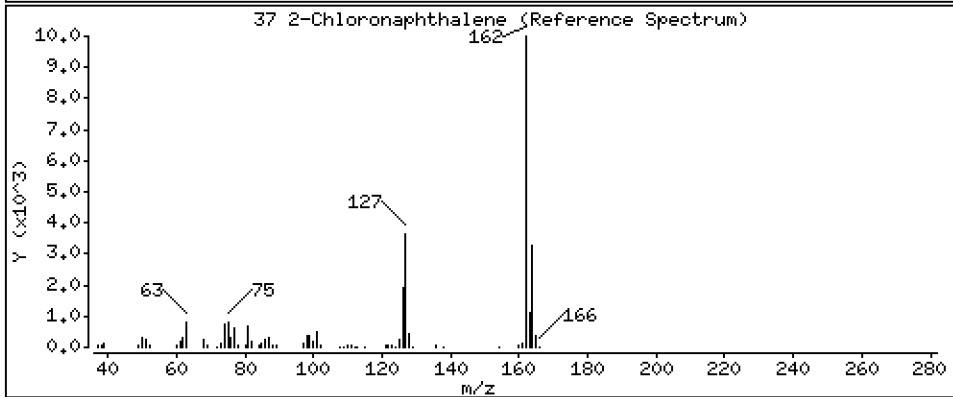
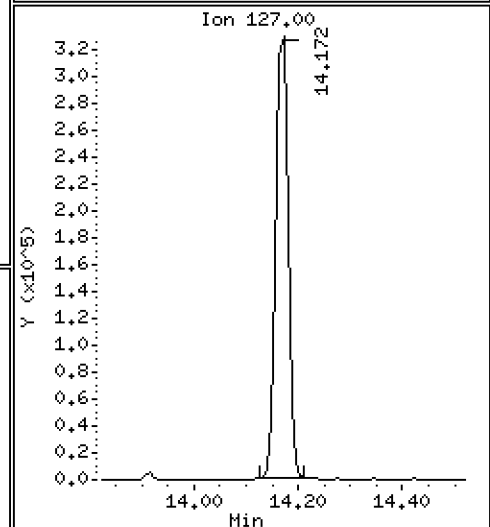
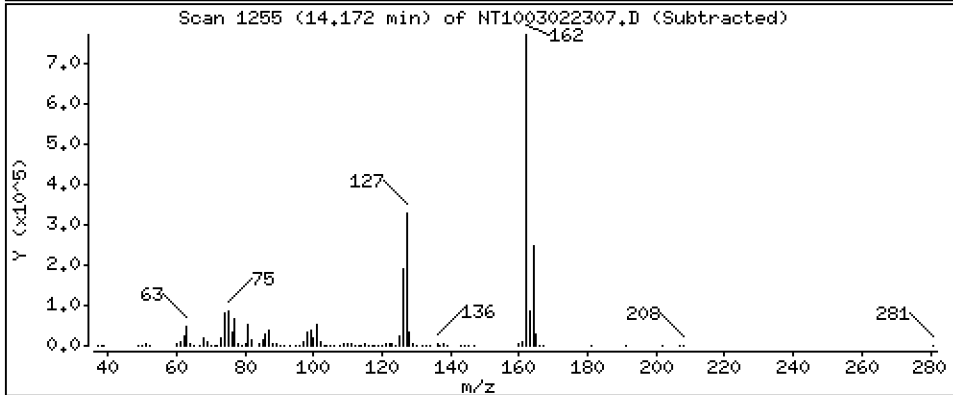
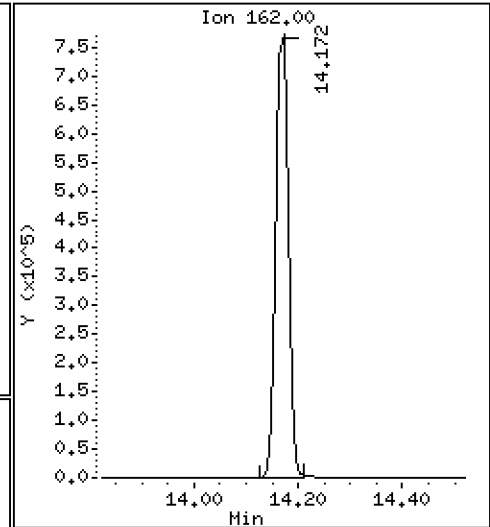
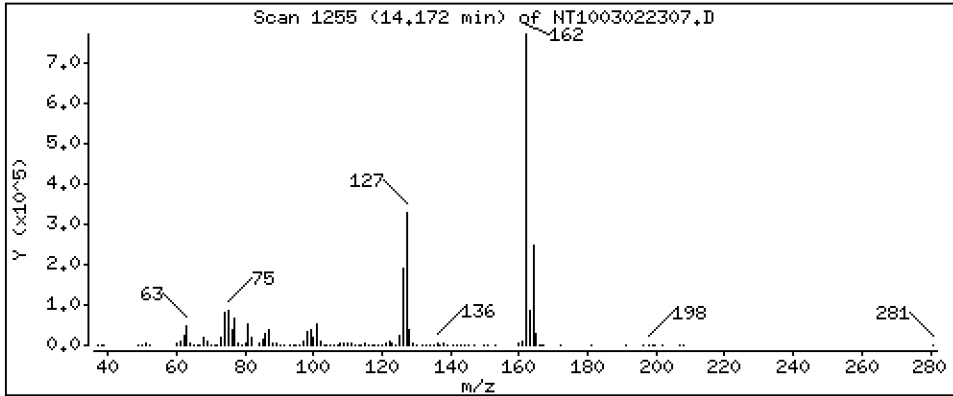
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 4,725 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

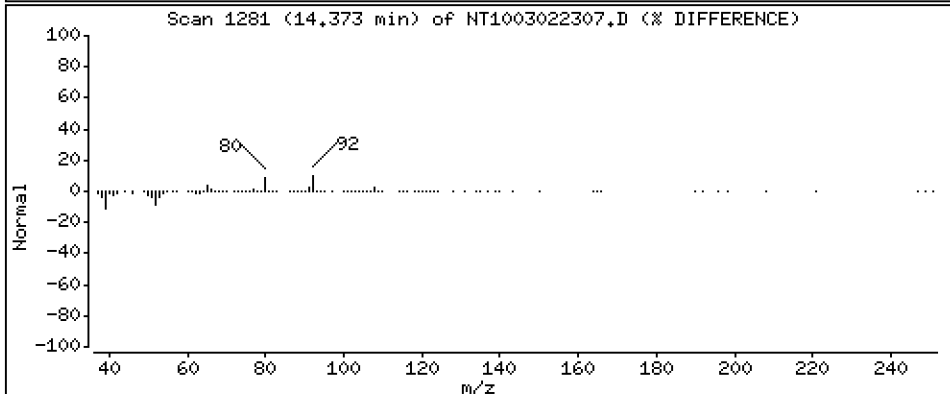
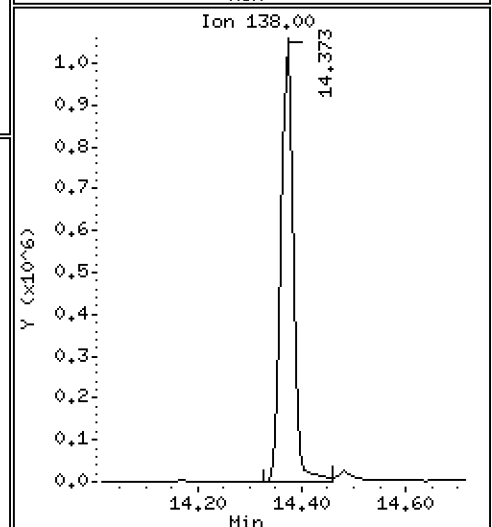
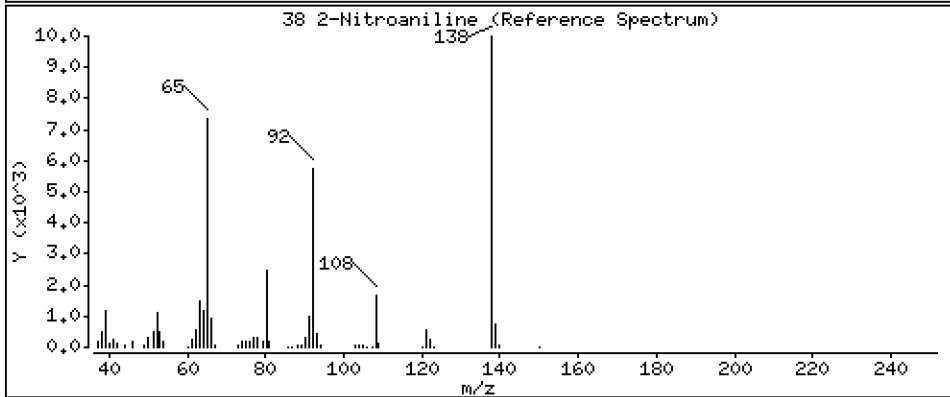
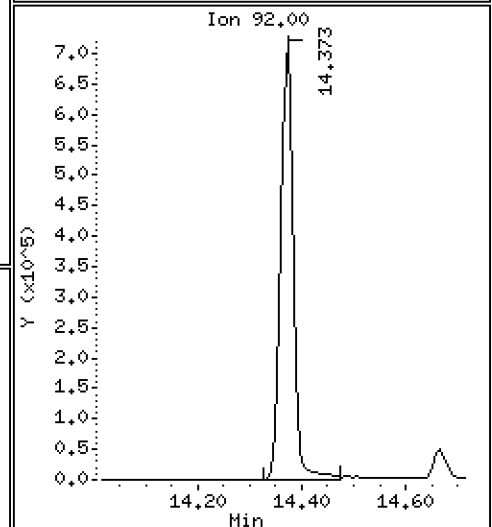
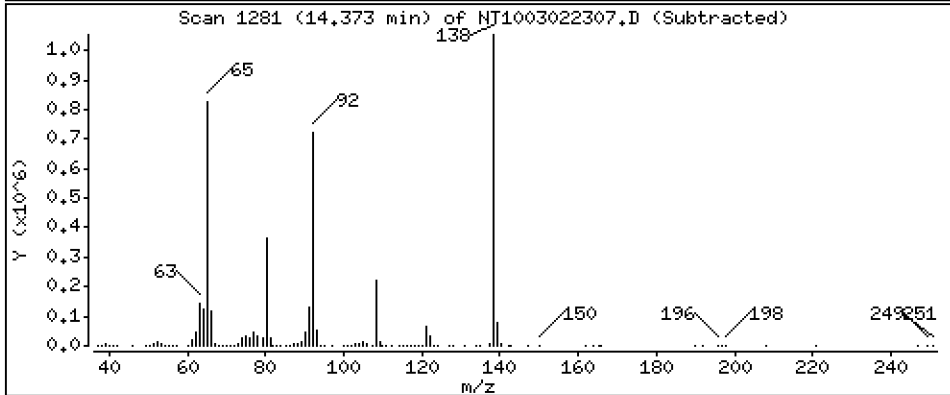
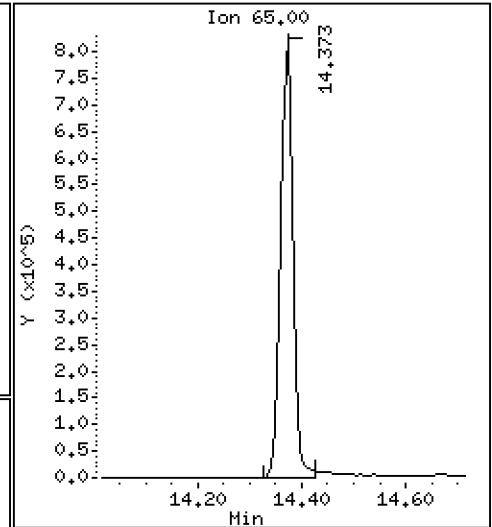
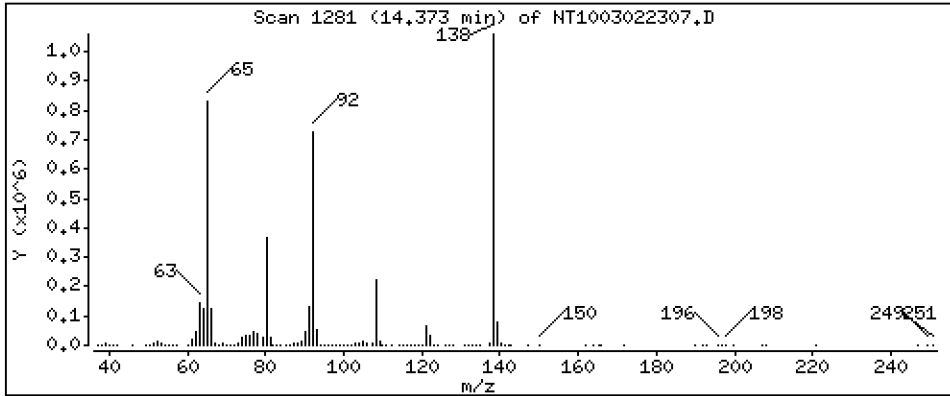
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 16,94 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

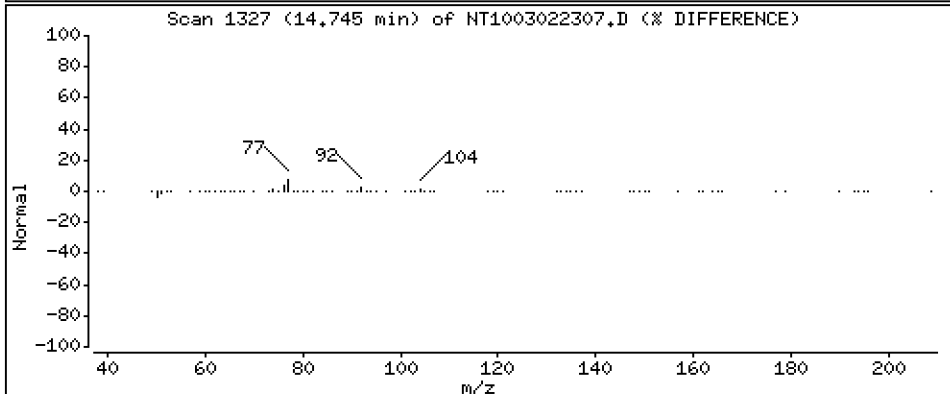
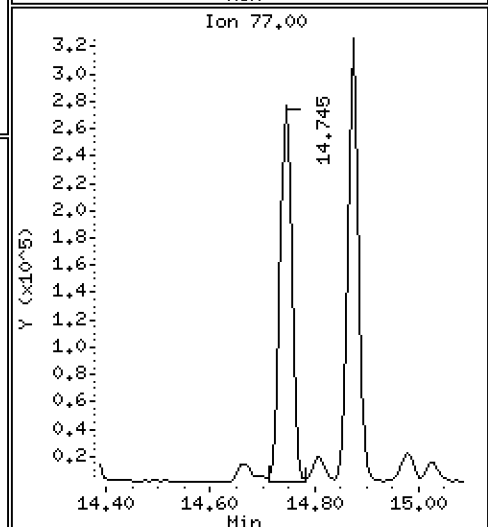
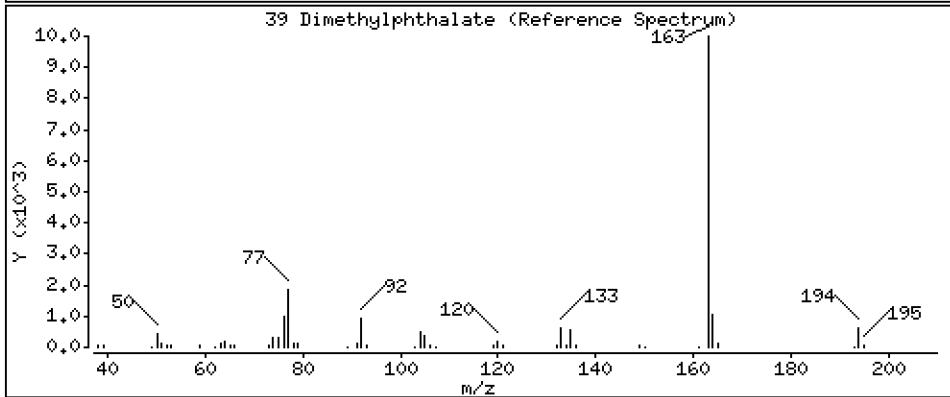
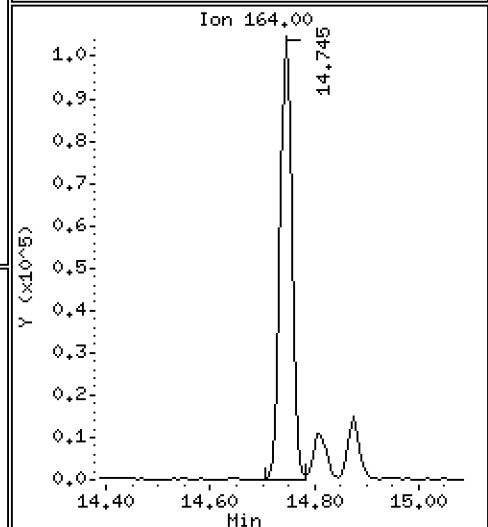
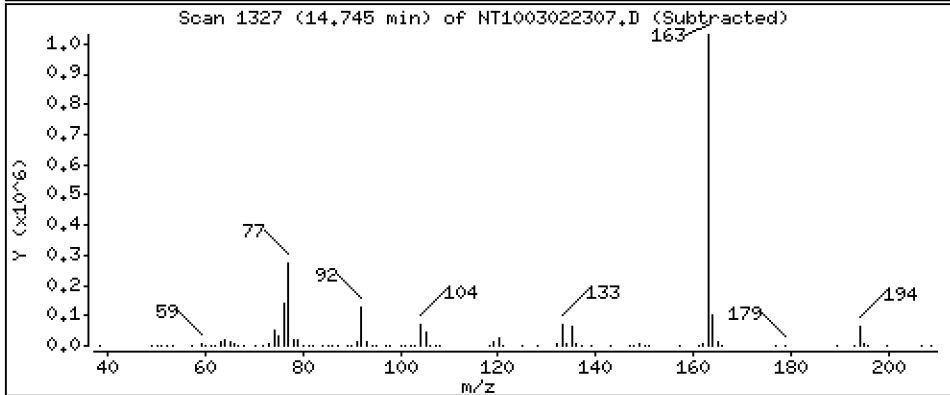
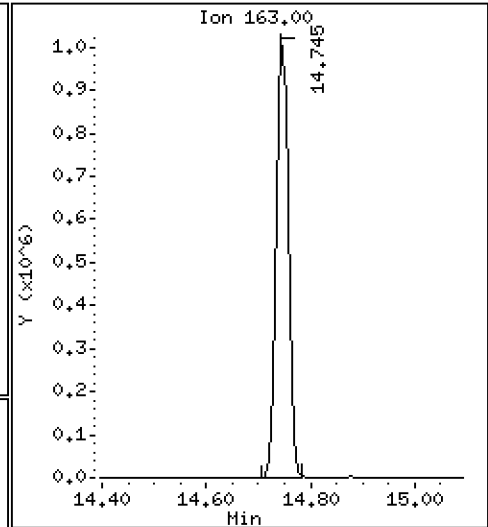
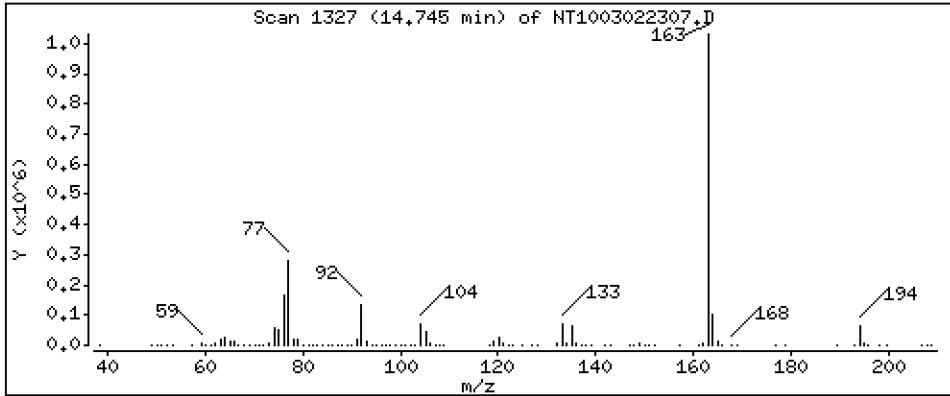
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,216 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

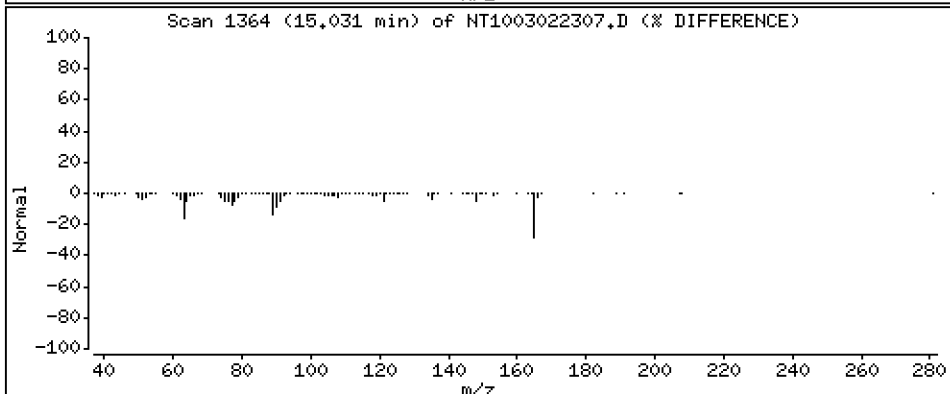
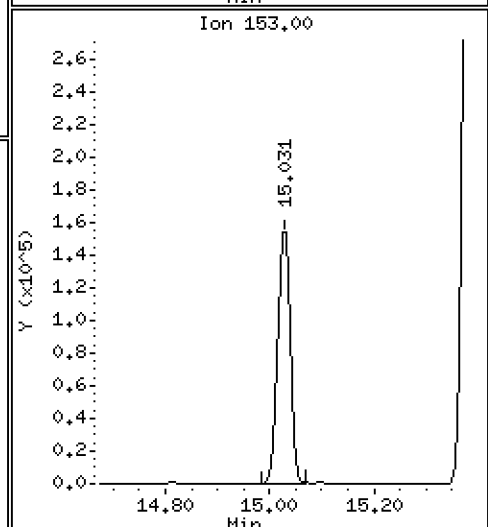
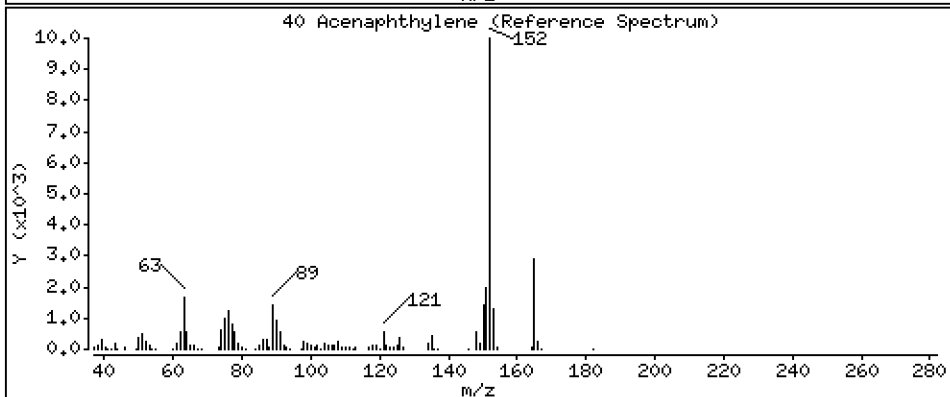
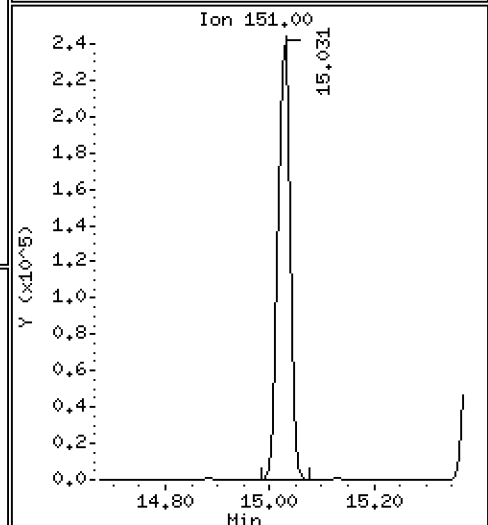
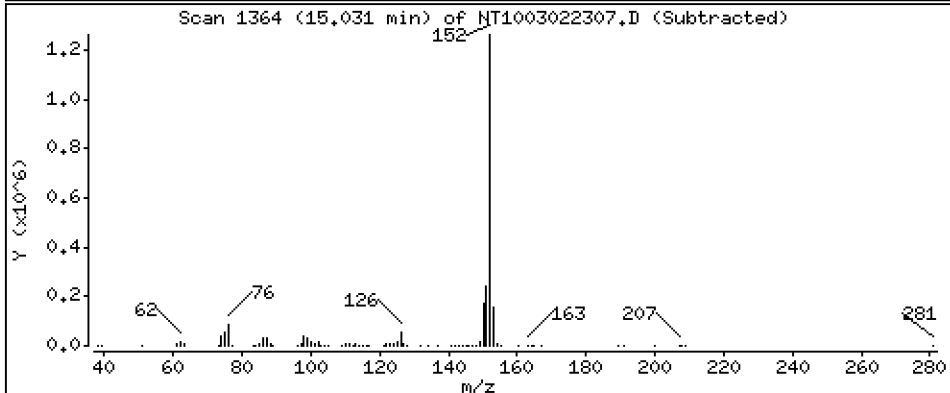
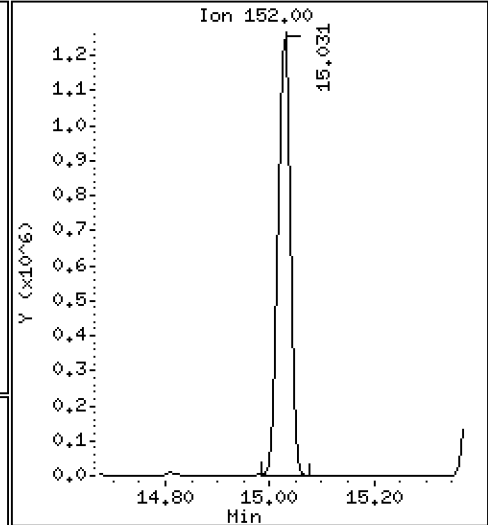
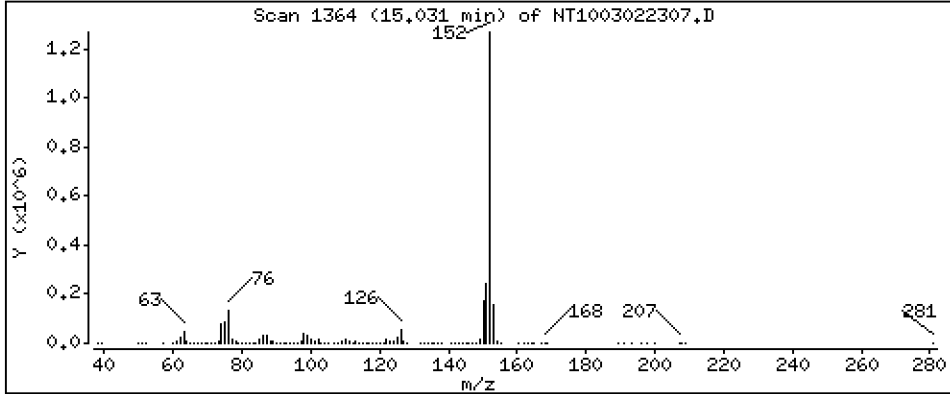
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 4,497 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

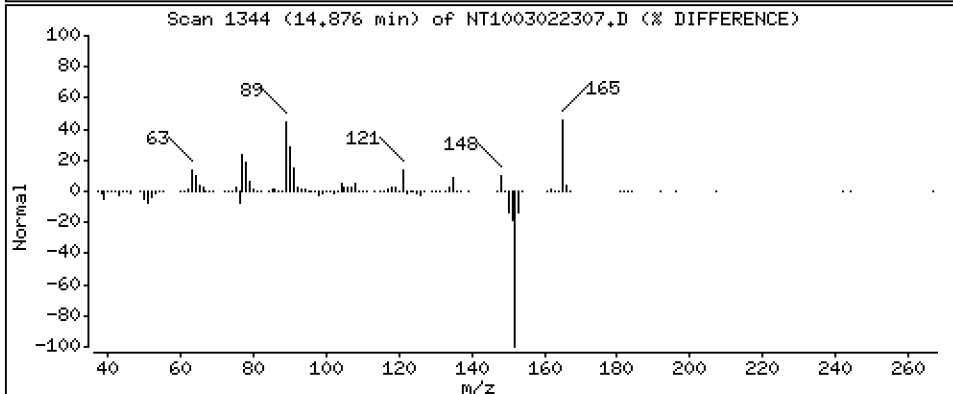
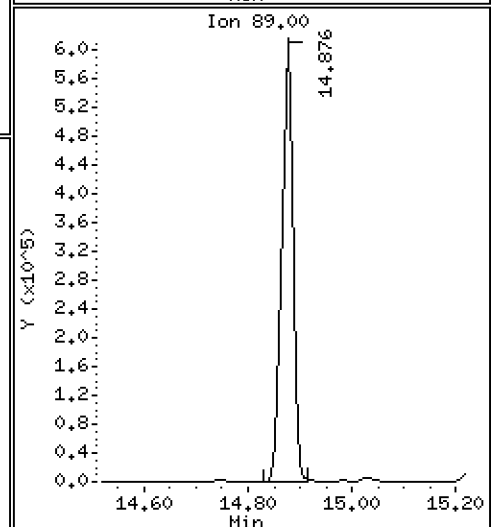
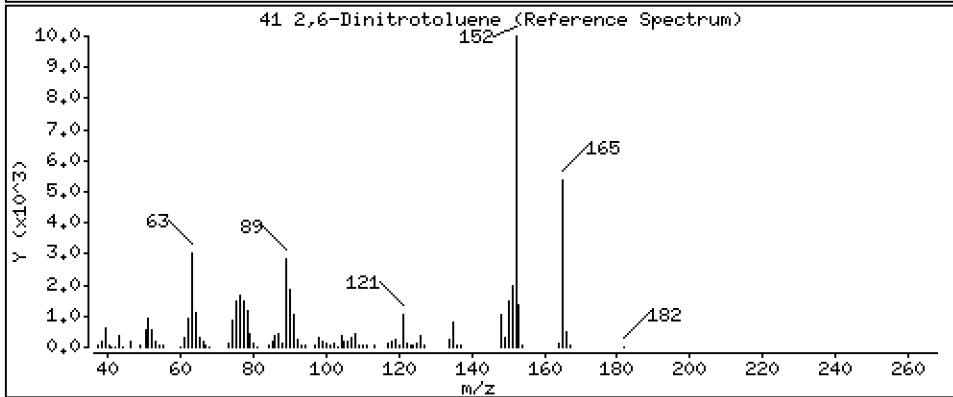
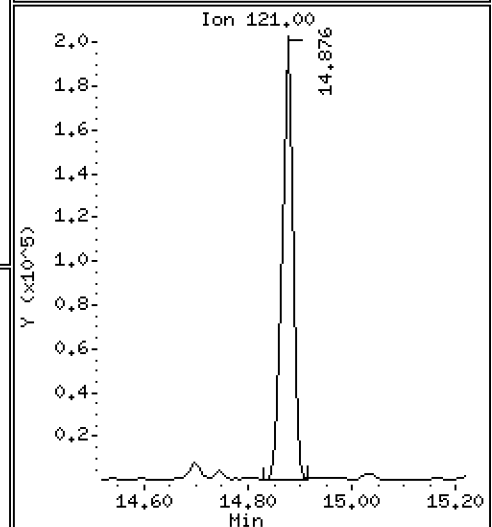
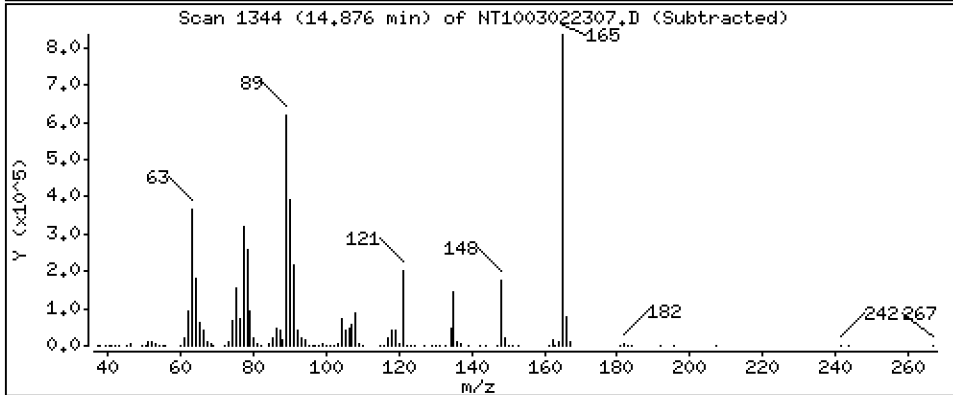
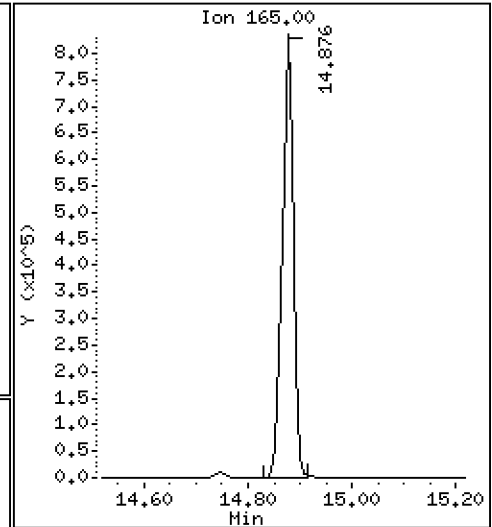
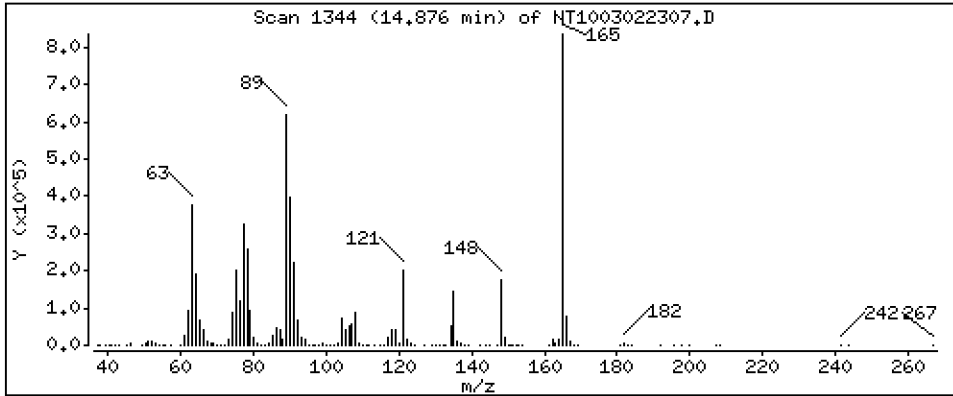
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 17,36 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

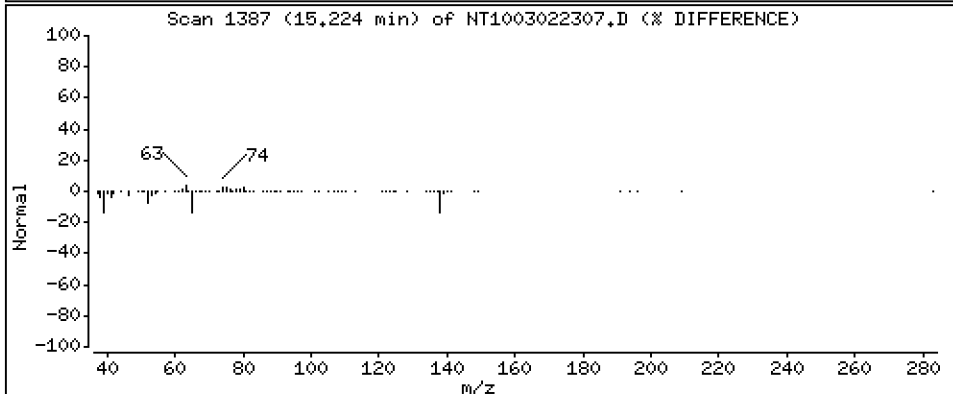
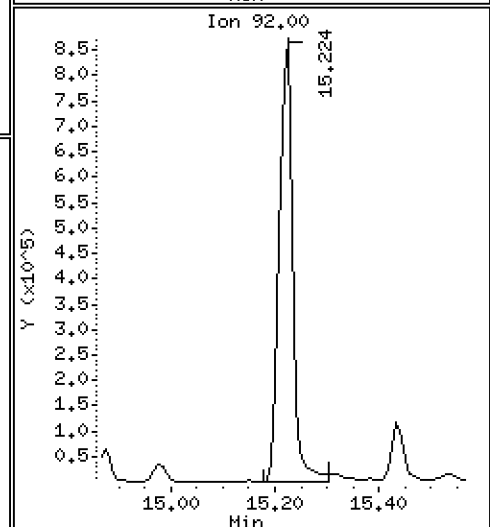
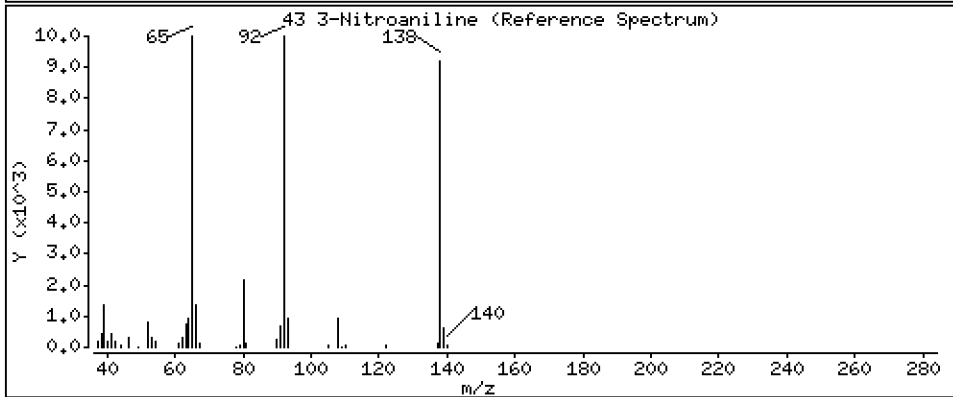
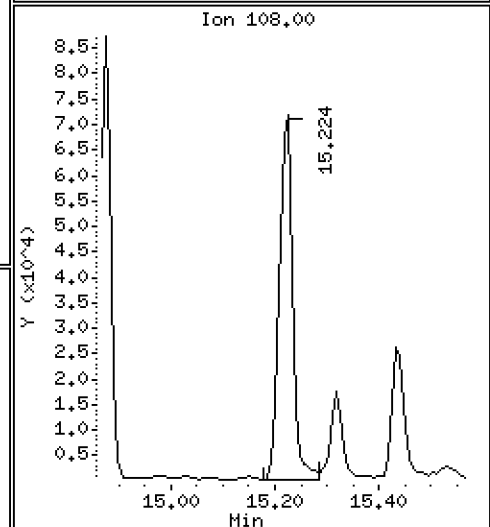
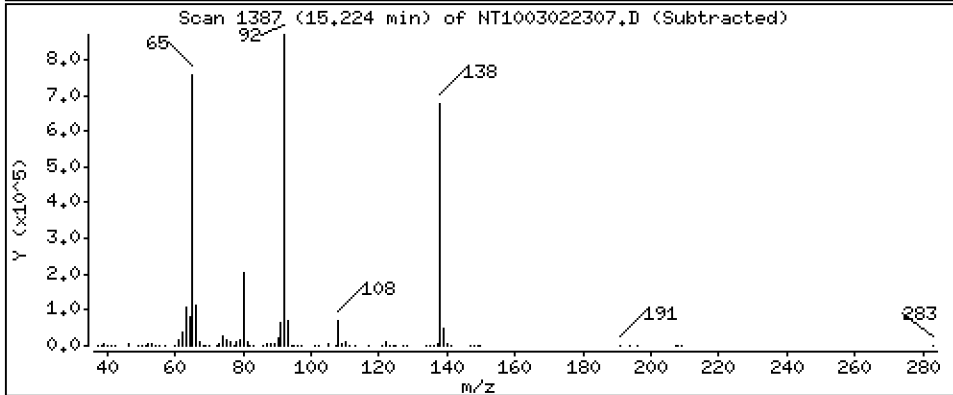
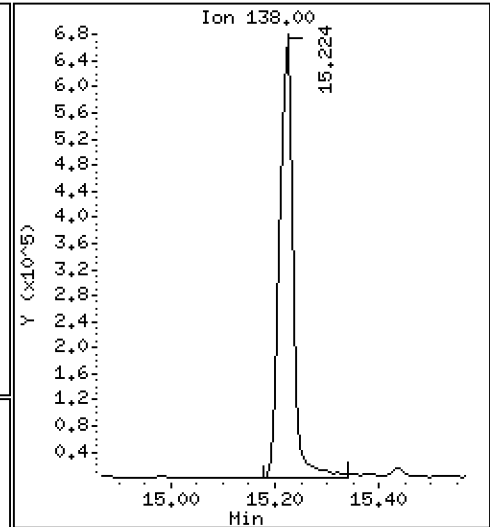
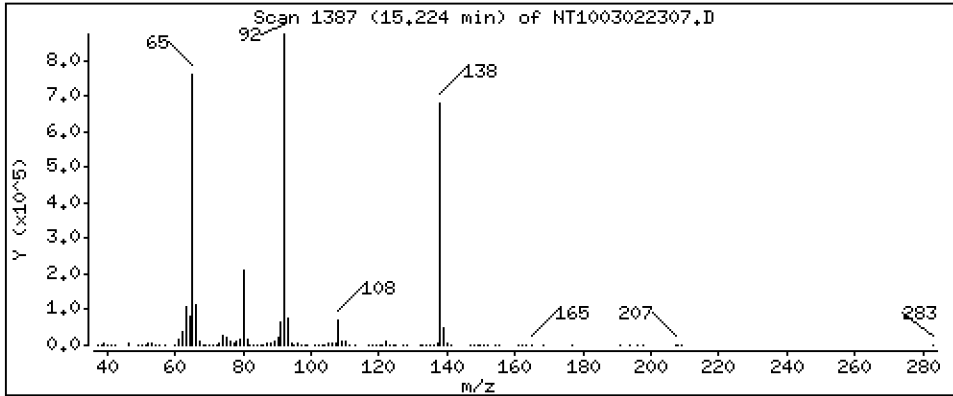
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 15,78 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

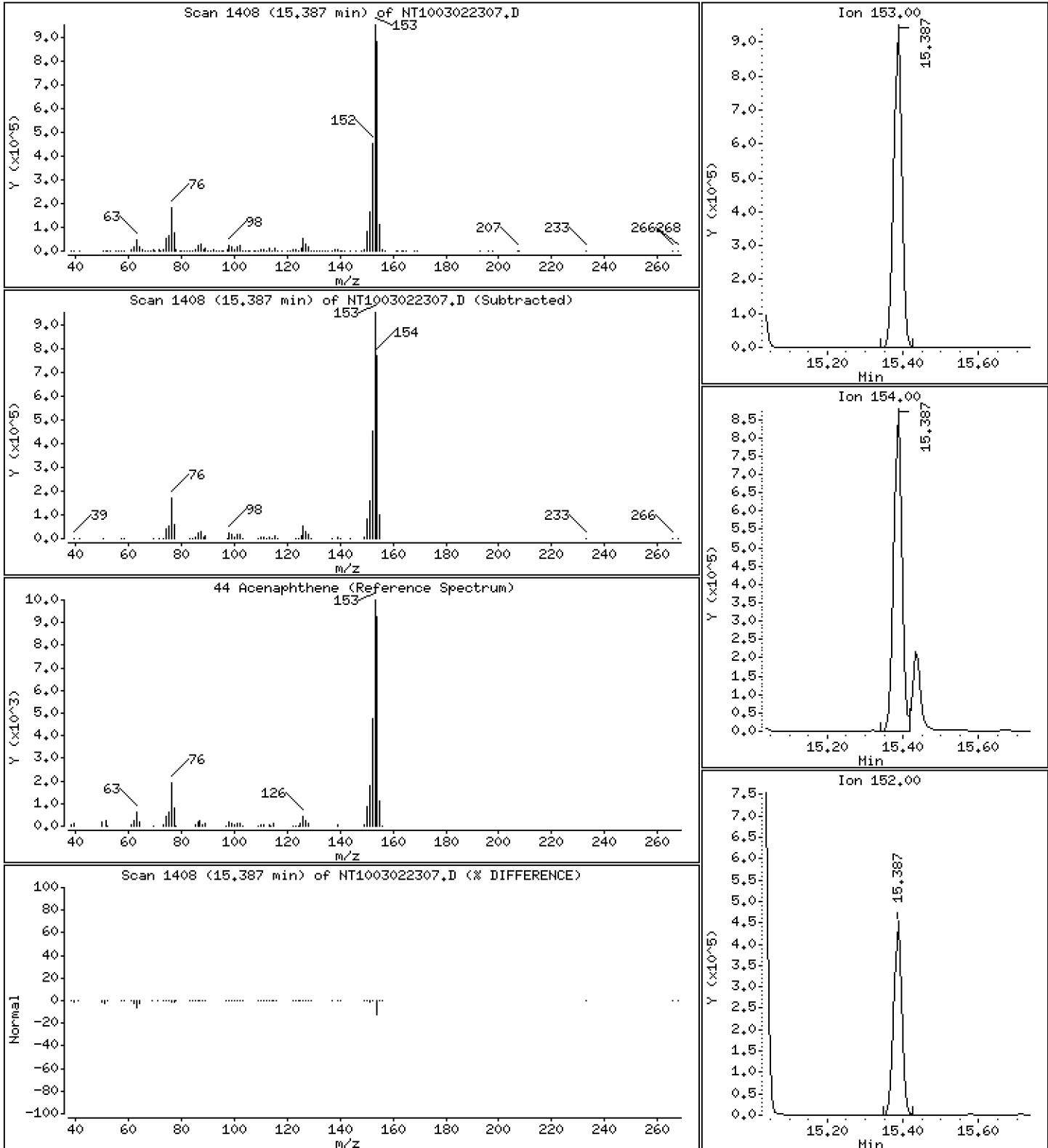
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 4,911 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

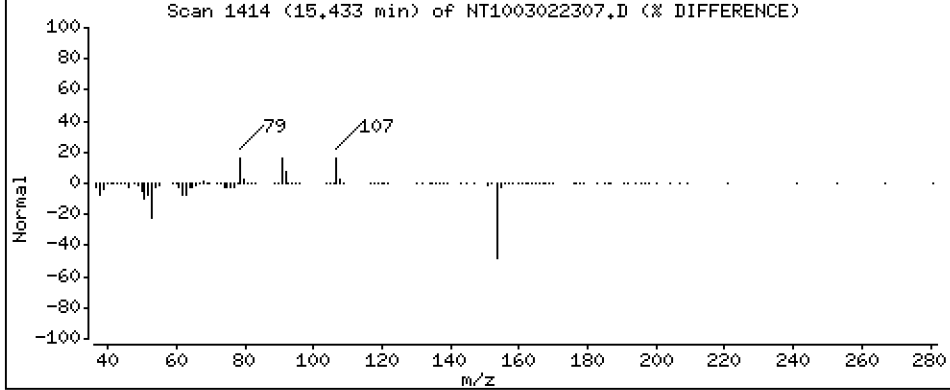
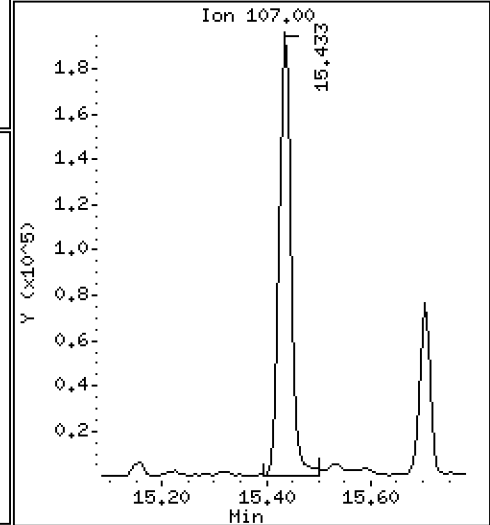
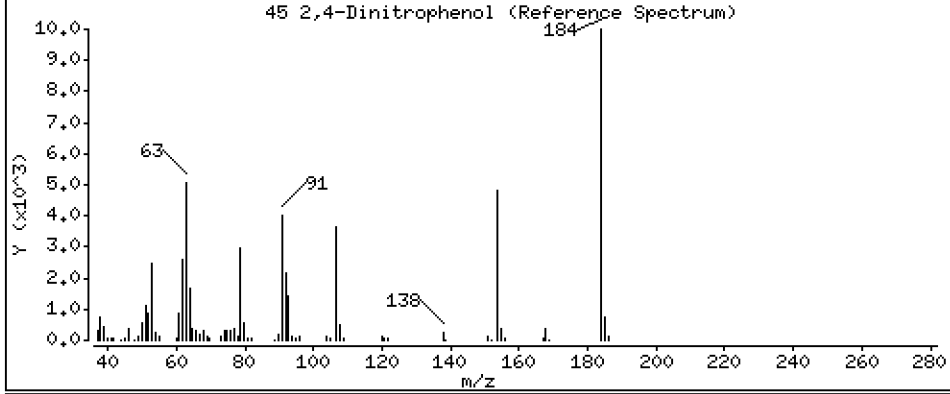
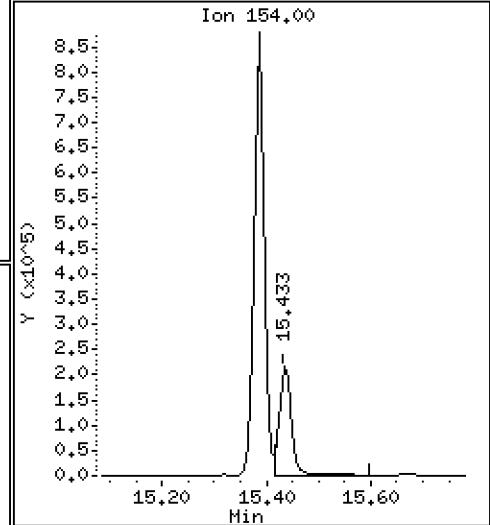
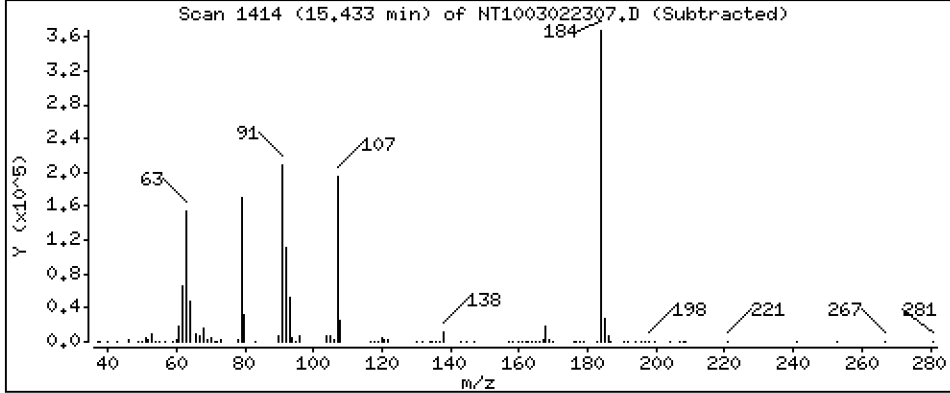
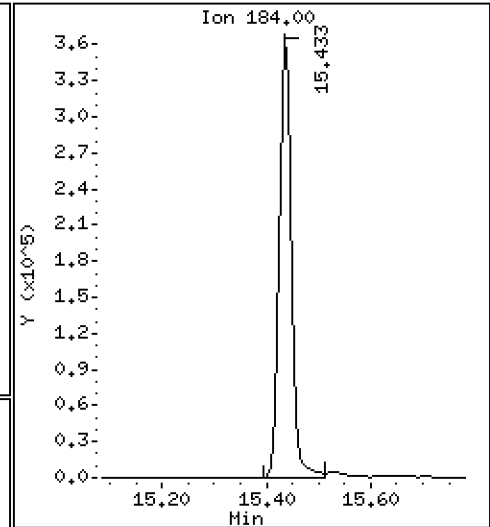
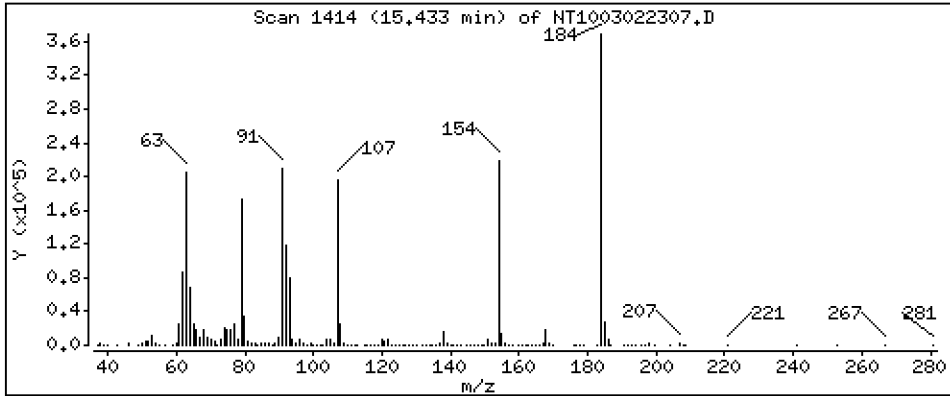
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 29,45 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

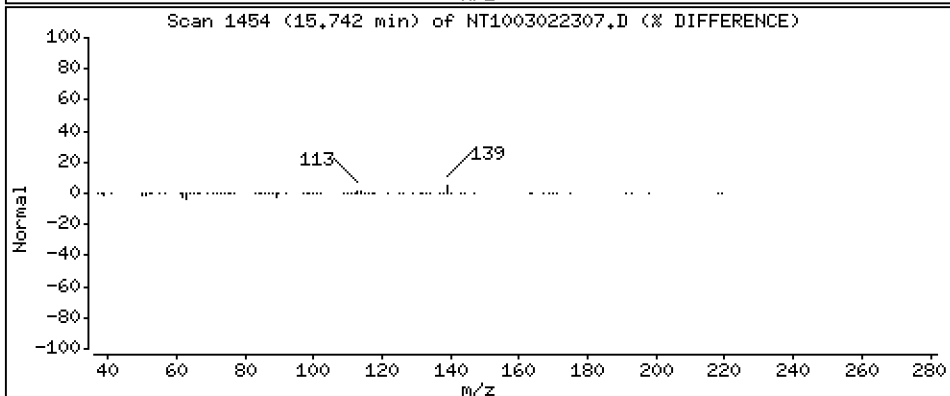
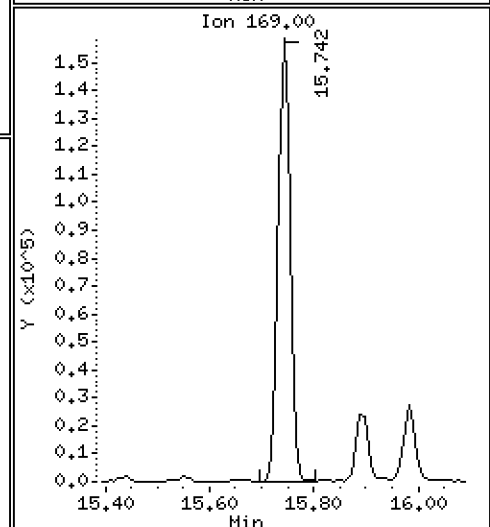
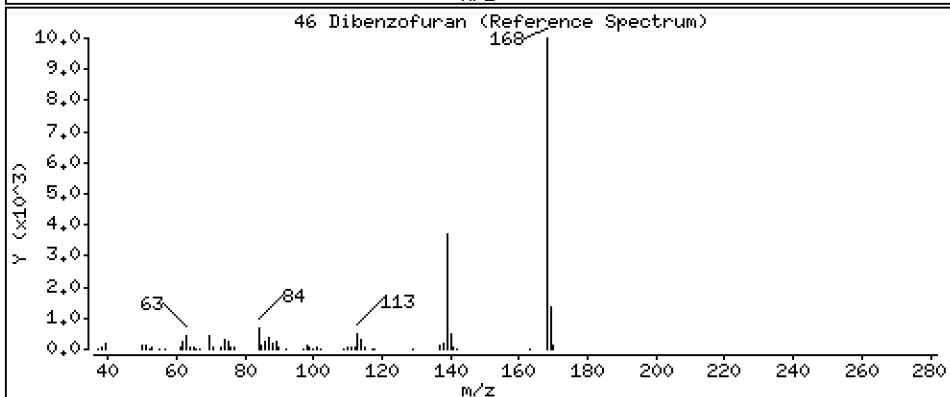
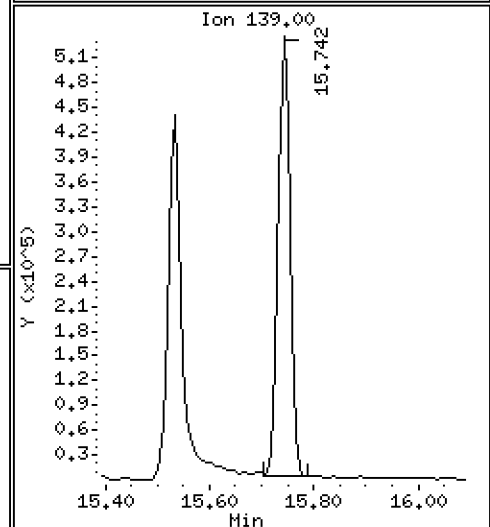
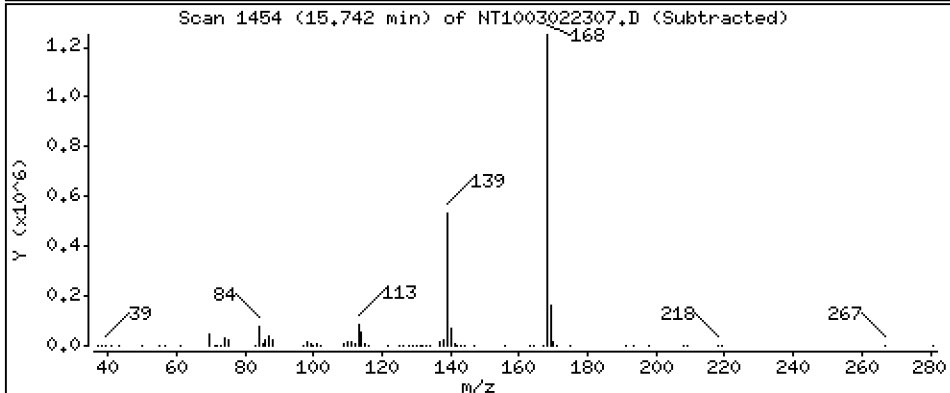
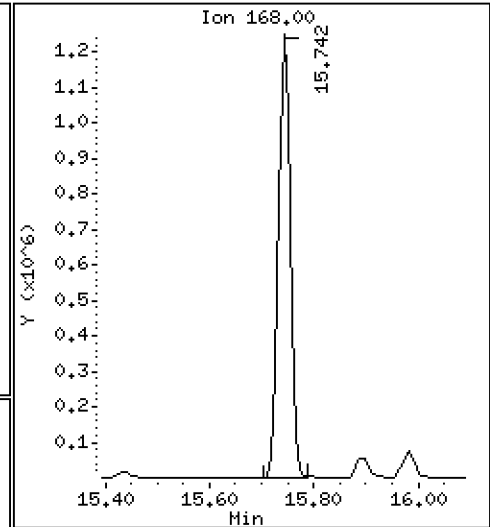
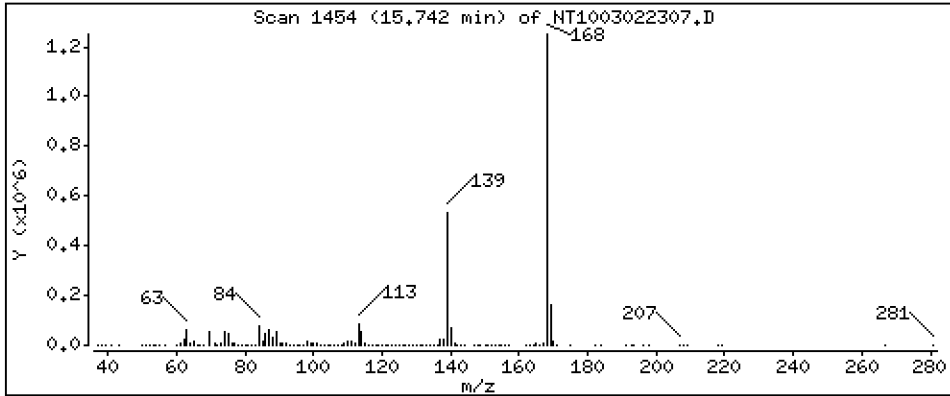
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,702 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

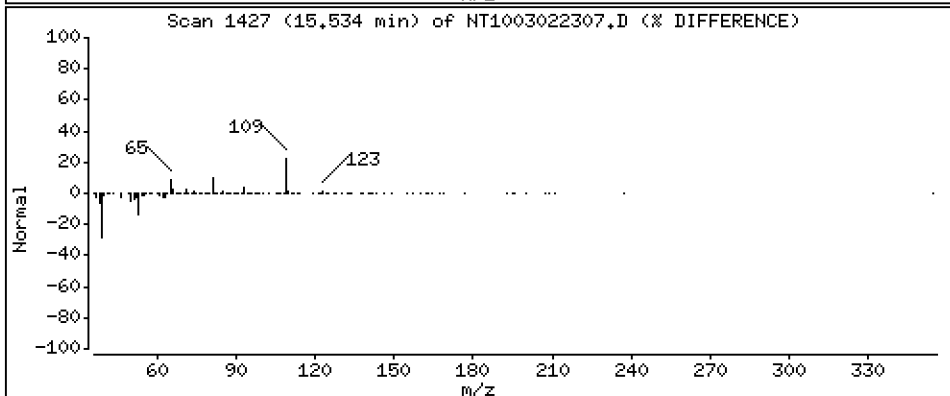
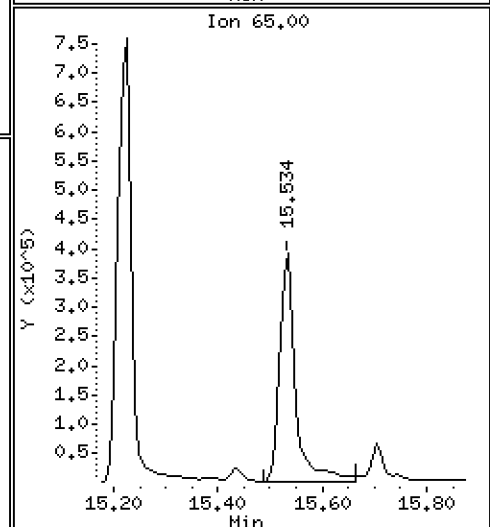
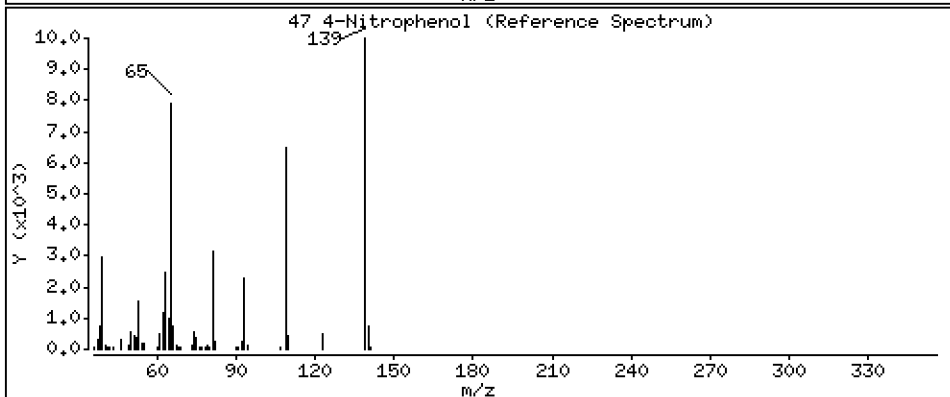
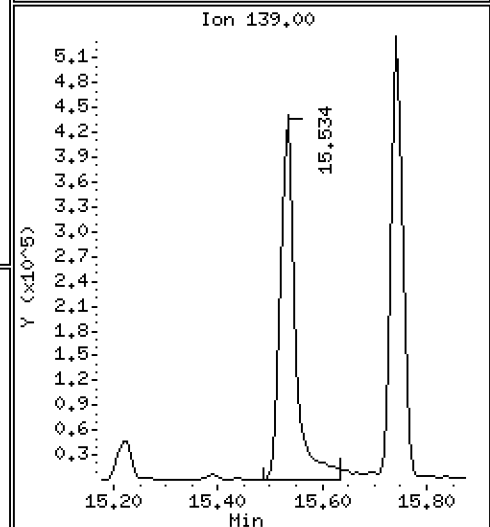
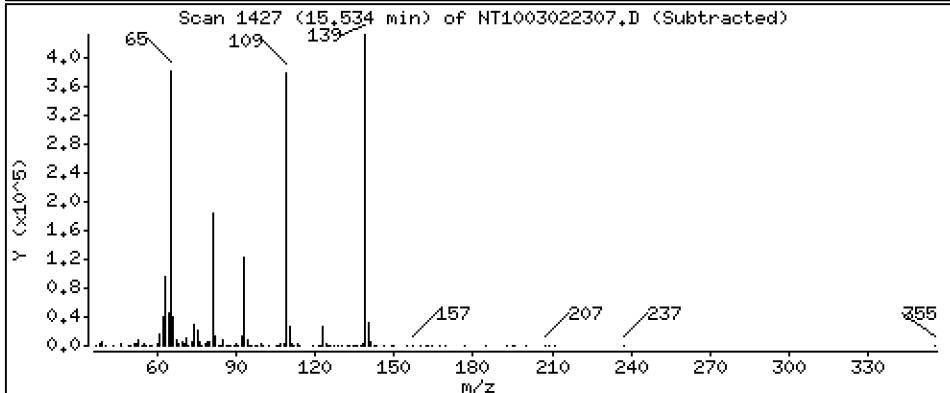
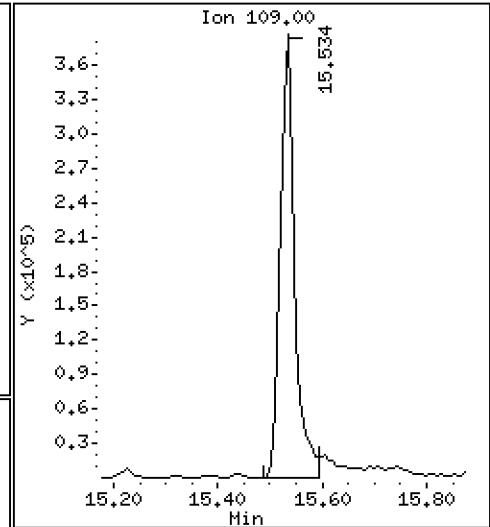
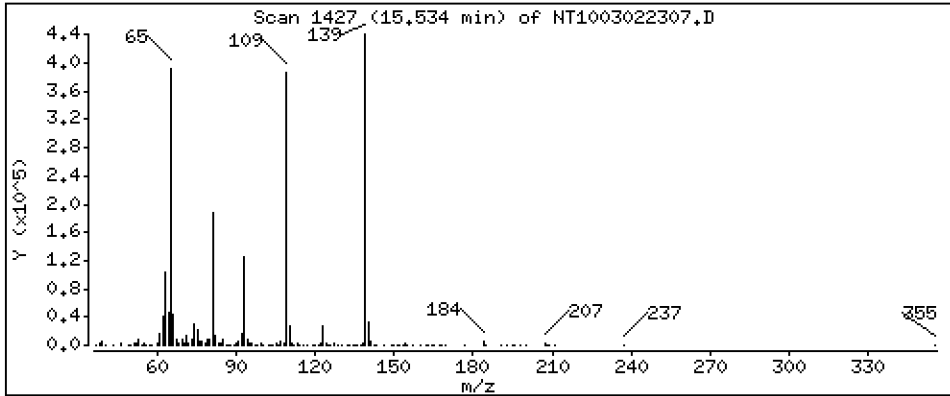
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 13,05 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

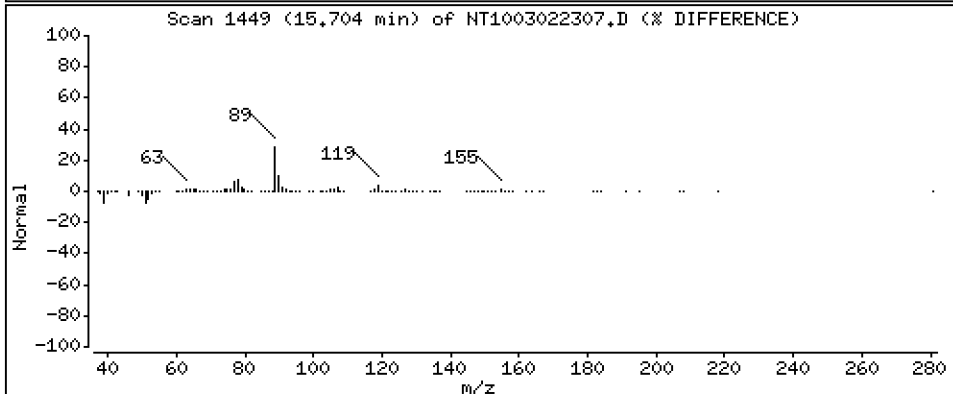
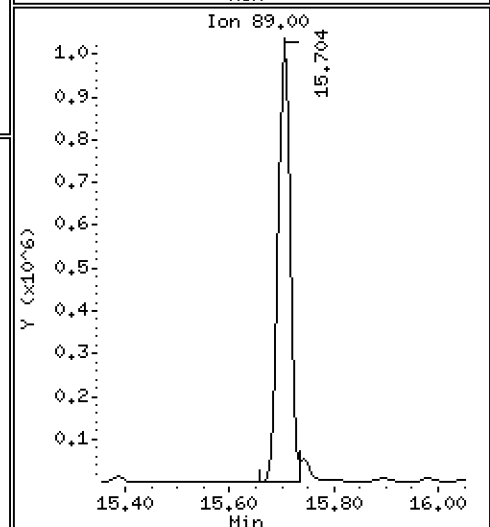
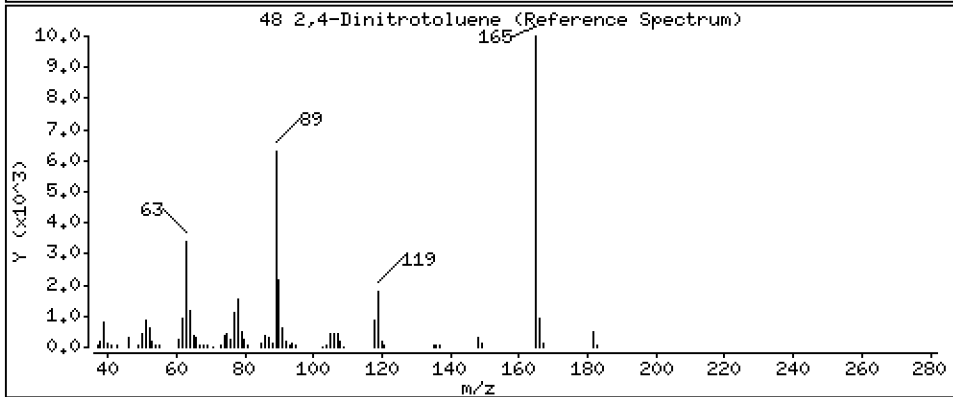
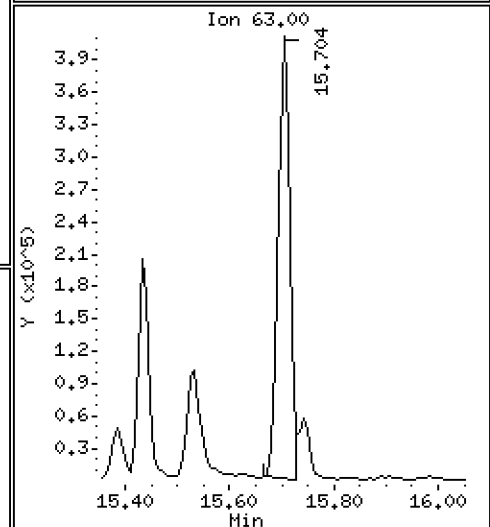
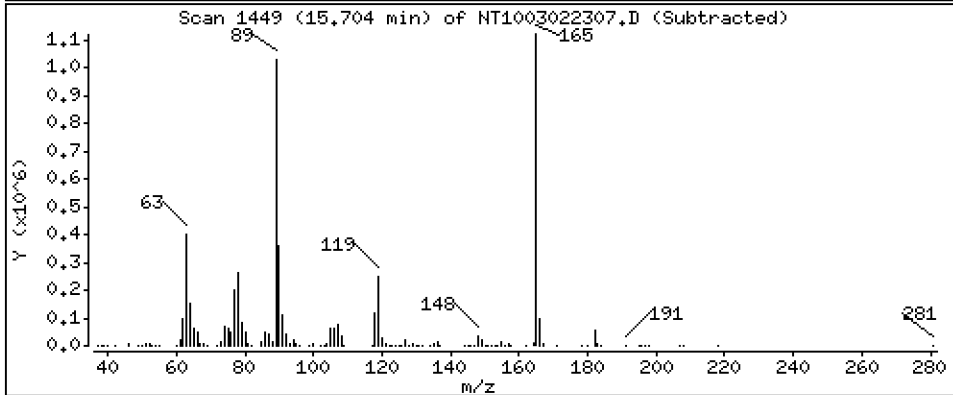
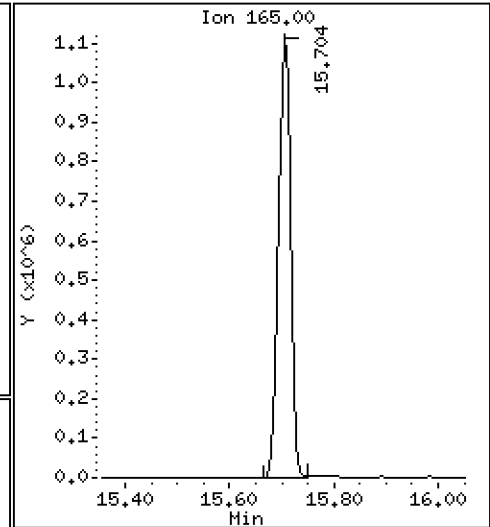
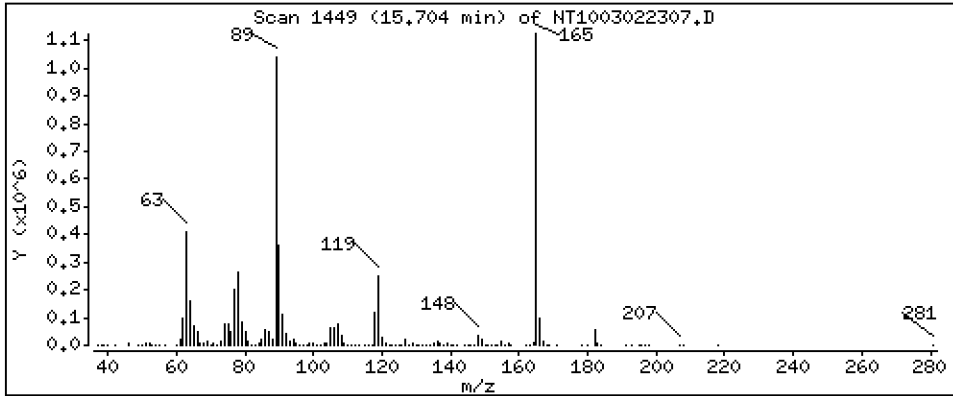
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 16,92 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

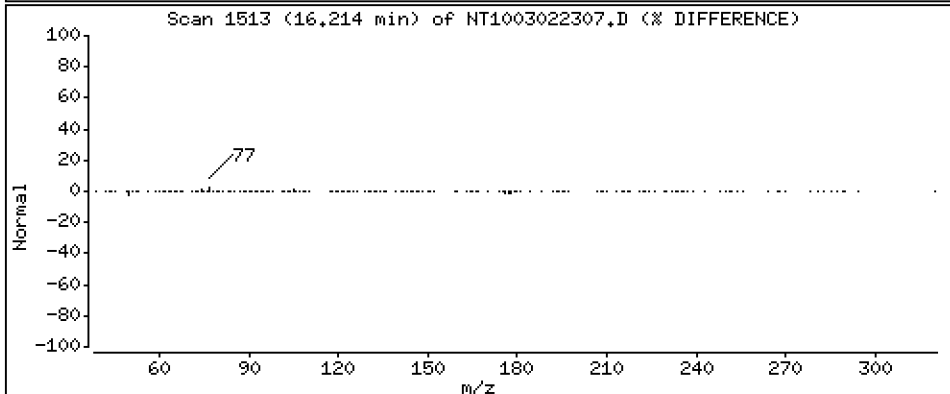
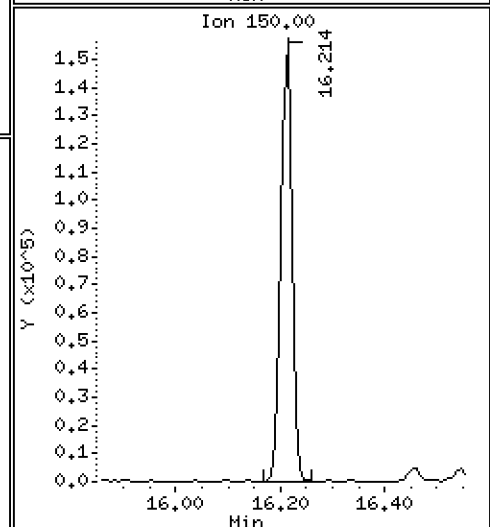
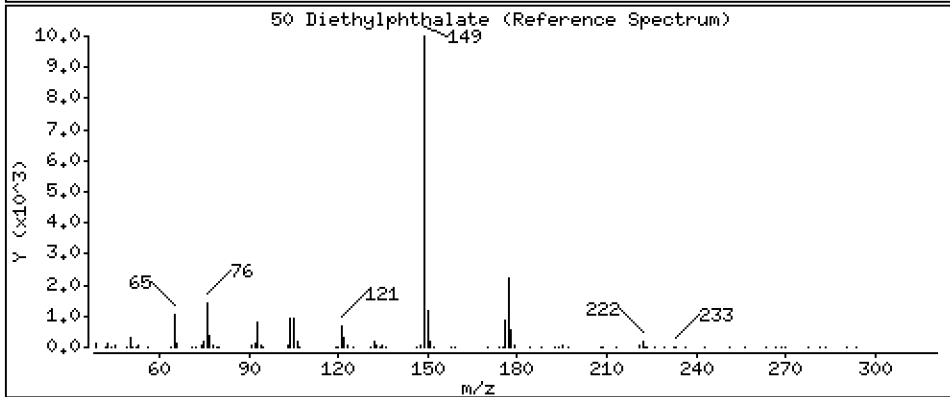
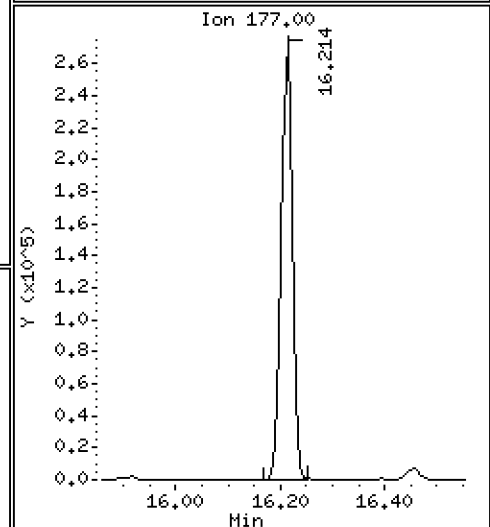
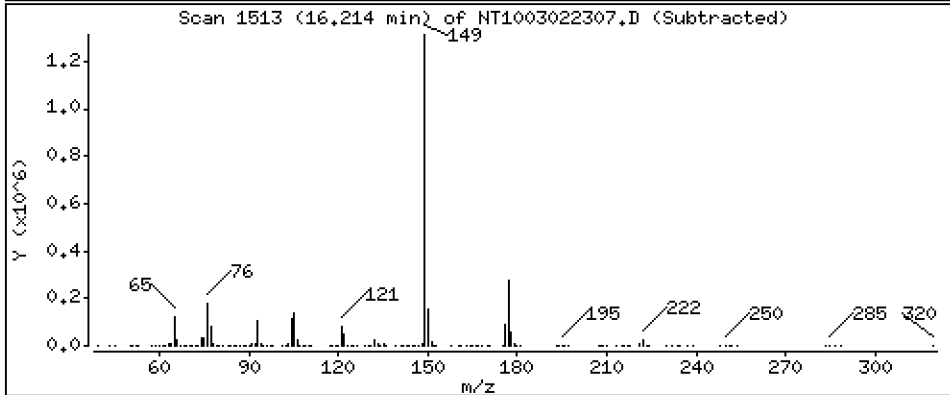
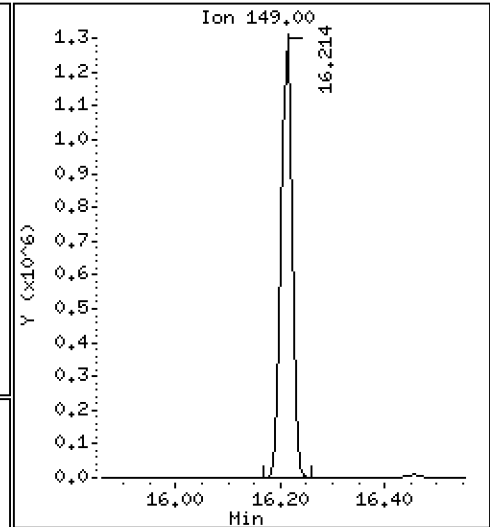
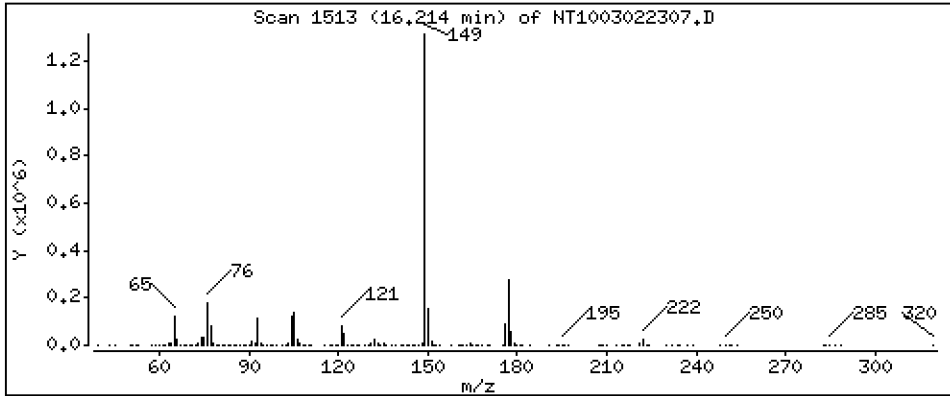
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,707 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

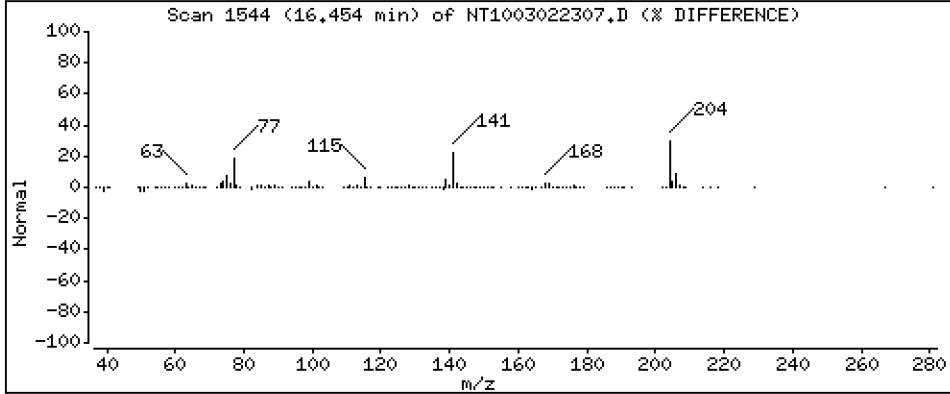
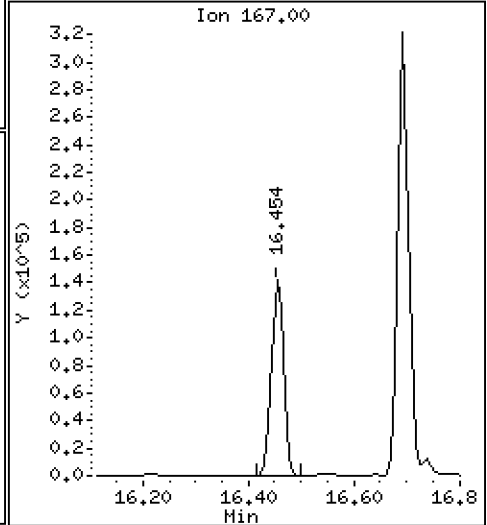
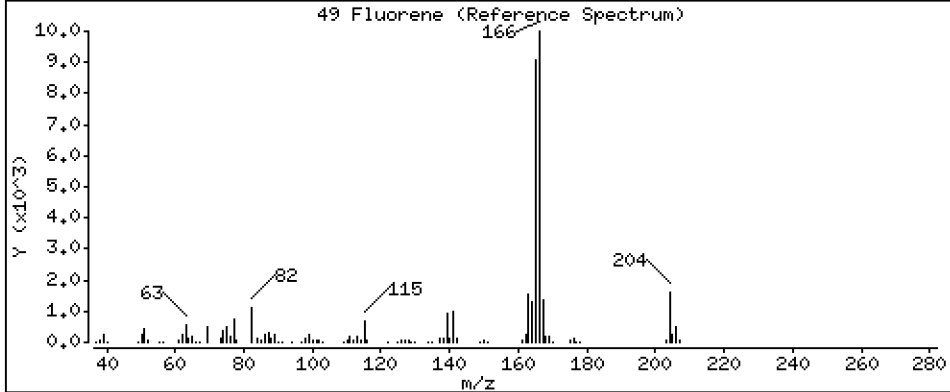
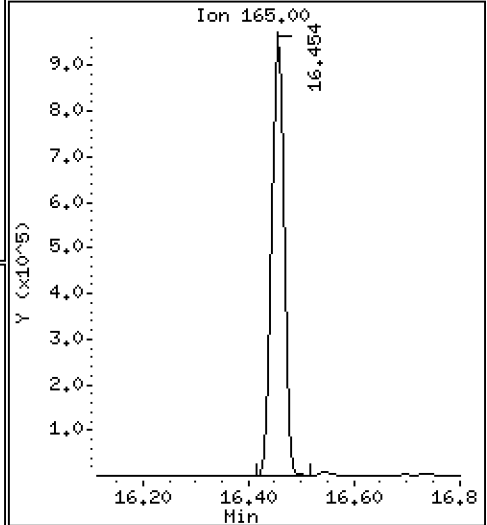
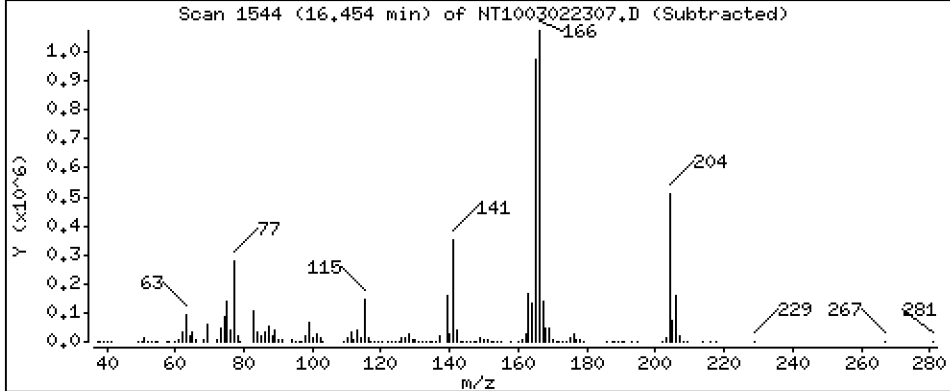
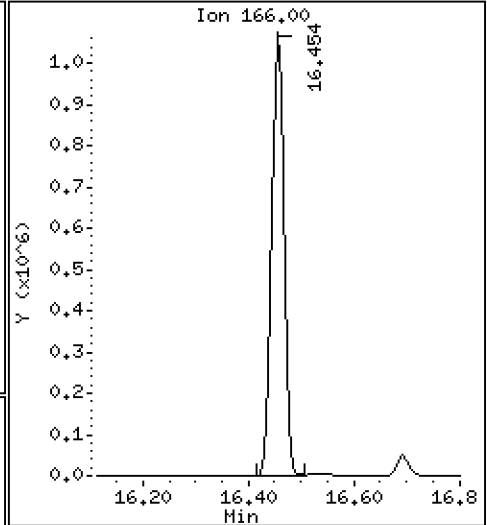
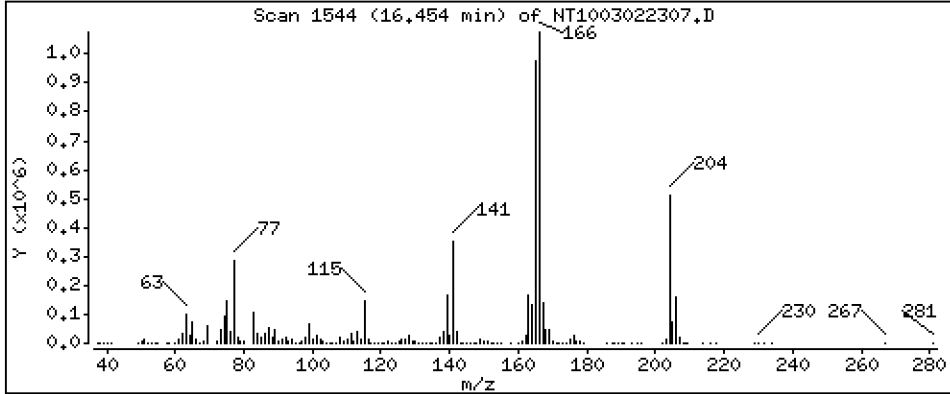
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,031 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

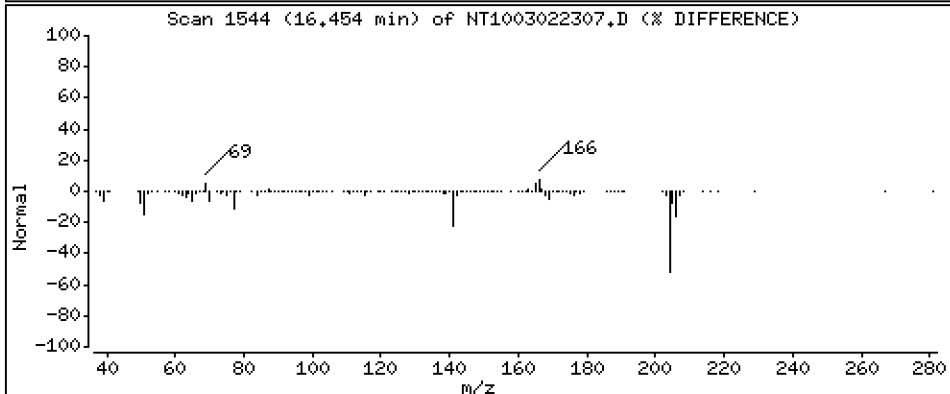
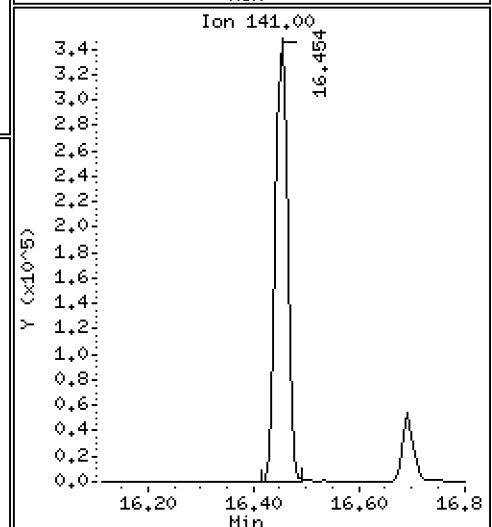
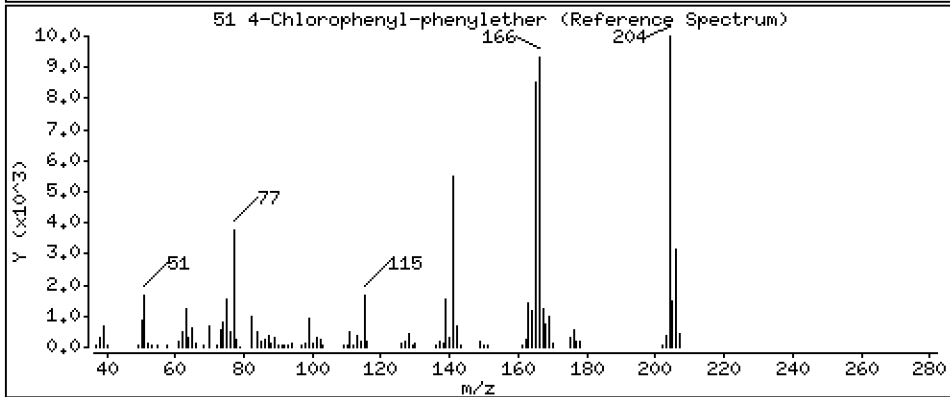
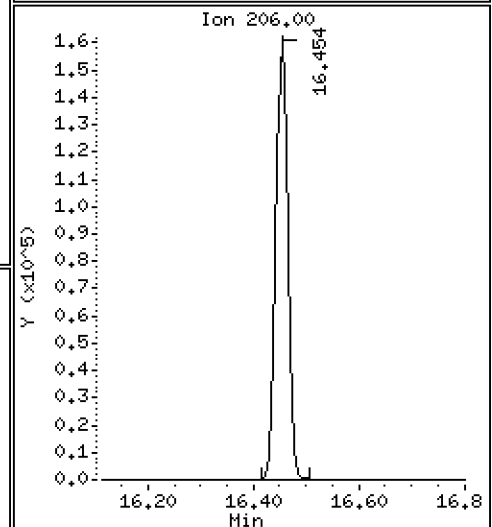
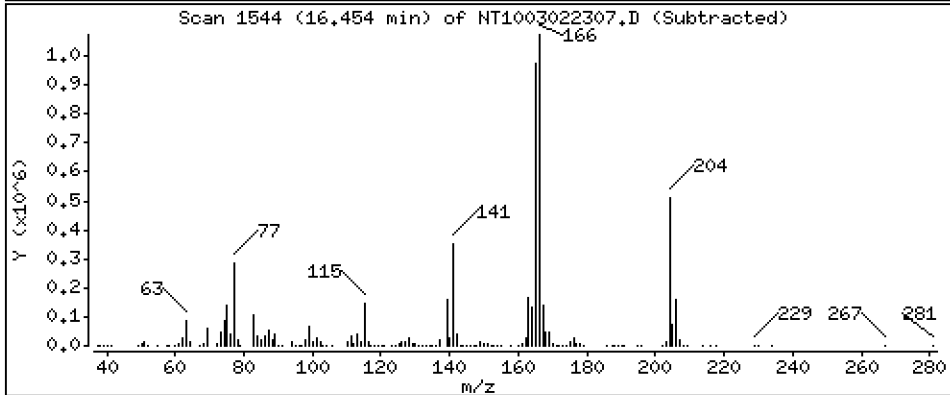
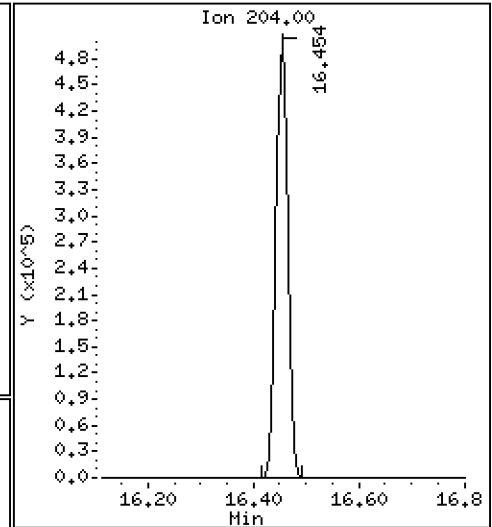
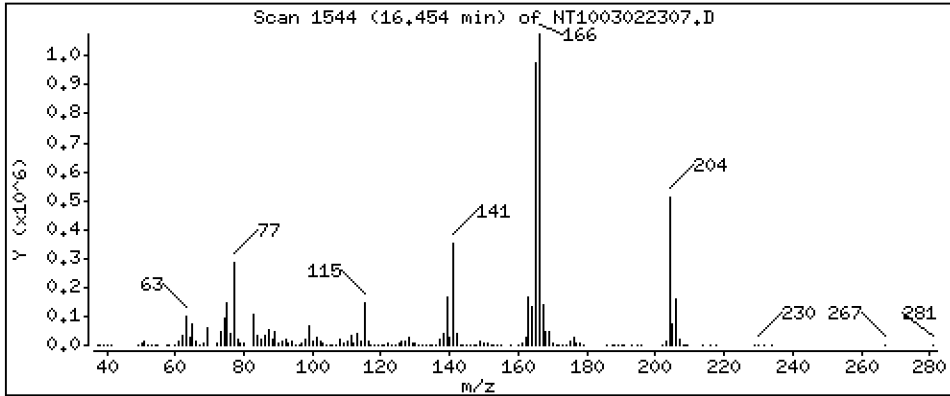
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 4,966 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

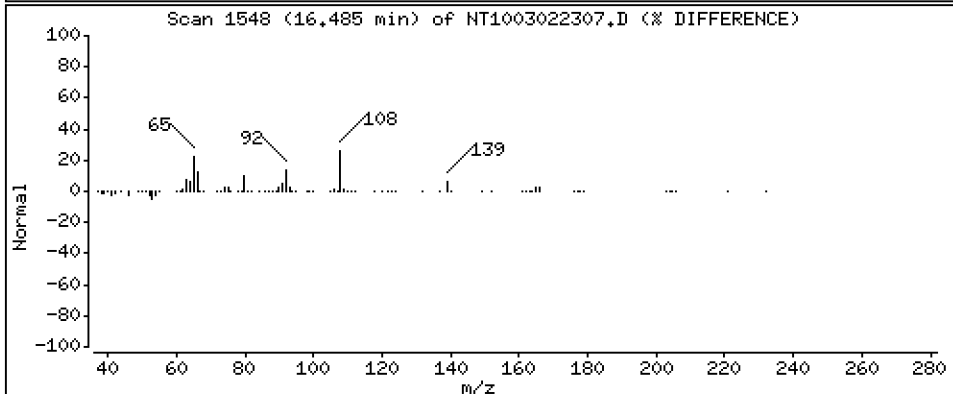
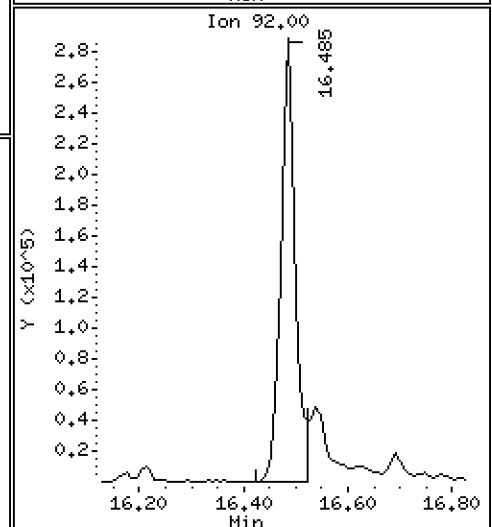
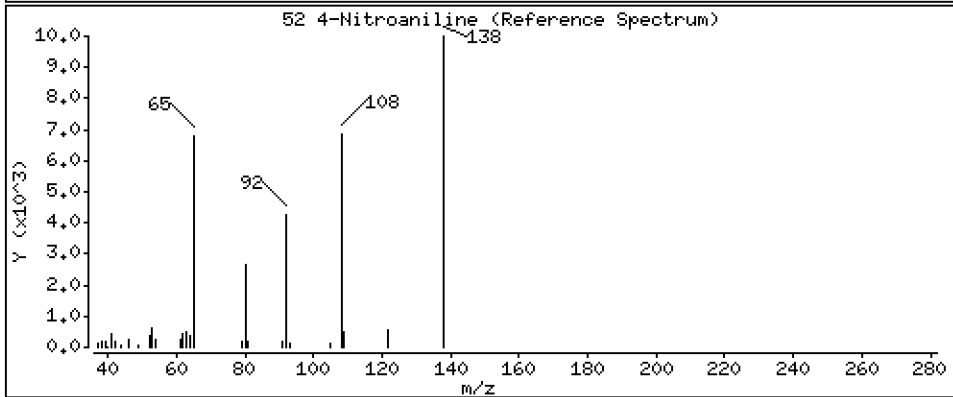
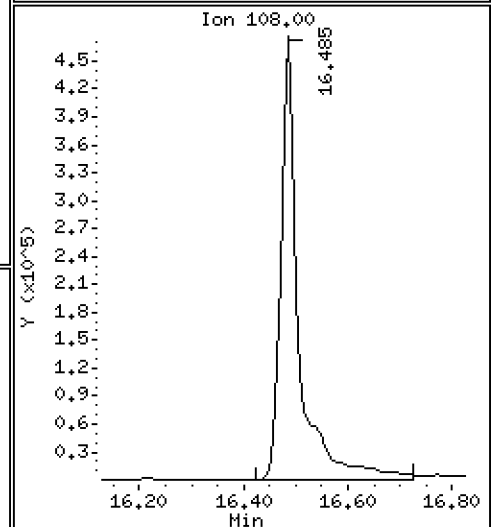
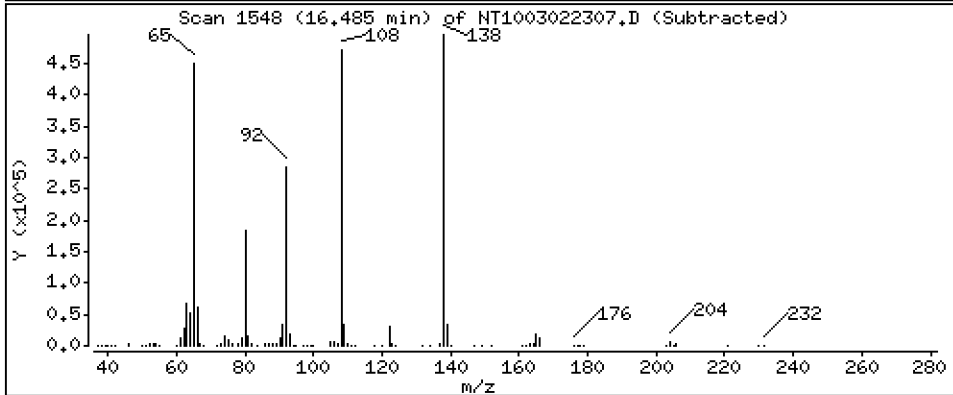
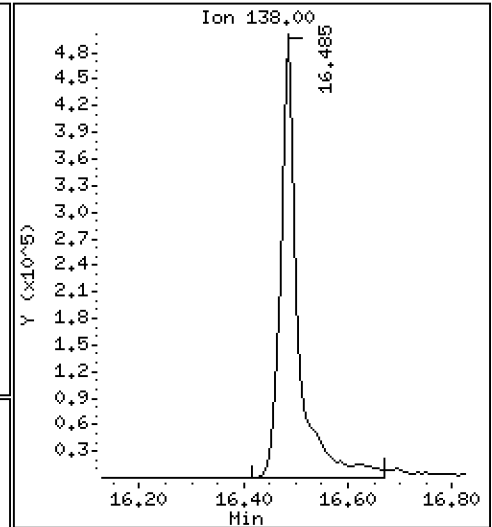
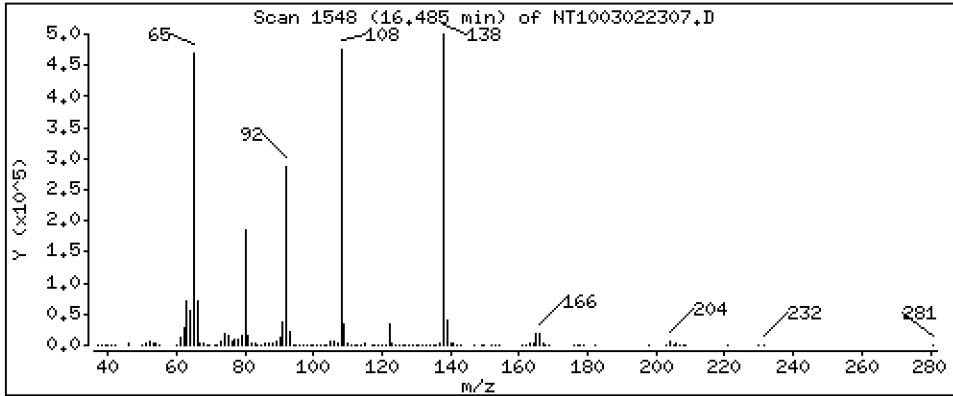
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 15,29 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

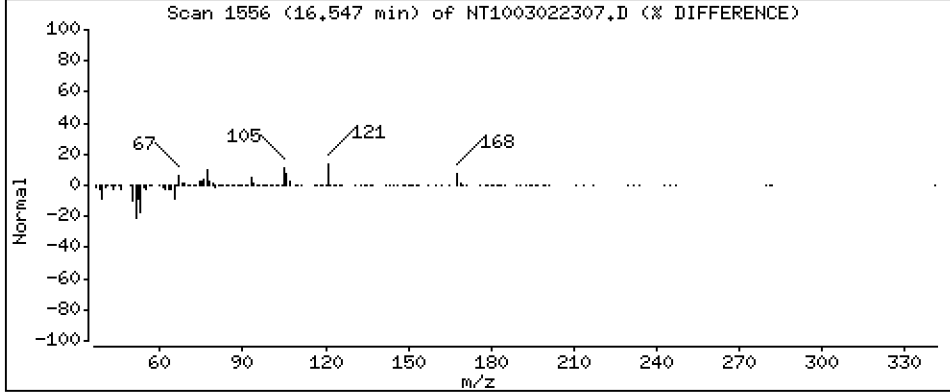
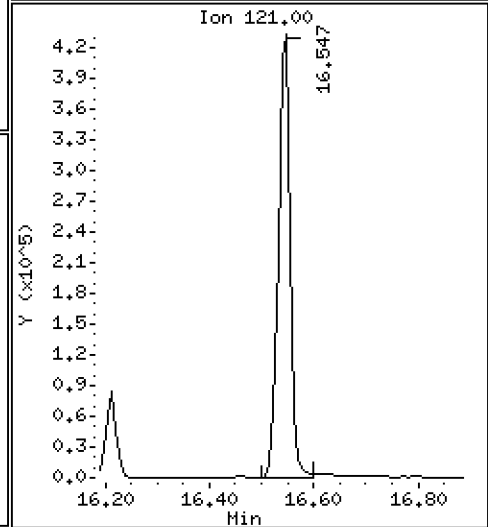
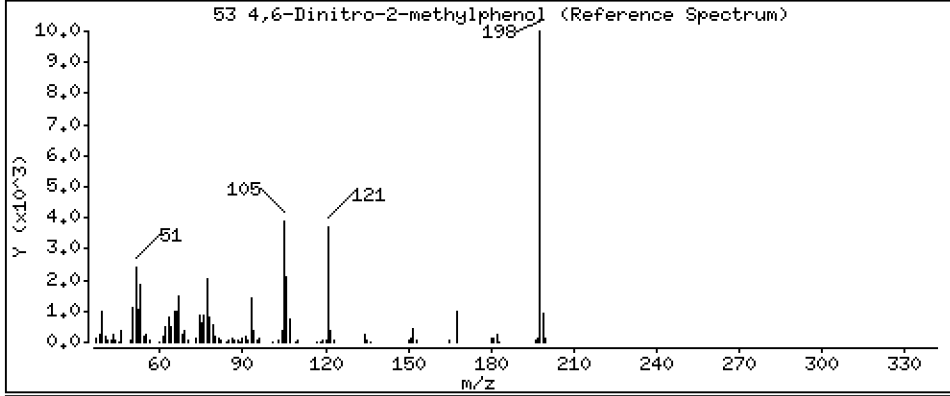
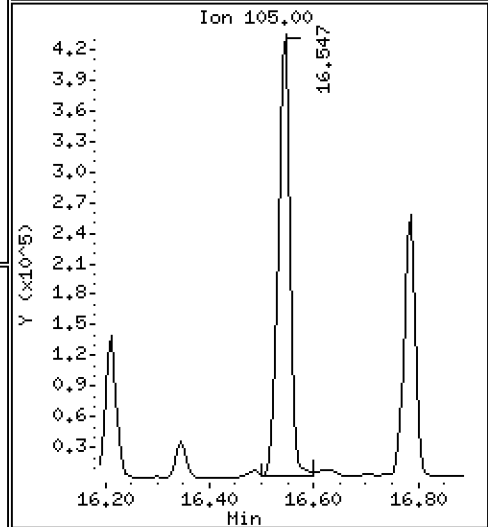
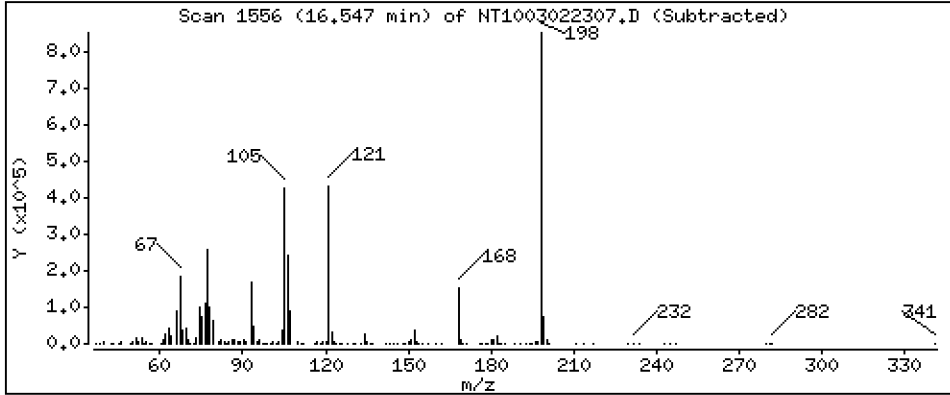
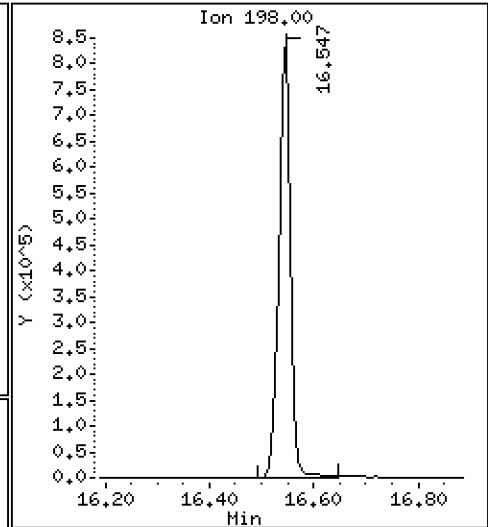
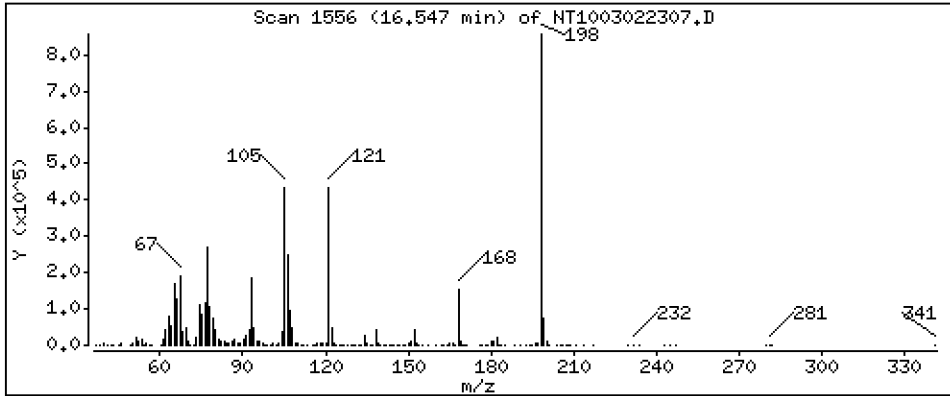
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 31,69 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

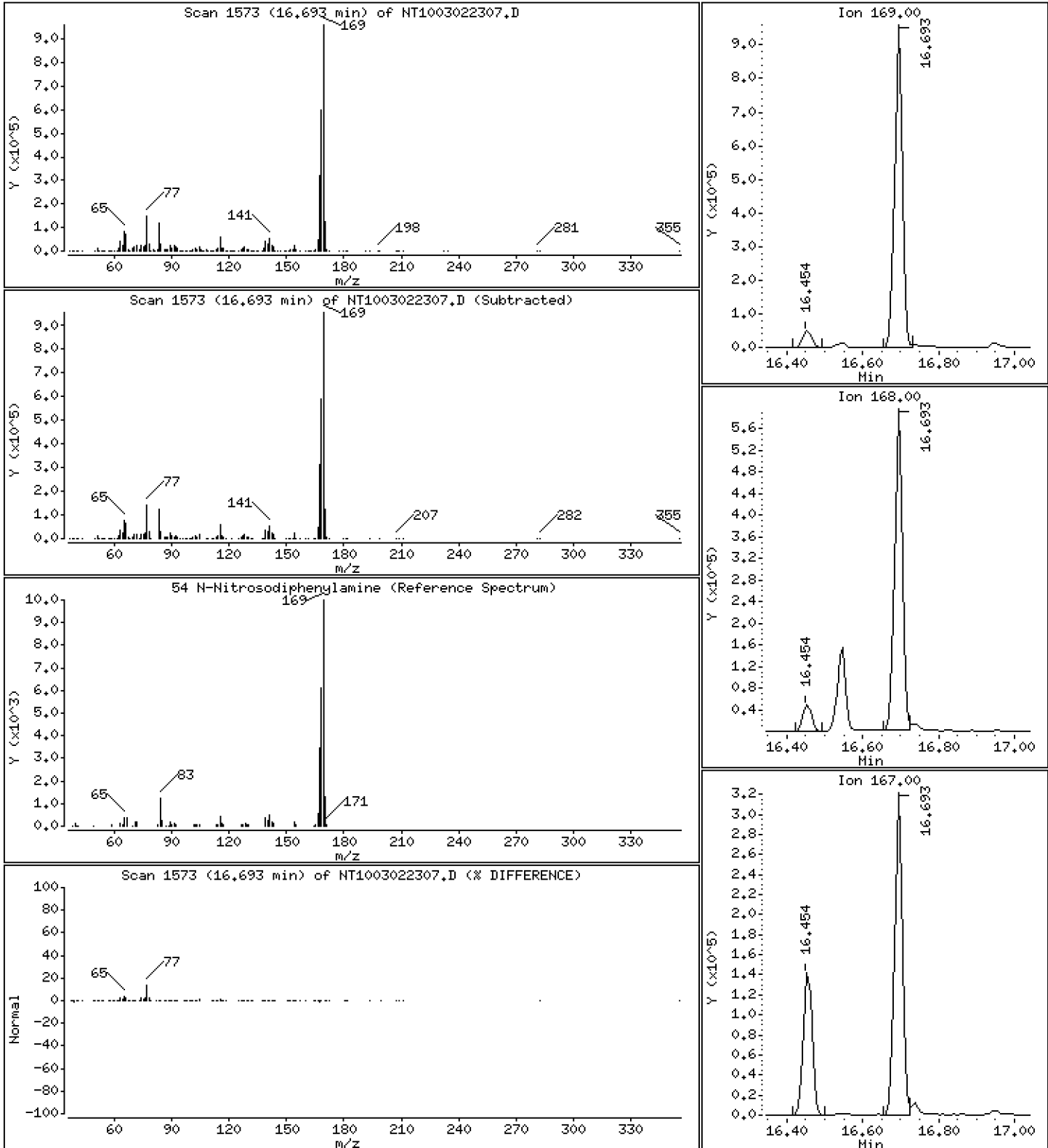
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,083 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

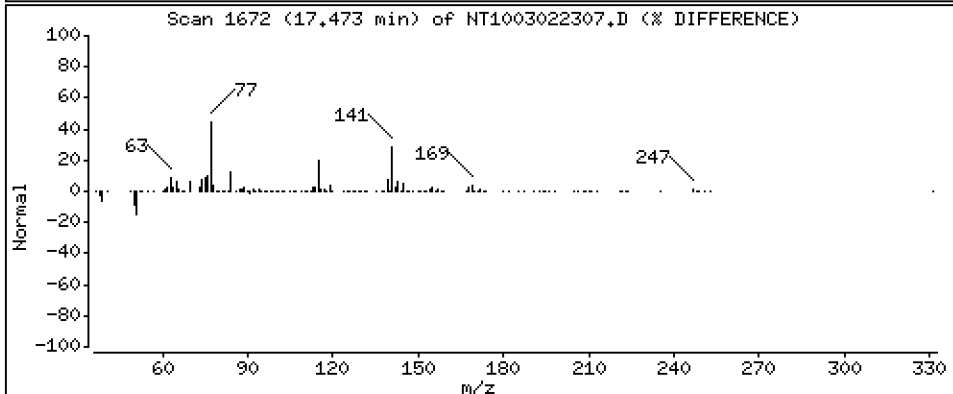
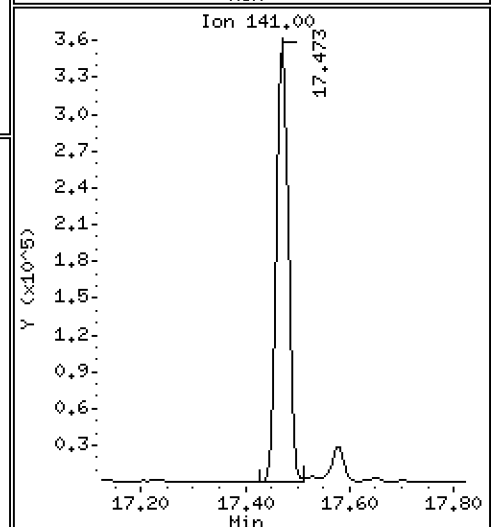
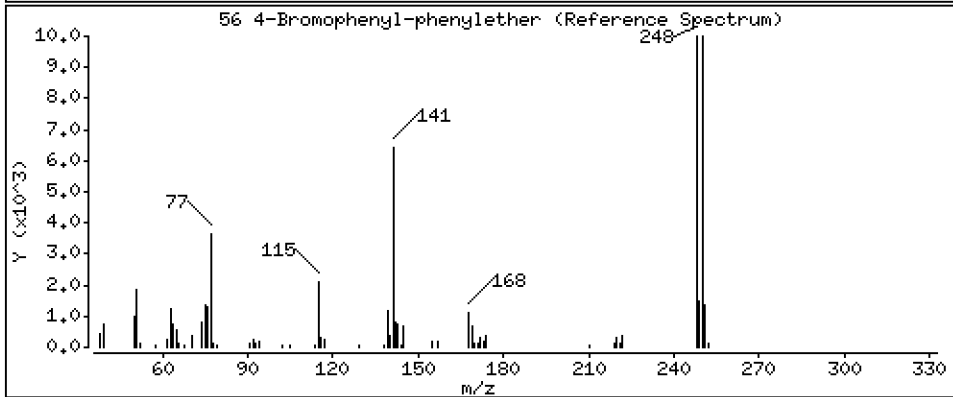
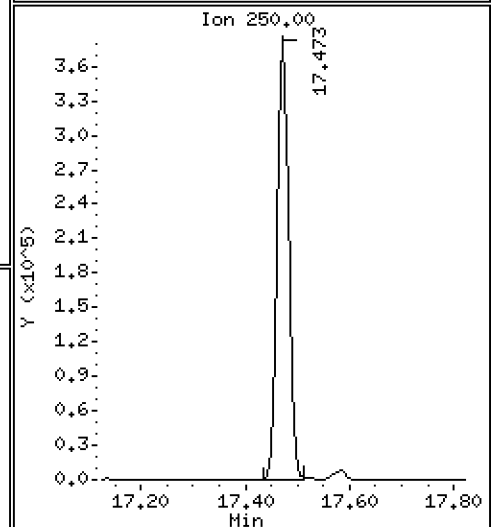
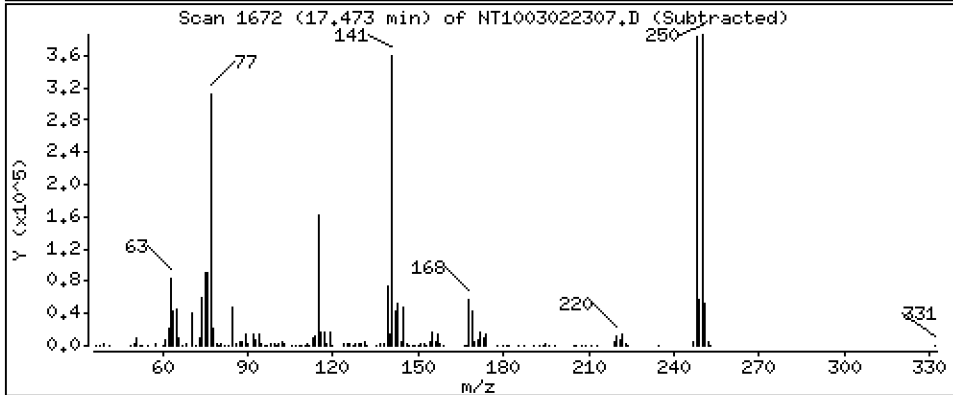
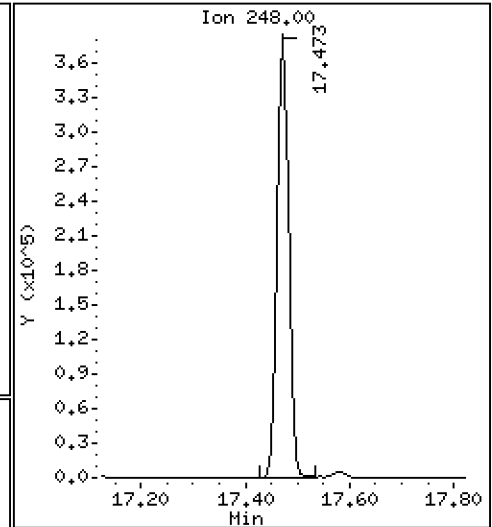
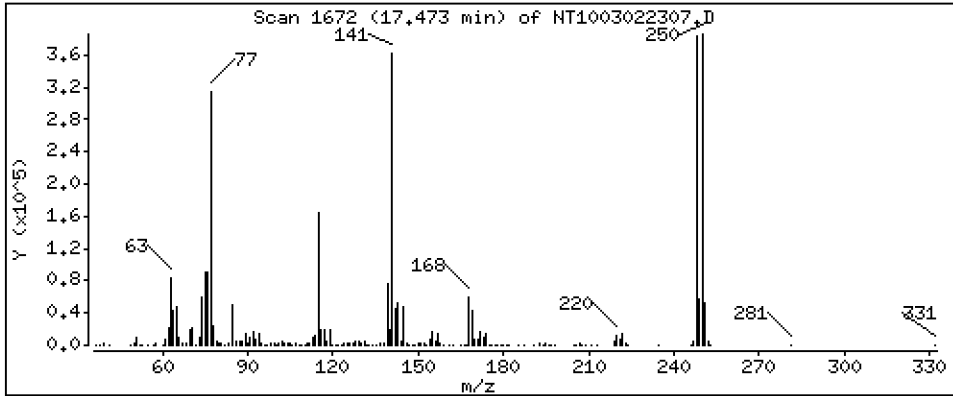
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,291 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

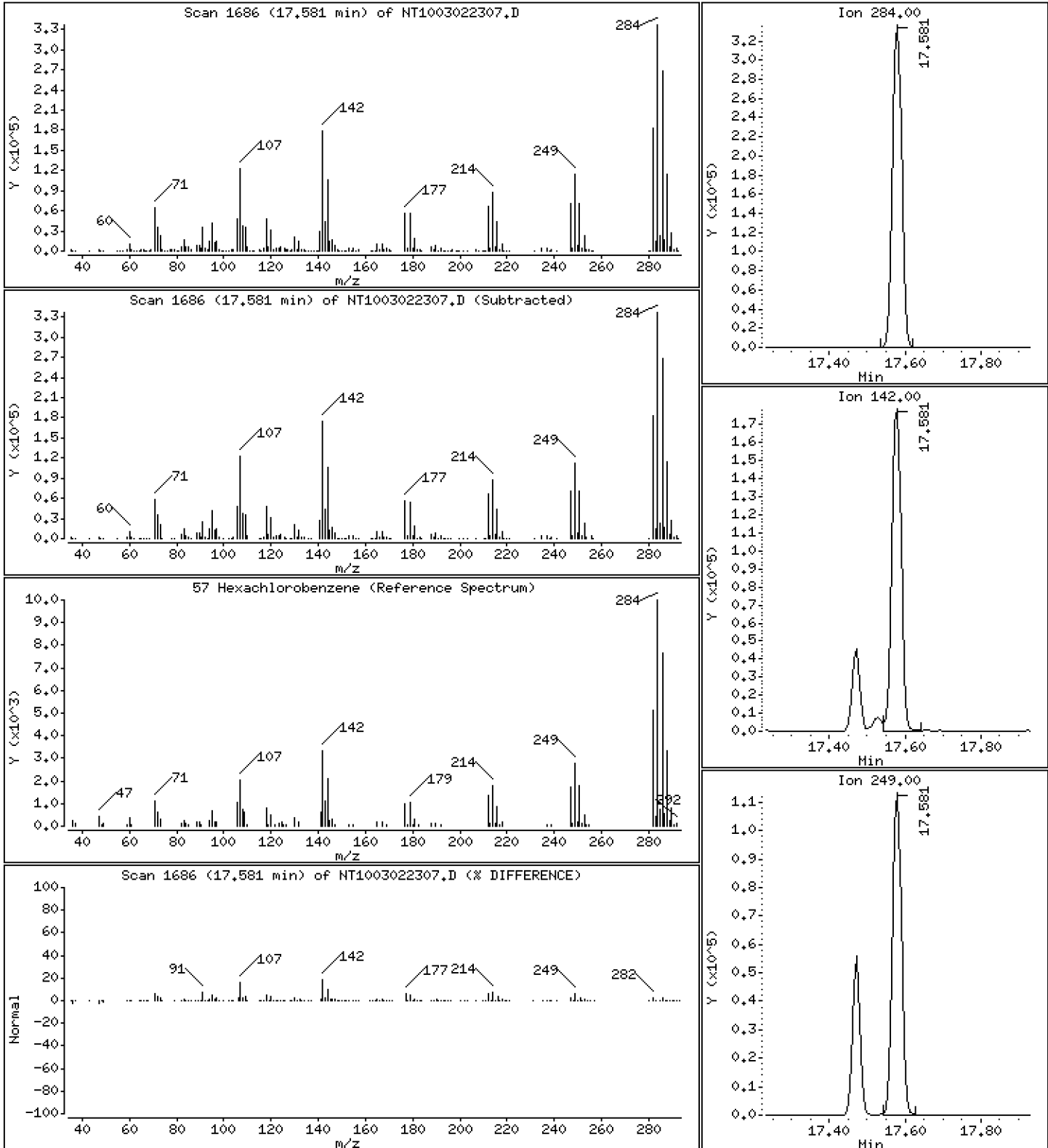
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,610 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

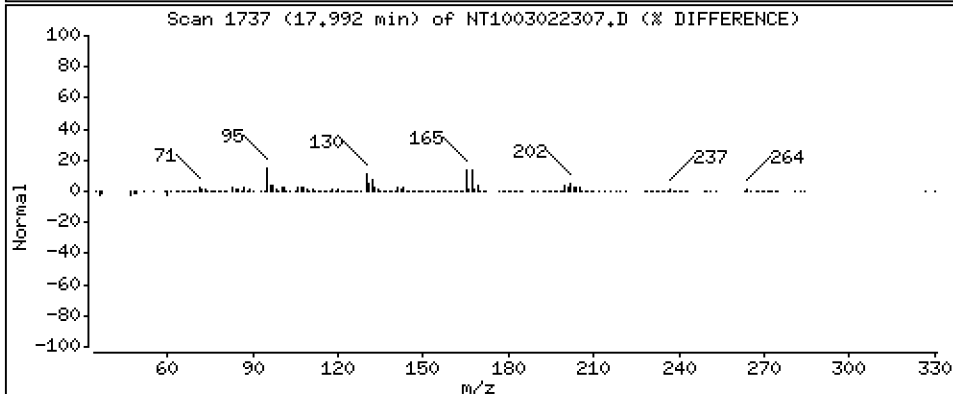
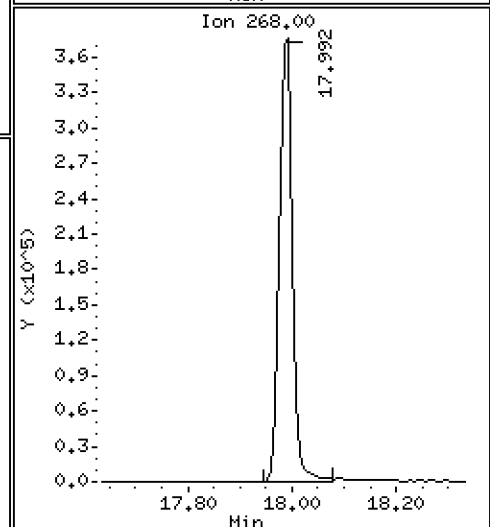
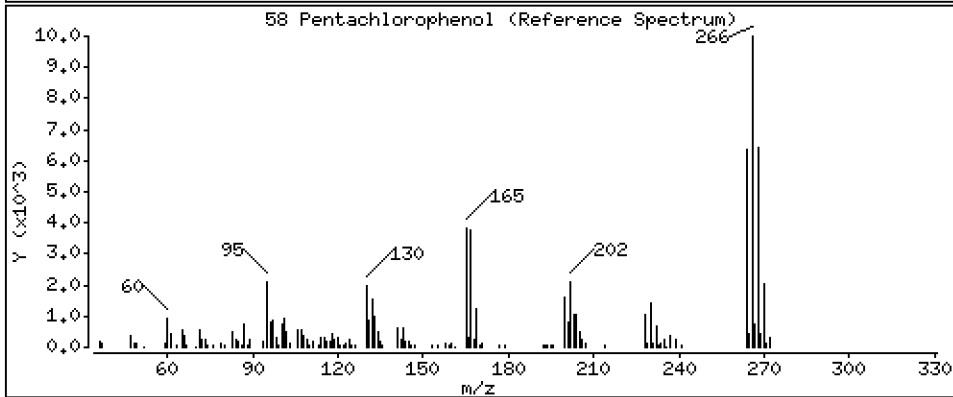
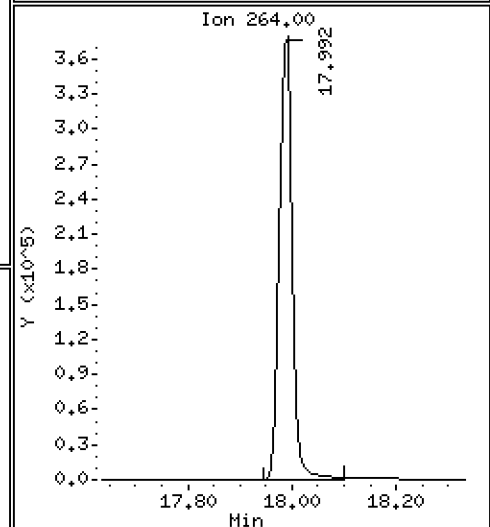
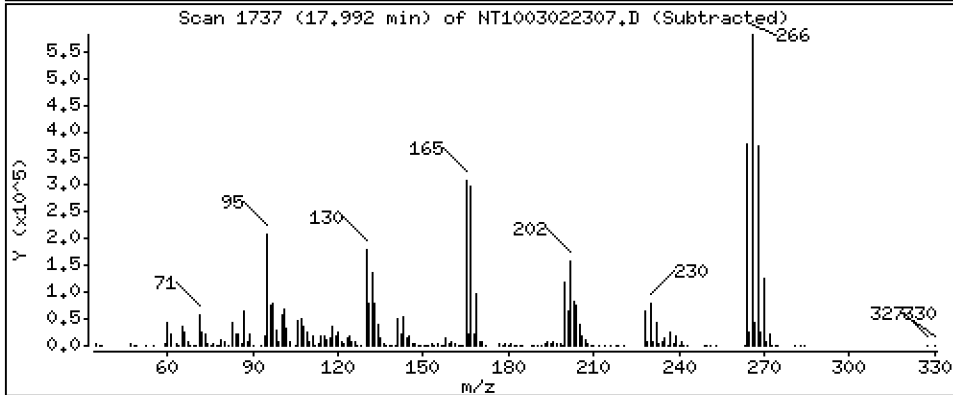
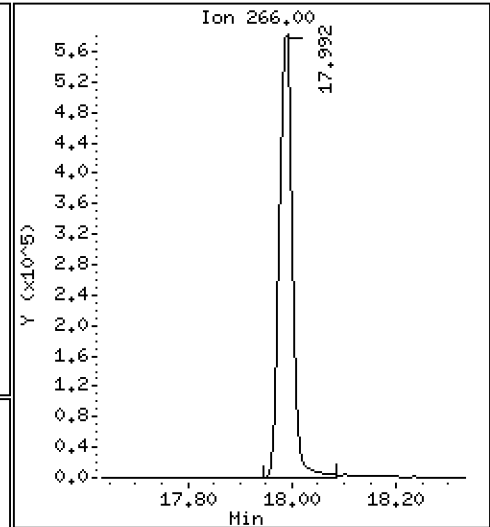
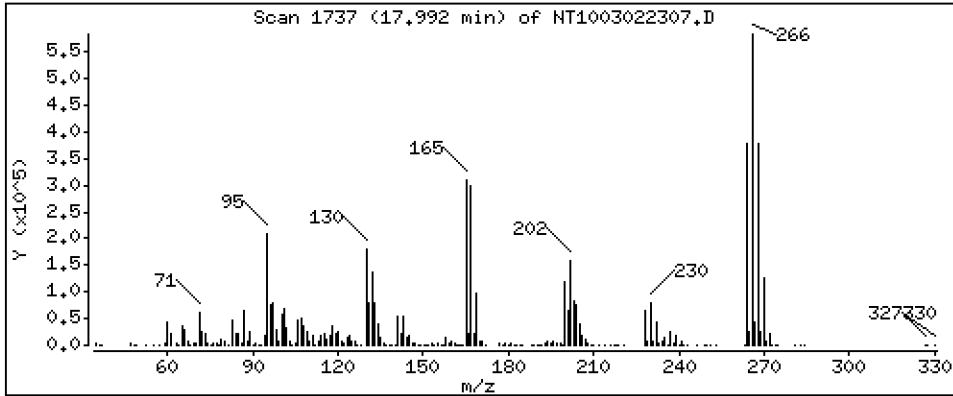
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 16,11 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

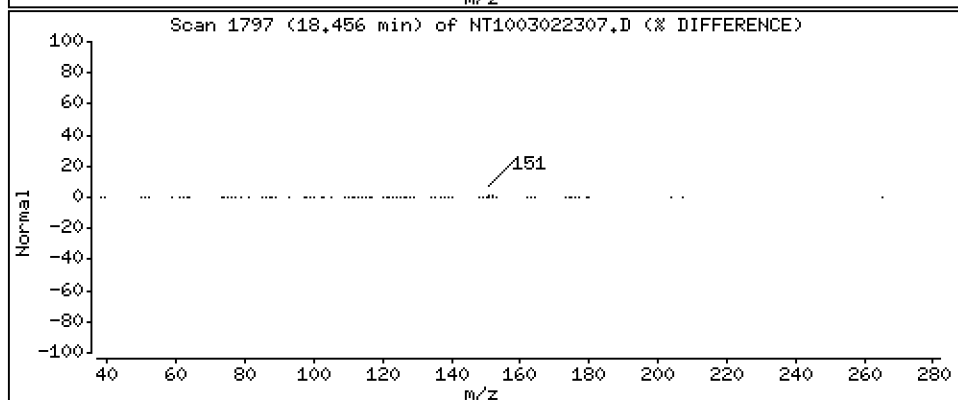
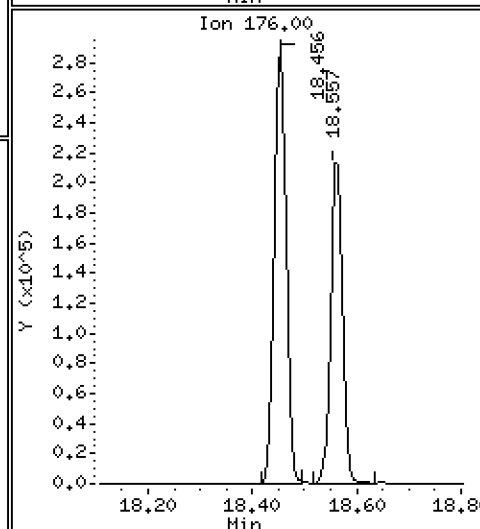
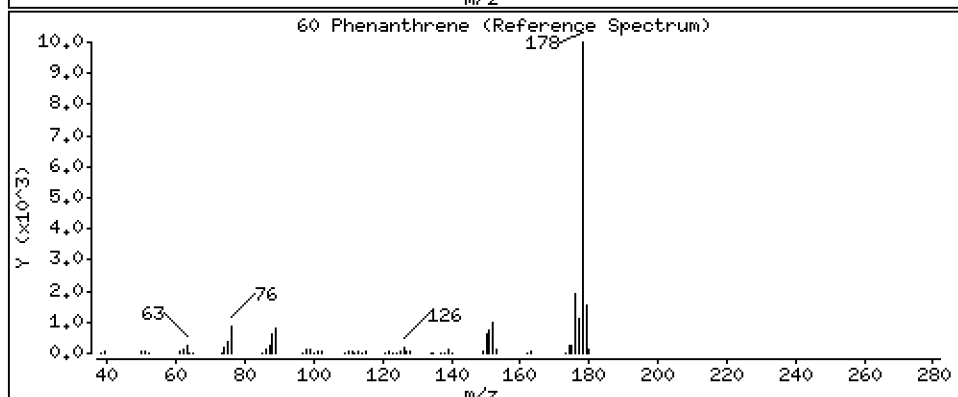
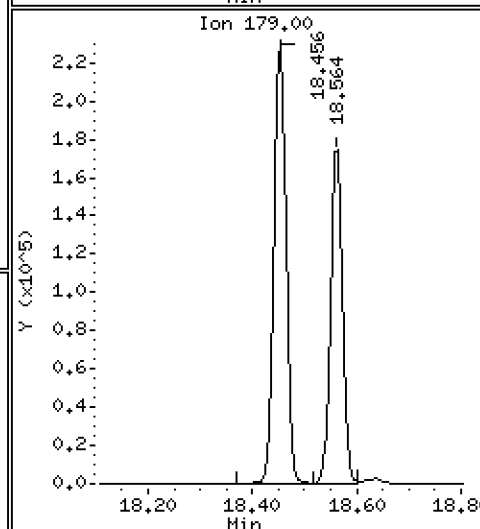
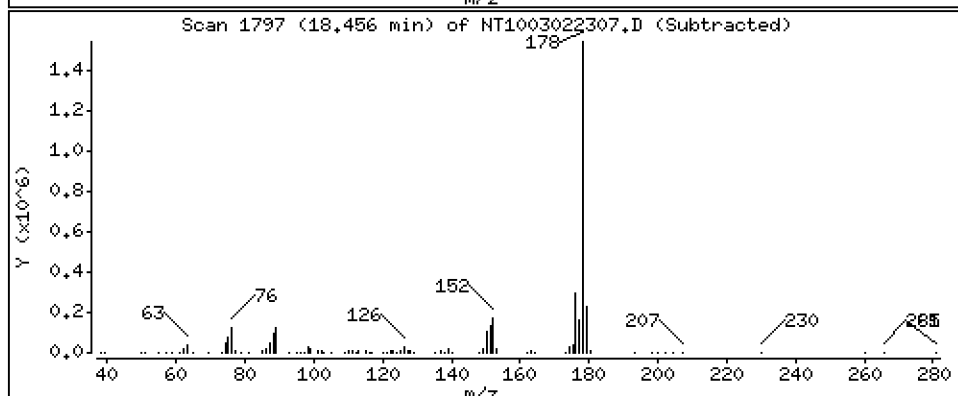
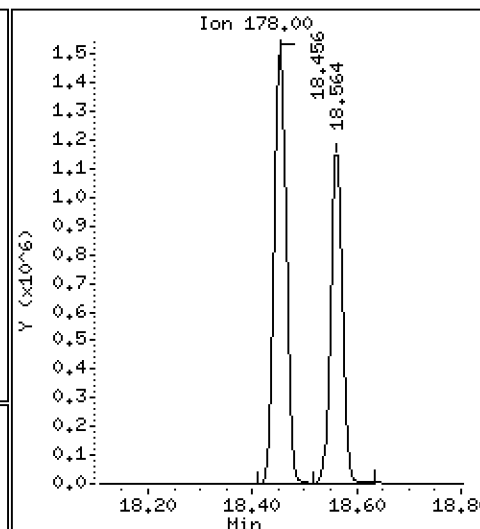
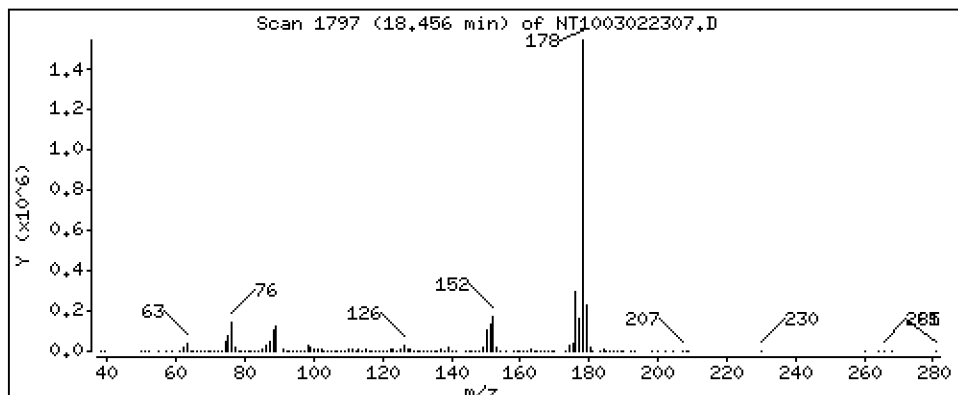
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,177 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

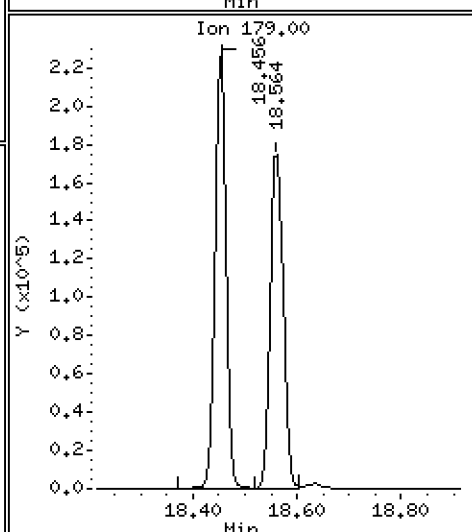
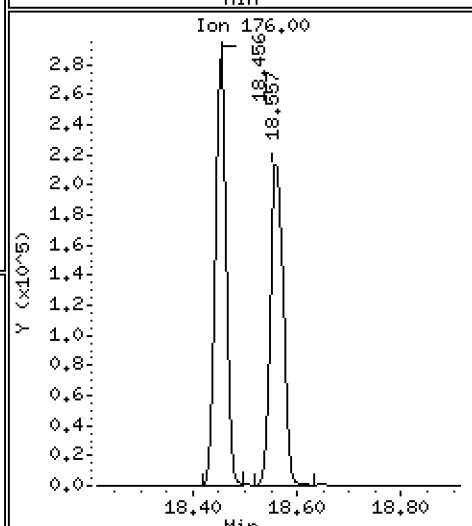
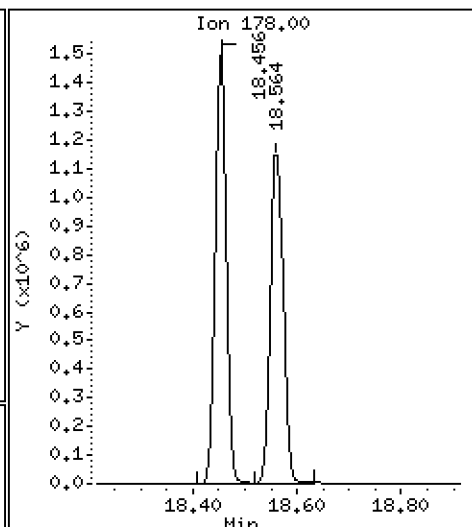
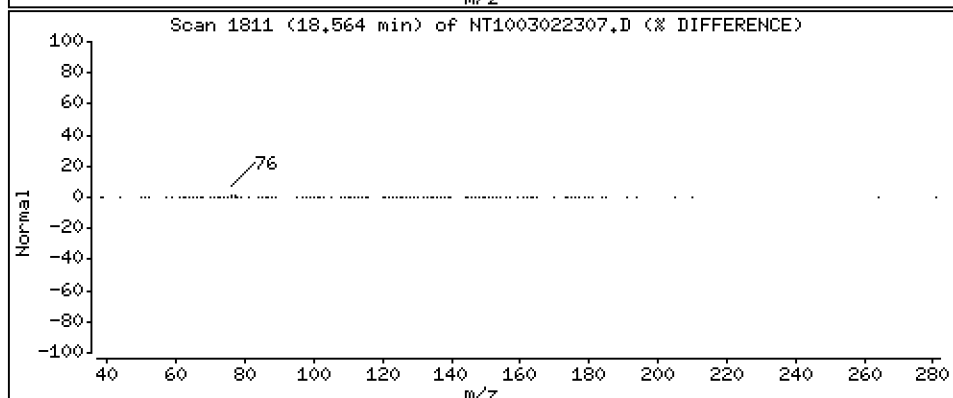
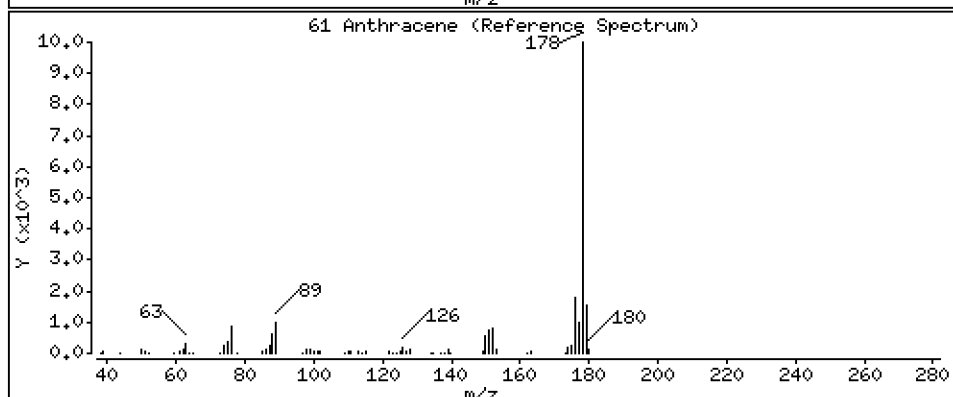
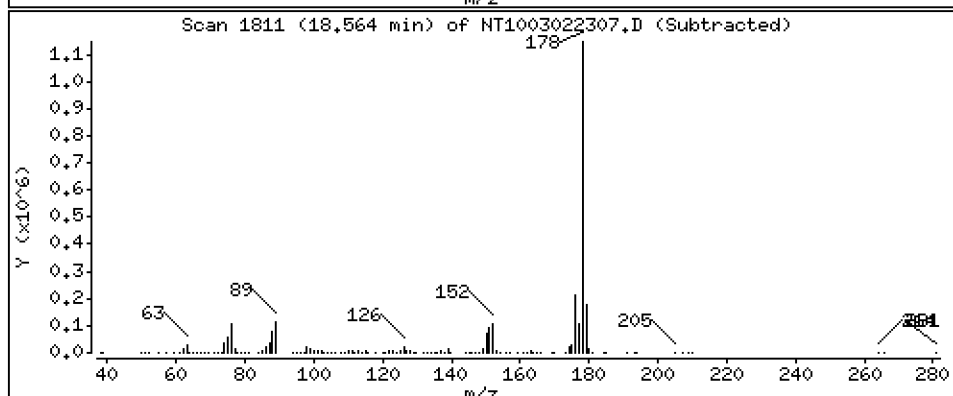
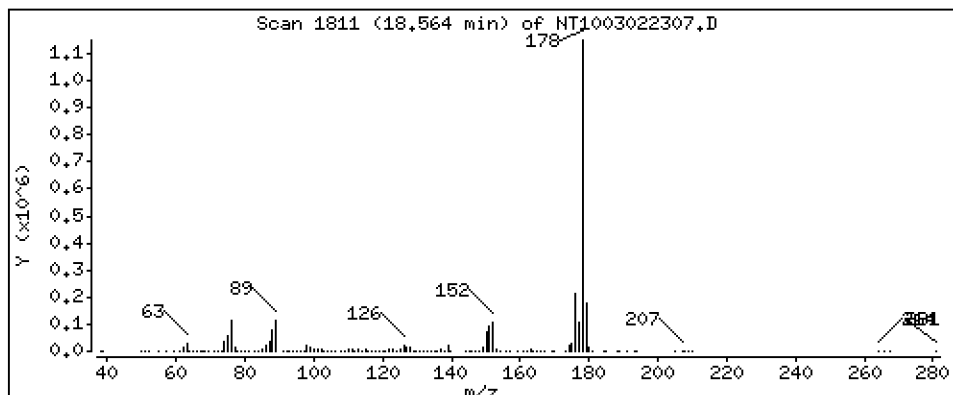
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,337 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

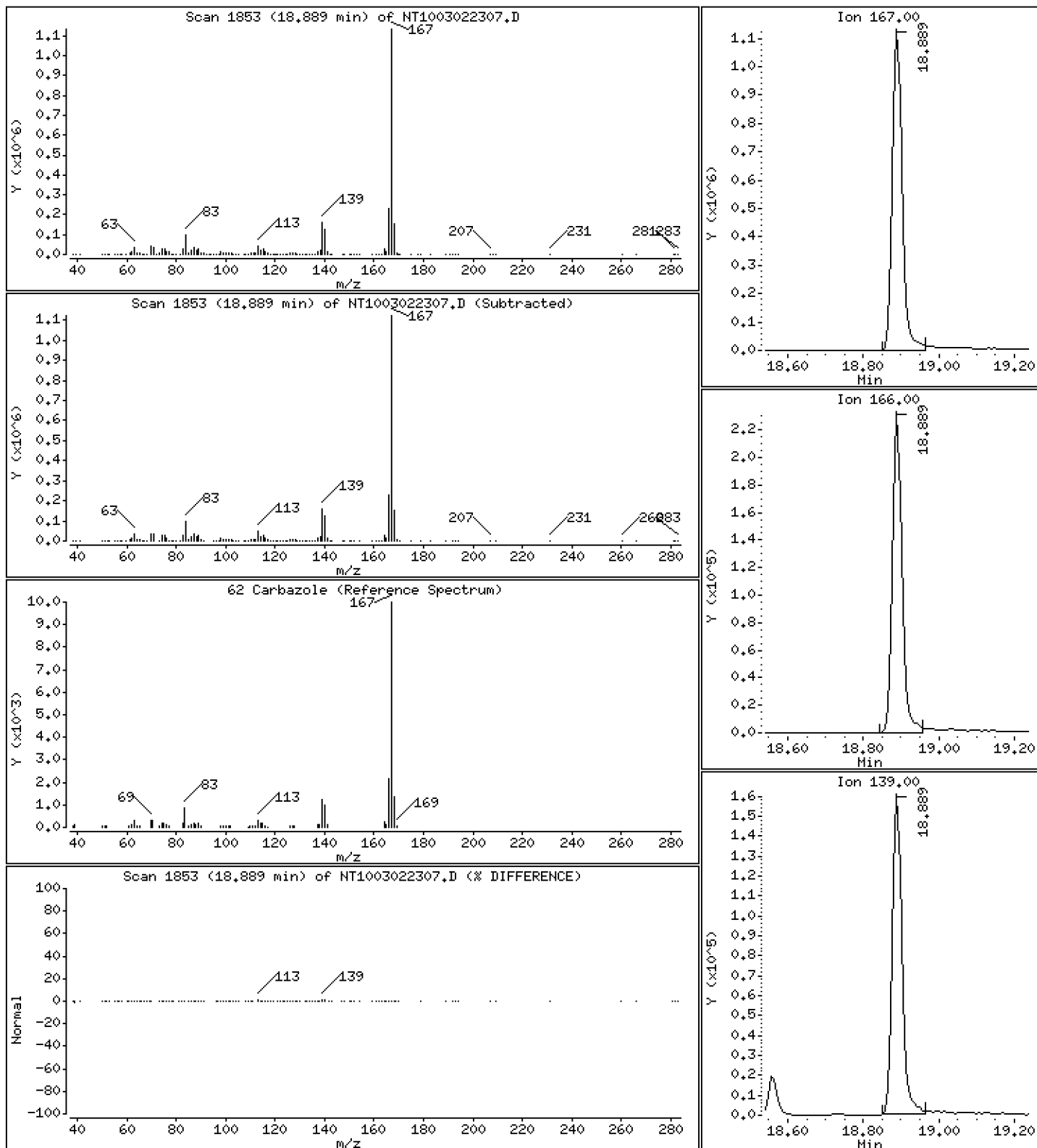
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 4,851 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

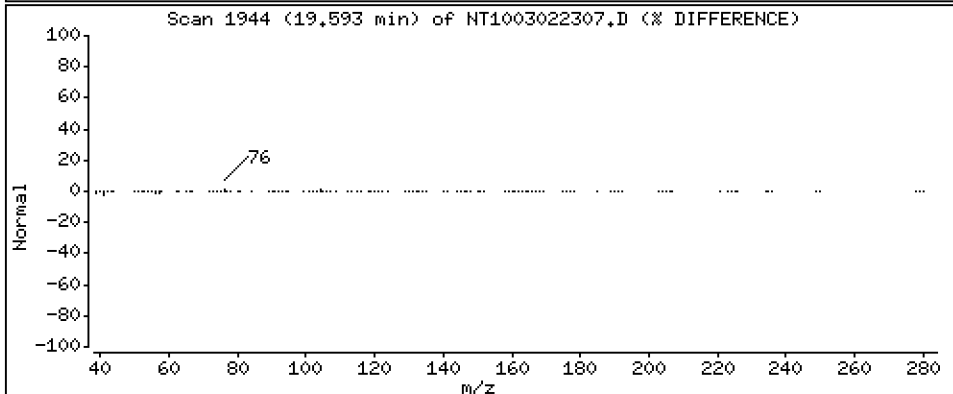
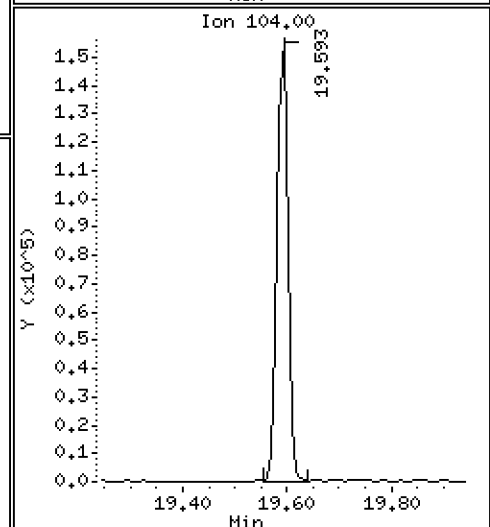
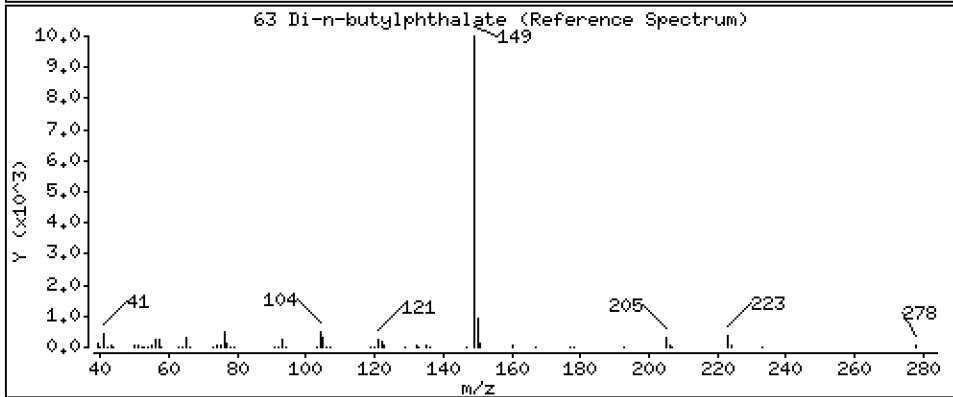
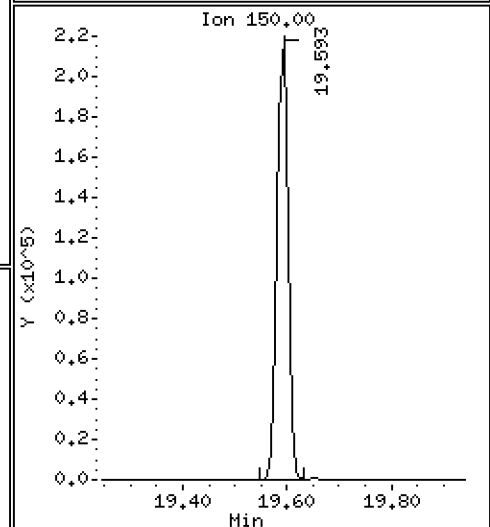
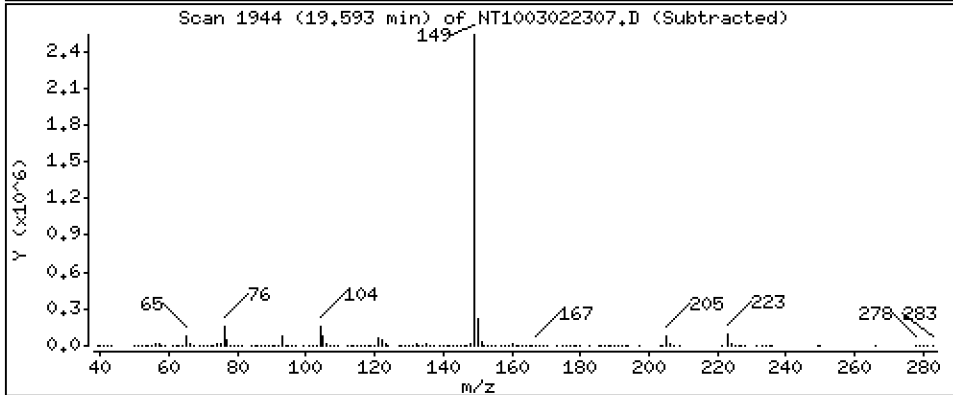
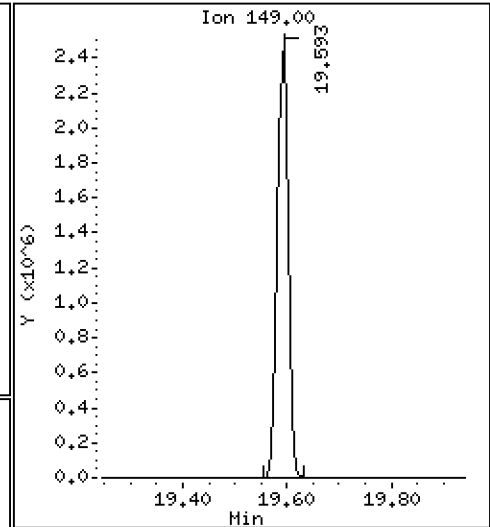
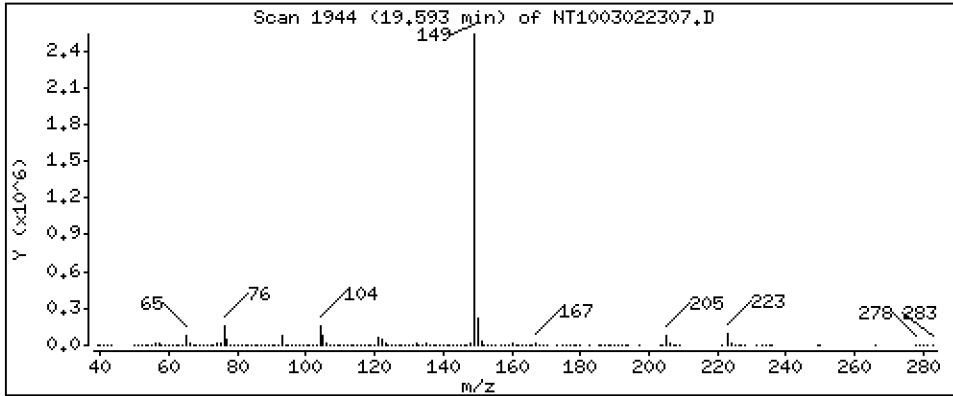
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,943 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

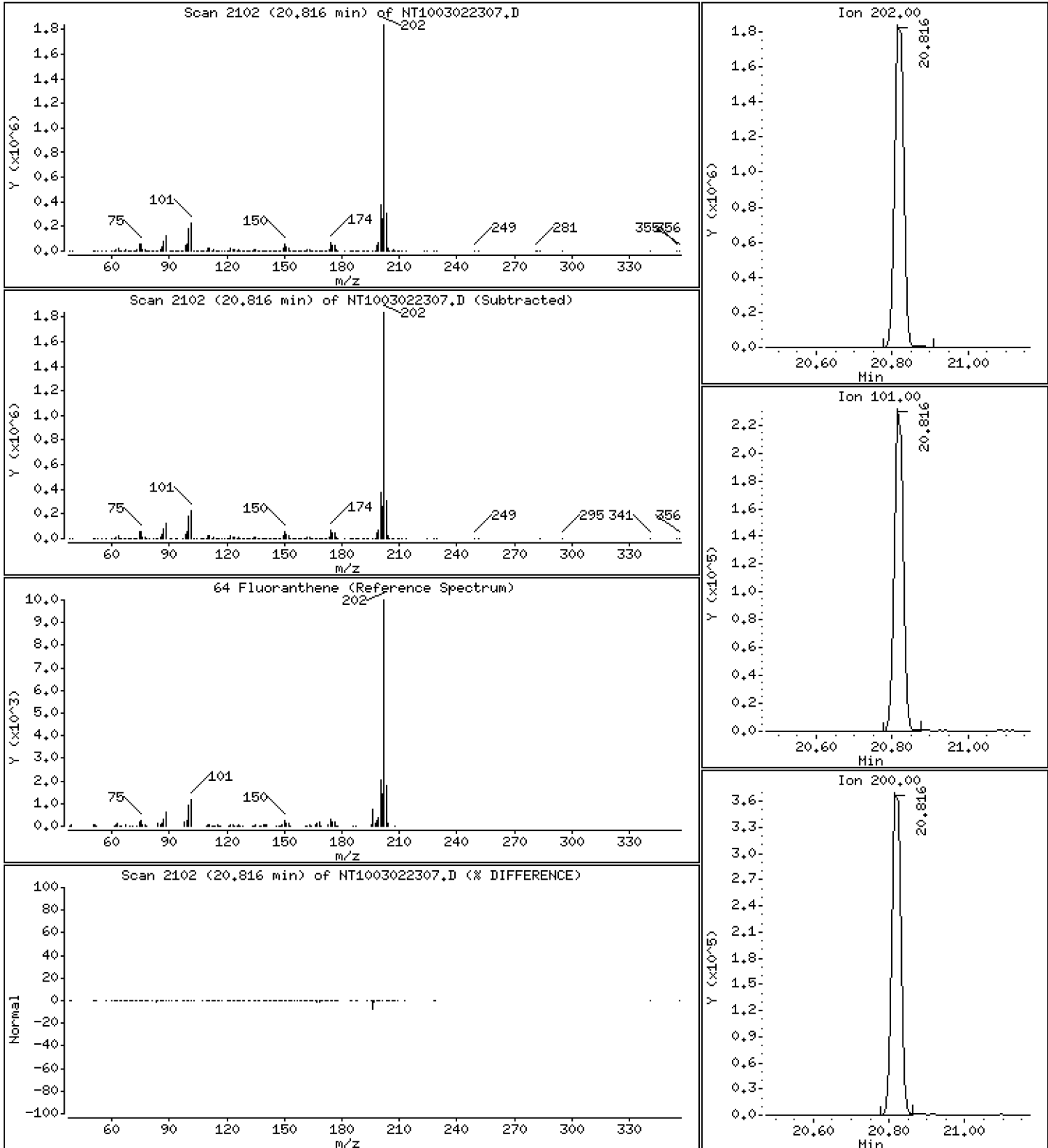
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,651 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

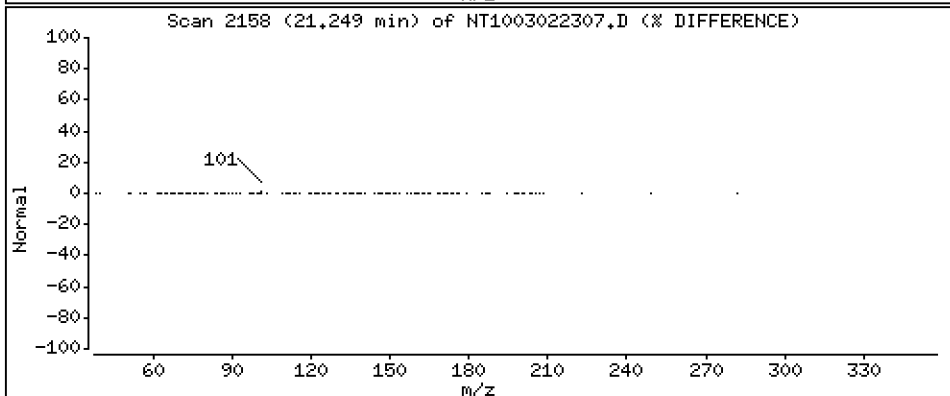
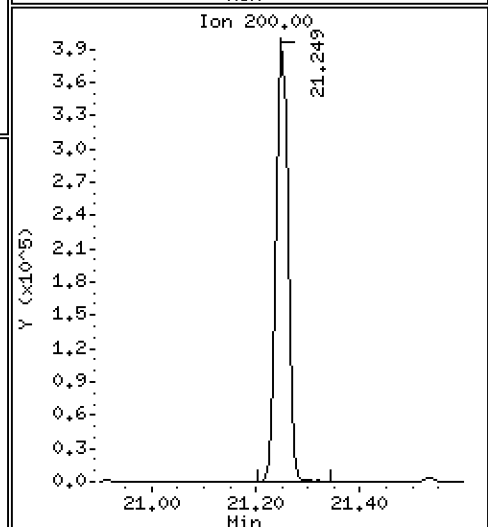
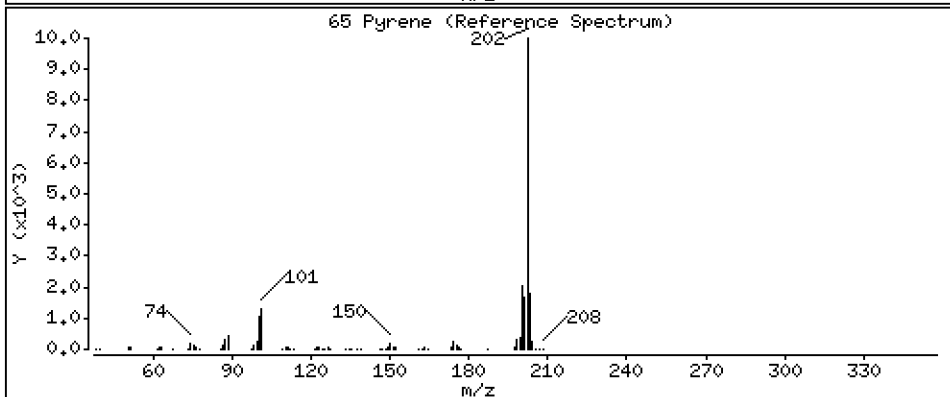
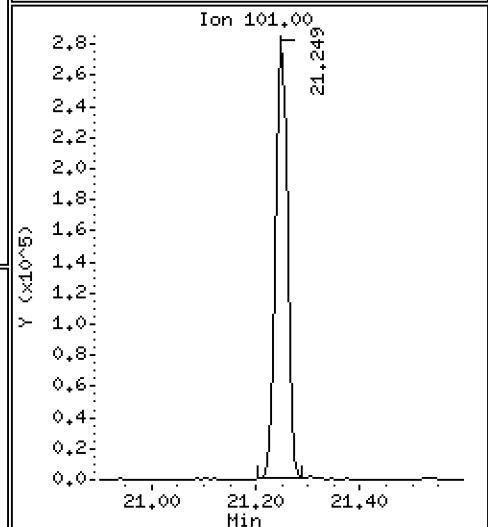
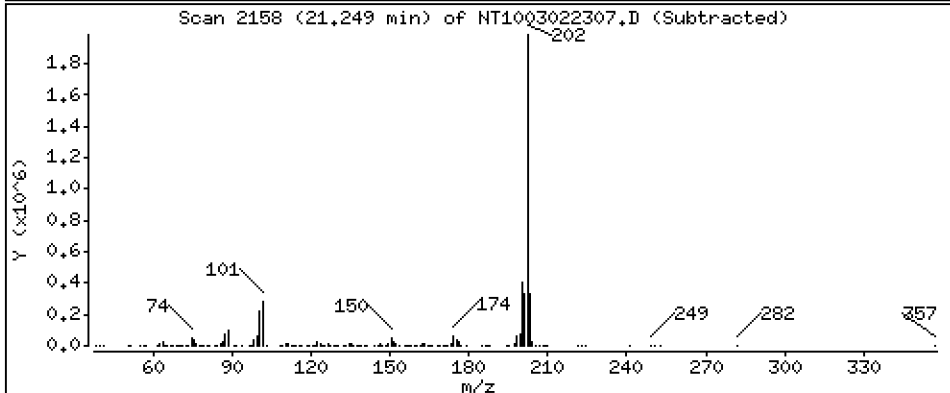
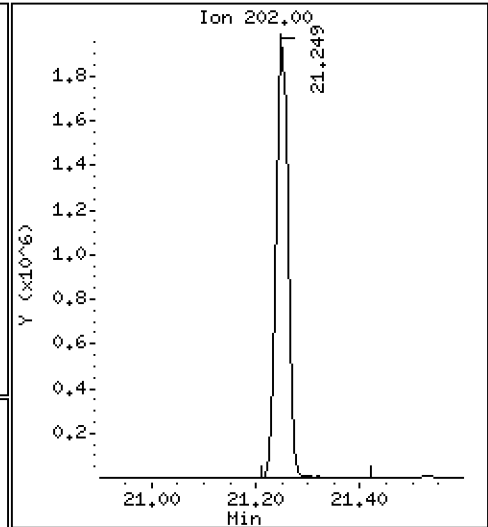
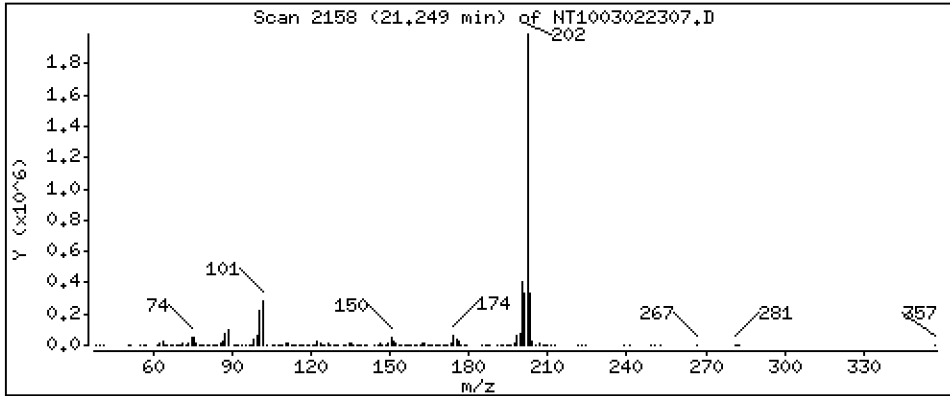
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 5,034 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

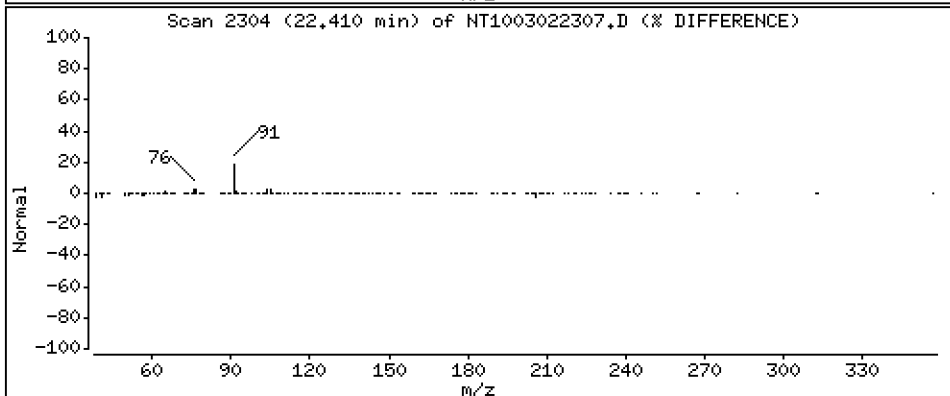
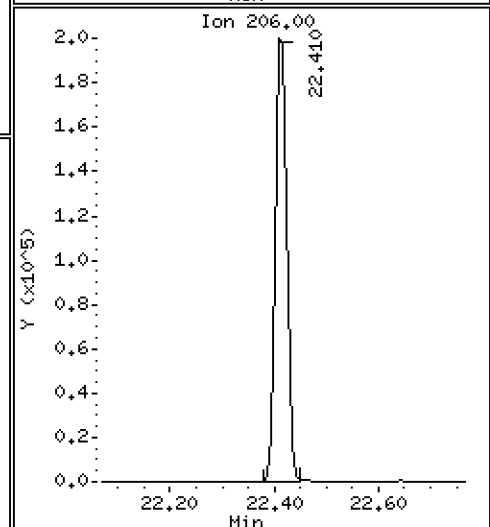
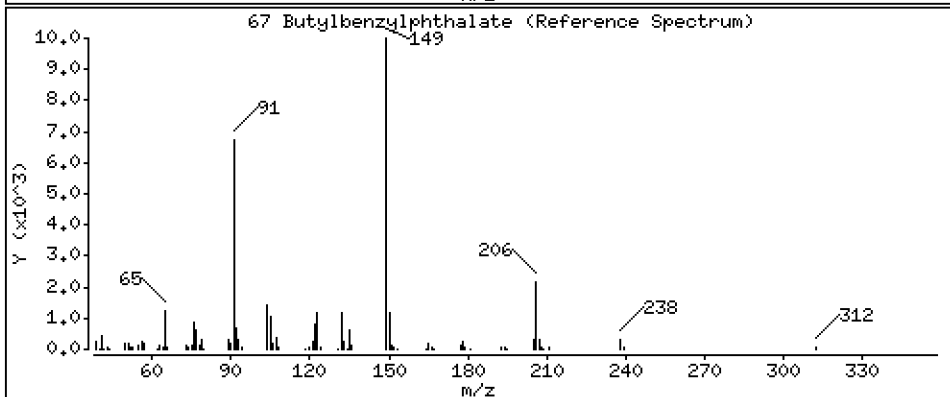
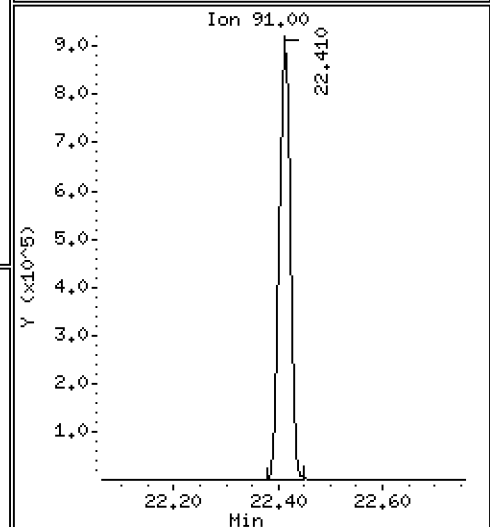
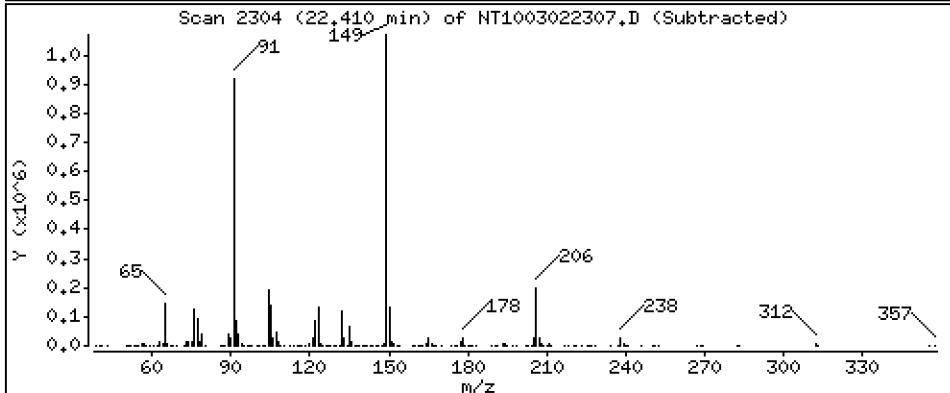
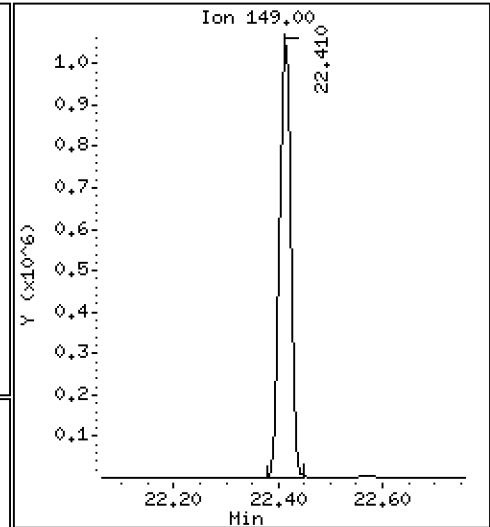
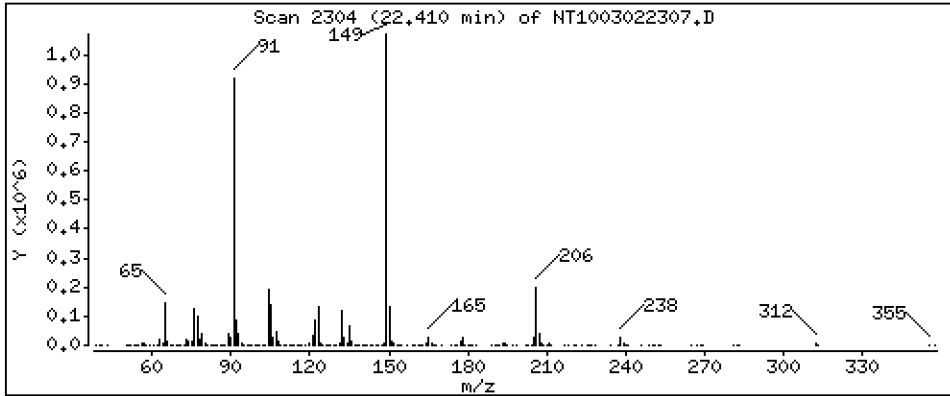
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,521 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

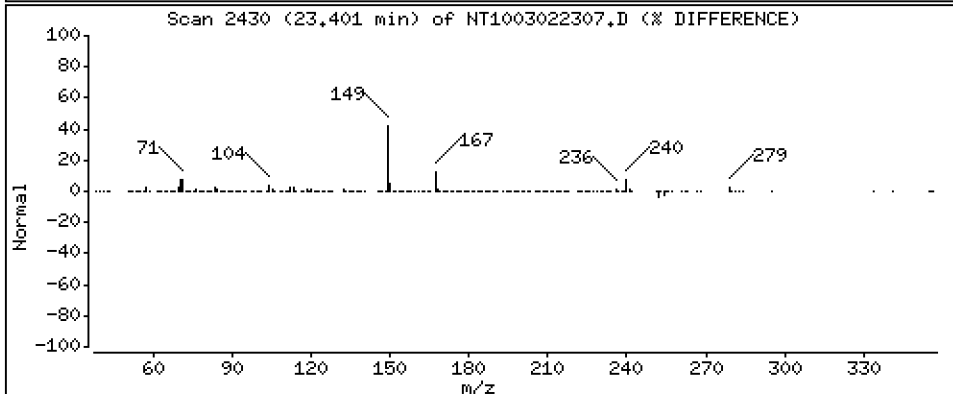
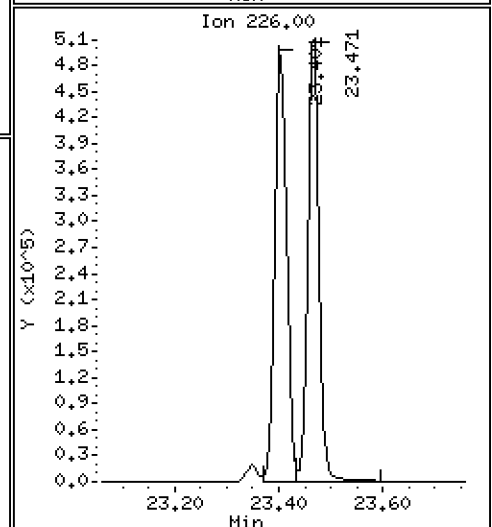
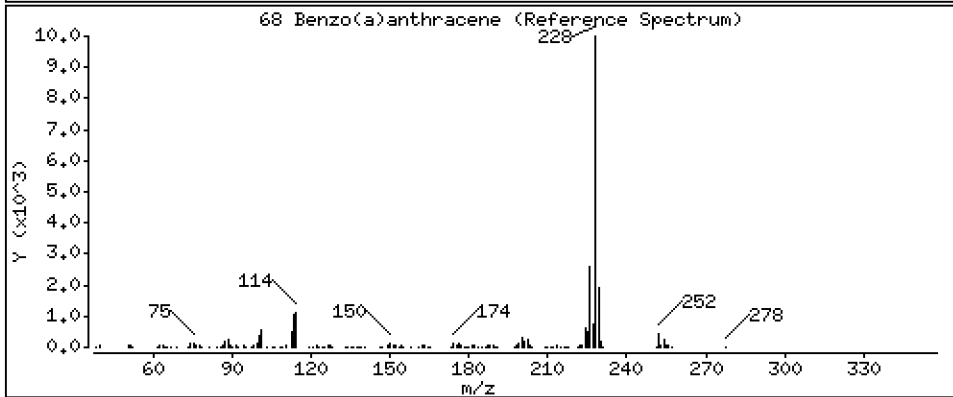
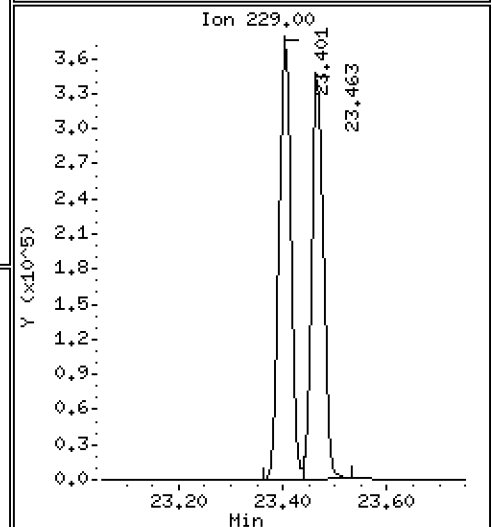
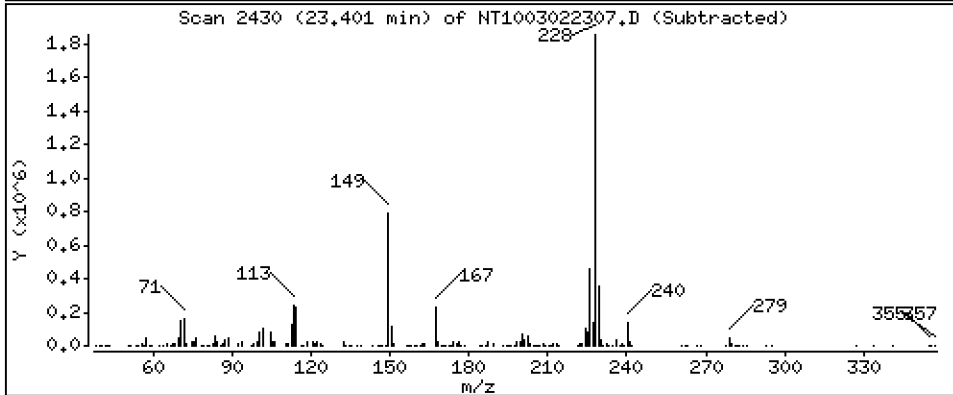
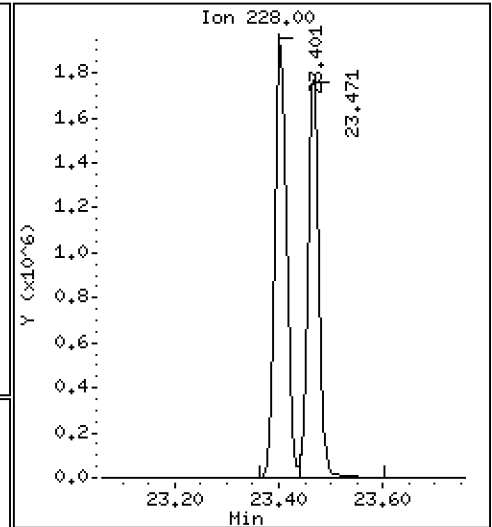
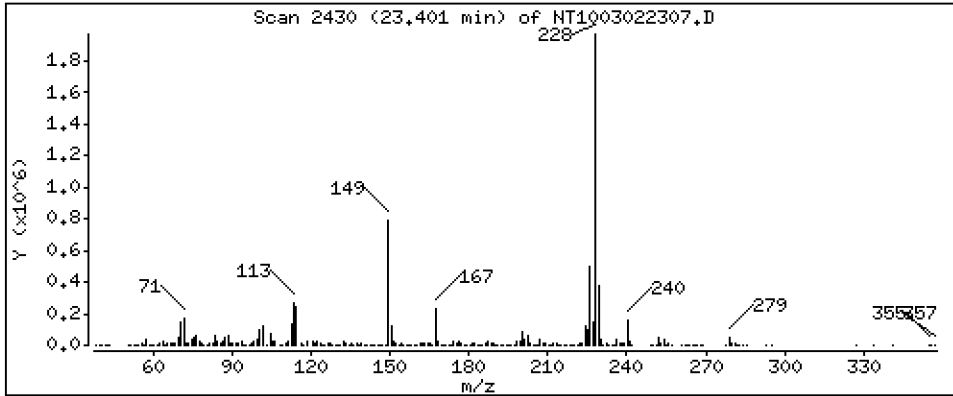
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,661 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

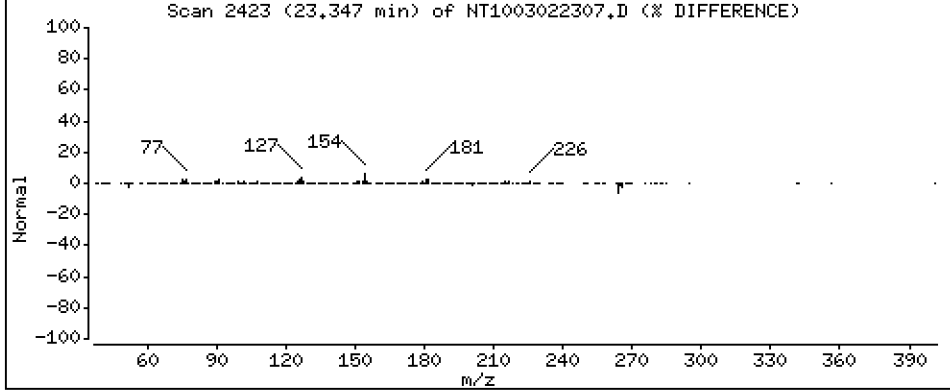
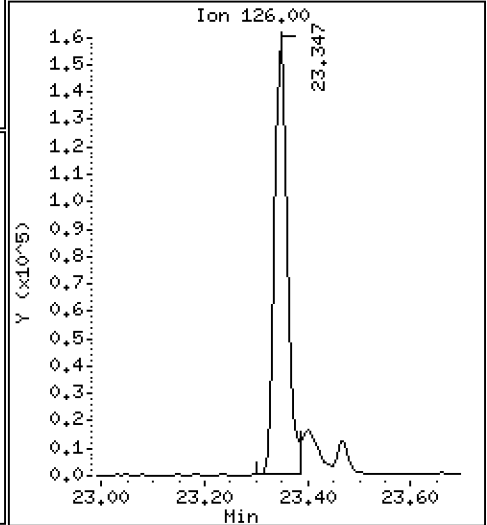
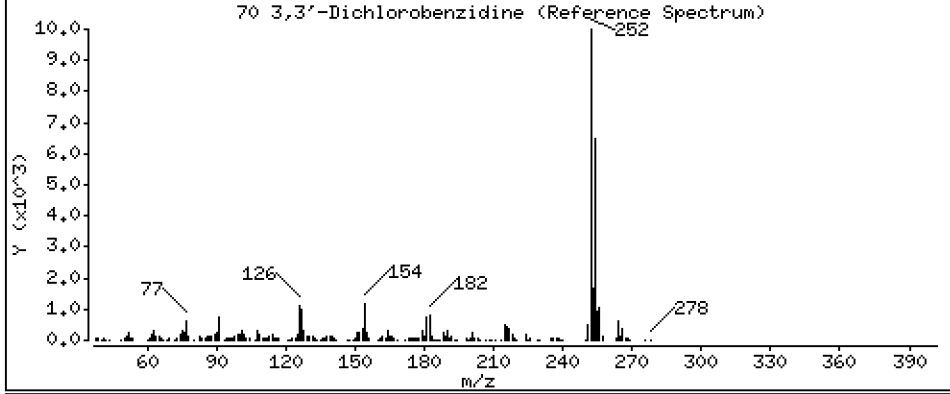
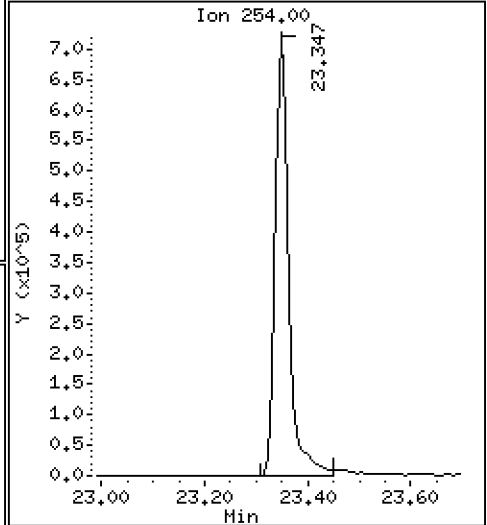
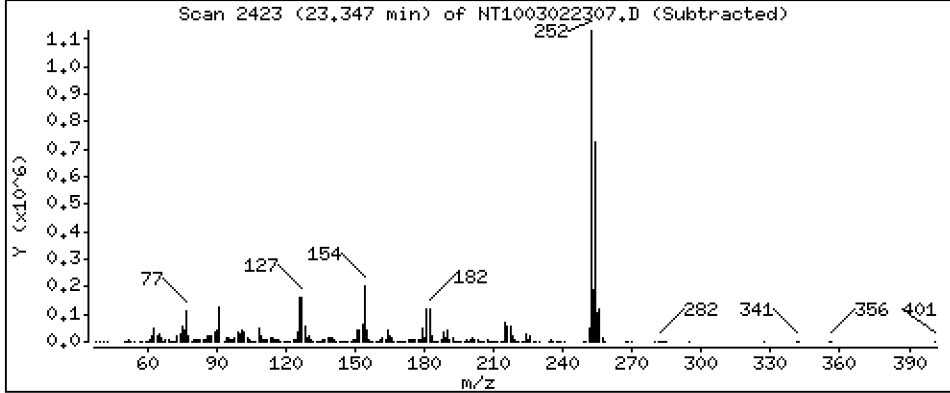
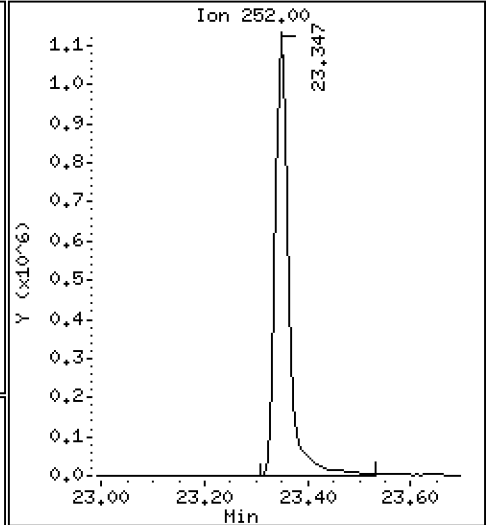
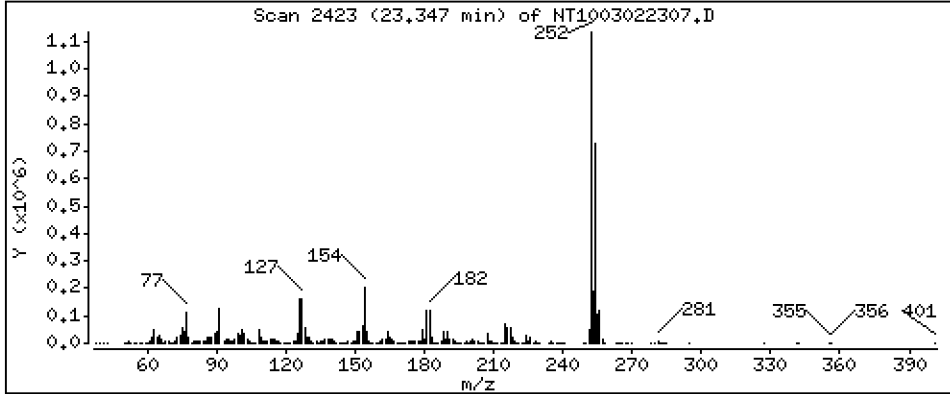
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 6,903 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

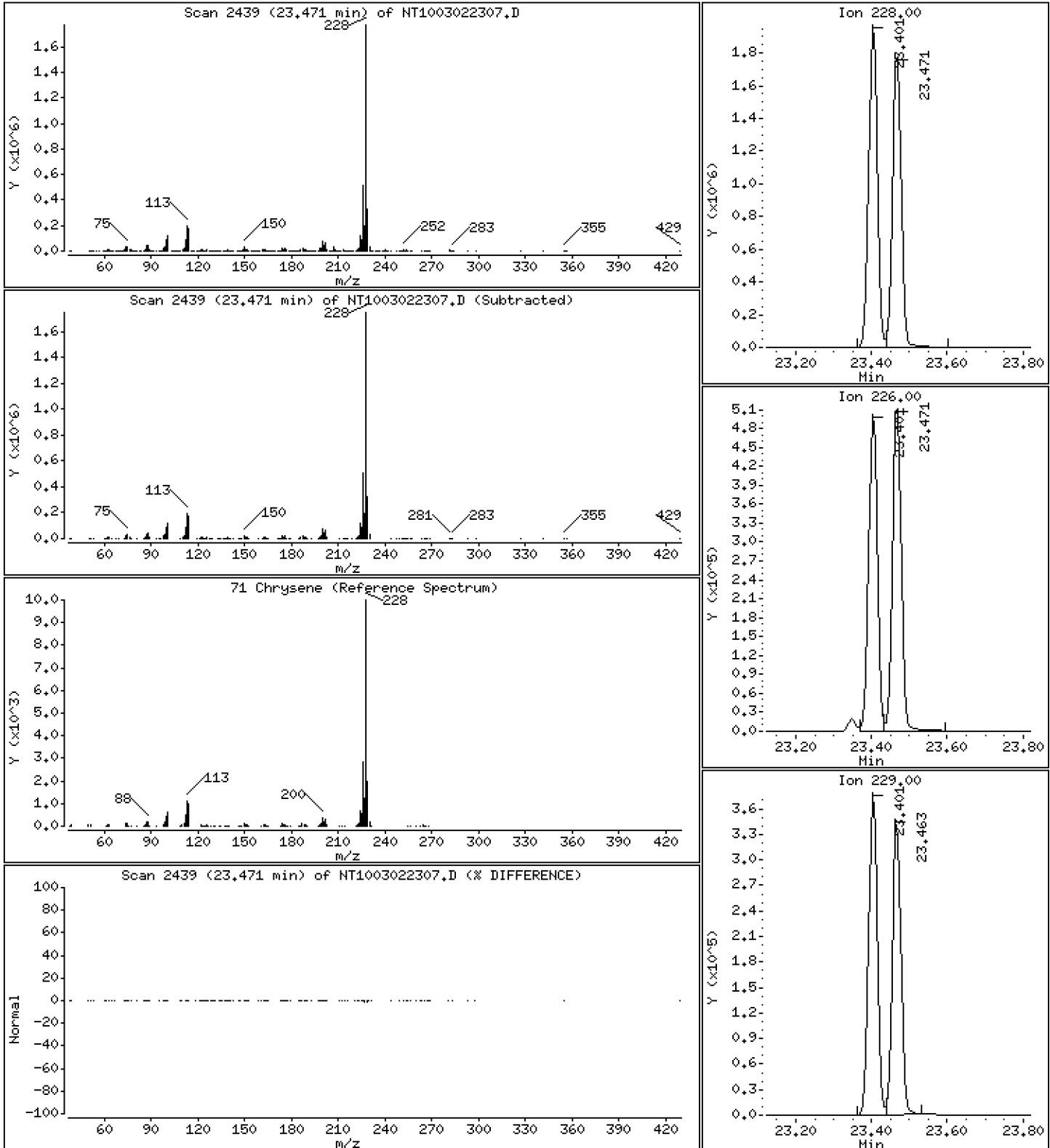
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 5,273 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

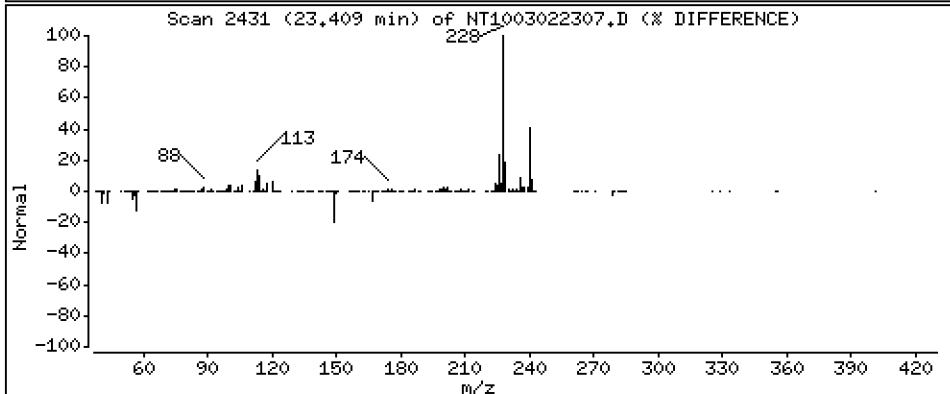
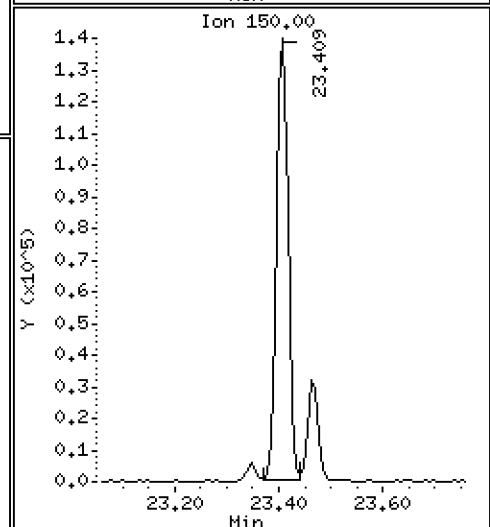
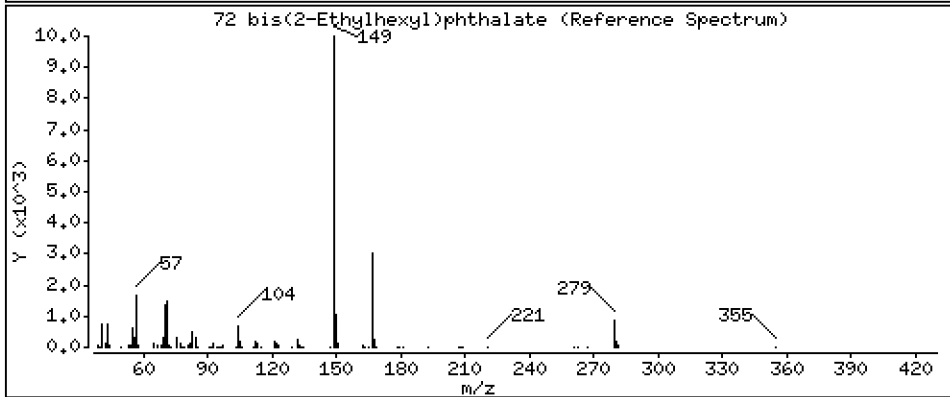
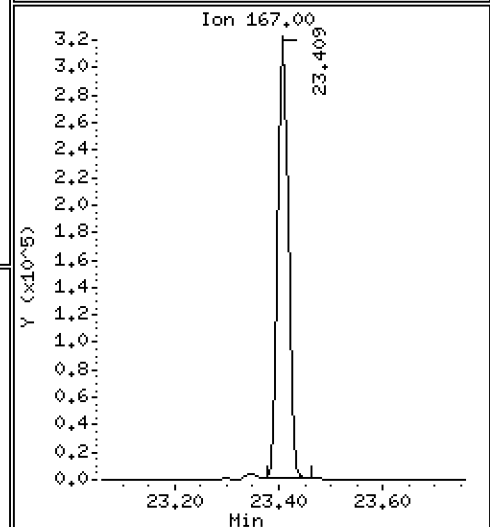
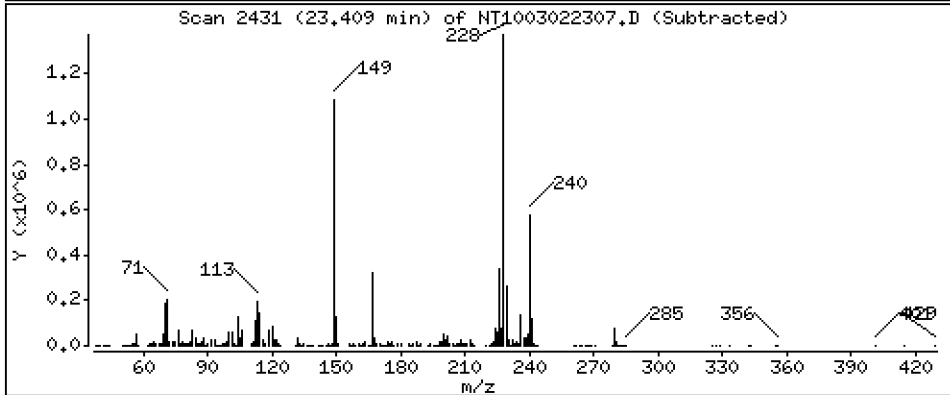
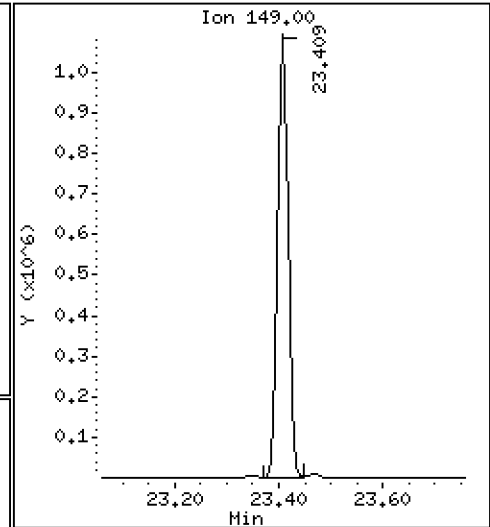
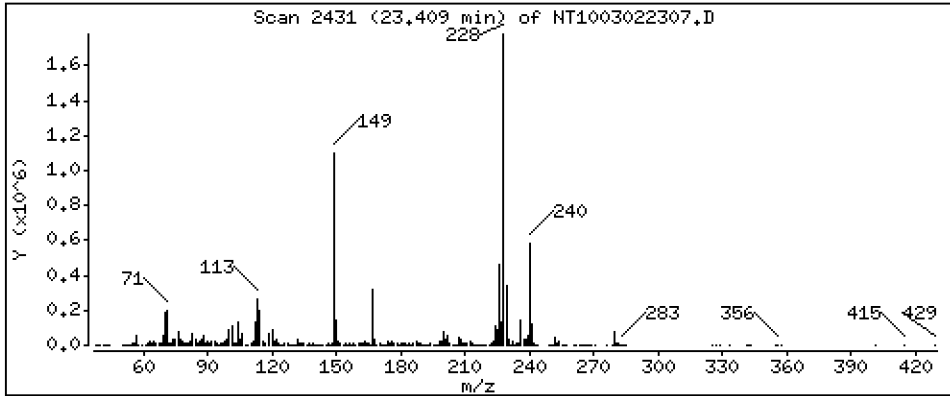
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 3,152 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

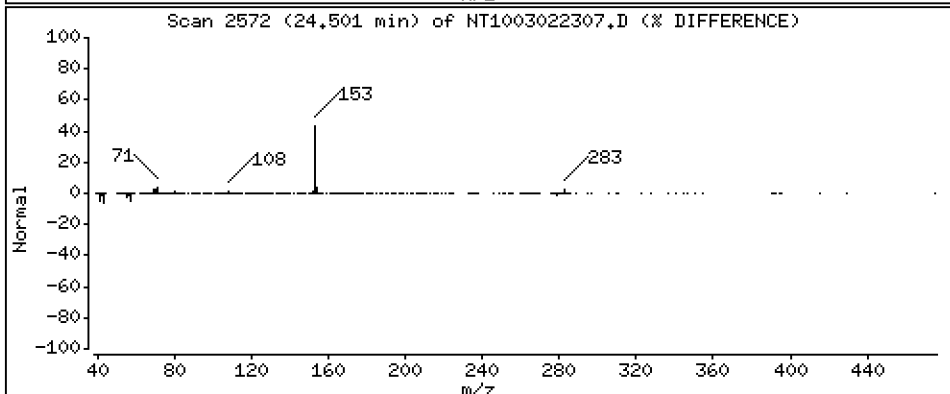
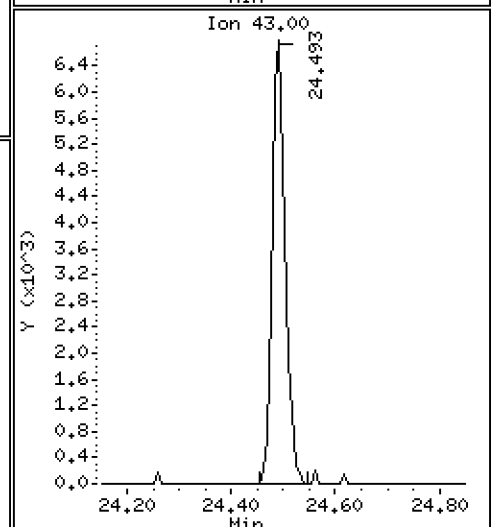
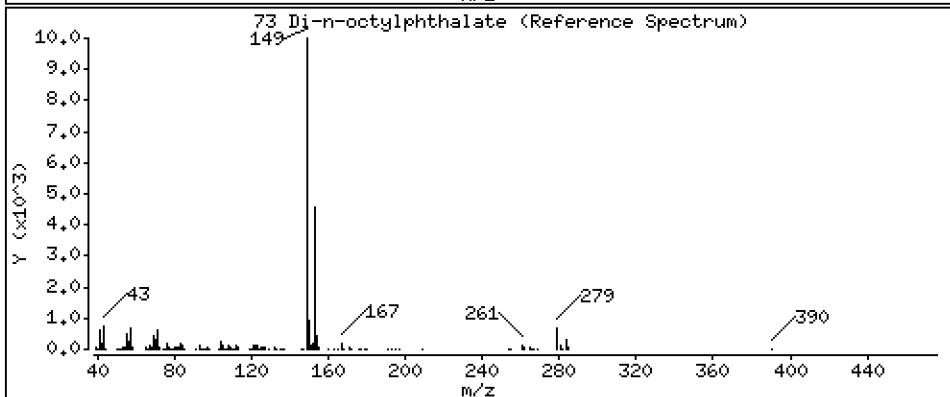
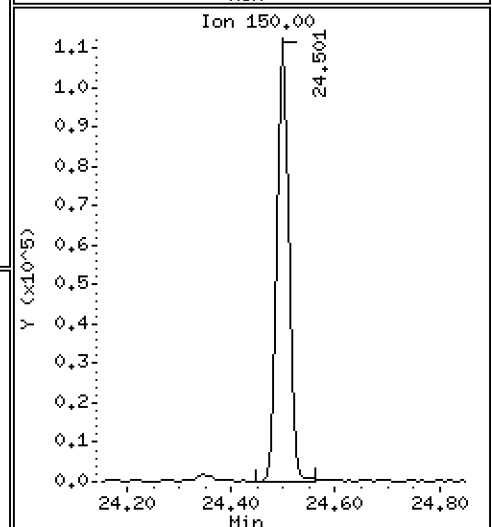
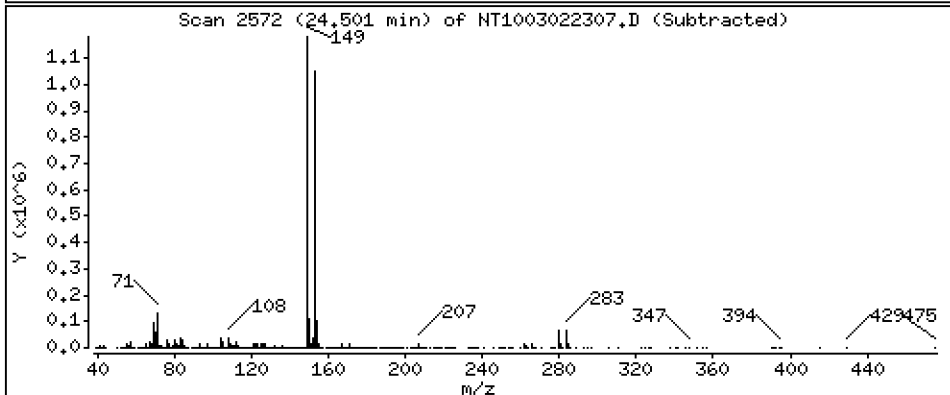
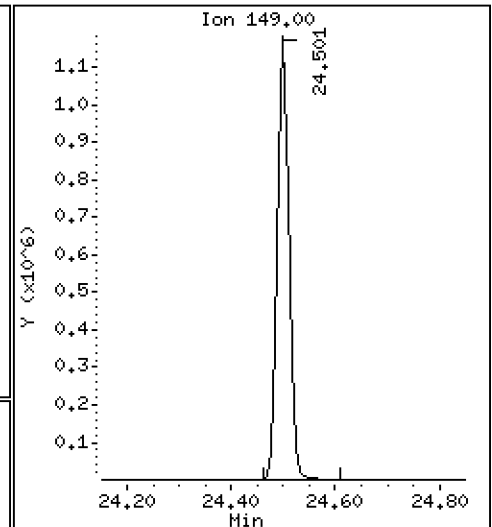
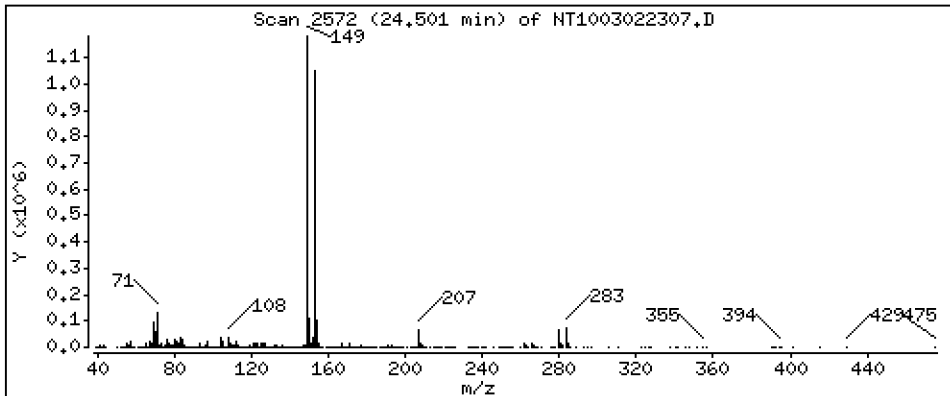
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 2,451 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

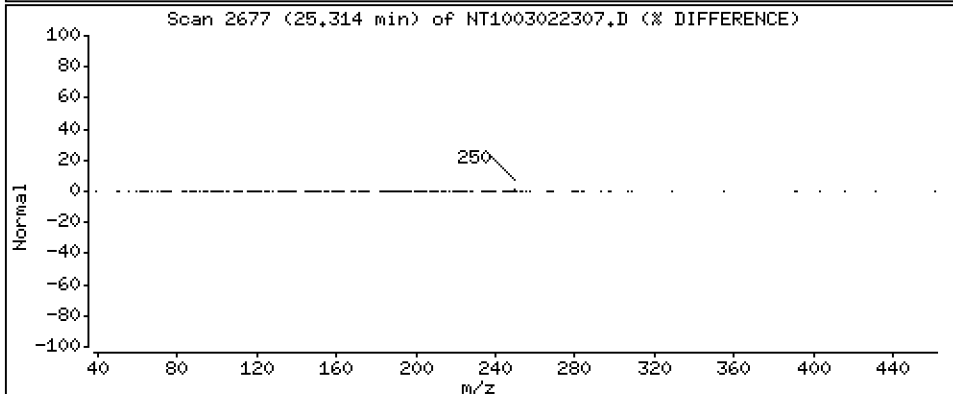
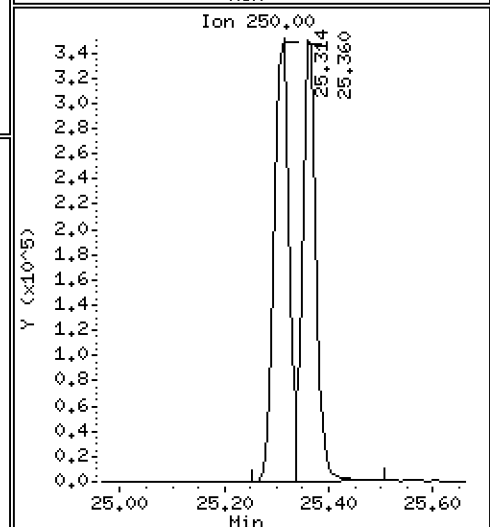
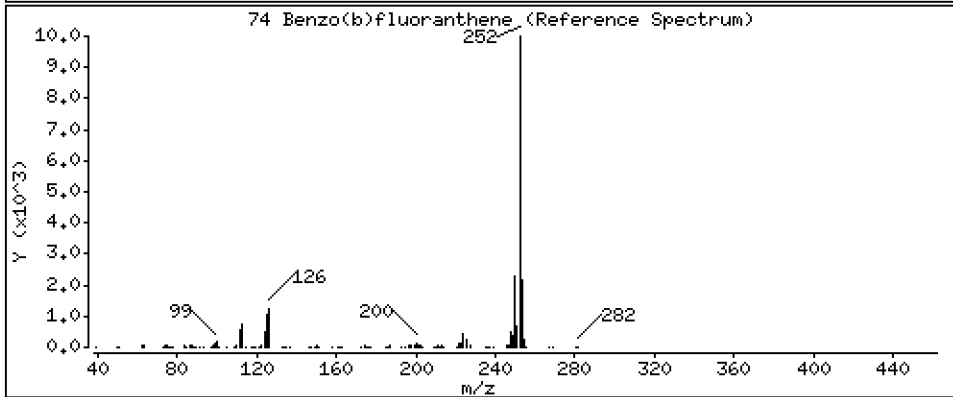
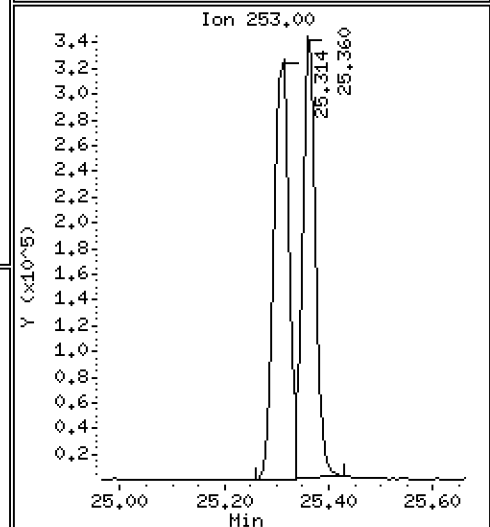
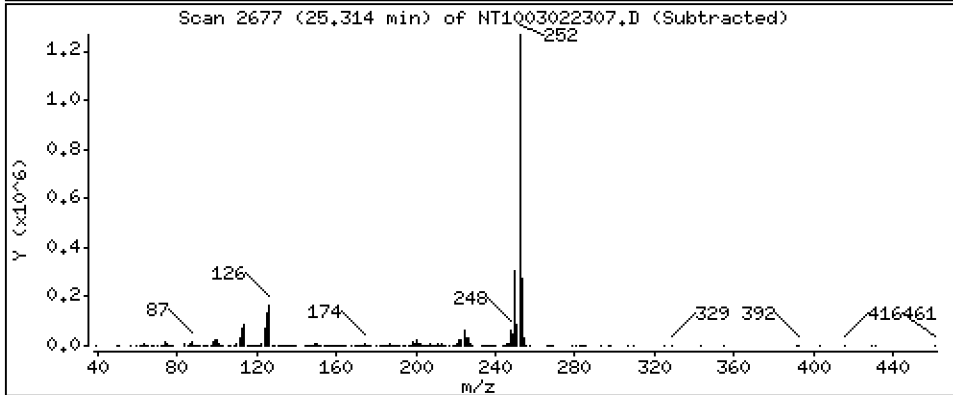
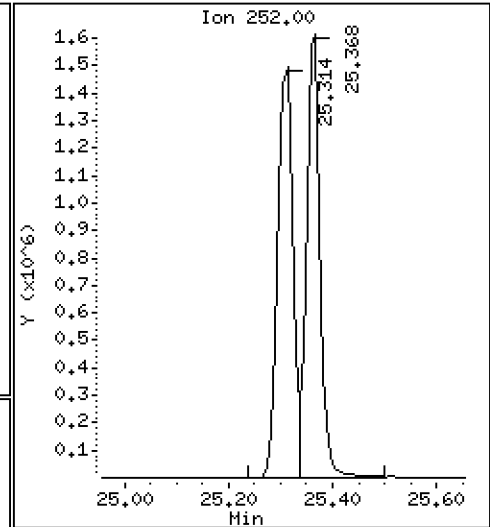
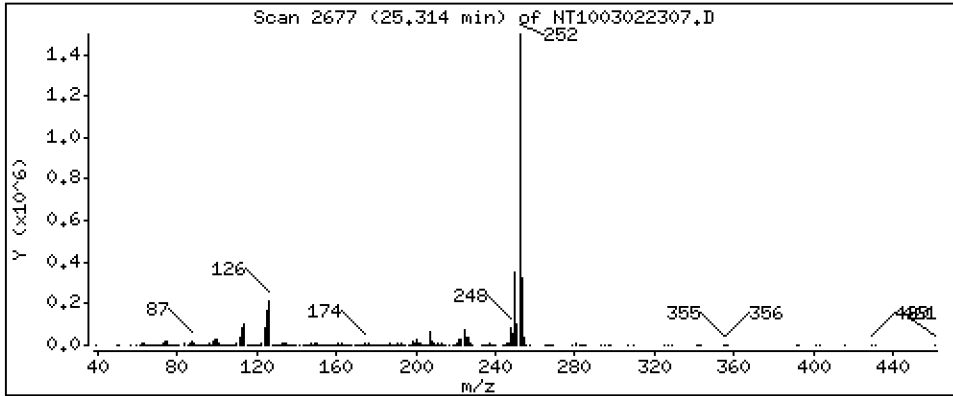
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,705 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

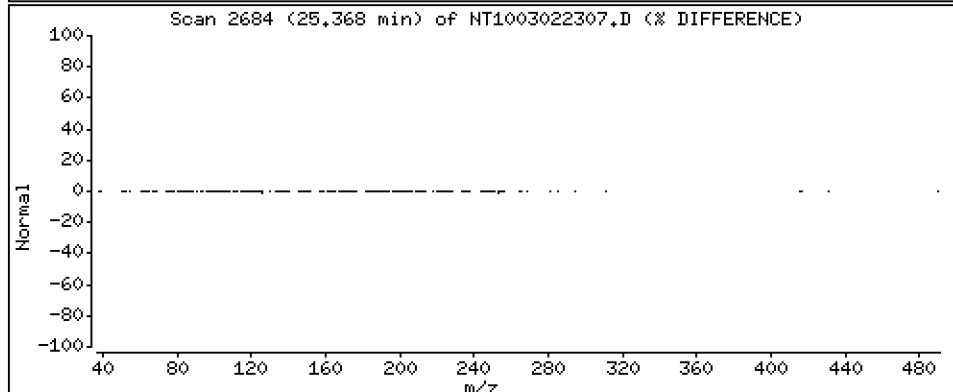
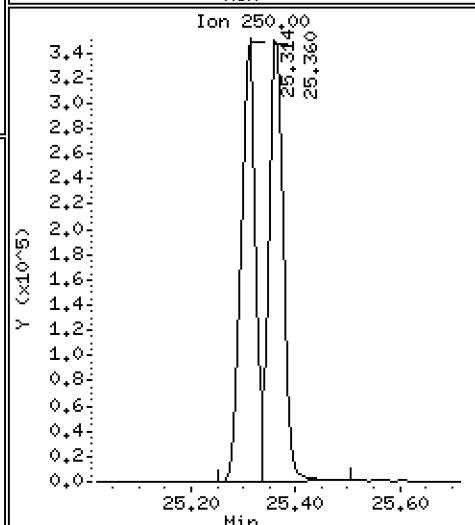
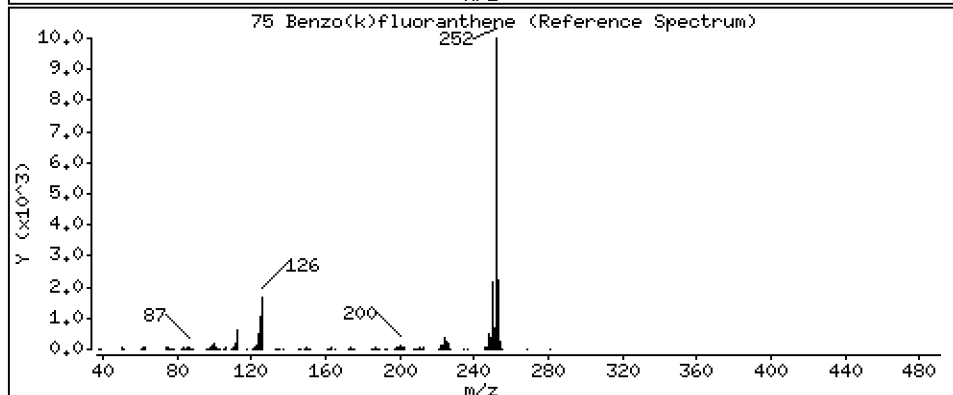
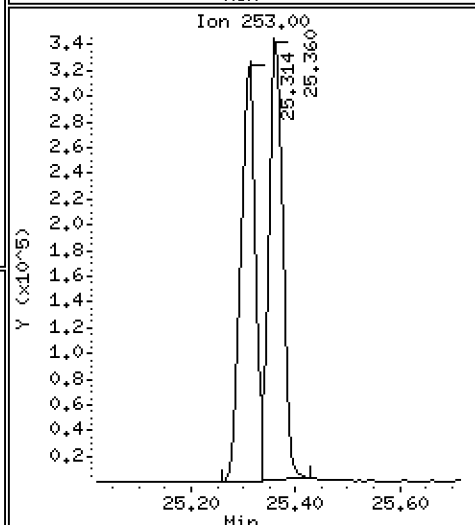
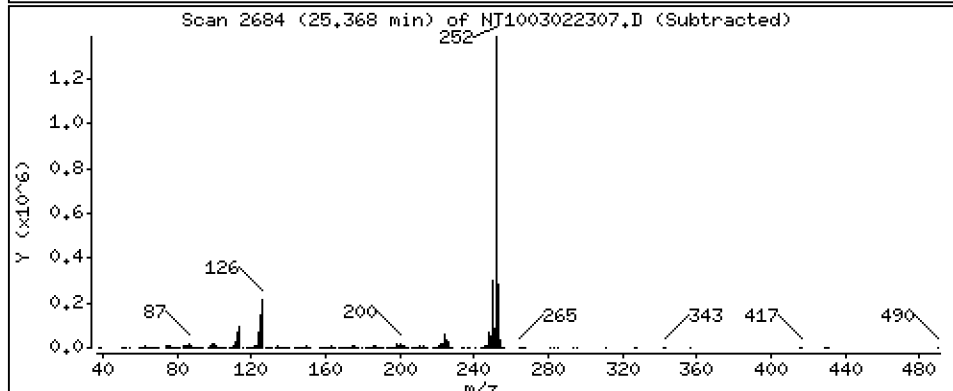
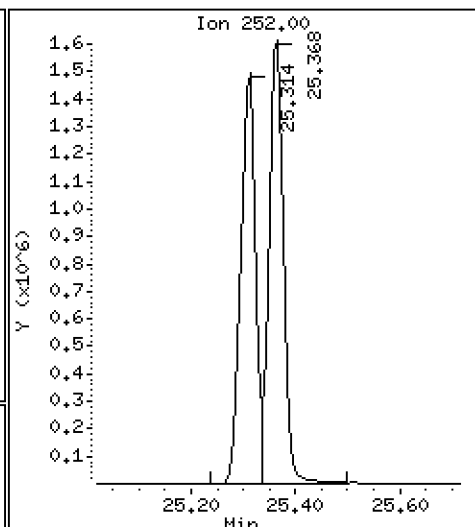
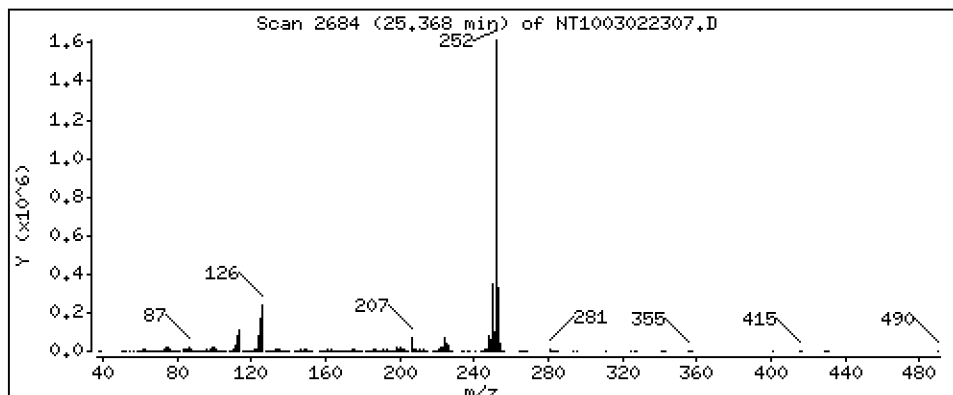
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,942 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

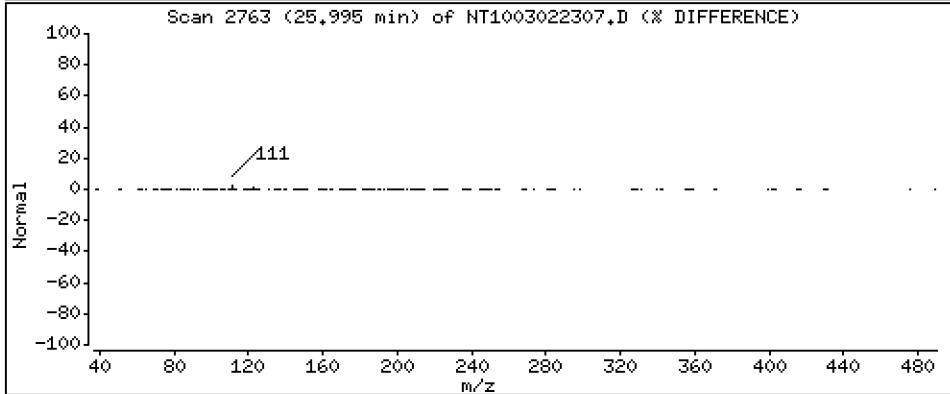
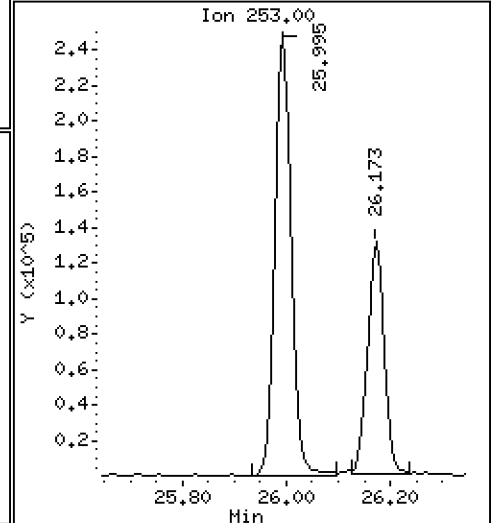
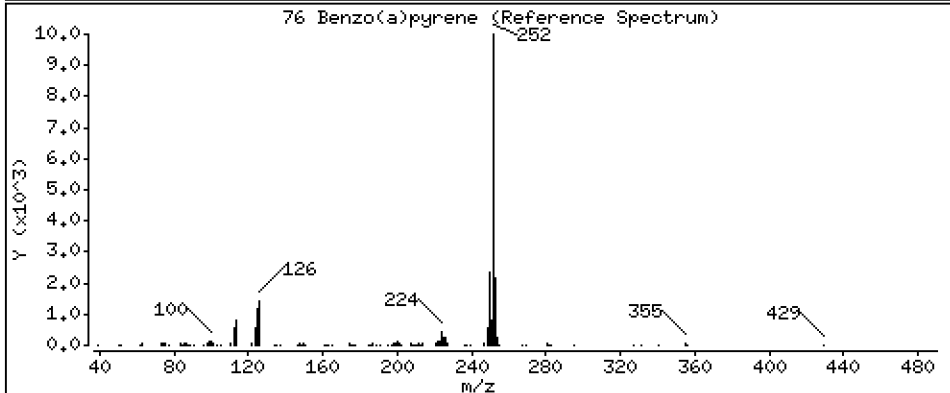
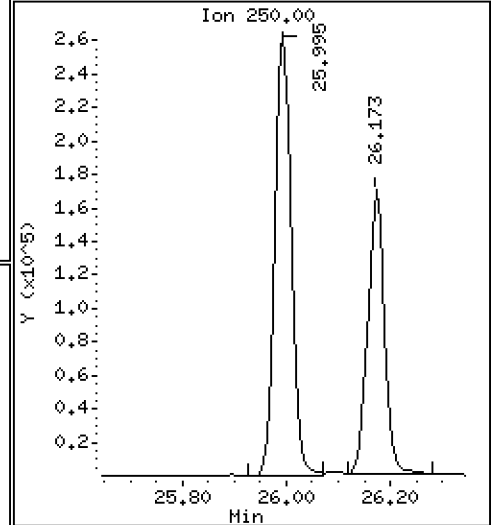
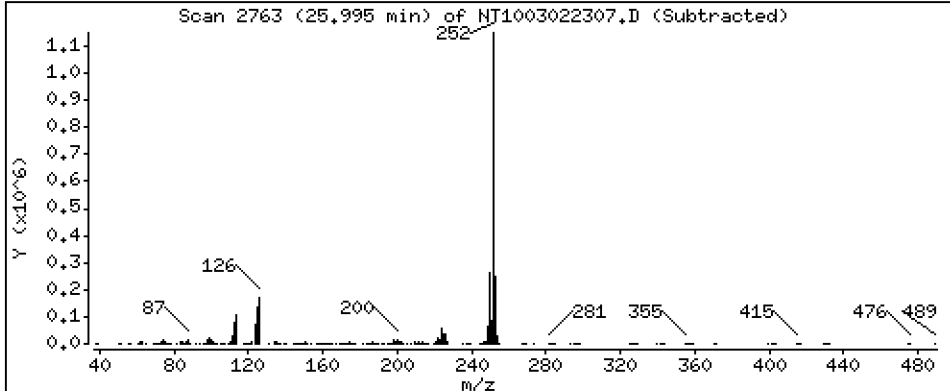
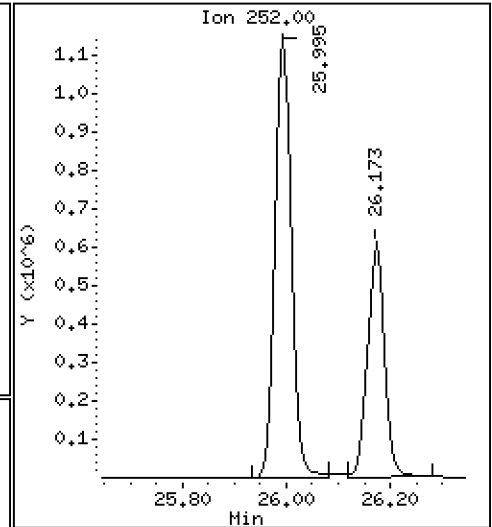
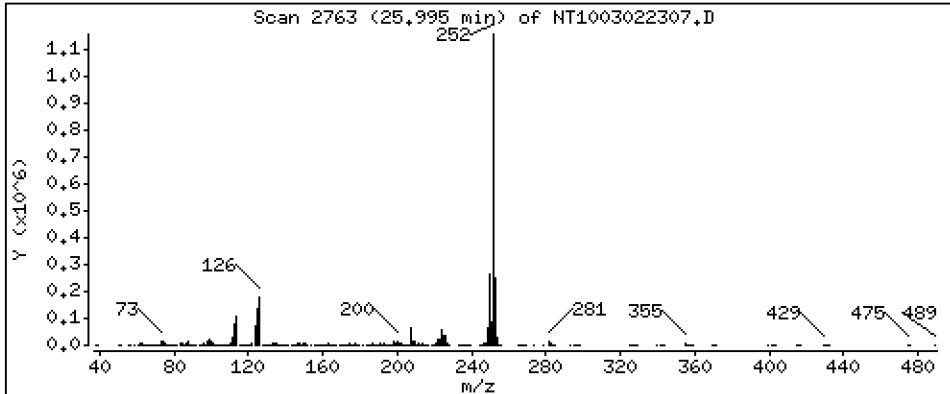
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,300 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

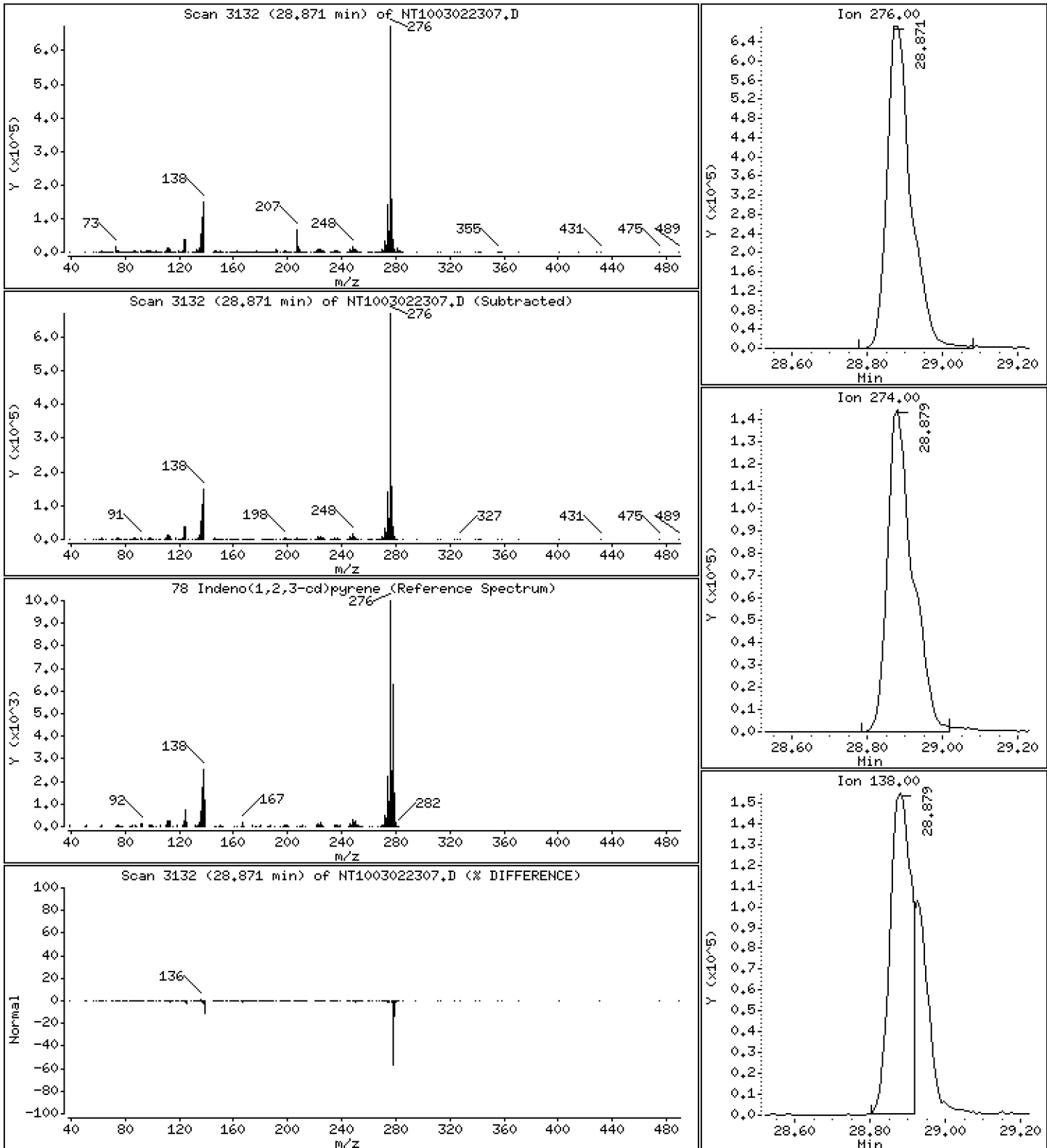
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,535 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

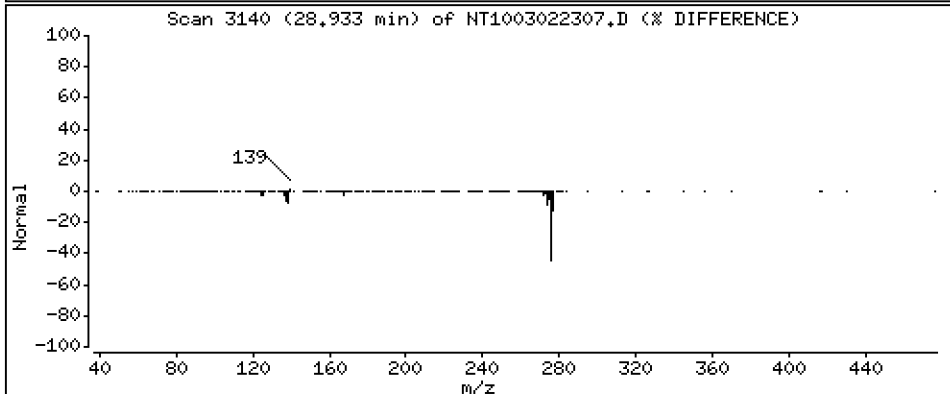
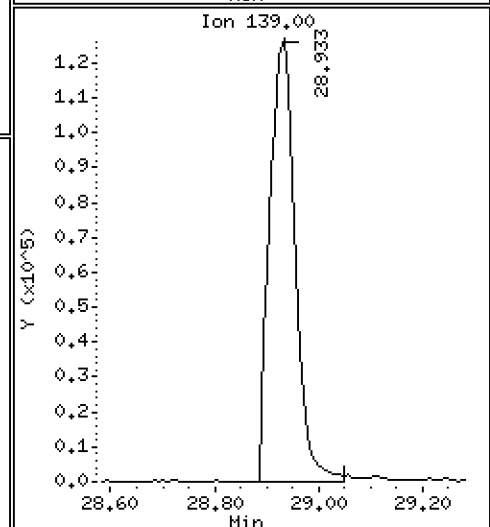
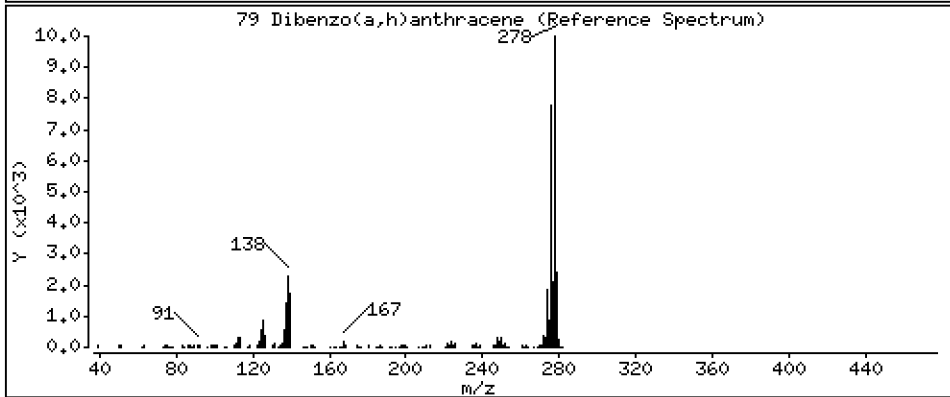
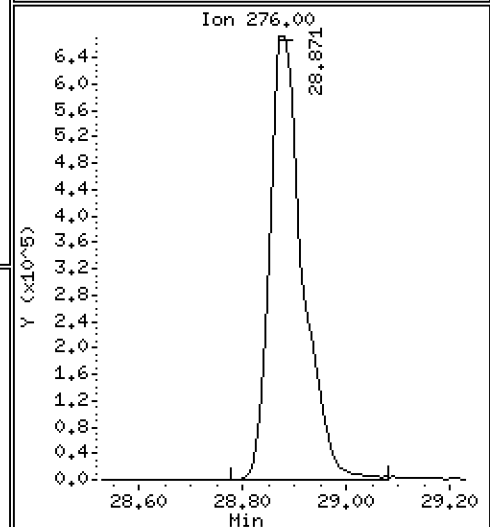
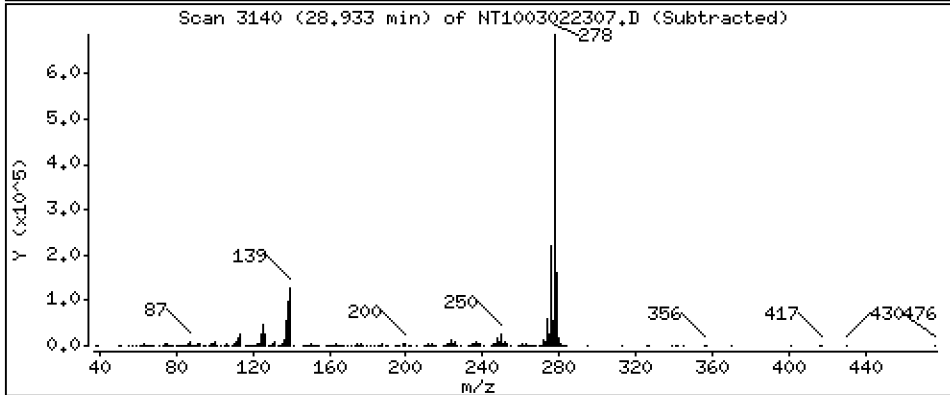
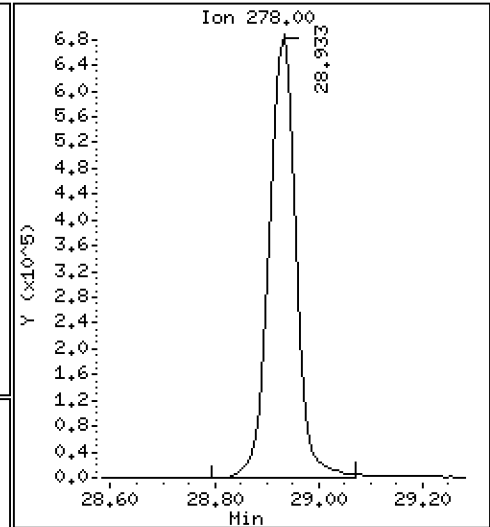
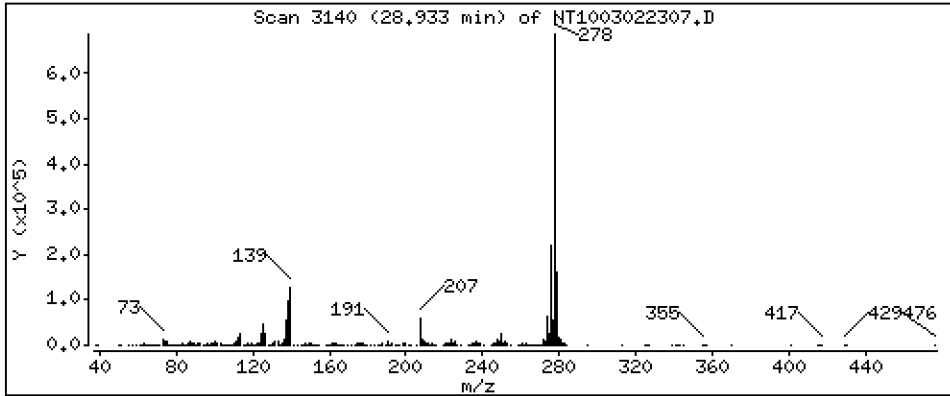
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,864 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

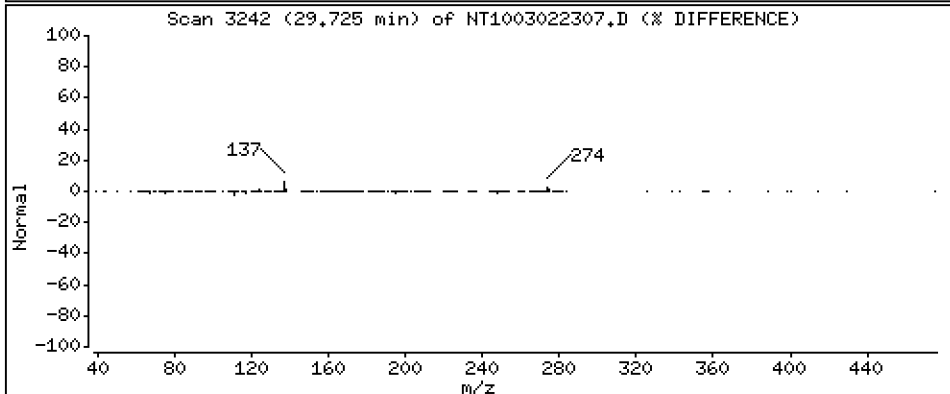
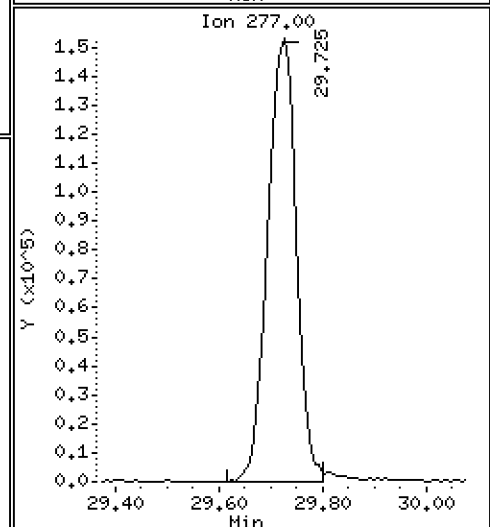
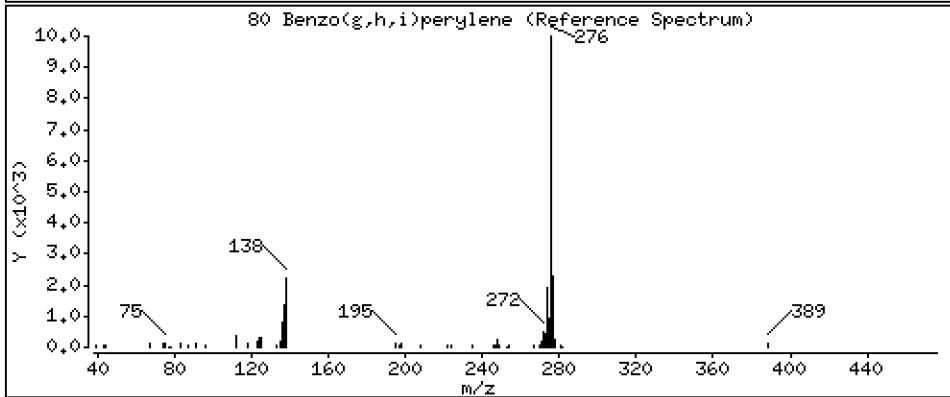
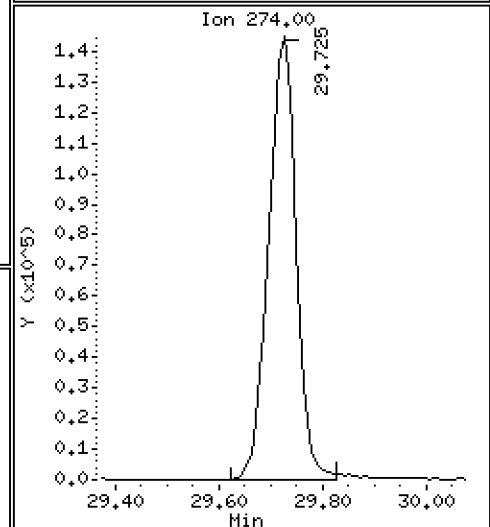
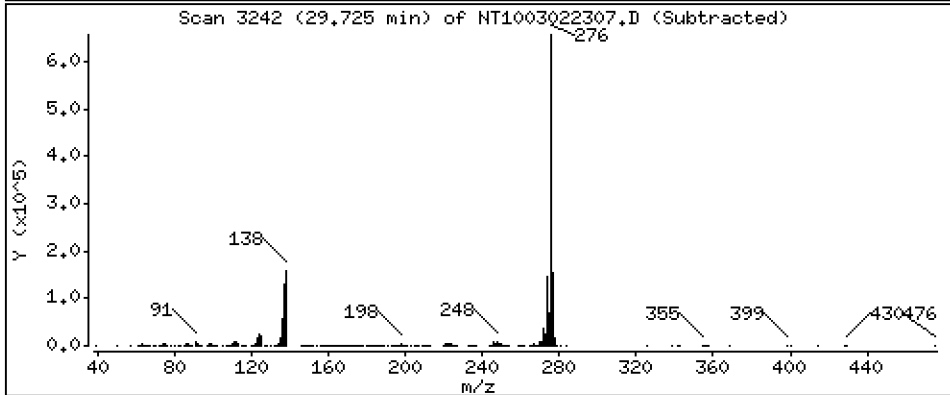
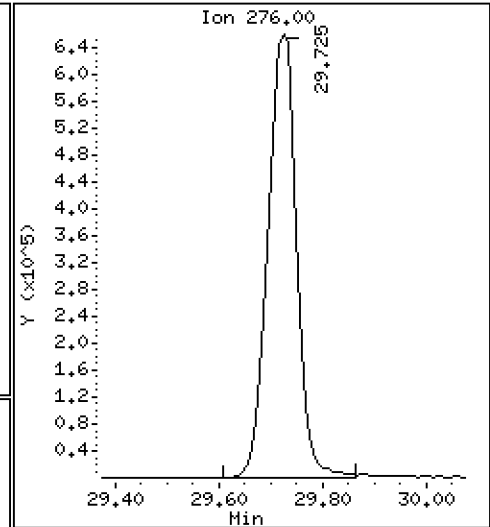
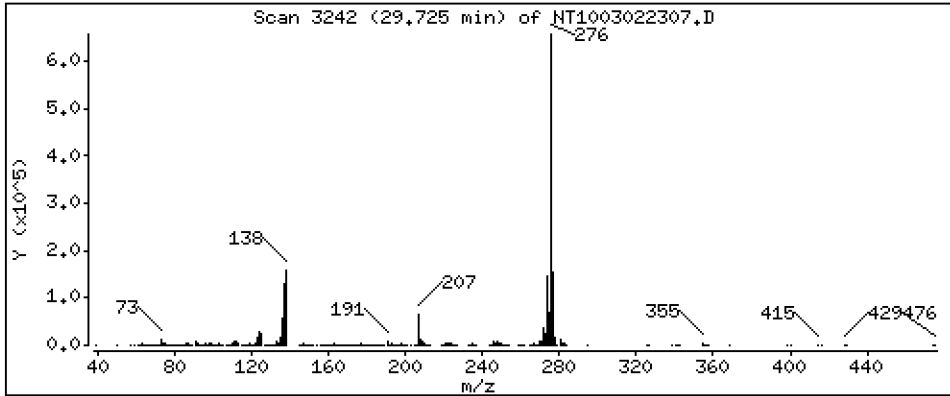
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,842 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

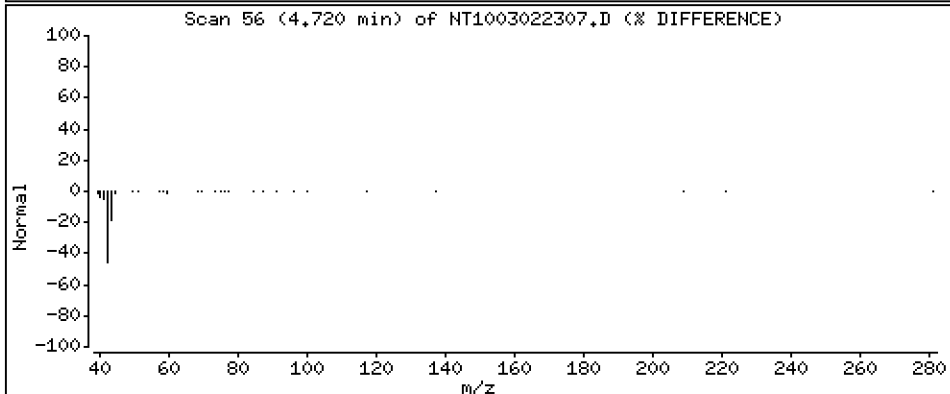
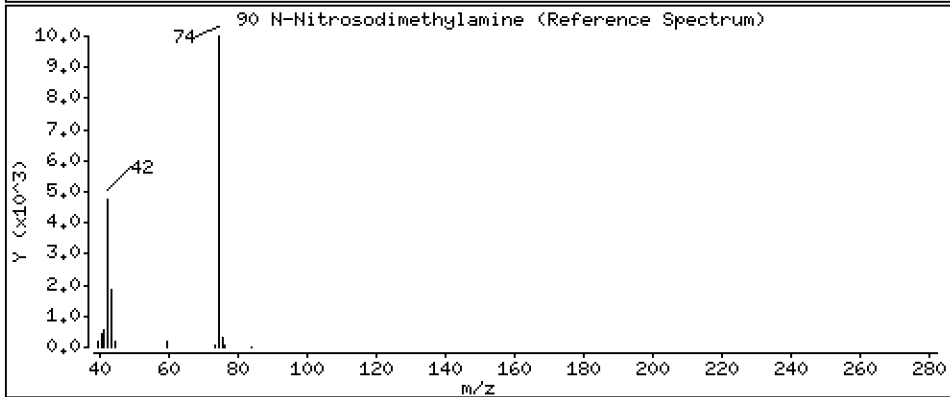
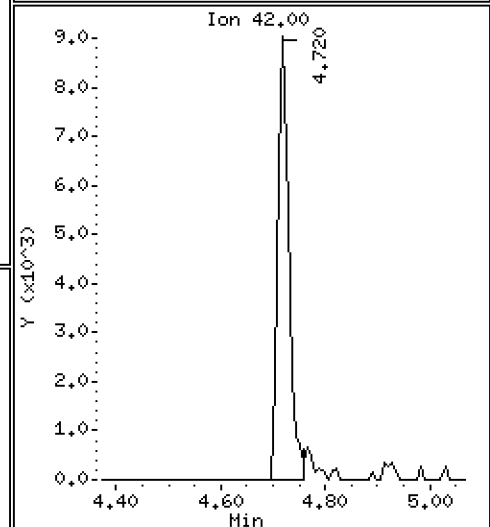
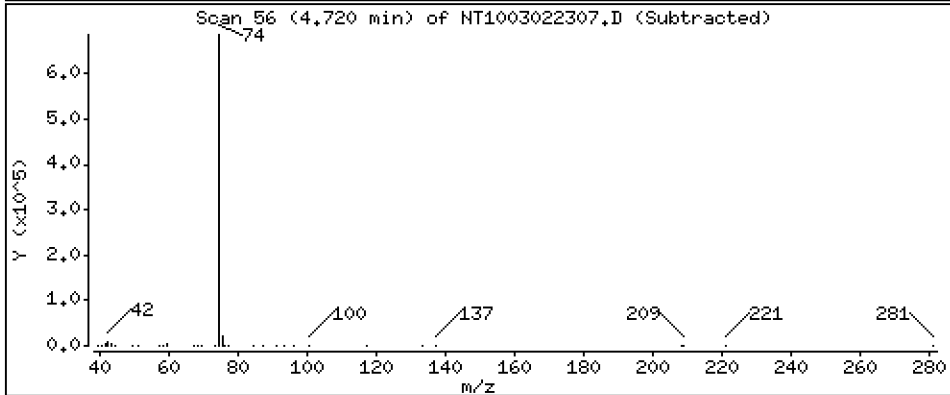
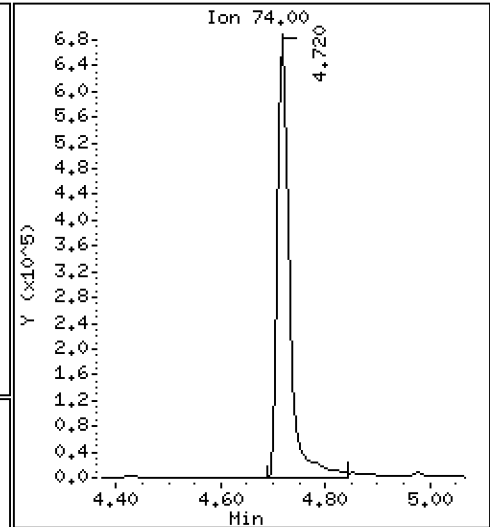
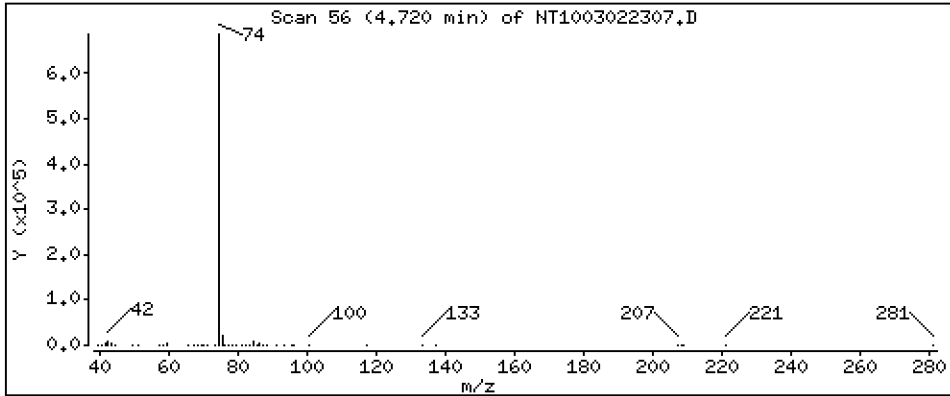
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 12,46 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

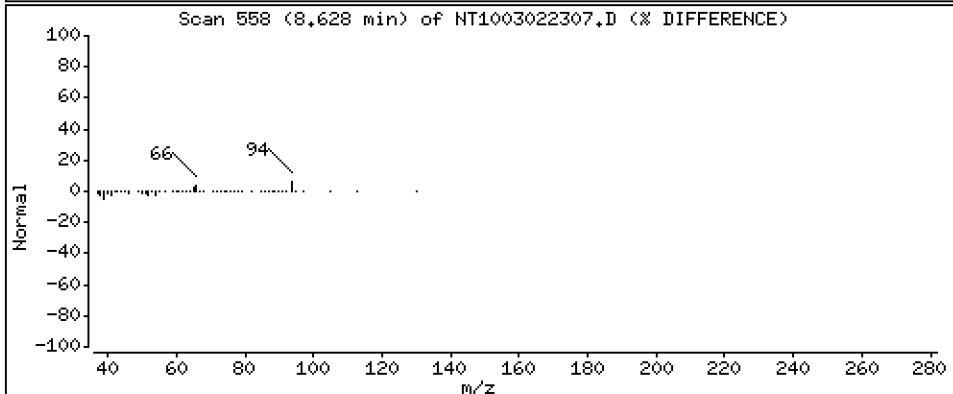
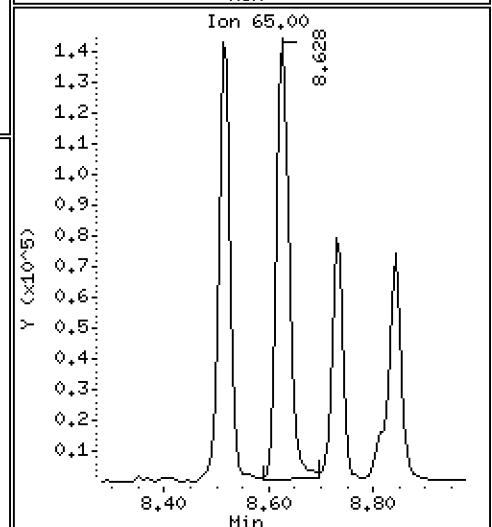
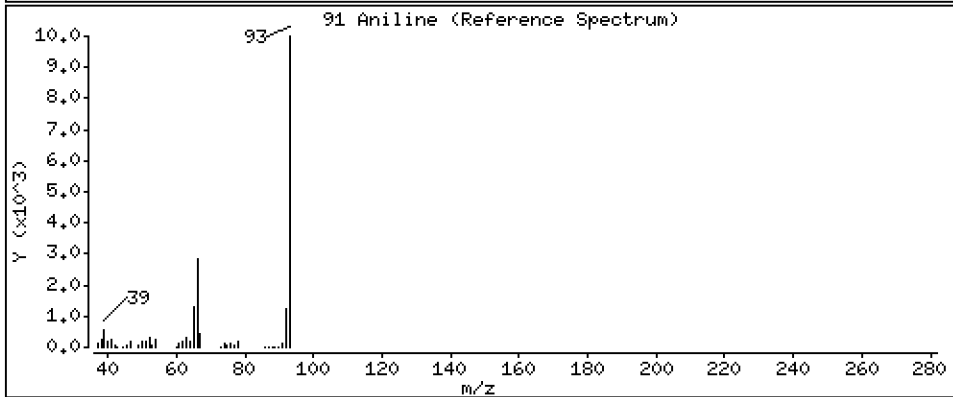
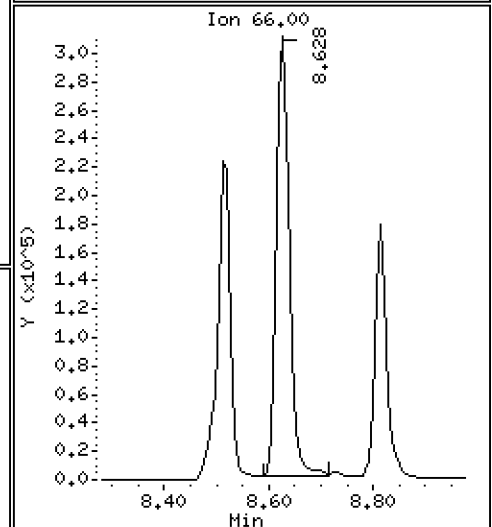
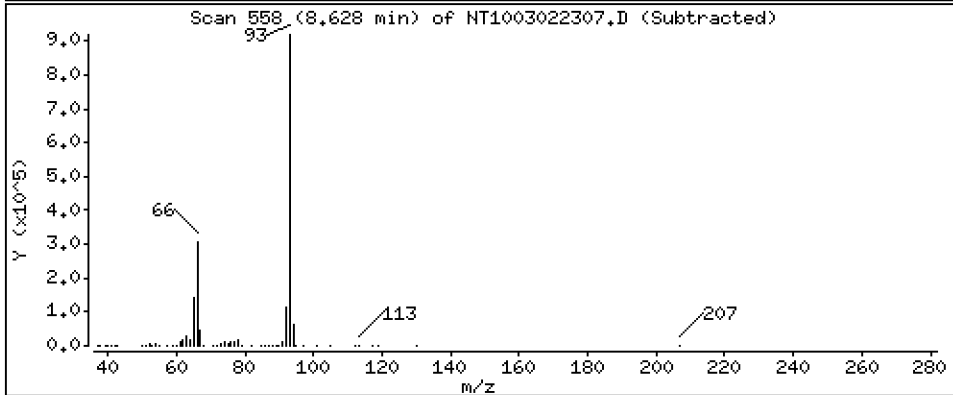
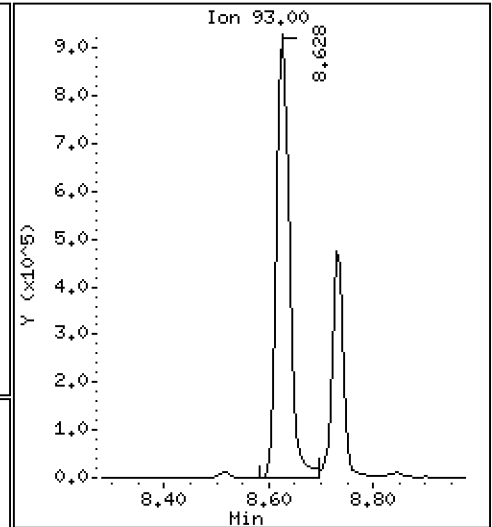
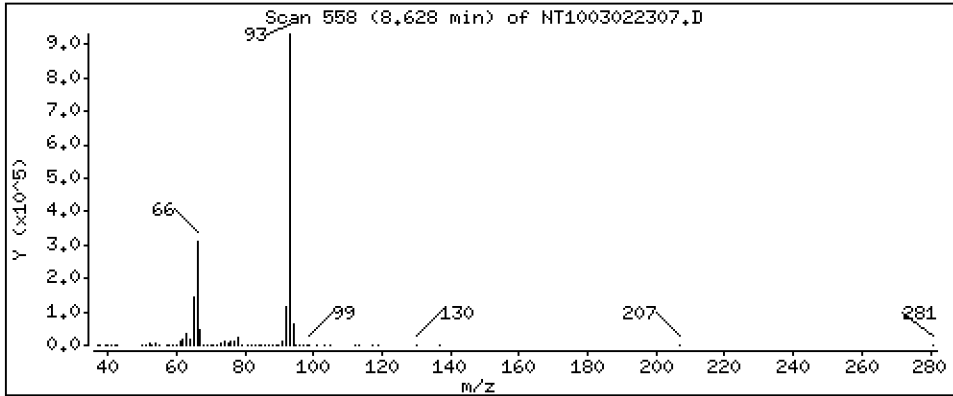
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 8,173 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

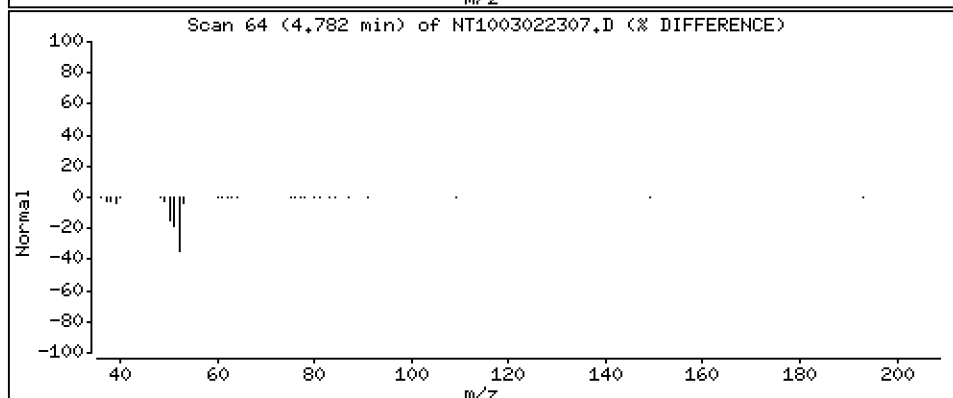
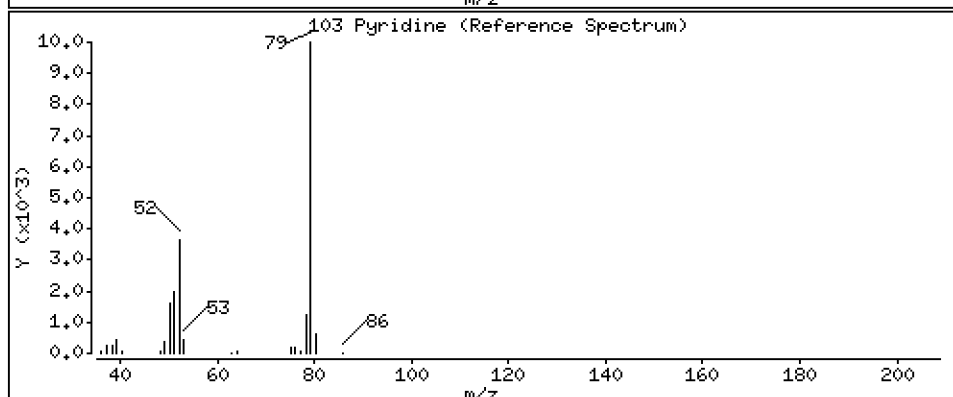
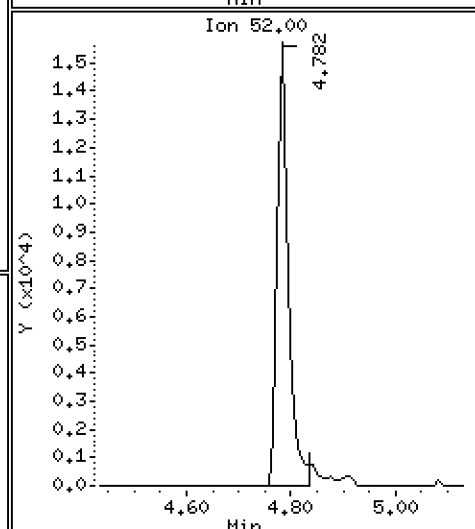
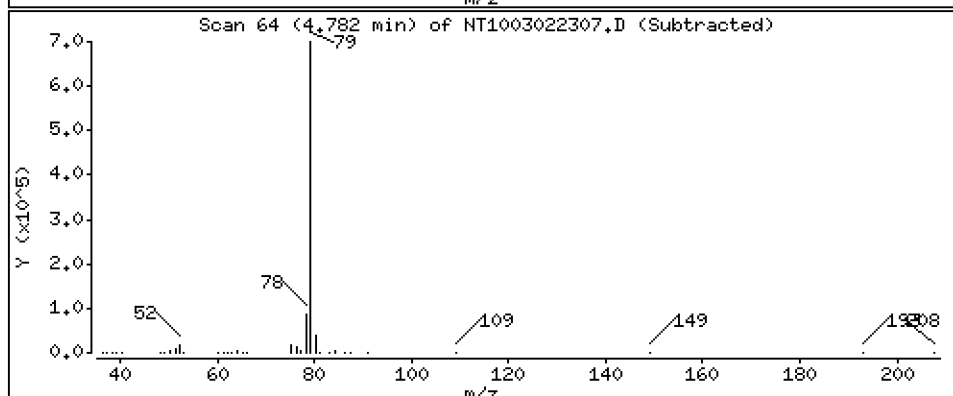
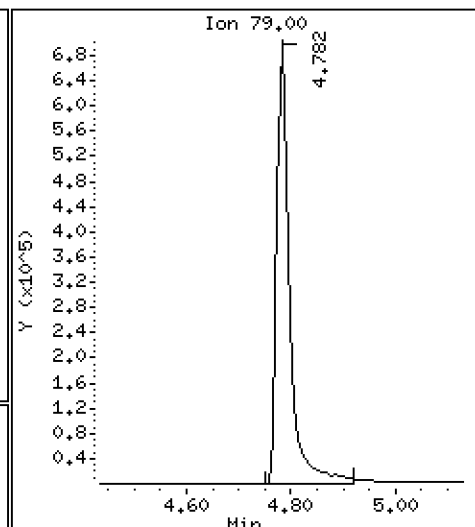
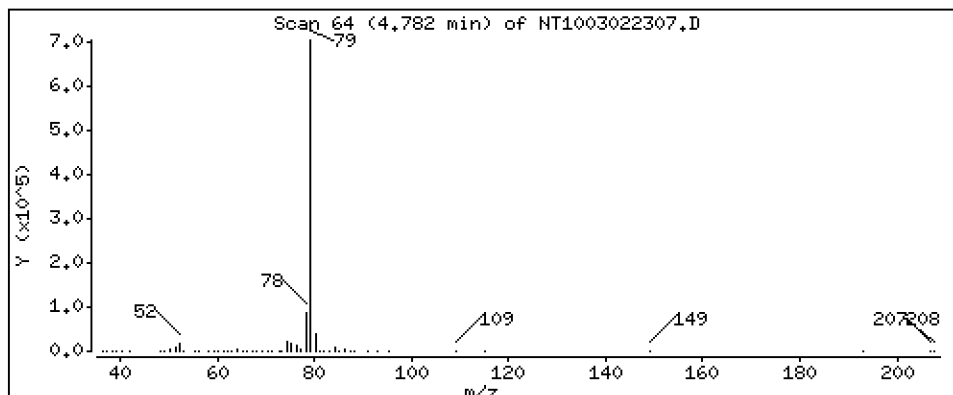
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 7,564 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

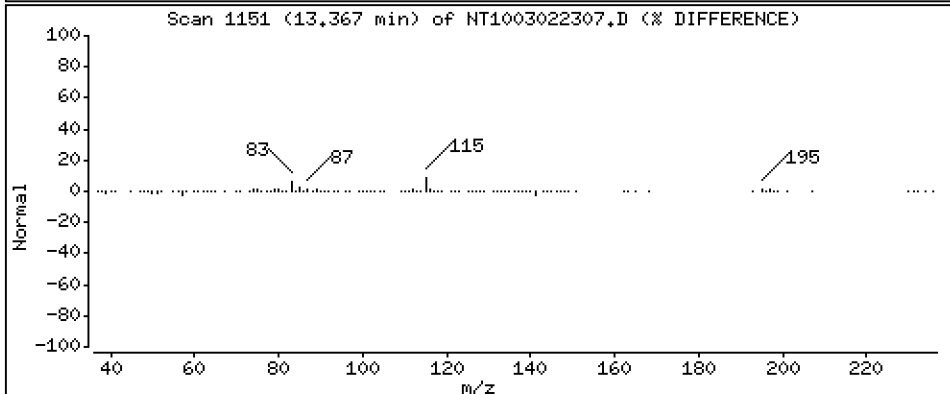
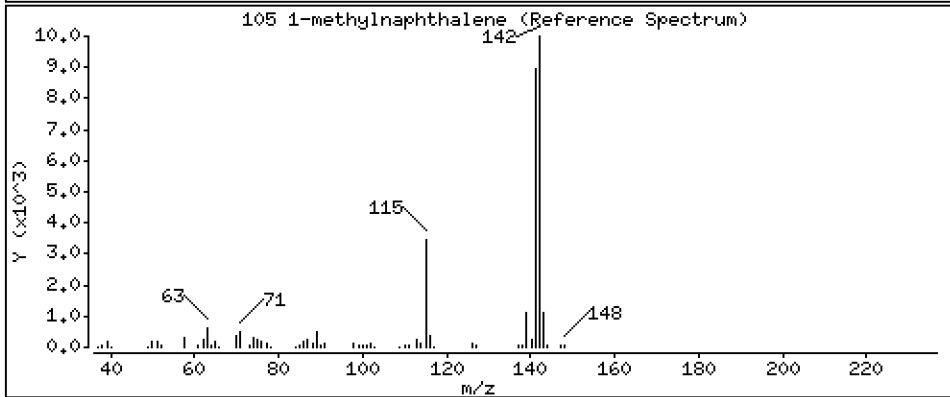
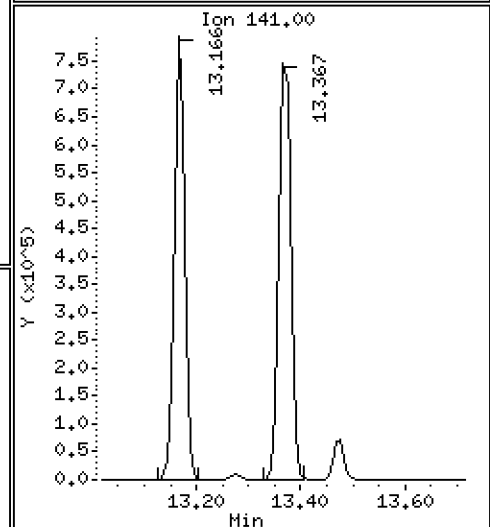
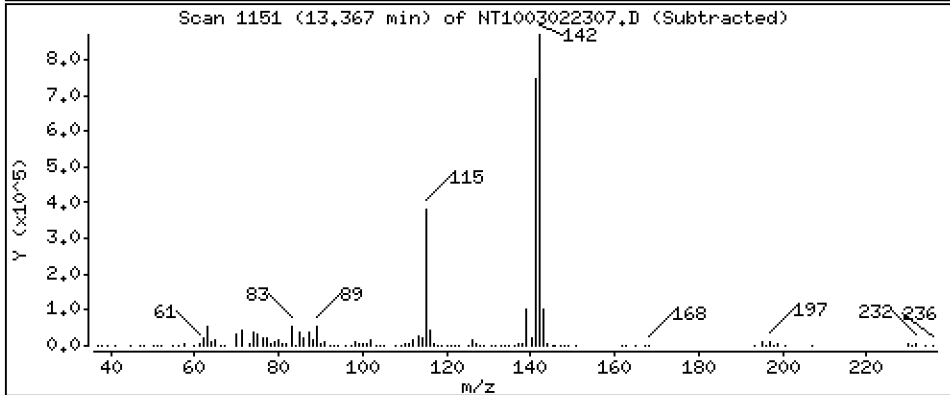
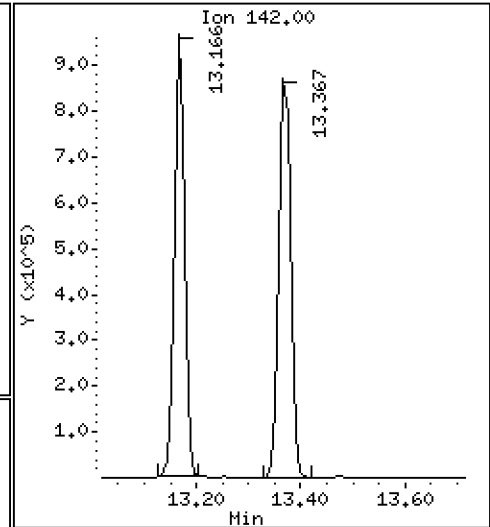
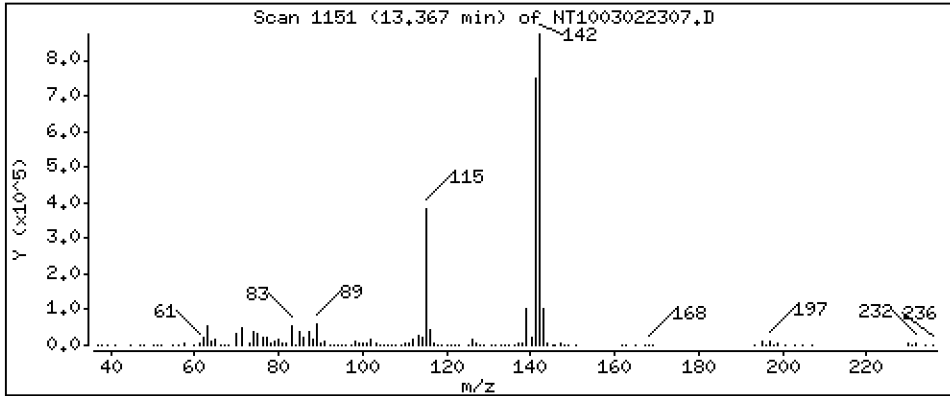
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 4,777 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

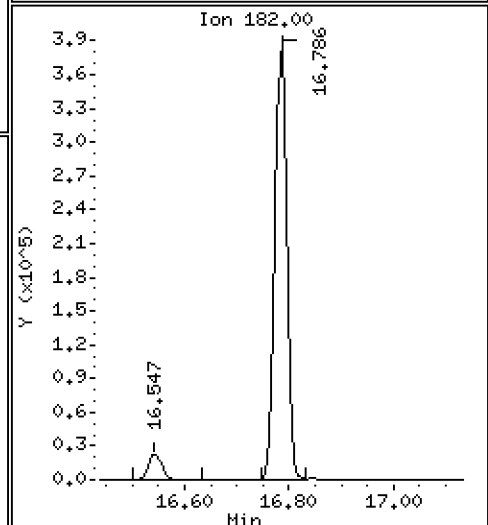
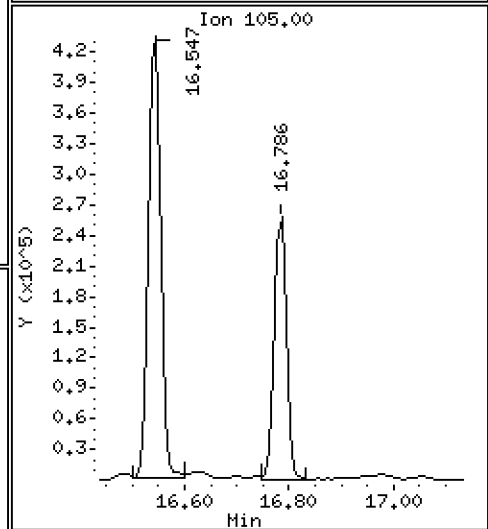
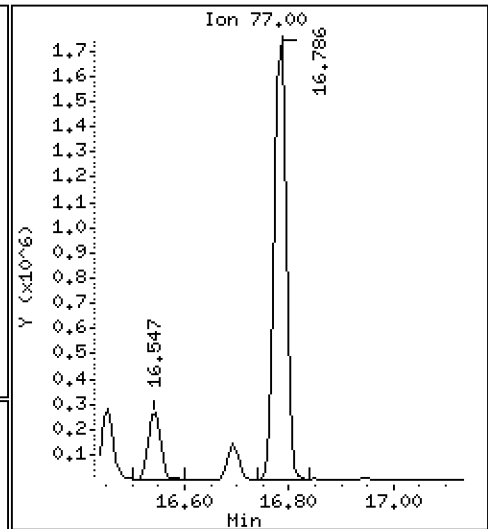
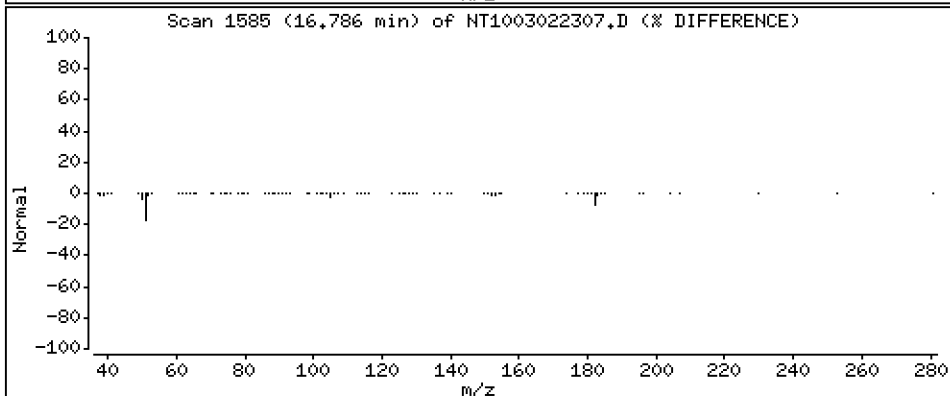
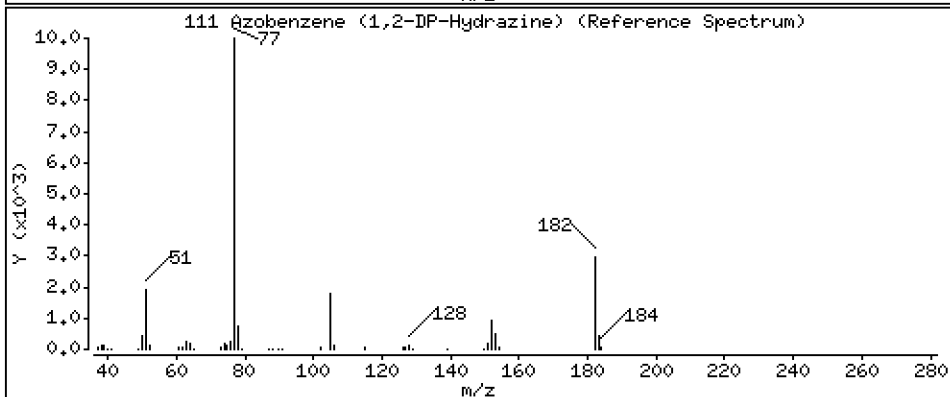
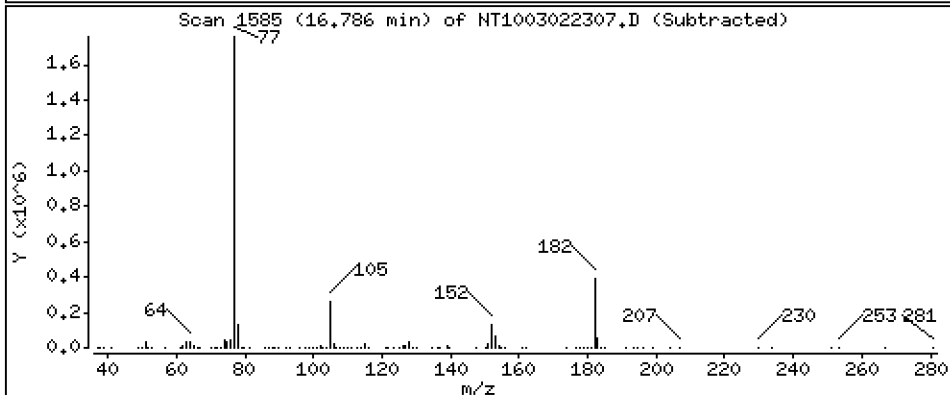
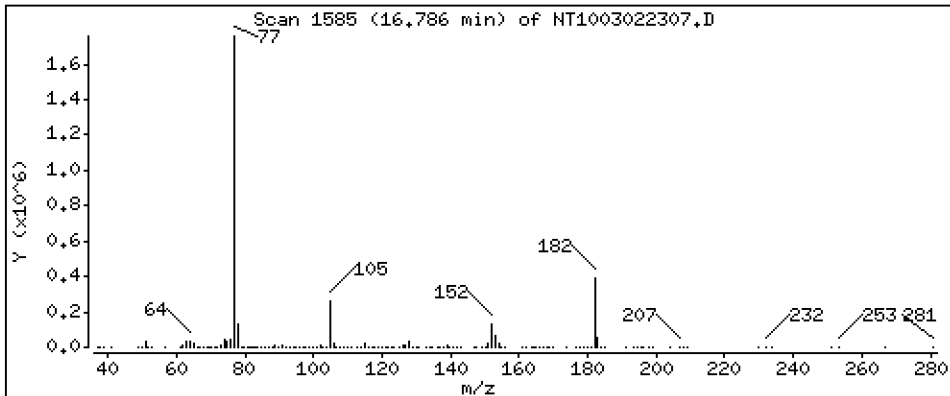
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,580 ug/mL





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

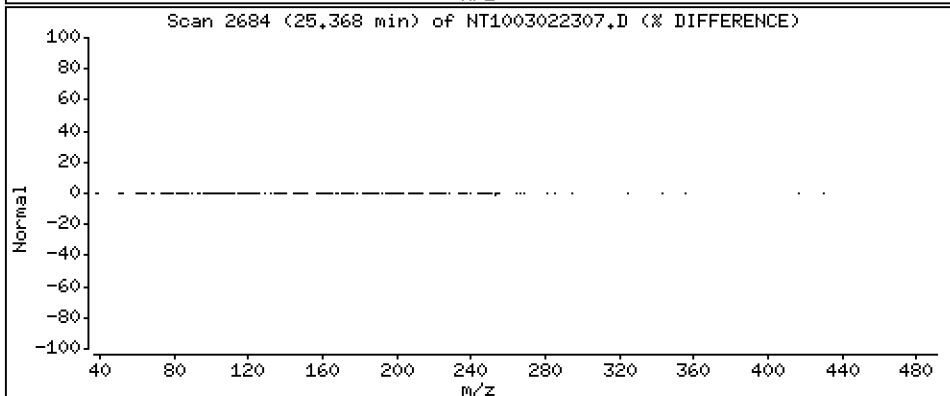
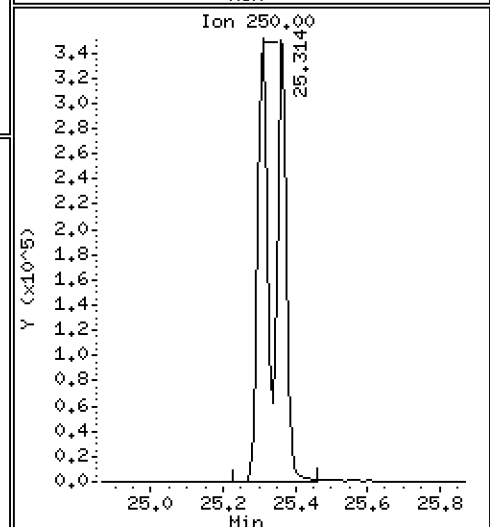
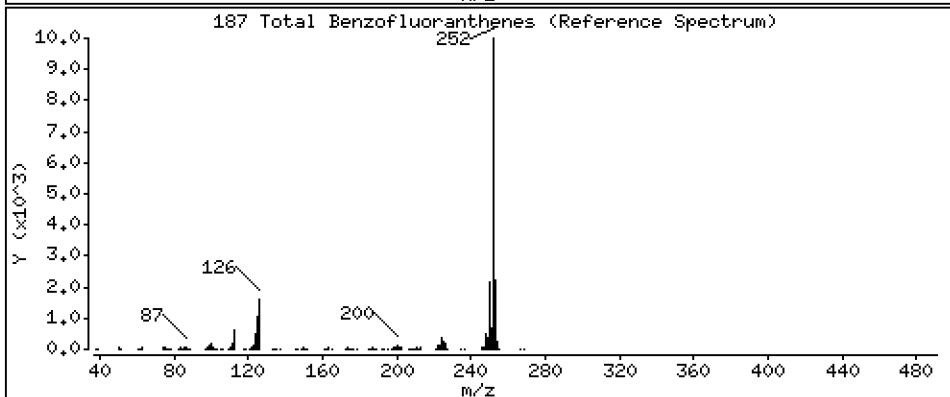
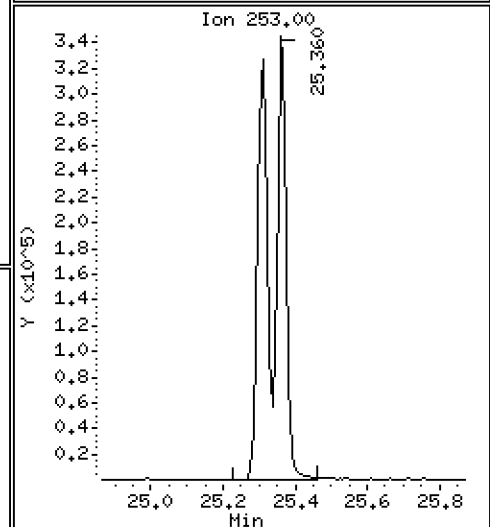
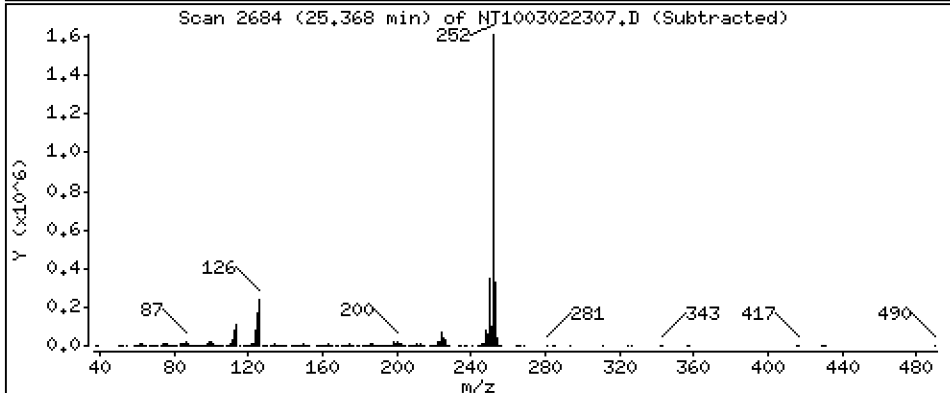
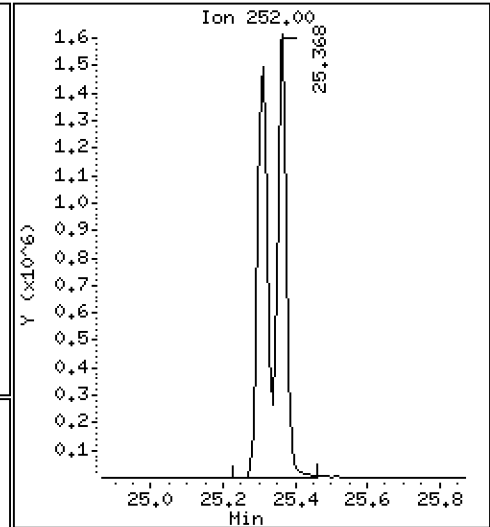
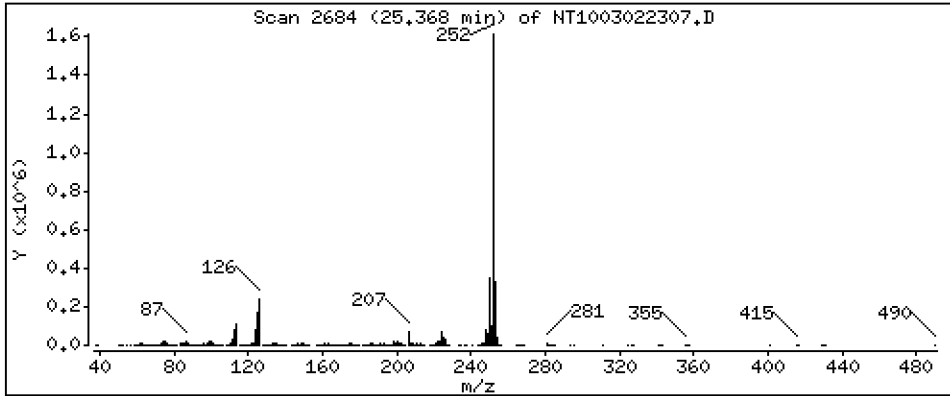
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 9,658 ug/mL



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

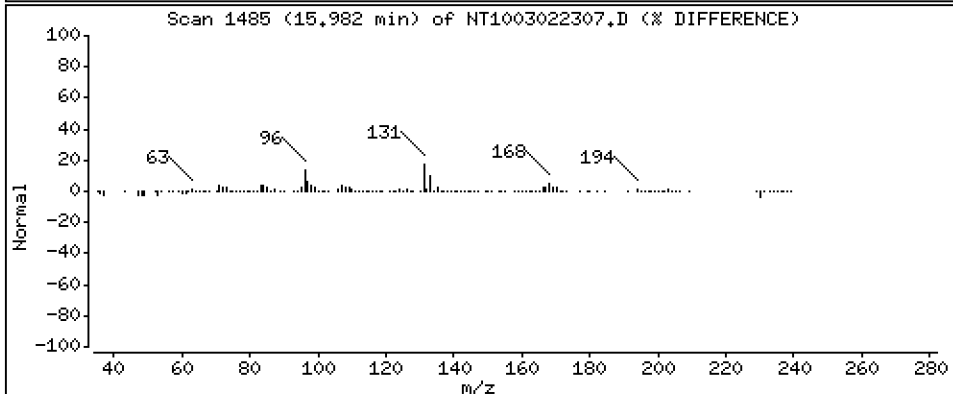
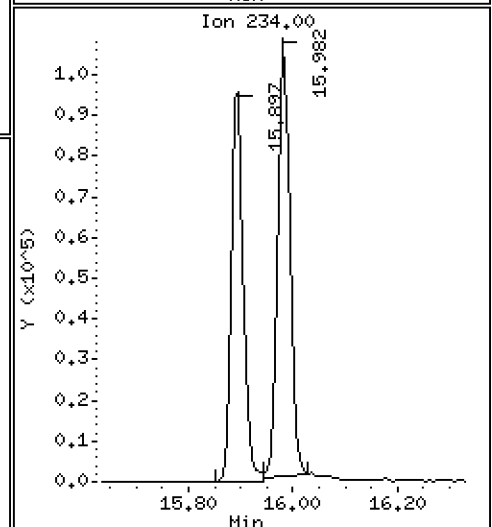
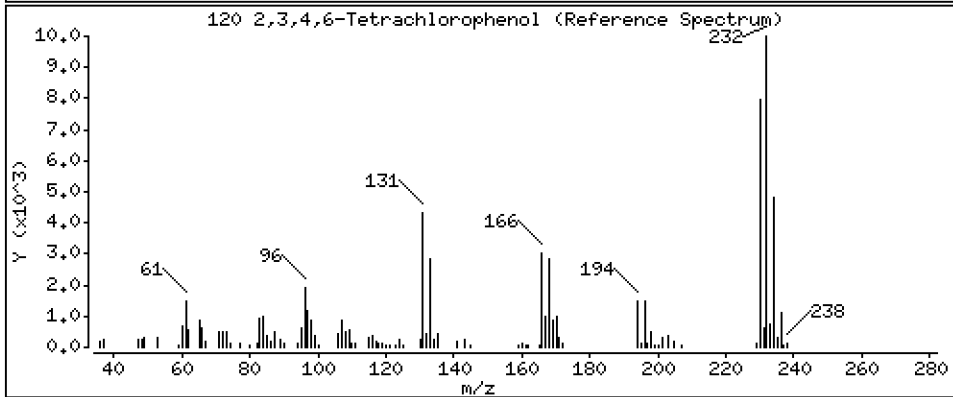
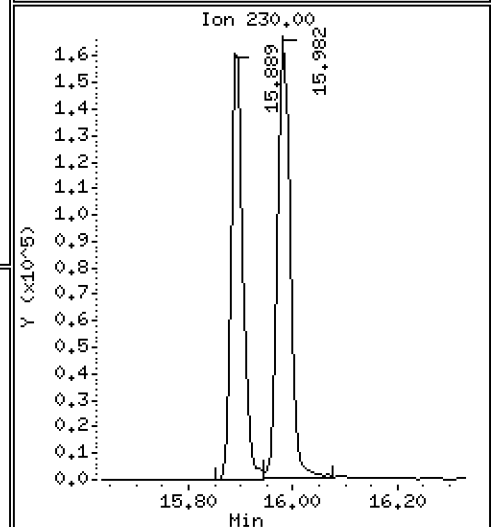
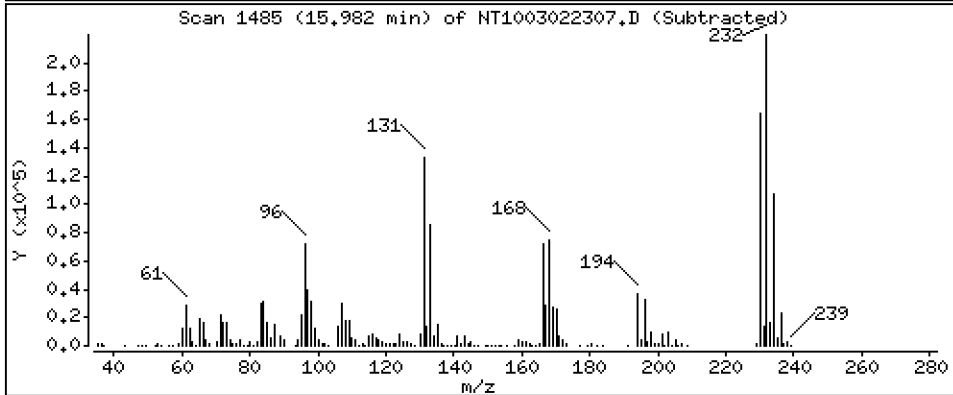
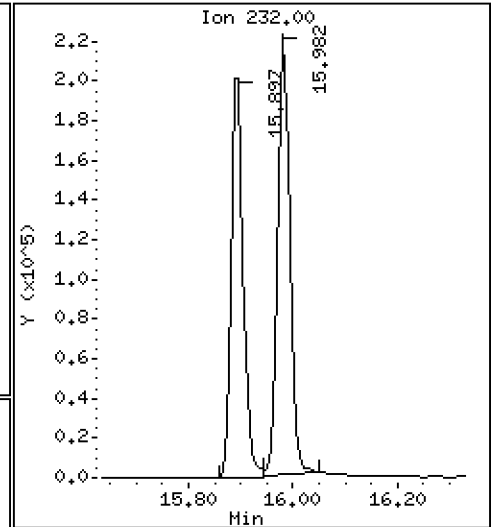
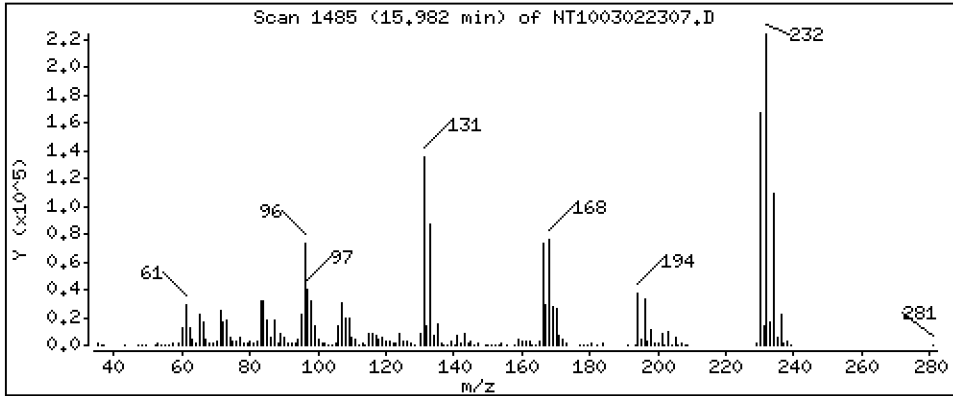
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,752 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022307.D  
 Lab Smp Id: BLA0624-BS1  
 Inj Date : 02-MAR-2023 18:12  
 Operator : VTS  
 Smp Info : BLA0624-BS1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	831587	6.35468	6.355
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	1174584	7.73110	7.731
3 Phenol	94		8.520	8.512	(0.921)	891603	5.51969	5.520
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	924179	7.12978	7.130
4 Bis(2-Chloroethyl)ether	93		8.728	8.736	(0.944)	715856	5.79944	5.799
6 2-Chlorophenol	128		8.844	8.844	(0.956)	606662	4.50513	4.505
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	652430	4.39442	4.394
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	415927	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	643623	4.36433	4.364
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	389715	4.02416	4.024
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	643163	4.50577	4.506
11 Benzyl alcohol	108		9.472	9.472	(1.024)	393500	4.63900	4.639
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	232182	5.64197	5.642
13 2-Methylphenol	108		9.650	9.650	(1.044)	518540	4.06716	4.067
17 Hexachloroethane	117		10.209	10.209	(1.104)	286136	4.72704	4.727
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	521704	5.35227	5.352
15 4-Methylphenol	108		9.945	9.938	(1.076)	648262	4.17242	4.172
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	800930	4.42096	4.421
19 Nitrobenzene	77		10.333	10.333	(0.882)	854369	5.02737	5.027
20 Isophorone	82		10.791	10.791	(0.921)	1555674	7.17124	7.171
21 2-Nitrophenol	139		10.950	10.950	(0.934)	294232	3.18687	3.187
22 2,4-Dimethylphenol	107		11.001	11.001	(0.939)	1614395	9.69197	9.692
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.957)	860137	6.41604	6.416
24 Benzoic acid	105		11.154	11.154	(0.952)	1720957	17.1832	17.18
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	2052472	15.3599	15.36
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	543792	4.26365	4.264
* 27 Naphthalene-d8	136		11.719	11.726	(1.000)	1650394	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	1953929	4.61273	4.613
29 4-Chloroaniline	127		11.858	11.858	(1.012)	1965883	10.2428	10.24
30 Hexachlorobutadiene	225		11.997	11.997	(1.024)	394283	4.24563	4.246
31 4-Chloro-3-methylphenol	107		12.809	12.801	(1.093)	2303878	15.9634	15.96
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	1355624	4.53007	4.530
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	623841	18.0067	18.01

Compounds	QUANT SIG					CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)	
34 2,4,6-Trichlorophenol	196	13.730	13.722	(0.896)	1386265	14.8323	14.83	
35 2,4,5-Trichlorophenol	196	13.792	13.792	(0.900)	1480538	14.7883	14.79	
§ 36 2-Fluorobiphenyl	172	13.916	13.908	(0.909)	1431001	4.37641	4.376	
37 2-Chloronaphthalene	162	14.171	14.171	(0.925)	1212776	4.72471	4.725	
38 2-Nitroaniline	65	14.373	14.365	(0.938)	1263224	16.9365	16.94	
39 Dimethylphthalate	163	14.744	14.744	(0.963)	1544256	5.21609	5.216	
40 Acenaphthylene	152	15.031	15.023	(0.981)	1990192	4.49725	4.497	
41 2,6-Dinitrotoluene	165	14.876	14.868	(0.971)	1197543	17.3643	17.36	
* 42 Acenaphthene-d10	164	15.317	15.317	(1.000)	916729	4.00000		
43 3-Nitroaniline	138	15.224	15.216	(0.994)	1178169	15.7806	15.78	
44 Acenaphthene	153	15.386	15.386	(1.005)	1310716	4.91110	4.911	
45 2,4-Dinitrophenol	184	15.433	15.433	(1.008)	559590	29.4502	29.45	
46 Dibenzofuran	168	15.742	15.742	(1.028)	1862302	4.70158	4.702	
47 4-Nitrophenol	109	15.533	15.525	(1.014)	721427	13.0527	13.05	
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.025)	1707386	16.9193	16.92	
50 Diethylphthalate	149	16.213	16.206	(1.059)	1790034	5.70742	5.707	
49 Fluorene	166	16.453	16.453	(1.074)	1658105	5.03126	5.031	
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	749745	4.96571	4.966	
52 4-Nitroaniline	138	16.484	16.476	(1.076)	1226995	15.2892	15.29	
53 4,6-Dinitro-2-methylphenol	198	16.546	16.538	(0.899)	1449398	31.6940	31.69	
54 N-Nitrosodiphenylamine	169	16.693	16.693	(0.907)	1319665	5.08274	5.083	
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.106)	407038	6.88659	6.887	
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	556659	5.29123	5.291	
57 Hexachlorobenzene	284	17.581	17.581	(0.955)	546135	4.60993	4.610	
58 Pentachlorophenol	266	17.991	17.983	(0.978)	980076	16.1081	16.11	
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1754820	4.00000		
60 Phenanthrene	178	18.455	18.455	(1.003)	2325009	5.17715	5.177	
61 Anthracene	178	18.564	18.564	(1.009)	1888471	4.33664	4.337	
62 Carbazole	167	18.889	18.889	(1.026)	1935342	4.85121	4.851	
63 Di-n-butylphthalate	149	19.593	19.593	(1.065)	3359582	5.94296	5.943	
64 Fluoranthene	202	20.815	20.815	(0.889)	2859656	4.65058	4.651	
65 Pyrene	202	21.248	21.248	(0.907)	3152245	5.03449	5.034	
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	2288321	4.51677	4.517	
67 Butylbenzylphthalate	149	22.410	22.410	(0.957)	1498130	4.52113	4.521	
68 Benzo(a)anthracene	228	23.401	23.409	(0.999)	2937854	4.66130	4.661	
* 69 Chrysene-d12	240	23.416	23.424	(1.000)	1787466	4.00000		
70 3,3'-Dichlorobenzidine	252	23.347	23.347	(0.997)	1954241	6.90317	6.903	
71 Chrysene	228	23.471	23.470	(1.002)	2700875	5.27287	5.273	
72 bis(2-Ethylhexyl)phthalate	149	23.409	23.409	(0.956)	1420210	3.15233	3.152	
* 134 Di-n-octylphthalate-d4	153	24.485	24.492	(1.000)	3153255	4.00000		
73 Di-n-octylphthalate	149	24.500	24.500	(1.001)	1713702	2.45081	2.451	
74 Benzo(b)fluoranthene	252	25.313	25.305	(0.969)	2957827	4.70537	4.705	
75 Benzo(k)fluoranthene	252	25.367	25.367	(0.971)	3003836	4.94163	4.942	
76 Benzo(a)pyrene	252	25.994	25.994	(0.995)	2403810	4.30017	4.300	
* 77 Perylene-d12	264	26.118	26.118	(1.000)	1751658	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.870	28.878	(1.105)	2970615	4.53542	4.535	
79 Dibenzo(a,h)anthracene	278	28.933	28.932	(1.108)	2440396	4.86385	4.864	
80 Benzo(g,h,i)perylene	276	29.725	29.725	(1.138)	2512665	4.84237	4.842	
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	1052450	12.4581	12.46	
91 Aniline	93	8.628	8.628	(0.933)	1530801	8.17332	8.173	
93 Benzidine	184	Compound Not Detected.						
103 Pyridine	79	4.781	4.781	(0.517)	1133264	7.56408	7.564 (H)	
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	1293897	4.77718	4.777	
111 Azobenzene (1,2-DP-Hydrazine)	77	16.785	16.785	(1.096)	2613520	5.58029	5.580	

Compounds	QUANT SIG	CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====
187 Total Benzofluoranthenes	252	25.367	25.367	(0.971)	5846633	9.65809	9.658
120 2,3,4,6-Tetrachlorophenol	232	15.981	15.981	(1.043)	335780	3.75200	3.752

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022307.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-BS1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	415927	-3.49
27 Naphthalene-d8	1609461	804731	3218922	1650394	2.54
42 Acenaphthene-d10	853113	426557	1706226	916729	7.46
59 Phenanthrene-d10	1556648	778324	3113296	1754820	12.73
69 Chrysene-d12	1539062	769531	3078124	1787466	16.14
134 Di-n-octylphthala	2949571	1474786	5899142	3153255	6.91
77 Perylene-d12	1634059	817030	3268118	1751658	7.20

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	-0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.03
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022307.D

Lab ID: BLA0624-BS1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 18:12

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003022302.D

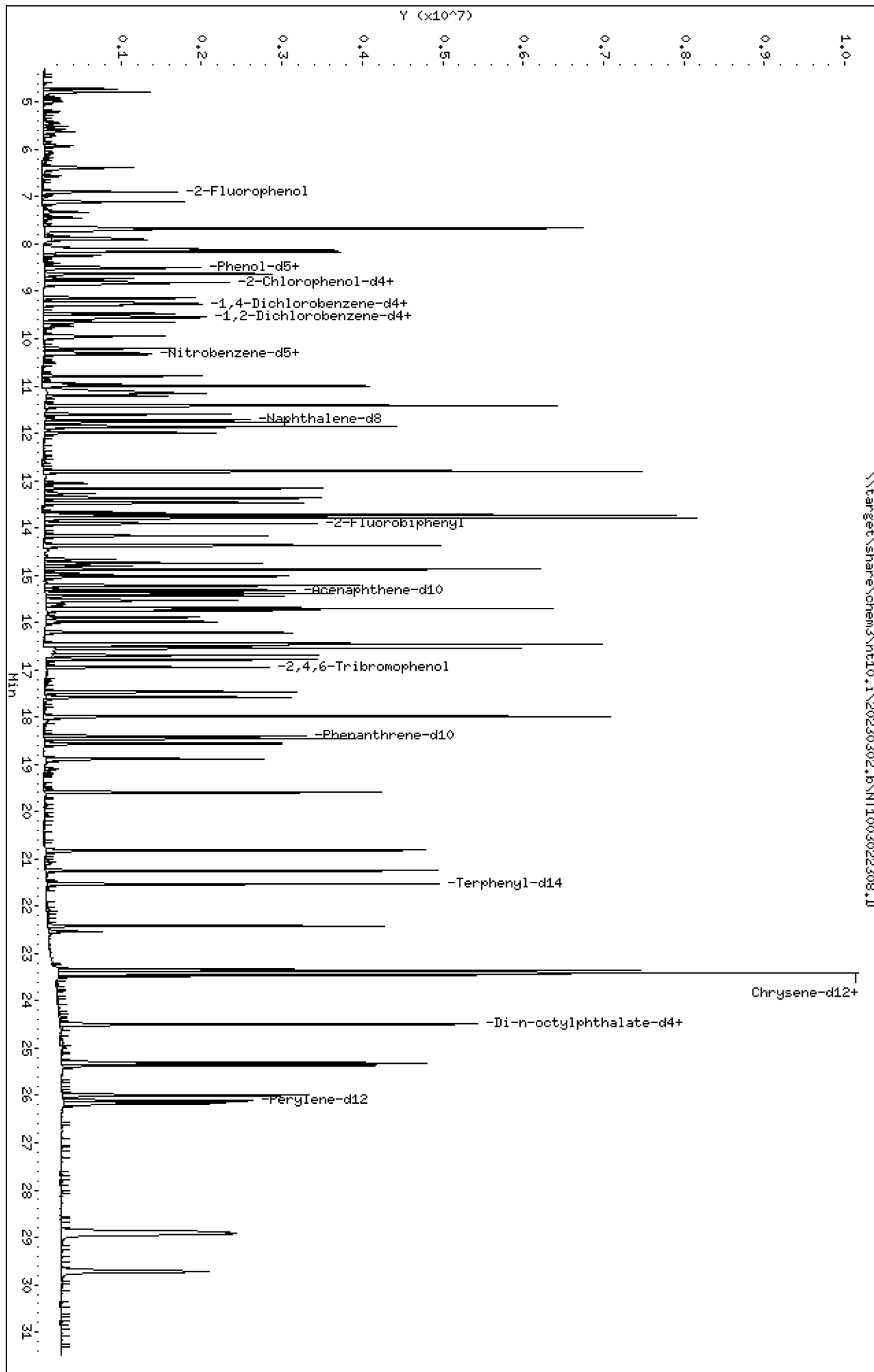
On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022308.D  
Date: 02-MAR-2023 18:50  
Client ID:  
Sample Info: BLR0624-BSM1  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: VTS  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022308.D





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

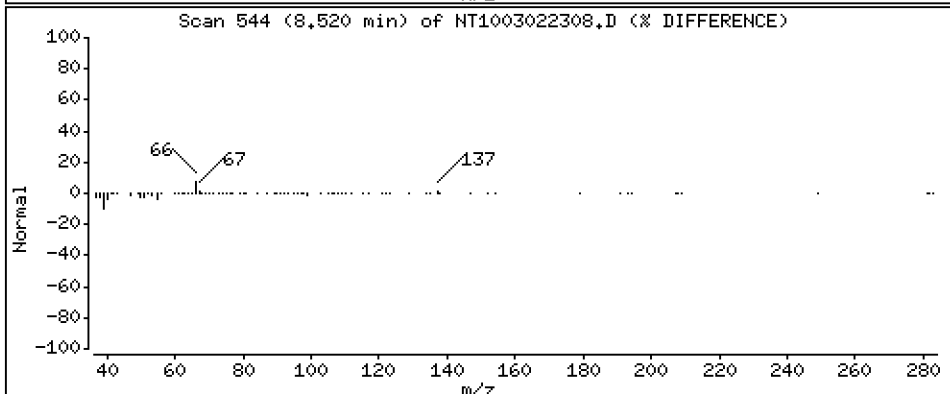
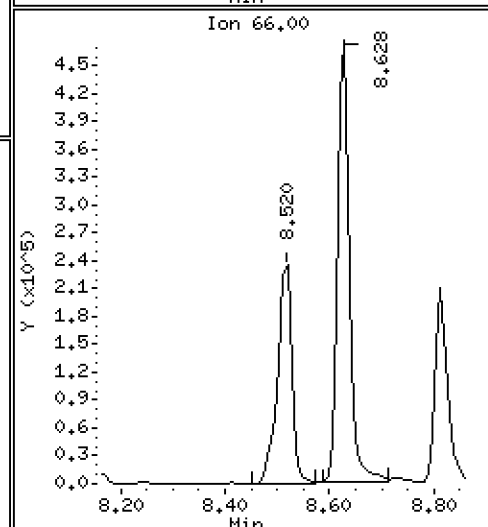
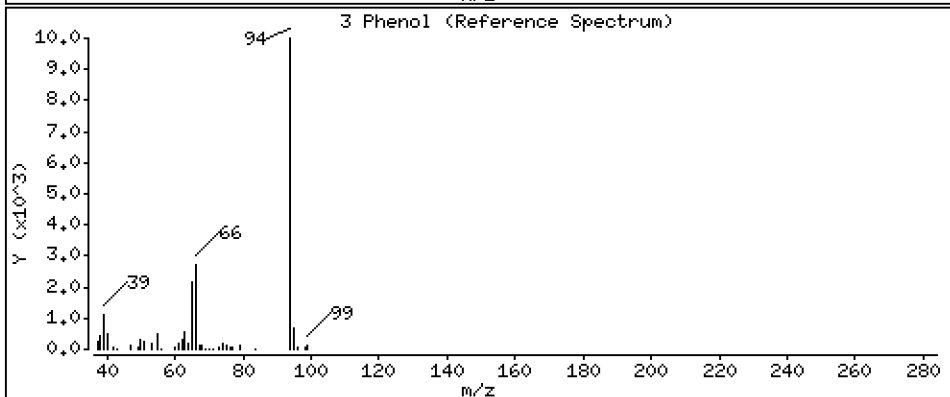
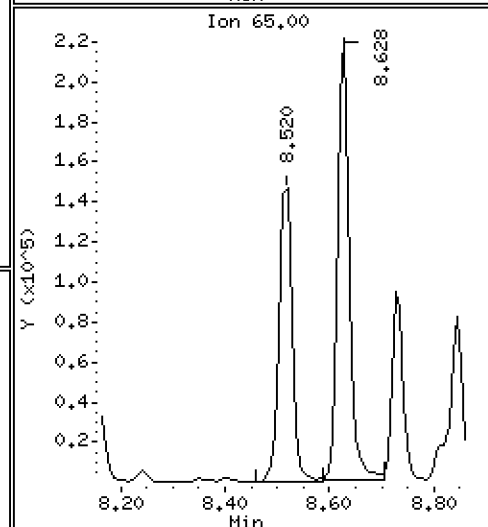
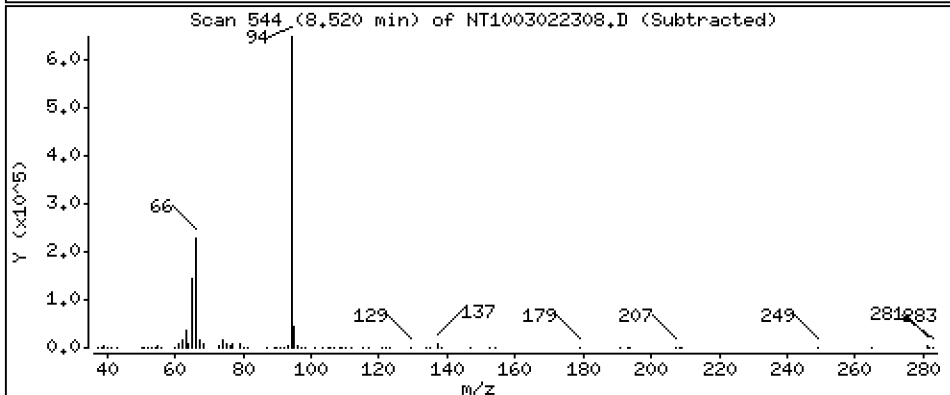
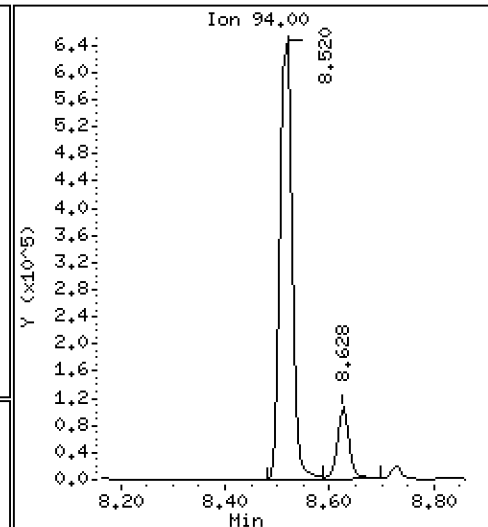
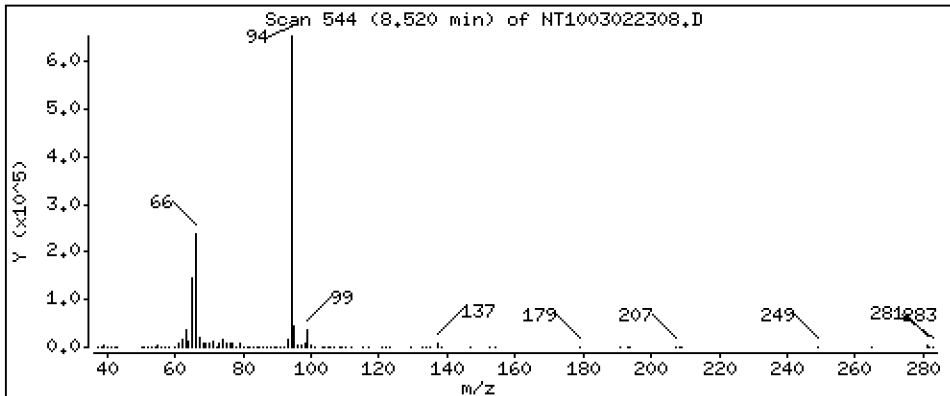
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,890 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

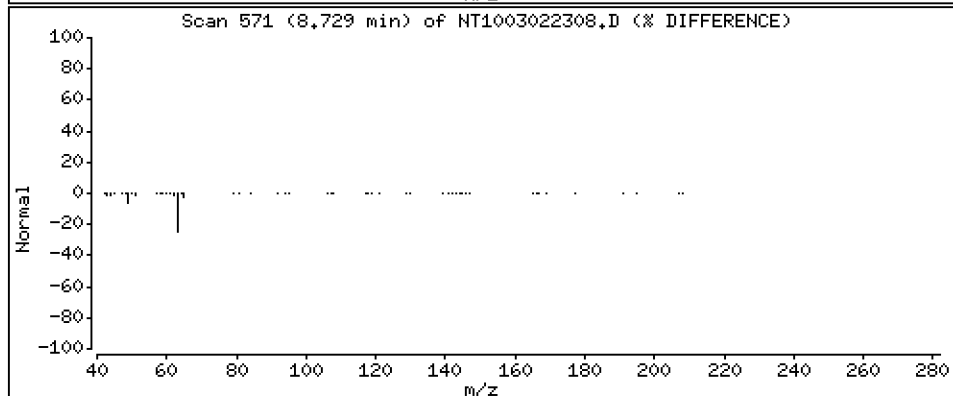
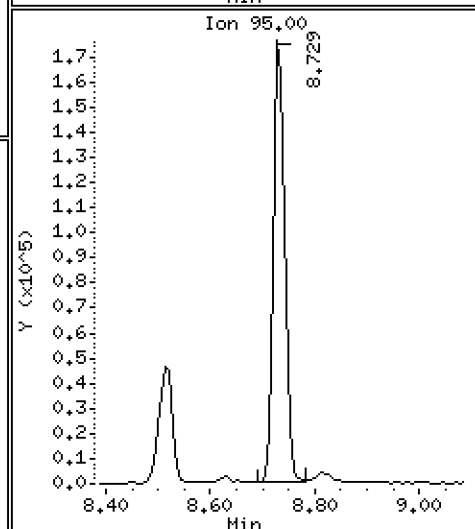
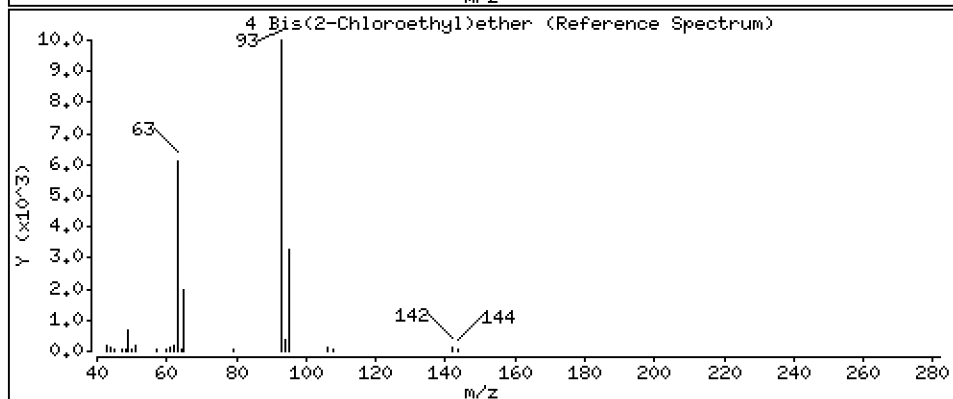
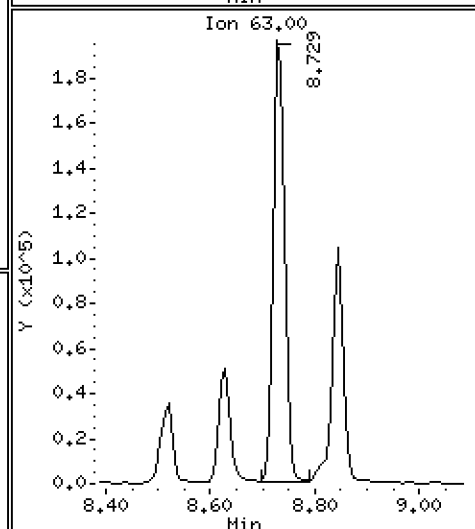
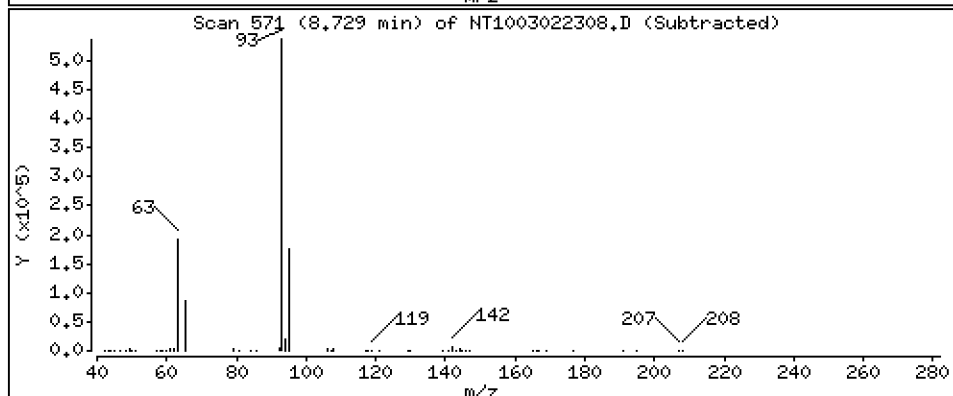
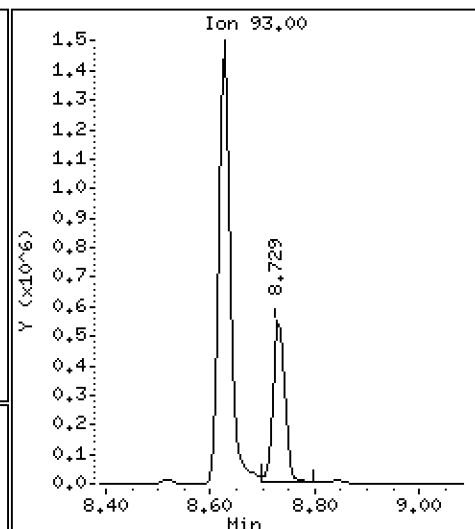
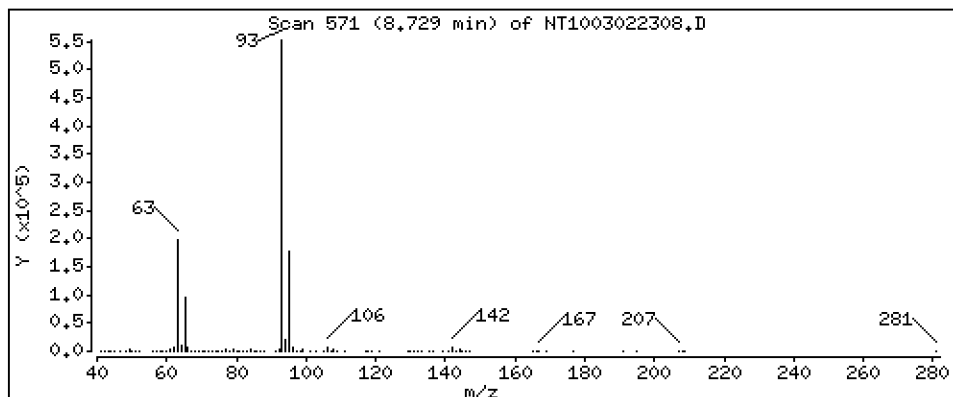
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,396 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

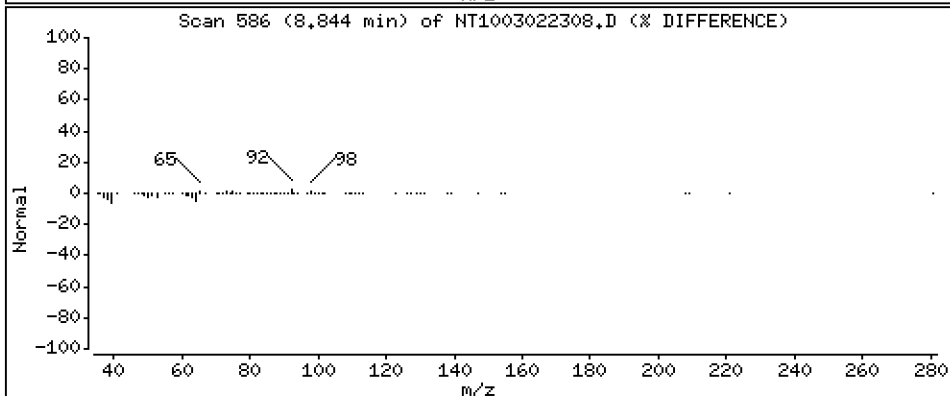
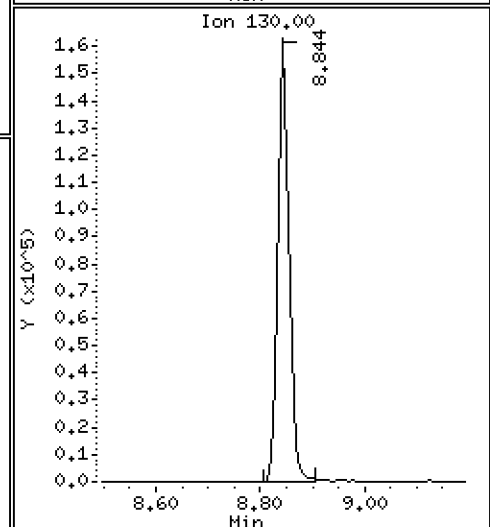
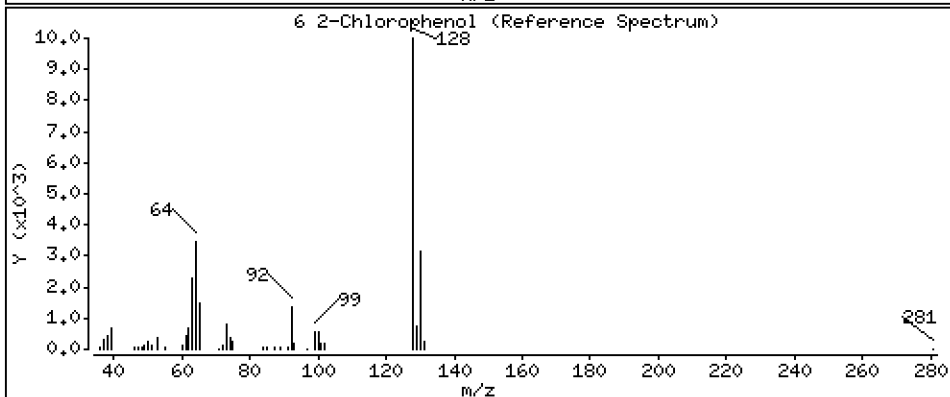
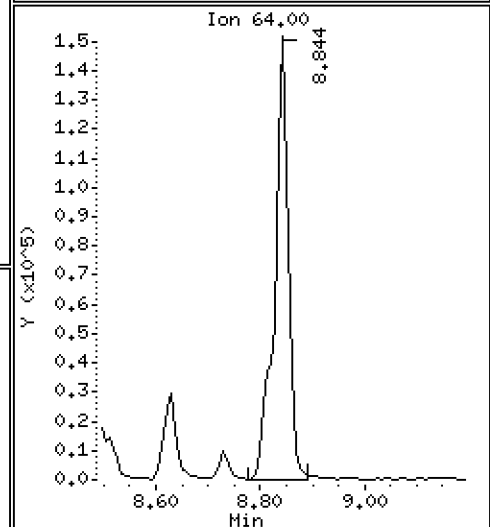
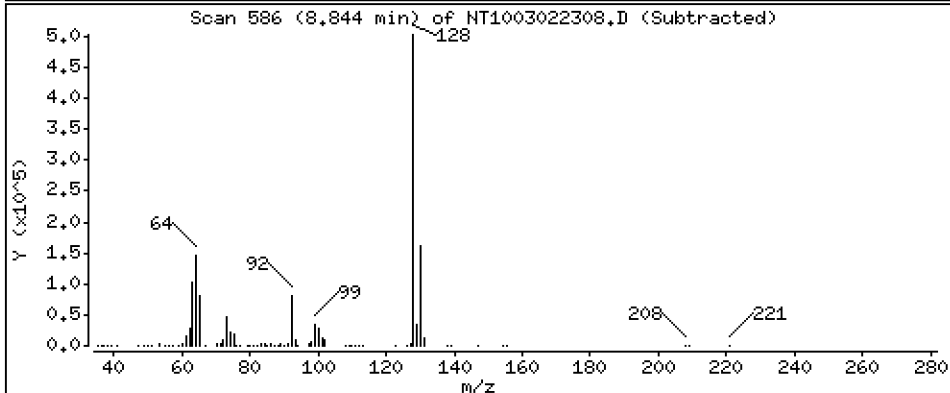
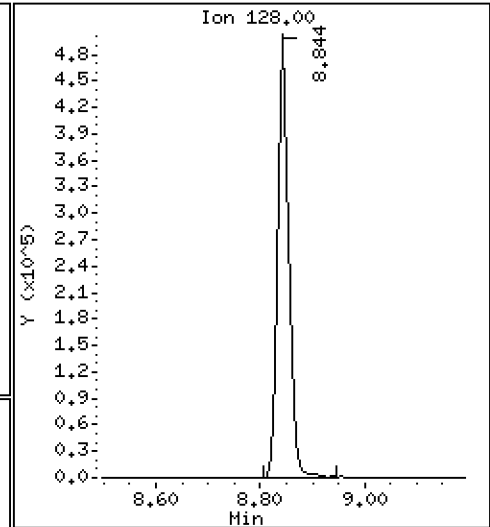
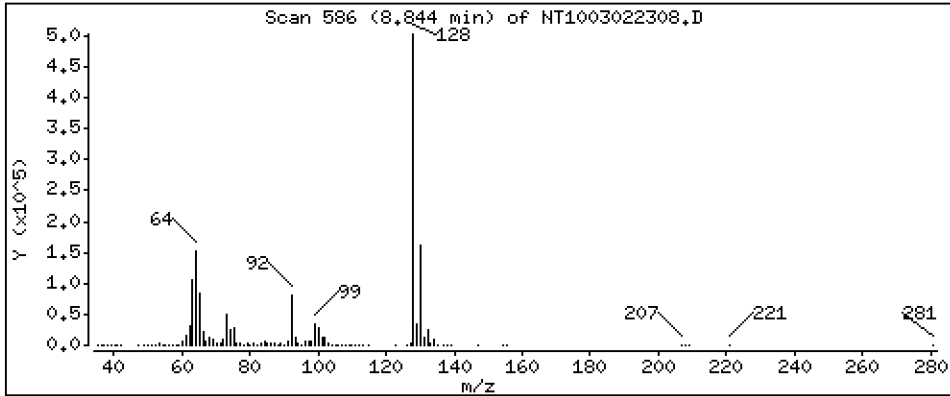
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 4,288 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

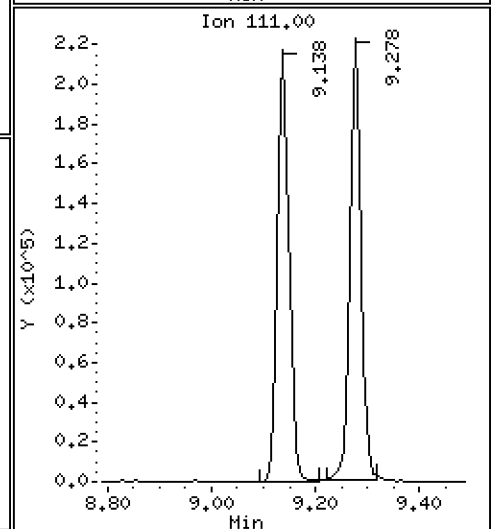
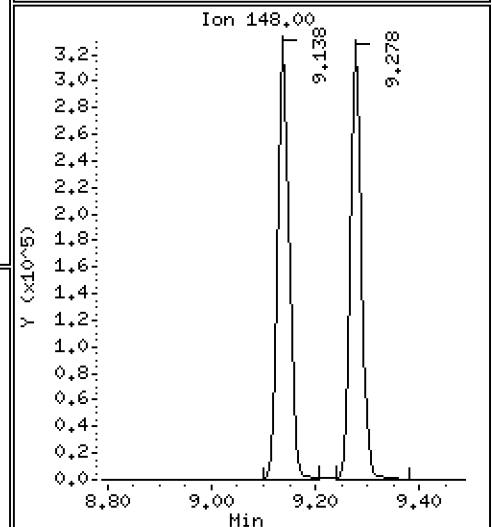
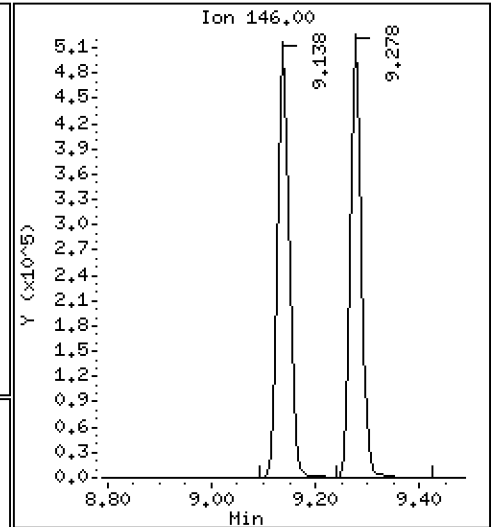
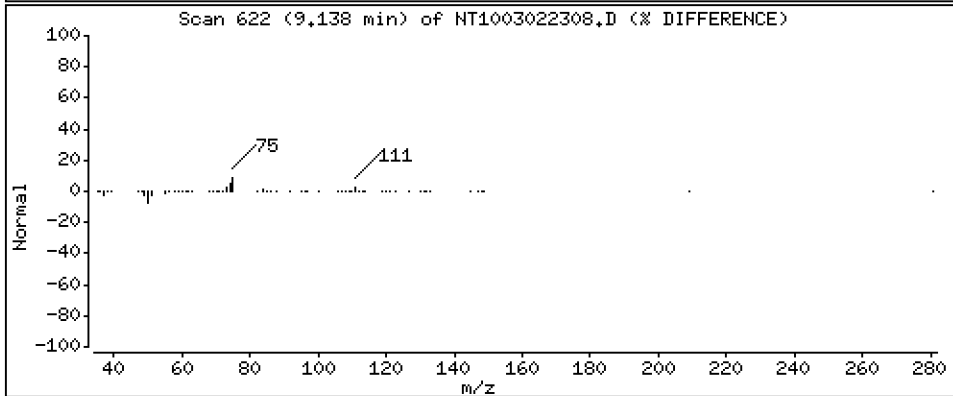
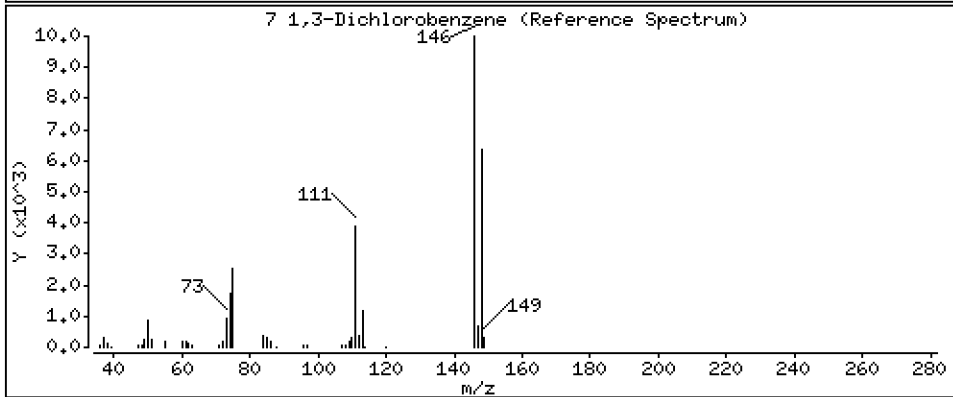
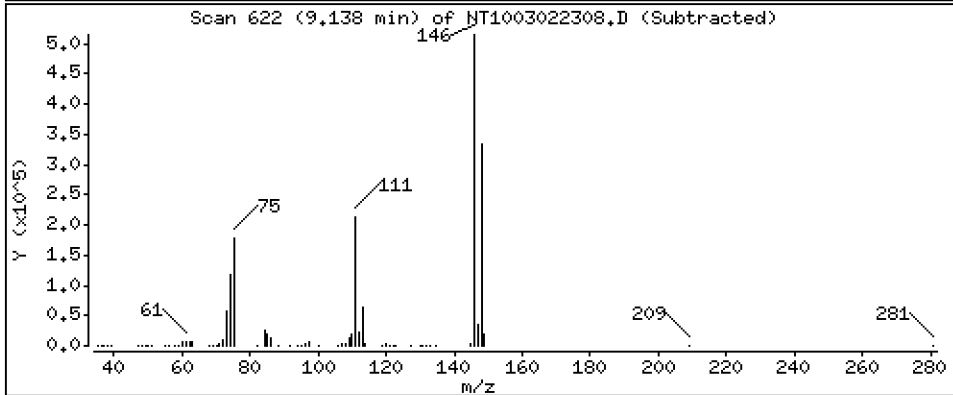
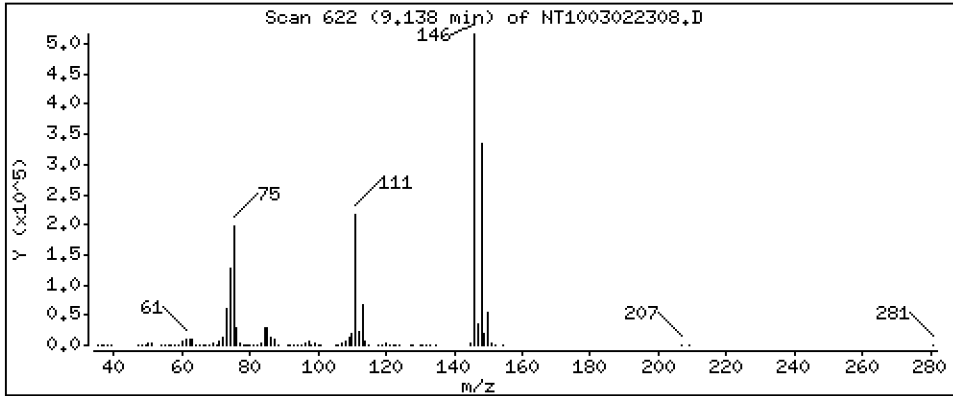
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,231 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

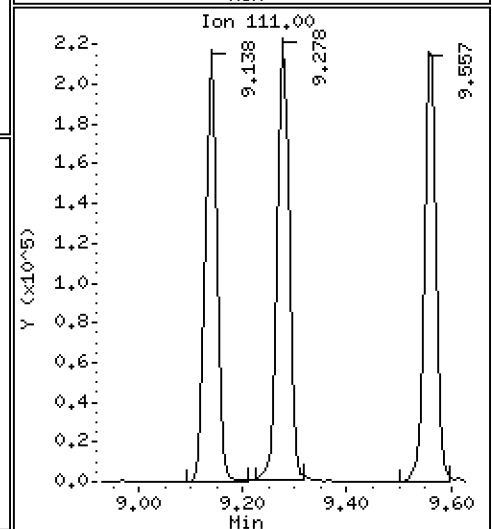
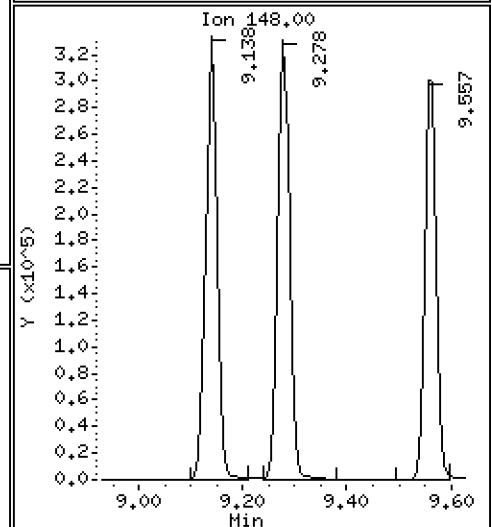
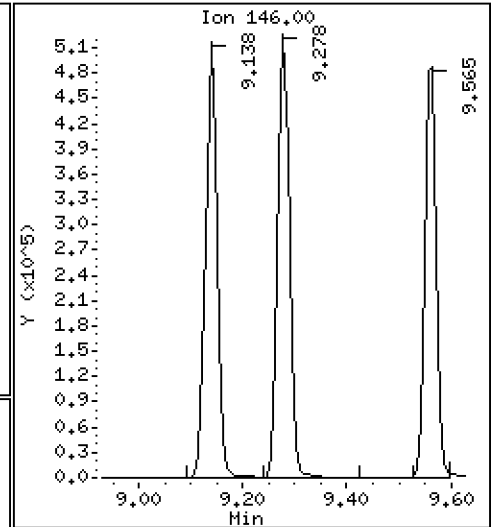
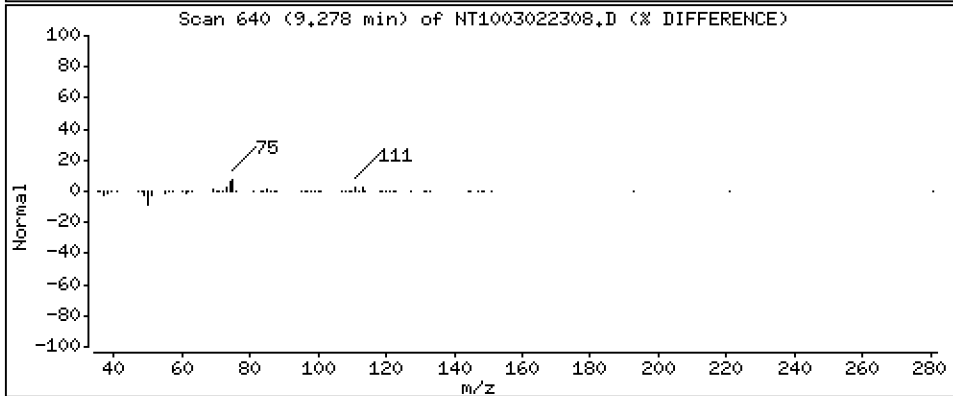
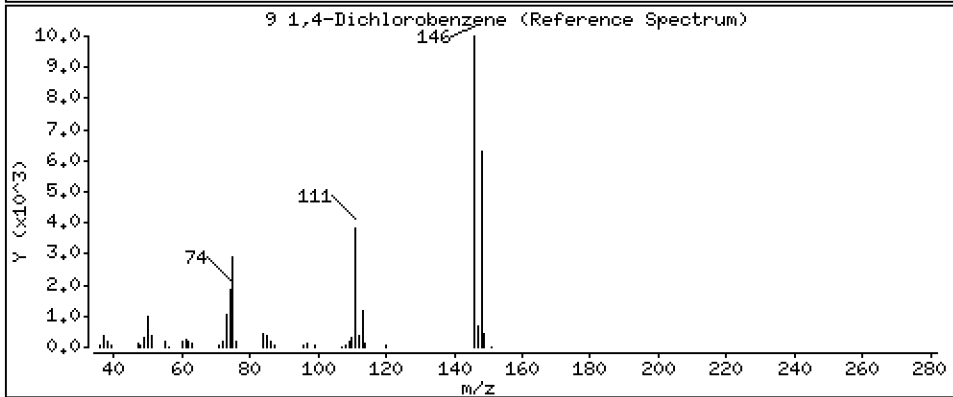
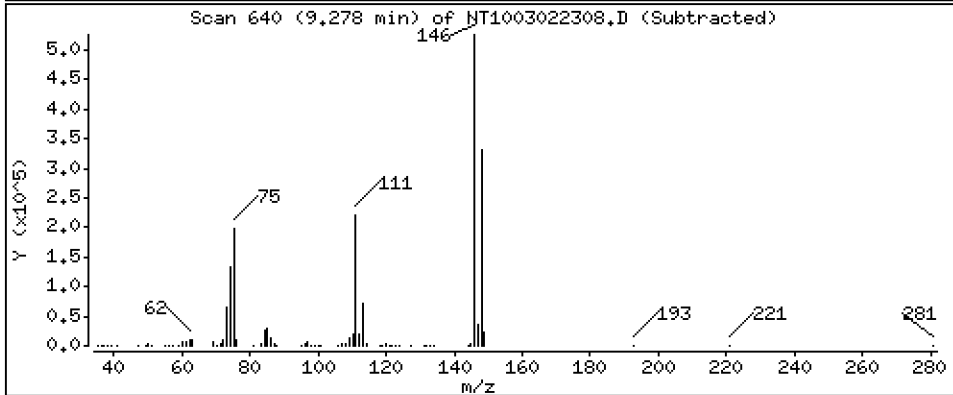
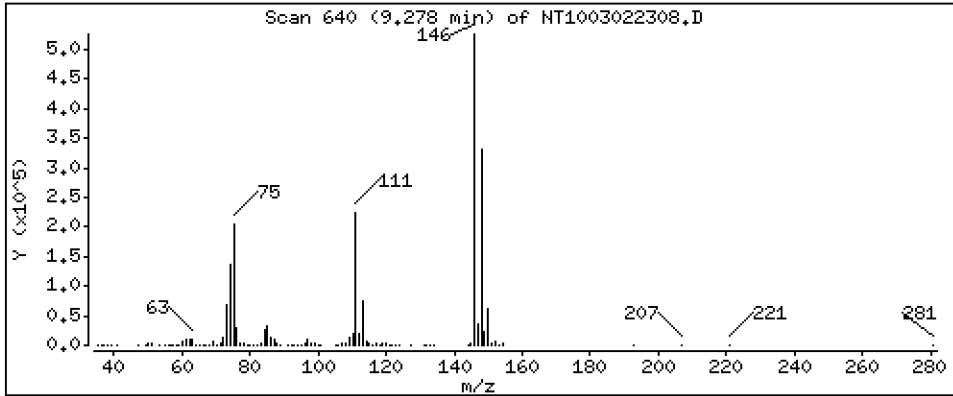
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 4,659 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

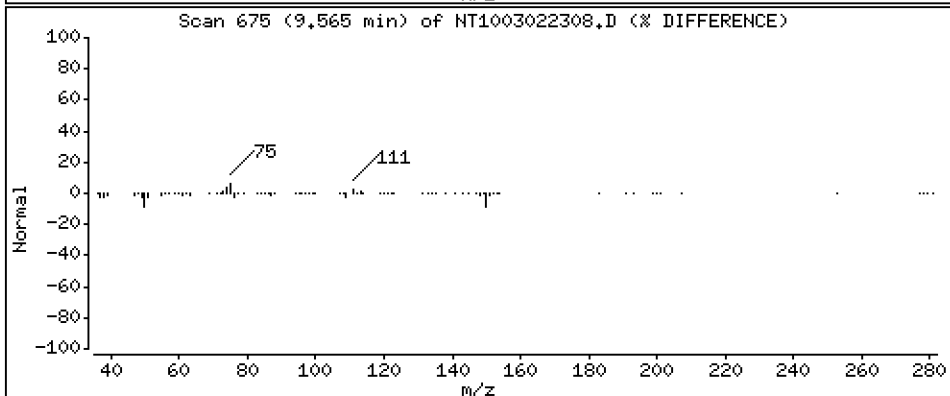
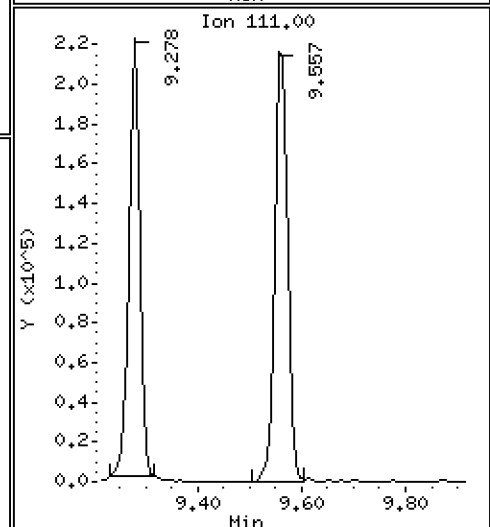
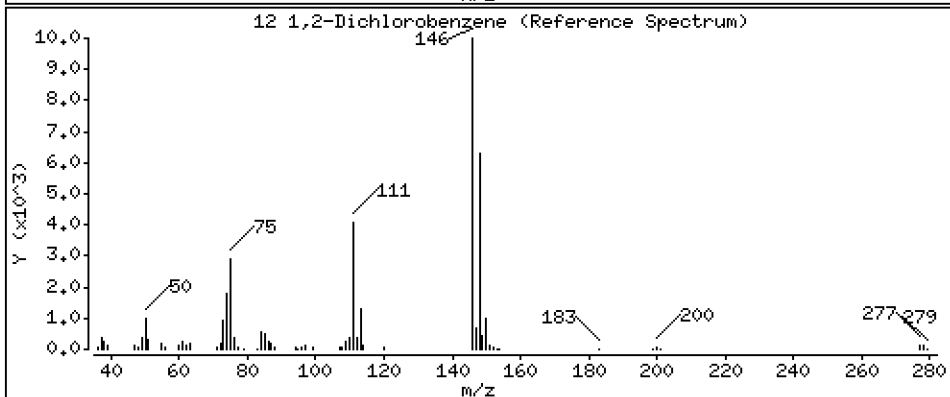
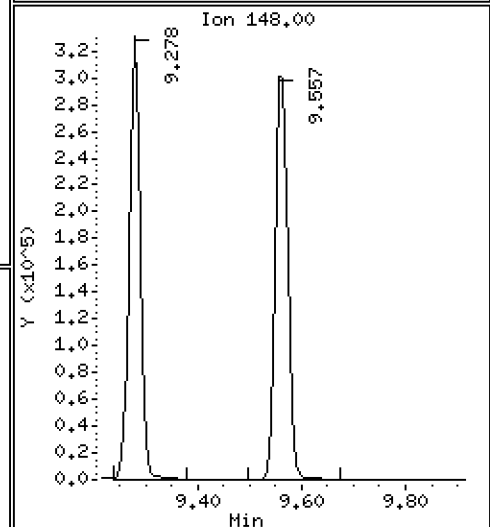
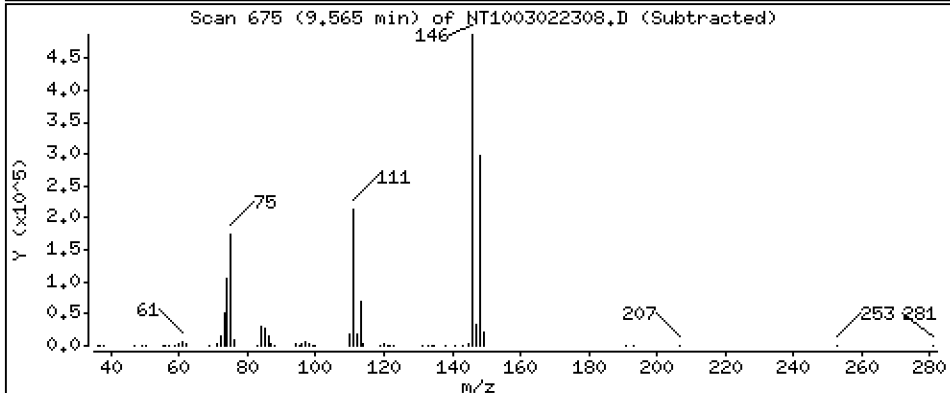
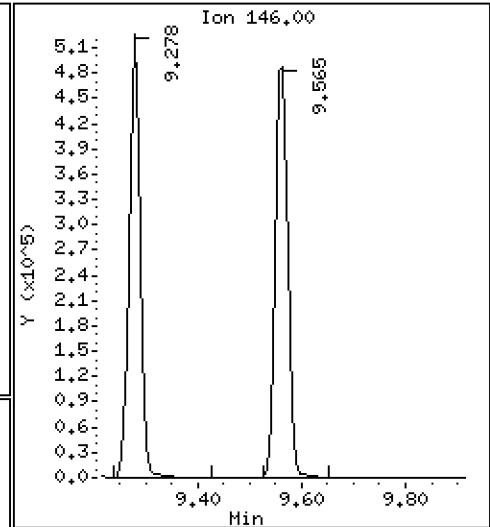
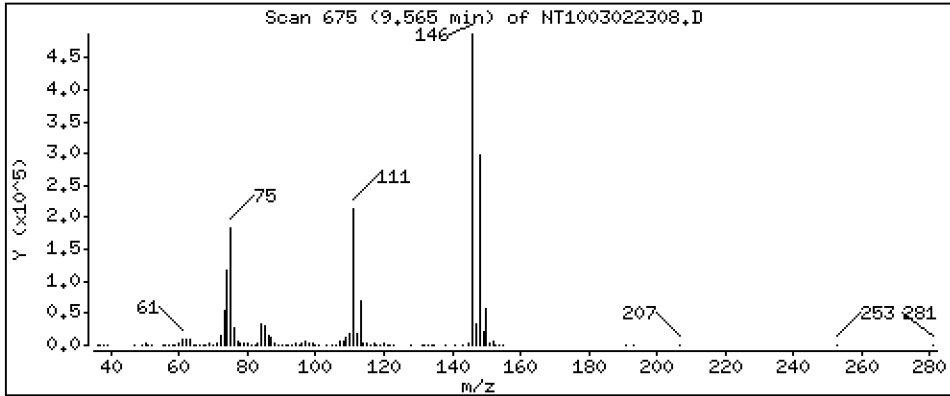
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,379 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

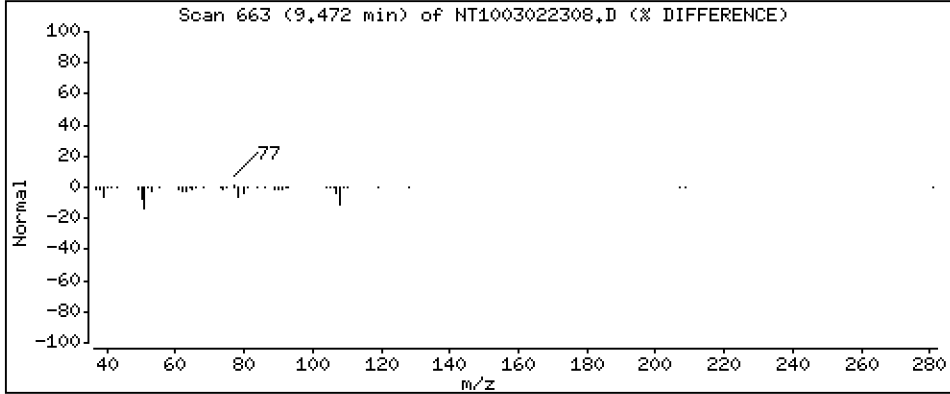
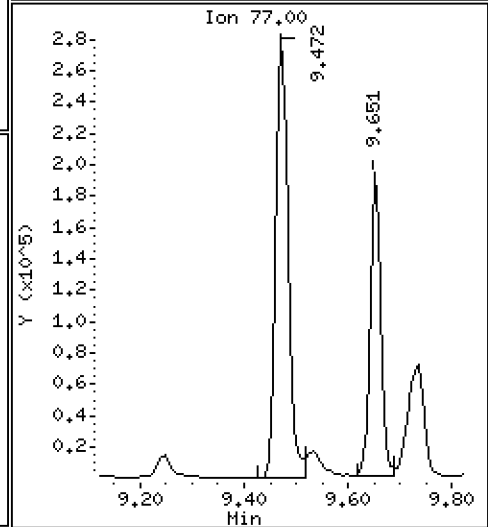
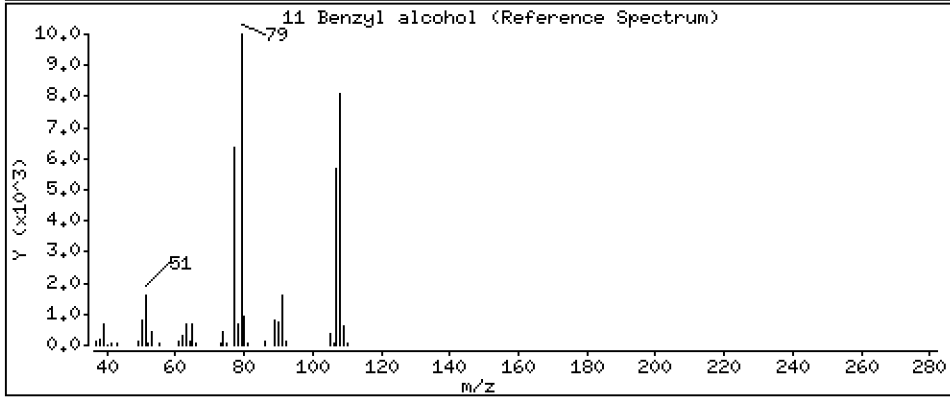
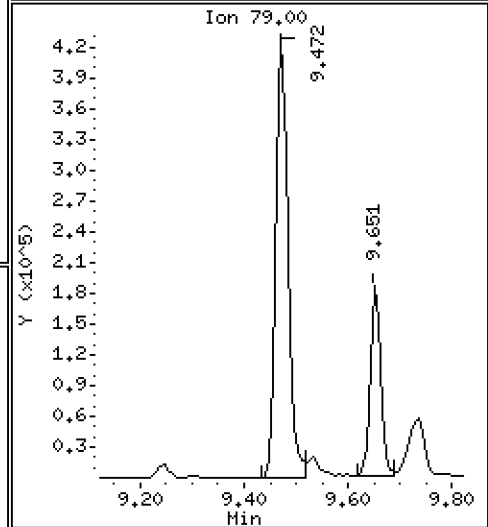
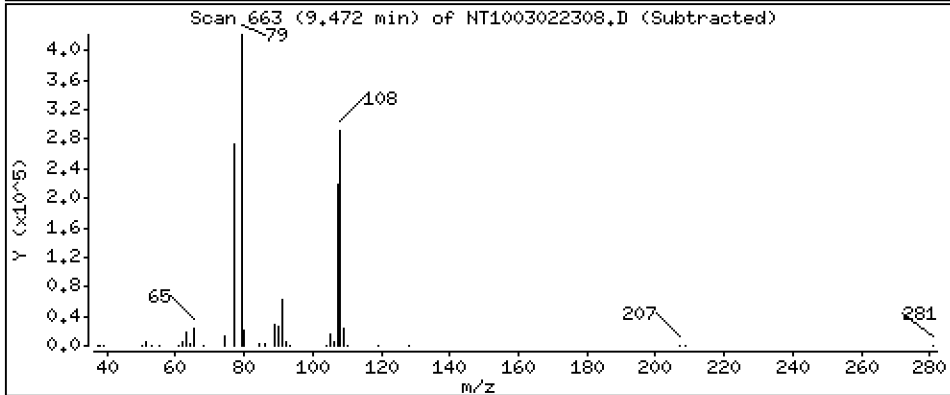
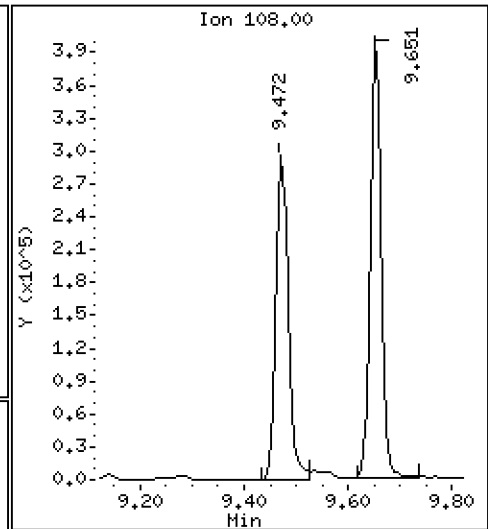
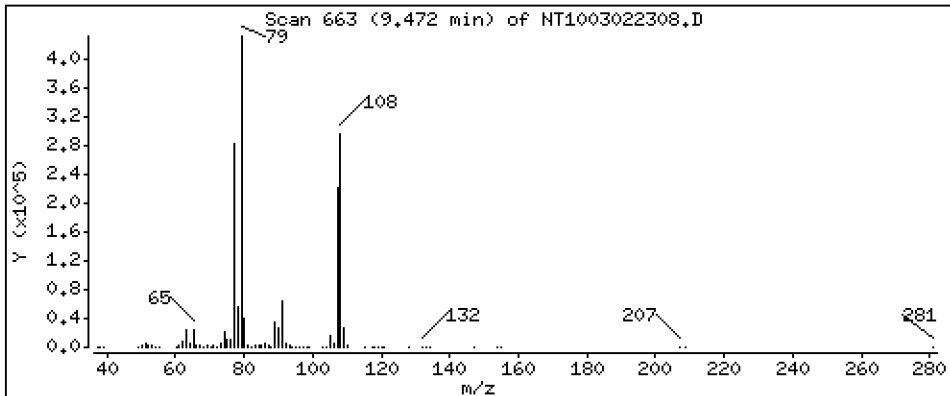
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 4,402 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

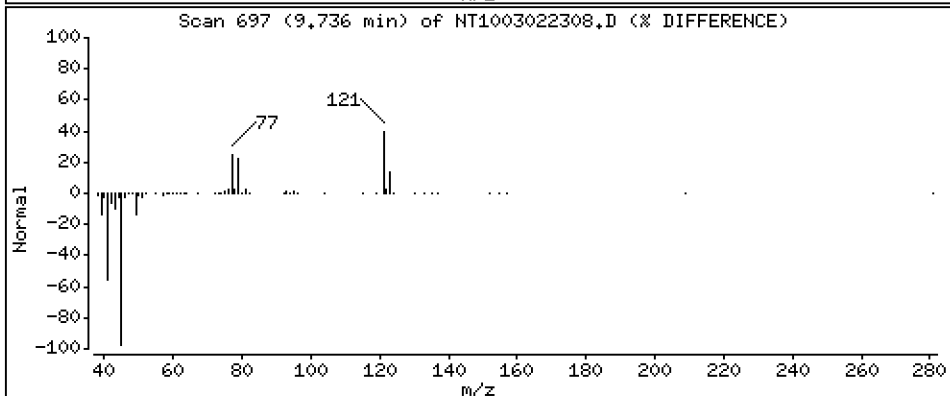
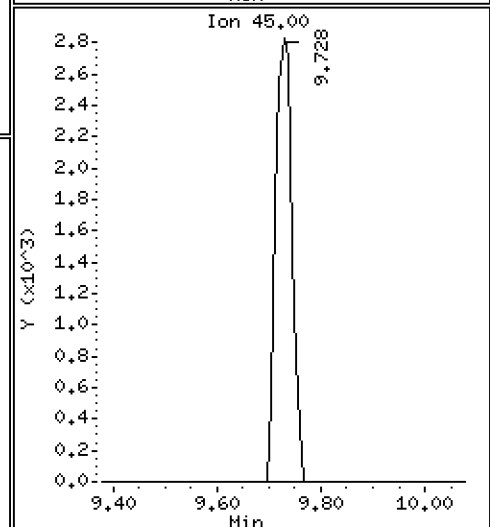
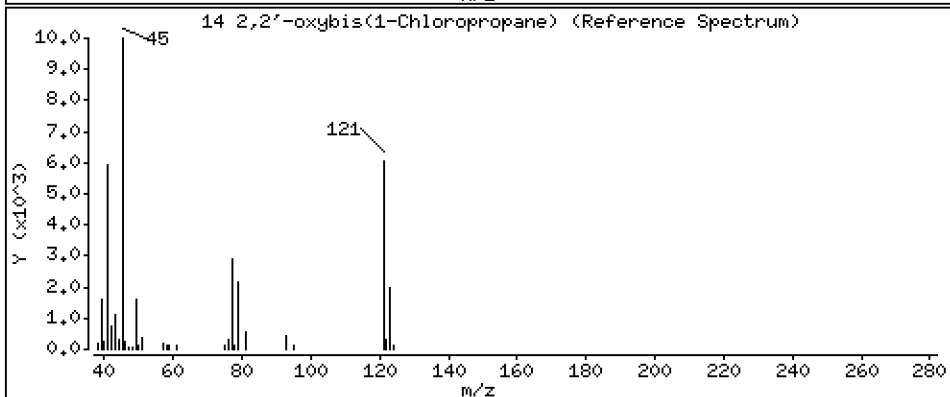
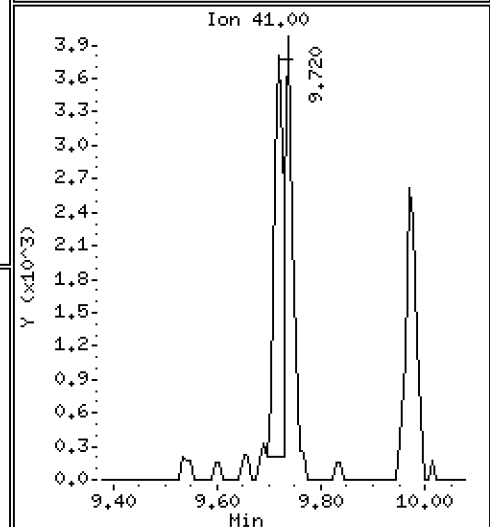
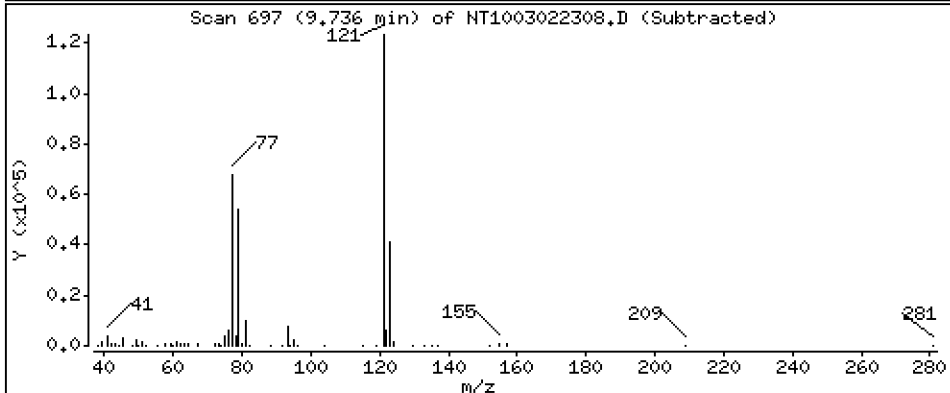
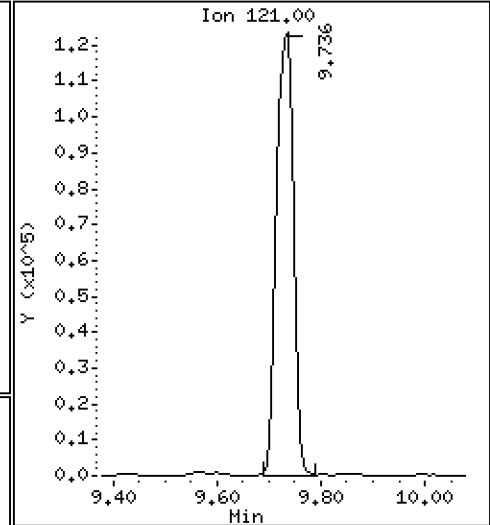
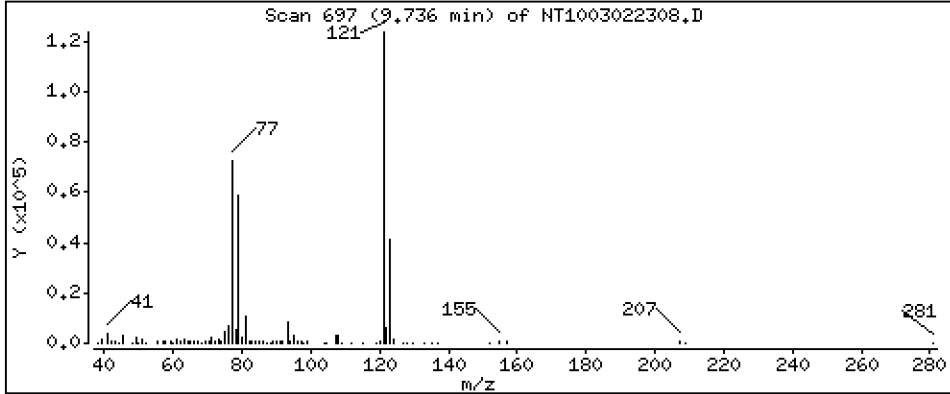
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 5,314 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

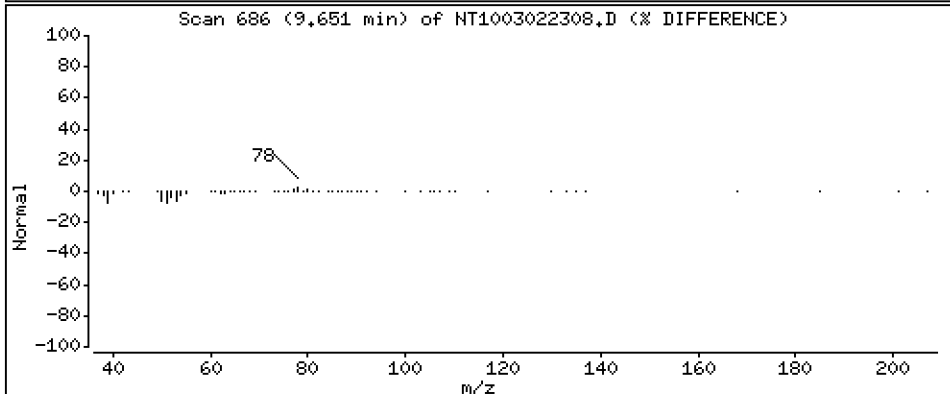
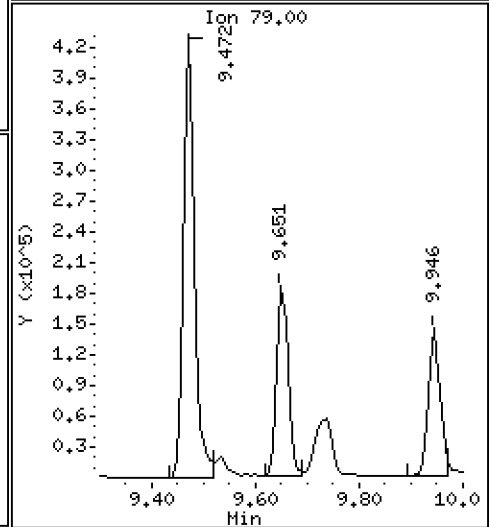
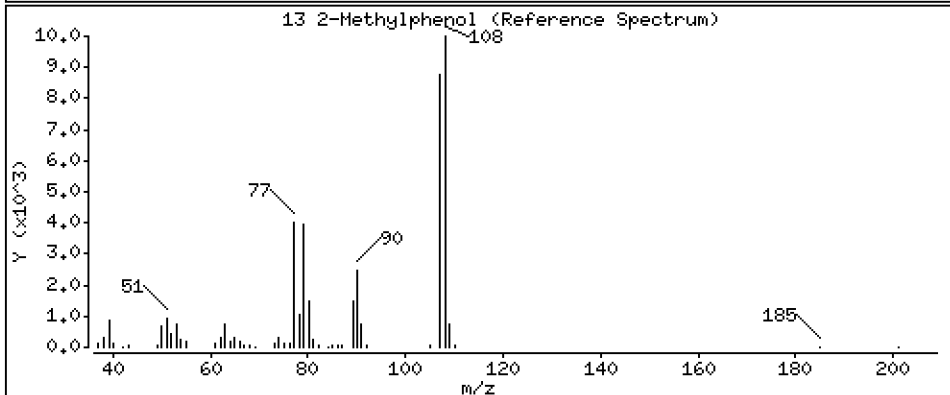
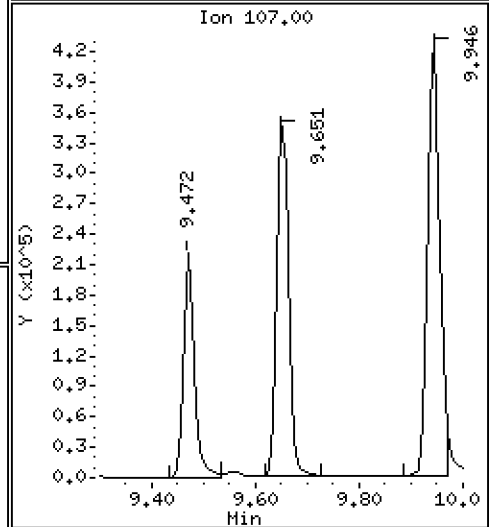
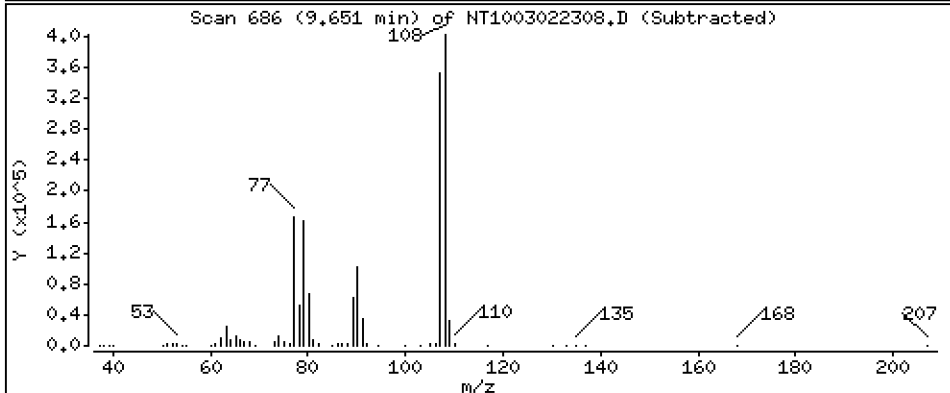
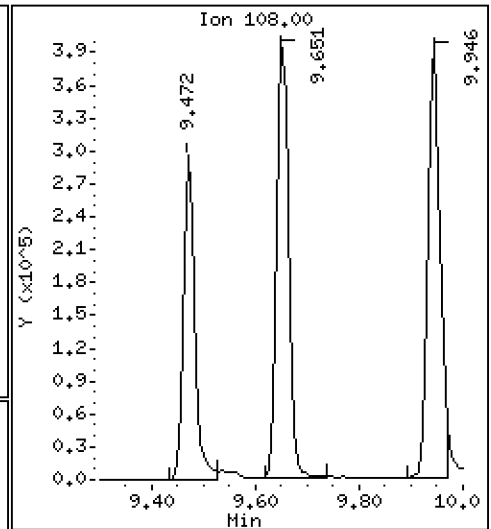
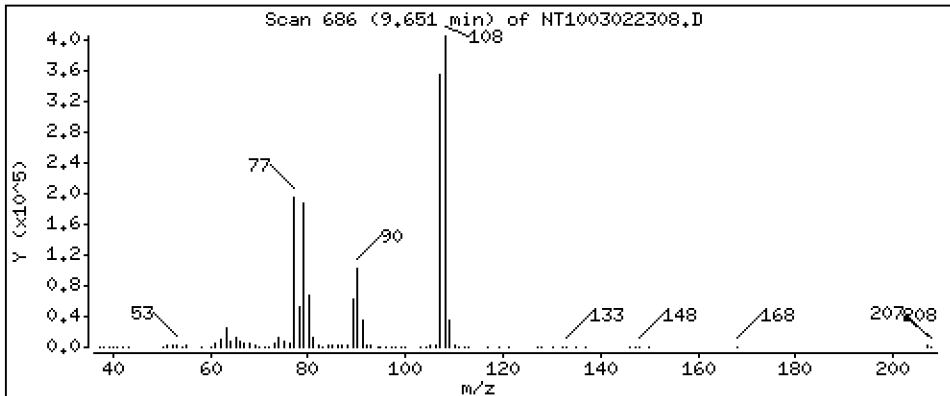
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Concentration: 3,772 ug/mL

13 2-Methylphenol



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

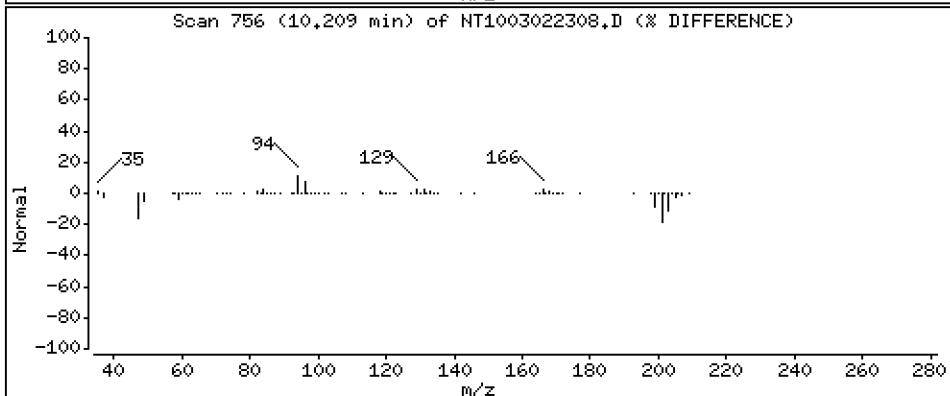
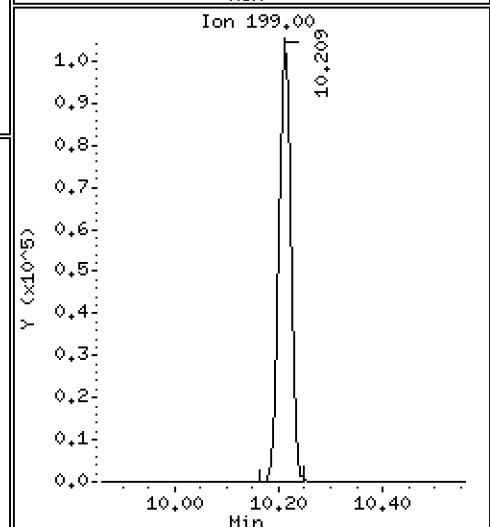
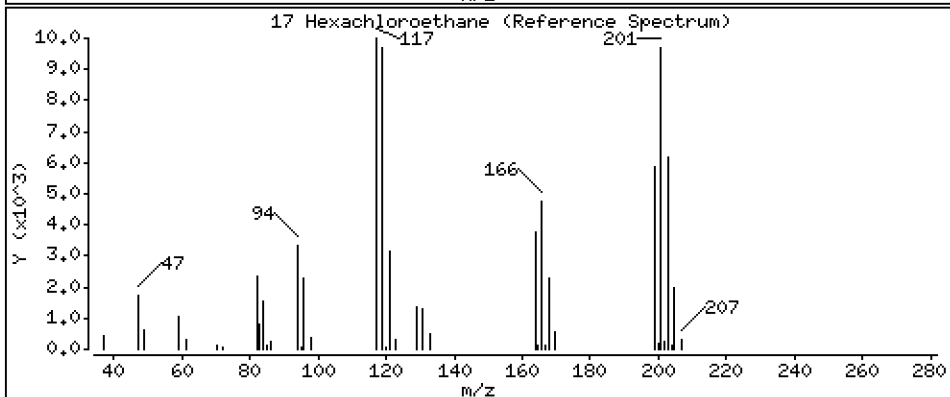
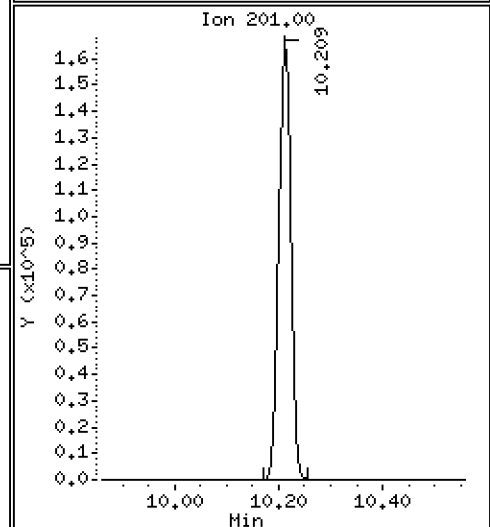
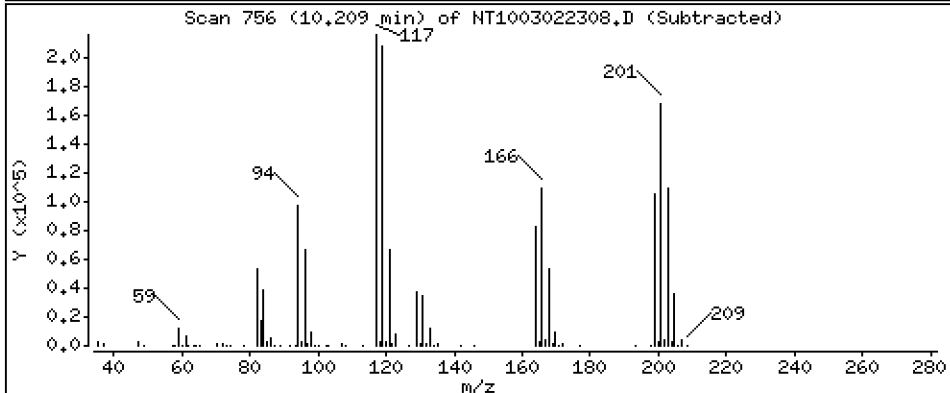
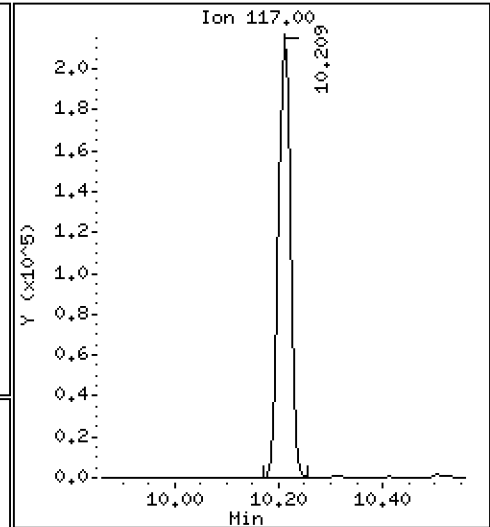
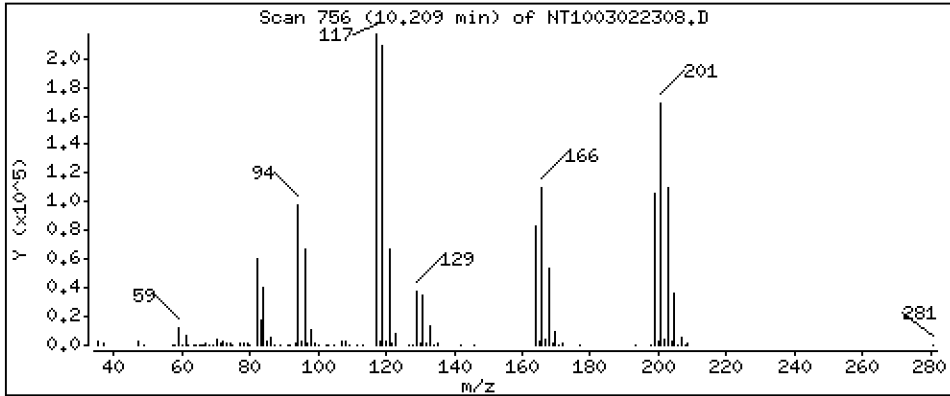
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 4,370 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

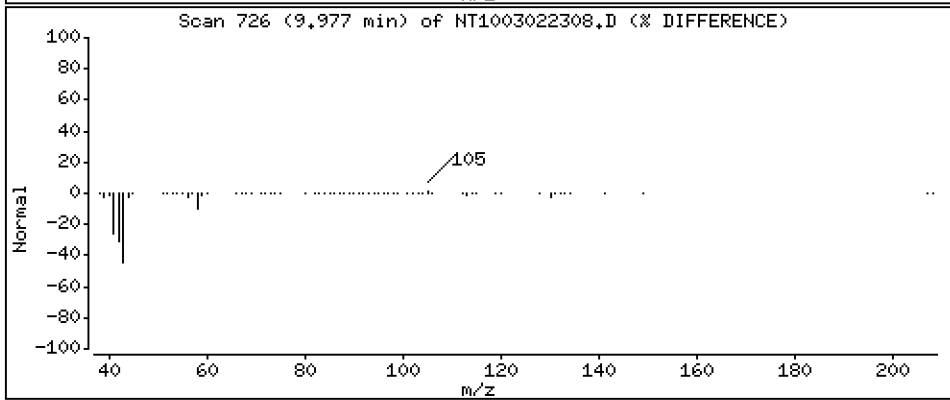
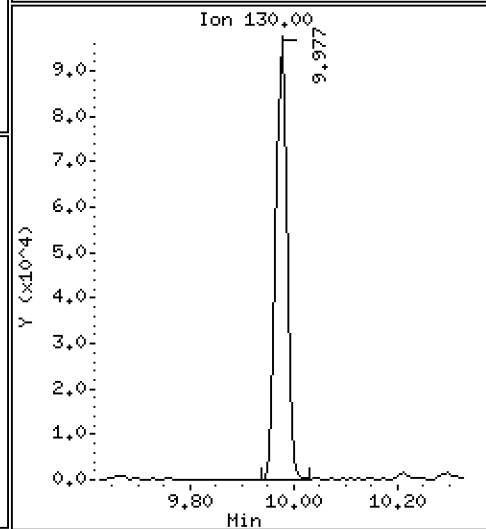
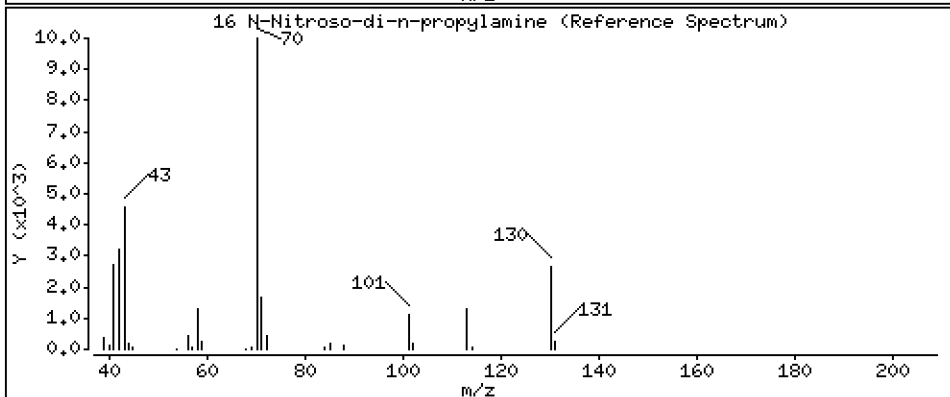
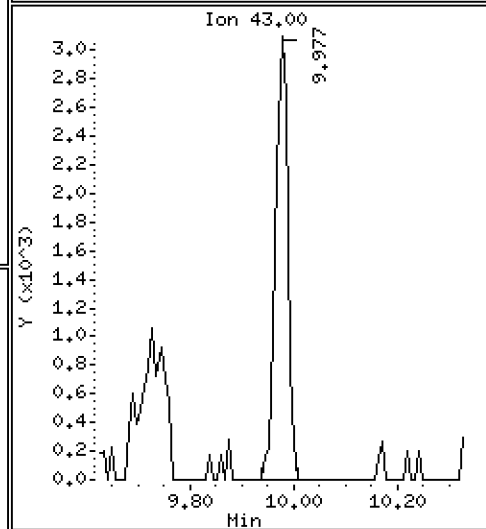
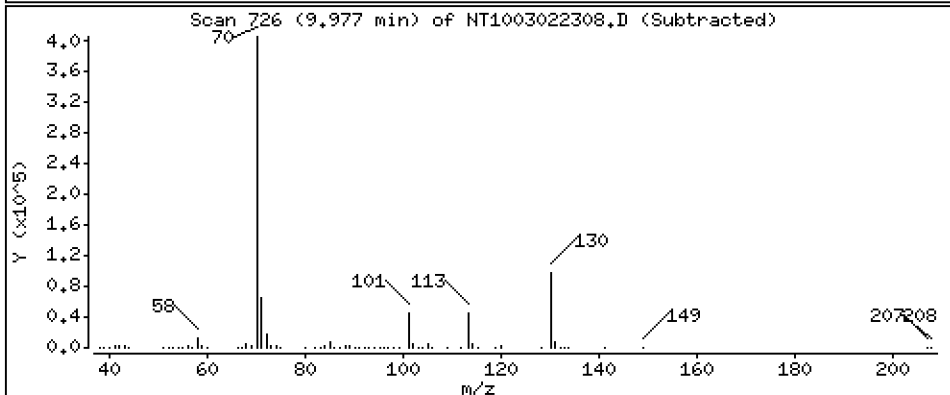
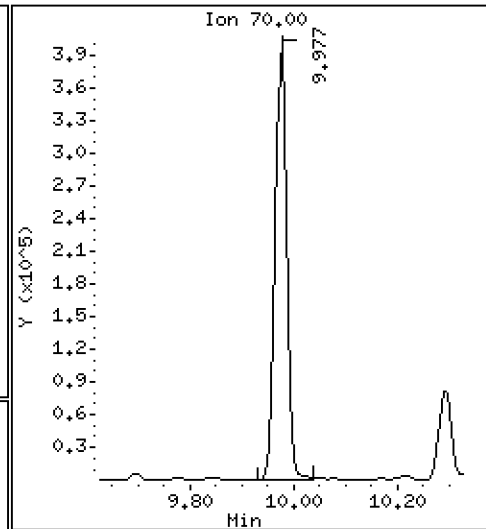
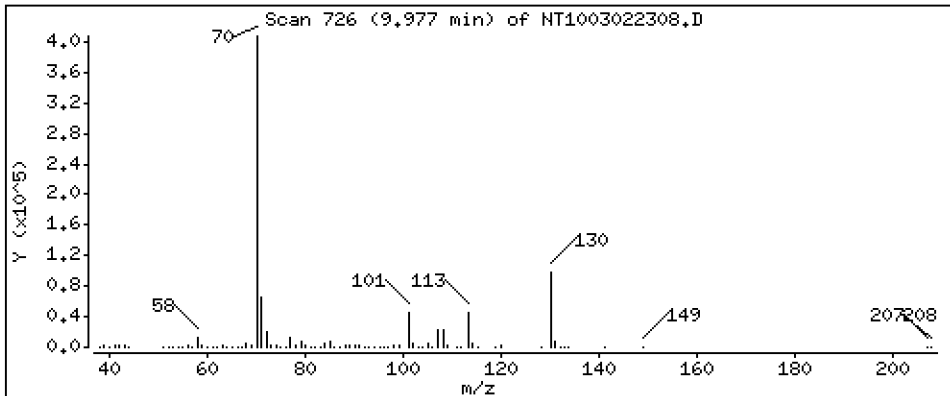
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 4,735 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

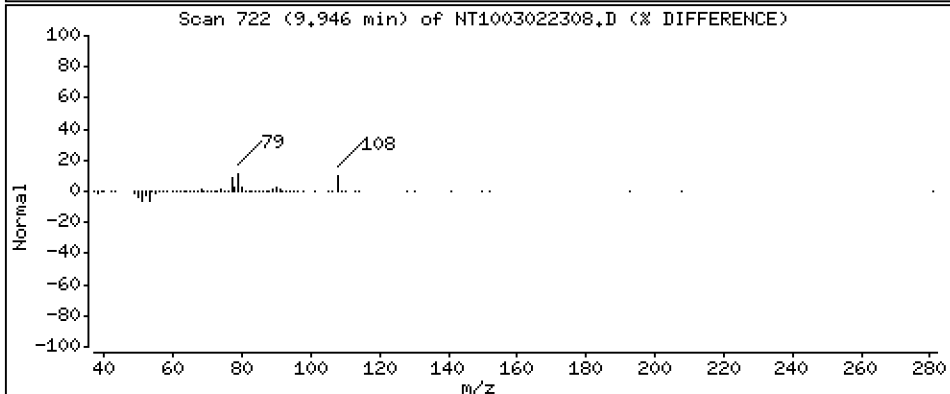
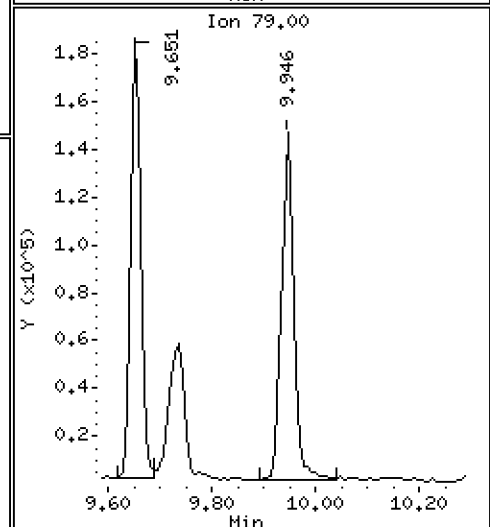
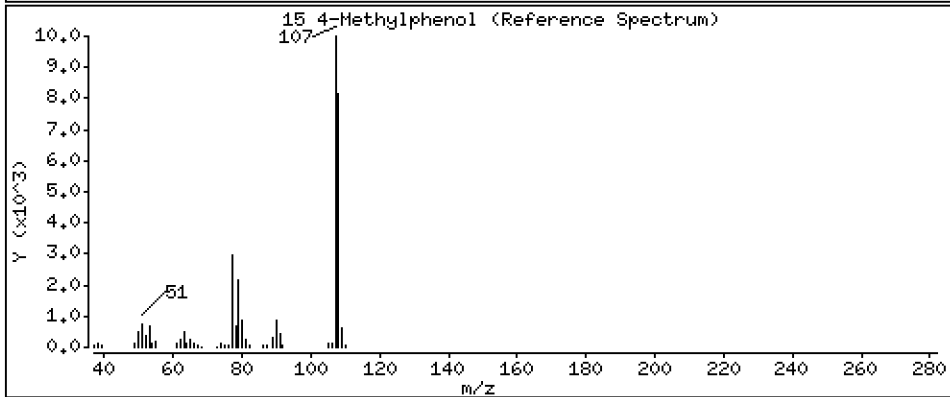
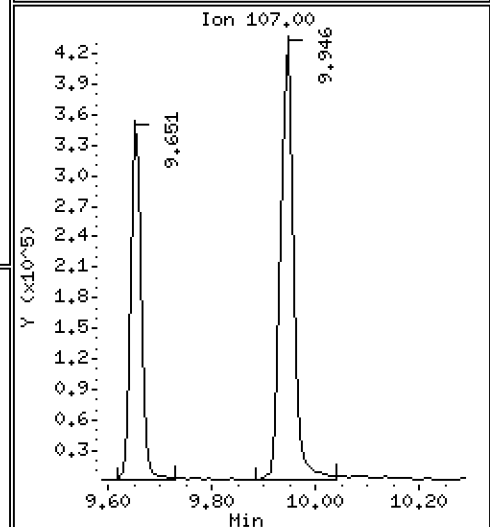
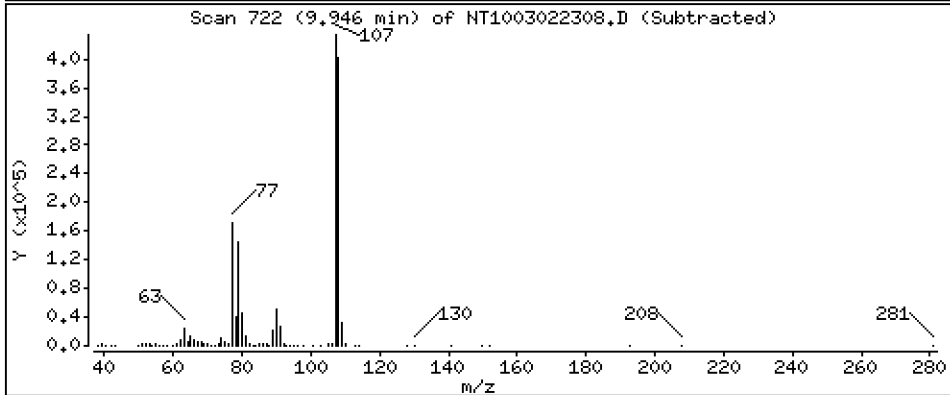
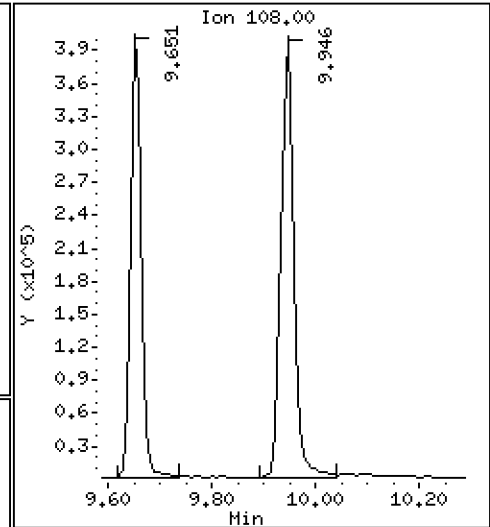
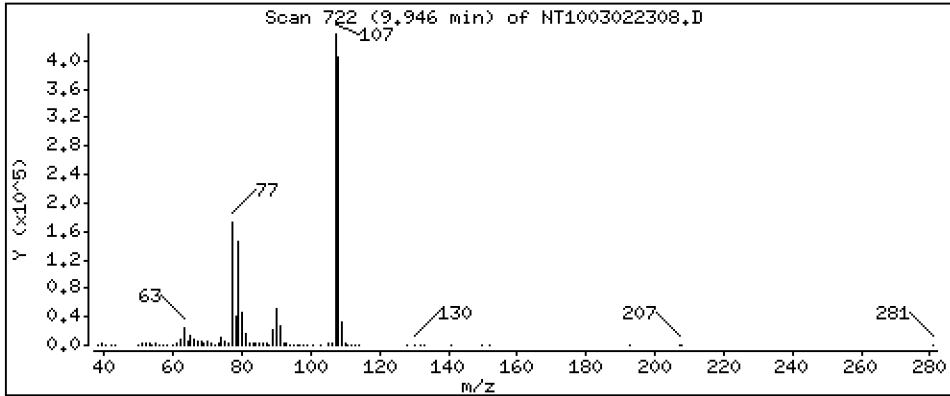
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 3,867 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

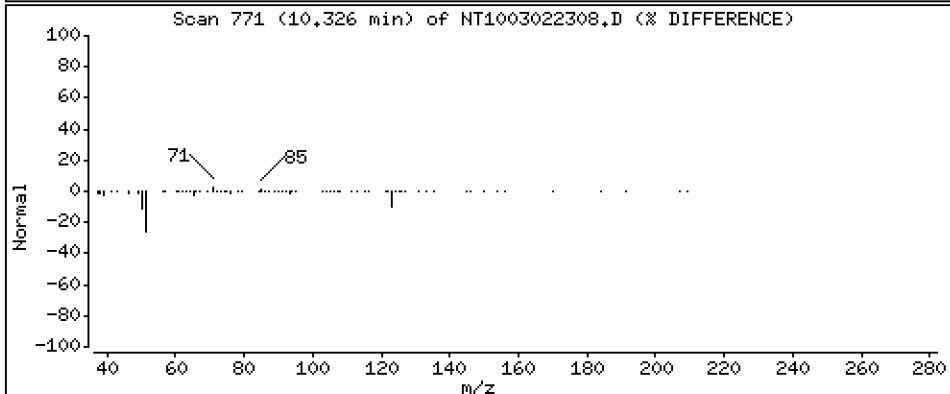
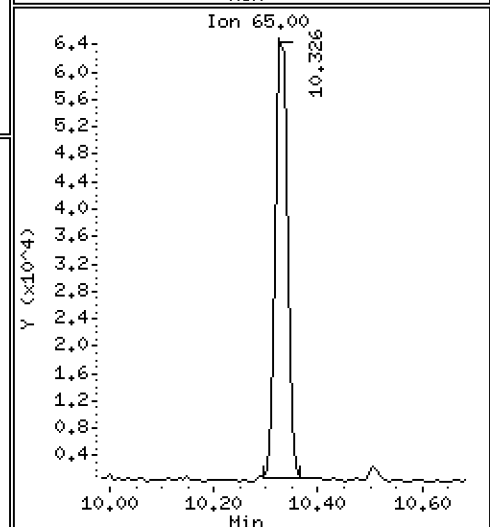
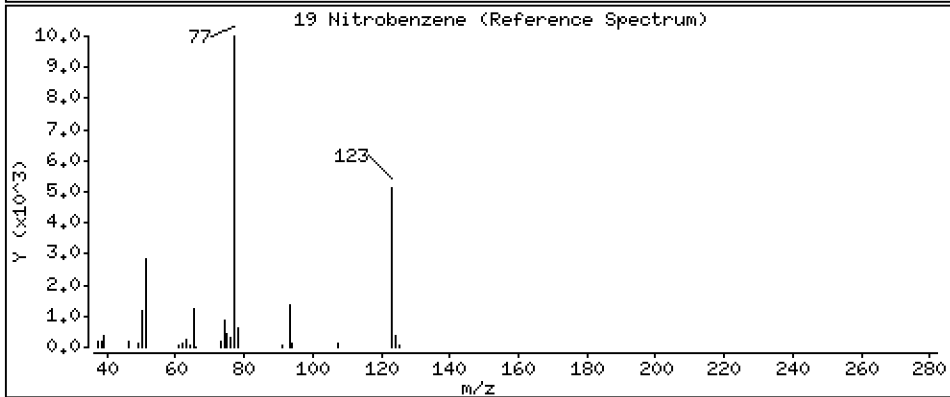
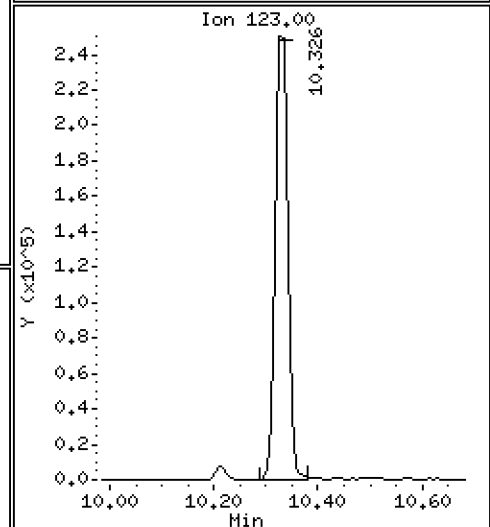
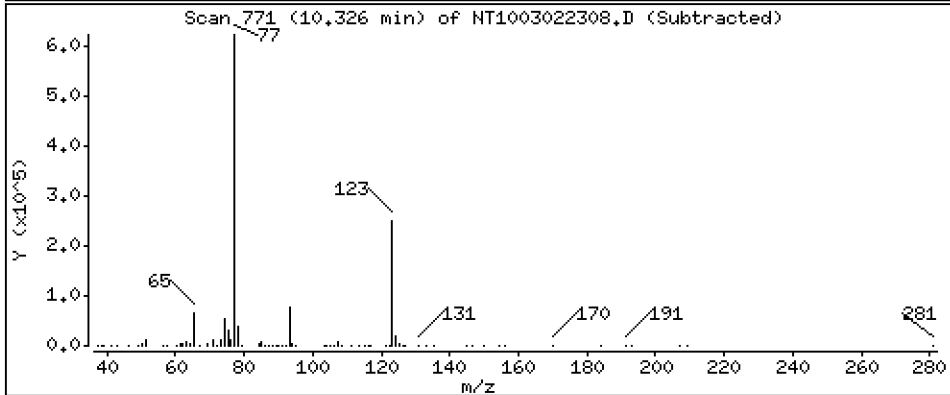
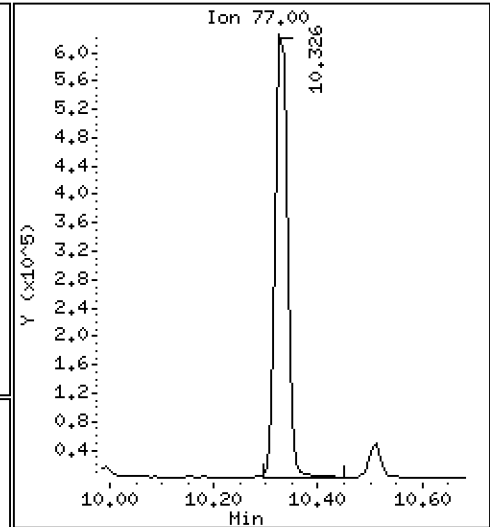
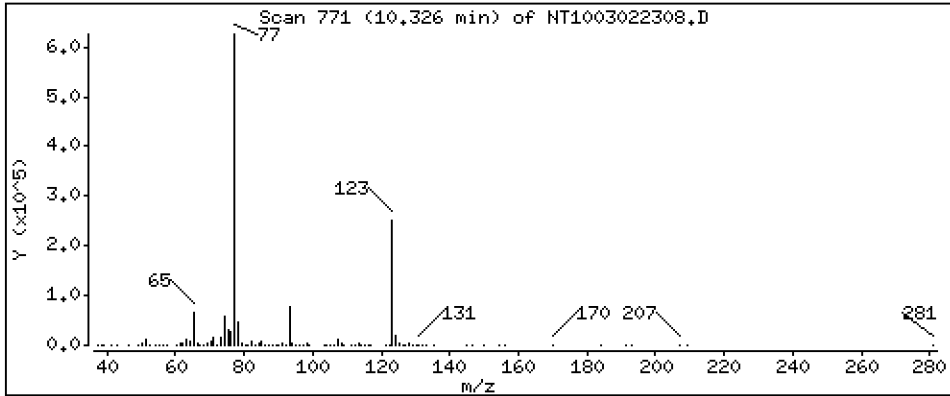
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 4,716 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

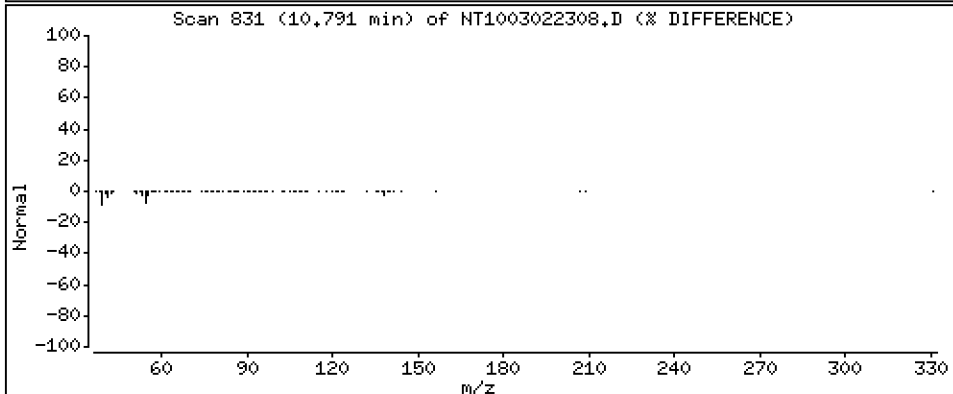
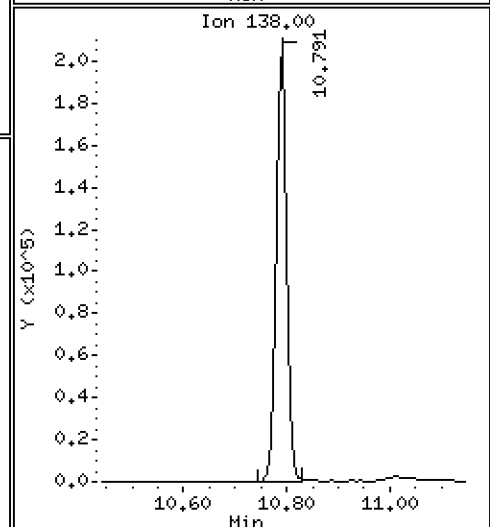
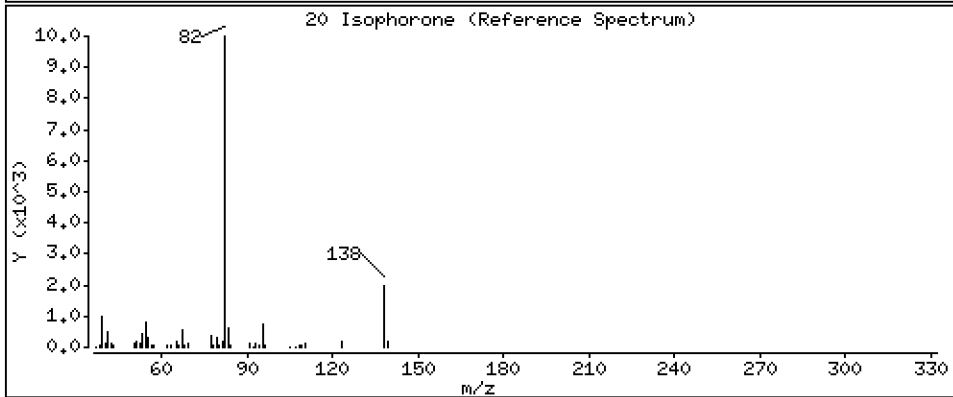
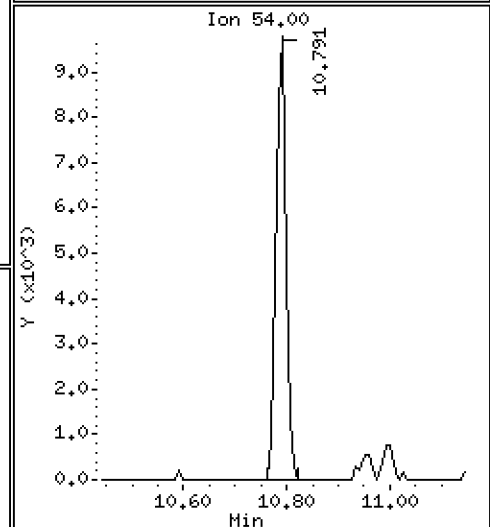
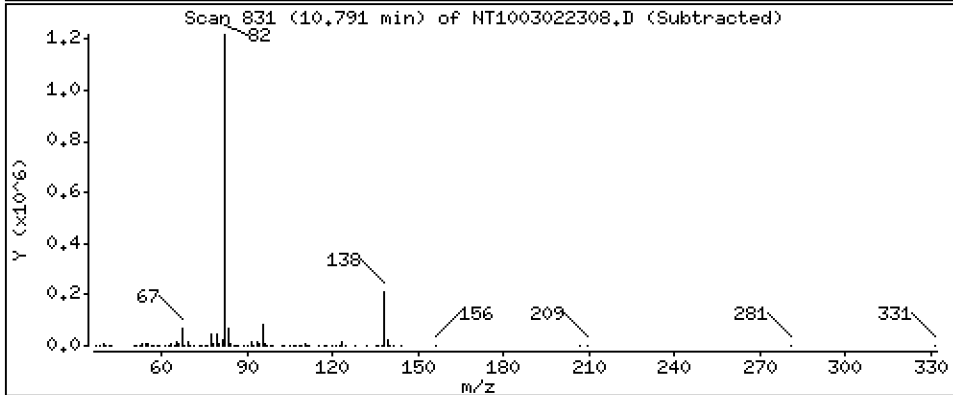
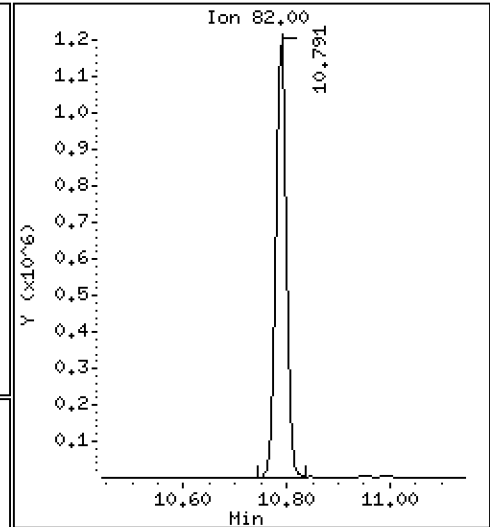
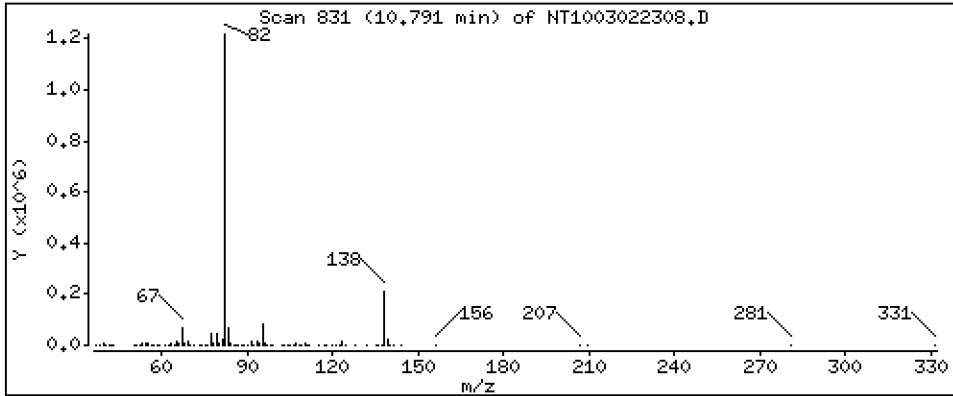
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 6,839 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

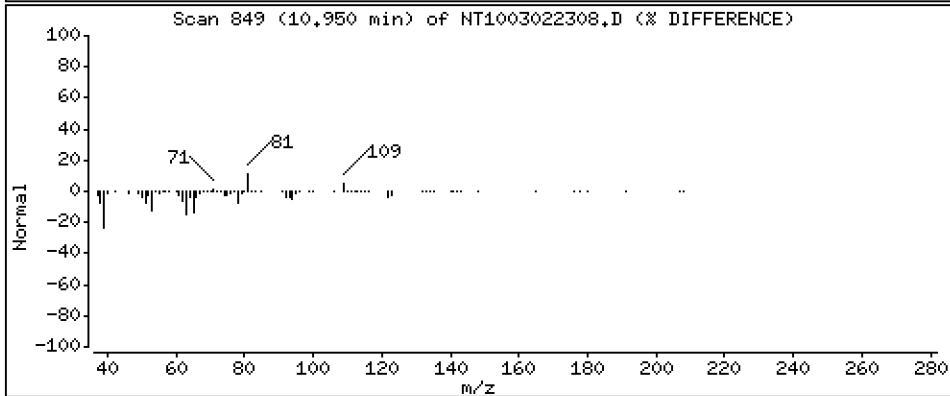
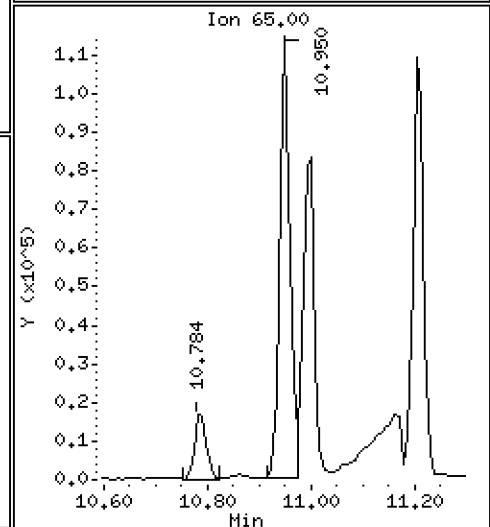
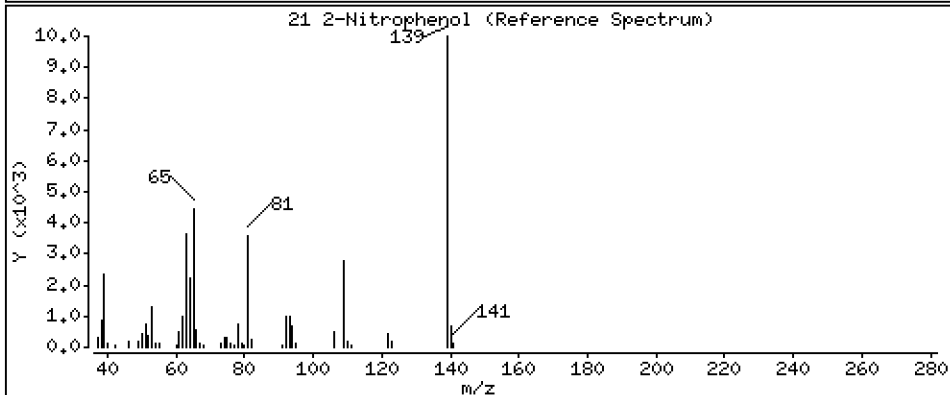
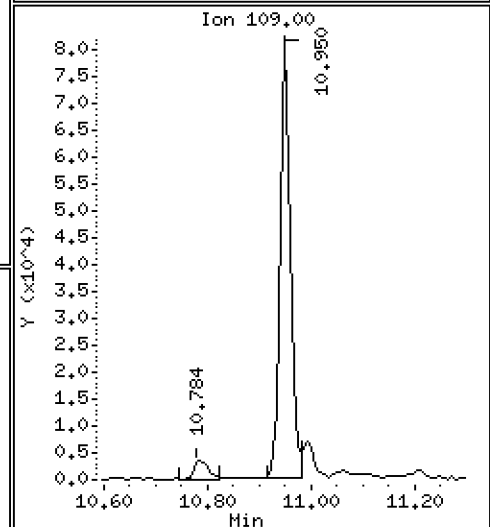
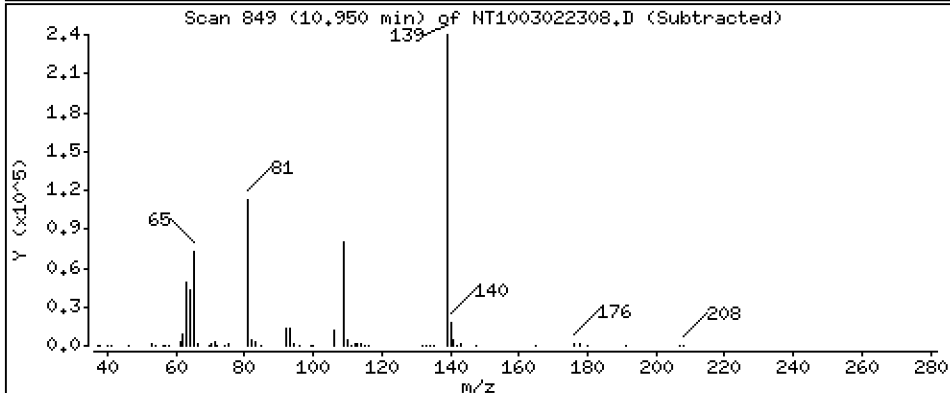
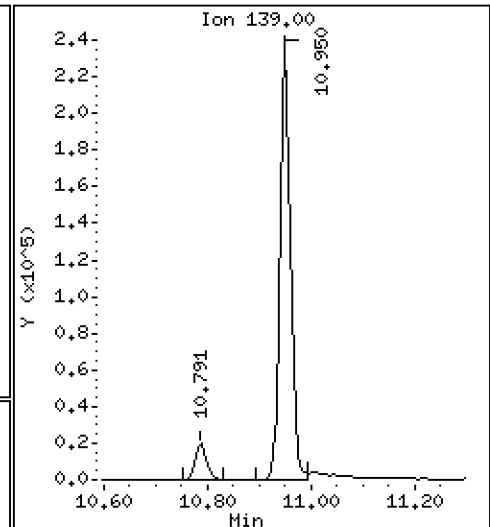
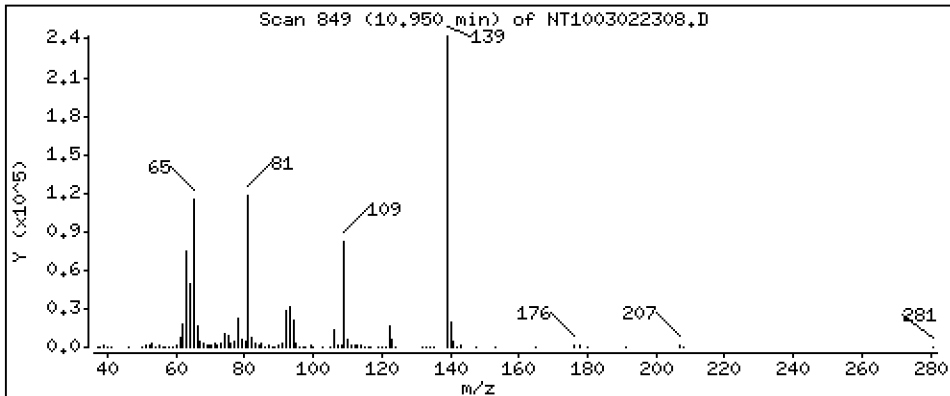
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,721 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

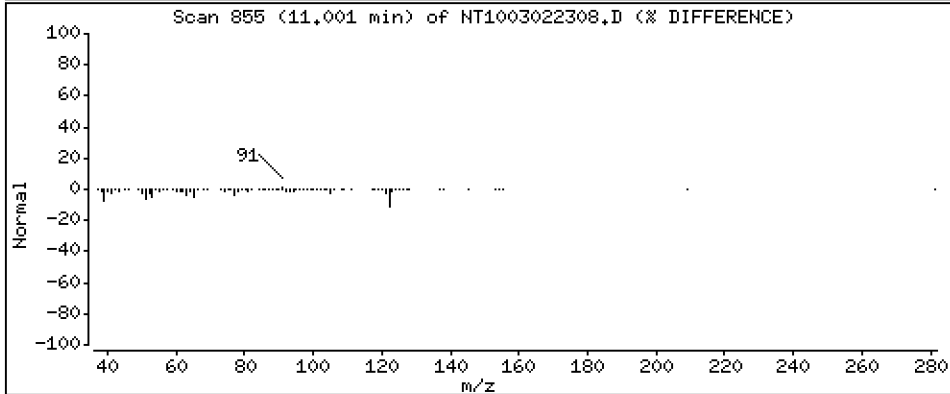
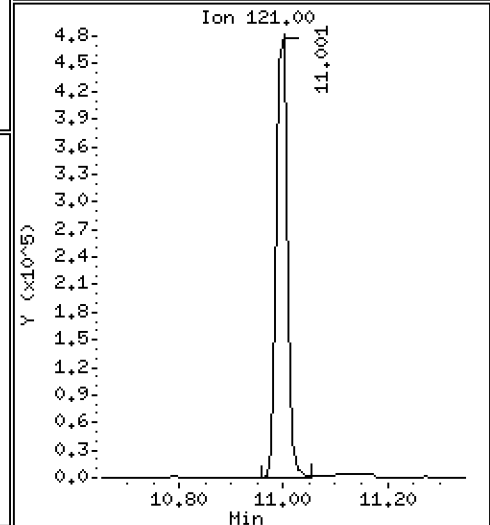
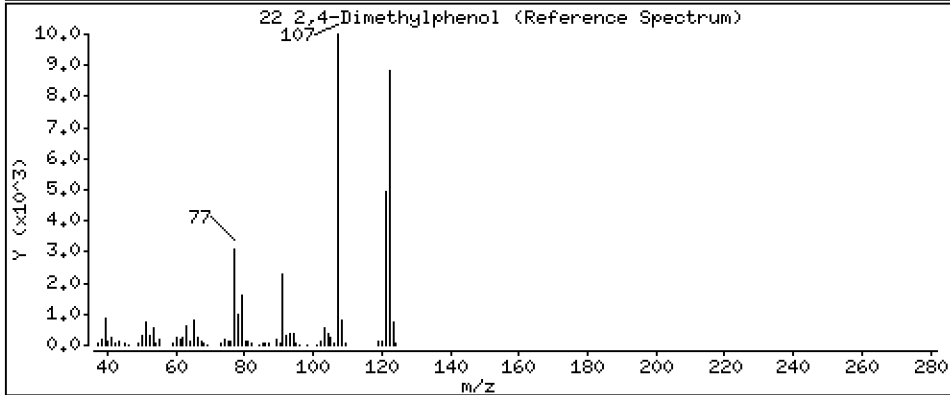
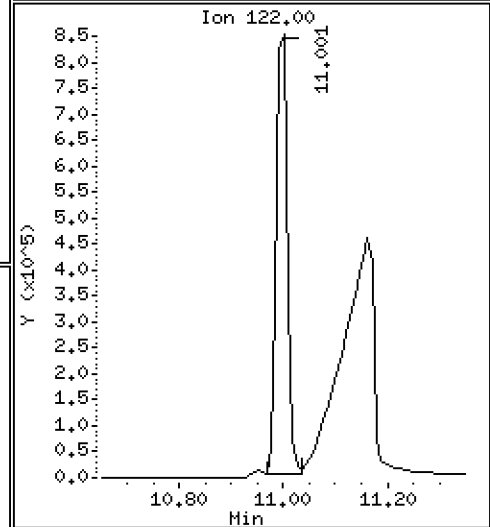
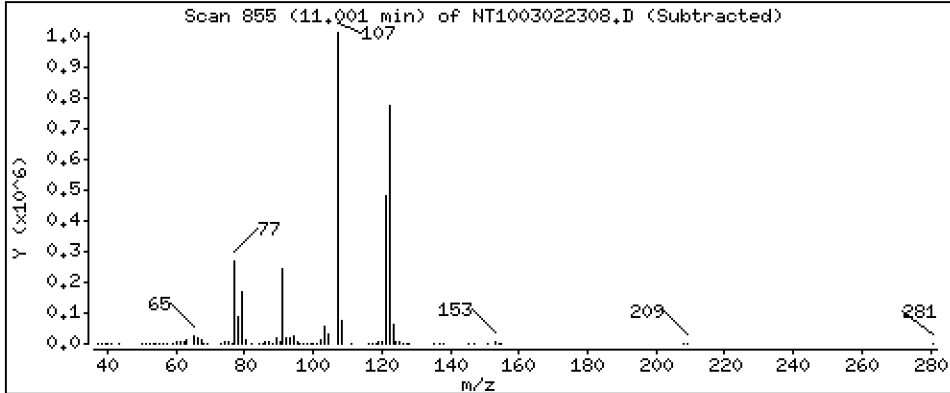
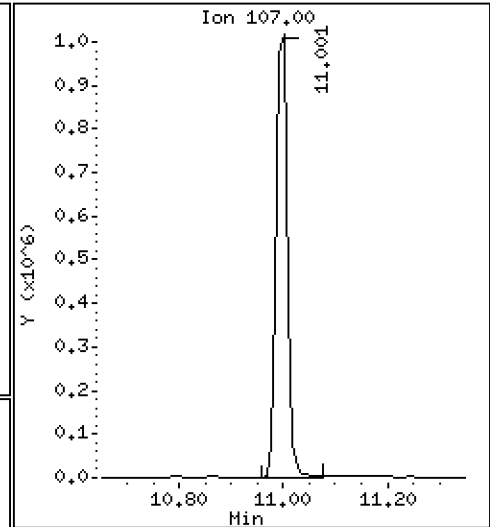
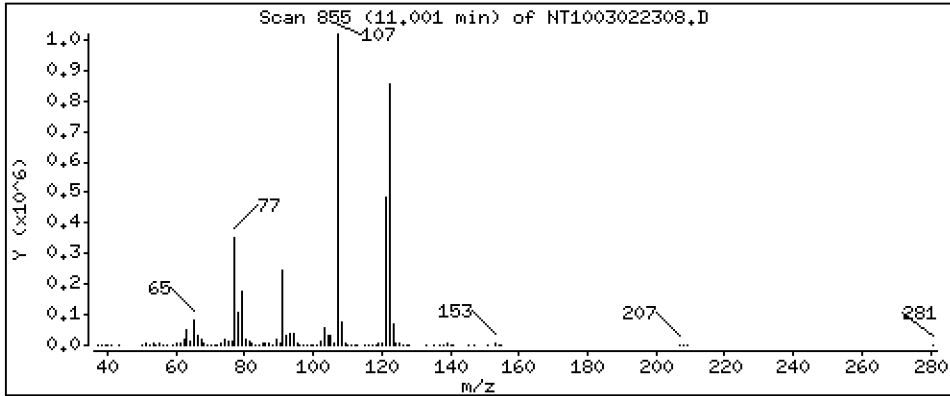
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 7,691 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

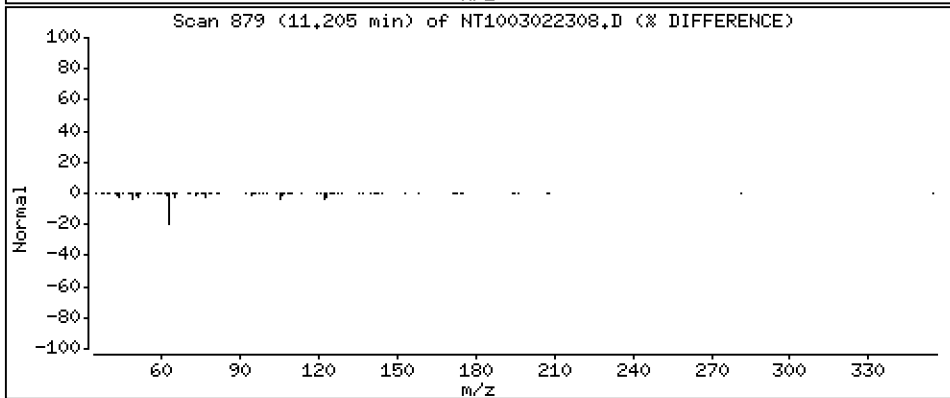
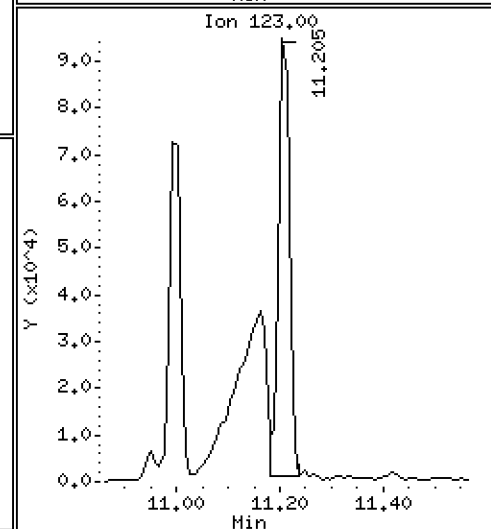
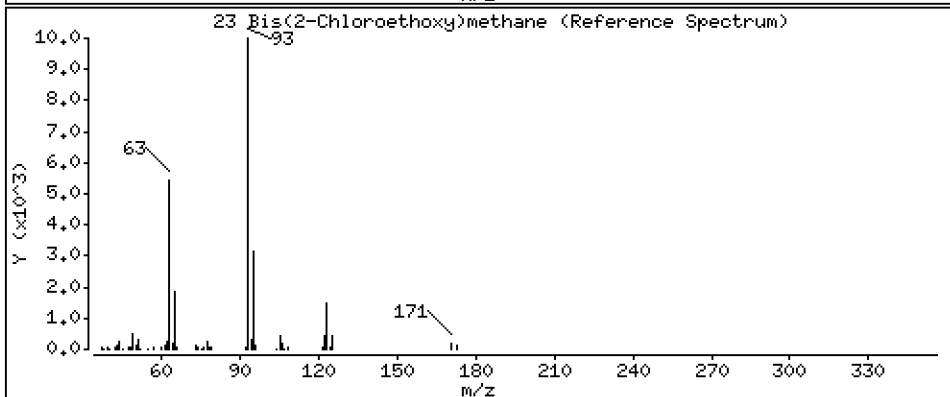
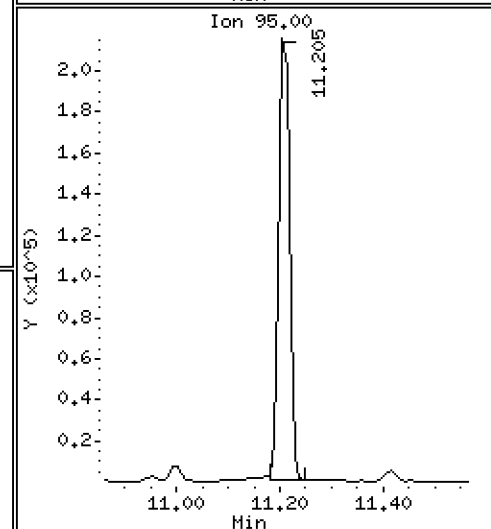
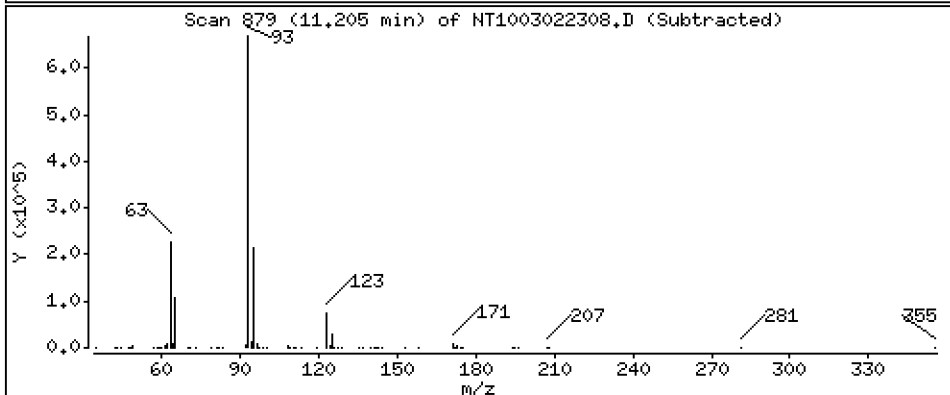
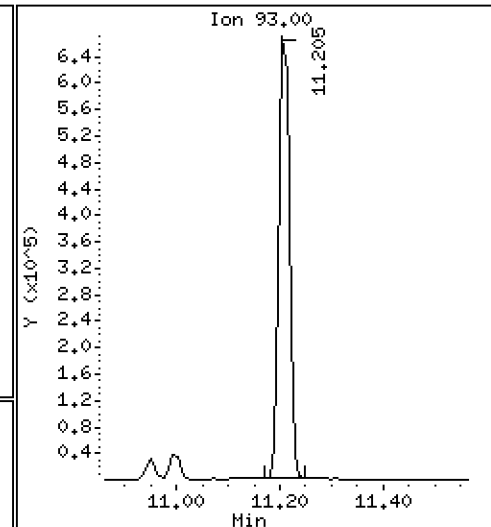
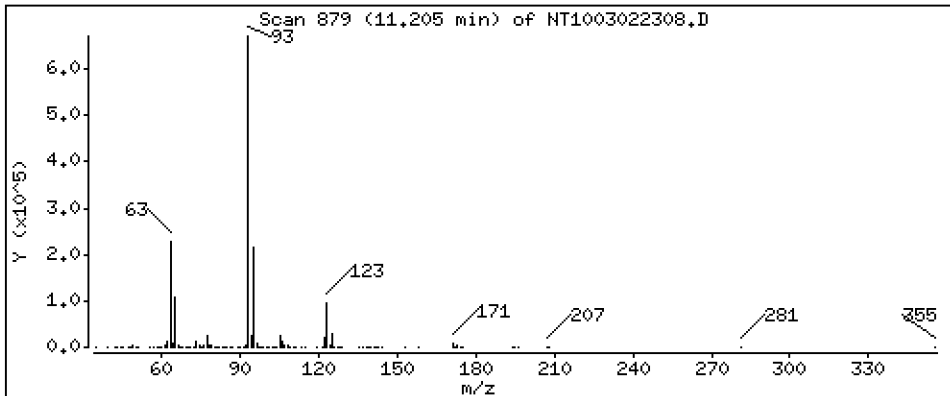
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 5,925 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

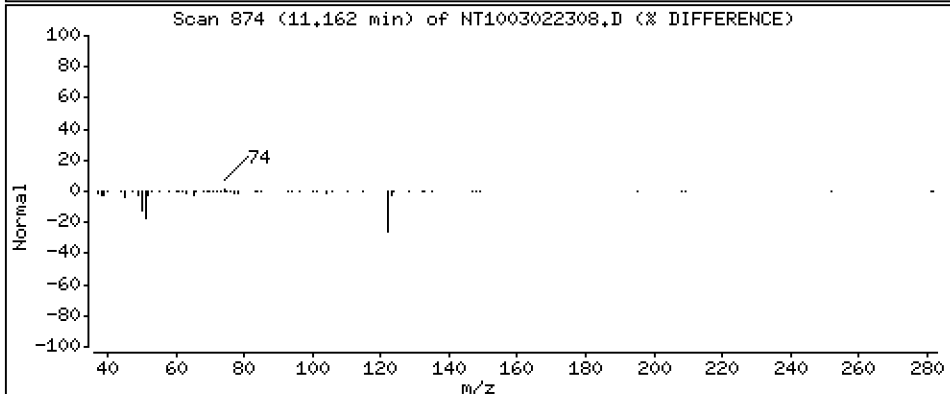
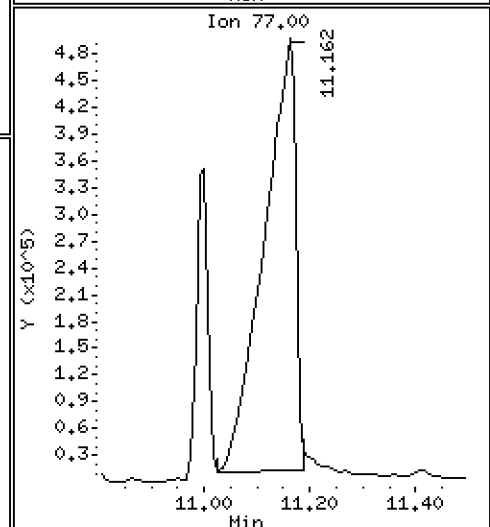
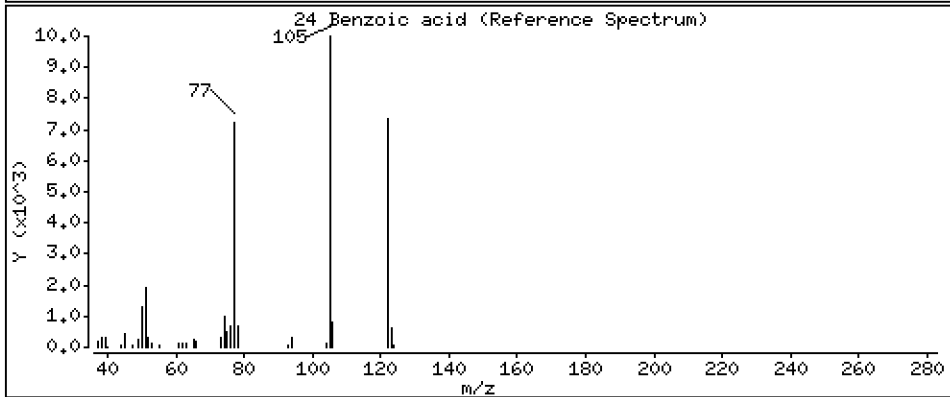
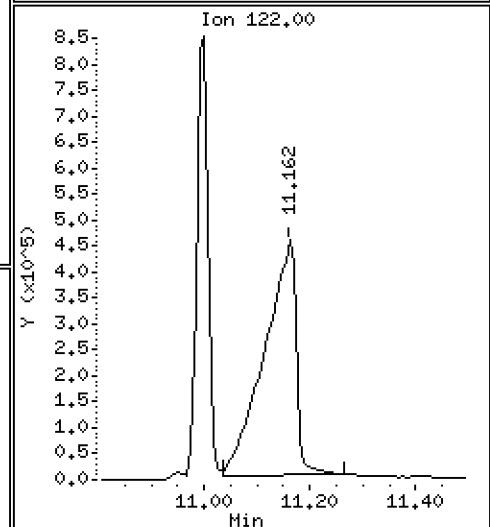
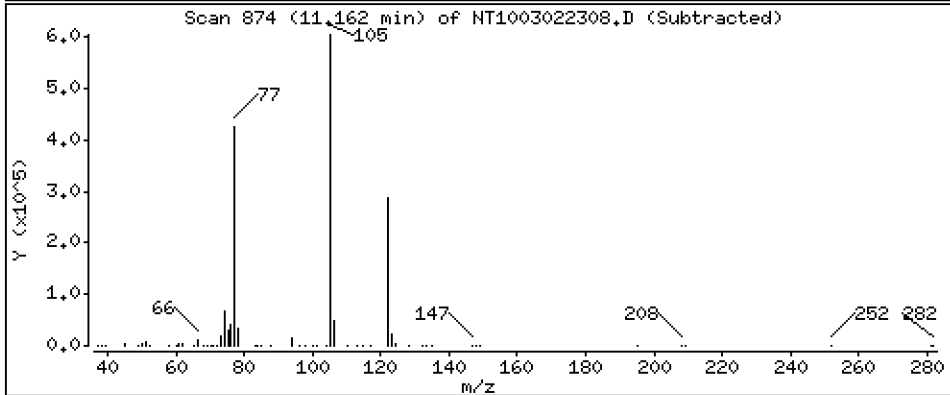
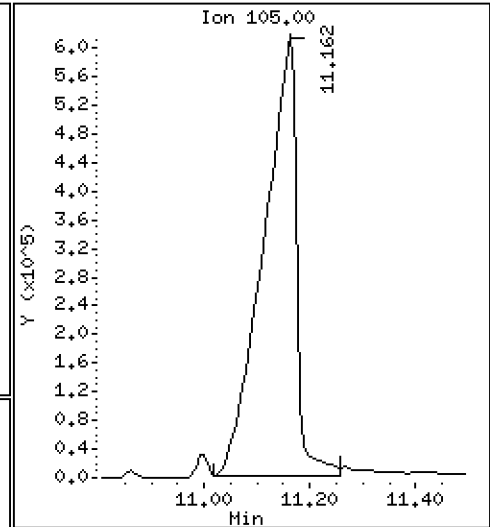
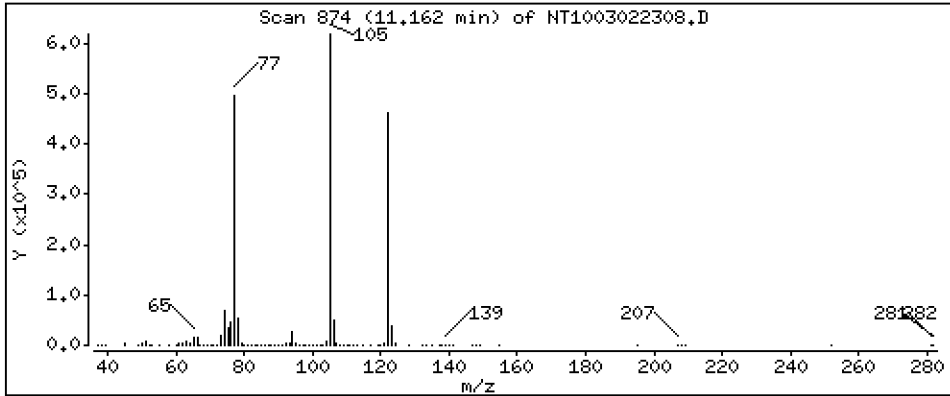
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 21,91 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

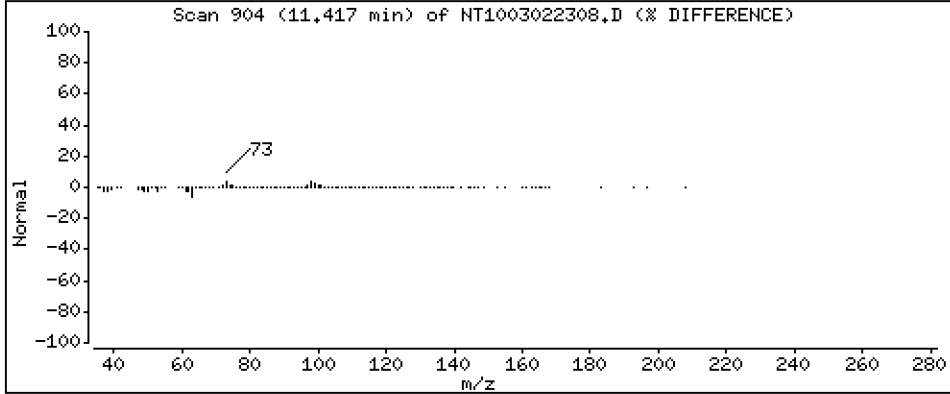
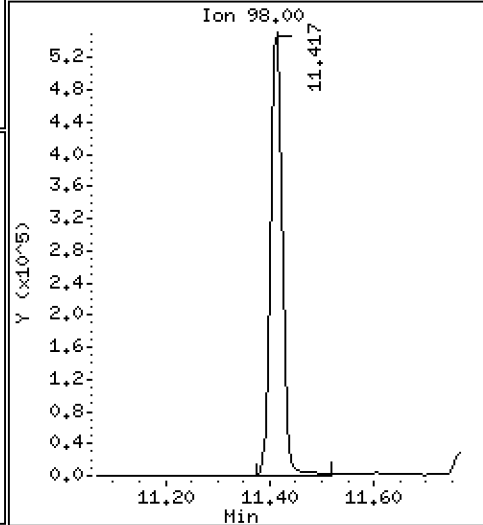
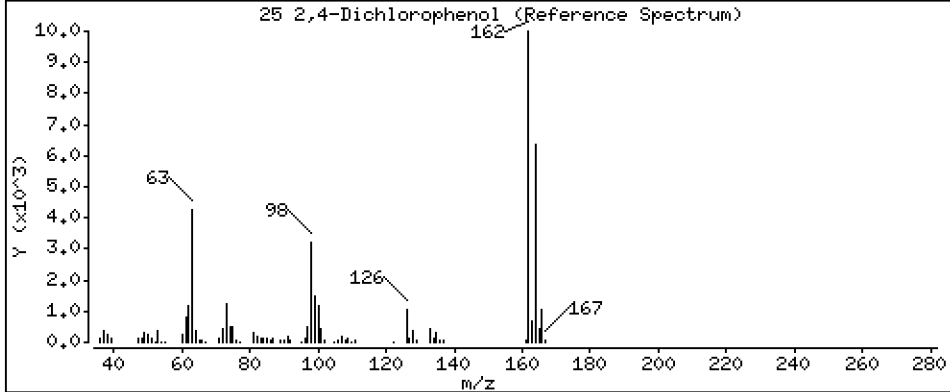
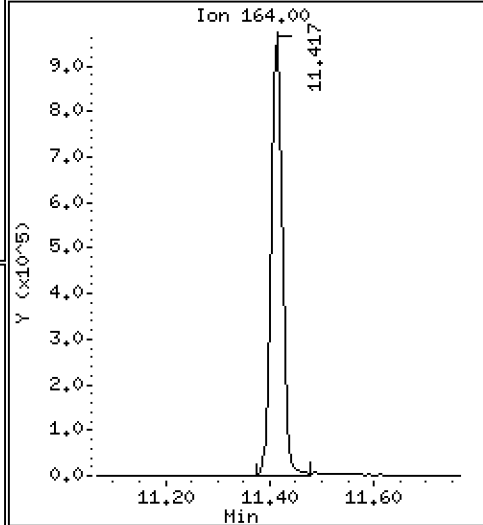
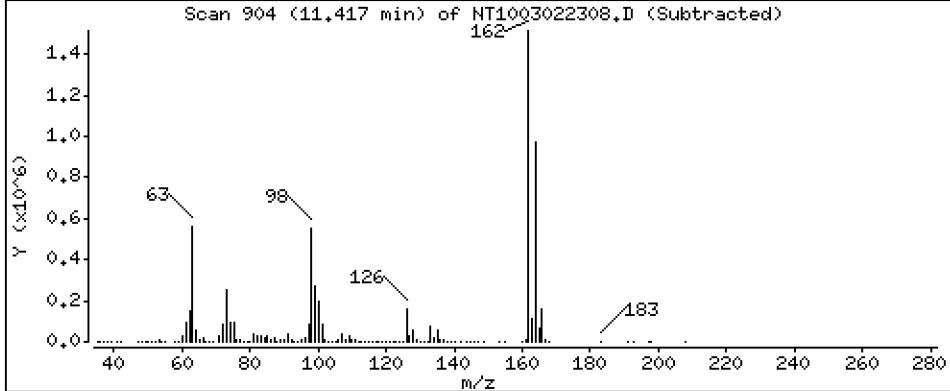
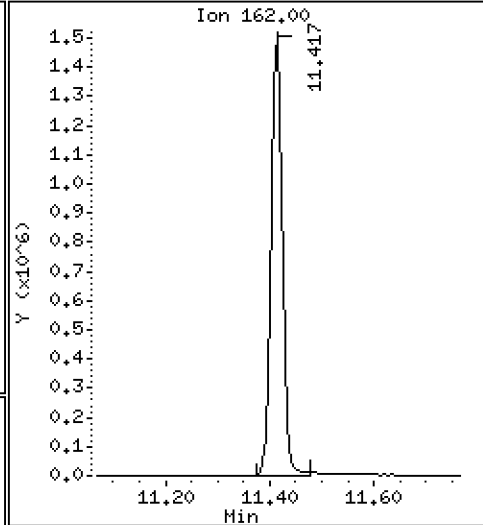
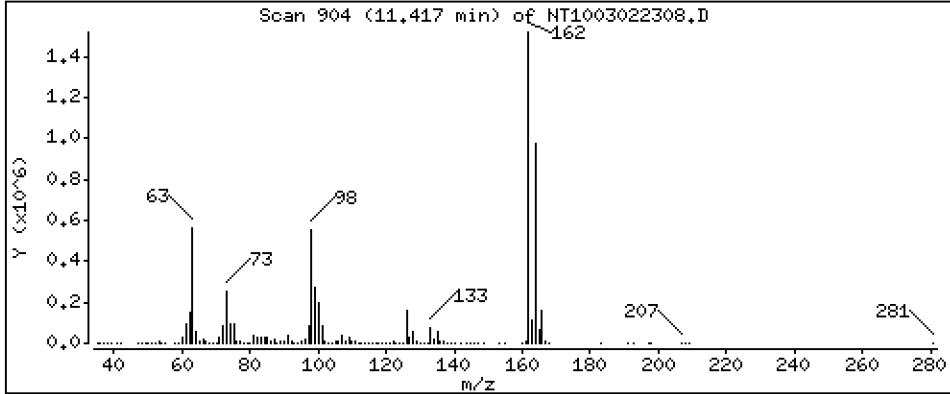
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 14,47 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

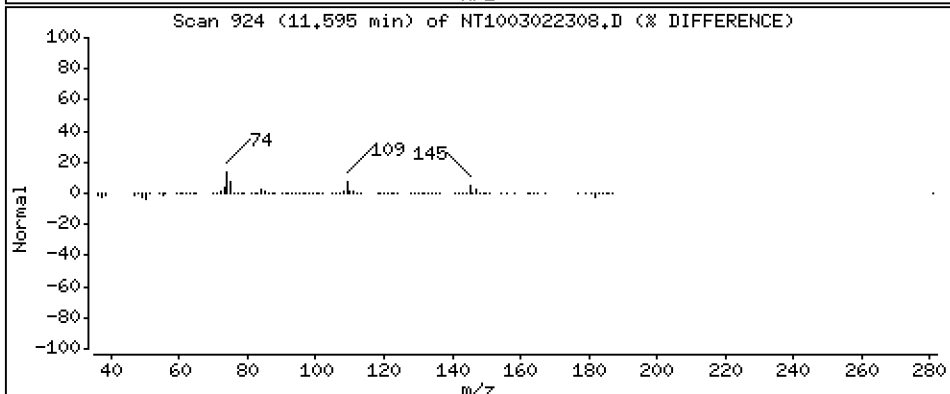
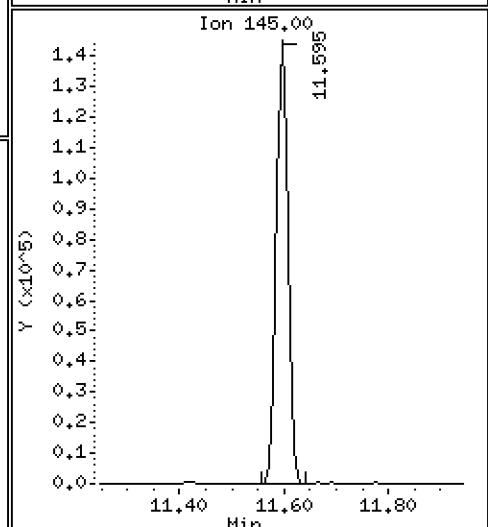
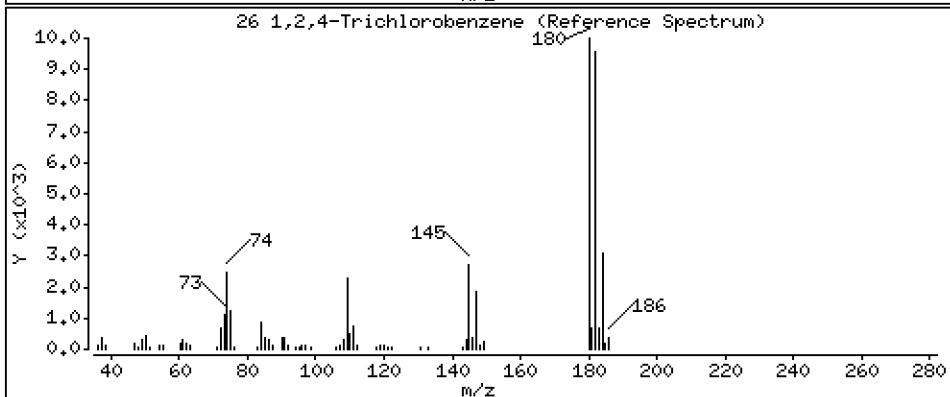
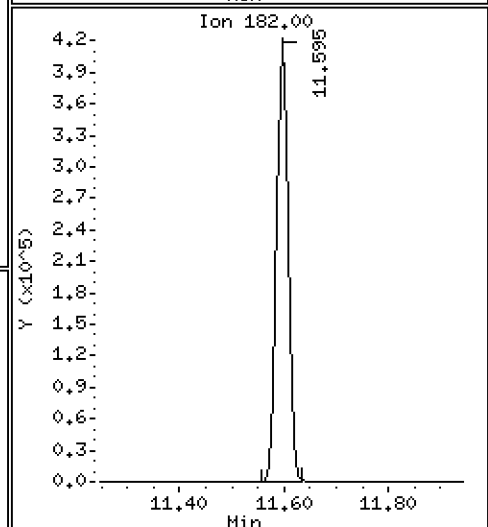
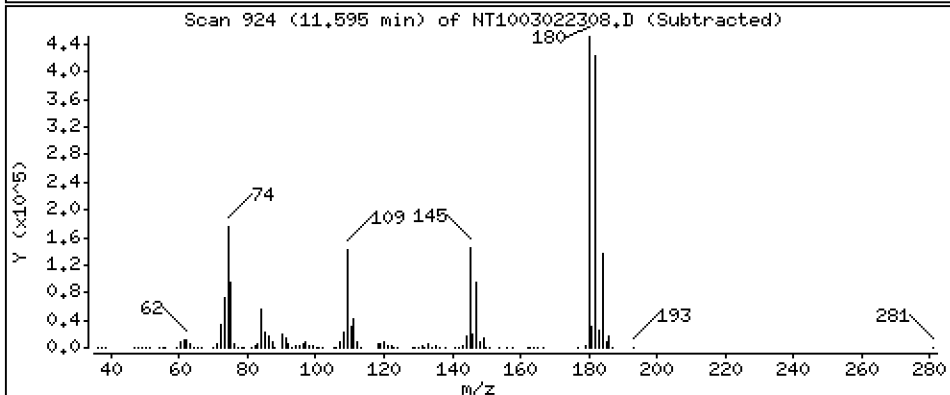
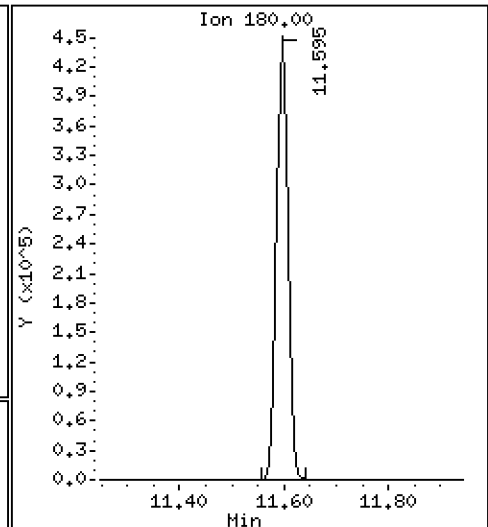
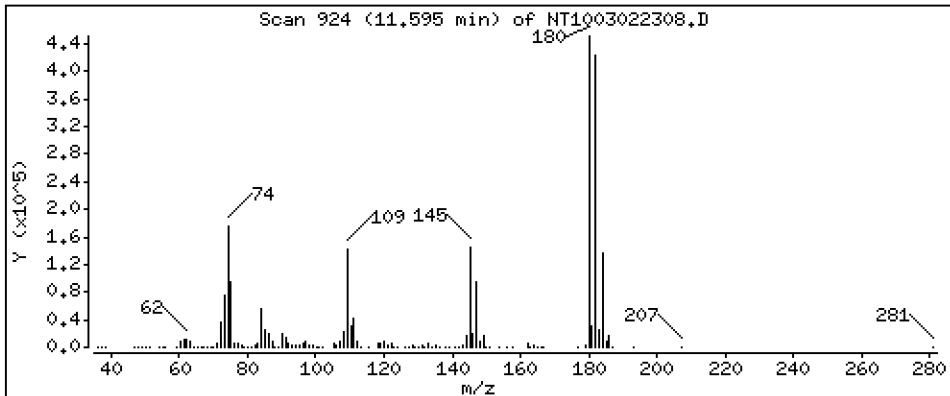
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,215 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

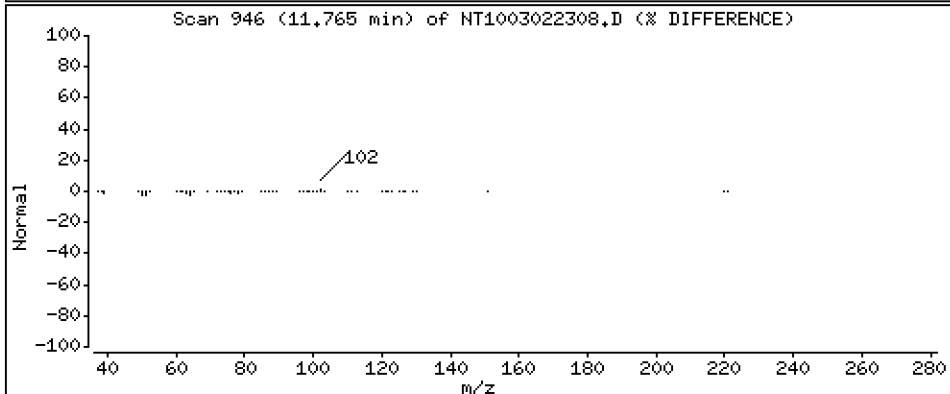
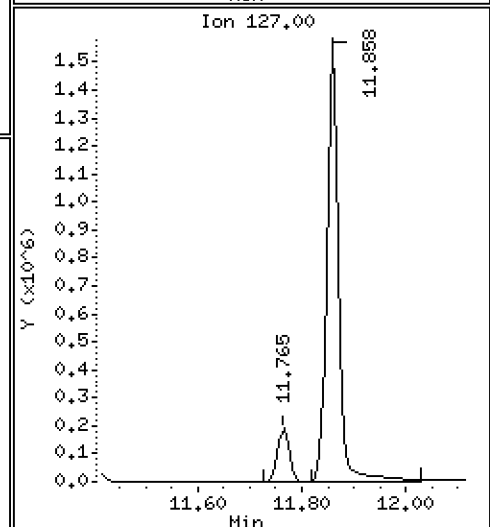
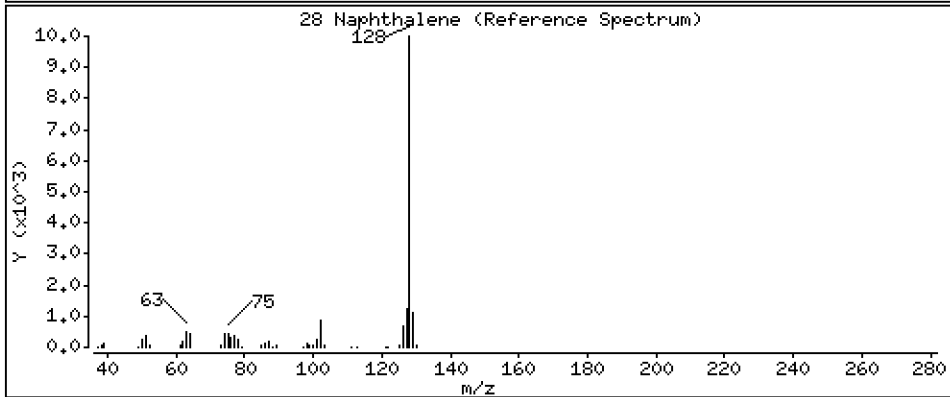
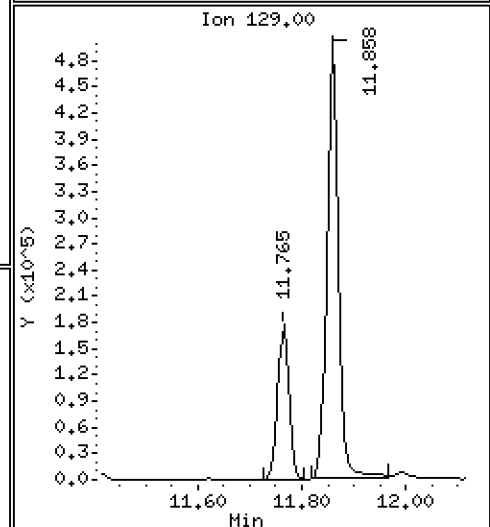
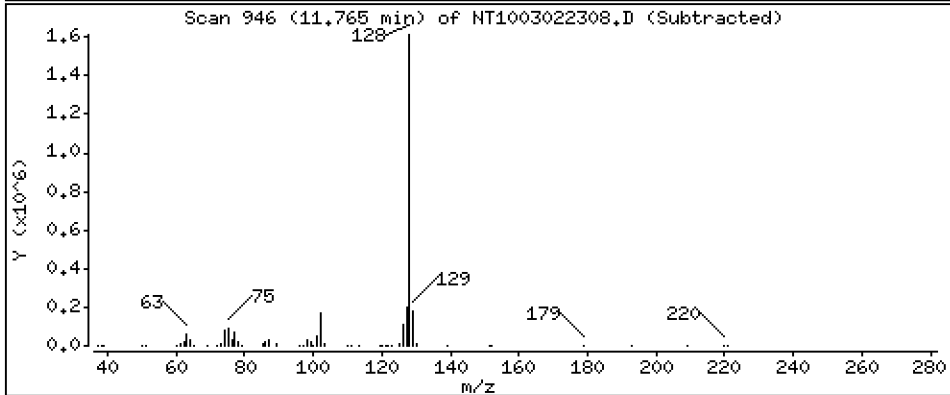
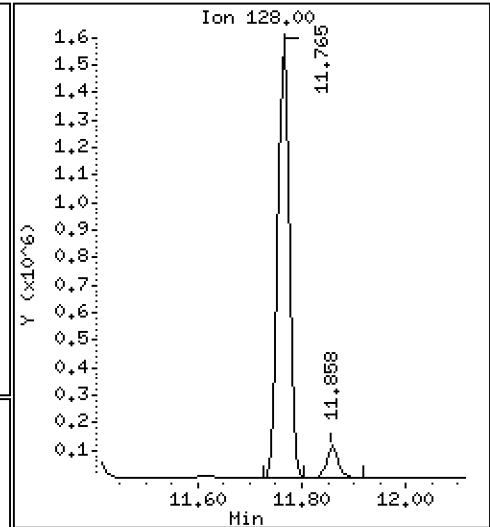
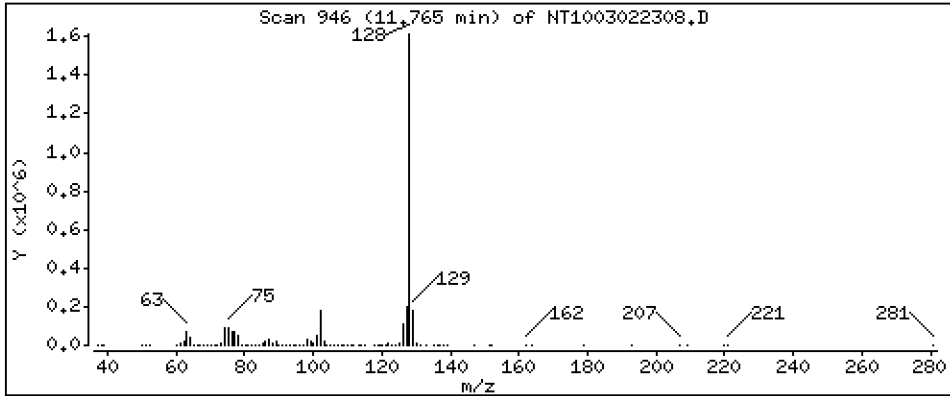
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,430 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

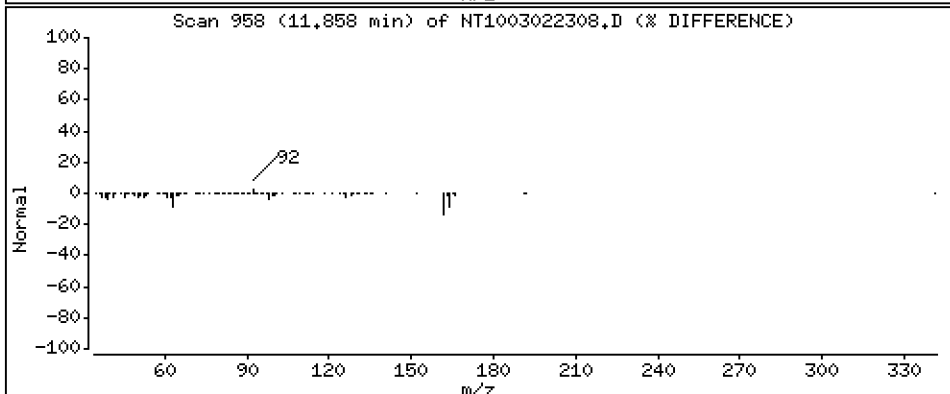
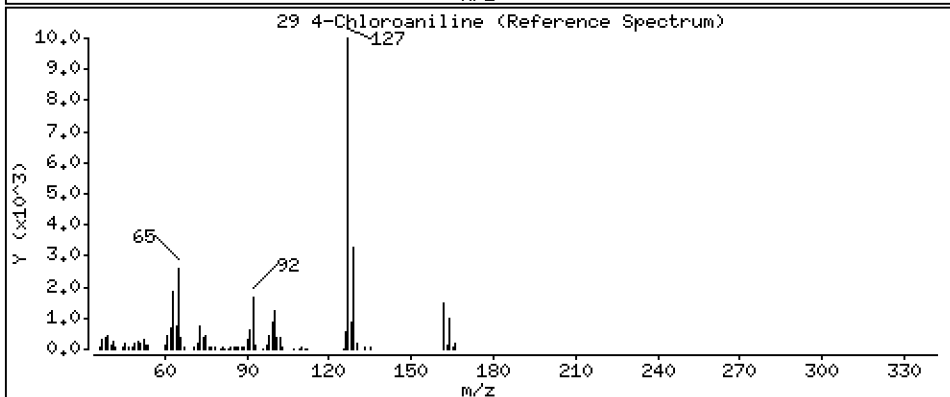
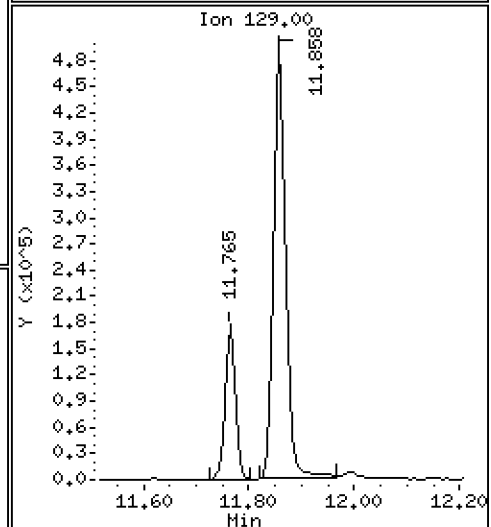
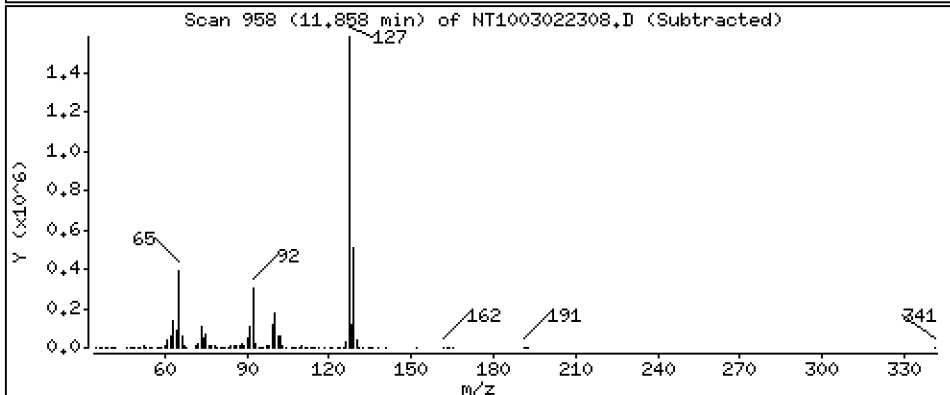
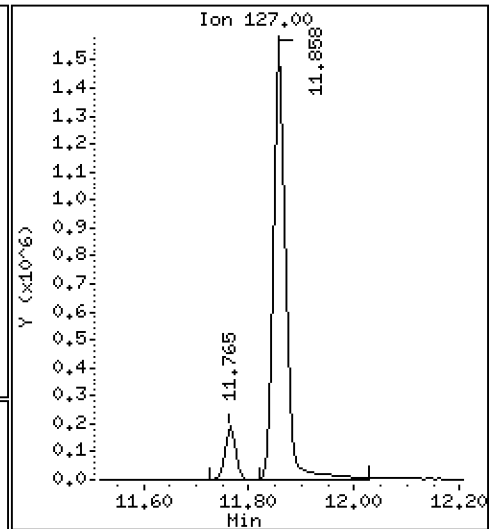
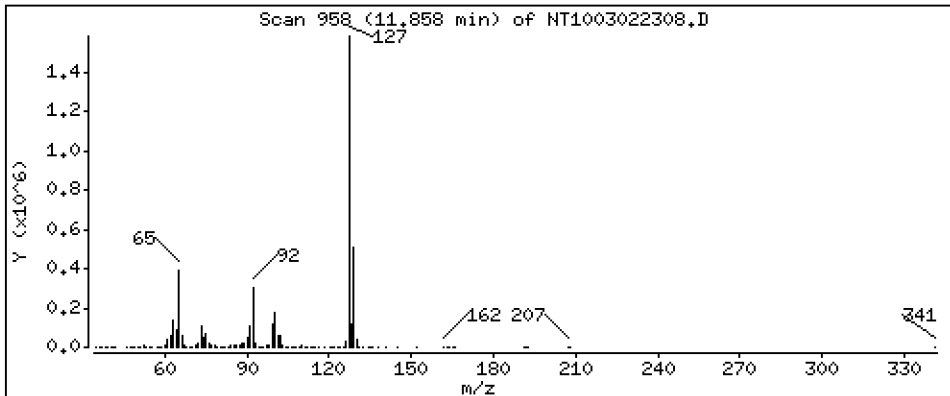
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 11,49 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

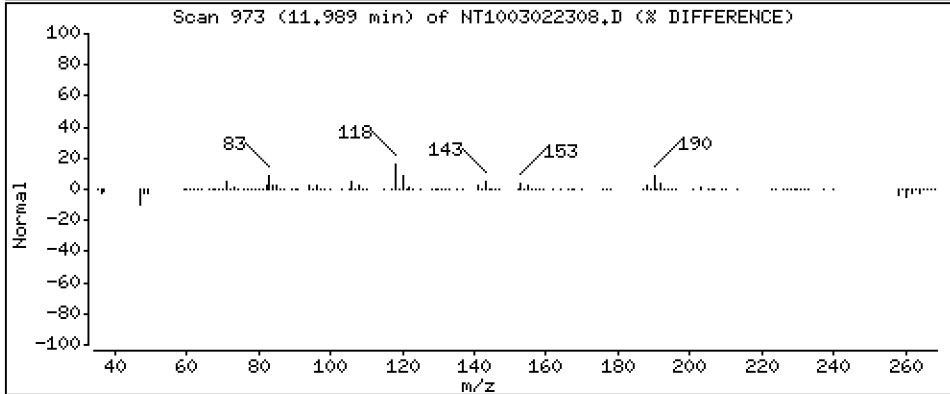
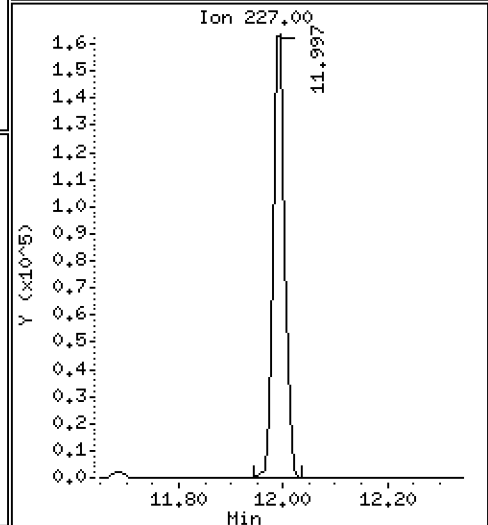
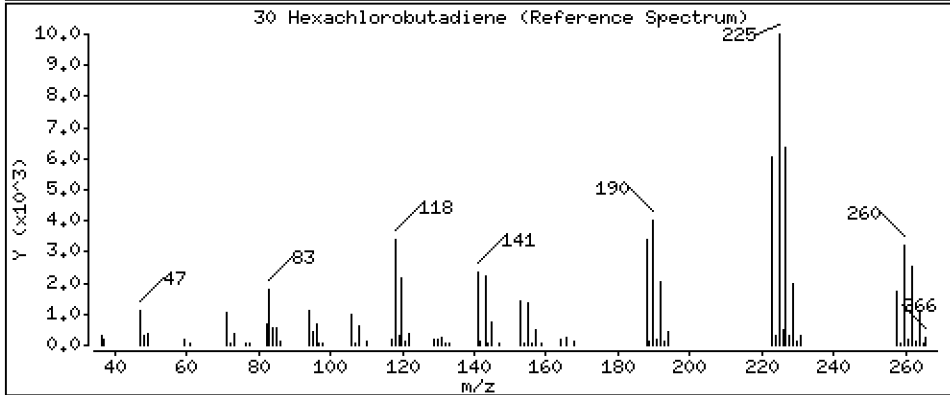
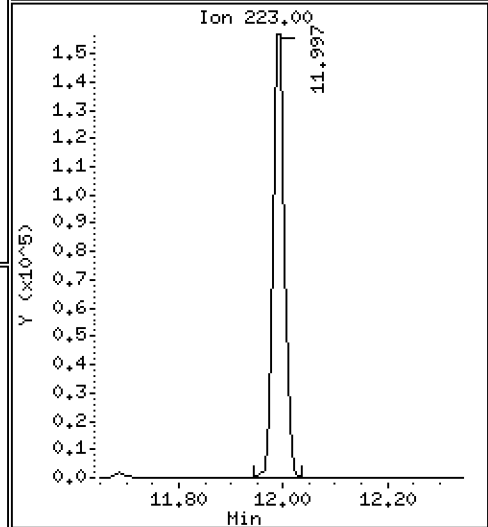
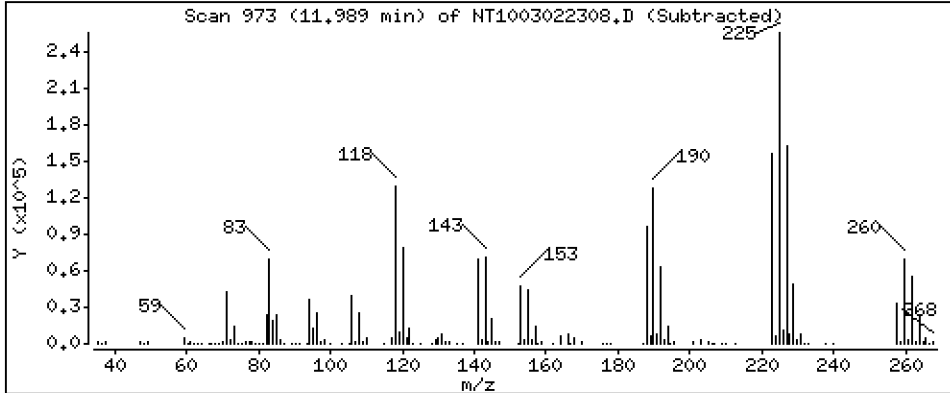
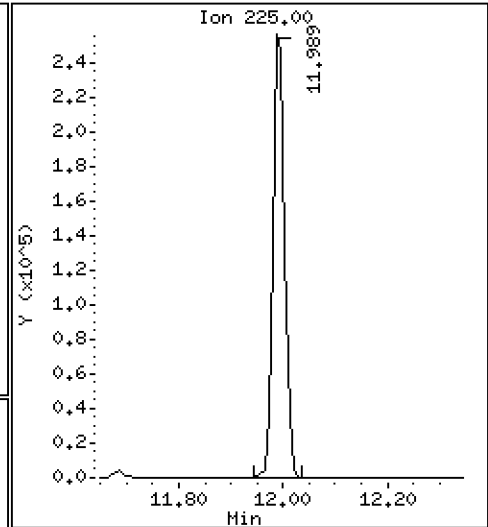
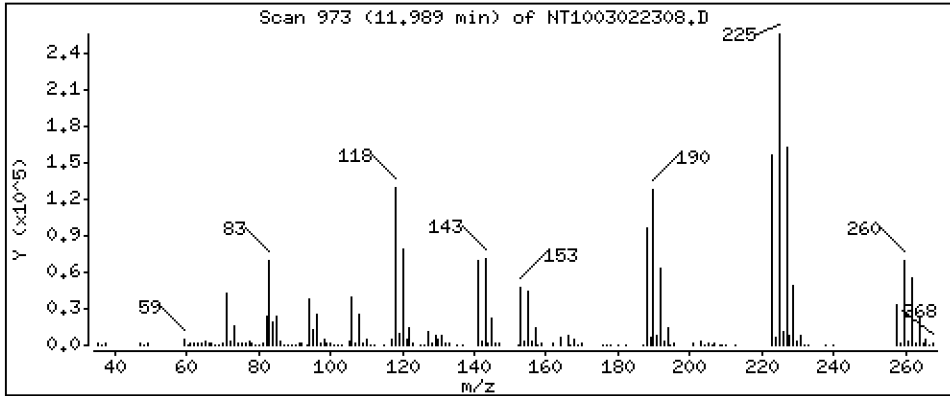
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,220 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

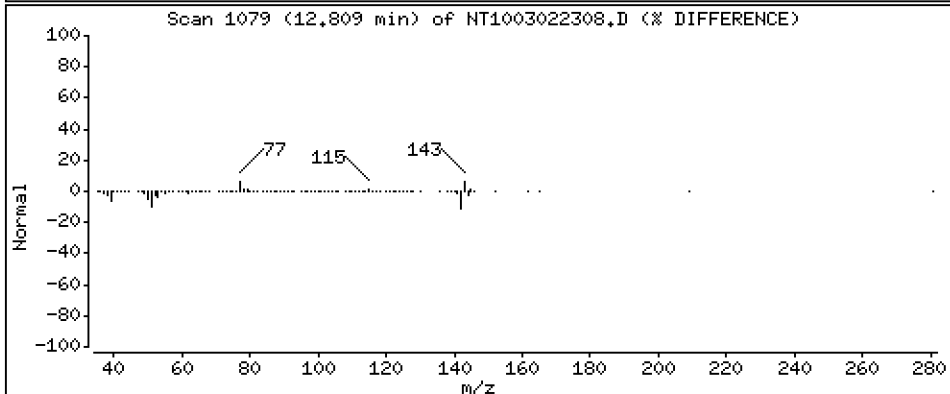
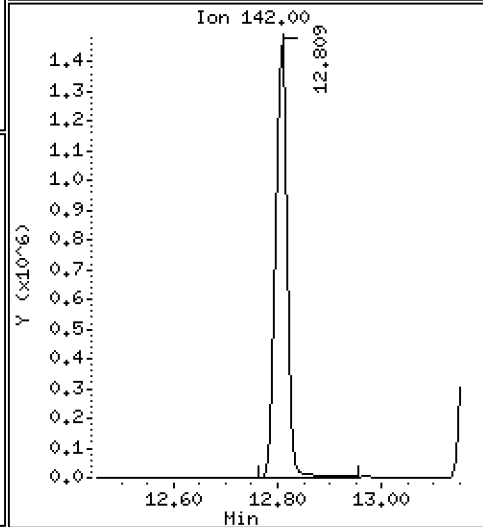
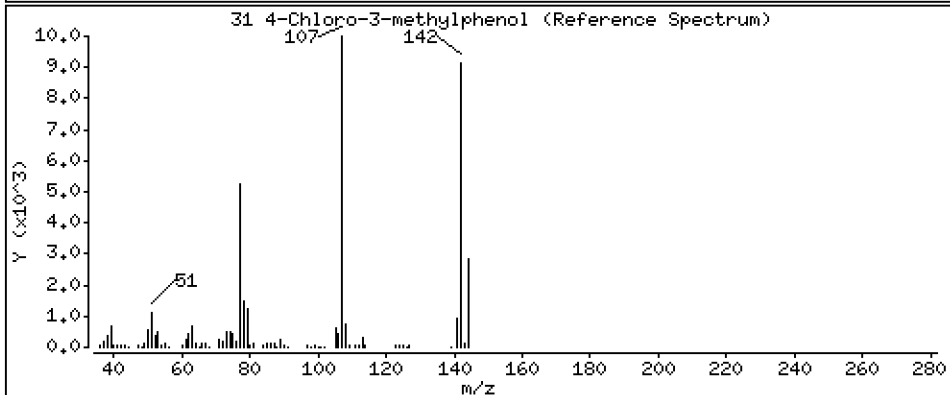
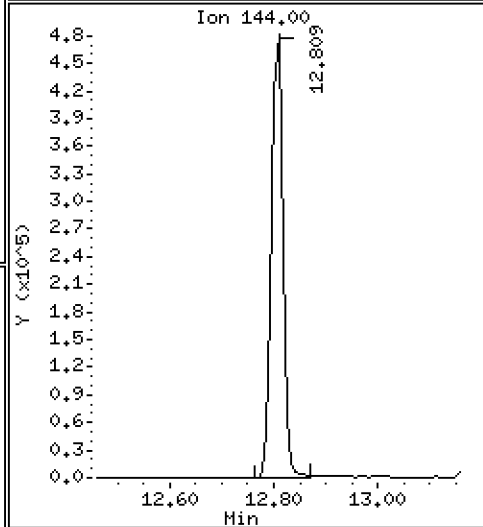
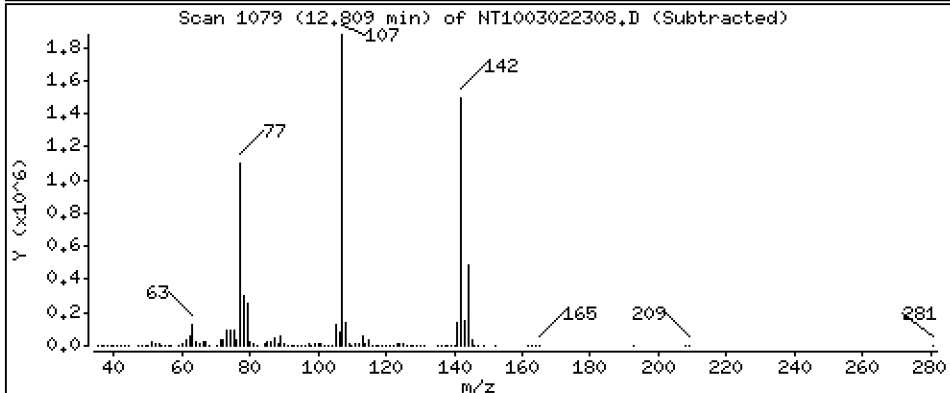
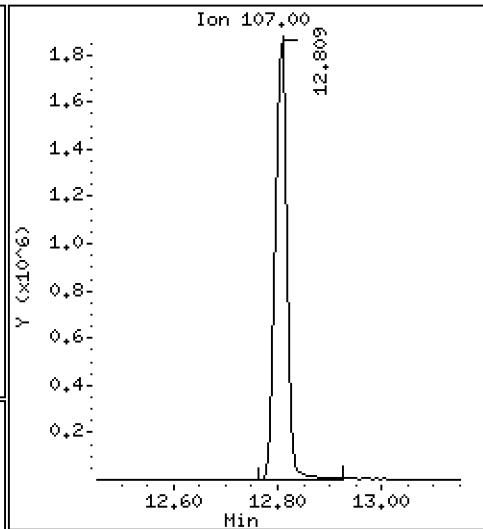
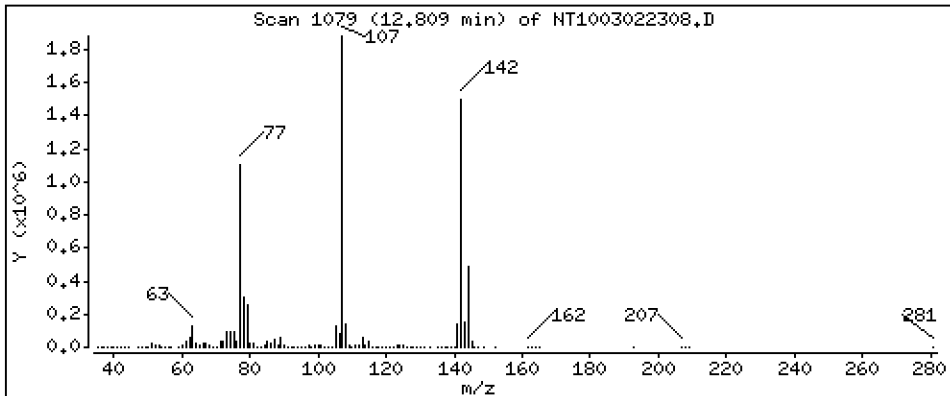
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 16,14 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

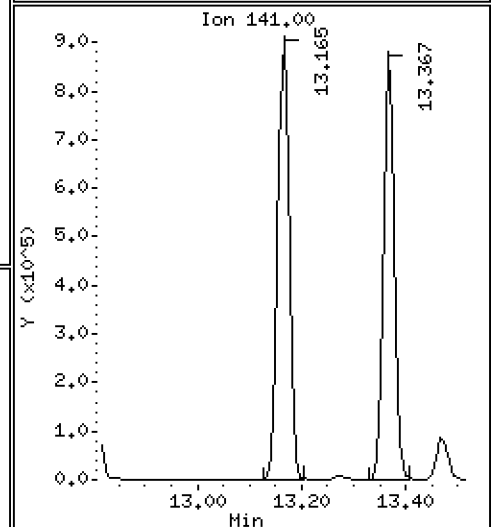
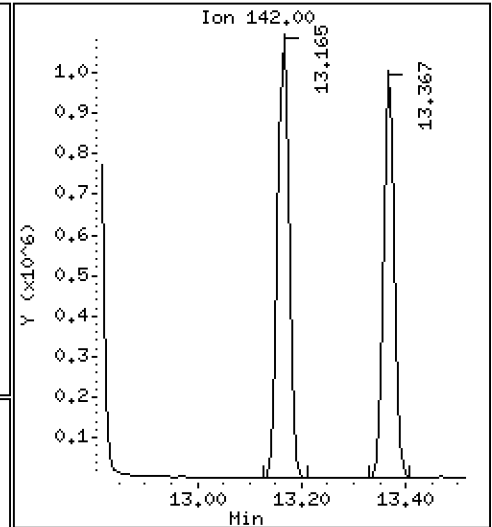
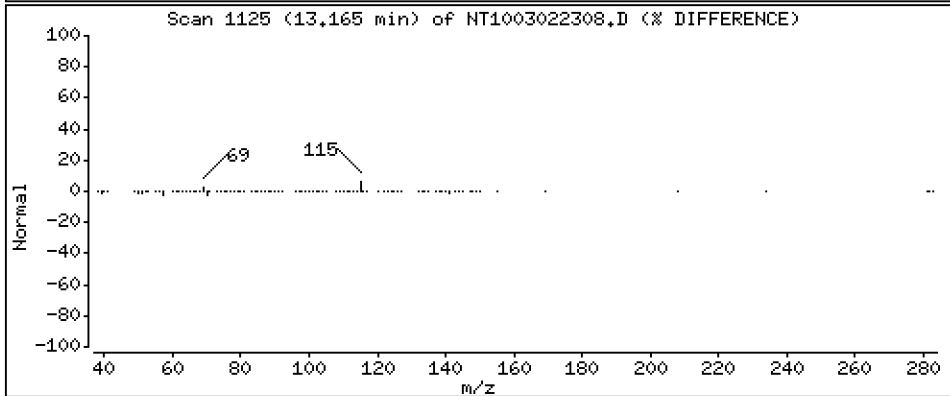
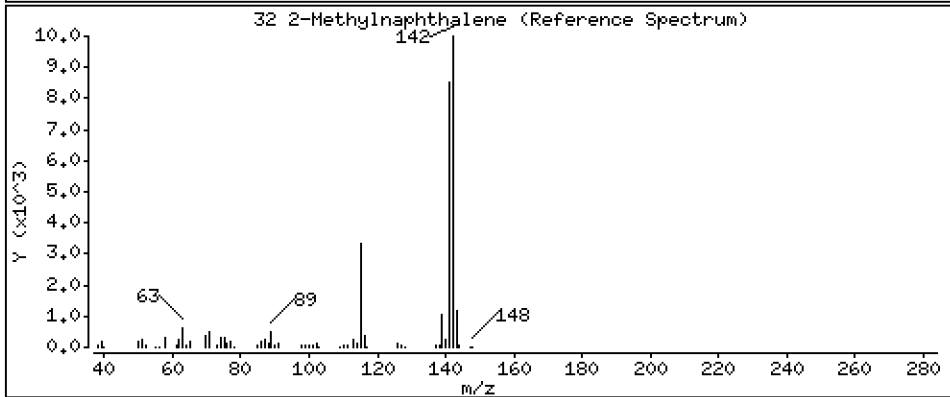
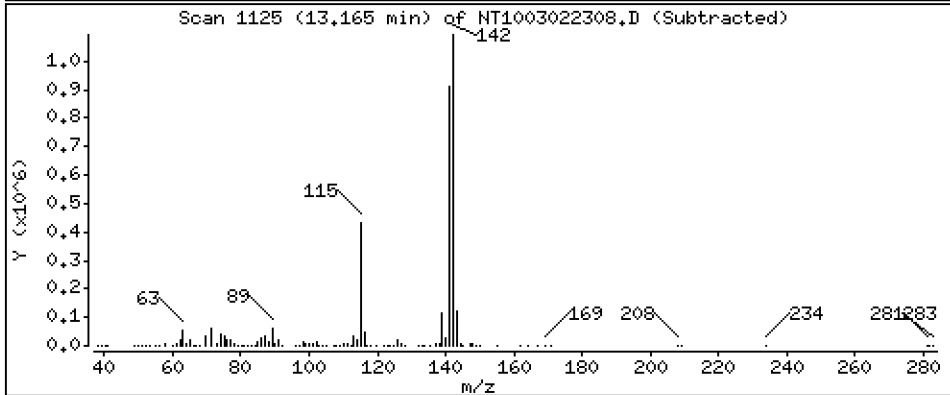
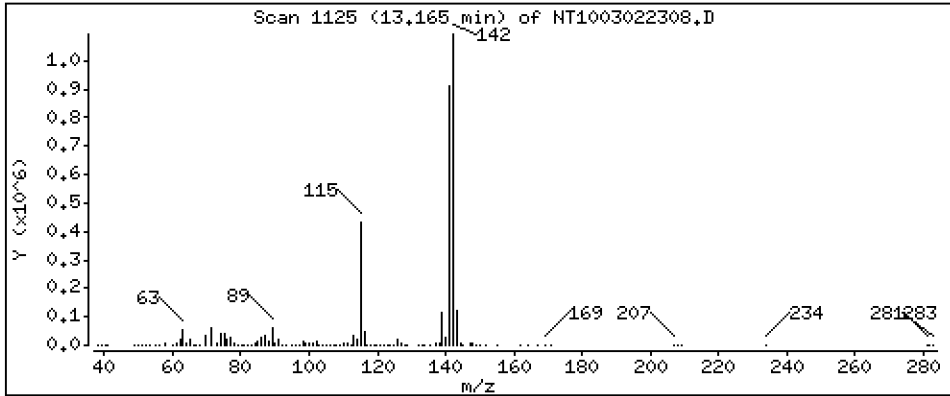
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,343 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

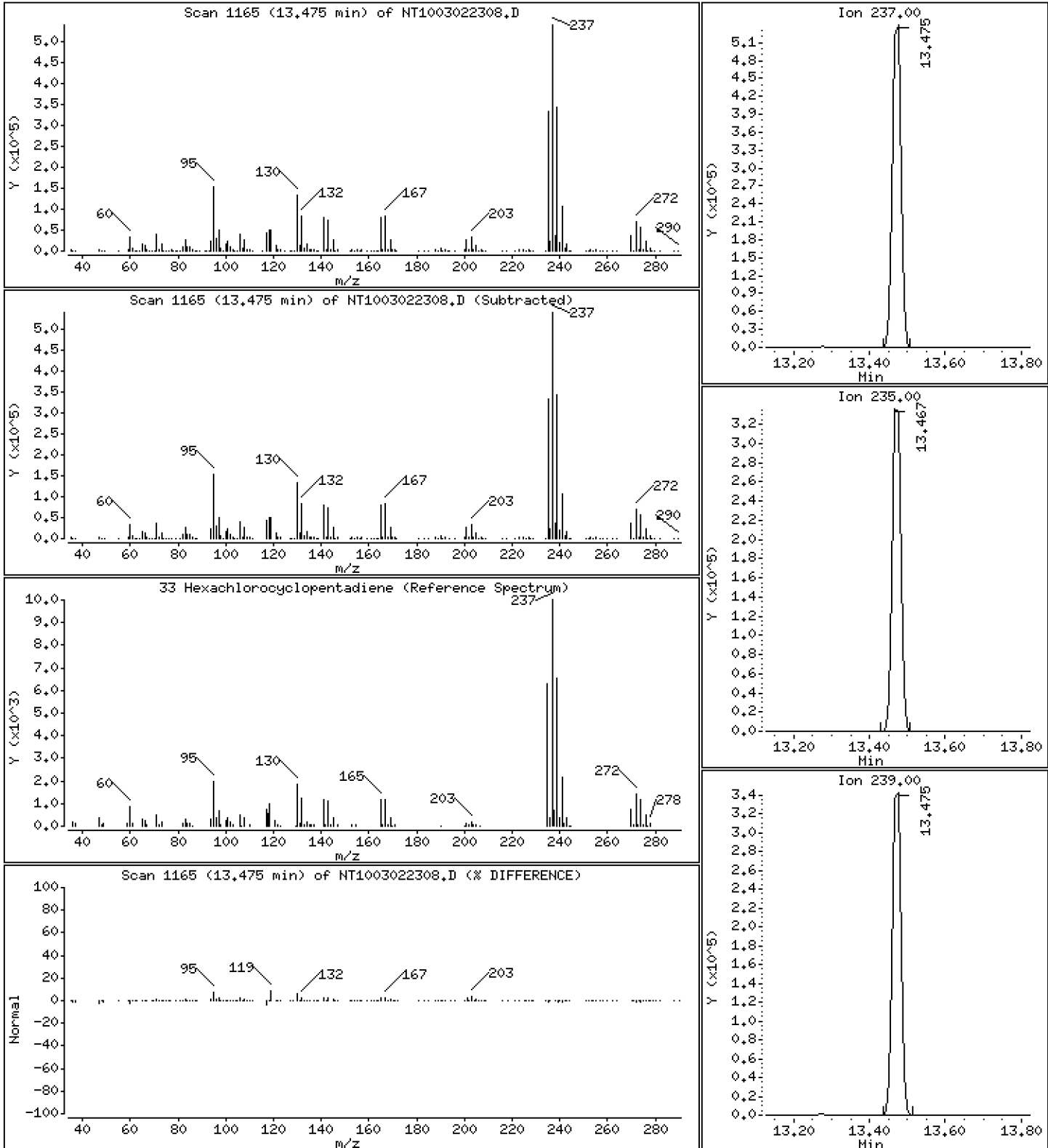
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 19,17 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

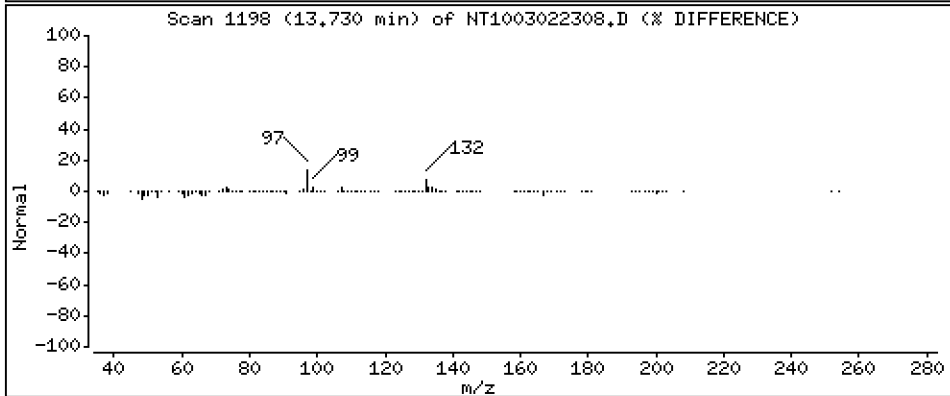
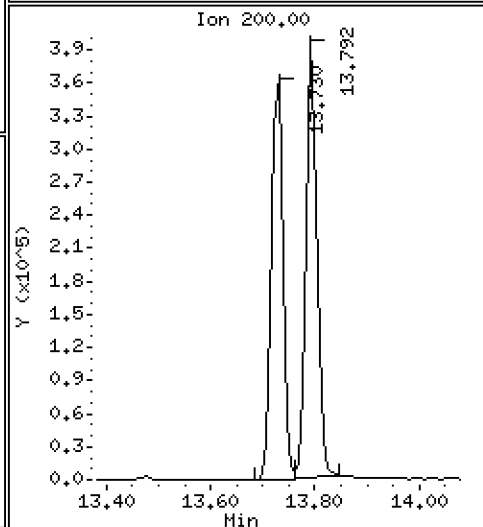
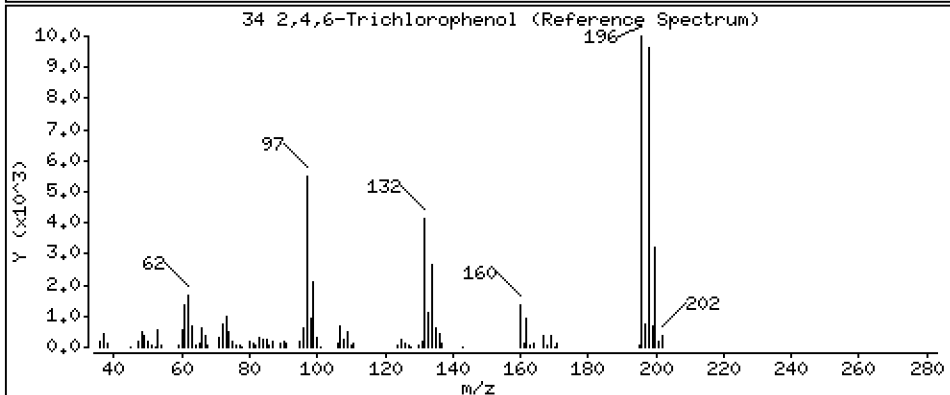
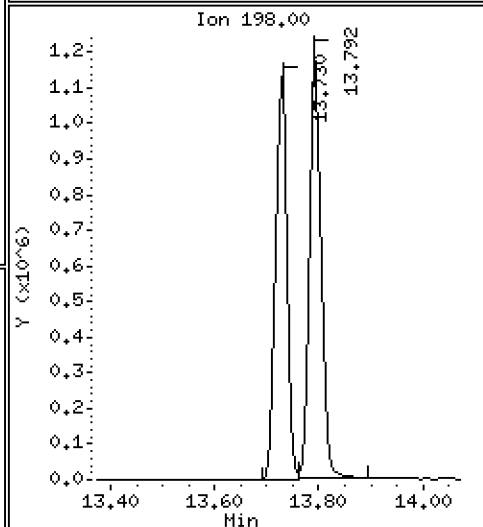
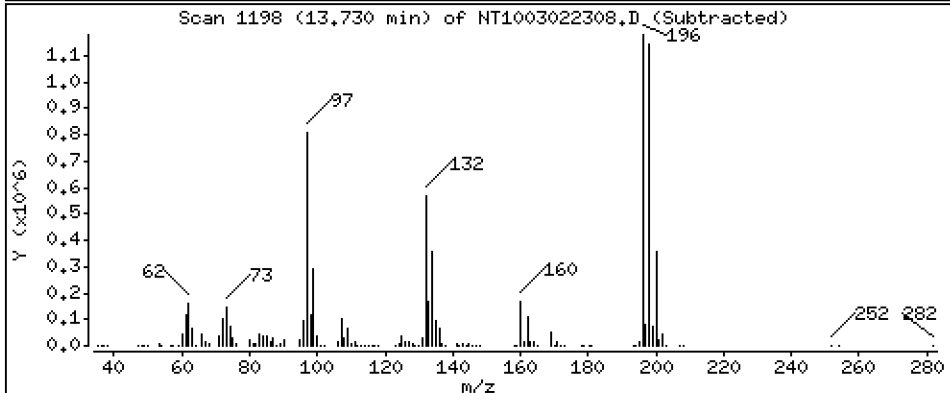
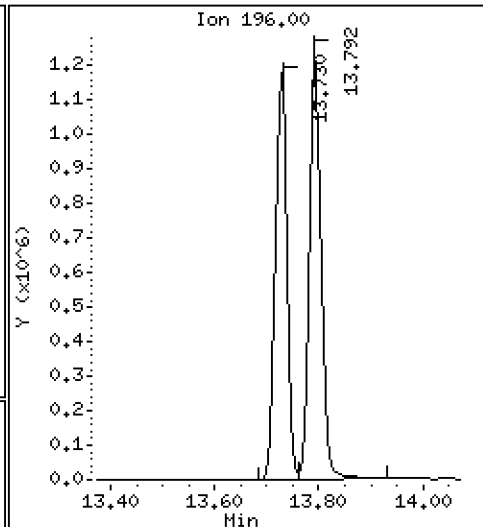
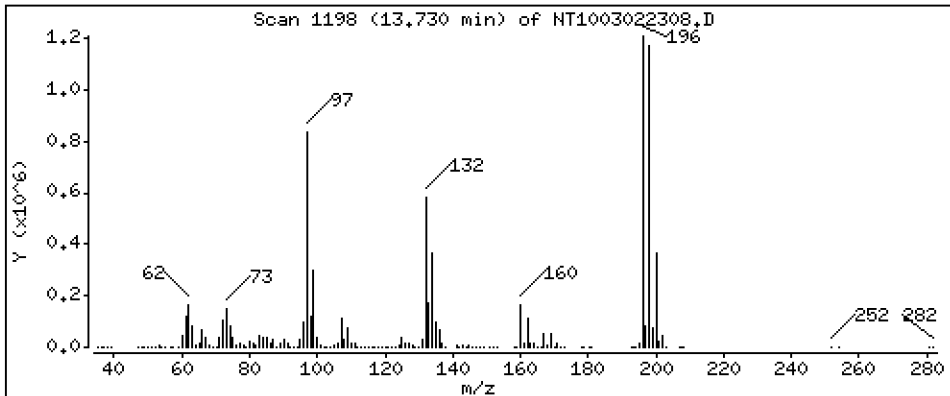
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 15,81 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

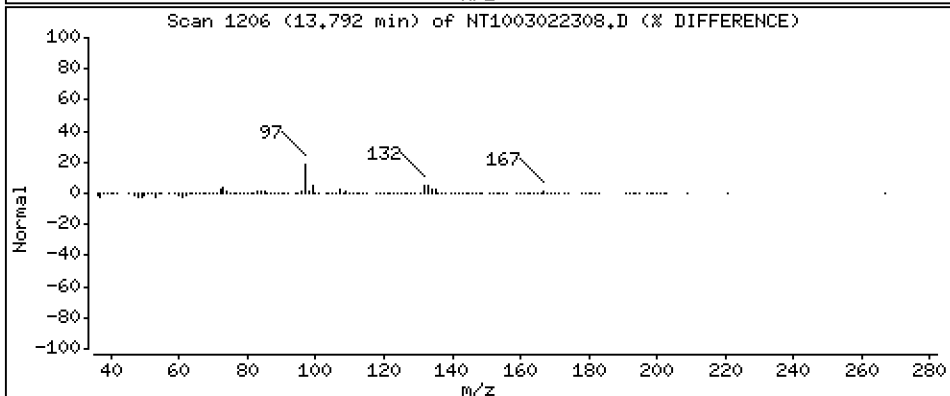
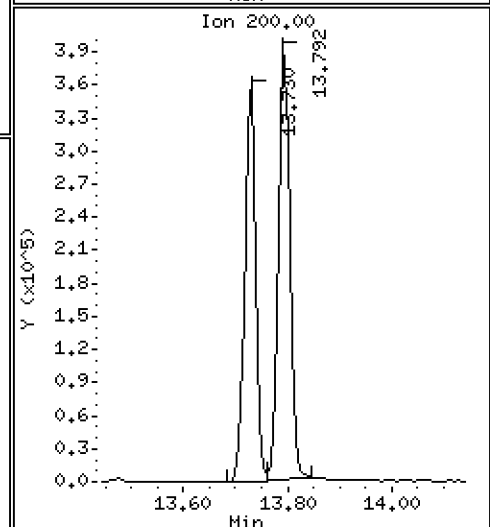
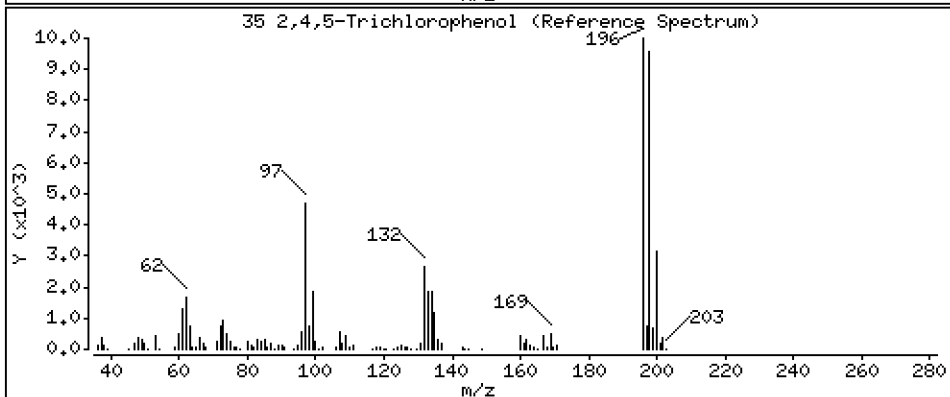
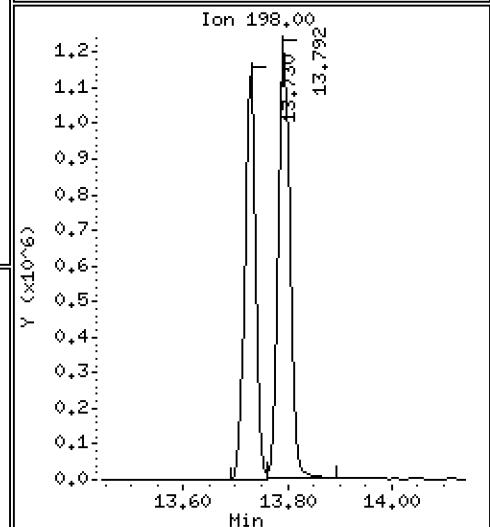
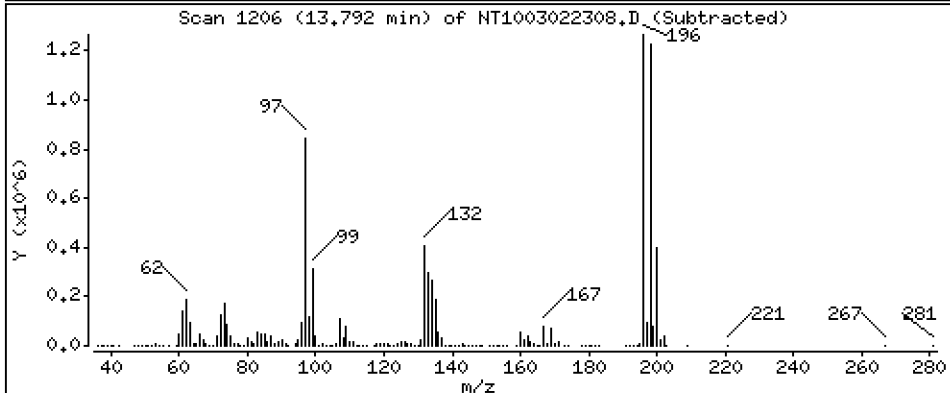
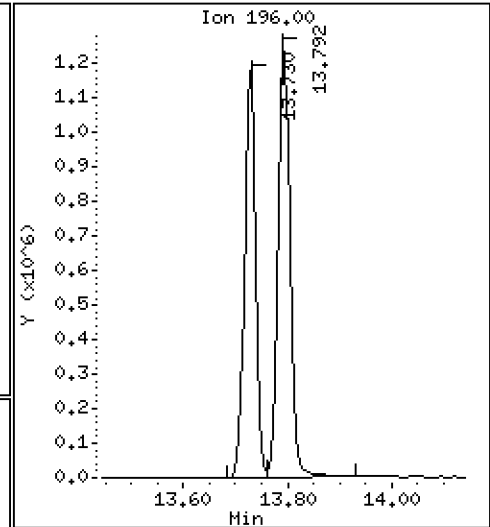
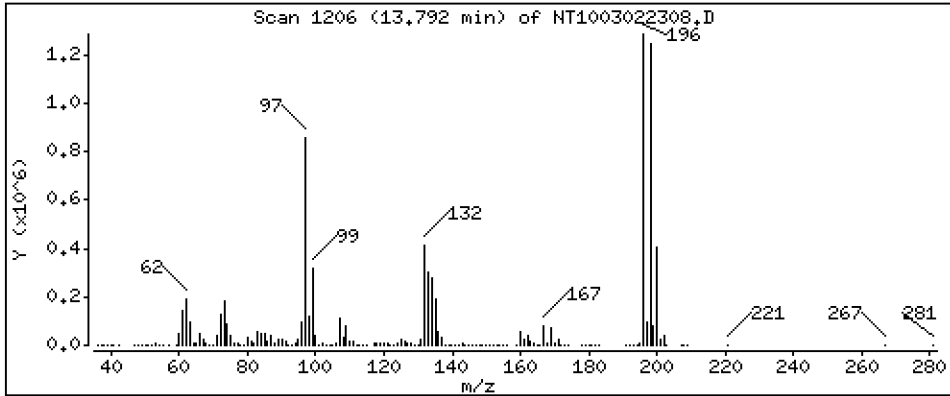
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 15,75 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

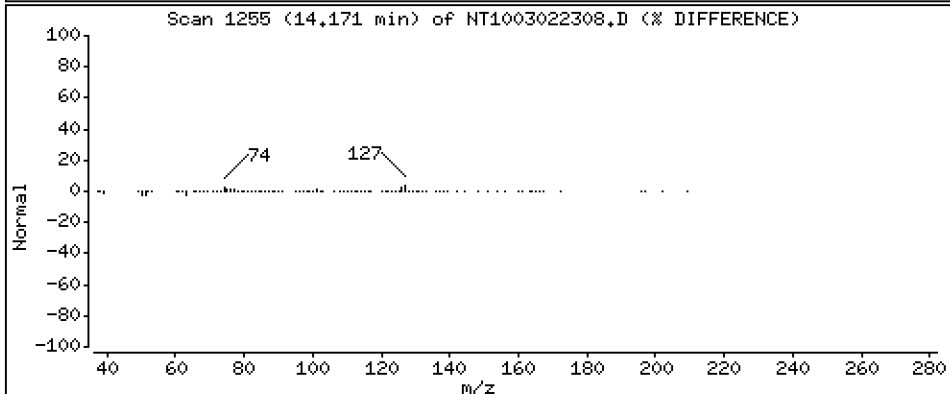
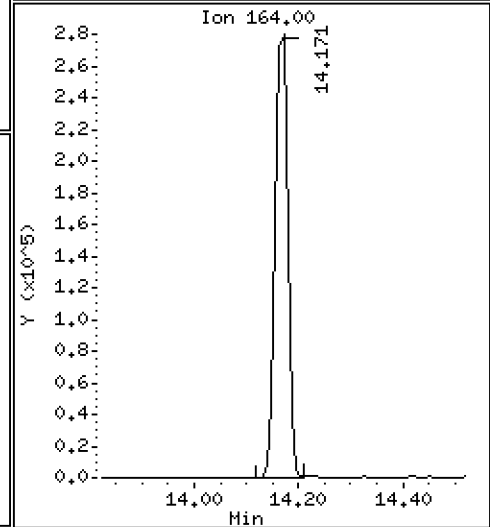
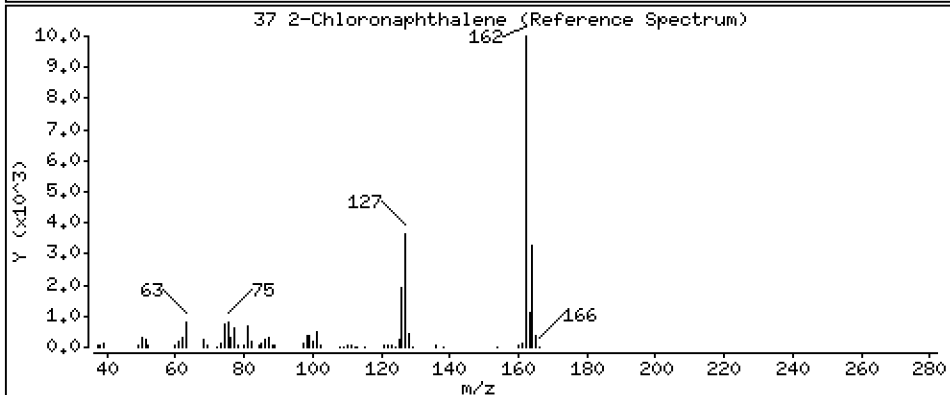
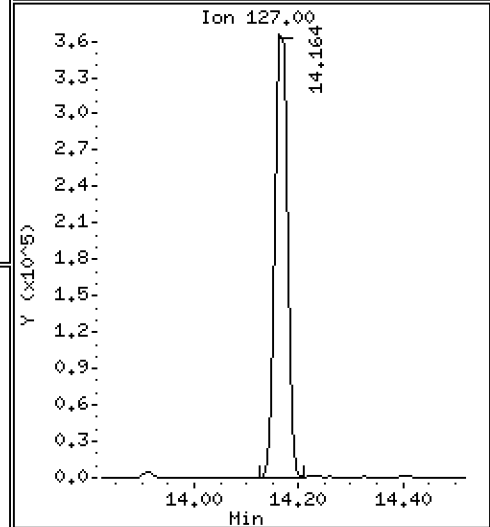
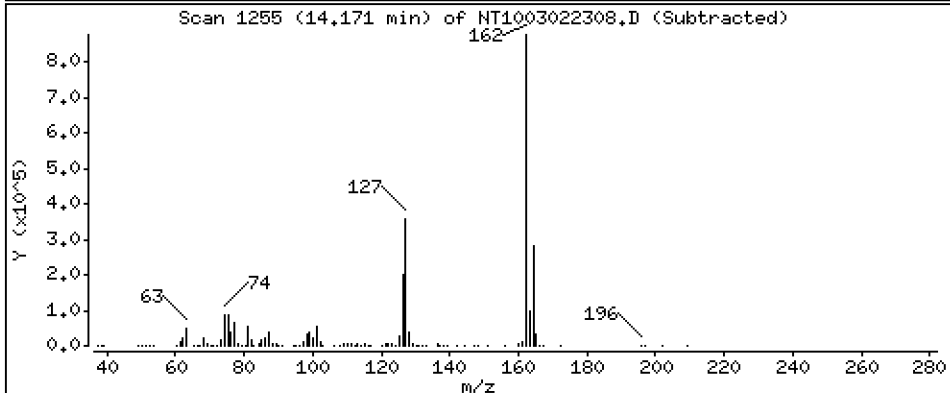
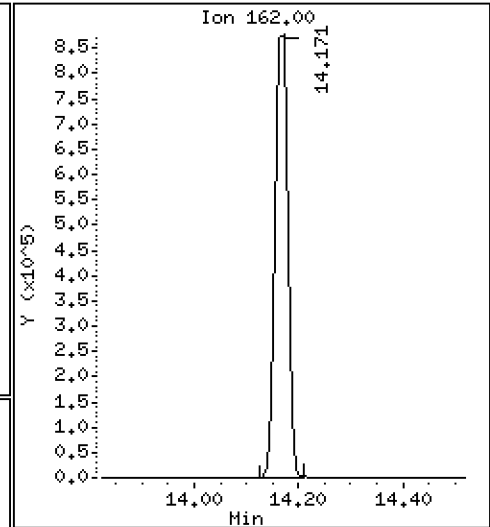
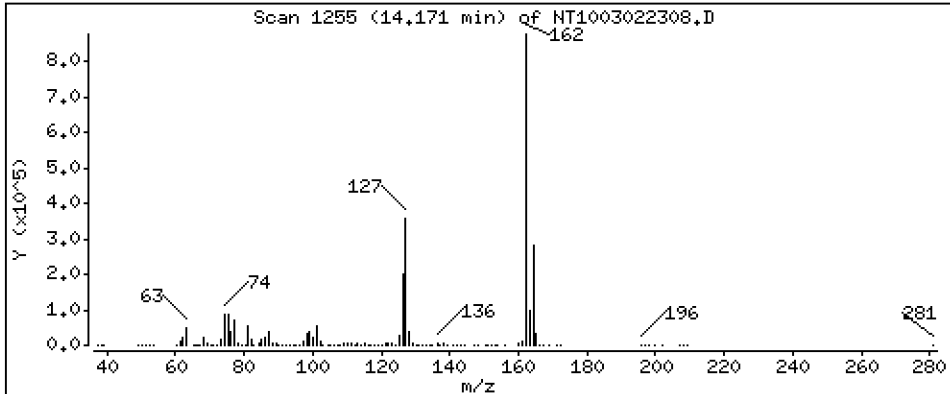
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 4,608 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

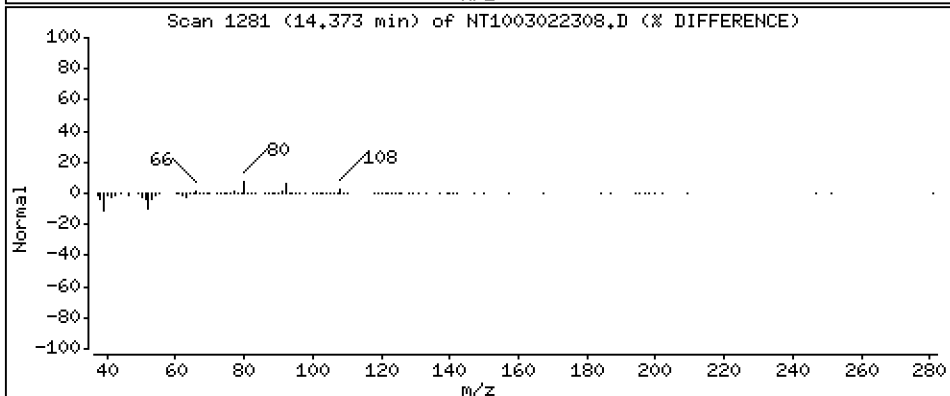
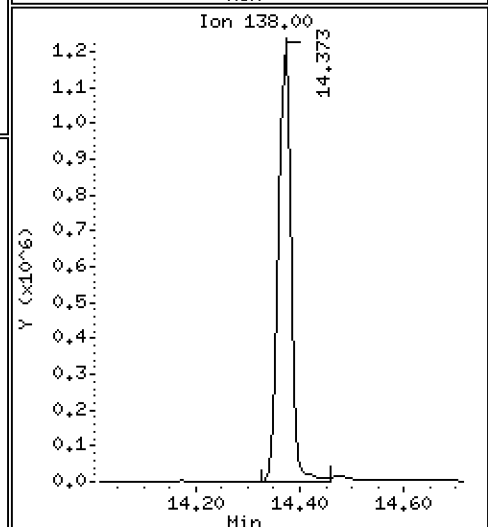
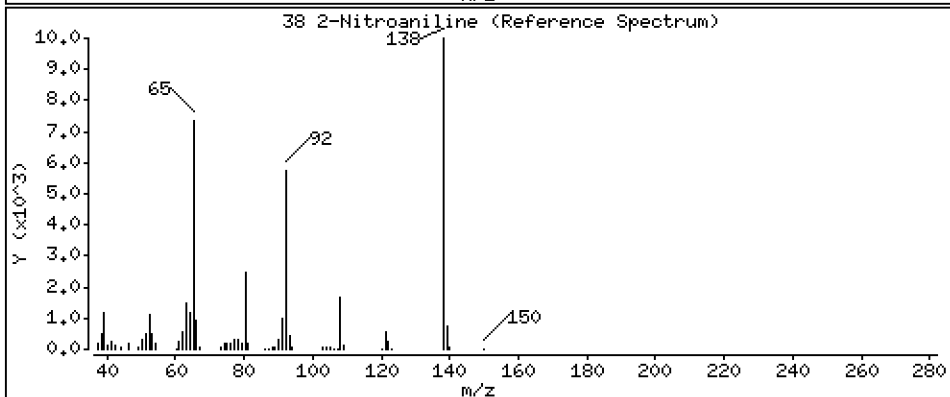
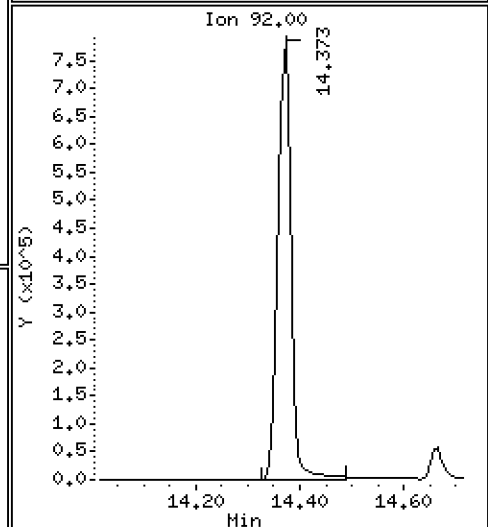
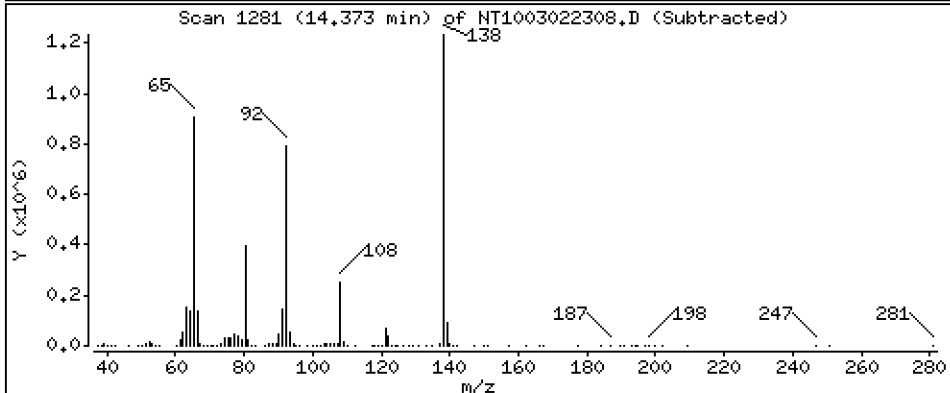
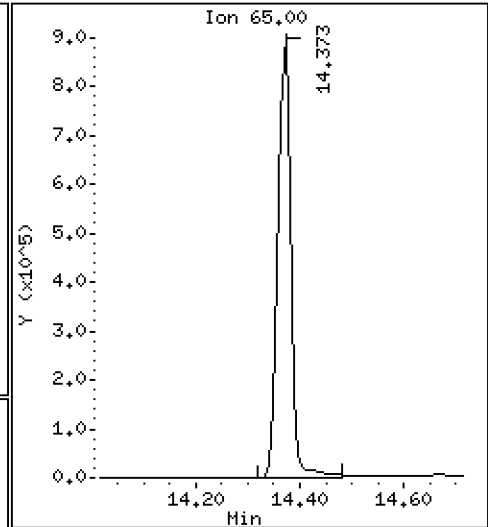
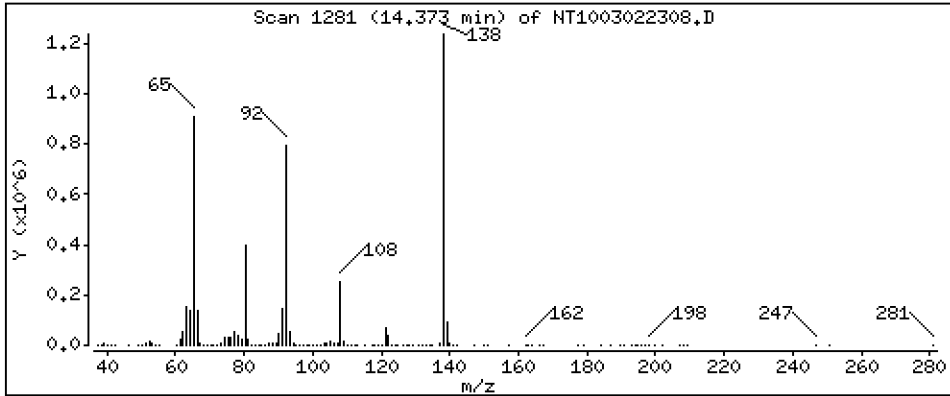
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 16,68 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

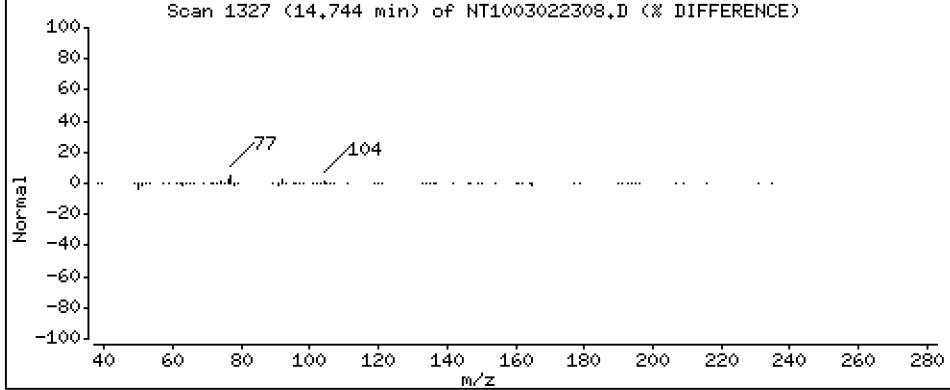
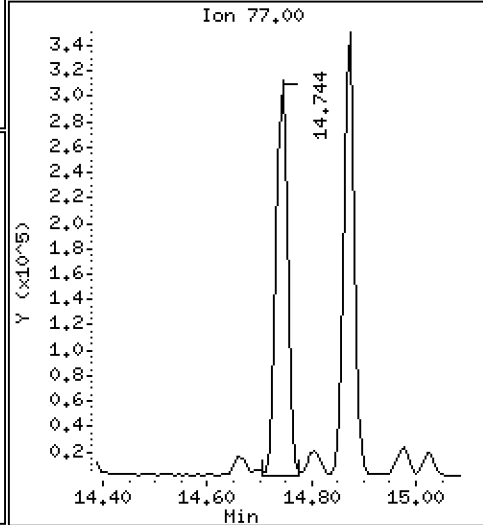
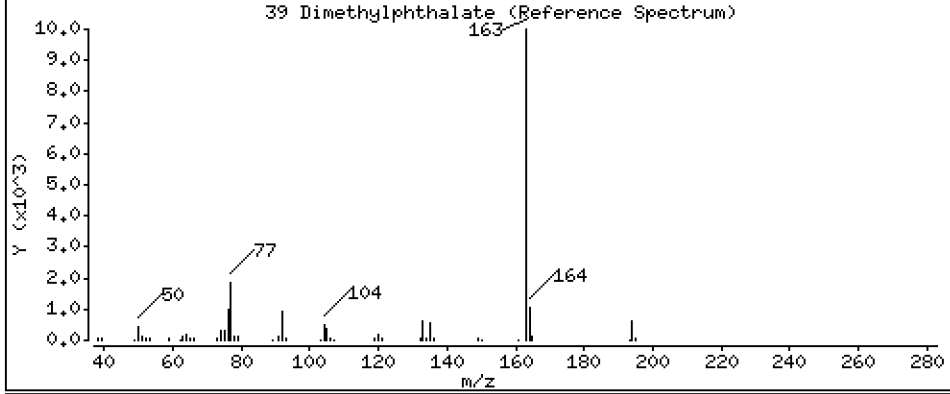
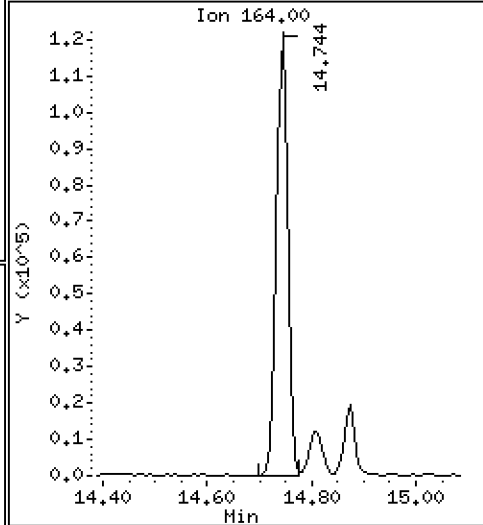
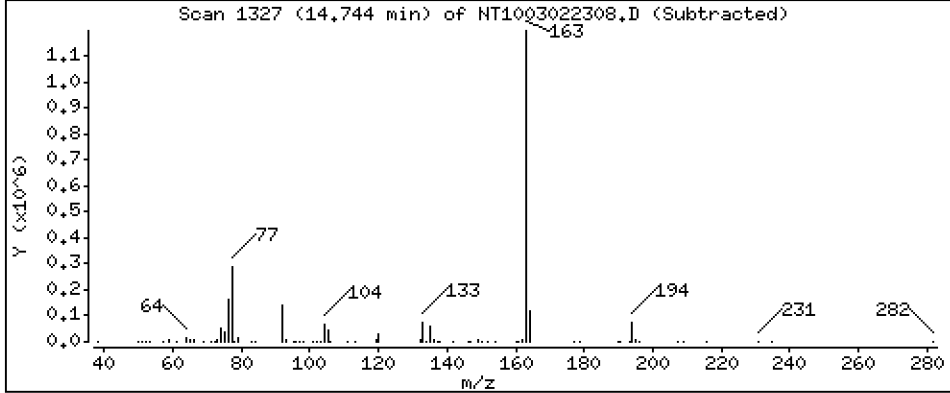
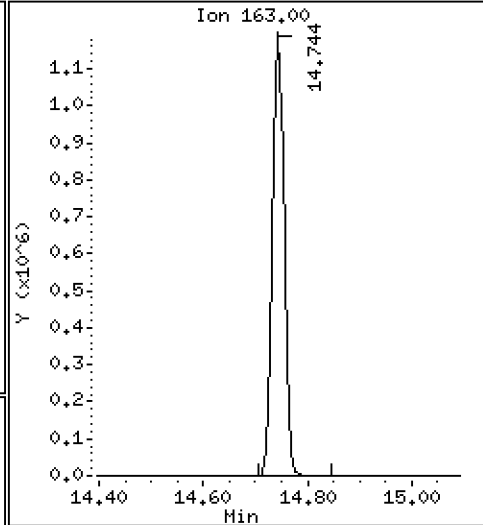
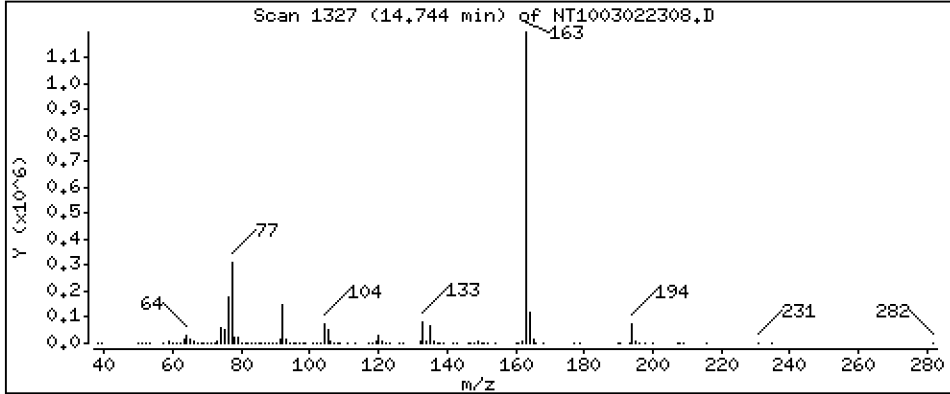
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,981 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

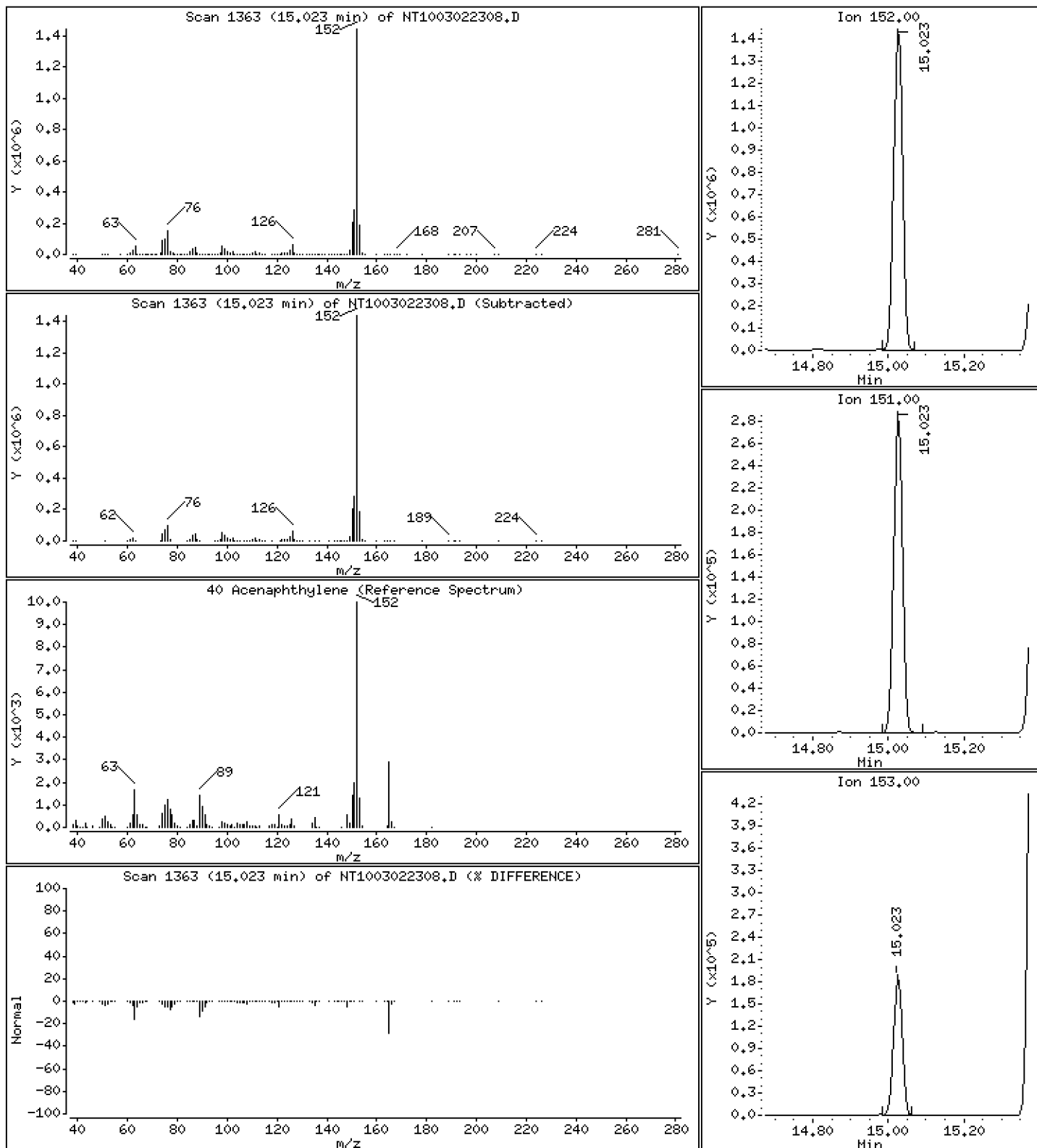
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 4,297 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

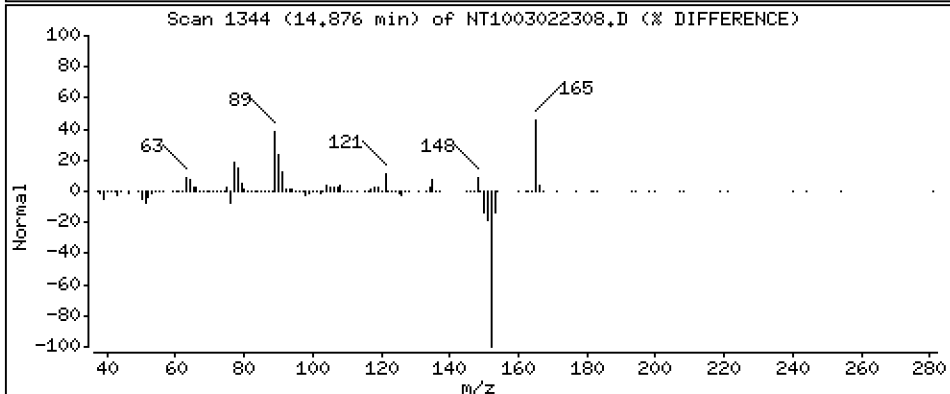
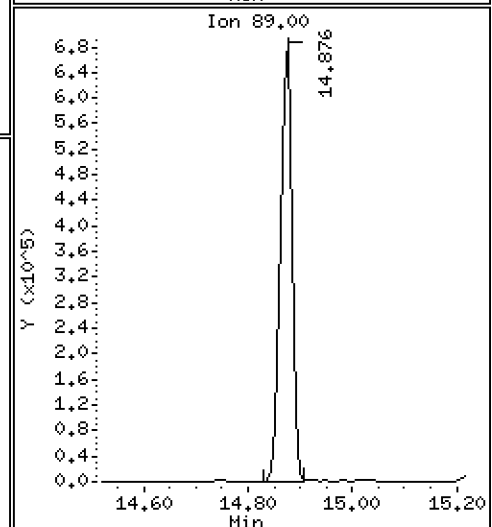
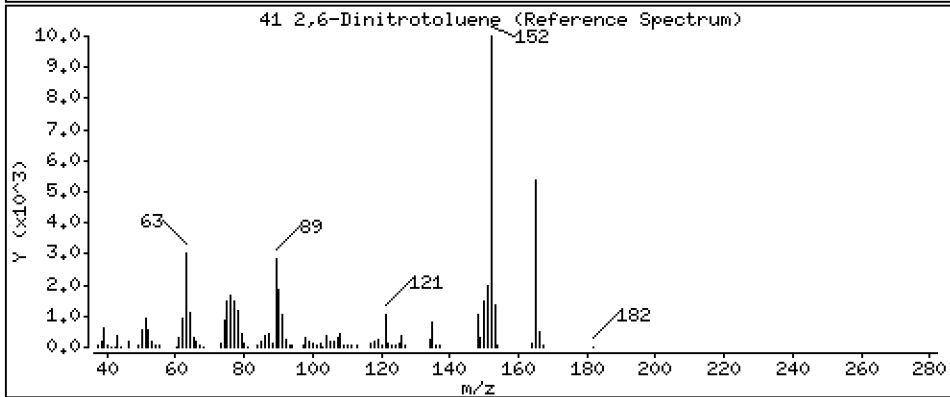
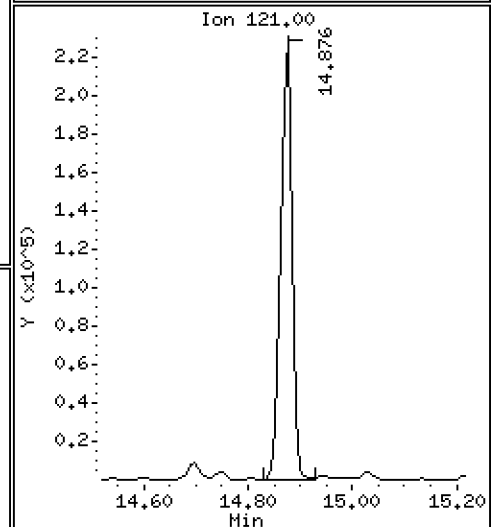
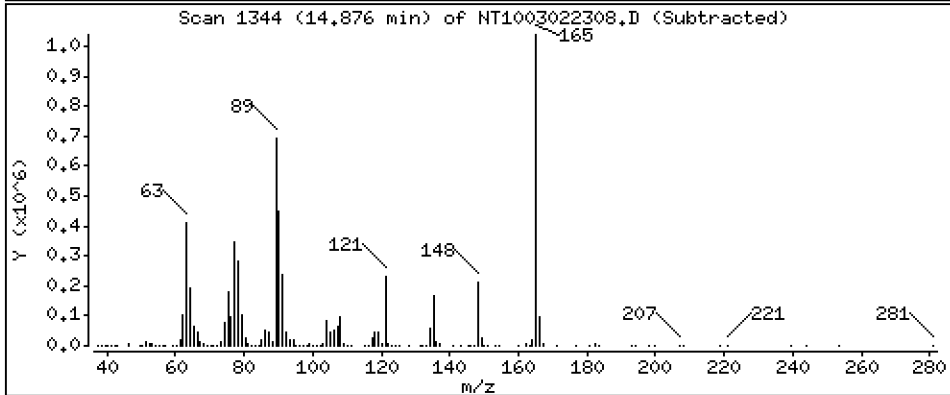
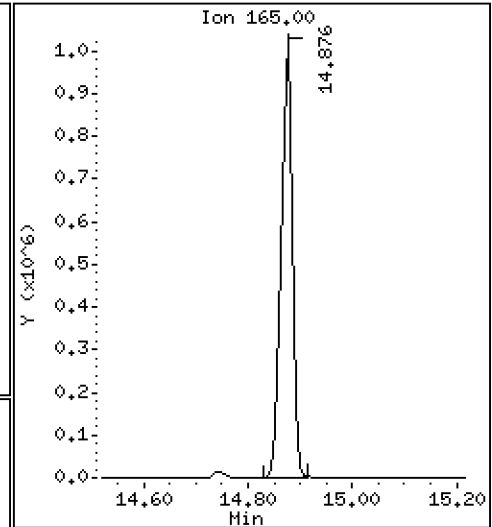
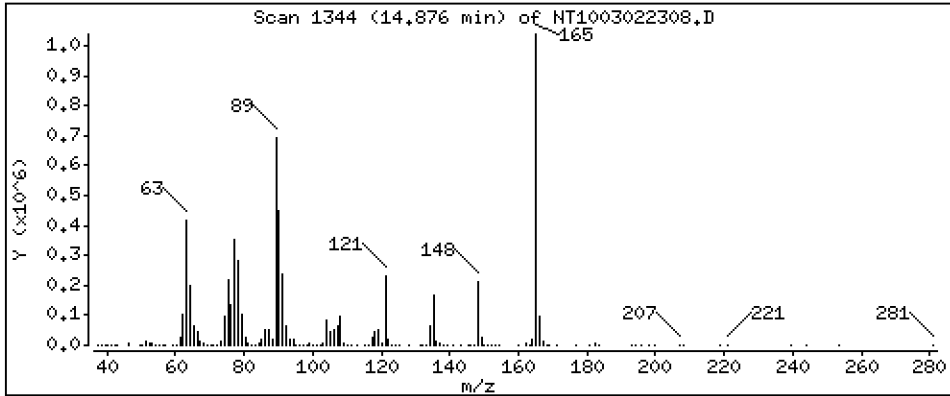
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 17,89 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

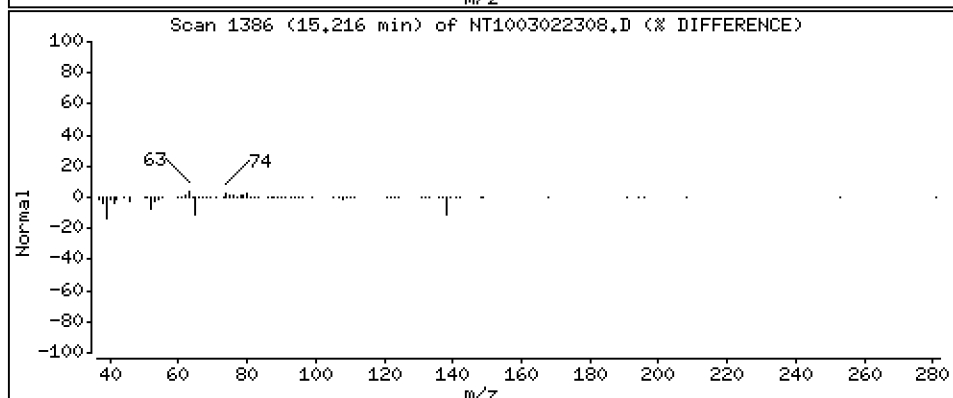
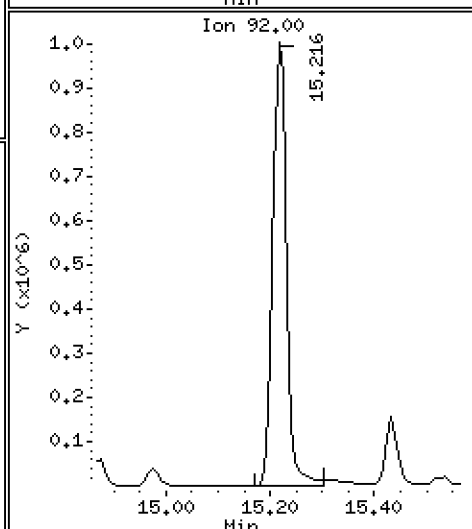
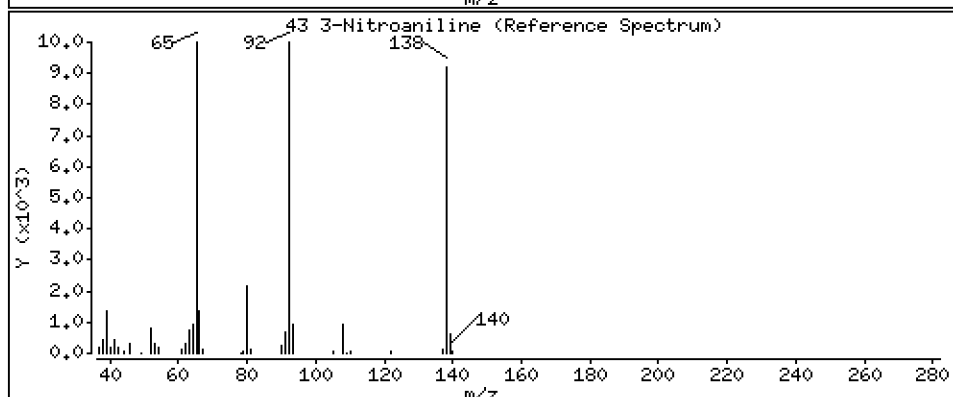
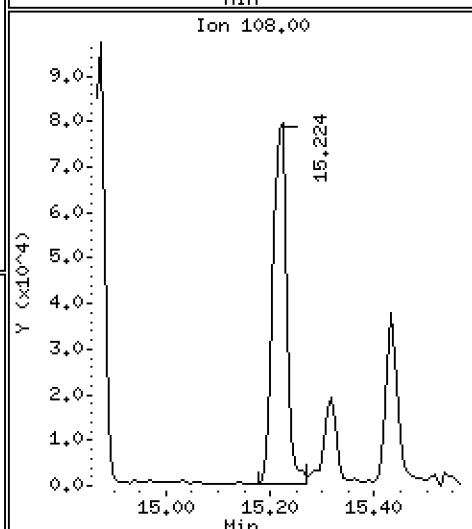
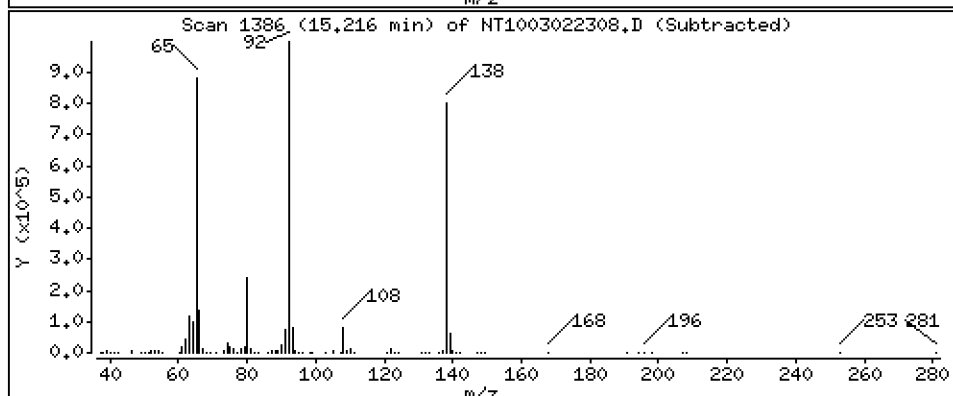
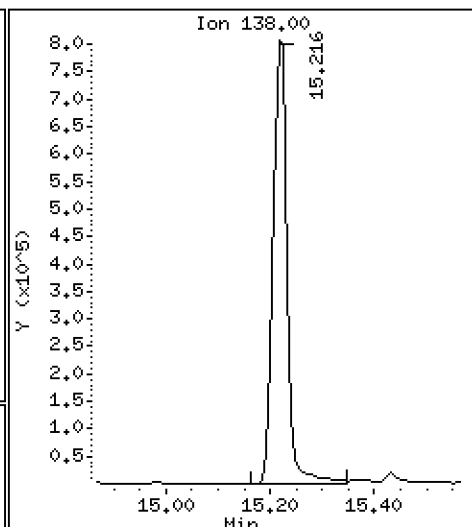
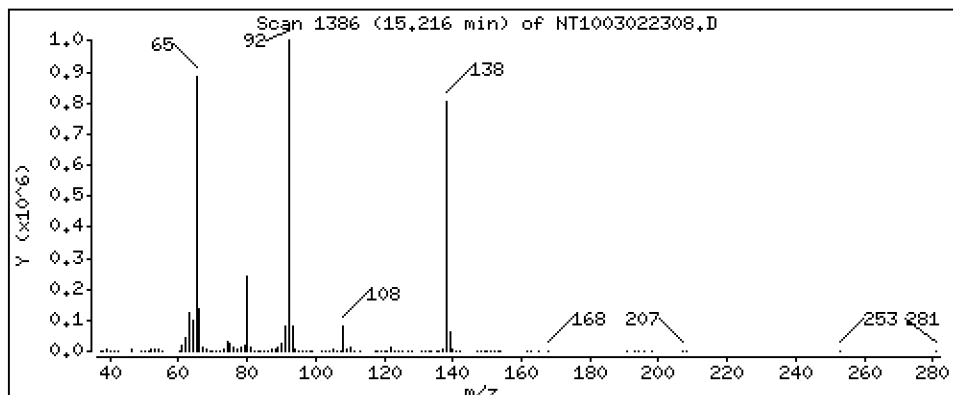
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 16,35 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

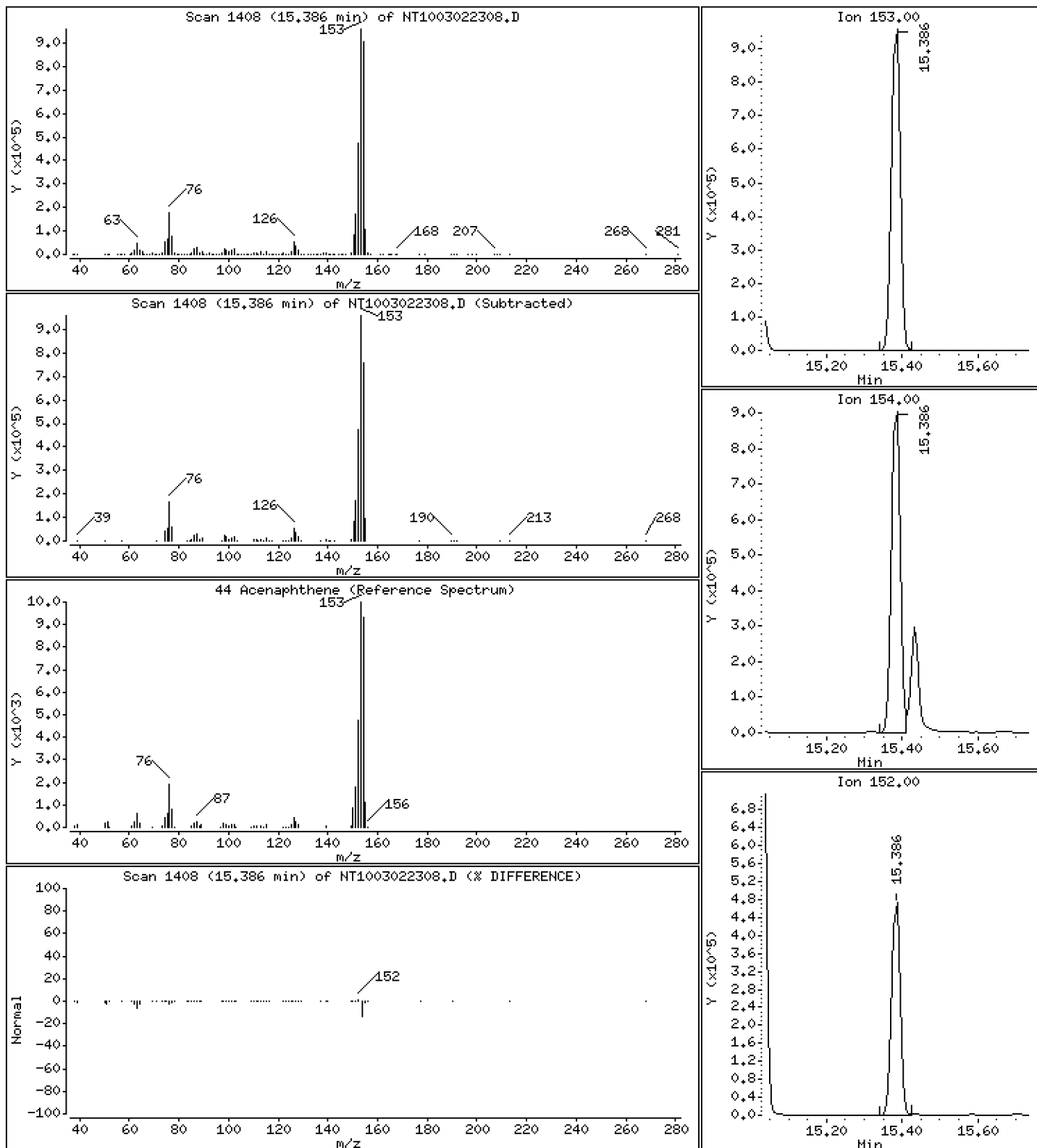
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 4,624 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

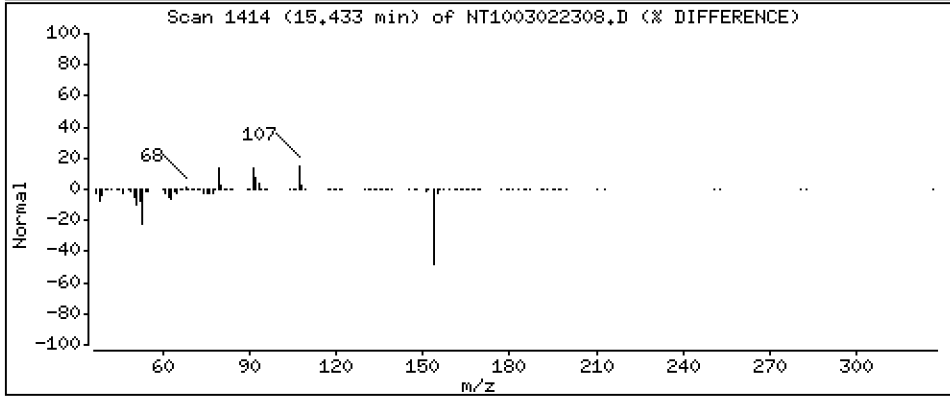
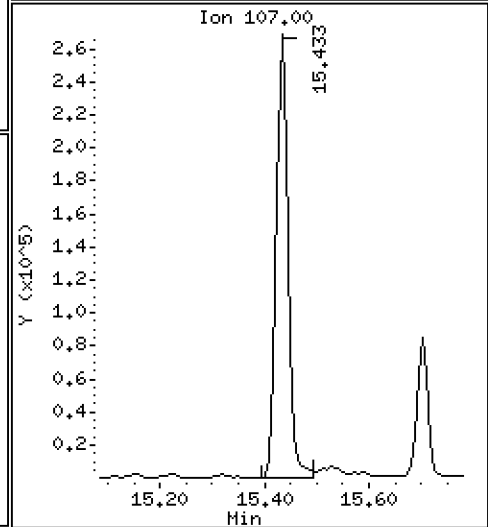
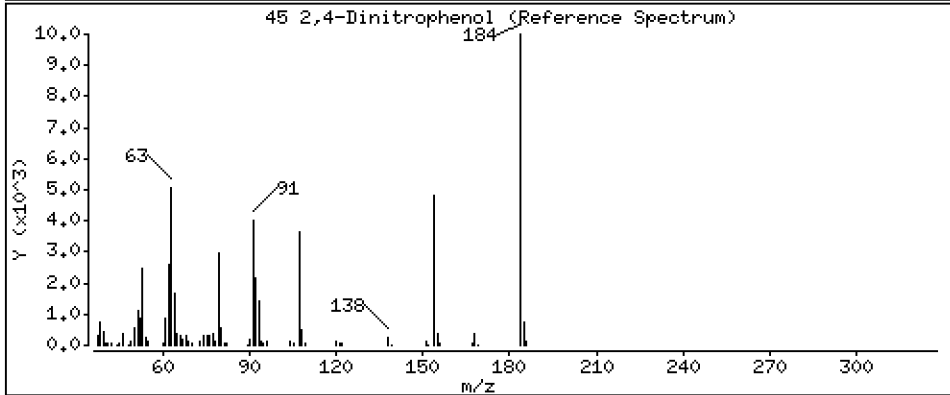
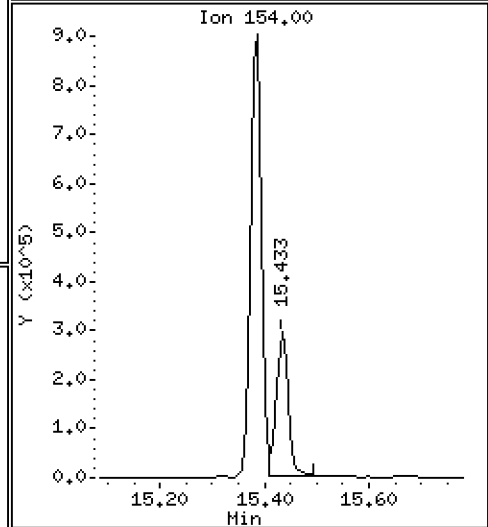
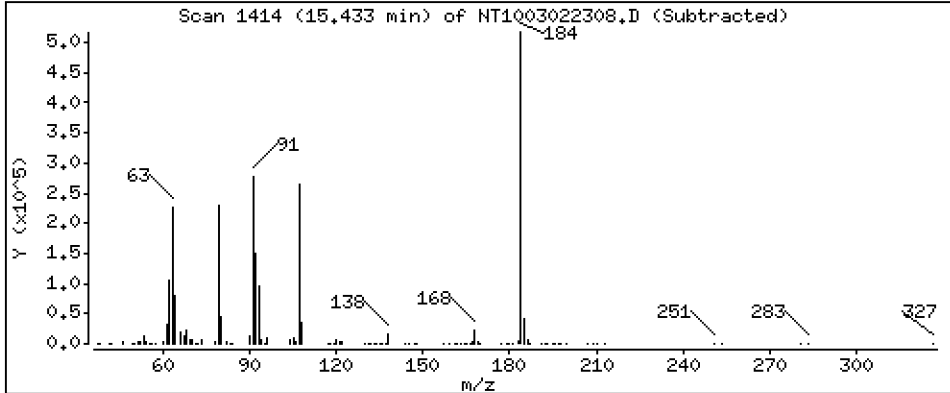
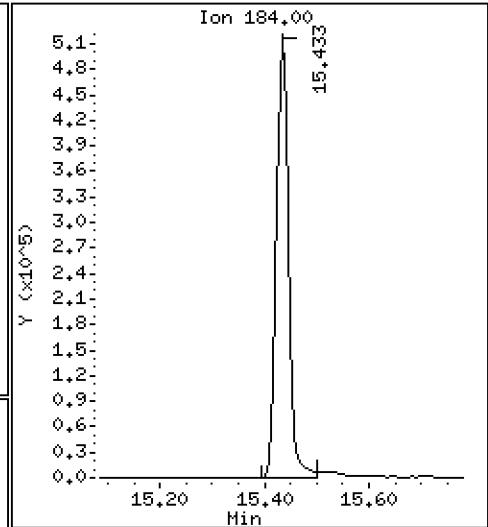
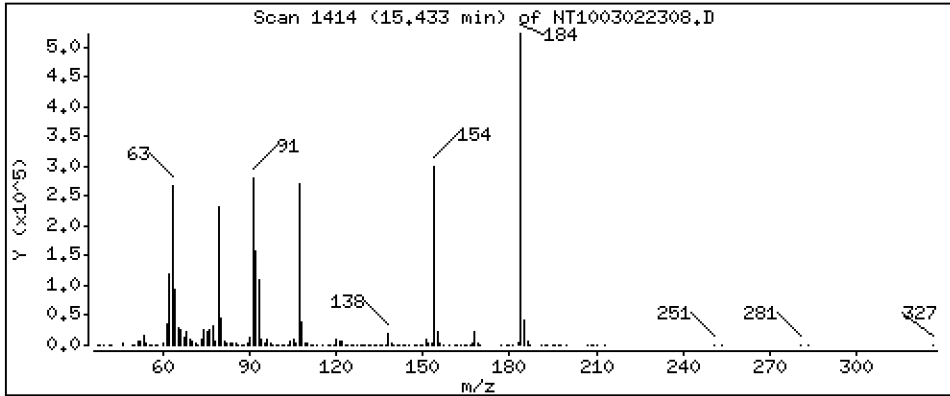
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 34,50 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

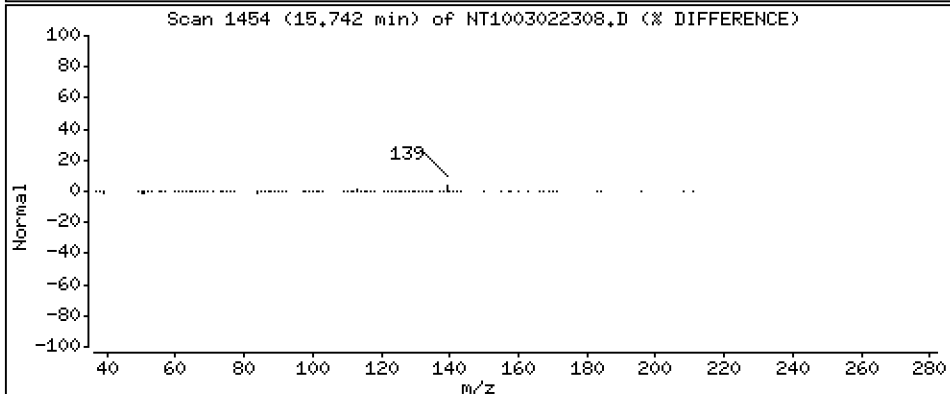
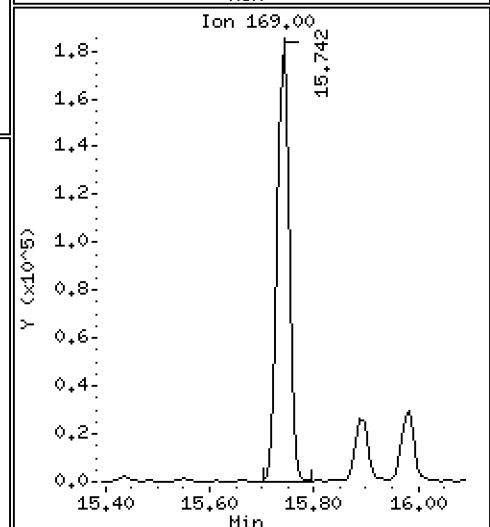
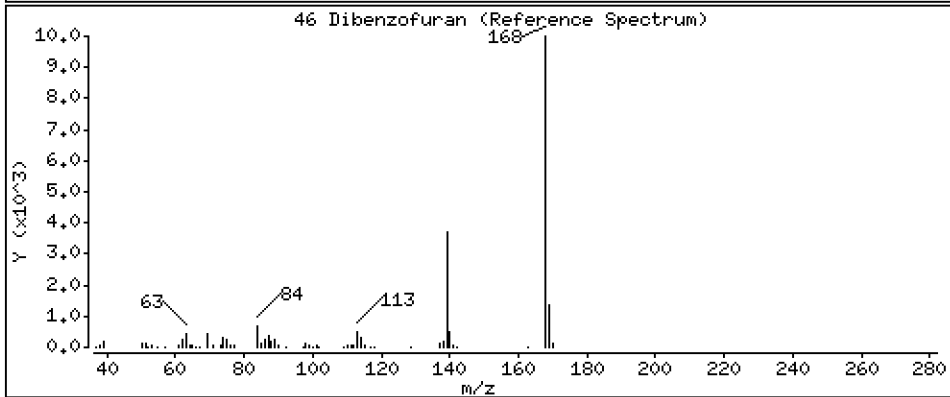
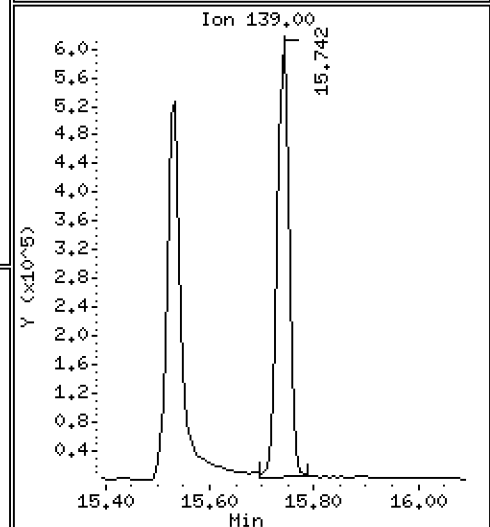
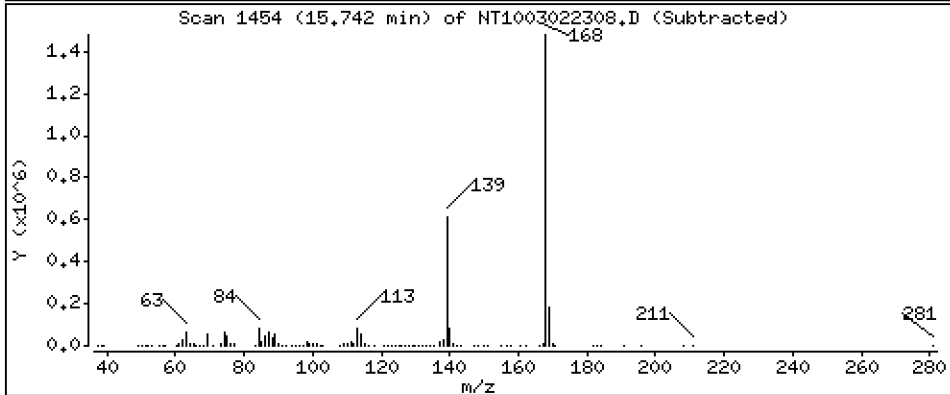
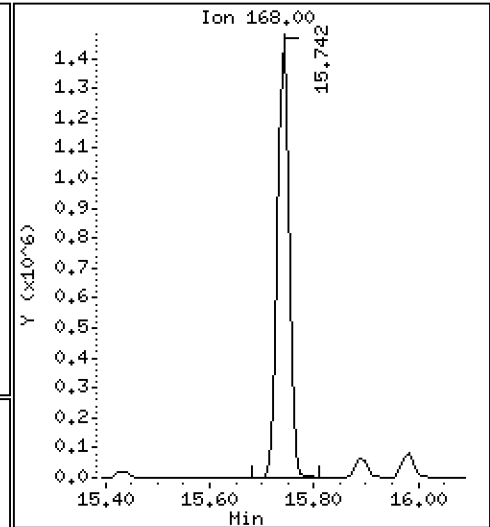
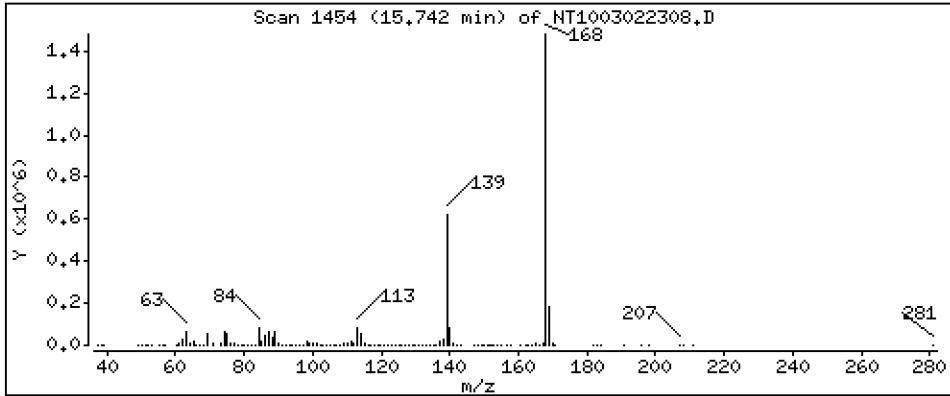
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,550 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

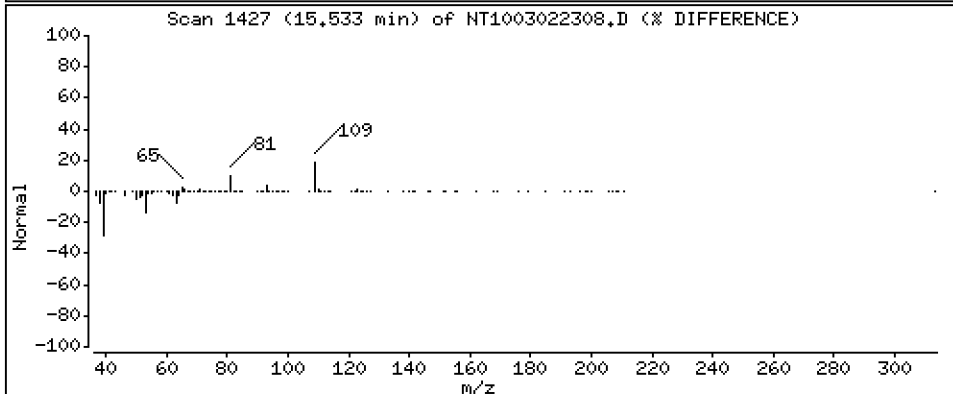
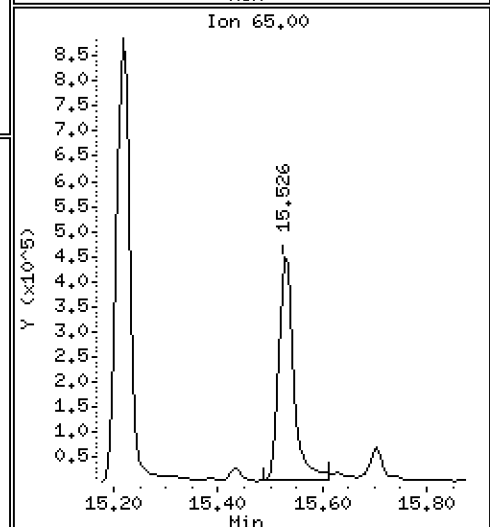
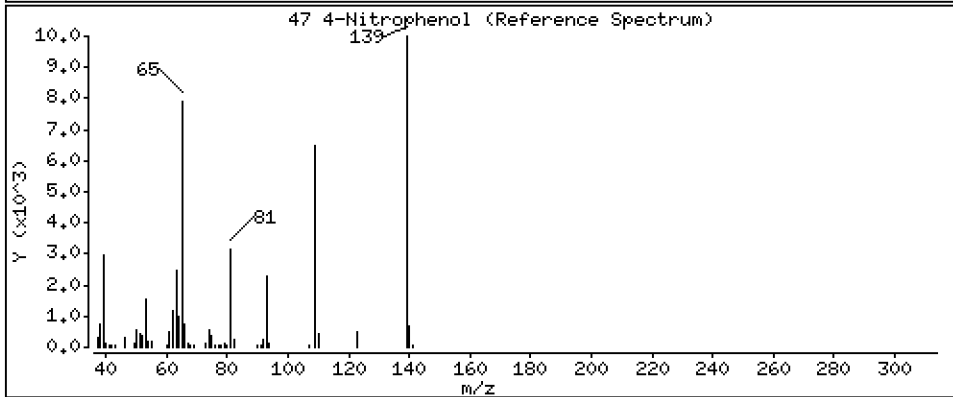
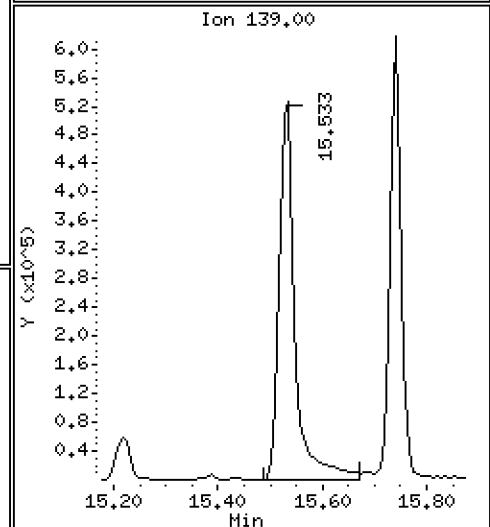
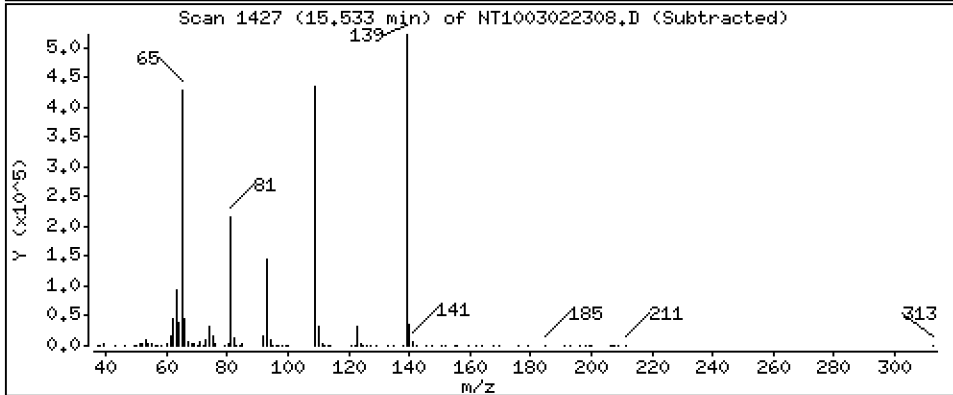
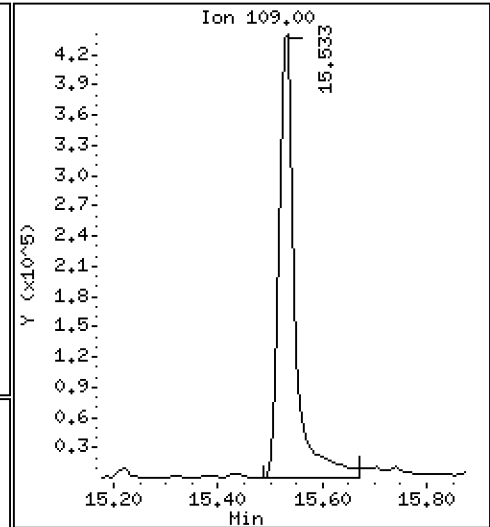
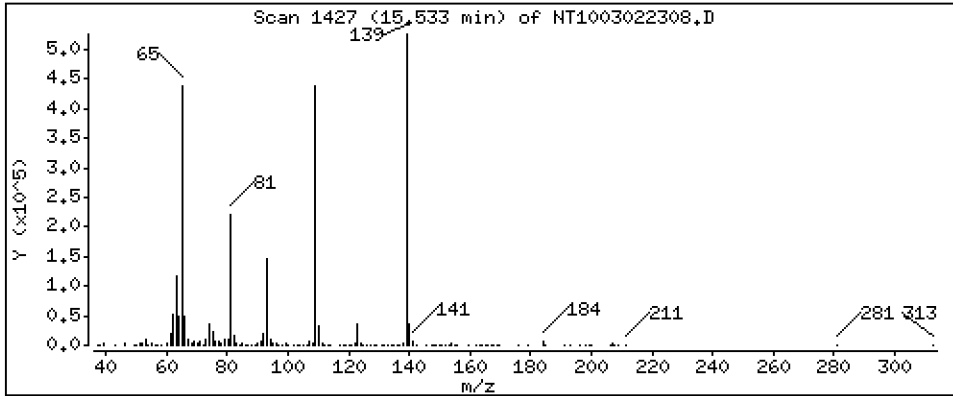
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 13,82 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

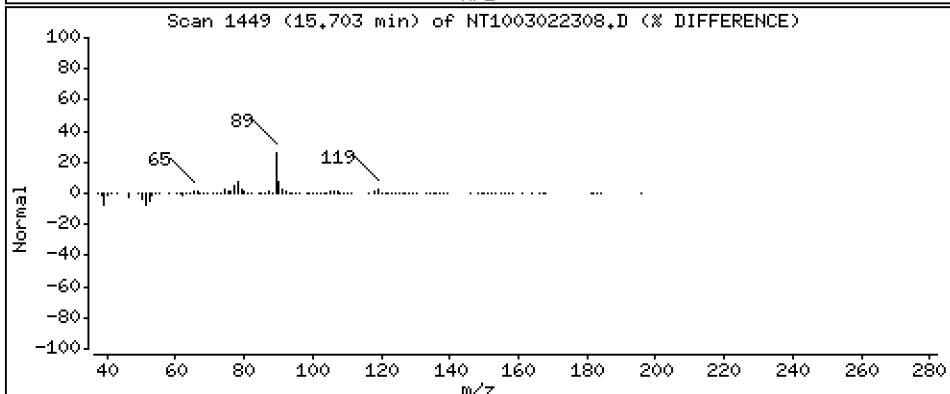
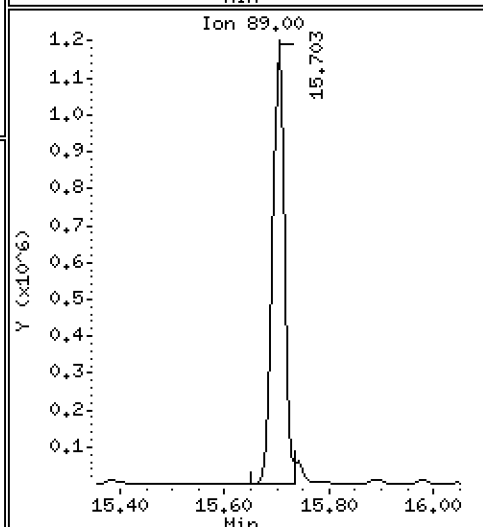
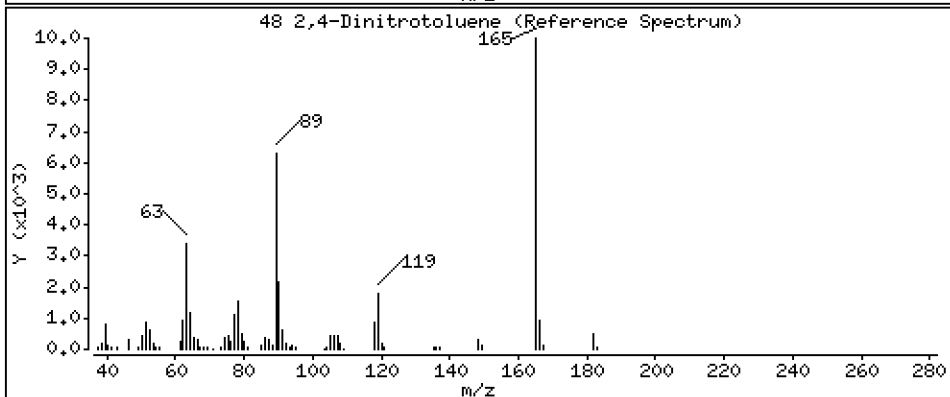
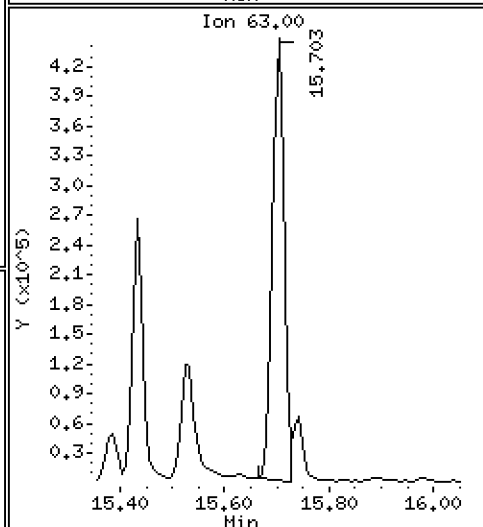
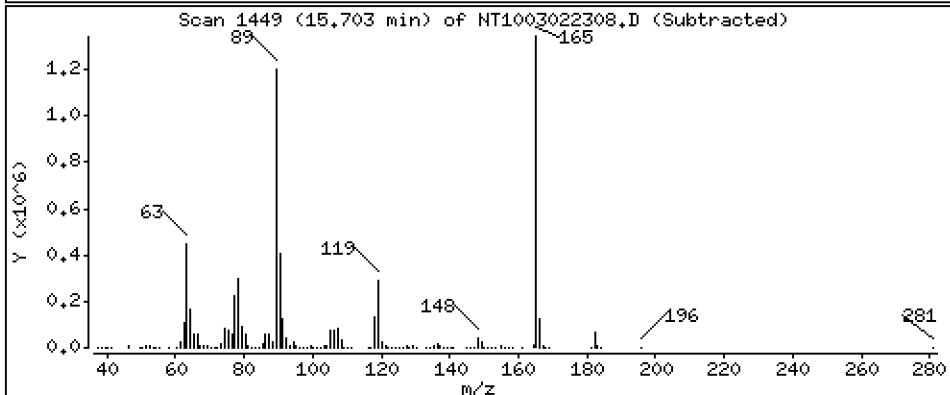
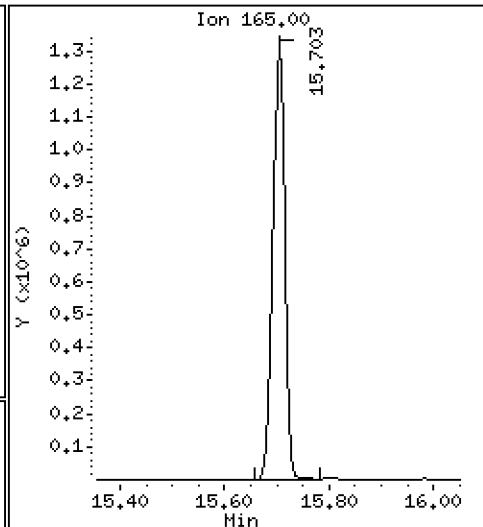
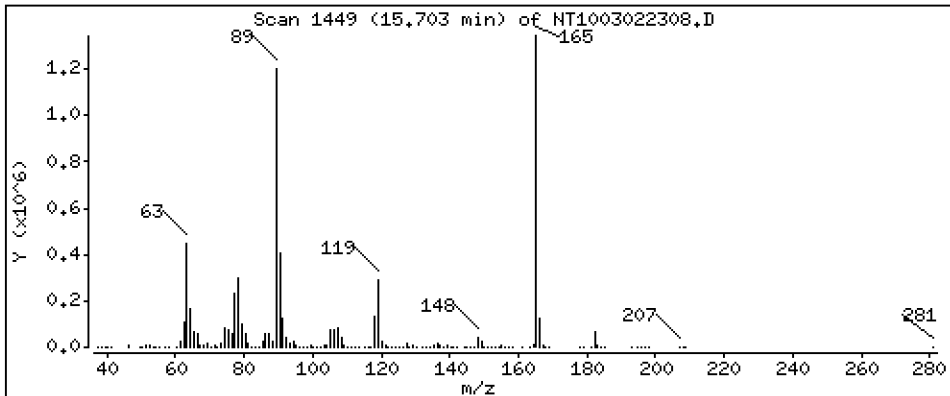
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 16,56 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

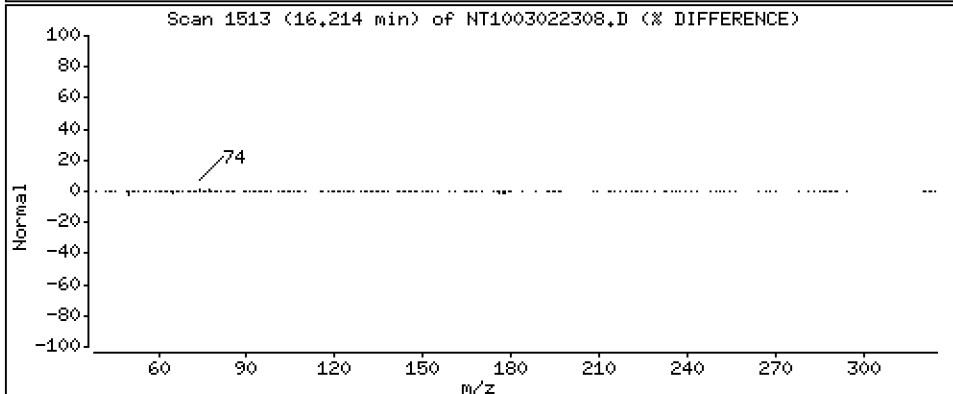
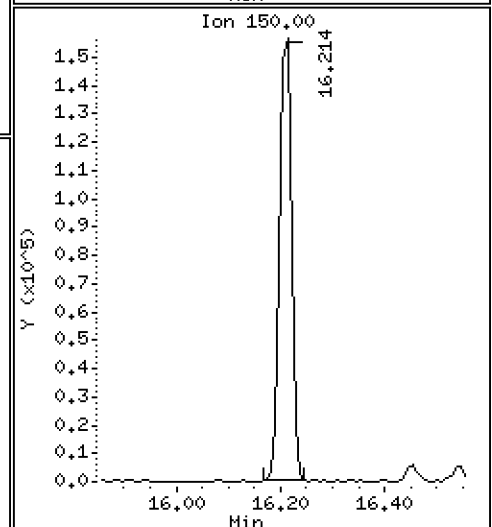
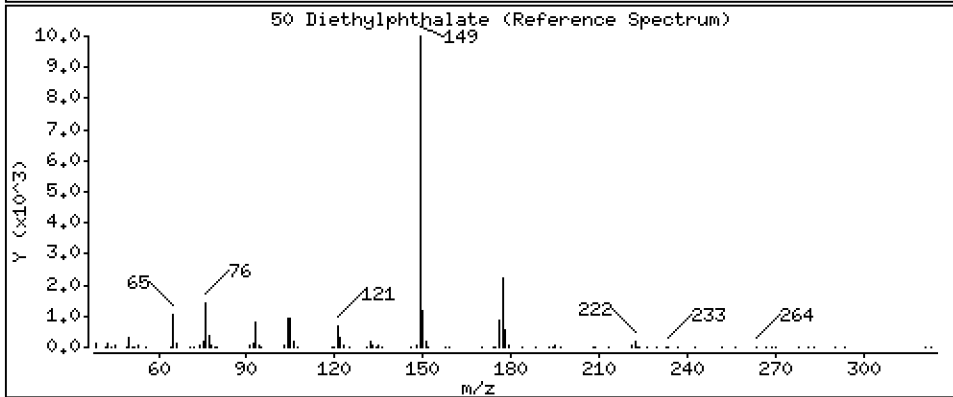
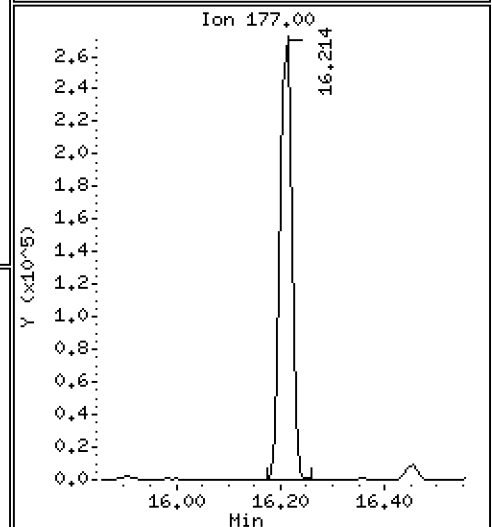
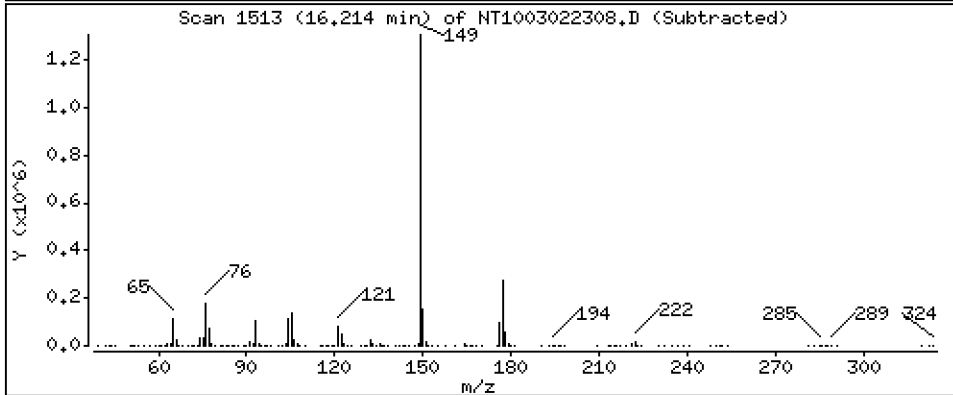
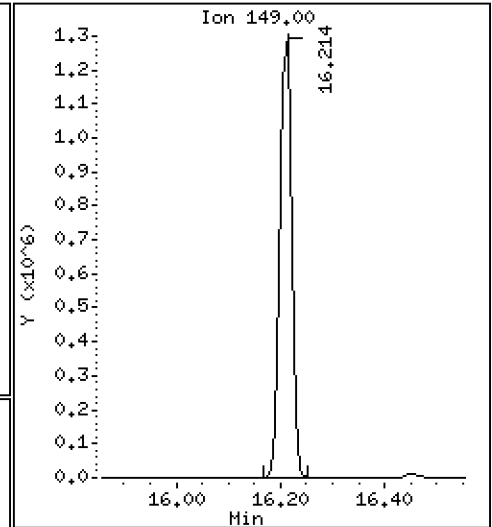
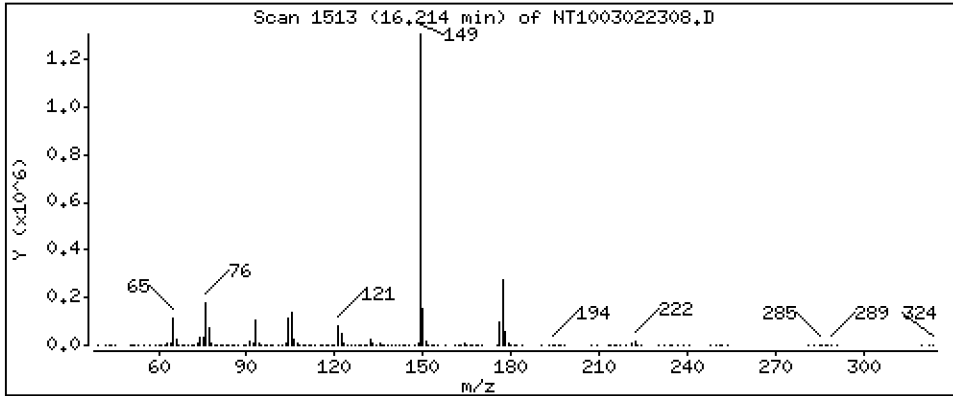
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,152 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

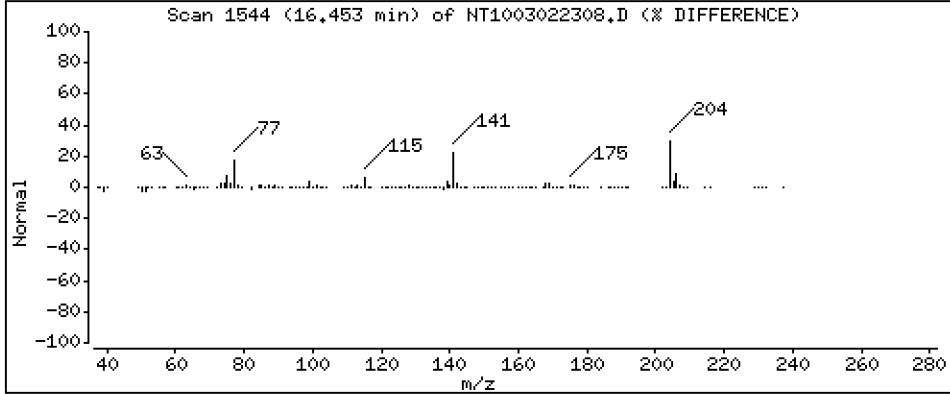
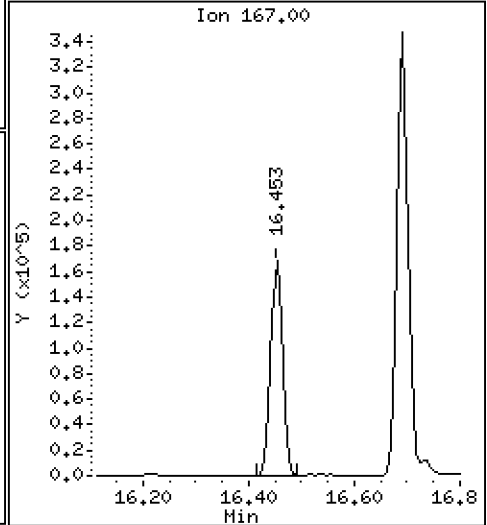
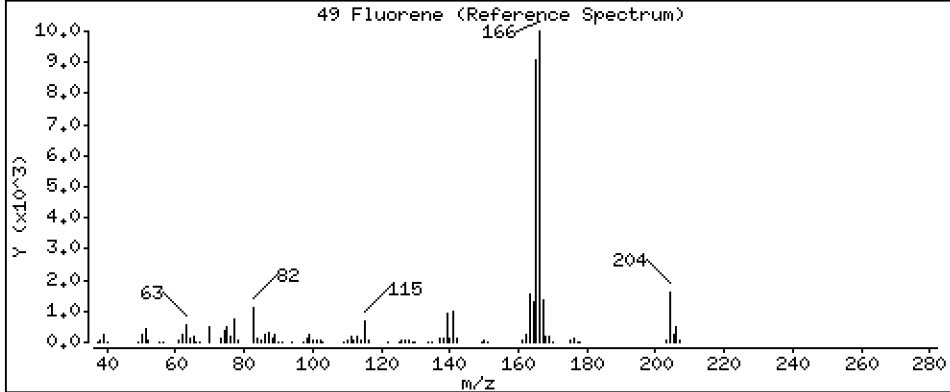
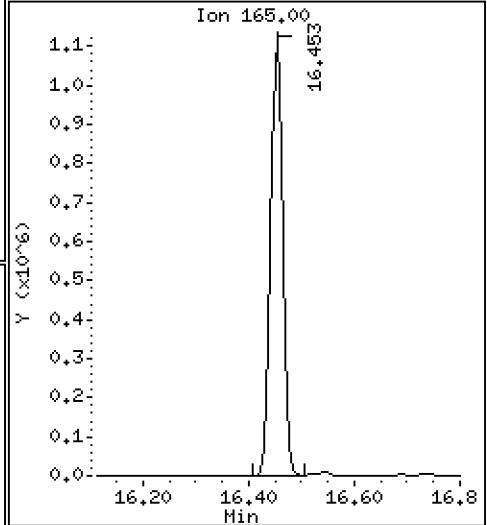
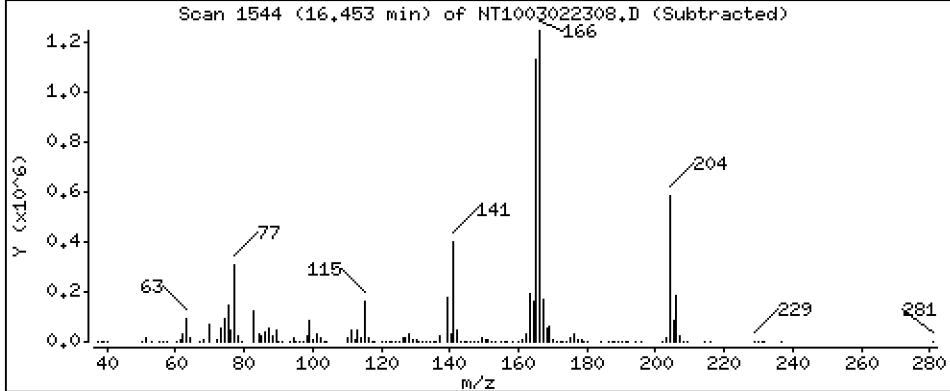
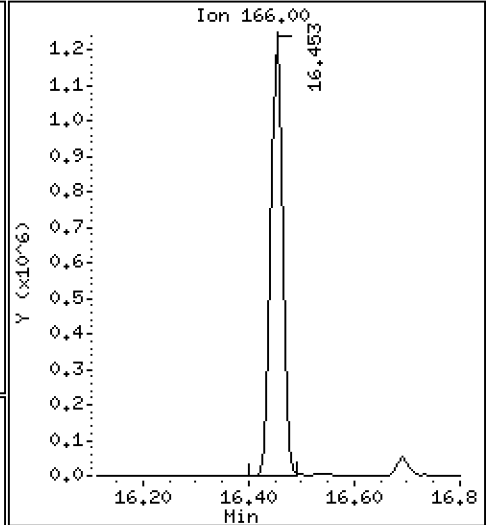
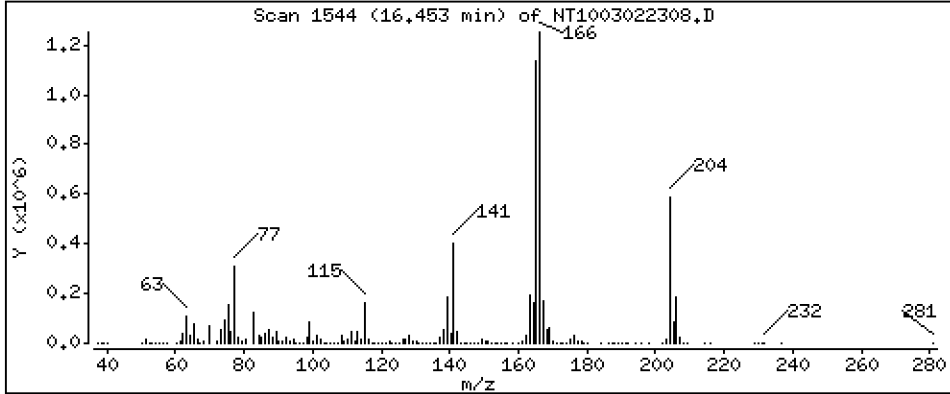
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 4,726 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

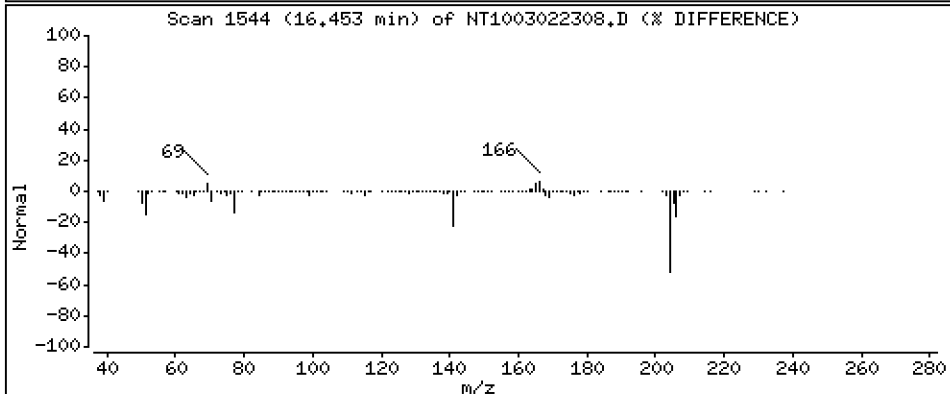
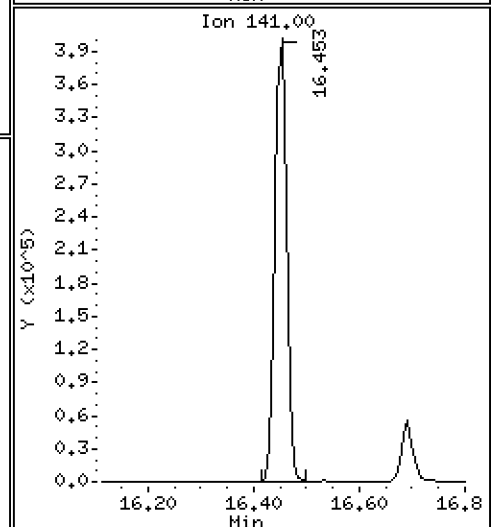
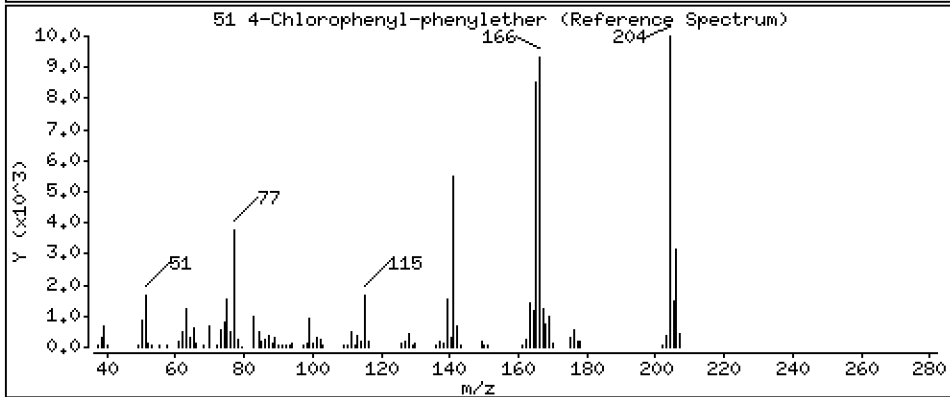
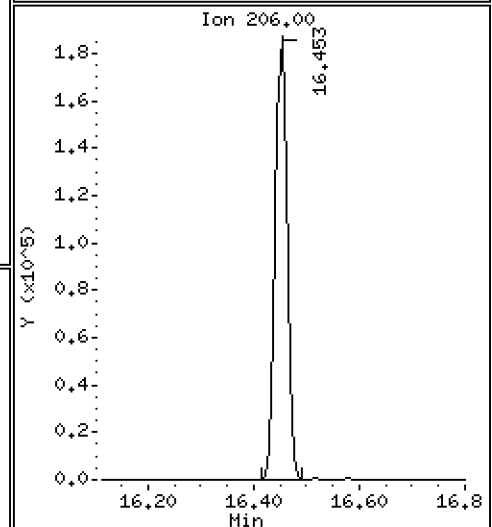
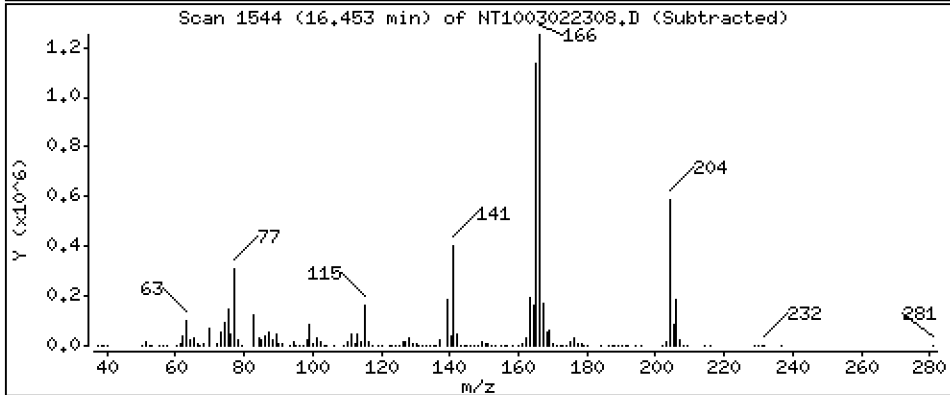
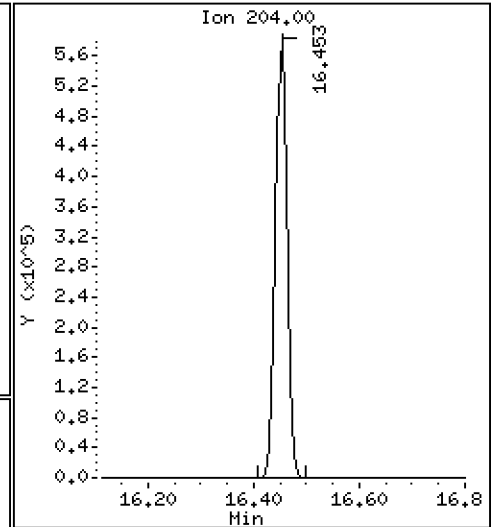
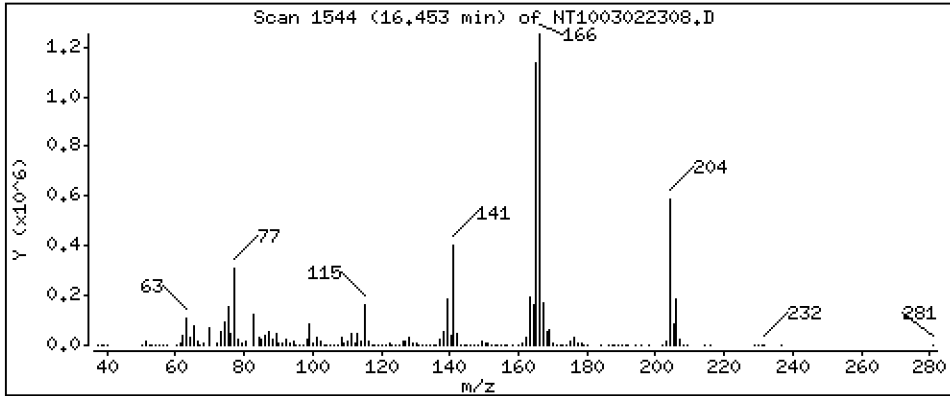
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 4,799 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

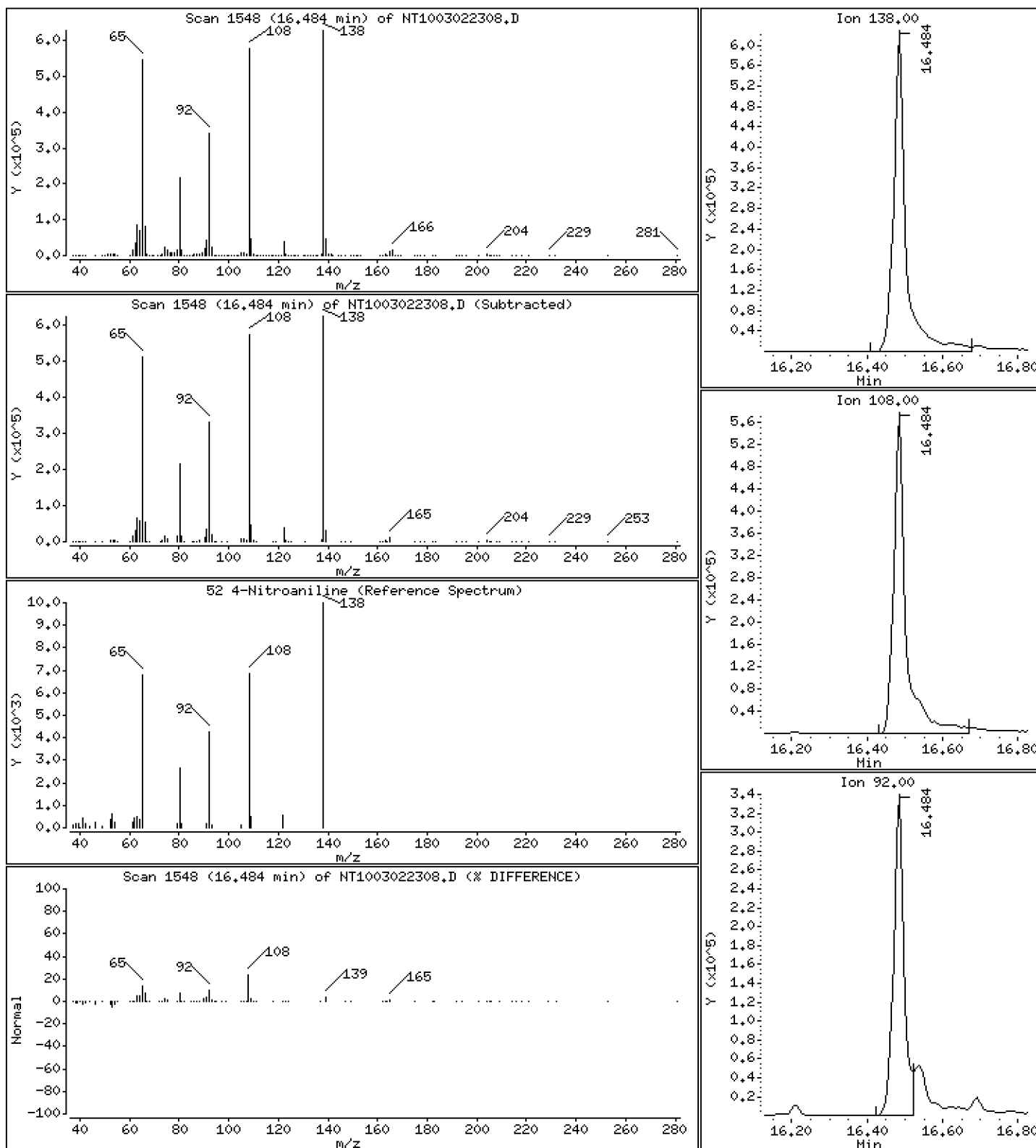
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 15,62 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

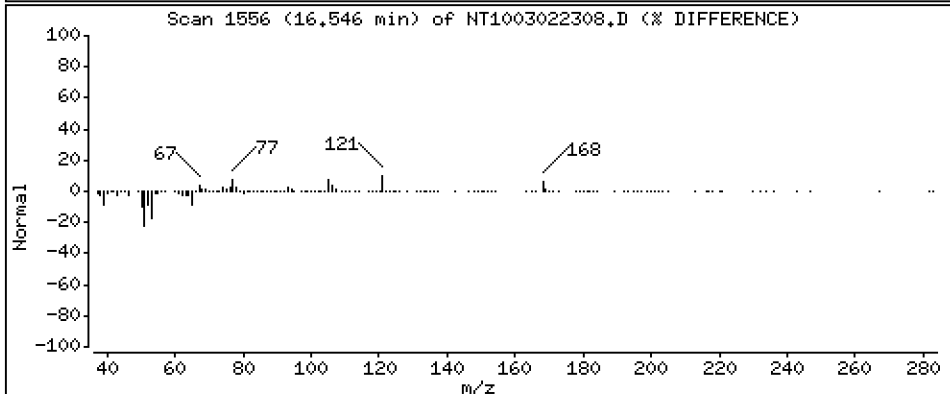
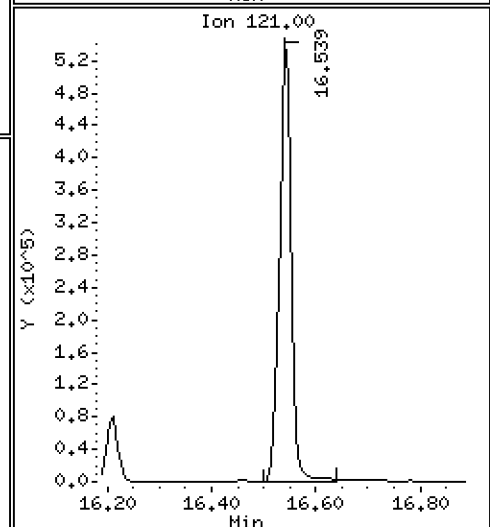
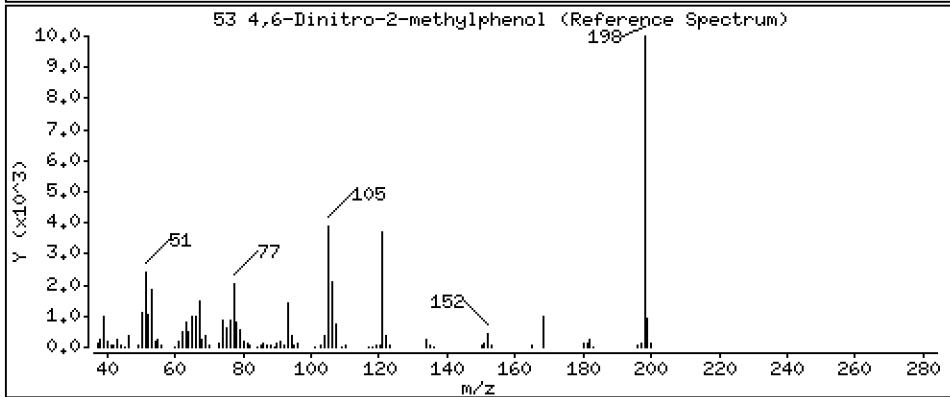
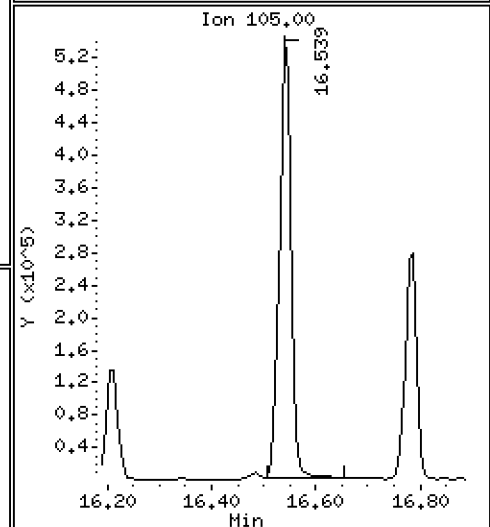
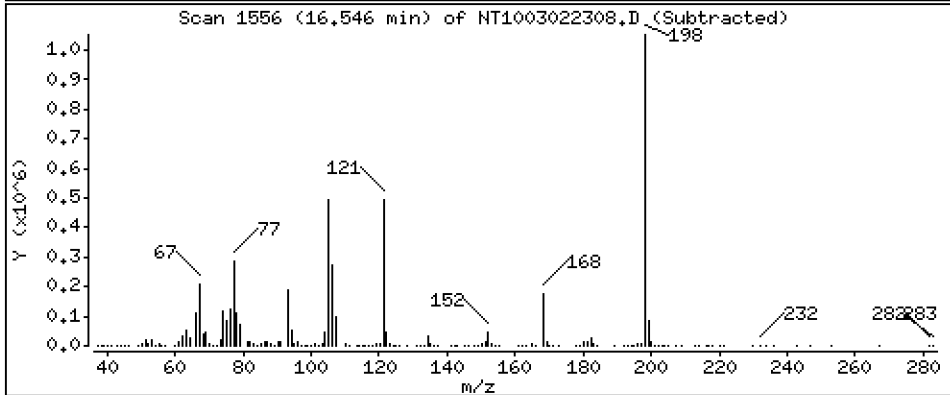
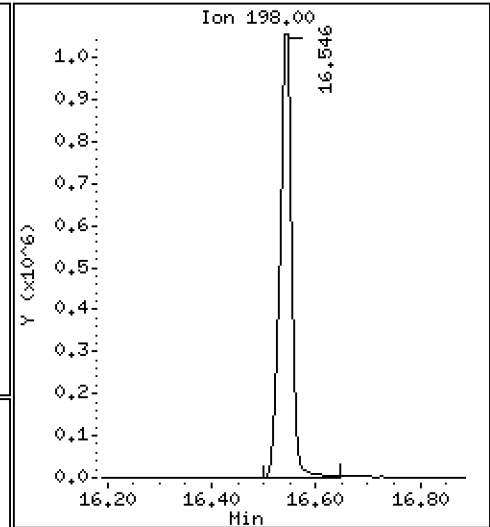
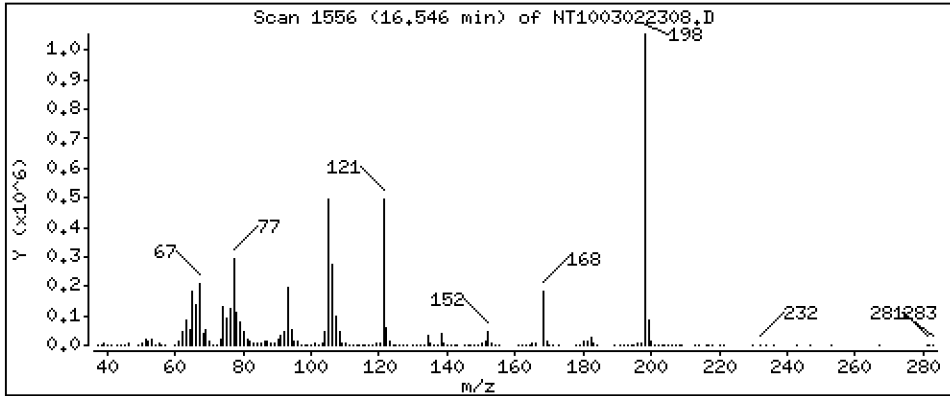
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 34,87 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

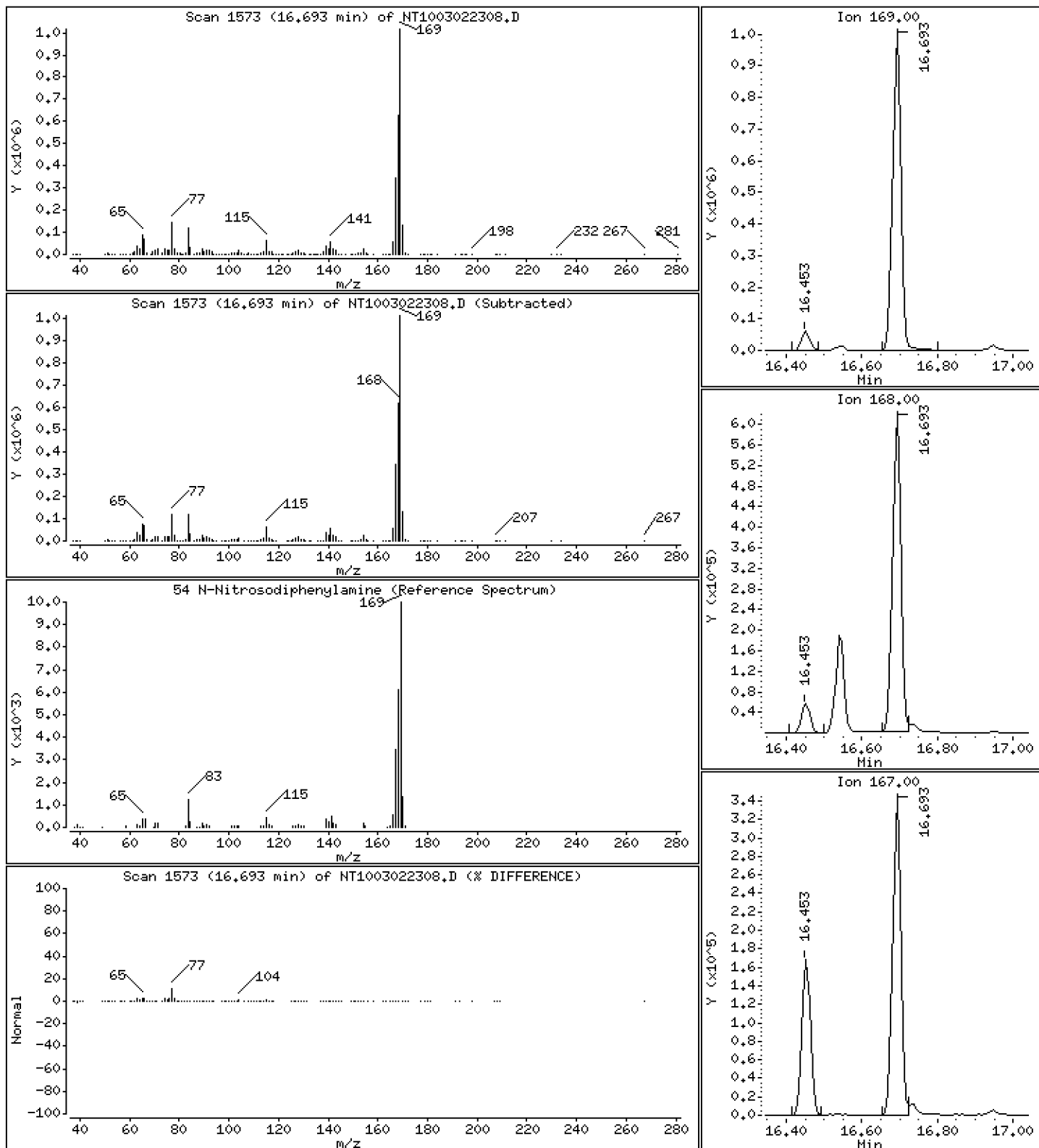
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,985 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

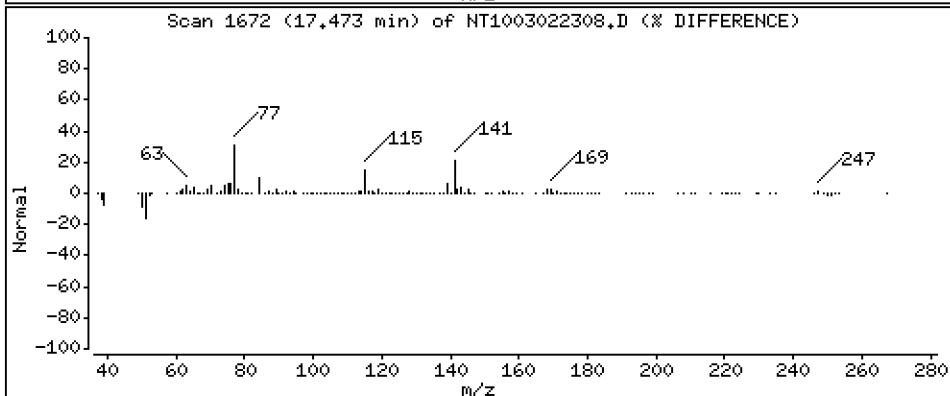
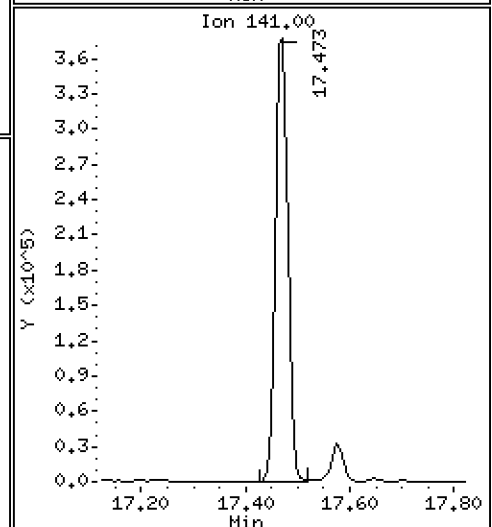
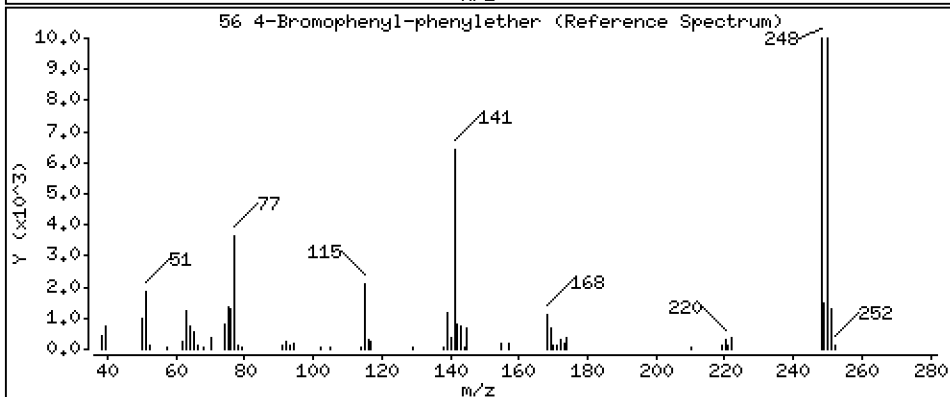
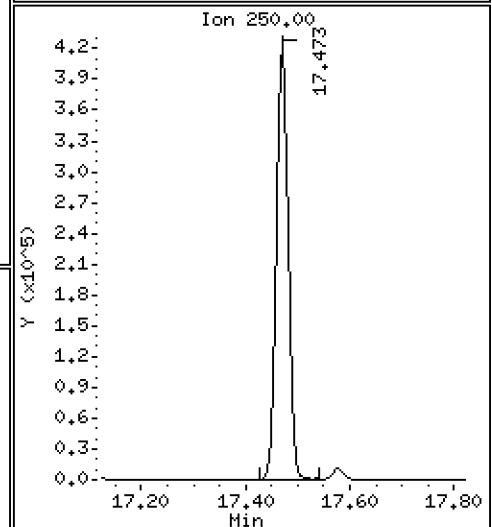
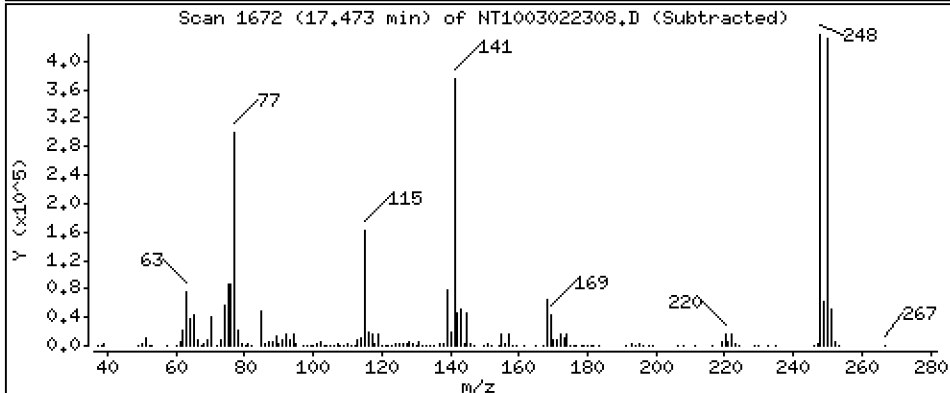
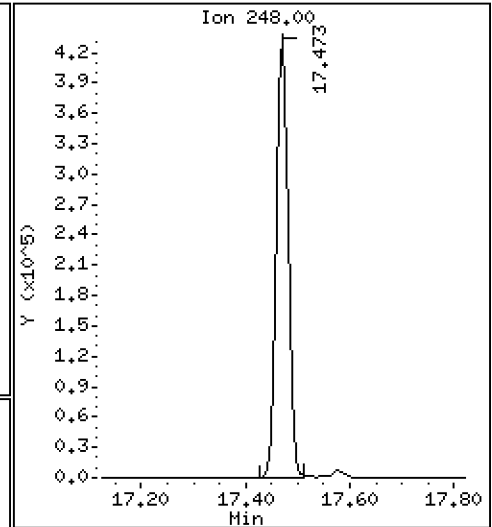
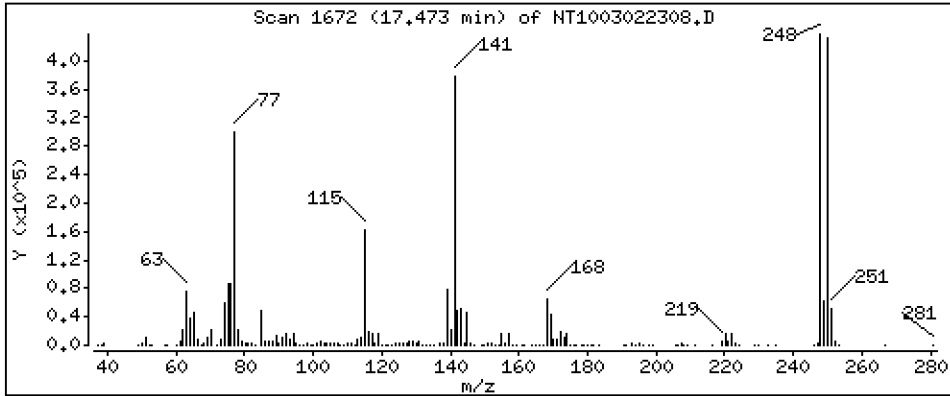
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,381 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

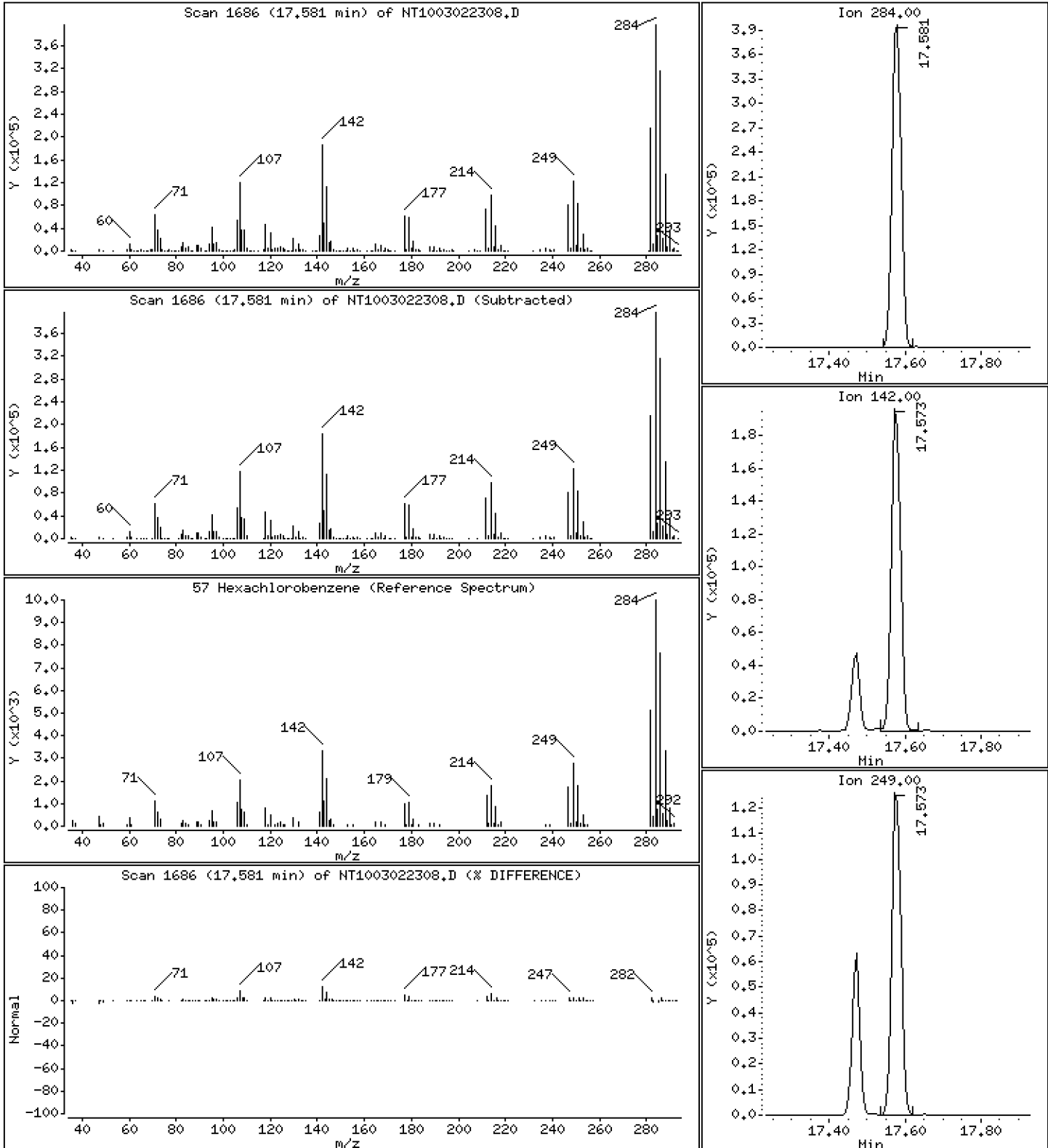
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,676 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

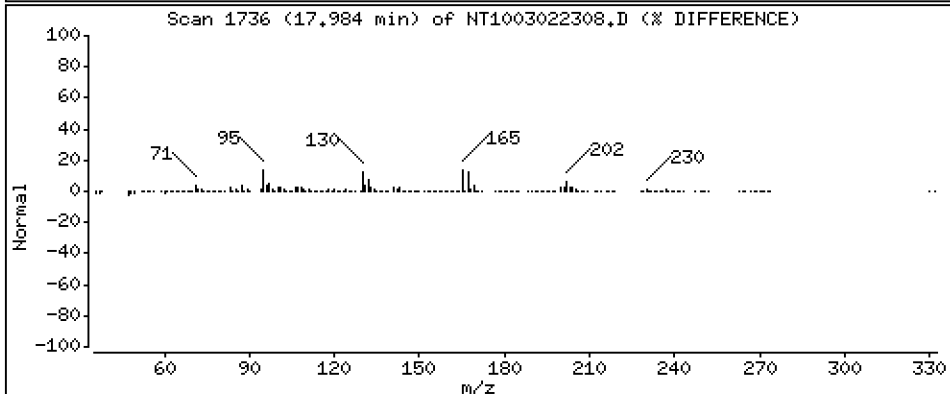
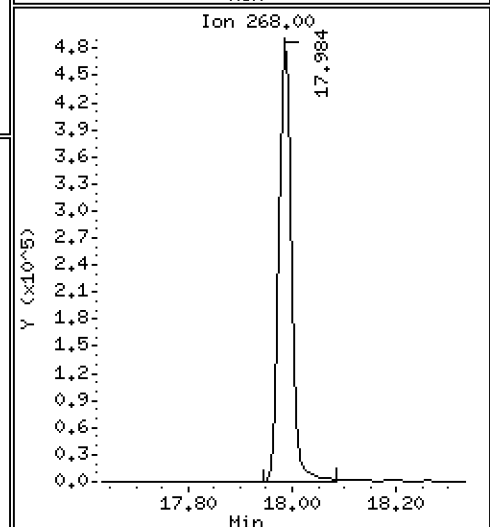
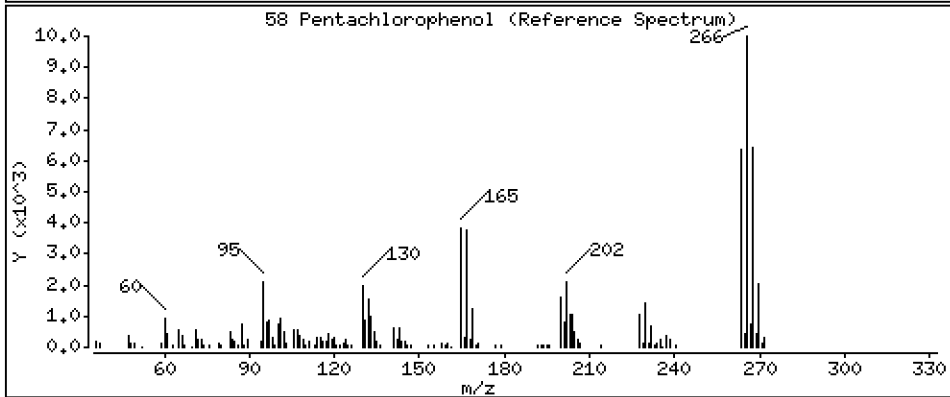
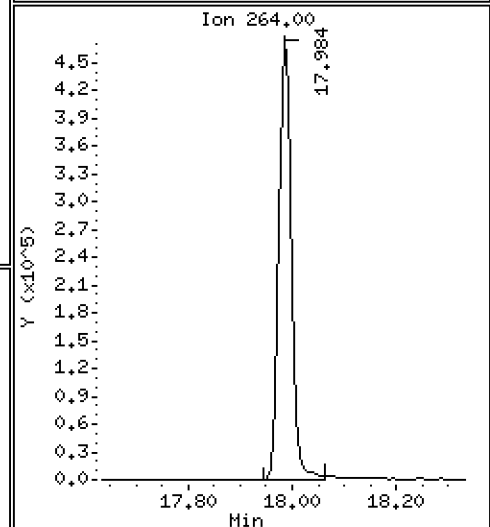
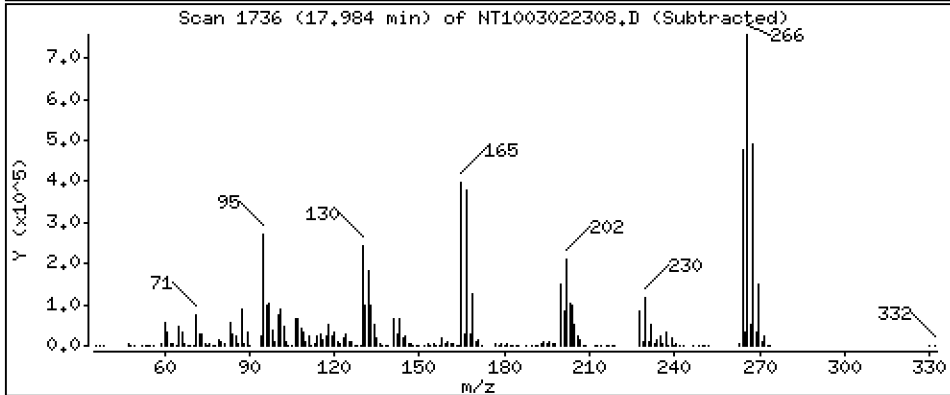
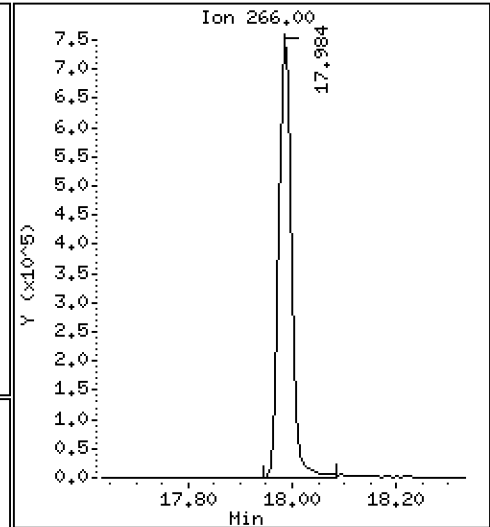
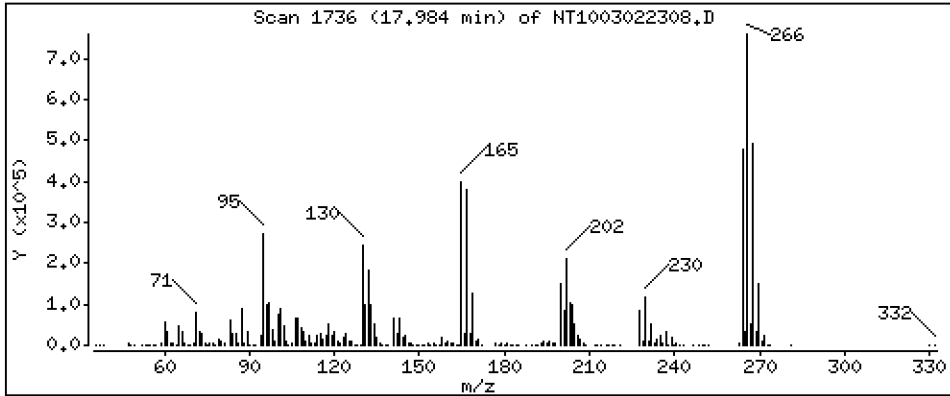
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 17,29 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

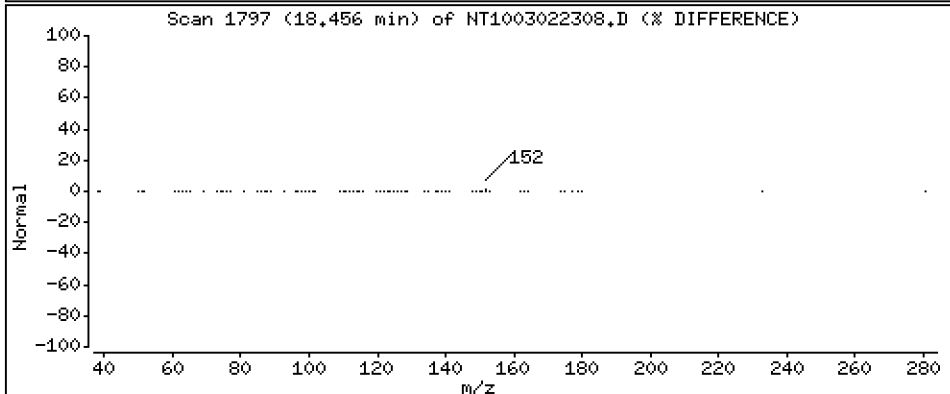
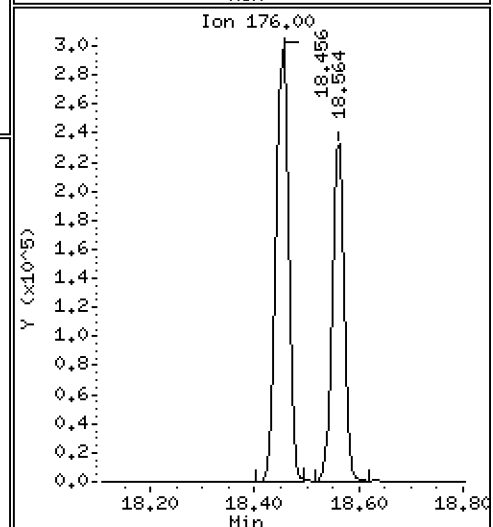
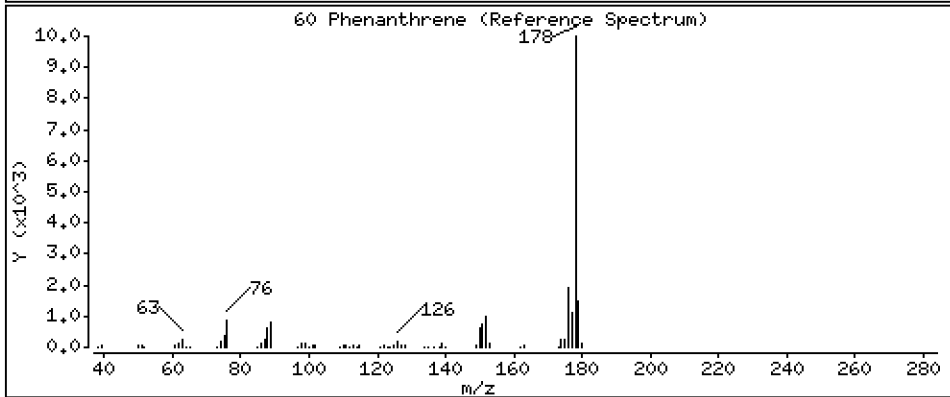
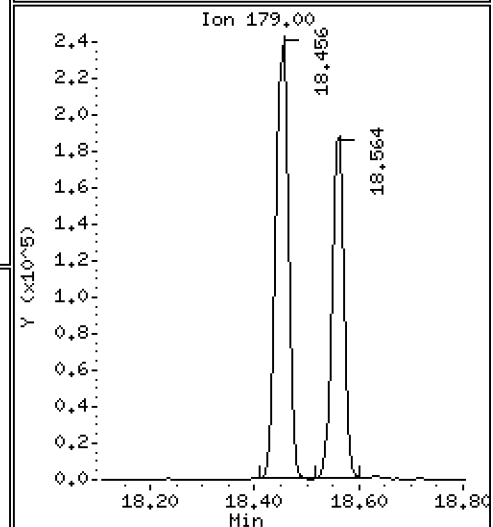
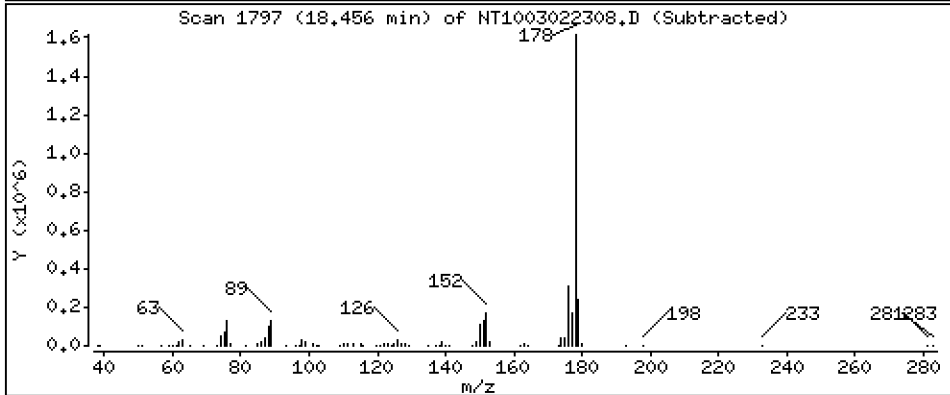
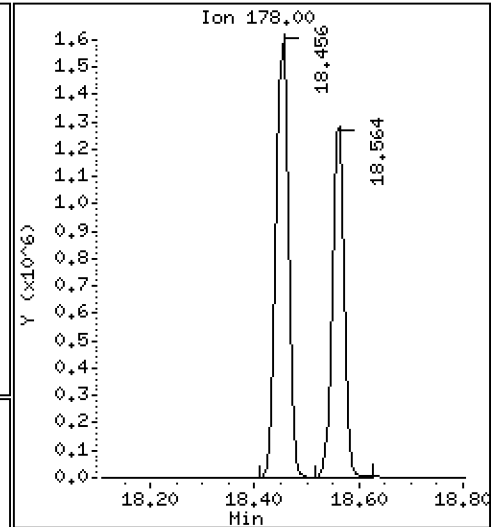
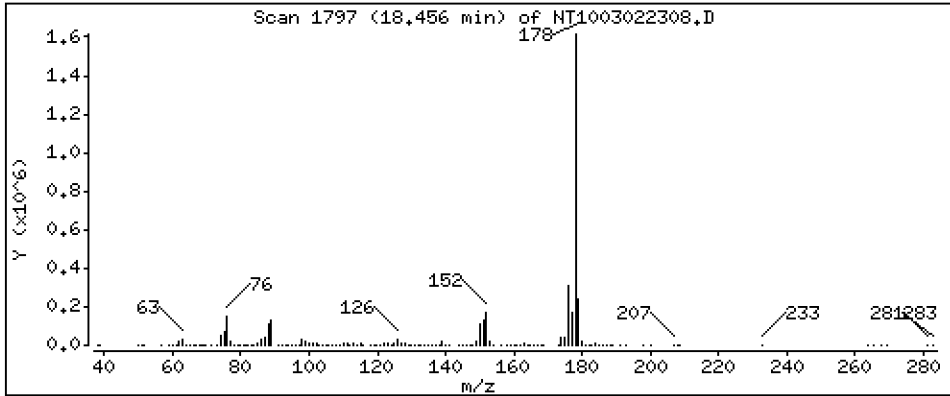
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 4,919 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

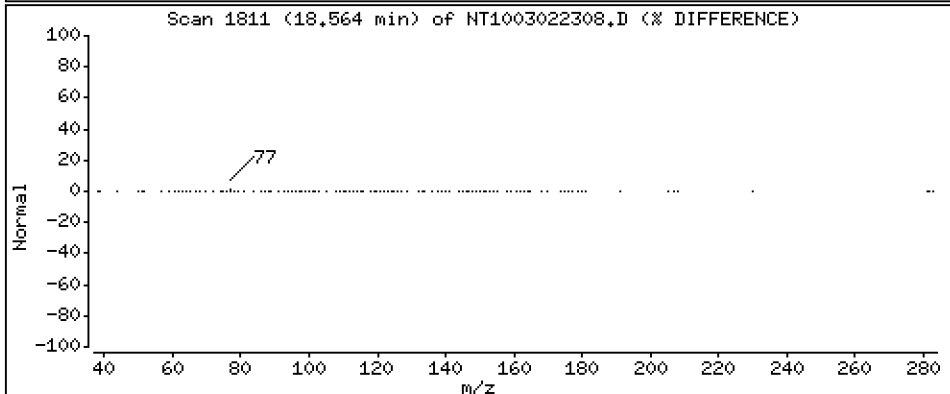
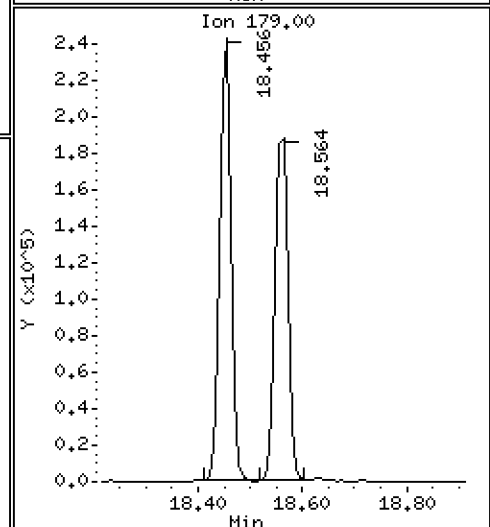
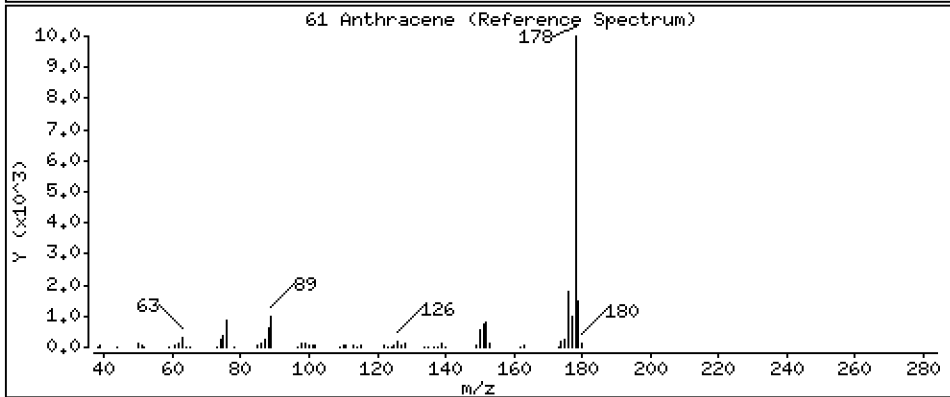
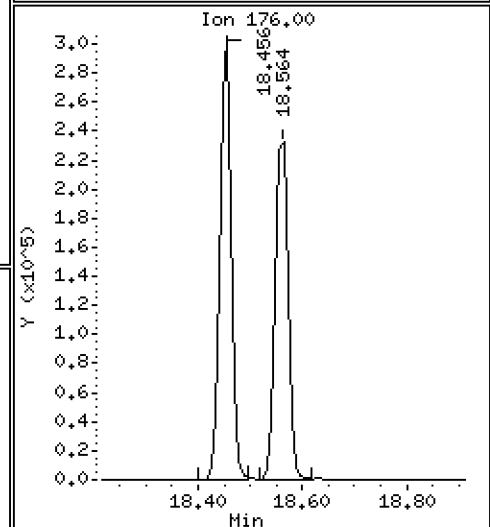
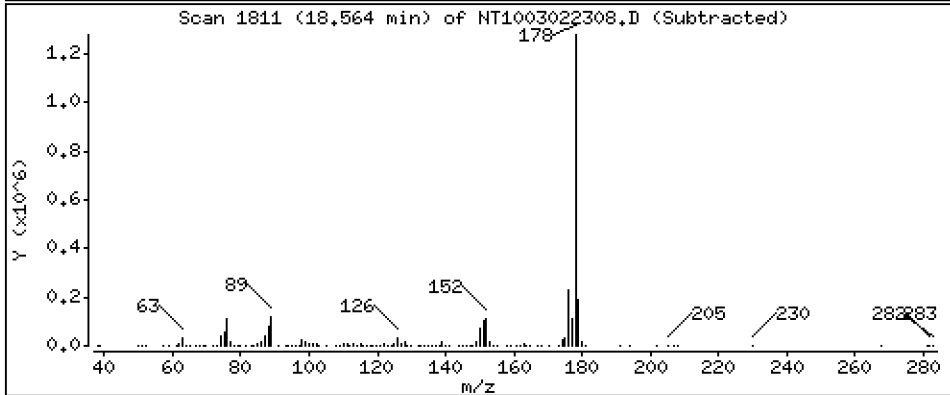
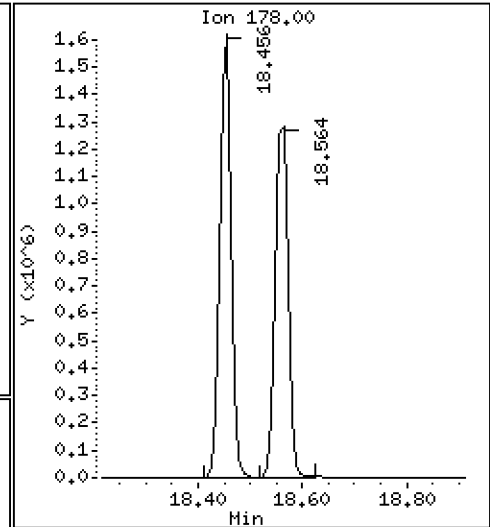
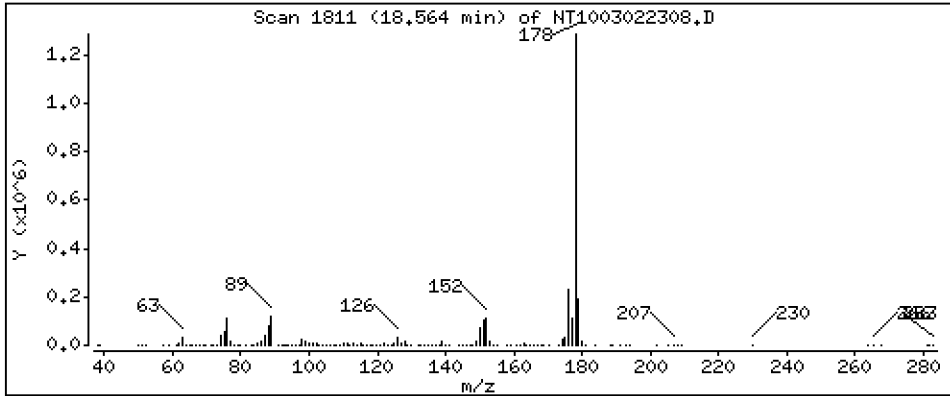
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,178 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

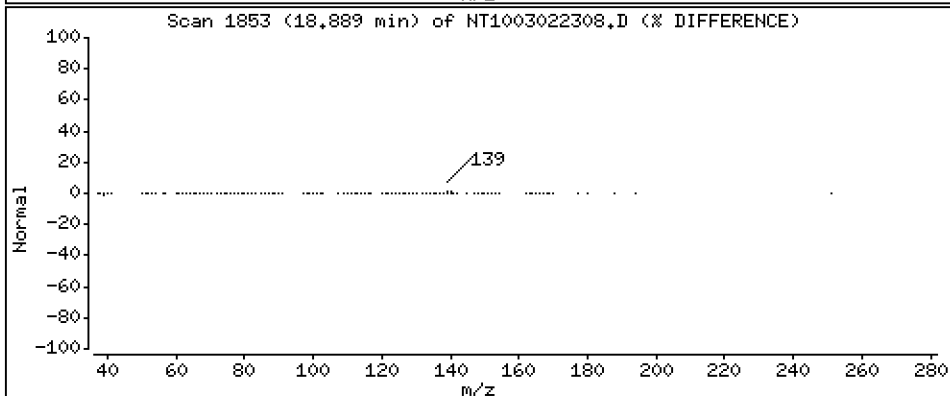
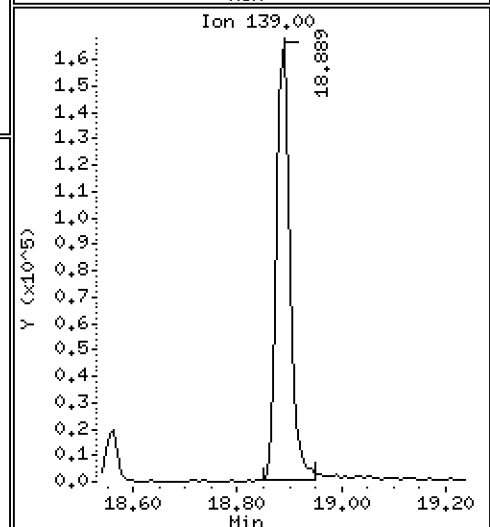
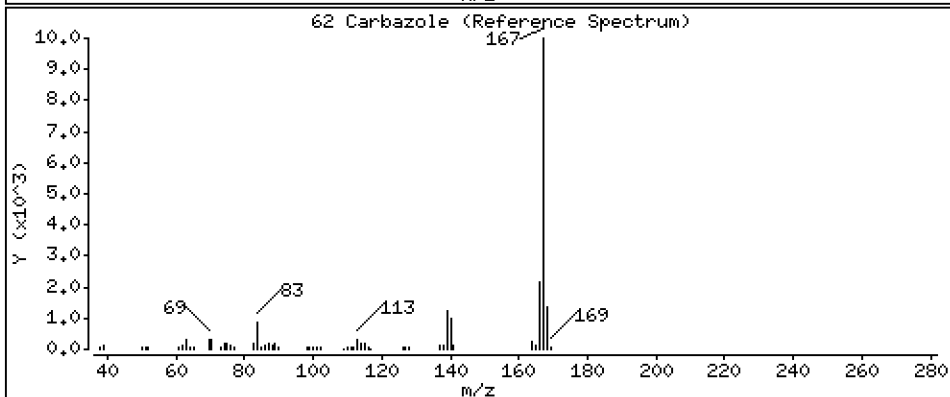
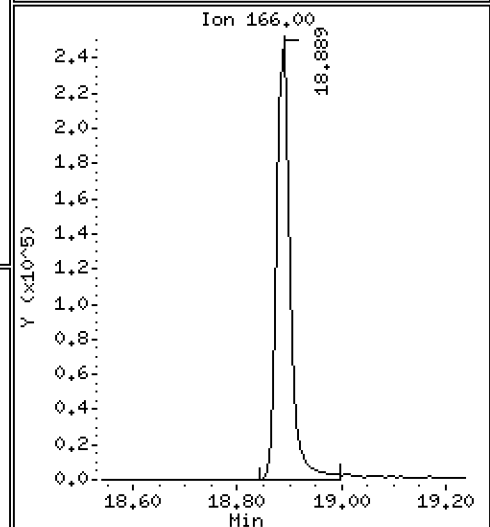
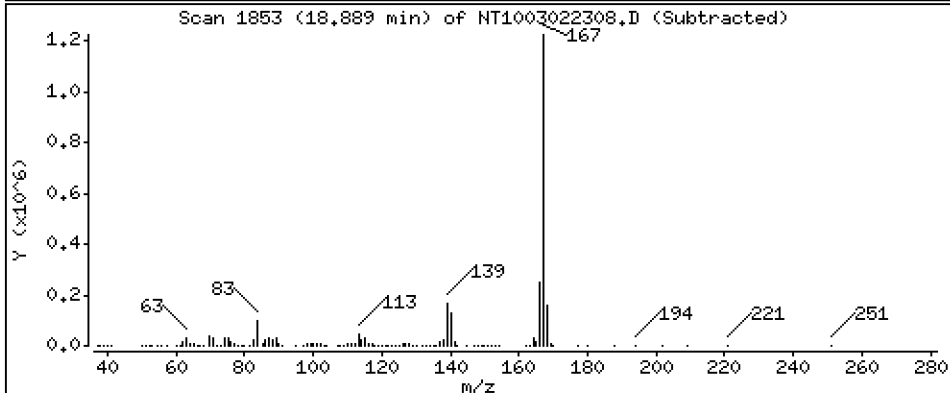
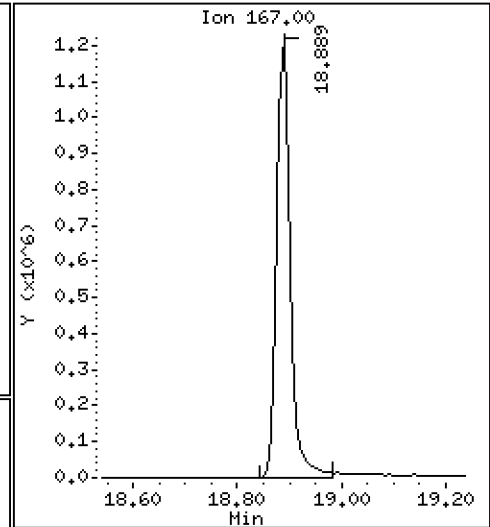
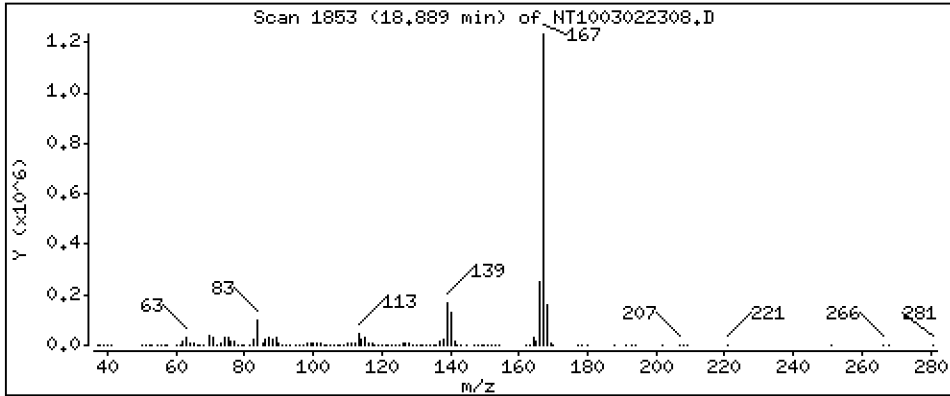
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 4,551 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

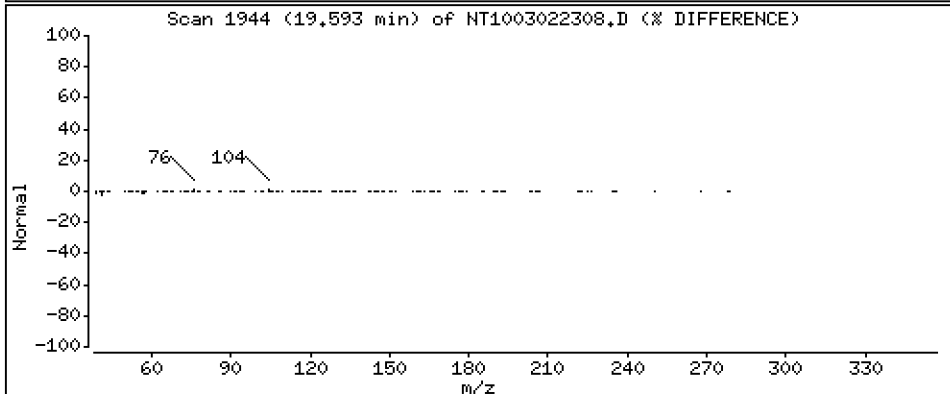
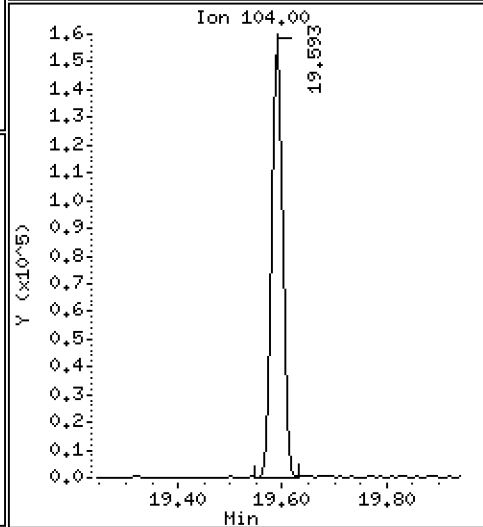
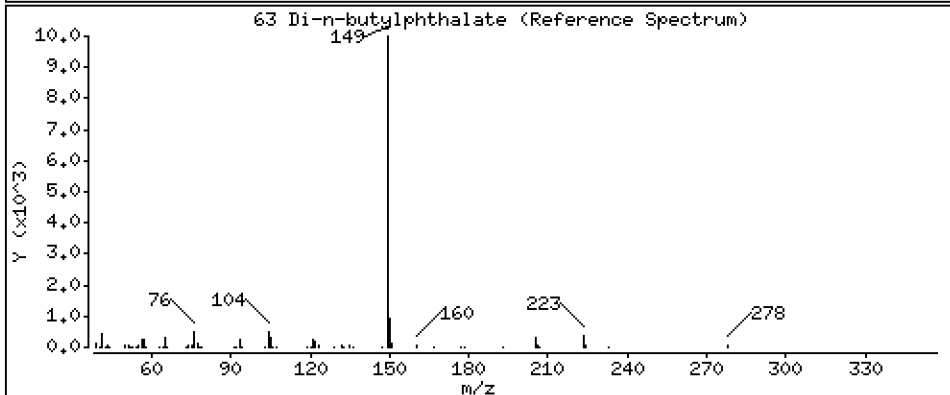
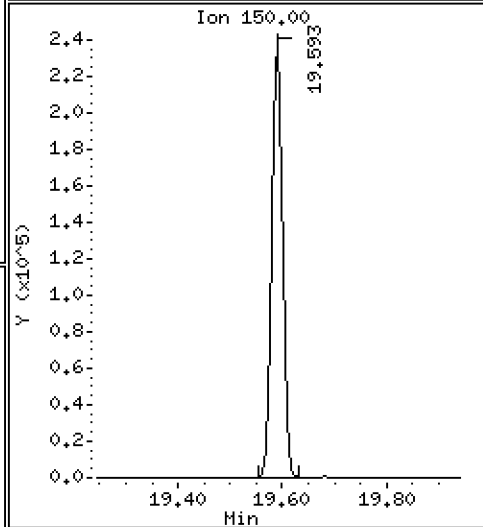
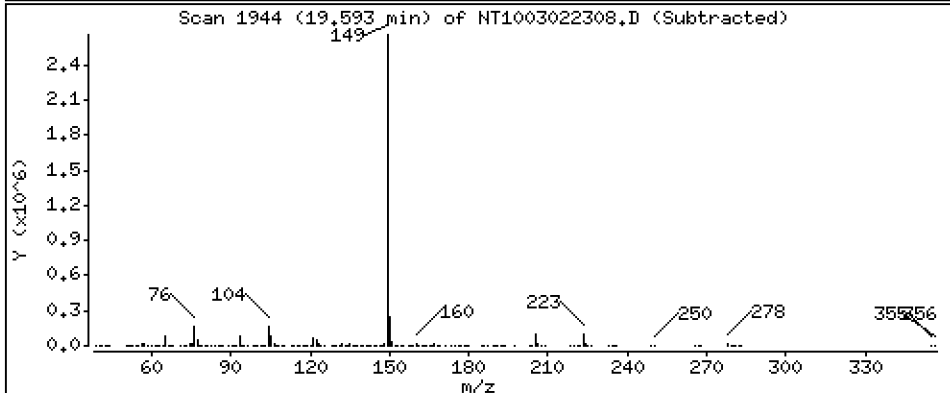
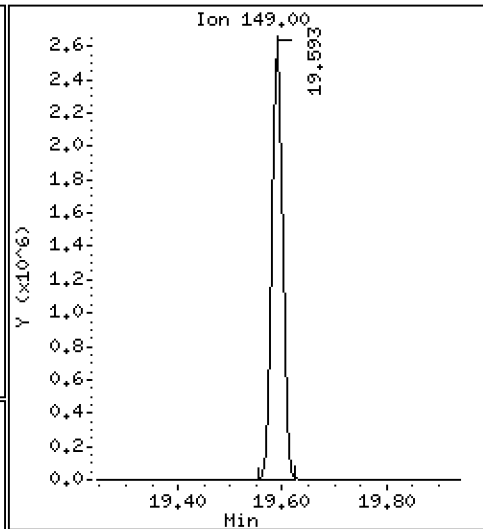
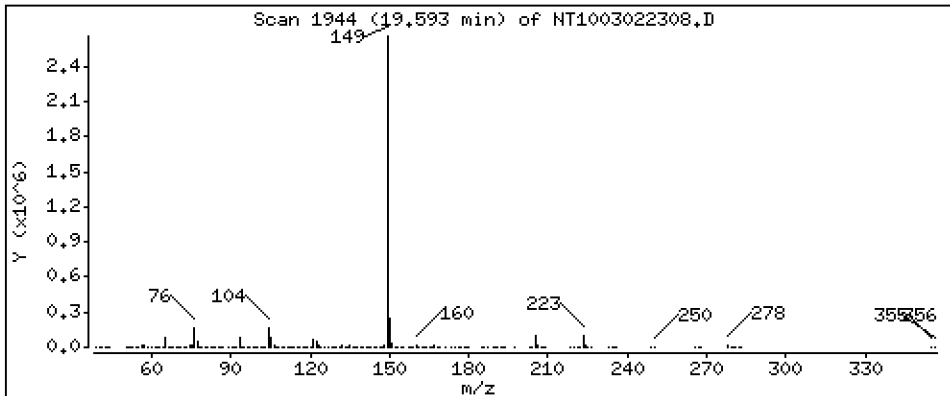
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,442 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

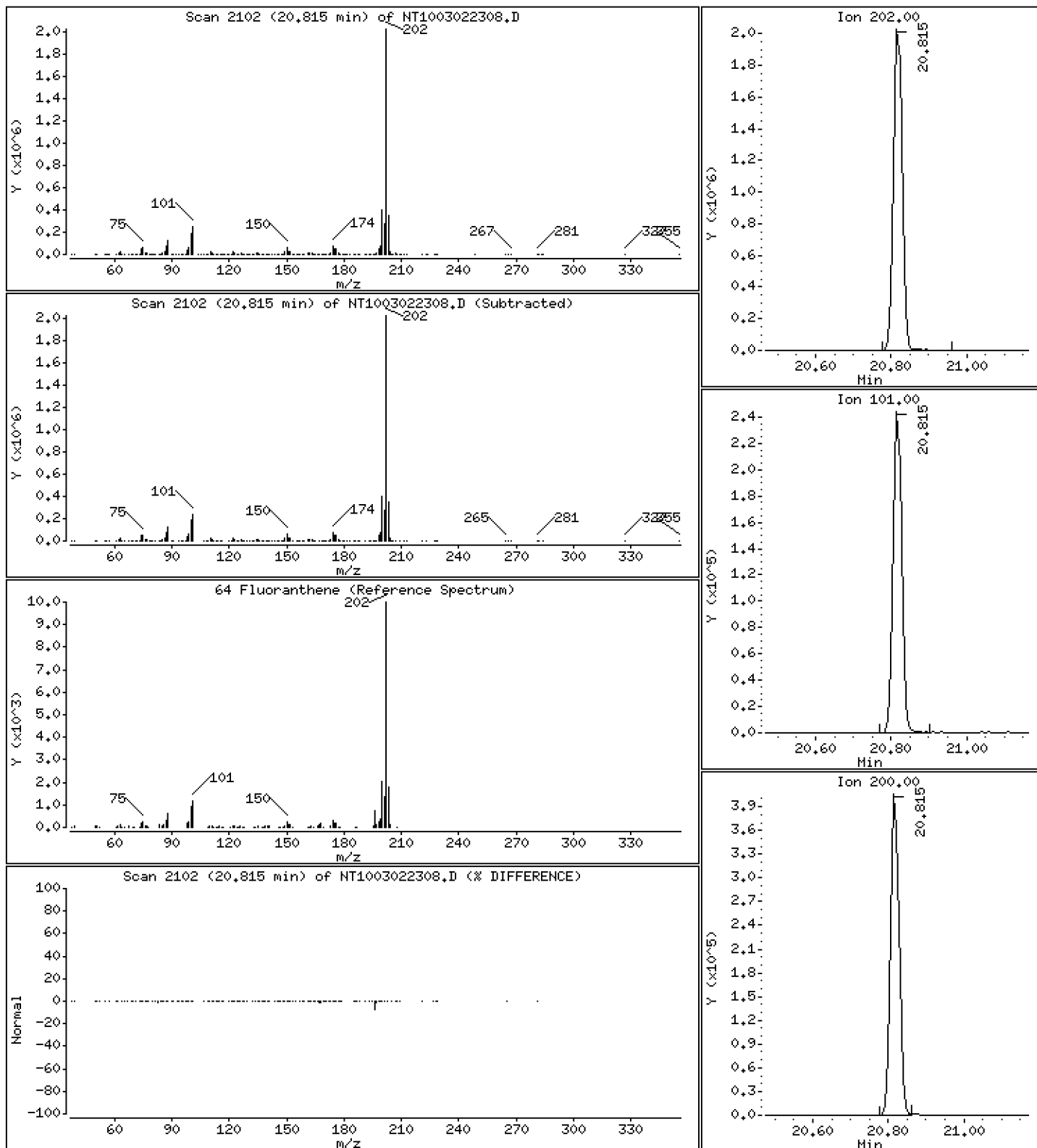
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,454 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

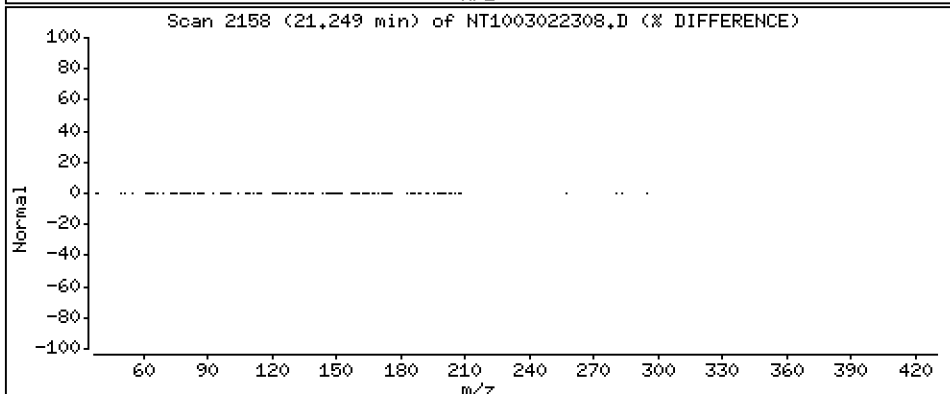
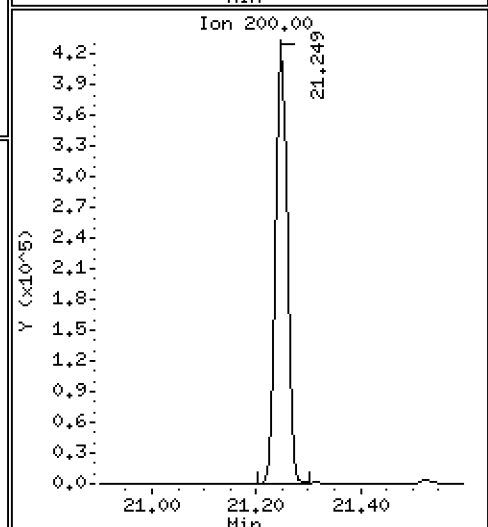
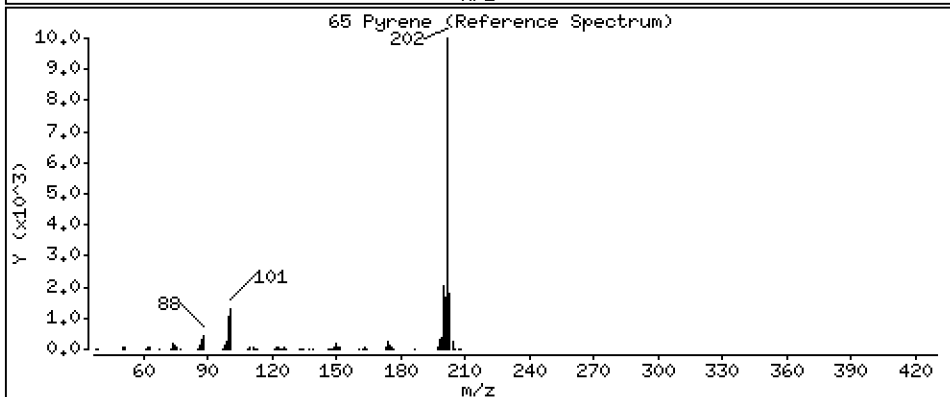
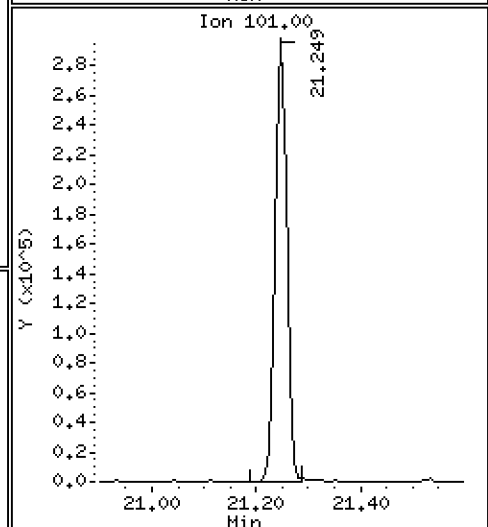
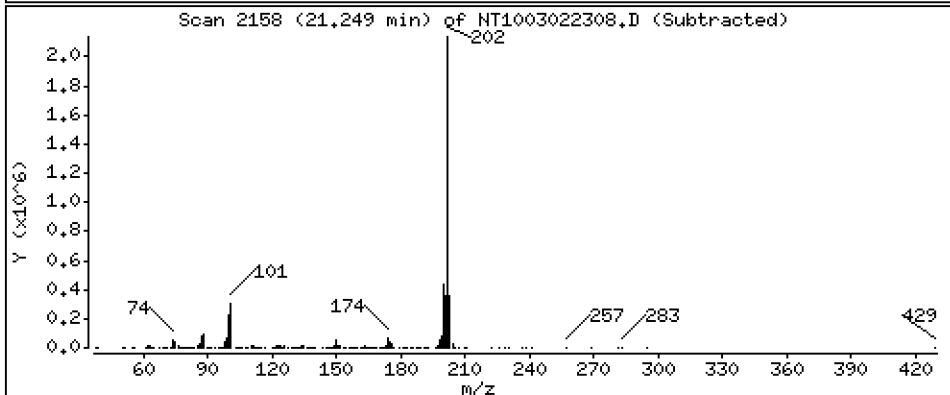
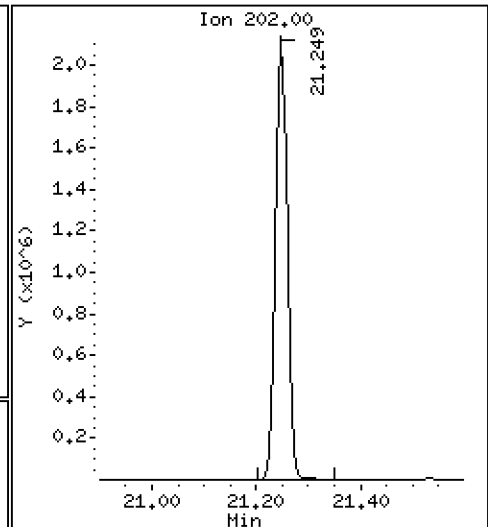
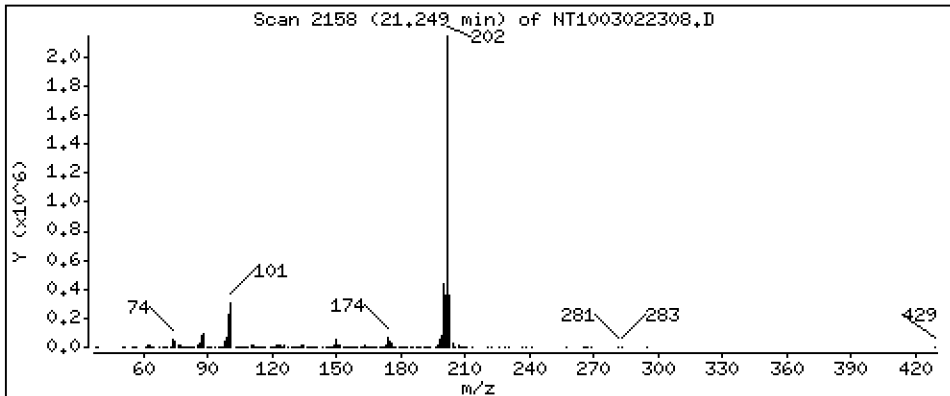
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,452 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

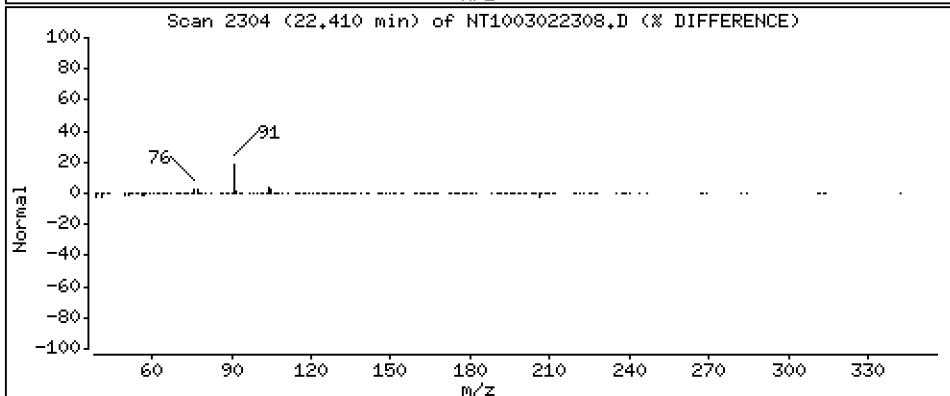
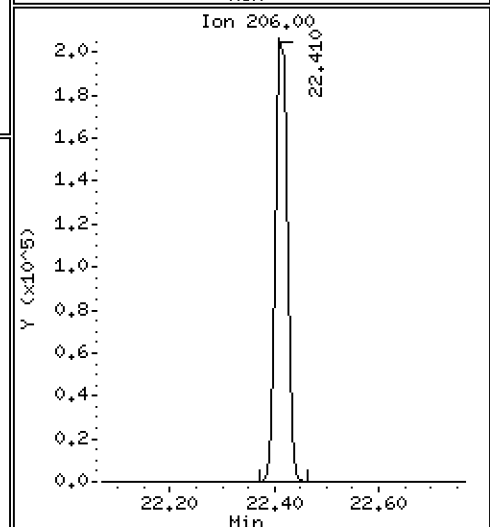
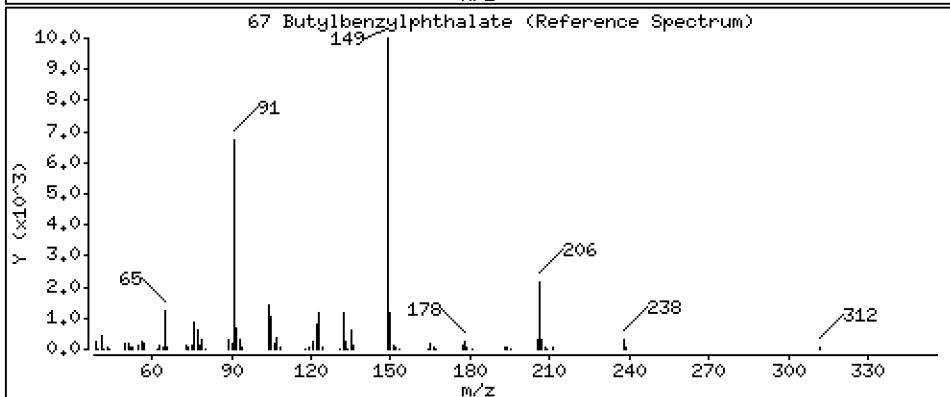
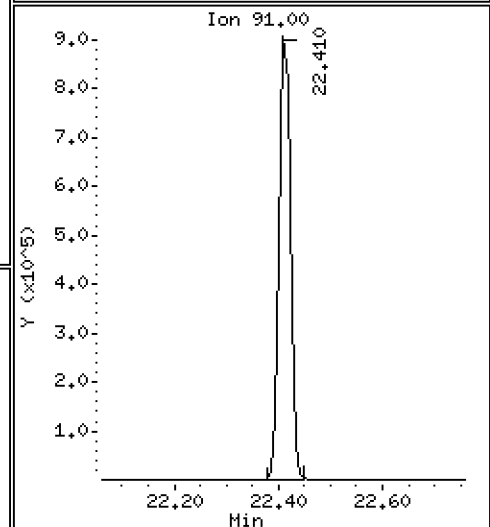
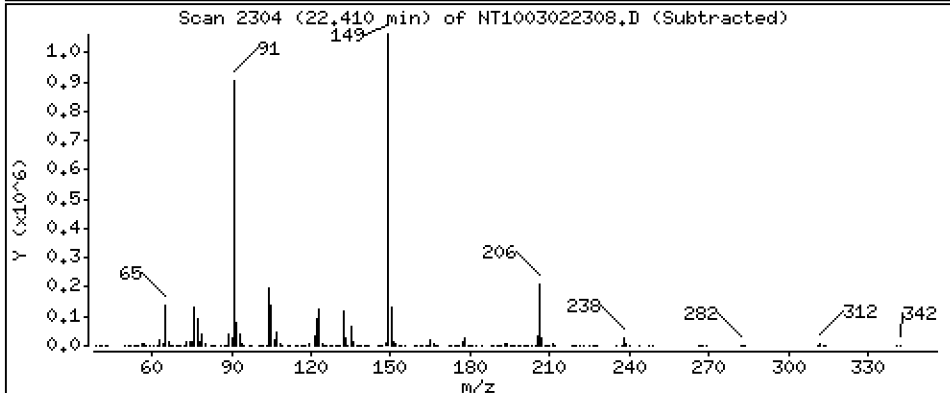
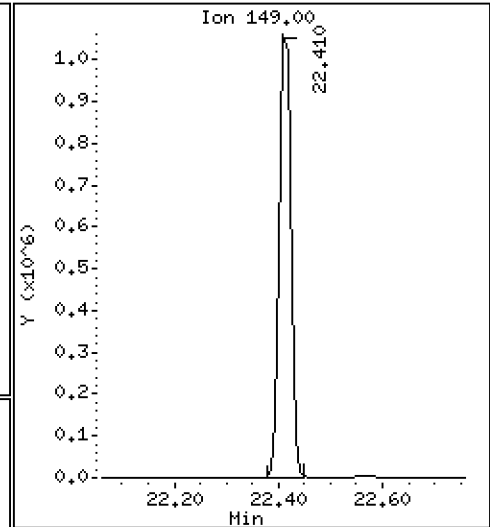
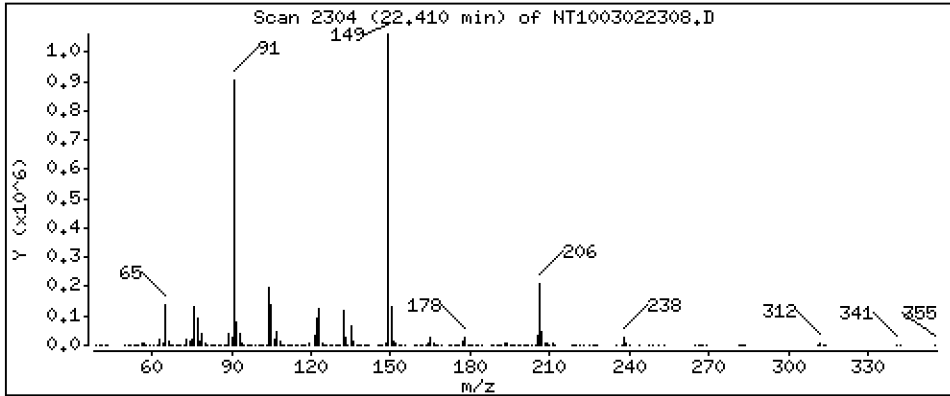
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,134 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

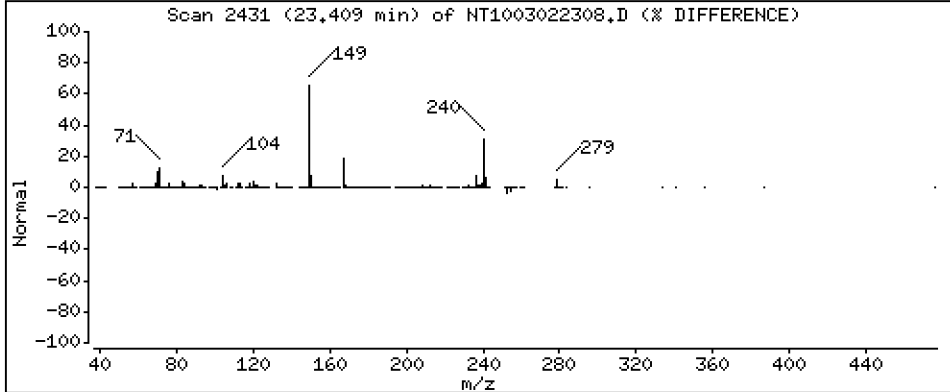
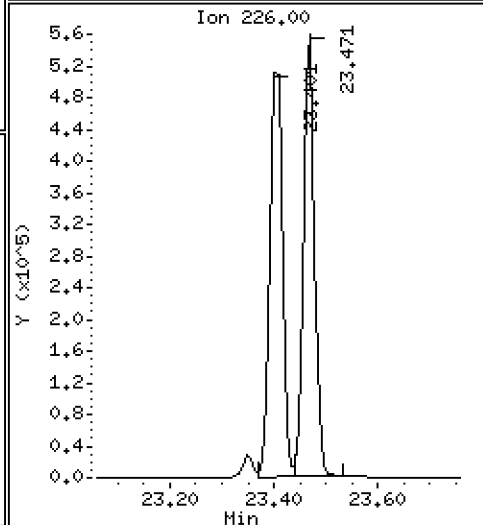
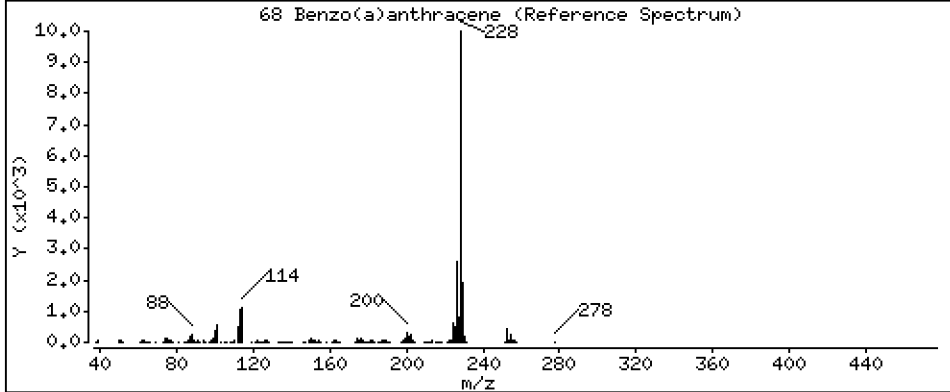
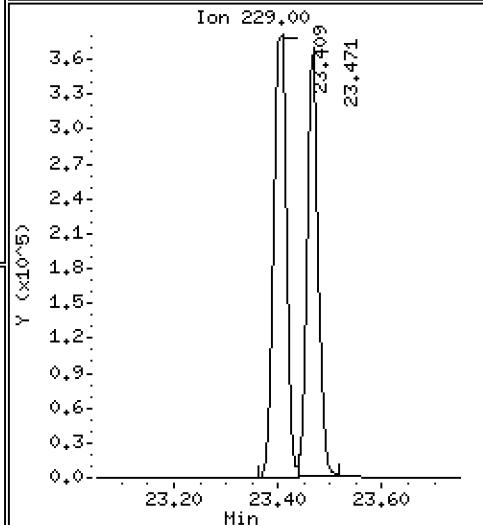
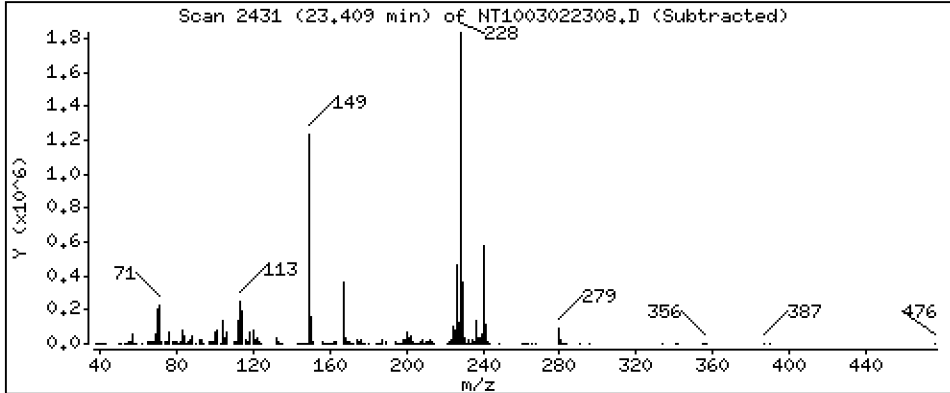
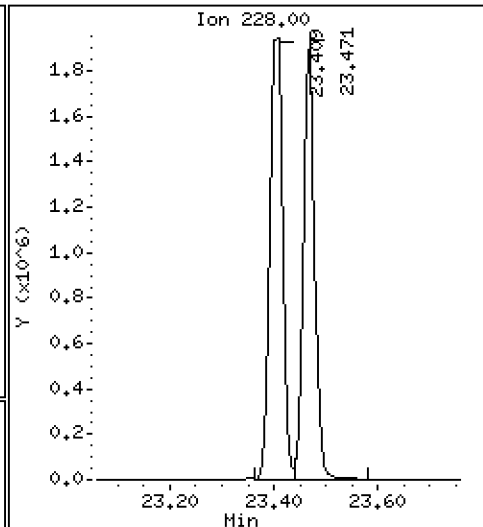
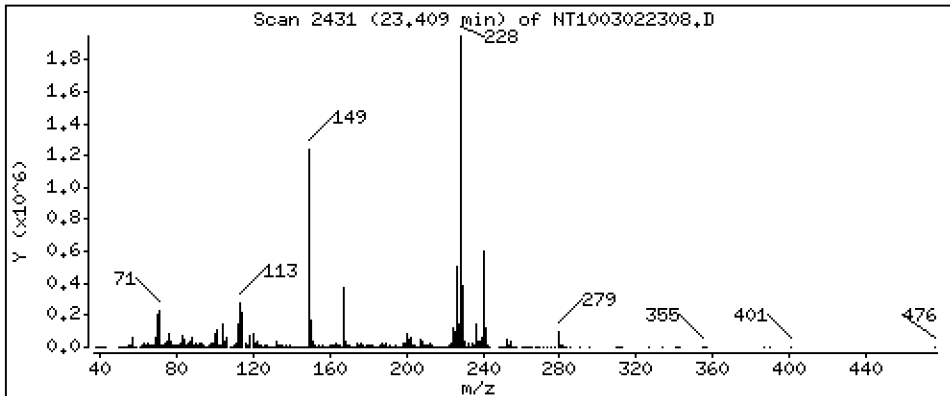
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,411 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

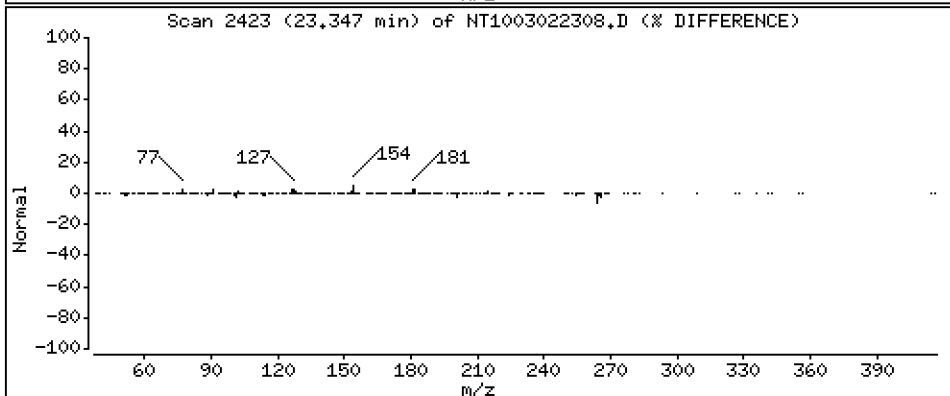
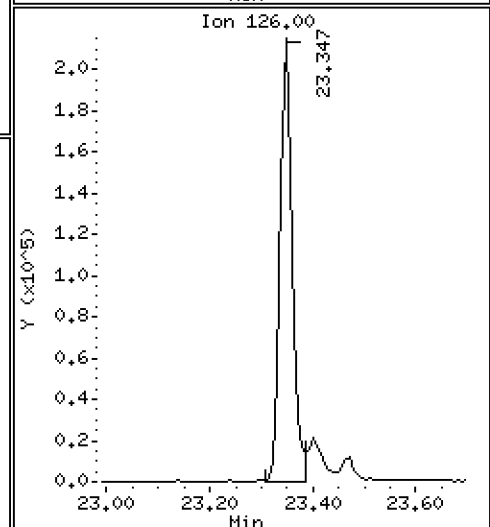
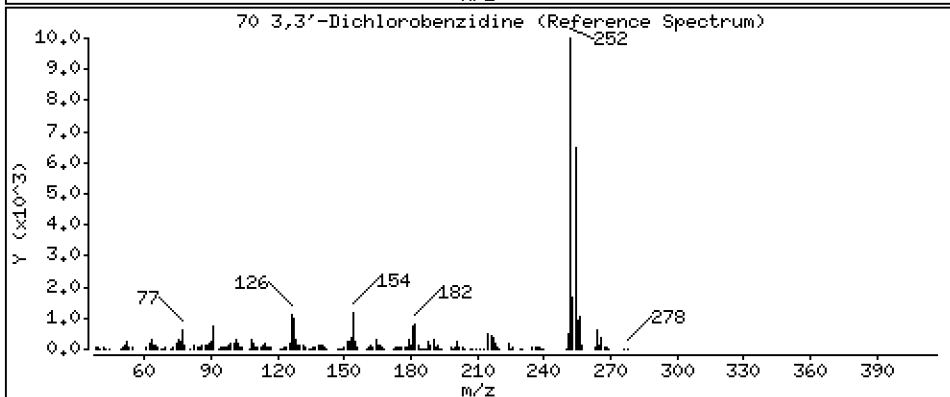
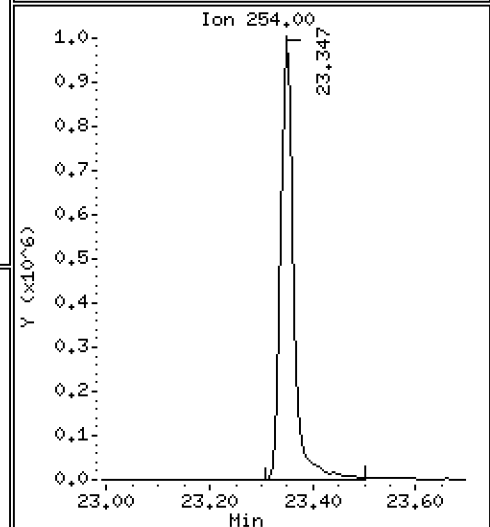
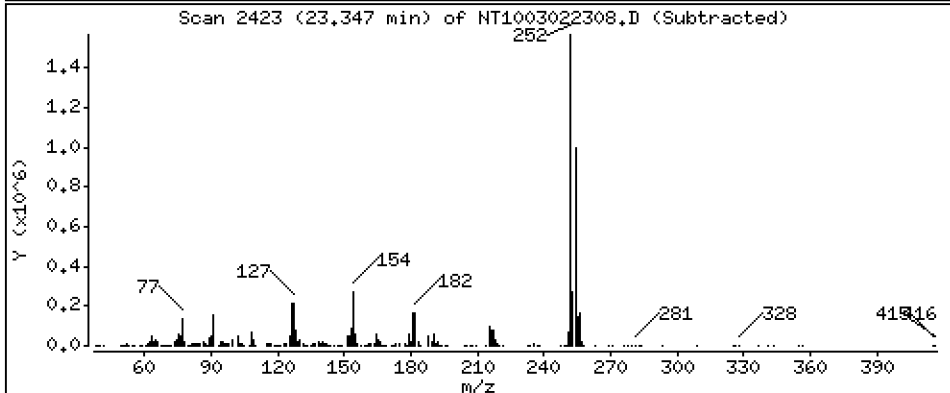
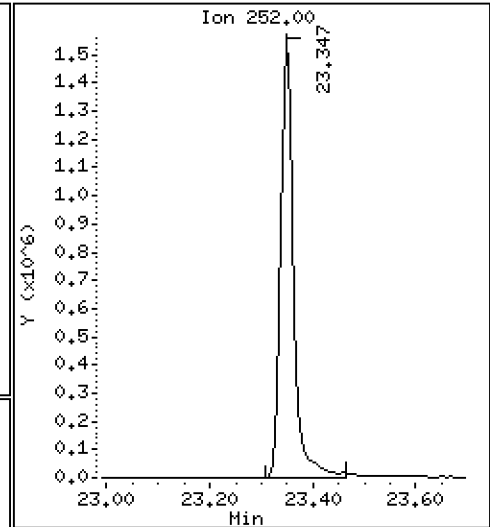
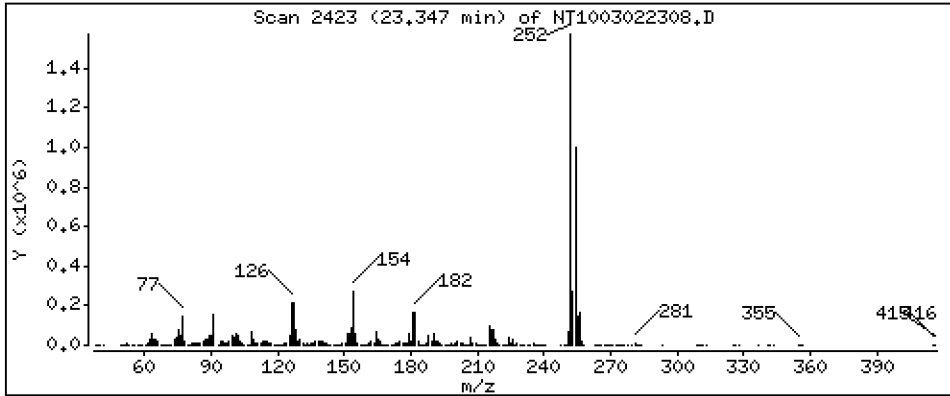
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 7,958 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

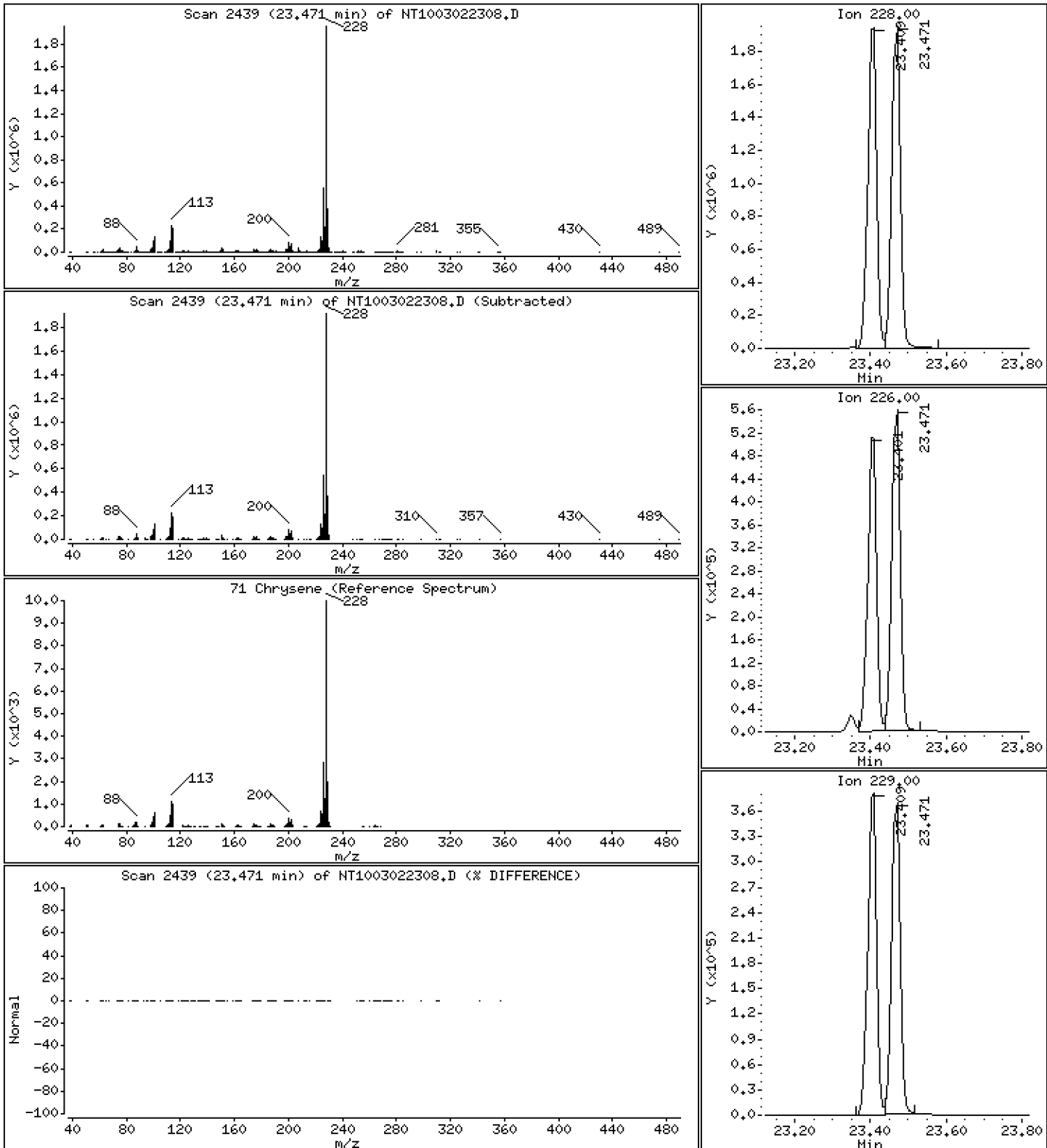
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,967 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

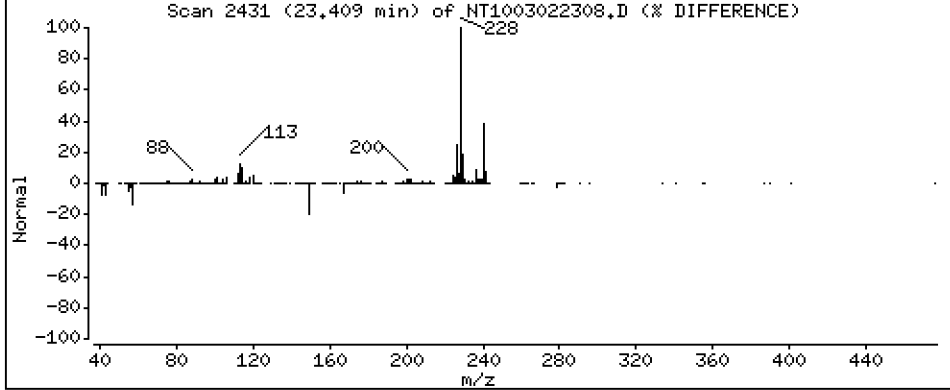
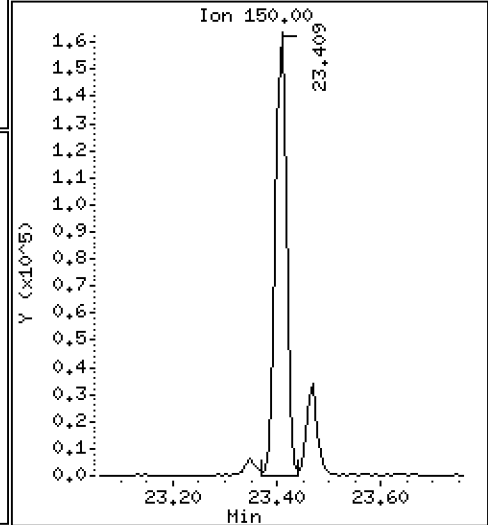
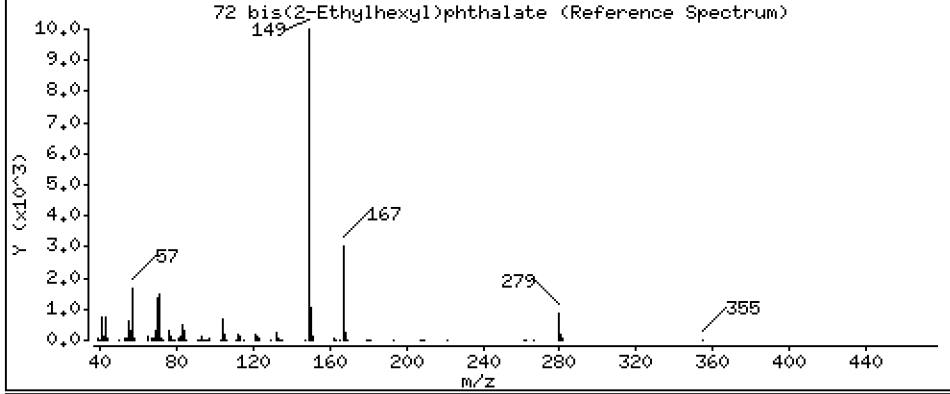
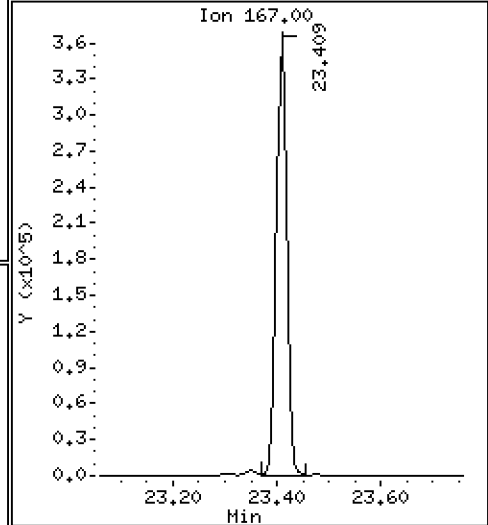
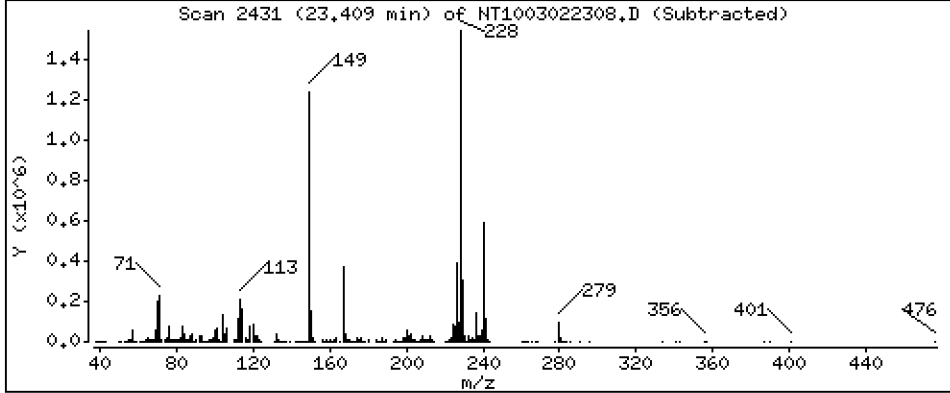
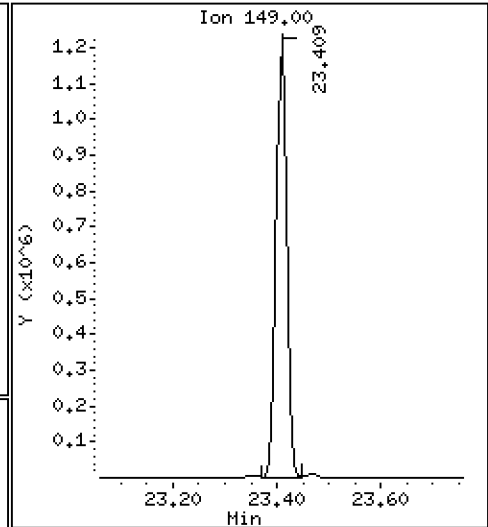
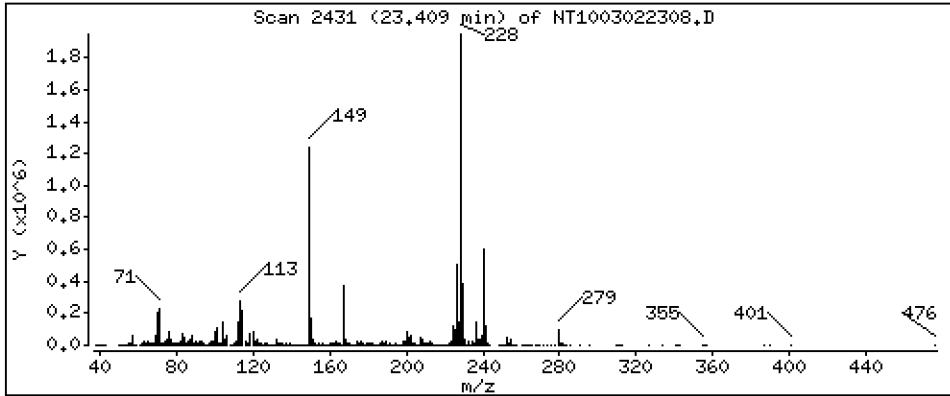
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 3,197 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

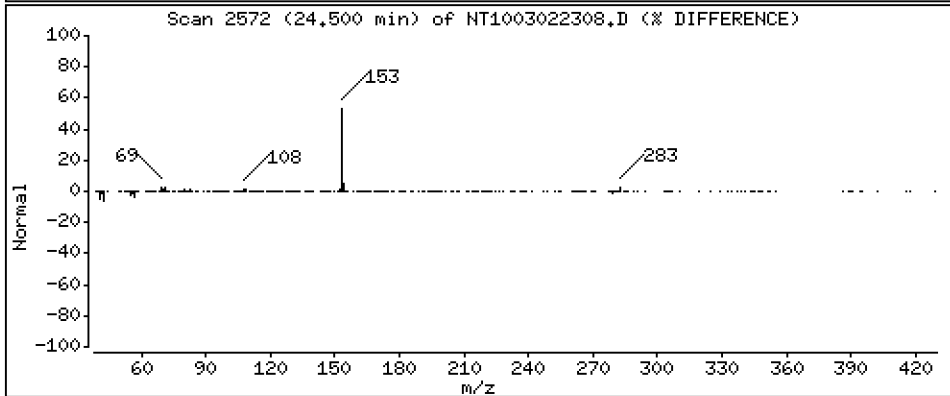
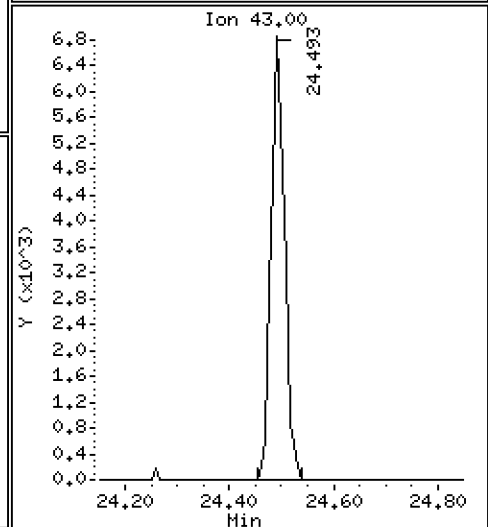
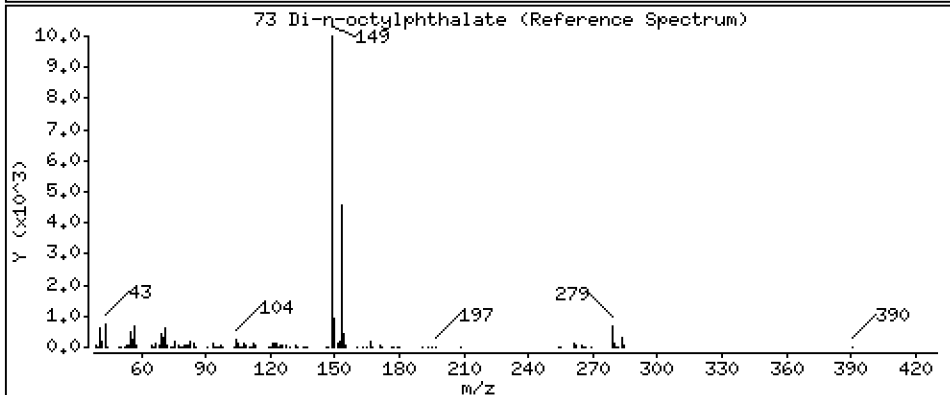
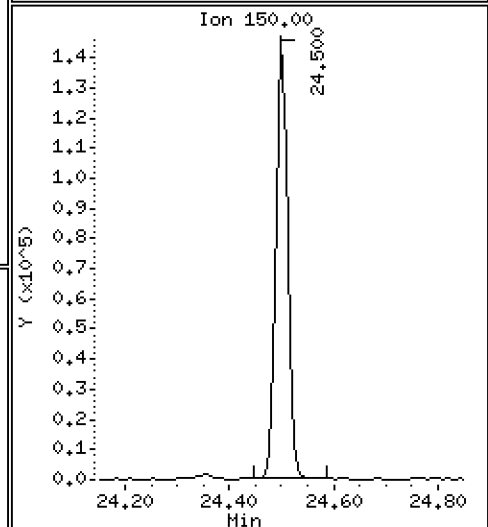
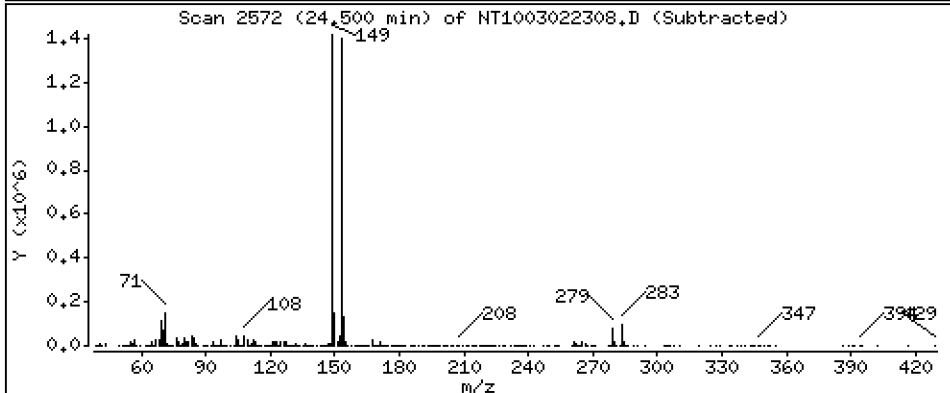
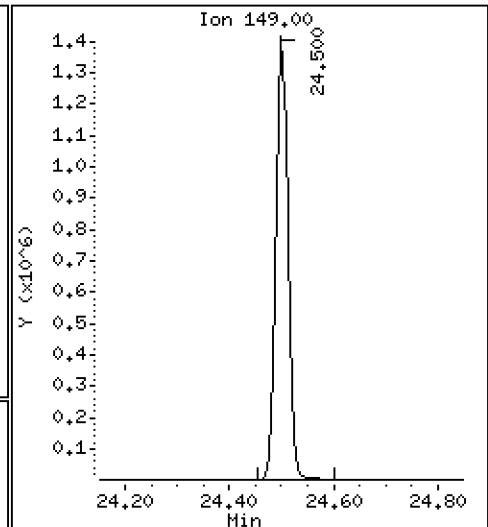
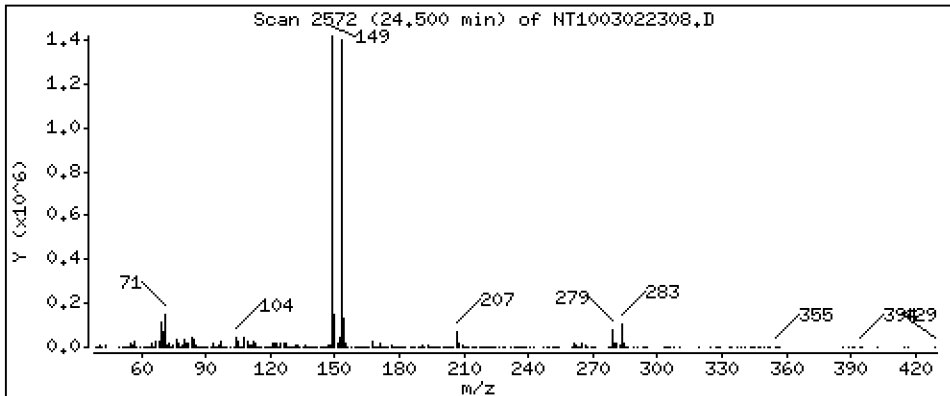
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 2,720 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

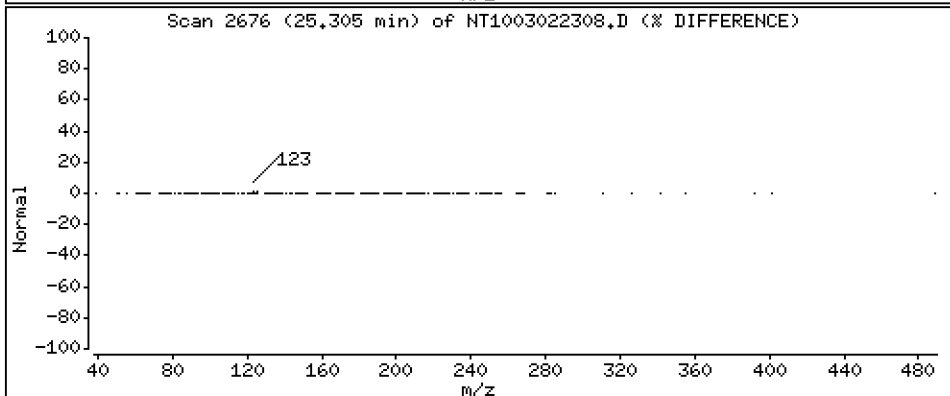
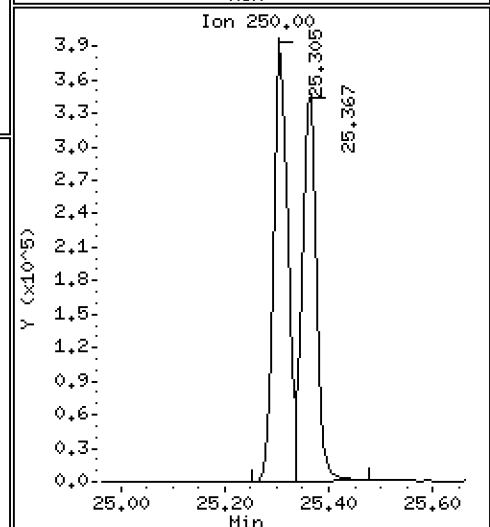
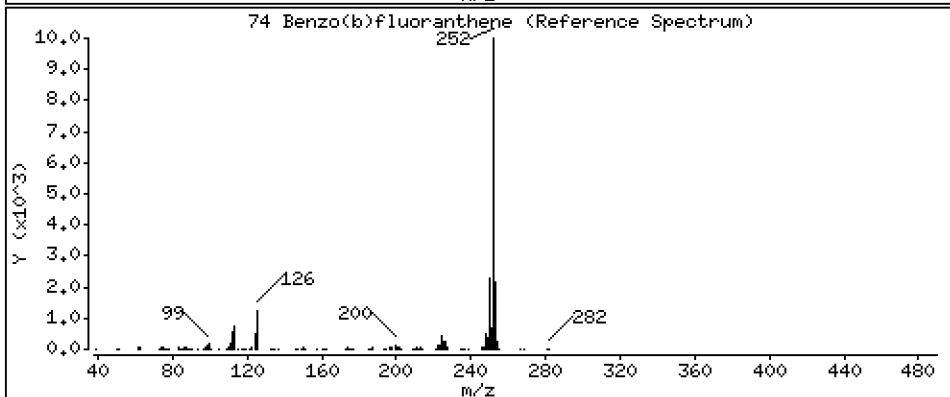
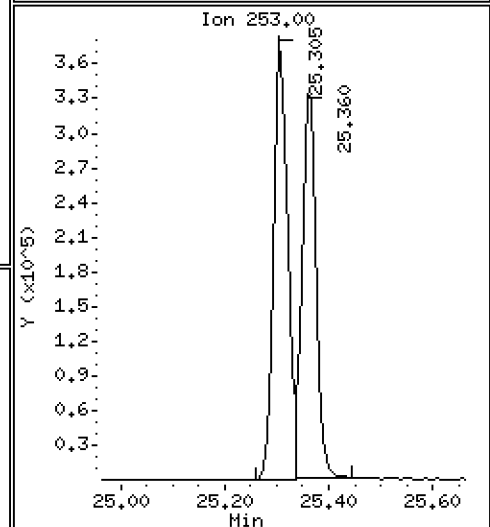
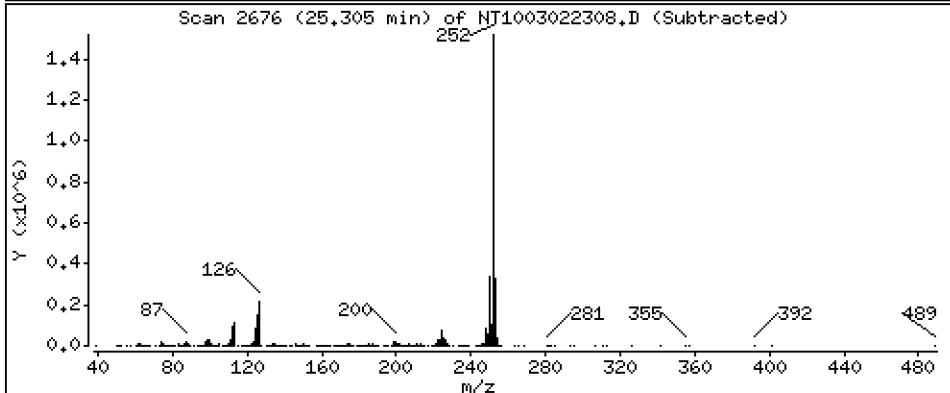
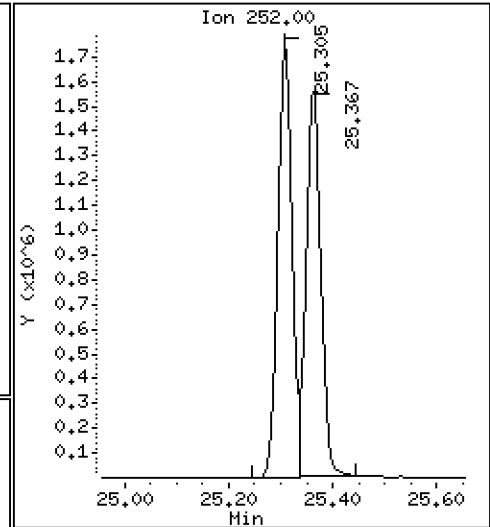
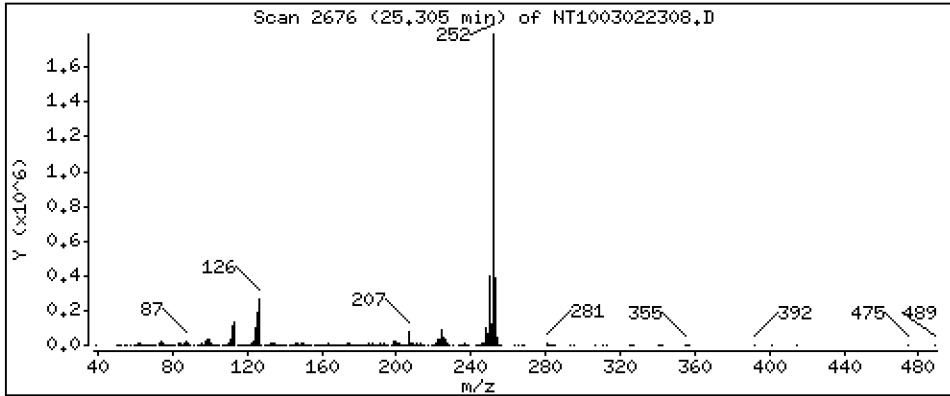
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,565 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

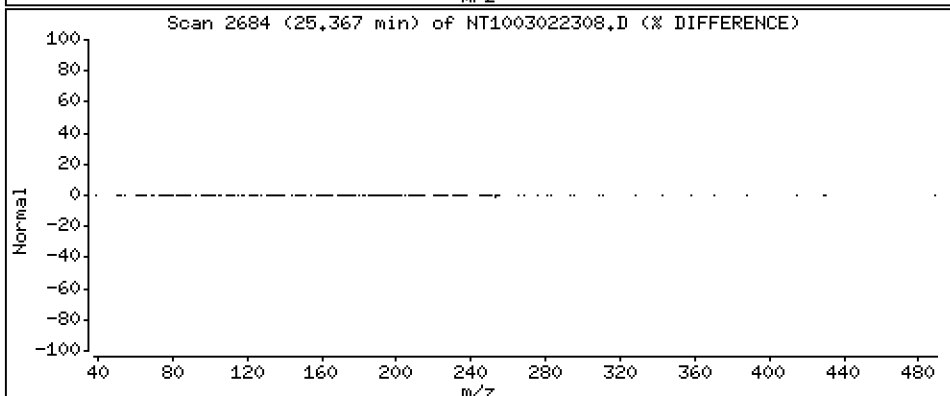
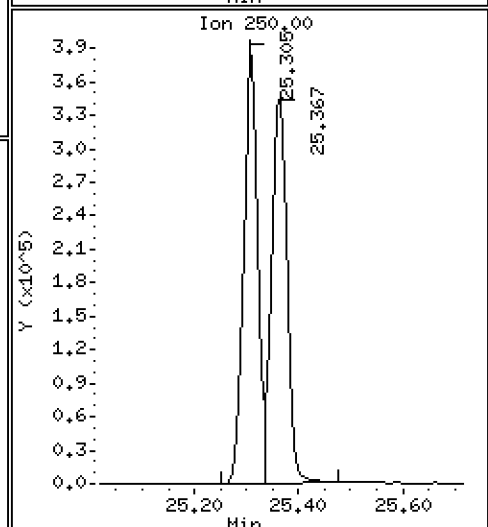
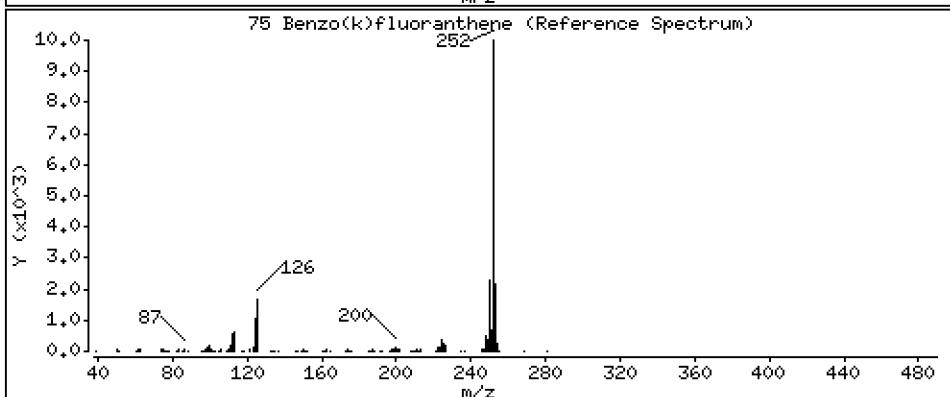
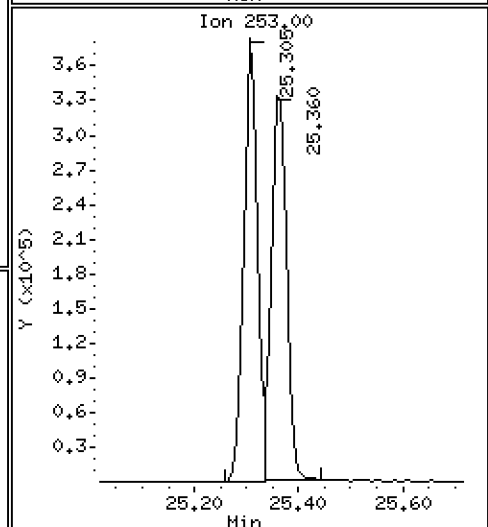
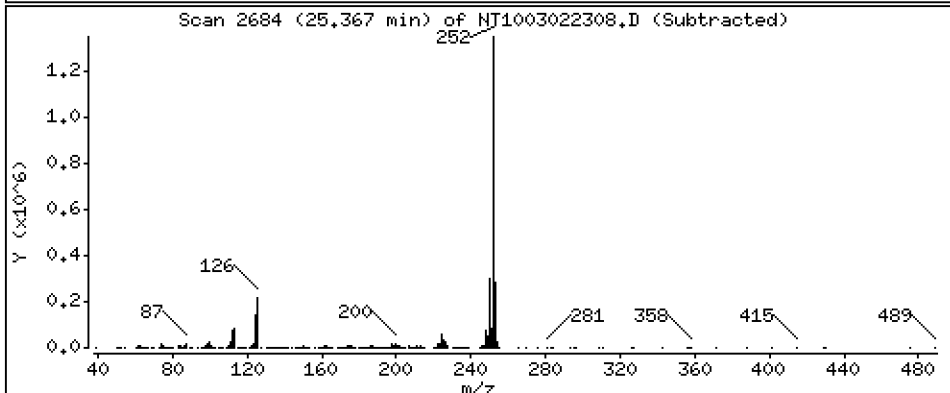
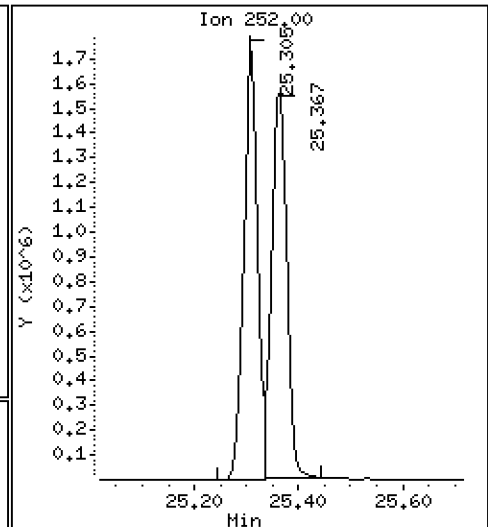
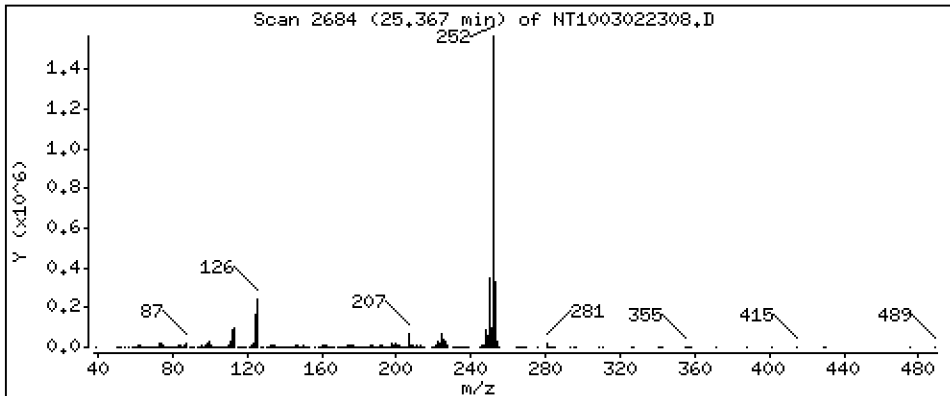
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,558 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

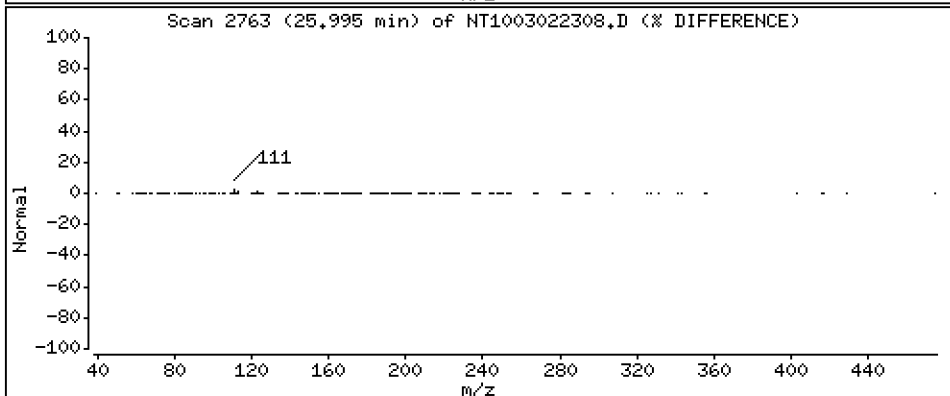
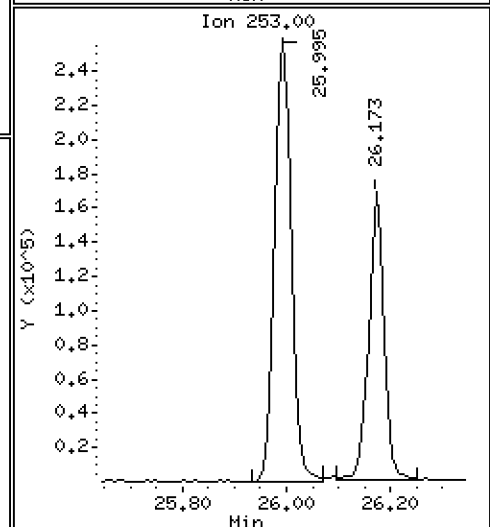
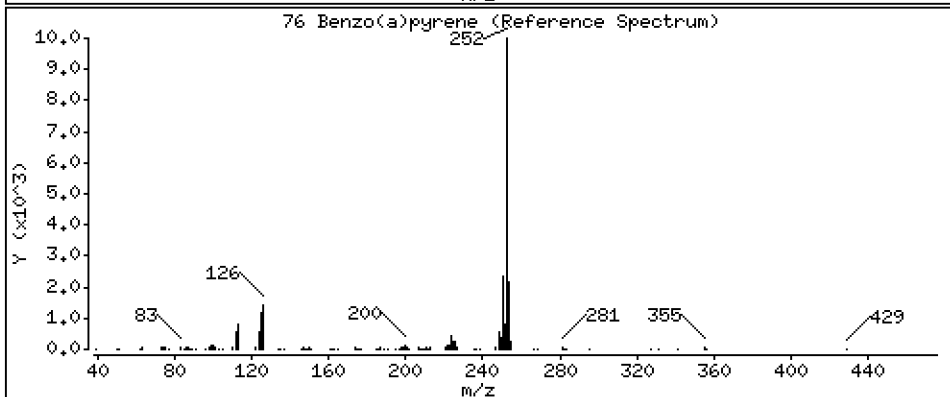
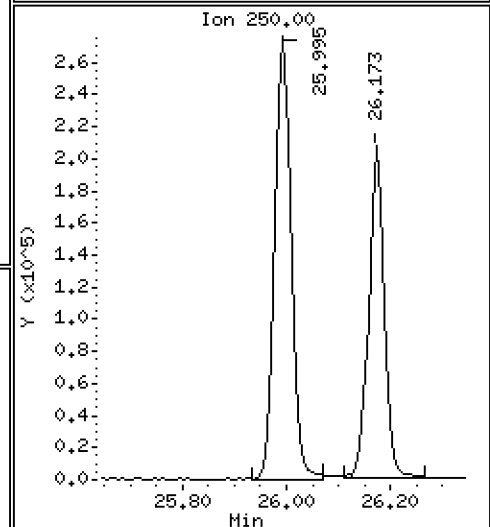
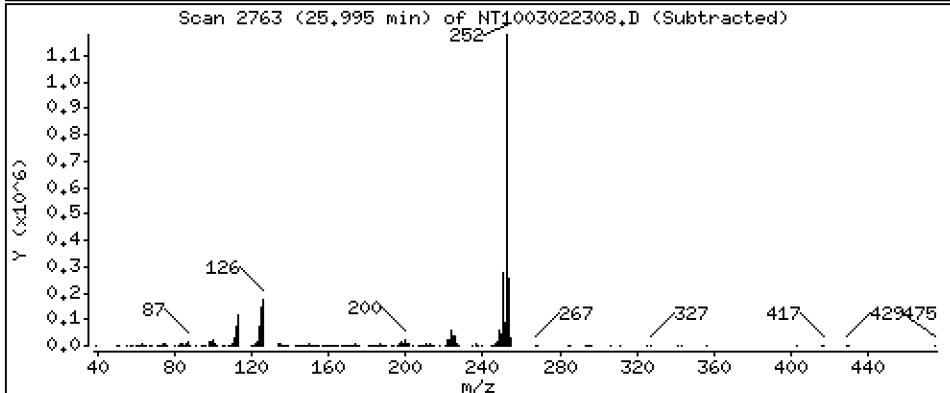
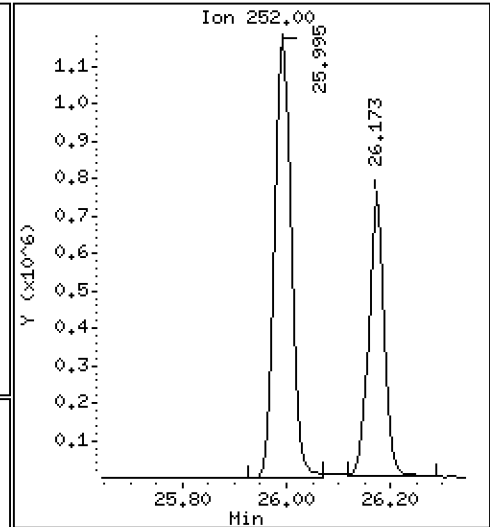
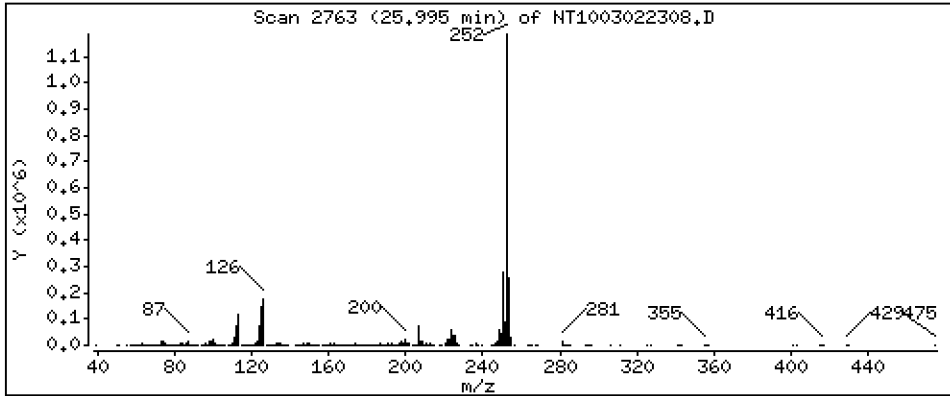
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,028 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

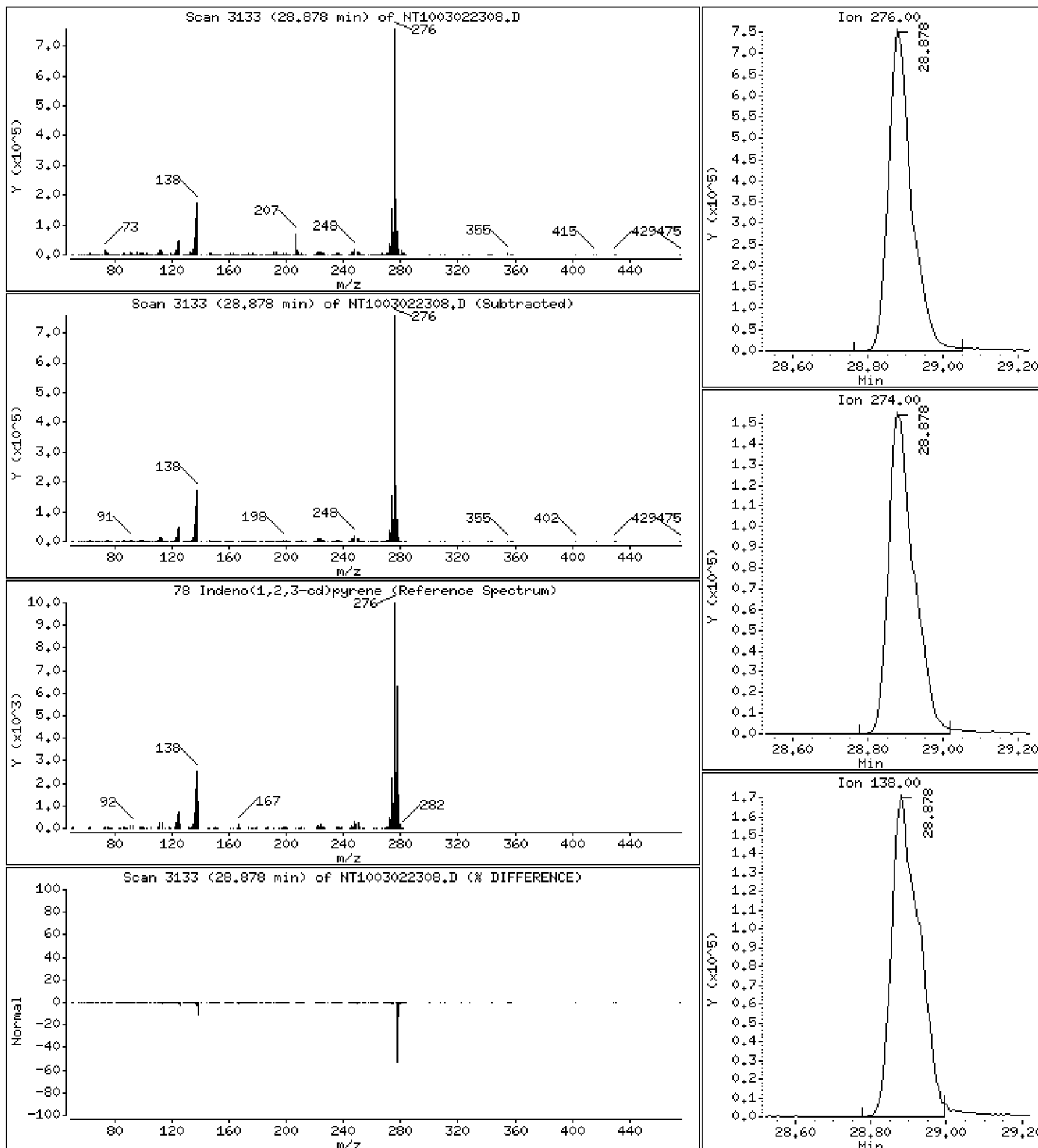
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,342 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

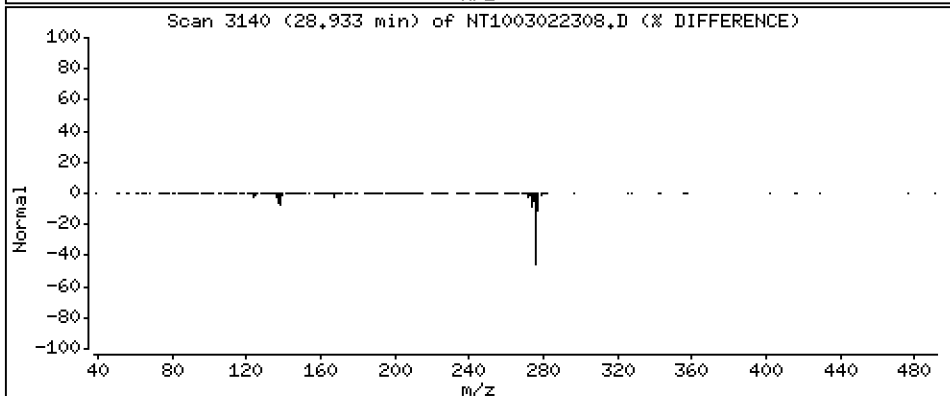
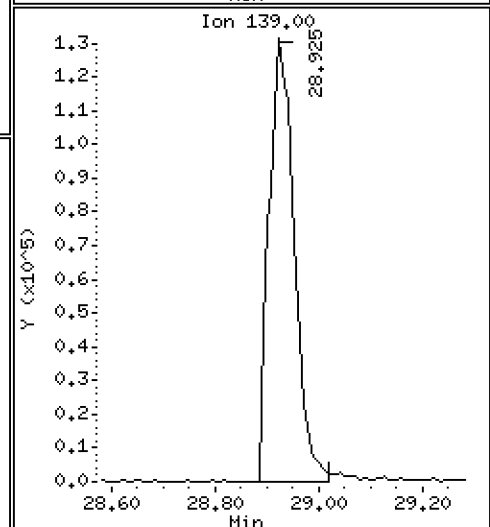
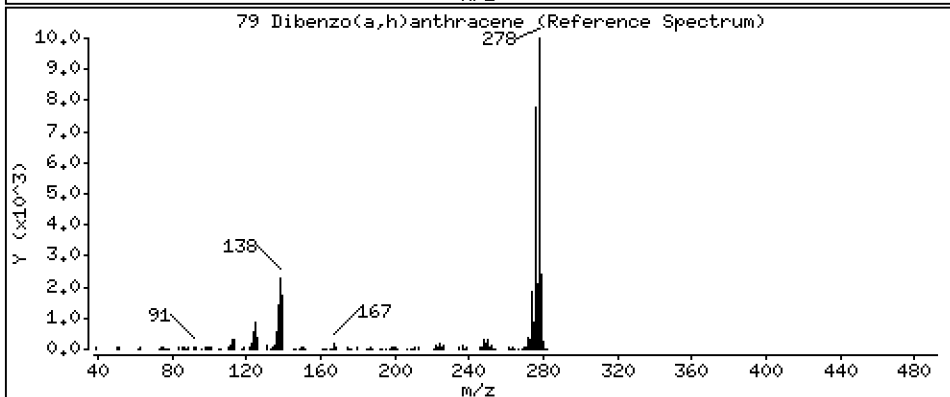
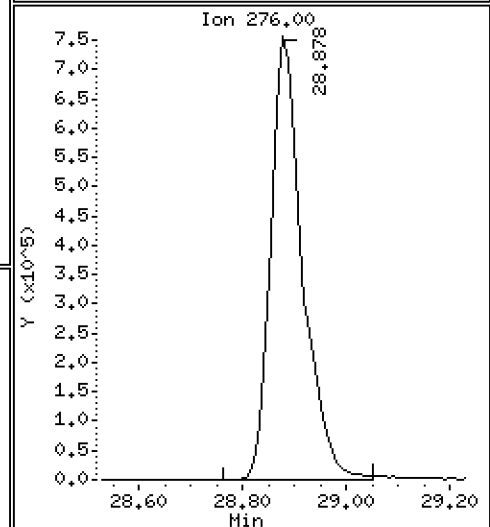
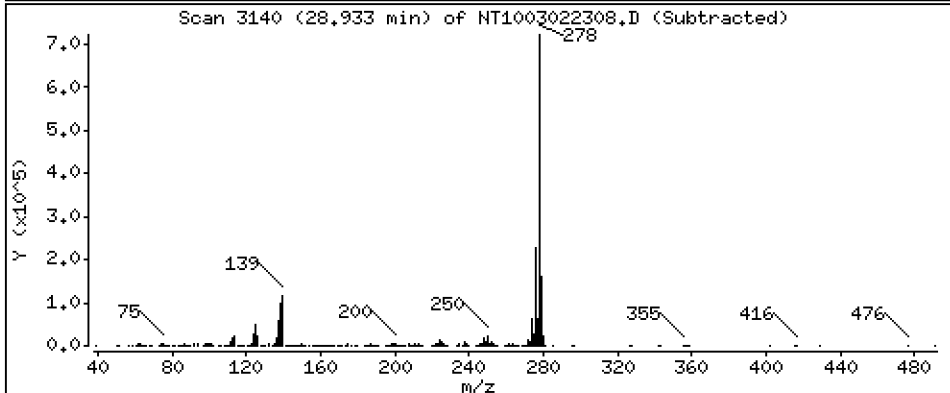
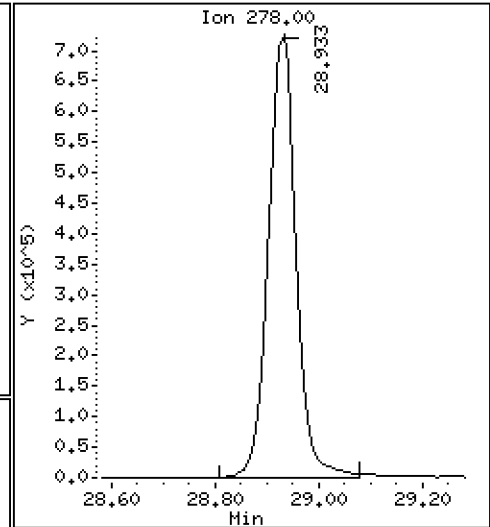
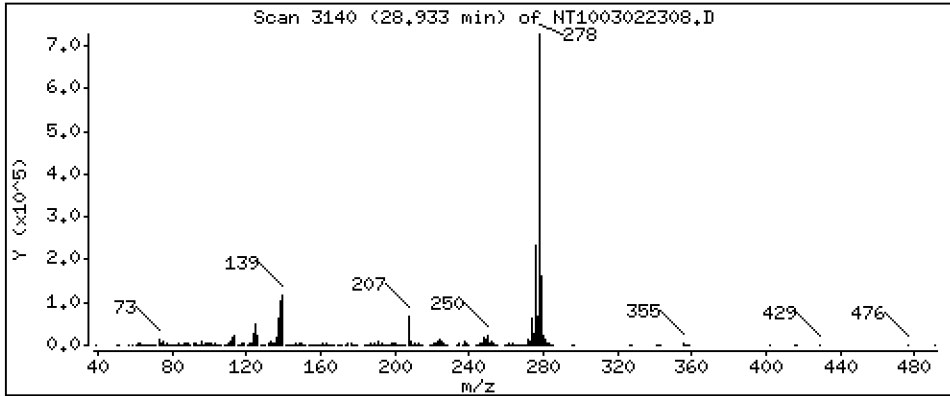
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,696 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

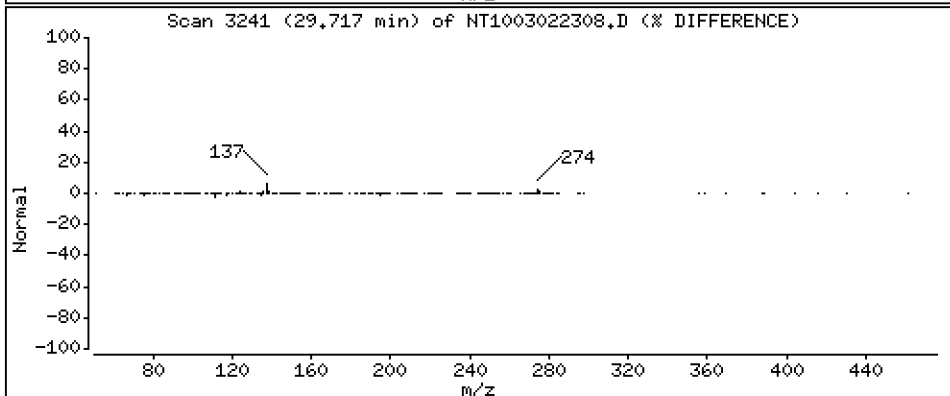
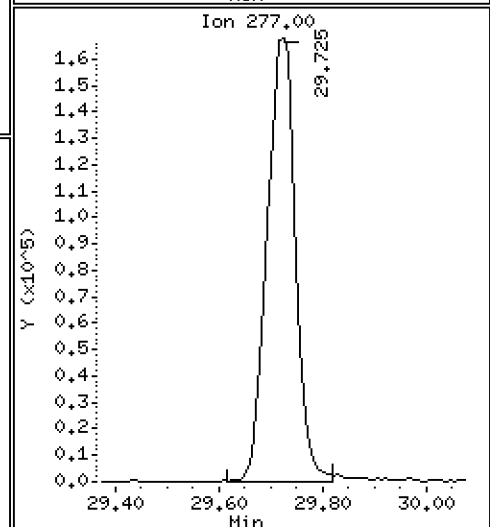
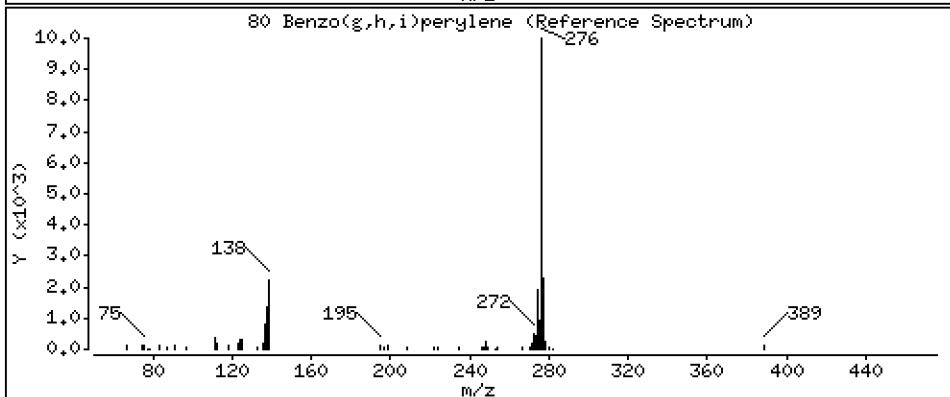
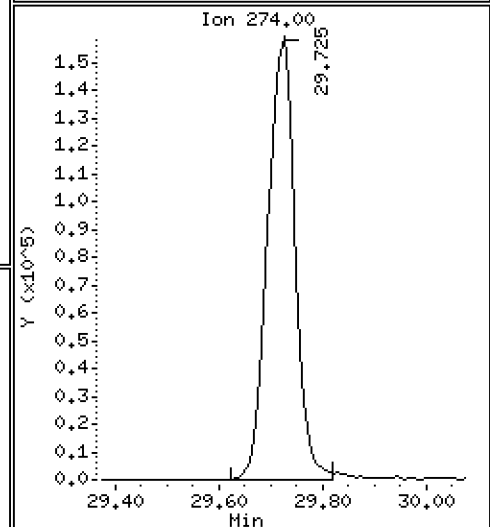
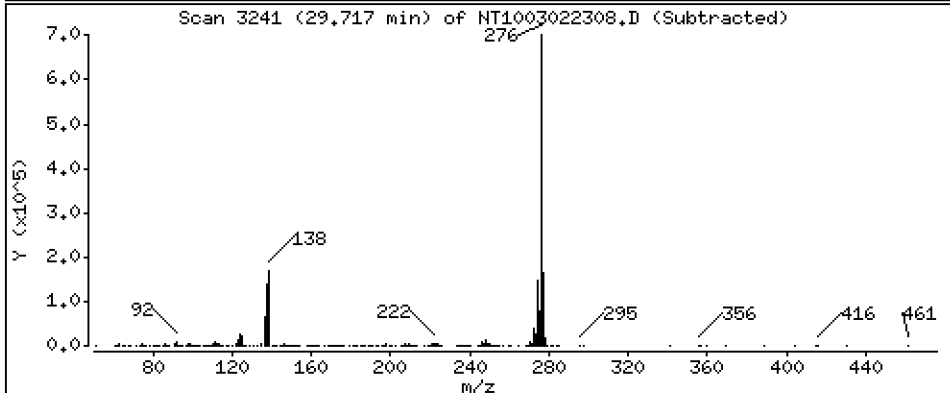
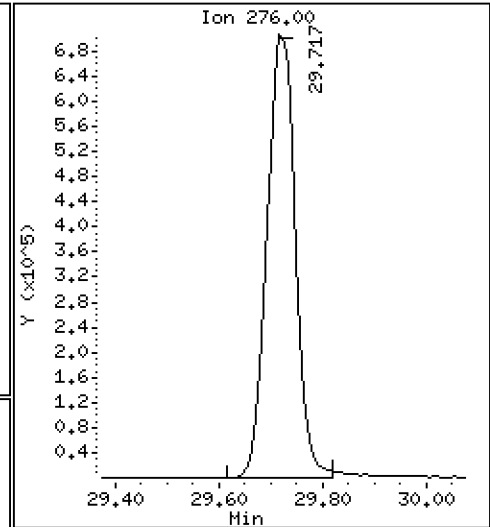
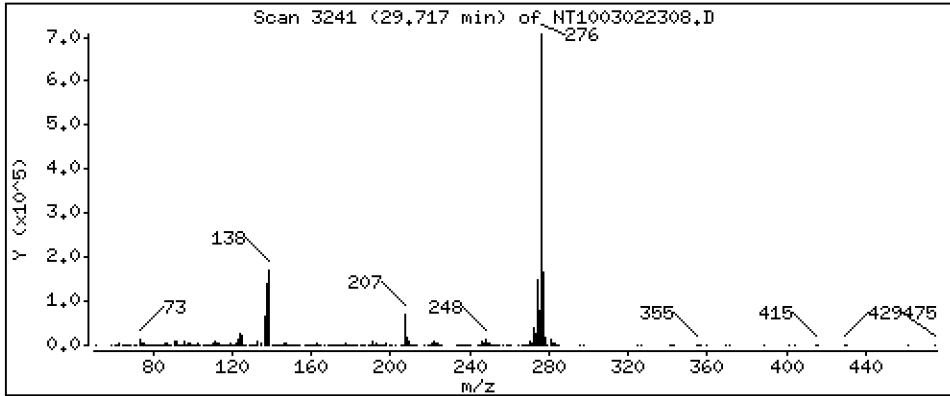
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,545 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

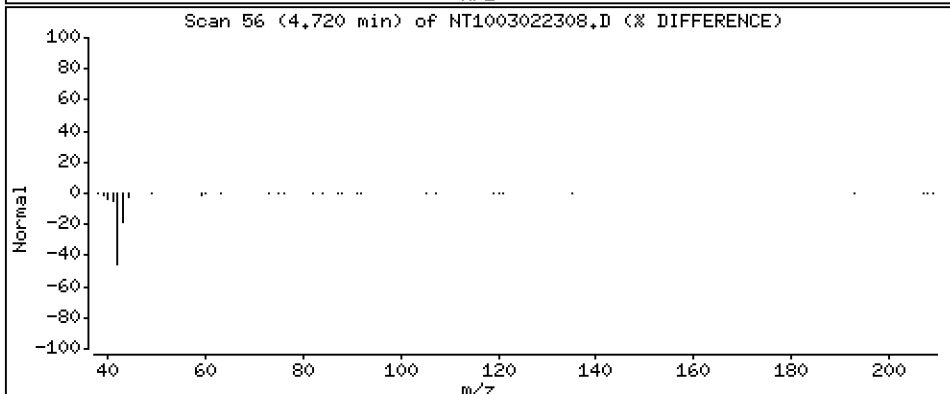
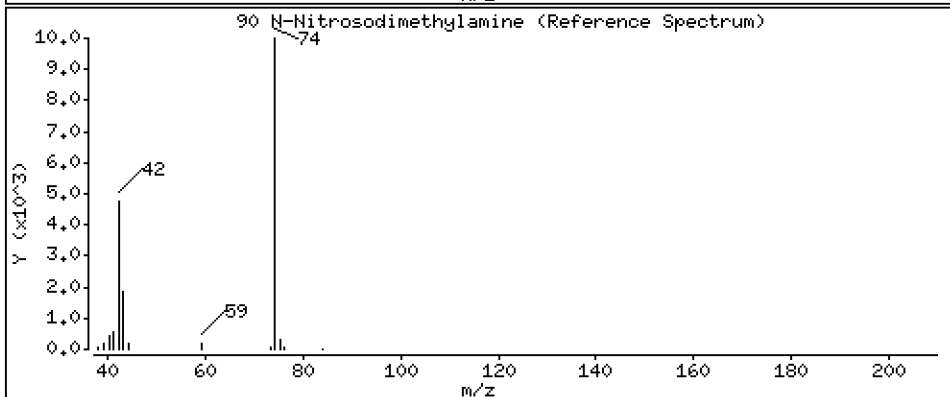
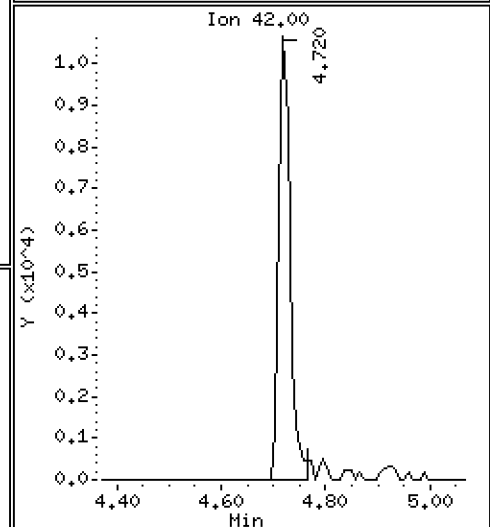
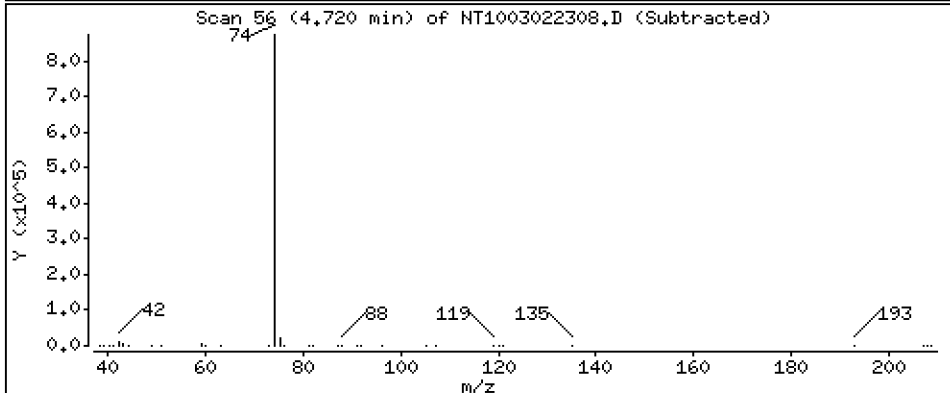
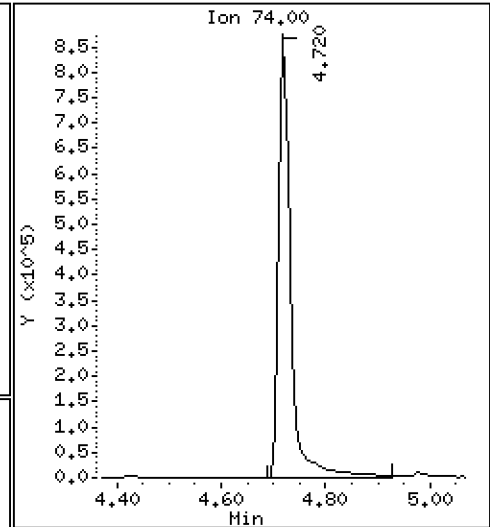
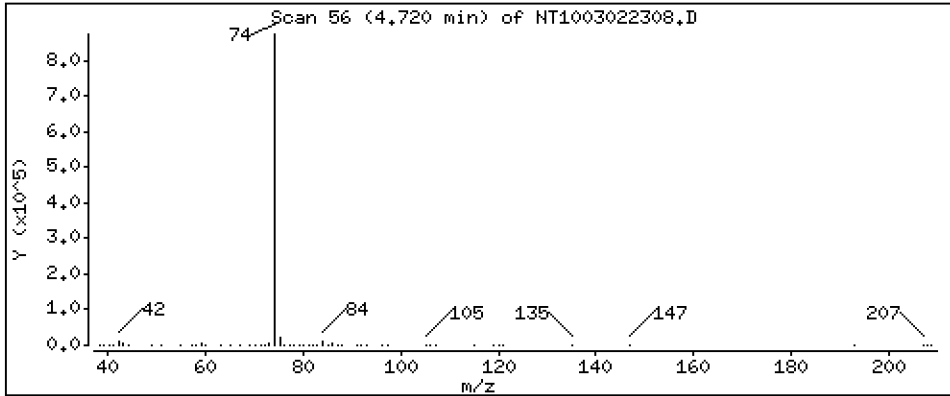
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 12,65 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

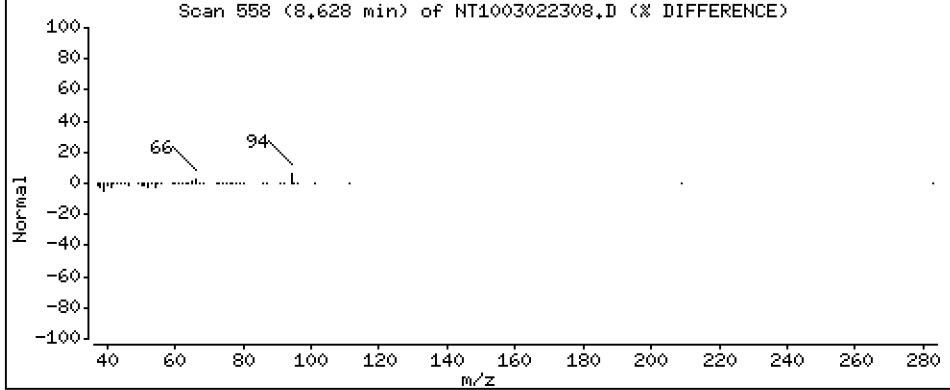
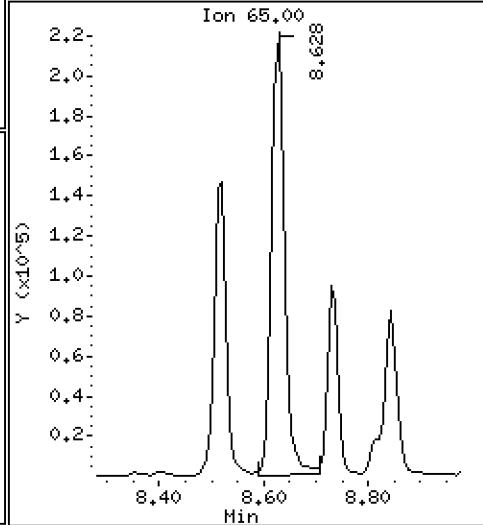
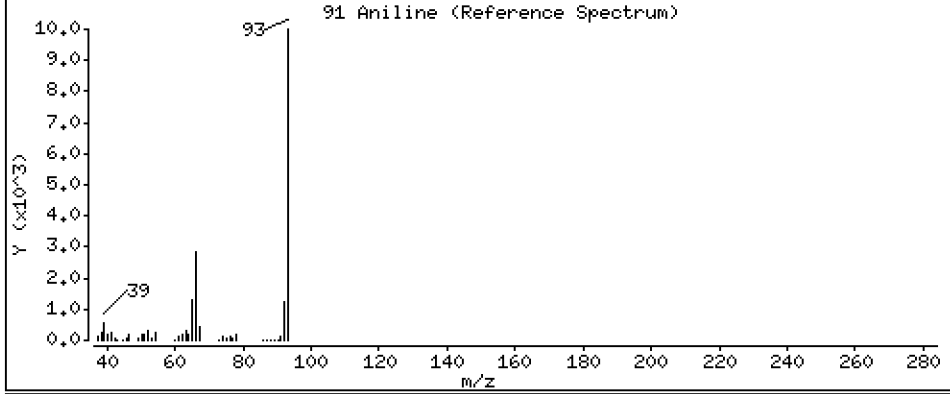
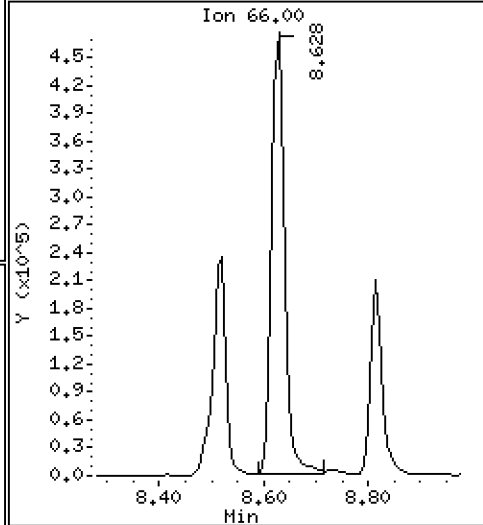
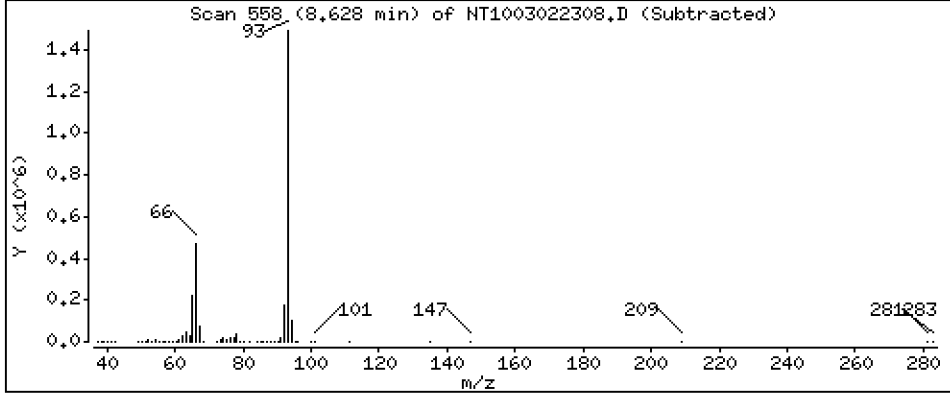
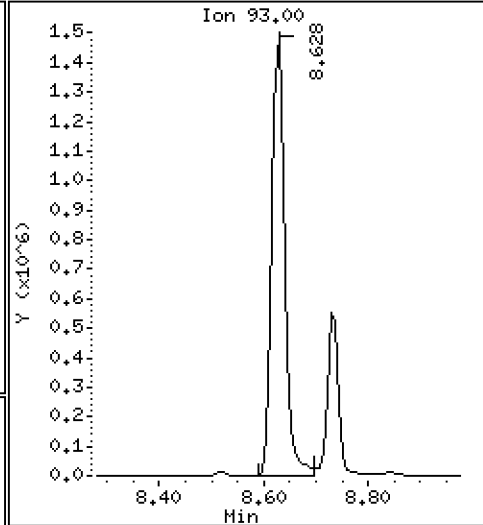
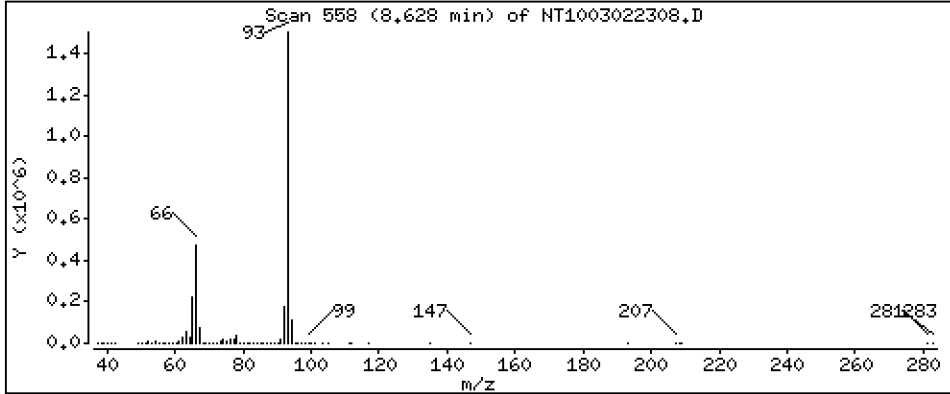
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 10,47 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

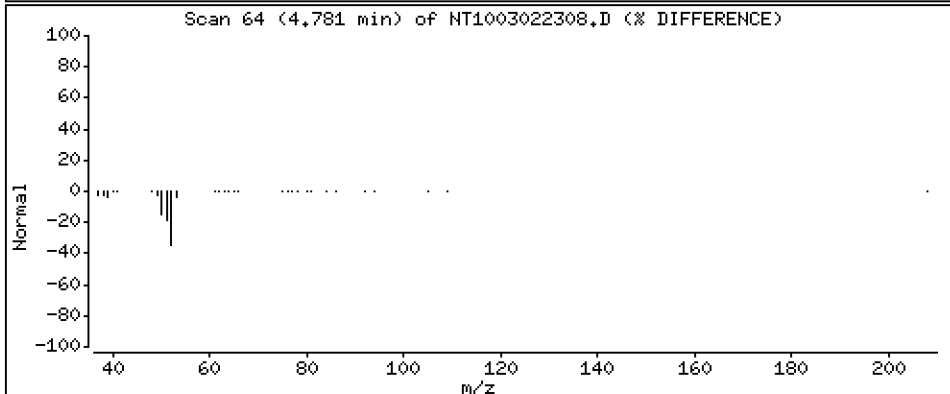
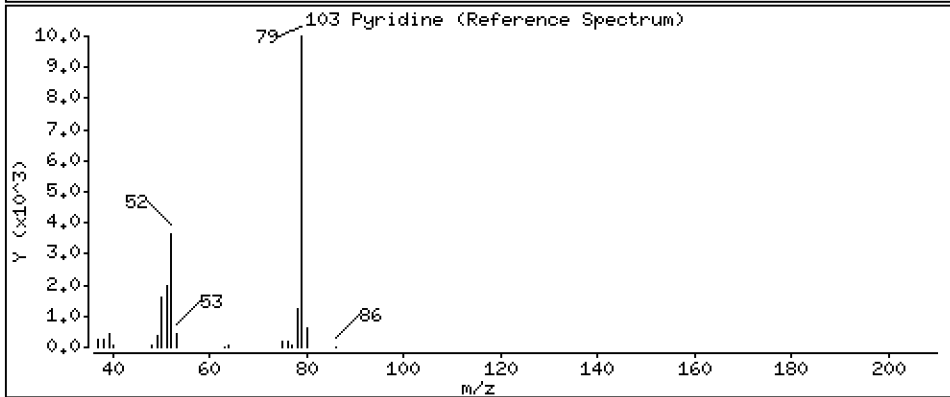
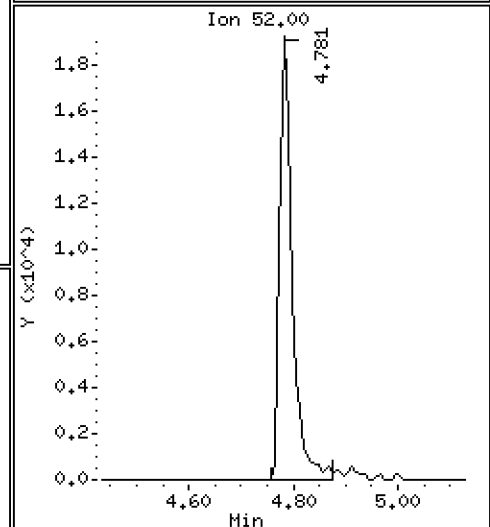
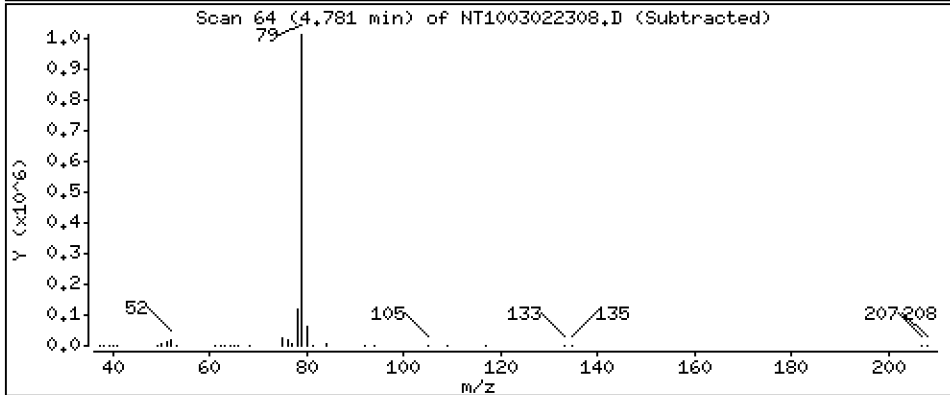
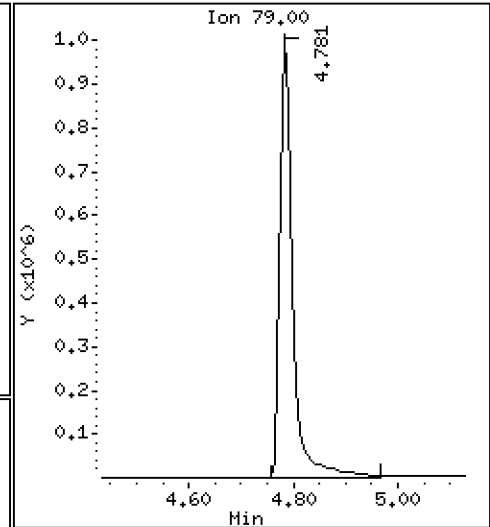
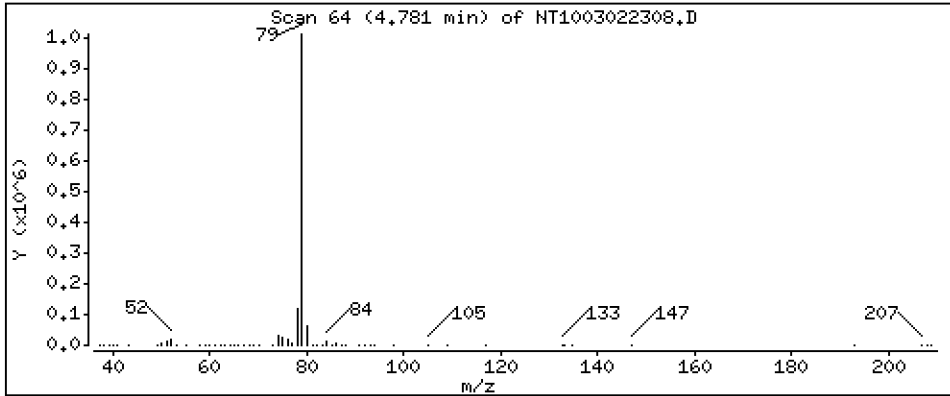
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 8,783 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

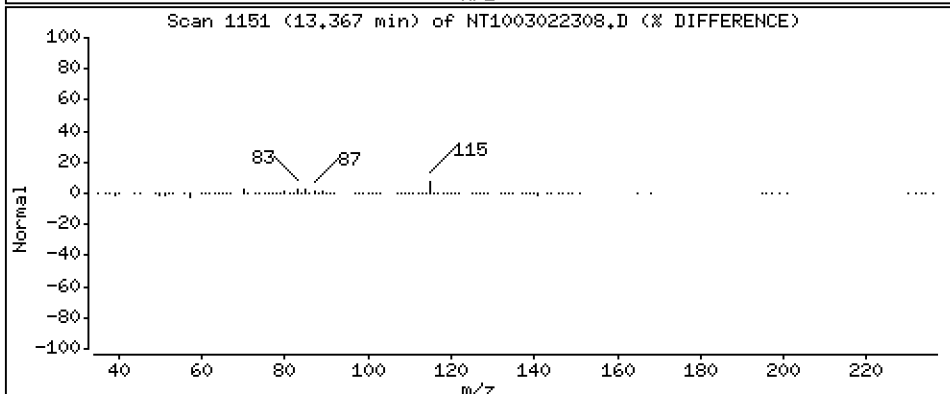
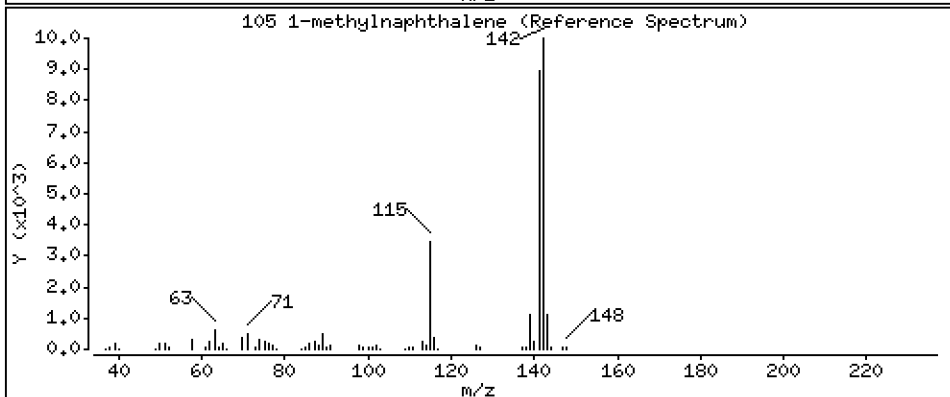
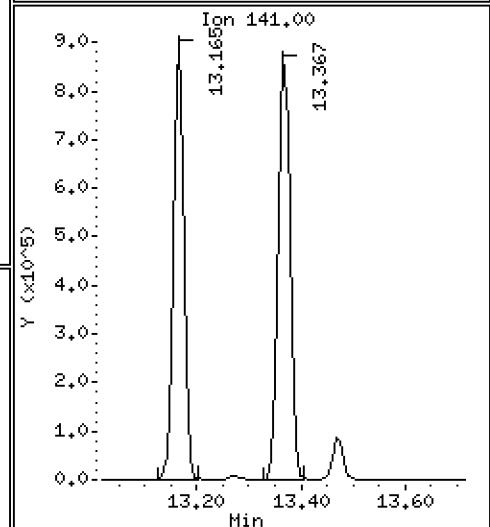
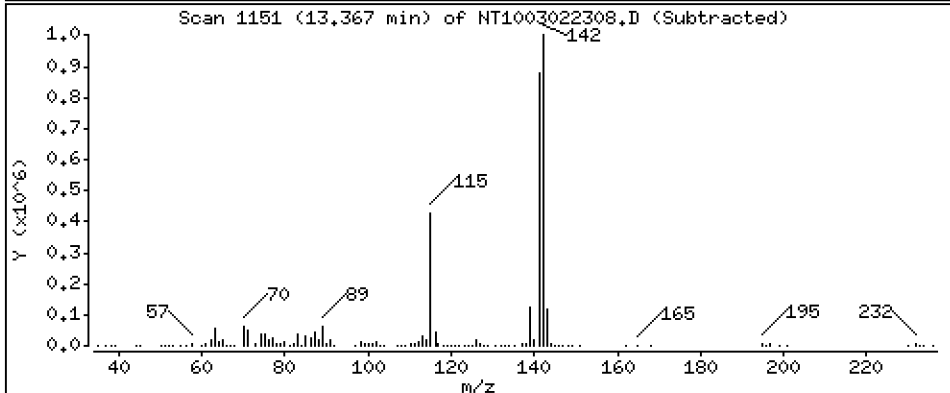
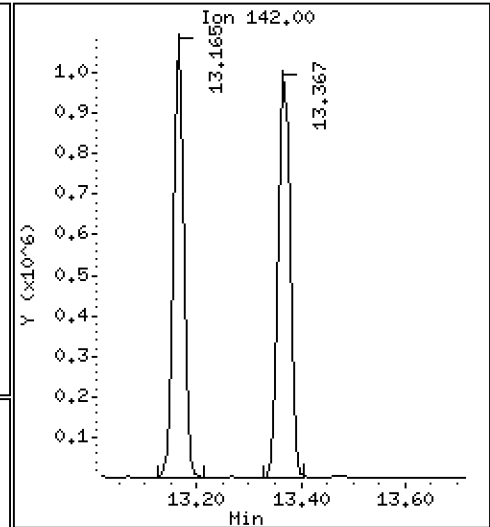
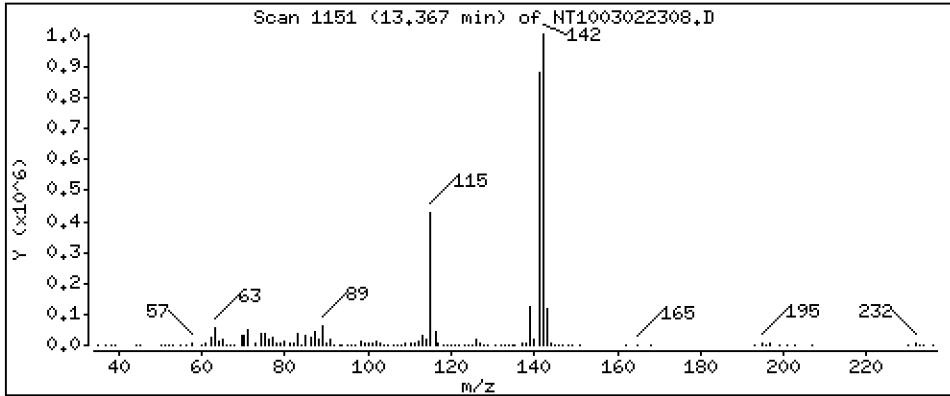
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 4,583 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

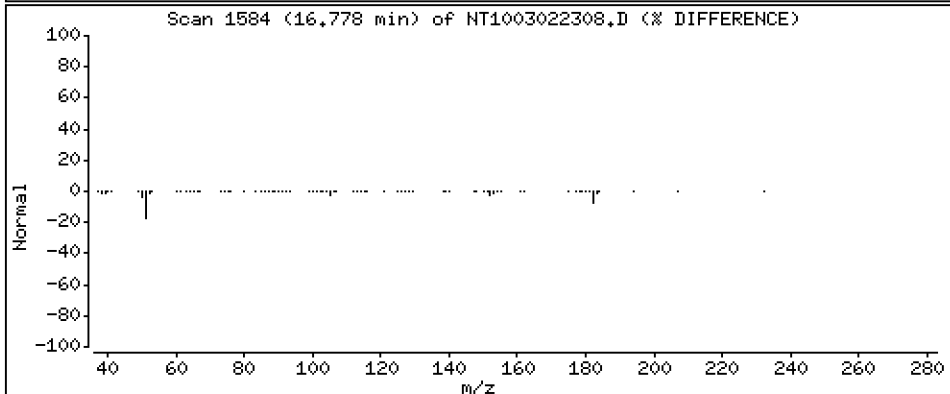
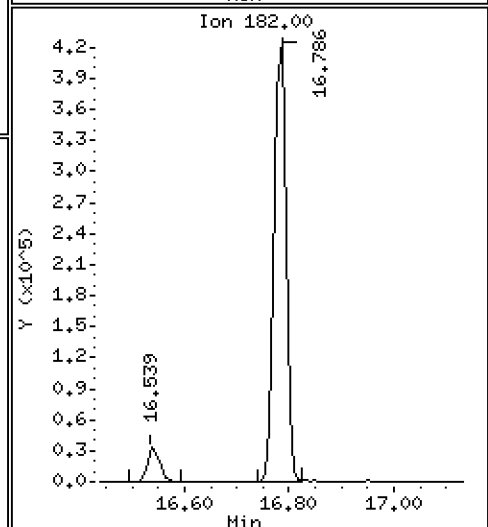
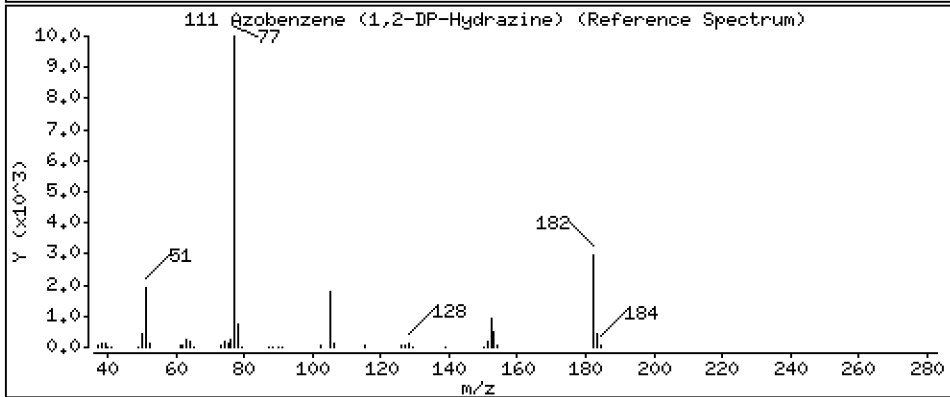
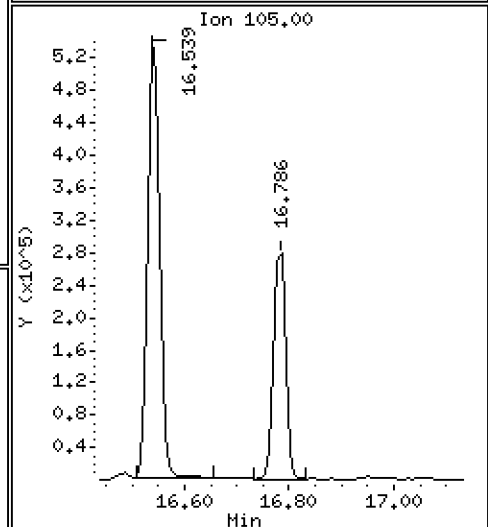
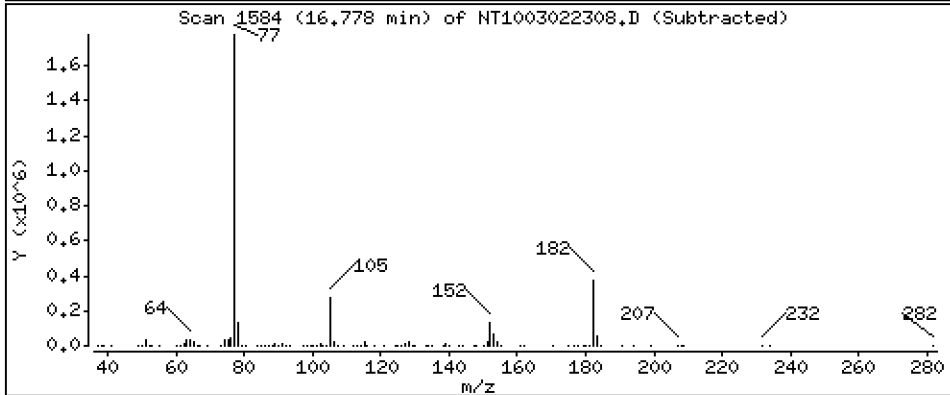
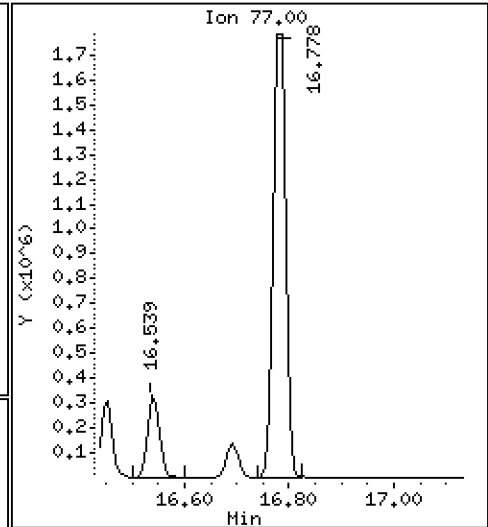
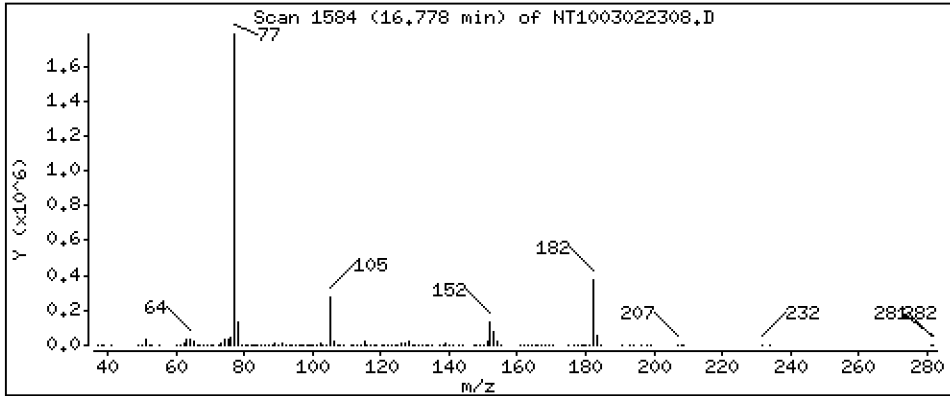
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 4,995 ug/mL



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

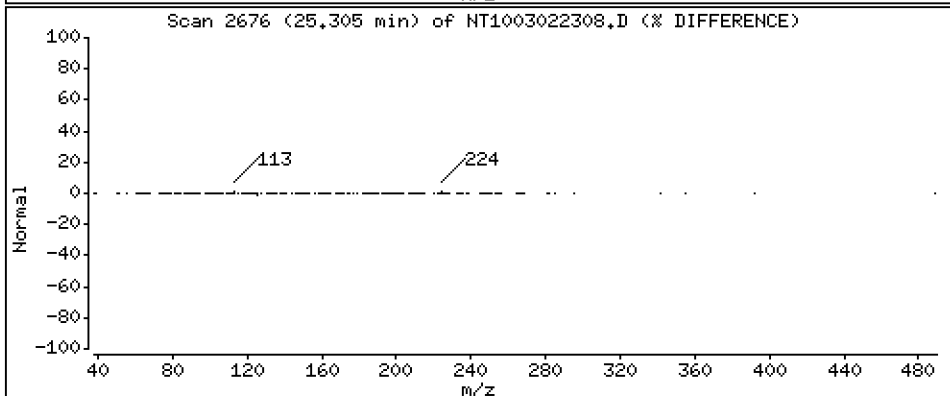
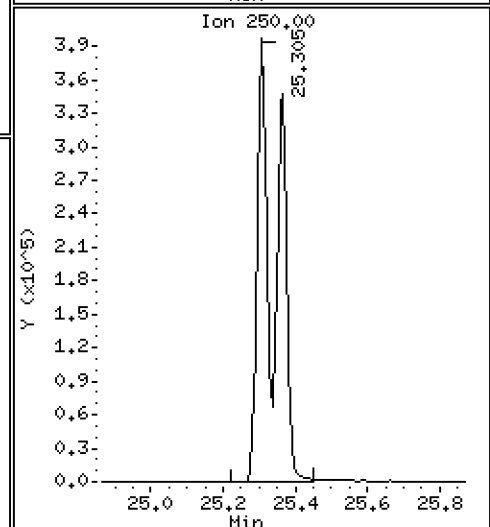
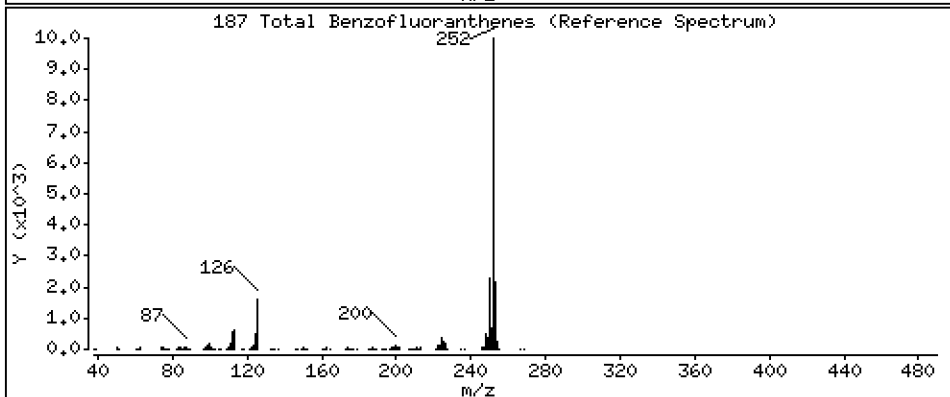
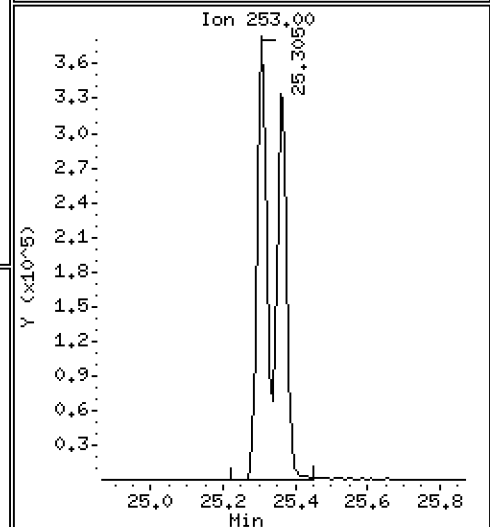
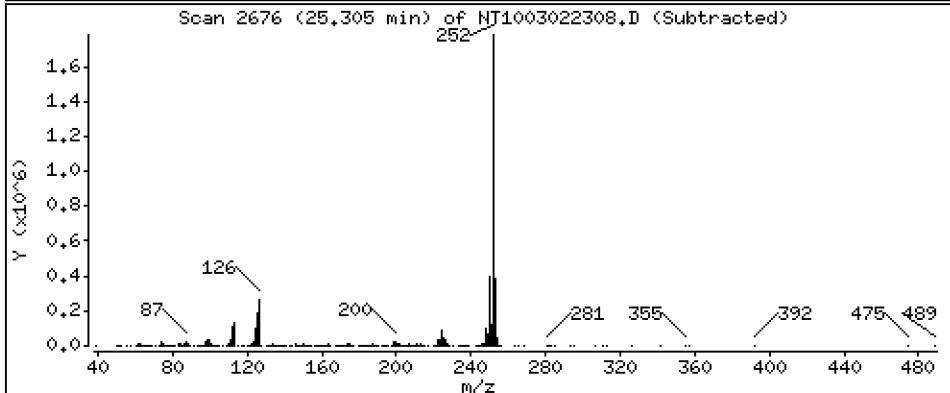
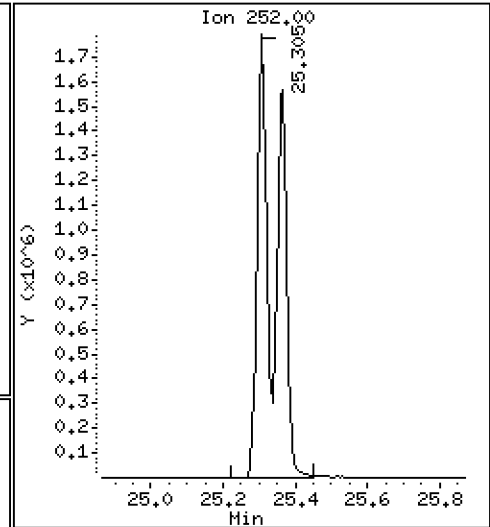
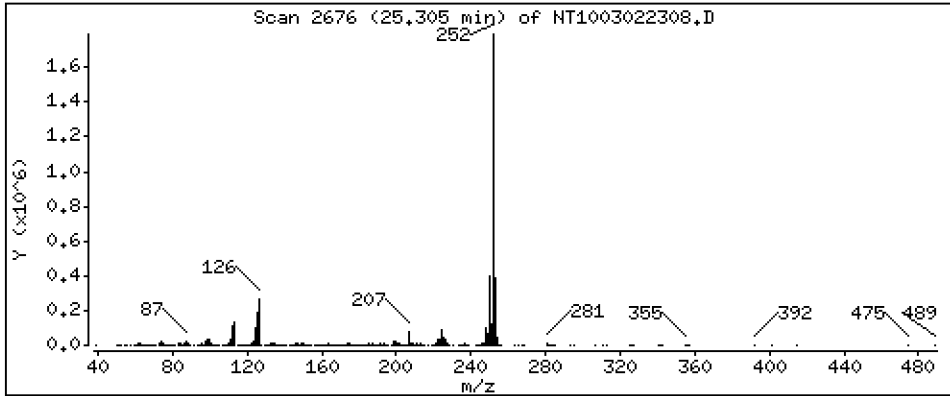
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 9,178 ug/mL





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

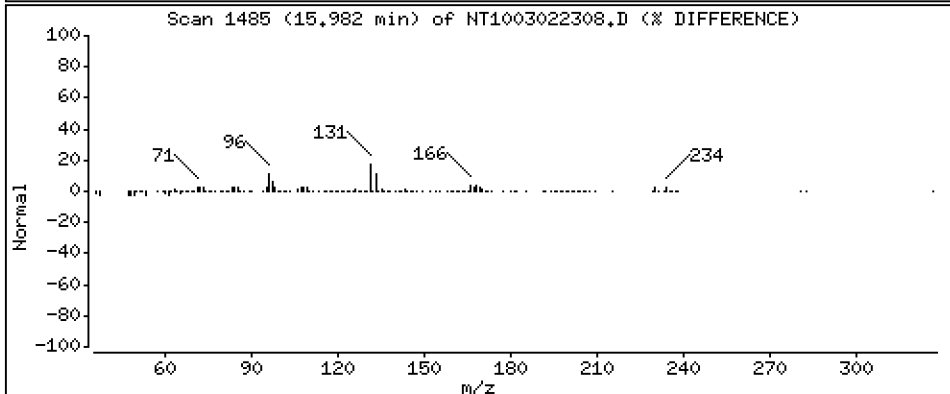
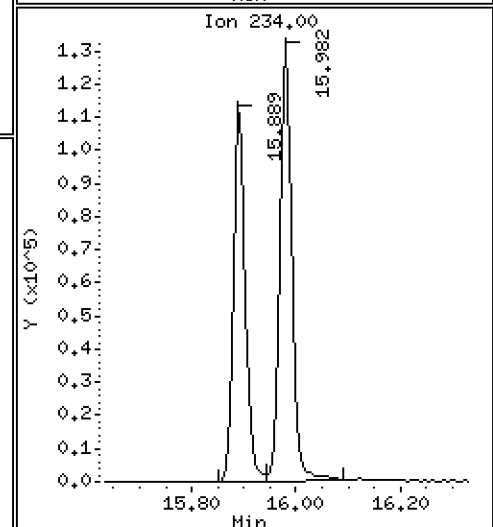
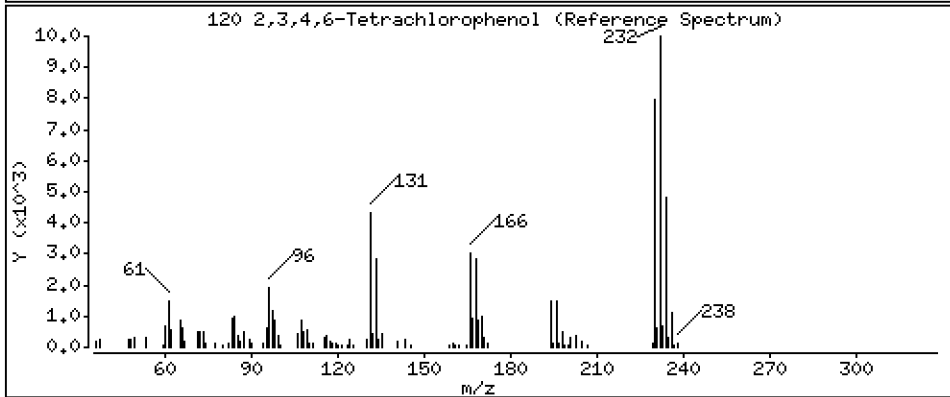
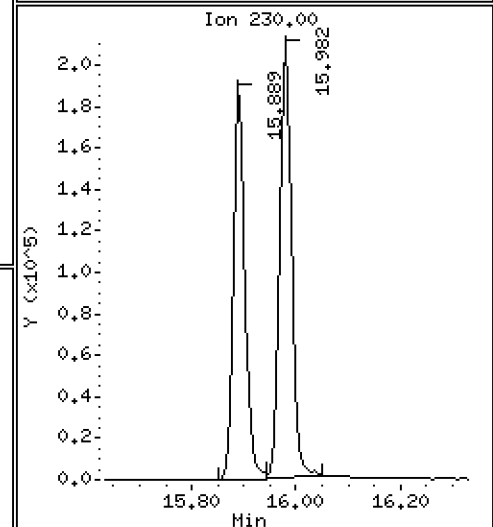
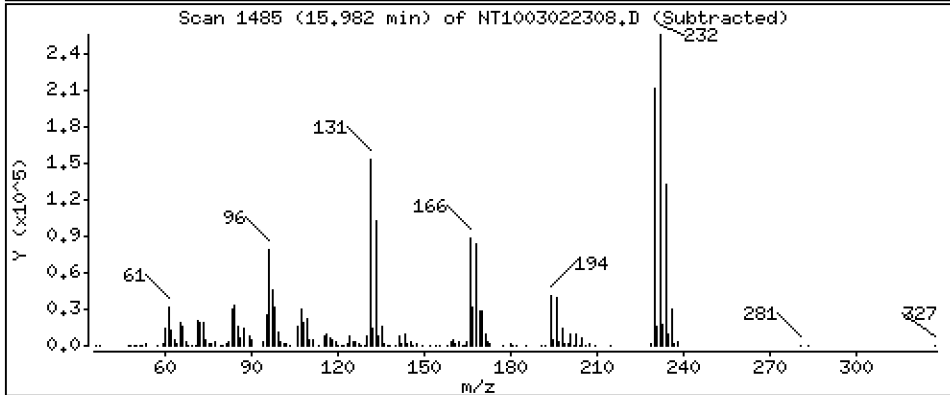
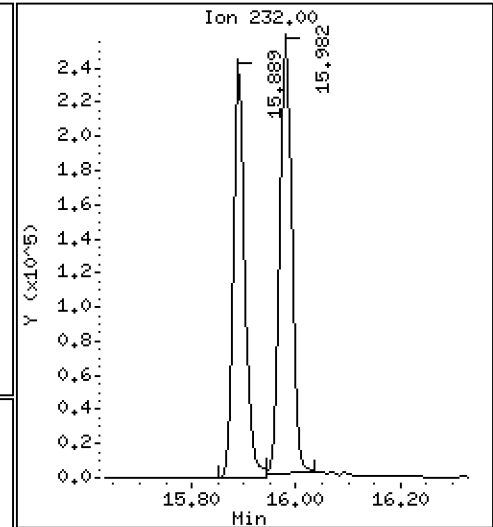
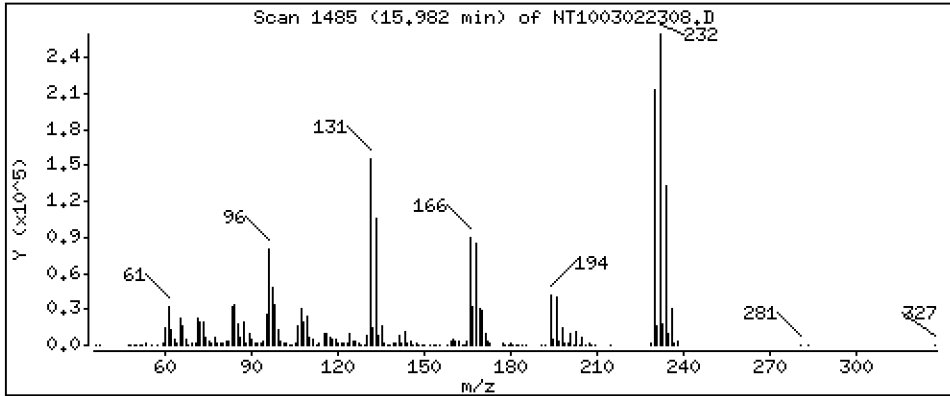
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,660 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022308.D  
 Lab Smp Id: BLA0624-BSD1  
 Inj Date : 02-MAR-2023 18:50  
 Operator : VTS  
 Smp Info : BLA0624-BSD1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	1031891	6.34529	6.345
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	1415837	7.49898	7.499
3 Phenol	94		8.520	8.512	(0.921)	981560	4.88980	4.890
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1141264	7.08496	7.085
4 Bis(2-Chloroethyl)ether	93		8.728	8.736	(0.944)	827724	5.39607	5.396
6 2-Chlorophenol	128		8.844	8.844	(0.956)	717560	4.28795	4.288
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	780703	4.23141	4.231
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	516875	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	853785	4.65871	4.659
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	493636	4.10172	4.102
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	776739	4.37880	4.379
11 Benzyl alcohol	108		9.471	9.472	(1.024)	463376	4.40161	4.402
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.728	(1.053)	271757	5.31391	5.314
13 2-Methylphenol	108		9.650	9.650	(1.044)	596719	3.77172	3.772
17 Hexachloroethane	117		10.209	10.209	(1.104)	328751	4.37034	4.370
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	573599	4.73537	4.735
15 4-Methylphenol	108		9.945	9.938	(1.076)	747219	3.86714	3.867
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	937747	4.30090	4.301
19 Nitrobenzene	77		10.325	10.333	(0.881)	964638	4.71641	4.716
20 Isophorone	82		10.791	10.791	(0.921)	1785531	6.83904	6.839
21 2-Nitrophenol	139		10.950	10.950	(0.934)	412026	3.72119	3.721
22 2,4-Dimethylphenol	107		11.001	11.001	(0.939)	1533557	7.69099	7.691
23 Bis(2-Chloroethoxy)methane	93		11.204	11.213	(0.956)	955985	5.92520	5.925
24 Benzoic acid	105		11.162	11.154	(0.953)	2673136	21.9145	21.91
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	2321360	14.4728	14.47
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	646933	4.21463	4.215
* 27 Naphthalene-d8	136		11.718	11.726	(1.000)	1986258	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	2258329	4.42984	4.430
29 4-Chloroaniline	127		11.857	11.858	(1.012)	2665292	11.4860	11.49
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	471643	4.21987	4.220
31 4-Chloro-3-methylphenol	107		12.809	12.801	(1.093)	2805998	16.1410	16.14
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	1564076	4.34286	4.343
33 Hexachlorocyclopentadiene	237		13.474	13.475	(0.880)	794512	19.1731	19.17

Compounds	QUANT SIG					CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)	
34 2,4,6-Trichlorophenol	196	13.730	13.722	(0.896)	1757193	15.8084	15.81	
35 2,4,5-Trichlorophenol	196	13.792	13.792	(0.900)	1875675	15.7494	15.75	
§ 36 2-Fluorobiphenyl	172	13.916	13.908	(0.909)	1732813	4.48151	4.482	
37 2-Chloronaphthalene	162	14.171	14.171	(0.925)	1398714	4.60806	4.608	
38 2-Nitroaniline	65	14.372	14.365	(0.938)	1469403	16.6774	16.68	
39 Dimethylphthalate	163	14.744	14.744	(0.963)	1743825	4.98108	4.981	
40 Acenaphthylene	152	15.022	15.023	(0.981)	2248650	4.29703	4.297	
41 2,6-Dinitrotoluene	165	14.875	14.868	(0.971)	1462359	17.8950	17.89	
* 42 Acenaphthene-d10	164	15.316	15.317	(1.000)	1084042	4.00000		
43 3-Nitroaniline	138	15.216	15.216	(0.993)	1443615	16.3516	16.35	
44 Acenaphthene	153	15.386	15.386	(1.005)	1459438	4.62435	4.624	
45 2,4-Dinitrophenol	184	15.432	15.433	(1.008)	792894	34.4964	34.50	
46 Dibenzofuran	168	15.741	15.742	(1.028)	2131413	4.55047	4.550	
47 4-Nitrophenol	109	15.533	15.525	(1.014)	907089	13.8167	13.82	
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.025)	1972660	16.5584	16.56	
50 Diethylphthalate	149	16.213	16.206	(1.059)	1910650	5.15175	5.152	
49 Fluorene	166	16.453	16.453	(1.074)	1841640	4.72568	4.726	
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	855112	4.79864	4.799	
52 4-Nitroaniline	138	16.484	16.476	(1.076)	1482623	15.6231	15.62	
53 4,6-Dinitro-2-methylphenol	198	16.546	16.538	(0.899)	1853115	34.8651	34.87	
54 N-Nitrosodiphenylamine	169	16.693	16.693	(0.907)	1483546	4.98479	4.985	
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.106)	477894	6.83997	6.840	
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	648956	5.38139	5.381	
57 Hexachlorobenzene	284	17.581	17.581	(0.955)	635038	4.67634	4.676	
58 Pentachlorophenol	266	17.983	17.983	(0.977)	1217672	17.2892	17.29	
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	2011504	4.00000		
60 Phenanthrene	178	18.455	18.455	(1.003)	2531996	4.91859	4.919	
61 Anthracene	178	18.563	18.564	(1.009)	2085484	4.17794	4.178	
62 Carbazole	167	18.888	18.889	(1.026)	2081003	4.55069	4.551	
63 Di-n-butylphthalate	149	19.592	19.593	(1.065)	3512511	5.44224	5.442	
64 Fluoranthene	202	20.815	20.815	(0.889)	3075184	4.45438	4.454	
65 Pyrene	202	21.248	21.248	(0.907)	3129783	4.45218	4.452	
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	2538568	4.46296	4.463	
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	1540408	4.13435	4.134	
68 Benzo(a)anthracene	228	23.408	23.409	(0.999)	3121105	4.41071	4.411	
* 69 Chrysene-d12	240	23.424	23.424	(1.000)	2006849	4.00000		
70 3,3'-Dichlorobenzidine	252	23.346	23.347	(0.997)	2532981	7.95850	7.958	
71 Chrysene	228	23.470	23.470	(1.002)	2856328	4.96677	4.967	
72 bis(2-Ethylhexyl)phthalate	149	23.408	23.409	(0.956)	1603759	3.19680	3.197	
* 134 Di-n-octylphthalate-d4	153	24.492	24.492	(1.000)	3510242	4.00000		
73 Di-n-octylphthalate	149	24.500	24.500	(1.000)	2117435	2.72023	2.720	
74 Benzo(b)fluoranthene	252	25.305	25.305	(0.969)	3228806	4.56549	4.565	
75 Benzo(k)fluoranthene	252	25.367	25.367	(0.972)	3107437	4.55802	4.558	
76 Benzo(a)pyrene	252	25.994	25.994	(0.996)	2529450	4.02810	4.028	
* 77 Perylene-d12	264	26.110	26.118	(1.000)	1974070	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.878	28.878	(1.106)	3197591	4.34178	4.342	
79 Dibenzo(a,h)anthracene	278	28.932	28.932	(1.108)	2649188	4.69572	4.696	
80 Benzo(g,h,i)perylene	276	29.717	29.725	(1.138)	2650460	4.54530	4.545	
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	1327889	12.6486	12.65	
91 Aniline	93	8.628	8.628	(0.933)	2436550	10.4686	10.47	
93 Benzidine	184	Compound Not Detected.						
103 Pyridine	79	4.781	4.781	(0.517)	1635292	8.78318	8.783	
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	1493847	4.58279	4.583	
111 Azobenzene (1,2-DP-Hydrazine)	77	16.777	16.785	(1.095)	2766299	4.99487	4.995	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.305	25.367	(0.969)	6243075	9.17835	9.178
120 2,3,4,6-Tetrachlorophenol	232	15.981	15.981	(1.043)	386928	3.66031	3.660

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022308.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-BSD1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	516875	19.93
27 Naphthalene-d8	1609461	804731	3218922	1986258	23.41
42 Acenaphthene-d10	853113	426557	1706226	1084042	27.07
59 Phenanthrene-d10	1556648	778324	3113296	2011504	29.22
69 Chrysene-d12	1539062	769531	3078124	2006849	30.39
134 Di-n-octylphthala	2949571	1474786	5899142	3510242	19.01
77 Perylene-d12	1634059	817030	3268118	1974070	20.81

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	-0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.12	25.62	26.62	26.11	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022308.D

Lab ID: BLA0624-BSD1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 18:50

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT CCV RRT DELTA COMPOUND  
-----

NONE

RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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



**MS / MS DUPLICATE RECOVERY**  
**EPA 8270E**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor OEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Matrix: <u>Solid</u>	Analyzed: <u>03/02/23 19:28</u>
Batch: <u>BLA0624</u>	Laboratory ID: <u>BLA0624-MS1</u>
Preparation: <u>EPA 3546 (Microwave)</u>	Sequence Name: <u>Matrix Spike</u>
Initial/Final: <u>16.64 g / 1 mL</u>	Source Sample: <u>LDW23-SS1066</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Phenol	500	813		1370		112	34 - 120
4-Methylphenol	500	112		477		72.9	29 - 120
Naphthalene	500	21.0		511		98.0	43 - 120
2-Methylnaphthalene	500	23.8		502		95.7	43 - 120
Acenaphthylene	500	14.0	J	503		98.0	42 - 120
Dimethylphthalate	500	ND	U	543		109	43 - 120
Acenaphthene	500	23.8		568		109	45 - 120
Dibenzofuran	500	16.0	J	557		108	43 - 120
Fluorene	500	21.6		638		123 *	45 - 120
Phenanthrene	500	215		1140		185 *	49 - 120
Anthracene	500	61.4		582		104	45 - 120
Fluoranthene	500	474		1220		150 *	53 - 145
Pyrene	500	449		1080		127	52 - 134
Butylbenzylphthalate	500	21.7	Q	450		85.8	45 - 132
Benzo(a)anthracene	500	187		849		132 *	49 - 120
Chrysene	500	315		1020		141 *	47 - 120
bis(2-Ethylhexyl)phthalate	500	322		854		106	34 - 130
Benzo(a)fluoranthene, Total	999	415		1690		128	30 - 160
Benzo(a)pyrene	500	189		764		115	42 - 120
Indeno(1,2,3-cd)pyrene	500	91.1		559		93.5	42 - 163
Dibenzo(a,h)anthracene	500	28.9		502		94.6	30 - 133
Benzo(g,h,i)perylene	500	116	Q	595		95.8	46 - 148

\* Values outside of QC limits



**MS / MS DUPLICATE RECOVERY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Matrix: Solid  
Batch: BLA0624  
Preparation: EPA 3546 (Microwave)  
Initial/Final: 16.64 g / 1 mL

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Analyzed: 03/02/23 20:06  
Laboratory ID: BLA0624-MSD1  
Sequence Name: Matrix Spike Dup  
Source Sample: LDW23-SS1066

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Phenol	500	1440		126 *	5.25	30	34 - 120
4-Methylphenol	500	472		72.0	0.929	30	29 - 120
Naphthalene	500	489		93.6	4.42	30	43 - 120
2-Methylnaphthalene	500	494		94.2	1.54	30	43 - 120
Acenaphthylene	500	477		92.7	5.36	30	42 - 120
Dimethylphthalate	500	505		101	7.24	30	43 - 120
Acenaphthene	500	520		99.2	8.95	30	45 - 120
Dibenzofuran	500	501		97.0	10.7	30	43 - 120
Fluorene	500	542		104	16.3	30	45 - 120
Phenanthrene	500	686		94.2	49.8 *	30	49 - 120
Anthracene	500	516		90.9	12.1	30	45 - 120
Fluoranthene	500	925		90.3	27.6	30	53 - 145
Pyrene	500	893		88.8	19.3	30	52 - 134
Butylbenzylphthalate	500	432		82.0	4.22	30	45 - 132
Benzo(a)anthracene	500	769		116	9.94	30	49 - 120
Chrysene	500	981		133 *	4.02	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	1330		201 *	43.5 *	30	34 - 130
Benzo(a)pyrene, Total	999	1410		99.9	18.1	30	30 - 160
Benzo(a)pyrene	500	635		89.3	18.5	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	491		80.0	12.9	30	42 - 163
Dibenzo(a,h)anthracene	500	465		87.3	7.61	30	30 - 133
Benzo(g,h,i)perylene	500	520		80.7	13.5	30	46 - 148

\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022309.D

Date: 02-MAR-2023 19:28

Client ID:

Sample Info: BLR0624-HSI

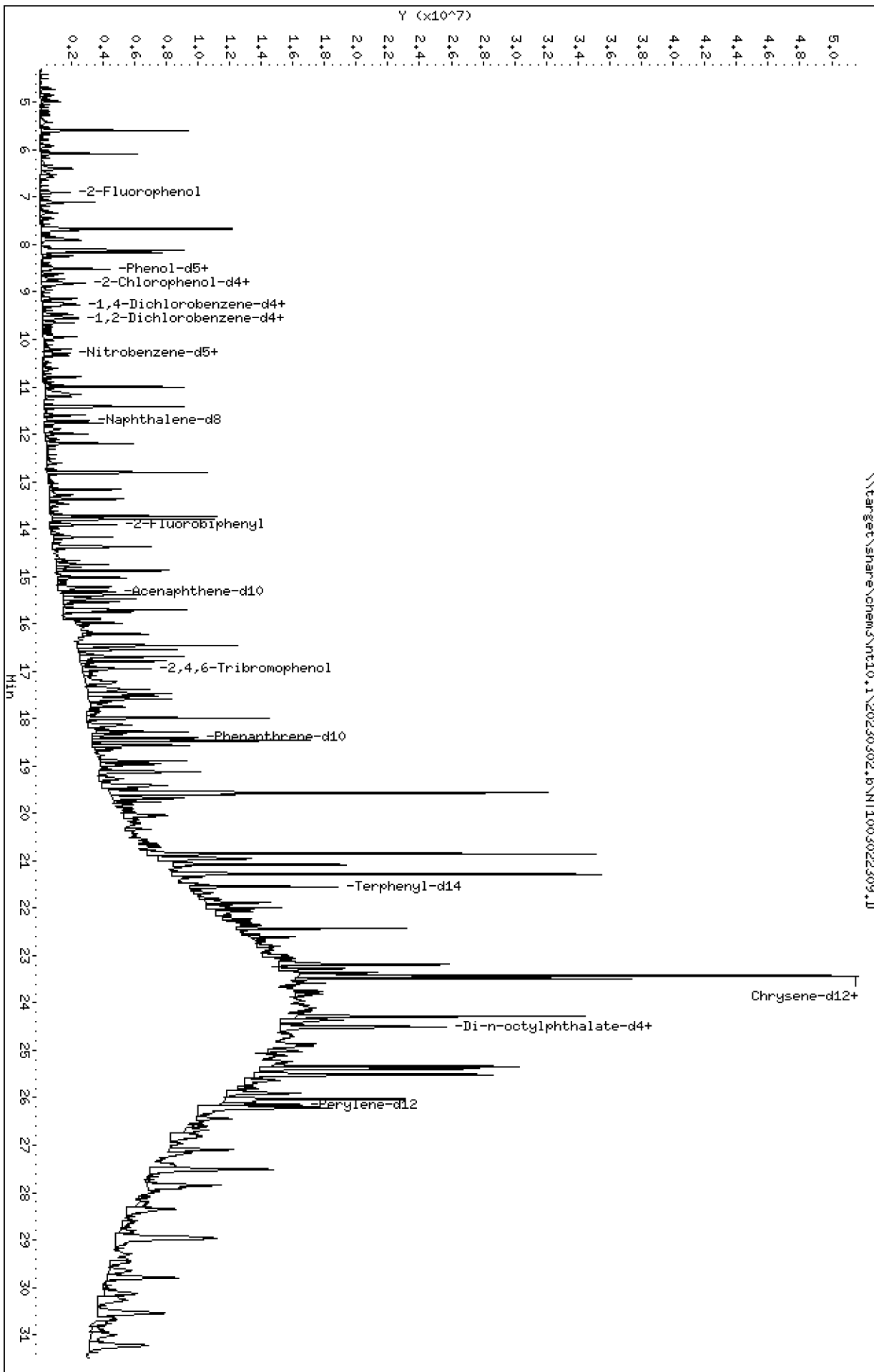
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022309.D



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

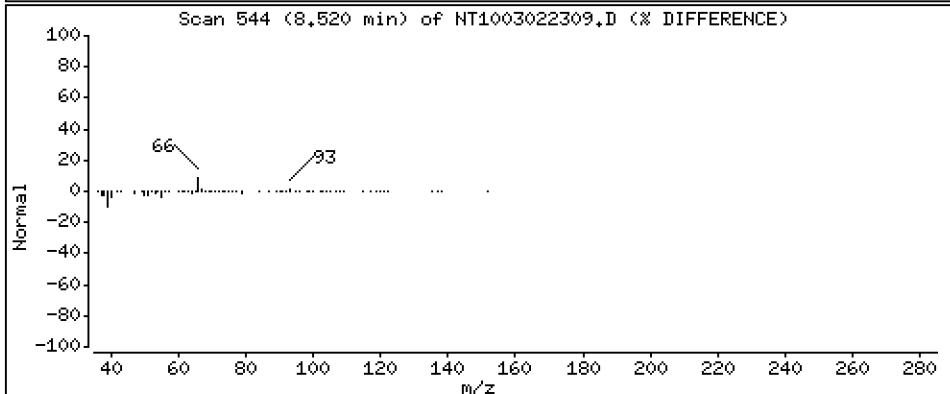
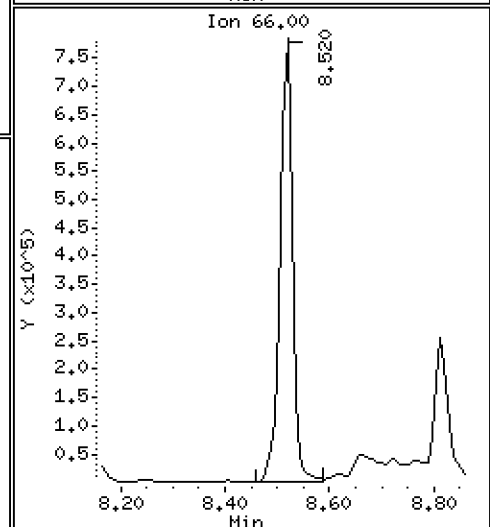
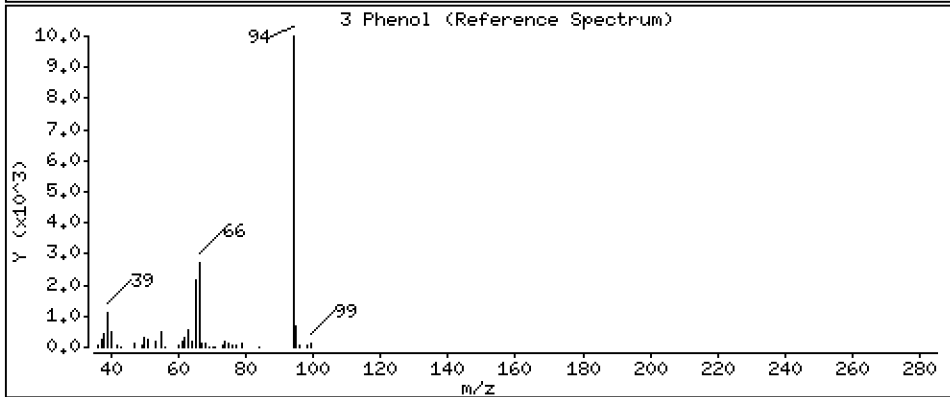
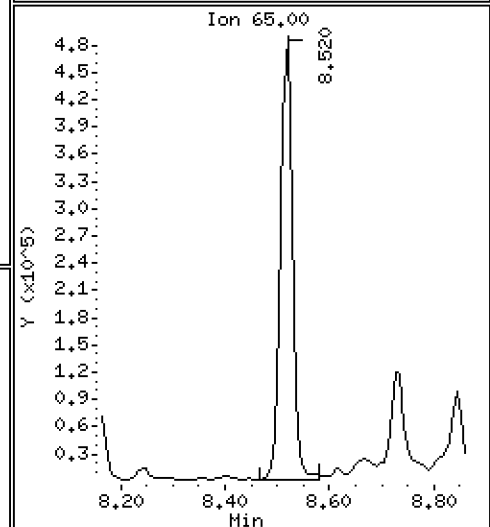
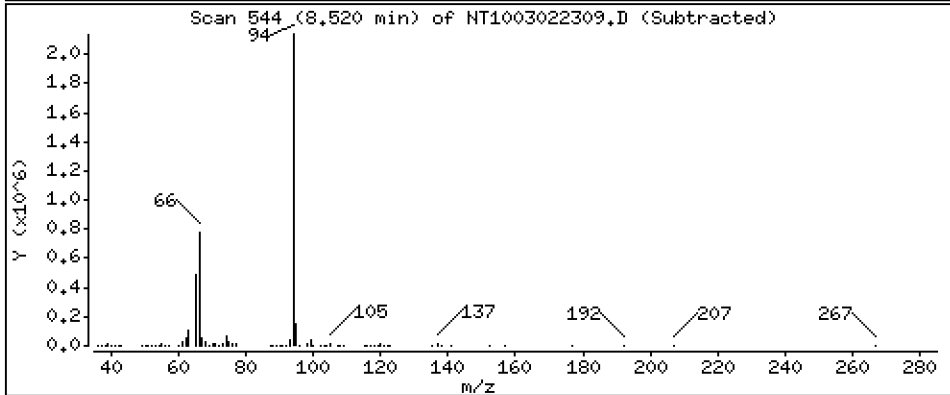
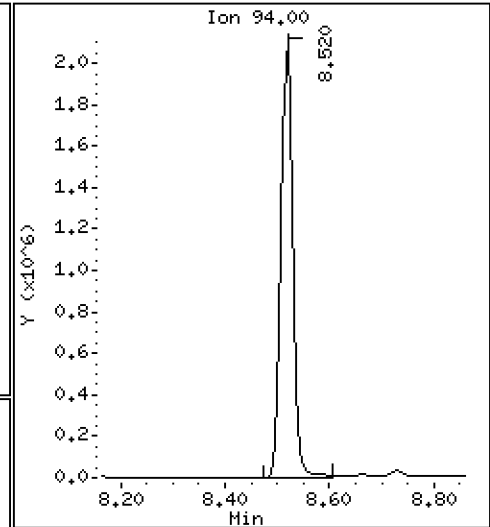
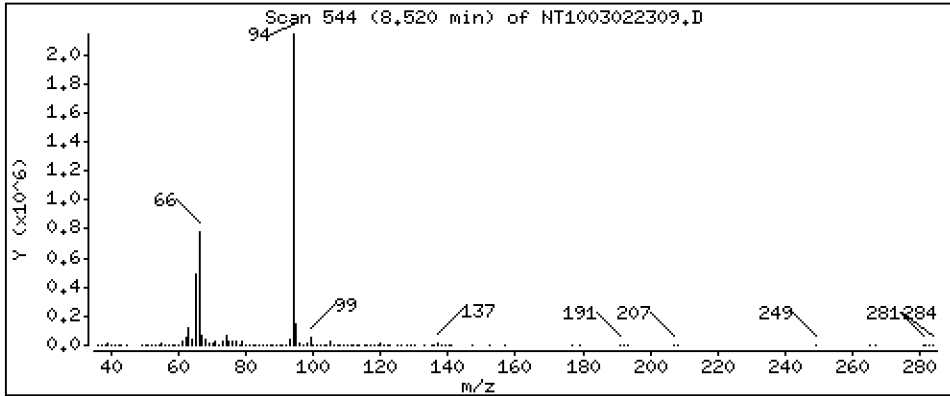
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 13,71 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

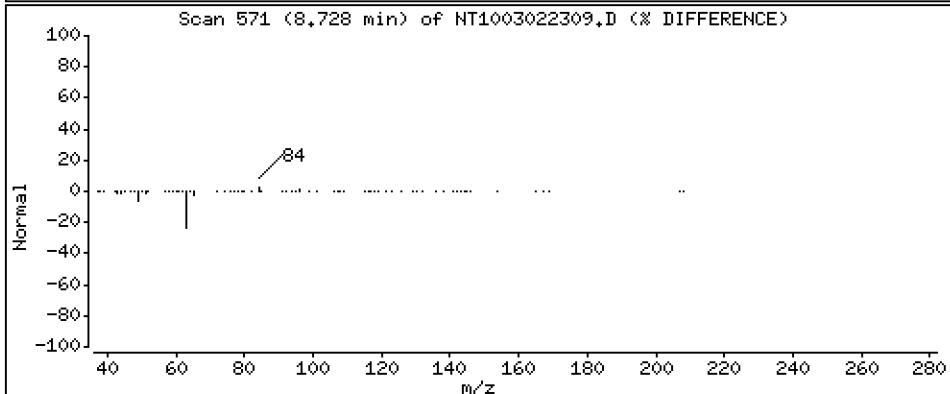
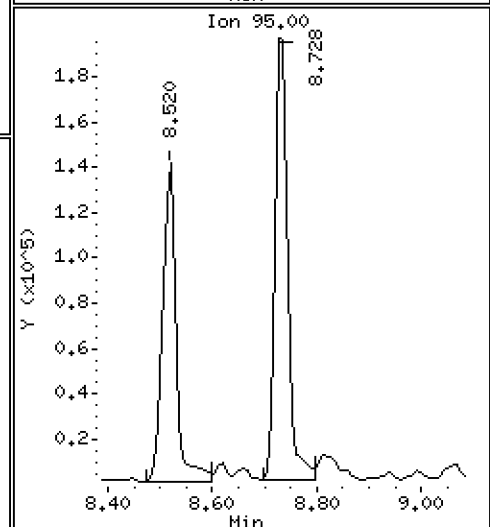
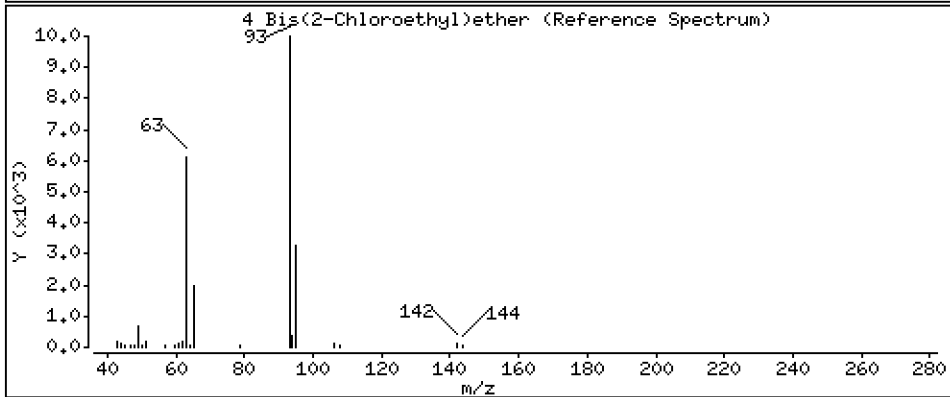
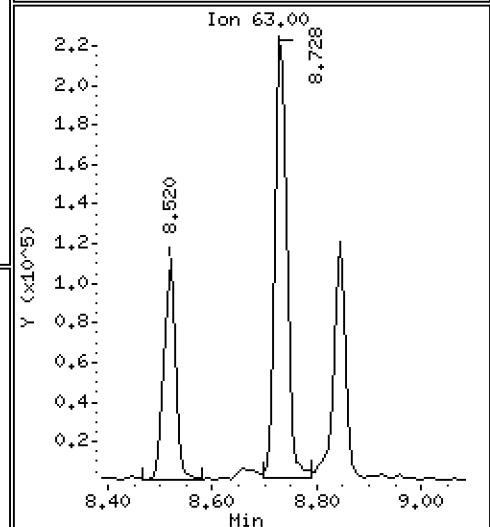
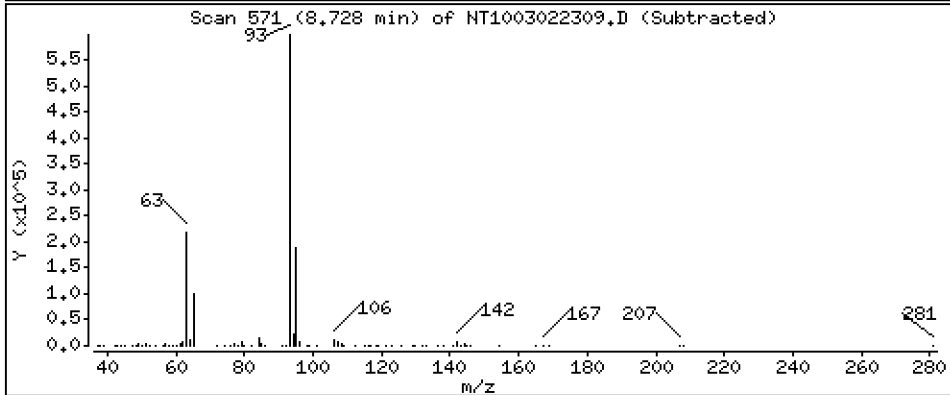
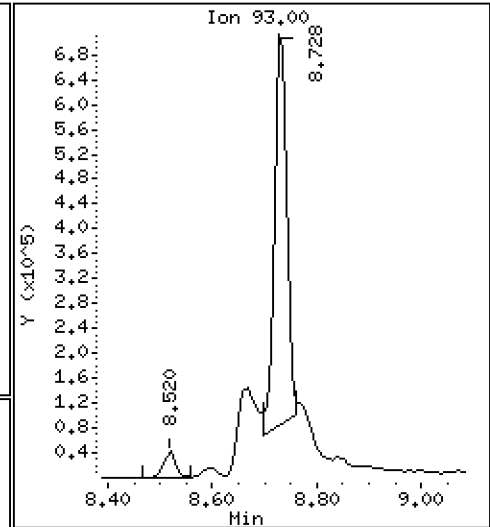
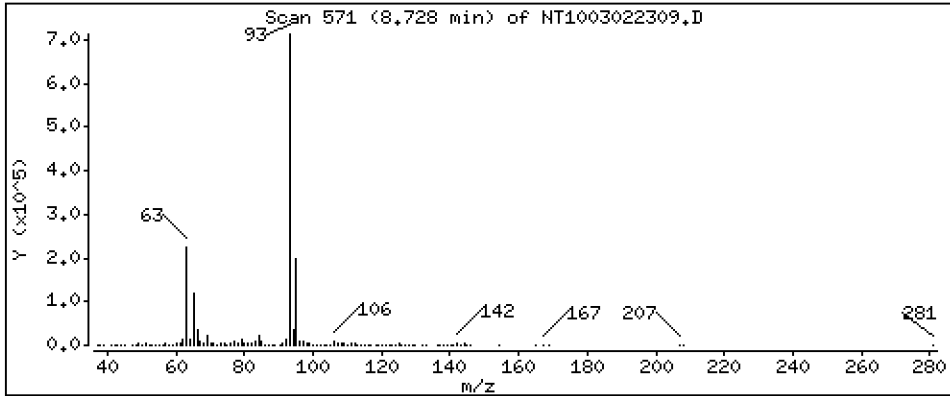
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,739 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

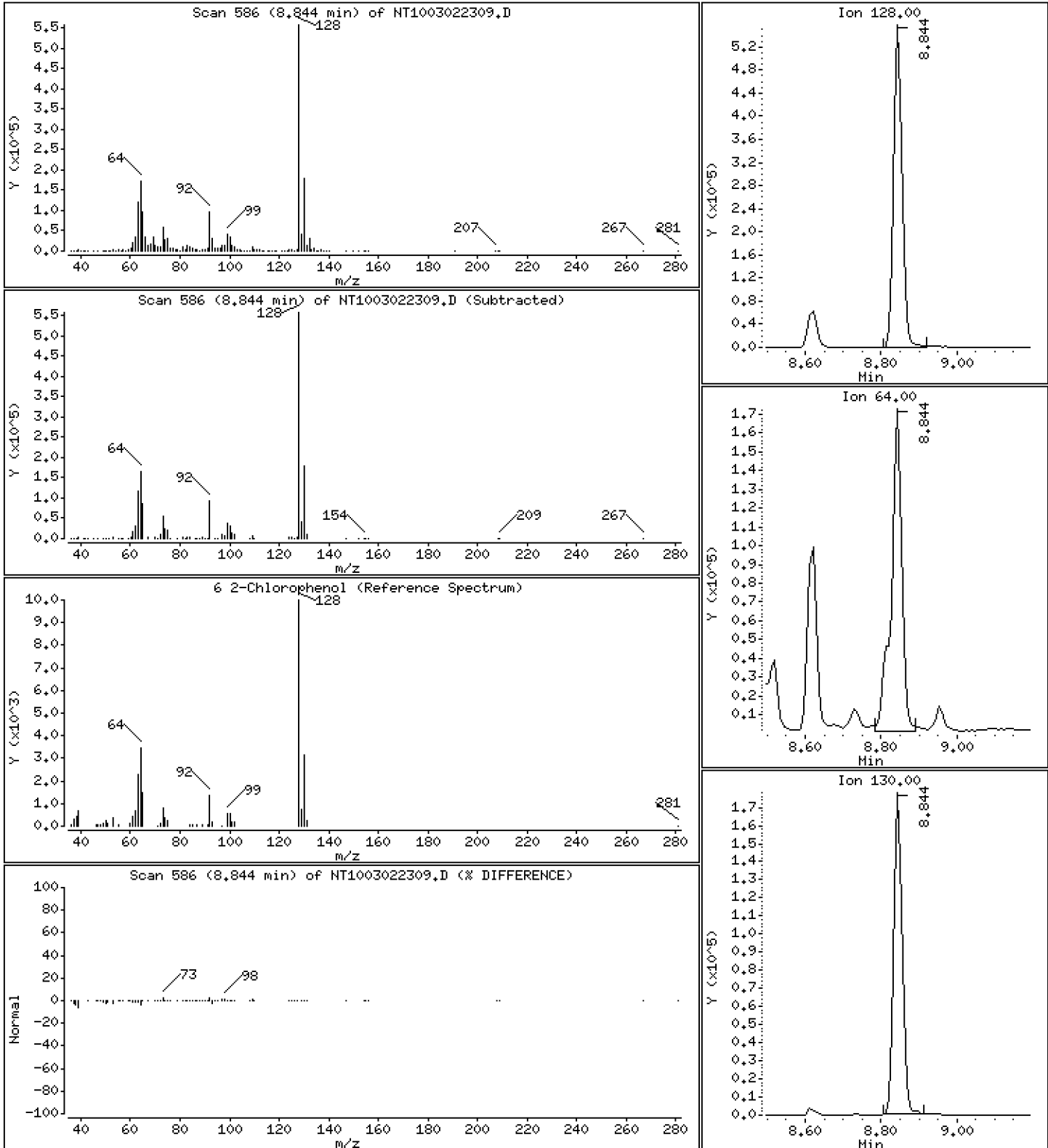
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 4,470 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

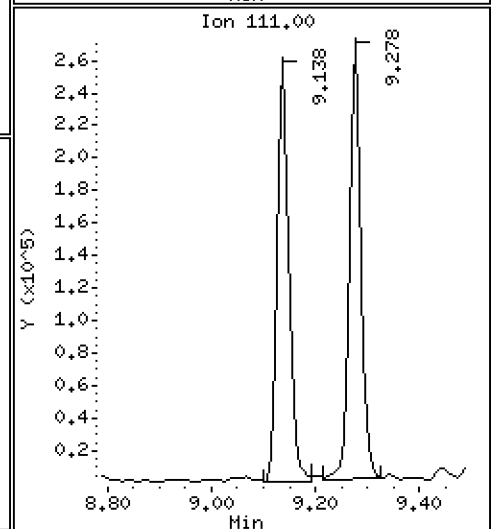
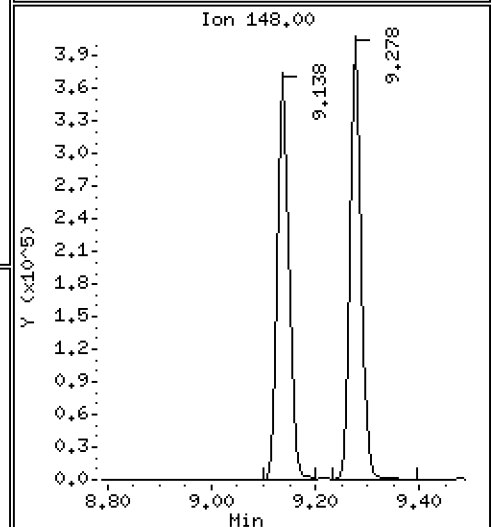
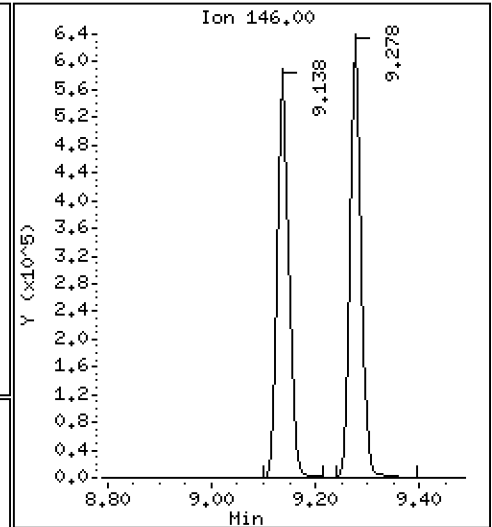
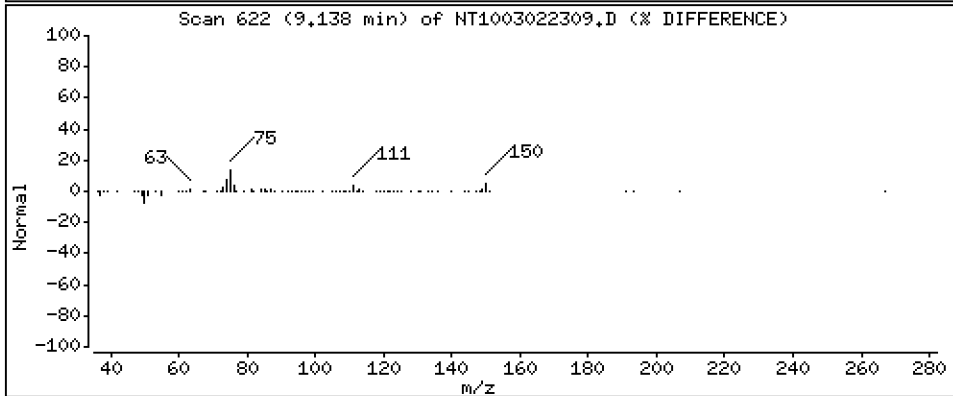
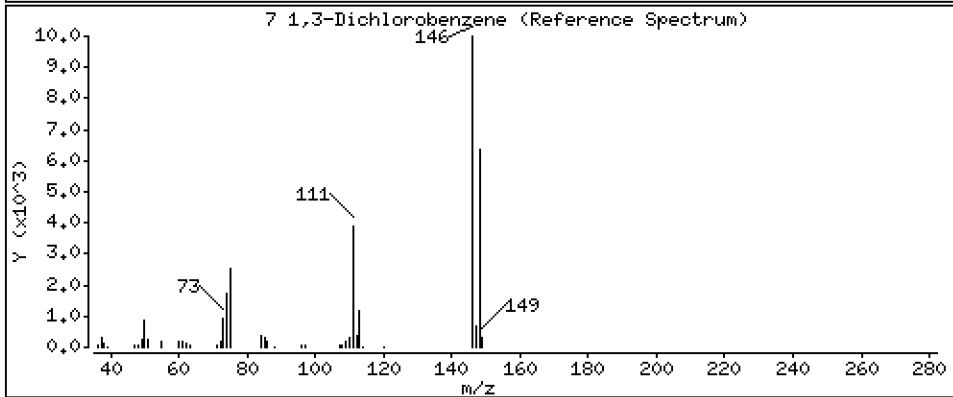
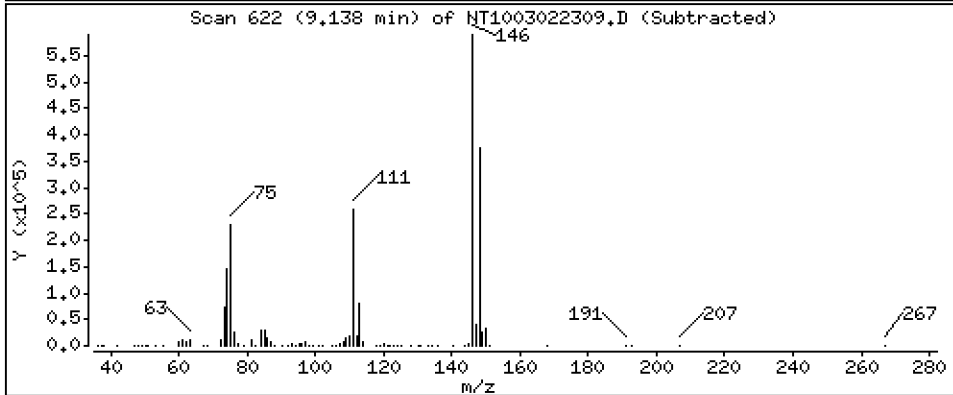
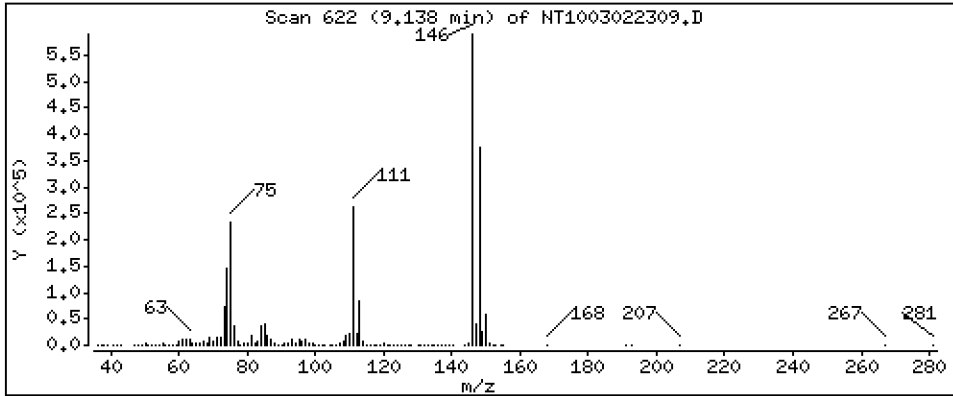
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,197 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

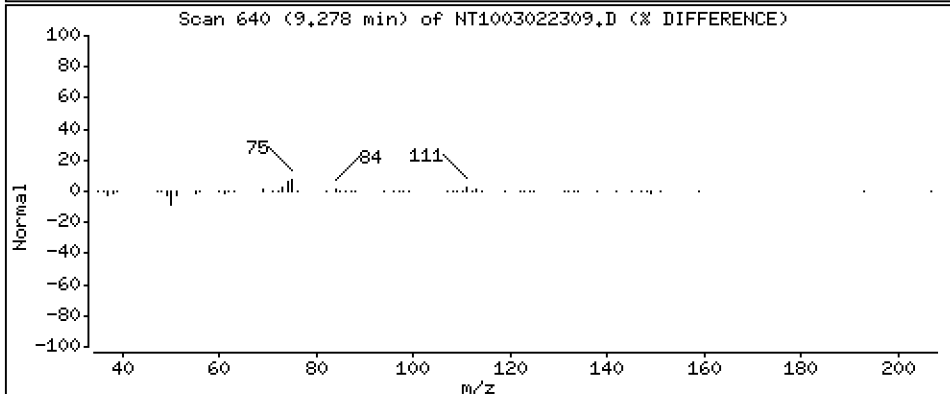
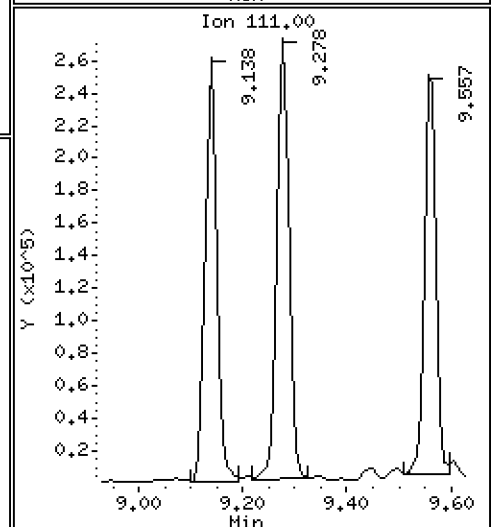
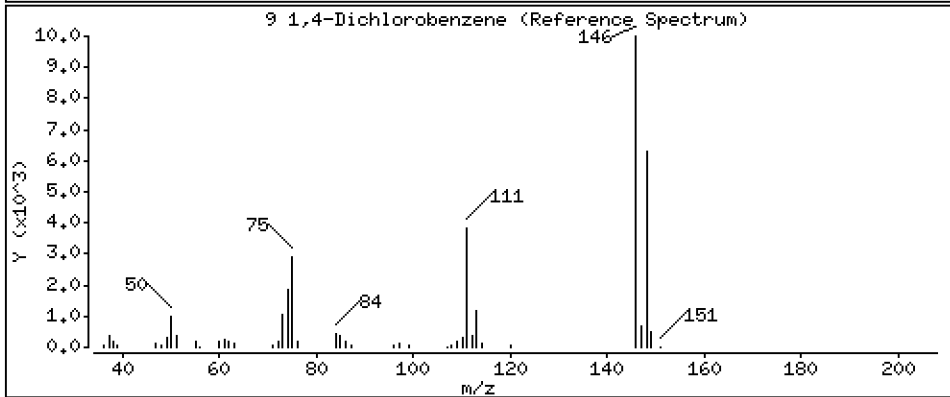
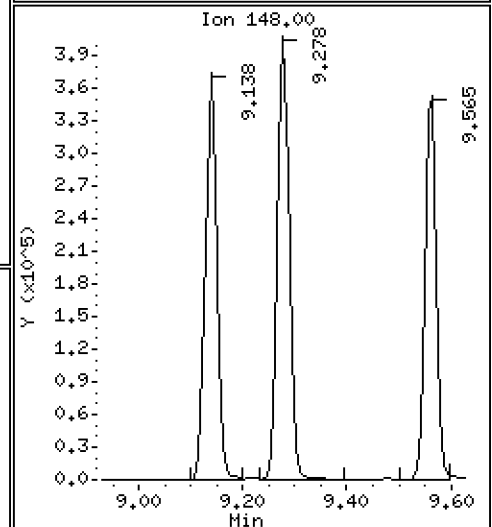
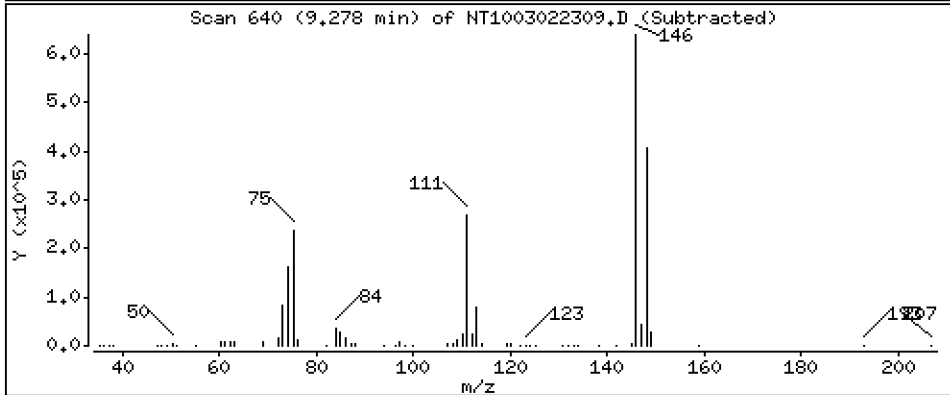
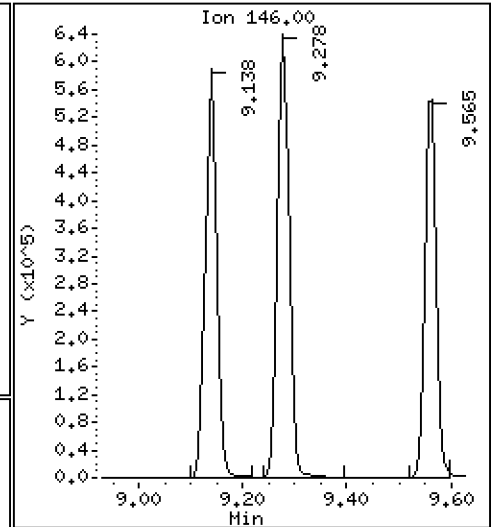
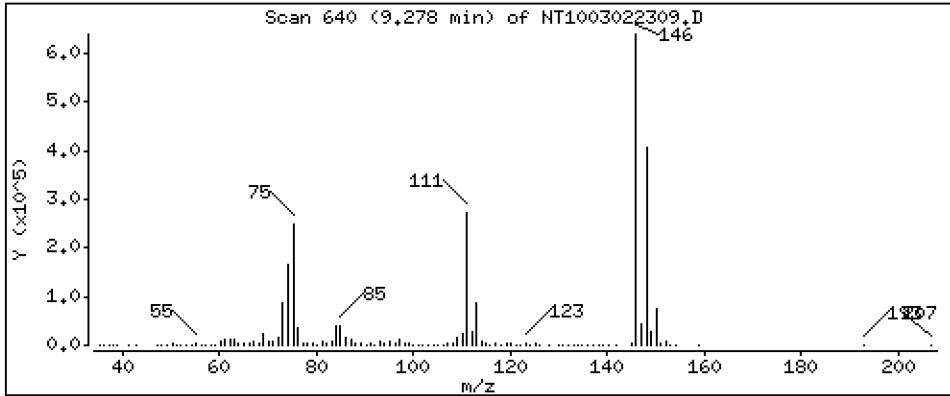
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 4,585 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

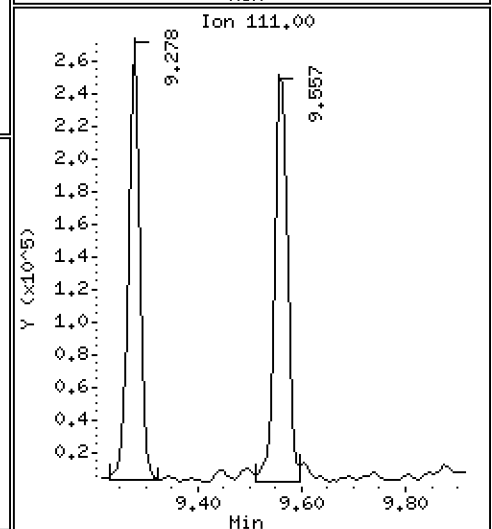
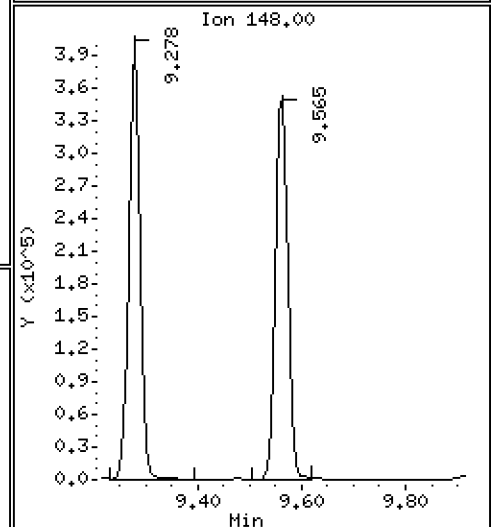
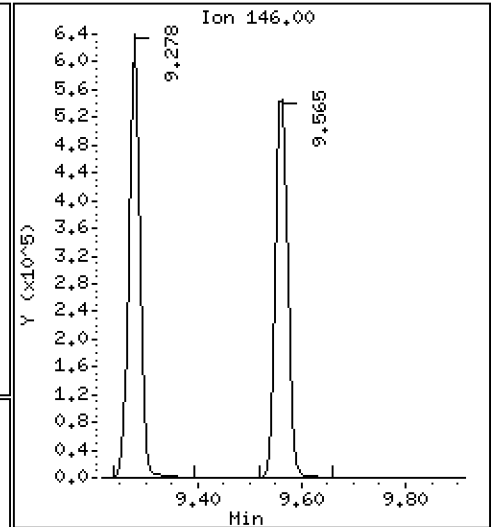
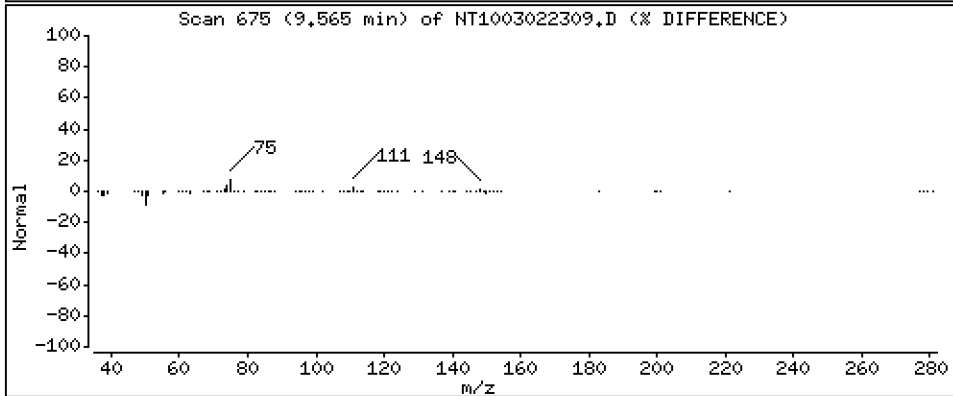
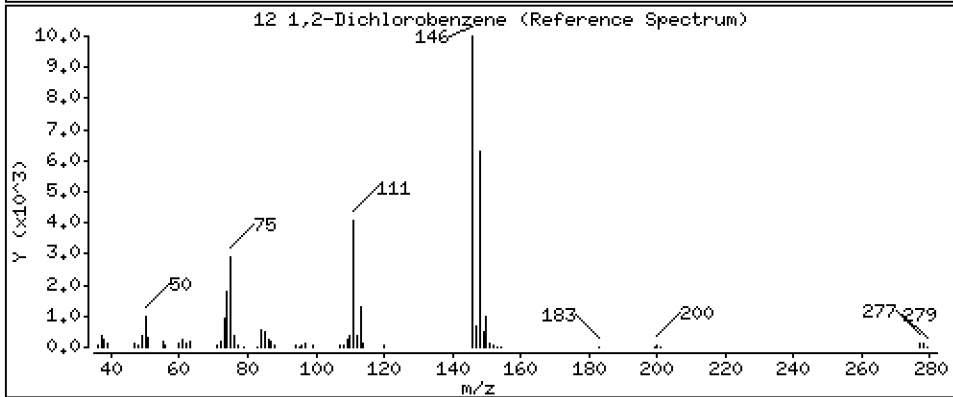
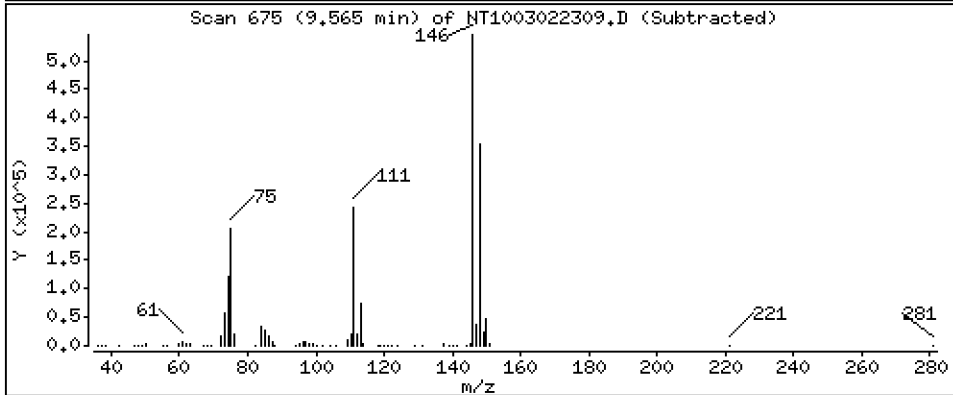
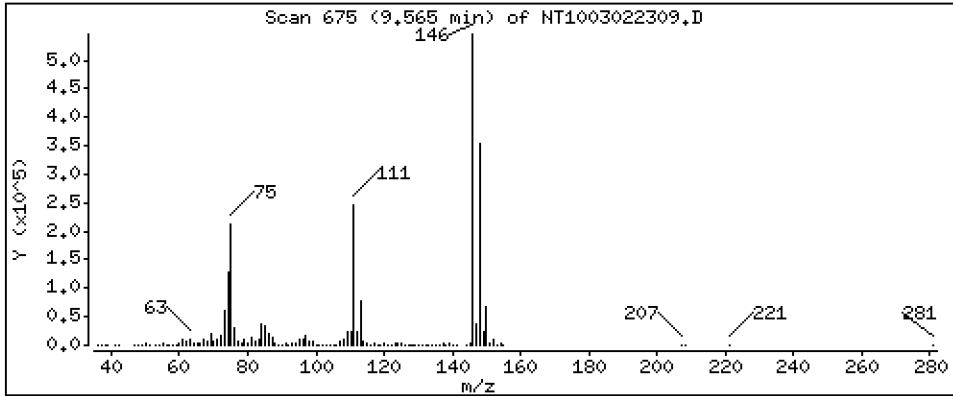
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,344 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

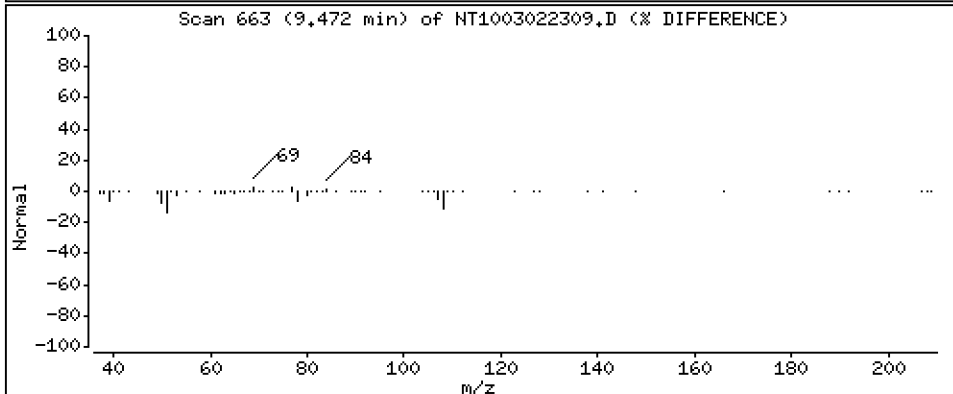
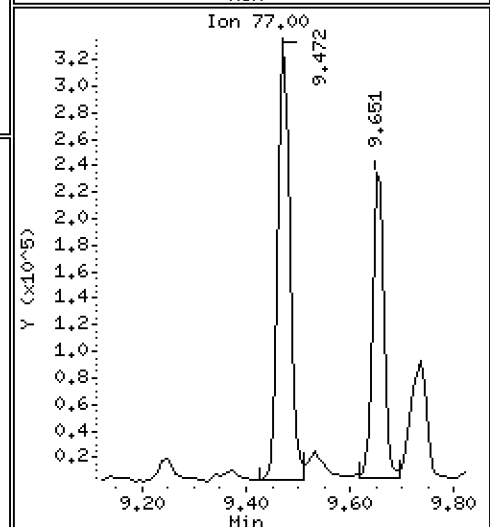
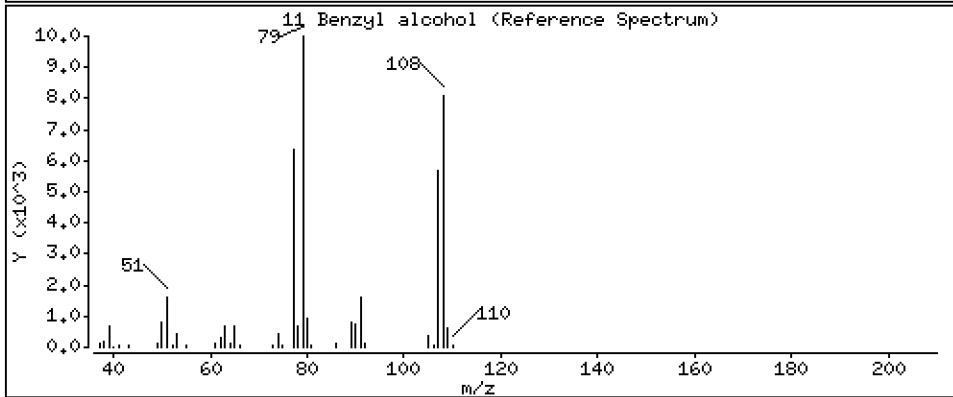
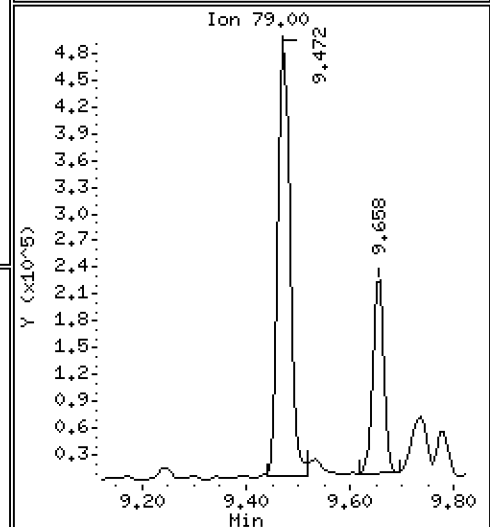
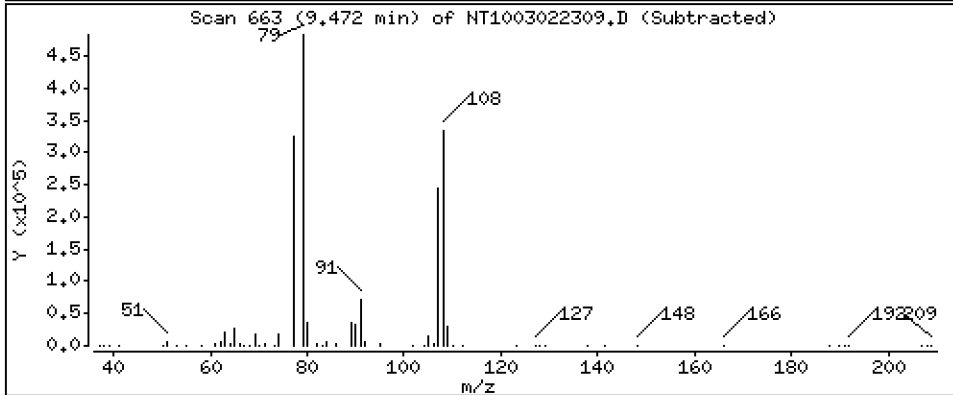
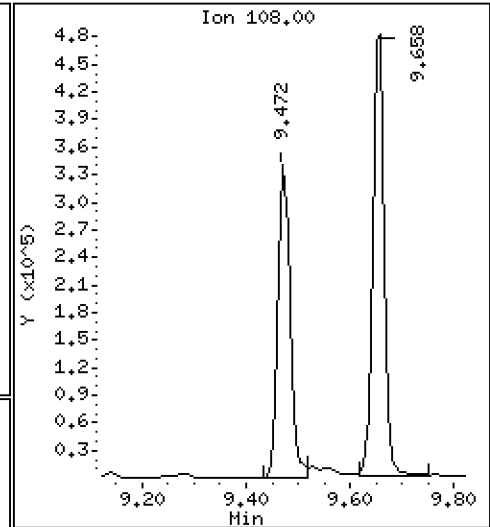
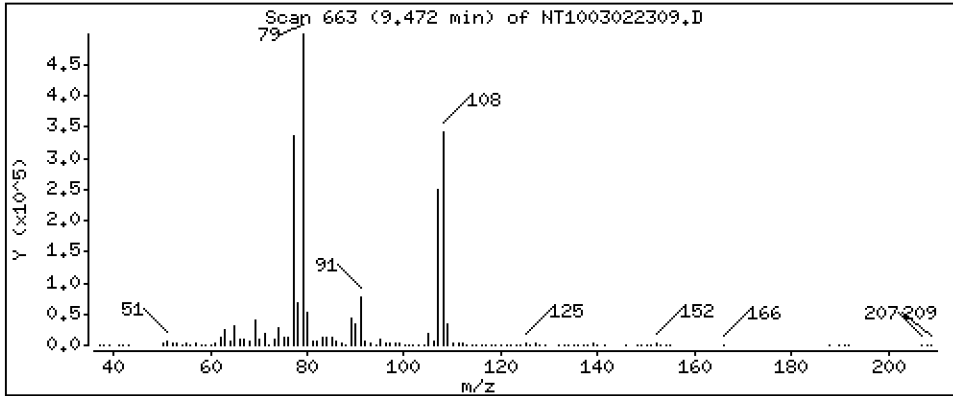
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.392 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

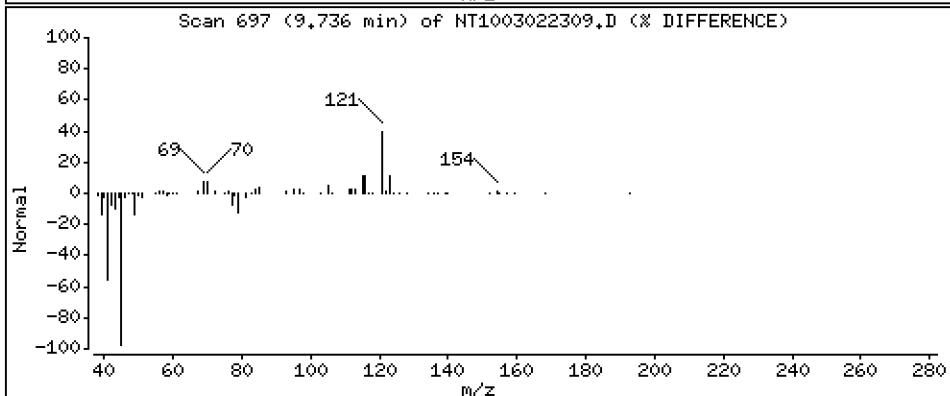
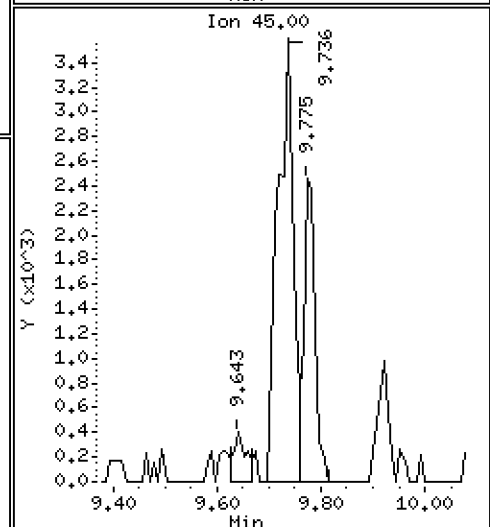
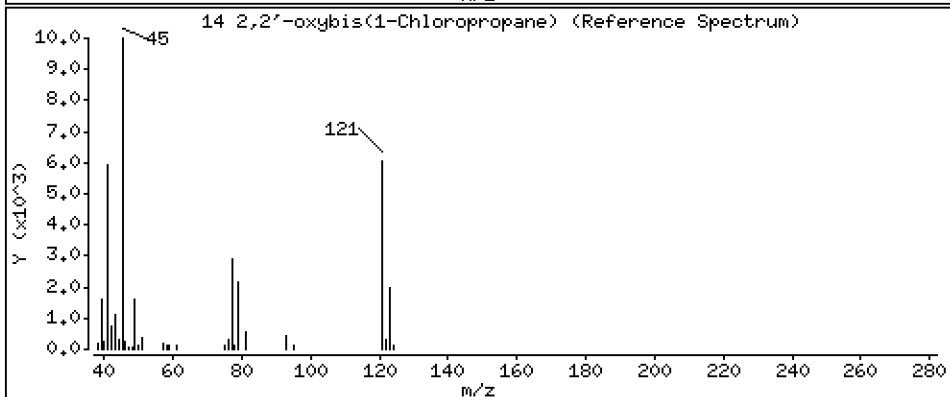
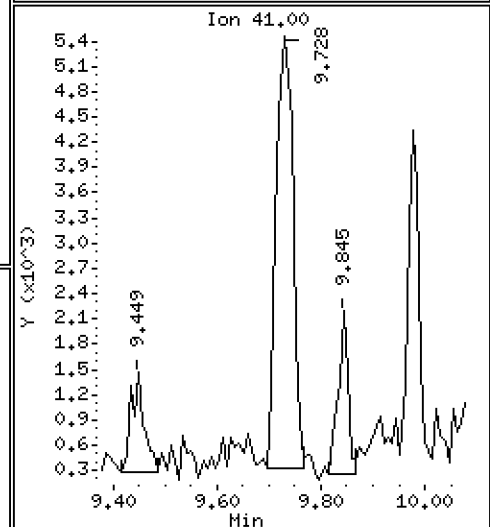
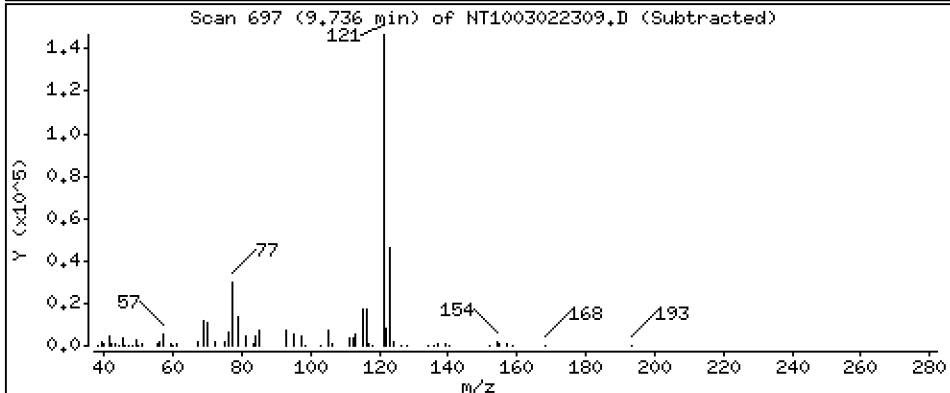
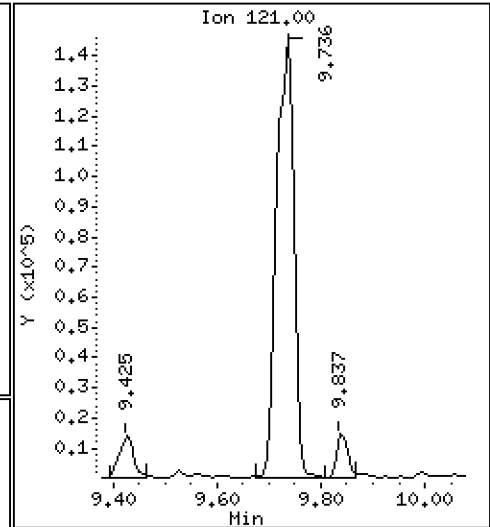
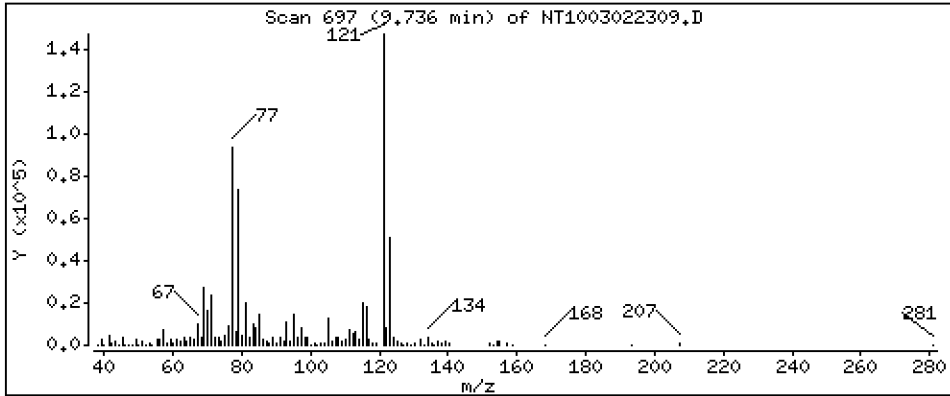
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 5,670 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

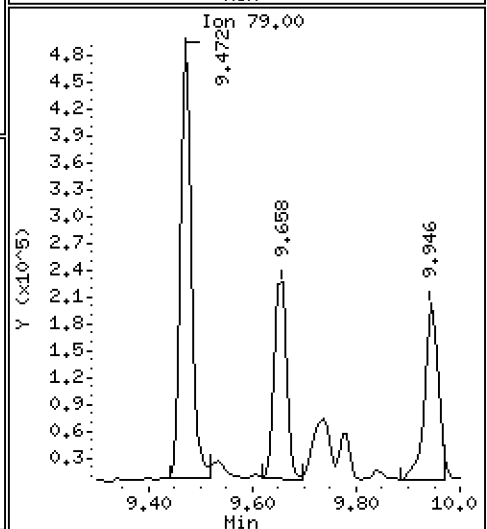
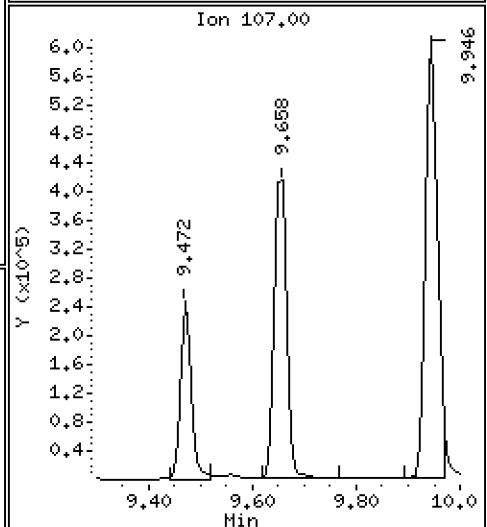
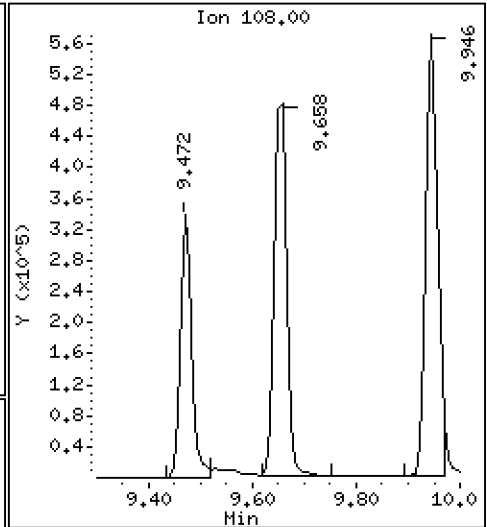
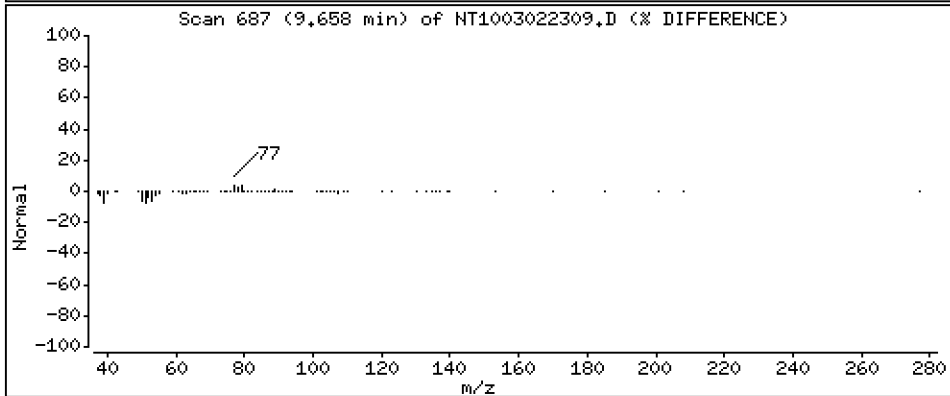
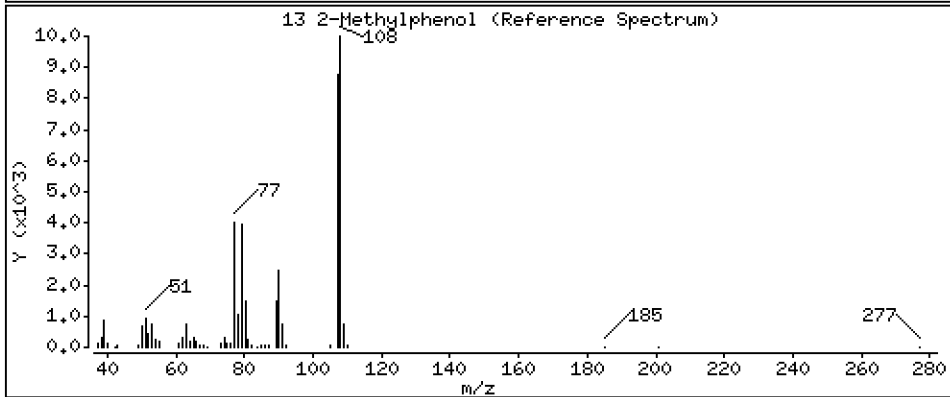
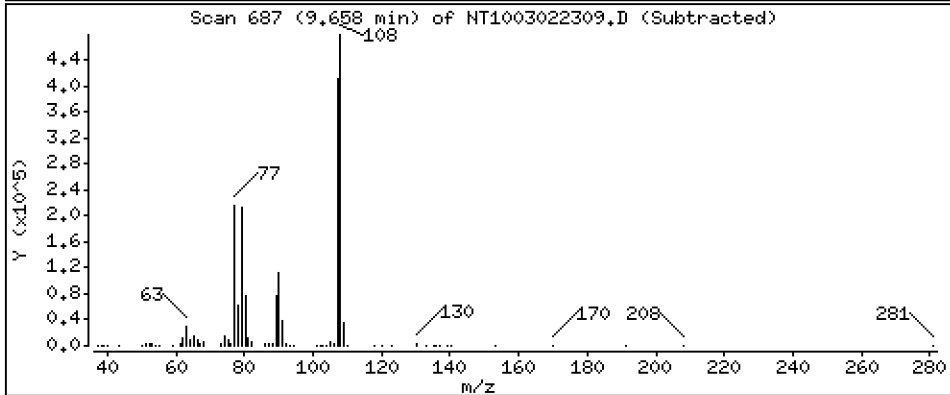
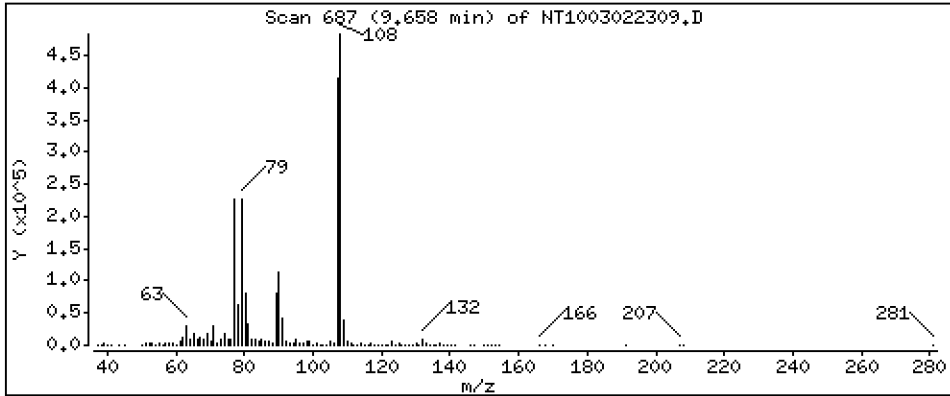
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 4,185 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

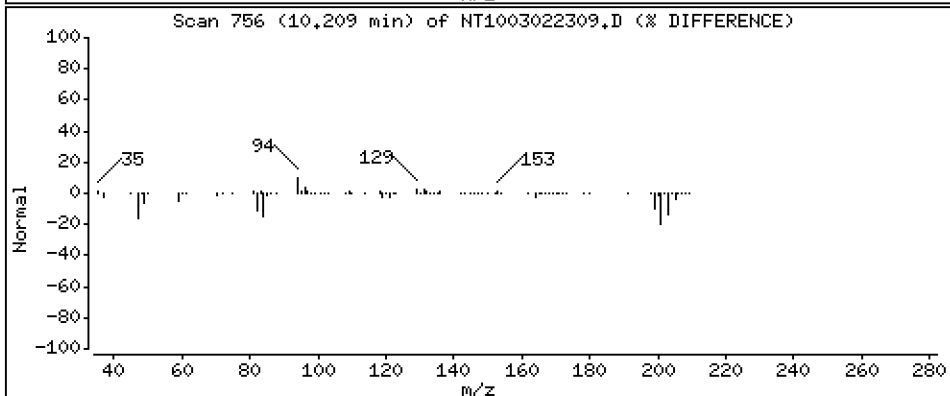
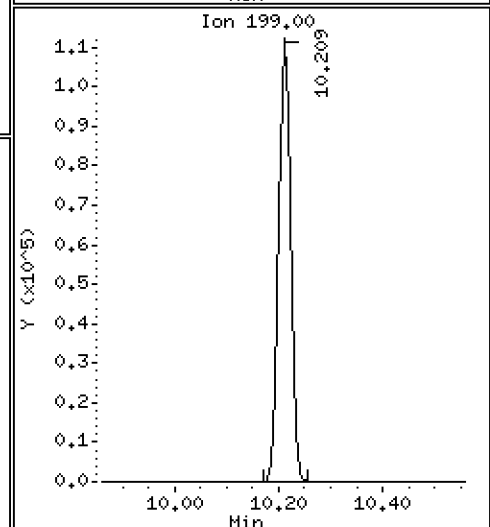
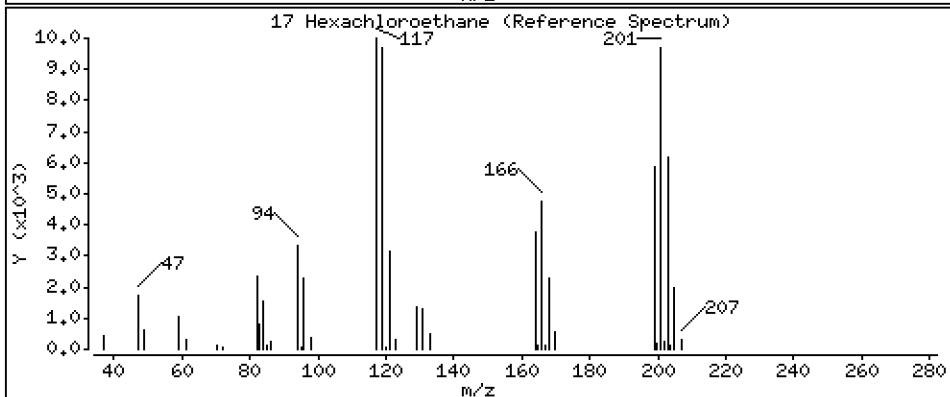
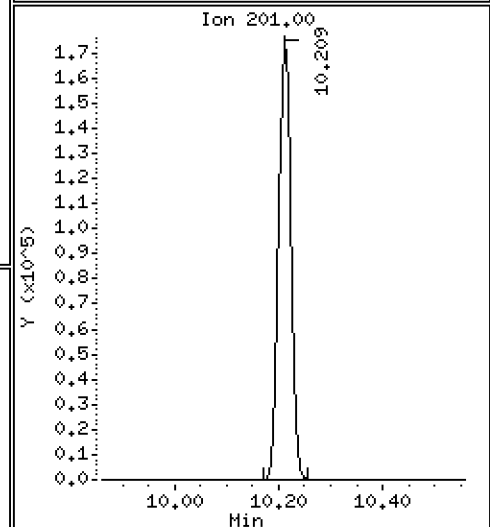
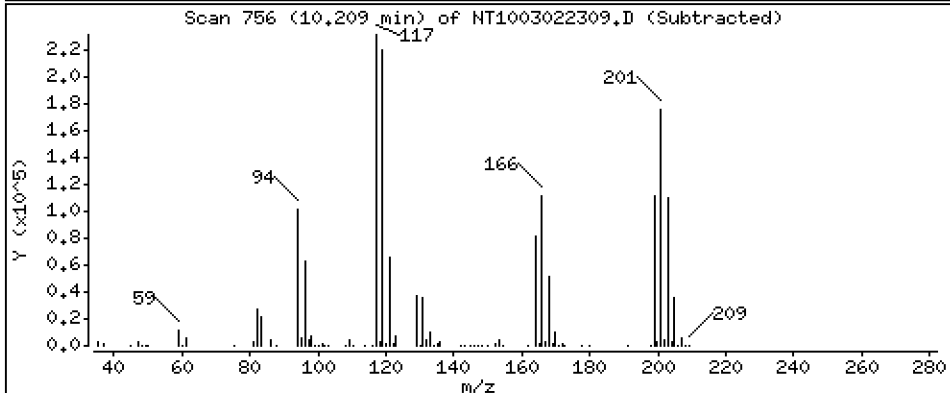
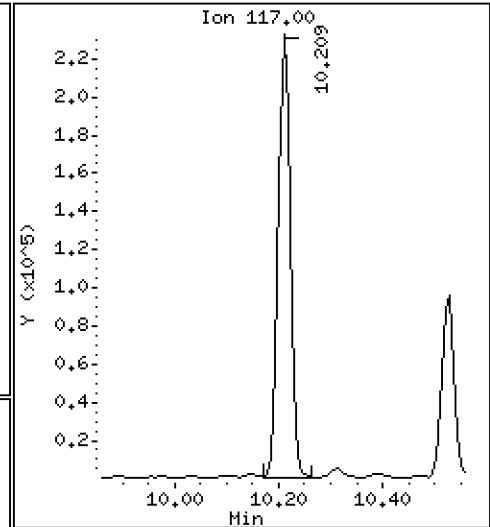
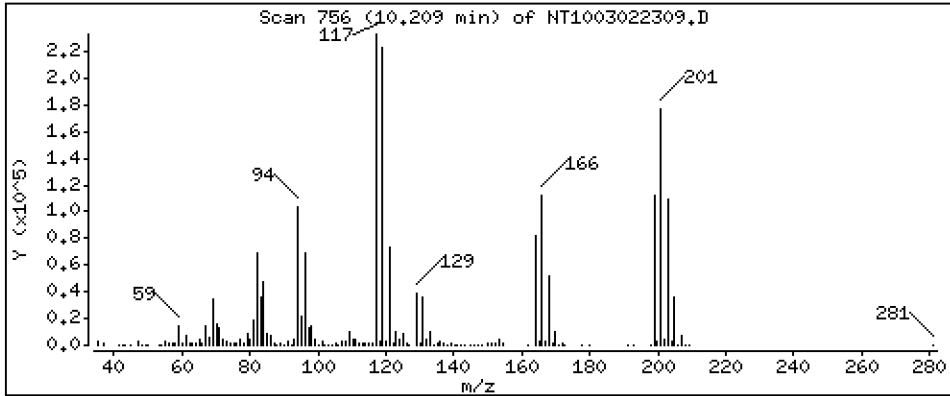
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 4,206 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

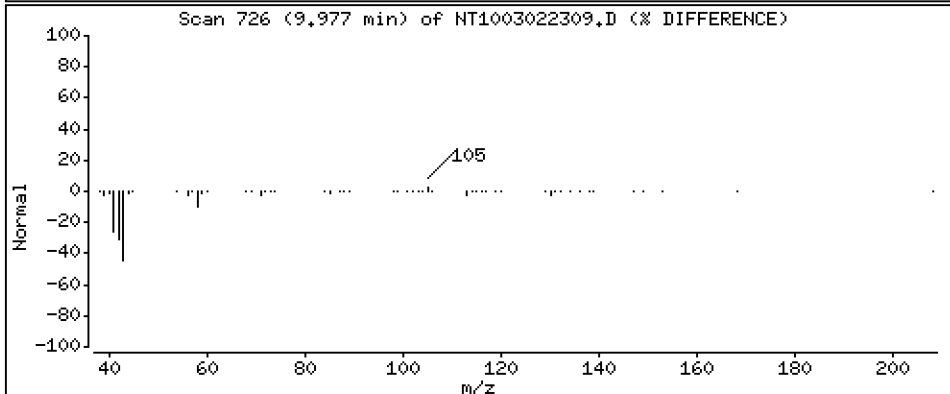
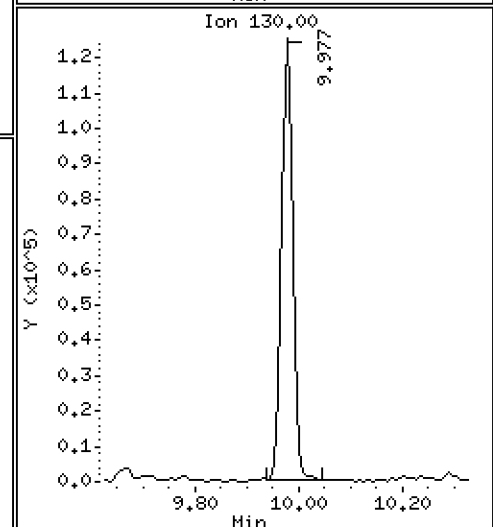
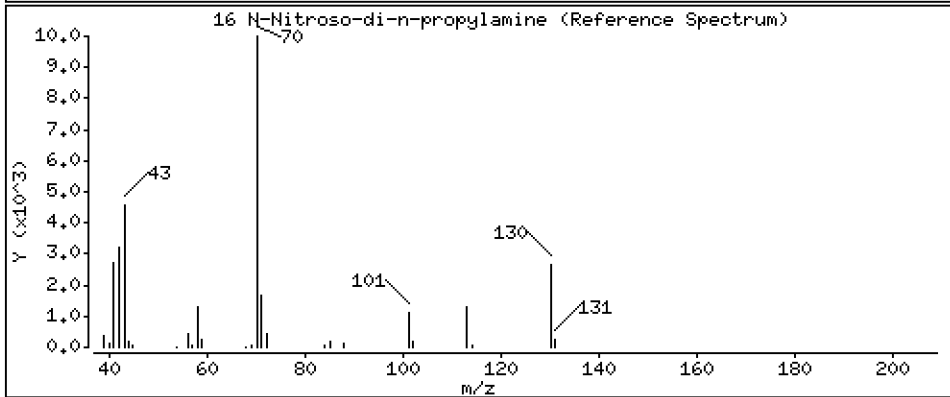
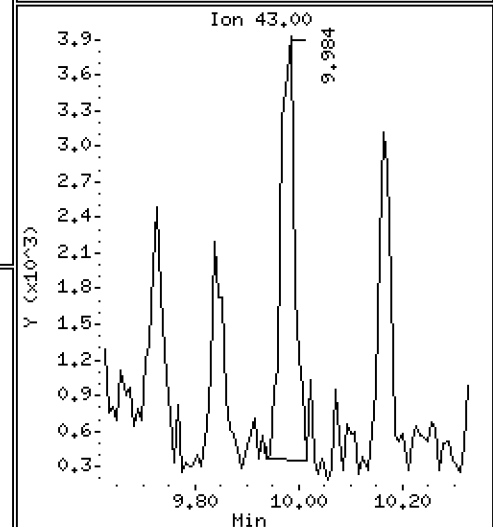
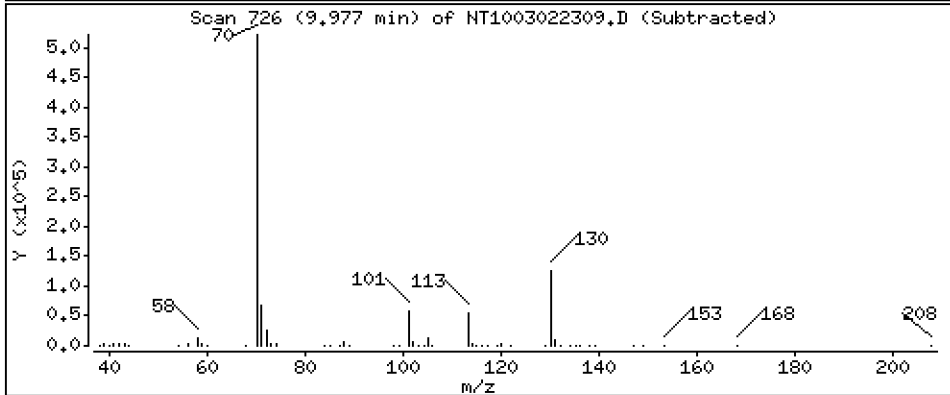
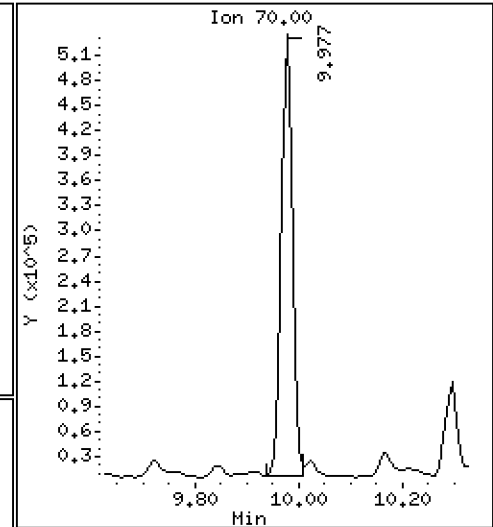
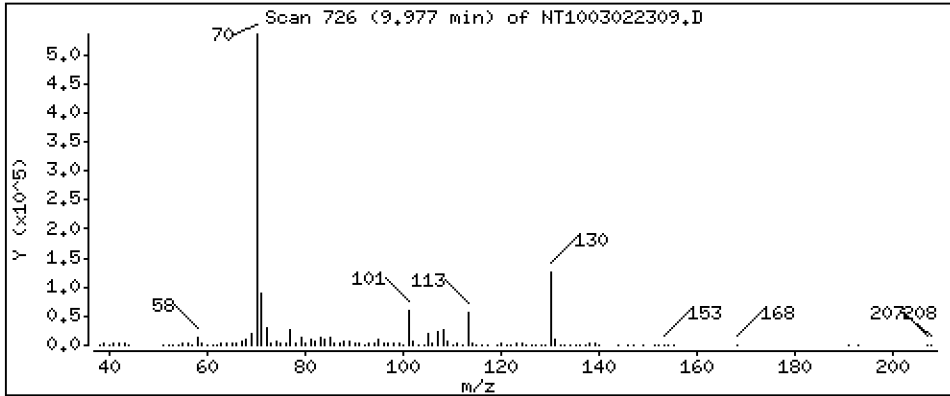
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,373 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

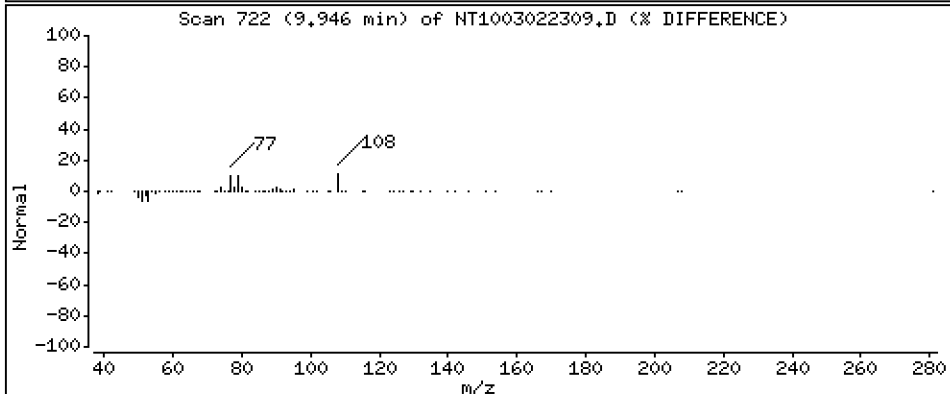
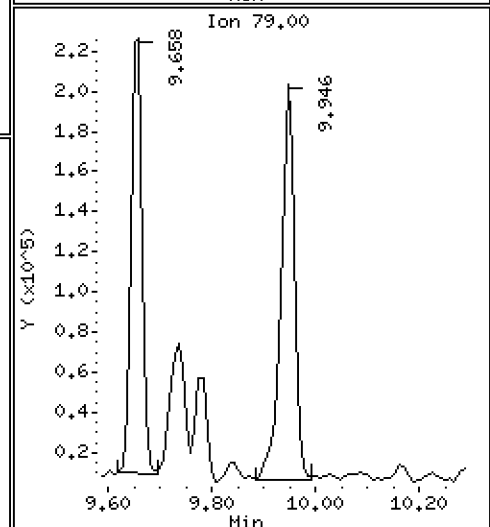
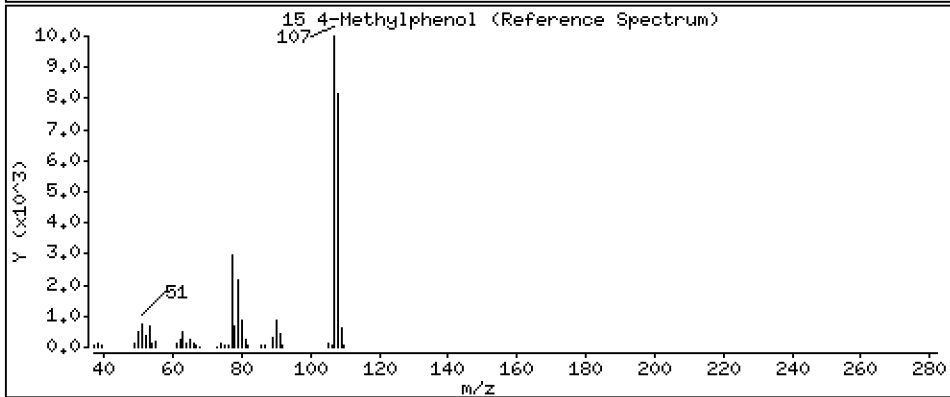
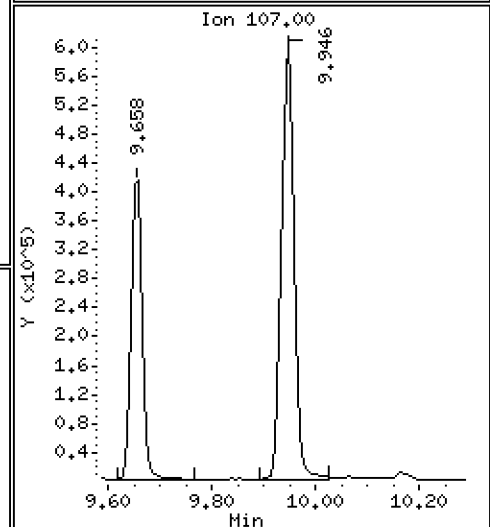
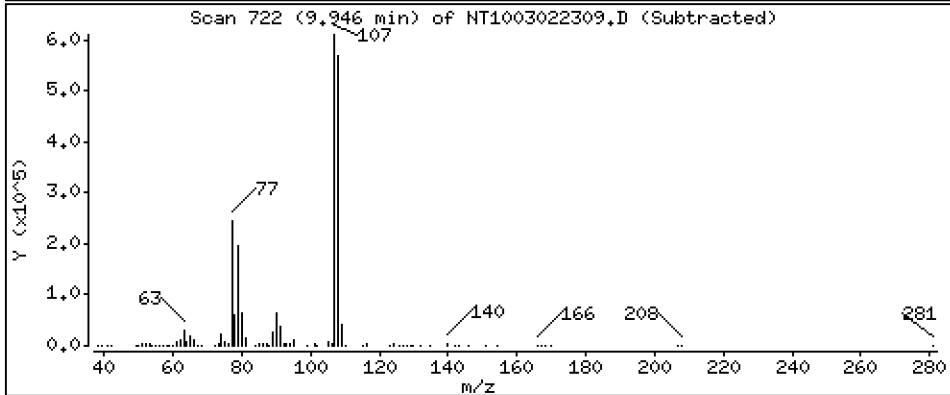
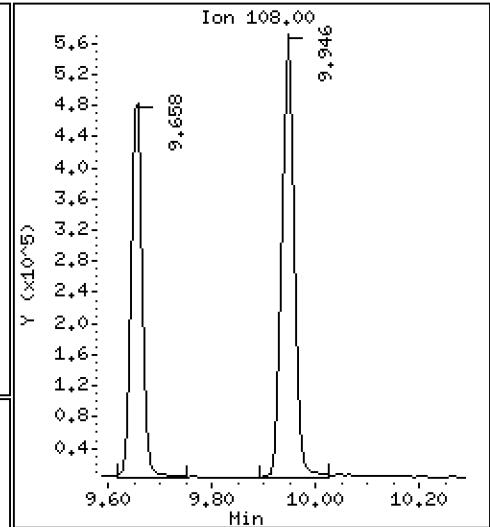
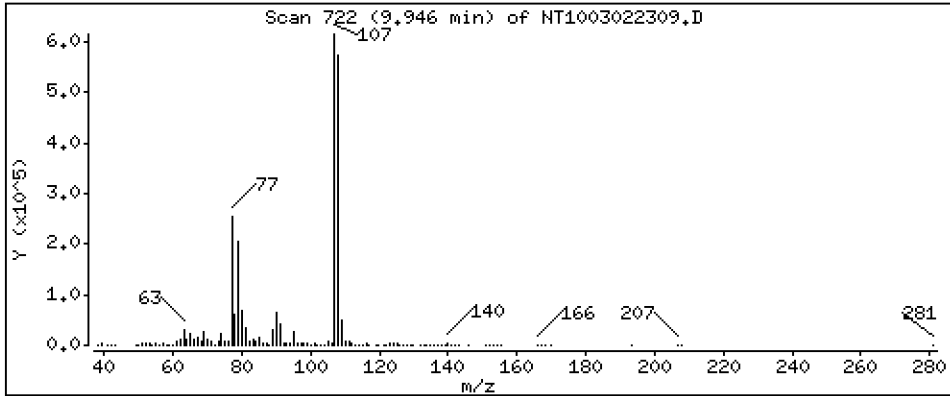
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,768 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

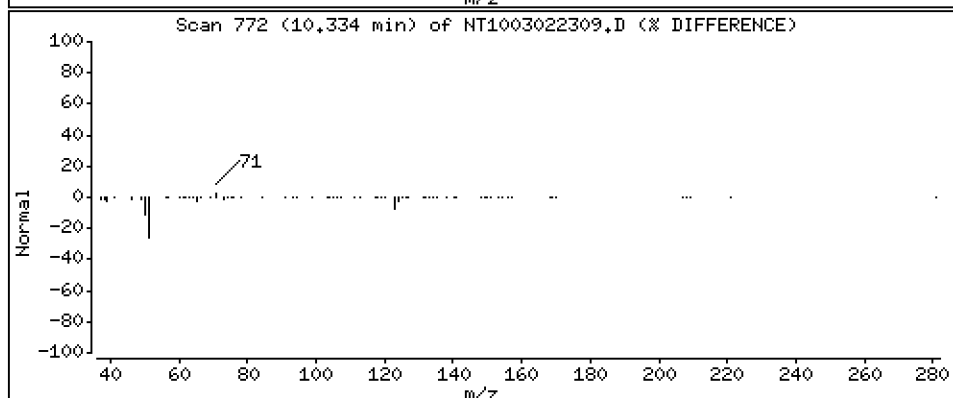
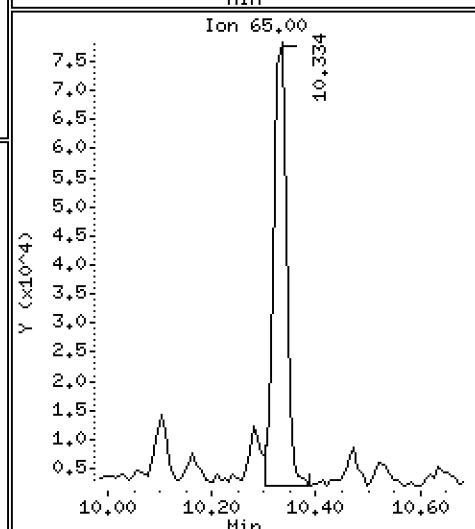
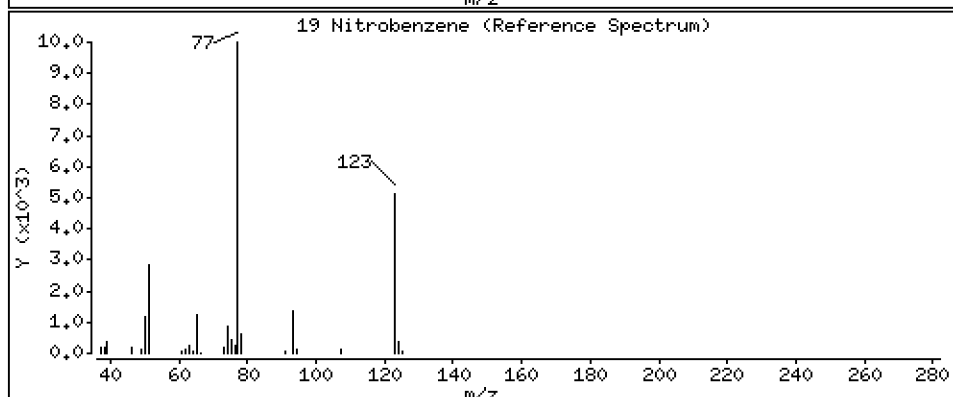
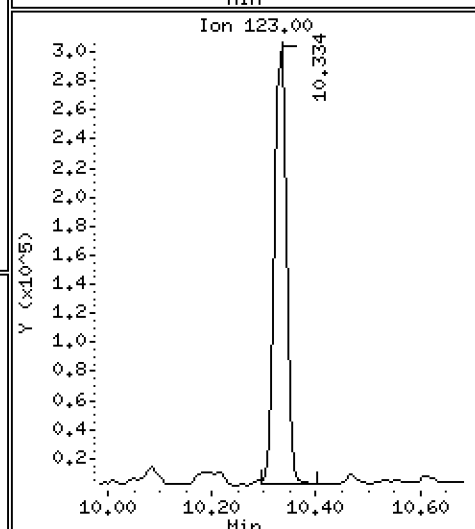
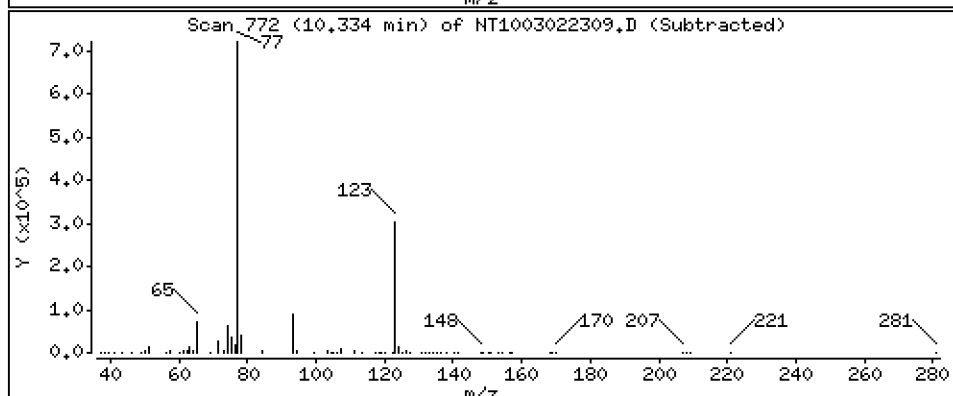
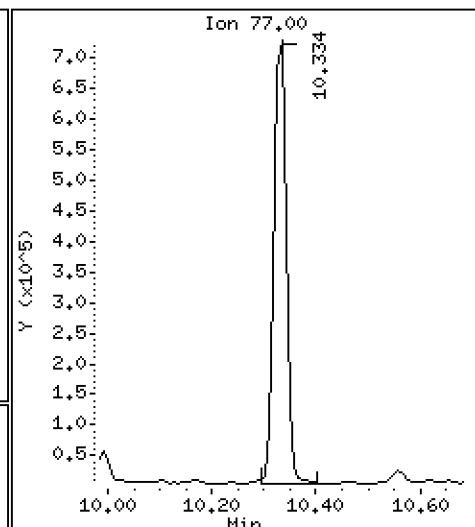
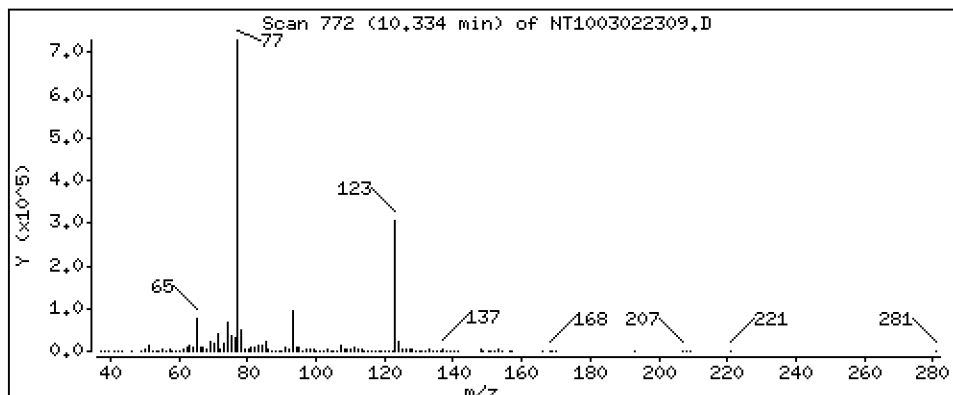
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 4,940 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

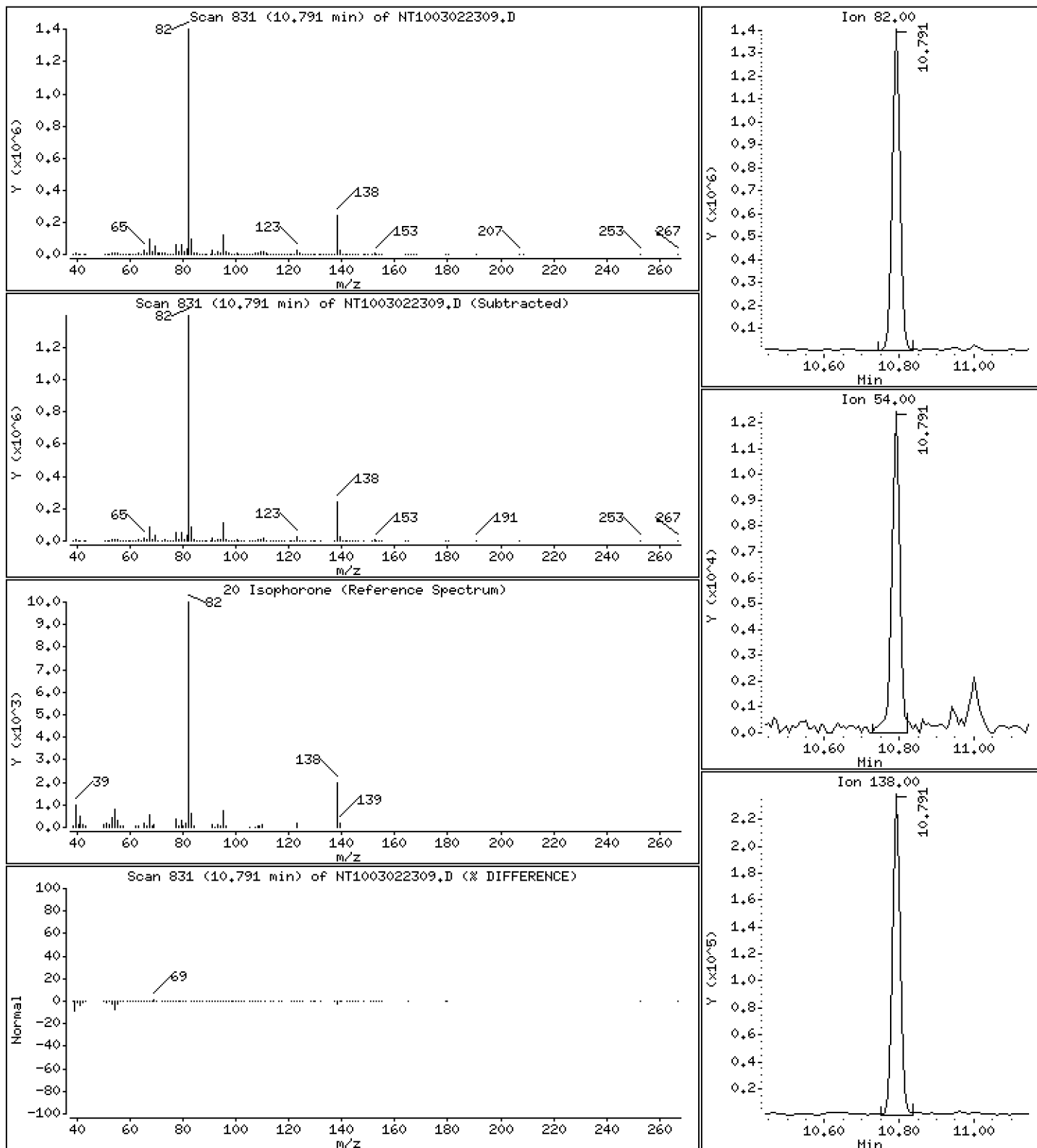
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,169 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

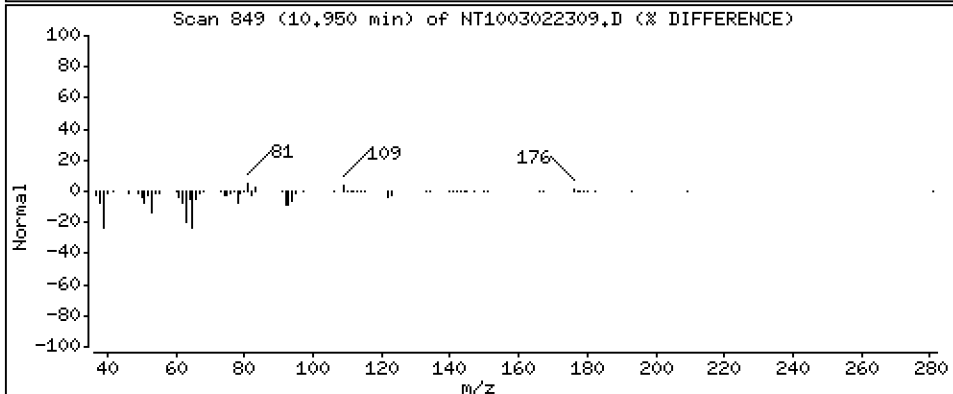
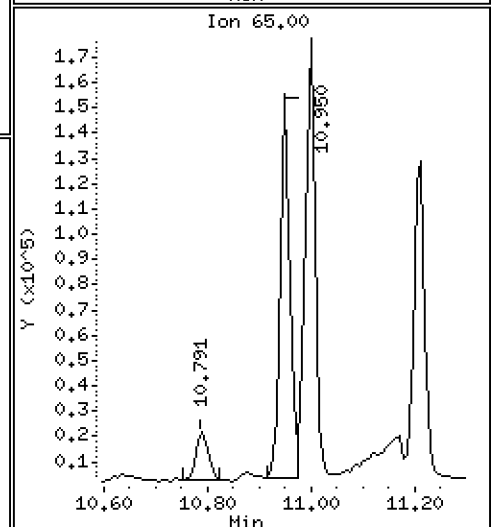
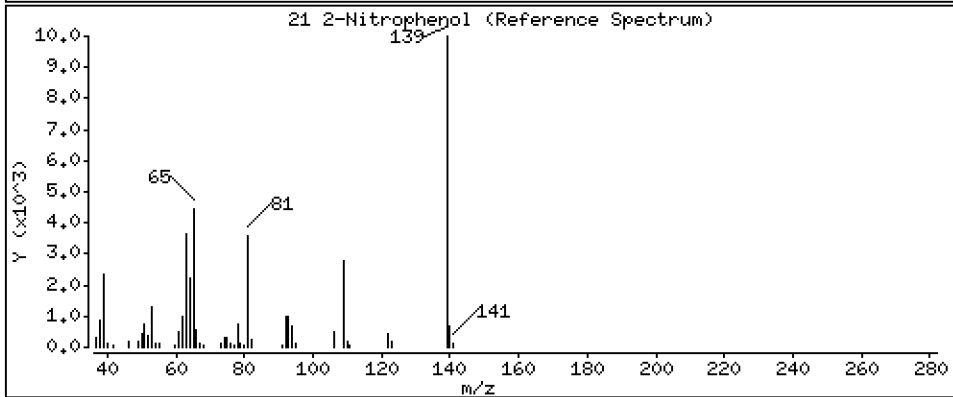
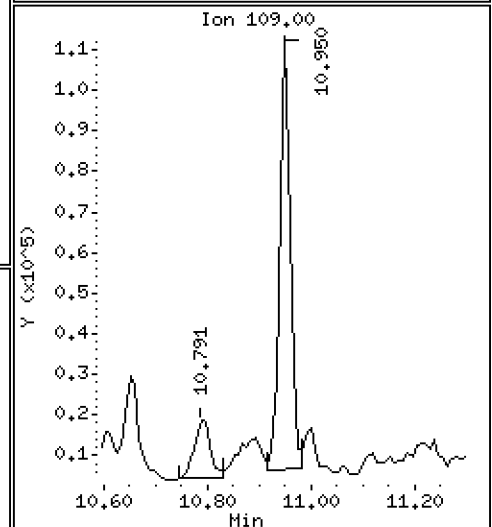
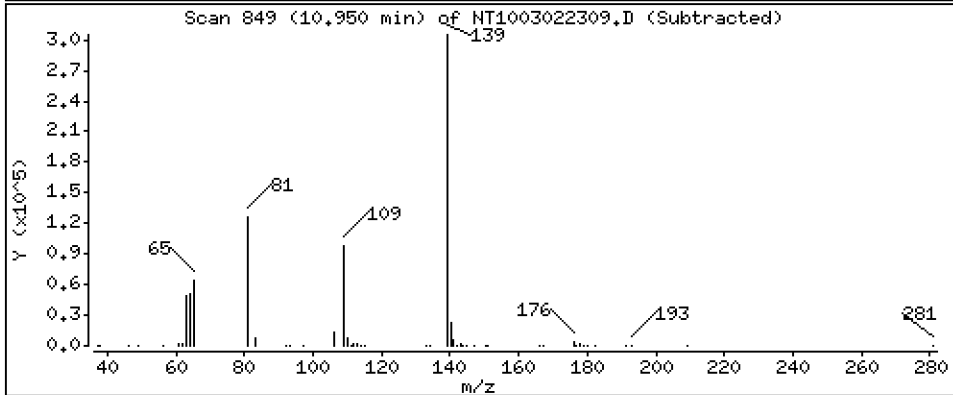
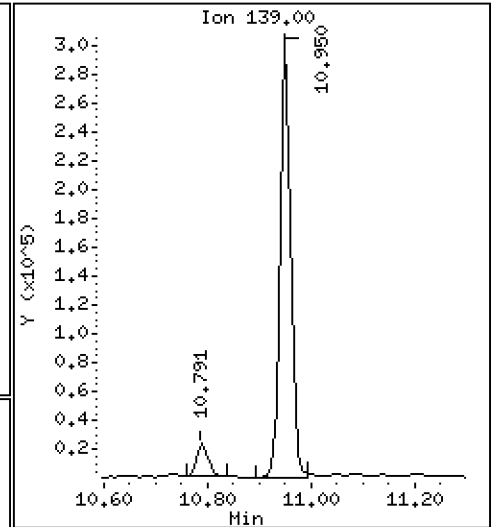
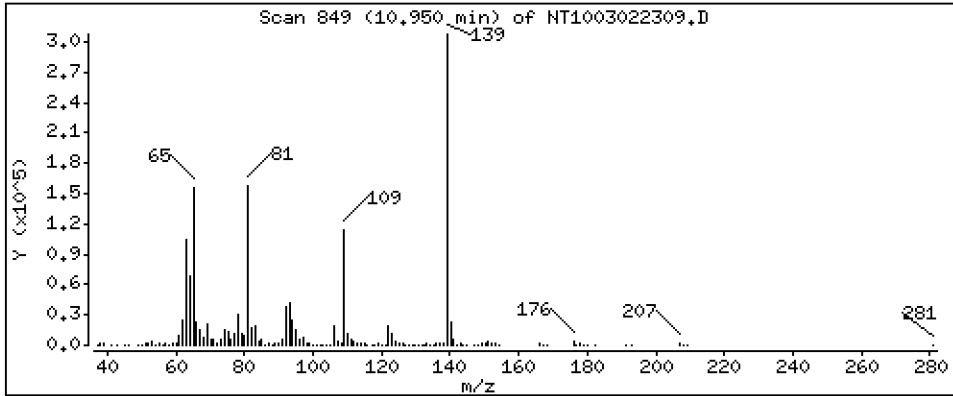
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 4,256 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

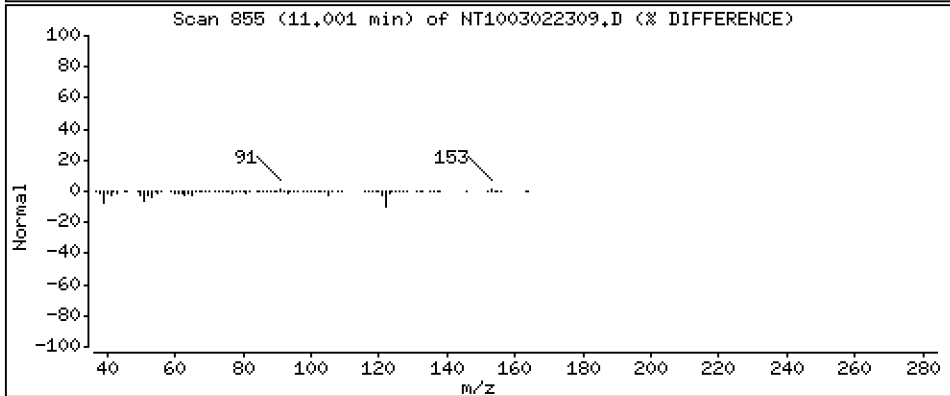
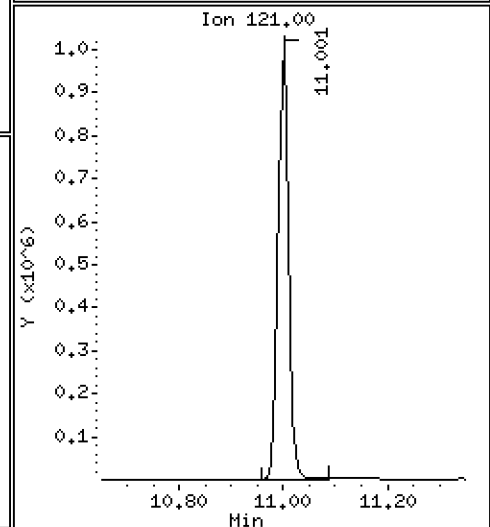
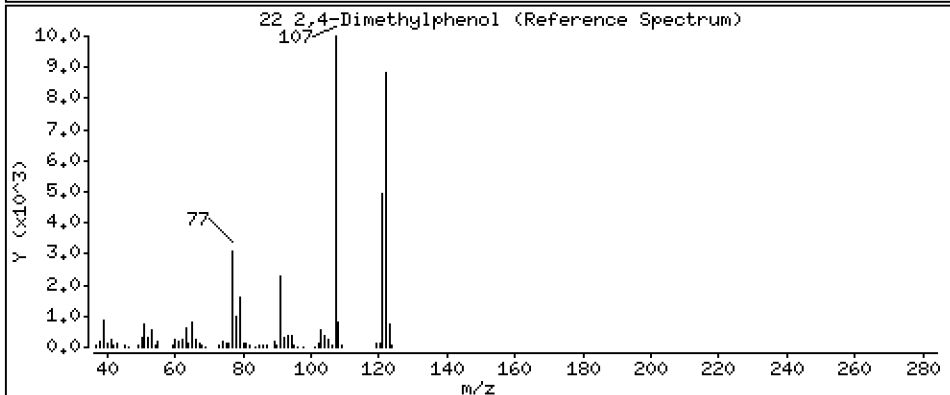
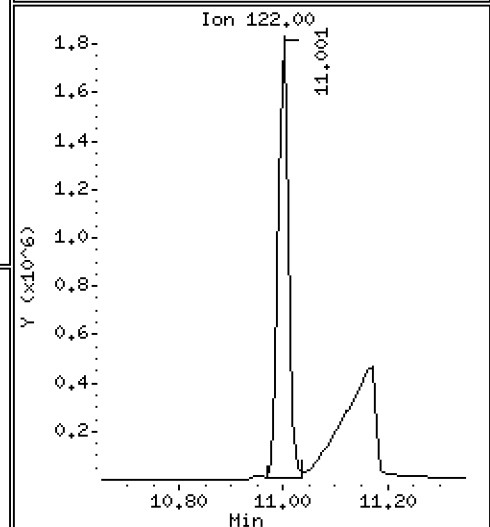
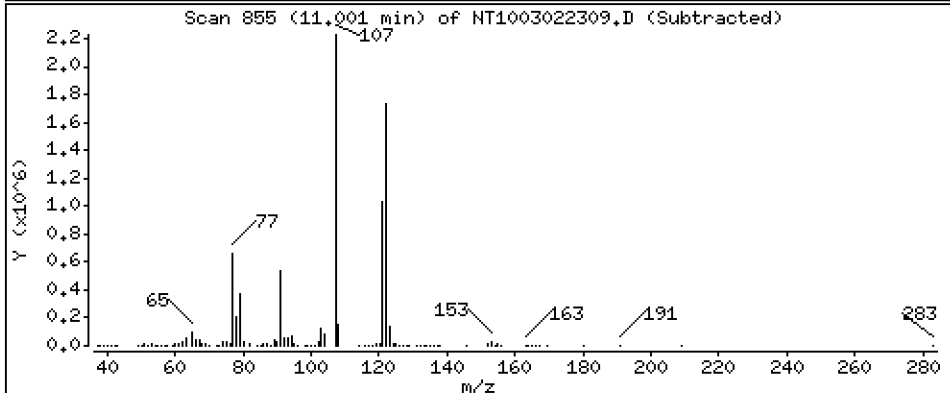
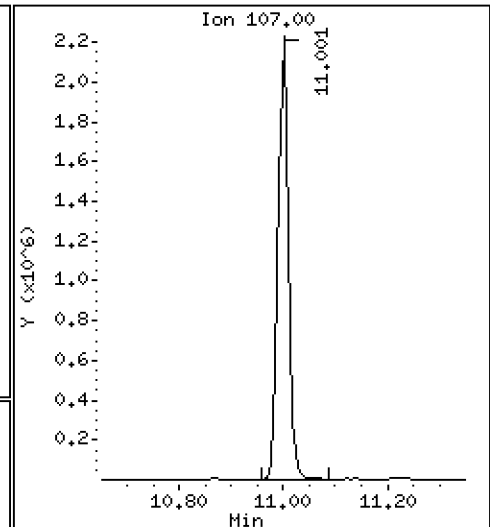
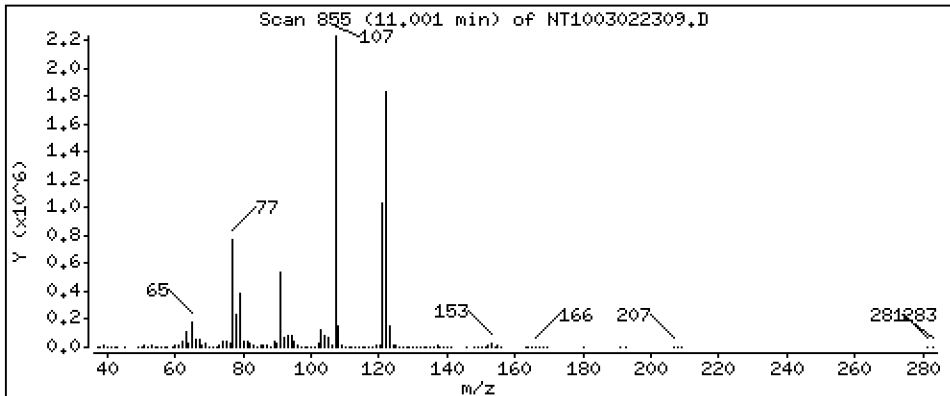
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 13,48 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

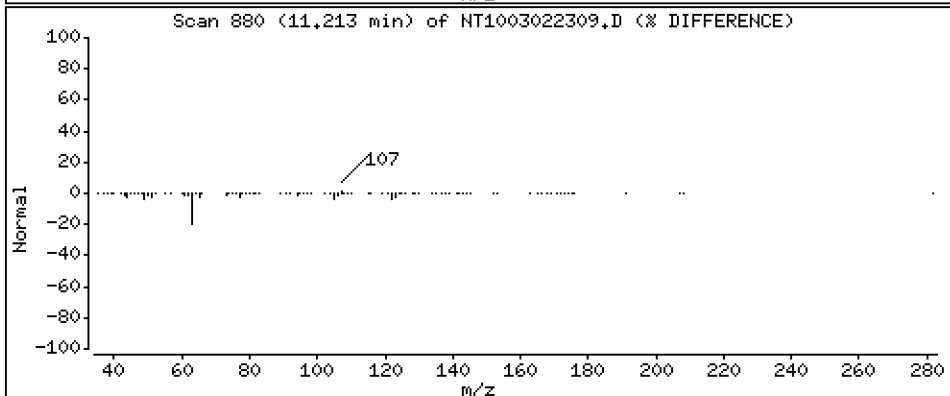
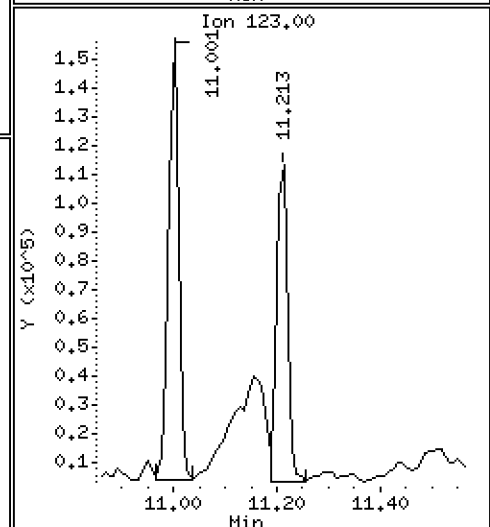
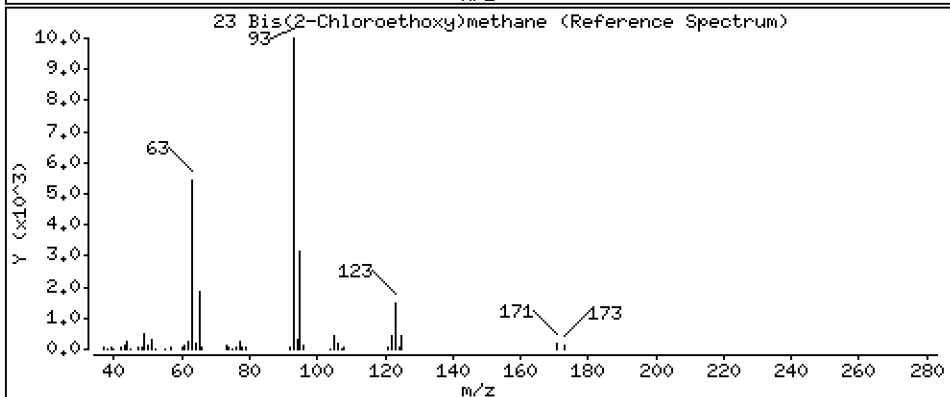
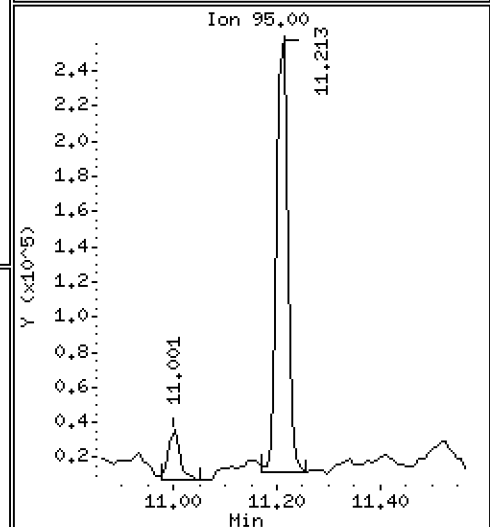
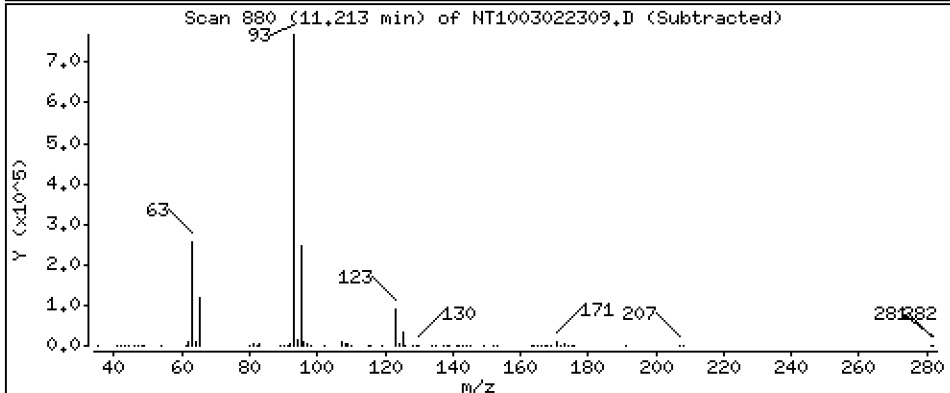
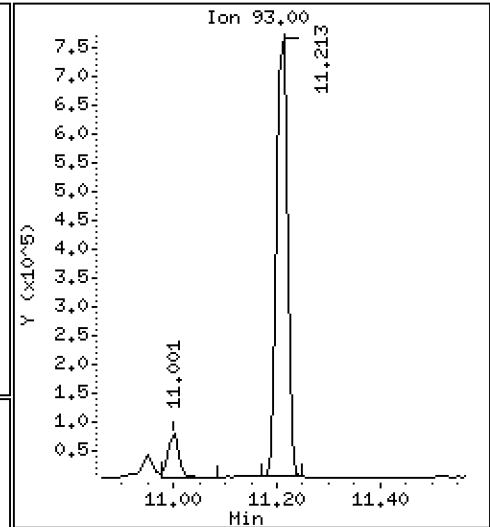
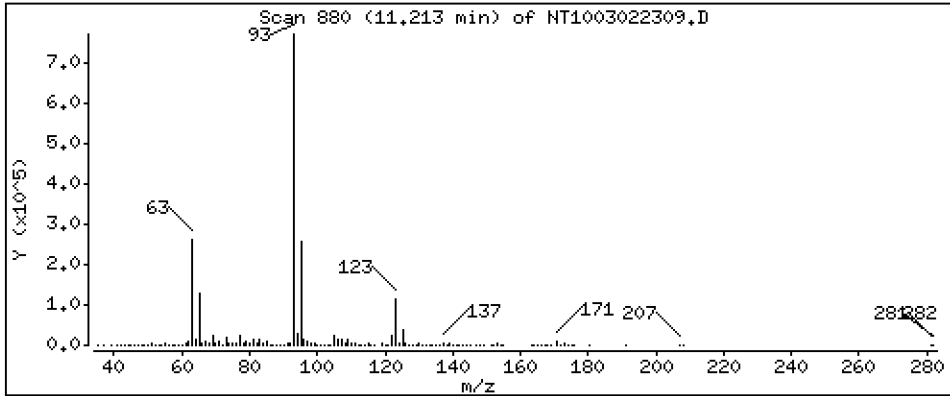
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,300 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

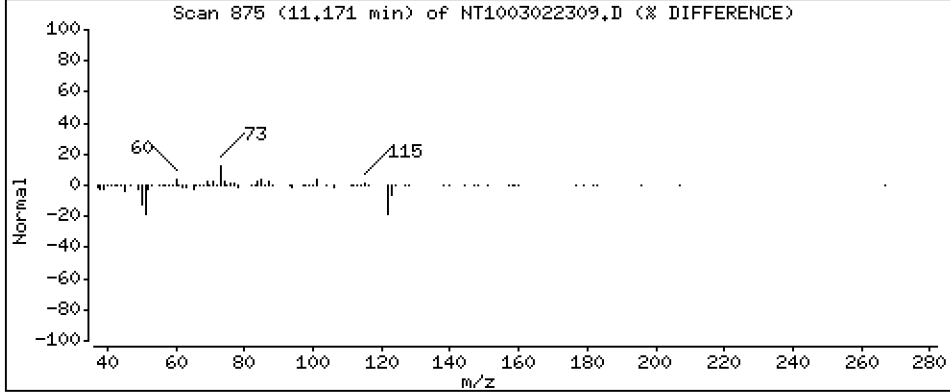
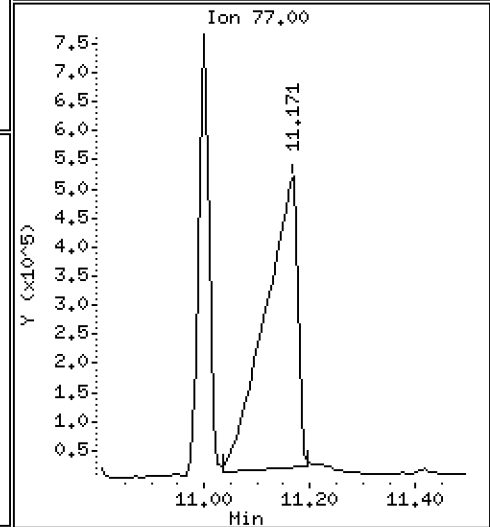
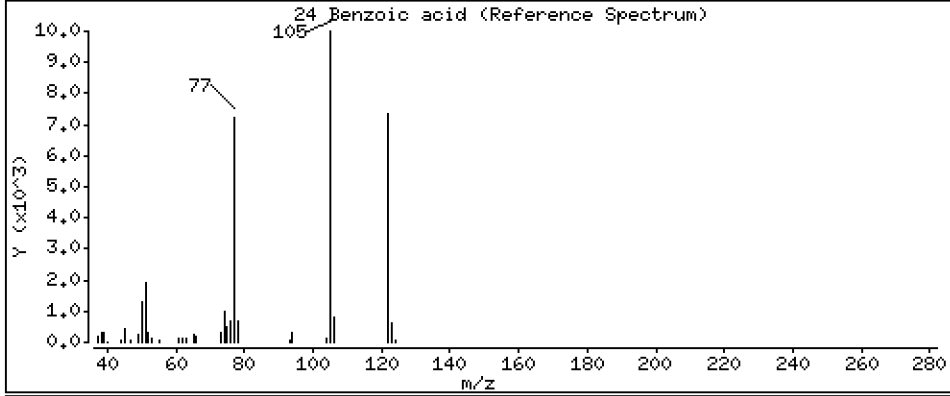
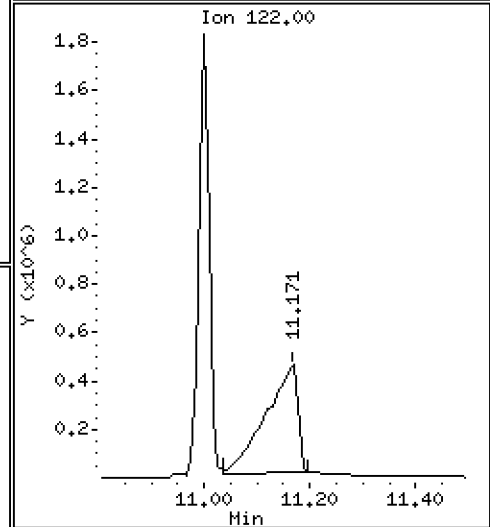
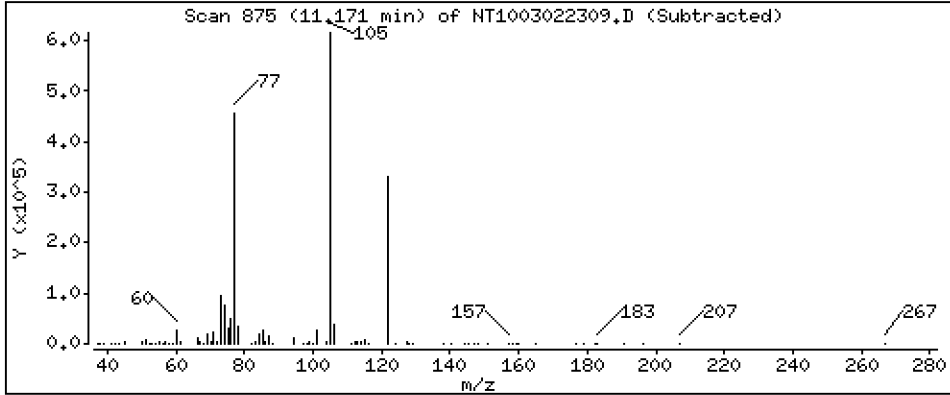
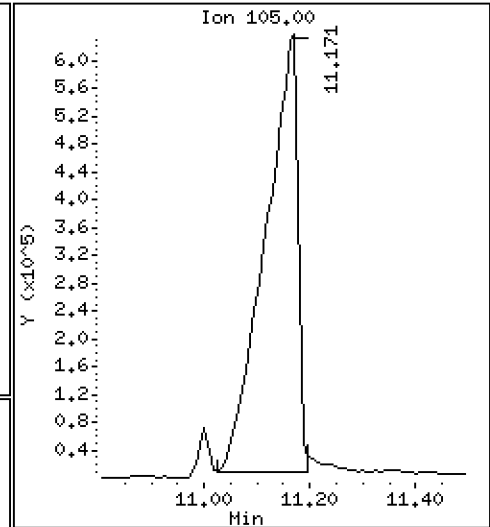
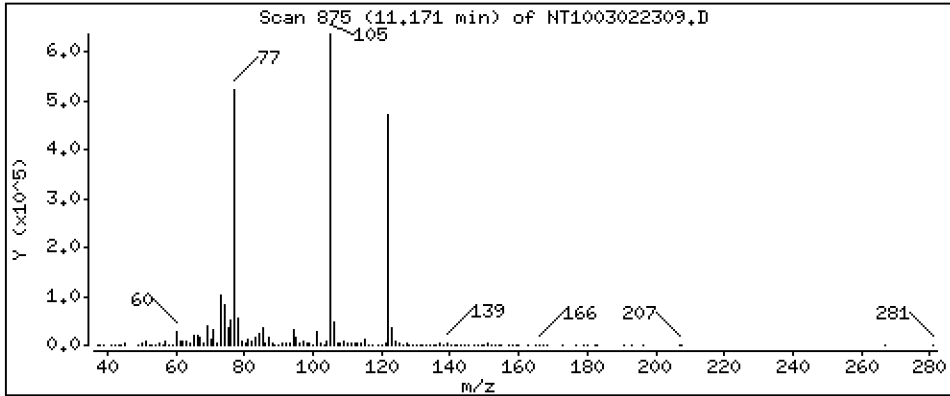
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 19,84 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

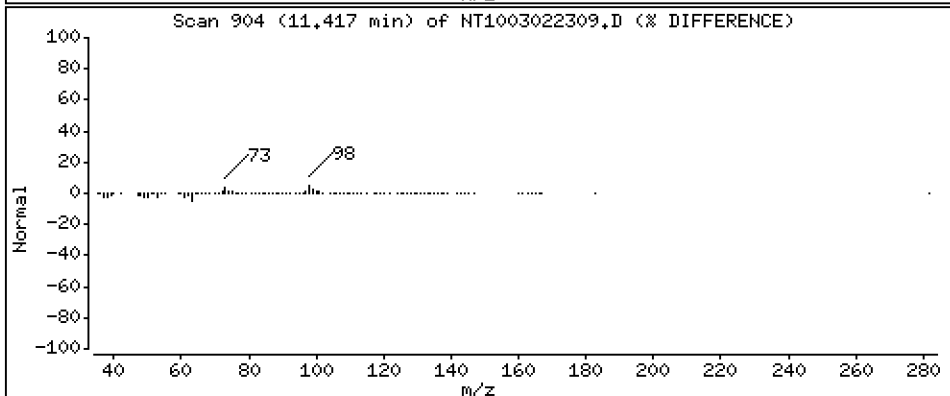
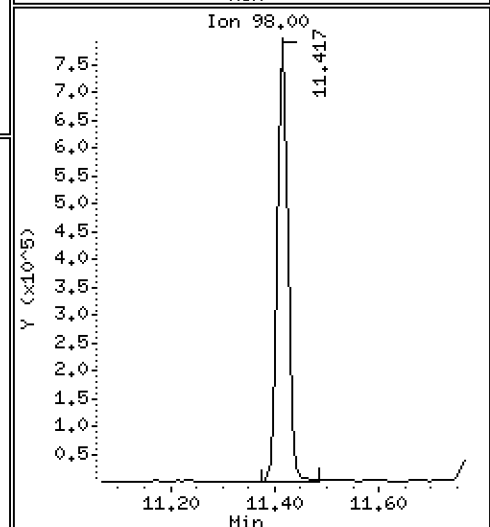
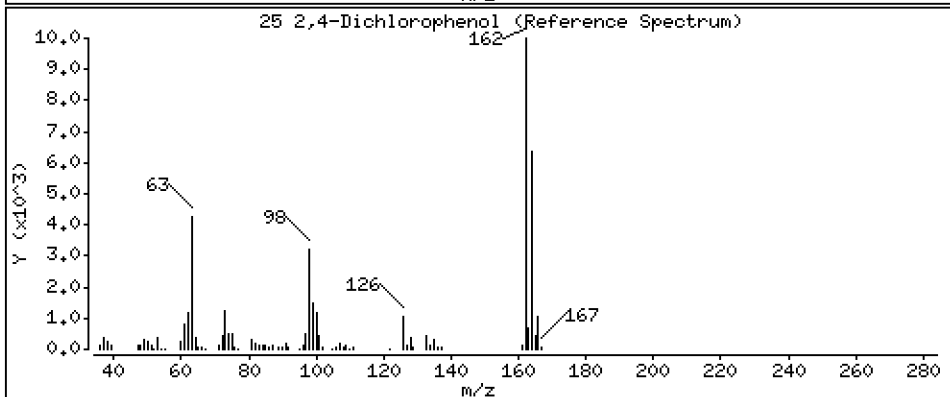
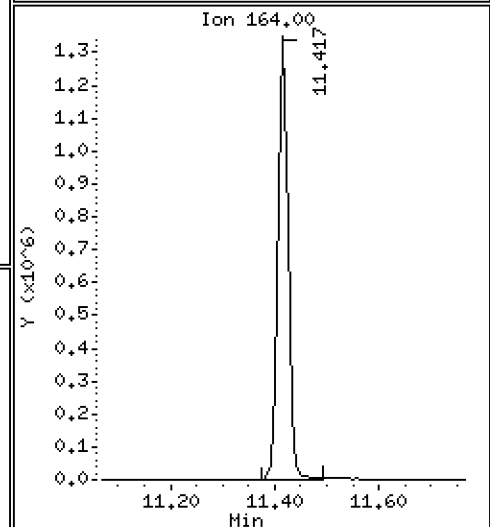
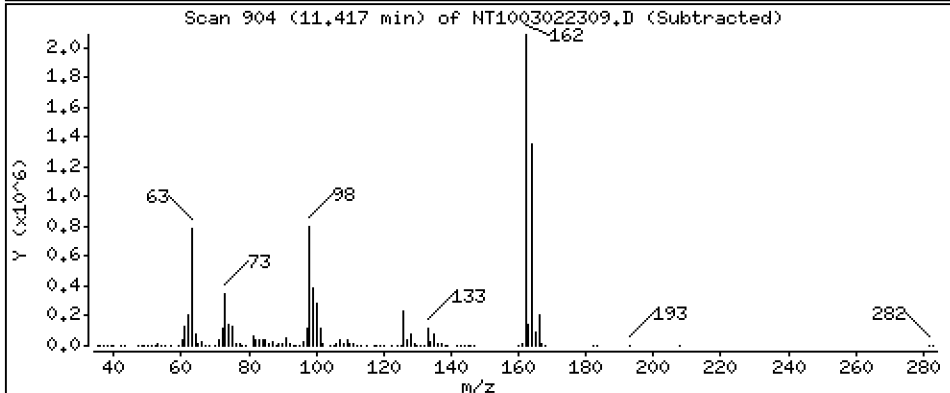
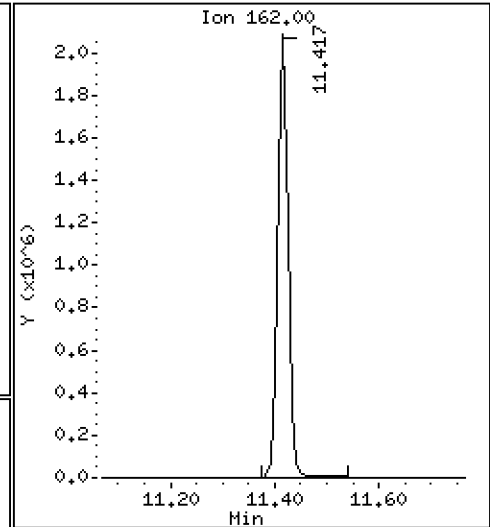
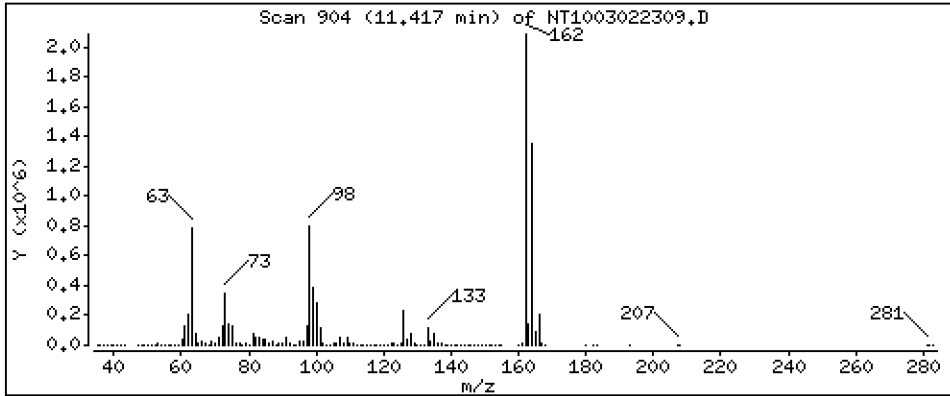
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 17,58 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

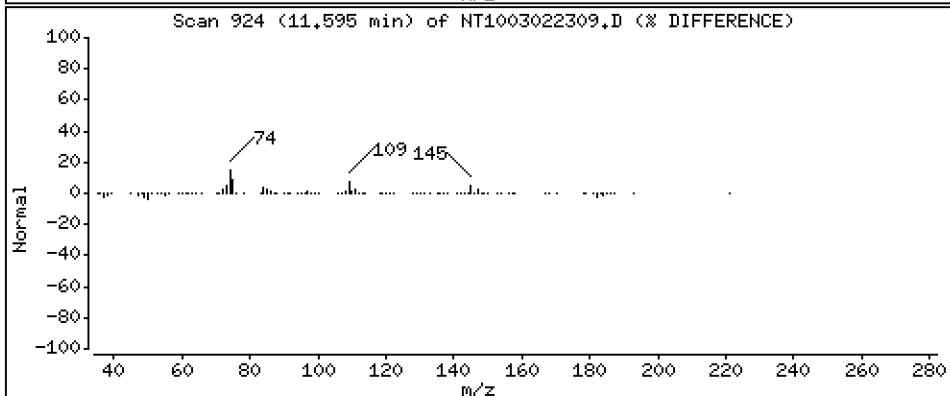
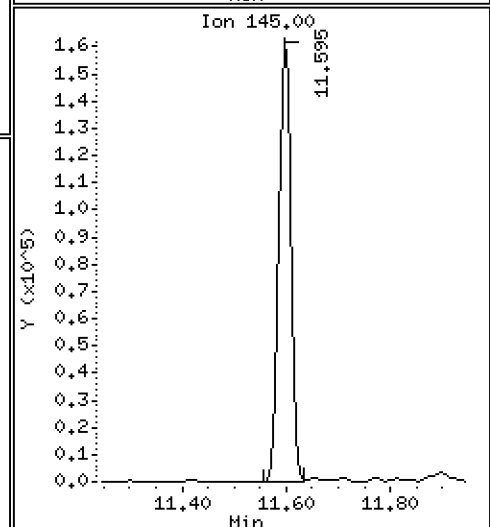
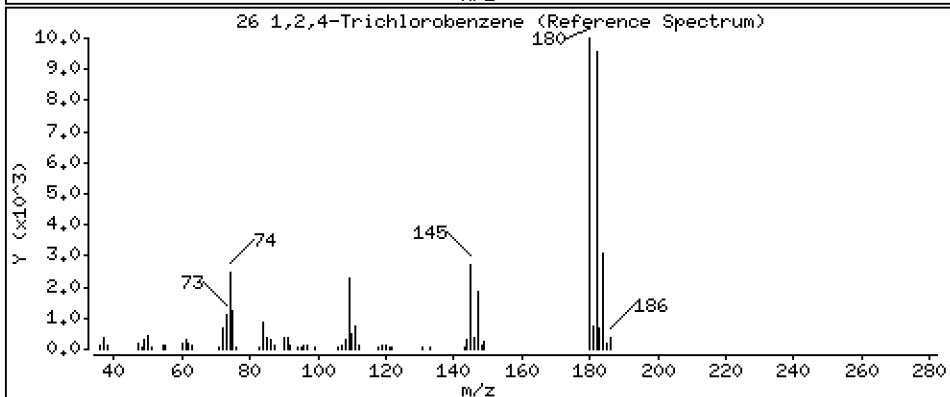
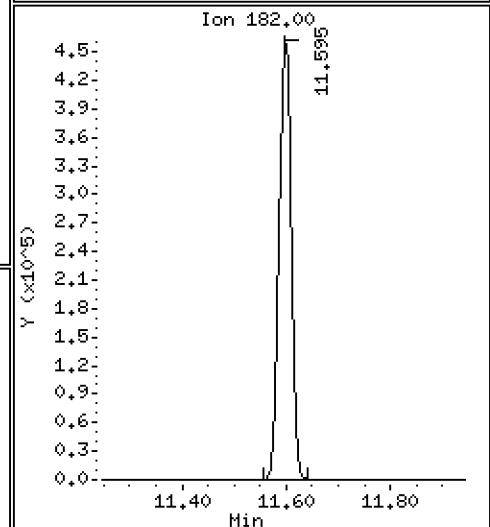
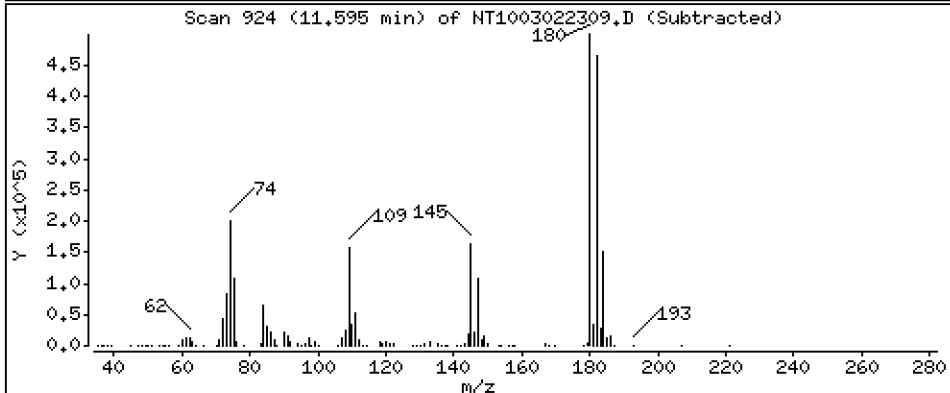
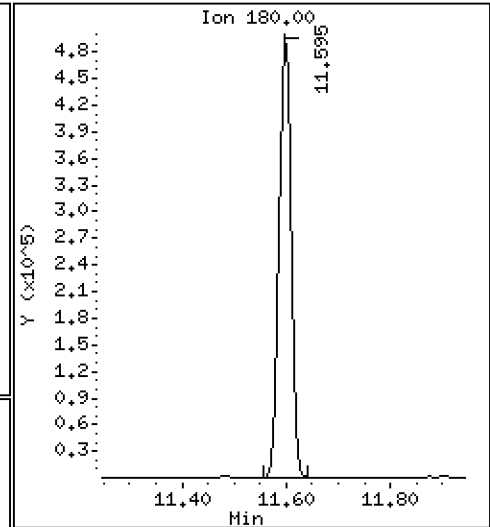
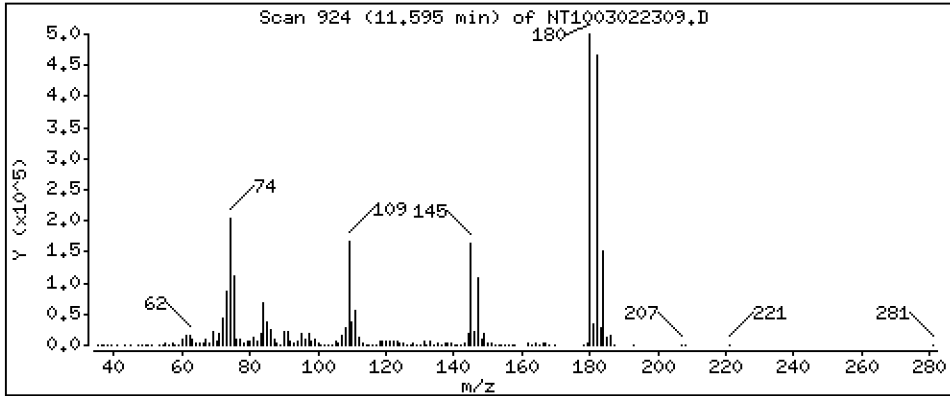
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,375 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

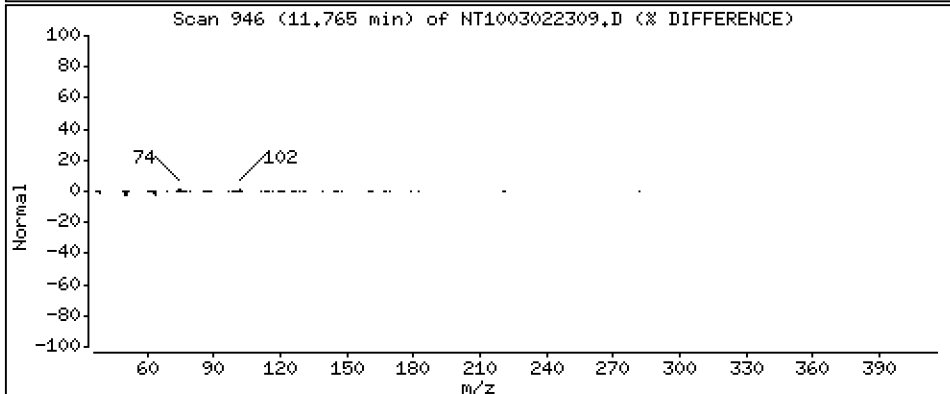
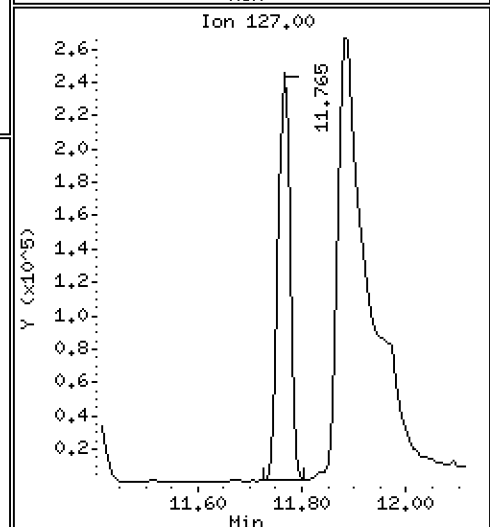
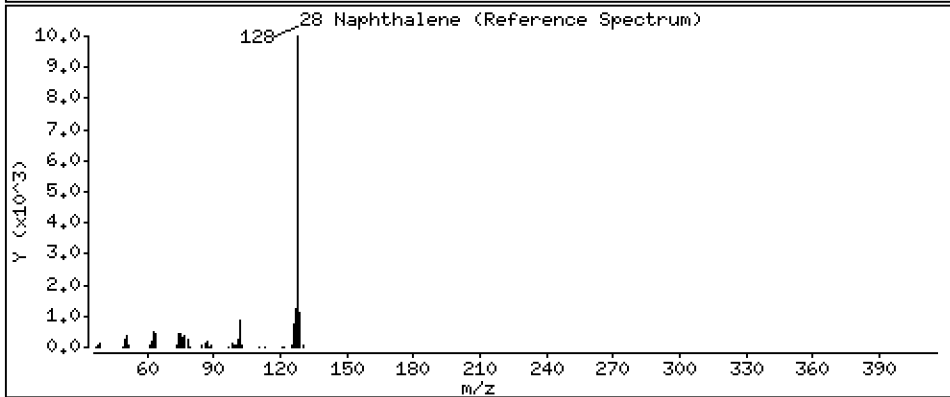
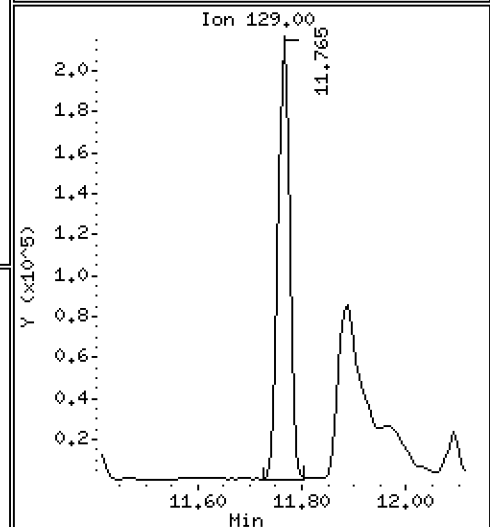
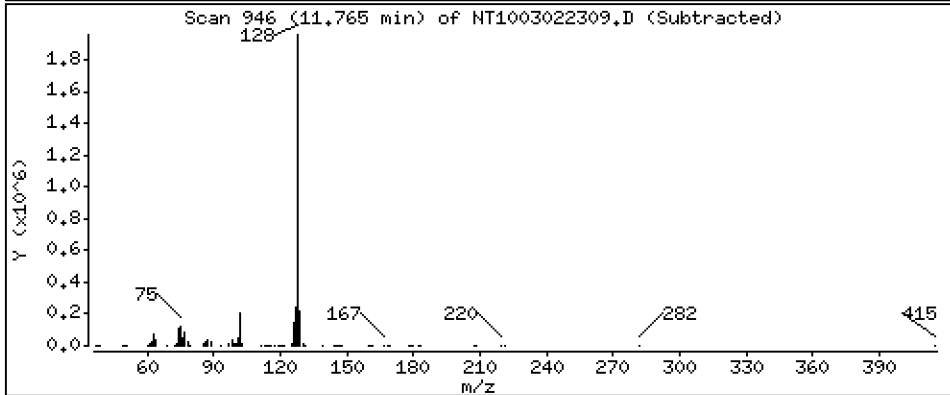
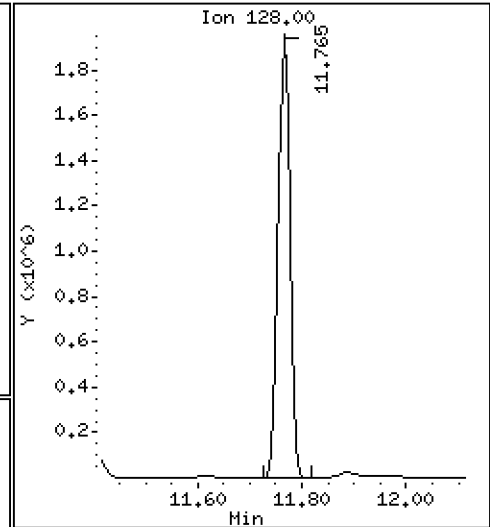
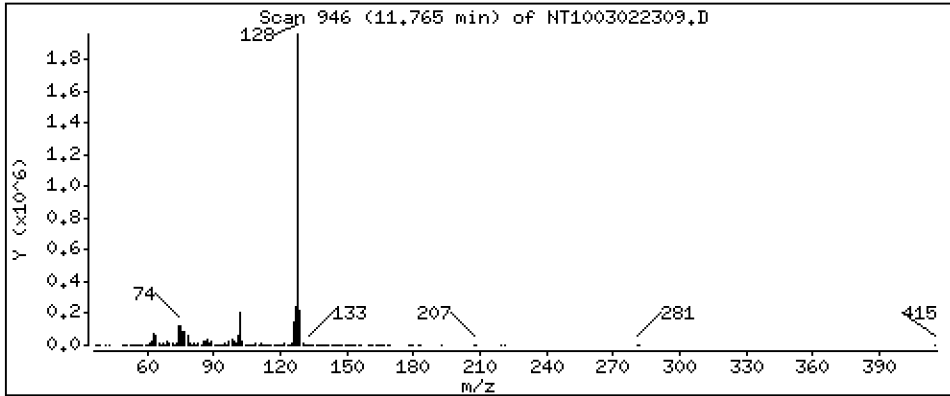
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 5,111 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

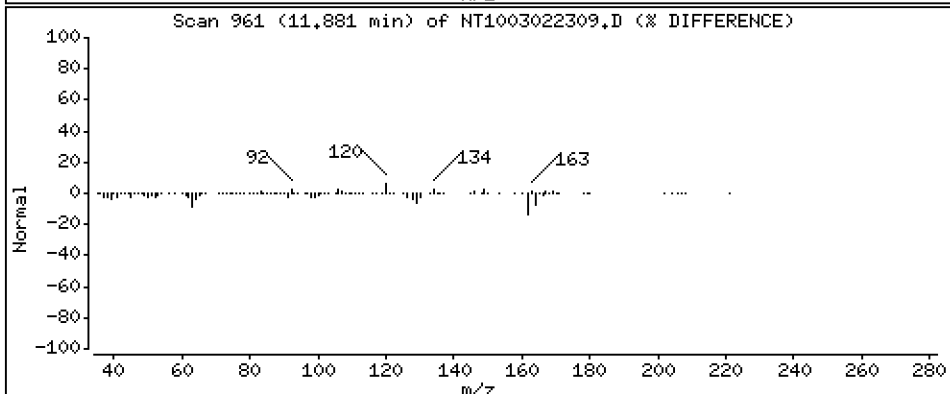
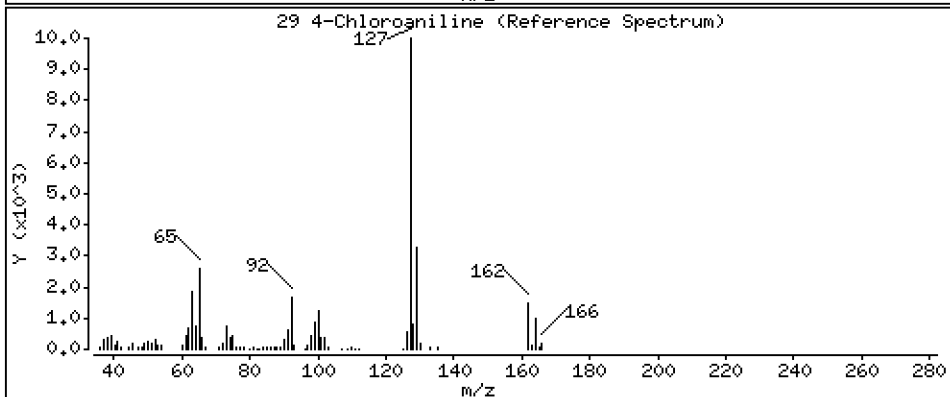
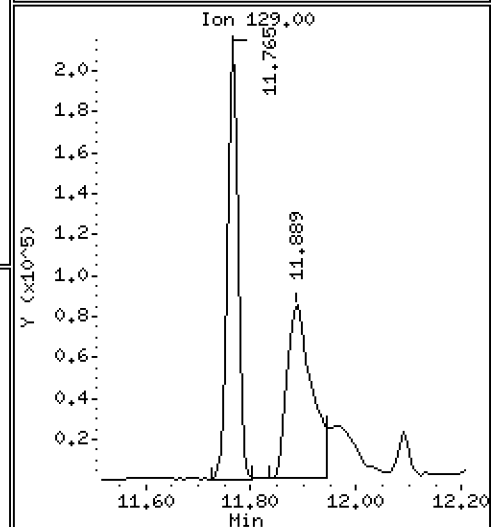
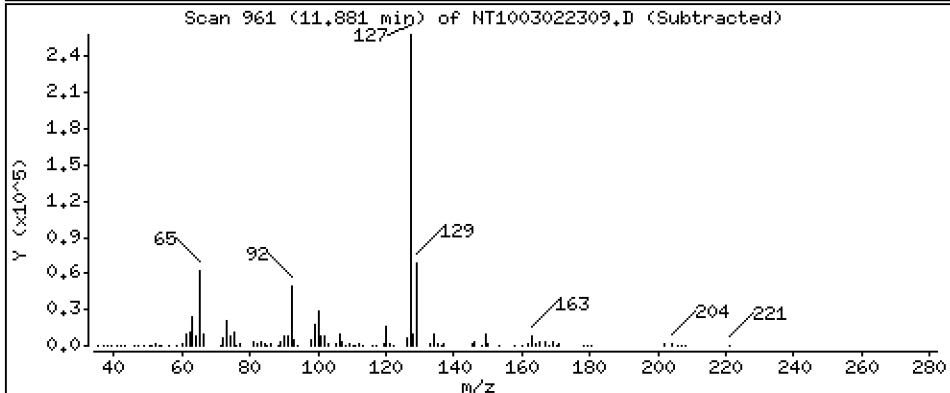
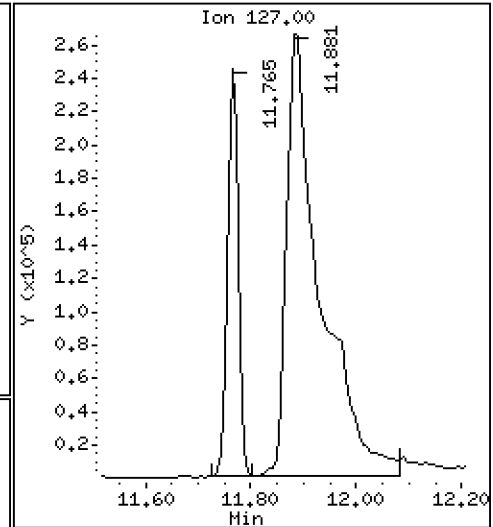
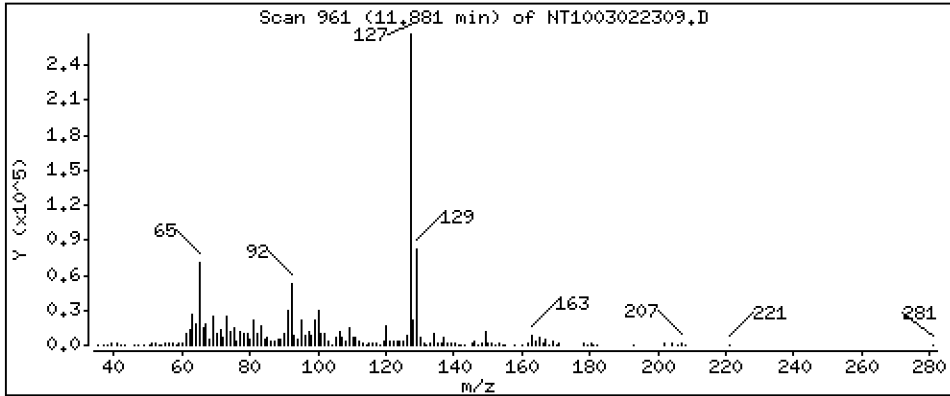
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 4,607 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

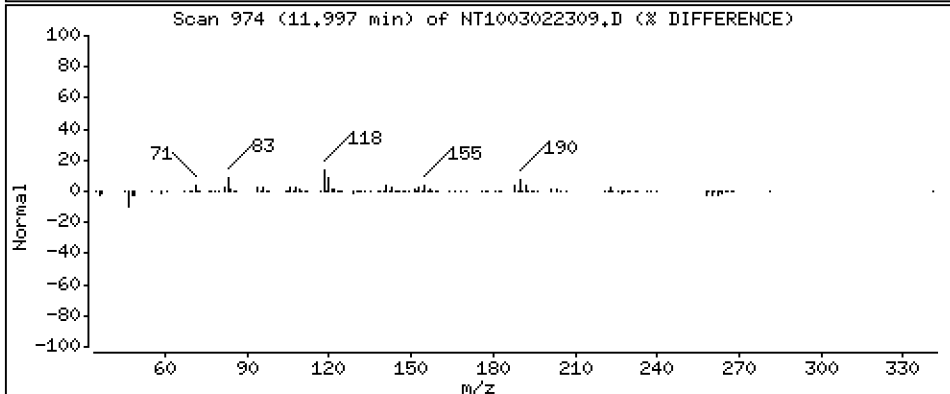
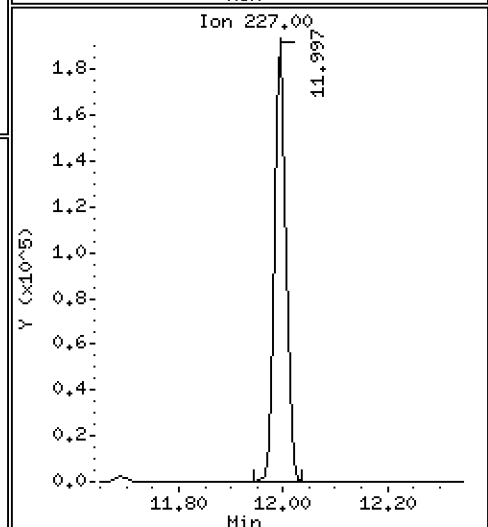
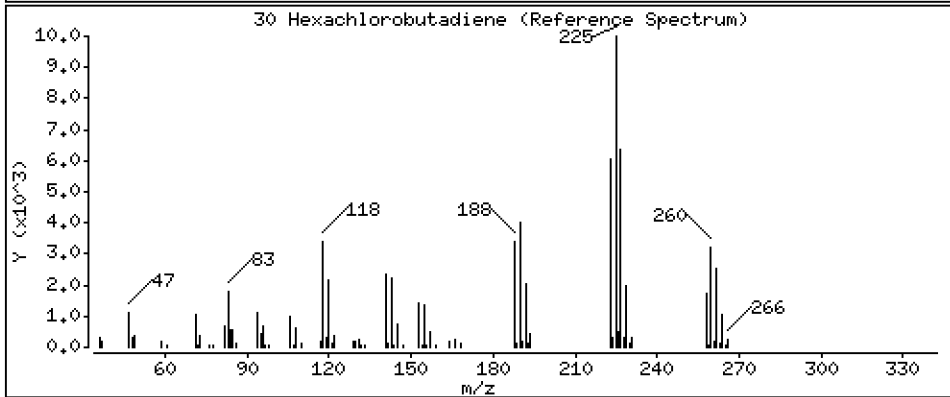
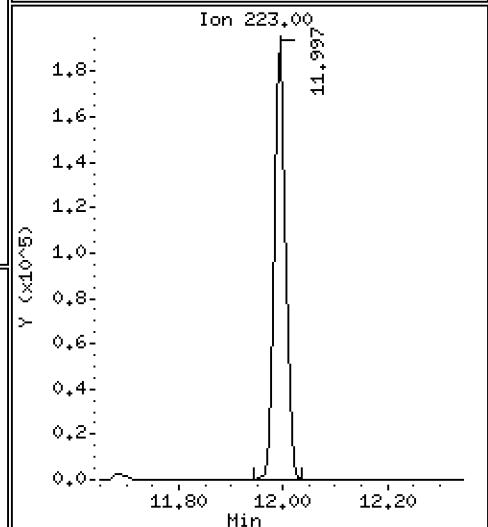
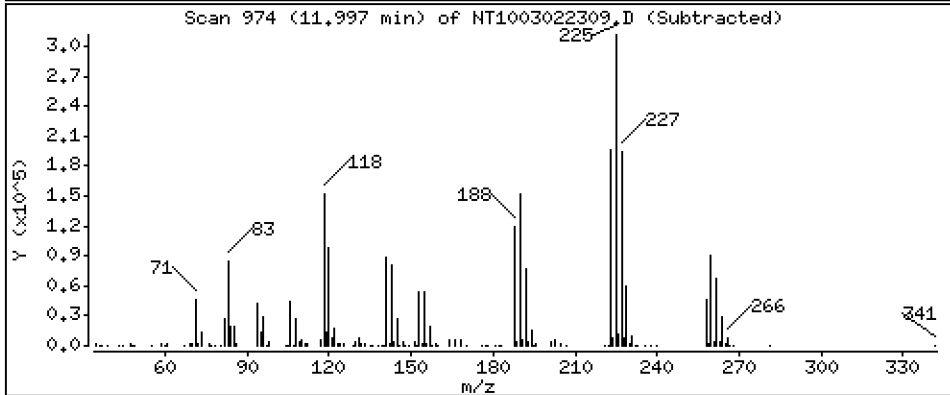
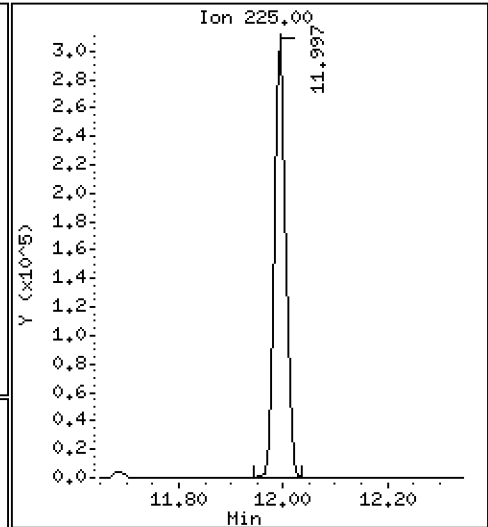
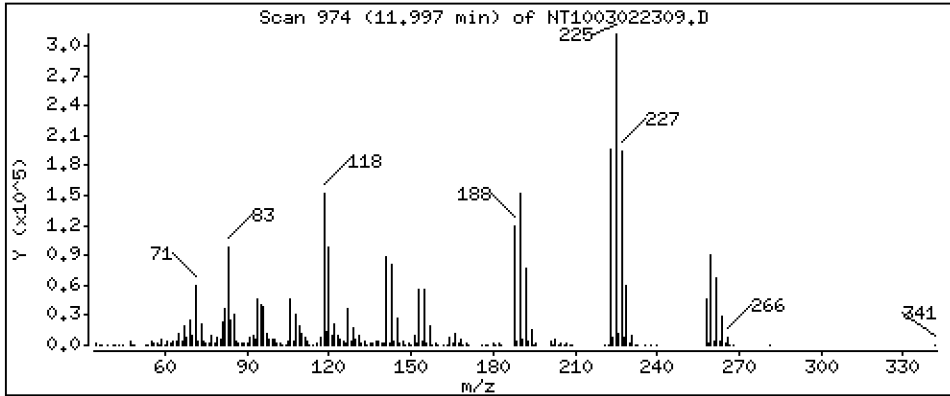
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,403 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

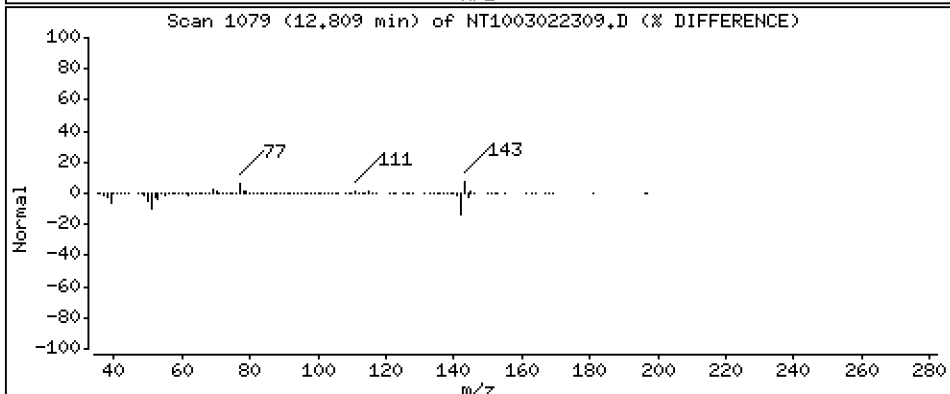
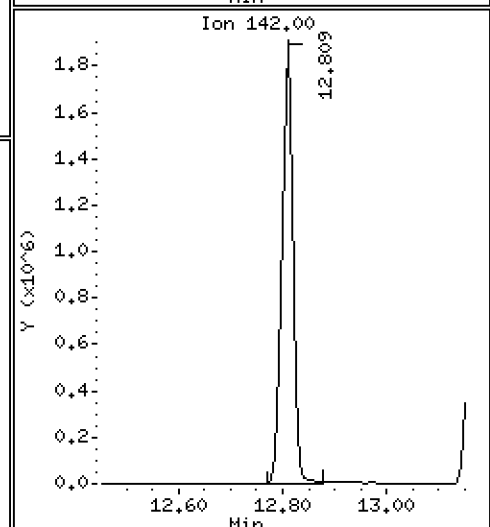
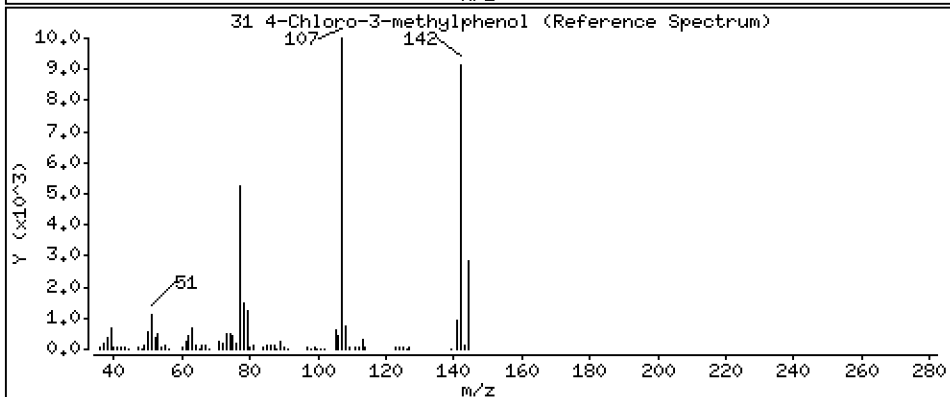
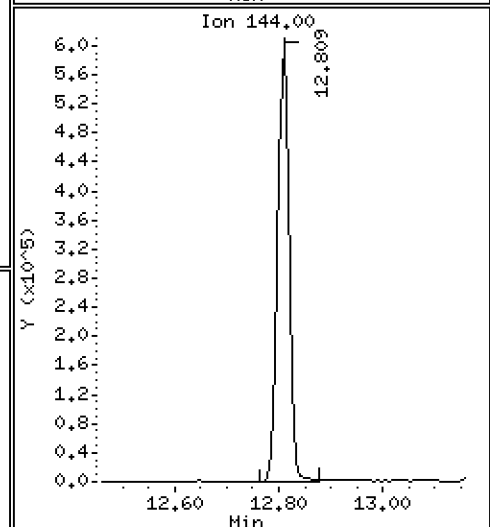
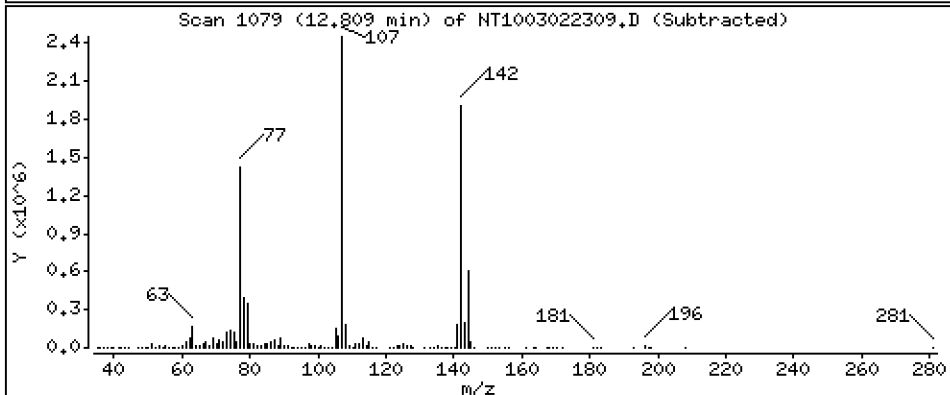
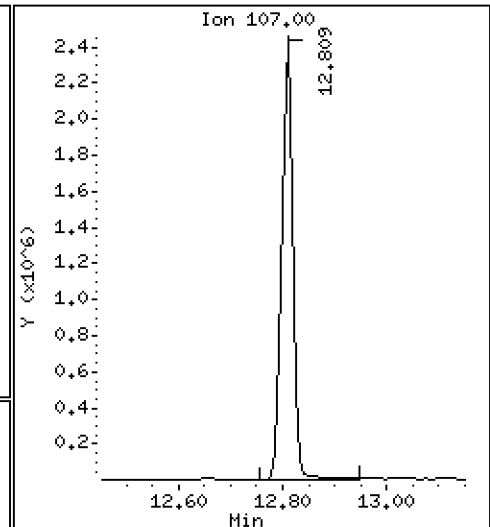
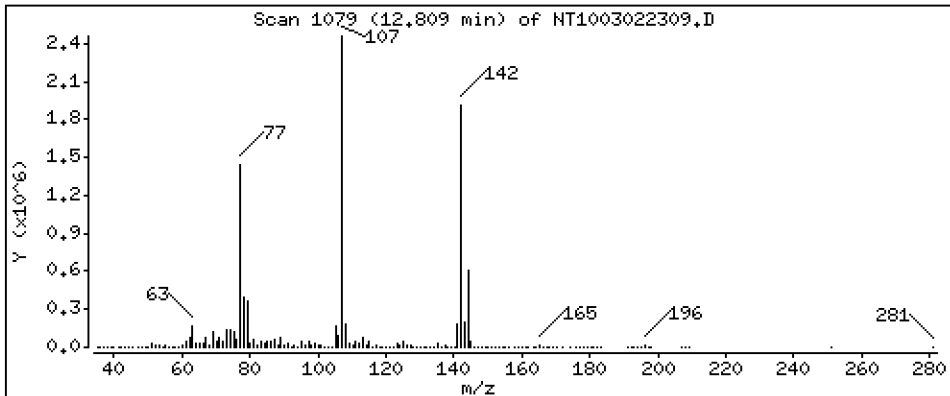
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 18,07 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

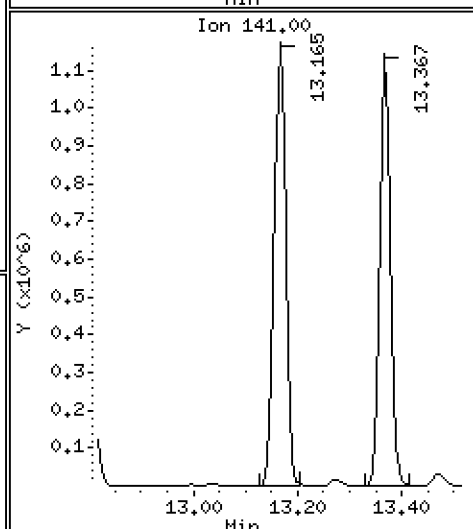
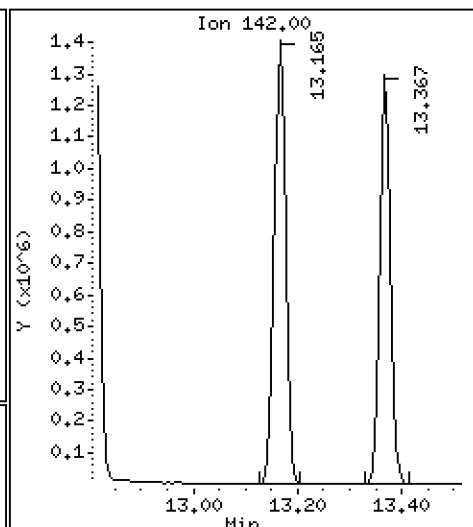
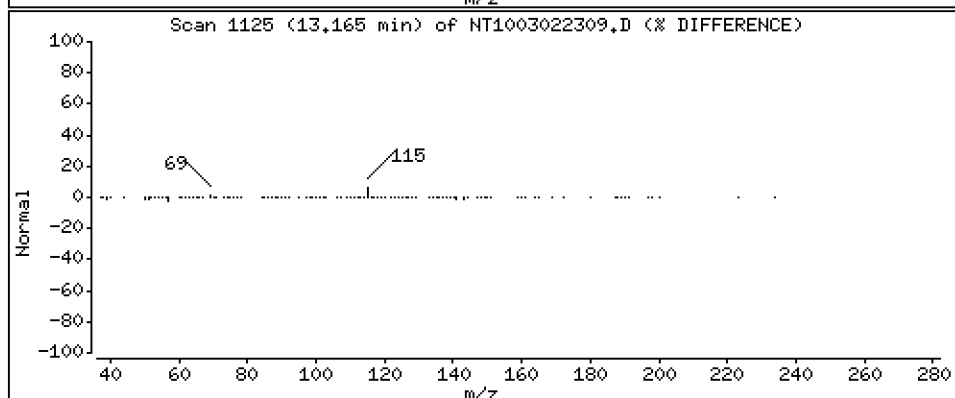
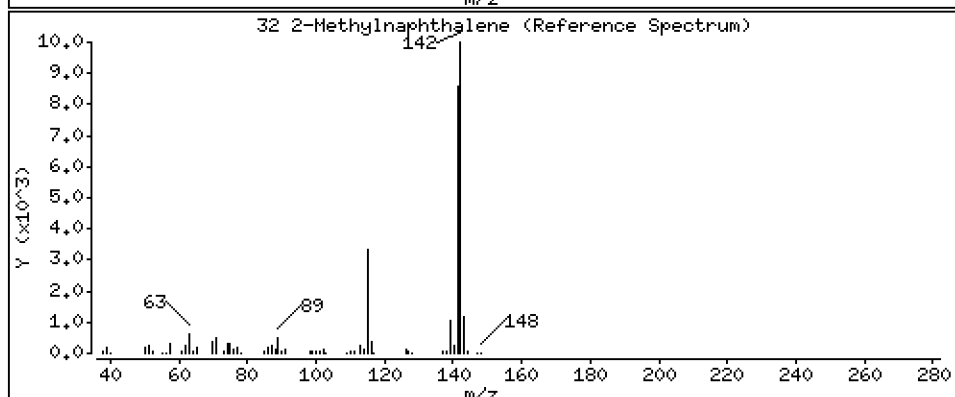
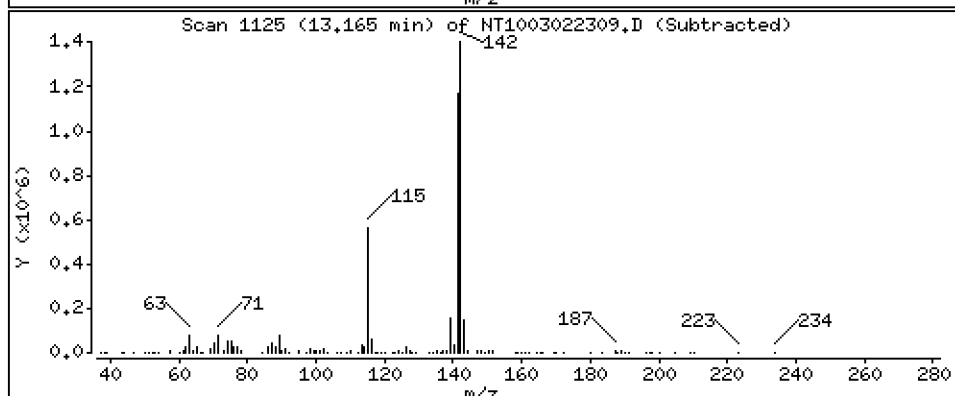
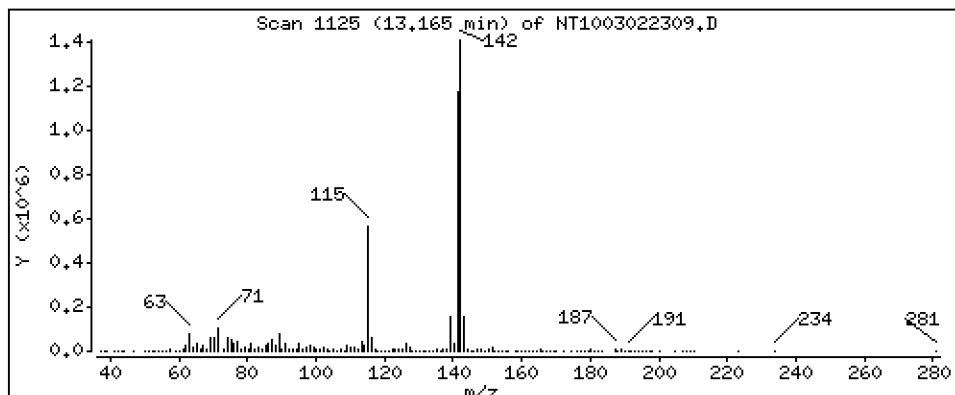
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 5,024 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

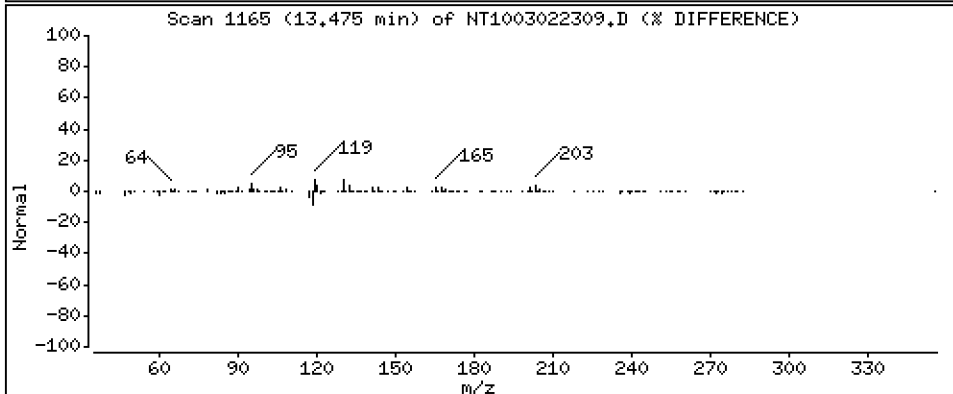
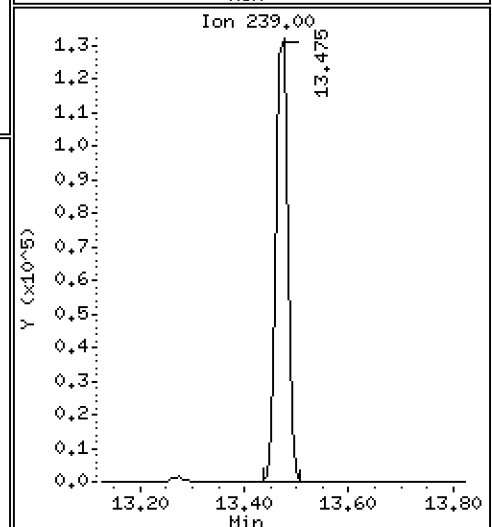
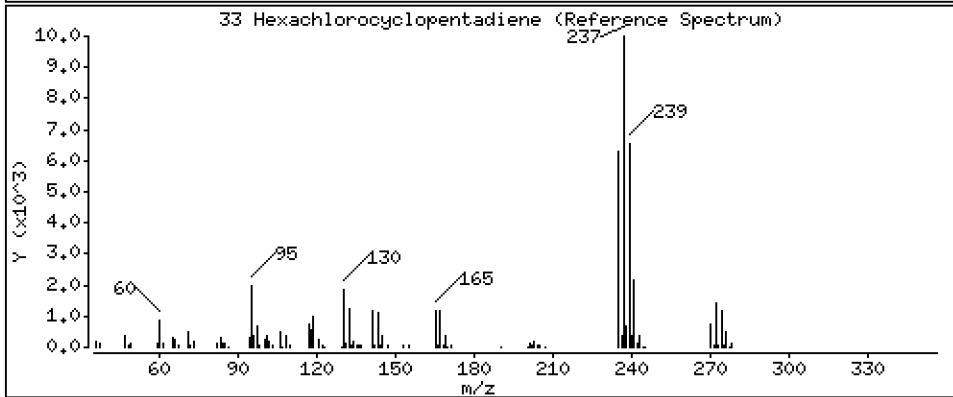
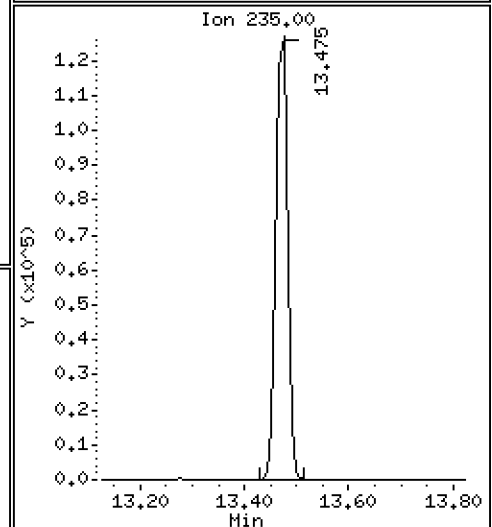
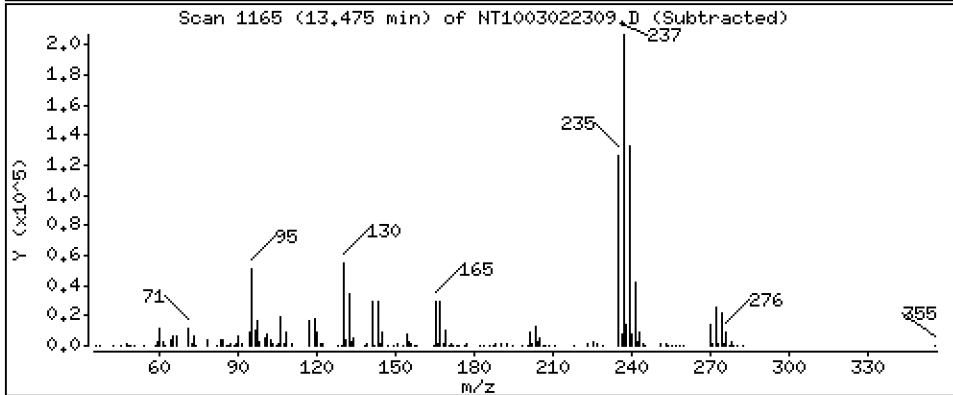
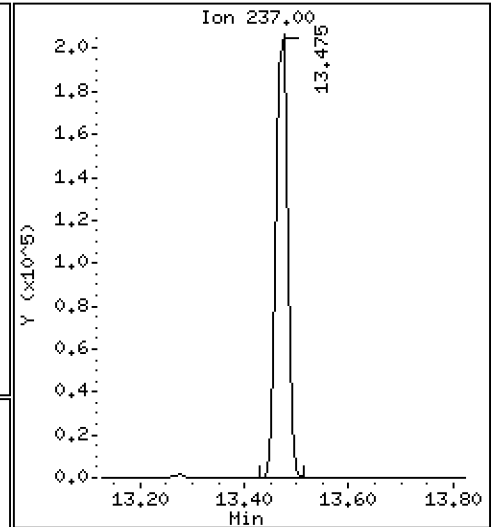
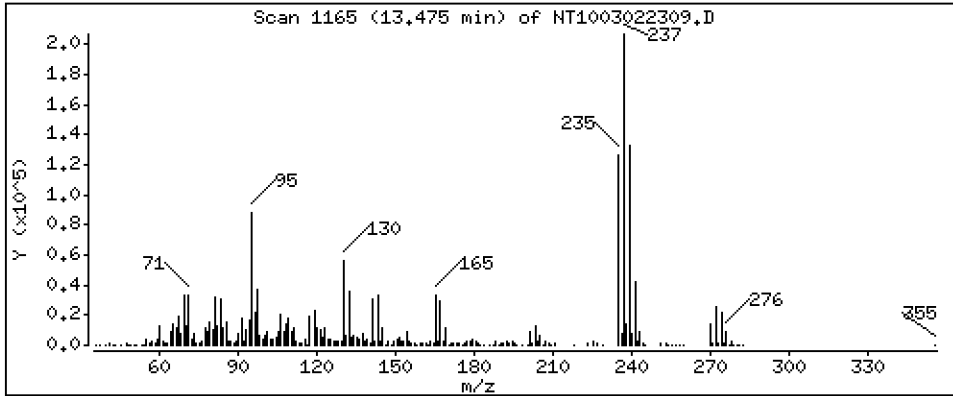
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 7,123 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

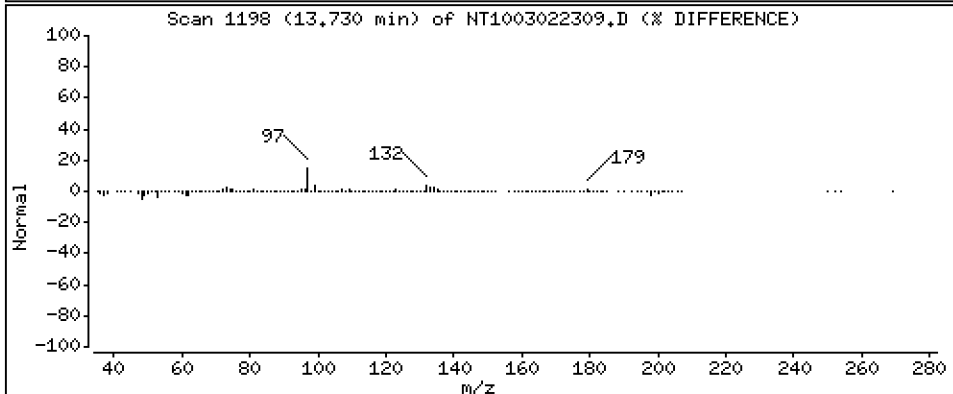
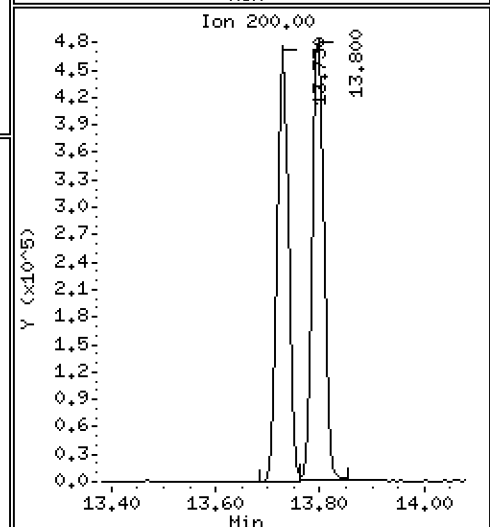
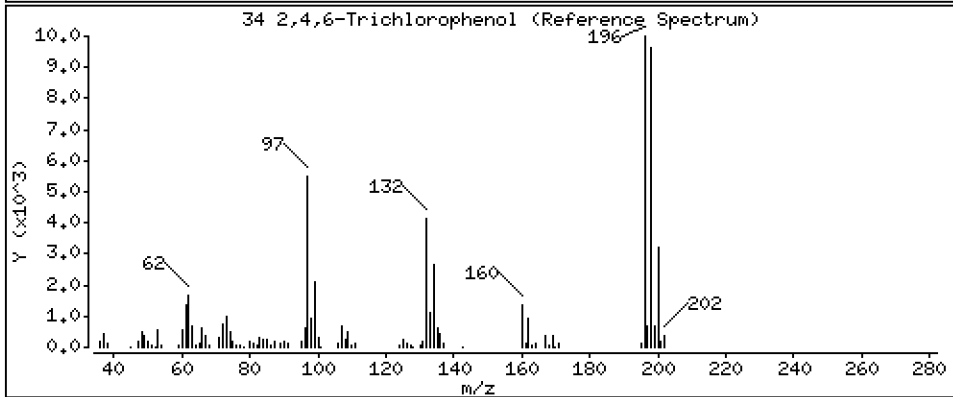
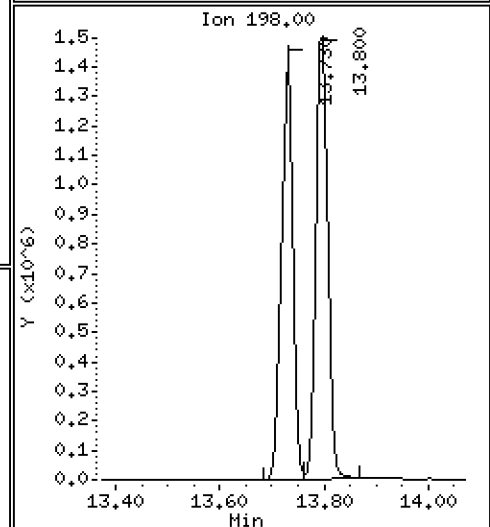
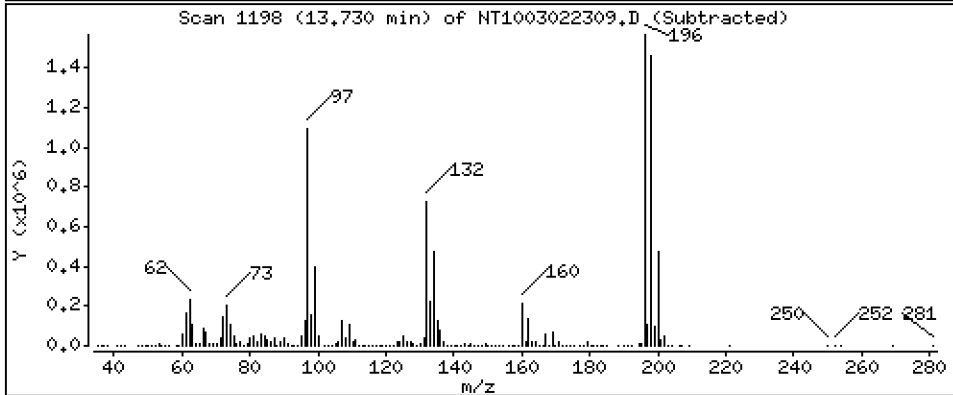
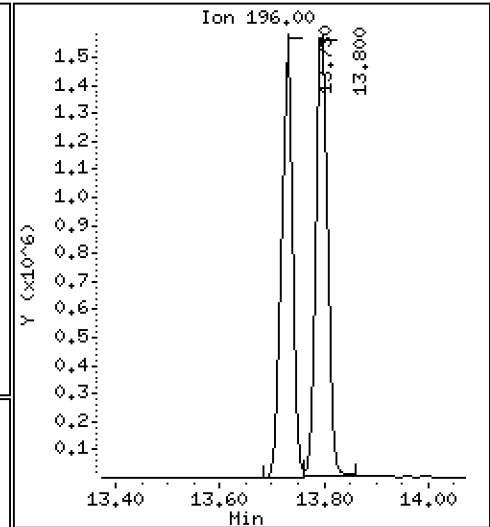
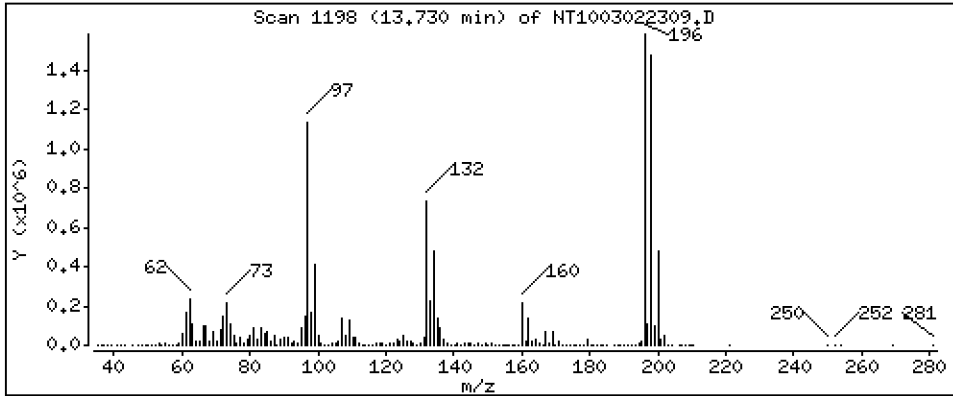
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 17,48 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

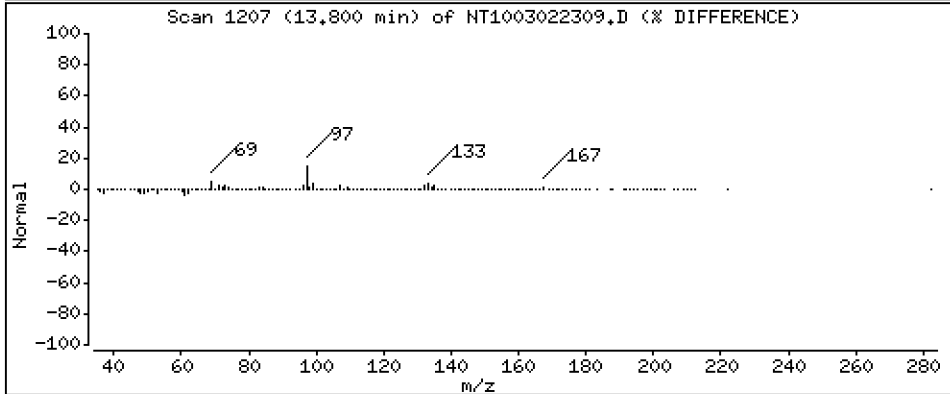
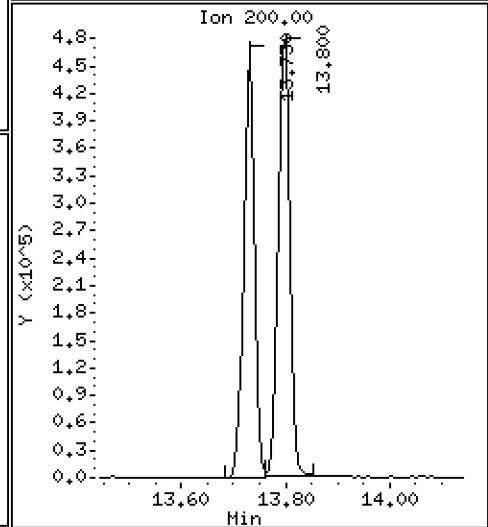
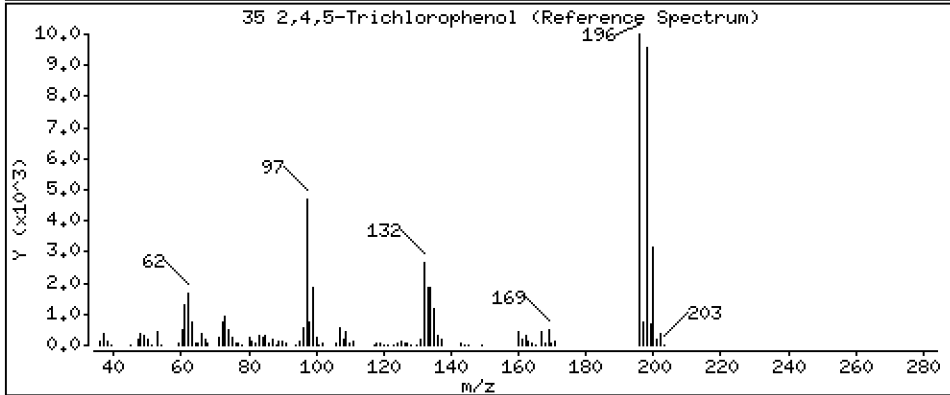
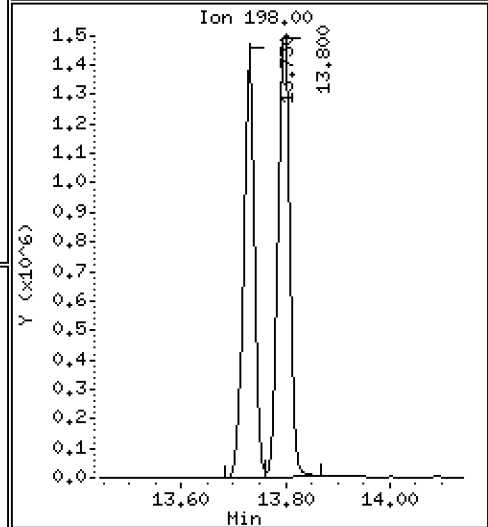
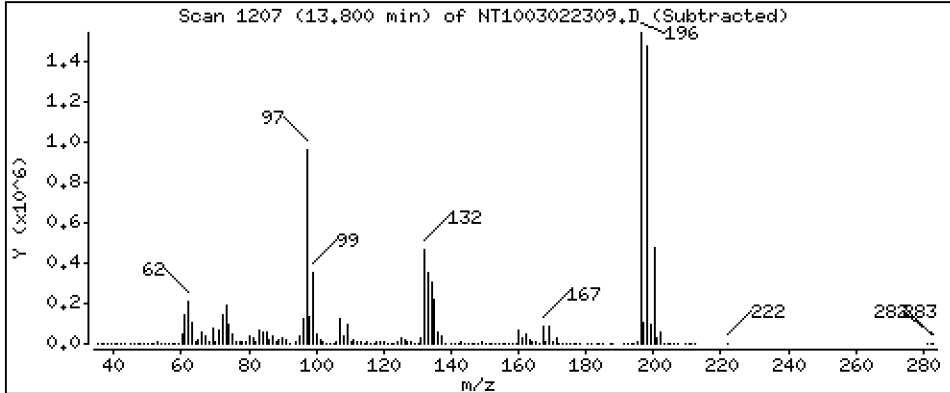
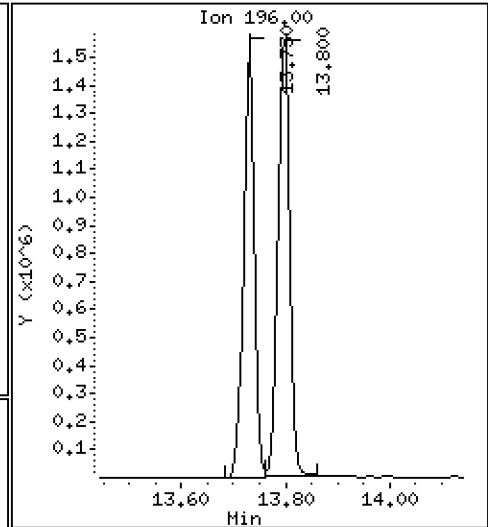
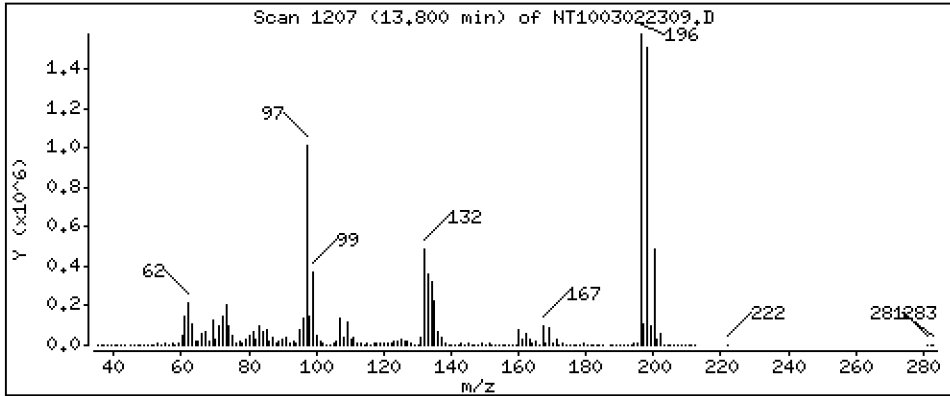
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 17,28 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

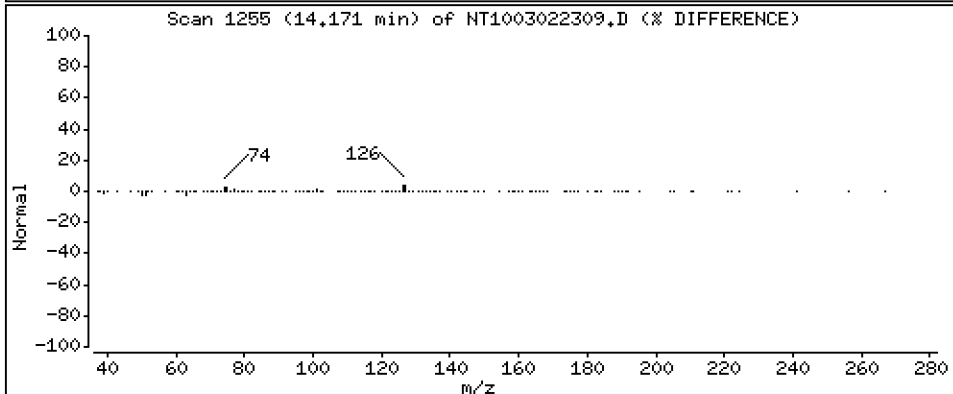
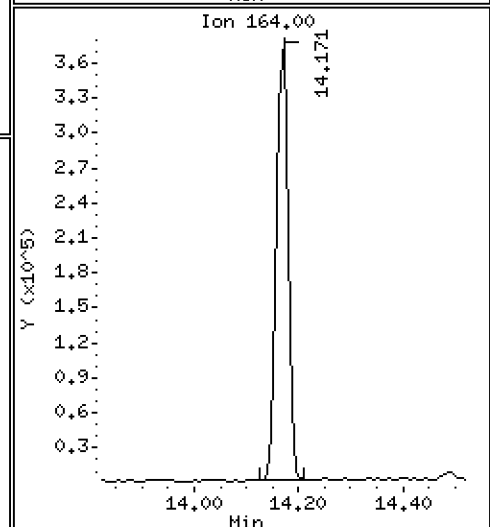
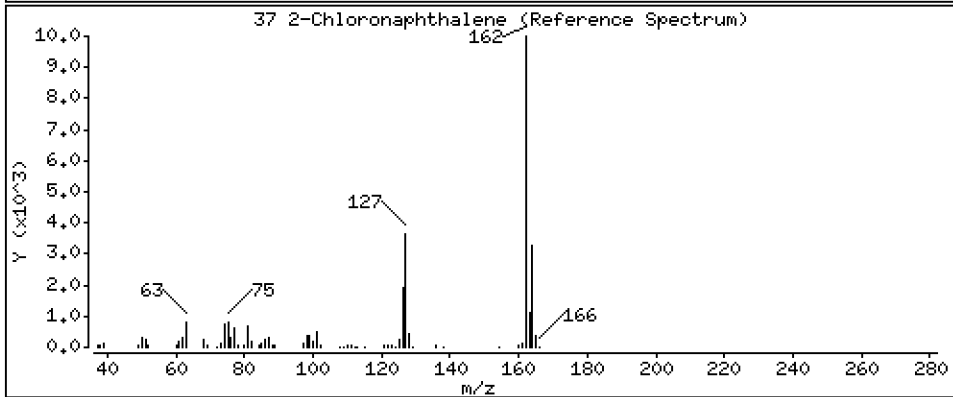
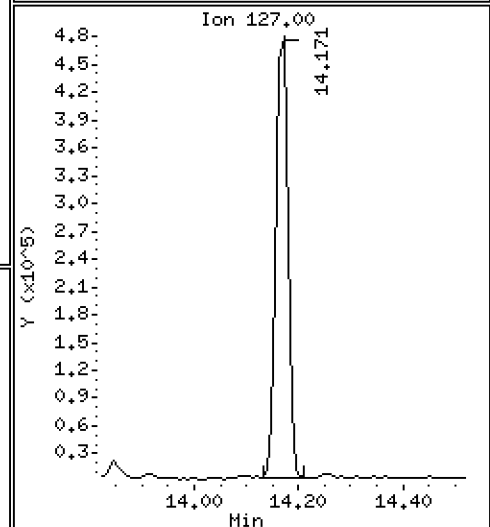
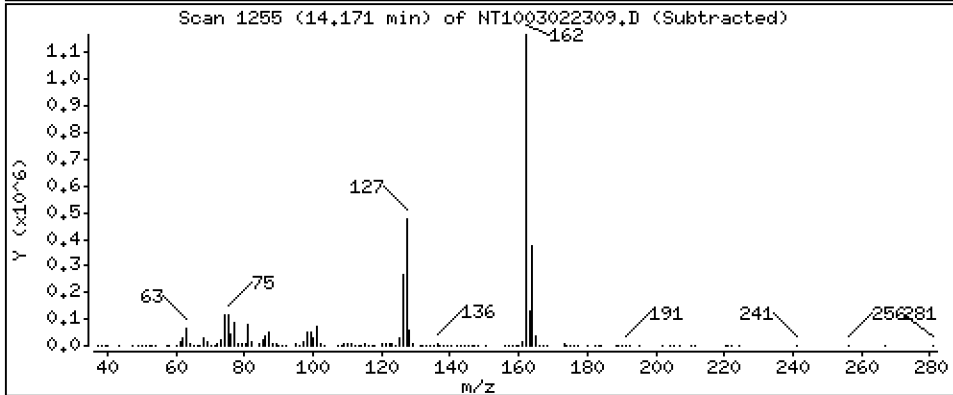
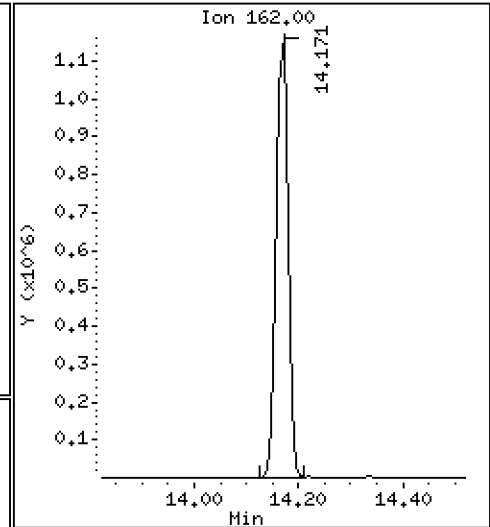
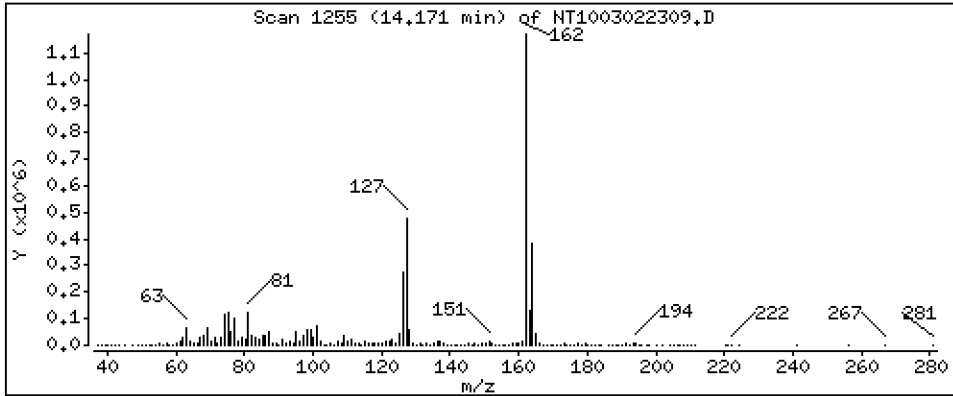
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,031 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

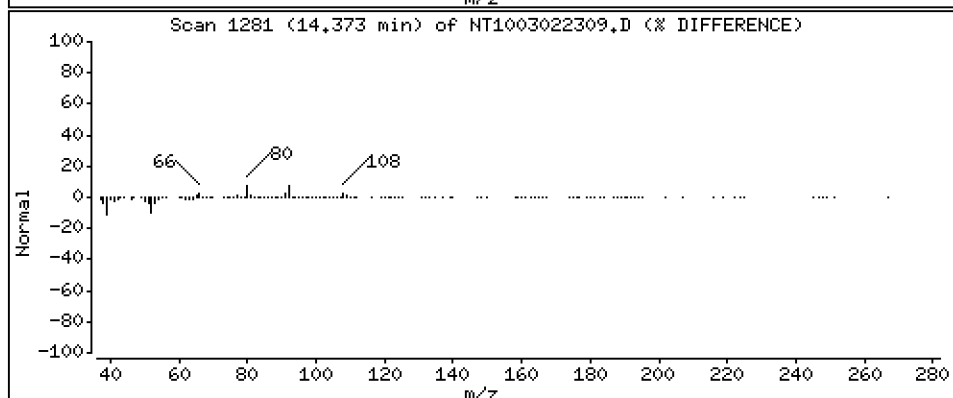
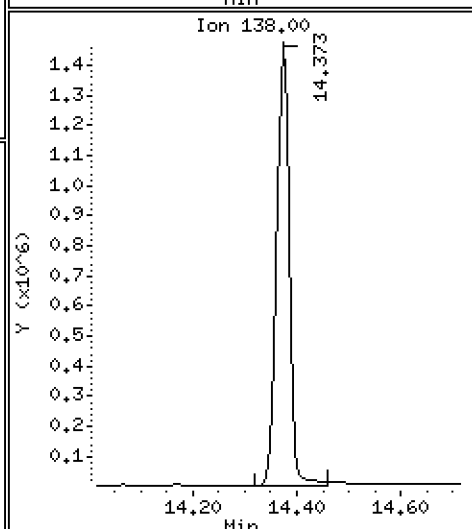
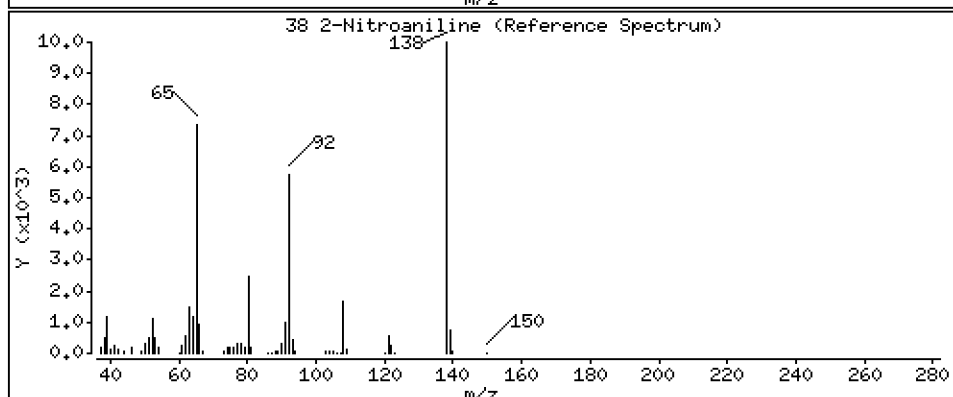
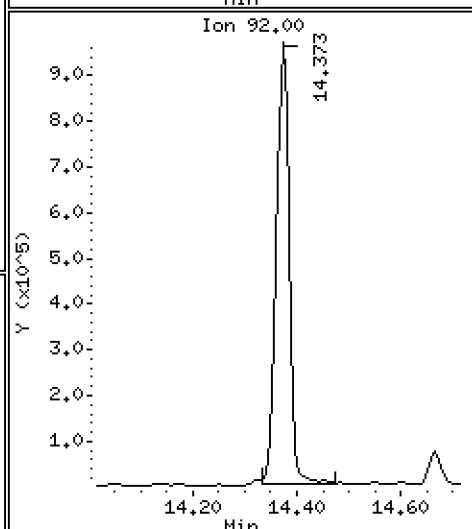
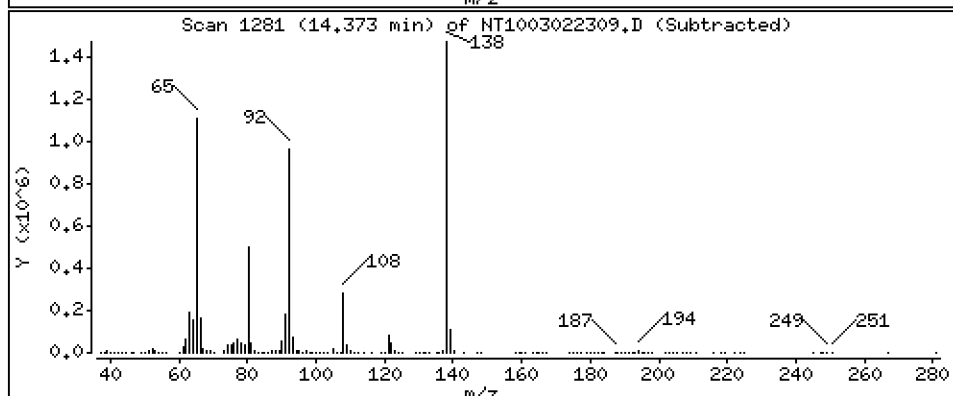
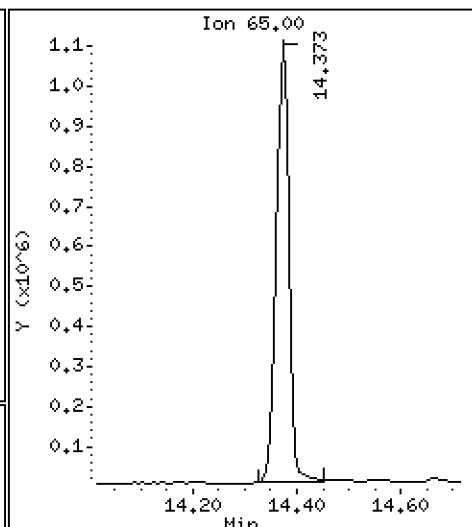
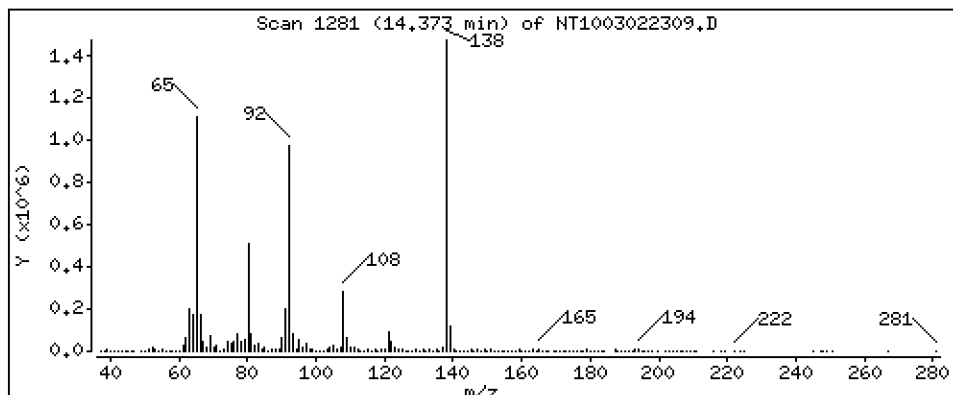
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 17,65 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

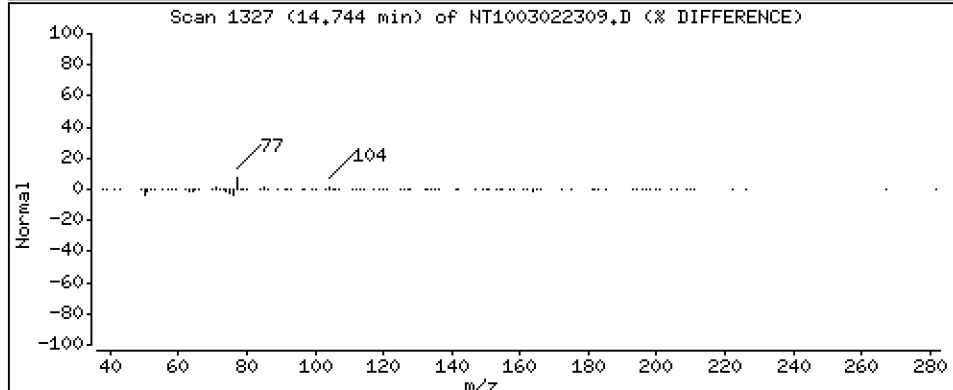
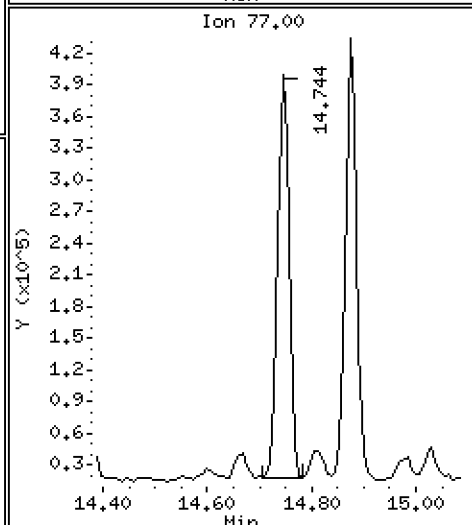
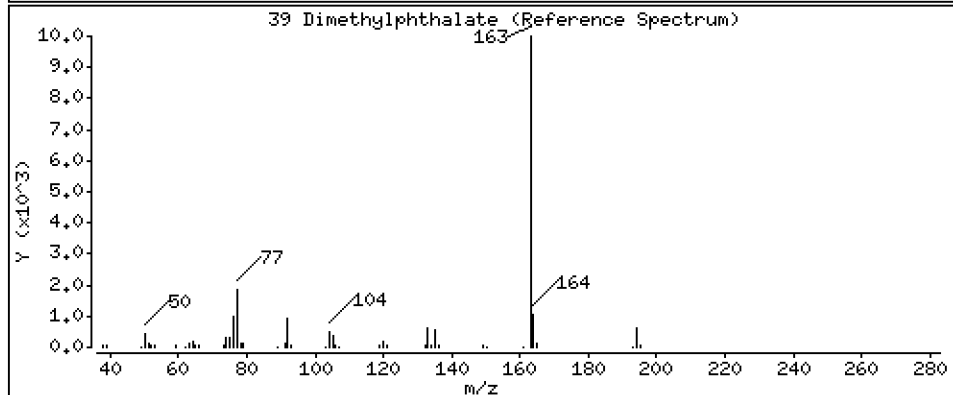
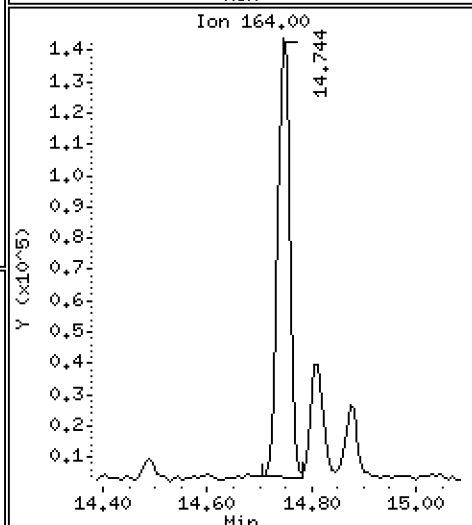
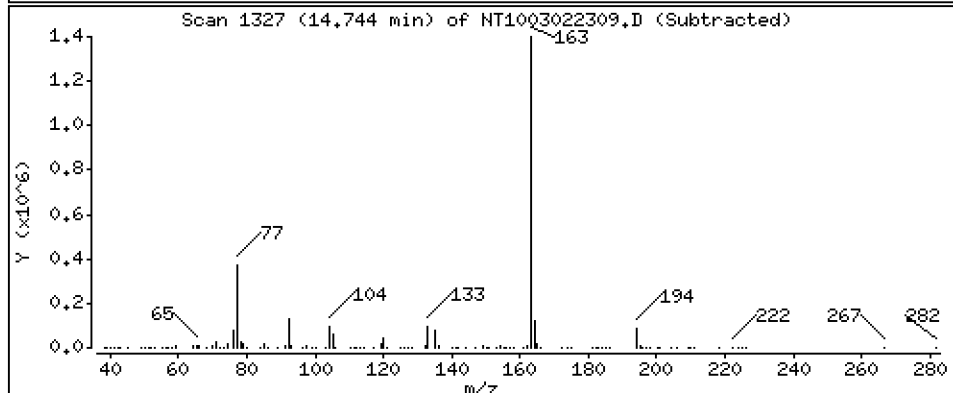
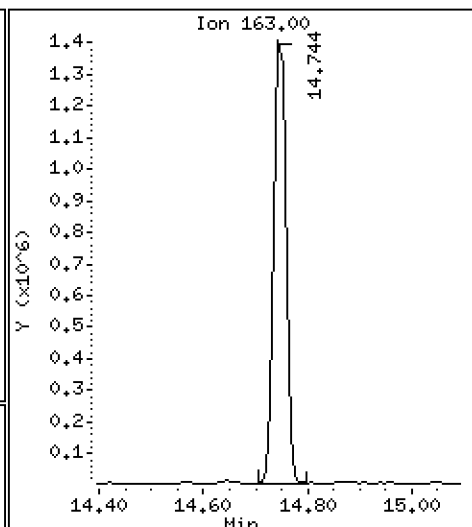
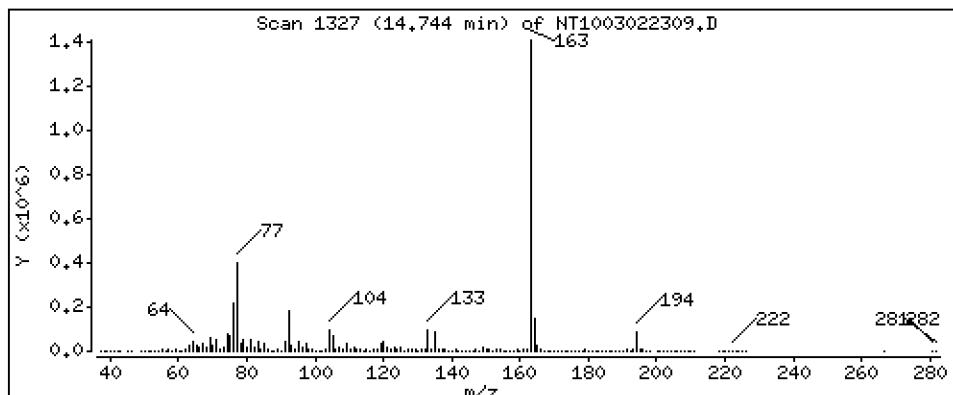
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,437 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

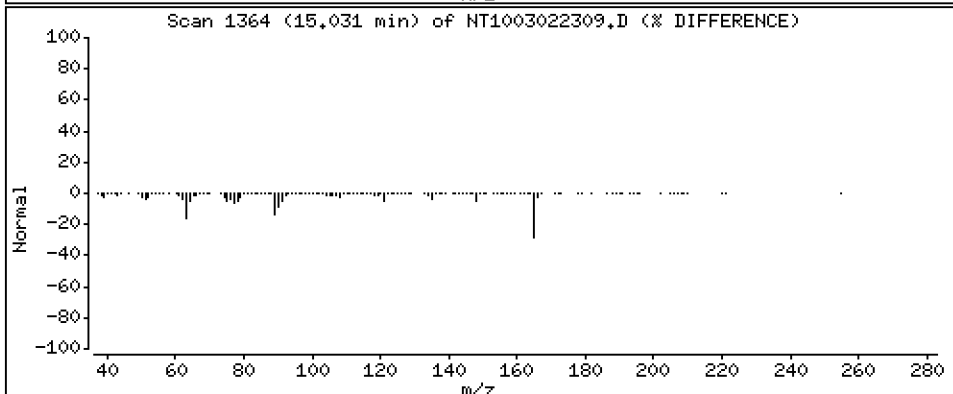
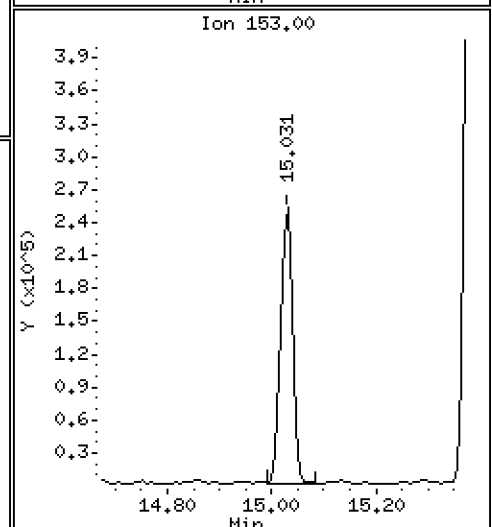
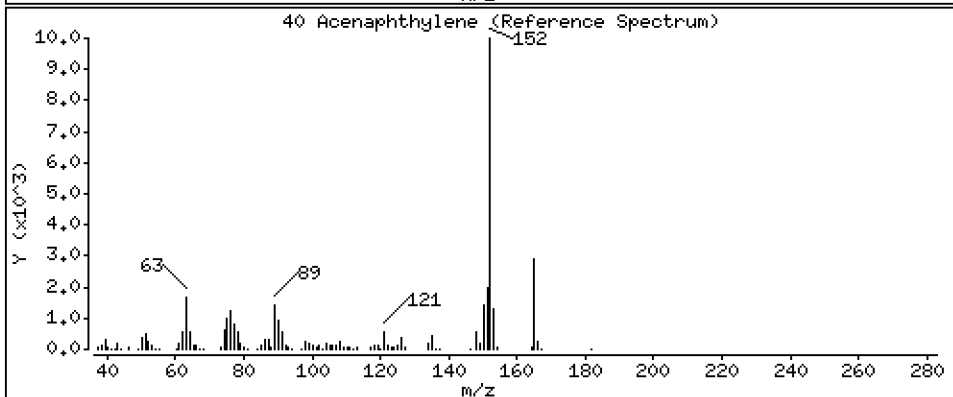
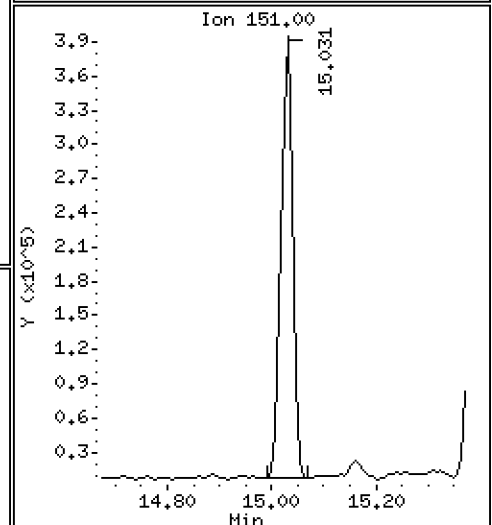
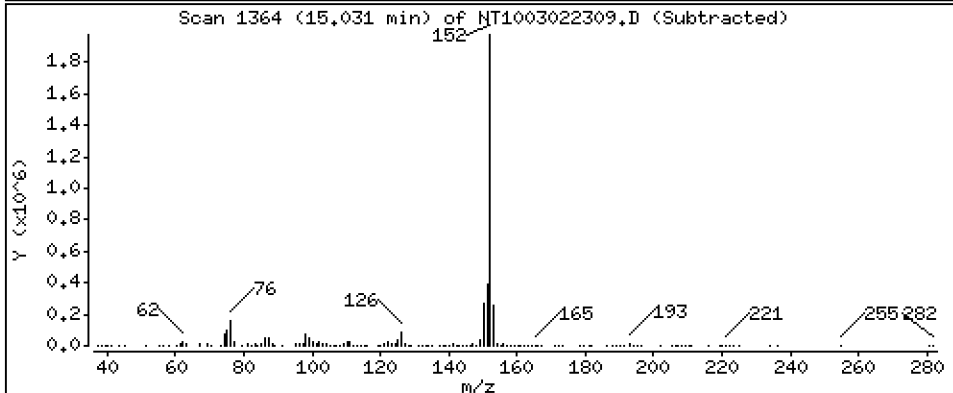
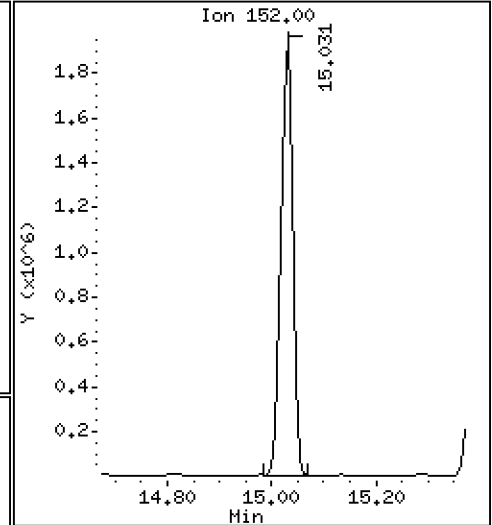
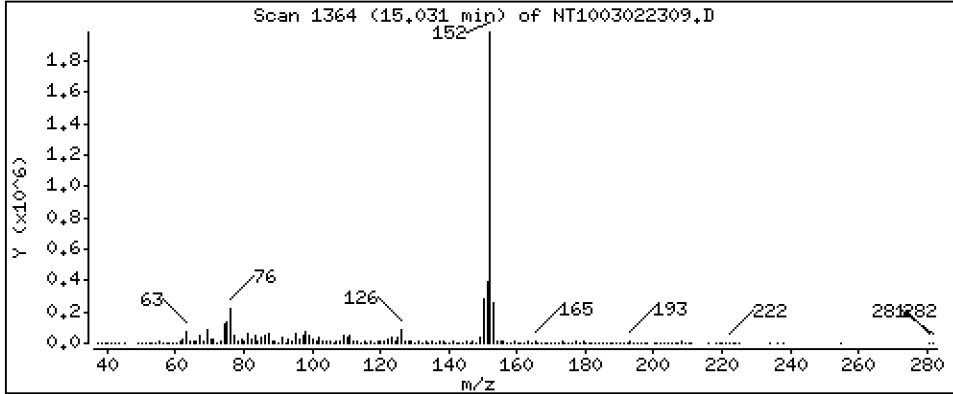
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,037 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

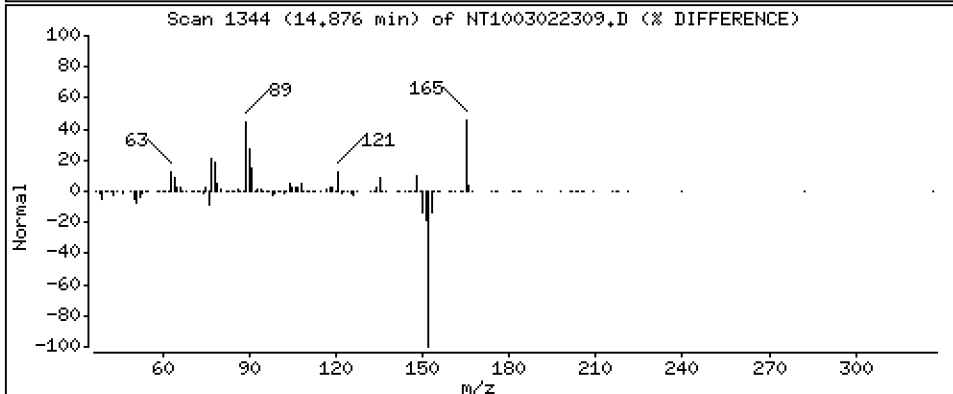
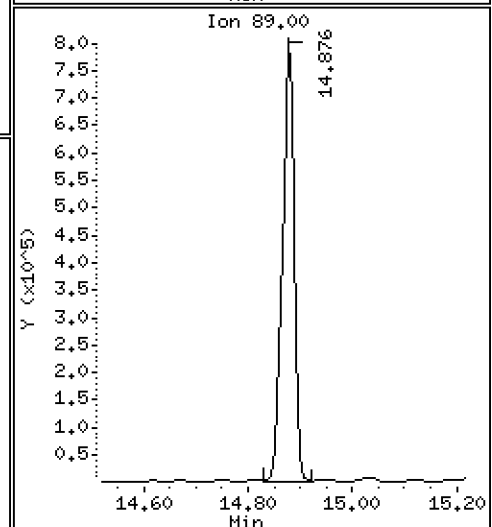
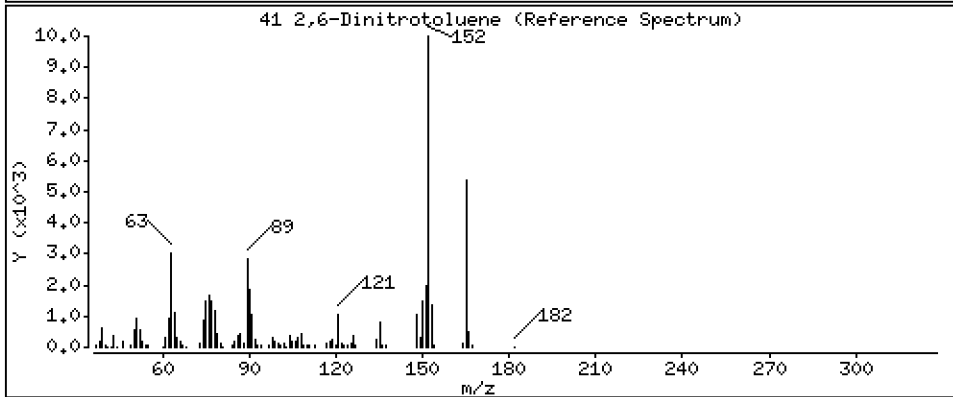
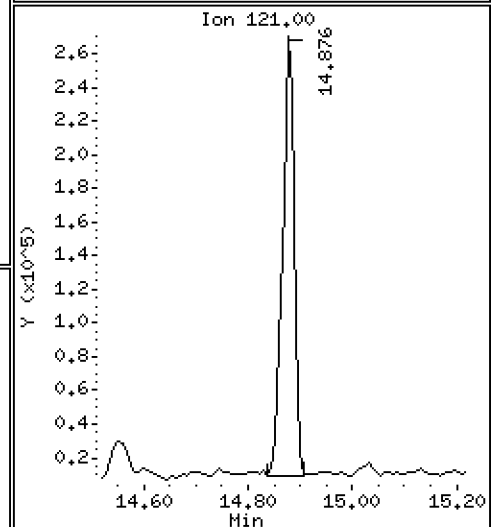
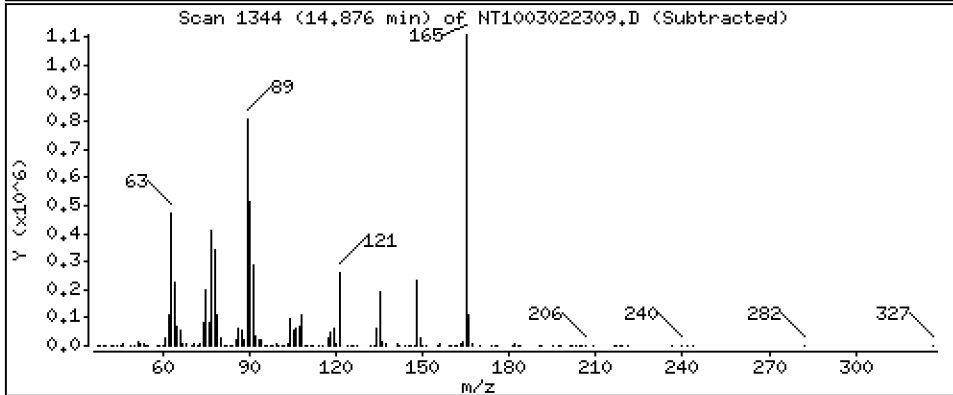
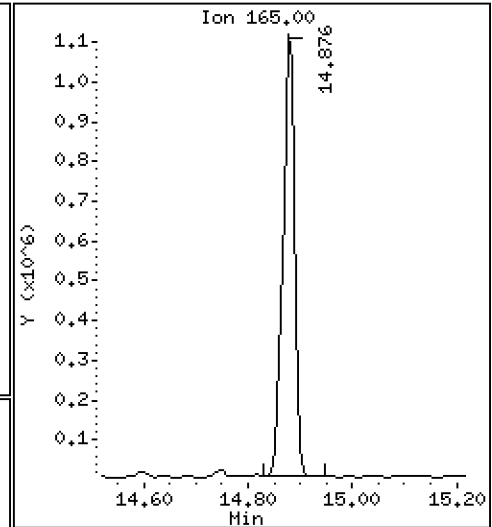
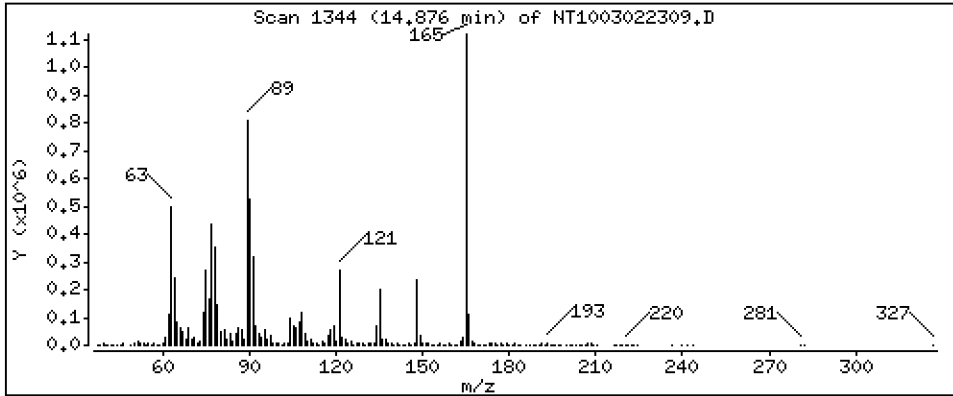
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 18,54 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

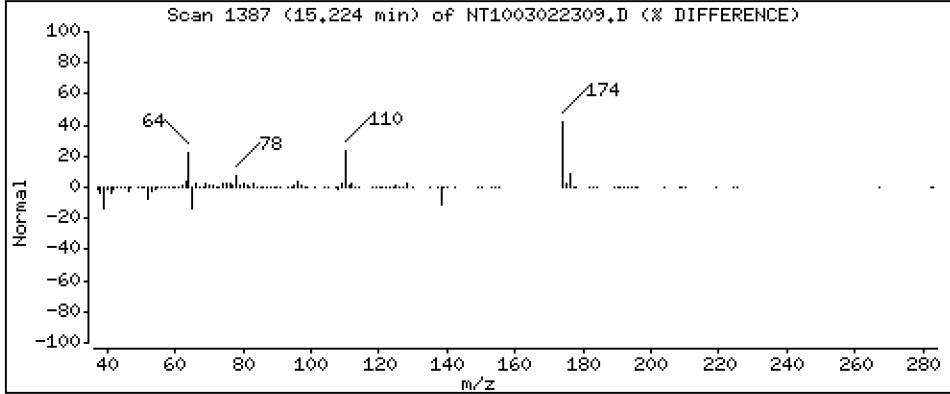
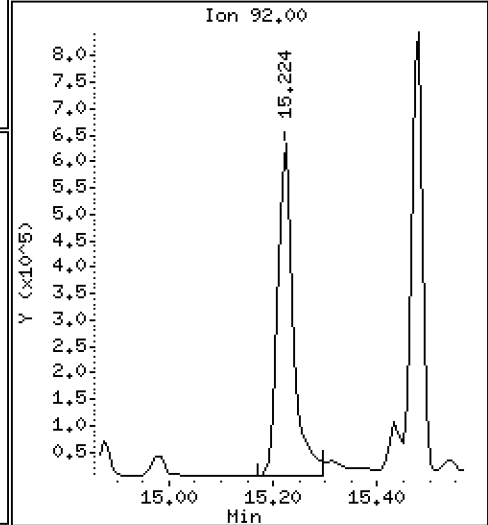
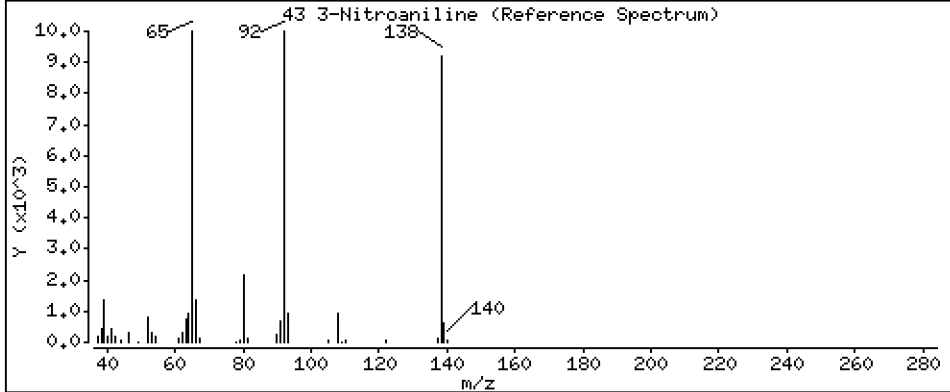
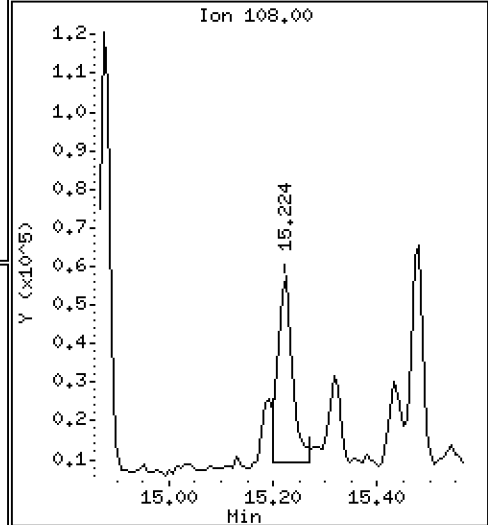
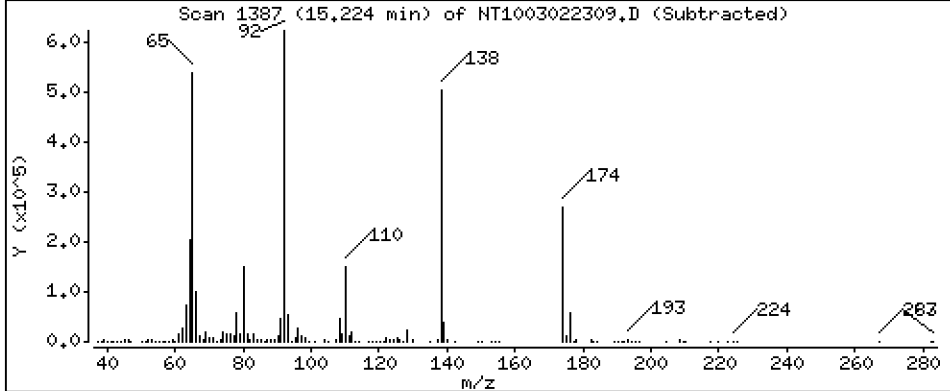
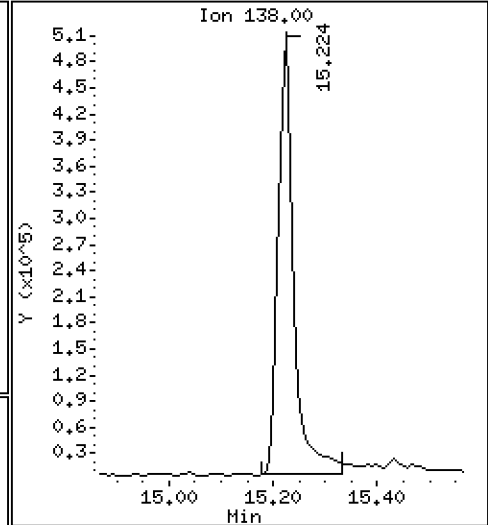
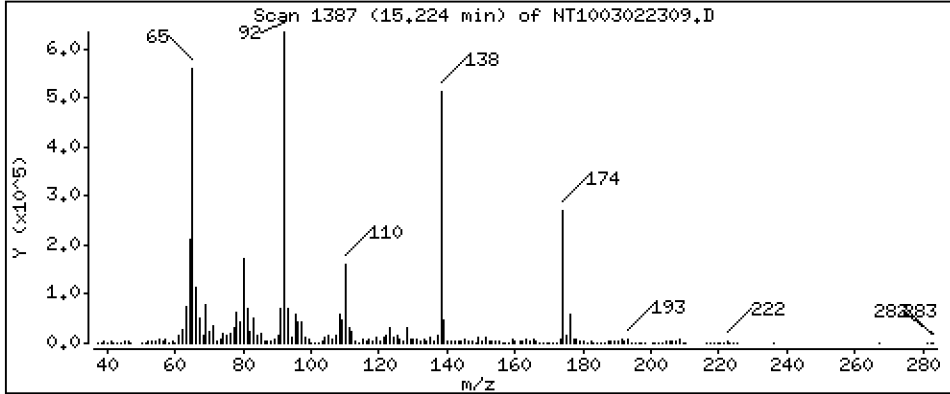
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 10,32 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

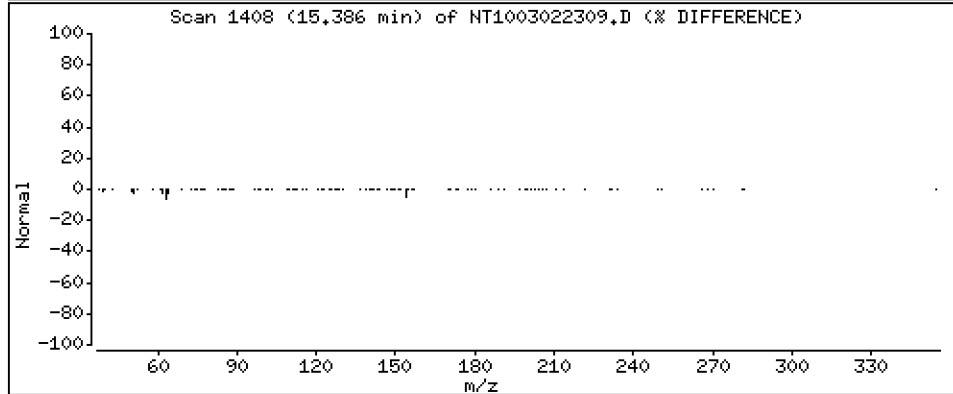
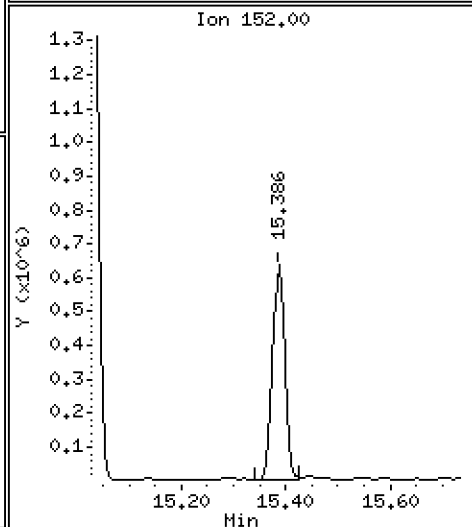
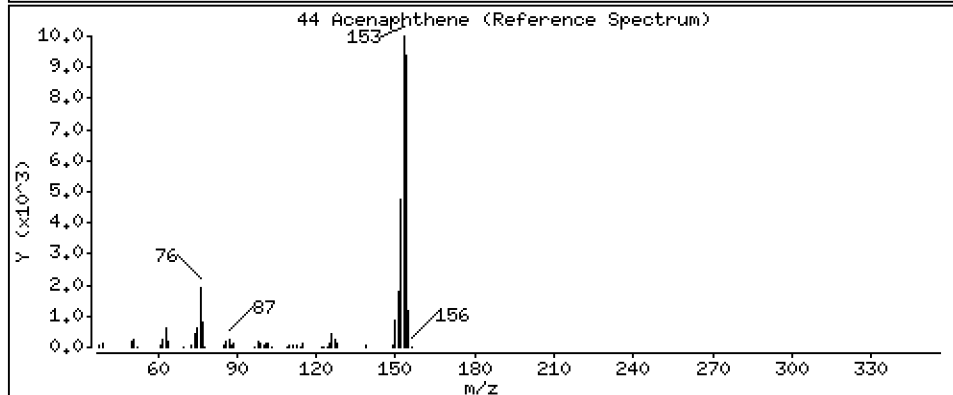
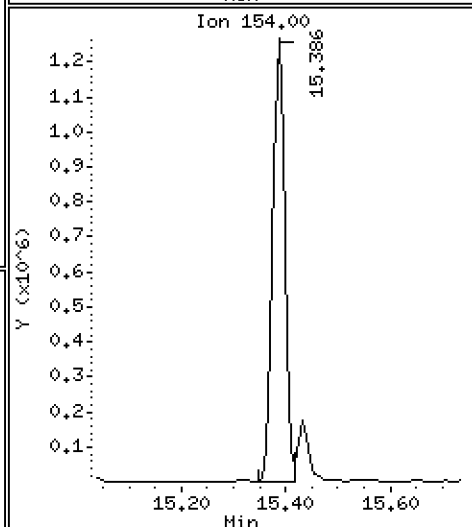
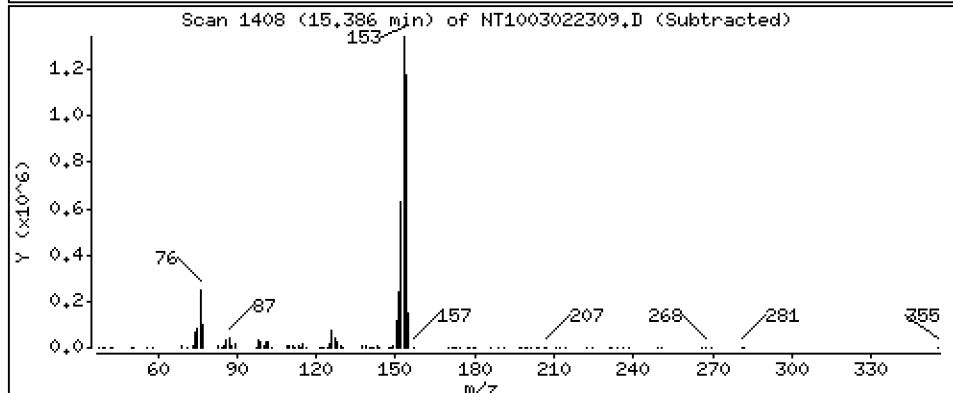
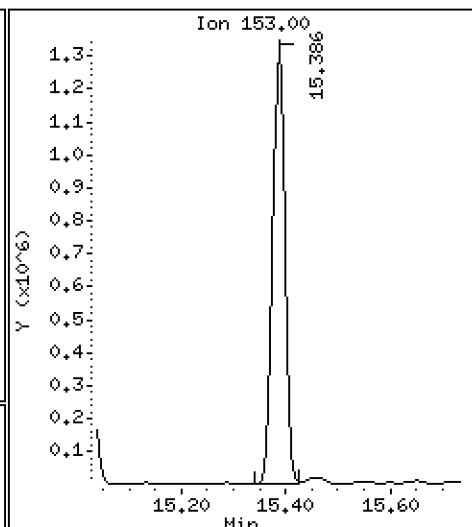
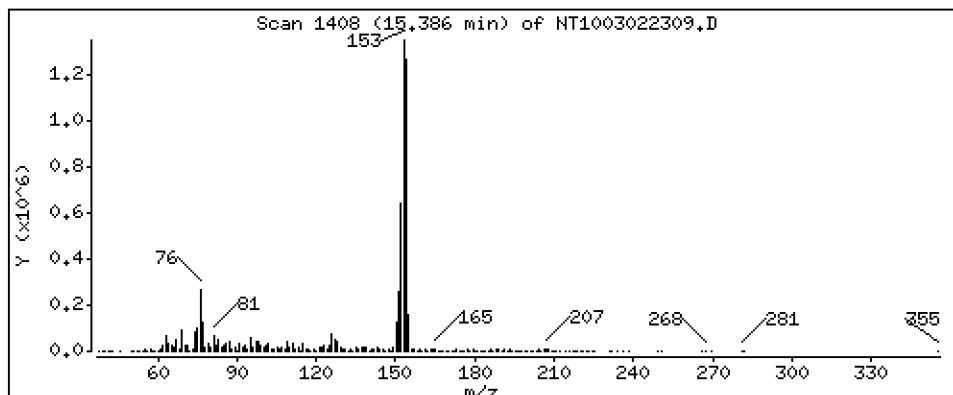
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,688 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

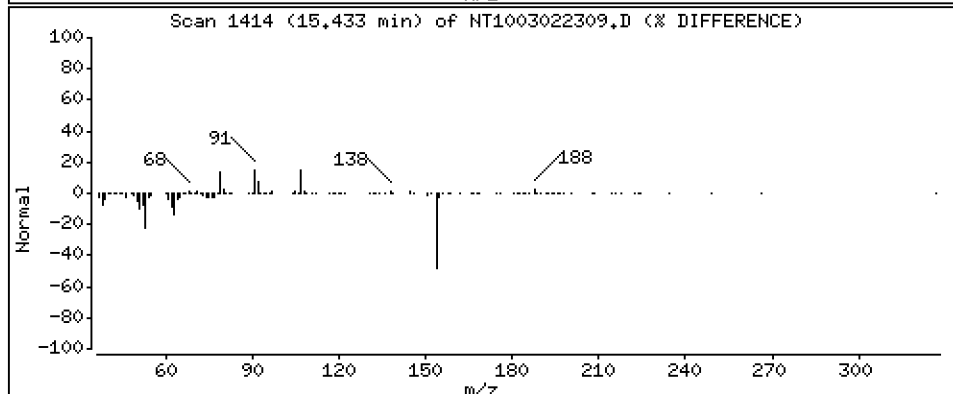
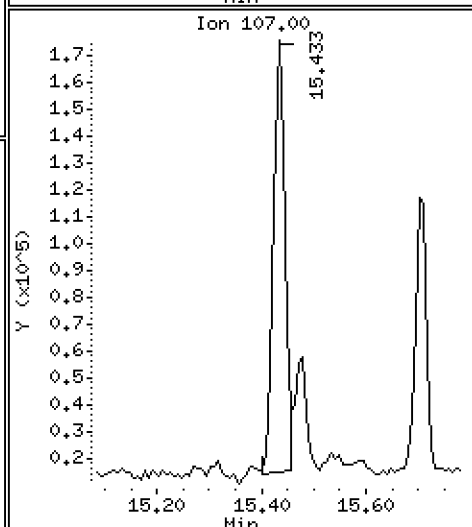
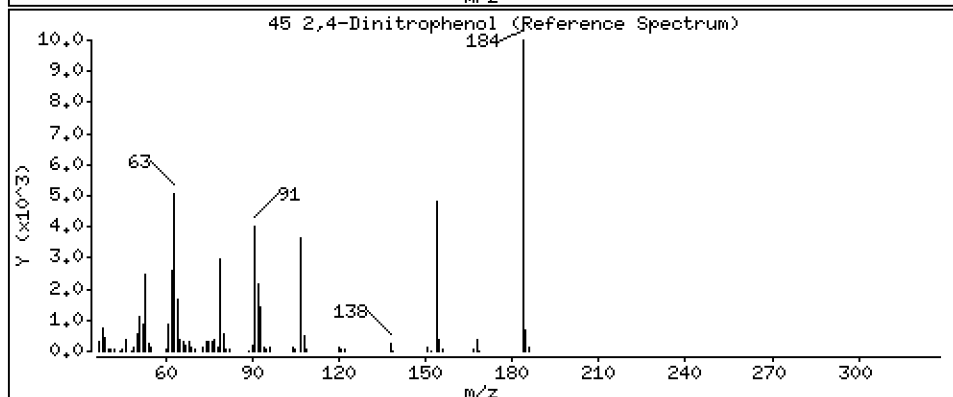
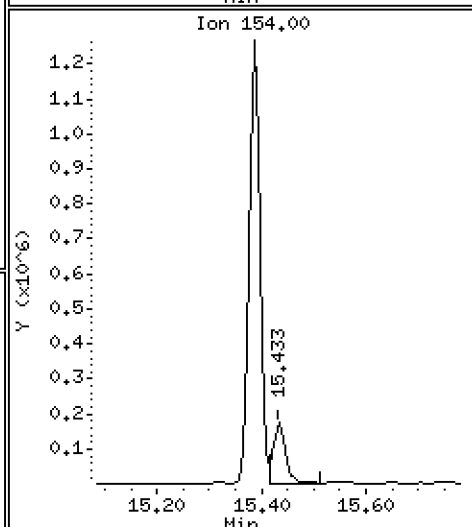
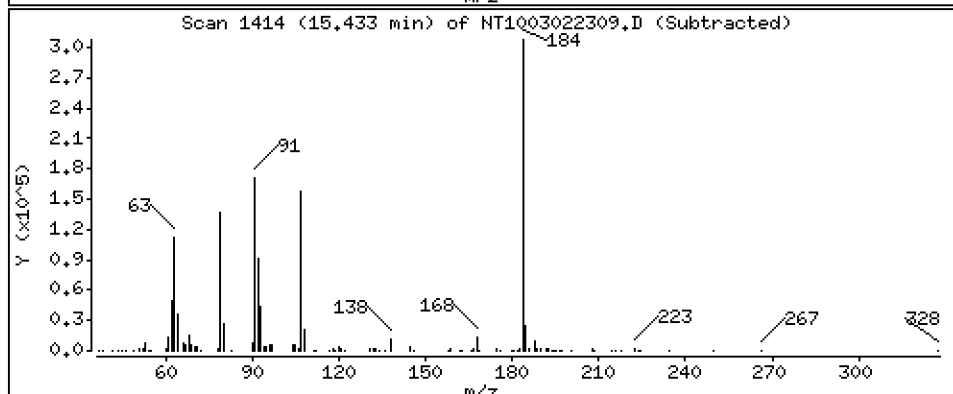
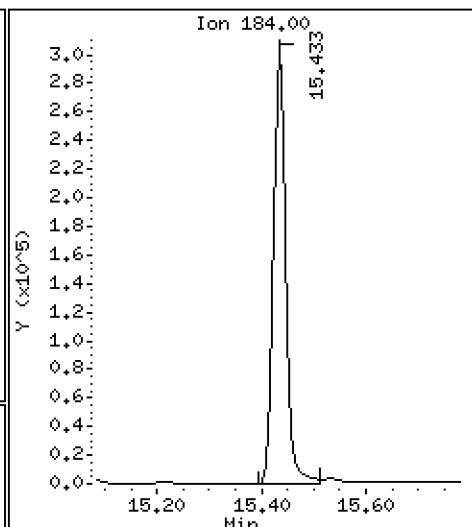
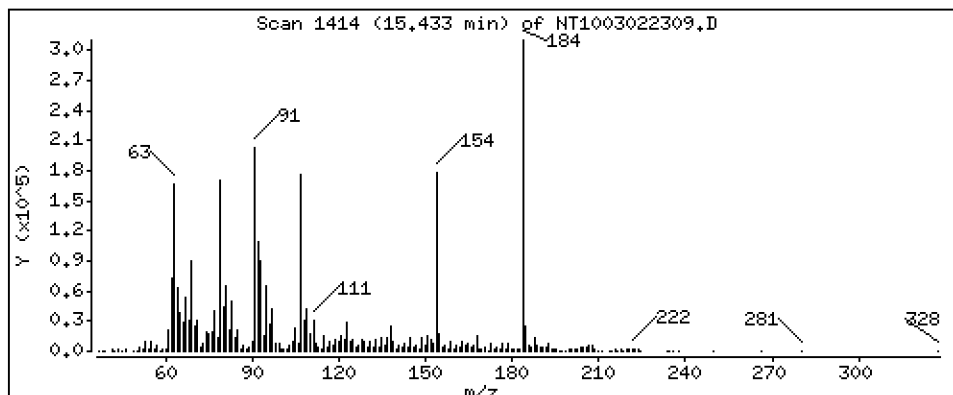
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 19,13 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

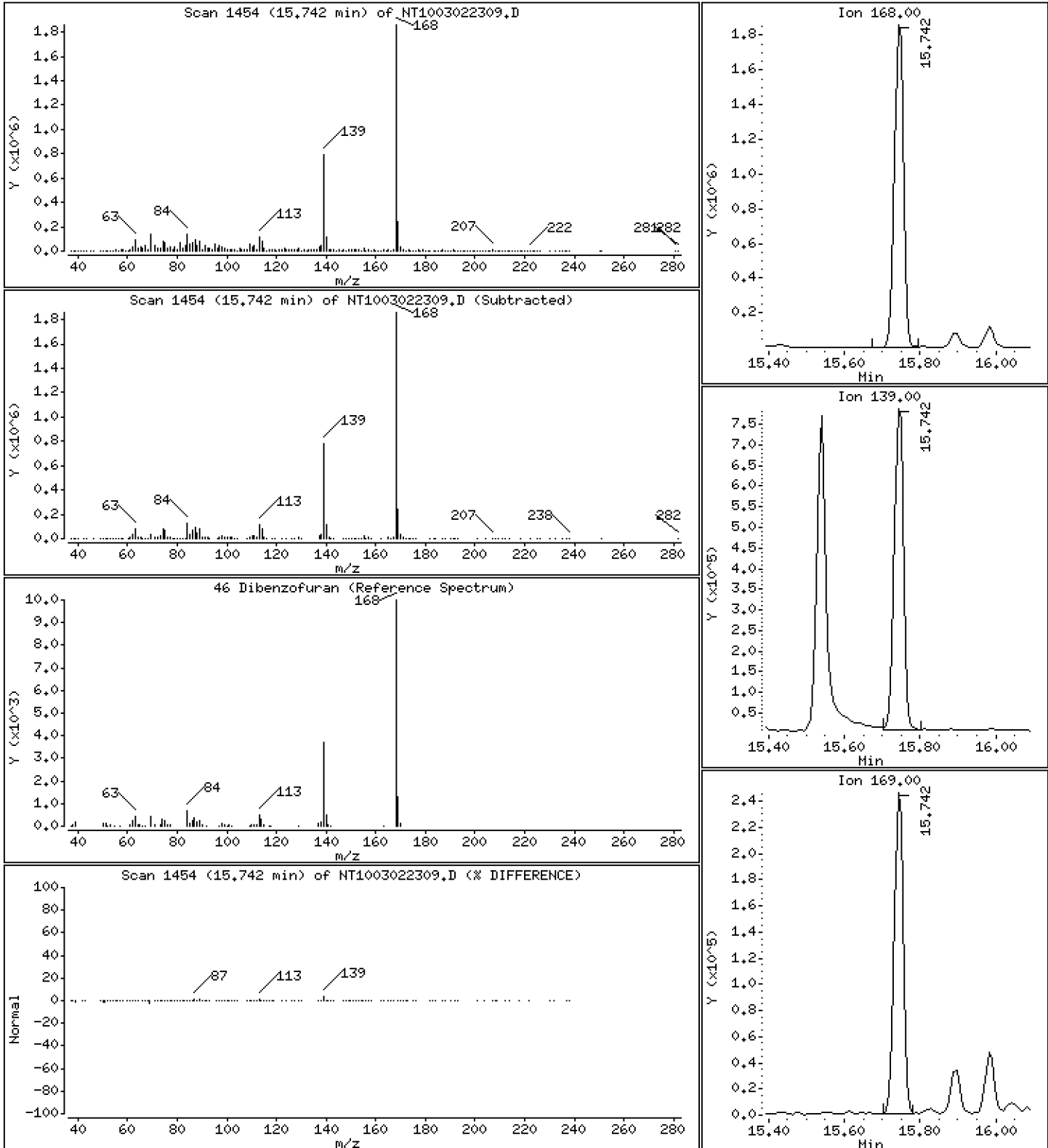
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 5,578 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

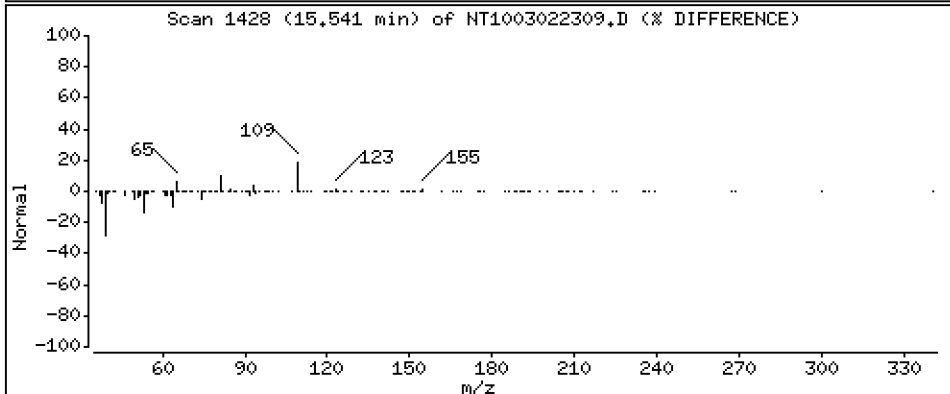
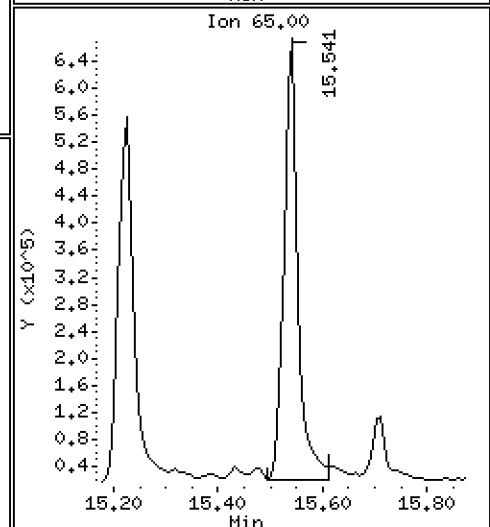
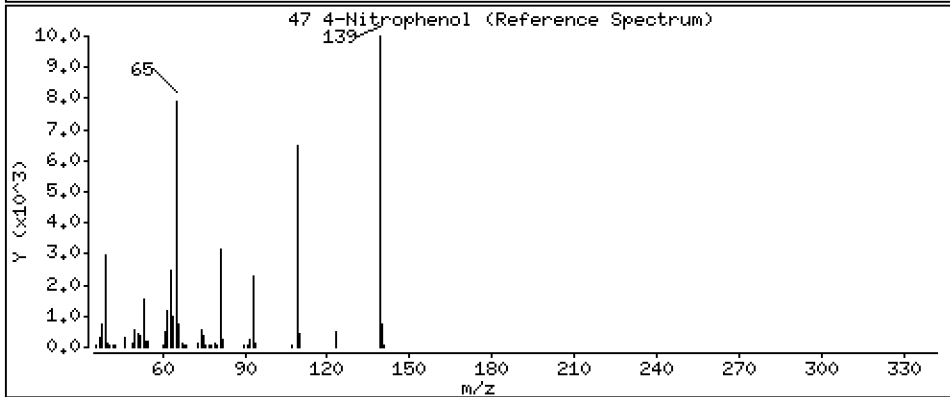
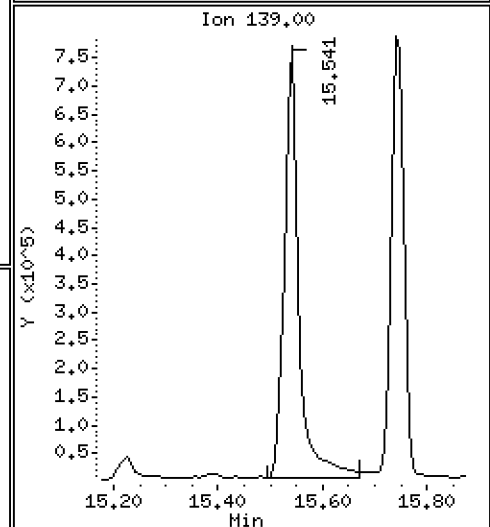
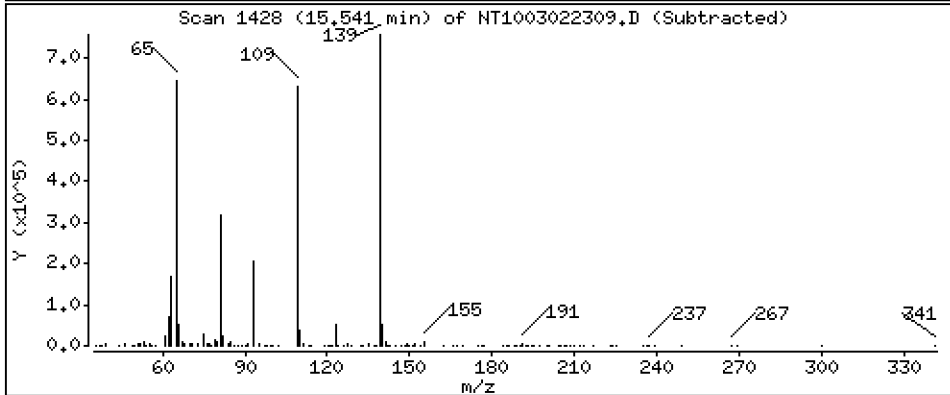
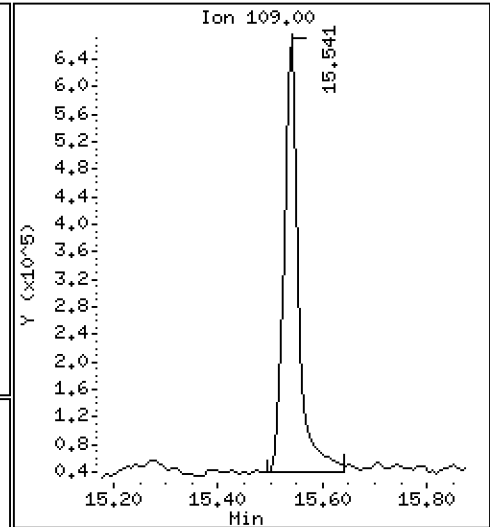
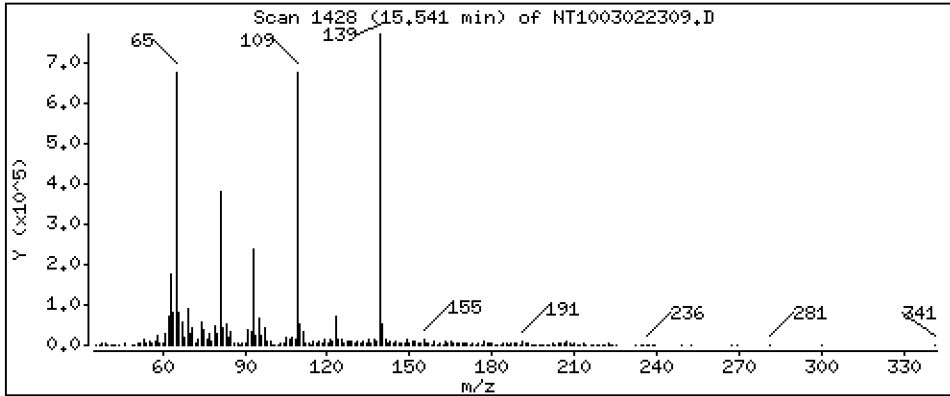
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 16,09 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

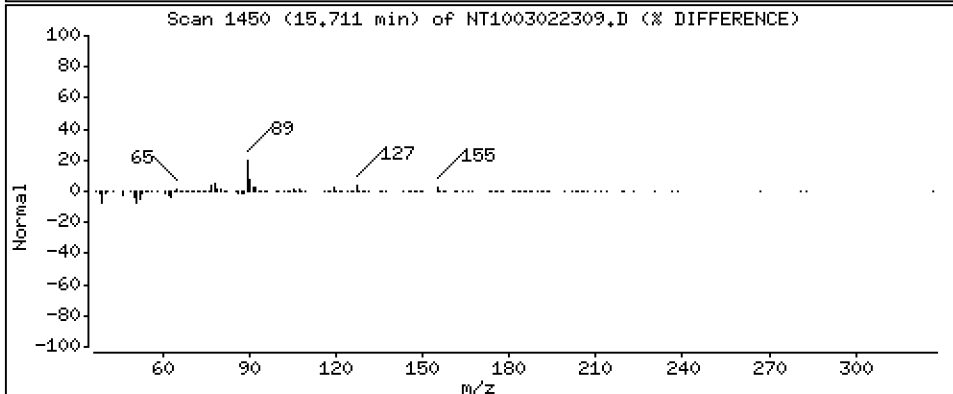
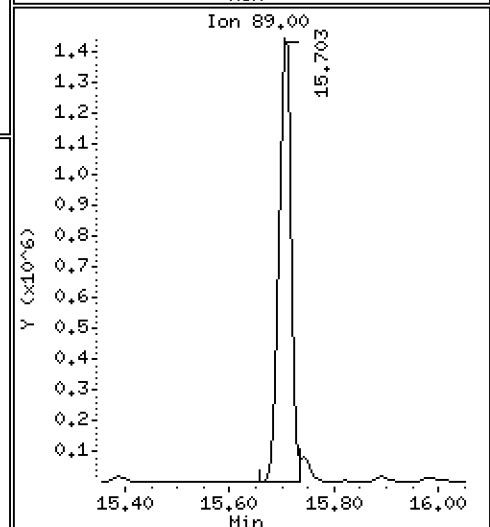
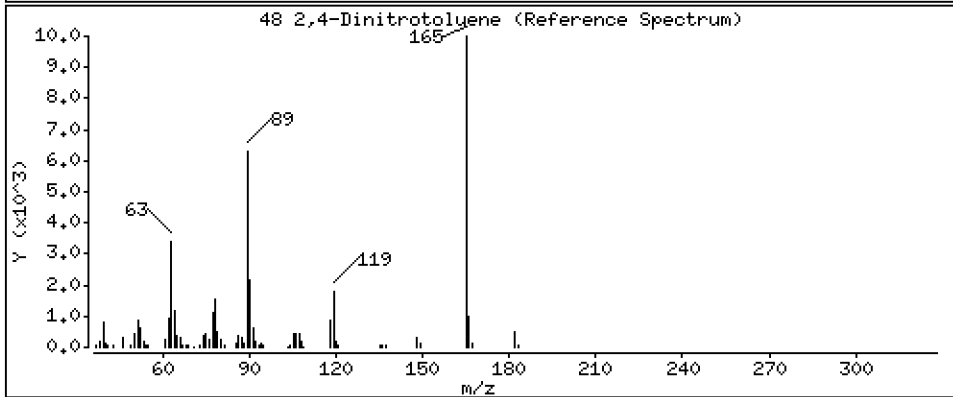
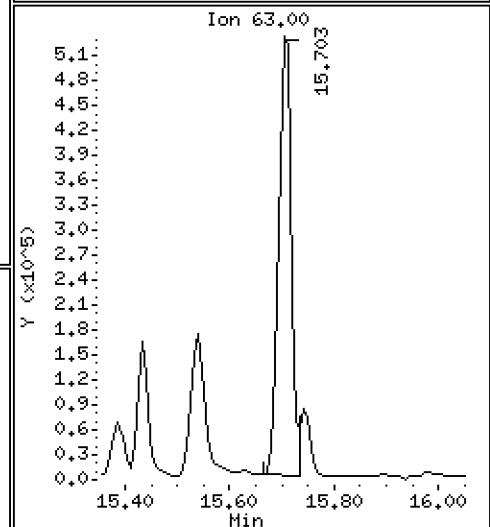
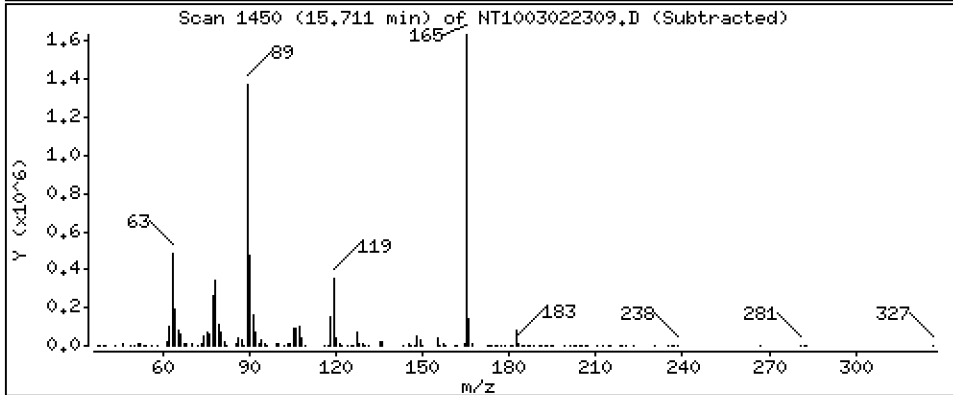
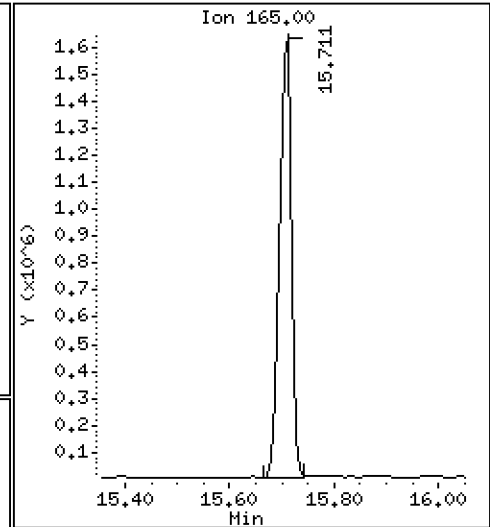
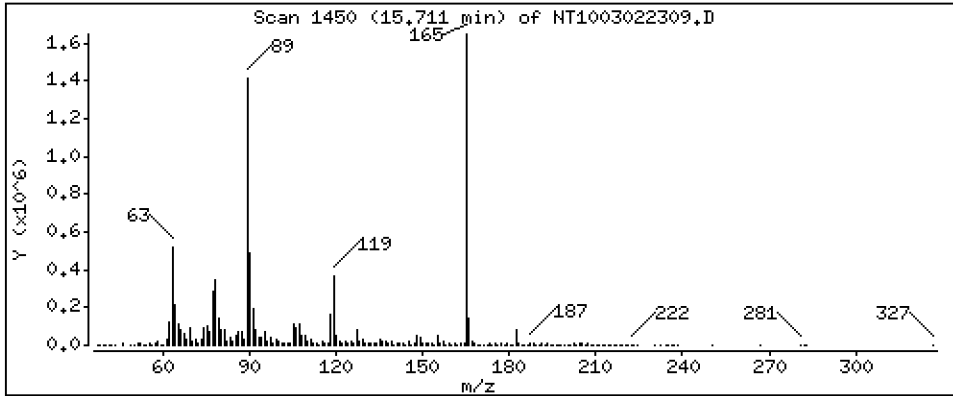
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 18,08 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

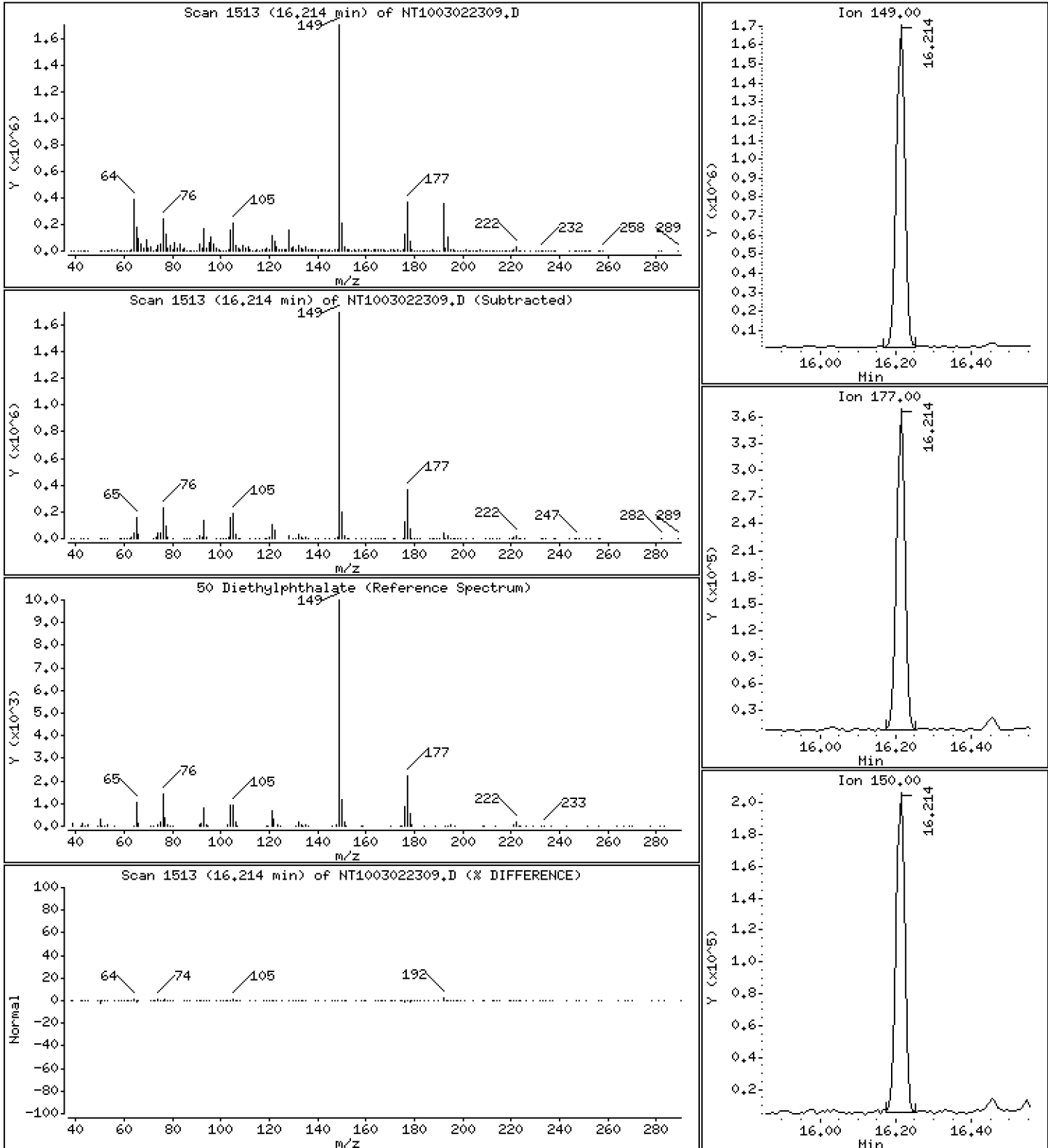
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,876 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

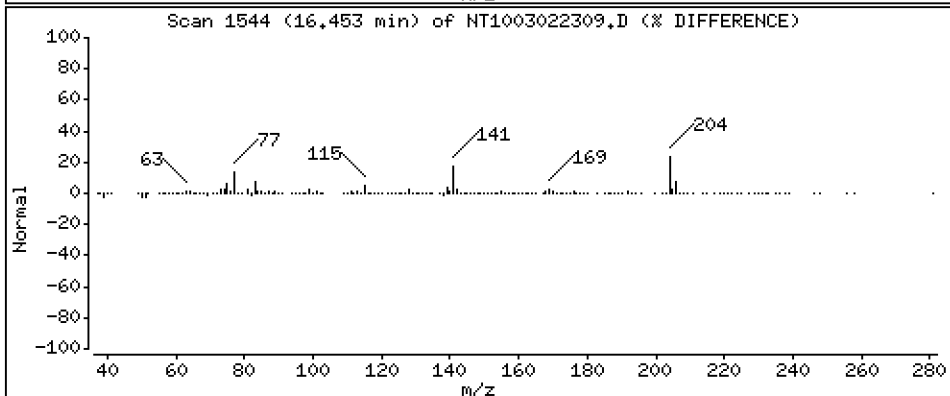
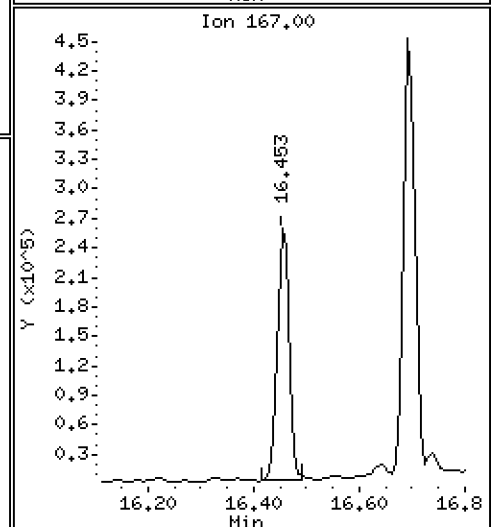
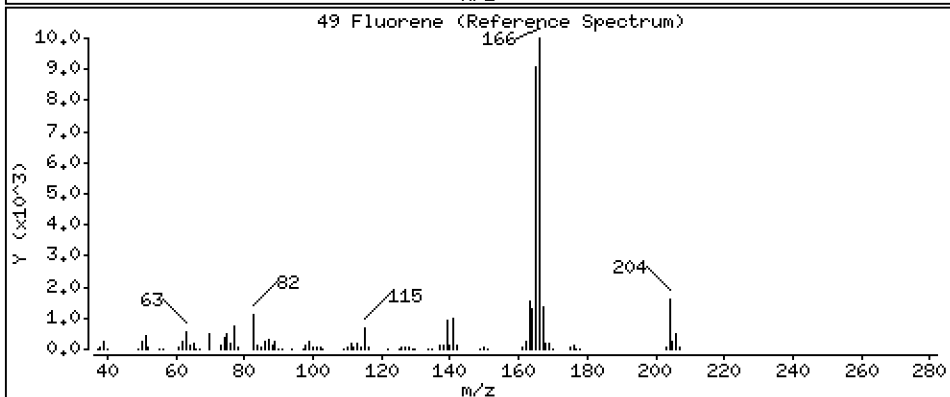
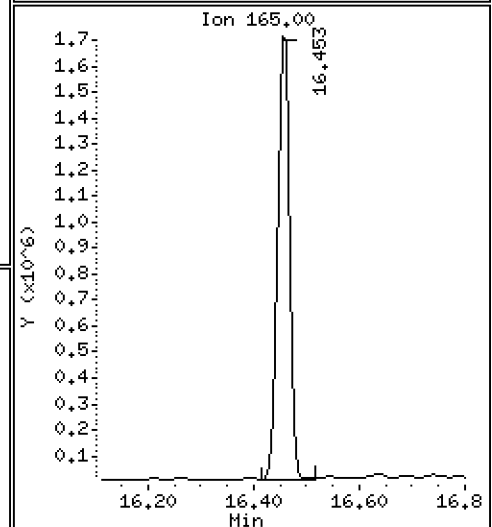
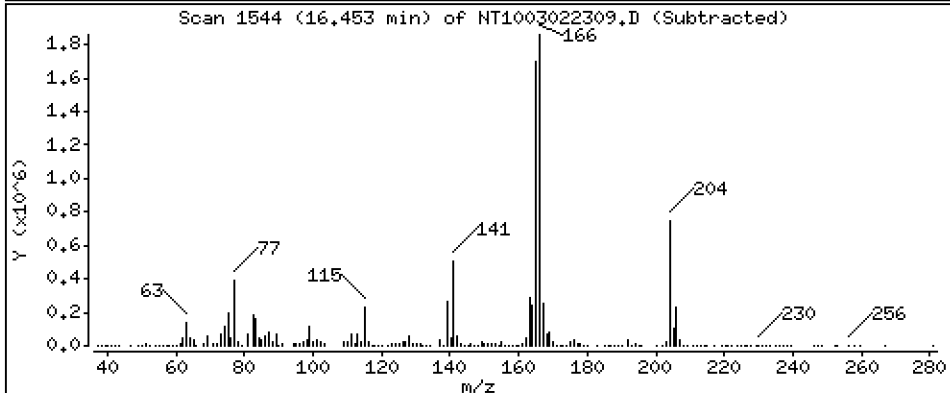
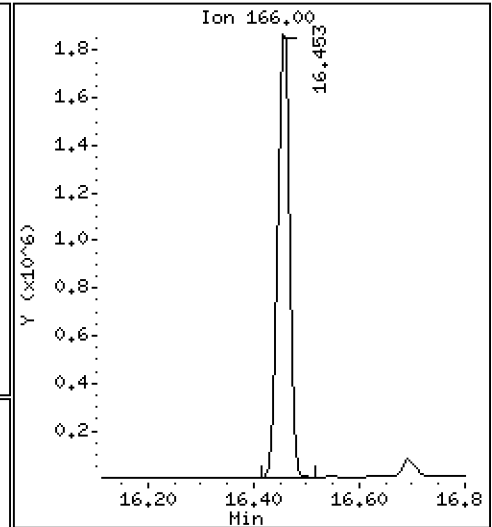
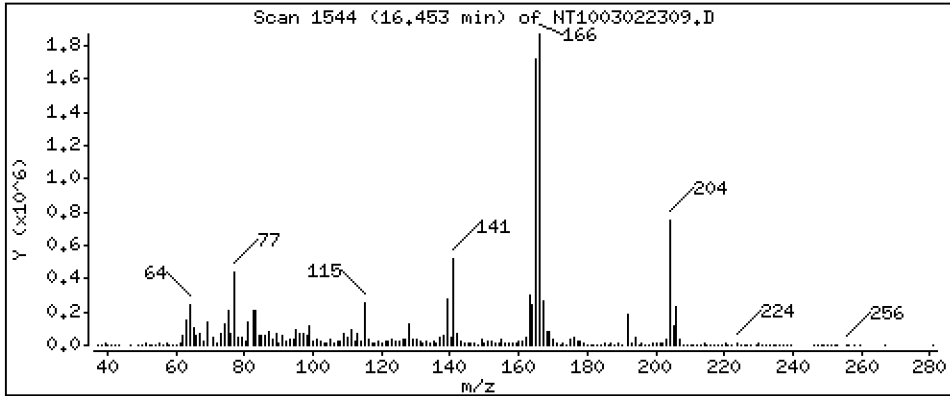
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 6,382 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

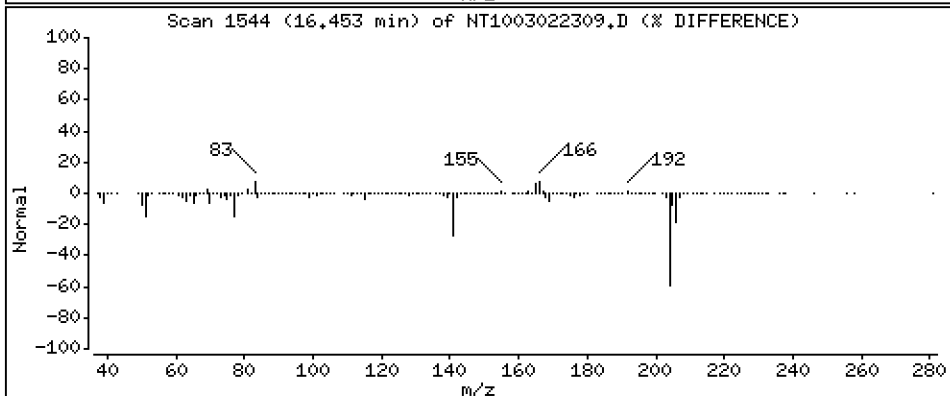
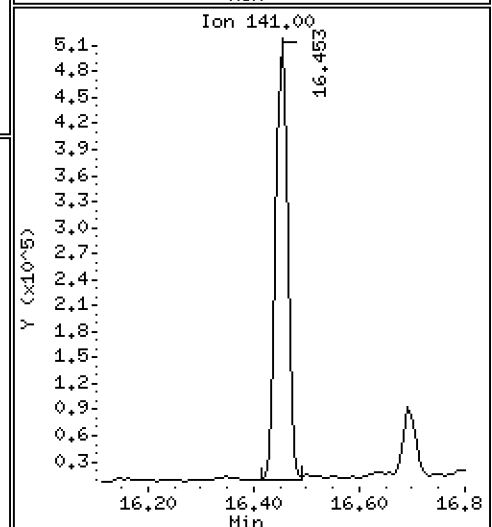
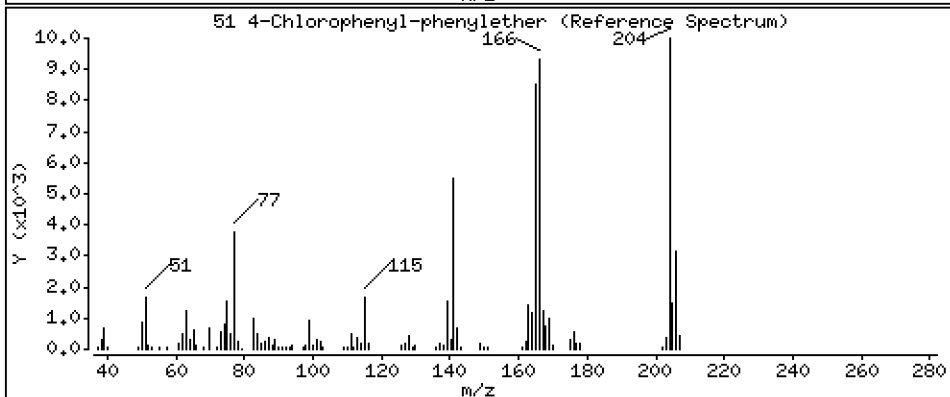
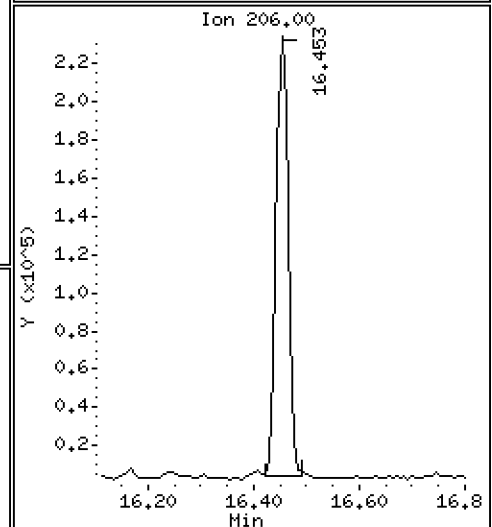
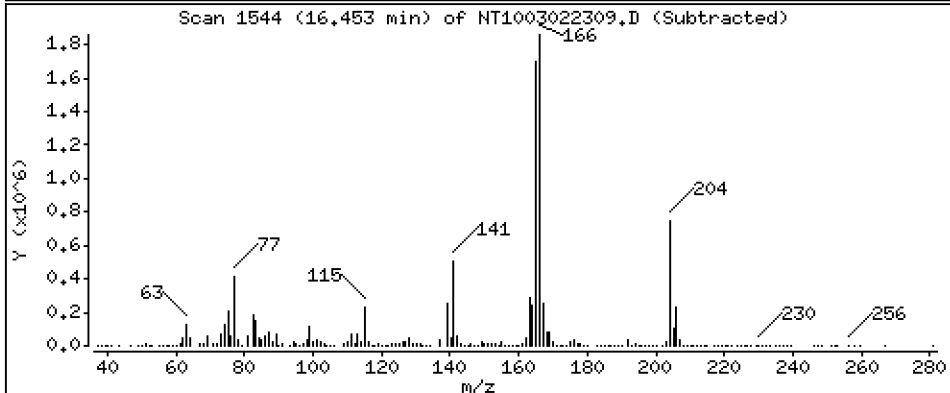
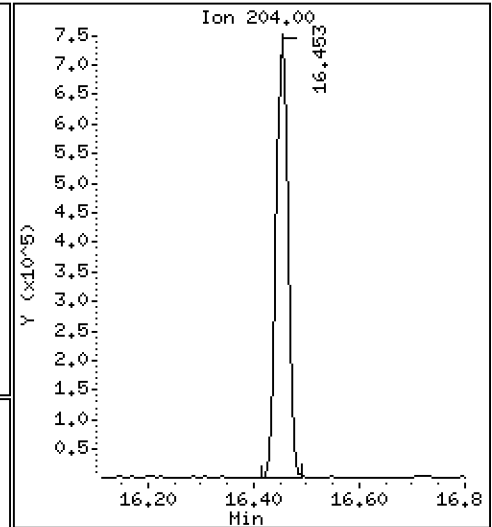
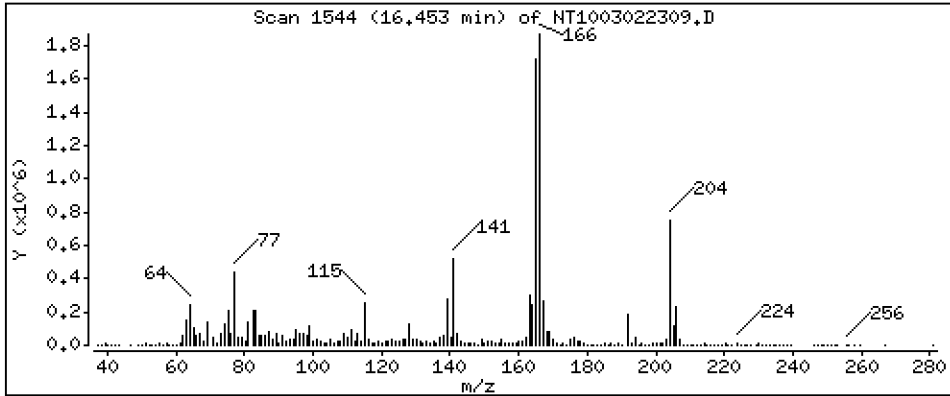
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,469 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

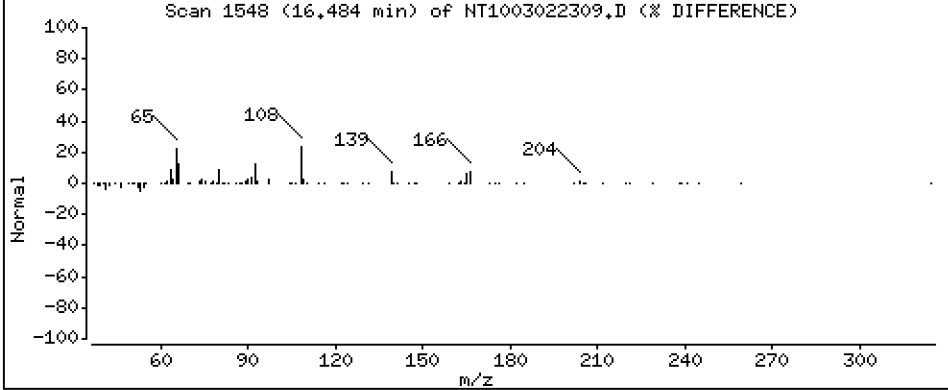
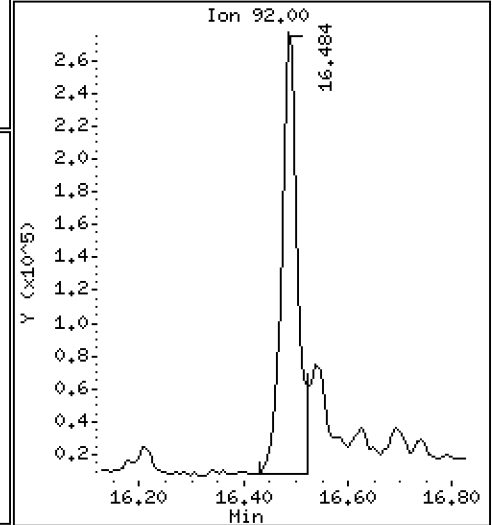
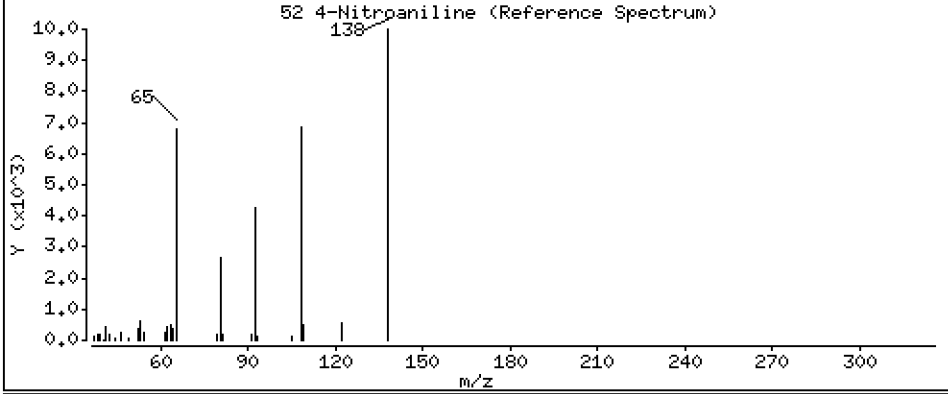
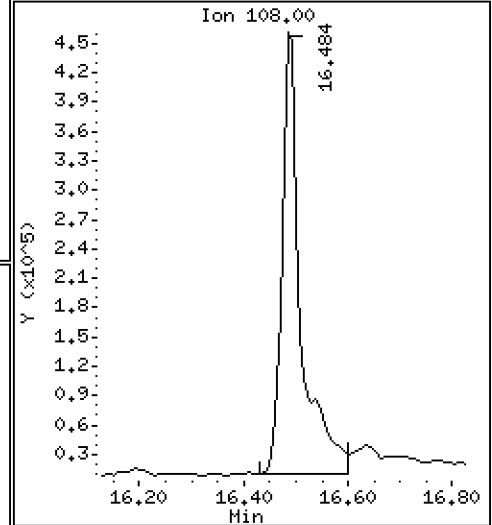
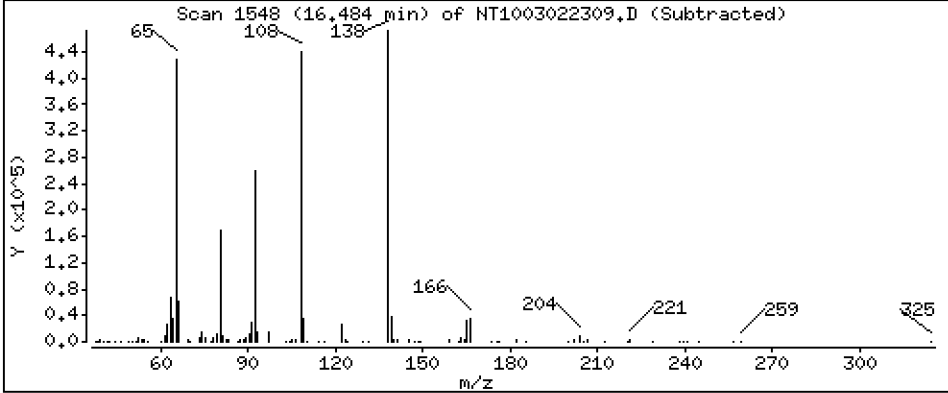
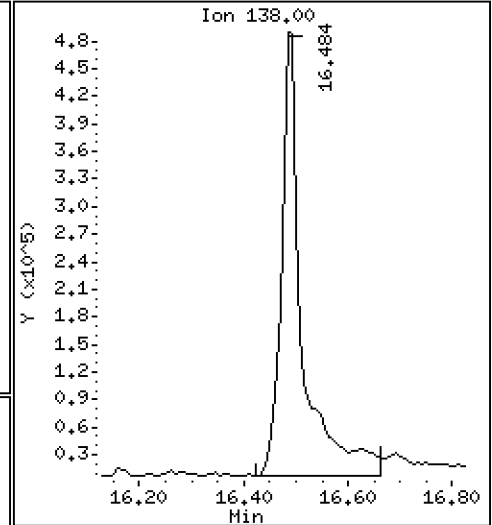
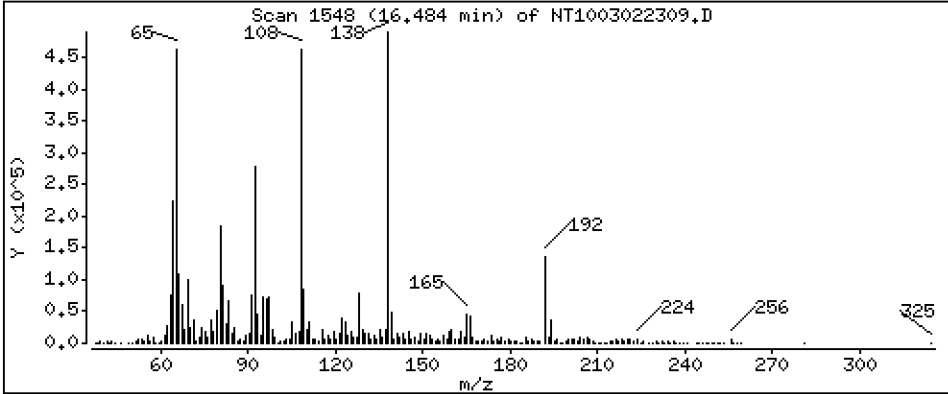
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 13,22 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

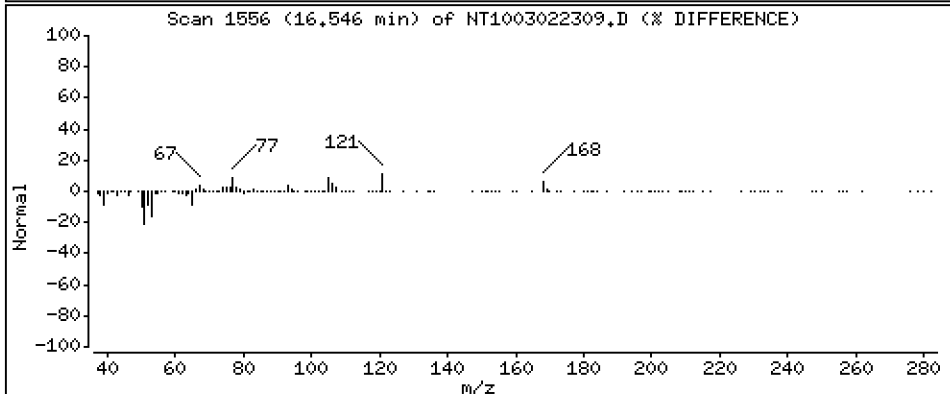
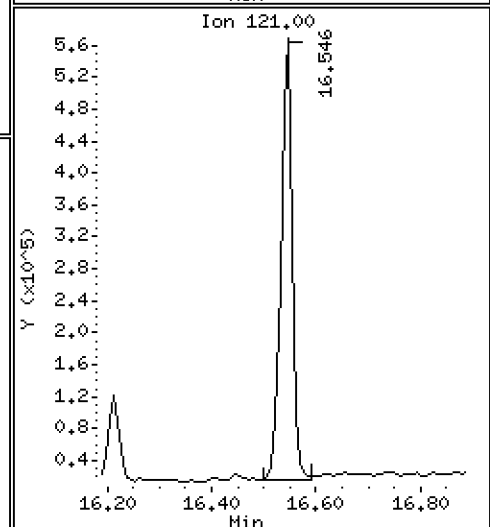
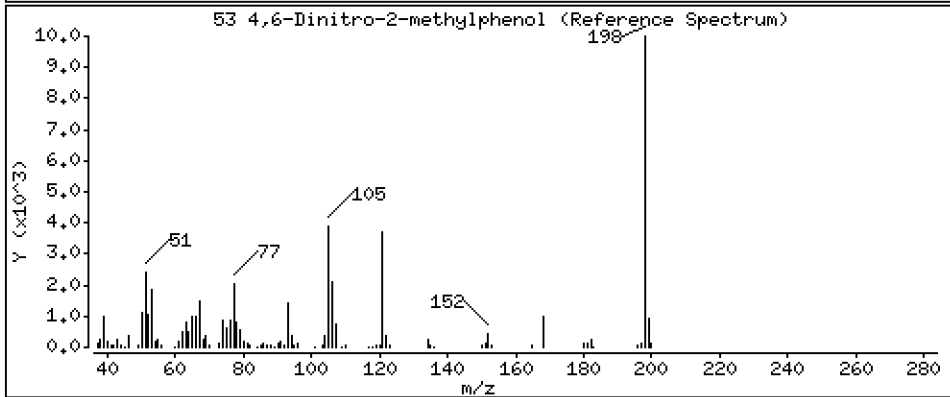
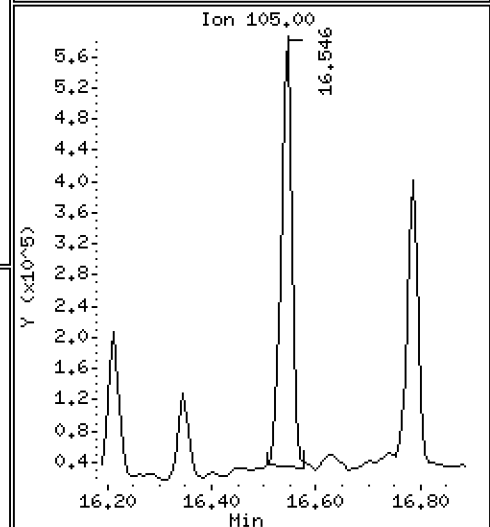
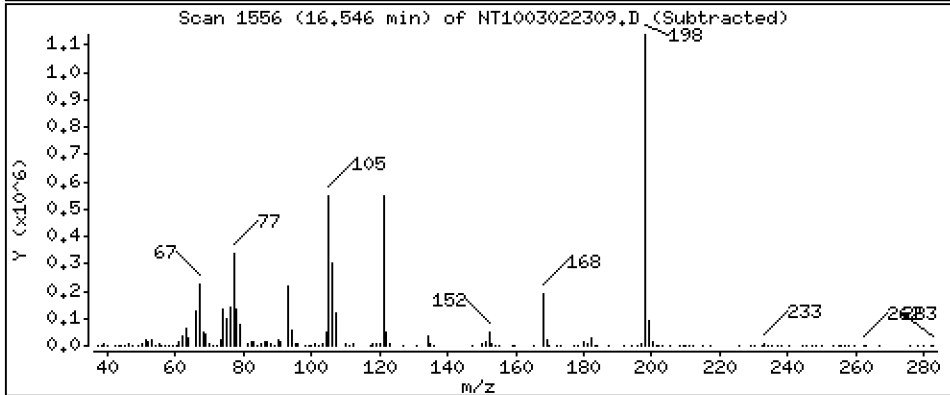
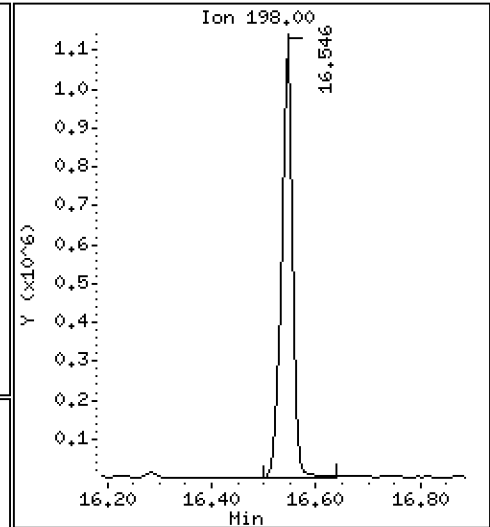
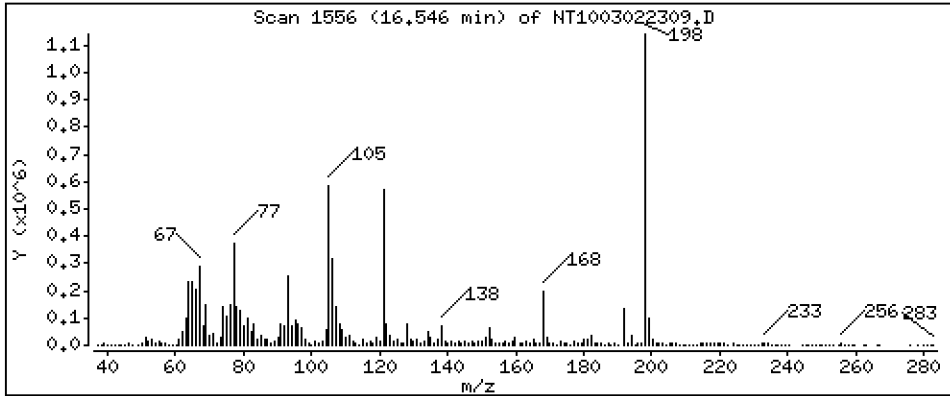
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 26,90 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

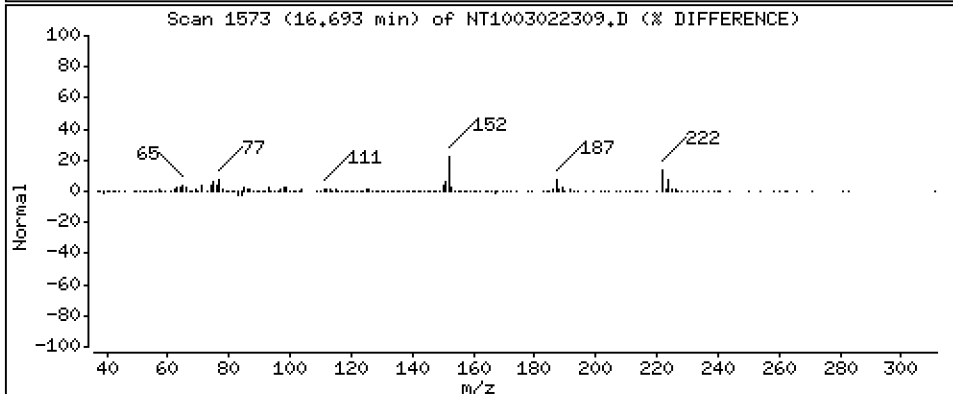
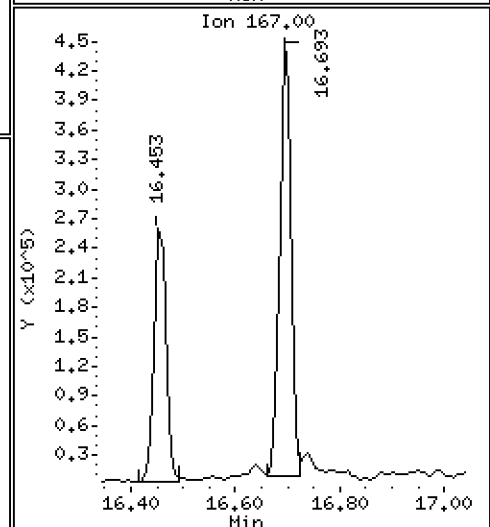
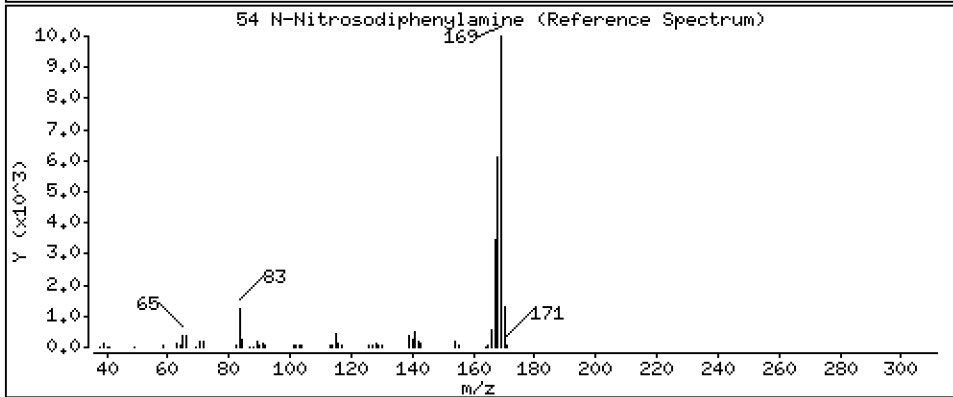
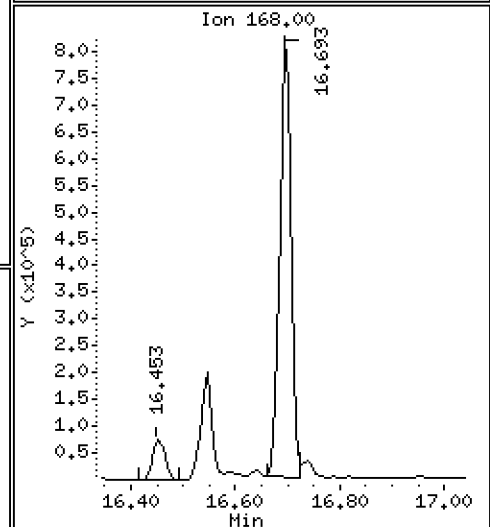
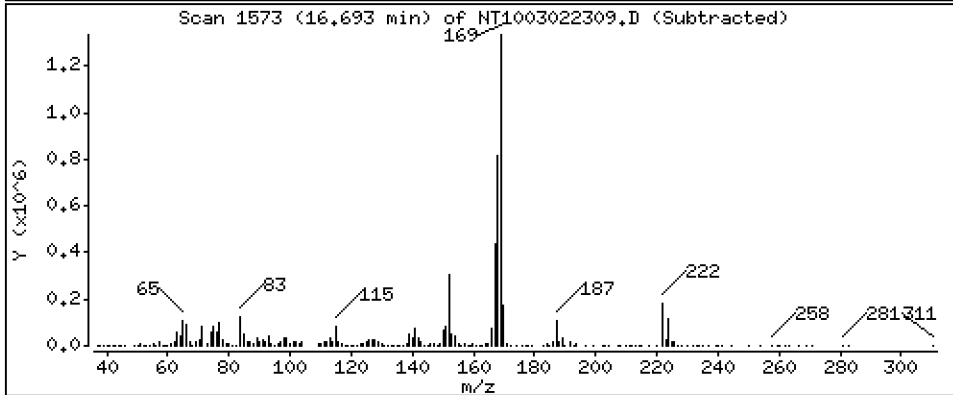
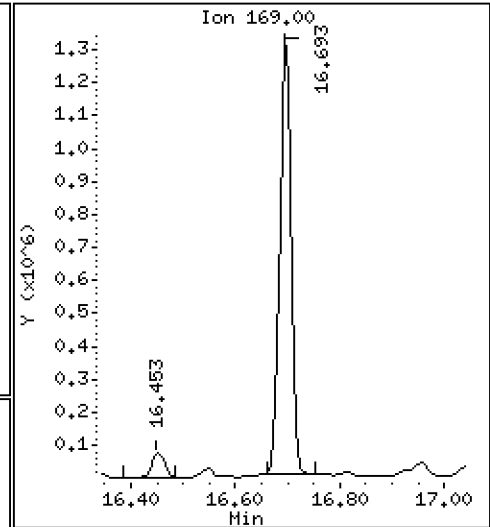
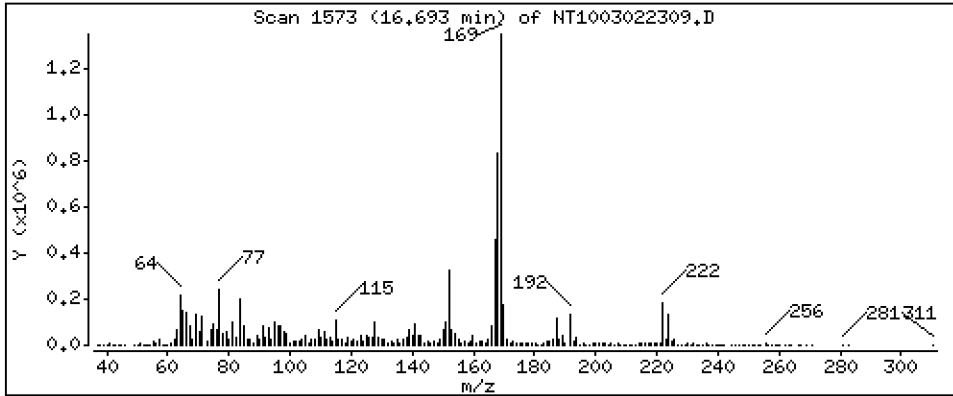
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,977 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

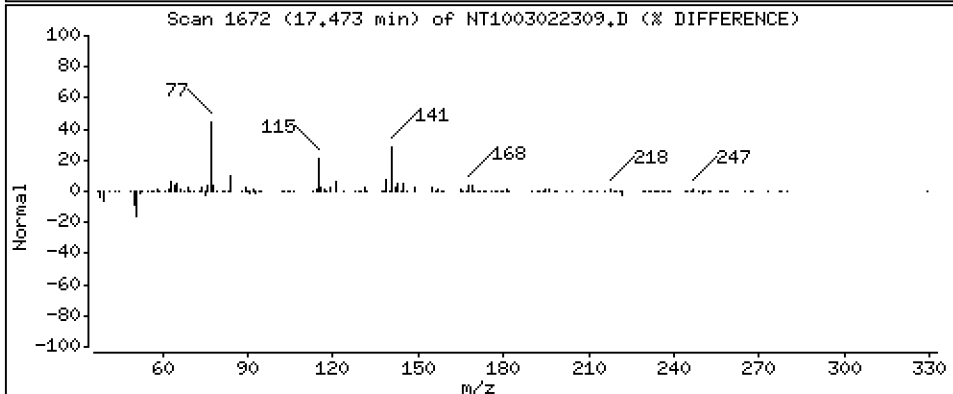
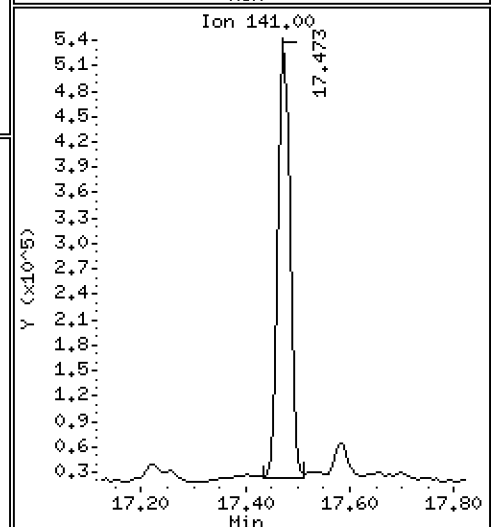
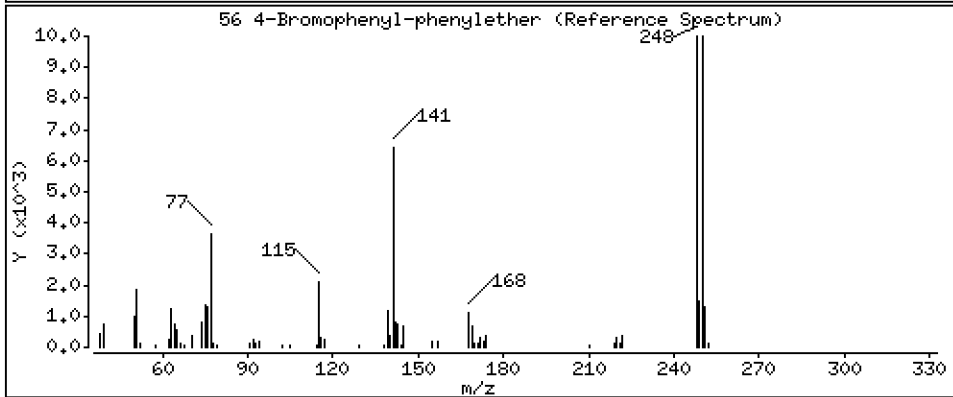
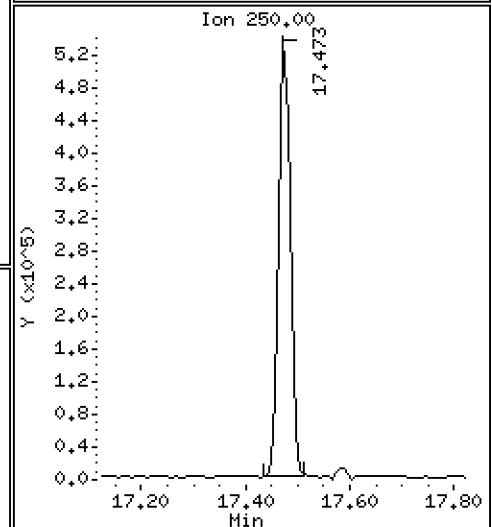
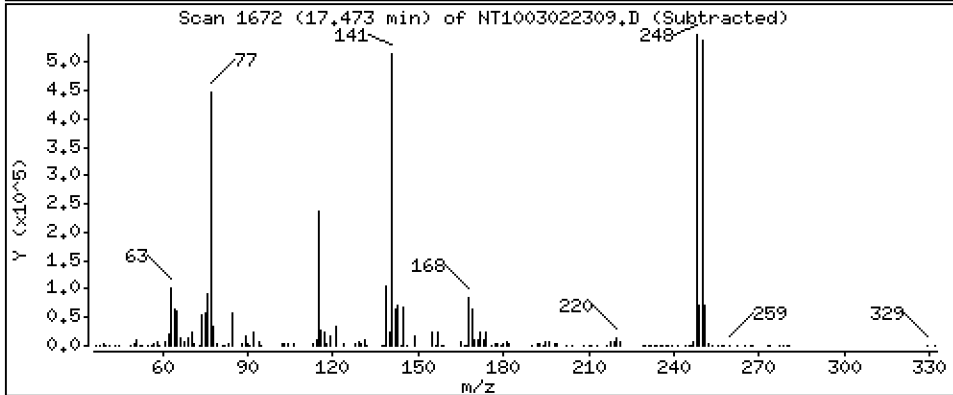
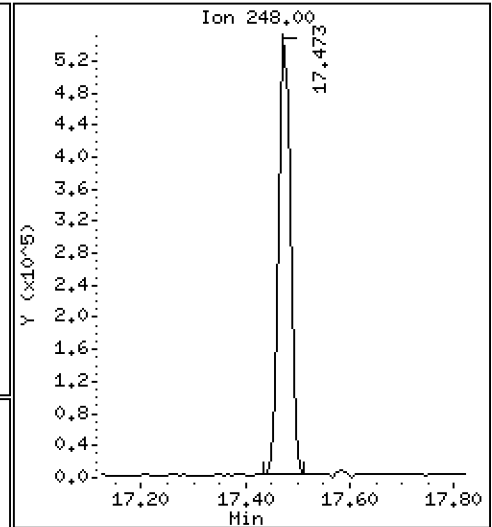
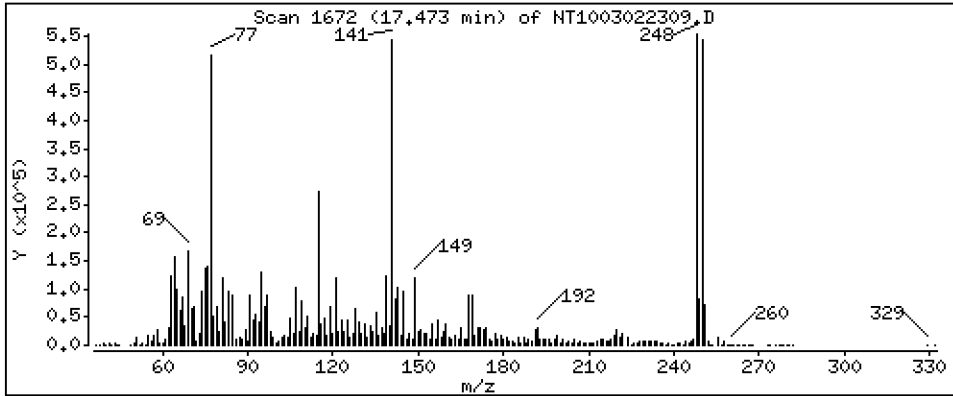
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 4,971 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

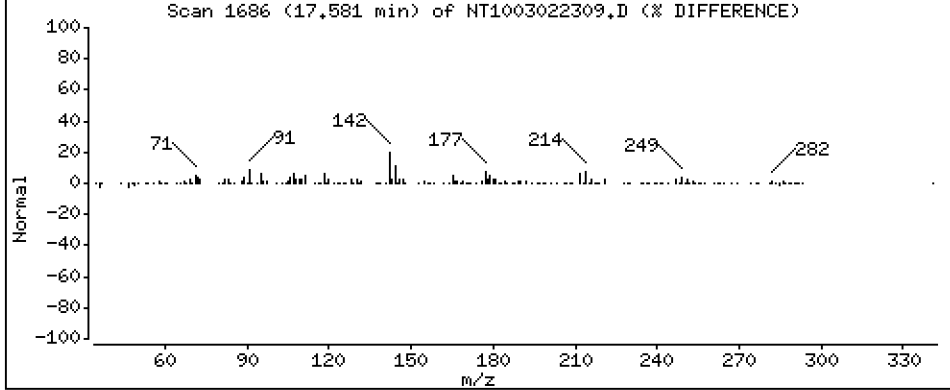
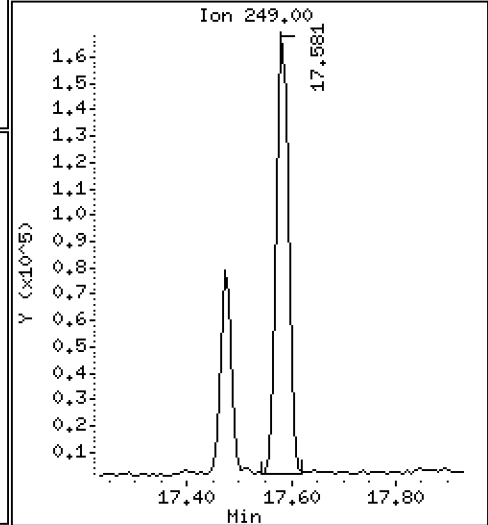
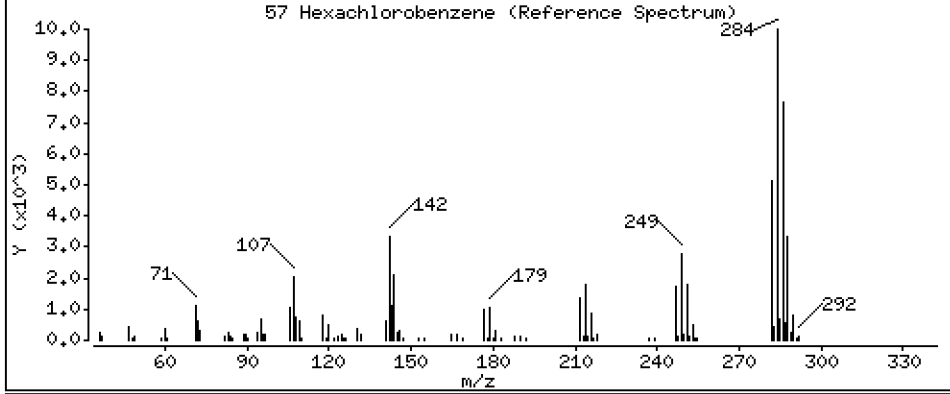
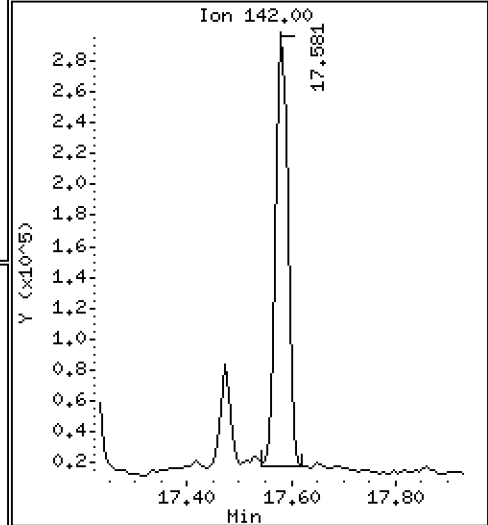
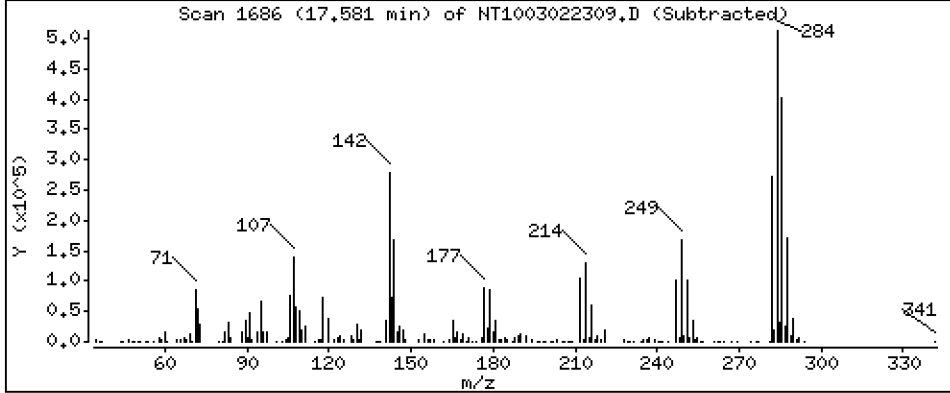
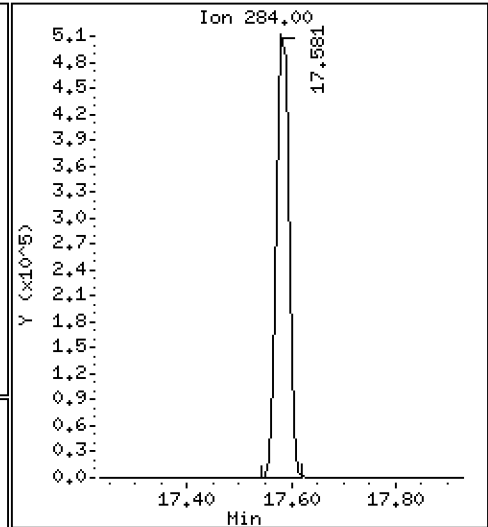
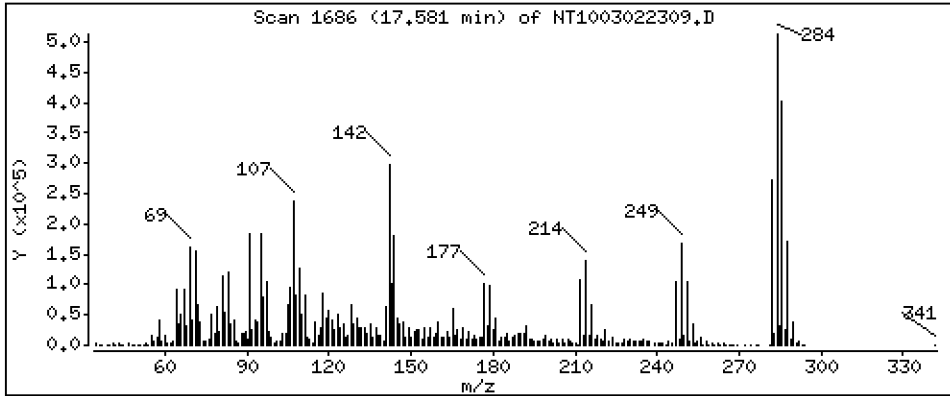
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,484 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

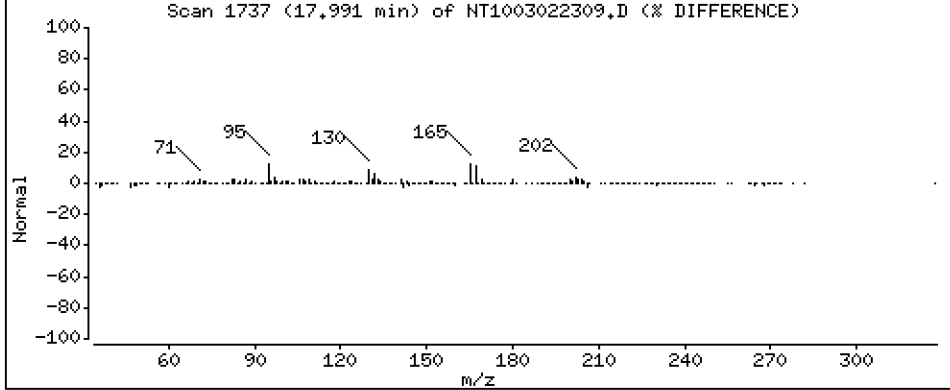
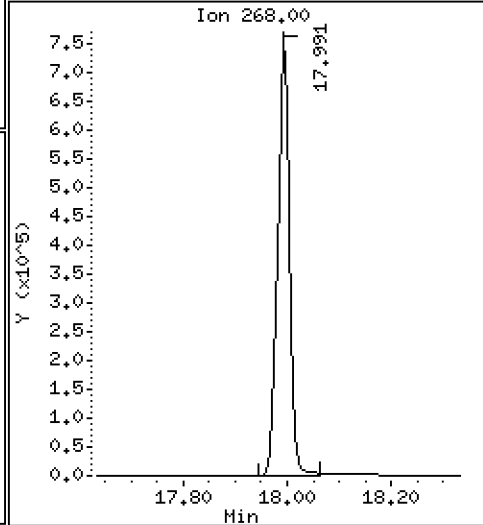
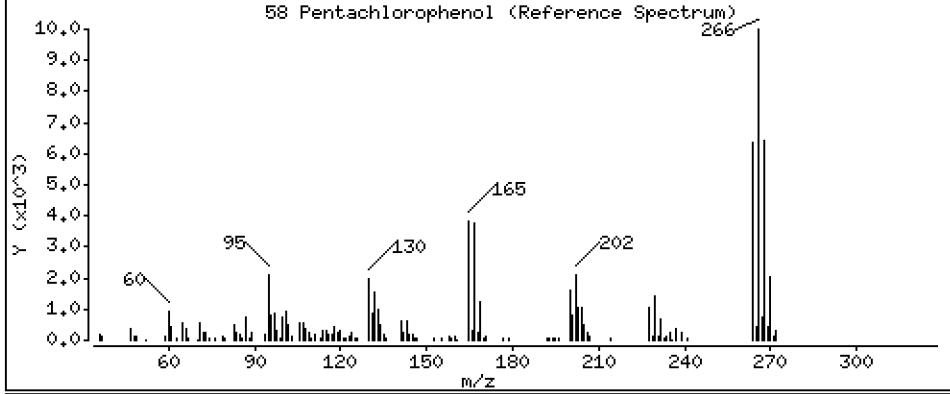
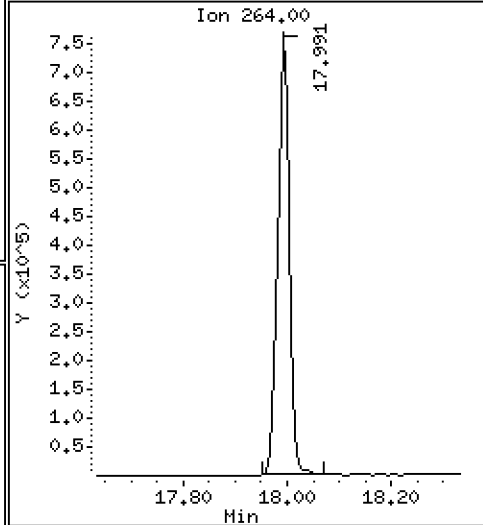
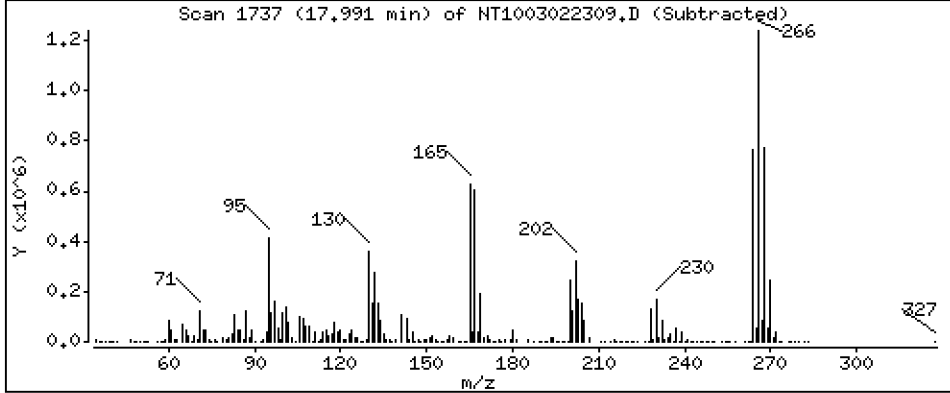
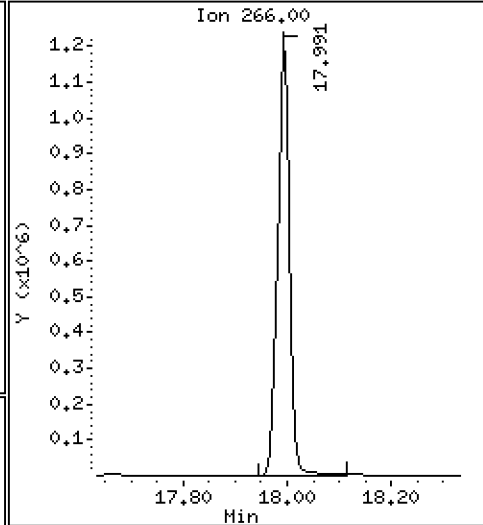
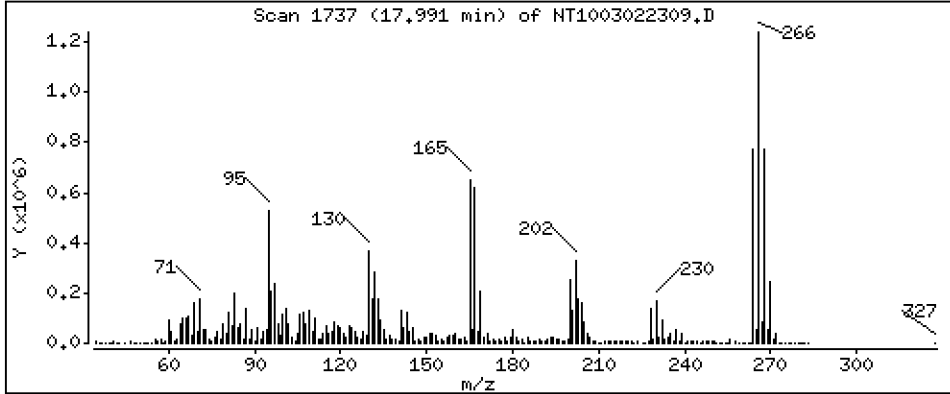
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 19,58 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

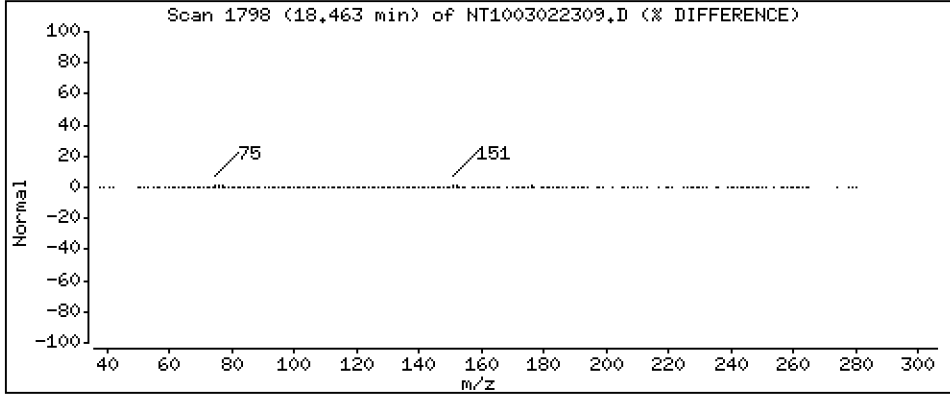
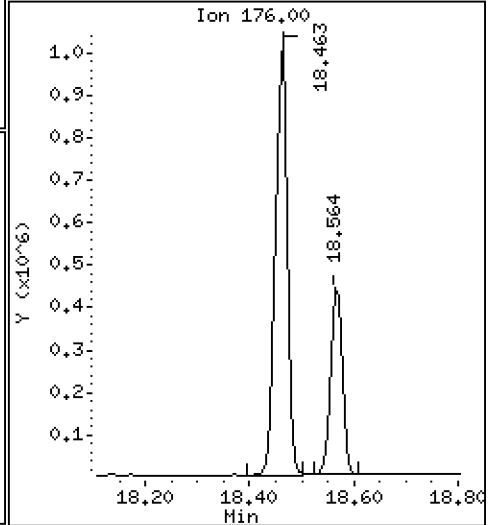
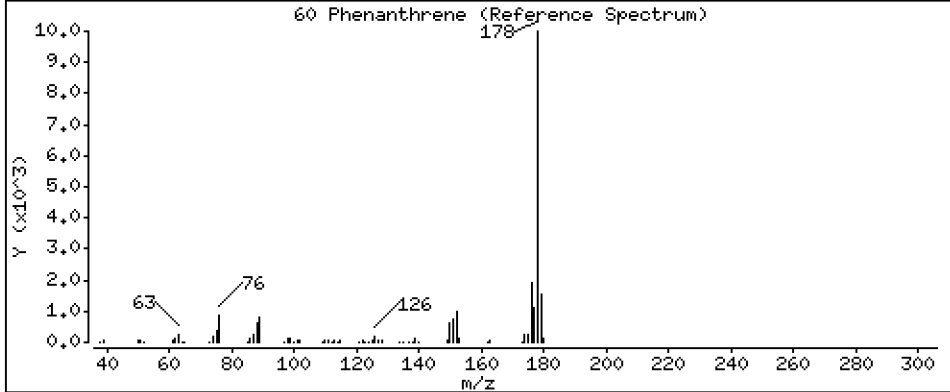
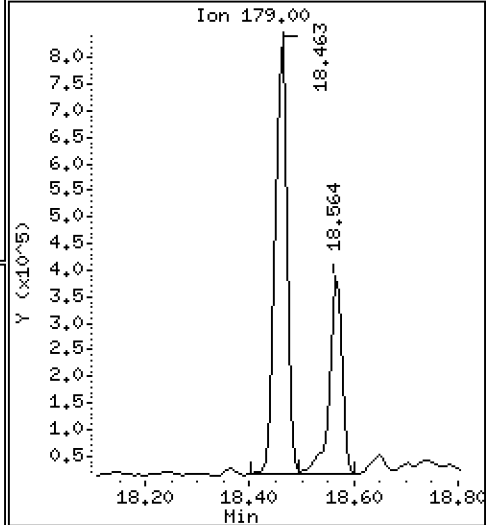
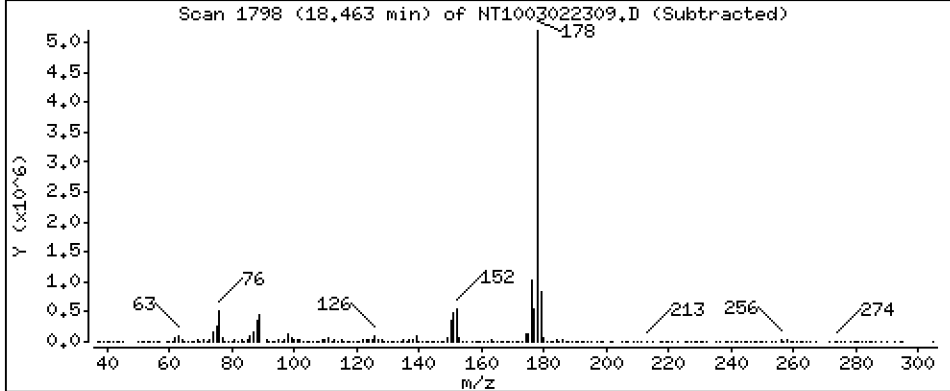
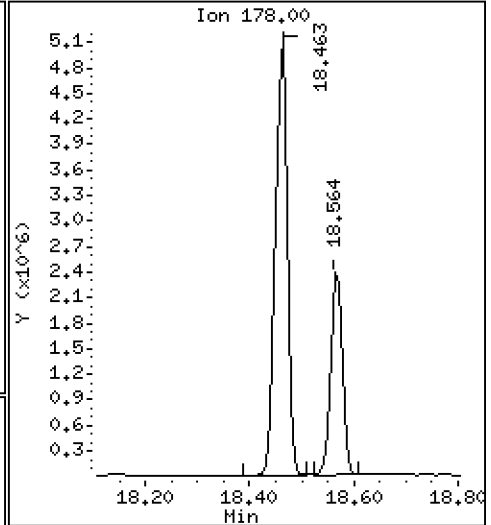
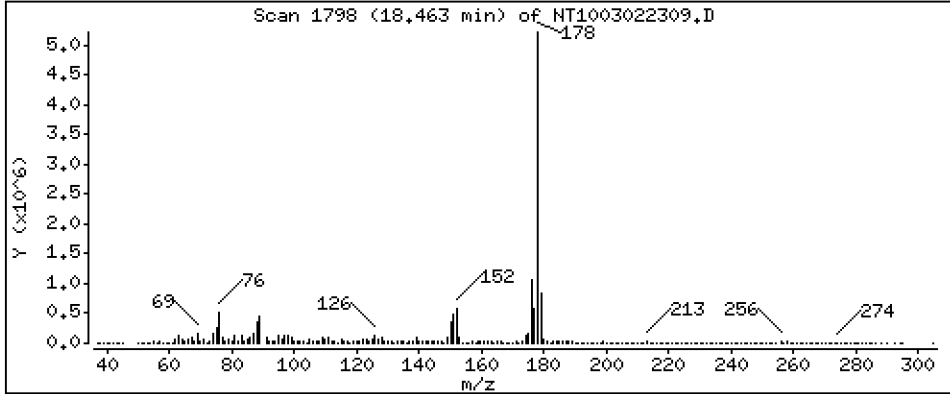
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 11,42 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

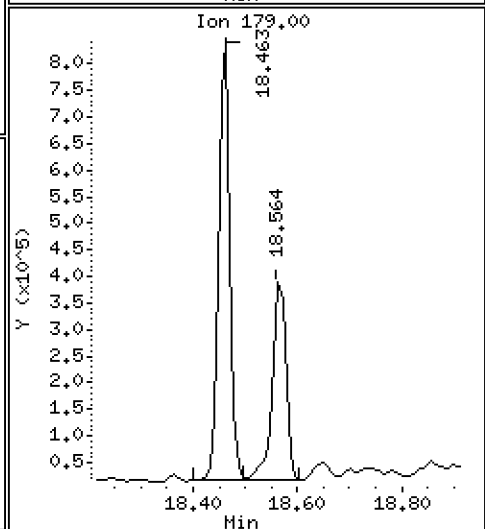
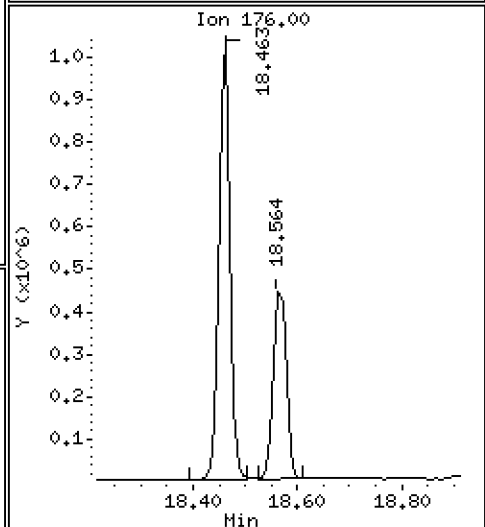
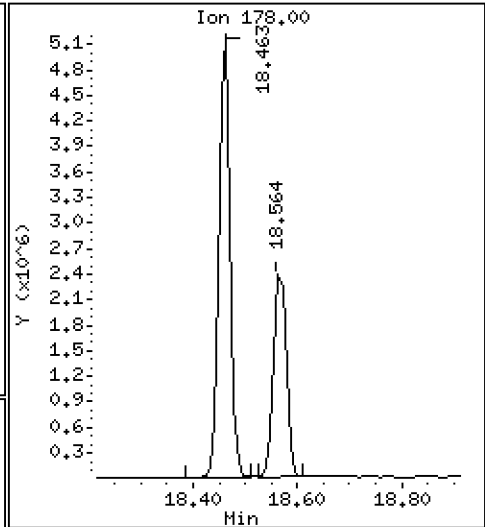
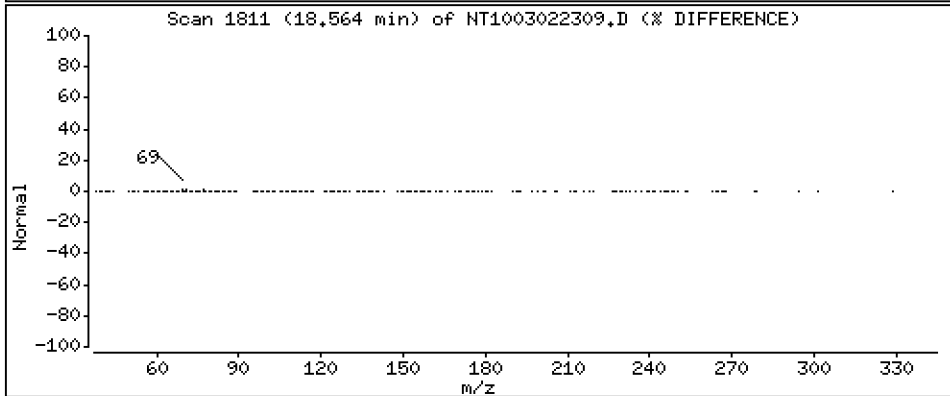
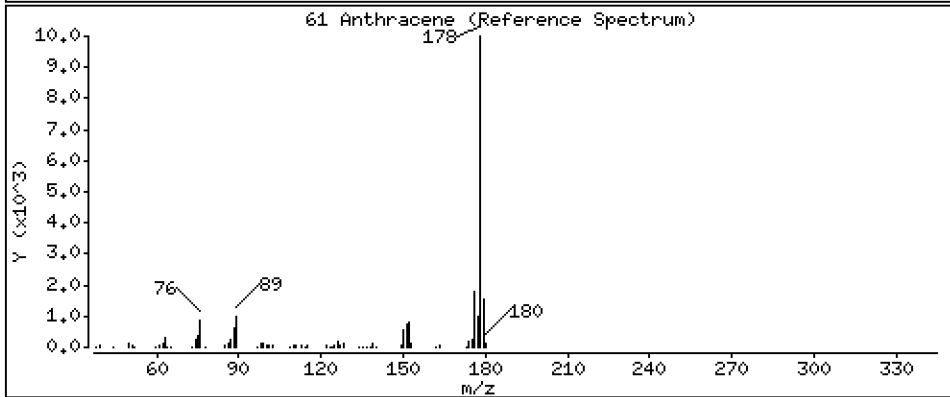
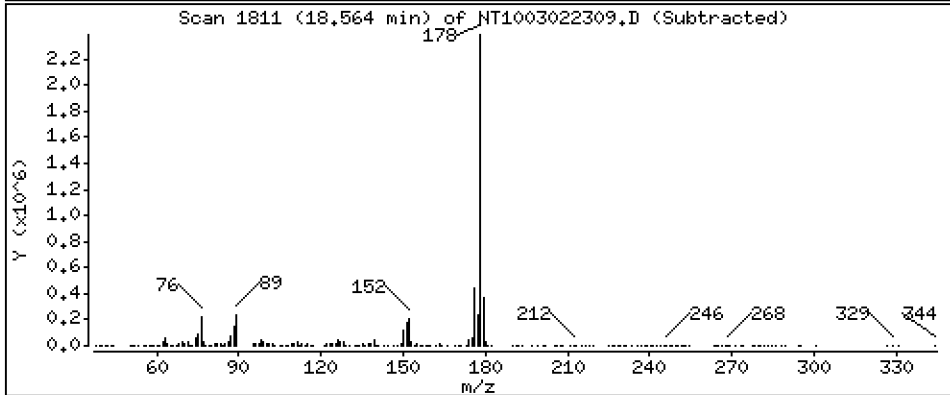
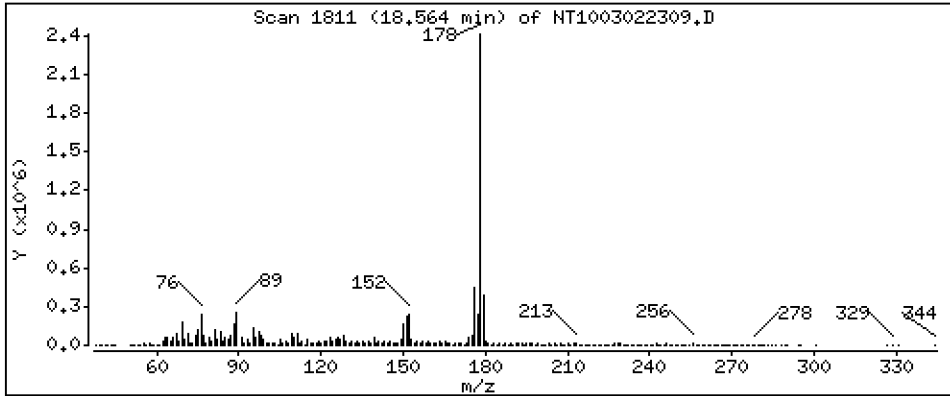
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 5,826 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

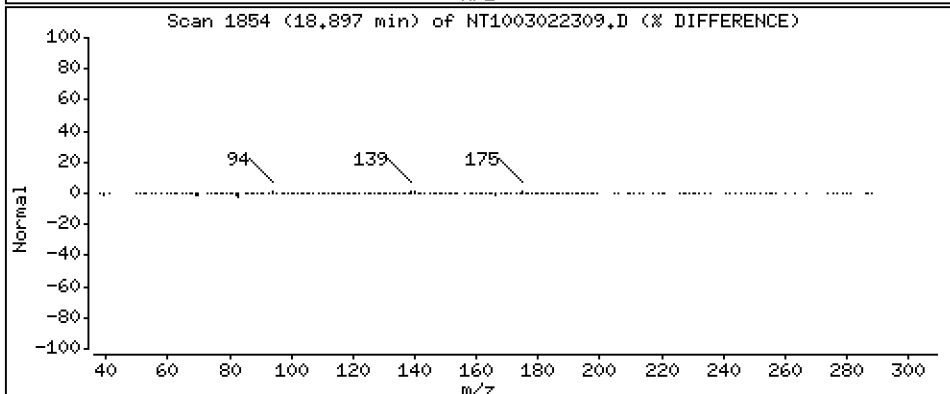
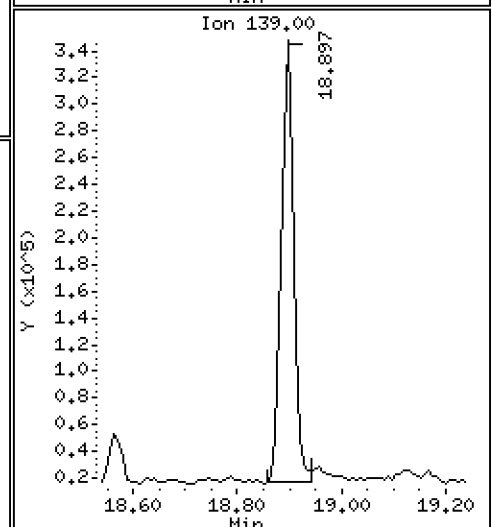
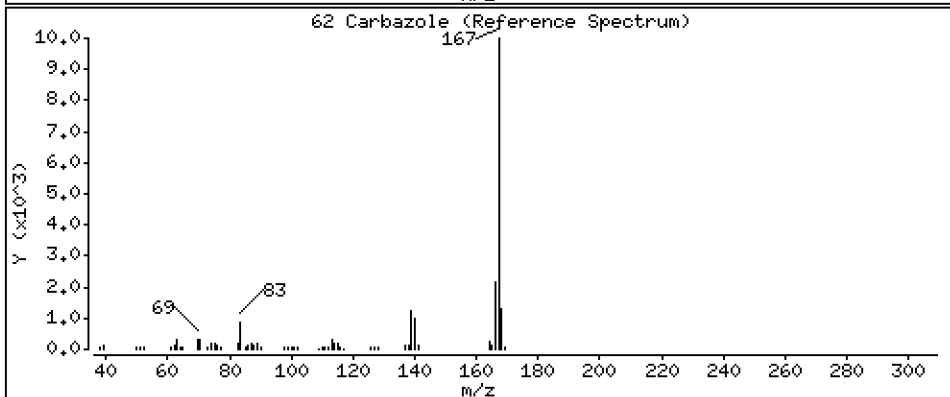
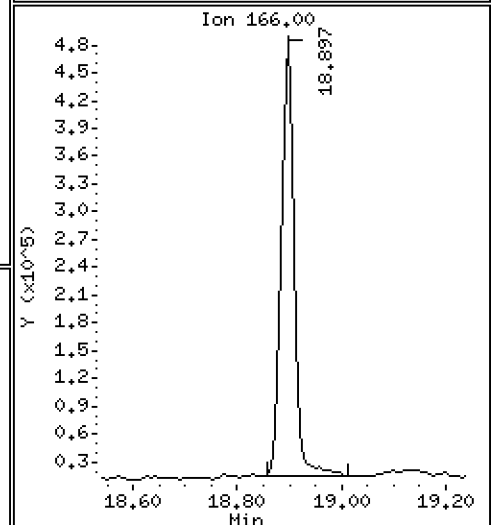
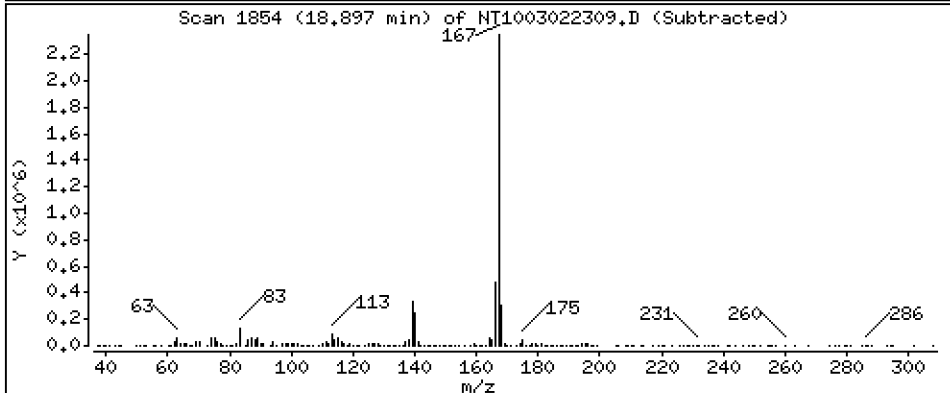
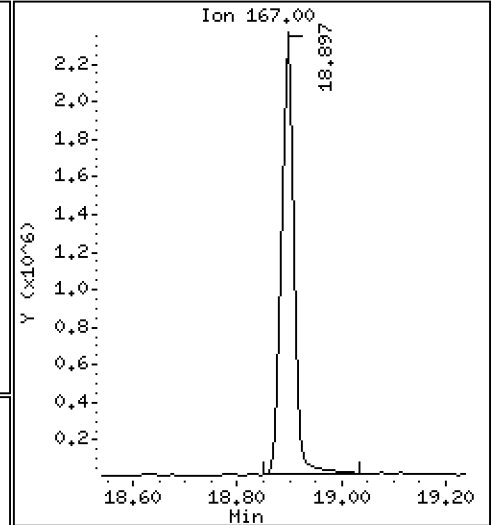
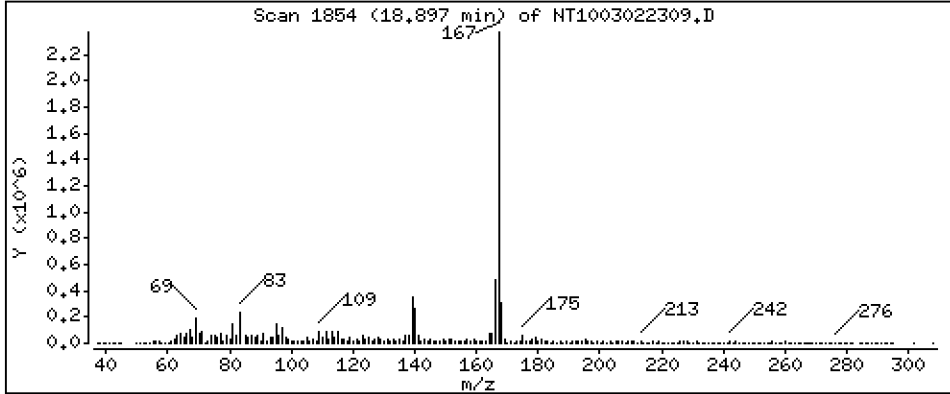
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 6,289 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

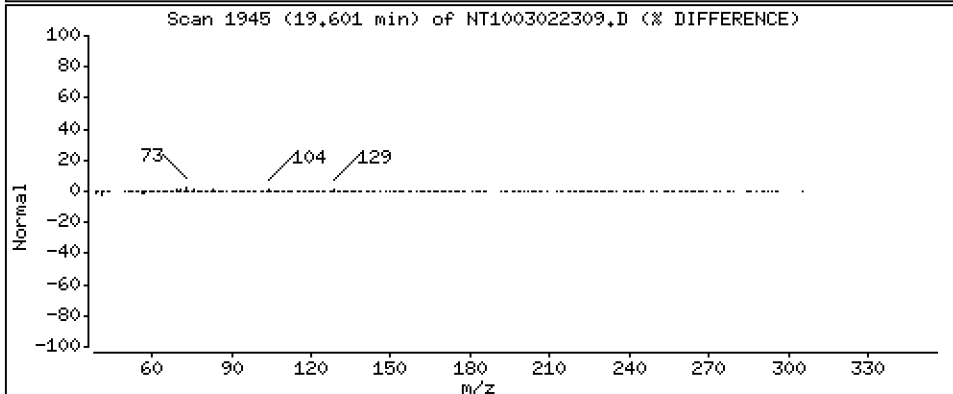
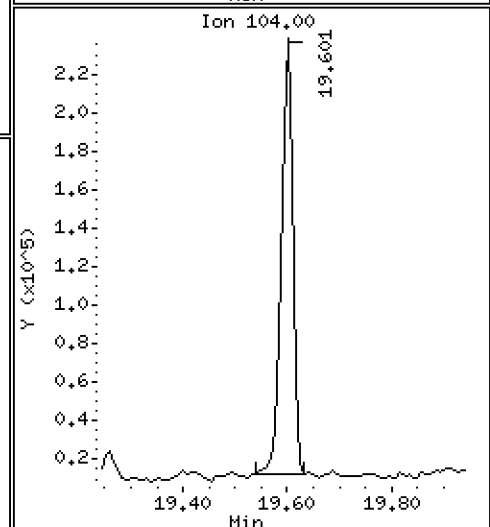
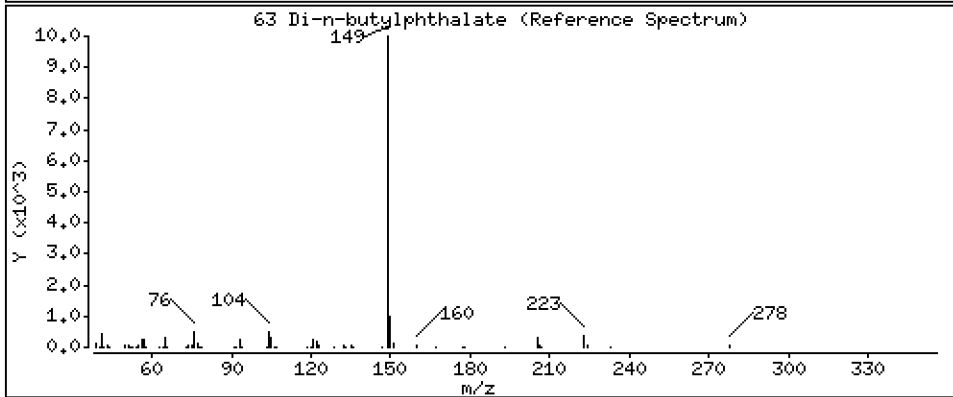
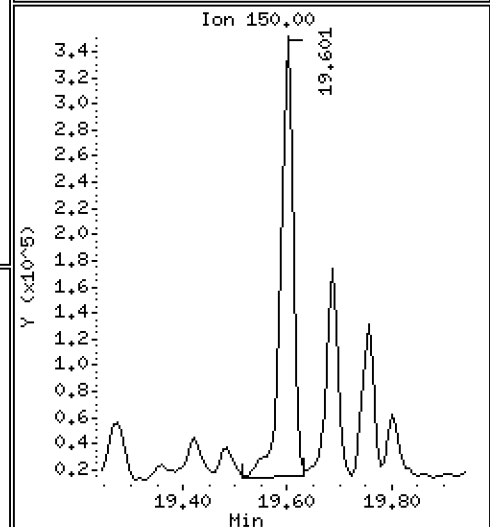
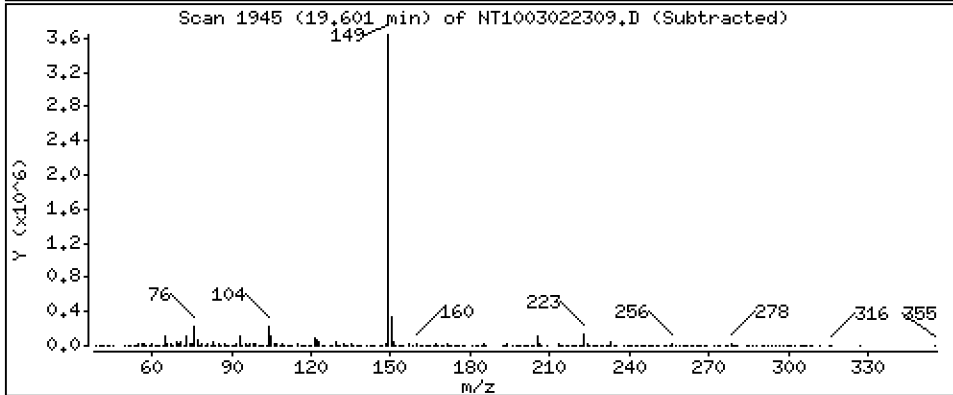
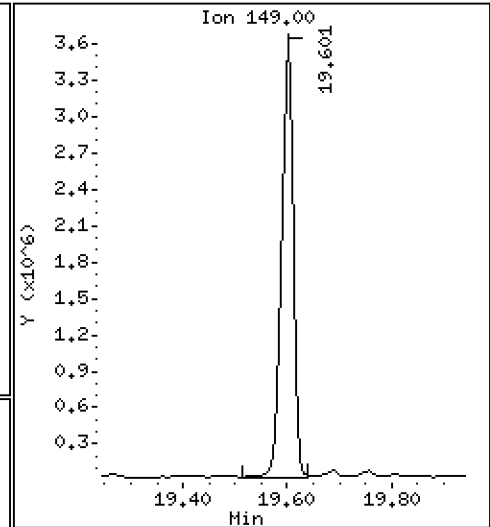
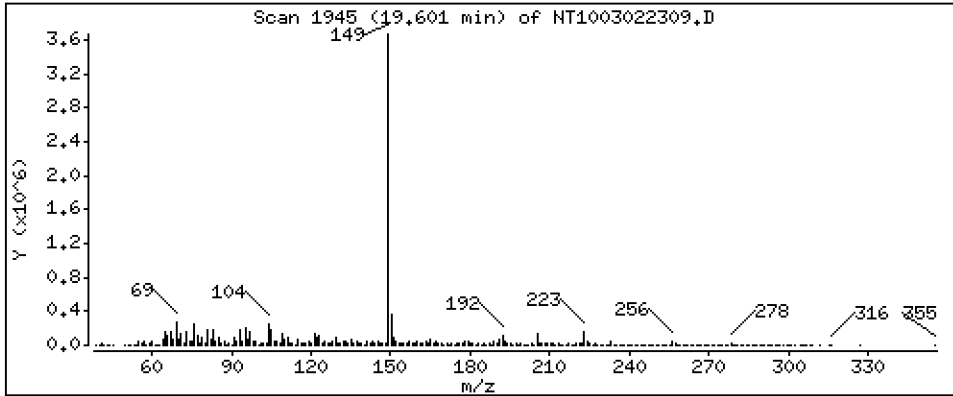
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 6,271 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

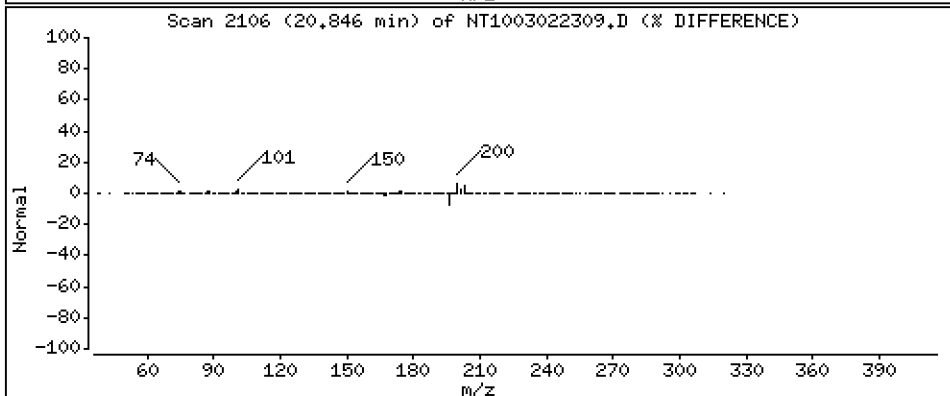
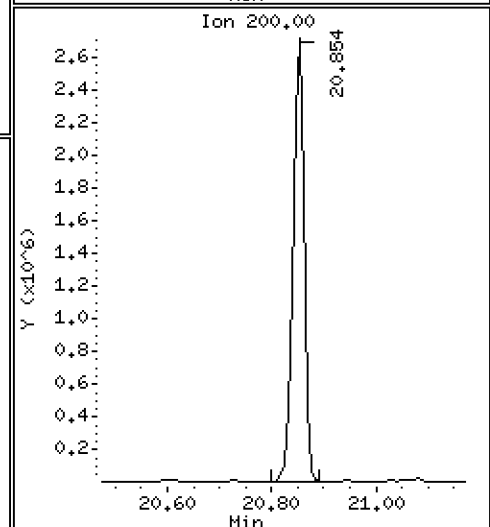
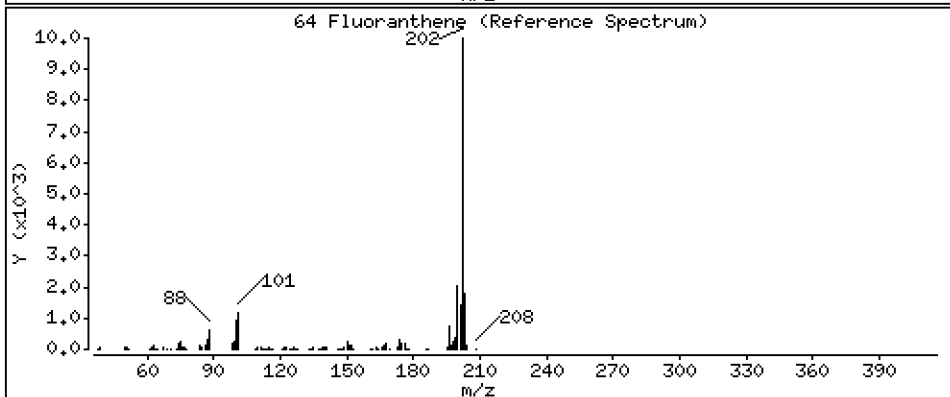
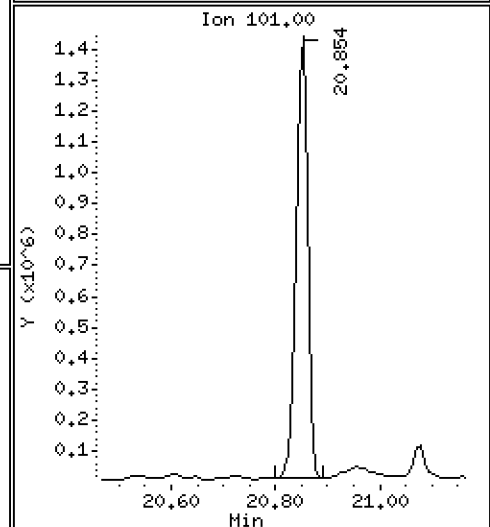
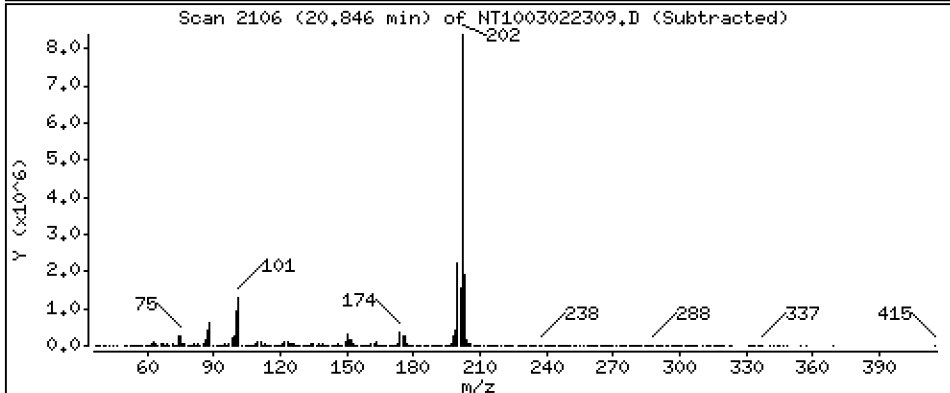
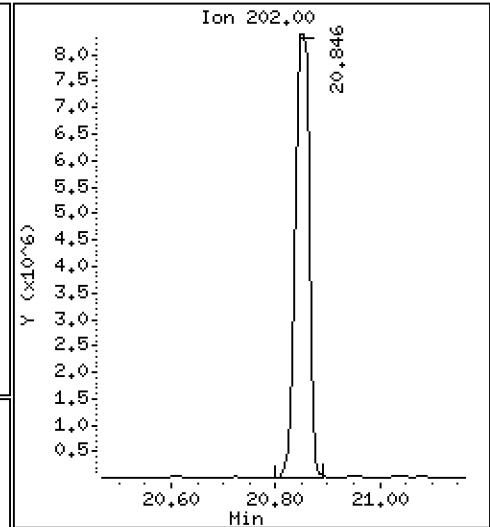
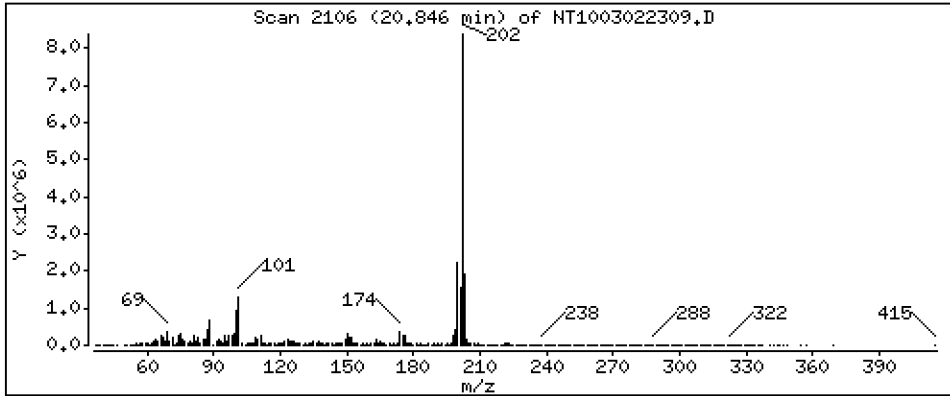
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 12,22 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

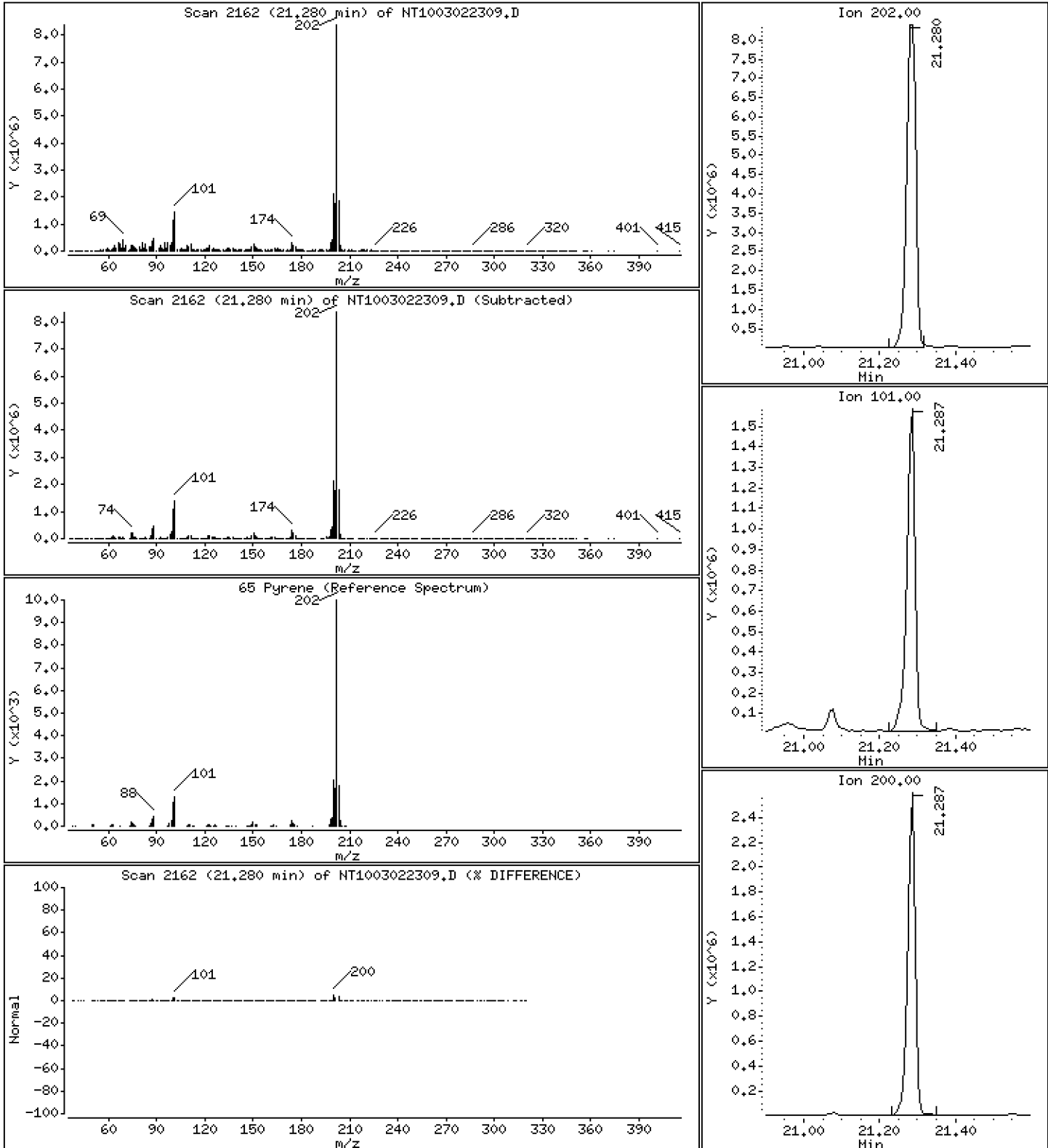
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 10,84 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

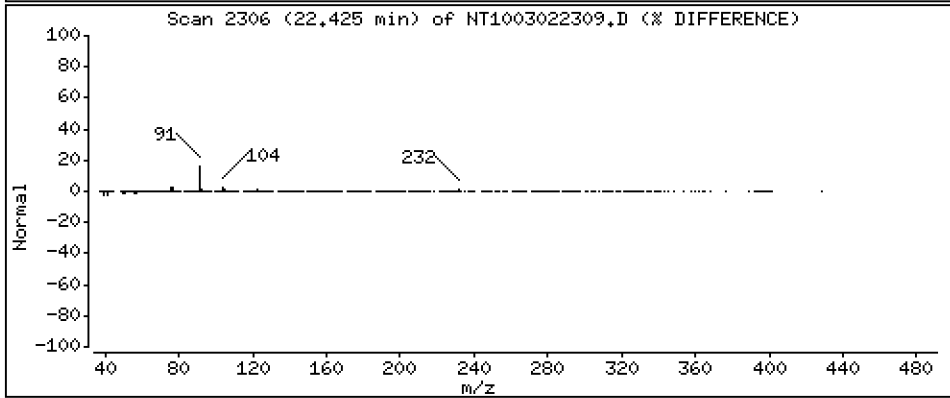
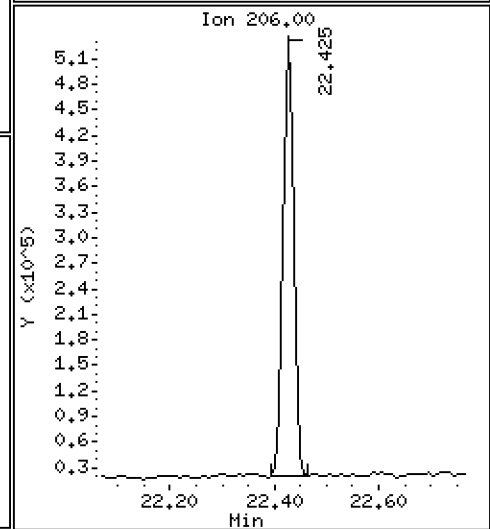
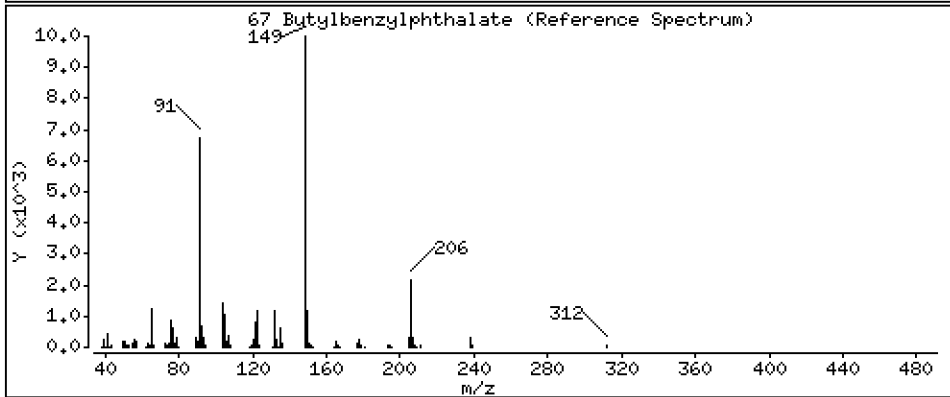
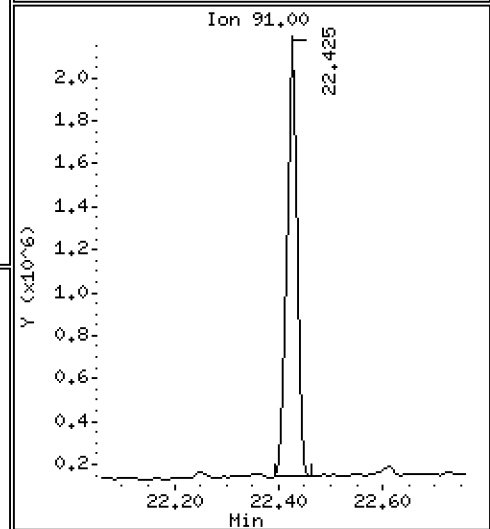
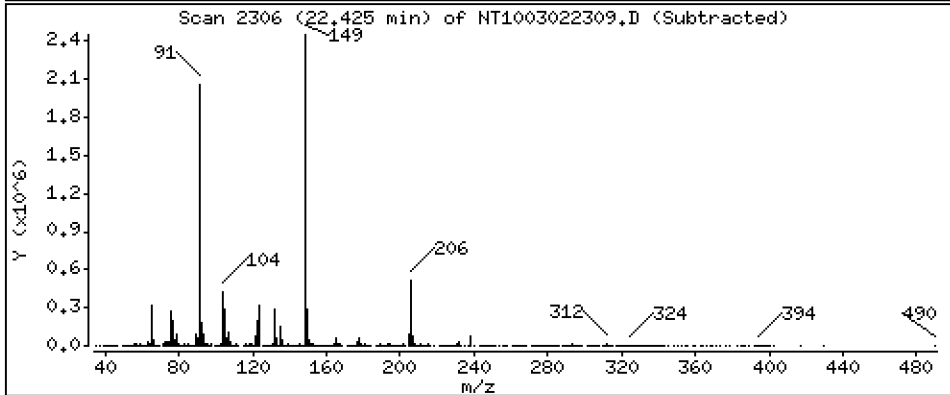
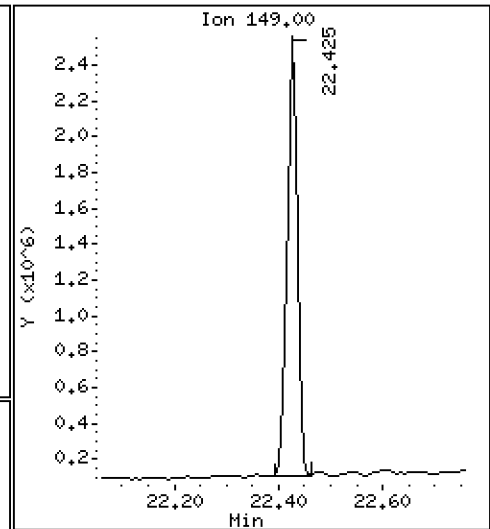
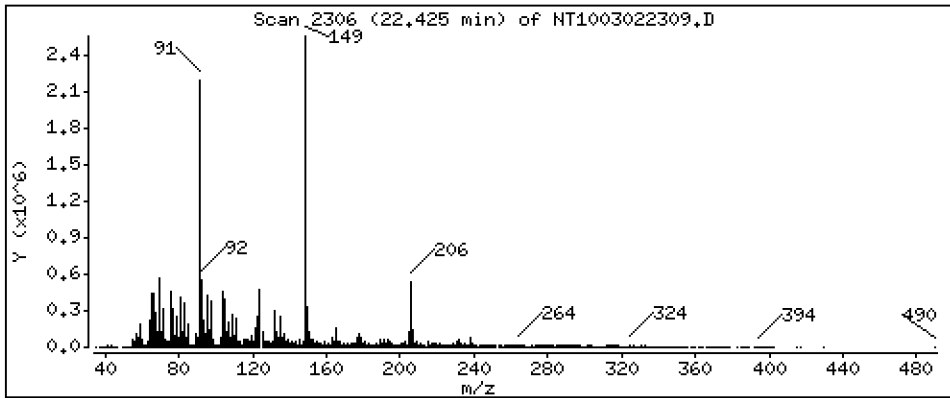
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,505 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

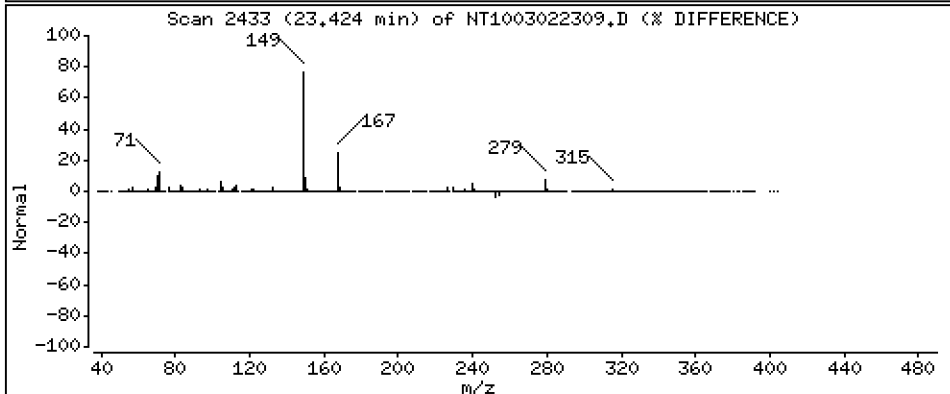
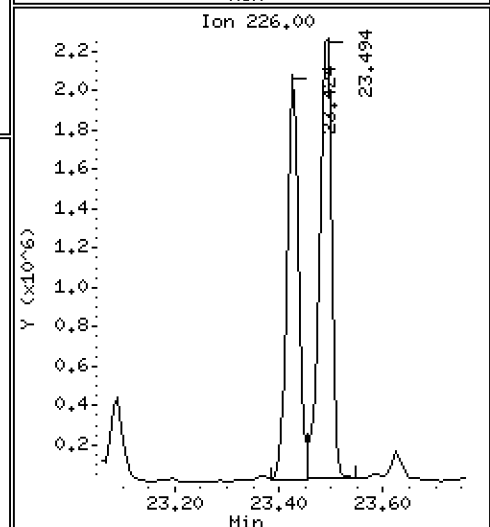
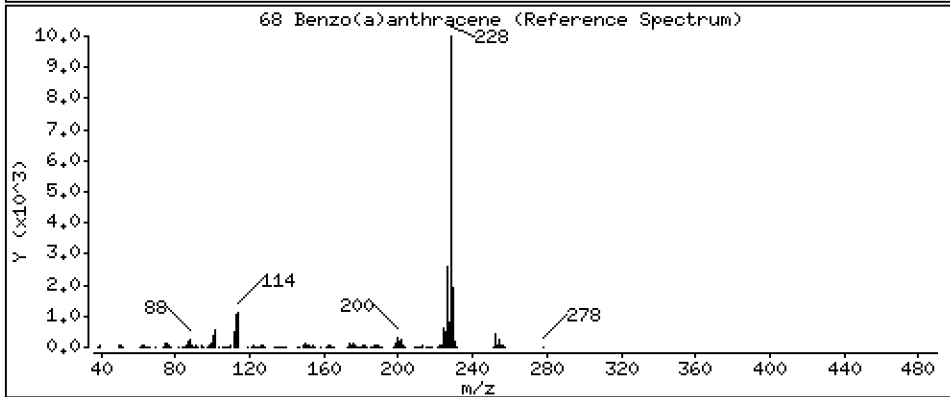
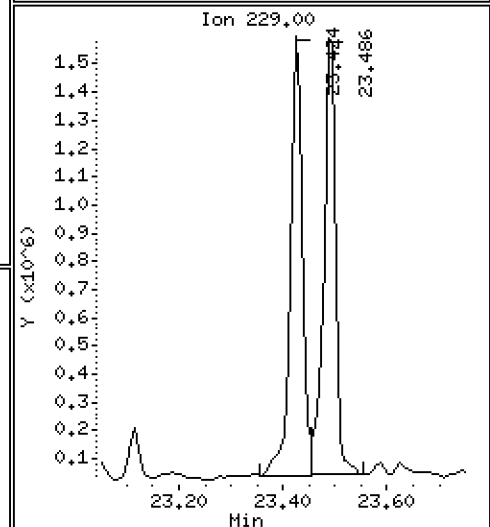
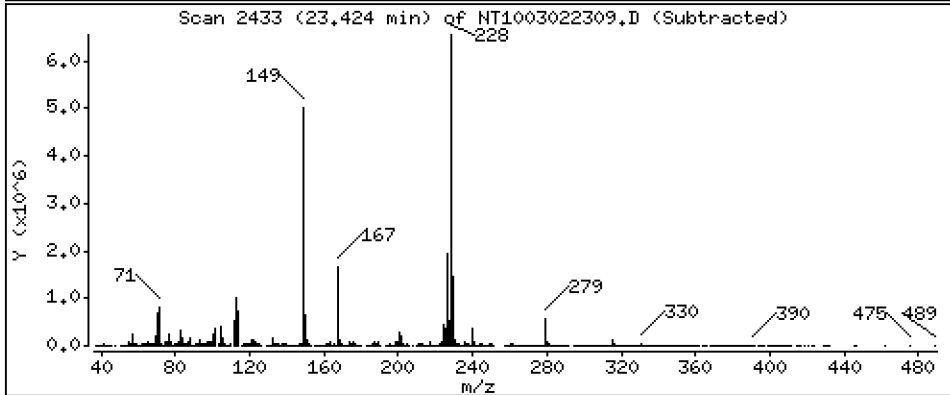
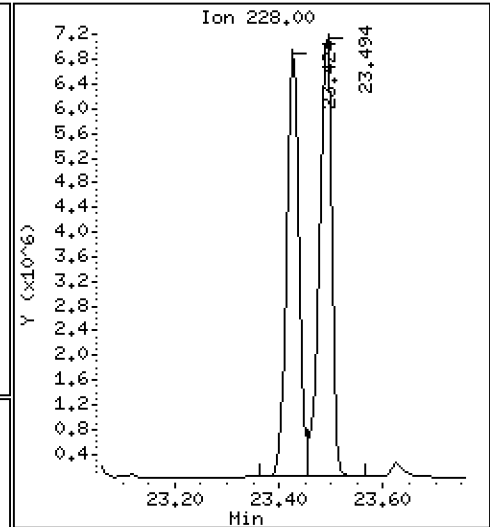
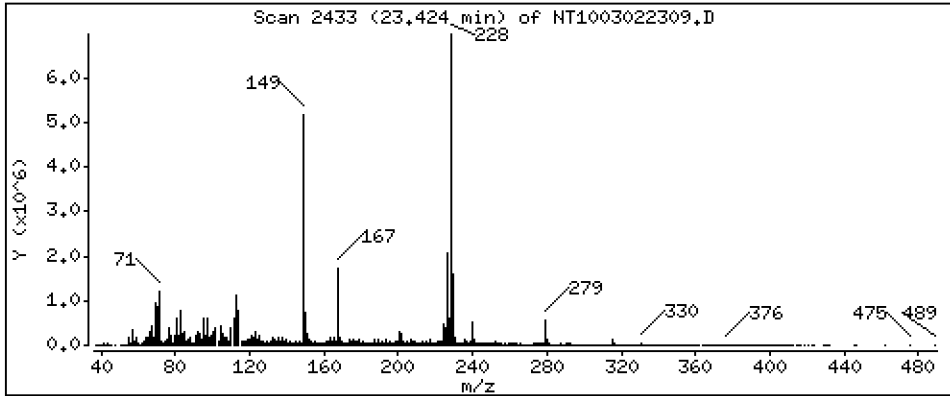
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 8,496 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

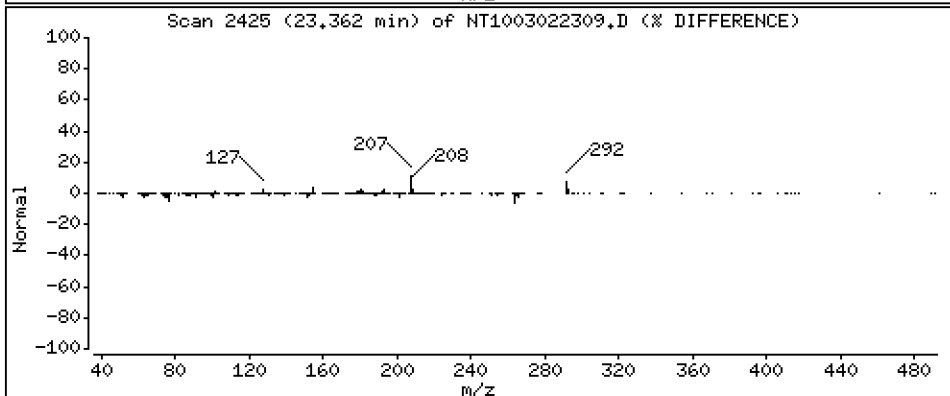
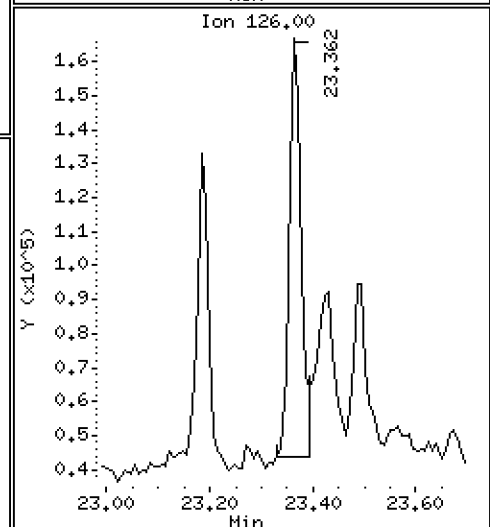
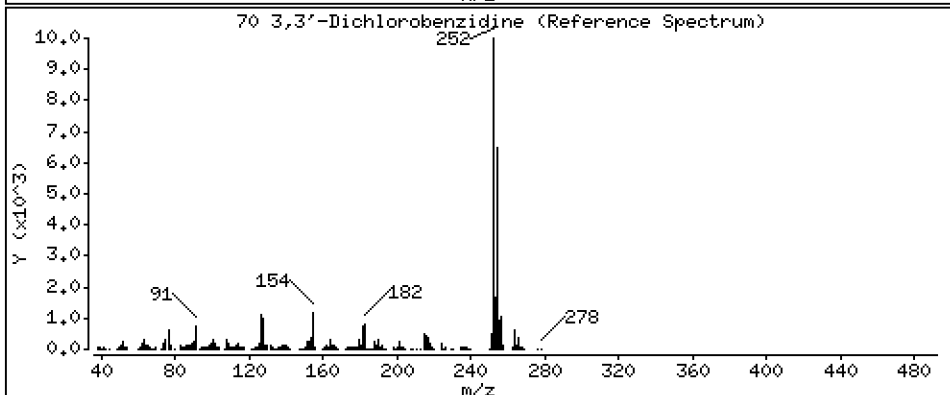
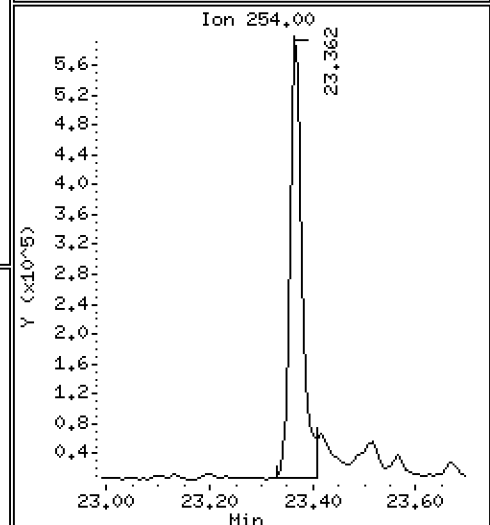
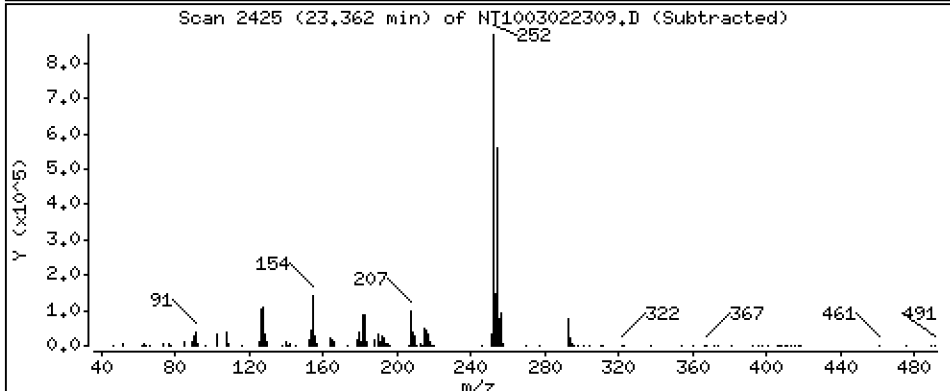
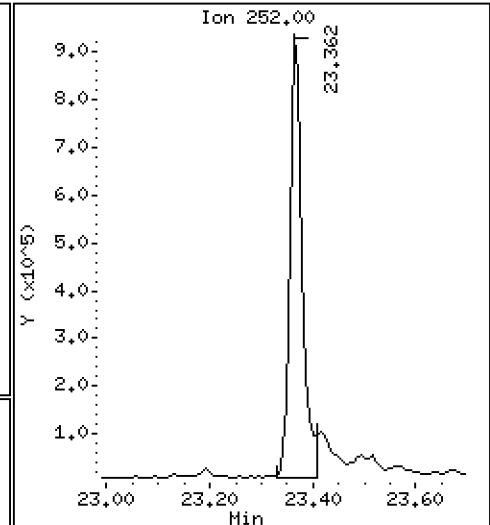
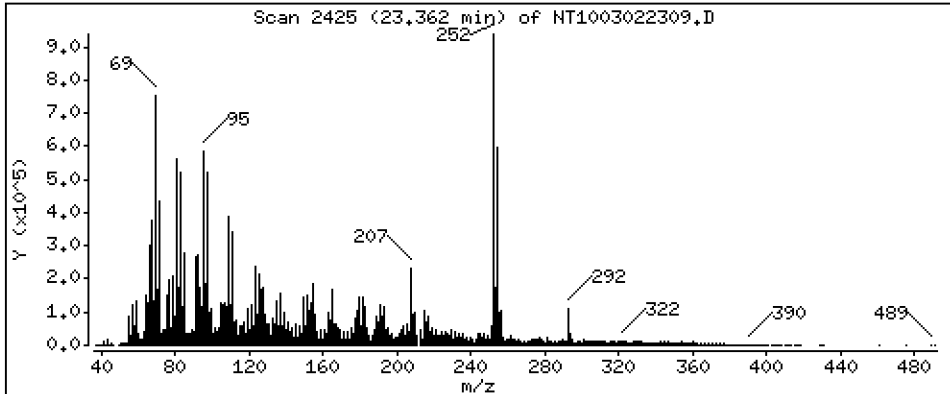
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 2,543 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

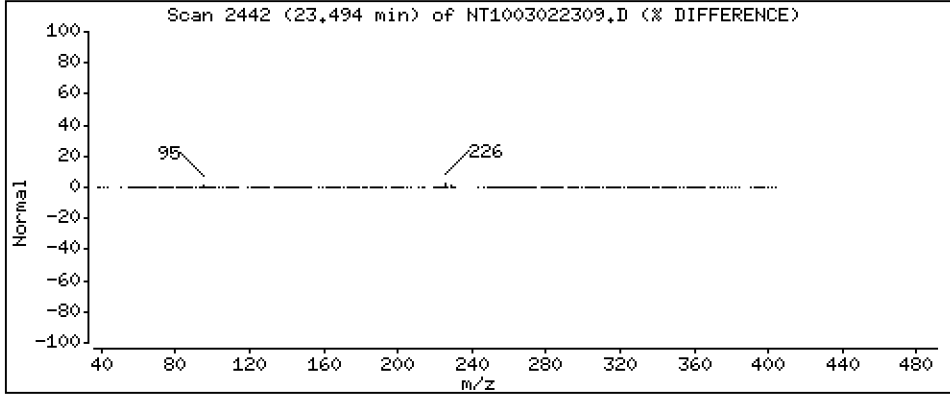
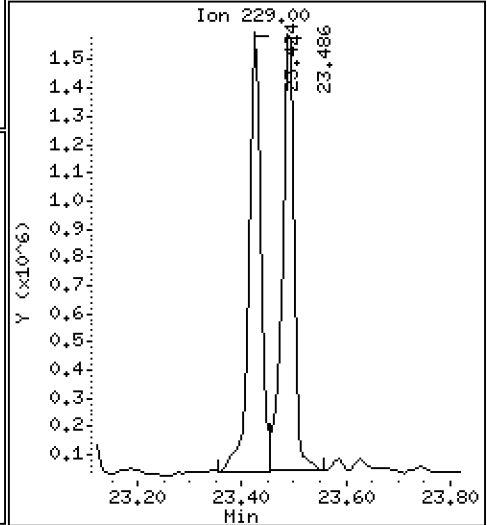
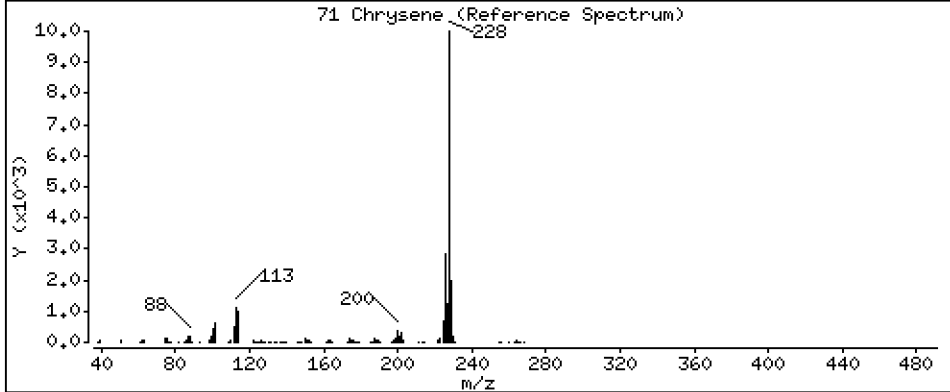
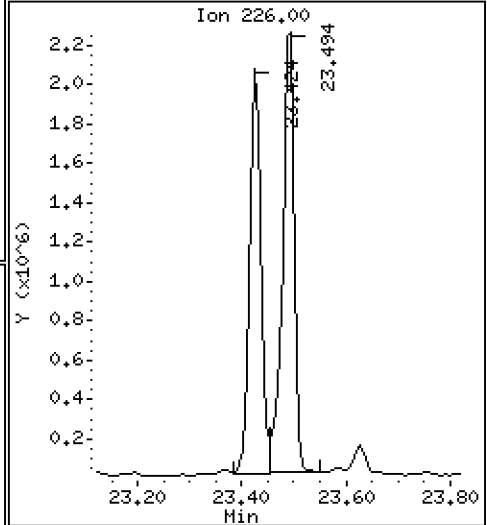
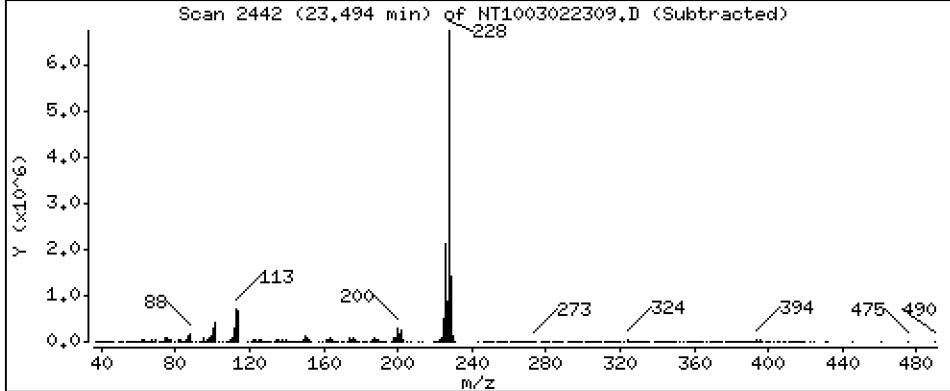
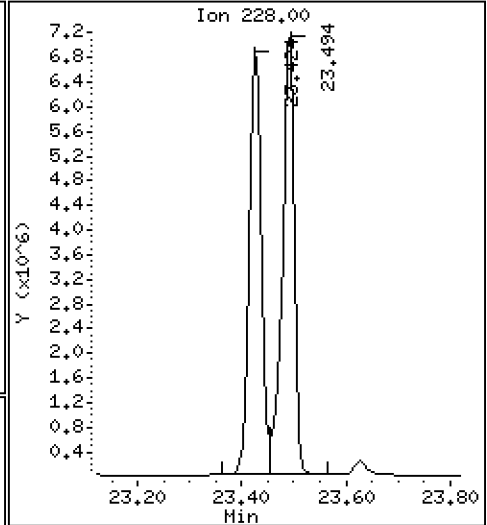
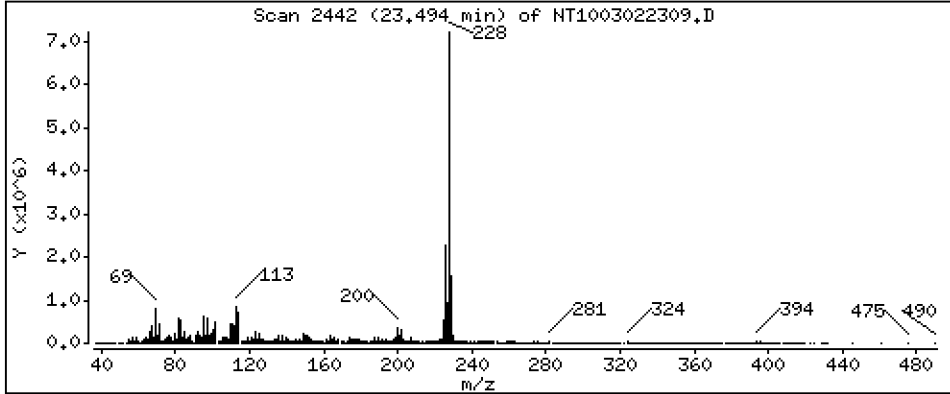
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 10,22 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

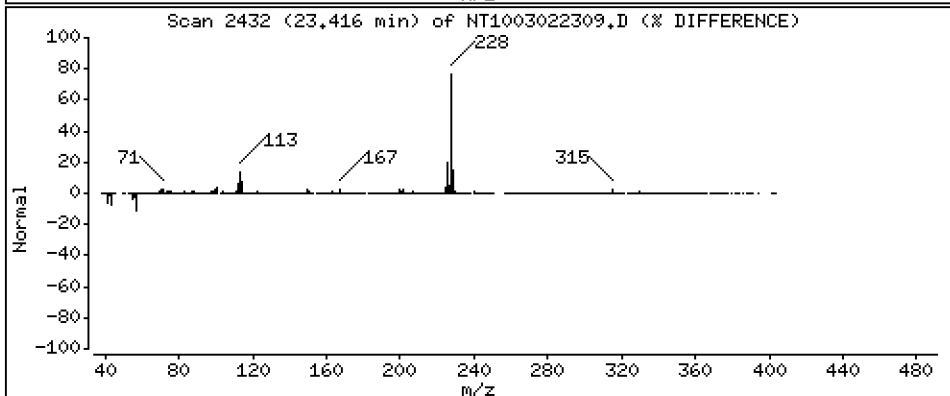
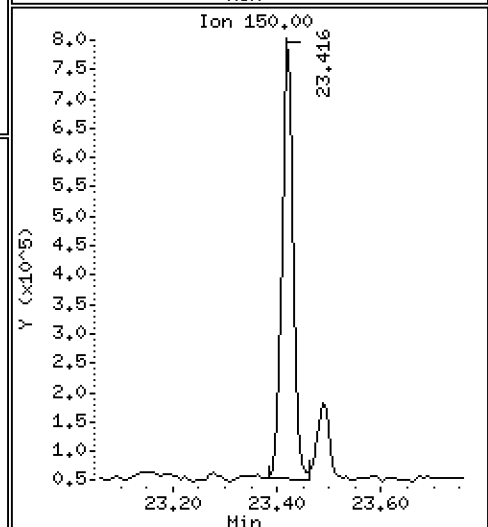
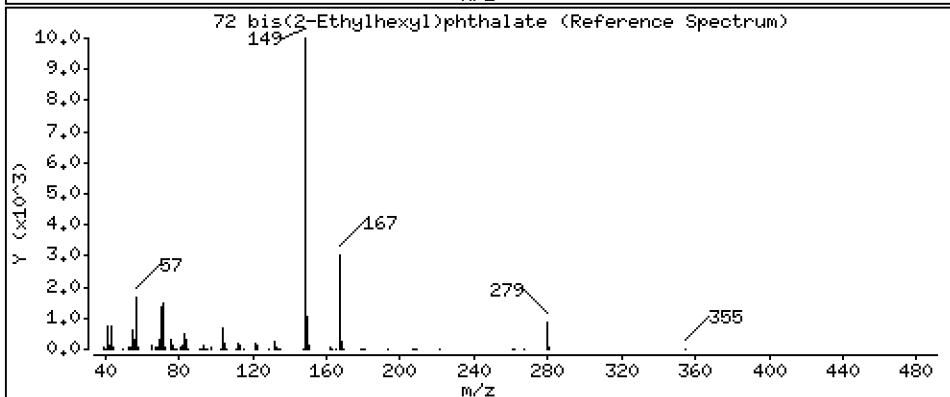
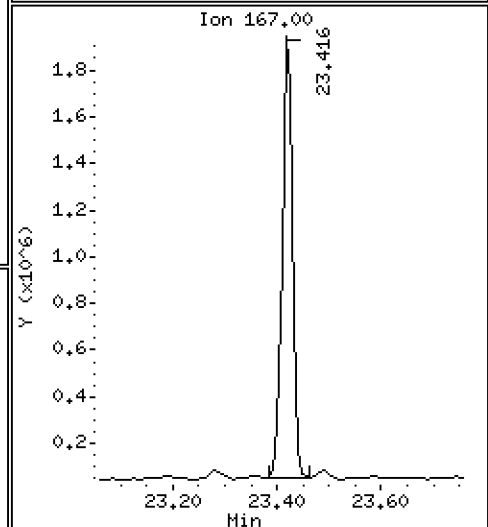
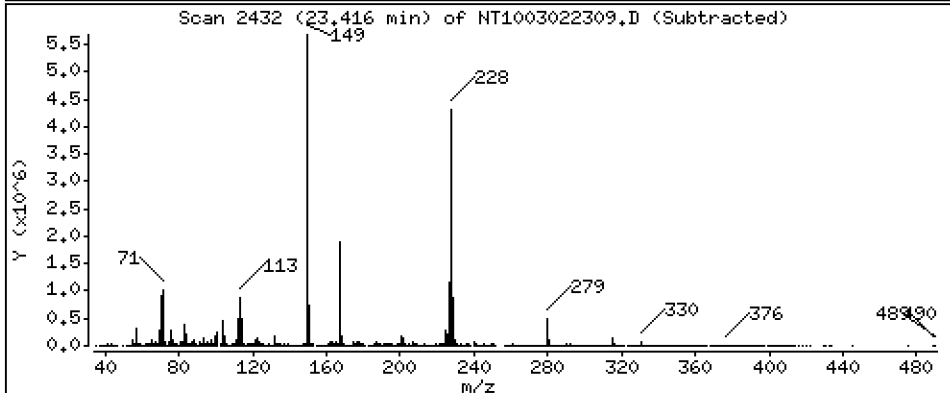
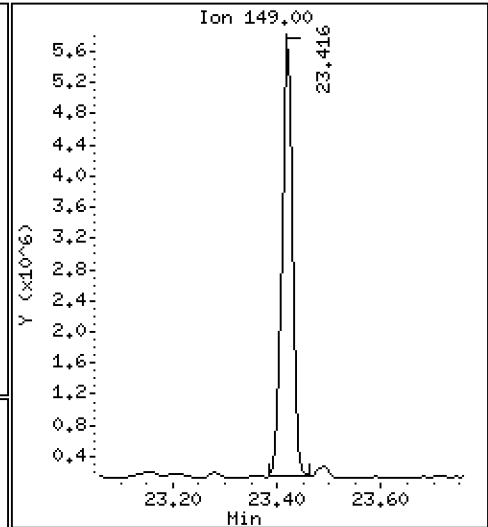
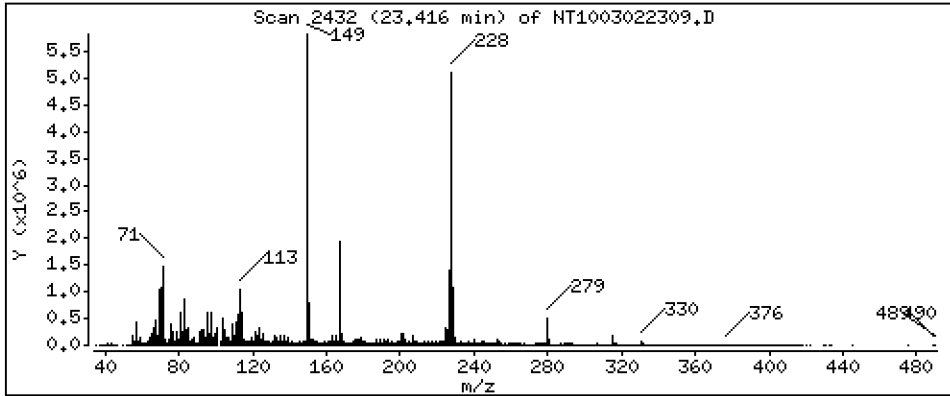
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 8,540 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

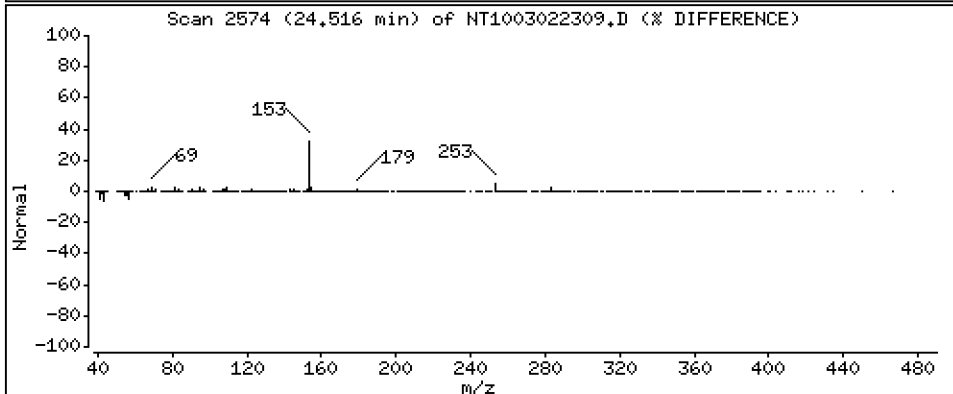
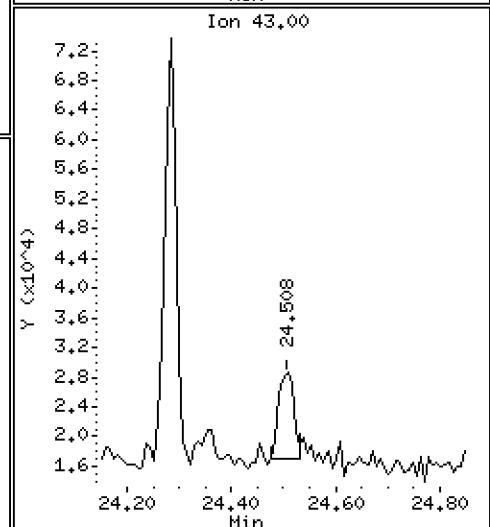
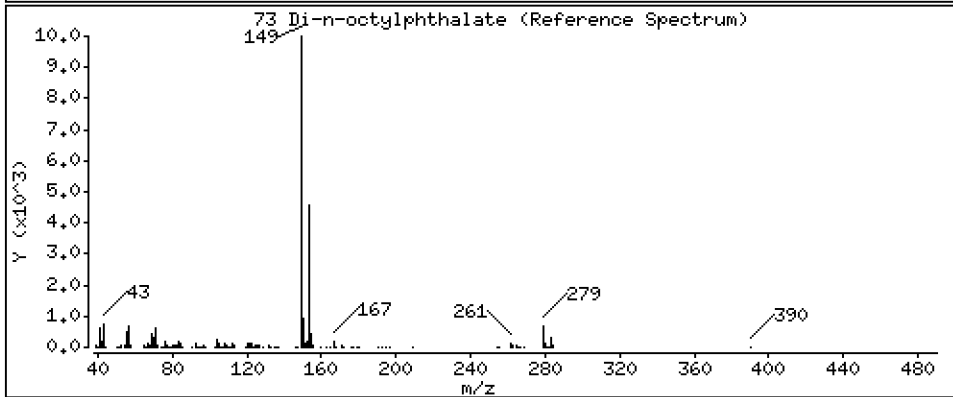
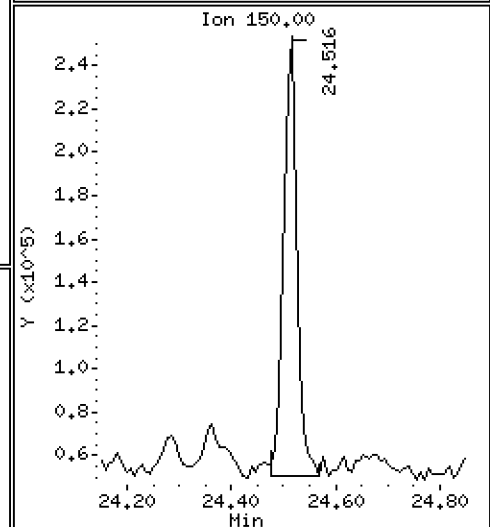
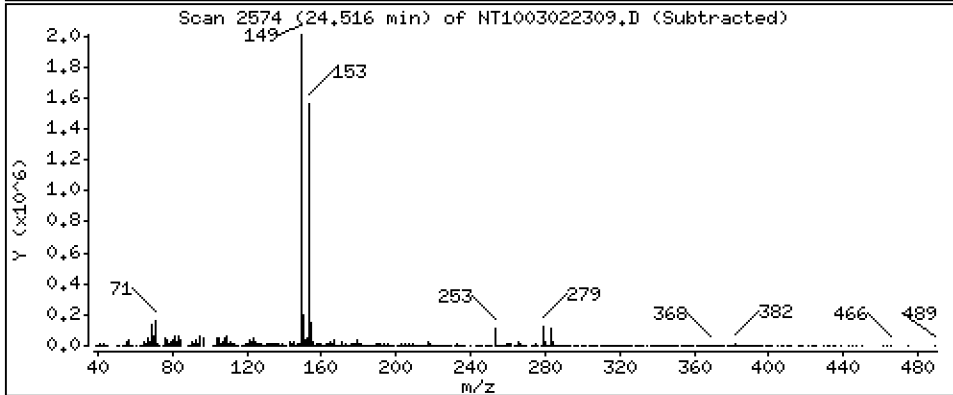
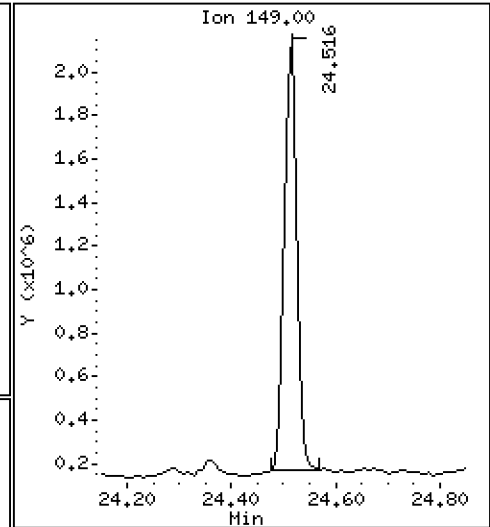
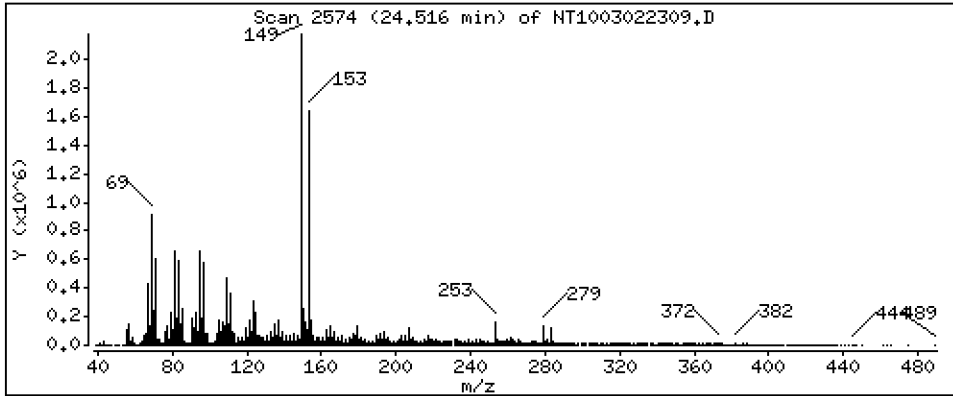
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 2,299 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

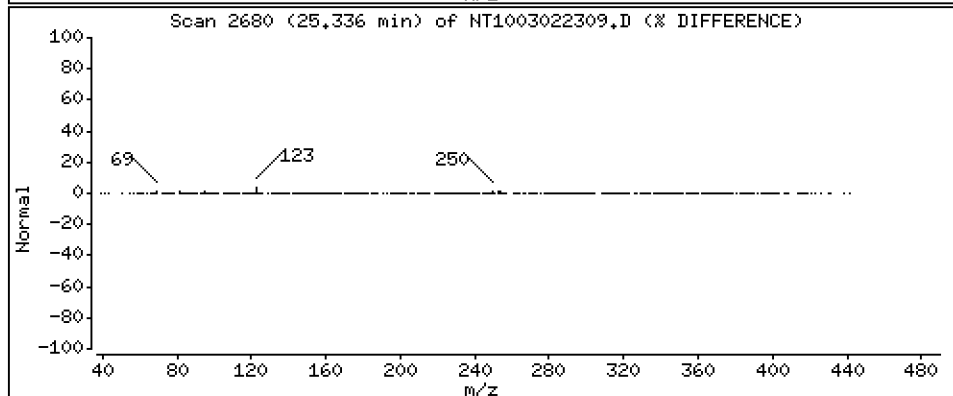
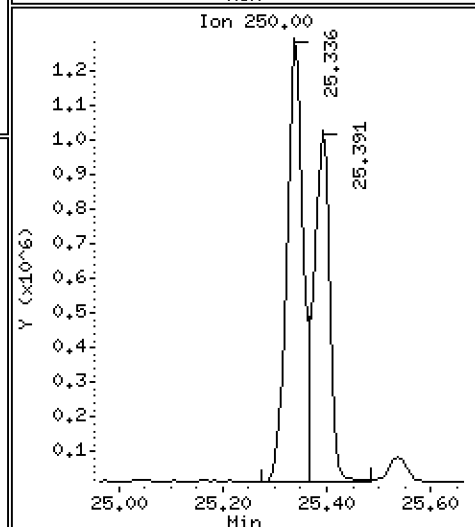
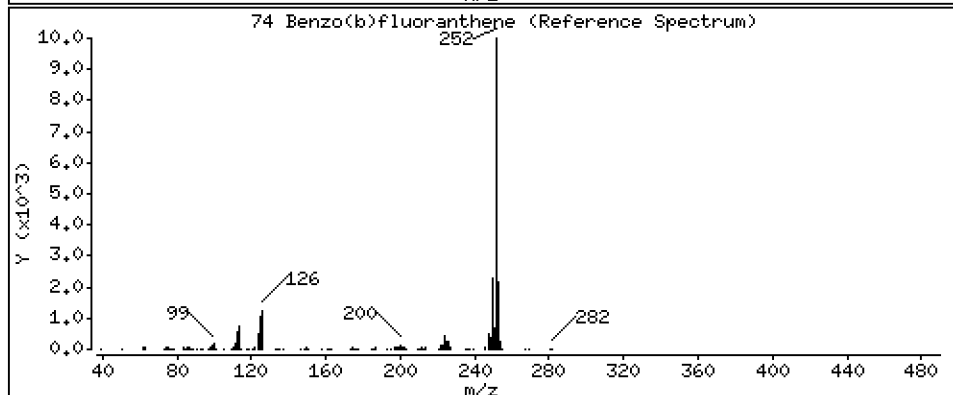
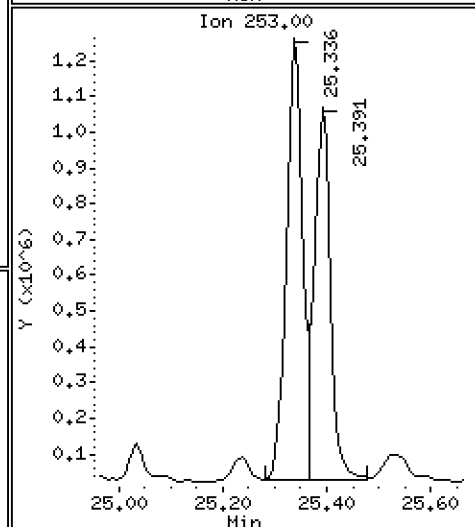
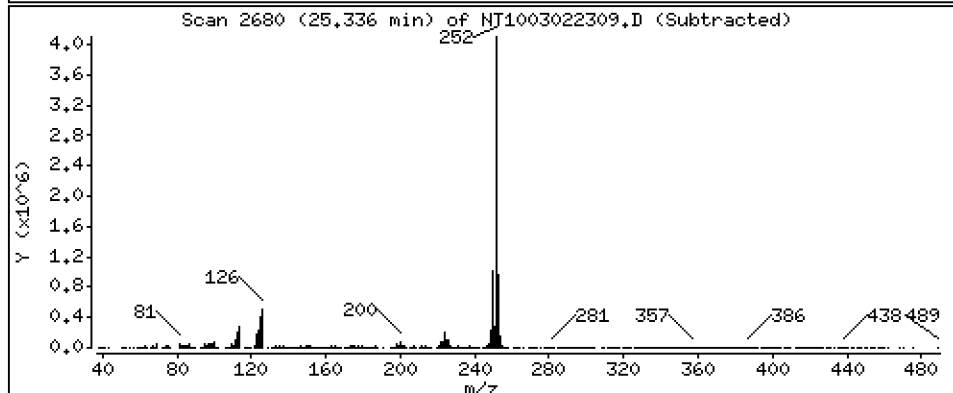
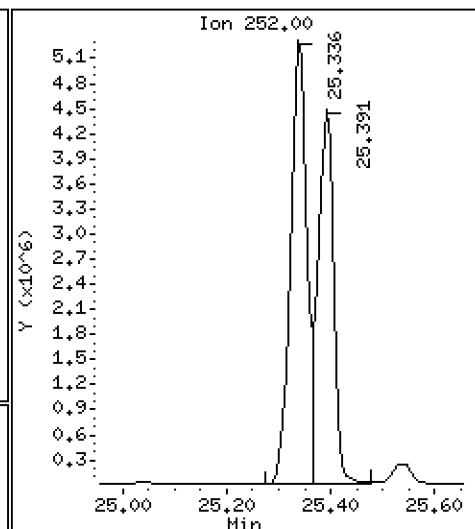
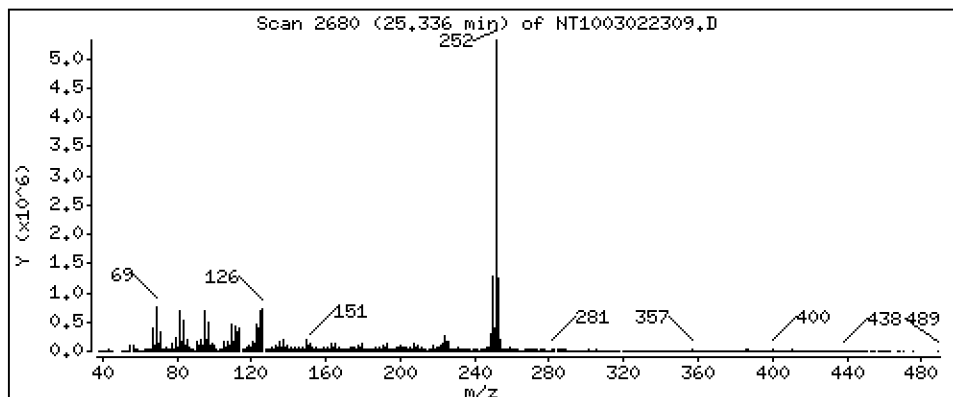
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 9,560 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

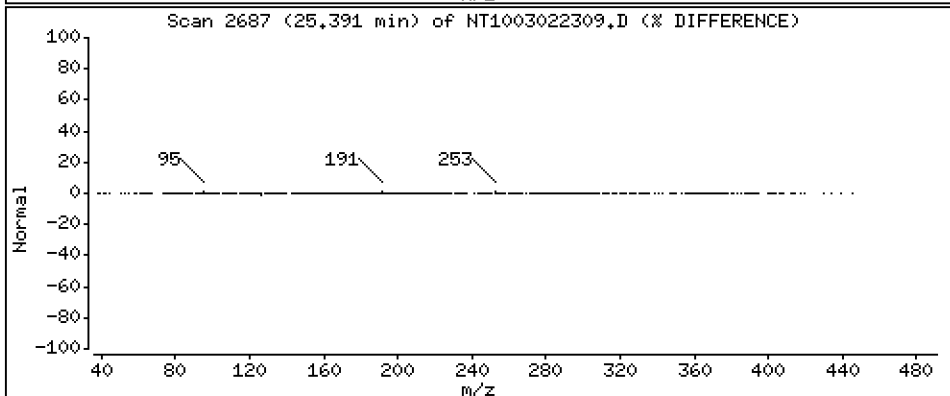
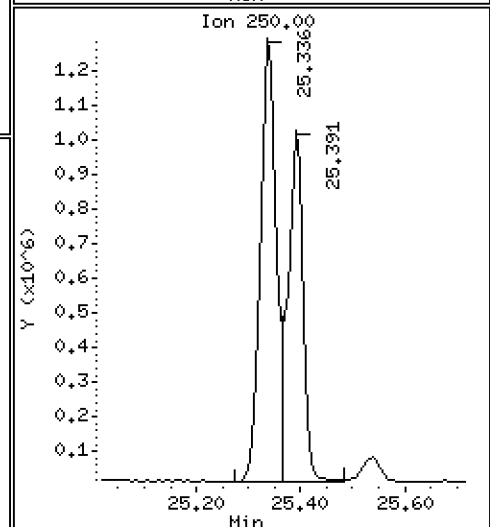
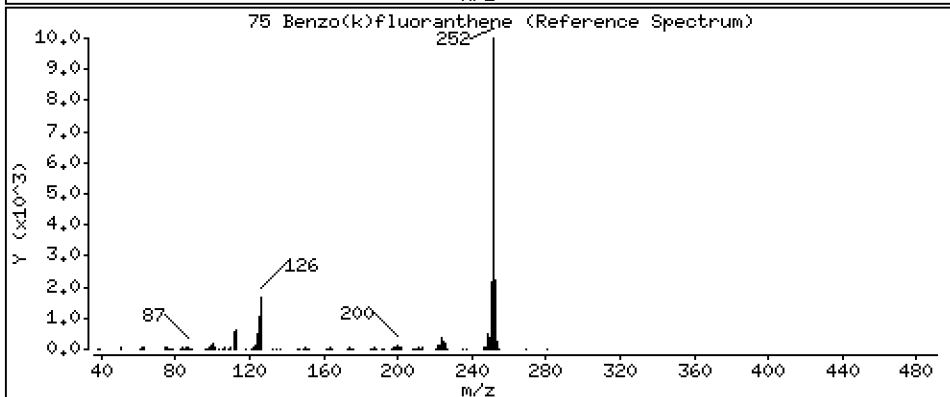
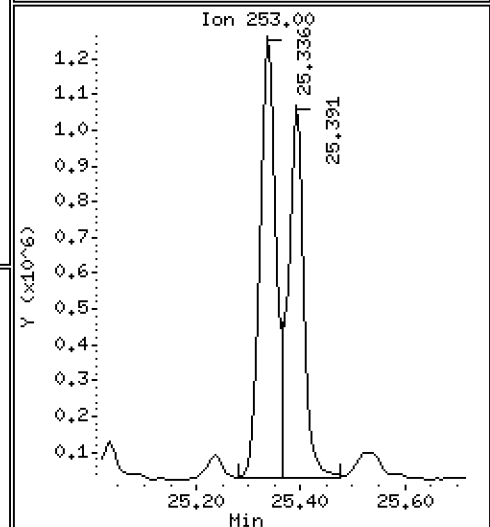
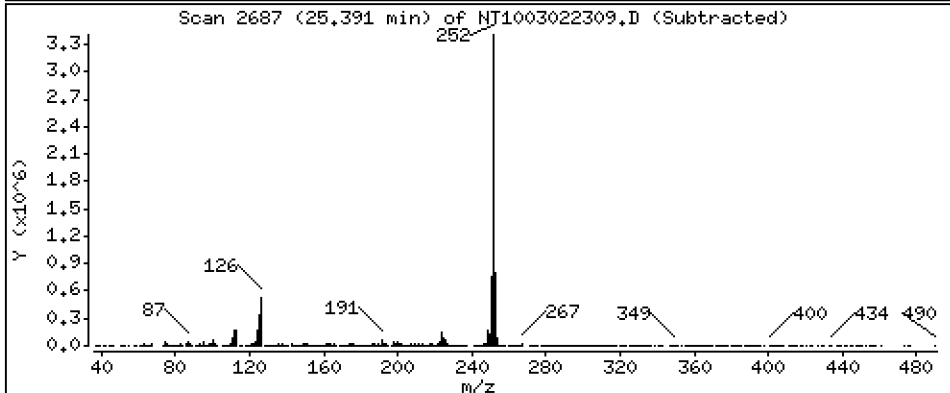
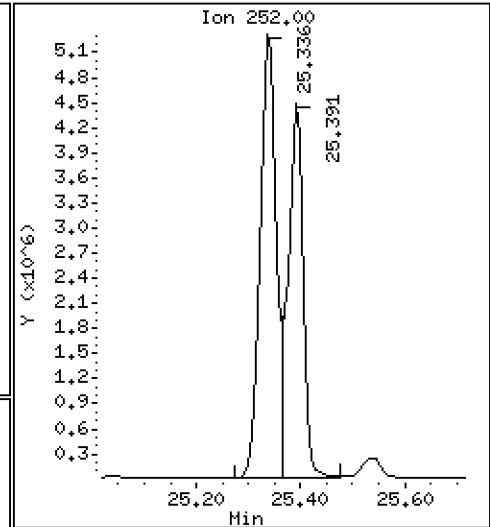
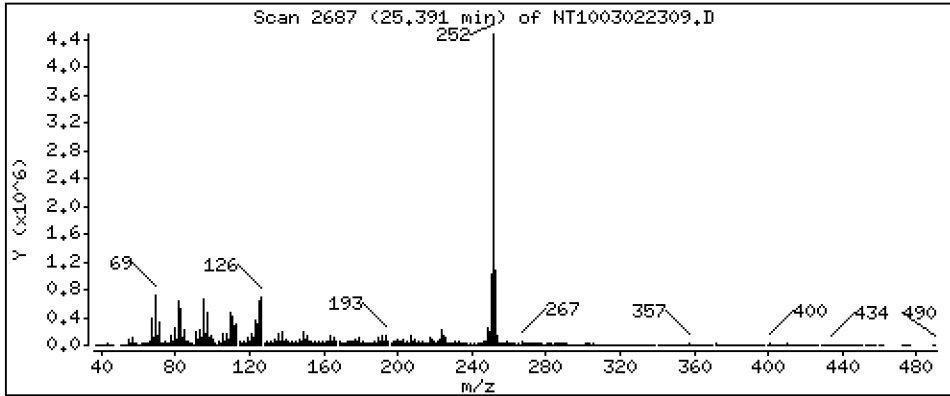
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 7,590 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

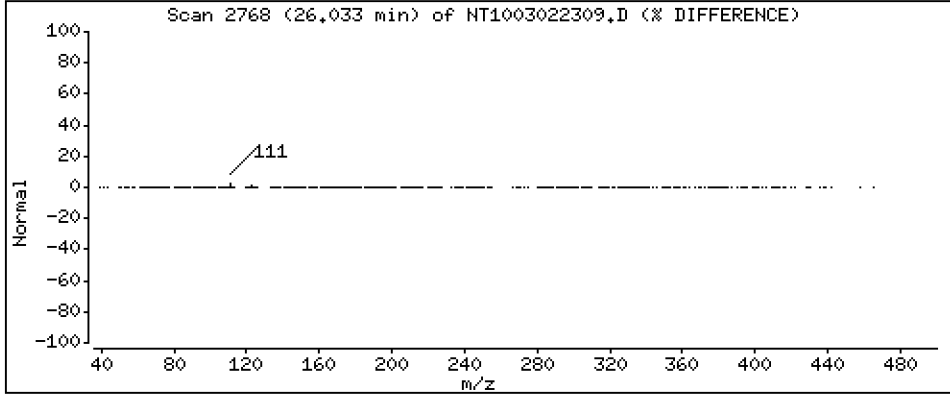
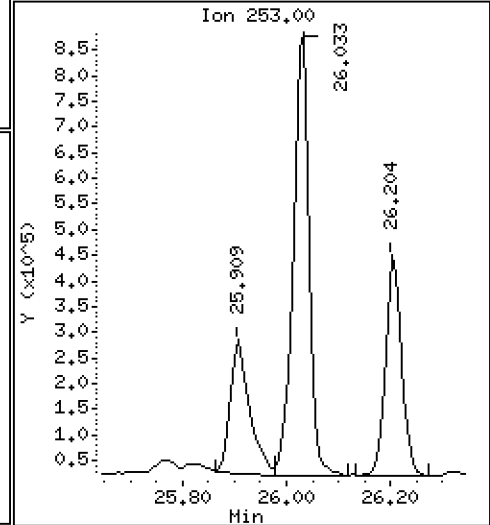
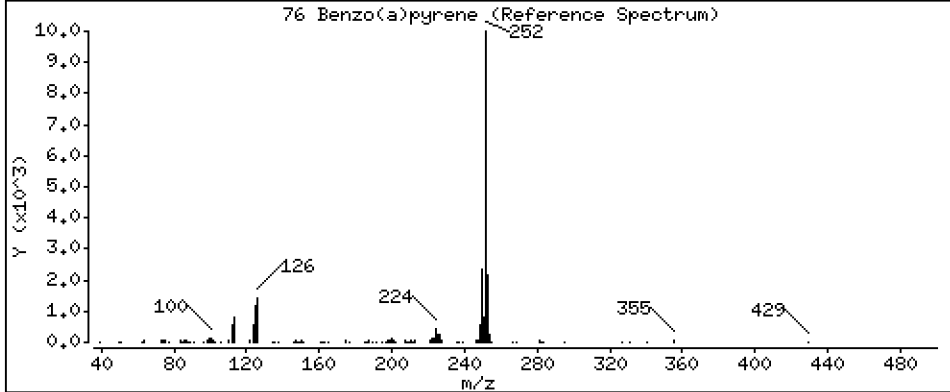
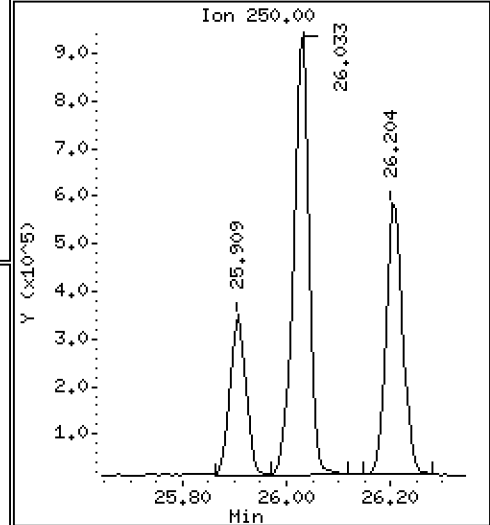
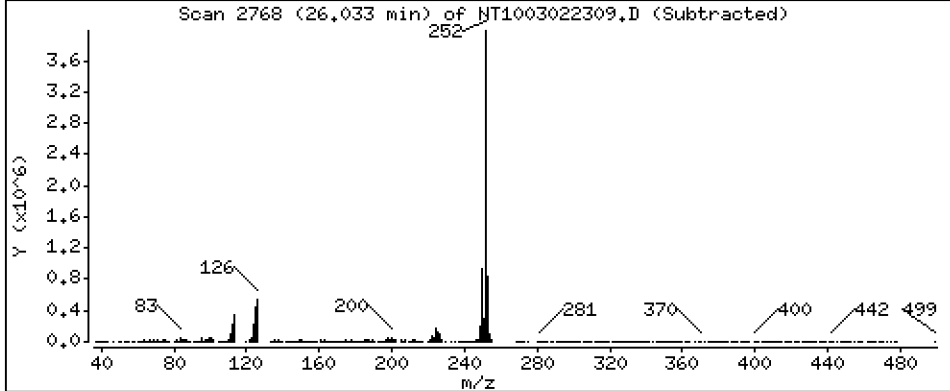
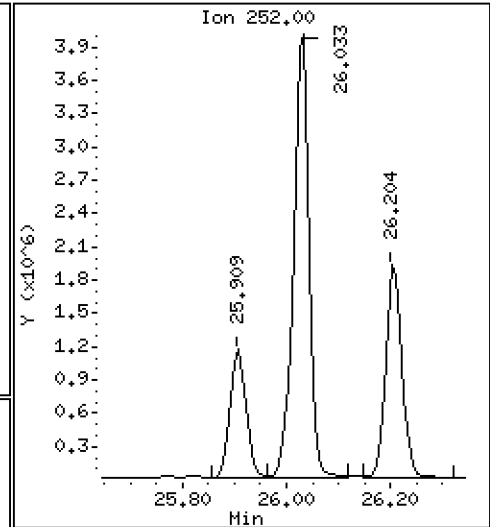
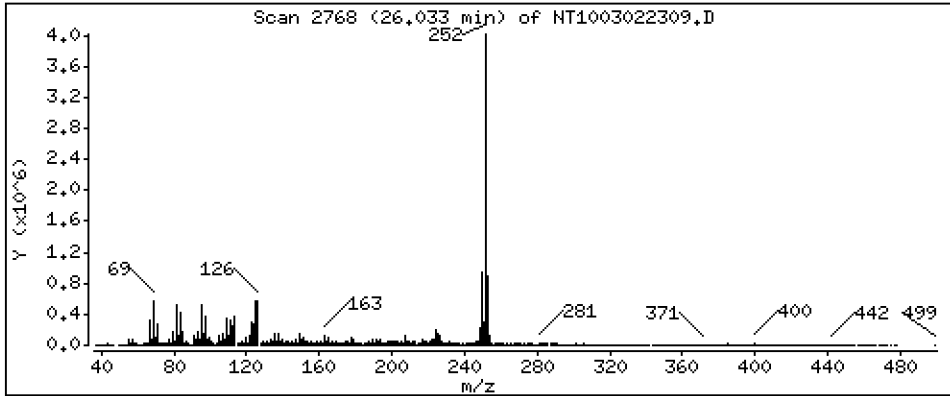
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 7,647 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

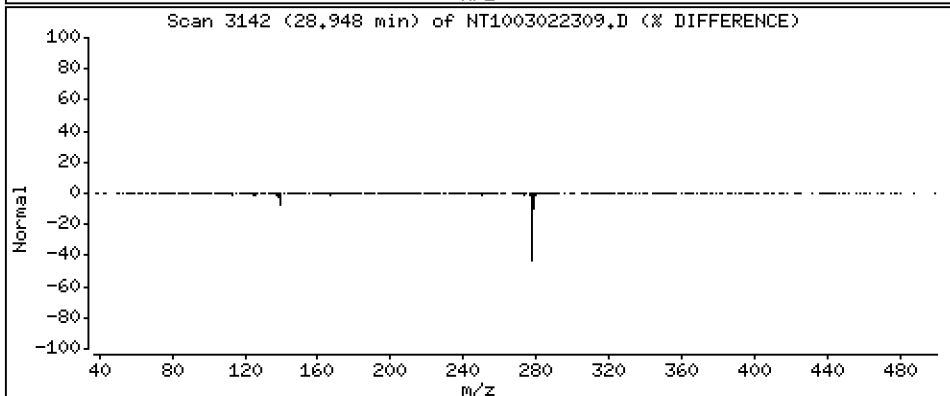
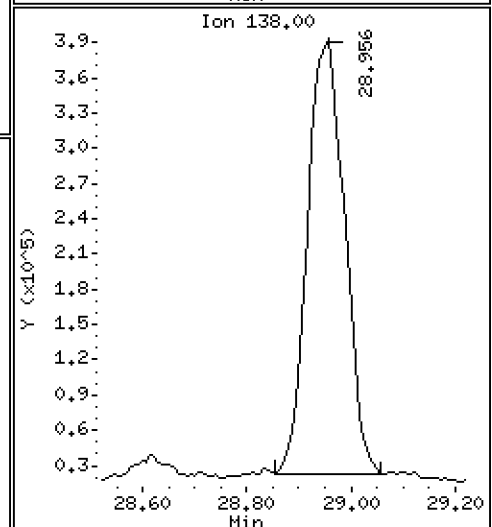
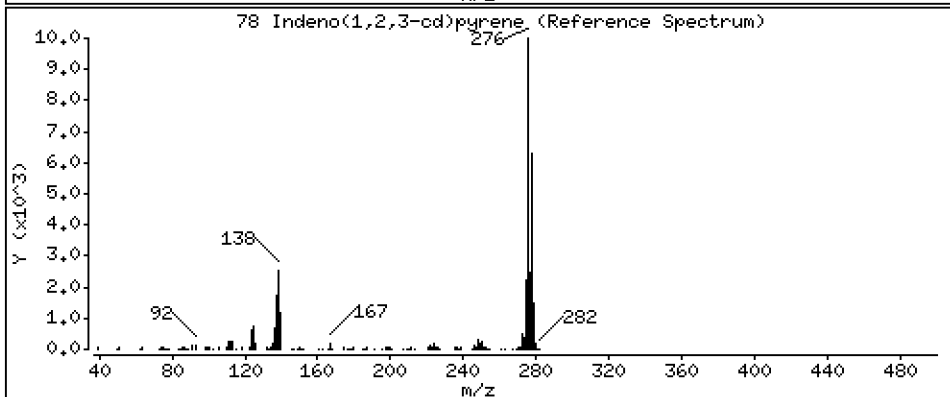
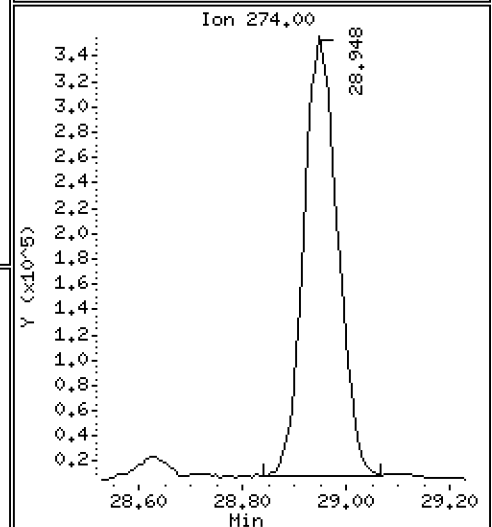
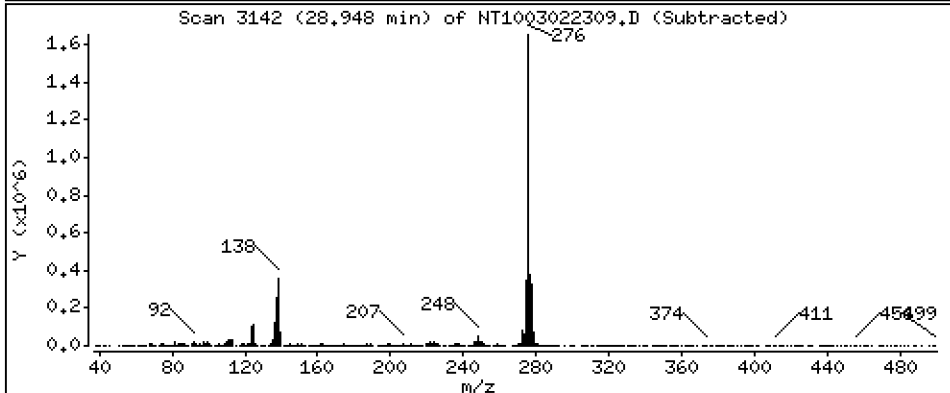
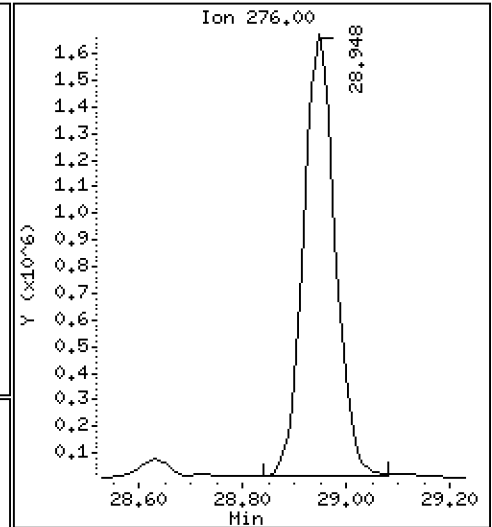
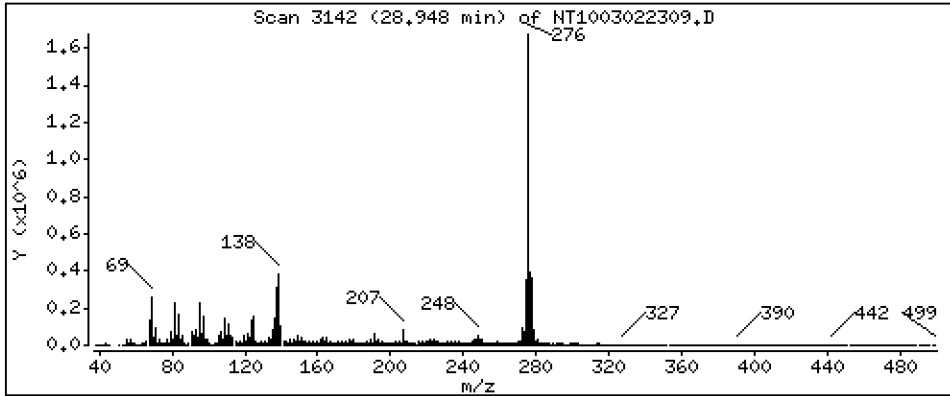
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 5,589 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

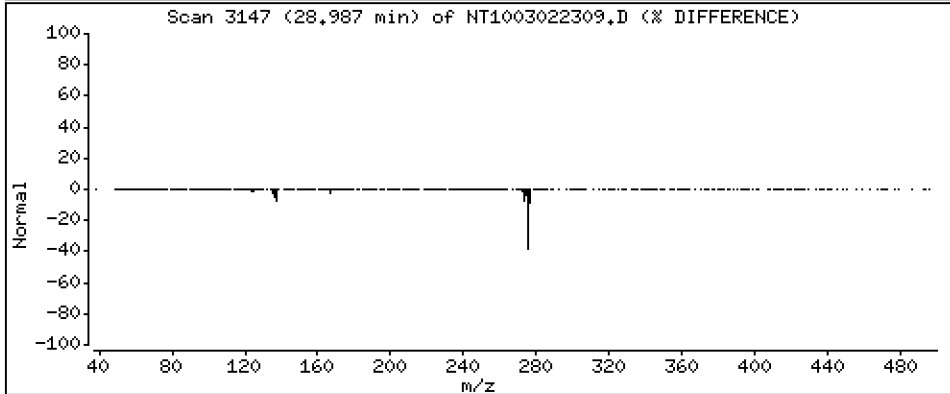
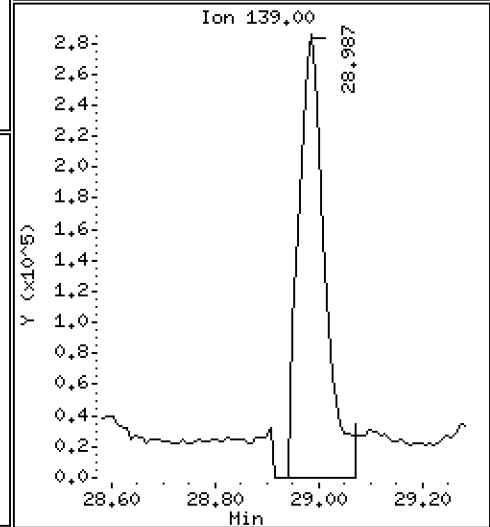
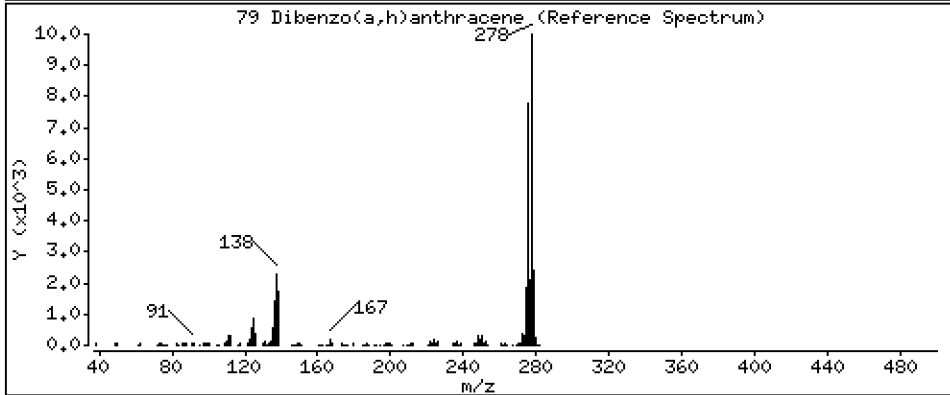
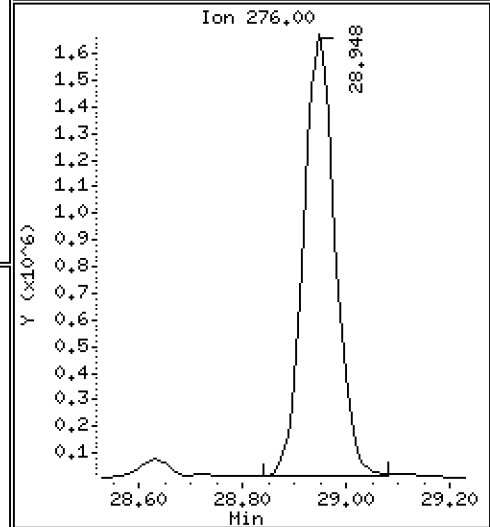
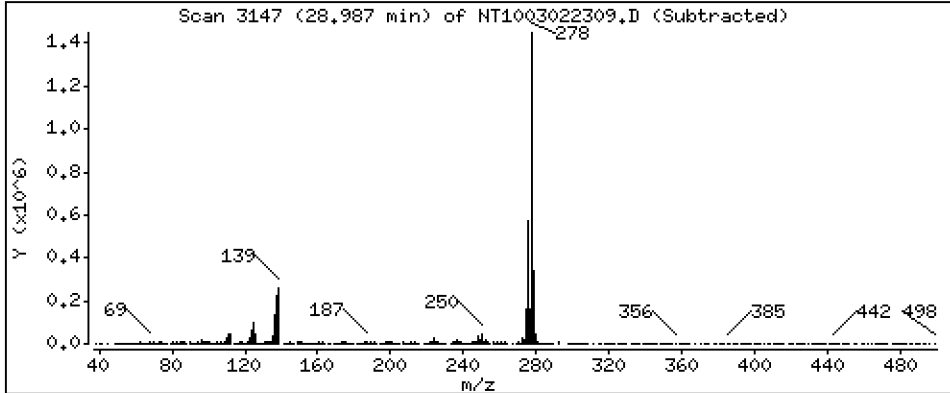
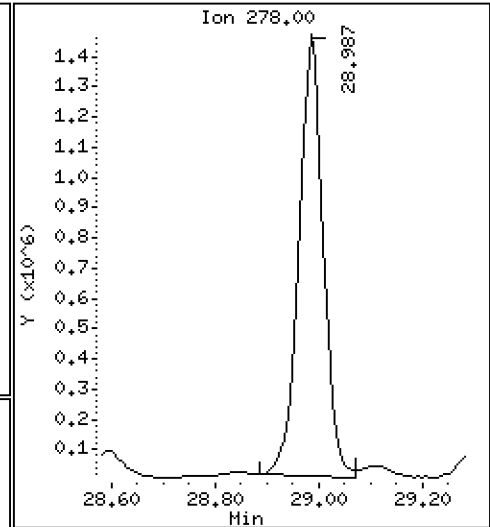
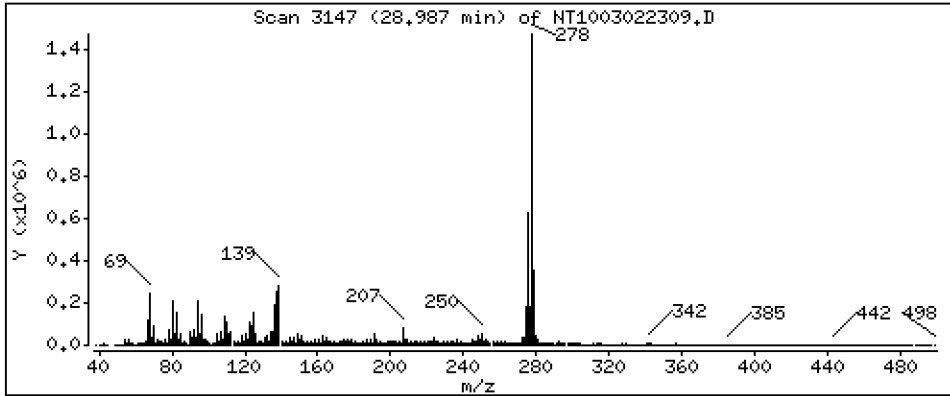
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,020 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

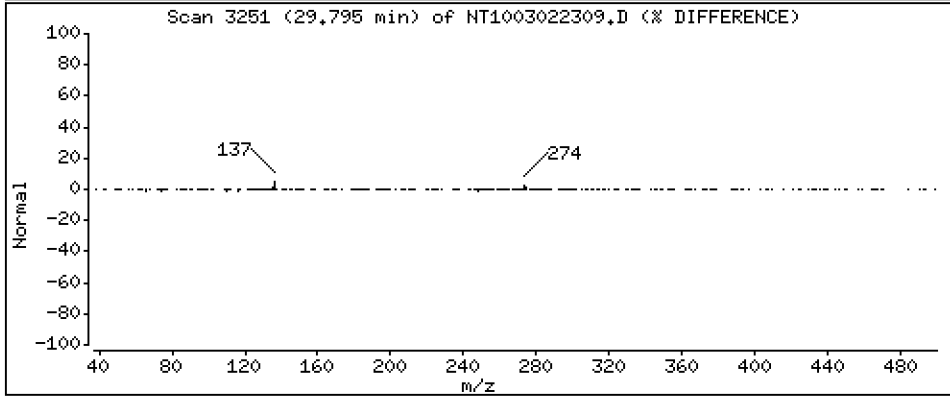
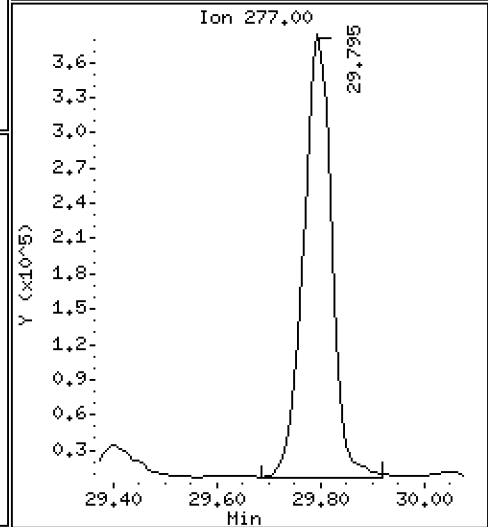
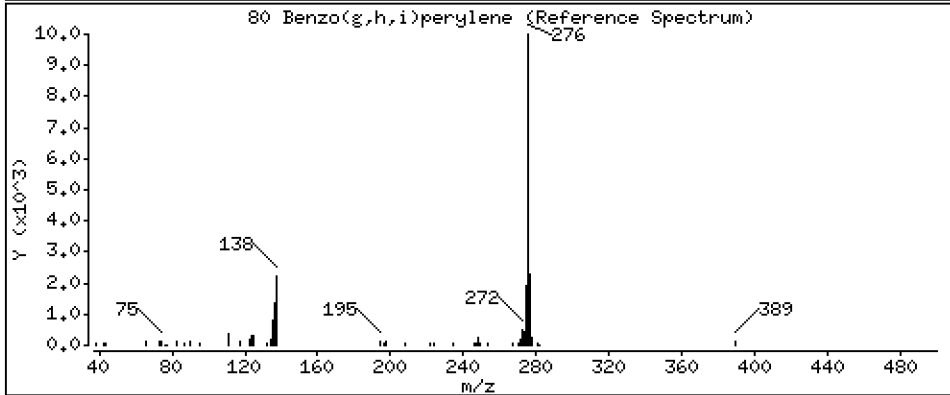
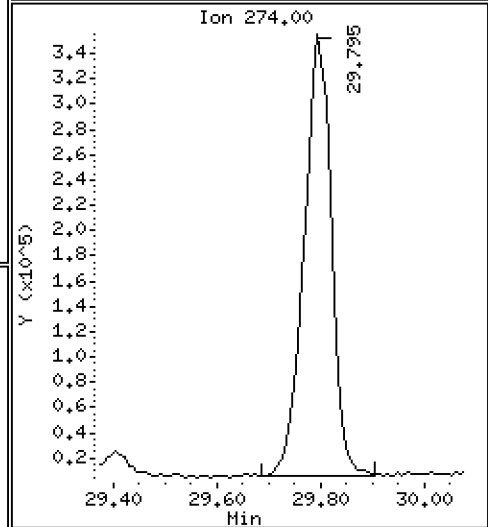
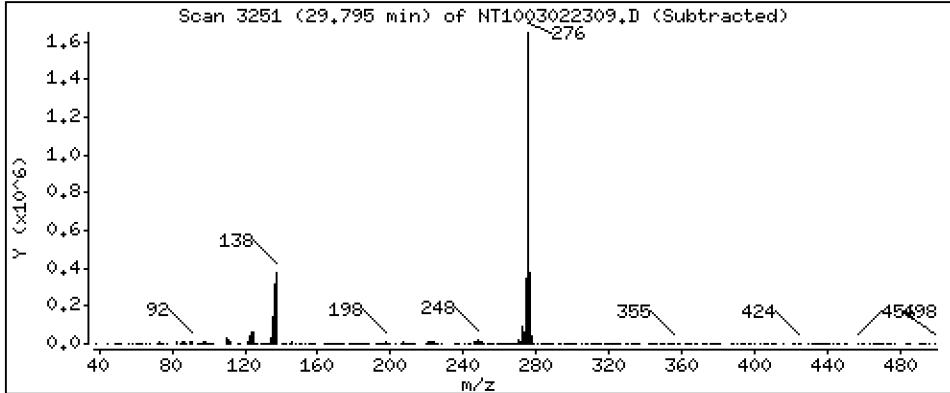
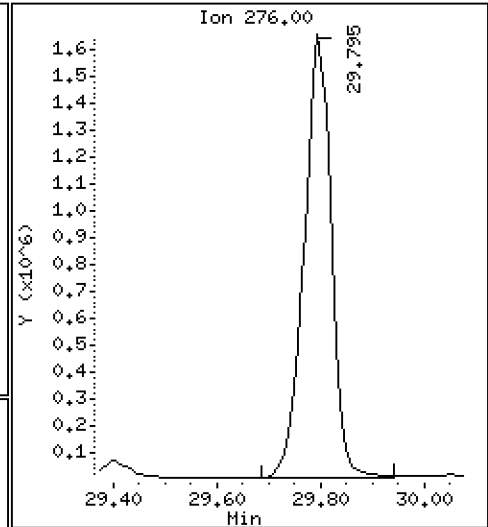
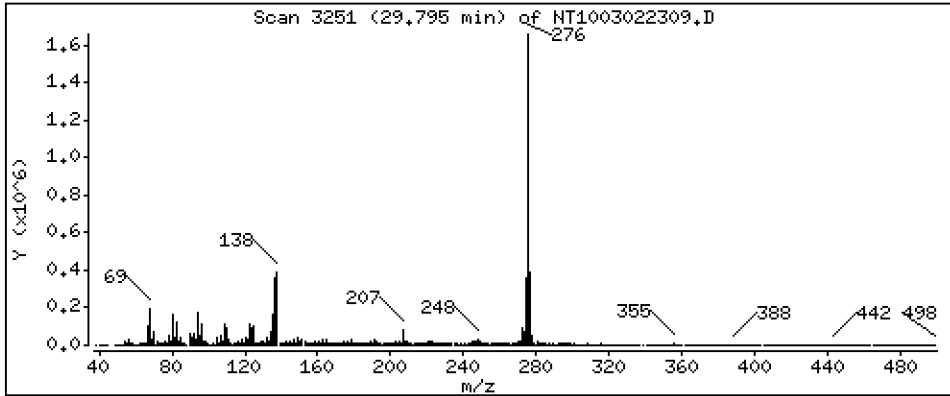
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 5,952 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

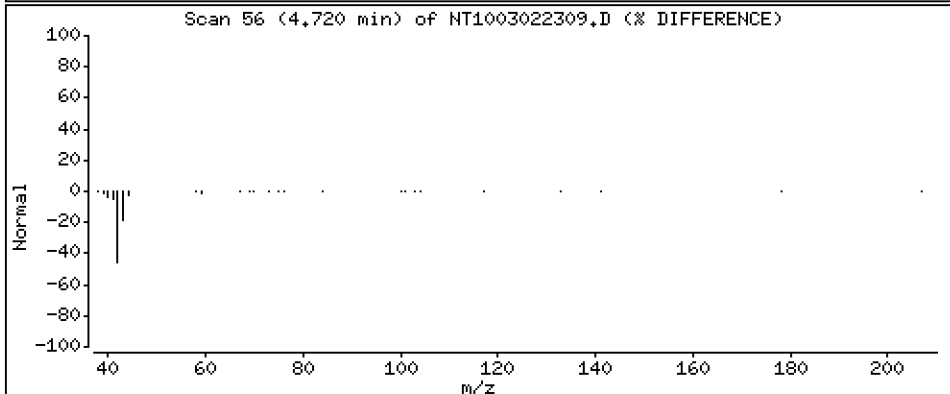
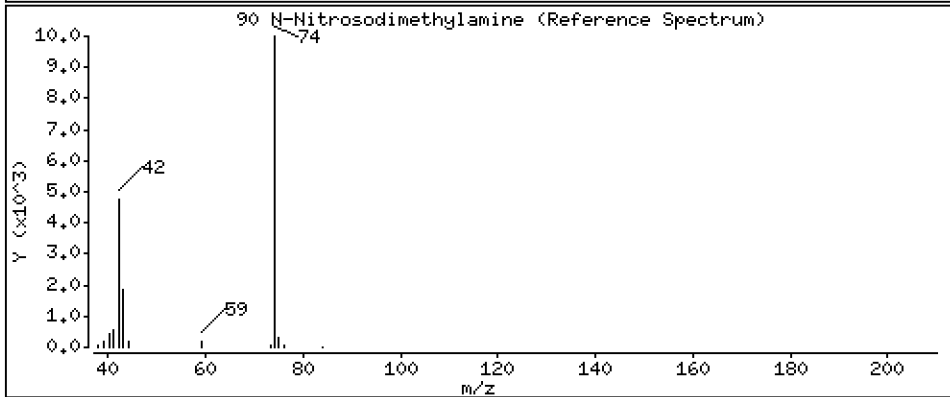
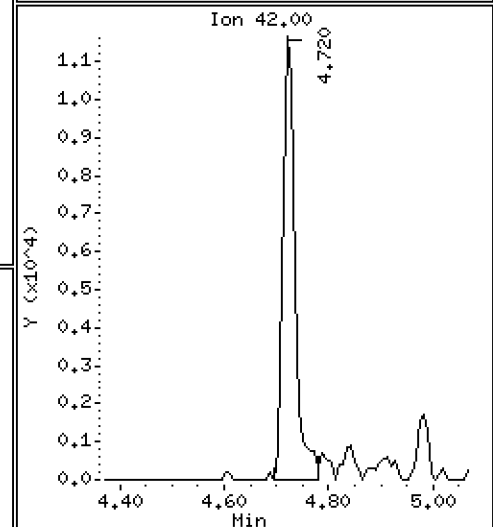
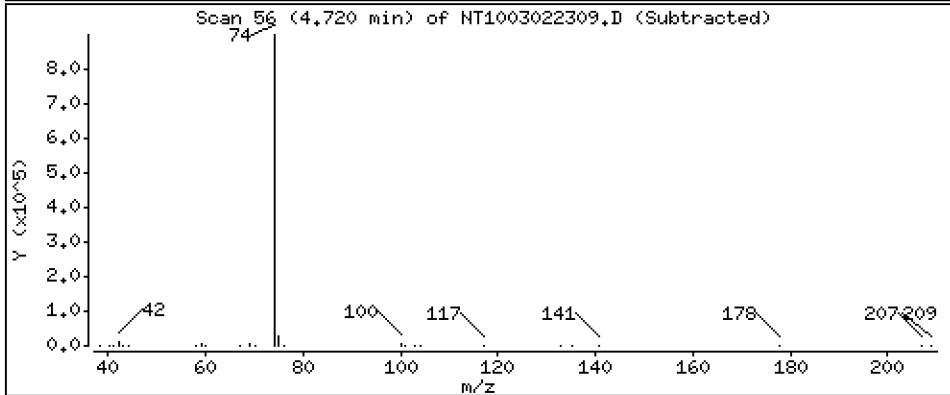
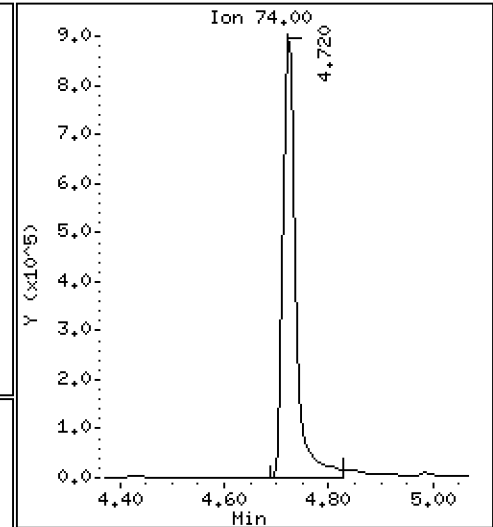
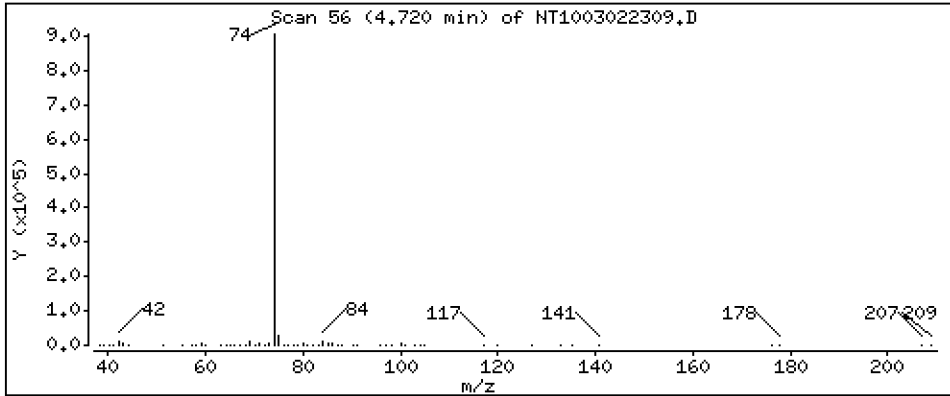
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 12,55 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

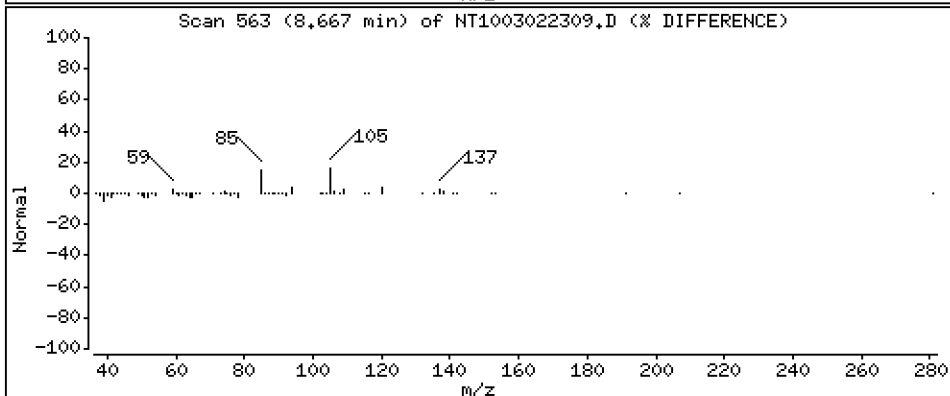
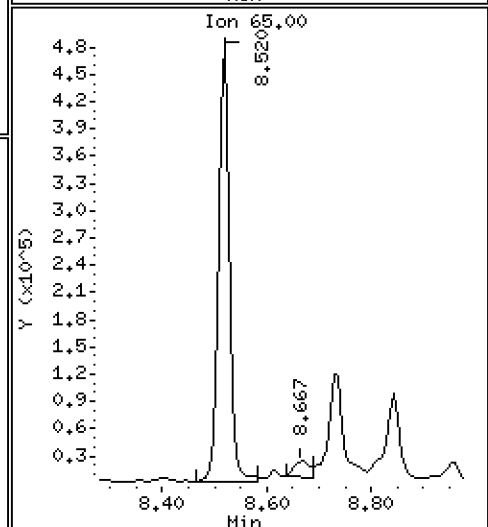
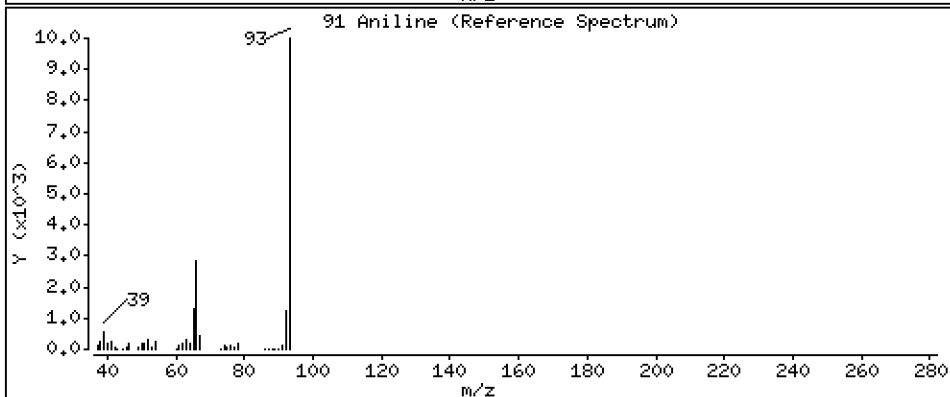
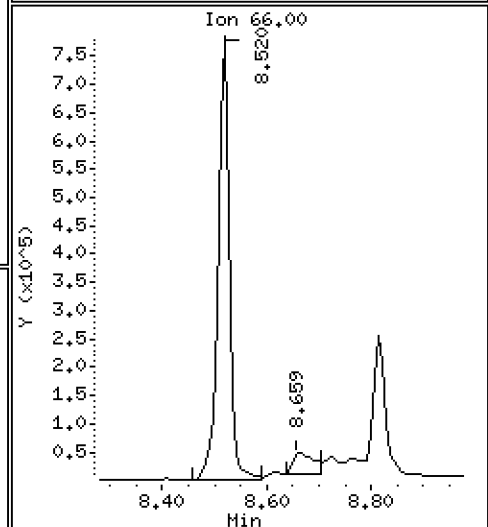
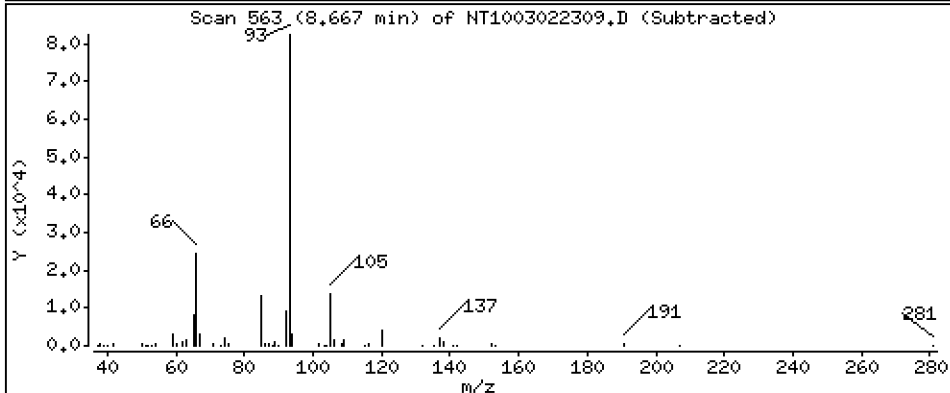
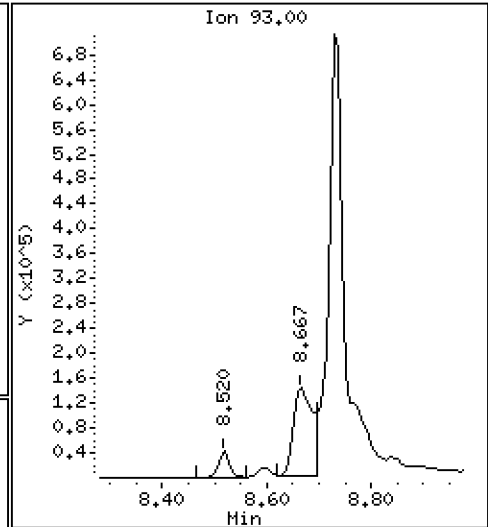
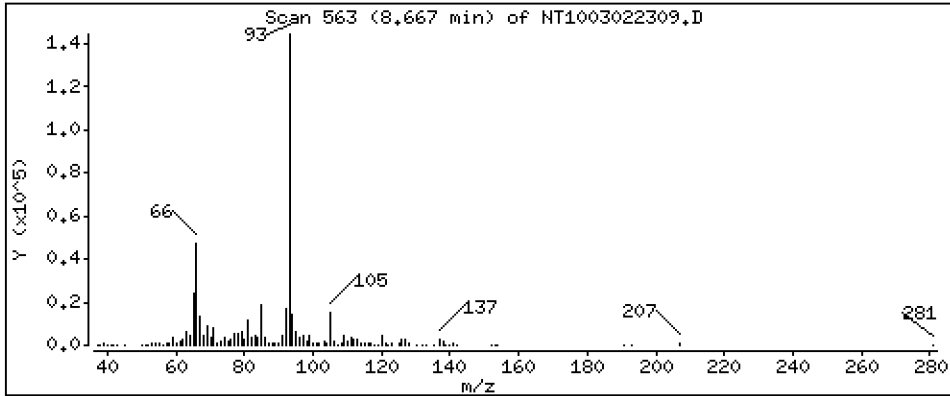
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 1,518 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

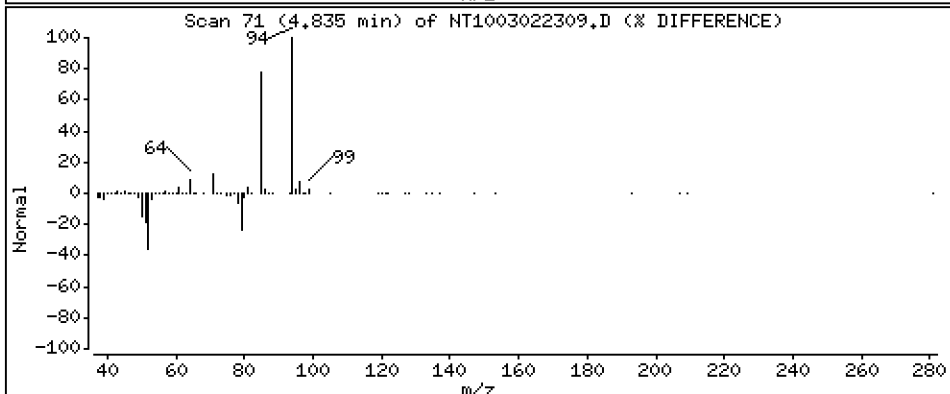
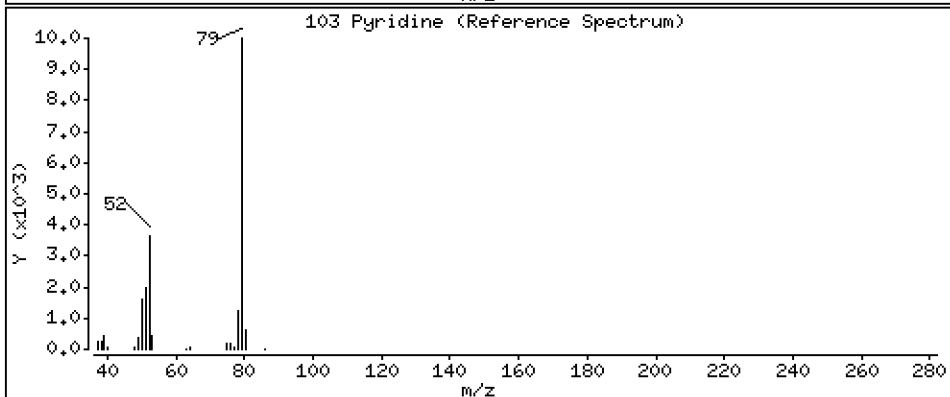
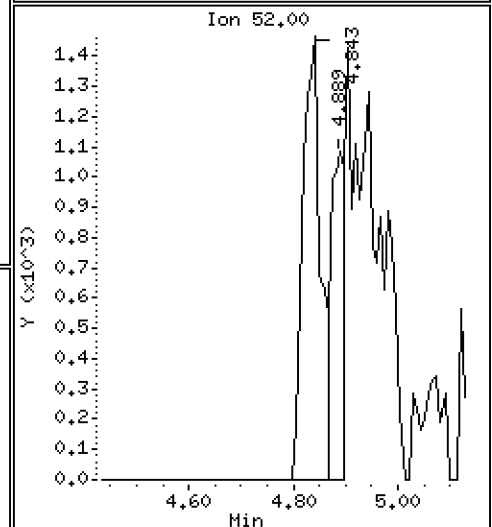
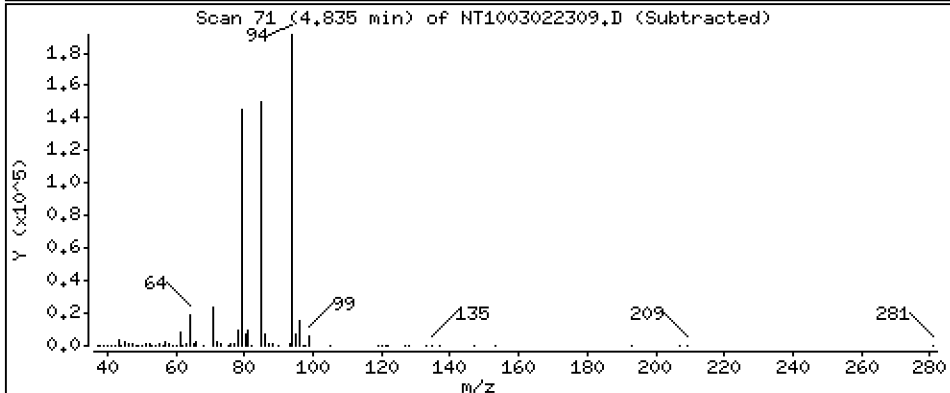
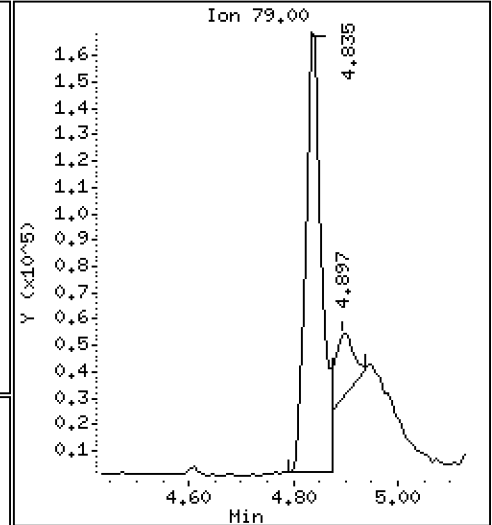
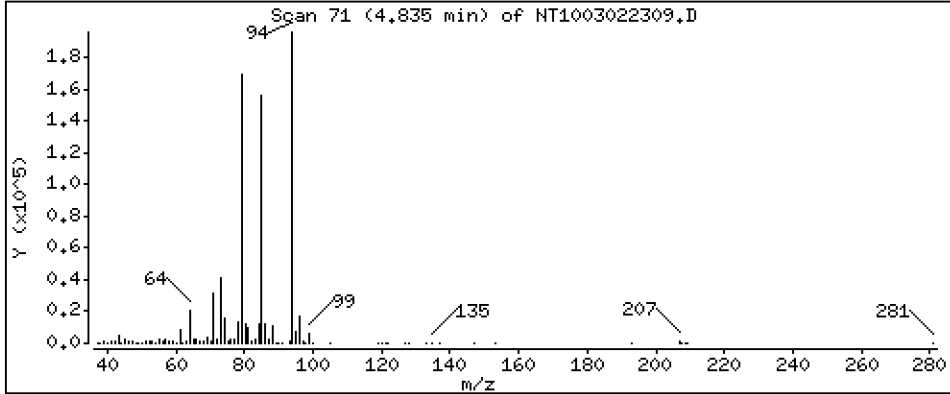
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 1,703 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

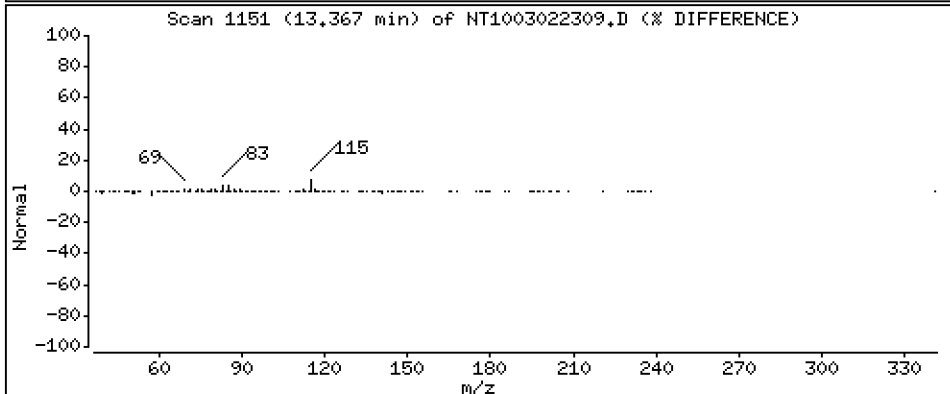
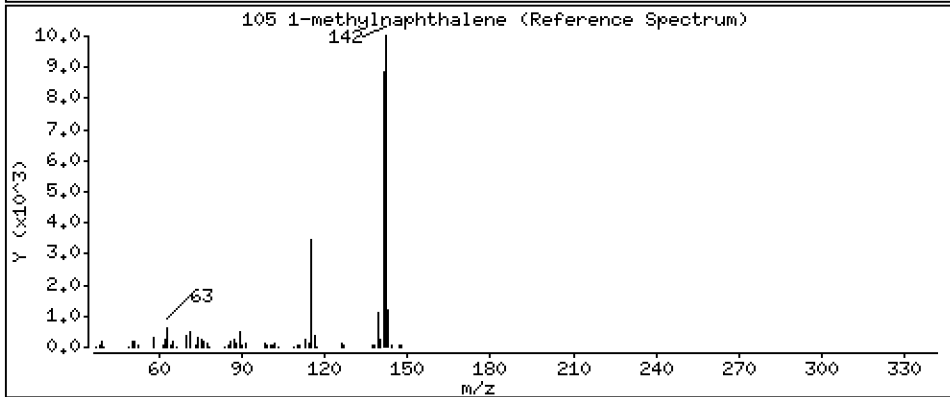
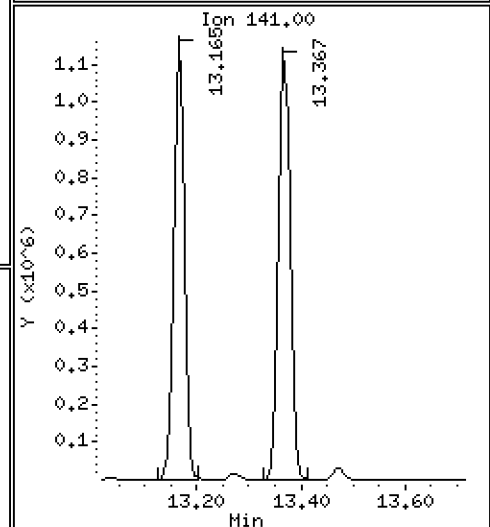
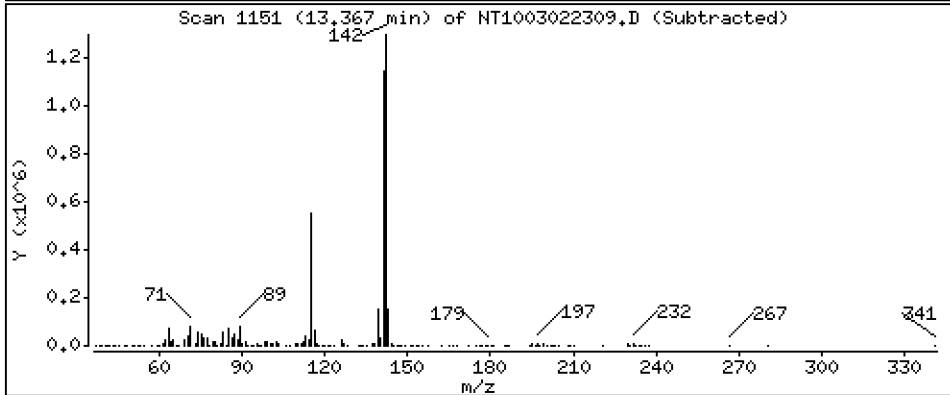
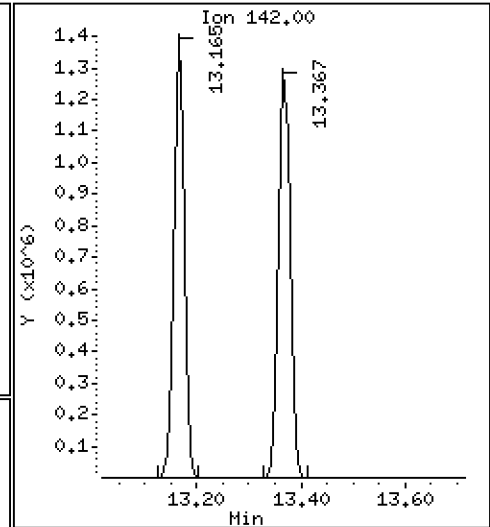
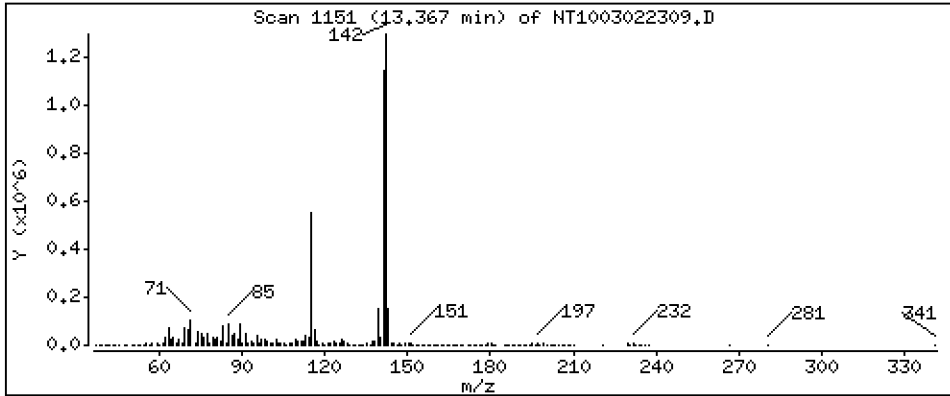
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,215 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

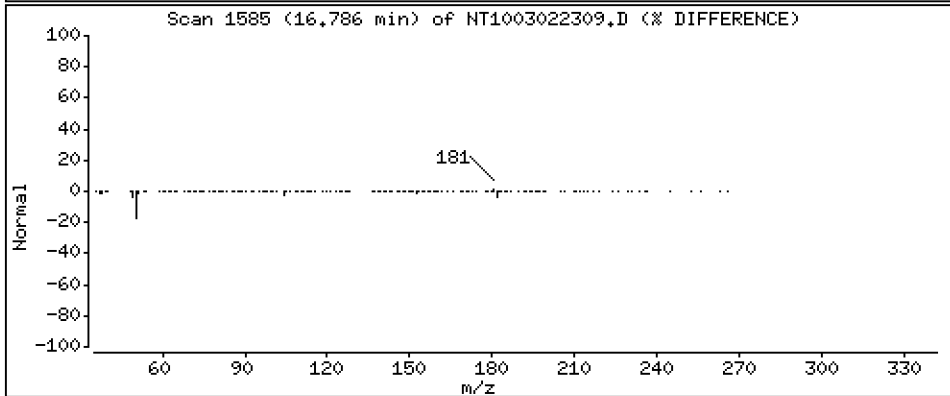
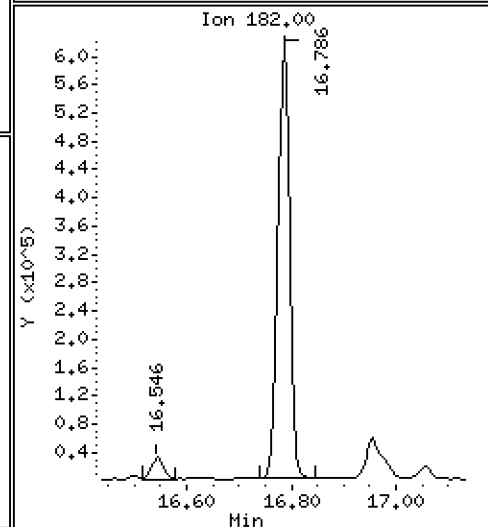
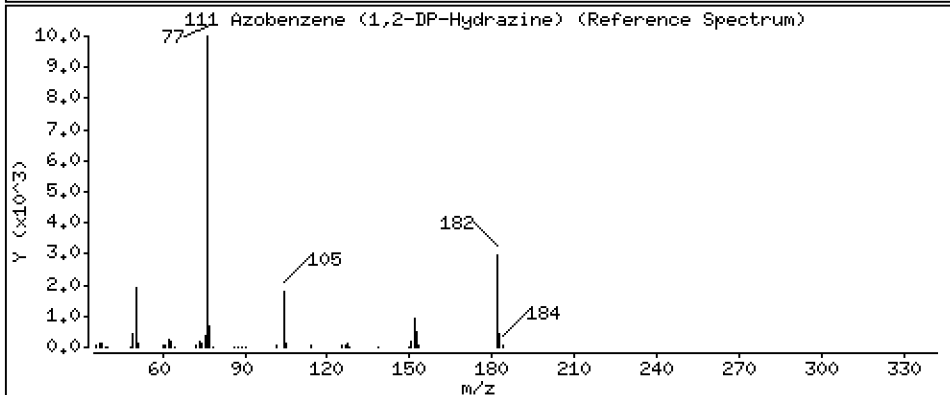
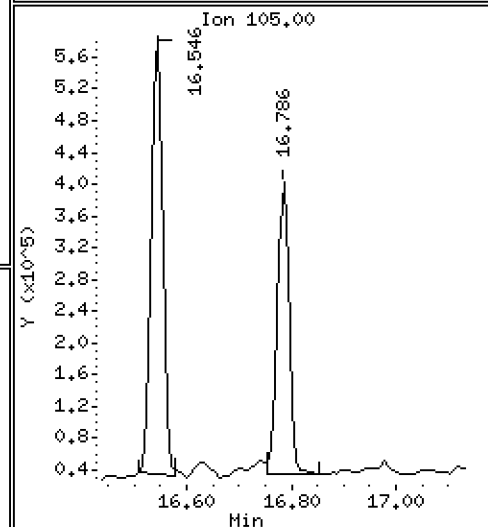
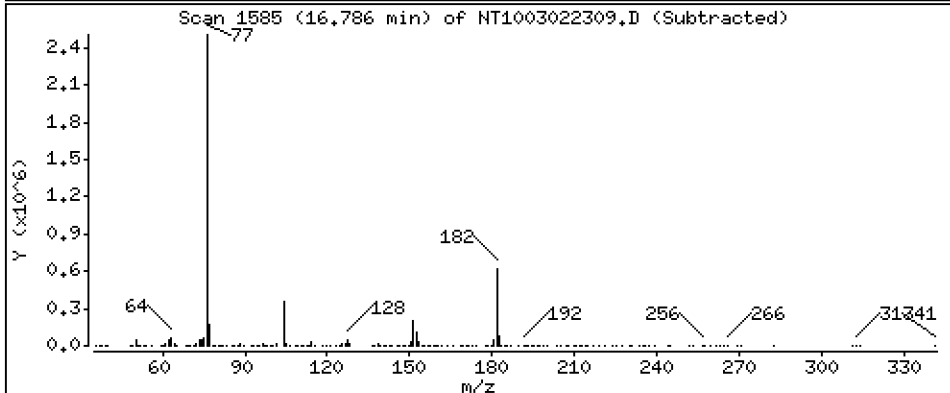
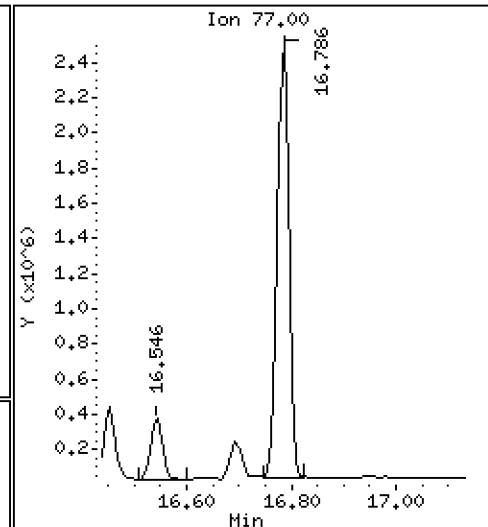
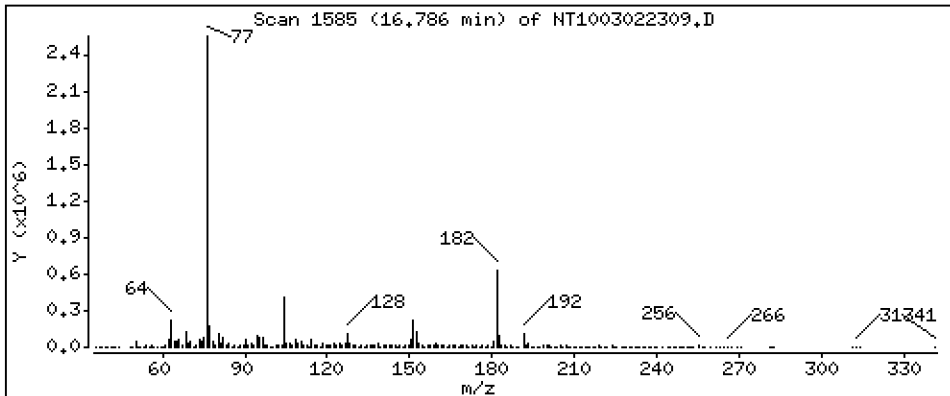
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,762 ug/mL





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

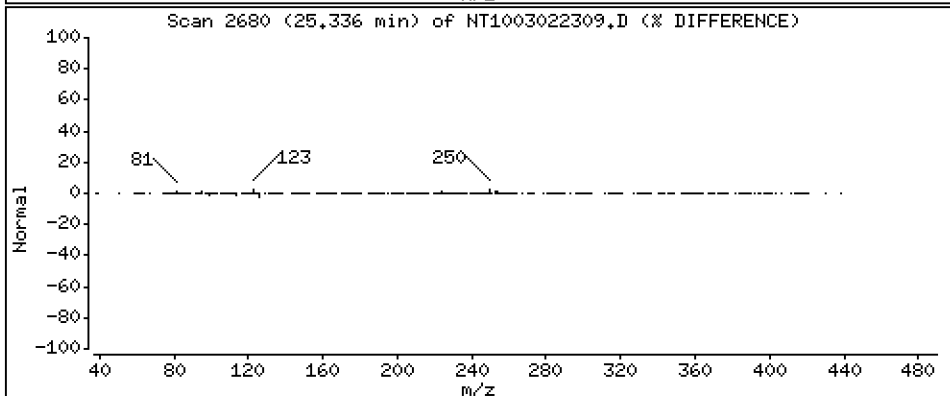
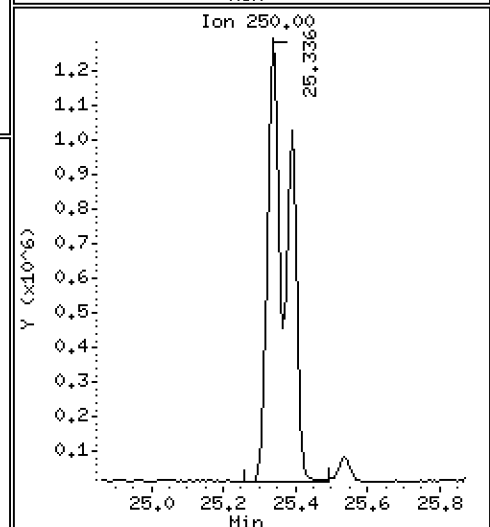
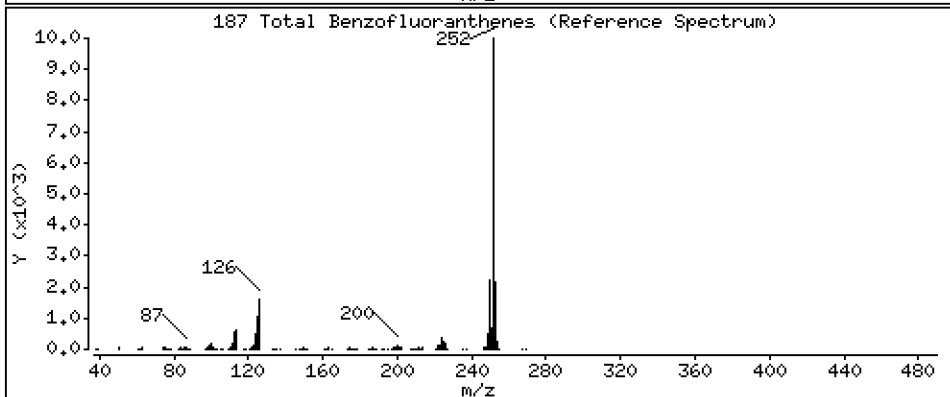
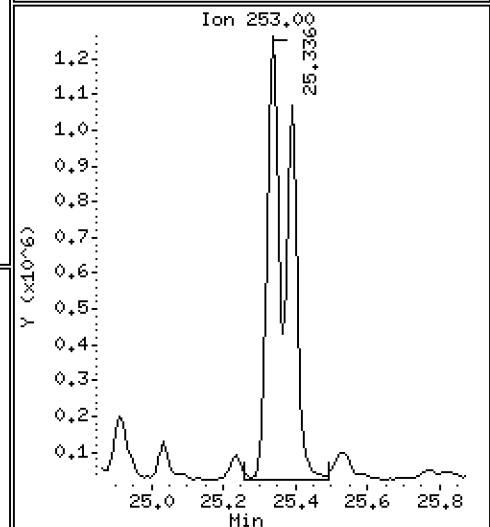
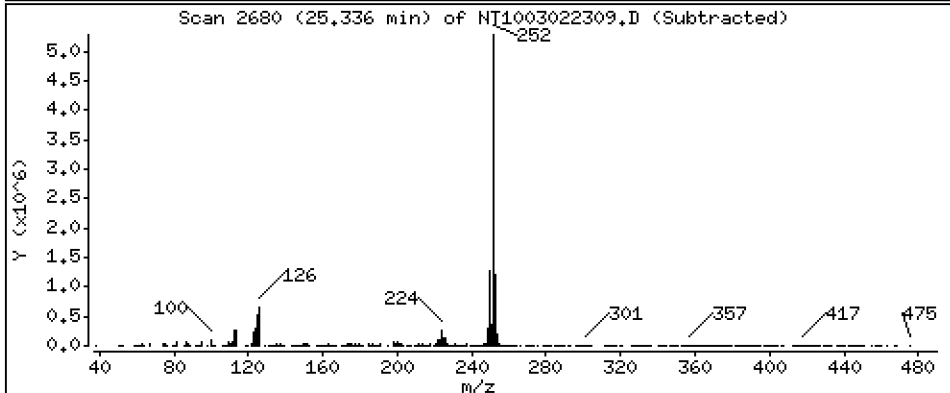
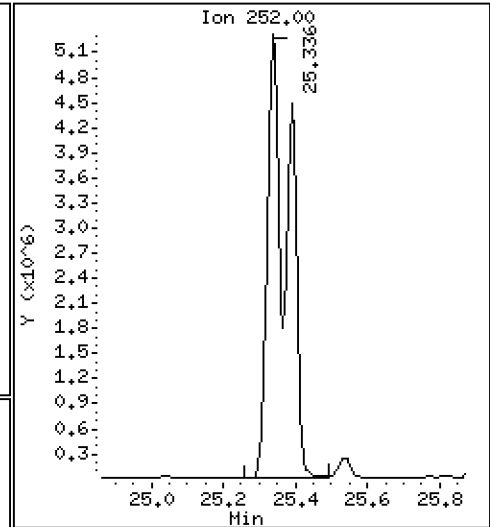
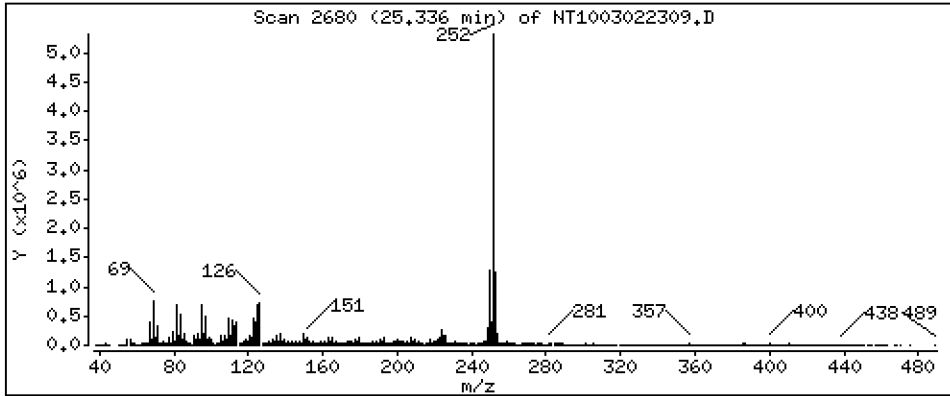
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 16,95 ug/mL



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

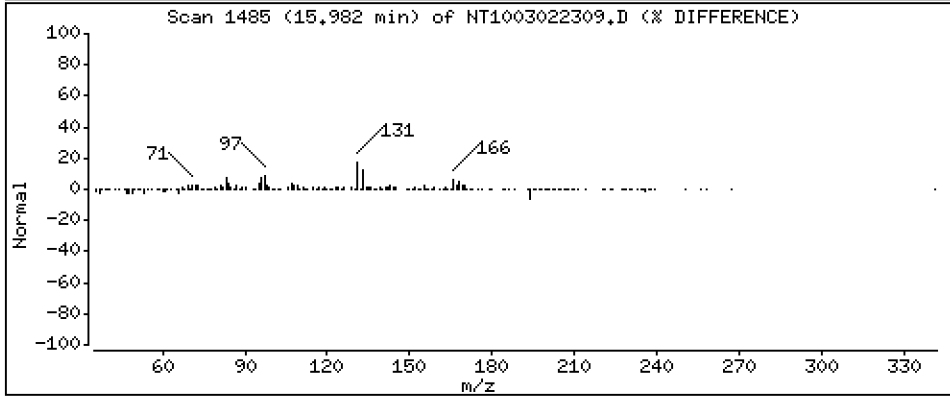
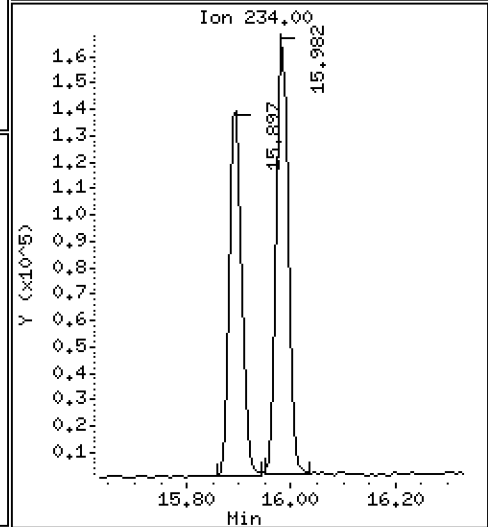
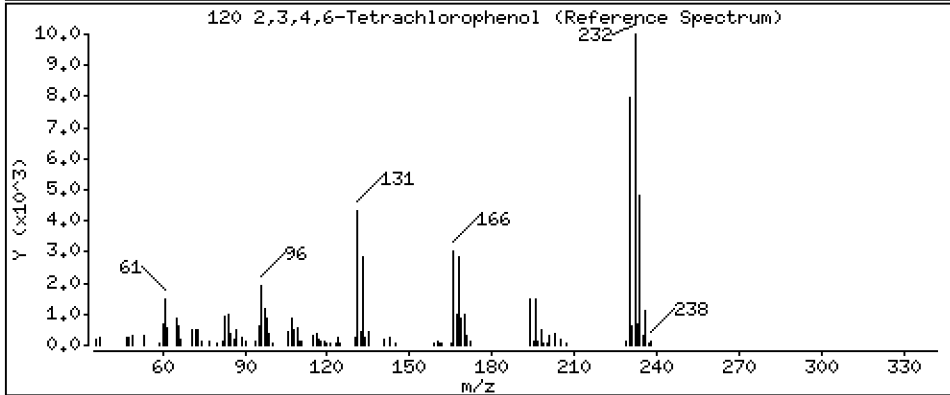
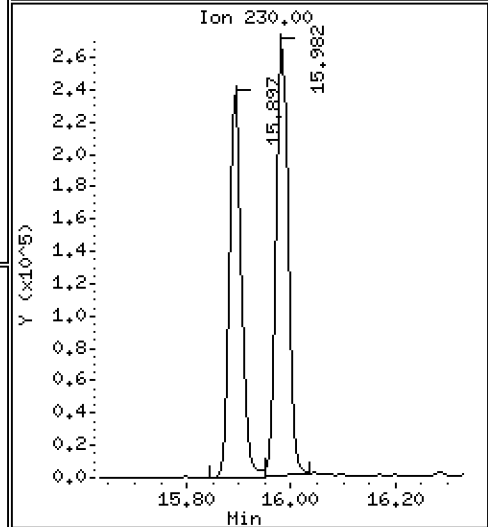
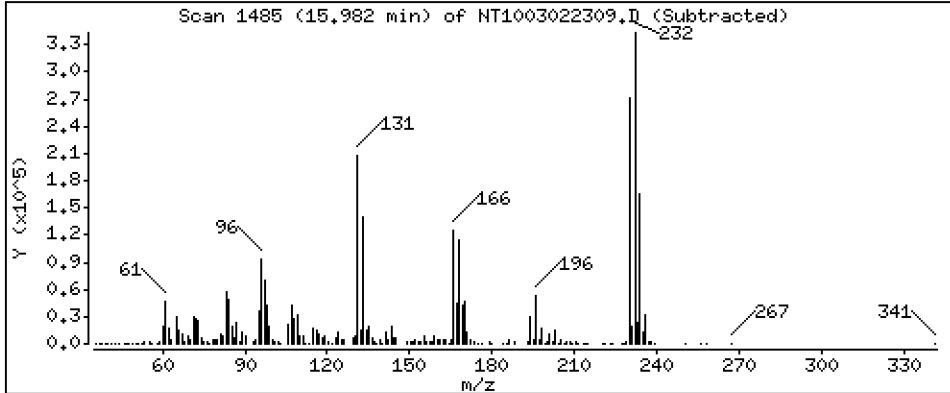
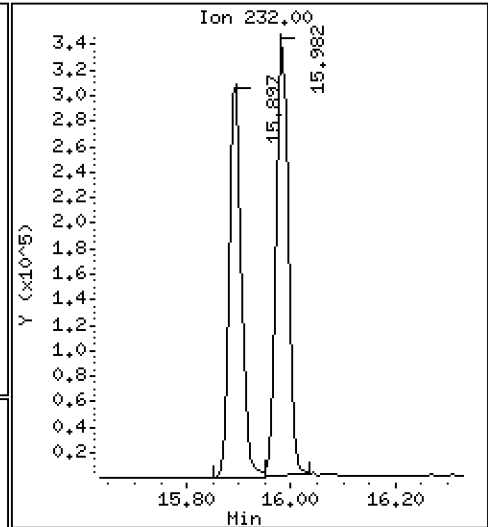
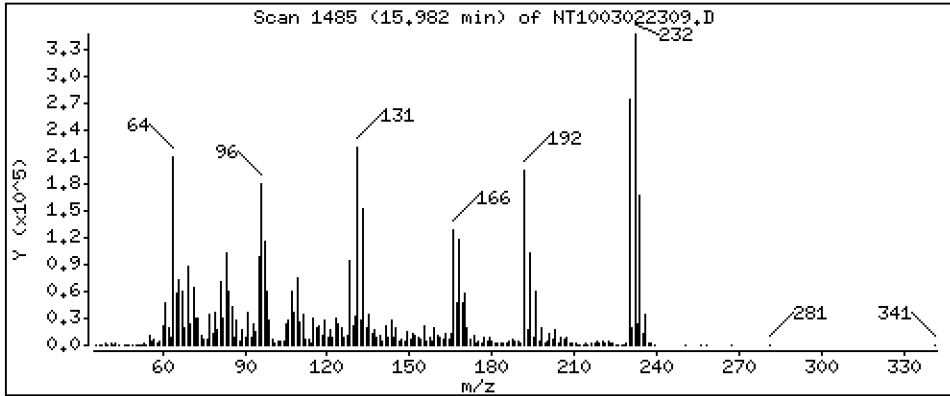
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 4,260 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022309.D  
 Lab Smp Id: BLA0624-MS1  
 Inj Date : 02-MAR-2023 19:28  
 Operator : VTS  
 Smp Info : BLA0624-MS1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	1154530	6.27158	6.272
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	1588145	7.43075	7.431
3 Phenol	94		8.519	8.512	(0.921)	3115730	13.7116	13.71
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1320069	7.23939	7.239
4 Bis(2-Chloroethyl)ether	93		8.728	8.736	(0.944)	996549	5.73911	5.739
6 2-Chlorophenol	128		8.844	8.844	(0.956)	846825	4.47033	4.470
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	876476	4.19656	4.197
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	585102	4.00000	
9 1,4-Dichlorobenzene	146		9.277	9.278	(1.003)	951187	4.58498	4.585
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	549139	4.03084	4.031
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	872257	4.34389	4.344
11 Benzyl alcohol	108		9.471	9.472	(1.024)	523405	4.39230	4.392
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.728	(1.053)	328242	5.66998	5.670
13 2-Methylphenol	108		9.658	9.650	(1.044)	750985	4.18479	4.185
17 Hexachloroethane	117		10.209	10.209	(1.104)	358190	4.20645	4.206
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	736762	5.37312	5.373
15 4-Methylphenol	108		9.945	9.938	(1.076)	1040646	4.76829	4.768
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	1131341	4.64858	4.649
19 Nitrobenzene	77		10.333	10.333	(0.882)	1127702	4.93964	4.940
20 Isophorone	82		10.791	10.791	(0.921)	2089081	7.16864	7.169
21 2-Nitrophenol	139		10.950	10.950	(0.934)	524219	4.25638	4.256
22 2,4-Dimethylphenol	107		11.001	11.001	(0.939)	3047862	13.4800	13.48
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.957)	1134660	6.30044	6.300
24 Benzoic acid	105		11.170	11.154	(0.953)	2686771	19.8376	19.84
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	3177198	17.5812	17.58
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	749532	4.37466	4.375
* 27 Naphthalene-d8	136		11.718	11.726	(1.000)	2217084	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	2908478	5.11117	5.111
29 4-Chloroaniline	127		11.880	11.858	(1.014)	1164189	4.60653	4.607
30 Hexachlorobutadiene	225		11.996	11.997	(1.024)	549330	4.40324	4.403
31 4-Chloro-3-methylphenol	107		12.809	12.801	(1.093)	3539740	18.0686	18.07
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	2019716	5.02414	5.024
33 Hexachlorocyclopentadiene	237		13.474	13.475	(0.880)	301227	7.12276	7.123

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.730	13.722	(0.896)	2216766	17.4793	17.48	
35 2,4,5-Trichlorophenol	196		13.799	13.792	(0.901)	2346826	17.2772	17.28	
§ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2053307	4.70145	4.701	
37 2-Chloronaphthalene	162		14.171	14.171	(0.925)	1724746	5.03060	5.031	
38 2-Nitroaniline	65		14.372	14.365	(0.938)	1763598	17.6520	17.65	
39 Dimethylphthalate	163		14.744	14.744	(0.963)	2149848	5.43668	5.437	
40 Acenaphthylene	152		15.030	15.023	(0.981)	2977535	5.03743	5.037	
41 2,6-Dinitrotoluene	165		14.875	14.868	(0.971)	1715722	18.5415	18.54	
* 42 Acenaphthene-d10	164		15.316	15.317	(1.000)	1224450	4.00000		
43 3-Nitroaniline	138		15.224	15.216	(0.994)	1029277	10.3216	10.32	
44 Acenaphthene	153		15.386	15.386	(1.005)	2027573	5.68783	5.688	
45 2,4-Dinitrophenol	184		15.432	15.433	(1.008)	465656	19.1305	19.13	
46 Dibenzofuran	168		15.741	15.742	(1.028)	2951143	5.57806	5.578	
47 4-Nitrophenol	109		15.540	15.525	(1.015)	1209403	16.0868	16.09	
48 2,4-Dinitrotoluene	165		15.710	15.703	(1.026)	2450667	18.0838	18.08	
50 Diethylphthalate	149		16.213	16.206	(1.059)	2461604	5.87620	5.876	
49 Fluorene	166		16.453	16.453	(1.074)	2809335	6.38217	6.382	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	1109374	5.46900	5.469	
52 4-Nitroaniline	138		16.484	16.476	(1.076)	1417352	13.2227	13.22	
53 4,6-Dinitro-2-methylphenol	198		16.546	16.538	(0.899)	1853401	26.9048	26.90	
54 N-Nitrosodiphenylamine	169		16.693	16.693	(0.907)	1985586	4.97736	4.977	
§ 55 2,4,6-Tribromophenol	330		16.955	16.947	(1.107)	640828	8.04308	8.043	
56 4-Bromophenyl-phenylether	248		17.472	17.472	(0.949)	803600	4.97146	4.971	
57 Hexachlorobenzene	284		17.581	17.581	(0.955)	816178	4.48390	4.484	
58 Pentachlorophenol	266		17.991	17.983	(0.977)	1886194	19.5848	19.58	
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2696226	4.00000		
60 Phenanthrene	178		18.463	18.455	(1.003)	7876694	11.4153	11.42	
61 Anthracene	178		18.563	18.564	(1.008)	3898083	5.82600	5.826	
62 Carbazole	167		18.896	18.889	(1.026)	3855079	6.28930	6.289	
63 Di-n-butylphthalate	149		19.600	19.593	(1.065)	5460972	6.27075	6.271	
64 Fluoranthene	202		20.846	20.815	(0.889)	16560930	12.2247	12.22	
65 Pyrene	202		21.279	21.248	(0.908)	14950243	10.8379	10.84	
§ 66 Terphenyl-d14	244		21.550	21.527	(0.919)	4477151	4.01120	4.011	
67 Butylbenzylphthalate	149		22.425	22.410	(0.957)	3289048	4.50508	4.505	
68 Benzo(a)anthracene	228		23.424	23.409	(0.999)	11797304	8.49613	8.496	
* 69 Chrysene-d12	240		23.439	23.424	(1.000)	3938003	4.00000		
70 3,3'-Dichlorobenzidine	252		23.362	23.347	(0.997)	1577042	2.54277	2.543	
71 Chrysene	228		23.493	23.470	(1.002)	11533297	10.2202	10.22	
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	7896232	8.53985	8.540	
* 134 Di-n-octylphthalate-d4	153		24.500	24.492	(1.000)	6236602	4.00000		
73 Di-n-octylphthalate	149		24.515	24.500	(1.001)	3179825	2.29926	2.299	
74 Benzo(b)fluoranthene	252		25.336	25.305	(0.969)	12261722	9.55951	9.560	
75 Benzo(k)fluoranthene	252		25.390	25.367	(0.971)	9136312	7.58963	7.590	
76 Benzo(a)pyrene	252		26.033	25.994	(0.996)	8526343	7.64694	7.647	
* 77 Perylene-d12	264		26.149	26.118	(1.000)	3348167	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.948	28.878	(1.107)	7085819	5.58869	5.589	
79 Dibenzo(a,h)anthracene	278		28.987	28.932	(1.109)	4824722	5.02012	5.020	
80 Benzo(g,h,i)perylene	276		29.794	29.725	(1.139)	5967456	5.95193	5.952	
90 N-Nitrosodimethylamine	74		4.719	4.719	(0.510)	1490998	12.5462	12.55	
91 Aniline	93		8.666	8.628	(0.937)	400072	1.51846	1.518	
93 Benzidine	184		Compound Not Detected.						
103 Pyridine	79		4.835	4.781	(0.523)	358962	1.70317	1.703	
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	1897391	5.21476	5.215	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.785	16.785	(1.096)	3604655	5.76228	5.762	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.336	25.367	(0.969)	20604881	16.9532	16.95
120 2,3,4,6-Tetrachlorophenol	232	15.981	15.981	(1.043)	512473	4.26045	4.260

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022309.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-MS1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	585102	35.76
27 Naphthalene-d8	1609461	804731	3218922	2217084	37.75
42 Acenaphthene-d10	853113	426557	1706226	1224450	43.53
59 Phenanthrene-d10	1556648	778324	3113296	2696226	73.21
69 Chrysene-d12	1539062	769531	3078124	3938003	155.87 <-
134 Di-n-octylphthala	2949571	1474786	5899142	6236602	111.44 <-
77 Perylene-d12	1634059	817030	3268118	3348167	104.90 <-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.44	0.06
134 Di-n-octylphthala	24.49	23.99	24.99	24.50	0.03
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022309.D

Lab ID: BLA0624-MS1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 19:28

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.523	0.517	0.0058	Pyridine

RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022310.D

Date: 02-MAR-2023 20:06

Client ID:

Sample Info: BLR0624-HSD1

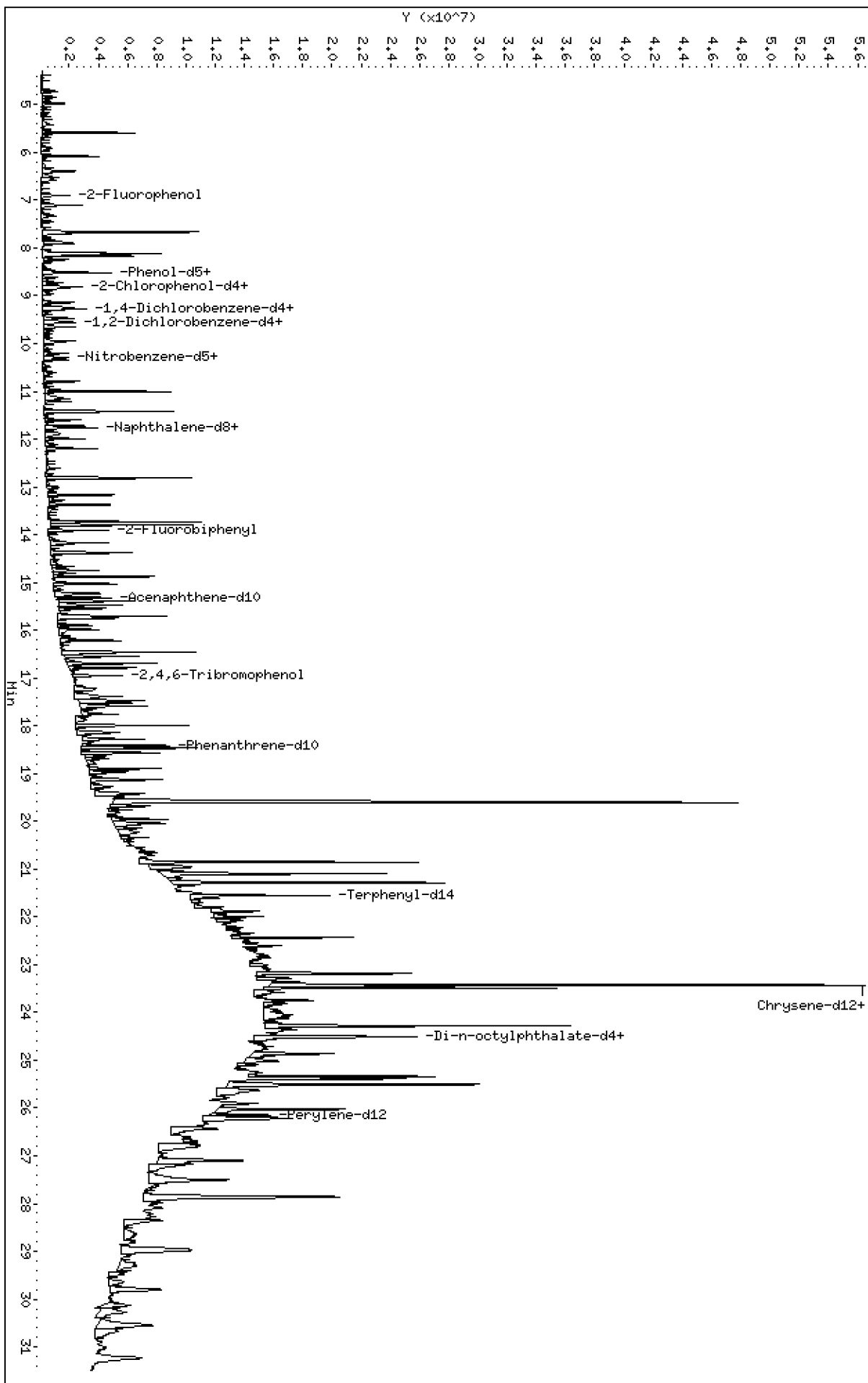
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022310.D





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

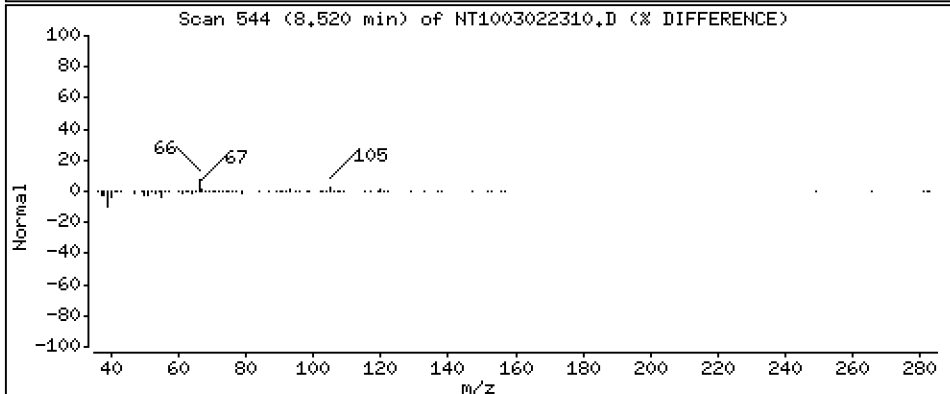
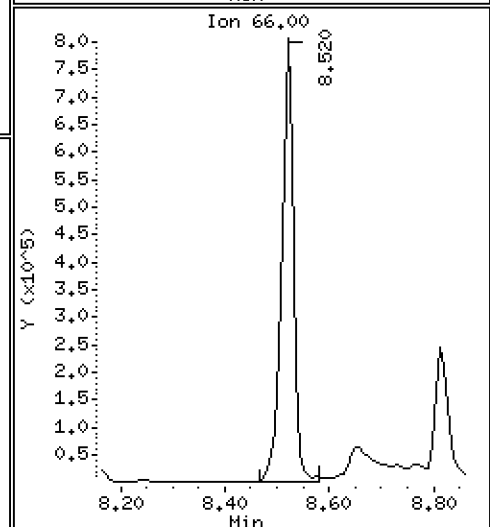
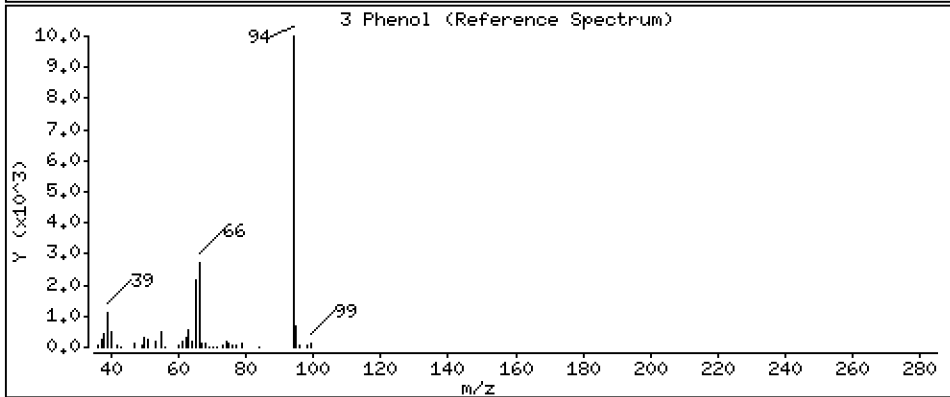
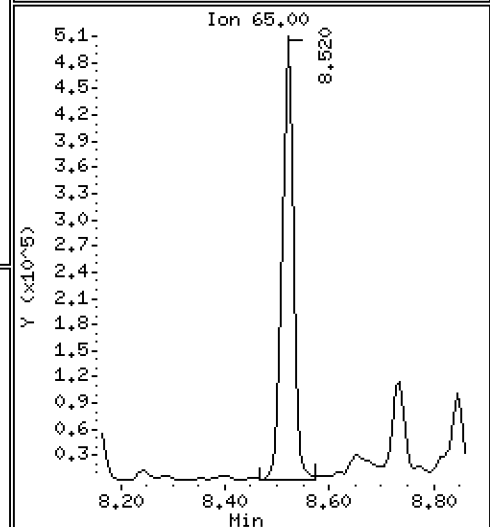
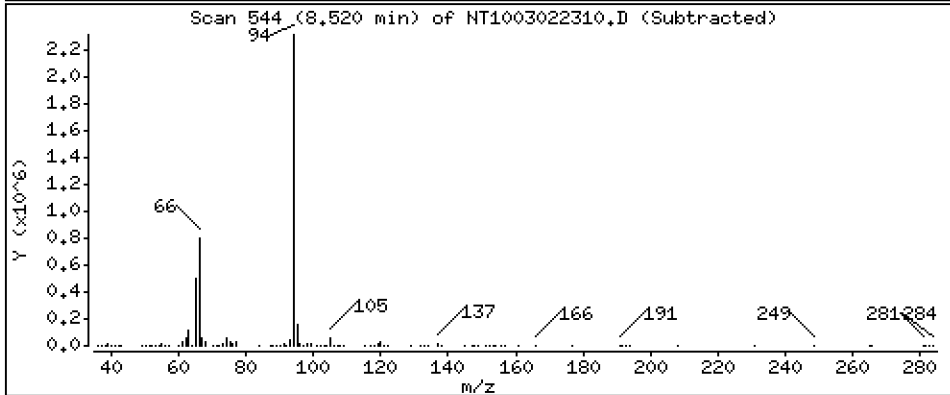
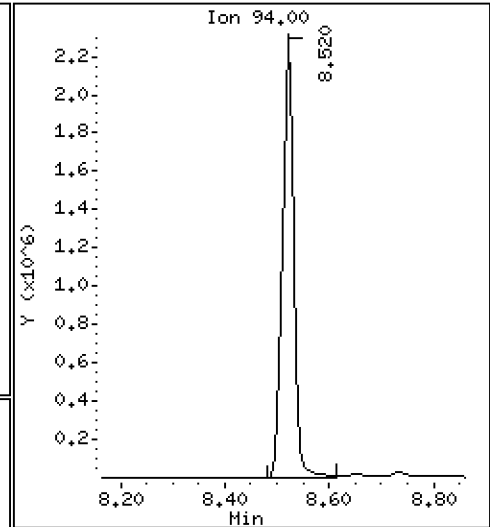
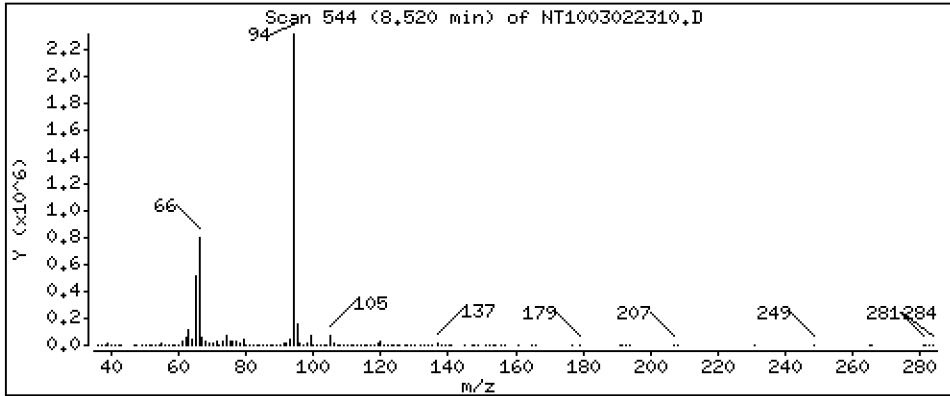
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 14,45 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

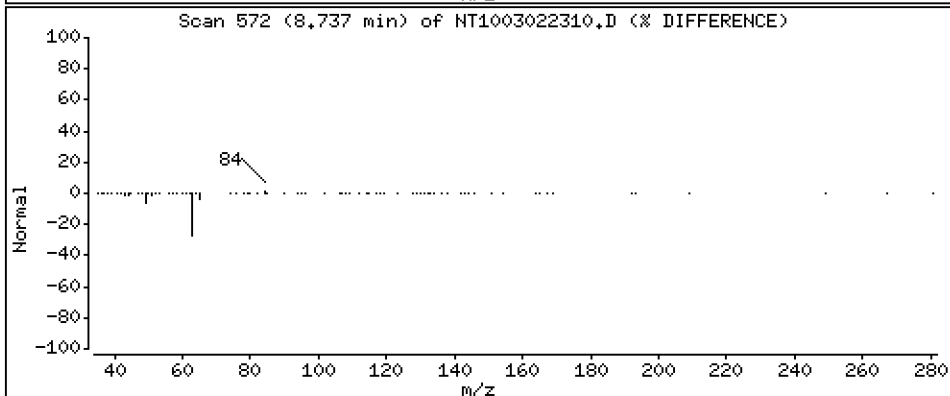
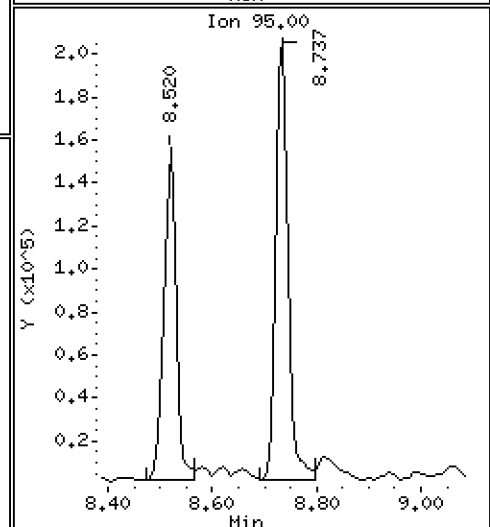
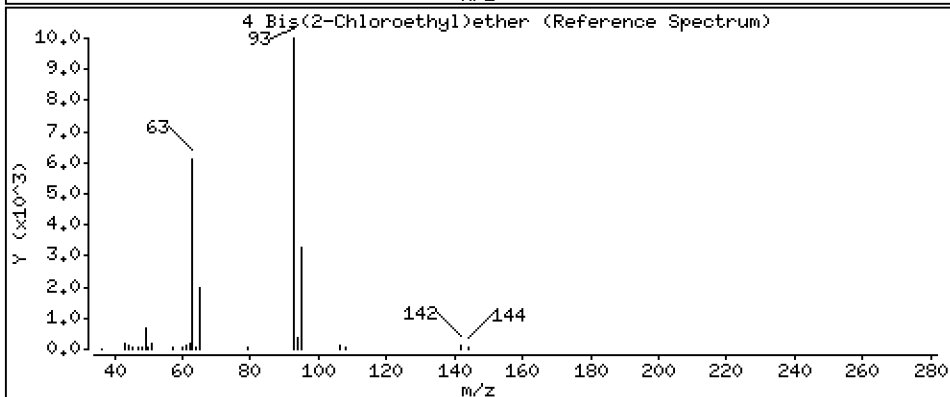
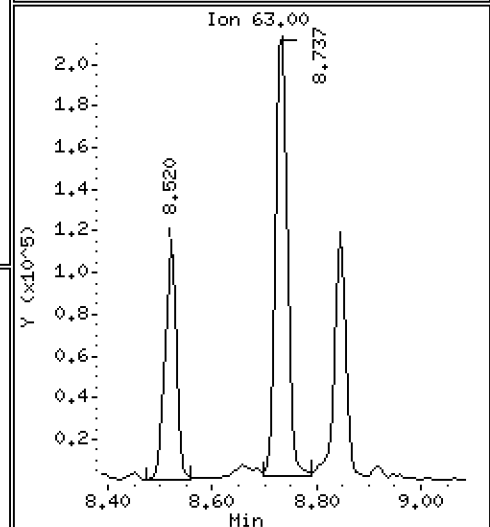
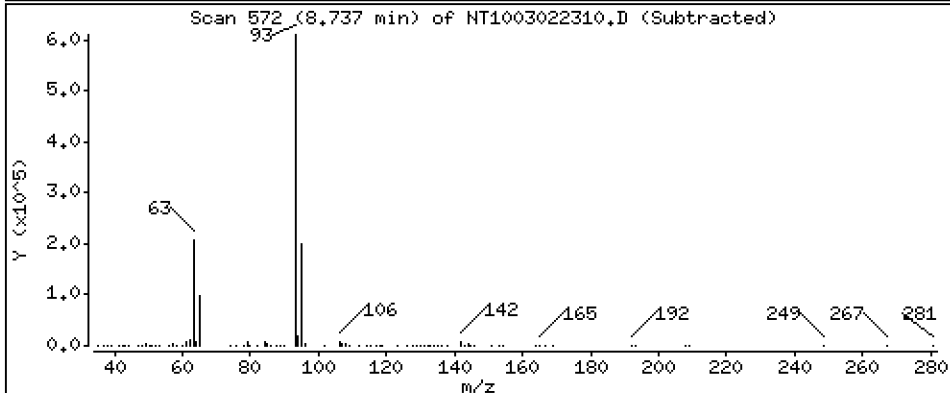
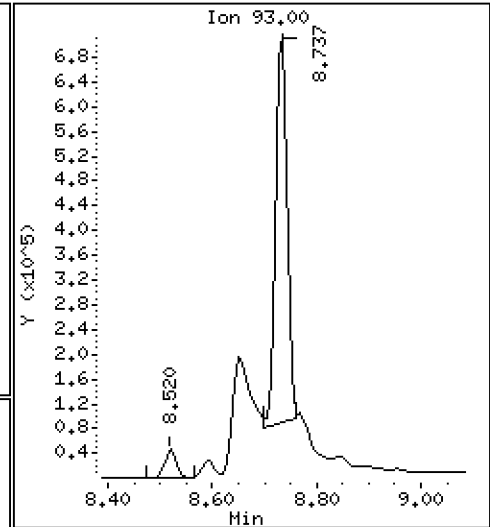
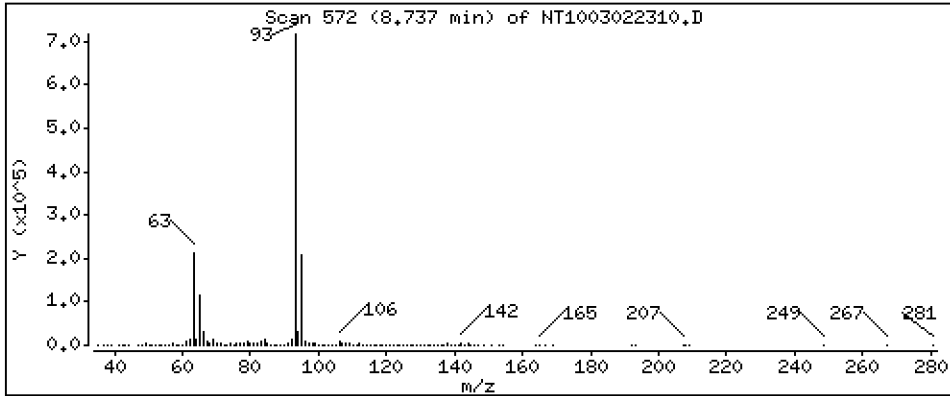
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,102 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

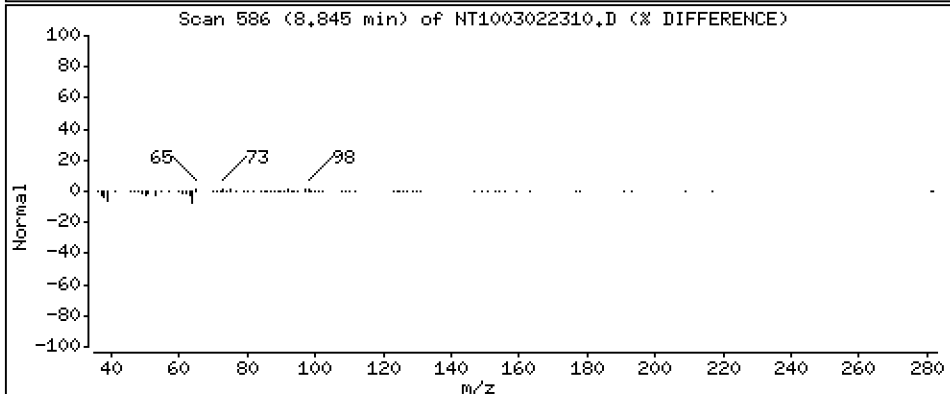
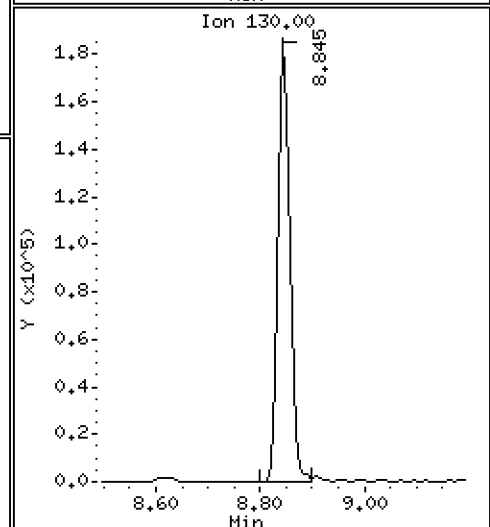
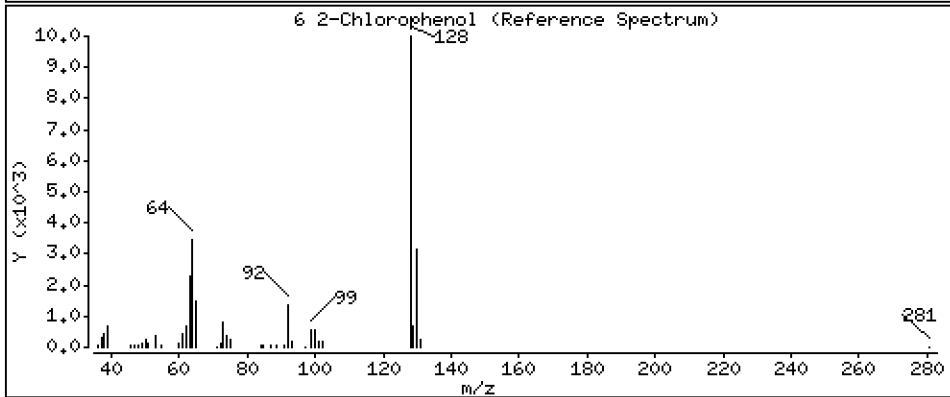
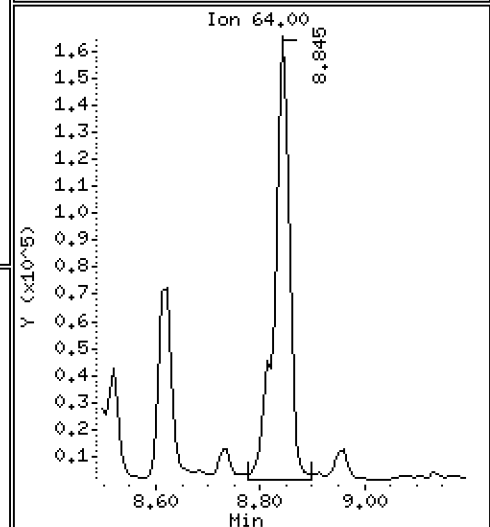
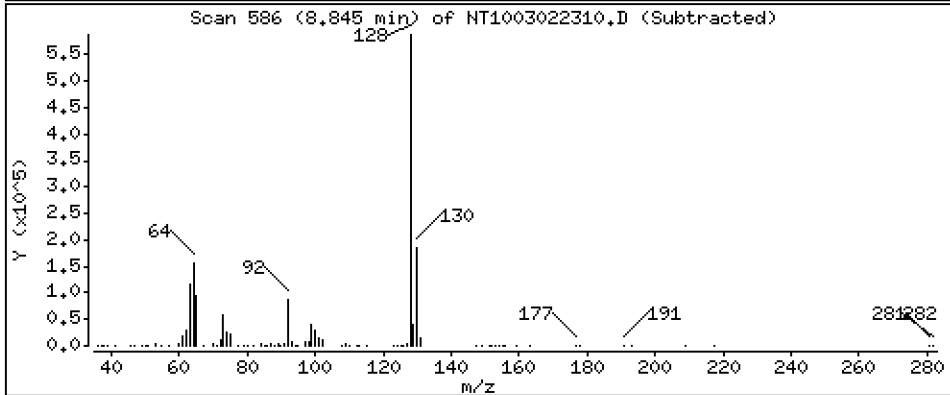
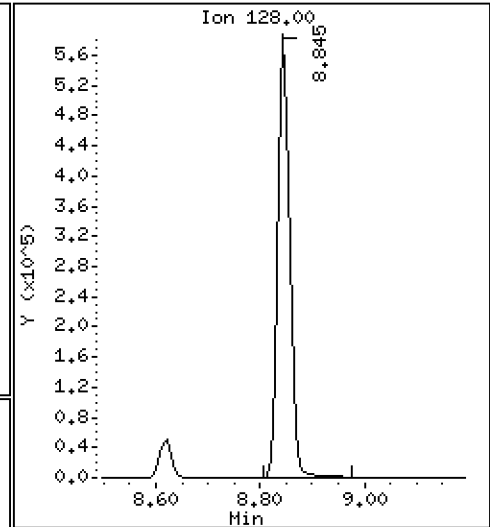
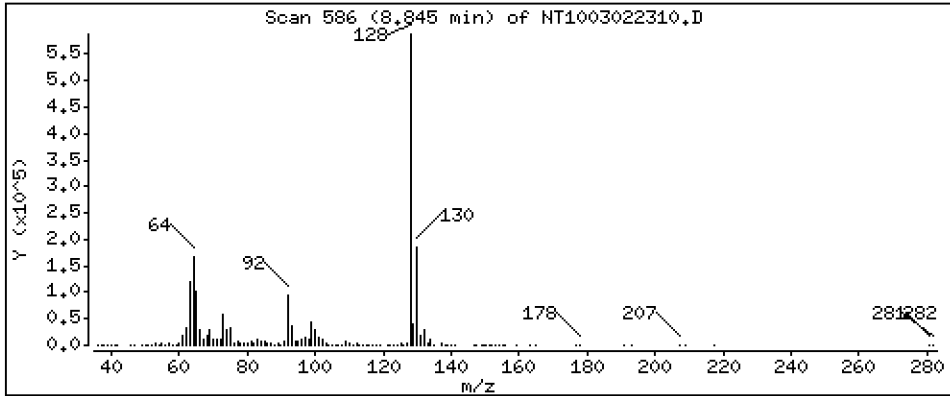
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 4,645 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

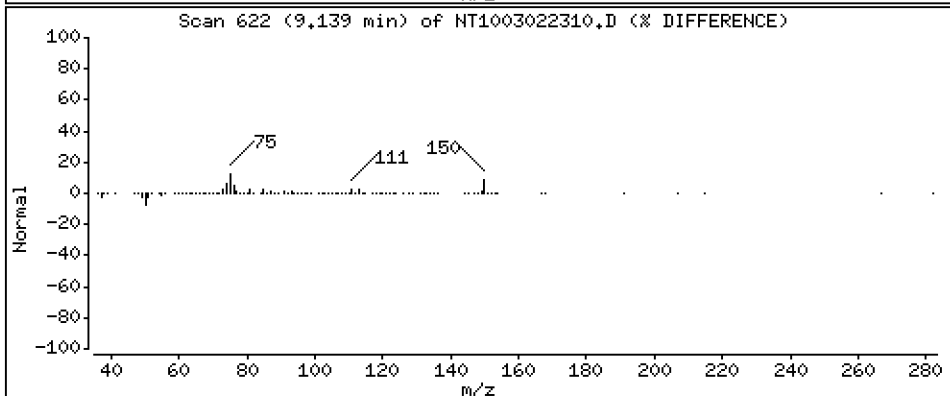
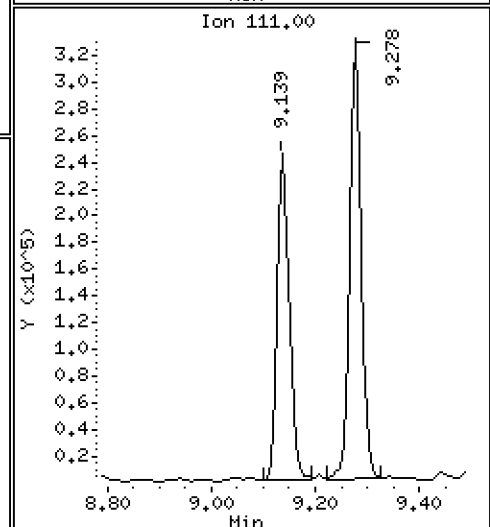
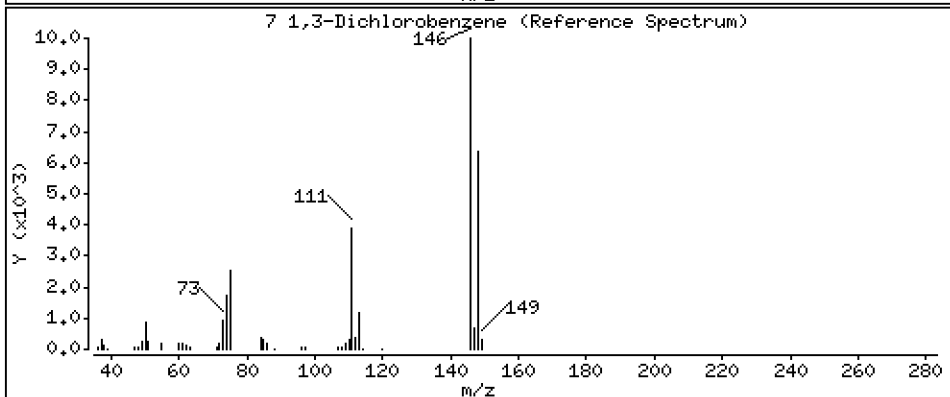
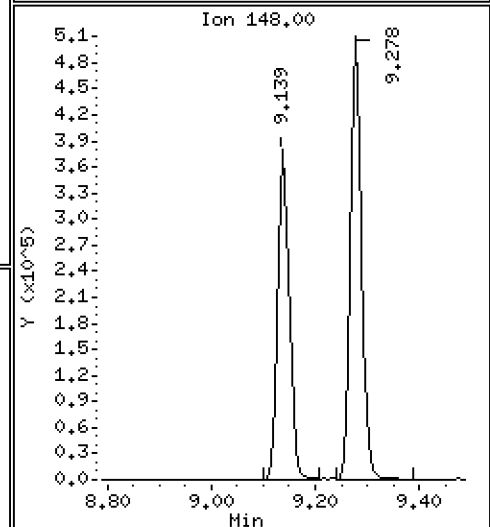
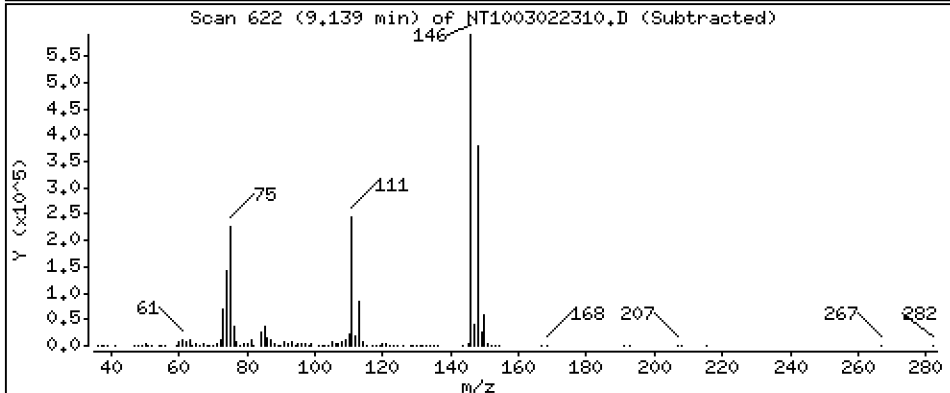
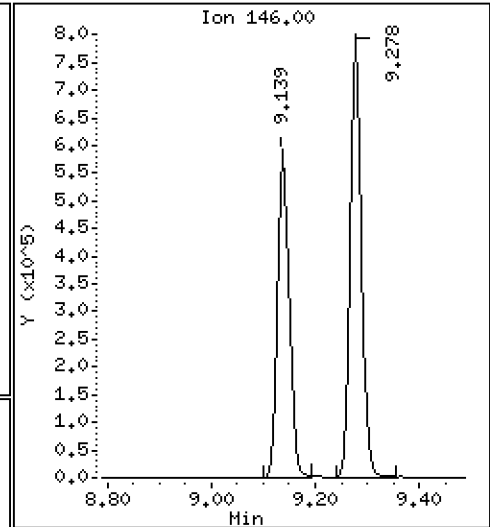
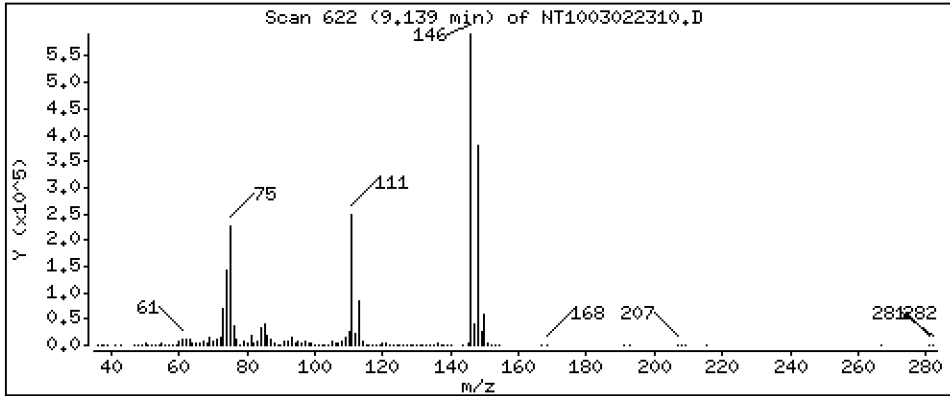
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,171 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

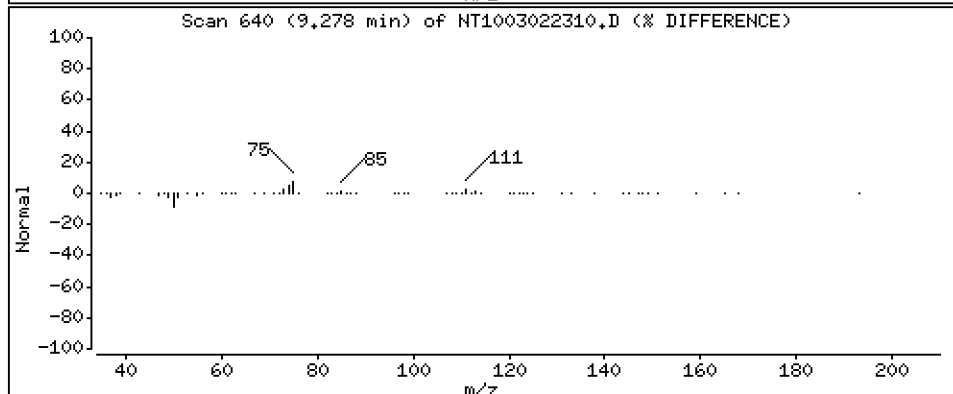
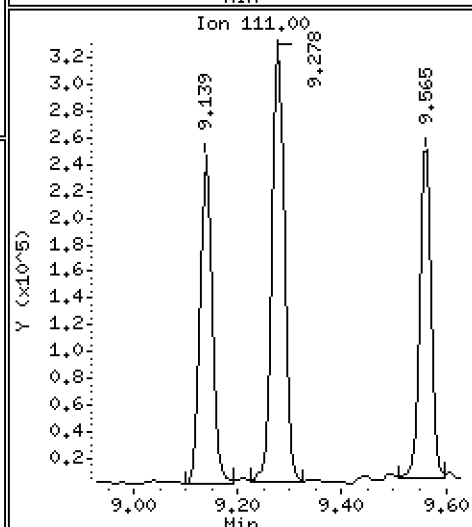
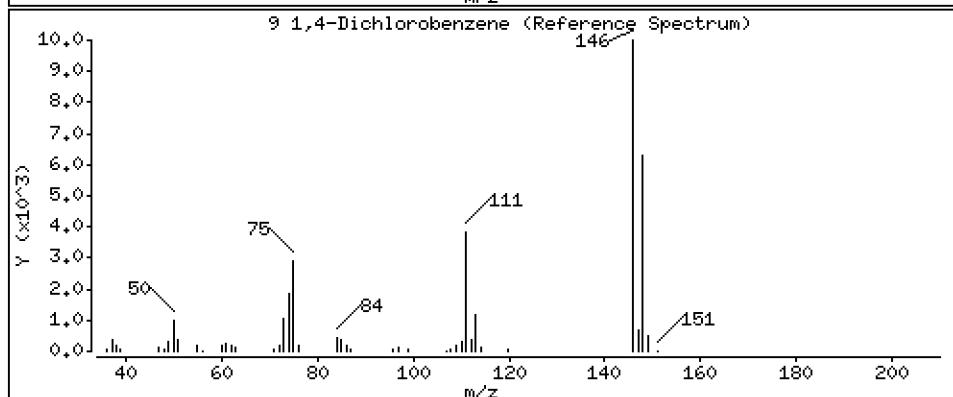
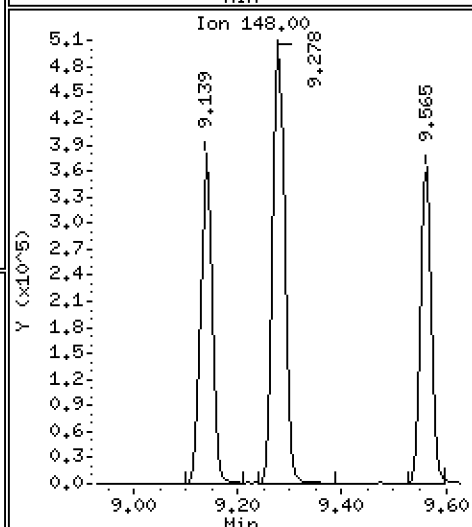
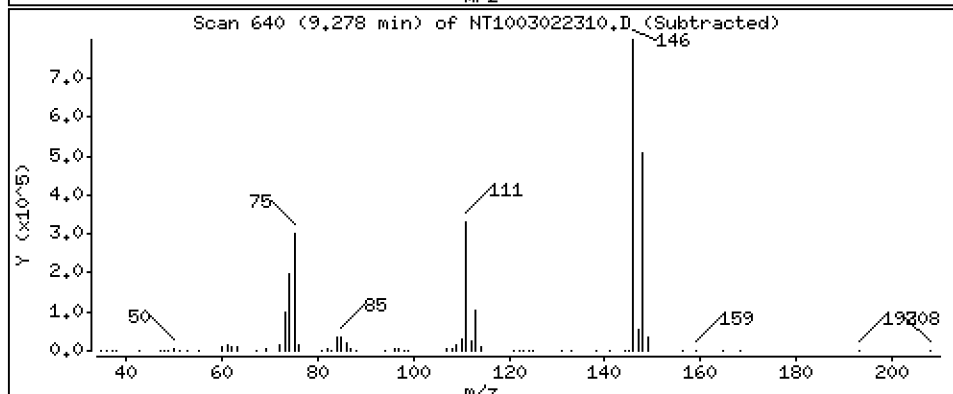
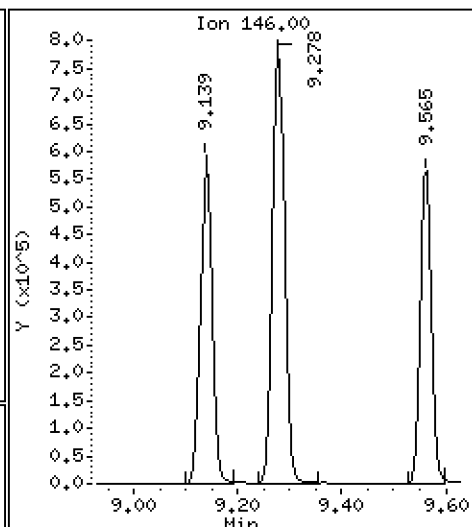
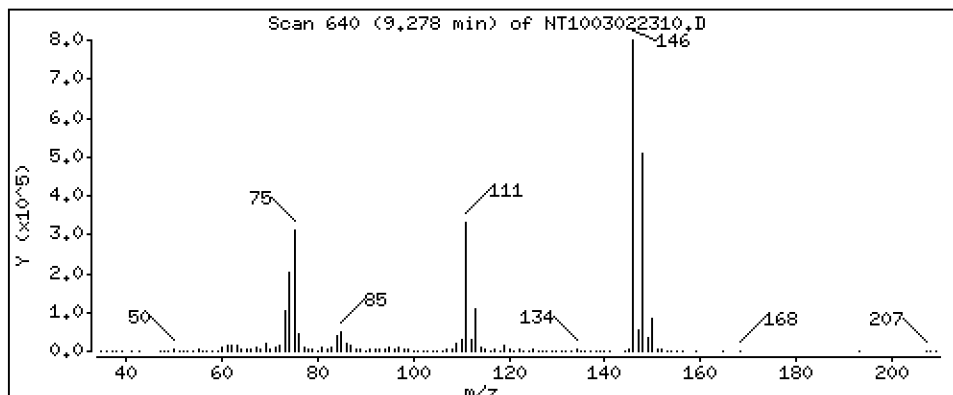
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,626 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

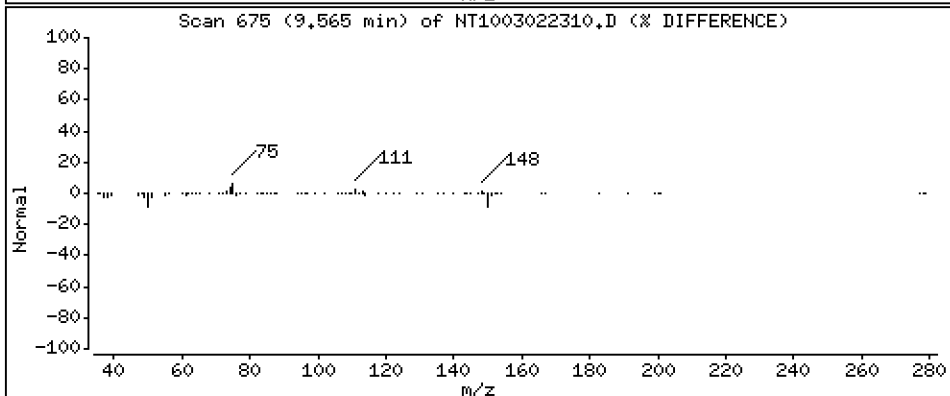
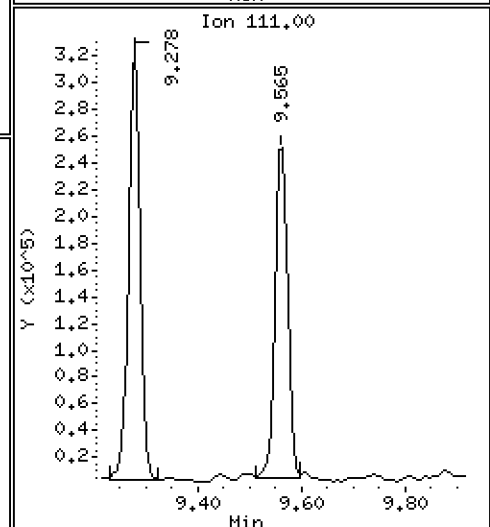
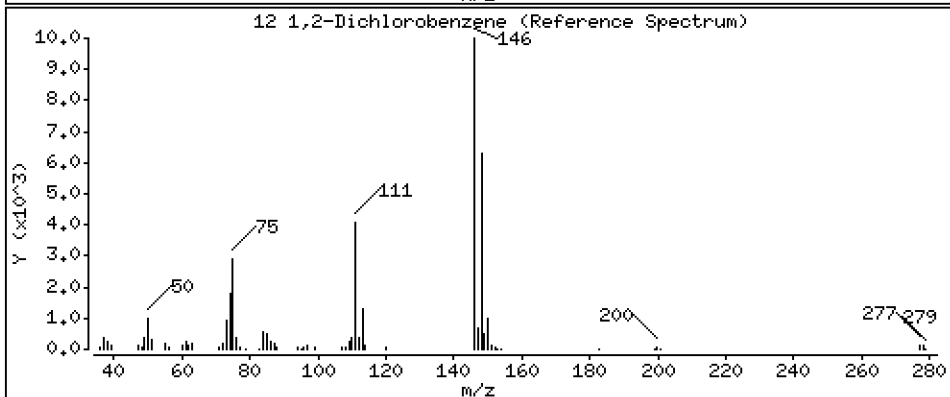
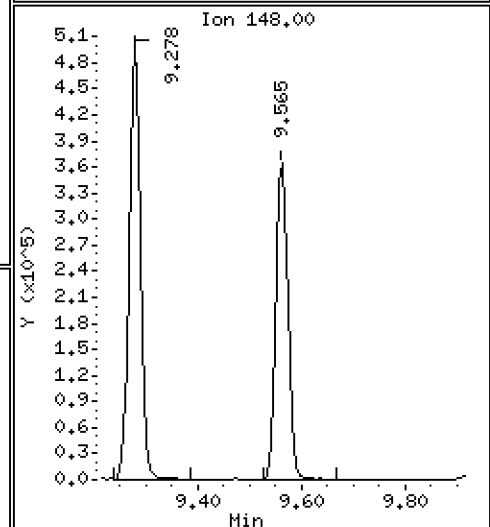
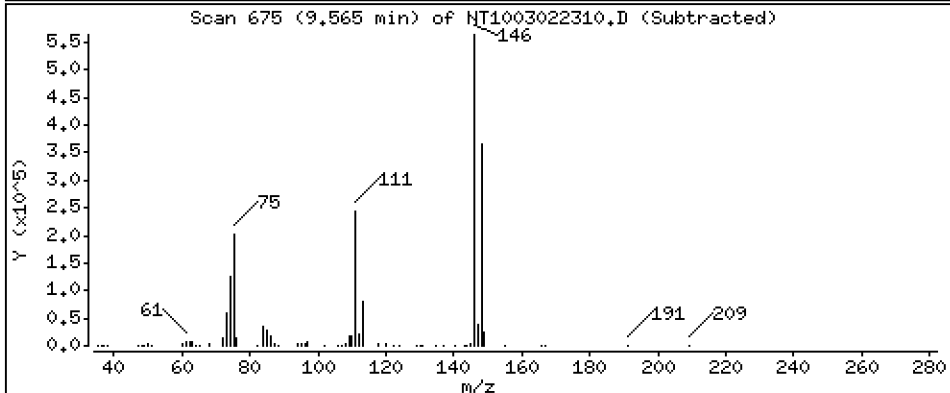
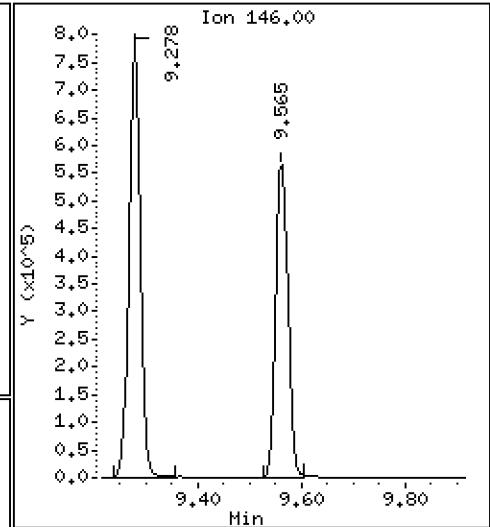
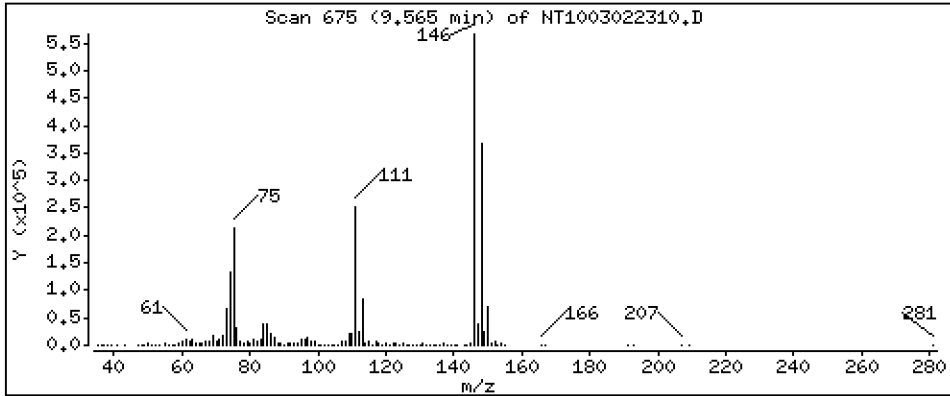
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,311 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

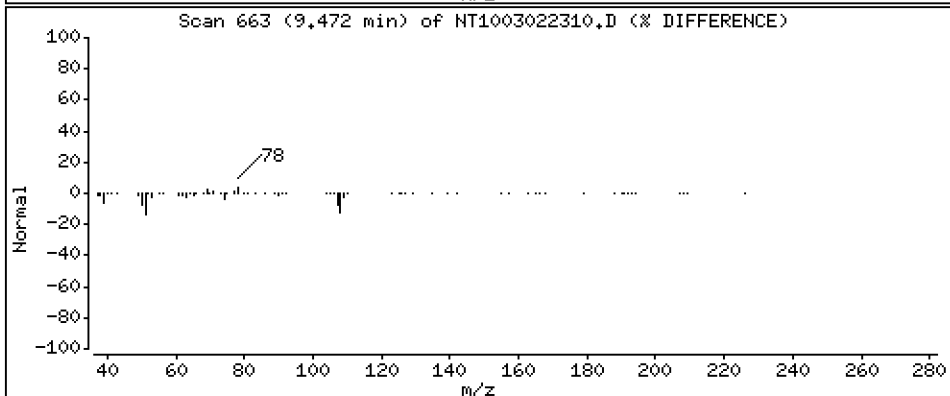
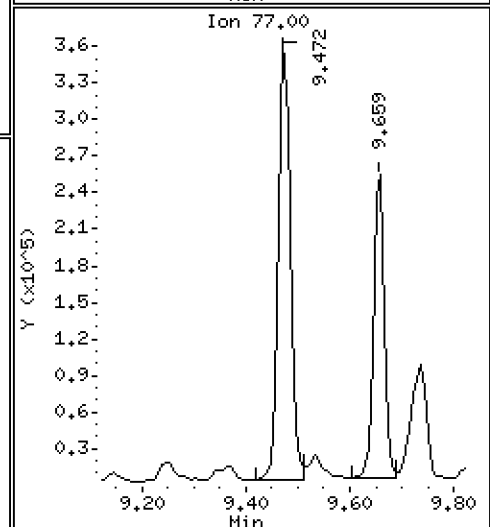
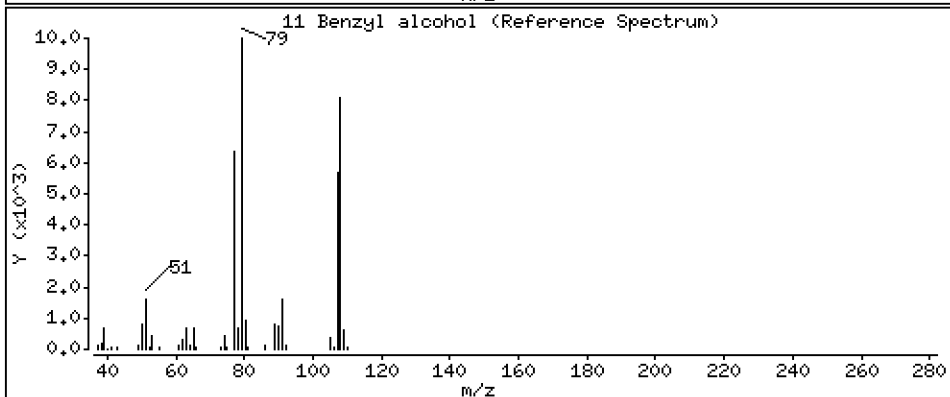
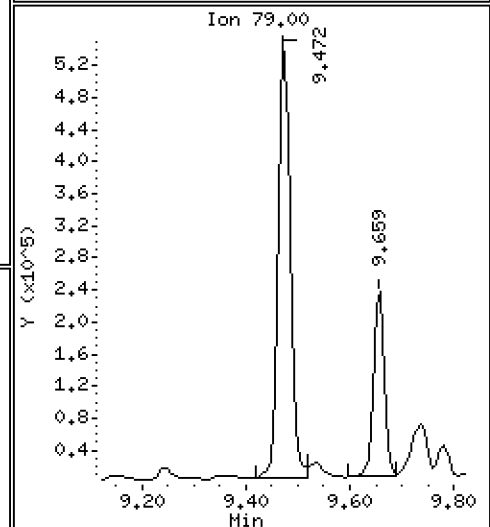
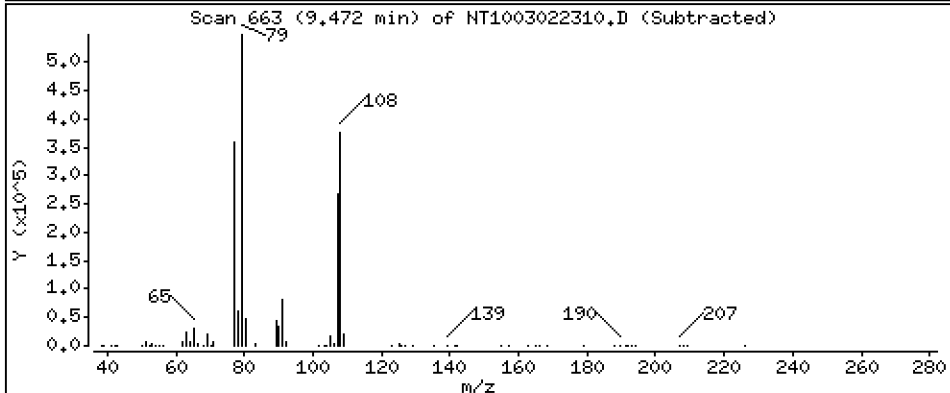
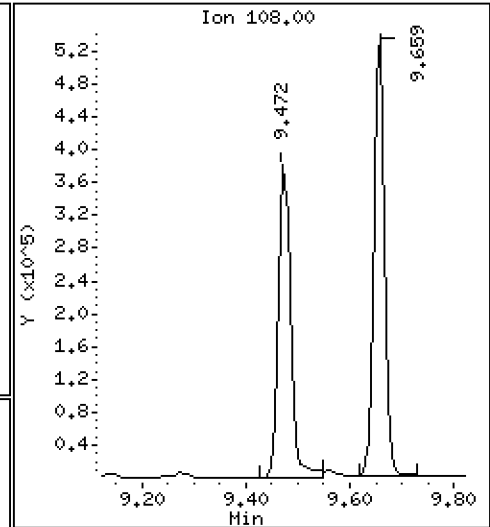
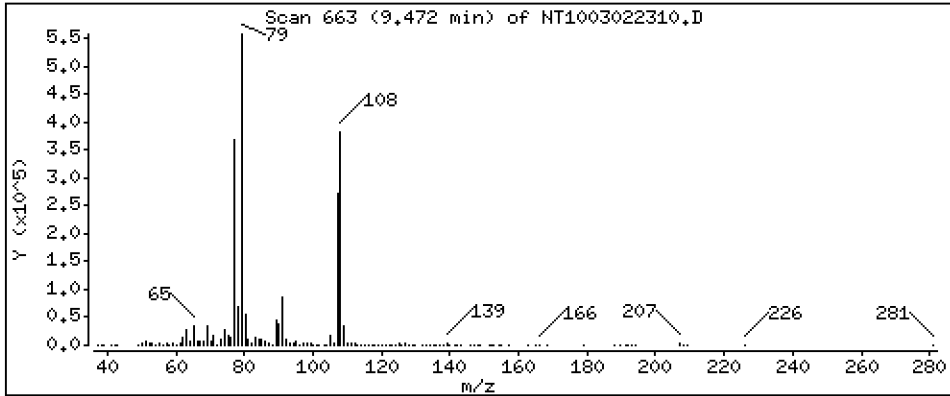
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 4,817 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

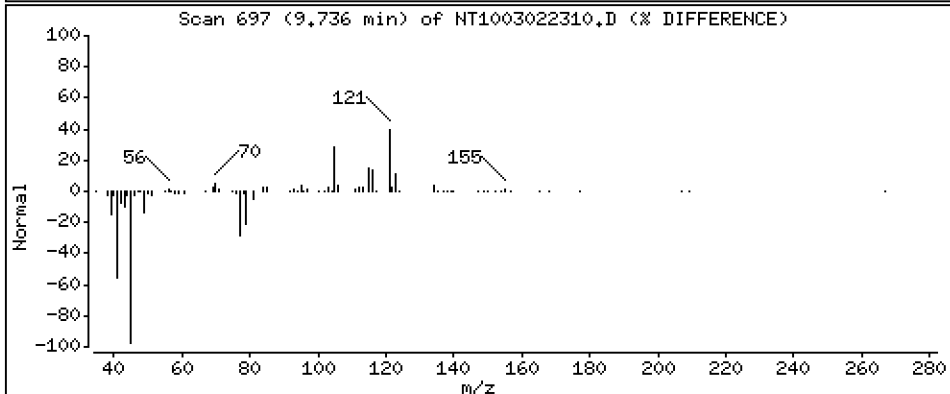
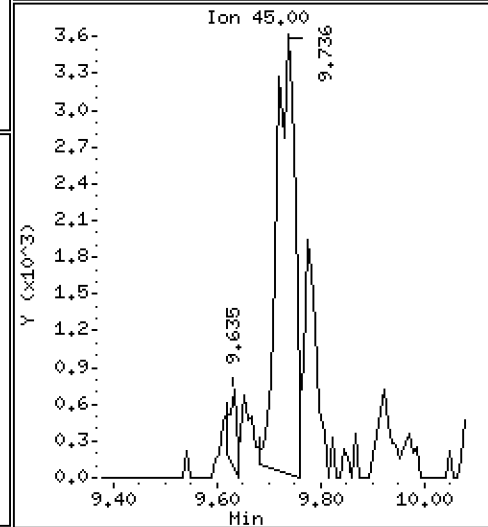
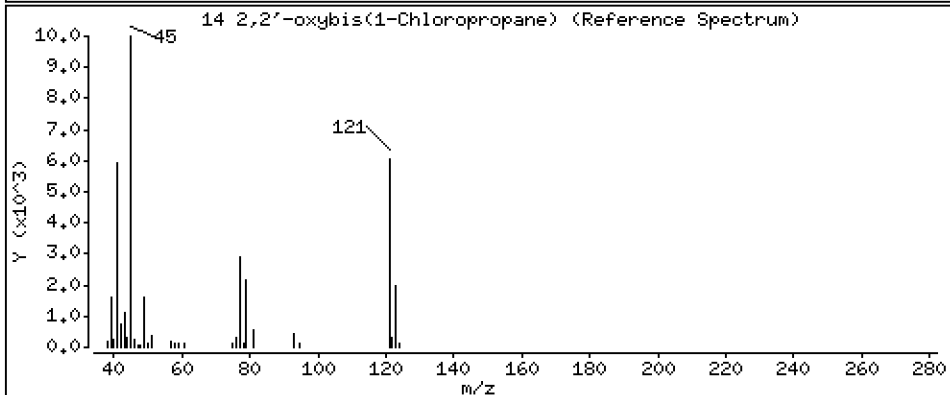
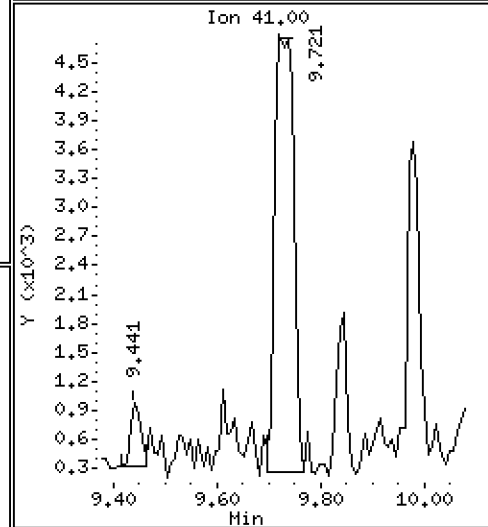
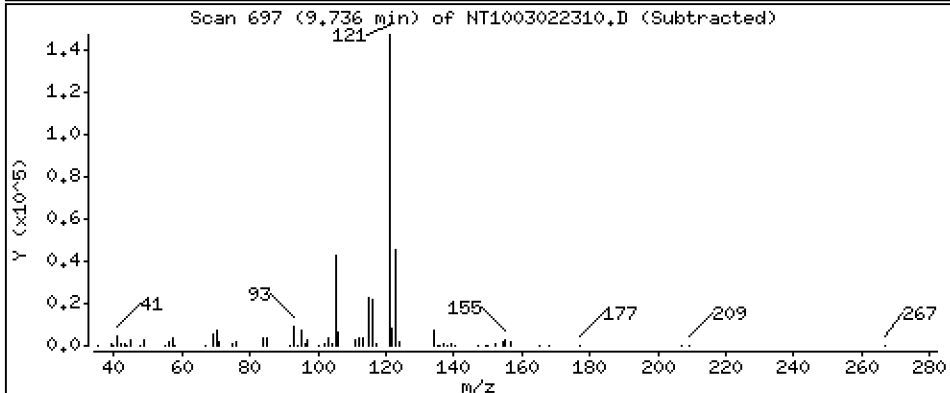
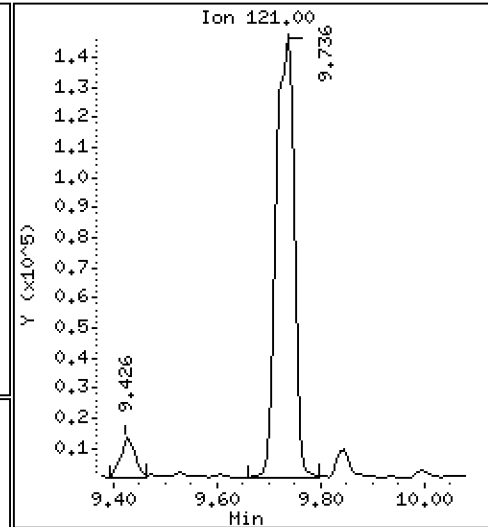
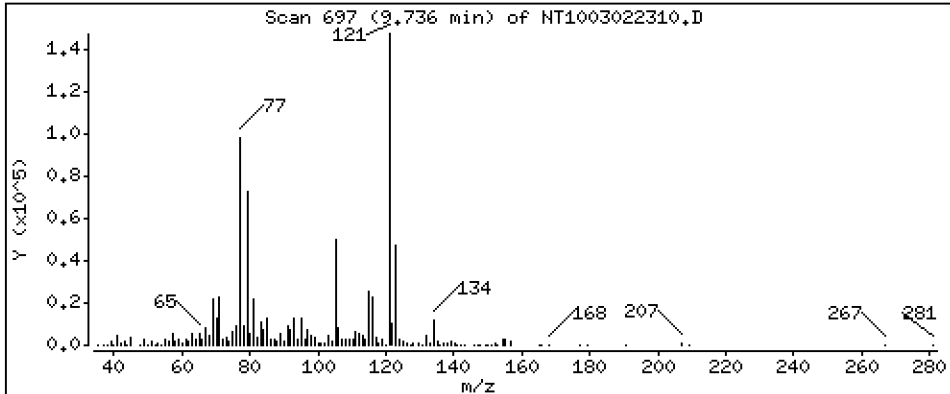
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 5,787 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

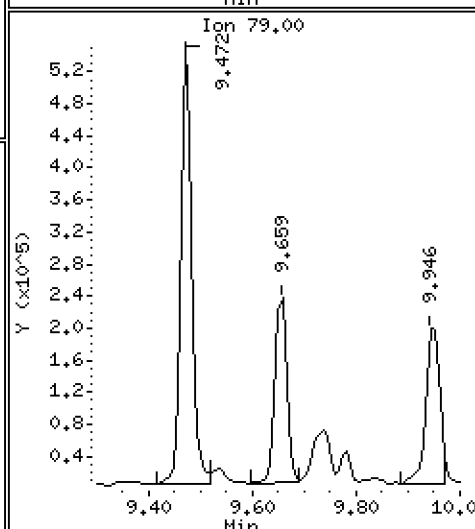
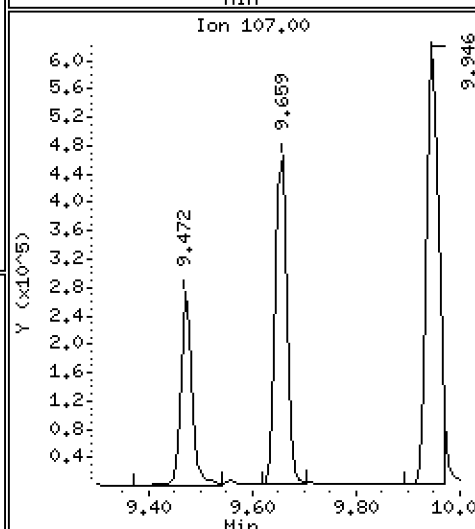
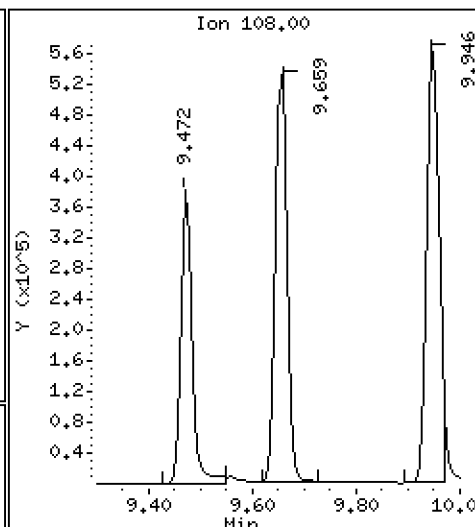
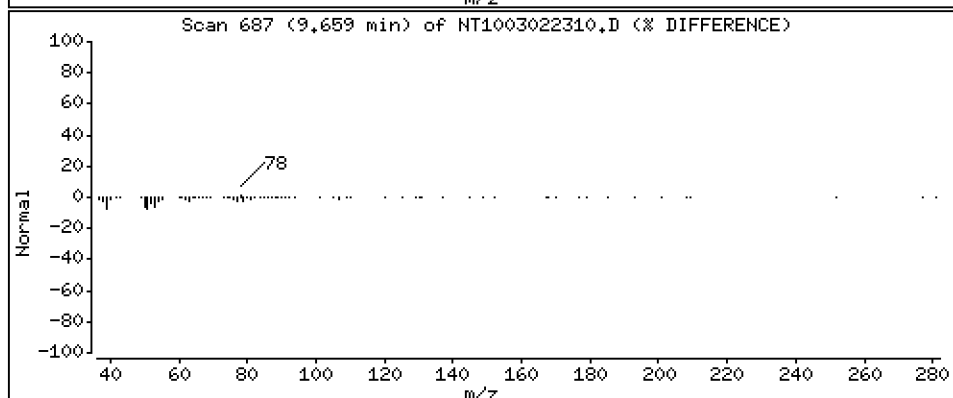
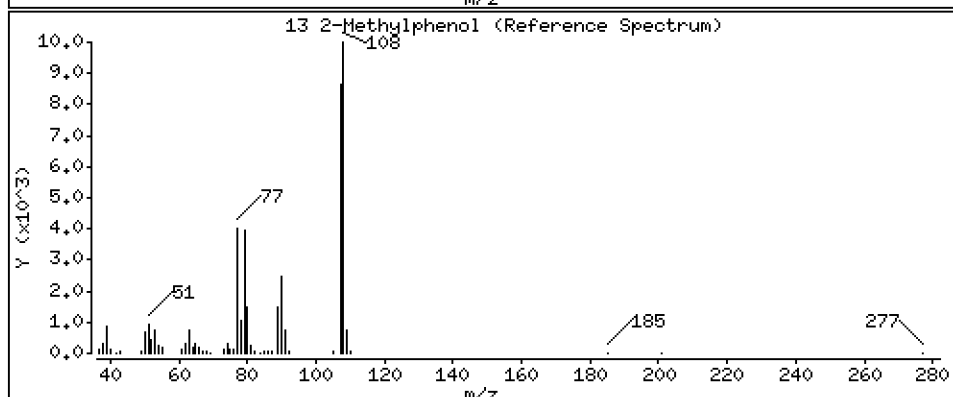
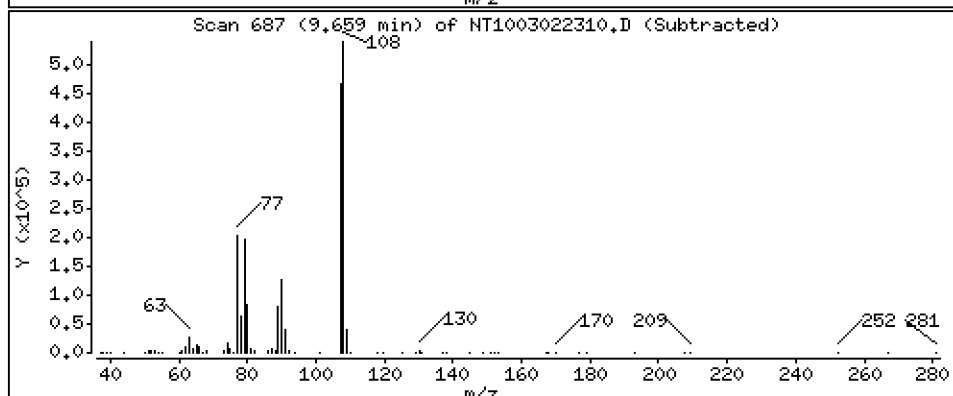
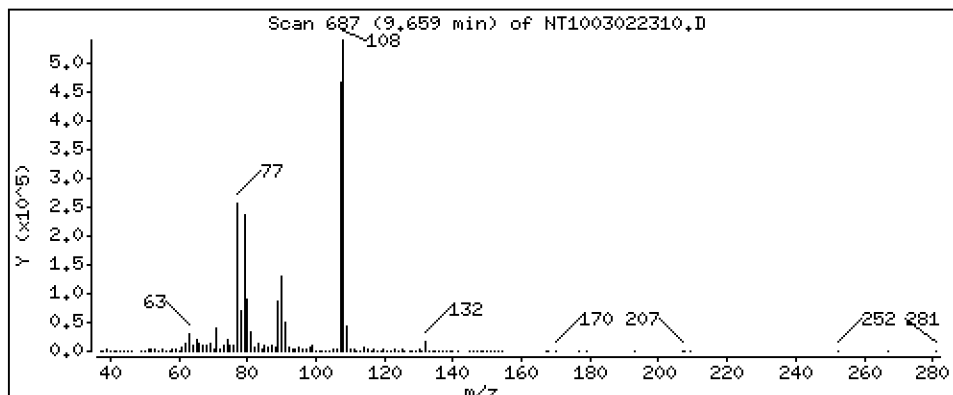
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 4,285 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

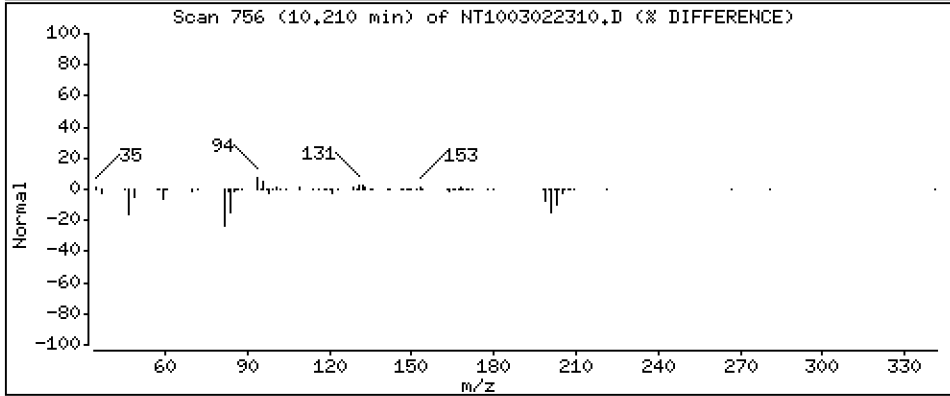
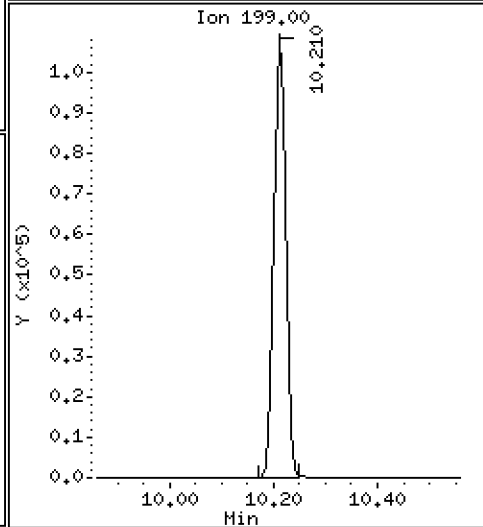
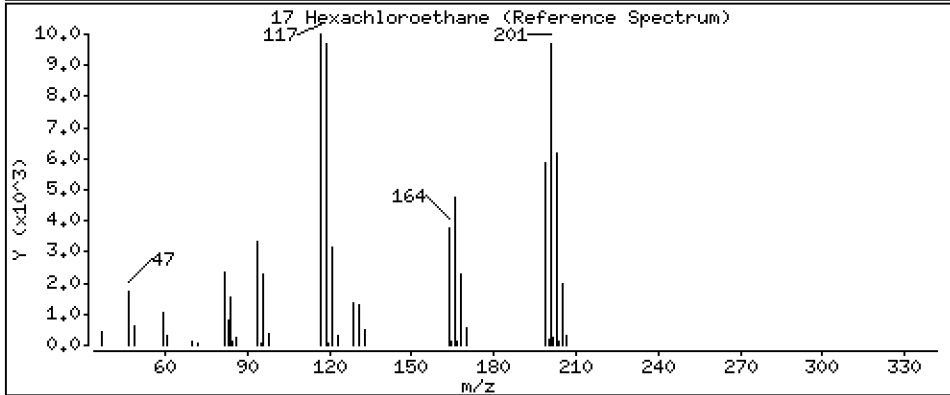
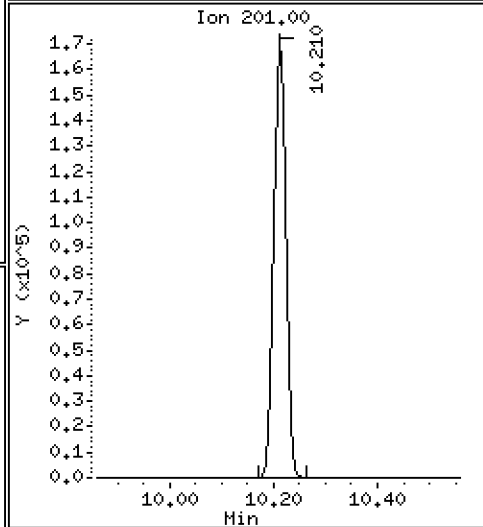
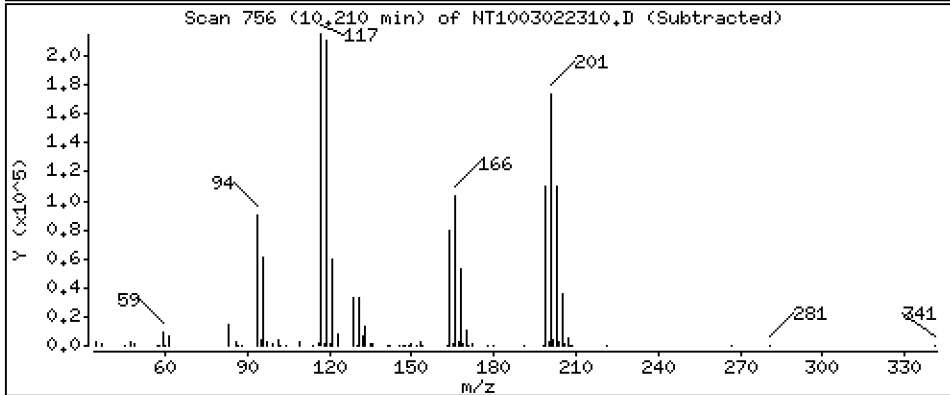
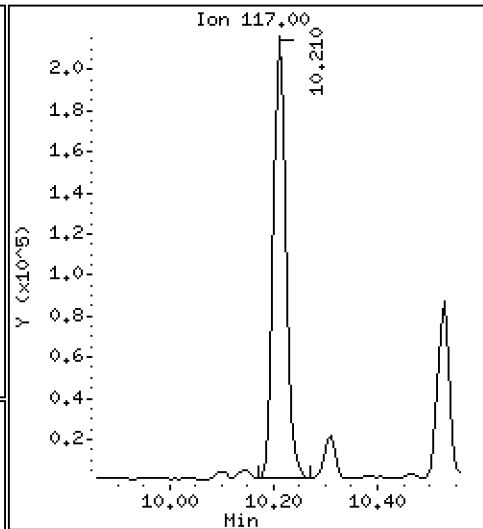
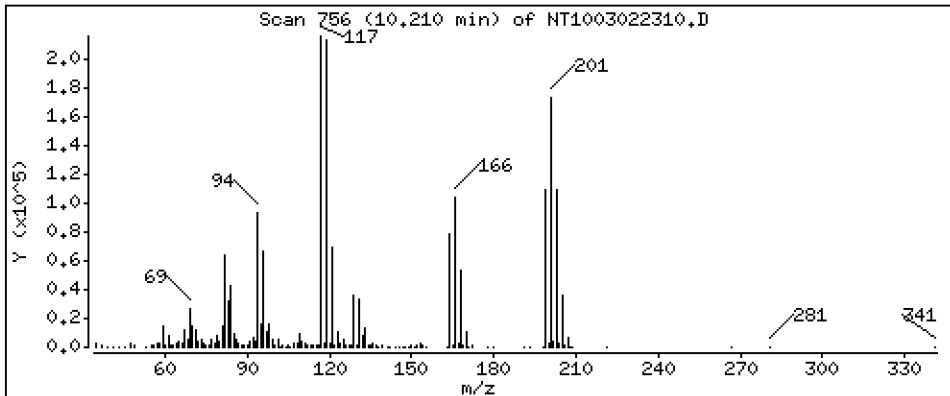
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 3,925 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

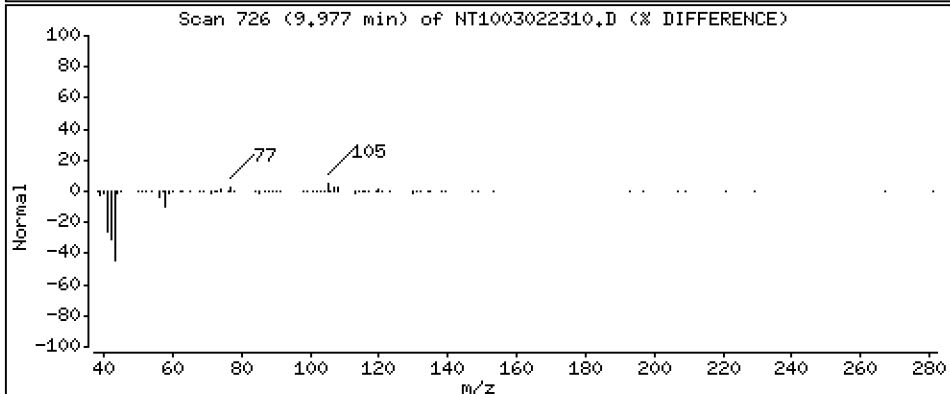
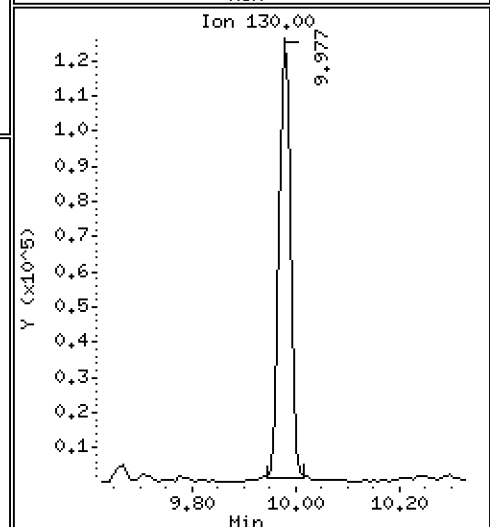
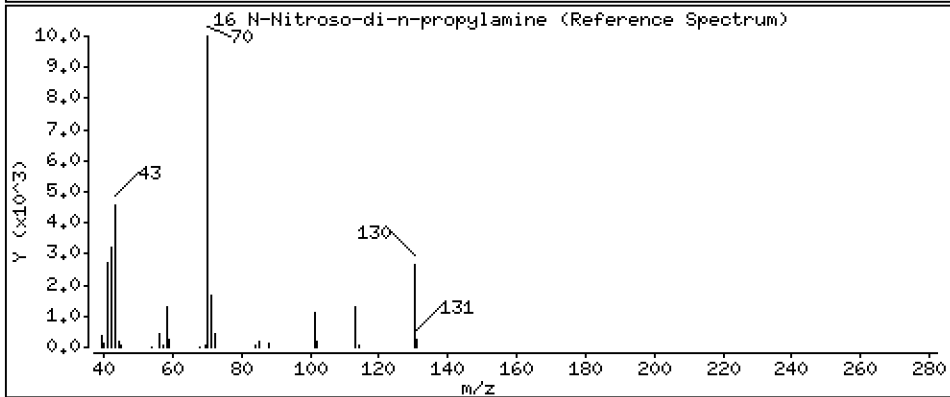
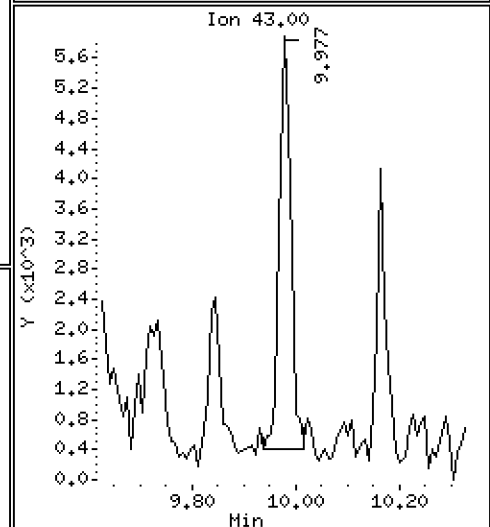
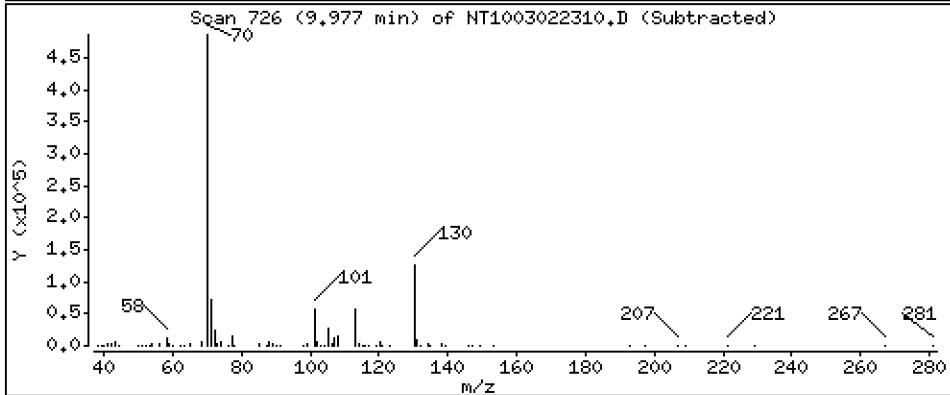
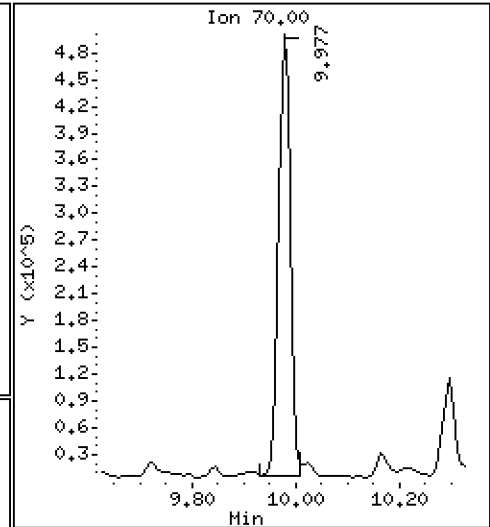
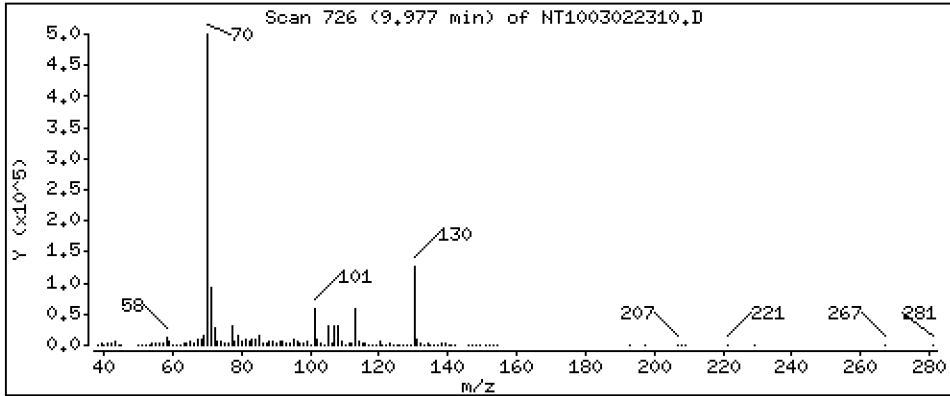
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,195 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

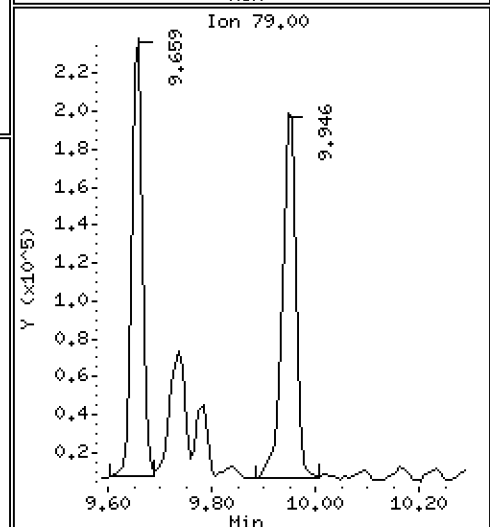
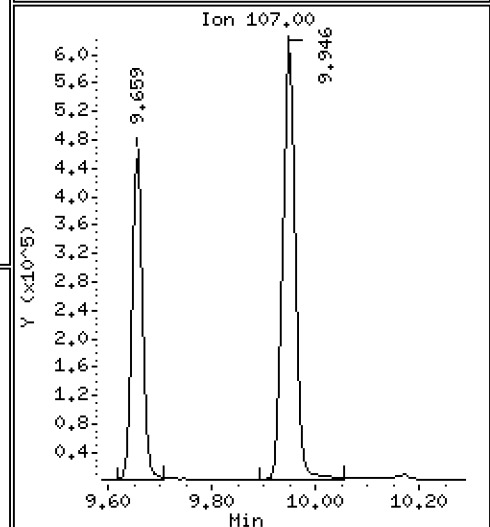
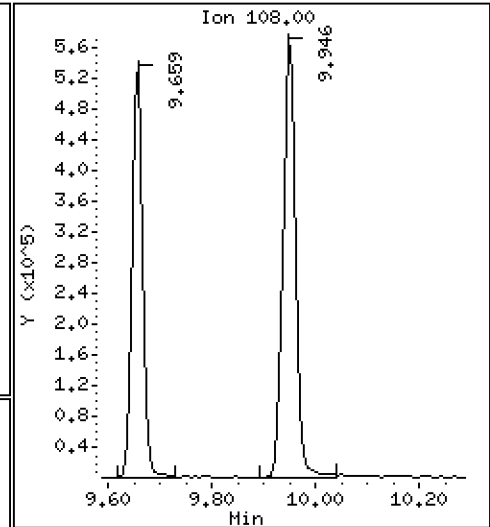
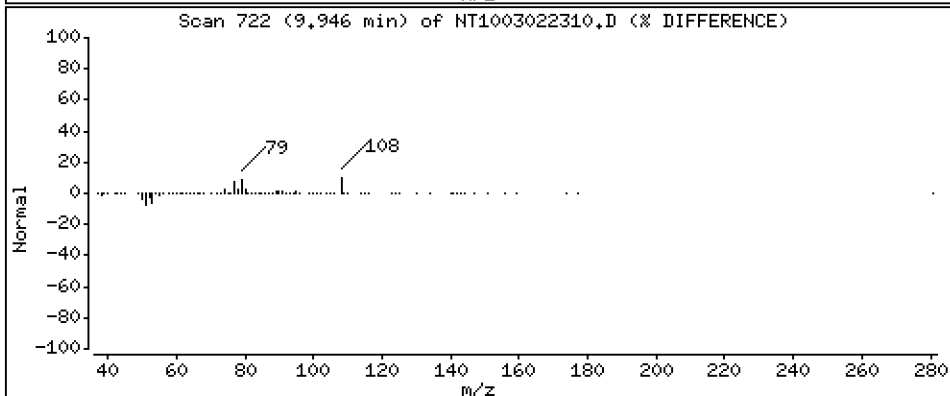
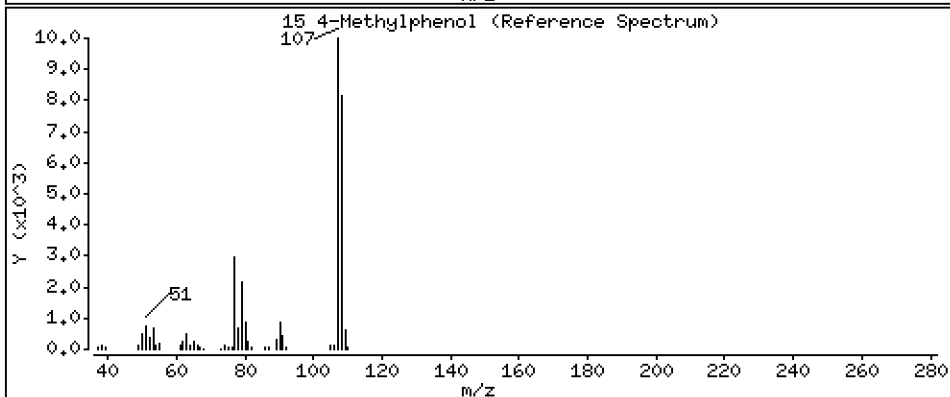
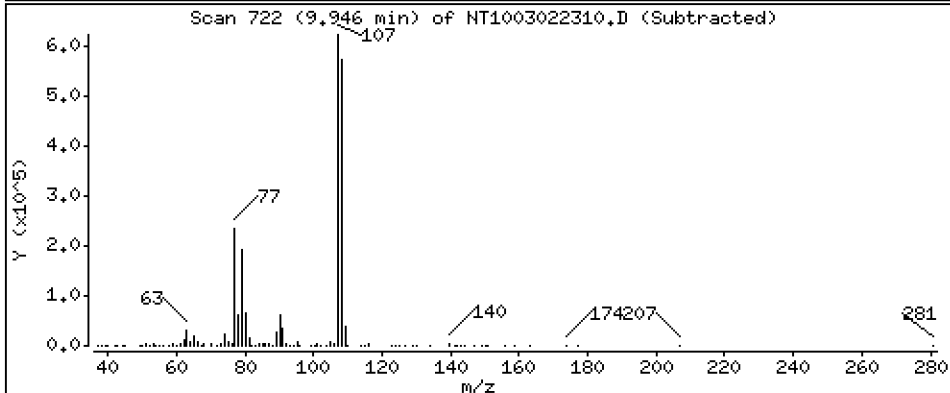
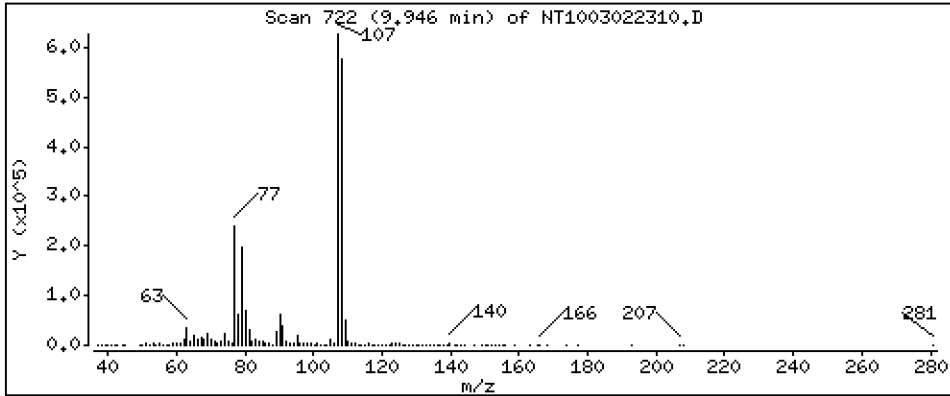
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,724 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

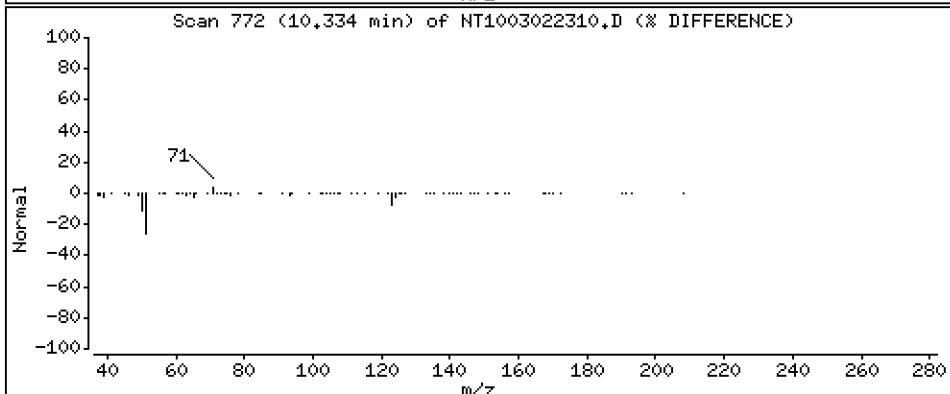
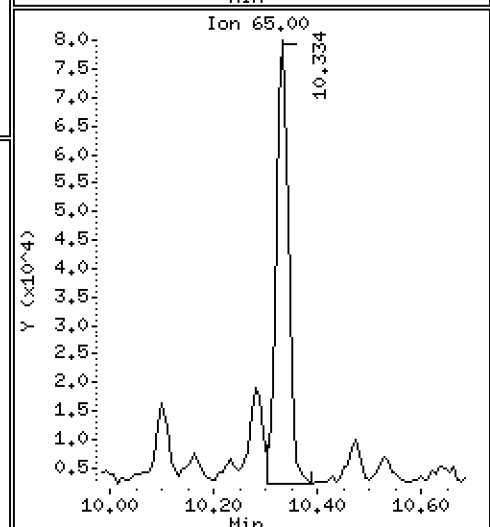
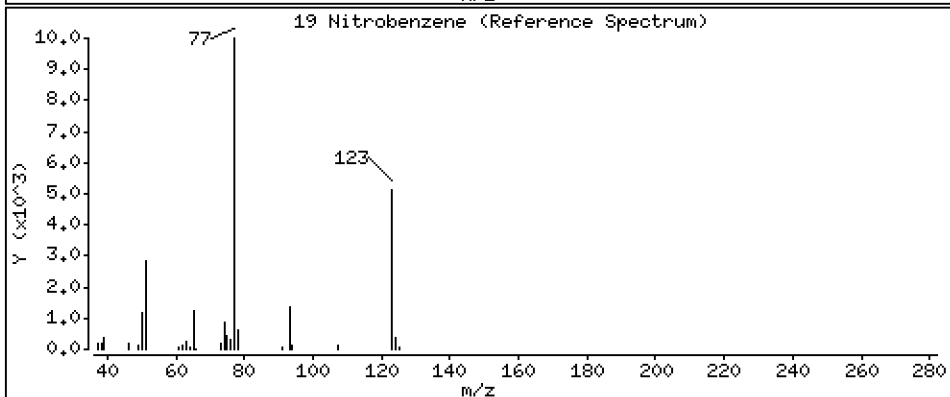
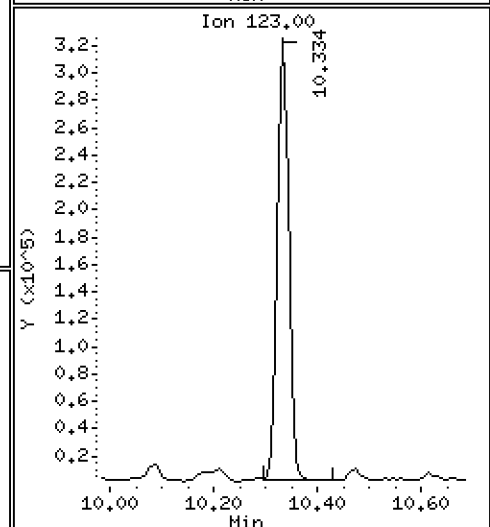
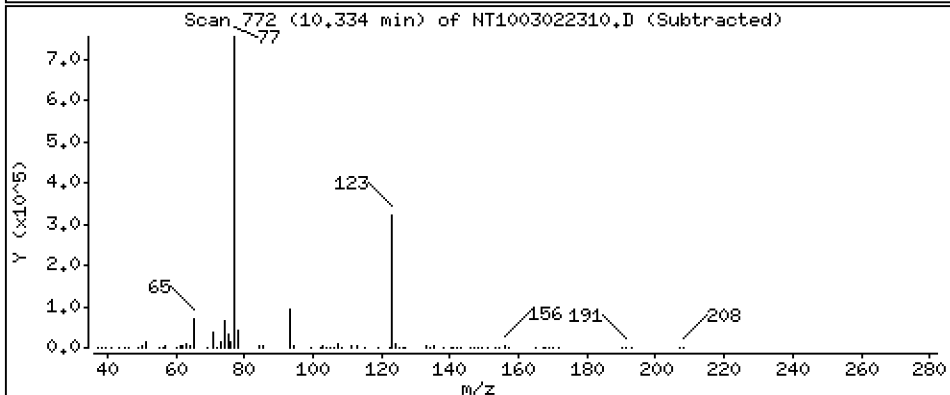
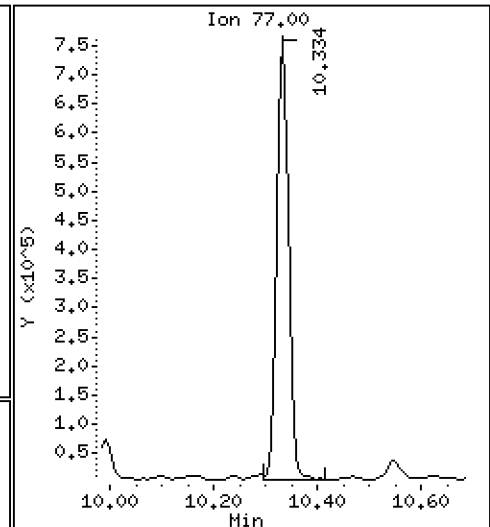
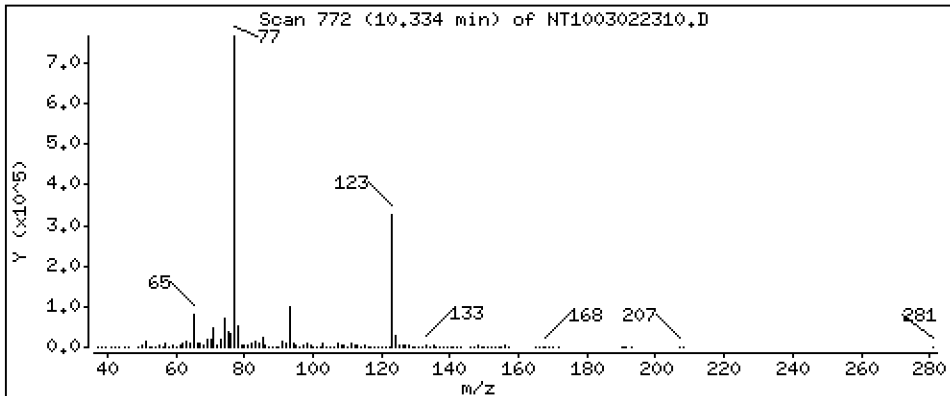
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 4,868 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

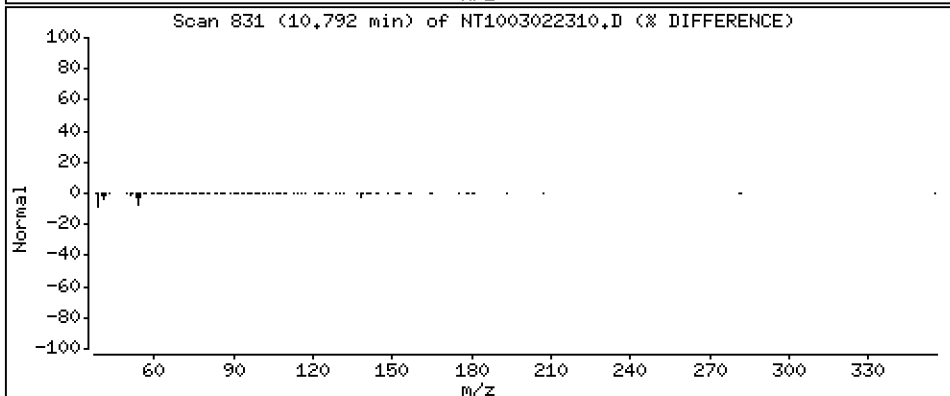
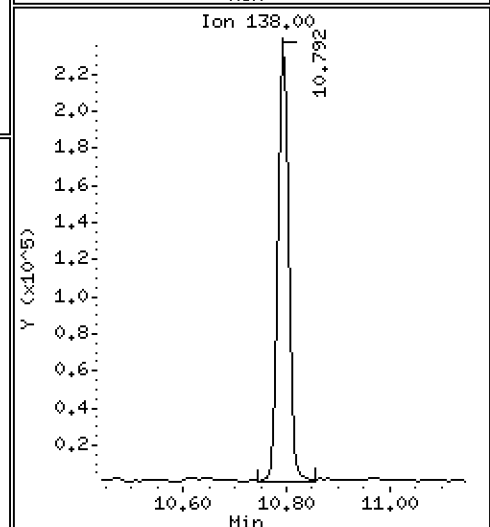
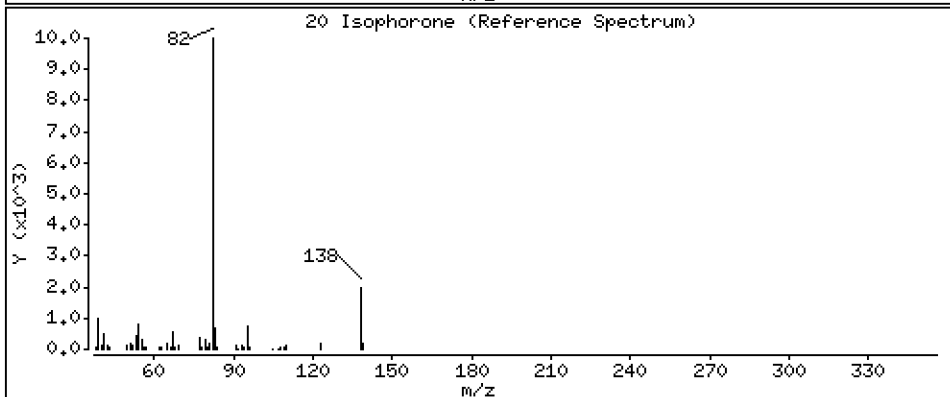
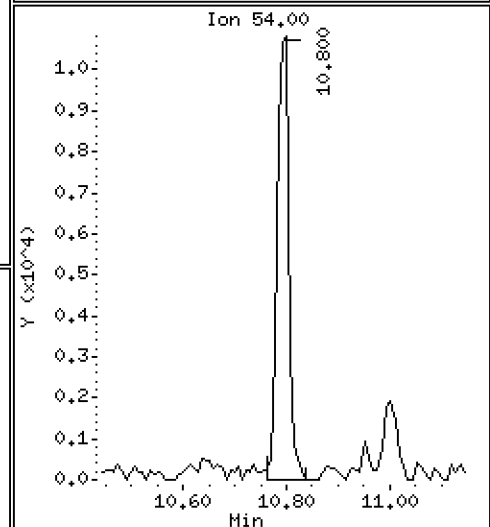
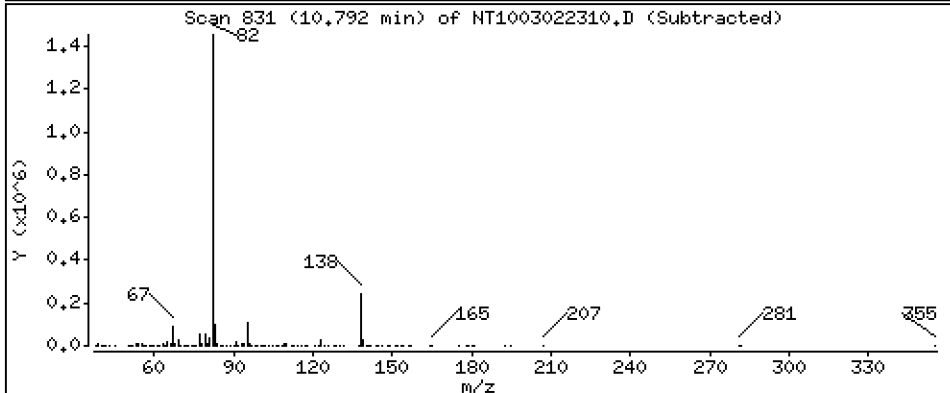
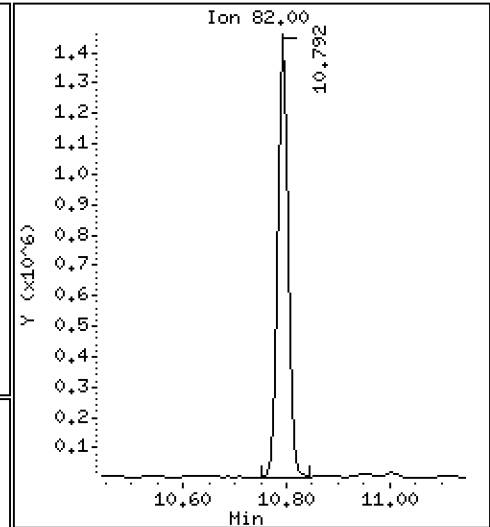
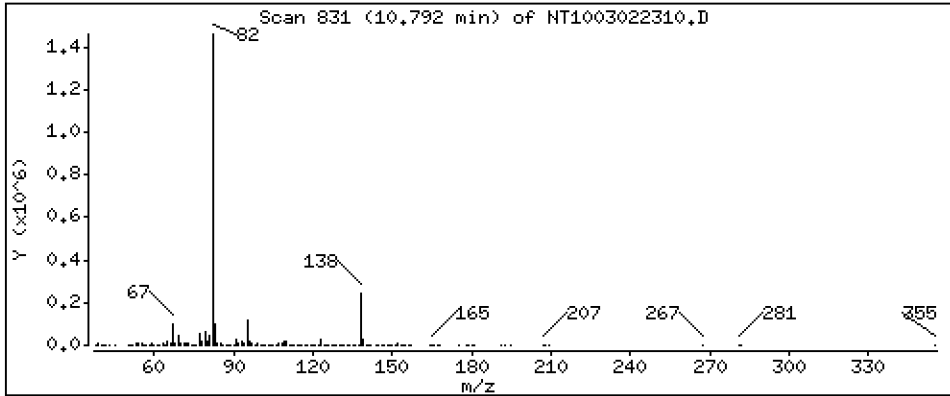
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,114 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

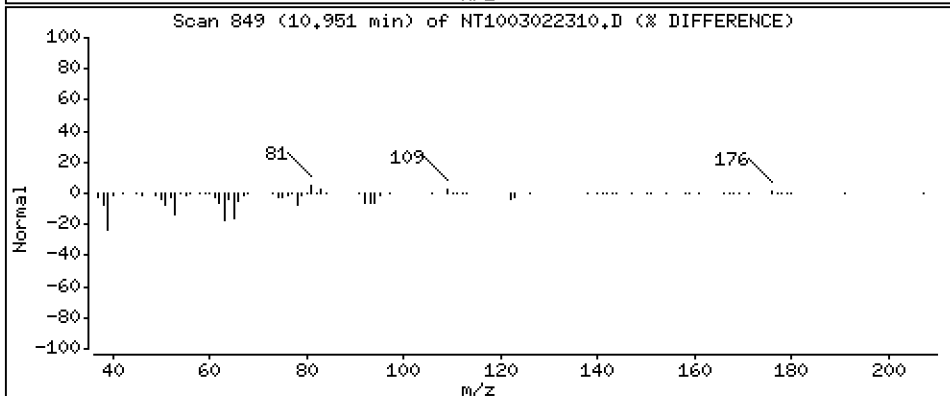
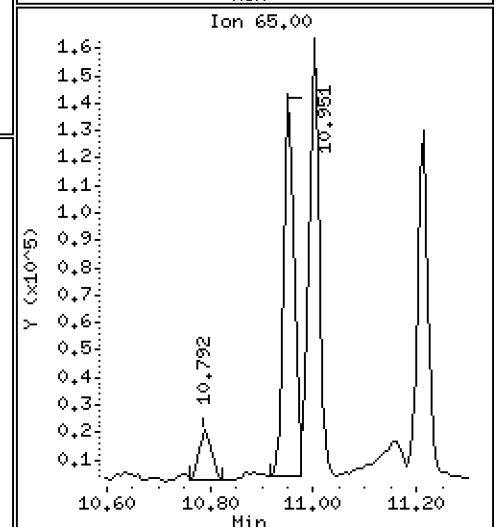
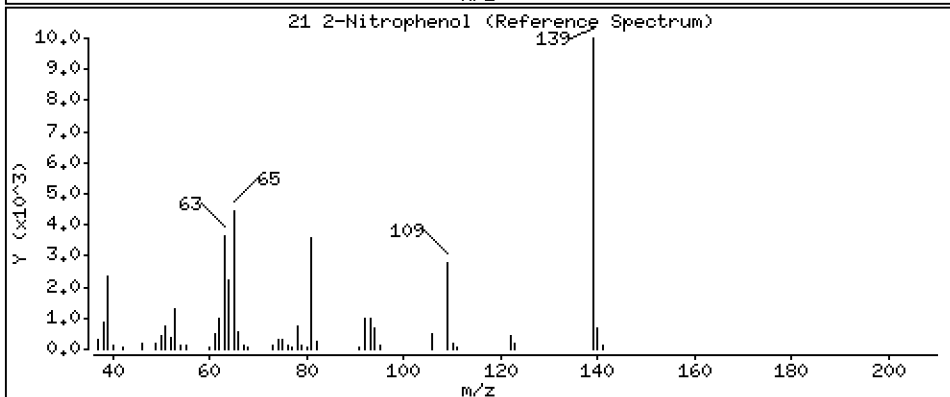
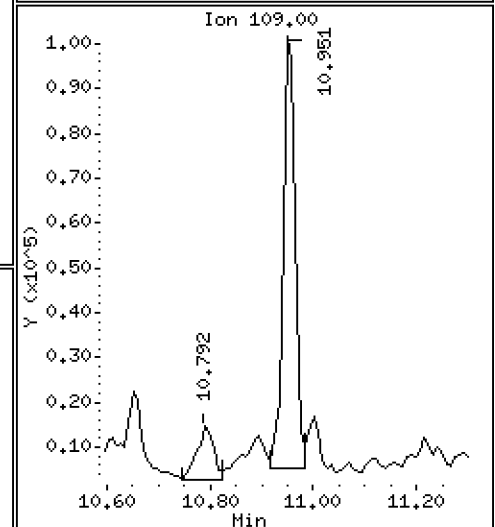
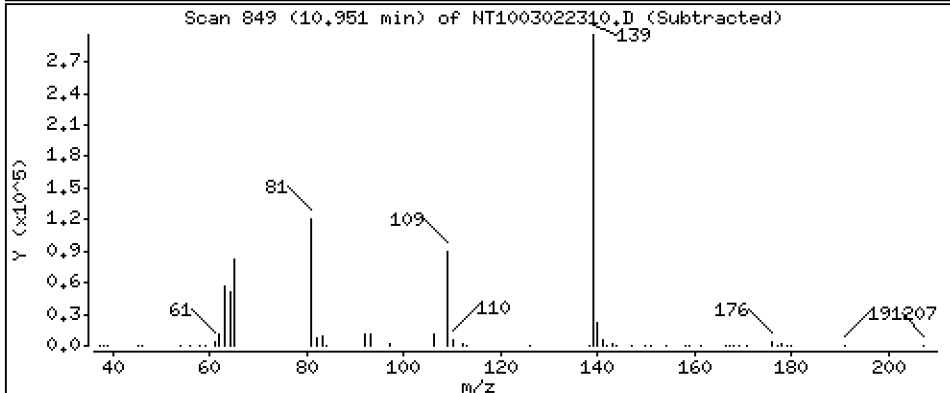
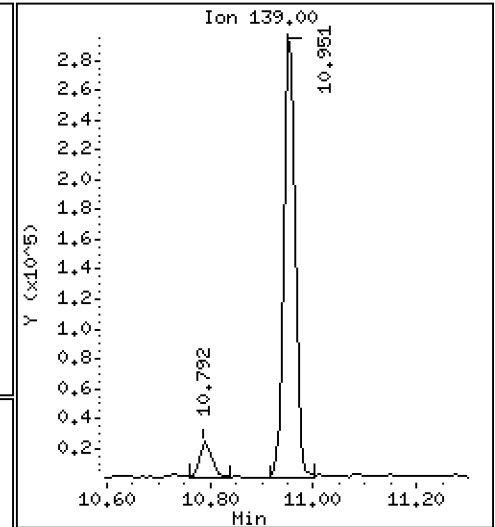
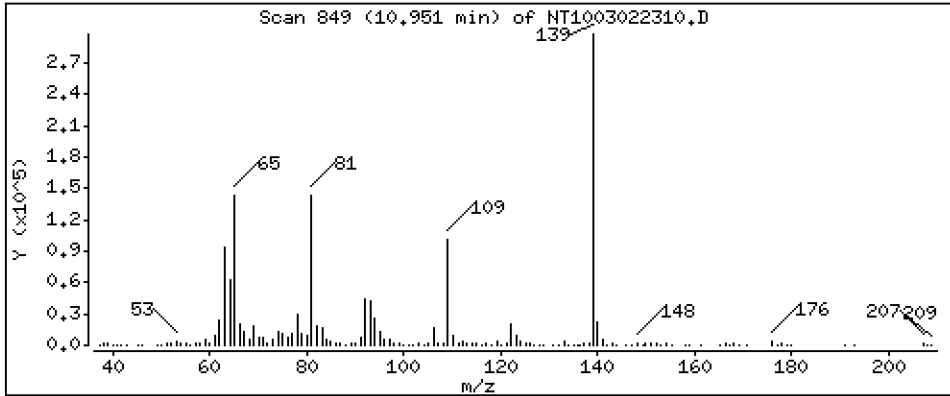
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,685 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

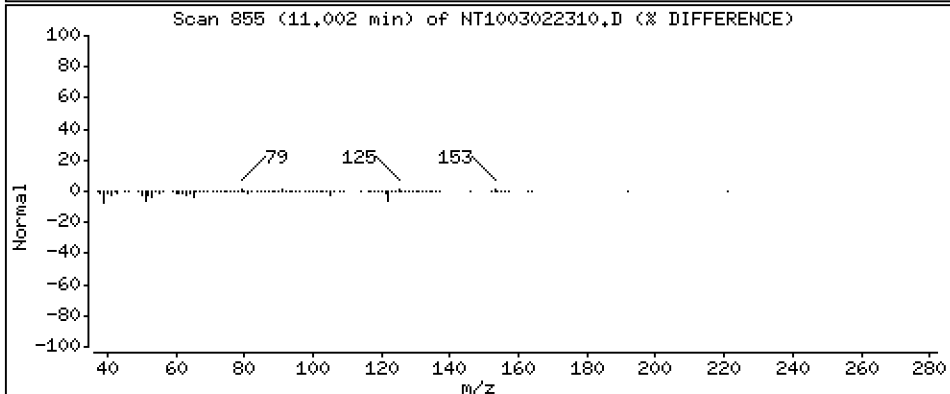
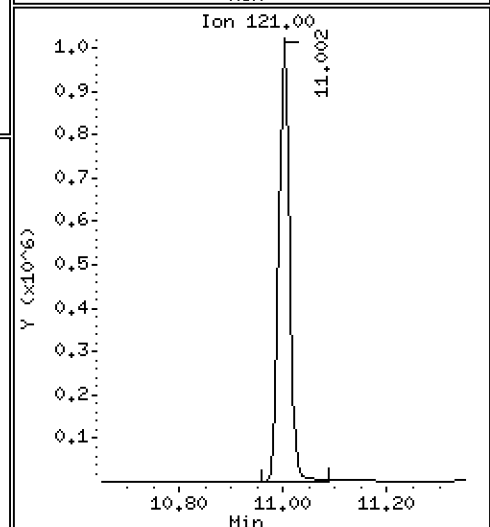
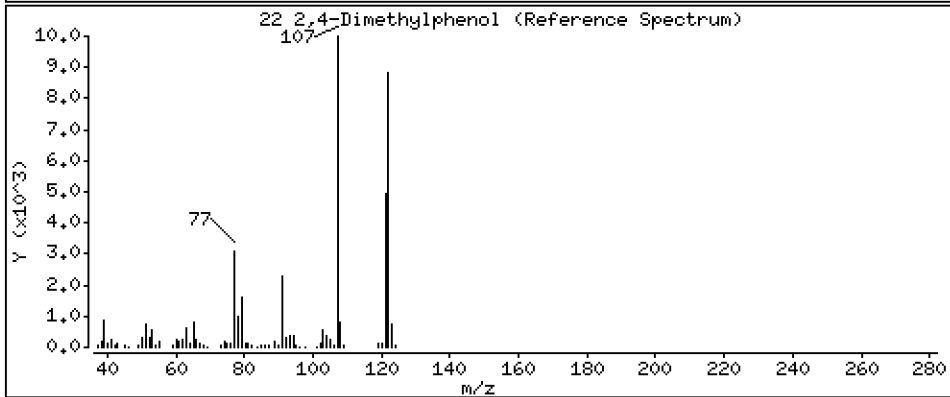
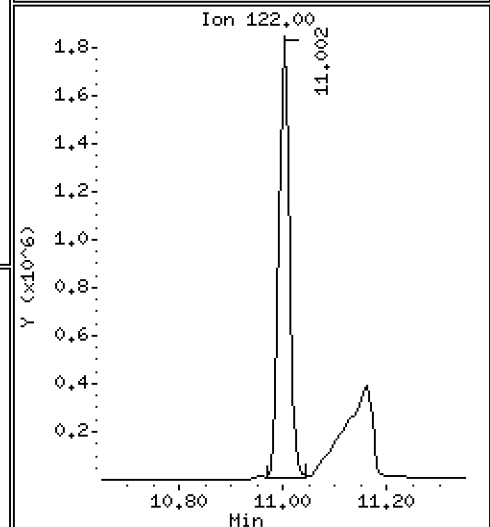
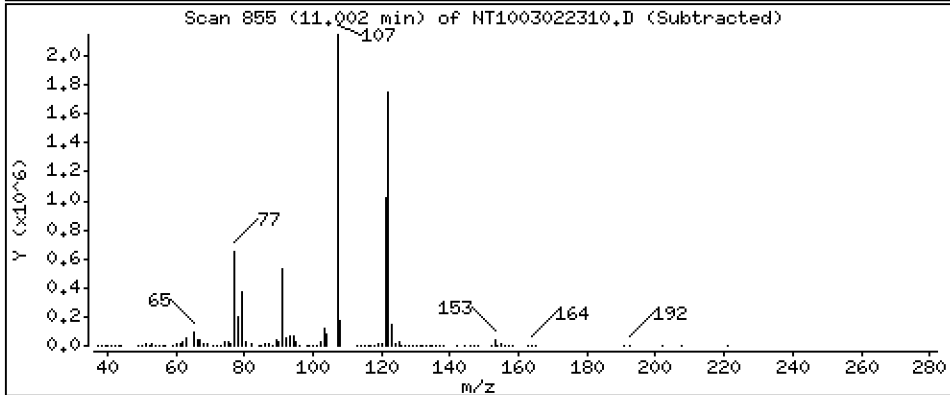
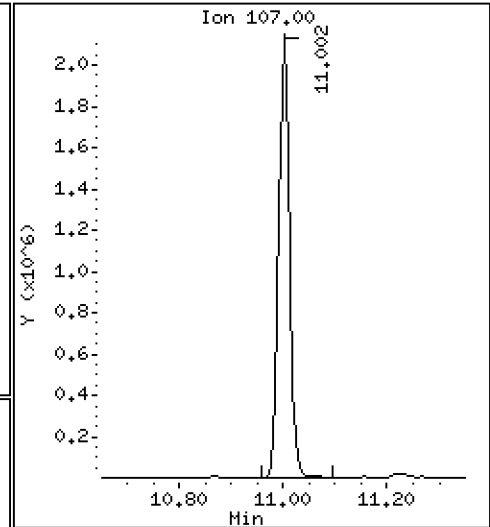
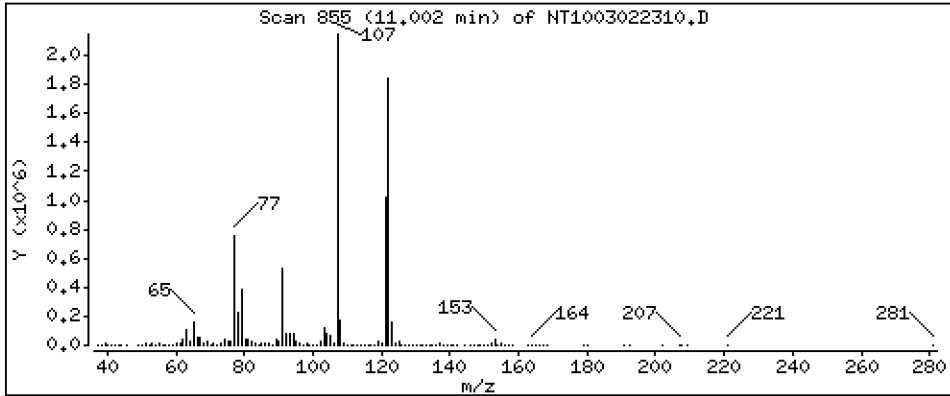
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 13,44 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

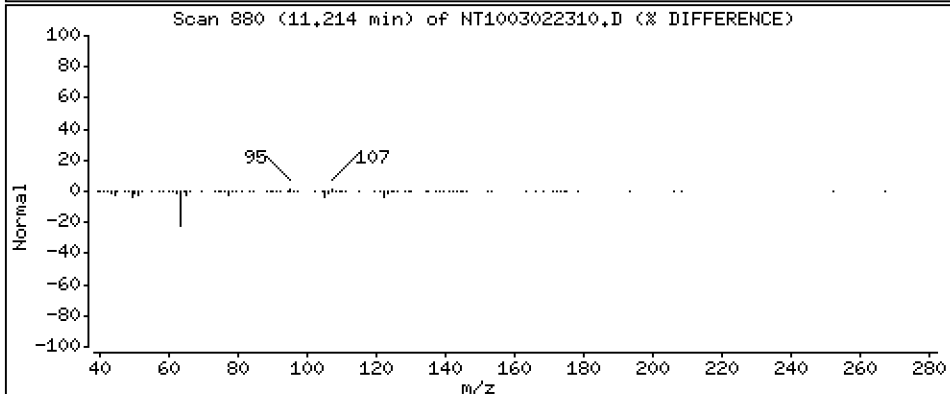
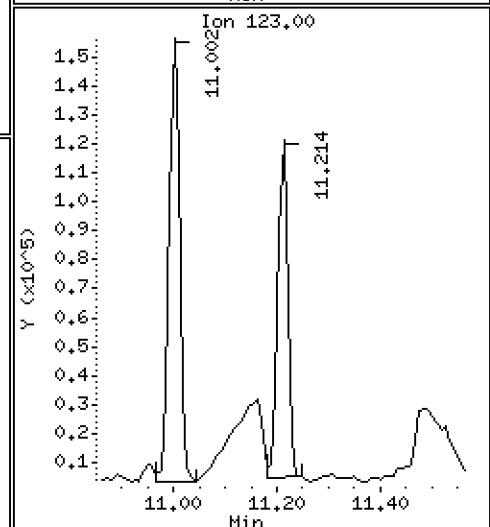
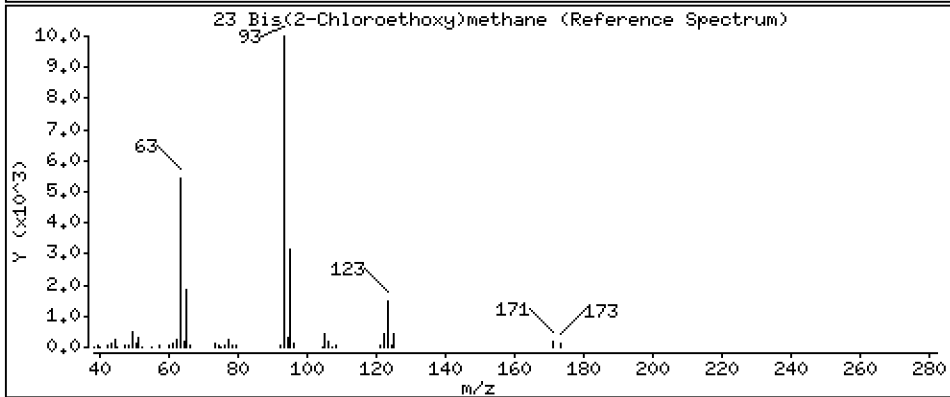
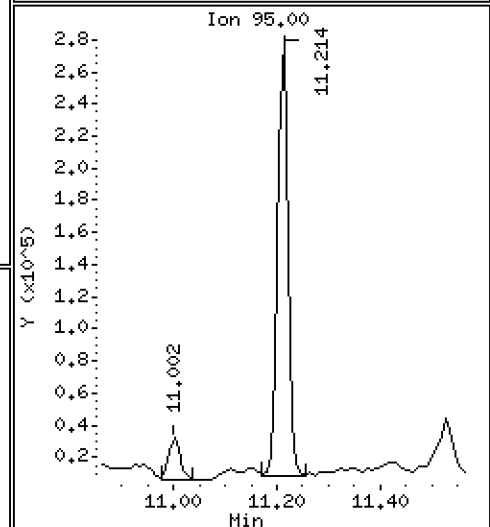
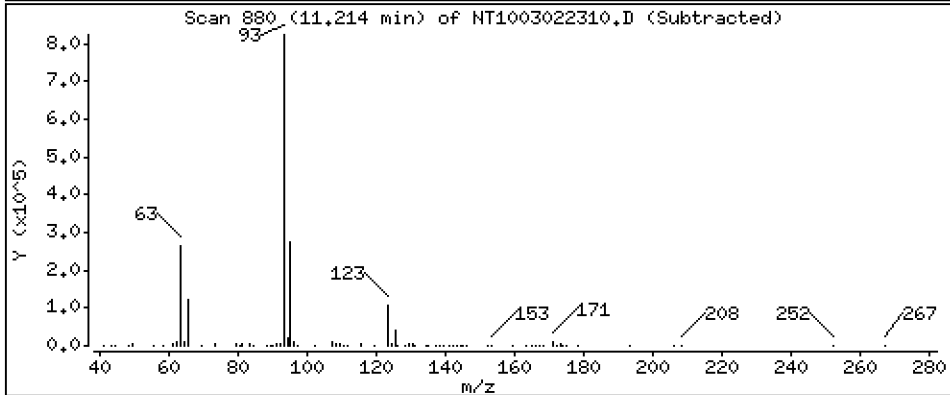
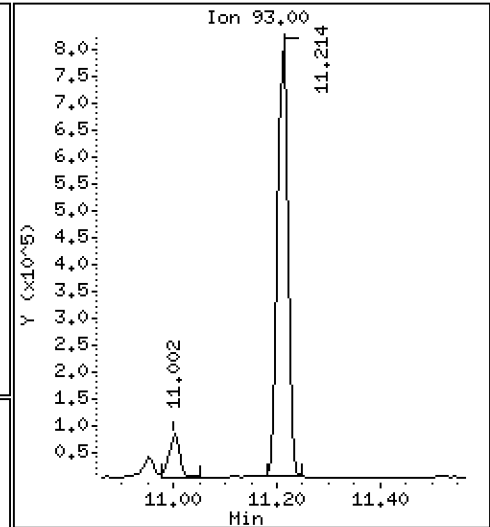
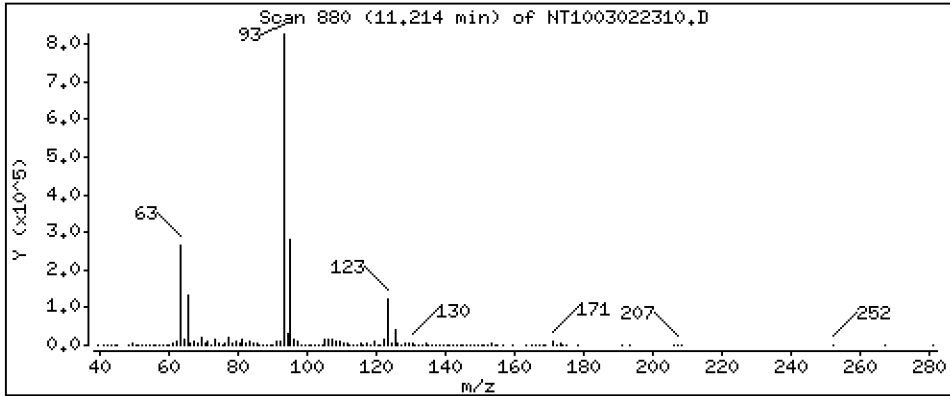
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,198 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

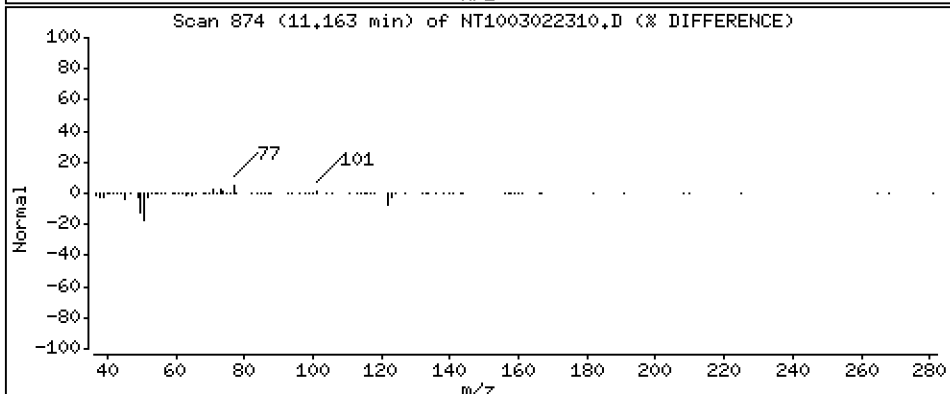
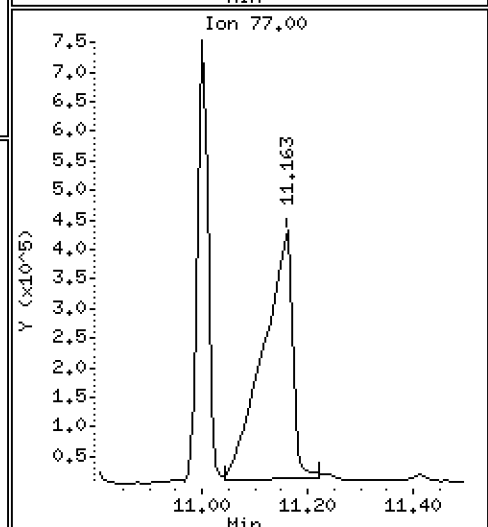
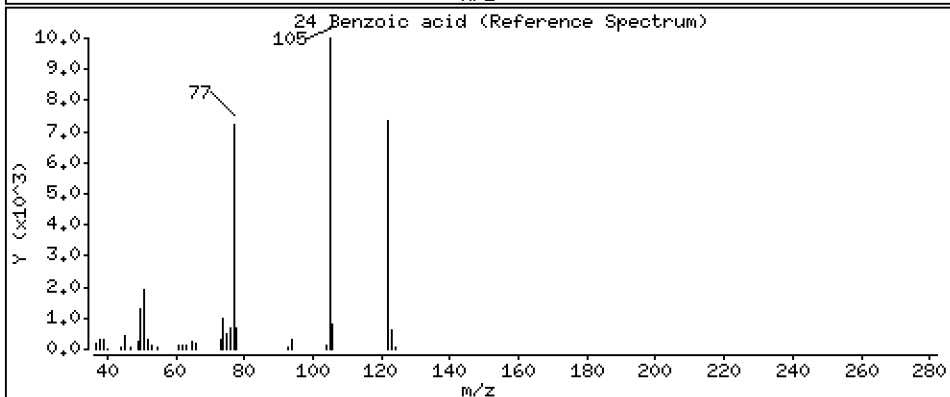
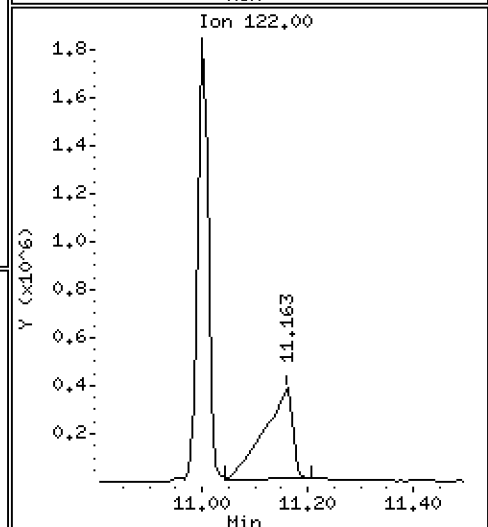
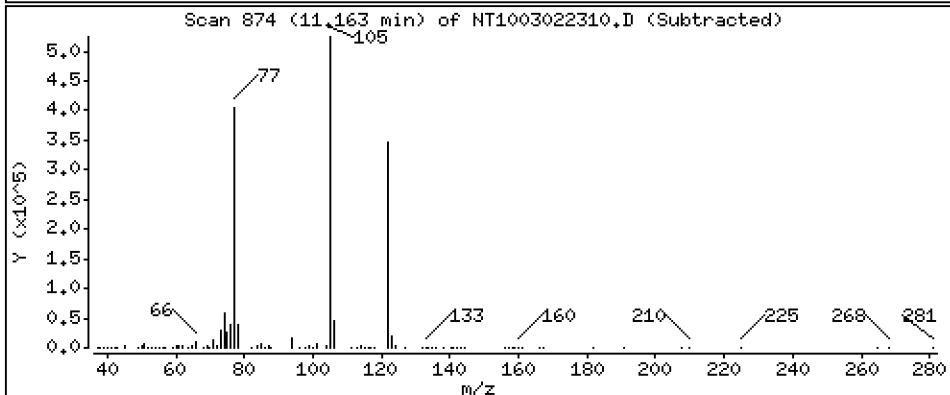
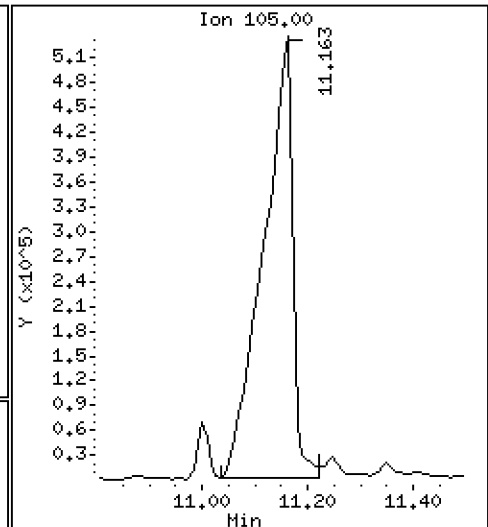
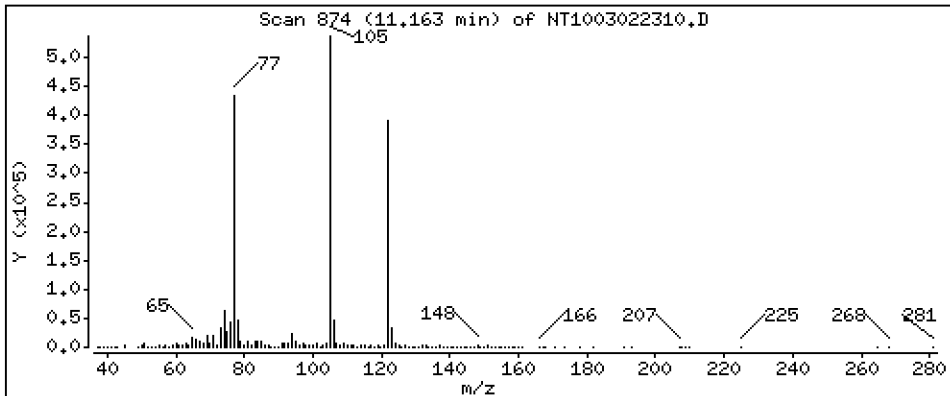
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 15,15 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

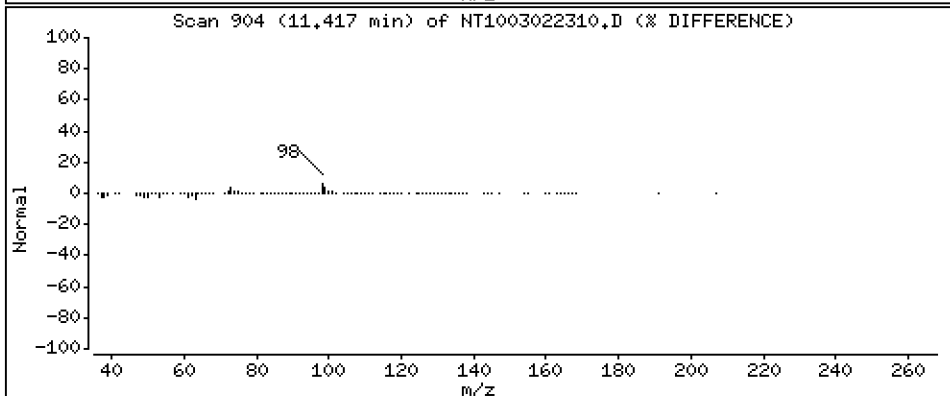
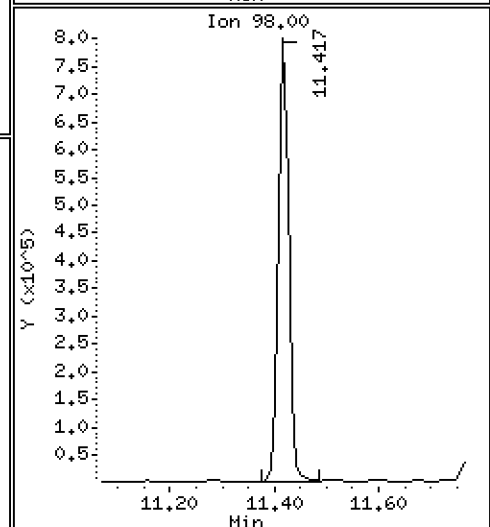
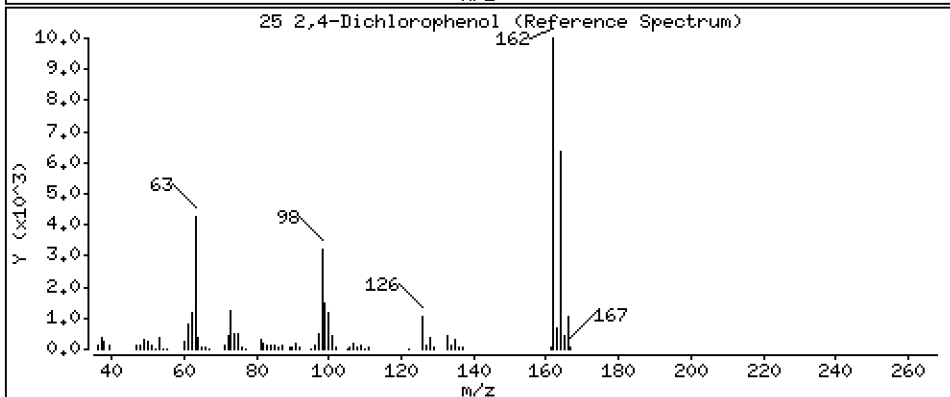
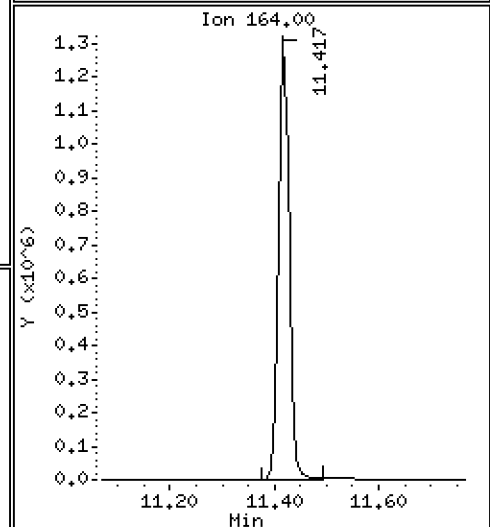
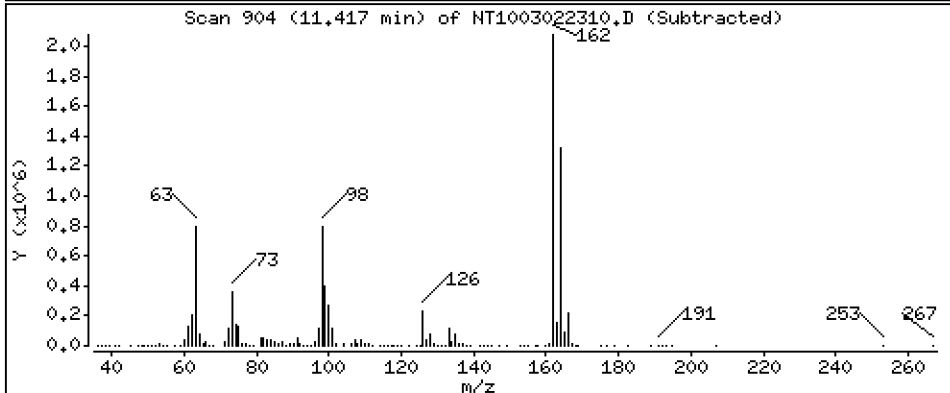
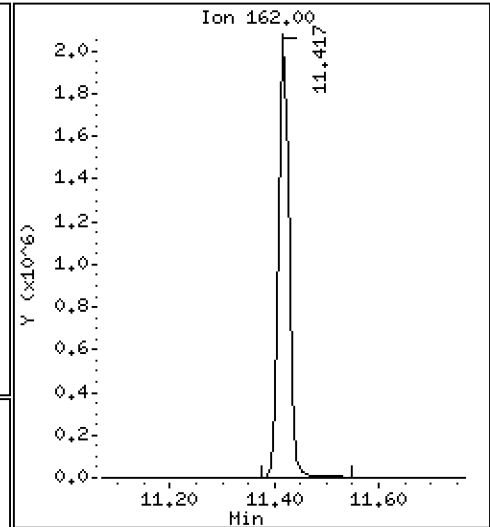
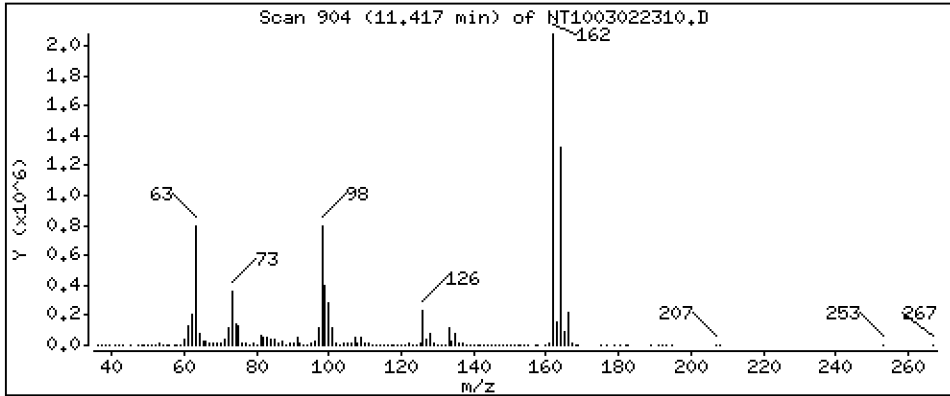
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 17,28 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

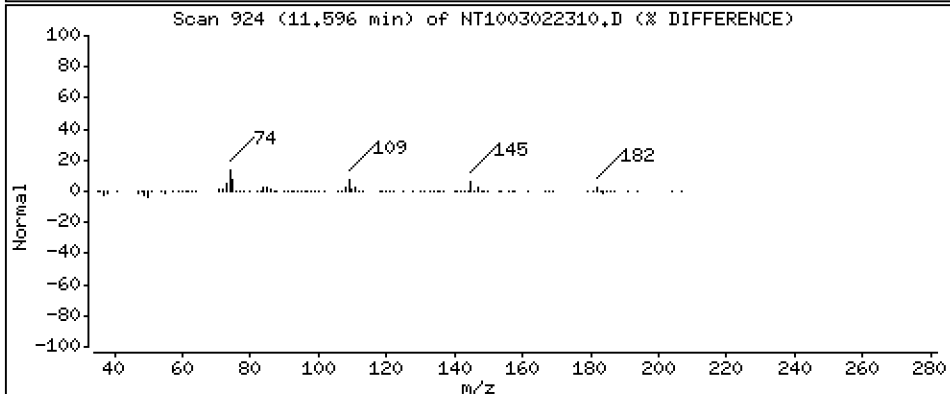
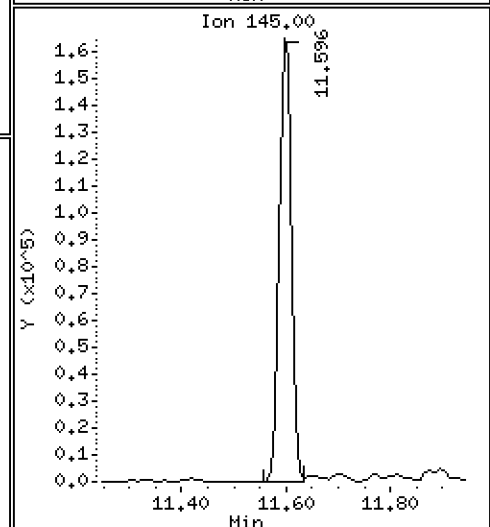
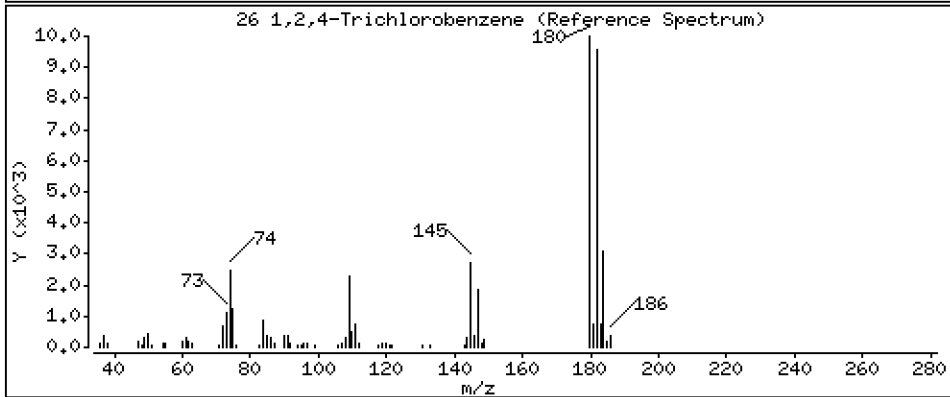
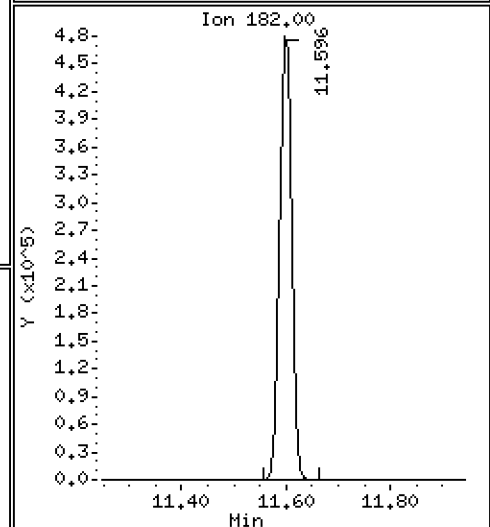
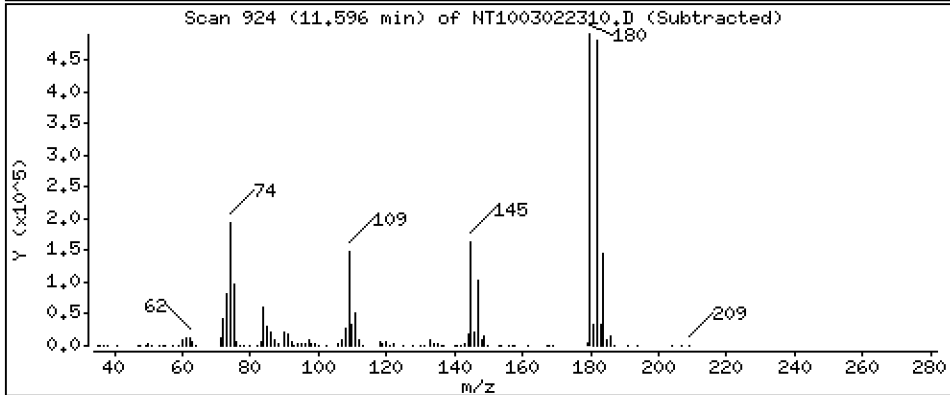
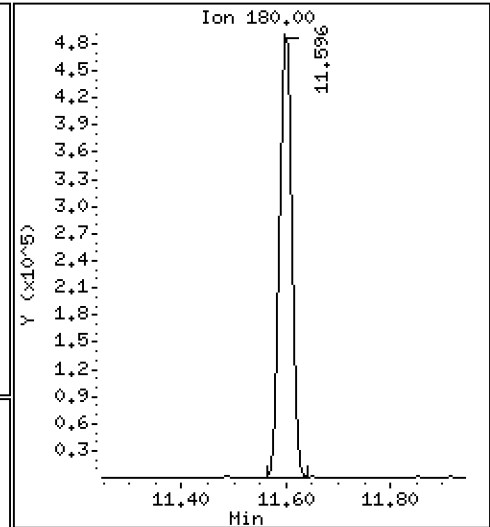
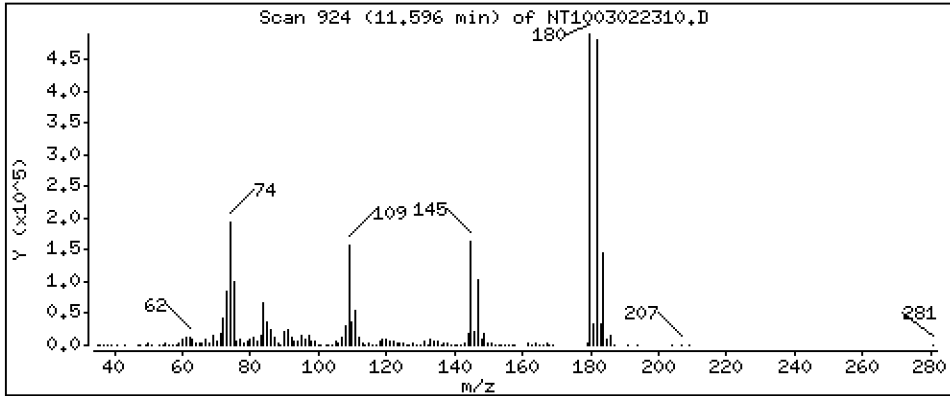
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,392 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

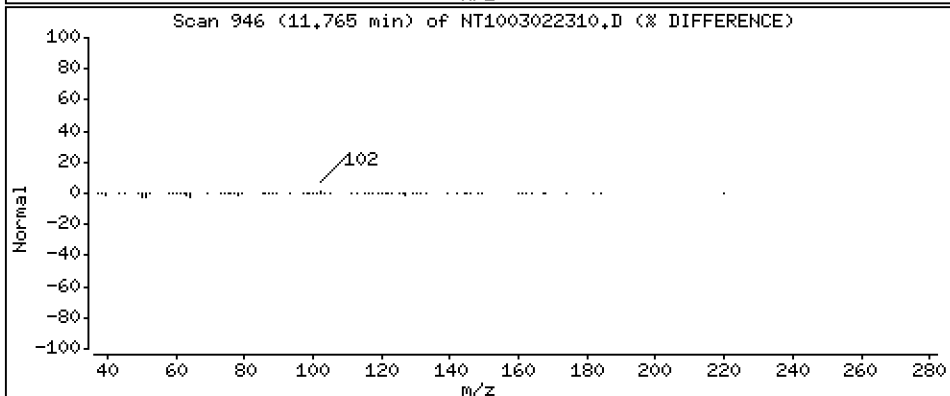
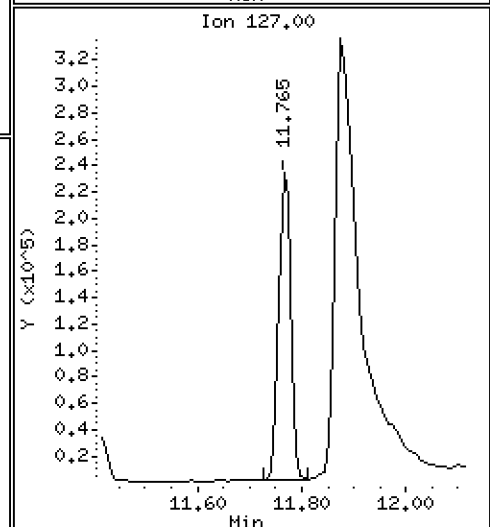
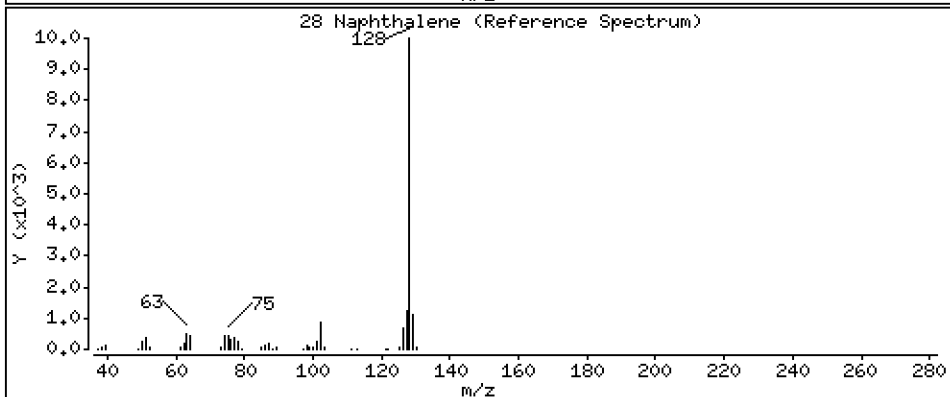
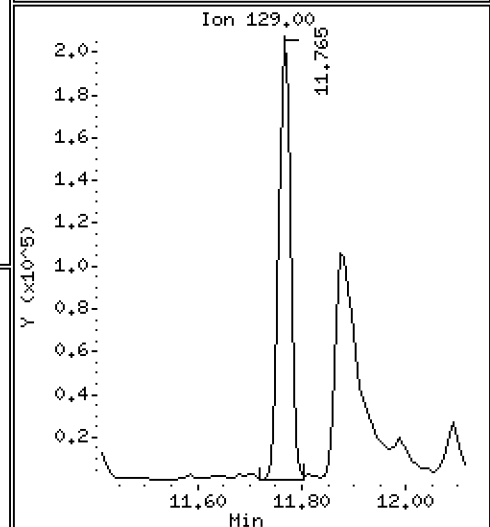
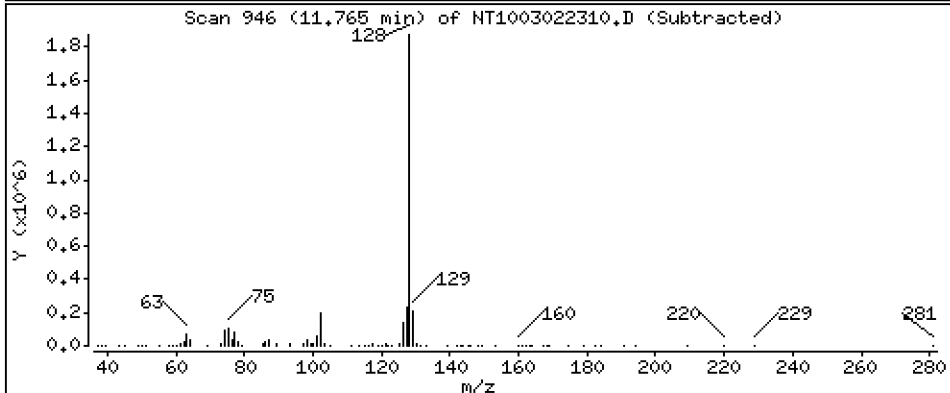
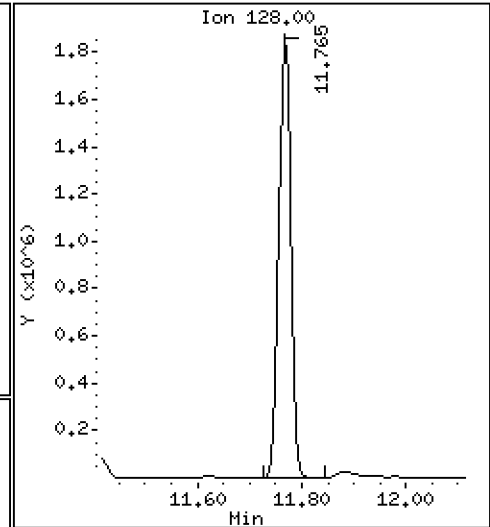
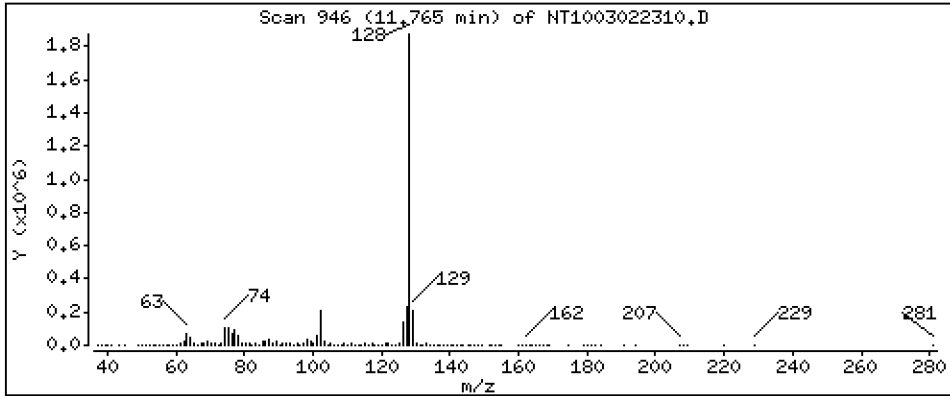
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,890 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

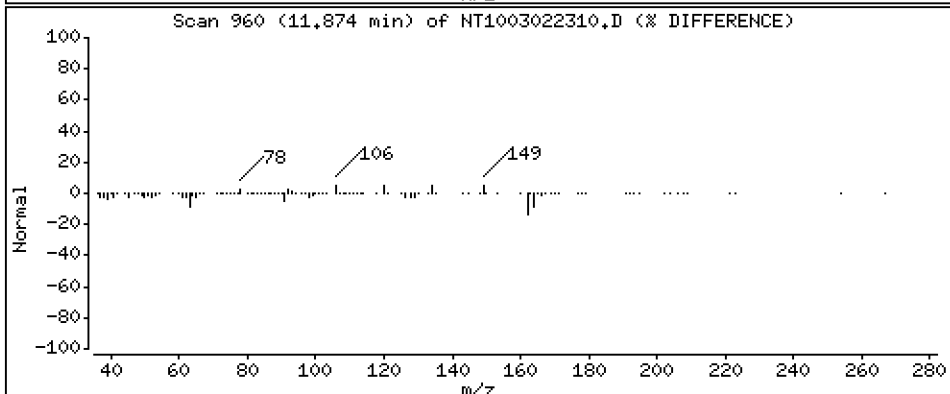
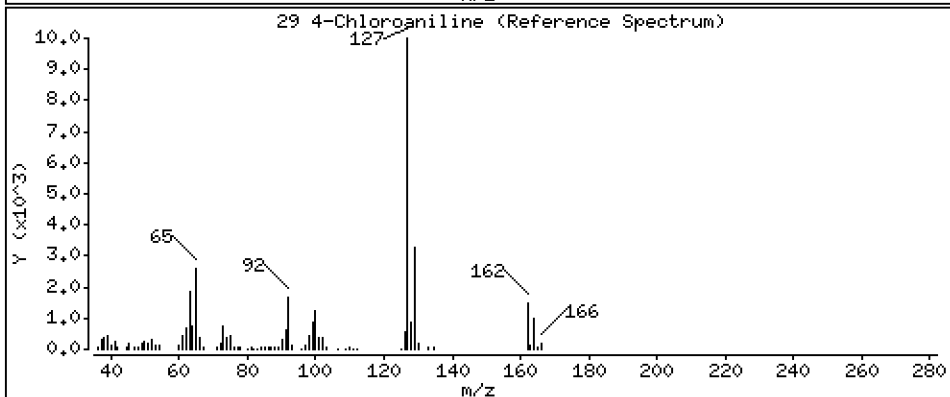
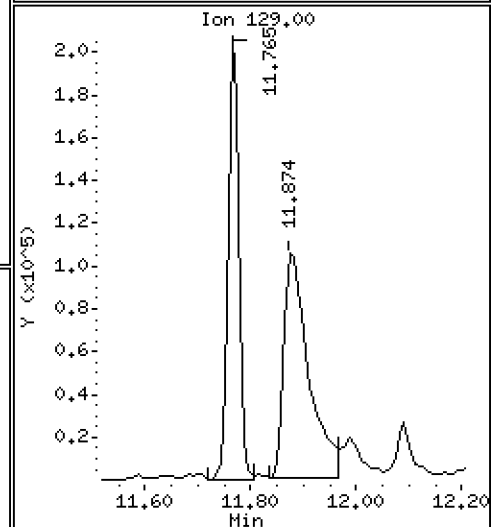
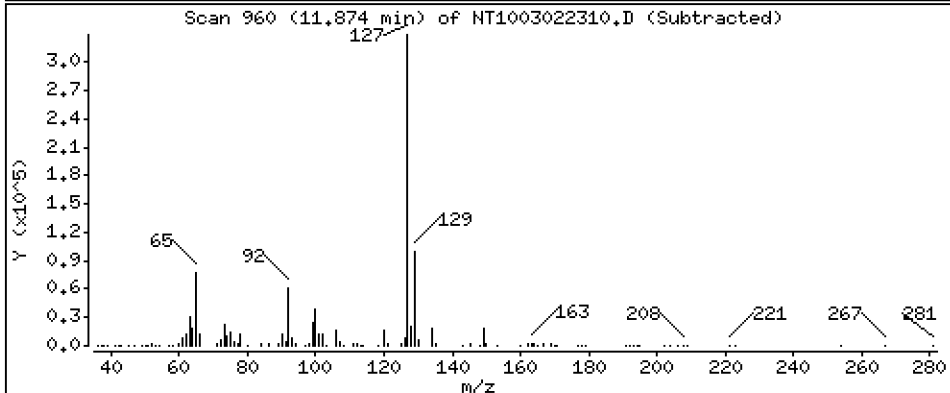
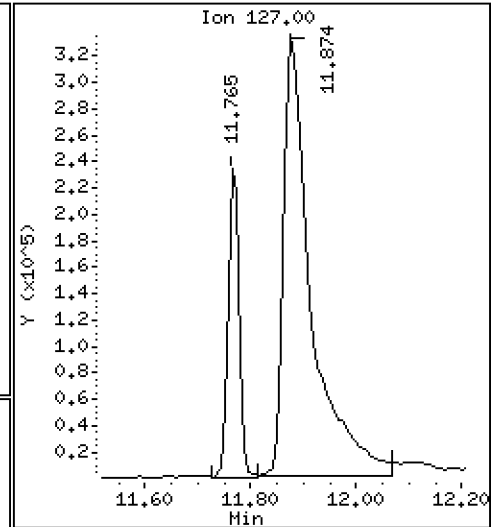
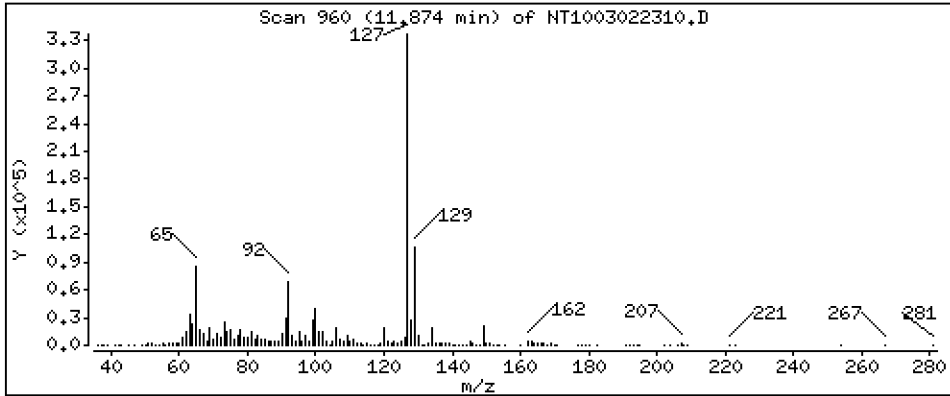
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 4,806 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

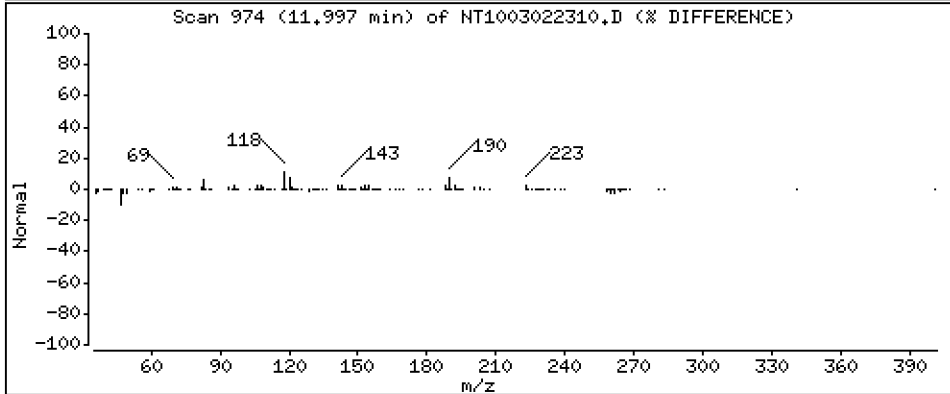
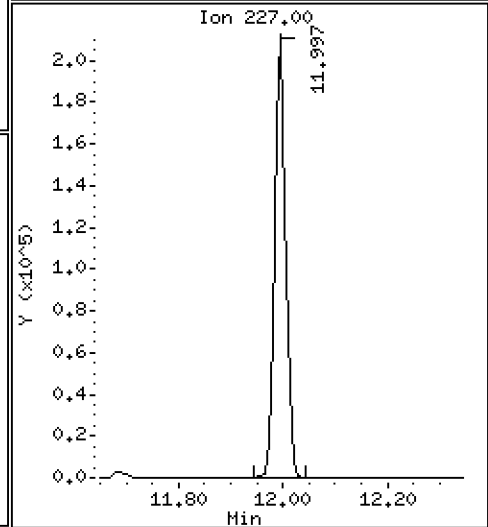
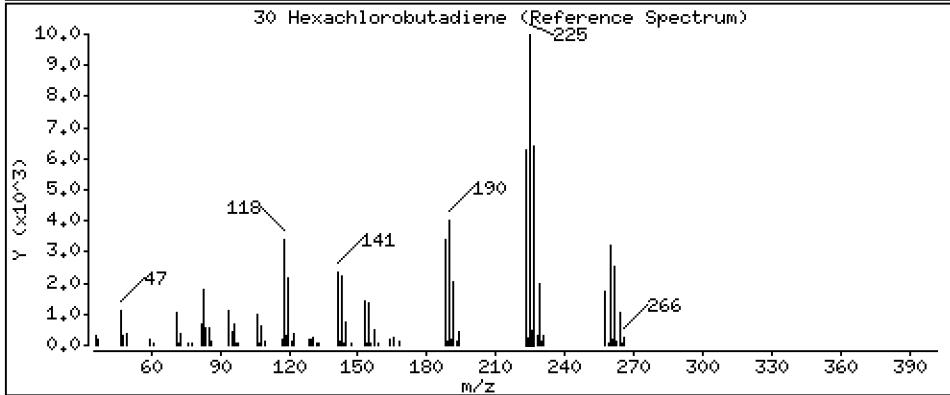
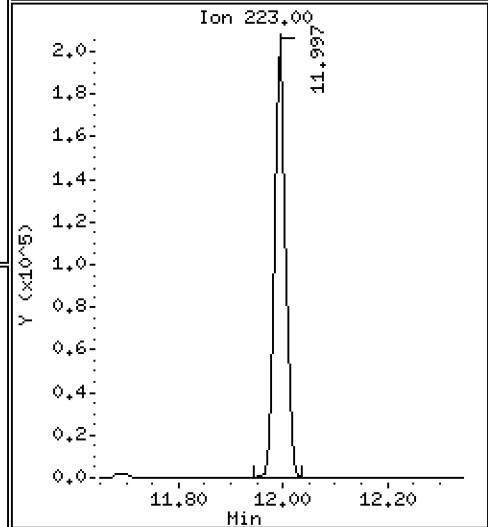
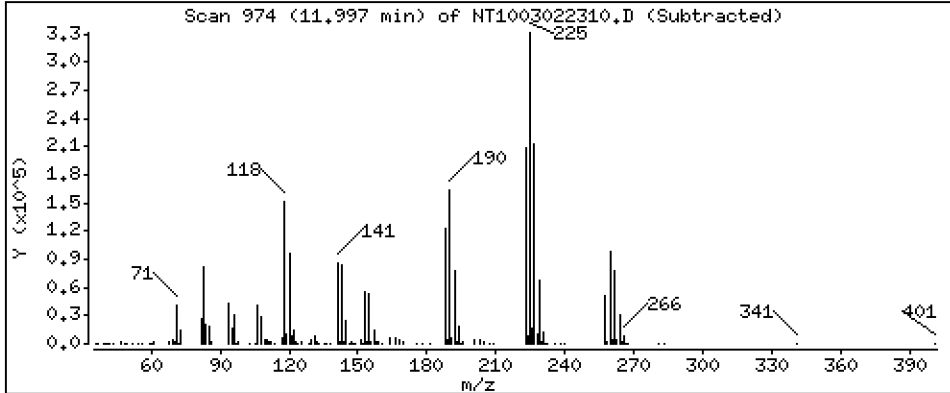
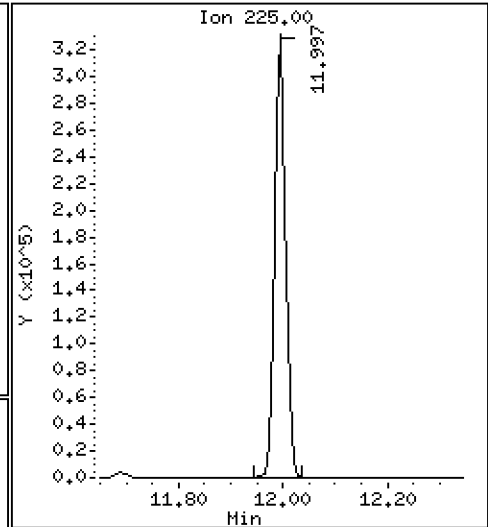
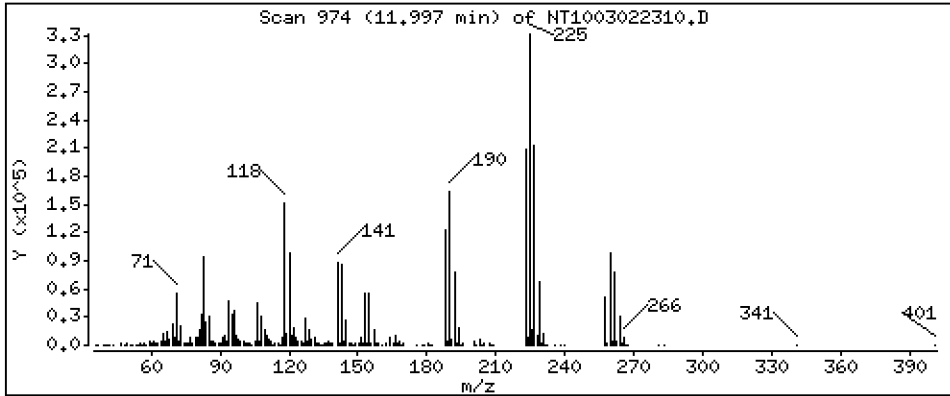
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,460 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

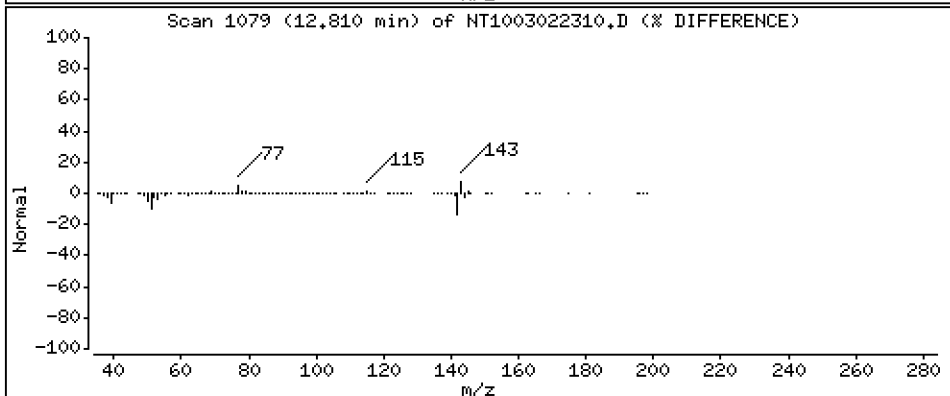
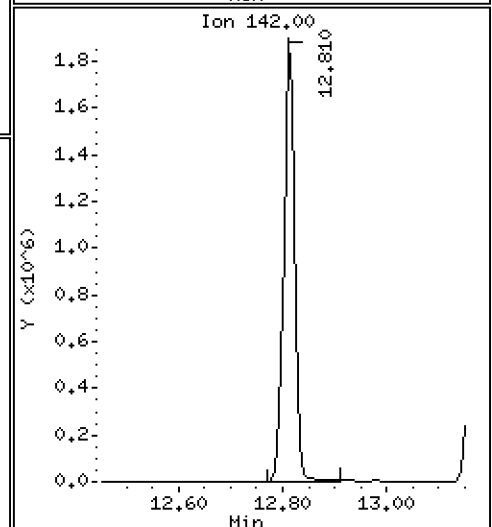
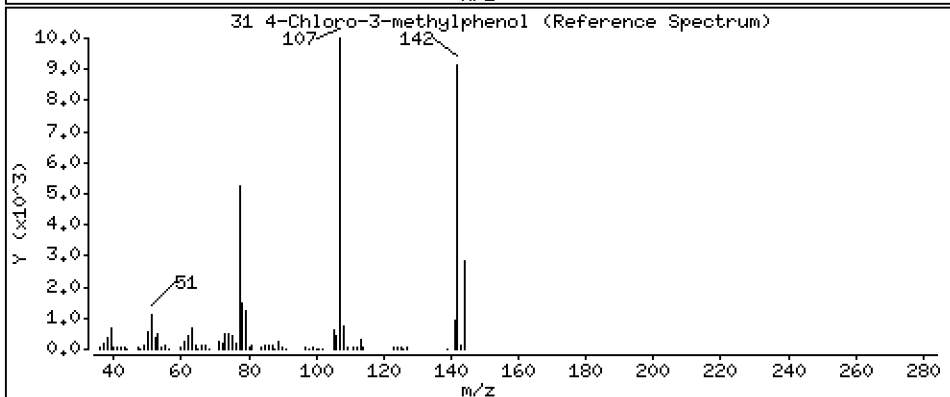
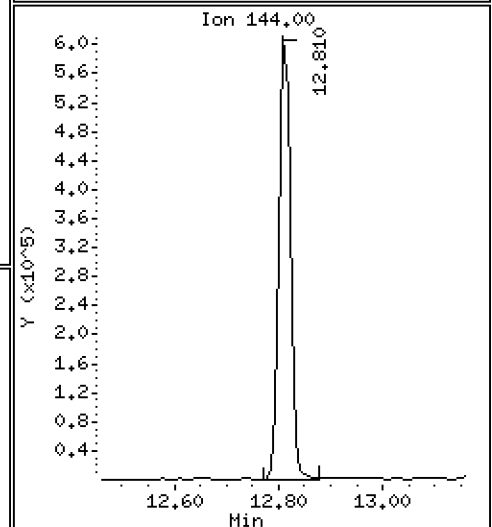
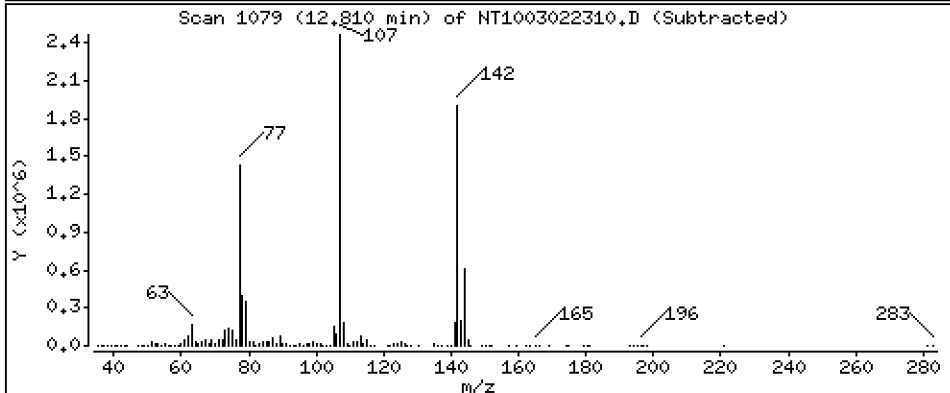
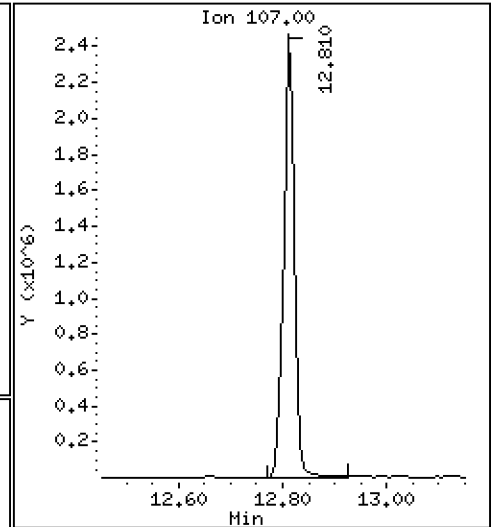
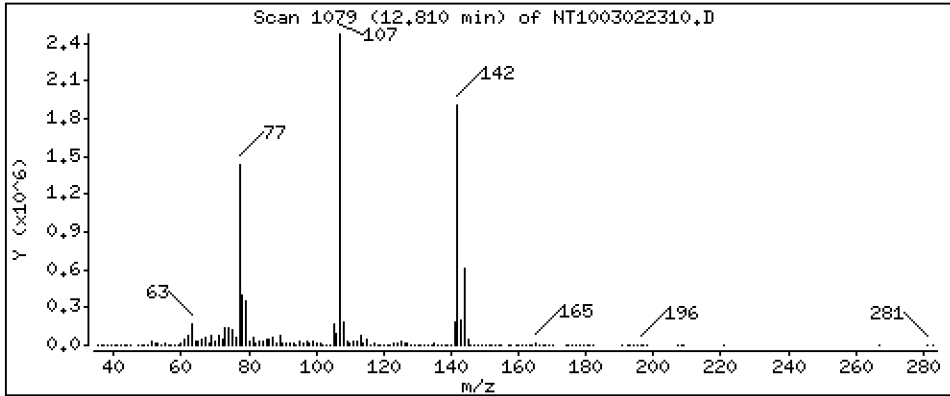
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 17,49 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

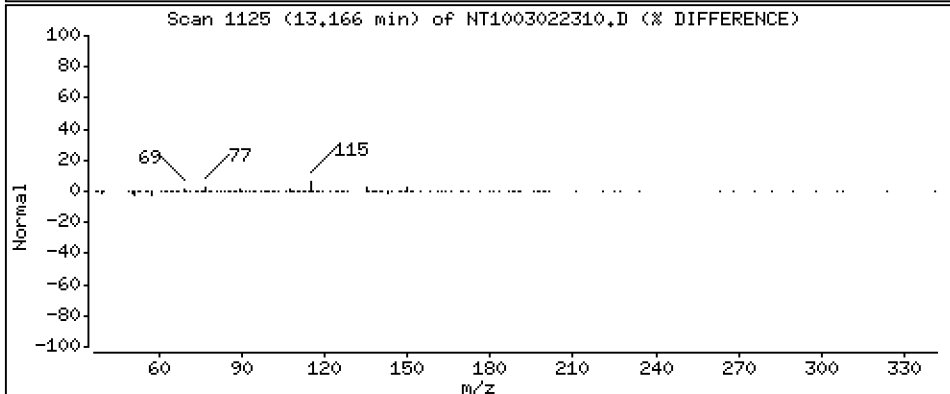
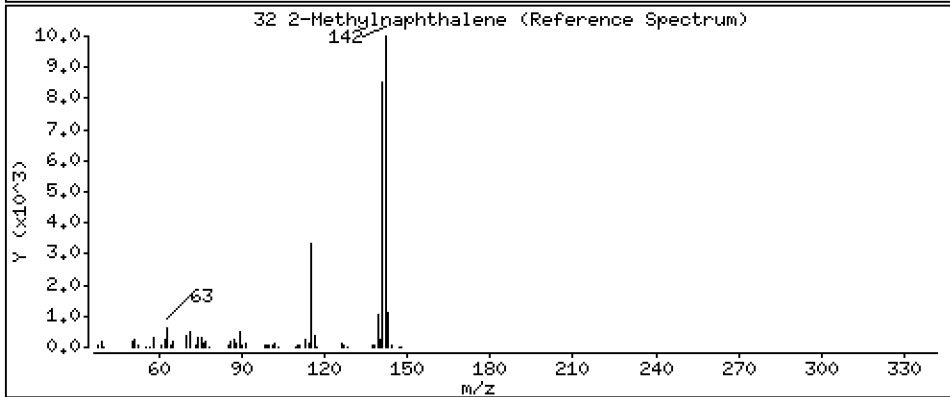
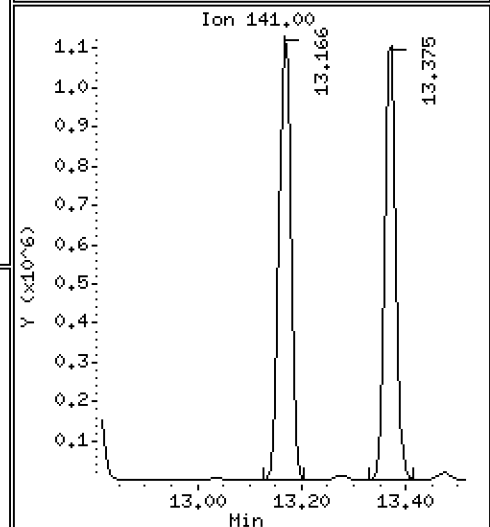
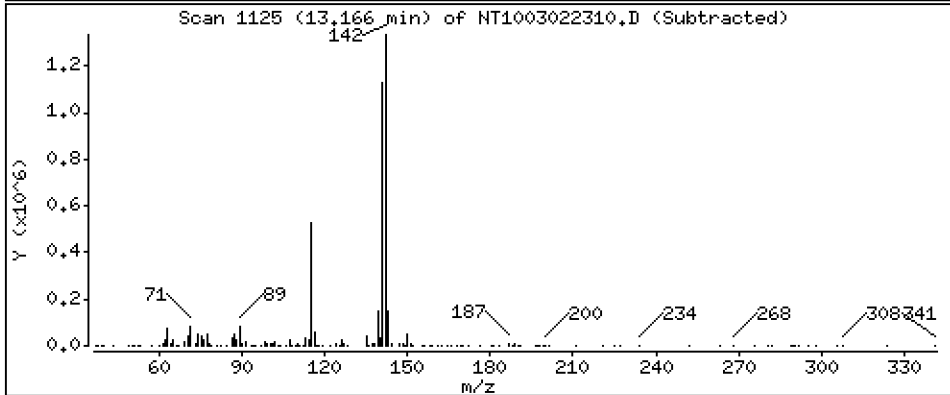
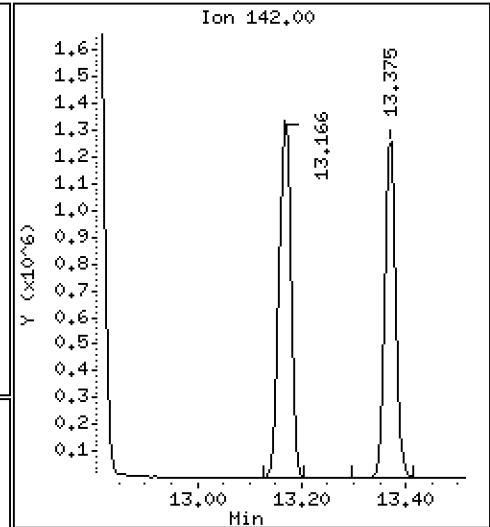
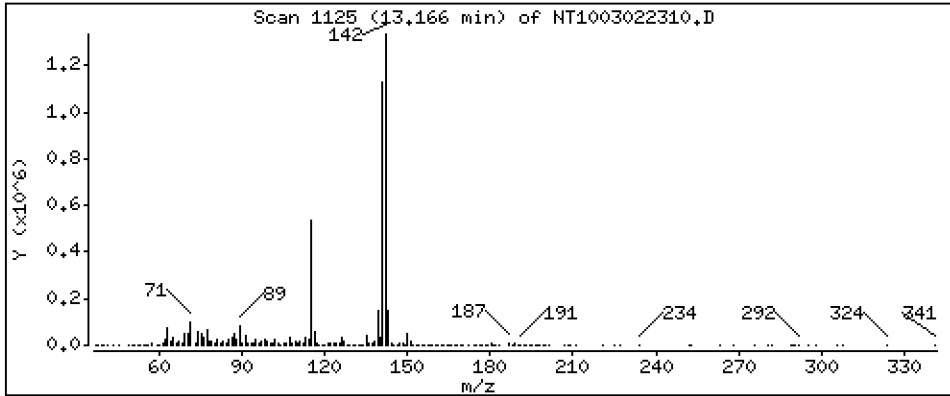
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,947 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

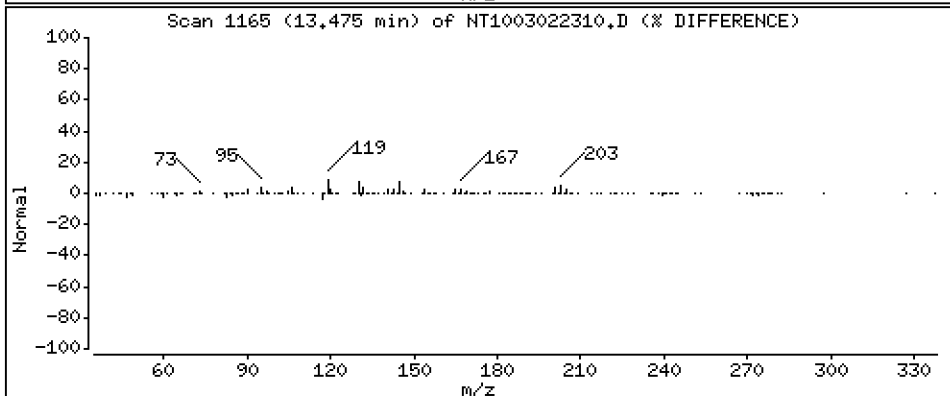
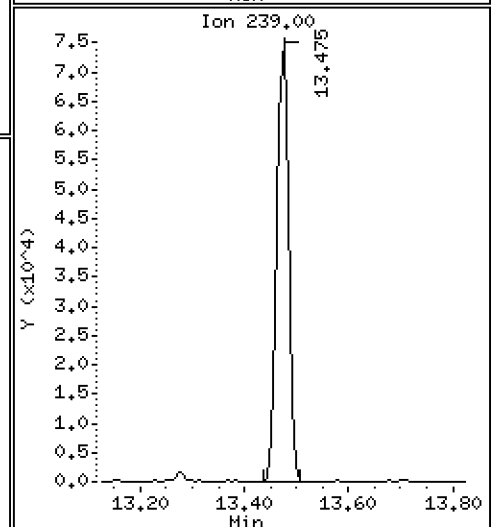
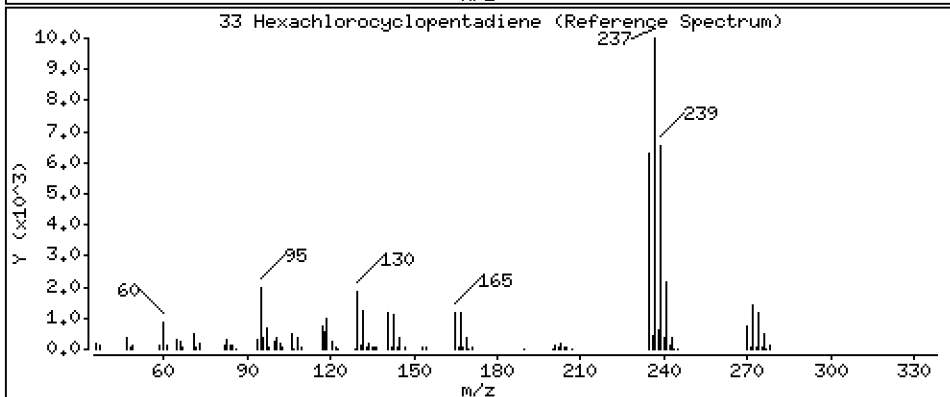
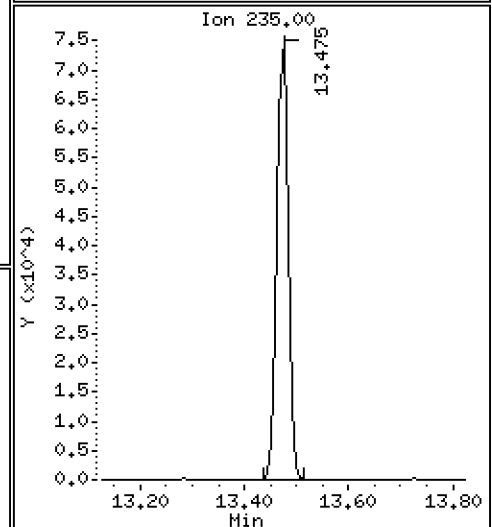
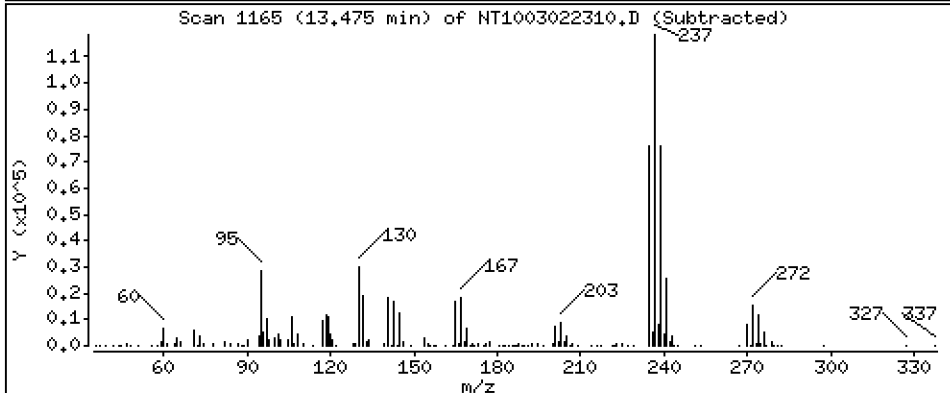
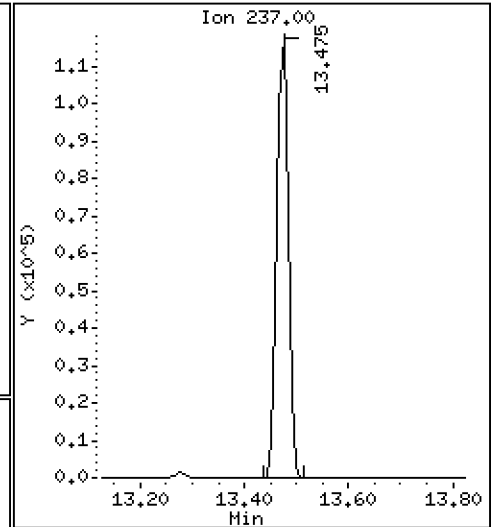
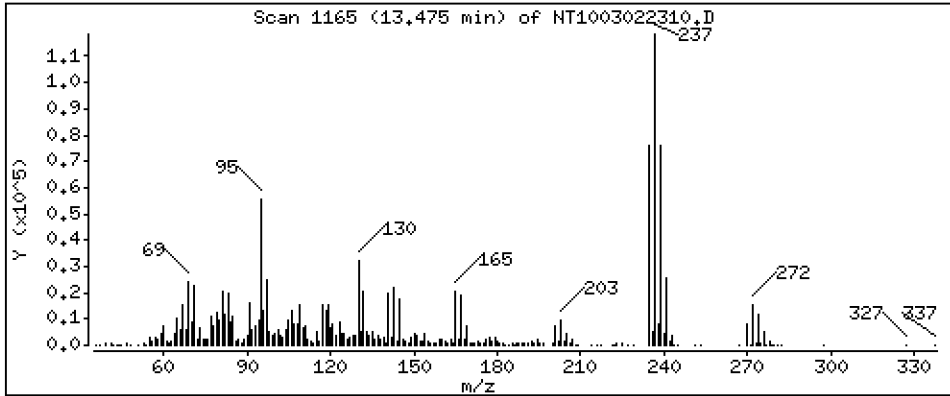
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 3,966 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

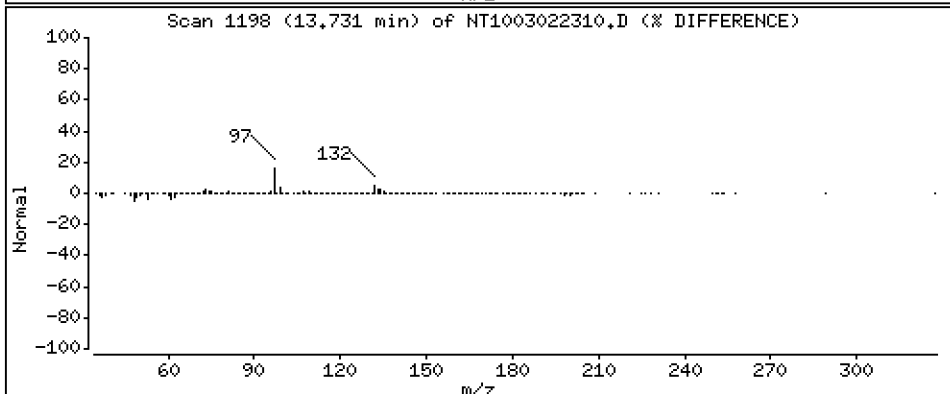
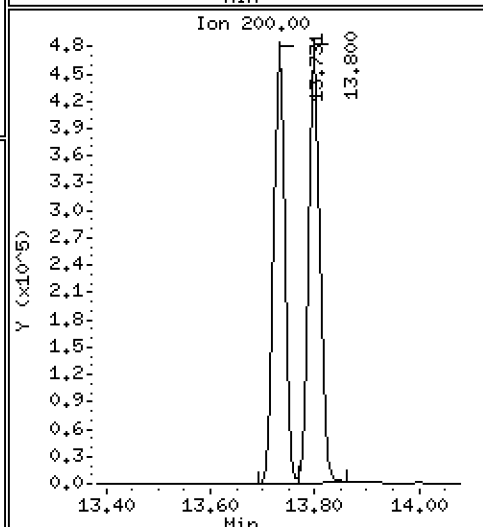
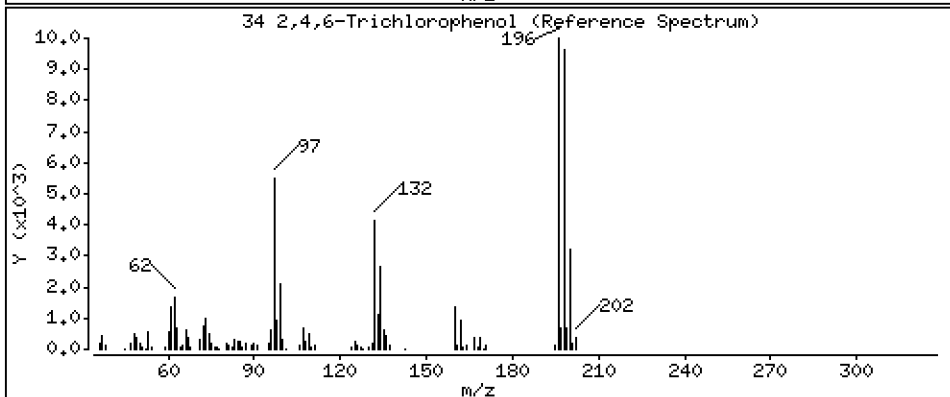
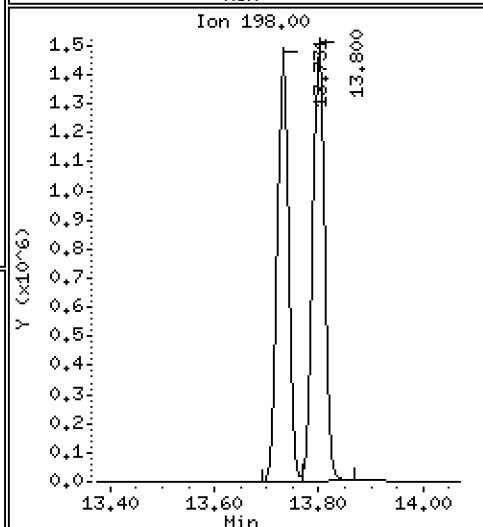
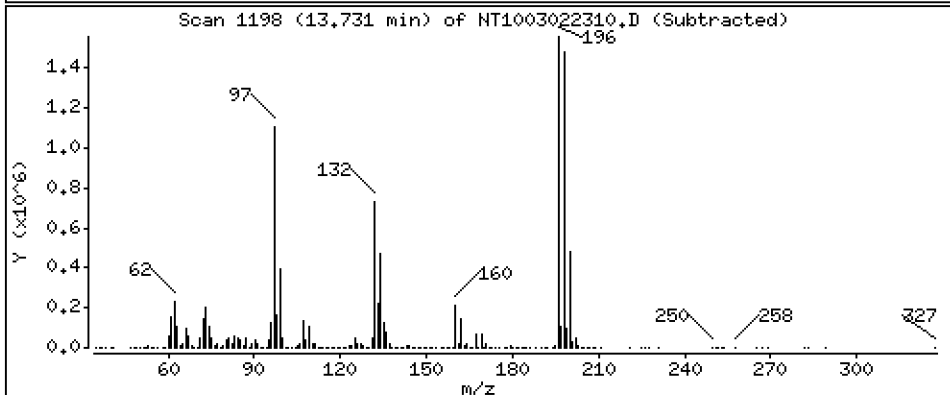
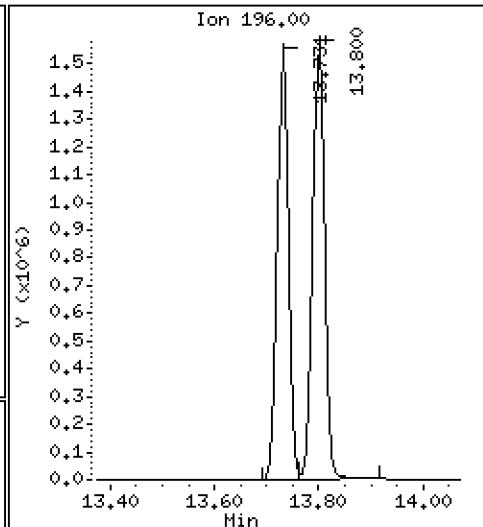
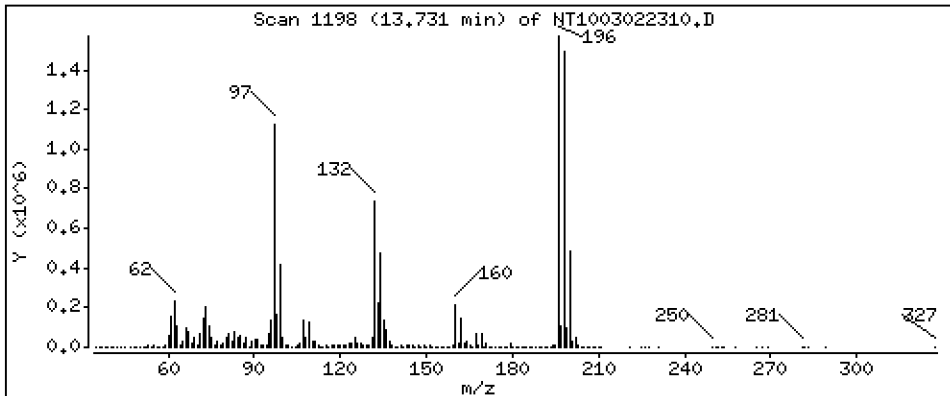
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 16,49 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

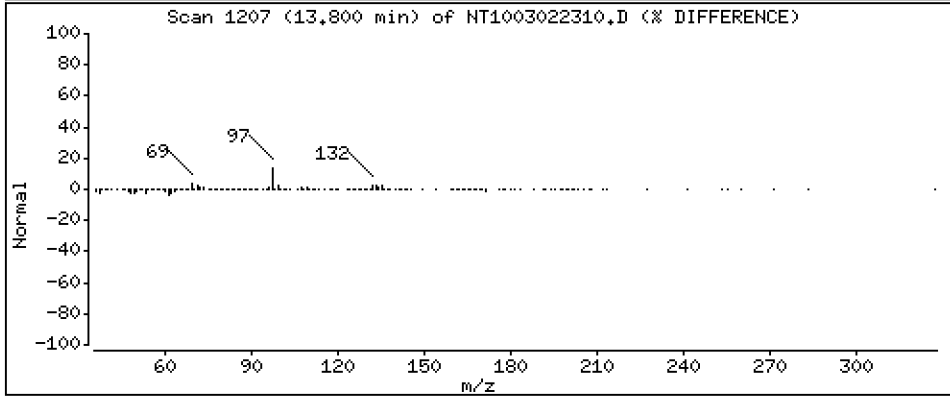
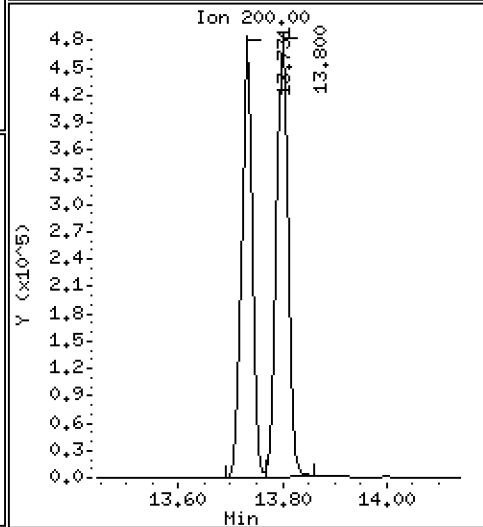
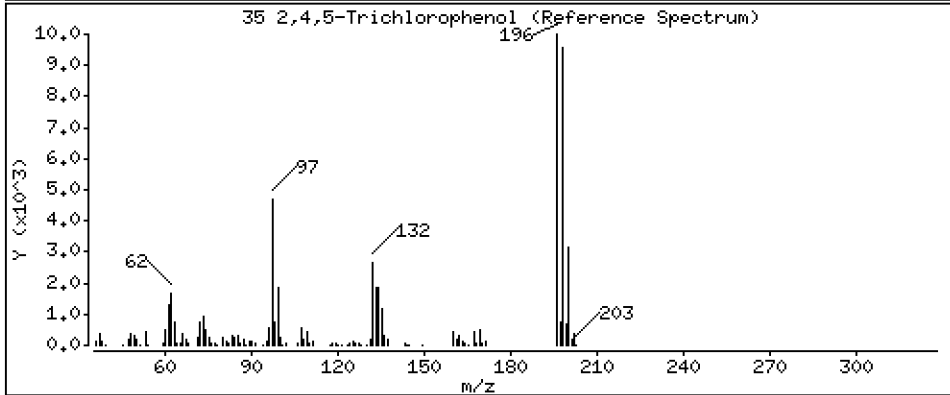
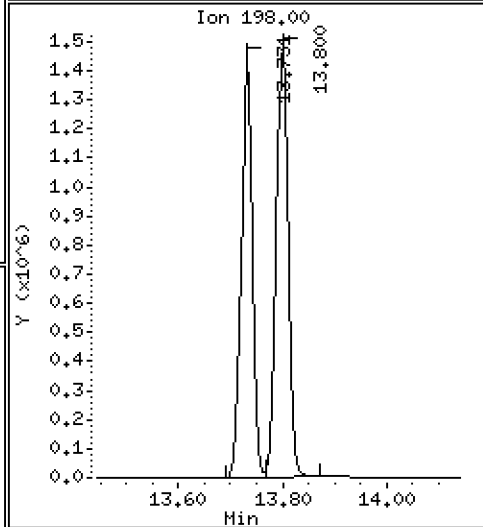
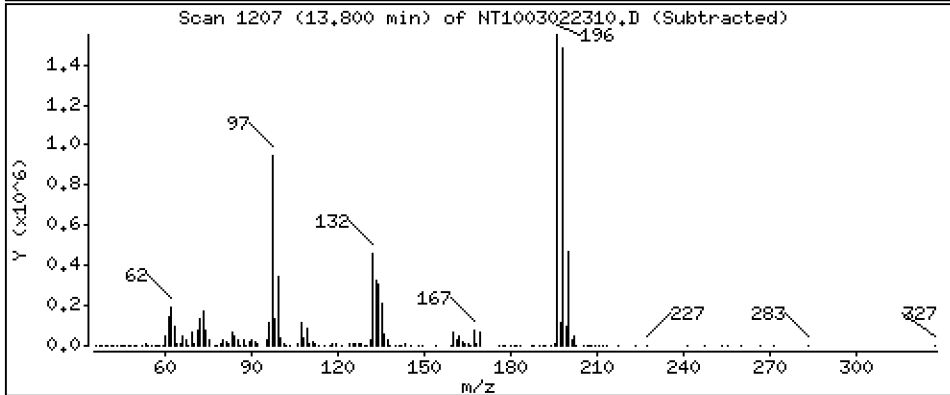
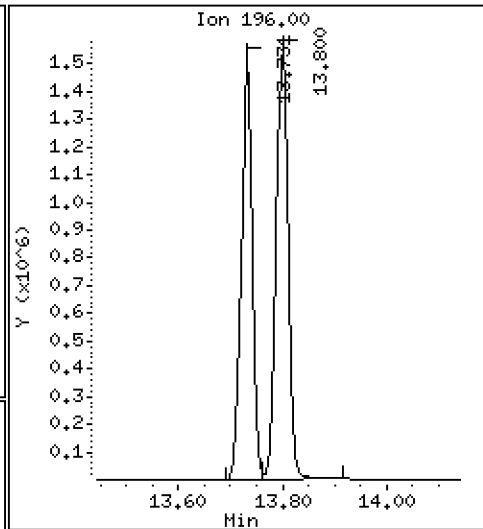
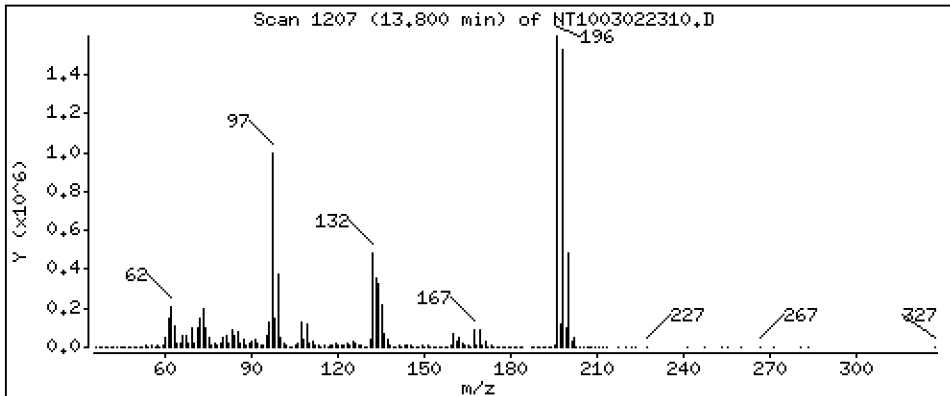
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 16,67 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

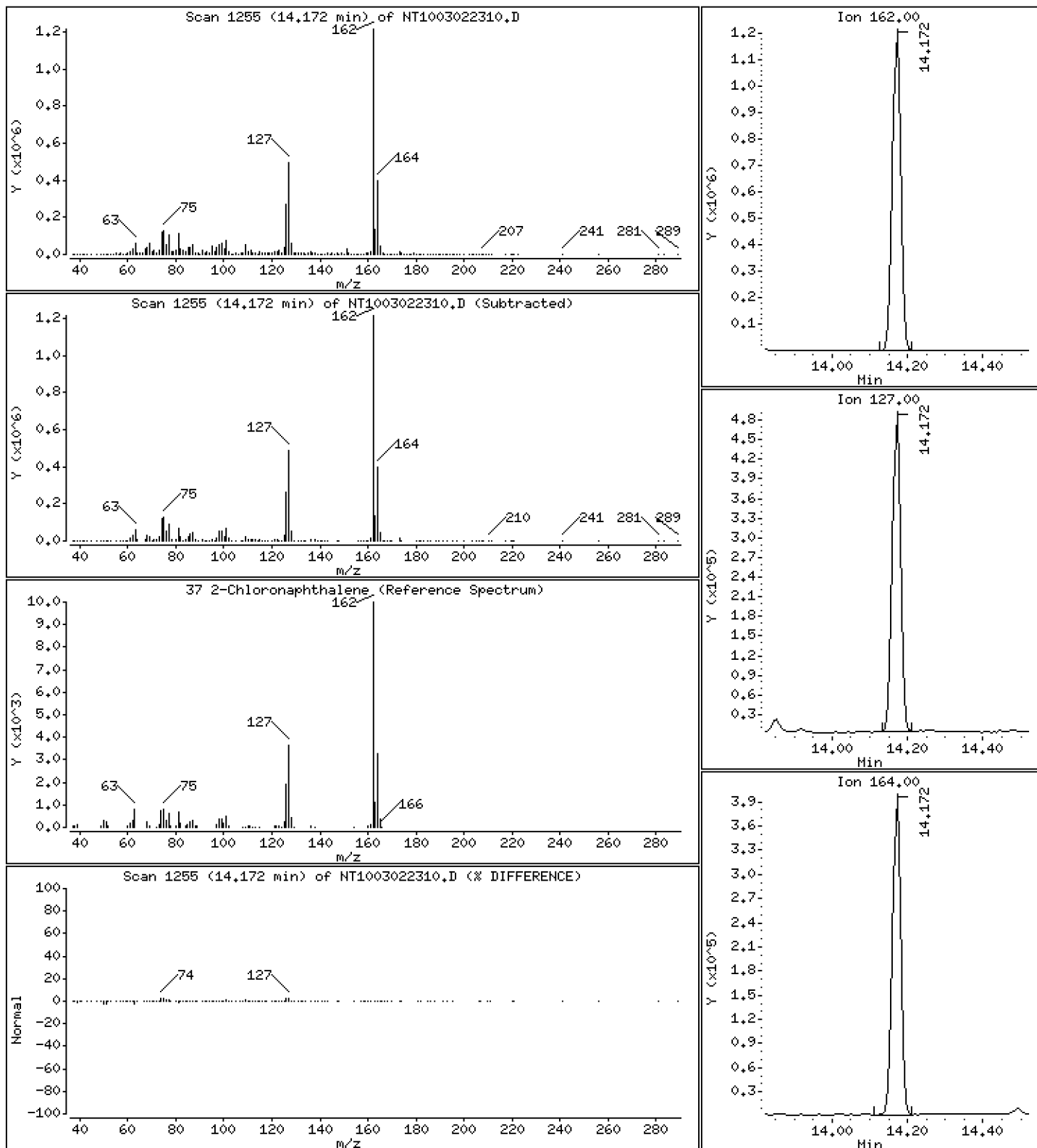
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 4,905 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

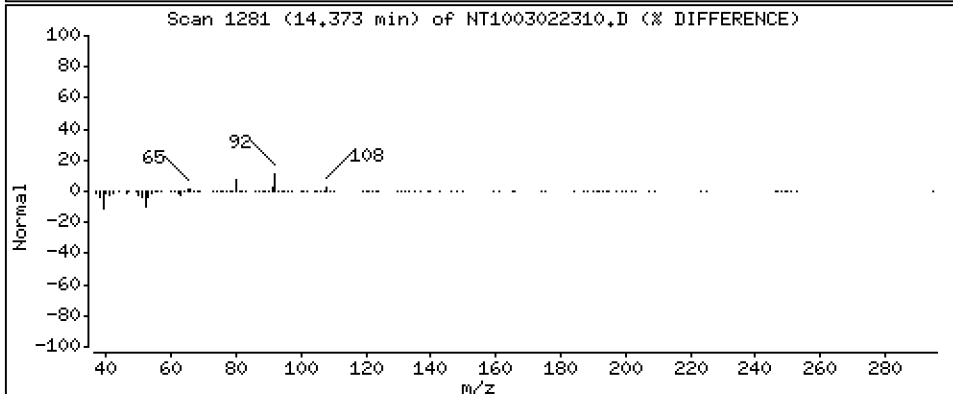
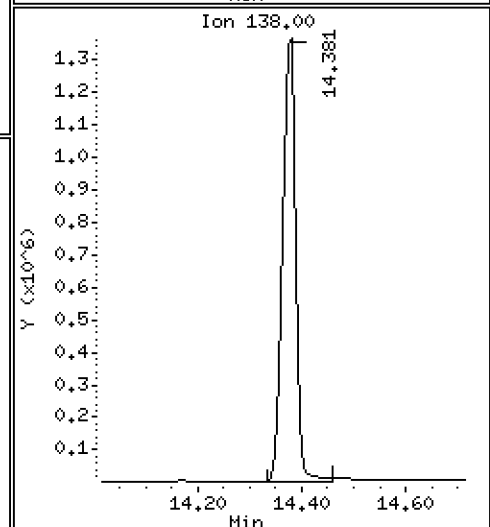
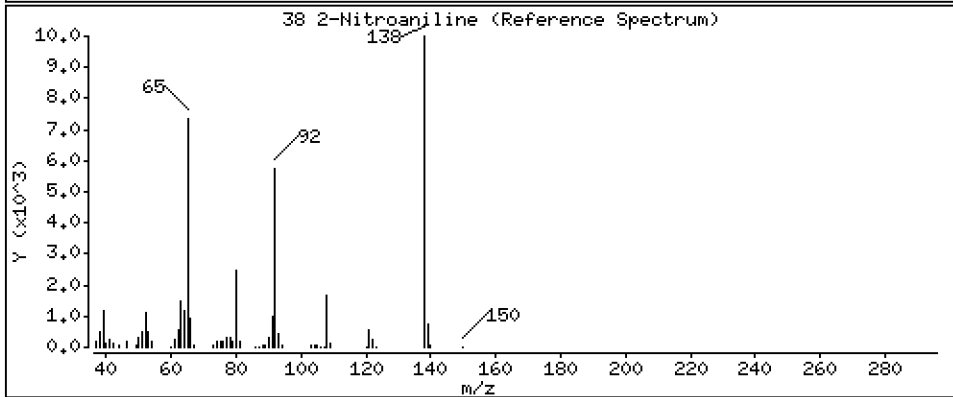
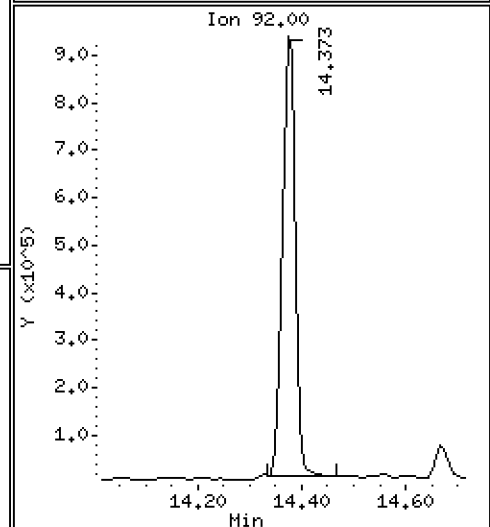
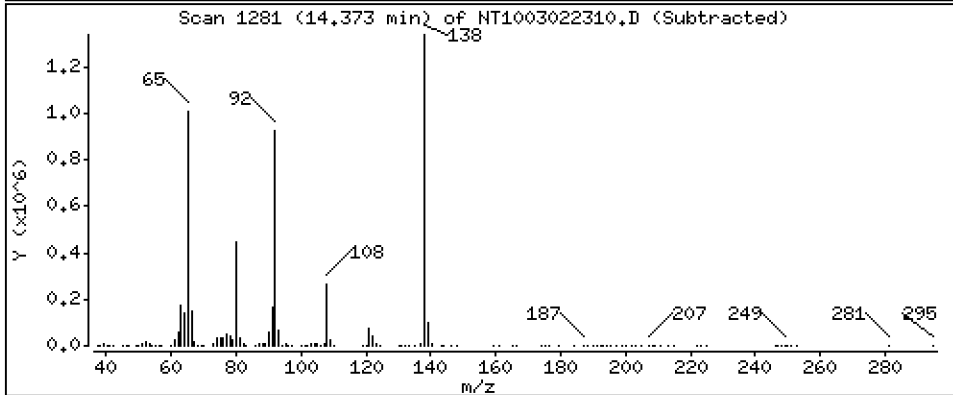
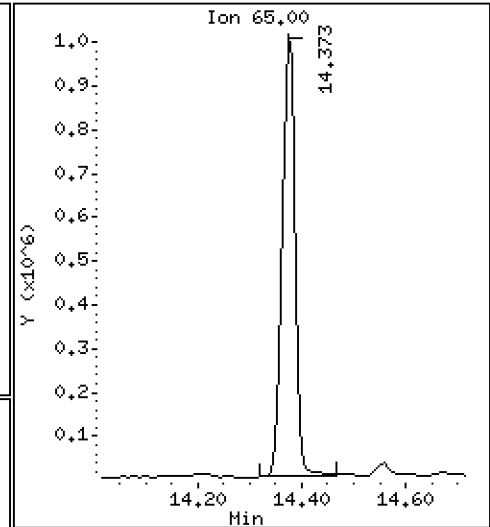
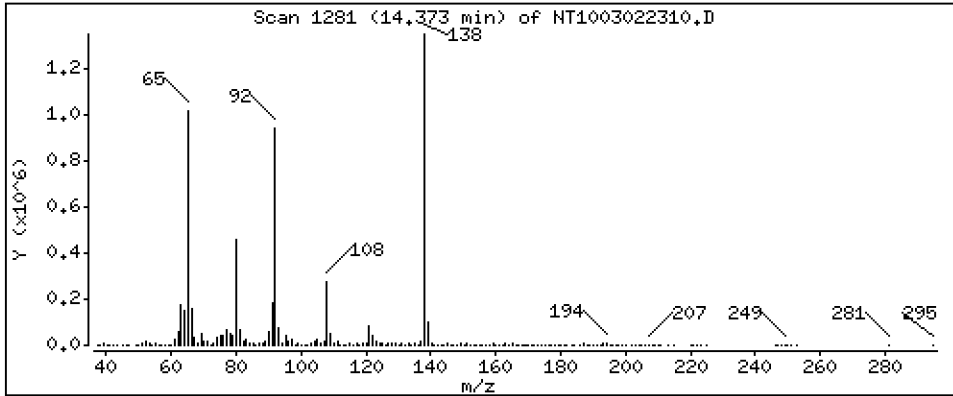
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 15,99 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

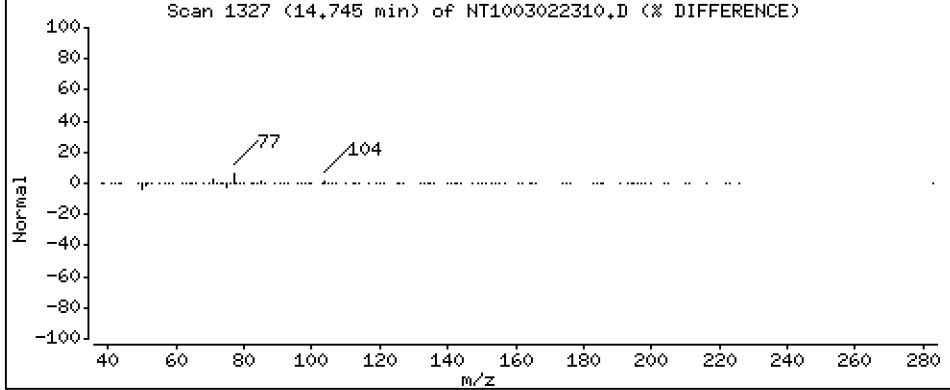
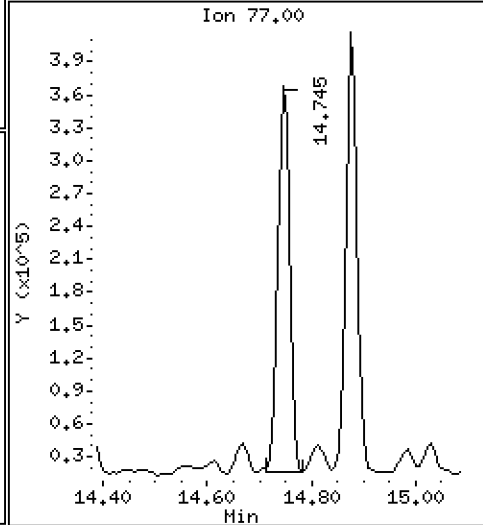
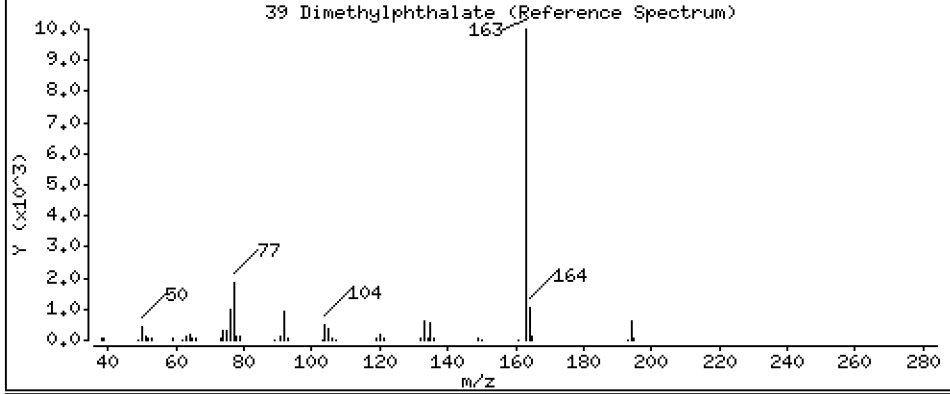
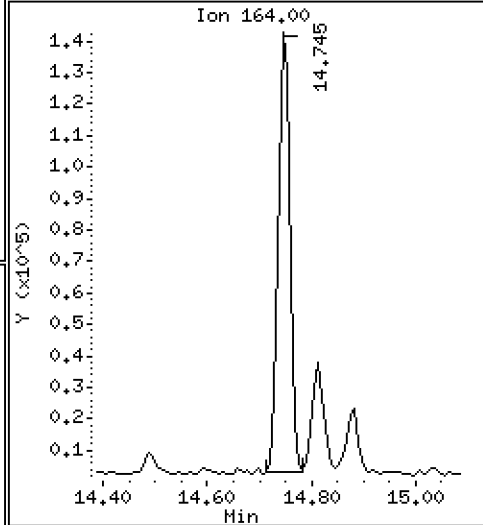
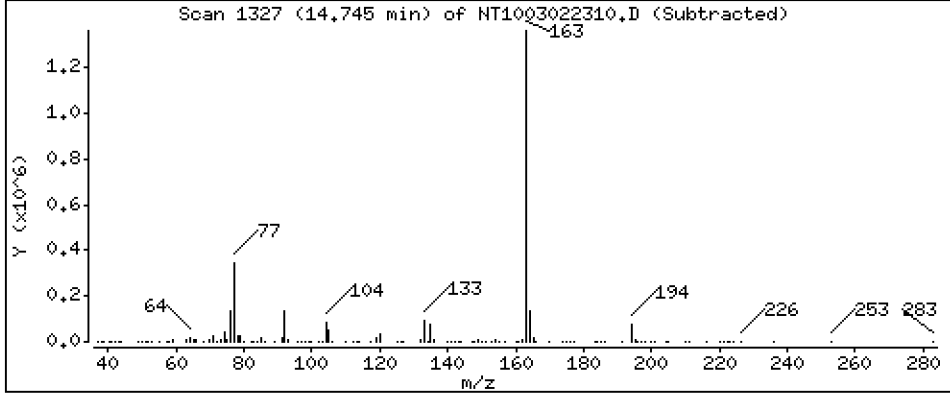
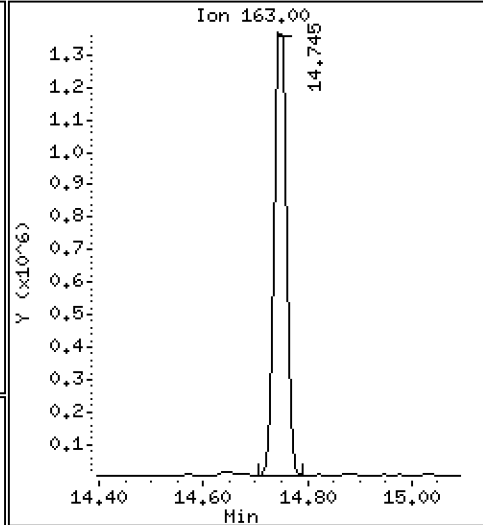
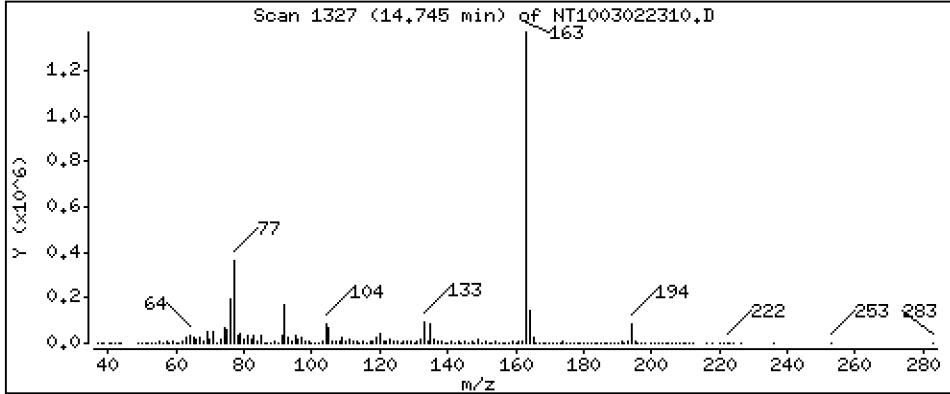
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,057 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

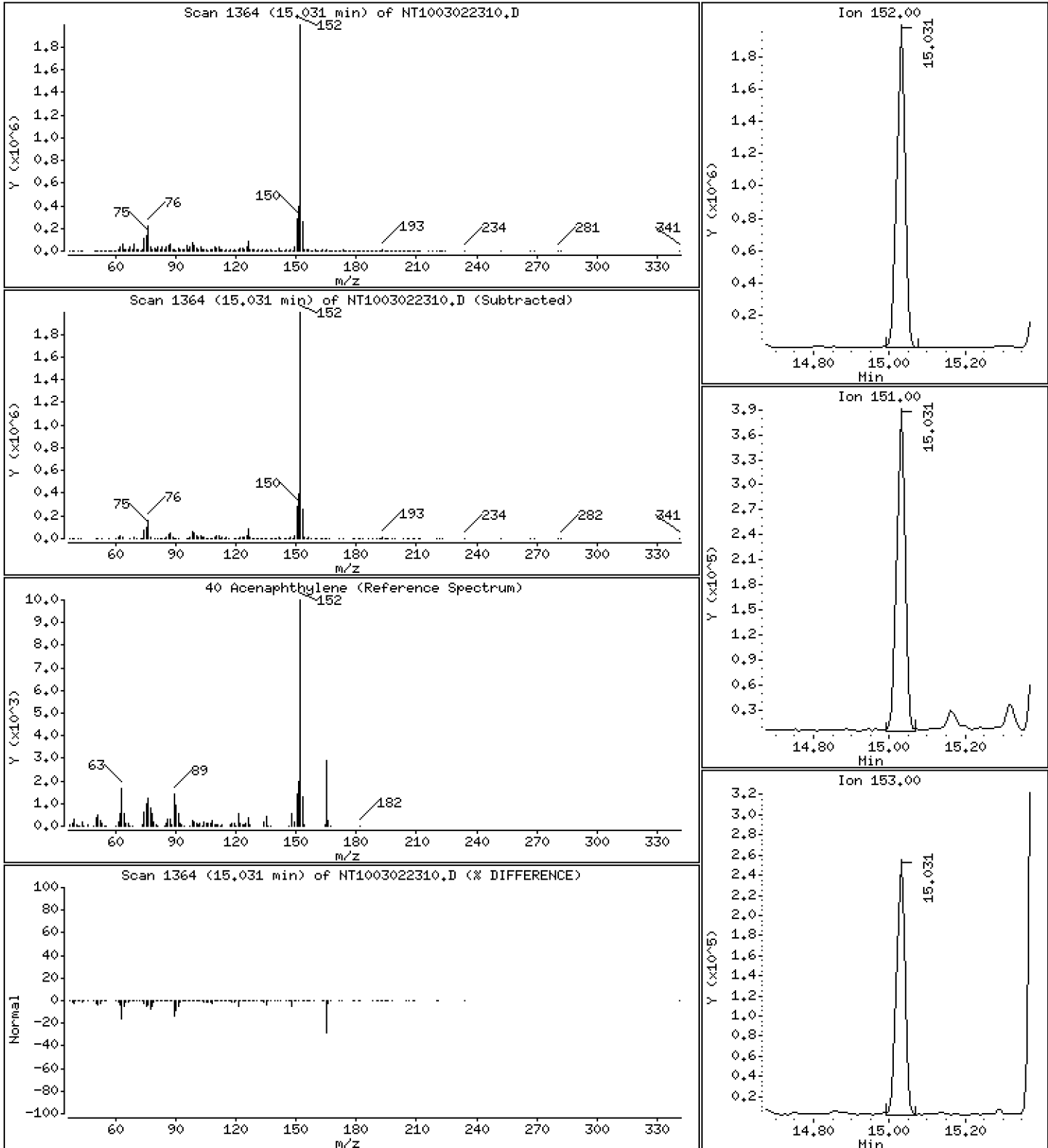
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 4,775 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

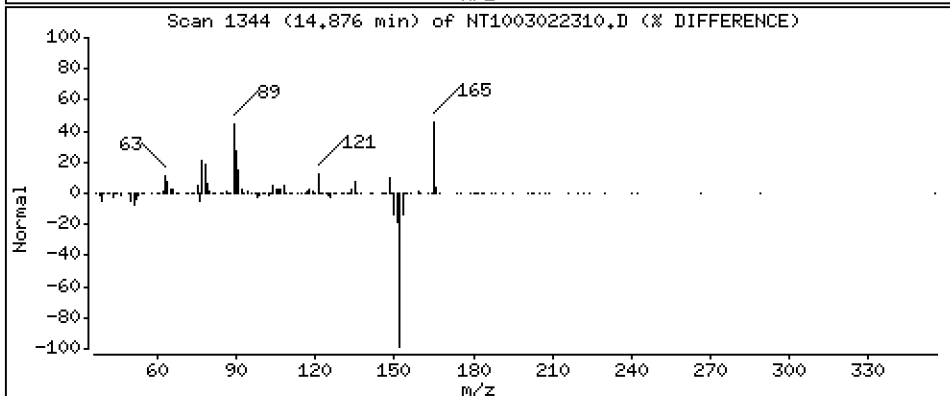
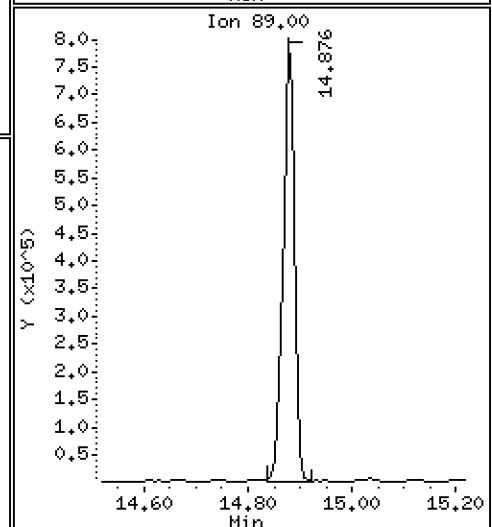
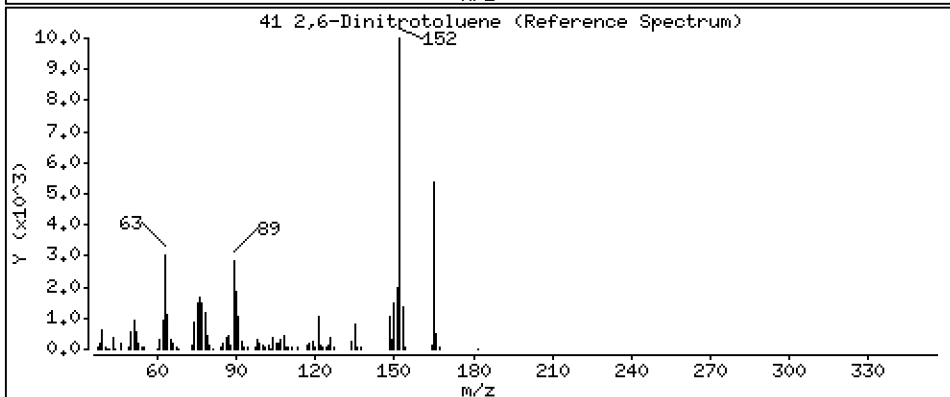
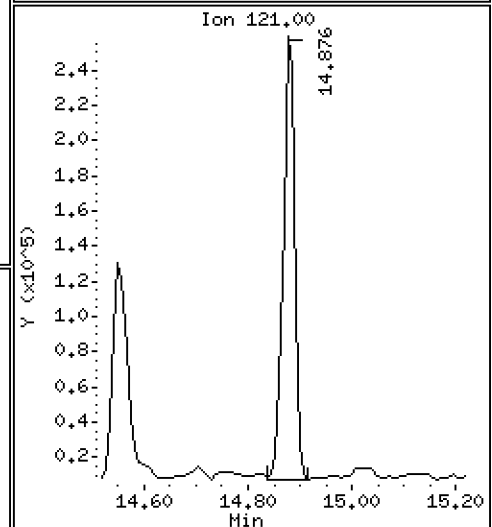
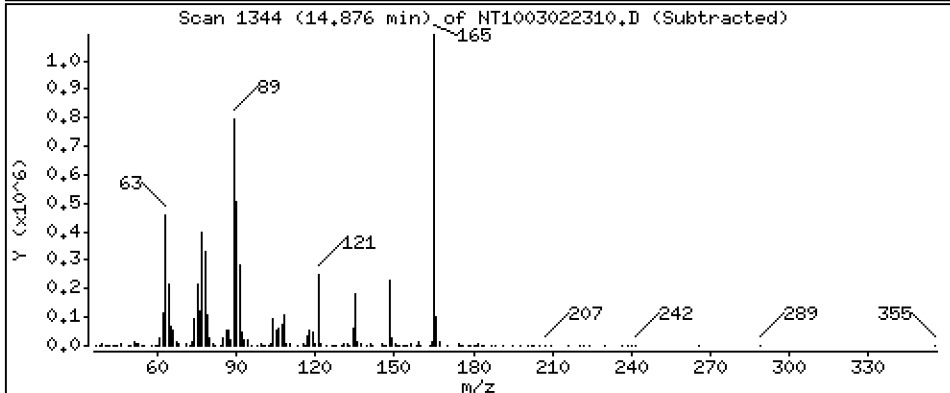
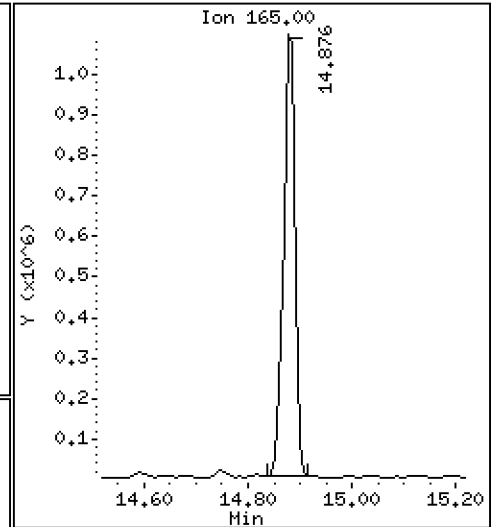
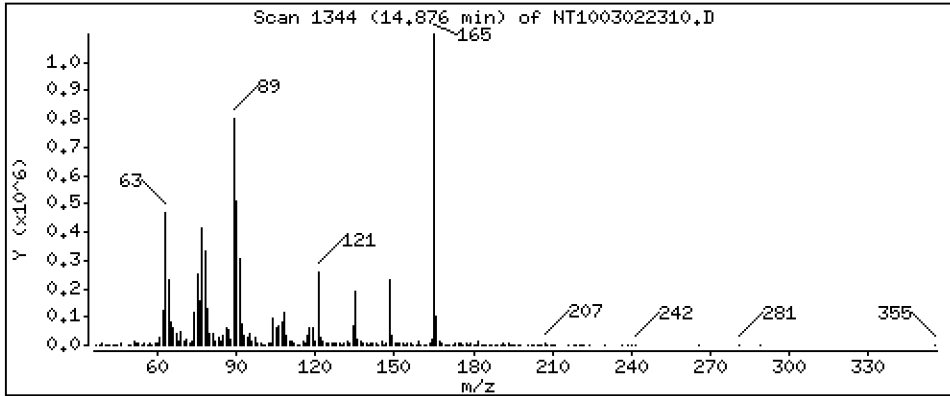
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 17,38 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

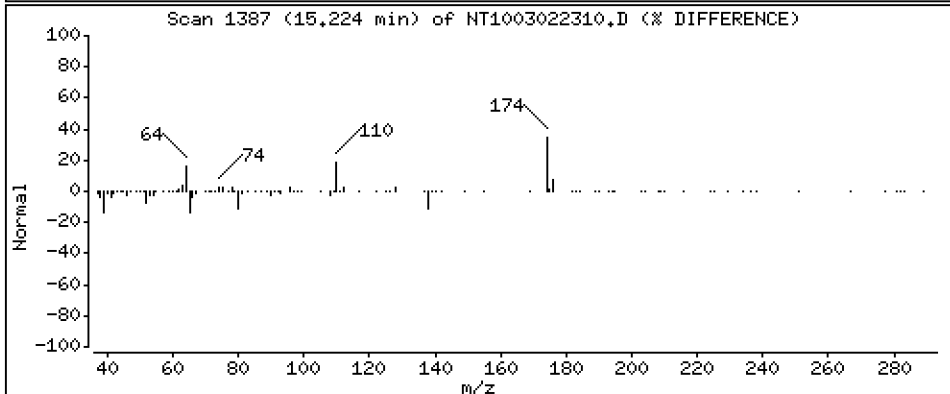
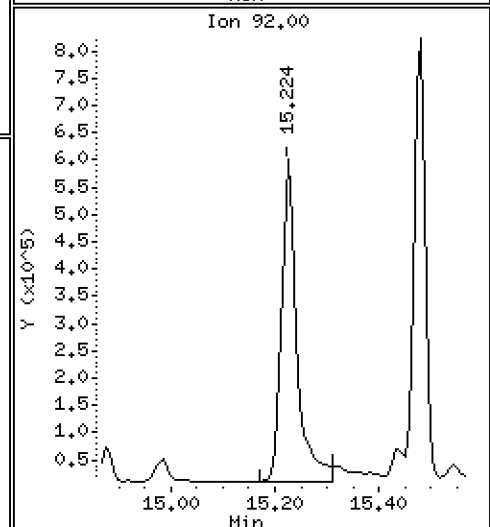
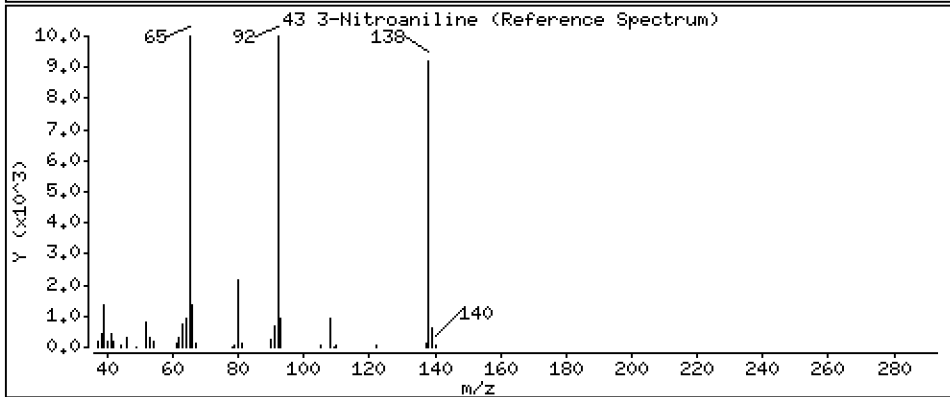
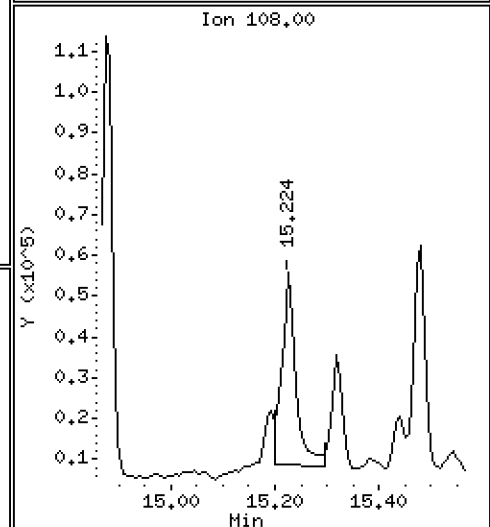
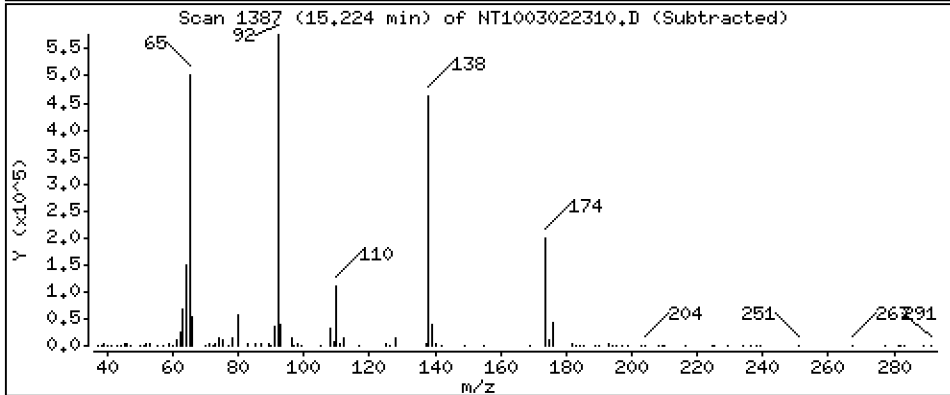
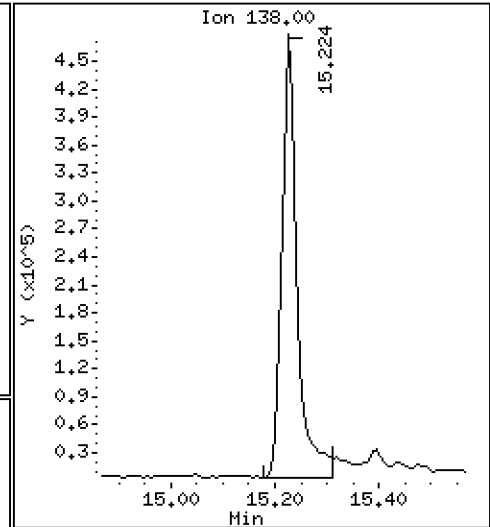
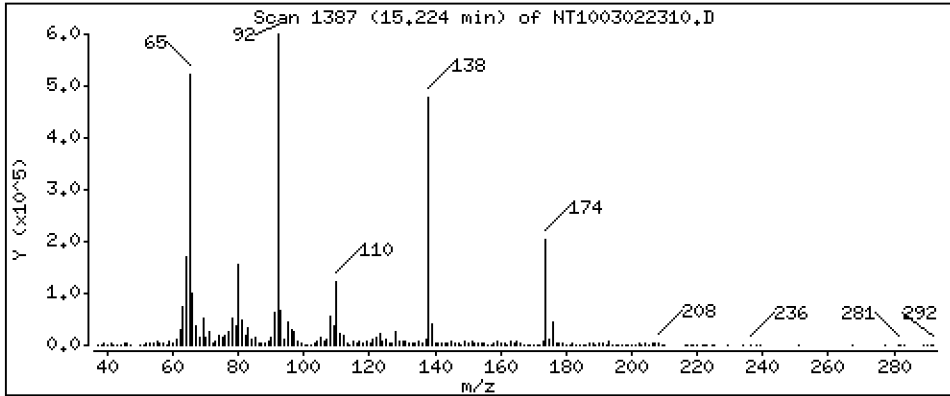
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 9,139 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

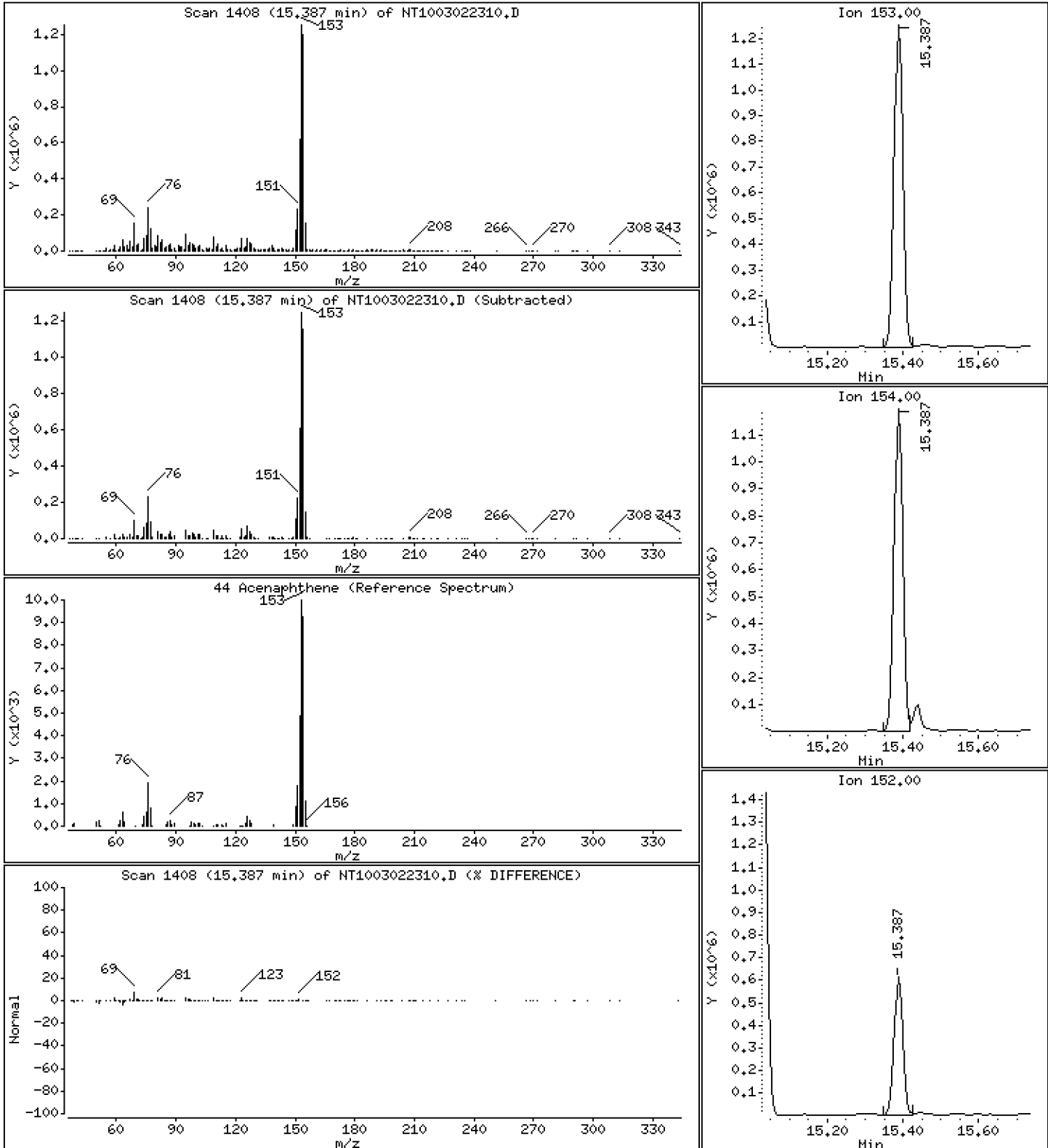
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,200 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

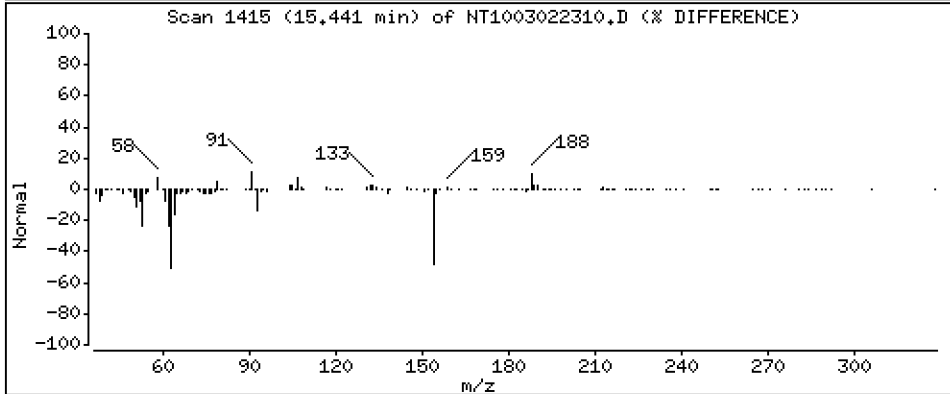
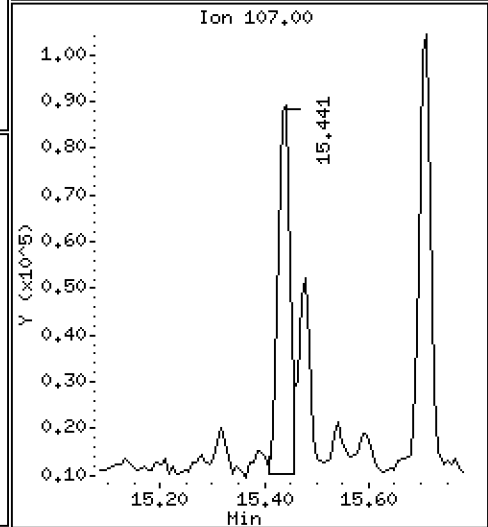
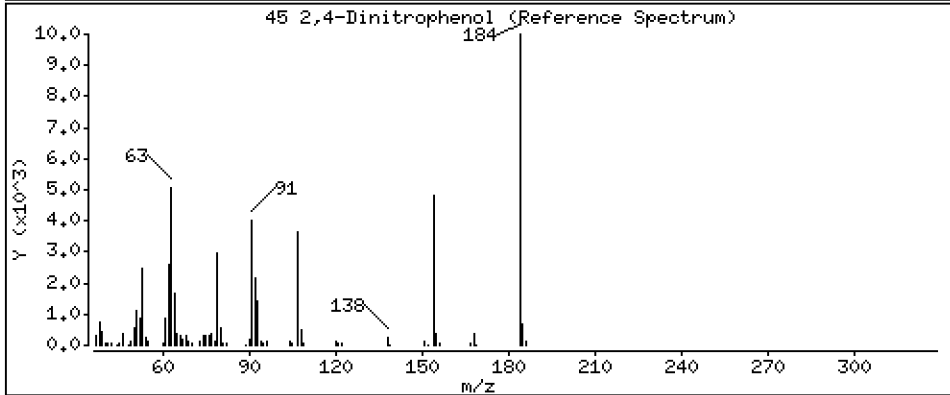
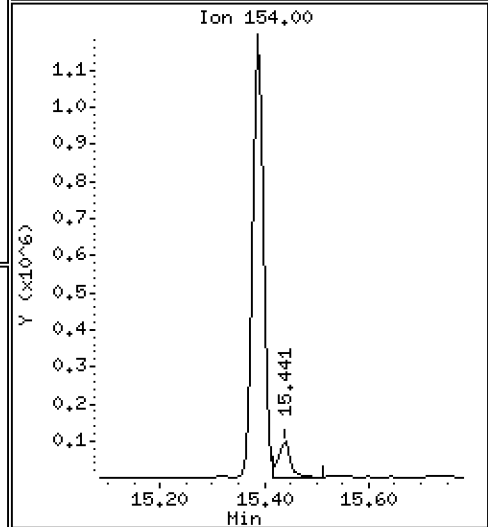
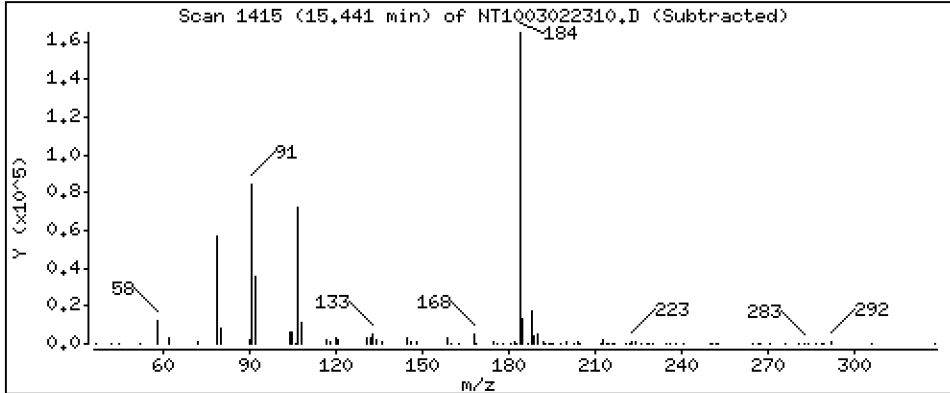
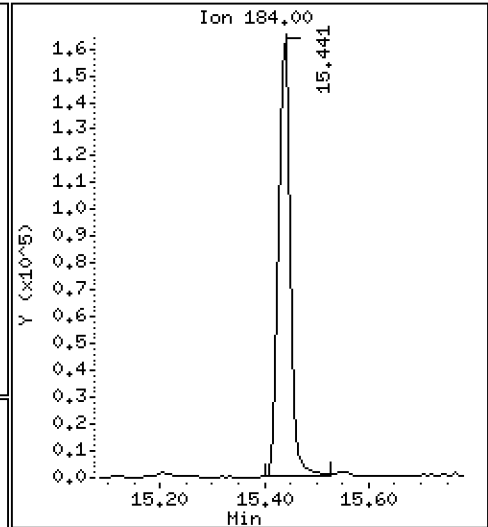
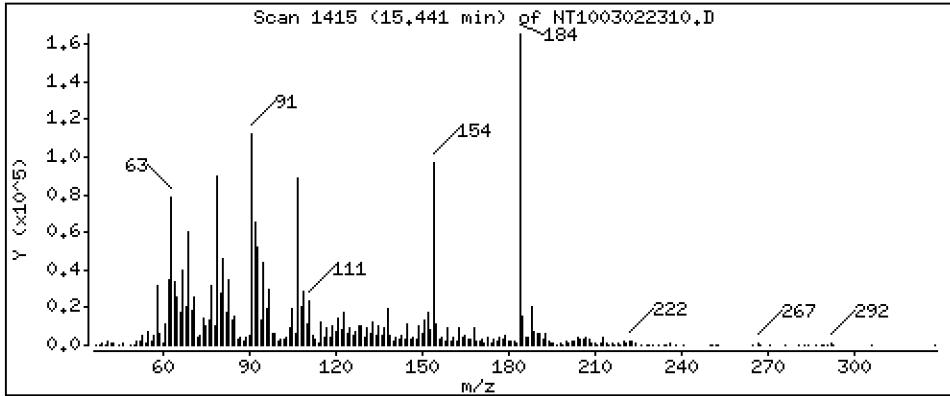
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 10,14 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

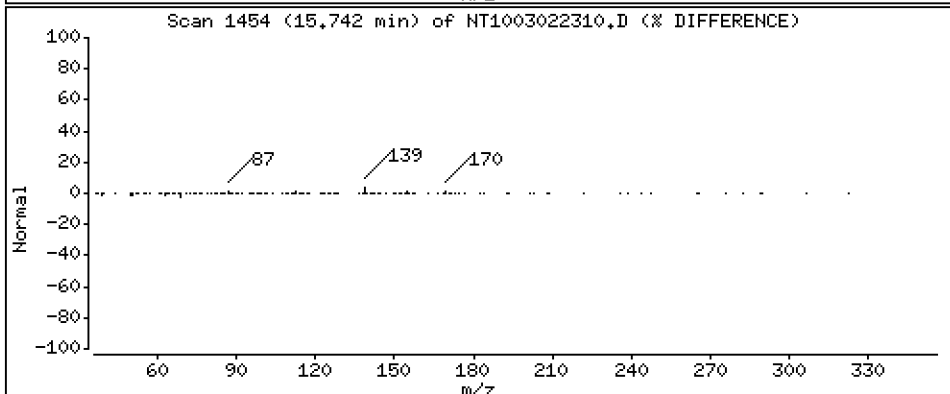
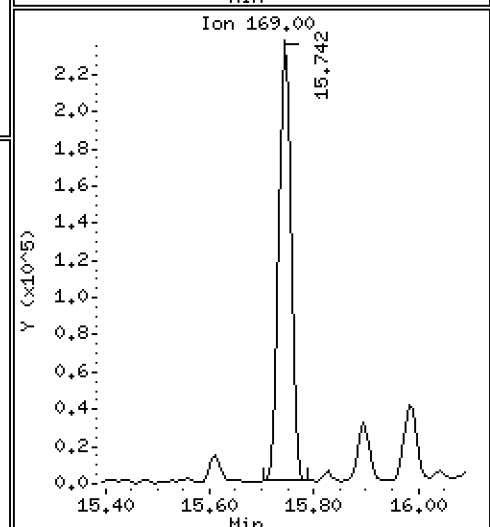
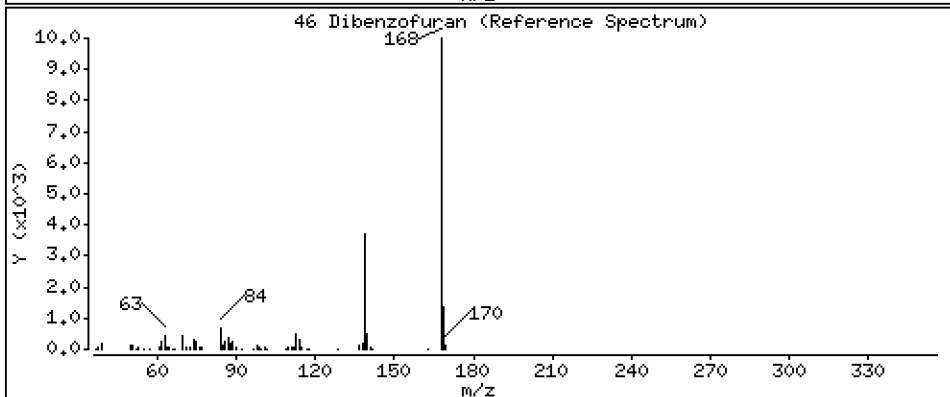
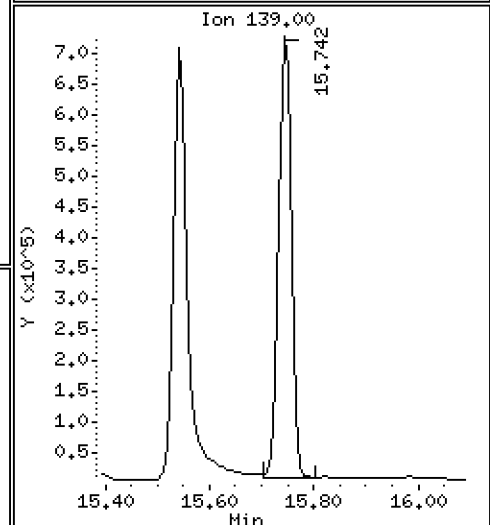
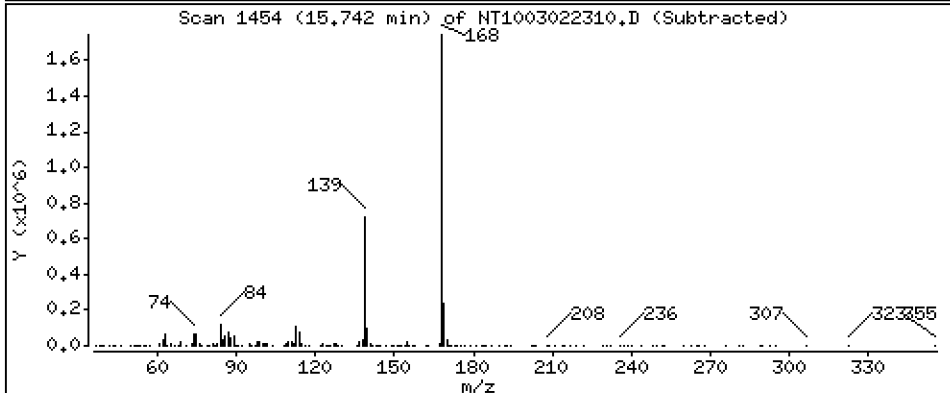
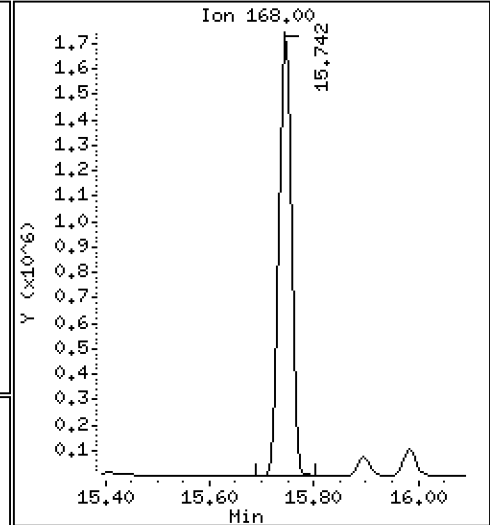
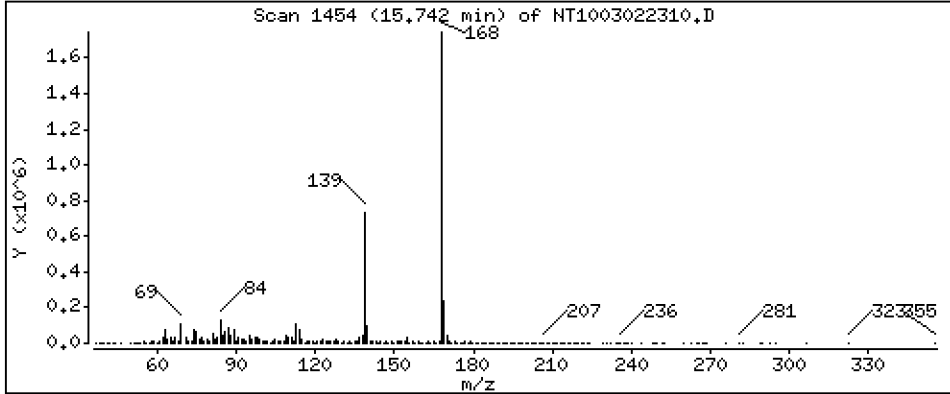
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 5,010 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

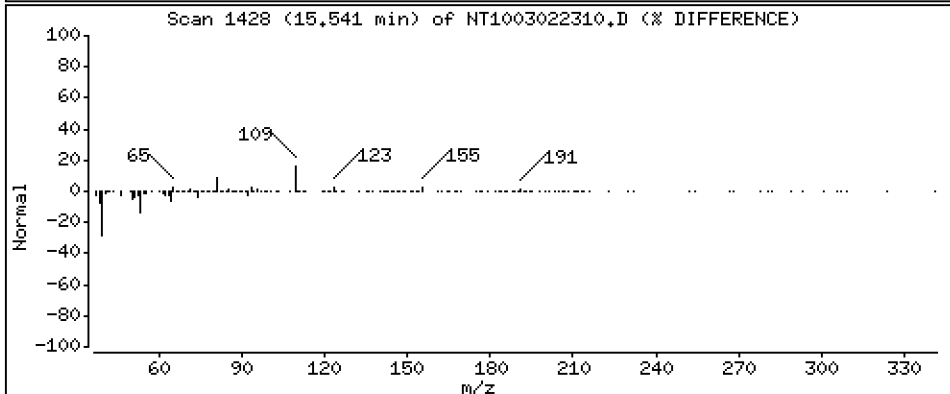
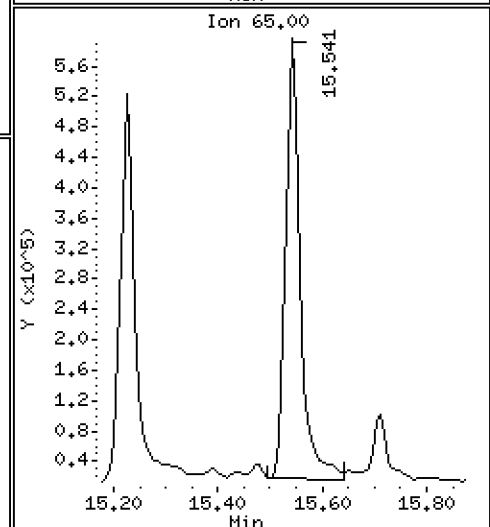
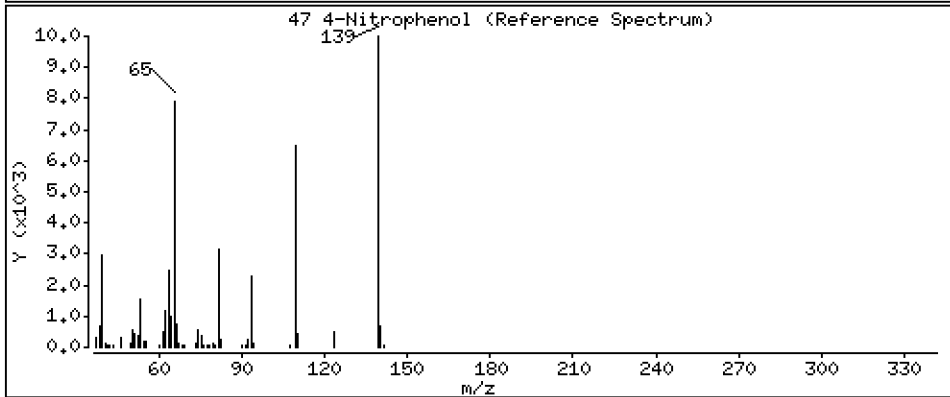
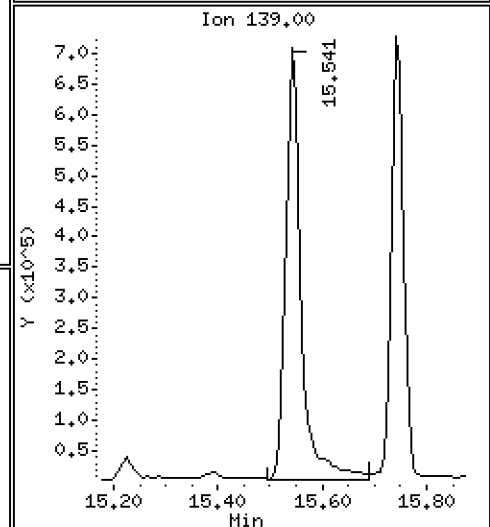
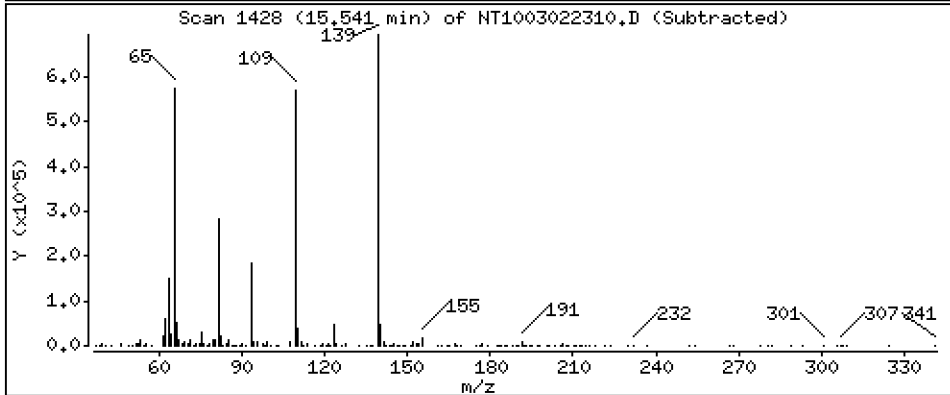
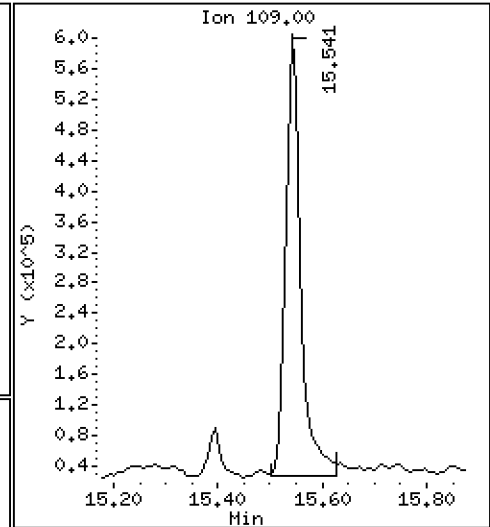
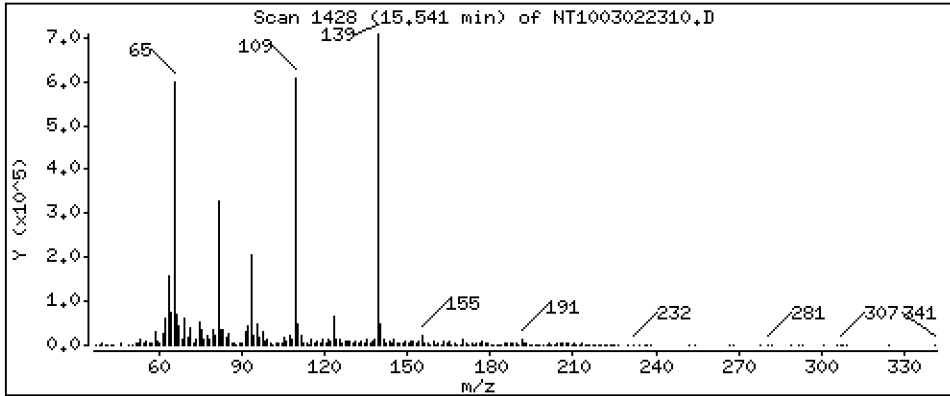
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 14,73 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

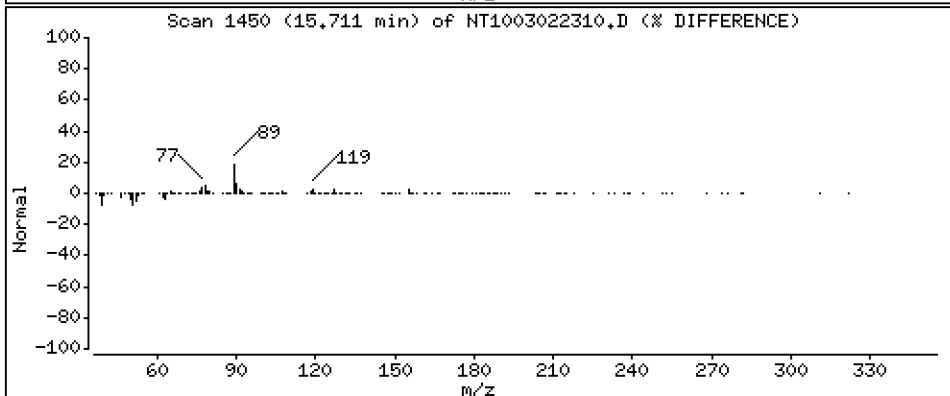
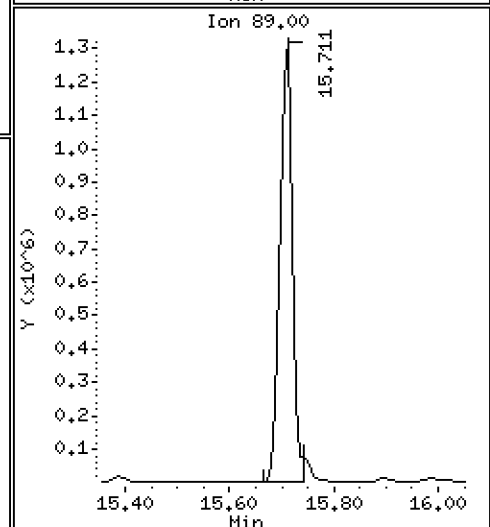
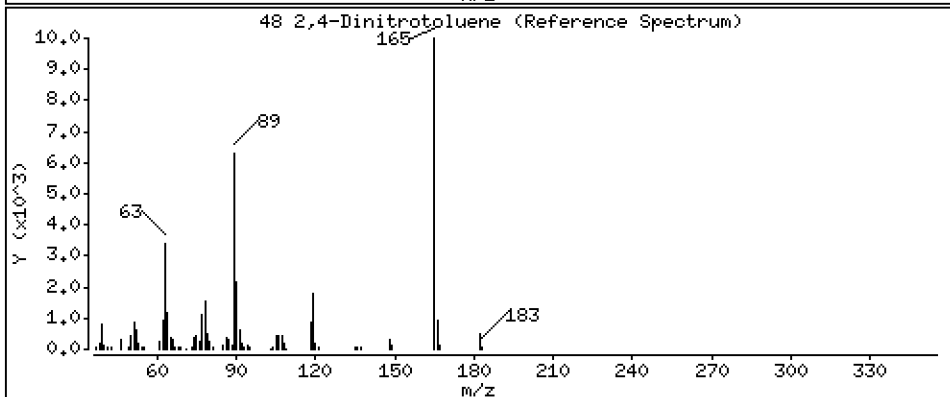
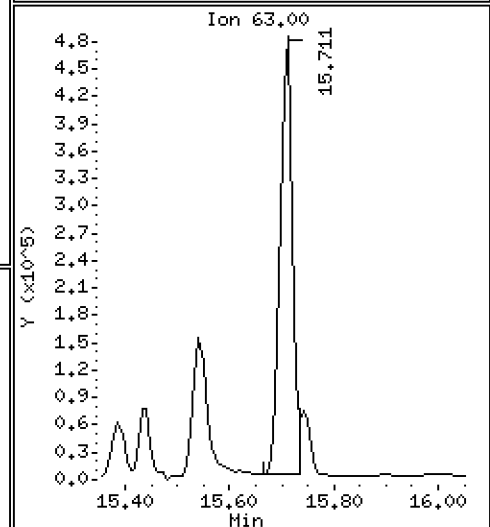
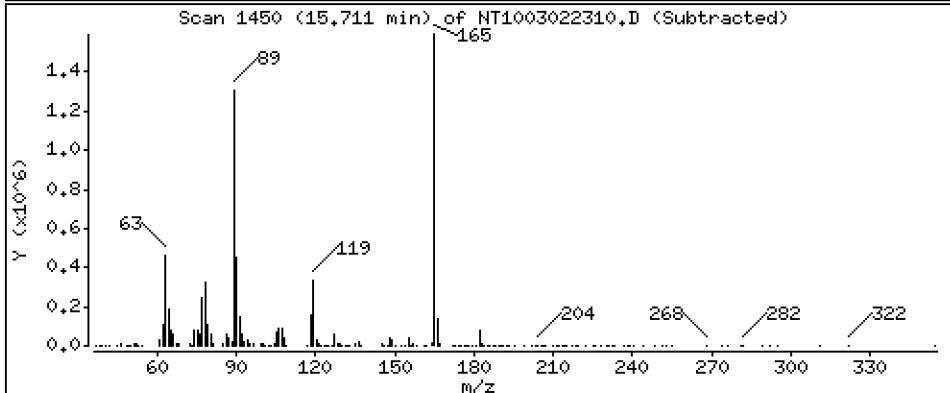
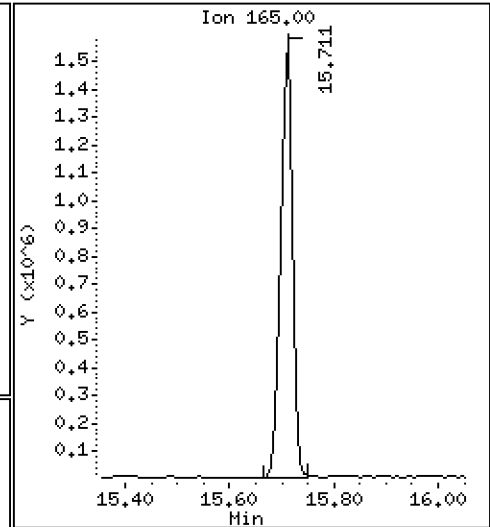
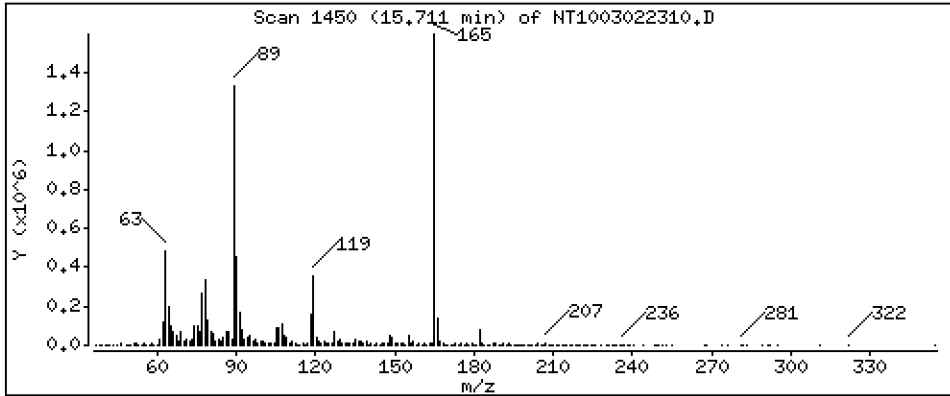
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 16,99 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

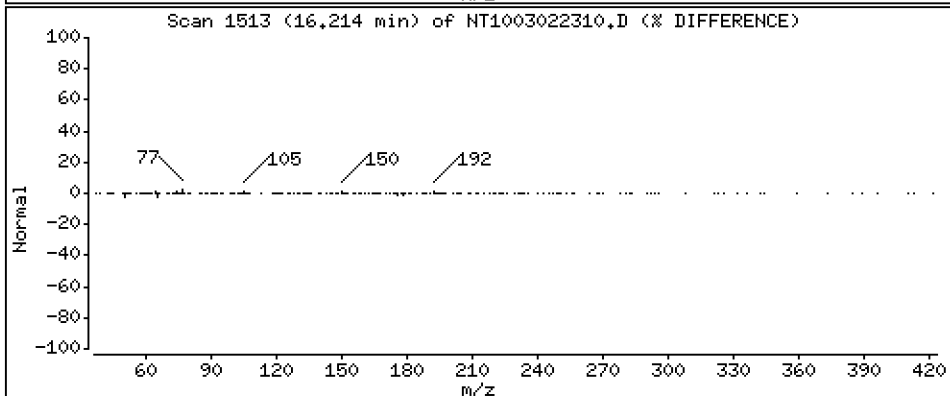
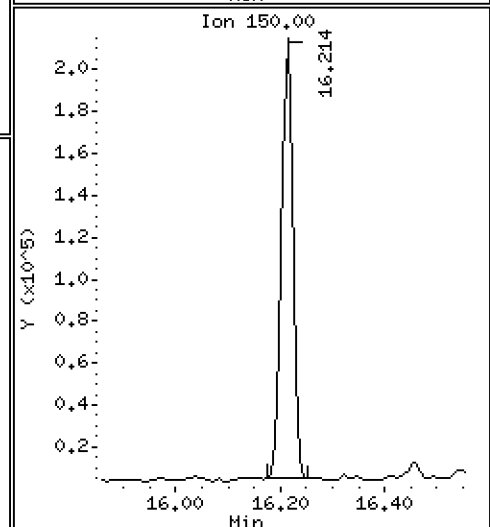
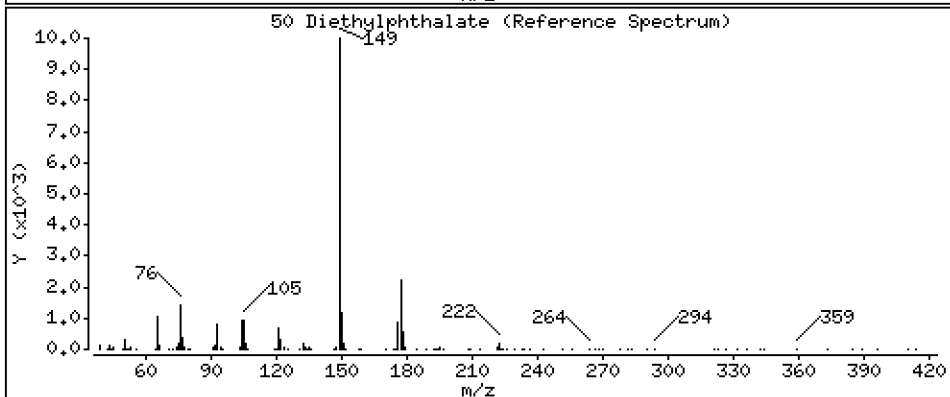
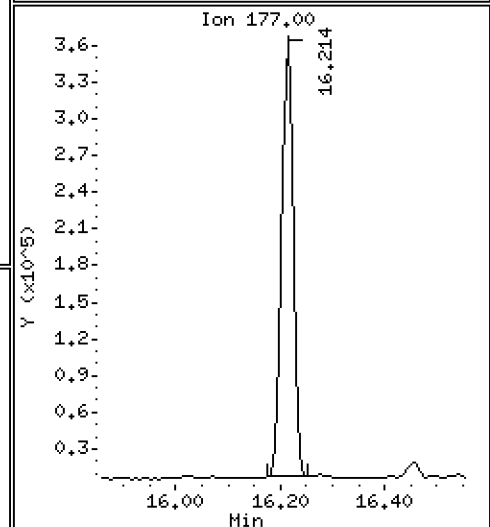
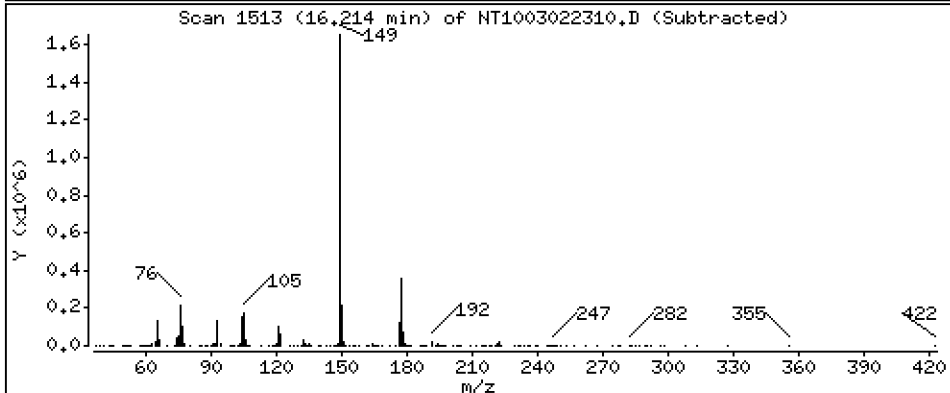
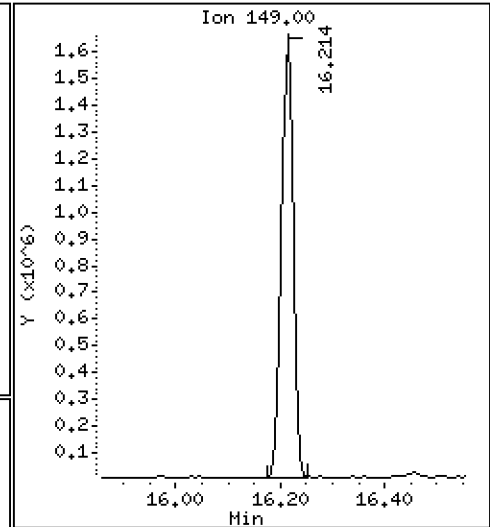
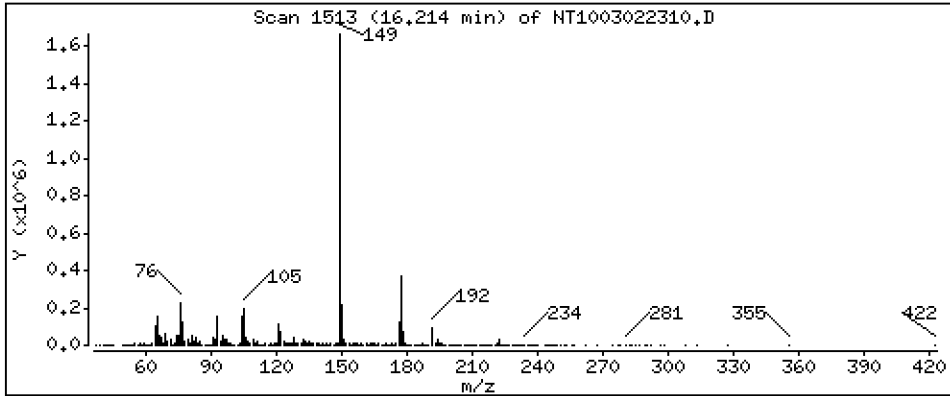
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,542 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

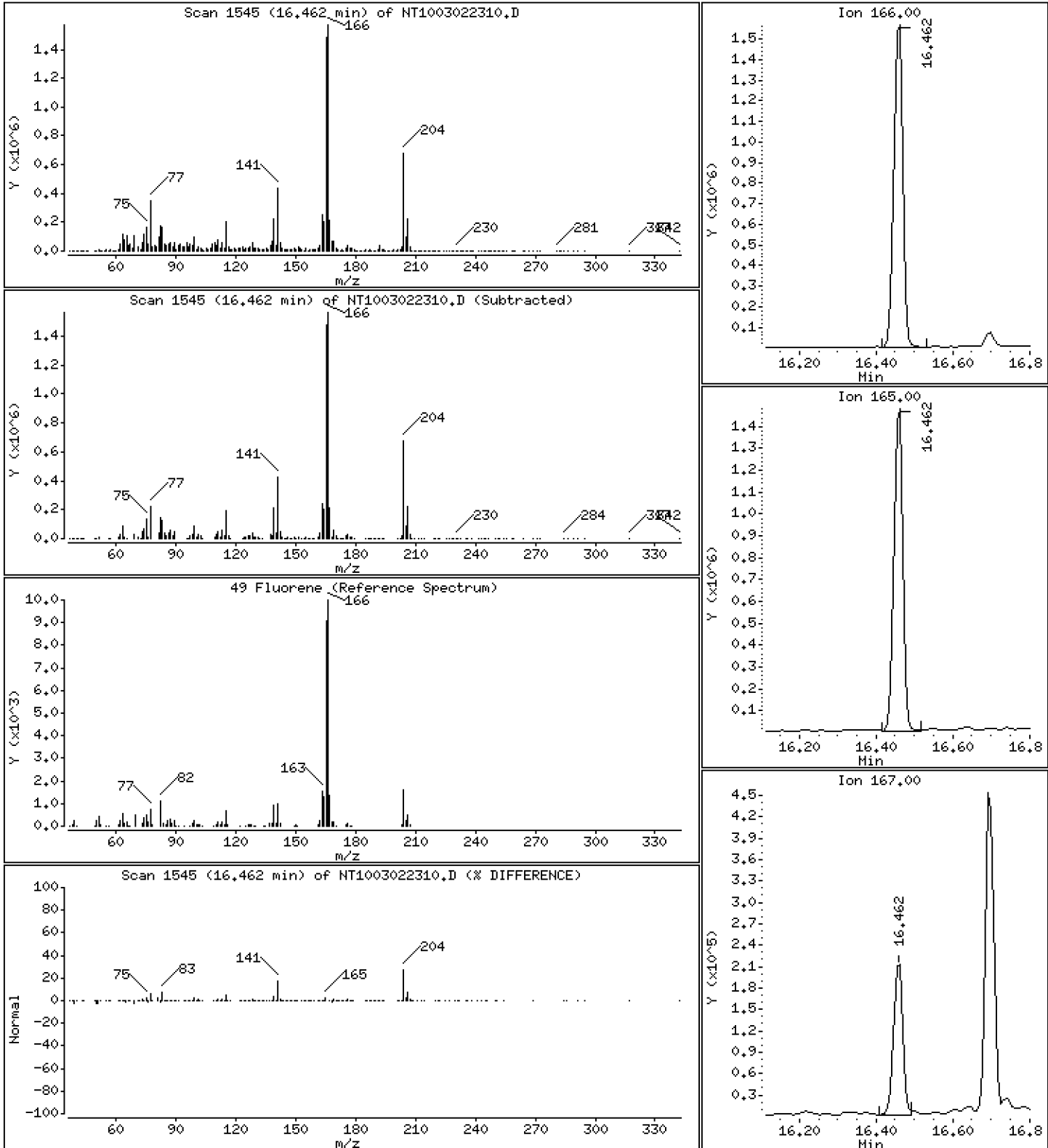
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,419 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

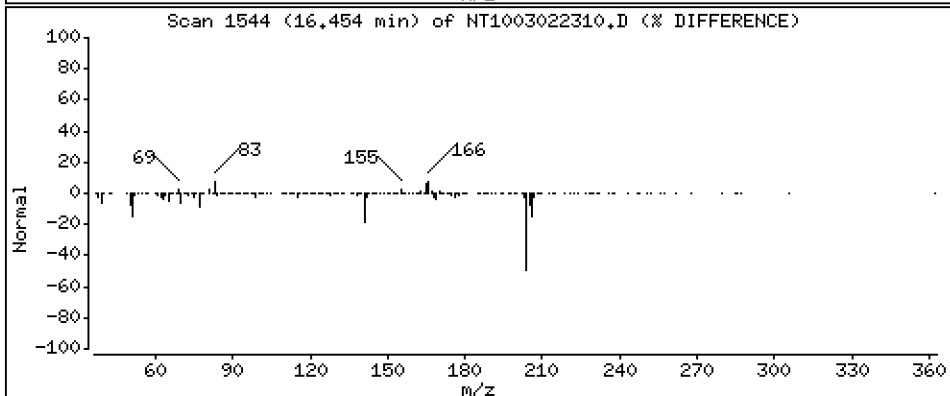
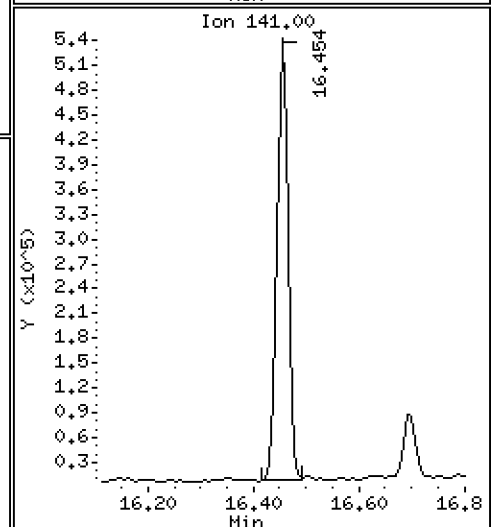
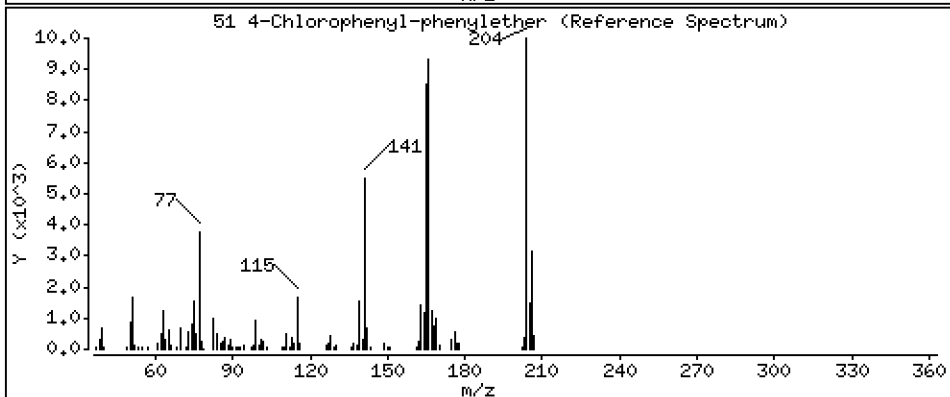
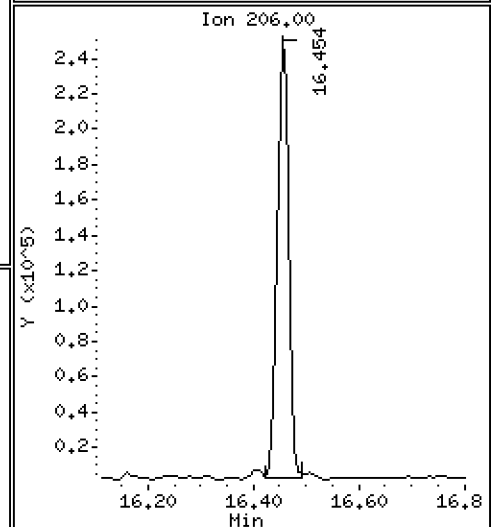
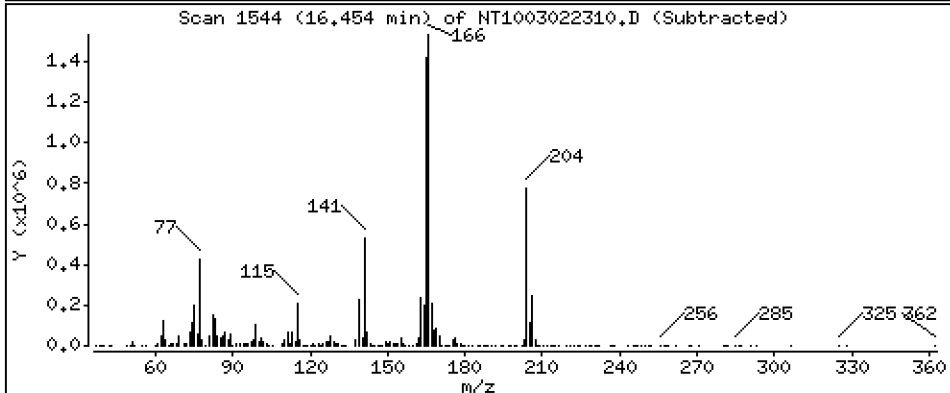
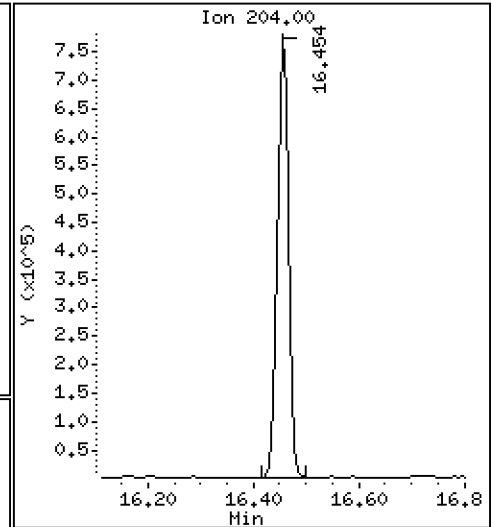
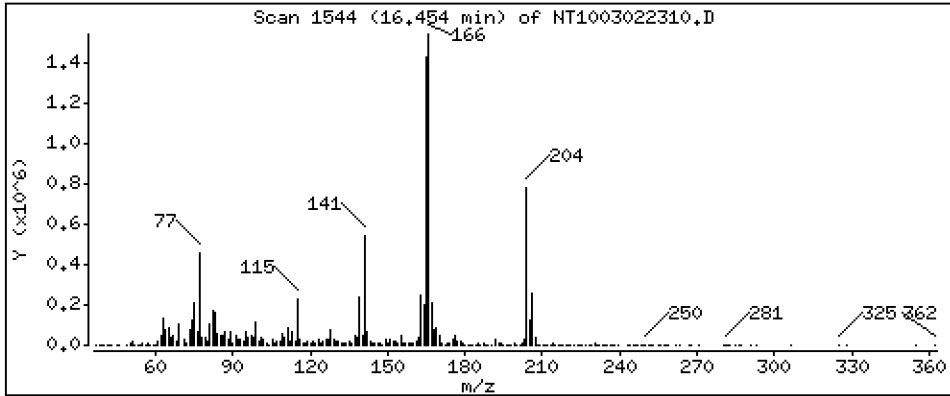
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,143 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

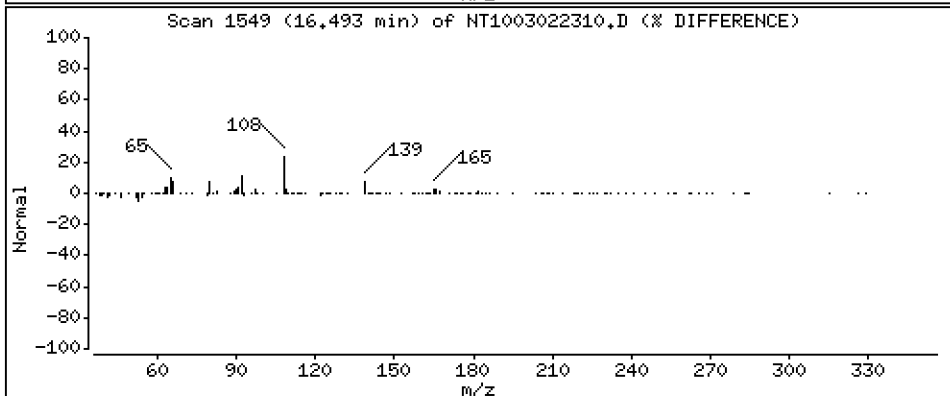
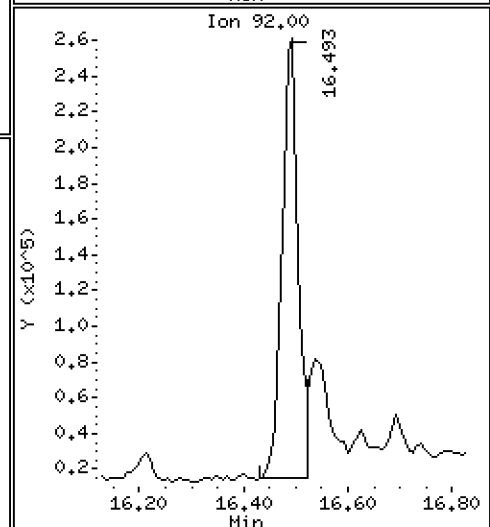
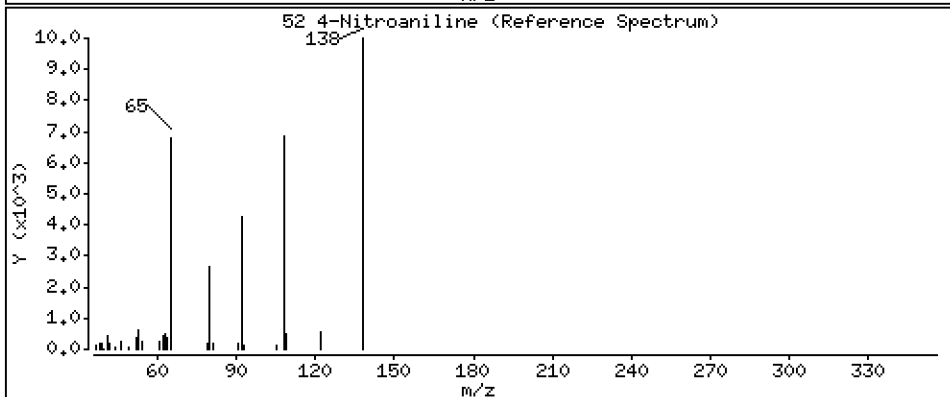
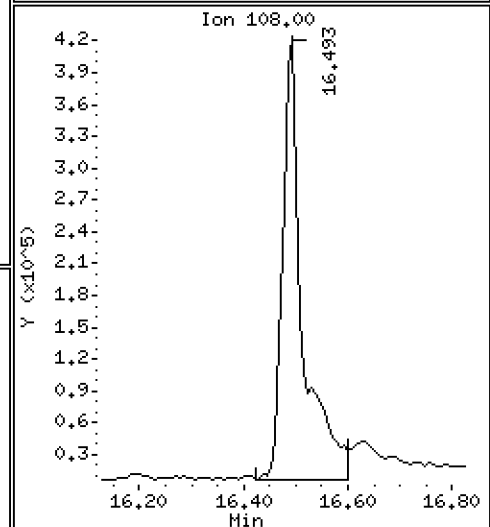
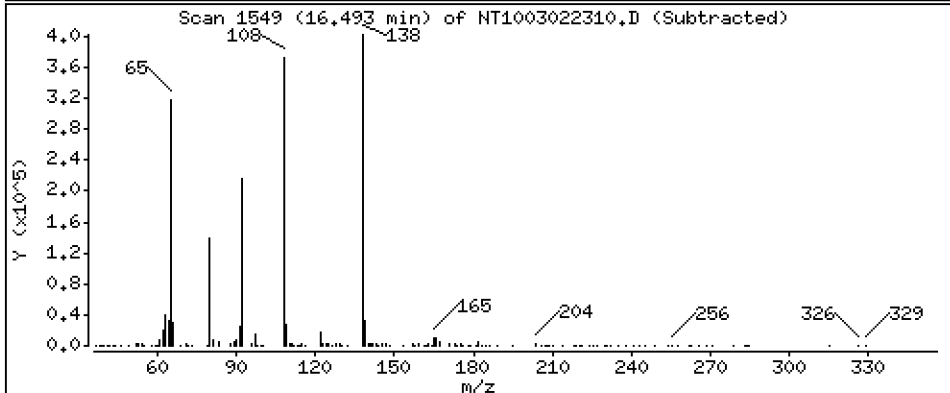
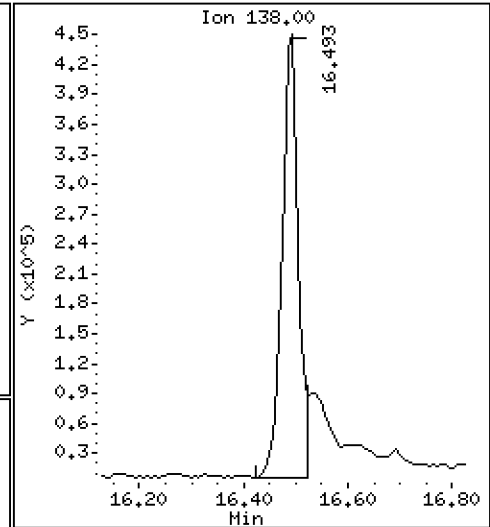
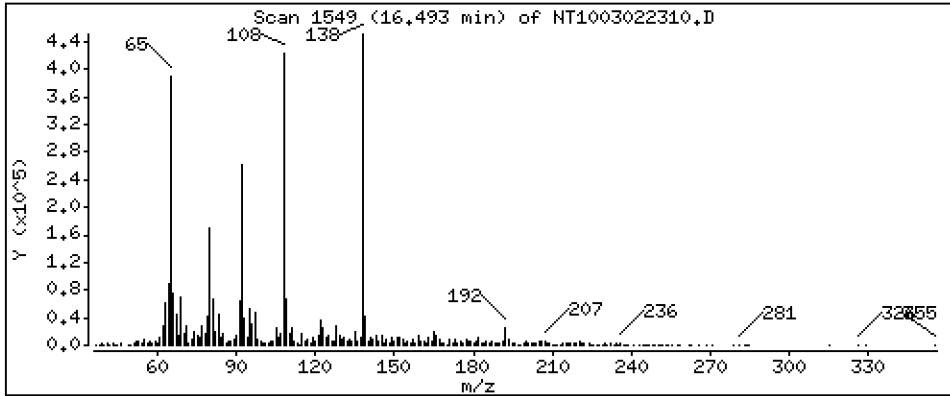
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 8,636 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

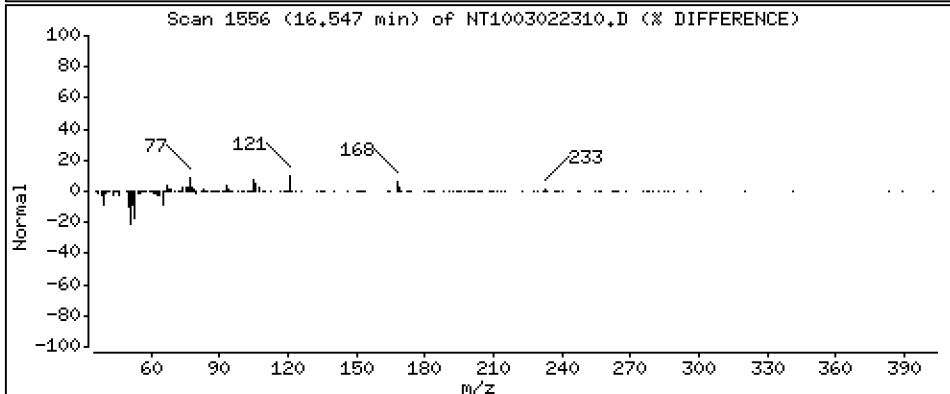
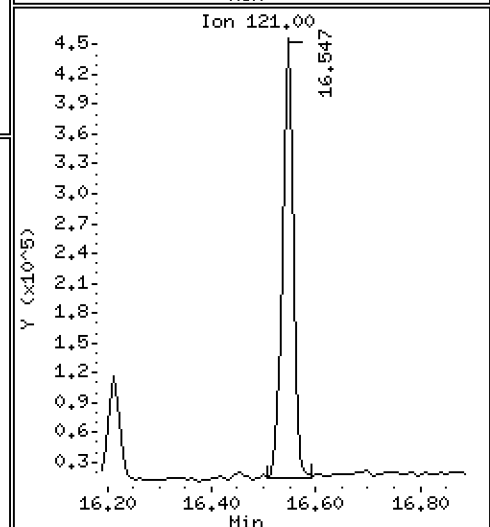
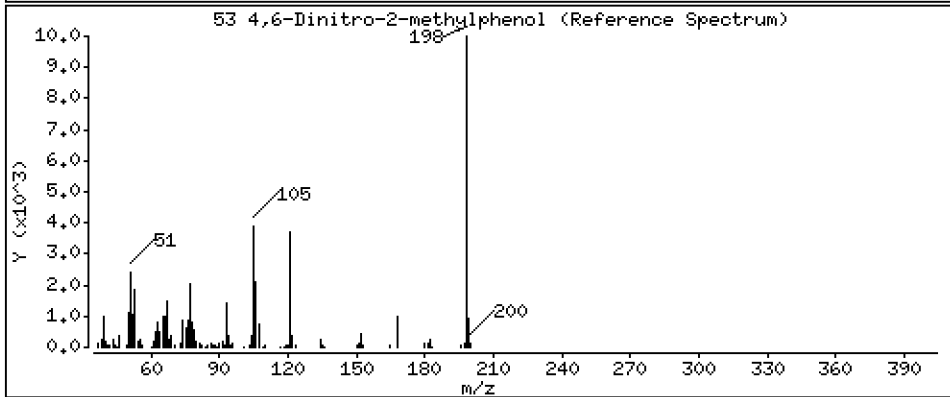
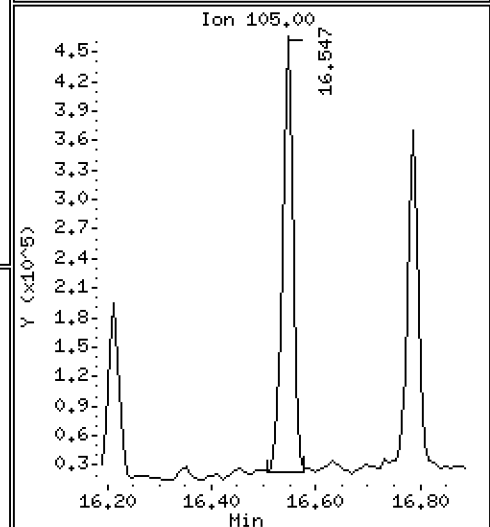
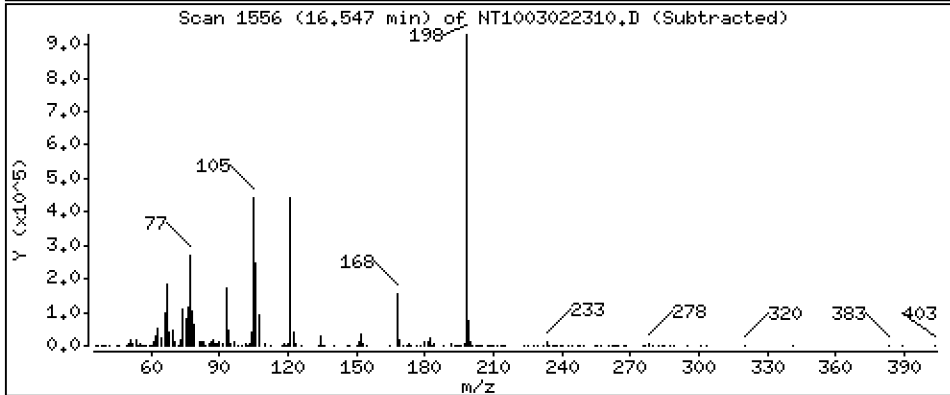
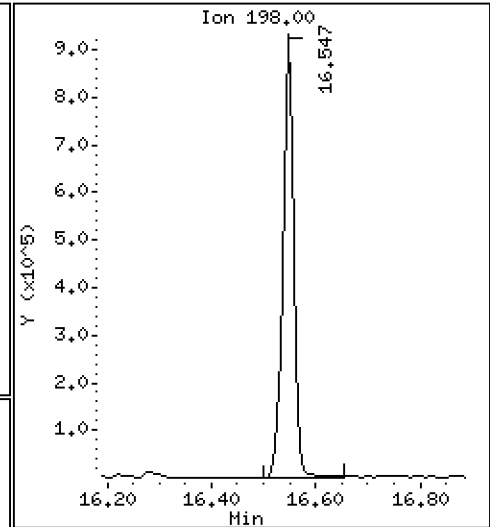
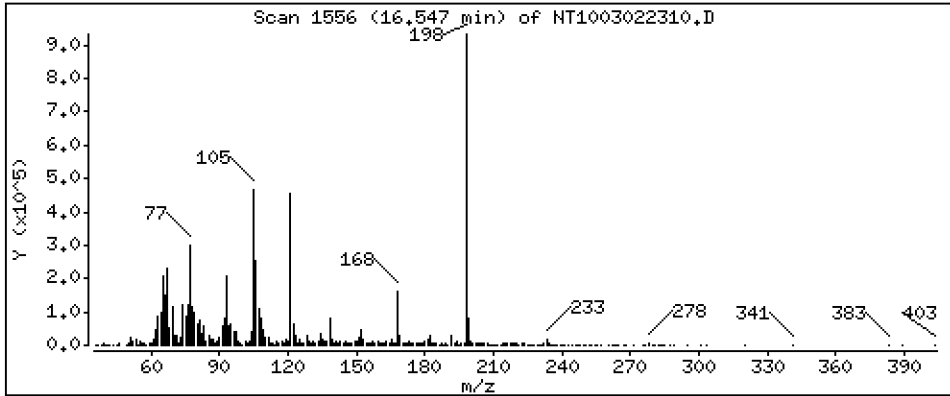
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 22,32 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

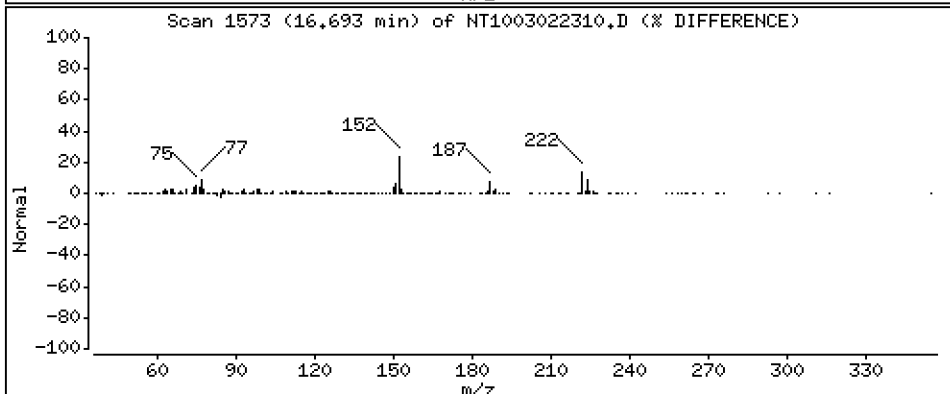
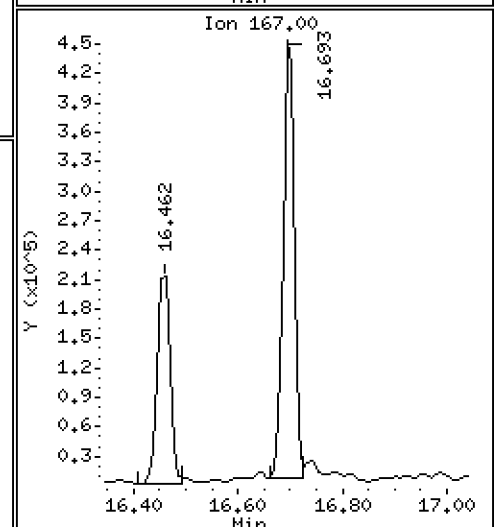
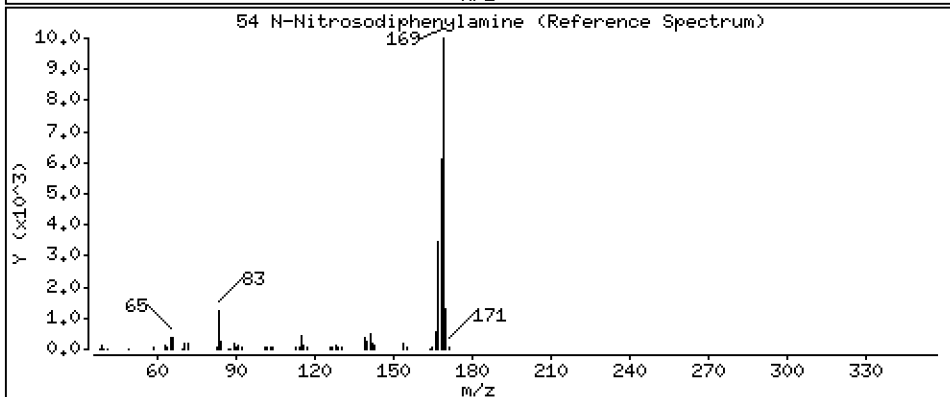
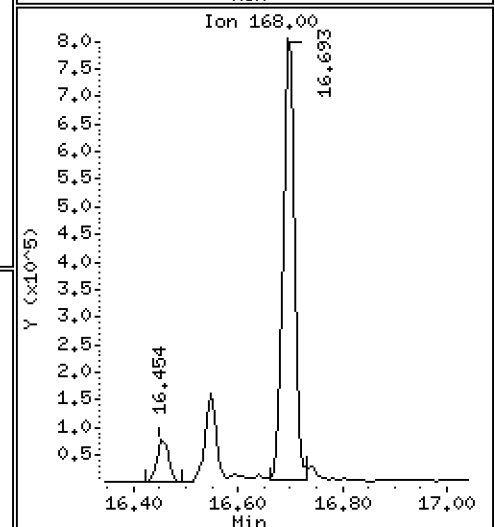
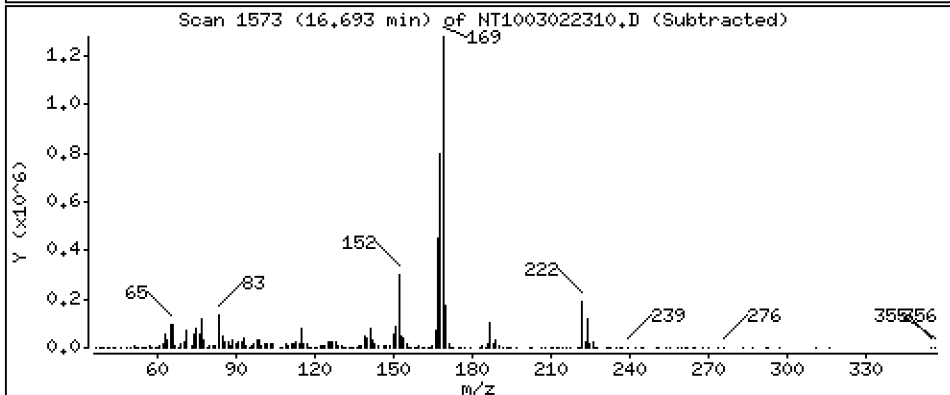
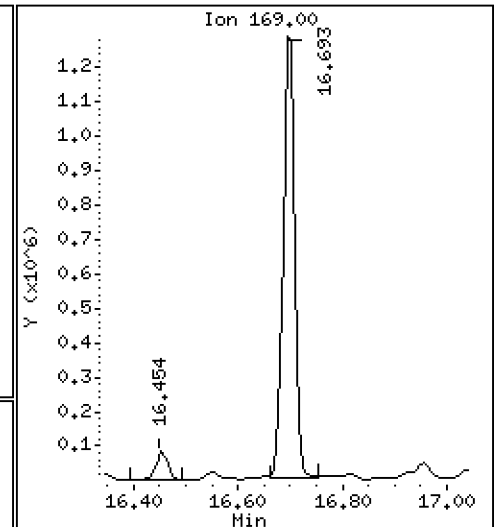
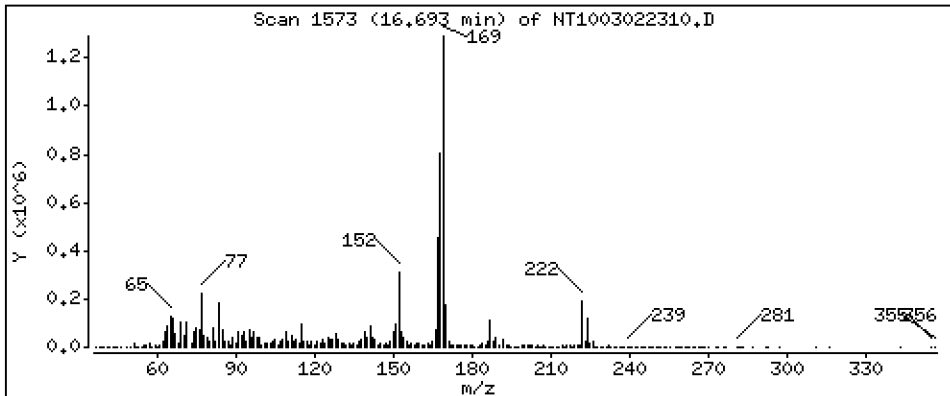
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,890 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

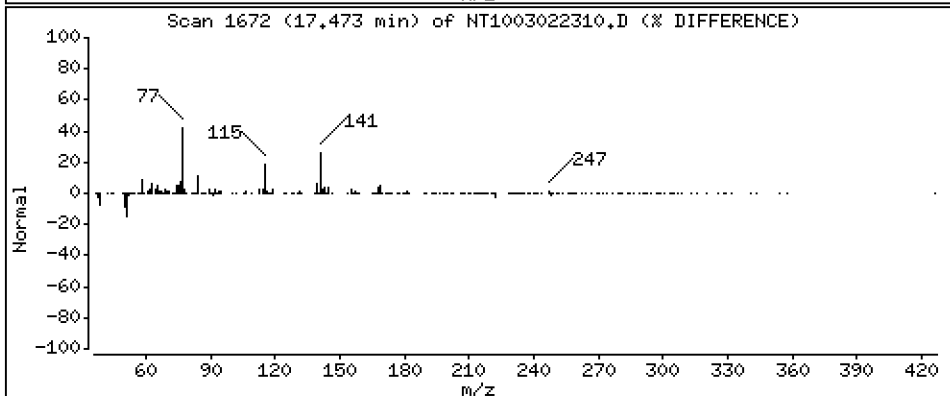
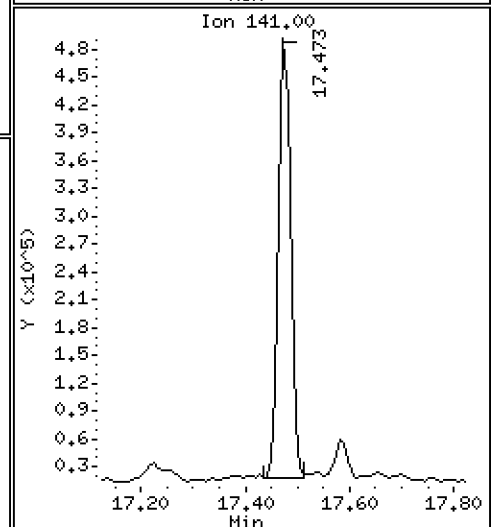
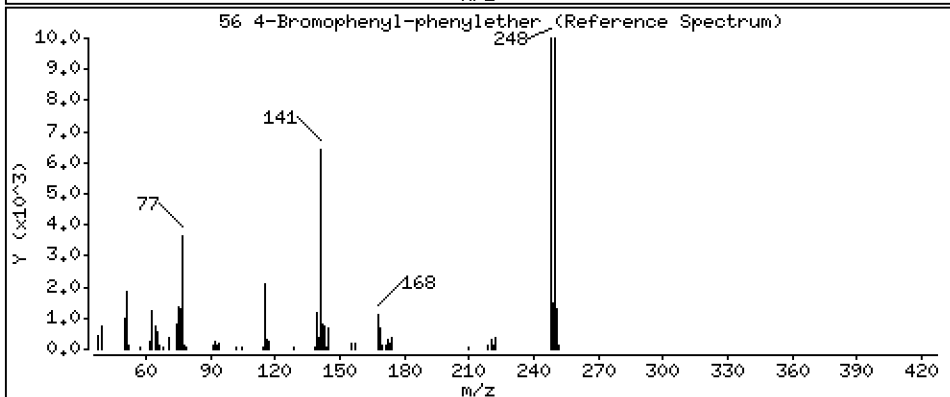
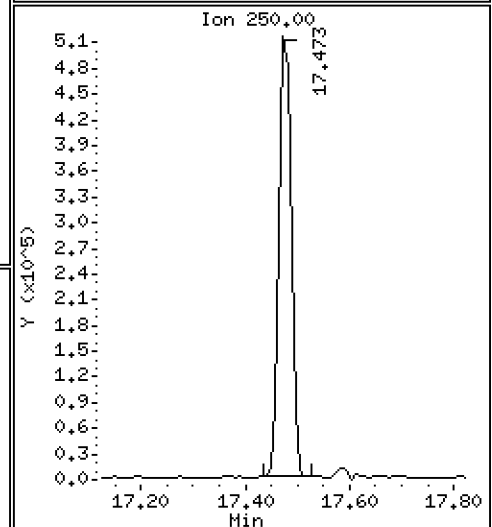
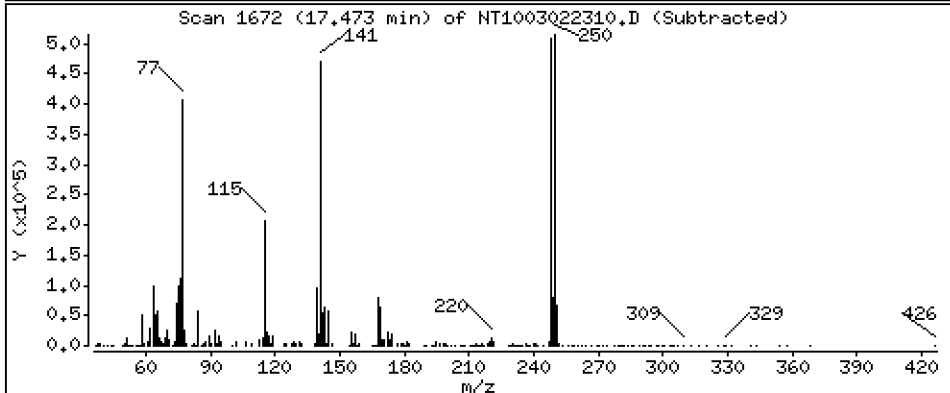
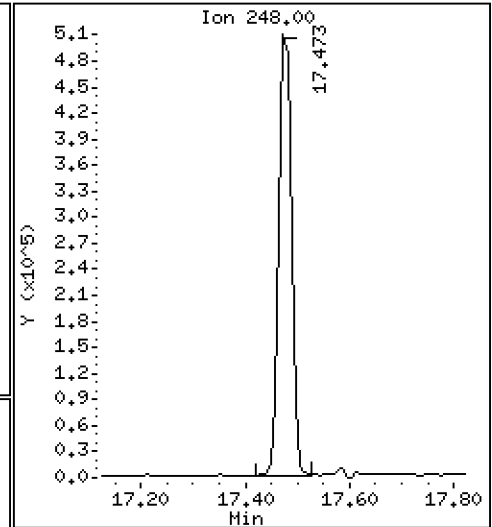
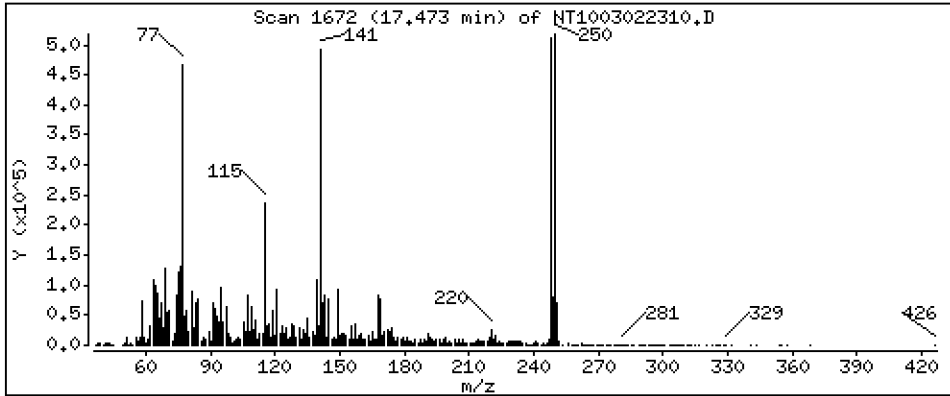
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,054 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

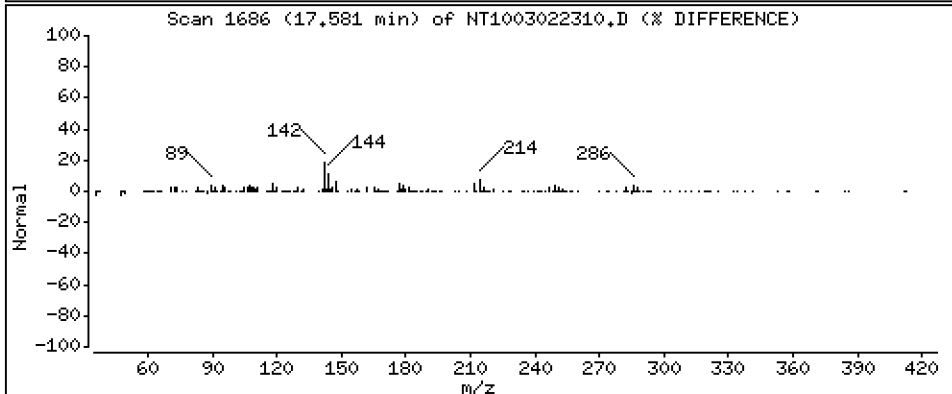
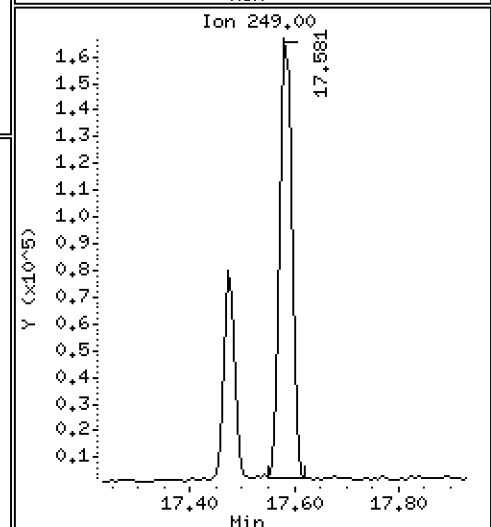
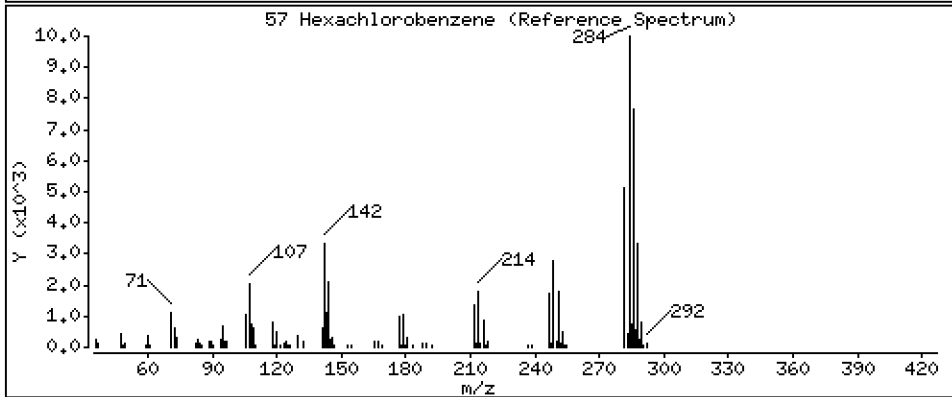
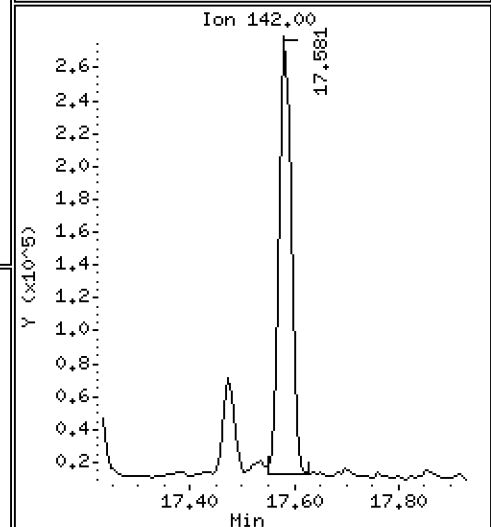
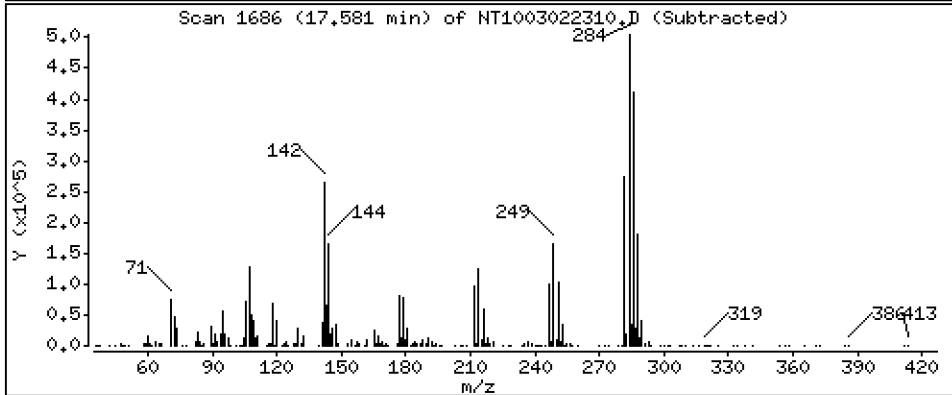
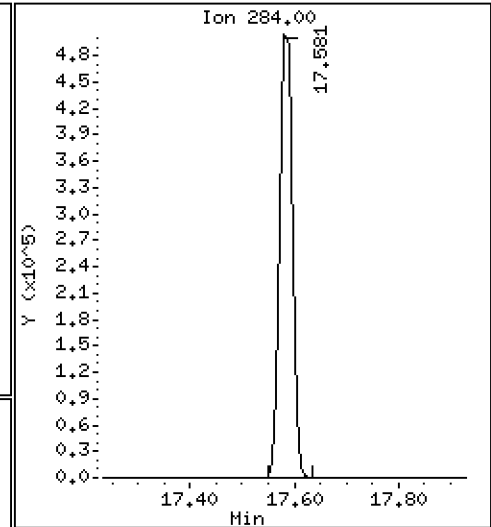
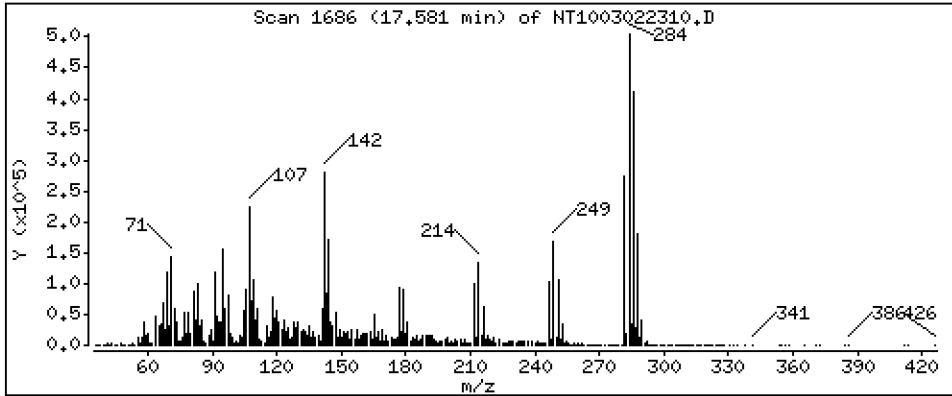
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,462 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

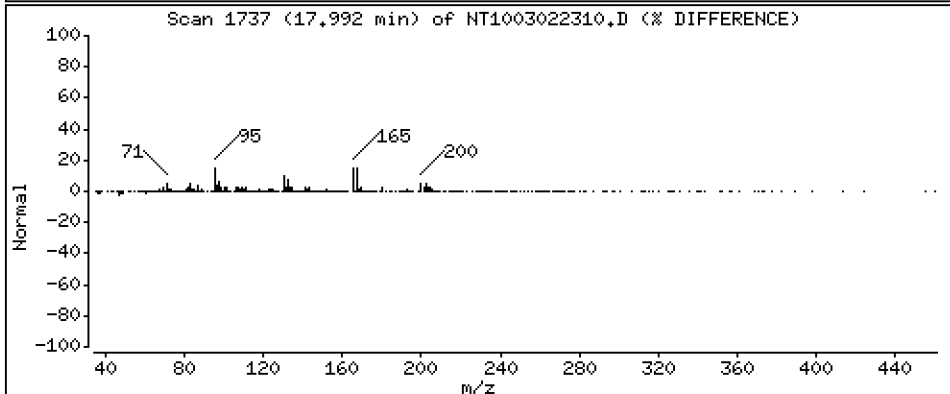
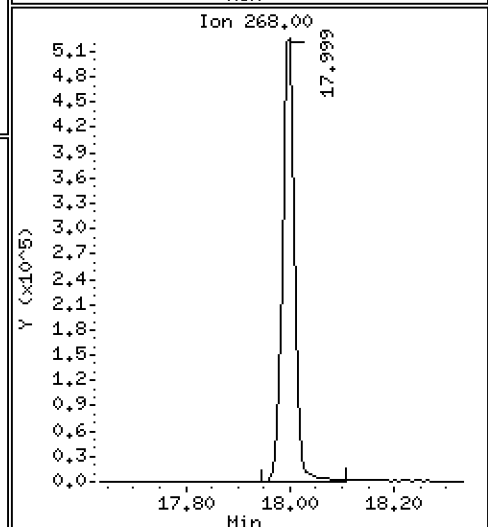
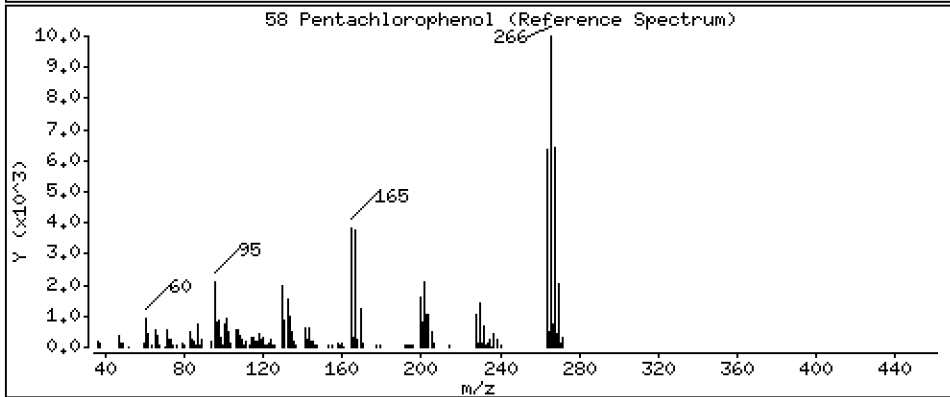
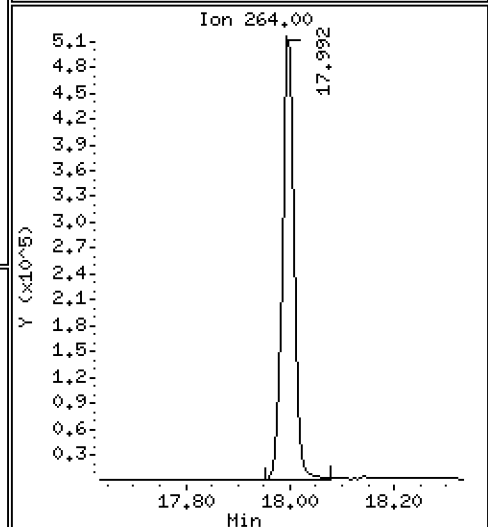
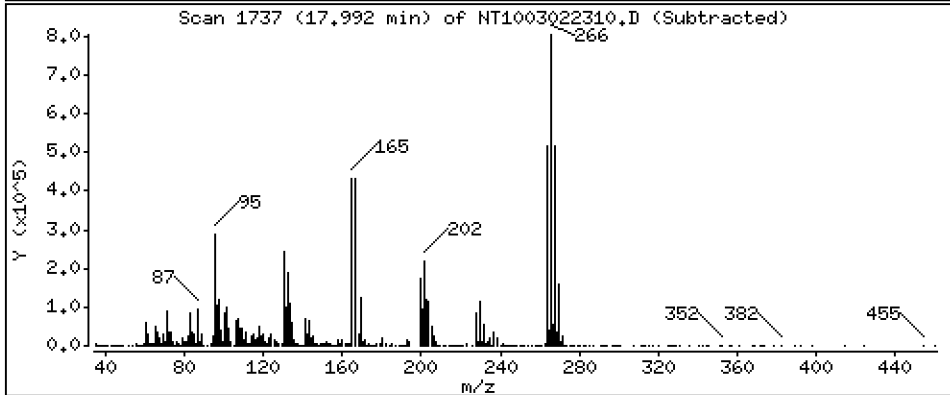
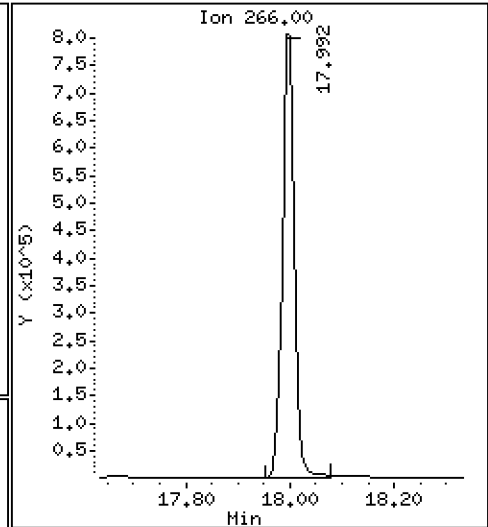
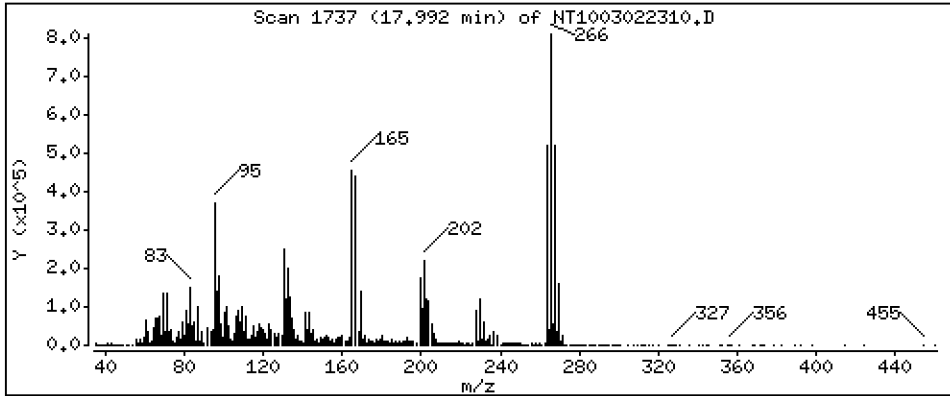
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 14,13 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

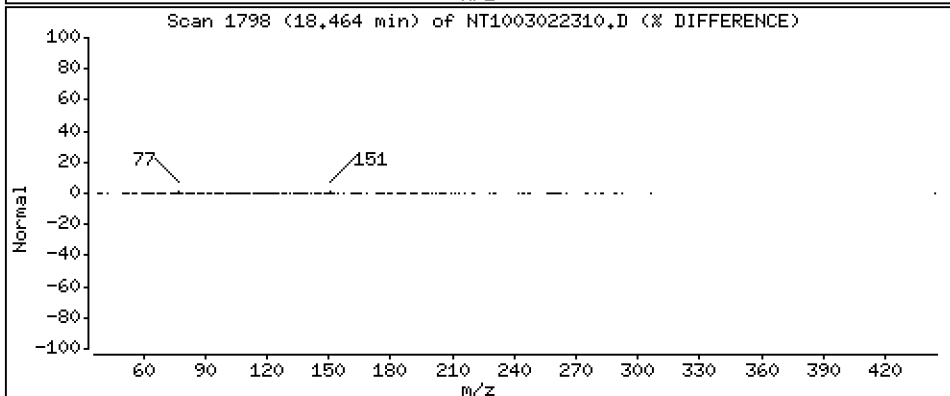
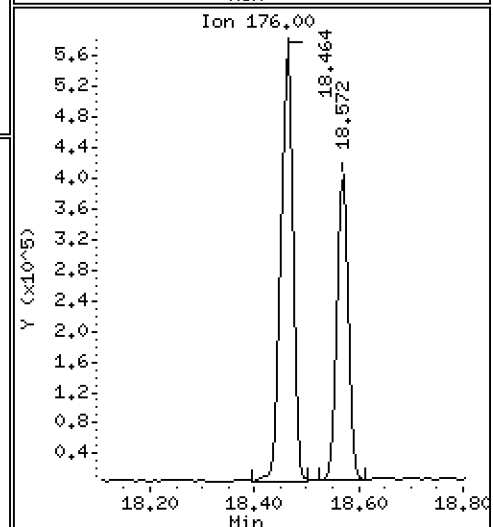
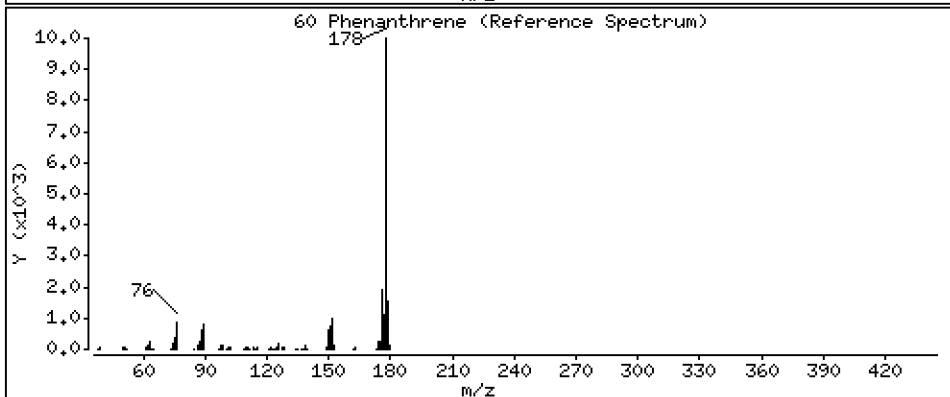
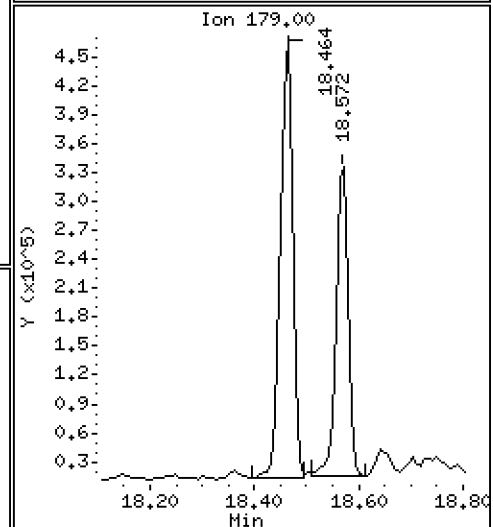
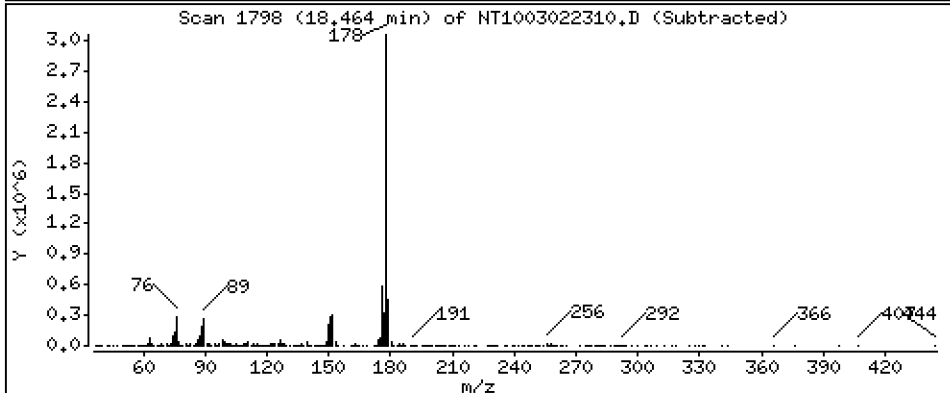
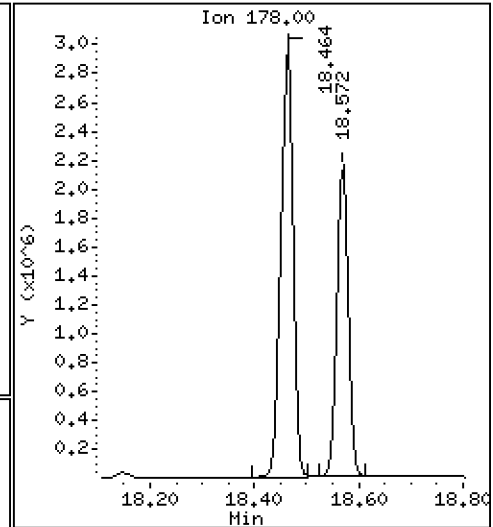
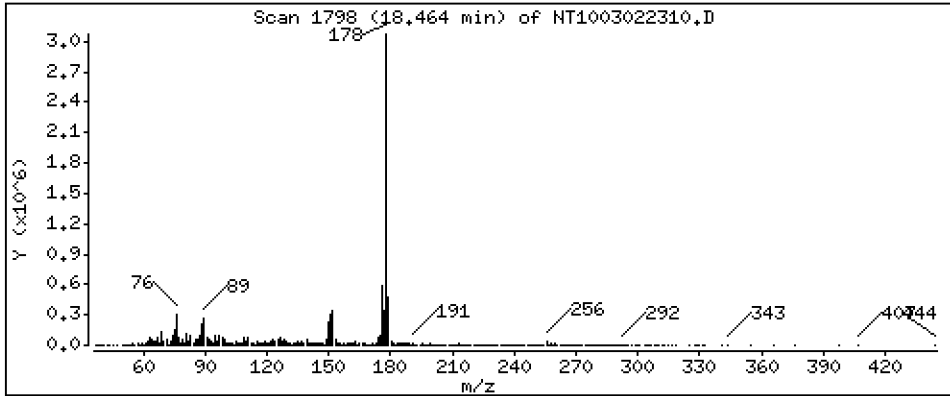
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 6,863 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

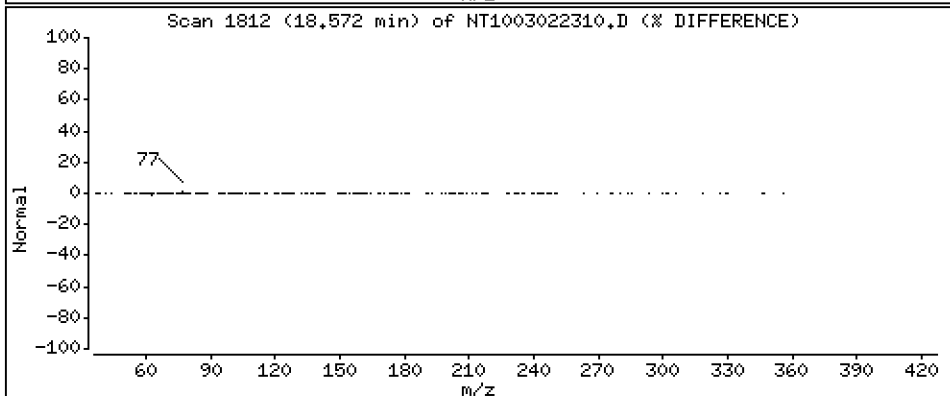
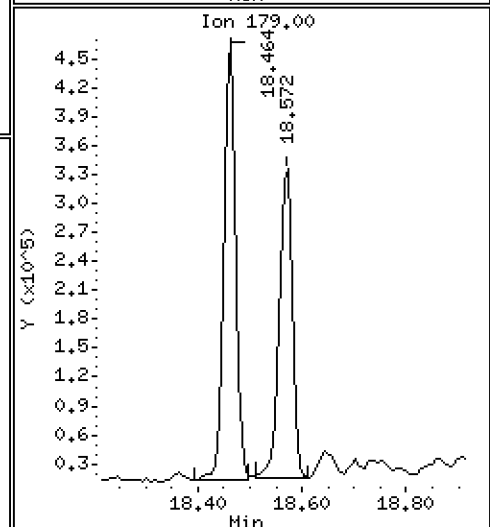
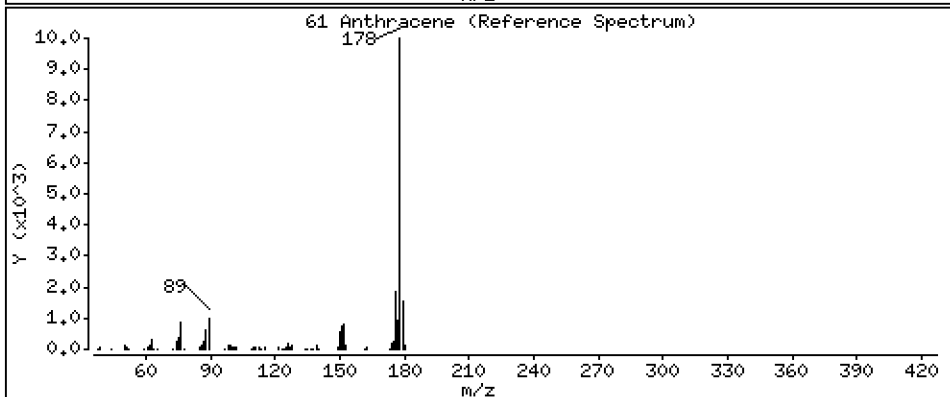
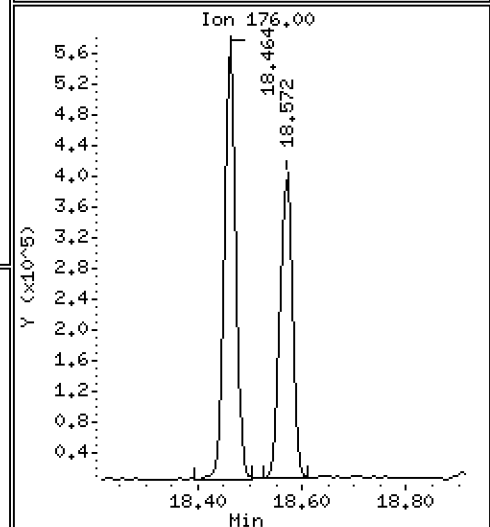
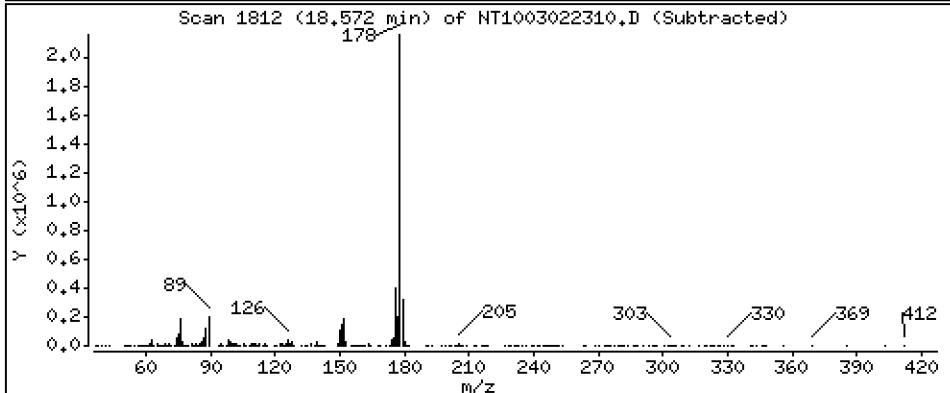
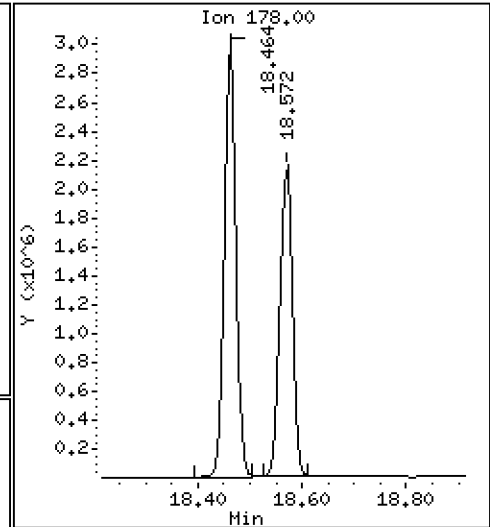
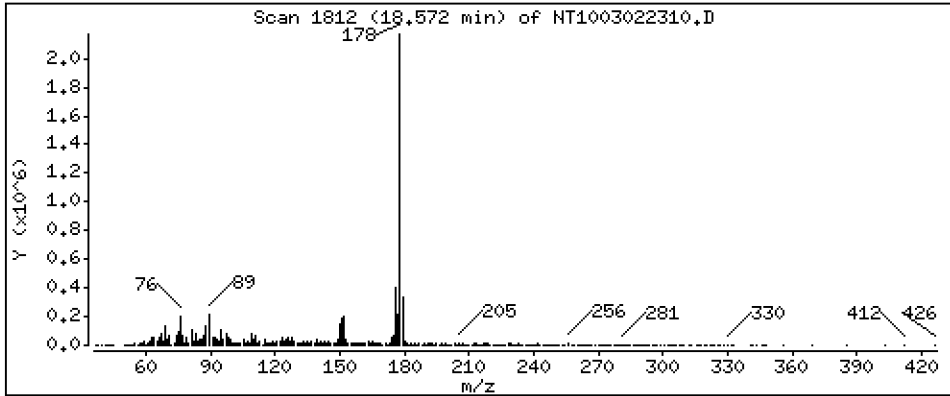
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 5,160 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

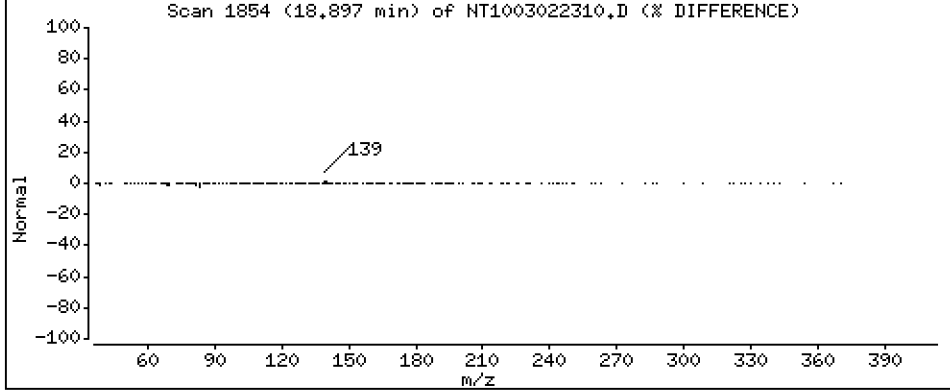
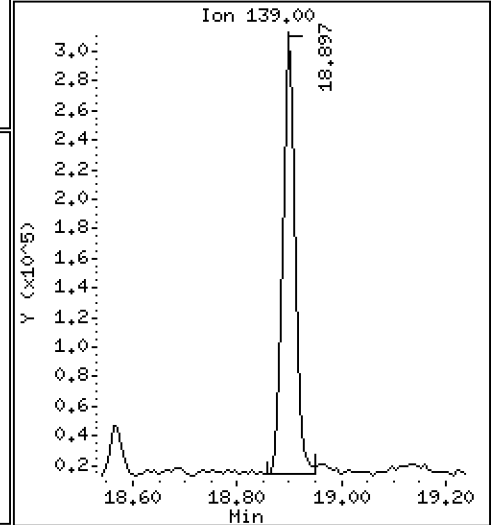
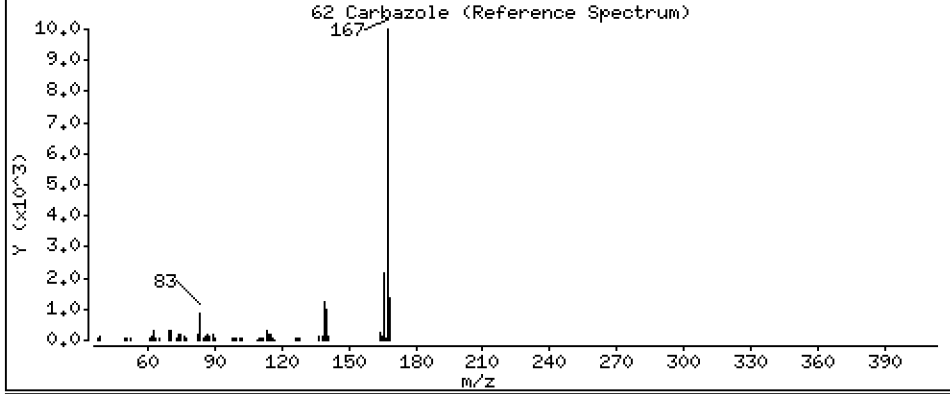
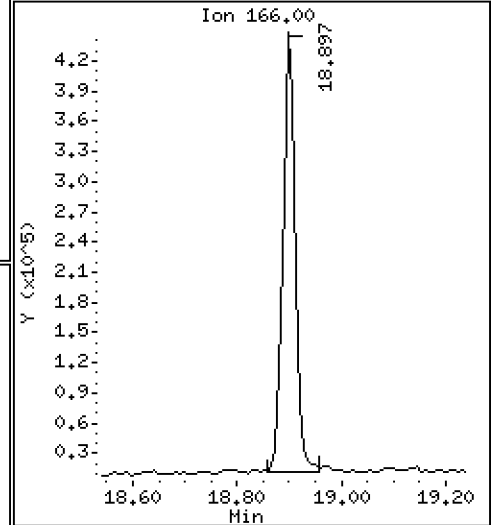
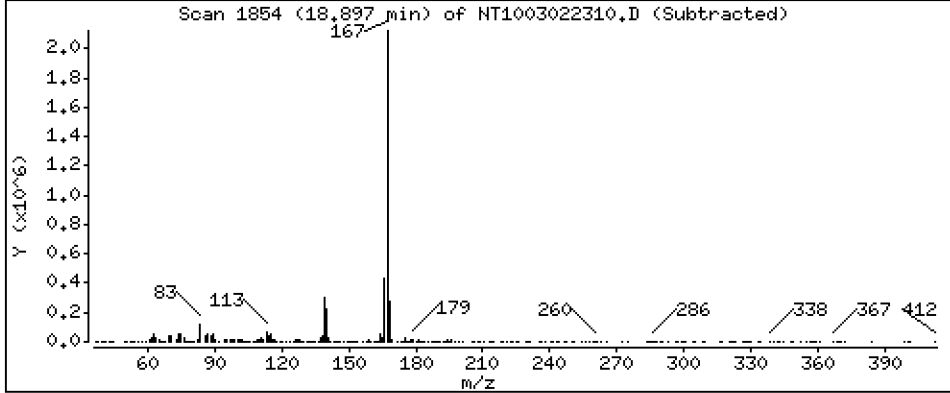
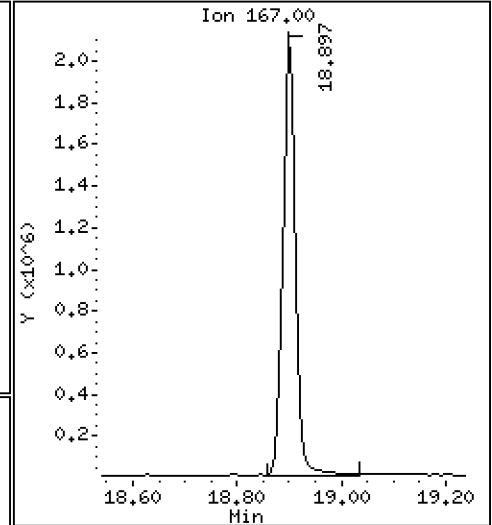
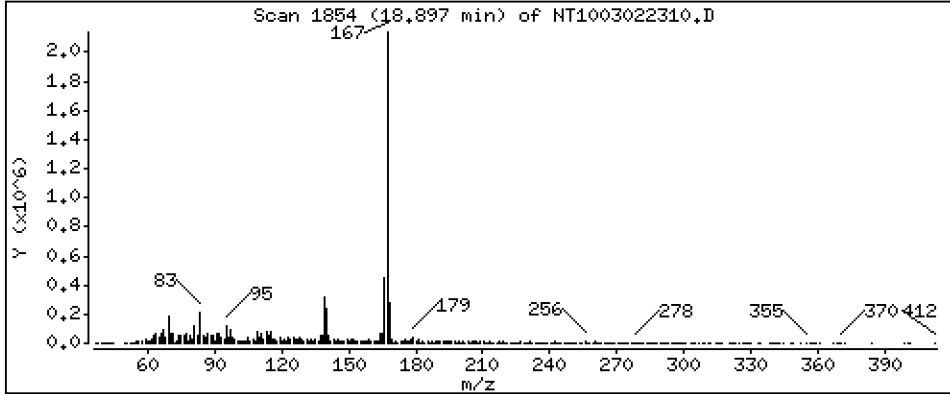
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,680 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

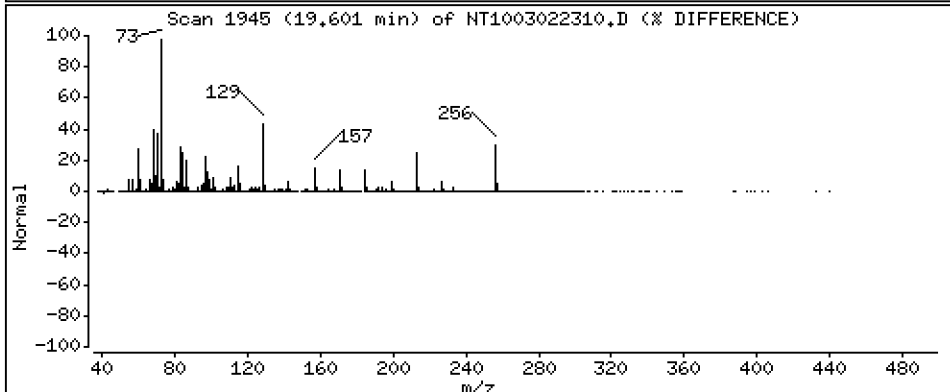
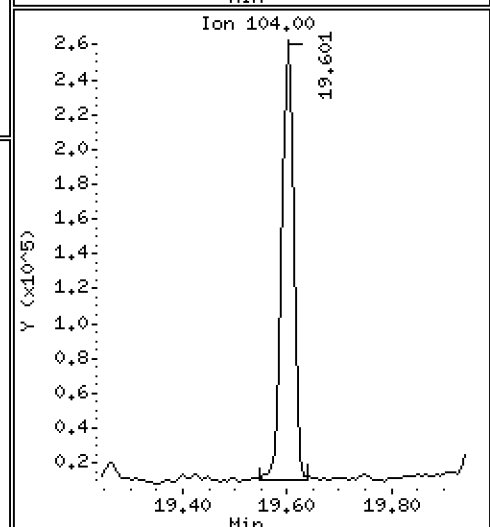
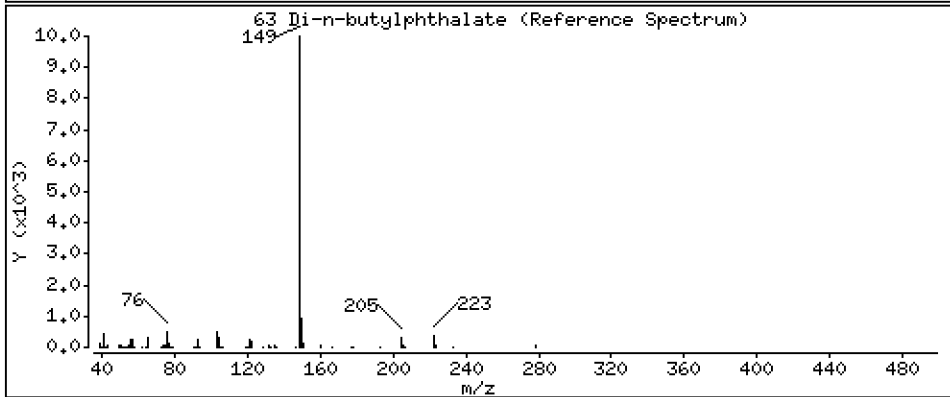
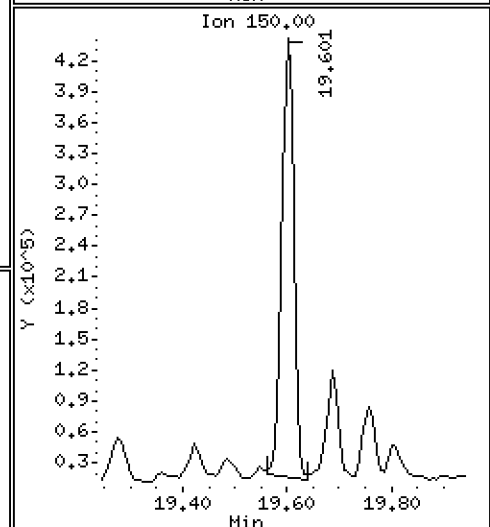
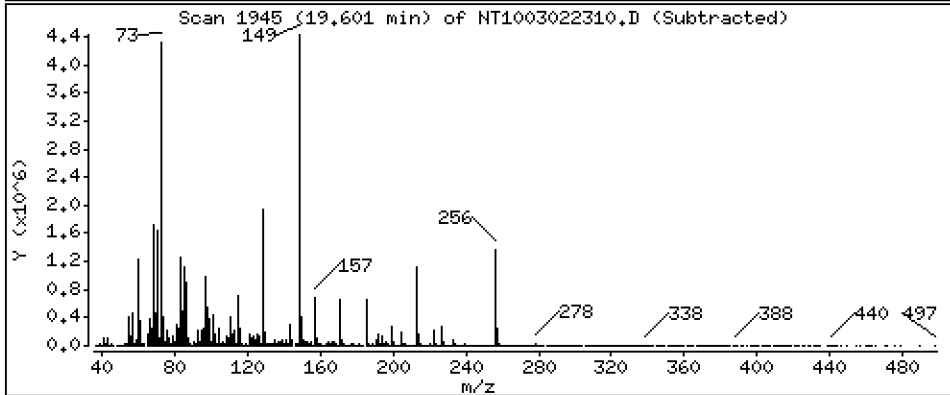
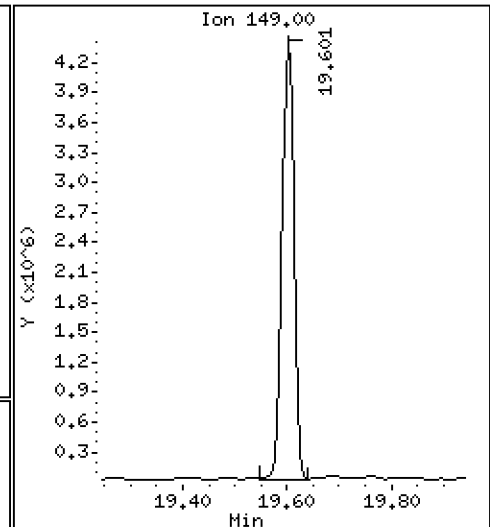
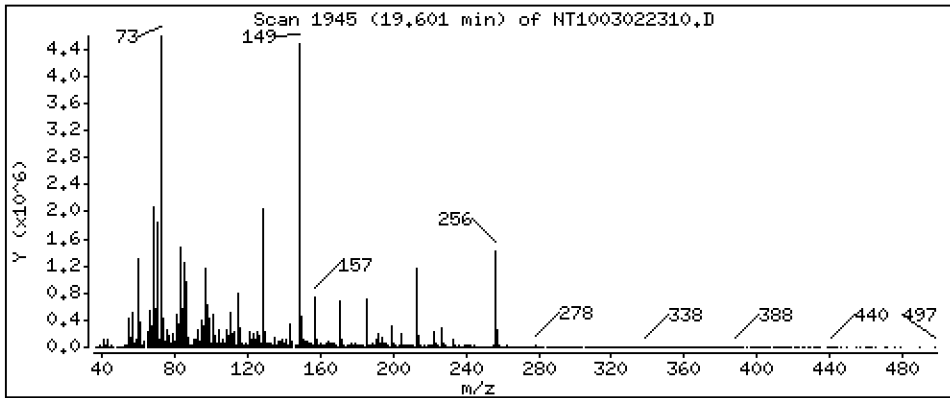
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 7,501 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

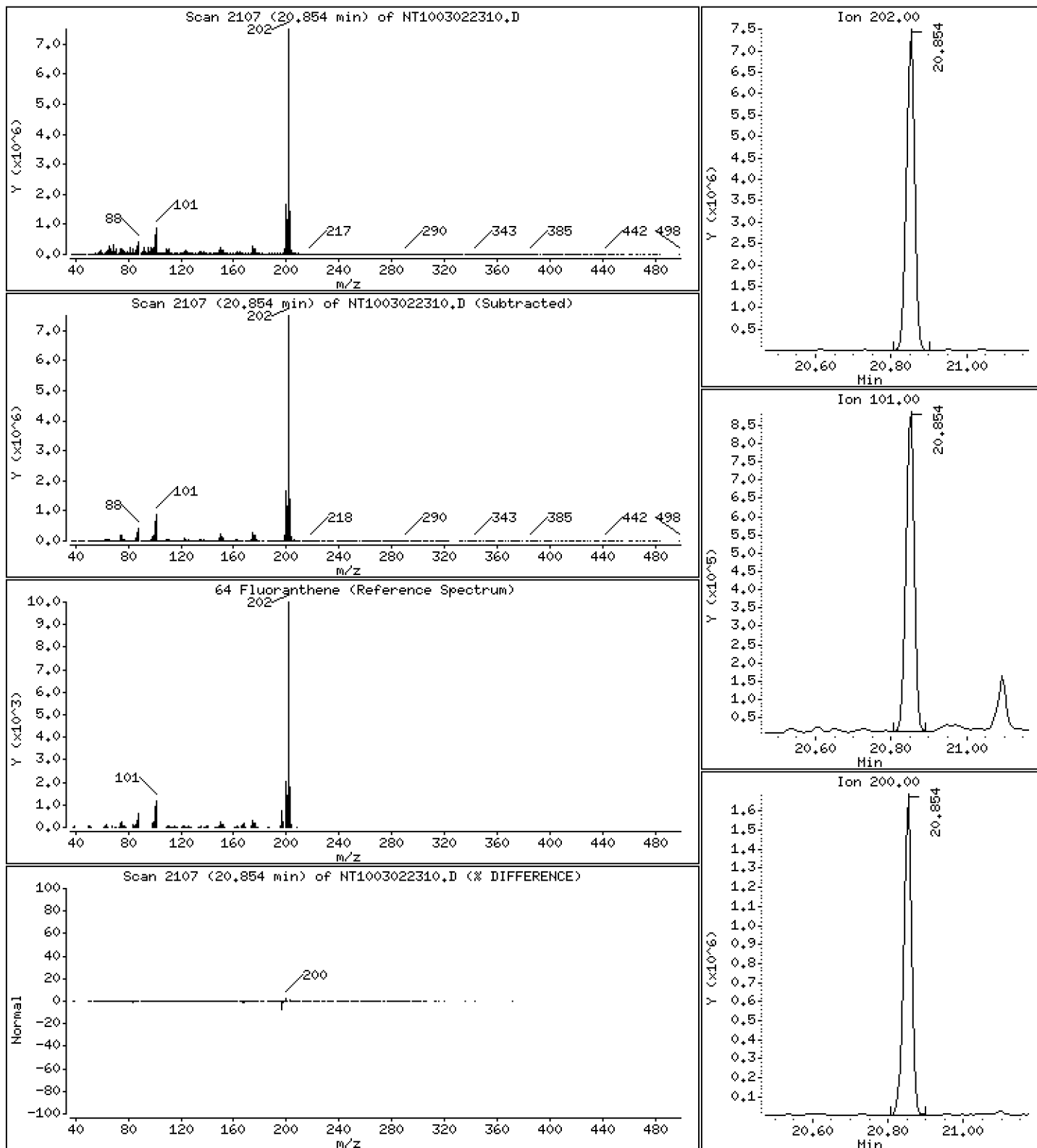
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 9,259 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

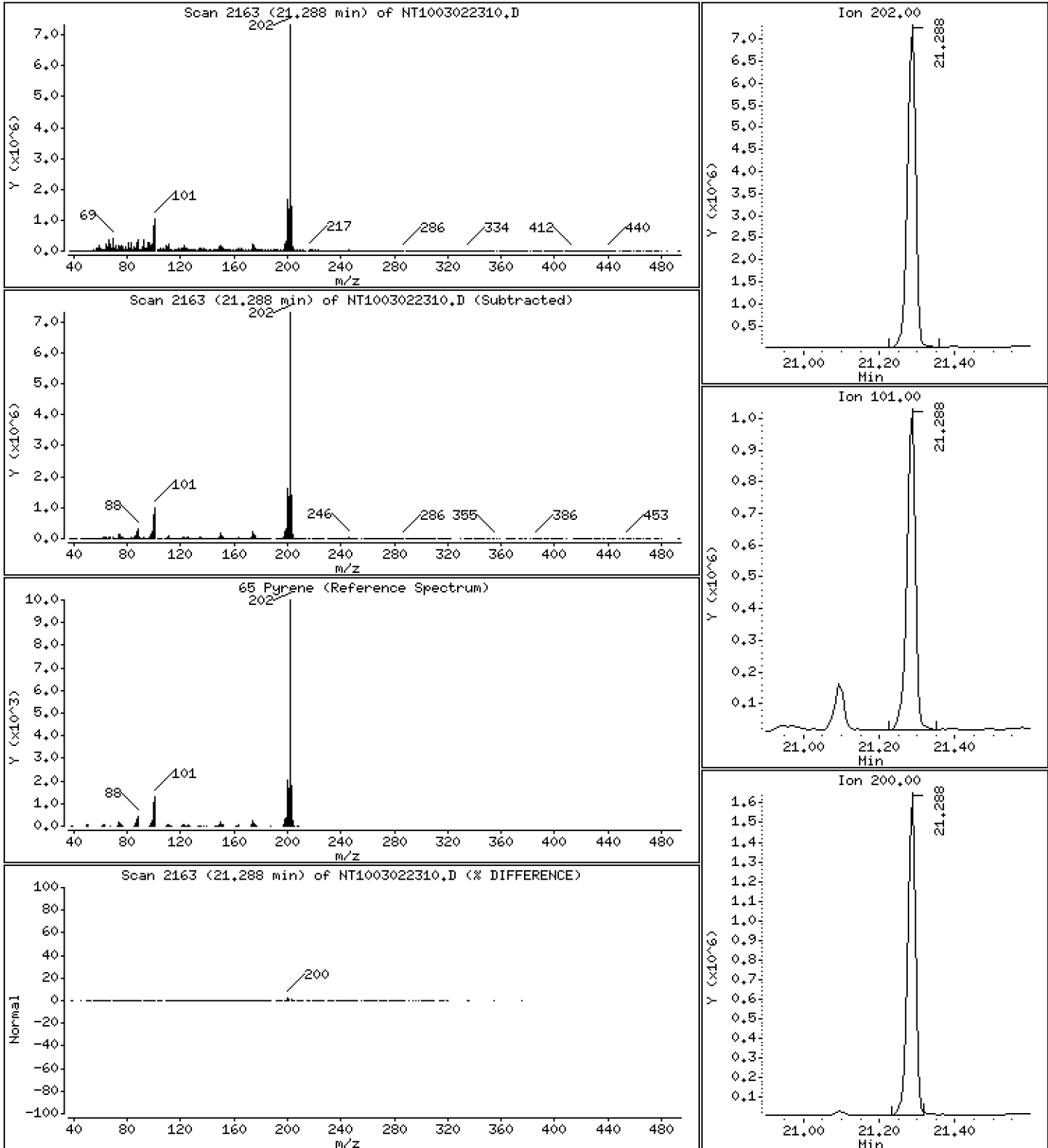
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 8,930 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

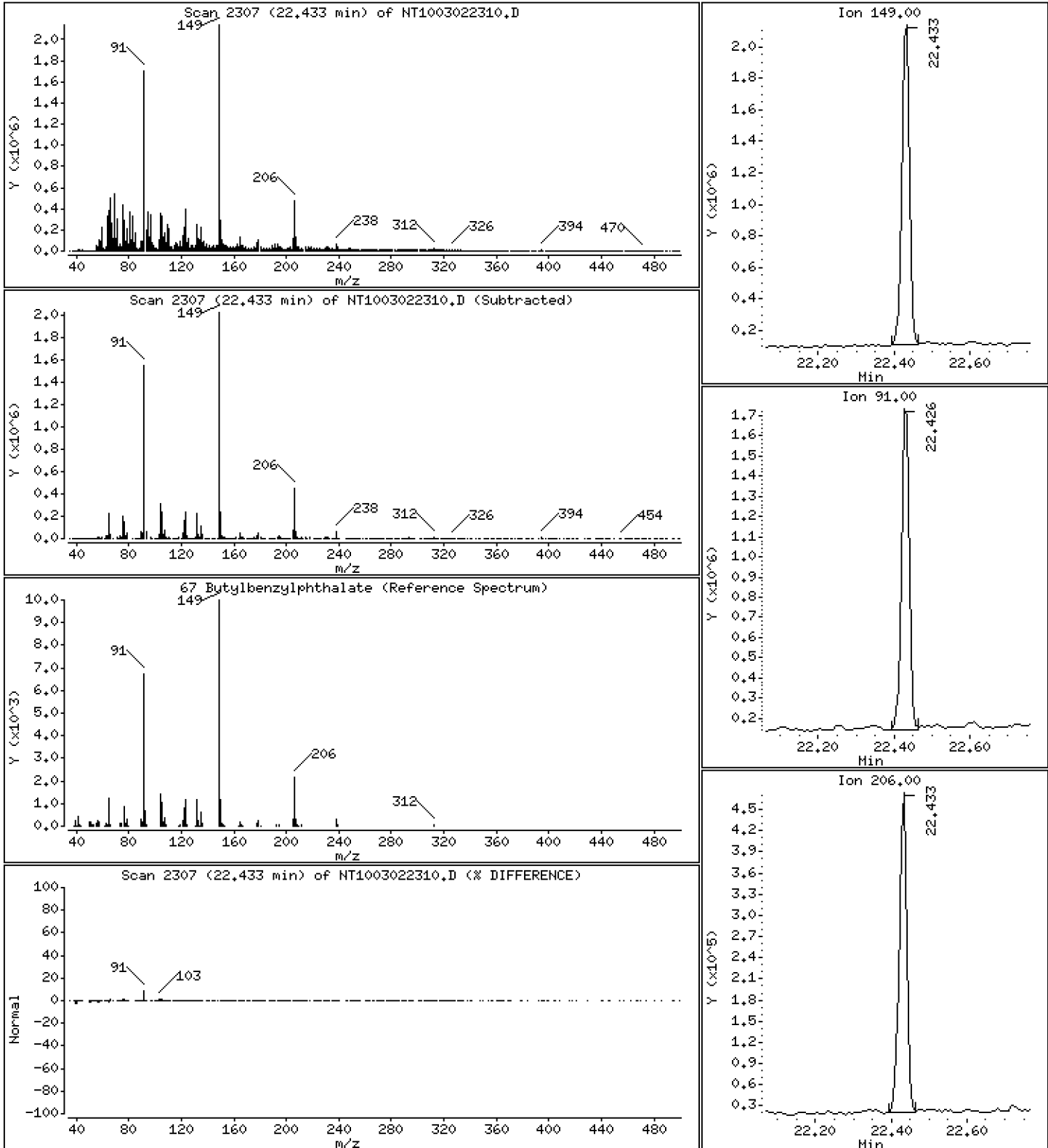
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,319 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

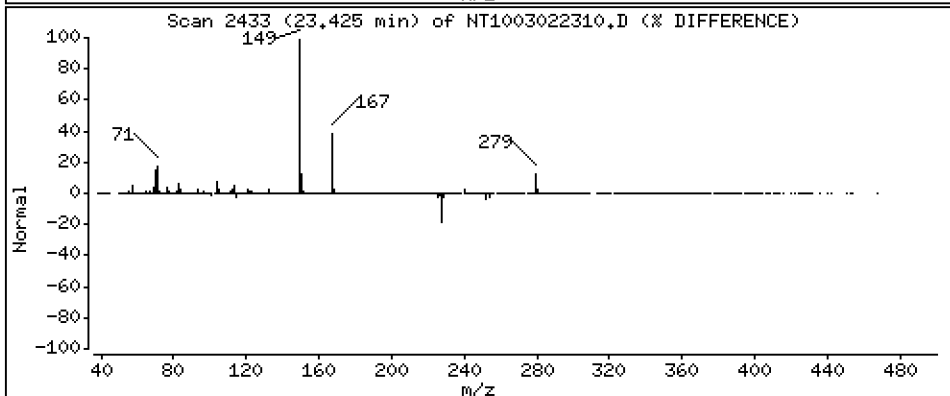
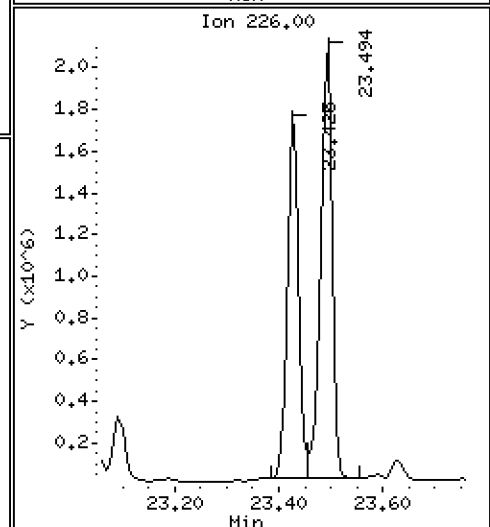
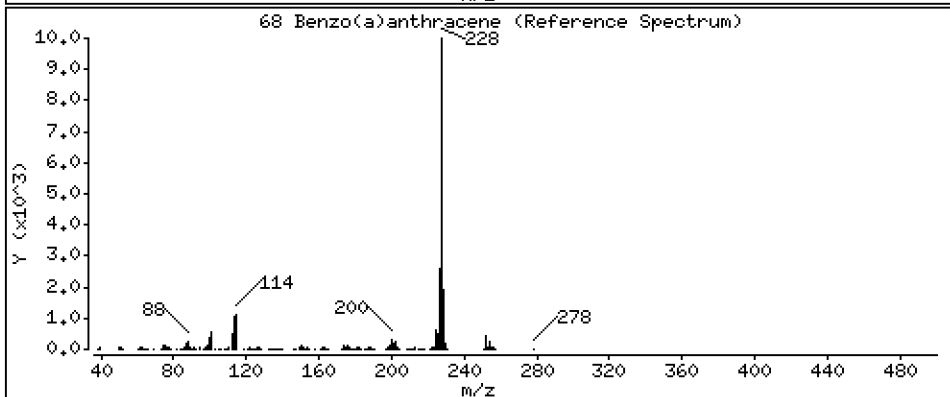
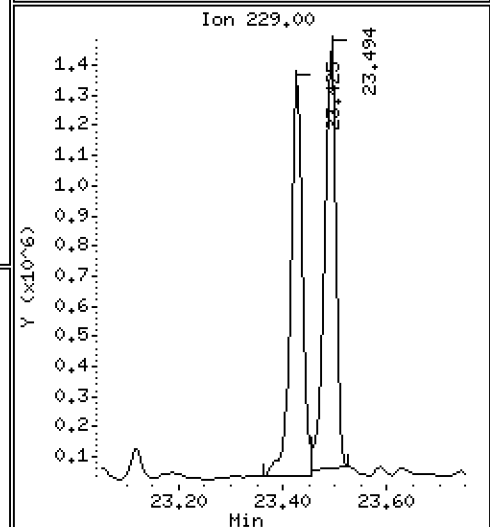
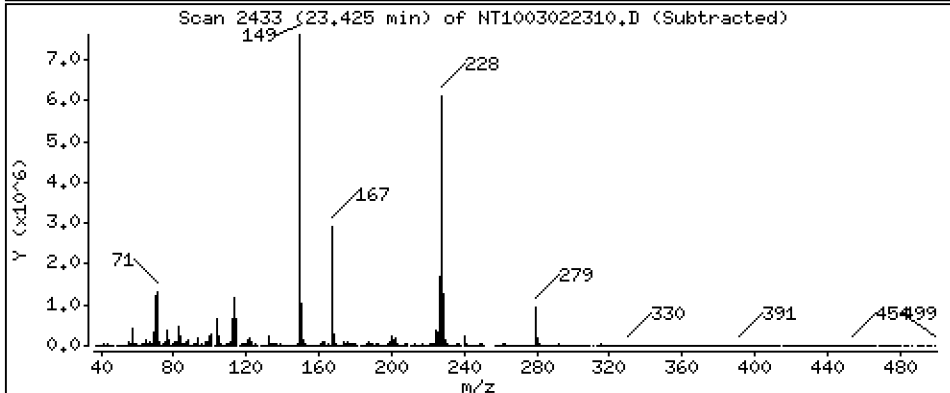
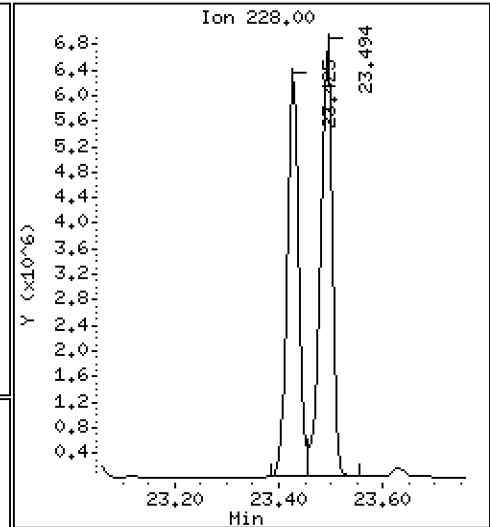
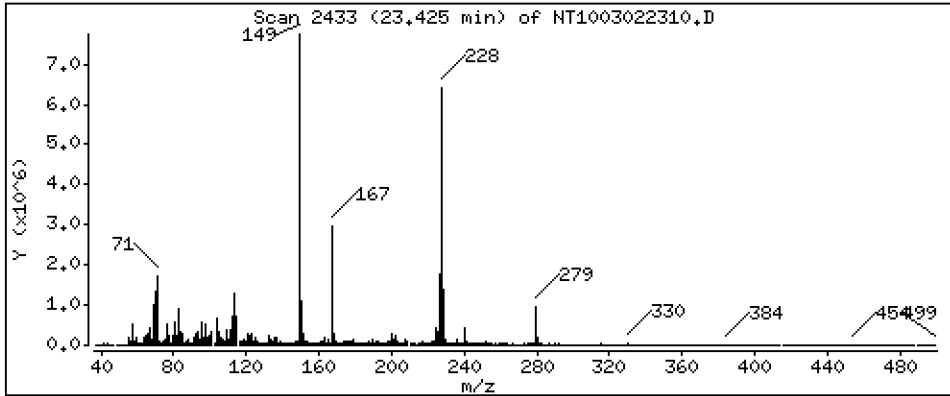
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 7,691 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

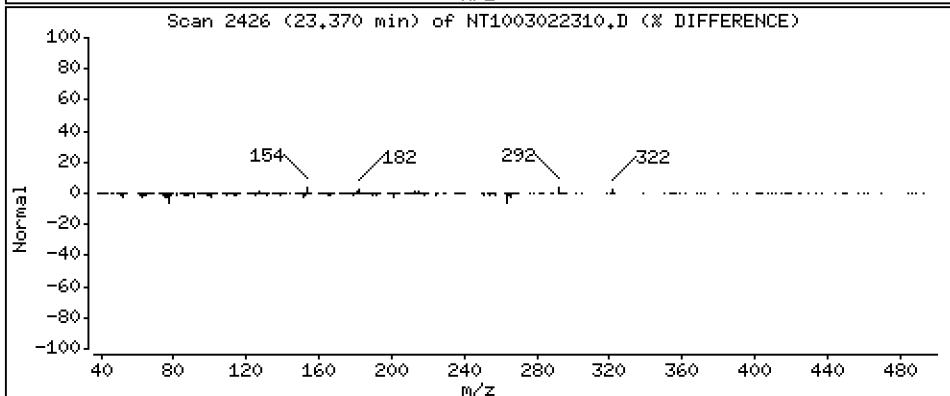
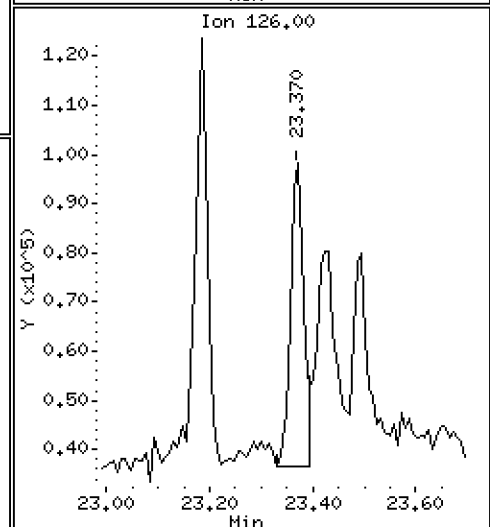
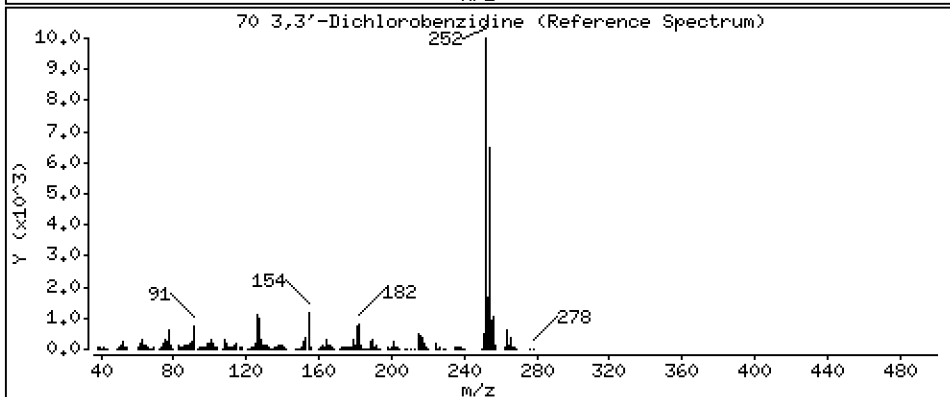
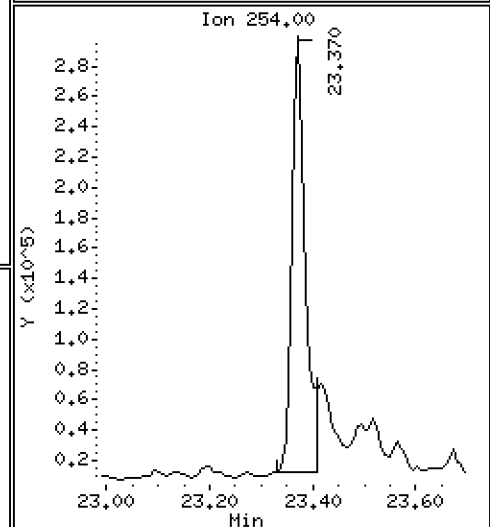
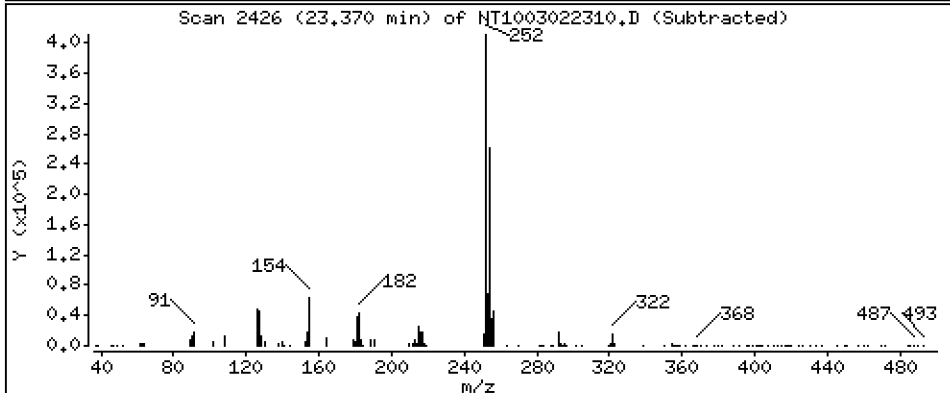
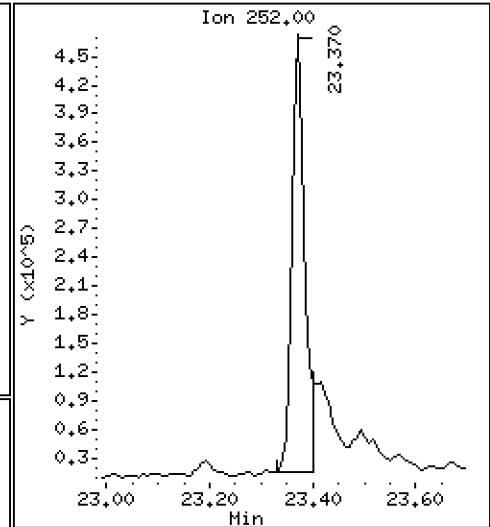
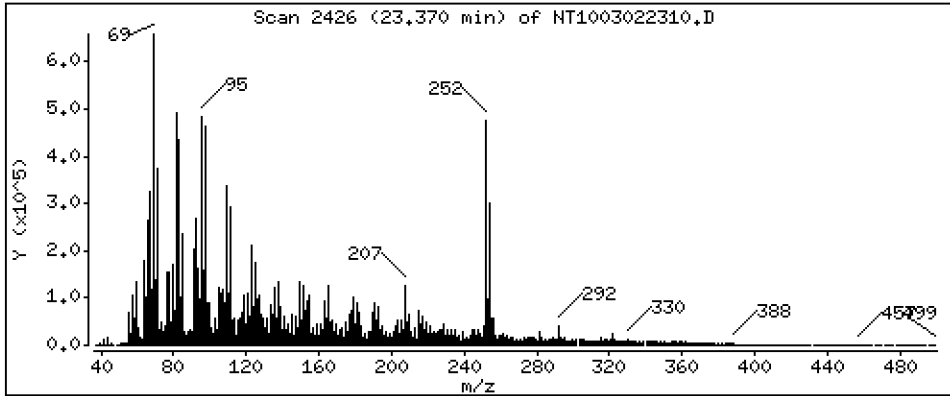
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 1,401 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

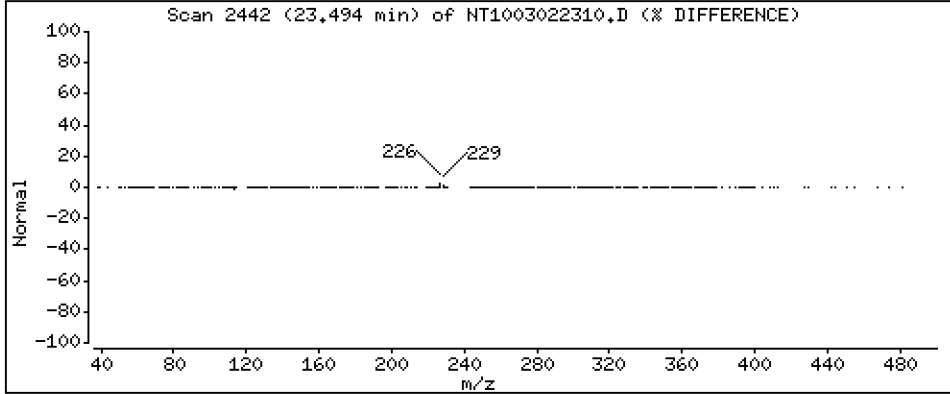
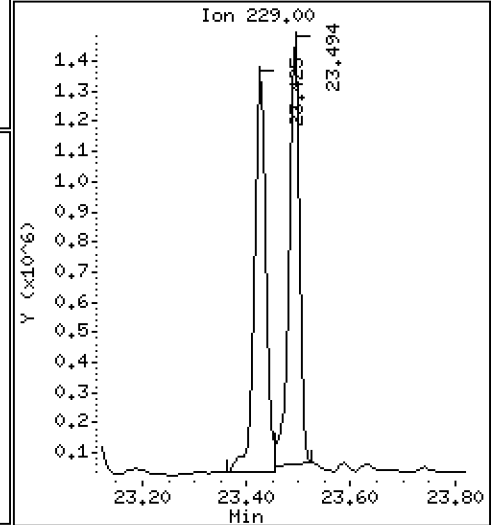
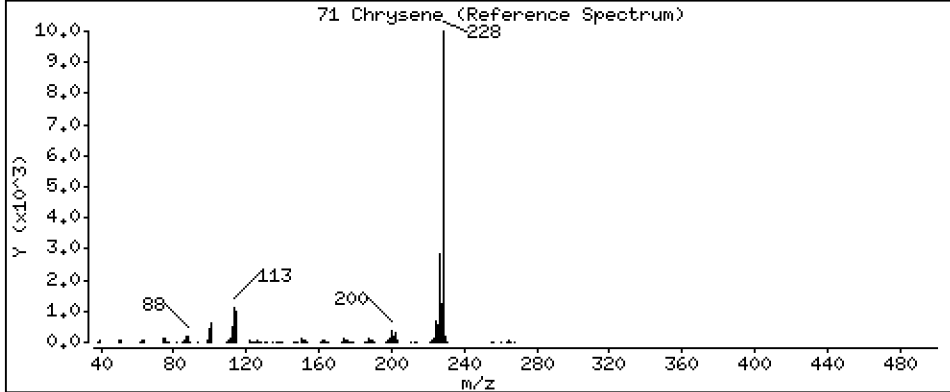
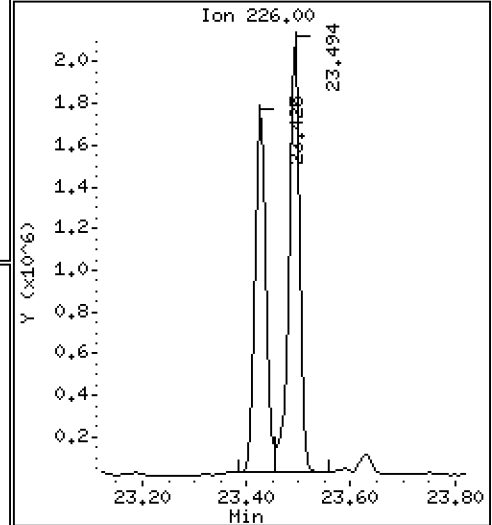
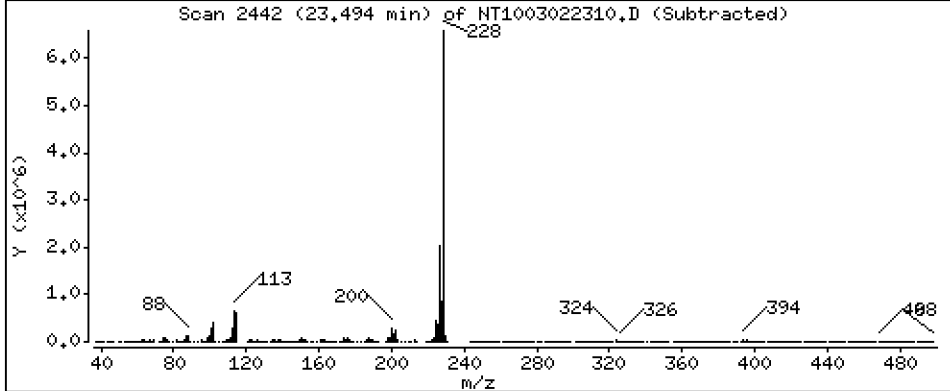
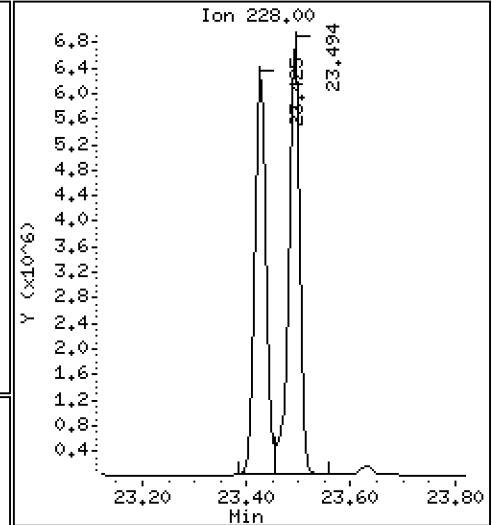
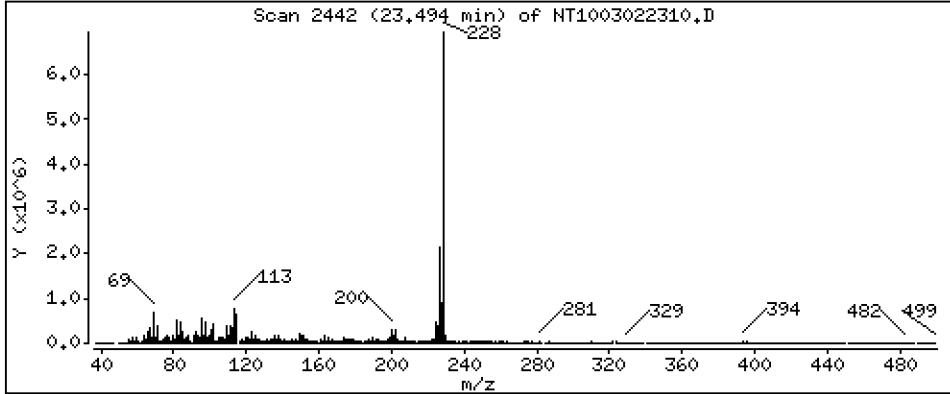
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 9,817 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

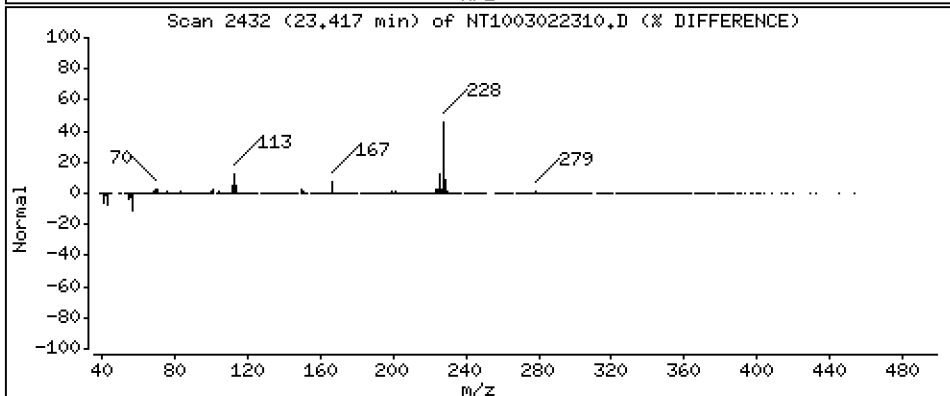
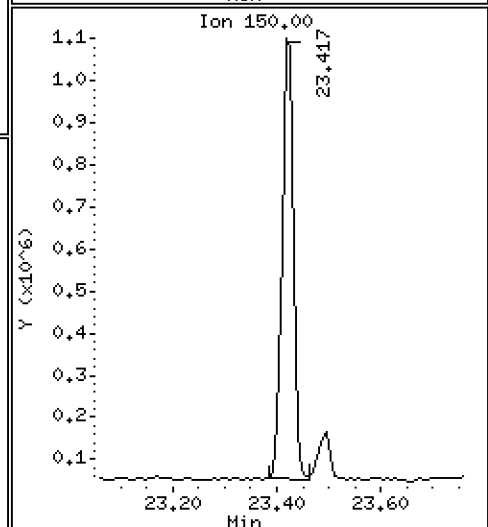
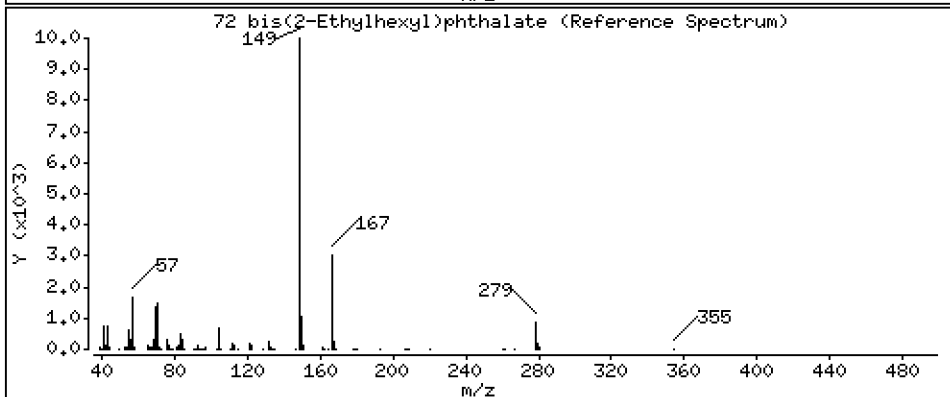
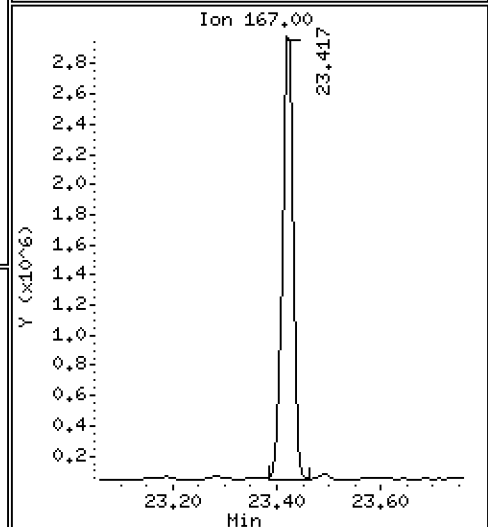
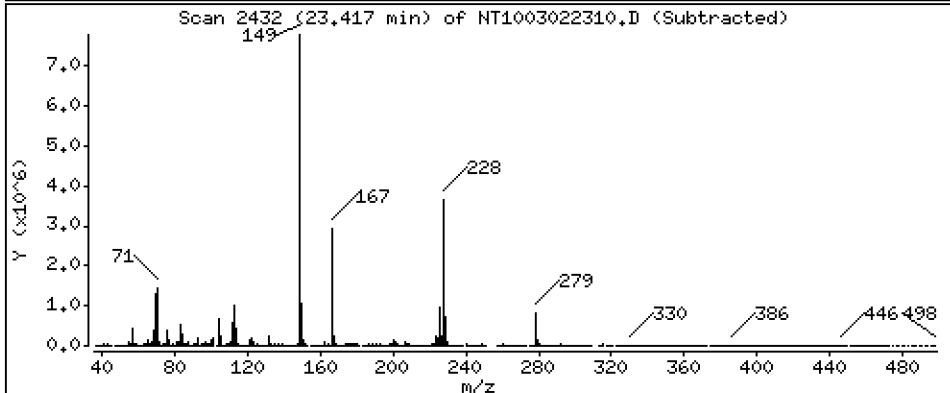
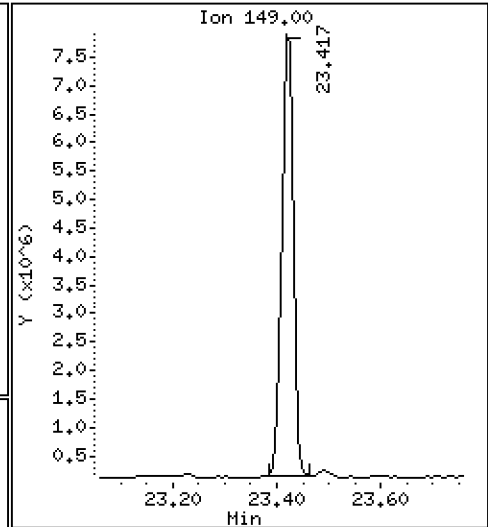
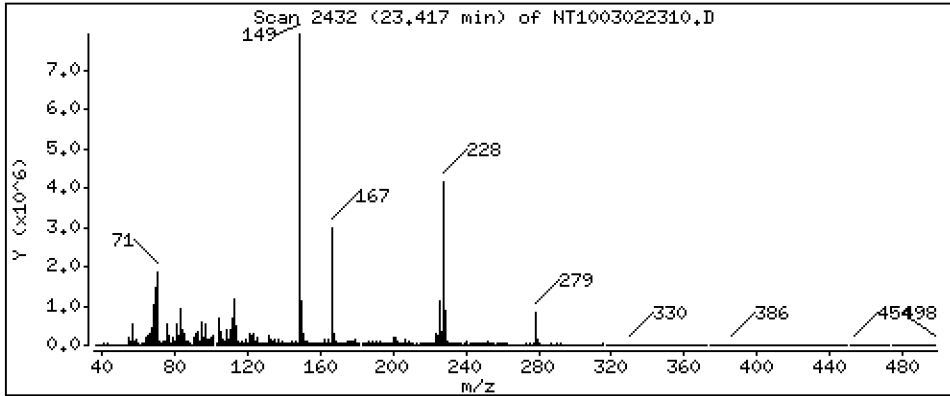
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 13,28 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

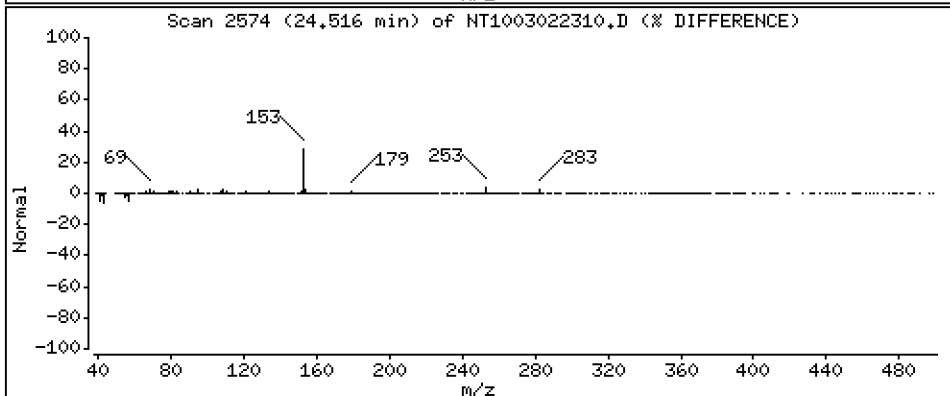
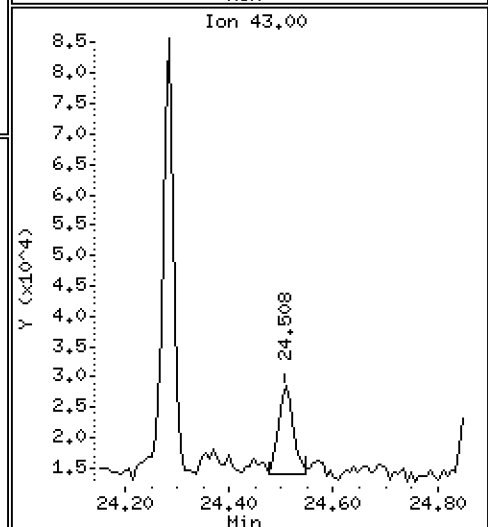
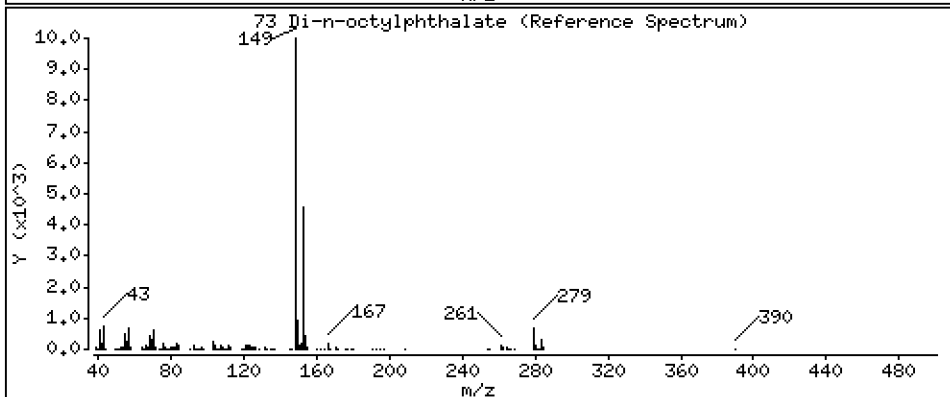
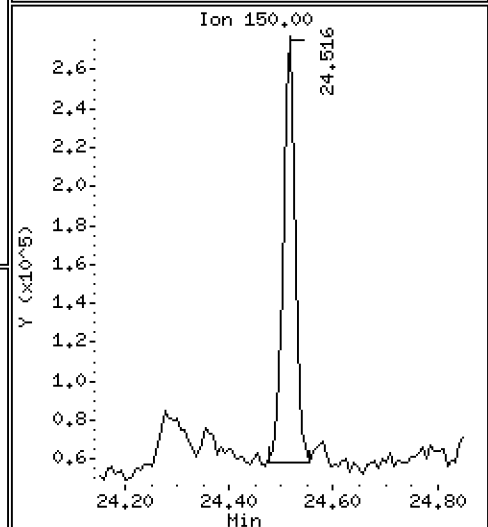
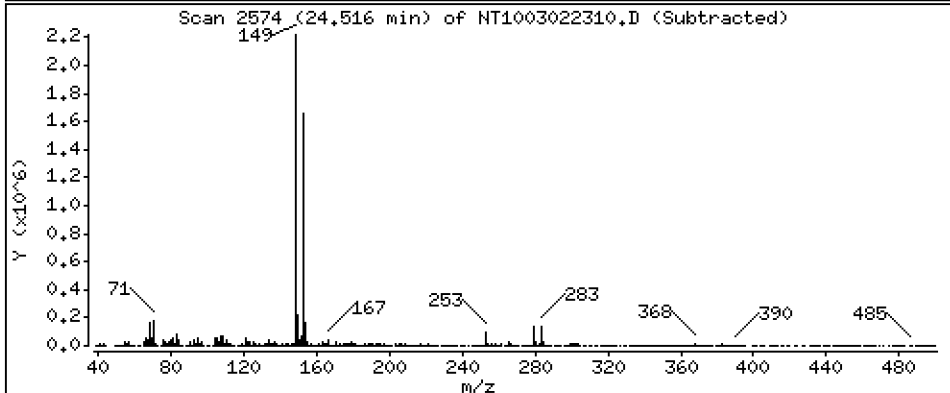
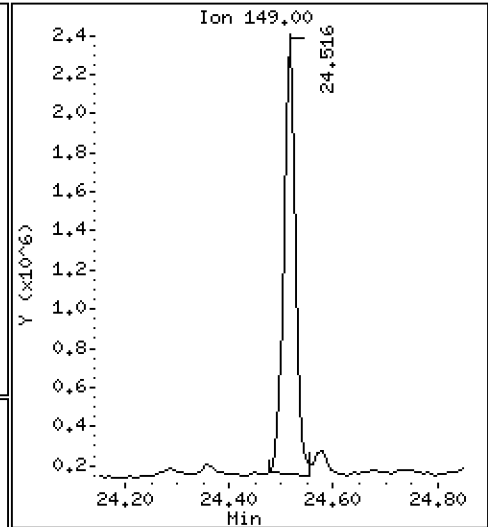
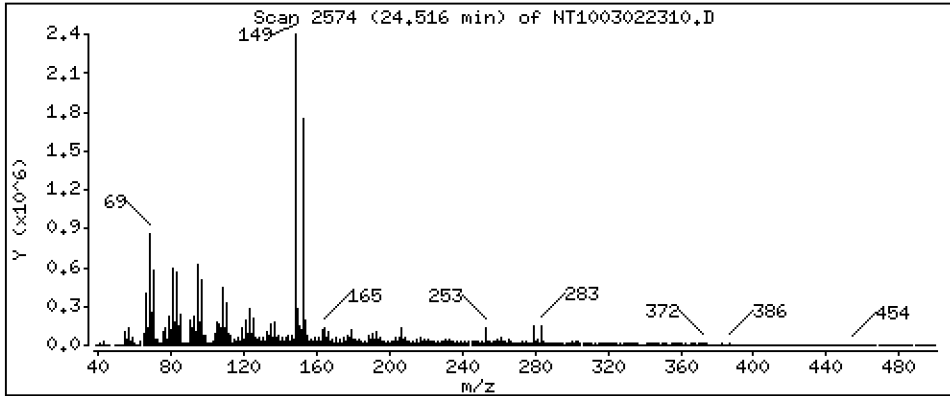
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 2,699 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

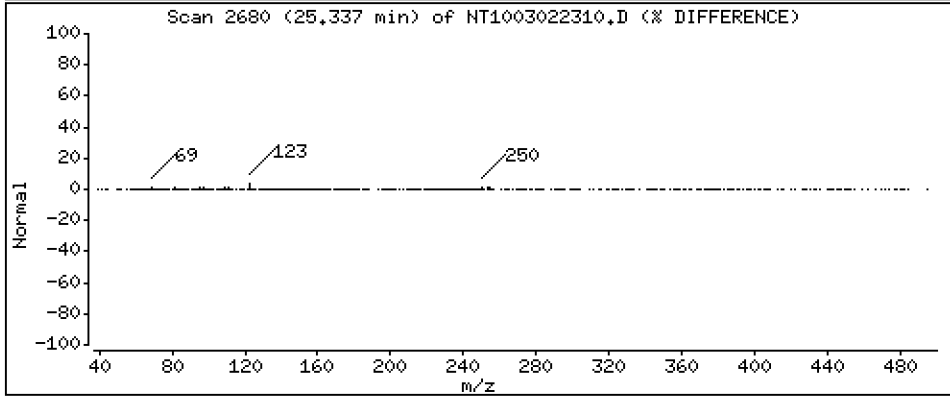
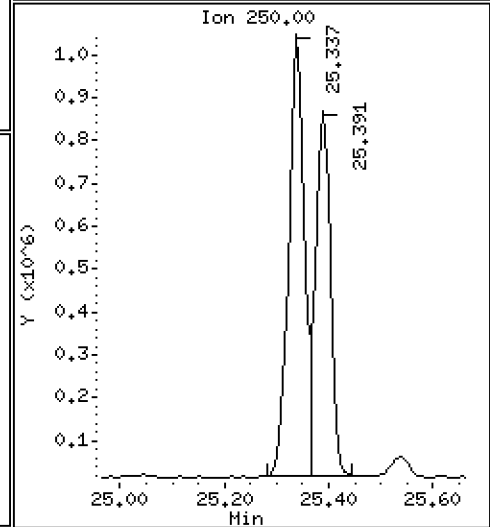
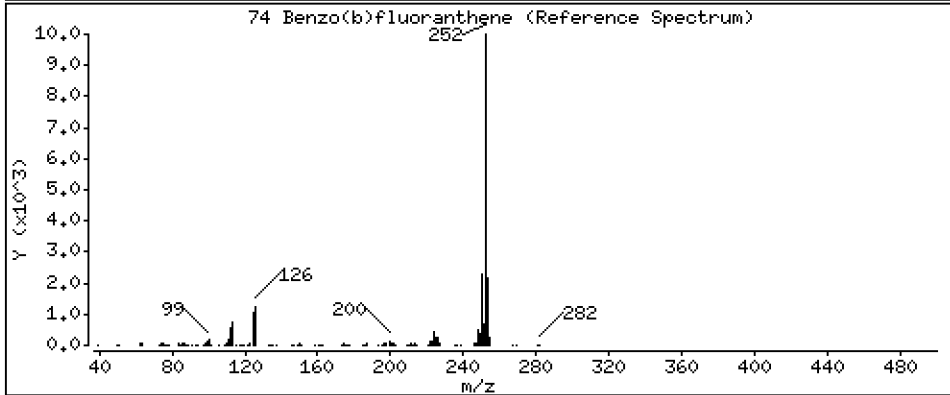
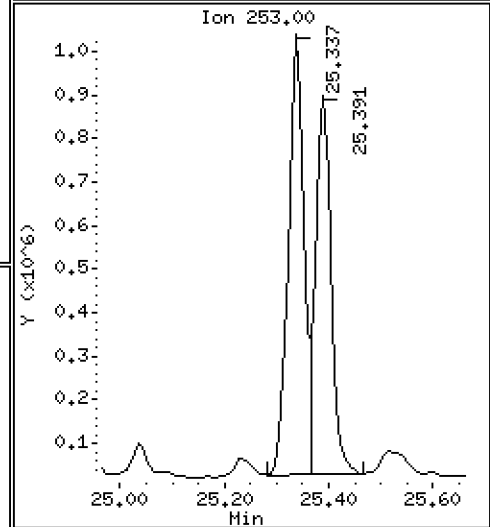
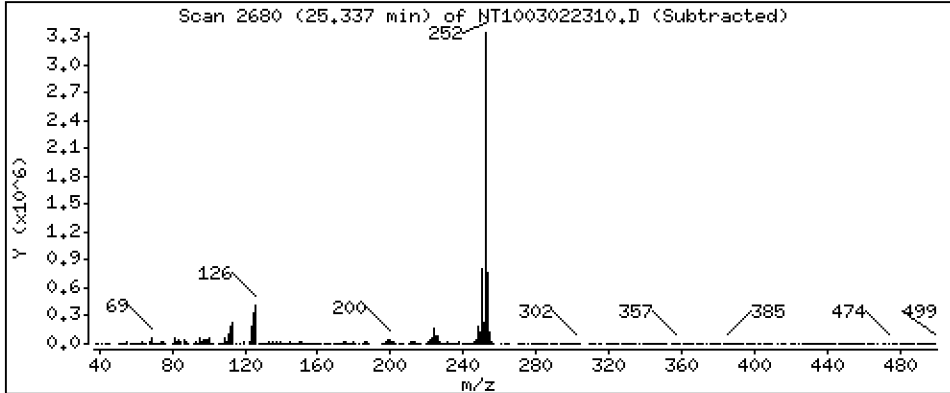
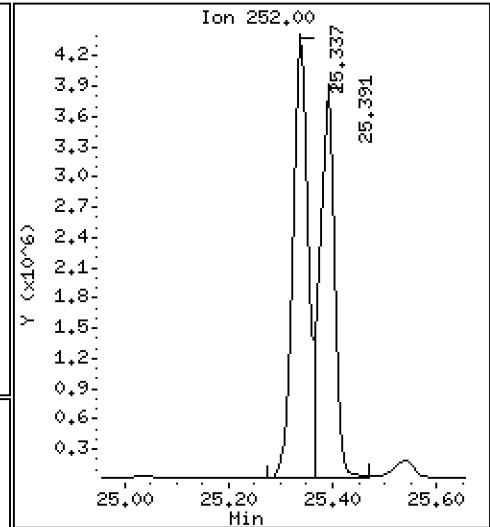
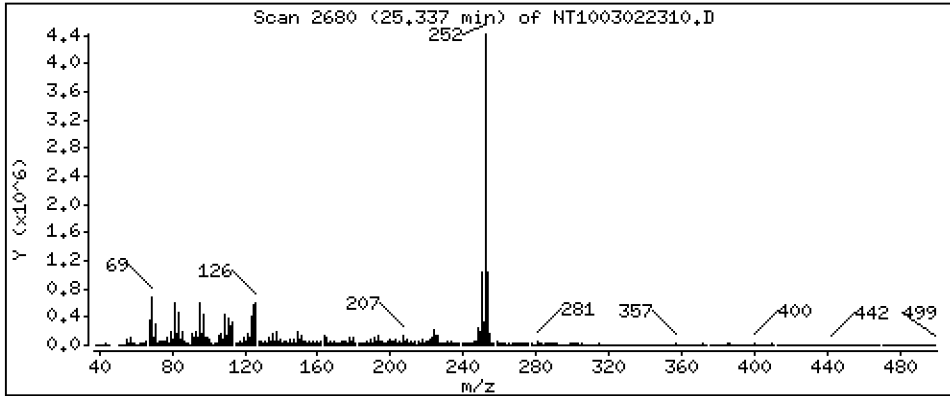
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 7,890 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

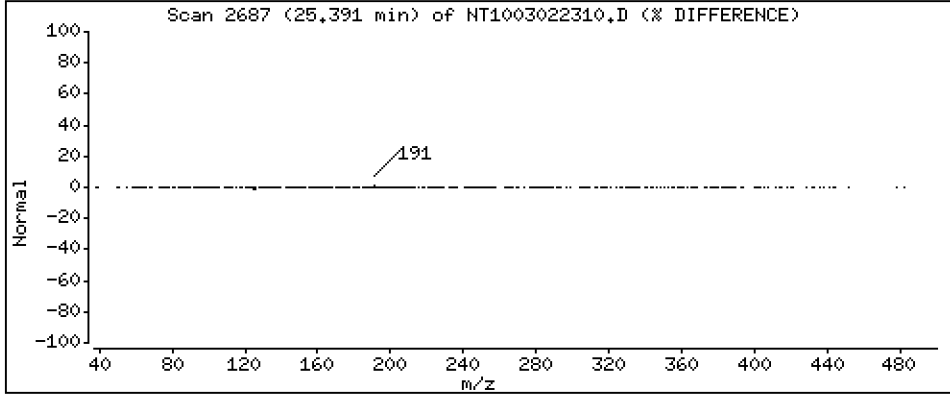
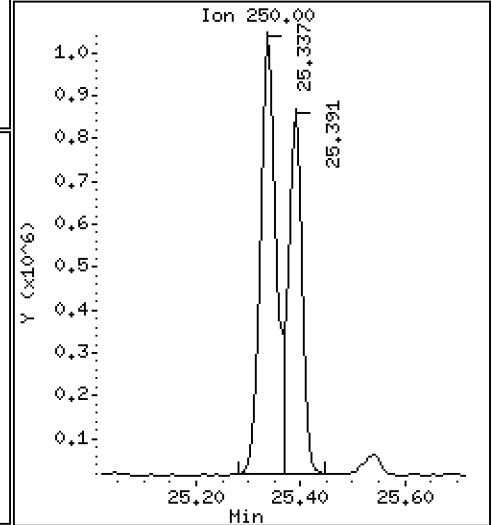
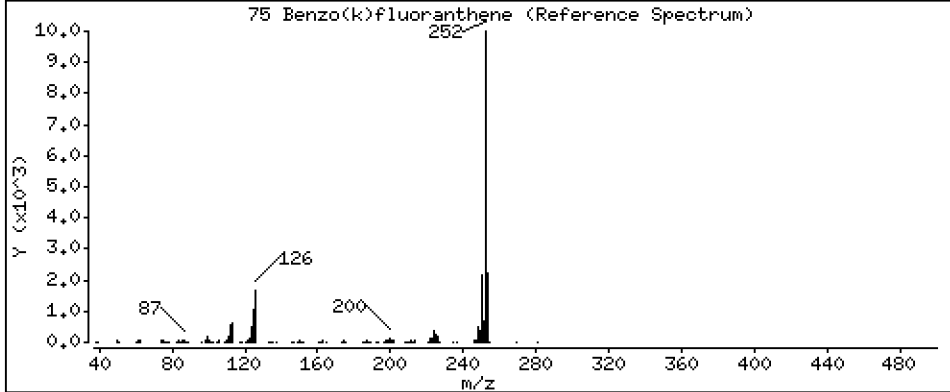
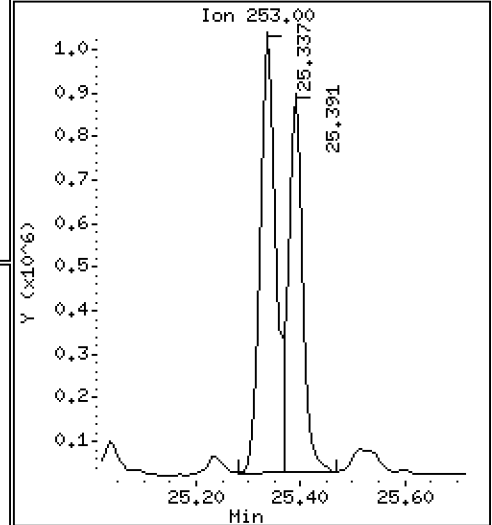
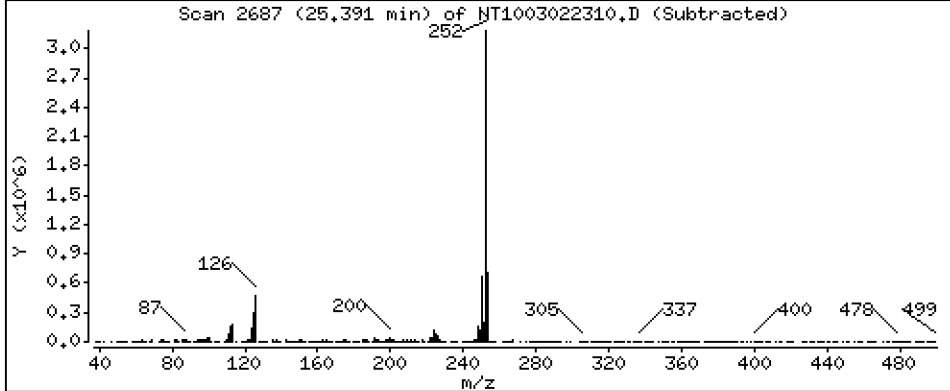
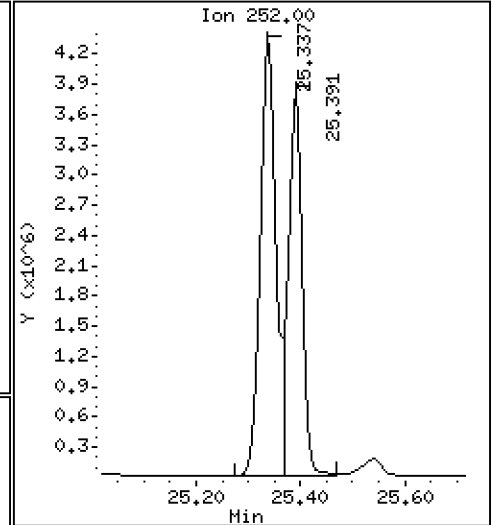
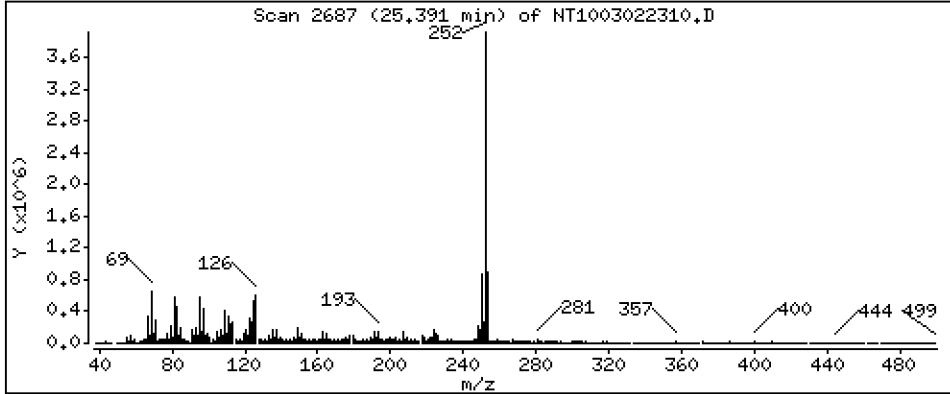
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 6,412 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

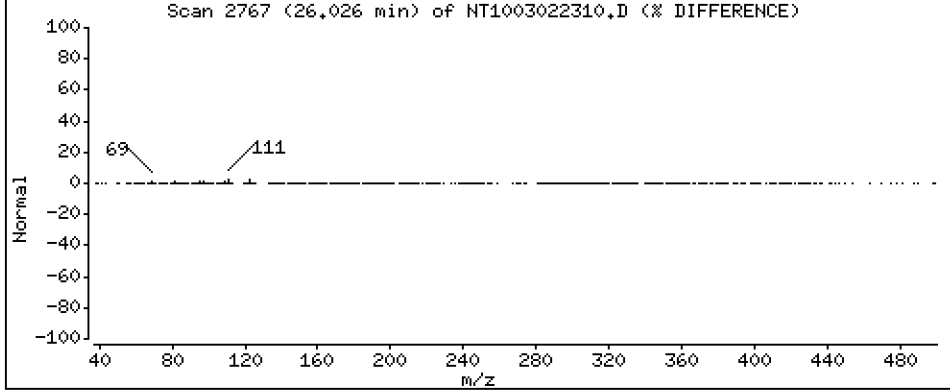
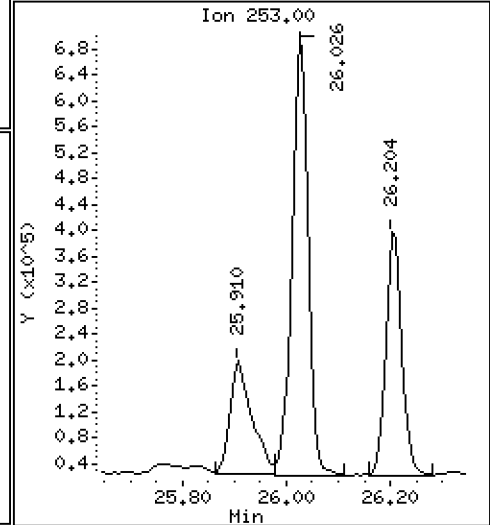
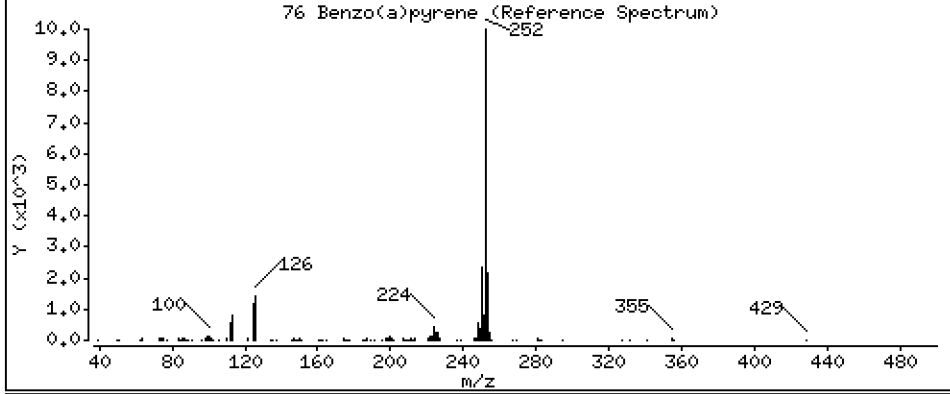
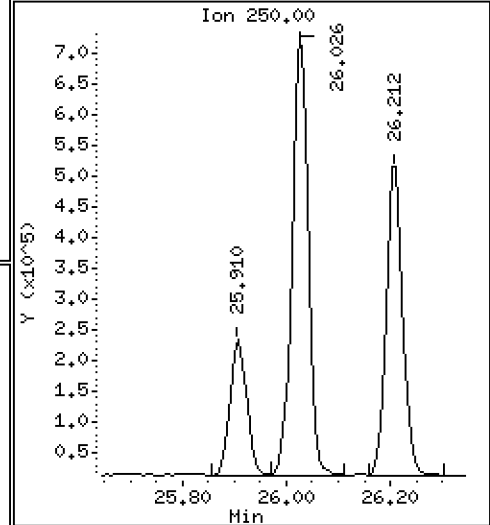
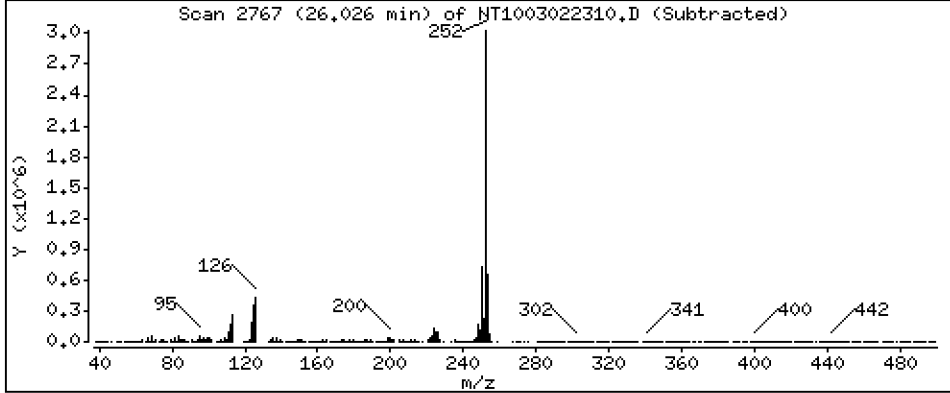
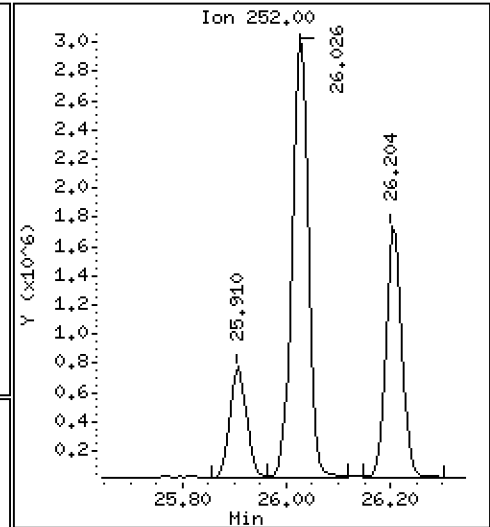
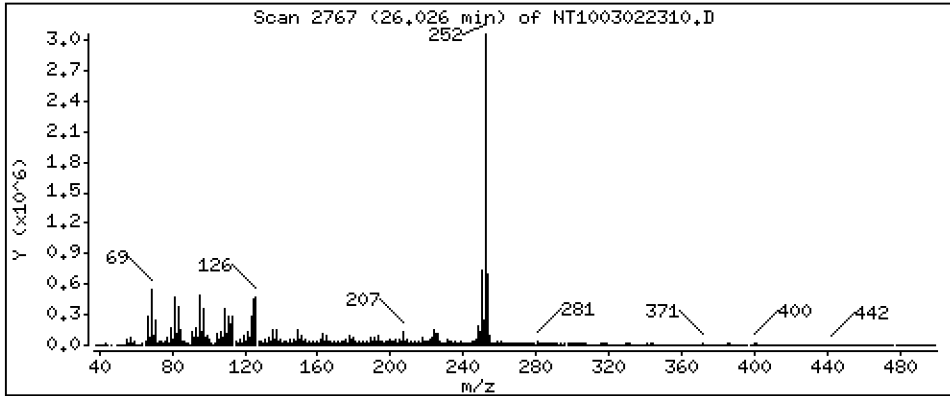
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 6,350 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

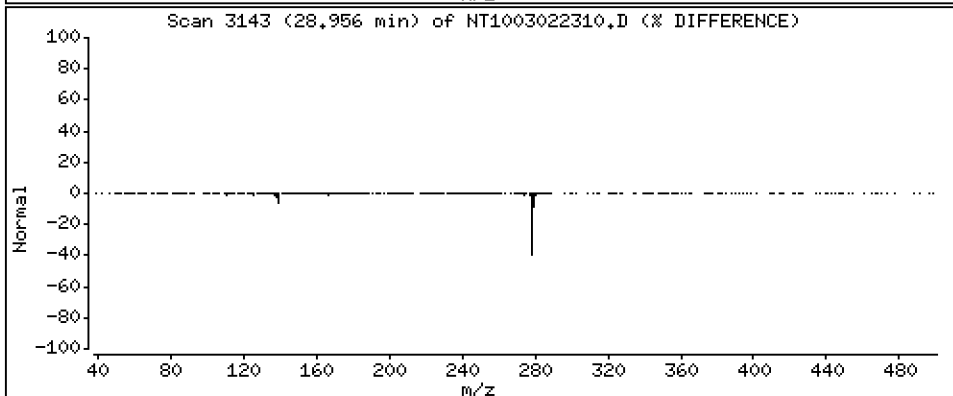
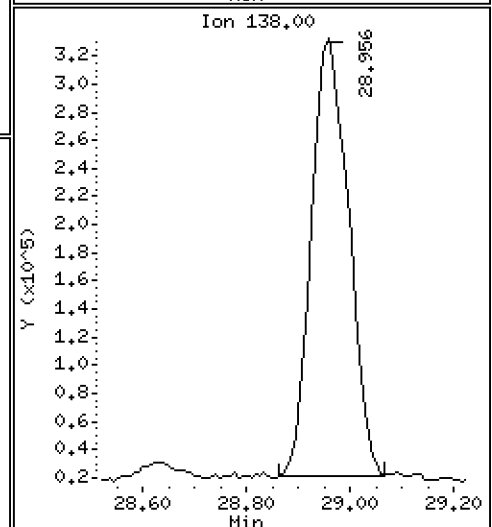
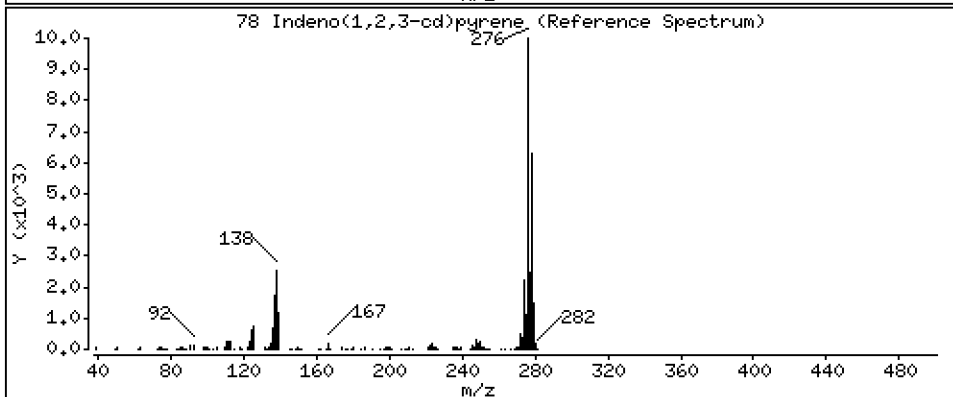
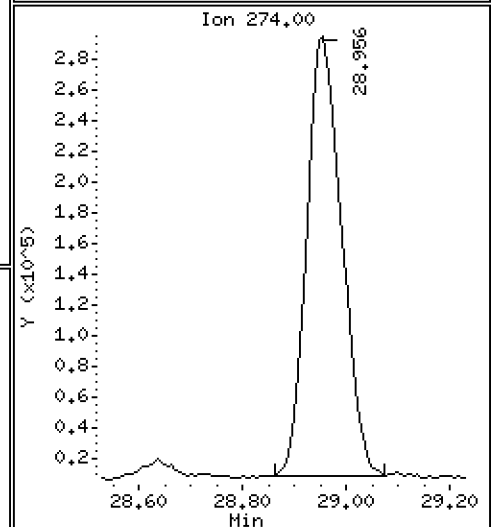
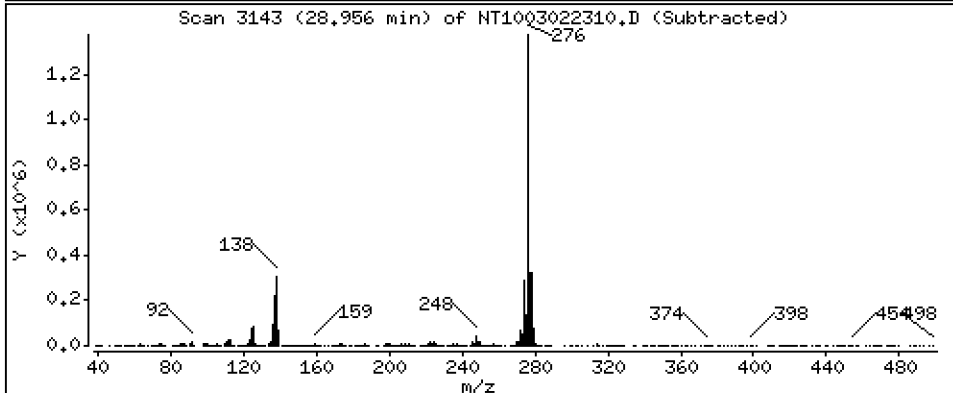
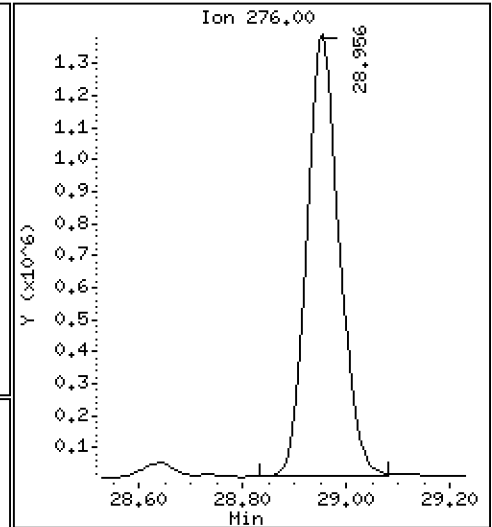
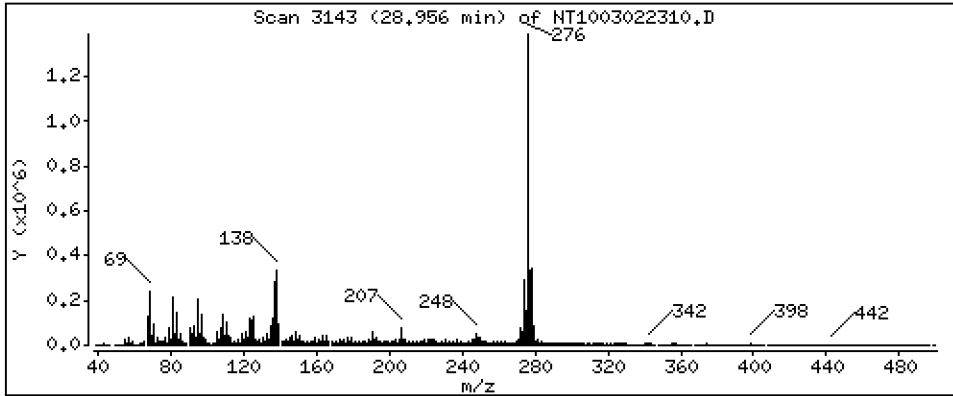
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,912 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

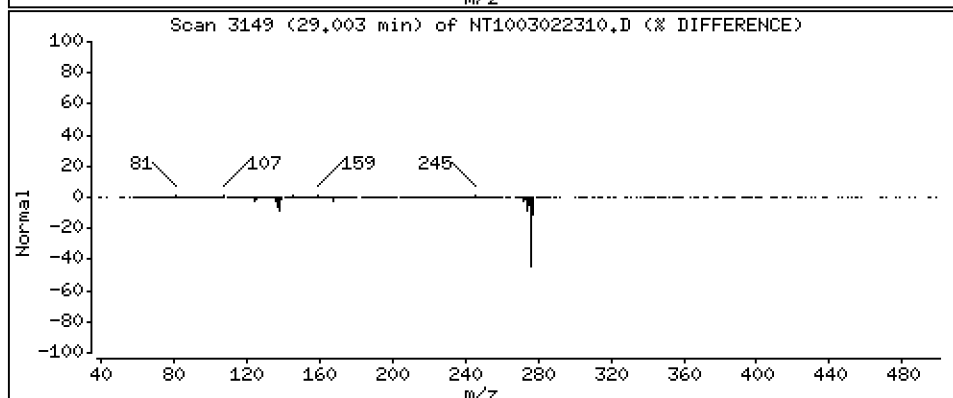
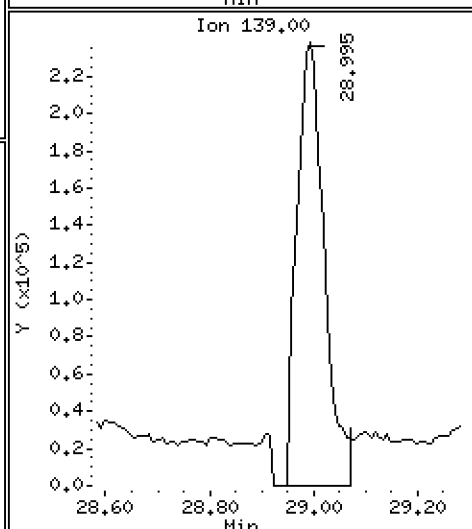
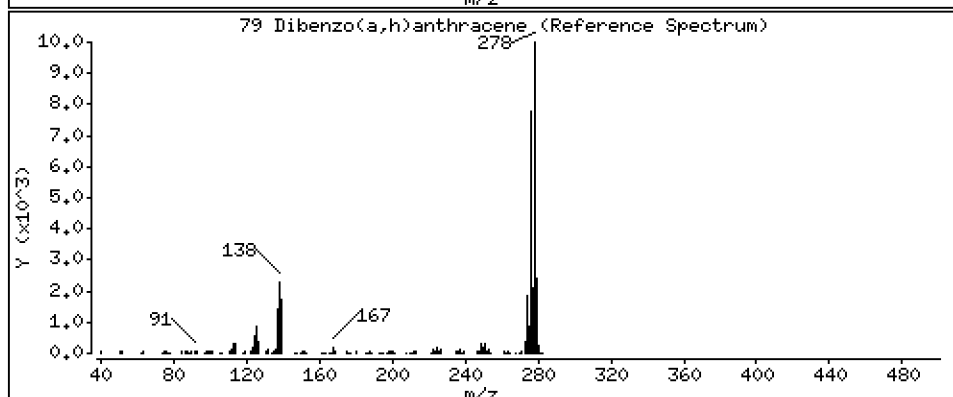
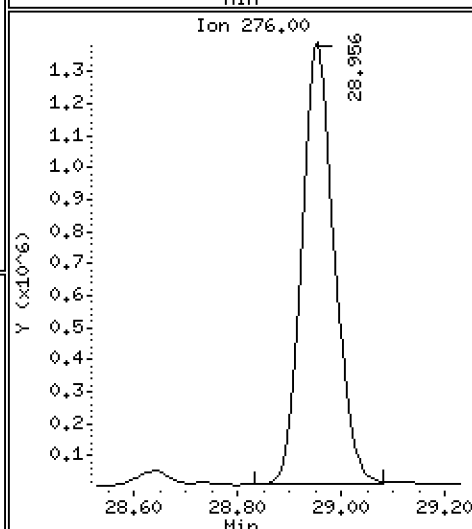
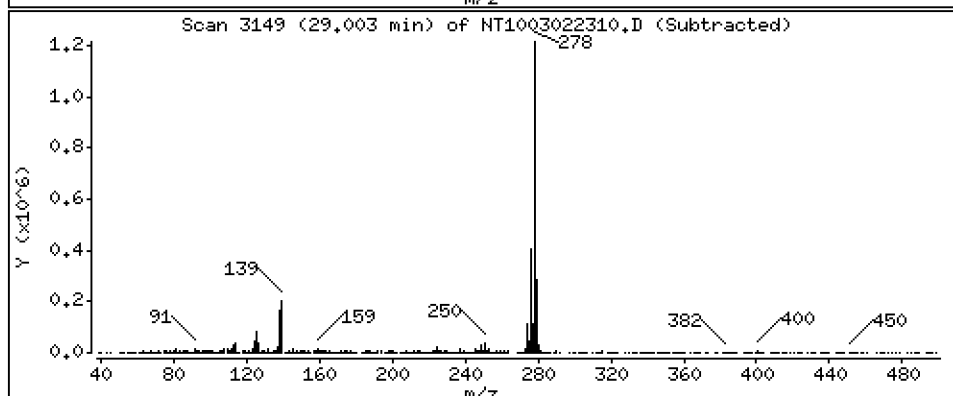
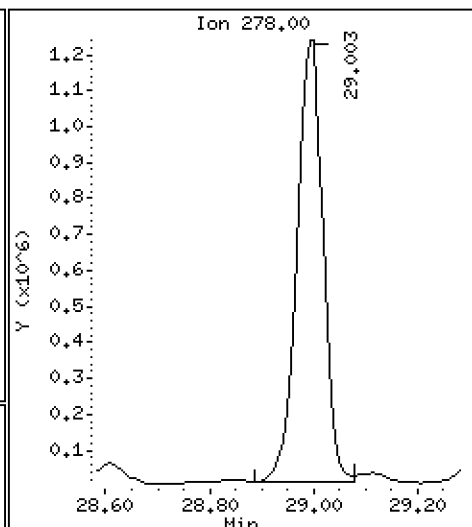
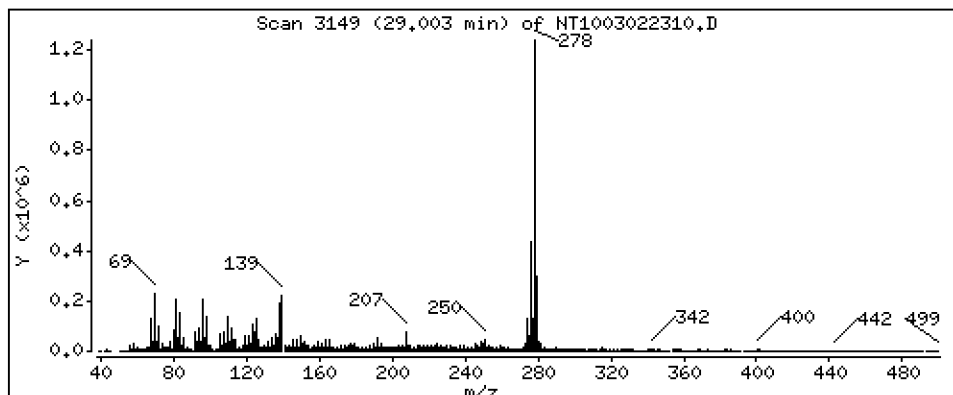
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,652 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

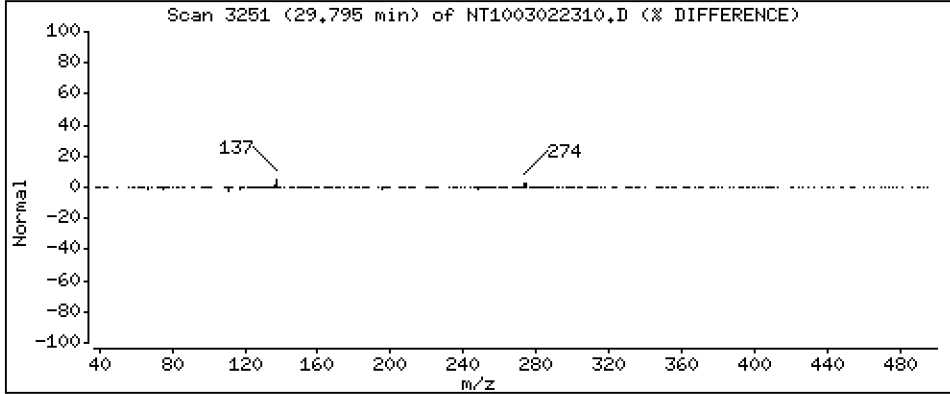
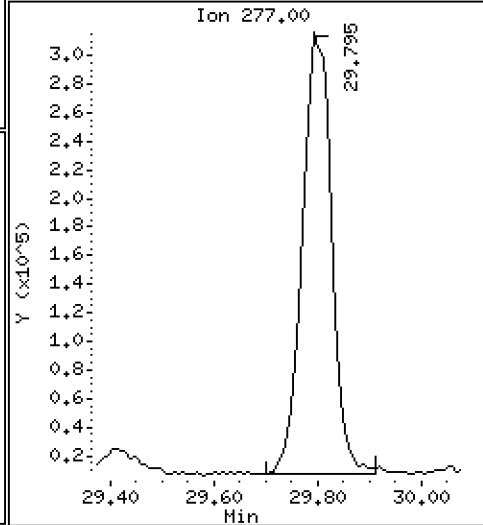
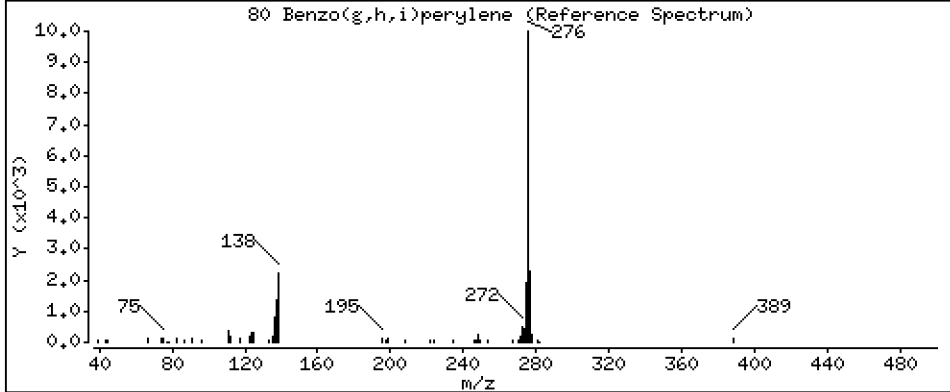
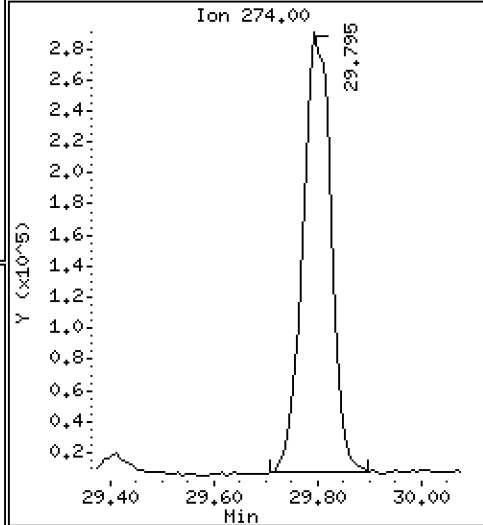
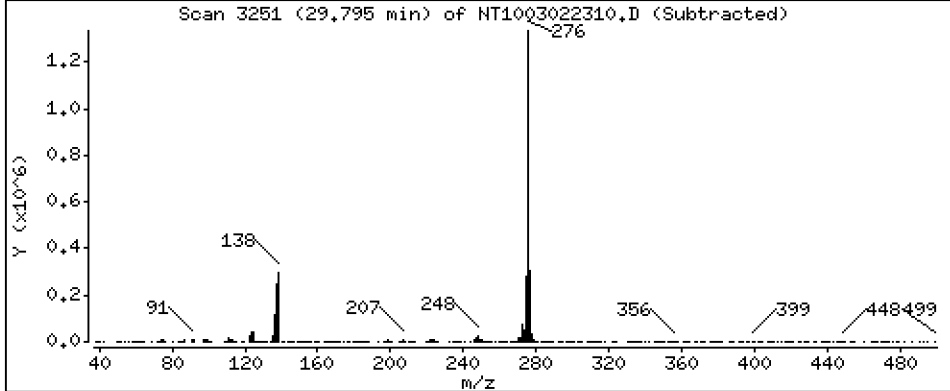
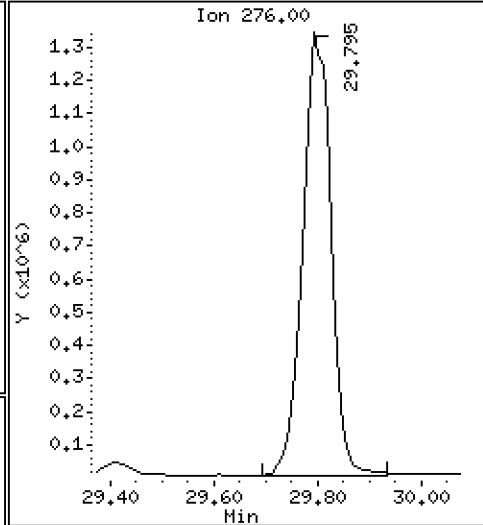
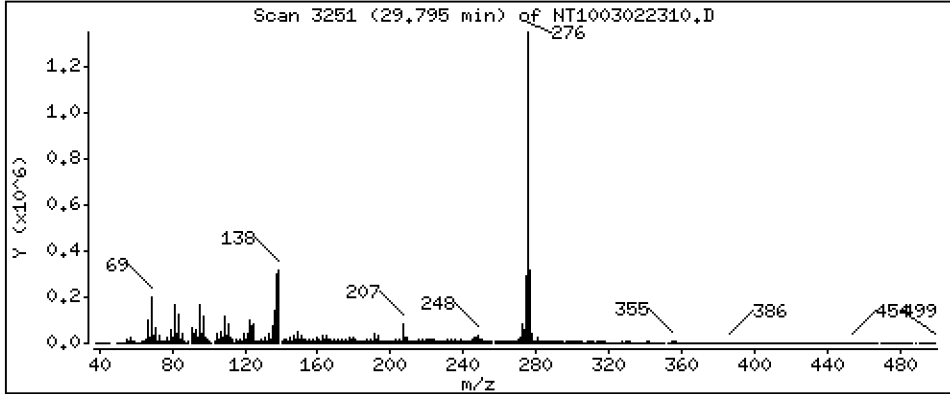
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 5,199 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

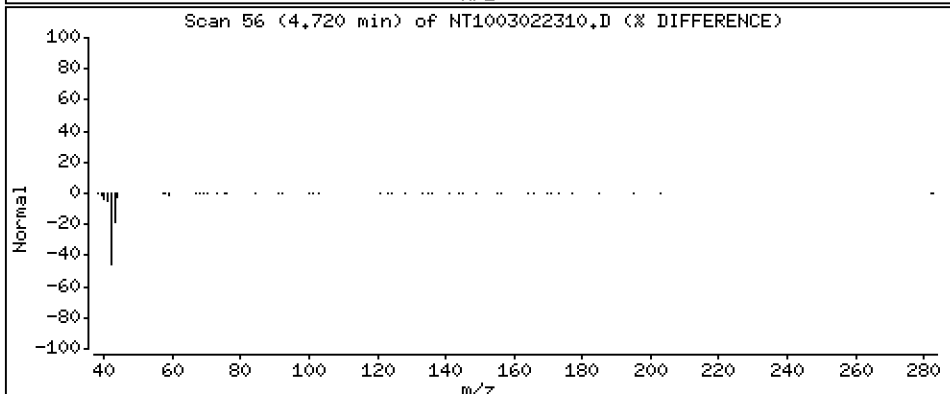
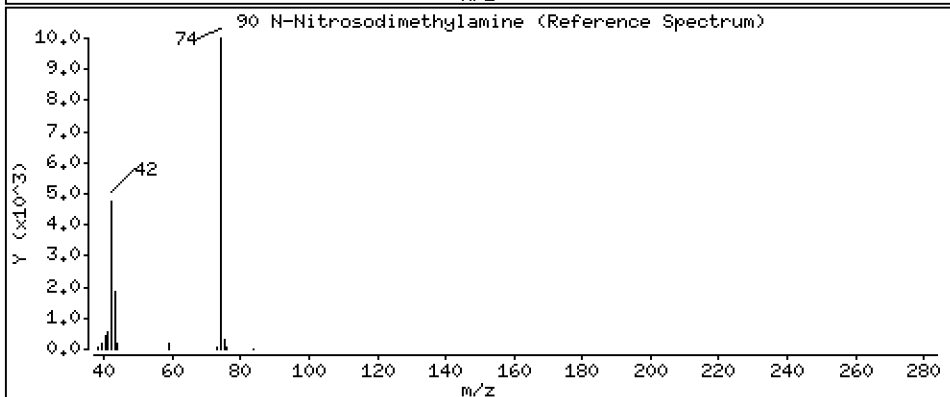
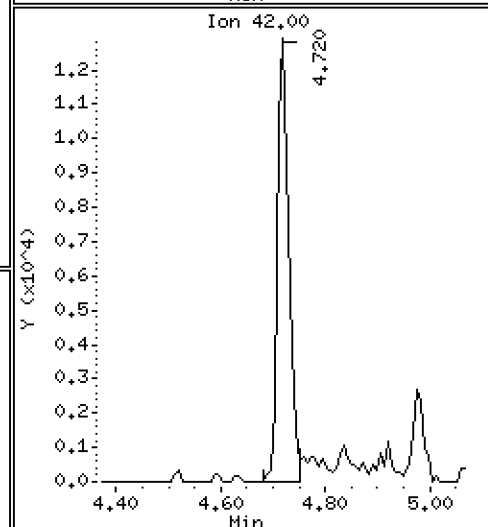
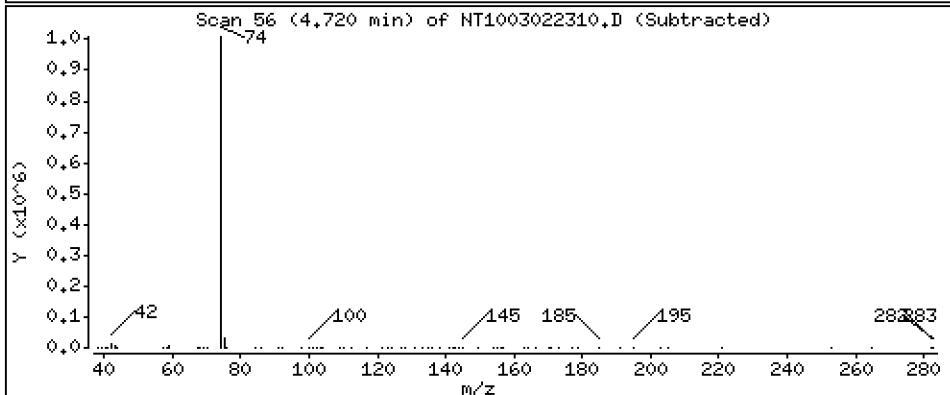
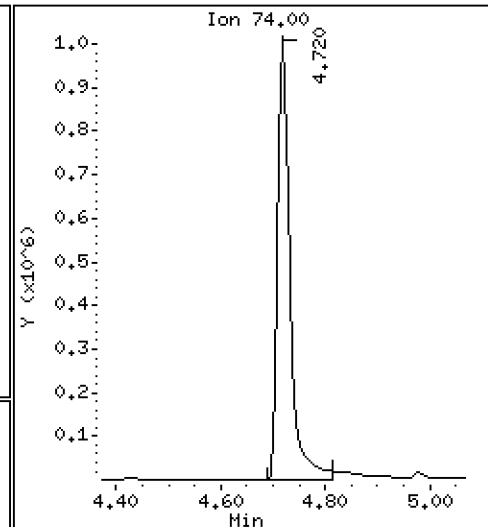
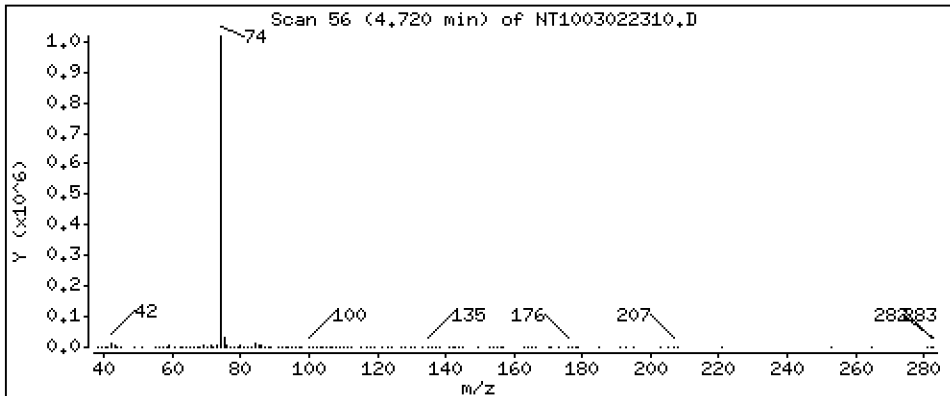
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 12,90 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

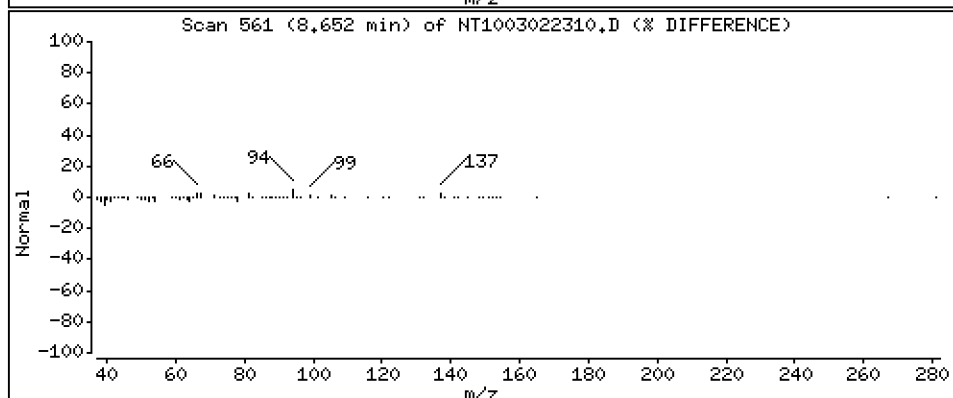
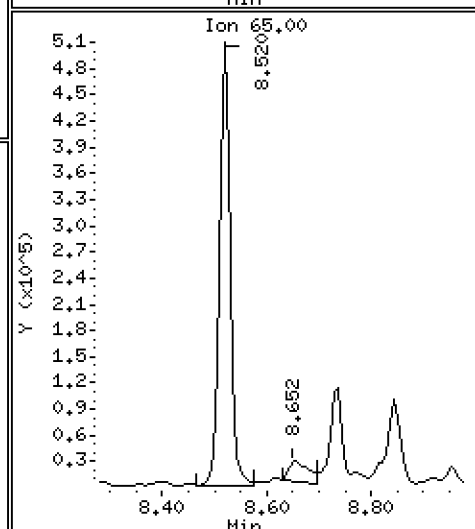
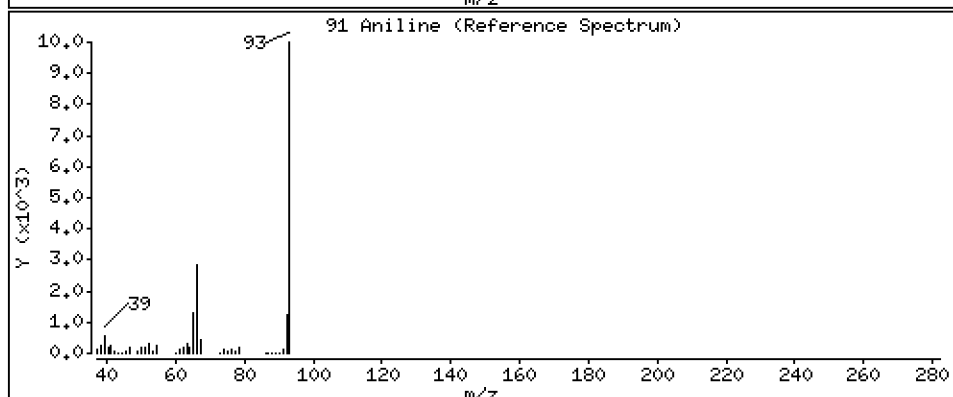
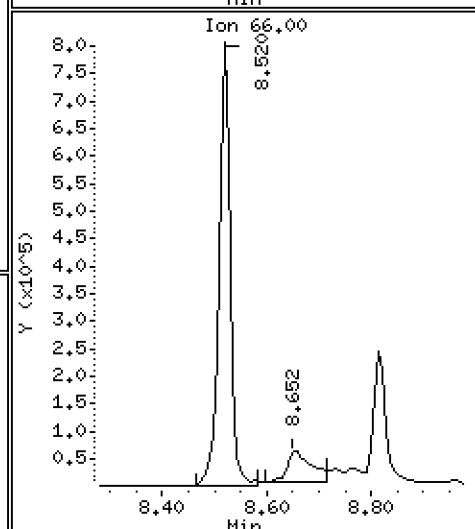
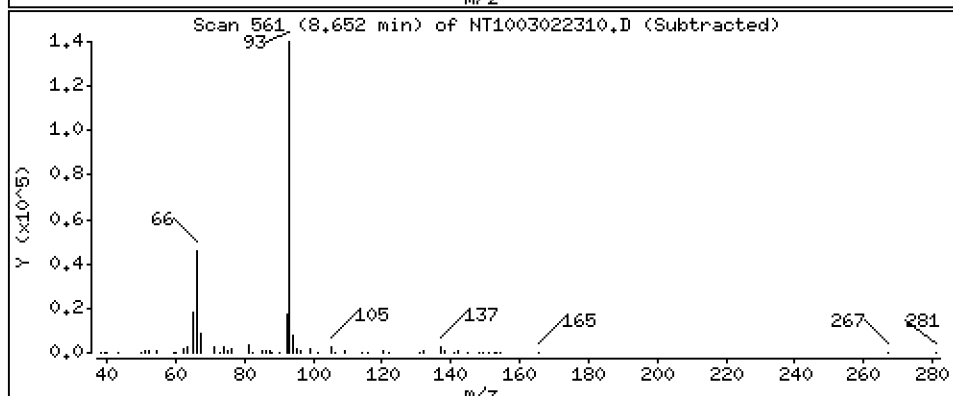
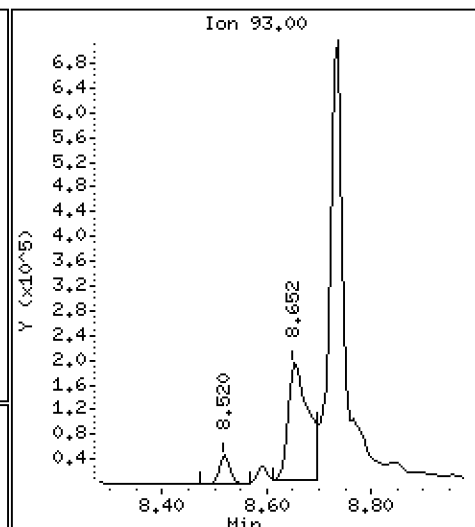
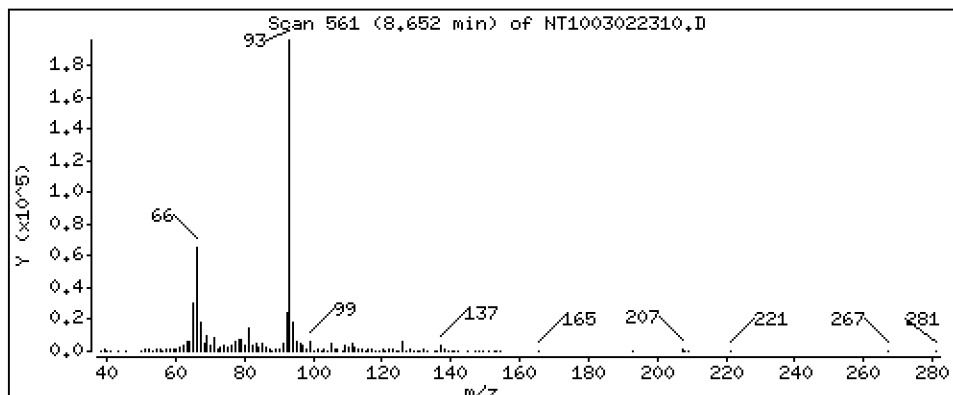
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 2,005 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

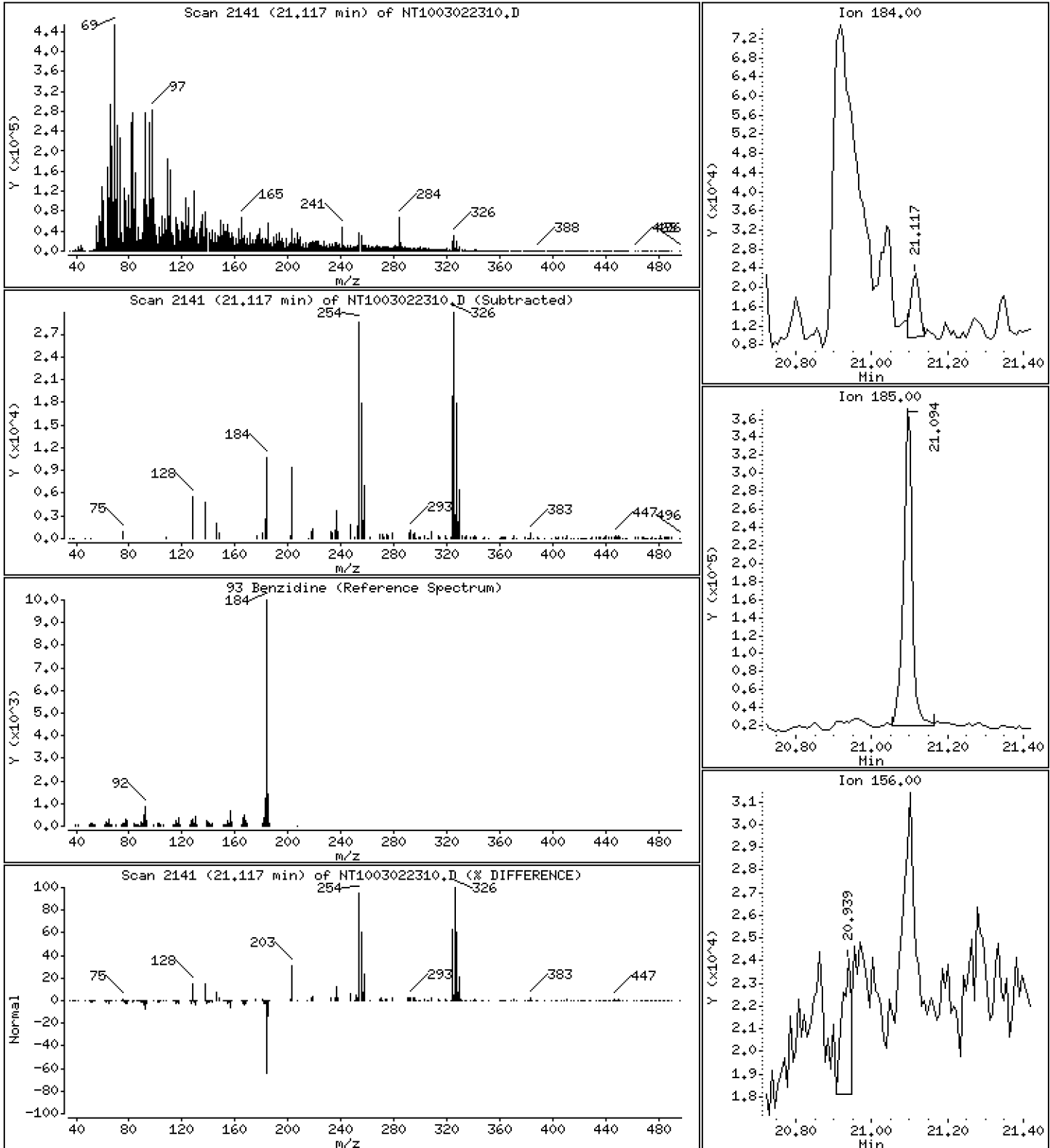
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

93 Benzidine

Concentration: 0.03983 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

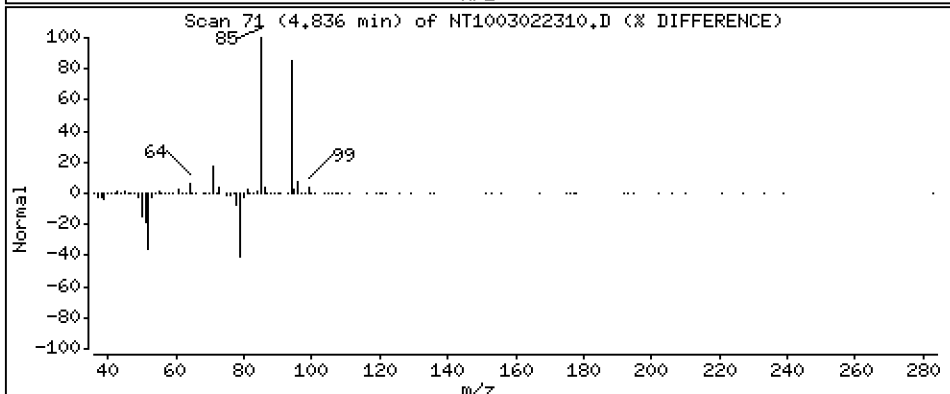
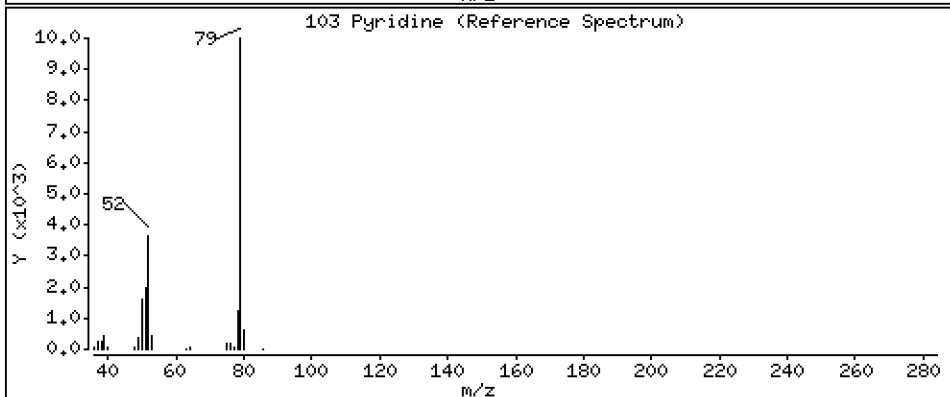
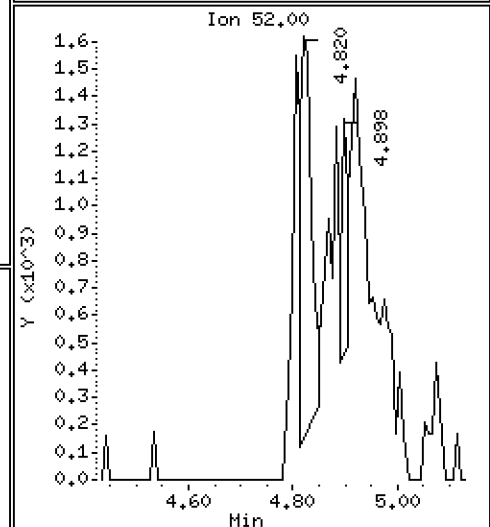
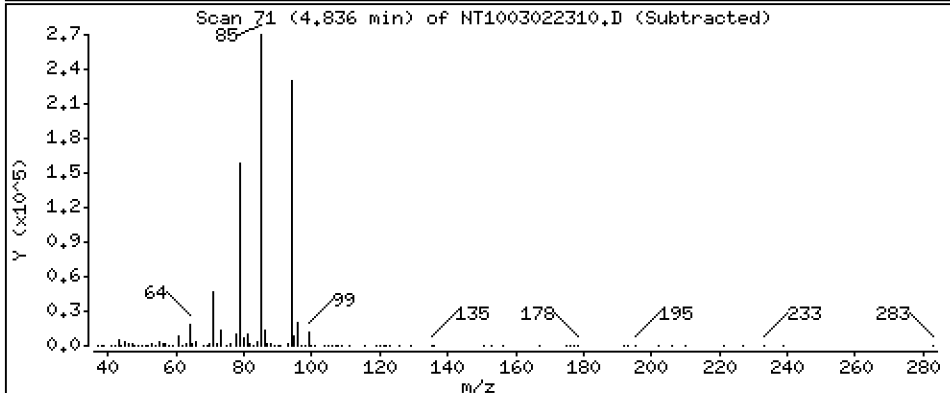
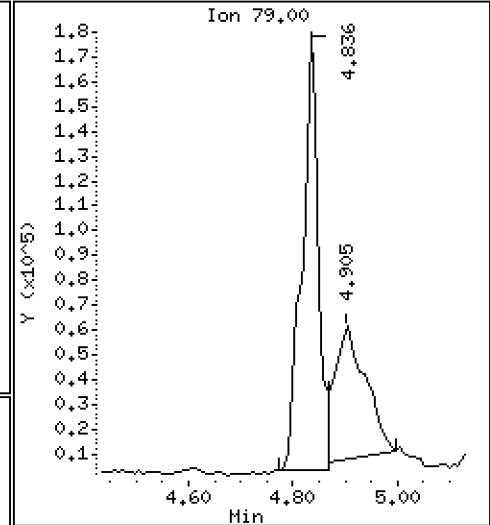
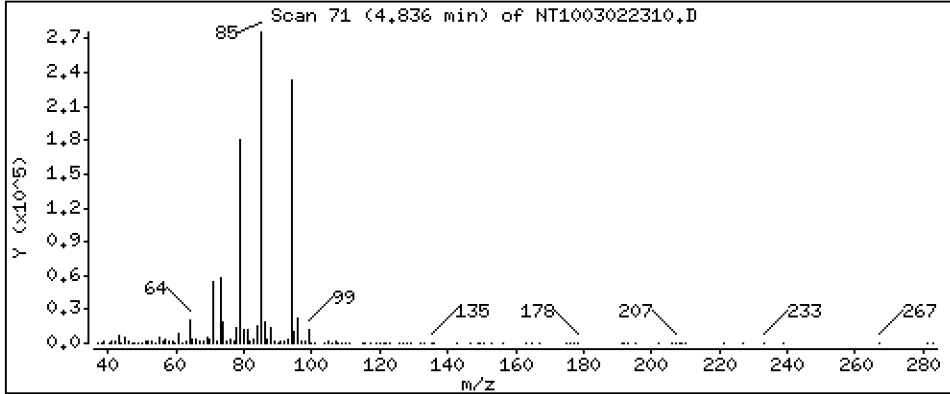
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 1,825 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

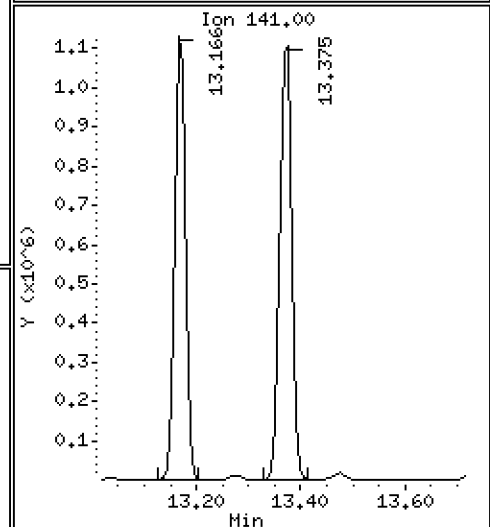
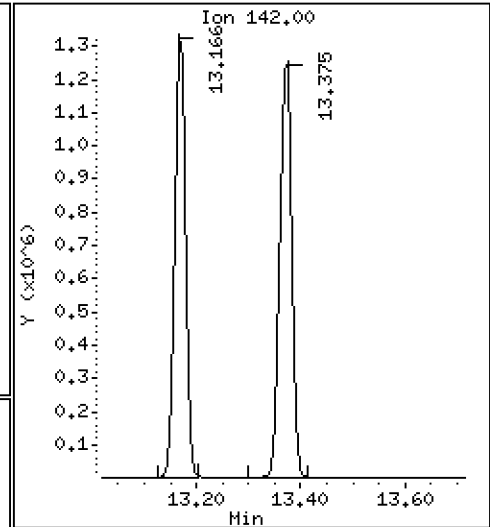
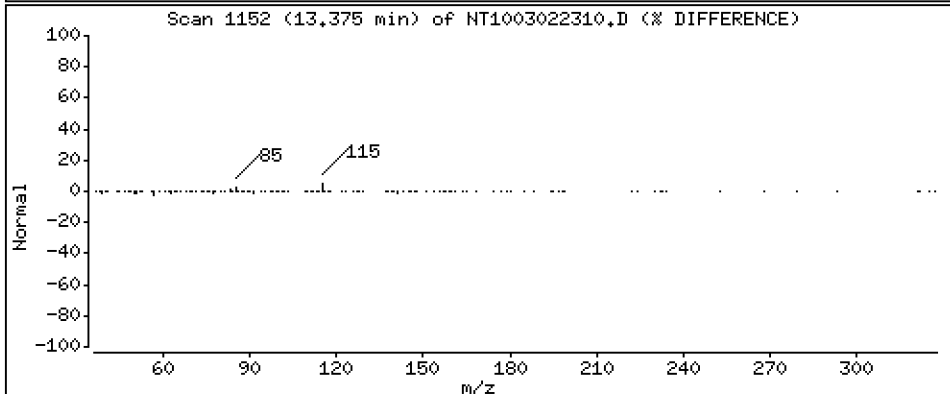
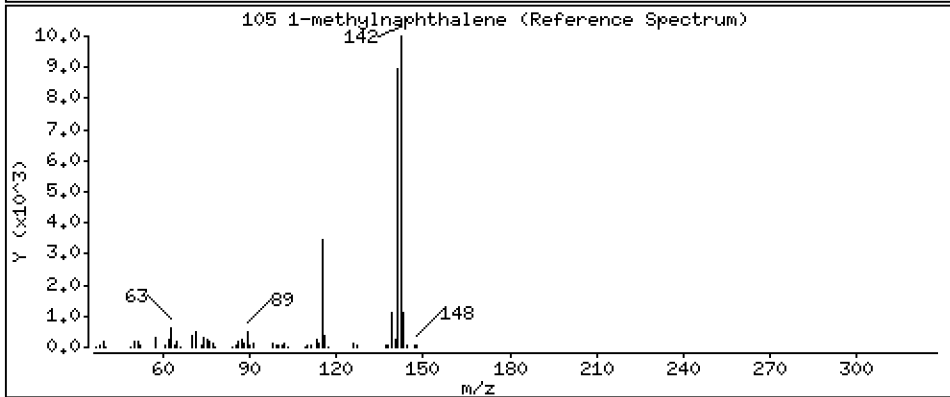
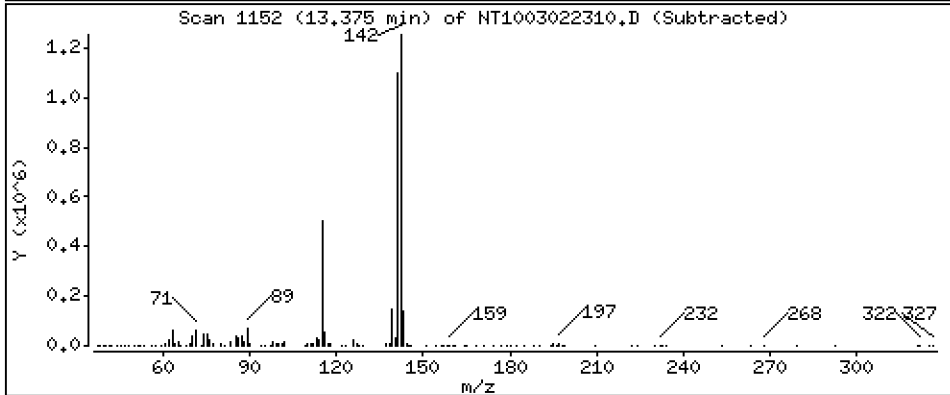
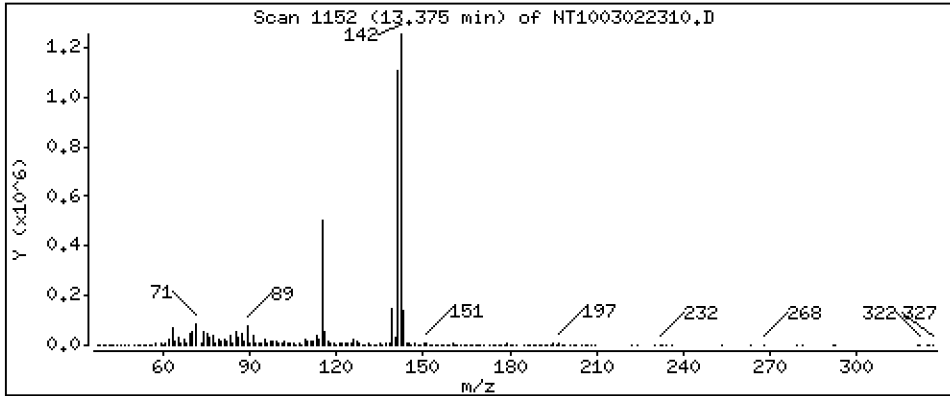
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,192 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

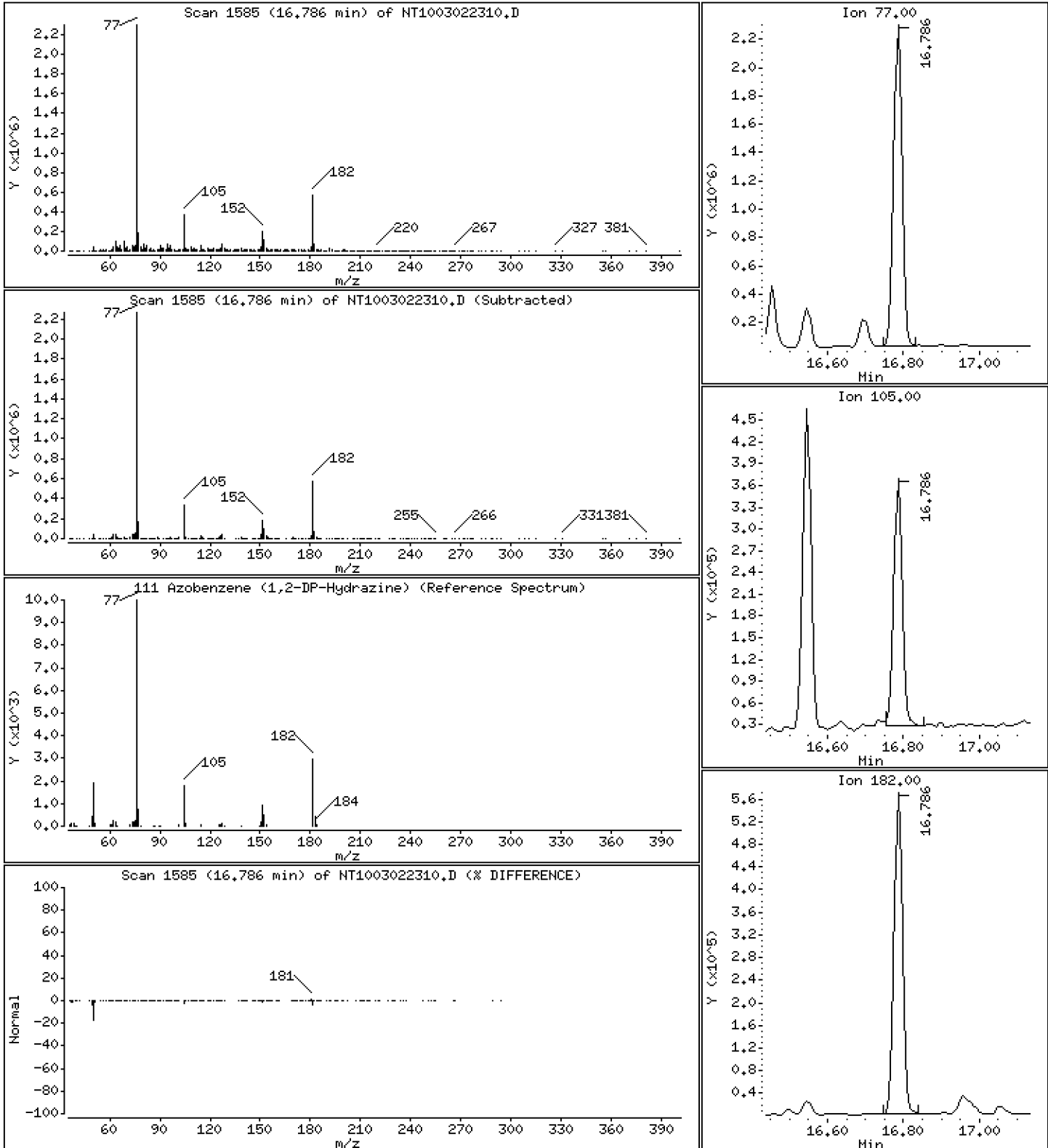
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,132 ug/mL





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

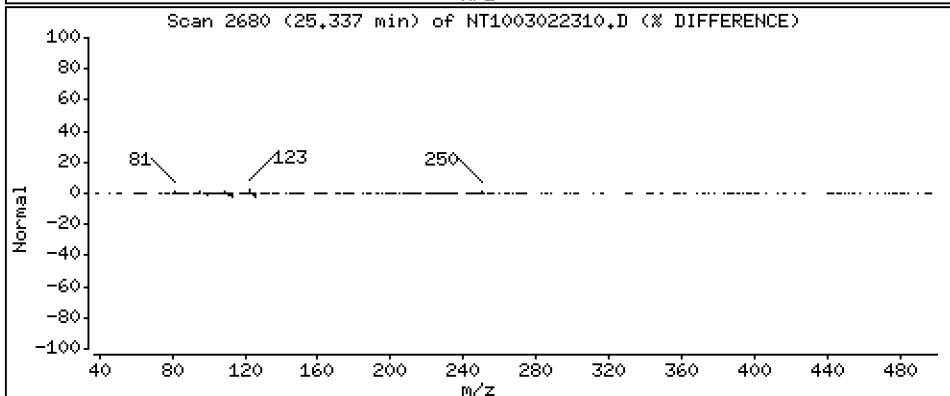
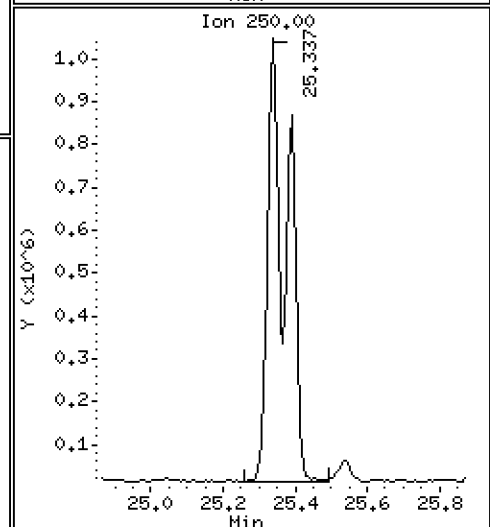
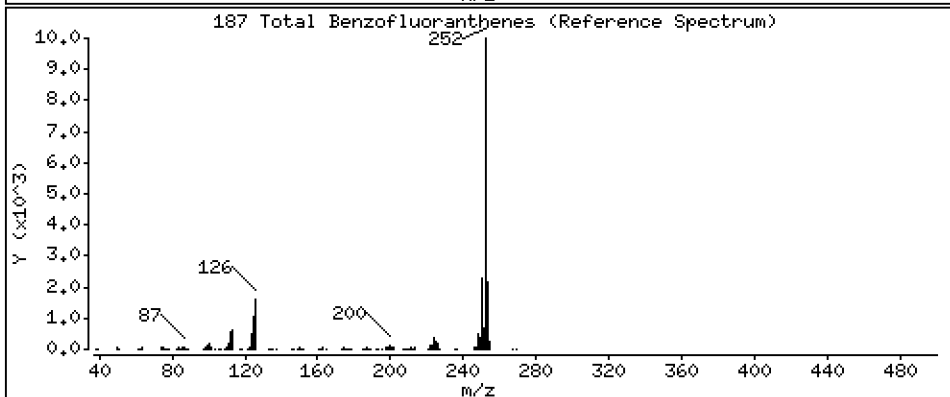
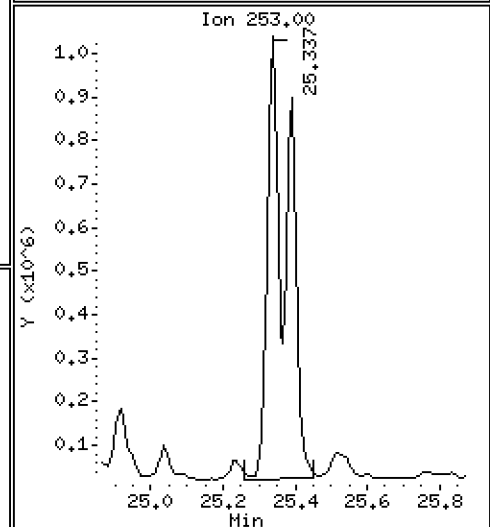
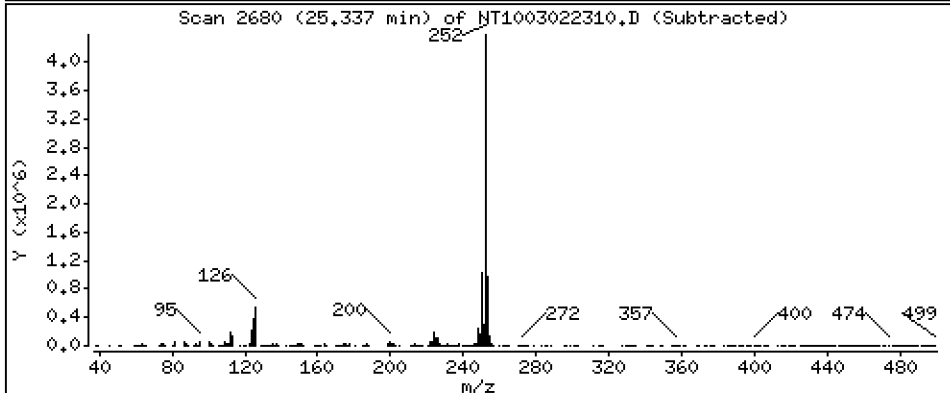
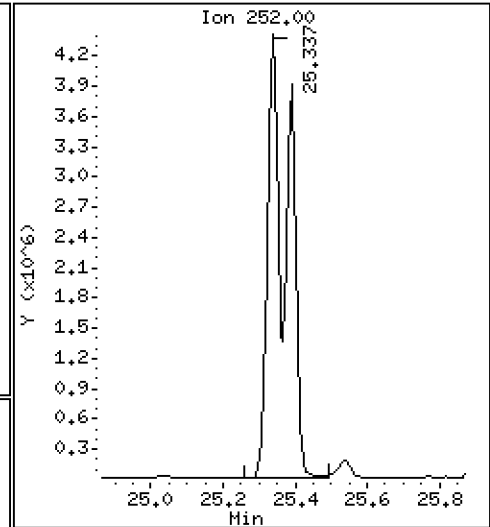
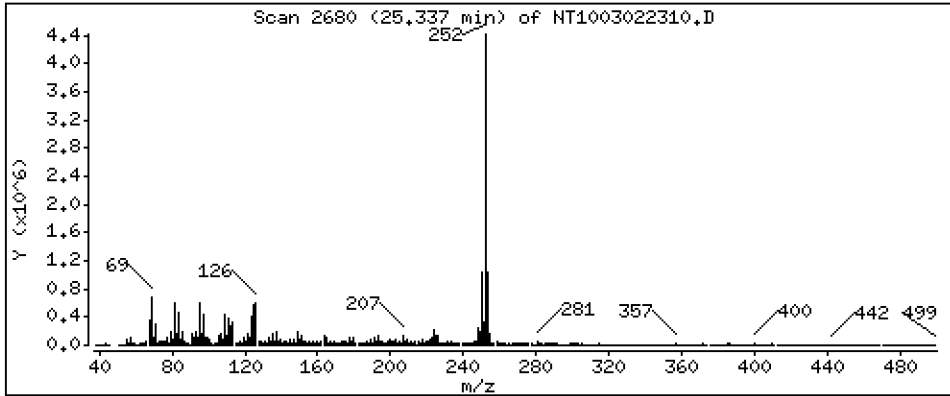
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 14,14 ug/mL



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

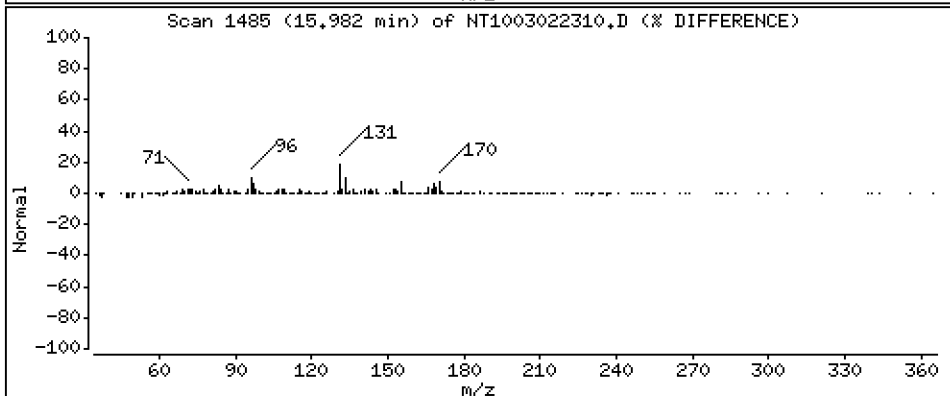
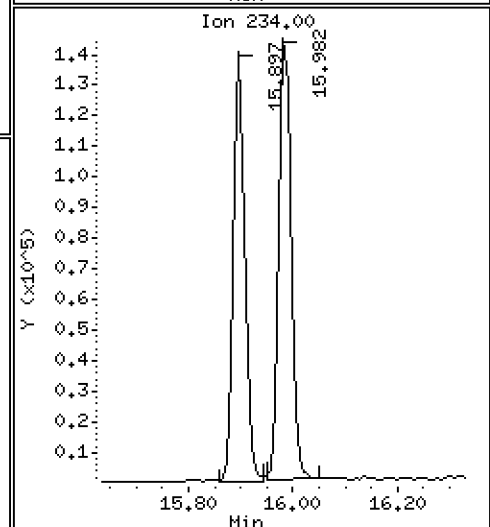
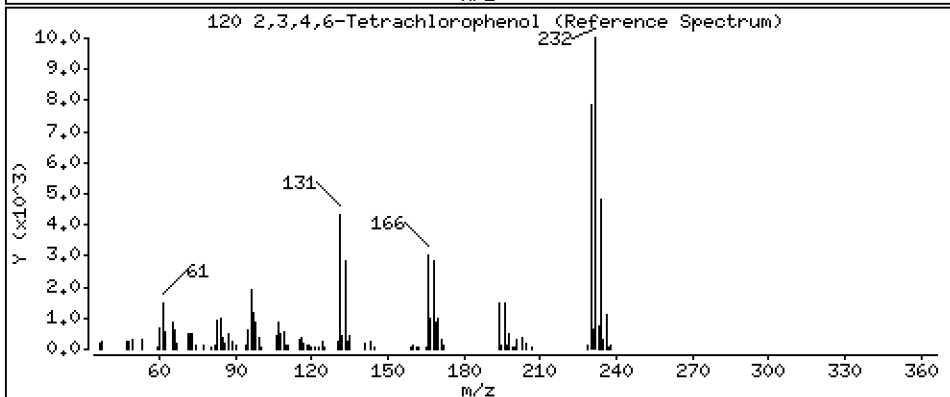
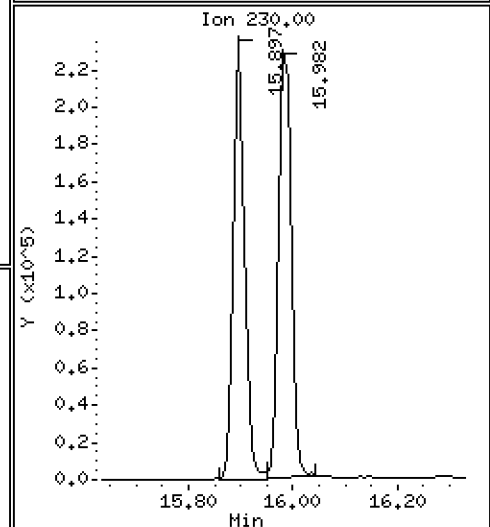
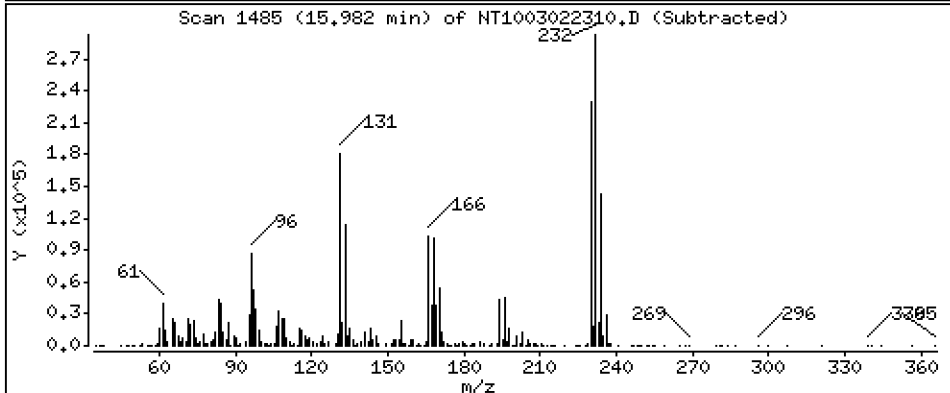
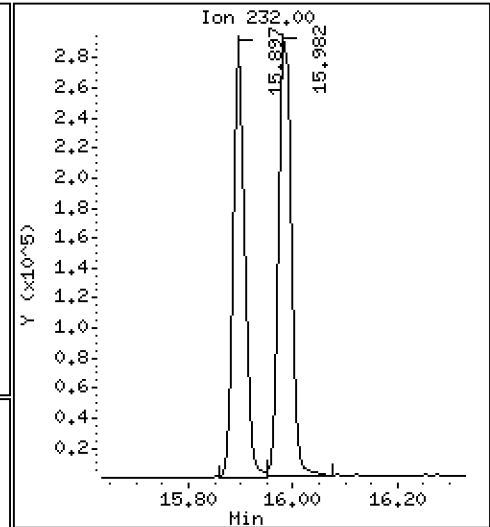
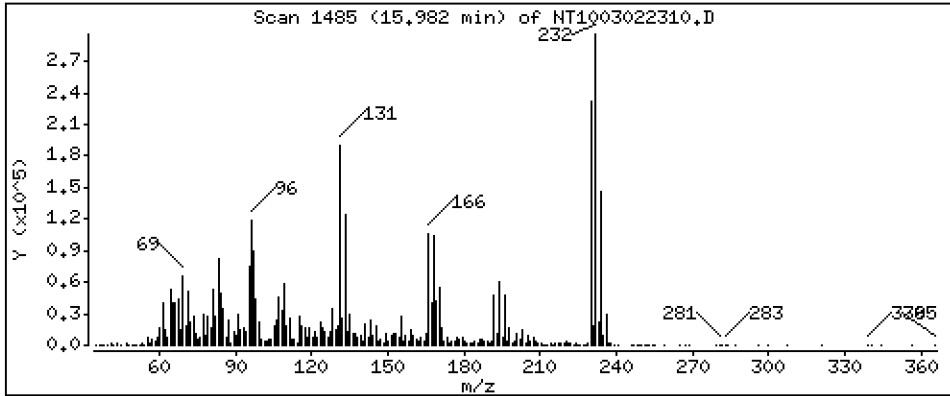
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,743 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022310.D  
 Lab Smp Id: BLA0624-MSD1  
 Inj Date : 02-MAR-2023 20:06  
 Operator : VTS  
 Smp Info : BLA0624-MSD1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	1182444	6.24466	6.245
\$ 2 Phenol-d5	99		8.497	8.489	(0.919)	1642471	7.47131	7.471
3 Phenol	94		8.520	8.512	(0.921)	3377631	14.4510	14.45
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1314454	7.00821	7.008
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	911302	5.10228	5.102
6 2-Chlorophenol	128		8.844	8.844	(0.956)	905062	4.64494	4.645
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	896100	4.17125	4.171
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	601832	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	1200614	5.62640	5.626
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	535910	3.82439	3.824
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	890346	4.31071	4.311
11 Benzyl alcohol	108		9.472	9.472	(1.024)	591769	4.81668	4.817
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	344589	5.78689	5.787
13 2-Methylphenol	108		9.658	9.650	(1.044)	791314	4.28483	4.285
17 Hexachloroethane	117		10.209	10.209	(1.104)	343791	3.92512	3.925
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	732717	5.19507	5.195
15 4-Methylphenol	108		9.945	9.938	(1.076)	1060619	4.72420	4.724
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	1108171	4.49030	4.490
19 Nitrobenzene	77		10.333	10.333	(0.881)	1126976	4.86807	4.868
20 Isophorone	82		10.791	10.791	(0.920)	2102418	7.11446	7.114
21 2-Nitrophenol	139		10.950	10.950	(0.934)	461933	3.68492	3.685
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	3080273	13.4362	13.44
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	1131821	6.19761	6.198
24 Benzoic acid	105		11.162	11.154	(0.952)	2056122	15.1461	15.15
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	3163711	17.2799	17.28
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	763048	4.39185	4.392
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2248229	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	2821681	4.88994	4.890
29 4-Chloroaniline	127		11.873	11.858	(1.013)	1232424	4.80567	4.806
30 Hexachlorobutadiene	225		11.997	11.997	(1.023)	564251	4.46019	4.460
31 4-Chloro-3-methylphenol	107		12.809	12.801	(1.092)	3464578	17.4905	17.49
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	2016693	4.94712	4.947
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	170598	3.96588	3.966

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.730	13.722	(0.896)	2161617	16.4916	16.49	
35 2,4,5-Trichlorophenol	196		13.800	13.792	(0.901)	2345273	16.6707	16.67	
§ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2001165	4.40697	4.407	
37 2-Chloronaphthalene	162		14.171	14.171	(0.925)	1748543	4.90512	4.905	
38 2-Nitroaniline	65		14.373	14.365	(0.938)	1650553	15.9948	15.99	
39 Dimethylphthalate	163		14.744	14.744	(0.963)	2079041	5.05671	5.057	
40 Acenaphthylene	152		15.031	15.023	(0.981)	2934315	4.77461	4.775	
41 2,6-Dinitrotoluene	165		14.876	14.868	(0.971)	1664798	17.3812	17.38	
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	1273098	4.00000		
43 3-Nitroaniline	138		15.224	15.216	(0.994)	947592	9.13935	9.139	
44 Acenaphthene	153		15.386	15.386	(1.005)	1927489	5.20046	5.200	
45 2,4-Dinitrophenol	184		15.440	15.433	(1.008)	248422	10.1391	10.14	
46 Dibenzofuran	168		15.742	15.742	(1.028)	2756001	5.01016	5.010	
47 4-Nitrophenol	109		15.541	15.525	(1.015)	1141542	14.7257	14.73	
48 2,4-Dinitrotoluene	165		15.711	15.703	(1.026)	2381729	16.9896	16.99	
50 Diethylphthalate	149		16.213	16.206	(1.059)	2413926	5.54219	5.542	
49 Fluorene	166		16.461	16.453	(1.075)	2480112	5.41895	5.419	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	1080531	5.14277	5.143	
52 4-Nitroaniline	138		16.492	16.476	(1.077)	962434	8.63557	8.636	
53 4,6-Dinitro-2-methylphenol	198		16.546	16.538	(0.899)	1507479	22.3235	22.32	
54 N-Nitrosodiphenylamine	169		16.693	16.693	(0.907)	1946668	4.89006	4.890	
§ 55 2,4,6-Tribromophenol	330		16.955	16.947	(1.107)	589376	7.16461	7.165	
56 4-Bromophenyl-phenylether	248		17.473	17.472	(0.949)	815156	5.05354	5.054	
57 Hexachlorobenzene	284		17.581	17.581	(0.955)	810452	4.46180	4.462	
58 Pentachlorophenol	266		17.991	17.983	(0.977)	1298072	14.1347	14.13	
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2690572	4.00000		
60 Phenanthrene	178		18.463	18.455	(1.003)	4725345	6.86258	6.863	
61 Anthracene	178		18.571	18.564	(1.009)	3445368	5.16020	5.160	
62 Carbazole	167		18.896	18.889	(1.026)	3474324	5.68003	5.680	
63 Di-n-butylphthalate	149		19.600	19.593	(1.065)	6585117	7.50139	7.501	
64 Fluoranthene	202		20.854	20.815	(0.890)	11754757	9.25861	9.259	
65 Pyrene	202		21.287	21.248	(0.908)	11545167	8.93048	8.930	
§ 66 Terphenyl-d14	244		21.550	21.527	(0.919)	4131825	3.94995	3.950	
67 Butylbenzylphthalate	149		22.433	22.410	(0.957)	2957172	4.31891	4.319	
68 Benzo(a)anthracene	228		23.424	23.409	(0.999)	10009053	7.69146	7.691	
* 69 Chrysene-d12	240		23.440	23.424	(1.000)	3690616	4.00000		
70 3,3'-Dichlorobenzidine	252		23.370	23.347	(0.997)	813435	1.40150	1.401	
71 Chrysene	228		23.494	23.470	(1.002)	10382844	9.81744	9.817	
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.409	(0.956)	12043169	13.2848	13.28	
* 134 Di-n-octylphthalate-d4	153		24.500	24.492	(1.000)	5895207	4.00000		
73 Di-n-octylphthalate	149		24.516	24.500	(1.001)	3528312	2.69899	2.699	
74 Benzo(b)fluoranthene	252		25.336	25.305	(0.969)	9576310	7.89015	7.890	
75 Benzo(k)fluoranthene	252		25.390	25.367	(0.971)	7361183	6.41227	6.412	
76 Benzo(a)pyrene	252		26.025	25.994	(0.995)	6745894	6.35025	6.350	
* 77 Perylene-d12	264		26.149	26.118	(1.000)	3245250	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.956	28.878	(1.107)	5987553	4.91226	4.912	
79 Dibenzo(a,h)anthracene	278		29.002	28.932	(1.109)	4312171	4.65214	4.652	
80 Benzo(g,h,i)perylene	276		29.795	29.725	(1.139)	5014741	5.19855	5.199	
90 N-Nitrosodimethylamine	74		4.719	4.719	(0.510)	1576985	12.9009	12.90	
91 Aniline	93		8.651	8.628	(0.936)	543339	2.00490	2.005	
93 Benzidine	184		21.117	21.070	(0.901)	22447	0.03983	0.03983	
103 Pyridine	79		4.835	4.781	(0.523)	395533	1.82452	1.825	
105 1-methylnaphthalene	142		13.374	13.366	(1.141)	1915556	5.19175	5.192	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.785	16.785	(1.096)	3337943	5.13202	5.132	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.336	25.367	(0.969)	16327851	14.1386	14.14
120 2,3,4,6-Tetrachlorophenol	232	15.981	15.981	(1.043)	465096	3.74265	3.743

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022310.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-MSD1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	601832	39.65
27 Naphthalene-d8	1609461	804731	3218922	2248229	39.69
42 Acenaphthene-d10	853113	426557	1706226	1273098	49.23
59 Phenanthrene-d10	1556648	778324	3113296	2690572	72.84
69 Chrysene-d12	1539062	769531	3078124	3690616	139.80
134 Di-n-octylphthala	2949571	1474786	5899142	5895207	99.87
77 Perylene-d12	1634059	817030	3268118	3245250	98.60

<-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.44	0.07
134 Di-n-octylphthala	24.49	23.99	24.99	24.50	0.03
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022310.D

Lab ID: BLA0624-MSD1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 20:06

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.523	0.517	0.0059	Pyridine

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RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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



## STANDARD REFERENCE MATERIAL RECOVERY

### EPA 8270E

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Matrix:** Solid

**Laboratory ID:** BLA0624-SRM1

**Batch:** BLA0624

**Initial/Final:** 1 g / 1 mL

**Preparation:** EPA 3546 (Microwave)

**Analyzed:** 03/02/2023 20:44

**Standard ID:** K003477

**Expires:** 01/31/2024

**Standard Lot#:** CRM 143 (LRAC8918)

**Description:** CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Phenol	2660.0	2870	43.9	200		108	26 - 174
4-Methylphenol	6617.0	6970	73.9	200		105	40 - 160
Naphthalene	4458.0	4510	42.4	200		101	25 - 175
Acenaphthylene	1948.0	1740	62.4	200		89.5	37 - 167
Dimethylphthalate	4537.0	4990	43.9	200		110	41 - 159
Acenaphthene	5489.0	5860	52.2	200		107	41 - 159
Dibenzofuran	6130.0	6510	141	200		106	45 - 155
Fluorene	3724.0	3770	146	200		101	44 - 156
Phenanthrene	5052.0	5460	87.2	200		108	46 - 154
Anthracene	2866.0	2590	71.9	200		90.5	42 - 158
Fluoranthene	2497.0	2110	60.9	200		84.4	39 - 161
Pyrene	2964.0	2740	56.8	200		92.3	38 - 162
Butylbenzylphthalate	3511.0	2850	94.1	200		81.1	36 - 164
Benzo(a)anthracene	5751.0	5560	59.6	200		96.7	49 - 151
Chrysene	1477.0	1450	60.6	200		98.3	45 - 155
bis(2-Ethylhexyl)phthalate	2905.0	1440	54.6	500		49.6	26 - 174
Benzofluoranthenes, Total	6534.0	4940	100	400		75.6	40 - 160
Benzo(a)pyrene	5902.0	4420	42.3	200		74.9	43 - 157
Indeno(1,2,3-cd)pyrene	3914.0	3500	147	200		89.4	22 - 178
Dibenzo(a,h)anthracene	3420.0	3400	172	200		99.3	37 - 163
Benzo(g,h,i)perylene	1380.0	1320	136	200		95.5	35 - 165

\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230302.16\NT1003022311.D

Date: 02-MAR-2023 20:44

Client ID:

Sample Info: BLR0624-SRM1

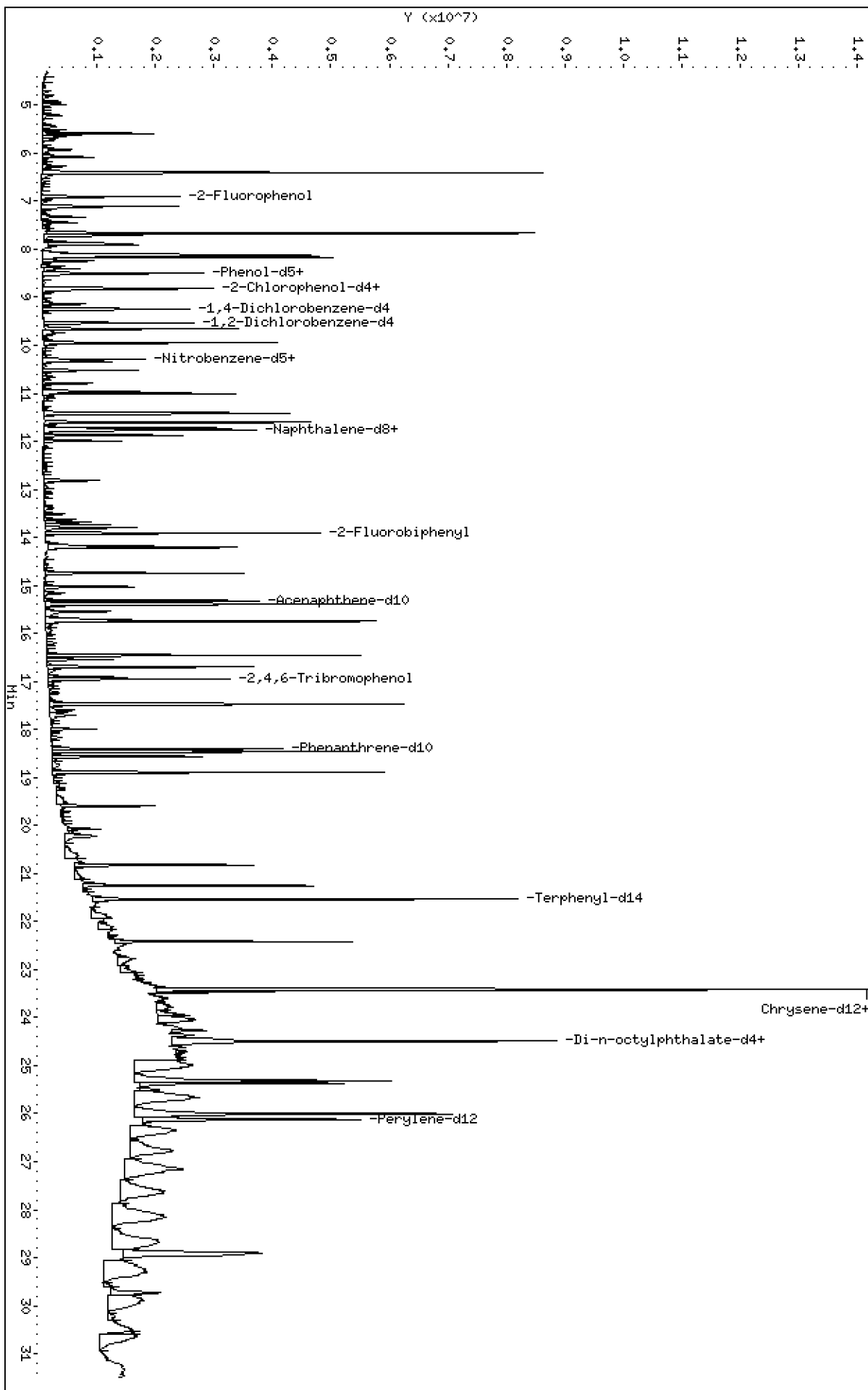
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

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Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

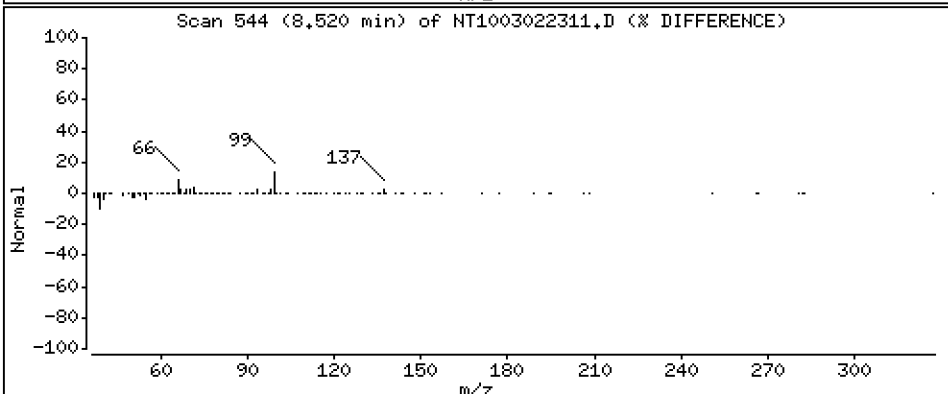
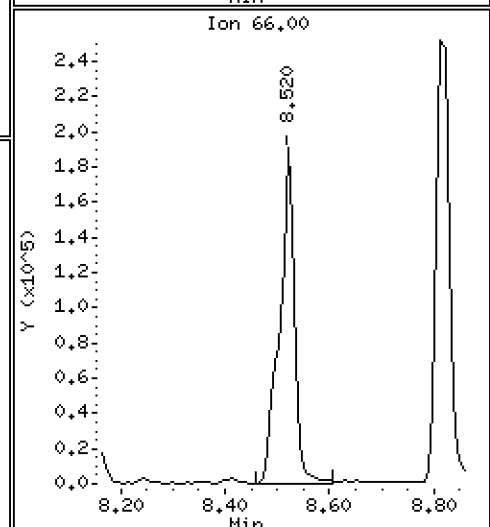
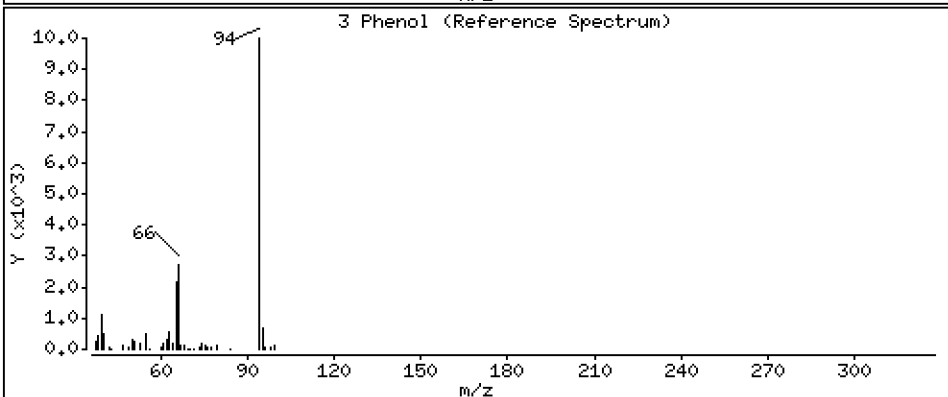
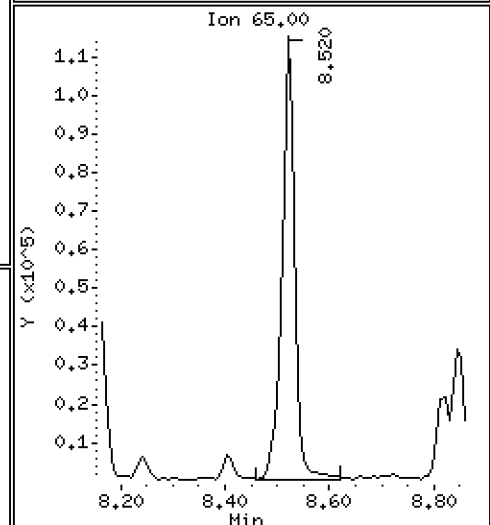
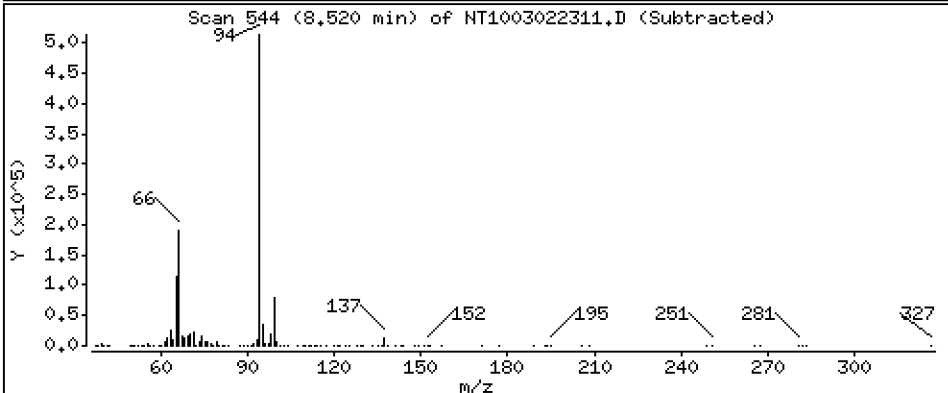
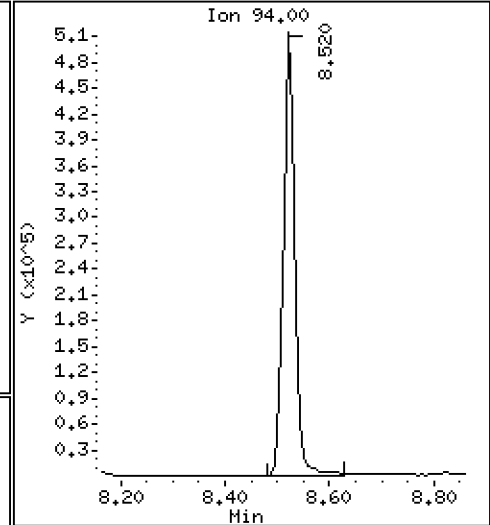
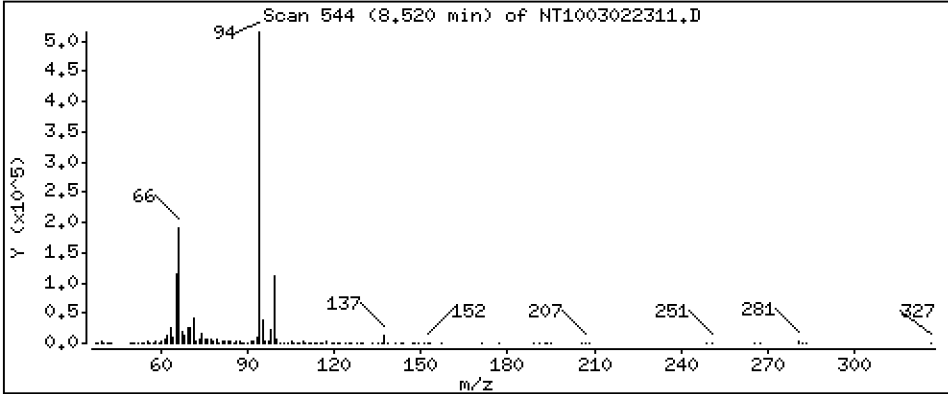
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 2,872 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

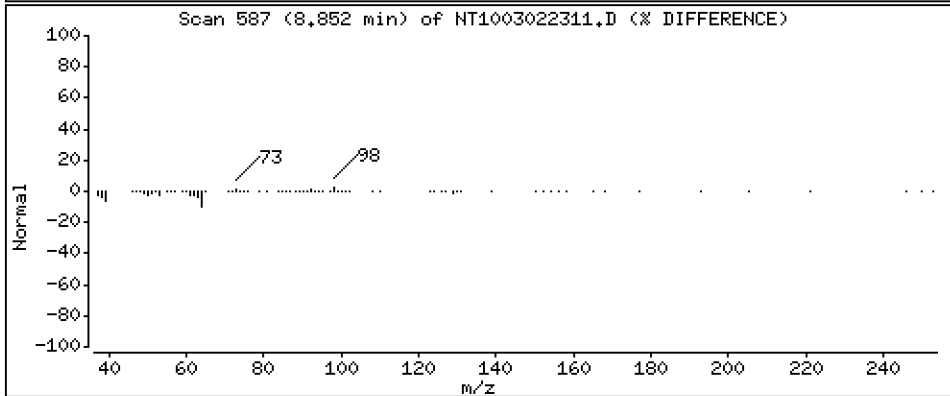
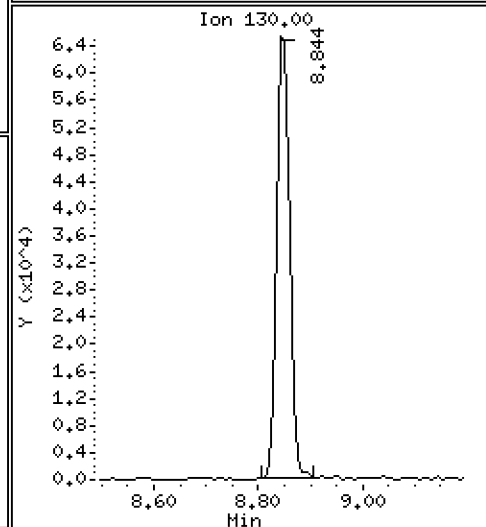
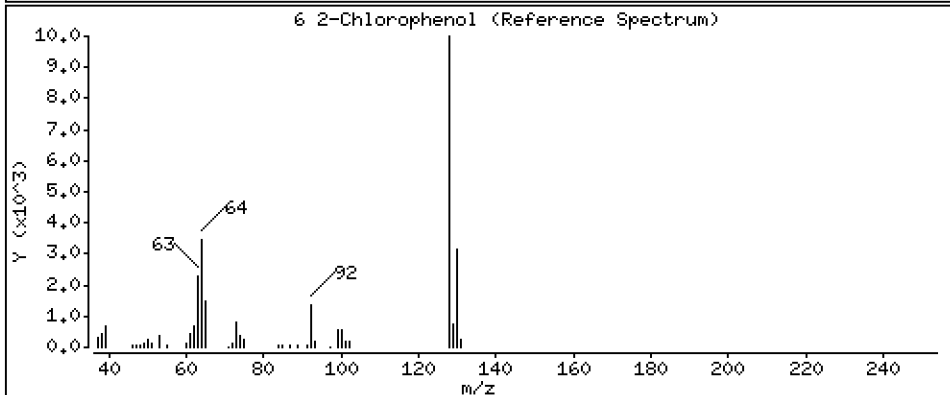
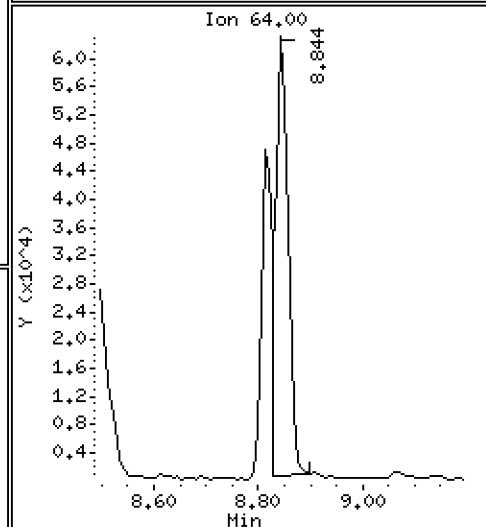
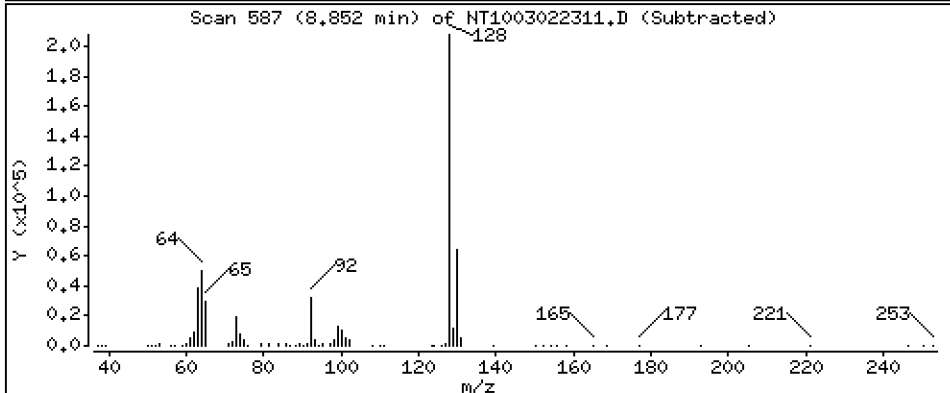
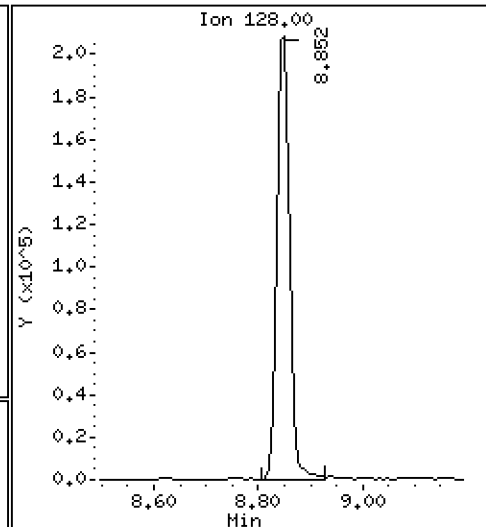
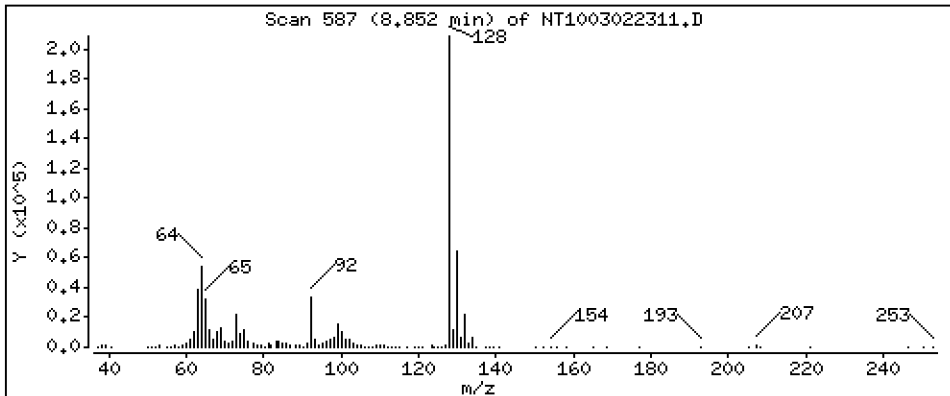
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 1,501 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

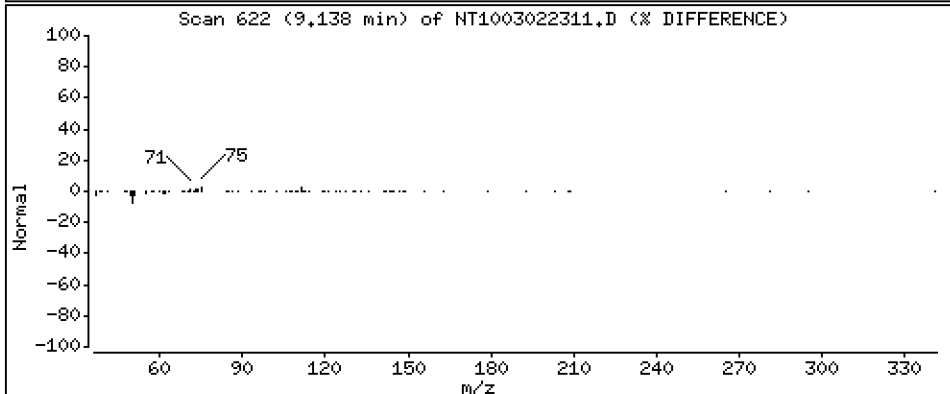
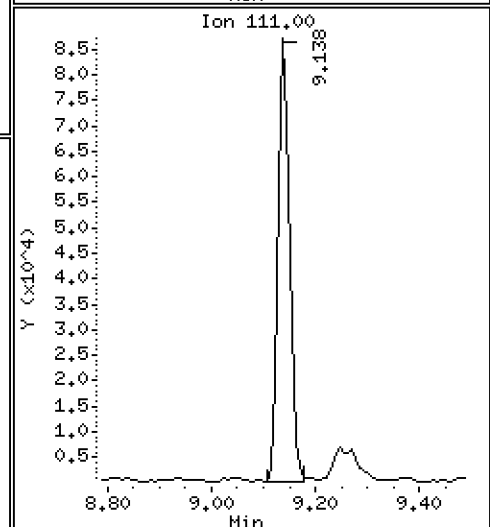
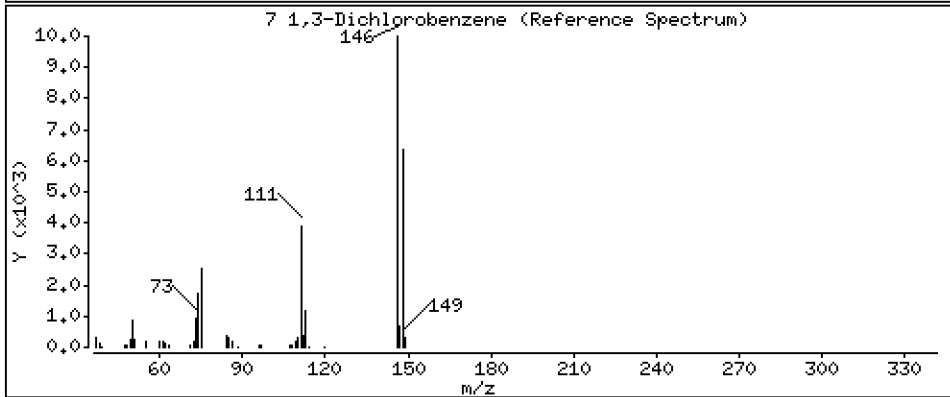
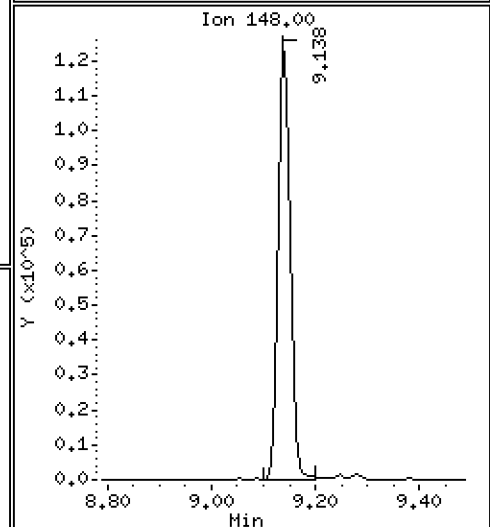
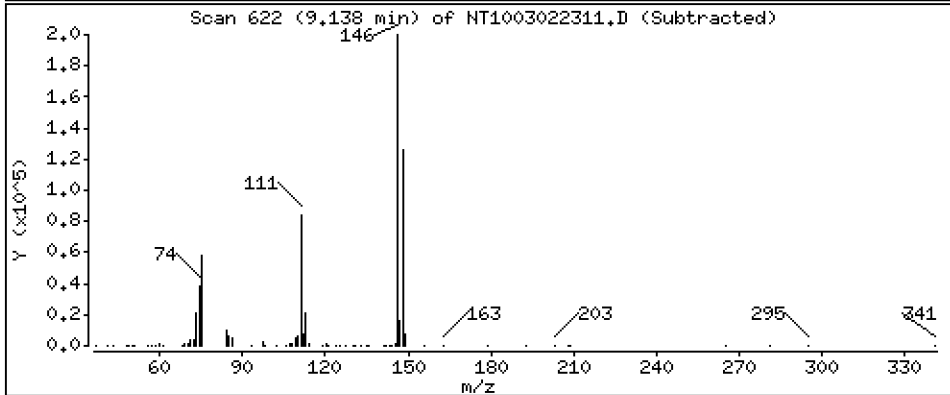
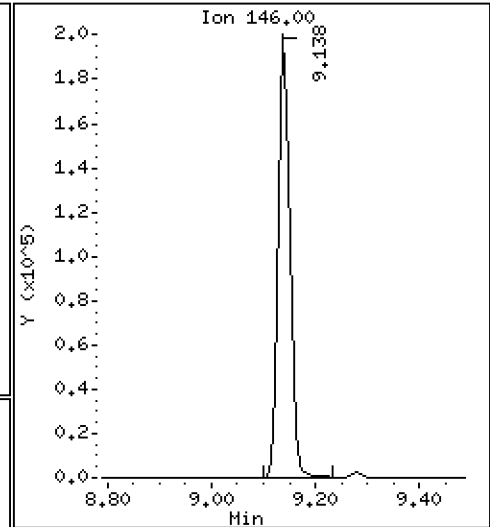
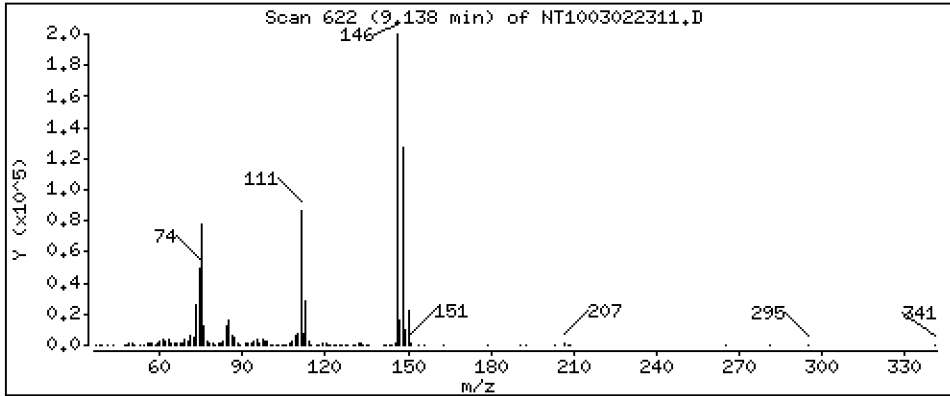
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 1,231 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

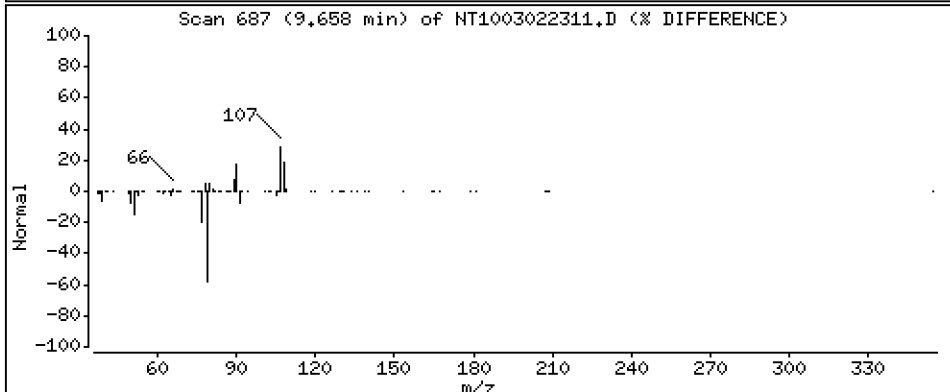
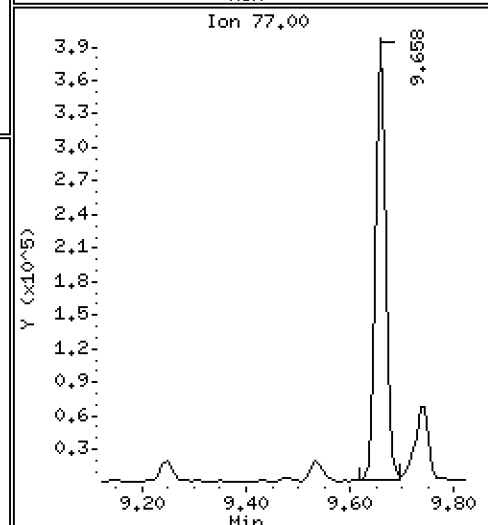
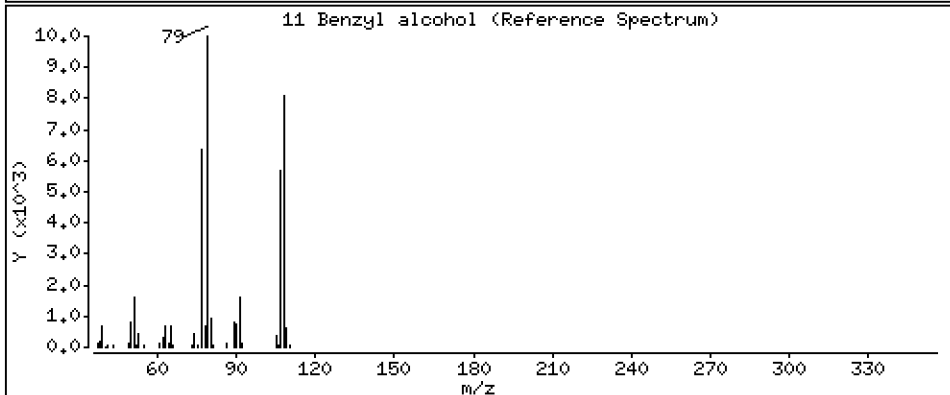
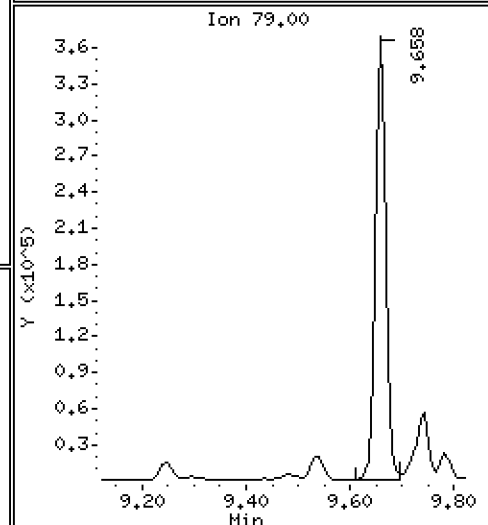
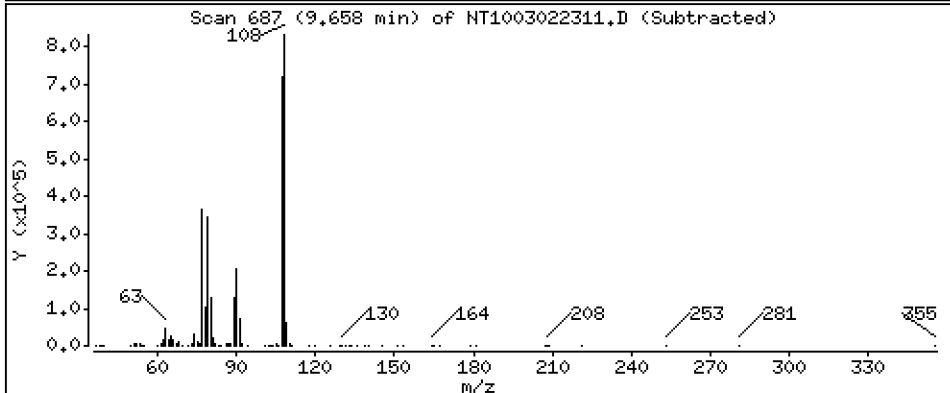
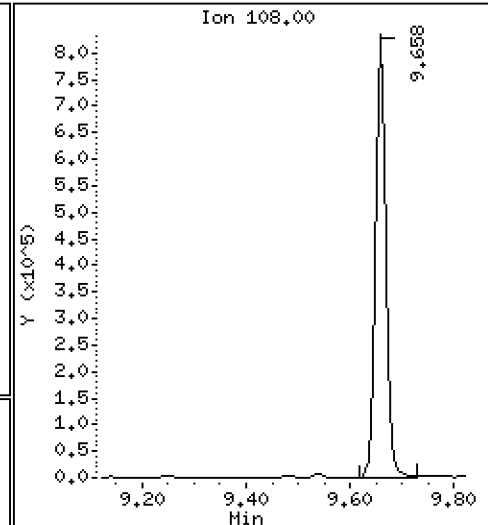
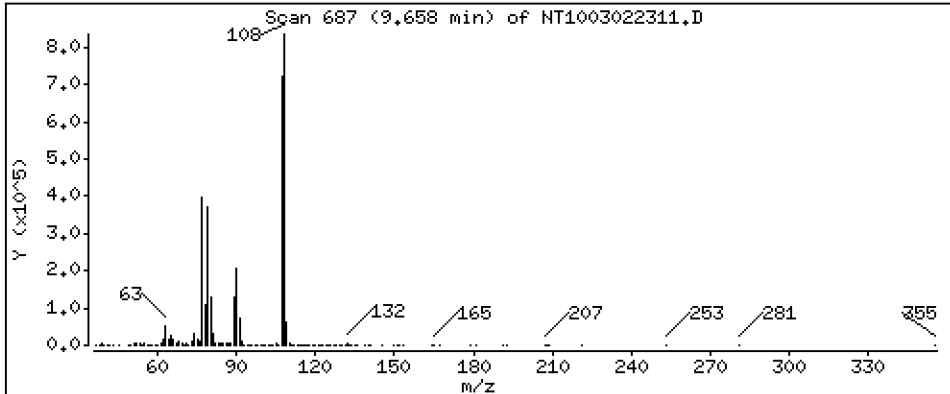
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 8,366 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

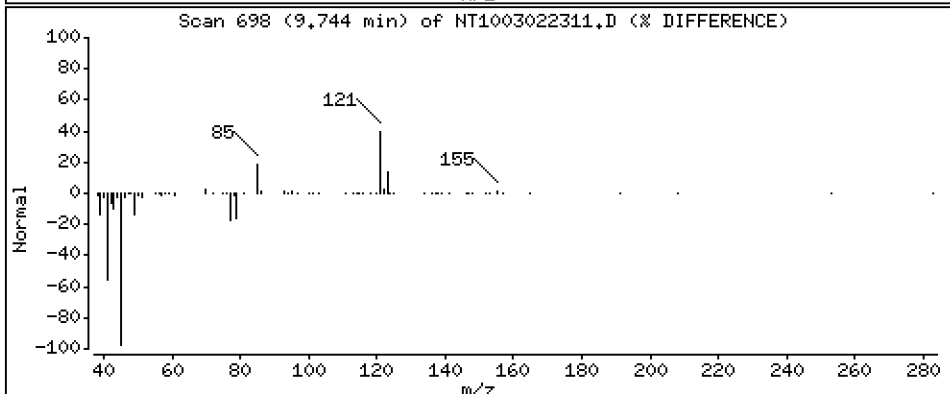
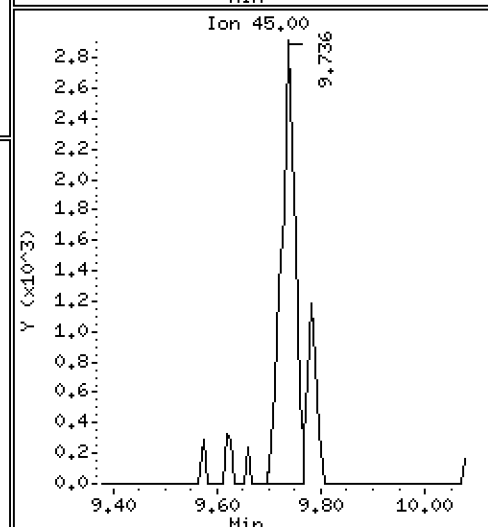
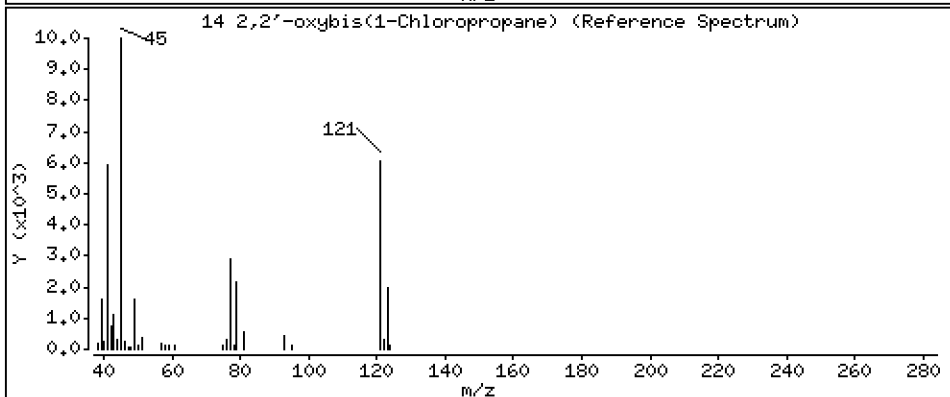
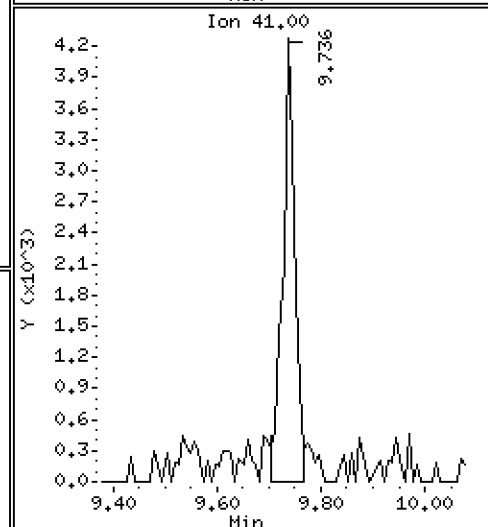
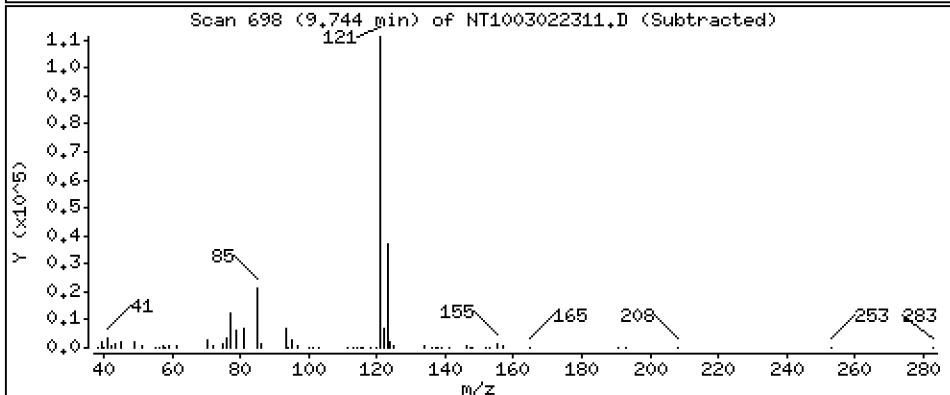
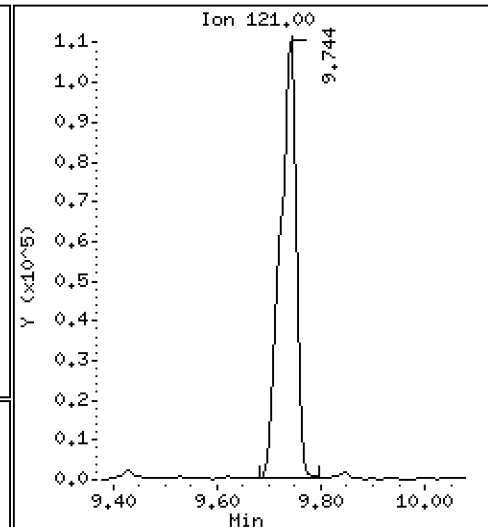
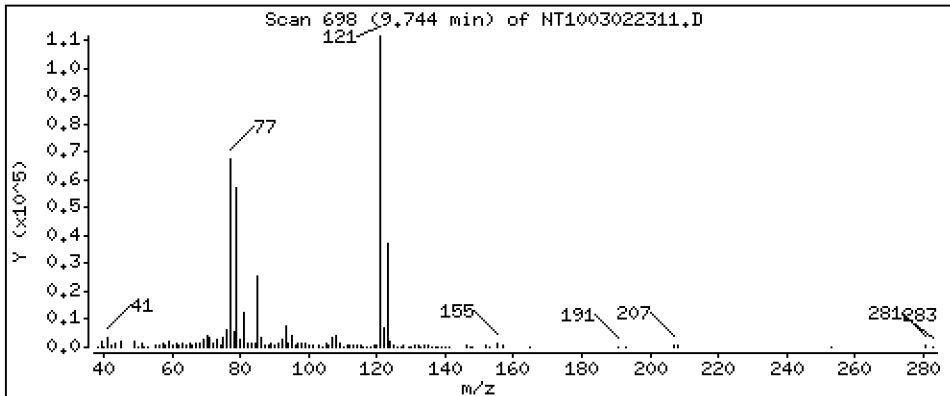
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,471 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

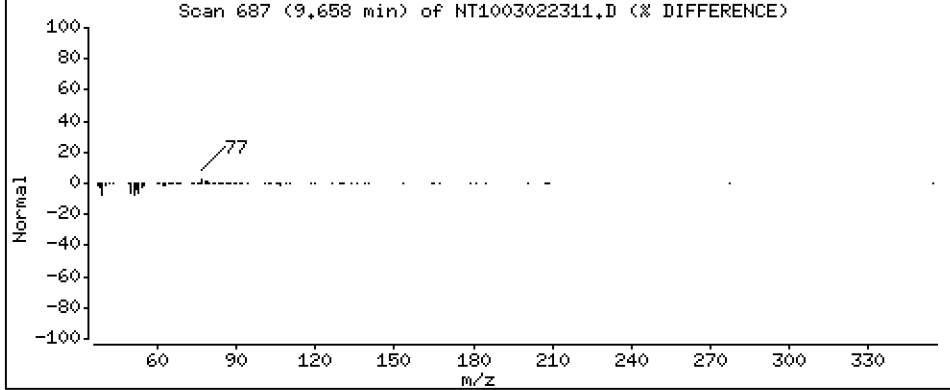
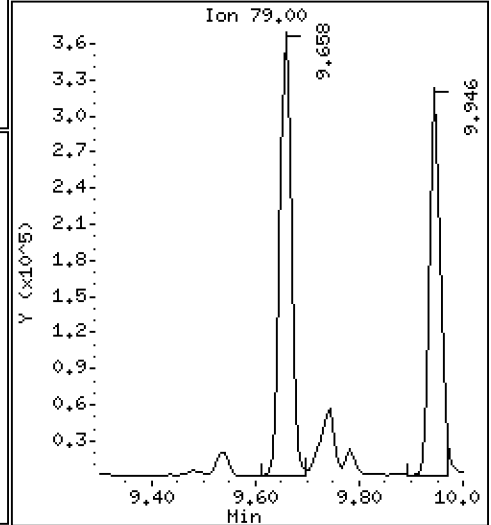
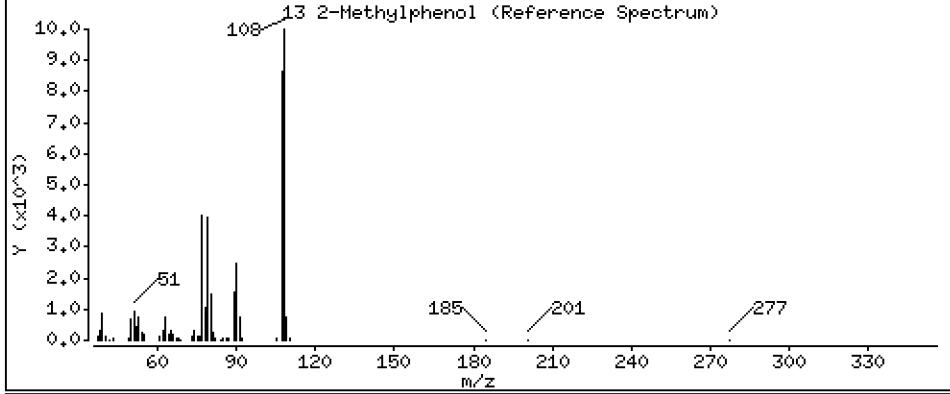
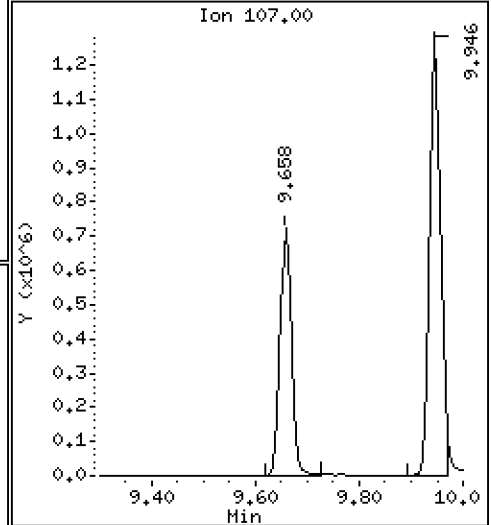
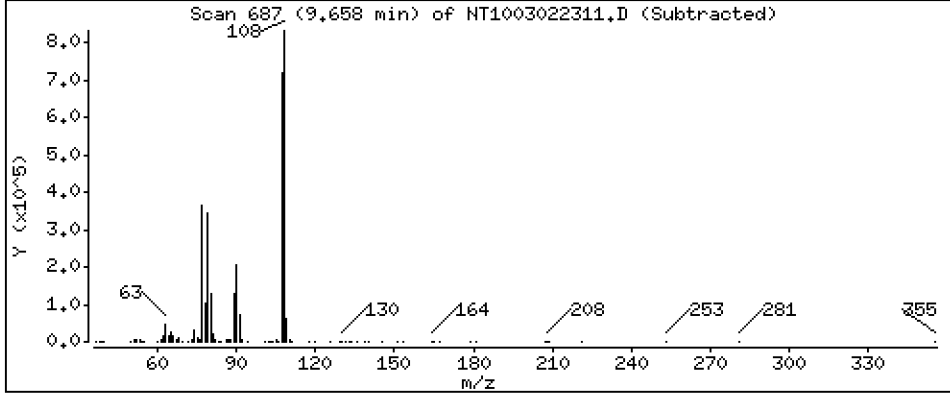
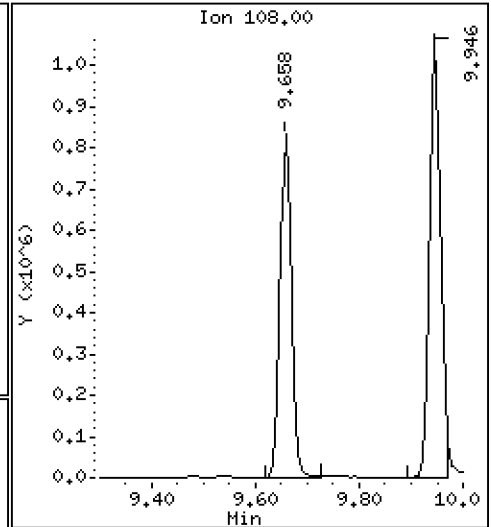
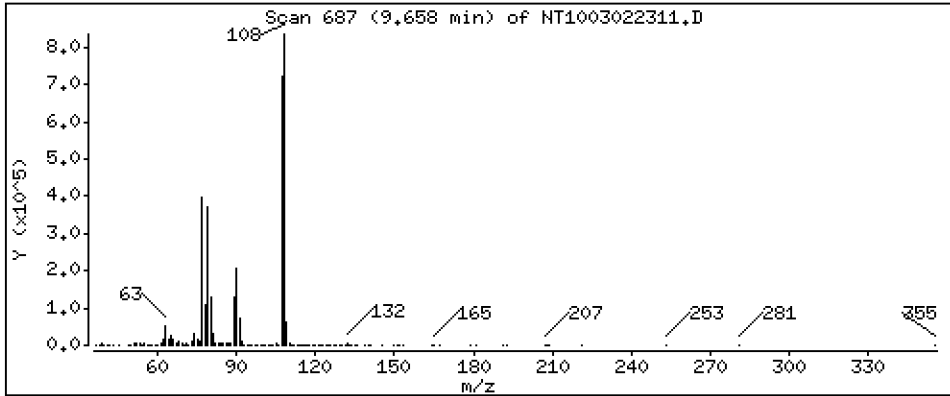
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 5.641 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

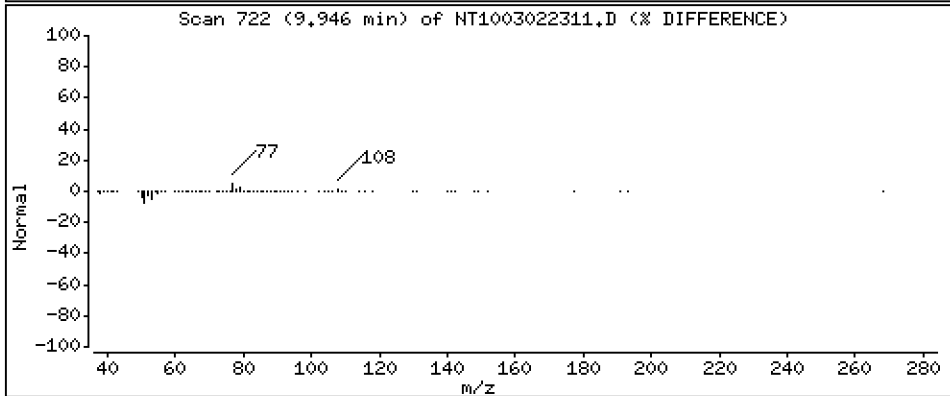
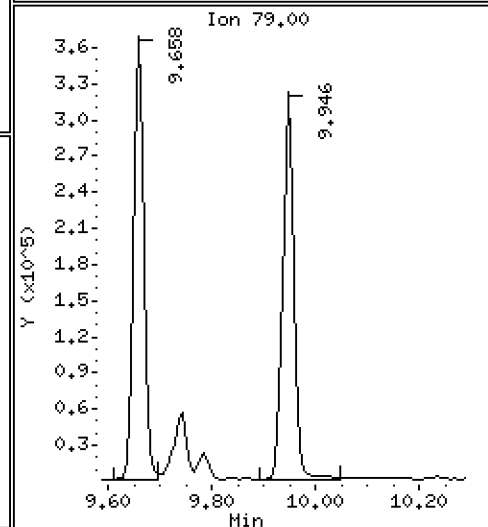
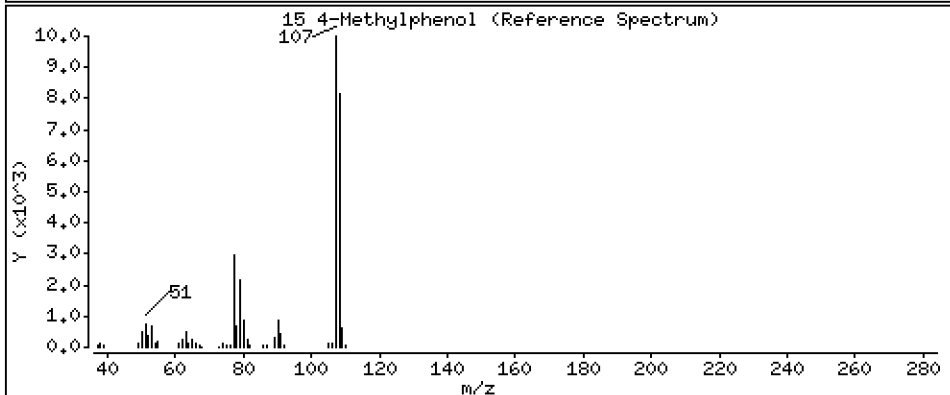
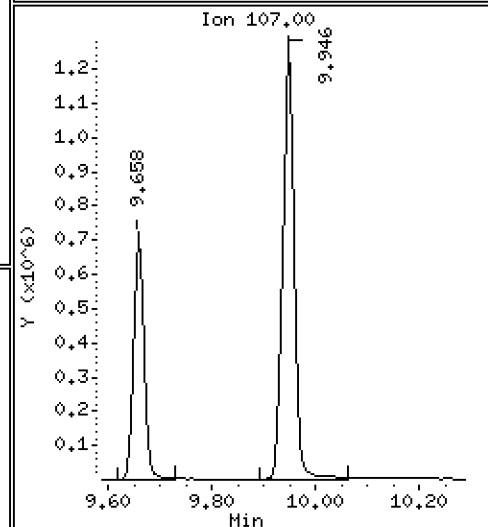
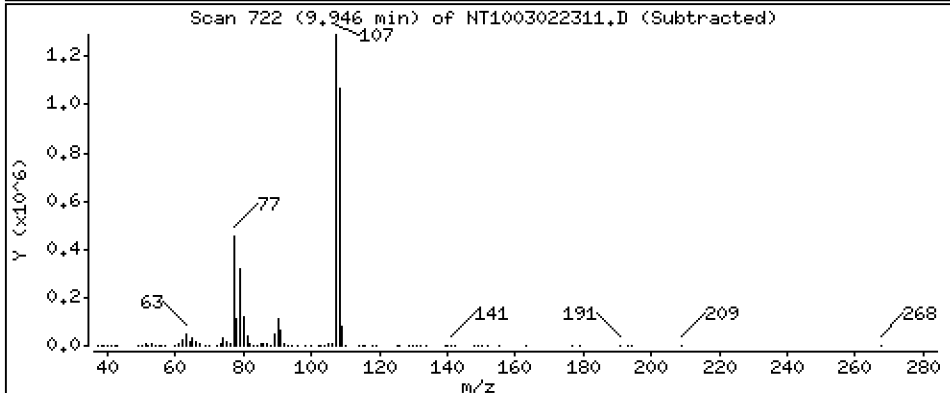
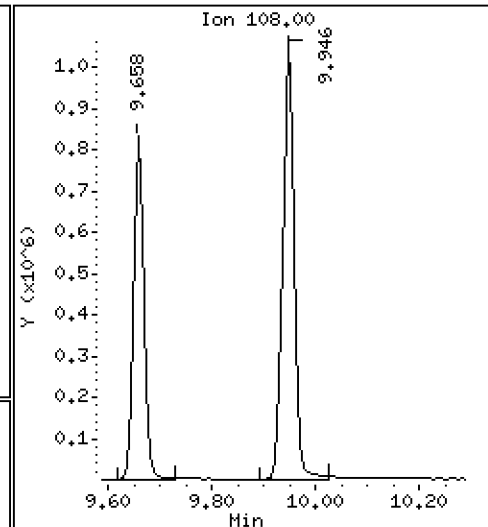
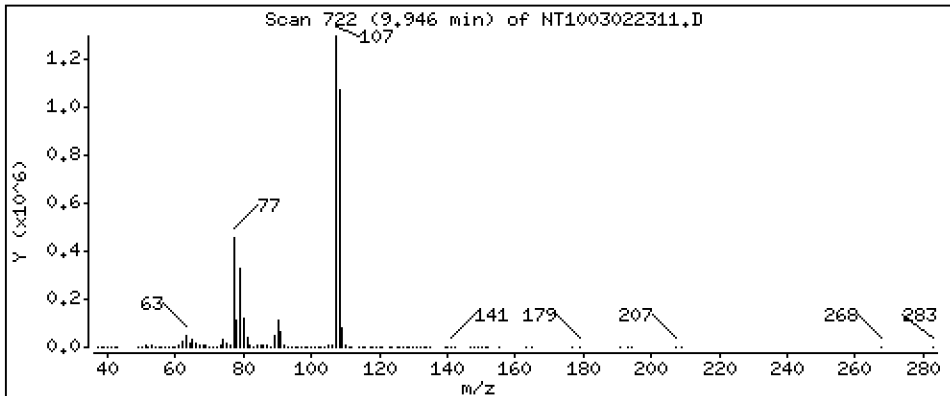
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 6,974 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

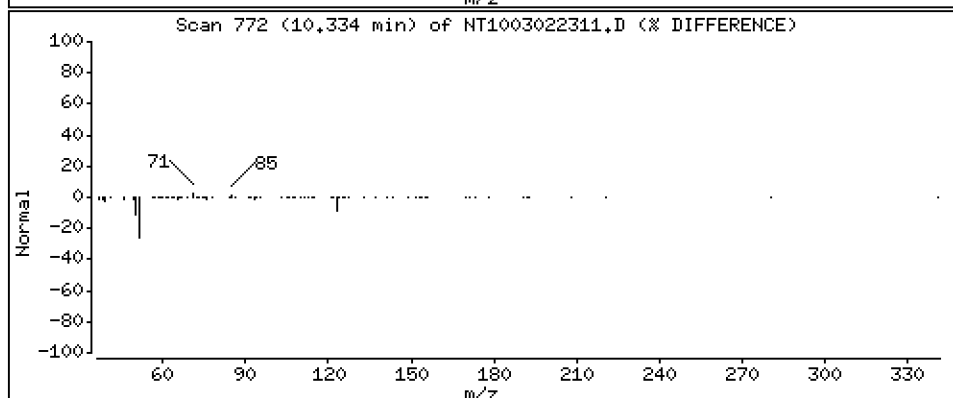
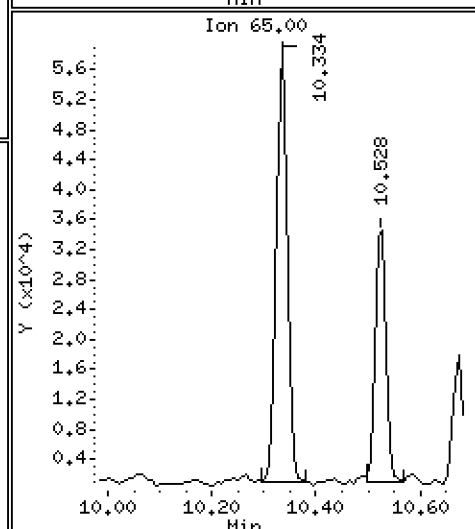
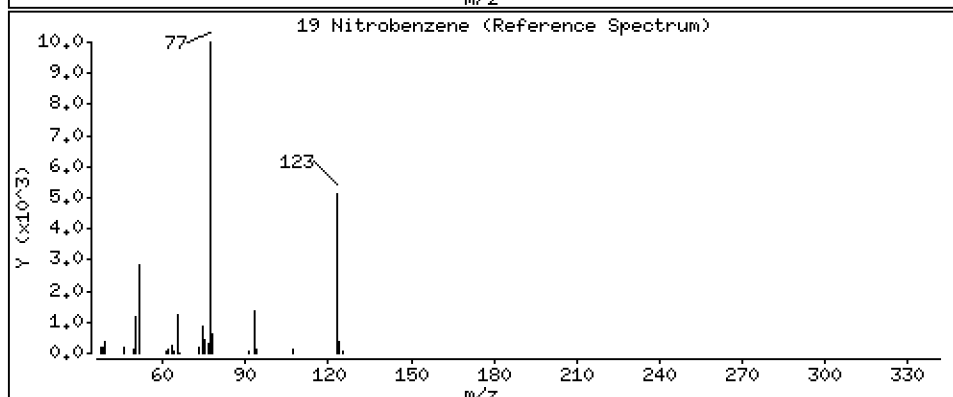
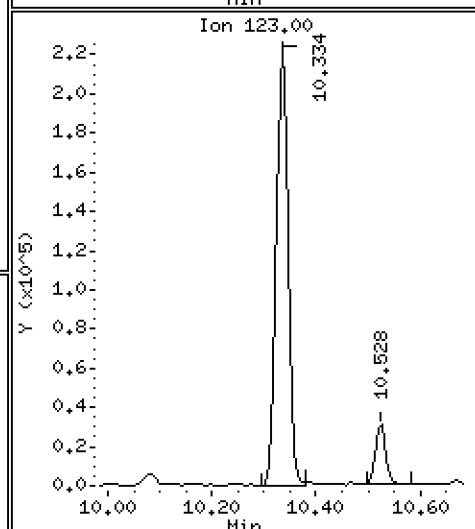
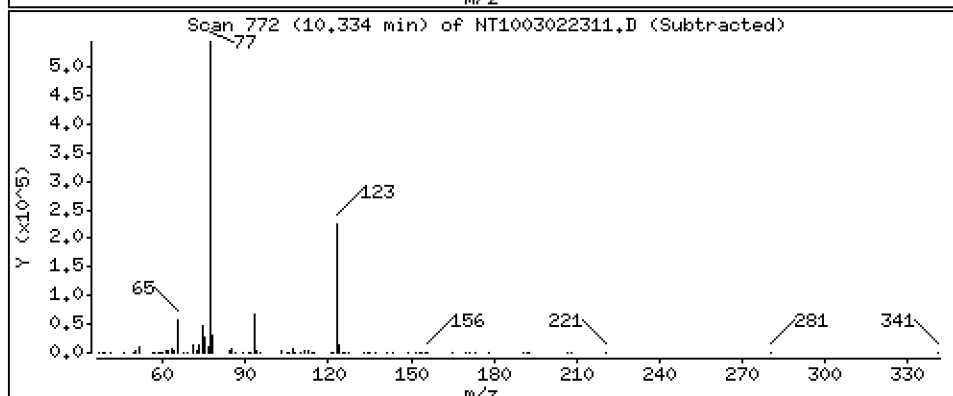
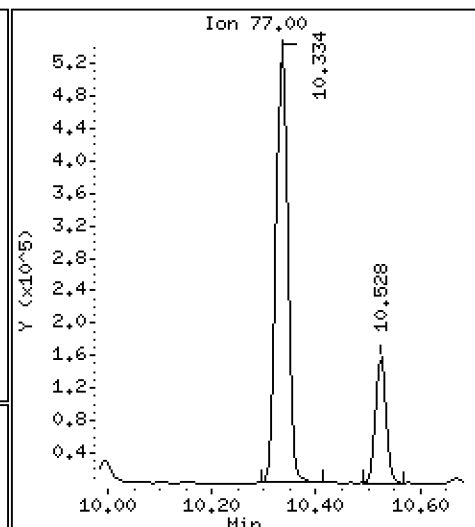
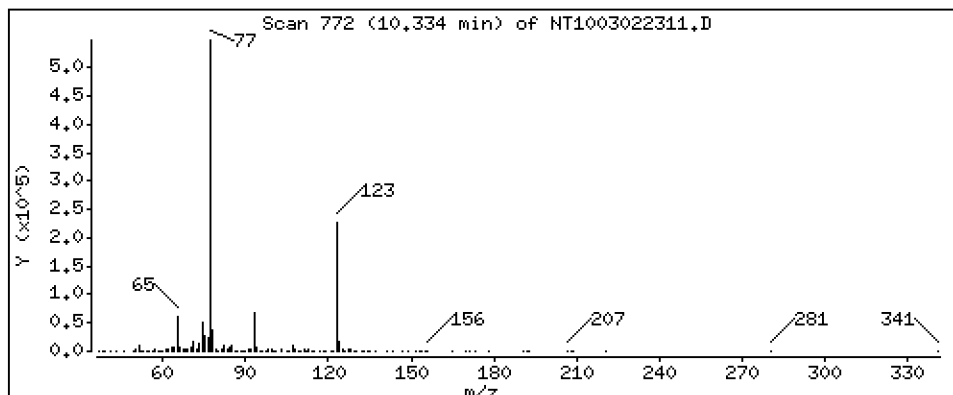
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 3,087 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

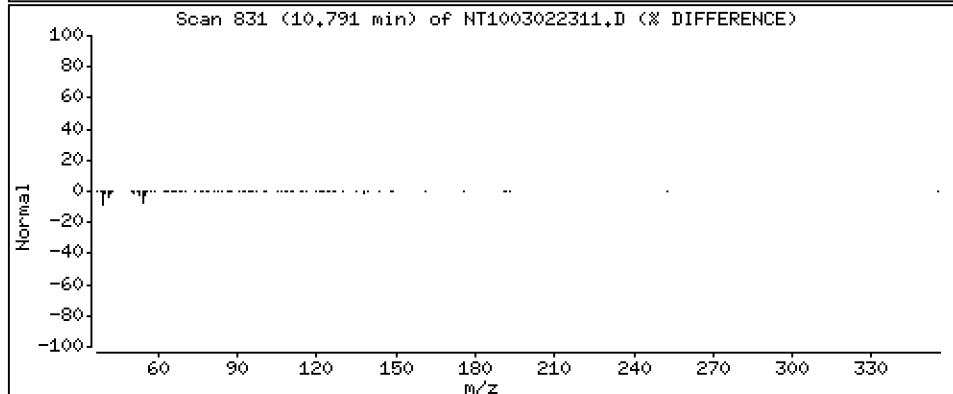
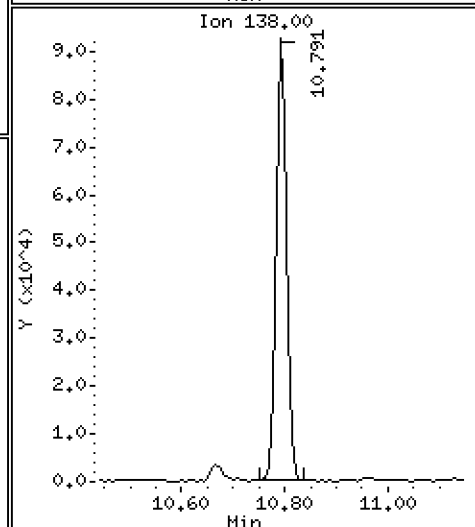
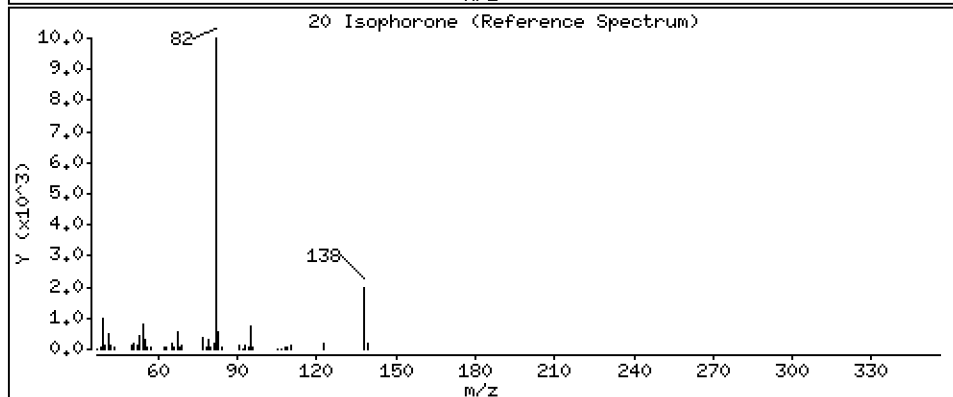
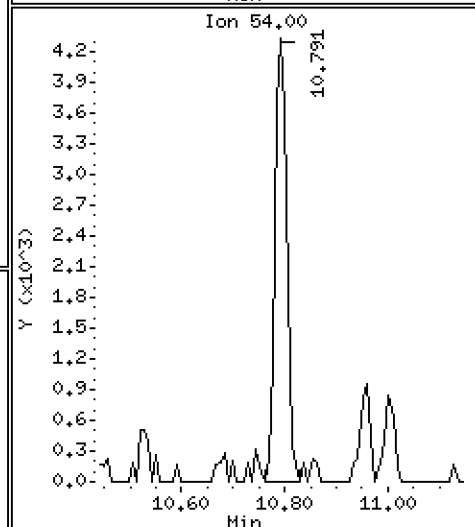
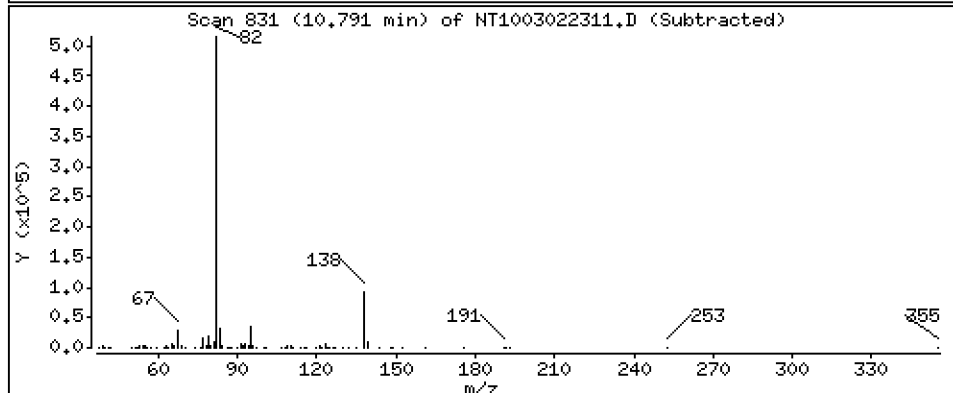
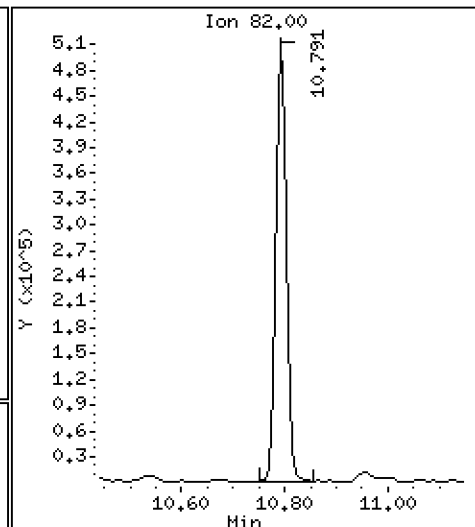
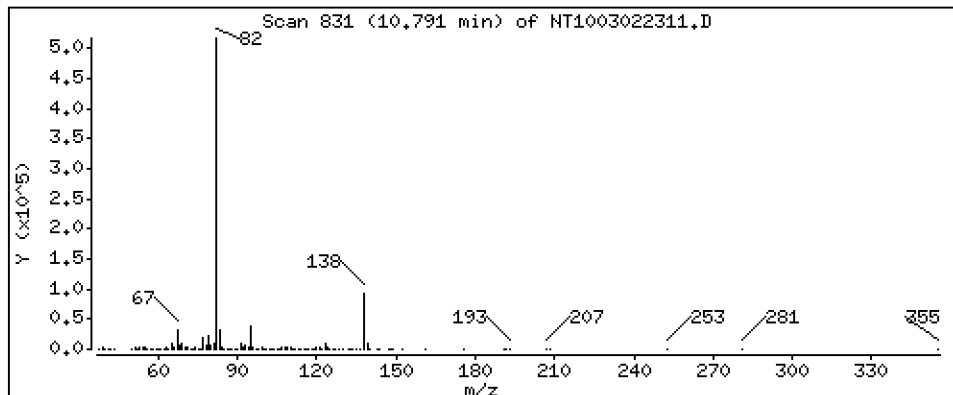
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 2,281 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

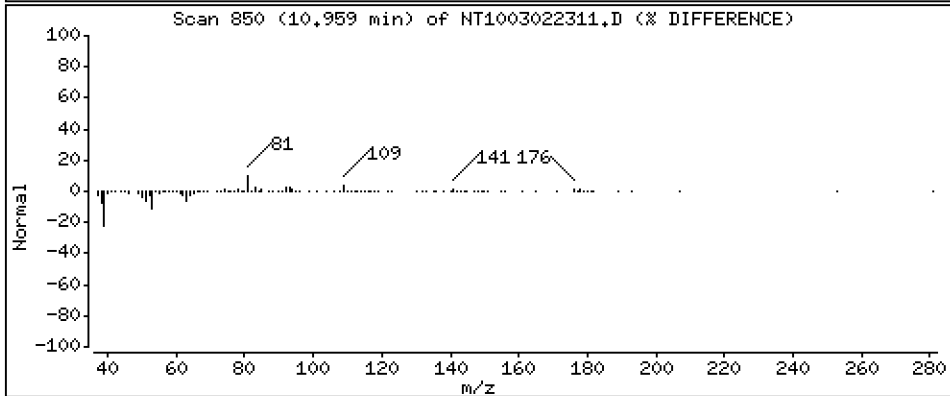
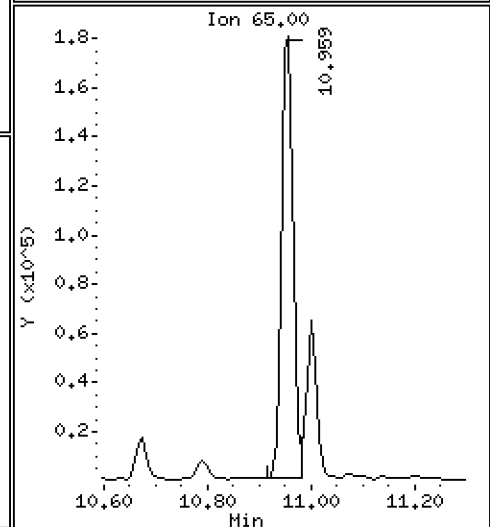
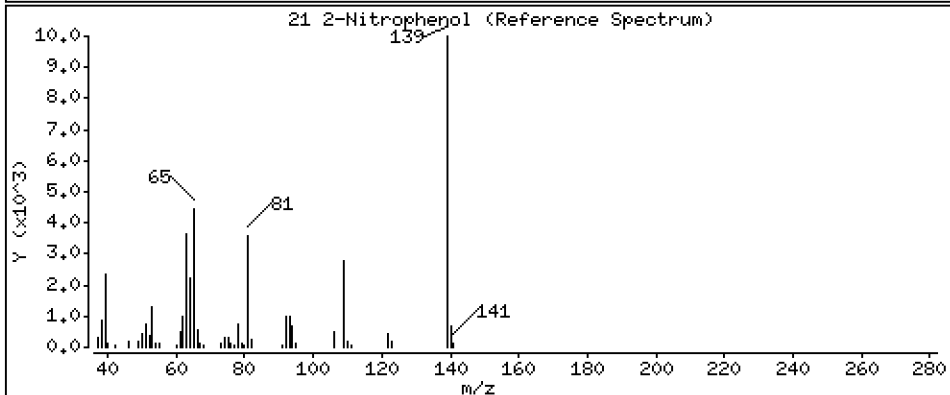
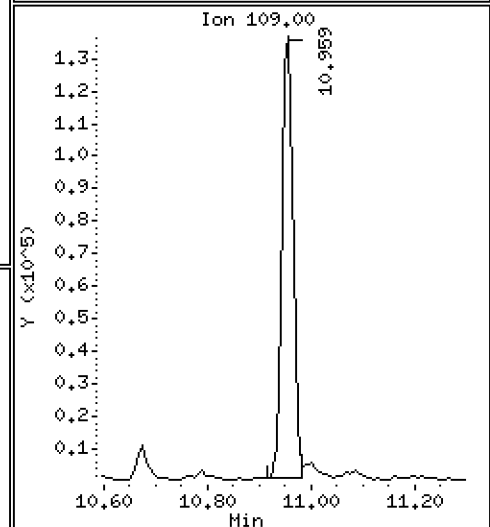
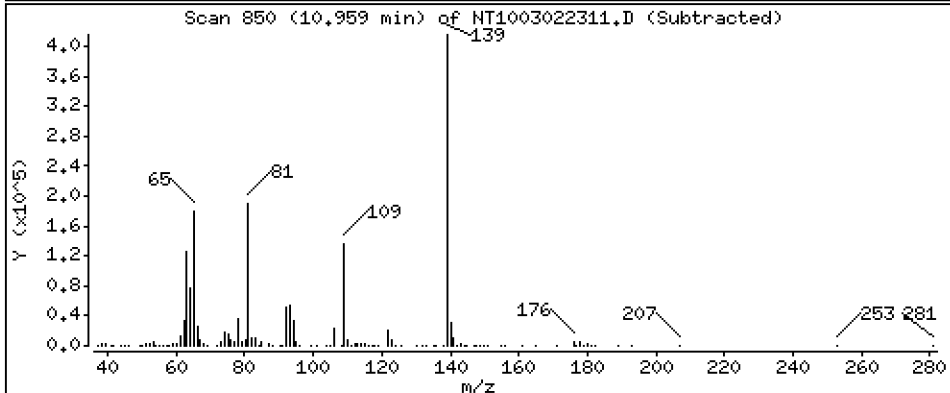
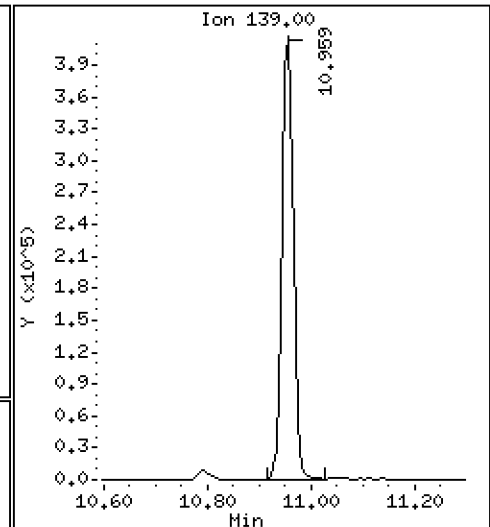
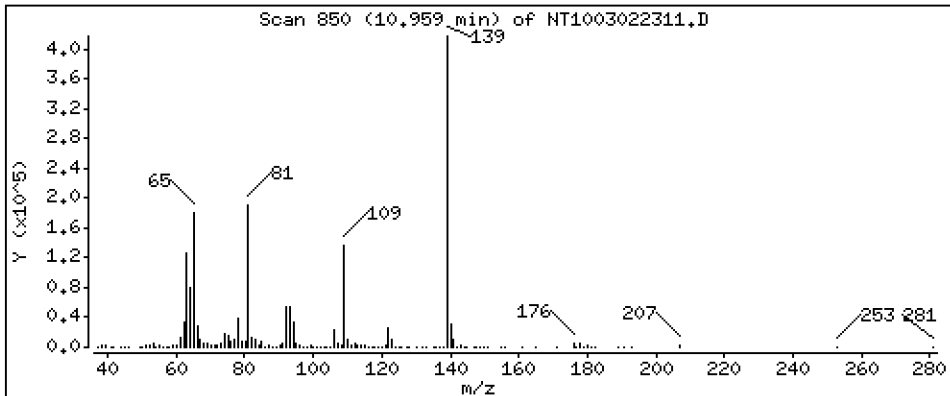
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 4,664 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

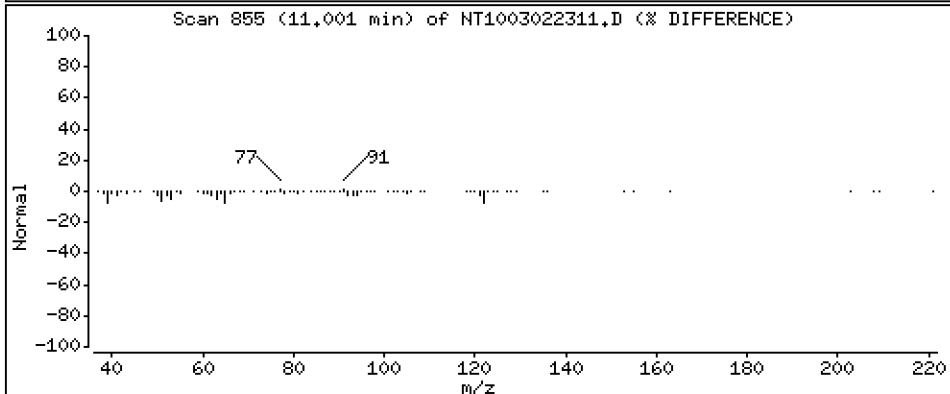
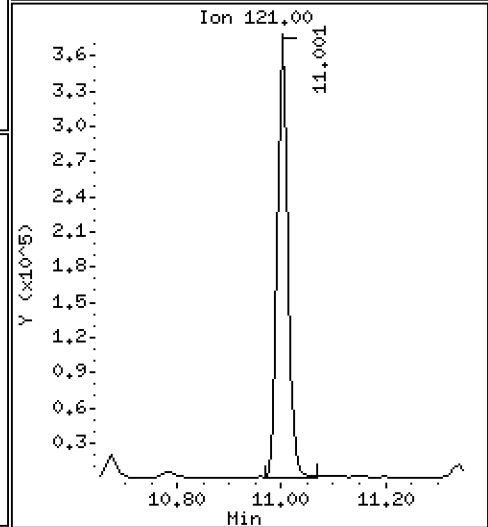
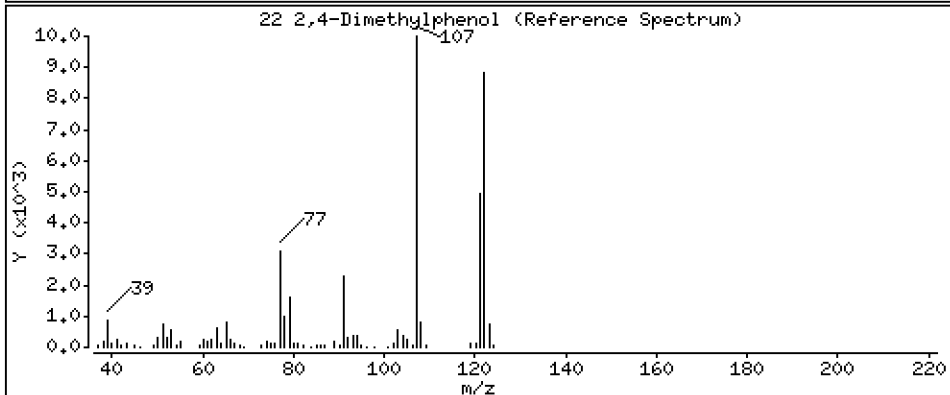
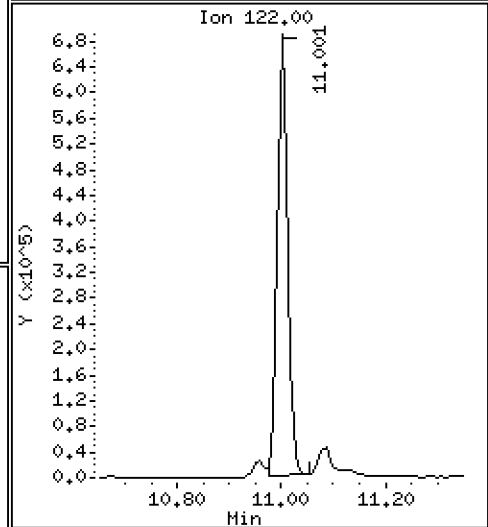
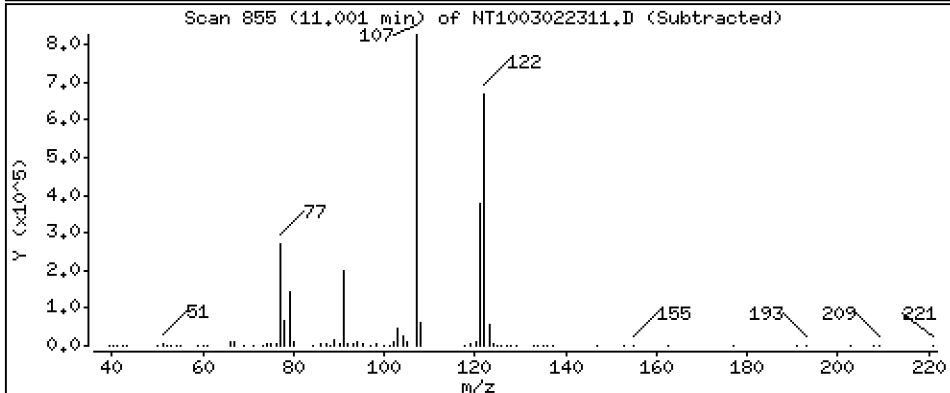
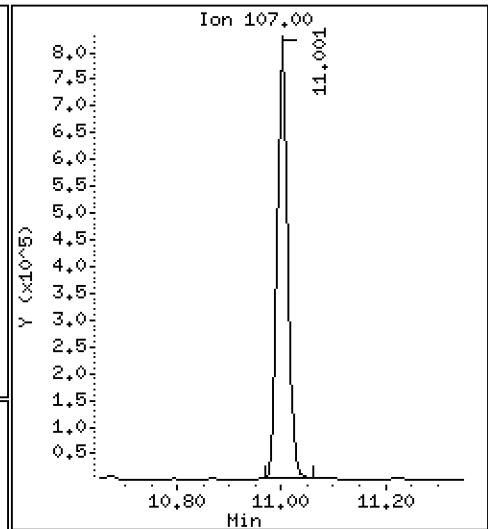
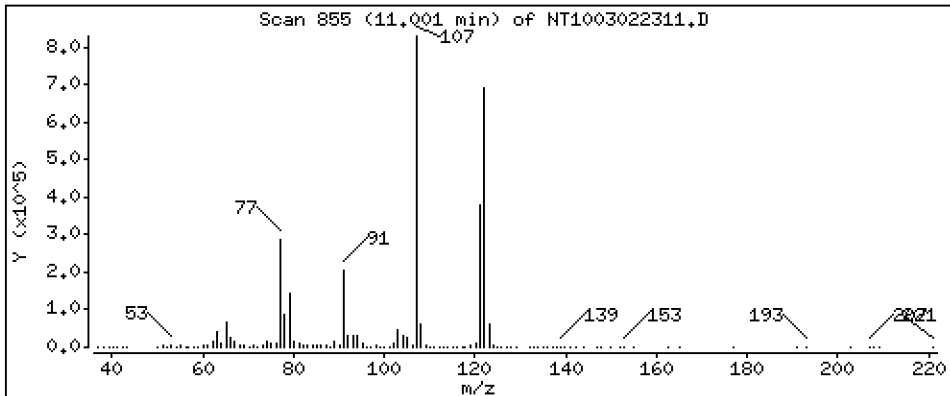
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 4,491 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

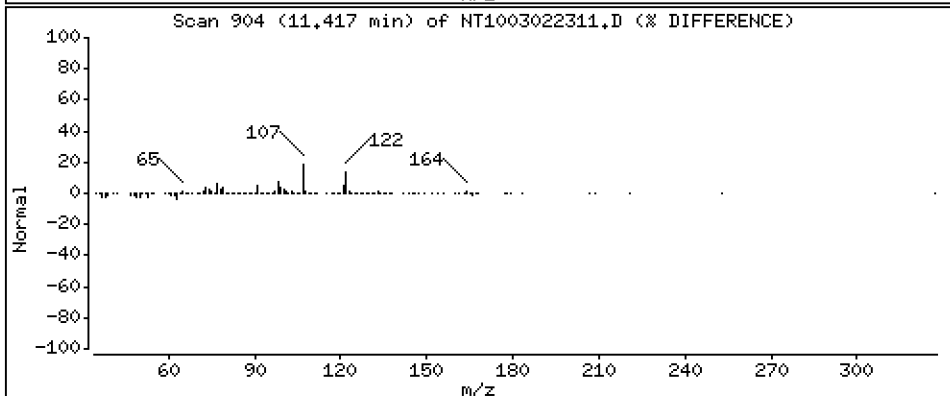
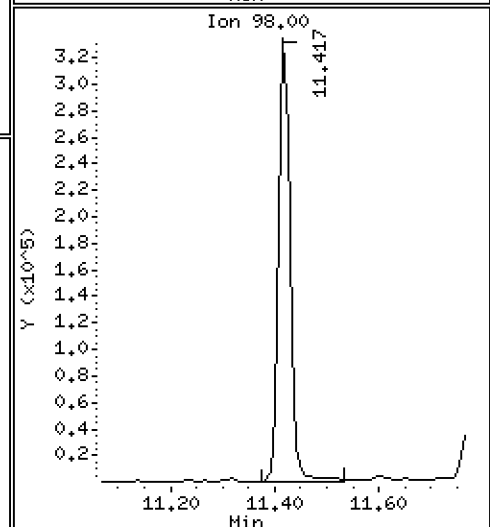
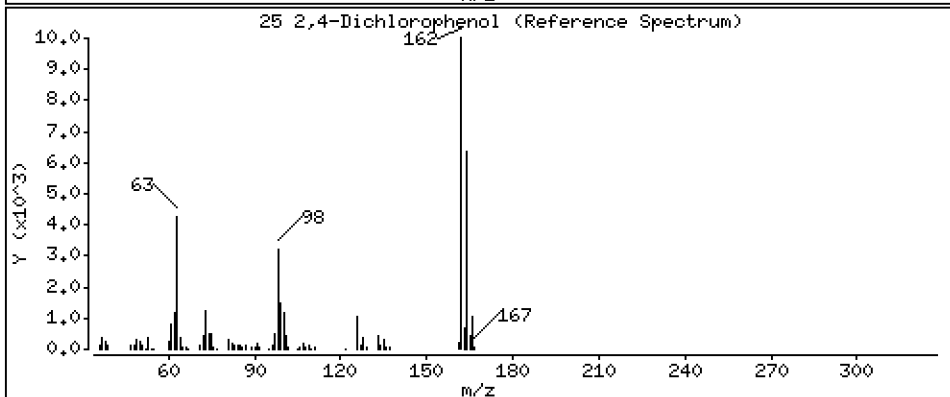
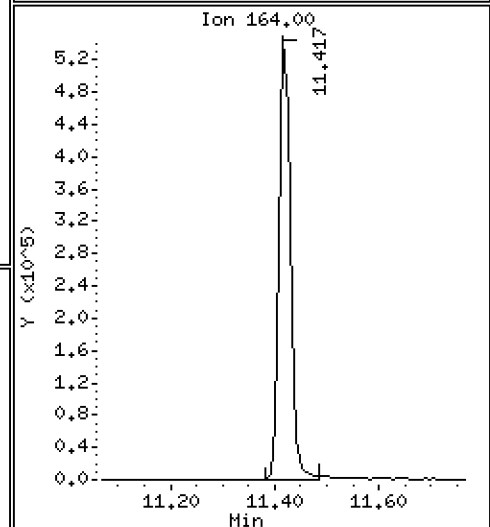
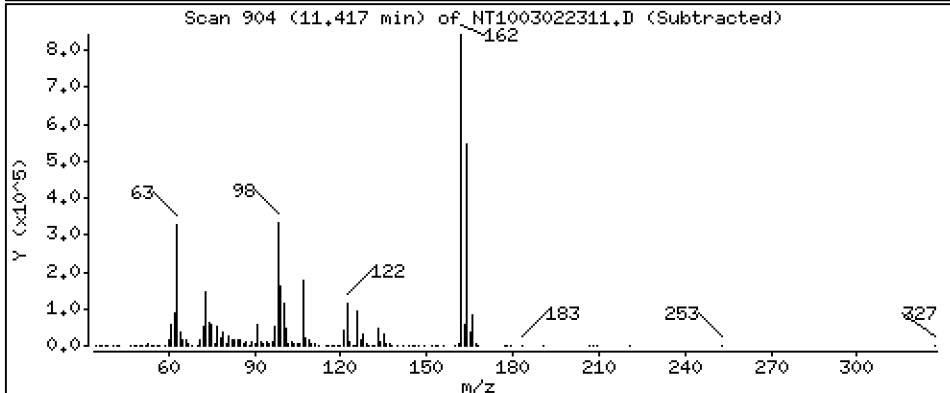
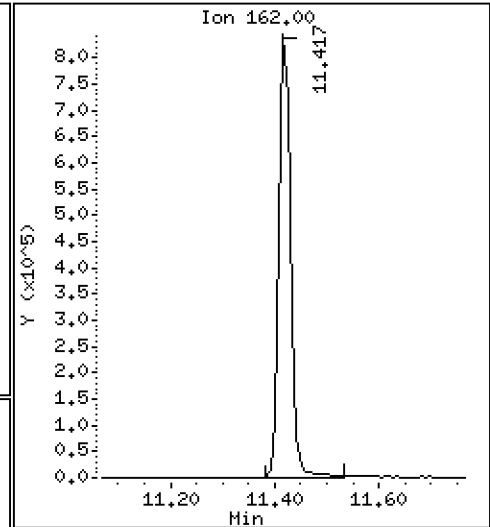
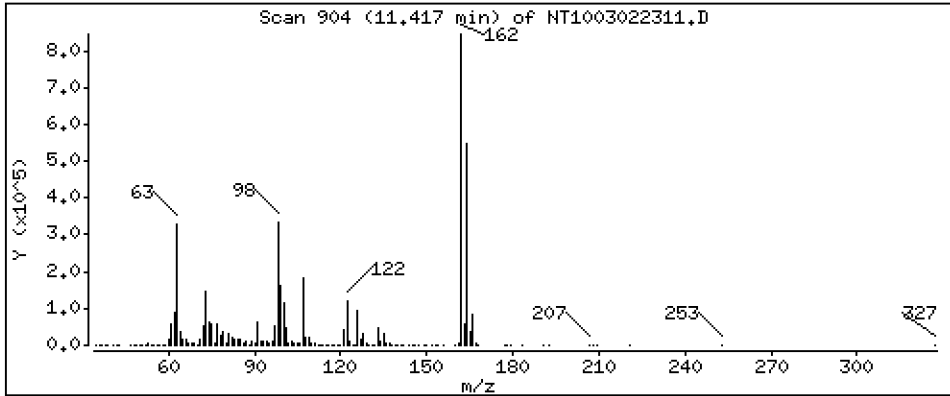
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 7,386 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

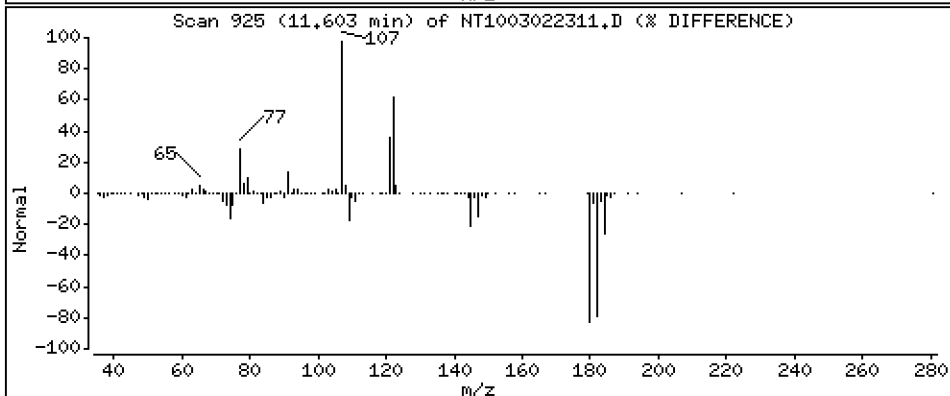
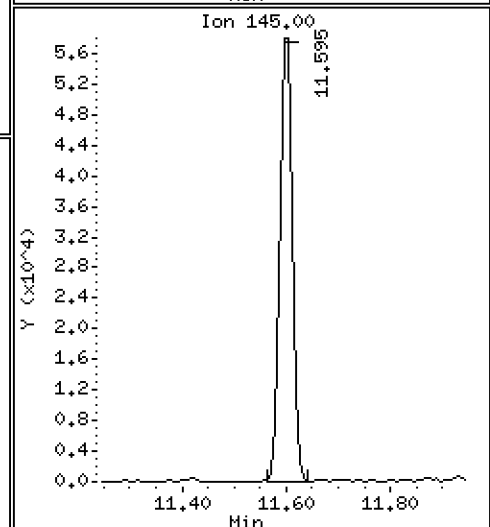
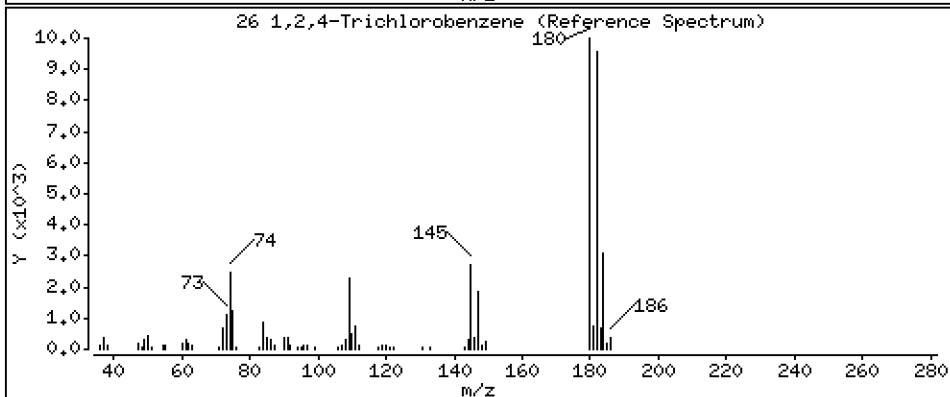
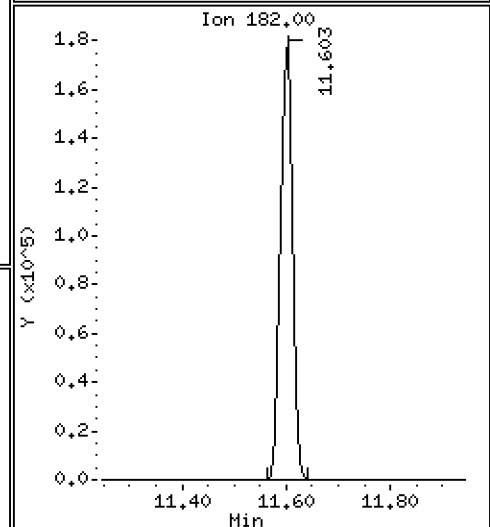
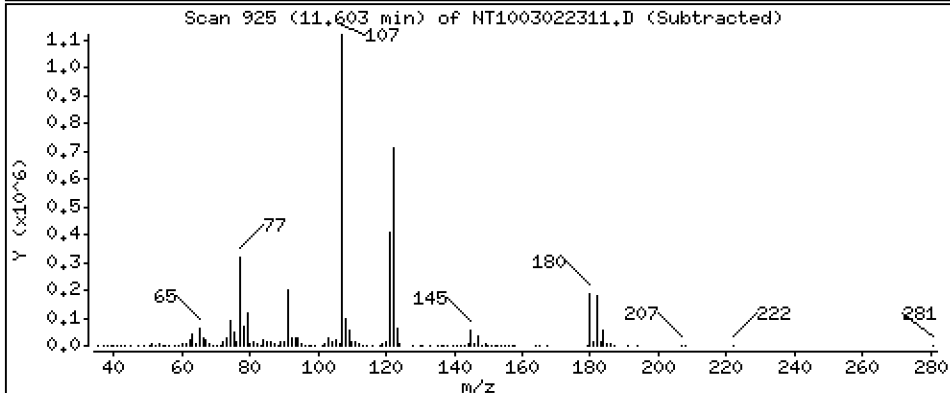
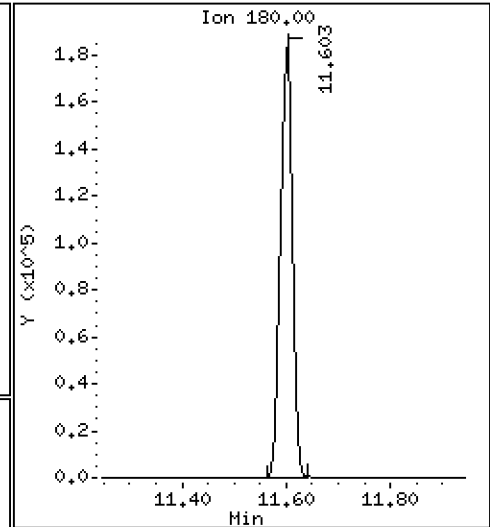
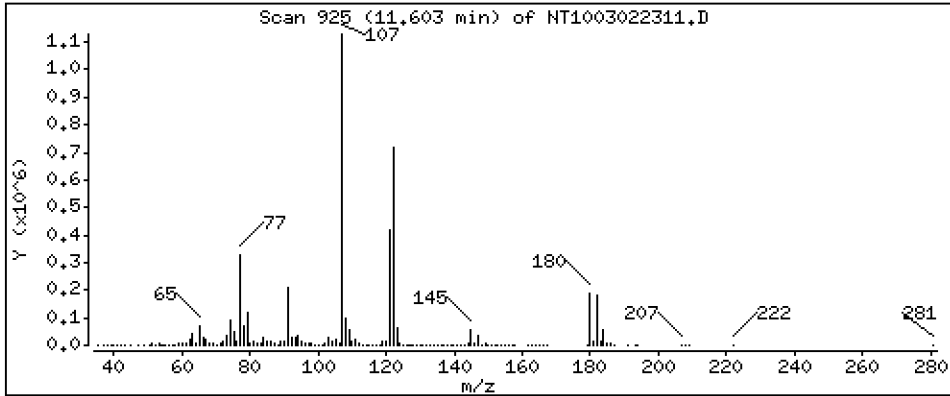
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 1,448 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

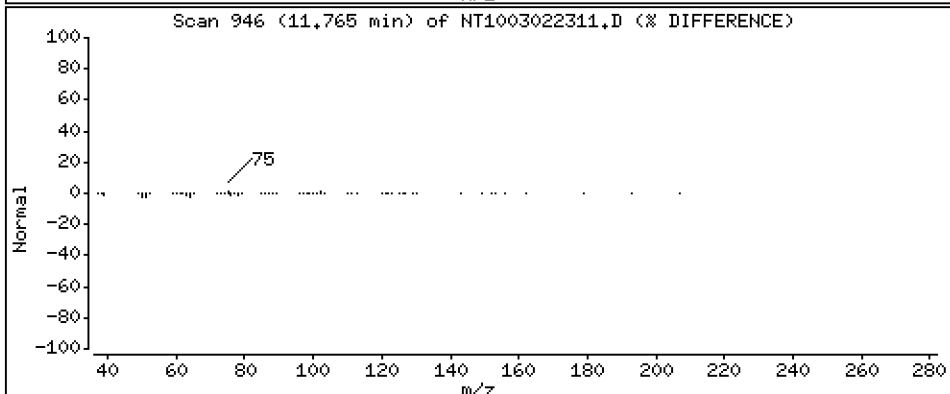
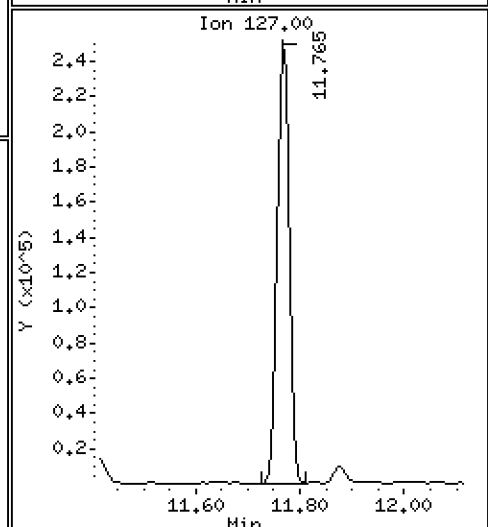
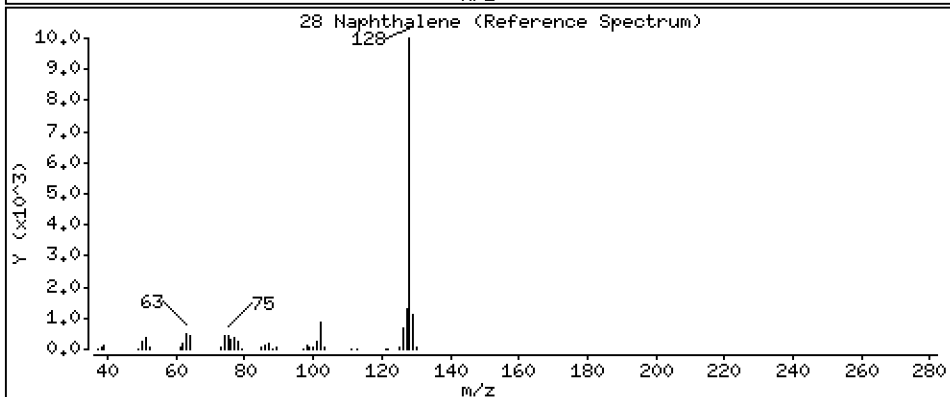
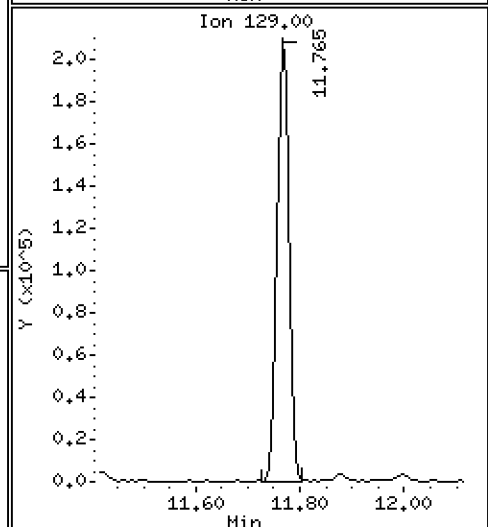
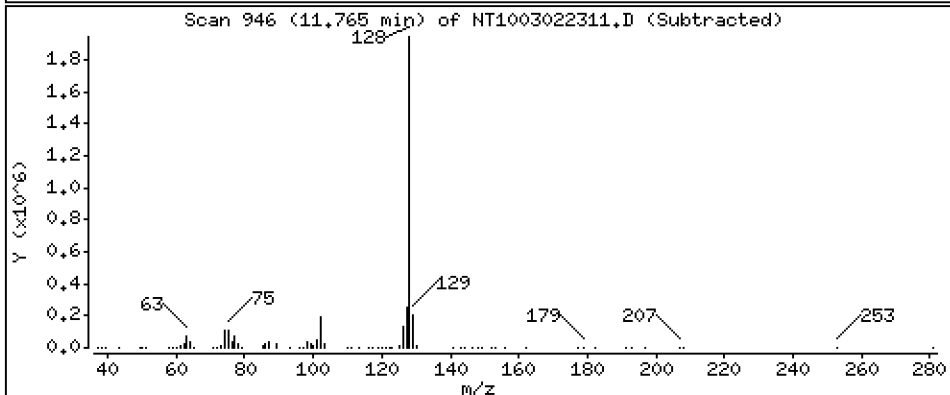
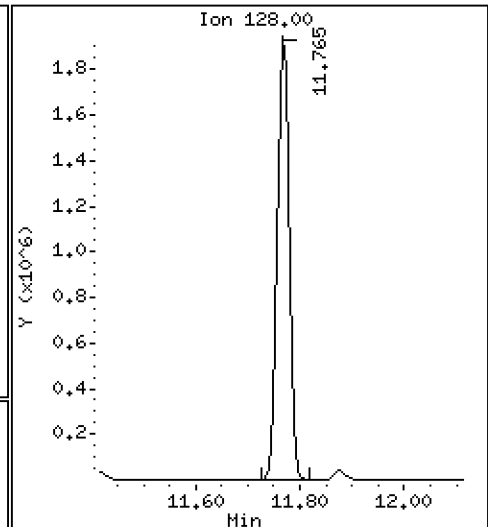
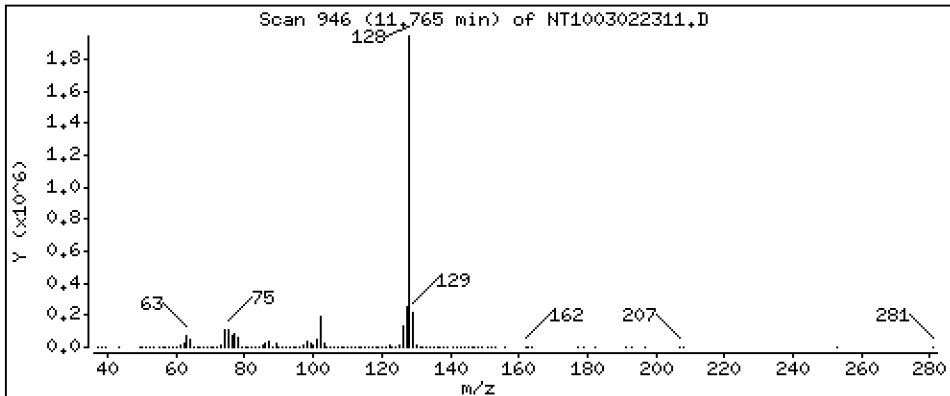
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,512 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

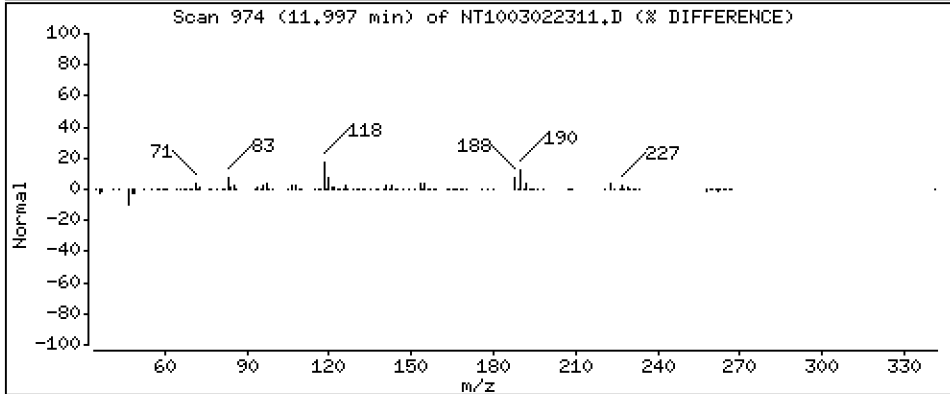
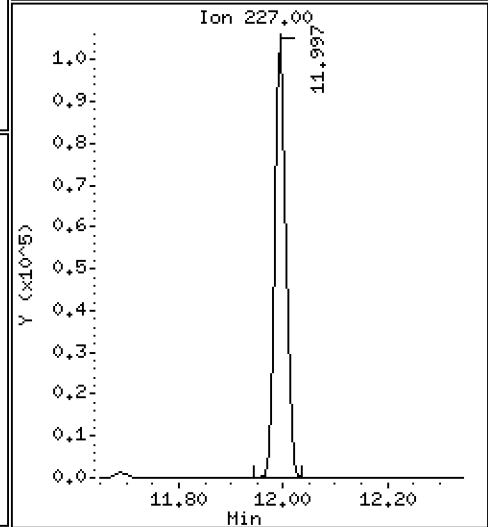
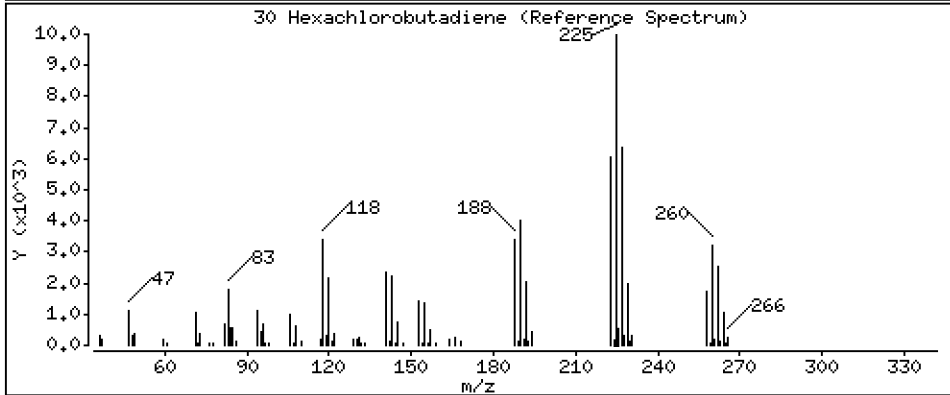
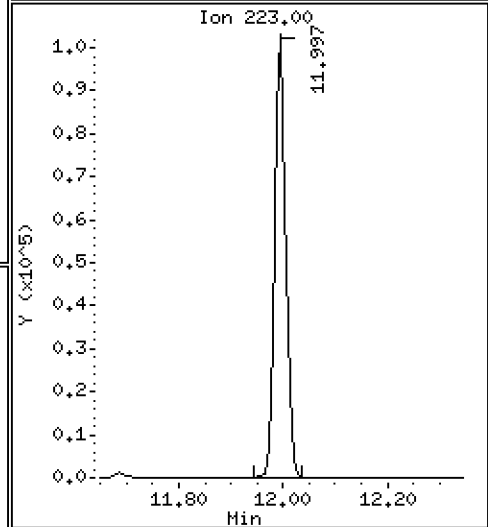
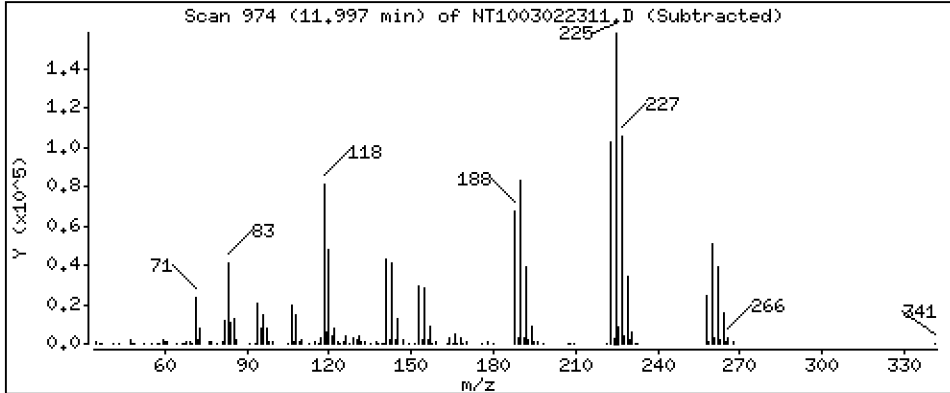
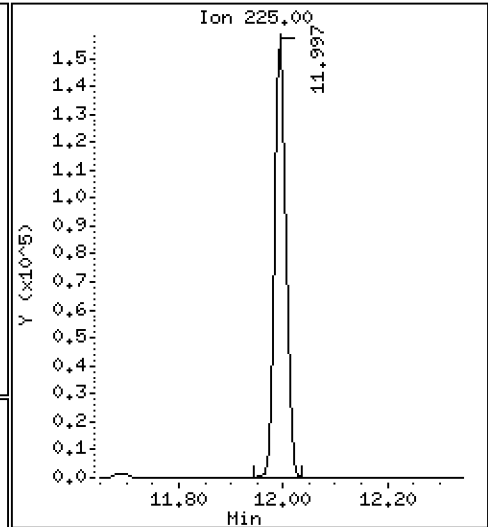
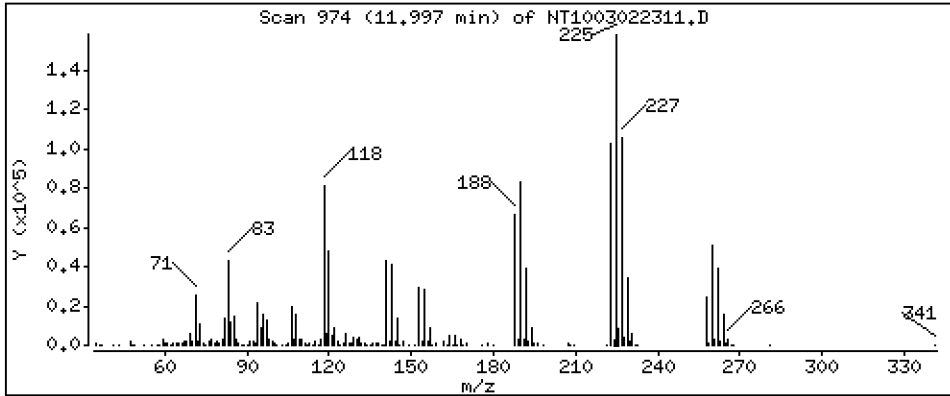
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 1,982 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

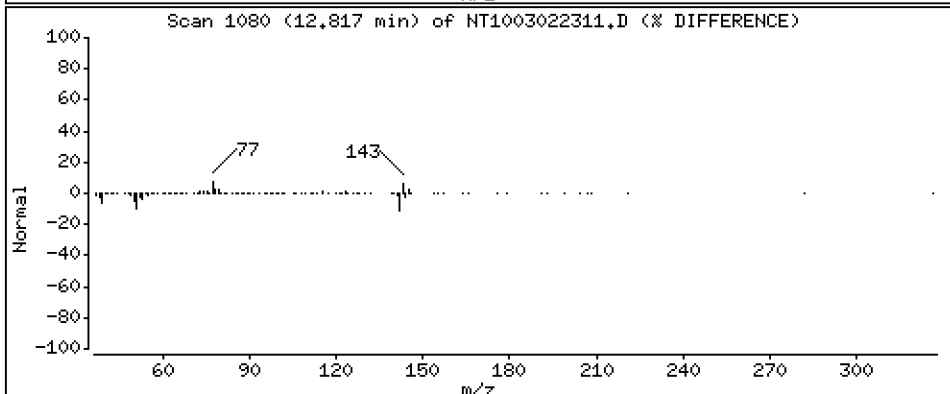
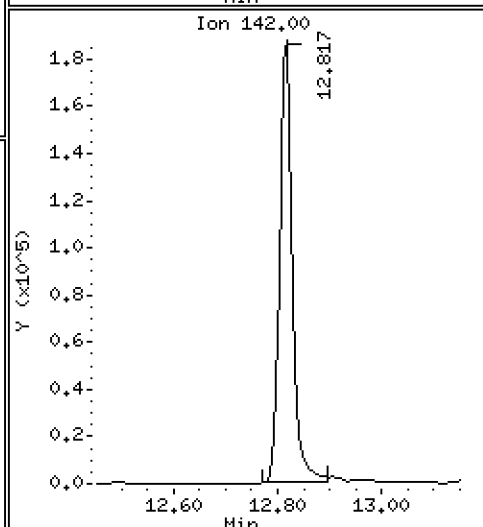
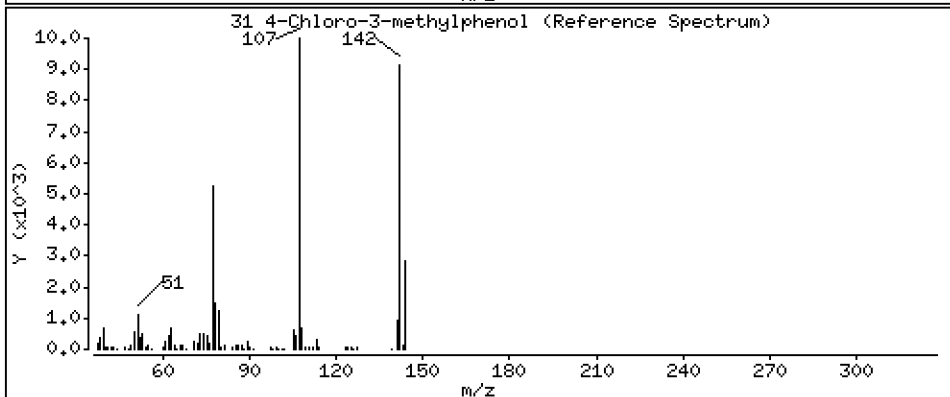
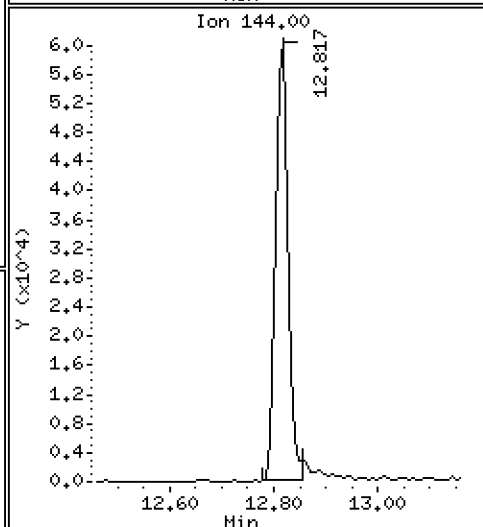
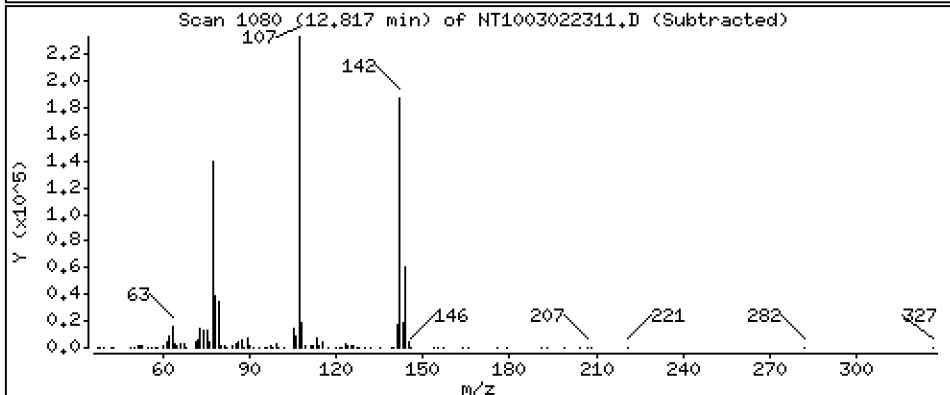
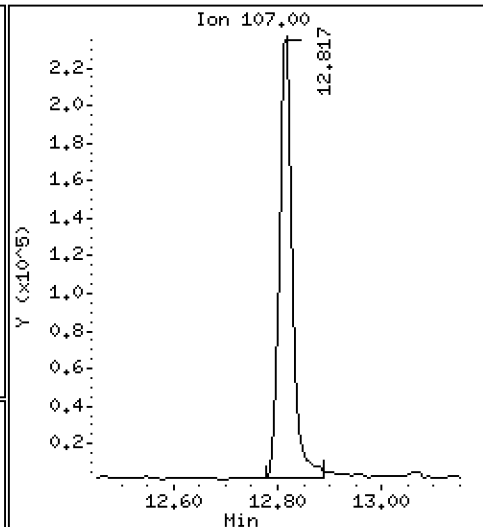
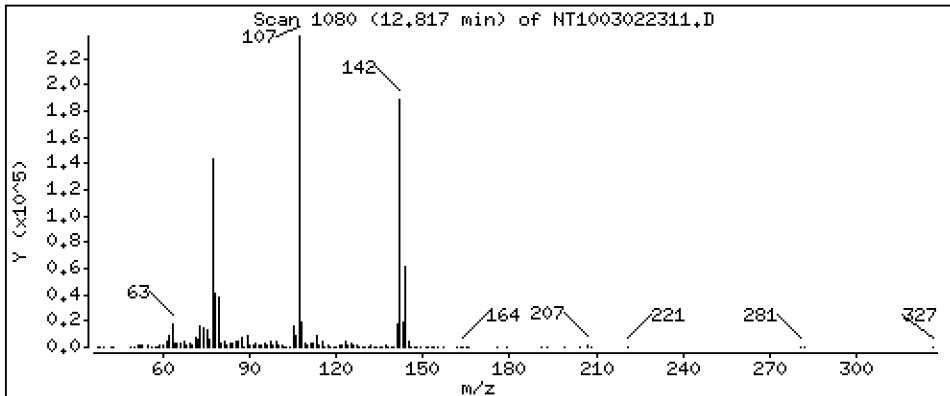
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 1,980 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

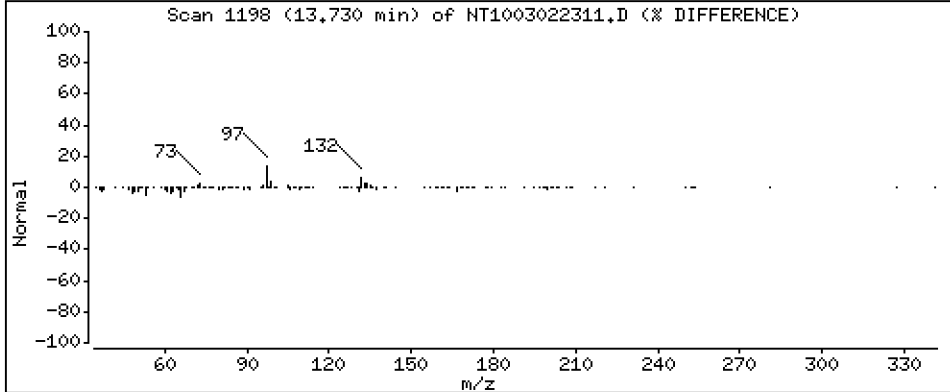
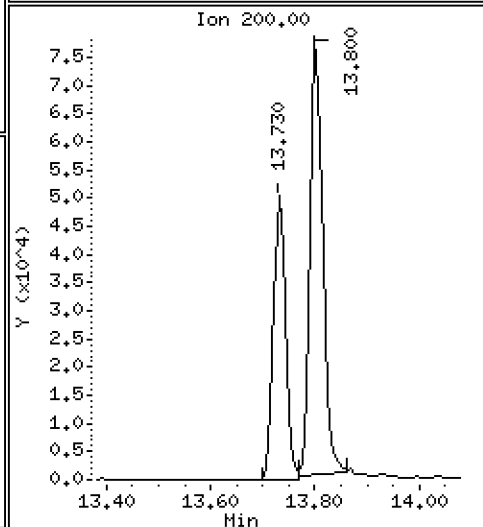
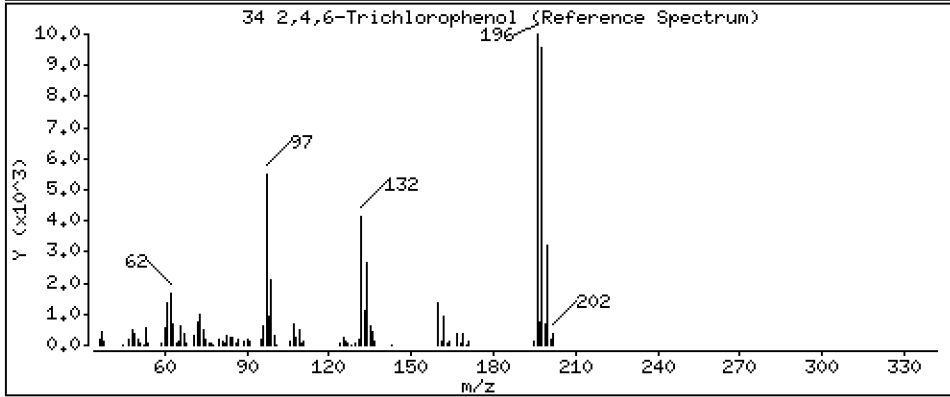
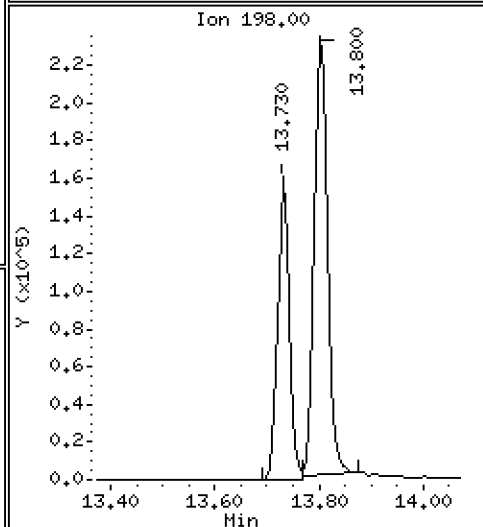
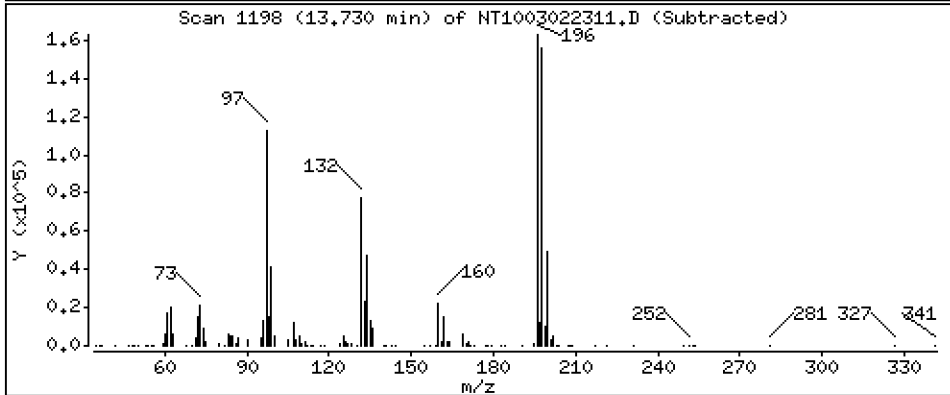
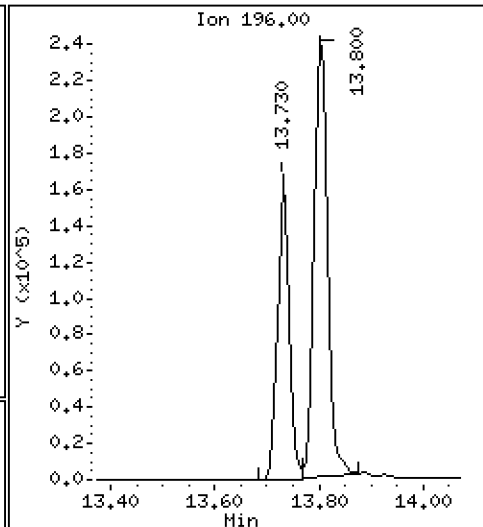
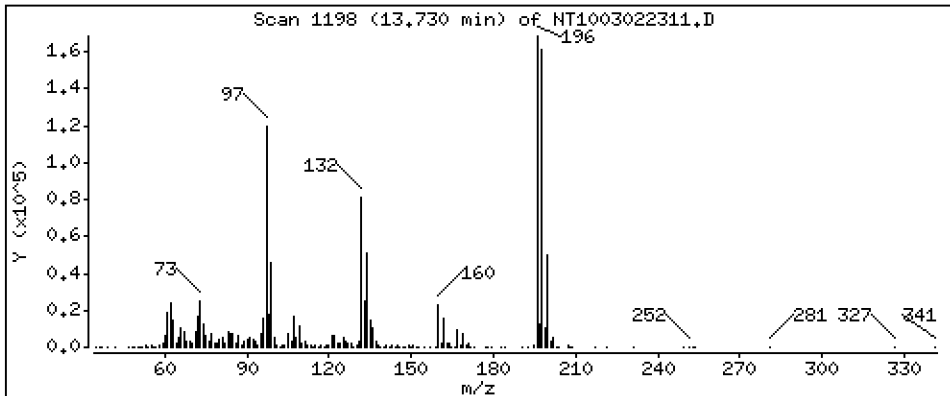
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 1,973 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

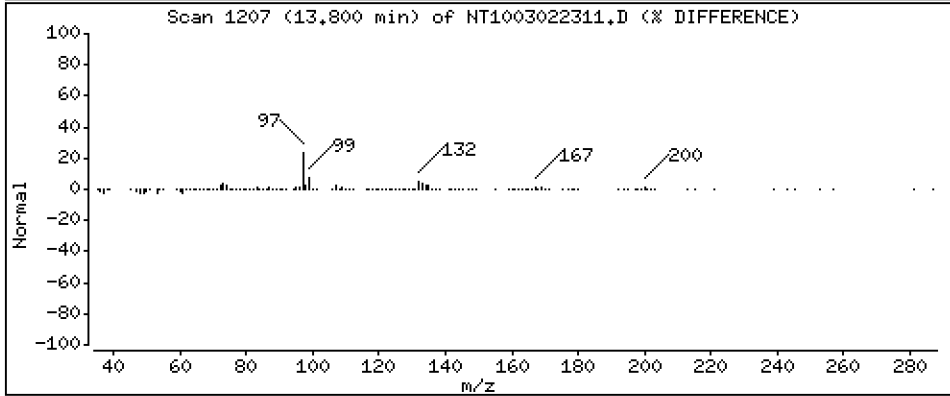
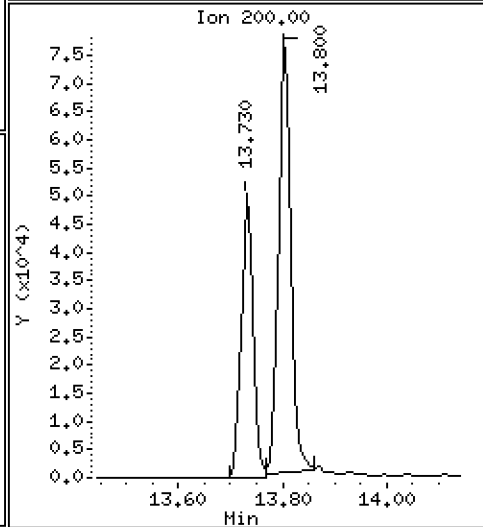
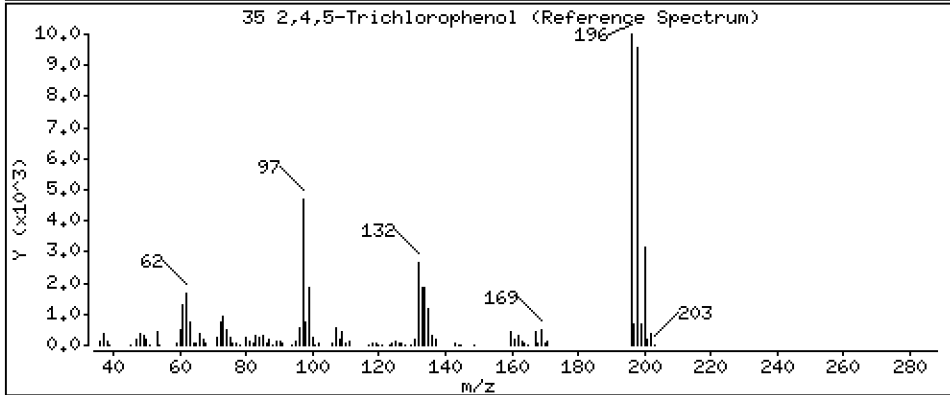
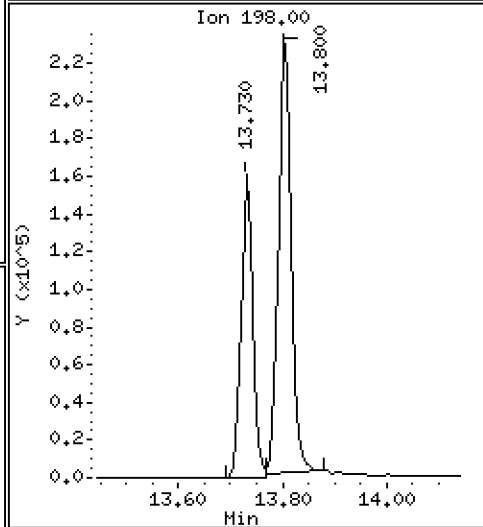
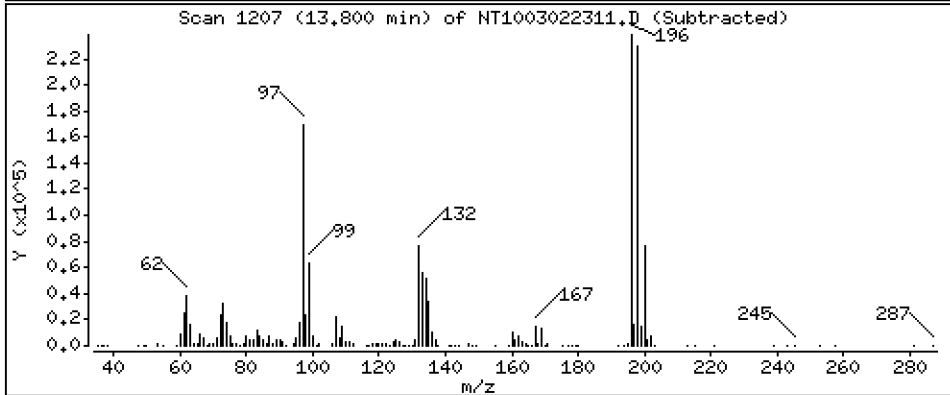
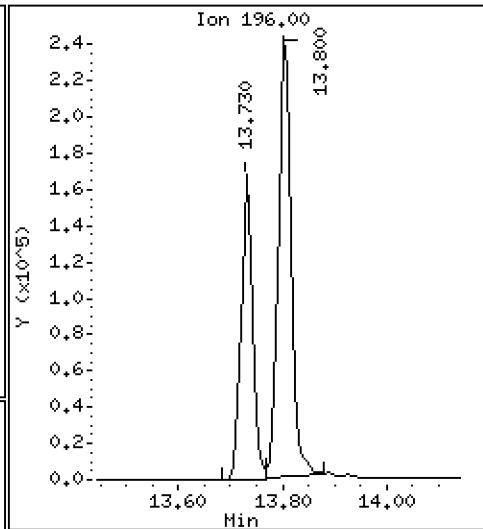
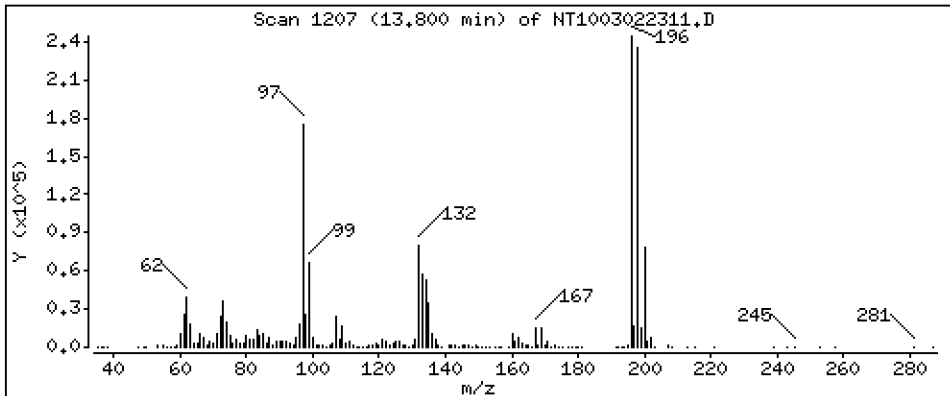
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 3,014 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

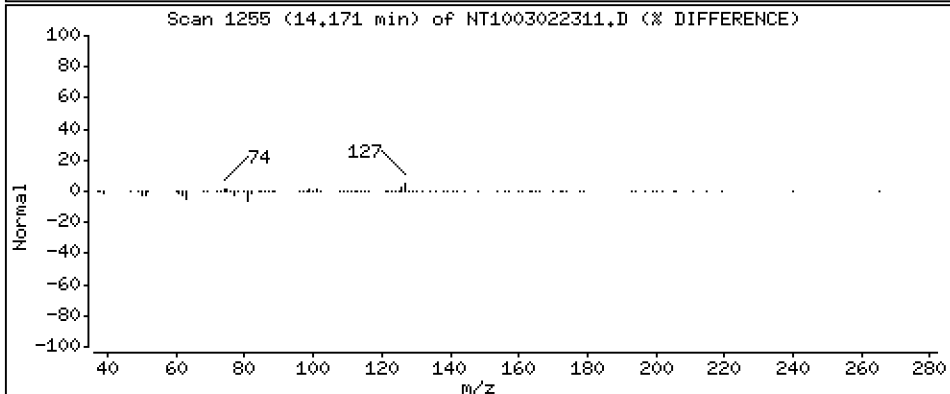
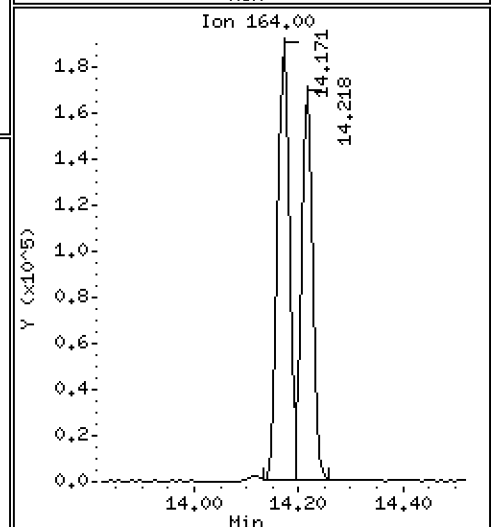
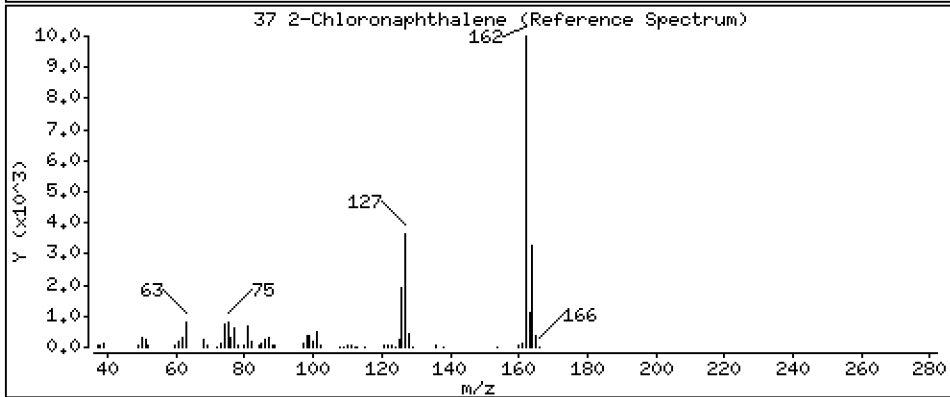
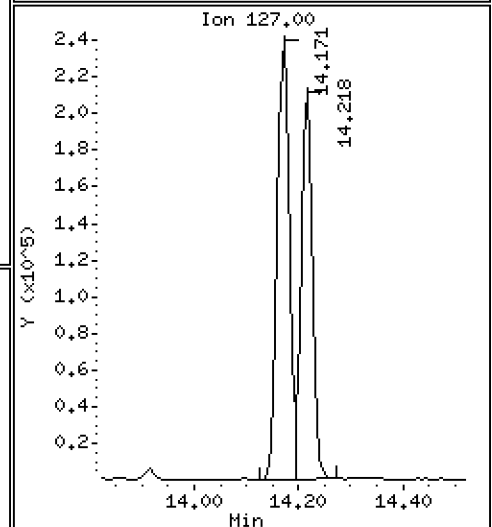
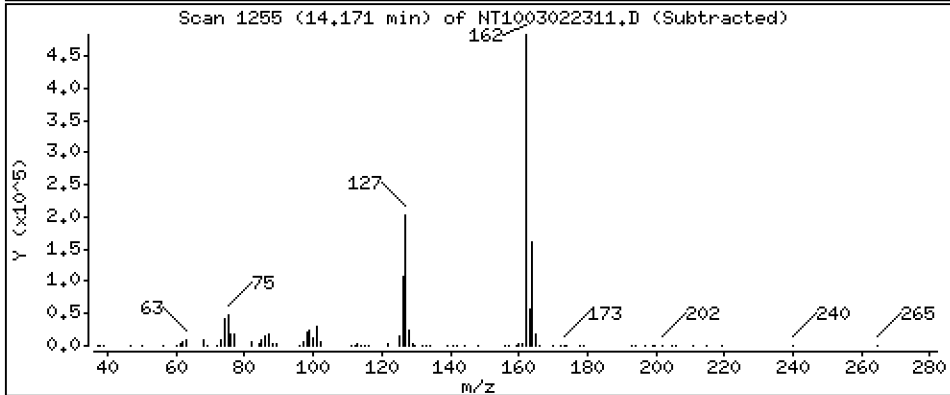
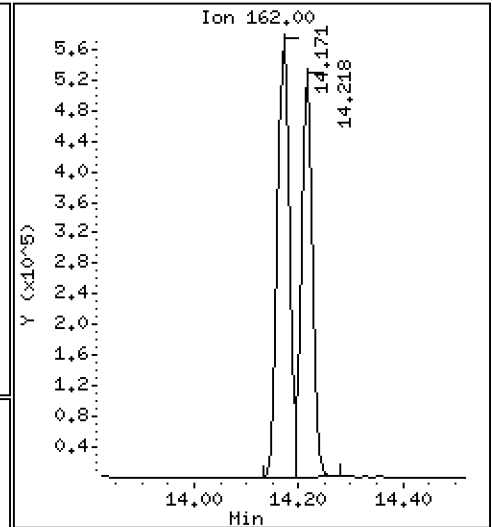
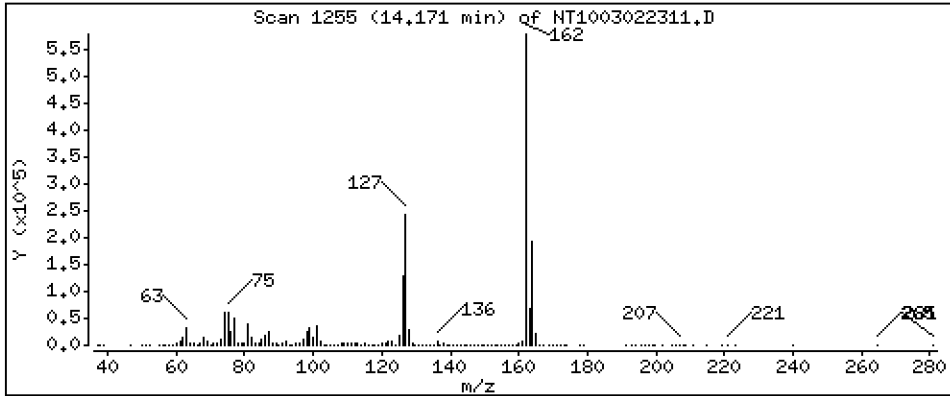
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 2,351 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

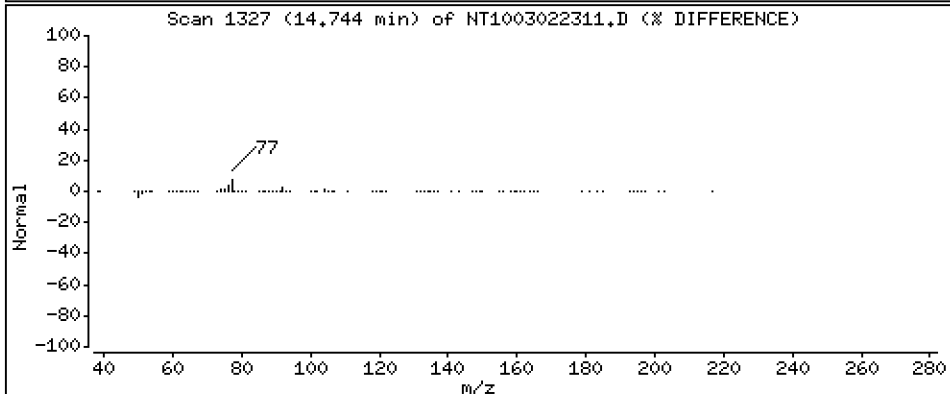
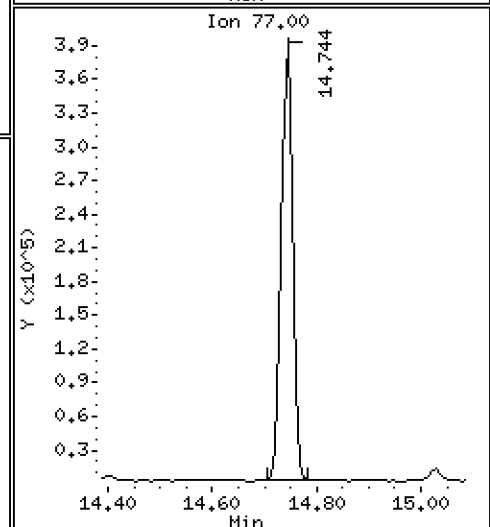
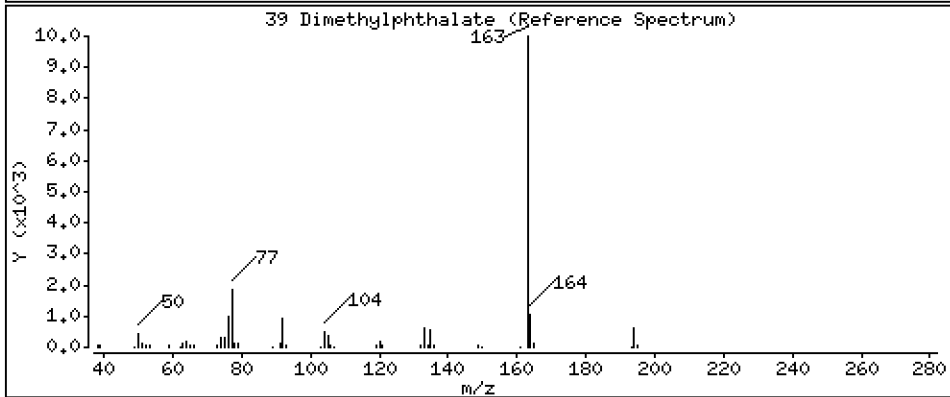
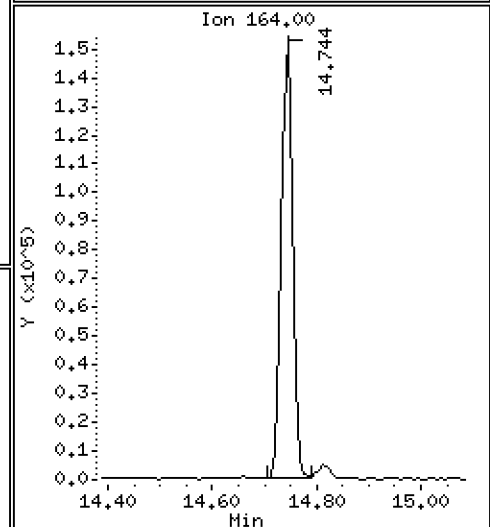
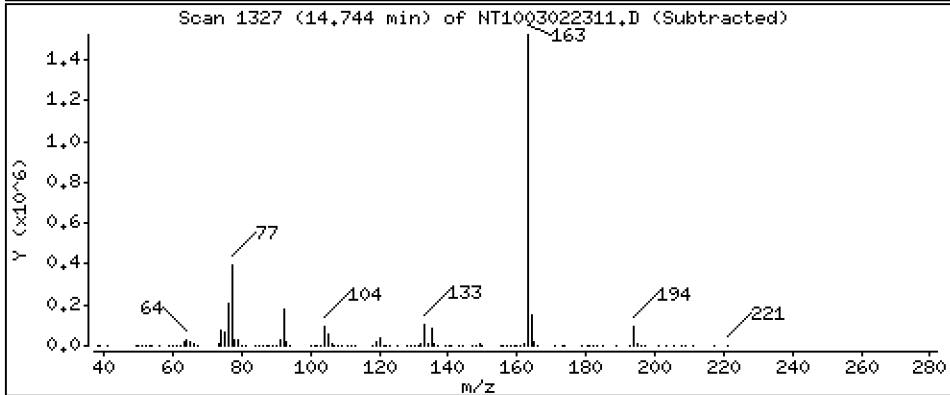
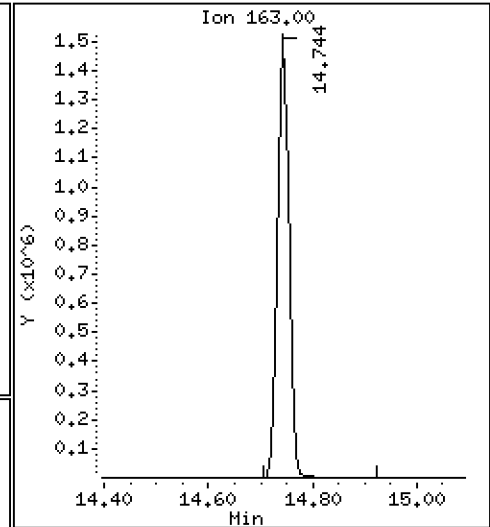
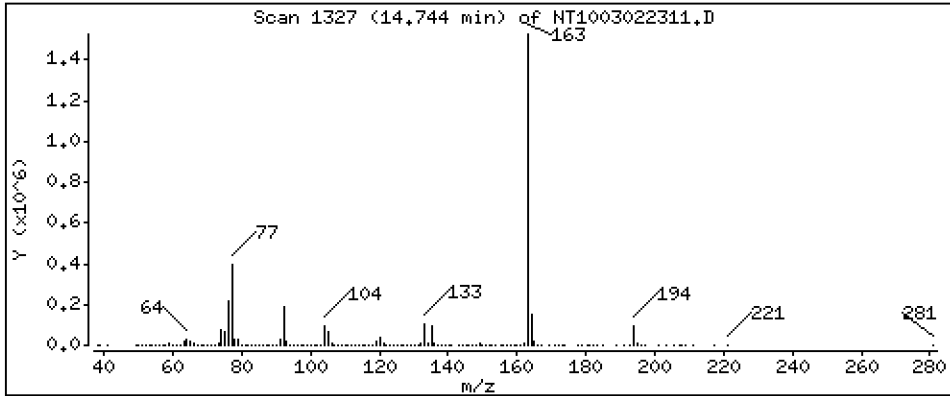
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,994 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

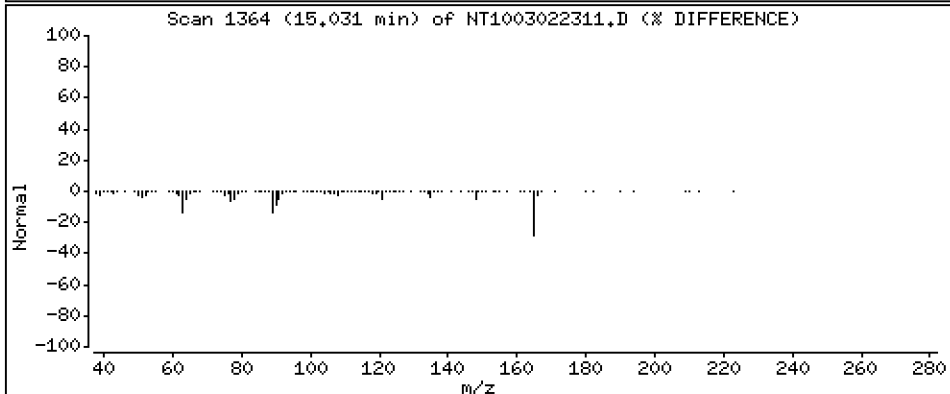
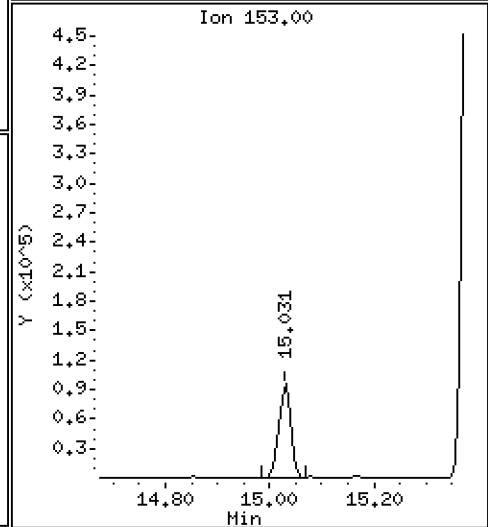
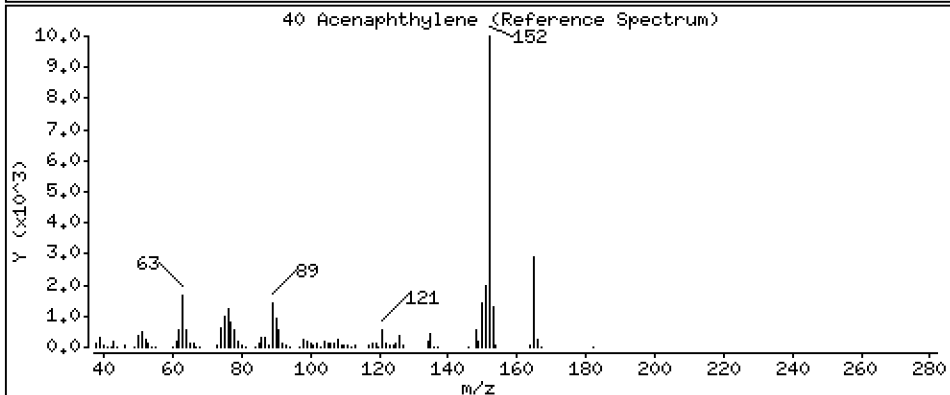
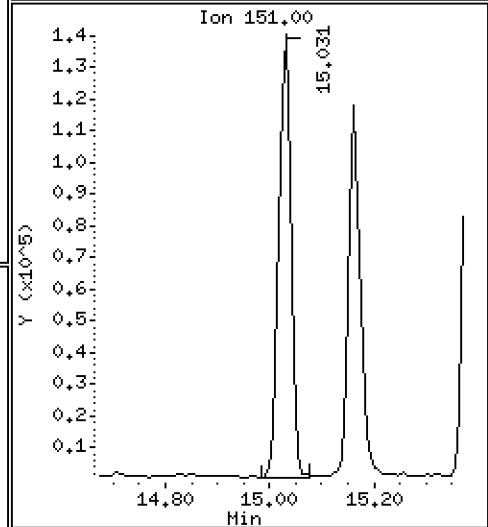
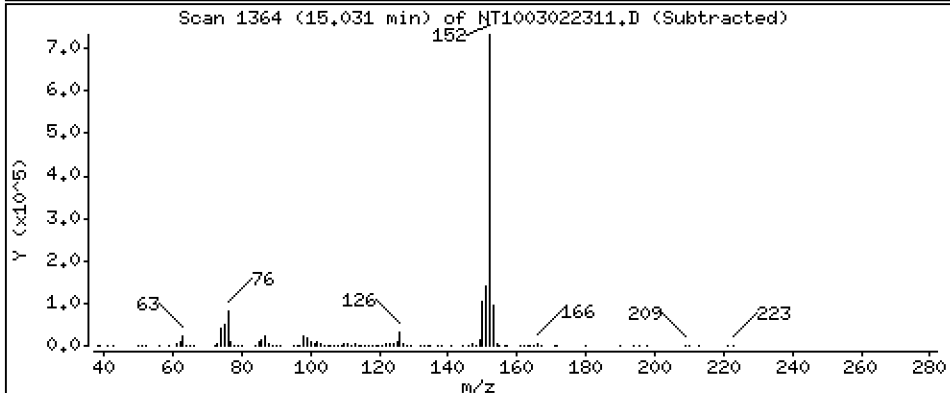
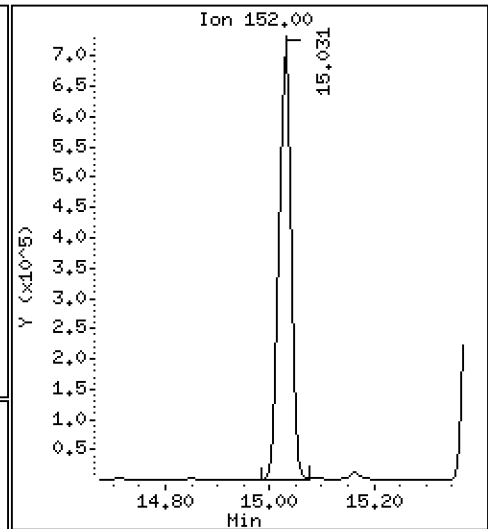
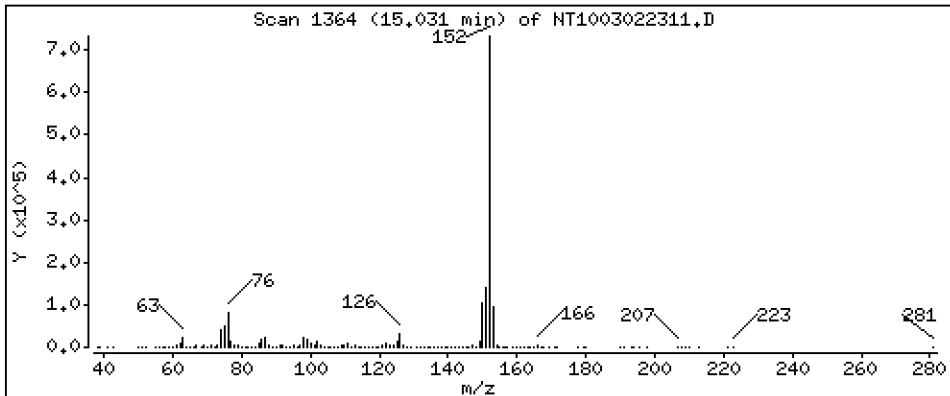
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 1,743 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

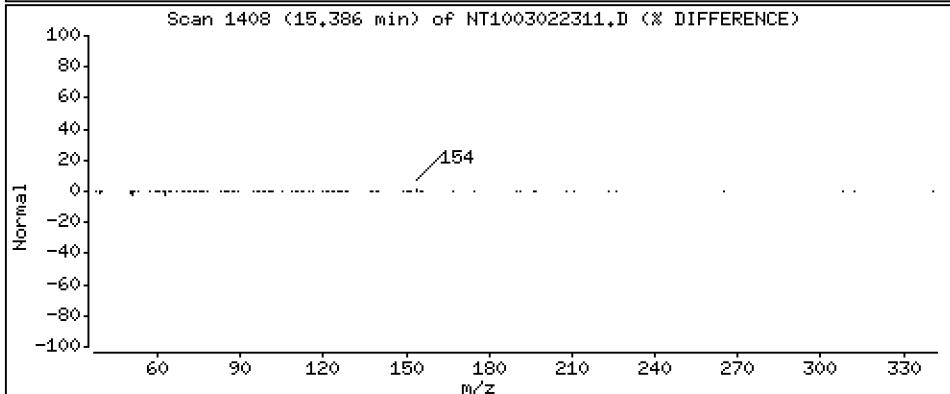
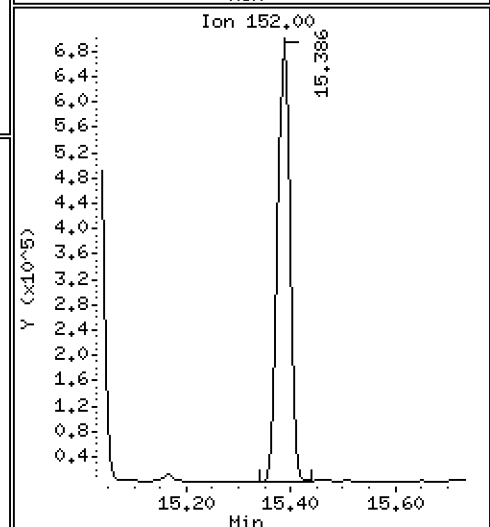
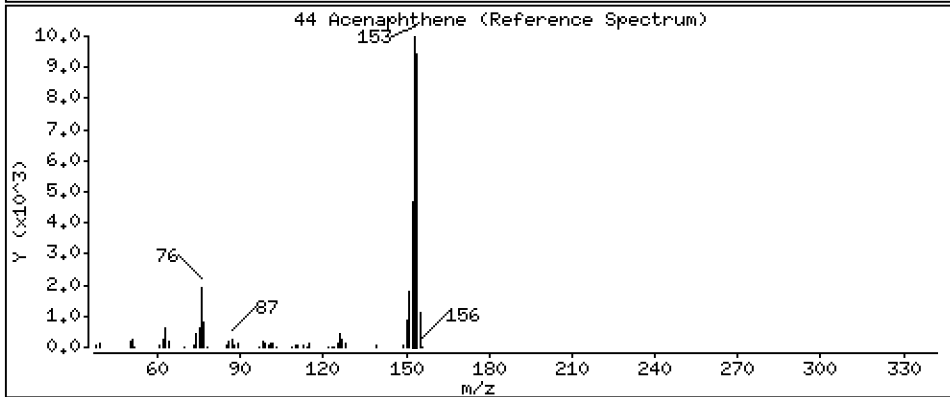
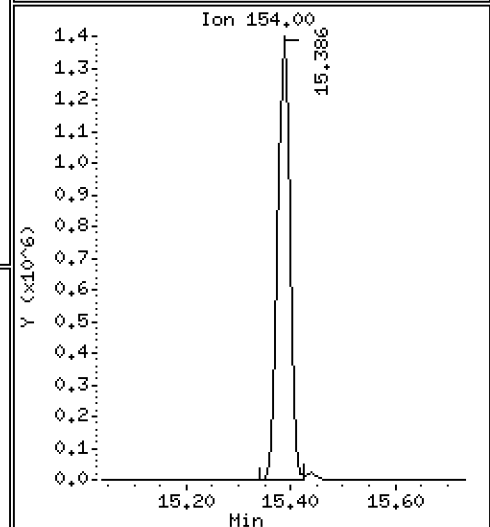
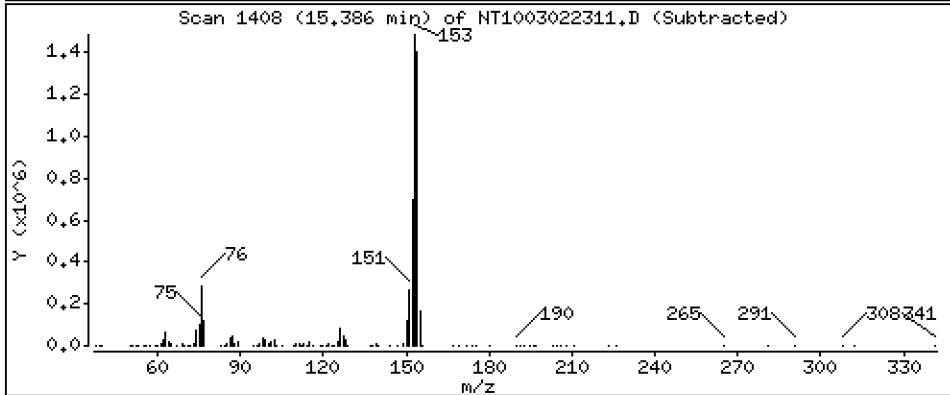
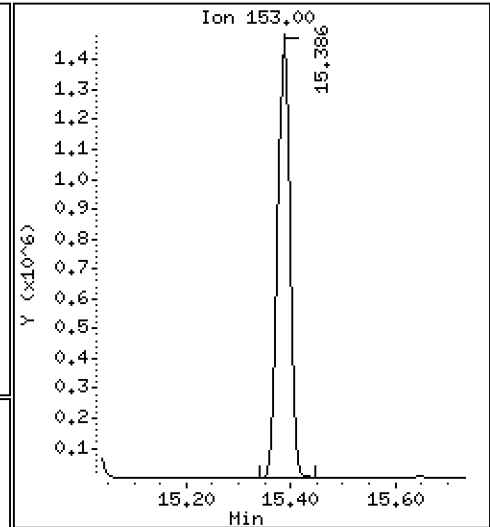
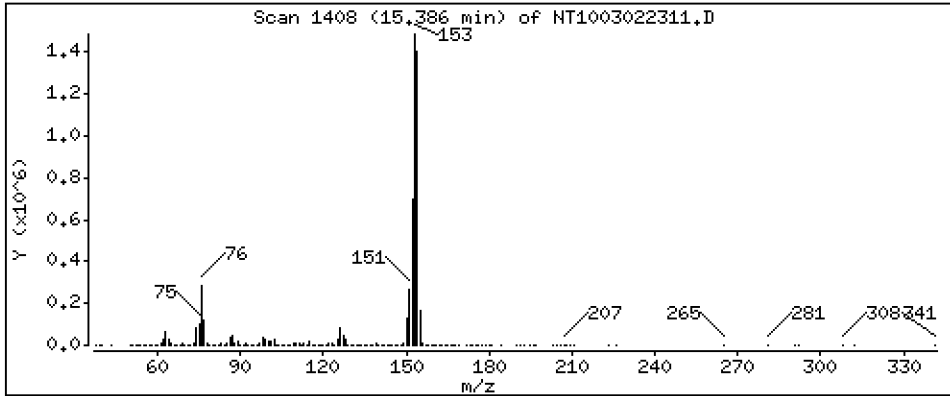
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,858 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

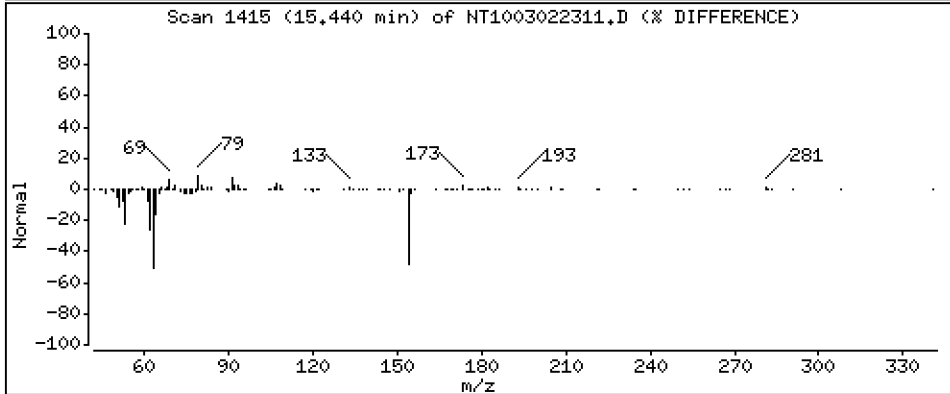
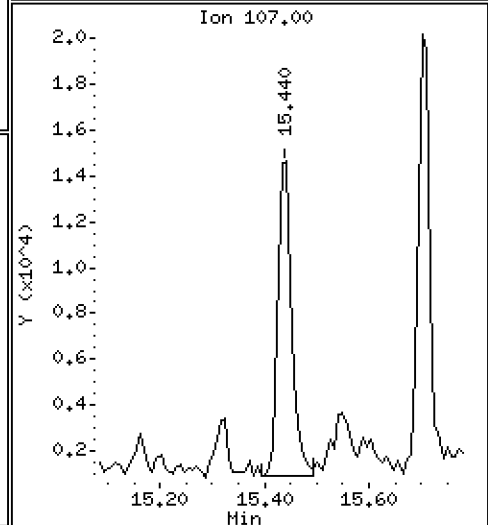
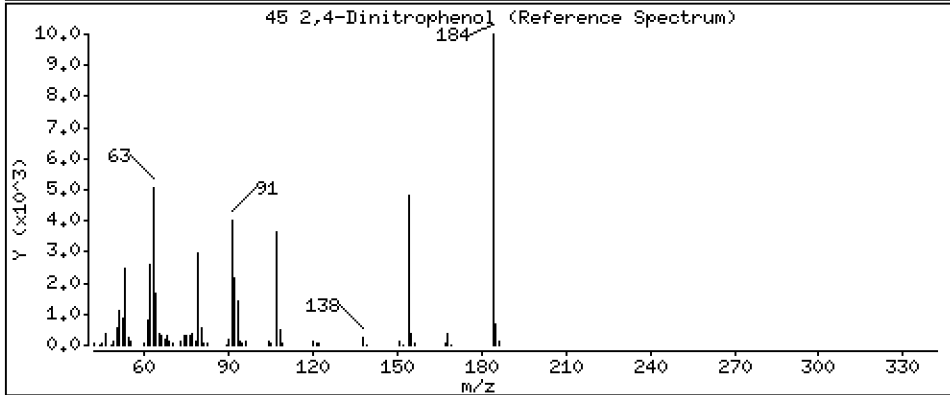
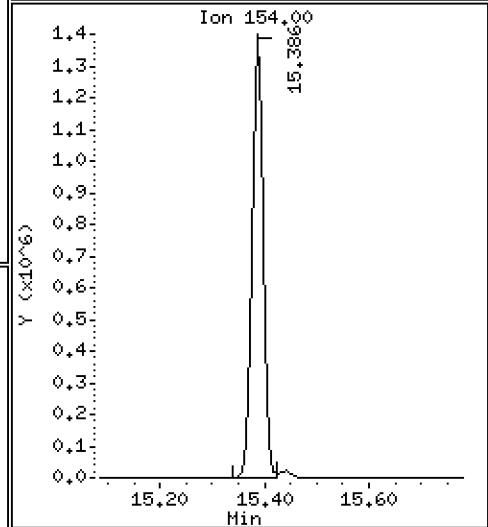
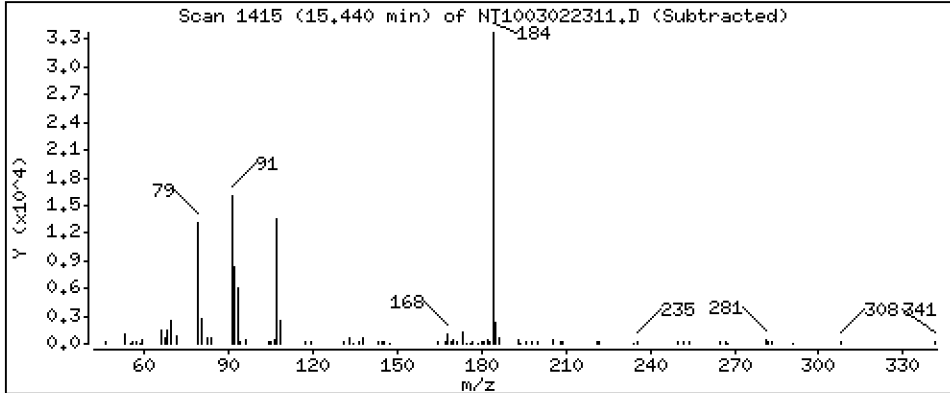
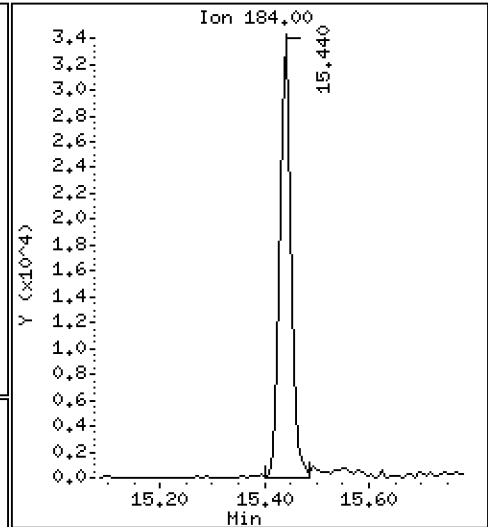
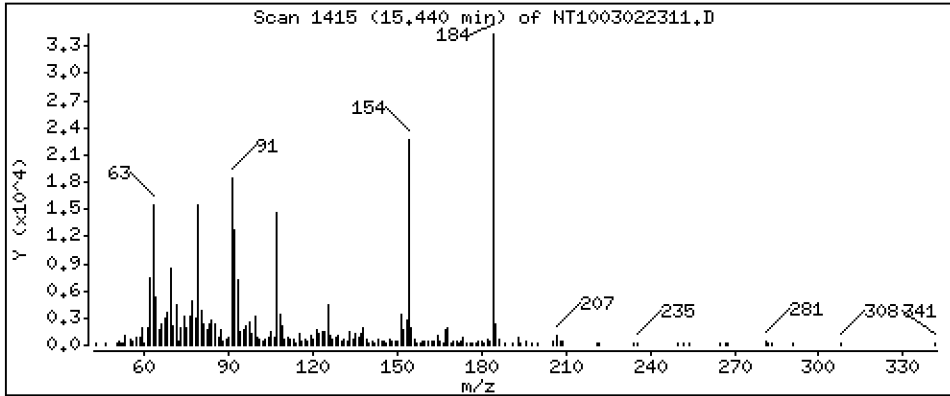
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 1,985 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

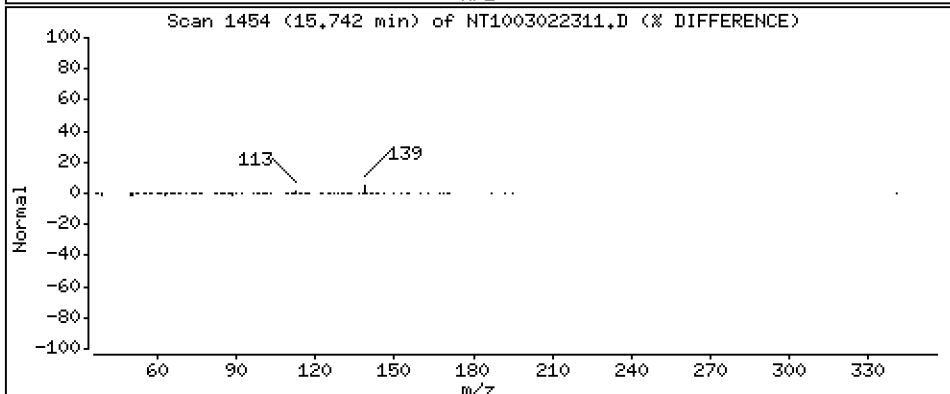
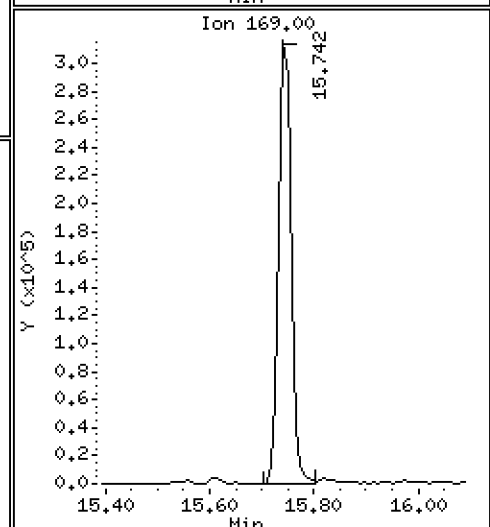
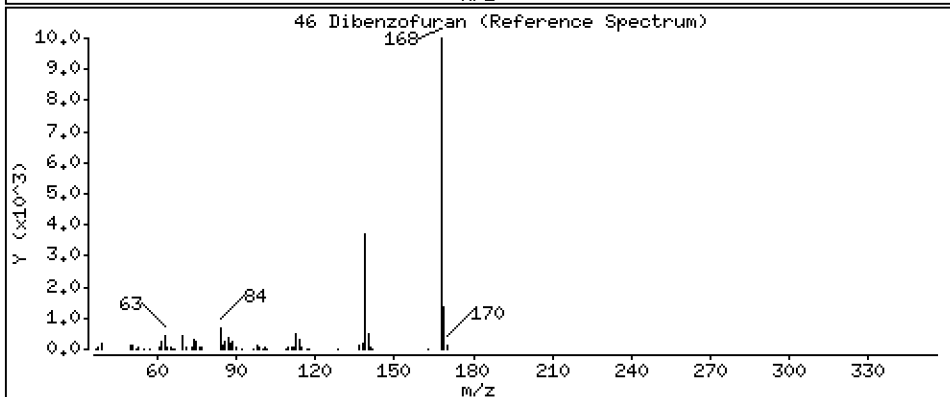
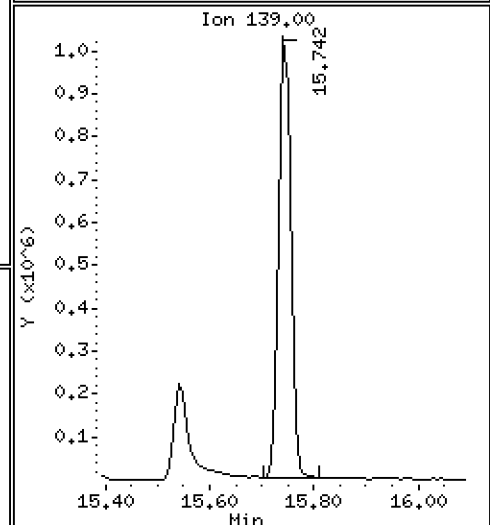
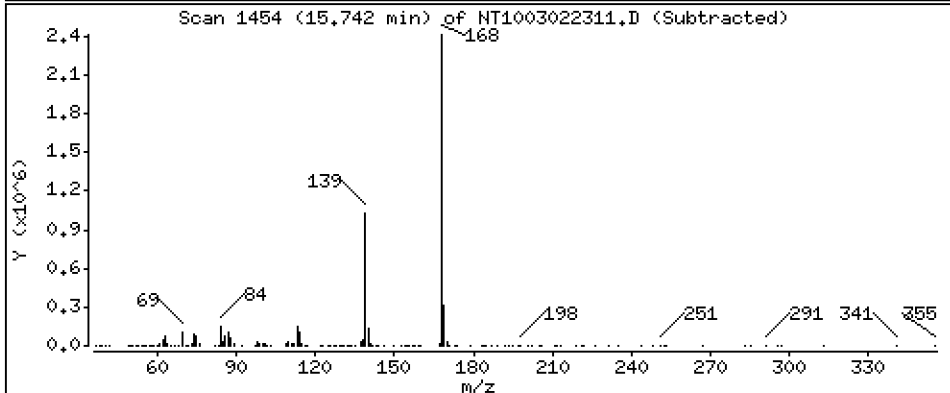
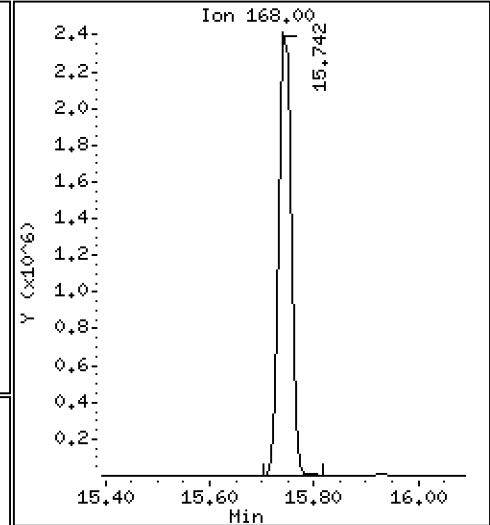
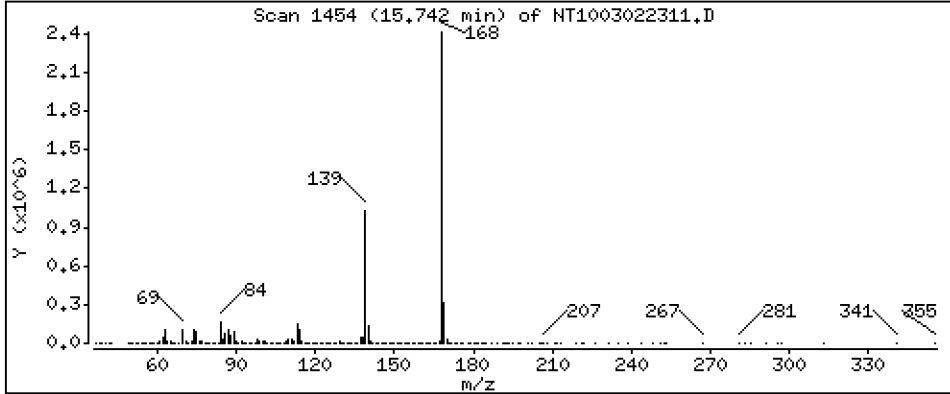
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 6,509 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

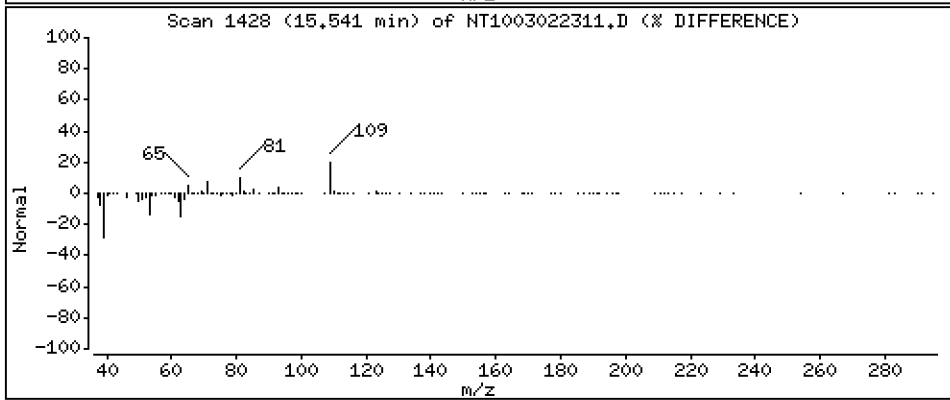
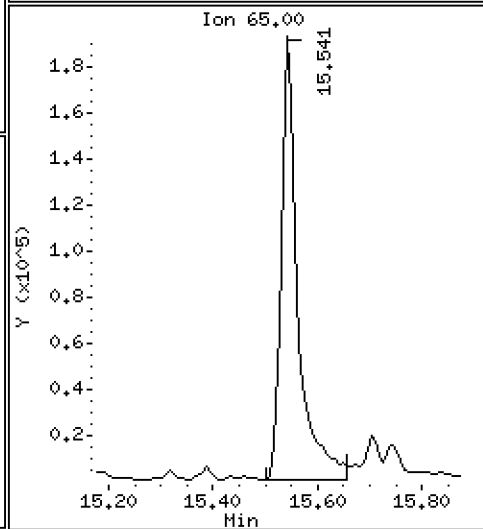
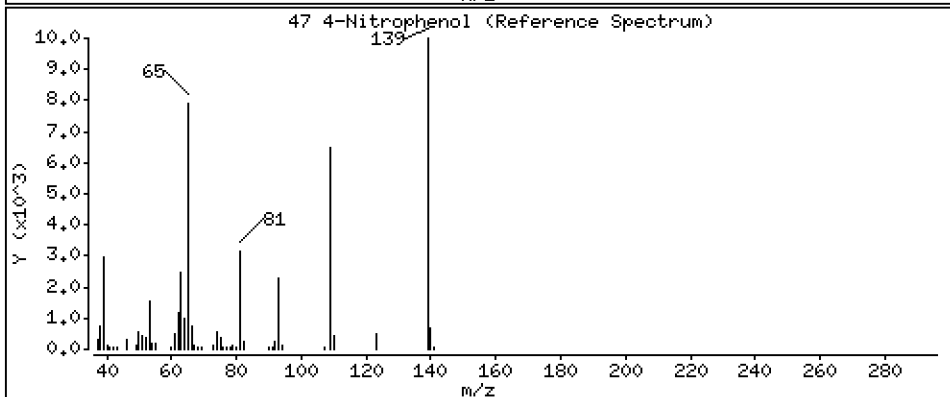
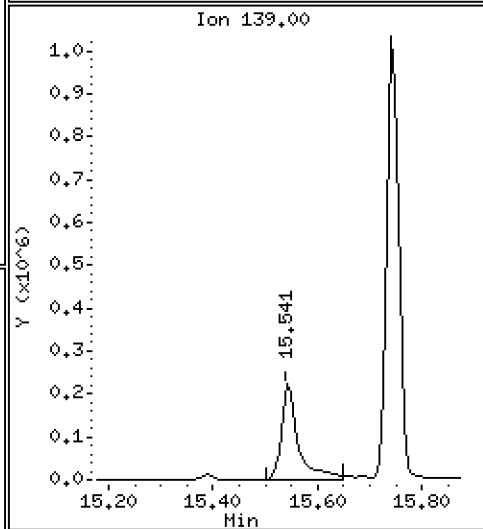
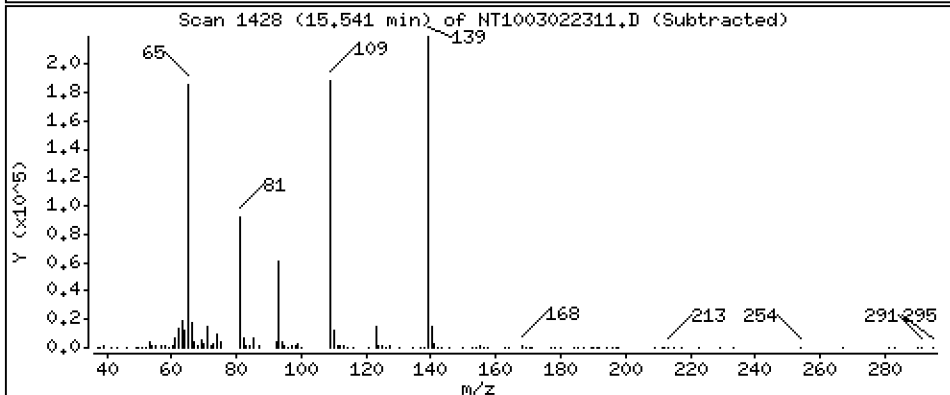
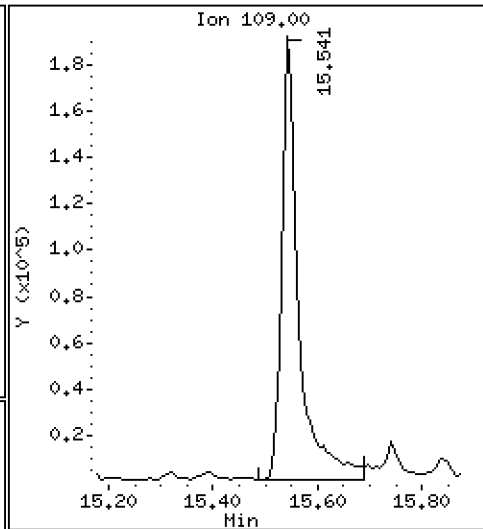
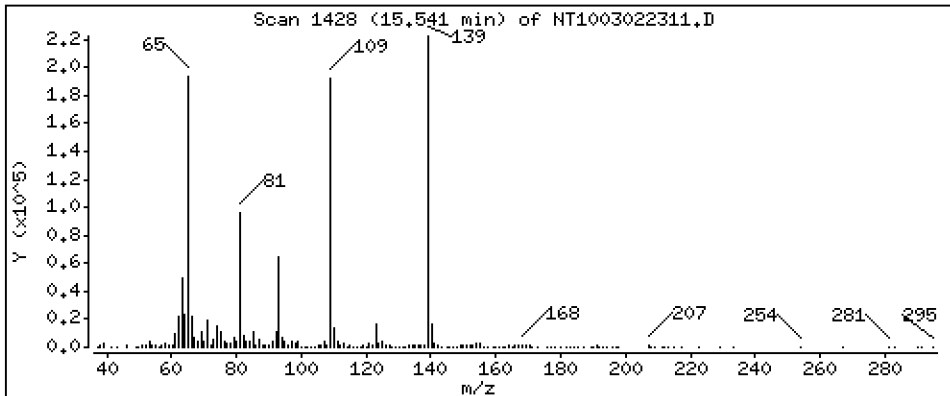
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 5,696 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

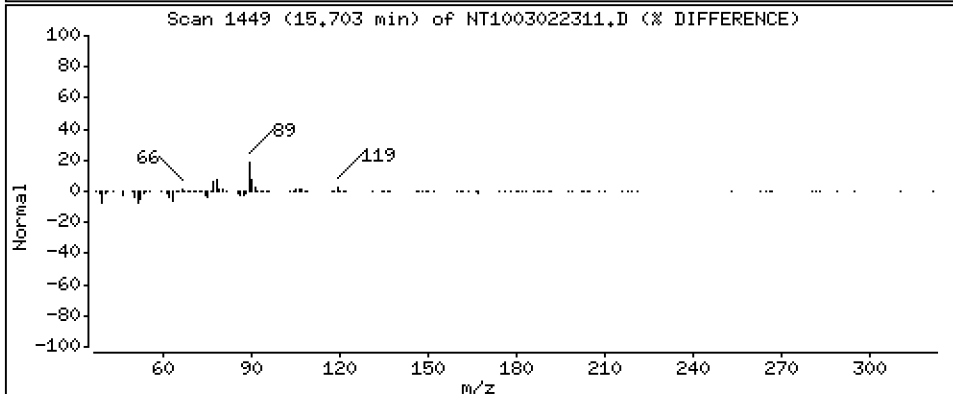
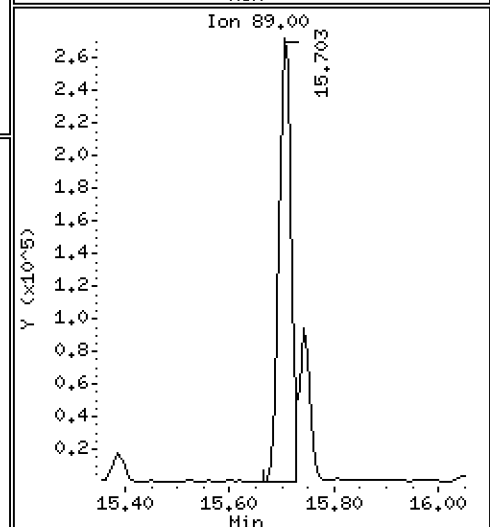
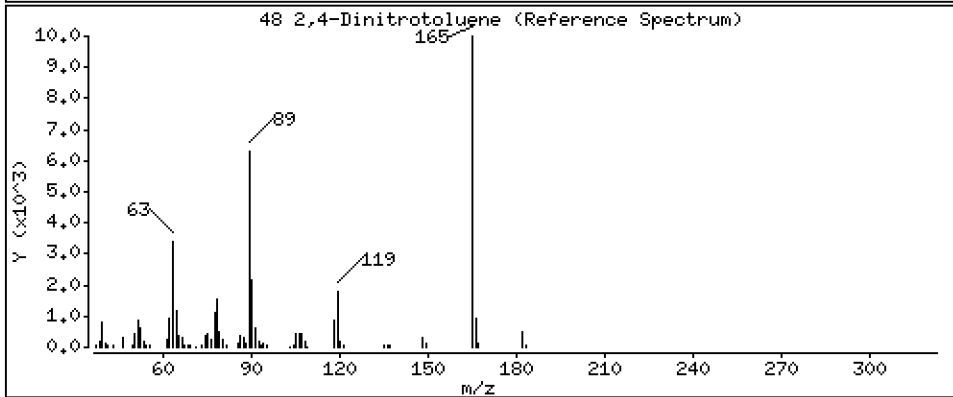
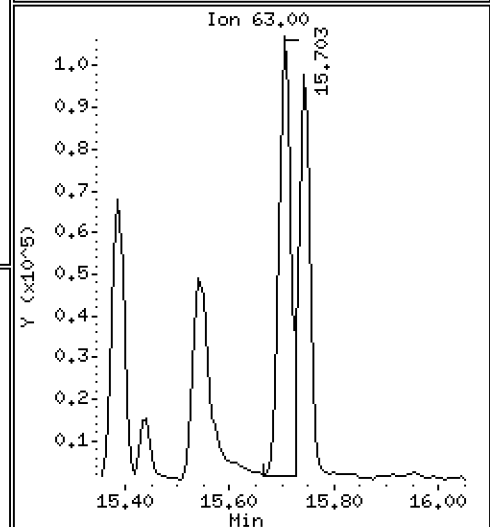
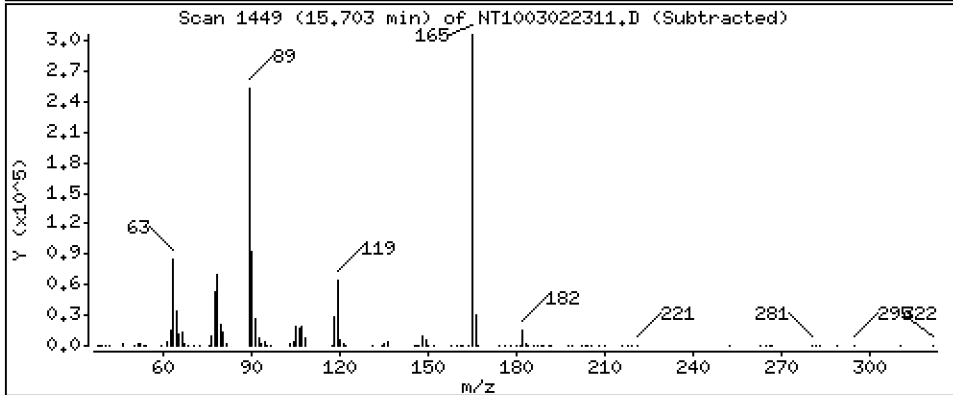
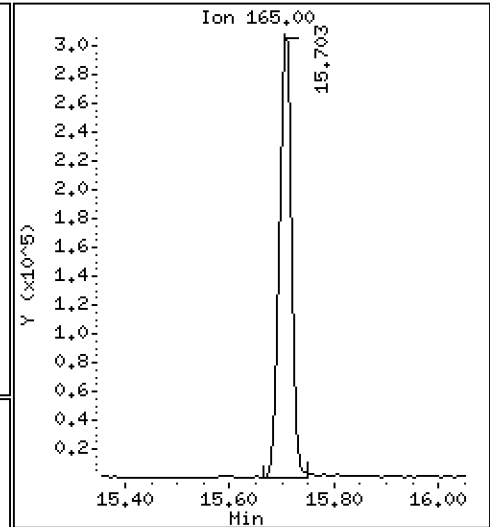
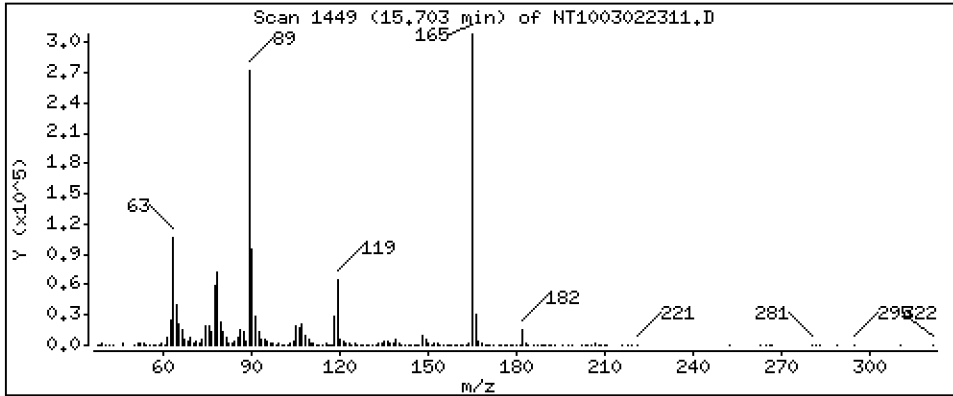
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 3,371 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

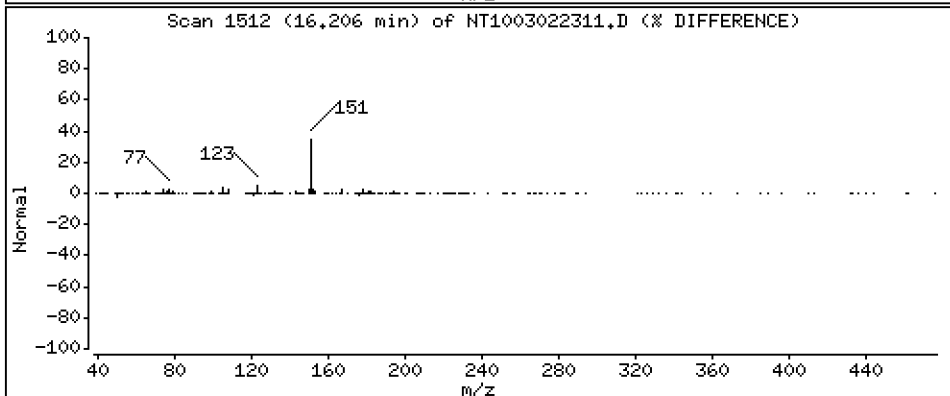
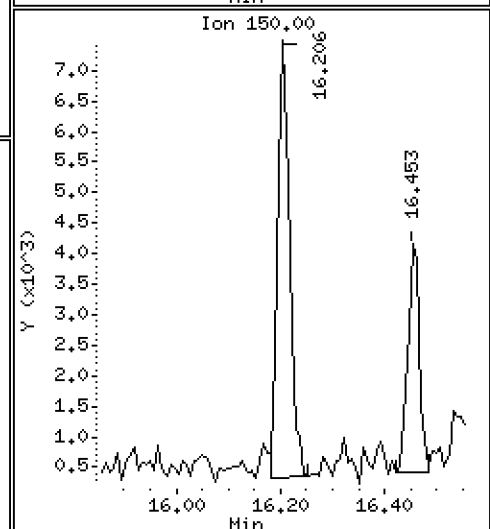
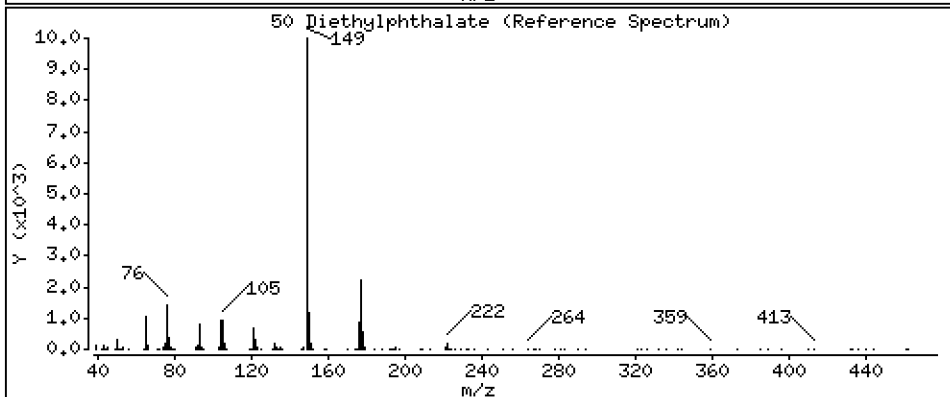
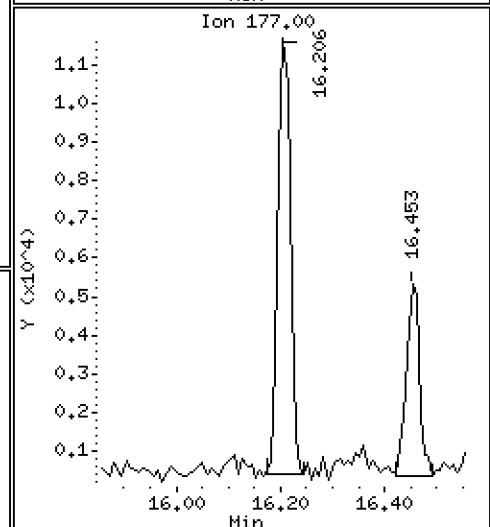
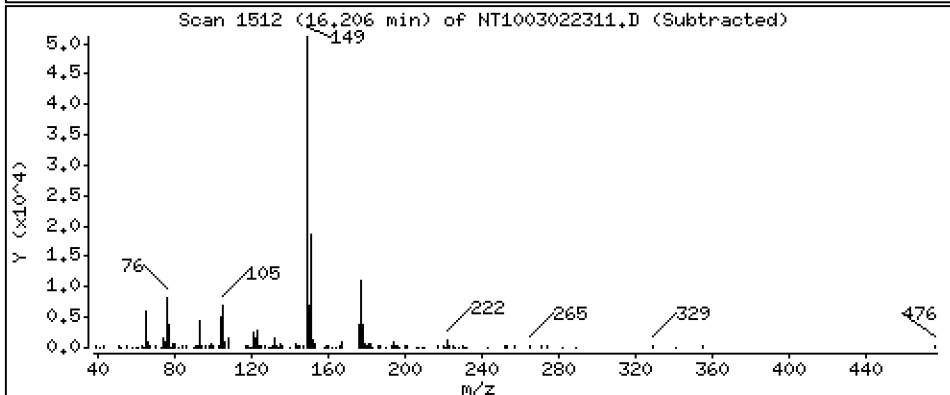
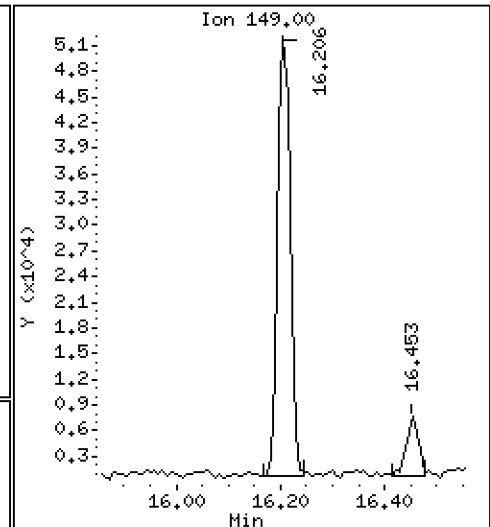
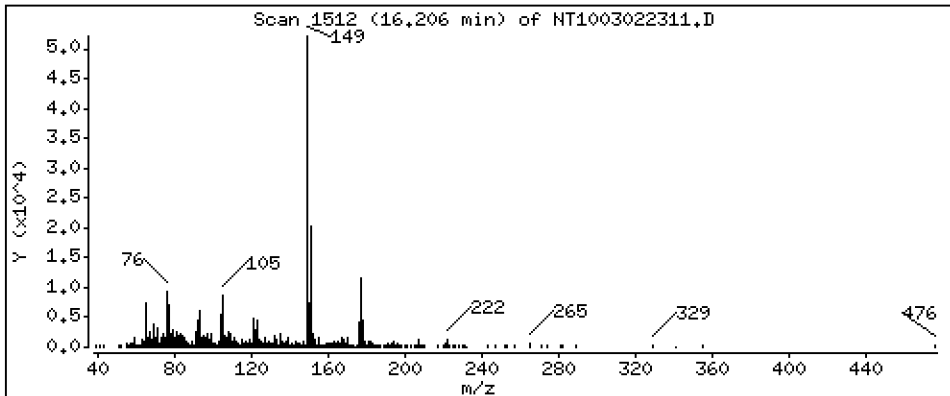
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1781 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

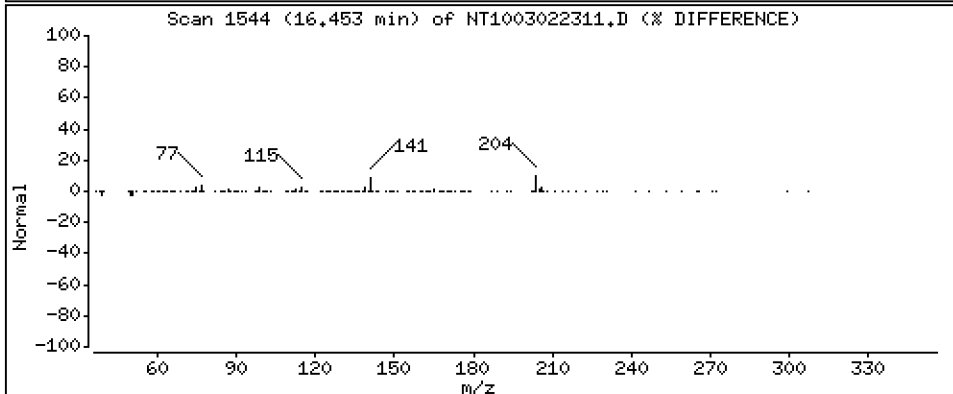
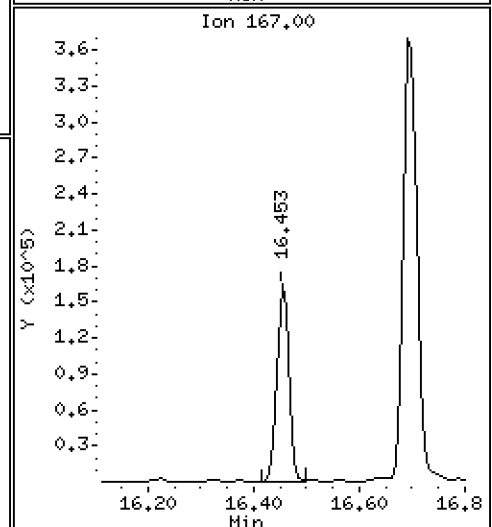
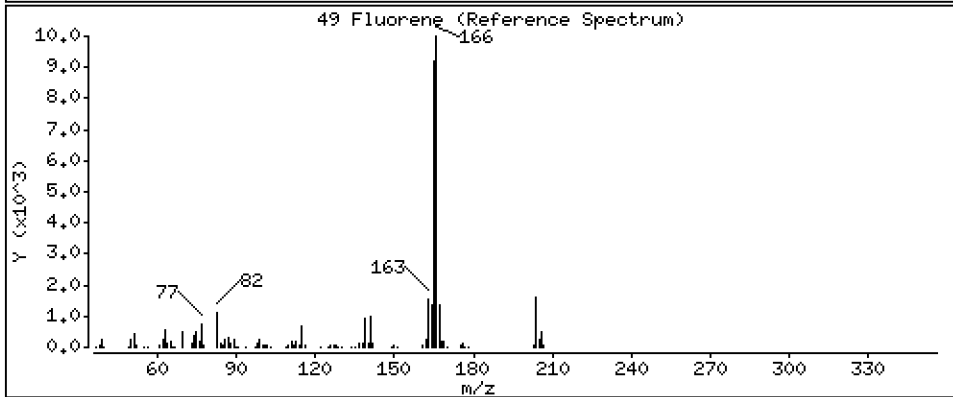
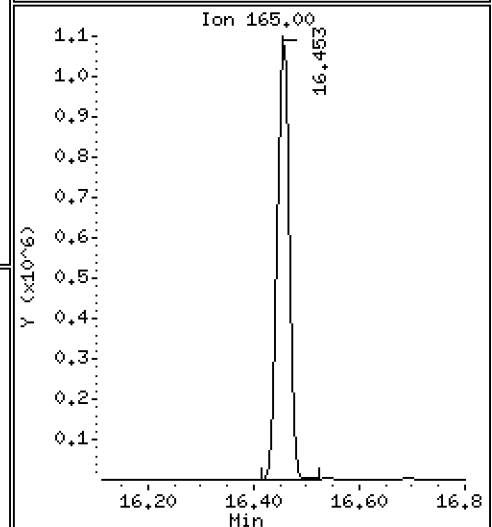
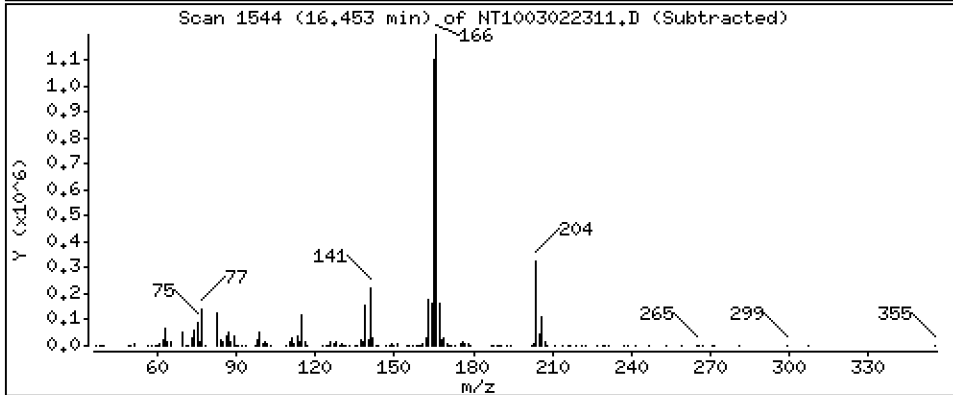
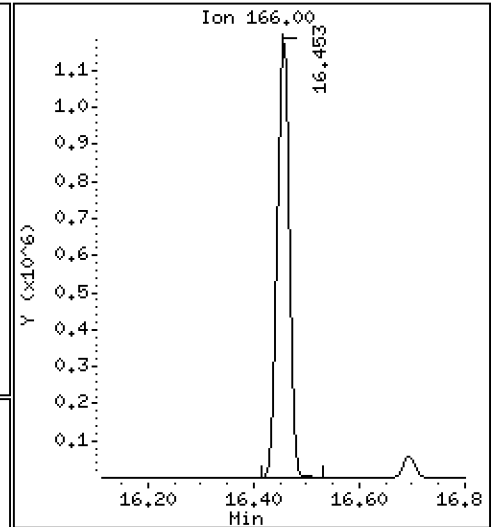
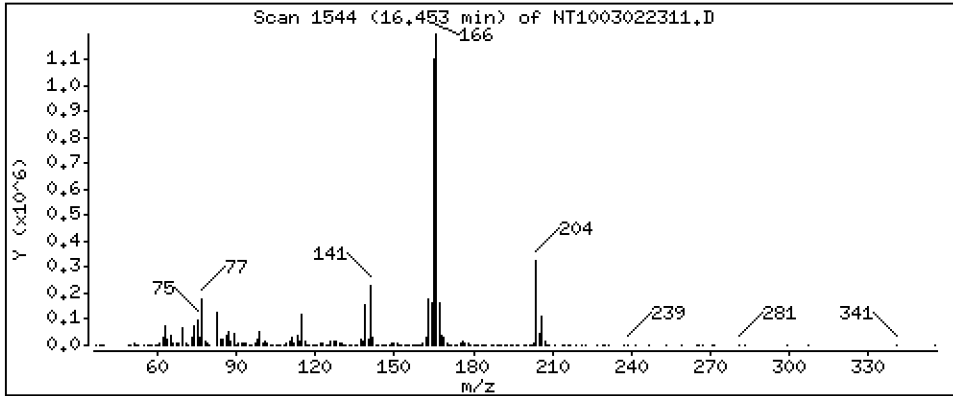
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 3,770 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

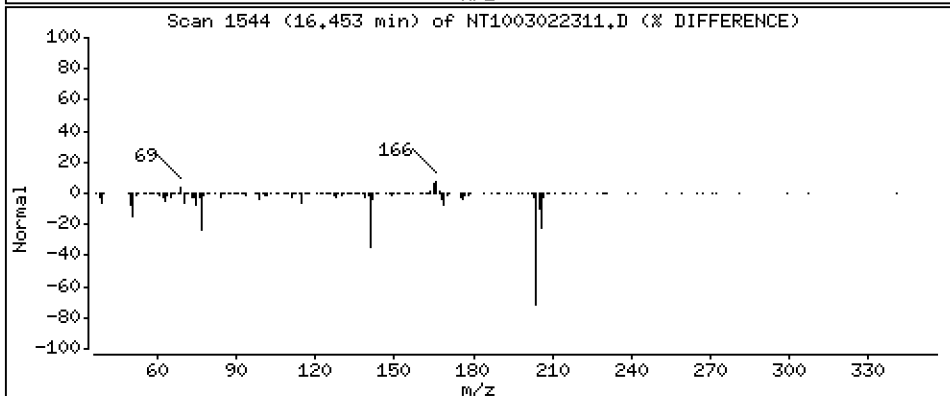
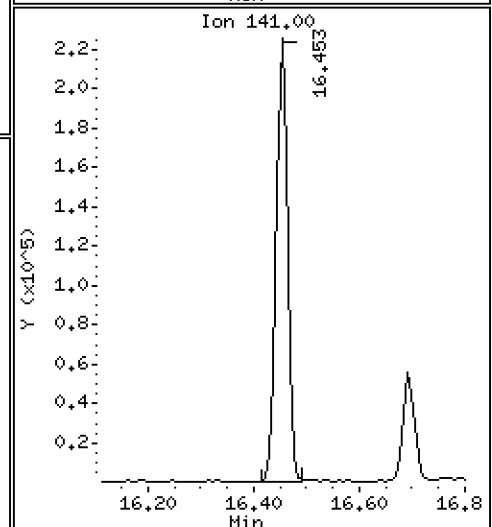
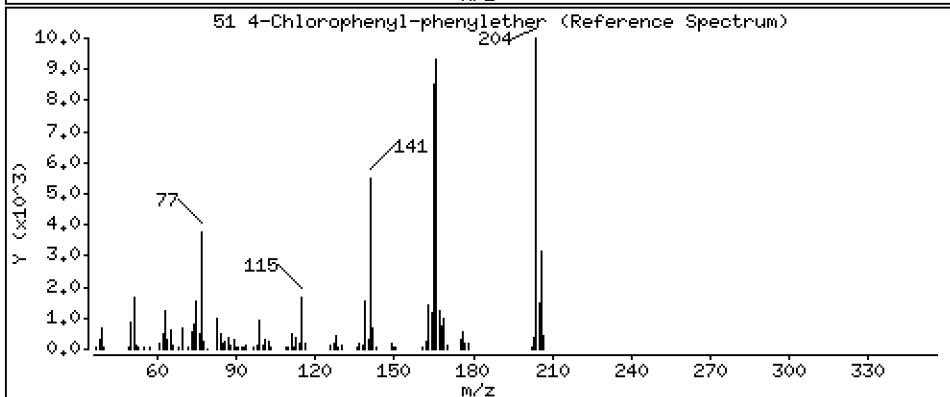
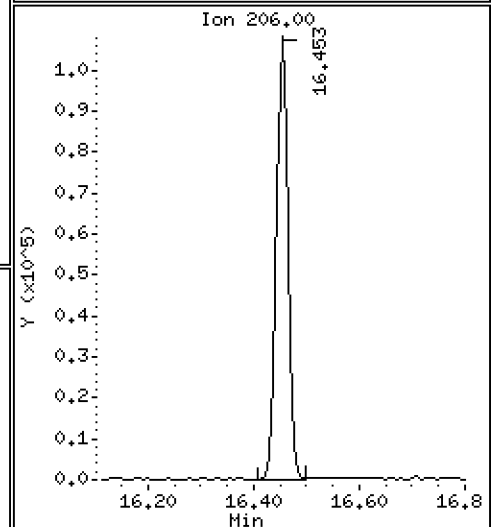
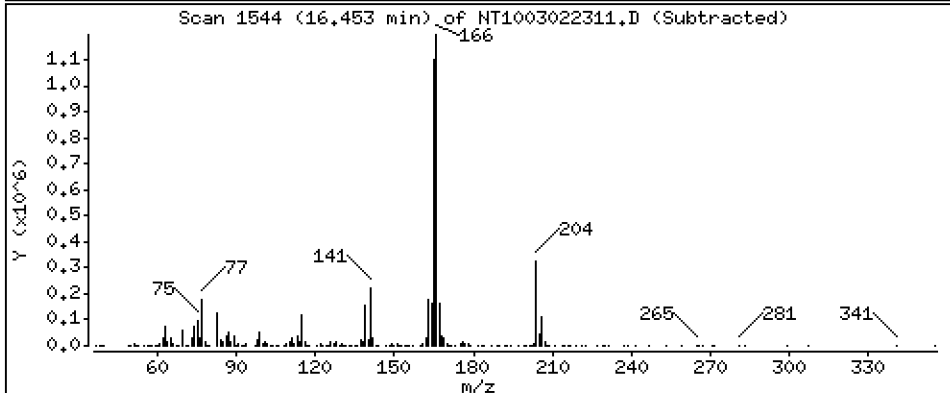
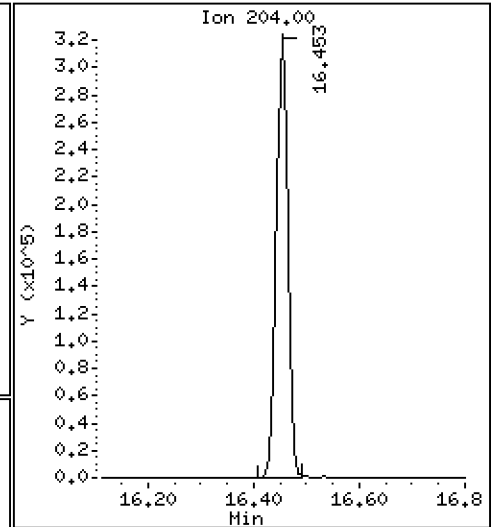
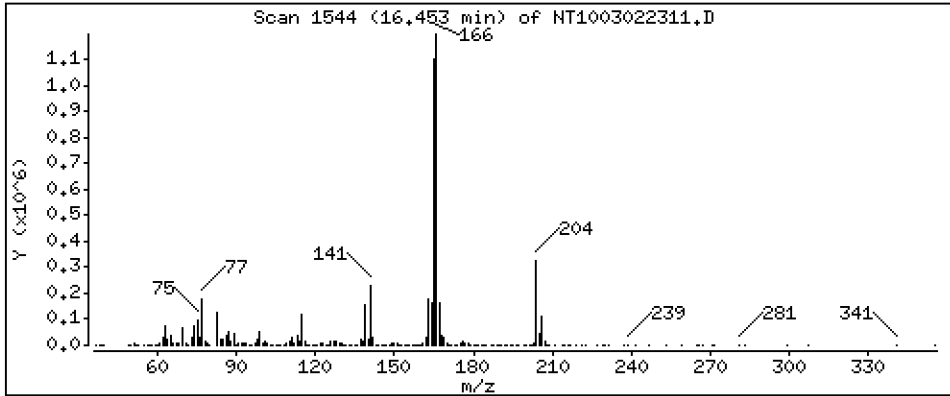
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 2,185 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

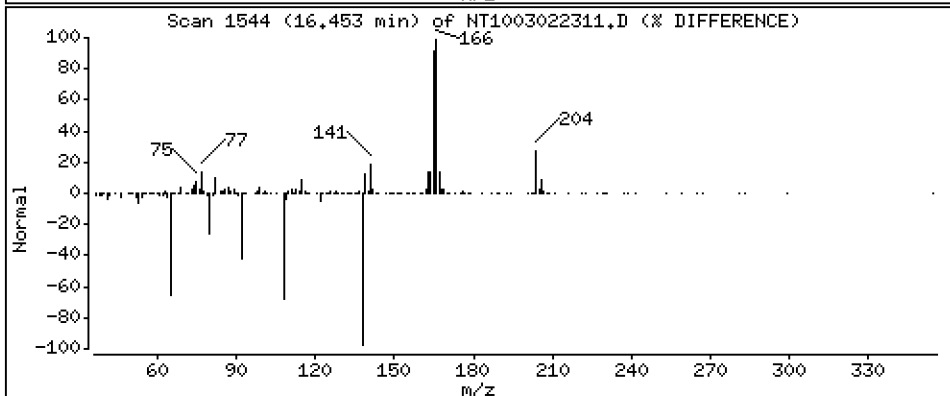
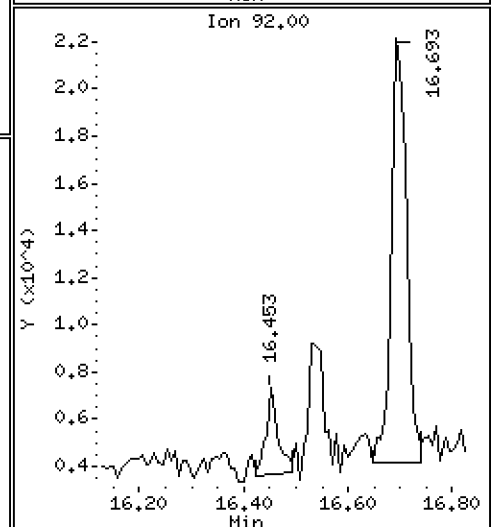
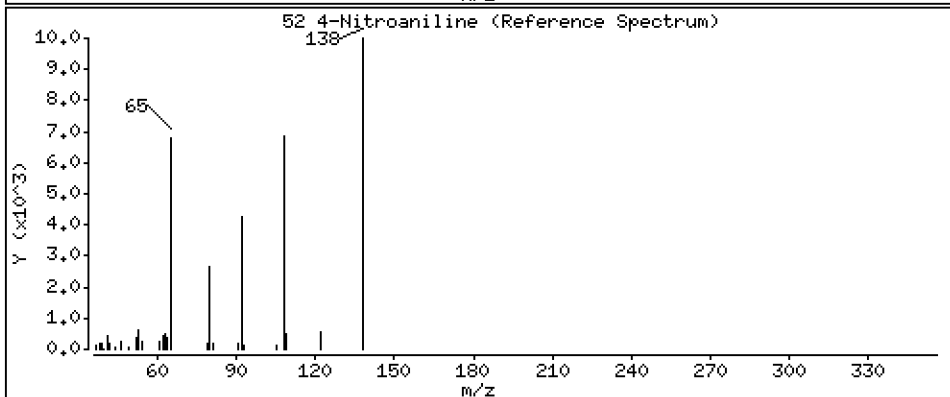
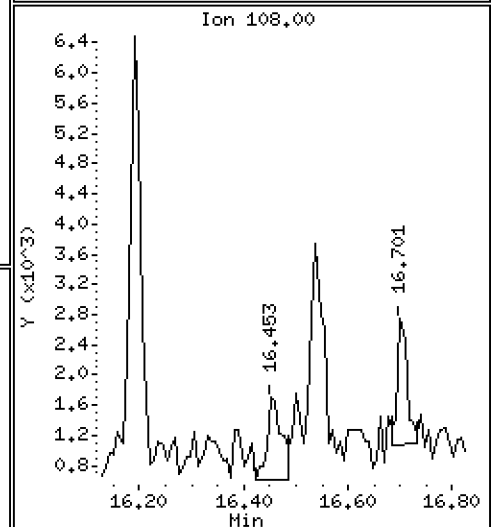
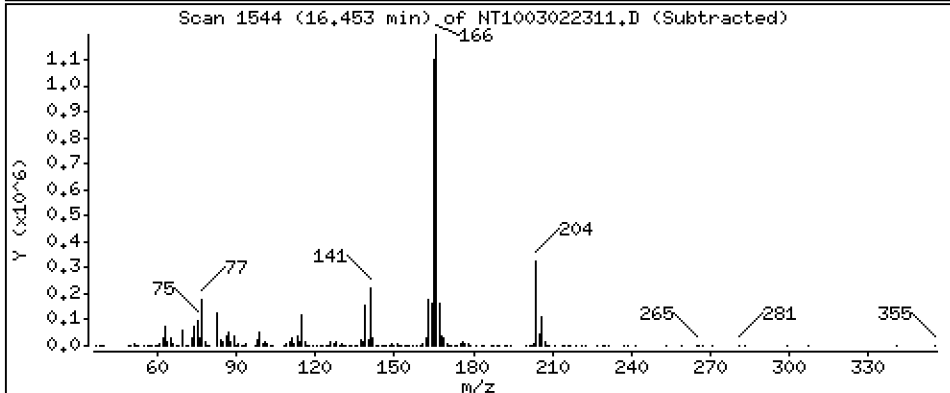
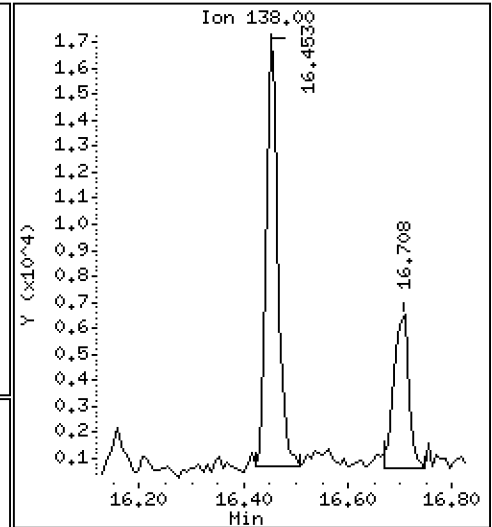
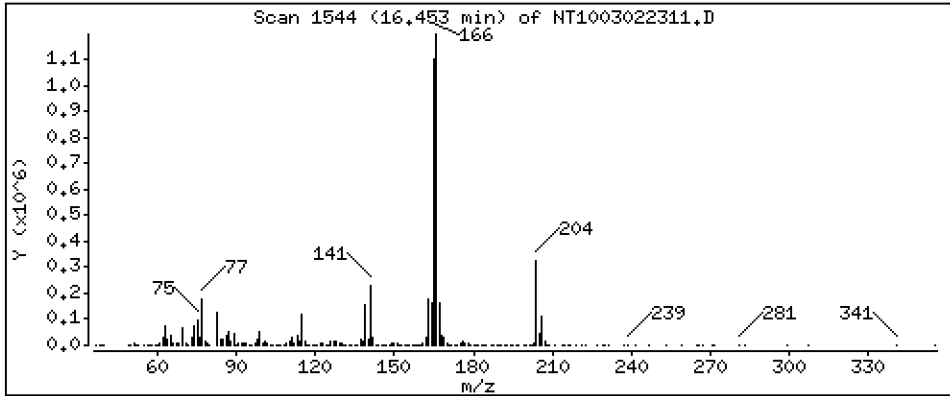
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 0,2207 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

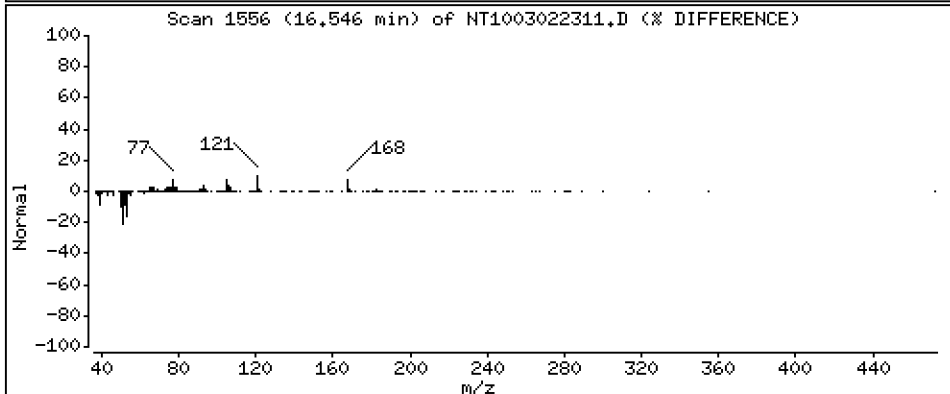
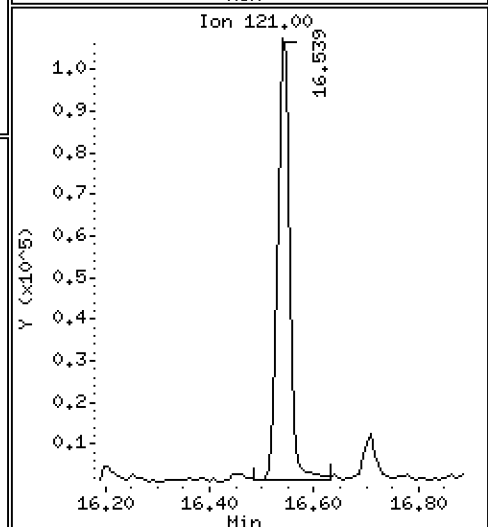
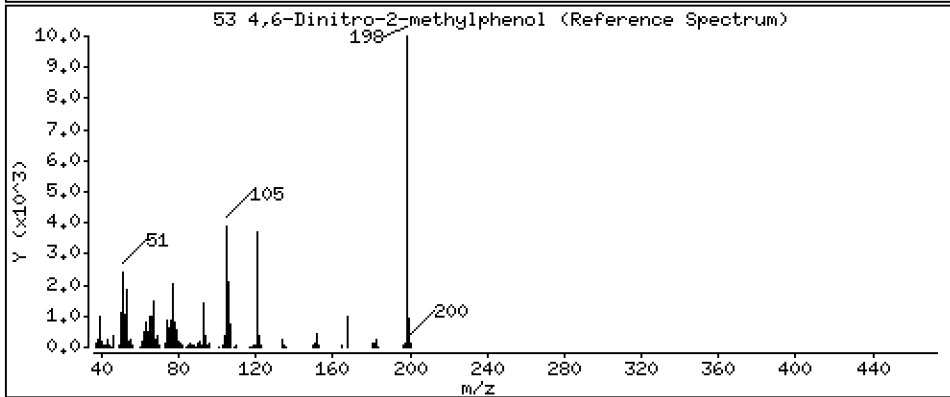
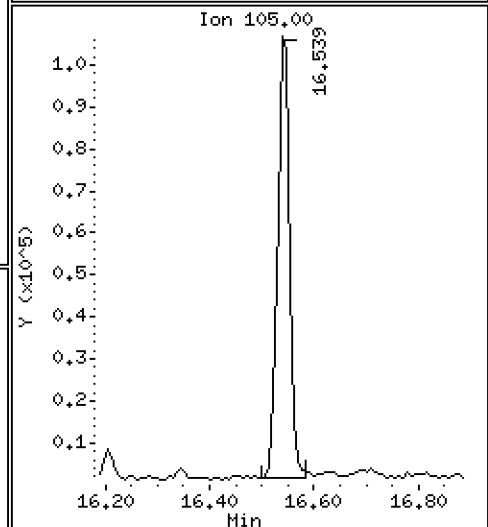
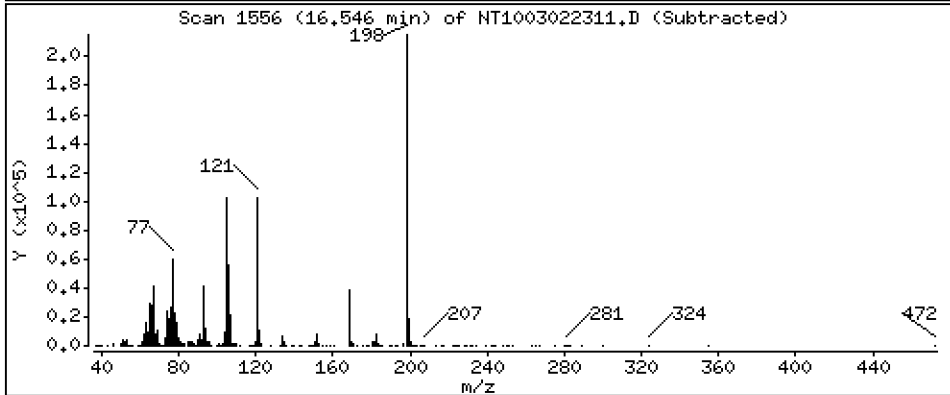
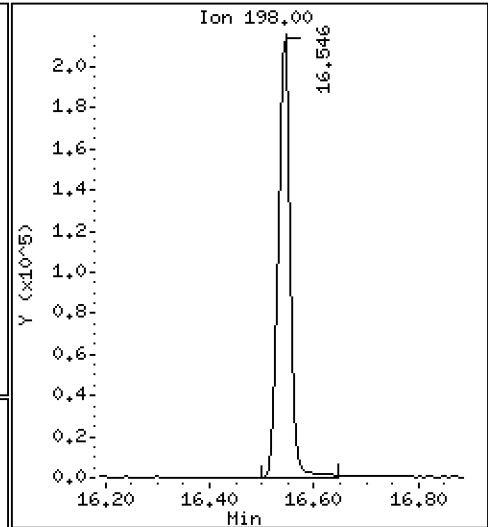
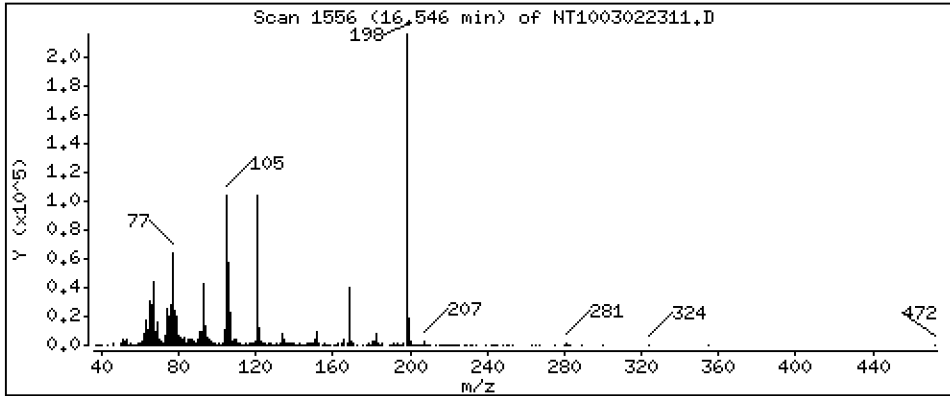
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 6,656 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

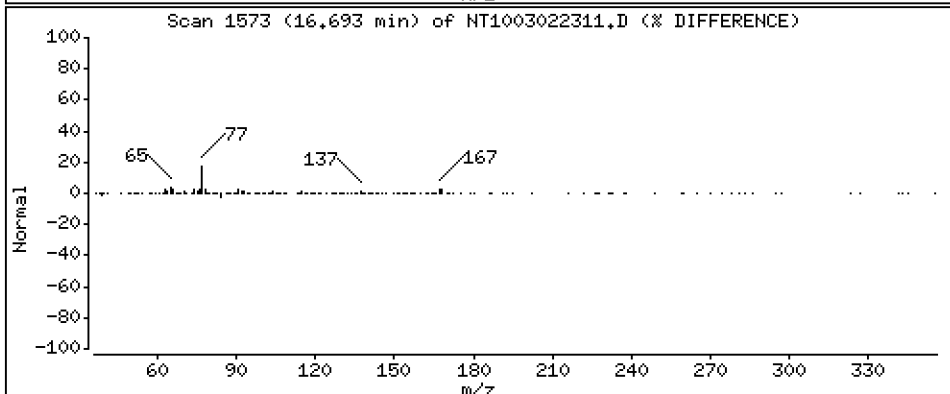
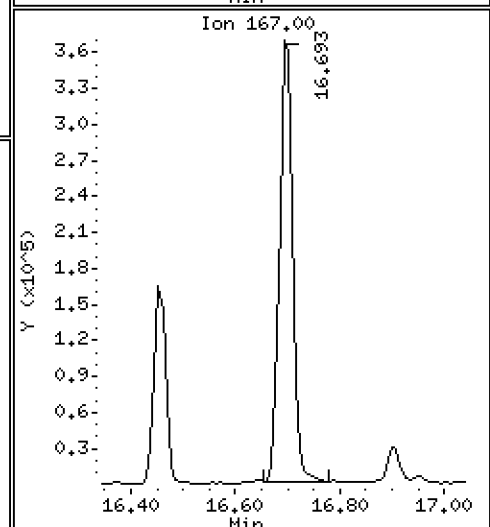
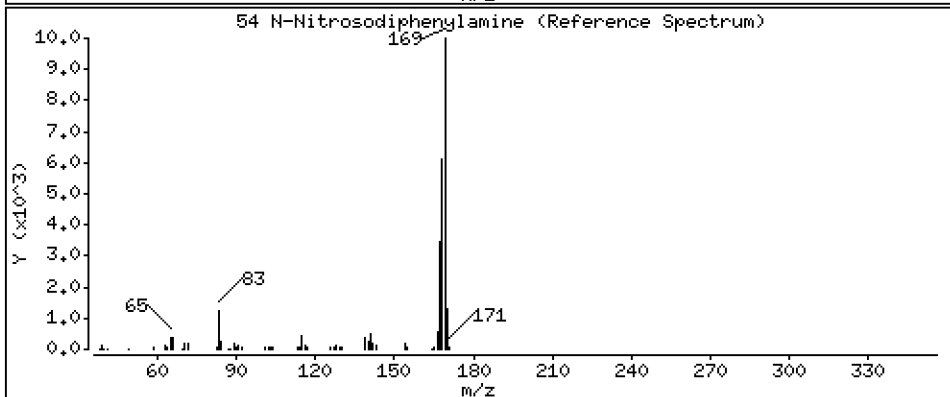
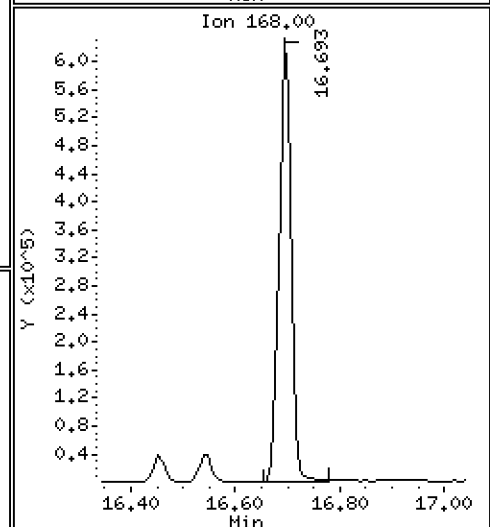
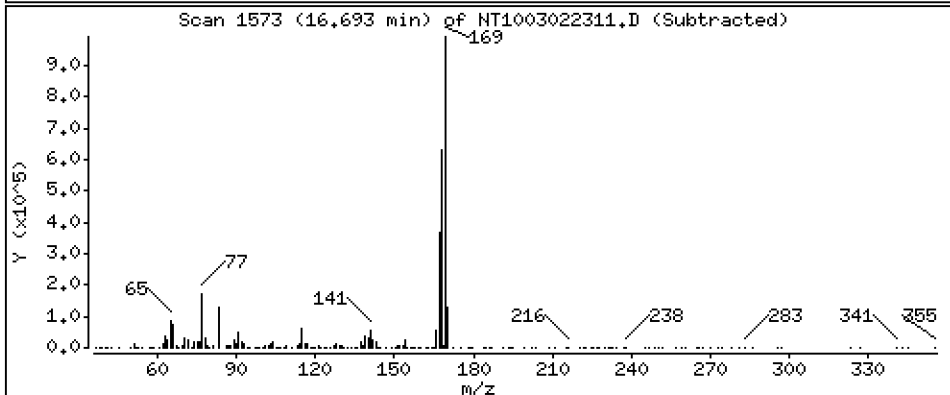
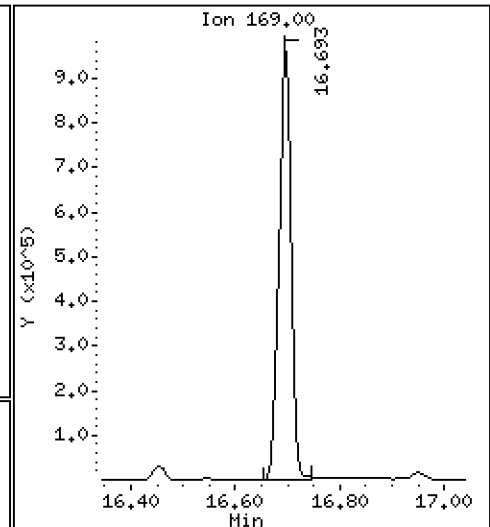
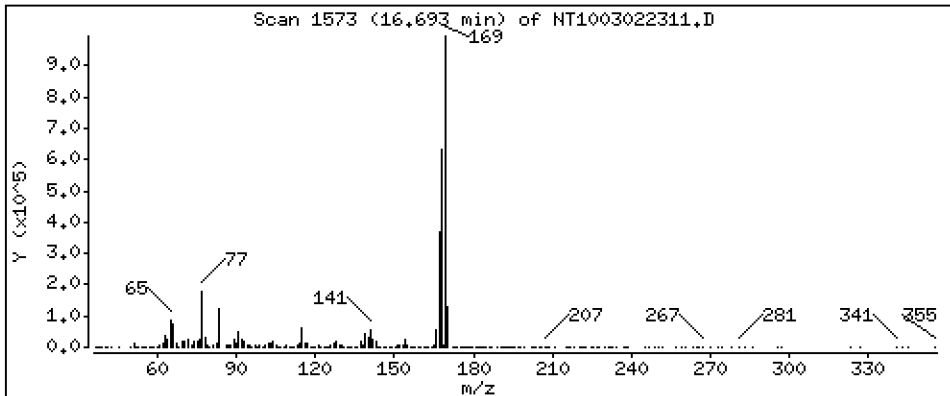
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,323 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

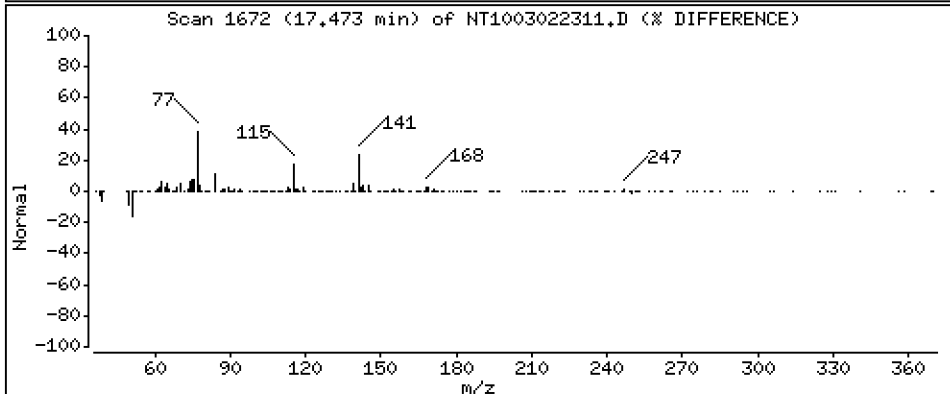
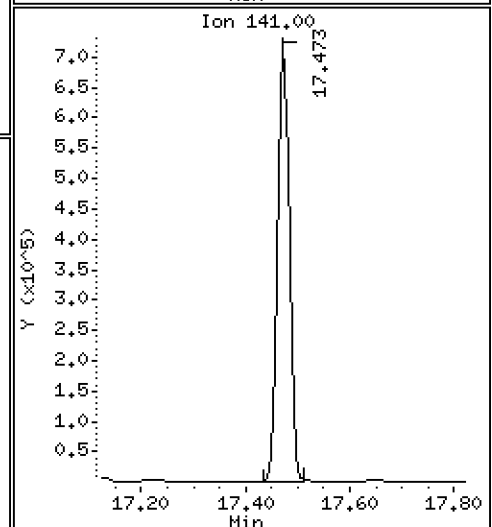
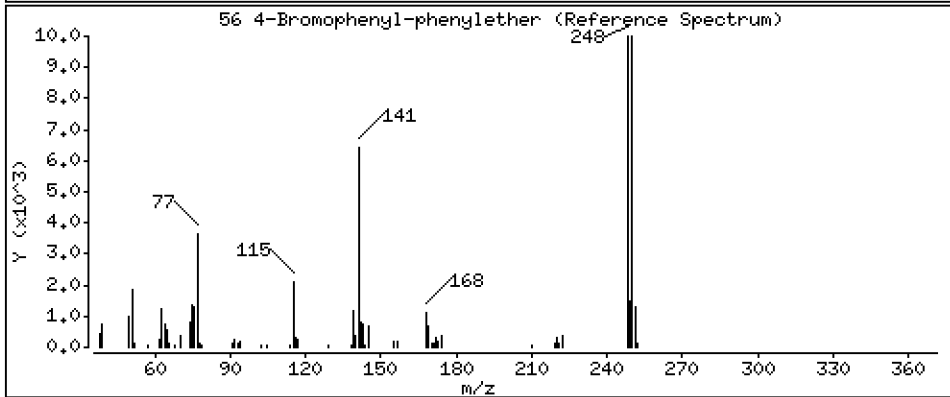
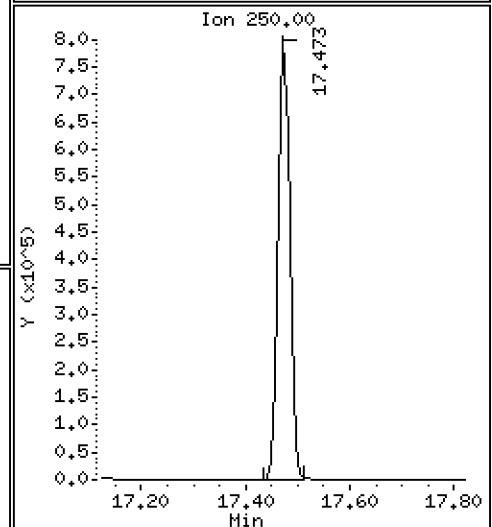
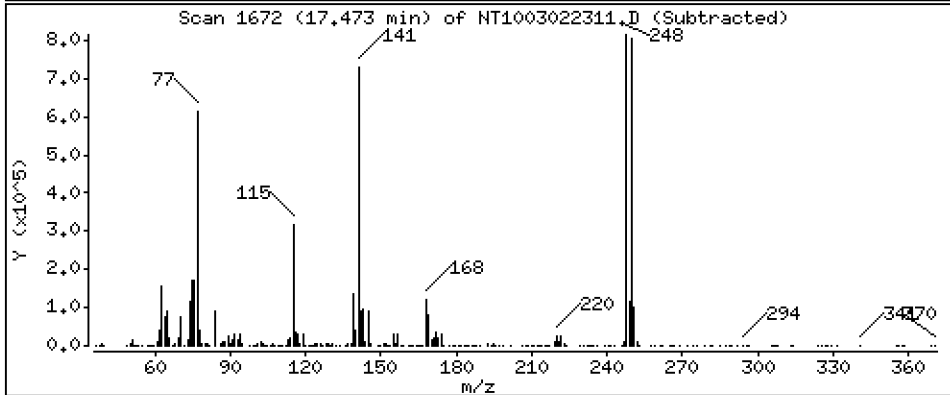
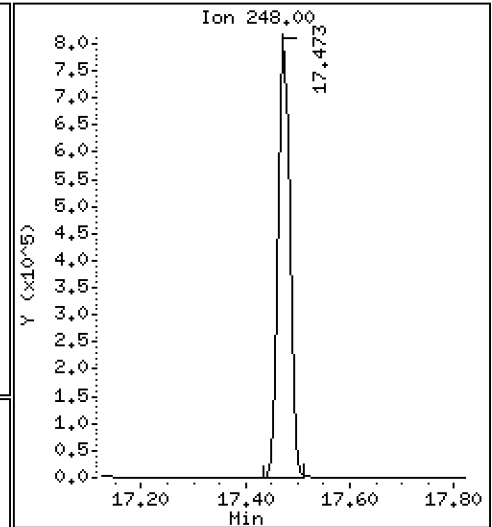
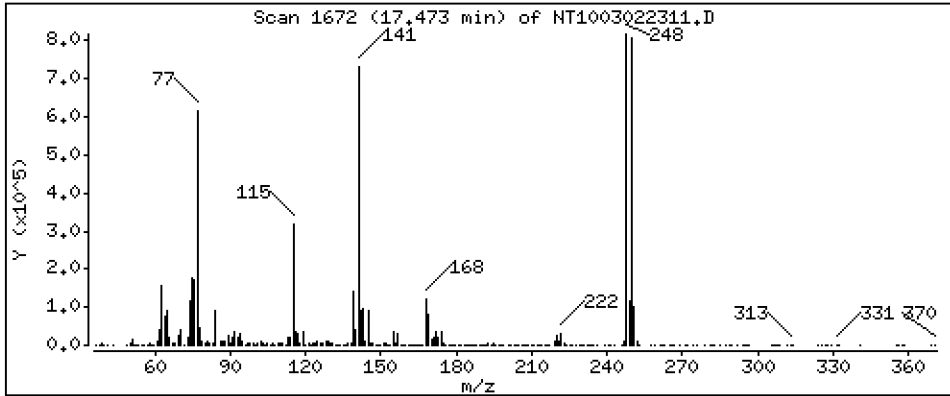
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 8,232 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

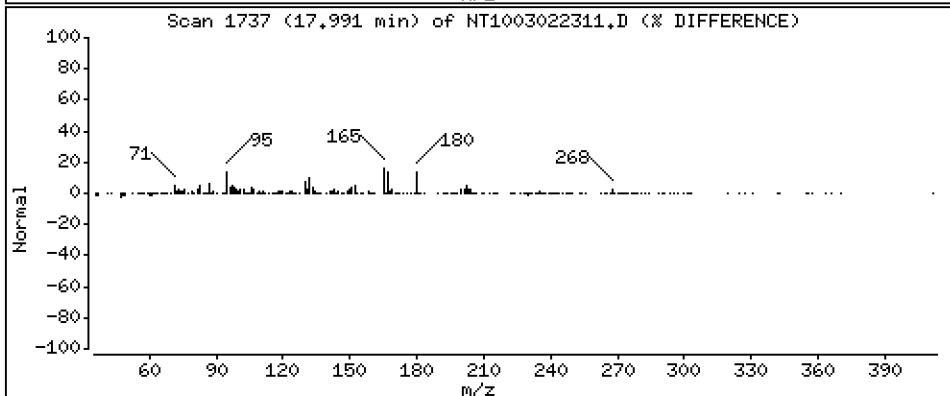
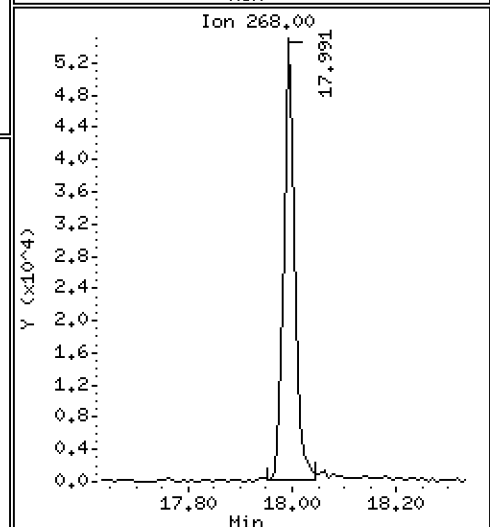
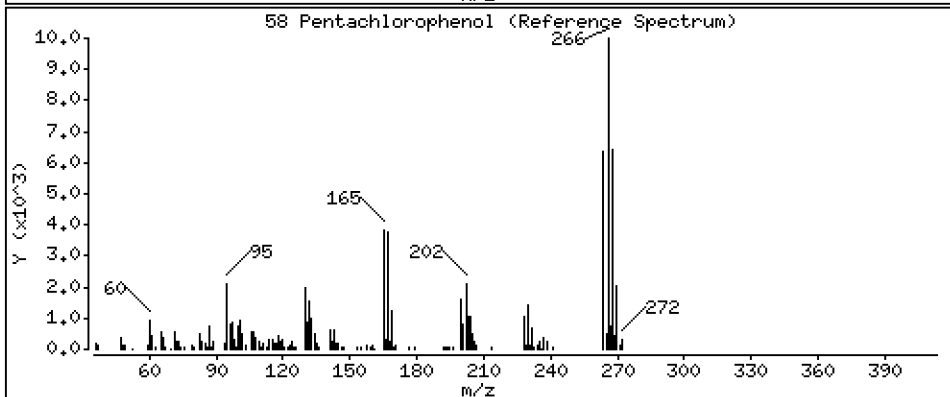
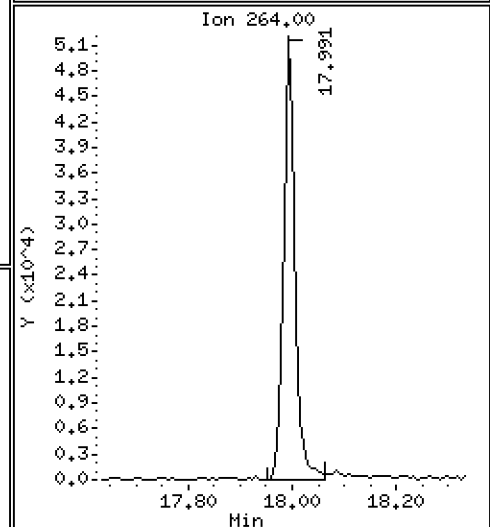
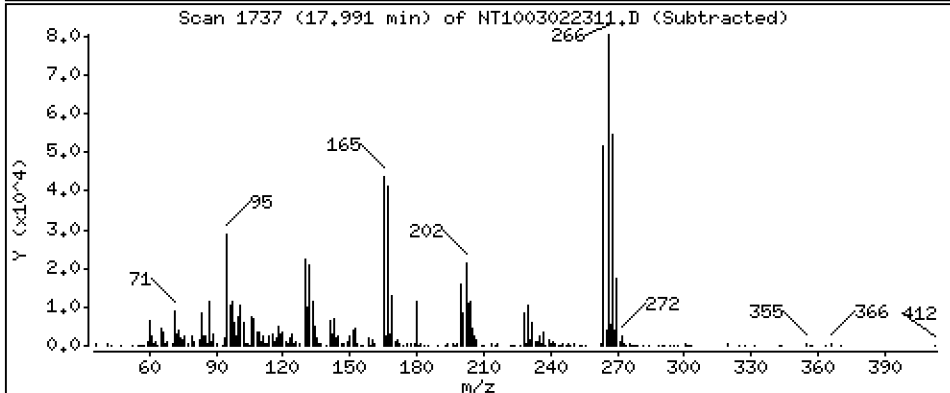
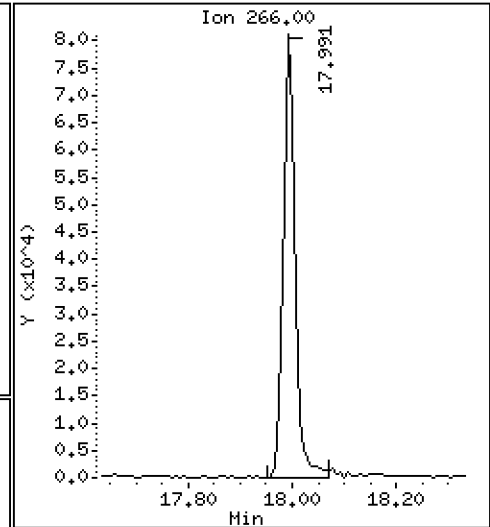
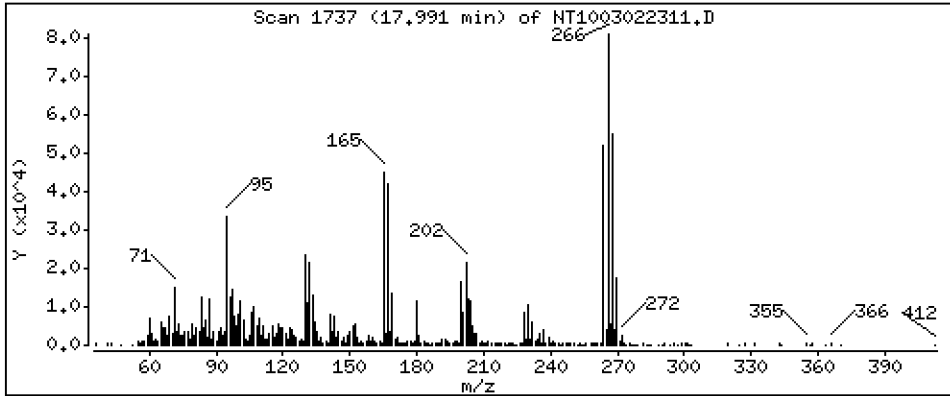
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 1,680 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

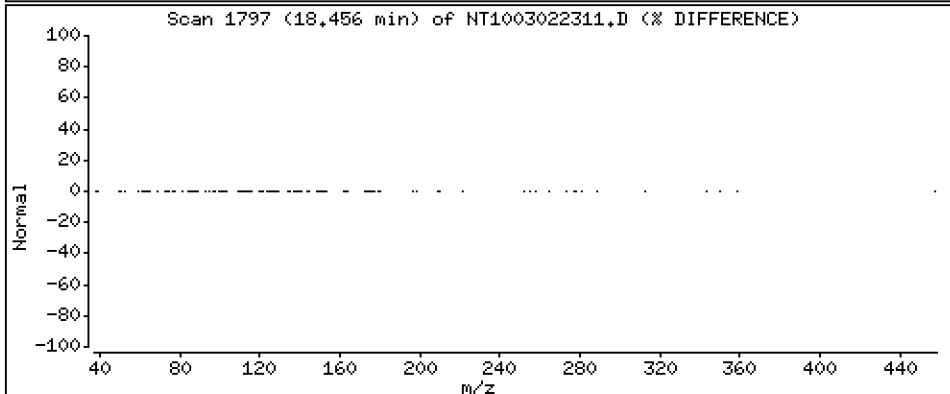
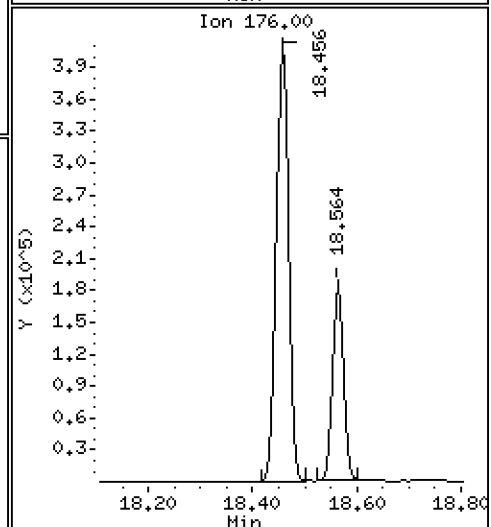
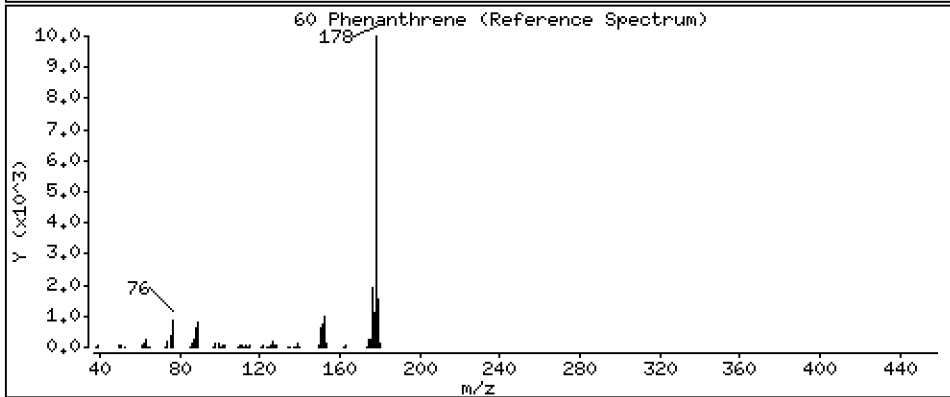
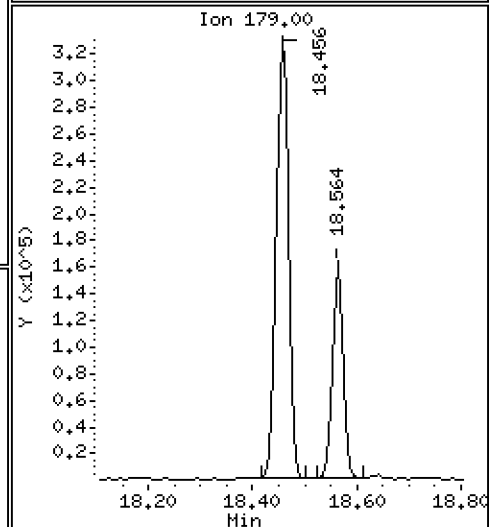
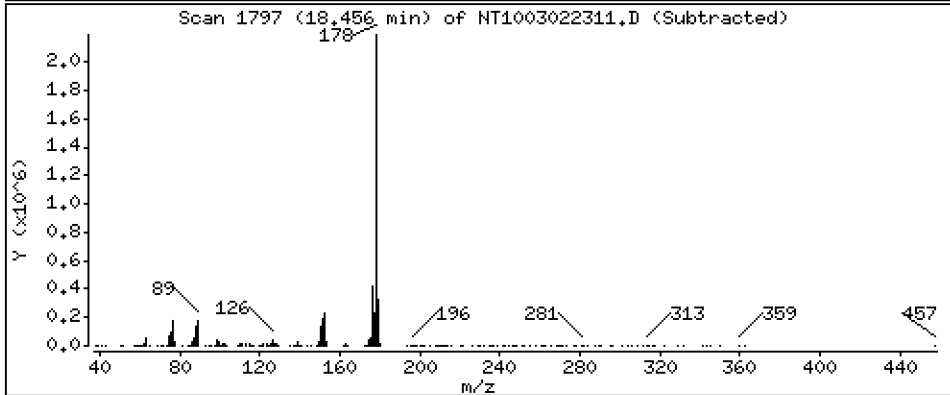
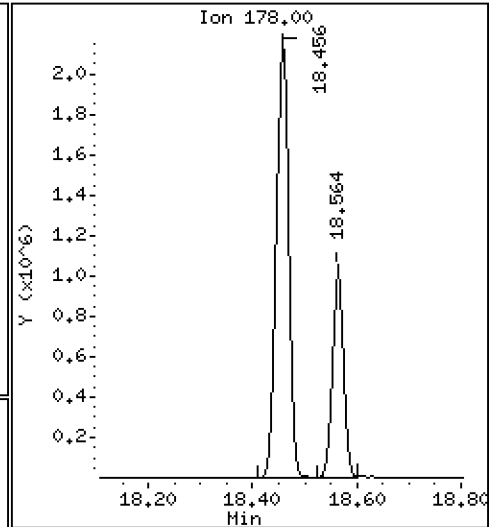
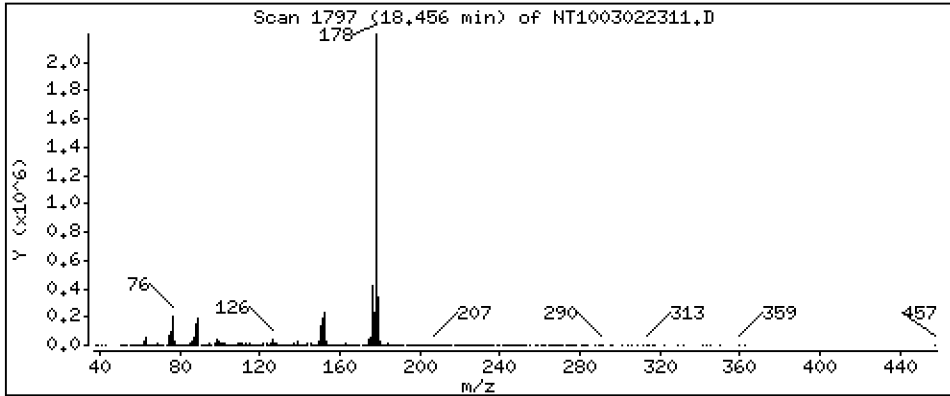
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,463 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

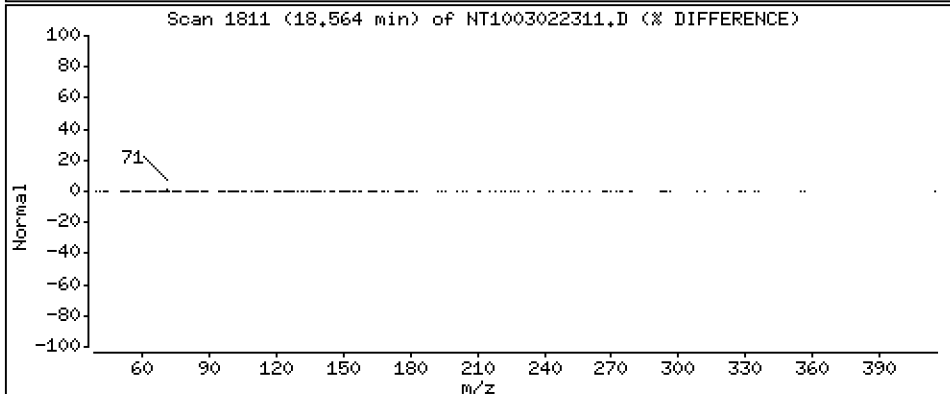
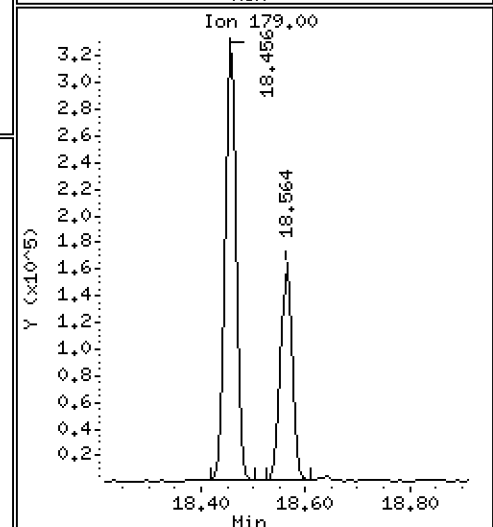
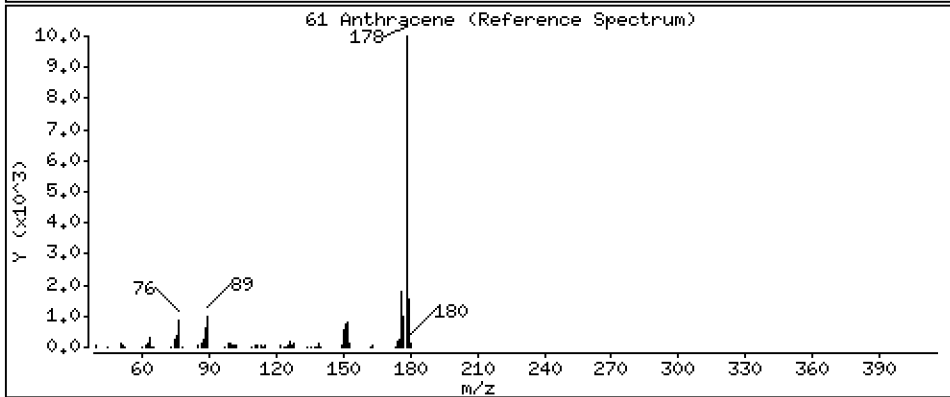
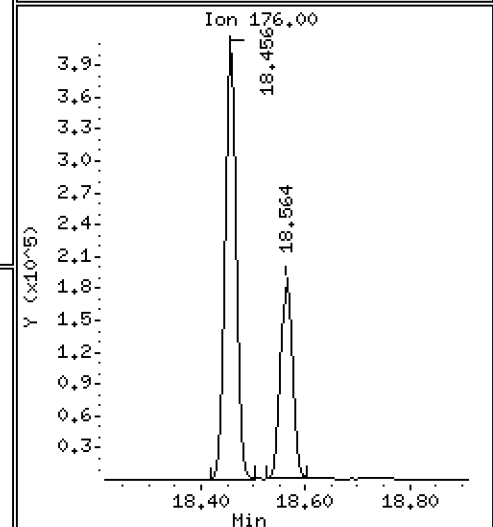
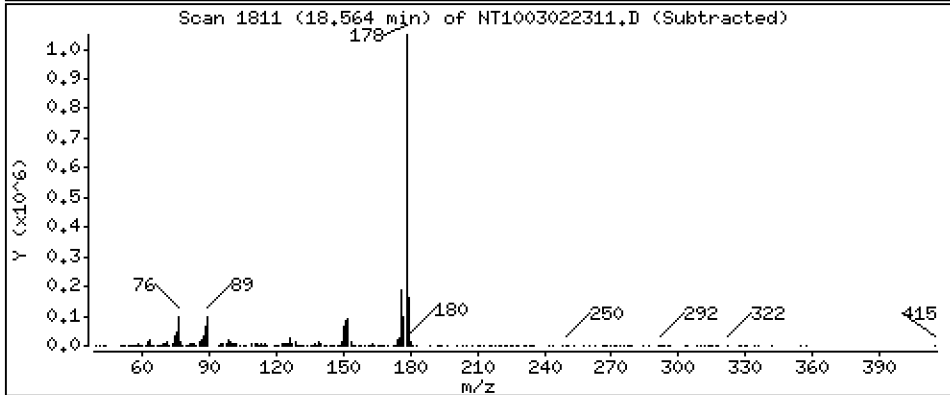
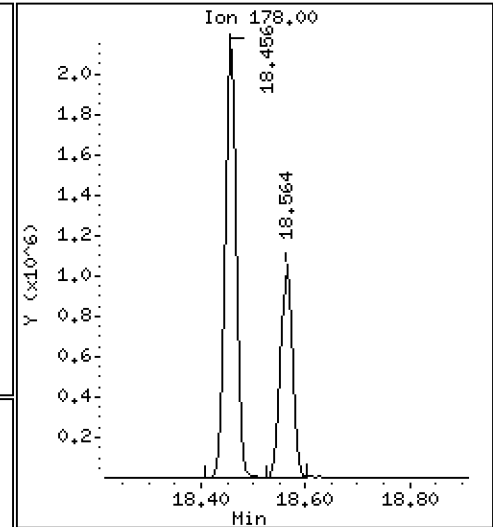
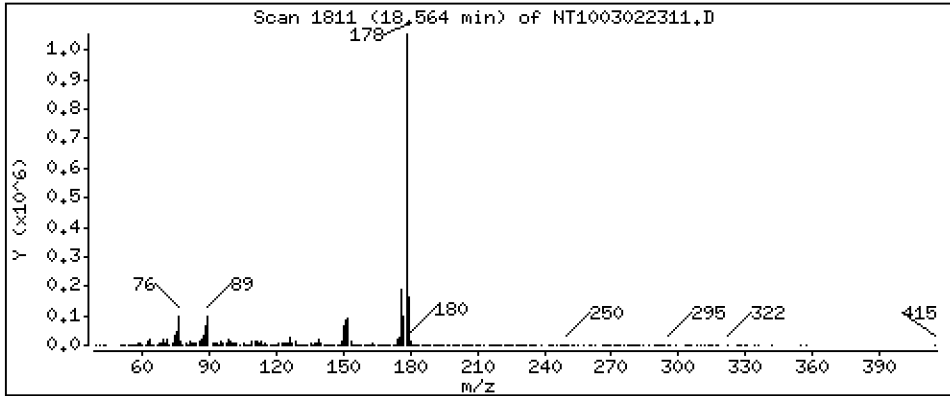
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 2,595 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

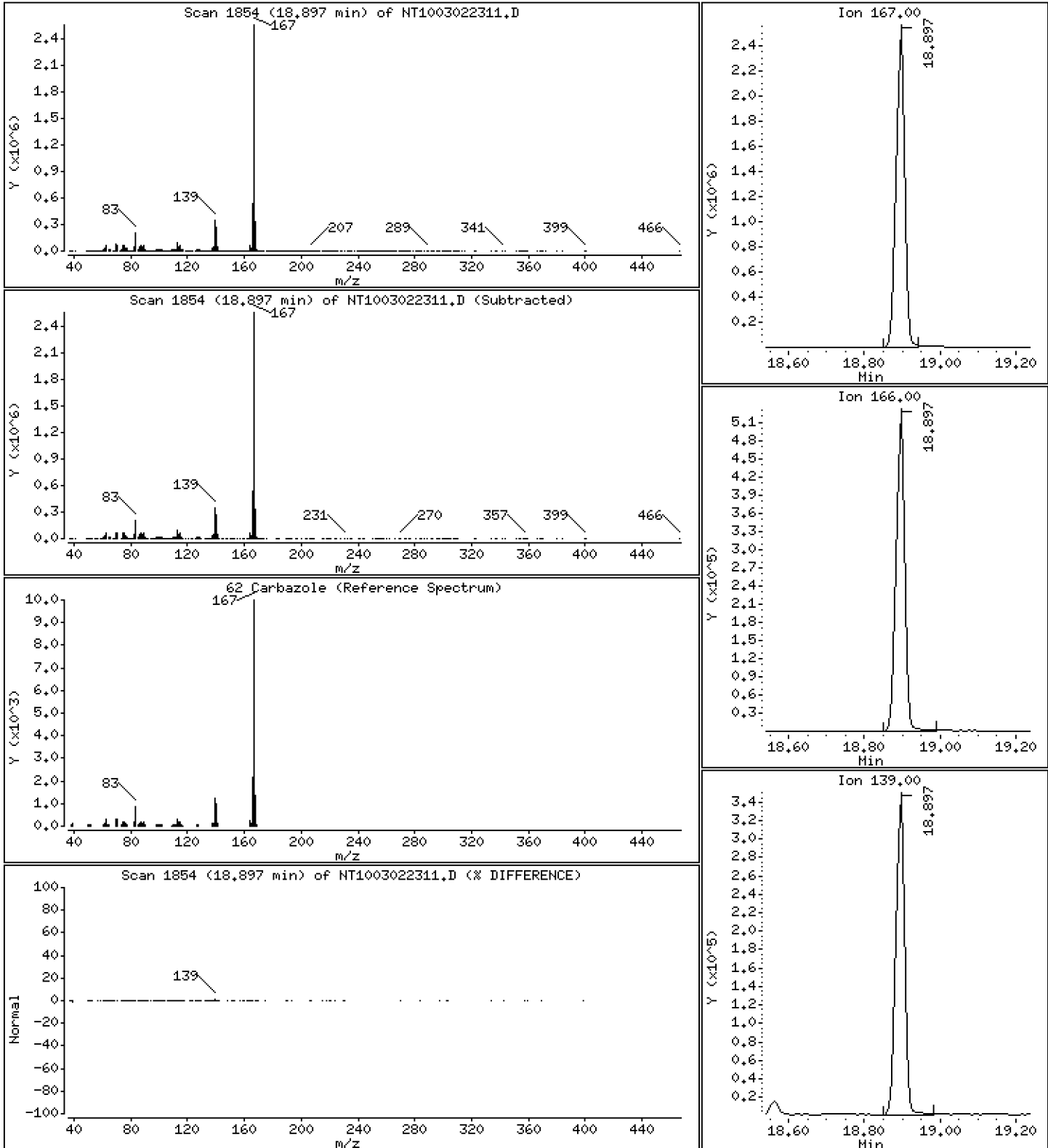
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 7,027 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

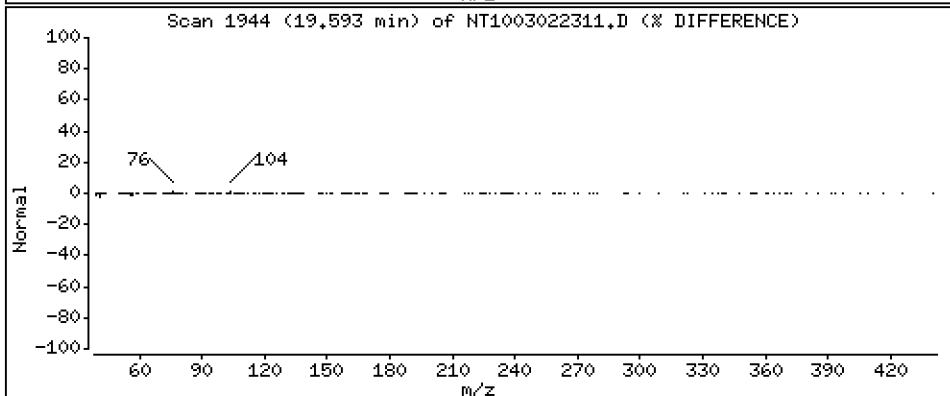
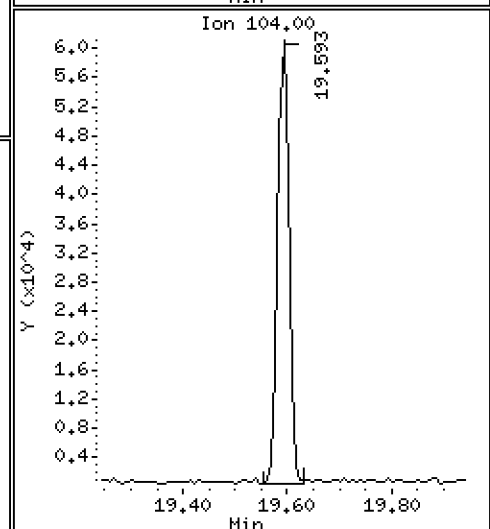
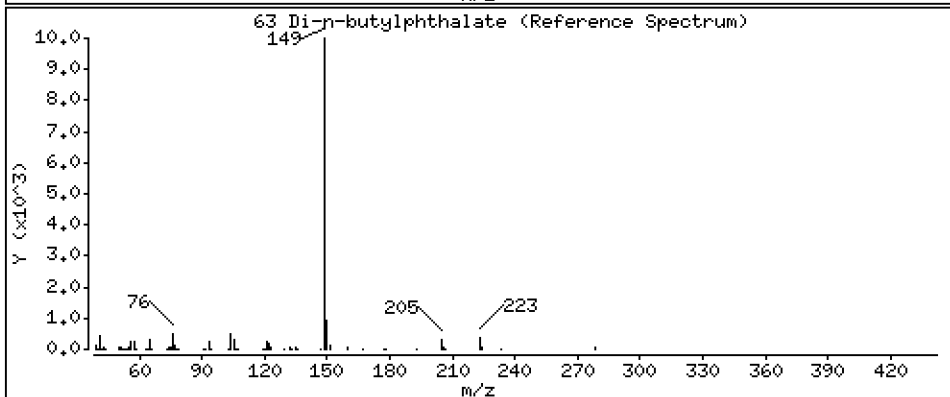
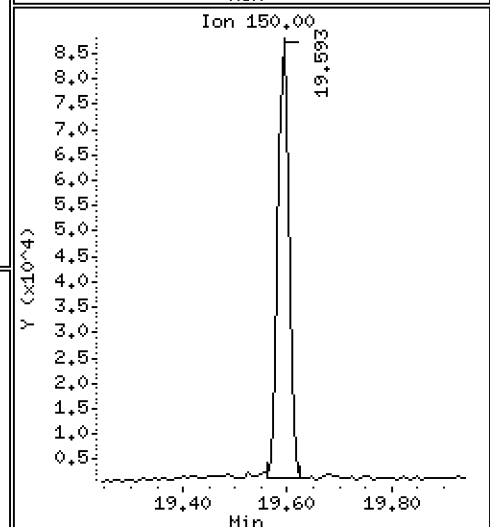
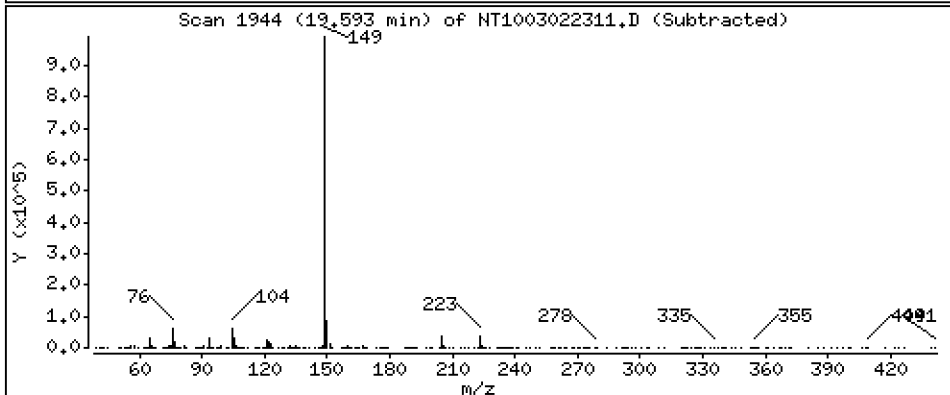
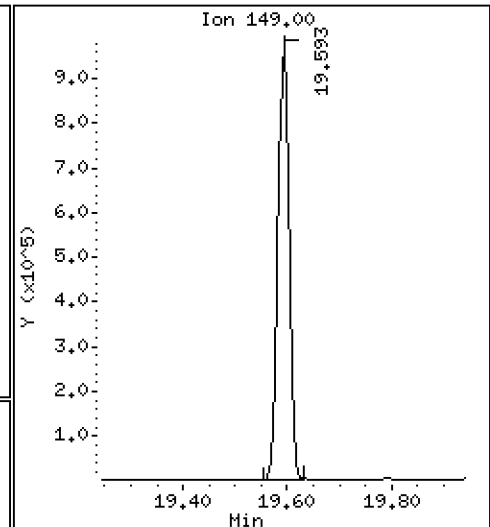
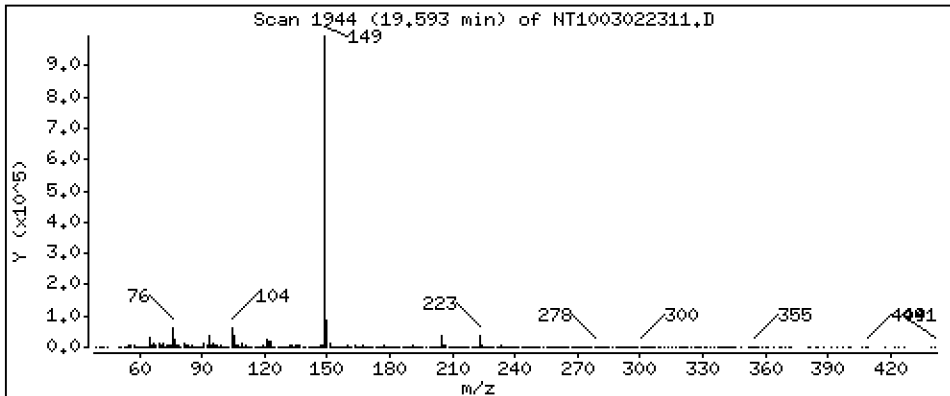
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 1,796 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

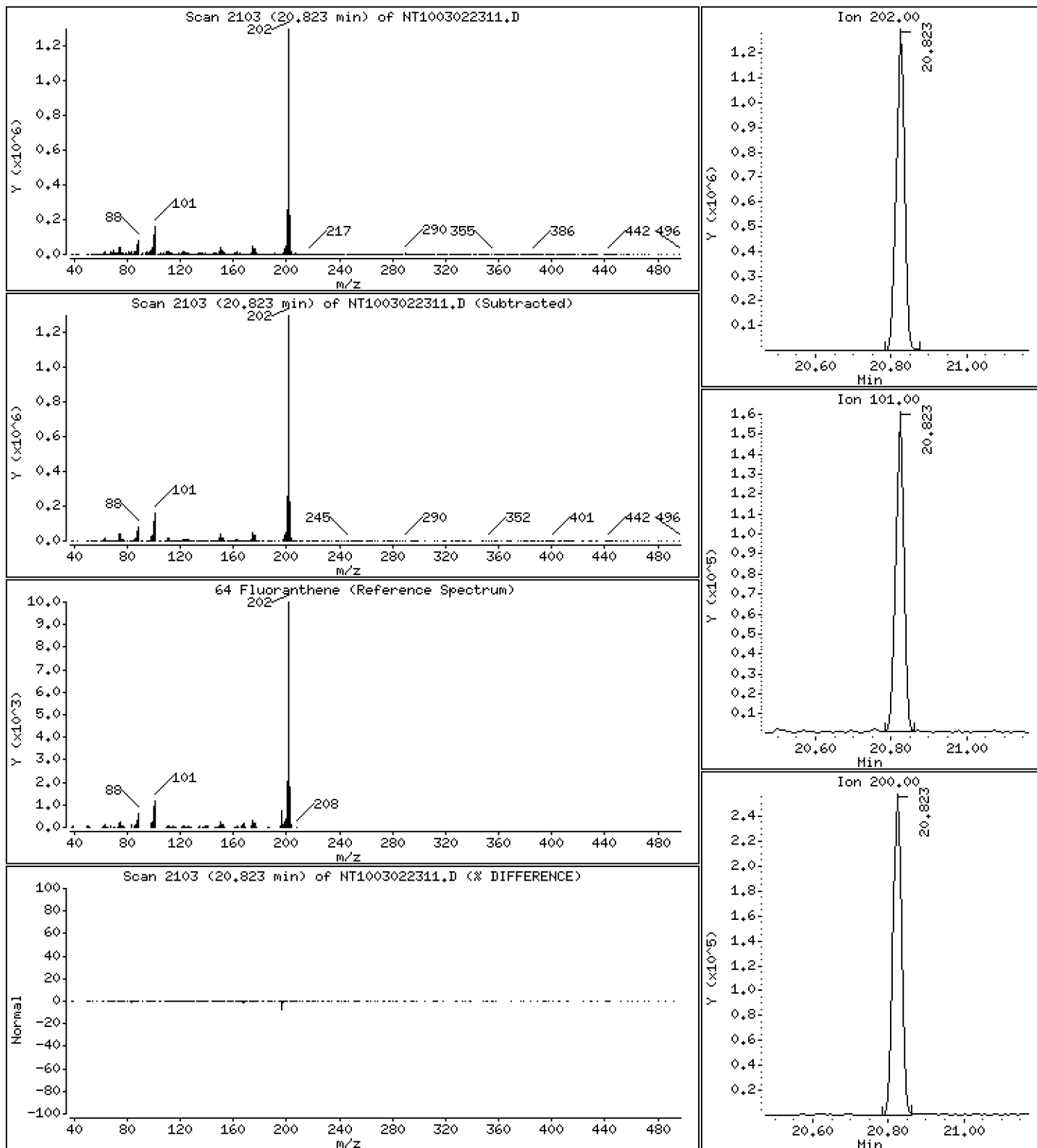
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 2,108 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

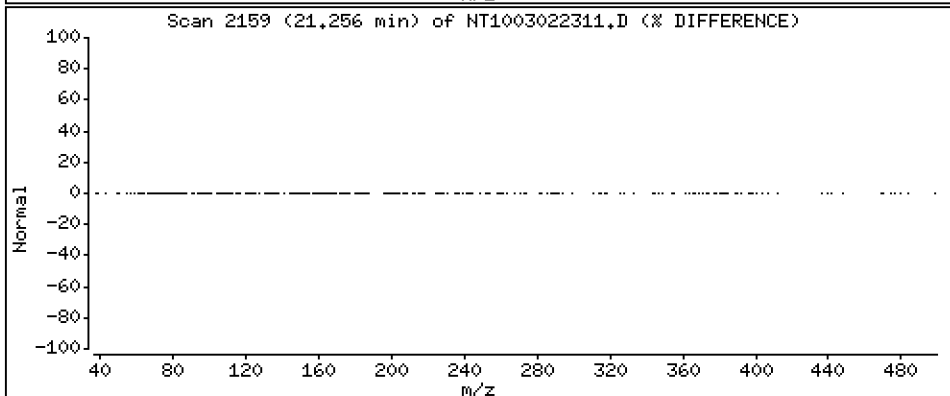
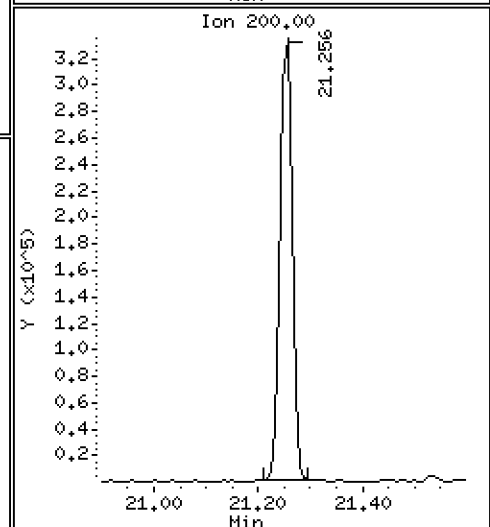
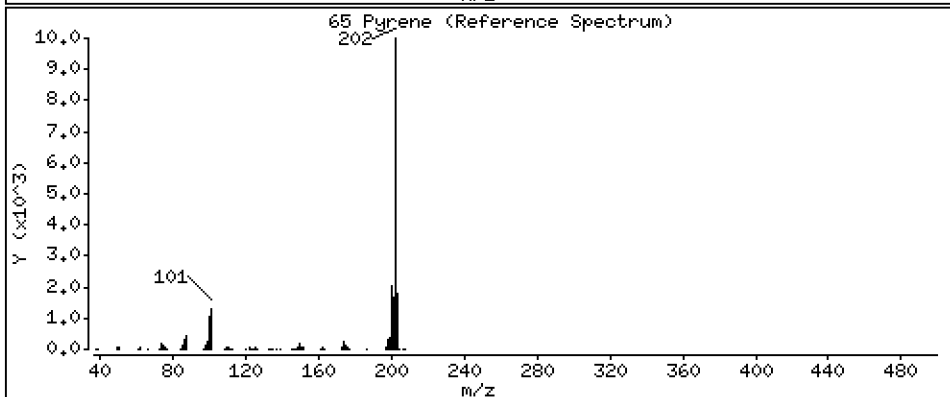
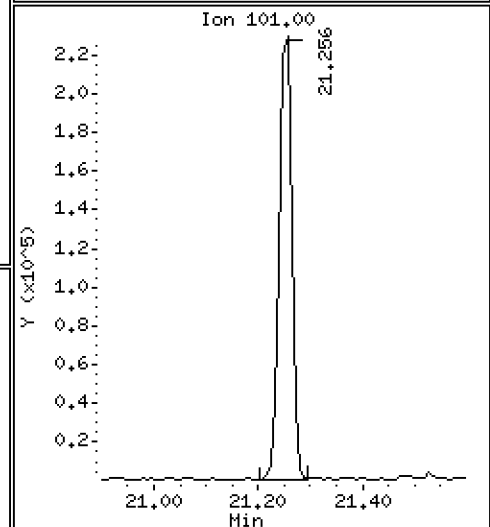
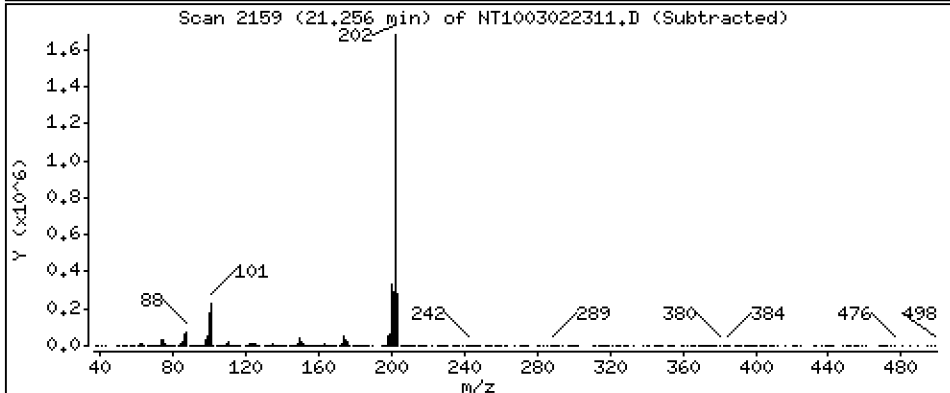
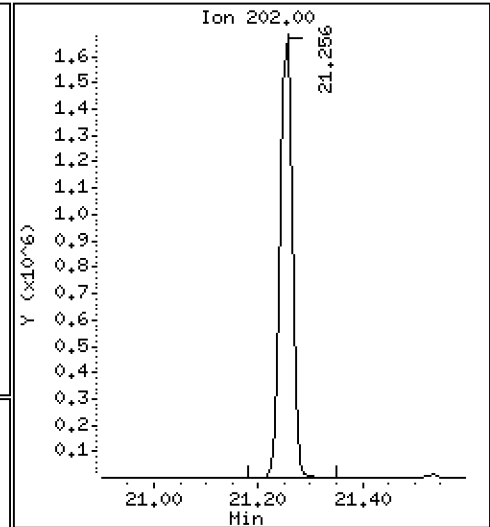
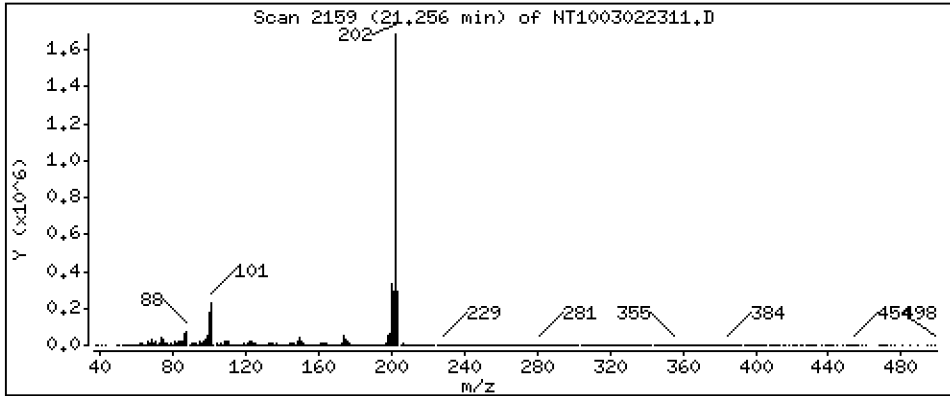
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 2,737 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

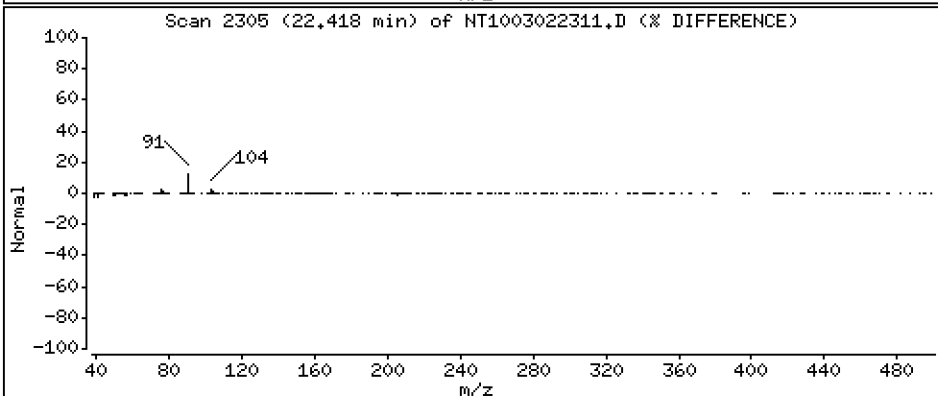
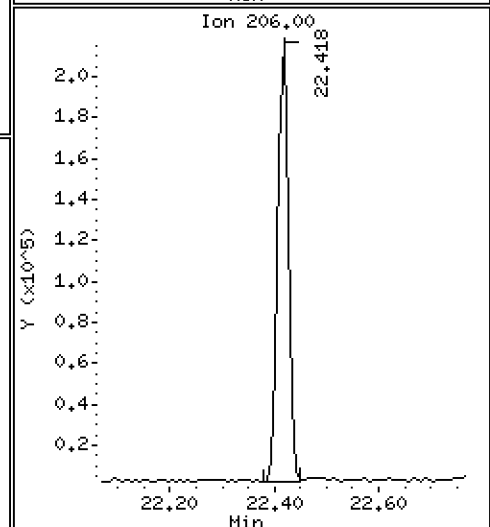
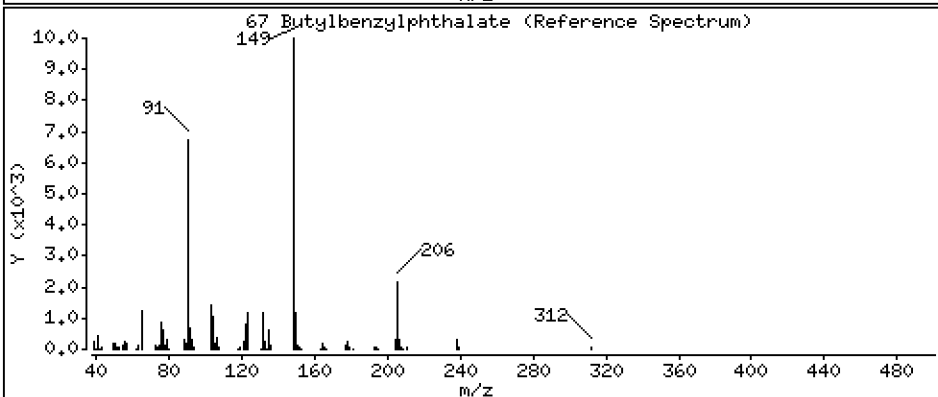
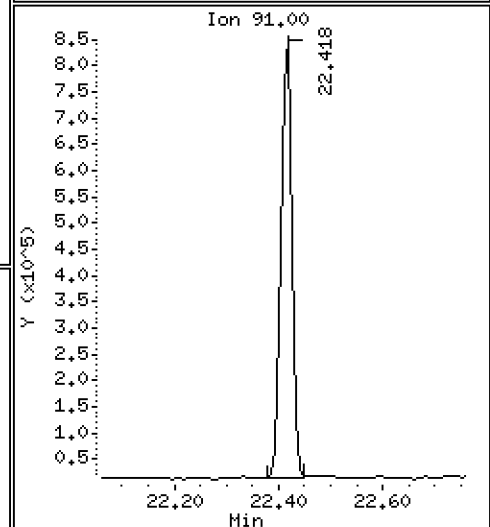
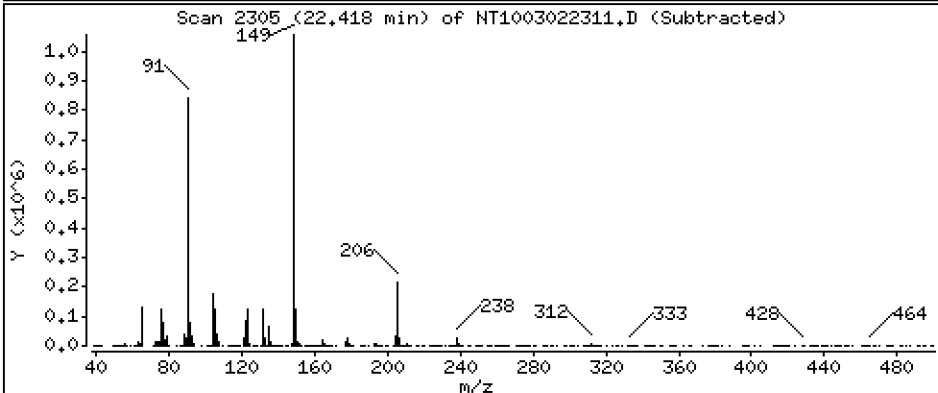
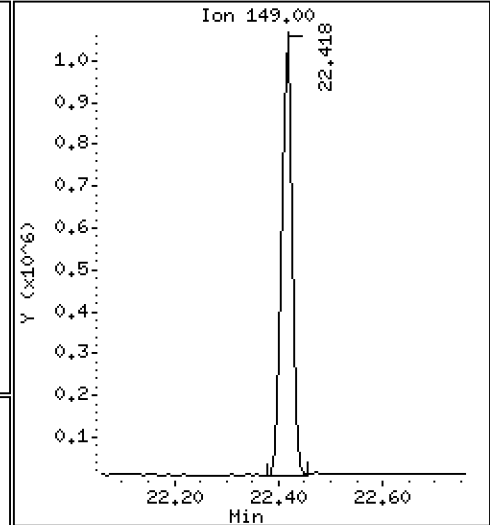
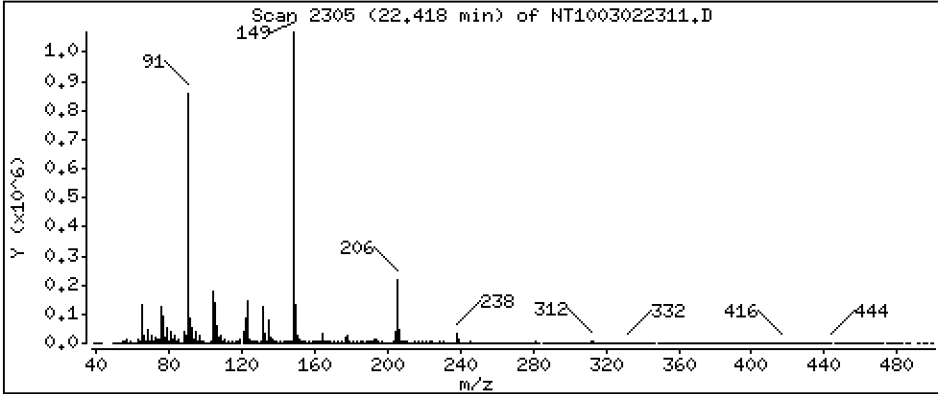
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 2,846 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

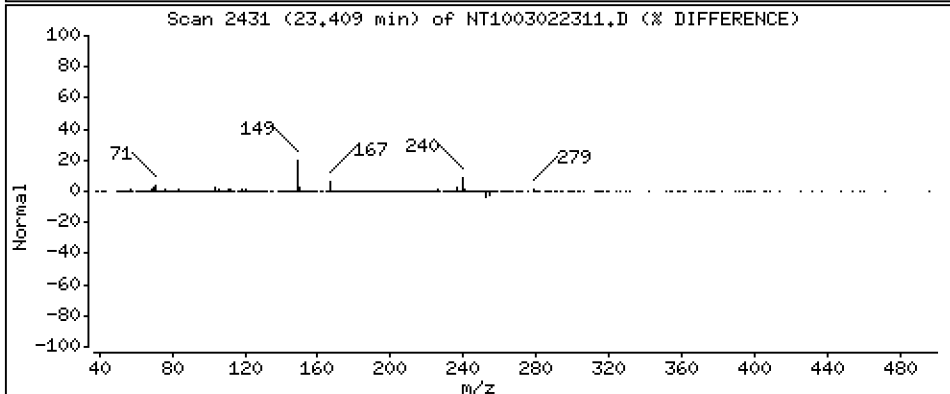
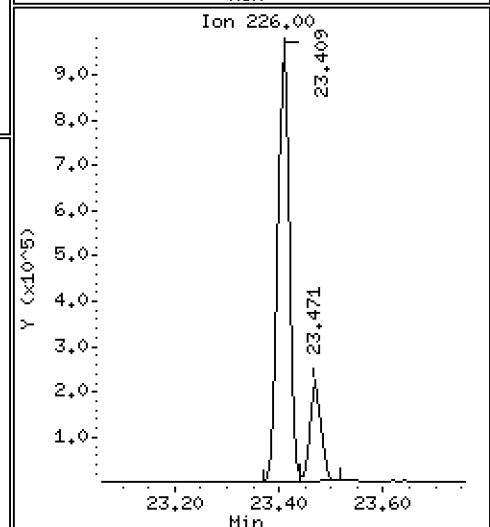
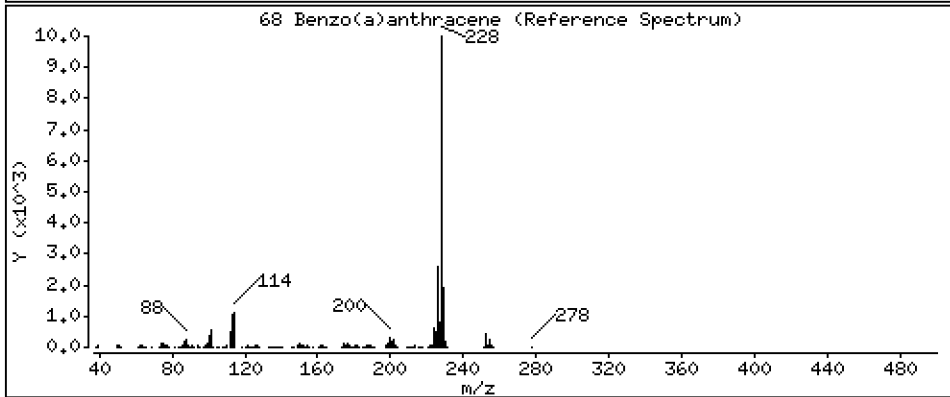
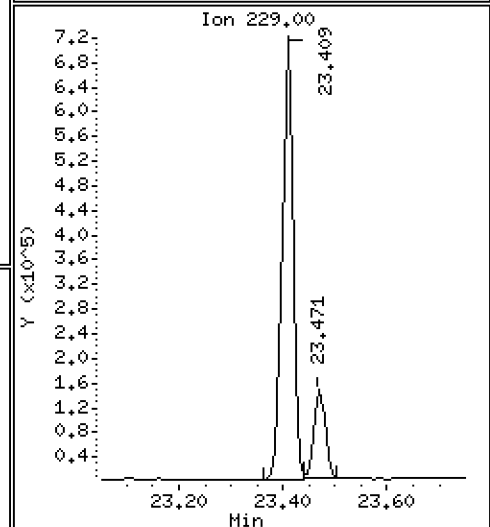
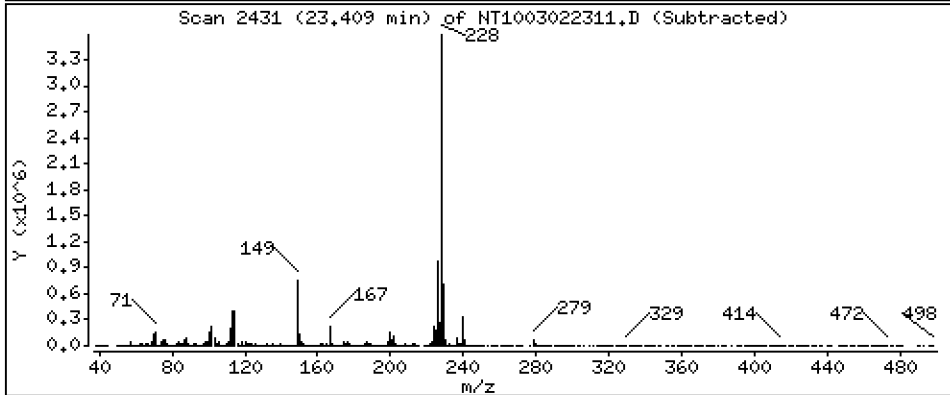
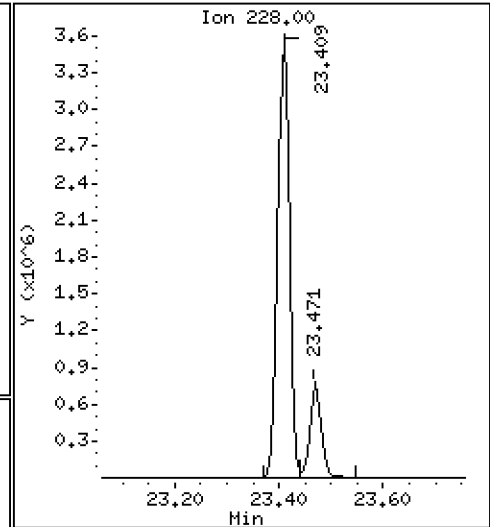
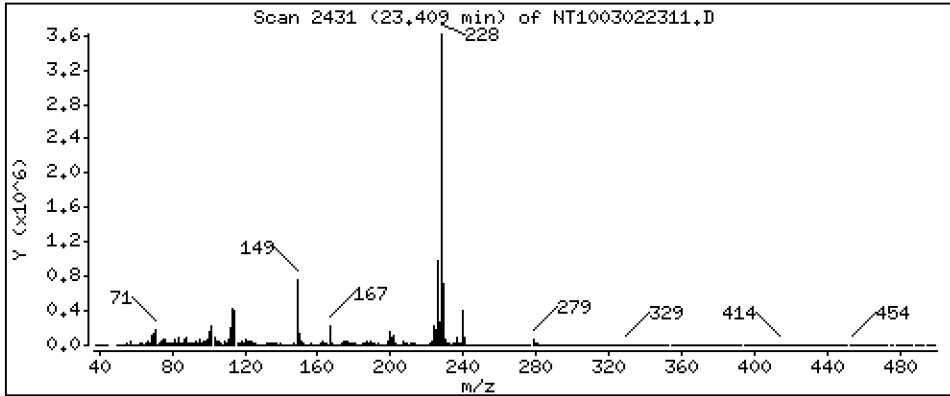
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 5,563 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

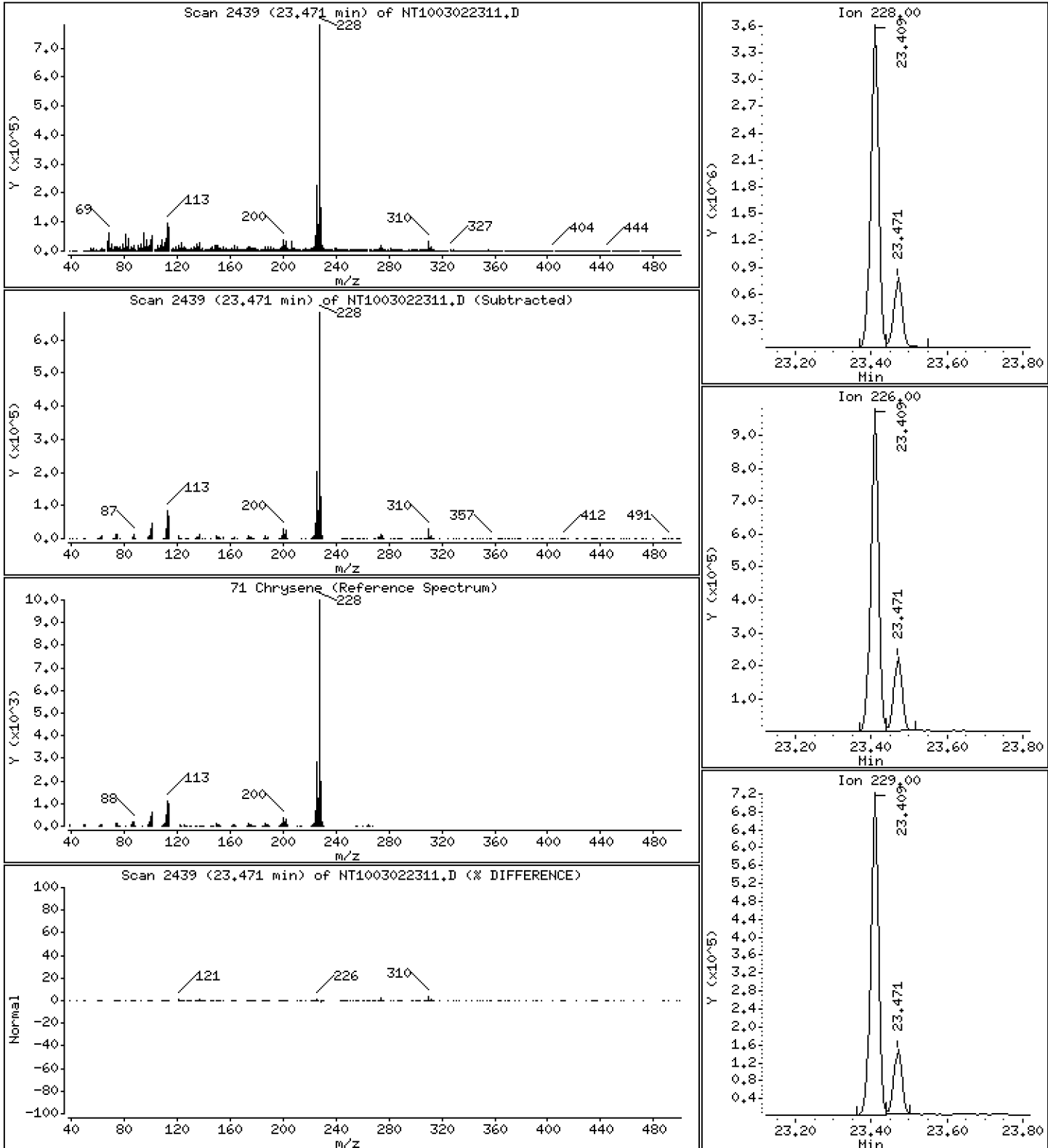
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 1,452 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

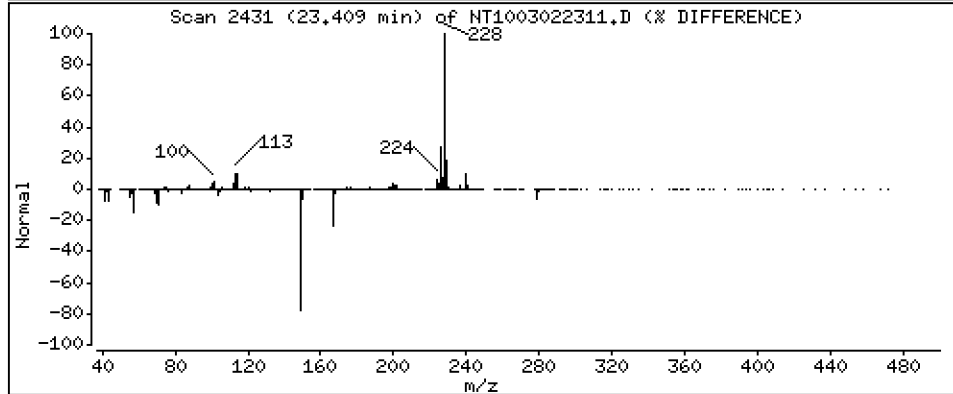
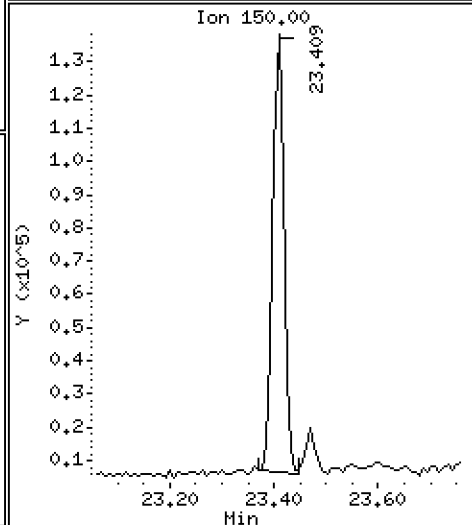
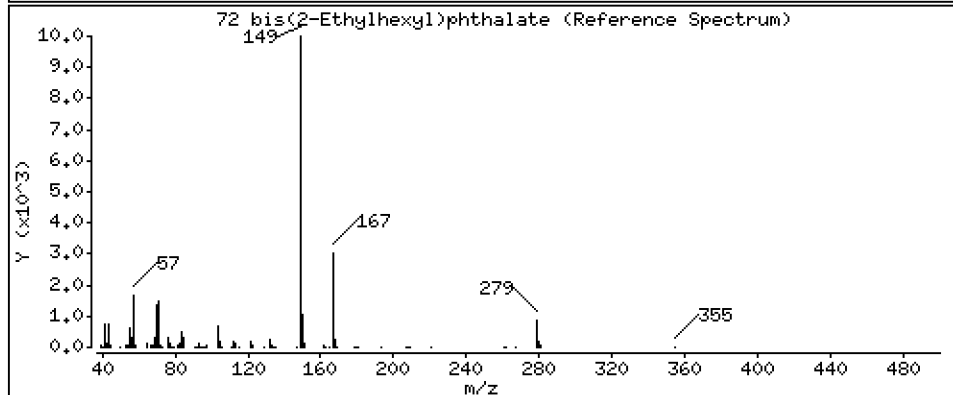
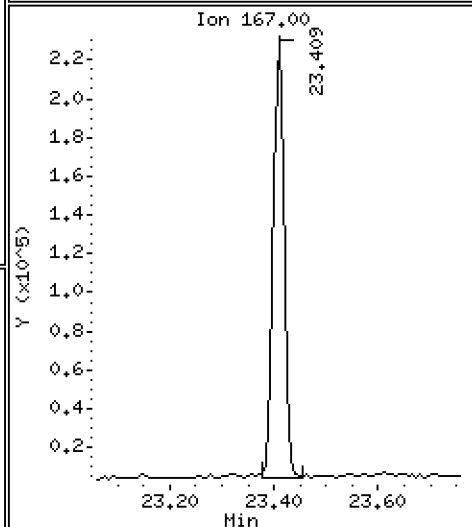
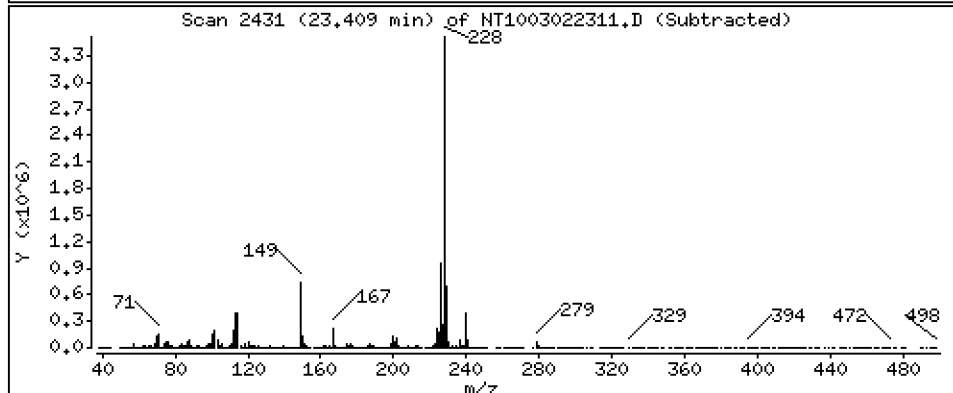
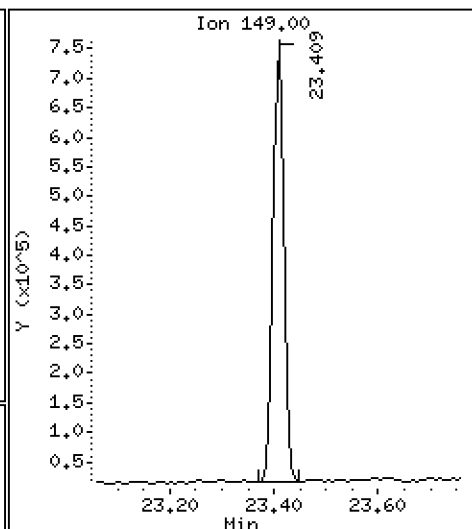
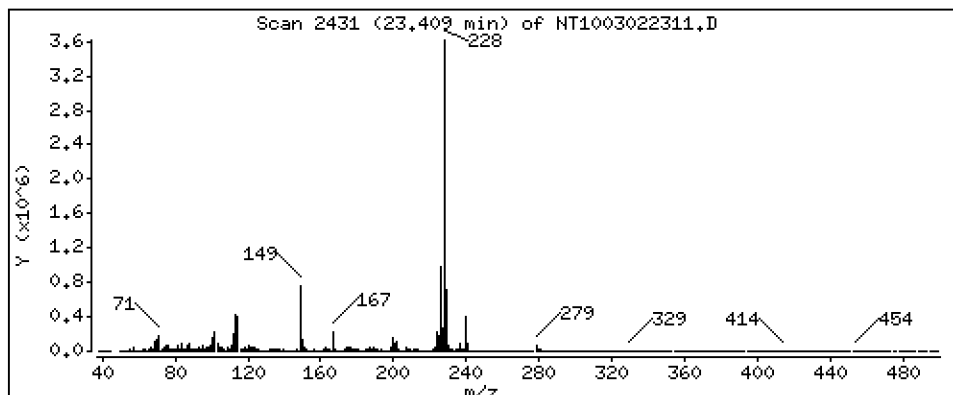
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 1,441 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

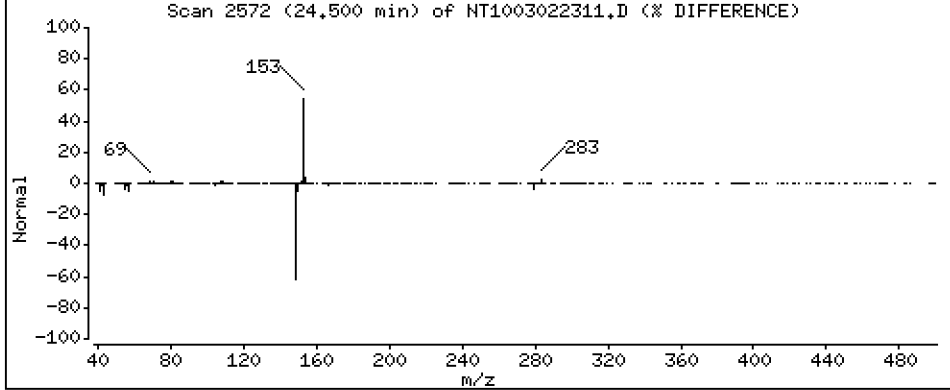
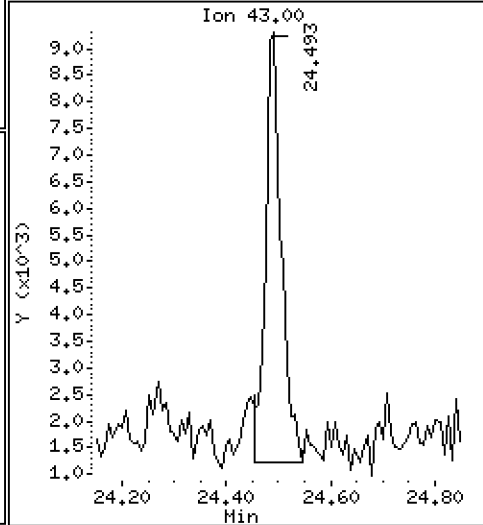
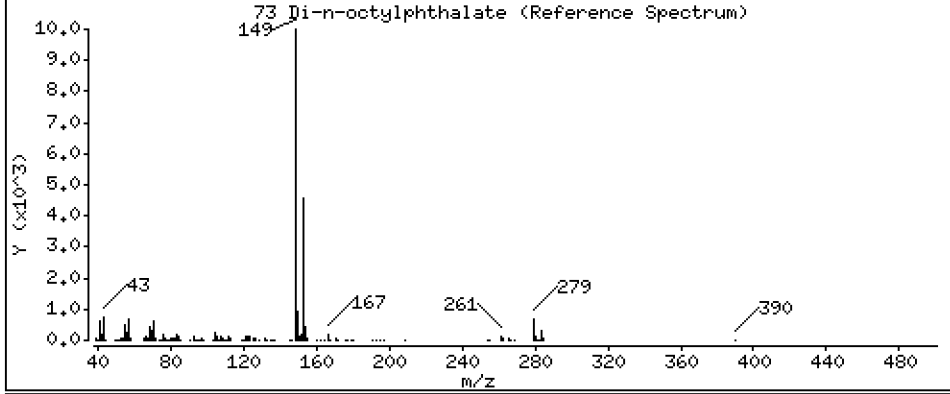
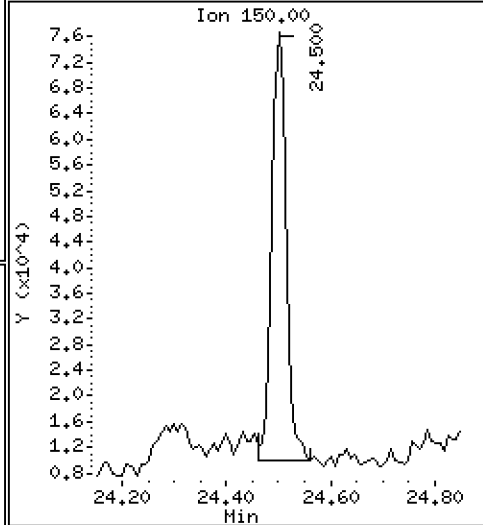
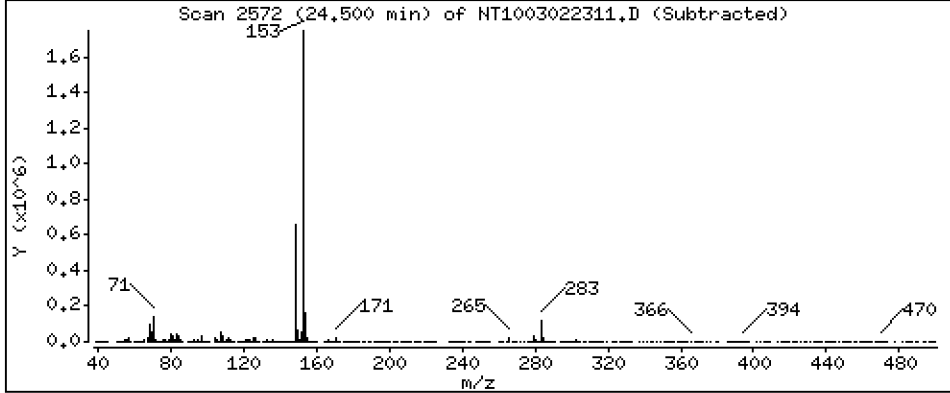
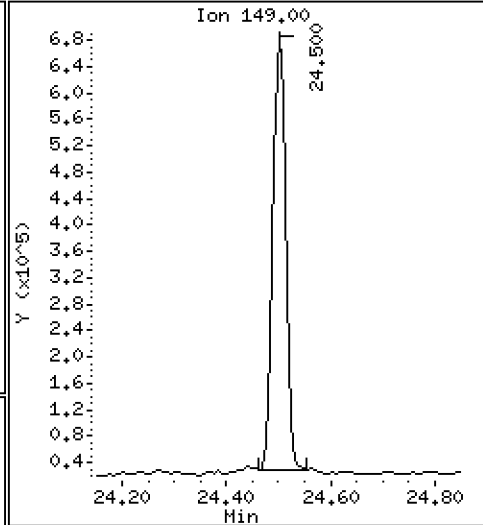
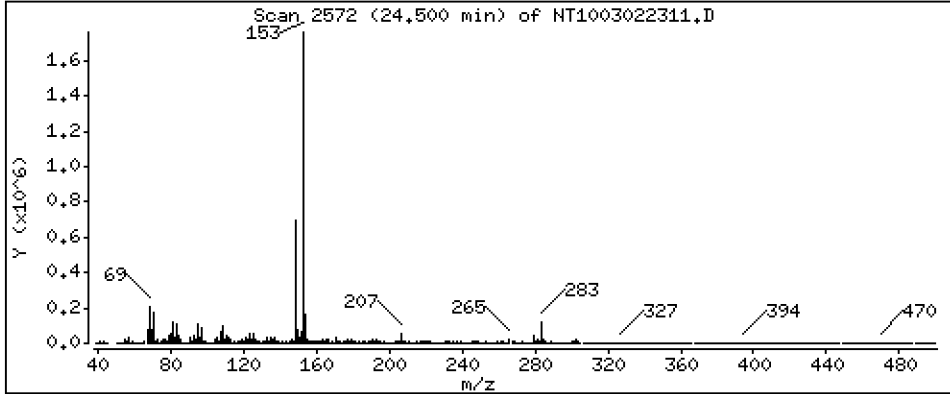
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 0,9791 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

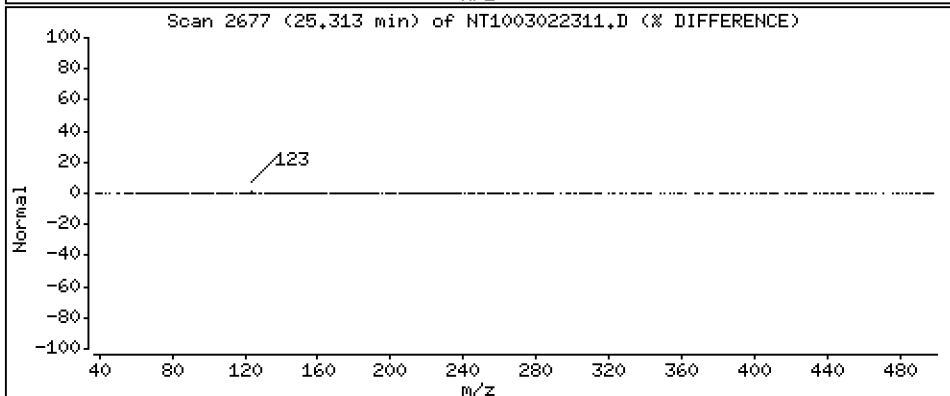
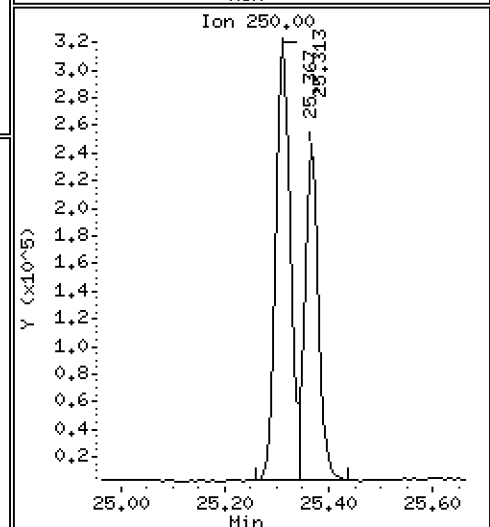
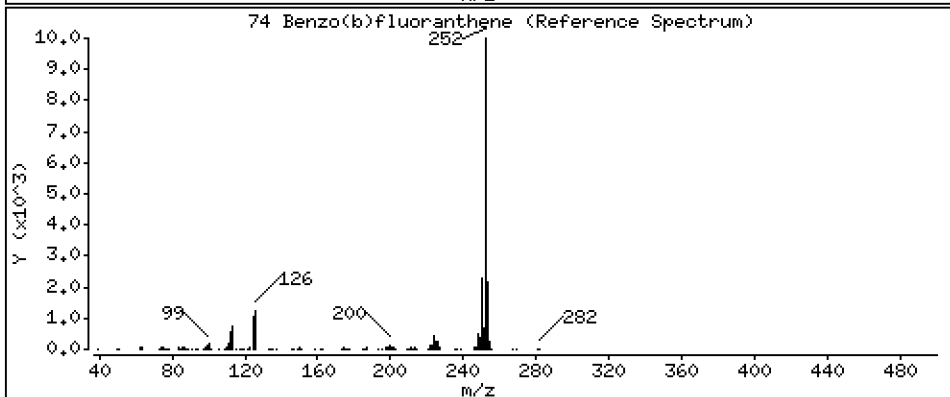
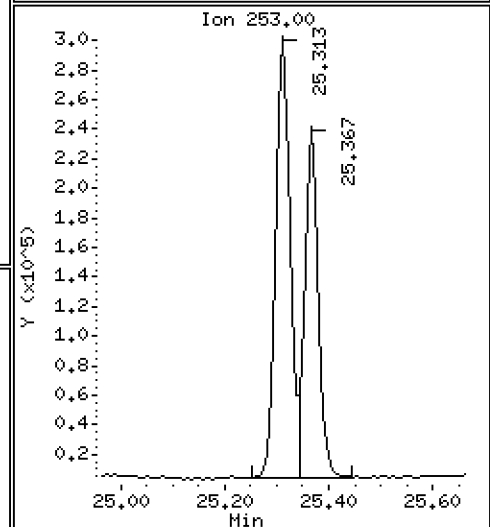
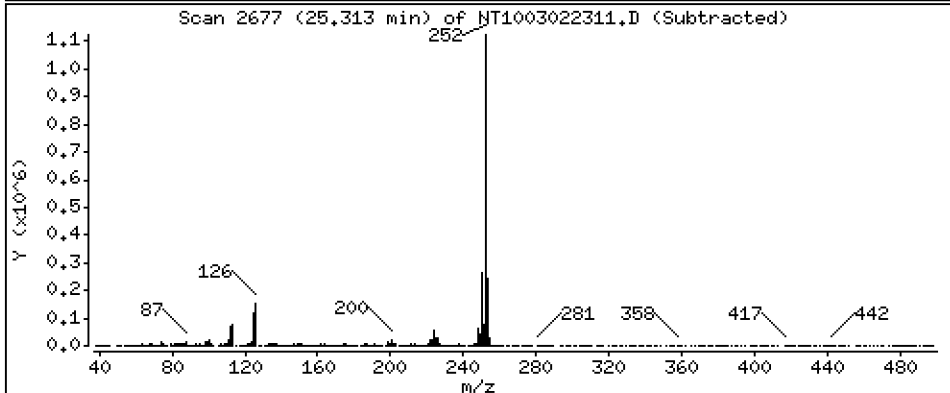
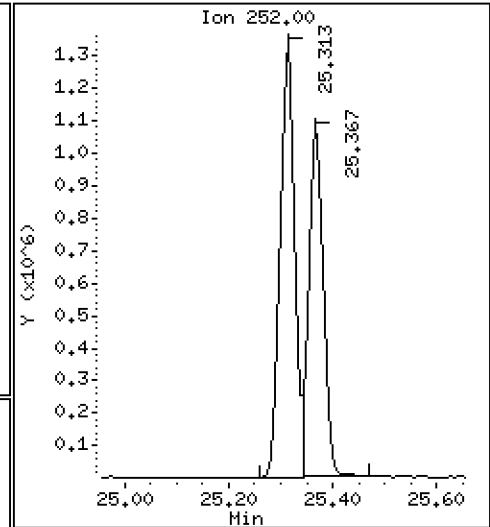
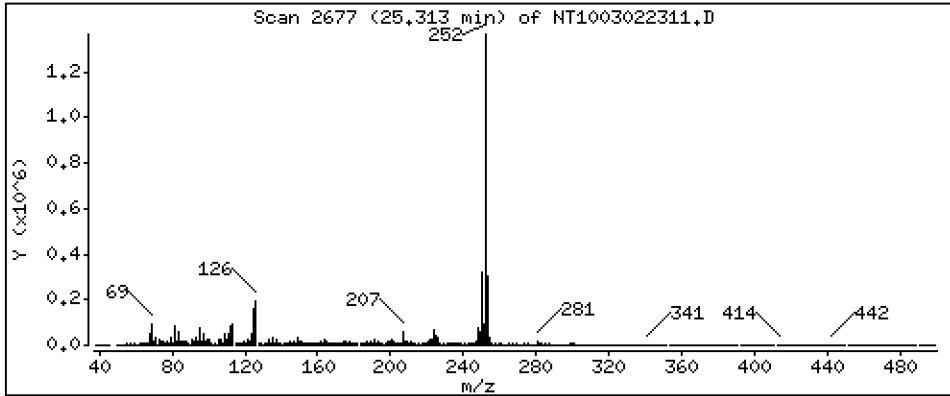
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 2,675 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

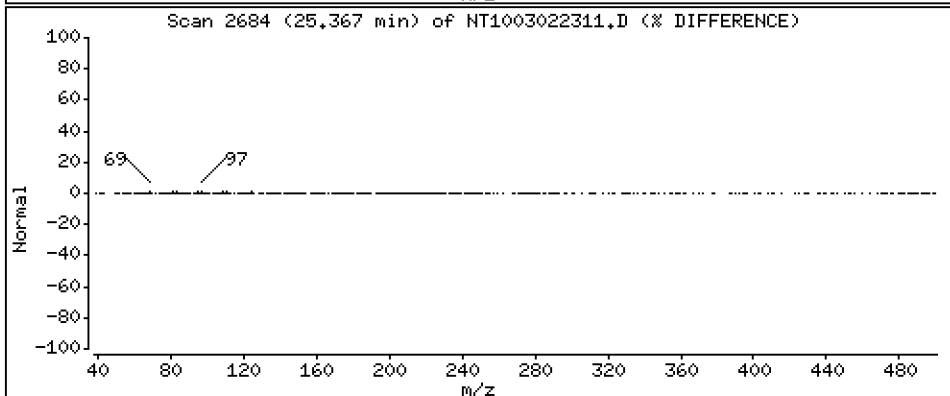
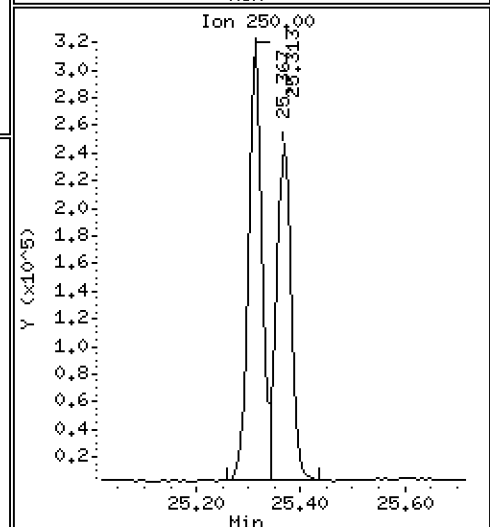
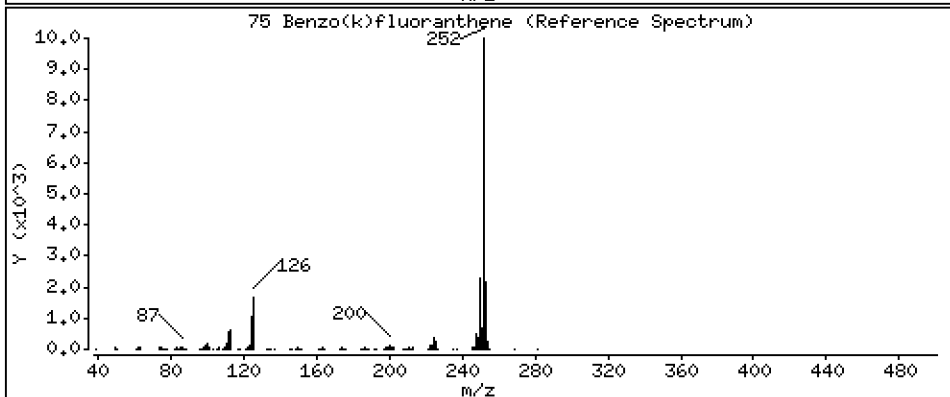
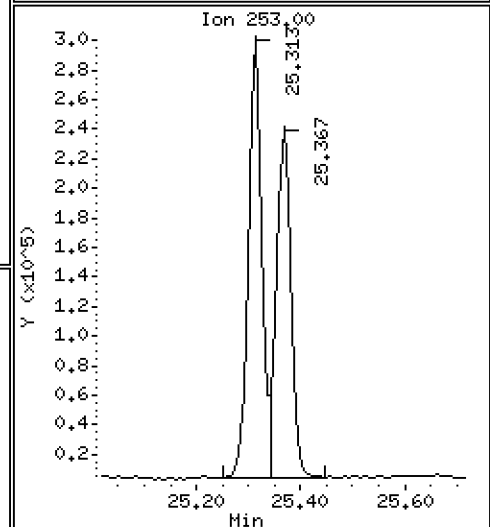
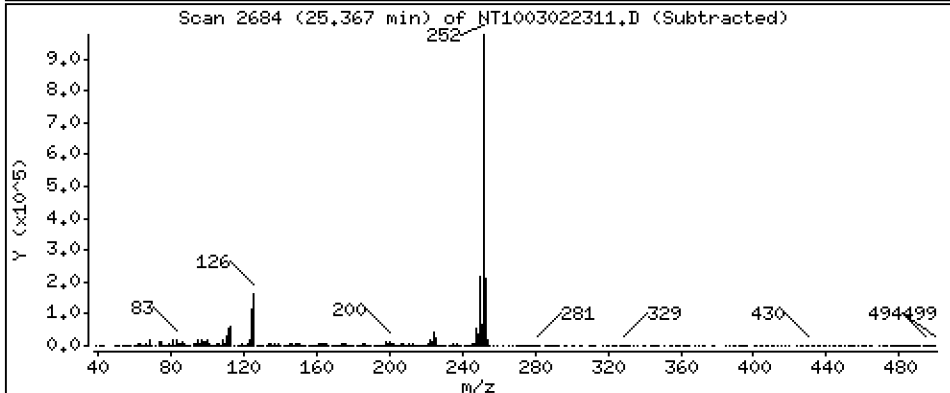
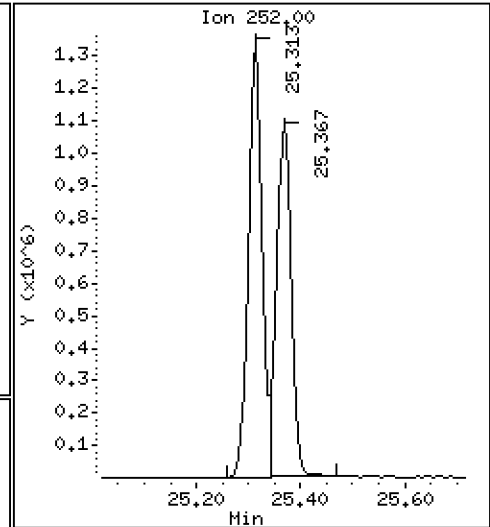
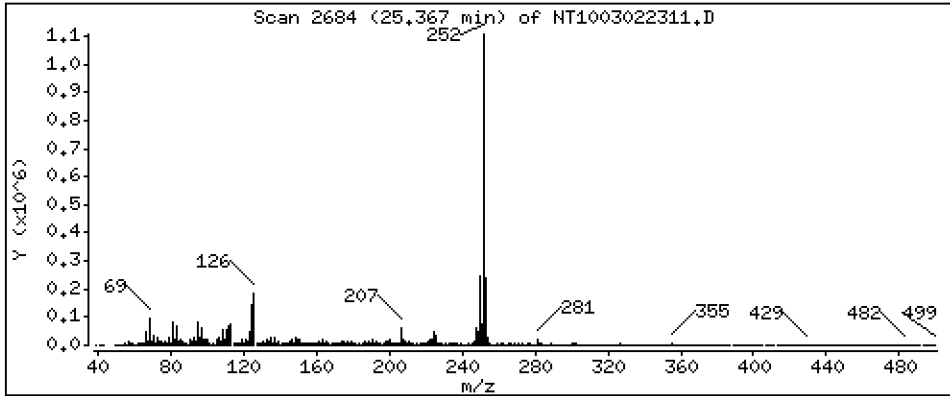
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 2,231 ug/mL





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

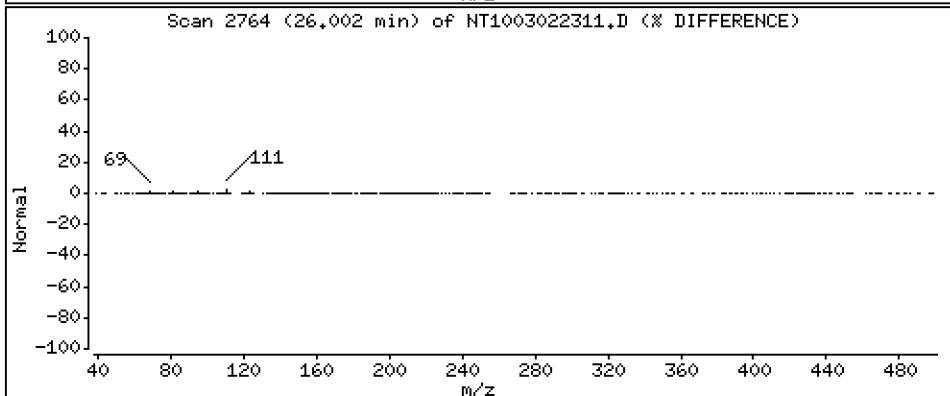
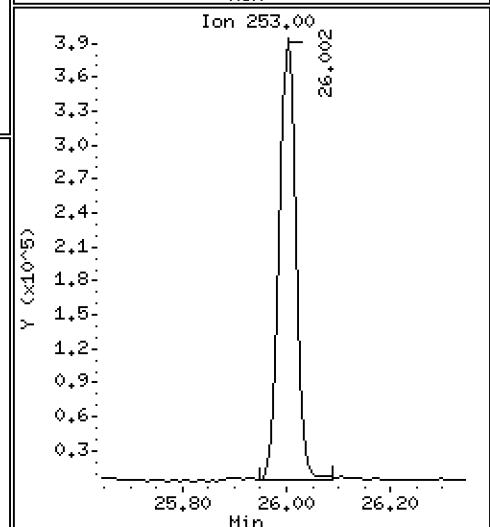
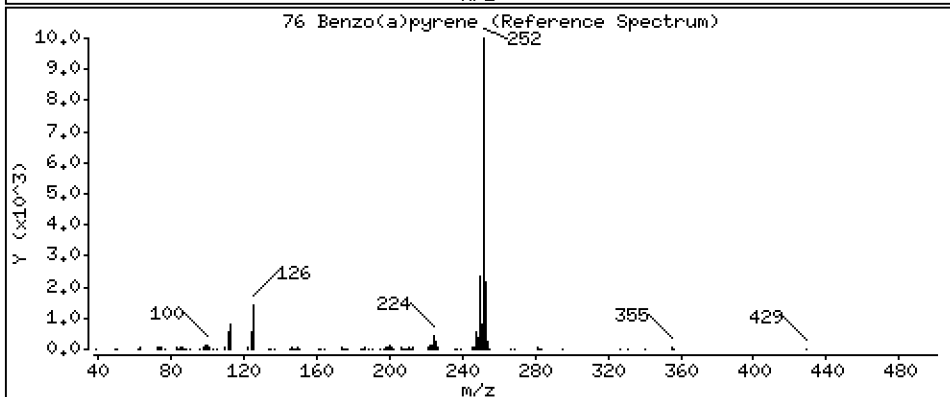
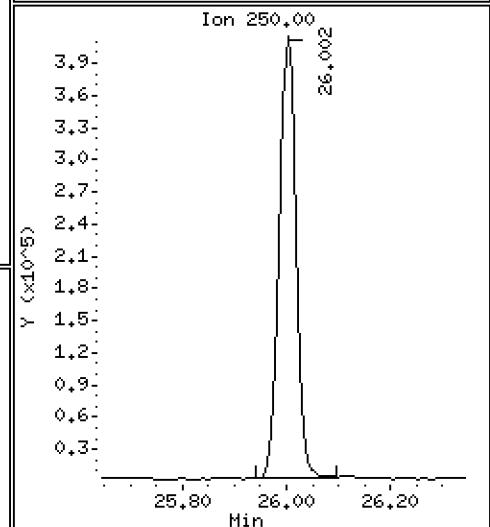
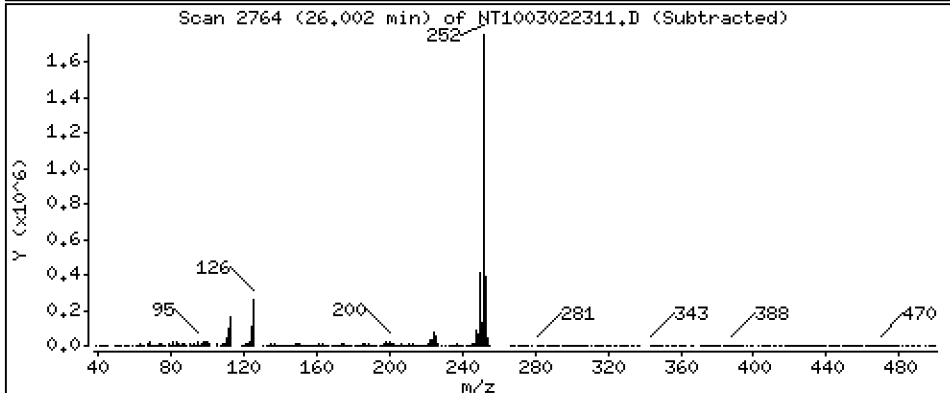
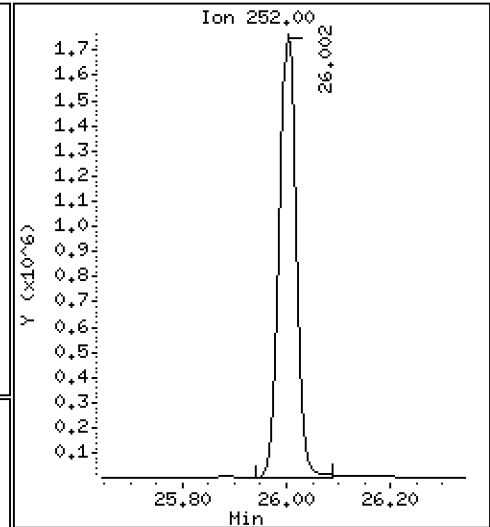
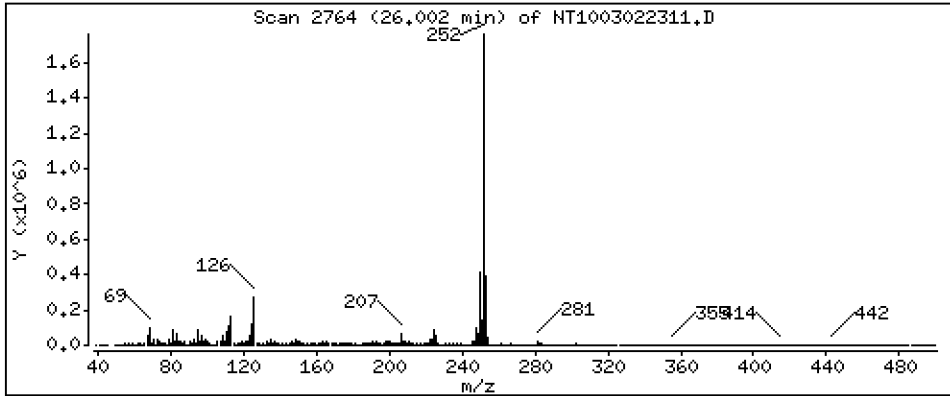
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,422 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

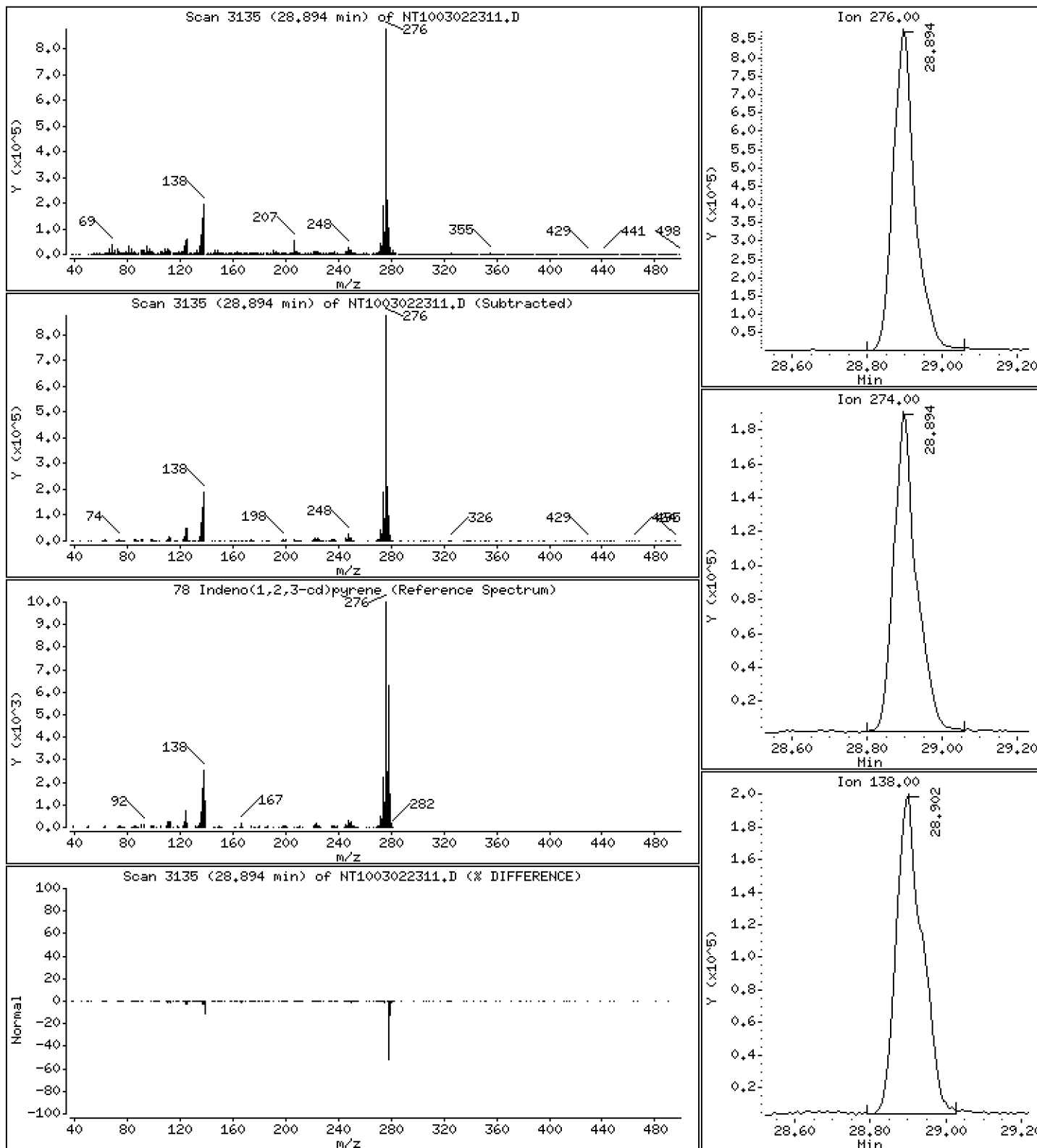
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,497 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

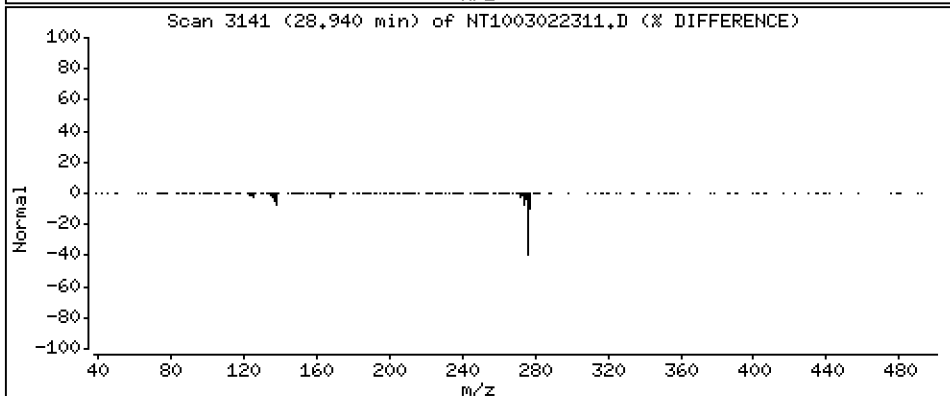
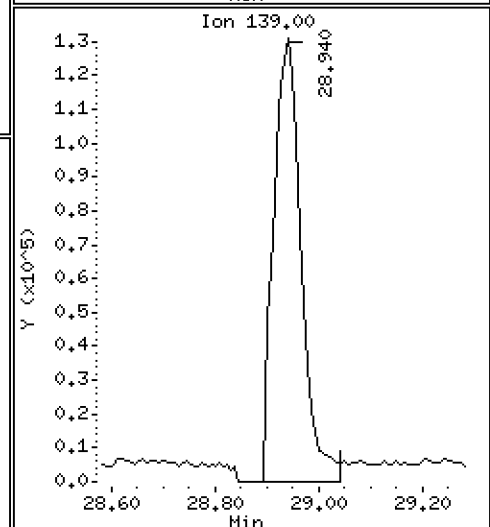
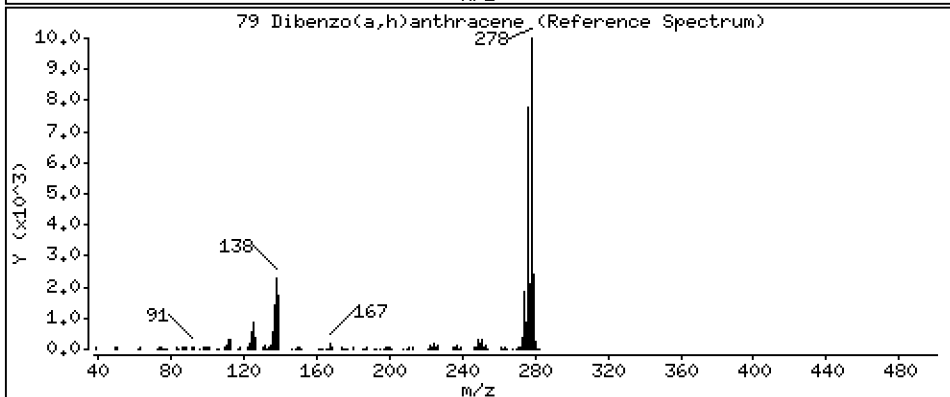
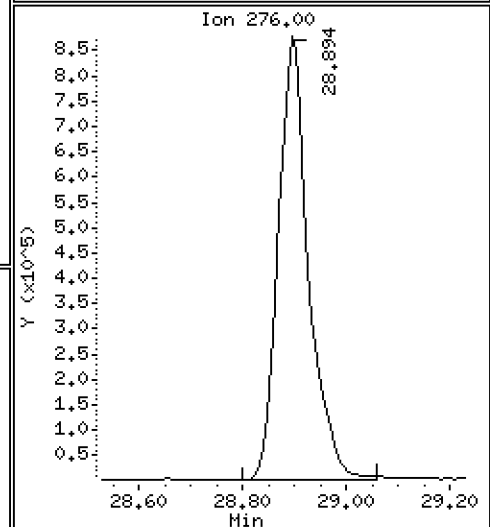
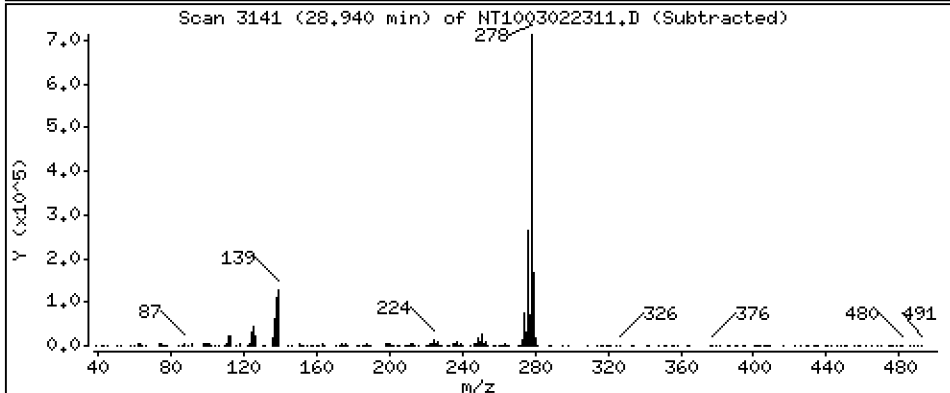
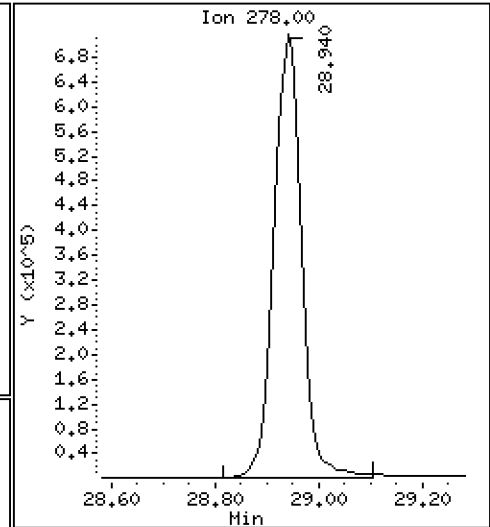
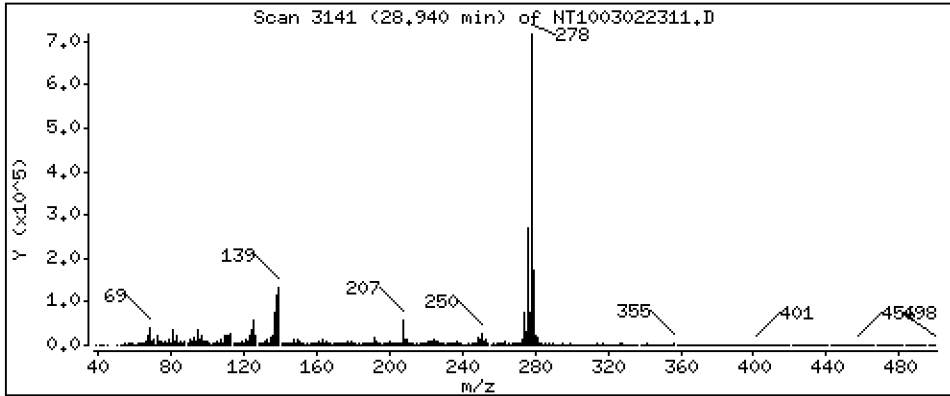
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 3,397 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

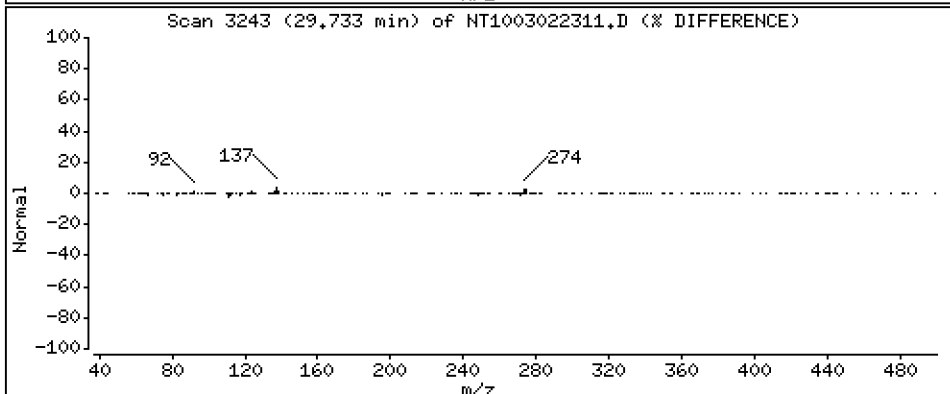
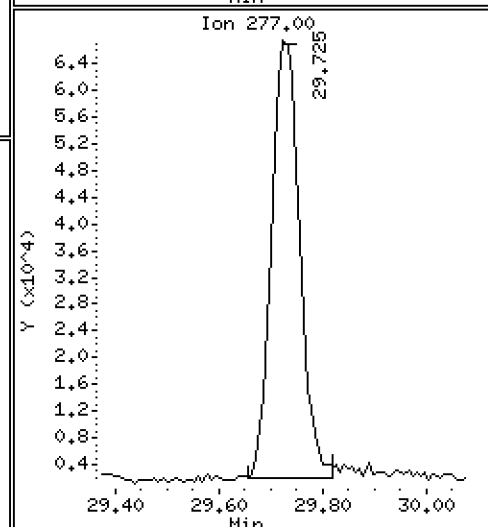
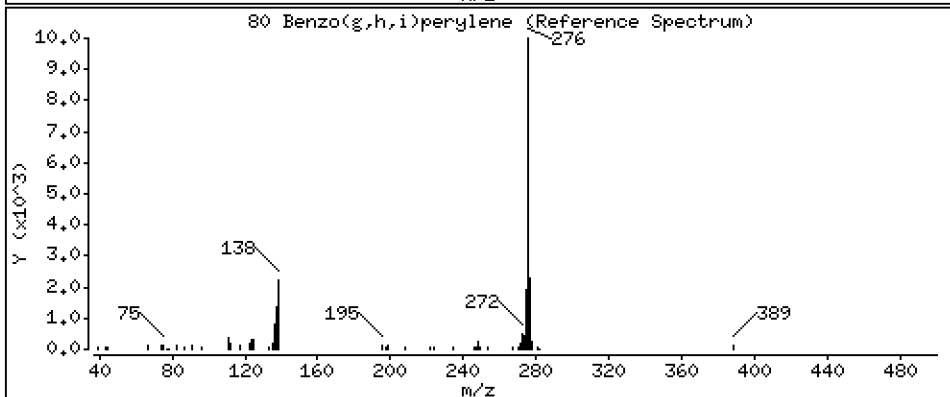
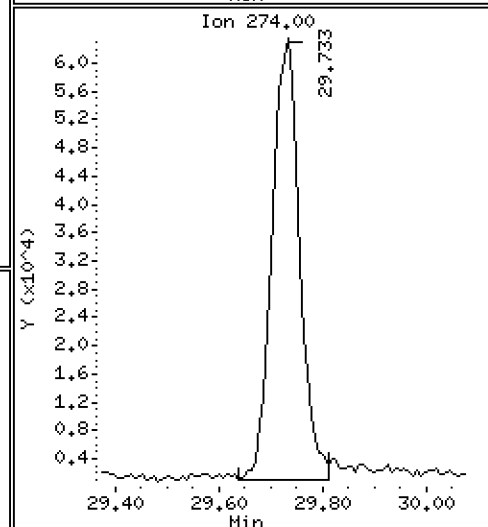
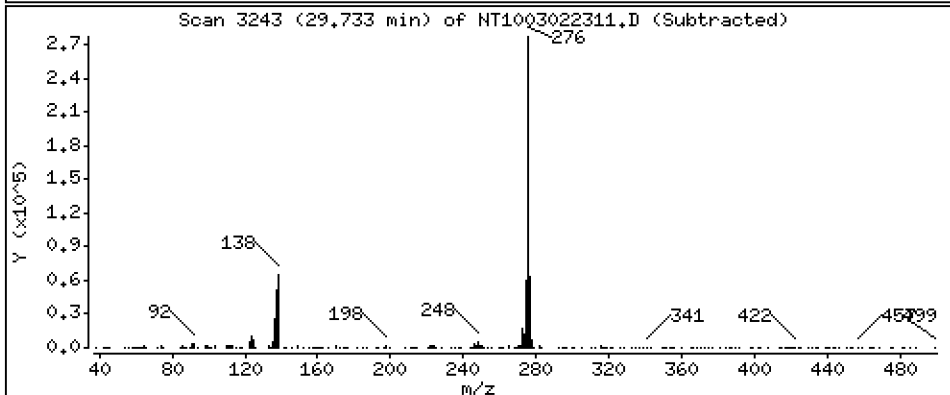
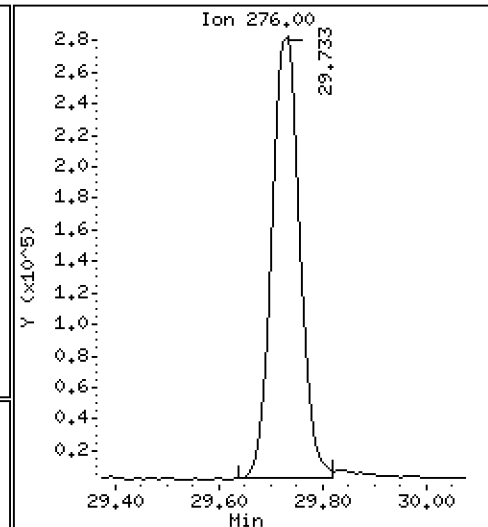
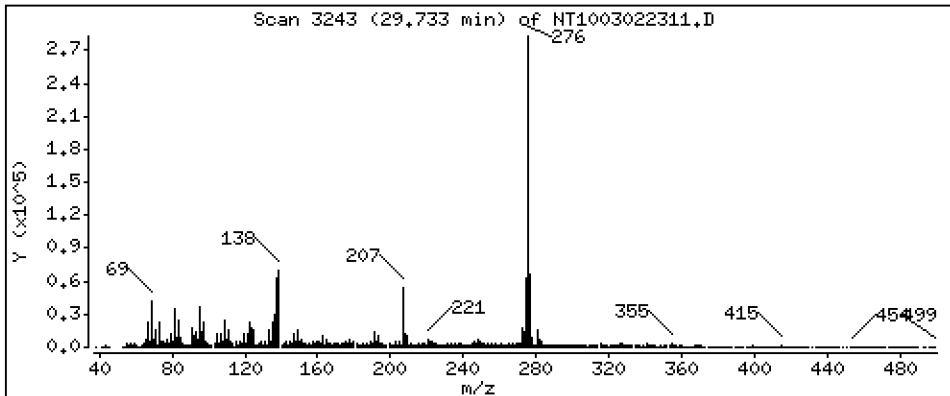
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 1,318 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

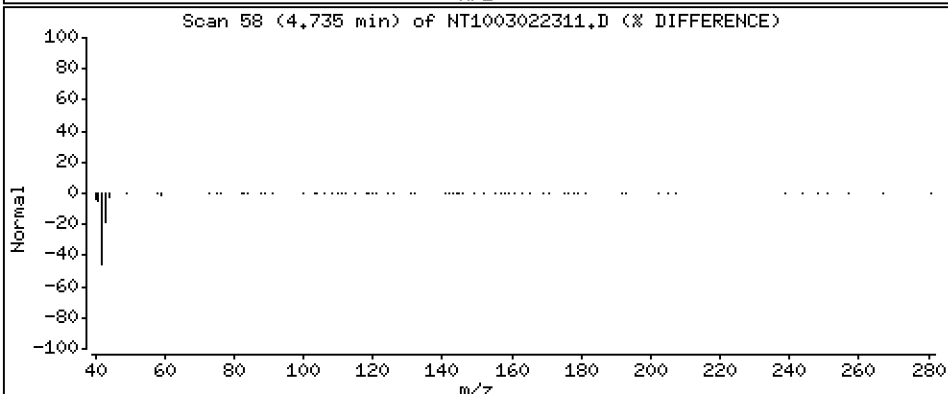
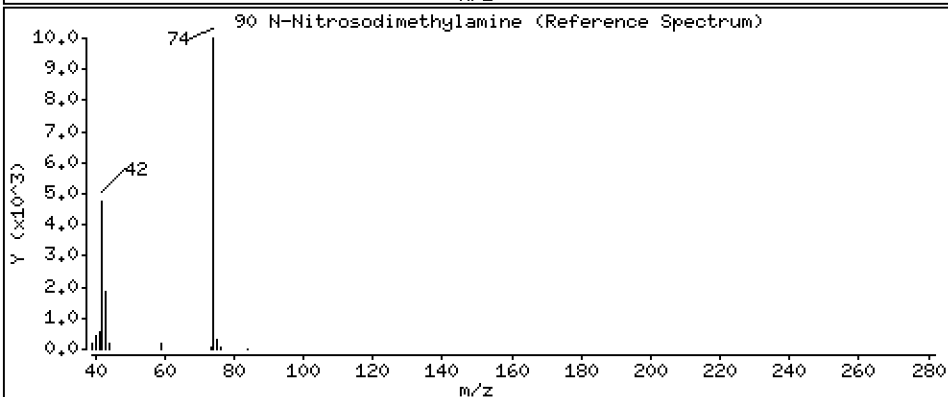
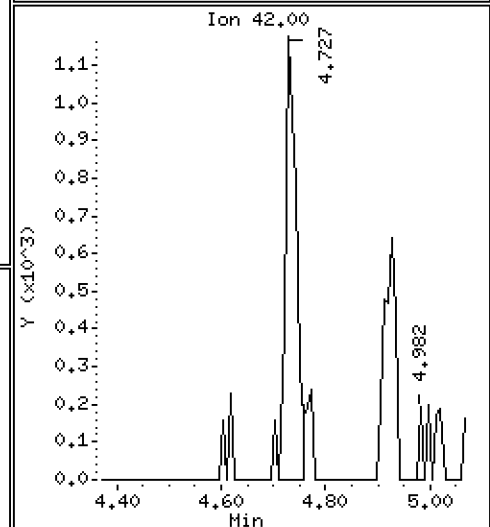
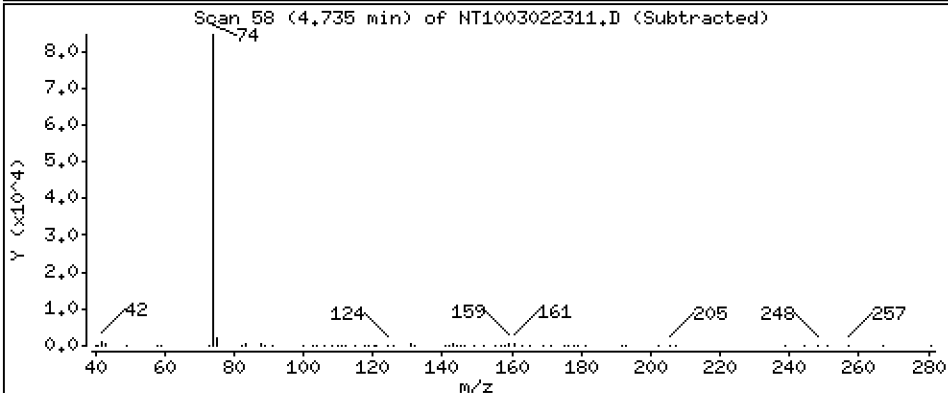
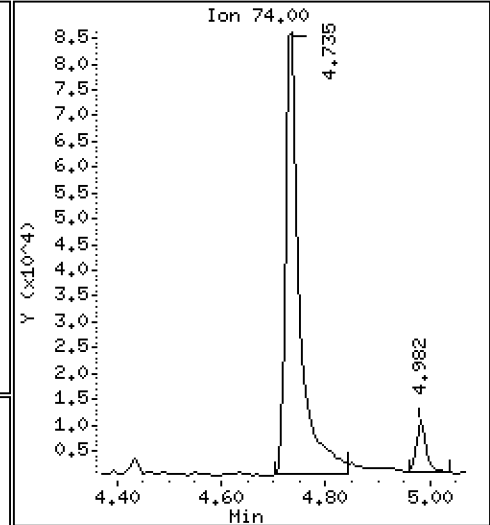
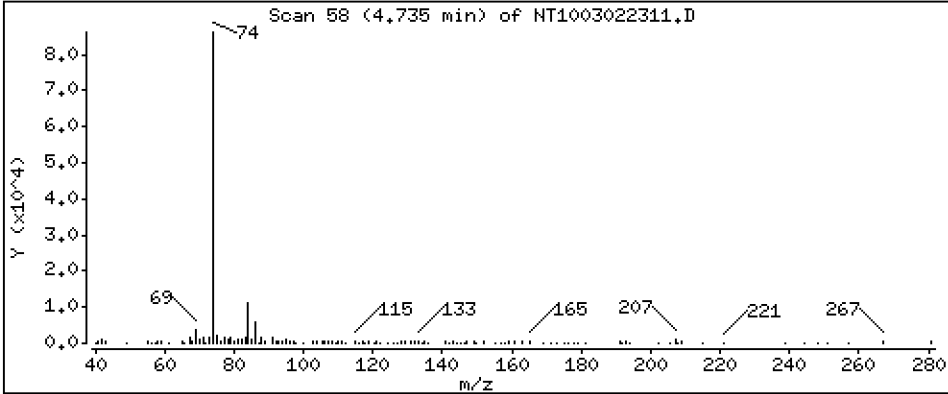
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 1,188 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

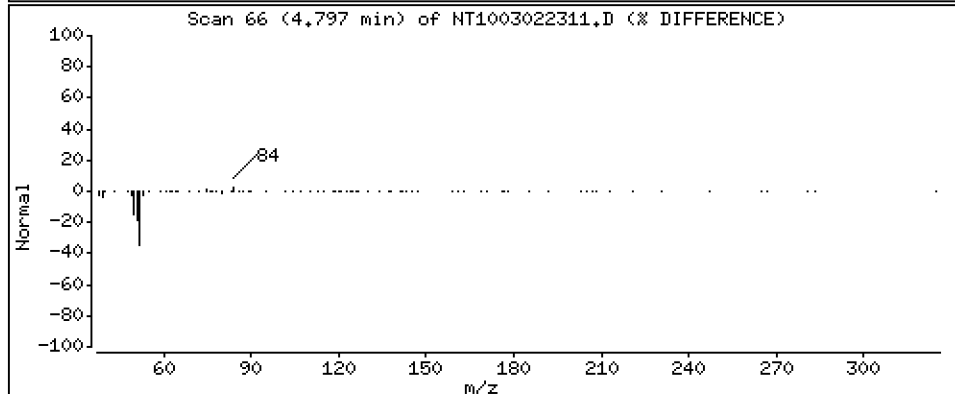
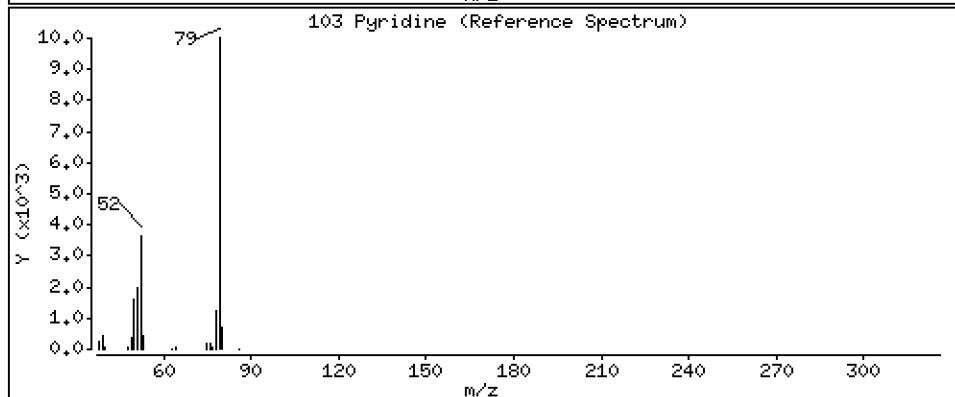
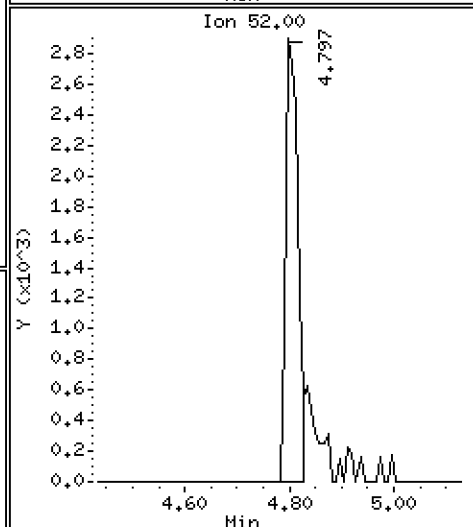
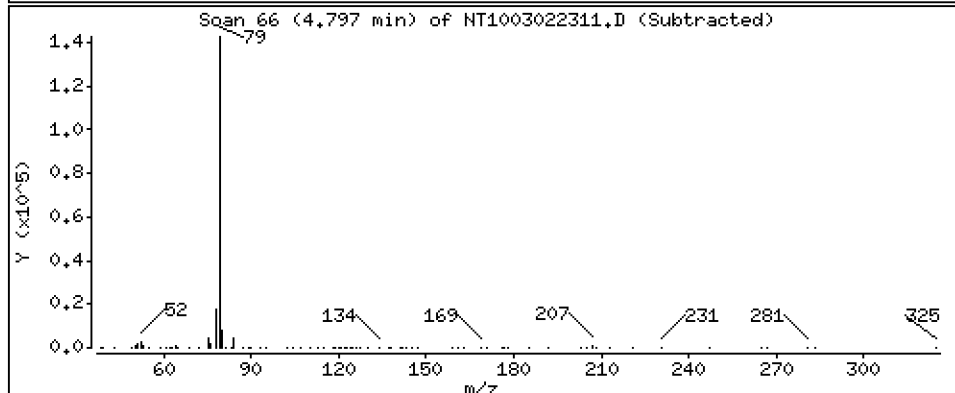
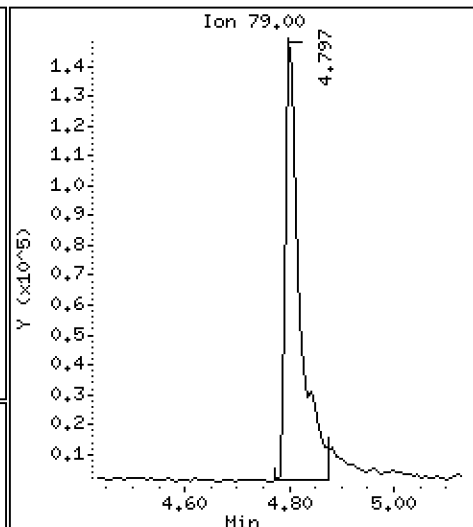
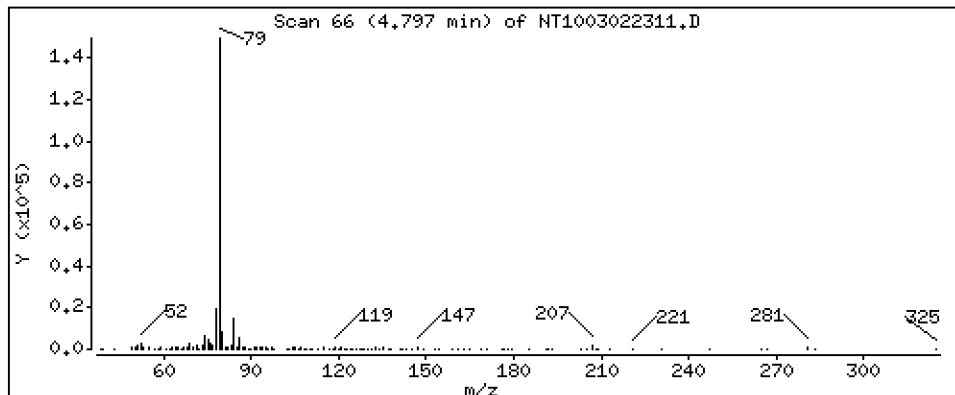
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 1,193 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

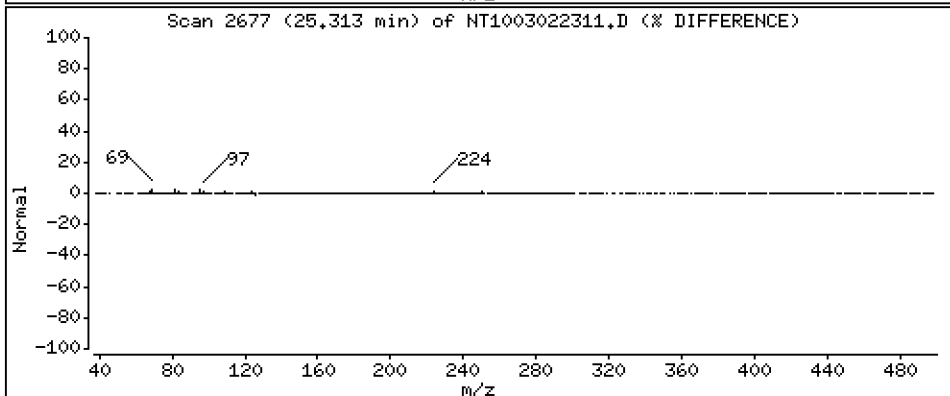
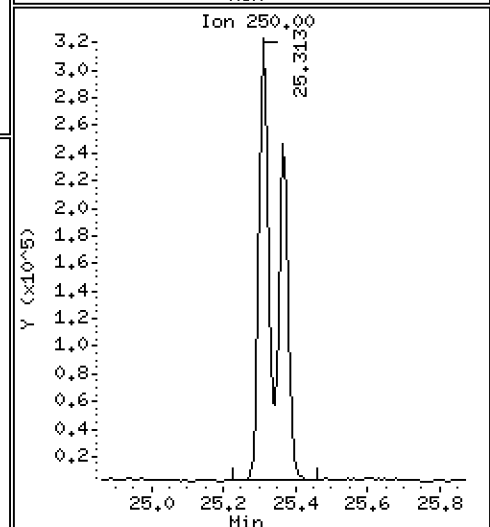
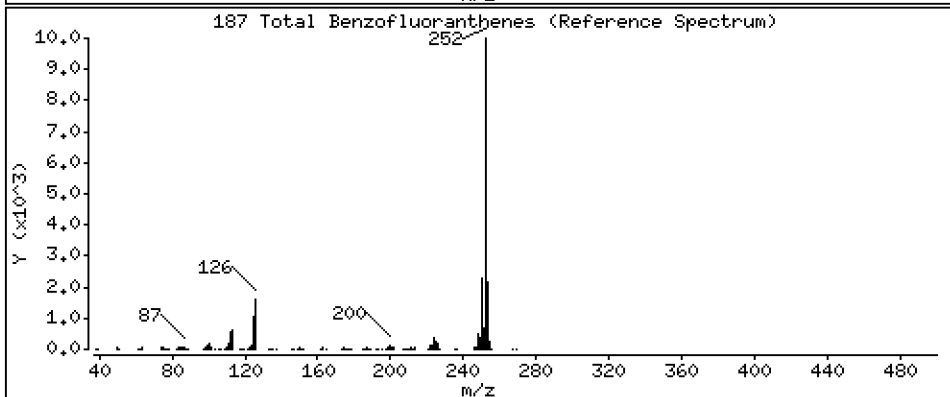
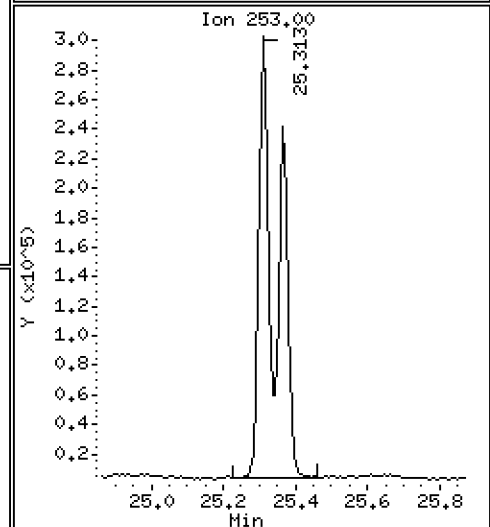
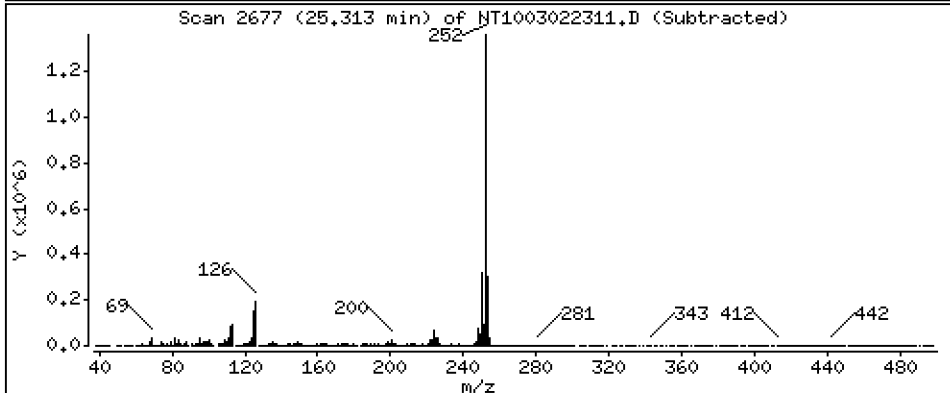
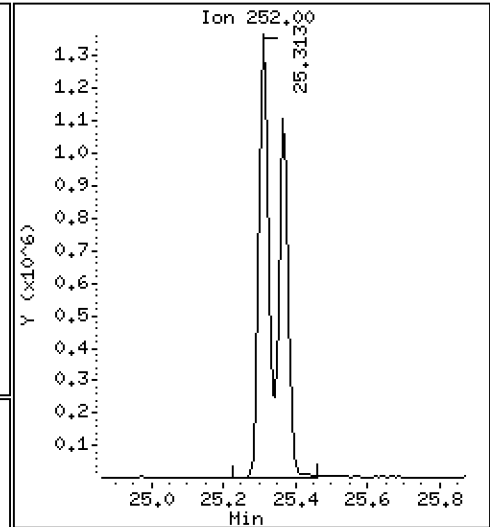
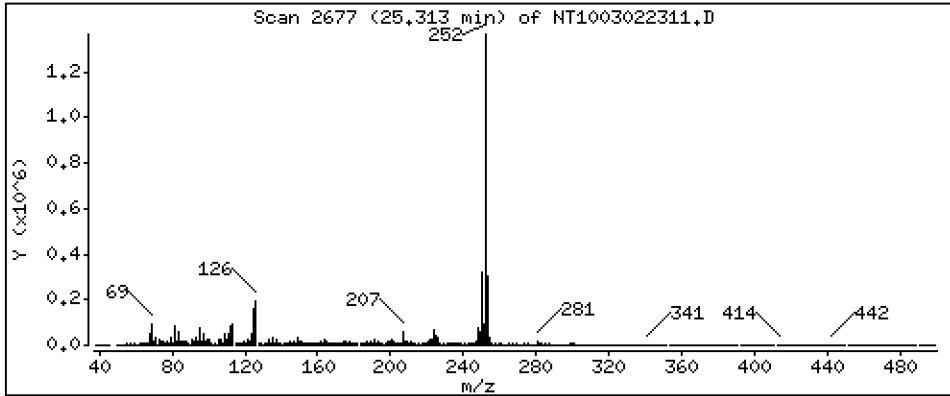
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 4,938 ug/mL



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

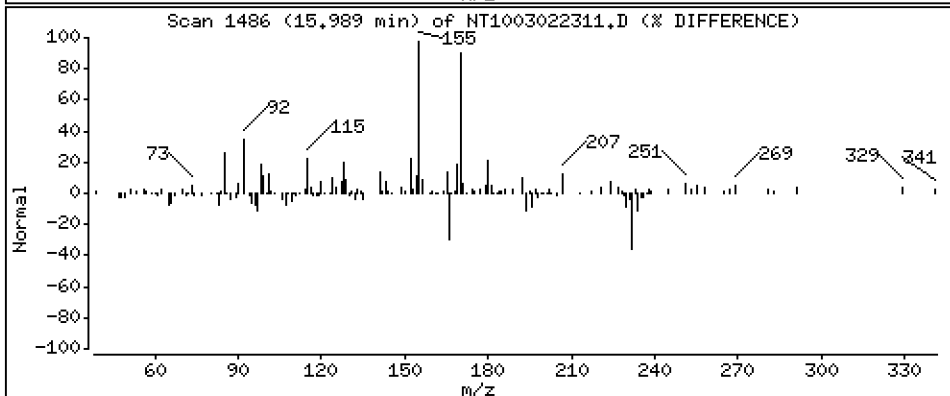
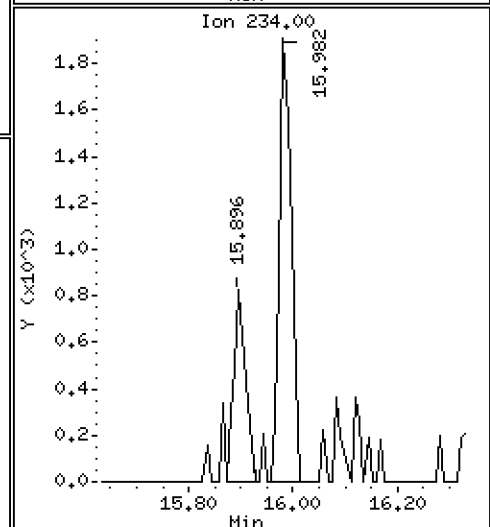
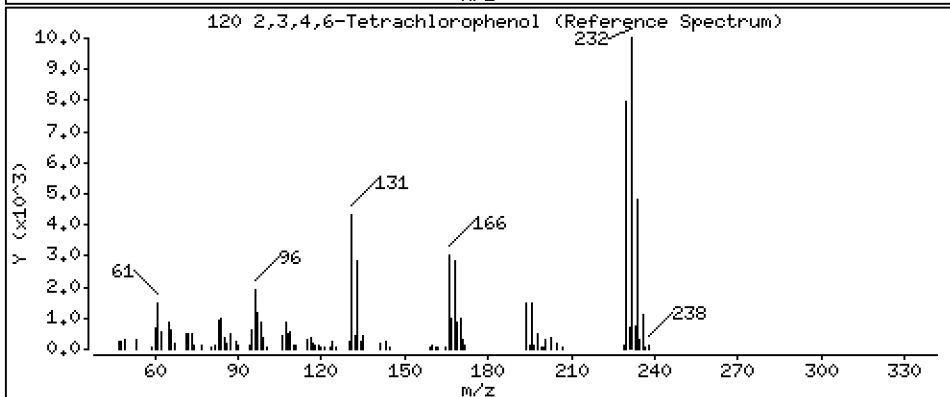
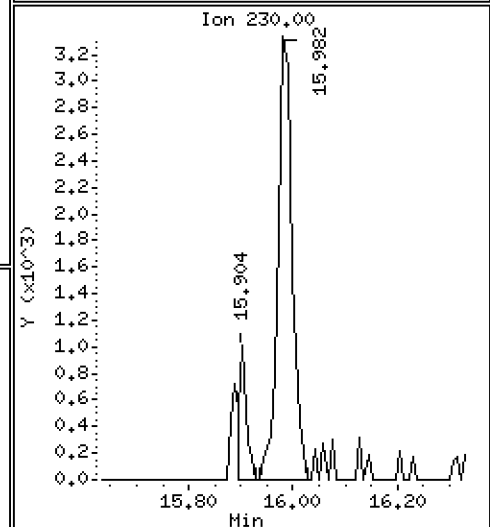
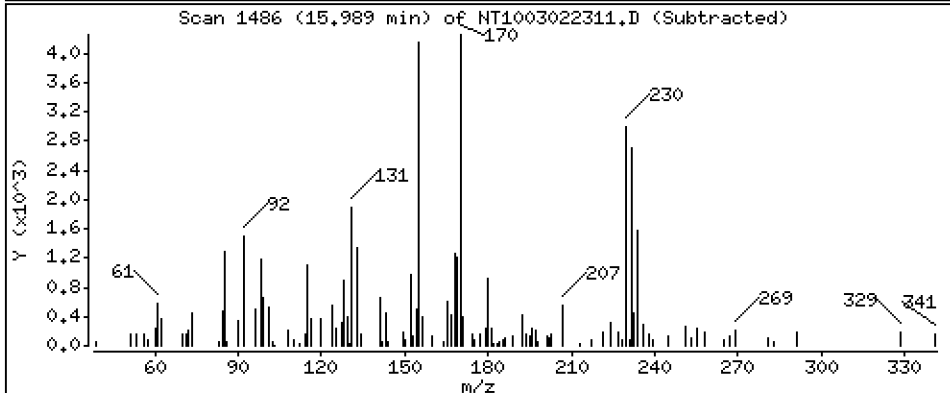
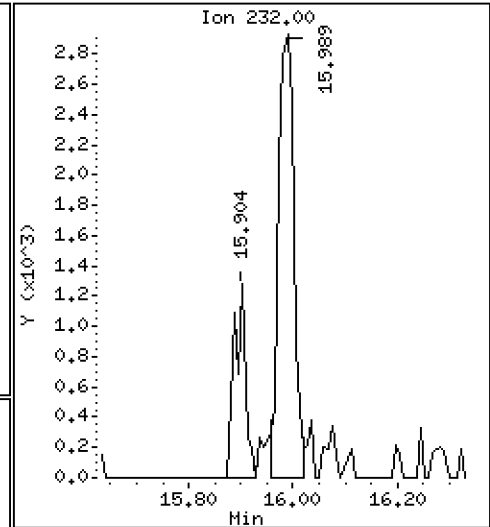
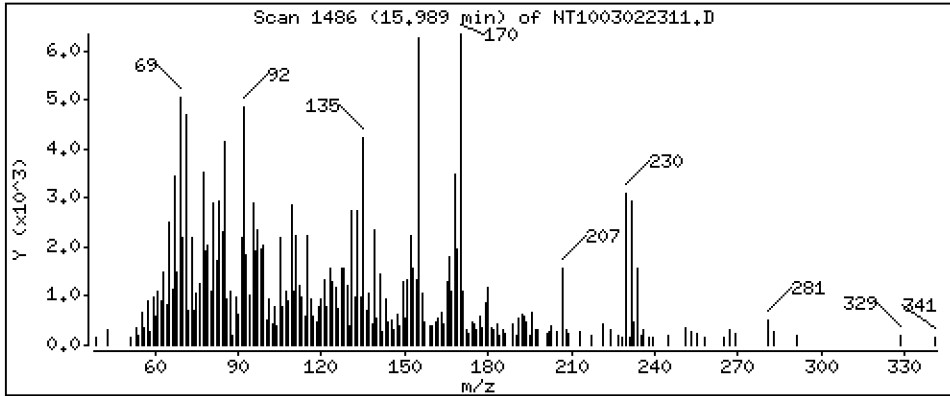
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

120 2,3,4,6-Tetrachlorophenol

Concentration: 0.04641 ug/mL





ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022311.D  
 Lab Smp Id: BLA0624-SRM1  
 Inj Date : 02-MAR-2023 20:44  
 Operator : VTS  
 Smp Info : BLA0624-SRM1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.904	6.897	(0.747)	1436753	6.61476	6.615
\$ 2 Phenol-d5	99		8.496	8.489	(0.919)	1891531	7.50096	7.501
3 Phenol	94		8.519	8.512	(0.921)	770119	2.87241	2.872
\$ 5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	1557746	7.24040	7.240
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		8.852	8.844	(0.957)	335459	1.50088	1.501
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	303391	1.23116	1.231
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	690353	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	662533	4.12175	4.122
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		9.658	9.472	(1.044)	1203132	8.36616	8.366
14 2,2'-oxybis(1-Chloropropane)	121		9.743	9.728	(1.054)	237109	3.47133	3.471
13 2-Methylphenol	108		9.658	9.650	(1.044)	1203132	5.64113	5.641
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		9.945	9.938	(1.076)	1786249	6.97419	6.974
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	1278227	4.62662	4.627
19 Nitrobenzene	77		10.333	10.333	(0.881)	800035	3.08701	3.087
20 Isophorone	82		10.791	10.791	(0.920)	754578	2.28094	2.281
21 2-Nitrophenol	139		10.958	10.950	(0.935)	650375	4.66407	4.664
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	1125178	4.49087	4.491
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		11.416	11.417	(0.974)	1470935	7.38632	7.386
26 1,2,4-Trichlorobenzene	180		11.602	11.595	(0.989)	281672	1.44819	1.448
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2516830	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	2914883	4.51236	4.512
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		11.996	11.997	(1.023)	280721	1.98218	1.982
31 4-Chloro-3-methylphenol	107		12.817	12.801	(1.093)	409637	1.97960	1.980
32 2-Methylnaphthalene	142		Compound Not Detected.					
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.730	13.722	(0.896)	251463	1.97339	1.973	
35 2,4,5-Trichlorophenol	196		13.799	13.792	(0.901)	412235	3.01391	3.014	
§ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2268866	4.75834	4.758	
37 2-Chloronaphthalene	162		14.171	14.171	(0.925)	879899	2.35069	2.351	
38 2-Nitroaniline	65		Compound Not Detected.						
39 Dimethylphthalate	163		14.744	14.744	(0.963)	2156090	4.99414	4.994	
40 Acenaphthylene	152		15.030	15.023	(0.981)	1124685	1.74281	1.743	
41 2,6-Dinitrotoluene	165		Compound Not Detected.						
* 42 Acenaphthene-d10	164		15.316	15.317	(1.000)	1336820	4.00000		
43 3-Nitroaniline	138		Compound Not Detected.						
44 Acenaphthene	153		15.386	15.386	(1.005)	2280064	5.85849	5.858	
45 2,4-Dinitrophenol	184		15.440	15.433	(1.008)	49726	1.98532	1.985	
46 Dibenzofuran	168		15.741	15.742	(1.028)	3759841	6.50925	6.509	
47 4-Nitrophenol	109		15.540	15.525	(1.015)	440994	5.69639	5.696	
48 2,4-Dinitrotoluene	165		15.703	15.703	(1.025)	468588	3.37088	3.371	
50 Diethylphthalate	149		16.205	16.206	(1.058)	81450	0.17809	0.1781	
49 Fluorene	166		16.453	16.453	(1.074)	1811557	3.76951	3.770	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	466546	2.18465	2.185	
52 4-Nitroaniline	138		16.453	16.476	(1.074)	25832	0.22073	0.2207	
53 4,6-Dinitro-2-methylphenol	198		16.546	16.538	(0.899)	380991	6.65606	6.656	
54 N-Nitrosodiphenylamine	169		16.693	16.693	(0.907)	1540335	4.32335	4.323	
§ 55 2,4,6-Tribromophenol	330		16.947	16.947	(1.106)	563368	6.55327	6.553	
56 4-Bromophenyl-phenylether	248		17.472	17.472	(0.949)	1188411	8.23200	8.232	
57 Hexachlorobenzene	284		Compound Not Detected.						
58 Pentachlorophenol	266		17.991	17.983	(0.977)	126911	1.67990	1.680	
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2408027	4.00000		
60 Phenanthrene	178		18.455	18.455	(1.003)	3366835	5.46335	5.463	
61 Anthracene	178		18.563	18.564	(1.008)	1550597	2.59486	2.595	
62 Carbazole	167		18.896	18.889	(1.026)	3846802	7.02690	7.027	
63 Di-n-butylphthalate	149		19.592	19.593	(1.064)	1349660	1.79575	1.796	
64 Fluoranthene	202		20.823	20.815	(0.889)	1934106	2.10819	2.108	
65 Pyrene	202		21.256	21.248	(0.907)	2556714	2.73687	2.737	
§ 66 Terphenyl-d14	244		21.534	21.527	(0.919)	3357556	4.44192	4.442	
67 Butylbenzylphthalate	149		22.417	22.410	(0.957)	1416295	2.84612	2.846	
68 Benzo(a)anthracene	228		23.408	23.409	(0.999)	5230893	5.56275	5.563	
* 69 Chrysene-d12	240		23.424	23.424	(1.000)	2666866	4.00000		
70 3,3'-Dichlorobenzidine	252		Compound Not Detected.						
71 Chrysene	228		23.470	23.470	(1.002)	1109637	1.45198	1.452	
72 bis(2-Ethylhexyl)phthalate	149		23.408	23.409	(0.956)	1001310	1.44147	1.441	
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	4915230	4.00000		
73 Di-n-octylphthalate	149		24.500	24.500	(1.000)	1067190	0.97911	0.9791	
74 Benzo(b)fluoranthene	252		25.313	25.305	(0.969)	2574082	2.67534	2.675	
75 Benzo(k)fluoranthene	252		25.367	25.367	(0.971)	2057080	2.23056	2.231	
76 Benzo(a)pyrene	252		26.002	25.994	(0.996)	3880302	4.42205	4.422	
* 77 Perylene-d12	264		26.118	26.118	(1.000)	2745651	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.893	28.878	(1.106)	3547575	3.49718	3.497	
79 Dibenzo(a,h)anthracene	278		28.940	28.932	(1.108)	2620524	3.39675	3.397	
80 Benzo(g,h,i)perylene	276		29.732	29.725	(1.138)	1038114	1.31805	1.318	
90 N-Nitrosodimethylamine	74		4.735	4.719	(0.512)	166623	1.18831	1.188	
91 Aniline	93		Compound Not Detected.						
93 Benzidine	184		Compound Not Detected.						
103 Pyridine	79		4.796	4.781	(0.519)	296546	1.19251	1.193	
105 1-methylnaphthalene	142		Compound Not Detected.						
111 Azobenzene (1,2-DP-Hydrazine)	77		Compound Not Detected.						

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.313	25.367	(0.969)	4555783	4.93846	4.938
120 2,3,4,6-Tetrachlorophenol	232	15.989	15.981	(1.044)	5805	0.04641	0.04641

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022311.D Calibration Time: 13:34  
 Lab Smp Id: BLA0624-SRM1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	690353	60.19
27 Naphthalene-d8	1609461	804731	3218922	2516830	56.38
42 Acenaphthene-d10	853113	426557	1706226	1336820	56.70
59 Phenanthrene-d10	1556648	778324	3113296	2408027	54.69
69 Chrysene-d12	1539062	769531	3078124	2666866	73.28
134 Di-n-octylphthala	2949571	1474786	5899142	4915230	66.64
77 Perylene-d12	1634059	817030	3268118	2745651	68.03

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	-0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	-0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.42	-0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	-0.00

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

REVIEW SUMMARY FOR FILE - NT1003022311.D

Lab ID: BLA0624-SRM1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 20:44

RT CO-ELUTION COMPOUNDS

---

23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.044	1.024	0.0202	Benzyl alcohol

RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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



**MASS SPECTROMETER  
INSTRUMENT PERFORMANCE CHECK  
EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Lab File ID: NT1003012301.D

Injection Date: 03/01/23

Instrument ID: NT10

Injection Time: 15:49

Sequence: SLC0084

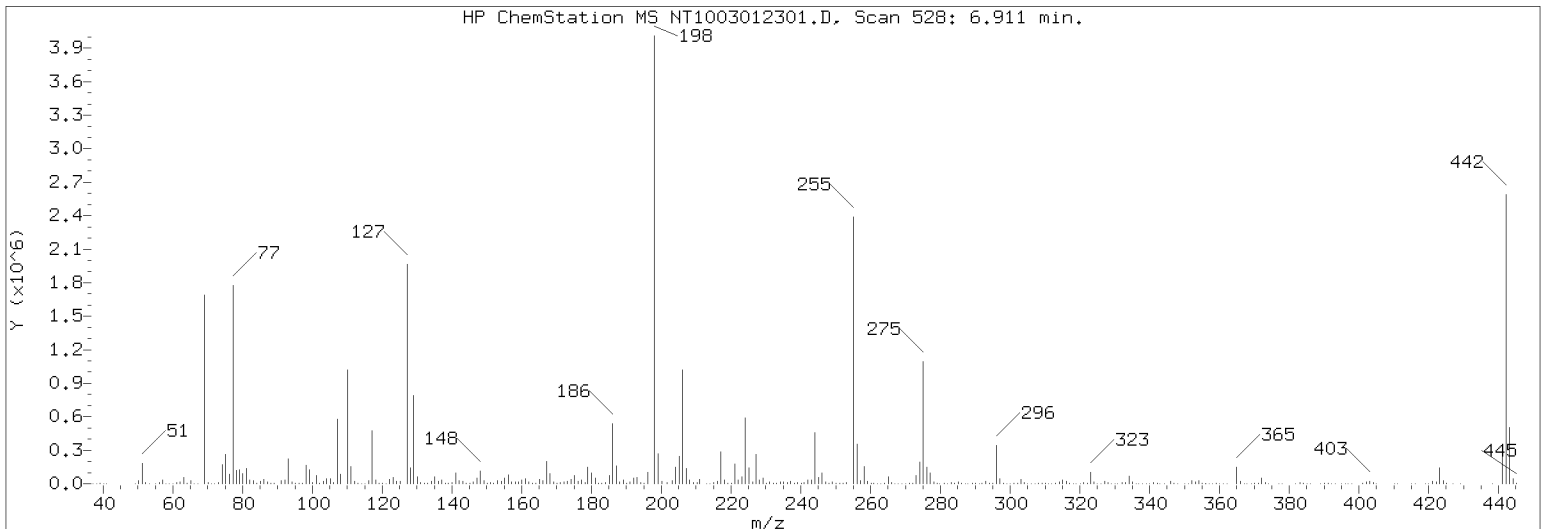
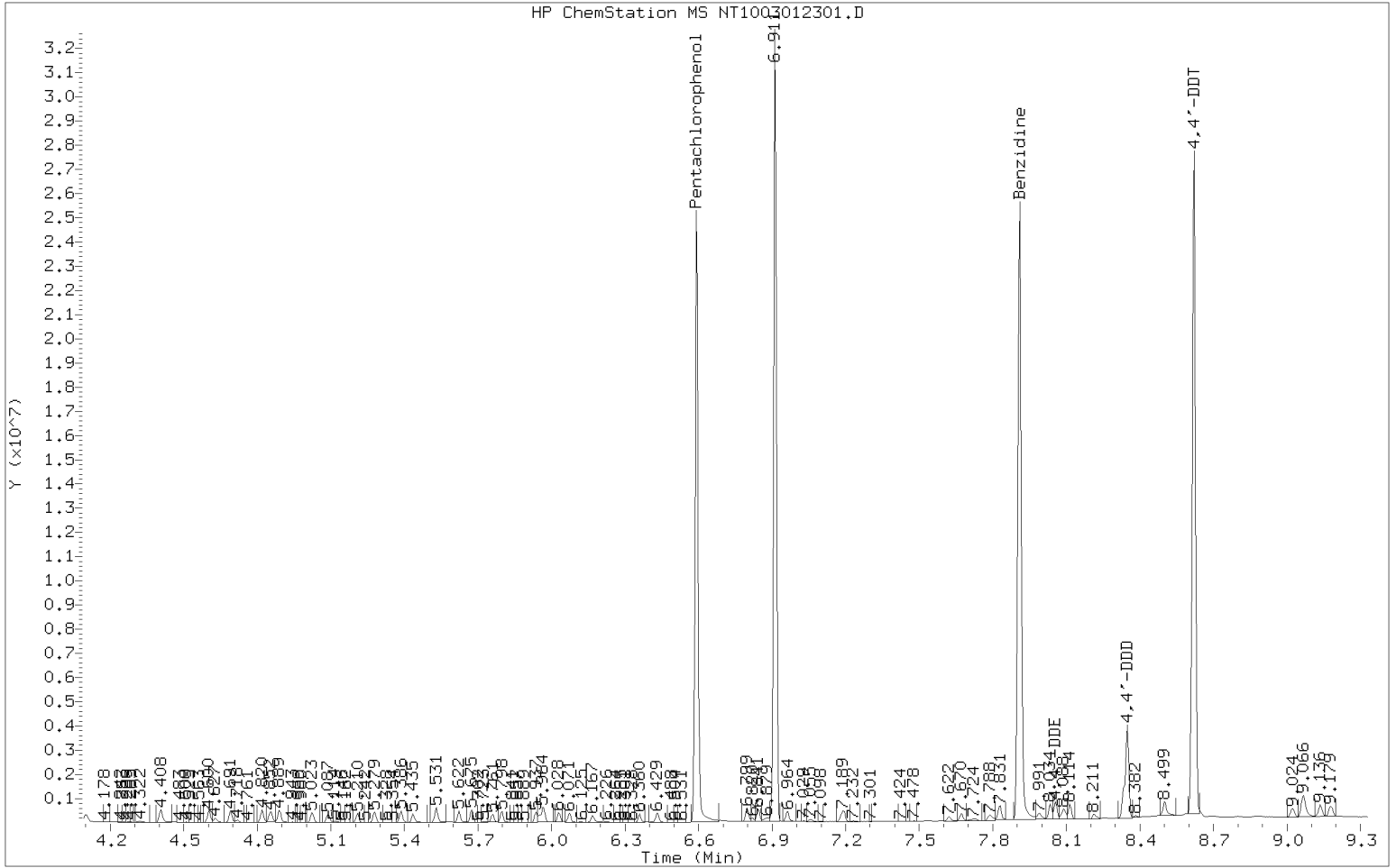
Lab Sample ID: SLC0084-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.793	PASS
69	Less than 100% of 198	41.1	PASS
70	Less than 2% of 69	0.366	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.67	PASS
365	1 - 100% of 198	4.33	PASS
441	Less than 150% of 443	73.4	PASS
442	1 - 200% of 198	80.1	PASS
443	15 - 24% of 442	19.1	PASS
4,4'-DDD	Less than 20% of		
4,4'-DDE	Less than 20% of		
4,4'-DDT	Base peak, 100% relative abundance		

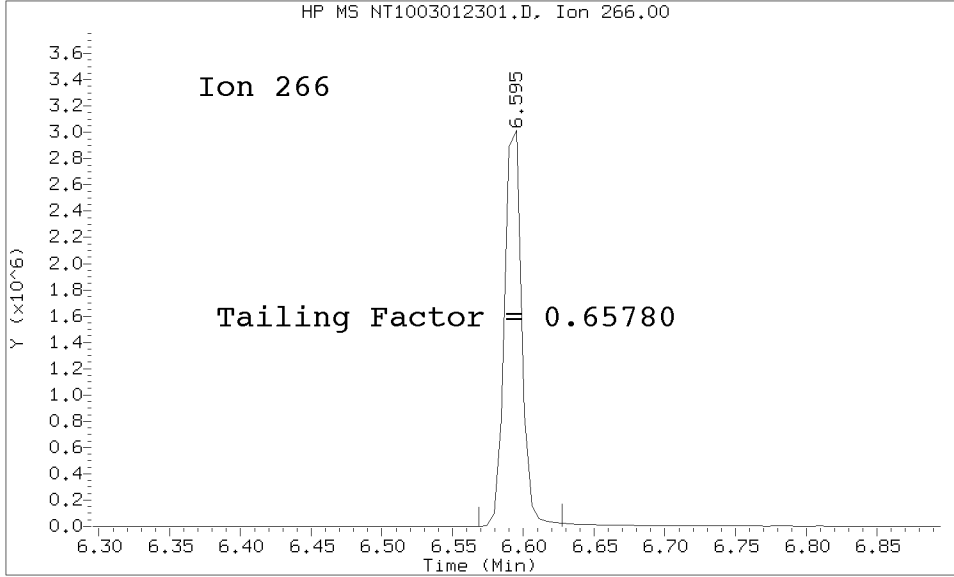
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0084-TUN1	NT1003012301.D	03/01/2023	15:49
Cal Standard	SLC0084-CAL7	NT1003012302.D	03/01/2023	16:04
Cal Standard	SLC0084-CAL6	NT1003012303.D	03/01/2023	16:42
Cal Standard	SLC0084-CAL5	NT1003012304.D	03/01/2023	17:21
Cal Standard	SLC0084-CAL4	NT1003012305.D	03/01/2023	17:59
Cal Standard	SLC0084-CAL3	NT1003012306.D	03/01/2023	18:37
Cal Standard	SLC0084-CAL2	NT1003012307.D	03/01/2023	19:15
Cal Standard	SLC0084-CAL1	NT1003012308.D	03/01/2023	19:53
Secondary Cal Check	SLC0084-SCV1	NT1003012311.D	03/01/2023	21:46
Initial Cal Blank	SLC0084-ICB1	NT1003012312.D	03/01/2023	22:24

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230301.b/NT1003012301.D/NT1003012301.D  
 Method Used: \20230301.b\DFTPP8270E.m Inst: nt10  
 Injection Date: 01-MAR-2023 15:49 Operator: JGR  
 Sample Info: SLC0084-TUN1 SEQ-TUN1  
 Report Date: 03/07/2023 12:33



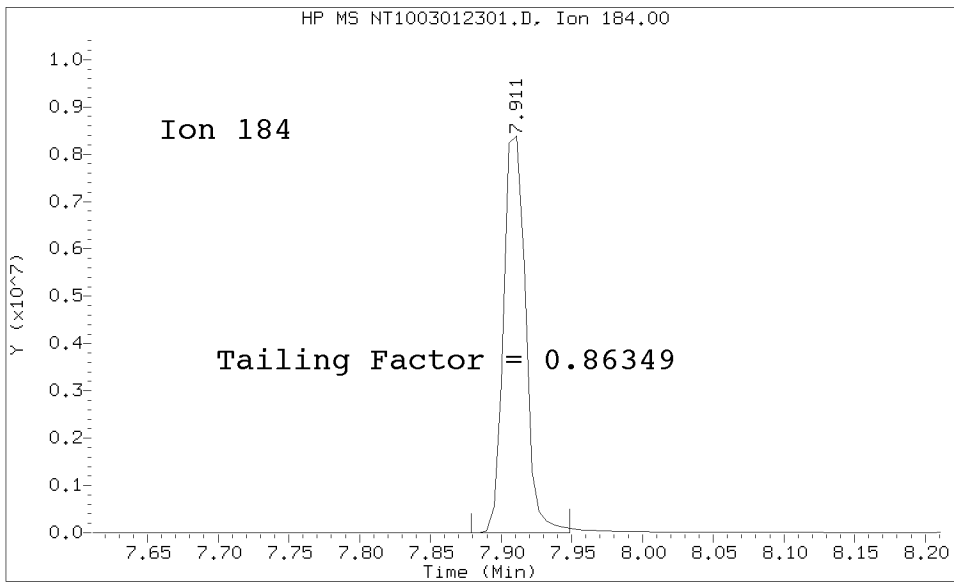
Datafile Analyzed: /20230301.b/NT1003012301.D/NT1003012301.D  
Method Used: \20230301.b\DFTPP8270E.m\sw846ddt.m Inst: nt10  
Injection Date: 01-MAR-2023 15:49 Operator: JGR  
Sample Info: SEQ-TUN1  
Report Date: 03/07/2023 12:33



Pentachlorophenol

=====  
Exp. RT = 6.590  
Found RT = 6.595

Tail Factor = 0.658 Maximum Allowed = 2.0



Benzidine

=====  
Exp. RT = 7.911  
Found RT = 7.911

Tail Factor = 0.863 Maximum Allowed = 2.0



8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.6578035	2.000	PASS
Benzidine	0.8634886	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	4780124			N/A
4,4-DDE	47256	1.0	20.0	PASS
4,4-DDD	542360	10.2	20.0	PASS
4,4-DDD + DDE	589616	11.0	20.0	PASS

Tuning Sample, nt10.i/20230301.b/NT1003012301.D, \*\*\* PASSED \*\*\*

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.33 ( 0.79)
69	Mass 69 relative abundance	41.10
70	Less than 2.00% of mass 69	0.15 ( 0.37)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
365	1.00 - 100.00% of mass 198	4.33
441	Less than 150.00% of mass 443	11.23 ( 73.44)
442	Less than 200.00% of mass 198	80.08
443	15.00 - 24.00% of mass 442	15.30 ( 19.10)

Data File: NT1003012301.D  
 Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522  
 Location of Maximum: 198.00  
 Number of points: 369

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	462	140.00	7430	237.00	14976	332.00	6725
38.00	1113	141.00	70248	238.00	2080	333.00	7901
39.00	4743	142.00	22264	239.00	7687	334.00	53800
40.00	108	143.00	15456	240.00	6126	335.00	13827
45.00	84	144.00	4558	241.00	9927	336.00	1422
49.00	890	145.00	3575	242.00	22800	337.00	158
50.00	20560	146.00	12885	243.00	23656	338.00	111
51.00	115400	147.00	37000	244.00	334528	339.00	1435
52.00	5980	148.00	83184	245.00	44200	340.00	1368
53.00	270	151.00	6891	246.00	75208	341.00	9189
55.00	1004	152.00	4801	247.00	14506	342.00	2530
56.00	6893	153.00	21920	248.00	2995	343.00	476
57.00	20032	154.00	16872	249.00	12012	344.00	229
58.00	1173	155.00	39720	250.00	2462	346.00	19040
59.00	381	156.00	58960	251.00	2978	347.00	3868
60.00	603	157.00	10415	252.00	3463	348.00	369
61.00	8555	158.00	12758	253.00	7543	350.00	680
62.00	12181	159.00	10289	254.00	2201	351.00	1509
63.00	36888	160.00	23104	255.00	1779712	352.00	24280
64.00	5850	161.00	32336	256.00	261248	353.00	16313
65.00	19656	162.00	10036	257.00	19960	354.00	23616
66.00	1277	163.00	2211	258.00	115664	355.00	4277
67.00	218	164.00	3370	259.00	18720	356.00	395
68.00	9335	165.00	26672	260.00	3097	357.00	288
69.00	1177088	166.00	21880	261.00	2983	358.00	496
70.00	4303	167.00	140736	262.00	311	359.00	2088
72.00	118	168.00	67144	263.00	1088	360.00	426
73.00	8187	169.00	12299	264.00	2758	361.00	287
74.00	117944	170.00	4307	265.00	46872	362.00	66
75.00	186240	171.00	6152	266.00	6551	363.00	78
76.00	58584	172.00	12323	267.00	641	364.00	312
77.00	1243648	173.00	16696	268.00	1031	365.00	124024
78.00	82568	174.00	30816	269.00	334	366.00	17240
79.00	86720	175.00	56392	270.00	1777	367.00	1640
80.00	67968	176.00	14808	271.00	3758	368.00	51
81.00	95752	177.00	24968	272.00	4667	369.00	81
82.00	22136	178.00	8414	273.00	54184	370.00	2231
83.00	20016	179.00	108176	274.00	145920	371.00	6578
84.00	1703	180.00	69200	275.00	822080	372.00	39896
85.00	15260	181.00	35088	276.00	108424	373.00	10420
86.00	27208	182.00	5707	277.00	76856	374.00	902
87.00	12947	183.00	2410	278.00	12879	377.00	1108
88.00	4317	184.00	9057	281.00	1271	378.00	190
89.00	1969	185.00	53272	282.00	1654	379.00	112
90.00	227	186.00	390848	283.00	8058	382.00	88
91.00	20144	187.00	115736	284.00	6096	383.00	11296
92.00	22872	188.00	12489	285.00	13310	384.00	3498
93.00	159616	189.00	26224	286.00	2664	385.00	1140
94.00	9906	190.00	3820	287.00	301	386.00	187

95.00	2189	191.00	11505	288.00	1049	388.00	81
96.00	5767	192.00	34688	289.00	3146	389.00	105
97.00	2485	193.00	41016	290.00	2684	390.00	4929
98.00	117552	194.00	9131	291.00	1791	391.00	3340
99.00	90792	195.00	3653	292.00	3510	392.00	2390
100.00	7885	196.00	74504	293.00	16520	393.00	475
101.00	52896	198.00	2863616	294.00	4295	395.00	216
102.00	3052	199.00	190976	295.00	4987	396.00	208
103.00	16416	200.00	14335	296.00	267904	397.00	274
104.00	30568	201.00	9948	297.00	37320	398.00	254
105.00	30136	203.00	20560	298.00	2786	401.00	2284
106.00	9766	204.00	107568	299.00	508	402.00	15386
107.00	410176	205.00	182464	300.00	217	403.00	21456
108.00	62280	206.00	743232	301.00	3180	404.00	8460
109.00	6029	207.00	96144	302.00	4702	405.00	1217
110.00	711808	208.00	26352	303.00	29528	408.00	105
111.00	108280	209.00	9347	304.00	7967	410.00	539
112.00	13160	210.00	10562	305.00	1122	411.00	56
113.00	4333	211.00	27120	306.00	358	415.00	1010
114.00	392	212.00	2578	307.00	530	416.00	312
115.00	1356	213.00	2139	308.00	3845	419.00	166
116.00	22112	214.00	764	309.00	2265	420.00	193
117.00	350208	215.00	8027	310.00	3023	421.00	17744
118.00	25424	216.00	16051	311.00	1030	422.00	15463
119.00	2716	217.00	211072	312.00	626	423.00	129392
120.00	4884	218.00	26304	313.00	2222	424.00	25976
121.00	587	219.00	2900	314.00	12766	425.00	2691
122.00	25416	220.00	3351	315.00	29288	426.00	96
123.00	40488	221.00	123968	316.00	15518	427.00	197
124.00	17936	222.00	24608	317.00	2892	429.00	55
125.00	15919	223.00	46856	318.00	260	437.00	78
127.00	1391616	224.00	432000	319.00	629	438.00	106
128.00	102568	225.00	107056	320.00	924	439.00	148
129.00	561152	226.00	10788	321.00	8267	440.00	550
130.00	46696	227.00	195904	322.00	3948	441.00	321664
131.00	8637	228.00	27456	323.00	81096	442.00	2293248
132.00	4190	229.00	39984	324.00	14693	443.00	438016
133.00	1654	230.00	5777	325.00	1371	444.00	39248
134.00	15899	231.00	15009	326.00	1762	445.00	2356
135.00	44024	232.00	3043	327.00	15694	446.00	82
136.00	18272	233.00	3542	328.00	7475	489.00	54
137.00	22936	234.00	12458	329.00	1733		
138.00	5085	235.00	13429	330.00	352		
139.00	2552	236.00	8601	331.00	463		



## INITIAL CALIBRATION DATA

### EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GC00019

Instrument: NT10

Calibration Date: 03/01/2023

Column (1): ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	0.2	1.237789	0.5	1.423375	1	1.52938	2.5	1.629375	5	1.651228	10	1.692958
bis(2-chloroethyl) ether	0.2	1.190382	0.5	1.202362	1	1.196973	2.5	1.177642	5	1.166505	10	1.182602
2-Chlorophenol	0.2	1.073761	0.5	1.276853	1	1.223013	2.5	1.300179	5	1.349028	10	1.392071
1,3-Dichlorobenzene	0.2	1.470962	0.5	1.463804	1	1.376309	2.5	1.413283	5	1.404678	10	1.407452
1,4-Dichlorobenzene	0.2	1.402764	0.5	1.454668	1	1.390445	2.5	1.327854	5	1.35838	10	1.394084
1,2-Dichlorobenzene	0.2	1.375403	0.5	1.449362	1	1.336466	2.5	1.343903	5	1.31661	10	1.366347
Benzyl Alcohol	0.2	0.3823688	0.5	0.5839947	1	0.6982351	2.5	0.7409103	5	0.8185546	10	0.8502382
2,2'-Oxybis(1-chloropropane)	0.2	0.3729552	0.5	0.4128573	1	0.4068658	2.5	0.3853497	5	0.3936868	10	0.397541
2-Methylphenol	0.2	0.6579371	0.5	0.9084103	1	1.072411	2.5	1.186631	5	1.230888	10	1.271372
Hexachloroethane	0.2	0.5951571	0.5	0.558966	1	0.5181683	2.5	0.5567259	5	0.5780767	10	0.6094776
N-Nitroso-di-n-Propylamine	0.2	0.817833	0.5	0.8639436	1	0.921424	2.5	0.9713214	5	0.968534	10	0.999017
4-Methylphenol	0.2	0.790134	0.5	0.8856075	1	1.097191	2.5	1.303514	5	1.426452	10	1.524046
Nitrobenzene	0.2	0.3593022	0.5	0.4125847	1	0.4194648	2.5	0.417506	5	0.4107371	10	0.427064
Isophorone	0.2	0.5124437	0.5	0.4761757	1	0.5036907	2.5	0.5303679	5	0.5387453	10	0.5589046
2-Nitrophenol	0.2	9.230907E-02	0.5	0.1219809	1	0.133764	2.5	0.1583716	5	0.2032402	10	0.2276972
2,4-Dimethylphenol			1	0.3151268	2	0.3442643	5	0.3800013	10	0.3929658	20	0.422898
Bis(2-Chloroethoxy)methane	0.2	0.267607	0.5	0.3091581	1	0.3293925	2.5	0.3364165	5	0.32793	10	0.3486418
2,4-Dichlorophenol	0.4	0.1660521	1	0.1807178	2	0.2119252	5	0.2913602	10	0.2838135	20	0.3447133
1,2,4-Trichlorobenzene	0.2	0.2896704	0.5	0.3213408	1	0.2998494	2.5	0.3028357	5	0.2998697	10	0.3151722
Naphthalene	0.2	1.007084	0.5	1.029387	1	0.9802583	2.5	1.002021	5	1.01875	10	1.050723
Benzoic acid			2	0.087499	4	0.122722	10	0.1741775	20	0.2267779	40	0.2711873
4-Chloroaniline	0.4	0.2878287	1	0.3052292	2	0.3445382	5	0.3843126	10	0.4612308	20	0.4932998
Hexachlorobutadiene	0.2	0.1902735	0.5	0.2353681	1	0.2127128	2.5	0.2258722	5	0.2286682	10	0.2332442
4-Chloro-3-Methylphenol			1	0.2577252	2	0.241096	5	0.3007188	10	0.3327581	20	0.3643688
2-Methylnaphthalene	0.2	0.6308902	0.5	0.7085788	1	0.6911815	2.5	0.7119533	5	0.7395277	10	0.7692108
Hexachlorocyclopentadiene			1	2.900822E-02	2	3.712456E-02	5	6.999604E-02	10	0.1138107	20	0.1661709
2,4,6-Trichlorophenol			1	0.2483337	2	0.2741153	5	0.3423678	10	0.3881395	20	0.4302867



## INITIAL CALIBRATION DATA EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4,5-Trichlorophenol			1	0.3033405	2	0.3019678	5	0.3552101	10	0.4201466	20	0.4608039
2-Chloronaphthalene	0.2	0.9847405	0.5	1.072019	1	1.054807	2.5	1.116004	5	1.139016	10	1.210507
2-Nitroaniline			1	0.1792621	2	0.2232641	5	0.3034832	10	0.3117416	20	0.3338102
Acenaphthylene	0.2	1.852595	0.5	1.718894	1	1.783836	2.5	1.831493	5	1.933401	10	2.276419
Dimethylphthalate	0.2	1.113155	0.5	1.295456	1	1.252652	2.5	1.299909	5	1.337911	10	1.339362
2,6-Dinitrotoluene			1	0.2056607	2	0.2310775	5	0.2626011	10	0.2951861	20	0.3068193
Acenaphthene	0.2	1.085113	0.5	1.124305	1	1.089364	2.5	1.116268	5	1.183736	10	1.222169
3-Nitroaniline			1	0.2839907	2	0.301451	5	0.3031841	10	0.3306409	20	0.3549581
2,4-Dinitrophenol	0.8		2	3.606356E-04	4	4.900991E-03	10	1.999184E-02	20	4.950252E-02	40	0.0951736
Dibenzofuran	0.2	1.529371	0.5	1.587544	1	1.606734	2.5	1.663489	5	1.814226	10	1.887051
4-Nitrophenol			1	9.050643E-02	2	0.1581923	5	0.1969452	10	0.2224502	20	0.2613282
2,4-Dinitrotoluene			1	0.2448191	2	0.3202929	5	0.3622655	10	0.4301237	20	0.4529644
Fluorene	0.2	1.182861	0.5	1.290603	1	1.323395	2.5	1.382538	5	1.488351	10	1.596706
4-Chlorophenylphenyl ether	0.2	0.5206595	0.5	0.5683749	1	0.5782613	2.5	0.6079906	5	0.663476	10	0.7052926
Diethyl phthalate	0.2	1.187883	0.5	1.317395	1	1.347048	2.5	1.355846	5	1.418462	10	1.437326
4-Nitroaniline			1	0.3099499	2	0.290066	5	0.3199367	10	0.3767291	20	0.3861115
4,6-Dinitro-2-methylphenol			2	7.890743E-03	4	1.867191E-02	10	0.0534178	20	7.636342E-02	40	0.117748
N-Nitrosodiphenylamine	0.2	0.4752356	0.5	0.5110202	1	0.5805407	2.5	0.6104635	5	0.6118214	10	0.6466191
4-Bromophenyl phenyl ether	0.2	0.1783261	0.5	0.2334774	1	0.2290381	2.5	0.236359	5	0.2450947	10	0.2619947
Hexachlorobenzene	0.2	0.264642	0.5	0.2787358	1	0.2521605	2.5	0.2543999	5	0.2673938	10	0.2689649
Pentachlorophenol			1	4.829203E-02	2	6.768589E-02	5	0.1039548	10	0.1237917	20	0.1491481
Phenanthrene	0.2	0.9192374	0.5	0.9749482	1	0.9741612	2.5	0.9910938	5	1.016959	10	1.094028
Anthracene	0.2	0.8232807	0.5	0.9126948	1	0.9131284	2.5	0.969178	5	1.016018	10	1.100731
Carbazole	0.2	0.762805	0.5	0.8378231	1	0.8791639	2.5	0.914396	5	0.9244507	10	0.9809884
Di-n-Butylphthalate	0.2	0.897945	0.5	0.9983239	1	1.099341	2.5	1.18703	5	1.25964	10	1.351168
Fluoranthene	0.2	1.08313	0.5	1.244509	1	1.329339	2.5	1.464169	5	1.56619	10	1.538862
Pyrene	0.2	1.207927	0.5	1.314345	1	1.36291	2.5	1.45954	5	1.554002	10	1.496866



## INITIAL CALIBRATION DATA EPA 8270E

Laboratory: Analytical Resources, LLC    SDG: 23A0206  
 Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
 Calibration: GC00019    Instrument: NT10  
 Calibration Date: 03/01/2023    Column (1): ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Butylbenzylphthalate	0.2	0.4551824	0.5	0.5606288	1	0.6258917	2.5	0.7113312	5	0.7485187	10	0.7299492
Benzo(a)anthracene	0.2	1.222677	0.5	1.26331	1	1.303592	2.5	1.350765	5	1.417005	10	1.593218
3,3'-Dichlorobenzidine			1.5	0.3781026	3	0.4318944	7.5	0.5089537	15	0.5886671	30	0.6867233
Chrysene	0.2	1.160355	0.5	1.121026	1	1.107342	2.5	1.07249	5	1.118093	10	1.166851
bis(2-Ethylhexyl)phthalate	0.2	0.3999472	0.5	0.473416	1	0.5092929	2.5	0.5327348	5	0.5502302	10	0.6148331
Di-n-Octylphthalate	0.2	0.9200329	0.5	0.9194176	1	0.8859107	2.5	0.8660992	5	0.8513586	10	0.887873
Benzofluoranthenes, Total	0.4	1.086703	1	1.163268	2	1.165762	5	1.235897	10	1.32605	20	1.520944
Benzo(a)pyrene	0.2	0.9326916	0.5	1.087162	1	1.10904	2.5	1.137554	5	1.227546	10	1.412948
Indeno(1,2,3-cd)pyrene	0.2	1.041732	0.5	1.137871	1	1.214088	2.5	1.354999	5	1.455807	10	1.640022
Dibenzo(a,h)anthracene	0.2	0.8390162	0.5	0.9499121	1	0.9616022	2.5	1.052088	5	1.103072	10	1.263728
Benzo(g,h,i)perylene	0.2	0.9192859	0.5	0.9590816	1	1.000648	2.5	1.115522	5	1.172504	10	1.263363
1-Methylnaphthalene	0.2	0.5875448	0.5	0.6383146	1	0.6280282	2.5	0.6495483	5	0.6746664	10	0.6854012
2-Fluorophenol	0.3	1.15591	0.75	1.261064	1.5	1.266294	3.75	1.259175	7.5	1.262003	15	1.298348
Phenol-d5	0.3	1.206252	0.75	1.242342	1.5	1.387843	3.75	1.498376	7.5	1.55432	15	1.664825
2-Chlorophenol-d4	0.3	0.9559445	0.75	1.127215	1.5	1.205728	3.75	1.271792	7.5	1.319434	15	1.380813
1,2-Dichlorobenzene-d4	0.2	0.9107501	0.5	0.9962826	1	0.908125	2.5	0.8838883	5	0.9100577	10	0.9338885
Nitrobenzene-d5	0.2	0.3600835	0.5	0.4235407	1	0.4367567	2.5	0.4596222	5	0.4535854	10	0.4648953
2-Fluorobiphenyl	0.2	1.243586	0.5	1.361144	1	1.361419	2.5	1.405476	5	1.475165	10	1.512933
2,4,6-Tribromophenol	0.3	0.1450166	0.75	0.1658224	1.5	0.1889403	3.75	0.2219042	7.5	0.2583988	15	0.2811215
p-Terphenyl-d14	0.2	1.000908	0.5	1.047604	1	1.075873	2.5	1.16204	5	1.238279	10	1.225061



**INITIAL CALIBRATION DATA**  
**EPA 8270E**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	20	1.710108										
bis(2-chloroethyl) ether	20	1.19314										
2-Chlorophenol	20	1.450363										
1,3-Dichlorobenzene	20	1.458296										
1,4-Dichlorobenzene	20	1.599659										
1,2-Dichlorobenzene	20	1.421225										
Benzyl Alcohol	20	0.8989961										
2,2'-Oxybis(1-chloropropane)	20	0.4011212										
2-Methylphenol	20	1.340478										
Hexachloroethane	20	0.6583989										
N-Nitroso-di-n-Propylamine	20	1.019793										
4-Methylphenol	20	1.434435										
Nitrobenzene	20	0.4365429										
Isophorone	20	0.5600685										
2-Nitrophenol	20	0.2015619										
2,4-Dimethylphenol	40	0.4429856										
Bis(2-Chloroethoxy)methane	20	0.3552745										
2,4-Dichlorophenol	40	0.3503969										
1,2,4-Trichlorobenzene	20	0.3350871										
Naphthalene	20	1.098343										
Benzoic acid	80	0.2999431										
4-Chloroaniline	40	0.5304621										
Hexachlorobutadiene	20	0.2494264										
4-Chloro-3-Methylphenol	40	0.4045101										
2-Methylnaphthalene	20	0.8256305										
Hexachlorocyclopentadiene	40	0.2416717										
2,4,6-Trichlorophenol	40	0.4978498										





**INITIAL CALIBRATION DATA**  
**EPA 8270E**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4,5-Trichlorophenol	40	0.5431348										
2-Chloronaphthalene	20	1.263021										
2-Nitroaniline	40	0.3626974										
Acenaphthylene	20	2.119888										
Dimethylphthalate	20	1.404111										
2,6-Dinitrotoluene	40	0.3326913										
Acenaphthene	20	1.330718										
3-Nitroaniline	40	0.3803653										
2,4-Dinitrophenol	80	0.165298										
Dibenzofuran	20	2.009868										
4-Nitrophenol	40	0.300473										
2,4-Dinitrotoluene	40	0.5008524										
Fluorene	20	1.801433										
4-Chlorophenylphenyl ether	20	0.8527636										
Diethyl phthalate	20	1.515442										
4-Nitroaniline	40	0.4182217										
4,6-Dinitro-2-methylphenol	80	0.1534116										
N-Nitrosodiphenylamine	20	0.7070765										
4-Bromophenyl phenyl ether	20	0.294352										
Hexachlorobenzene	20	0.3040043										
Pentachlorophenol	40	0.1944574										
Phenanthrene	20	1.195283										
Anthracene	20	1.213327										
Carbazole	20	1.06588										
Di-n-Butylphthalate	20	1.479832										
Fluoranthene	20	1.406035										
Pyrene	20	1.412502										



**INITIAL CALIBRATION DATA**  
**EPA 8270E**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi

Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Butylbenzylphthalate	20	0.7013138										
Benzo(a)anthracene	20	1.722304										
3,3'-Dichlorobenzidine	60	0.6806052										
Chrysene	20	1.277591										
bis(2-Ethylhexyl)phthalate	20	0.6518326										
Di-n-Octylphthalate	20	0.8783523										
Benzo(a)fluoranthenes, Total	40	1.869524										
Benzo(a)pyrene	20	1.711472										
Indeno(1,2,3-cd)pyrene	20	1.978991										
Dibenzo(a,h)anthracene	20	1.636061										
Benzo(g,h,i)perylene	20	1.441266										
1-Methylnaphthalene	20	0.7316309										
2-Fluorophenol	30	1.306775										
Phenol-d5	30	1.673875										
2-Chlorophenol-d4	30	1.465192										
1,2-Dichlorobenzene-d4	20	0.9764885										
Nitrobenzene-d5	20	0.4751259										
2-Fluorobiphenyl	20	1.627365										
2,4,6-Tribromophenol	30	0.3402775										
p-Terphenyl-d14	20	1.18638										



## INITIAL CALIBRATION DATA

### EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi
Calibration Comments:	ABN PSDDA 32 to 33 Analytes Quad. fit.		

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.553459	11.0			RSD (15)	
bis(2-chloroethyl) ether	1.187087	1.0			RSD (15)	
2-Chlorophenol	1.295038	9.5			RSD (15)	
1,3-Dichlorobenzene	1.427826	2.5			RSD (15)	
1,4-Dichlorobenzene	1.418265	6.3			RSD (15)	
1,2-Dichlorobenzene	1.372759	3.5			RSD (15)	
Benzyl Alcohol	0.7104711	25.1		0.9997	QCOD (0.99)	
2,2'-Oxybis(1-chloropropane)	0.3957681	3.4			RSD (15)	
2-Methylphenol	1.095447	21.9		0.9999	QCOD (0.99)	
Hexachloroethane	0.5821386	7.7			RSD (15)	
N-Nitroso-di-n-Propylamine	0.9374094	7.9			RSD (15)	
4-Methylphenol	1.208768	23.9		0.9987	QCOD (0.99)	
Nitrobenzene	0.411886	6.0			RSD (15)	
Isophorone	0.5257709	5.8			RSD (15)	
2-Nitrophenol	0.1627036	30.6		0.9954	QCOD (0.99)	
2,4-Dimethylphenol	0.3830403	12.5		0.9997	QCOD (0.99)	
Bis(2-Chloroethoxy)methane	0.3249172	9.0			RSD (15)	
2,4-Dichlorophenol	0.2612827	28.9		0.9978	QCOD (0.99)	
1,2,4-Trichlorobenzene	0.3091179	5.0			RSD (15)	
Naphthalene	1.026652	3.8			RSD (15)	
Benzoic acid	0.1970511	42.5		0.9961	QCOD (0.99)	
4-Chloroaniline	0.4009859	23.7		0.9991	QCOD (0.99)	
Hexachlorobutadiene	0.2250808	8.4			RSD (15)	
4-Chloro-3-Methylphenol	0.3168628	19.8		0.9993	QCOD (0.99)	
2-Methylnaphthalene	0.7252818	8.5			RSD (15)	
Hexachlorocyclopentadiene	0.1096304	75.2		0.9881	QCOD (0.99)	*
2,4,6-Trichlorophenol	0.3635155	26.0		0.9991	QCOD (0.99)	
2,4,5-Trichlorophenol	0.397434	24.0		0.9992	QCOD (0.99)	
2-Chloronaphthalene	1.120016	8.5			RSD (15)	



**INITIAL CALIBRATION DATA**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC      SDG: 23A0206  
Client: Anchor QEA, LLC      Project: AOC5 MR Phase 1  
Calibration: GC00019      Instrument: NT10  
Calibration Date: 03/01/2023      Column (1): ZB-5MSi  
Calibration Comments: ABN PSDDA  
32 to 33 Analytes Quad. fit.

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2-Nitroaniline	0.2857098	24.5		0.9995	QCOD (0.99)	
Acenaphthylene	1.930932	10.3			RSD (15)	
Dimethylphthalate	1.291794	7.1			RSD (15)	
2,6-Dinitrotoluene	0.2723393	17.7		0.9996	QCOD (0.99)	
Acenaphthene	1.164525	7.6			RSD (15)	
3-Nitroaniline	0.325765	11.2			RSD (15)	
2,4-Dinitrophenol	5.587126E-02	114.7		0.9701	QCOD (0.99)	*
Dibenzofuran	1.728326	10.3			RSD (15)	
4-Nitrophenol	0.2049826	36.5		0.9982	QCOD (0.99)	
2,4-Dinitrotoluene	0.3852197	24.5		0.9992	QCOD (0.99)	
Fluorene	1.437984	14.6			RSD (15)	
4-Chlorophenylphenyl ether	0.6424026	17.3		0.9999	QCOD (0.99)	
Diethyl phthalate	1.368486	7.6			RSD (15)	
4-Nitroaniline	0.3501692	14.4			RSD (15)	
4,6-Dinitro-2-methylphenol	7.125058E-02	79.5		0.9864	QCOD (0.99)	*
N-Nitrosodiphenylamine	0.5918253	13.3			RSD (15)	
4-Bromophenyl phenyl ether	0.239806	14.7			RSD (15)	
Hexachlorobenzene	0.270043	6.5			RSD (15)	
Pentachlorophenol	0.114555	46.8		0.9974	QCOD (0.99)	
Phenanthrene	1.023673	9.0			RSD (15)	
Anthracene	0.9926226	13.2			RSD (15)	
Carbazole	0.9093581	10.8			RSD (15)	
Di-n-Butylphthalate	1.181897	17.1		0.9998	QCOD (0.99)	
Fluoranthene	1.376033	12.5			RSD (15)	
Pyrene	1.401156	8.4			RSD (15)	
Butylbenzylphthalate	0.6475451	16.6		0.9998	QCOD (0.99)	
Benzo(a)anthracene	1.41041	13.0			RSD (15)	
3,3'-Dichlorobenzidine	0.5458244	23.5		0.9972	QCOD (0.99)	
Chrysene	1.14625	5.8			RSD (15)	



**INITIAL CALIBRATION DATA**  
**EPA 8270E**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00019	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi
Calibration Comments:	ABN PSDDA 32 to 33 Analytes Quad. fit.		

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
bis(2-Ethylhexyl)phthalate	0.5331838	15.9		0.9995	QCOD (0.99)	
Di-n-Octylphthalate	0.8870063	2.9			RSD (15)	
Benzofluoranthenes, Total	1.338307	20.5		0.9996	QCOD (0.99)	
Benzo(a)pyrene	1.231202	20.9		0.9995	QCOD (0.99)	
Indeno(1,2,3-cd)pyrene	1.403359	23.1		0.9996	QCOD (0.99)	
Dibenzo(a,h)anthracene	1.115069	23.9		0.9997	QCOD (0.99)	
Benzo(g,h,i)perylene	1.124524	16.5		0.9999	QCOD (0.99)	
1-Methylnaphthalene	0.6564478	7.0			RSD (15)	
2-Fluorophenol	1.25851	3.9			RSD (15)	
Phenol-d5	1.461119	13.0			RSD (15)	
2-Chlorophenol-d4	1.246588	13.6			RSD (15)	
1,2-Dichlorobenzene-d4	0.9313544	4.4			RSD (15)	
Nitrobenzene-d5	0.4390871	8.9			RSD (15)	
2-Fluorobiphenyl	1.426727	8.7			RSD (15)	
2,4,6-Tribromophenol	0.228783	30.2		0.9994	QCOD (0.99)	
p-Terphenyl-d14	1.133735	8.2			RSD (15)	



INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b

Time	Filename	LabID	ClientId	DF																													
1	1549	NT1003012301.D	SLC0084-TUN1	1		NO ISTDS FOUND																											
2	1604	NT1003012302.D	SLC0084-CAL7	1		9.25		350339		11.73		1337321		15.32		721926		18.41		1389567		23.42		1382735		26.11		1052577		24.49		2772507	
3	1642	NT1003012303.D	SLC0084-CAL6	1		9.25		343229		11.72		1283371		15.32		697310		18.40		1340795		23.42		1088479		26.11		973894		24.48		2152692	
4	1721	NT1003012304.D	SLC0084-CAL5	1		9.25		337641		11.72		1265187		15.31		692385		18.40		1376777		23.42		1019524		26.10		1027409		24.48		2027111	
5	1759	NT1003012305.D	SLC0084-CAL4	1		9.25		320922		11.72		1174958		15.31		642002		18.40		1218560		23.42		904733		26.10		947785		24.48		1785837	
6	1837	NT1003012306.D	SLC0084-CAL3	1		9.25		301377		11.72		1117281		15.31		611509		18.40		1193129		23.42		938680		26.10		995239		24.49		1744984	
7	1915	NT1003012307.D	SLC0084-CAL2	1		9.25		309085		11.72		1141293		15.31		610034		18.40		1173527		23.42		1001661		26.10		1066145		24.49		1783007	
8	1953	NT1003012308.D	SLC0084-CAL1	1		9.25		295317		11.72		1075084		15.32		525641		18.40		1064230		23.42		908515		26.10		969731		24.48		1659419	
9	2030	NT1003012309.D	SEQ-SIM2	1		9.25		285326		11.72		1006391		15.31		485266		18.40		993728		23.42		888551		26.10		1001314		24.49		1646702	
10	2109	NT1003012310.D	SEQ-SIM1	1		9.25		350039		11.72		1219070		15.31		587402		18.40		1179509		23.42		1044485		26.10		1189301		24.48		1916581	
11	2146	NT1003012311.D	SLC0084-SCV1	1		9.25		283537		11.72		1089120		15.32		607772		18.40		1205858		23.42		1219436		26.10		1289108		24.49		2317357	
12	2224	NT1003012312.D	SLC0084-ICB1	1		9.25		480761		11.72		1681746		15.31		836849		18.40		1648281		23.42		1391477		26.10		1542419		24.48		2481481	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b

ARI Job No.: SLC0 Method: DFTPP8270E.m Instrument: nt10.i Date: 01-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1549	NT1003012301.D	SLC0084-TUN1		1	NO MANUAL INTEGRATION
1604	NT1003012302.D	SLC0084-CAL7		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1642	NT1003012303.D	SLC0084-CAL6		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1721	NT1003012304.D	SLC0084-CAL5		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1759	NT1003012305.D	SLC0084-CAL4		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol, 4-Nitrophenol,
1837	NT1003012306.D	SLC0084-CAL3		1	2,2'-oxybis(1-Chloropropane), Benzoic acid, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol,
1915	NT1003012307.D	SLC0084-CAL2		1	2,2'-oxybis(1-Chloropropane), Benzoic acid, 4-Chloro-3-methylphenol, 2,4,5-Trichlorophenol, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline, N-Nitrosodimethylamine, Benzidine,
1953	NT1003012308.D	SLC0084-CAL1		1	2,2'-oxybis(1-Chloropropane), N-Nitroso-di-n-propylamine, 4-Methylphenol, Isophorone, 2,4-Dichlorophenol, Benzoic acid, 4-Chloroaniline, 4-Chloro-3-methylphenol, 2,4,5-Trichlorophenol, 2-Nitroaniline, 3-Nitroaniline, 4-Nitroaniline, Pentachlorophenol, Carbazole, Chrysene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, N-Nitrosodimethylami
2030	NT1003012309.D	SEQ-SIM2		1	NO MANUAL INTEGRATION
2109	NT1003012310.D	SEQ-SIM1		1	NO MANUAL INTEGRATION
2146	NT1003012311.D	SLC0084-SCV1		1	Bis(2-Chloroethyl)ether, 2,4,5-Trichlorophenol, 4-Nitrophenol,
2224	NT1003012312.D	SLC0084-ICB1		1	NO MANUAL INTEGRATION



Security Status Report

Date: 07-Mar-2023 12:54

NT1003012301.D	Data Locked	yev, 07-
NT1003012302.D	Data Locked	yev, 07-
NT1003012303.D	Data Locked	yev, 07-
NT1003012304.D	Data Locked	yev, 07-
NT1003012305.D	Data Locked	yev, 07-
NT1003012306.D	Data Locked	yev, 07-
NT1003012307.D	Data Locked	yev, 07-
NT1003012308.D	Data Locked	yev, 07-
NT1003012309.D	Data Locked	yev, 07-
NT1003012310.D	Data Locked	yev, 07-
NT1003012311.D	Data Locked	yev, 07-
NT1003012312.D	Data Locked	yev, 07-

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230301.b
Inst ID: nt10.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: NT1003012302 NT1003012303 NT1003012304 NT1003012305 NT1003012306 NT1003012307 NT1003012308
INJ. DATE: 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023
INJ. TIME: 16:04 16:42 17:21 17:59 18:37 19:15 19:53

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include various chemical compounds like 2-Fluorophenol, Carbaryl, n-Decane, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.493	24.485	24.485	24.485	24.485	24.485	24.485	24.485	21.485-27.485	24.486	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropyl-naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	15.982	15.981	15.974	15.974	15.982	15.982	15.981	15.982	12.982-18.982	15.979	0.004
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.793	16.778	16.778	16.778	16.778	16.778	16.778	16.778	13.778-19.778	16.780	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.140	14.140-20.140	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.070	12.070-18.070	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.232	12.232-18.232	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.374	13.374-19.374	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.120	10.120-16.120	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.735	8.735-14.735	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105 1-methylnaphthalene	13.374	13.367	13.366	13.367	13.367	13.367	13.366	13.367	10.367-16.367	13.368	0.003
151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
\$ 2 Phenol-d5	8.505	8.497	8.489	8.489	8.489	8.489	8.489	8.489	5.489-11.489	8.492	0.006
3 Phenol	8.528	8.520	8.512	8.512	8.513	8.513	8.520	8.513	5.513-11.513	8.517	0.006
4 Bis(2-Chloroethyl)ethe	8.744	8.736	8.728	8.728	8.729	8.729	8.728	8.729	5.729-11.729	8.732	0.006
\$ 5 2-Chlorophenol-d4	8.821	8.813	8.813	8.813	8.814	8.814	8.813	8.814	5.814-11.814	8.815	0.003

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
6 2-Chlorophenol	8.852	8.844	8.844	8.844	8.845	8.845	8.844	8.845	5.845-11.845	8.845	0.003
7 1,3-Dichlorobenzene	9.146	9.138	9.138	9.138	9.139	9.139	9.138	9.139	6.139-12.139	9.140	0.003
* 8 1,4-Dichlorobenzene-d4	9.247	9.247	9.247	9.247	9.247	9.247	9.247	9.247	6.247-12.247	9.247	0.000
9 1,4-Dichlorobenzene	9.286	9.278	9.278	9.278	9.278	9.278	9.278	9.278	6.278-12.278	9.279	0.003
\$ 10 1,2-Dichlorobenzene-d4	9.542	9.534	9.534	9.534	9.534	9.534	9.534	9.534	6.534-12.534	9.535	0.003
11 Benzyl alcohol	9.480	9.472	9.472	9.472	9.472	9.472	9.480	9.472	6.472-12.472	9.474	0.004
12 1,2-Dichlorobenzene	9.565	9.565	9.565	9.557	9.558	9.565	9.565	9.565	6.565-12.565	9.563	0.004
13 2-Methylphenol	9.658	9.650	9.650	9.651	9.651	9.651	9.658	9.651	6.651-12.651	9.653	0.004
14 2,2'-oxybis(1-Chloropr	9.744	9.736	9.728	9.728	9.728	9.729	9.736	9.729	6.729-12.729	9.733	0.006
15 4-Methylphenol	9.953	9.945	9.938	9.938	9.946	9.938	9.953	9.938	6.938-12.938	9.945	0.007
16 N-Nitroso-di-n-propyla	9.992	9.984	9.976	9.977	9.977	9.977	9.976	9.977	6.977-12.977	9.980	0.006
17 Hexachloroethane	10.217	10.209	10.209	10.209	10.210	10.210	10.209	10.210	7.210-13.210	10.211	0.003
\$ 18 Nitrobenzene-d5	10.303	10.295	10.295	10.287	10.287	10.295	10.295	10.295	7.295-13.295	10.294	0.005
19 Nitrobenzene	10.341	10.334	10.333	10.326	10.326	10.326	10.333	10.326	7.326-13.326	10.331	0.006
20 Isophorone	10.815	10.791	10.791	10.784	10.784	10.784	10.784	10.784	7.784-13.784	10.790	0.011
21 2-Nitrophenol	10.959	10.950	10.950	10.950	10.951	10.951	10.950	10.951	7.951-13.951	10.952	0.003
22 2,4-Dimethylphenol	11.010	11.001	11.001	10.993	10.993	10.993	11.001	10.993	7.993-13.993	10.999	0.006
23 Bis(2-Chloroethoxy)met	11.222	11.213	11.205	11.205	11.205	11.205	11.213	11.205	8.205-14.205	11.210	0.007
24 Benzoic acid	11.315	11.213	11.162	11.111	11.069	11.052	11.086	11.052	8.052-14.052	11.144	0.094
25 2,4-Dichlorophenol	11.426	11.417	11.417	11.408	11.417	11.417	11.417	11.417	8.417-14.417	11.417	0.005
26 1,2,4-Trichlorobenzene	11.603	11.595	11.595	11.595	11.596	11.596	11.595	11.596	8.596-14.596	11.596	0.003
* 27 Naphthalene-d8	11.727	11.719	11.719	11.719	11.719	11.719	11.719	11.719	8.719-14.719	11.720	0.003
28 Naphthalene	11.773	11.765	11.765	11.765	11.765	11.765	11.765	11.765	8.765-14.765	11.766	0.003
29 4-Chloroaniline	11.866	11.858	11.858	11.858	11.858	11.858	11.865	11.858	8.858-14.858	11.860	0.004

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Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
30 Hexachlorobutadiene	11.997	11.997	11.997	11.989	11.989	11.997	11.997	11.997	8.997-14.997	11.995	0.004
31 4-Chloro-3-methylpheno	12.817	12.809	12.802	12.802	12.810	12.810	12.817	12.810	9.810-15.810	12.809	0.006
32 2-Methylnaphthalene	13.165	13.165	13.165	13.165	13.166	13.166	13.165	13.166	10.166-16.166	13.165	0.000
33 Hexachlorocyclopentadi	13.475	13.467	13.467	13.467	13.467	13.475	13.467	13.475	10.475-16.475	13.469	0.004
34 2,4,6-Trichlorophenol	13.730	13.730	13.722	13.723	13.723	13.731	13.730	13.731	10.731-16.731	13.727	0.004
35 2,4,5-Trichlorophenol	13.800	13.792	13.792	13.792	13.793	13.808	13.815	13.808	10.808-16.808	13.799	0.009
36 2-Fluorobiphenyl	13.916	13.916	13.908	13.908	13.909	13.909	13.908	13.909	10.909-16.909	13.911	0.004
37 2-Chloronaphthalene	14.171	14.164	14.164	14.164	14.164	14.164	14.164	14.164	11.164-17.164	14.165	0.003
38 2-Nitroaniline	14.380	14.373	14.365	14.365	14.365	14.365	14.373	14.365	11.365-17.365	14.369	0.006
39 Dimethylphthalate	14.752	14.744	14.736	14.736	14.737	14.737	14.744	14.737	11.737-17.737	14.741	0.006
40 Acenaphthylene	15.031	15.023	15.023	15.023	15.023	15.023	15.023	15.023	12.023-18.023	15.024	0.003
41 2,6-Dinitrotoluene	14.884	14.876	14.868	14.868	14.868	14.868	14.868	14.868	11.868-17.868	14.871	0.006
42 Acenaphthene-d10	15.317	15.317	15.309	15.309	15.309	15.309	15.317	15.309	12.309-18.309	15.312	0.004
43 3-Nitroaniline	15.240	15.216	15.216	15.216	15.217	15.224	15.232	15.224	12.224-18.224	15.223	0.009
44 Acenaphthene	15.386	15.386	15.378	15.379	15.379	15.379	15.378	15.379	12.379-18.379	15.381	0.004
45 2,4-Dinitrophenol	15.448	15.433	15.433	15.433	15.448	15.487	+++++	15.487	12.487-18.487	15.447	0.021
46 Dibenzofuran	15.750	15.742	15.742	15.734	15.734	15.735	15.742	15.735	12.735-18.735	15.740	0.006
47 4-Nitrophenol	15.549	15.533	15.525	15.525	15.572	15.603	+++++	15.603	12.603-18.603	15.551	0.031
48 2,4-Dinitrotoluene	15.719	15.703	15.695	15.696	15.696	15.704	15.703	15.704	12.704-18.704	15.702	0.008
49 Fluorene	16.461	16.453	16.453	16.453	16.454	16.454	16.453	16.454	13.454-19.454	16.455	0.003
50 Diethylphthalate	16.221	16.213	16.206	16.198	16.198	16.198	16.198	16.198	13.198-19.198	16.205	0.009
51 4-Chlorophenyl-phenyle	16.461	16.453	16.446	16.446	16.446	16.454	16.453	16.454	13.454-19.454	16.451	0.006
52 4-Nitroaniline	16.523	16.492	16.477	16.469	16.477	16.485	16.515	16.485	13.485-19.485	16.491	0.021
53 4,6-Dinitro-2-methylph	16.562	16.546	16.538	16.531	16.531	16.539	+++++	16.539	13.539-19.539	16.541	0.012

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Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
54 N-Nitrosodiphenylamine	16.701	16.693	16.693	16.685	16.686	16.693	16.693	16.693	13.693-19.693	16.692	0.005
\$ 55 2,4,6-Tribromophenol	16.955	16.947	16.940	16.947	16.948	16.948	16.947	16.948	13.948-19.948	16.948	0.005
56 4-Bromophenyl-phenylet	17.473	17.473	17.465	17.465	17.473	17.473	17.473	17.473	14.473-20.473	17.470	0.004
57 Hexachlorobenzene	17.581	17.573	17.573	17.573	17.574	17.574	17.581	17.574	14.574-20.574	17.576	0.004
58 Pentachlorophenol	17.991	17.984	17.983	17.984	17.984	17.984	17.999	17.984	14.984-20.984	17.987	0.006
* 59 Phenanthrene-d10	18.409	18.401	18.401	18.401	18.402	18.402	18.401	18.402	15.402-21.402	18.403	0.003
60 Phenanthrene	18.456	18.455	18.448	18.448	18.448	18.448	18.448	18.448	15.448-21.448	18.450	0.004
61 Anthracene	18.564	18.556	18.556	18.556	18.556	18.557	18.556	18.557	15.557-21.557	18.557	0.003
62 Carbazole	18.897	18.889	18.881	18.881	18.889	18.889	18.896	18.889	15.889-21.889	18.889	0.006
63 Di-n-butylphthalate	19.593	19.585	19.585	19.585	19.585	19.586	19.593	19.586	16.586-22.586	19.587	0.004
64 Fluoranthene	20.823	20.815	20.815	20.815	20.816	20.816	20.815	20.816	17.816-23.816	20.816	0.003
65 Pyrene	21.256	21.249	21.248	21.241	21.241	21.249	21.248	21.249	18.249-24.249	21.248	0.005
\$ 66 Terphenyl-d14	21.527	21.527	21.519	21.519	21.520	21.528	21.527	21.528	18.528-24.528	21.524	0.004
67 Butylbenzylphthalate	22.410	22.410	22.410	22.410	22.410	22.410	22.410	22.410	19.410-25.410	22.410	0.000
68 Benzo(a)anthracene	23.409	23.401	23.401	23.393	23.394	23.401	23.401	23.401	20.401-26.401	23.400	0.005
* 69 Chrysene-d12	23.424	23.416	23.416	23.416	23.417	23.417	23.416	23.417	20.417-26.417	23.418	0.003
70 3,3'-Dichlorobenzidine	23.355	23.347	23.347	23.339	23.347	23.347	23.362	23.347	20.347-26.347	23.349	0.007
71 Chrysene	23.478	23.463	23.463	23.463	23.463	23.463	23.463	23.463	20.463-26.463	23.465	0.006
72 bis(2-Ethylhexyl)phtha	23.409	23.401	23.401	23.401	23.401	23.409	23.409	23.409	20.409-26.409	23.404	0.004
73 Di-n-octylphthalate	24.500	24.493	24.492	24.493	24.493	24.493	24.492	24.493	21.493-27.493	24.494	0.003
74 Benzo(b)fluoranthene	25.321	25.305	25.298	25.298	25.290	25.298	25.298	25.298	22.298-28.298	25.301	0.010
75 Benzo(k)fluoranthene	25.375	25.360	25.352	25.352	25.352	25.352	25.360	25.352	22.352-28.352	25.357	0.009
187 Total Benzofluoranthen	25.375	25.360	25.298	25.352	25.352	25.352	25.298	25.352	22.352-28.352	25.341	0.031
76 Benzo(a)pyrene	26.002	25.987	25.987	25.979	25.979	25.987	25.987	25.987	22.987-28.987	25.987	0.008



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Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 77 Perylene-d12	26.111	26.111	26.103	26.103	26.103	26.103	26.103	26.103	23.103-29.103	26.105	0.004
78 Indeno(1,2,3-cd)pyrene	28.902	28.878	28.870	28.863	28.863	28.863	28.870	28.863	25.863-31.863	28.873	0.014
79 Dibenzo(a,h)anthracene	28.948	28.933	28.909	28.909	28.910	28.925	28.925	28.925	25.925-31.925	28.923	0.015
80 Benzo(g,h,i)perylene	29.756	29.725	29.694	29.702	29.694	29.710	29.717	29.710	26.710-32.710	29.714	0.022
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
\$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
\$ 88 Dibenzo(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
\$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
90 N-Nitrosodimethylamine	4.743	4.727	4.719	4.720	4.720	4.720	4.743	4.720	1.720-7.720	4.727	0.011
91 Aniline	8.644	8.628	8.628	8.620	8.621	8.628	8.628	8.628	5.628-11.628	8.628	0.008
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	21.078	21.063	21.063	21.071	21.071	21.094	21.094	21.094	18.094-24.094	21.076	0.013
\$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.787	15.787-21.787	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.361	21.361-27.361	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
103 Pyridine	4.781	4.781	4.781	4.781	4.782	4.789	4.797	4.789	1.789-7.789	4.785	0.006
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06  
 End Cal Date : 01-MAR-2023 19:53  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

Calibration File Names:

Level 1: \\target\share\chem3\nt10.i\20230301.b\NT1003012308.D  
 Level 2: \\target\share\chem3\nt10.i\20230301.b\NT1003012307.D  
 Level 3: \\target\share\chem3\nt10.i\20230301.b\NT1003012306.D  
 Level 4: \\target\share\chem3\nt10.i\20230301.b\NT1003012305.D  
 Level 5: \\target\share\chem3\nt10.i\20230301.b\NT1003012304.D  
 Level 6: \\target\share\chem3\nt10.i\20230301.b\NT1003012303.D  
 Level 7: \\target\share\chem3\nt10.i\20230301.b\NT1003012302.D

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

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 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

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

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 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

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

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 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

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

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 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

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

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

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
143 1,4-Dioxane	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000<-
121 Quinoline	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
120 2,3,4,6-Tetrachlorophenol	0.19782	0.26940	0.29342	0.33469	0.39319	0.43368					
	0.54201						AVRG		0.35203		32.55426<-
178 2-Benzyl-4-Chlorophenol	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000<-
119 7,12-Dimethylbenz(a)anthracen	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000<-
117 Butyl Diphenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000<-



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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
116 Dibutyl Phenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
115 Tributyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
114 Beta-Pinene	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
113 Diphenyl Oxide	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
112 Biphenyl	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
111 Azobenzene (1,2-DP-Hydrazine)	1.59527	1.87182	1.97939	2.08840	2.14898	2.23341					
	2.38768						AVRG		2.04356		12.66882
110 Tetrachloroguaiacol	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-

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

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000 <-
105 1-methylnaphthalene	0.58754	0.63831	0.62803	0.64955	0.67467	0.68540					
	0.73163						AVRG		0.65645		7.02352
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000 <-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

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

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
163 1,2,3,5,8-Pentachloronaphthal	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
164 1,2,3,4,6,7-Hexachloronaphtha	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
165 1,2,3,4,5,6,7-Heptachloronaph	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
166 Octachloronaphthalene	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
167 2,2',4,4',5-Pentabromobipheny	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
3 Phenol	1.23779	1.42338	1.52938	1.62938	1.65123	1.69296					
	1.71011						AVRG		1.55346		11.03978
4 Bis(2-Chloroethyl)ether	1.19038	1.20236	1.19697	1.17764	1.16651	1.18260					
	1.19314						AVRG		1.18709		1.03828

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
6 2-Chlorophenol	1.07376 1.45036	1.27685	1.22301	1.30018	1.34903	1.39207					
							AVRG		1.29504		9.50773
7 1,3-Dichlorobenzene	1.47096 1.45830	1.46380	1.37631	1.41328	1.40468	1.40745					
							AVRG		1.42783		2.54133
9 1,4-Dichlorobenzene	1.40276 1.59966	1.45467	1.39044	1.32785	1.35838	1.39408					
							AVRG		1.41826		6.27938
11 Benzyl alcohol	5646 1574767	22563	52608	148609	345472	729566					
							QUAD	0.000e+000	1.25640	-0.03230	0.99987
12 1,2-Dichlorobenzene	1.37540 1.42123	1.44936	1.33647	1.34390	1.31661	1.36635					
							AVRG		1.37276		3.46403
13 2-Methylphenol	9715 2348109	35097	80800	238010	519498	1090929					
							QUAD	0.000e+000	0.83157	-0.01283	0.99996<-
14 2,2'-oxybis(1-Chloropropane)	0.37296 0.40112	0.41286	0.40687	0.38535	0.39369	0.39754					
							AVRG		0.39577		3.39044

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
15 4-Methylphenol	11667 2512692	34216	82667	261454	602036	1307742	QUAD	0.000e+000	0.66231	0.00446	0.99922
16 N-Nitroso-di-n-propylamine	0.81783 1.01979	0.86394	0.92142	0.97132	0.96853	0.99902	AVRG		0.93741		7.86962
17 Hexachloroethane	0.59516 0.65840	0.55897	0.51817	0.55673	0.57808	0.60948	AVRG		0.58214		7.68993
19 Nitrobenzene	0.35930 0.43654	0.41258	0.41946	0.41751	0.41074	0.42706	AVRG		0.41189		6.02434
20 Isophorone	0.51244 0.56007	0.47618	0.50369	0.53037	0.53875	0.55890	AVRG		0.52577		5.80463
21 2-Nitrophenol	++++ 1347765	17402	37363	116300	321421	730550	QUAD	0.000e+000	4.37246	0.54104	0.99681
22 2,4-Dimethylphenol	27927 5924139	89913	192320	558107	1242938	2713675	QUAD	0.000e+000	2.54020	-0.06459	0.99984

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
23 Bis(2-Chloroethoxy)methane	0.26761	0.30916	0.32939	0.33642	0.32793	0.34864					
	0.35527						AVRG		0.32492		9.04183
24 Benzoic acid	14999	49931	137115	511628	1434582	3480339					
	8022405						QUAD	0.000e+000	4.28758	-0.16104	0.99828
25 2,4-Dichlorophenol	17852	51563	118390	427920	897693	2211975					
	4685931						QUAD	0.000e+000	3.22328	-0.10899	0.99847
26 1,2,4-Trichlorobenzene	0.28967	0.32134	0.29985	0.30284	0.29987	0.31517					
	0.33509						AVRG		0.30912		5.02827
28 Naphthalene	1.00708	1.02939	0.98026	1.00202	1.01875	1.05072					
	1.09834						AVRG		1.02665		3.75792
29 4-Chloroaniline	30944	87089	192473	564439	1458858	3165433					
	7093981						QUAD	0.000e+000	2.22739	-0.06517	0.99952
30 Hexachlorobutadiene	0.19027	0.23537	0.21271	0.22587	0.22867	0.23324					
	0.24943						AVRG		0.22508		8.39685



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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
31 4-Chloro-3-methylphenol	++++ 5409598	73535	134686	441665	1052503	2338102	QUAD	0.000e+000	3.06470	-0.14745	0.99968
32 2-Methylnaphthalene	0.63089 0.82563	0.70858	0.69118	0.71195	0.73953	0.76921	AVRG		0.72528		8.48661
33 Hexachlorocyclopentadiene	++++ 1744691	4424	11351	56172	197002	579363	QUAD	0.000e+000	7.59108	-1.43409	0.99520
34 2,4,6-Trichlorophenol	++++ 3594107	37873	83812	274751	671855	1500216	QUAD	0.000e+000	2.64695	-0.12883	0.99965
35 2,4,5-Trichlorophenol	++++ 3921031	46262	92328	285057	727258	1606616	QUAD	0.000e+000	2.47983	-0.11804	0.99960
37 2-Chloronaphthalene	0.98474 1.26302	1.07202	1.05481	1.11600	1.13902	1.21051	AVRG		1.12002		8.46019
38 2-Nitroaniline	++++ 2618407	27339	68264	243546	539613	1163846	QUAD	0.000e+000	3.26785	-0.14160	0.99979

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
39 Dimethylphthalate	1.11316  1.40411	1.29546	1.25265	1.29991	1.33791	1.33936					
							AVRG		1.29179		7.10389
40 Acenaphthylene	1.85260  2.11989	1.71889	1.78364	1.83149	1.93340	2.27642					
							AVRG		1.93093		10.30781
41 2,6-Dinitrotoluene	++++  2401785	31365	70653	210738	510956	1069741					
							QUAD	0.000e+000	3.53000	-0.15836	0.99982
43 3-Nitroaniline	++++  0.38037	0.28399	0.30145	0.30318	0.33064	0.35496					
							AVRG		0.32577		11.23975
44 Acenaphthene	1.08511  1.33072	1.12430	1.08936	1.11627	1.18374	1.22217					
							AVRG		1.16452		7.61746
45 2,4-Dinitrophenol	++++  2386659	110	2997	32087	171374	663655					
							QUAD	0.000e+000	13.42637	-2.23607	0.98860 <-
46 Dibenzofuran	1.52937  2.00987	1.58754	1.60673	1.66349	1.81423	1.88705					
							AVRG		1.72833		10.30238

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06  
 End Cal Date : 01-MAR-2023 19:53  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
47 4-Nitrophenol	++++ 2169193	13803	48368	158049	385053	911134	QUAD	0.000e+000	4.43996	-0.37279	0.99922
48 2,4-Dinitrotoluene	12046 3615784	37337	97931	290719	744528	1579283	QUAD	0.000e+000	2.43502	-0.08802	0.99966
49 Fluorene	1.18286 1.80143	1.29060	1.32340	1.38254	1.48835	1.59671	AVRG		1.43798		14.55509
50 Diethylphthalate	1.18788 1.51544	1.31740	1.34705	1.35585	1.41846	1.43733	AVRG		1.36849		7.58696
51 4-Chlorophenyl-phenylether	13684 3078161	43341	88403	243957	574226	1229519	QUAD	0.000e+000	1.59995	-0.10030	0.99995
52 4-Nitroaniline	++++ 0.41822	0.30995	0.29007	0.31994	0.37673	0.38611	AVRG		0.35017		14.43356
53 4,6-Dinitro-2-methylphenol	++++ 4263513	4630	22278	162732	525677	1578759	QUAD	0.000e+000	10.73625	-1.38395	0.99450

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 Last Edit : 07-Mar-2023 12:01 yev

Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
54 N-Nitrosodiphenylamine	0.47524	0.51102	0.58054	0.61046	0.61182	0.64662					
	0.70708						AVRG		0.59183		13.31934
56 4-Bromophenyl-phenylether	0.17833	0.23348	0.22904	0.23636	0.24509	0.26199					
	0.29435						AVRG		0.23981		14.68741
57 Hexachlorobenzene	0.26464	0.27874	0.25216	0.25440	0.26739	0.26896					
	0.30400						AVRG		0.27004		6.46858
58 Pentachlorophenol	+++++	14168	40379	158344	426084	999885					
	2702116						QUAD	0.000e+000	8.04768	-1.49919	0.99905
60 Phenanthrene	0.91924	0.97495	0.97416	0.99109	1.01696	1.09403					
	1.19528						AVRG		1.02367		9.02739
61 Anthracene	0.82328	0.91269	0.91313	0.96918	1.01602	1.10073					
	1.21333						AVRG		0.99262		13.19181
62 Carbazole	0.76281	0.83782	0.87916	0.91440	0.92445	0.98099					
	1.06588						AVRG		0.90936		10.75491

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 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
63 Di-n-butylphthalate	47781	146445	327914	904042	2167805	4529098					
	10281629						QUAD	0.000e+000	0.81130	-0.01841	0.99990
64 Fluoranthene	1.08313	1.24451	1.32934	1.46417	1.56619	1.53886					
	1.40603						AVRG		1.37603		12.46825
65 Pyrene	1.20793	1.31434	1.36291	1.45954	1.55400	1.49687					
	1.41250						AVRG		1.40116		8.36356
67 Butylbenzylphthalate	20677	70195	146878	402228	953916	1986336					
	4848656						QUAD	0.000e+000	1.32463	0.02857	0.99990
68 Benzo(a)anthracene	1.22268	1.26331	1.30359	1.35076	1.41700	1.59322					
	1.72230						AVRG		1.41041		13.02832
70 3,3'-Dichlorobenzidine	++++	142024	304058	863376	2250601	5606129					
	14116451						QUAD	0.000e+000	1.59250	-0.01279	0.99833
71 Chrysene	1.16036	1.12103	1.10734	1.07249	1.11809	1.16685					
	1.27759						AVRG		1.14625		5.77126

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
72 bis(2-Ethylhexyl)phthalate	33184 9036052	105513	222177	594611	1394222	3308866	QUAD	0.000e+000	1.78483	-0.07787	0.99964
73 Di-n-octylphthalate	0.92003 0.87835	0.91942	0.88591	0.86610	0.85136	0.88787	AVRG		0.88701		2.88383
74 Benzo(b)fluoranthene	50227 10113499	156722	281873	726977	1825423	3823921	QUAD	0.000e+000	0.73435	-0.02233	0.99971
75 Benzo(k)fluoranthene	51821 9917423	155908	306114	757491	1645283	3744000	QUAD	0.000e+000	0.76283	-0.02473	0.99939
187 Total Benzofluoranthenes	105381 19678177	310053	580106	1464206	3405989	7406193	QUAD	0.000e+000	0.76451	-0.01232	0.99970
76 Benzo(a)pyrene	45223 9007280	144884	275940	673848	1576490	3440154	QUAD	0.000e+000	0.82157	-0.02783	0.99964
78 Indeno(1,2,3-cd)pyrene	50510 10415201	151642	302077	802655	1869637	3993020	QUAD	0.000e+000	0.70249	-0.01999	0.99979

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Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	Coefficients			%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		b	m1	m2	
	20.0000										
	Level 7										
79 Dibenzo(a,h)anthracene	40681 8610401	126593	239256	623221	1416633	3076842	QUAD	0.000e+000	0.92660	-0.03862	0.99980
80 Benzo(g,h,i)perylene	44573 7585215	127815	248971	660797	1505801	3075954	QUAD	0.000e+000	0.88137	-0.02609	0.99993
90 N-Nitrosodimethylamine	0.87266 0.78859	0.90410	0.71609	0.80174	0.77322	0.83070	AVRG		0.81244		7.76269
91 Aniline	1.62276 1.91085	1.75468	1.78807	1.82664	1.81777	1.88766	AVRG		1.80121		5.29596
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	AVRG	0.000e+000			0.000e+000
93 Benzidine	+++++ 0.60694	0.48550	0.57960	0.68694	0.70001	0.60616	AVRG		0.61086		12.77852
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG	0.000e+000			0.000e+000

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 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
97 Caffeine	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
98 Retene	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
99 Perylene	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
100 3-beta-Coprostanol	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
101 Cholesterol	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000 <-
102 beta-Sitosterol	++++	++++	++++	++++	++++	++++					
	++++						AVRG		0.000e+000		0.000e+000
103 Pyridine	1.47269	1.45222	1.43777	1.41290	1.41588	1.47038					
	1.42409						AVRG		1.44085		1.72589



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 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
188 2,6-Dichlorophenol	++++	++++	++++	++++	++++	++++					
	++++						AVRG	0.000e+000			0.000e+000 <-
189 N-Nitrosomethylethylamine	++++	++++	++++	++++	++++	++++					
	++++						AVRG	0.000e+000			0.000e+000 <-
\$ 1 2-Fluorophenol	1.15591	1.26106	1.26629	1.25918	1.26200	1.29835					
	1.30678						AVRG	1.25851			3.90928
\$ 137 d8-1,4-Dioxane	++++	++++	++++	++++	++++	++++					
	++++						AVRG	0.000e+000			0.000e+000 <-
\$ 2 Phenol-d5	1.20625	1.24234	1.38784	1.49838	1.55432	1.66483					
	1.67388						AVRG	1.46112			12.95640
\$ 5 2-Chlorophenol-d4	0.95594	1.12722	1.20573	1.27179	1.31943	1.38081					
	1.46519						AVRG	1.24659			13.58753
\$ 10 1,2-Dichlorobenzene-d4	0.91075	0.99628	0.90813	0.88389	0.91006	0.93389					
	0.97649						AVRG	0.93135			4.36799

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 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Last Edit : 07-Mar-2023 12:01 yev

Compound	0.2000000	0.5000000	1.0000	2.5000	5.0000	10.0000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	20.0000										
	Level 7										
\$ 18 Nitrobenzene-d5	0.36008	0.42354	0.43676	0.45962	0.45359	0.46490					
	0.47513						AVRG		0.43909		8.86231
\$ 36 2-Fluorobiphenyl	1.24359	1.36114	1.36142	1.40548	1.47517	1.51293					
	1.62737						AVRG		1.42673		8.70703
\$ 55 2,4,6-Tribromophenol	5717	18967	43327	133559	335459	735108					
	1842414						QUAD	0.000e+000	4.07583	-0.44670	0.99973
\$ 66 Terphenyl-d14	1.00091	1.04760	1.07587	1.16204	1.23828	1.22506					
	1.18638						AVRG		1.13373		8.15209
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
\$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

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

ARI Labs, Inc.

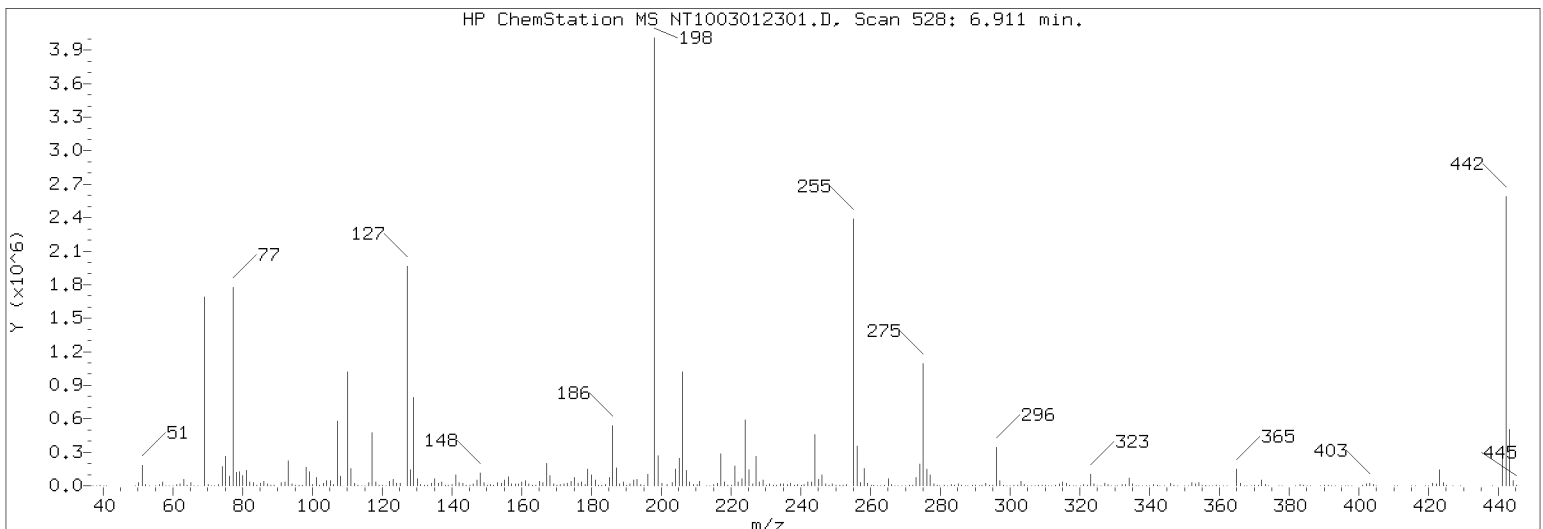
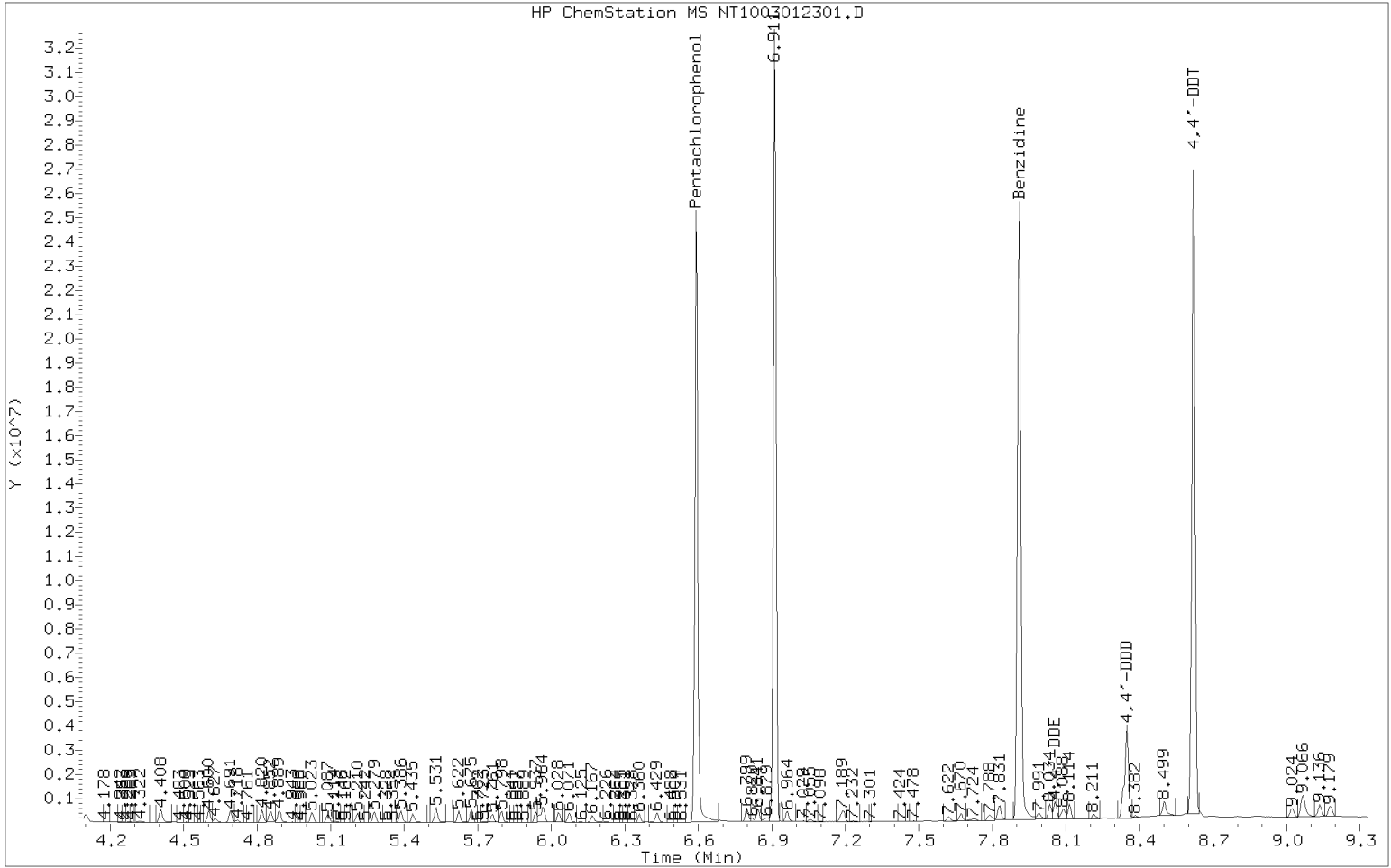
INITIAL CALIBRATION DATA

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Quant Method : ISTD  
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Last Edit : 07-Mar-2023 12:01 yev

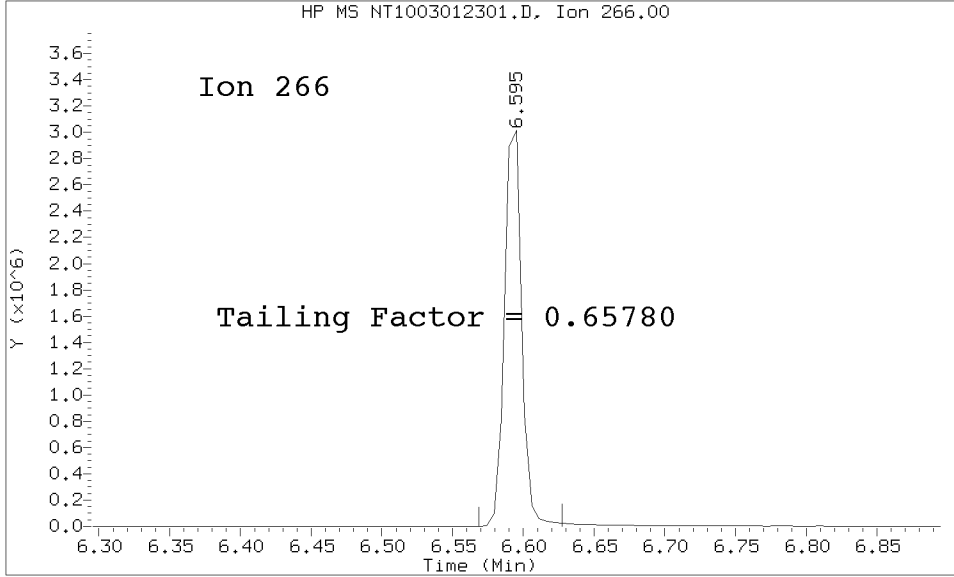
Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230301.b/NT1003012301.D/NT1003012301.D  
 Method Used: \20230301.b\DFTPP8270E.m Inst: nt10  
 Injection Date: 01-MAR-2023 15:49 Operator: JGR  
 Sample Info: SLC0084-TUN1 SEQ-TUN1  
 Report Date: 03/07/2023 12:33



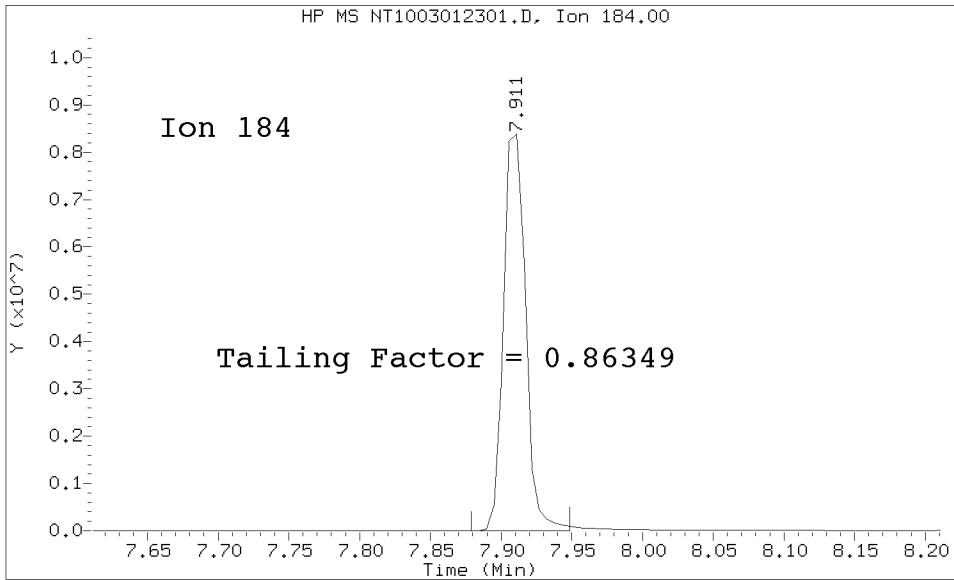
Datafile Analyzed: /20230301.b/NT1003012301.D/NT1003012301.D  
Method Used: \20230301.b\DFTPP8270E.m\sw846ddt.m Inst: nt10  
Injection Date: 01-MAR-2023 15:49 Operator: JGR  
Sample Info: SEQ-TUN1  
Report Date: 03/07/2023 12:33



Pentachlorophenol

=====  
Exp. RT = 6.590  
Found RT = 6.595

Tail Factor = 0.658 Maximum Allowed = 2.0



Benzidine

=====  
Exp. RT = 7.911  
Found RT = 7.911

Tail Factor = 0.863 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.6578035	2.000	PASS
Benzidine	0.8634886	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	4780124			N/A
4,4-DDE	47256	1.0	20.0	PASS
4,4-DDD	542360	10.2	20.0	PASS
4,4-DDD + DDE	589616	11.0	20.0	PASS

Tuning Sample, nt10.i/20230301.b/NT1003012301.D, \*\*\* PASSED \*\*\*

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.33 ( 0.79)
69	Mass 69 relative abundance	41.10
70	Less than 2.00% of mass 69	0.15 ( 0.37)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
365	1.00 - 100.00% of mass 198	4.33
441	Less than 150.00% of mass 443	11.23 ( 73.44)
442	Less than 200.00% of mass 198	80.08
443	15.00 - 24.00% of mass 442	15.30 ( 19.10)



Data File: NT1003012301.D  
Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522  
Location of Maximum: 198.00  
Number of points: 369

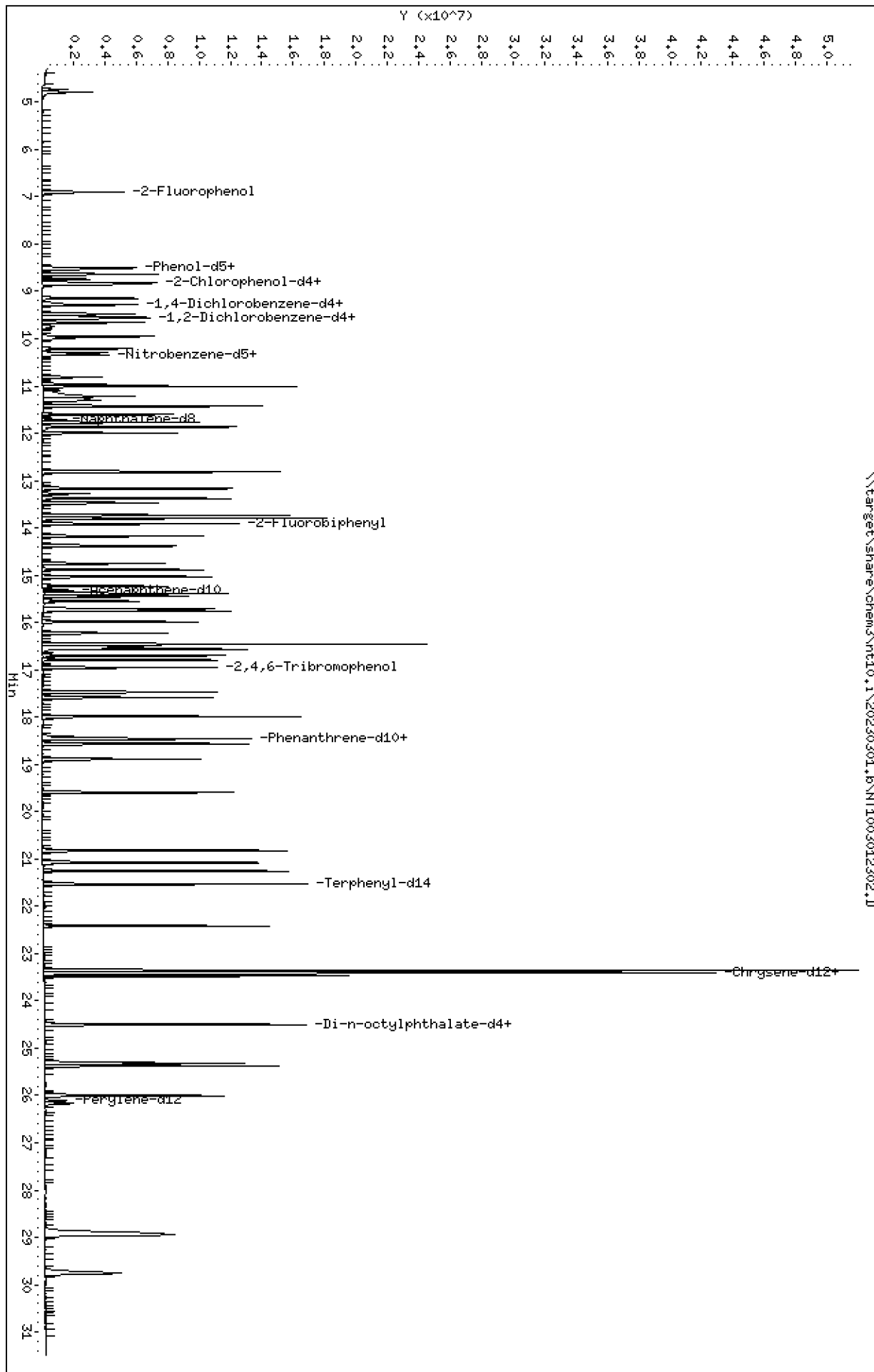
m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	462	140.00	7430	237.00	14976	332.00	6725
38.00	1113	141.00	70248	238.00	2080	333.00	7901
39.00	4743	142.00	22264	239.00	7687	334.00	53800
40.00	108	143.00	15456	240.00	6126	335.00	13827
45.00	84	144.00	4558	241.00	9927	336.00	1422
49.00	890	145.00	3575	242.00	22800	337.00	158
50.00	20560	146.00	12885	243.00	23656	338.00	111
51.00	115400	147.00	37000	244.00	334528	339.00	1435
52.00	5980	148.00	83184	245.00	44200	340.00	1368
53.00	270	151.00	6891	246.00	75208	341.00	9189
55.00	1004	152.00	4801	247.00	14506	342.00	2530
56.00	6893	153.00	21920	248.00	2995	343.00	476
57.00	20032	154.00	16872	249.00	12012	344.00	229
58.00	1173	155.00	39720	250.00	2462	346.00	19040
59.00	381	156.00	58960	251.00	2978	347.00	3868
60.00	603	157.00	10415	252.00	3463	348.00	369
61.00	8555	158.00	12758	253.00	7543	350.00	680
62.00	12181	159.00	10289	254.00	2201	351.00	1509
63.00	36888	160.00	23104	255.00	1779712	352.00	24280
64.00	5850	161.00	32336	256.00	261248	353.00	16313
65.00	19656	162.00	10036	257.00	19960	354.00	23616
66.00	1277	163.00	2211	258.00	115664	355.00	4277
67.00	218	164.00	3370	259.00	18720	356.00	395
68.00	9335	165.00	26672	260.00	3097	357.00	288
69.00	1177088	166.00	21880	261.00	2983	358.00	496
70.00	4303	167.00	140736	262.00	311	359.00	2088
72.00	118	168.00	67144	263.00	1088	360.00	426
73.00	8187	169.00	12299	264.00	2758	361.00	287
74.00	117944	170.00	4307	265.00	46872	362.00	66
75.00	186240	171.00	6152	266.00	6551	363.00	78
76.00	58584	172.00	12323	267.00	641	364.00	312
77.00	1243648	173.00	16696	268.00	1031	365.00	124024
78.00	82568	174.00	30816	269.00	334	366.00	17240
79.00	86720	175.00	56392	270.00	1777	367.00	1640
80.00	67968	176.00	14808	271.00	3758	368.00	51
81.00	95752	177.00	24968	272.00	4667	369.00	81
82.00	22136	178.00	8414	273.00	54184	370.00	2231
83.00	20016	179.00	108176	274.00	145920	371.00	6578
84.00	1703	180.00	69200	275.00	822080	372.00	39896
85.00	15260	181.00	35088	276.00	108424	373.00	10420
86.00	27208	182.00	5707	277.00	76856	374.00	902
87.00	12947	183.00	2410	278.00	12879	377.00	1108
88.00	4317	184.00	9057	281.00	1271	378.00	190
89.00	1969	185.00	53272	282.00	1654	379.00	112
90.00	227	186.00	390848	283.00	8058	382.00	88
91.00	20144	187.00	115736	284.00	6096	383.00	11296
92.00	22872	188.00	12489	285.00	13310	384.00	3498
93.00	159616	189.00	26224	286.00	2664	385.00	1140
94.00	9906	190.00	3820	287.00	301	386.00	187

95.00	2189	191.00	11505	288.00	1049	388.00	81
96.00	5767	192.00	34688	289.00	3146	389.00	105
97.00	2485	193.00	41016	290.00	2684	390.00	4929
98.00	117552	194.00	9131	291.00	1791	391.00	3340
99.00	90792	195.00	3653	292.00	3510	392.00	2390
100.00	7885	196.00	74504	293.00	16520	393.00	475
101.00	52896	198.00	2863616	294.00	4295	395.00	216
102.00	3052	199.00	190976	295.00	4987	396.00	208
103.00	16416	200.00	14335	296.00	267904	397.00	274
104.00	30568	201.00	9948	297.00	37320	398.00	254
105.00	30136	203.00	20560	298.00	2786	401.00	2284
106.00	9766	204.00	107568	299.00	508	402.00	15386
107.00	410176	205.00	182464	300.00	217	403.00	21456
108.00	62280	206.00	743232	301.00	3180	404.00	8460
109.00	6029	207.00	96144	302.00	4702	405.00	1217
110.00	711808	208.00	26352	303.00	29528	408.00	105
111.00	108280	209.00	9347	304.00	7967	410.00	539
112.00	13160	210.00	10562	305.00	1122	411.00	56
113.00	4333	211.00	27120	306.00	358	415.00	1010
114.00	392	212.00	2578	307.00	530	416.00	312
115.00	1356	213.00	2139	308.00	3845	419.00	166
116.00	22112	214.00	764	309.00	2265	420.00	193
117.00	350208	215.00	8027	310.00	3023	421.00	17744
118.00	25424	216.00	16051	311.00	1030	422.00	15463
119.00	2716	217.00	211072	312.00	626	423.00	129392
120.00	4884	218.00	26304	313.00	2222	424.00	25976
121.00	587	219.00	2900	314.00	12766	425.00	2691
122.00	25416	220.00	3351	315.00	29288	426.00	96
123.00	40488	221.00	123968	316.00	15518	427.00	197
124.00	17936	222.00	24608	317.00	2892	429.00	55
125.00	15919	223.00	46856	318.00	260	437.00	78
127.00	1391616	224.00	432000	319.00	629	438.00	106
128.00	102568	225.00	107056	320.00	924	439.00	148
129.00	561152	226.00	10788	321.00	8267	440.00	550
130.00	46696	227.00	195904	322.00	3948	441.00	321664
131.00	8637	228.00	27456	323.00	81096	442.00	2293248
132.00	4190	229.00	39984	324.00	14693	443.00	438016
133.00	1654	230.00	5777	325.00	1371	444.00	39248
134.00	15899	231.00	15009	326.00	1762	445.00	2356
135.00	44024	232.00	3043	327.00	15694	446.00	82
136.00	18272	233.00	3542	328.00	7475	489.00	54
137.00	22936	234.00	12458	329.00	1733		
138.00	5085	235.00	13429	330.00	352		
139.00	2552	236.00	8601	331.00	463		

Data File: \\target\share\chem3\nt10.1\20230301.1\NT1003012302.D  
Date: 01-HR-2023 16:04  
Client ID:  
Sample Info: SEQ-CAL7  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: VTS  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.1\NT1003012302.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012302.D  
 Lab Smp Id: SLC0084-CAL7  
 Inj Date : 01-MAR-2023 16:04  
 Operator : VTS  
 Smp Info : SEQ-CAL7  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 7  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
1 2-Fluorophenol	112		6.905	6.898	(0.747)	3433608	30.0000	31.15
2 Phenol-d5	99		8.504	8.489	(0.920)	4398179	30.0000	34.37
3 Phenol	94		8.527	8.512	(0.922)	2995587	20.0000	22.02
5 2-Chlorophenol-d4	132		8.821	8.813	(0.954)	3849853	30.0000	35.26
4 Bis(2-Chloroethyl)ether	93		8.743	8.728	(0.946)	2090017	20.0000	20.10
6 2-Chlorophenol	128		8.852	8.844	(0.957)	2540593	20.0000	22.40
7 1,3-Dichlorobenzene	146		9.146	9.138	(0.989)	2554489	20.0000	20.43
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	350339	4.00000	
9 1,4-Dichlorobenzene	146		9.285	9.278	(1.004)	2802114	20.0000	22.56
\$ 10 1,2-Dichlorobenzene-d4	152		9.541	9.534	(1.032)	1710510	20.0000	20.97 (H)
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	2489553	20.0000	20.71
11 Benzyl alcohol	108		9.479	9.472	(1.025)	1574767	20.0000	19.98
14 2,2'-oxybis(1-Chloropropane)	121		9.743	9.728	(1.054)	702642	20.0000	20.27 (M)
13 2-Methylphenol	108		9.658	9.650	(1.044)	2348109	20.0000	19.99
17 Hexachloroethane	117		10.217	10.209	(1.105)	1153314	20.0000	22.62
16 N-Nitroso-di-n-propylamine	70		9.992	9.976	(1.081)	1786366	20.0000	21.76
15 4-Methylphenol	108		9.953	9.938	(1.076)	2512692	20.0000	19.92
\$ 18 Nitrobenzene-d5	82		10.302	10.295	(0.879)	3176979	20.0000	21.64
19 Nitrobenzene	77		10.341	10.326	(0.882)	2918990	20.0000	21.20
20 Isophorone	82		10.814	10.784	(0.922)	3744957	20.0000	21.30
21 2-Nitrophenol	139		10.958	10.951	(0.935)	1347765	20.0000	19.82
22 2,4-Dimethylphenol	107		11.009	10.993	(0.939)	5924139	40.0000	39.94
23 Bis(2-Chloroethoxy)methane	93		11.221	11.205	(0.957)	2375580	20.0000	21.87
24 Benzoic acid	105		11.315	11.052	(0.965)	8022405	80.0000	79.70
25 2,4-Dichlorophenol	162		11.425	11.417	(0.974)	4685931	40.0000	39.82
26 1,2,4-Trichlorobenzene	180		11.603	11.595	(0.989)	2240595	20.0000	21.68
* 27 Naphthalene-d8	136		11.726	11.719	(1.000)	1337321	4.00000	
28 Naphthalene	128		11.772	11.765	(1.004)	7344186	20.0000	21.40
29 4-Chloroaniline	127		11.865	11.858	(1.012)	7093981	40.0000	39.93
30 Hexachlorobutadiene	225		11.996	11.997	(1.023)	1667816	20.0000	22.16
31 4-Chloro-3-methylphenol	107		12.817	12.809	(1.093)	5409598	40.0000	39.94
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	5520665	20.0000	22.77
33 Hexachlorocyclopentadiene	237		13.474	13.475	(0.880)	1744691	40.0000	39.88

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.730	13.730	(0.896)	3594107	40.0000	39.94
35 2,4,5-Trichlorophenol	196	13.800	13.808	(0.901)	3921031	40.0000	39.95
\$ 36 2-Fluorobiphenyl	172	13.916	13.908	(0.909)	5874186	20.0000	22.81
37 2-Chloronaphthalene	162	14.171	14.164	(0.925)	4559040	20.0000	22.55
38 2-Nitroaniline	65	14.380	14.365	(0.939)	2618407	40.0000	39.96
39 Dimethylphthalate	163	14.751	14.736	(0.963)	5068322	20.0000	21.74
40 Acenaphthylene	152	15.030	15.023	(0.981)	7652012	20.0000	21.96
41 2,6-Dinitrotoluene	165	14.883	14.868	(0.972)	2401785	40.0000	39.96
* 42 Acenaphthene-d10	164	15.316	15.309	(1.000)	721926	4.00000	
43 3-Nitroaniline	138	15.239	15.224	(0.995)	2745956	40.0000	46.70
44 Acenaphthene	153	15.386	15.378	(1.005)	4803401	20.0000	22.85
45 2,4-Dinitrophenol	184	15.448	15.487	(1.009)	2386659	80.0000	79.79 (M)
46 Dibenzofuran	168	15.749	15.734	(1.028)	7254880	20.0000	23.26
47 4-Nitrophenol	109	15.548	15.603	(1.015)	2169193	40.0000	39.90
48 2,4-Dinitrotoluene	165	15.718	15.703	(1.026)	3615784	40.0000	39.95
50 Diethylphthalate	149	16.221	16.198	(1.059)	5470185	20.0000	22.15
49 Fluorene	166	16.461	16.453	(1.075)	6502507	20.0000	25.05
51 4-Chlorophenyl-phenylether	204	16.461	16.453	(1.075)	3078161	20.0000	19.99
52 4-Nitroaniline	138	16.523	16.484	(1.079)	3019251	40.0000	47.77
53 4,6-Dinitro-2-methylphenol	198	16.561	16.538	(0.900)	4263513	80.0000	79.65
54 N-Nitrosodiphenylamine	169	16.700	16.693	(0.907)	4912651	20.0000	23.89
\$ 55 2,4,6-Tribromophenol	330	16.955	16.947	(1.107)	1842414	30.0000	29.97
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.949)	2045109	20.0000	24.55
57 Hexachlorobenzene	284	17.581	17.573	(0.955)	2112172	20.0000	22.52
58 Pentachlorophenol	266	17.991	17.983	(0.977)	2702116	40.0000	39.92
* 59 Phenanthrene-d10	188	18.409	18.401	(1.000)	1389567	4.00000	
60 Phenanthrene	178	18.455	18.448	(1.003)	8304629	20.0000	23.35
61 Anthracene	178	18.563	18.556	(1.008)	8429997	20.0000	24.45
62 Carbazole	167	18.896	18.889	(1.026)	7405556	20.0000	23.44
63 Di-n-butylphthalate	149	19.592	19.585	(1.064)	10281629	20.0000	19.98
64 Fluoranthene	202	20.823	20.815	(0.889)	9720868	20.0000	20.44
65 Pyrene	202	21.256	21.248	(0.907)	9765581	20.0000	20.16
\$ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	8202245	20.0000	20.93
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	4848656	20.0000	19.98
68 Benzo(a)anthracene	228	23.408	23.401	(0.999)	11907454	20.0000	24.42
* 69 Chrysene-d12	240	23.424	23.416	(1.000)	1382735	4.00000	
70 3,3'-Dichlorobenzidine	252	23.354	23.347	(0.997)	14116451	60.0000	59.70
71 Chrysene	228	23.478	23.463	(1.002)	8832851	20.0000	22.29
72 bis(2-Ethylhexyl)phthalate	149	23.408	23.409	(0.956)	9036052	20.0000	19.96
* 134 Di-n-octylphthalate-d4	153	24.492	24.485	(1.000)	2772507	4.00000	
73 Di-n-octylphthalate	149	24.500	24.492	(1.000)	12176189	20.0000	19.80
74 Benzo(b)fluoranthene	252	25.320	25.298	(0.970)	10113499	20.0000	19.98
75 Benzo(k)fluoranthene	252	25.375	25.352	(0.972)	9917423	20.0000	19.97
76 Benzo(a)pyrene	252	26.002	25.987	(0.996)	9007280	20.0000	19.97
* 77 Perylene-d12	264	26.110	26.103	(1.000)	1052577	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.901	28.863	(1.107)	10415201	20.0000	19.98
79 Dibenzo(a,h)anthracene	278	28.948	28.925	(1.109)	8610401	20.0000	19.98
80 Benzo(g,h,i)perylene	276	29.756	29.709	(1.140)	7585215	20.0000	19.99
90 N-Nitrosodimethylamine	74	4.742	4.719	(0.513)	2762745	40.0000	38.83
91 Aniline	93	8.643	8.628	(0.935)	6694460	40.0000	42.43
93 Benzidine	184	21.078	21.094	(0.900)	8392394	40.0000	39.74
103 Pyridine	79	4.781	4.789	(0.517)	4989157	40.0000	39.53
105 1-methylnaphthalene	142	13.374	13.366	(1.141)	4892127	20.0000	22.29
111 Azobenzene (1,2-DP-Hydrazine)	77	16.793	16.778	(1.096)	8618633	20.0000	23.37

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252		25.375	25.352	(0.972)	19678177	40.0000	39.95
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.982	(1.043)	1956466	20.0000	19.98

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012302.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL7  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	350339	3.76
27 Naphthalene-d8	1265187	632594	2530374	1337321	5.70
42 Acenaphthene-d10	692385	346193	1384770	721926	4.27
59 Phenanthrene-d10	1376777	688389	2753554	1389567	0.93
69 Chrysene-d12	1019524	509762	2039048	1382735	35.63
134 Di-n-octylphthala	2027111	1013556	4054222	2772507	36.77
77 Perylene-d12	1027409	513705	2054818	1052577	2.45

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.03
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012302.D

Lab ID: SLC0084-CAL7  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 16:04

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.965	0.943	0.0218	Benzoic acid

-----  
RRT check based on Ccal File: NT1003012307.D

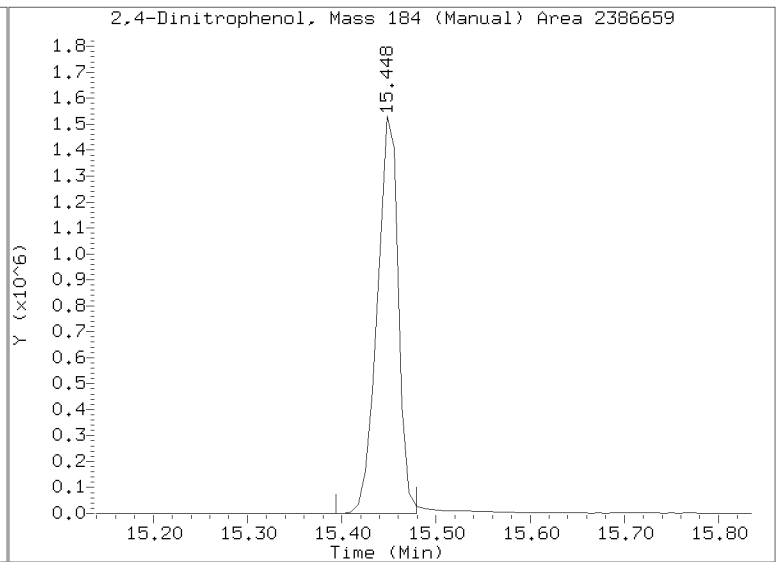
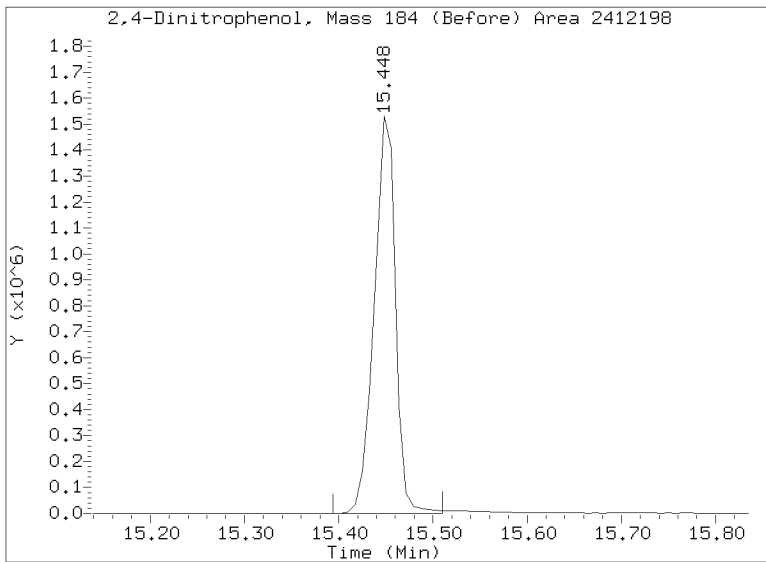
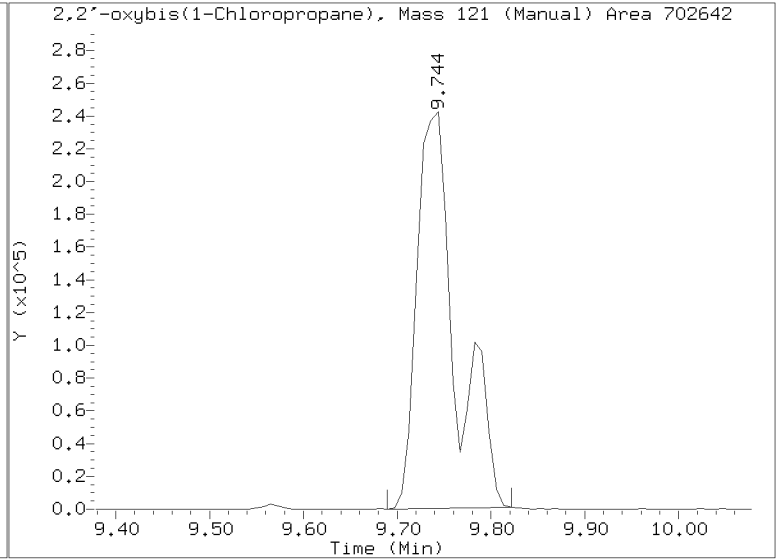
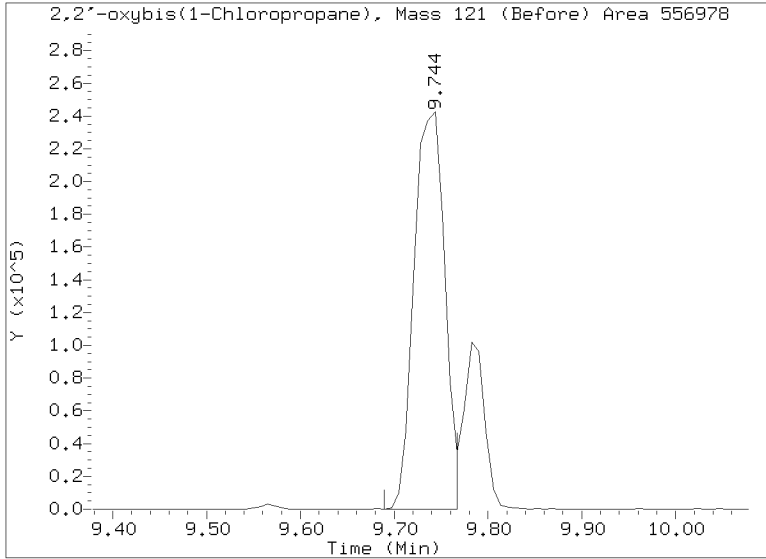
On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012302.D  
Injection Date: 01-MAR-2023 16:04  
Lab ID:SLC0084-CAL7 Client ID:  
Report Date: 03/07/2023 12:47



Data File: \\target\share\chem3\nt10.1\20230301.1\NT1003012303.D

Date: 01-MAR-2023 16:42

Client ID:

Sample Info: SEQ-CAL6

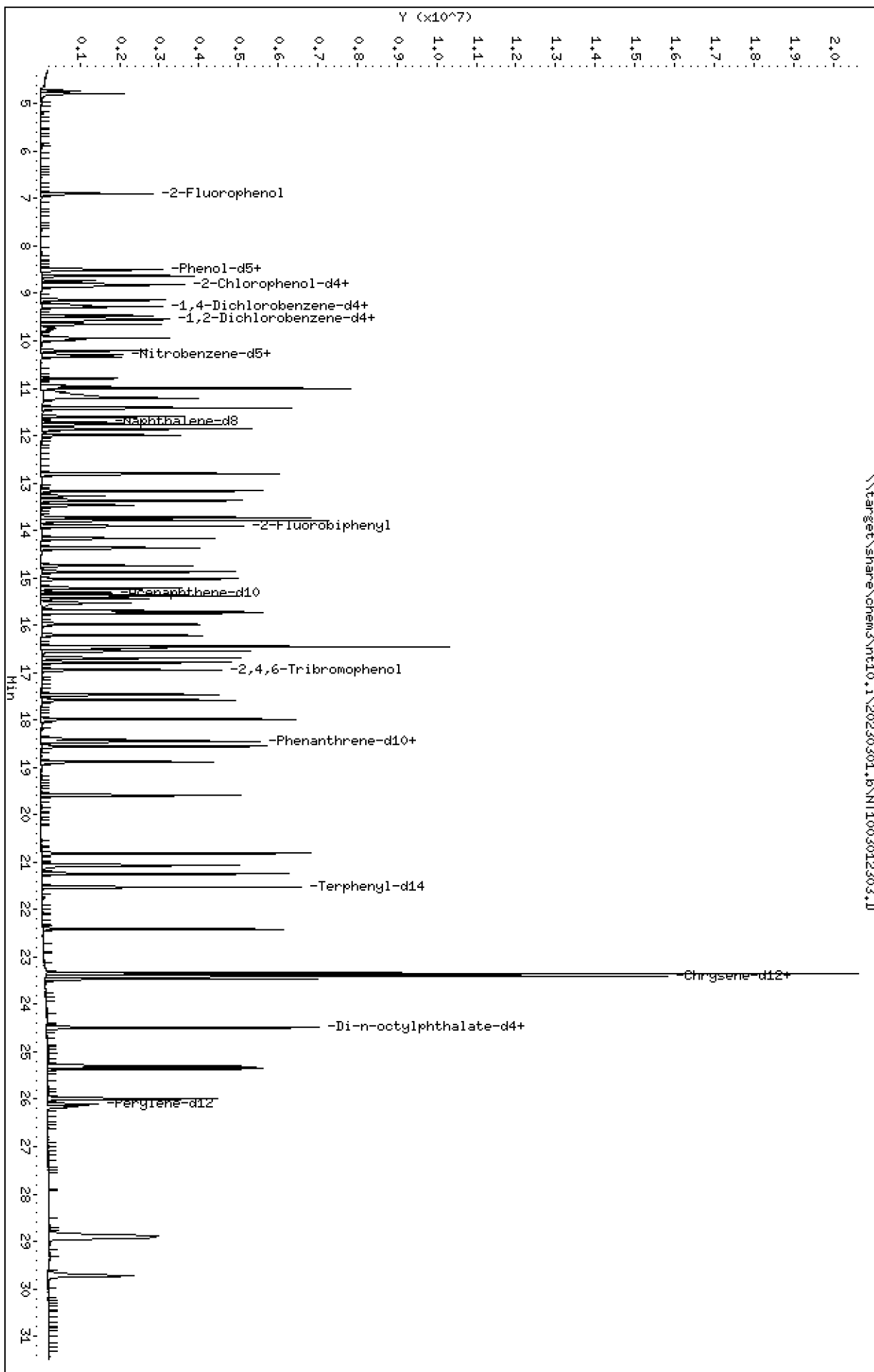
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.1\NT1003012303.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012303.D  
 Lab Smp Id: SLC0084-CAL6  
 Inj Date : 01-MAR-2023 16:42  
 Operator : VTS  
 Smp Info : SEQ-CAL6  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 6  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.898	(0.746)	1671115	15.0000	15.47
\$ 2 Phenol-d5	99		8.496	8.489	(0.919)	2142811	15.0000	17.09
3 Phenol	94		8.519	8.512	(0.921)	1452681	10.0000	10.90
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1777257	15.0000	16.62
4 Bis(2-Chloroethyl)ether	93		8.736	8.728	(0.945)	1014758	10.0000	9.962
6 2-Chlorophenol	128		8.844	8.844	(0.956)	1194498	10.0000	10.75
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	1207696	10.0000	9.857
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	343229	4.00000	
9 1,4-Dichlorobenzene	146		9.277	9.278	(1.003)	1196225	10.0000	9.830
\$ 10 1,2-Dichlorobenzene-d4	152		9.533	9.534	(1.031)	801344	10.0000	10.03 (H)
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	1172425	10.0000	9.953
11 Benzyl alcohol	108		9.471	9.472	(1.024)	729566	10.0000	10.10
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.728	(1.053)	341119	10.0000	10.04 (M)
13 2-Methylphenol	108		9.650	9.650	(1.044)	1090929	10.0000	10.05
17 Hexachloroethane	117		10.209	10.209	(1.104)	522976	10.0000	10.47
16 N-Nitroso-di-n-propylamine	70		9.984	9.976	(1.080)	857229	10.0000	10.66
15 4-Methylphenol	108		9.945	9.938	(1.076)	1307742	10.0000	10.35
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	1491583	10.0000	10.59
19 Nitrobenzene	77		10.333	10.326	(0.882)	1370204	10.0000	10.37
20 Isophorone	82		10.791	10.784	(0.921)	1793205	10.0000	10.63
21 2-Nitrophenol	139		10.950	10.951	(0.934)	730550	10.0000	10.66
22 2,4-Dimethylphenol	107		11.001	10.993	(0.939)	2713675	20.0000	20.33
23 Bis(2-Chloroethoxy)methane	93		11.213	11.205	(0.957)	1118592	10.0000	10.73
24 Benzoic acid	105		11.213	11.052	(0.957)	3480339	40.0000	41.77
25 2,4-Dichlorophenol	162		11.416	11.417	(0.974)	2211975	20.0000	20.93
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	1011207	10.0000	10.20
* 27 Naphthalene-d8	136		11.718	11.719	(1.000)	1283371	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	3371168	10.0000	10.23
29 4-Chloroaniline	127		11.857	11.858	(1.012)	3165433	20.0000	20.39
30 Hexachlorobutadiene	225		11.996	11.997	(1.024)	748347	10.0000	10.36
31 4-Chloro-3-methylphenol	107		12.809	12.809	(1.093)	2338102	20.0000	20.38
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	2467957	10.0000	10.61
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	579363	20.0000	21.27

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.730	13.730	(0.896)	1500216	20.0000	20.39
35 2,4,5-Trichlorophenol	196	13.792	13.808	(0.900)	1606616	20.0000	20.35
§ 36 2-Fluorobiphenyl	172	13.915	13.908	(0.909)	2637459	10.0000	10.60
37 2-Chloronaphthalene	162	14.163	14.164	(0.925)	2110247	10.0000	10.81
38 2-Nitroaniline	65	14.372	14.365	(0.938)	1163846	20.0000	20.24
39 Dimethylphthalate	163	14.744	14.736	(0.963)	2334876	10.0000	10.37
40 Acenaphthylene	152	15.022	15.023	(0.981)	3968425	10.0000	11.79
41 2,6-Dinitrotoluene	165	14.875	14.868	(0.971)	1069741	20.0000	20.17
* 42 Acenaphthene-d10	164	15.316	15.309	(1.000)	697310	4.00000	
43 3-Nitroaniline	138	15.216	15.224	(0.993)	1237579	20.0000	21.79
44 Acenaphthene	153	15.386	15.378	(1.005)	2130576	10.0000	10.49
45 2,4-Dinitrophenol	184	15.432	15.487	(1.008)	663655	40.0000	43.01 (M)
46 Dibenzofuran	168	15.741	15.734	(1.028)	3289648	10.0000	10.92
47 4-Nitrophenol	109	15.533	15.603	(1.014)	911134	20.0000	20.66
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.025)	1579283	20.0000	20.25
50 Diethylphthalate	149	16.213	16.198	(1.059)	2505654	10.0000	10.50
49 Fluorene	166	16.453	16.453	(1.074)	2783498	10.0000	11.10
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	1229519	10.0000	10.04
52 4-Nitroaniline	138	16.492	16.484	(1.077)	1346197	20.0000	22.05
53 4,6-Dinitro-2-methylphenol	198	16.546	16.538	(0.899)	1578759	40.0000	42.89
54 N-Nitrosodiphenylamine	169	16.692	16.693	(0.907)	2167459	10.0000	10.93
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.106)	735108	15.0000	15.20
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	878203	10.0000	10.93
57 Hexachlorobenzene	284	17.573	17.573	(0.955)	901567	10.0000	9.960
58 Pentachlorophenol	266	17.983	17.983	(0.977)	999885	20.0000	20.67
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1340795	4.00000	
60 Phenanthrene	178	18.455	18.448	(1.003)	3667169	10.0000	10.69
61 Anthracene	178	18.556	18.556	(1.008)	3689636	10.0000	11.09
62 Carbazole	167	18.888	18.889	(1.026)	3288261	10.0000	10.79
63 Di-n-butylphthalate	149	19.585	19.585	(1.064)	4529098	10.0000	10.12
64 Fluoranthene	202	20.815	20.815	(0.889)	4187547	10.0000	11.18
65 Pyrene	202	21.248	21.248	(0.907)	4073267	10.0000	10.68
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	3333633	10.0000	10.81
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	1986336	10.0000	10.05
68 Benzo(a)anthracene	228	23.400	23.401	(0.999)	4335462	10.0000	11.30
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	1088479	4.00000	
70 3,3'-Dichlorobenzidine	252	23.346	23.347	(0.997)	5606129	30.0000	31.45
71 Chrysene	228	23.462	23.463	(1.002)	3175231	10.0000	10.18
72 bis(2-Ethylhexyl)phthalate	149	23.400	23.409	(0.956)	3308866	10.0000	10.24
* 134 Di-n-octylphthalate-d4	153	24.484	24.485	(1.000)	2152692	4.00000	
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	4778293	10.0000	10.01
74 Benzo(b)fluoranthene	252	25.305	25.298	(0.969)	3823921	10.0000	10.16
75 Benzo(k)fluoranthene	252	25.359	25.352	(0.971)	3744000	10.0000	10.27
76 Benzo(a)pyrene	252	25.986	25.987	(0.995)	3440154	10.0000	10.22
* 77 Perylene-d12	264	26.110	26.103	(1.000)	973894	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.878	28.863	(1.106)	3993020	10.0000	10.18
79 Dibenzo(a,h)anthracene	278	28.932	28.925	(1.108)	3076842	10.0000	10.17
80 Benzo(g,h,i)perylene	276	29.724	29.709	(1.138)	3075954	10.0000	10.09
90 N-Nitrosodimethylamine	74	4.727	4.719	(0.511)	1425602	20.0000	20.45
91 Aniline	93	8.628	8.628	(0.933)	3239498	20.0000	20.96
93 Benzidine	184	21.062	21.094	(0.899)	3298965	20.0000	19.85
103 Pyridine	79	4.781	4.789	(0.517)	2523388	20.0000	20.41
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	2199060	10.0000	10.44
111 Azobenzene (1,2-DP-Hydrazine)	77	16.777	16.778	(1.095)	3893455	10.0000	10.93

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252		25.359	25.352	(0.971)	7406193	20.0000	20.41
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.982	(1.043)	756020	10.0000	10.15

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012303.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL6  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	343229	1.66
27 Naphthalene-d8	1265187	632594	2530374	1283371	1.44
42 Acenaphthene-d10	692385	346193	1384770	697310	0.71
59 Phenanthrene-d10	1376777	688389	2753554	1340795	-2.61
69 Chrysene-d12	1019524	509762	2039048	1088479	6.76
134 Di-n-octylphthala	2027111	1013556	4054222	2152692	6.20
77 Perylene-d12	1027409	513705	2054818	973894	-5.21

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012303.D

Lab ID: SLC0084-CAL6  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 16:42

RT CO-ELUTION COMPOUNDS

-----  
23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.943	0.0138	Benzoic acid
1.014	1.019	-0.0051	4-Nitrophenol

RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

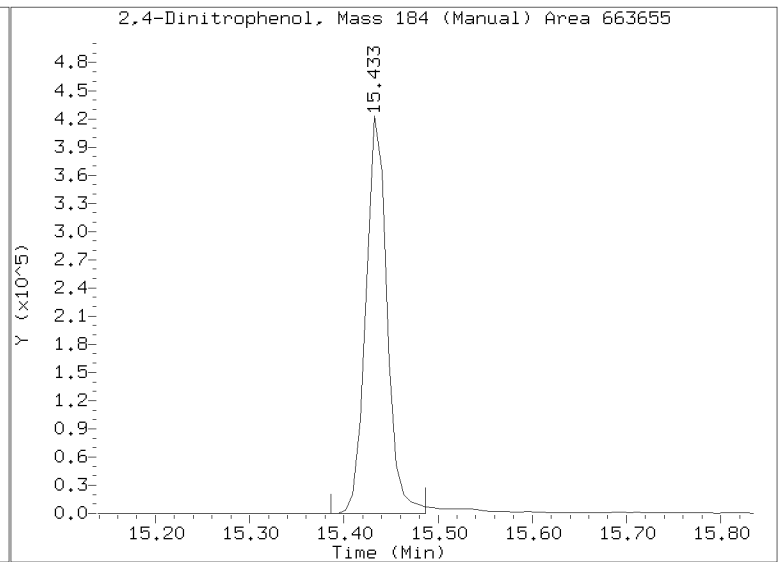
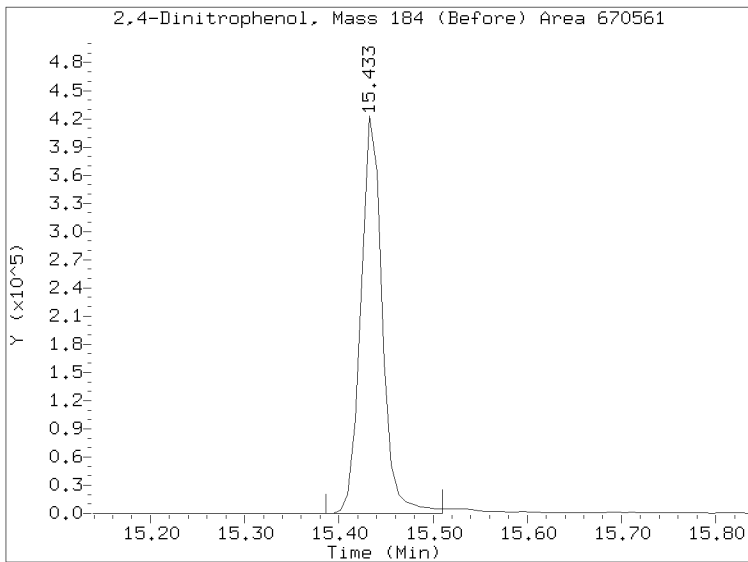
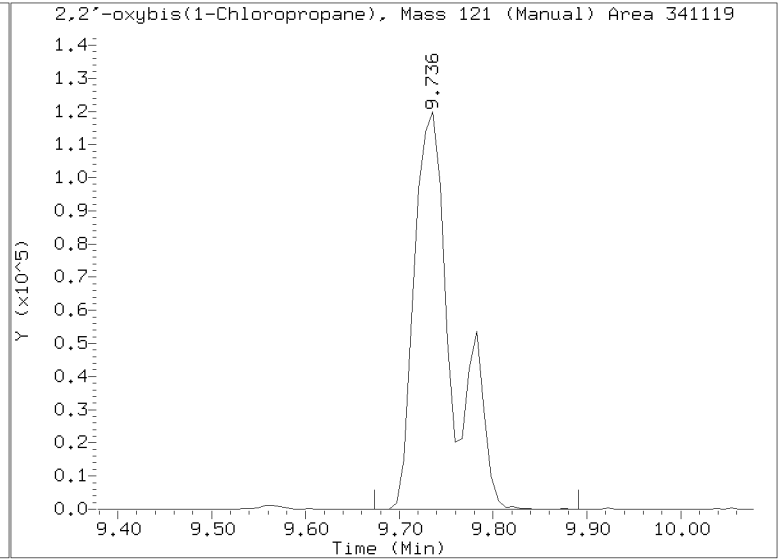
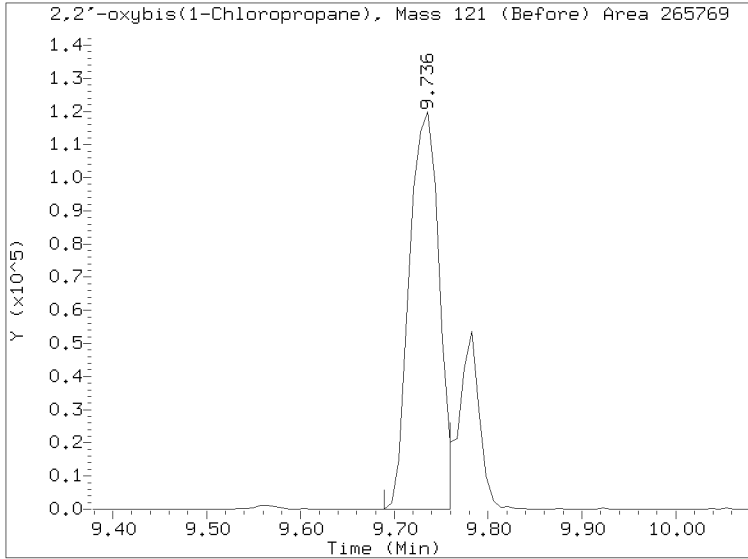
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Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012303.D

Injection Date: 01-MAR-2023 16:42

Lab ID: SLC0084-CAL6 Client ID:

Report Date: 03/07/2023 12:47

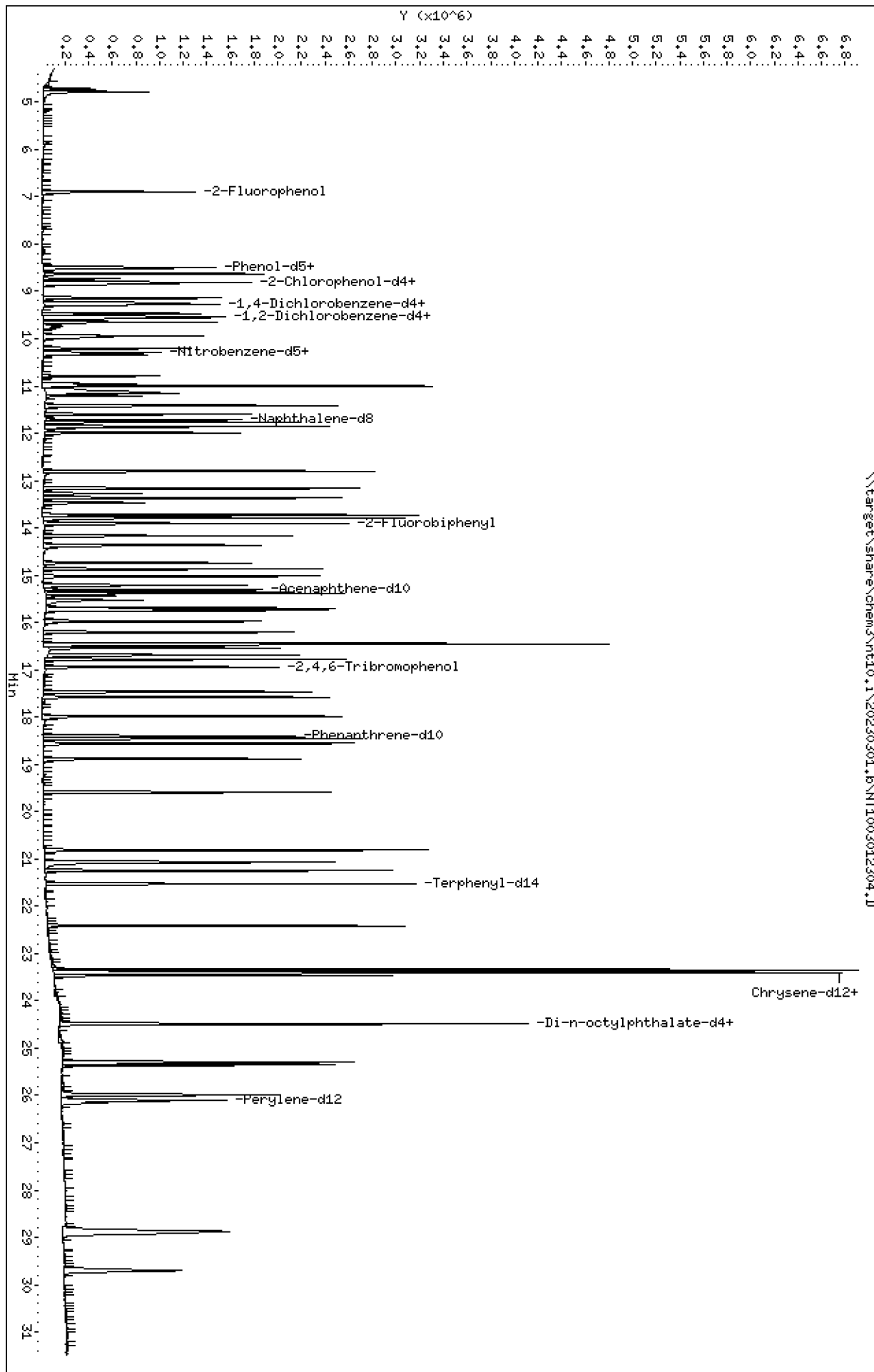




Data File: \\target\share\chem3\nt10.1\20230304.1\NT1003042304.D  
 Date: 01-HR-2023 17:21  
 Client ID:  
 Sample Info: SEQ-CALS  
 Column phase: ZB-Smsi

Instrument: nt10.1  
 Operator: VTS  
 Column diameter: 0.25

\\target\share\chem3\nt10.1\20230304.1\NT1003042304.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012304.D  
 Lab Smp Id: SLC0084-CAL5  
 Inj Date : 01-MAR-2023 17:21  
 Operator : VTS  
 Smp Info : SEQ-CAL5  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 5  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
1 2-Fluorophenol	112		6.897	6.898	(0.746)	798945	7.50000	7.521
2 Phenol-d5	99		8.488	8.489	(0.918)	984004	7.50000	7.978
3 Phenol	94		8.512	8.512	(0.921)	696903	5.00000	5.315
5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	835303	7.50000	7.938
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	492325	5.00000	4.913
6 2-Chlorophenol	128		8.844	8.844	(0.956)	569359	5.00000	5.208
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	592846	5.00000	4.919
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	337641	4.00000	
9 1,4-Dichlorobenzene	146		9.277	9.278	(1.003)	573306	5.00000	4.789
\$ 10 1,2-Dichlorobenzene-d4	152		9.533	9.534	(1.031)	384091	5.00000	4.886 (H)
12 1,2-Dichlorobenzene	146		9.564	9.565	(1.034)	555677	5.00000	4.795
11 Benzyl alcohol	108		9.471	9.472	(1.024)	345472	5.00000	5.007
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	166156	5.00000	4.974 (M)
13 2-Methylphenol	108		9.650	9.650	(1.044)	519498	5.00000	4.996
17 Hexachloroethane	117		10.209	10.209	(1.104)	243978	5.00000	4.965
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	408771	5.00000	5.166
15 4-Methylphenol	108		9.937	9.938	(1.075)	602036	5.00000	4.780
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	717338	5.00000	5.165
19 Nitrobenzene	77		10.333	10.326	(0.882)	649574	5.00000	4.986
20 Isophorone	82		10.791	10.784	(0.921)	852017	5.00000	5.123
21 2-Nitrophenol	139		10.950	10.951	(0.934)	321421	5.00000	4.583
22 2,4-Dimethylphenol	107		11.001	10.993	(0.939)	1242938	10.0000	9.733
23 Bis(2-Chloroethoxy)methane	93		11.204	11.205	(0.956)	518616	5.00000	5.046
24 Benzoic acid	105		11.162	11.052	(0.953)	1434582	20.0000	18.62
25 2,4-Dichlorophenol	162		11.416	11.417	(0.974)	897693	10.0000	8.929
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	474239	5.00000	4.850
* 27 Naphthalene-d8	136		11.718	11.719	(1.000)	1265187	4.00000	
28 Naphthalene	128		11.764	11.765	(1.004)	1611137	5.00000	4.962
29 4-Chloroaniline	127		11.857	11.858	(1.012)	1458858	10.0000	9.927
30 Hexachlorobutadiene	225		11.996	11.997	(1.024)	361635	5.00000	5.080
31 4-Chloro-3-methylphenol	107		12.801	12.809	(1.092)	1052503	10.0000	9.790
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	1169551	5.00000	5.098
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.880)	197002	10.0000	8.175

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.722	13.730	(0.896)	671855	10.0000	9.789
35 2,4,5-Trichlorophenol	196	13.792	13.808	(0.901)	727258	10.0000	9.898
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.909)	1276728	5.00000	5.170
37 2-Chloronaphthalene	162	14.163	14.164	(0.925)	985797	5.00000	5.085
38 2-Nitroaniline	65	14.364	14.365	(0.938)	539613	10.0000	9.843
39 Dimethylphthalate	163	14.736	14.736	(0.963)	1157937	5.00000	5.179
40 Acenaphthylene	152	15.022	15.023	(0.981)	1673322	5.00000	5.006
41 2,6-Dinitrotoluene	165	14.867	14.868	(0.971)	510956	10.0000	10.08
* 42 Acenaphthene-d10	164	15.308	15.309	(1.000)	692385	4.00000	
43 3-Nitroaniline	138	15.216	15.224	(0.994)	572327	10.0000	10.15
44 Acenaphthene	153	15.378	15.378	(1.005)	1024501	5.00000	5.082
45 2,4-Dinitrophenol	184	15.432	15.487	(1.008)	171374	20.0000	12.74 (M)
46 Dibenzofuran	168	15.741	15.734	(1.028)	1570179	5.00000	5.249
47 4-Nitrophenol	109	15.525	15.603	(1.014)	385053	10.0000	9.416
48 2,4-Dinitrotoluene	165	15.695	15.703	(1.025)	744528	10.0000	10.07
50 Diethylphthalate	149	16.205	16.198	(1.059)	1227652	5.00000	5.183
49 Fluorene	166	16.453	16.453	(1.075)	1288140	5.00000	5.175
51 4-Chlorophenyl-phenylether	204	16.445	16.453	(1.074)	574226	5.00000	5.032
52 4-Nitroaniline	138	16.476	16.484	(1.076)	652104	10.0000	10.76
53 4,6-Dinitro-2-methylphenol	198	16.538	16.538	(0.899)	525677	20.0000	15.59
54 N-Nitrosodiphenylamine	169	16.692	16.693	(0.907)	1052927	5.00000	5.169
§ 55 2,4,6-Tribromophenol	330	16.939	16.947	(1.107)	335459	7.50000	7.479
56 4-Bromophenyl-phenylether	248	17.464	17.472	(0.949)	421801	5.00000	5.110
57 Hexachlorobenzene	284	17.573	17.573	(0.955)	460177	5.00000	4.951
58 Pentachlorophenol	266	17.983	17.983	(0.977)	426084	10.0000	9.388
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1376777	4.00000	
60 Phenanthrene	178	18.447	18.448	(1.003)	1750157	5.00000	4.967
61 Anthracene	178	18.556	18.556	(1.008)	1748537	5.00000	5.118
62 Carbazole	167	18.880	18.889	(1.026)	1590953	5.00000	5.083
63 Di-n-butylphthalate	149	19.585	19.585	(1.064)	2167805	5.00000	4.927
64 Fluoranthene	202	20.815	20.815	(0.889)	1995961	5.00000	5.691
65 Pyrene	202	21.248	21.248	(0.907)	1980428	5.00000	5.545
§ 66 Terphenyl-d14	244	21.519	21.527	(0.919)	1578069	5.00000	5.461
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	953916	5.00000	5.058
68 Benzo(a)anthracene	228	23.400	23.401	(0.999)	1805838	5.00000	5.023
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	1019524	4.00000	
70 3,3'-Dichlorobenzidine	252	23.346	23.347	(0.997)	2250601	15.0000	13.81
71 Chrysene	228	23.462	23.463	(1.002)	1424903	5.00000	4.877
72 bis(2-Ethylhexyl)phthalate	149	23.400	23.409	(0.956)	1394222	5.00000	4.763
* 134 Di-n-octylphthalate-d4	153	24.484	24.485	(1.000)	2027111	4.00000	
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	2157248	5.00000	4.799
74 Benzo(b)fluoranthene	252	25.297	25.298	(0.969)	1825423	5.00000	4.937
75 Benzo(k)fluoranthene	252	25.351	25.352	(0.971)	1645283	5.00000	4.633
76 Benzo(a)pyrene	252	25.986	25.987	(0.996)	1576490	5.00000	4.781
* 77 Perylene-d12	264	26.102	26.103	(1.000)	1027409	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.870	28.863	(1.106)	1869637	5.00000	4.849
79 Dibenzo(a,h)anthracene	278	28.909	28.925	(1.108)	1416633	5.00000	4.817
80 Benzo(g,h,i)perylene	276	29.693	29.709	(1.138)	1505801	5.00000	4.943
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	652679	10.0000	9.517
91 Aniline	93	8.627	8.628	(0.933)	1534382	10.0000	10.09
93 Benzidine	184	21.062	21.094	(0.899)	1784190	10.0000	11.46
103 Pyridine	79	4.781	4.789	(0.517)	1195147	10.0000	9.827
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	1066974	5.00000	5.139
111 Azobenzene (1,2-DP-Hydrazine)	77	16.777	16.778	(1.096)	1859900	5.00000	5.258

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
187 Total Benzofluoranthenes	252	25.297	25.352	(0.969)	3405989	10.0000	9.596	
120 2,3,4,6-Tetrachlorophenol	232	15.973	15.982	(1.043)	340297	5.00000	4.959	

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012304.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL5  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	337641	0.00
27 Naphthalene-d8	1265187	632594	2530374	1265187	0.00
42 Acenaphthene-d10	692385	346193	1384770	692385	0.00
59 Phenanthrene-d10	1376777	688389	2753554	1376777	0.00
69 Chrysene-d12	1019524	509762	2039048	1019524	0.00
134 Di-n-octylphthala	2027111	1013556	4054222	2027111	0.00
77 Perylene-d12	1027409	513705	2054818	1027409	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012304.D

Lab ID: SLC0084-CAL5  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 17:21

RT CO-ELUTION COMPOUNDS

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23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.943	0.0094	Benzoic acid
1.014	1.019	-0.0050	4-Nitrophenol

RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

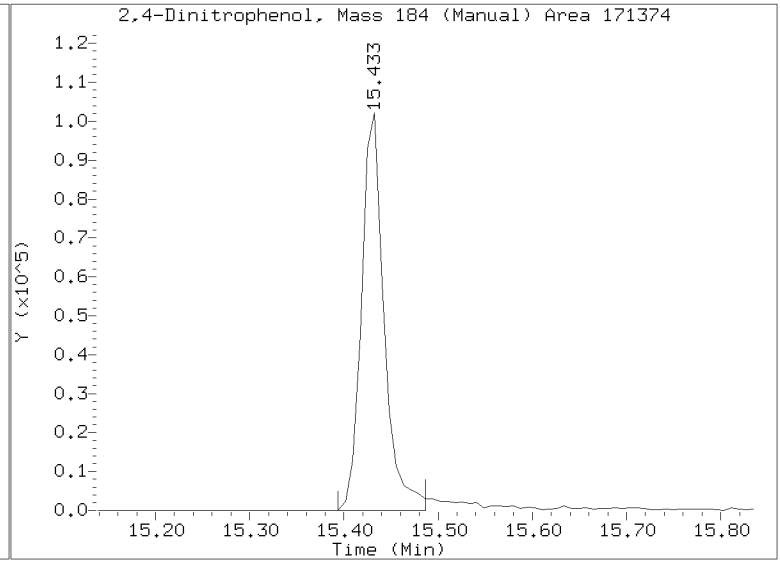
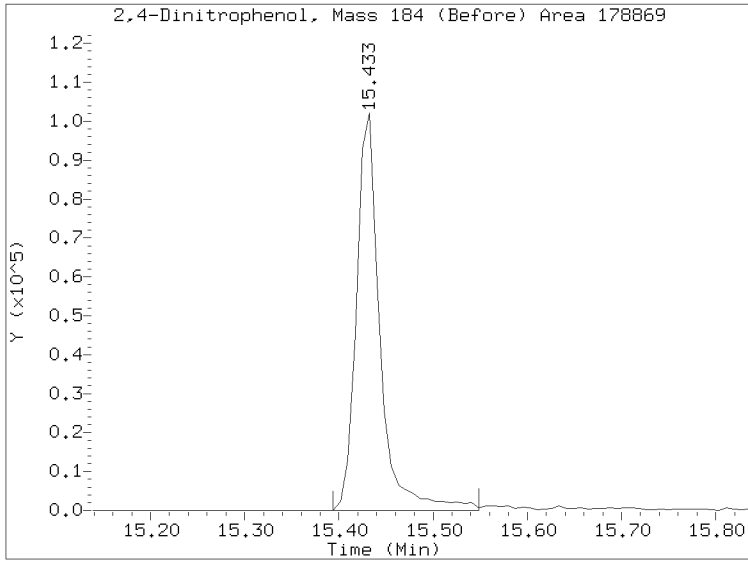
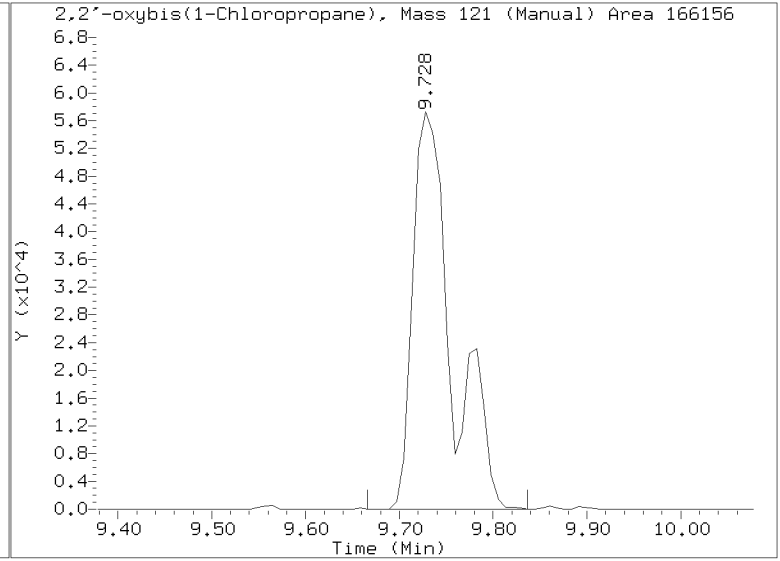
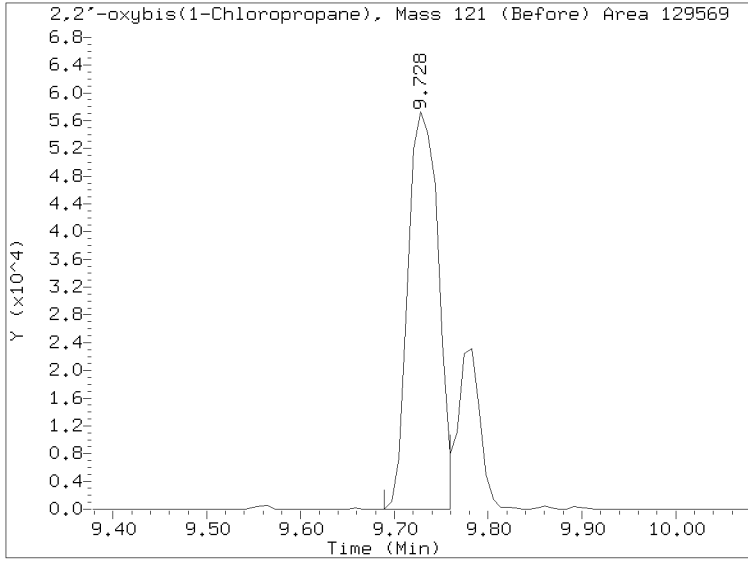
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Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012304.D

Injection Date: 01-MAR-2023 17:21

Lab ID:SLC0084-CAL5 Client ID:

Report Date: 03/07/2023 12:47



Data File: \\target\share\chem3\nt10.1\20230304.1\NT1003042305.D

Date: 01-MAR-2023 17:59

Client ID:

Sample Info: SEQ-CAL4

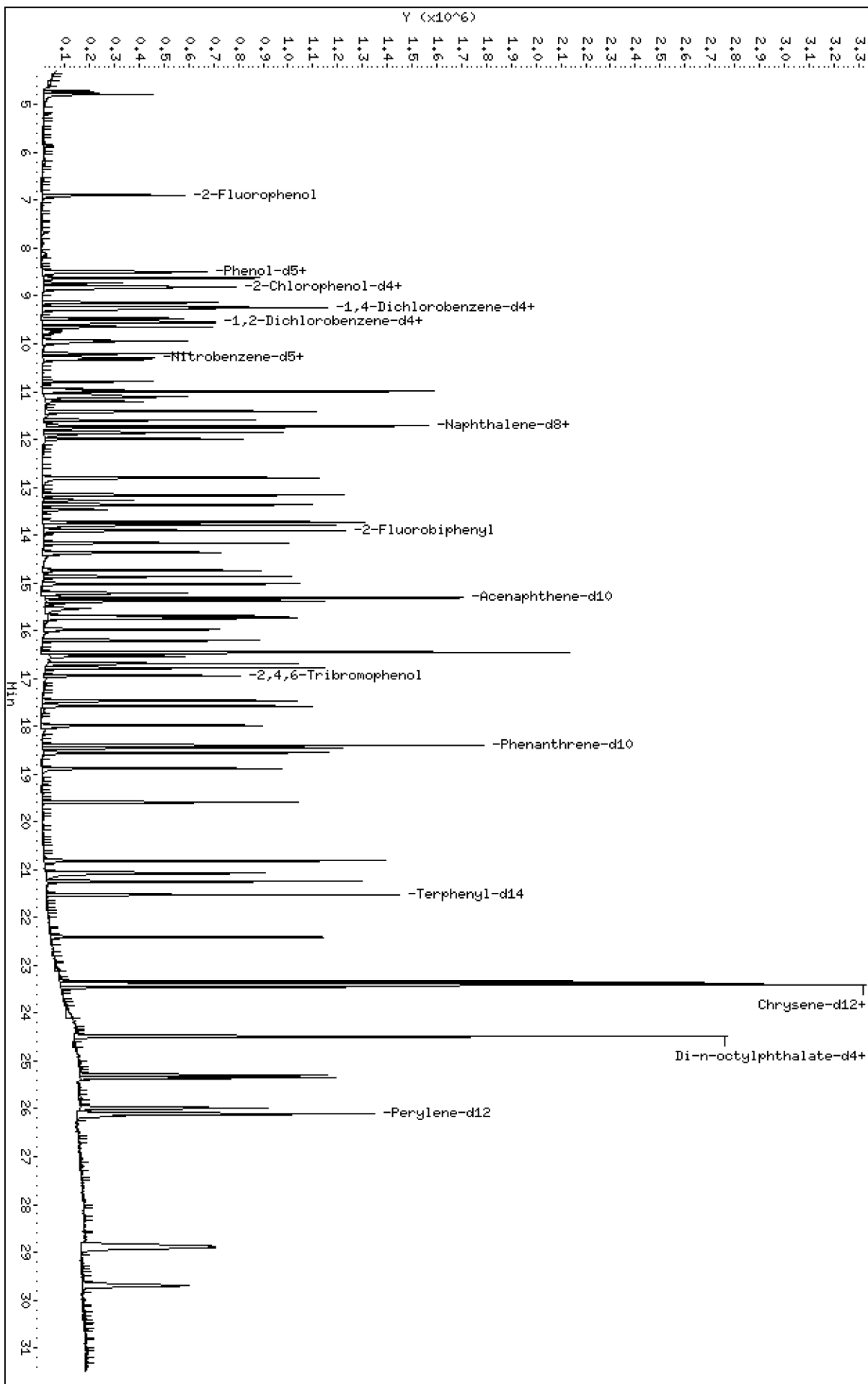
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230304.1\NT1003042305.D





ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012305.D  
 Lab Smp Id: SLC0084-CAL4  
 Inj Date : 01-MAR-2023 17:59  
 Operator : VTS  
 Smp Info : SEQ-CAL4  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 4  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.898	(0.746)	378841	3.75000	3.752
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	450808	3.75000	3.846
3 Phenol	94		8.512	8.512	(0.921)	326814	2.50000	2.622
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	382637	3.75000	3.826
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	236207	2.50000	2.480
6 2-Chlorophenol	128		8.844	8.844	(0.956)	260785	2.50000	2.510
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	283471	2.50000	2.475
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	320922	4.00000	
9 1,4-Dichlorobenzene	146		9.277	9.278	(1.003)	266336	2.50000	2.341
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	177287	2.50000	2.373 (H)
12 1,2-Dichlorobenzene	146		9.557	9.565	(1.034)	269555	2.50000	2.447
11 Benzyl alcohol	108		9.471	9.472	(1.024)	148609	2.50000	2.300
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	77292	2.50000	2.434 (M)
13 2-Methylphenol	108		9.650	9.650	(1.044)	238010	2.50000	2.439
17 Hexachloroethane	117		10.209	10.209	(1.104)	111666	2.50000	2.391
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	194824	2.50000	2.590
15 4-Methylphenol	108		9.937	9.938	(1.075)	261454	2.50000	2.170
\$ 18 Nitrobenzene-d5	82		10.286	10.295	(0.878)	337523	2.50000	2.617
19 Nitrobenzene	77		10.325	10.326	(0.881)	306595	2.50000	2.534
20 Isophorone	82		10.783	10.784	(0.920)	389475	2.50000	2.522
21 2-Nitrophenol	139		10.950	10.951	(0.934)	116300	2.50000	1.752
22 2,4-Dimethylphenol	107		10.992	10.993	(0.938)	558107	5.00000	4.768
23 Bis(2-Chloroethoxy)methane	93		11.204	11.205	(0.956)	247047	2.50000	2.588
24 Benzoic acid	105		11.111	11.052	(0.948)	511628	10.0000	7.346
25 2,4-Dichlorophenol	162		11.408	11.417	(0.974)	427920	5.00000	4.638
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	222387	2.50000	2.449
* 27 Naphthalene-d8	136		11.718	11.719	(1.000)	1174958	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	735833	2.50000	2.440
29 4-Chloroaniline	127		11.857	11.858	(1.012)	564439	5.00000	4.220
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	165869	2.50000	2.509
31 4-Chloro-3-methylphenol	107		12.801	12.809	(1.092)	441665	5.00000	4.525
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	522822	2.50000	2.454
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.880)	56172	5.00000	2.613

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.722	13.730	(0.896)	274751	5.00000	4.437
35 2,4,5-Trichlorophenol	196	13.792	13.808	(0.901)	285057	5.00000	4.311
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.909)	563949	2.50000	2.463
37 2-Chloronaphthalene	162	14.163	14.164	(0.925)	447798	2.50000	2.491
38 2-Nitroaniline	65	14.364	14.365	(0.938)	243546	5.00000	4.877
39 Dimethylphthalate	163	14.736	14.736	(0.963)	521590	2.50000	2.516
40 Acenaphthylene	152	15.022	15.023	(0.981)	734889	2.50000	2.371
41 2,6-Dinitrotoluene	165	14.868	14.868	(0.971)	210738	5.00000	4.567
* 42 Acenaphthene-d10	164	15.309	15.309	(1.000)	642002	4.00000	
43 3-Nitroaniline	138	15.216	15.224	(0.994)	243306	5.00000	4.653
44 Acenaphthene	153	15.378	15.378	(1.005)	447904	2.50000	2.396
45 2,4-Dinitrophenol	184	15.432	15.487	(1.008)	32087	10.0000	2.662 (M)
46 Dibenzofuran	168	15.734	15.734	(1.028)	667477	2.50000	2.406
47 4-Nitrophenol	109	15.525	15.603	(1.014)	158049	5.00000	4.282 (M)
48 2,4-Dinitrotoluene	165	15.695	15.703	(1.025)	290719	5.00000	4.338
50 Diethylphthalate	149	16.198	16.198	(1.058)	544035	2.50000	2.477
49 Fluorene	166	16.453	16.453	(1.075)	554745	2.50000	2.404
51 4-Chlorophenyl-phenylether	204	16.445	16.453	(1.074)	243957	2.50000	2.374
52 4-Nitroaniline	138	16.468	16.484	(1.076)	256750	5.00000	4.568
53 4,6-Dinitro-2-methylphenol	198	16.530	16.538	(0.898)	162732	10.0000	5.636
54 N-Nitrosodiphenylamine	169	16.685	16.693	(0.907)	464929	2.50000	2.579
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.107)	133559	3.75000	3.314
56 4-Bromophenyl-phenylether	248	17.464	17.472	(0.949)	180011	2.50000	2.464
57 Hexachlorobenzene	284	17.573	17.573	(0.955)	193751	2.50000	2.355
58 Pentachlorophenol	266	17.983	17.983	(0.977)	158344	5.00000	4.082
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1218560	4.00000	
60 Phenanthrene	178	18.447	18.448	(1.003)	754817	2.50000	2.420
61 Anthracene	178	18.556	18.556	(1.008)	738126	2.50000	2.441
62 Carbazole	167	18.881	18.889	(1.026)	696404	2.50000	2.514
63 Di-n-butylphthalate	149	19.585	19.585	(1.064)	904042	2.50000	2.367
64 Fluoranthene	202	20.815	20.815	(0.889)	827926	2.50000	2.660
65 Pyrene	202	21.240	21.248	(0.907)	825309	2.50000	2.604
§ 66 Terphenyl-d14	244	21.519	21.527	(0.919)	657085	2.50000	2.562
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	402228	2.50000	2.378
68 Benzo(a)anthracene	228	23.393	23.401	(0.999)	763801	2.50000	2.394
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	904733	4.00000	
70 3,3'-Dichlorobenzidine	252	23.339	23.347	(0.997)	863376	7.50000	6.032
71 Chrysene	228	23.462	23.463	(1.002)	606448	2.50000	2.339
72 bis(2-Ethylhexyl)phthalate	149	23.400	23.409	(0.956)	594611	2.50000	2.343
* 134 Di-n-octylphthalate-d4	153	24.484	24.485	(1.000)	1785837	4.00000	
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	966695	2.50000	2.441
74 Benzo(b)fluoranthene	252	25.297	25.298	(0.969)	726977	2.50000	2.201
75 Benzo(k)fluoranthene	252	25.351	25.352	(0.971)	757491	2.50000	2.375
76 Benzo(a)pyrene	252	25.979	25.987	(0.995)	673848	2.50000	2.280
* 77 Perylene-d12	264	26.102	26.103	(1.000)	947785	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.862	28.863	(1.106)	802655	2.50000	2.322
79 Dibenzo(a,h)anthracene	278	28.909	28.925	(1.108)	623221	2.50000	2.370
80 Benzo(g,h,i)perylene	276	29.701	29.709	(1.138)	660797	2.50000	2.407
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	321620	5.00000	4.934
91 Aniline	93	8.620	8.628	(0.932)	732763	5.00000	5.071
93 Benzidine	184	21.070	21.094	(0.900)	776867	5.00000	5.623
103 Pyridine	79	4.781	4.789	(0.517)	566787	5.00000	4.903
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	476995	2.50000	2.474
111 Azobenzene (1,2-DP-Hydrazine)	77	16.777	16.778	(1.096)	837975	2.50000	2.555

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
187 Total Benzofluoranthenes	252	25.351	25.352	(0.971)	1464206	5.00000	4.607	
120 2,3,4,6-Tetrachlorophenol	232	15.973	15.982	(1.043)	134294	2.50000	2.183	

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012305.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL4  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	320922	-4.95
27 Naphthalene-d8	1265187	632594	2530374	1174958	-7.13
42 Acenaphthene-d10	692385	346193	1384770	642002	-7.28
59 Phenanthrene-d10	1376777	688389	2753554	1218560	-11.49
69 Chrysene-d12	1019524	509762	2039048	904733	-11.26
134 Di-n-octylphthala	2027111	1013556	4054222	1785837	-11.90
77 Perylene-d12	1027409	513705	2054818	947785	-7.75

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012305.D

Lab ID: SLC0084-CAL4  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 17:59

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.948	0.943	0.0051	Benzoic acid
1.014	1.019	-0.0050	4-Nitrophenol

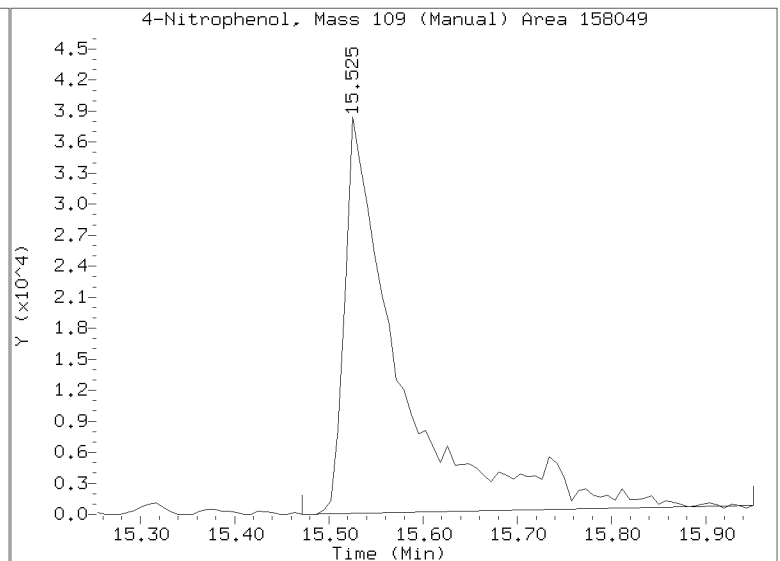
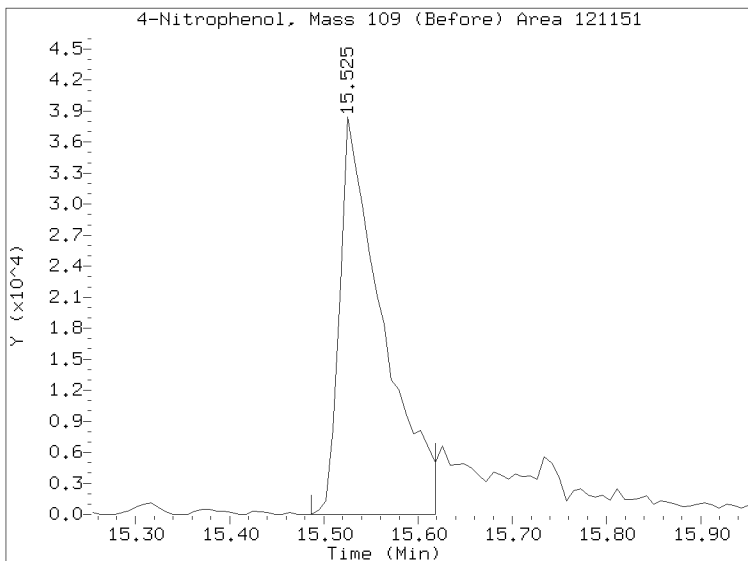
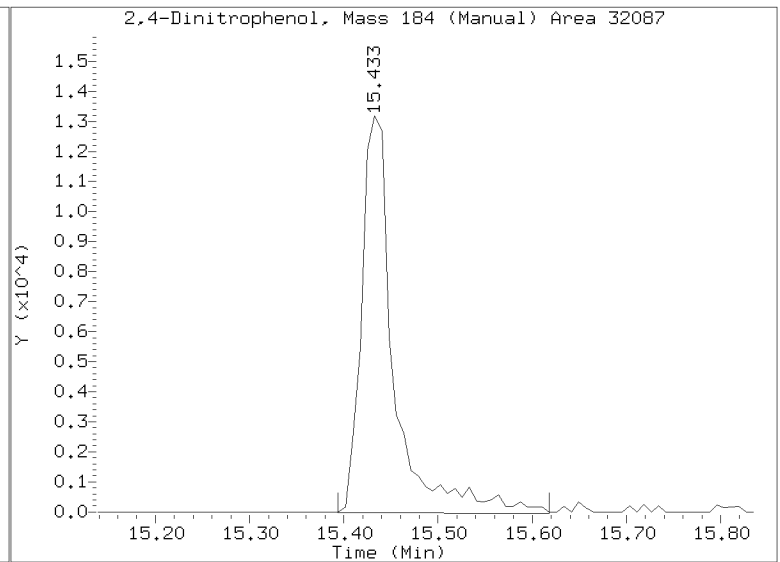
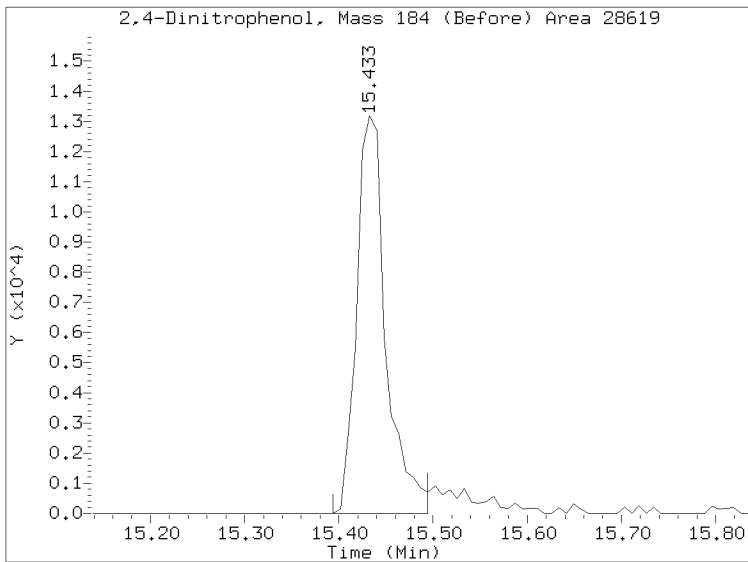
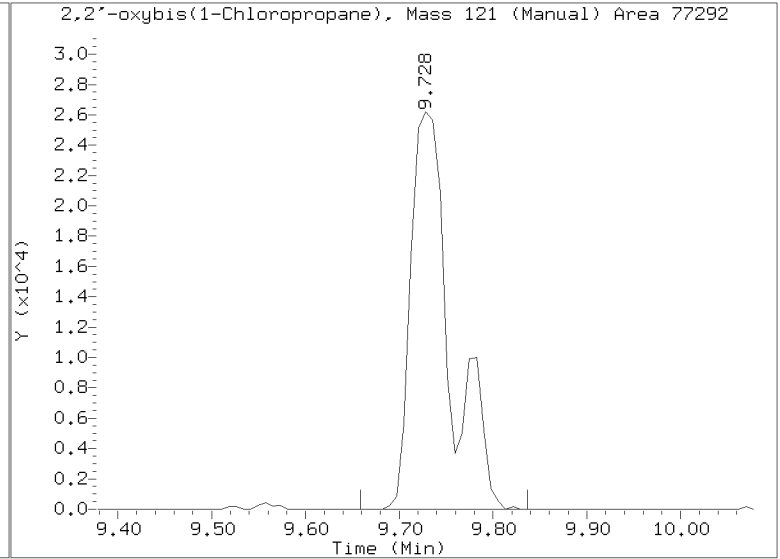
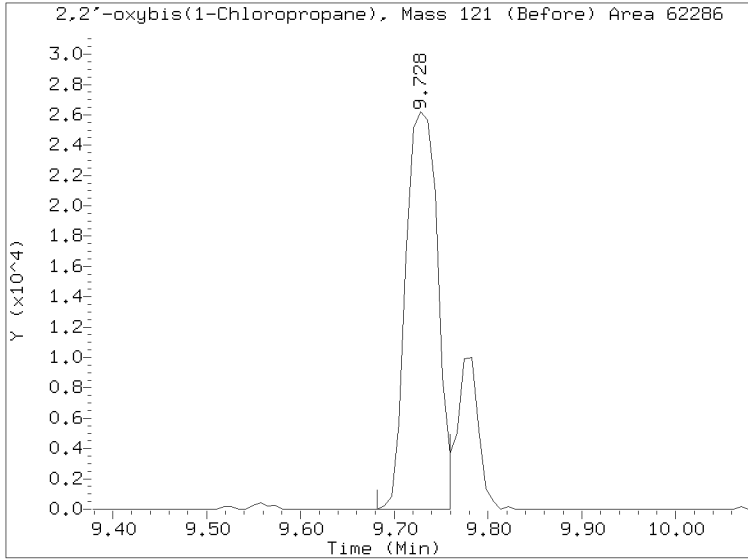
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012305.D  
Injection Date: 01-MAR-2023 17:59  
Lab ID: SLC0084-CAL4 Client ID:  
Report Date: 03/07/2023 12:47



Data File: \\target\share\chem3\nt10,1\20230304,16\NT1003012306.D

Date: 01-MAR-2023 18:37

Client ID:

Sample Info: SEQ-CAL3

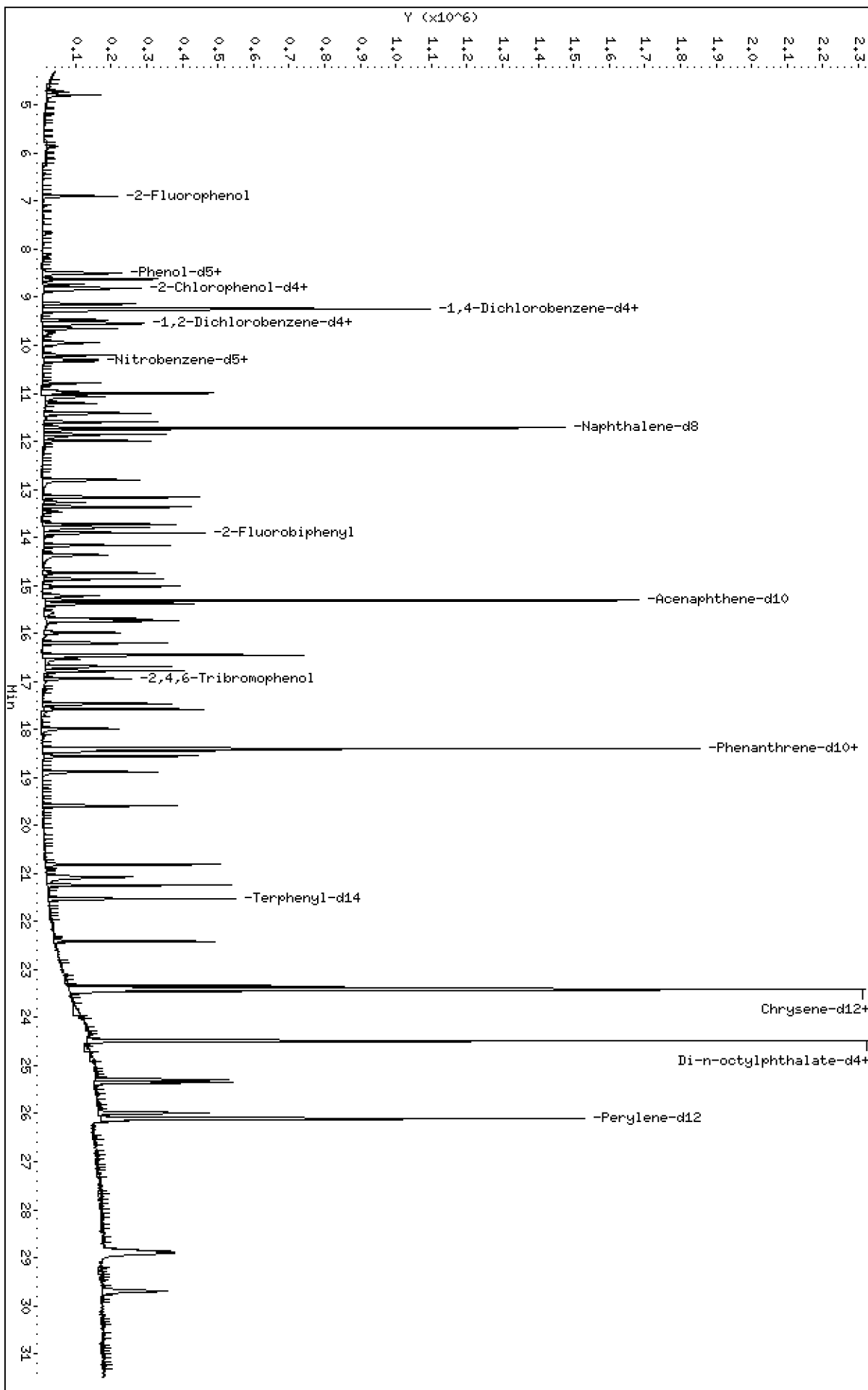
Column phase: ZB-5msi

Instrument: nt10,1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10,1\20230304,16\NT1003012306.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012306.D  
 Lab Smp Id: SLC0084-CAL3  
 Inj Date : 01-MAR-2023 18:37  
 Operator : VTS  
 Smp Info : SEQ-CAL3  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 3  
 Compound Sublist: ICAL.sub

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.897	6.898	(0.746)	143112	1.50000	1.509
2 Phenol-d5	99	8.489	8.489	(0.918)	156849	1.50000	1.425
3 Phenol	94	8.512	8.512	(0.921)	115230	1.00000	0.9845
5 2-Chlorophenol-d4	132	8.813	8.813	(0.953)	136267	1.50000	1.451
4 Bis(2-Chloroethyl)ether	93	8.728	8.728	(0.944)	90185	1.00000	1.008
6 2-Chlorophenol	128	8.844	8.844	(0.956)	92147	1.00000	0.9444
7 1,3-Dichlorobenzene	146	9.138	9.138	(0.988)	103697	1.00000	0.9639
* 8 1,4-Dichlorobenzene-d4	152	9.247	9.247	(1.000)	301377	4.00000	
9 1,4-Dichlorobenzene	146	9.278	9.278	(1.003)	104762	1.00000	0.9804
\$ 10 1,2-Dichlorobenzene-d4	152	9.534	9.534	(1.031)	68422	1.00000	0.9751
12 1,2-Dichlorobenzene	146	9.557	9.565	(1.034)	100695	1.00000	0.9736
11 Benzyl alcohol	108	9.472	9.472	(1.024)	52608	1.00000	0.8733
14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.728	(1.052)	30655	1.00000	1.028 (M)
13 2-Methylphenol	108	9.650	9.650	(1.044)	80800	1.00000	0.8881
17 Hexachloroethane	117	10.209	10.209	(1.104)	39041	1.00000	0.8901
16 N-Nitroso-di-n-propylamine	70	9.976	9.976	(1.079)	69424	1.00000	0.9829
15 4-Methylphenol	108	9.945	9.938	(1.076)	82667	1.00000	0.7280
\$ 18 Nitrobenzene-d5	82	10.287	10.295	(0.878)	121995	1.00000	0.9947
19 Nitrobenzene	77	10.326	10.326	(0.881)	117165	1.00000	1.018
20 Isophorone	82	10.783	10.784	(0.920)	140691	1.00000	0.9580
21 2-Nitrophenol	139	10.950	10.951	(0.934)	37363	1.00000	0.5873
22 2,4-Dimethylphenol	107	10.992	10.993	(0.938)	192320	2.00000	1.741
23 Bis(2-Chloroethoxy)methane	93	11.205	11.205	(0.956)	92006	1.00000	1.014
24 Benzoic acid	105	11.069	11.052	(0.945)	137115	4.00000	2.095 (M)
25 2,4-Dichlorophenol	162	11.417	11.417	(0.974)	118390	2.00000	1.361
26 1,2,4-Trichlorobenzene	180	11.595	11.595	(0.989)	83754	1.00000	0.9700
* 27 Naphthalene-d8	136	11.719	11.719	(1.000)	1117281	4.00000	
28 Naphthalene	128	11.765	11.765	(1.004)	273806	1.00000	0.9548
29 4-Chloroaniline	127	11.858	11.858	(1.012)	192473	2.00000	1.527
30 Hexachlorobutadiene	225	11.989	11.997	(1.023)	59415	1.00000	0.9451
31 4-Chloro-3-methylphenol	107	12.809	12.809	(1.093)	134686	2.00000	1.469
32 2-Methylnaphthalene	142	13.165	13.165	(1.123)	193061	1.00000	0.9530
33 Hexachlorocyclopentadiene	237	13.467	13.475	(0.880)	11351	2.00000	0.5617



Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.722	13.730	(0.896)	83812	2.00000	1.441
35 2,4,5-Trichlorophenol	196	13.792	13.808	(0.901)	92328	2.00000	1.487
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.909)	208130	1.00000	0.9542
37 2-Chloronaphthalene	162	14.164	14.164	(0.925)	161256	1.00000	0.9418
38 2-Nitroaniline	65	14.365	14.365	(0.938)	68264	2.00000	1.452
39 Dimethylphthalate	163	14.736	14.736	(0.963)	191502	1.00000	0.9697
40 Acenaphthylene	152	15.023	15.023	(0.981)	272708	1.00000	0.9238
41 2,6-Dinitrotoluene	165	14.868	14.868	(0.971)	70653	2.00000	1.623
* 42 Acenaphthene-d10	164	15.309	15.309	(1.000)	611509	4.00000	
43 3-Nitroaniline	138	15.216	15.224	(0.994)	92170	2.00000	1.851 (M)
44 Acenaphthene	153	15.378	15.378	(1.005)	166539	1.00000	0.9355
45 2,4-Dinitrophenol	184	15.448	15.487	(1.009)	2997	4.00000	0.2630 (M)
46 Dibenzofuran	168	15.734	15.734	(1.028)	245633	1.00000	0.9296
47 4-Nitrophenol	109	15.572	15.603	(1.017)	48368	2.00000	1.395 (M)
48 2,4-Dinitrotoluene	165	15.695	15.703	(1.025)	97931	2.00000	1.551
50 Diethylphthalate	149	16.198	16.198	(1.058)	205933	1.00000	0.9843
49 Fluorene	166	16.453	16.453	(1.075)	202317	1.00000	0.9203
51 4-Chlorophenyl-phenylether	204	16.446	16.453	(1.074)	88403	1.00000	0.9168
52 4-Nitroaniline	138	16.476	16.484	(1.076)	88689	2.00000	1.657
53 4,6-Dinitro-2-methylphenol	198	16.531	16.538	(0.898)	22278	4.00000	0.7999
54 N-Nitrosodiphenylamine	169	16.685	16.693	(0.907)	173165	1.00000	0.9809
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.107)	43327	1.50000	1.146
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	68318	1.00000	0.9551
57 Hexachlorobenzene	284	17.573	17.573	(0.955)	75215	1.00000	0.9338
58 Pentachlorophenol	266	17.983	17.983	(0.977)	40379	2.00000	1.083
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1193129	4.00000	
60 Phenanthrene	178	18.448	18.448	(1.003)	290575	1.00000	0.9516
61 Anthracene	178	18.556	18.556	(1.008)	272370	1.00000	0.9199
62 Carbazole	167	18.889	18.889	(1.026)	262239	1.00000	0.9668
63 Di-n-butylphthalate	149	19.585	19.585	(1.064)	327914	1.00000	0.8863
64 Fluoranthene	202	20.815	20.815	(0.889)	311956	1.00000	0.9661
65 Pyrene	202	21.241	21.248	(0.907)	319834	1.00000	0.9727
§ 66 Terphenyl-d14	244	21.519	21.527	(0.919)	252475	1.00000	0.9490
67 Butylbenzylphthalate	149	22.410	22.410	(0.957)	146878	1.00000	0.8319
68 Benzo(a)anthracene	228	23.393	23.401	(0.999)	305914	1.00000	0.9243
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	938680	4.00000	
70 3,3'-Dichlorobenzidine	252	23.347	23.347	(0.997)	304058	3.00000	2.058
71 Chrysene	228	23.463	23.463	(1.002)	259860	1.00000	0.9661
72 bis(2-Ethylhexyl)phthalate	149	23.401	23.409	(0.956)	222177	1.00000	0.9040
* 134 Di-n-octylphthalate-d4	153	24.485	24.485	(1.000)	1744984	4.00000	
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	386475	1.00000	0.9988
74 Benzo(b)fluoranthene	252	25.290	25.298	(0.969)	281873	1.00000	0.8248
75 Benzo(k)fluoranthene	252	25.352	25.352	(0.971)	306114	1.00000	0.9292
76 Benzo(a)pyrene	252	25.979	25.987	(0.995)	275940	1.00000	0.9026
* 77 Perylene-d12	264	26.103	26.103	(1.000)	995239	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.863	28.863	(1.106)	302077	1.00000	0.8455
79 Dibenzo(a,h)anthracene	278	28.909	28.925	(1.108)	239256	1.00000	0.8821
80 Benzo(g,h,i)perylene	276	29.694	29.709	(1.138)	248971	1.00000	0.8754
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	107907	2.00000	1.763
91 Aniline	93	8.620	8.628	(0.932)	269442	2.00000	1.985
93 Benzidine	184	21.070	21.094	(0.900)	272028	2.00000	1.898
103 Pyridine	79	4.781	4.789	(0.517)	216655	2.00000	1.996
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	175421	1.00000	0.9567
111 Azobenzene (1,2-DP-Hydrazine)	77	16.778	16.778	(1.096)	302604	1.00000	0.9686

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	
187 Total Benzofluoranthenes	252		25.352	25.352	(0.971)	580106	2.00000	1.766
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.982	(1.044)	44857	1.00000	0.7777

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012306.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL3  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	301377	-10.74
27 Naphthalene-d8	1265187	632594	2530374	1117281	-11.69
42 Acenaphthene-d10	692385	346193	1384770	611509	-11.68
59 Phenanthrene-d10	1376777	688389	2753554	1193129	-13.34
69 Chrysene-d12	1019524	509762	2039048	938680	-7.93
134 Di-n-octylphthala	2027111	1013556	4054222	1744984	-13.92
77 Perylene-d12	1027409	513705	2054818	995239	-3.13

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012306.D

Lab ID: SLC0084-CAL3  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 18:37

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

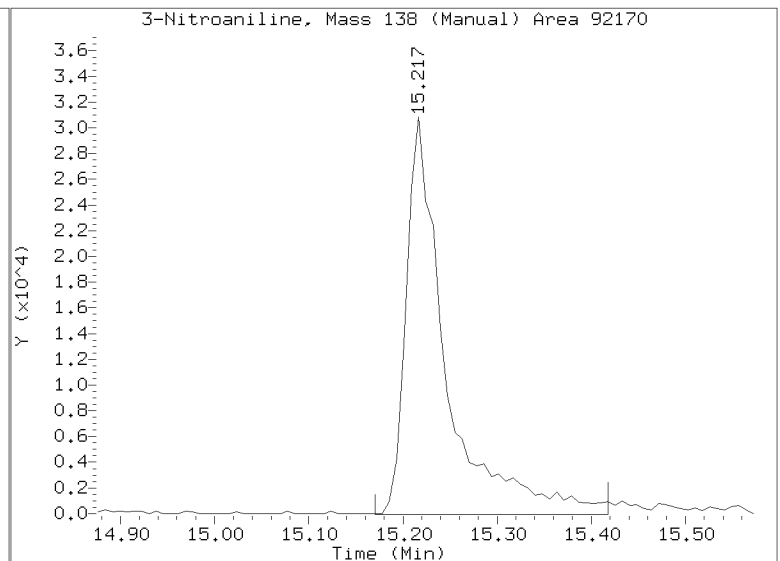
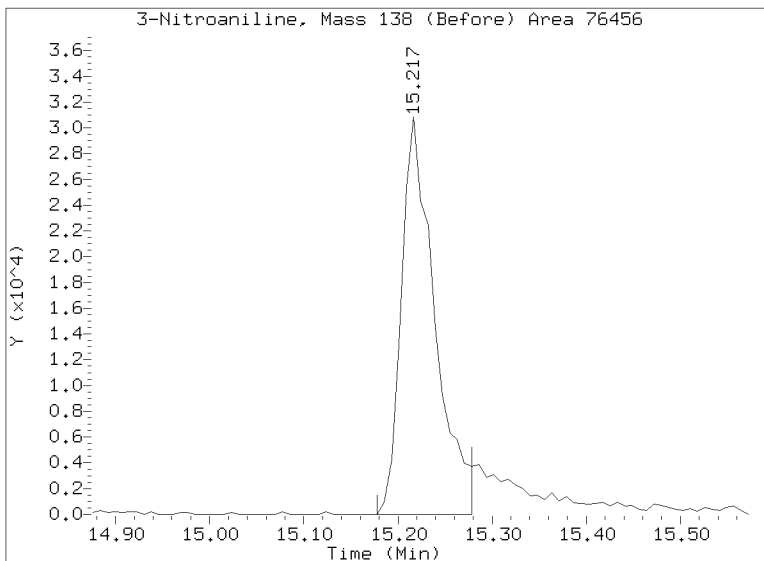
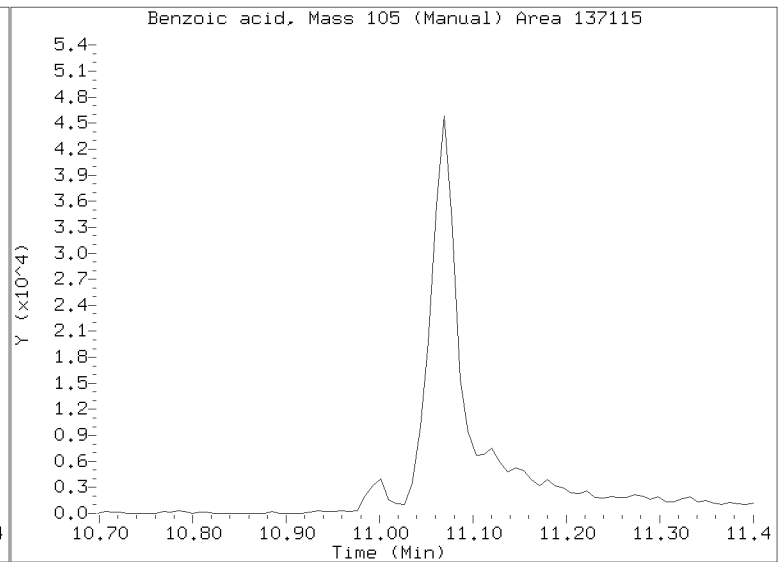
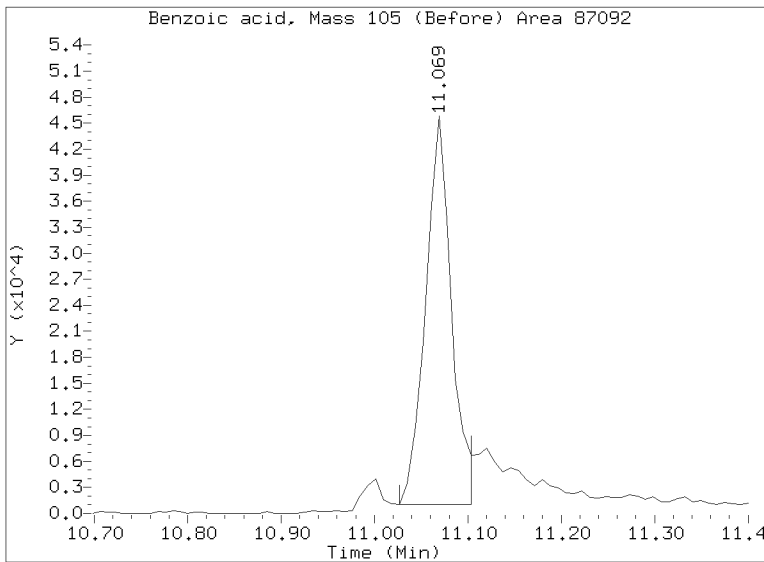
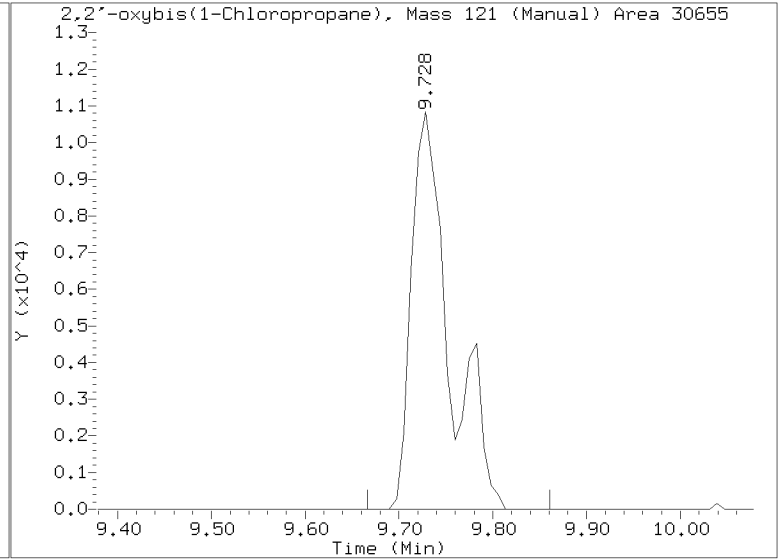
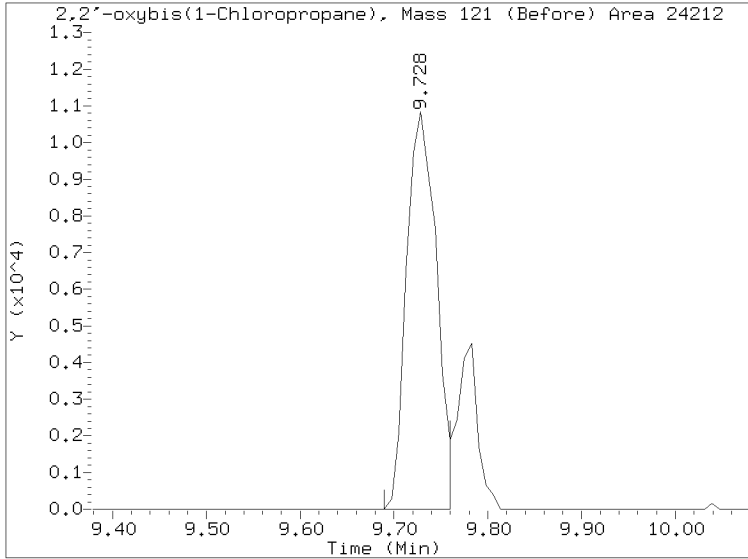
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

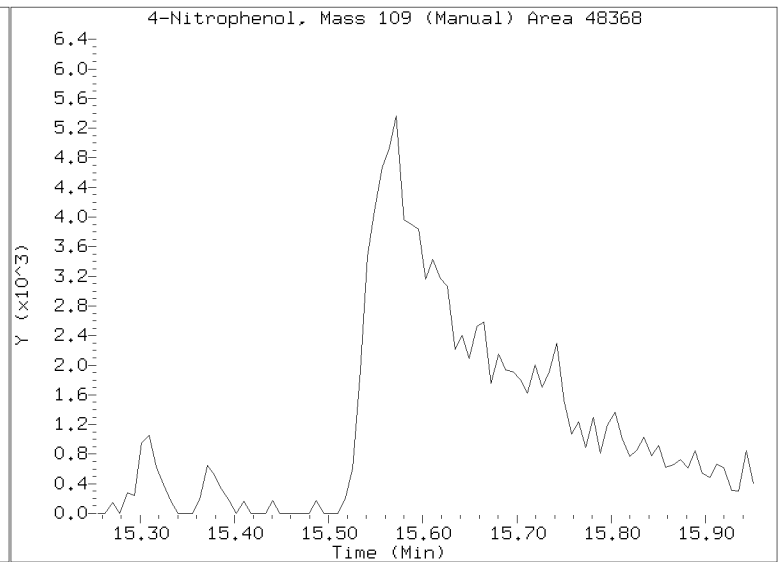
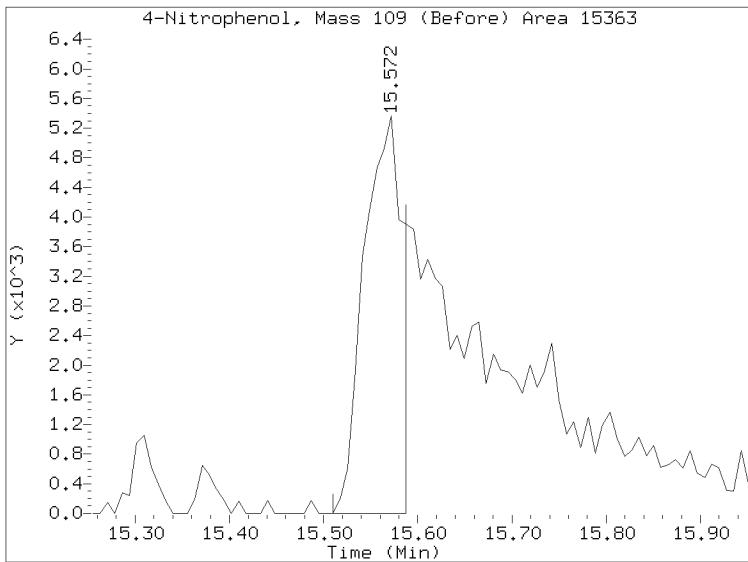
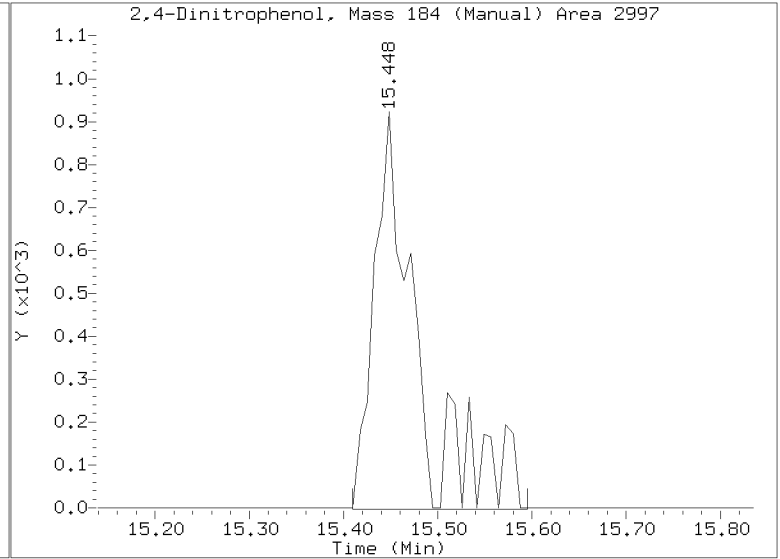
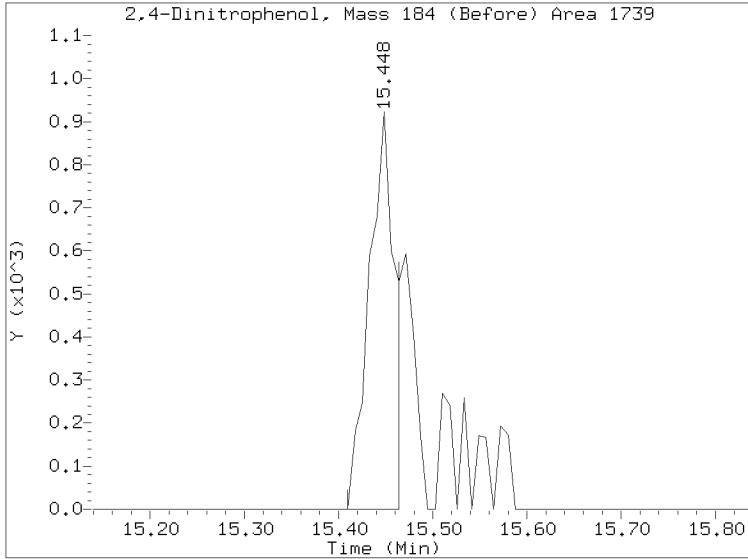
# Quant Ion Manual Peak Adjustment Report

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Injection Date: 01-MAR-2023 18:37  
Lab ID: SLC0084-CAL3 Client ID:  
Report Date: 03/07/2023 12:47



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012306.D  
Injection Date: 01-MAR-2023 18:37  
Lab ID:SLC0084-CAL3 Client ID:  
Report Date: 03/07/2023 12:47



Data File: \\target\share\chem3\nt10.1\20230304.1\NT1003042307.D

Date: 01-MAR-2023 19:15

Client ID:

Sample Info: SEQ-CAL2

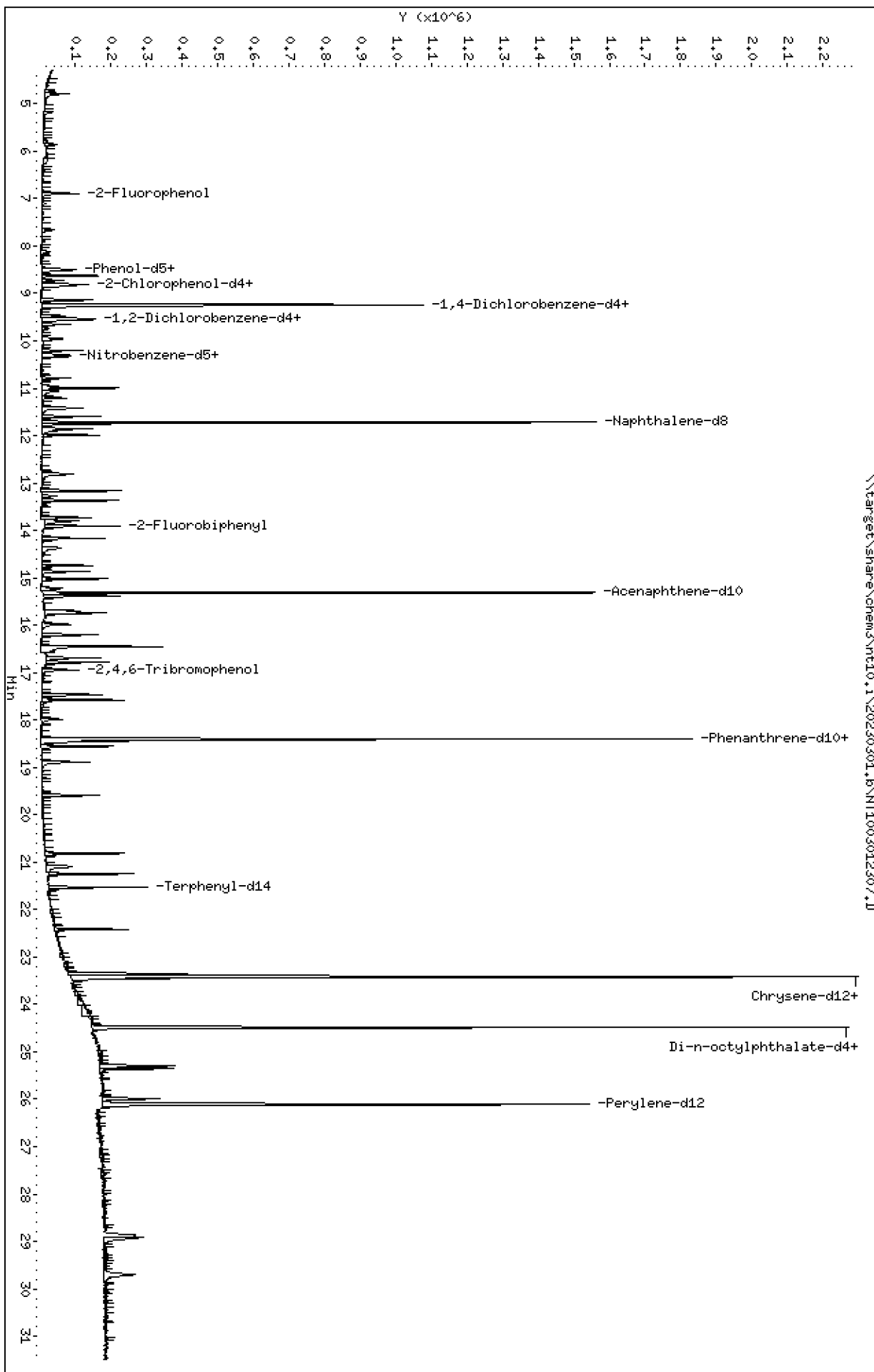
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012307.D  
 Lab Smp Id: SLC0084-CAL2  
 Inj Date : 01-MAR-2023 19:15  
 Operator : VTS  
 Smp Info : SEQ-CAL2  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 2  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
1 2-Fluorophenol	112		6.897	6.898	(0.746)	73083	0.75000	0.7515
2 Phenol-d5	99		8.489	8.489	(0.918)	71998	0.75000	0.6377
3 Phenol	94		8.512	8.512	(0.921)	54993	0.50000	0.4581
5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	65326	0.75000	0.6782
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	46454	0.50000	0.5064
6 2-Chlorophenol	128		8.844	8.844	(0.956)	49332	0.50000	0.4930
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	56555	0.50000	0.5126
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	309085	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	56202	0.50000	0.5128
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	38492	0.50000	0.5349
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	55997	0.50000	0.5279
11 Benzyl alcohol	108		9.472	9.472	(1.024)	22563	0.50000	0.3662
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	15951	0.50000	0.5216 (M)
13 2-Methylphenol	108		9.650	9.650	(1.044)	35097	0.50000	0.3770
17 Hexachloroethane	117		10.209	10.209	(1.104)	21596	0.50000	0.4801
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	33379	0.50000	0.4608
15 4-Methylphenol	108		9.938	9.938	(1.075)	34216	0.50000	0.2935
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	60423	0.50000	0.4823
19 Nitrobenzene	77		10.326	10.326	(0.881)	58860	0.50000	0.5008
20 Isophorone	82		10.784	10.784	(0.920)	67932	0.50000	0.4528
21 2-Nitrophenol	139		10.950	10.951	(0.934)	17402	0.50000	0.2672
22 2,4-Dimethylphenol	107		10.993	10.993	(0.938)	89913	1.00000	0.7989
23 Bis(2-Chloroethoxy)methane	93		11.205	11.205	(0.956)	44105	0.50000	0.4757
24 Benzoic acid	105		11.052	11.052	(0.943)	49931	2.00000	0.7491 (M)
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	51563	1.00000	0.5816
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	45843	0.50000	0.5198
* 27 Naphthalene-d8	136		11.719	11.719	(1.000)	1141293	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	146854	0.50000	0.5013
29 4-Chloroaniline	127		11.858	11.858	(1.012)	87089	1.00000	0.6783
30 Hexachlorobutadiene	225		11.997	11.997	(1.024)	33578	0.50000	0.5229
31 4-Chloro-3-methylphenol	107		12.809	12.809	(1.093)	73535	1.00000	0.7874 (M)
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	101087	0.50000	0.4885
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	4424	1.00000	0.2199



Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.730	13.730	(0.897)	37873	1.00000	0.6553
35 2,4,5-Trichlorophenol	196	13.808	13.808	(0.902)	46262	1.00000	0.7495 (M)
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.909)	103793	0.50000	0.4770
37 2-Chloronaphthalene	162	14.164	14.164	(0.925)	81746	0.50000	0.4786
38 2-Nitroaniline	65	14.365	14.365	(0.938)	27339	1.00000	0.5847
39 Dimethylphthalate	163	14.736	14.736	(0.963)	98784	0.50000	0.5014
40 Acenaphthylene	152	15.023	15.023	(0.981)	131073	0.50000	0.4451
41 2,6-Dinitrotoluene	165	14.868	14.868	(0.971)	31365	1.00000	0.7243
* 42 Acenaphthene-d10	164	15.309	15.309	(1.000)	610034	4.00000	
43 3-Nitroaniline	138	15.224	15.224	(0.994)	43311	1.00000	0.8718 (M)
44 Acenaphthene	153	15.378	15.378	(1.005)	85733	0.50000	0.4827
45 2,4-Dinitrophenol	184	15.487	15.487	(1.012)	110	2.00000	0.009684 (M)
46 Dibenzofuran	168	15.734	15.734	(1.028)	121057	0.50000	0.4593
47 4-Nitrophenol	109	15.603	15.603	(1.019)	13803	1.00000	0.4011 (M)
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.026)	37337	1.00000	0.5948
50 Diethylphthalate	149	16.198	16.198	(1.058)	100457	0.50000	0.4813
49 Fluorene	166	16.453	16.453	(1.075)	98414	0.50000	0.4488
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.075)	43341	0.50000	0.4527
52 4-Nitroaniline	138	16.484	16.484	(1.077)	47270	1.00000	0.8851 (M)
53 4,6-Dinitro-2-methylphenol	198	16.538	16.538	(0.899)	4630	2.00000	0.1693
54 N-Nitrosodiphenylamine	169	16.693	16.693	(0.907)	74962	0.50000	0.4317
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.107)	18967	0.75000	0.5052
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	34249	0.50000	0.4868
57 Hexachlorobenzene	284	17.573	17.573	(0.955)	40888	0.50000	0.5161
58 Pentachlorophenol	266	17.983	17.983	(0.977)	14168	1.00000	0.3878
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1173527	4.00000	
60 Phenanthrene	178	18.448	18.448	(1.003)	143016	0.50000	0.4762
61 Anthracene	178	18.556	18.556	(1.008)	133884	0.50000	0.4597
62 Carbazole	167	18.889	18.889	(1.026)	122901	0.50000	0.4607
63 Di-n-butylphthalate	149	19.585	19.585	(1.064)	146445	0.50000	0.4038
64 Fluoranthene	202	20.815	20.815	(0.889)	155822	0.50000	0.4522
65 Pyrene	202	21.248	21.248	(0.907)	164566	0.50000	0.4690
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	131168	0.50000	0.4620
67 Butylbenzylphthalate	149	22.410	22.410	(0.957)	70195	0.50000	0.3719
68 Benzo(a)anthracene	228	23.401	23.401	(0.999)	158176	0.50000	0.4479
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	1001661	4.00000	
70 3,3'-Dichlorobenzidine	252	23.347	23.347	(0.997)	142024	1.50000	0.9022
71 Chrysene	228	23.463	23.463	(1.002)	140361	0.50000	0.4890
72 bis(2-Ethylhexyl)phthalate	149	23.409	23.409	(0.956)	105513	0.50000	0.4214
* 134 Di-n-octylphthalate-d4	153	24.485	24.485	(1.000)	1783007	4.00000	
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	204916	0.50000	0.5183
74 Benzo(b)fluoranthene	252	25.298	25.298	(0.969)	156722	0.50000	0.4299
75 Benzo(k)fluoranthene	252	25.352	25.352	(0.971)	155908	0.50000	0.4441
76 Benzo(a)pyrene	252	25.987	25.987	(0.996)	144884	0.50000	0.4445
* 77 Perylene-d12	264	26.103	26.103	(1.000)	1066145	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.863	28.863	(1.106)	151642	0.50000	0.3981
79 Dibenzo(a,h)anthracene	278	28.925	28.925	(1.108)	126593	0.50000	0.4379
80 Benzo(g,h,i)perylene	276	29.709	29.709	(1.138)	127815	0.50000	0.4212
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	69861	1.00000	1.113 (M)
91 Aniline	93	8.628	8.628	(0.933)	135586	1.00000	0.9742
93 Benzidine	184	21.094	21.094	(0.901)	121576	1.00000	0.7948 (M)
103 Pyridine	79	4.789	4.789	(0.518)	112215	1.00000	1.008
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	91063	0.50000	0.4862
111 Azobenzene (1,2-DP-Hydrazine)	77	16.778	16.778	(1.096)	142734	0.50000	0.4580

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252		25.352	25.352	(0.971)	310053	1.00000	0.8852
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.982	(1.044)	20543	0.50000	0.3587

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012307.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL2  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	309085	-8.46
27 Naphthalene-d8	1265187	632594	2530374	1141293	-9.79
42 Acenaphthene-d10	692385	346193	1384770	610034	-11.89
59 Phenanthrene-d10	1376777	688389	2753554	1173527	-14.76
69 Chrysene-d12	1019524	509762	2039048	1001661	-1.75
134 Di-n-octylphthala	2027111	1013556	4054222	1783007	-12.04
77 Perylene-d12	1027409	513705	2054818	1066145	3.77

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.01
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012307.D

Lab ID: SLC0084-CAL2  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 19:15

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

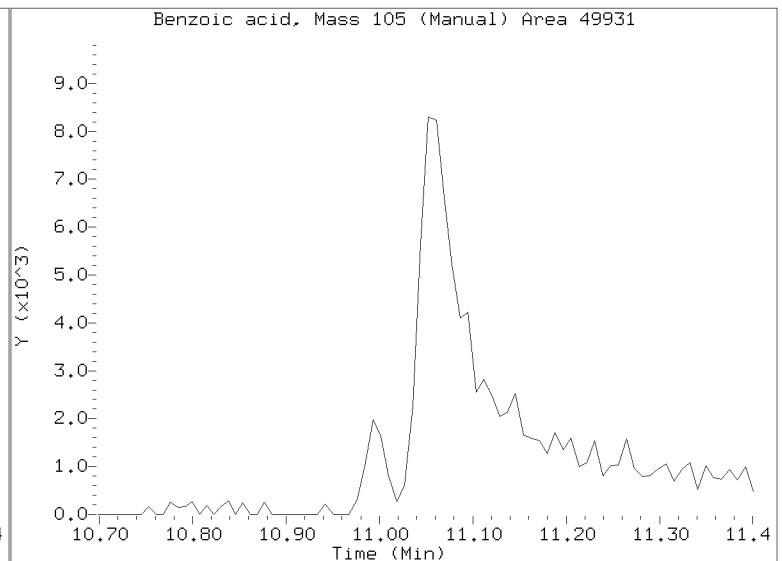
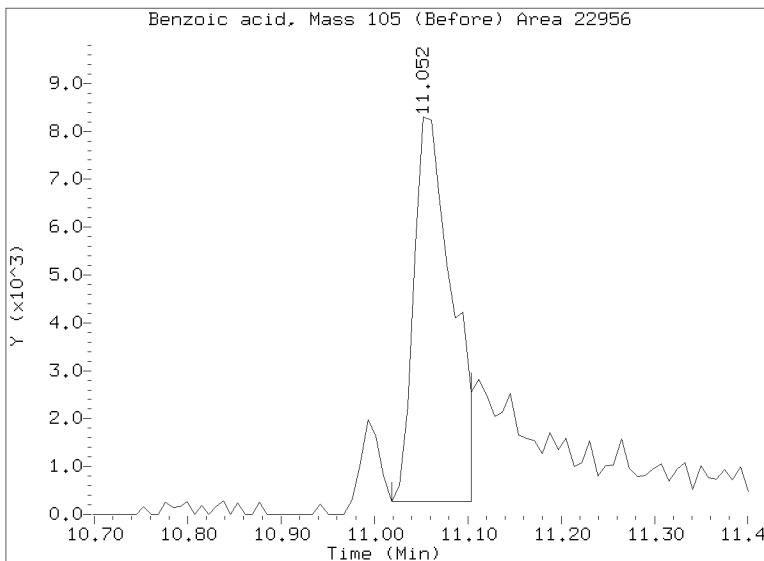
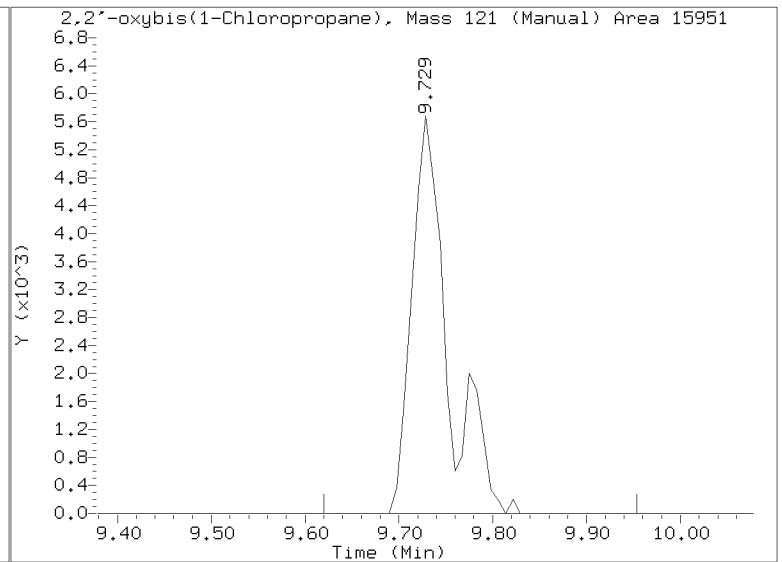
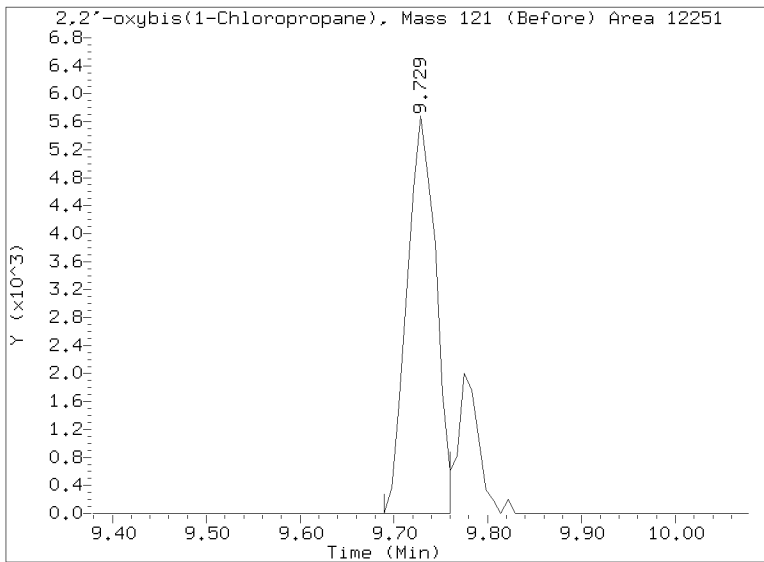
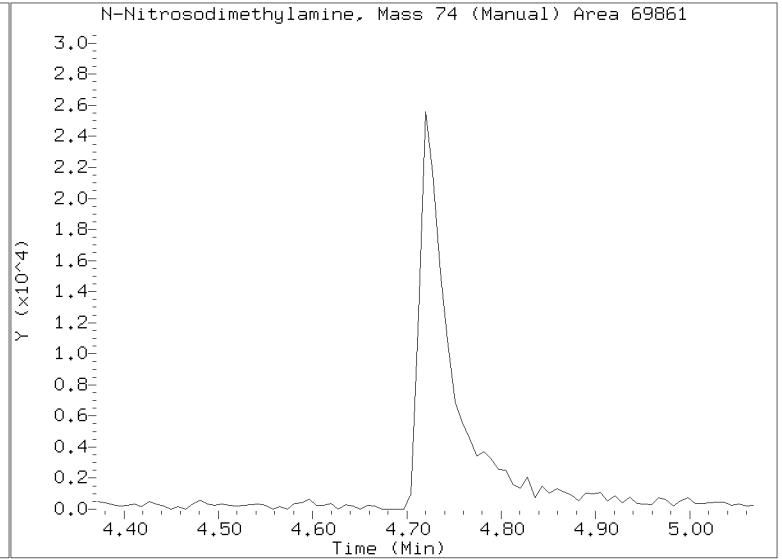
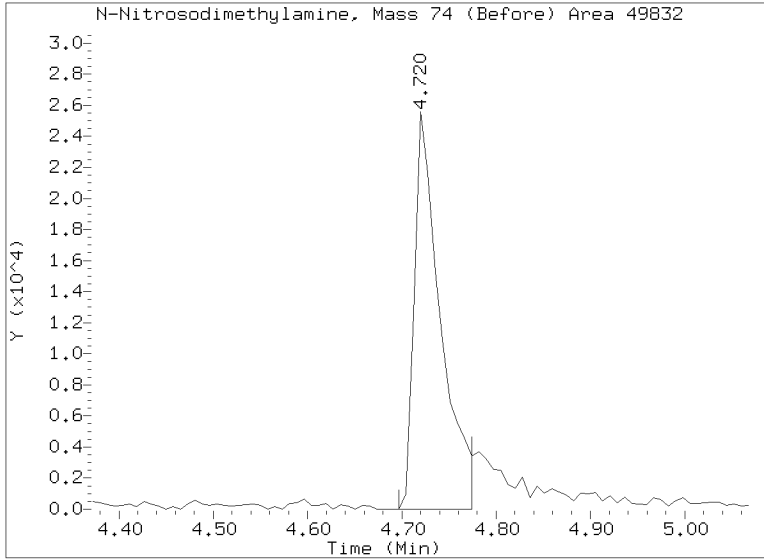
# Quant Ion Manual Peak Adjustment Report

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Injection Date: 01-MAR-2023 19:15

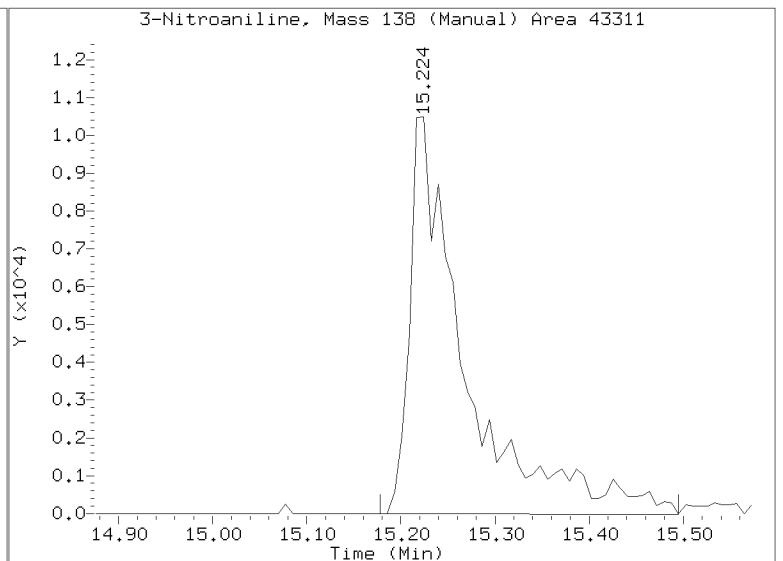
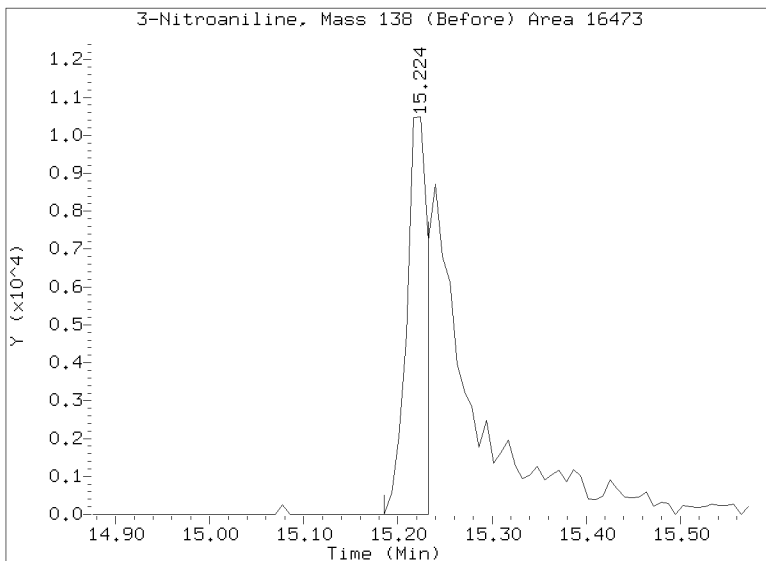
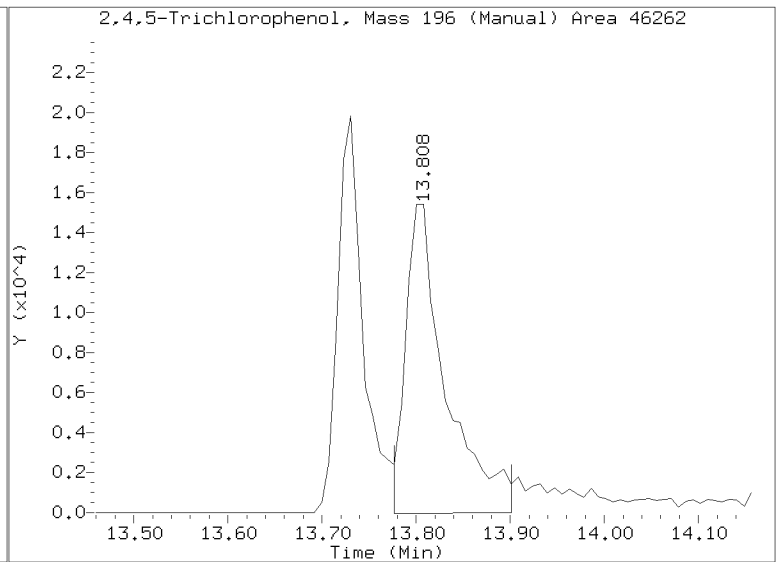
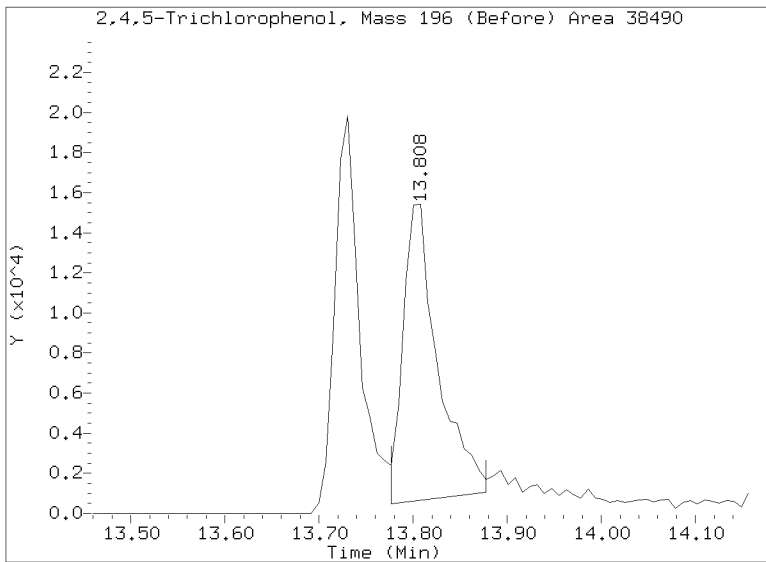
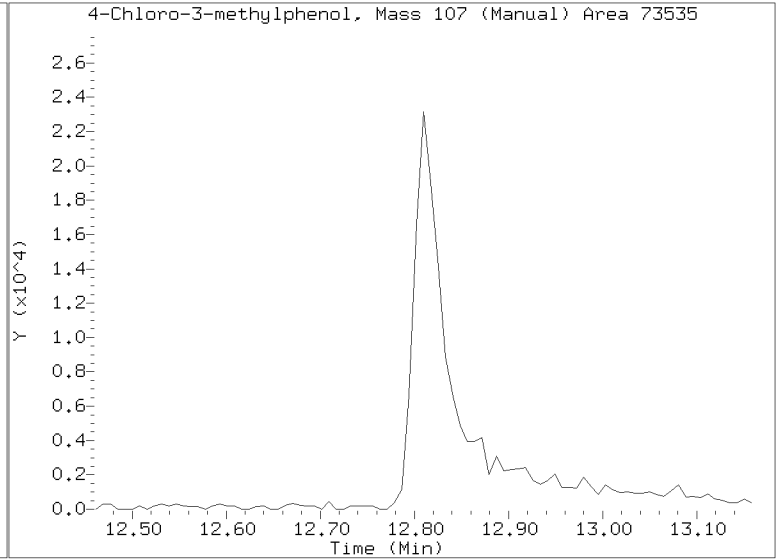
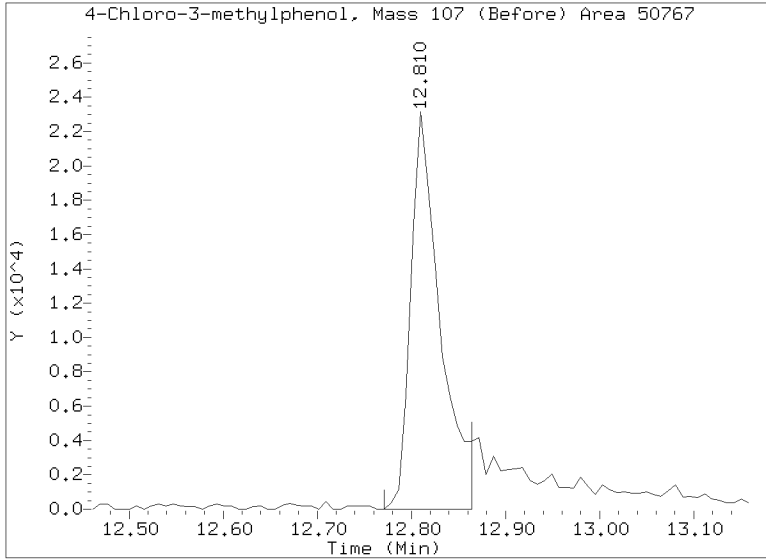
Lab ID: SLC0084-CAL2 Client ID:

Report Date: 03/07/2023 12:48



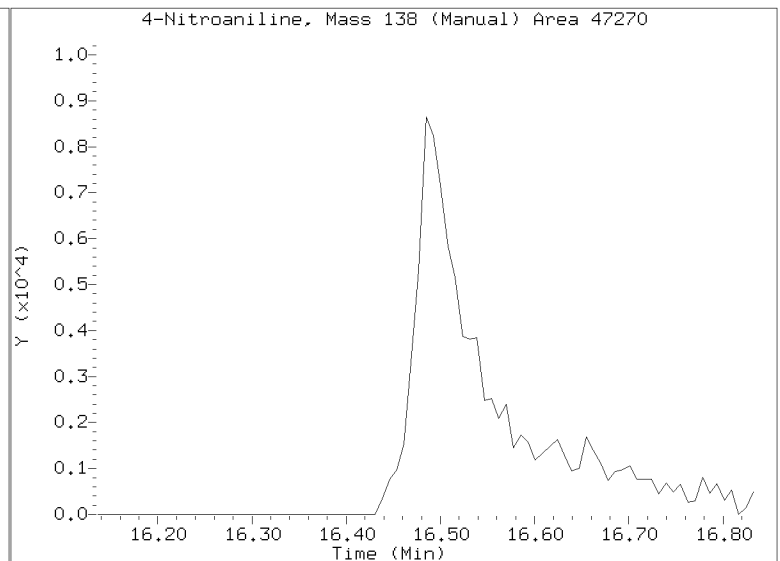
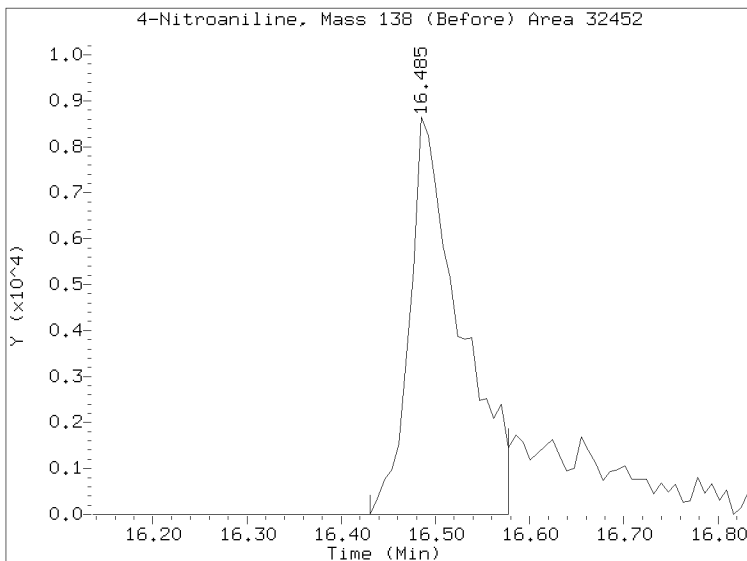
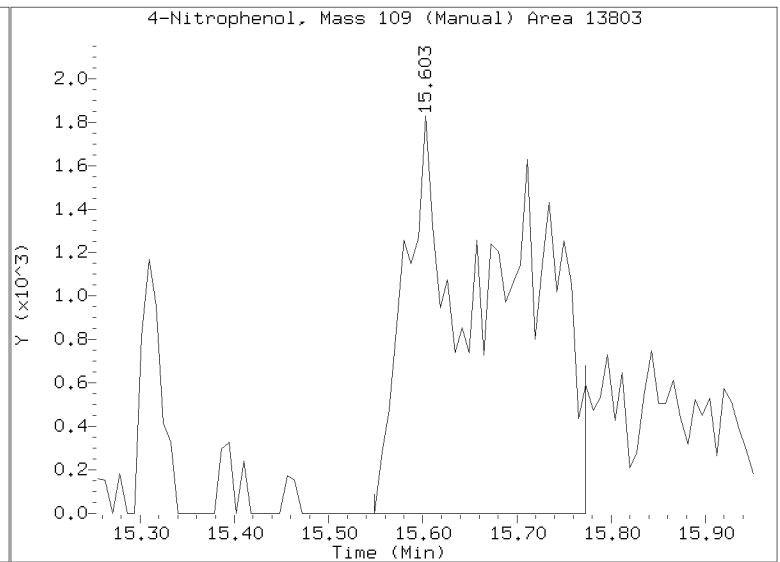
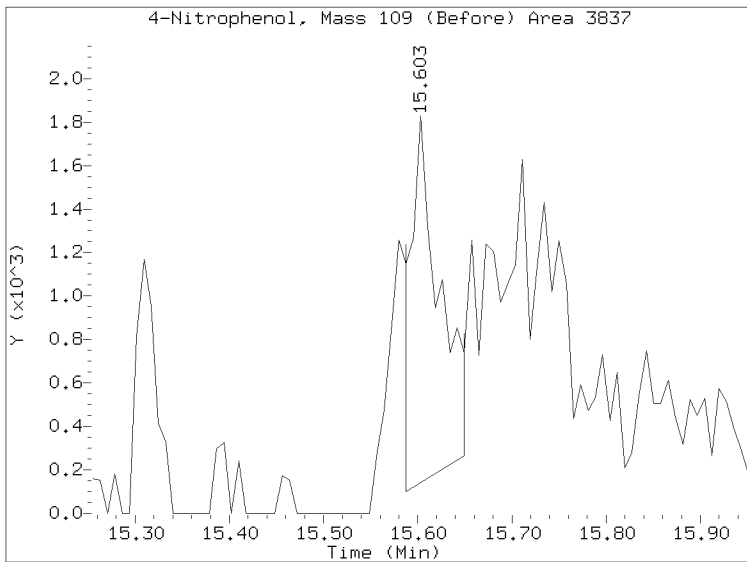
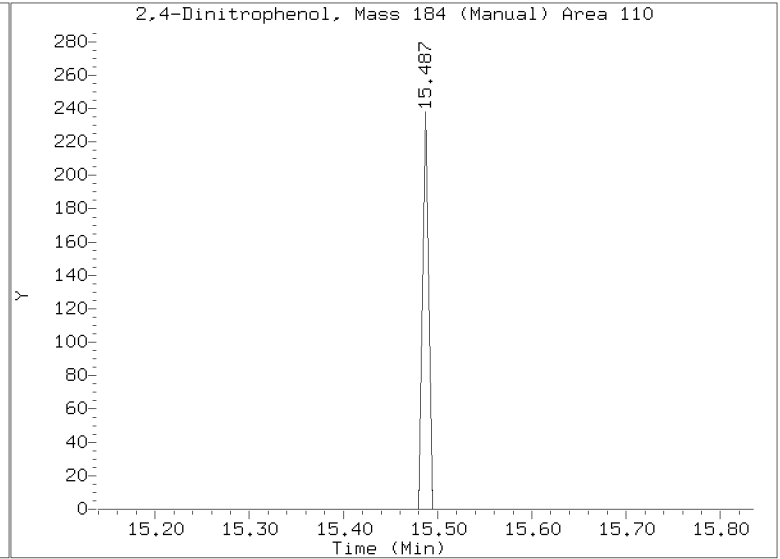
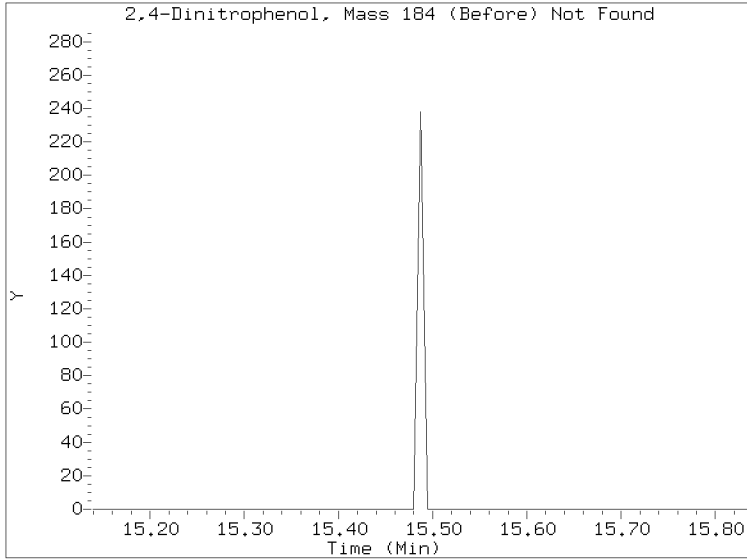
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Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012307.D  
Injection Date: 01-MAR-2023 19:15  
Lab ID: SLC0084-CAL2 Client ID:  
Report Date: 03/07/2023 12:48



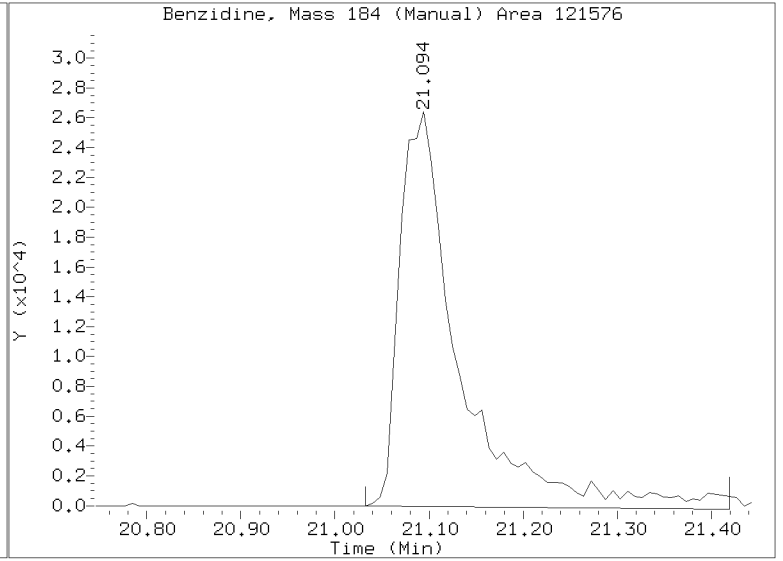
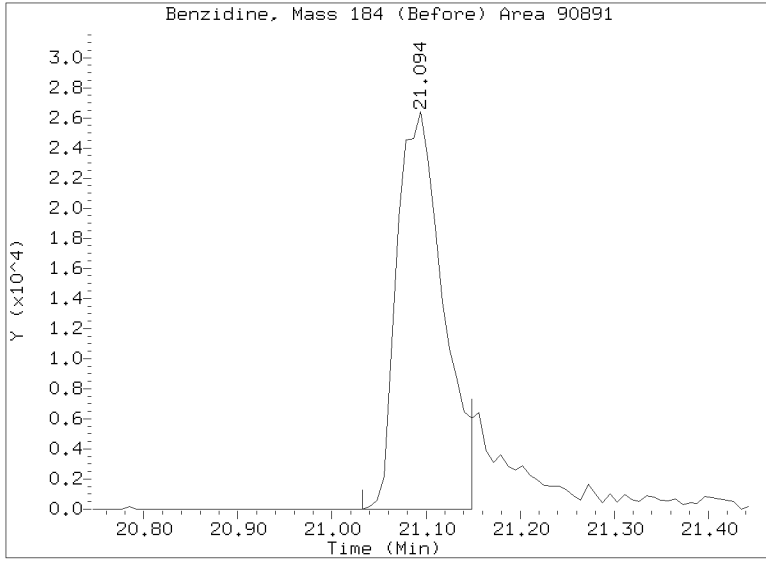
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Injection Date: 01-MAR-2023 19:15  
Lab ID: SLC0084-CAL2 Client ID:  
Report Date: 03/07/2023 12:48



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012307.D  
Injection Date: 01-MAR-2023 19:15  
Lab ID:SLC0084-CAL2 Client ID:  
Report Date: 03/07/2023 12:48

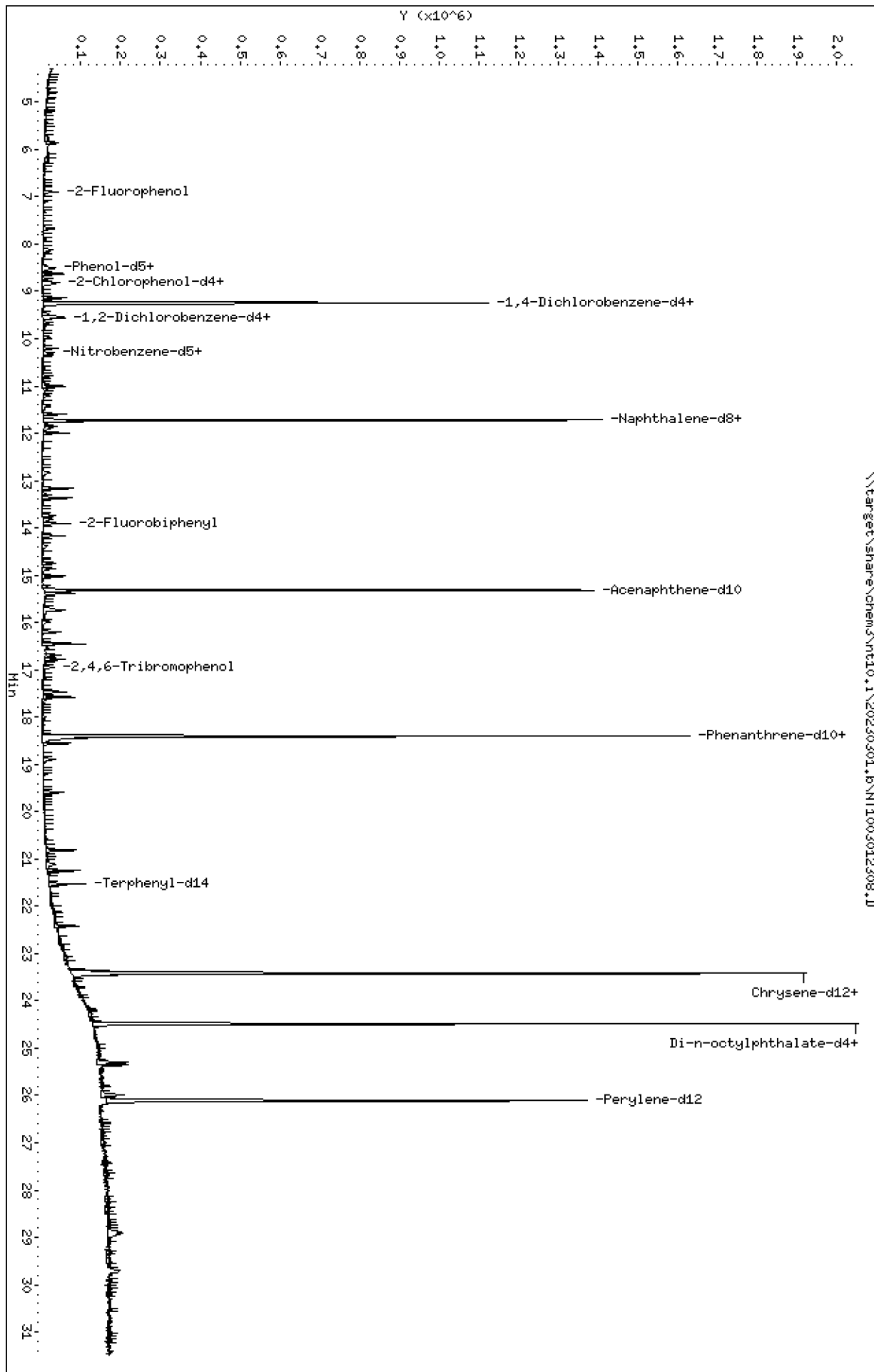




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Date: 01-HR-2023 19:53  
Client ID:  
Sample Info: SEQ-CALL  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: VTS  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.6\NT1003012308.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012308.D  
 Lab Smp Id: SLC0084-CAL1  
 Inj Date : 01-MAR-2023 19:53  
 Operator : VTS  
 Smp Info : SEQ-CAL1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Calibration Sample, Level: 1  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.898	(0.746)	25602	0.30000	0.2755
\$ 2 Phenol-d5	99		8.488	8.489	(0.918)	26717	0.30000	0.2477 (M)
3 Phenol	94		8.519	8.512	(0.921)	18277	0.20000	0.1594
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	21173	0.30000	0.2301
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	17577	0.20000	0.2006
6 2-Chlorophenol	128		8.844	8.844	(0.956)	15855	0.20000	0.1658
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	21720	0.20000	0.2060
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	295317	4.00000	
9 1,4-Dichlorobenzene	146		9.277	9.278	(1.003)	20713	0.20000	0.1978
\$ 10 1,2-Dichlorobenzene-d4	152		9.533	9.534	(1.031)	13448	0.20000	0.1956 (M)
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	20309	0.20000	0.2004
11 Benzyl alcohol	108		9.479	9.472	(1.025)	5646	0.20000	0.09603
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.728	(1.053)	5507	0.20000	0.1885 (M)
13 2-Methylphenol	108		9.658	9.650	(1.044)	9715	0.20000	0.1094
17 Hexachloroethane	117		10.209	10.209	(1.104)	8788	0.20000	0.2045
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	12076	0.20000	0.1745 (M)
15 4-Methylphenol	108		9.953	9.938	(1.076)	11667	0.20000	0.1047 (M)
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	19356	0.20000	0.1640
19 Nitrobenzene	77		10.333	10.326	(0.882)	19314	0.20000	0.1745
20 Isophorone	82		10.783	10.784	(0.920)	27546	0.20000	0.1949 (M)
21 2-Nitrophenol	139		10.950	10.951	(0.934)	4962	0.20000	0.08077
22 2,4-Dimethylphenol	107		11.001	10.993	(0.939)	27927	0.40000	0.2638
23 Bis(2-Chloroethoxy)methane	93		11.213	11.205	(0.957)	14385	0.20000	0.1647
24 Benzoic acid	105		11.085	11.052	(0.946)	14999	0.80000	0.2391 (M)
25 2,4-Dichlorophenol	162		11.416	11.417	(0.974)	17852	0.40000	0.2140 (M)
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	15571	0.20000	0.1874
* 27 Naphthalene-d8	136		11.718	11.719	(1.000)	1075084	4.00000	
28 Naphthalene	128		11.764	11.765	(1.004)	54135	0.20000	0.1962
29 4-Chloroaniline	127		11.865	11.858	(1.013)	30944	0.40000	0.2562 (M)
30 Hexachlorobutadiene	225		11.996	11.997	(1.024)	10228	0.20000	0.1691
31 4-Chloro-3-methylphenol	107		12.817	12.809	(1.094)	26030	0.40000	0.2965 (M)
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	33913	0.20000	0.1740
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	1171	0.40000	0.06762

Compounds	QUANT SIG		AMOUNTS					
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
34 2,4,6-Trichlorophenol	196	13.730	13.730	(0.896)	9351	0.40000	0.1882	
35 2,4,5-Trichlorophenol	196	13.815	13.808	(0.902)	15928	0.40000	0.3001 (M)	
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.908)	32684	0.20000	0.1743	
37 2-Chloronaphthalene	162	14.163	14.164	(0.925)	25881	0.20000	0.1758	
38 2-Nitroaniline	65	14.372	14.365	(0.938)	15452	0.40000	0.3838 (M)	
39 Dimethylphthalate	163	14.744	14.736	(0.963)	29256	0.20000	0.1723	
40 Acenaphthylene	152	15.022	15.023	(0.981)	48690	0.20000	0.1919	
41 2,6-Dinitrotoluene	165	14.867	14.868	(0.971)	7739	0.40000	0.2078	
* 42 Acenaphthene-d10	164	15.316	15.309	(1.000)	525641	4.00000		
43 3-Nitroaniline	138	15.231	15.224	(0.994)	11148	0.40000	0.2604 (M)	
44 Acenaphthene	153	15.378	15.378	(1.004)	28519	0.20000	0.1864	
45 2,4-Dinitrophenol	184	Compound Not Detected.						
46 Dibenzofuran	168	15.741	15.734	(1.028)	40195	0.20000	0.1770	
47 4-Nitrophenol	109	Compound Not Detected.						
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.025)	12046	0.40000	0.2230	
50 Diethylphthalate	149	16.197	16.198	(1.058)	31220	0.20000	0.1736	
49 Fluorene	166	16.453	16.453	(1.074)	31088	0.20000	0.1645	
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	13684	0.20000	0.1663	
52 4-Nitroaniline	138	16.515	16.484	(1.078)	14319	0.40000	0.3112 (M)	
53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.						
54 N-Nitrosodiphenylamine	169	16.692	16.693	(0.907)	25288	0.20000	0.1606	
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.106)	5717	0.30000	0.1771	
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	9489	0.20000	0.1487	
57 Hexachlorobenzene	284	17.580	17.573	(0.955)	14082	0.20000	0.1960	
58 Pentachlorophenol	266	17.998	17.983	(0.978)	2963	0.40000	0.08958 (M)	
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1064230	4.00000		
60 Phenanthrene	178	18.447	18.448	(1.003)	48914	0.20000	0.1796	
61 Anthracene	178	18.556	18.556	(1.008)	43808	0.20000	0.1659	
62 Carbazole	167	18.896	18.889	(1.027)	40590	0.20000	0.1678 (M)	
63 Di-n-butylphthalate	149	19.592	19.585	(1.065)	47781	0.20000	0.1456	
64 Fluoranthene	202	20.815	20.815	(0.889)	49202	0.20000	0.1574	
65 Pyrene	202	21.248	21.248	(0.907)	54871	0.20000	0.1724	
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	45467	0.20000	0.1766	
67 Butylbenzylphthalate	149	22.409	22.410	(0.957)	20677	0.20000	0.1206	
68 Benzo(a)anthracene	228	23.400	23.401	(0.999)	55541	0.20000	0.1734	
* 69 Chrysene-d12	240	23.416	23.416	(1.000)	908515	4.00000		
70 3,3'-Dichlorobenzidine	252	23.362	23.347	(0.998)	43228	0.60000	0.3030	
71 Chrysene	228	23.462	23.463	(1.002)	52710	0.20000	0.2025 (M)	
72 bis(2-Ethylhexyl)phthalate	149	23.408	23.409	(0.956)	33184	0.20000	0.1426	
* 134 Di-n-octylphthalate-d4	153	24.484	24.485	(1.000)	1659419	4.00000		
73 Di-n-octylphthalate	149	24.492	24.492	(1.000)	76336	0.20000	0.2074	
74 Benzo(b)fluoranthene	252	25.297	25.298	(0.969)	50227	0.20000	0.1519	
75 Benzo(k)fluoranthene	252	25.359	25.352	(0.972)	51821	0.20000	0.1628	
76 Benzo(a)pyrene	252	25.986	25.987	(0.996)	45223	0.20000	0.1530	
* 77 Perylene-d12	264	26.102	26.103	(1.000)	969731	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.870	28.863	(1.106)	50510	0.20000	0.1461 (M)	
79 Dibenzo(a,h)anthracene	278	28.924	28.925	(1.108)	40681	0.20000	0.1552 (M)	
80 Benzo(g,h,i)perylene	276	29.717	29.709	(1.138)	44573	0.20000	0.1618 (M)	
90 N-Nitrosodimethylamine	74	4.742	4.719	(0.513)	25771	0.40000	0.4296 (M)	
91 Aniline	93	8.627	8.628	(0.933)	47923	0.40000	0.3604	
93 Benzidine	184	21.093	21.094	(0.901)	29448	0.40000	0.2122 (M)	
103 Pyridine	79	4.796	4.789	(0.519)	43491	0.40000	0.4088 (M)	
105 1-methylnaphthalene	142	13.366	13.366	(1.141)	31583	0.20000	0.1790	
111 Azobenzene (1,2-DP-Hydrazine)	77	16.777	16.778	(1.095)	41927	0.20000	0.1561	

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	
187 Total Benzofluoranthenes	252		25.297	25.352	(0.969)	105381	0.40000	0.3317
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.982	(1.043)	5199	0.20000	0.1056

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012308.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-CAL1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	295317	-12.54
27 Naphthalene-d8	1265187	632594	2530374	1075084	-15.03
42 Acenaphthene-d10	692385	346193	1384770	525641	-24.08
59 Phenanthrene-d10	1376777	688389	2753554	1064230	-22.70
69 Chrysene-d12	1019524	509762	2039048	908515	-10.89
134 Di-n-octylphthala	2027111	1013556	4054222	1659419	-18.14
77 Perylene-d12	1027409	513705	2054818	969731	-5.61

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012308.D

Lab ID: SLC0084-CAL1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 19:53

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

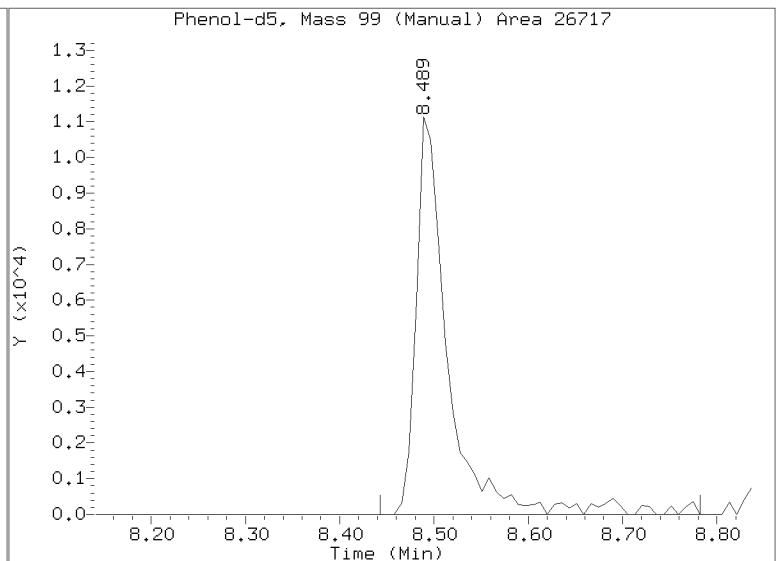
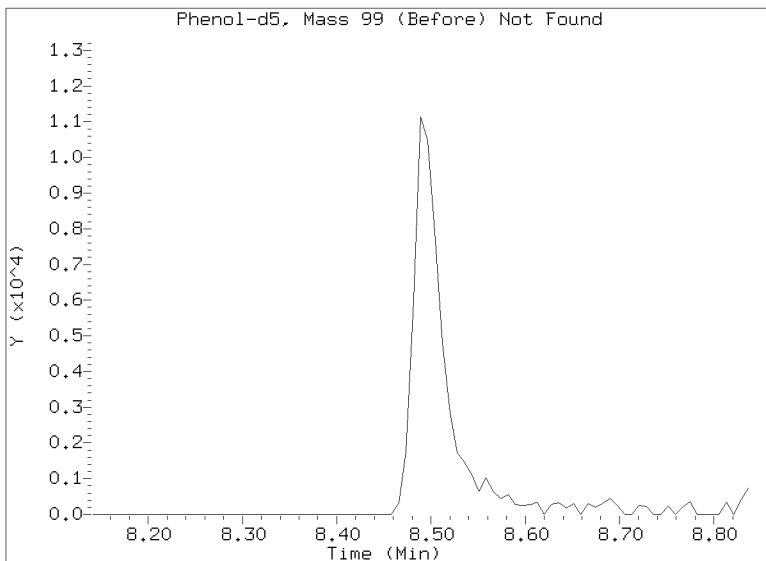
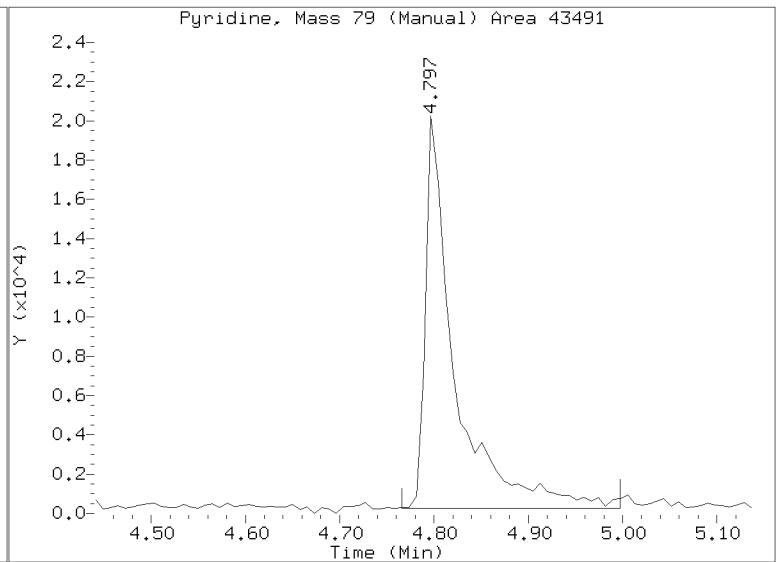
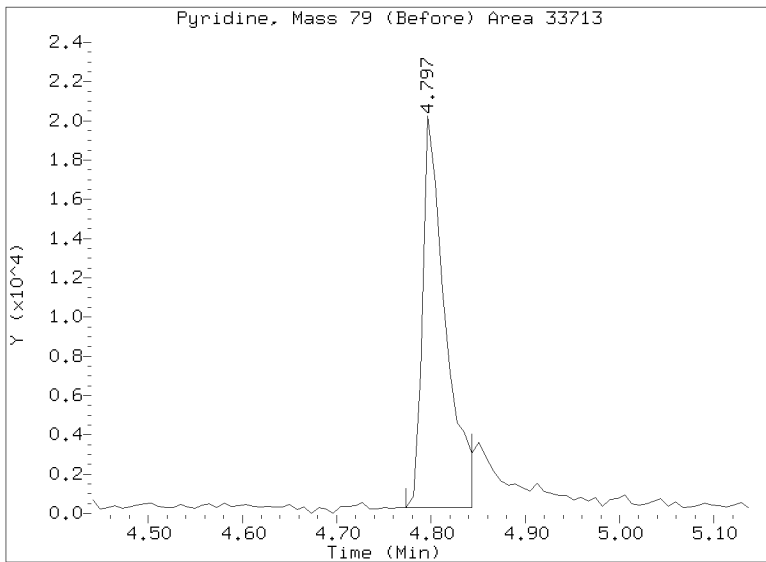
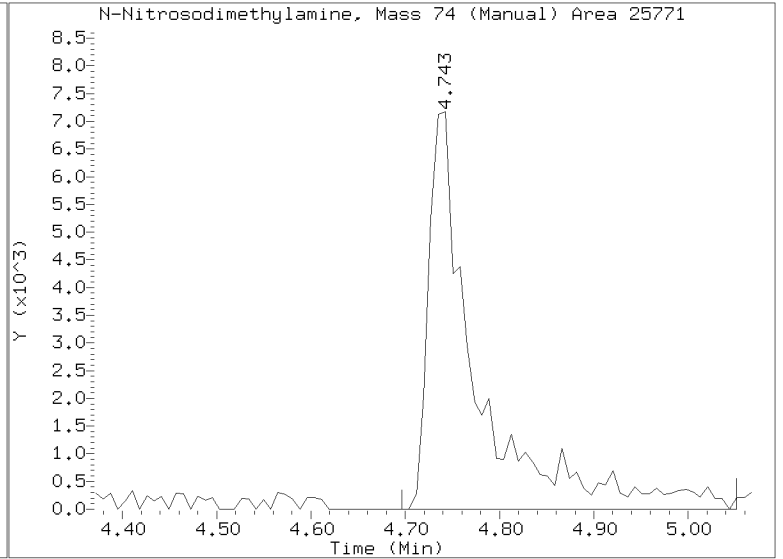
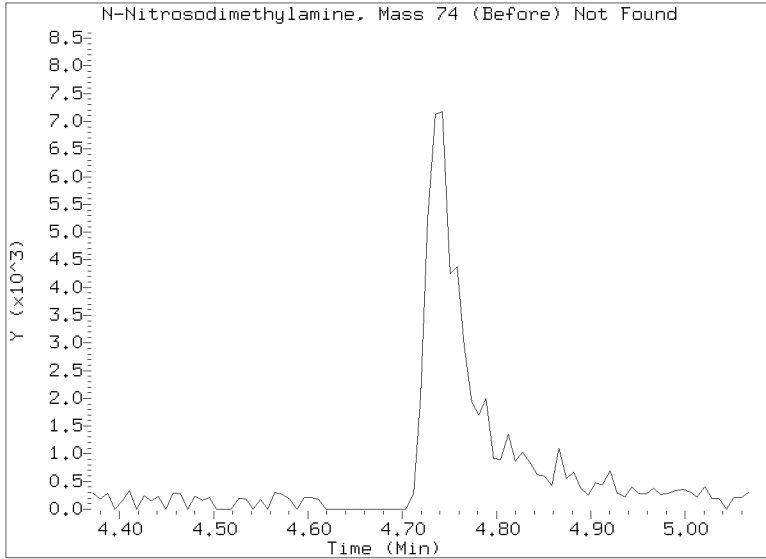
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

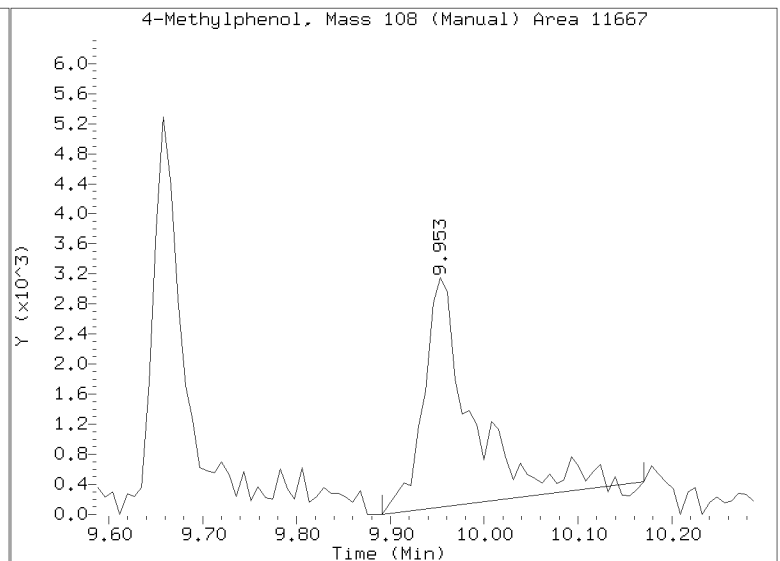
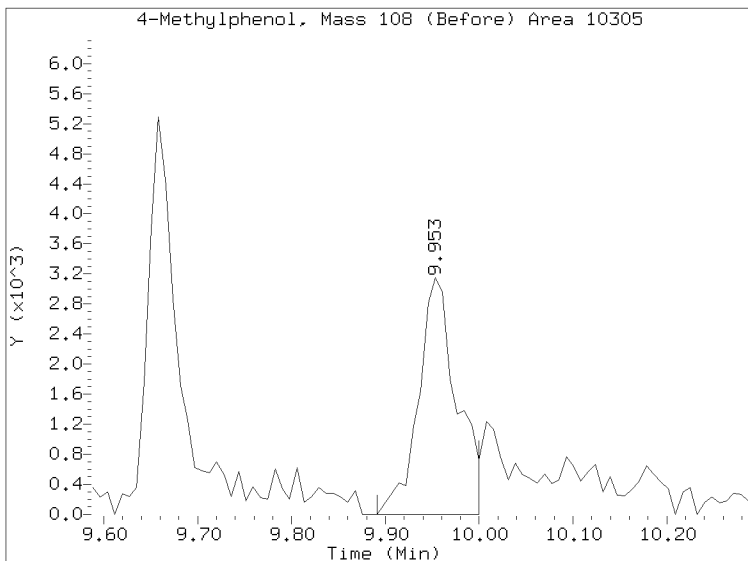
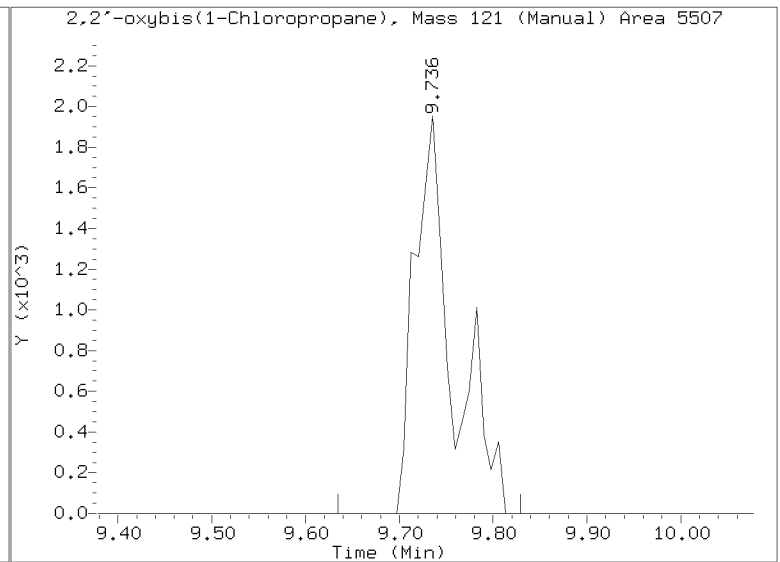
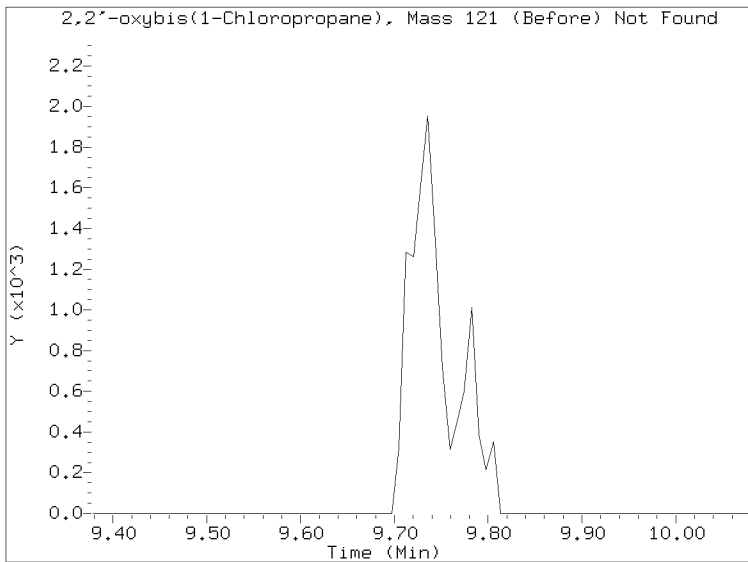
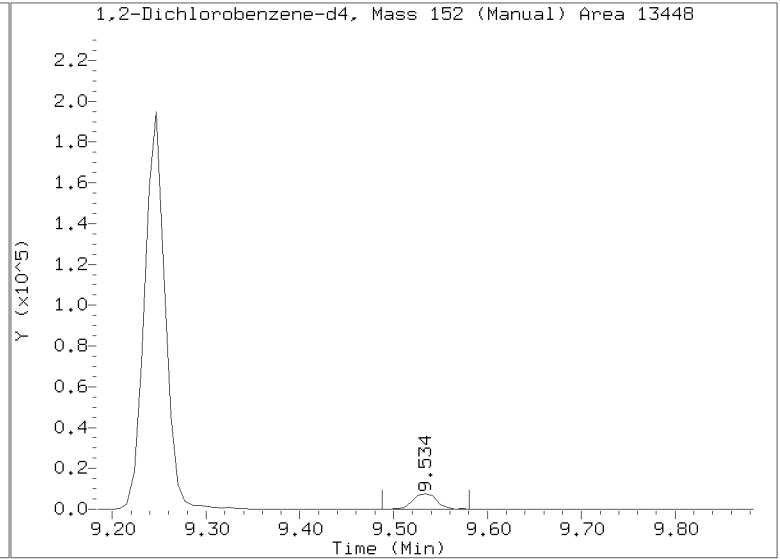
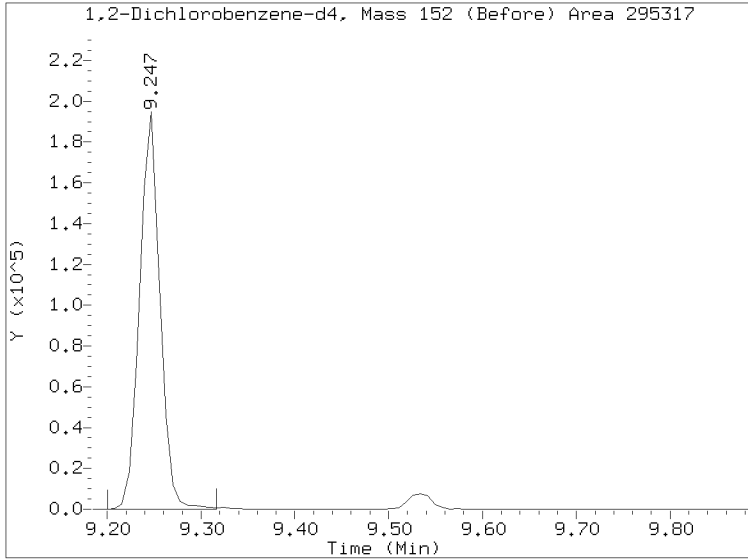
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Injection Date: 01-MAR-2023 19:53  
Lab ID:SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



# Quant Ion Manual Peak Adjustment Report

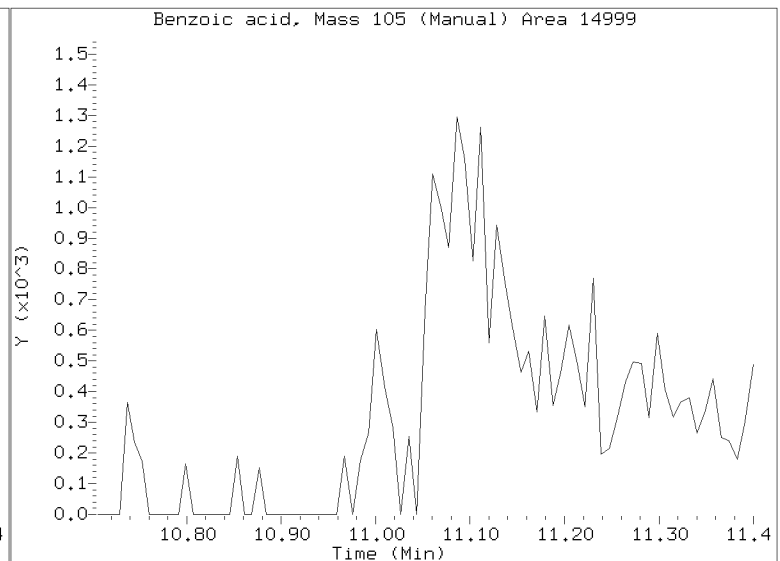
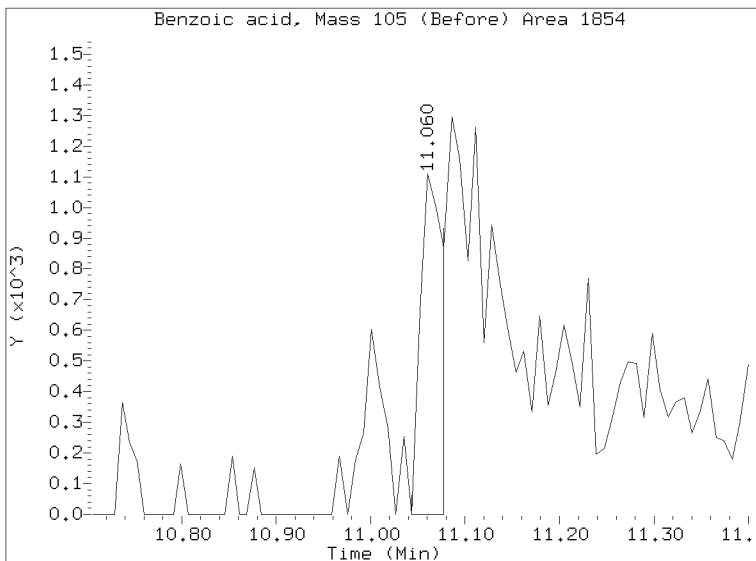
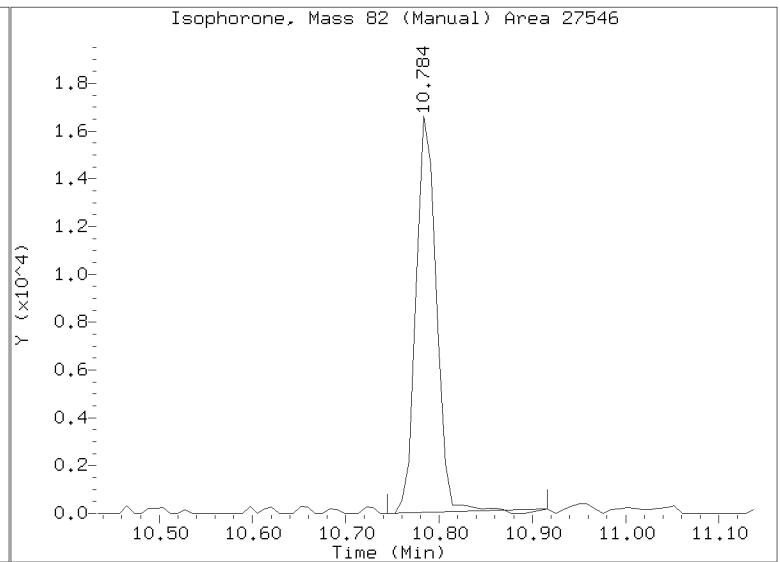
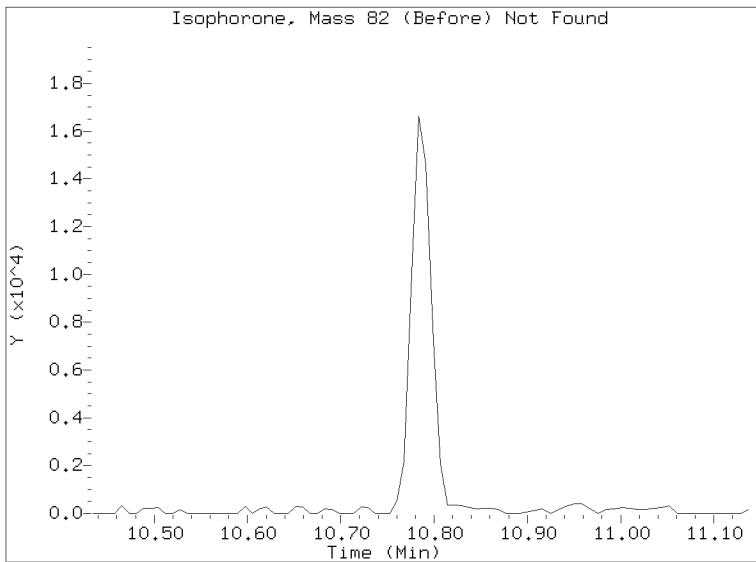
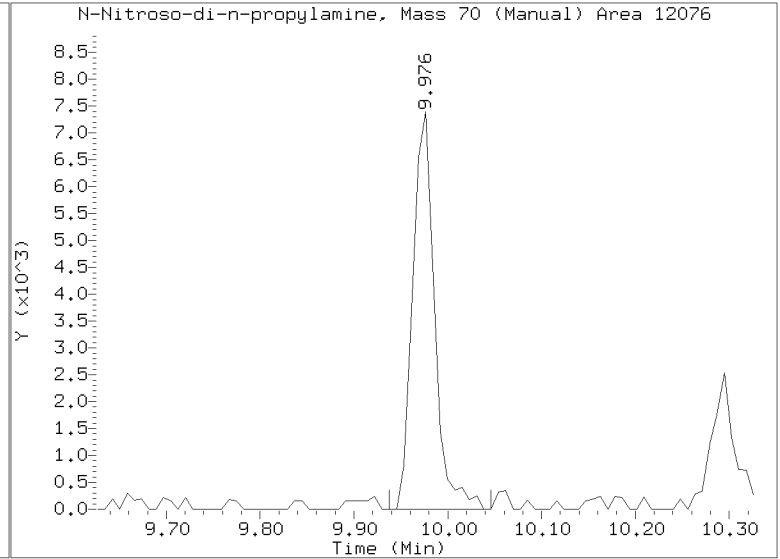
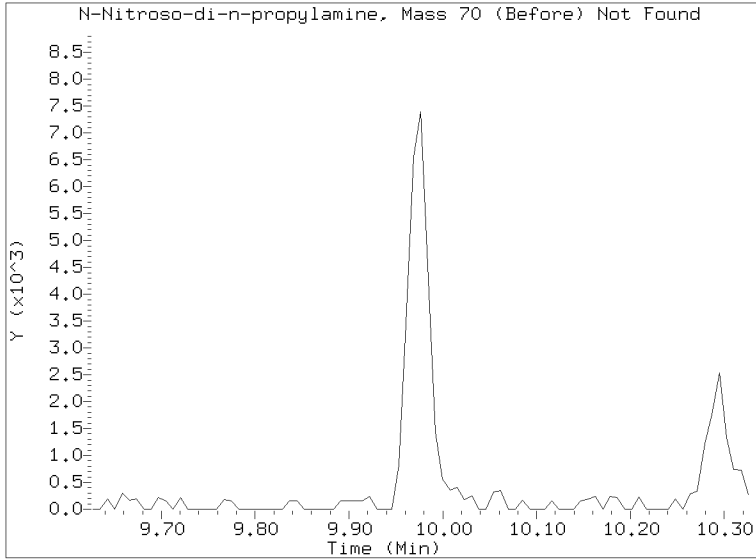
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Injection Date: 01-MAR-2023 19:53  
Lab ID: SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48





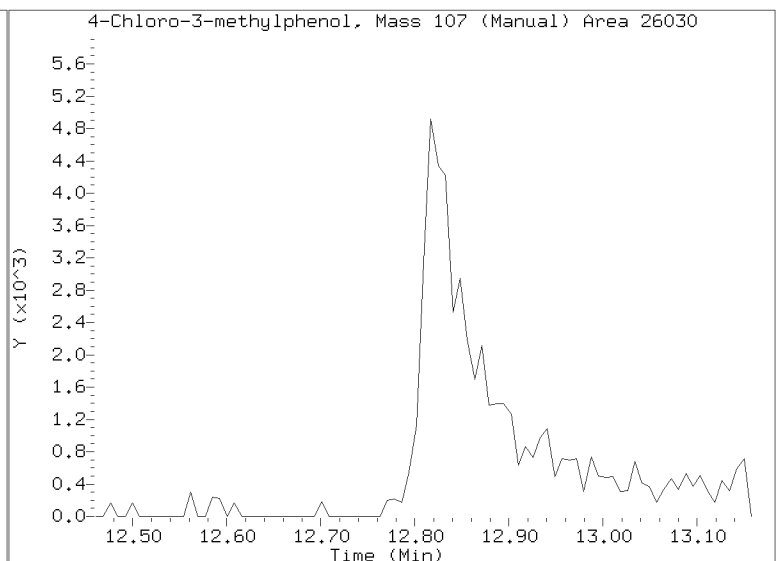
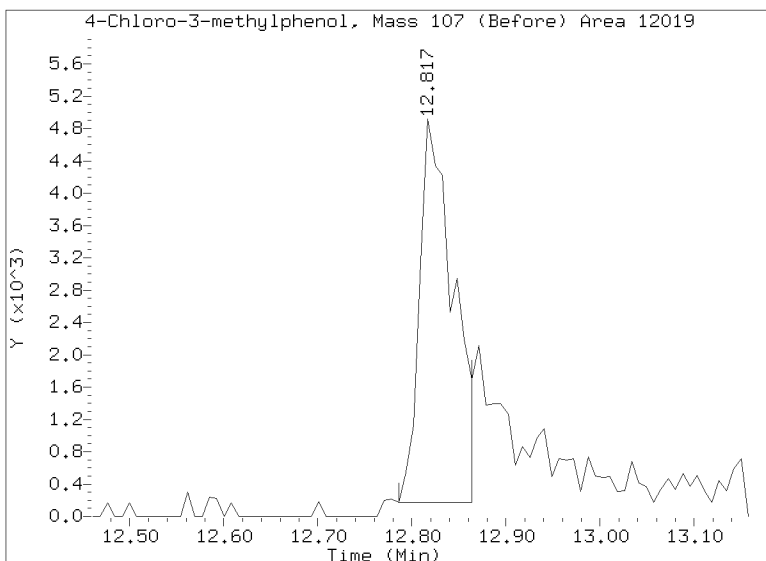
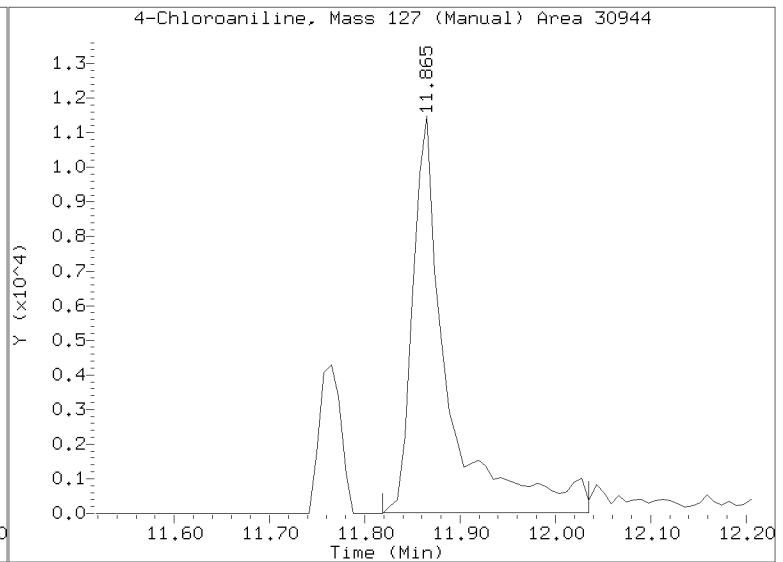
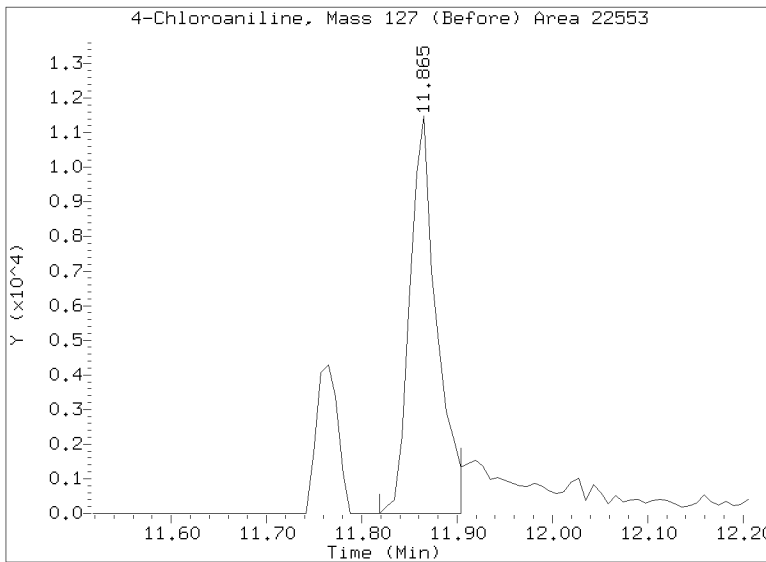
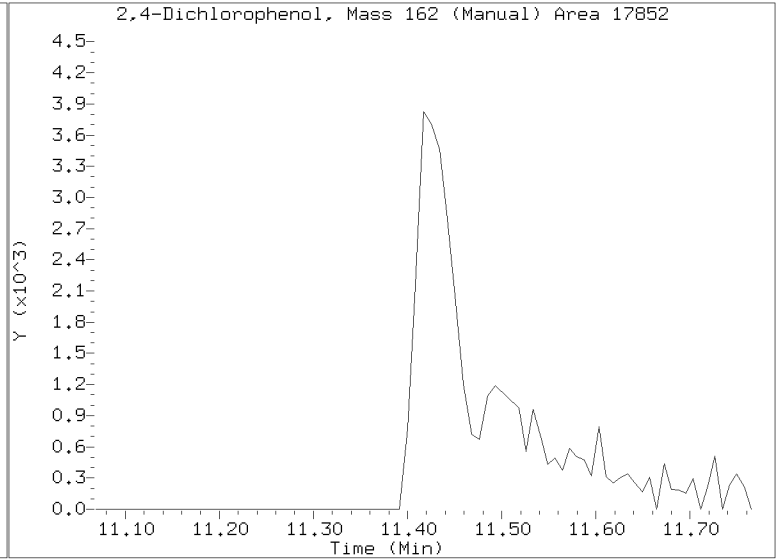
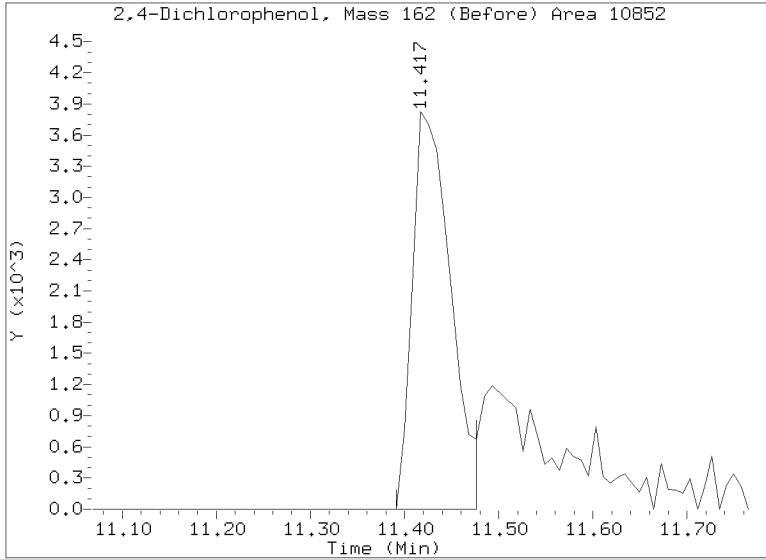
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Injection Date: 01-MAR-2023 19:53  
Lab ID: SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



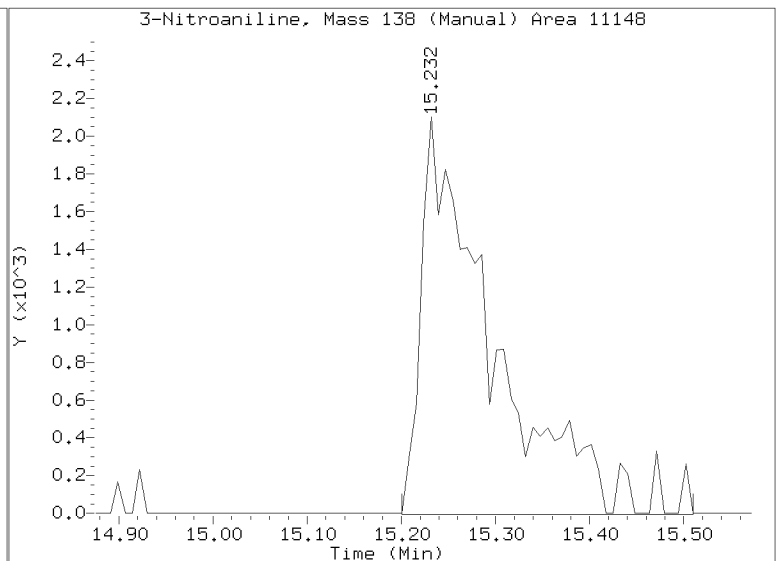
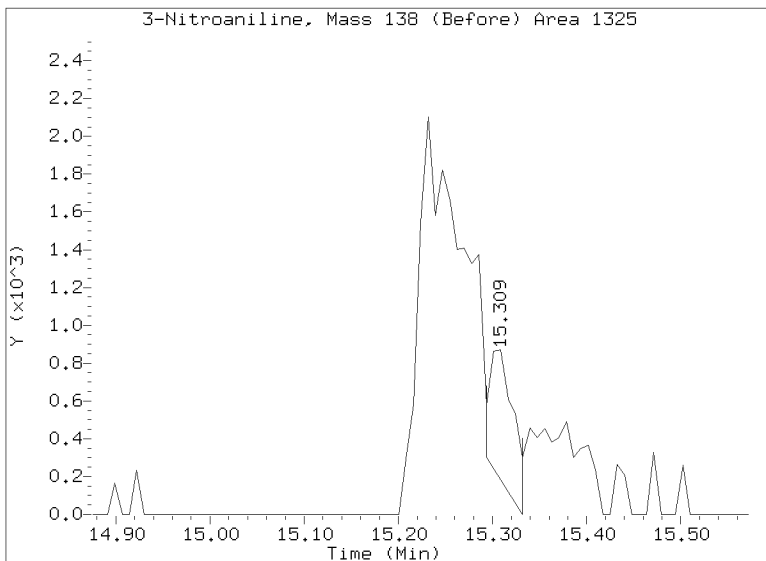
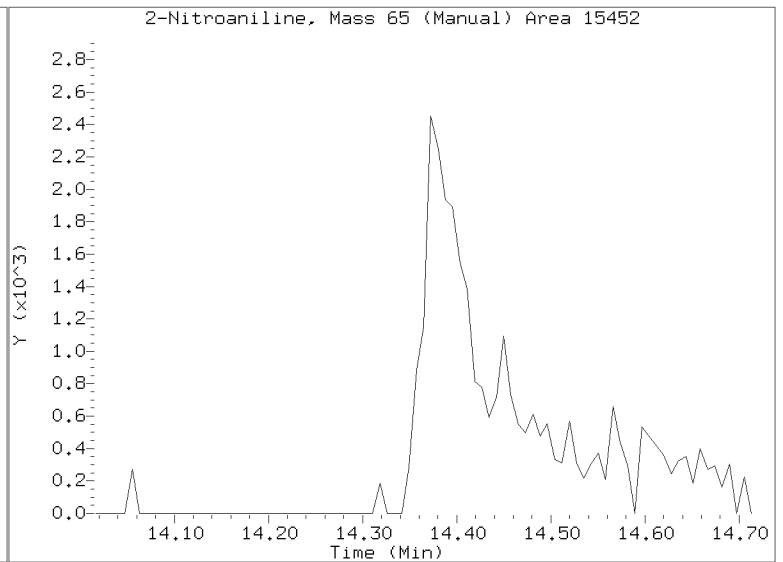
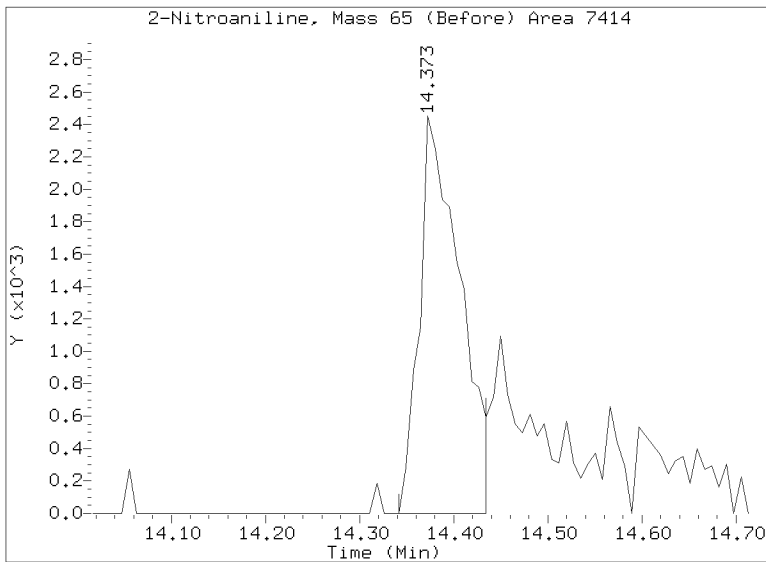
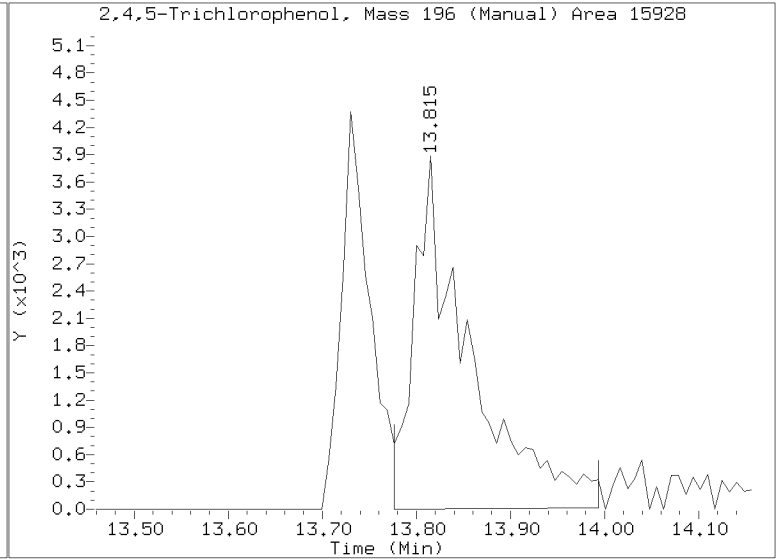
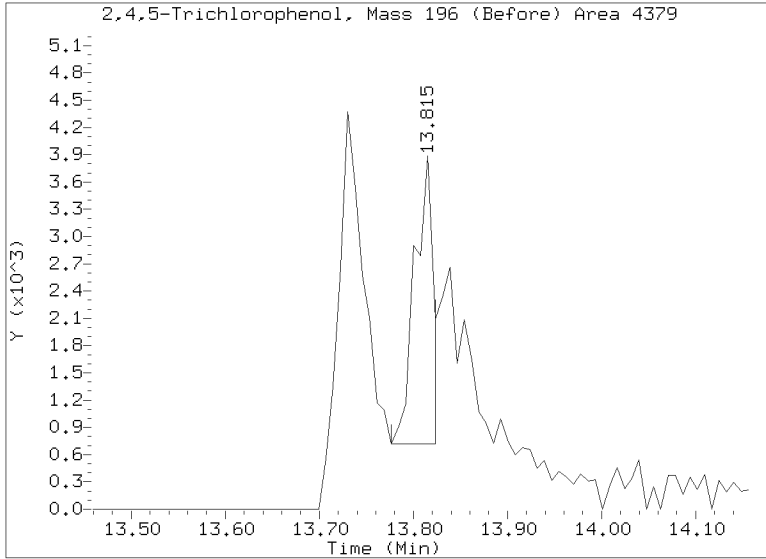
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Injection Date: 01-MAR-2023 19:53  
Lab ID: SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



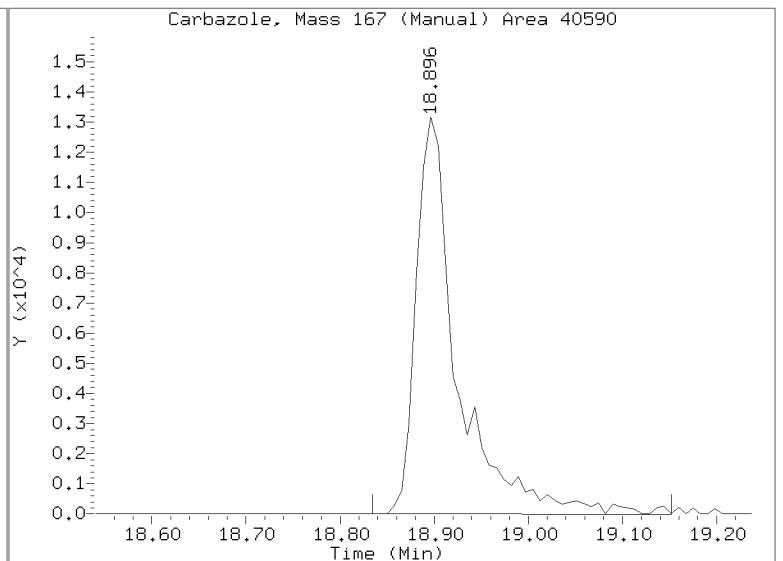
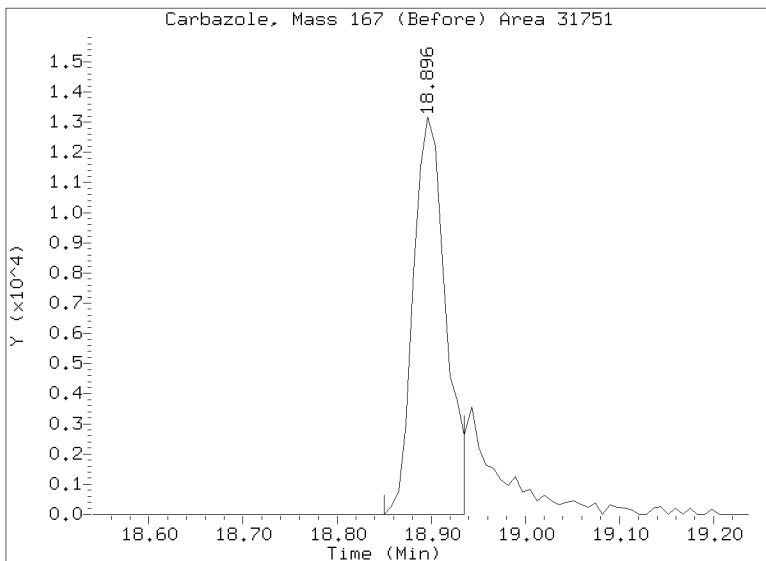
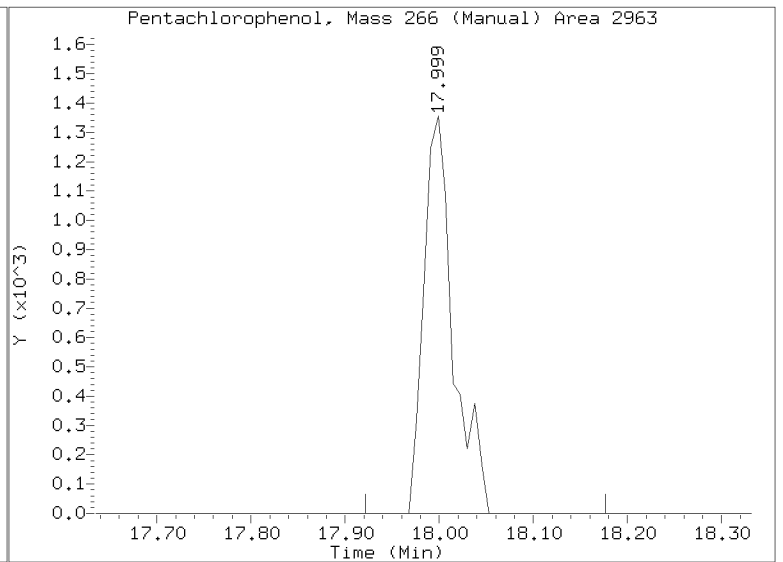
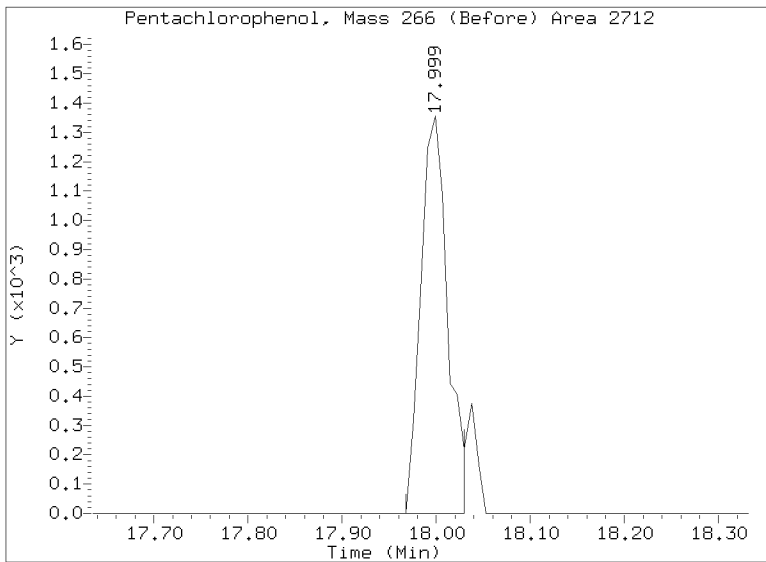
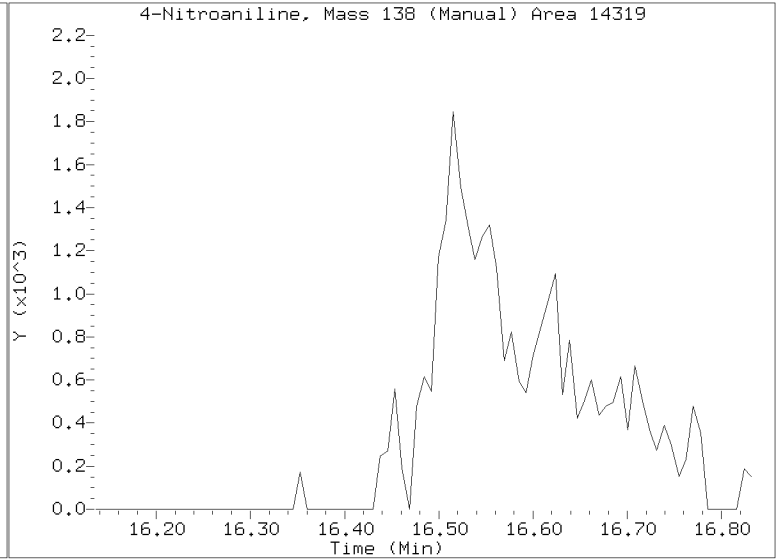
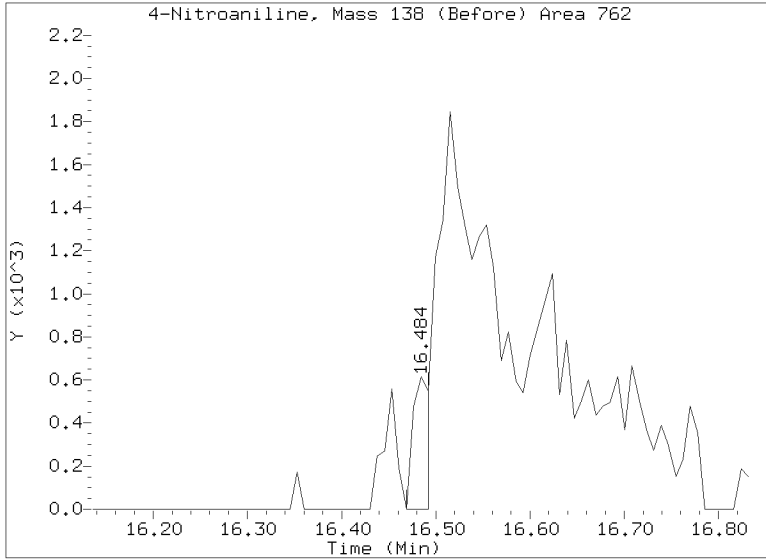
# Quant Ion Manual Peak Adjustment Report

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Injection Date: 01-MAR-2023 19:53  
Lab ID:SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



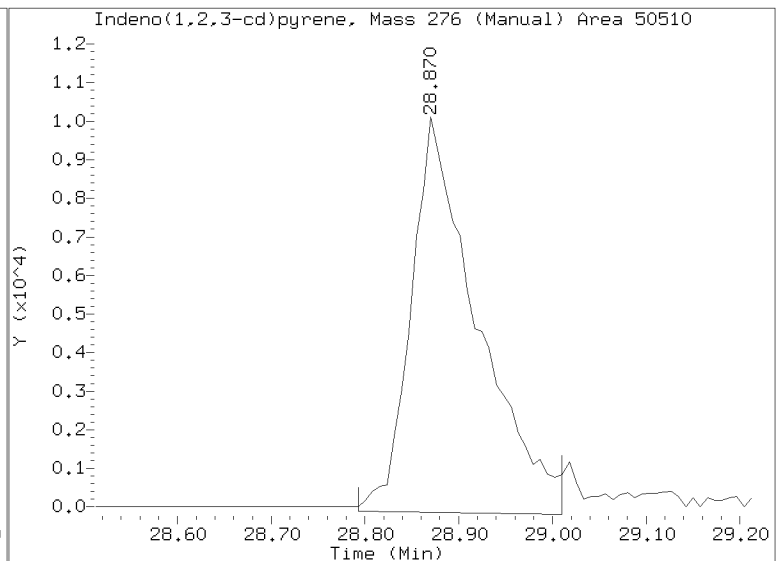
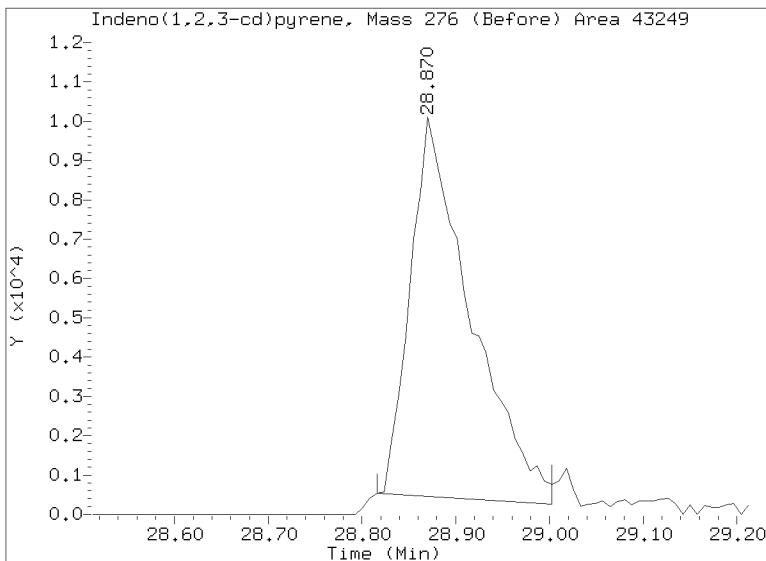
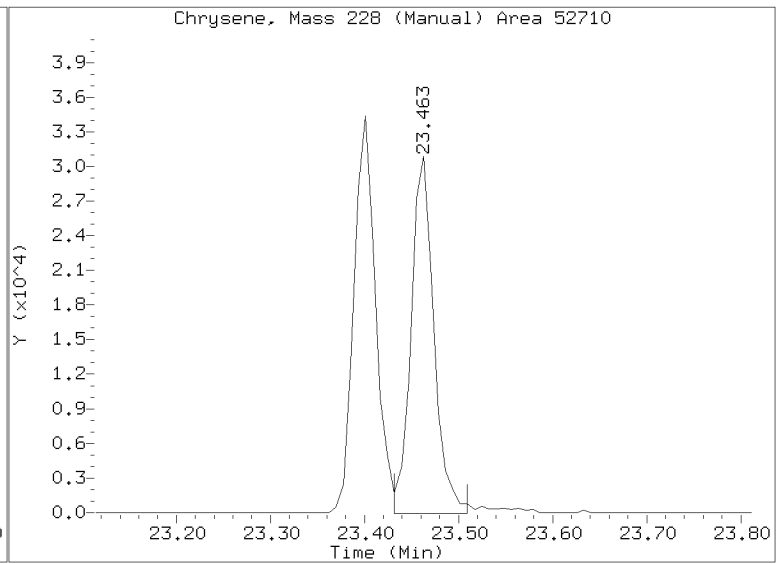
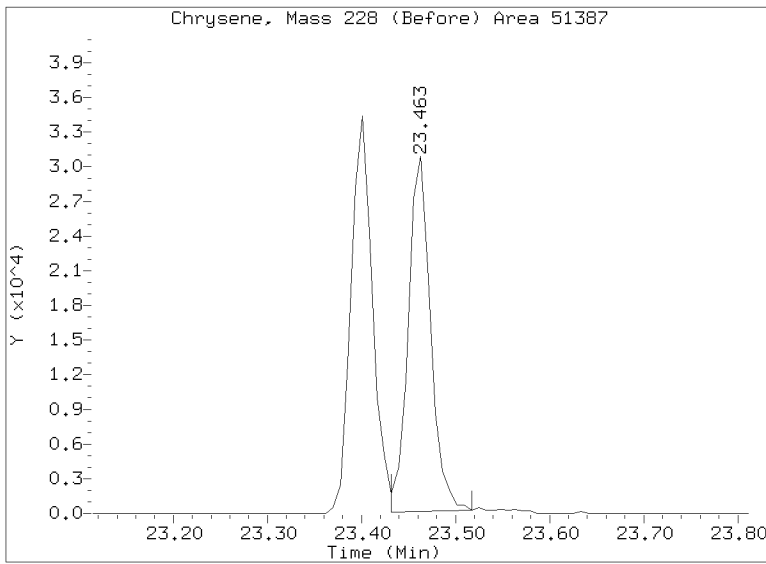
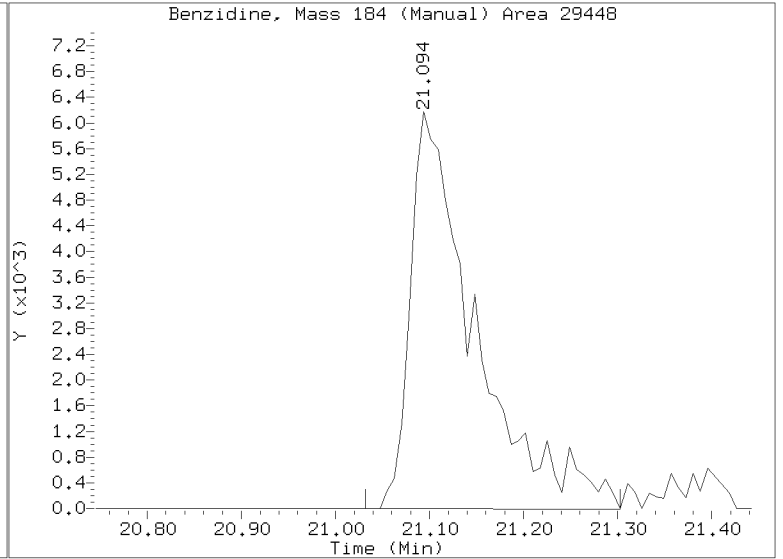
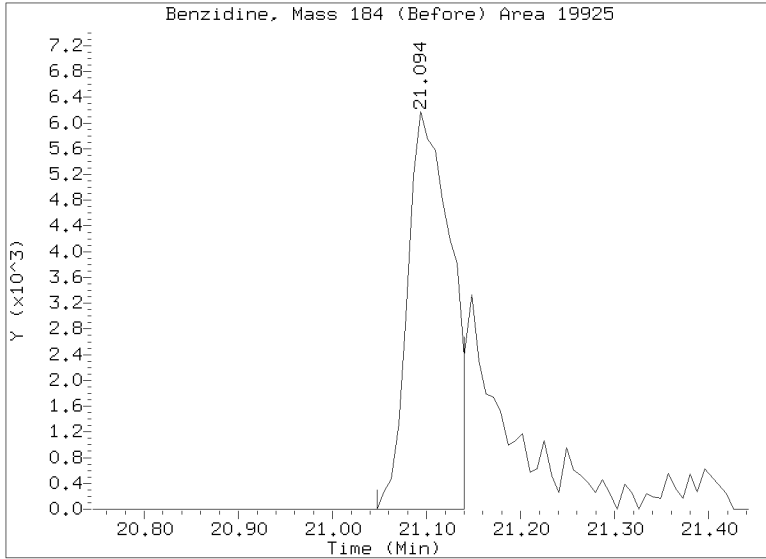
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Injection Date: 01-MAR-2023 19:53  
Lab ID: SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



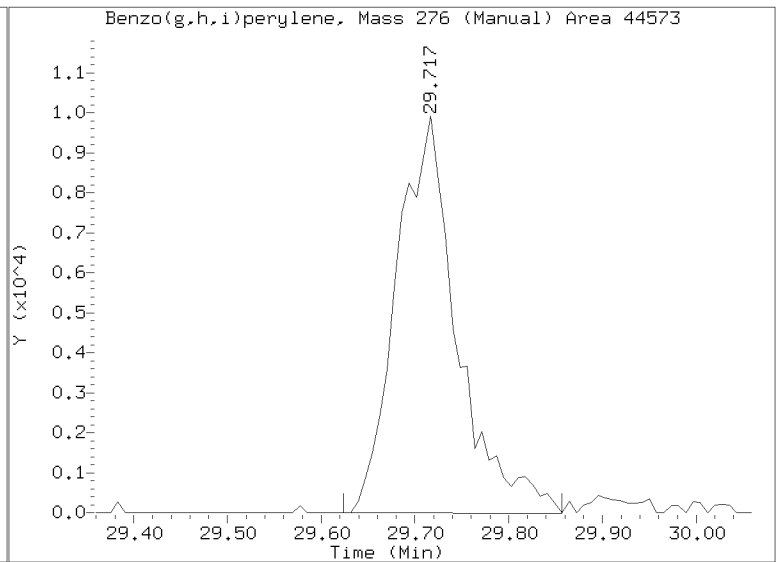
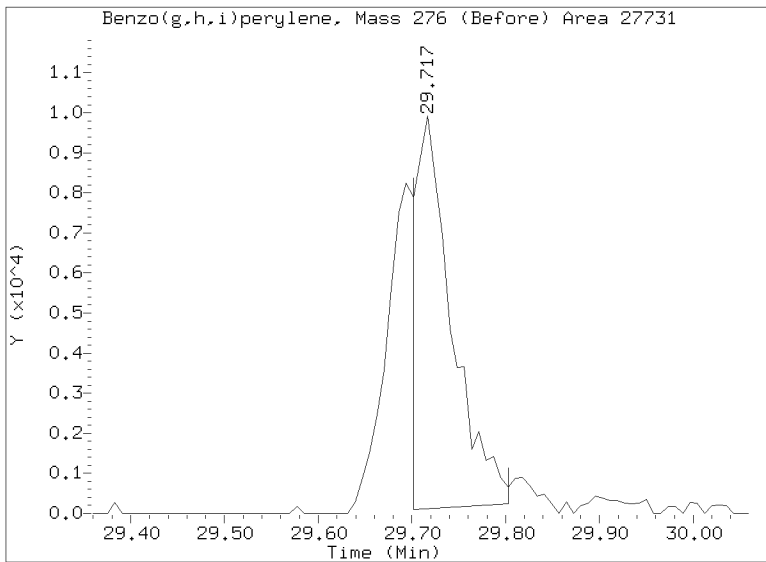
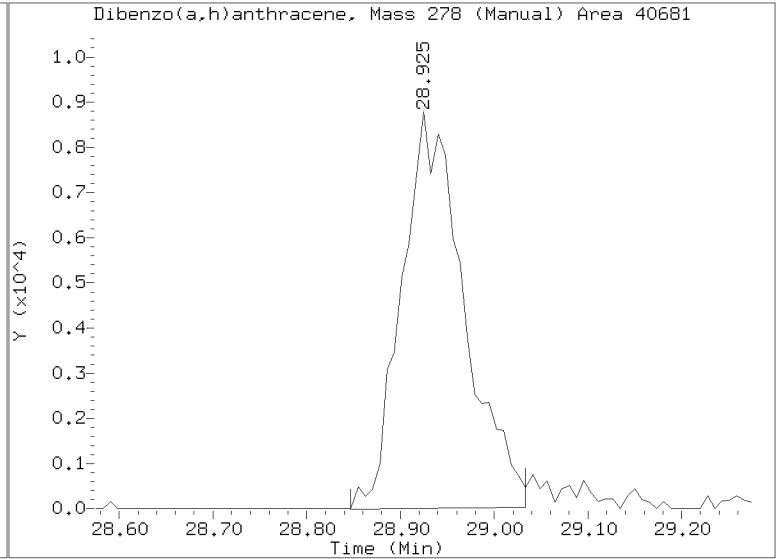
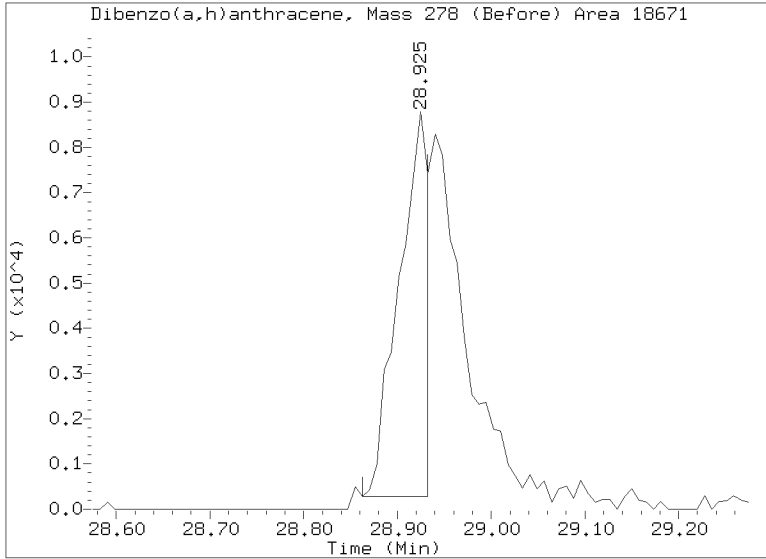
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Injection Date: 01-MAR-2023 19:53  
Lab ID:SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



# Quant Ion Manual Peak Adjustment Report

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Injection Date: 01-MAR-2023 19:53  
Lab ID:SLC0084-CAL1 Client ID:  
Report Date: 03/07/2023 12:48



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Date: 01-MAR-2023 21:46

Client ID:

Sample Info: SEQ-SCV1

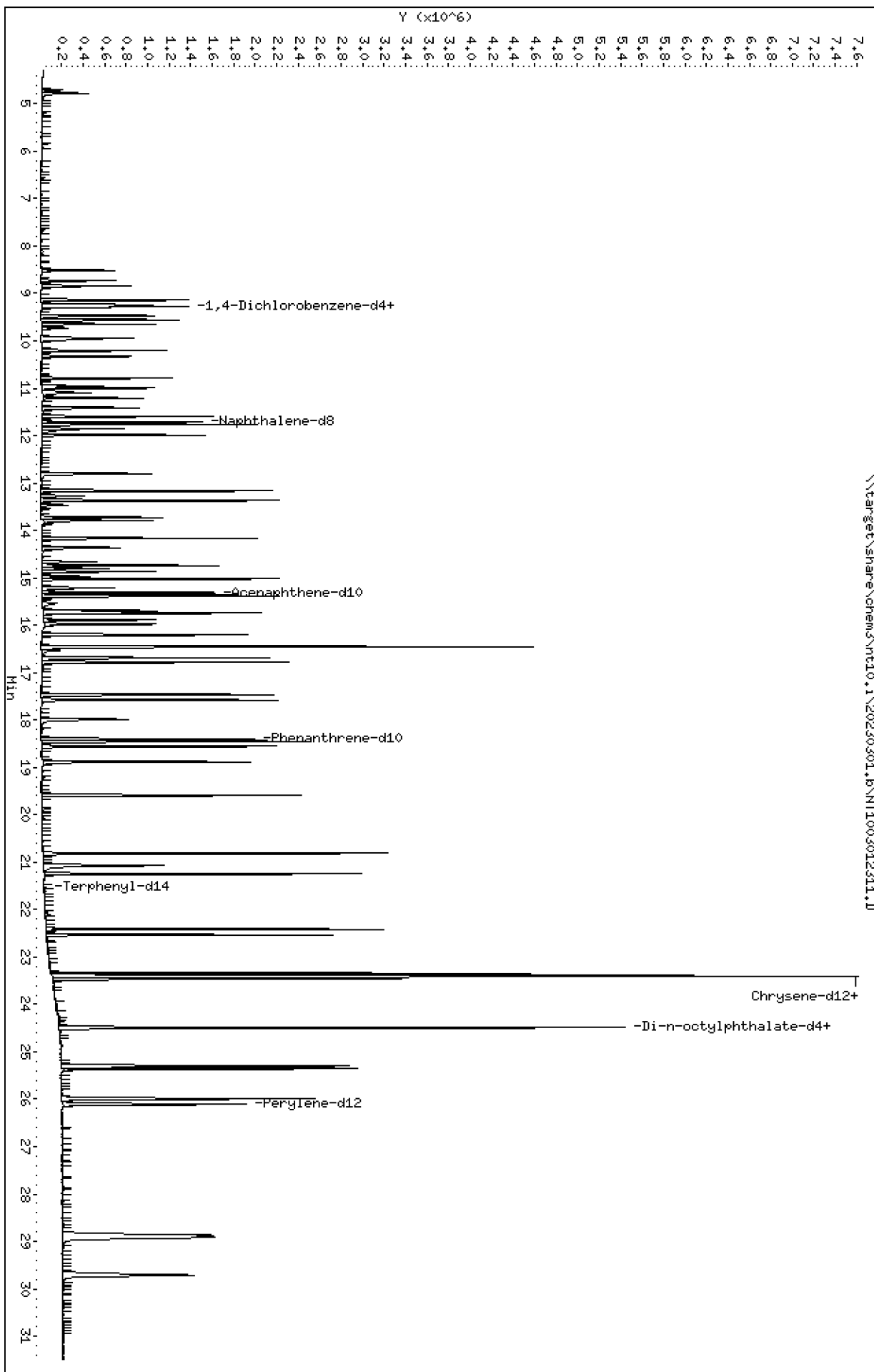
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

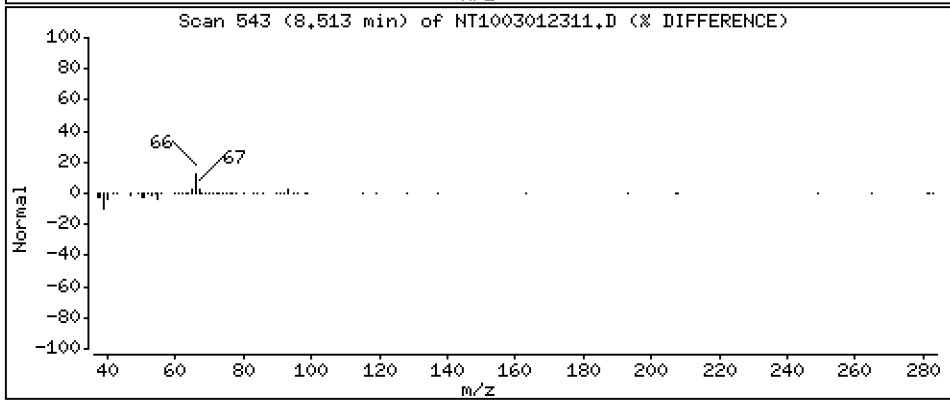
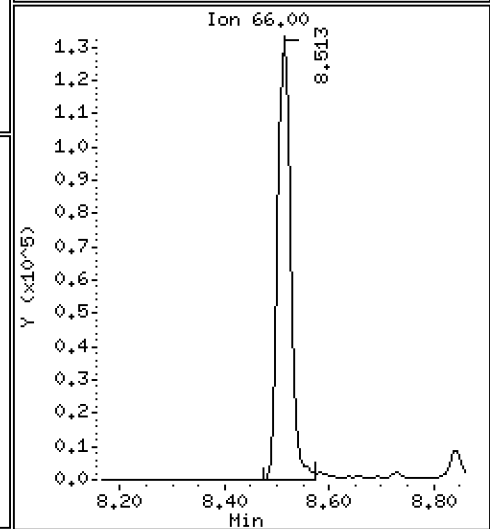
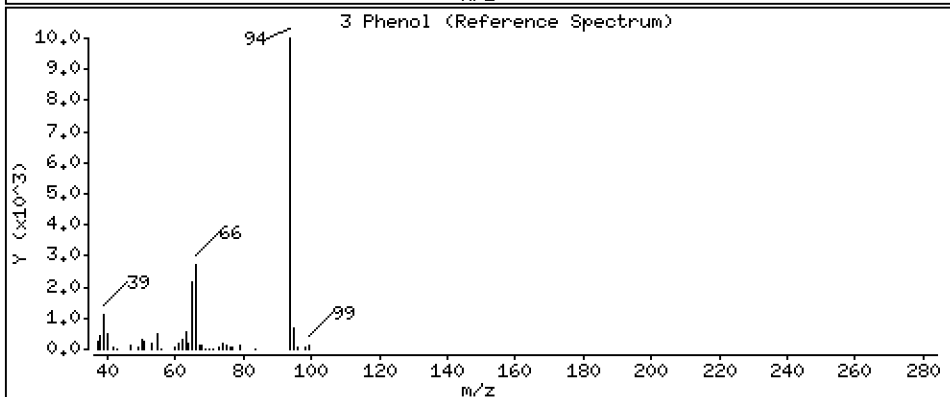
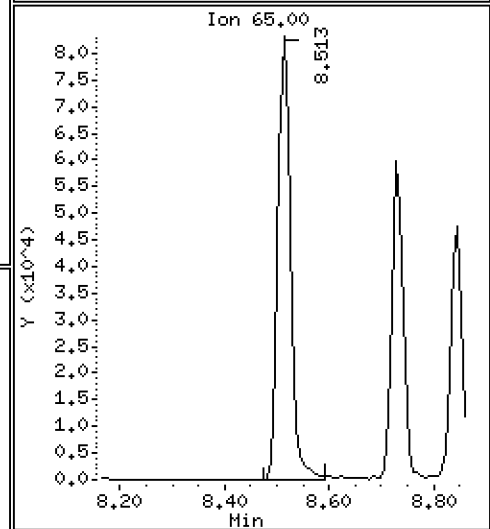
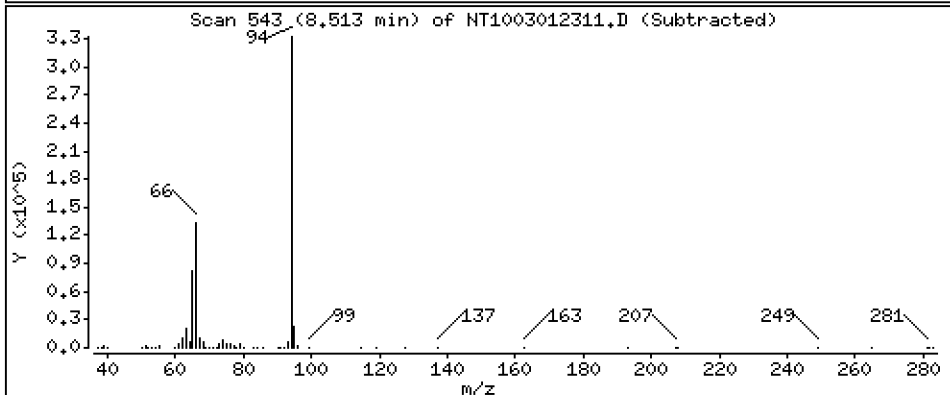
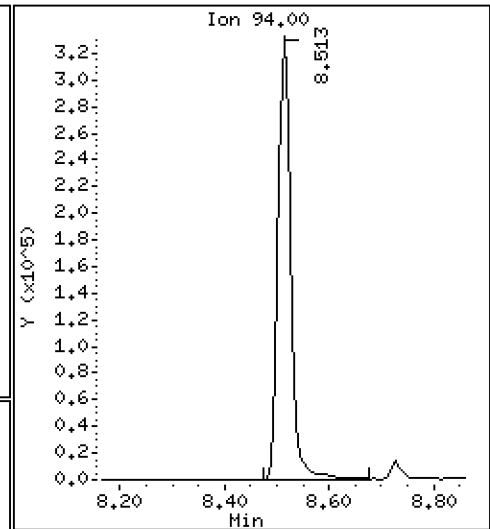
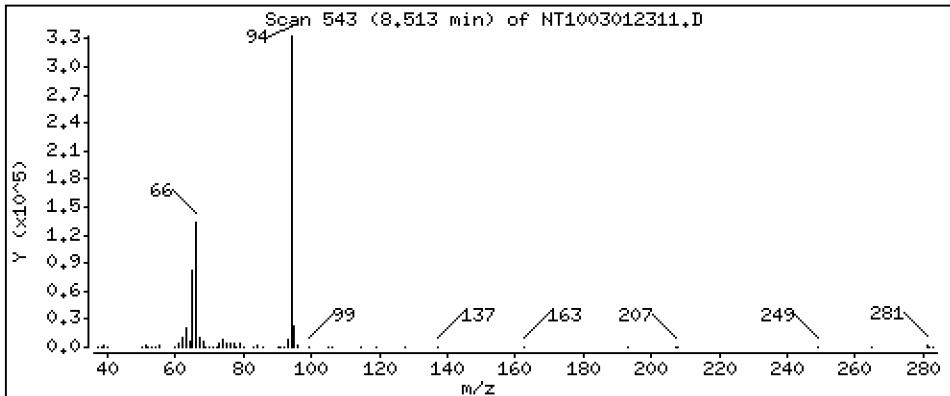
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,852 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

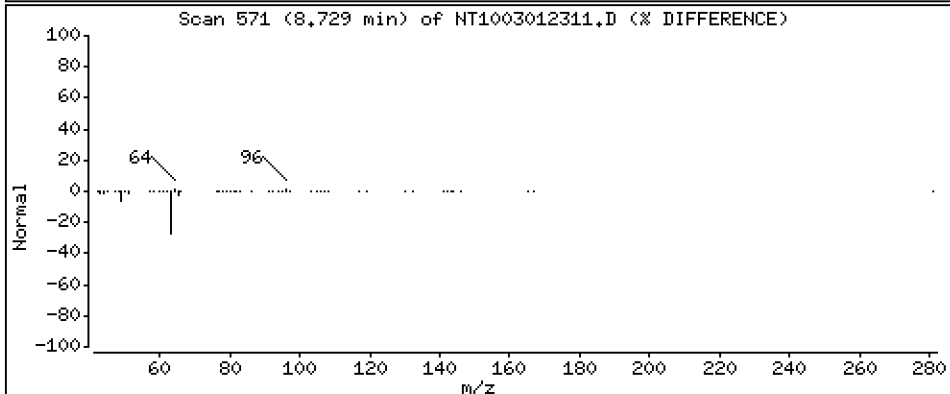
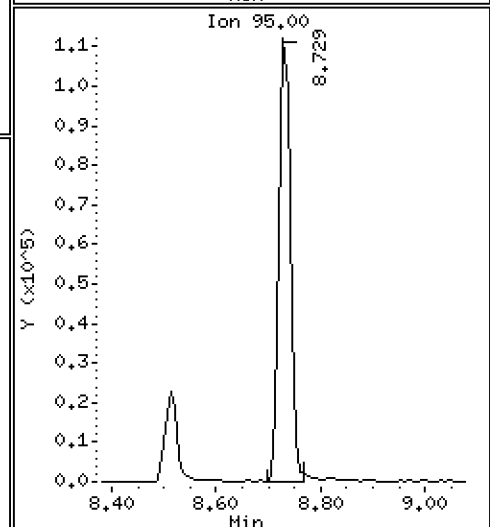
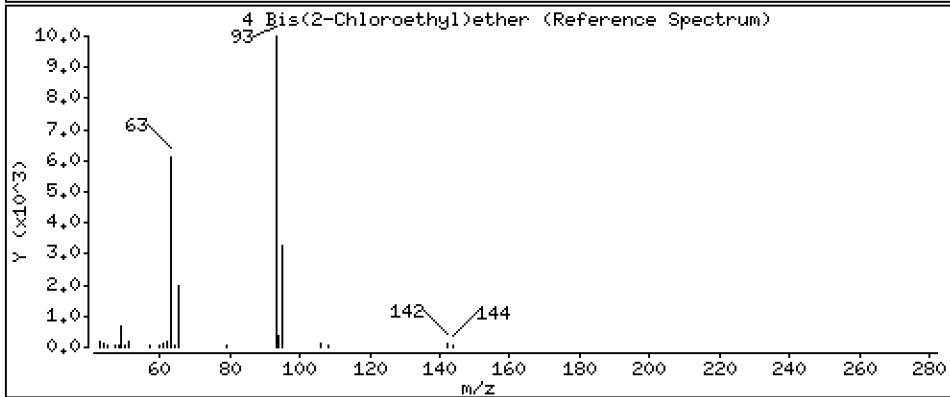
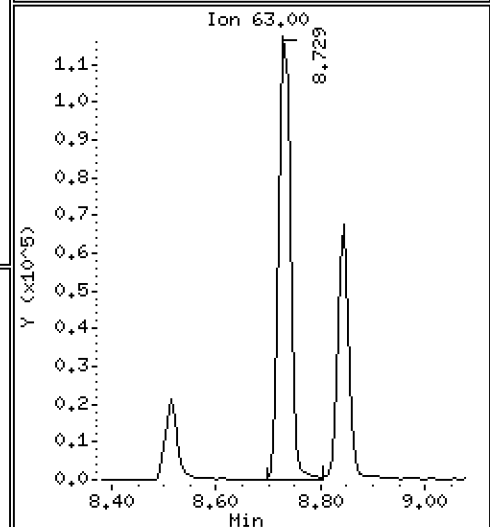
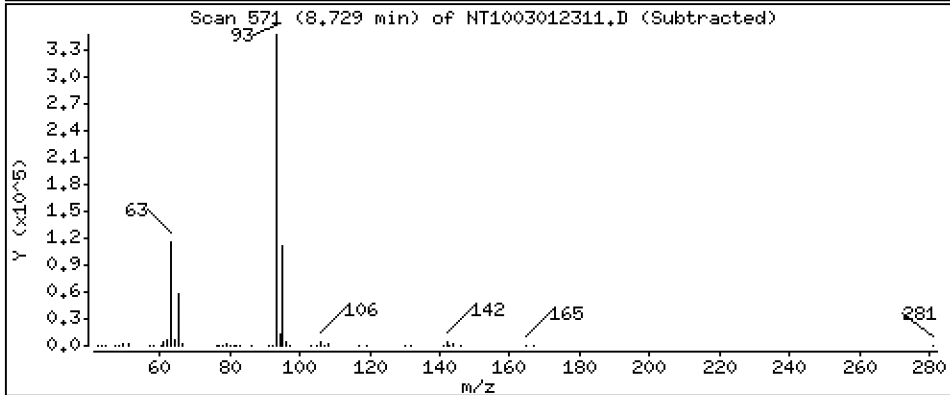
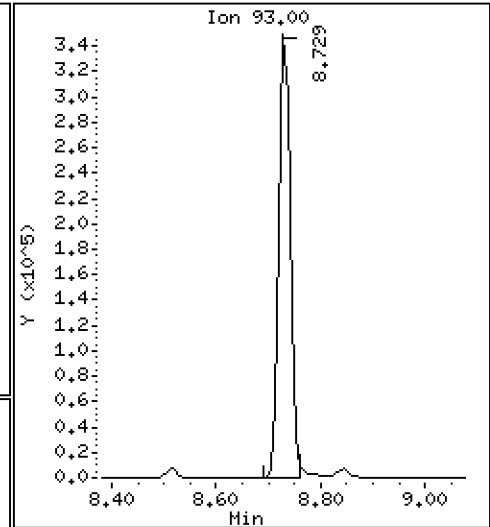
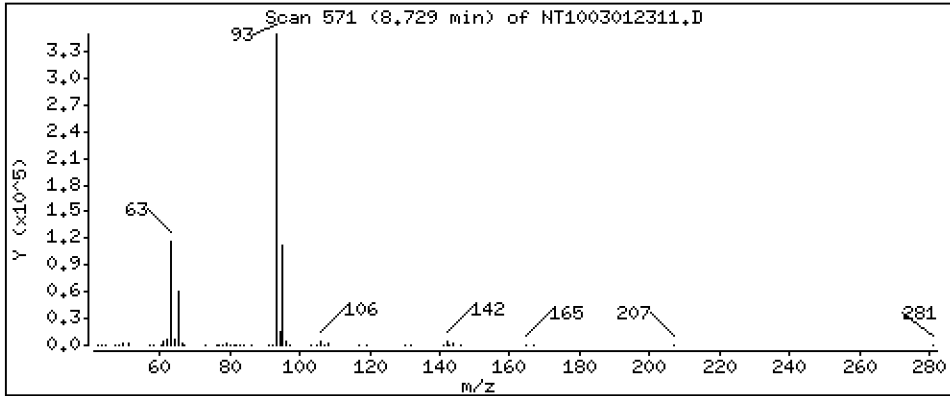
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,928 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

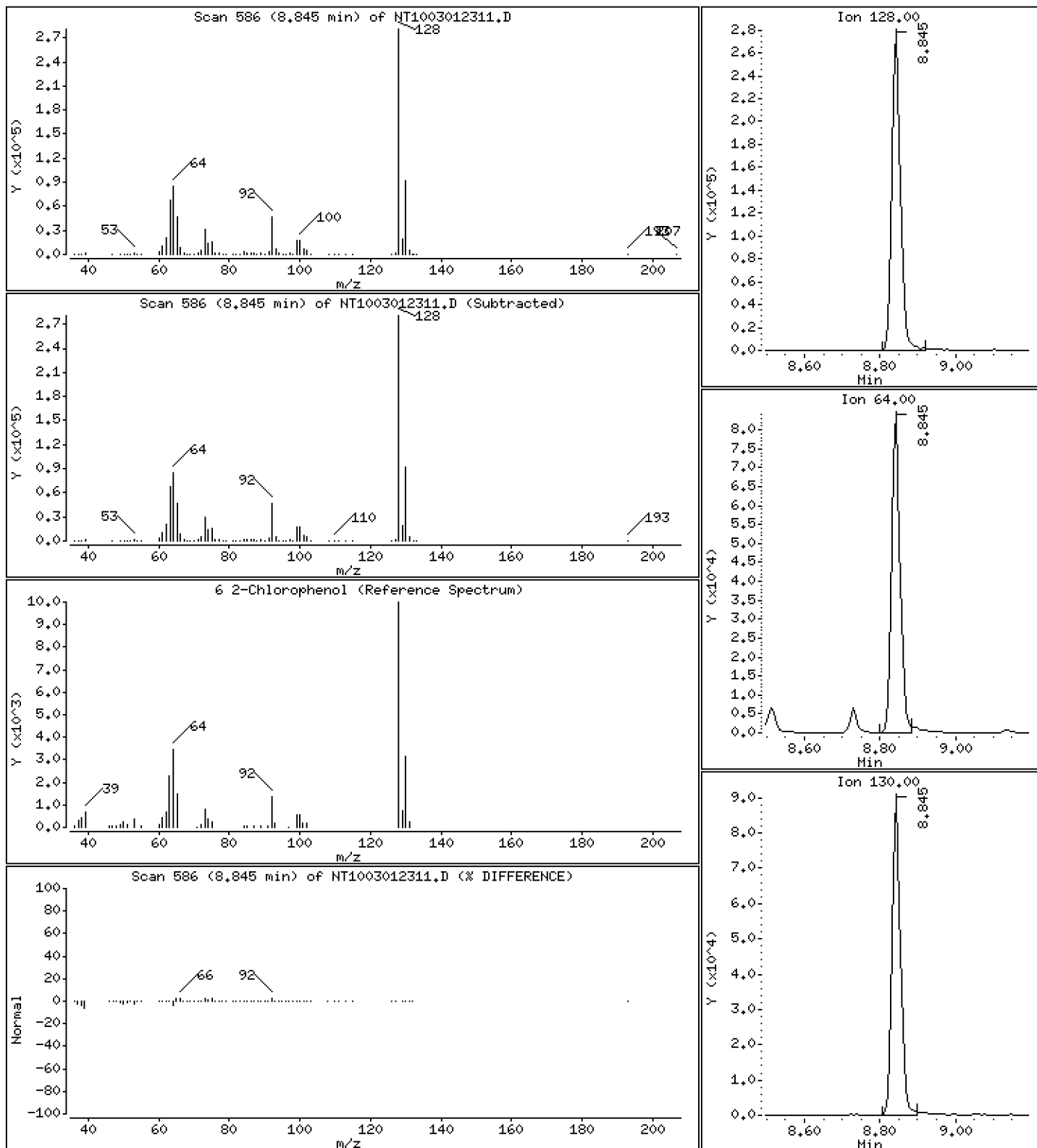
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

6 2-Chlorophenol

Concentration: 4.692 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

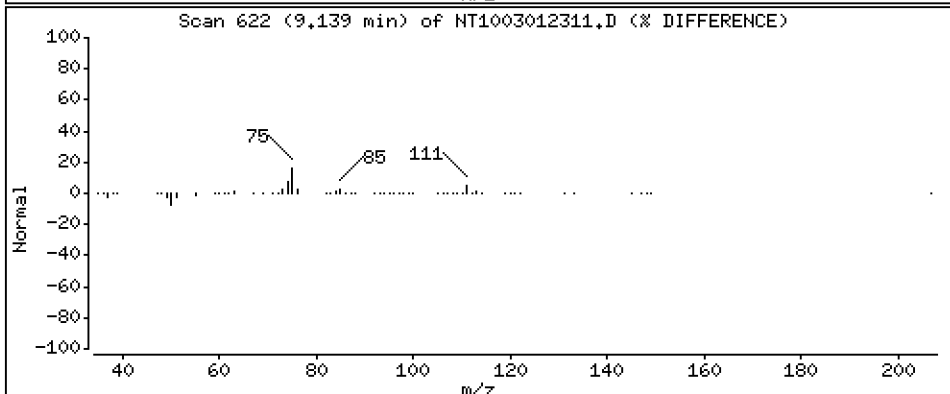
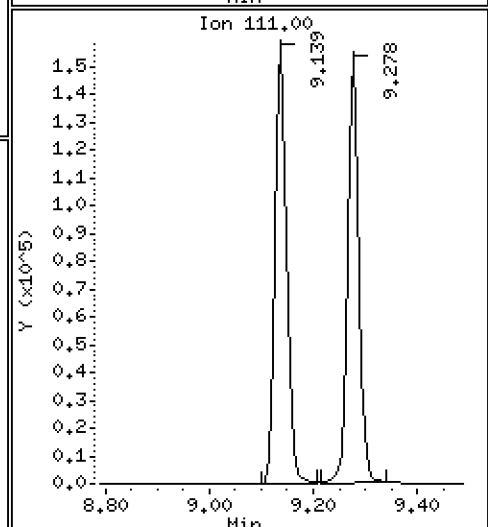
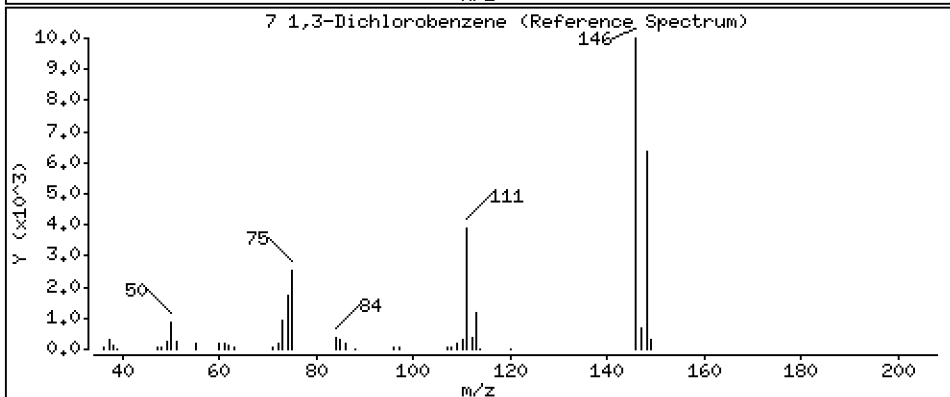
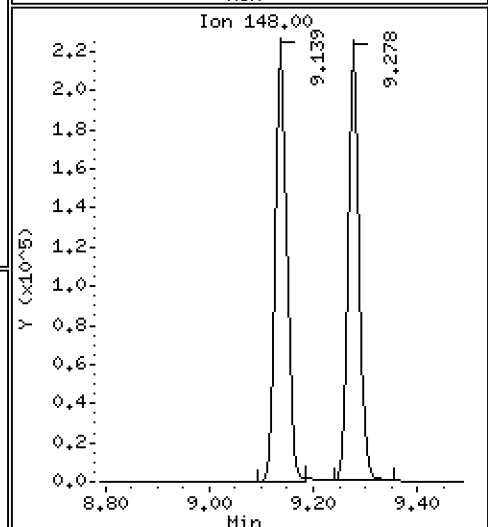
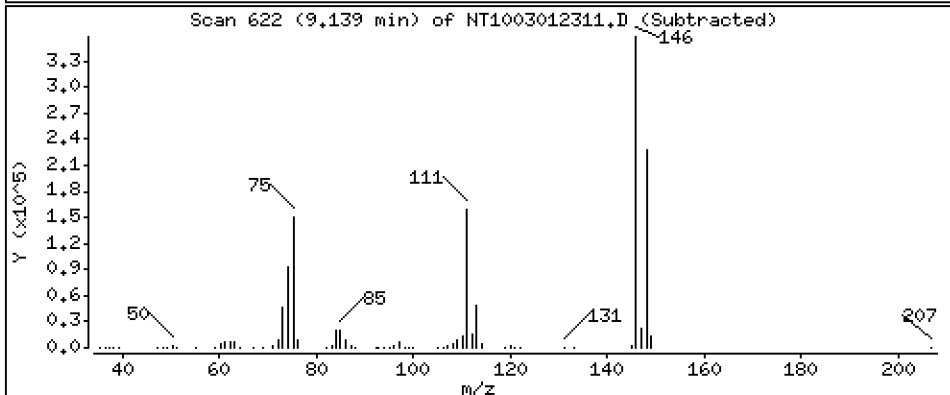
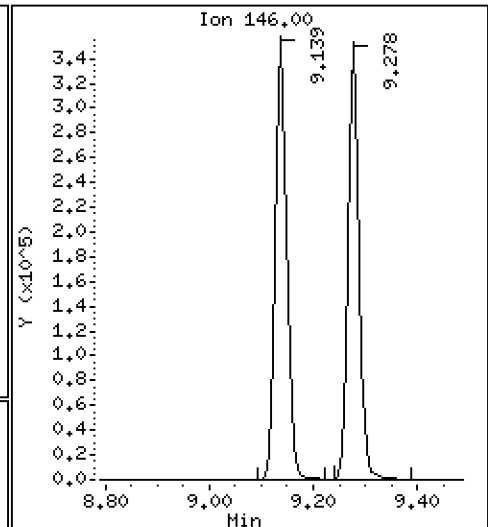
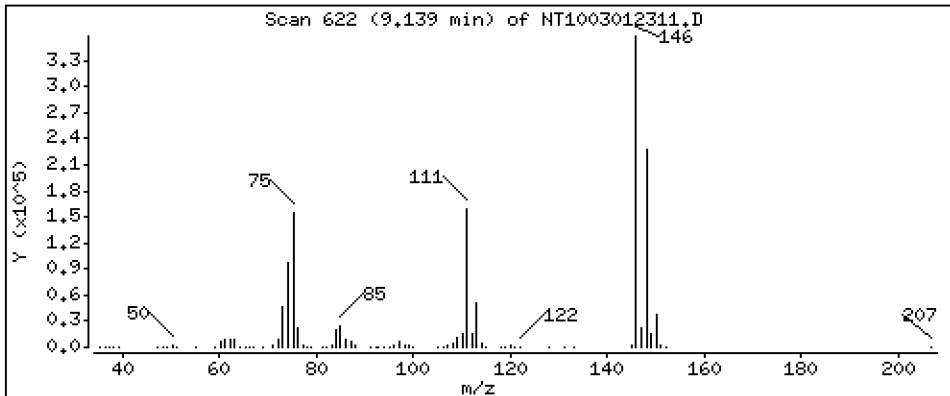
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 5,266 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

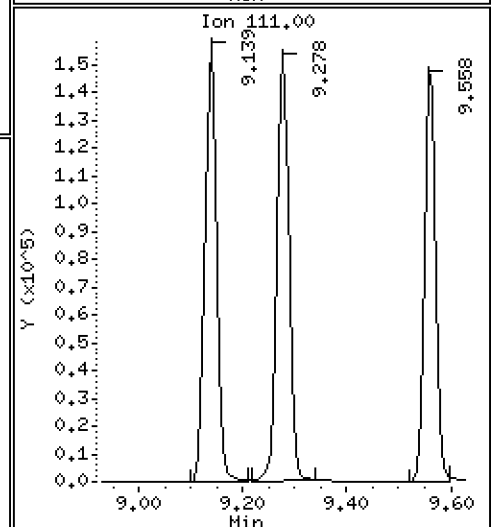
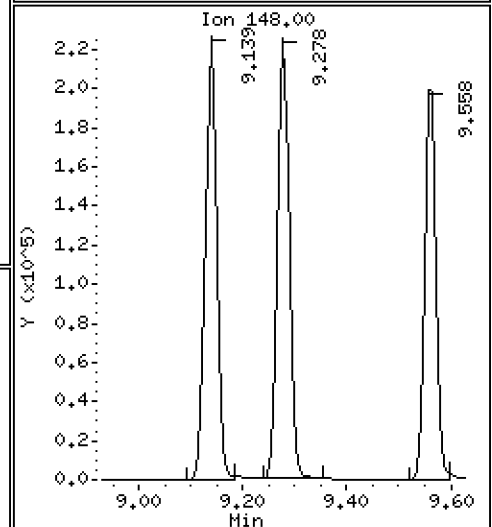
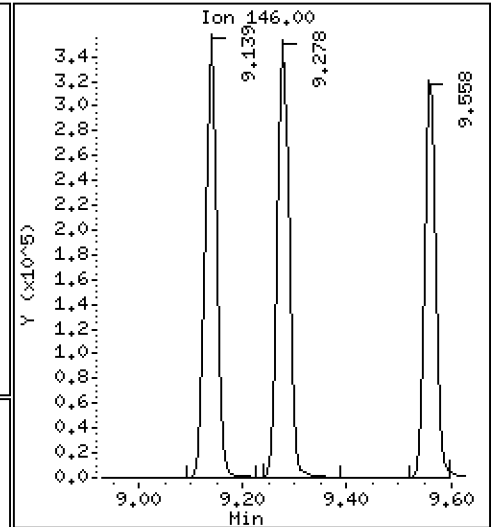
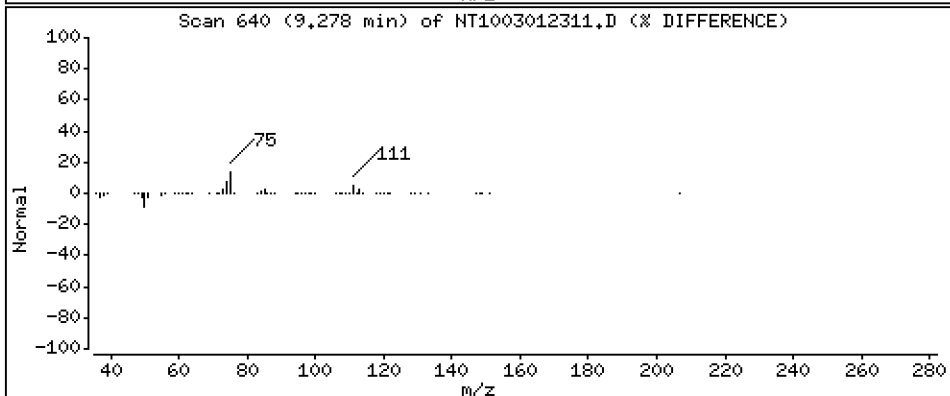
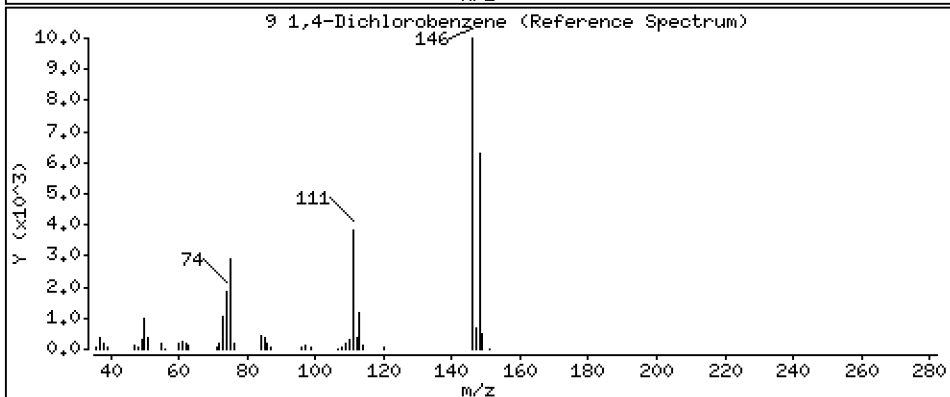
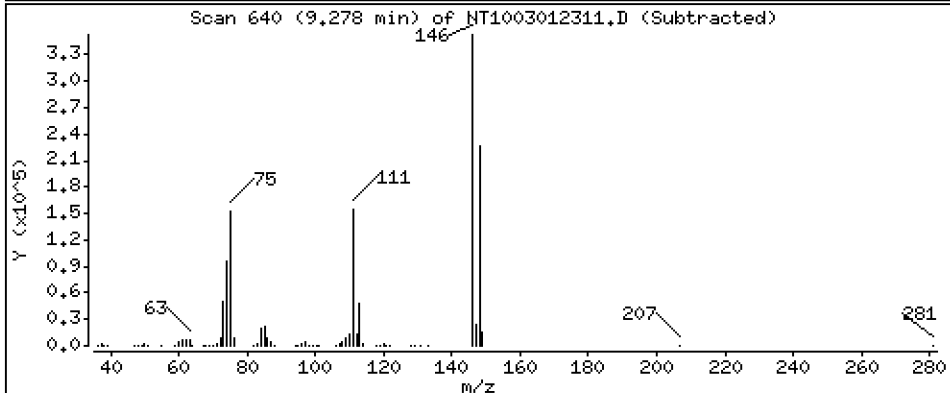
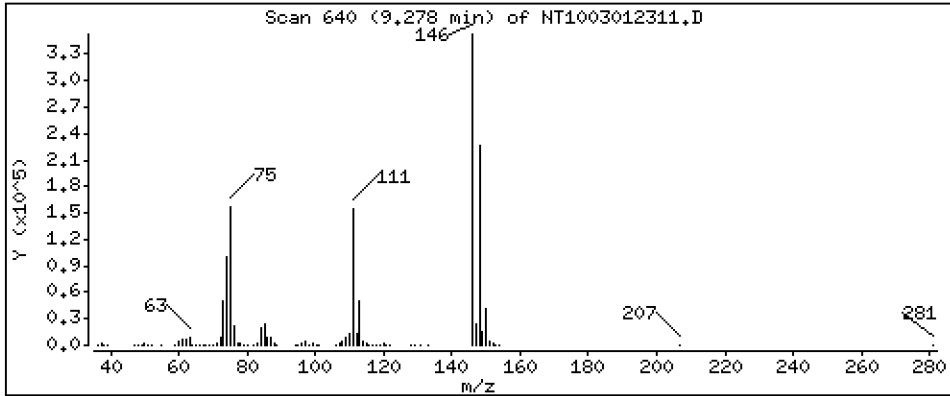
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,216 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

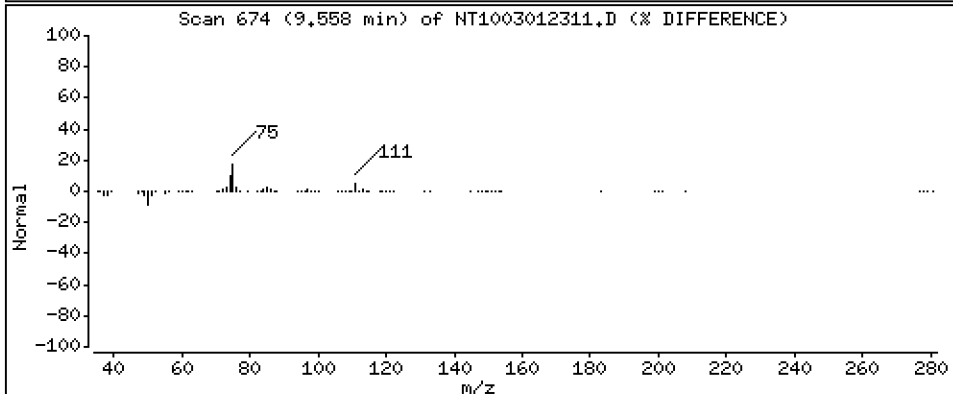
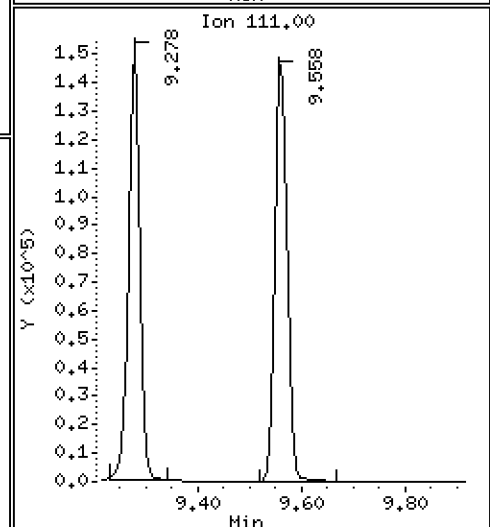
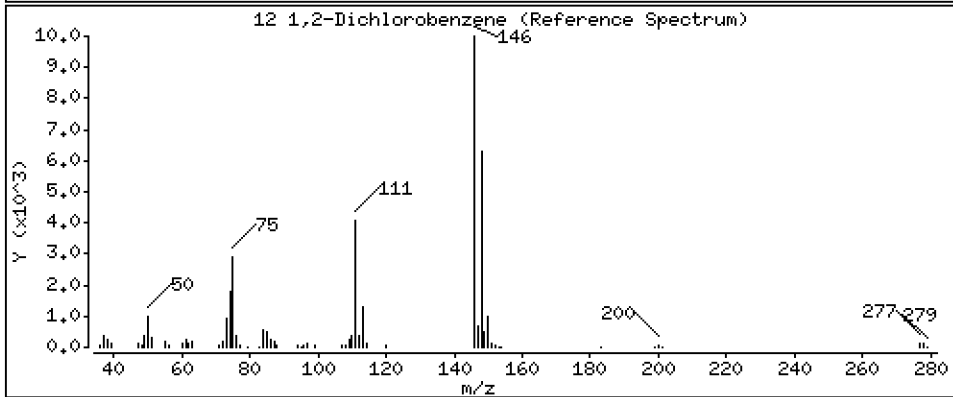
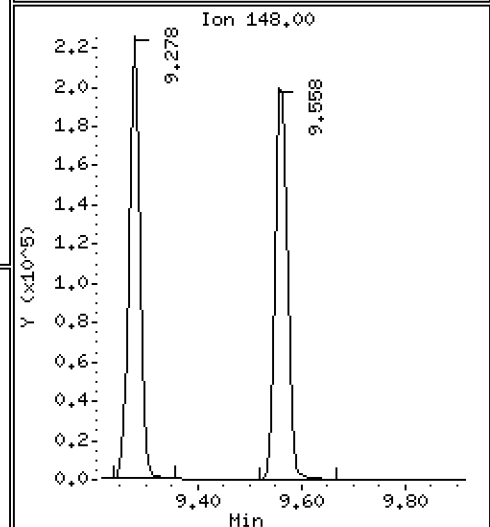
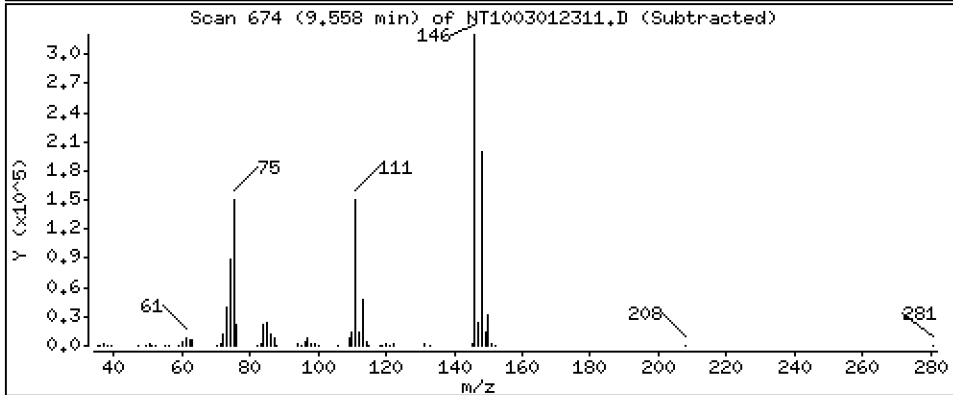
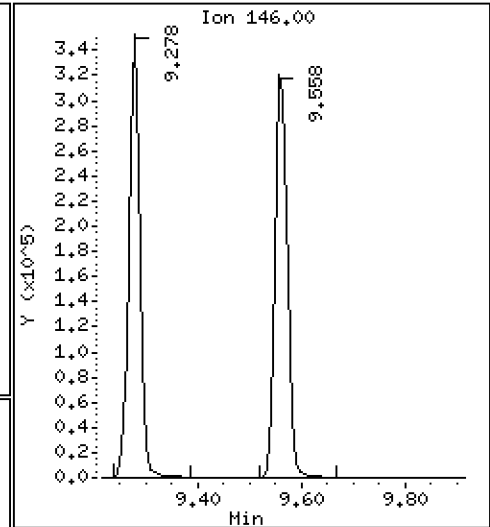
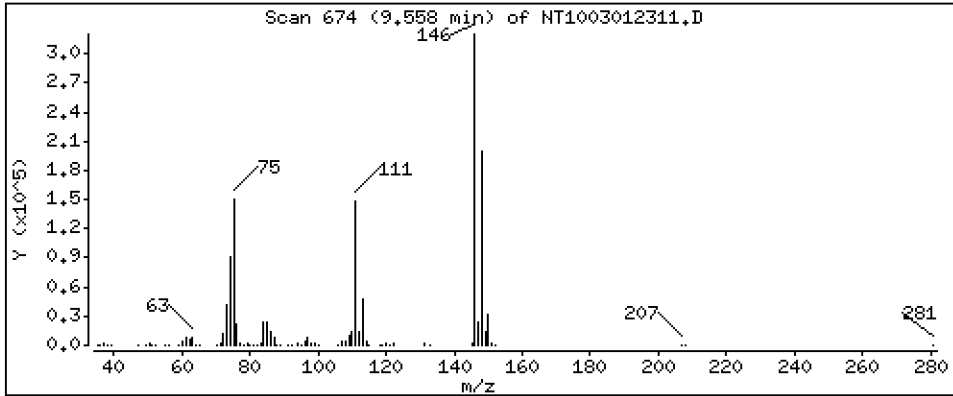
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5,194 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

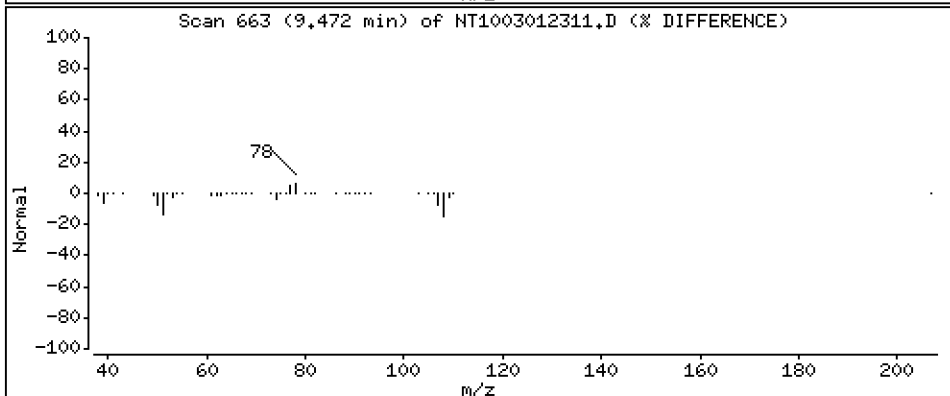
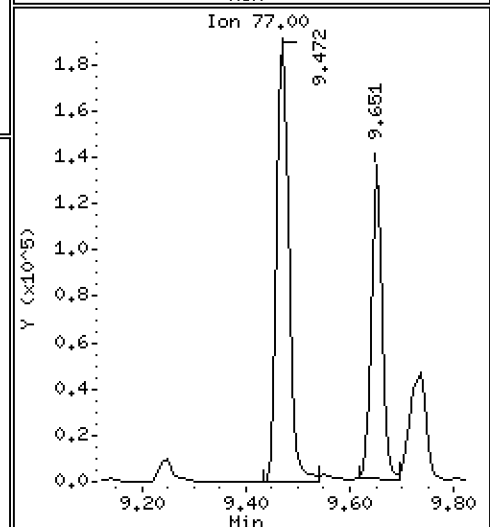
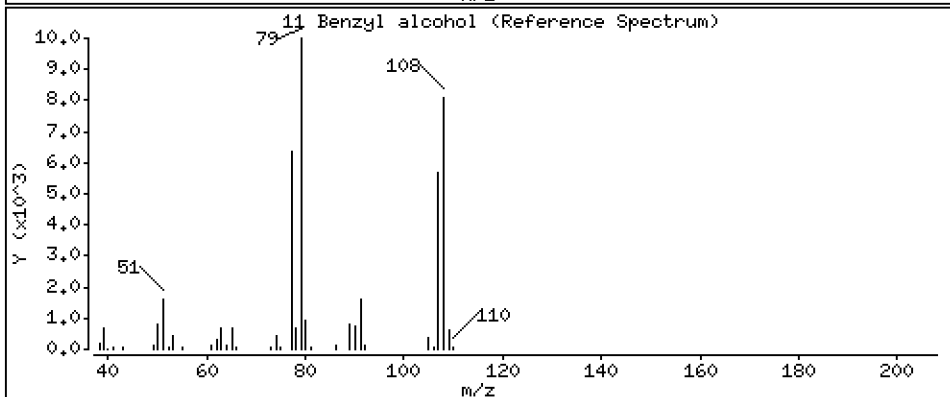
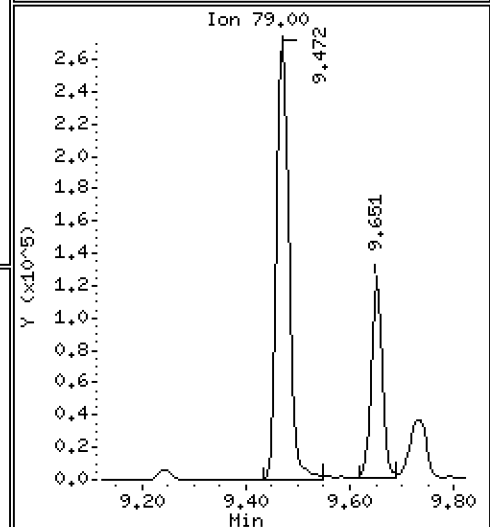
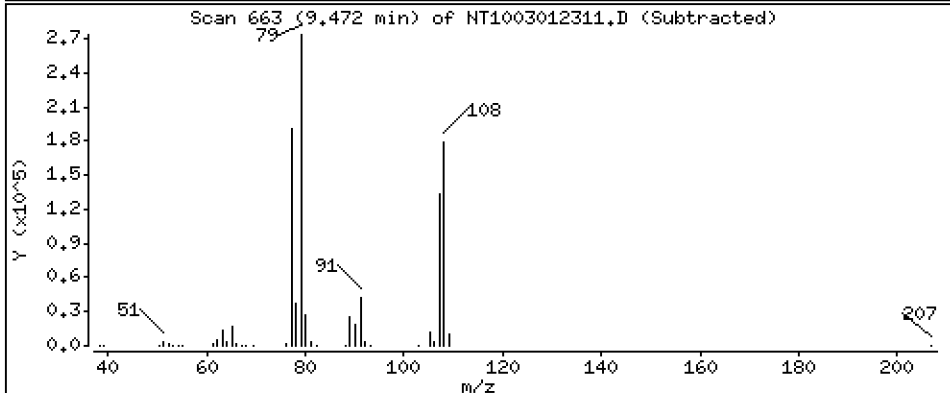
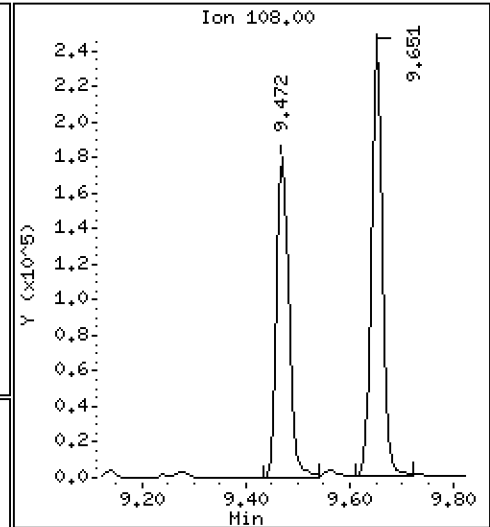
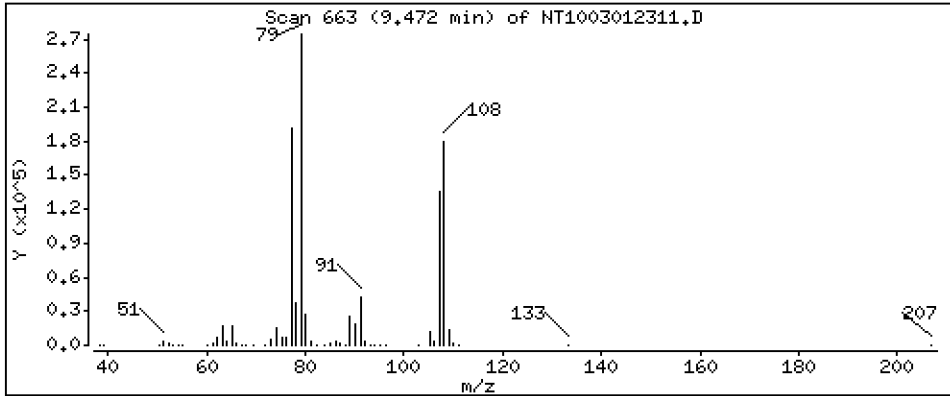
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.898 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

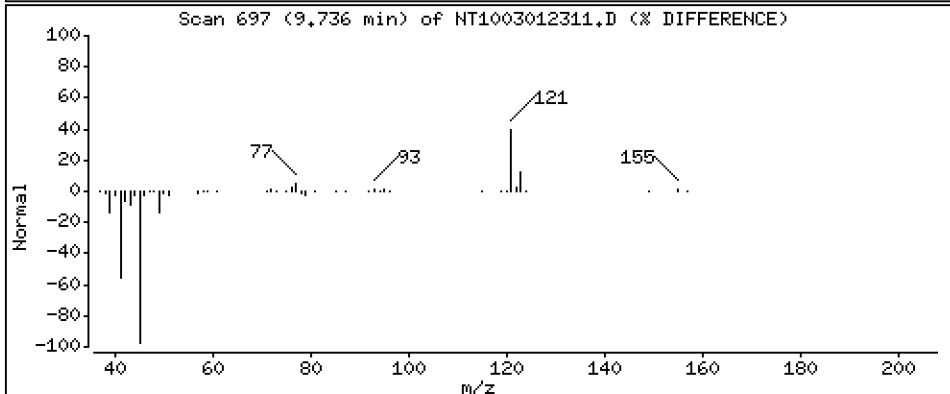
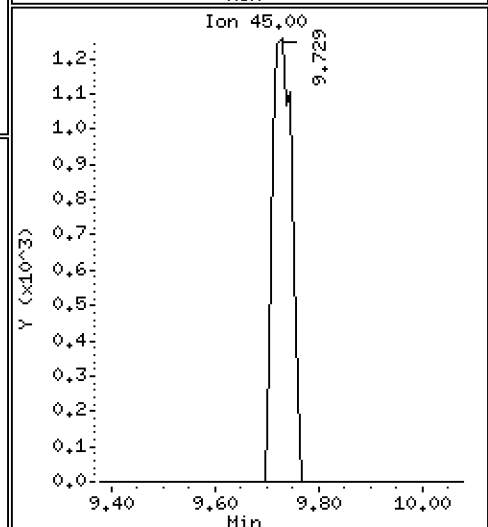
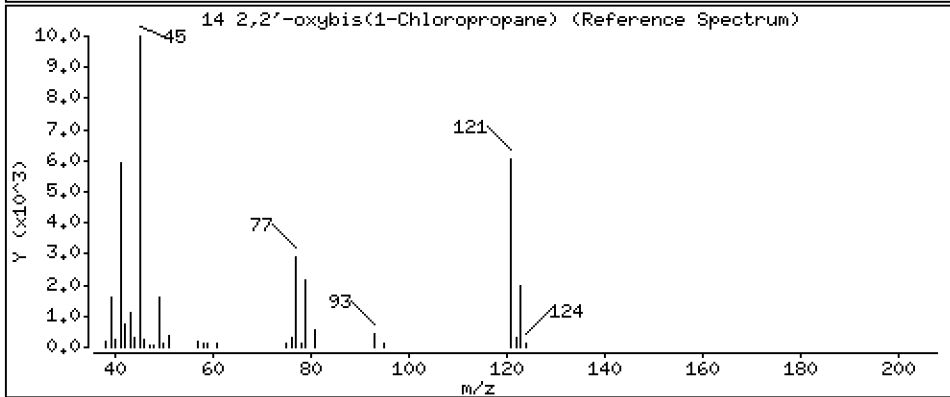
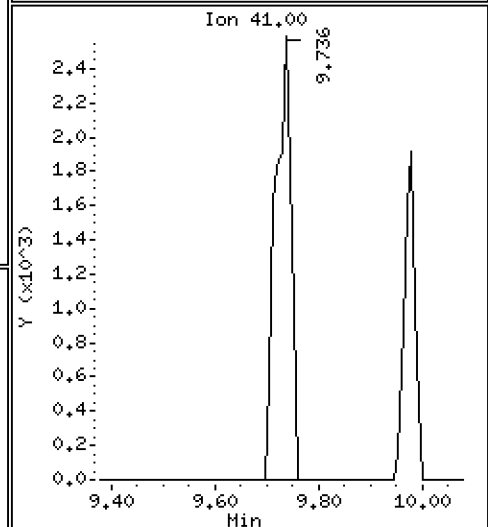
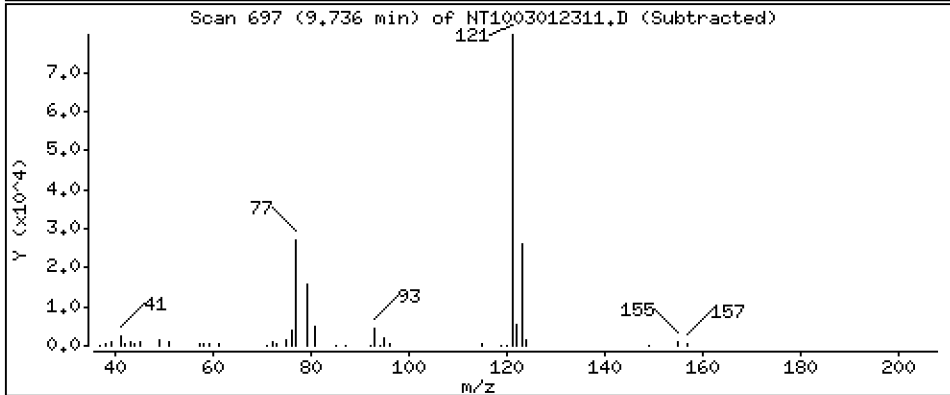
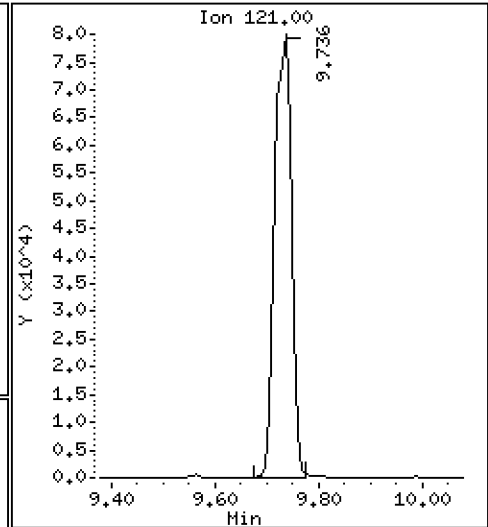
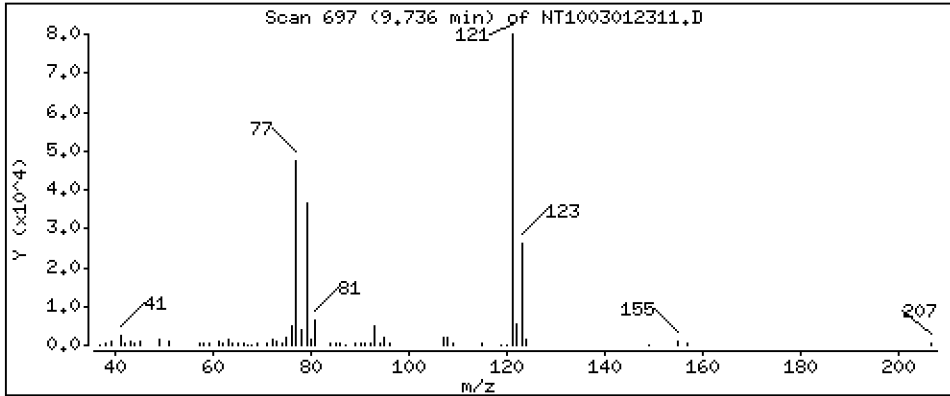
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 6,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

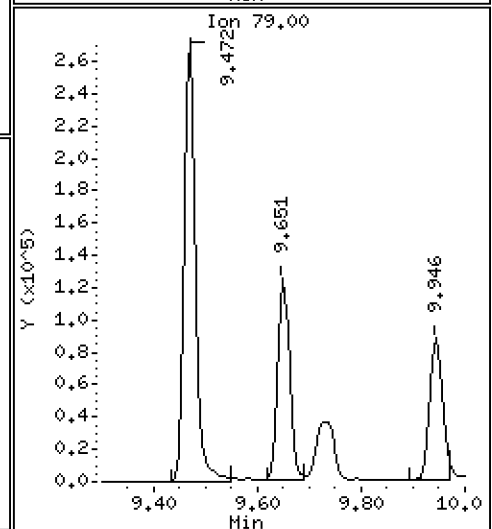
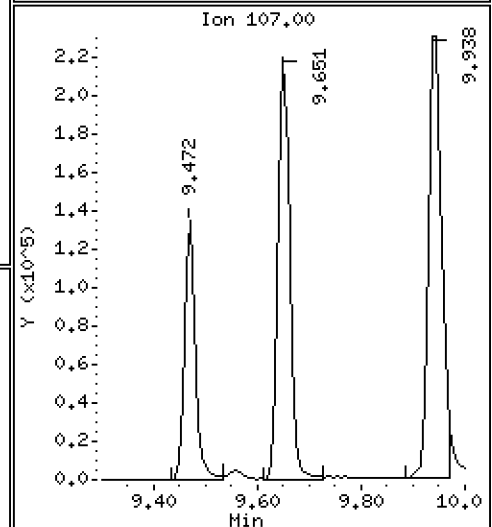
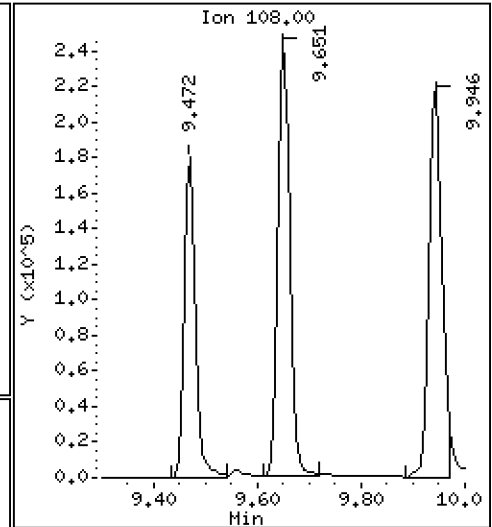
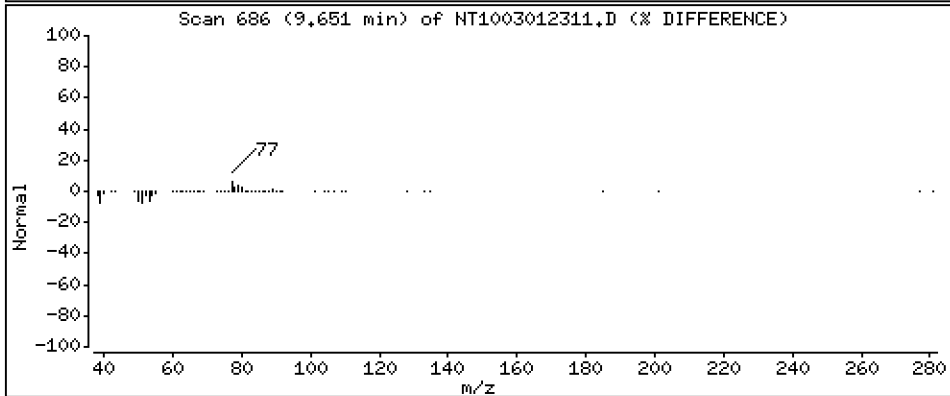
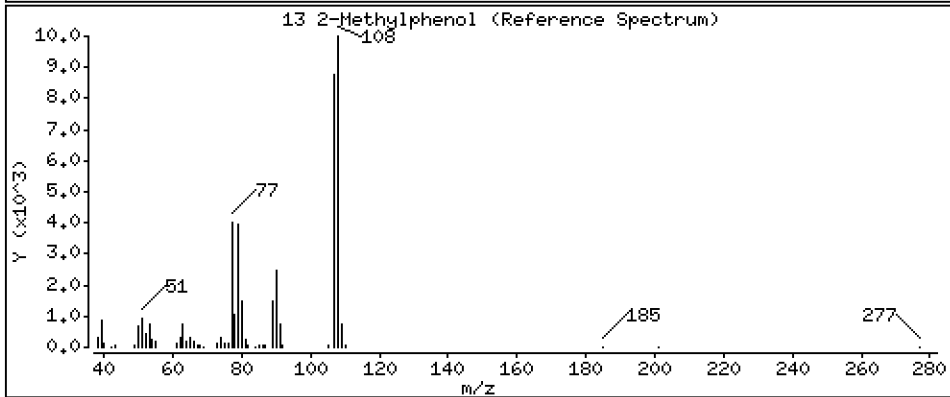
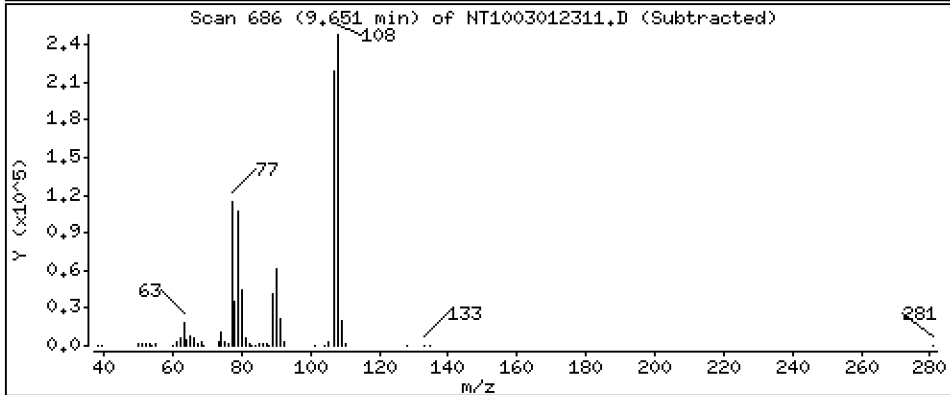
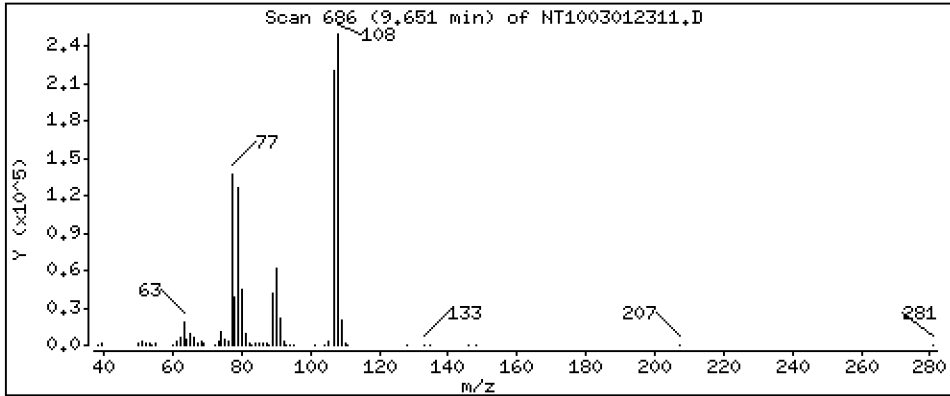
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.192 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

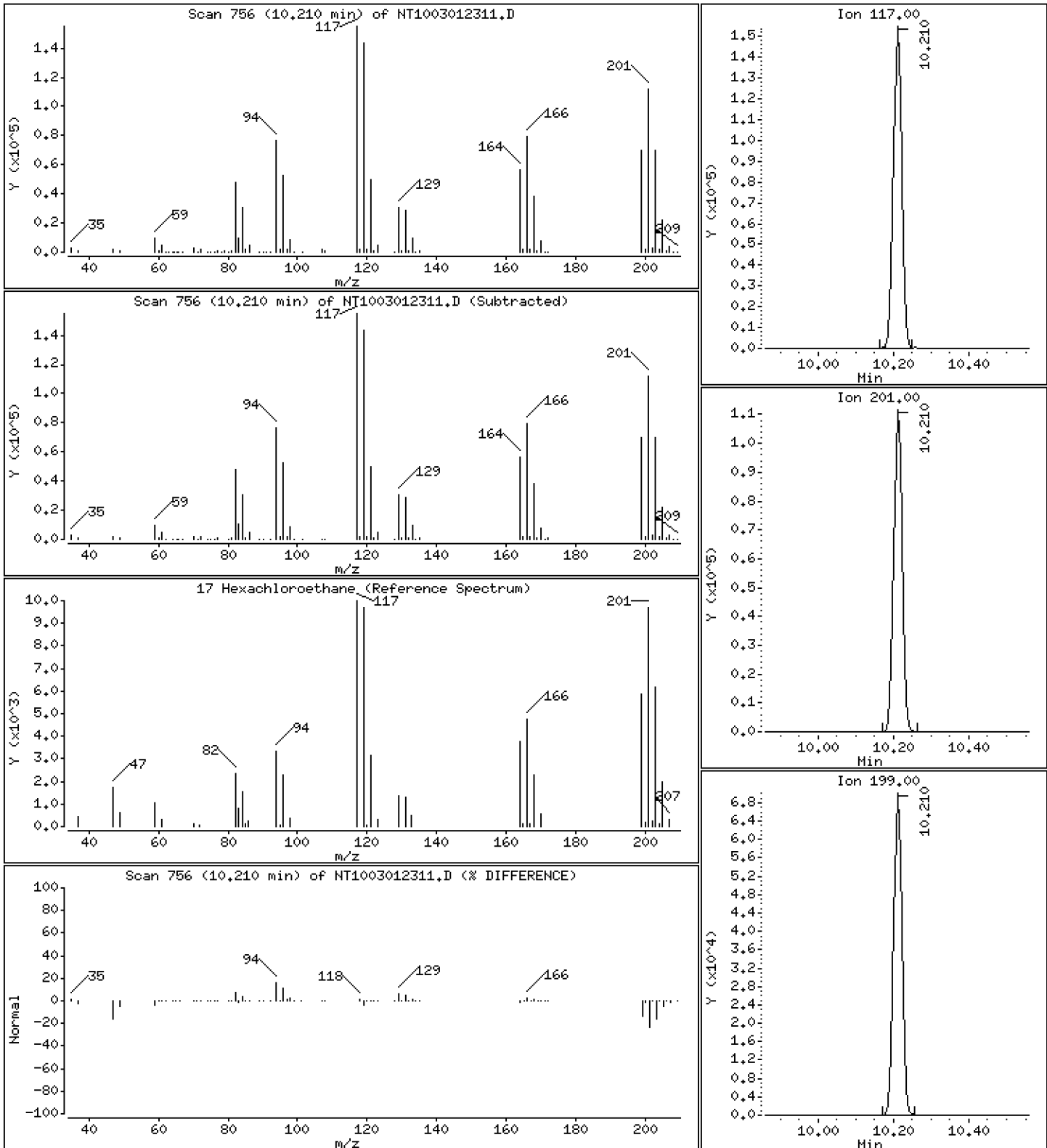
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 5,443 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

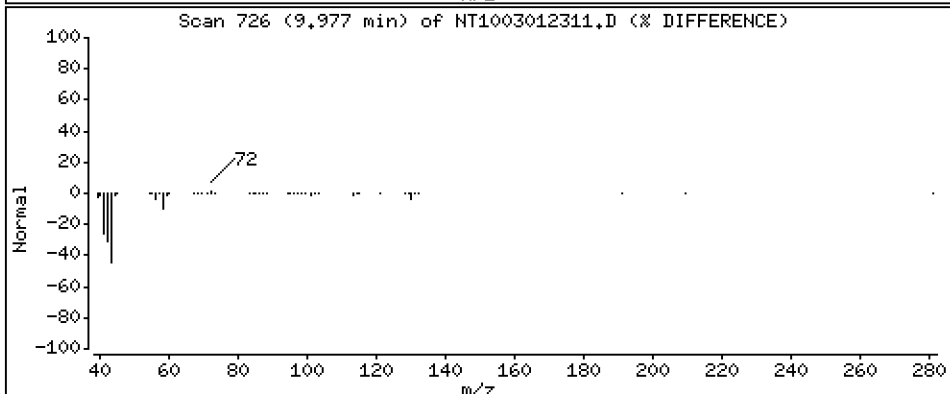
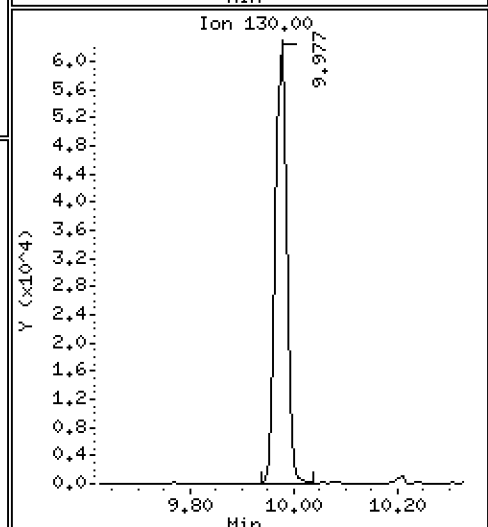
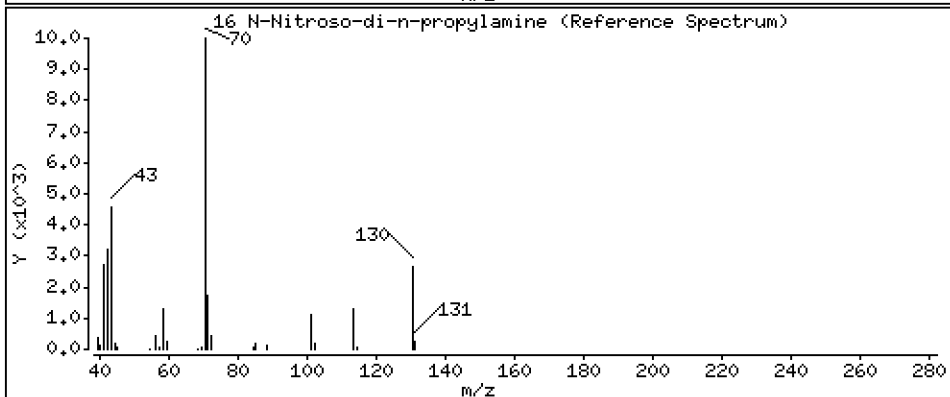
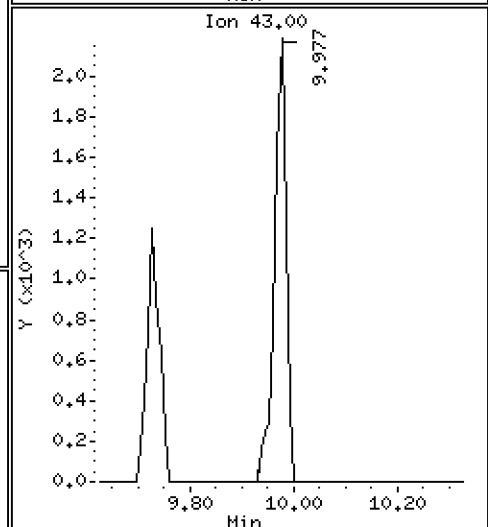
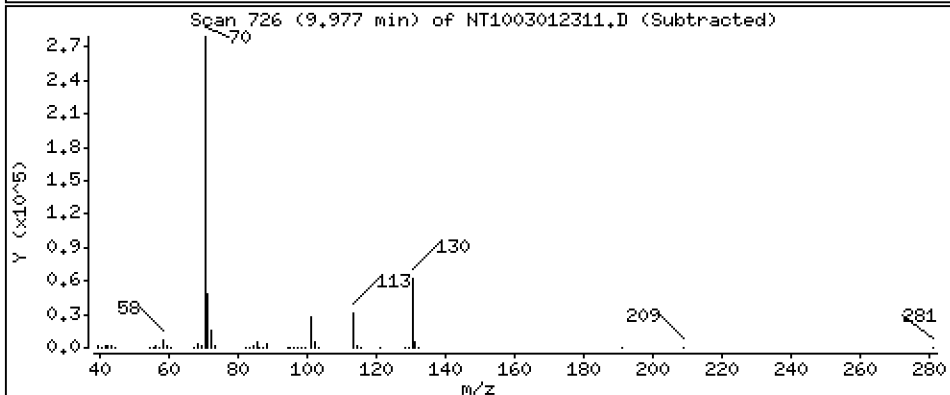
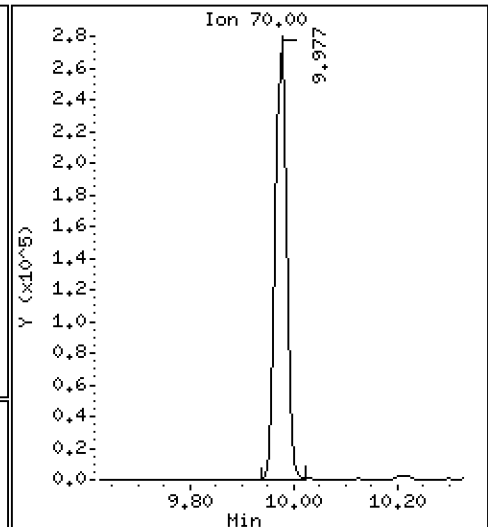
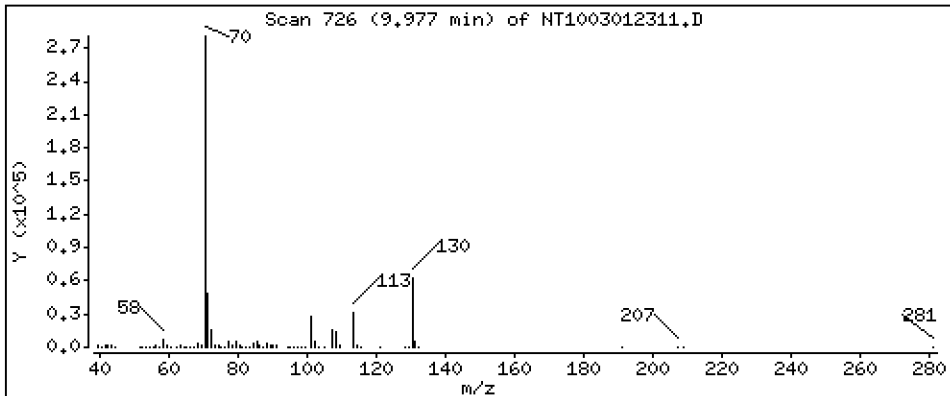
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

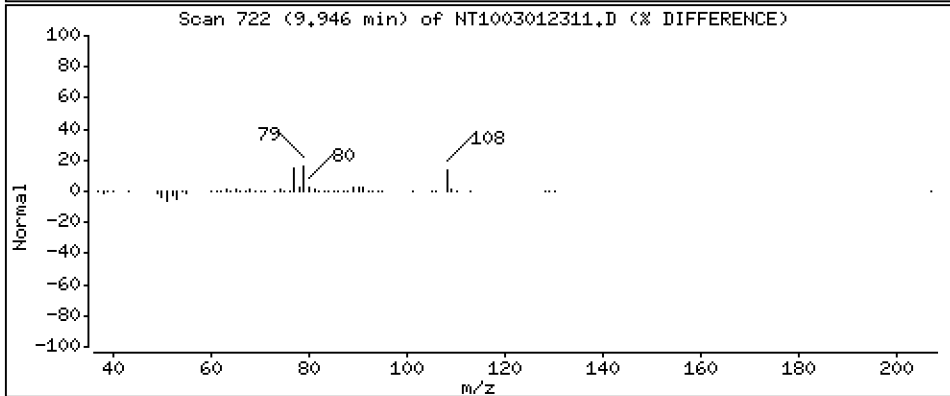
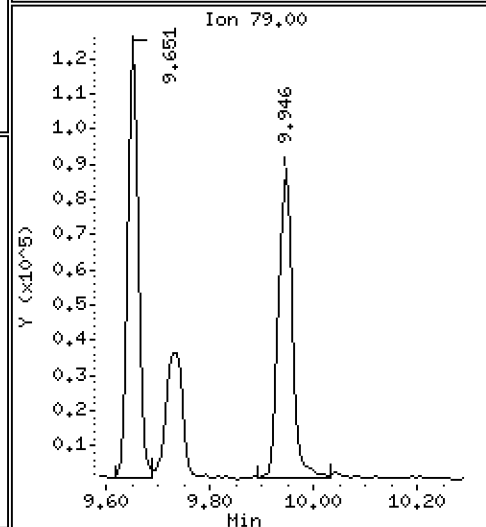
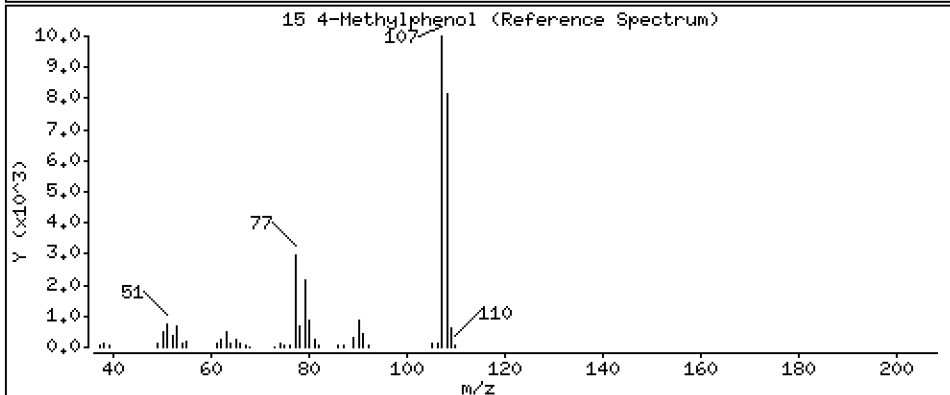
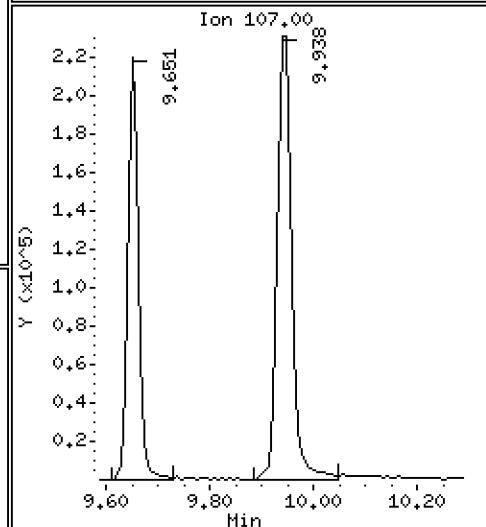
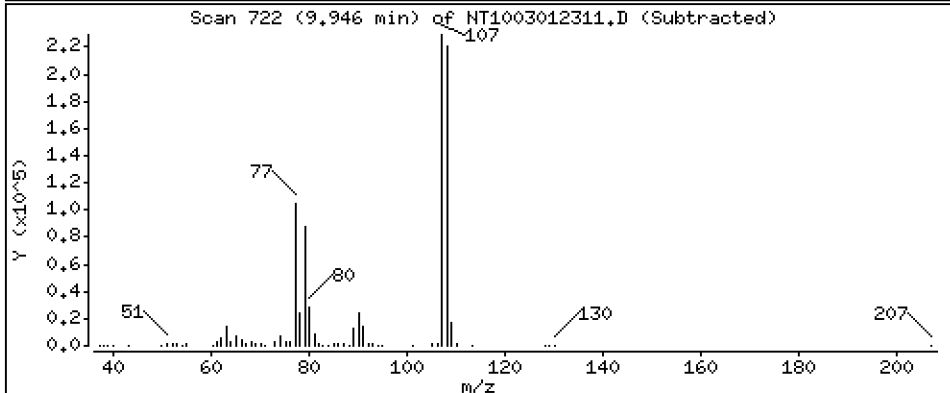
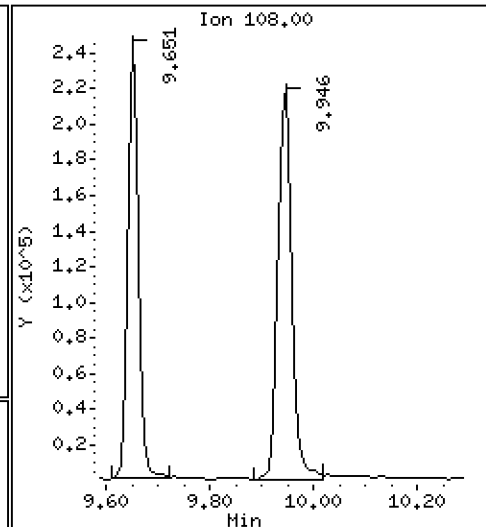
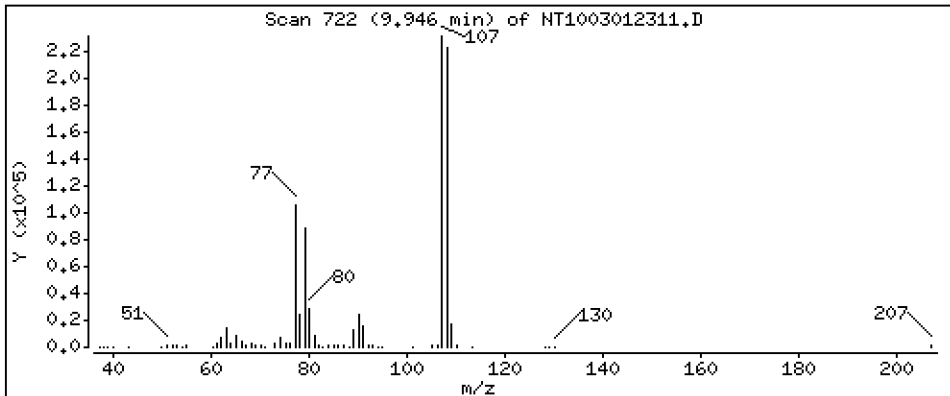
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,239 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

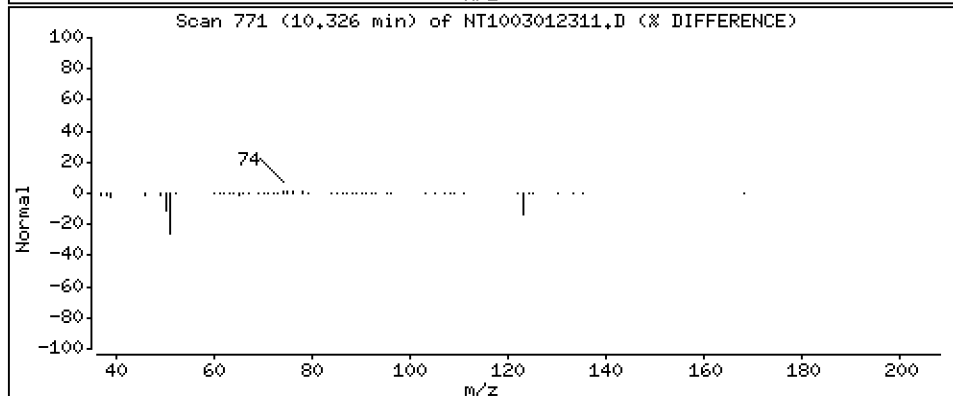
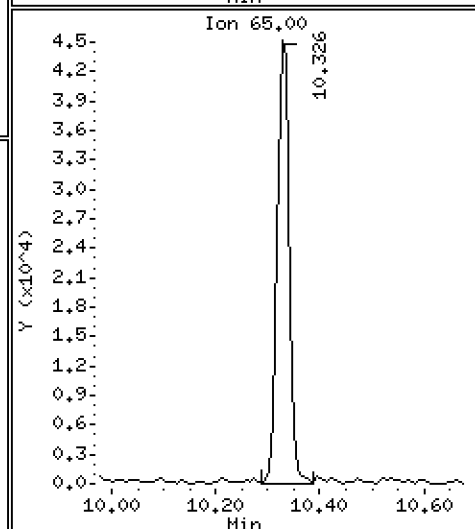
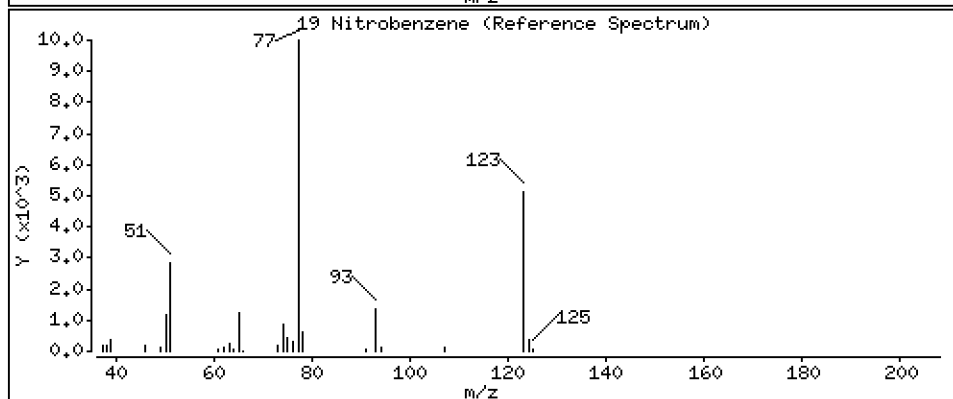
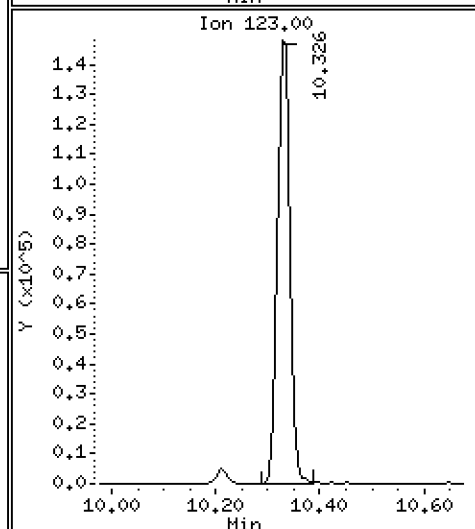
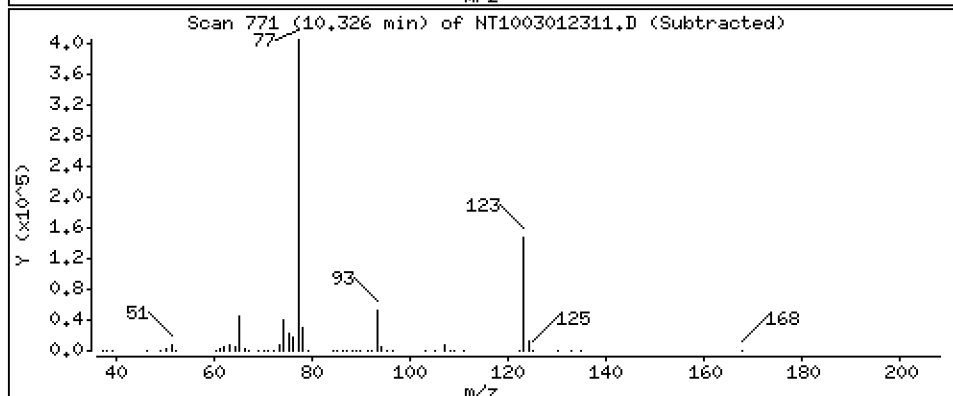
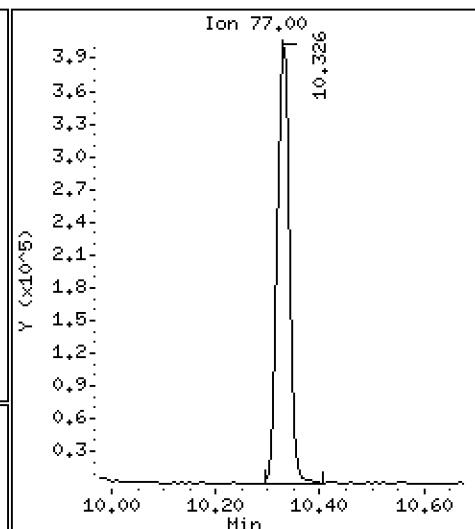
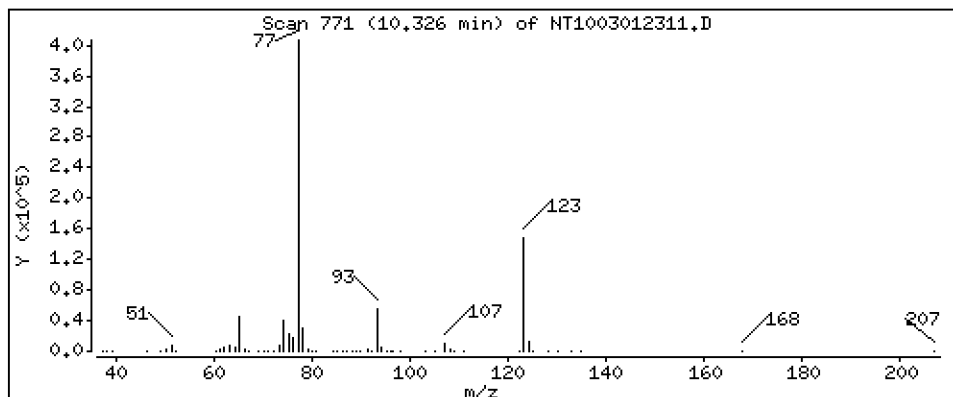
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,569 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

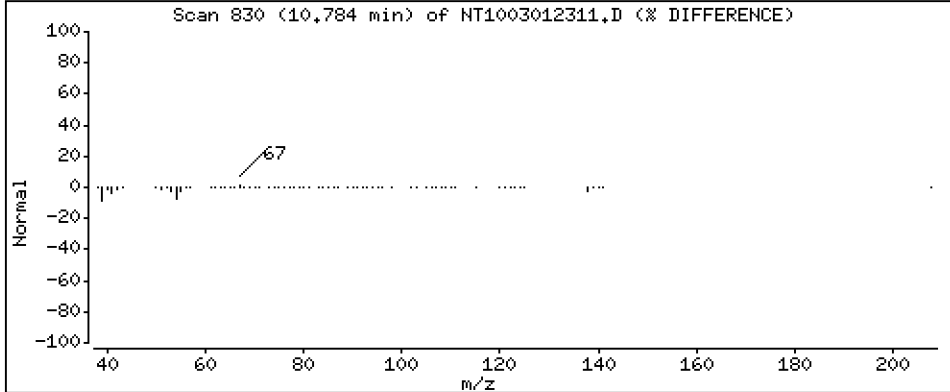
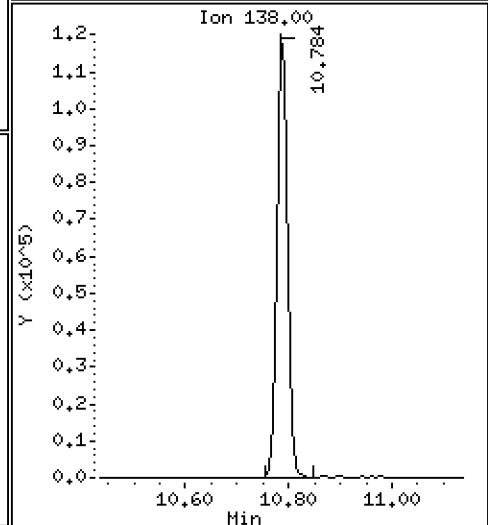
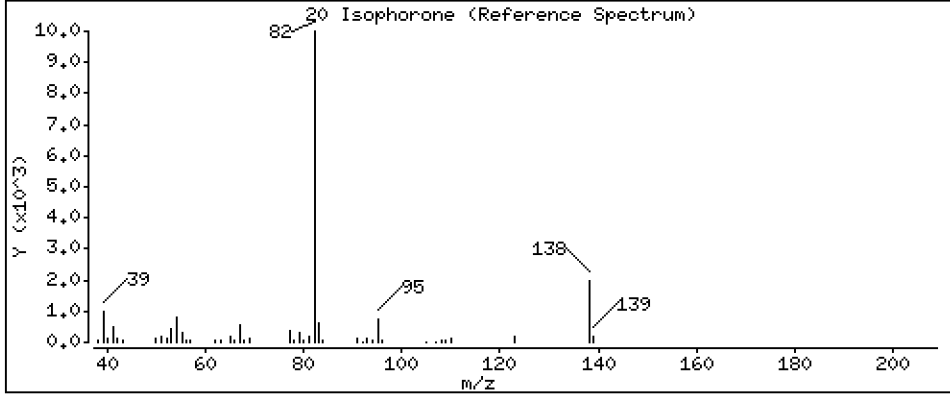
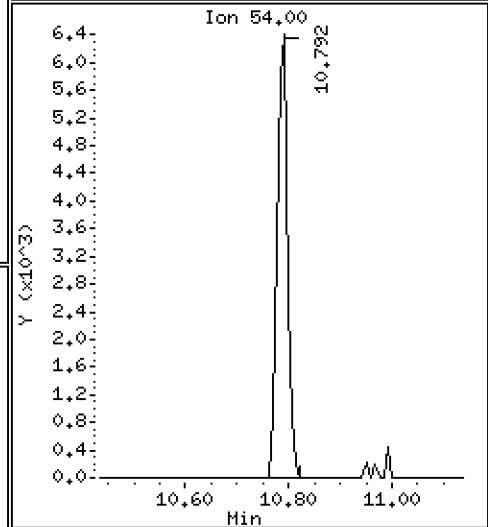
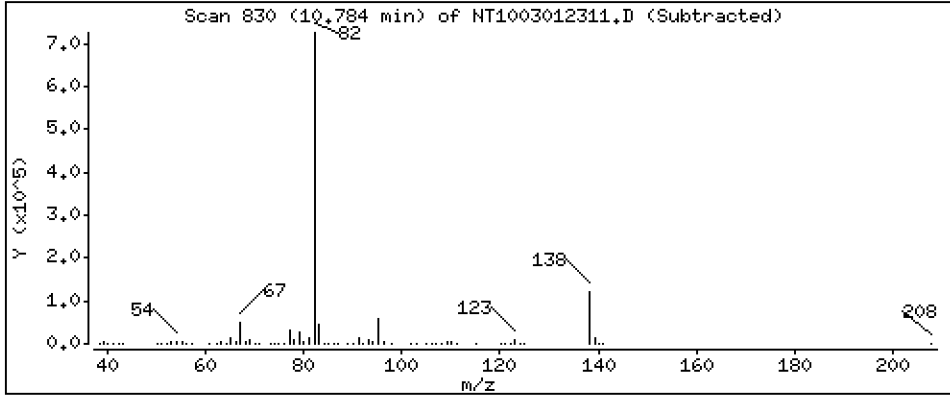
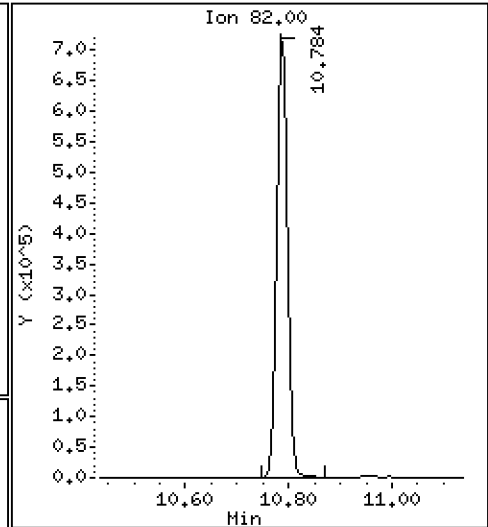
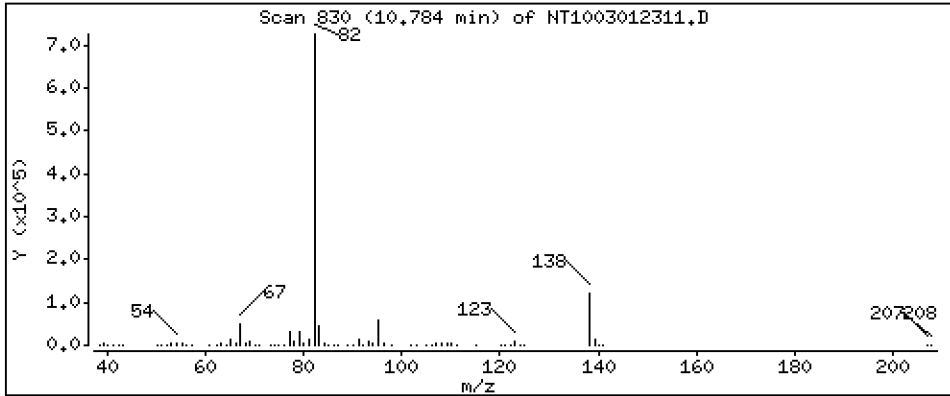
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,672 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

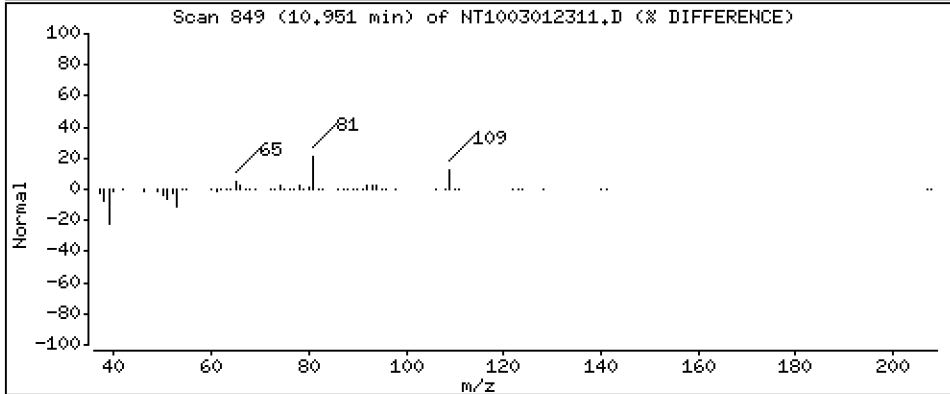
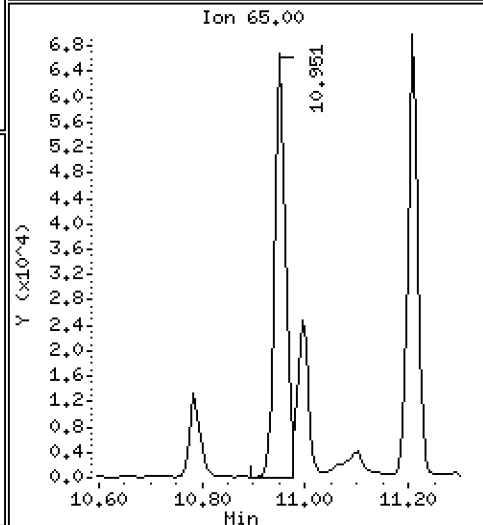
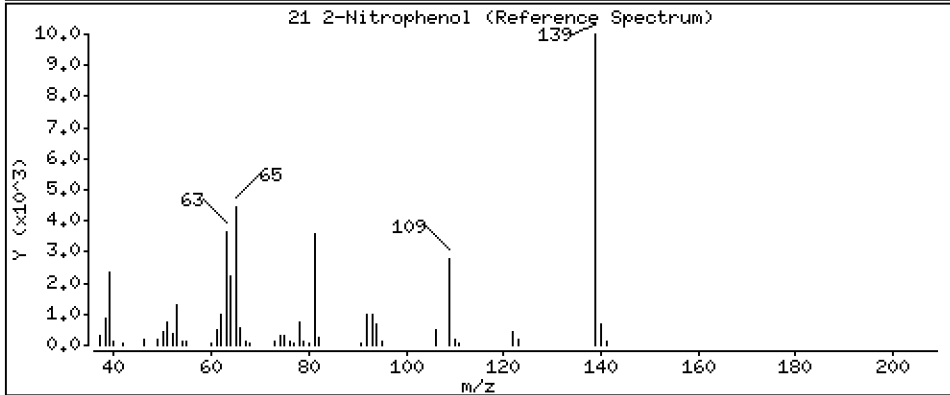
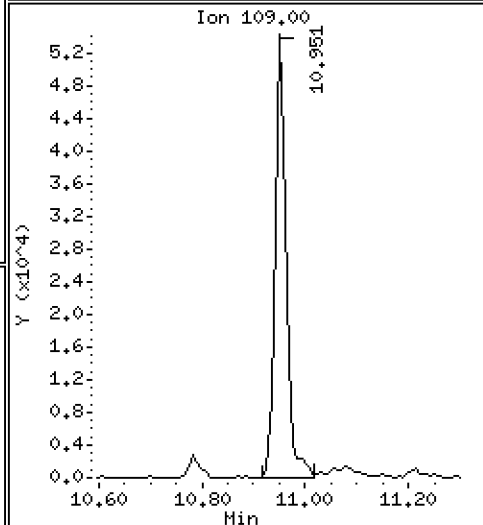
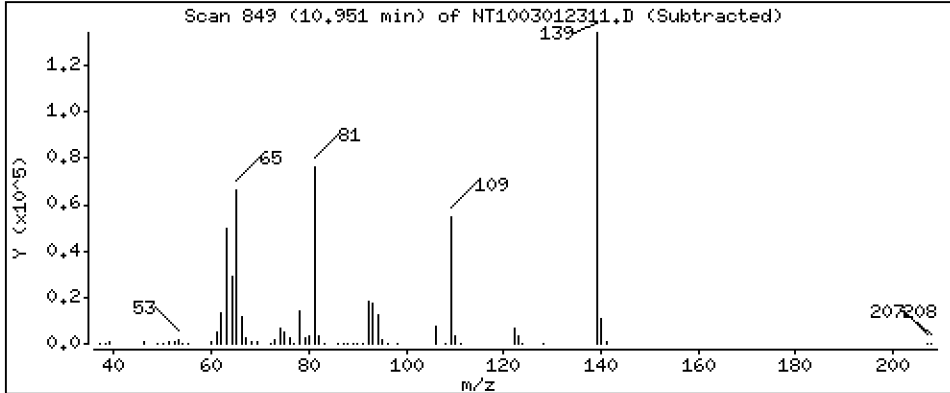
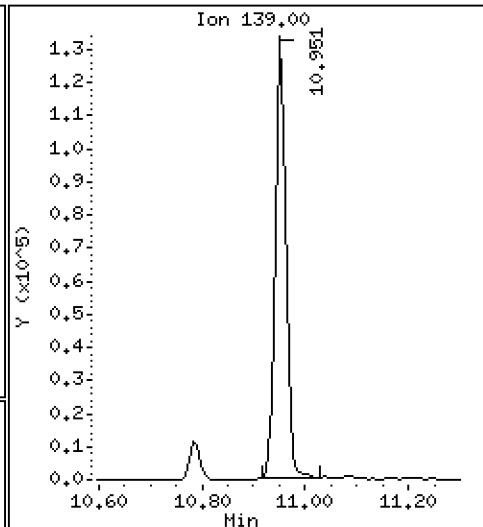
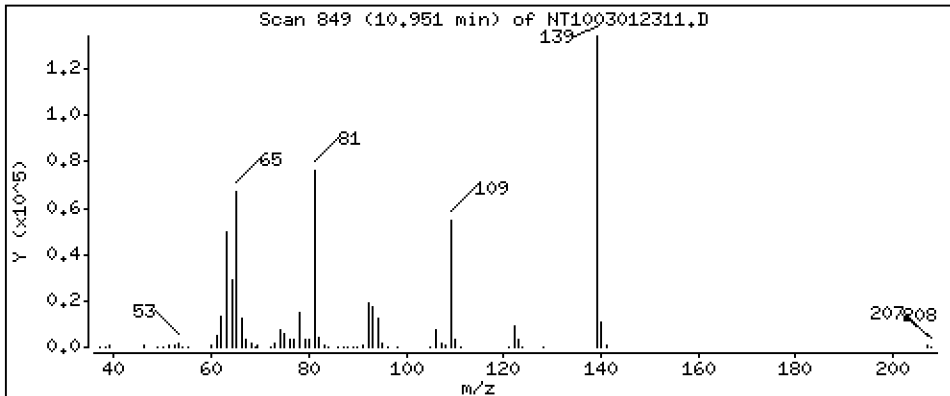
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,244 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

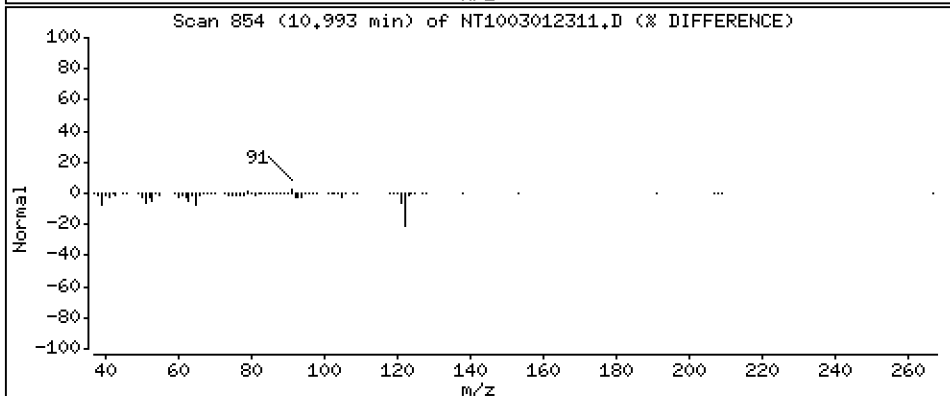
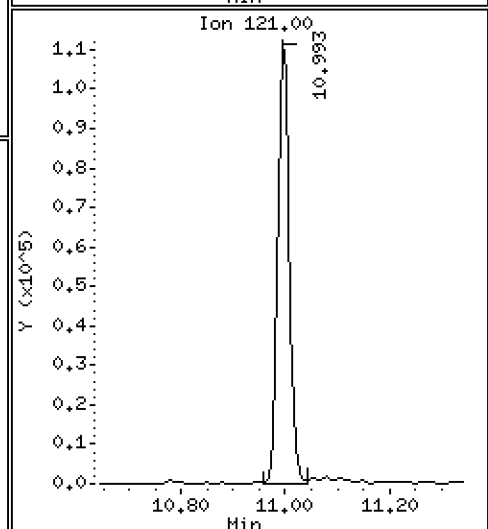
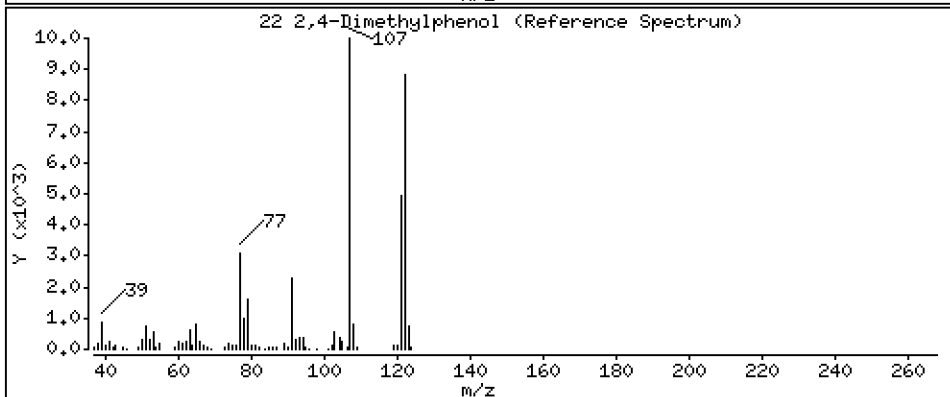
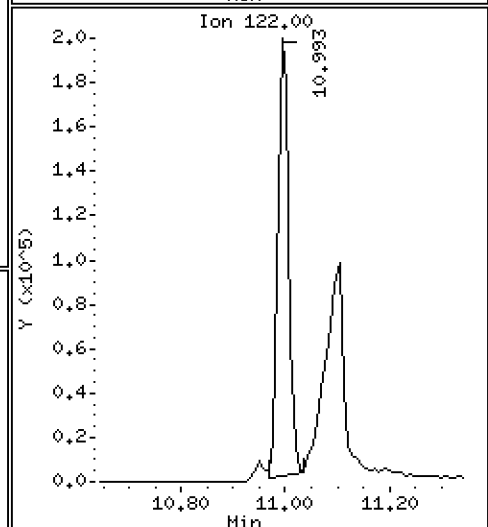
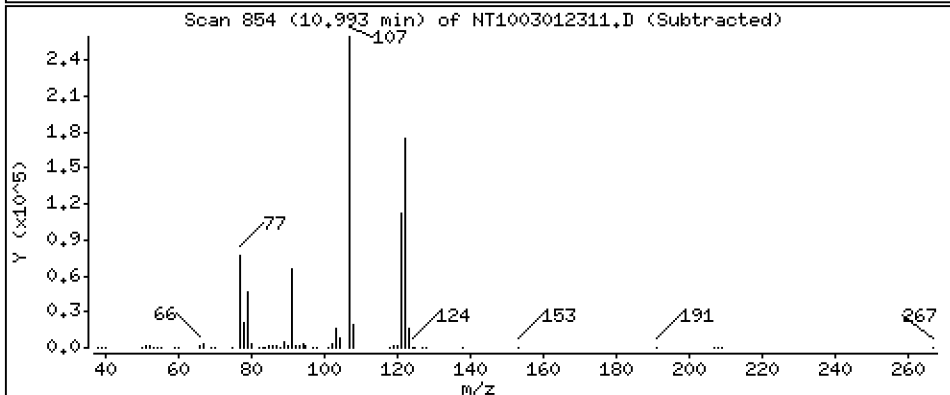
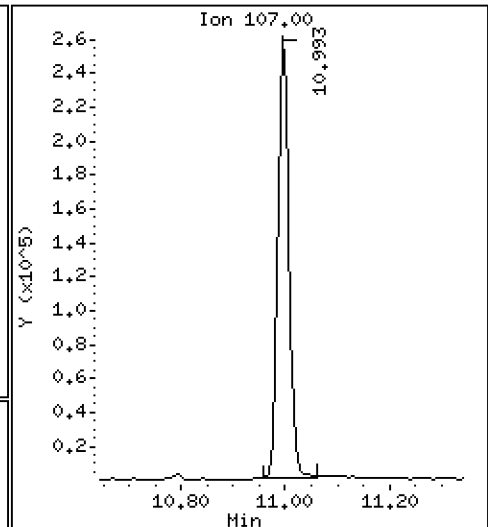
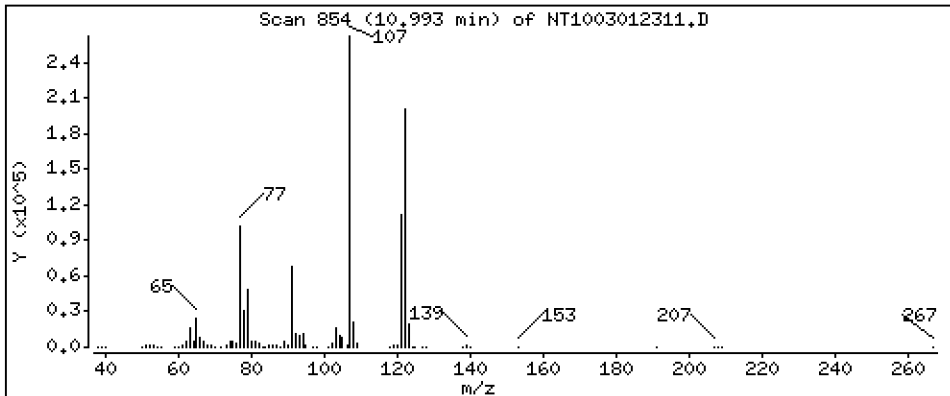
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 3,507 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

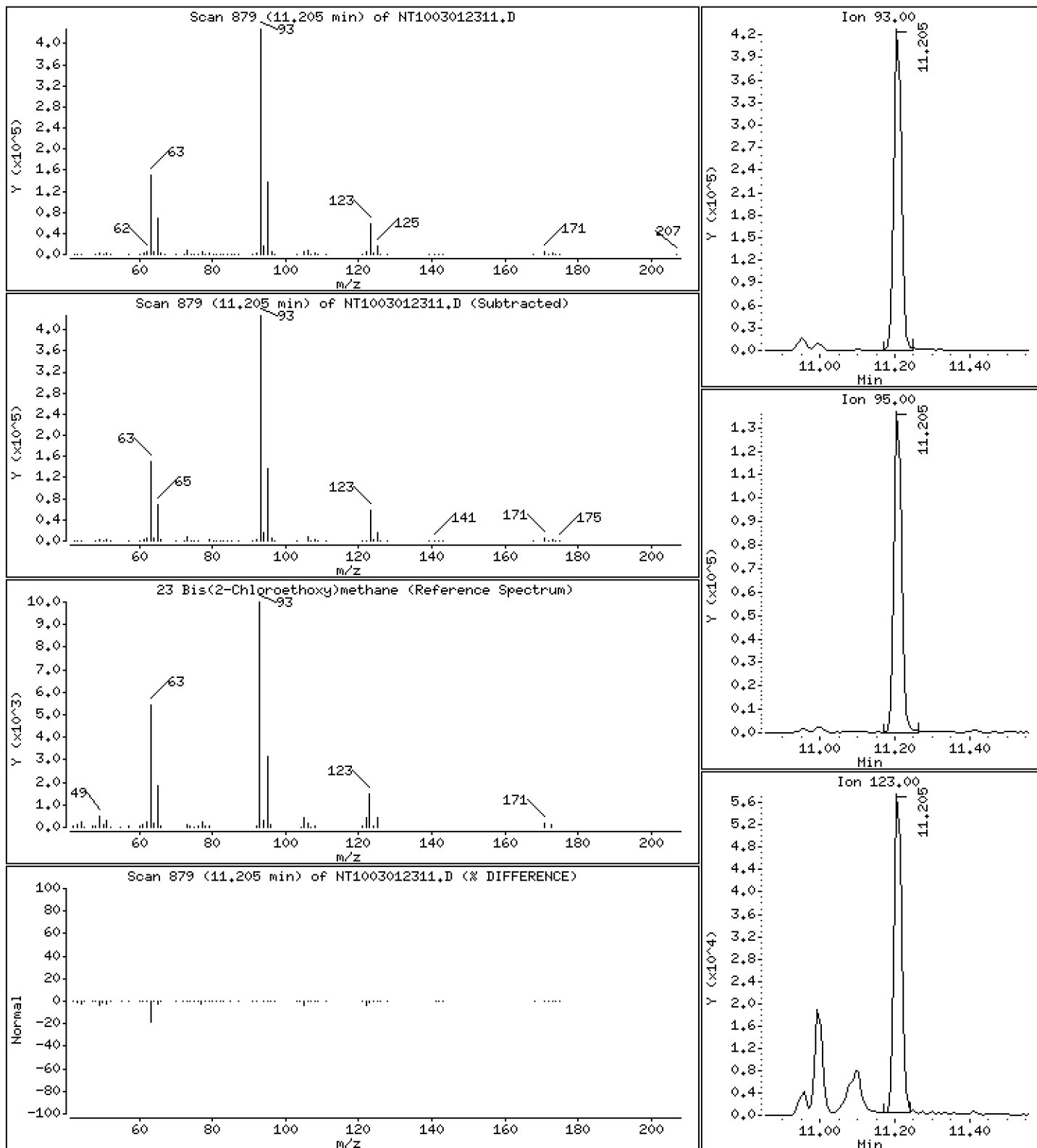
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,727 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

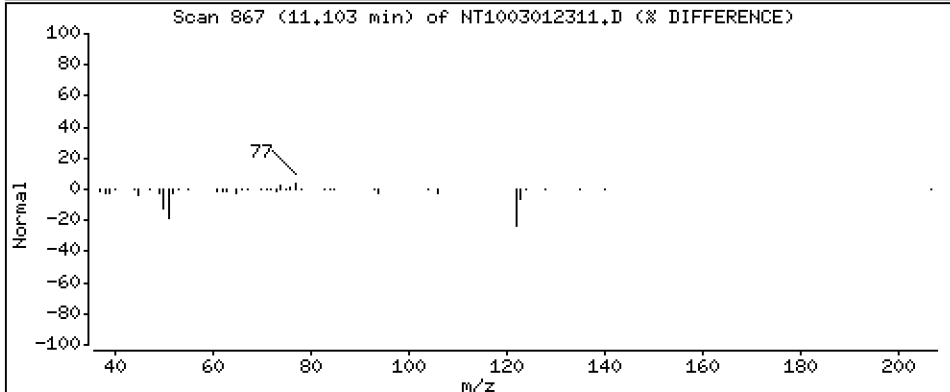
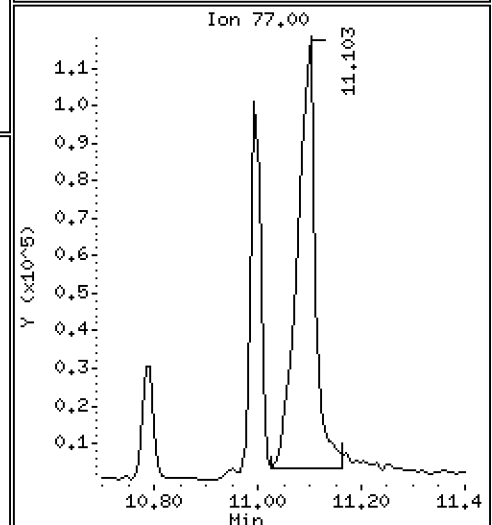
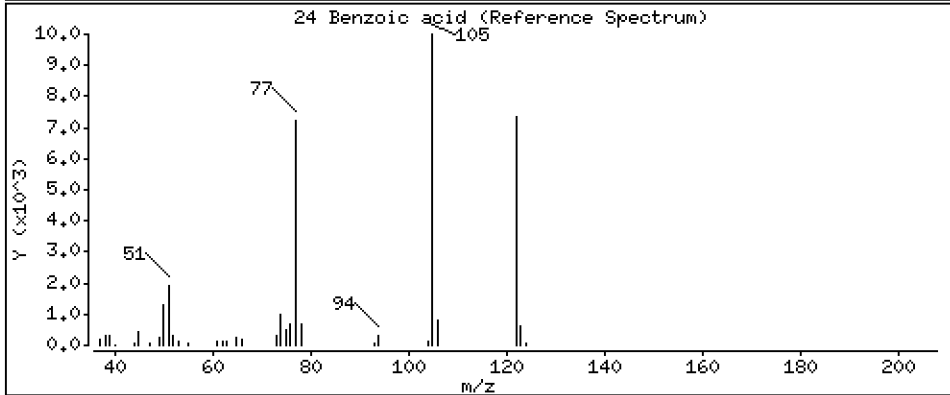
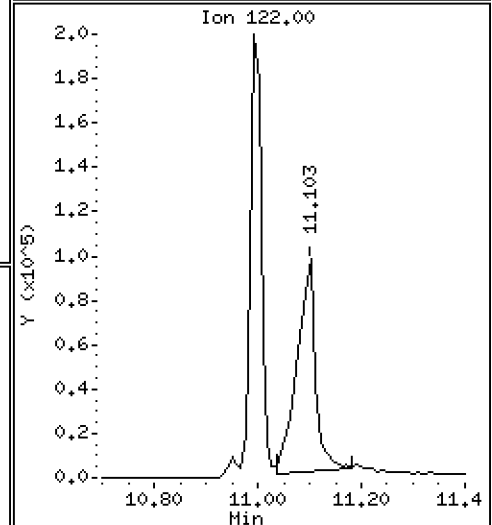
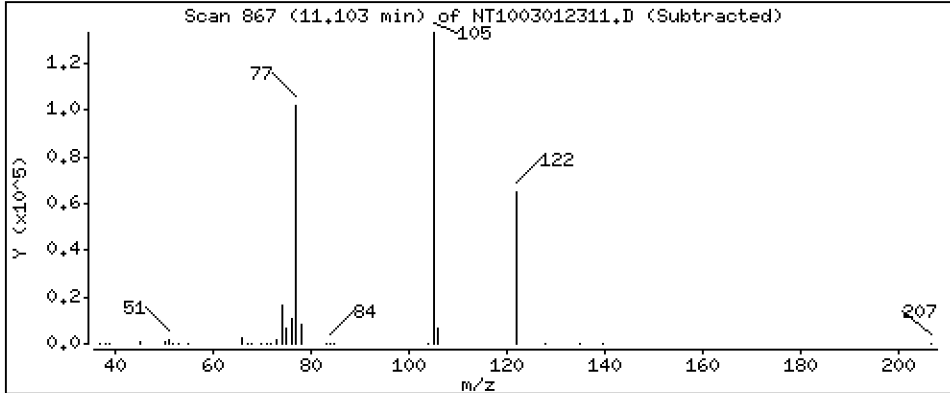
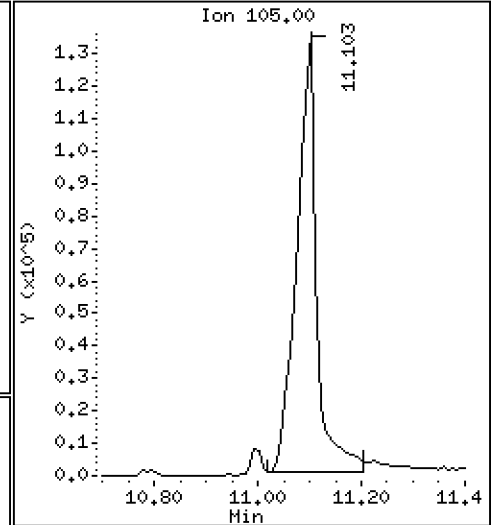
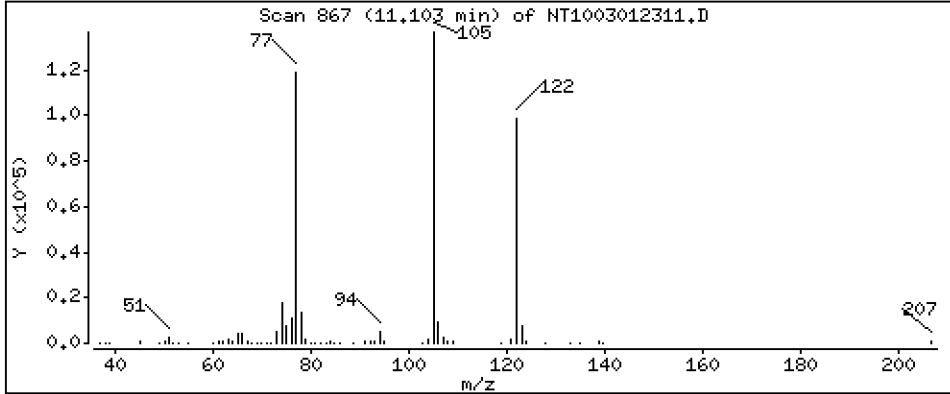
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 5,635 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

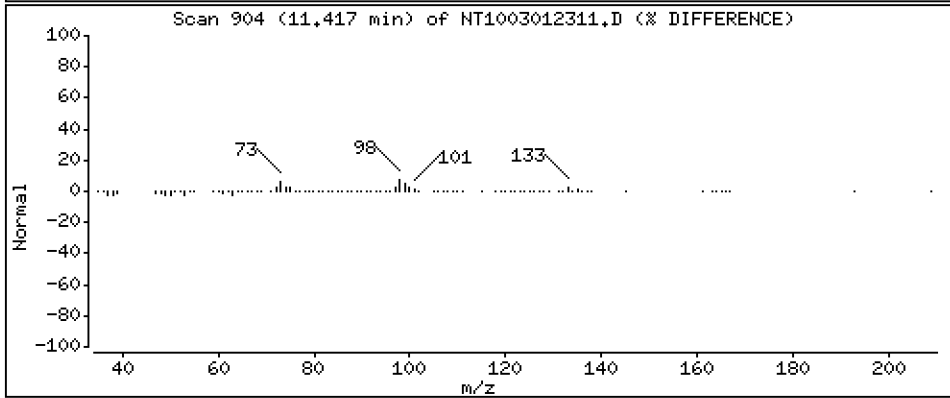
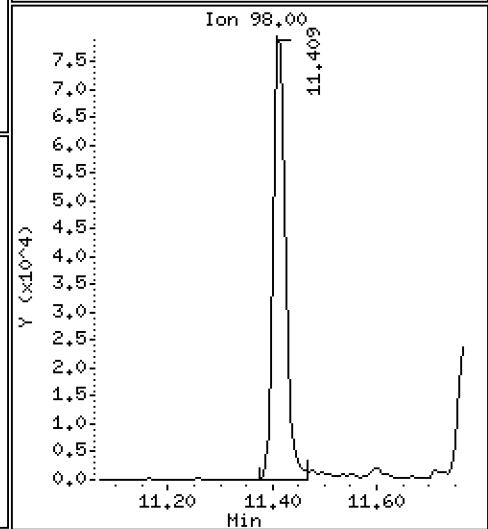
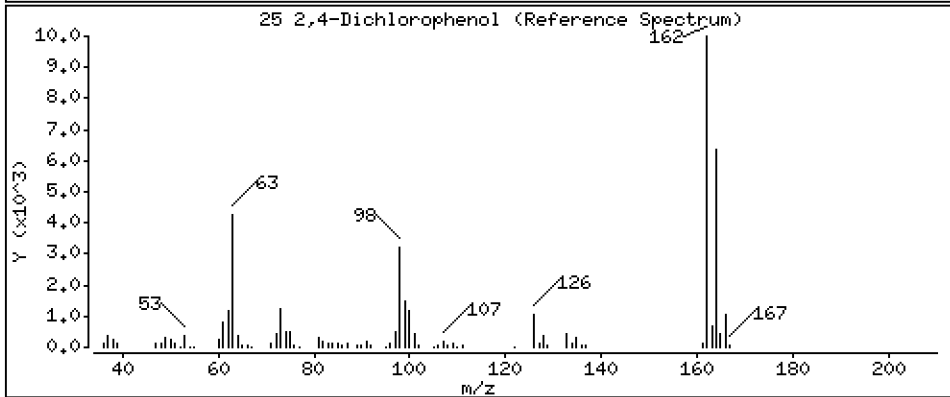
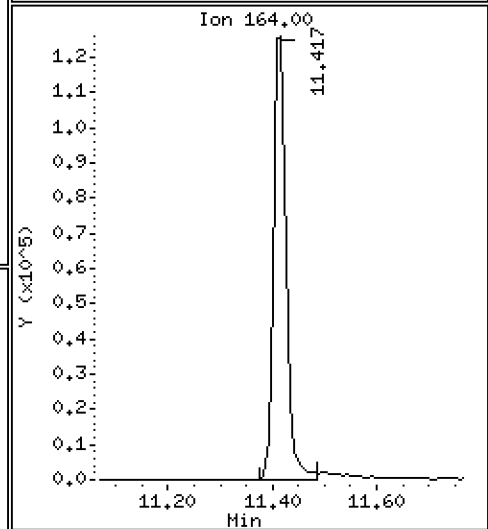
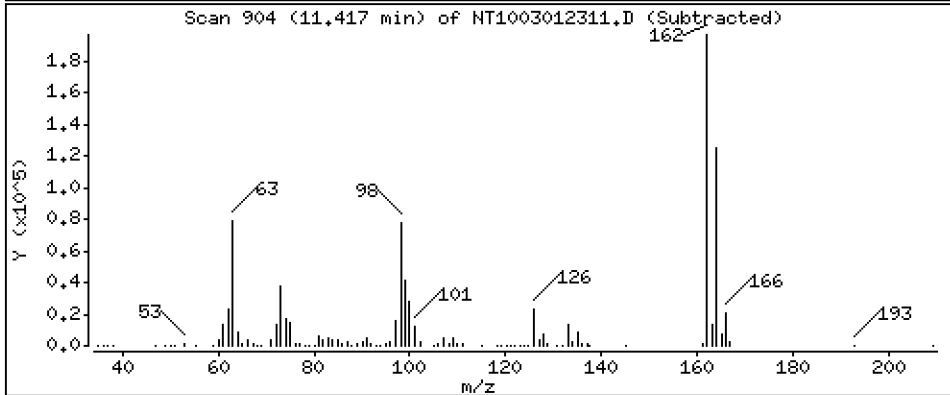
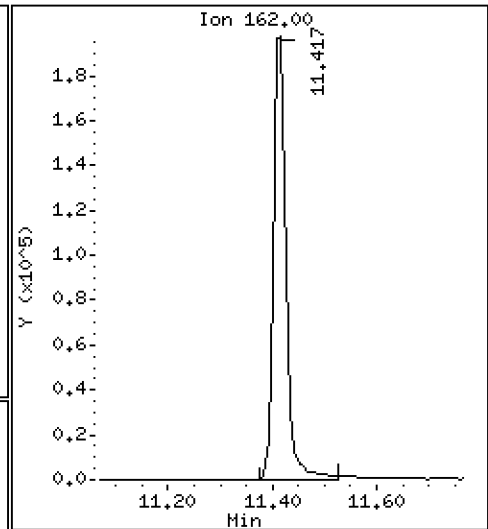
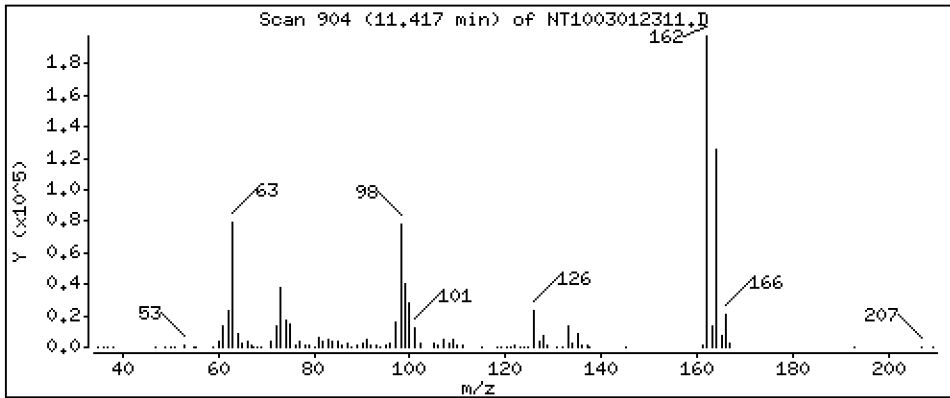
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 4,437 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

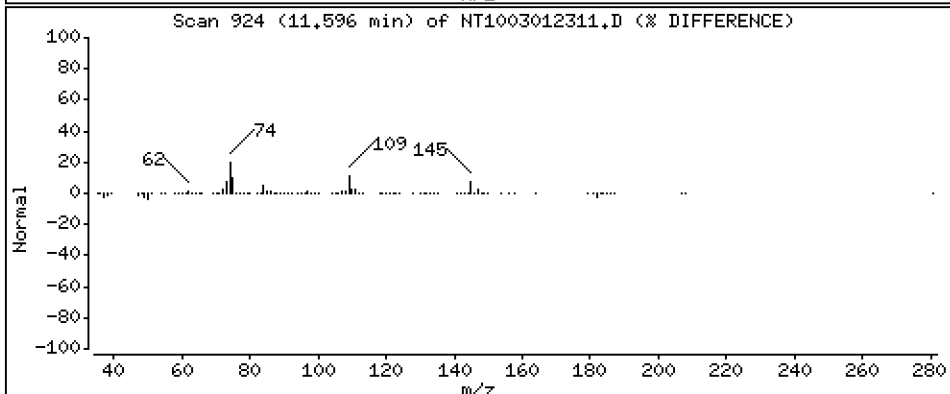
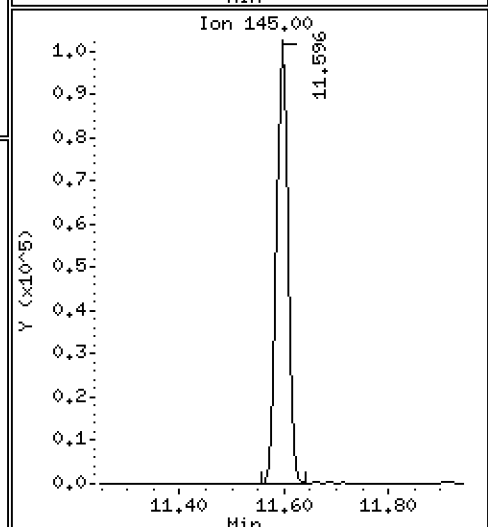
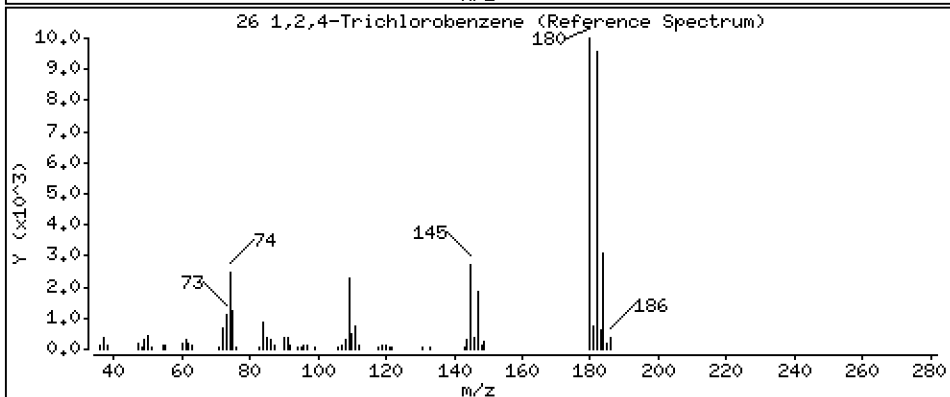
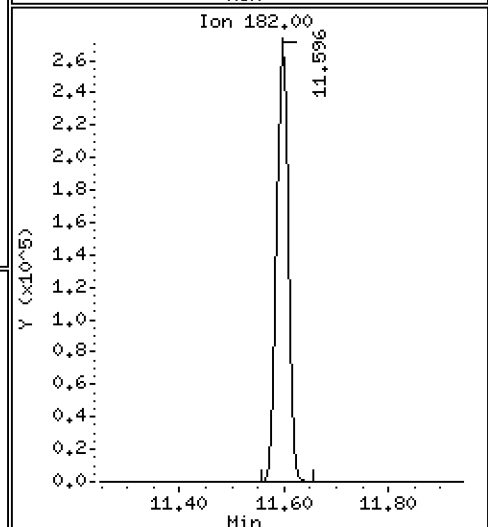
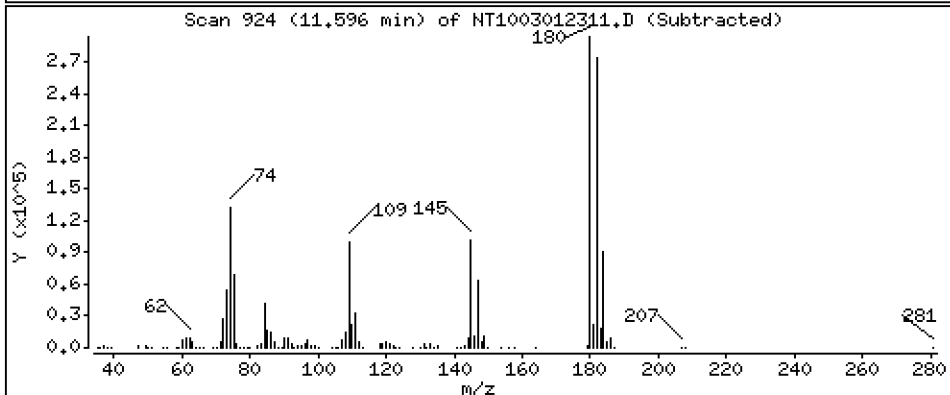
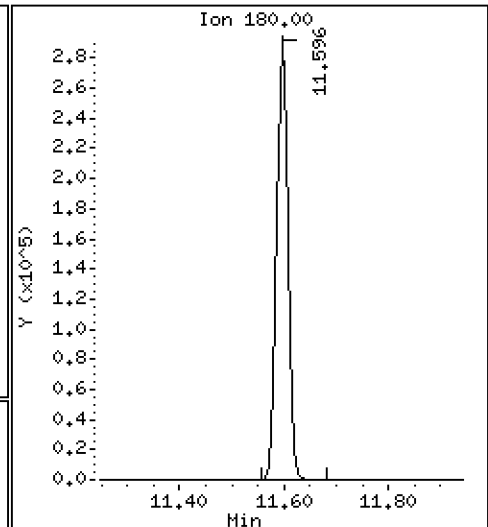
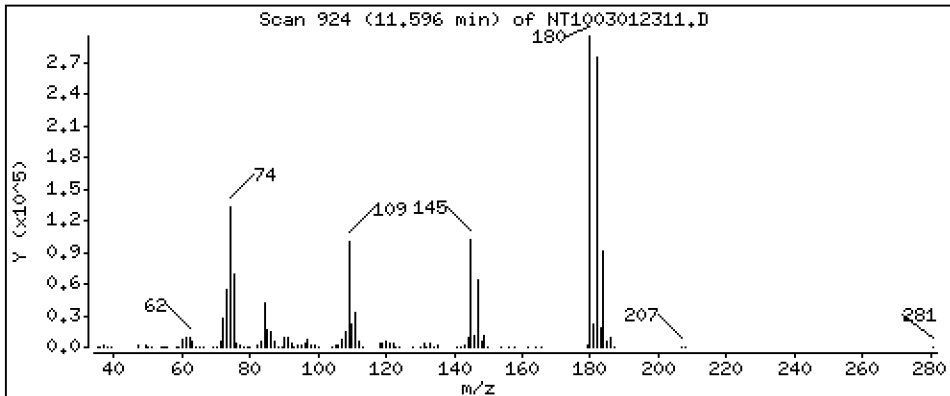
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,908 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

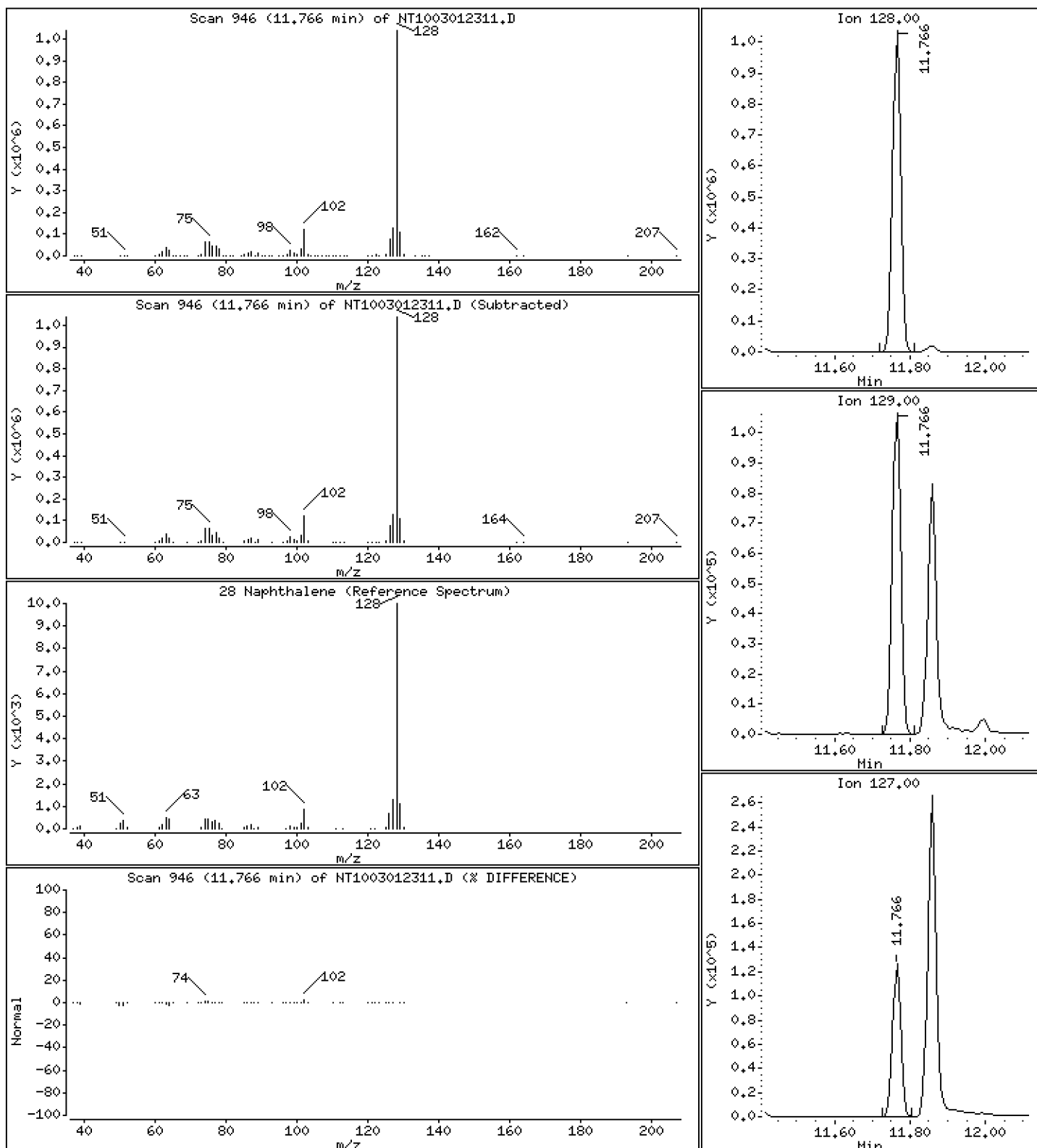
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 5,255 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

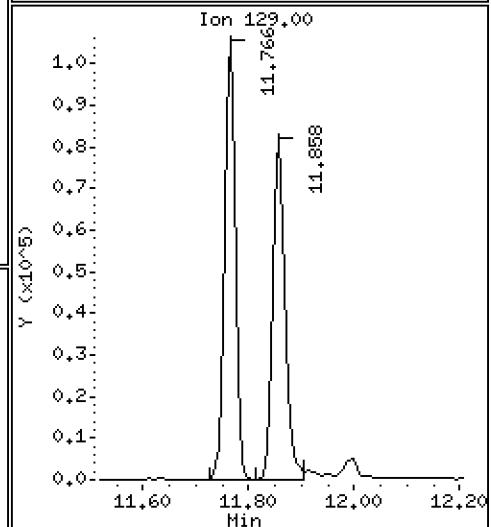
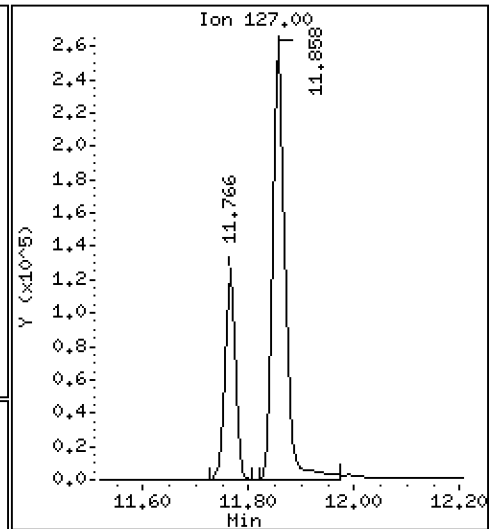
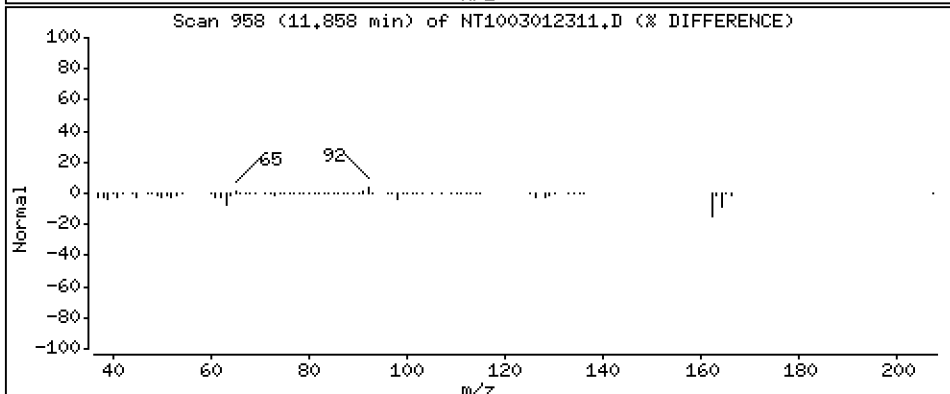
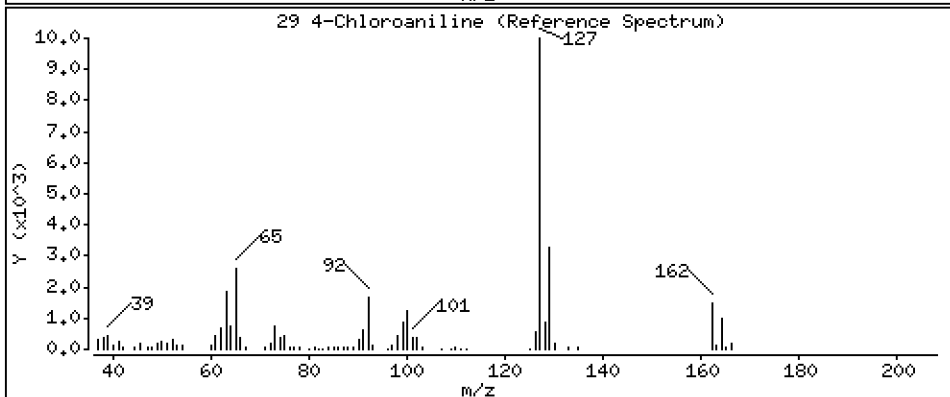
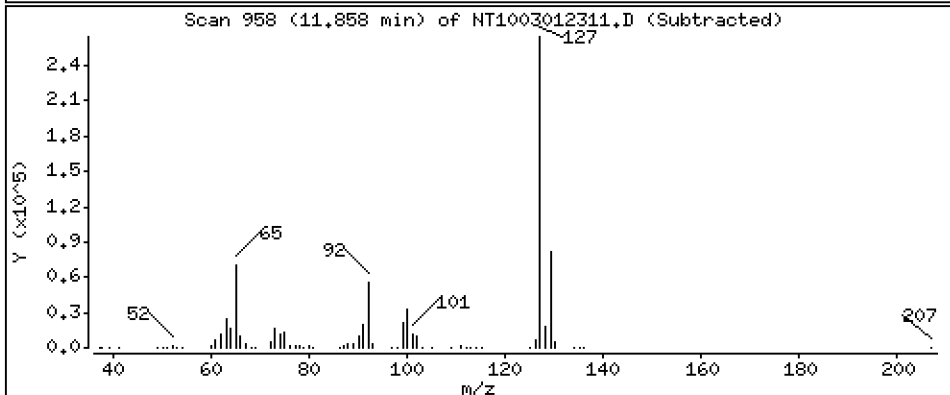
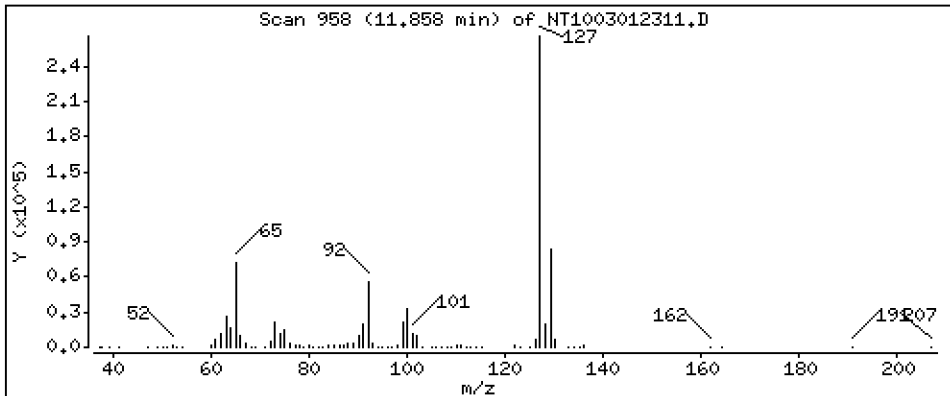
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 3,791 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

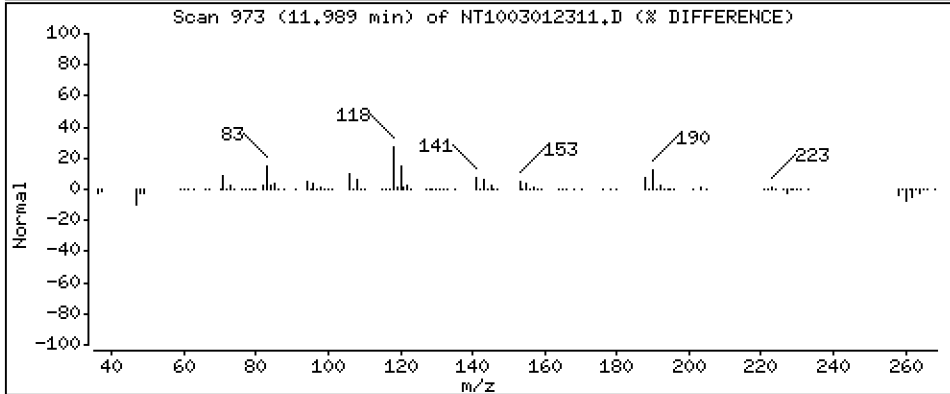
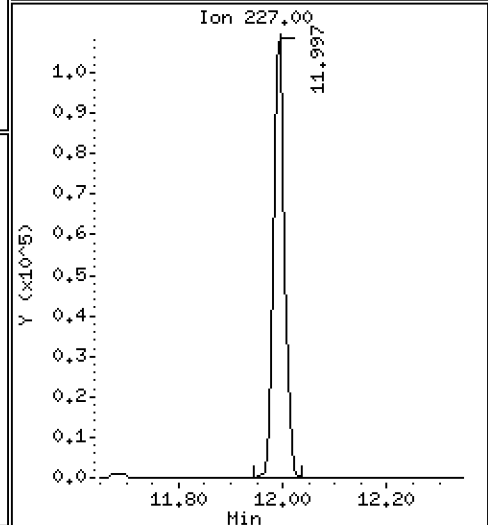
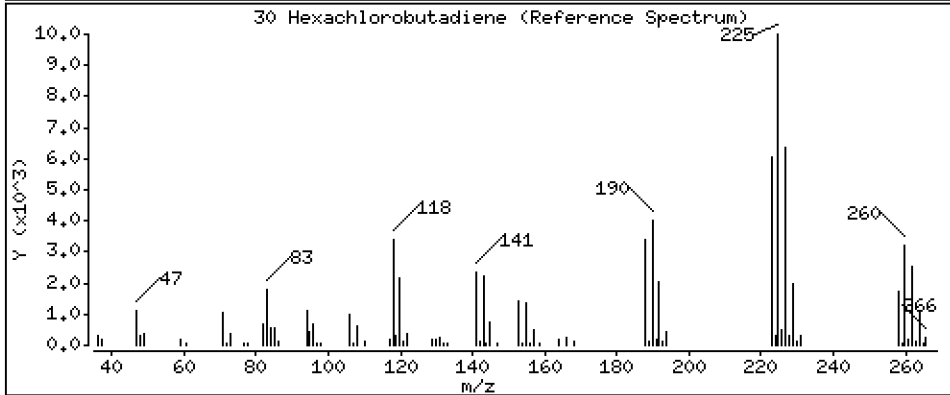
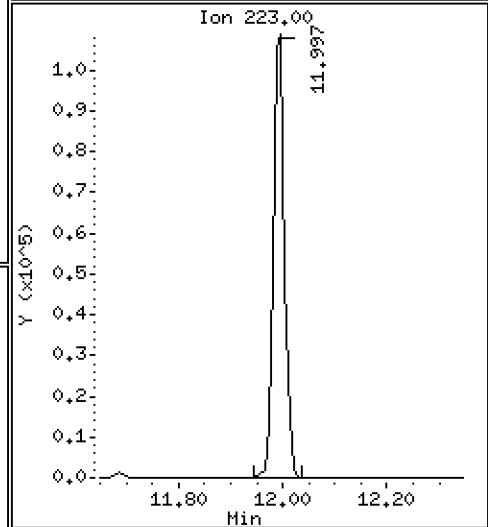
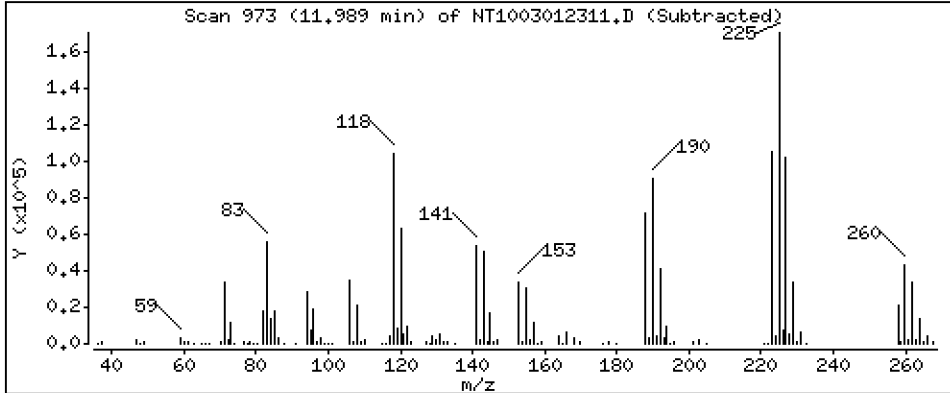
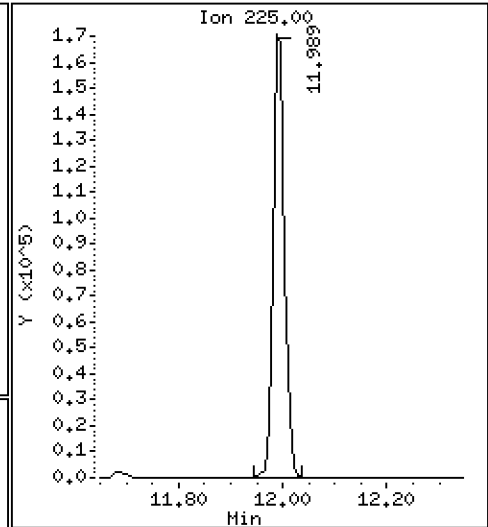
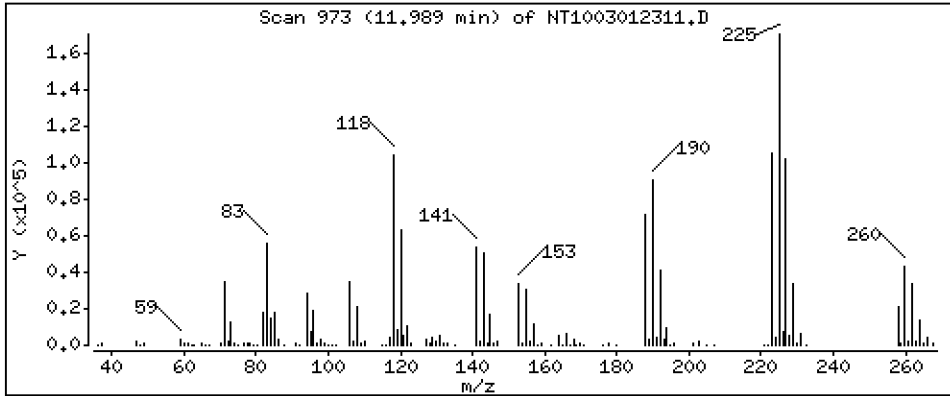
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 5,014 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

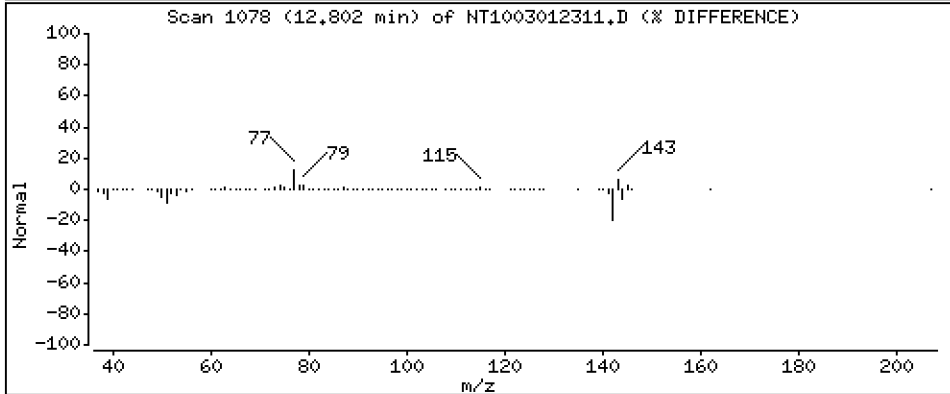
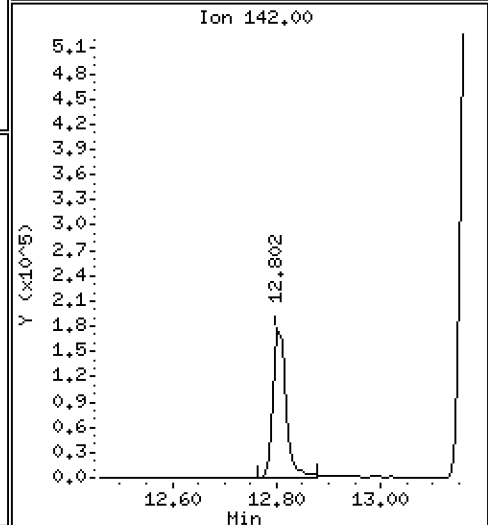
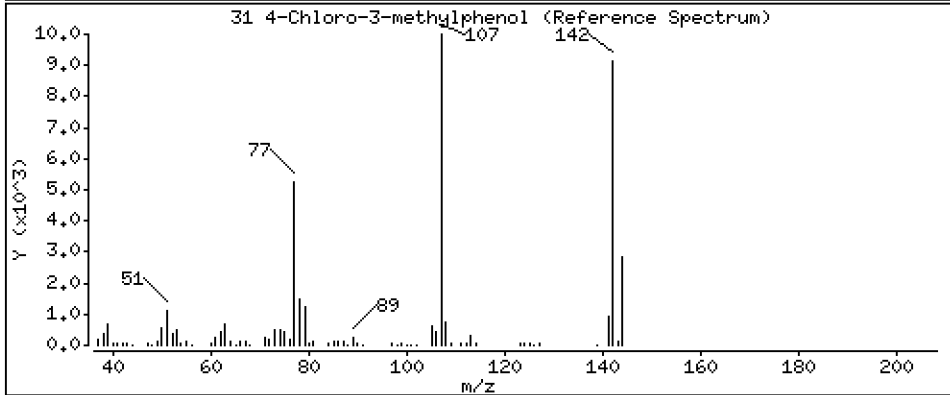
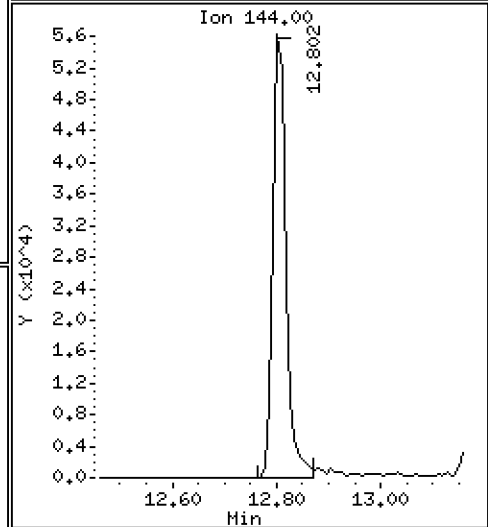
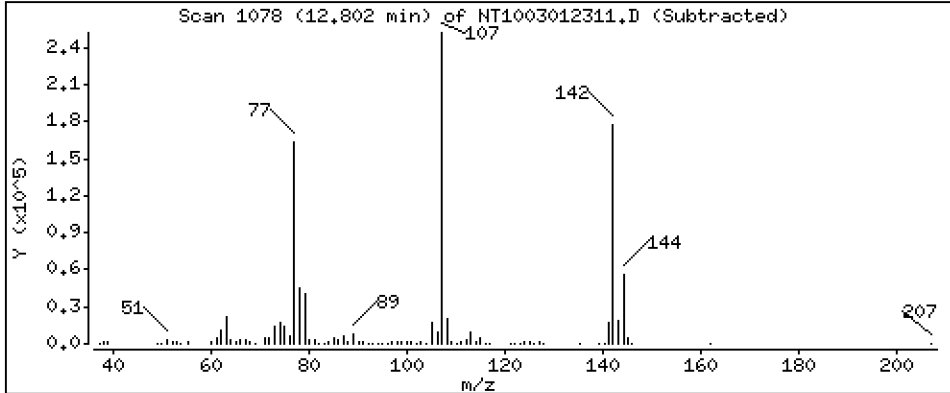
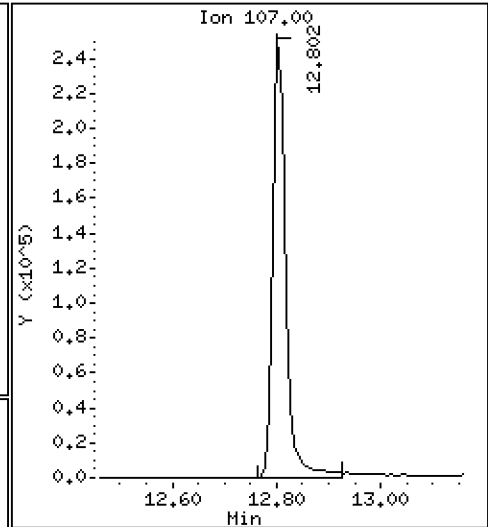
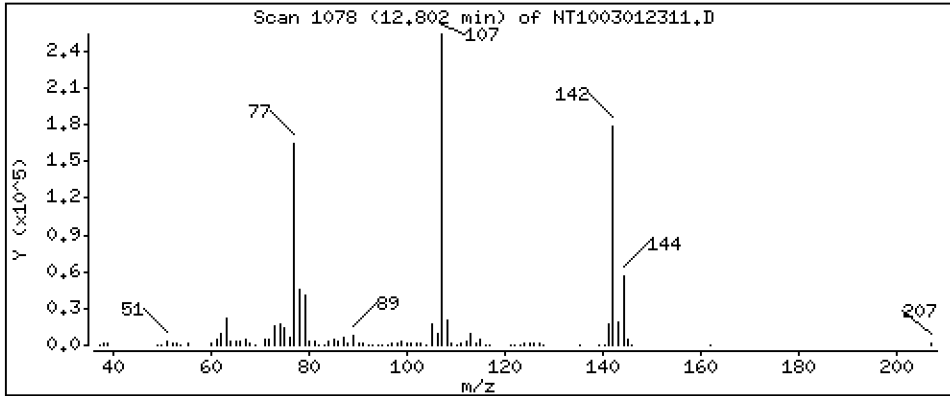
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 4,452 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

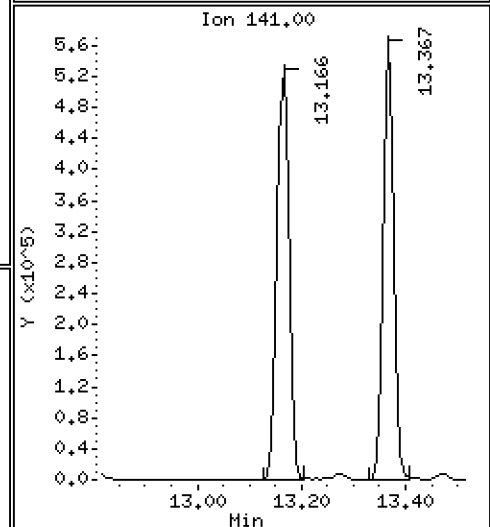
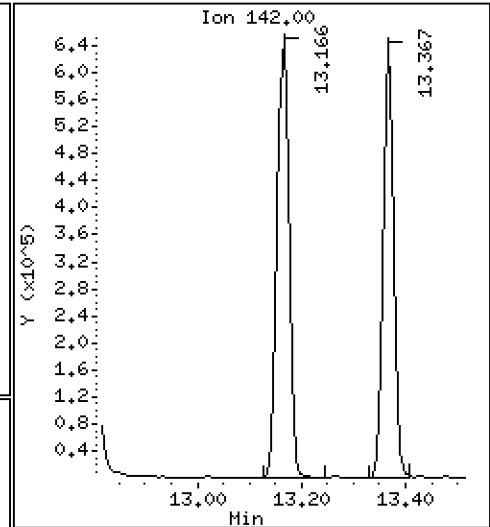
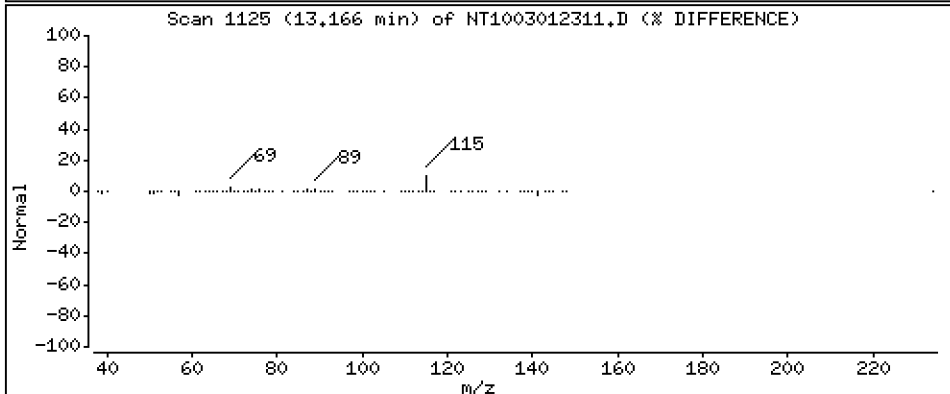
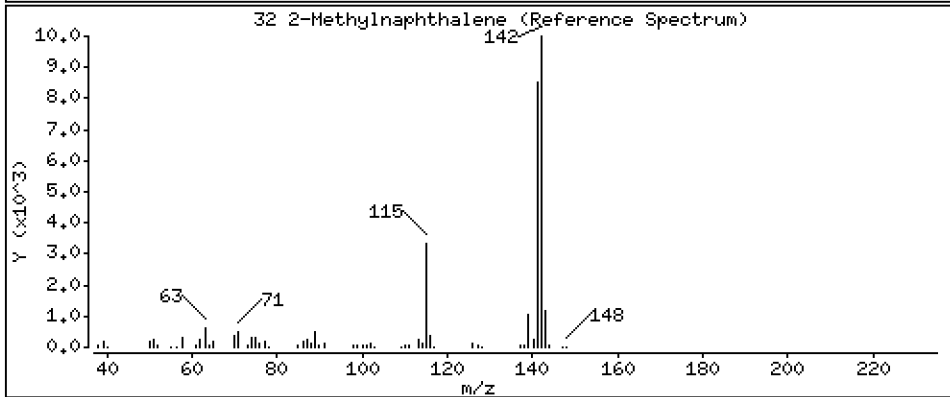
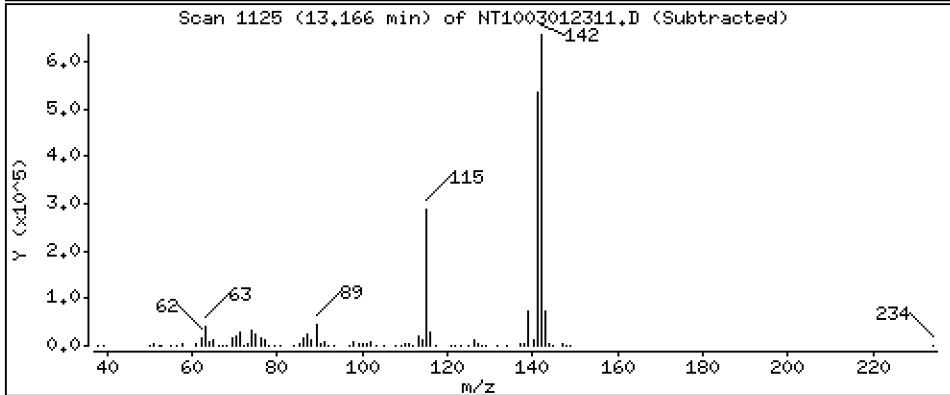
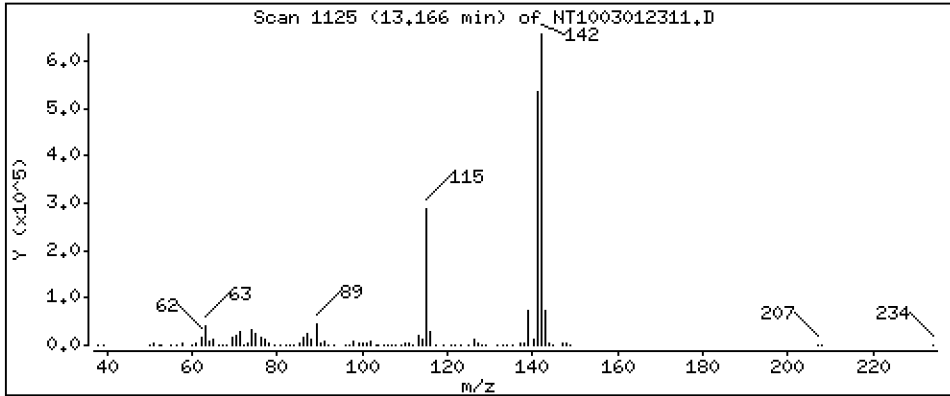
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,951 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

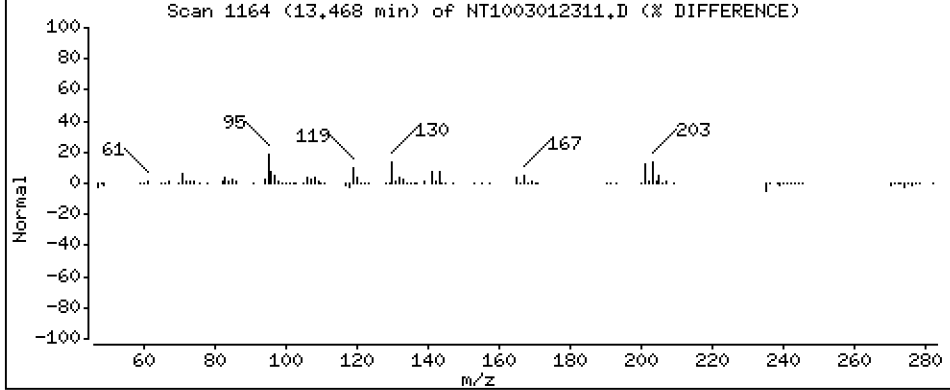
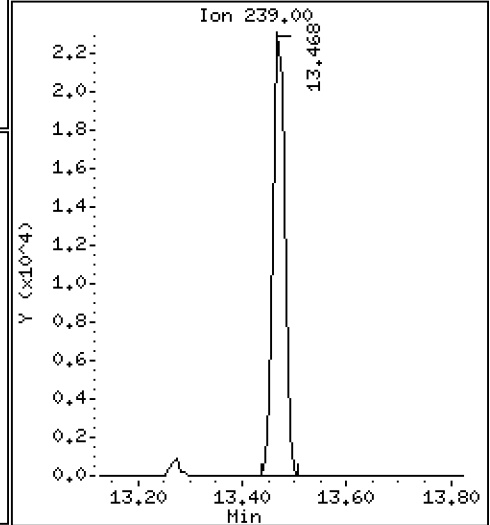
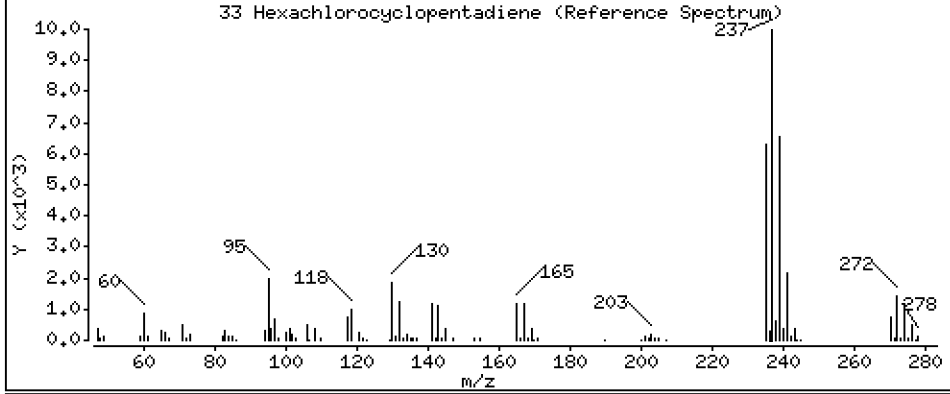
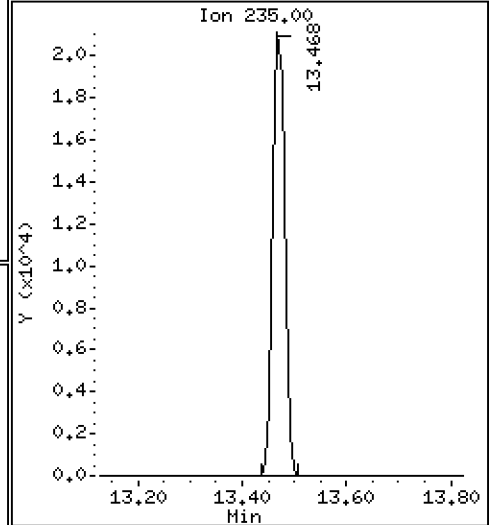
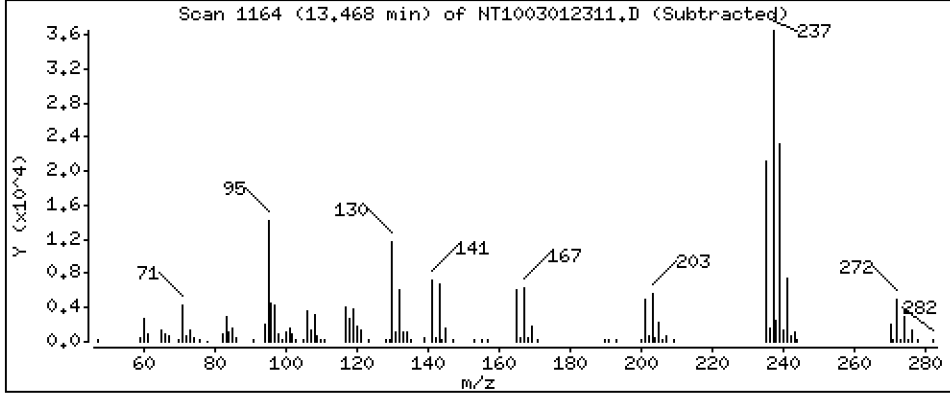
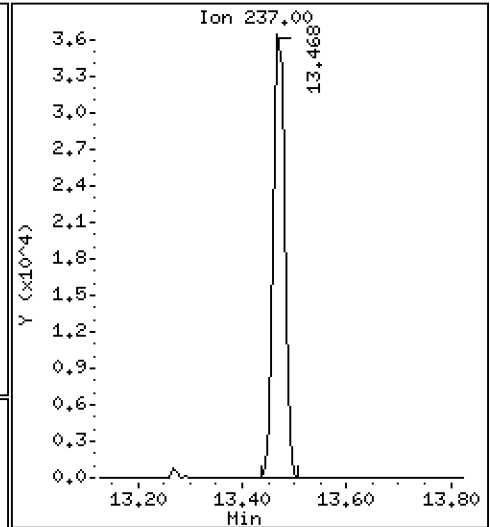
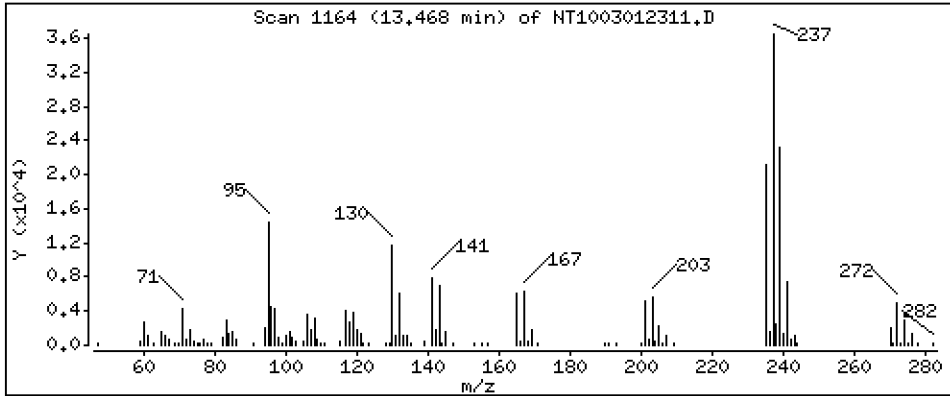
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 2,562 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

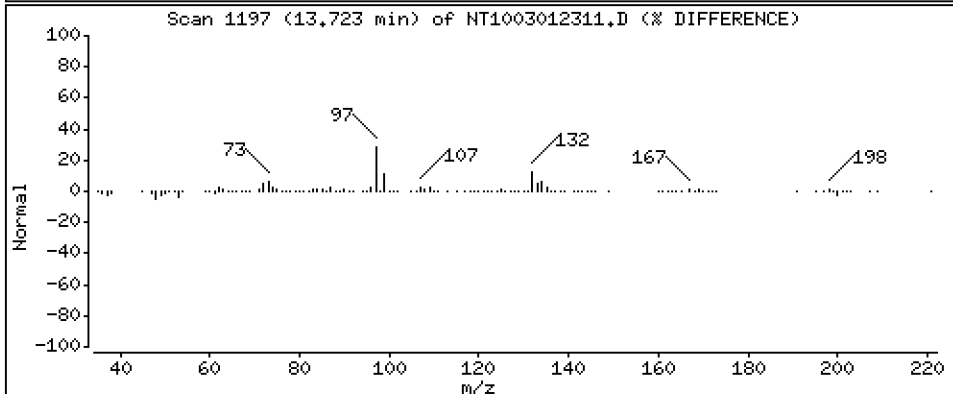
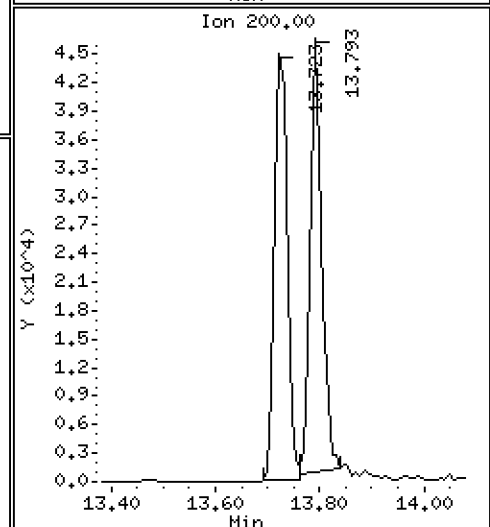
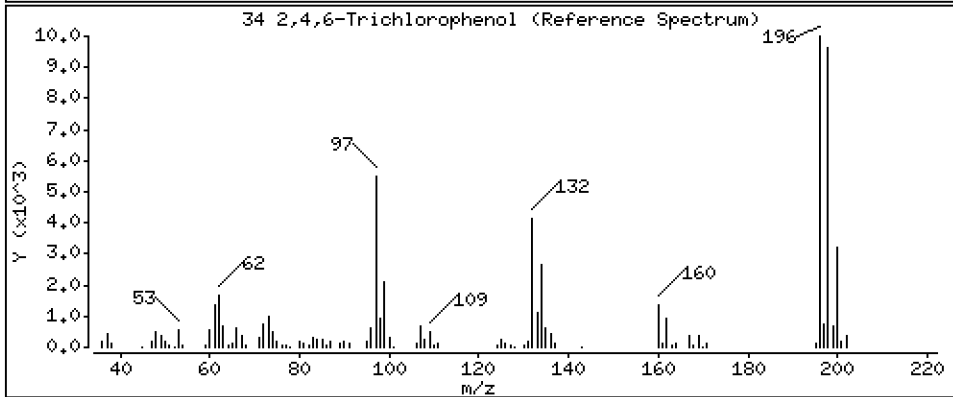
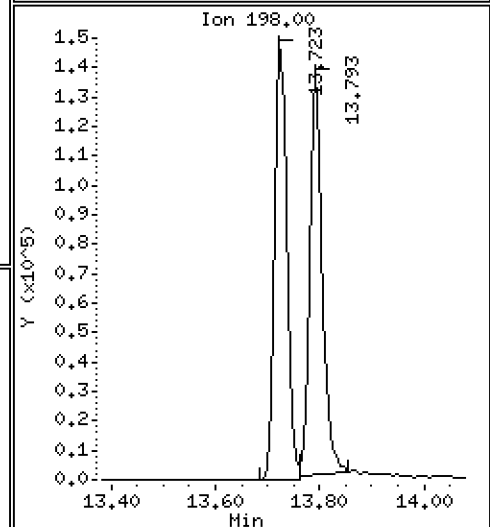
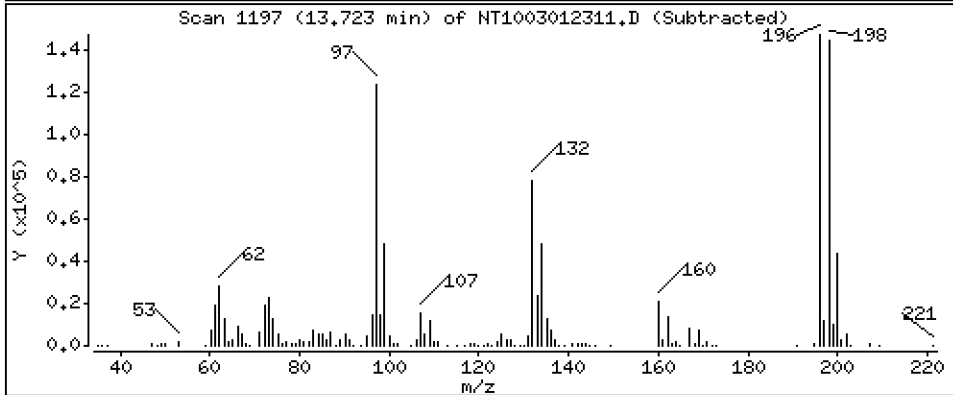
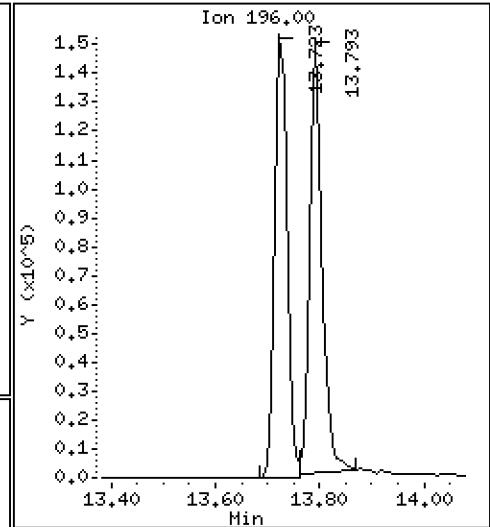
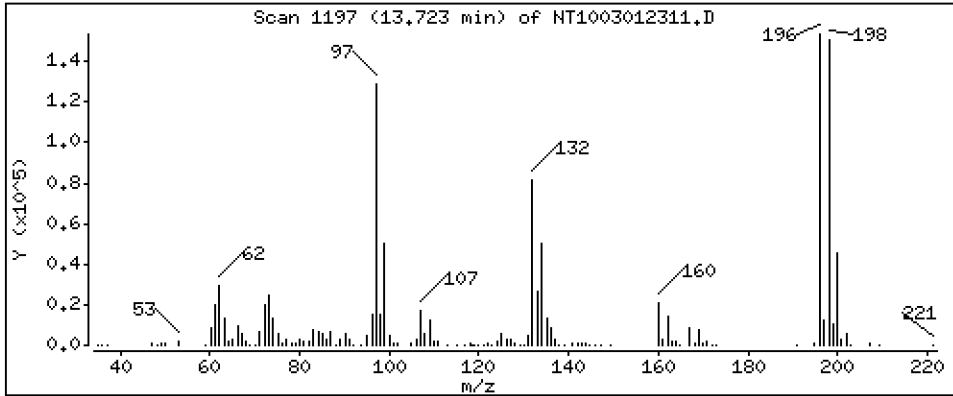
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

34 2,4,6-Trichlorophenol

Concentration: 4.120 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

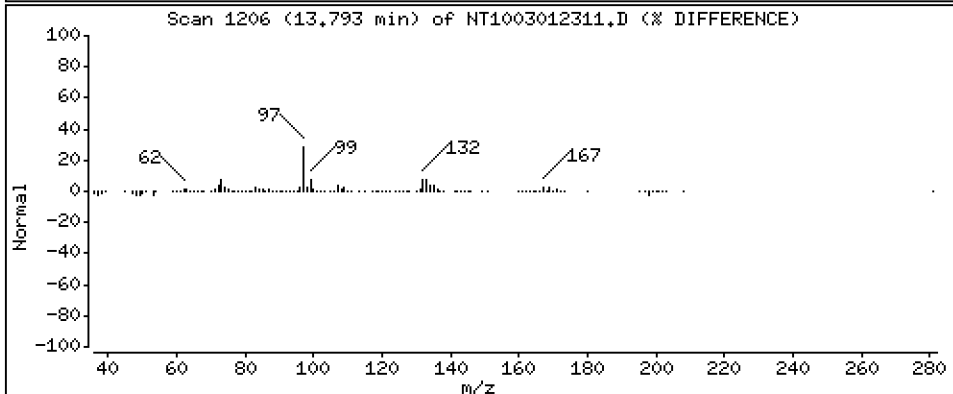
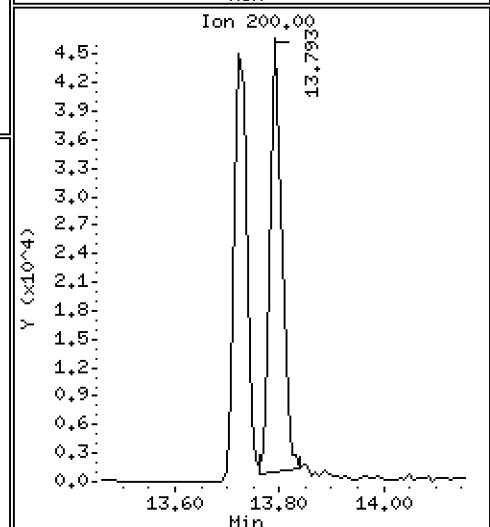
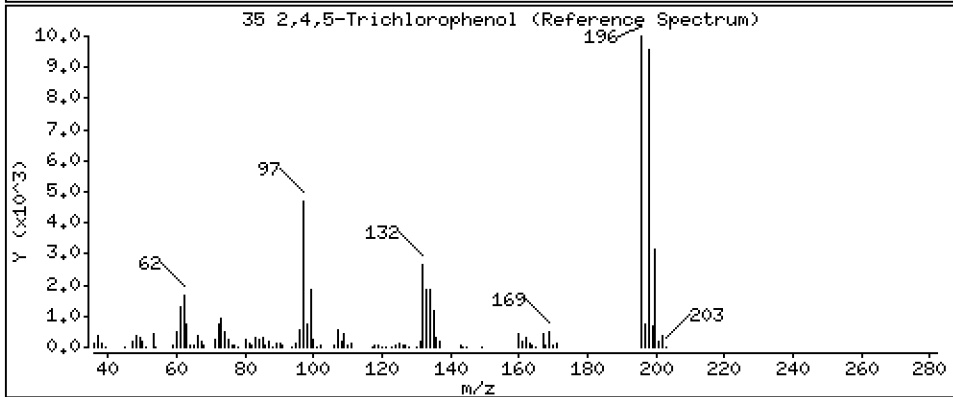
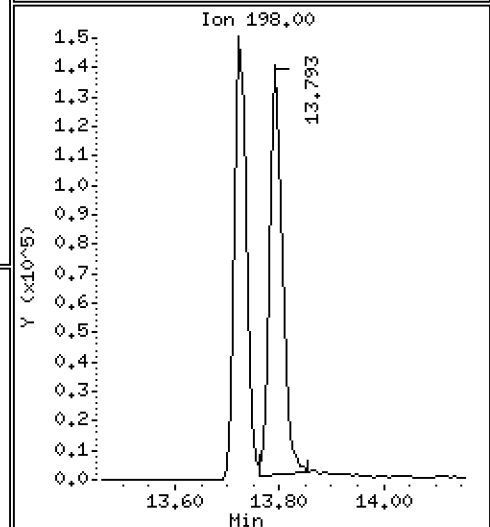
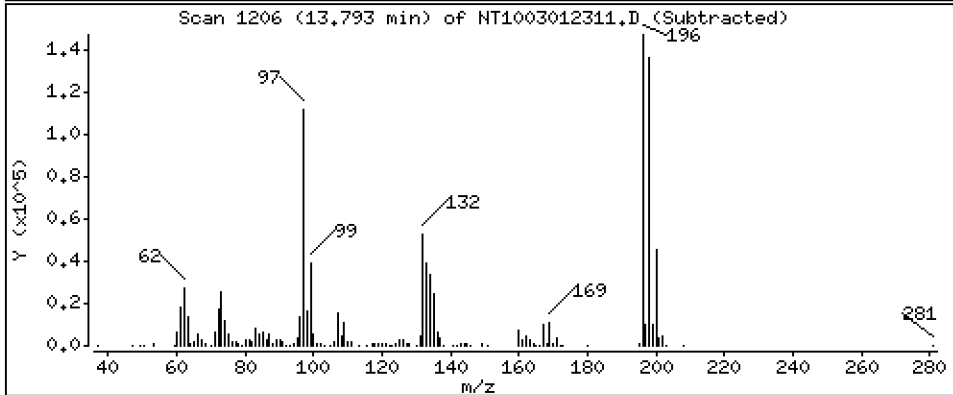
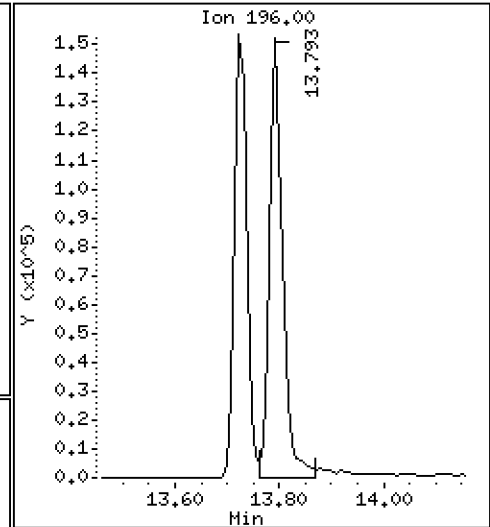
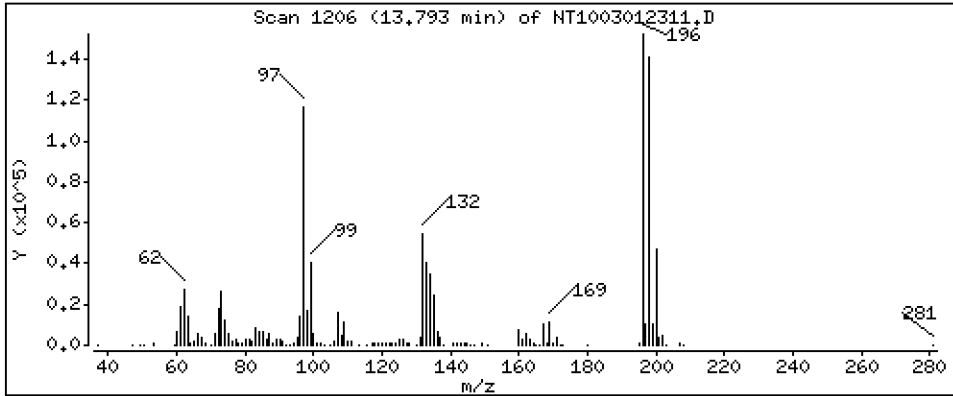
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 4,149 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

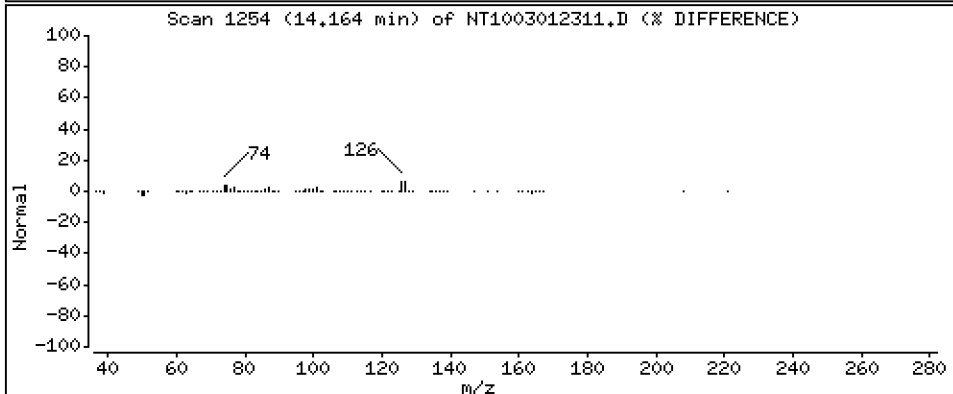
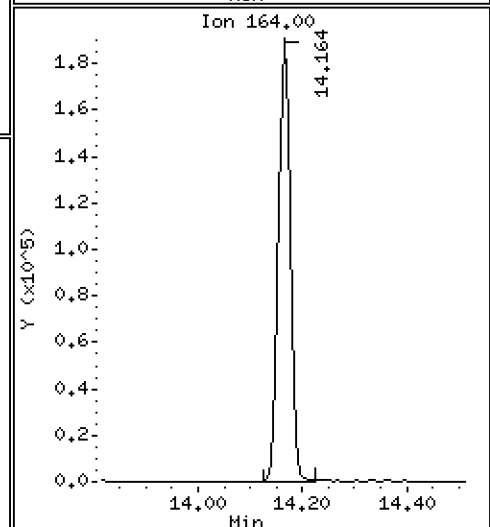
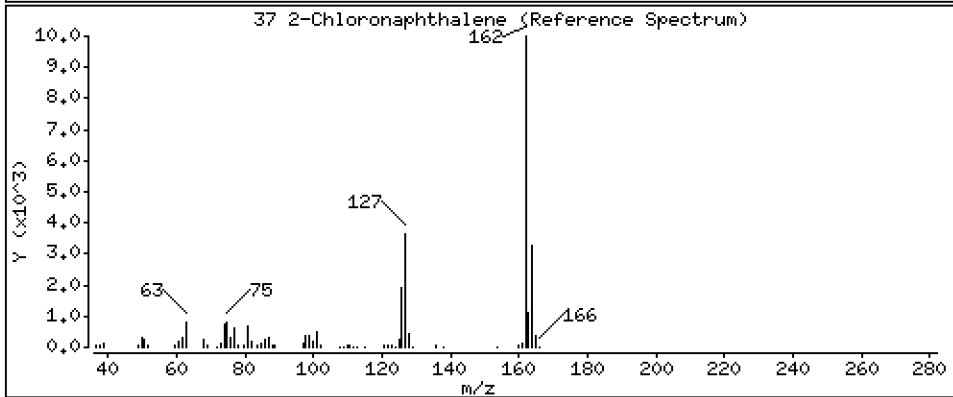
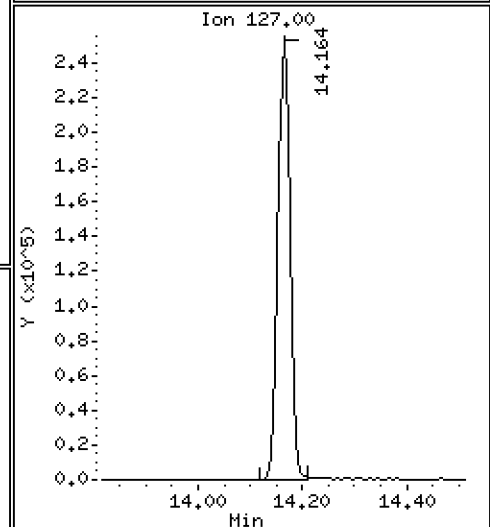
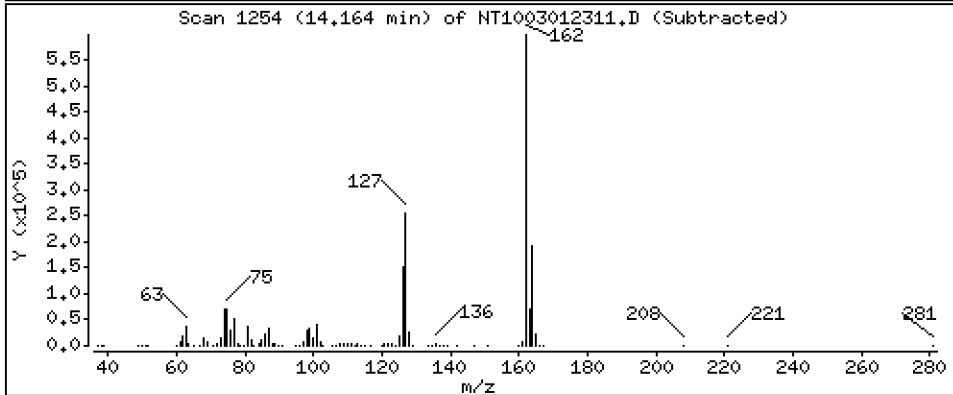
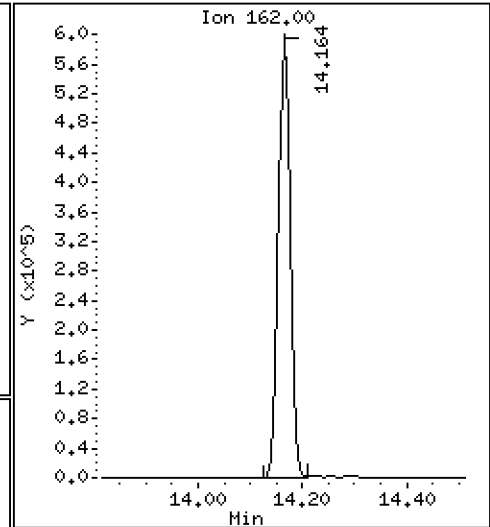
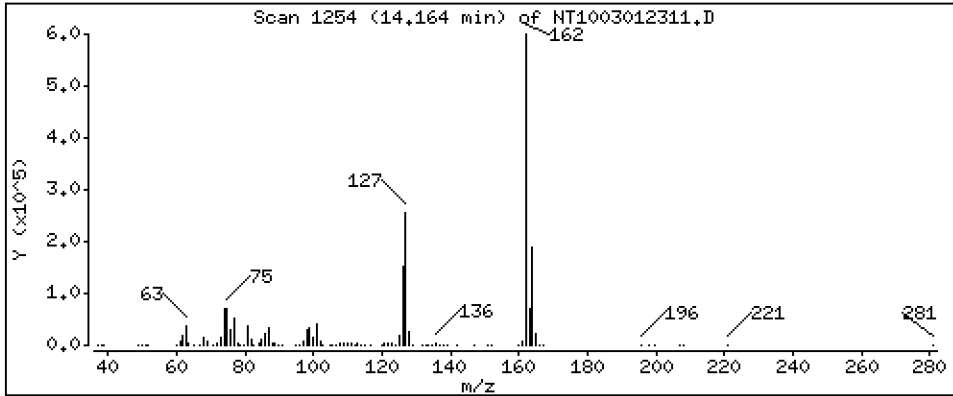
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,264 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

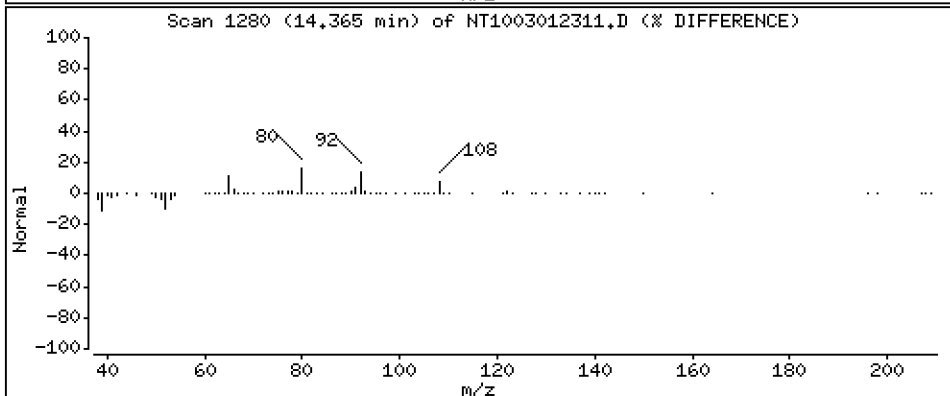
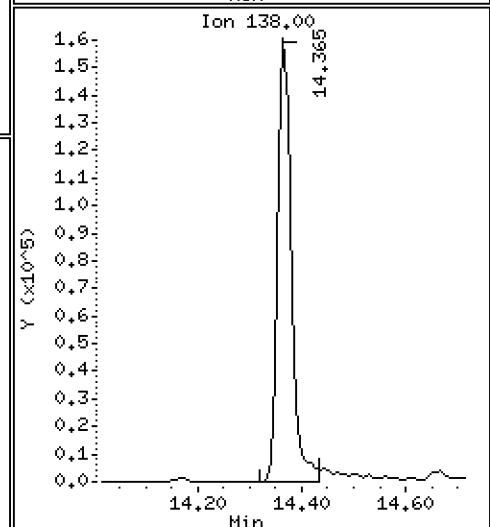
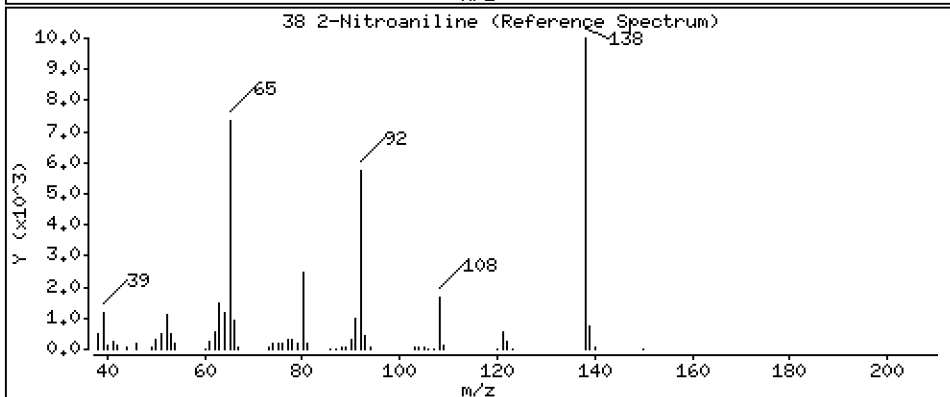
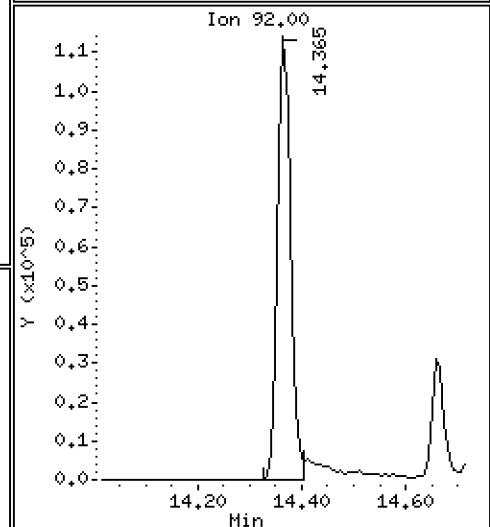
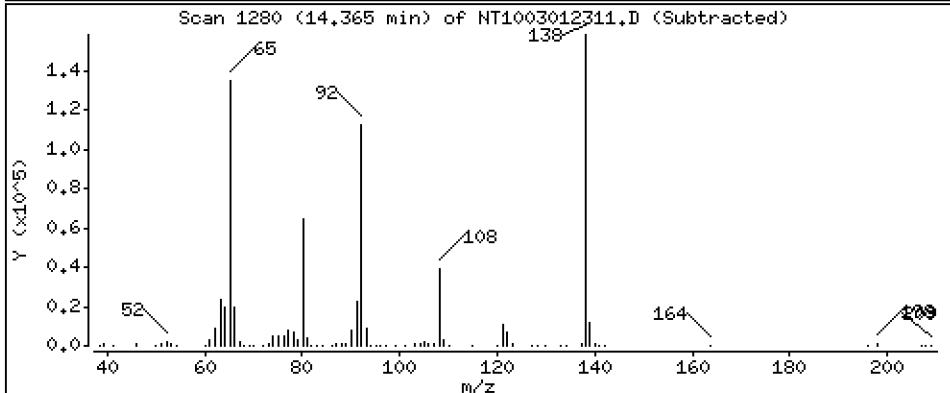
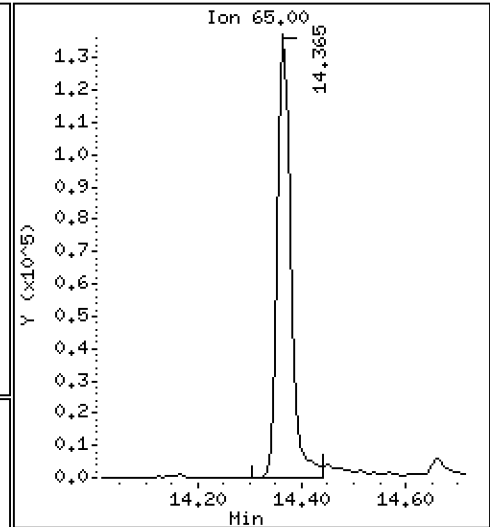
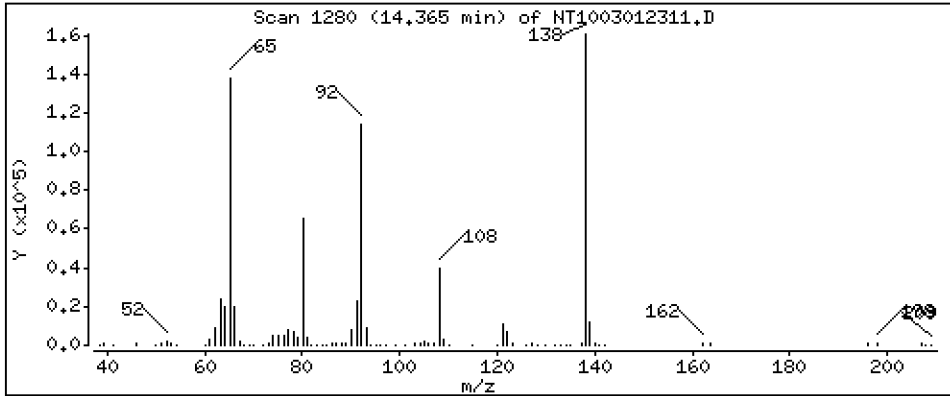
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 5,027 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

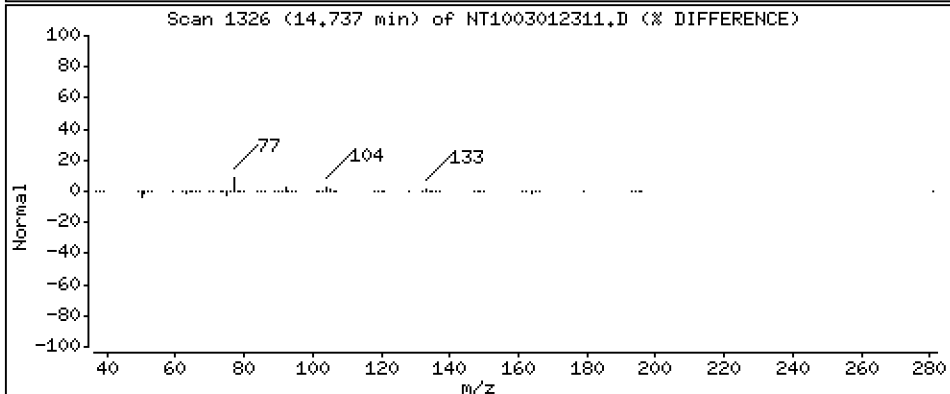
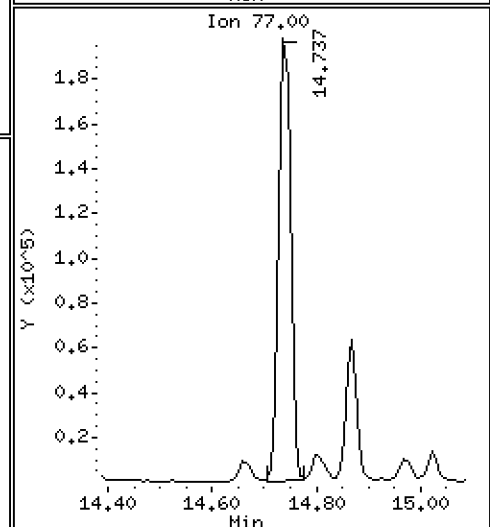
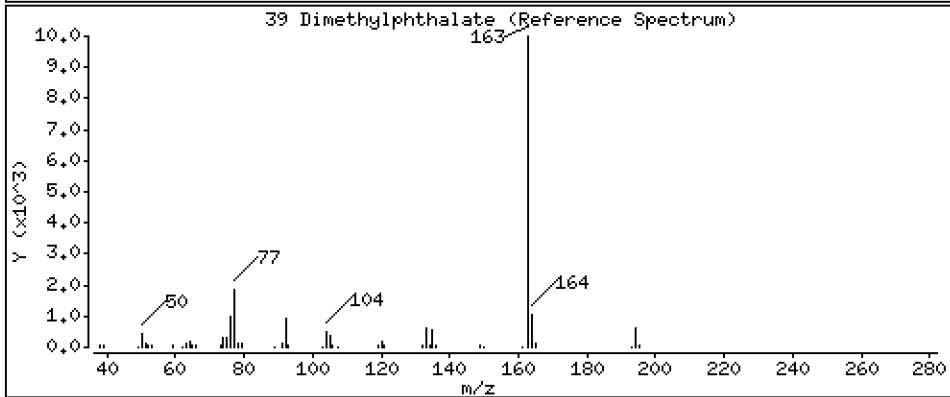
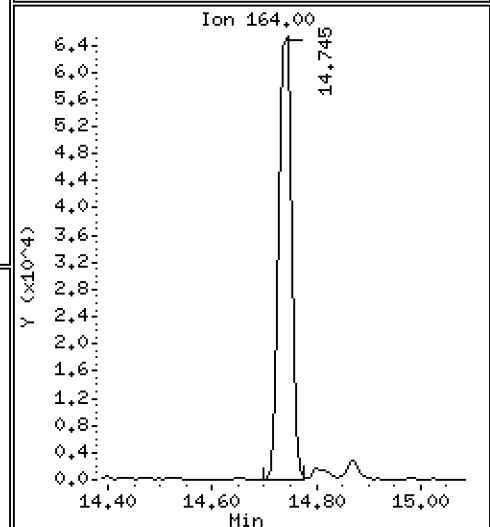
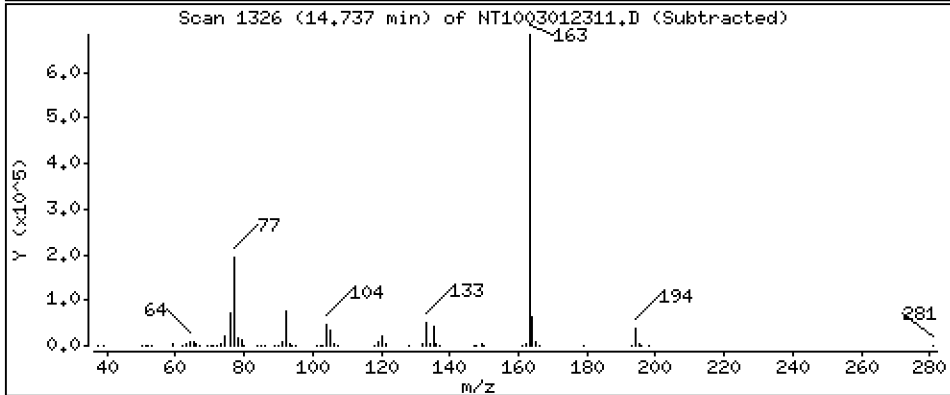
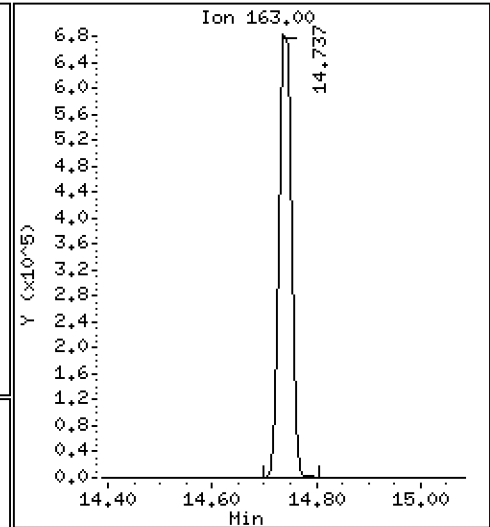
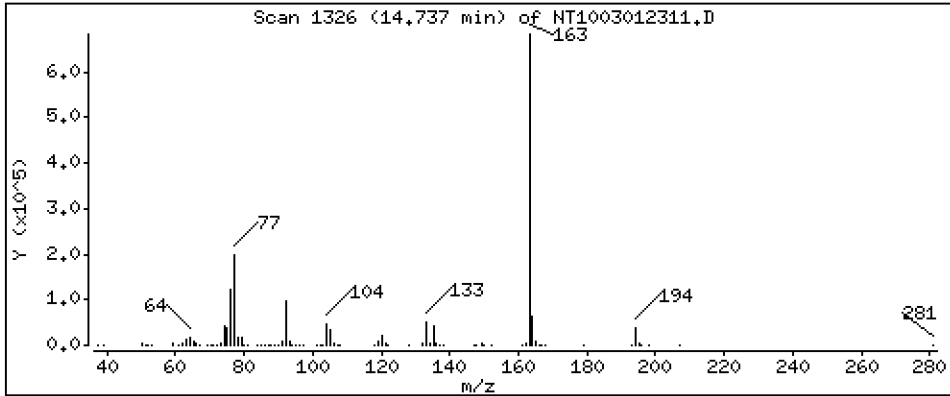
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 5.384 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

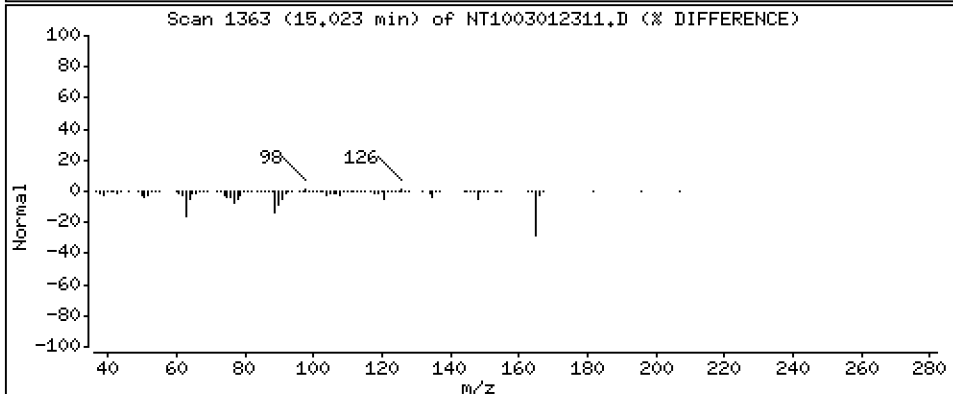
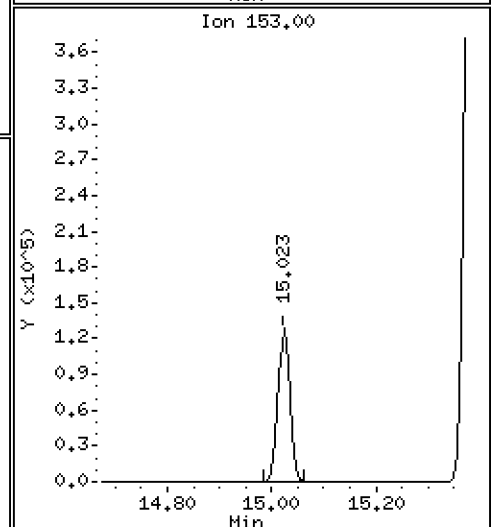
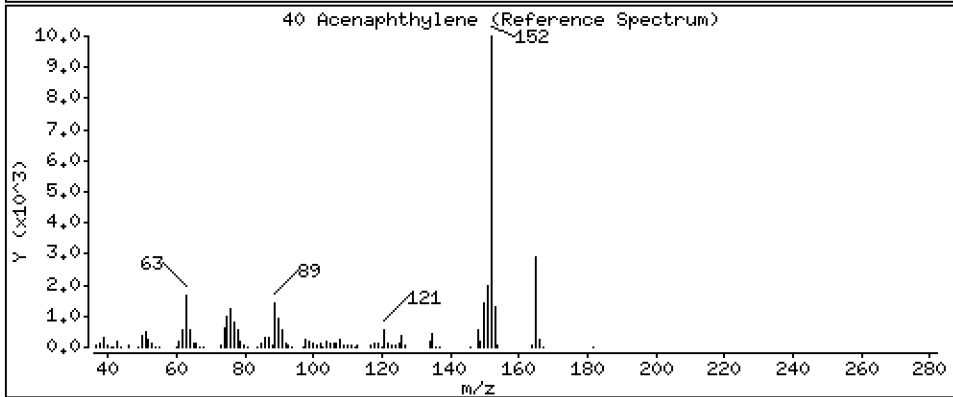
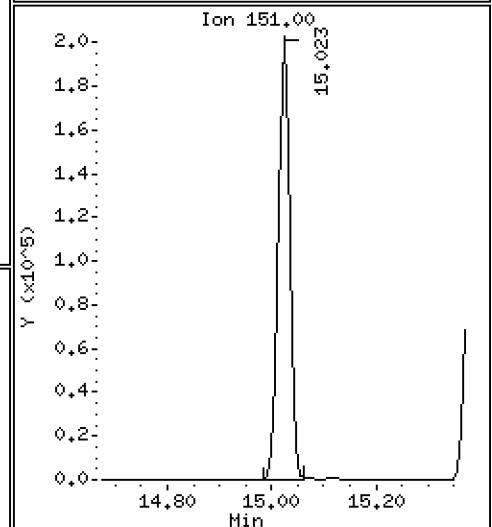
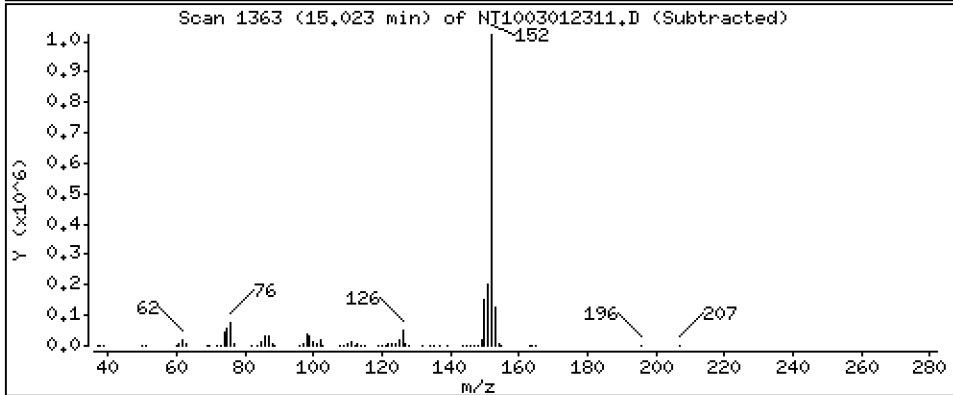
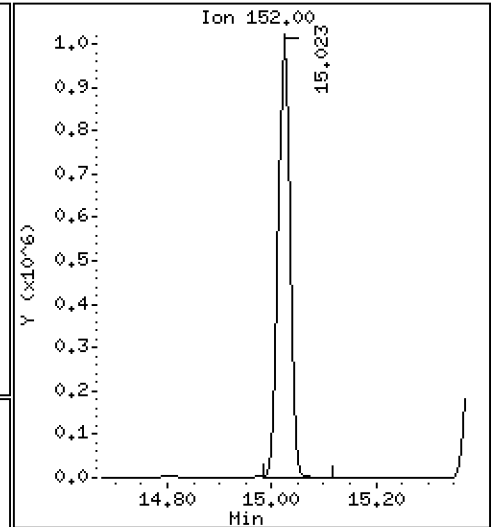
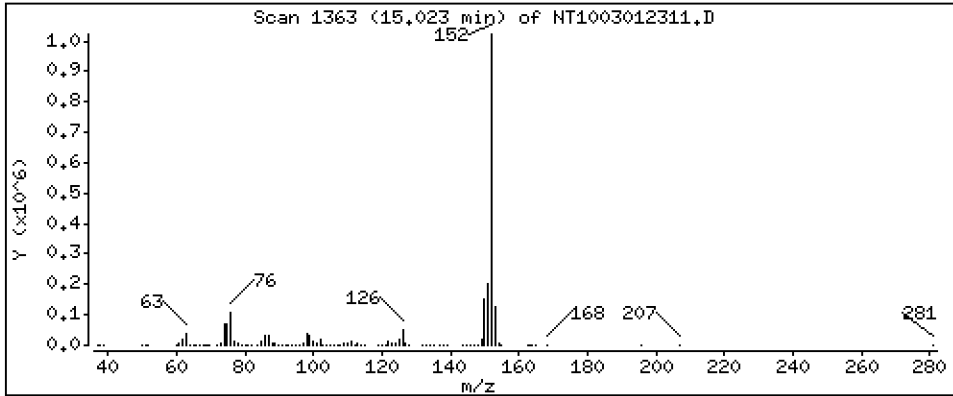
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,806 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

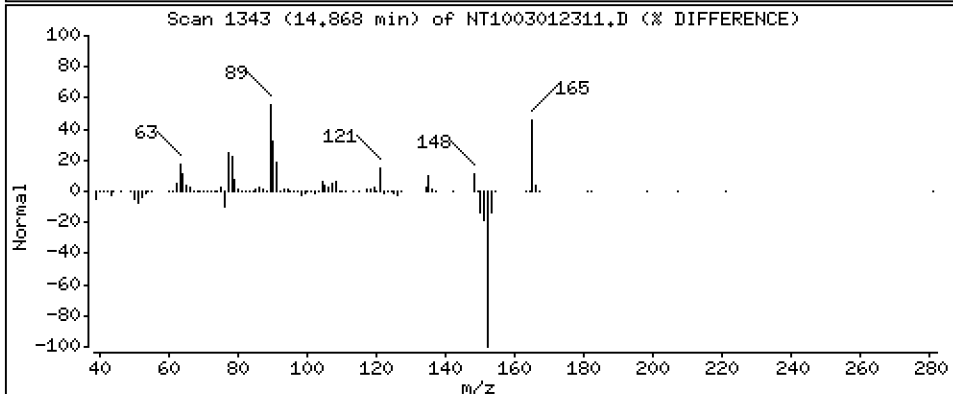
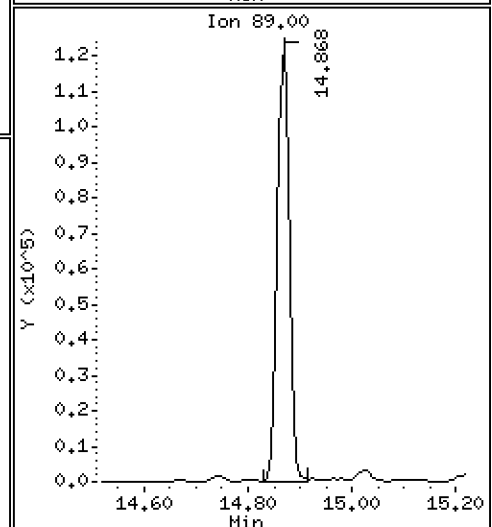
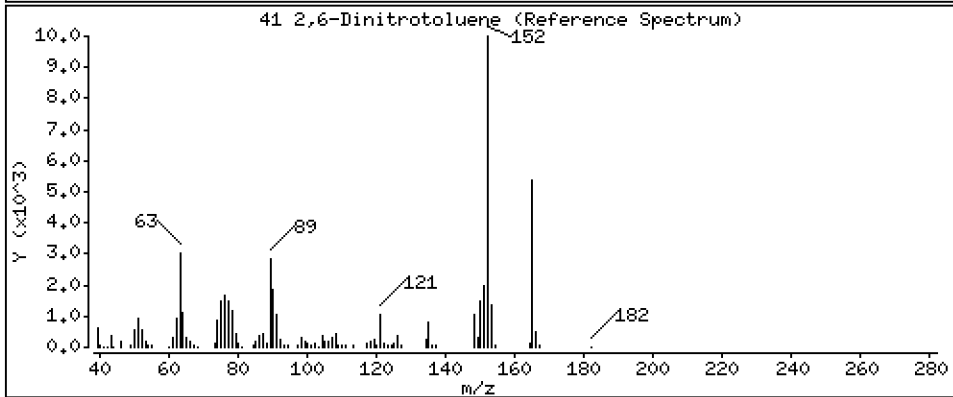
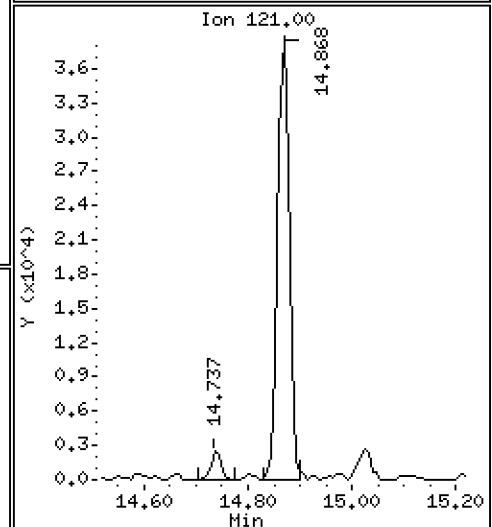
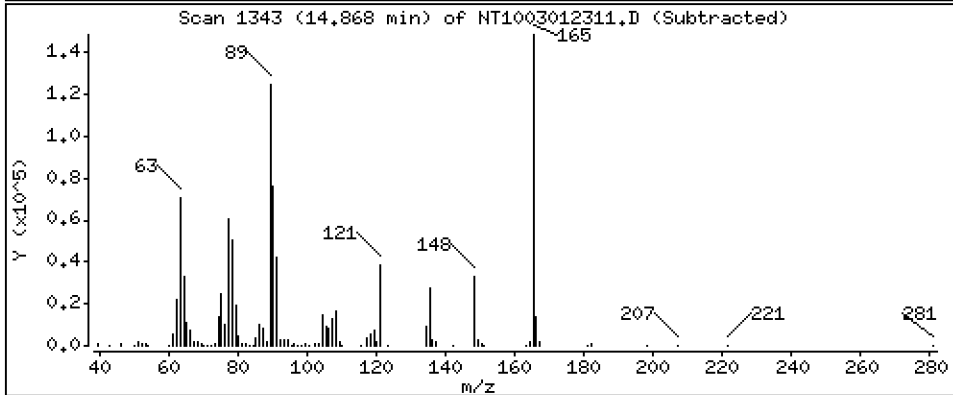
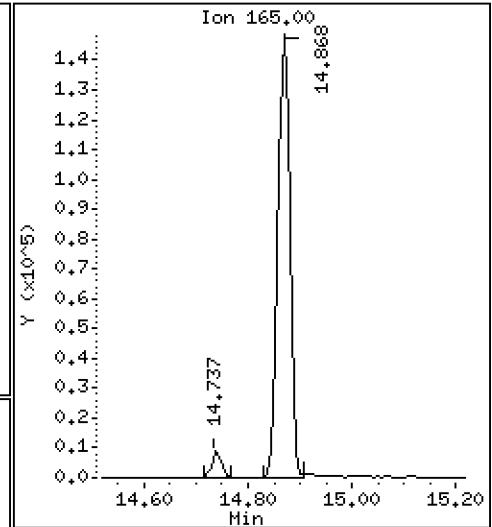
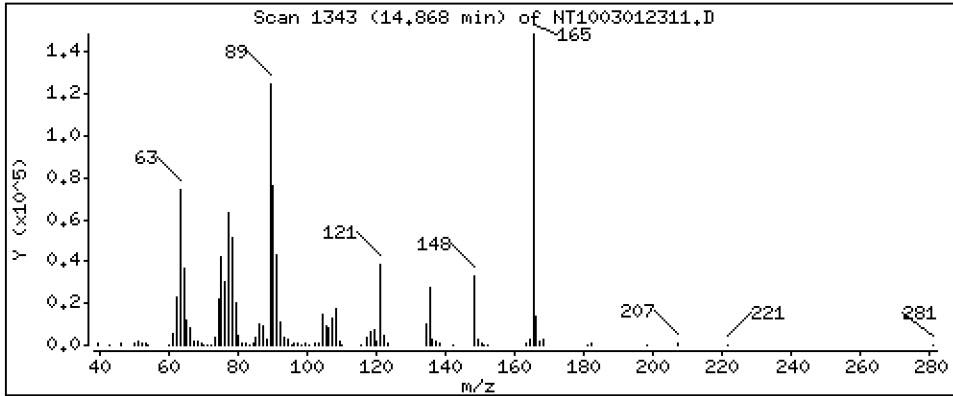
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

41 2,6-Dinitrotoluene

Concentration: 5.187 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

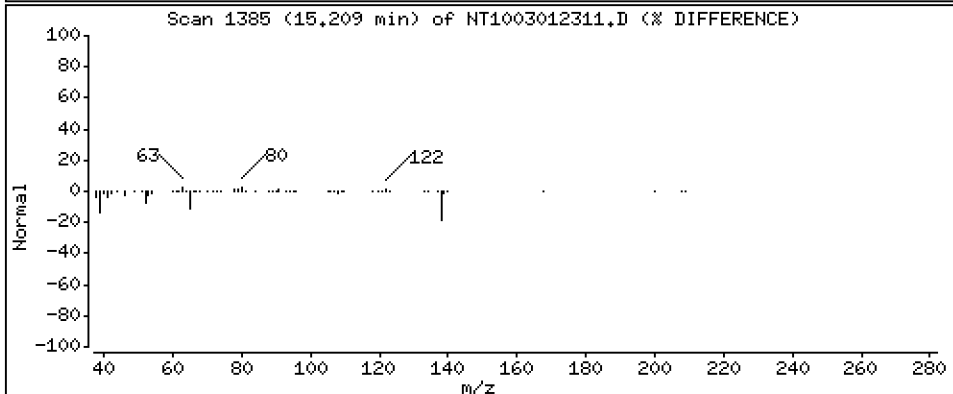
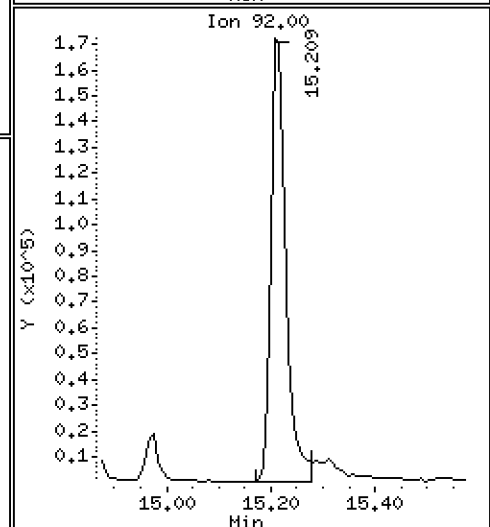
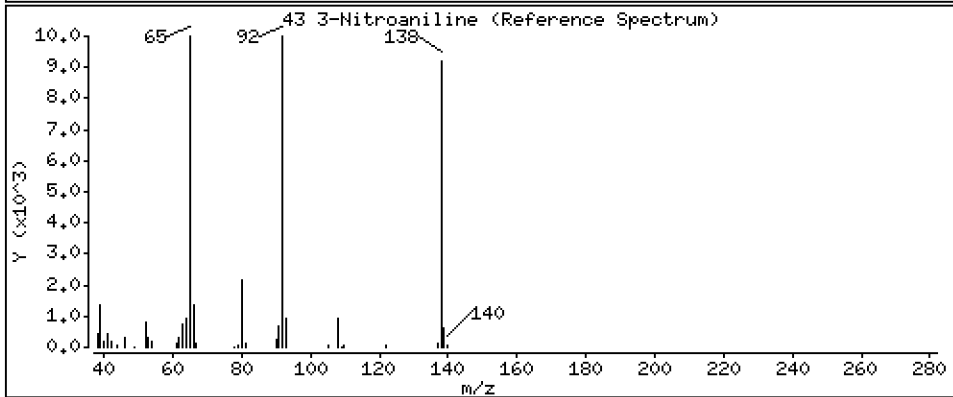
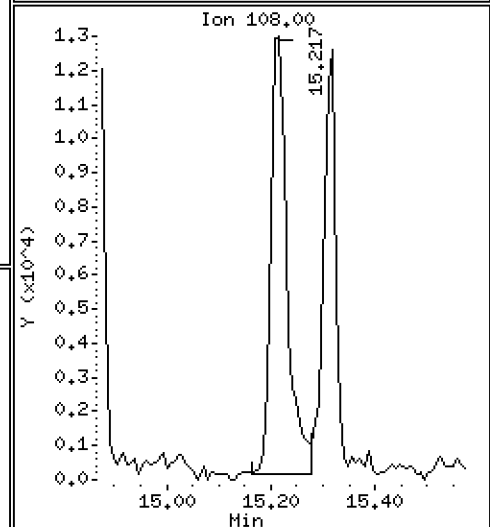
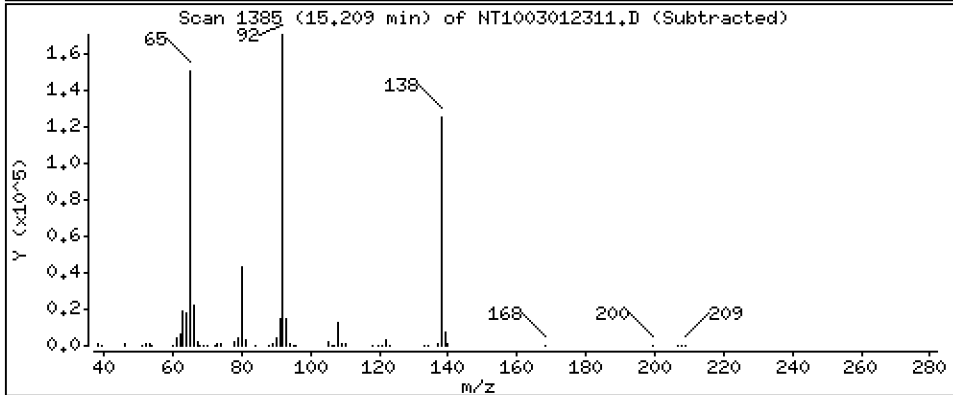
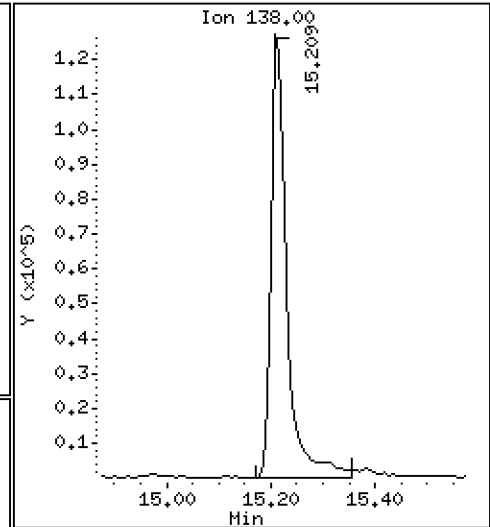
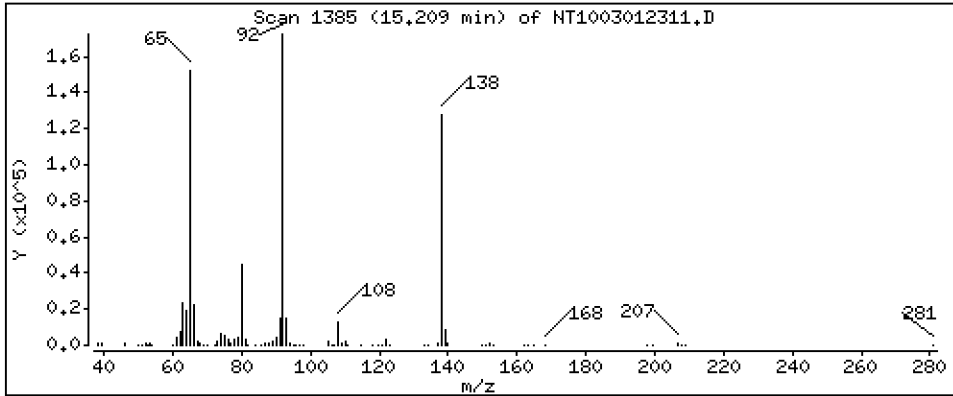
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 5,172 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

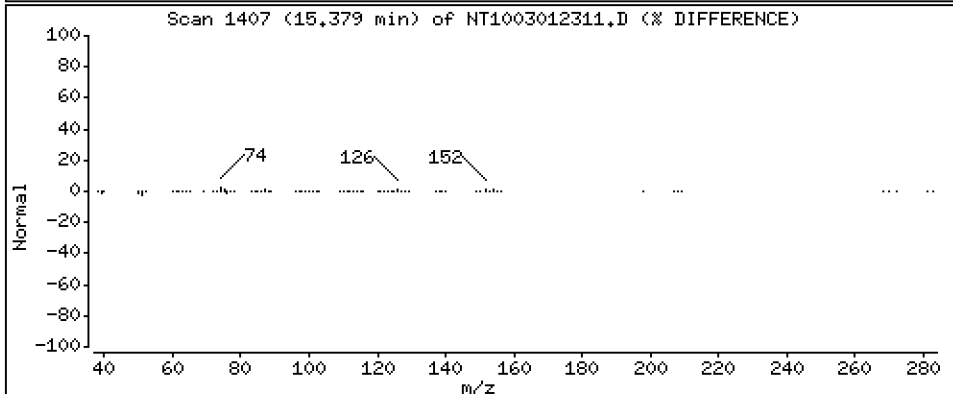
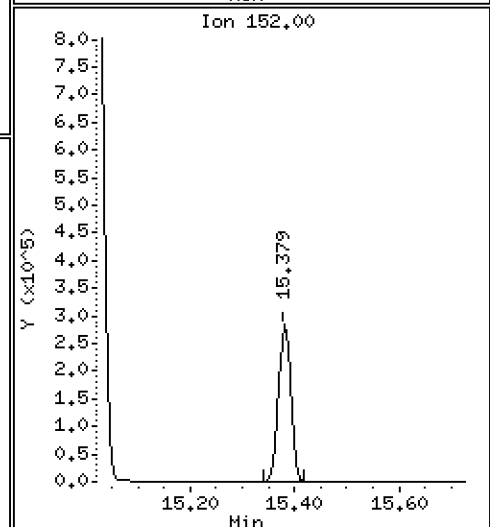
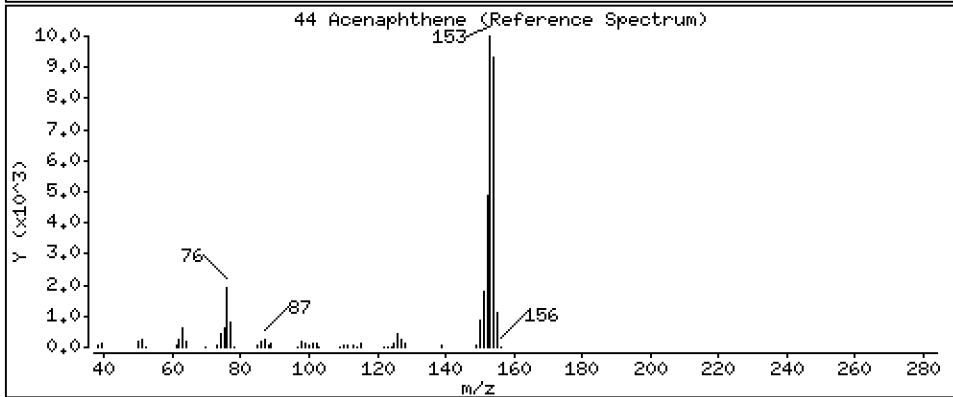
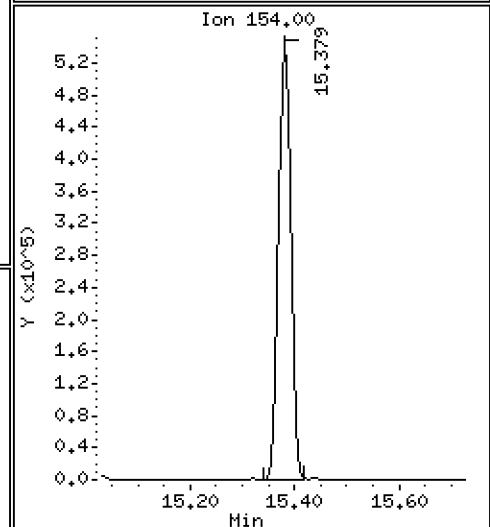
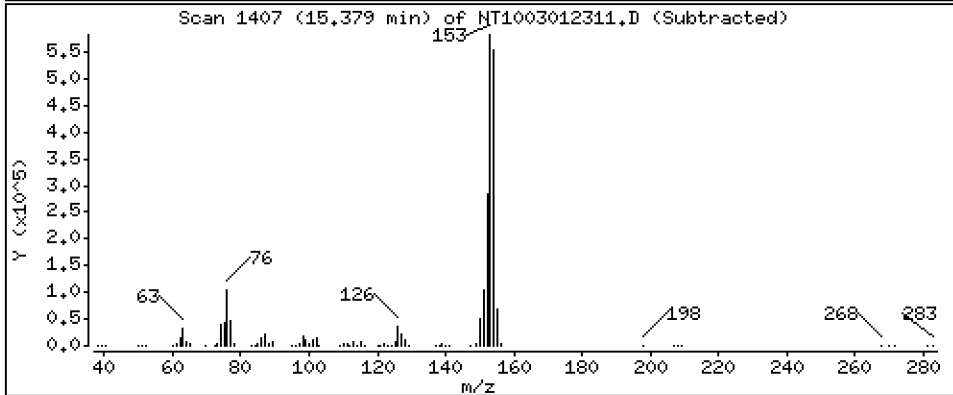
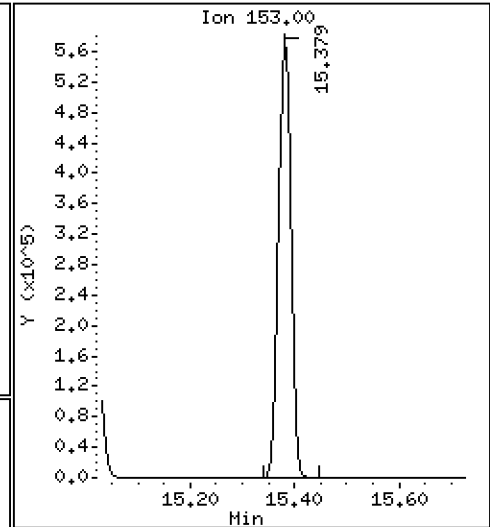
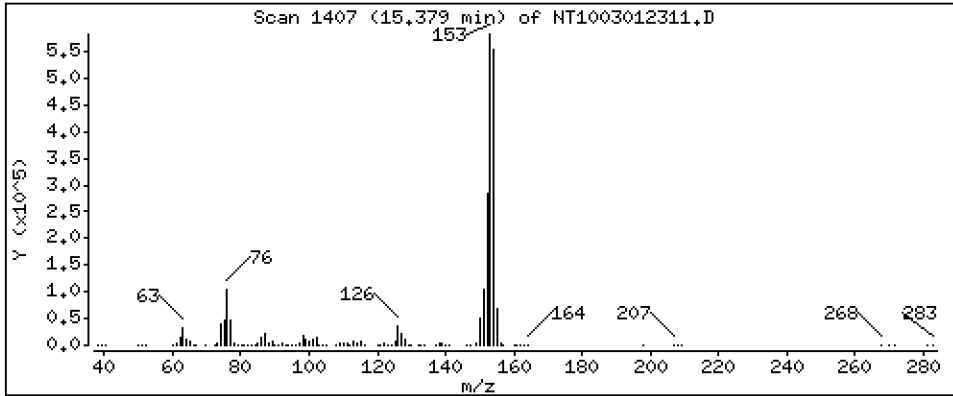
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,154 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

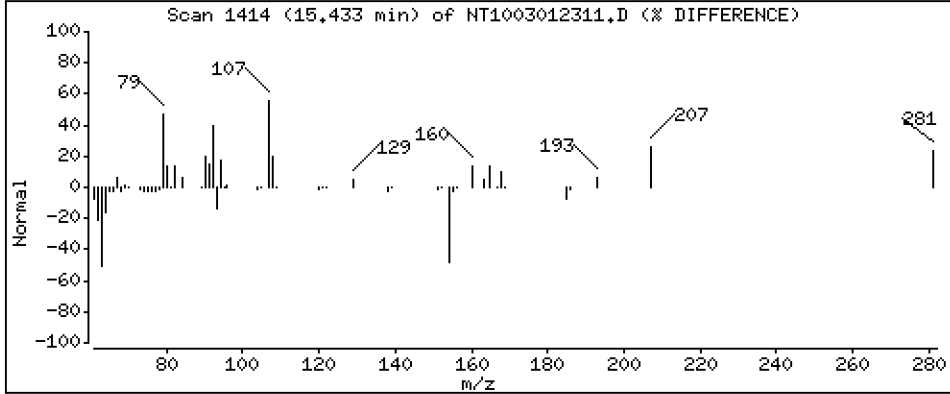
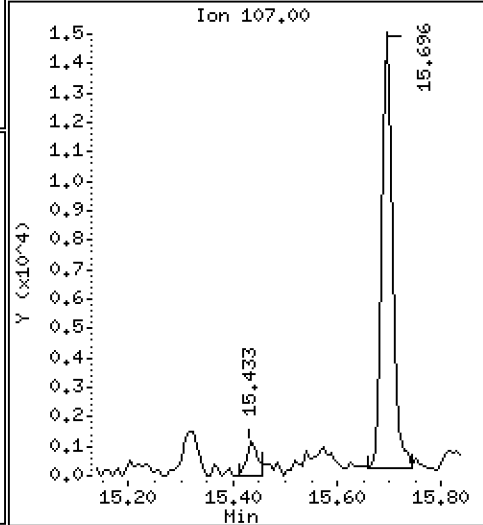
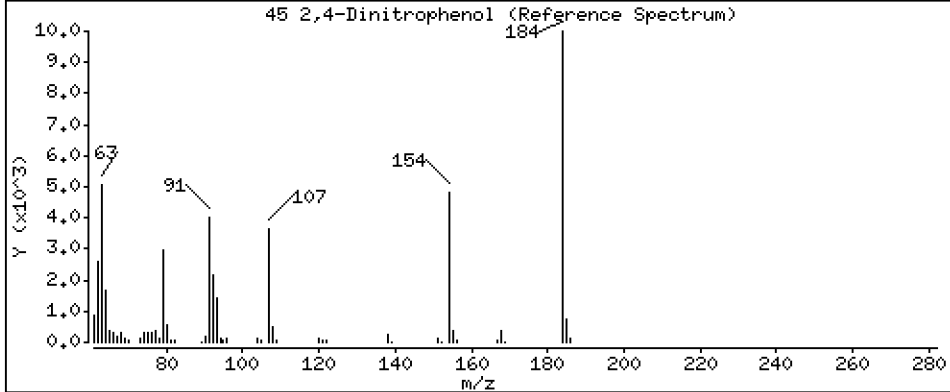
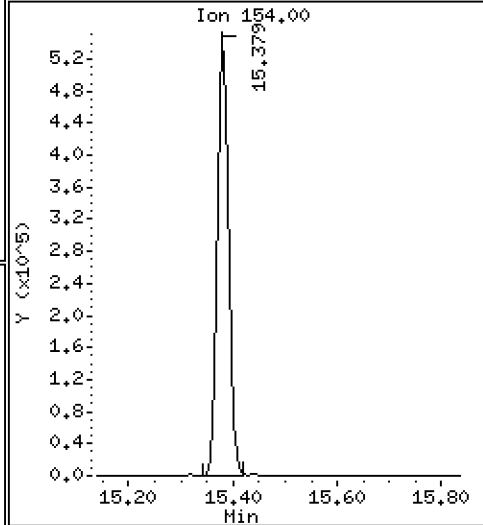
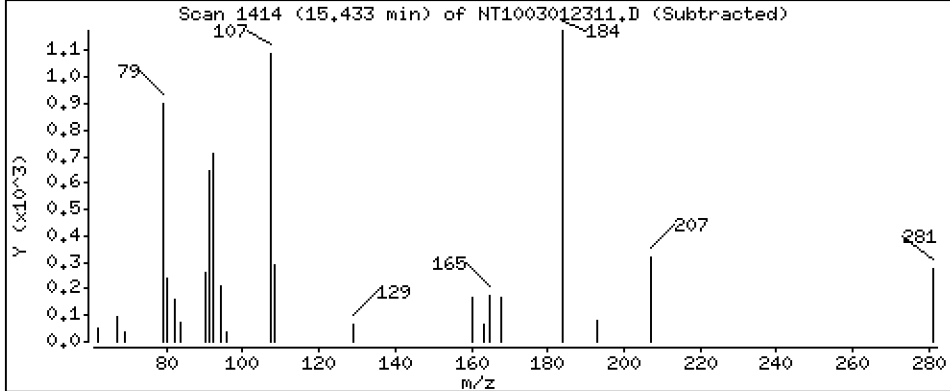
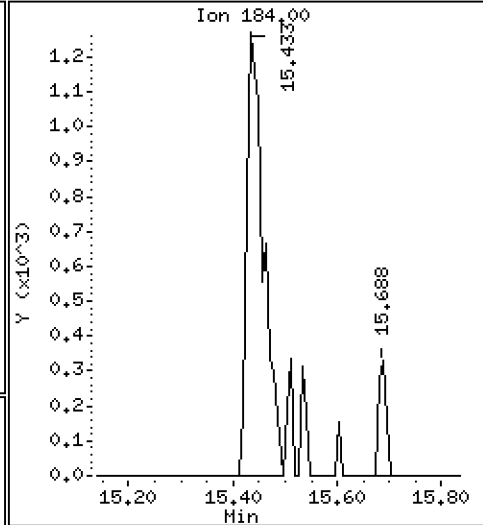
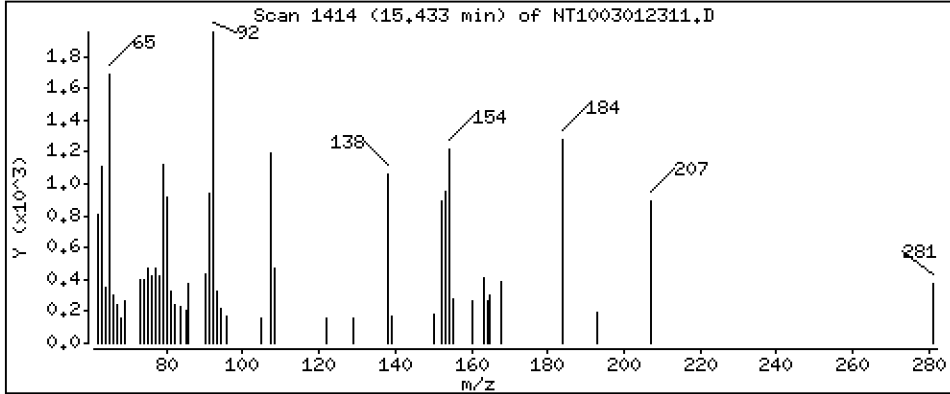
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 0,2667 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

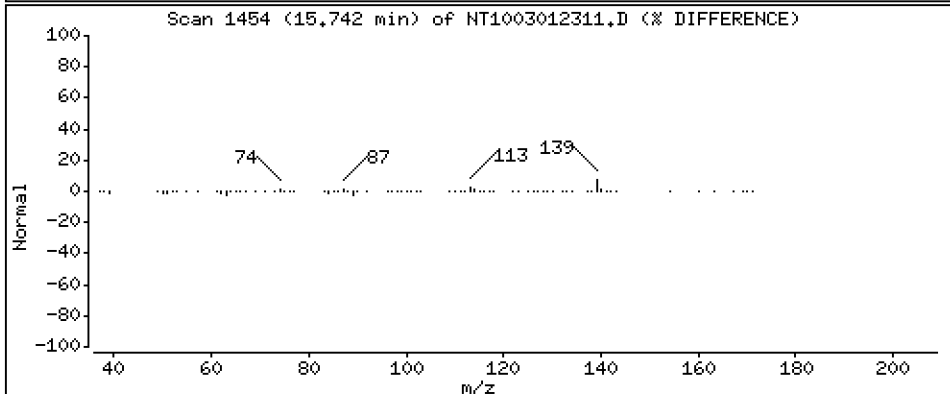
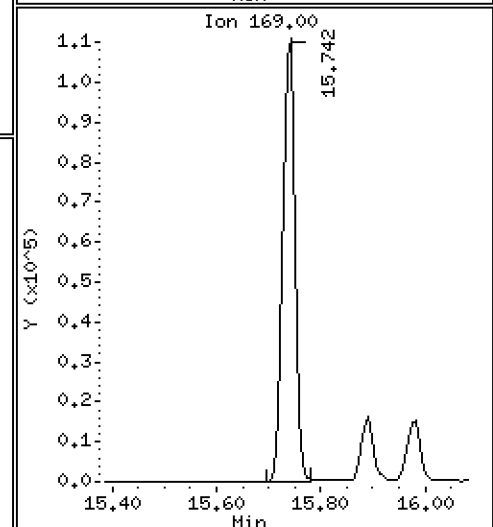
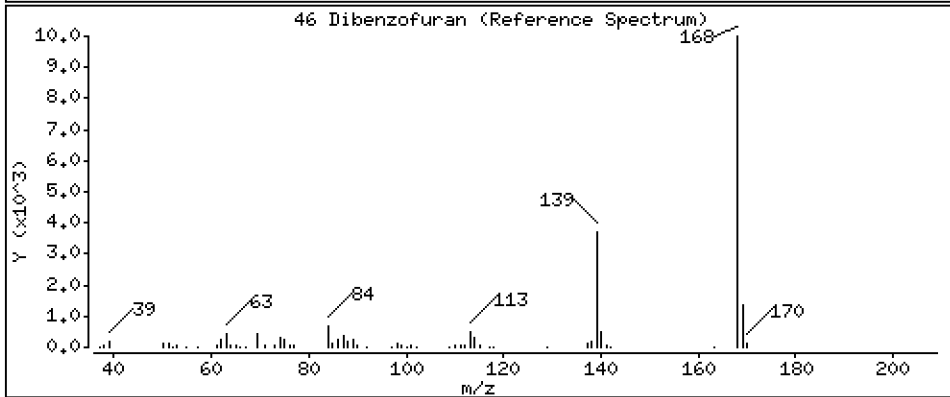
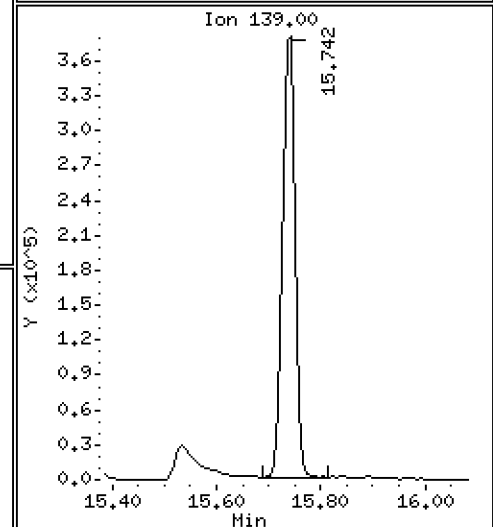
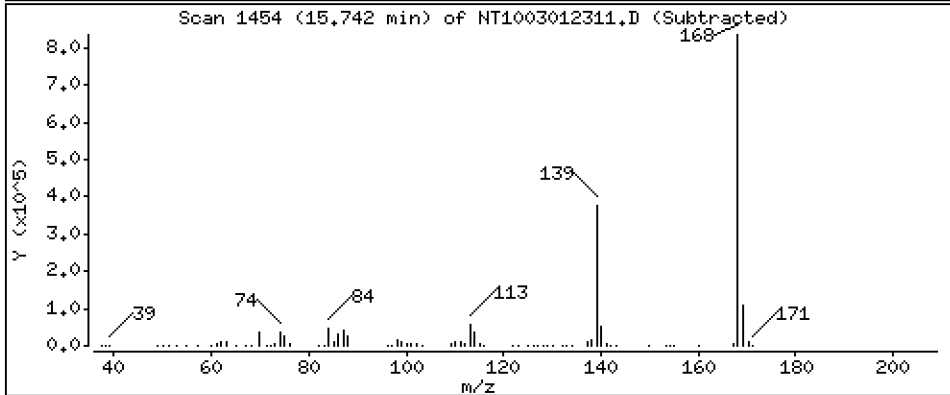
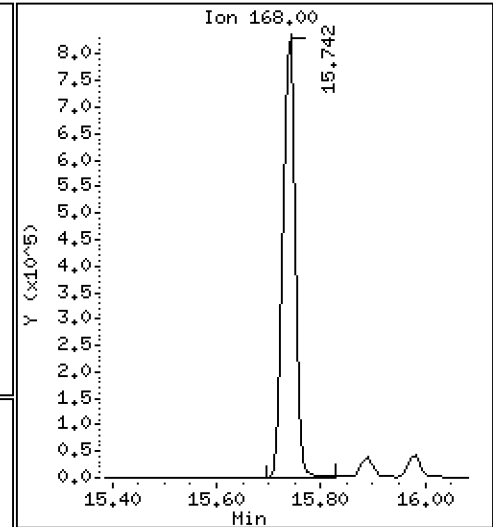
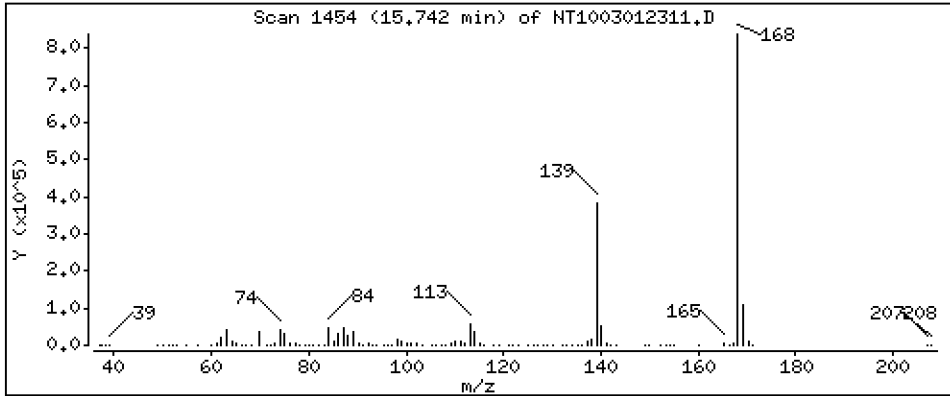
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,994 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

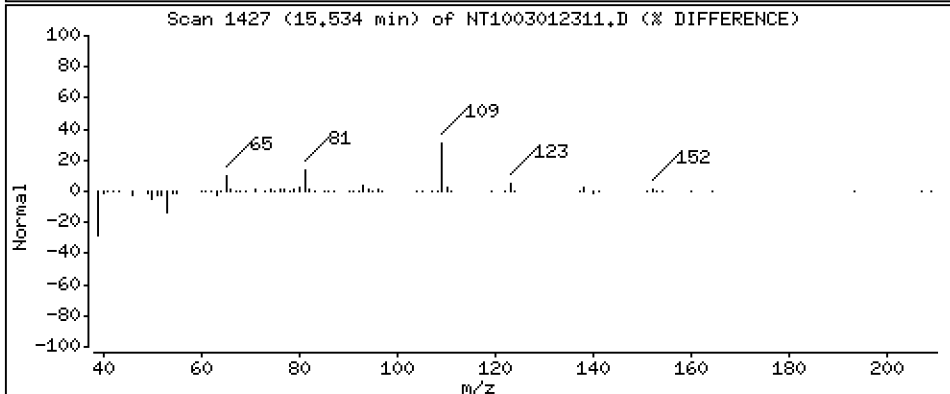
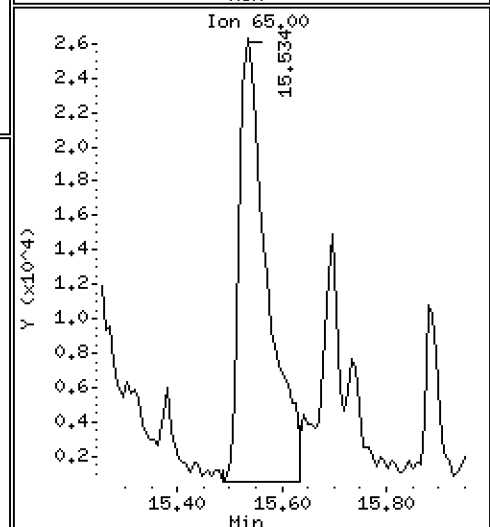
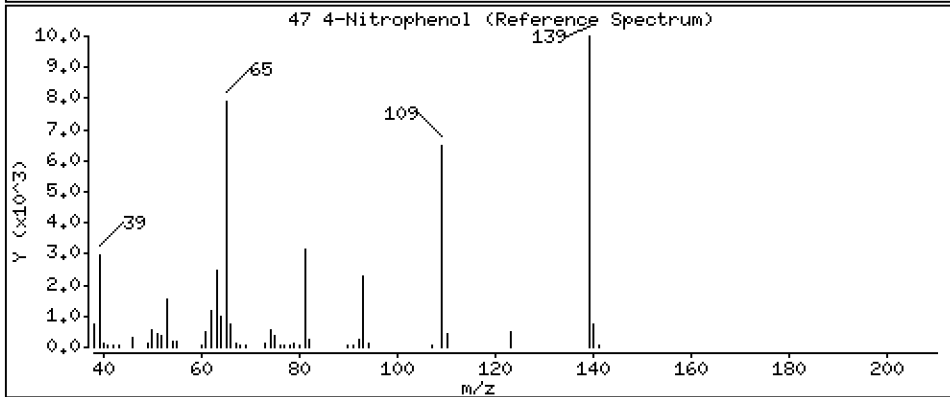
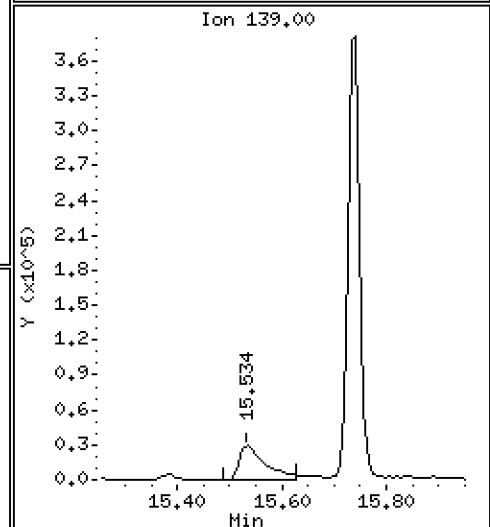
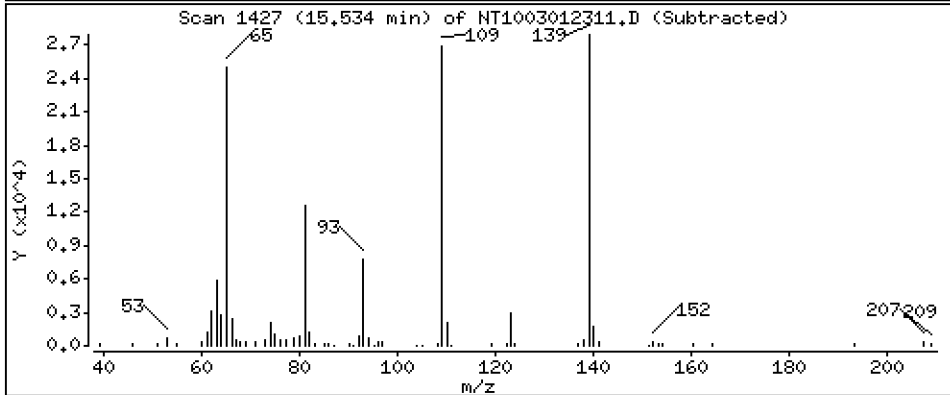
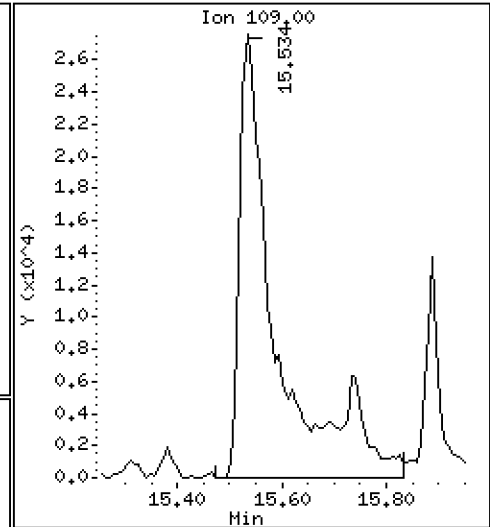
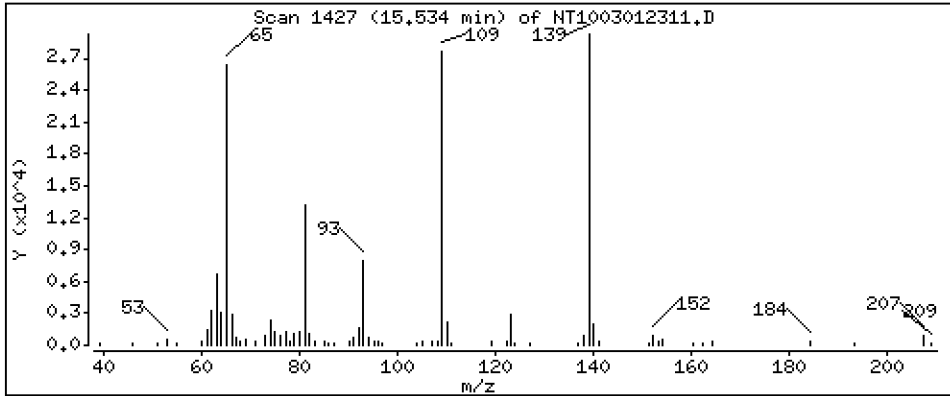
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 3,822 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

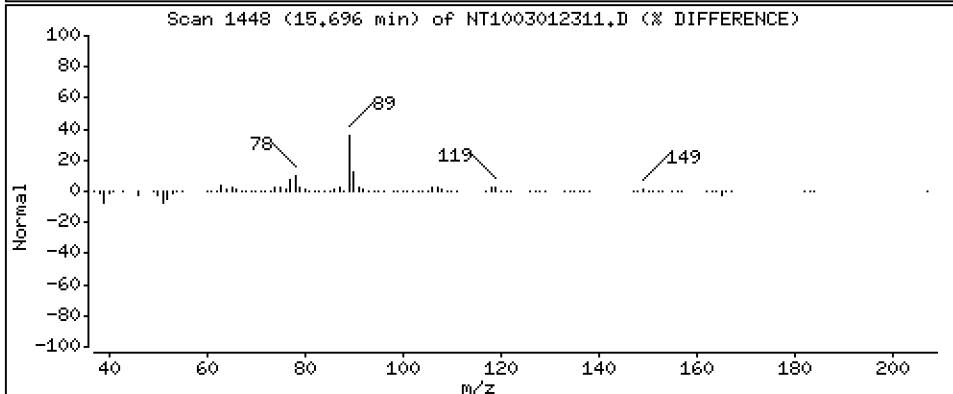
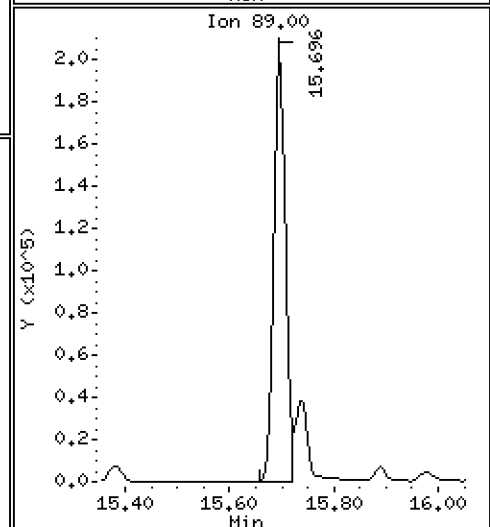
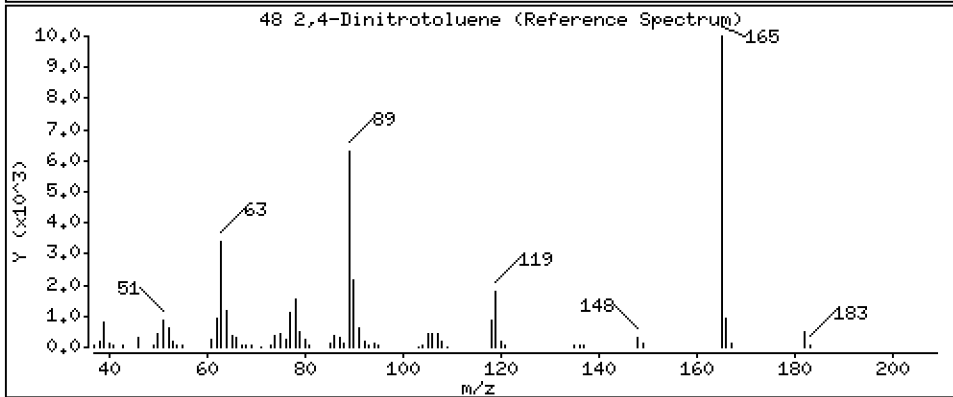
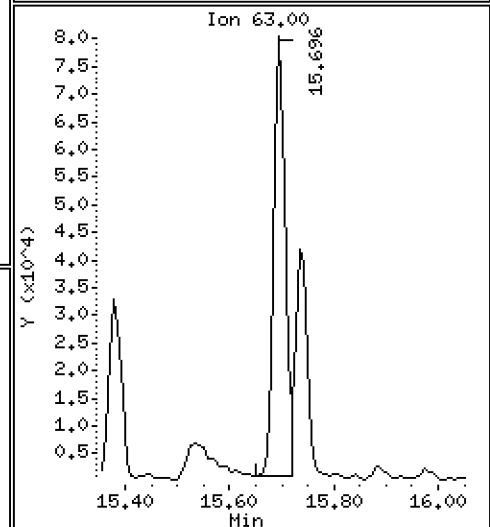
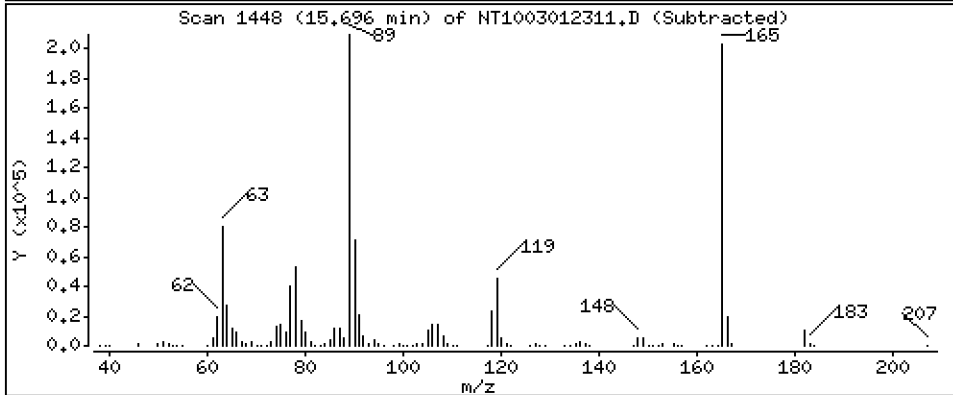
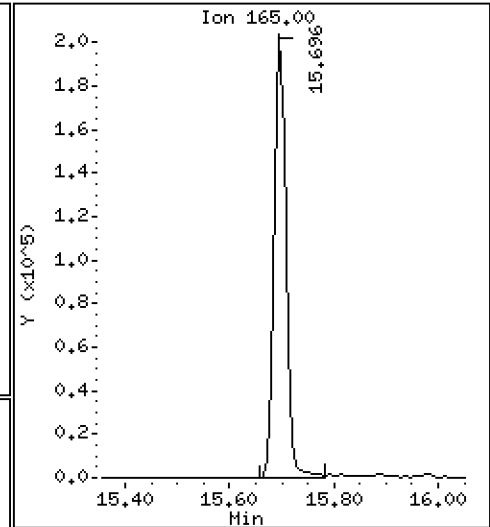
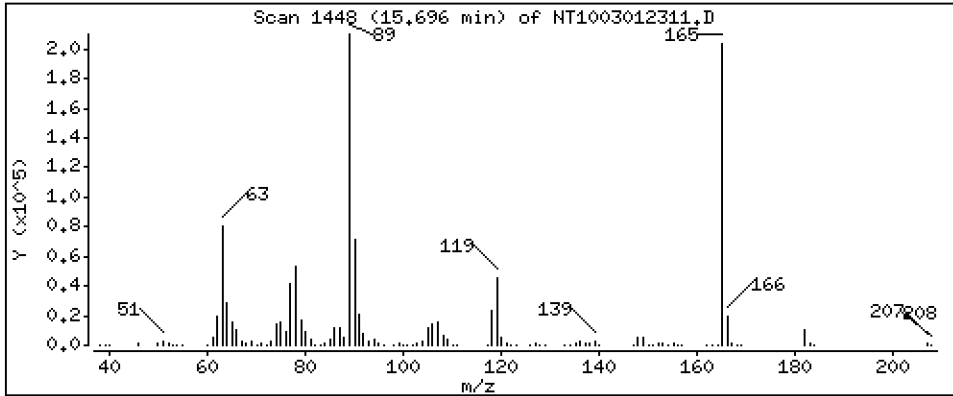
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

48 2,4-Dinitrotoluene

Concentration: 4.729 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

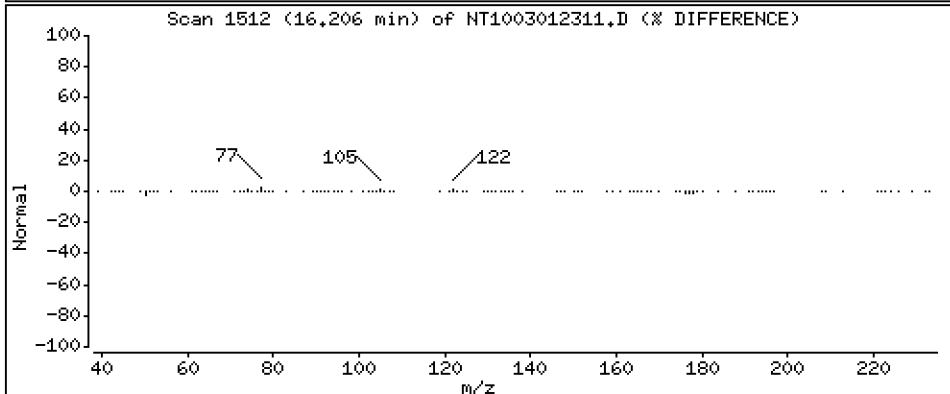
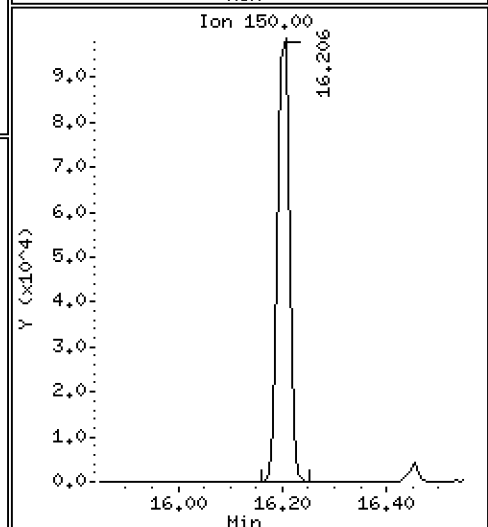
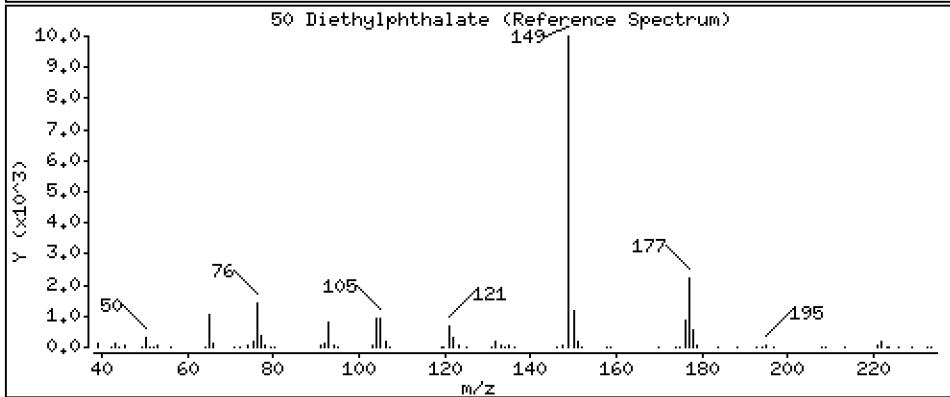
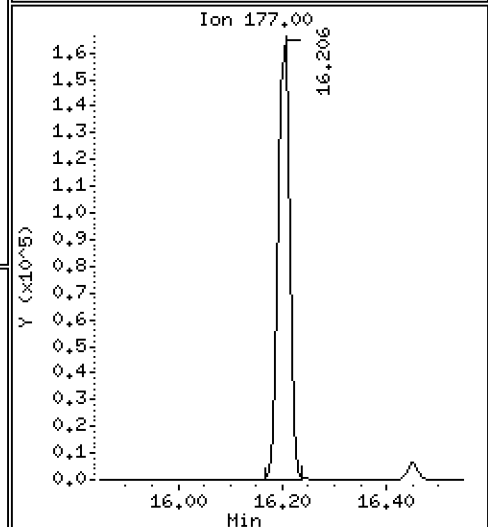
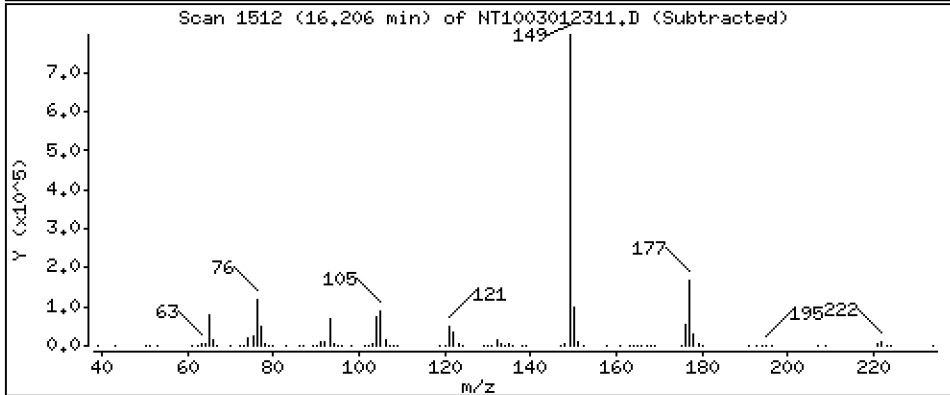
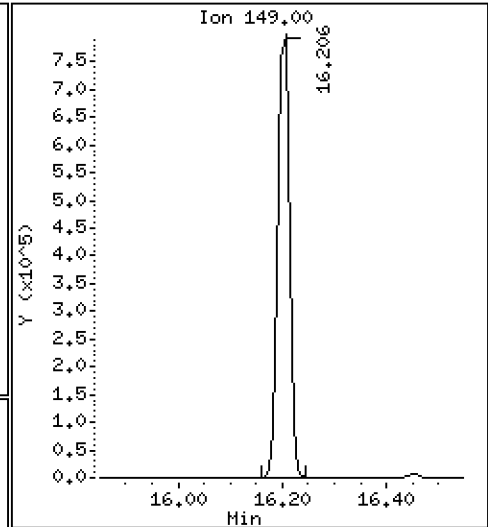
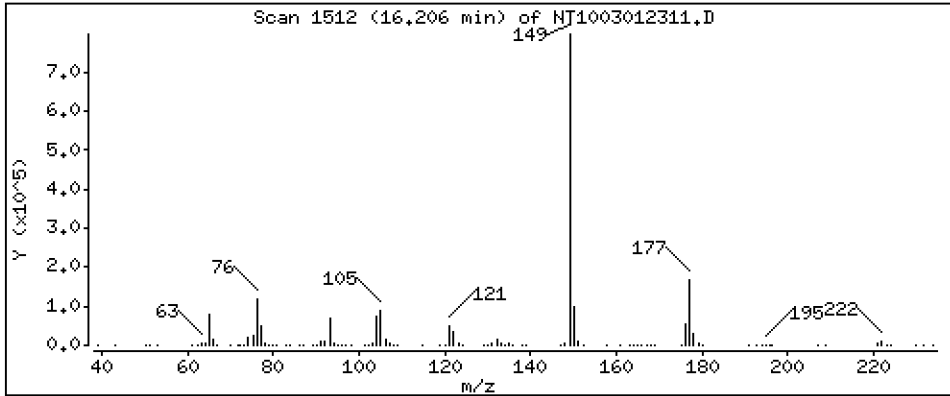
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,639 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

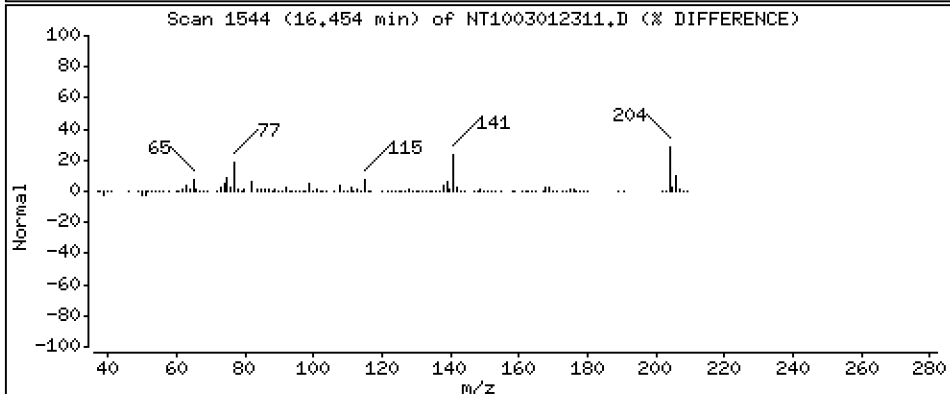
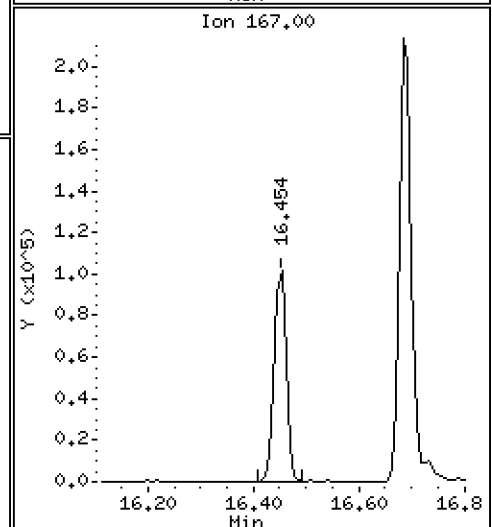
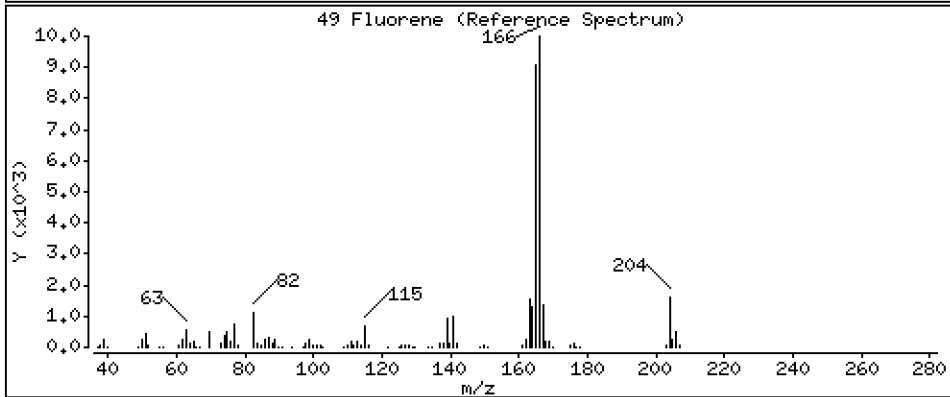
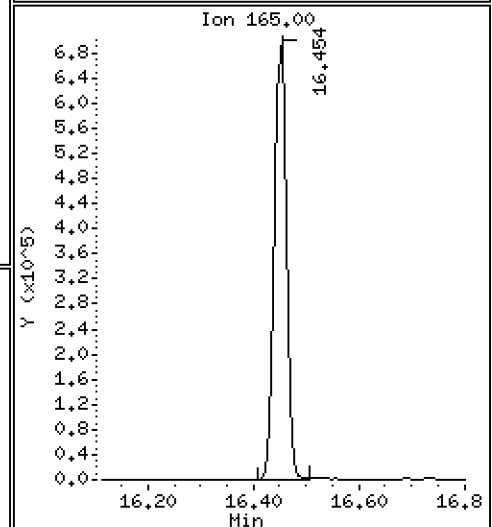
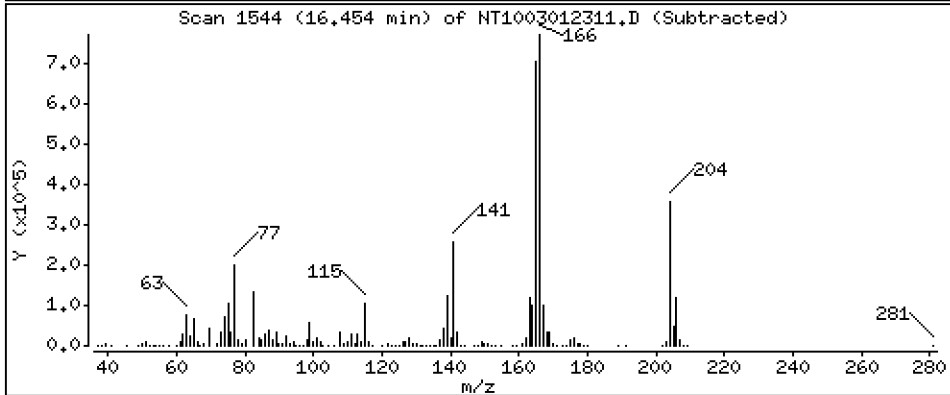
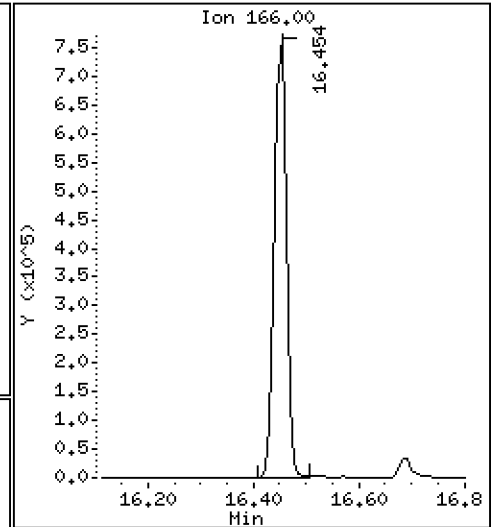
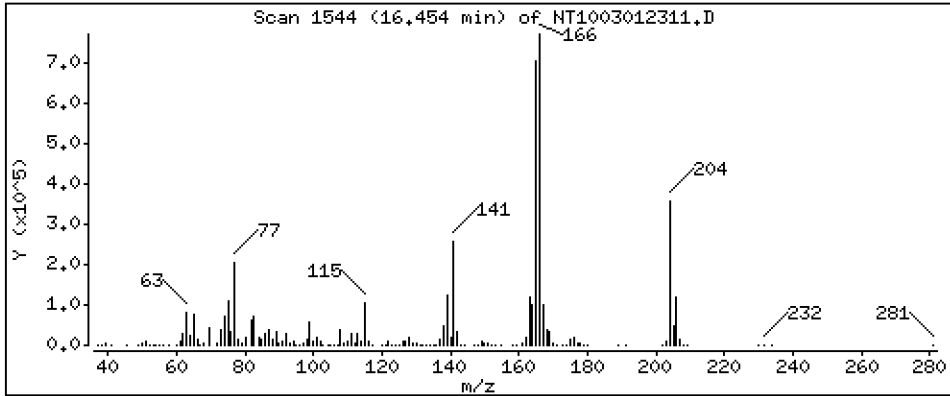
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,305 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

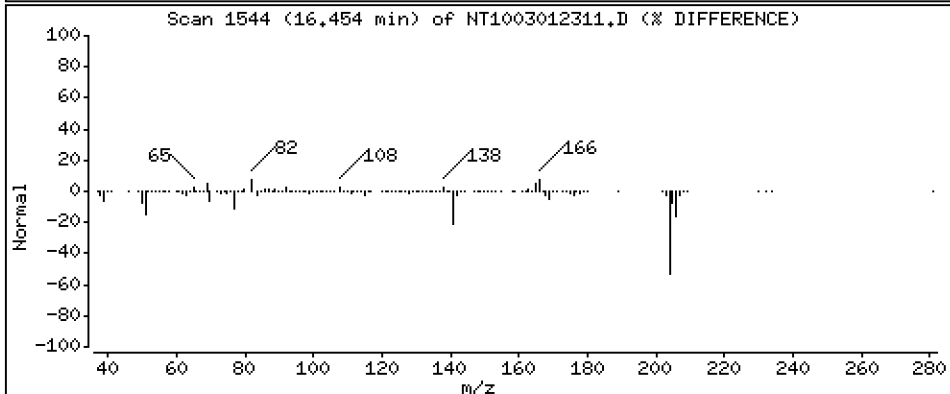
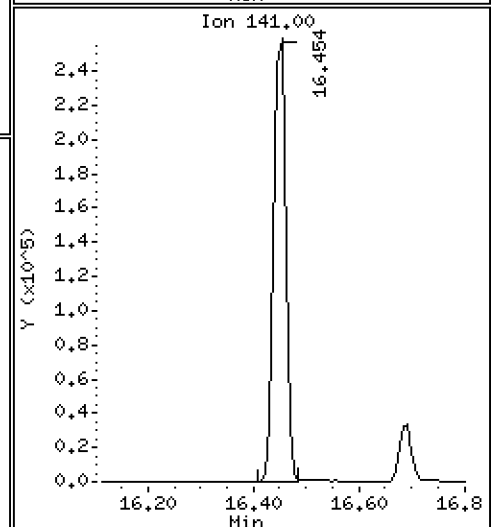
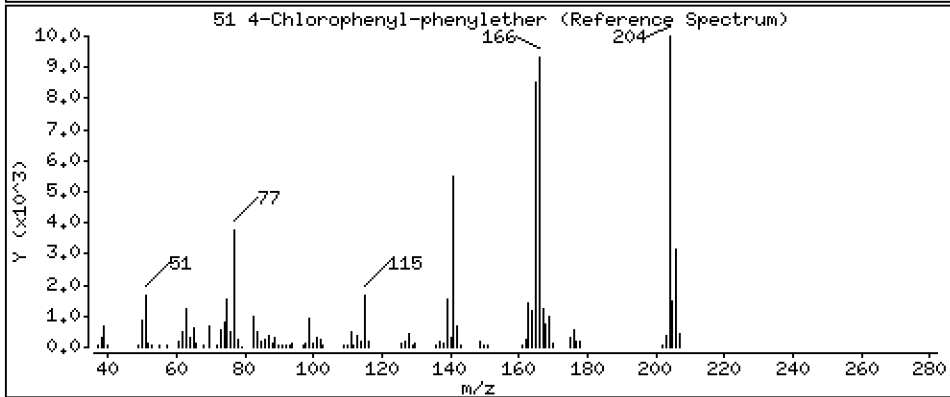
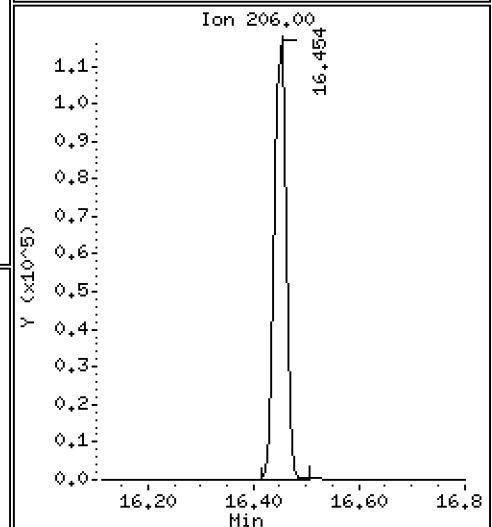
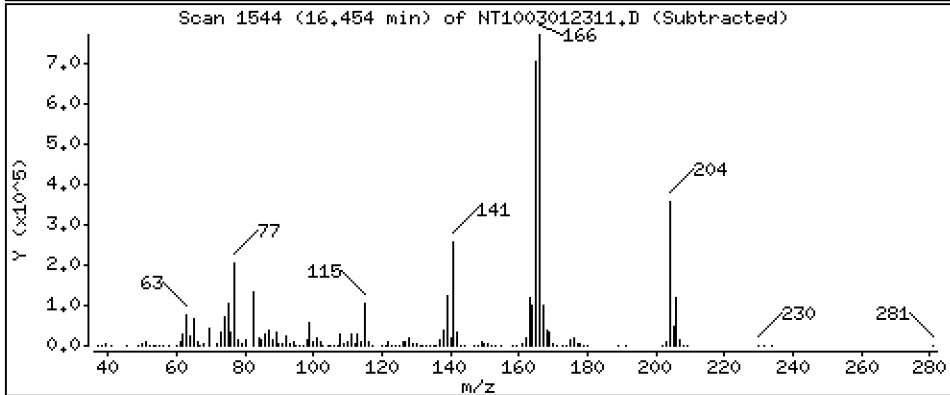
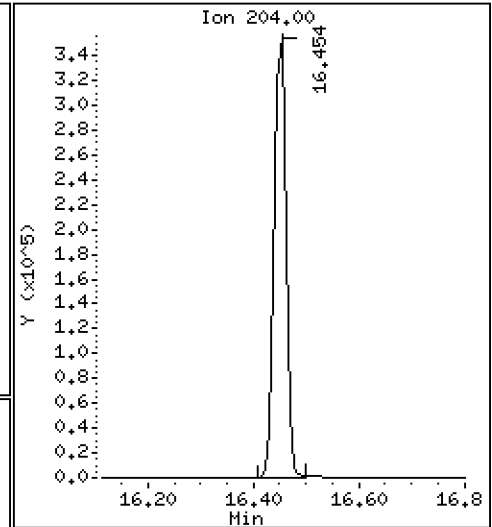
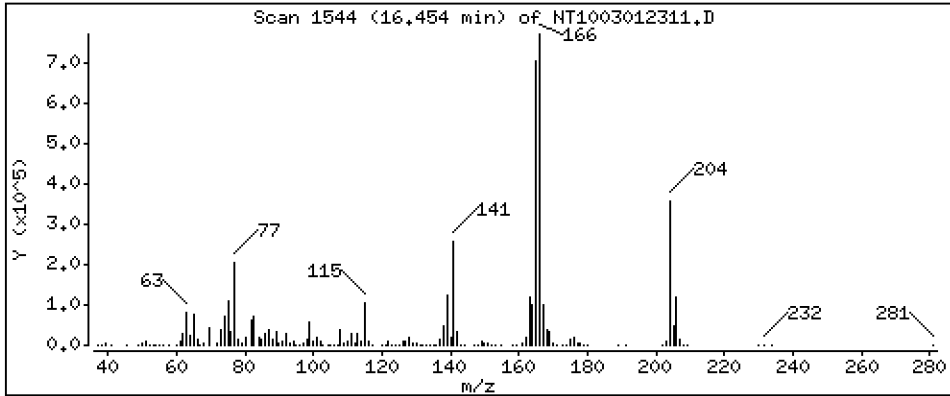
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,253 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

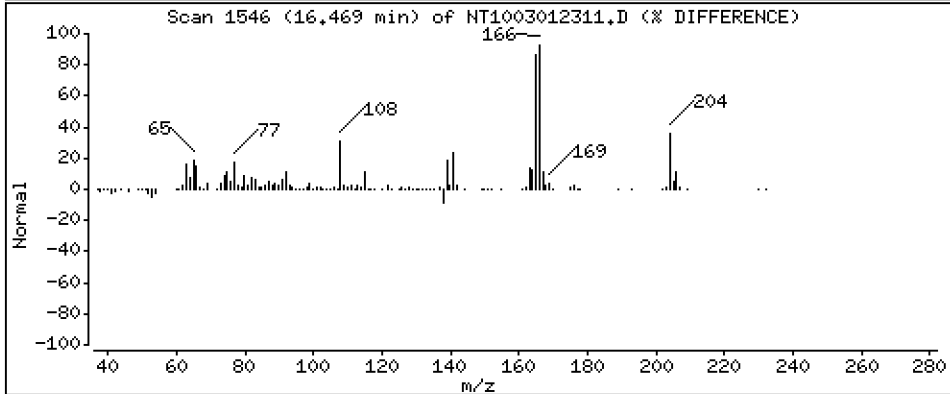
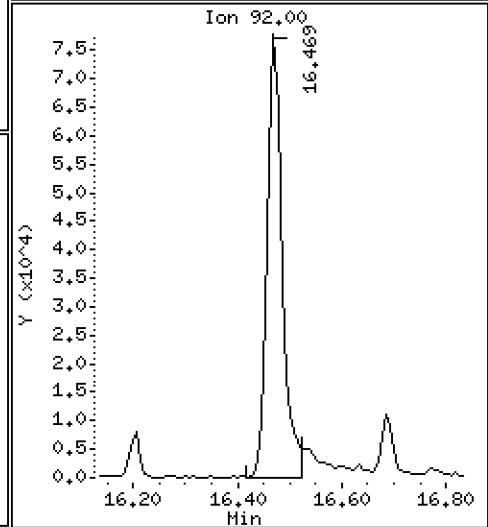
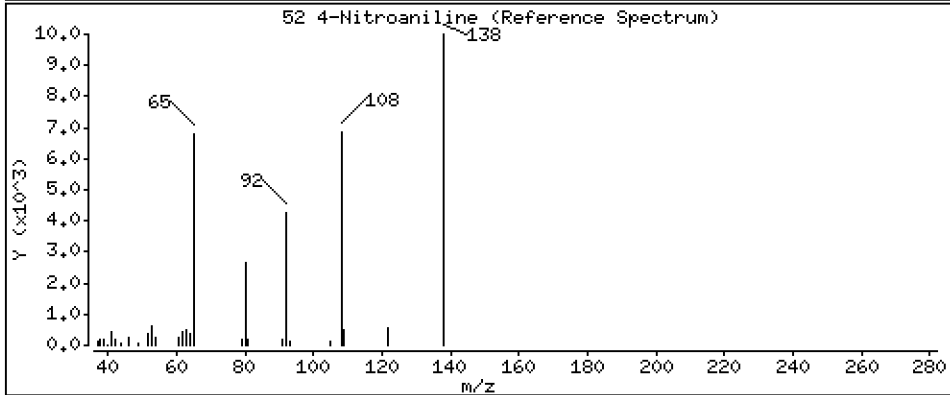
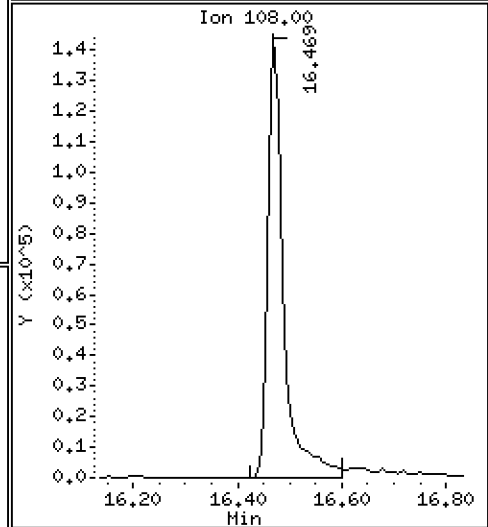
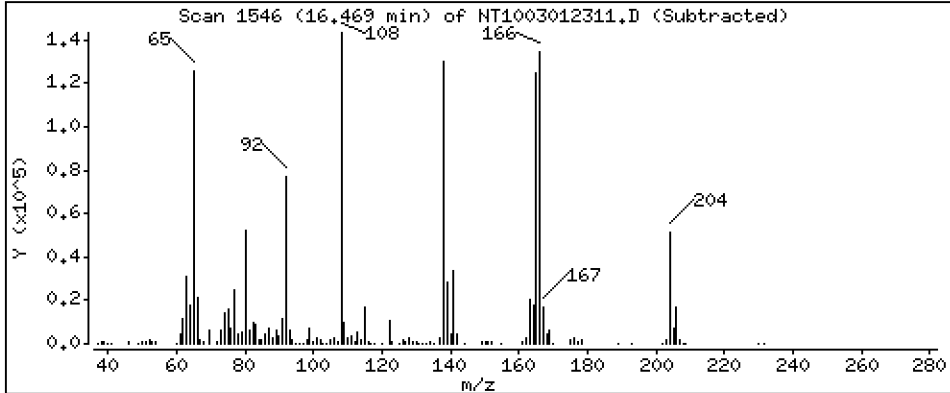
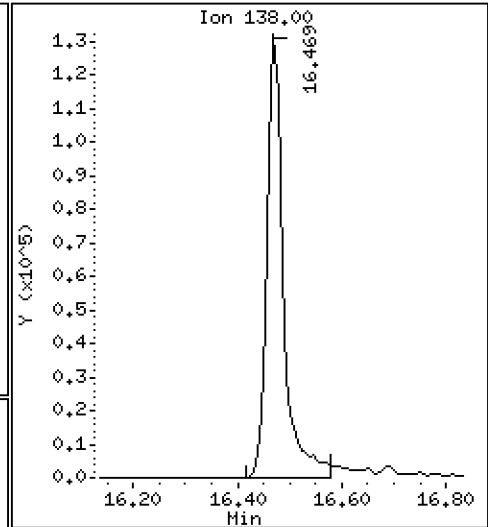
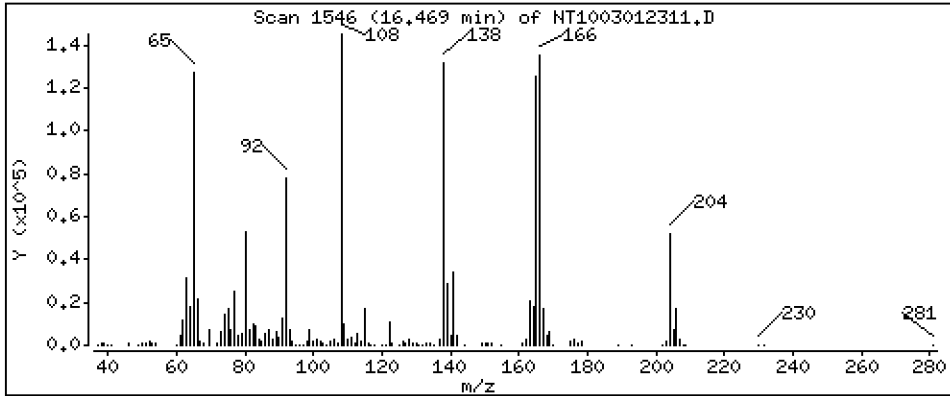
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 5,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

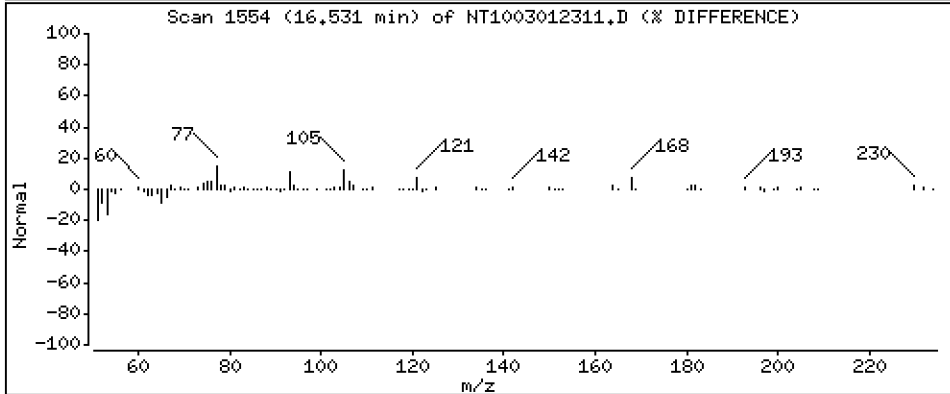
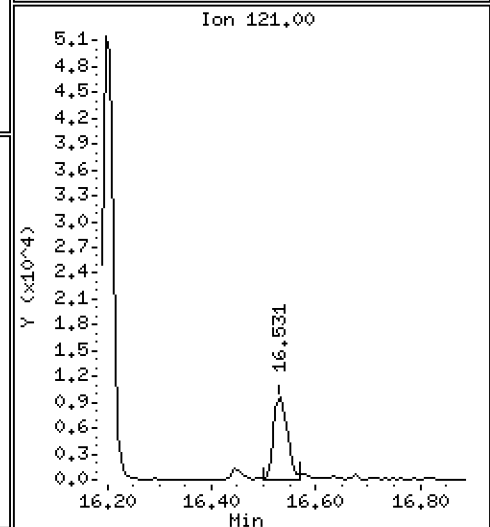
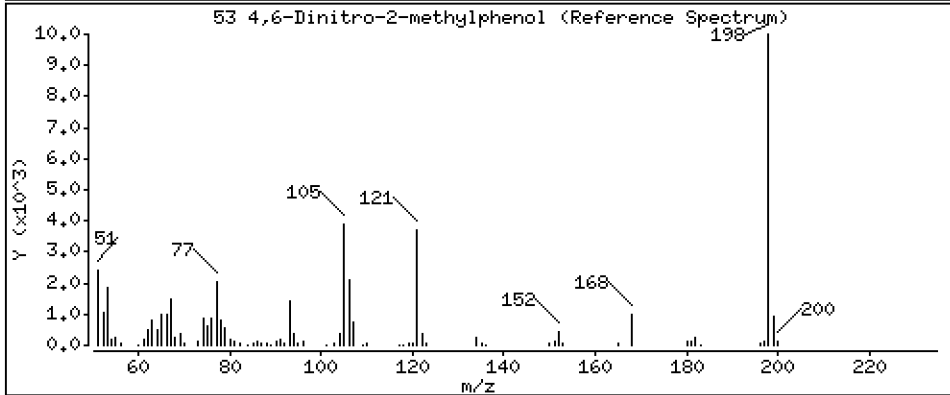
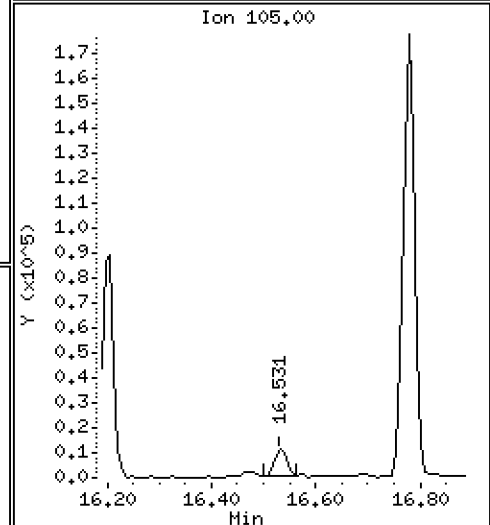
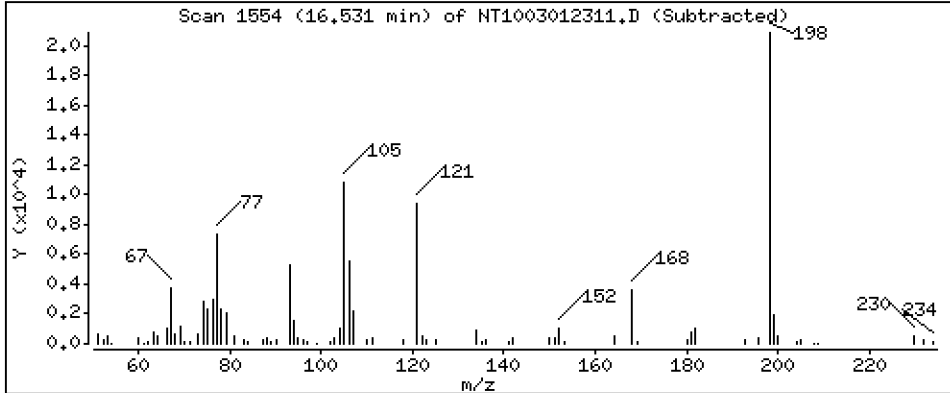
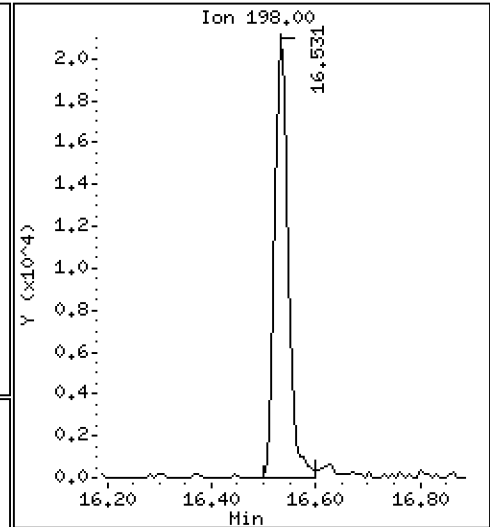
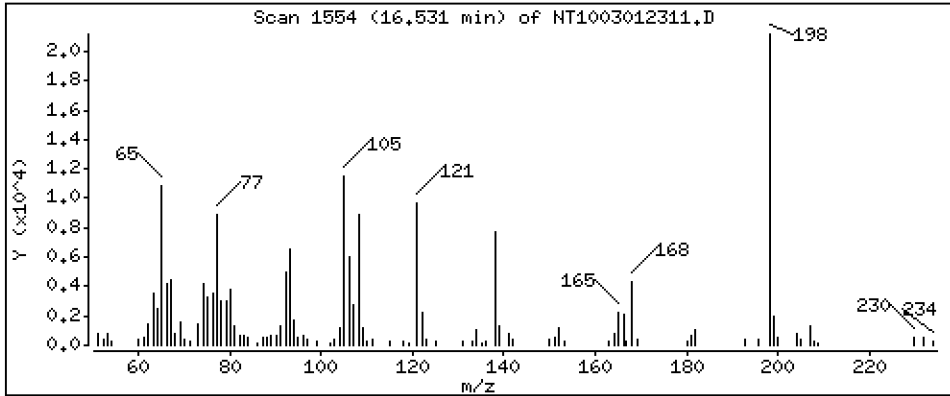
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 1,292 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

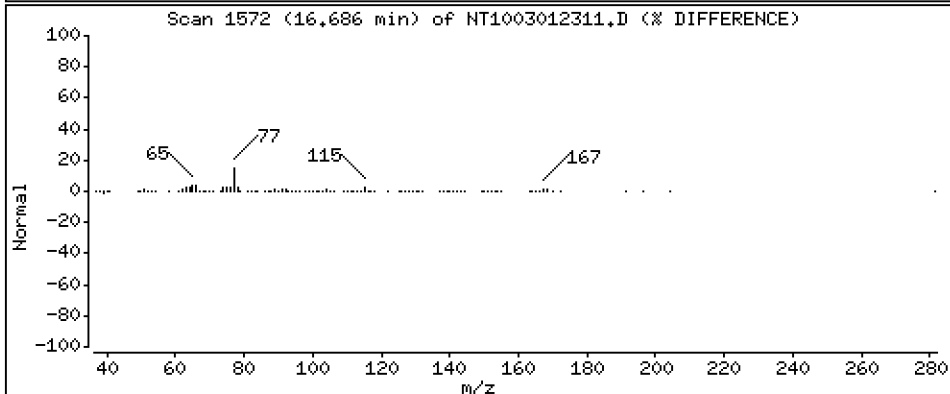
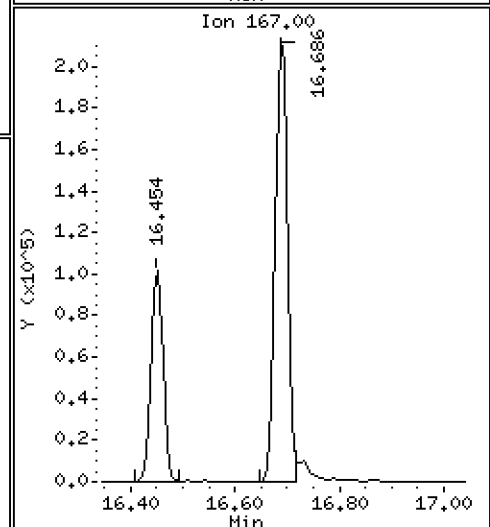
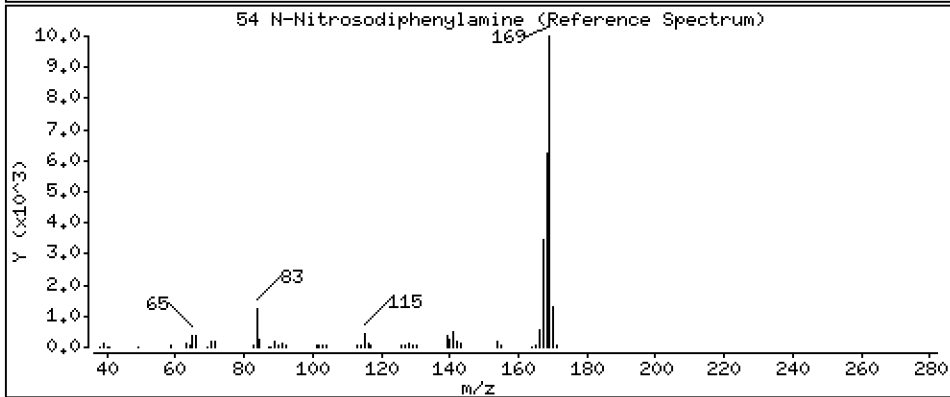
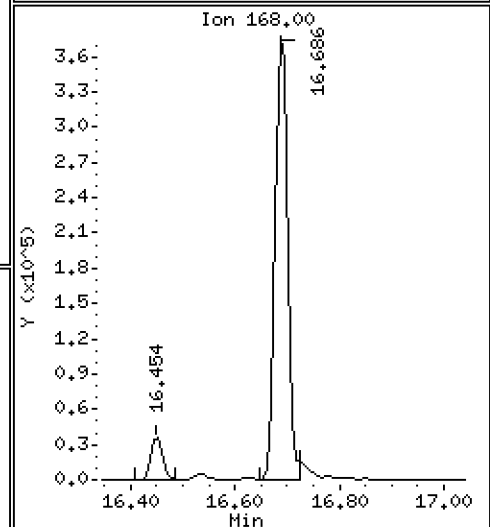
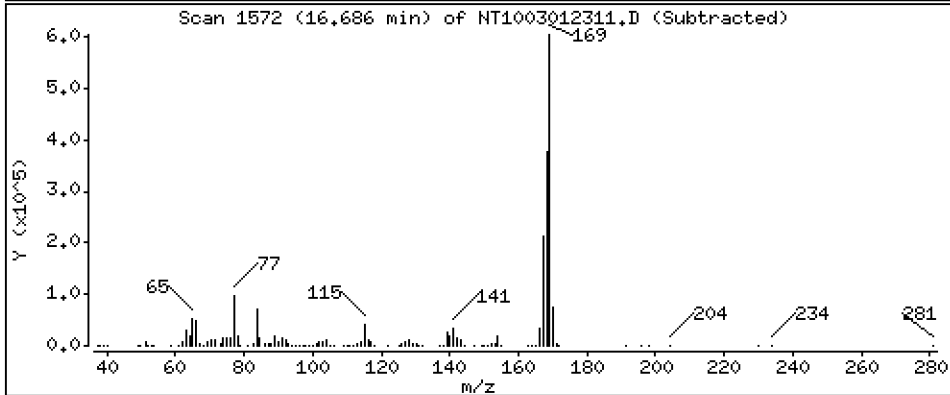
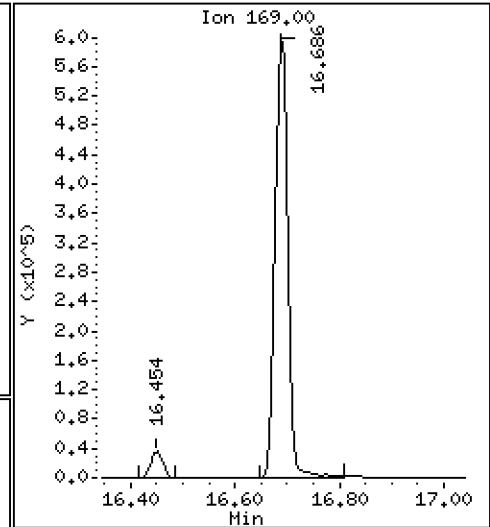
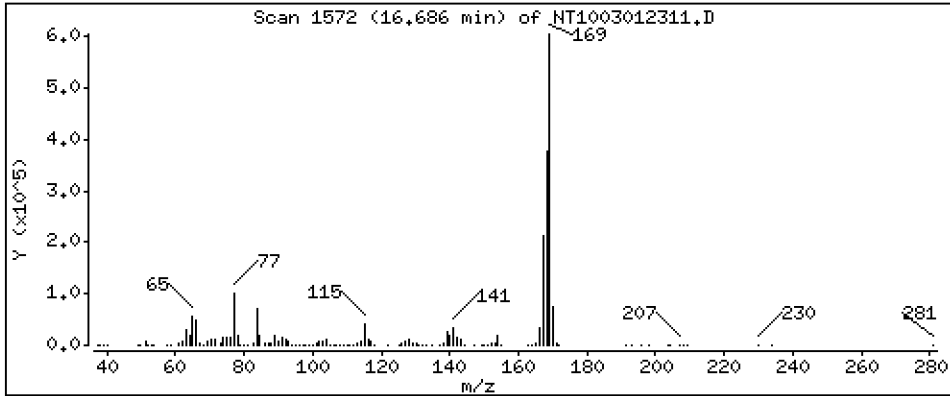
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,416 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

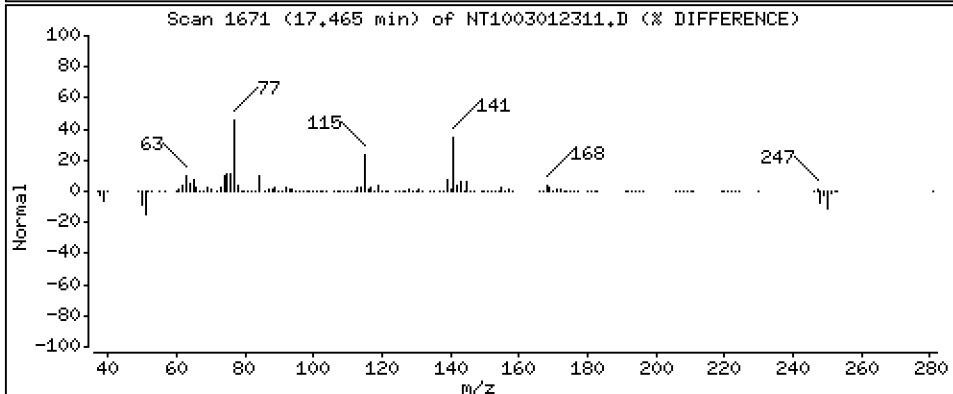
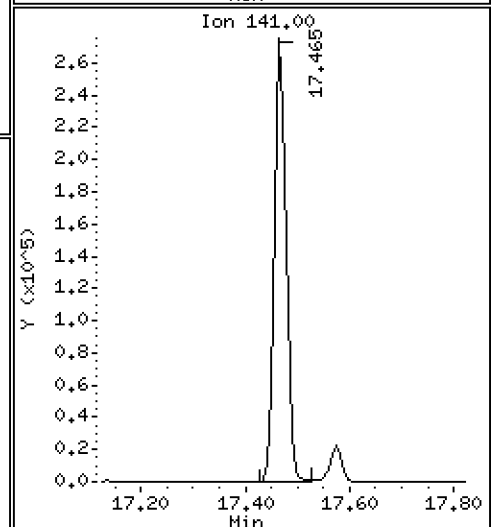
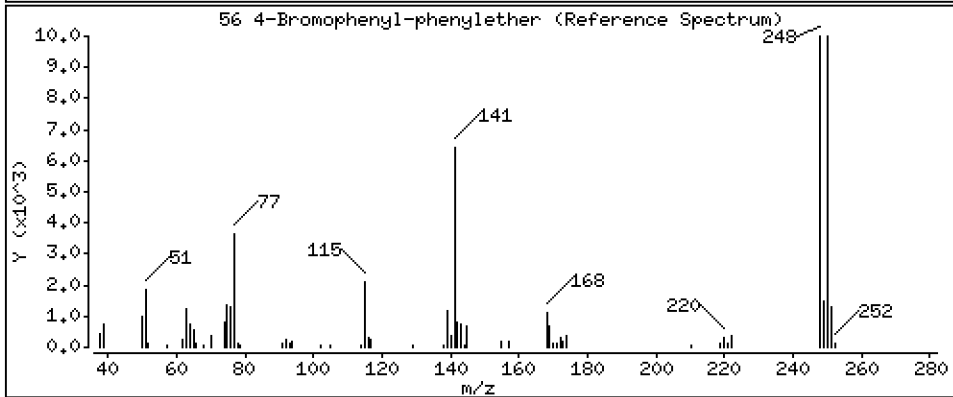
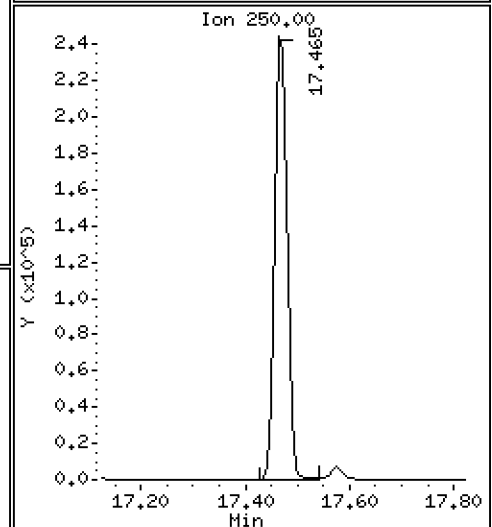
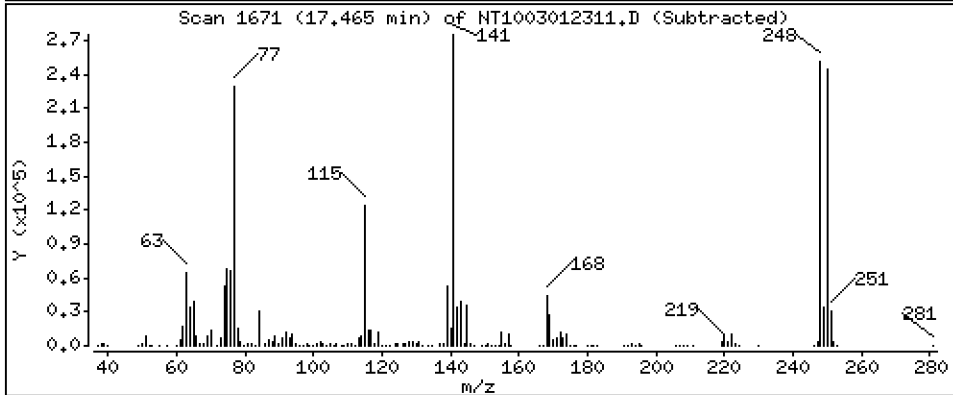
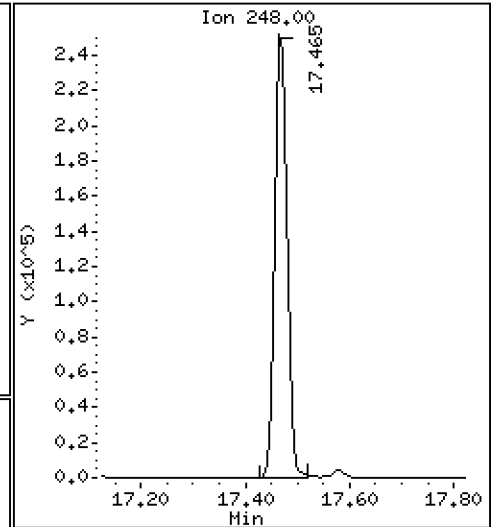
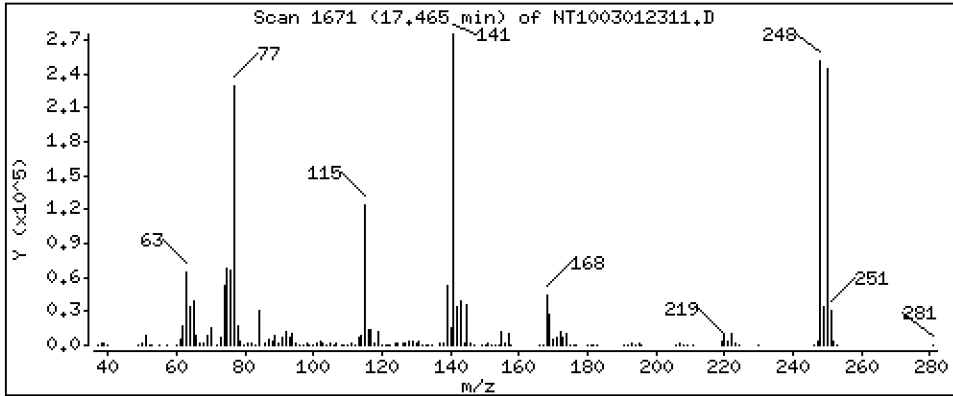
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,460 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

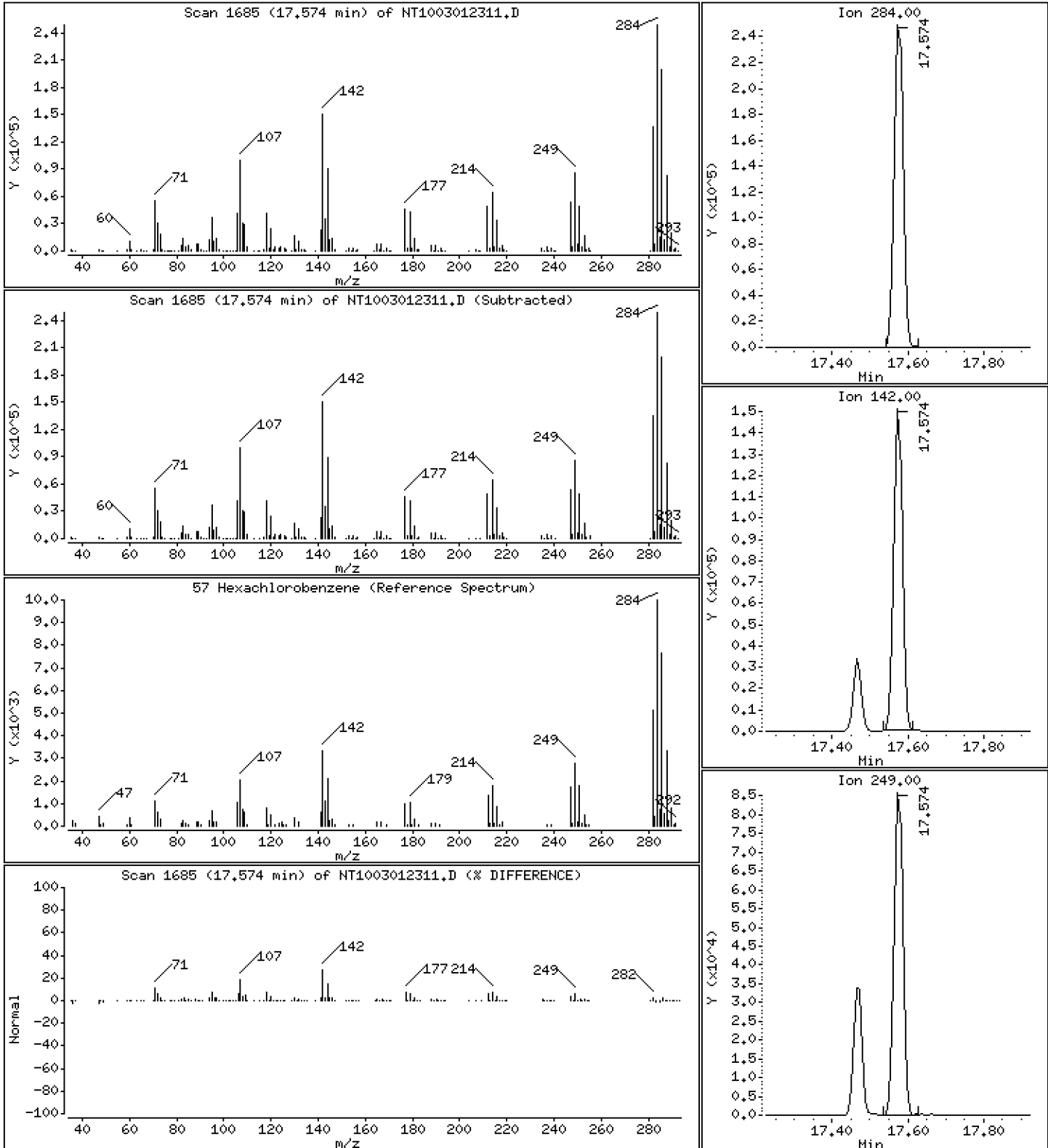
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,805 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

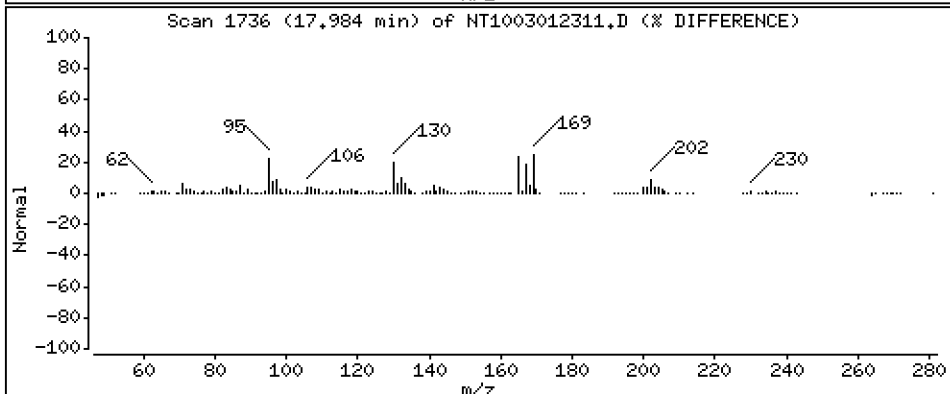
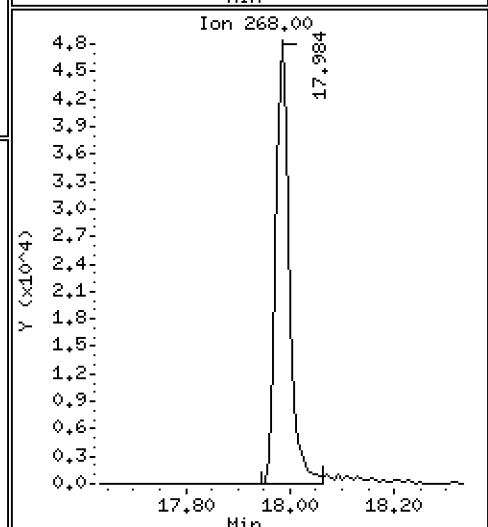
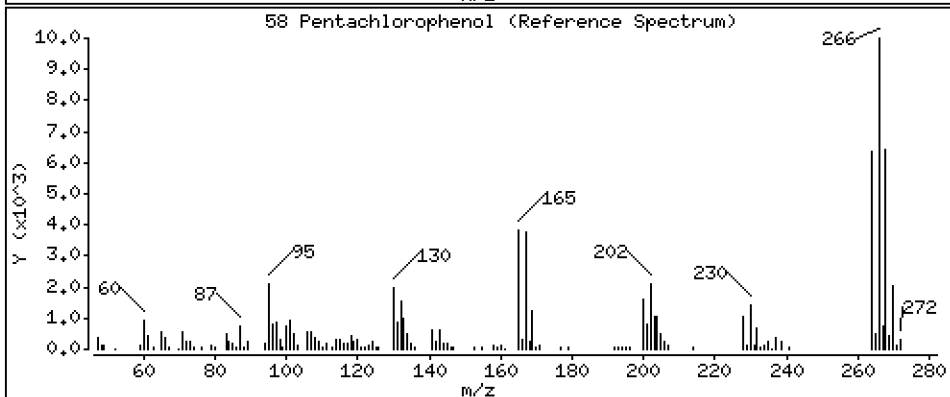
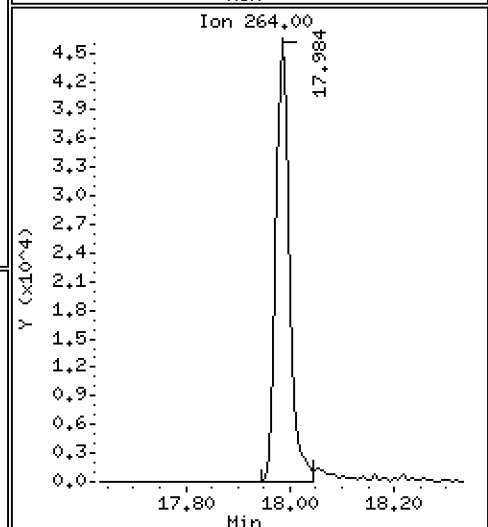
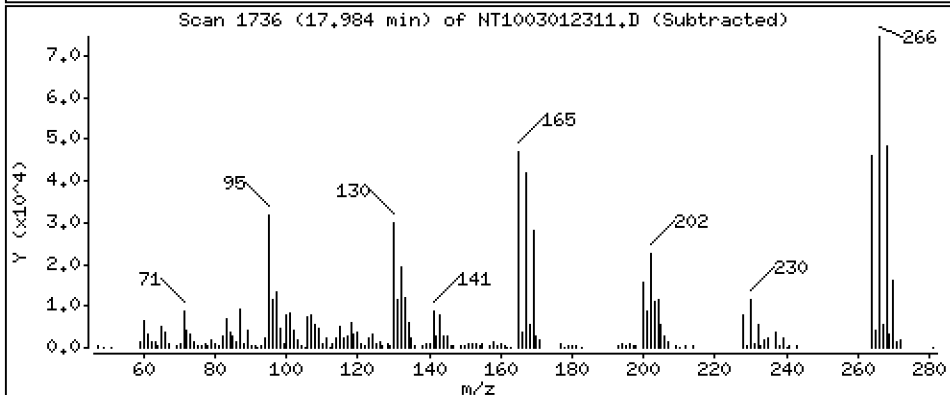
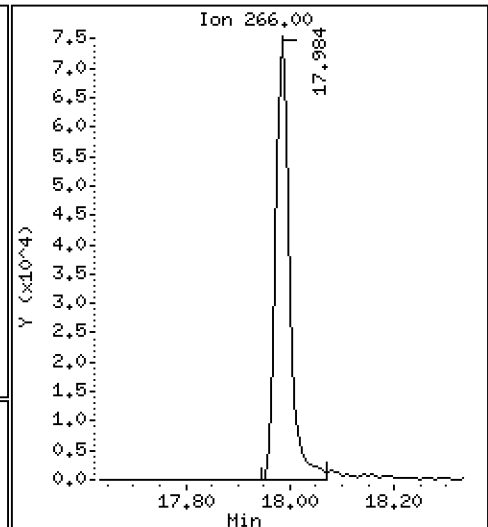
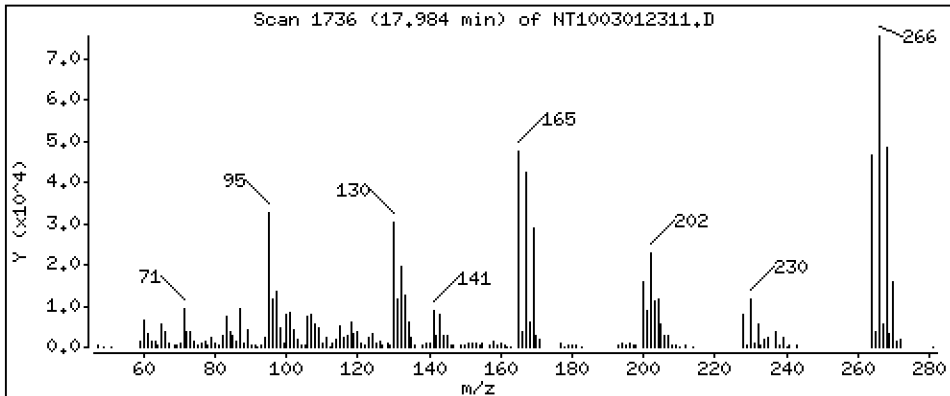
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,492 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

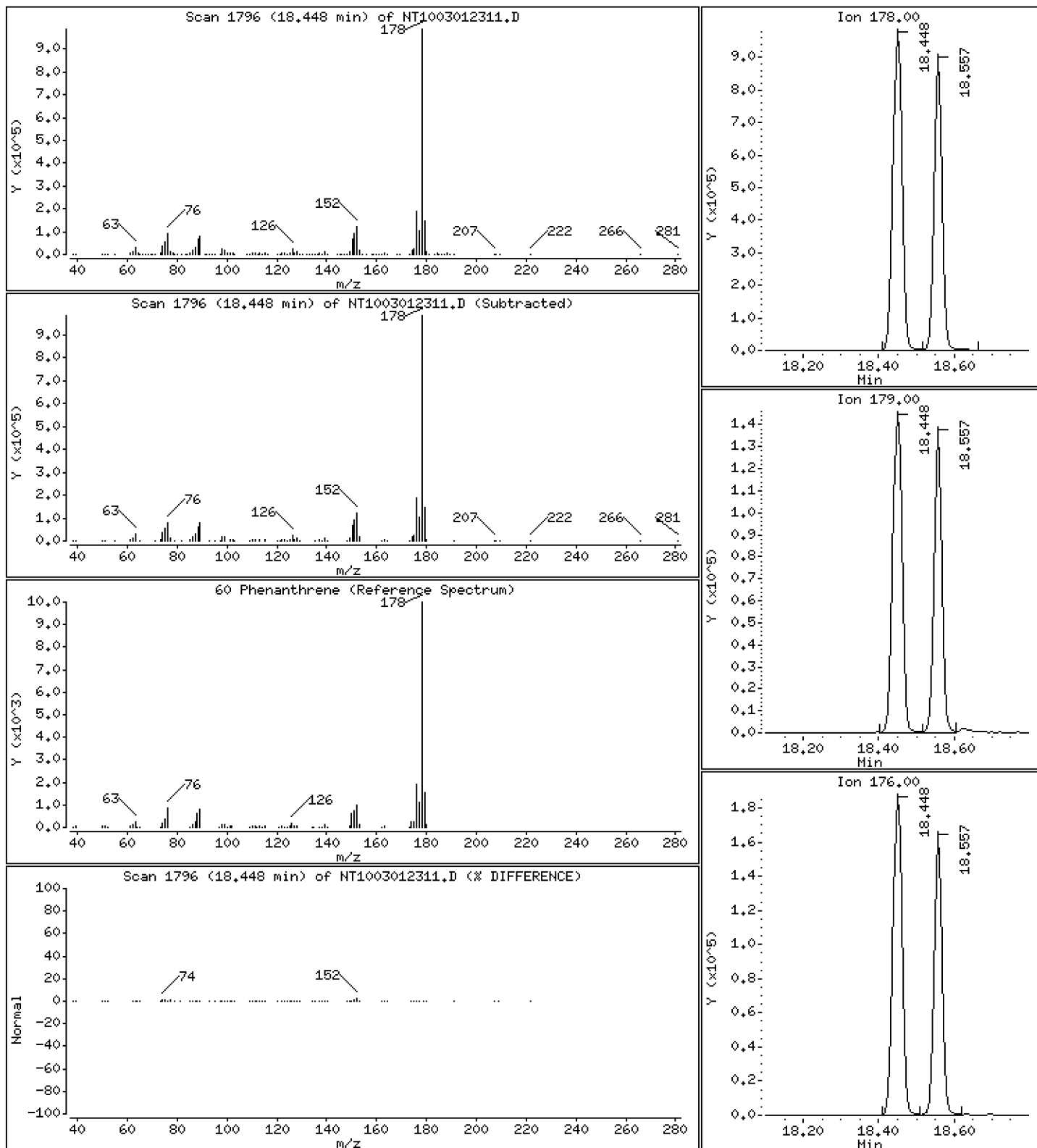
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,085 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

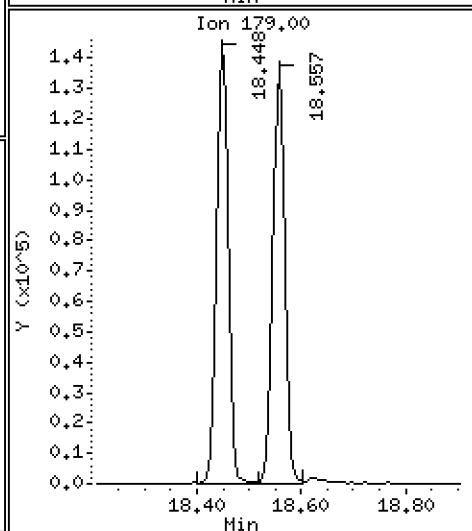
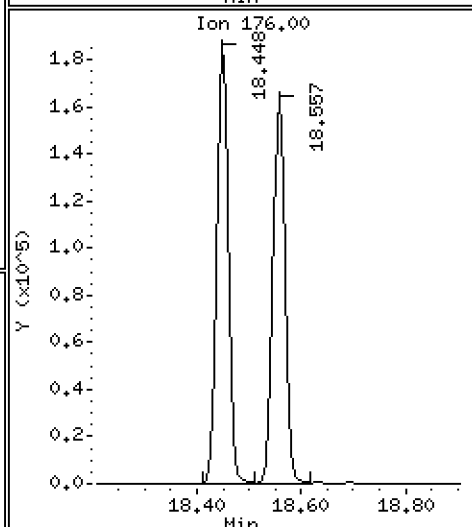
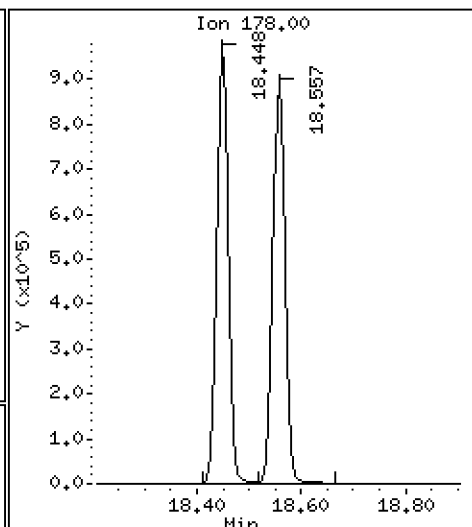
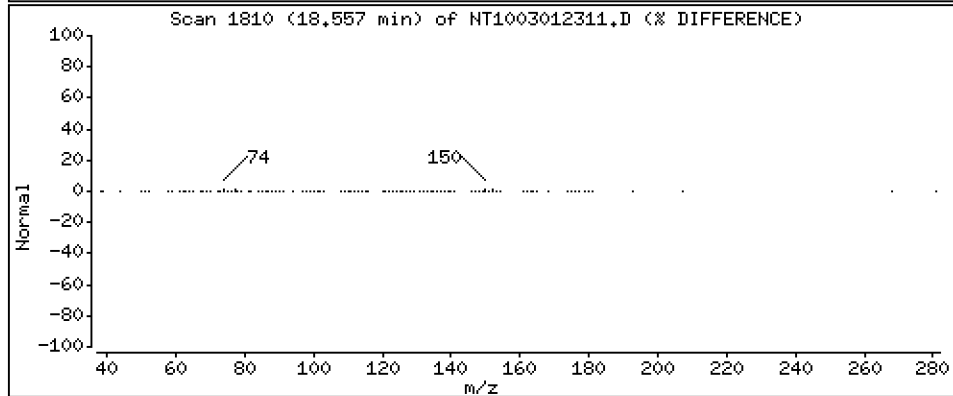
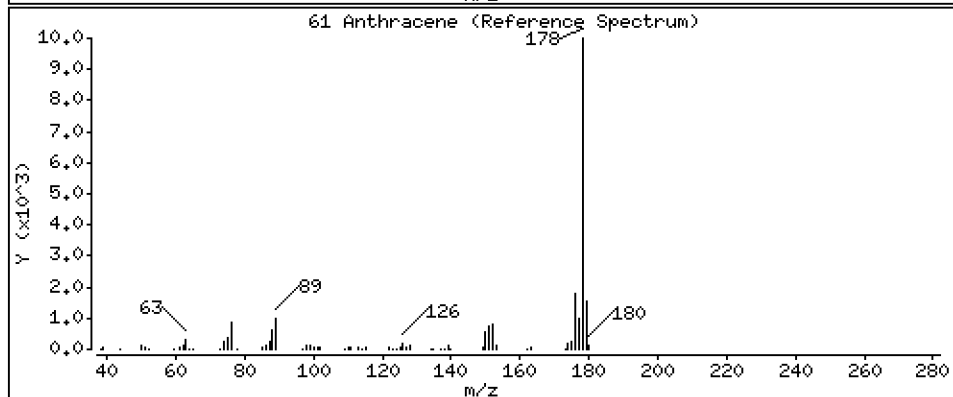
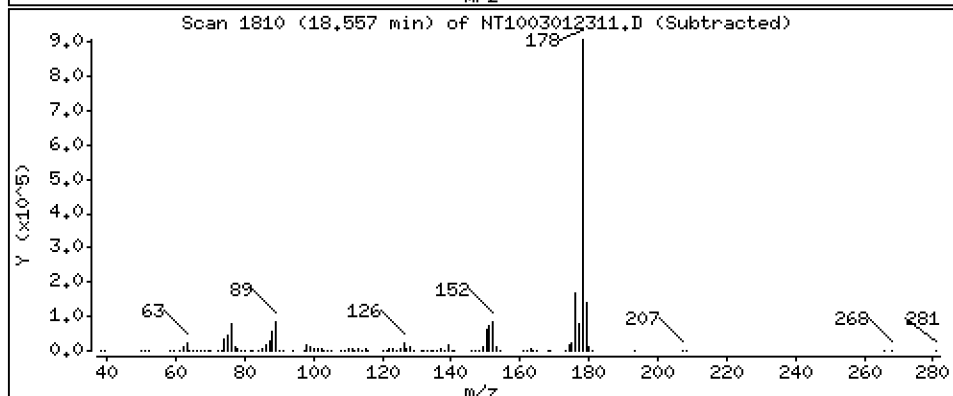
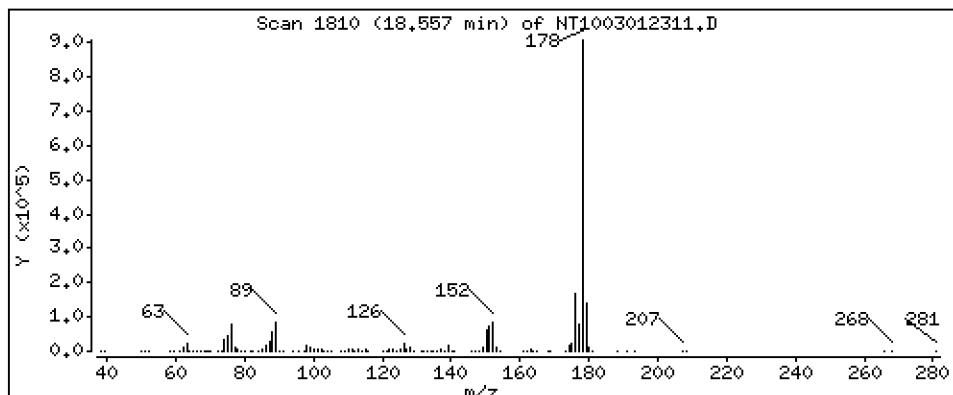
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,585 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

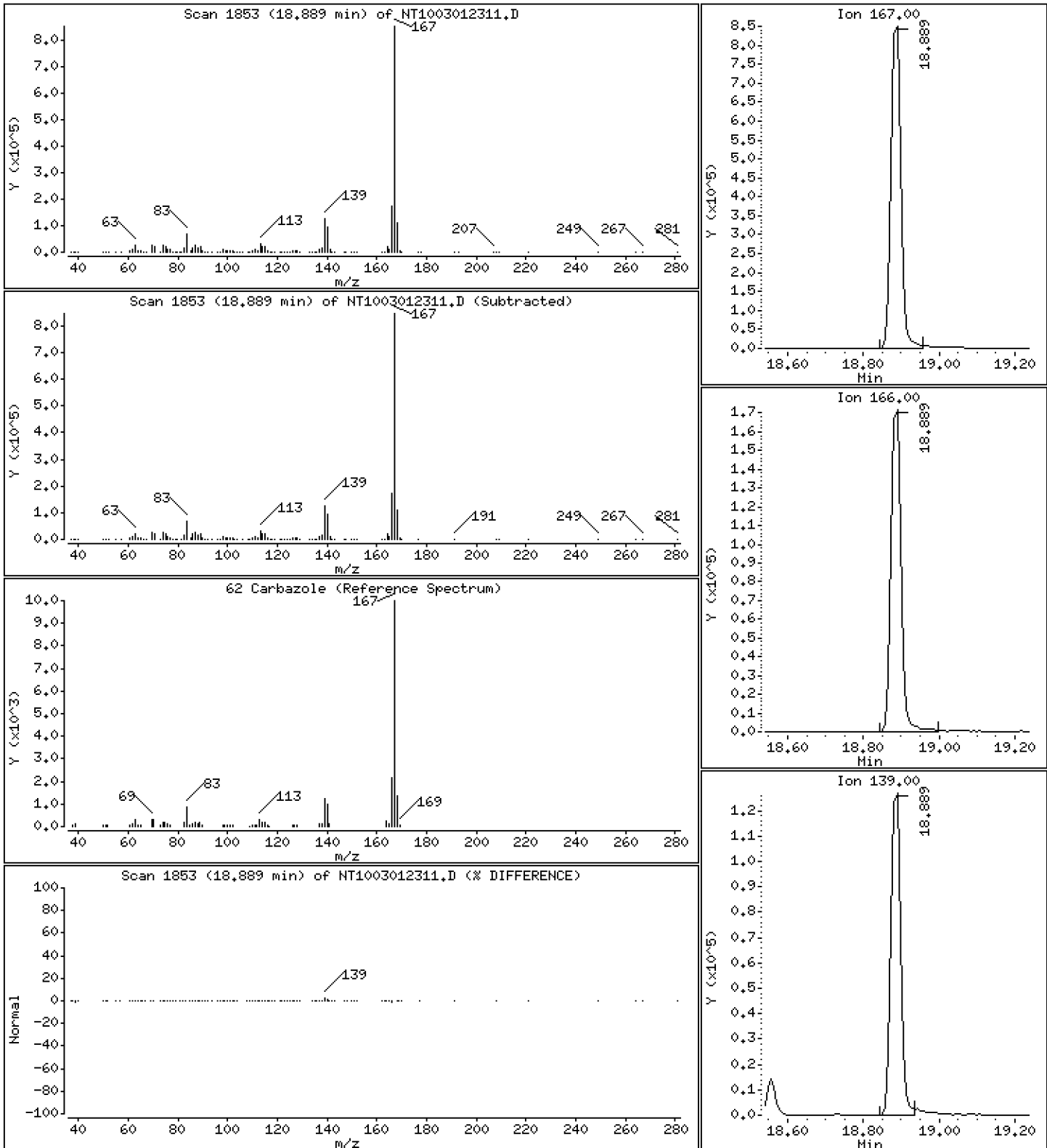
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,335 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

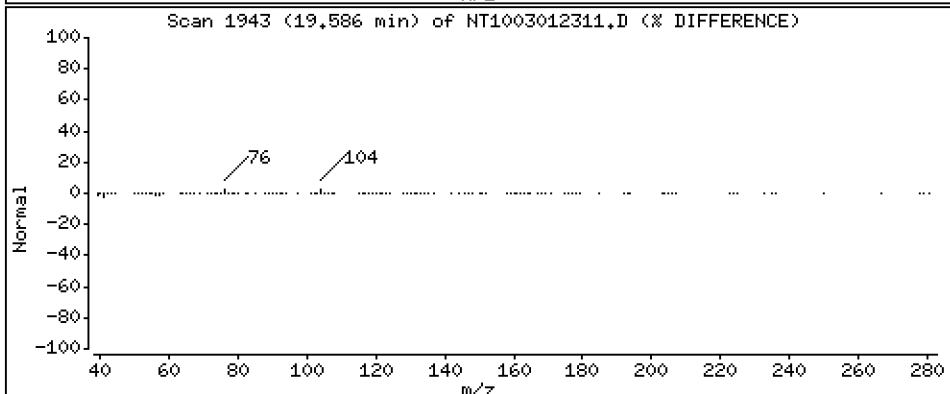
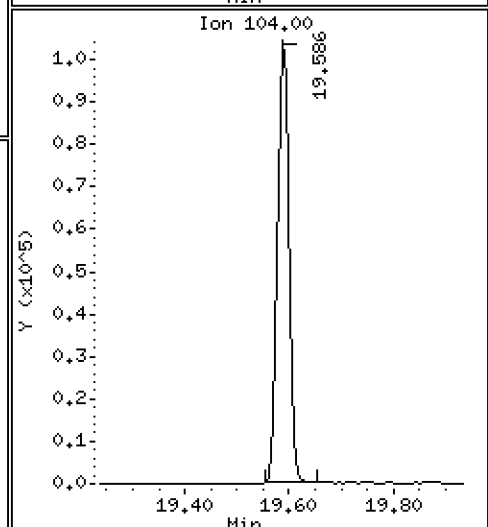
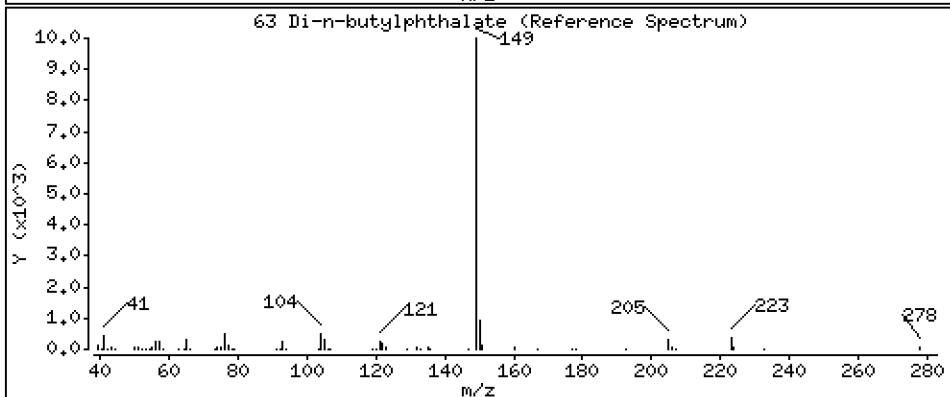
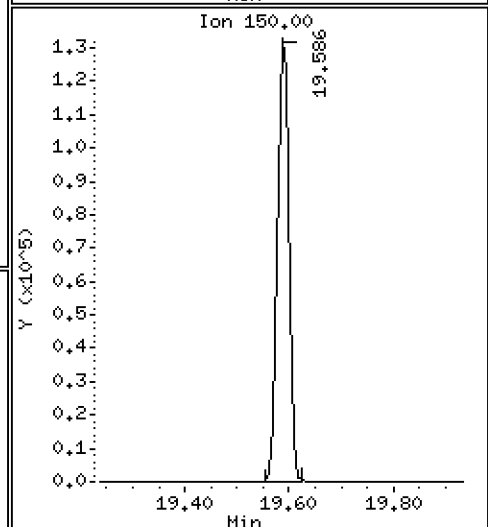
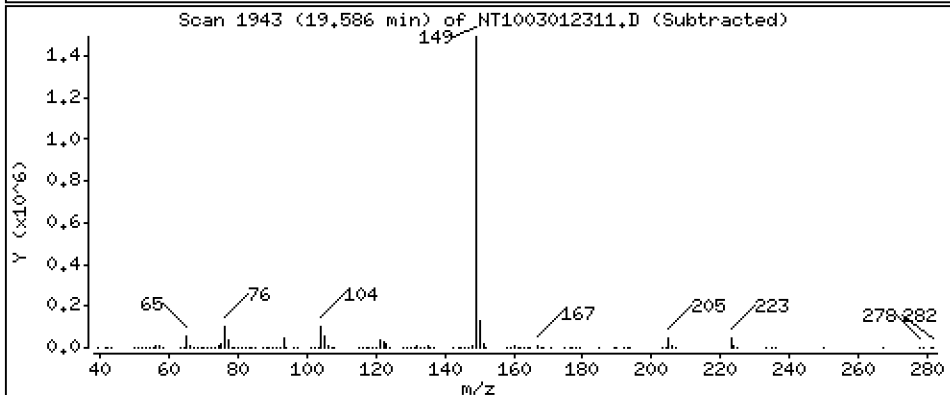
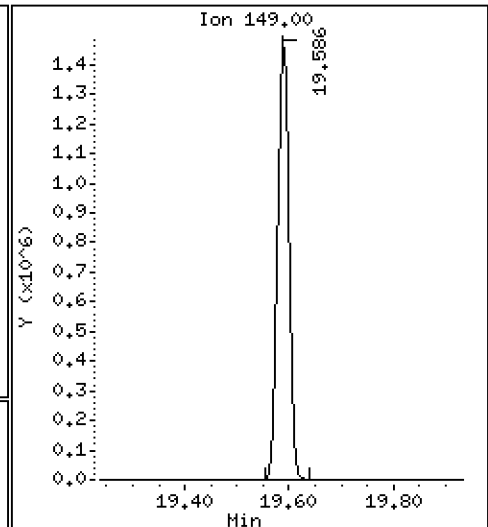
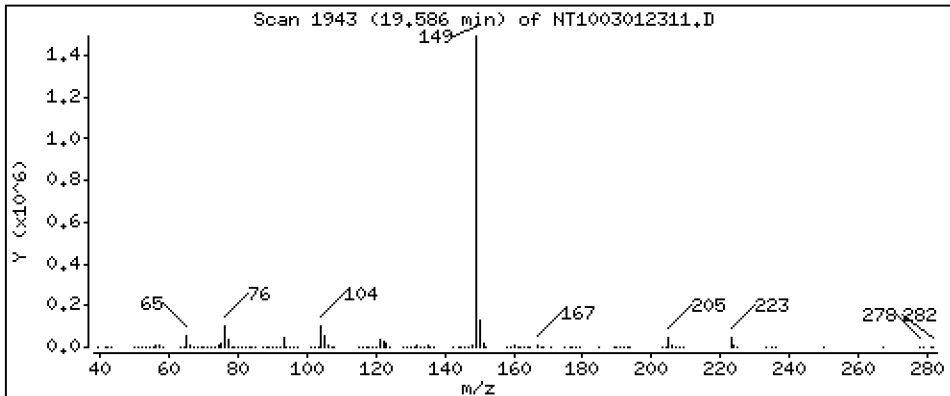
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,463 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

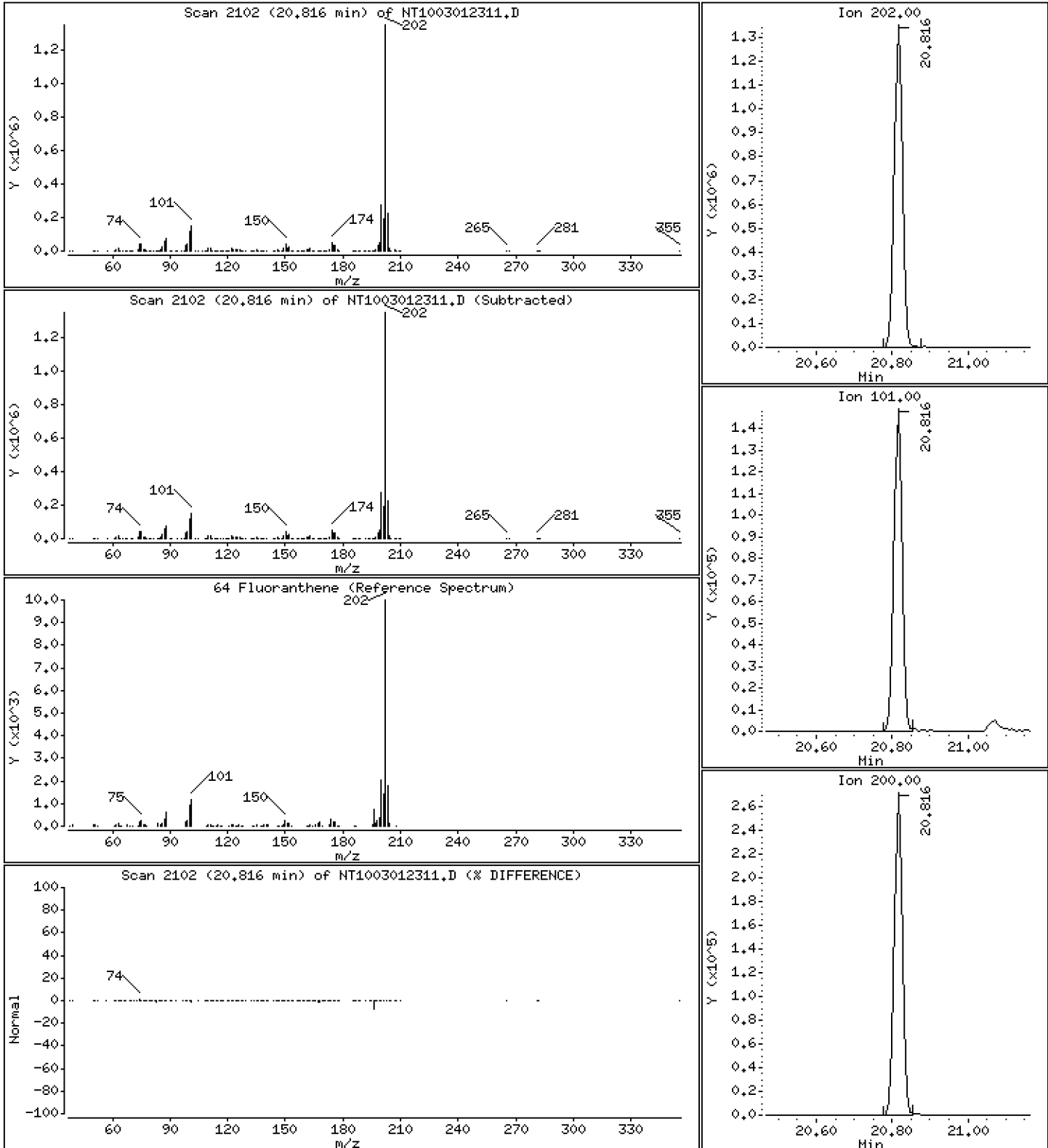
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,542 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

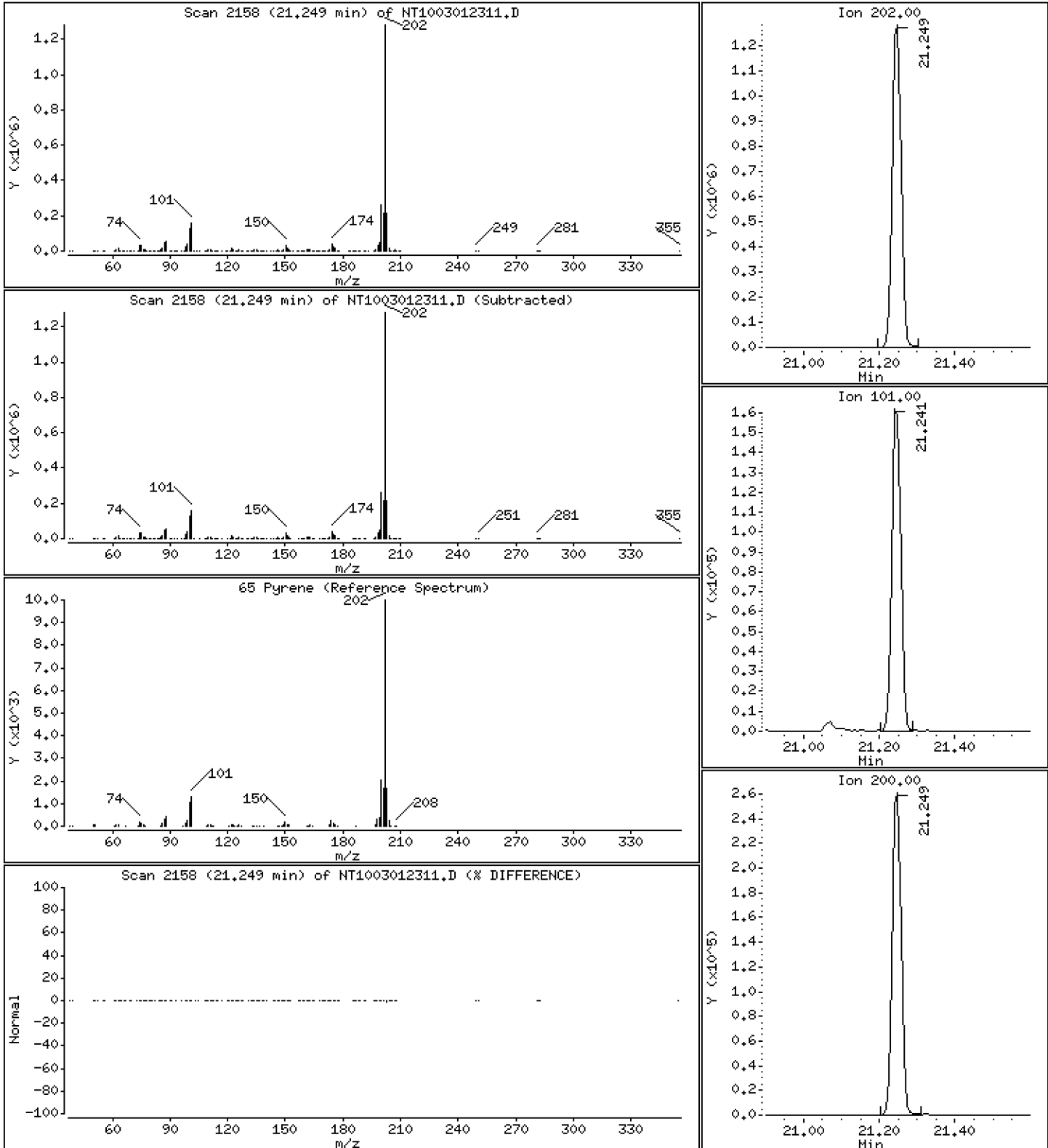
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,626 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

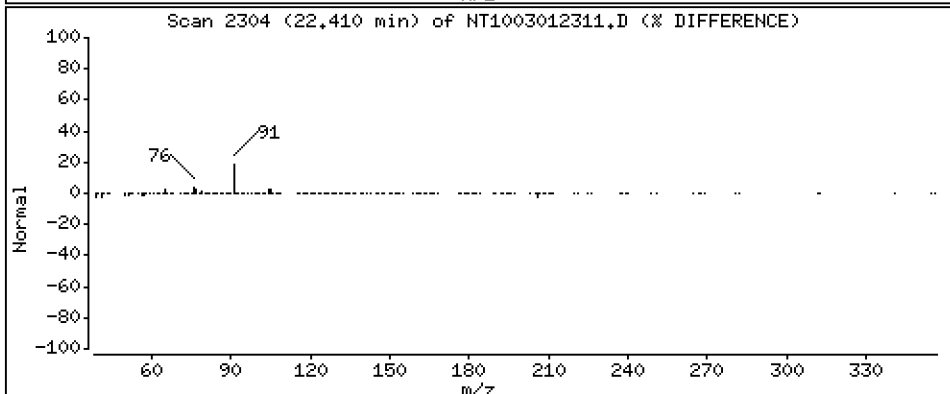
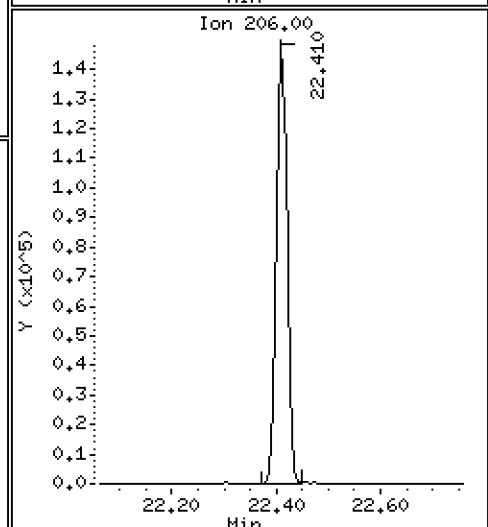
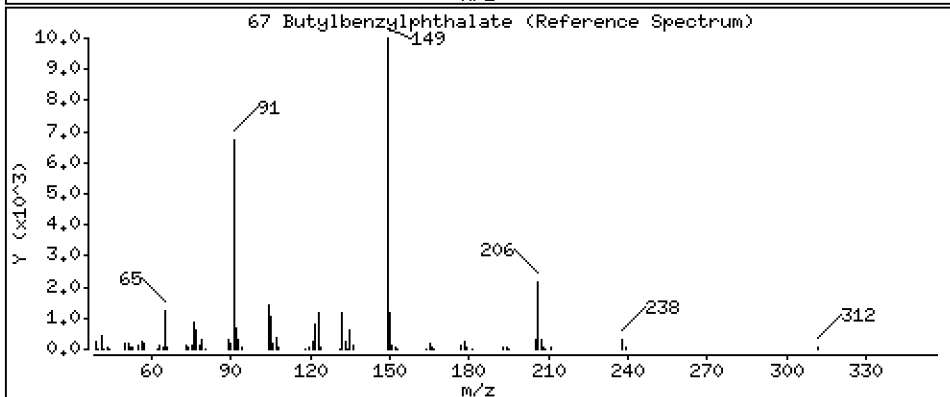
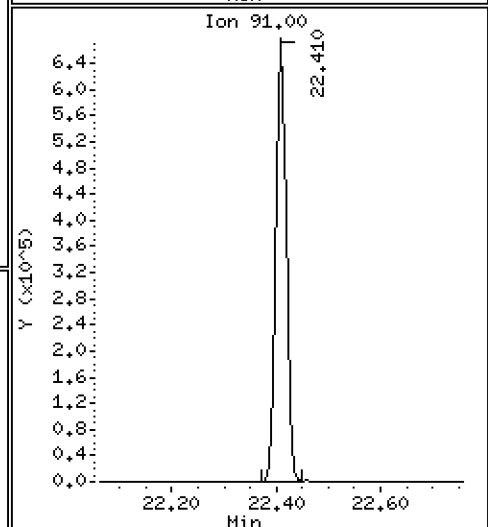
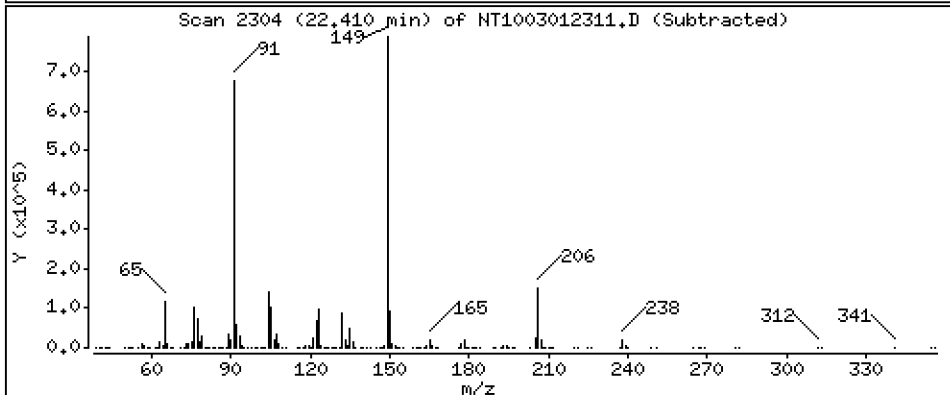
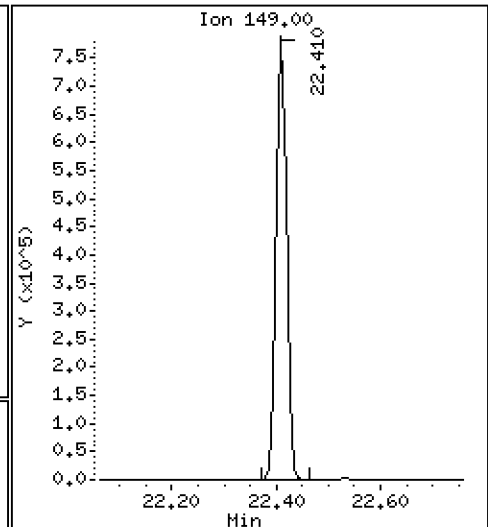
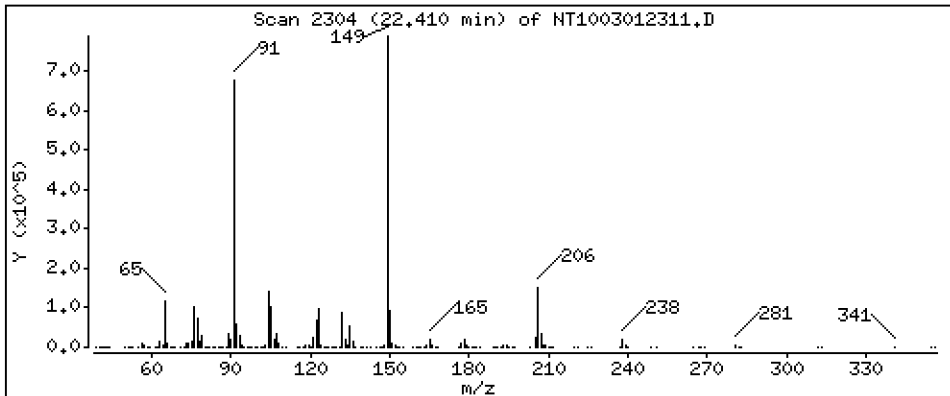
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,525 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

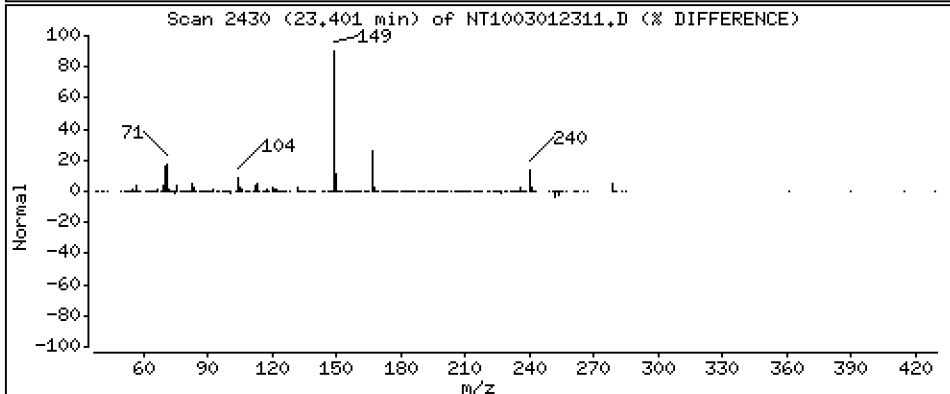
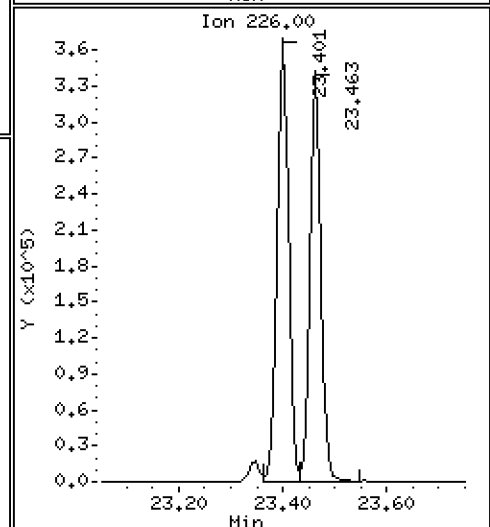
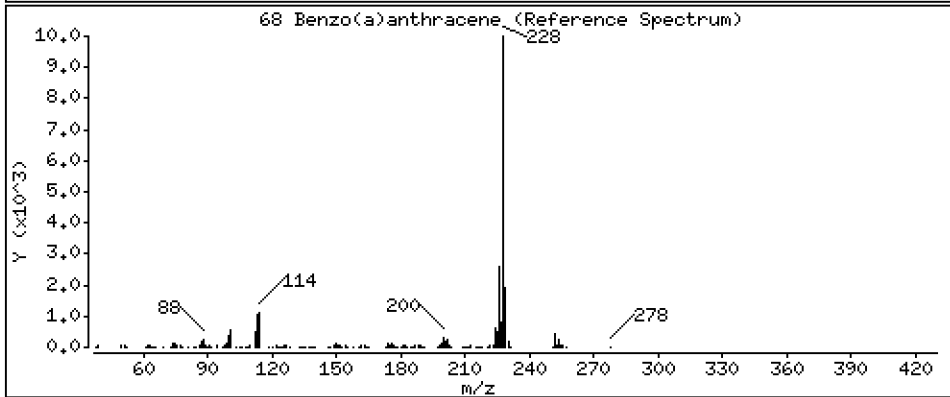
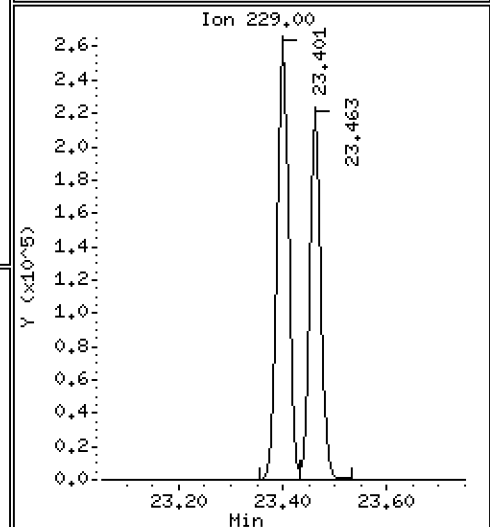
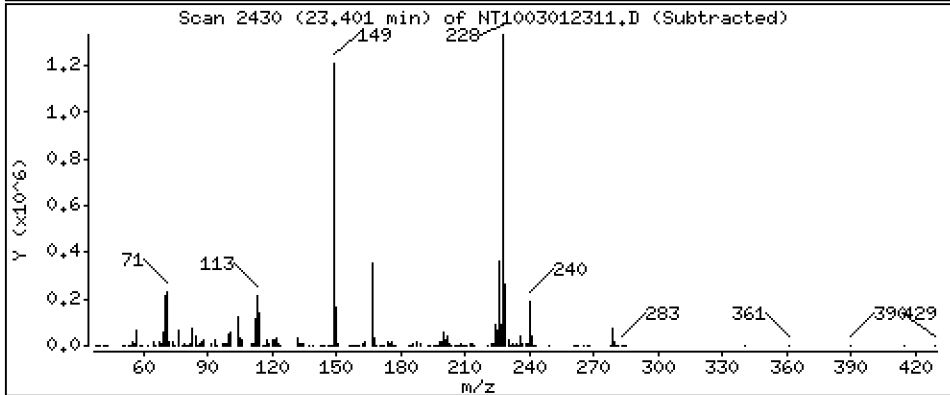
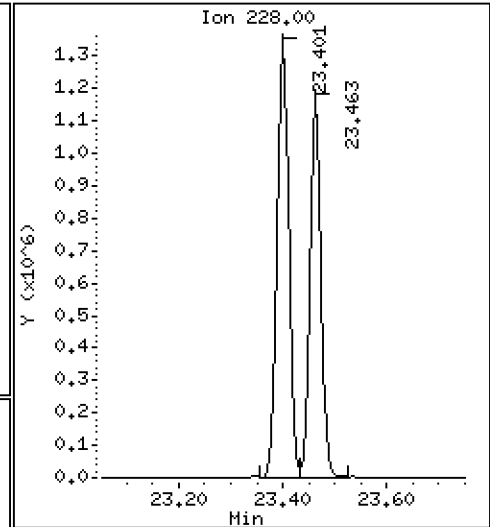
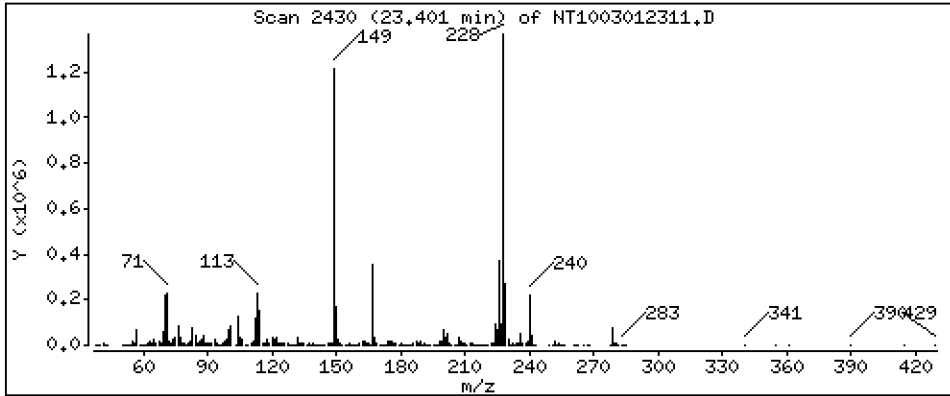
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,578 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

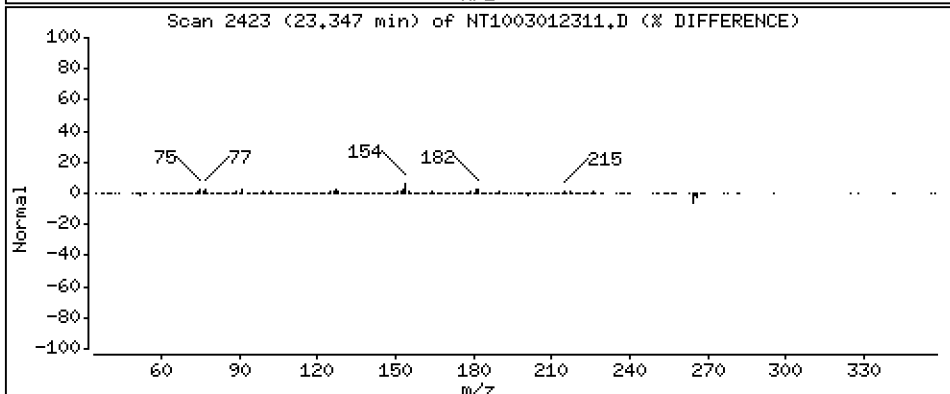
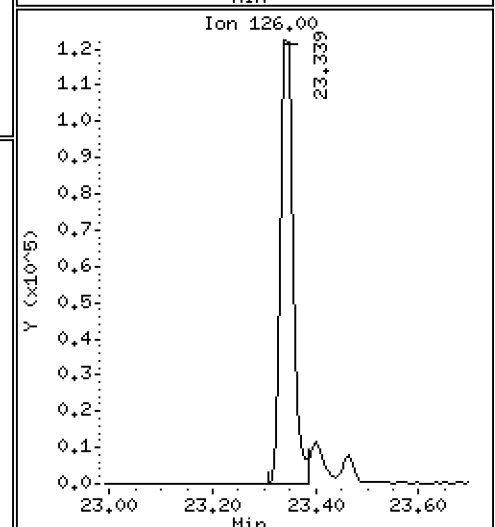
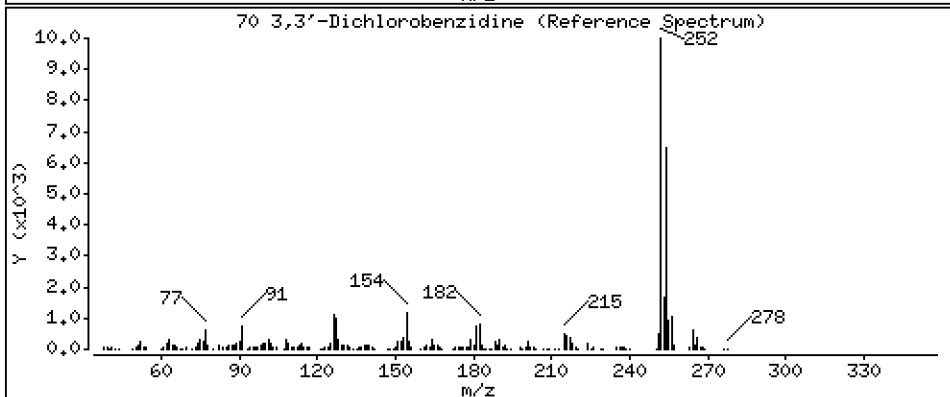
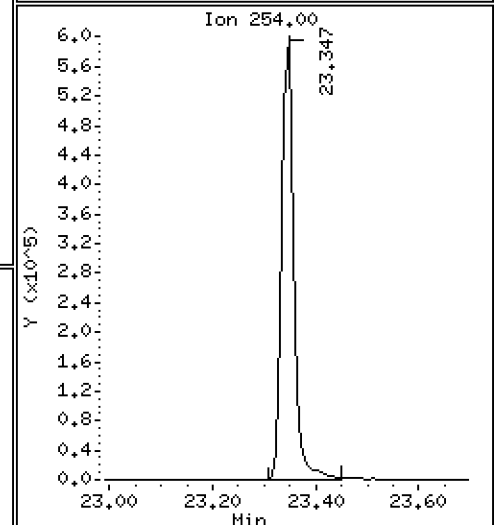
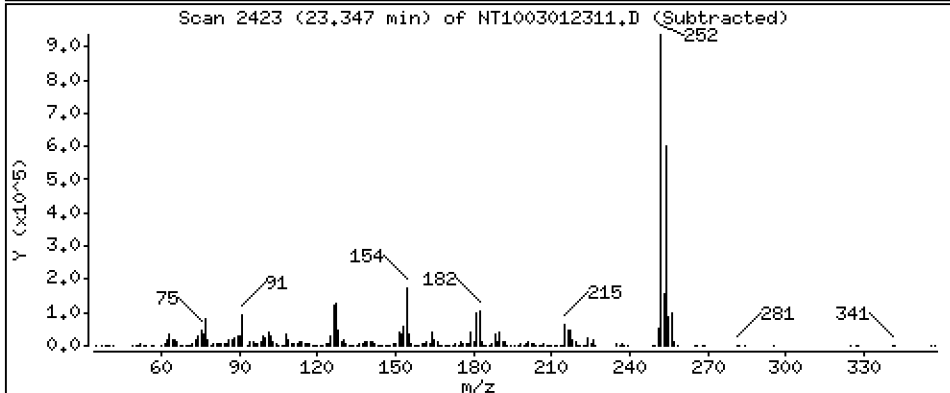
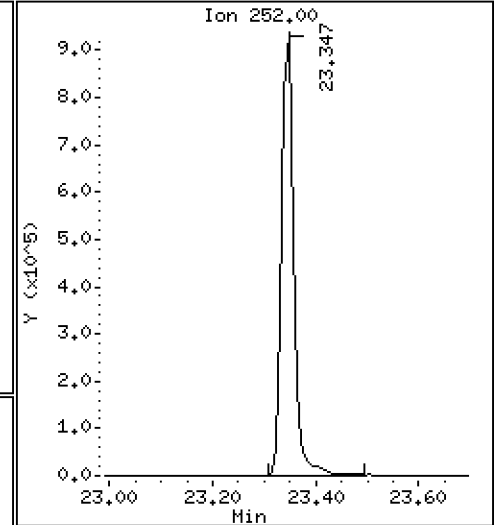
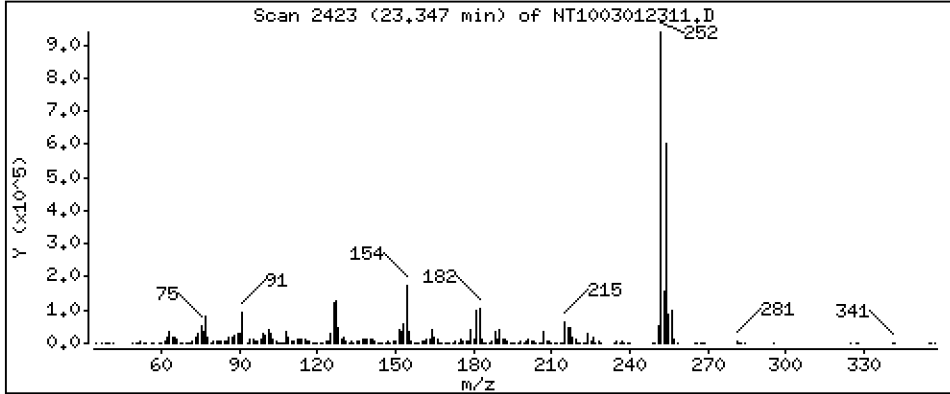
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 7,383 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

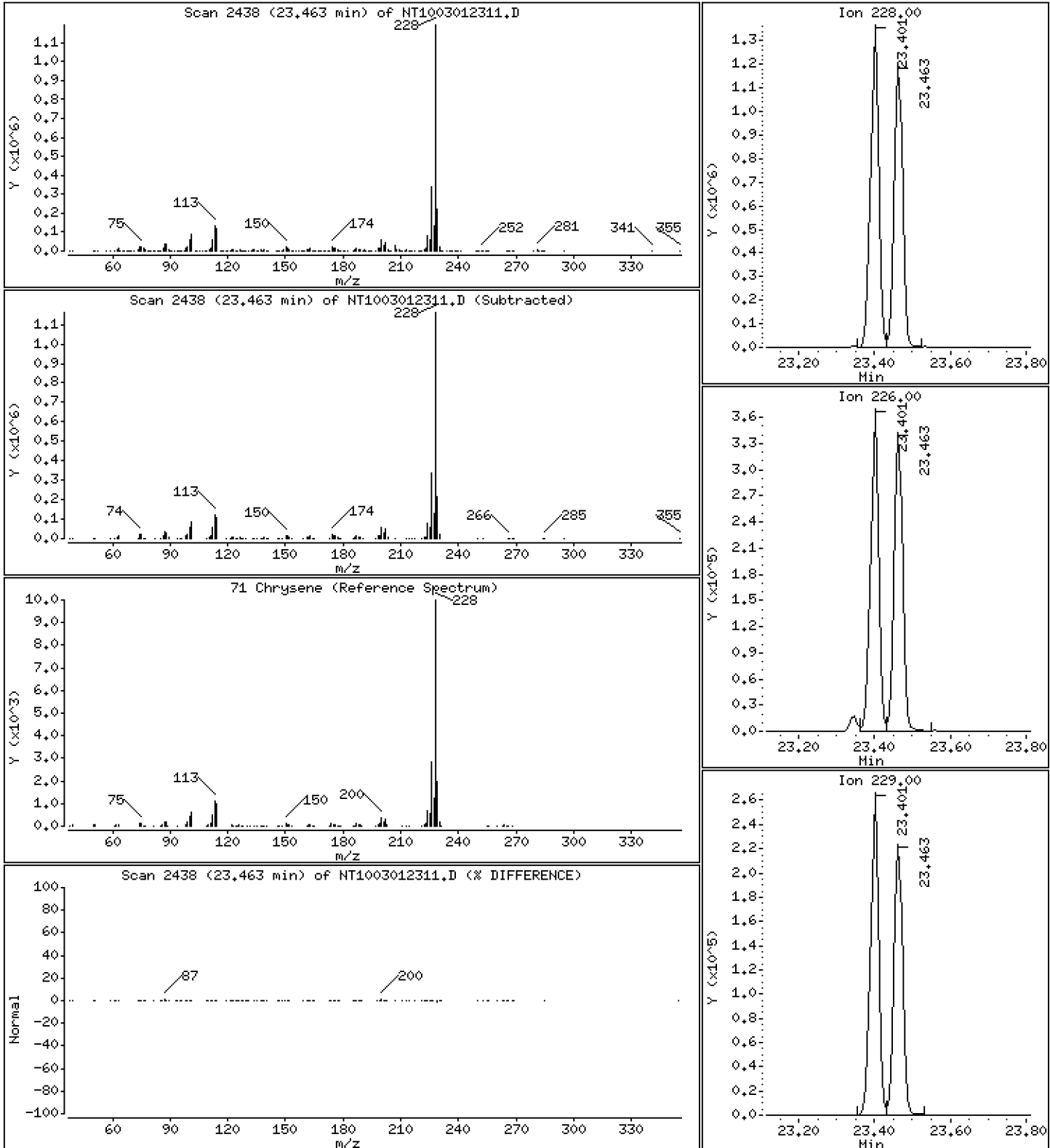
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,967 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

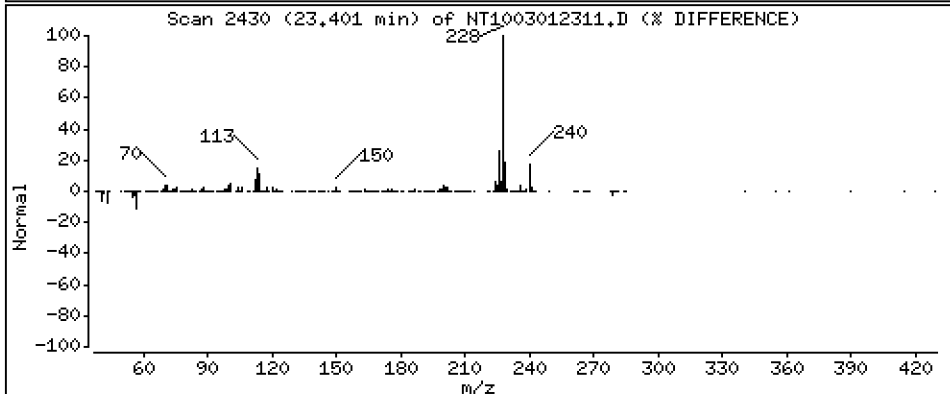
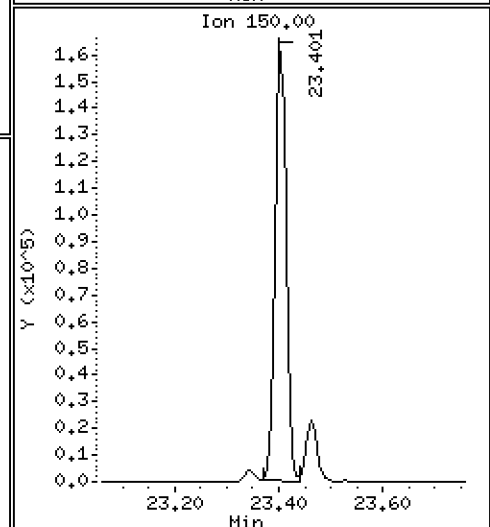
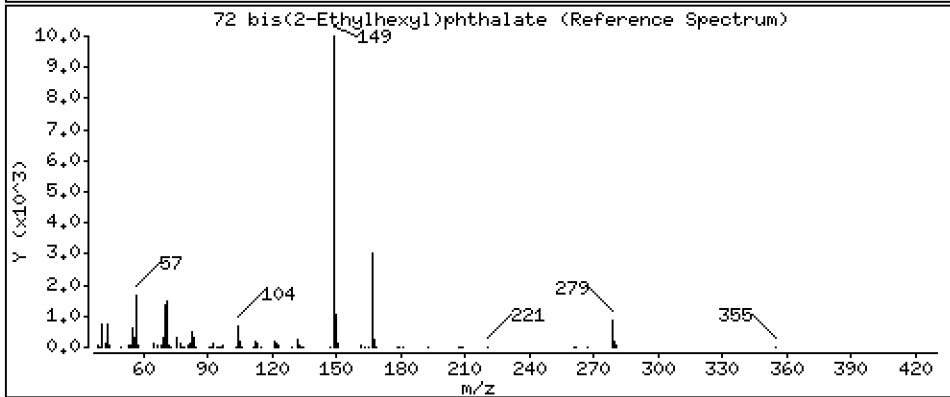
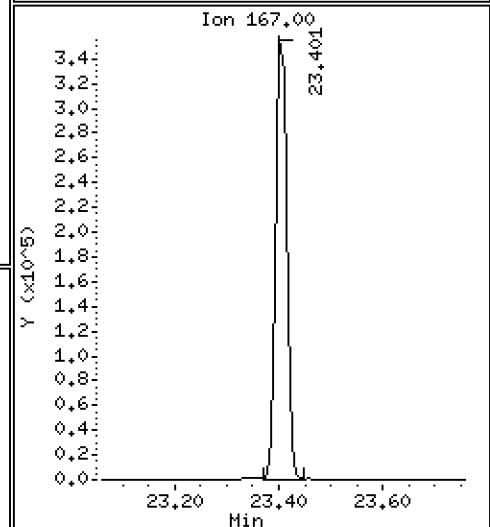
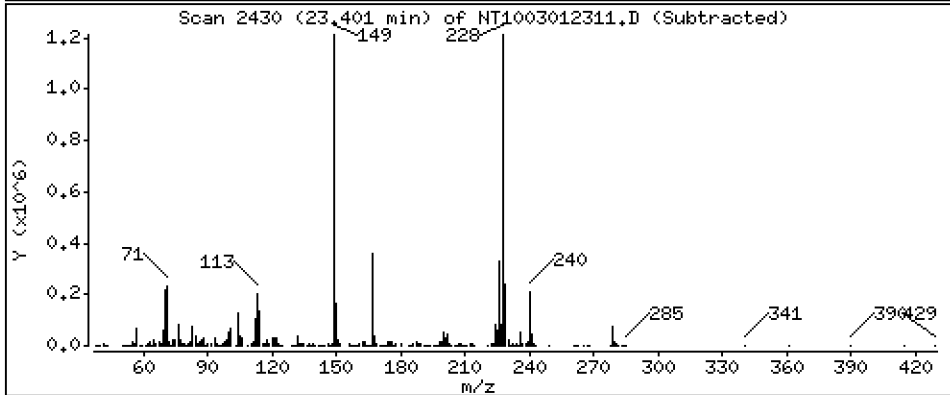
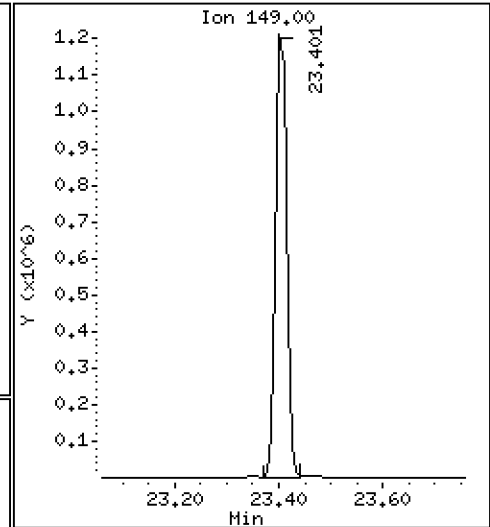
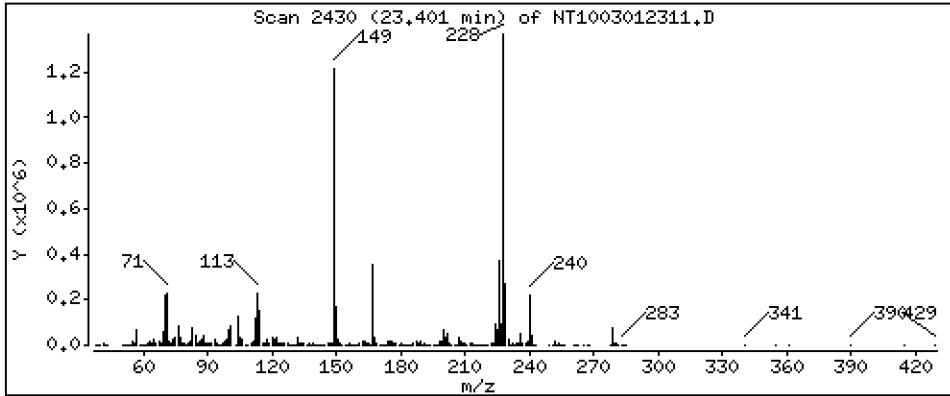
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,956 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

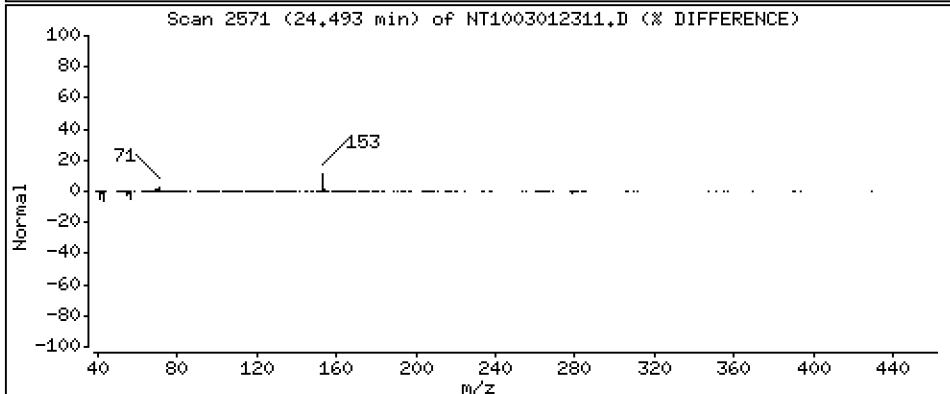
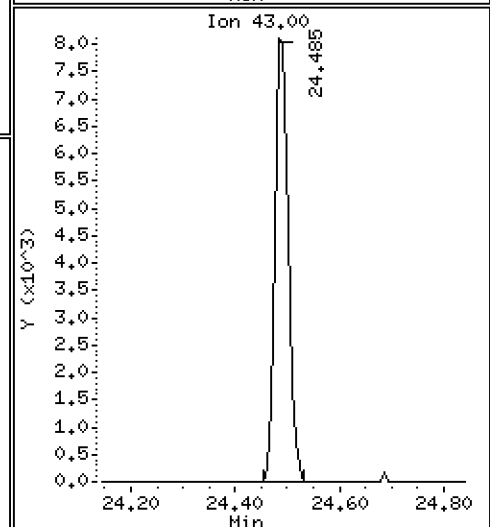
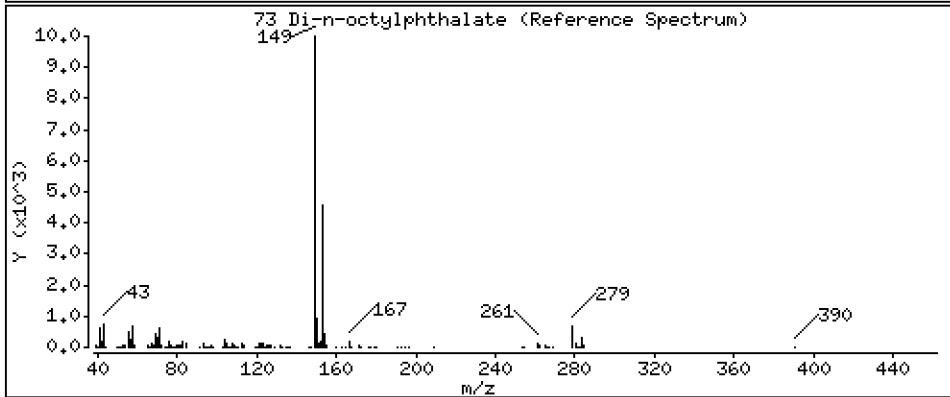
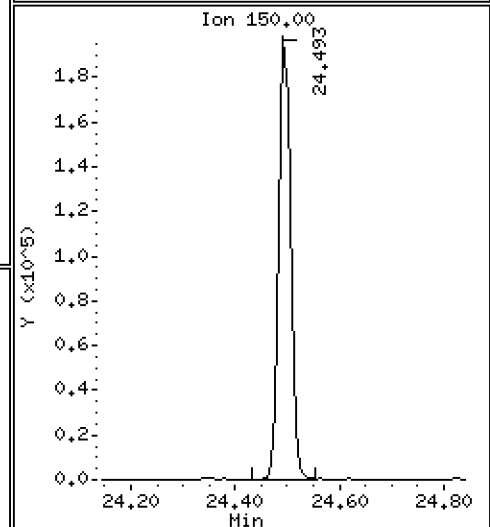
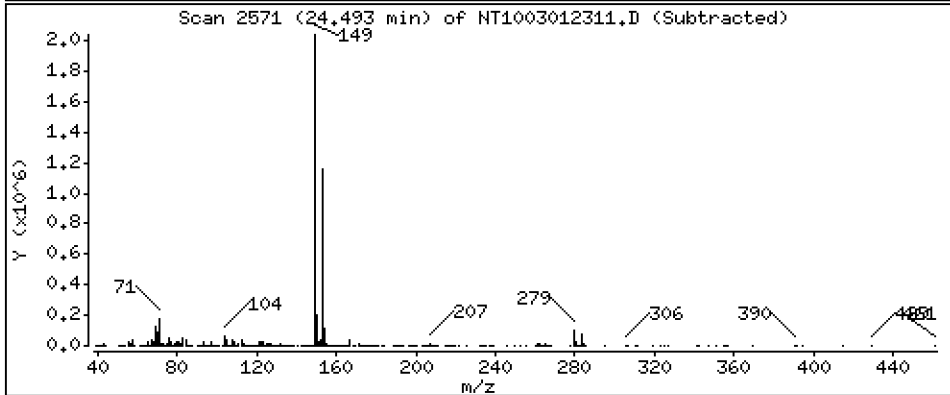
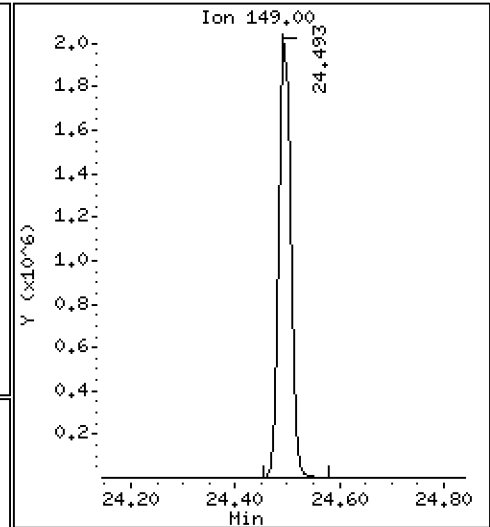
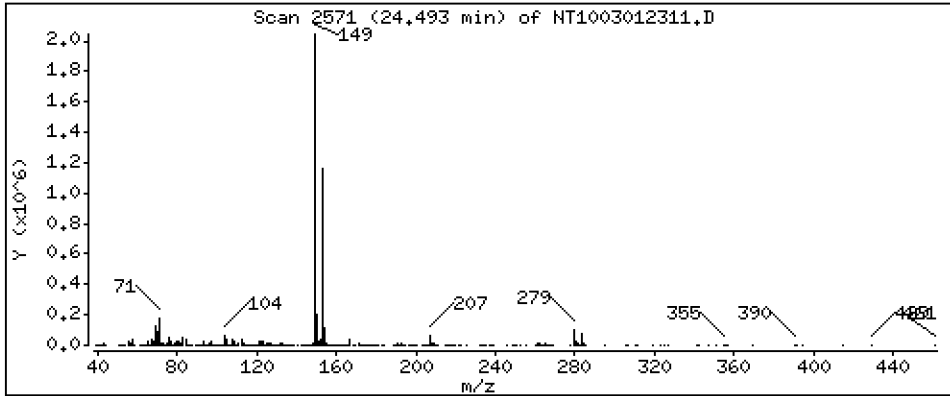
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,844 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

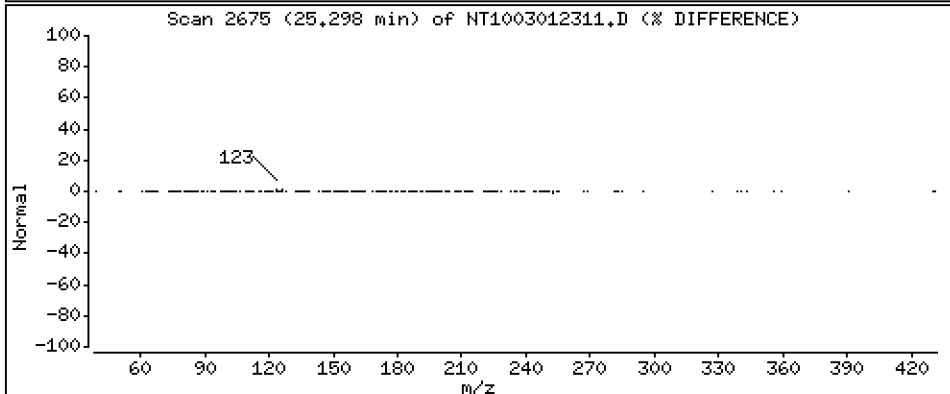
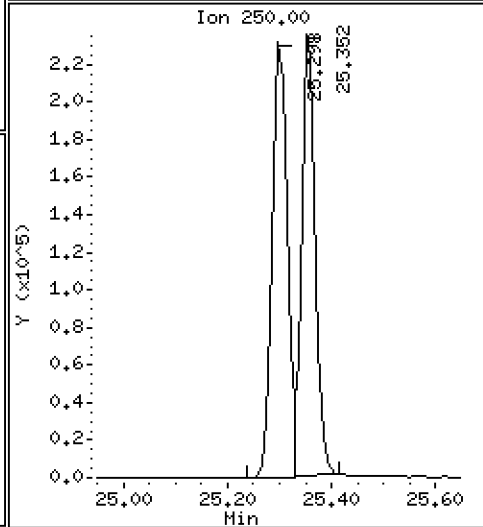
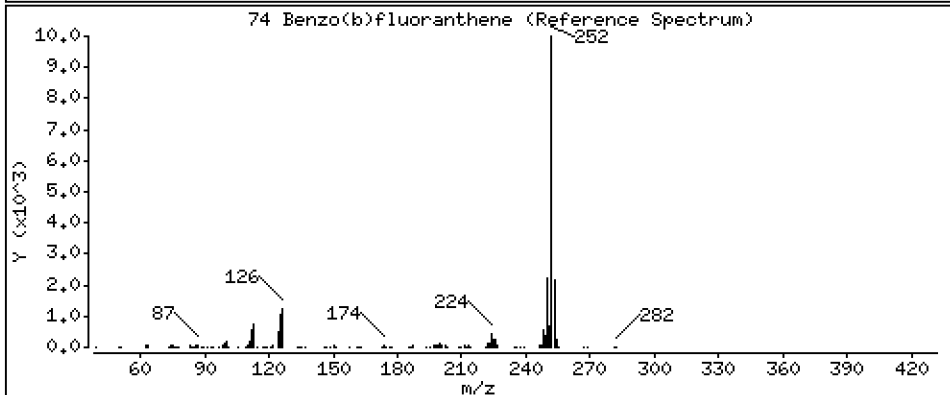
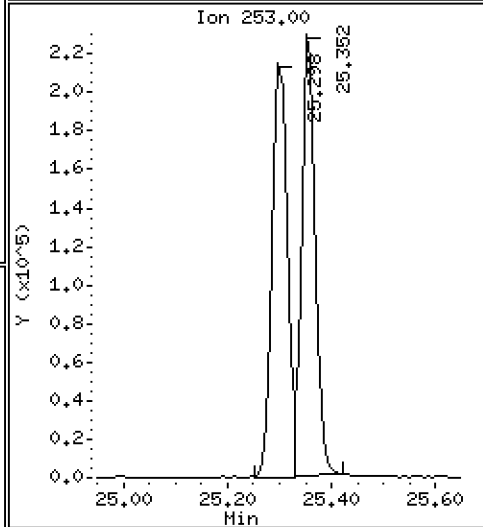
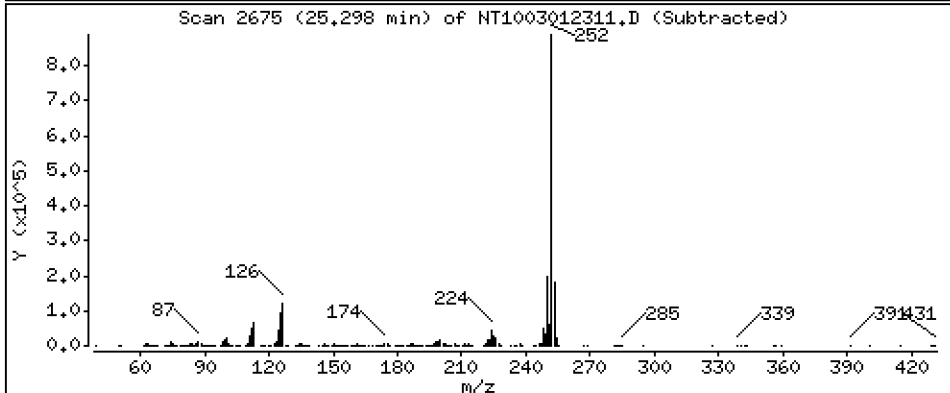
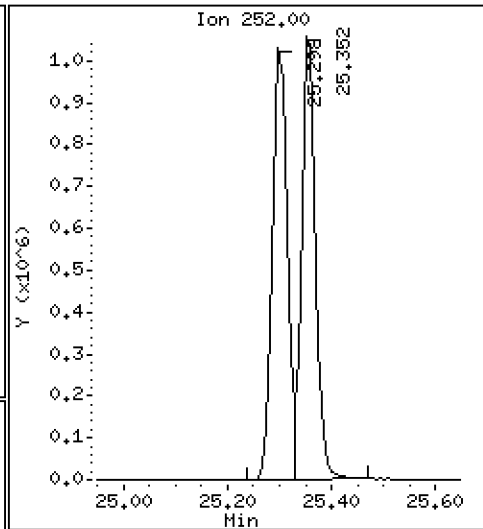
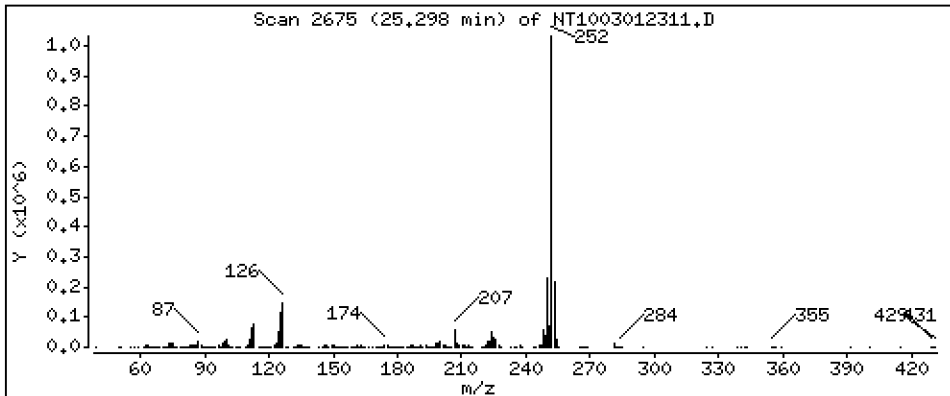
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,319 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

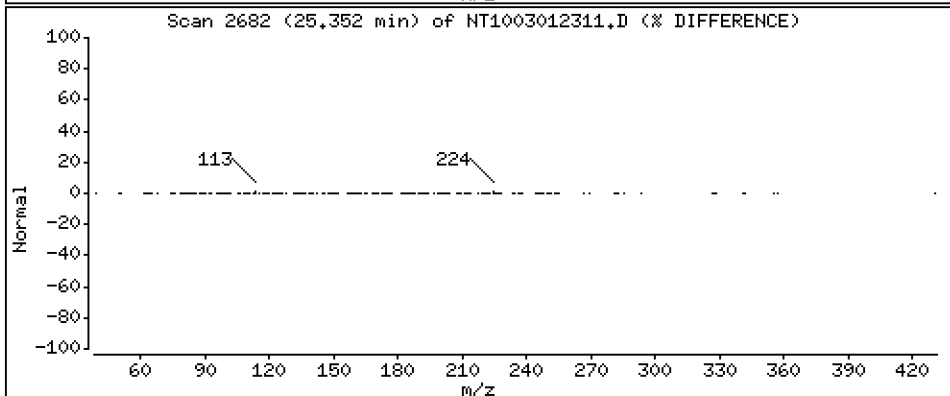
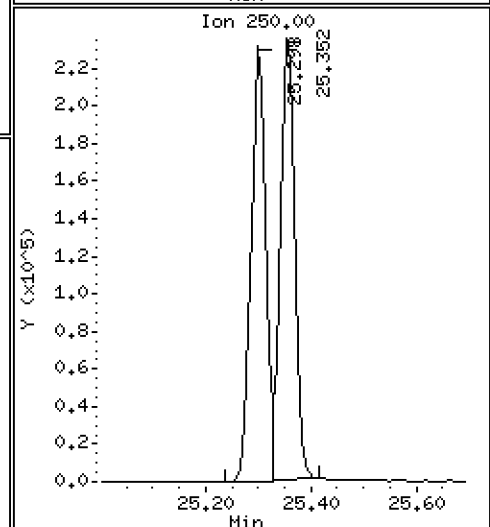
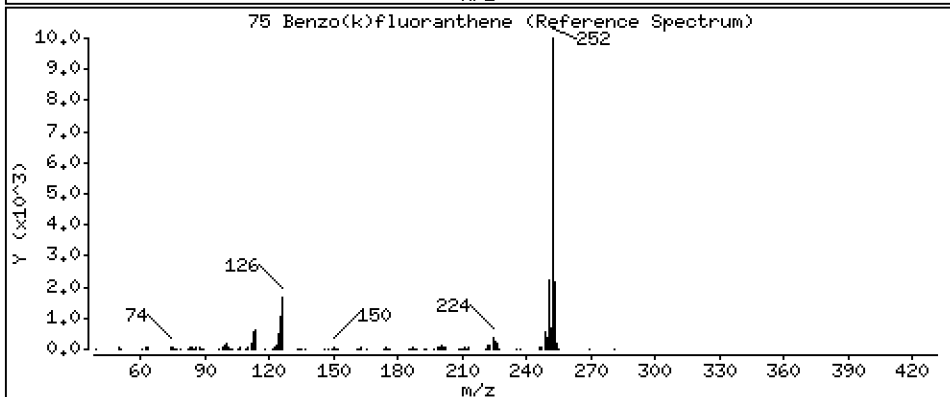
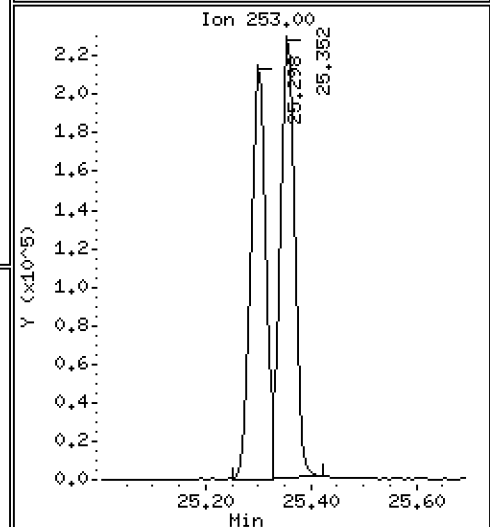
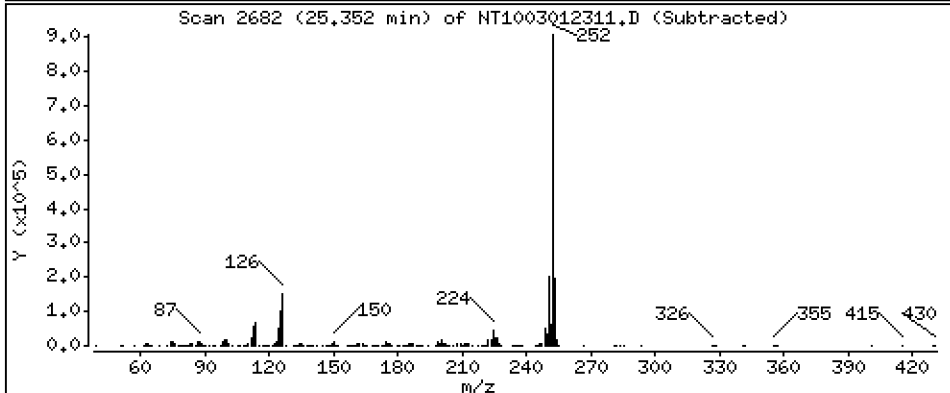
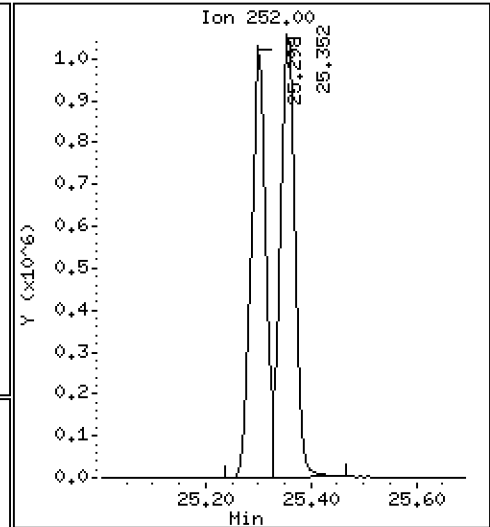
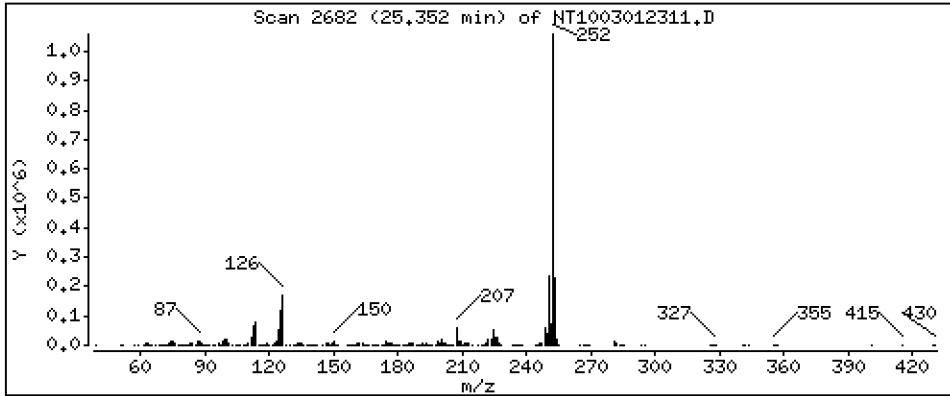
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,563 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

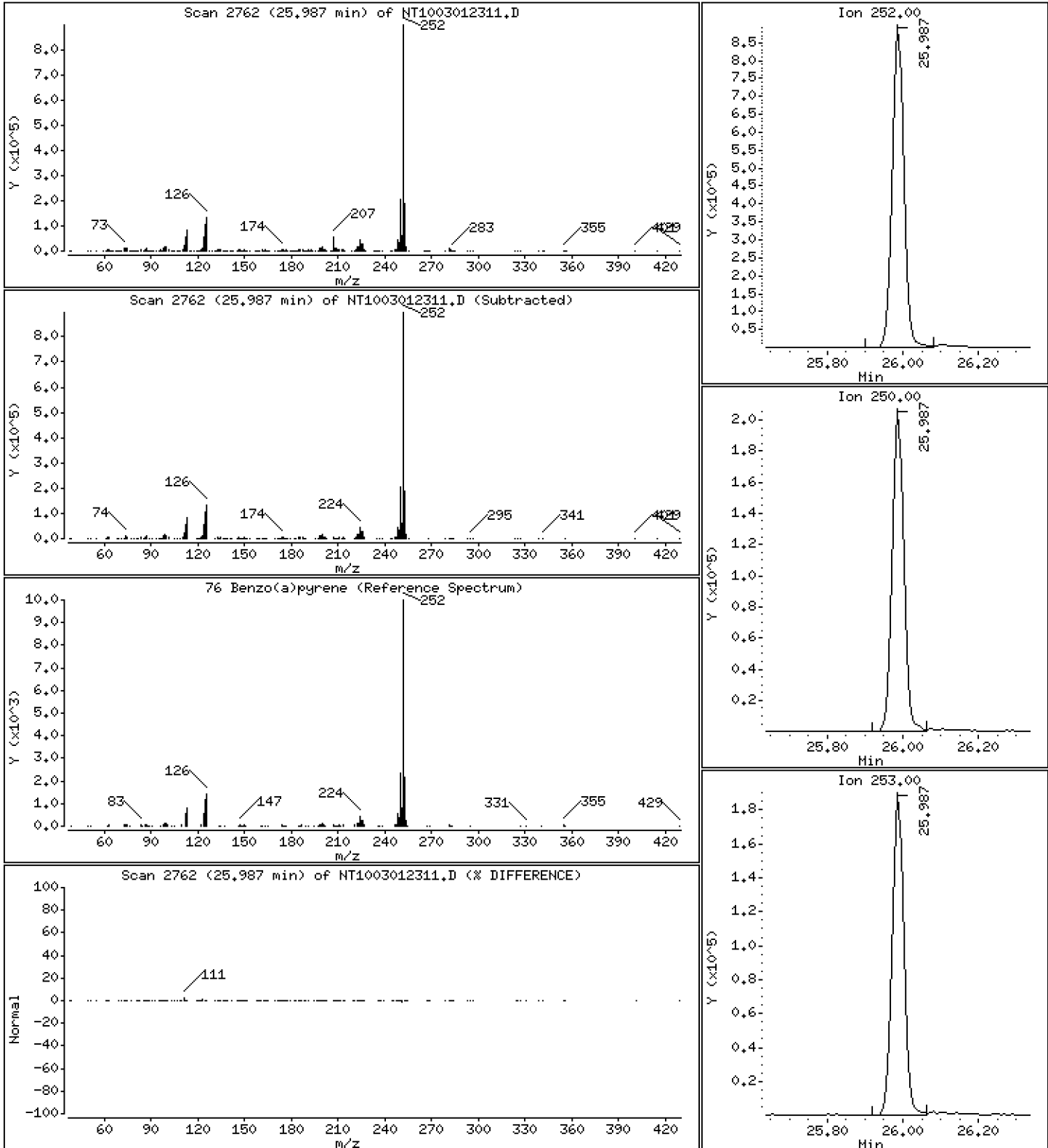
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,445 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

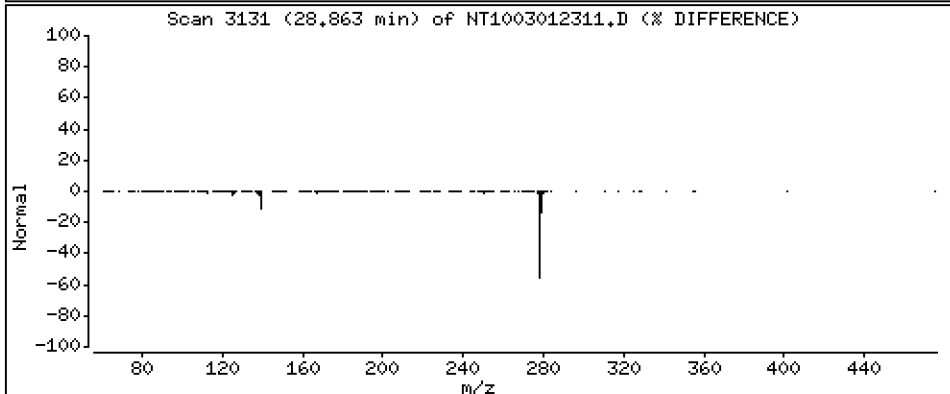
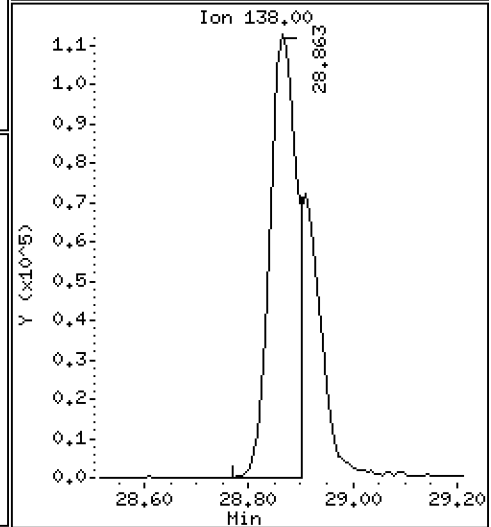
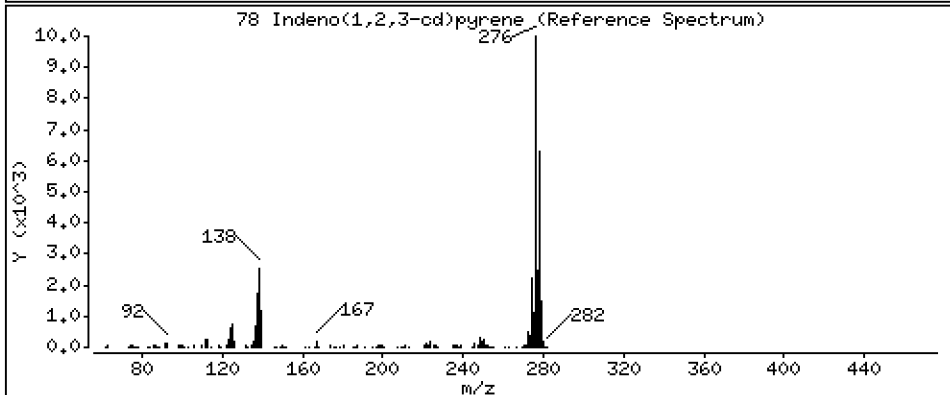
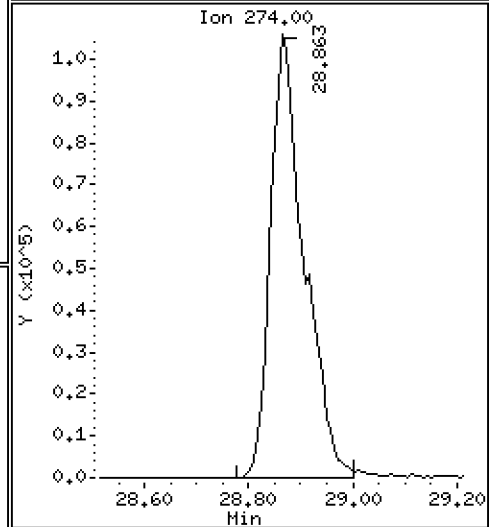
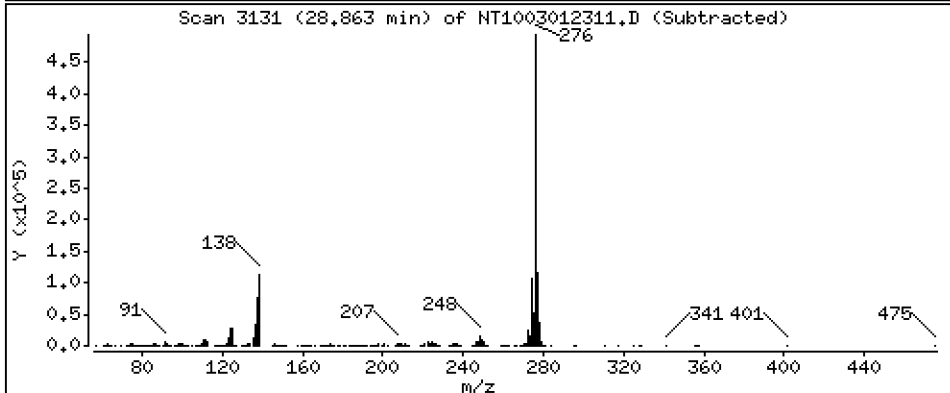
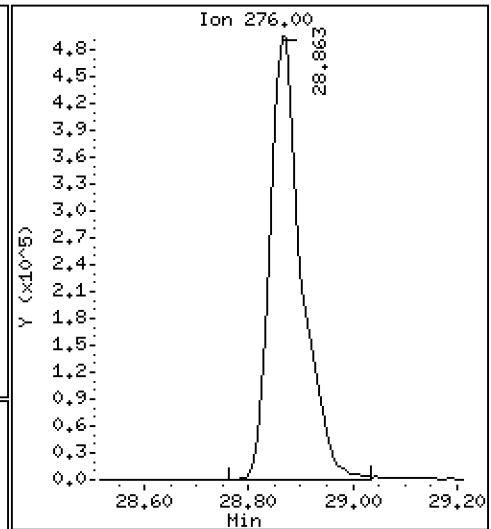
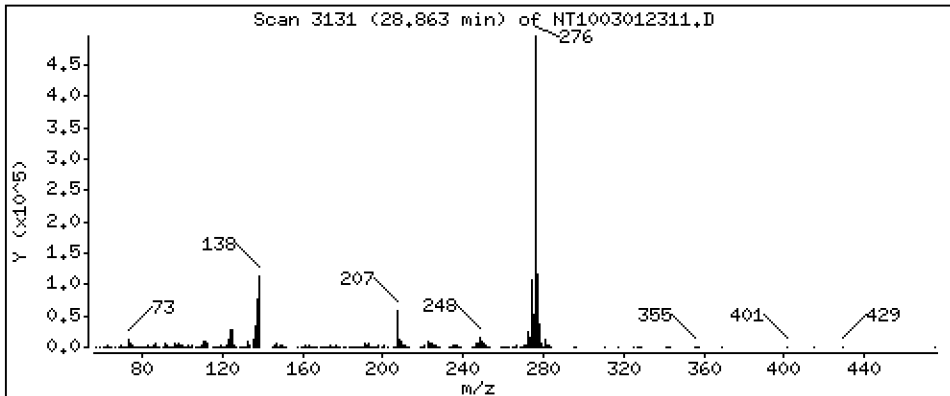
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,345 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

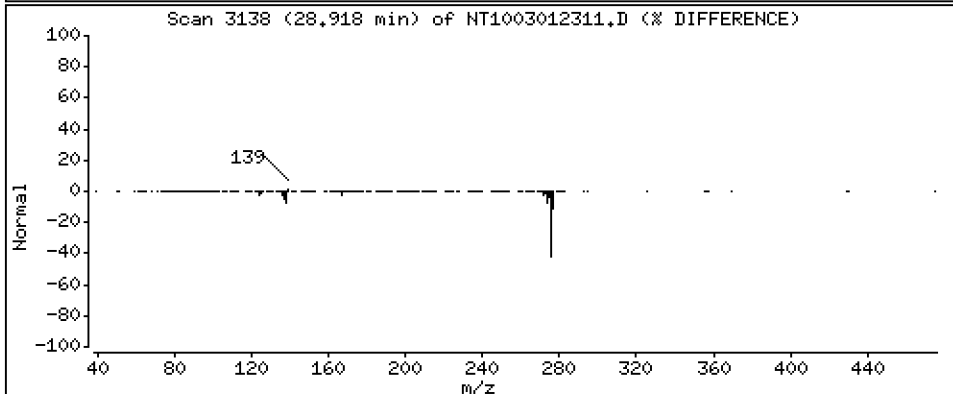
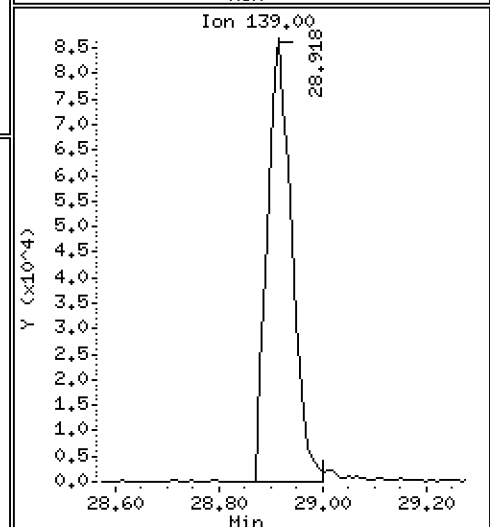
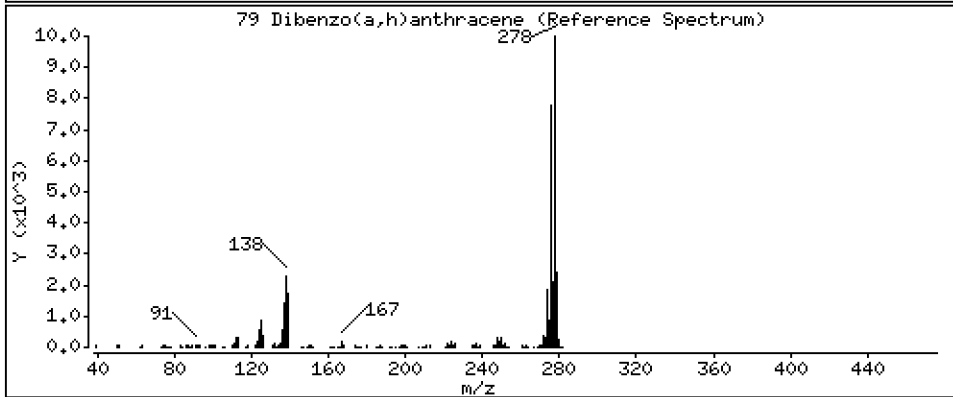
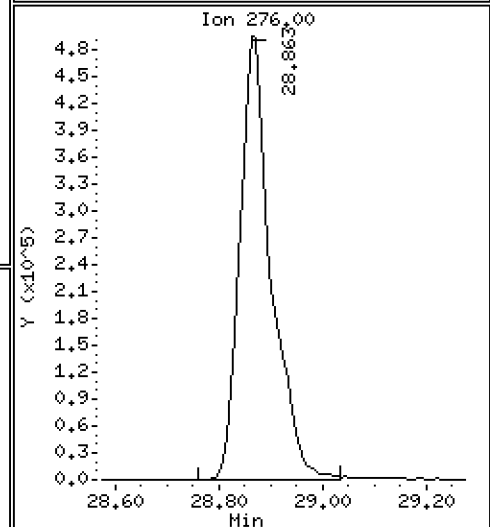
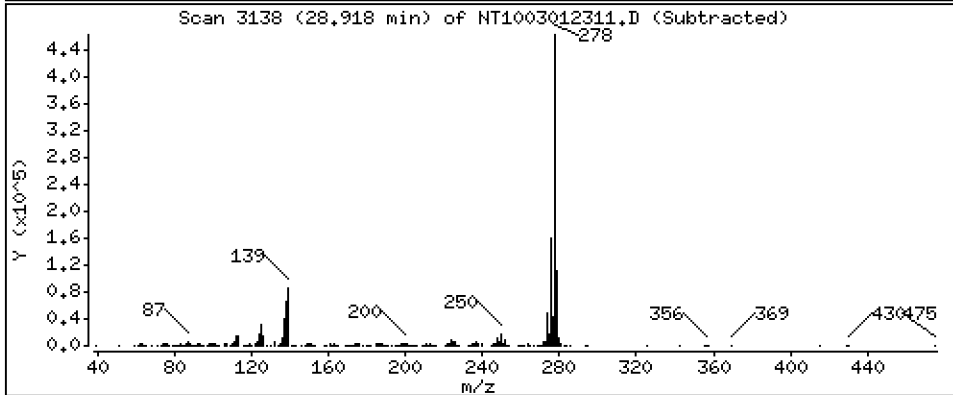
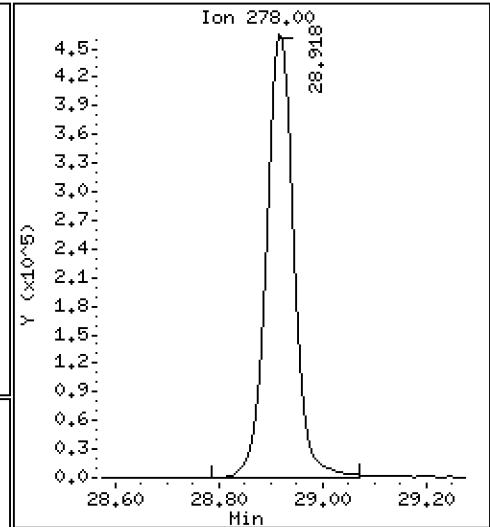
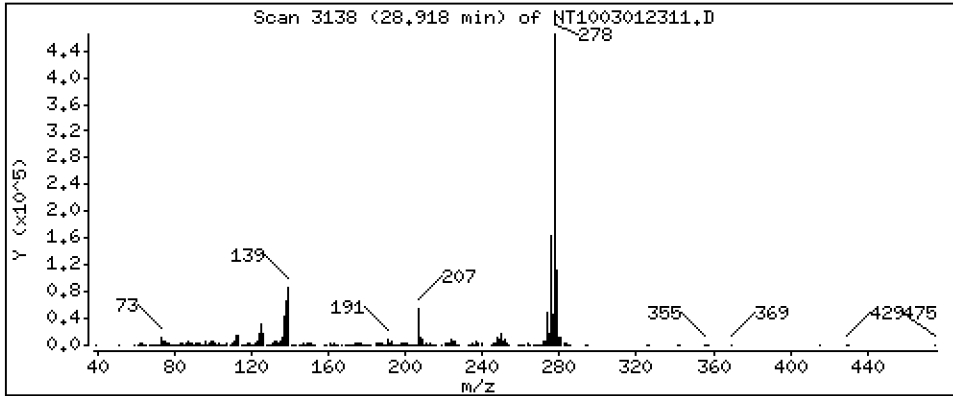
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,608 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

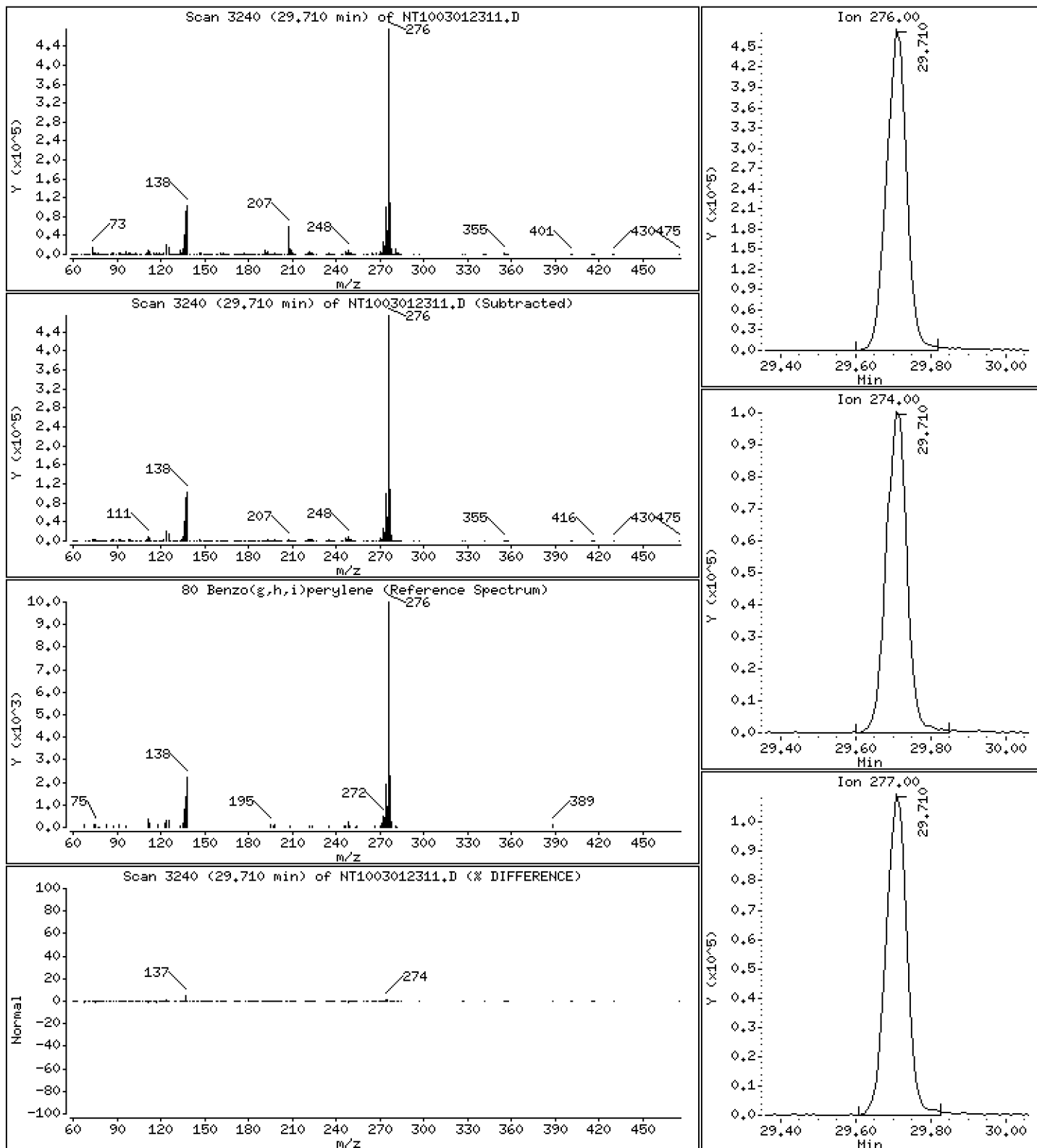
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,602 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

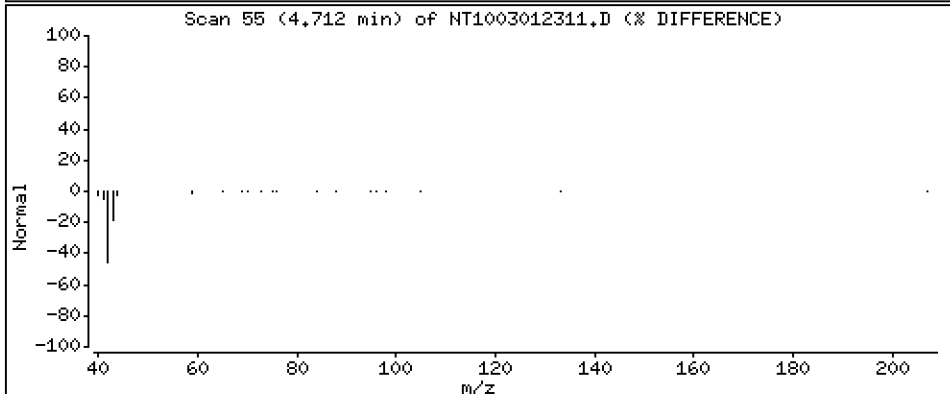
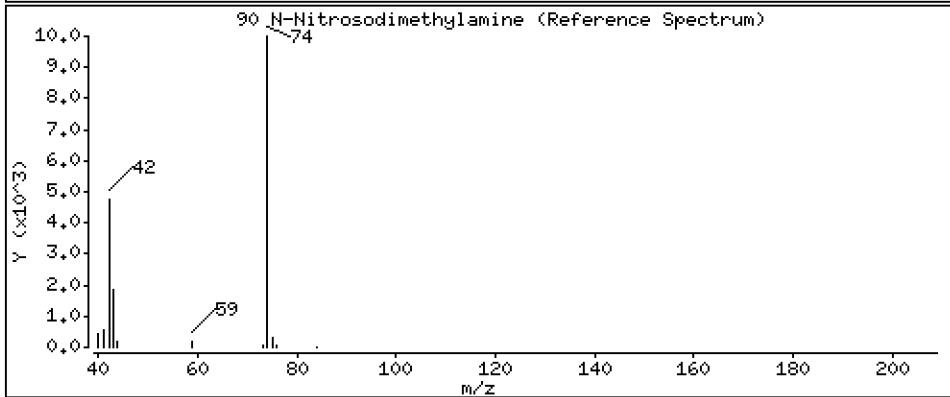
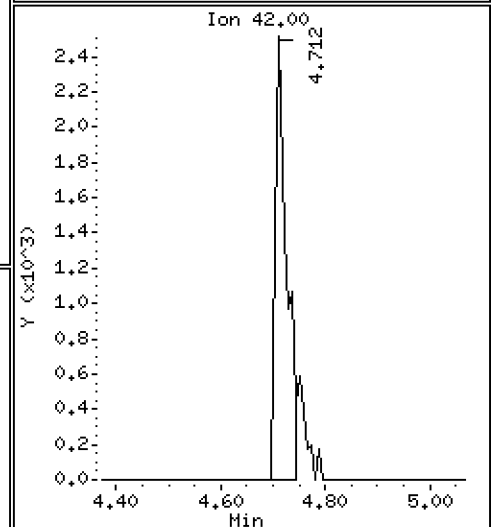
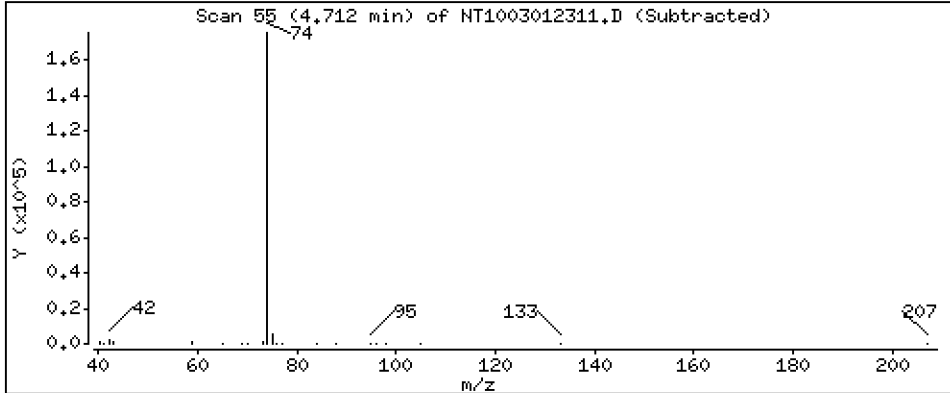
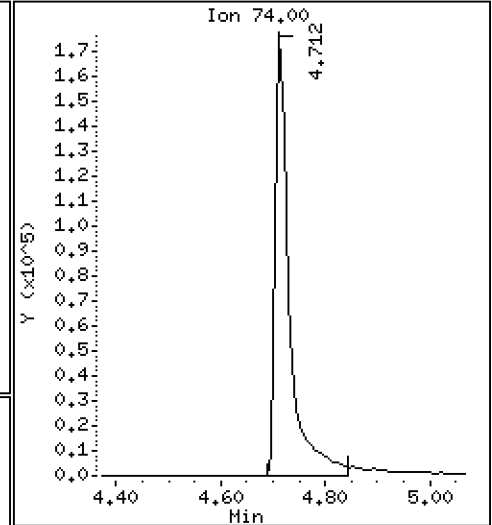
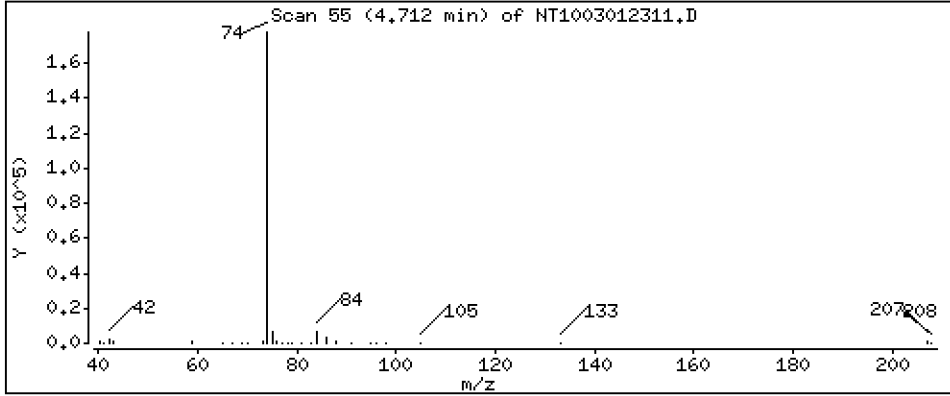
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 5.491 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

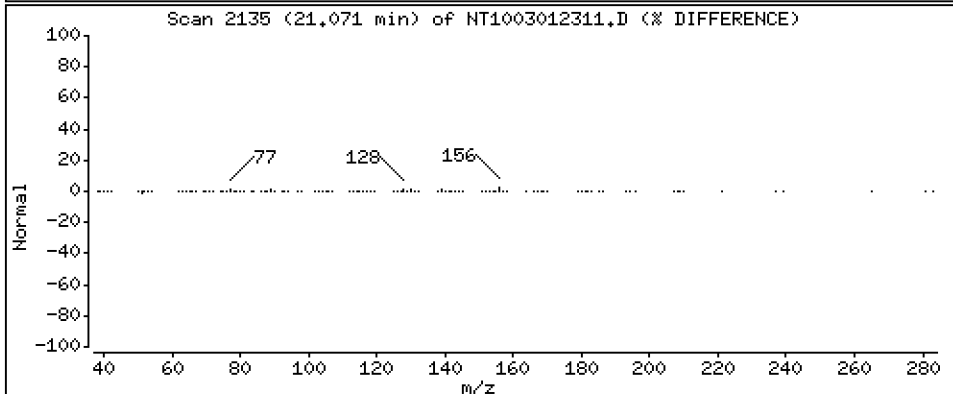
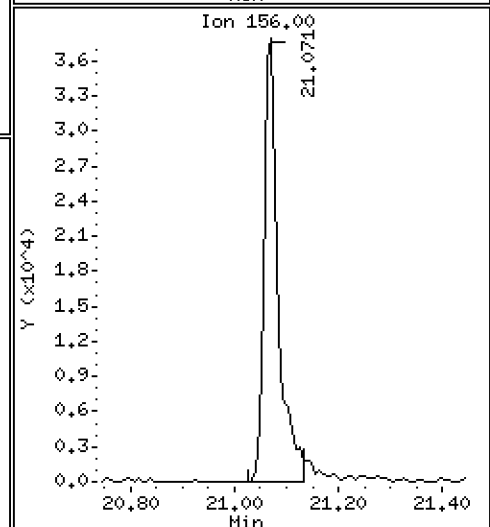
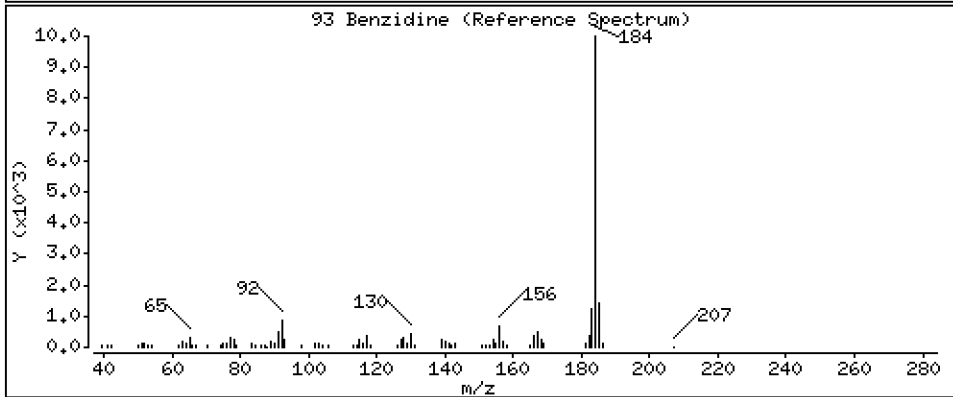
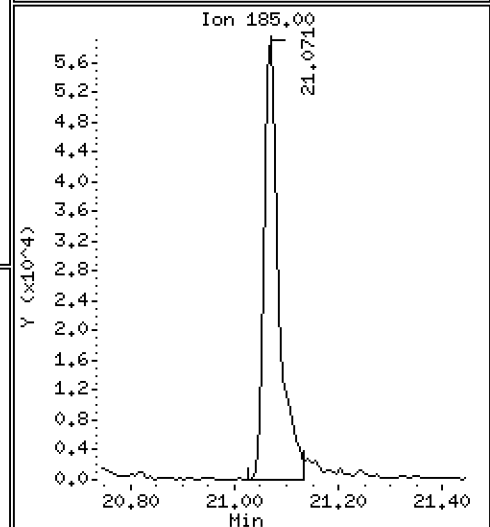
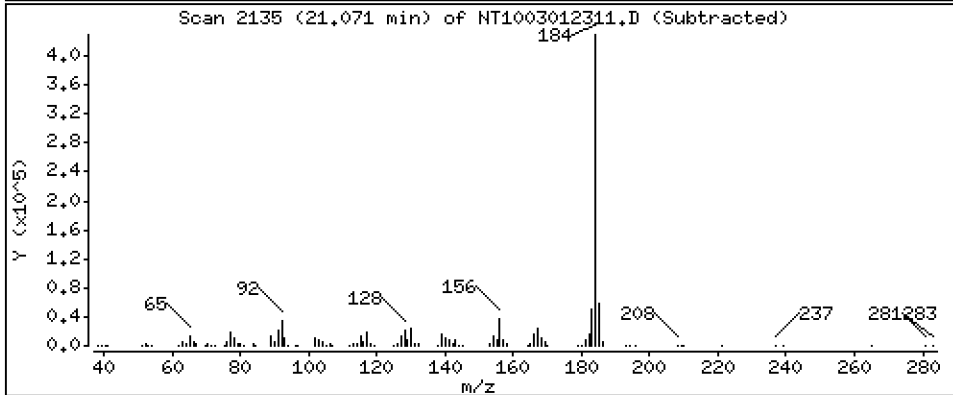
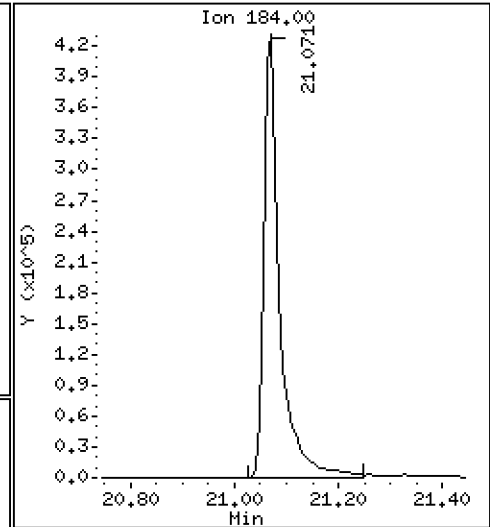
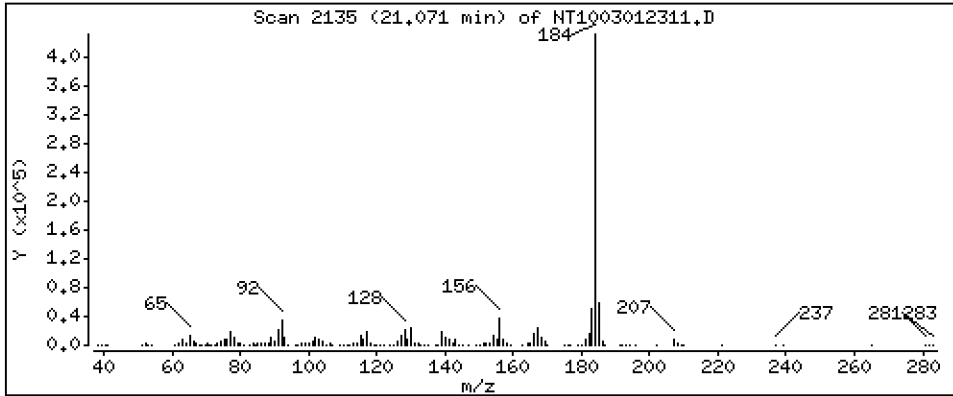
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 5,007 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

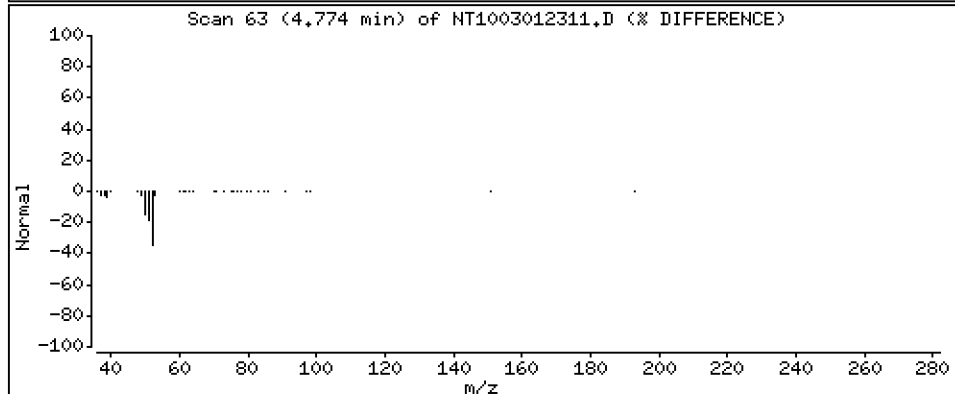
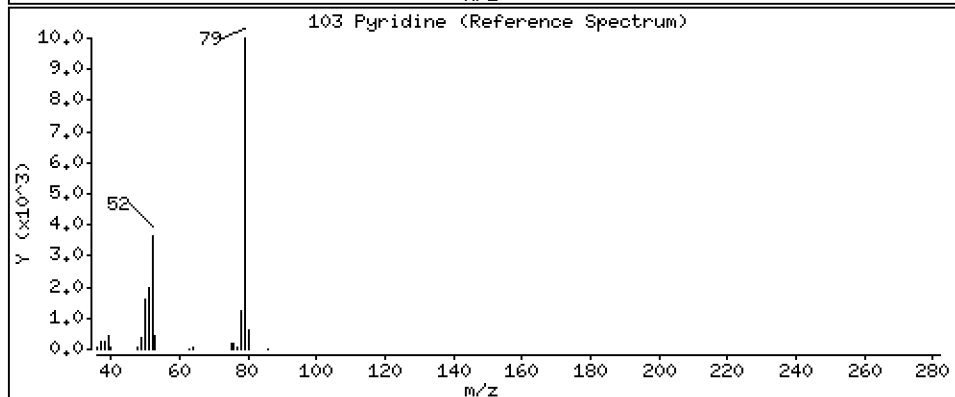
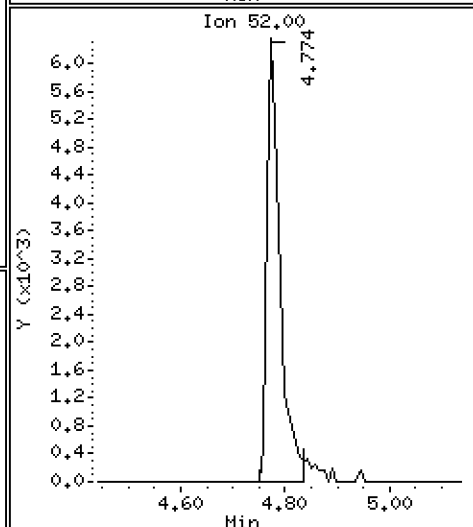
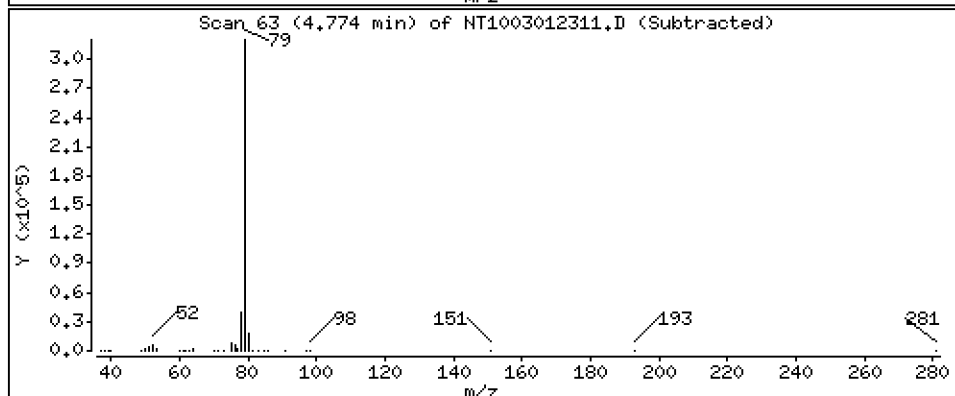
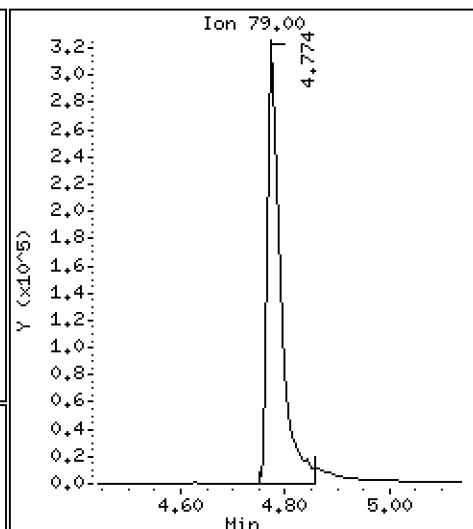
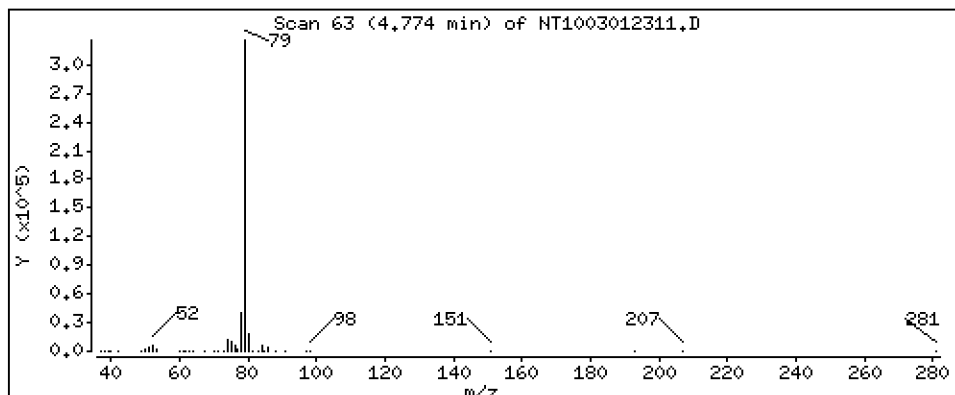
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 5,430 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

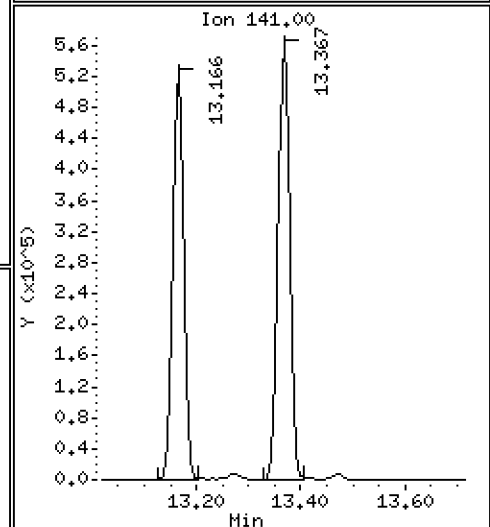
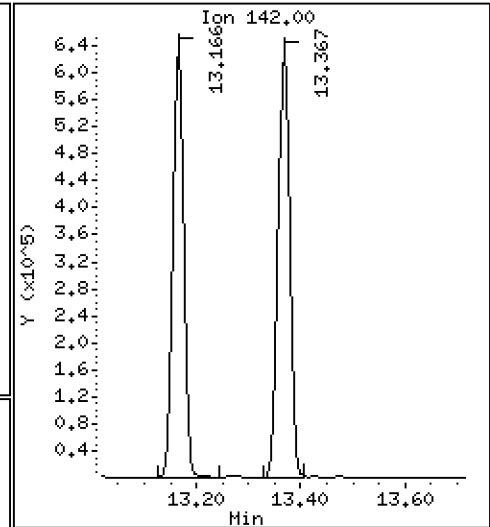
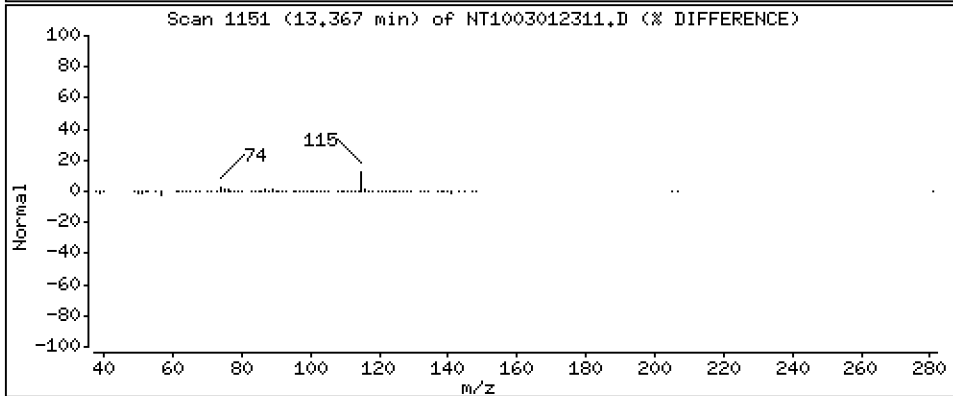
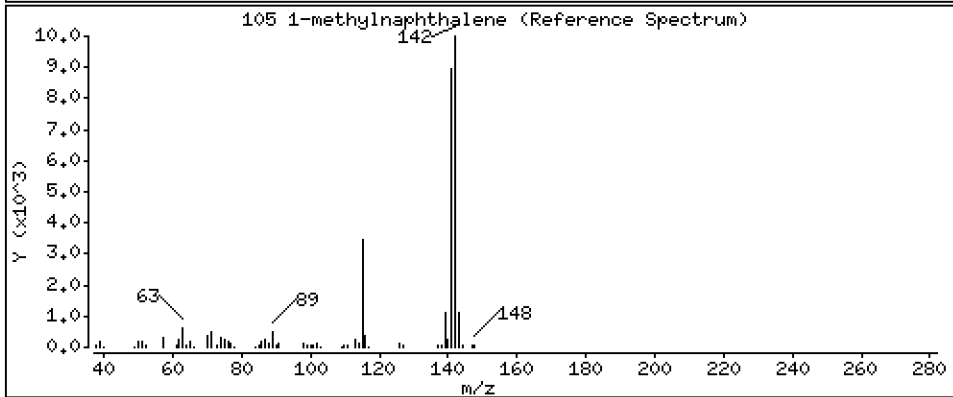
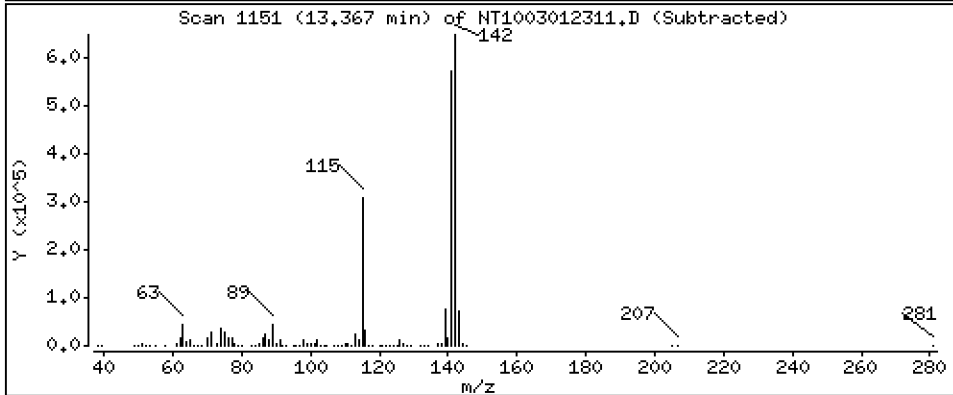
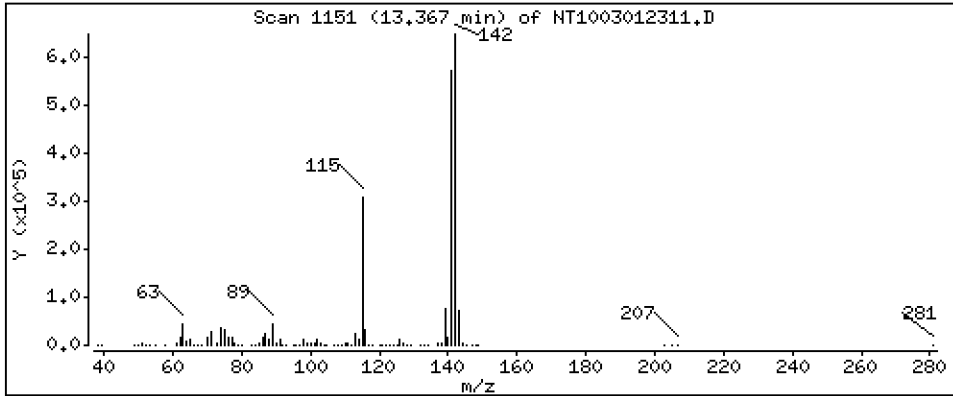
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,219 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

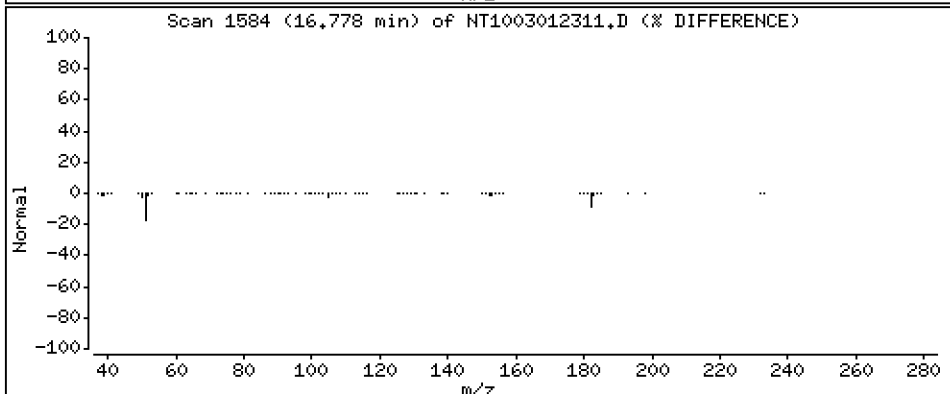
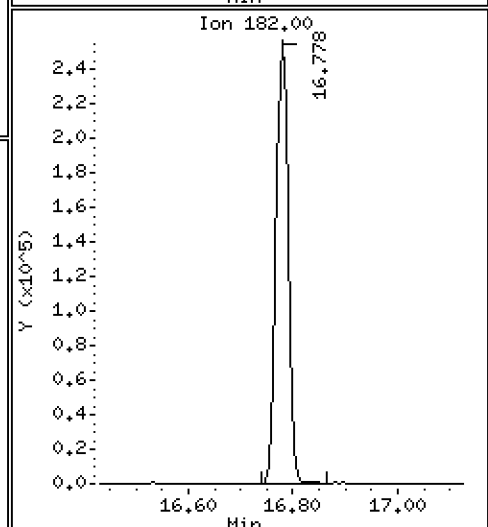
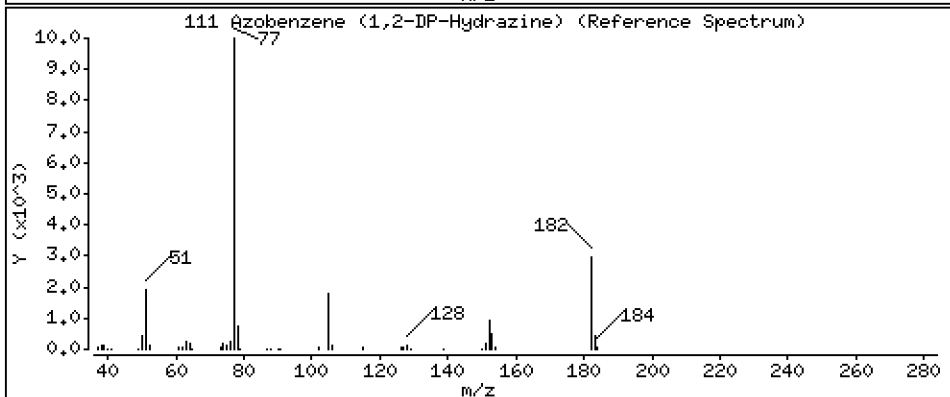
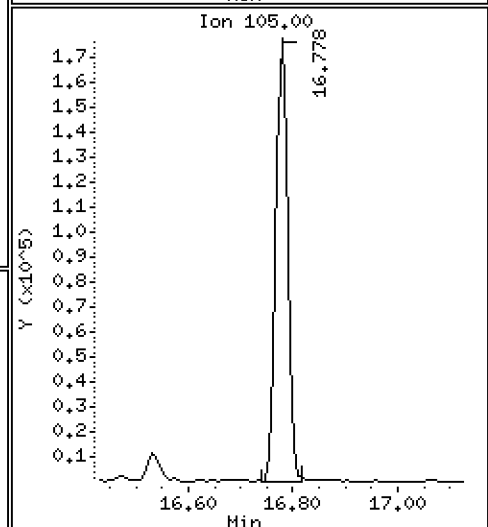
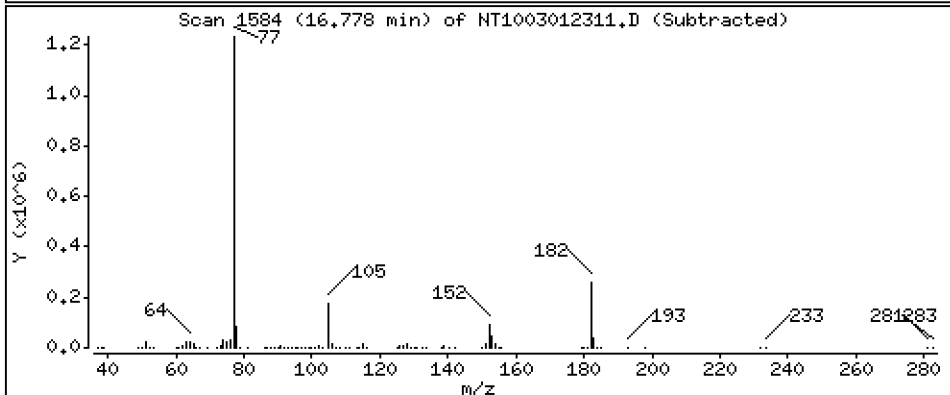
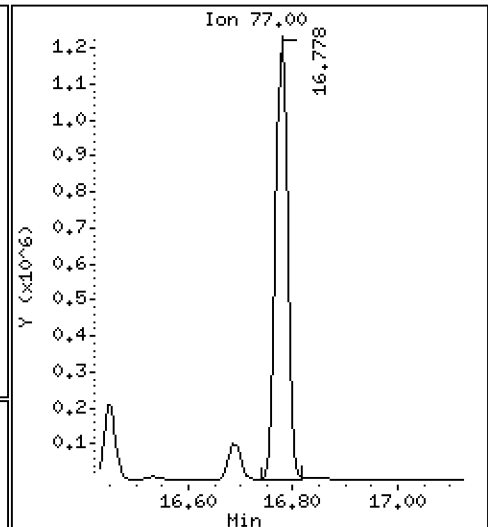
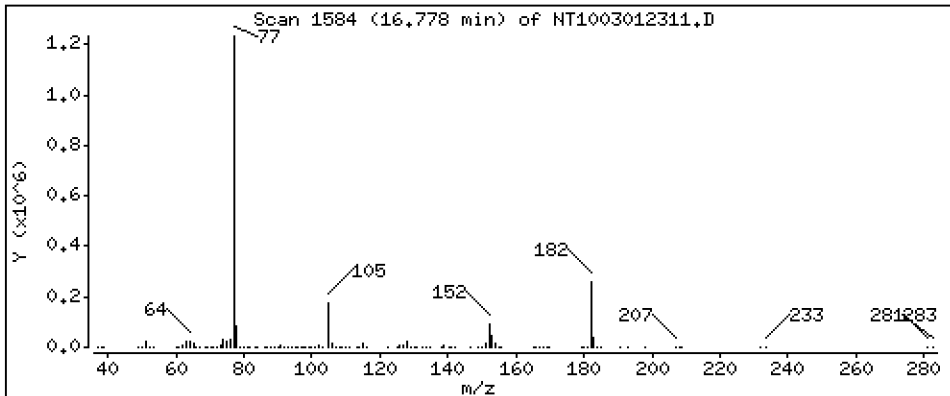
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,953 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

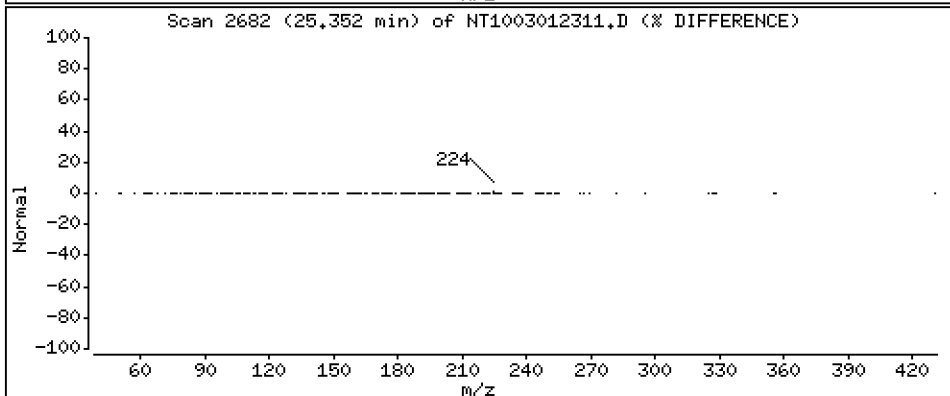
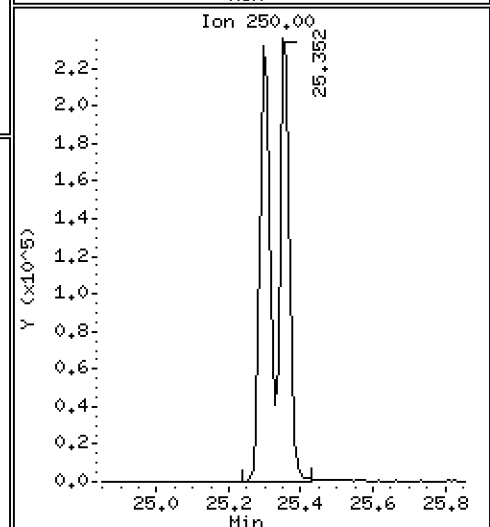
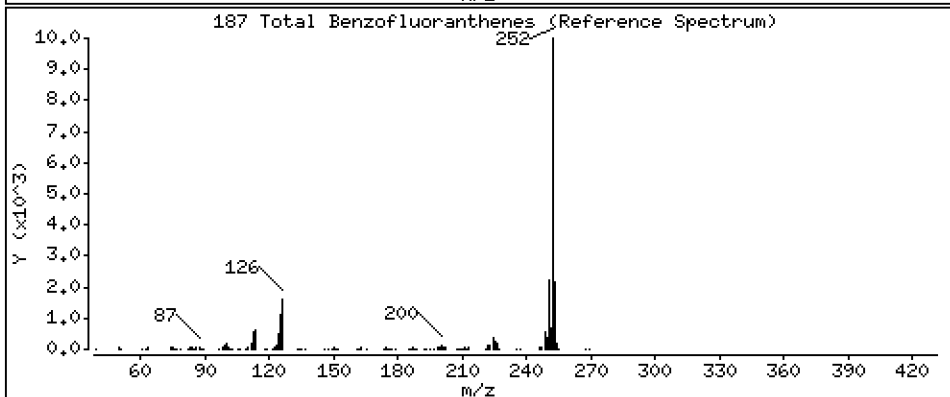
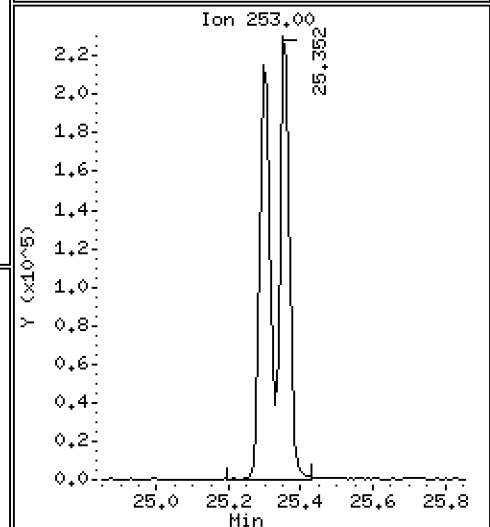
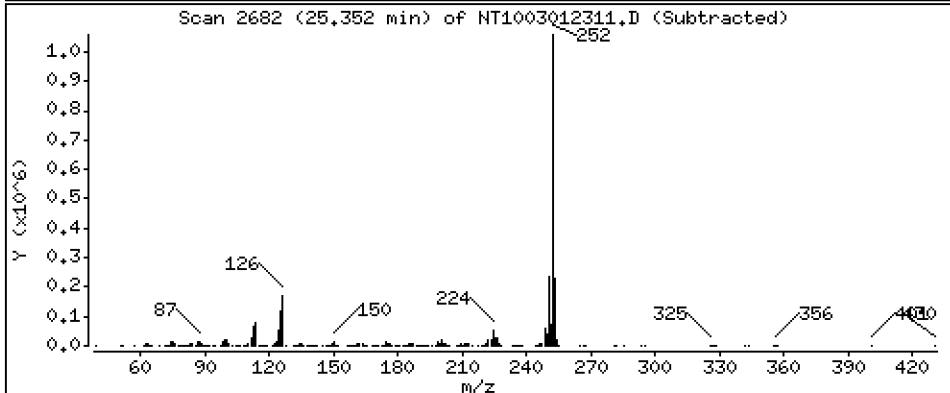
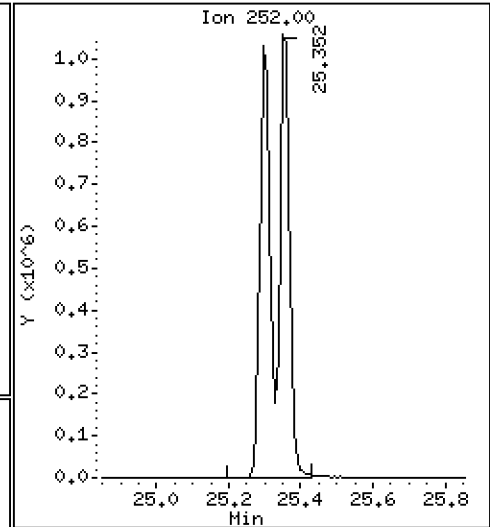
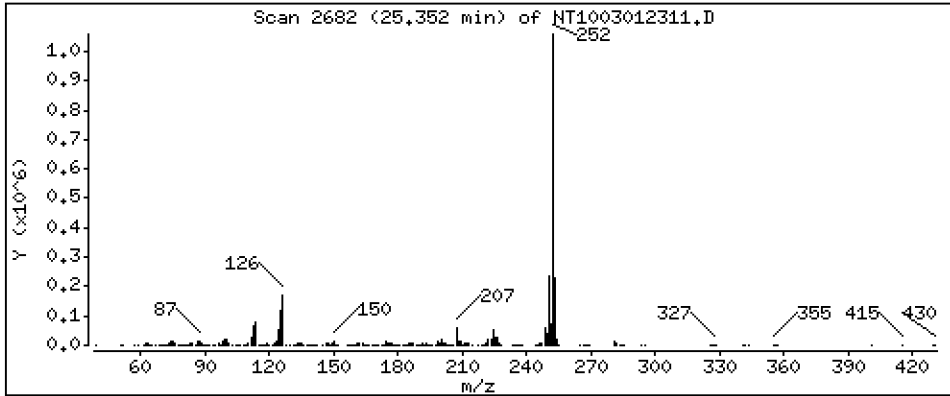
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 8,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

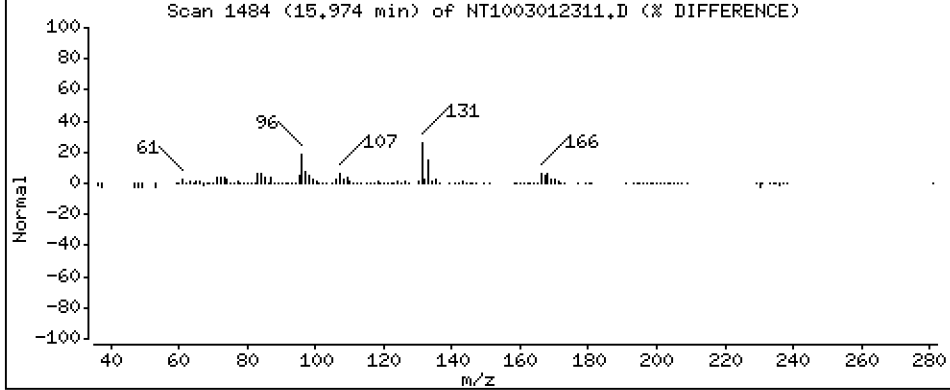
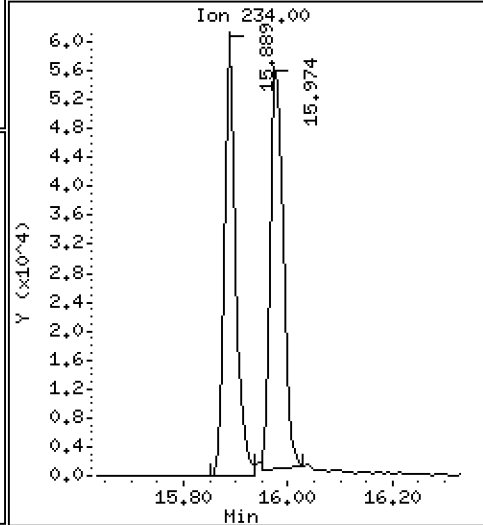
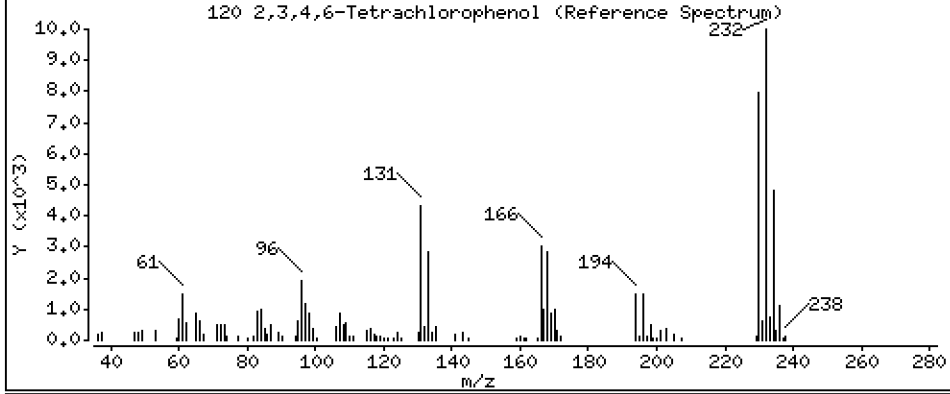
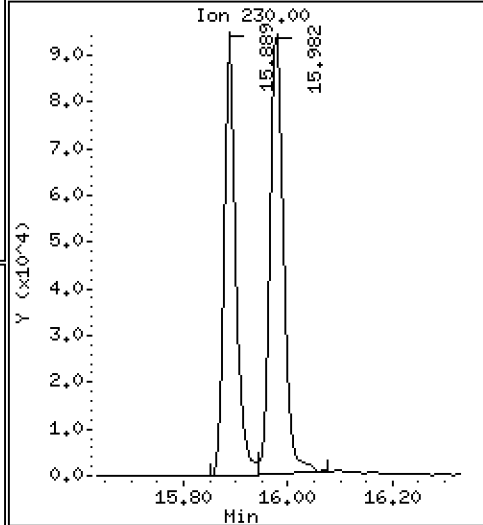
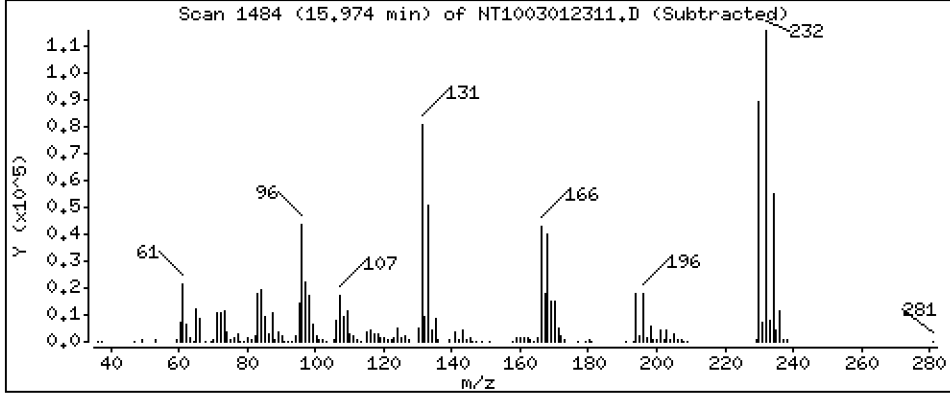
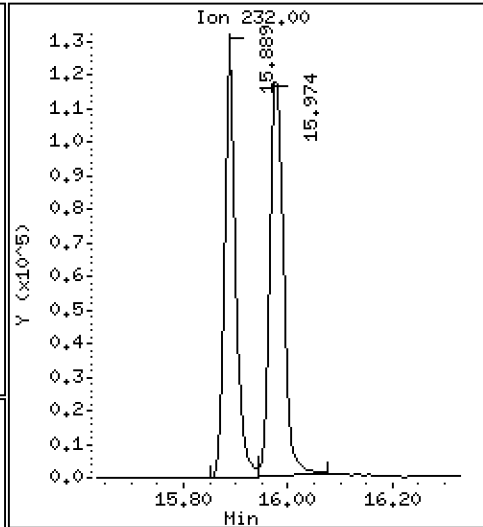
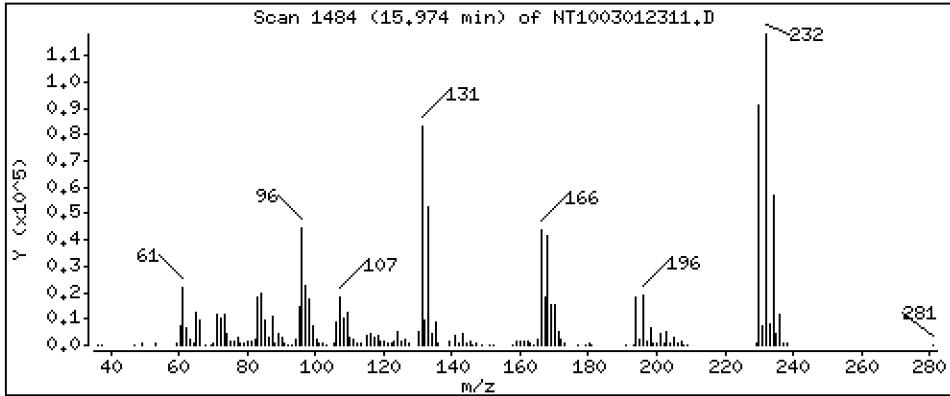
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,534 ug/mL





ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012311.D  
 Lab Smp Id: SLC0084-SCV1  
 Inj Date : 01-MAR-2023 21:46  
 Operator : VTS  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	====		====	=====	=====	=====	=====	=====
\$ 1 2-Fluorophenol	112					Compound Not Detected.		
\$ 2 Phenol-d5	99					Compound Not Detected.		
3 Phenol	94		8.512	8.512	(0.921)	534295	4.85212	4.852
\$ 5 2-Chlorophenol-d4	132					Compound Not Detected.		
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	498825	5.92811	5.928 (M)
6 2-Chlorophenol	128		8.844	8.844	(0.956)	430747	4.69234	4.692
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	533006	5.26632	5.266
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	283537	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	524367	5.21589	5.216
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.534	(1.000)	283537	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.557	9.565	(1.034)	505415	5.19402	5.194
11 Benzyl alcohol	108		9.472	9.472	(1.024)	283618	4.89779	4.898
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	174821	6.23165	6.232
13 2-Methylphenol	108		9.650	9.650	(1.044)	364596	4.19238	4.192
17 Hexachloroethane	117		10.209	10.209	(1.104)	224586	5.44260	5.443
16 N-Nitroso-di-n-propylamine	70		9.977	9.976	(1.079)	392376	5.90505	5.905
15 4-Methylphenol	108		9.945	9.938	(1.076)	448938	4.23938	4.239
\$ 18 Nitrobenzene-d5	82					Compound Not Detected.		
19 Nitrobenzene	77		10.326	10.326	(0.881)	624582	5.56925	5.569
20 Isophorone	82		10.784	10.784	(0.920)	1098236	7.67155	7.672
21 2-Nitrophenol	139		10.950	10.951	(0.934)	197578	3.24407	3.244
22 2,4-Dimethylphenol	107		10.993	10.993	(0.938)	379240	3.50675	3.507
23 Bis(2-Chloroethoxy)methane	93		11.205	11.205	(0.956)	595145	6.72720	6.727
24 Benzoic acid	105		11.103	11.052	(0.947)	362406	5.63546	5.635
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	379310	4.43743	4.437
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	413079	4.90787	4.908
* 27 Naphthalene-d8	136		11.719	11.719	(1.000)	1089120	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	1468990	5.25508	5.255
29 4-Chloroaniline	127		11.858	11.858	(1.012)	469377	3.79133	3.791
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	307313	5.01449	5.014
31 4-Chloro-3-methylphenol	107		12.802	12.809	(1.092)	402740	4.45246	4.452
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	977687	4.95082	4.951
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	52130	2.56222	2.562

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.722	13.730	(0.896)	241174	4.12027	4.120	
35 2,4,5-Trichlorophenol	196		13.792	13.808	(0.900)	259485	4.14893	4.149 (M)	
§ 36 2-Fluorobiphenyl	172		Compound Not Detected.						
37 2-Chloronaphthalene	162		14.164	14.164	(0.925)	895889	5.26440	5.264	
38 2-Nitroaniline	65		14.365	14.365	(0.938)	237773	5.02711	5.027	
39 Dimethylphthalate	163		14.736	14.736	(0.962)	1056857	5.38446	5.384	
40 Acenaphthylene	152		15.023	15.023	(0.981)	1703355	5.80574	5.806	
41 2,6-Dinitrotoluene	165		14.868	14.868	(0.971)	227062	5.18679	5.187	
* 42 Acenaphthene-d10	164		15.317	15.309	(1.000)	607772	4.00000		
43 3-Nitroaniline	138		15.208	15.224	(0.993)	256002	5.17200	5.172	
44 Acenaphthene	153		15.379	15.378	(1.004)	911910	5.15374	5.154	
45 2,4-Dinitrophenol	184		15.433	15.487	(1.008)	3021	0.26673	0.2667	
46 Dibenzofuran	168		15.742	15.734	(1.028)	1311367	4.99365	4.994	
47 4-Nitrophenol	109		15.533	15.603	(1.014)	133260	3.82233	3.822 (M)	
48 2,4-Dinitrotoluene	165		15.695	15.703	(1.025)	300469	4.72923	4.729	
50 Diethylphthalate	149		16.206	16.198	(1.058)	1172442	5.63859	5.639	
49 Fluorene	166		16.453	16.453	(1.074)	1159050	5.30478	5.305	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	527532	5.25262	5.253	
52 4-Nitroaniline	138		16.469	16.484	(1.075)	278392	5.23237	5.232	
53 4,6-Dinitro-2-methylphenol	198		16.531	16.538	(0.898)	36409	1.29161	1.292	
54 N-Nitrosodiphenylamine	169		16.685	16.693	(0.907)	966268	5.41587	5.416	
§ 55 2,4,6-Tribromophenol	330		Compound Not Detected.						
56 4-Bromophenyl-phenylether	248		17.465	17.472	(0.949)	394706	5.45981	5.460	
57 Hexachlorobenzene	284		17.573	17.573	(0.955)	391196	4.80535	4.805	
58 Pentachlorophenol	266		17.984	17.983	(0.977)	133557	3.49178	3.492	
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1205858	4.00000		
60 Phenanthrene	178		18.448	18.448	(1.003)	1569094	5.08454	5.085	
61 Anthracene	178		18.556	18.556	(1.008)	1371933	4.58472	4.585	
62 Carbazole	167		18.889	18.889	(1.026)	1462441	5.33467	5.335	
63 Di-n-butylphthalate	149		19.585	19.585	(1.064)	2114080	5.46304	5.463	
64 Fluoranthene	202		20.815	20.815	(0.889)	1905220	4.54169	4.542	
65 Pyrene	202		21.248	21.248	(0.907)	1975953	4.62585	4.626	
§ 66 Terphenyl-d14	244		21.519	21.527	(0.919)	6779	0.01961	0.01961	
67 Butylbenzylphthalate	149		22.410	22.410	(0.957)	1022950	4.52520	4.525	
68 Benzo(a)anthracene	228		23.401	23.401	(0.999)	1968545	4.57826	4.578	
* 69 Chrysene-d12	240		23.416	23.416	(1.000)	1219436	4.00000		
70 3,3'-Dichlorobenzidine	252		23.347	23.347	(0.997)	1426681	7.38255	7.383	
71 Chrysene	228		23.463	23.463	(1.002)	1735599	4.96674	4.967	
72 bis(2-Ethylhexyl)phthalate	149		23.401	23.409	(0.956)	1660477	4.95568	4.956	
* 134 Di-n-octylphthalate-d4	153		24.485	24.485	(1.000)	2317357	4.00000		
73 Di-n-octylphthalate	149		24.492	24.492	(1.000)	3003083	5.84397	5.844	
74 Benzo(b)fluoranthene	252		25.298	25.298	(0.969)	1988643	4.31882	4.319	
75 Benzo(k)fluoranthene	252		25.352	25.352	(0.971)	2031546	4.56297	4.563	
76 Benzo(a)pyrene	252		25.987	25.987	(0.996)	1831856	4.44514	4.445	
* 77 Perylene-d12	264		26.103	26.103	(1.000)	1289108	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.863	28.863	(1.106)	2089660	4.34488	4.345	
79 Dibenzo(a,h)anthracene	278		28.917	28.925	(1.108)	1695484	4.60754	4.608	
80 Benzo(g,h,i)perylene	276		29.709	29.709	(1.138)	1753537	4.60249	4.602	
90 N-Nitrosodimethylamine	74		4.712	4.719	(0.510)	316213	5.49082	5.491	
91 Aniline	93		Compound Not Detected.						
93 Benzidine	184		21.071	21.094	(0.900)	932502	5.00739	5.007	
103 Pyridine	79		4.774	4.789	(0.516)	554573	5.42989	5.430	
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	932752	5.21855	5.219	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.778	16.778	(1.095)	1848373	5.95279	5.953	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.352	25.352	(0.971)	3948555	8.90452	8.905
120 2,3,4,6-Tetrachlorophenol	232	15.974	15.982	(1.043)	209122	3.53394	3.534

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012311.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-SCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	283537	-16.02
27 Naphthalene-d8	1265187	632594	2530374	1089120	-13.92
42 Acenaphthene-d10	692385	346193	1384770	607772	-12.22
59 Phenanthrene-d10	1376777	688389	2753554	1205858	-12.41
69 Chrysene-d12	1019524	509762	2039048	1219436	19.61
134 Di-n-octylphthala	2027111	1013556	4054222	2317357	14.32
77 Perylene-d12	1027409	513705	2054818	1289108	25.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.01
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012311.D

Lab ID: SLC0084-SCV1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

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23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.014	1.019	-0.0051	4-Nitrophenol
1.000	1.031	-0.0310	1,2-Dichlorobenzene-d4

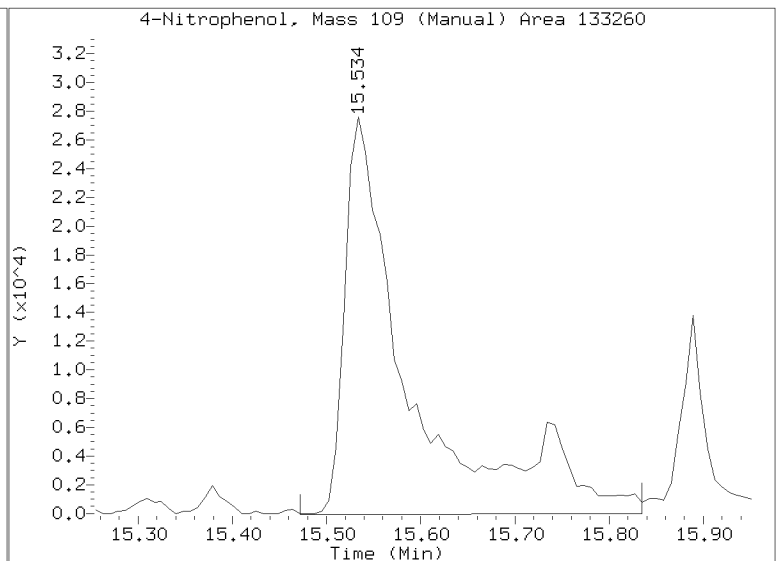
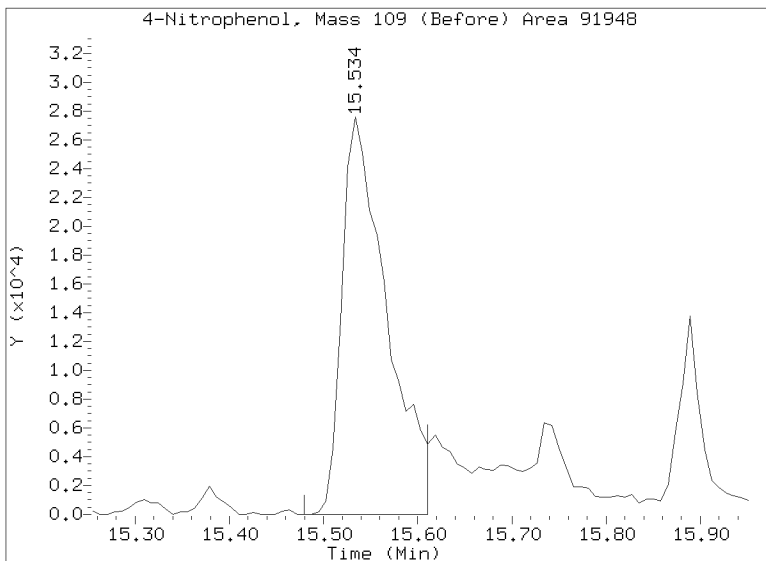
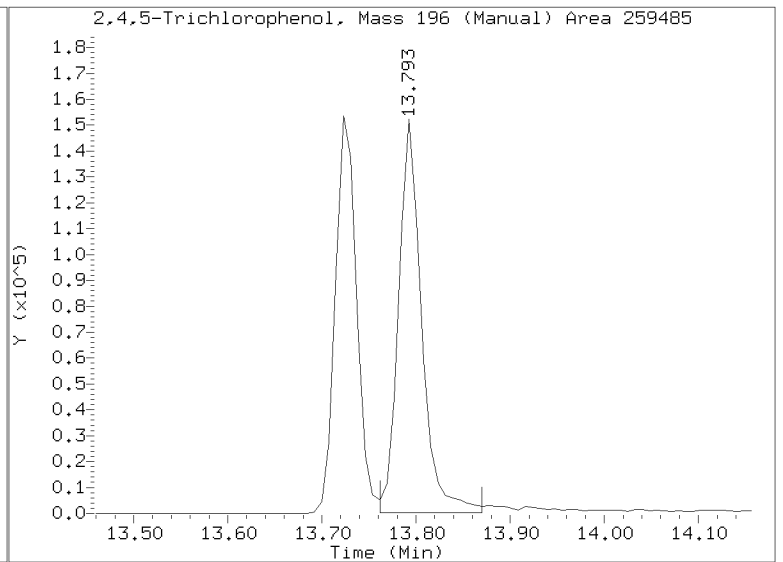
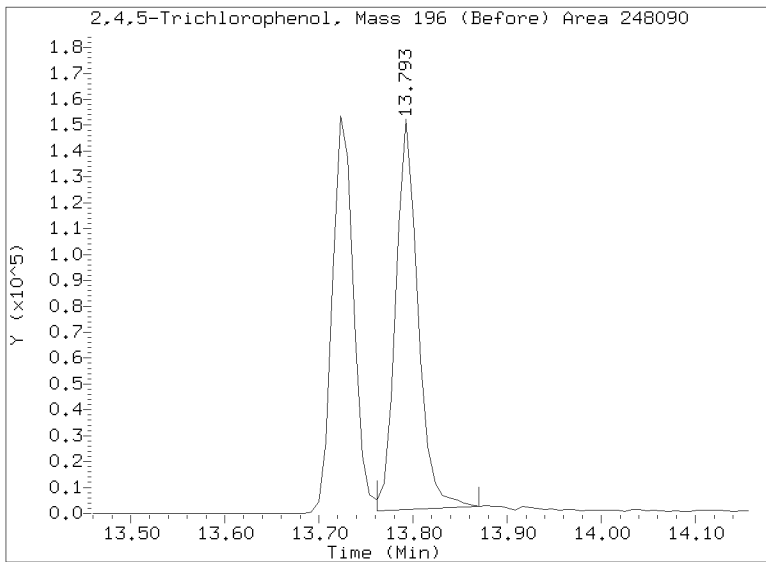
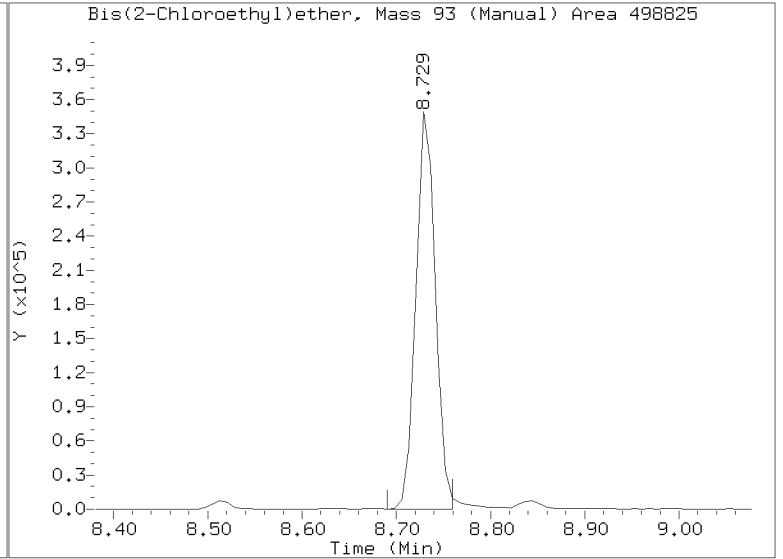
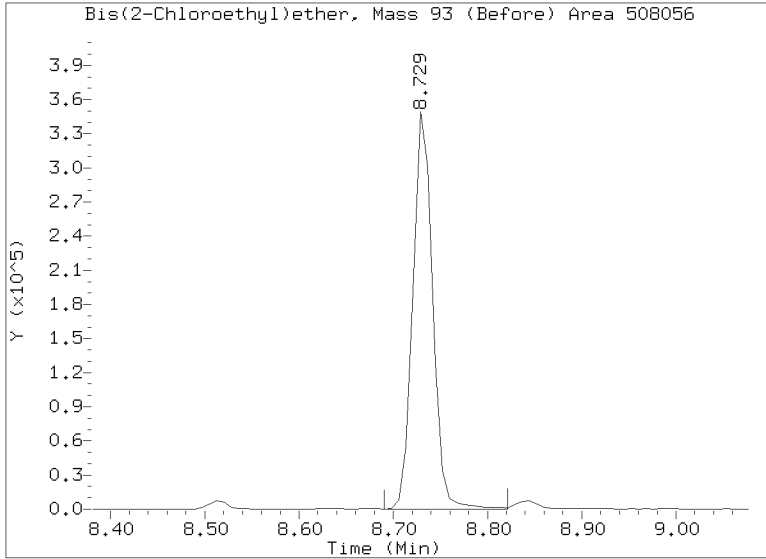
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012311.D  
Injection Date: 01-MAR-2023 21:46  
Lab ID: SLC0084-SCV1 Client ID:  
Report Date: 03/07/2023 12:48



Data File: \\target\share\chem3\nt10.1\20230304.1\NT1003042312.D

Date: 01-HRR-2023 22:24

Client ID:

Sample Info: SEQ-IBL1

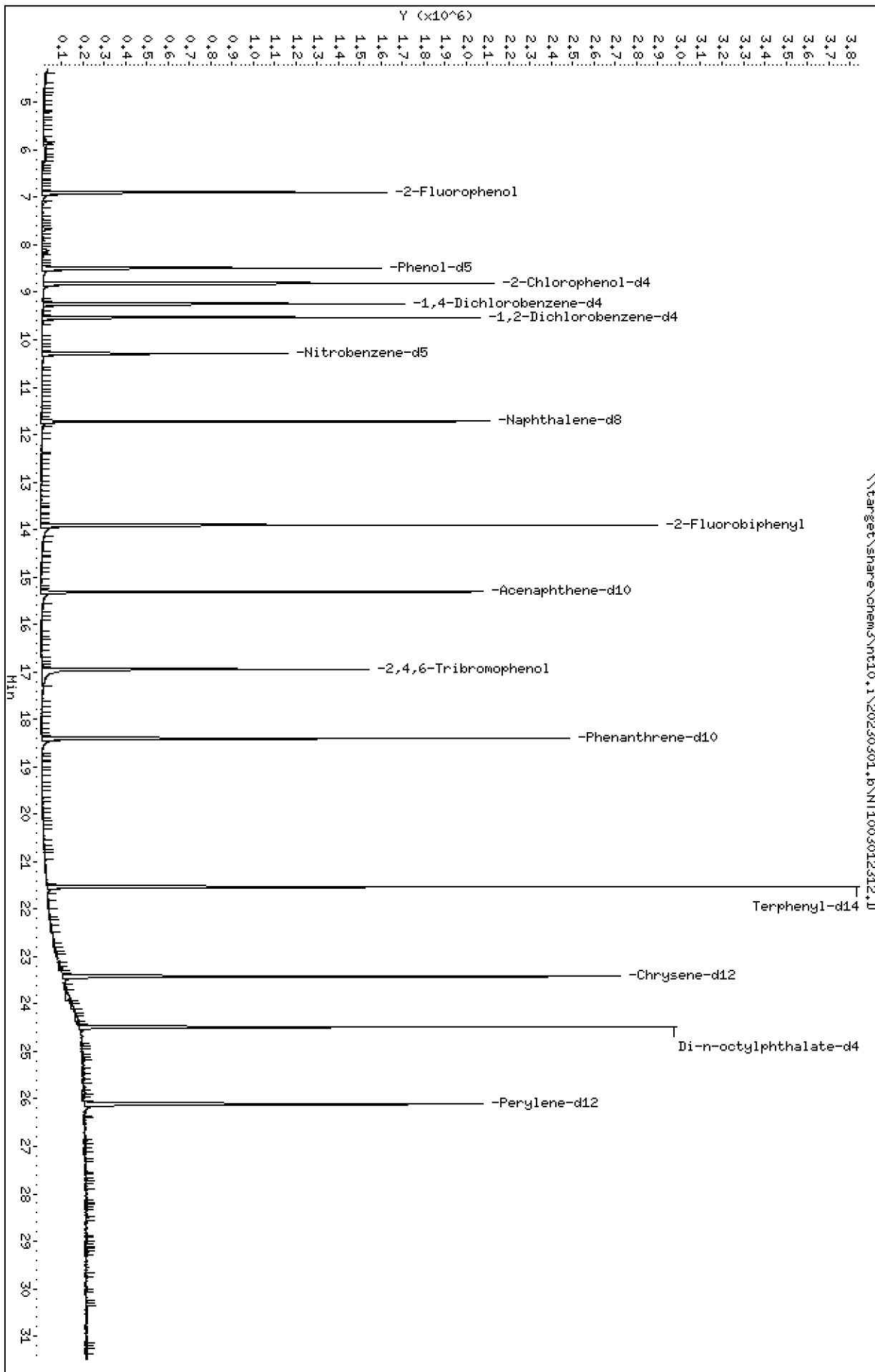
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230304.1\NT1003042312.D



ARI Labs, Inc.

Semivolatle Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012312.D  
 Lab Smp Id: SLC0084-ICB1  
 Inj Date : 01-MAR-2023 22:24  
 Operator : VTS  
 Smp Info : SEQ-IBL1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	====		====	=====	=====	=====	=====	=====
\$ 1 2-Fluorophenol	112		6.897	6.898	(0.746)	1136457	7.51324	7.513
\$ 2 Phenol-d5	99		8.489	8.489	(0.918)	1260755	7.17920	7.179
3 Phenol	94		Compound Not Detected.					
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1111618	7.41931	7.419
4 Bis(2-Chloroethyl)ether	93		Compound Not Detected.					
6 2-Chlorophenol	128		Compound Not Detected.					
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.247	(1.000)	480761	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	531349	4.74674	4.747
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	108		Compound Not Detected.					
14 2,2'-oxybis(1-Chloropropane)	121		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
17 Hexachloroethane	117		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82		10.294	10.295	(0.878)	924001	5.00520	5.005
19 Nitrobenzene	77		Compound Not Detected.					
20 Isophorone	82		Compound Not Detected.					
21 2-Nitrophenol	139		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
23 Bis(2-Chloroethoxy)methane	93		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.718	11.719	(1.000)	1681746	4.00000	
28 Naphthalene	128		Compound Not Detected.					
29 4-Chloroaniline	127		Compound Not Detected.					
30 Hexachlorobutadiene	225		Compound Not Detected.					
31 4-Chloro-3-methylphenol	107		Compound Not Detected.					
32 2-Methylnaphthalene	142		Compound Not Detected.					
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					



Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====	=====
34 2,4,6-Trichlorophenol	196							
35 2,4,5-Trichlorophenol	196							
\$ 36 2-Fluorobiphenyl	172		13.908	13.908	(0.909)	1465702	4.91041	4.910
37 2-Chloronaphthalene	162							
38 2-Nitroaniline	65							
39 Dimethylphthalate	163							
40 Acenaphthylene	152							
41 2,6-Dinitrotoluene	165							
* 42 Acenaphthene-d10	164		15.308	15.309	(1.000)	836849	4.00000	
43 3-Nitroaniline	138							
44 Acenaphthene	153							
45 2,4-Dinitrophenol	184							
46 Dibenzofuran	168							
47 4-Nitrophenol	109							
48 2,4-Dinitrotoluene	165							
50 Diethylphthalate	149							
49 Fluorene	166							
51 4-Chlorophenyl-phenylether	204							
52 4-Nitroaniline	138							
53 4,6-Dinitro-2-methylphenol	198							
54 N-Nitrosodiphenylamine	169							
\$ 55 2,4,6-Tribromophenol	330		16.947	16.947	(1.107)	300263	5.61962	5.620
56 4-Bromophenyl-phenylether	248							
57 Hexachlorobenzene	284							
58 Pentachlorophenol	266							
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1648281	4.00000	
60 Phenanthrene	178							
61 Anthracene	178							
62 Carbazole	167							
63 Di-n-butylphthalate	149							
64 Fluoranthene	202							
65 Pyrene	202							
\$ 66 Terphenyl-d14	244		21.527	21.527	(0.919)	1900377	4.81850	4.819
67 Butylbenzylphthalate	149							
68 Benzo(a)anthracene	228							
* 69 Chrysene-d12	240		23.416	23.416	(1.000)	1391477	4.00000	
70 3,3'-Dichlorobenzidine	252							
71 Chrysene	228							
72 bis(2-Ethylhexyl)phthalate	149							
* 134 Di-n-octylphthalate-d4	153		24.484	24.485	(1.000)	2481481	4.00000	
73 Di-n-octylphthalate	149							
74 Benzo(b)fluoranthene	252							
75 Benzo(k)fluoranthene	252							
76 Benzo(a)pyrene	252							
* 77 Perylene-d12	264		26.102	26.103	(1.000)	1542419	4.00000	
78 Indeno(1,2,3-cd)pyrene	276							
79 Dibenzo(a,h)anthracene	278							
80 Benzo(g,h,i)perylene	276							
90 N-Nitrosodimethylamine	74							
91 Aniline	93							
93 Benzidine	184							
103 Pyridine	79							
105 1-methylnaphthalene	142							
111 Azobenzene (1,2-DP-Hydrazine)	77							

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012312.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-ICB1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	480761	42.39
27 Naphthalene-d8	1265187	632594	2530374	1681746	32.92
42 Acenaphthene-d10	692385	346193	1384770	836849	20.86
59 Phenanthrene-d10	1376777	688389	2753554	1648281	19.72
69 Chrysene-d12	1019524	509762	2039048	1391477	36.48
134 Di-n-octylphthala	2027111	1013556	4054222	2481481	22.41
77 Perylene-d12	1027409	513705	2054818	1542419	50.13

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012312.D

Lab ID: SLC0084-ICB1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 22:24

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Sequence Name:** SCV 5.0

**Standard ID:** K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.9	-3.0	20.00
bis(2-chloroethyl) ether	5.0000	5.9	18.6	20.00
2-Chlorophenol	5.0000	4.7	-6.2	20.00
1,3-Dichlorobenzene	5.0000	5.3	5.3	20.00
1,4-Dichlorobenzene	5.0000	5.2	4.3	20.00
1,2-Dichlorobenzene	5.0000	5.2	3.9	20.00
Benzyl Alcohol	5.0000	4.9	-2.0	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	6.2	24.6 *	20.00
2-Methylphenol	5.0000	4.2	-16.2	20.00
Hexachloroethane	5.0000	5.4	8.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.9	18.1	20.00
4-Methylphenol	5.0000	4.2	-15.2	20.00
Nitrobenzene	5.0000	5.6	11.4	20.00
Isophorone	5.0000	7.7	53.4 *	20.00
2-Nitrophenol	5.0000	3.2	-35.1 *	20.00
2,4-Dimethylphenol	5.0000	3.5	-29.9 *	20.00
Bis(2-Chloroethoxy)methane	5.0000	6.7	34.5 *	20.00
2,4-Dichlorophenol	5.0000	4.4	-11.3	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-1.8	20.00
Naphthalene	5.0000	5.3	5.1	20.00
Benzoic acid	10.0000	5.6	-43.6 *	20.00
4-Chloroaniline	5.0000	3.8	-24.2 *	20.00
Hexachlorobutadiene	5.0000	5.0	0.3	20.00
4-Chloro-3-Methylphenol	5.0000	4.5	-11.0	20.00
2-Methylnaphthalene	5.0000	5.0	-1.0	20.00
Hexachlorocyclopentadiene	5.0000	2.6	-48.8 *	20.00
2,4,6-Trichlorophenol	5.0000	4.1	-17.6	20.00
2,4,5-Trichlorophenol	5.0000	4.1	-17.0	20.00
2-Chloronaphthalene	5.0000	5.3	5.3	20.00
2-Nitroaniline	5.0000	5.0	0.5	20.00
Acenaphthylene	5.0000	5.8	16.1	20.00
Dimethylphthalate	5.0000	5.4	7.7	20.00
2,6-Dinitrotoluene	5.0000	5.2	3.7	20.00
Acenaphthene	5.0000	5.2	3.1	20.00



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Sequence Name:** SCV 5.0

**Standard ID:** K010066

3-Nitroaniline	5.0000	5.2	3.4		20.00
2,4-Dinitrophenol	5.0000	0.3	-94.7	*	20.00
Dibenzofuran	5.0000	5.0	-0.1		20.00
4-Nitrophenol	5.0000	3.8	-23.6	*	20.00
2,4-Dinitrotoluene	5.0000	4.7	-5.4		20.00
Fluorene	5.0000	5.3	6.1		20.00
4-Chlorophenylphenyl ether	5.0000	5.3	5.1		20.00
Diethyl phthalate	5.0000	5.6	12.8		20.00
4-Nitroaniline	5.0000	5.2	4.6		20.00
4,6-Dinitro-2-methylphenol	5.0000	1.3	-74.2	*	20.00
N-Nitrosodiphenylamine	5.0000	5.4	8.3		20.00
4-Bromophenyl phenyl ether	5.0000	5.5	9.2		20.00
Hexachlorobenzene	5.0000	4.8	-3.9		20.00
Pentachlorophenol	5.0000	3.5	-30.2	*	20.00
Phenanthrene	5.0000	5.1	1.7		20.00
Anthracene	5.0000	4.6	-8.3		20.00
Carbazole	5.0000	5.3	6.7		20.00
Di-n-Butylphthalate	5.0000	5.5	9.3		20.00
Fluoranthene	5.0000	4.5	-9.2		20.00
Pyrene	5.0000	4.6	-7.5		20.00
Butylbenzylphthalate	5.0000	4.5	-9.5		20.00
Benzo(a)anthracene	5.0000	4.6	-8.4		20.00
3,3'-Dichlorobenzidine	10.0000	7.4	-26.2	*	20.00
Chrysene	5.0000	5.0	-0.7		20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.0	-0.9		20.00
Di-n-Octylphthalate	5.0000	5.8	16.9		20.00
Benzo(a)fluoranthene, Total	10.0000	8.9	-11.0		20.00
Benzo(a)pyrene	5.0000	4.4	-11.1		20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.3	-13.1		20.00
Dibenzo(a,h)anthracene	5.0000	4.6	-7.8		20.00
Benzo(g,h,i)perylene	5.0000	4.6	-8.0		20.00
1-Methylnaphthalene	5.0000	5.2	4.4		20.00
2-Fluorophenol	7.5000	0.00		*	20.00
Phenol-d5	7.5000	0.00		*	20.00
2-Chlorophenol-d4	7.5000	0.00		*	20.00
1,2-Dichlorobenzene-d4	5.0000	4.29	-14.1		20.00
Nitrobenzene-d5	5.0000	0.00		*	20.00



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Sequence Name:** SCV 5.0

**Standard ID:** K010066

2-Fluorobiphenyl	5.0000	0.00	*	20.00
2,4,6-Tribromophenol	7.5000	0.00	*	20.00
p-Terphenyl-d14	5.0000	0.0196	-99.6 *	20.00

\* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230301.1\NT1003012311.D

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Sample Info: SEQ-SCV1

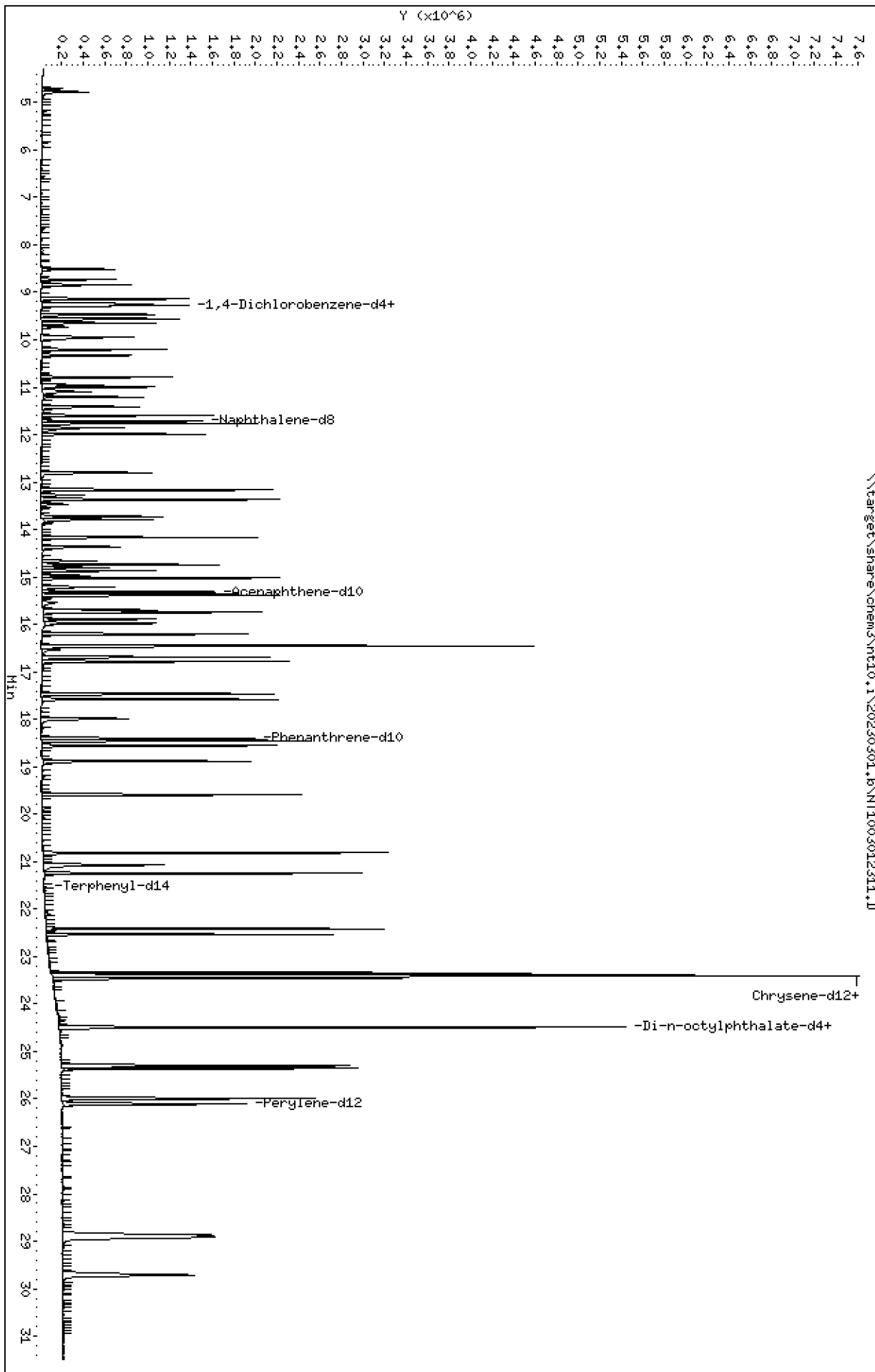
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

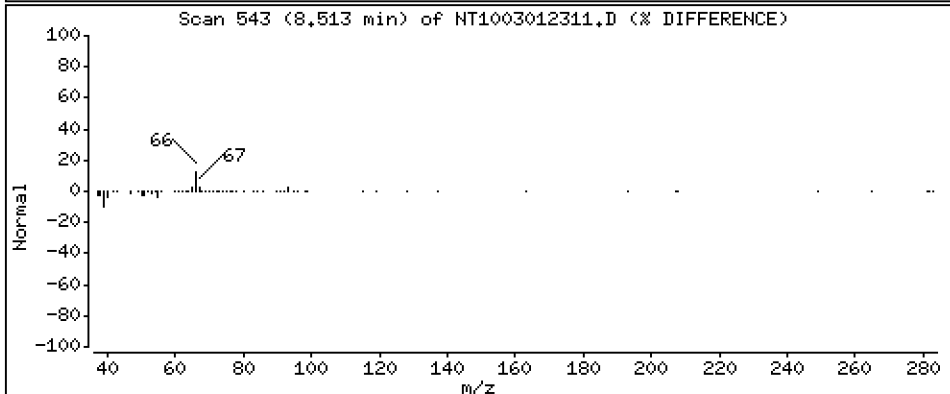
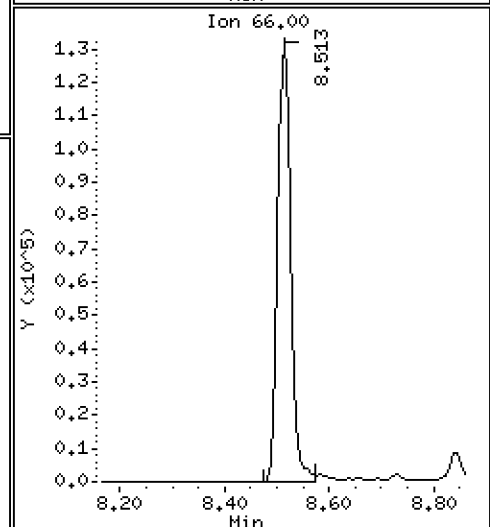
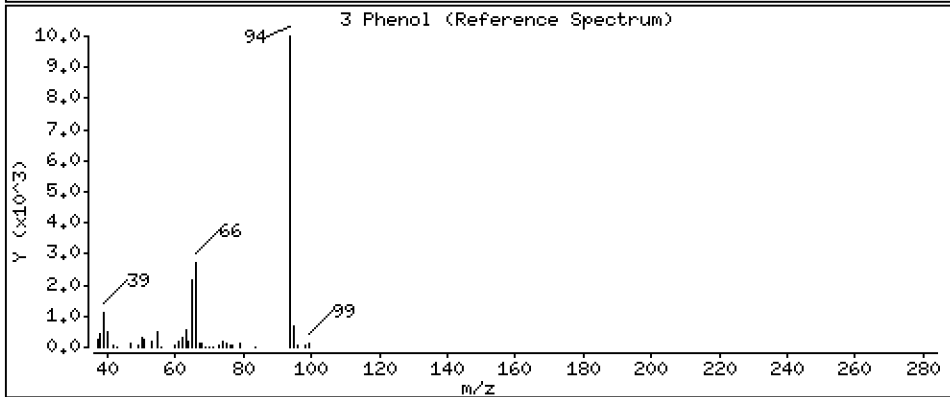
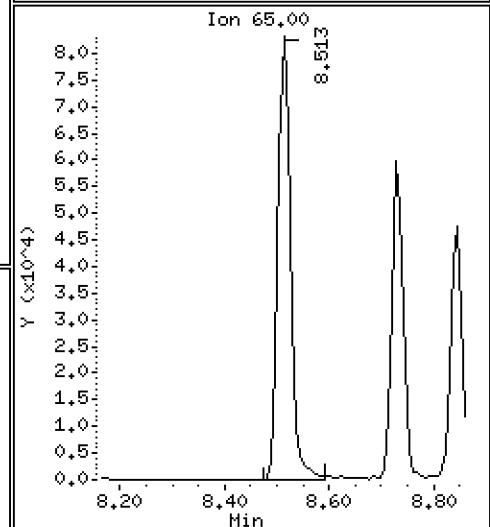
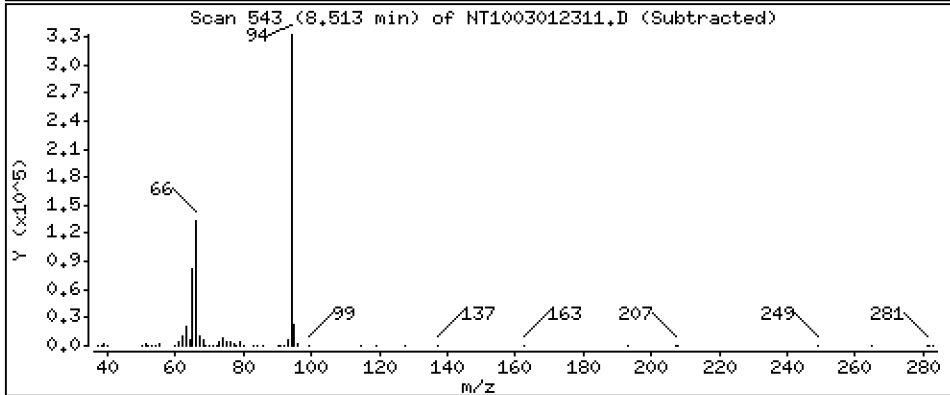
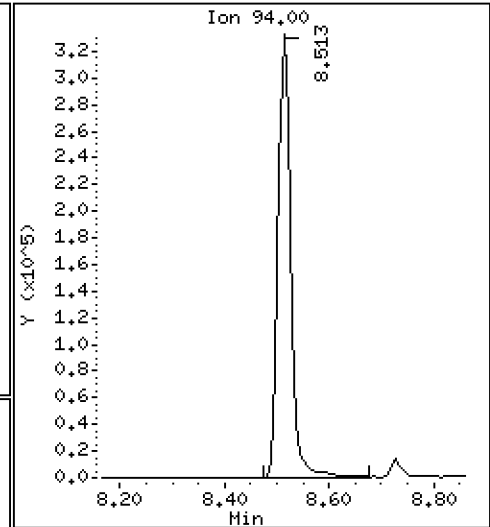
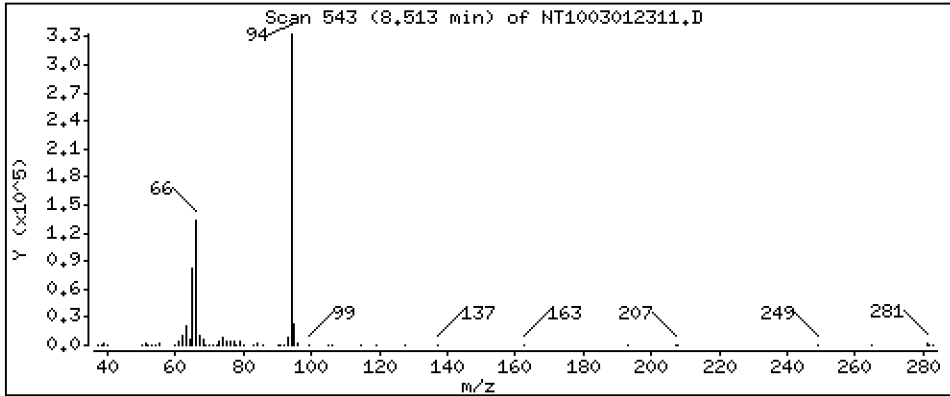
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,852 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

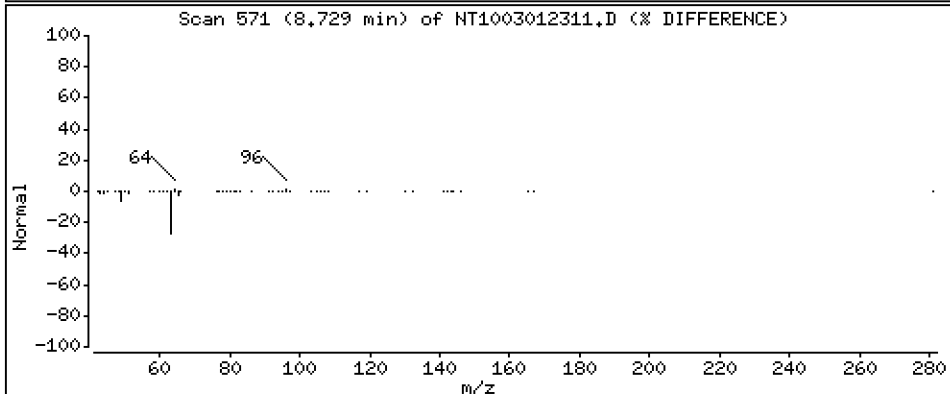
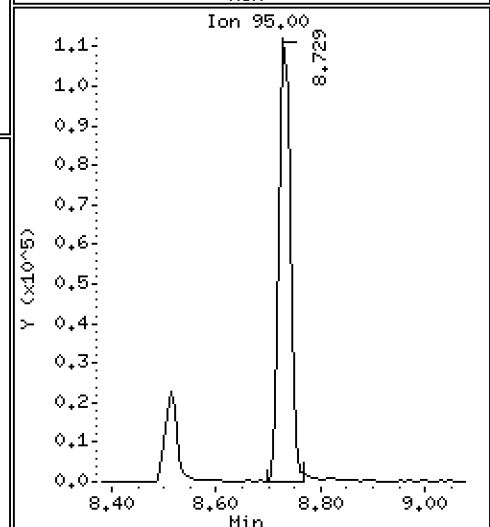
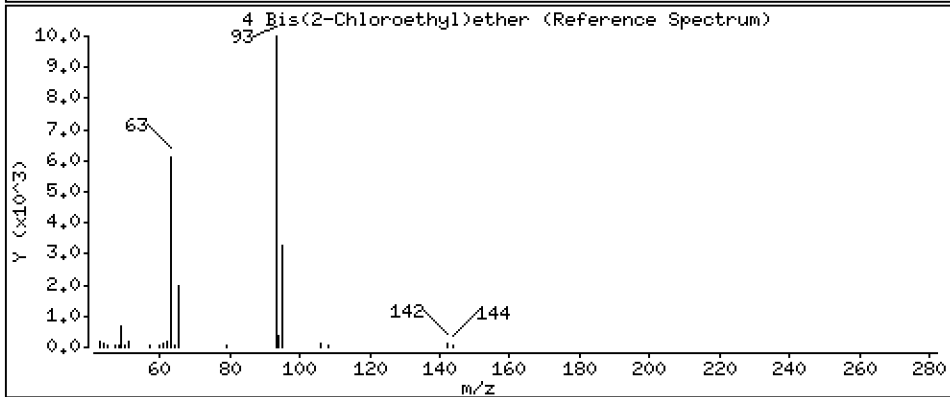
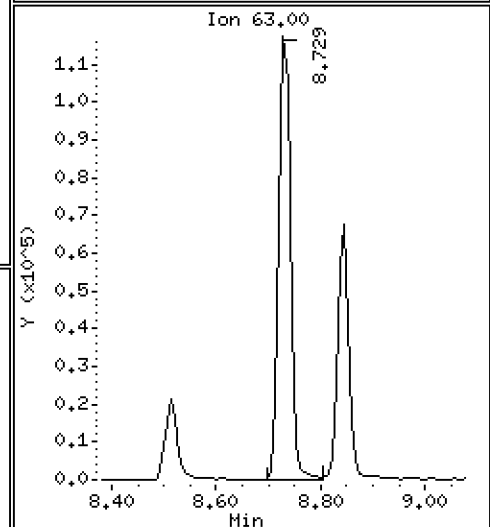
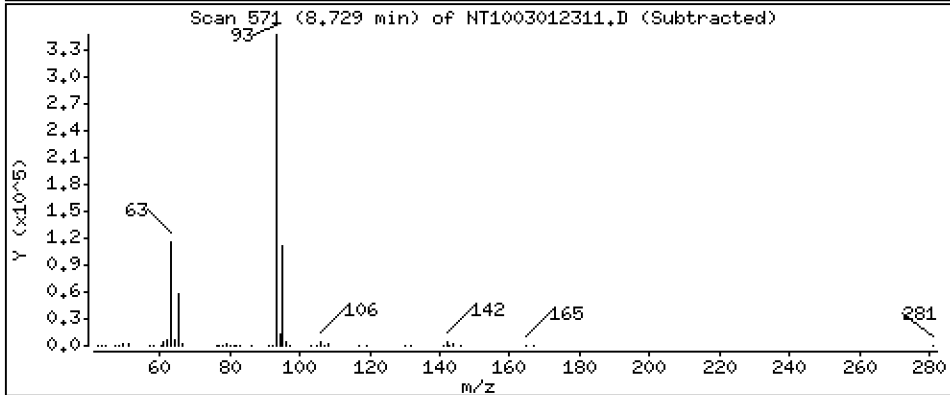
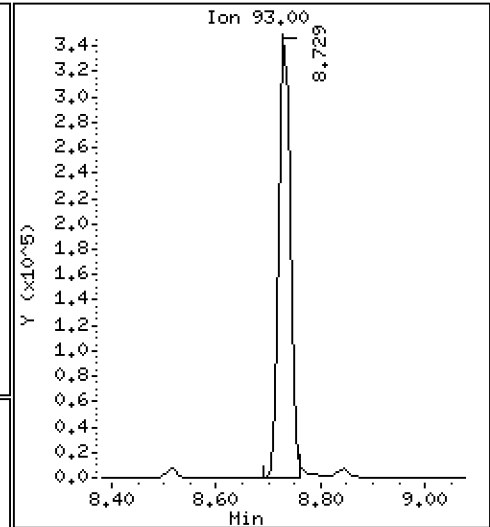
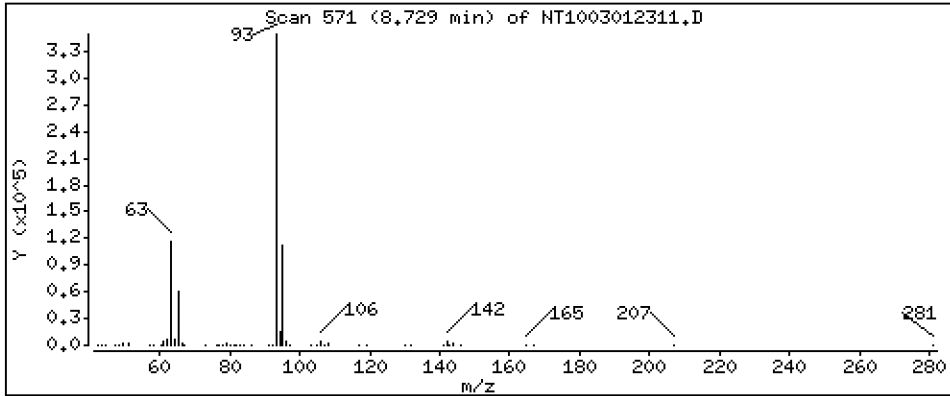
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,928 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

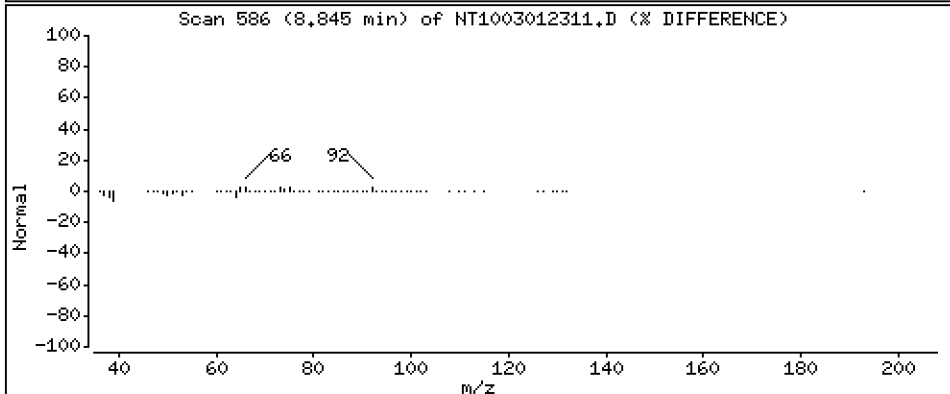
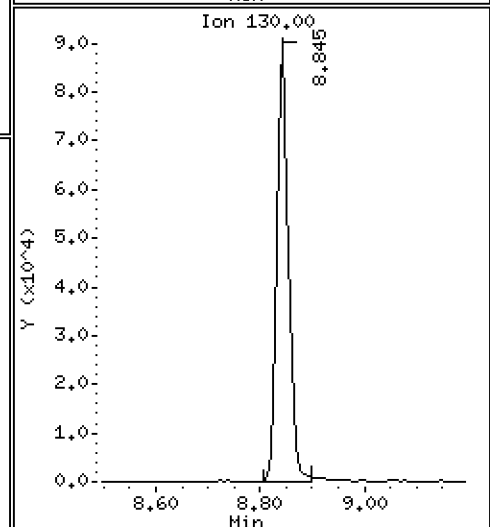
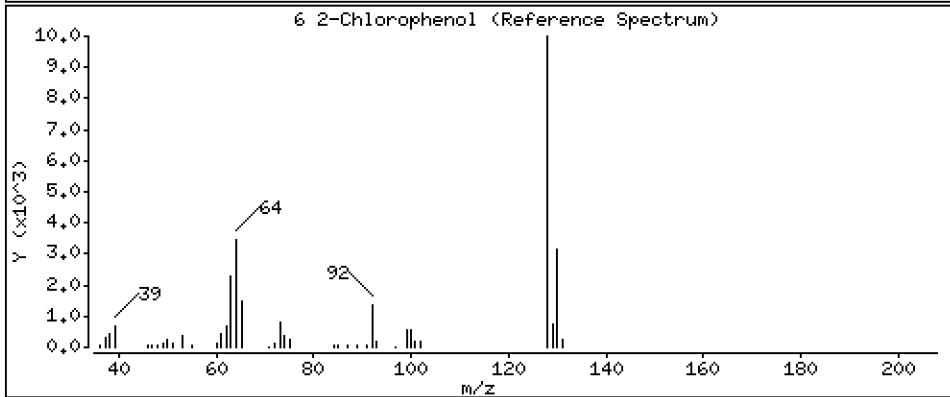
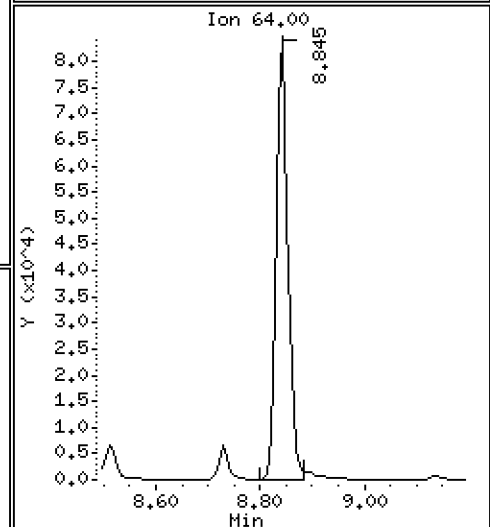
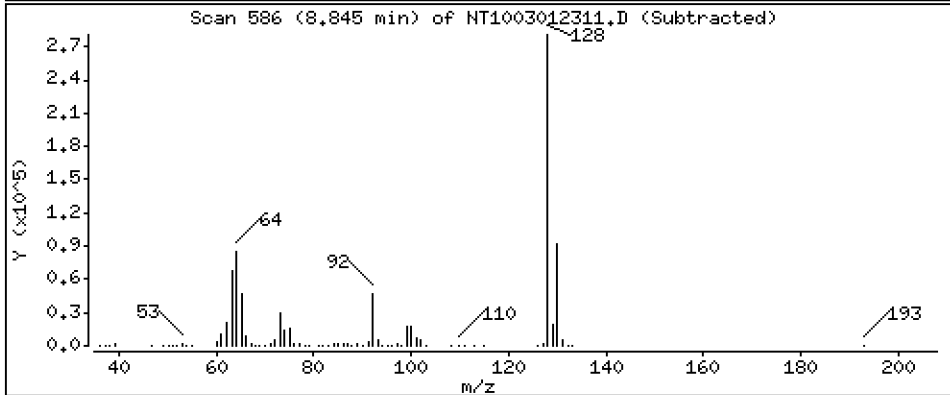
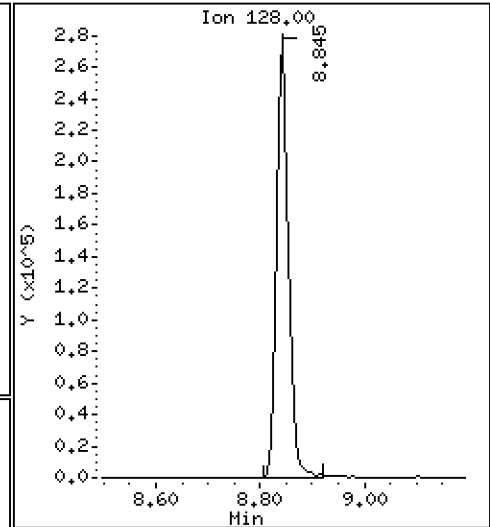
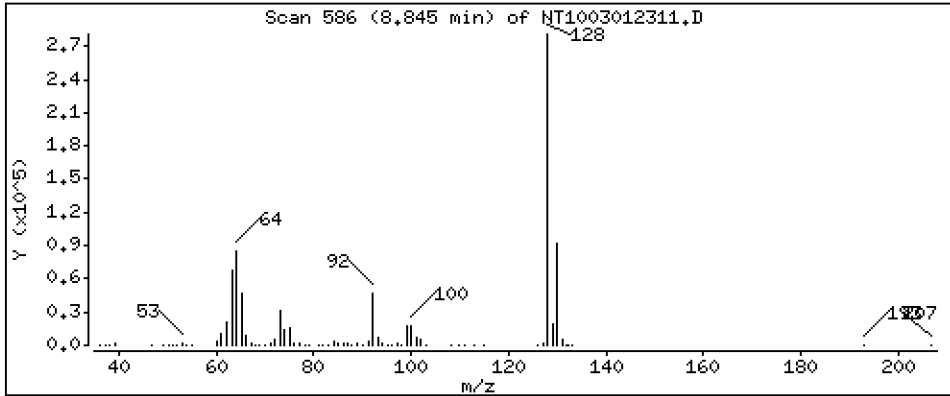
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

6 2-Chlorophenol

Concentration: 4.692 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

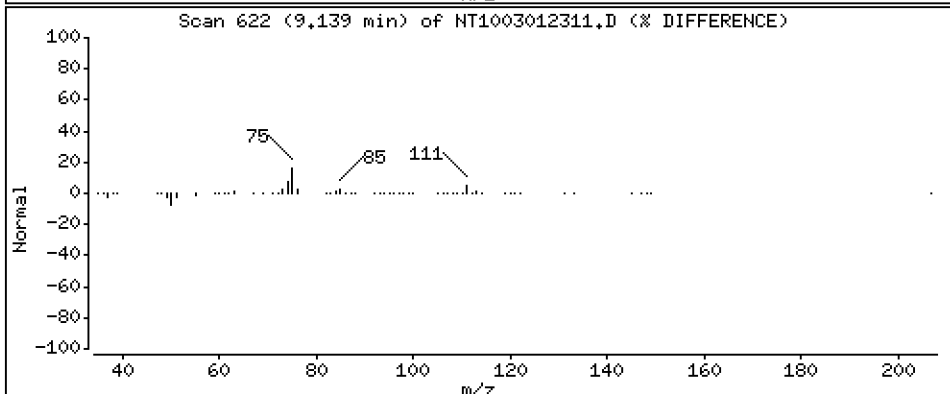
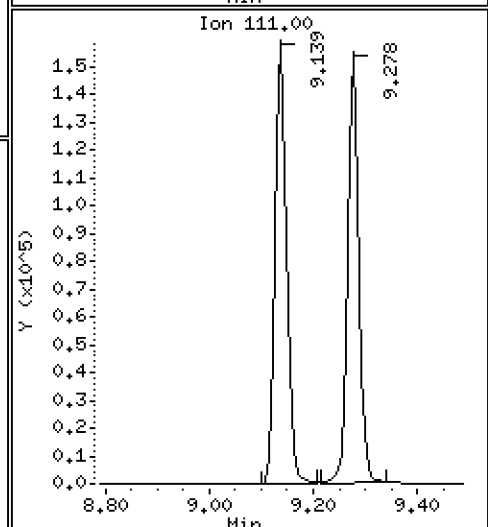
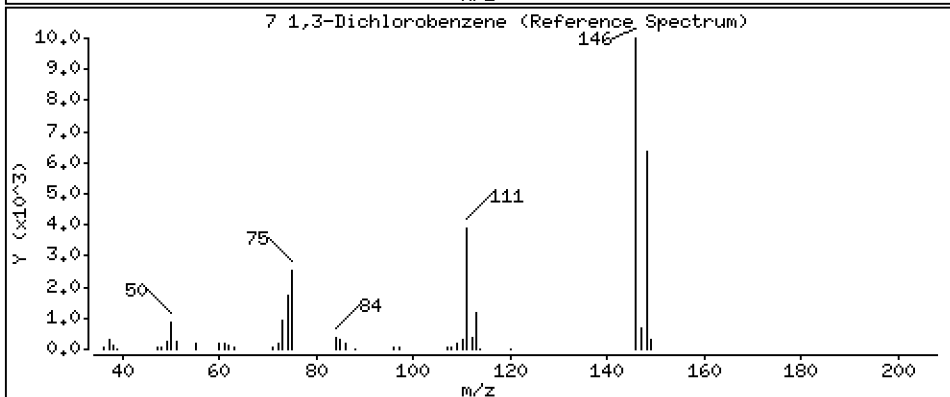
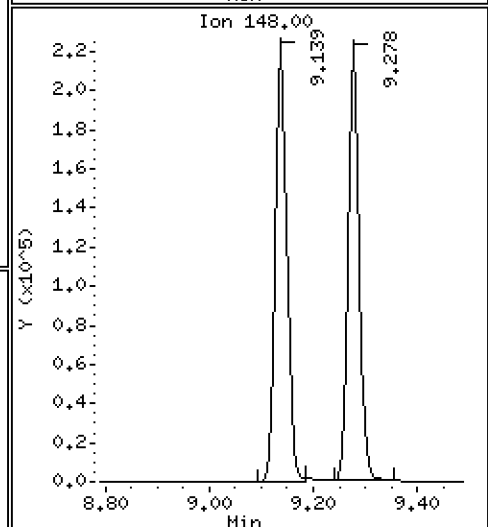
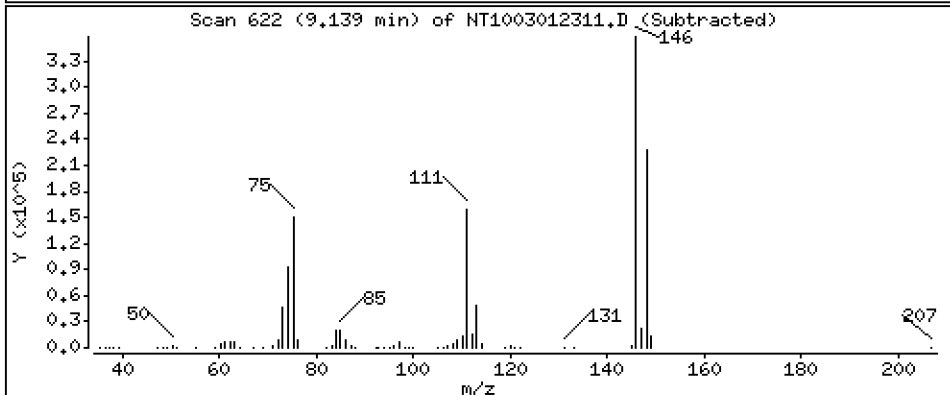
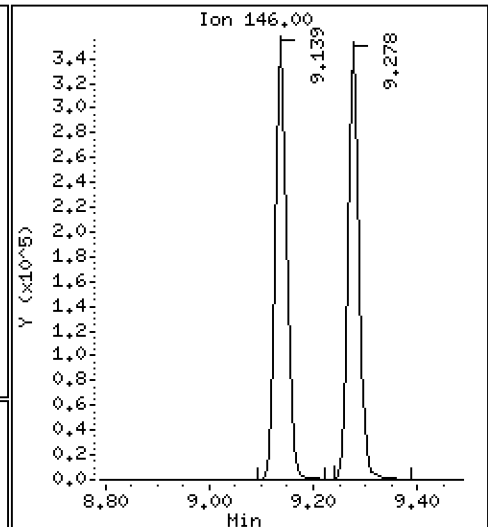
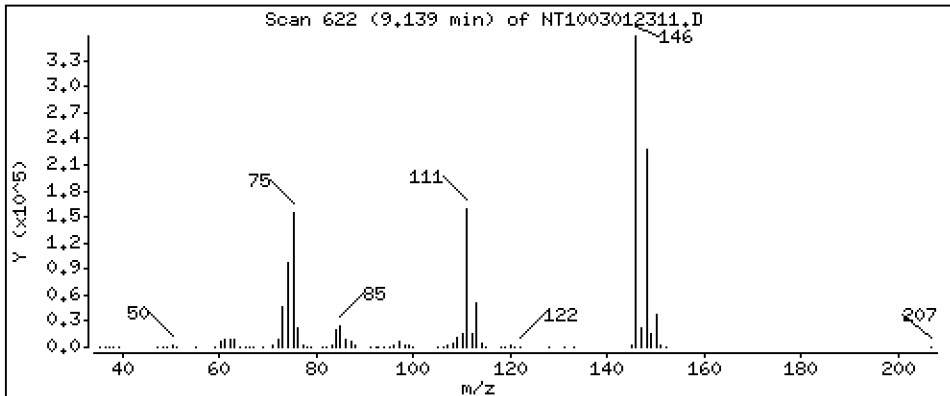
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 5,266 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

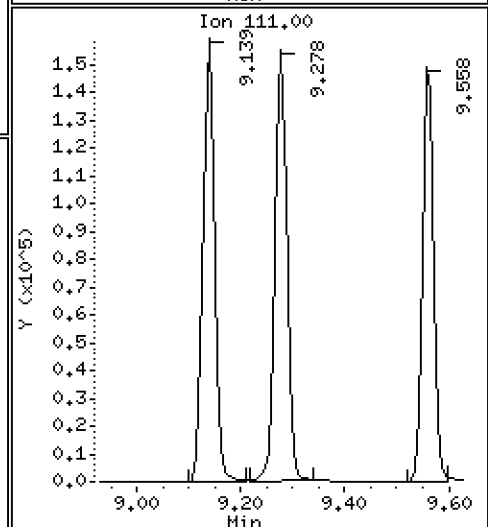
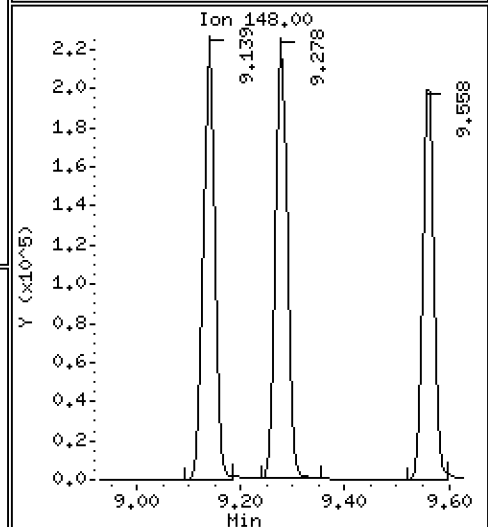
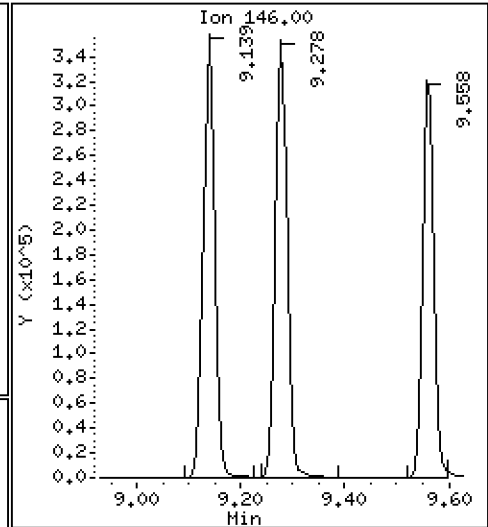
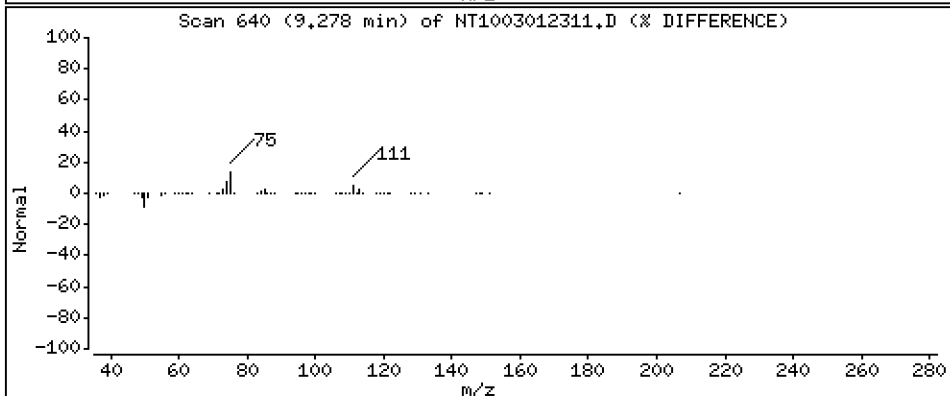
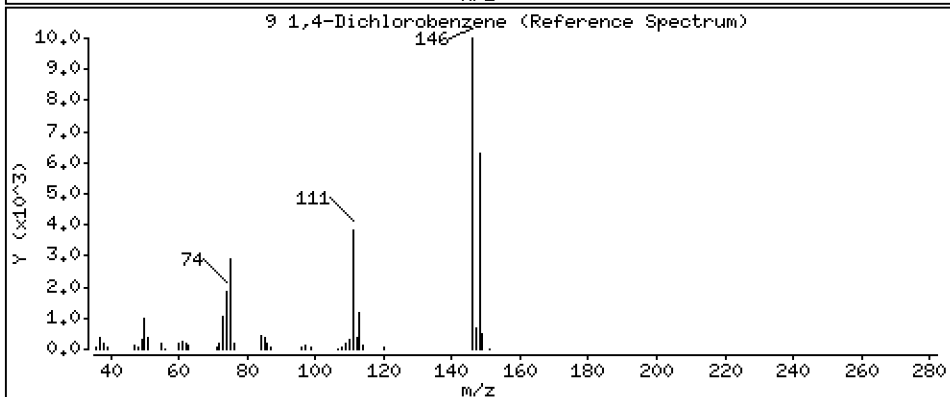
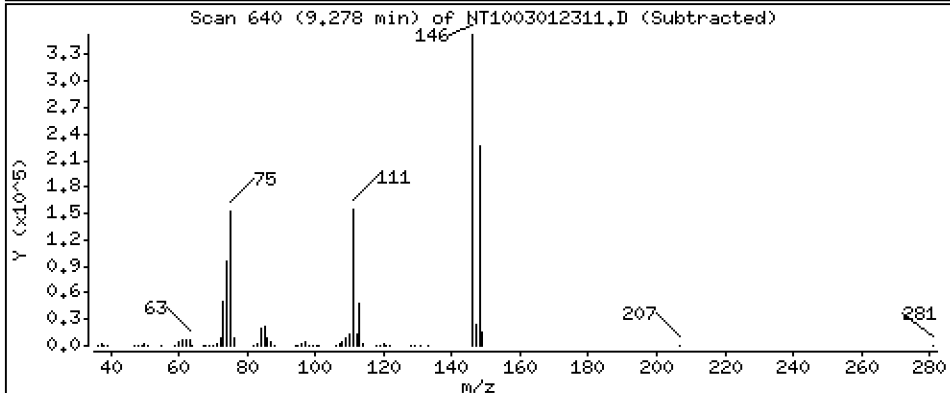
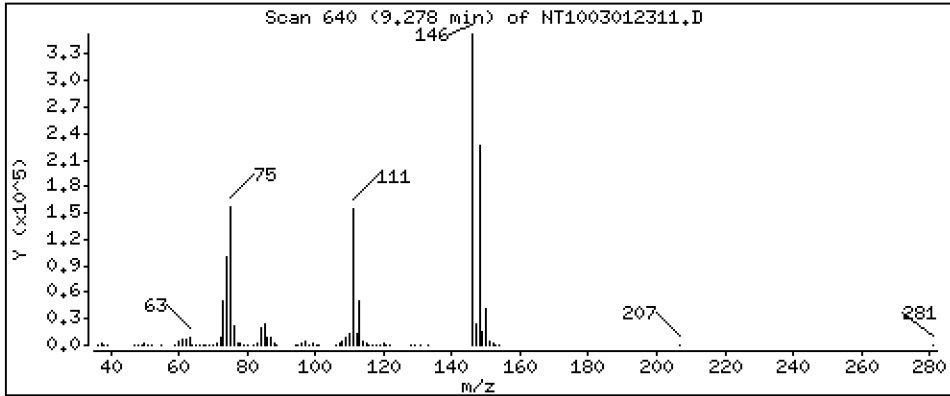
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,216 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

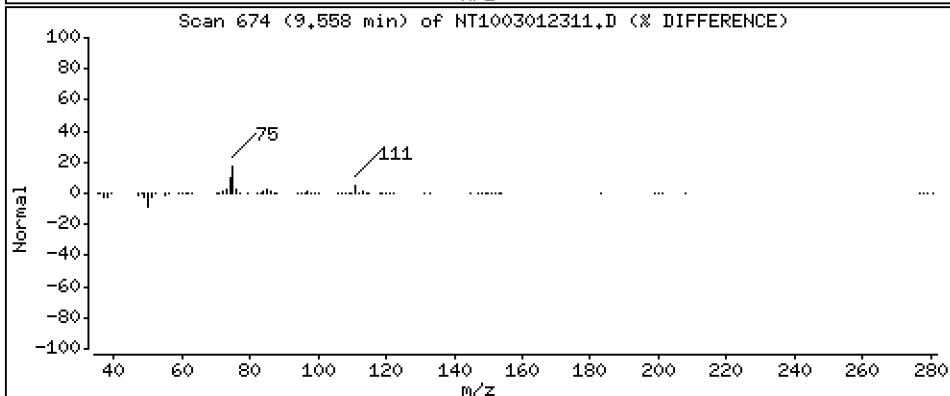
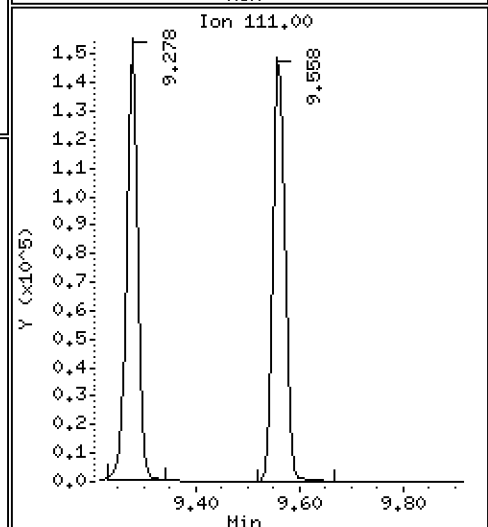
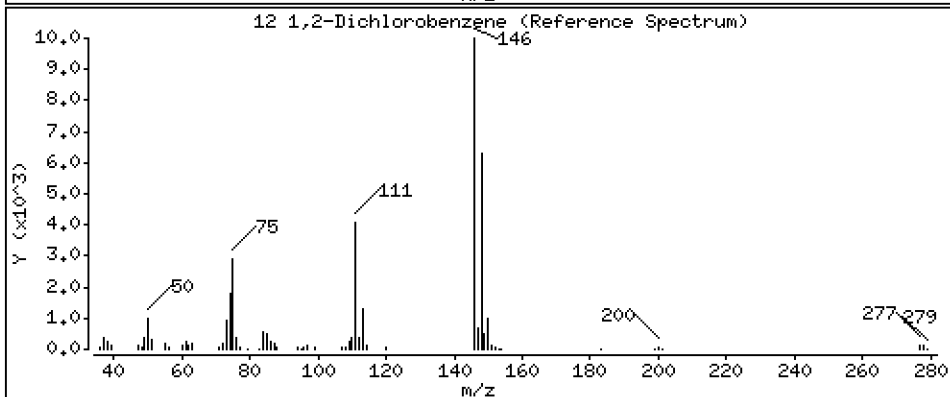
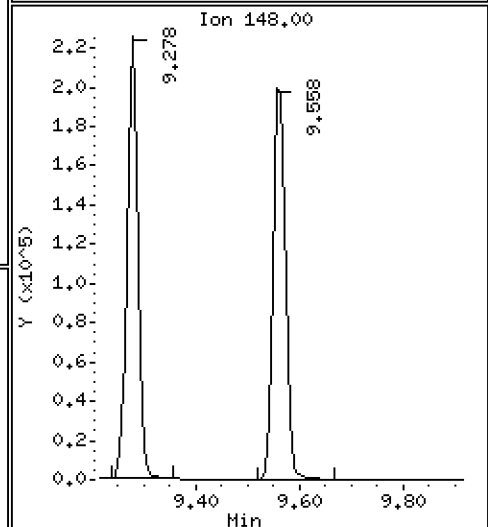
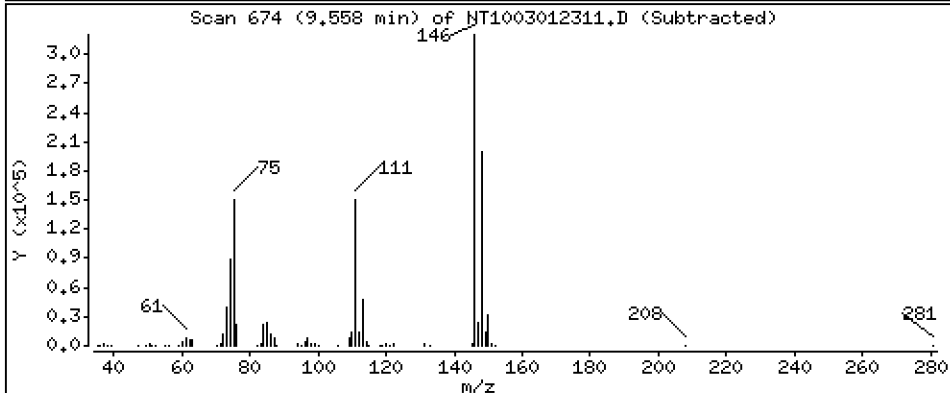
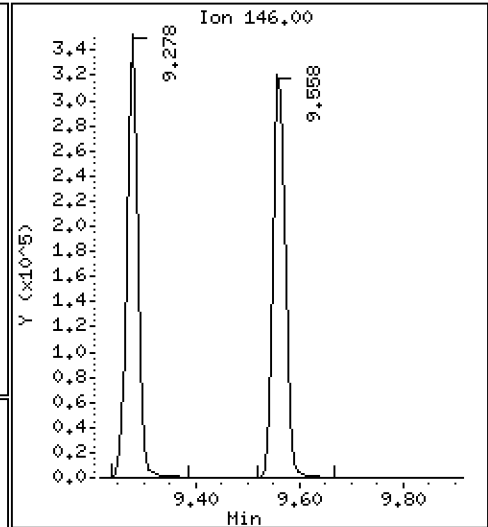
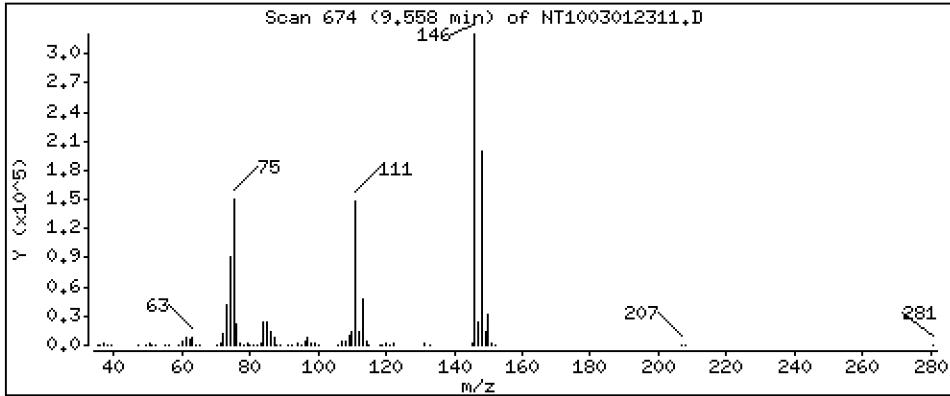
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5.194 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

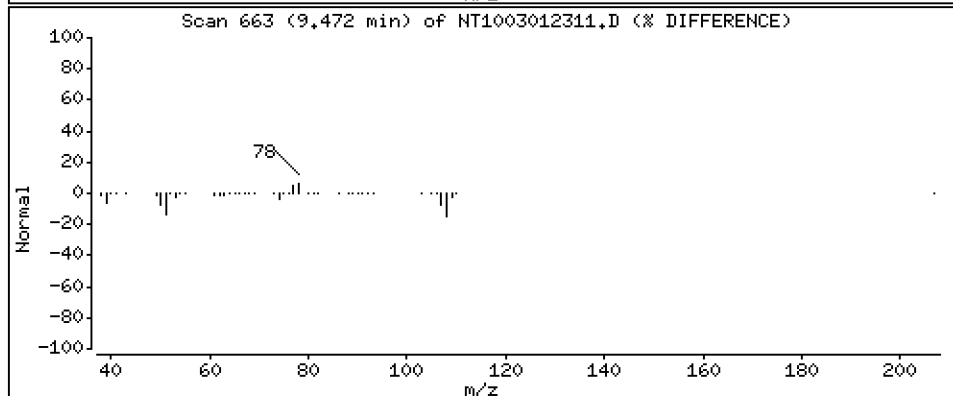
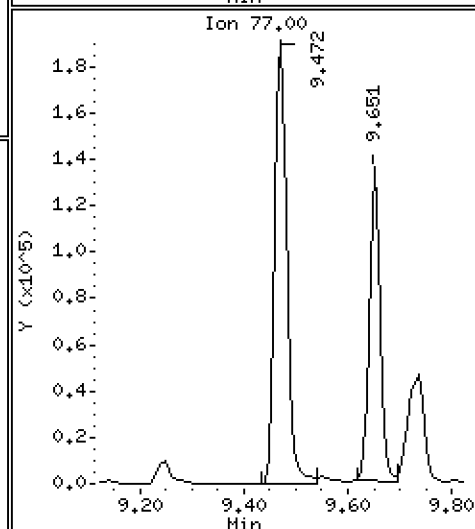
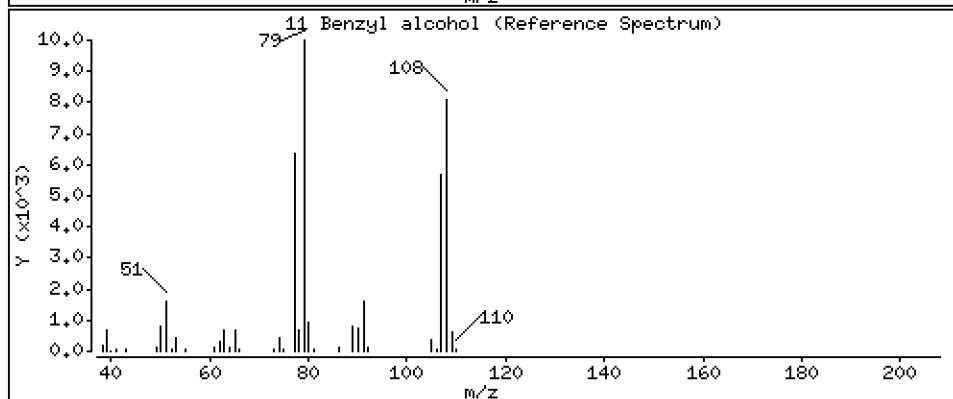
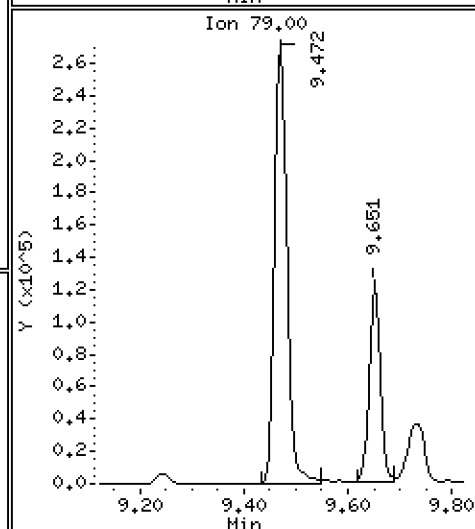
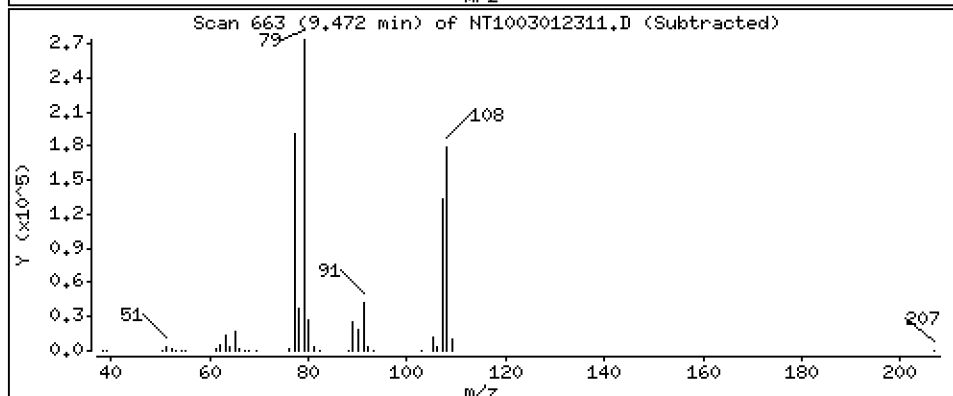
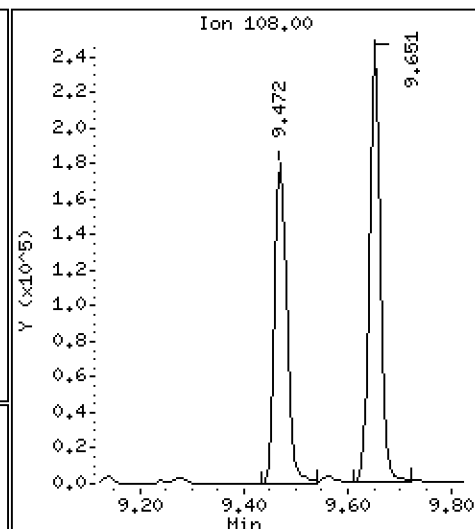
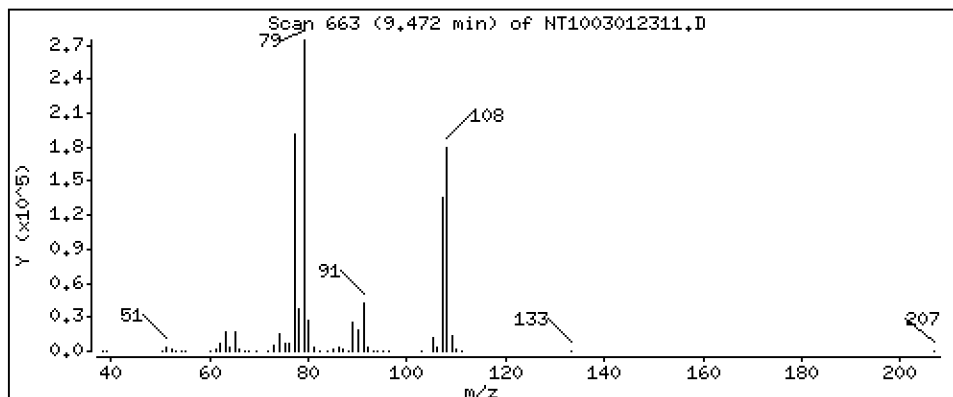
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.898 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

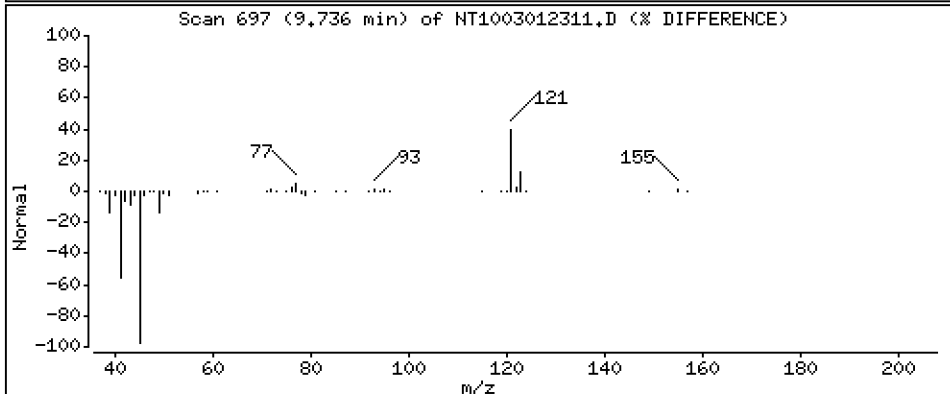
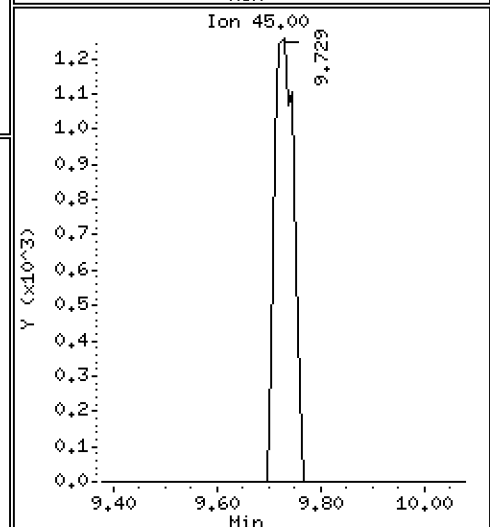
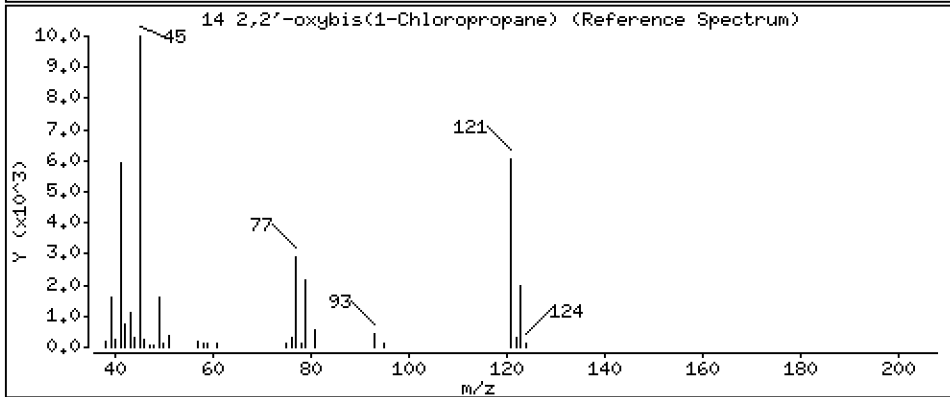
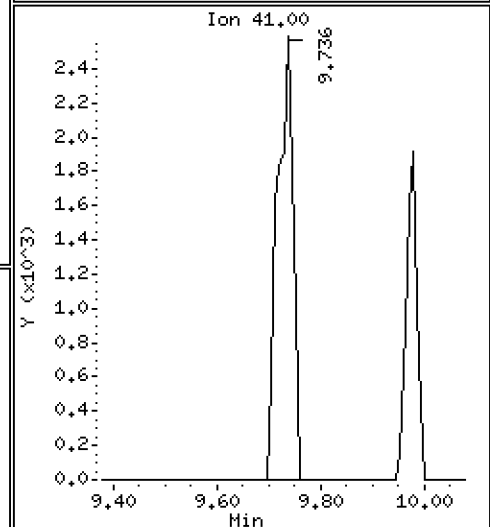
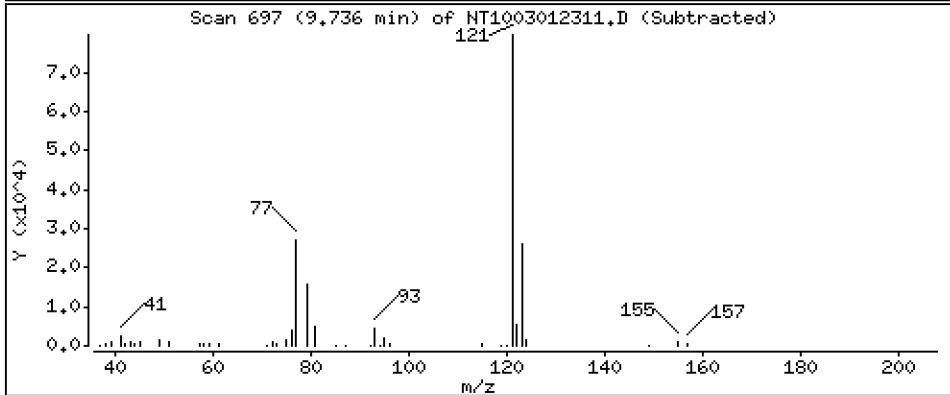
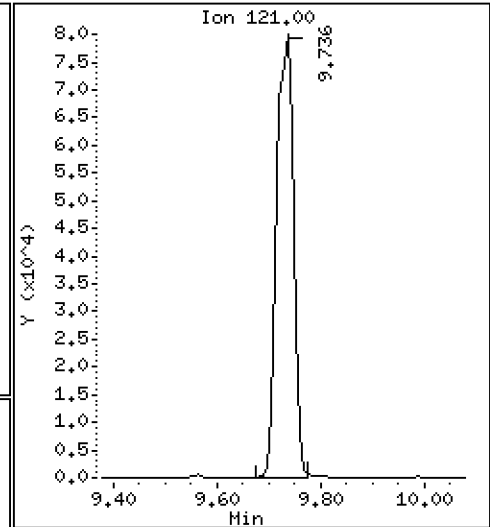
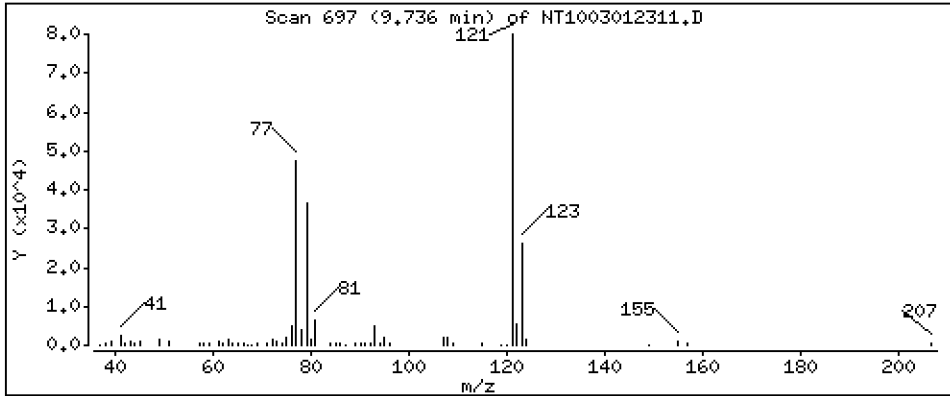
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 6,232 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

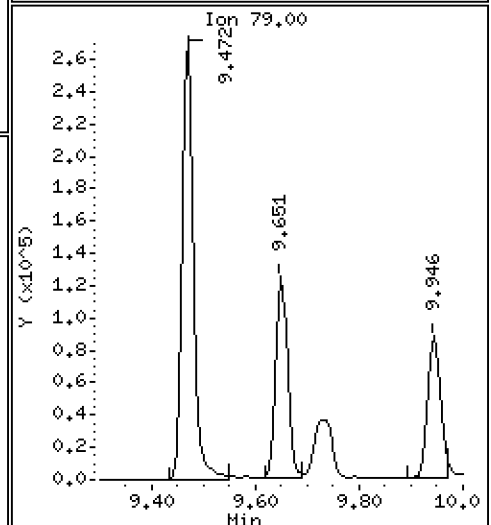
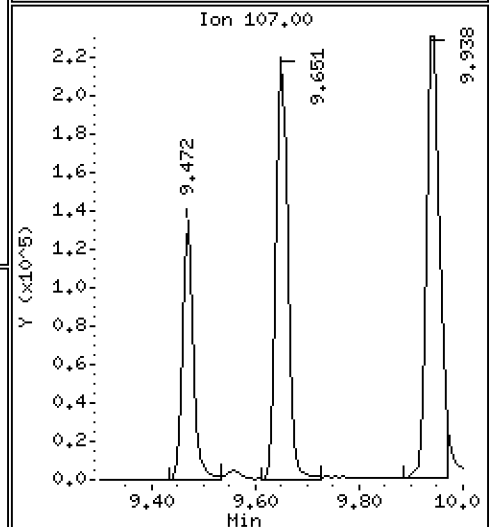
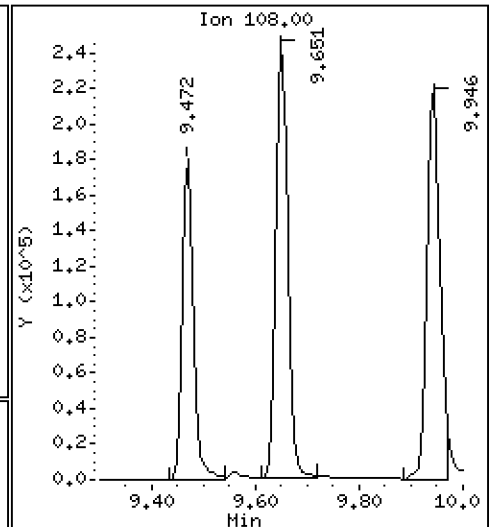
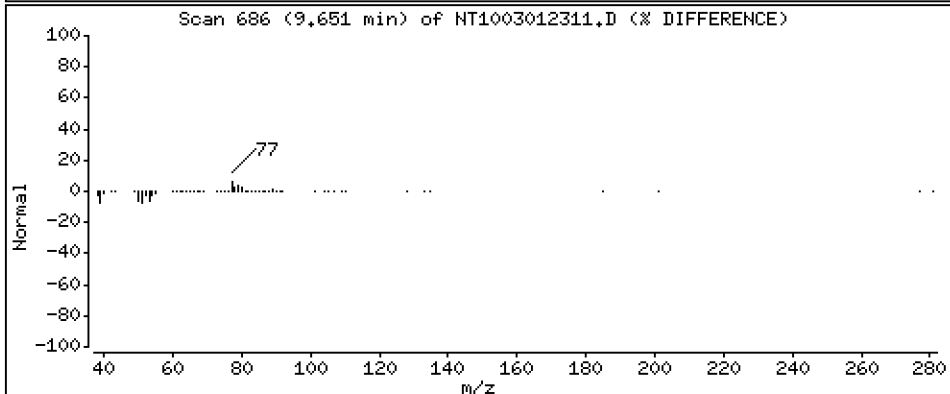
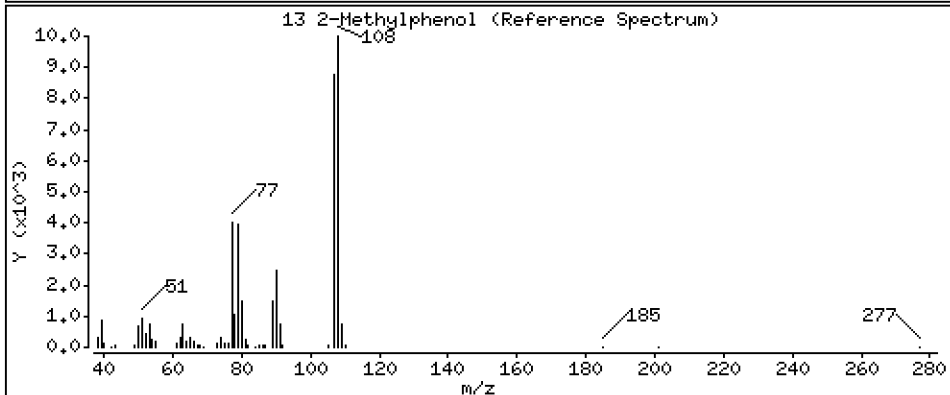
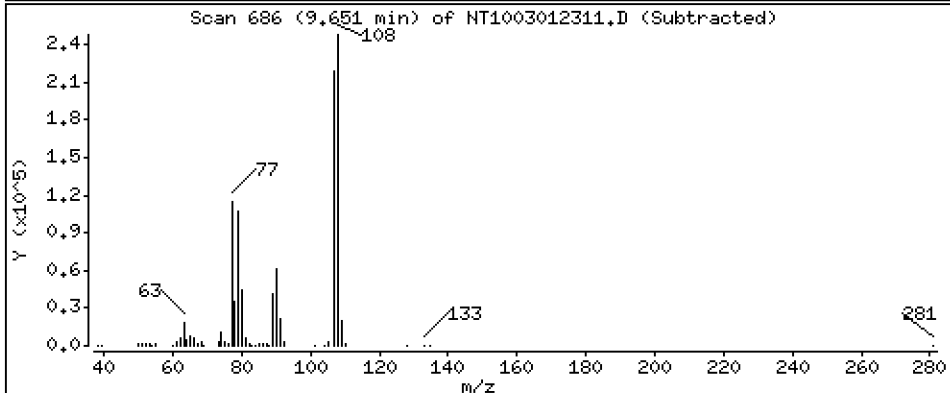
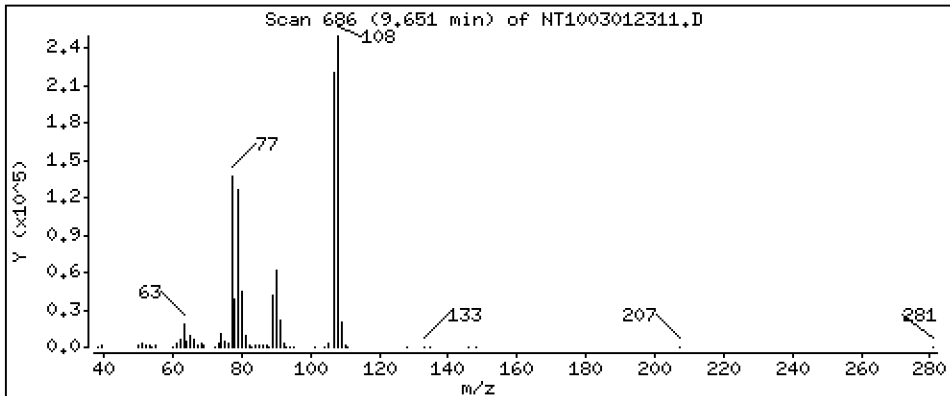
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.192 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

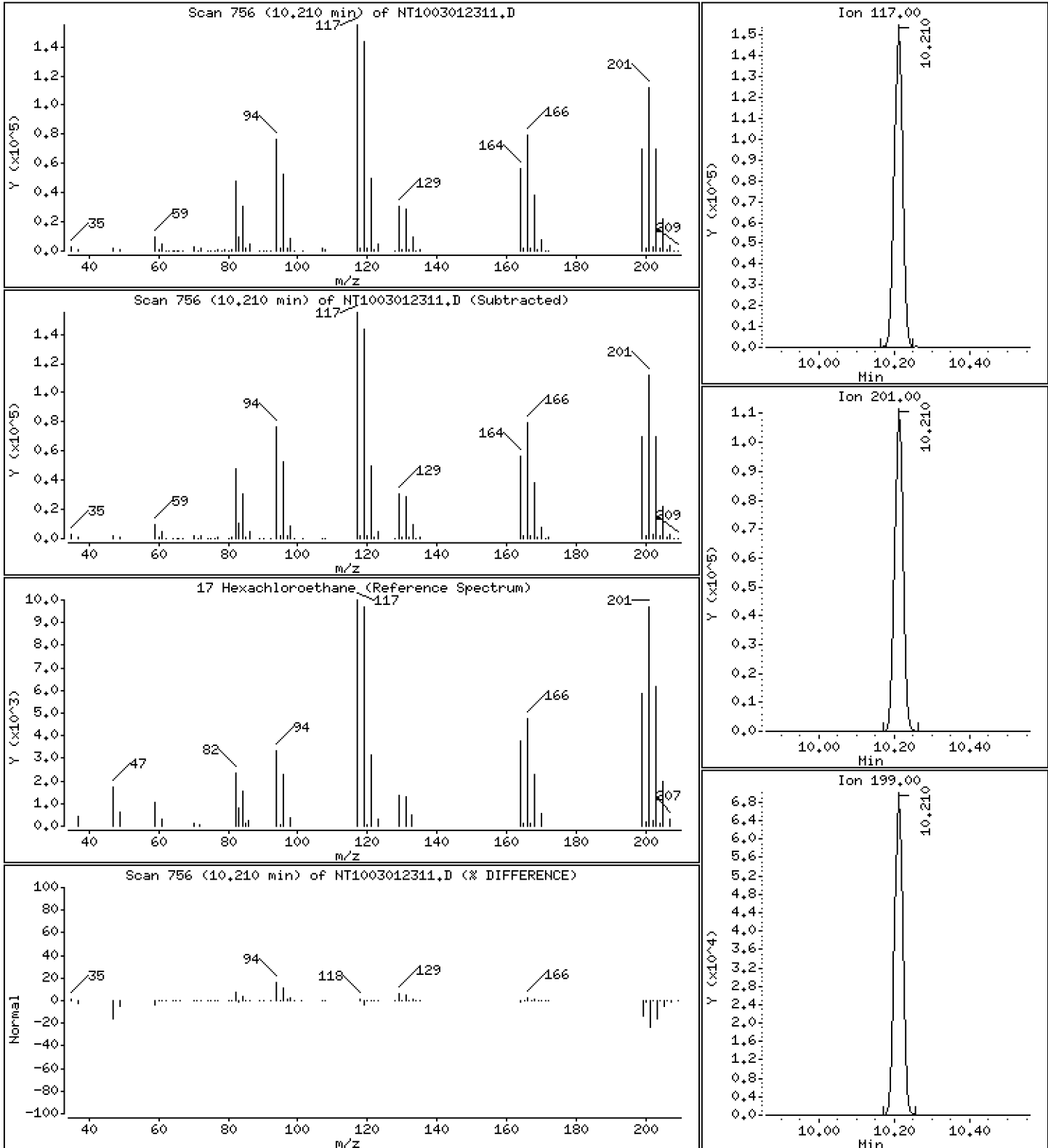
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 5,443 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

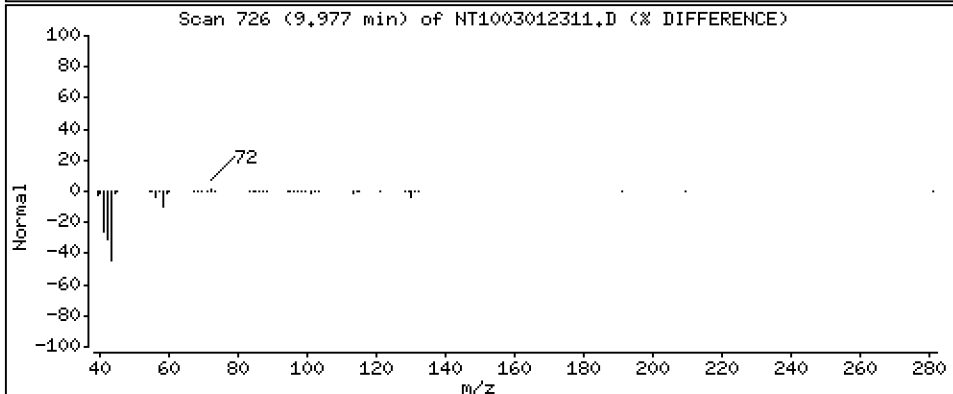
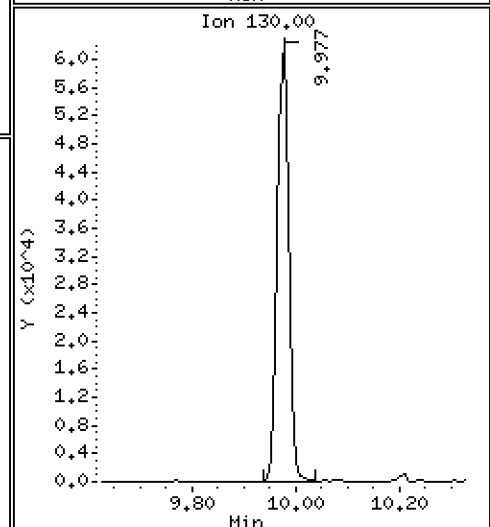
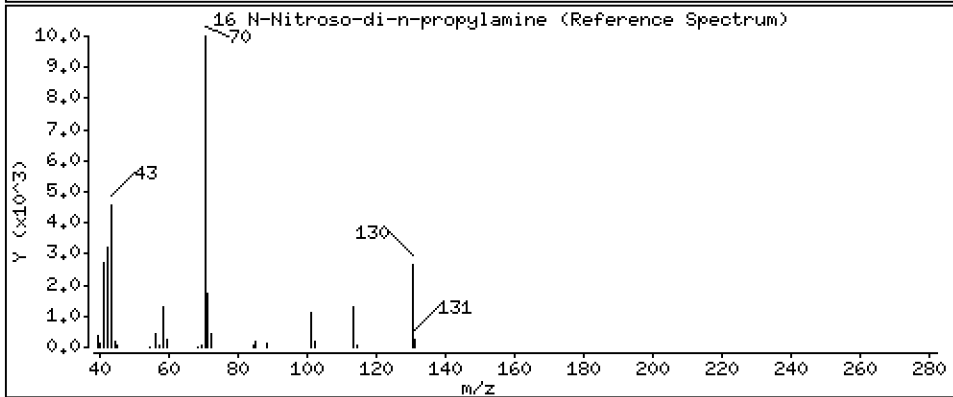
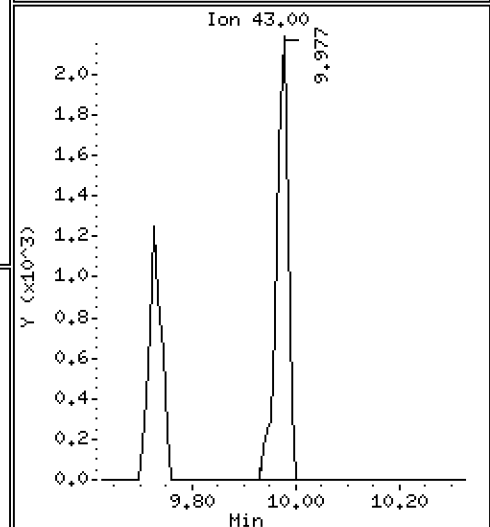
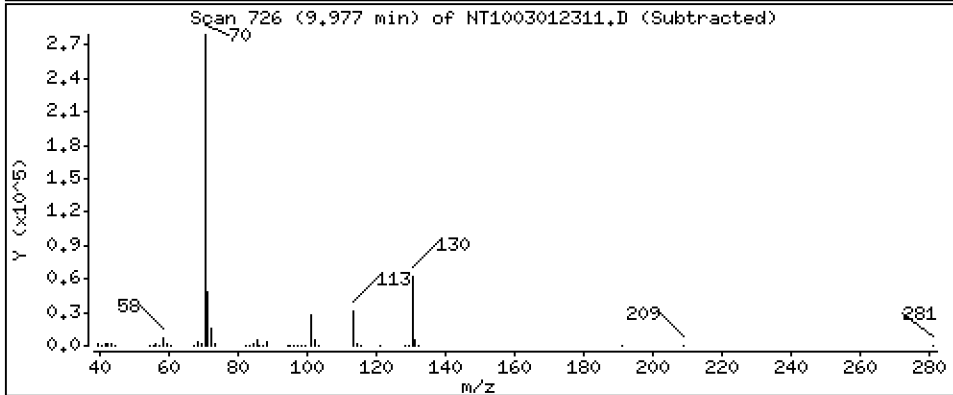
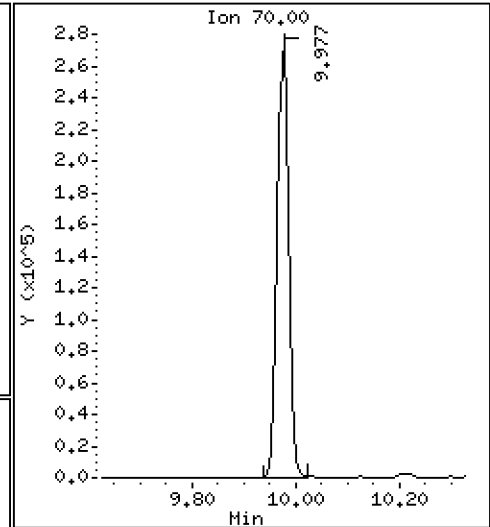
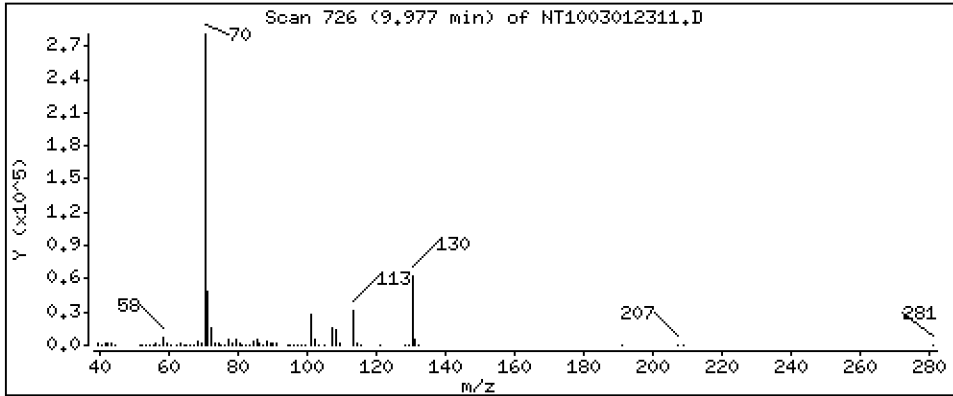
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

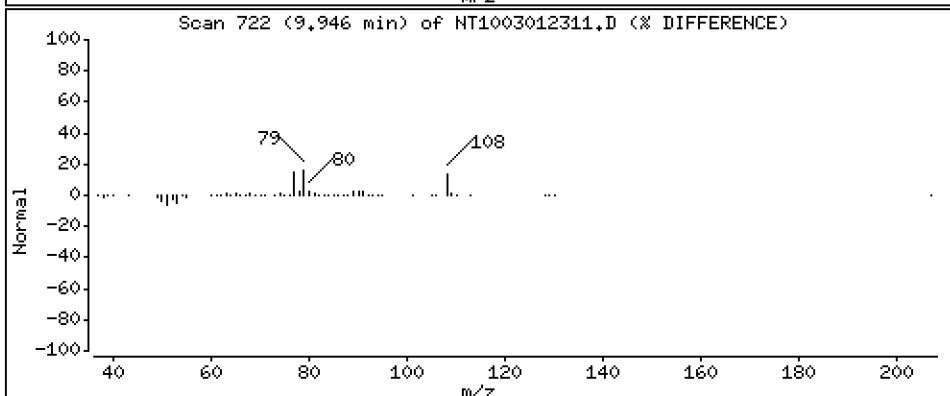
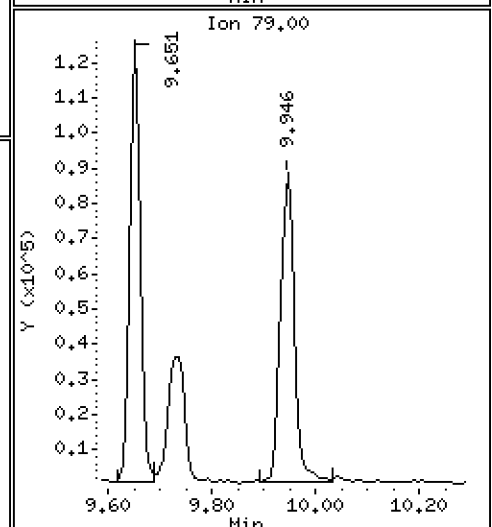
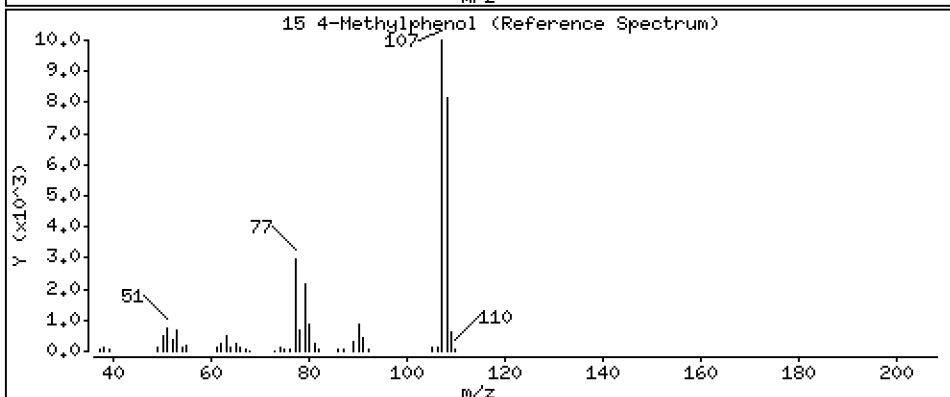
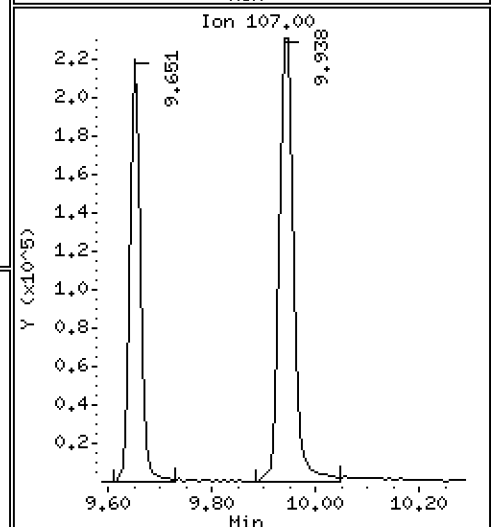
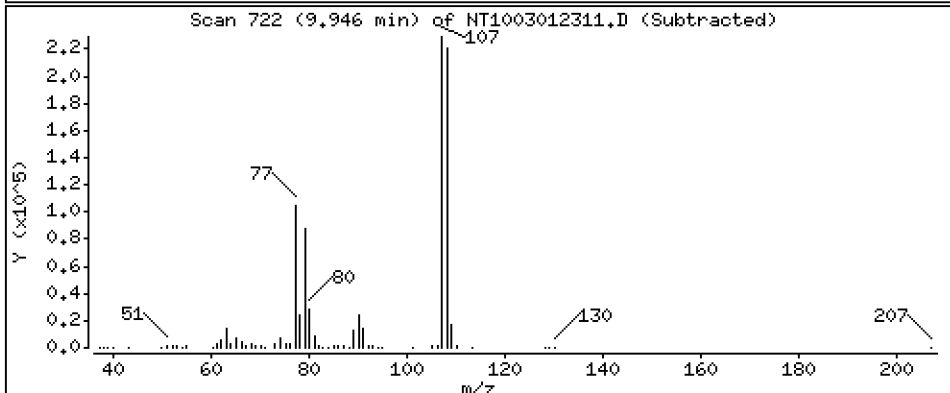
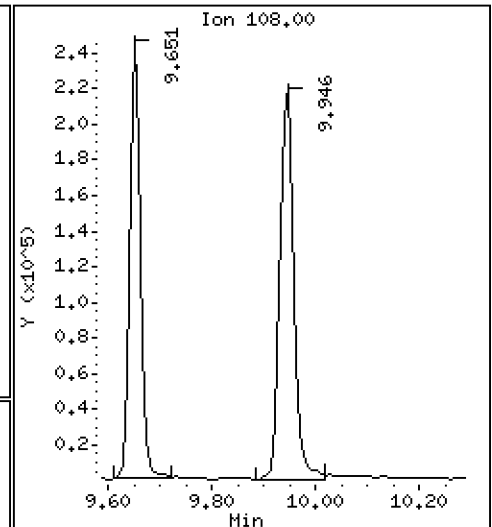
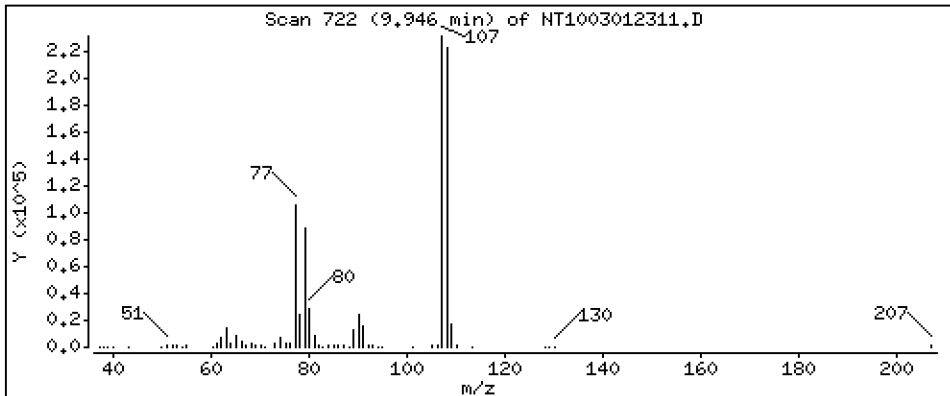
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,239 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

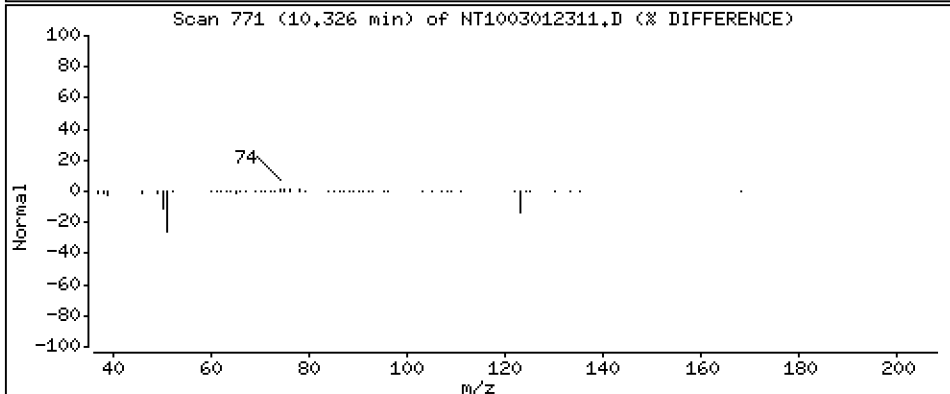
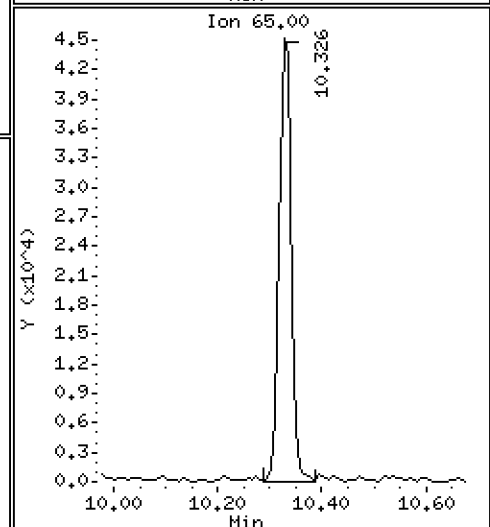
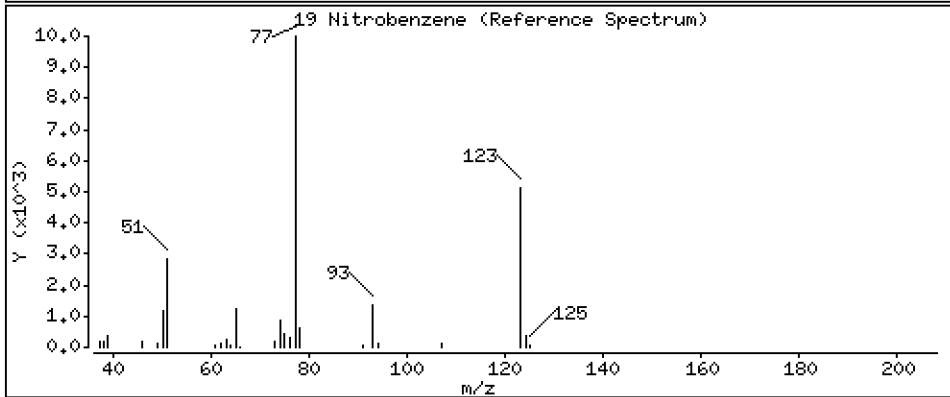
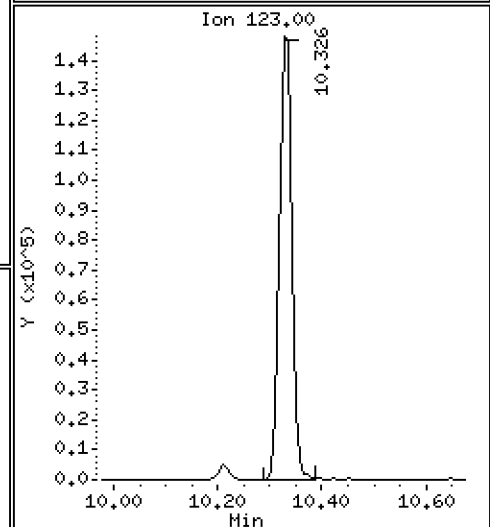
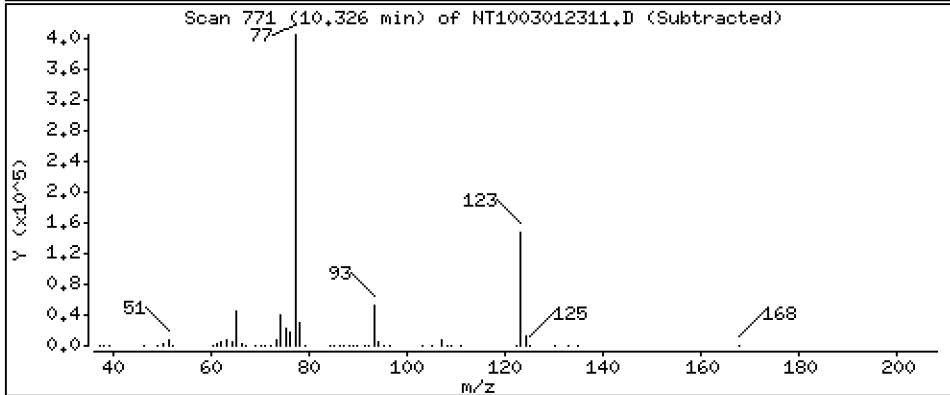
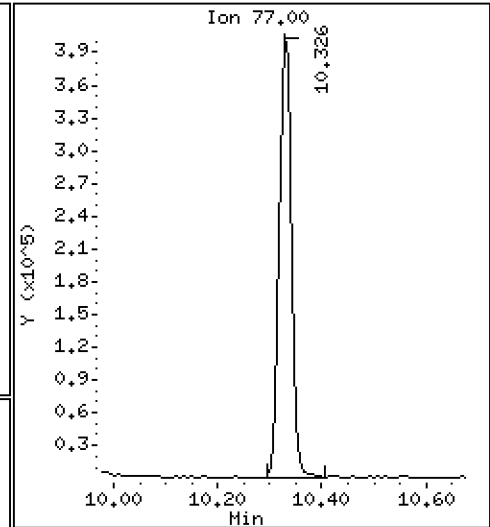
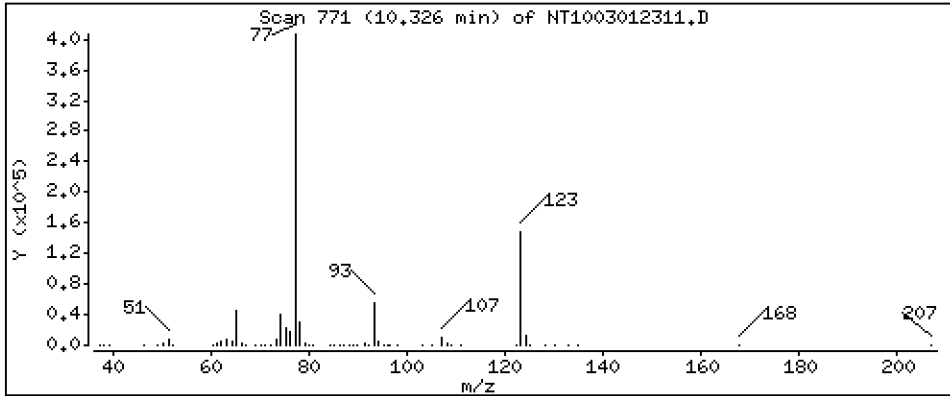
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,569 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

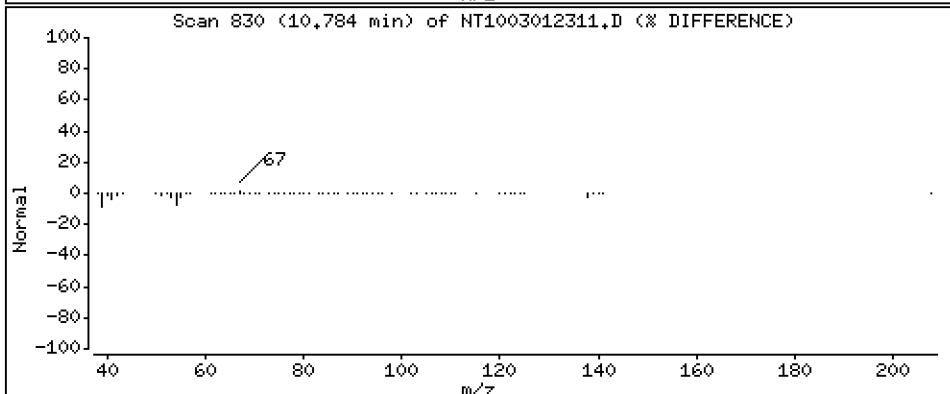
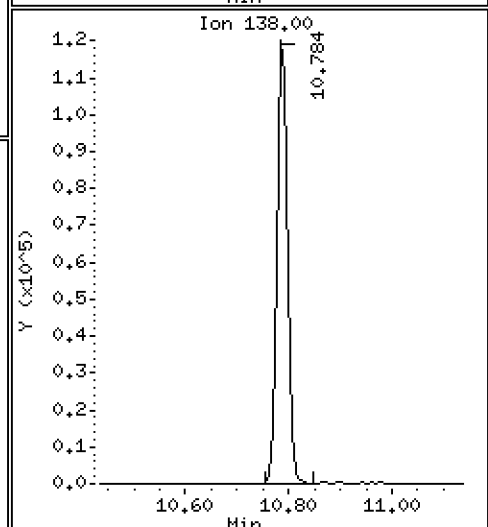
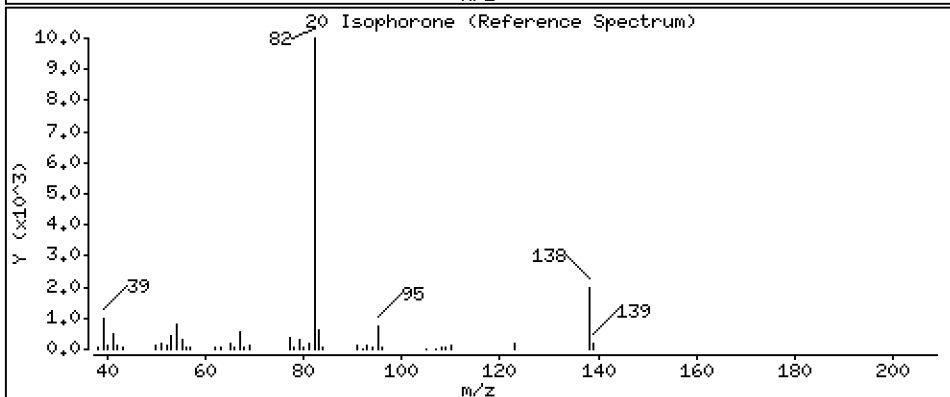
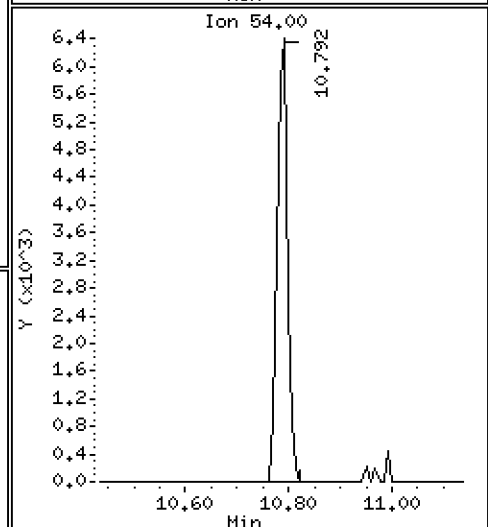
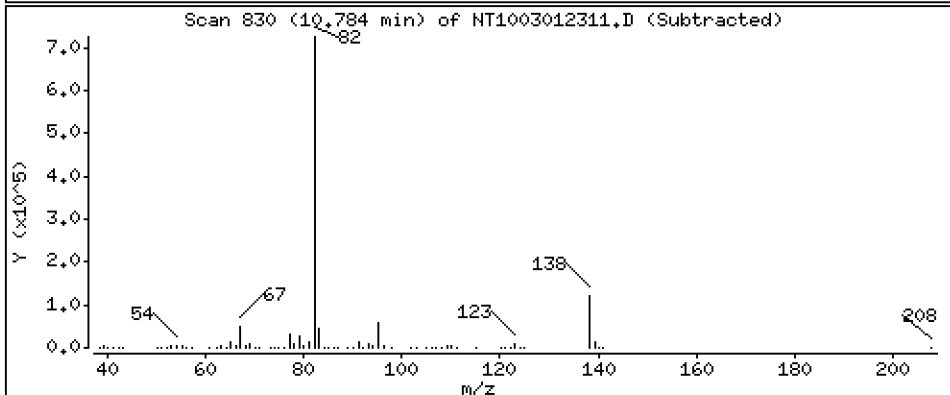
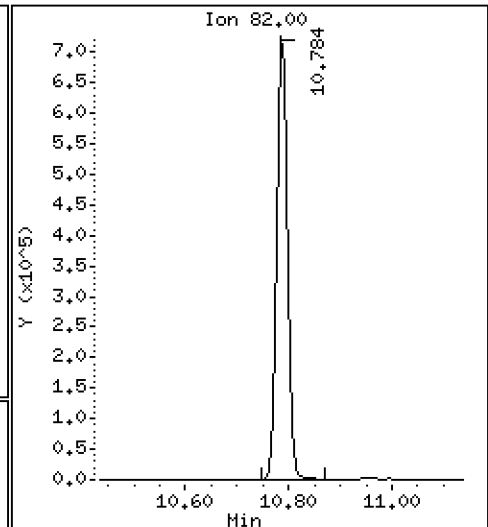
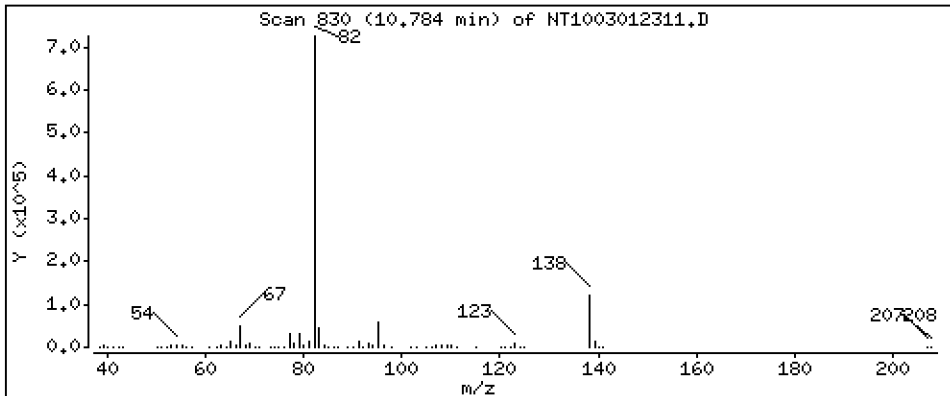
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,672 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

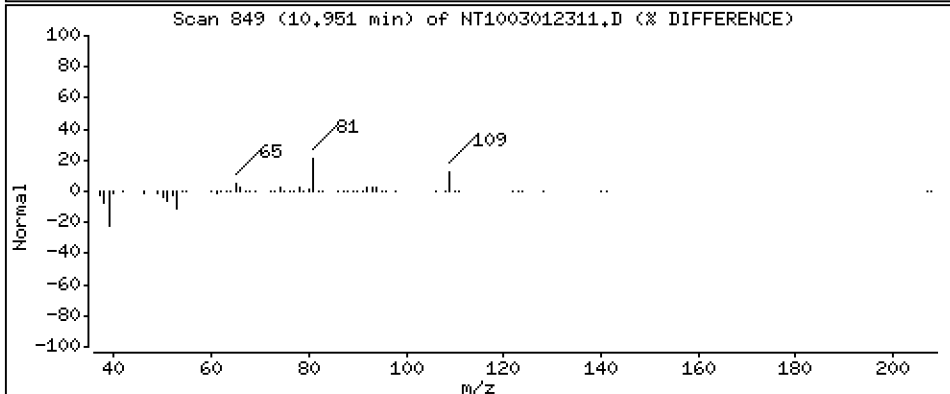
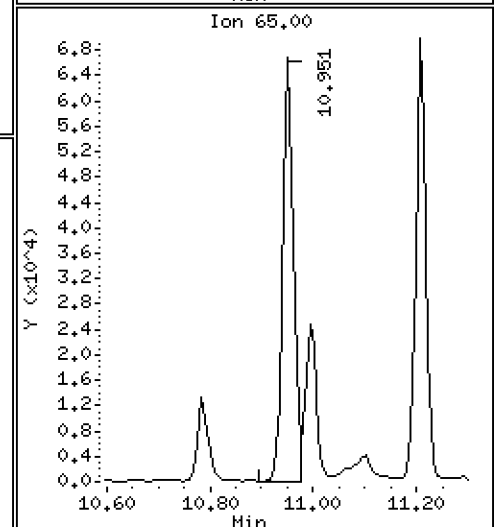
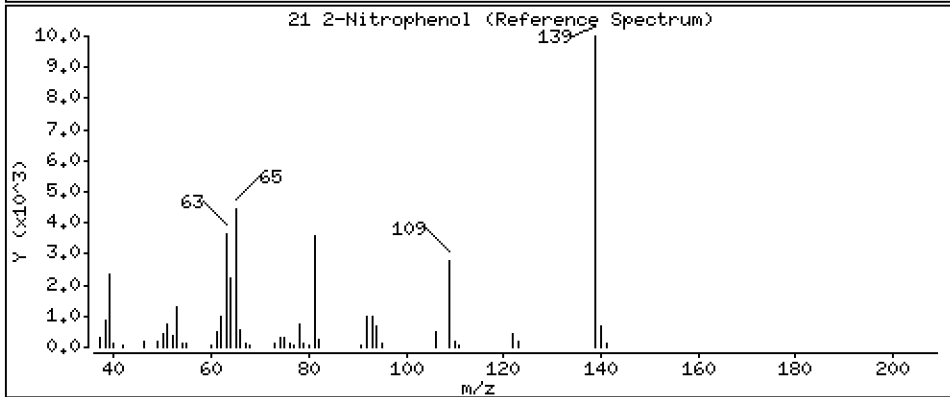
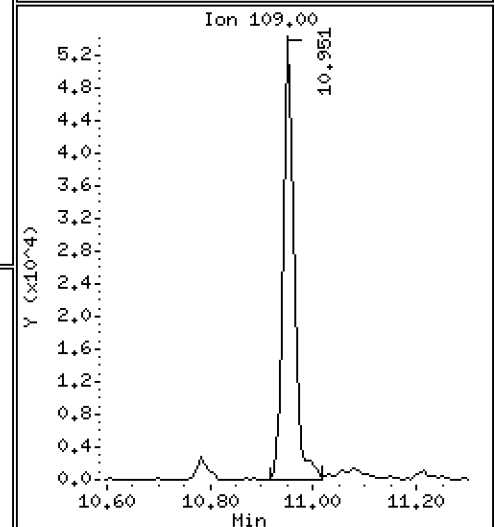
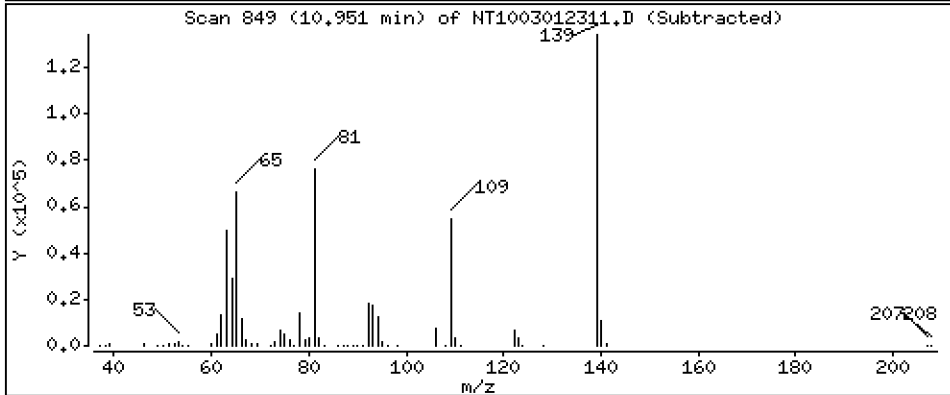
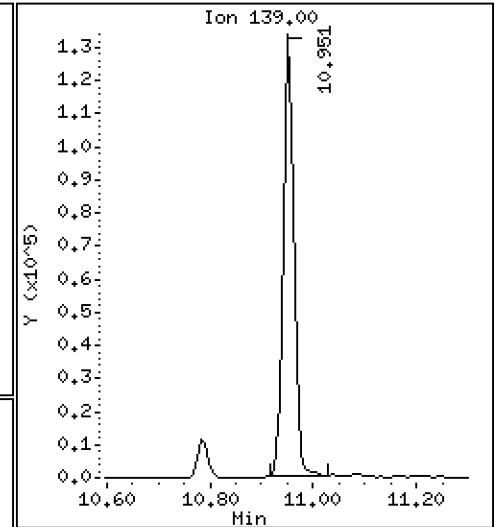
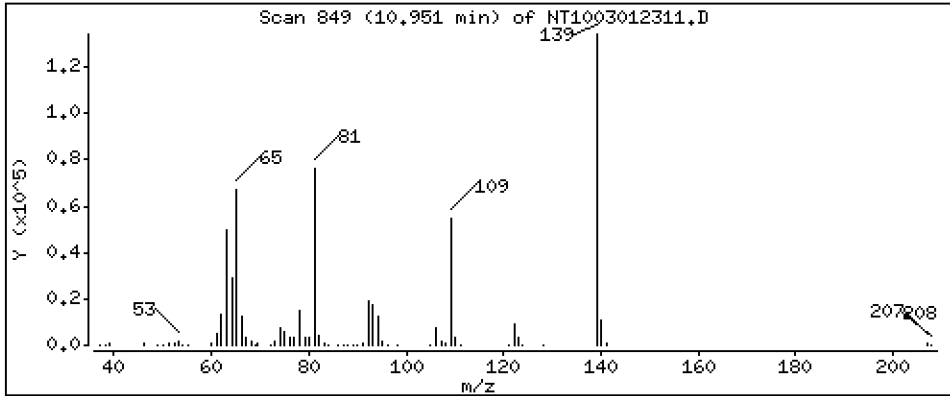
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,244 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

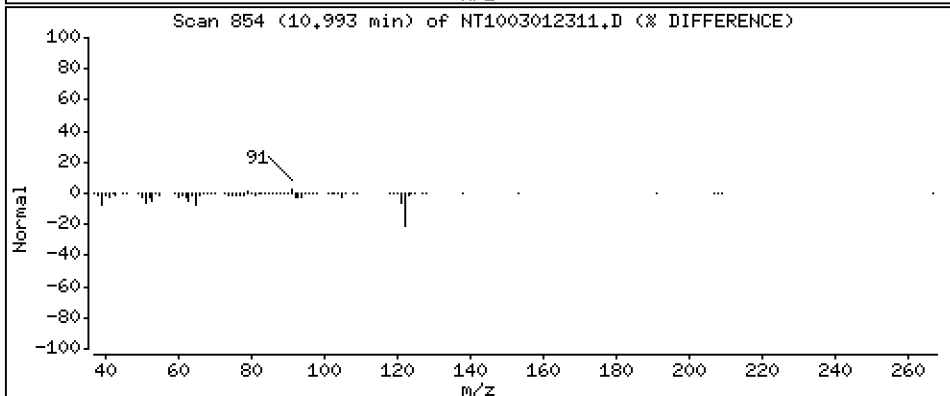
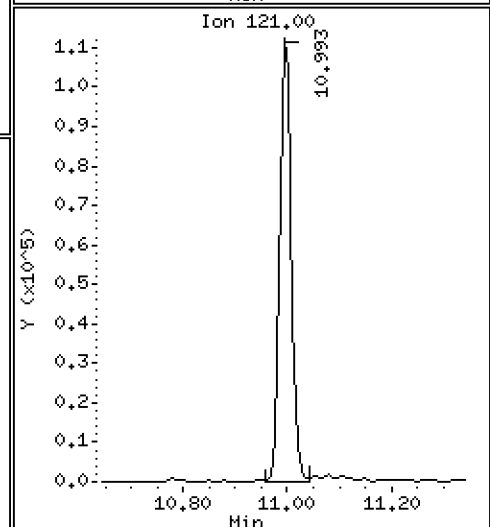
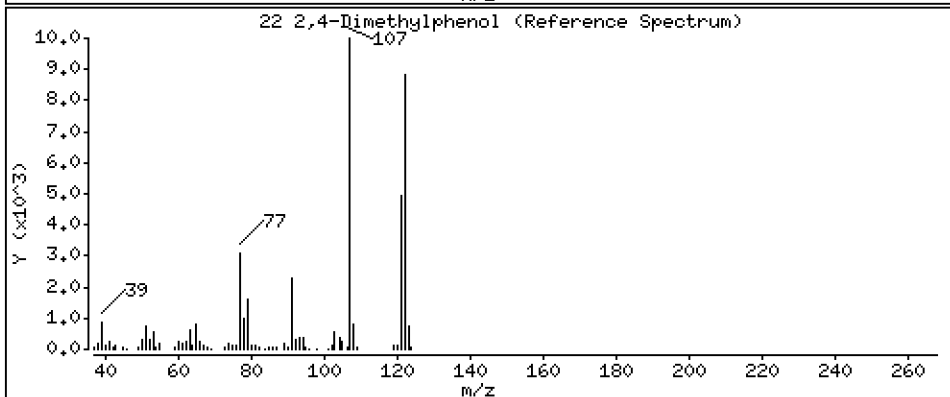
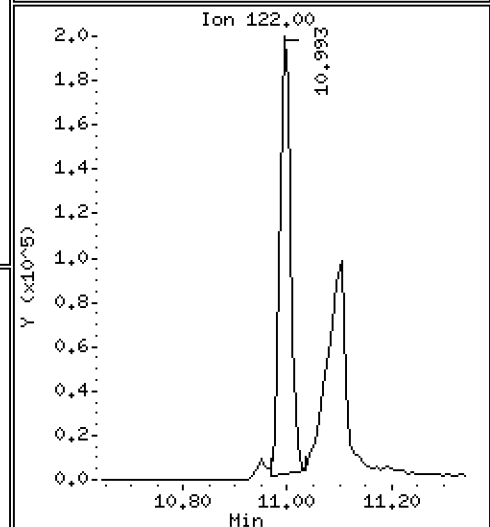
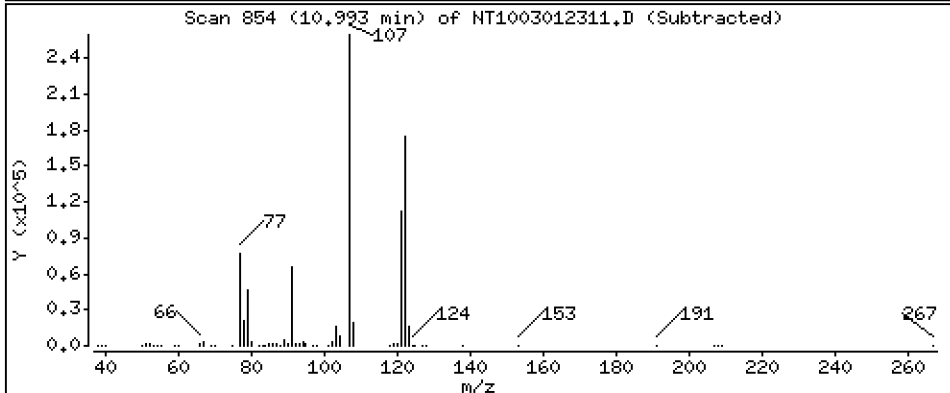
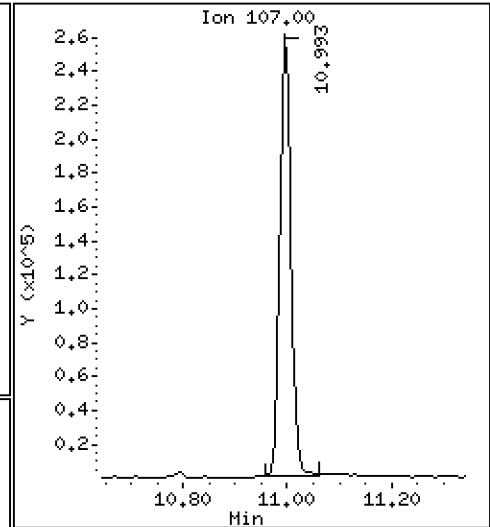
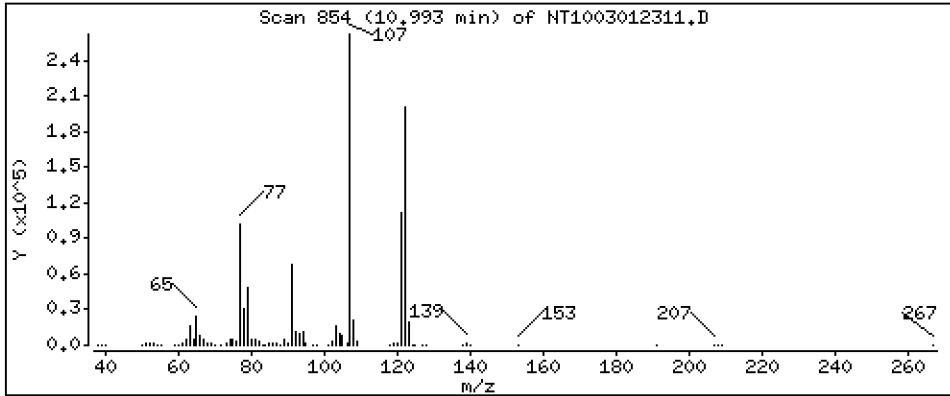
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 3,507 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

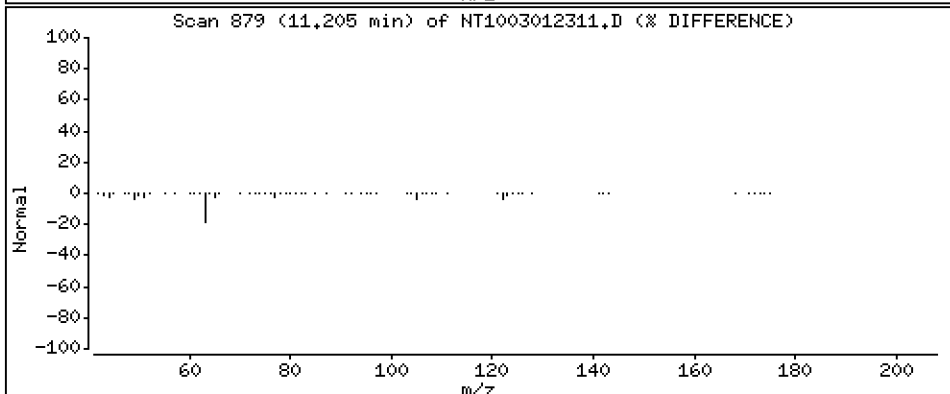
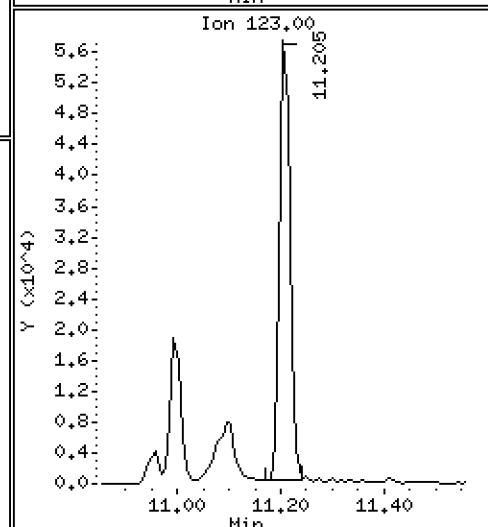
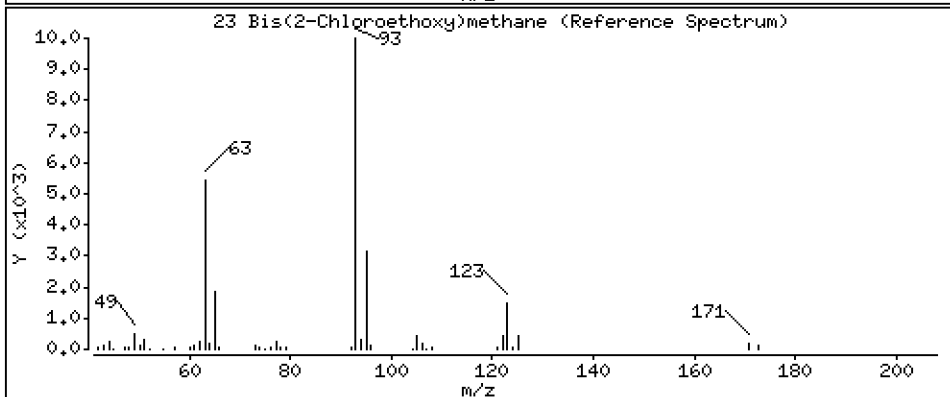
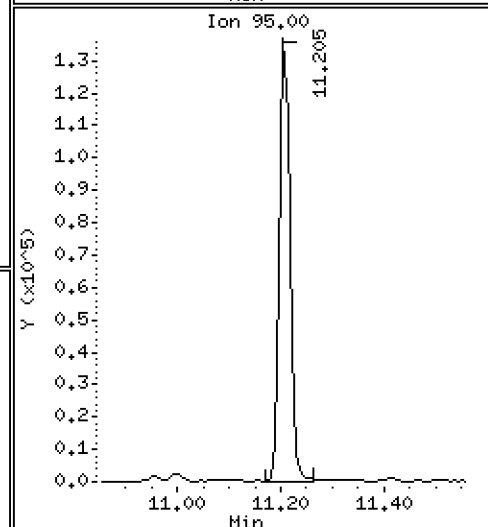
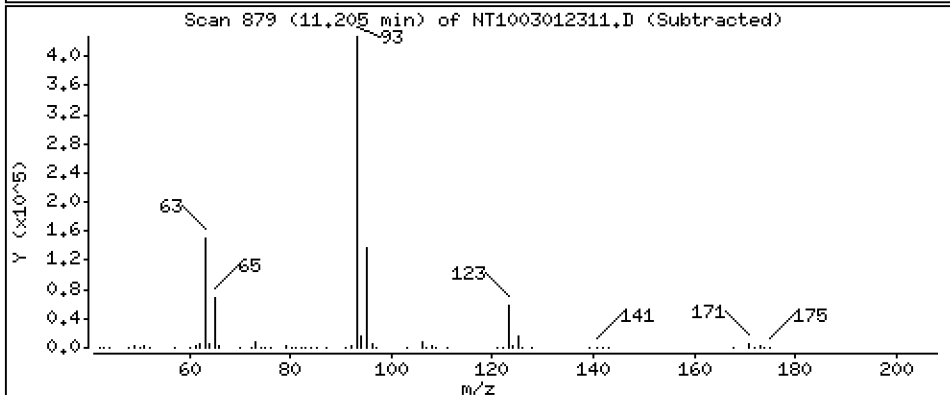
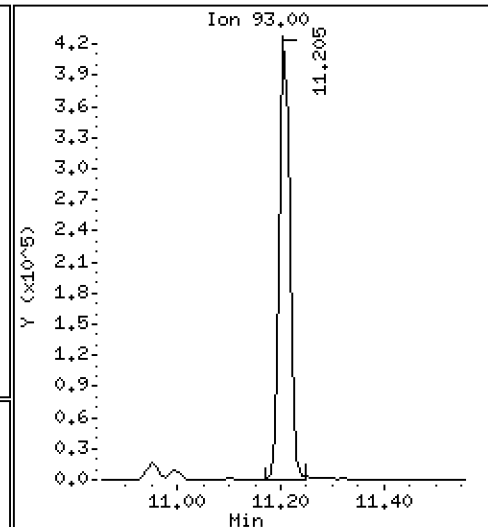
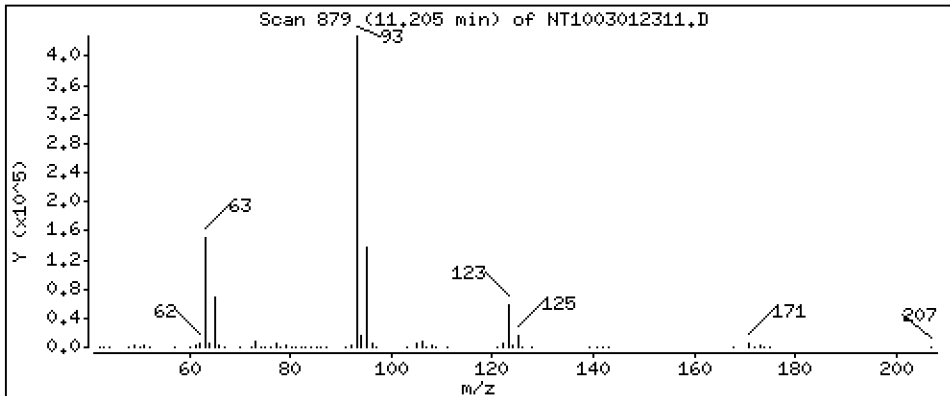
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,727 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

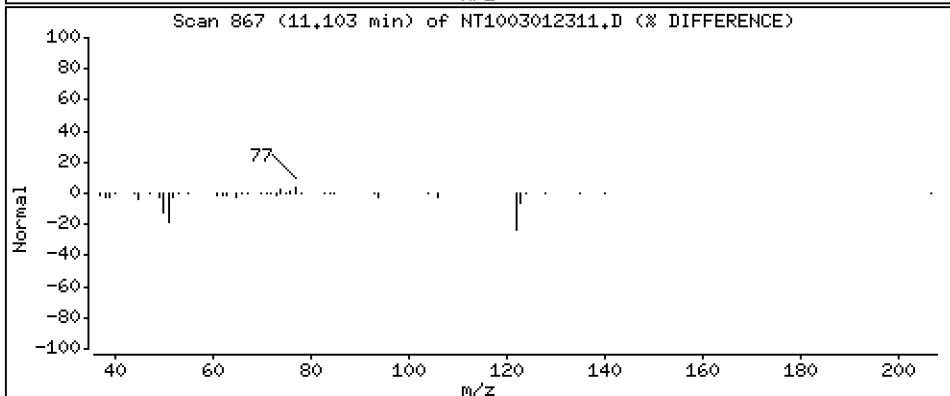
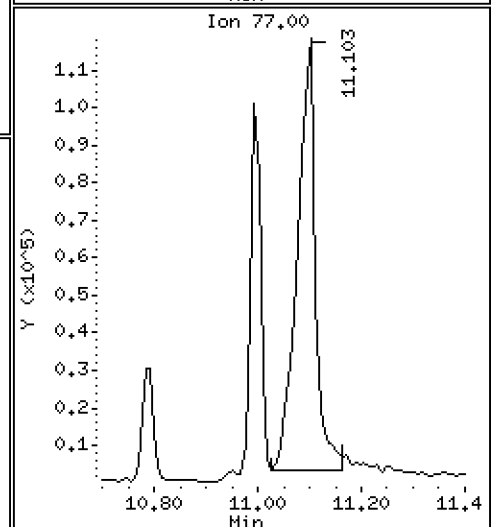
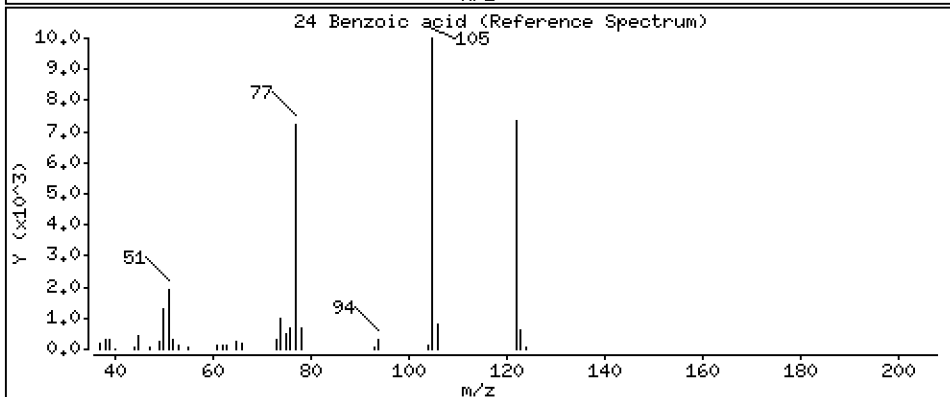
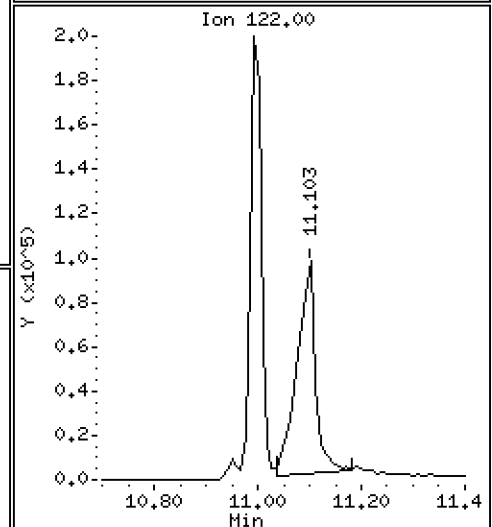
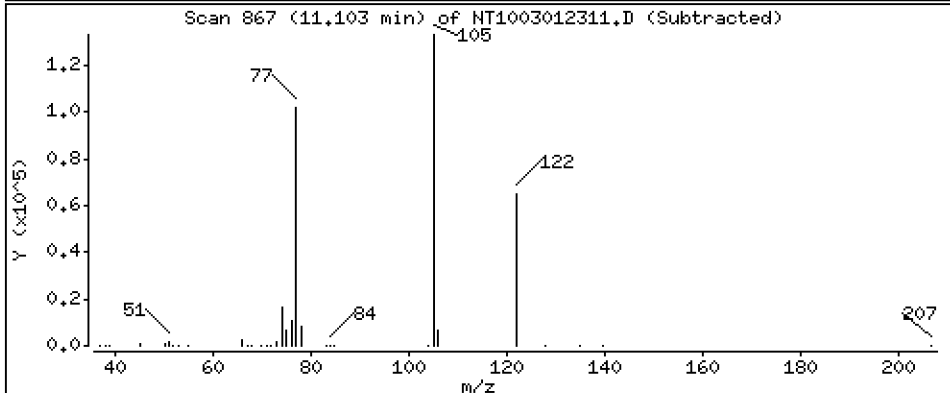
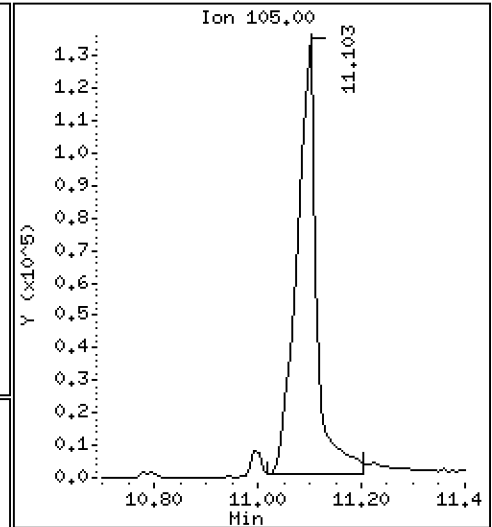
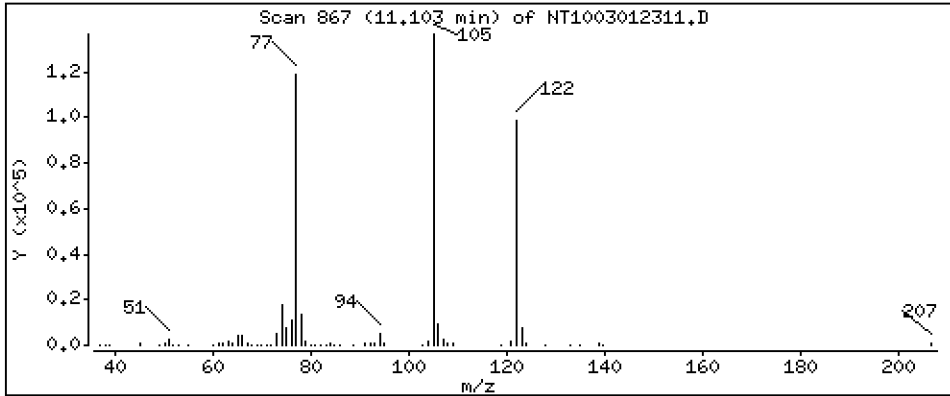
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 5,635 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

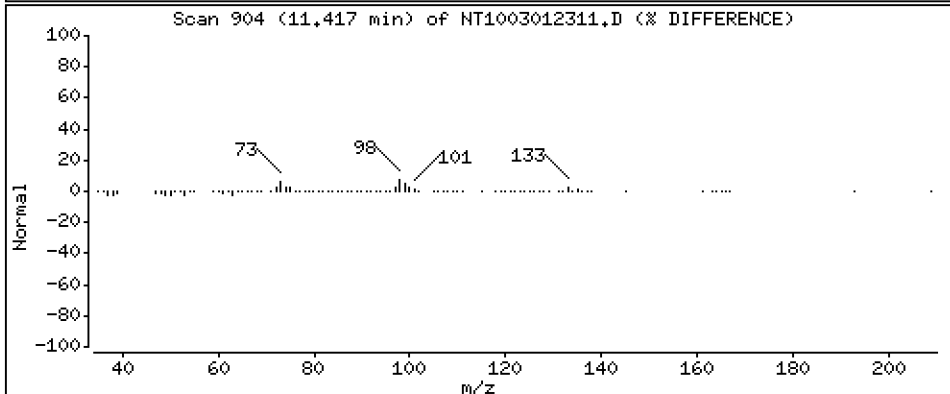
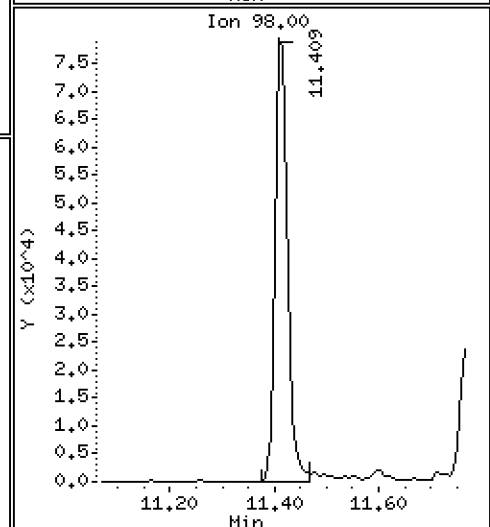
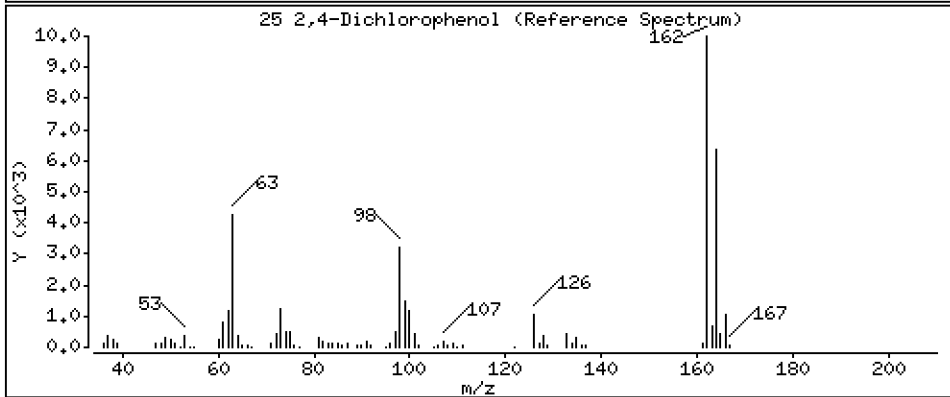
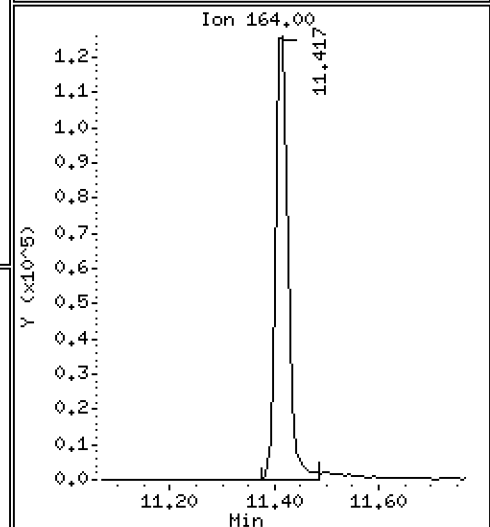
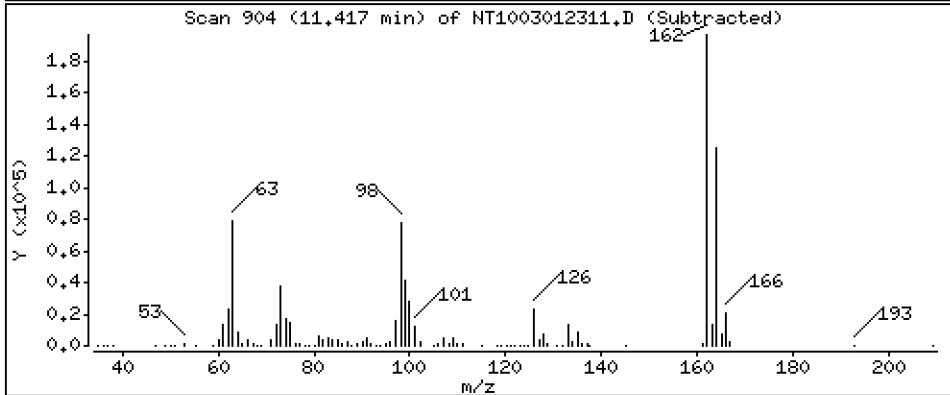
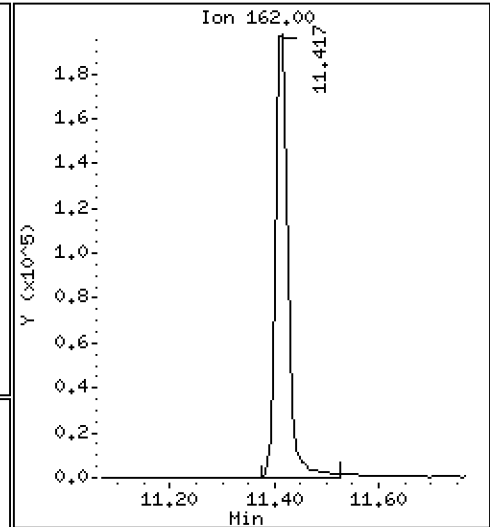
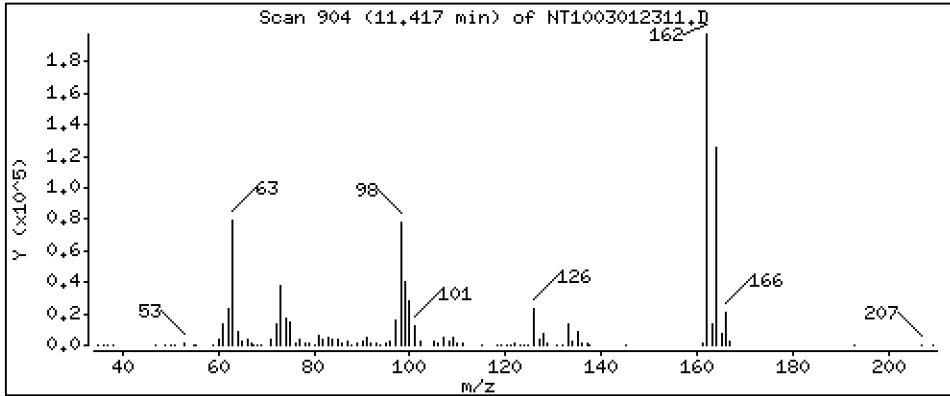
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 4,437 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

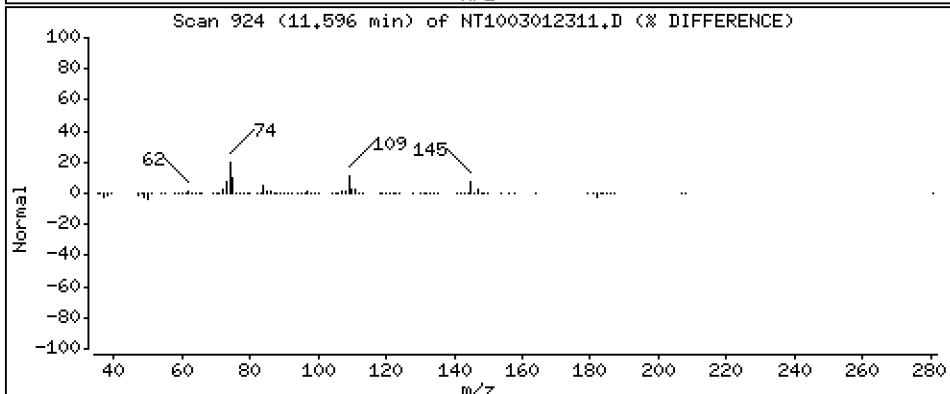
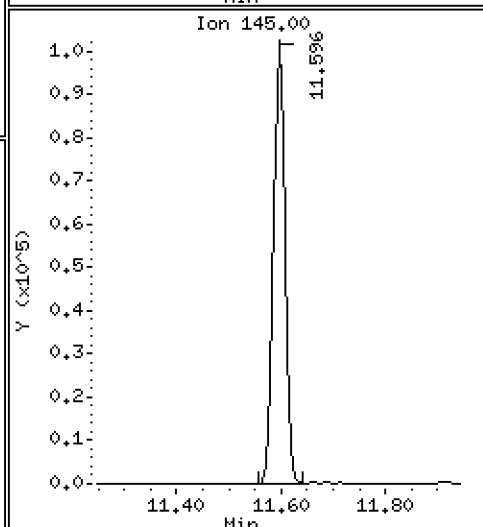
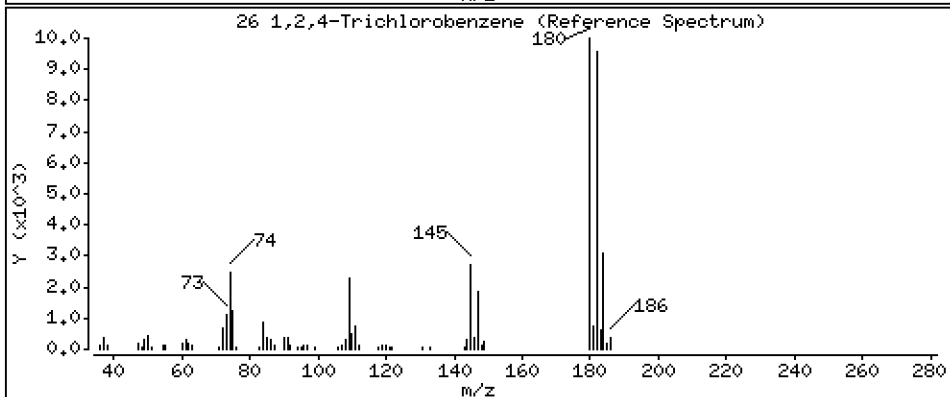
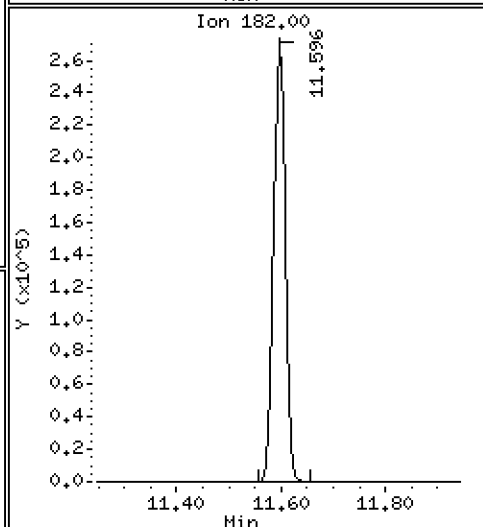
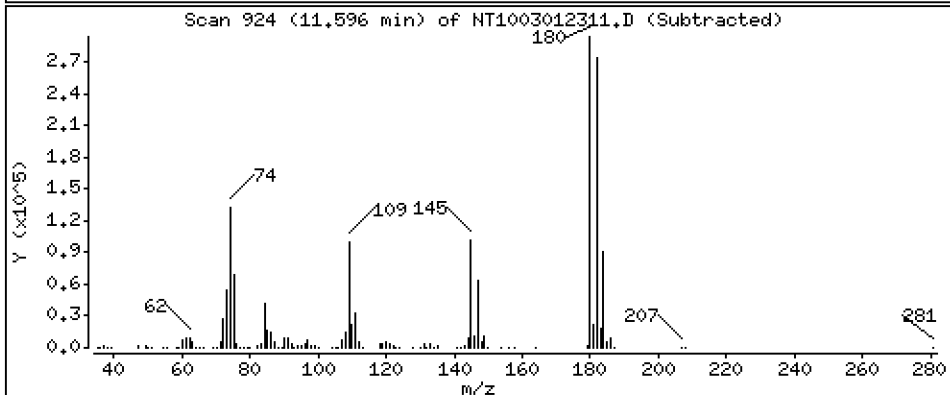
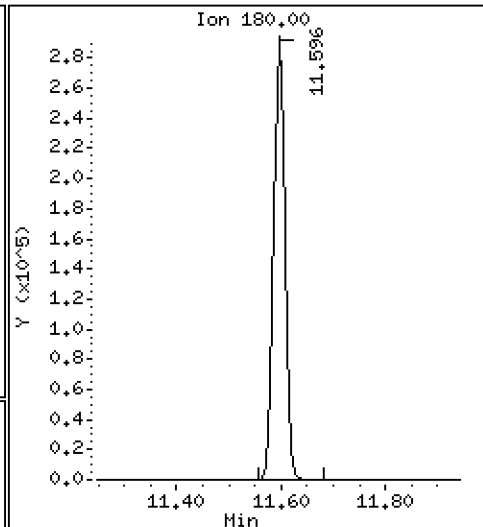
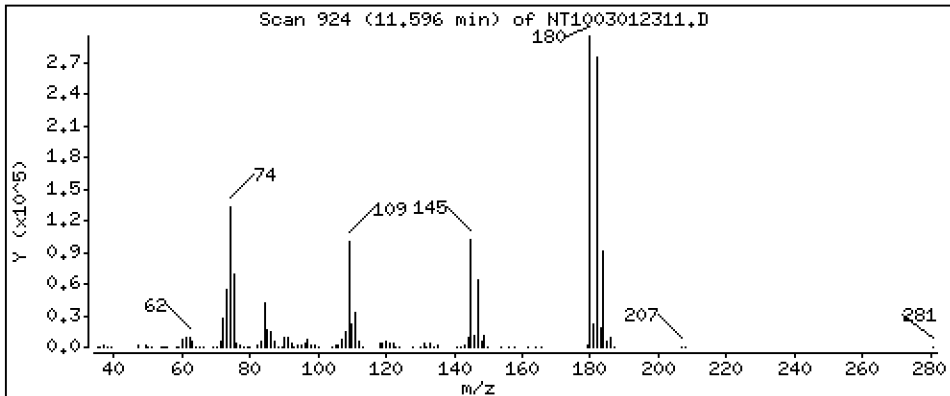
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,908 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

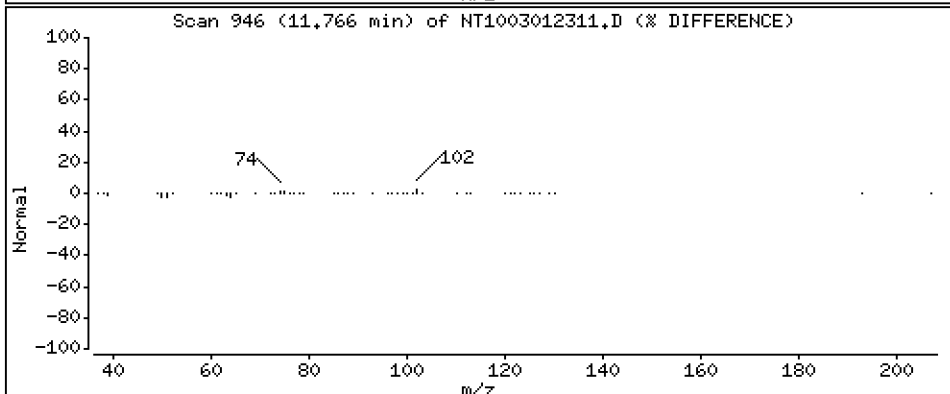
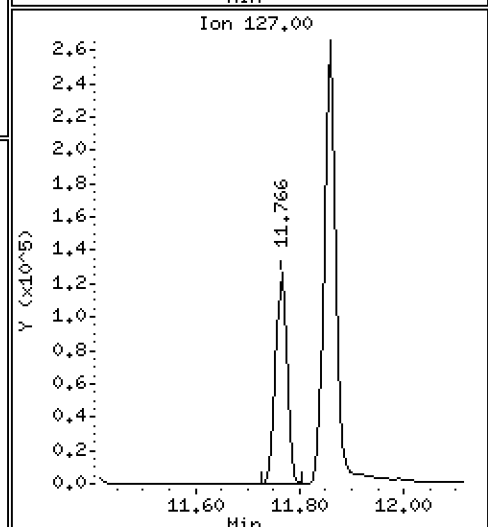
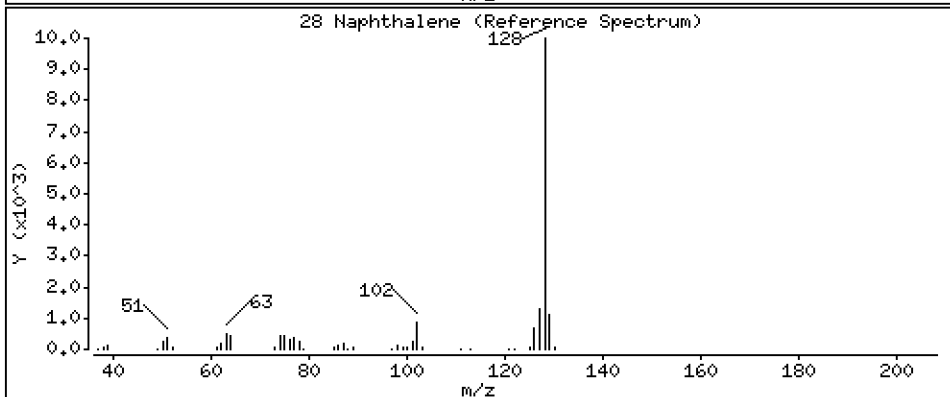
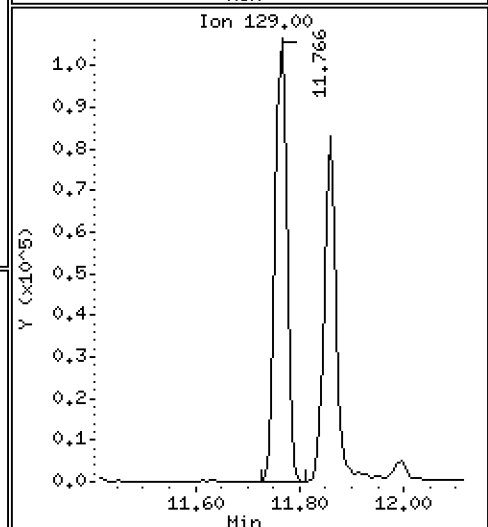
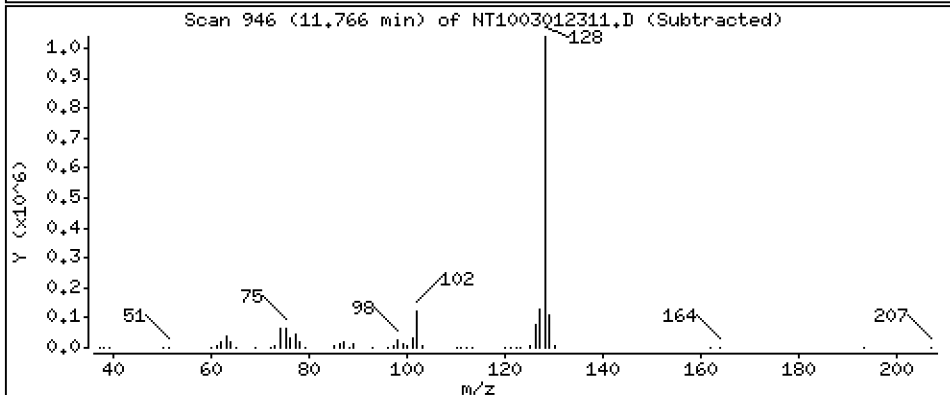
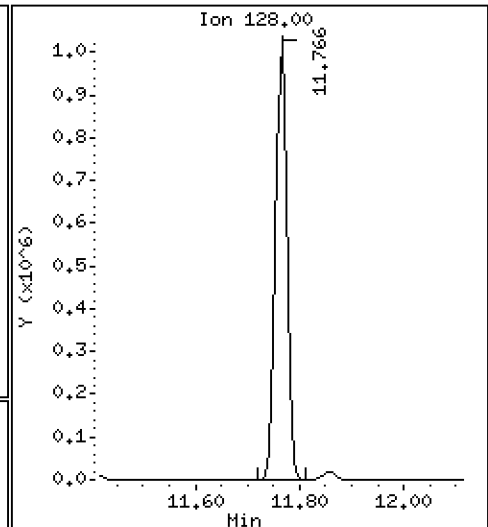
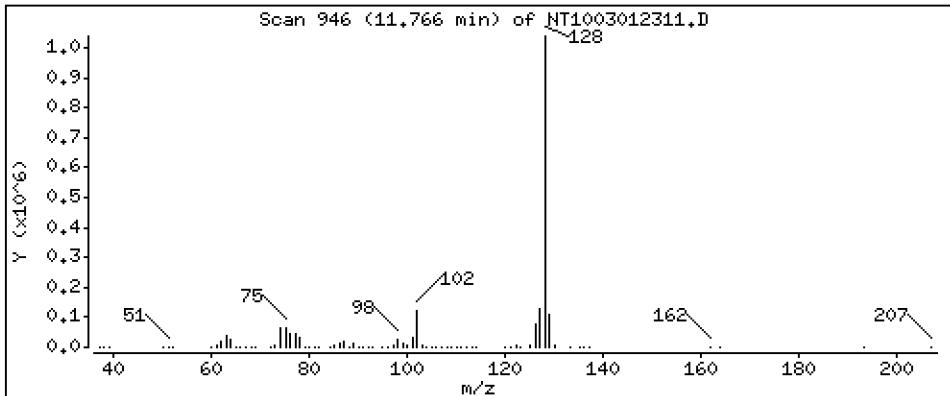
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 5,255 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

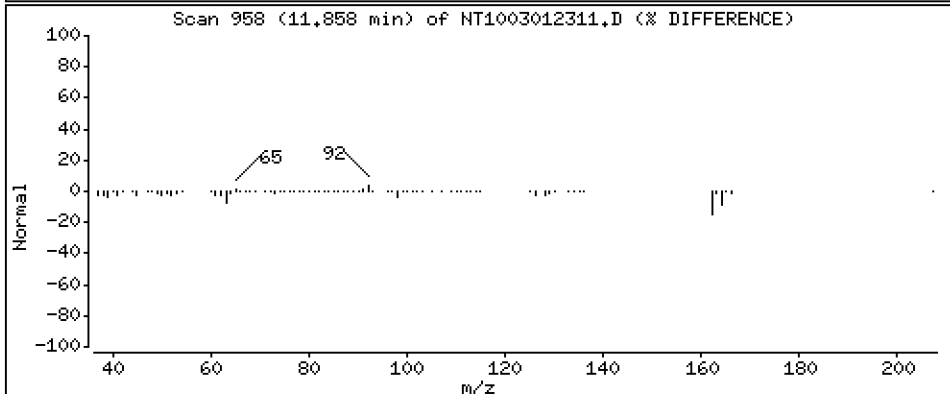
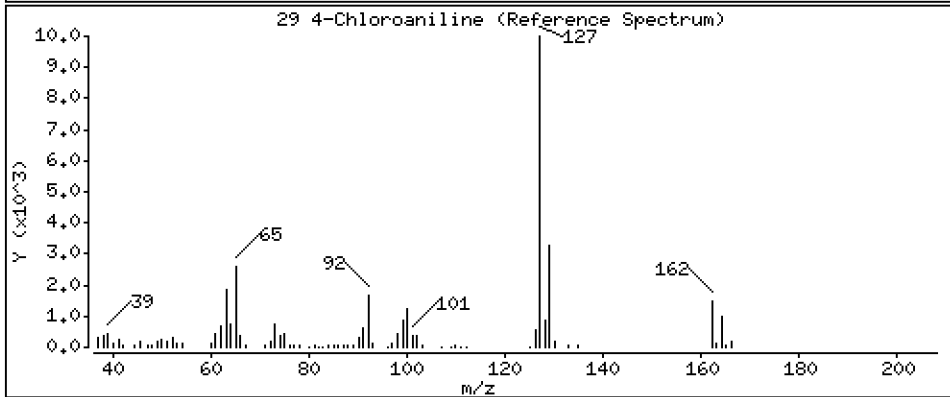
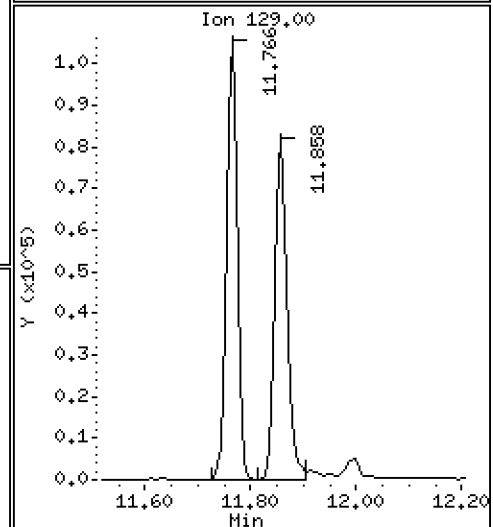
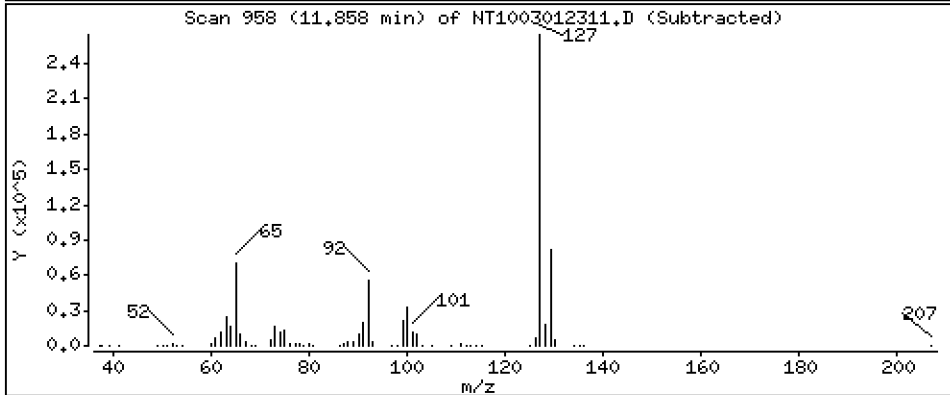
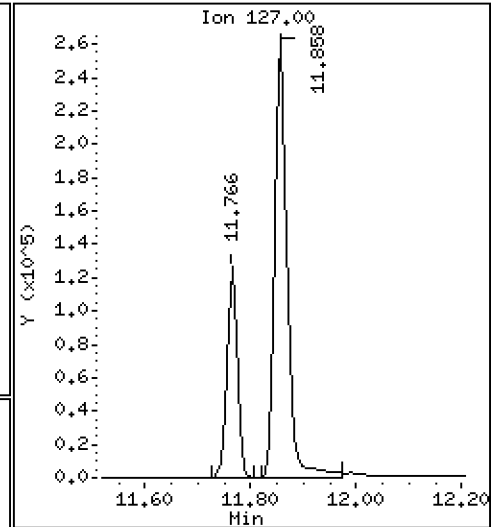
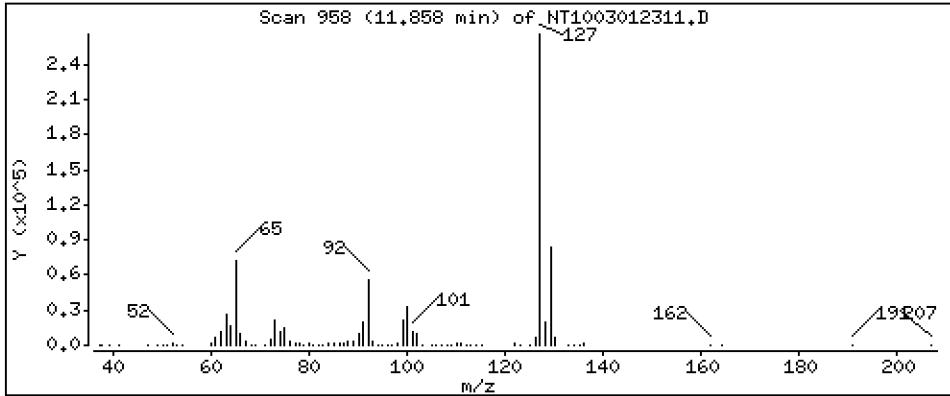
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 3,791 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

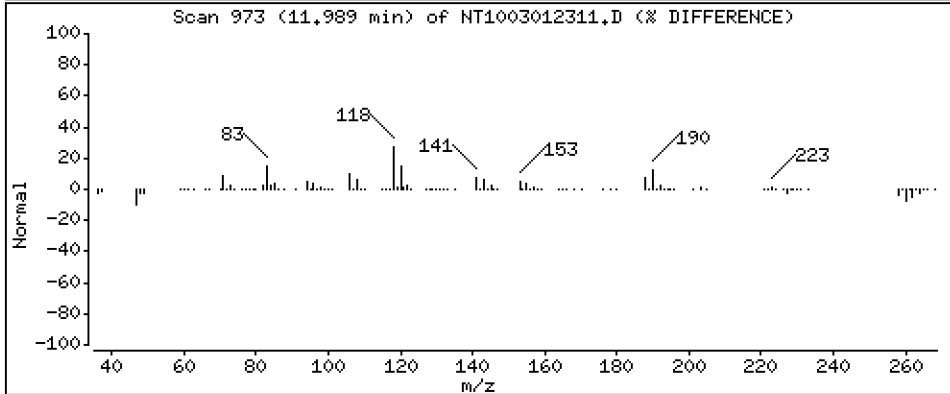
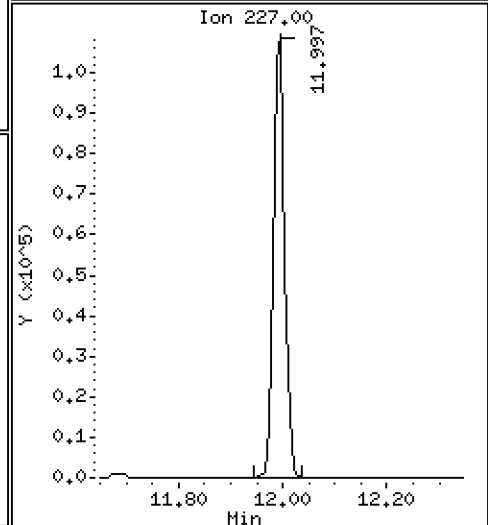
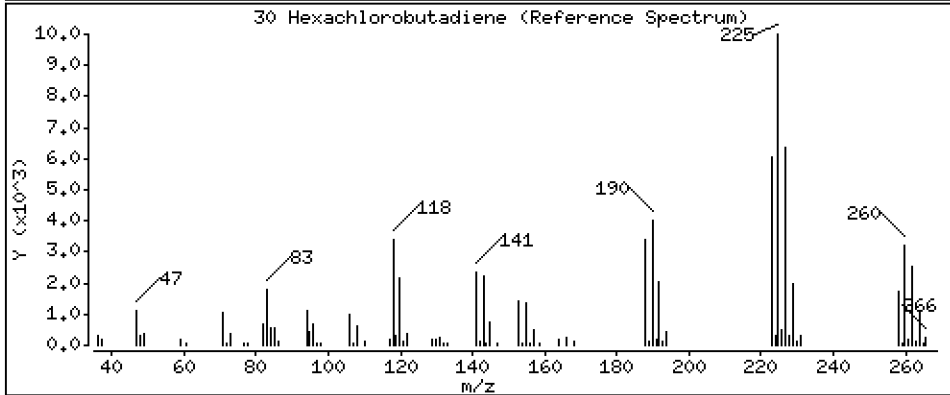
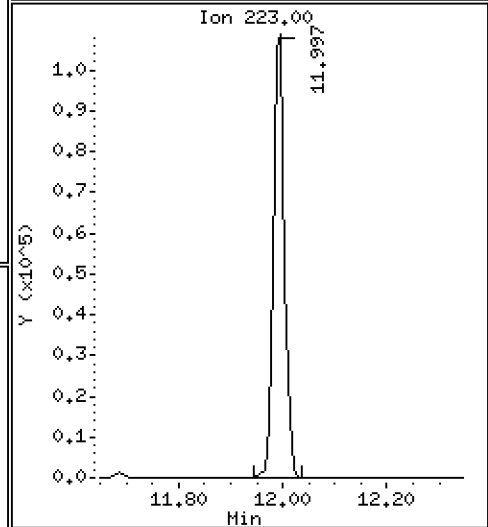
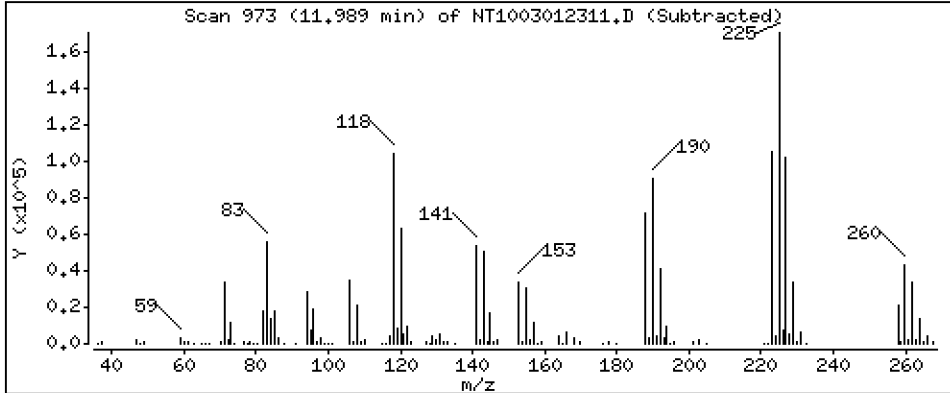
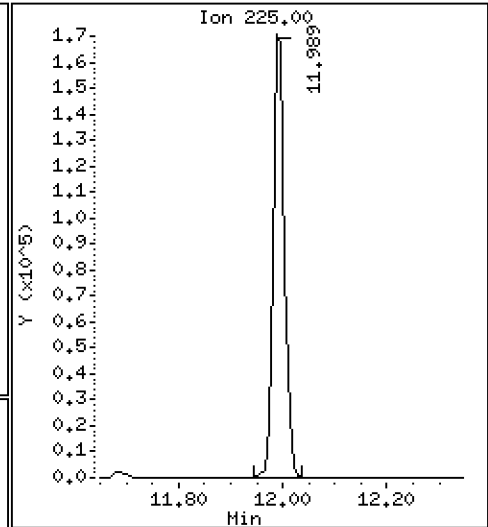
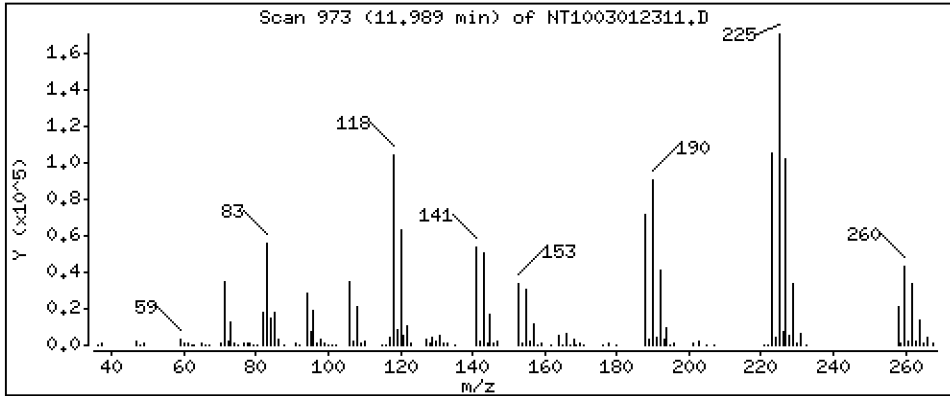
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 5,014 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

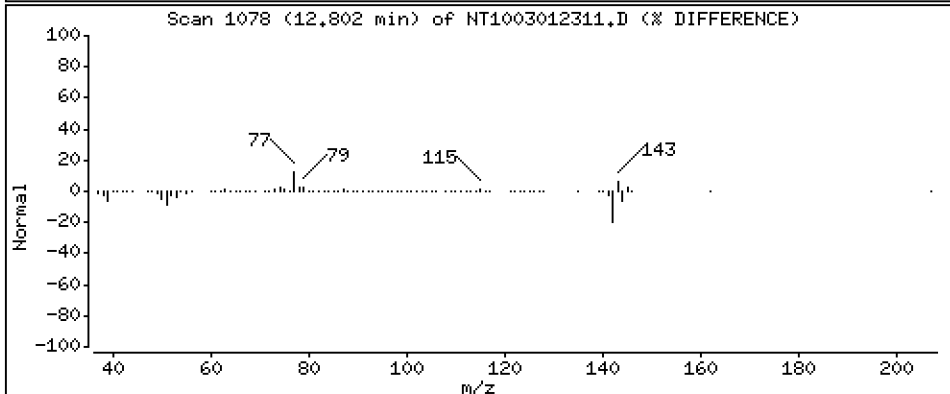
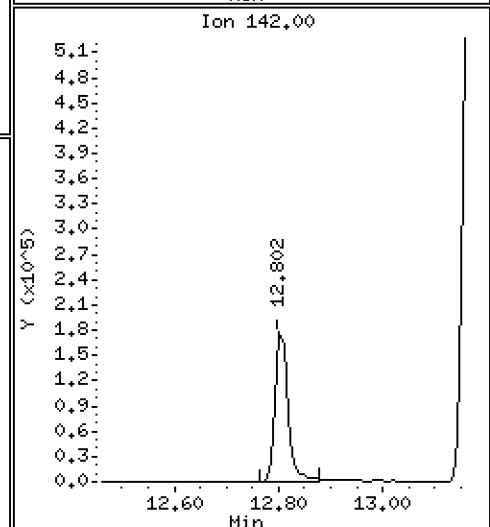
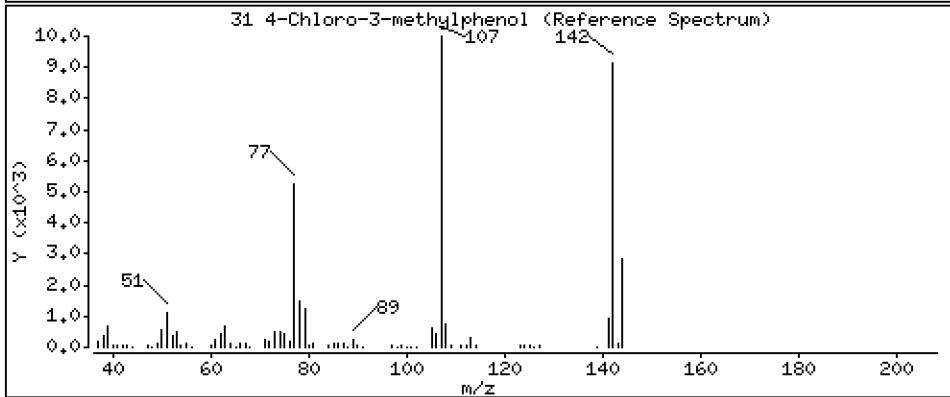
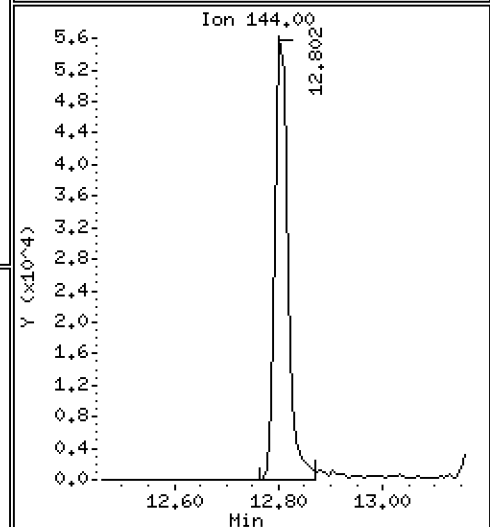
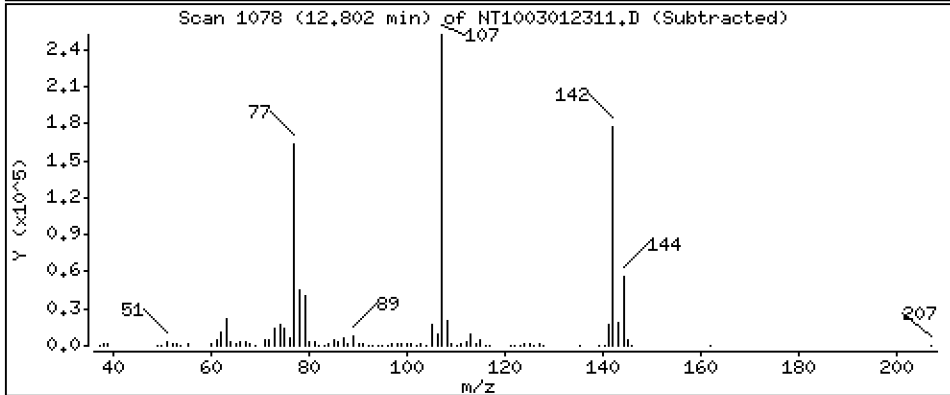
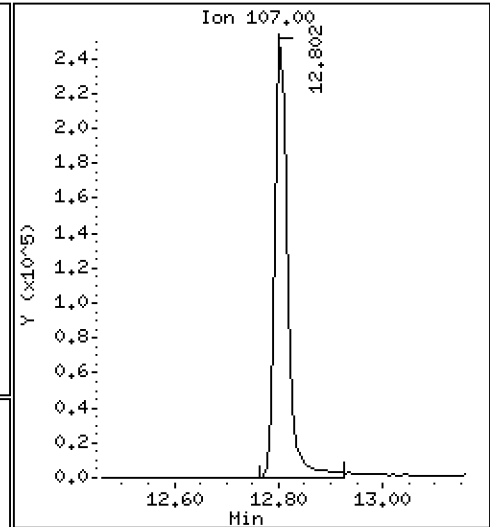
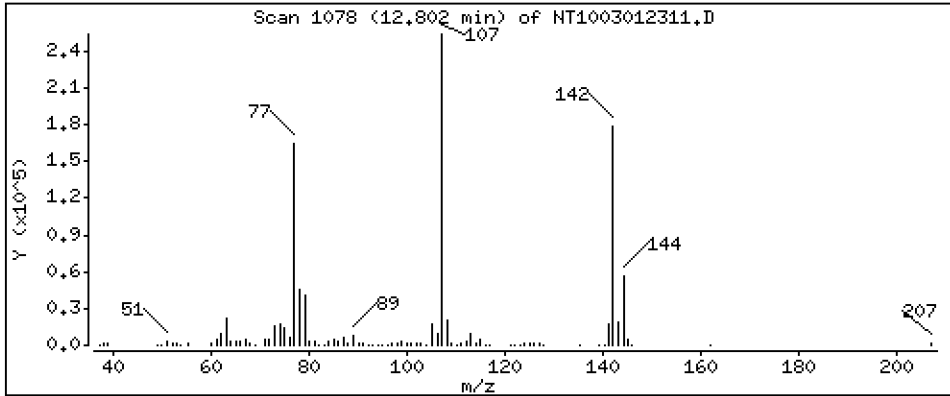
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 4,452 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

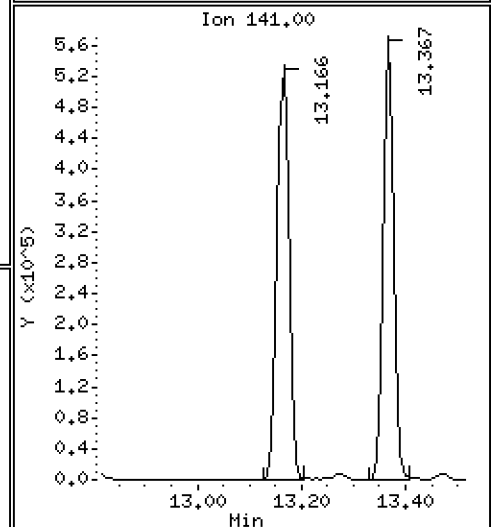
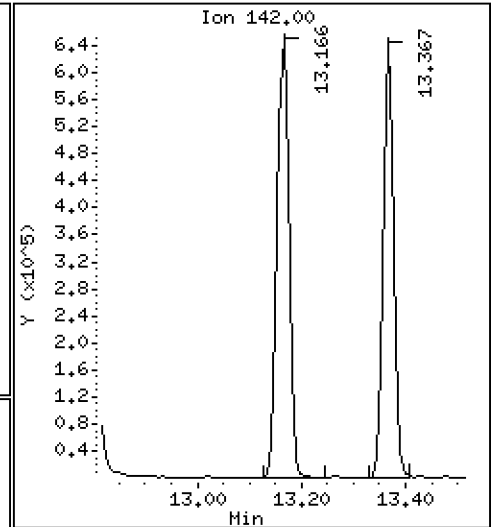
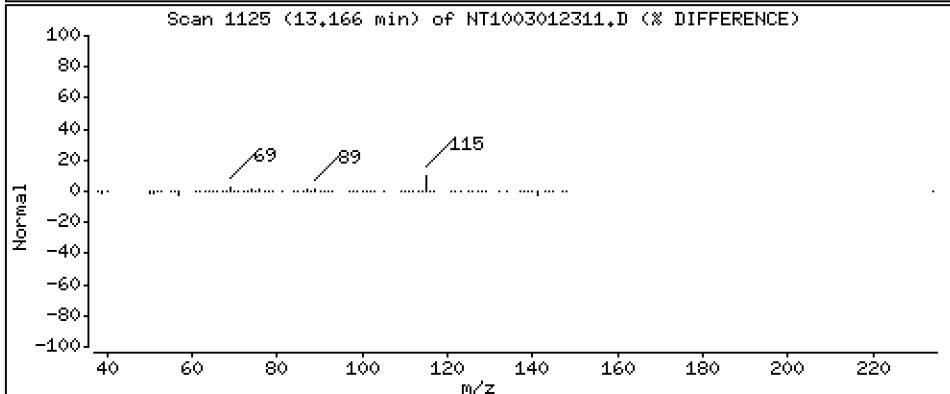
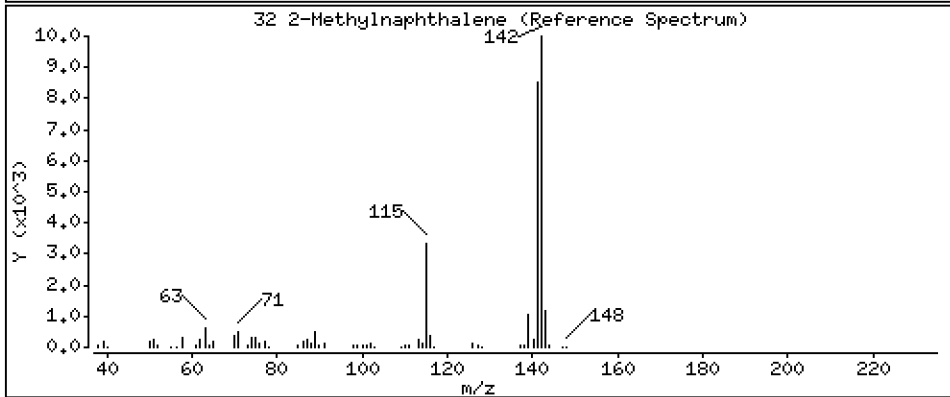
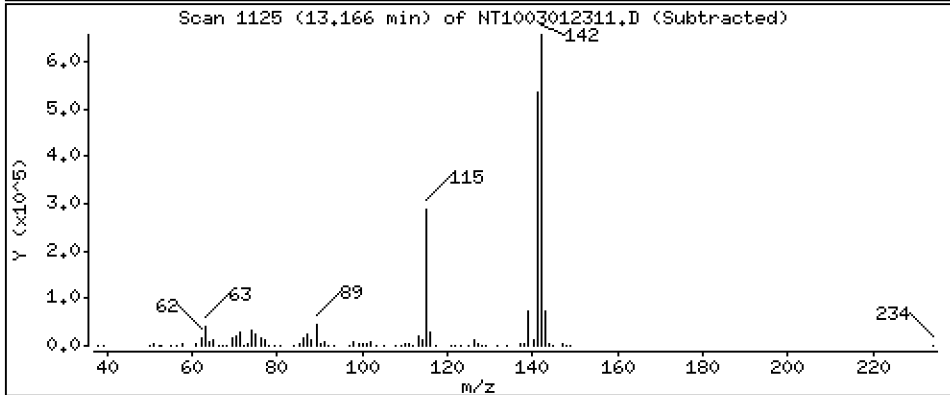
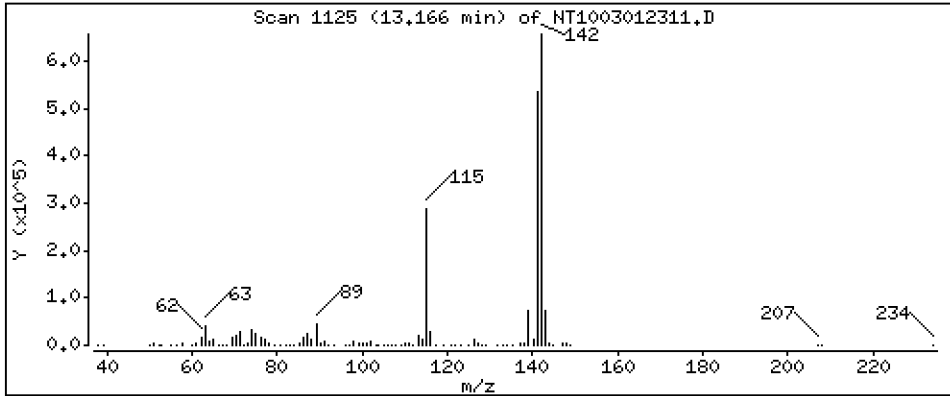
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,951 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

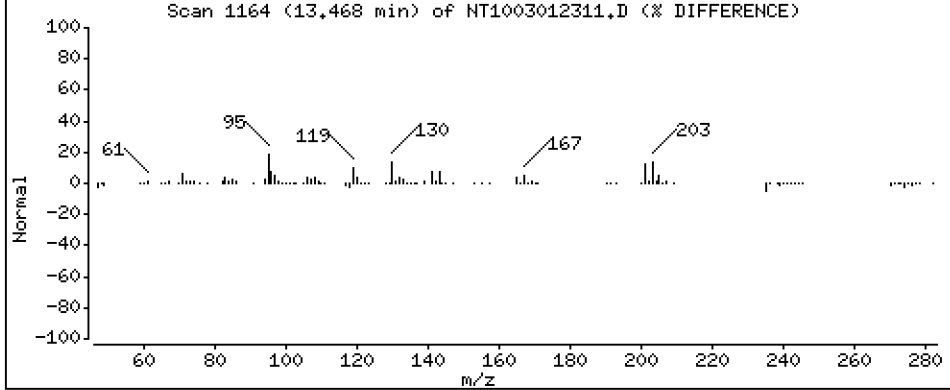
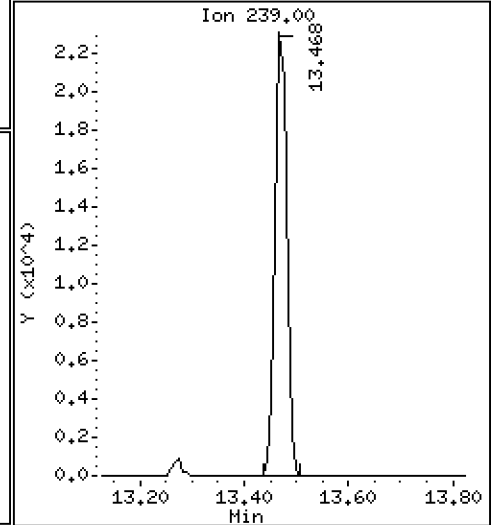
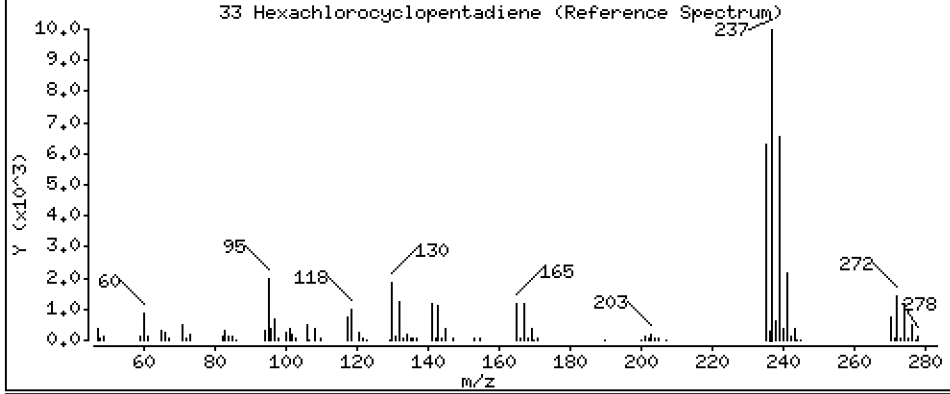
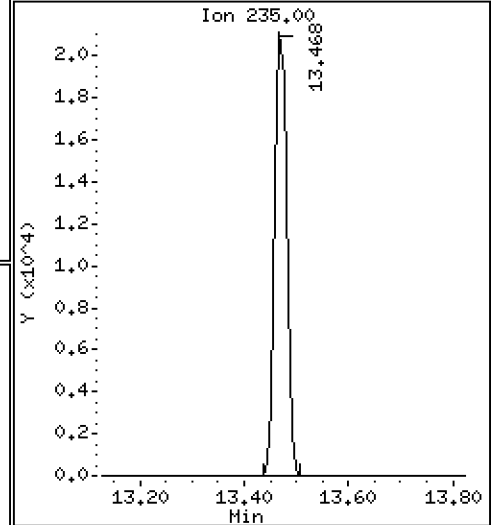
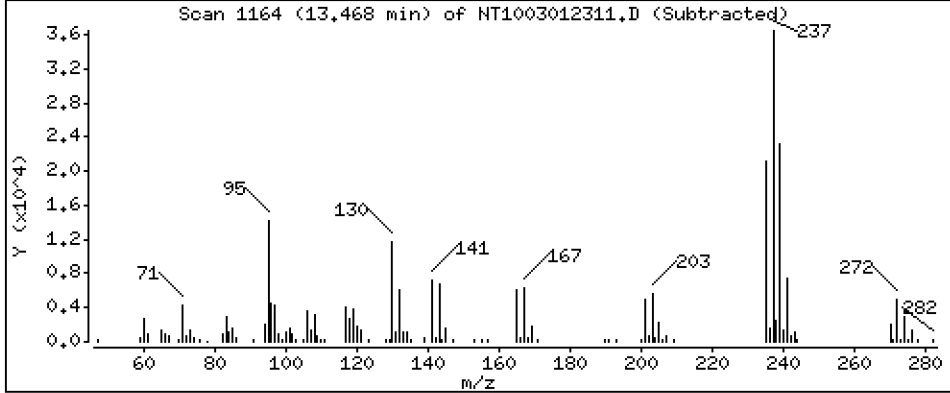
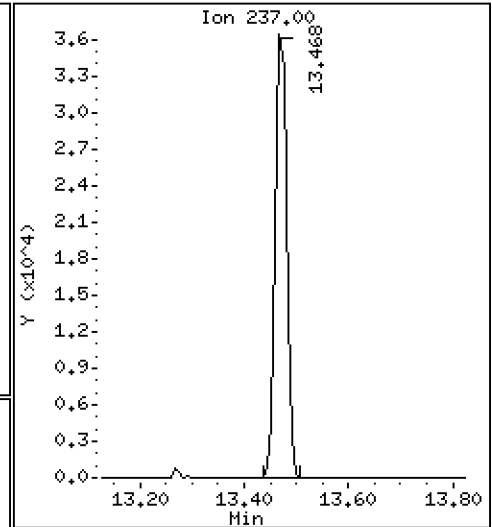
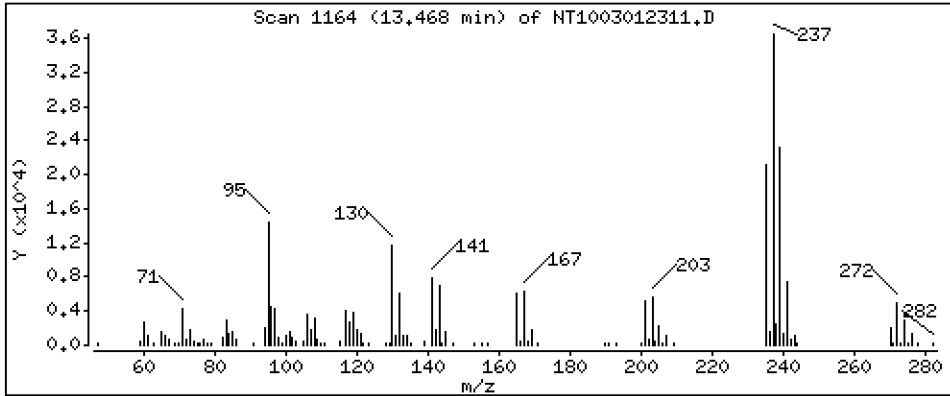
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 2,562 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

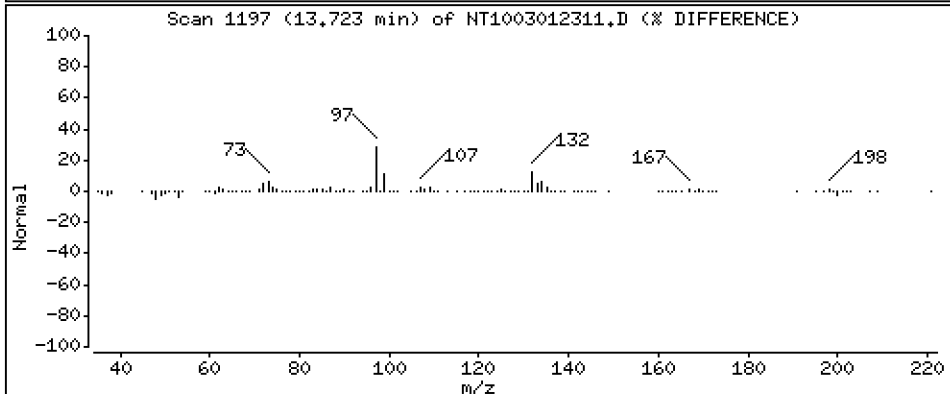
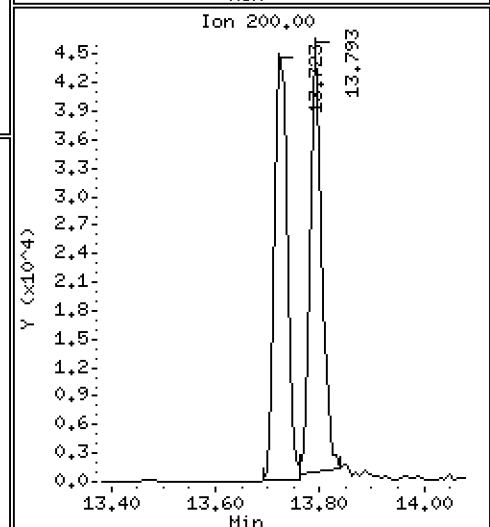
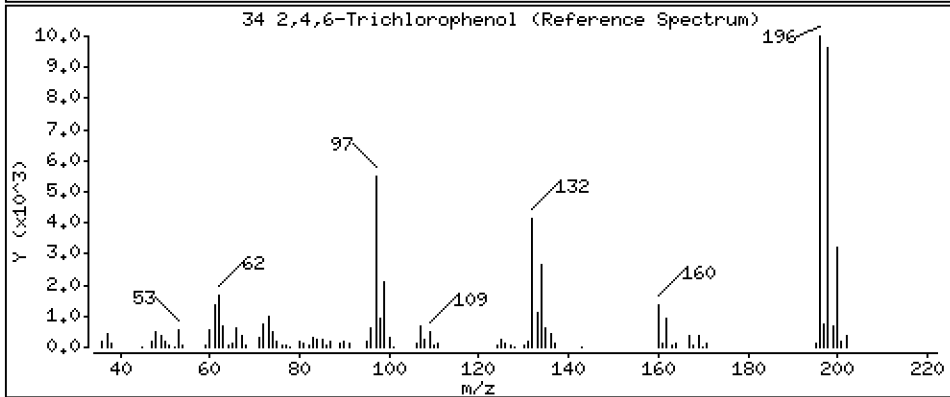
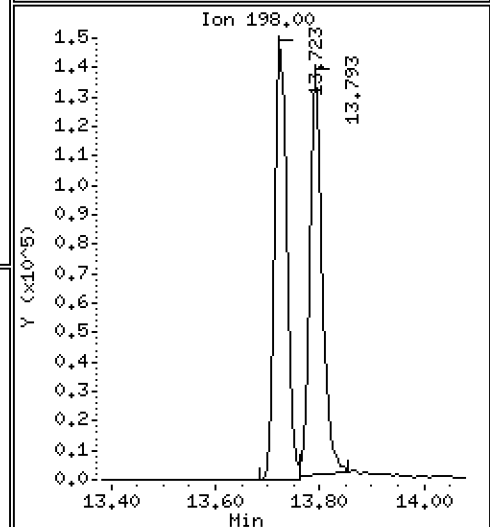
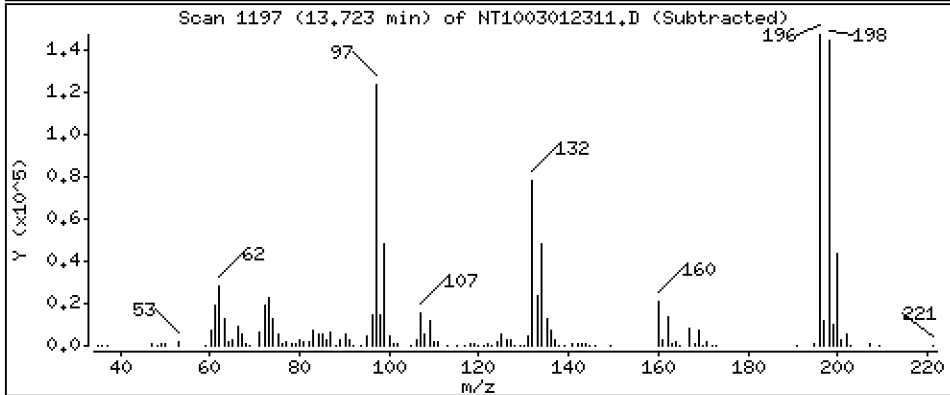
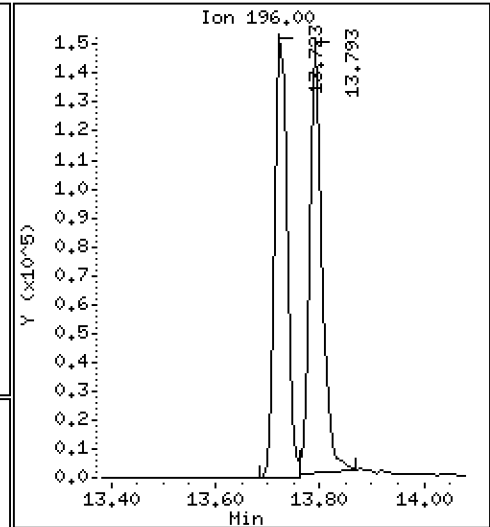
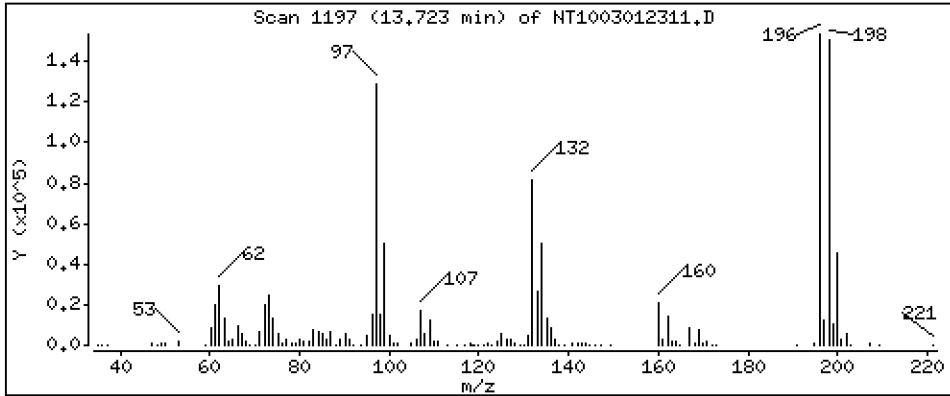
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

34 2,4,6-Trichlorophenol

Concentration: 4.120 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

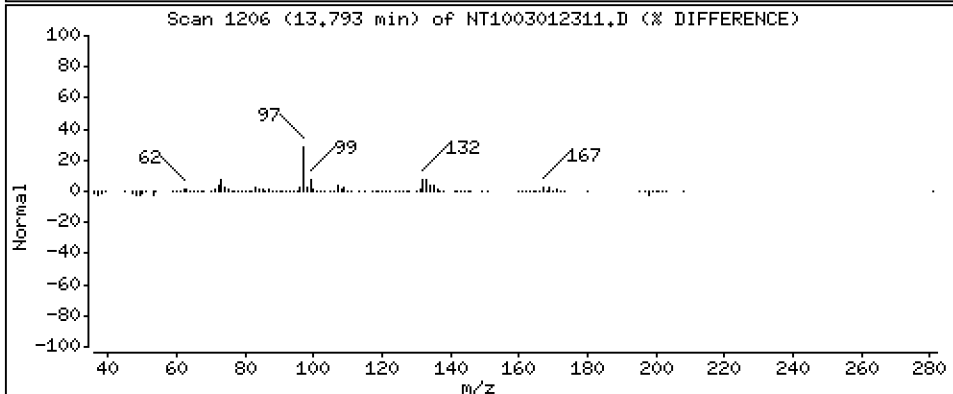
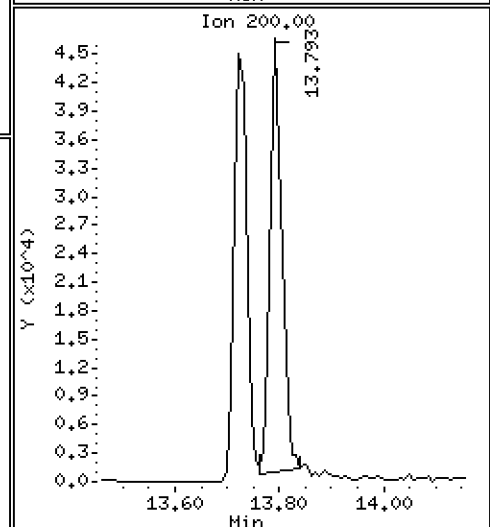
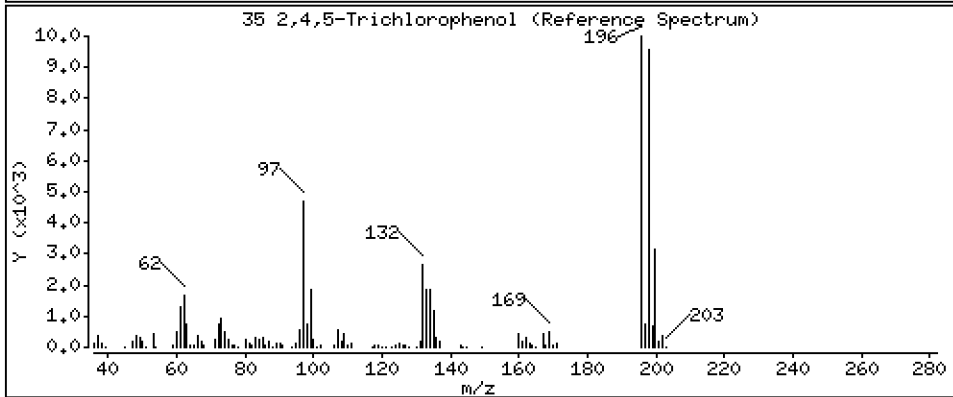
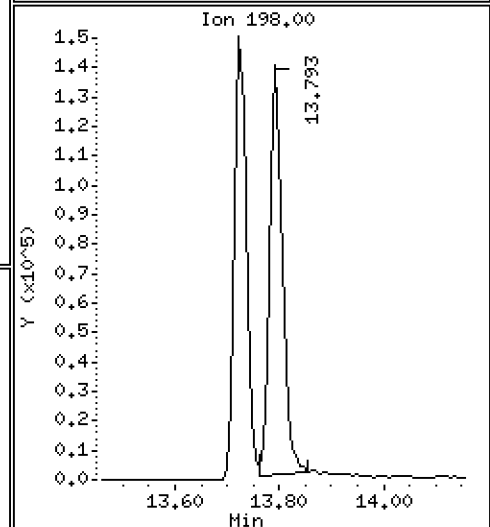
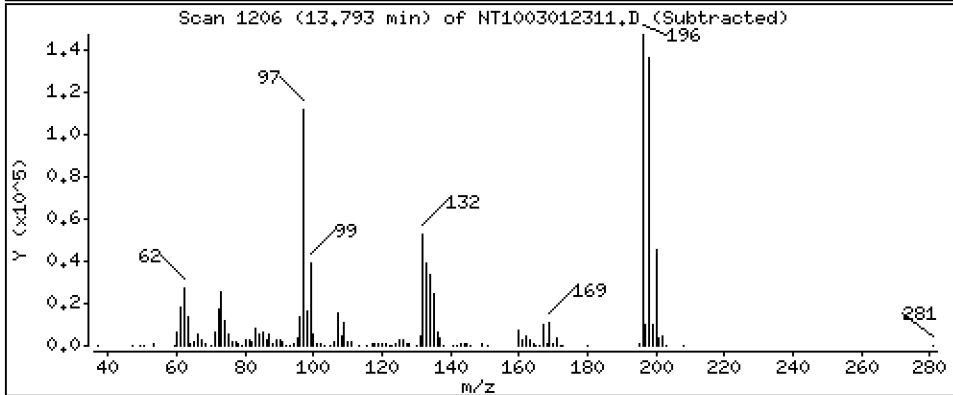
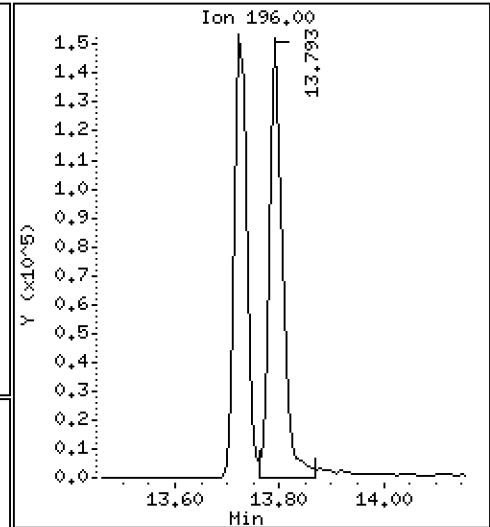
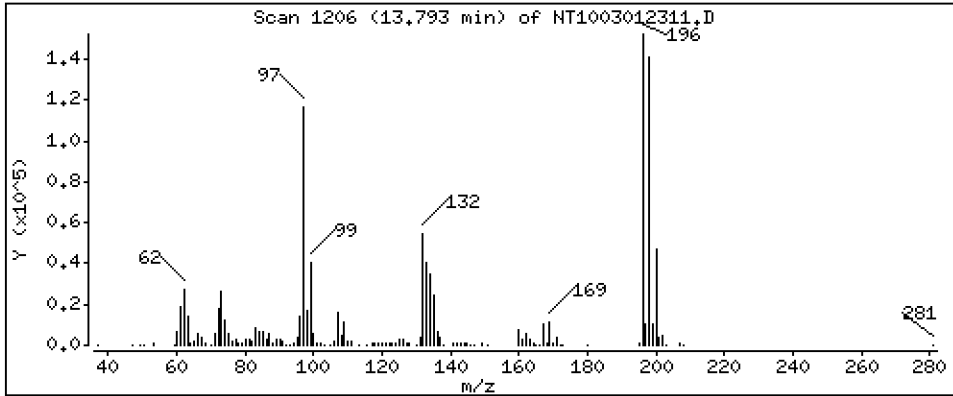
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 4,149 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

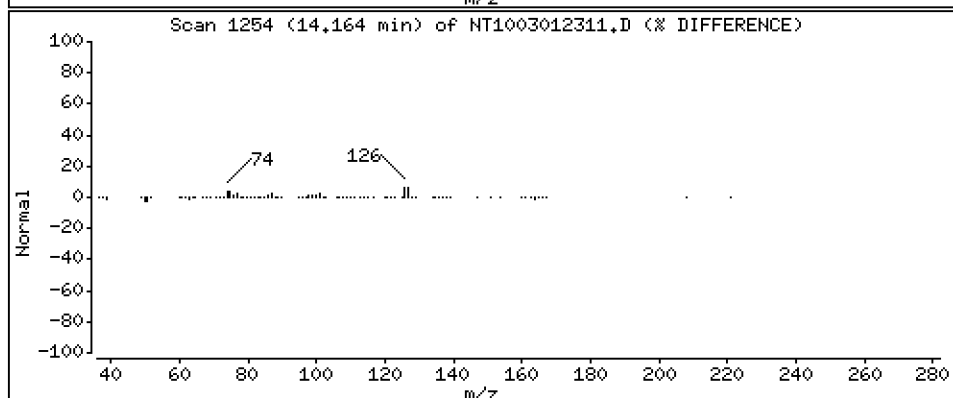
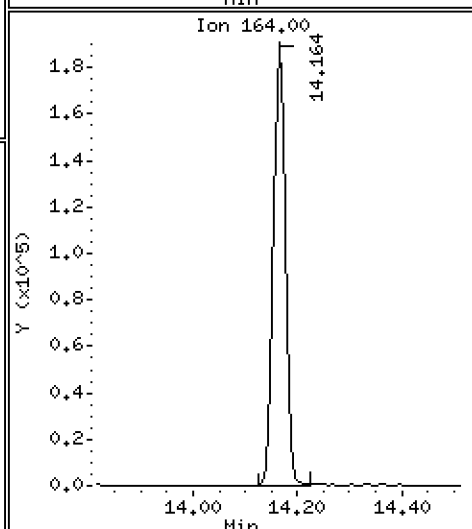
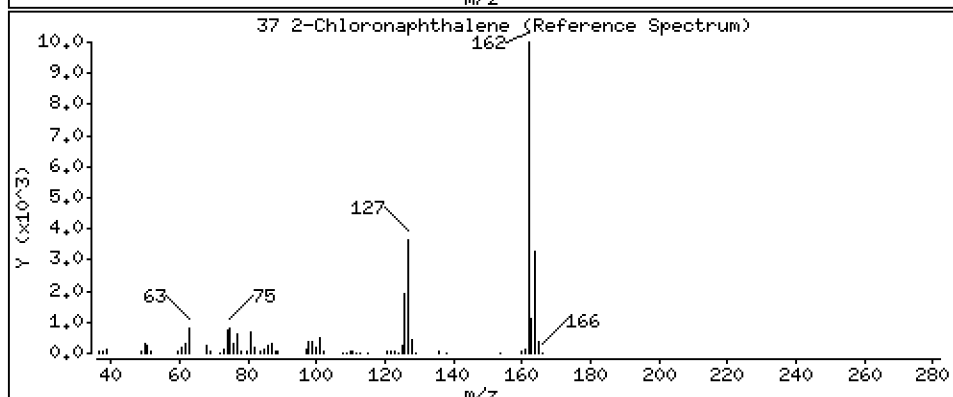
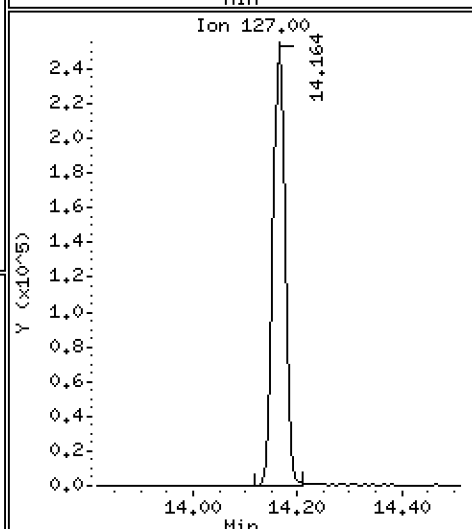
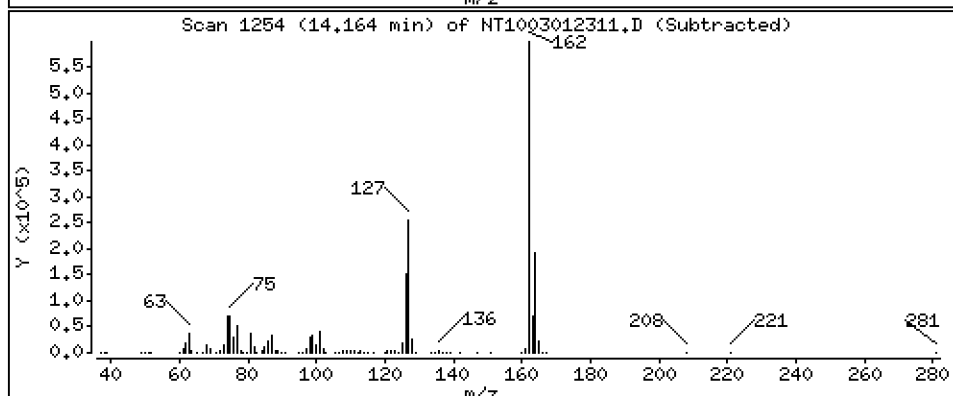
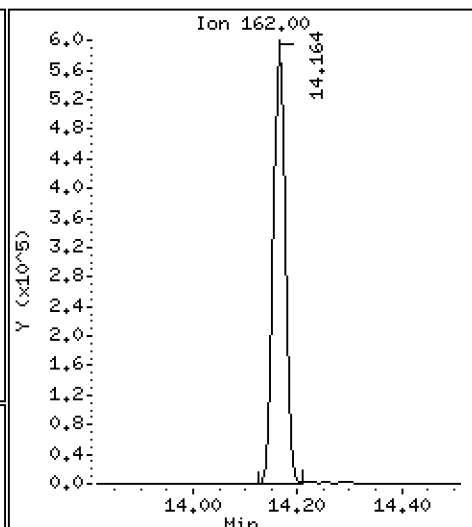
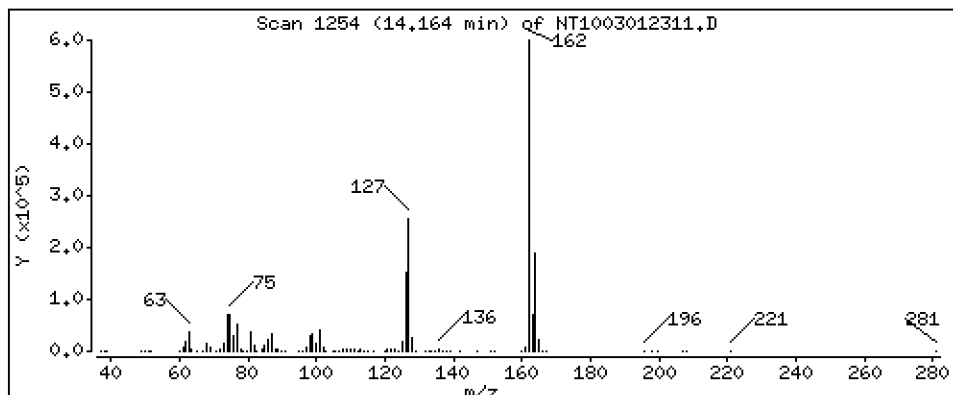
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,264 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

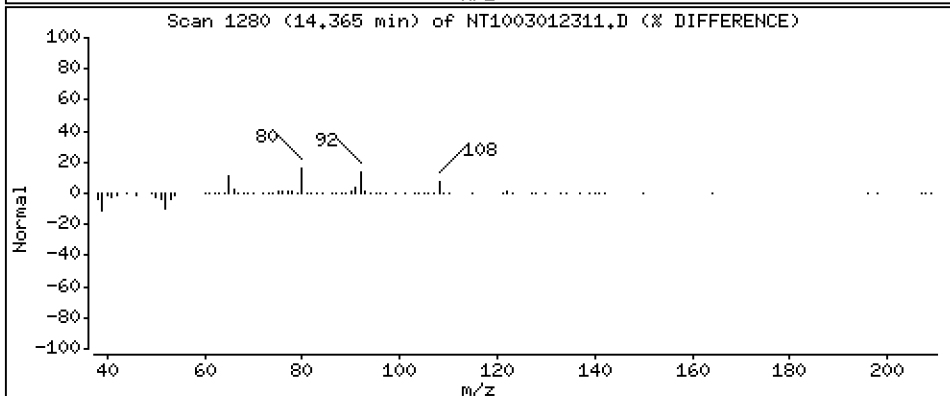
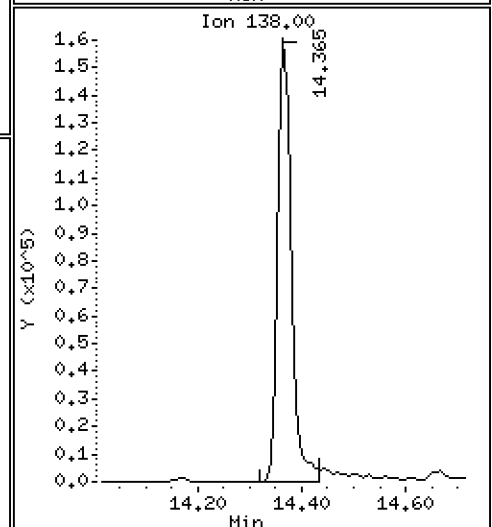
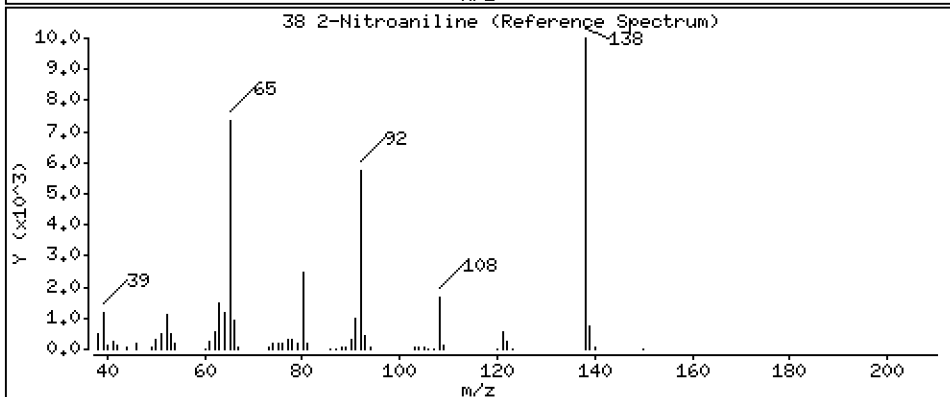
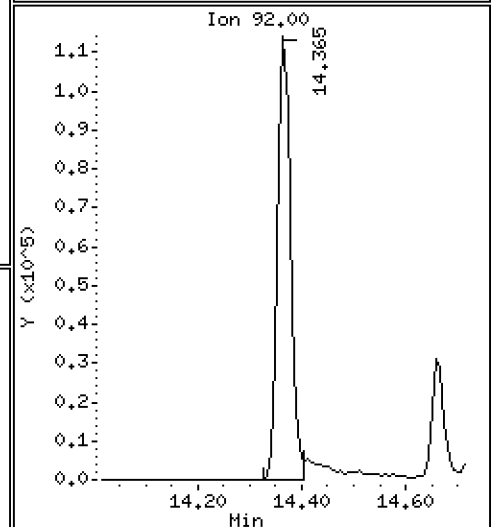
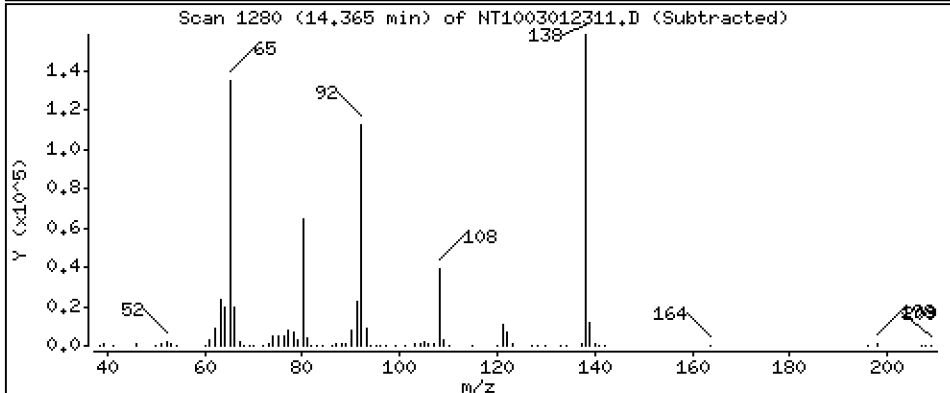
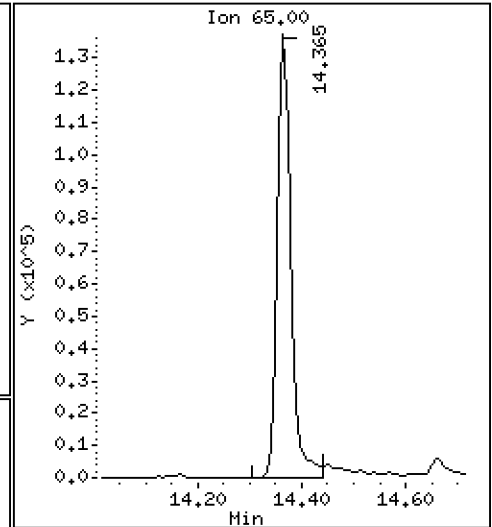
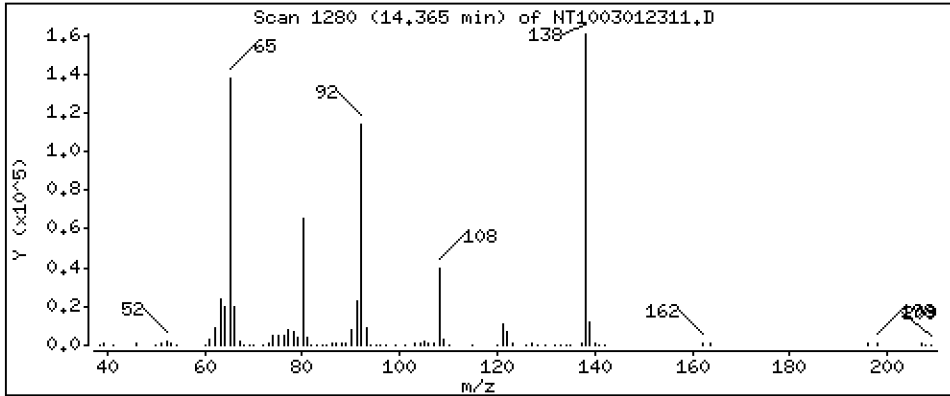
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 5,027 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

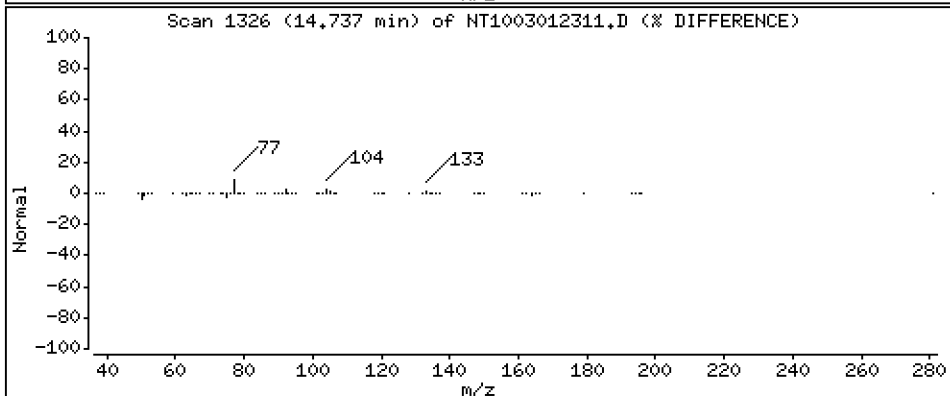
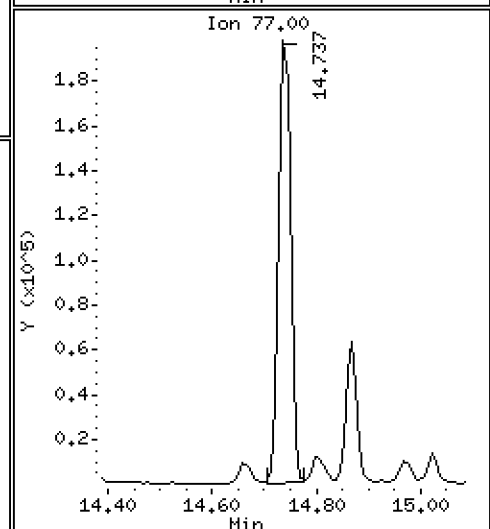
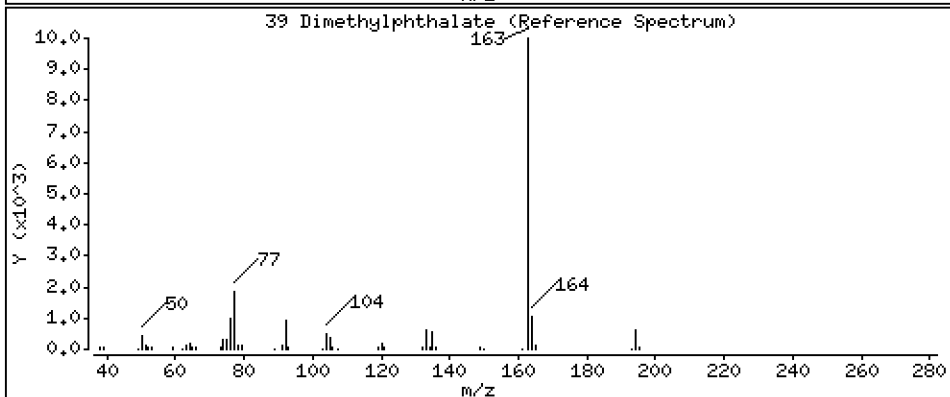
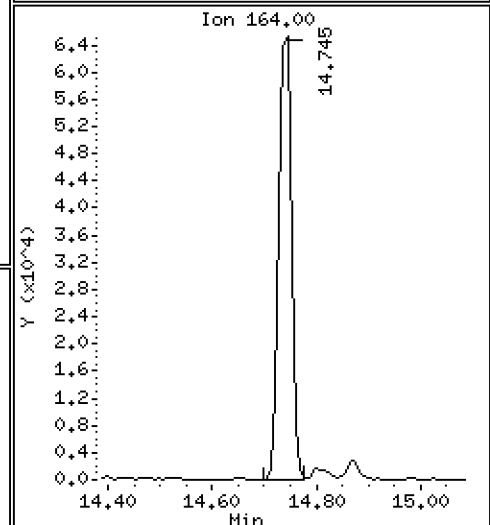
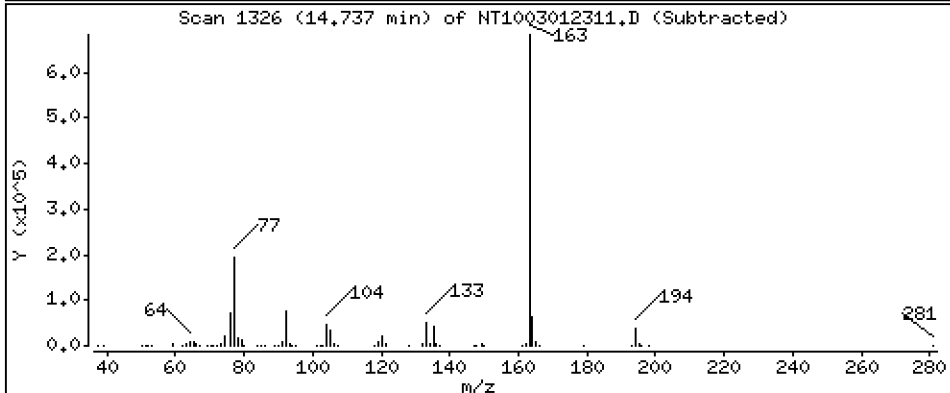
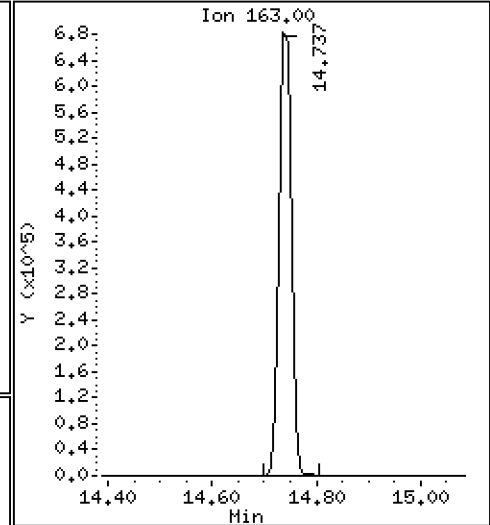
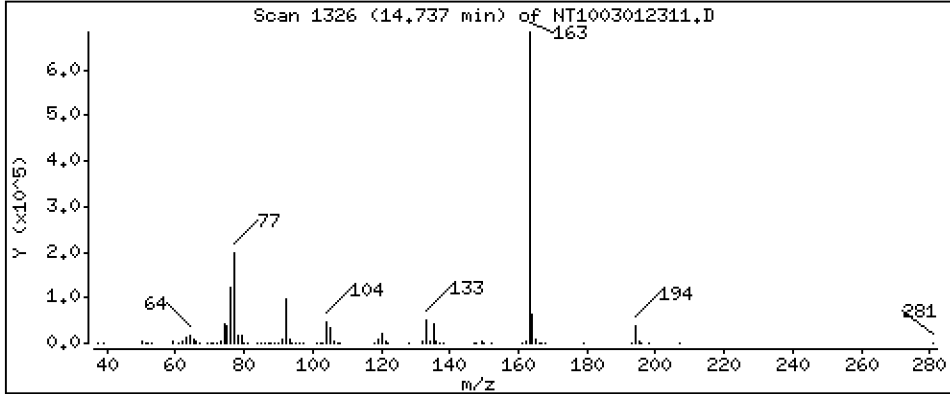
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,384 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

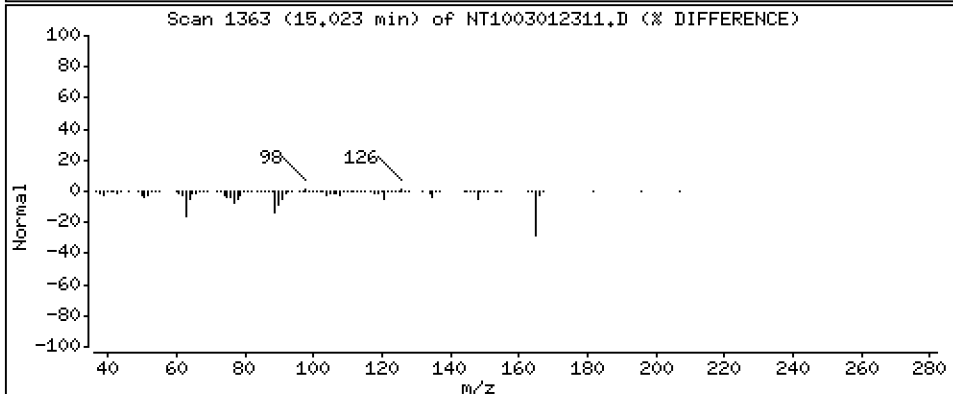
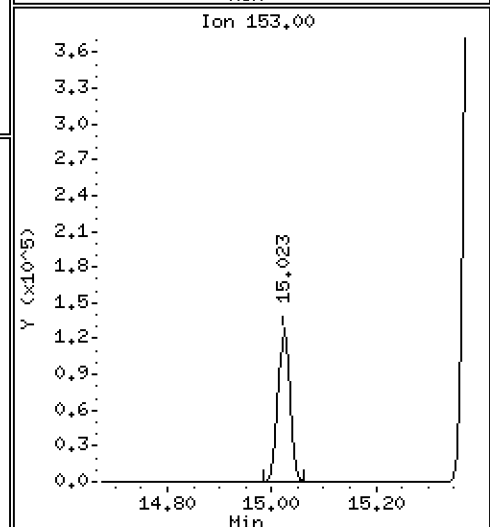
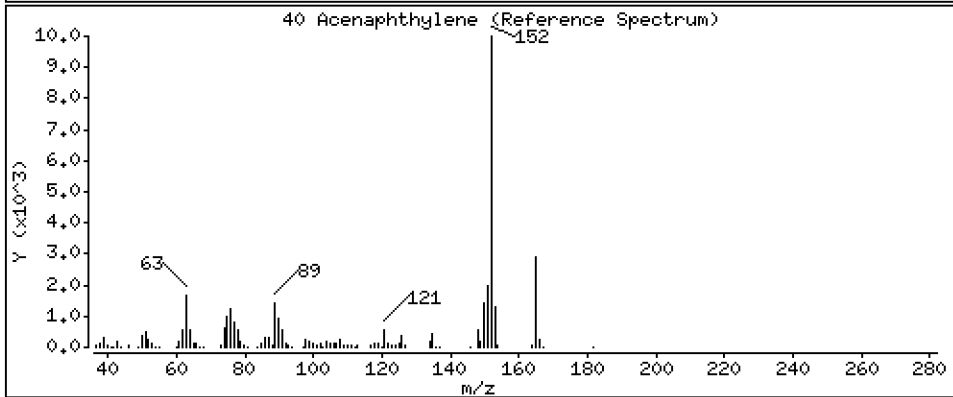
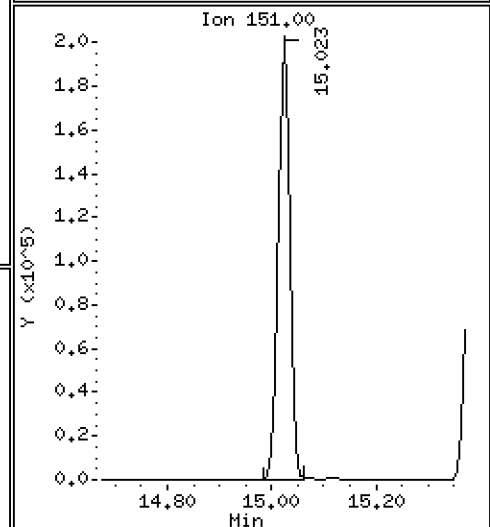
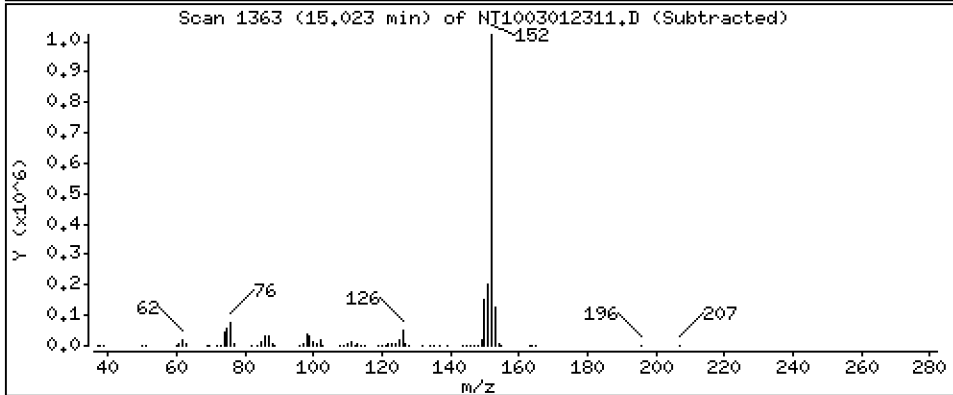
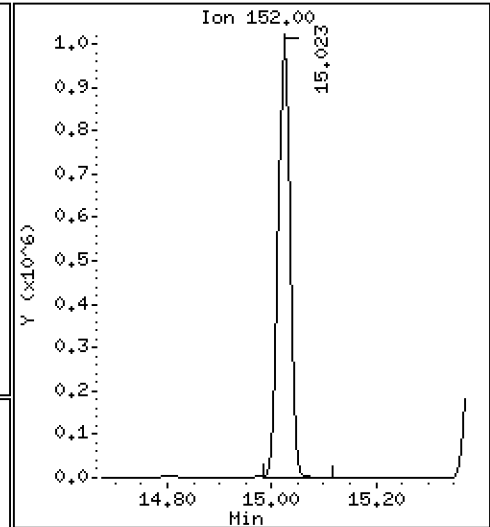
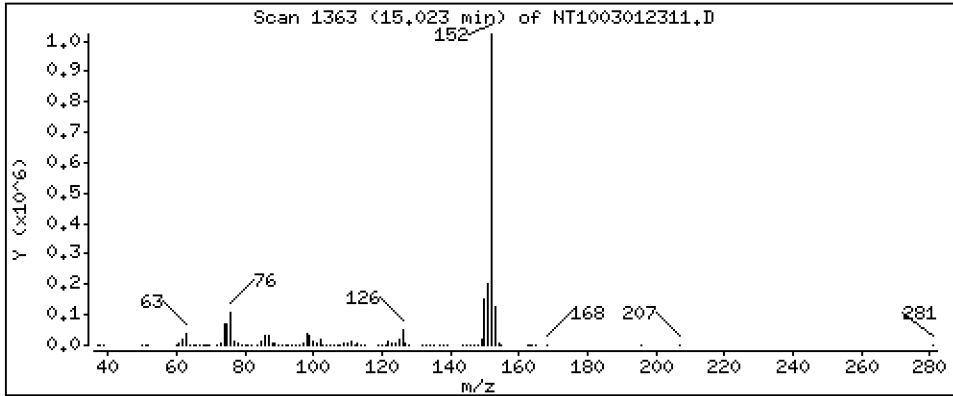
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,806 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

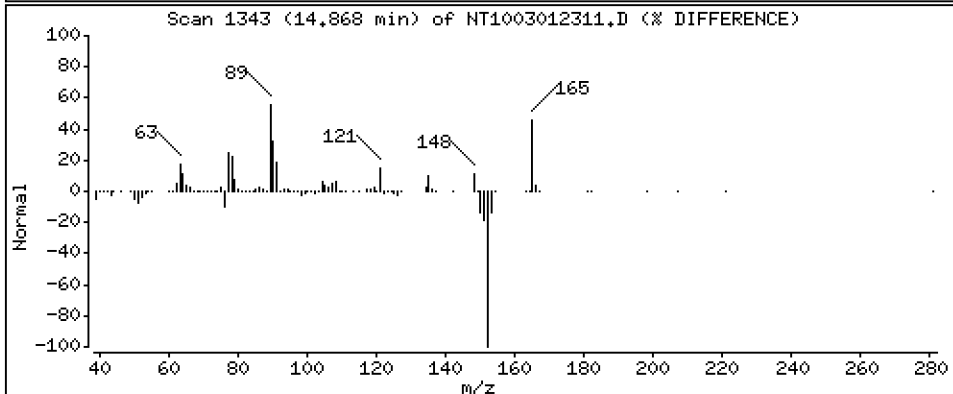
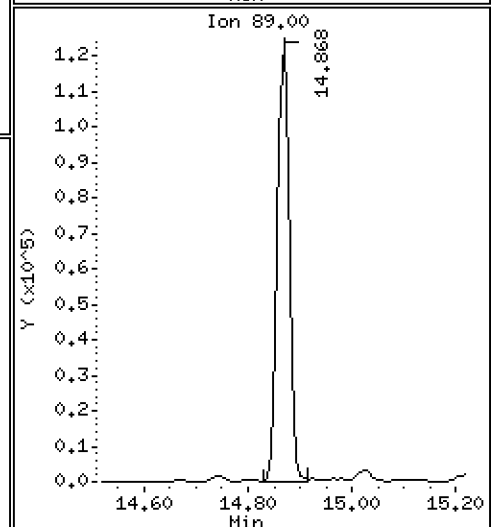
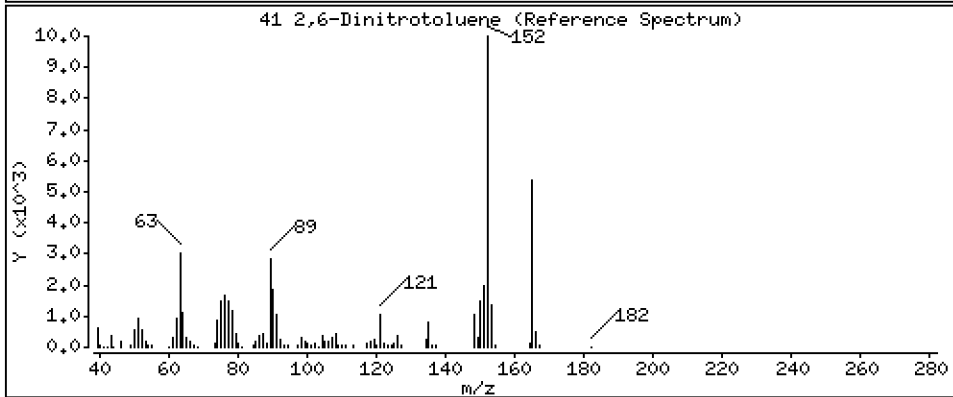
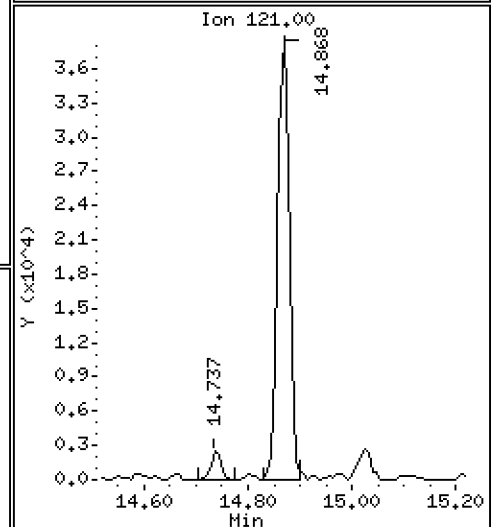
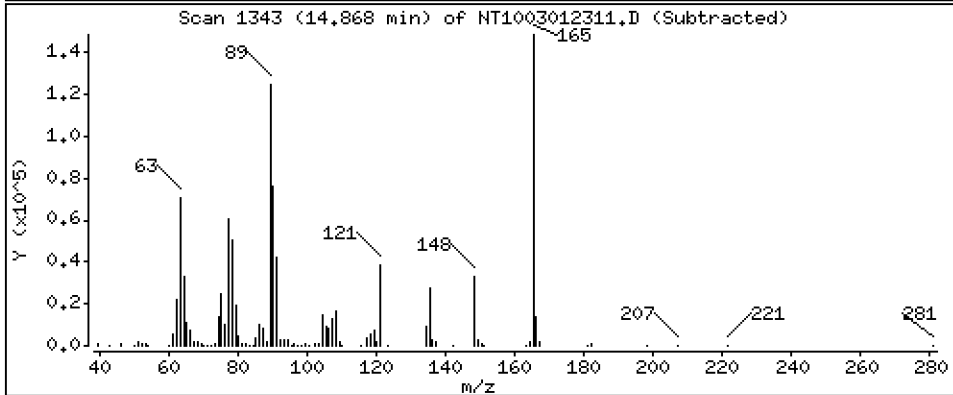
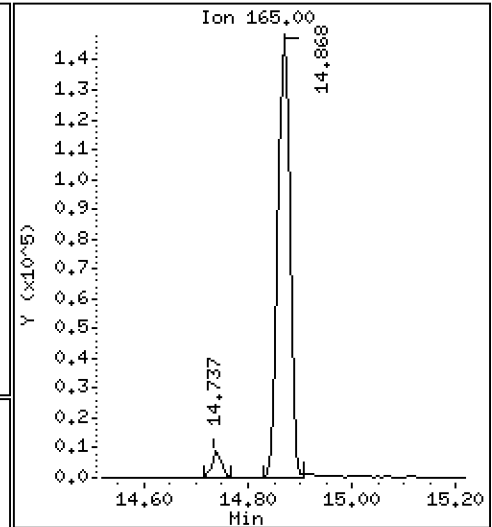
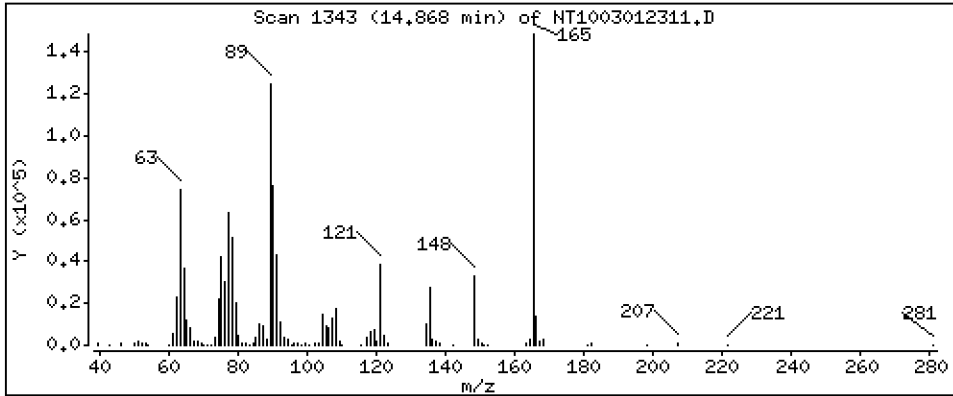
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

41 2,6-Dinitrotoluene

Concentration: 5.187 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

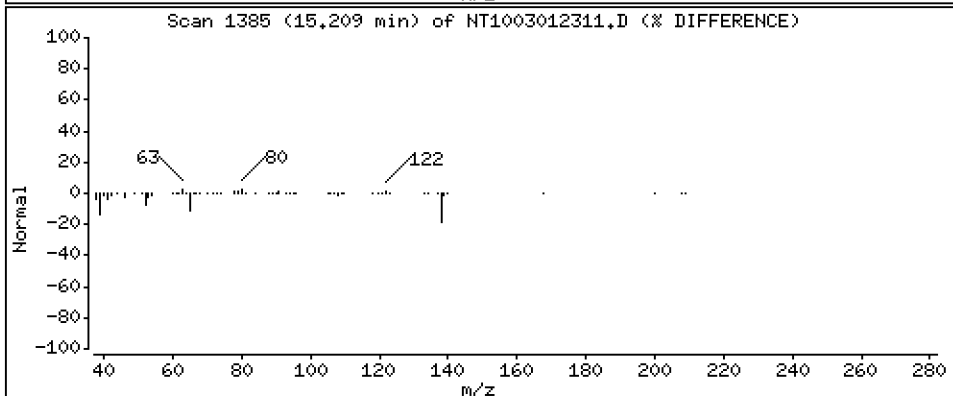
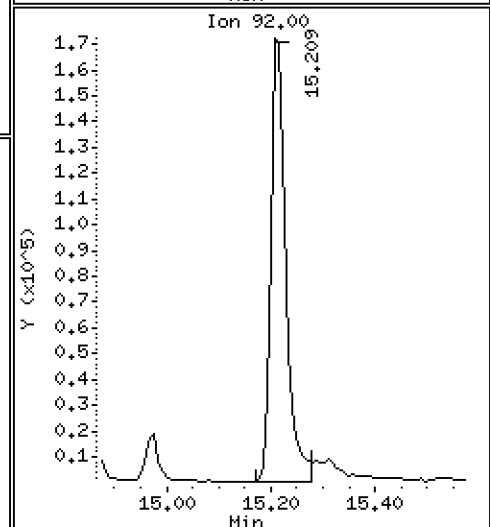
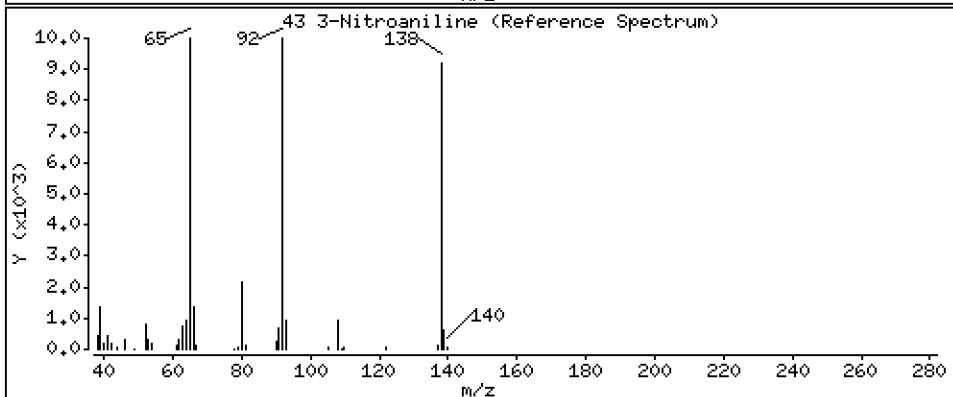
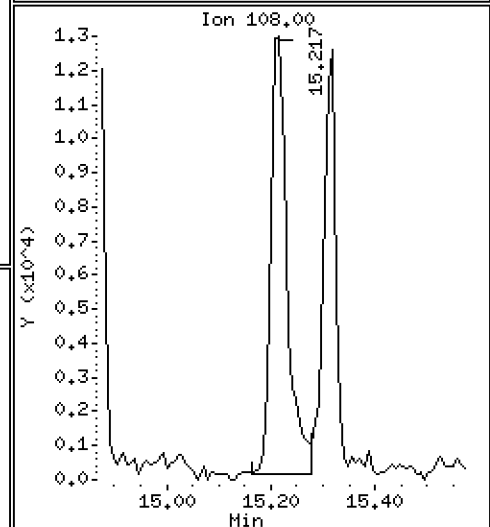
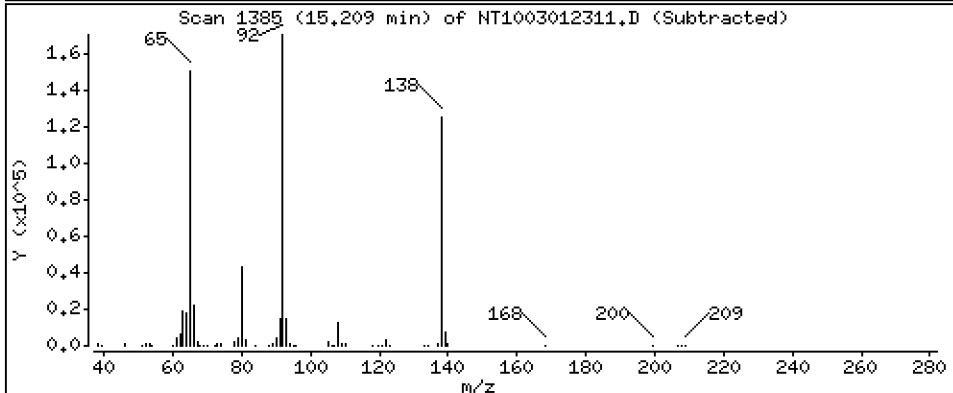
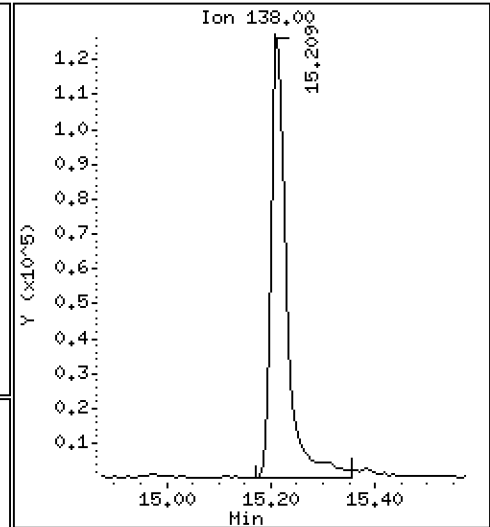
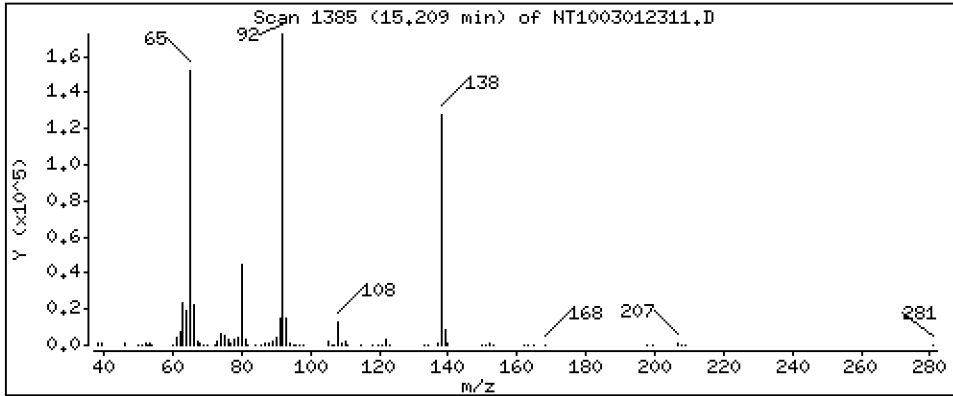
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

43 3-Nitroaniline

Concentration: 5.172 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

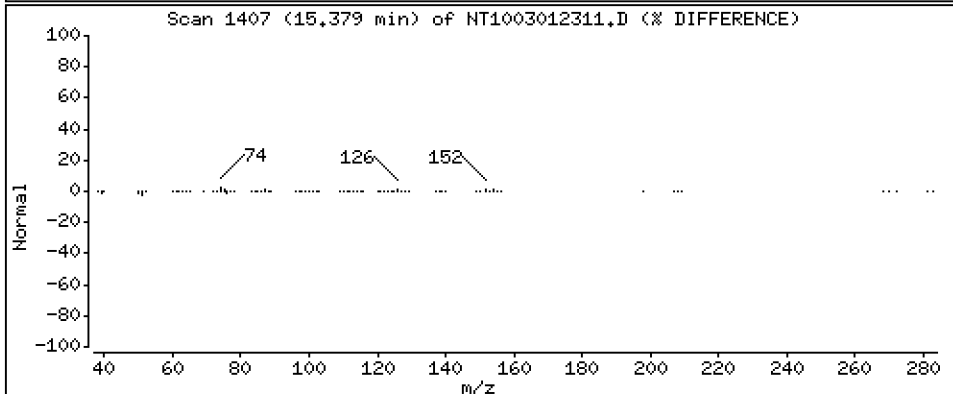
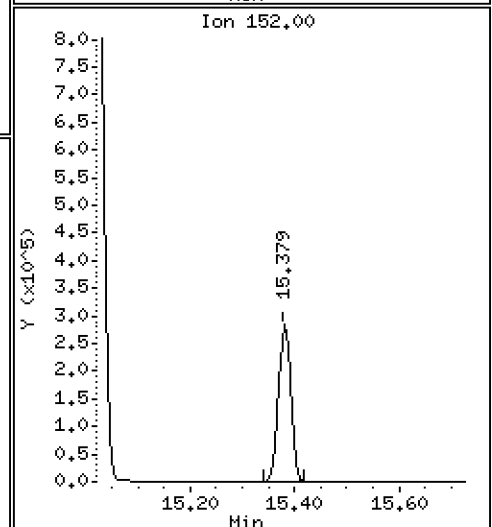
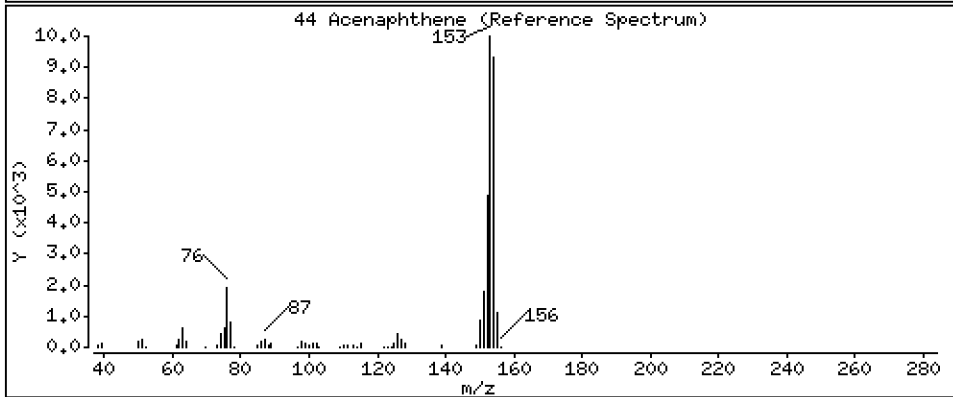
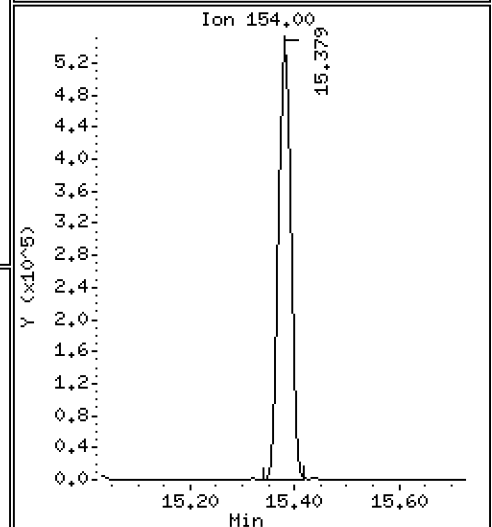
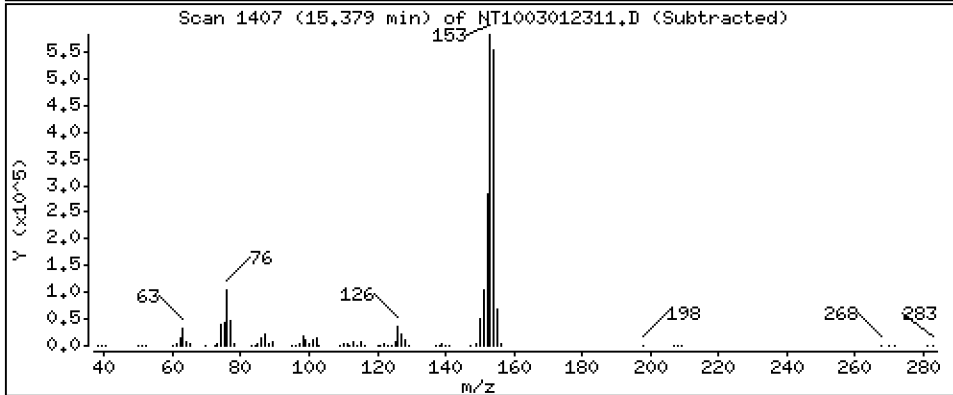
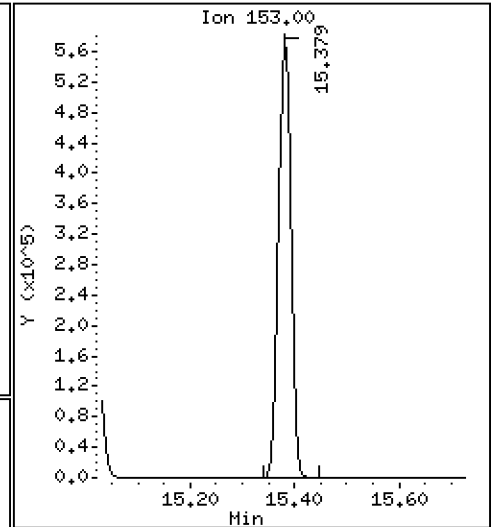
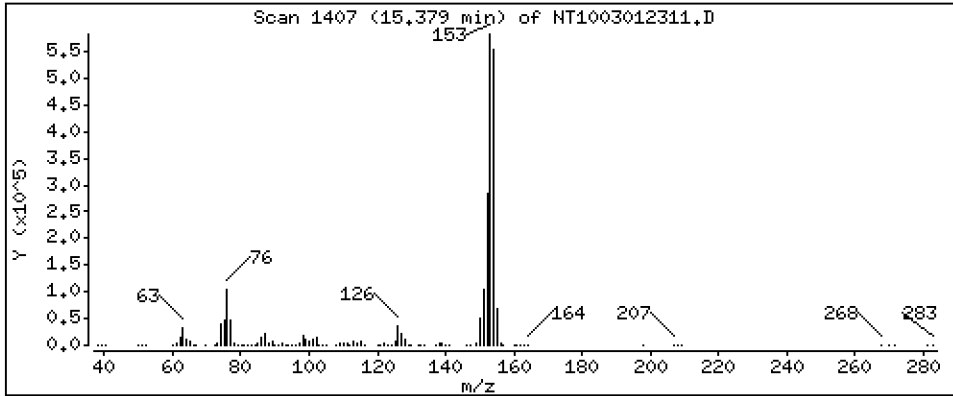
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,154 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

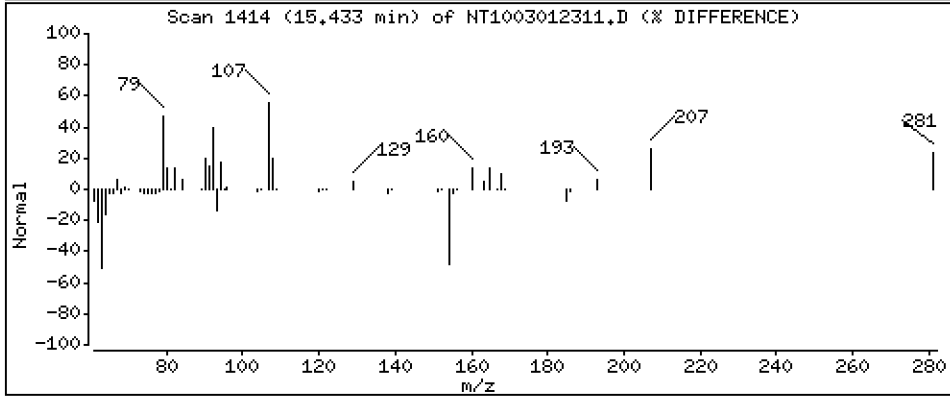
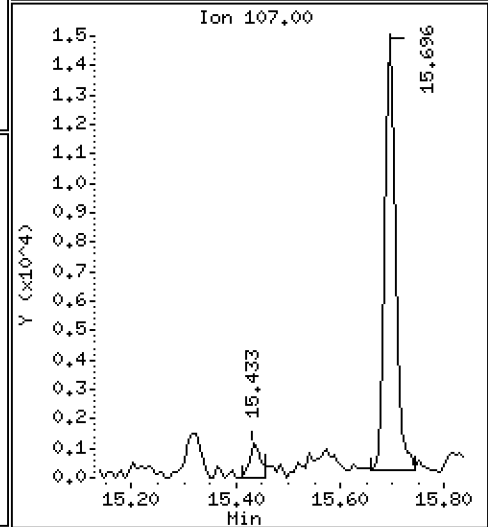
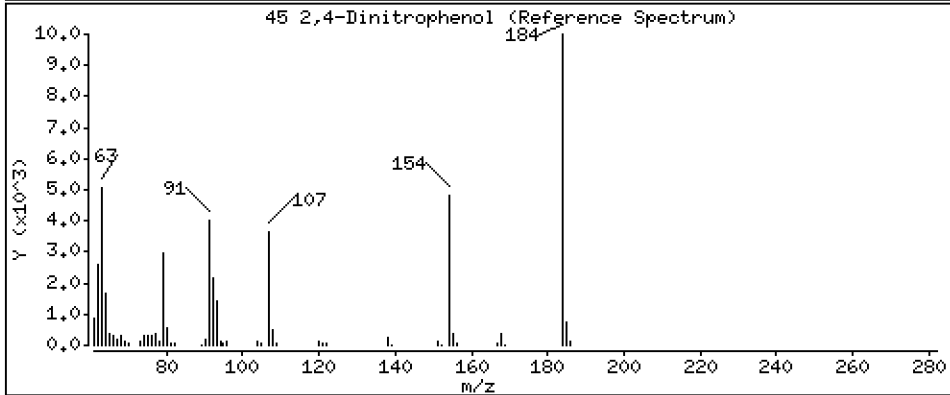
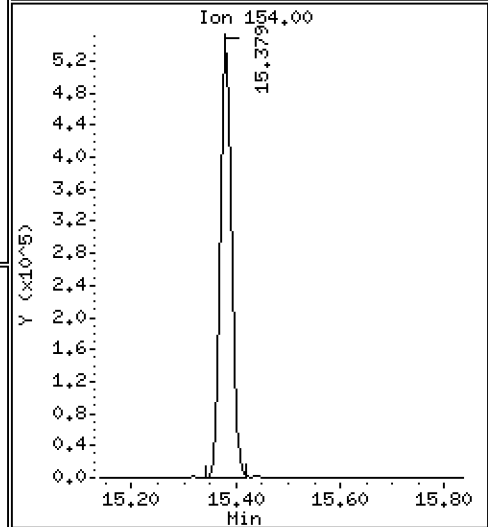
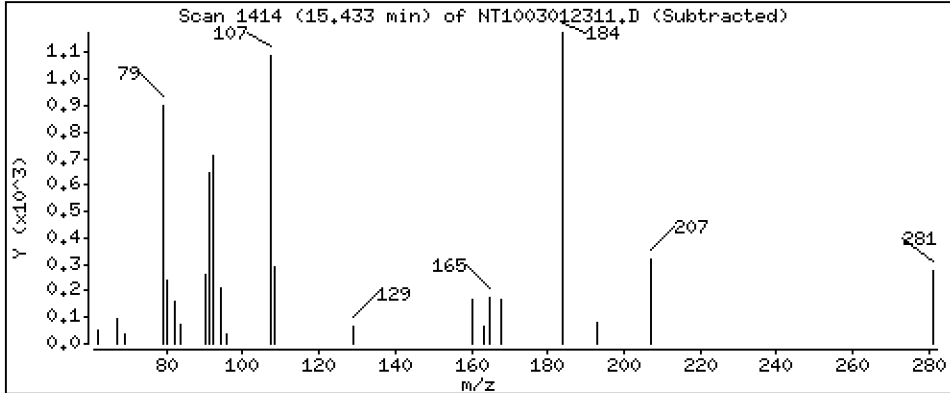
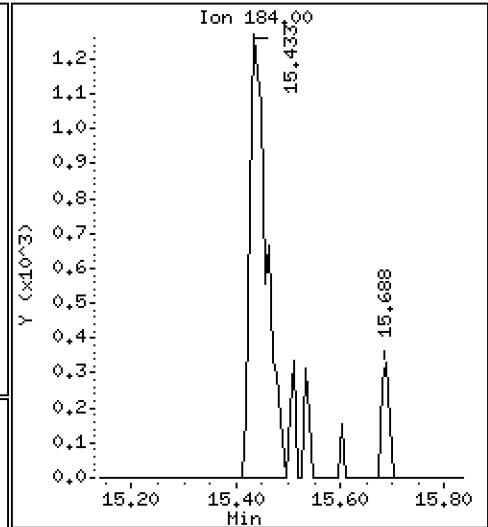
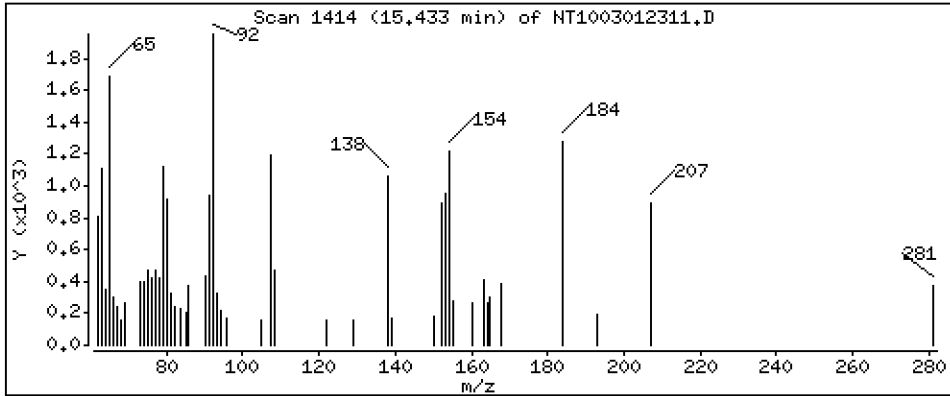
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 0,2667 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

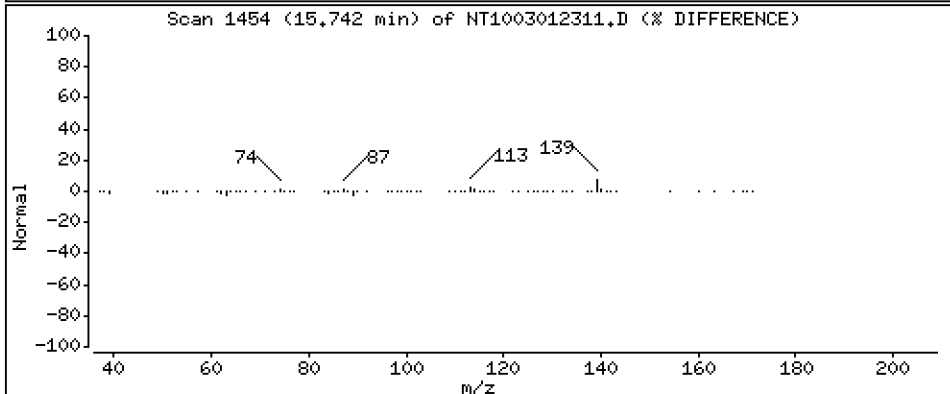
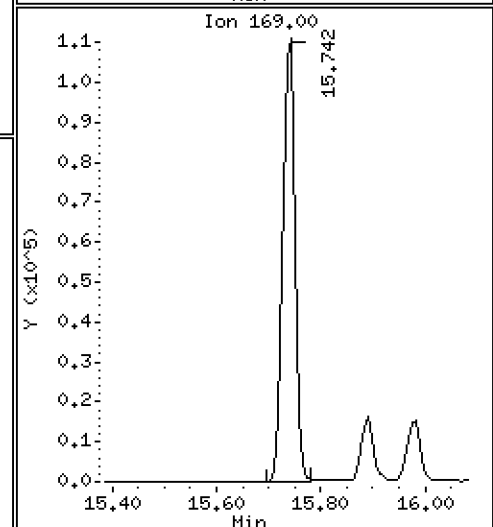
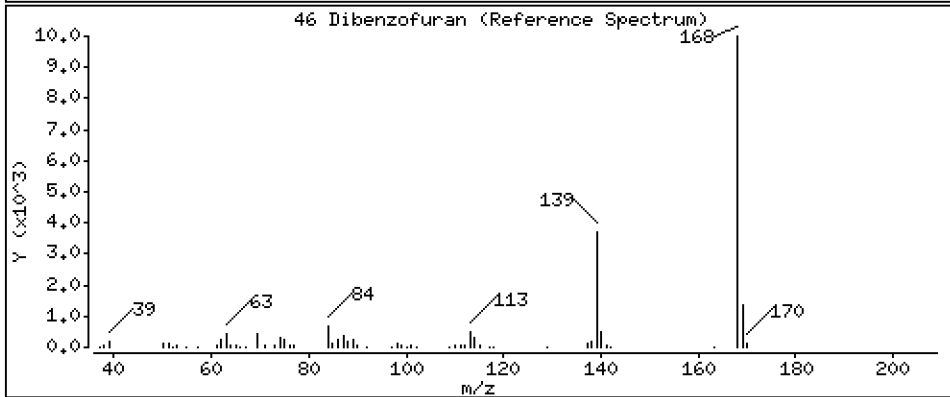
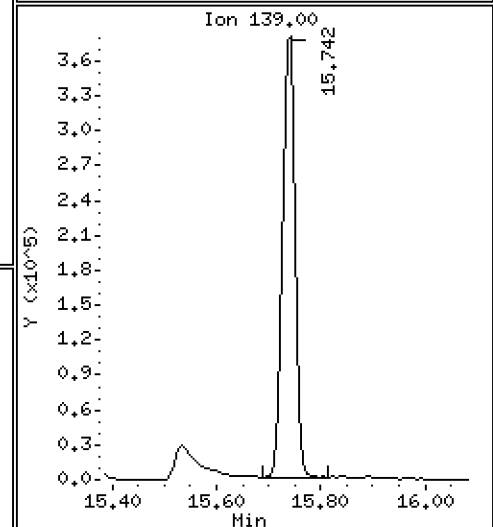
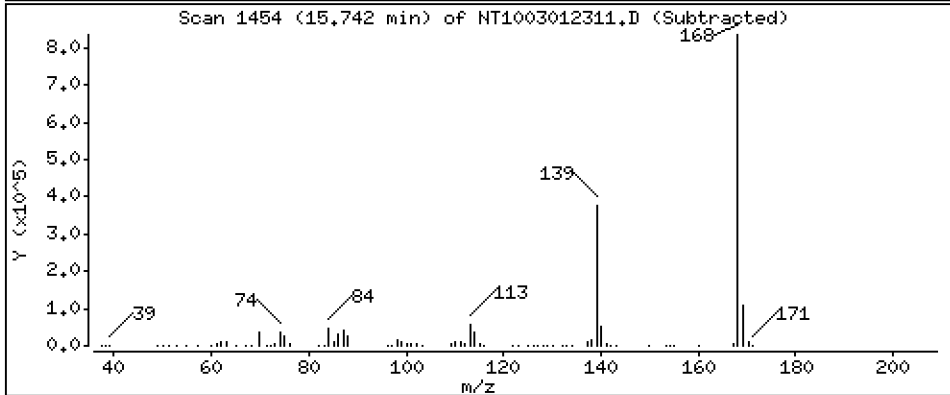
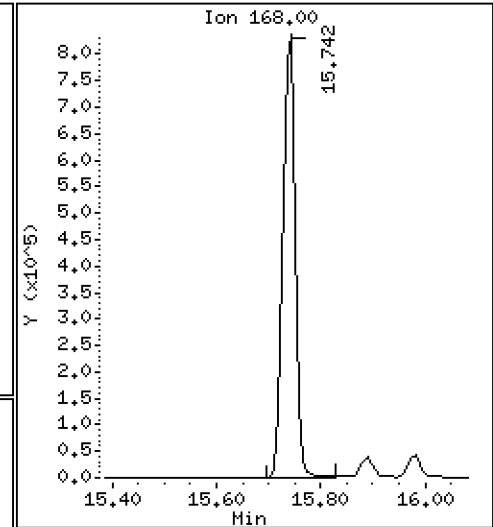
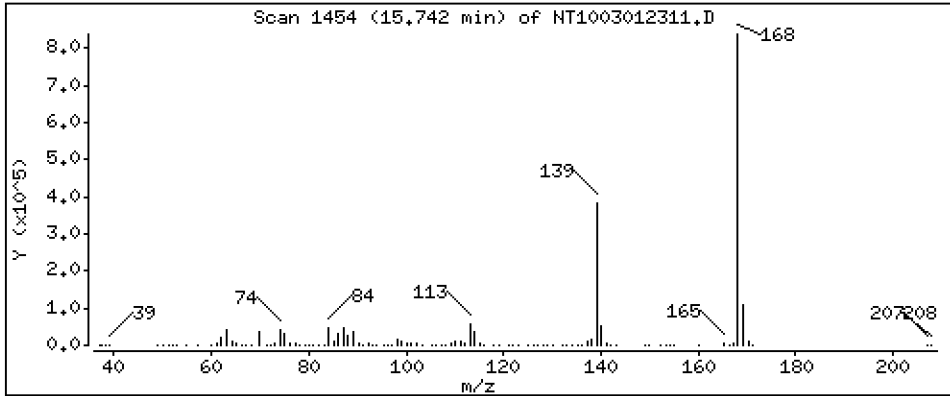
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,994 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

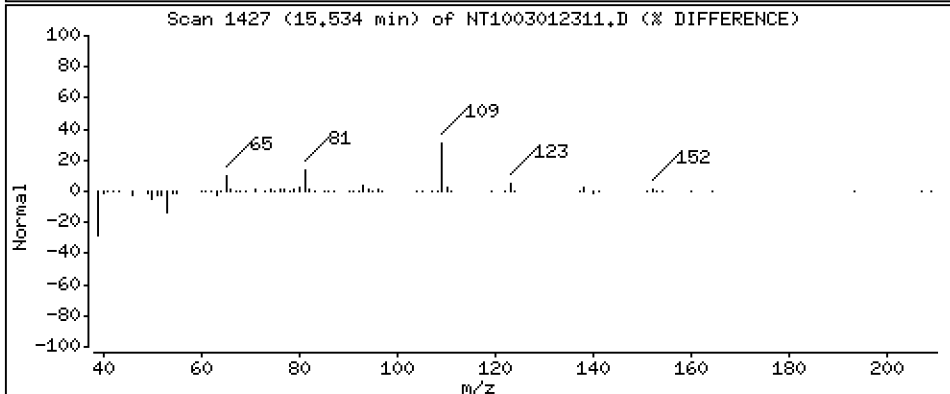
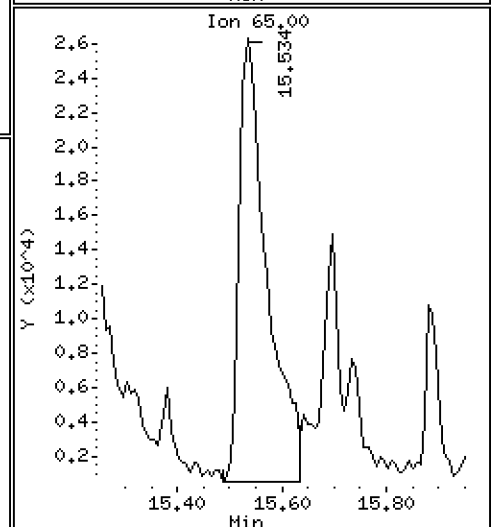
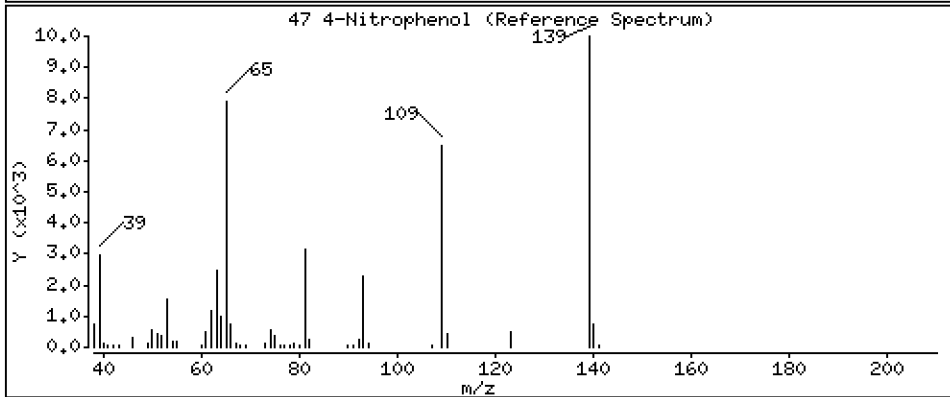
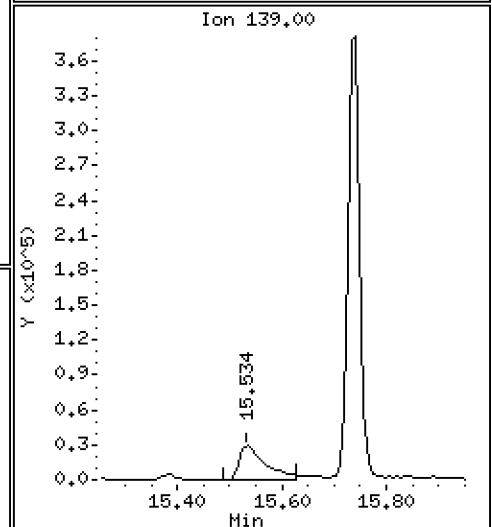
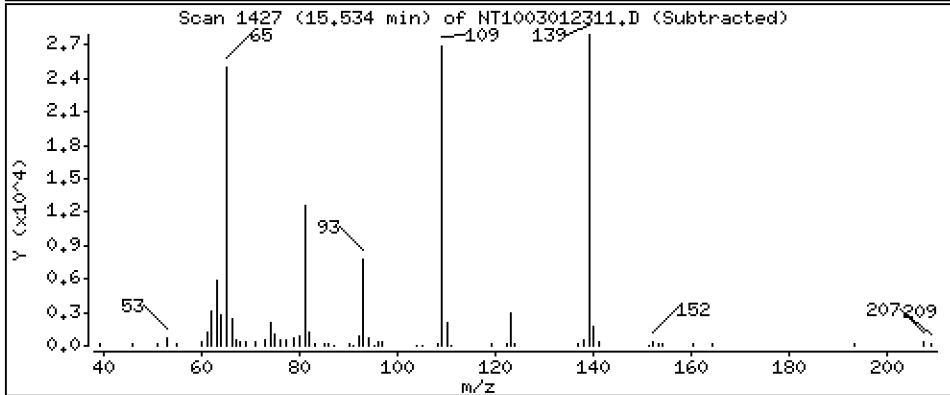
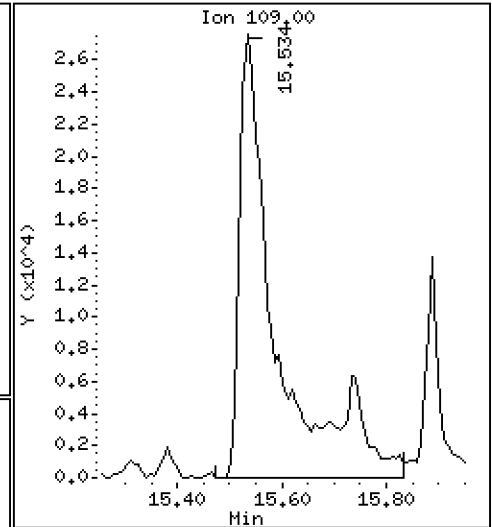
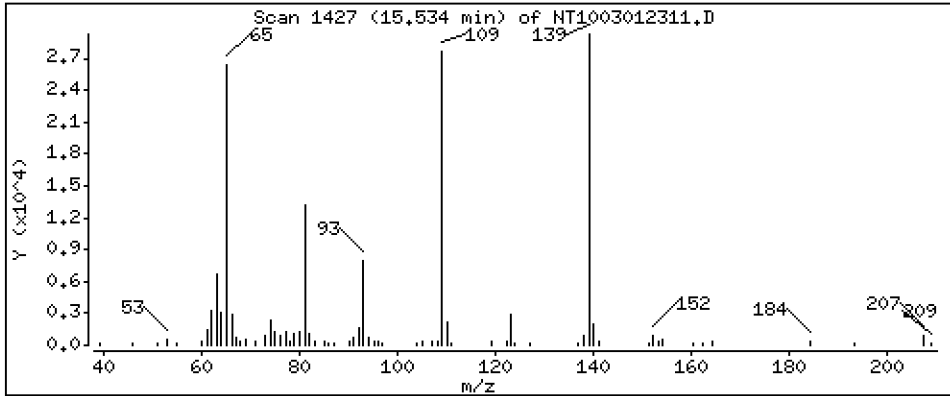
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 3,822 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

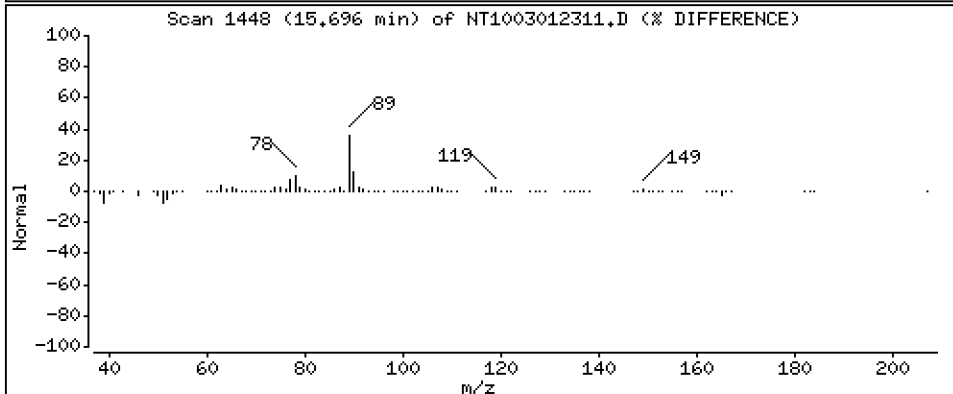
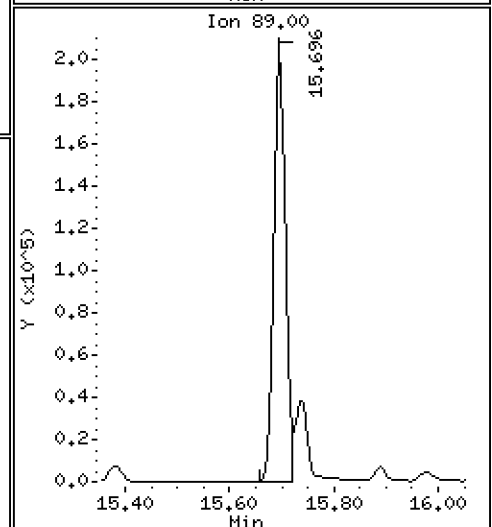
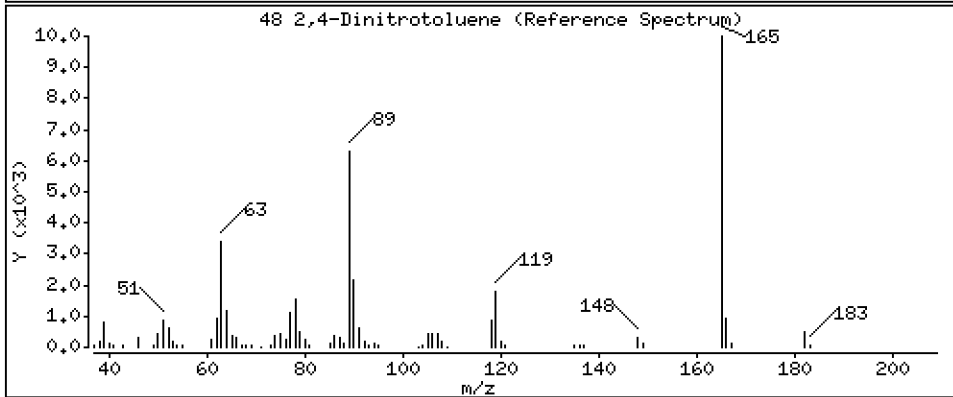
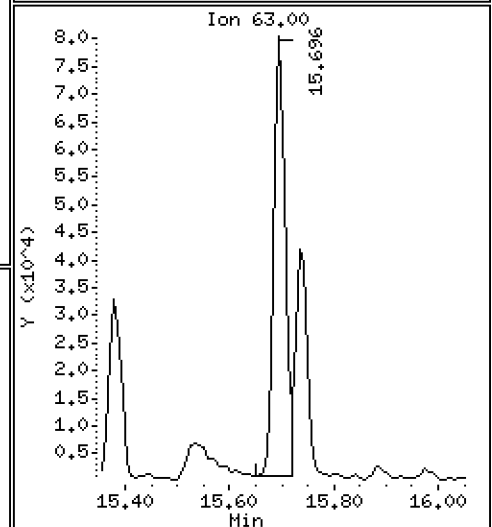
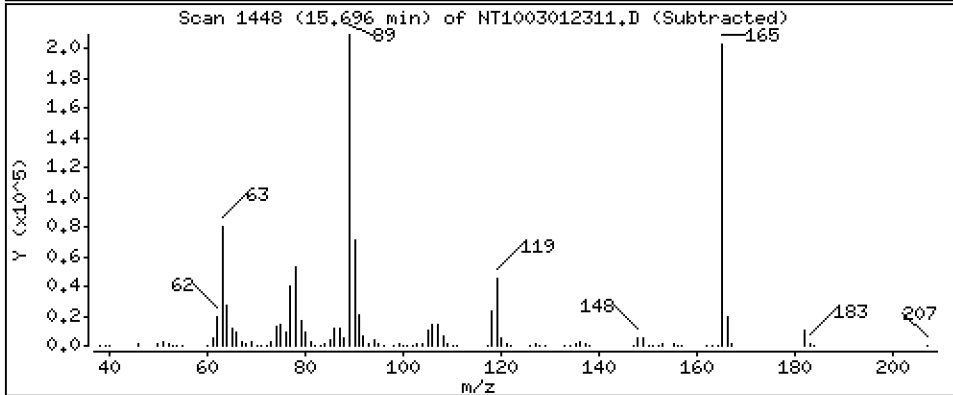
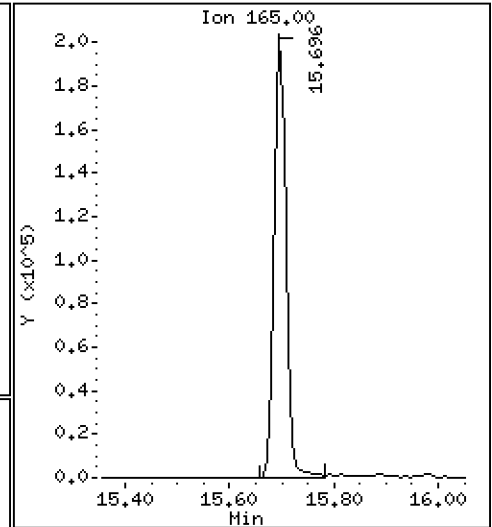
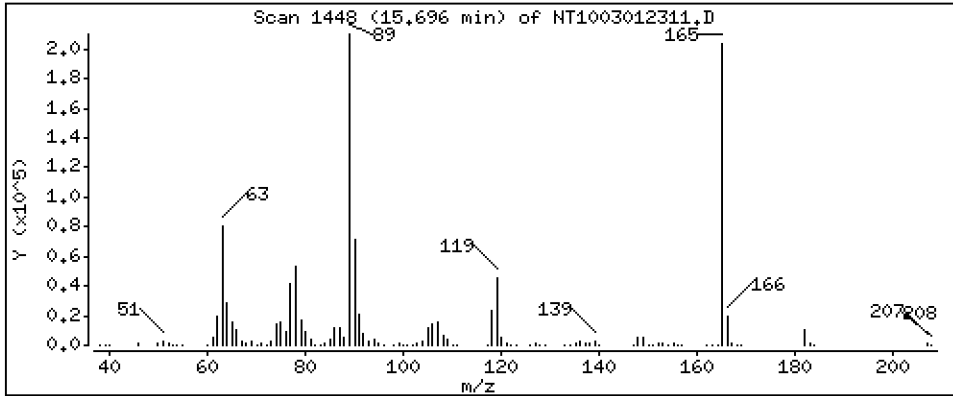
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

48 2,4-Dinitrotoluene

Concentration: 4.729 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

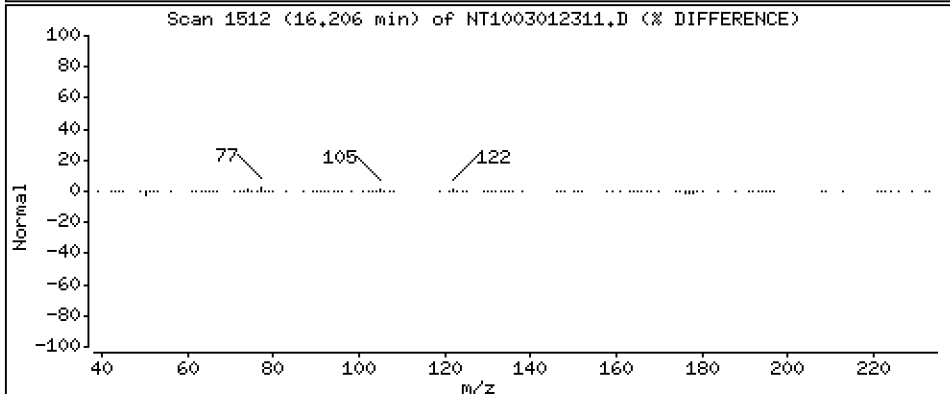
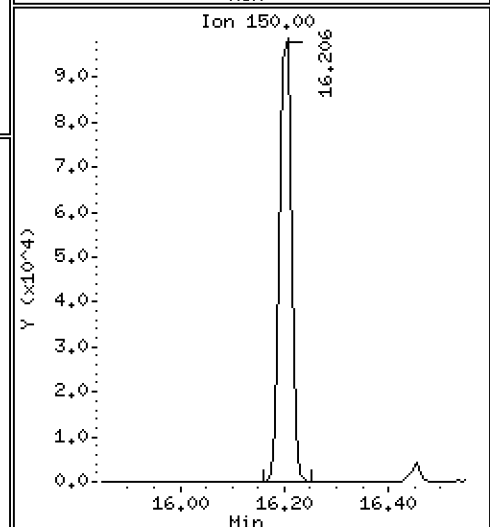
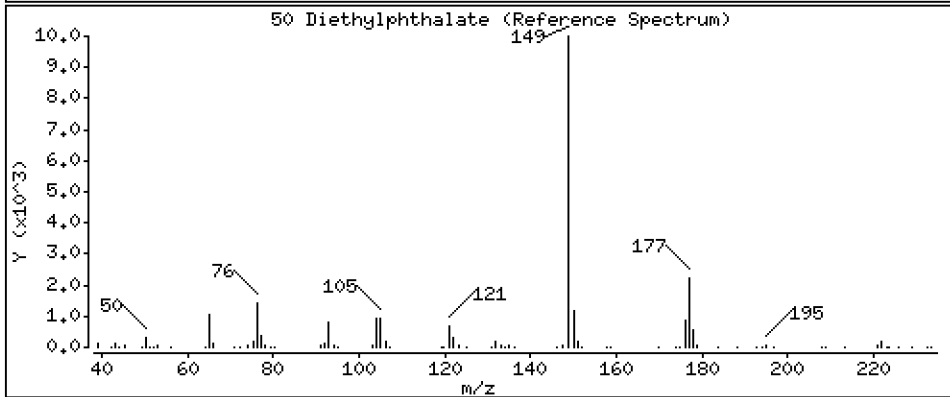
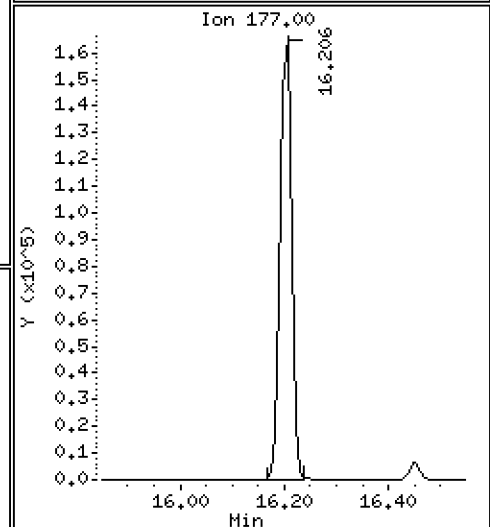
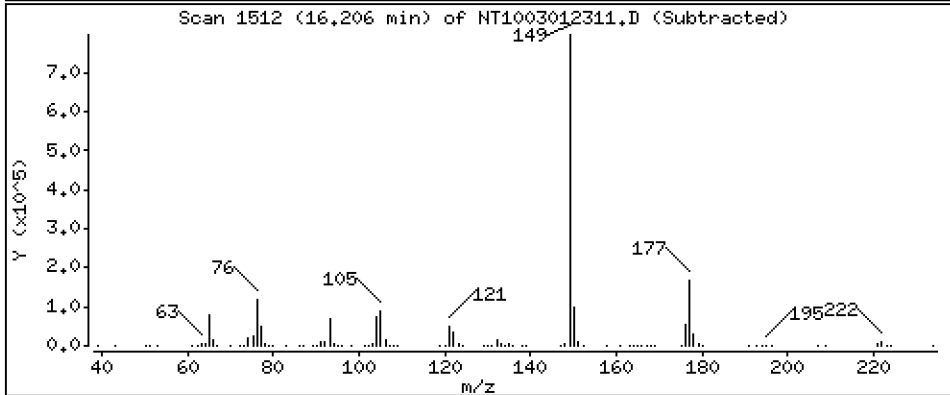
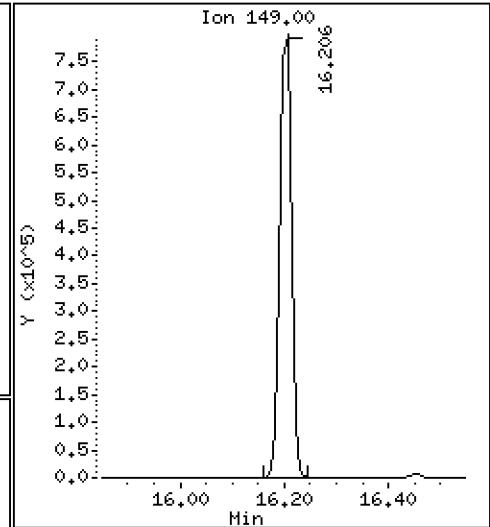
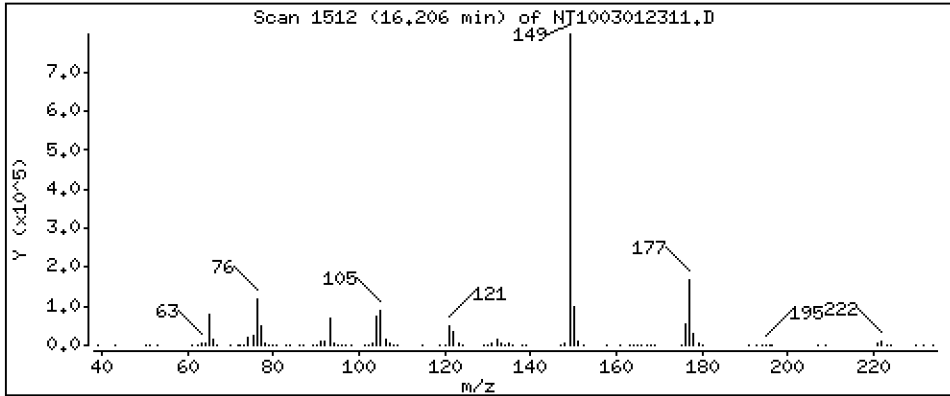
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,639 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

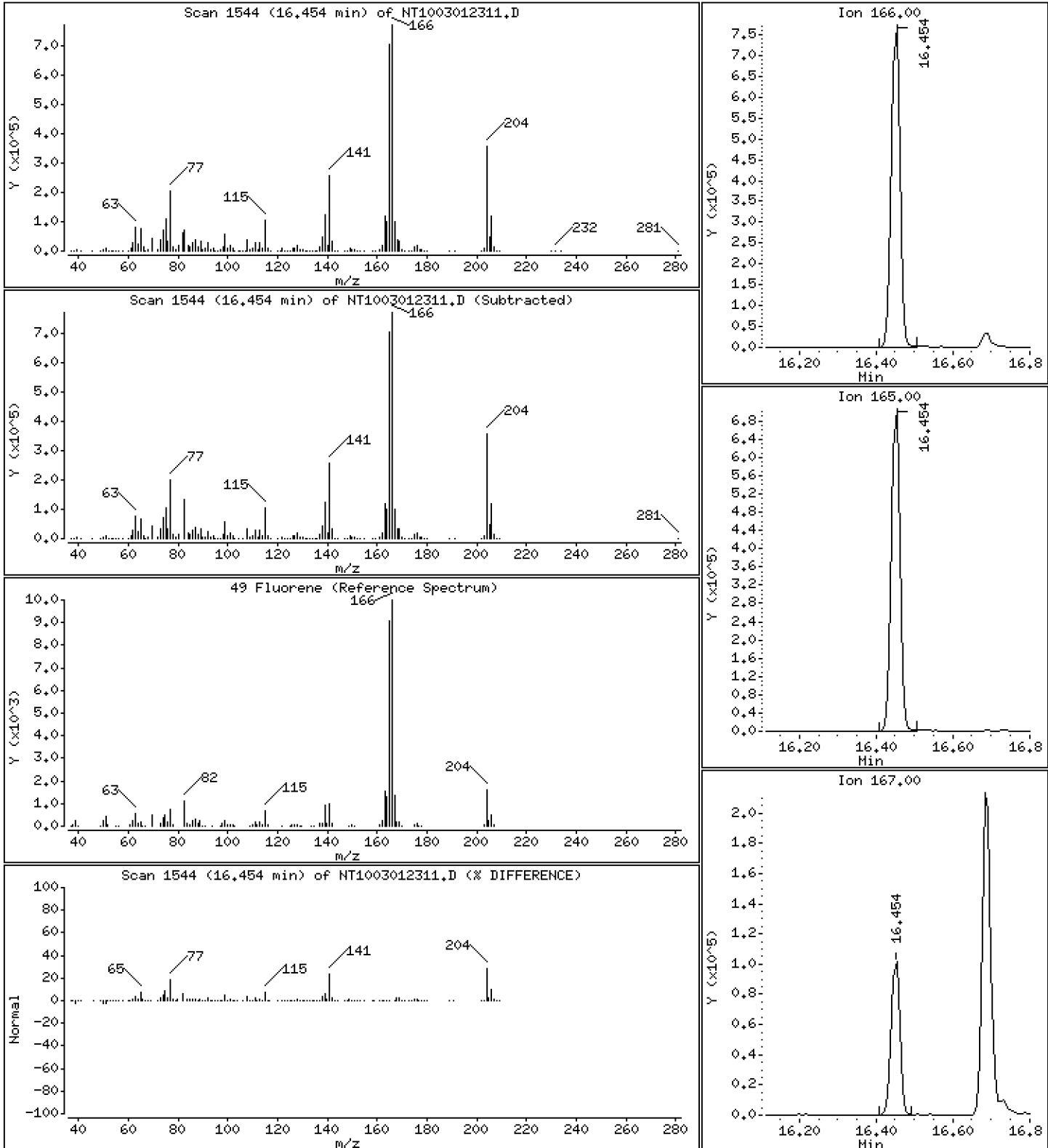
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,305 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

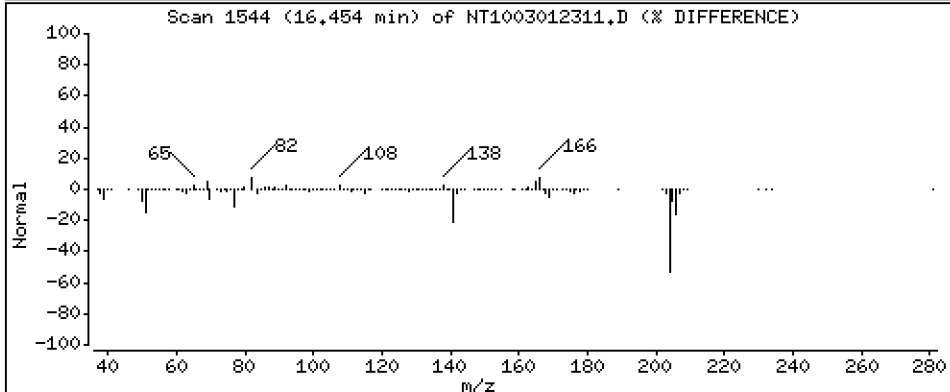
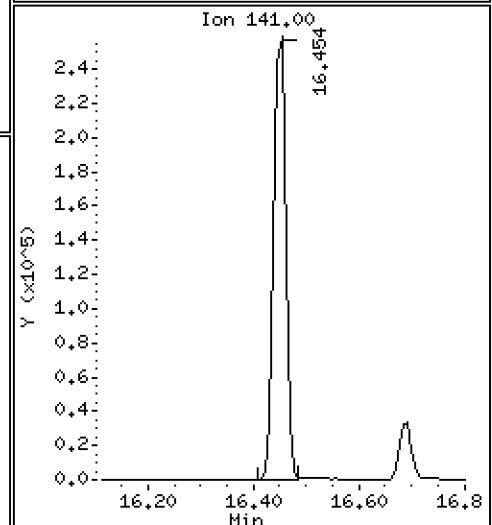
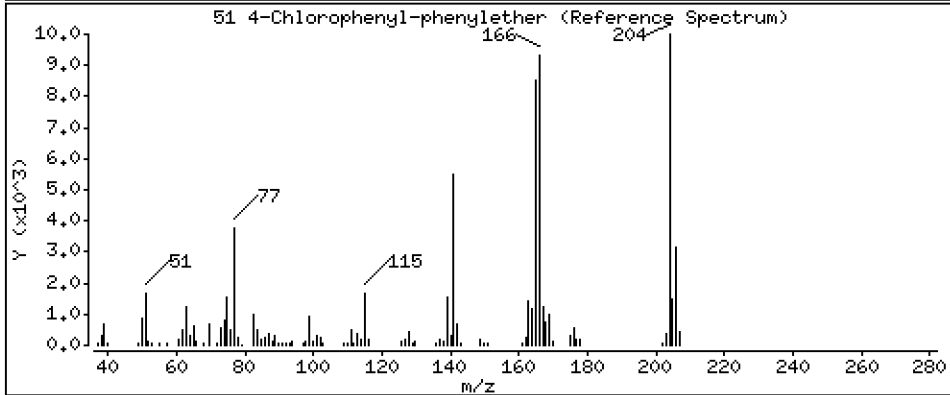
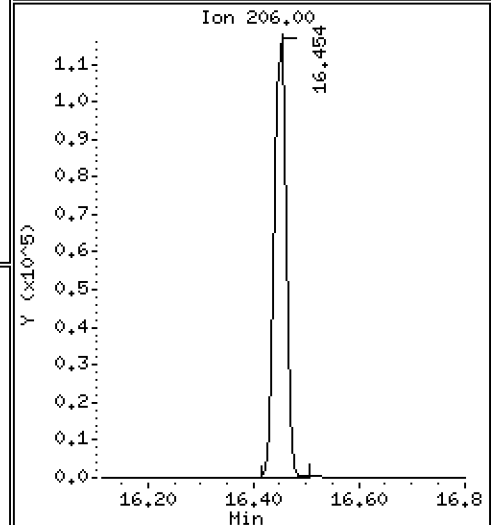
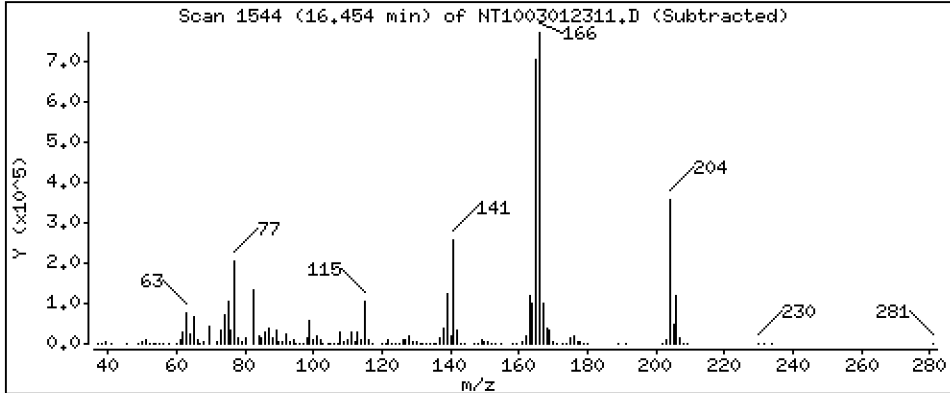
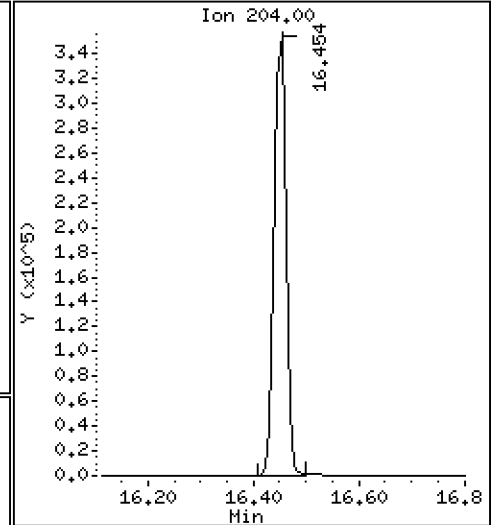
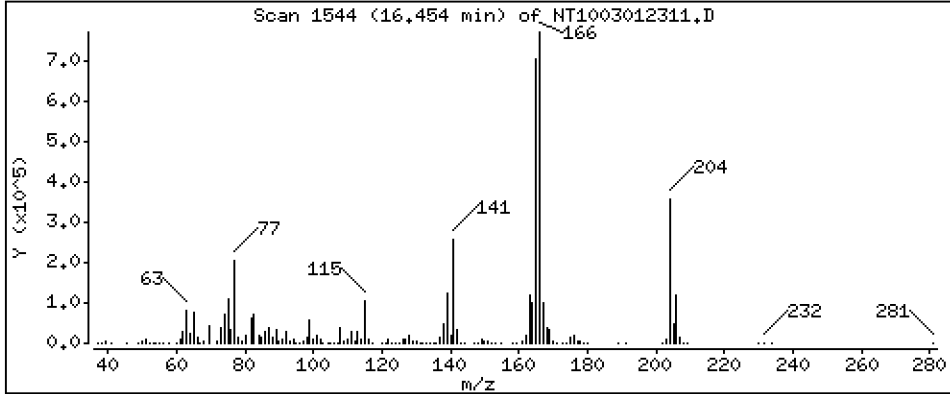
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,253 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

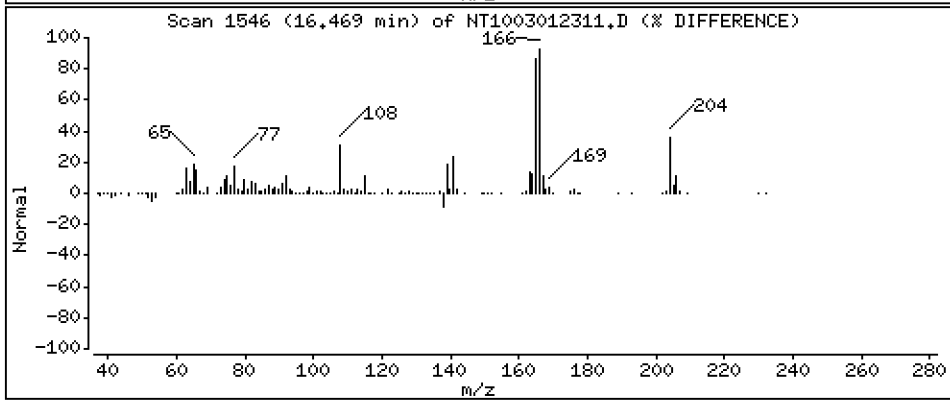
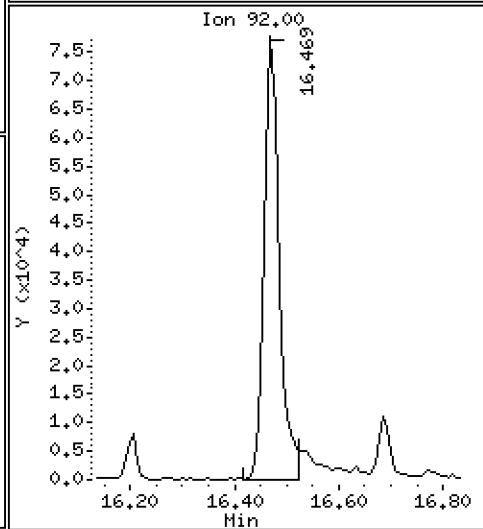
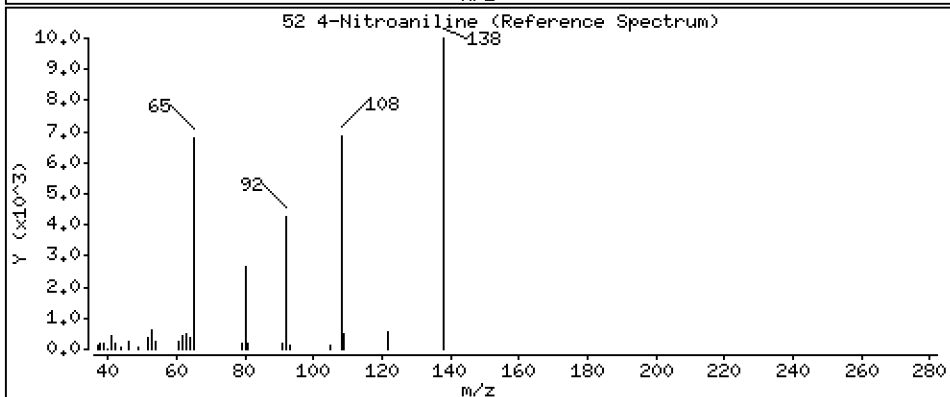
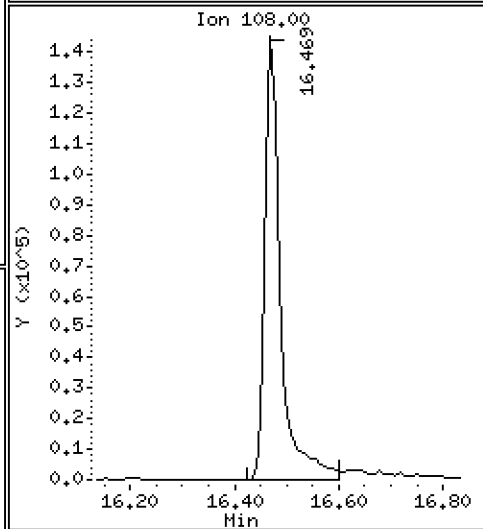
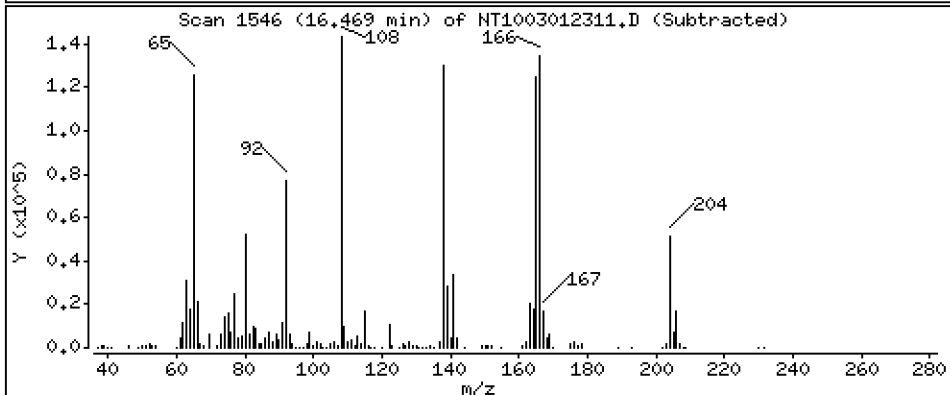
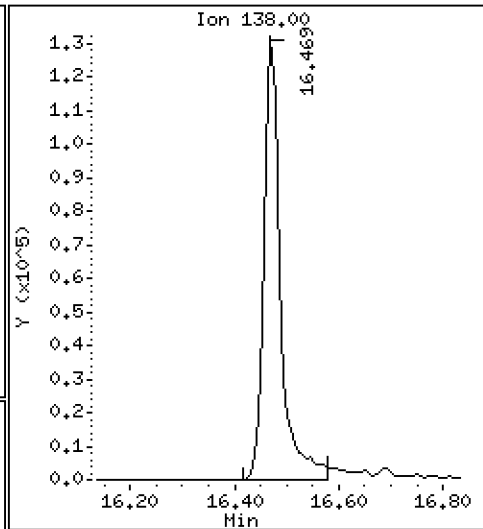
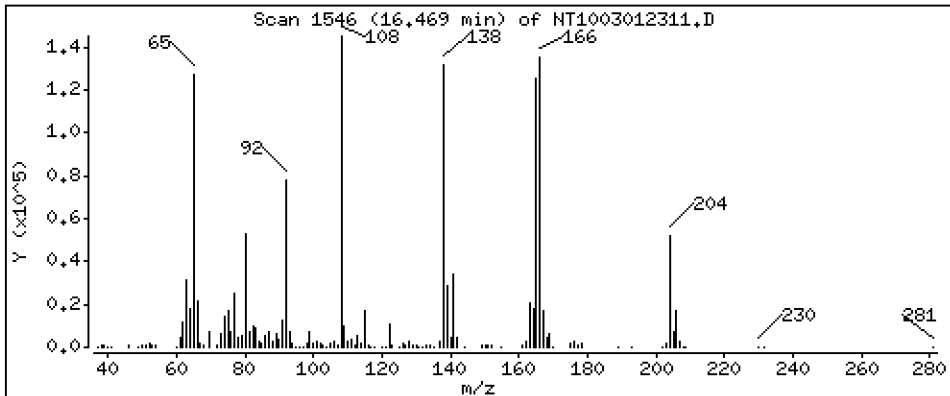
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 5,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

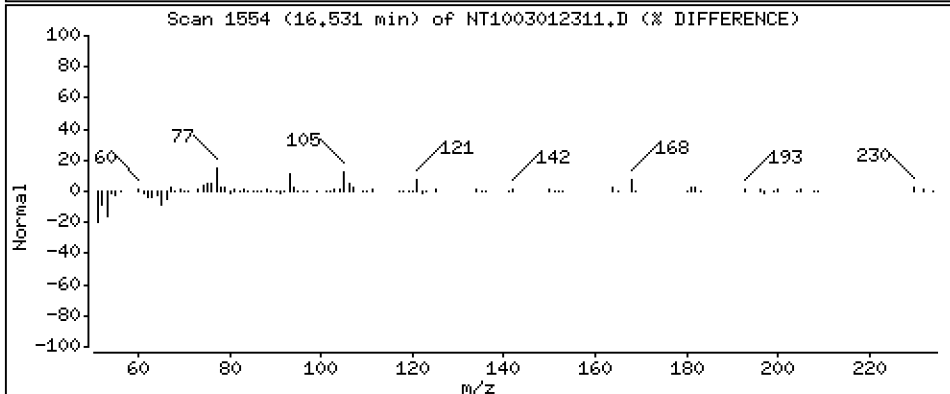
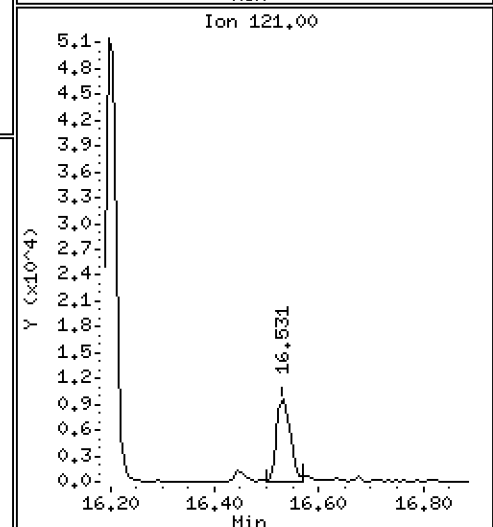
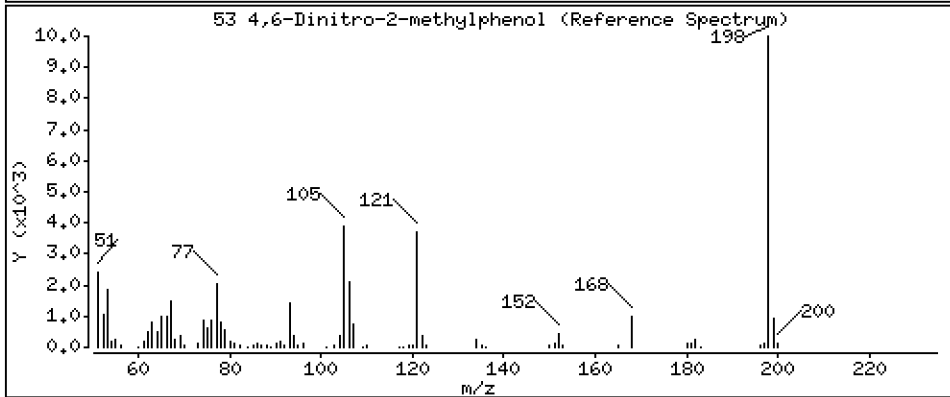
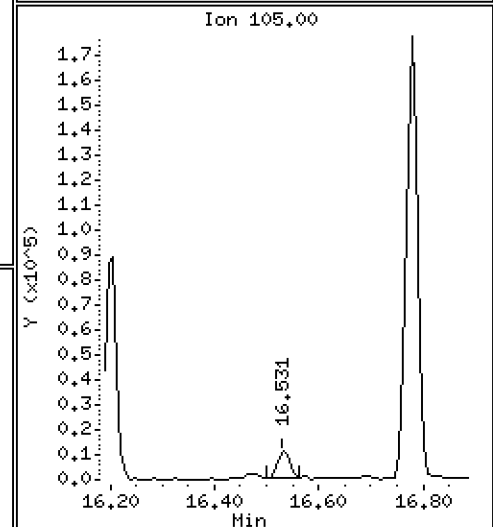
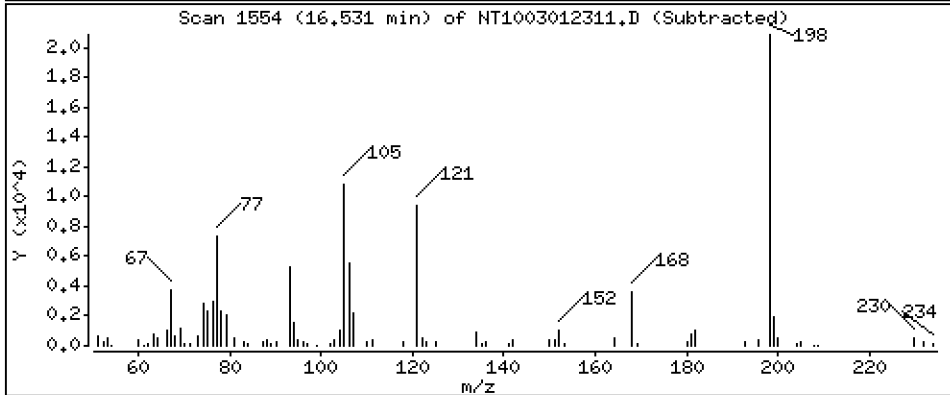
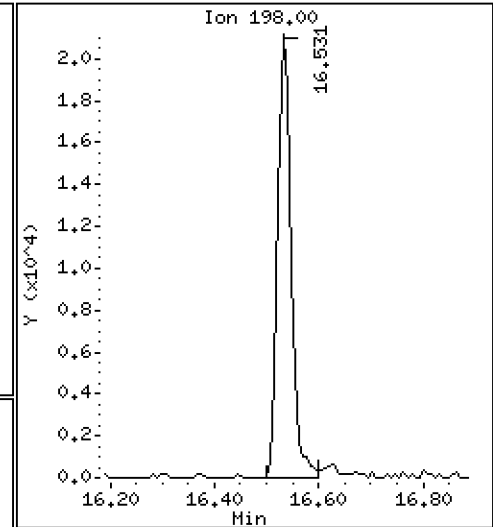
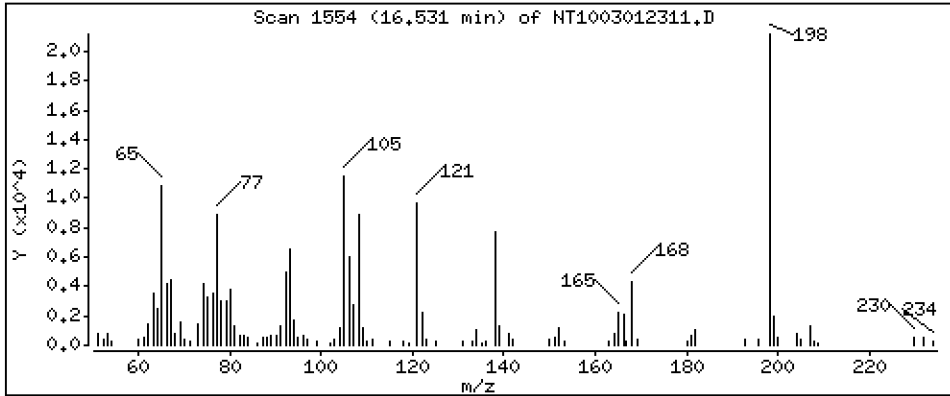
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 1,292 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

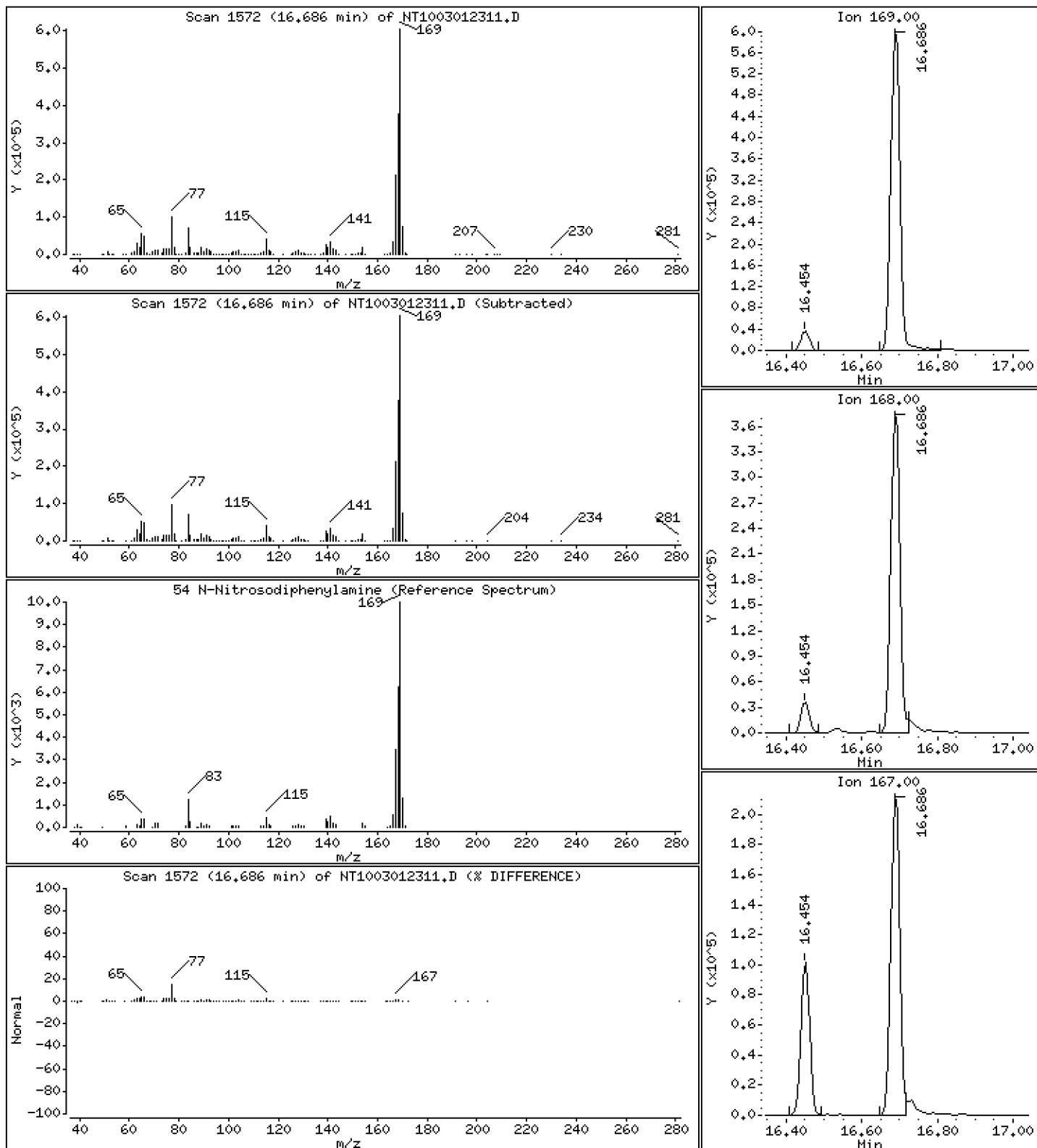
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,416 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

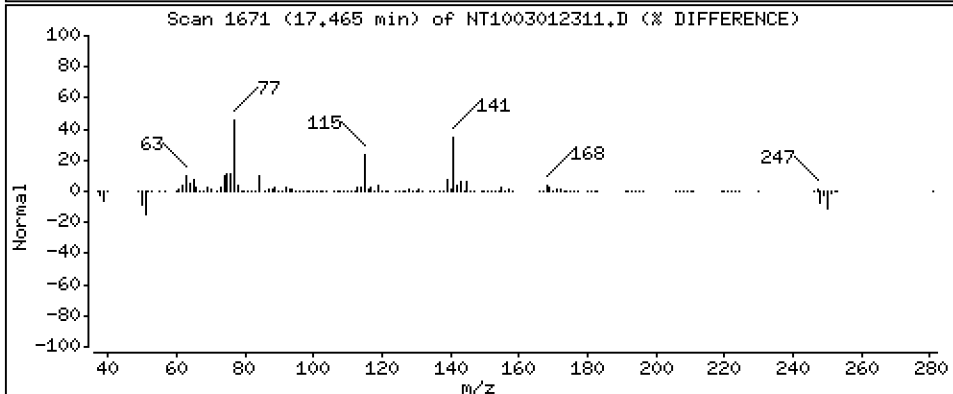
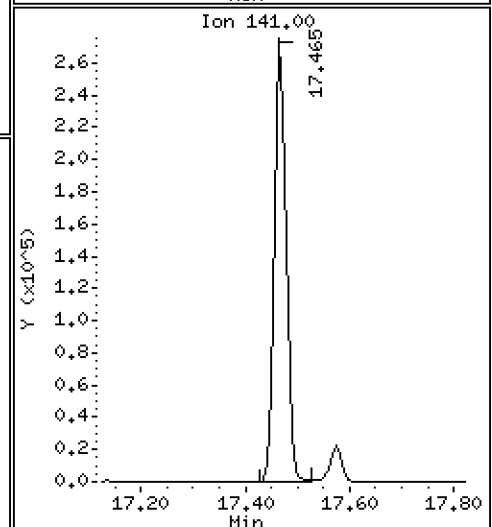
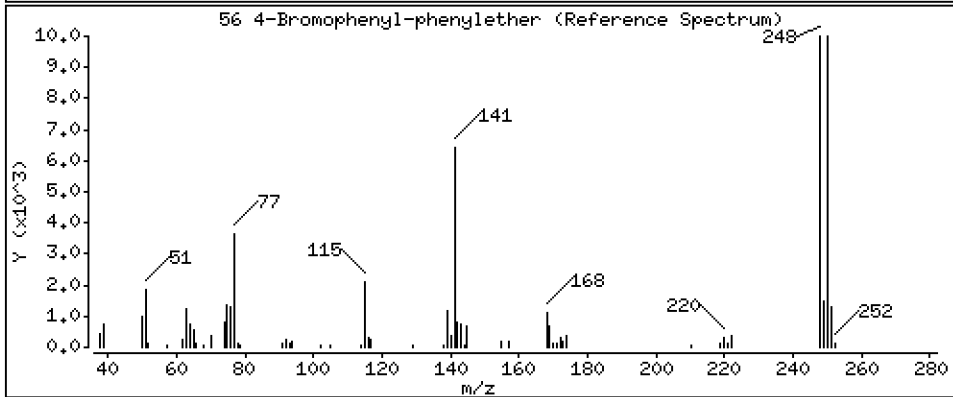
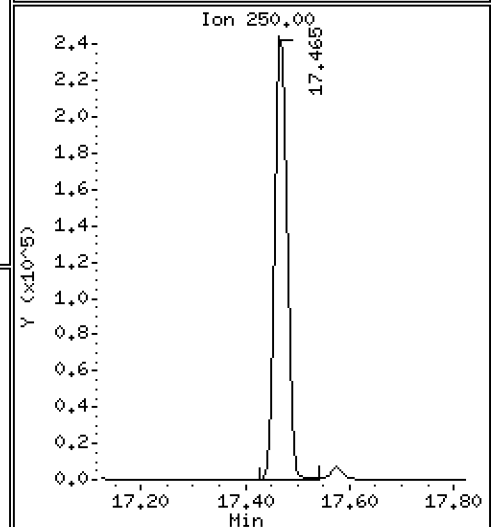
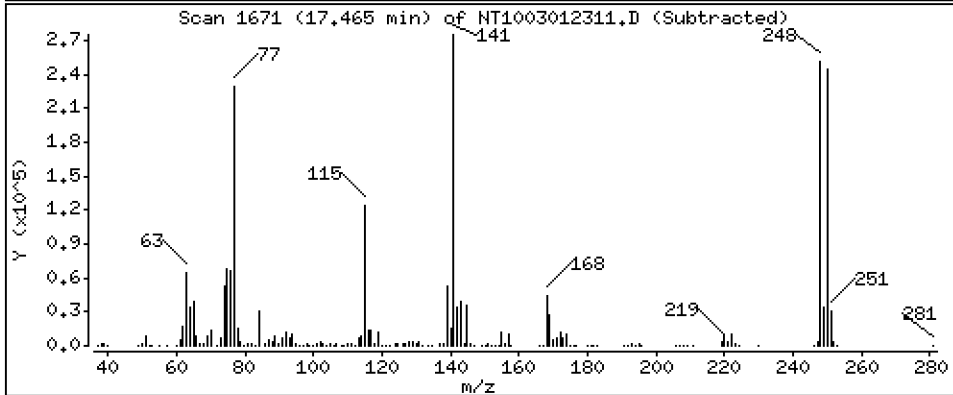
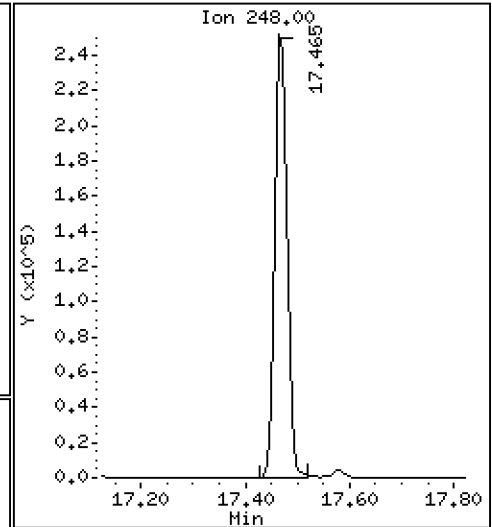
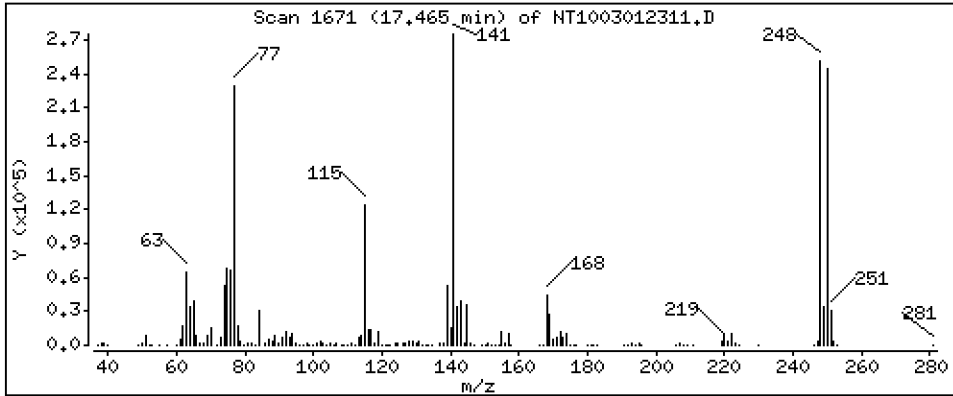
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,460 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

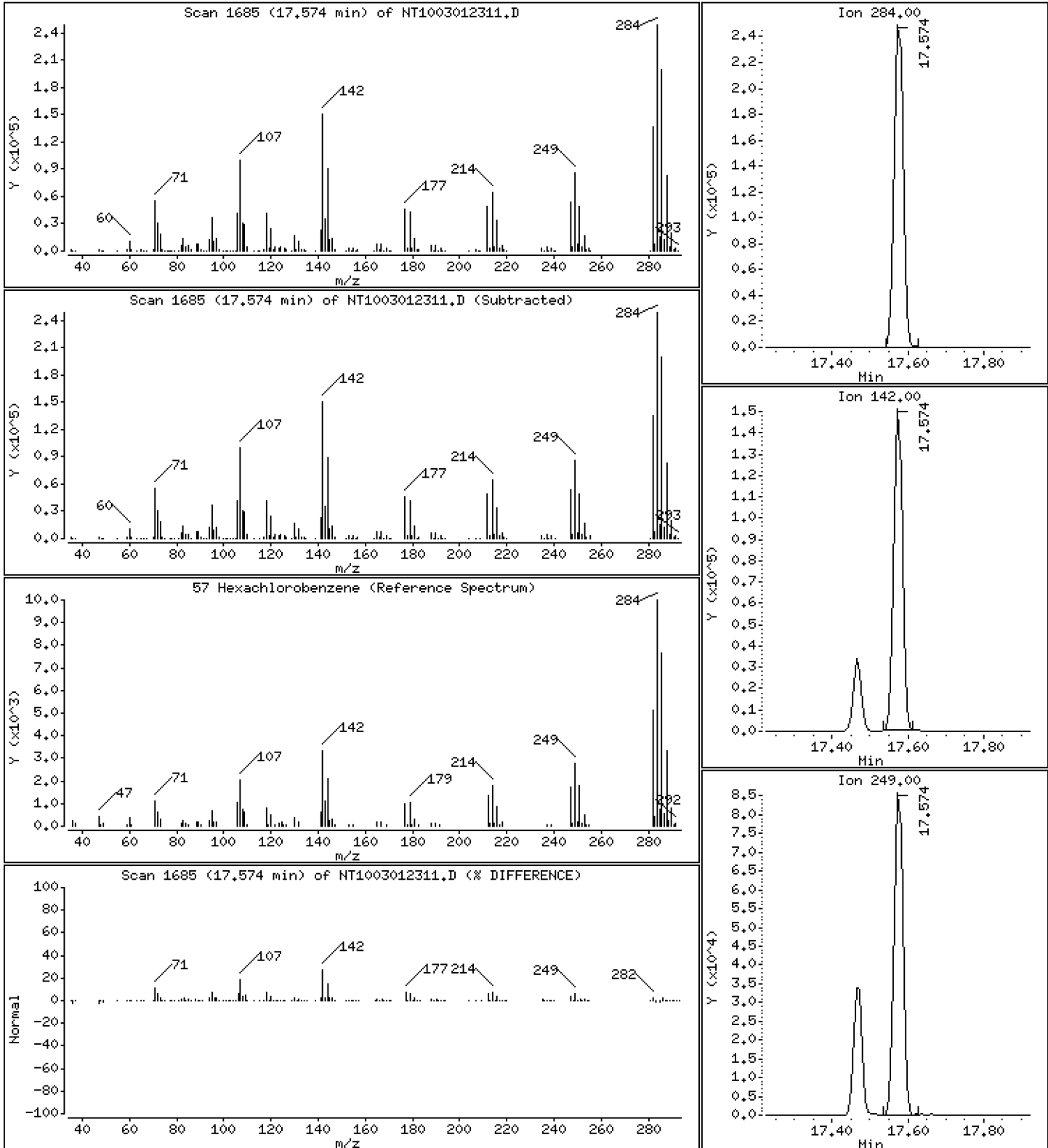
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,805 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

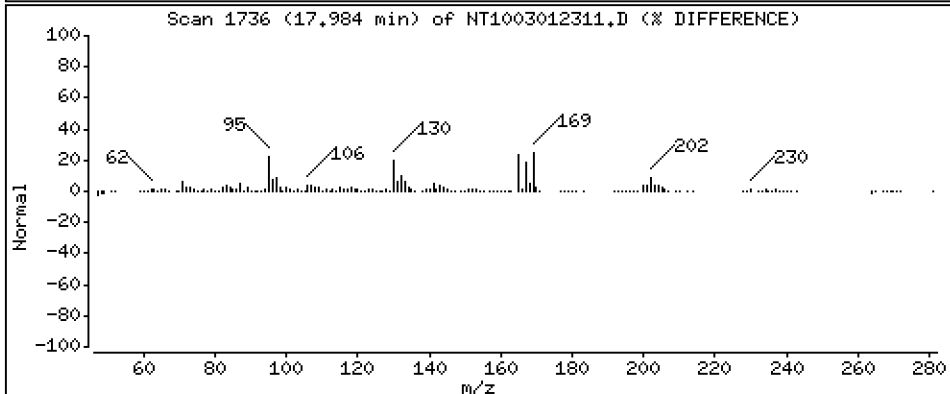
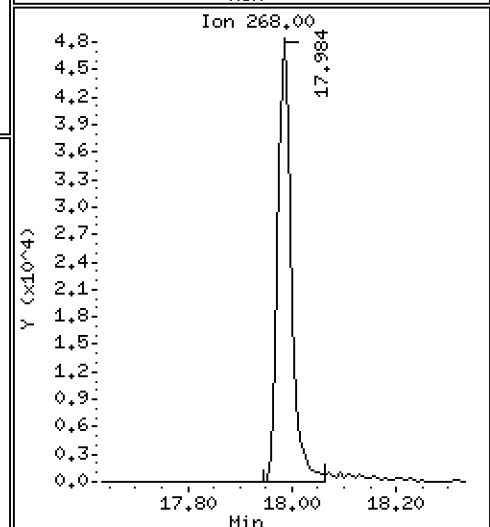
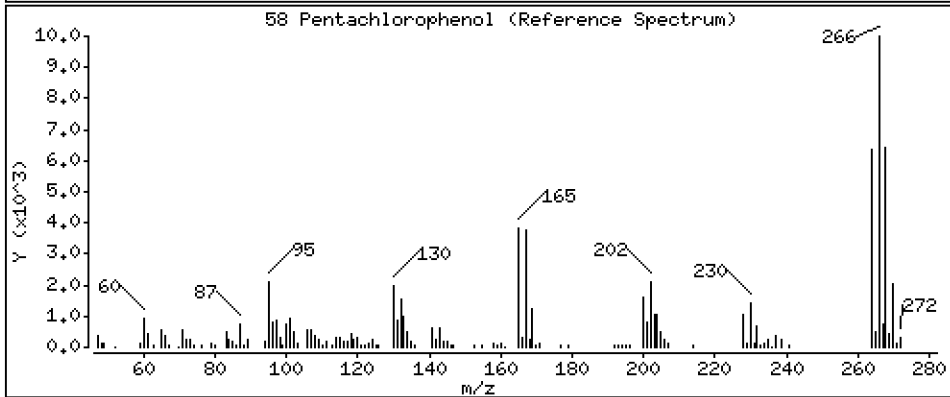
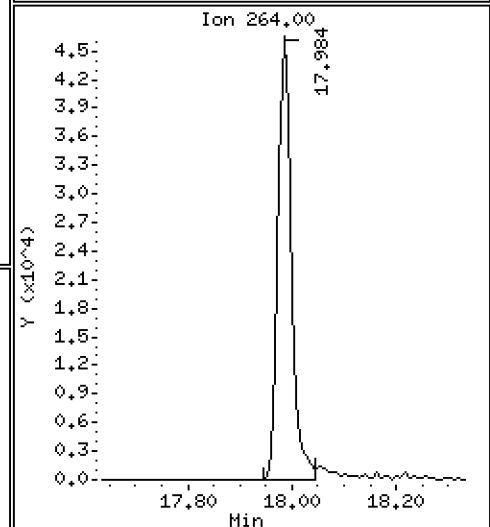
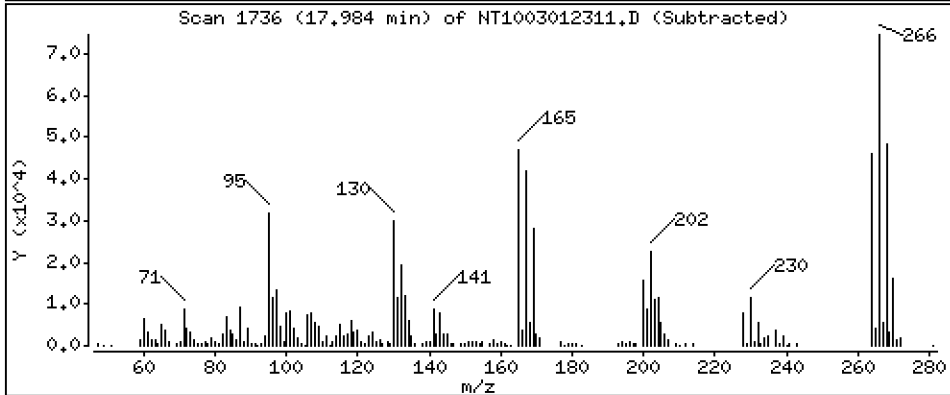
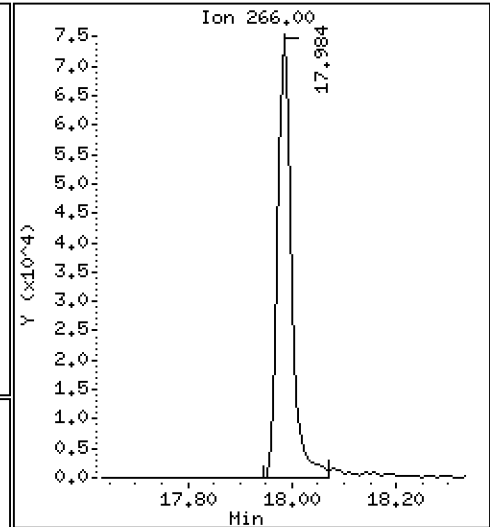
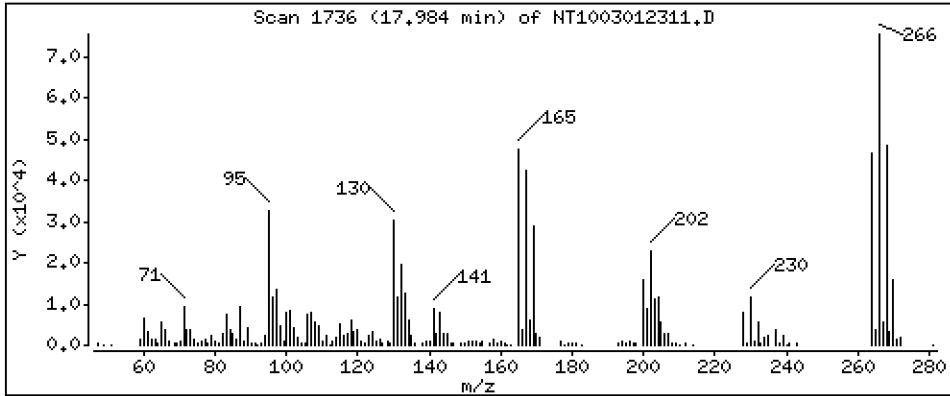
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,492 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

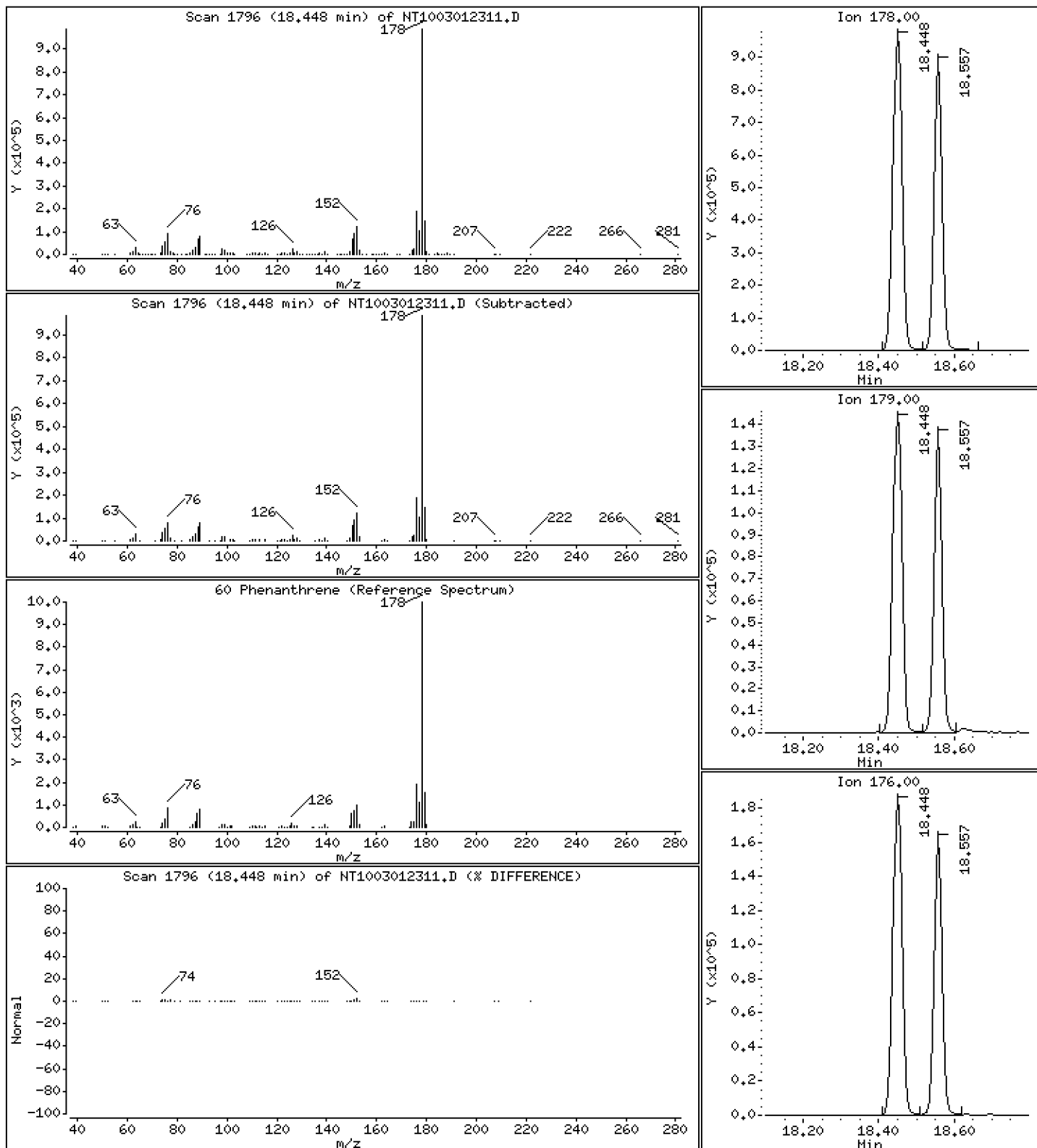
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,085 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

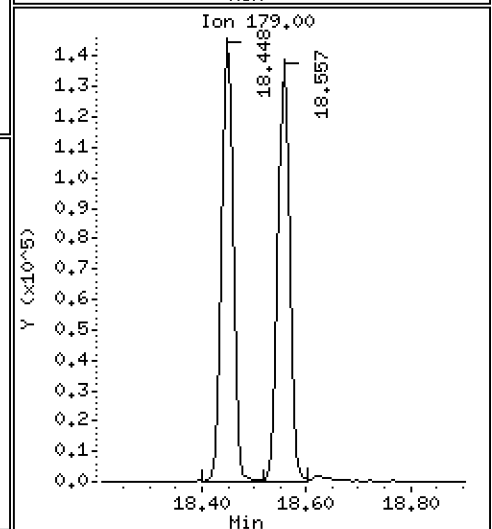
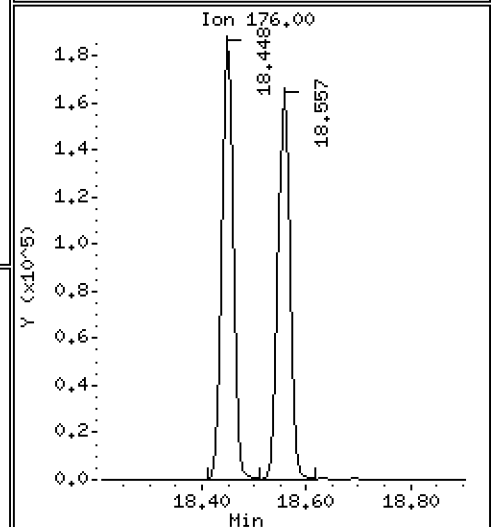
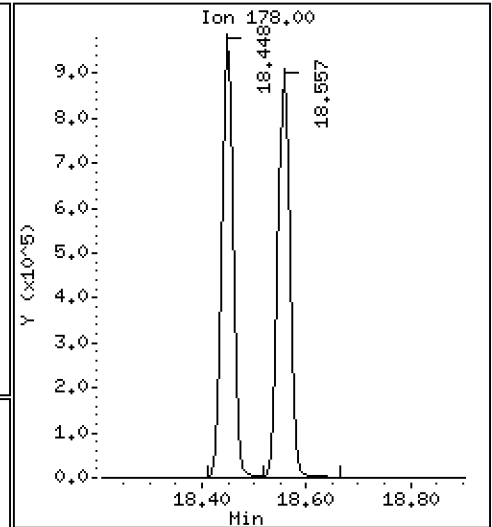
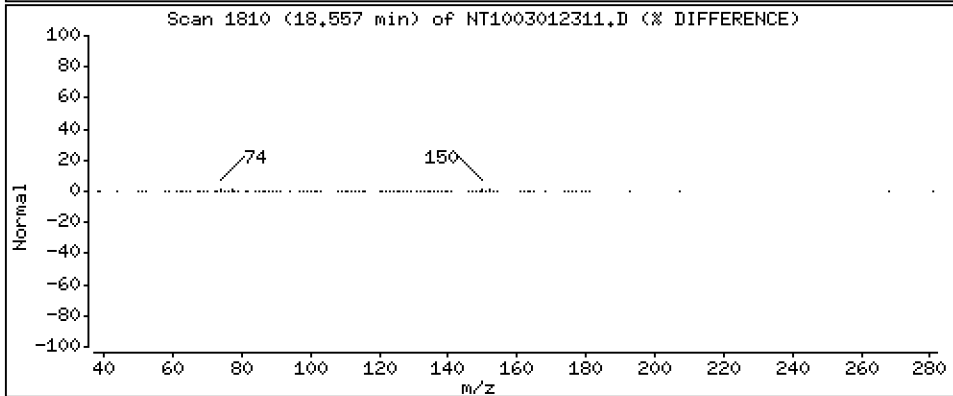
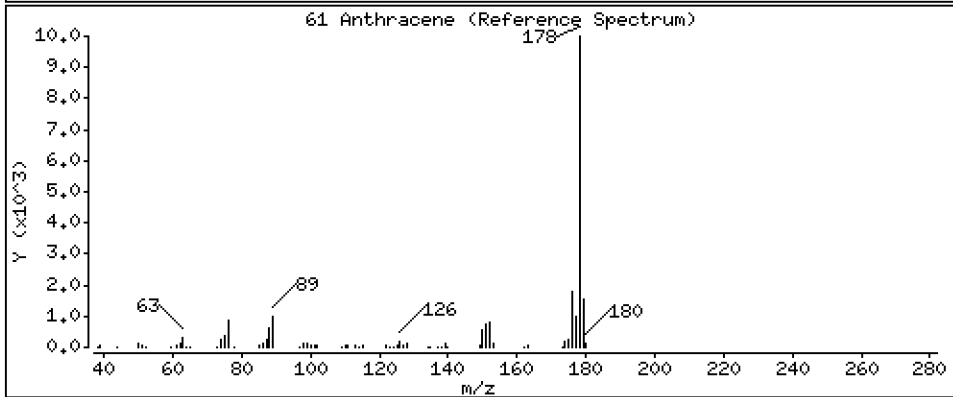
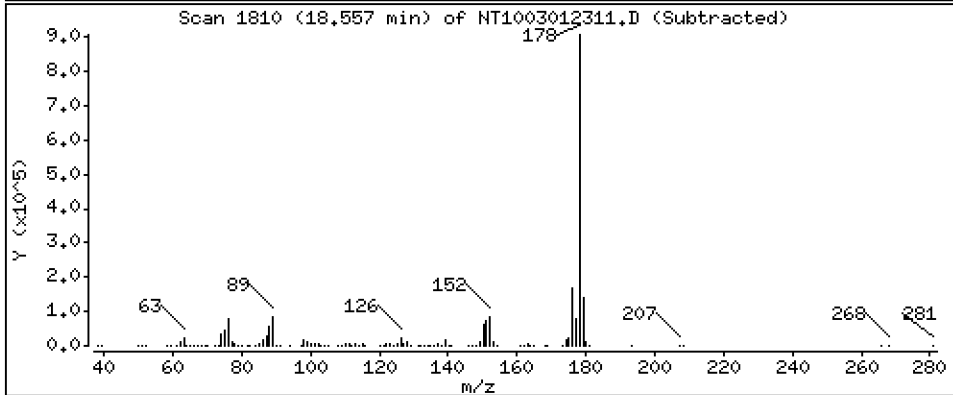
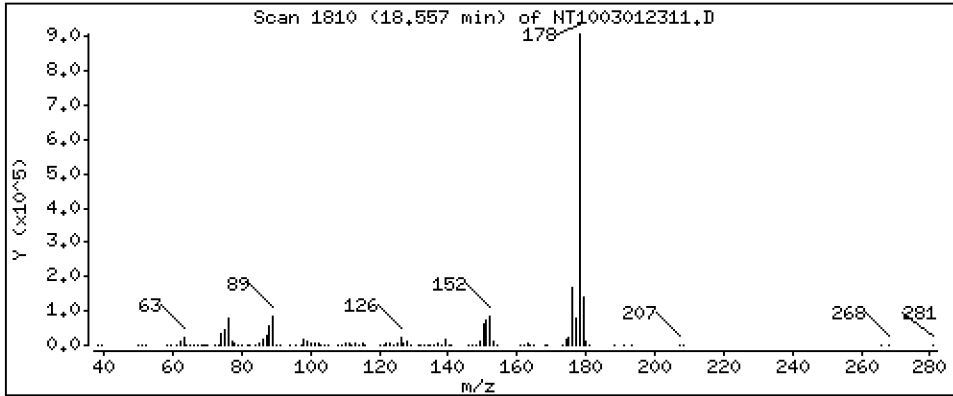
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,585 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

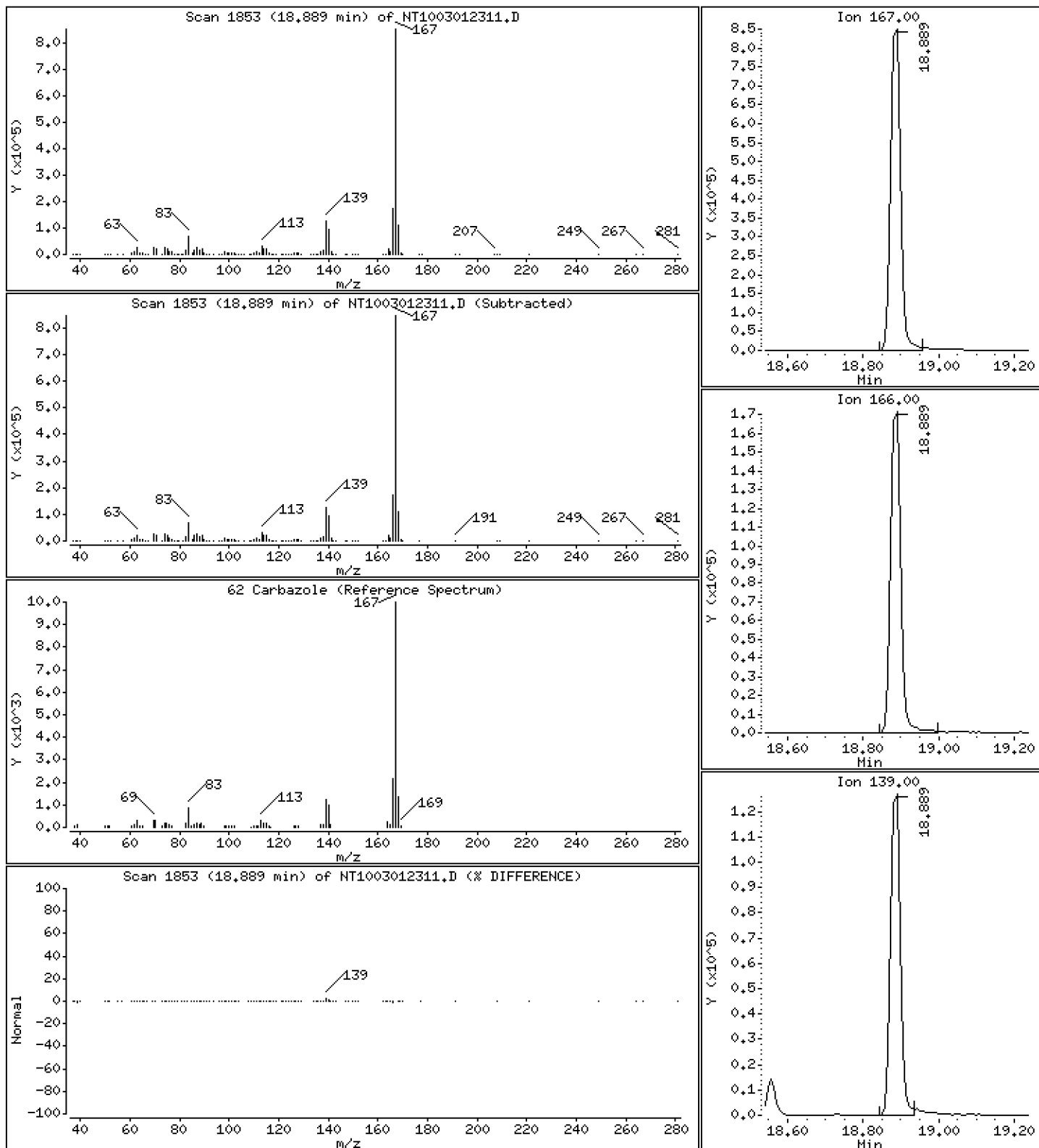
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,335 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

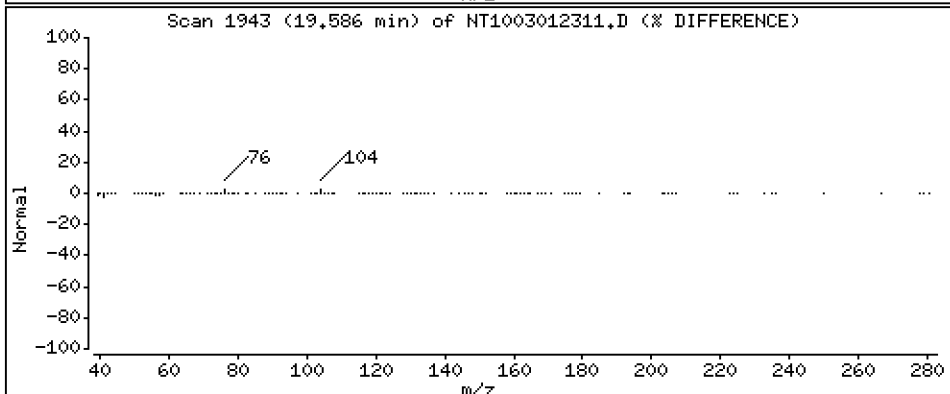
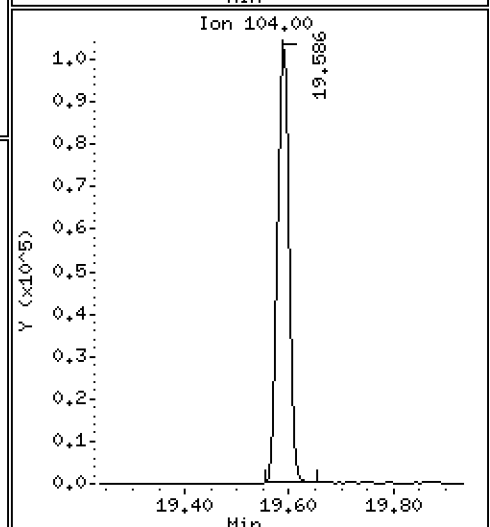
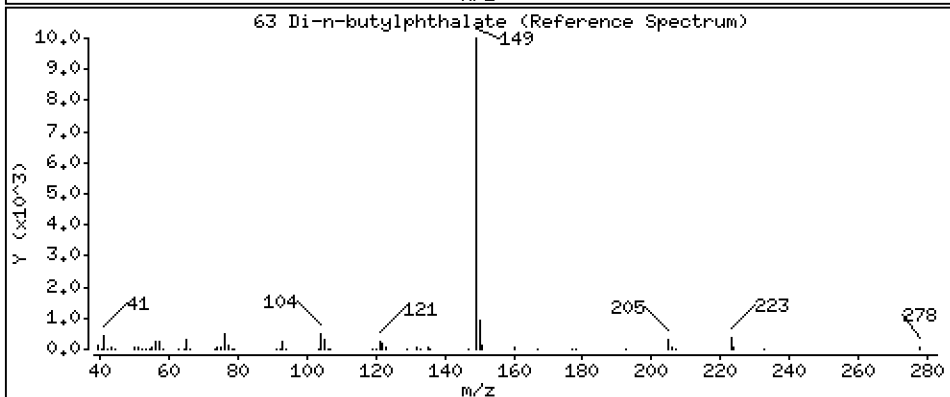
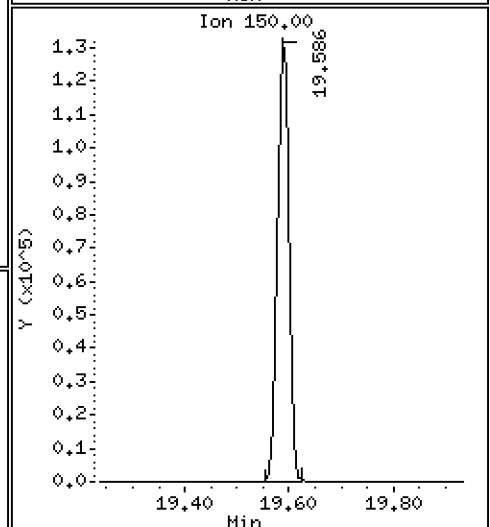
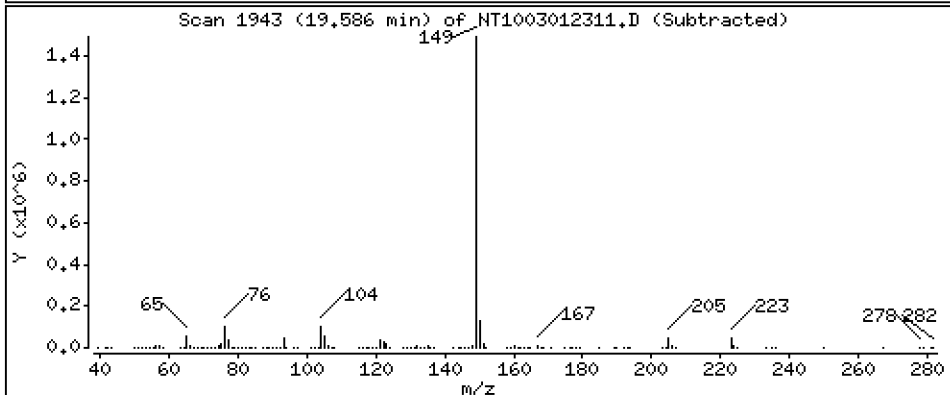
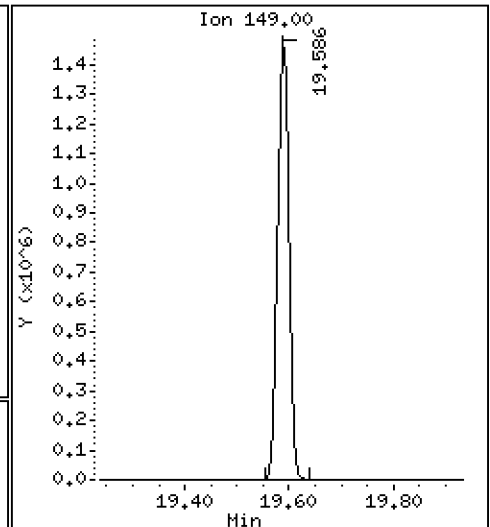
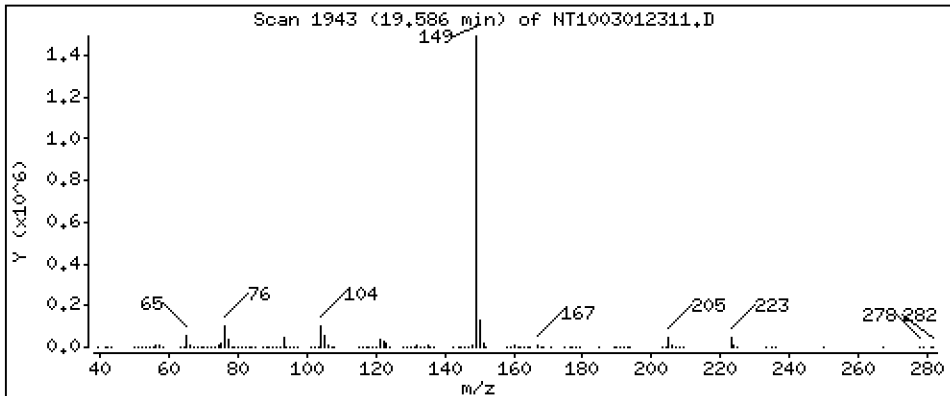
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,463 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

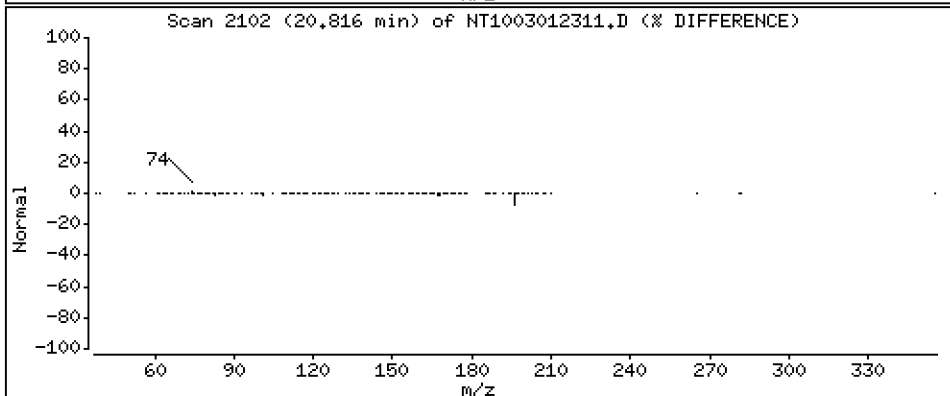
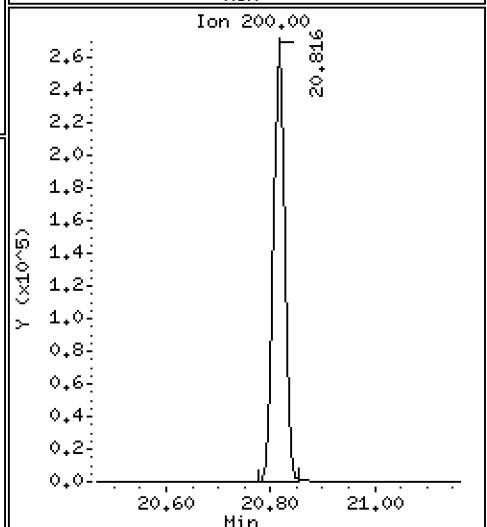
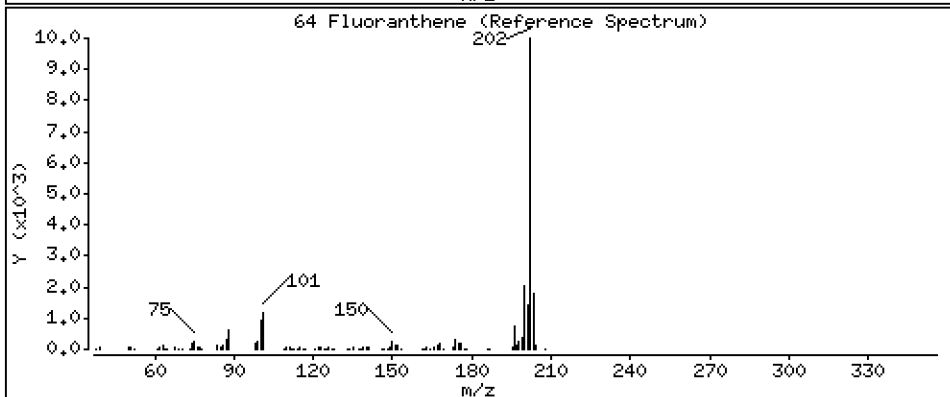
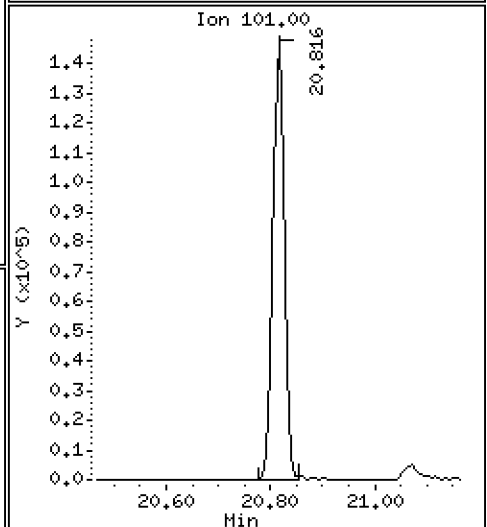
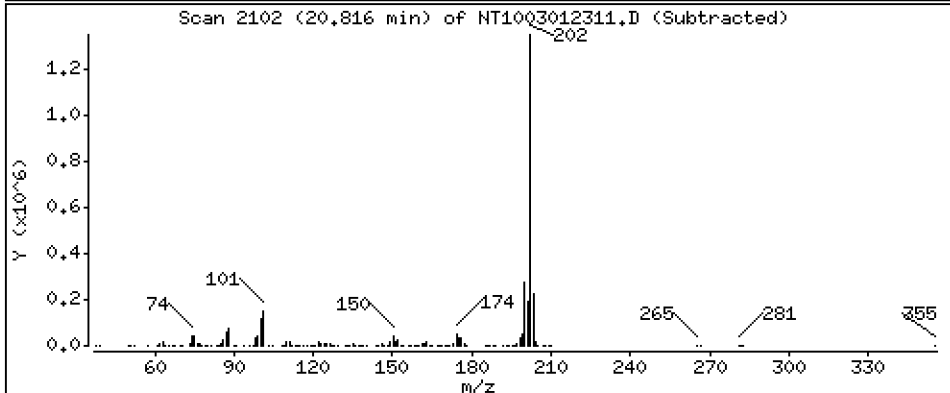
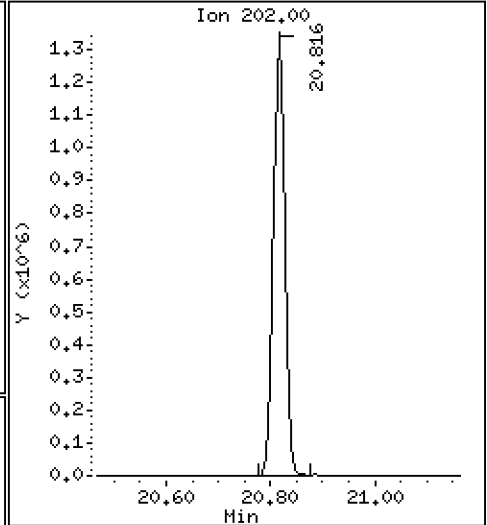
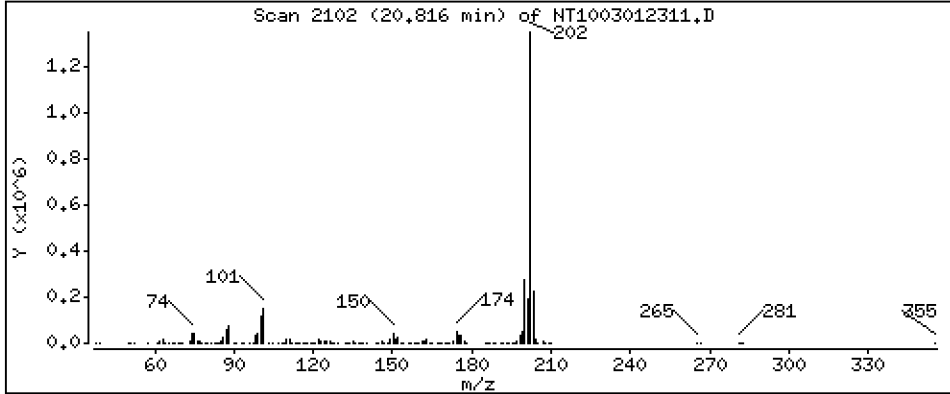
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,542 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

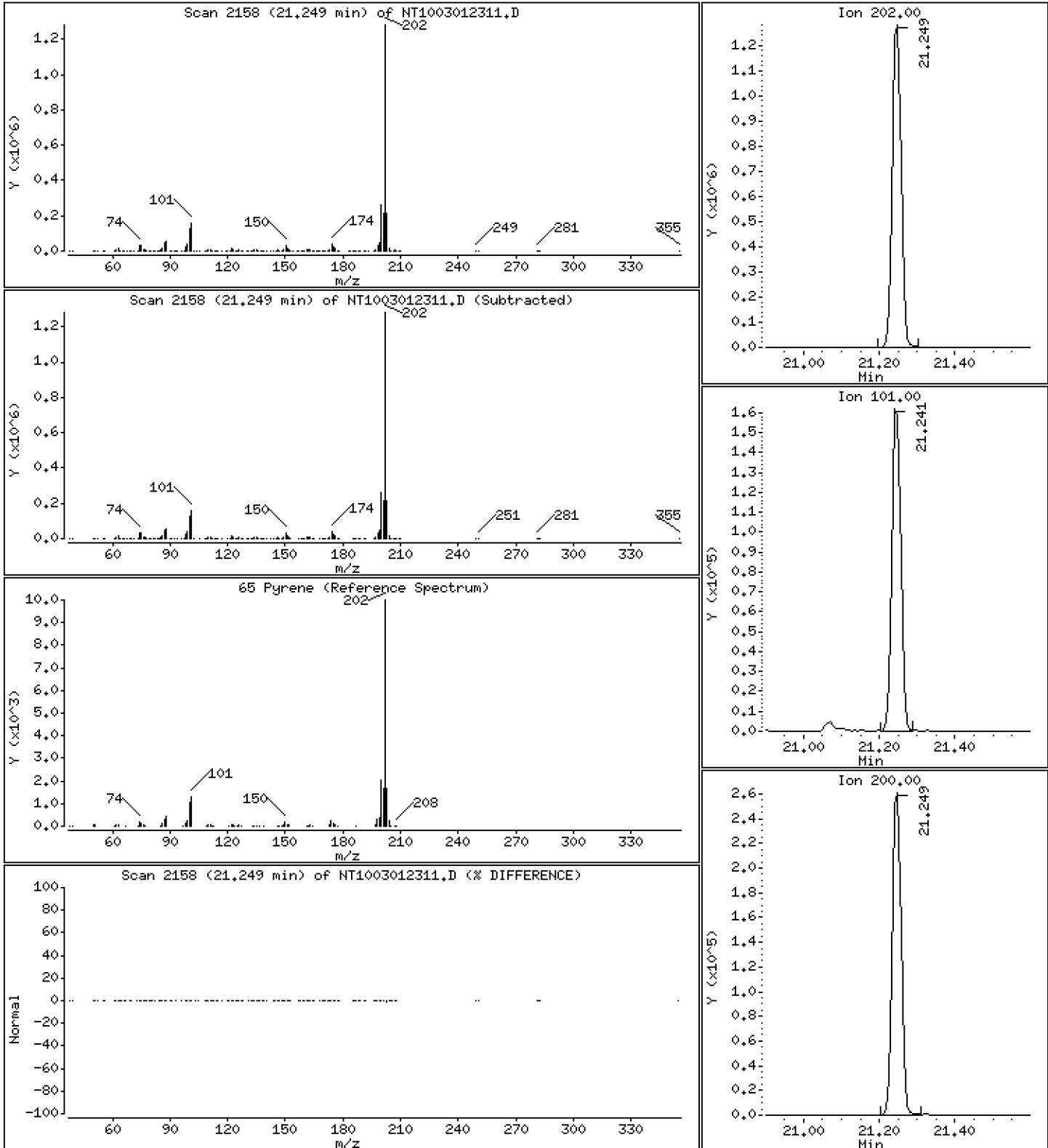
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,626 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

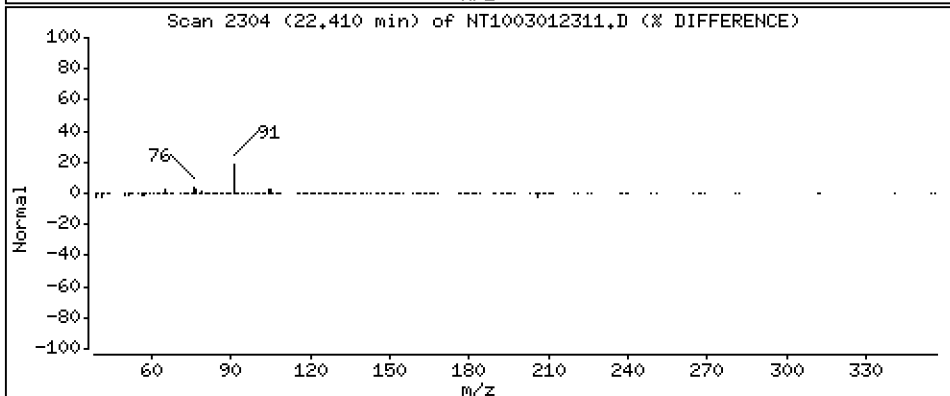
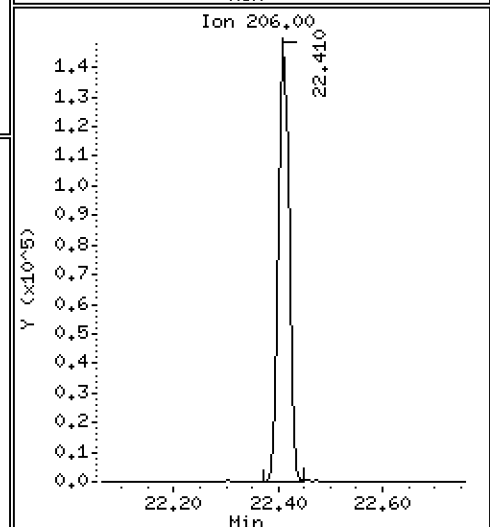
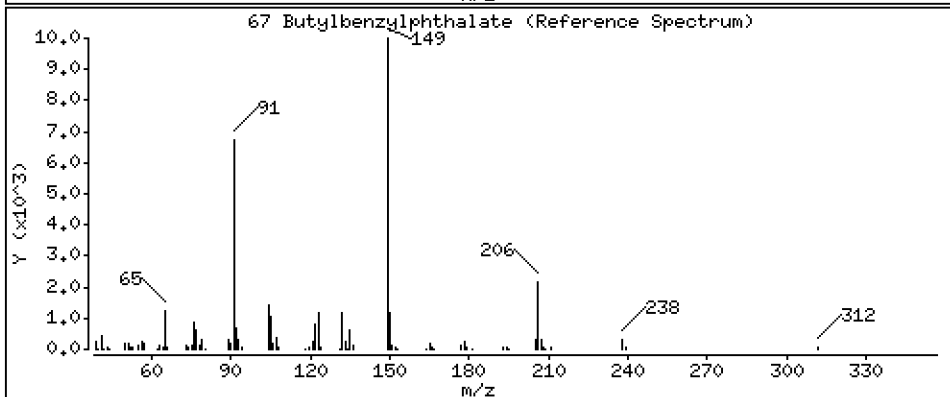
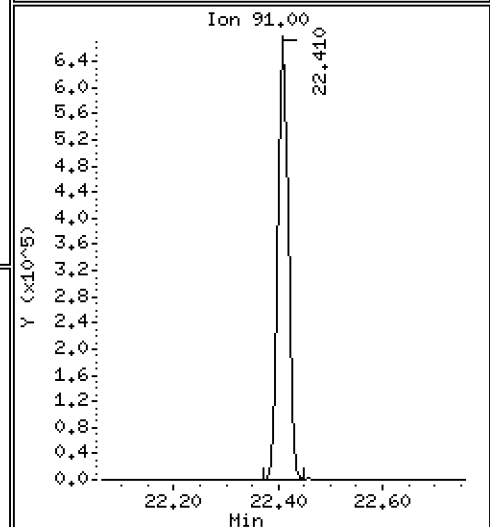
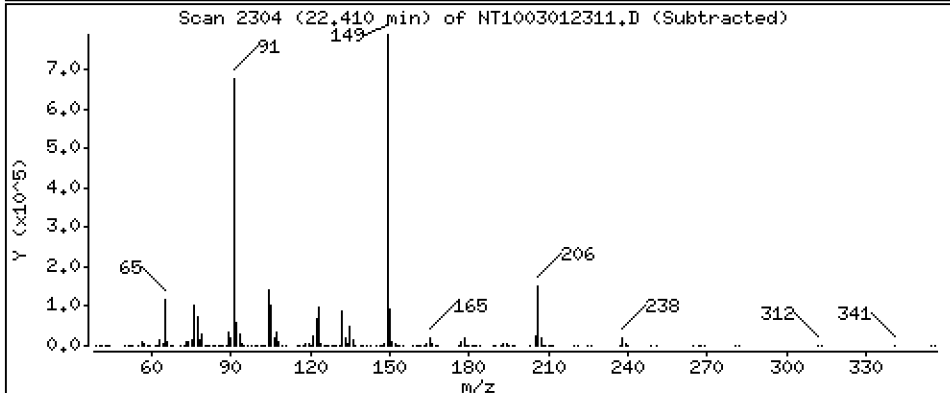
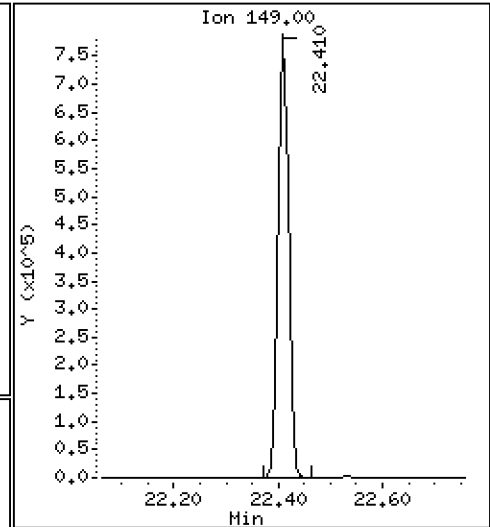
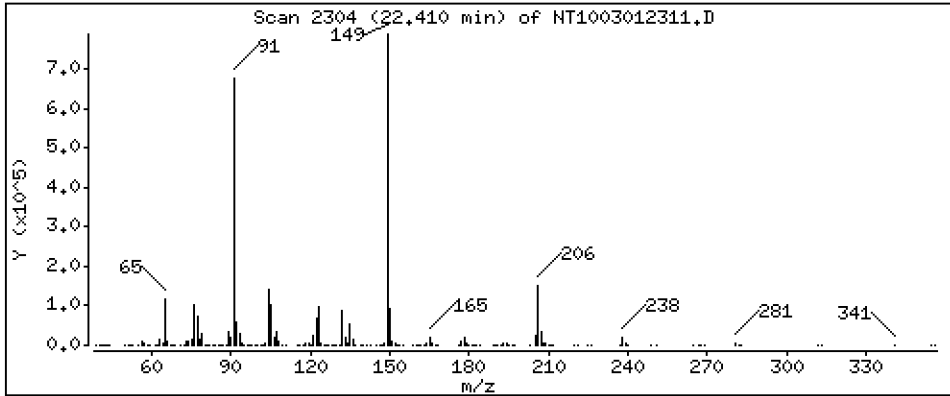
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,525 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

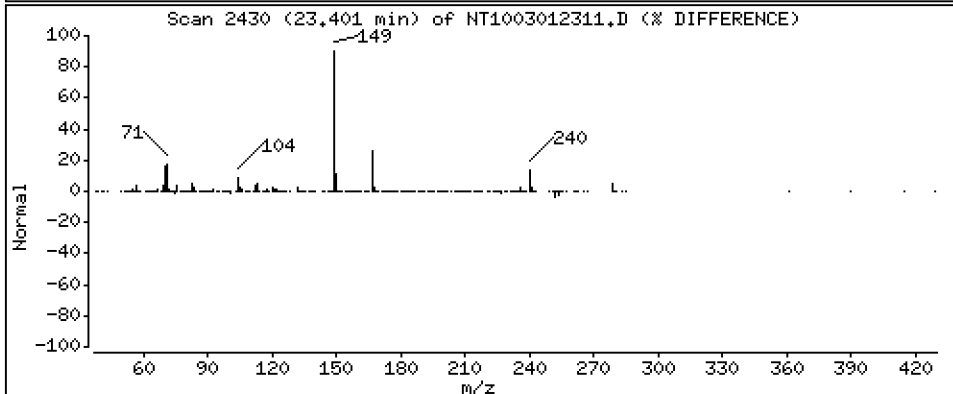
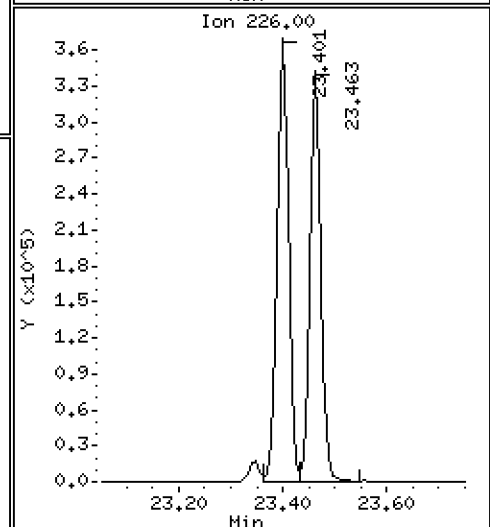
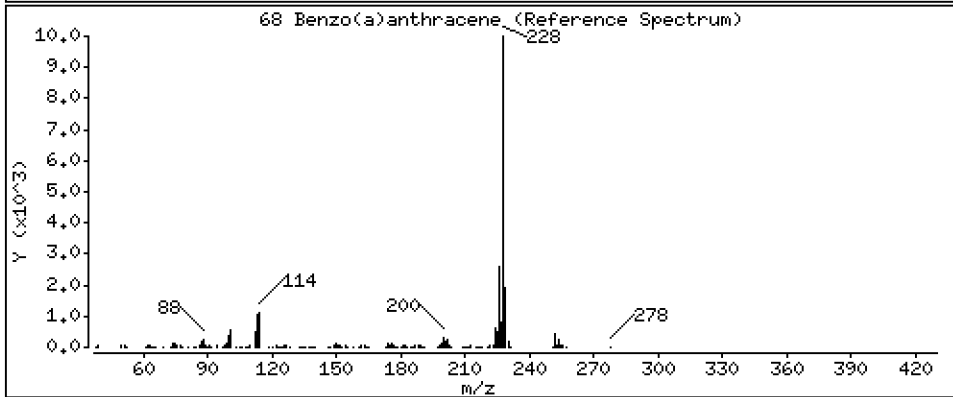
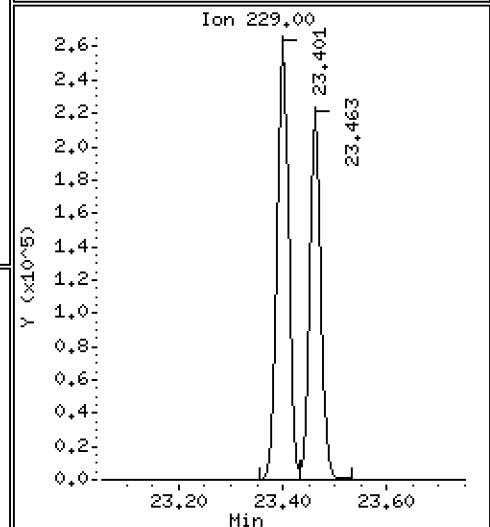
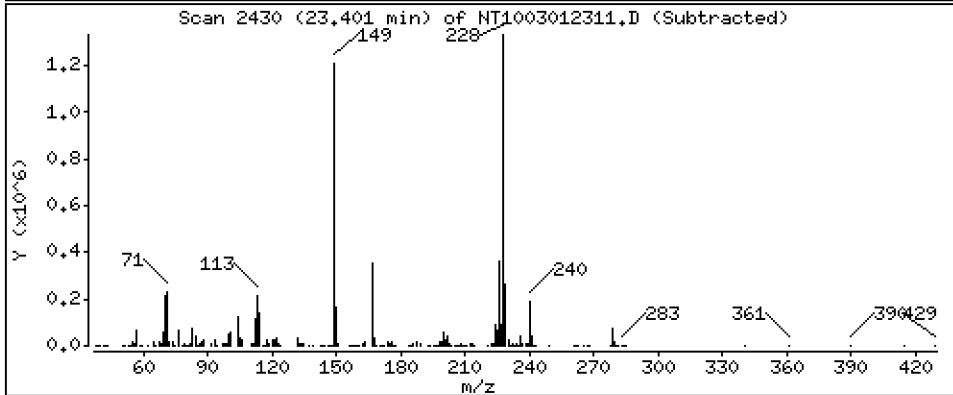
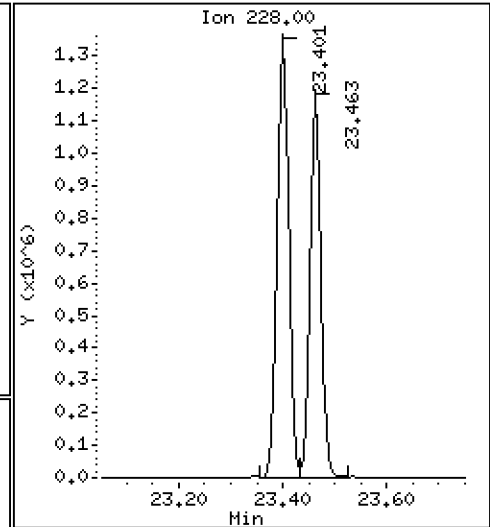
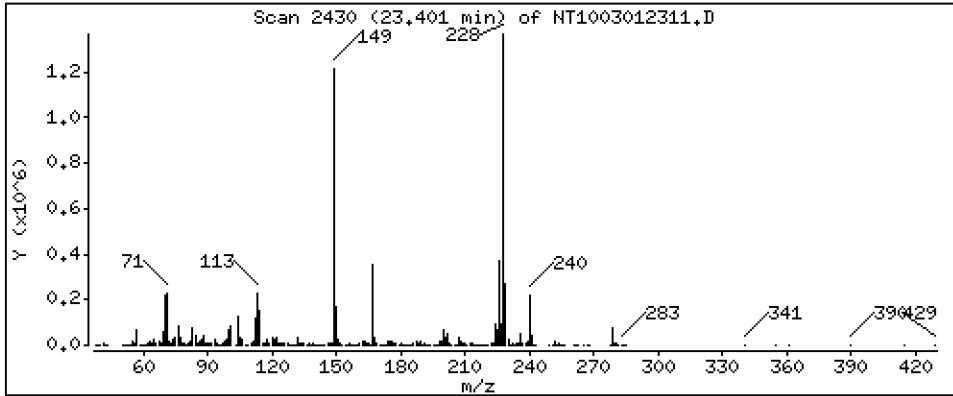
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,578 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

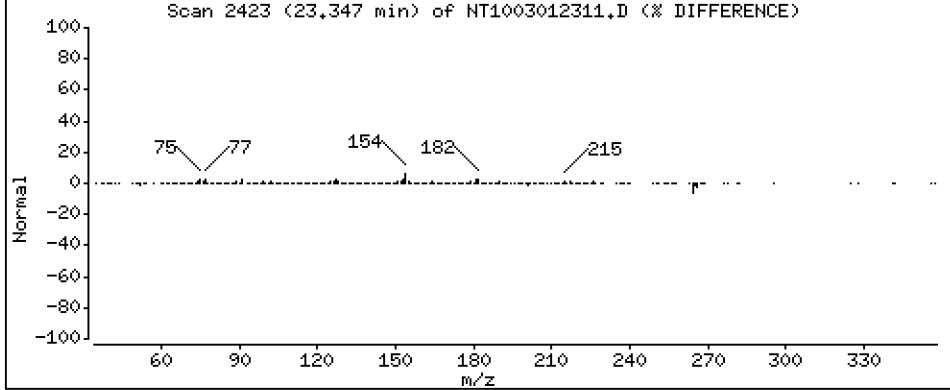
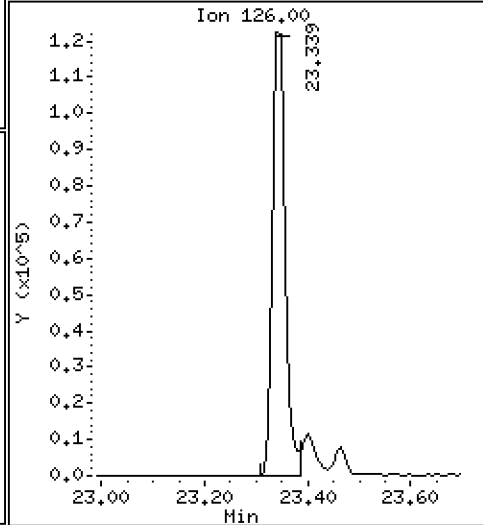
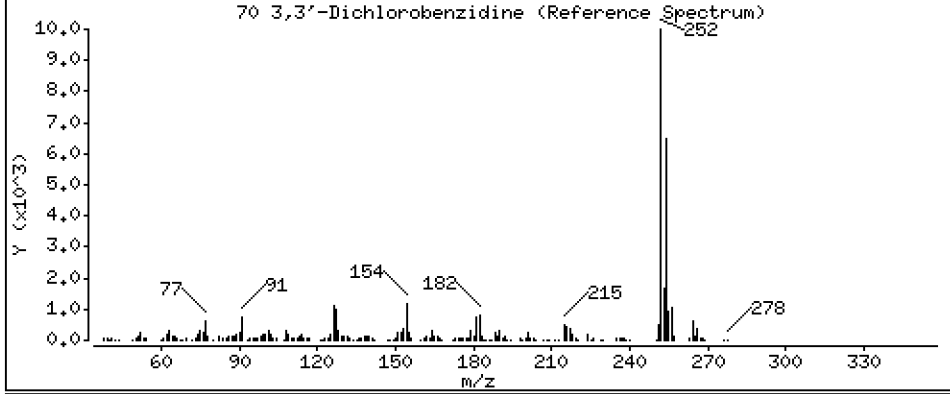
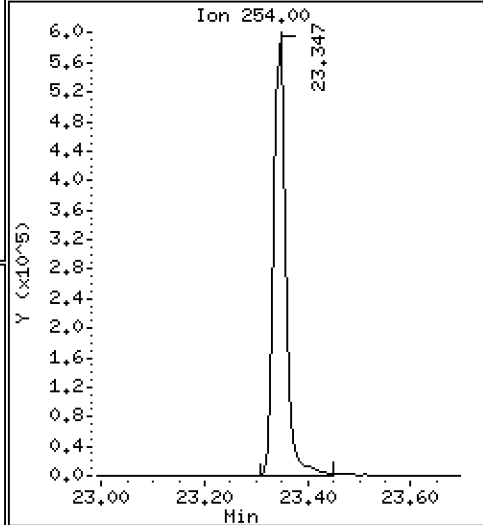
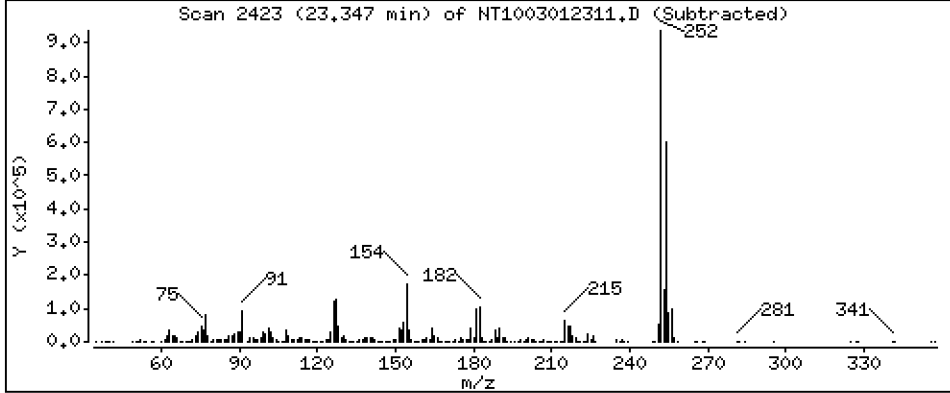
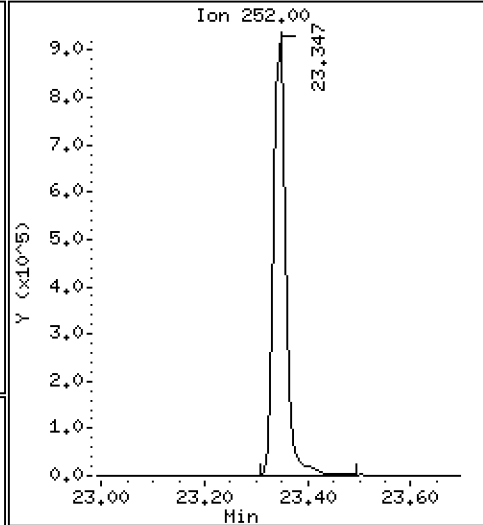
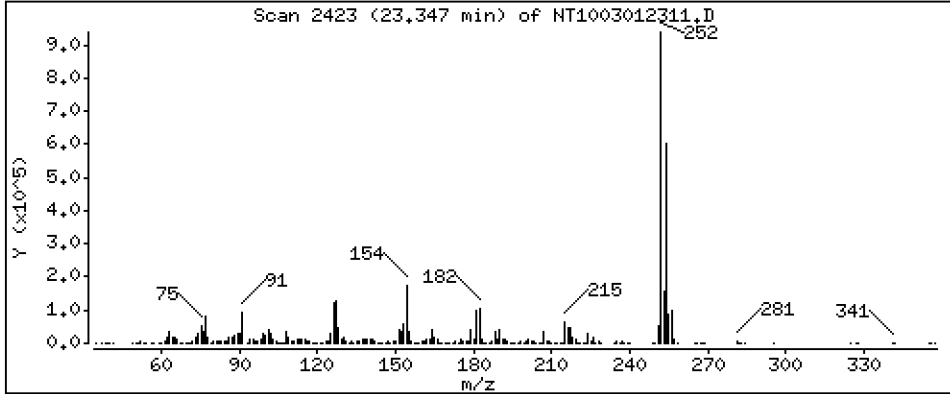
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 7,383 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

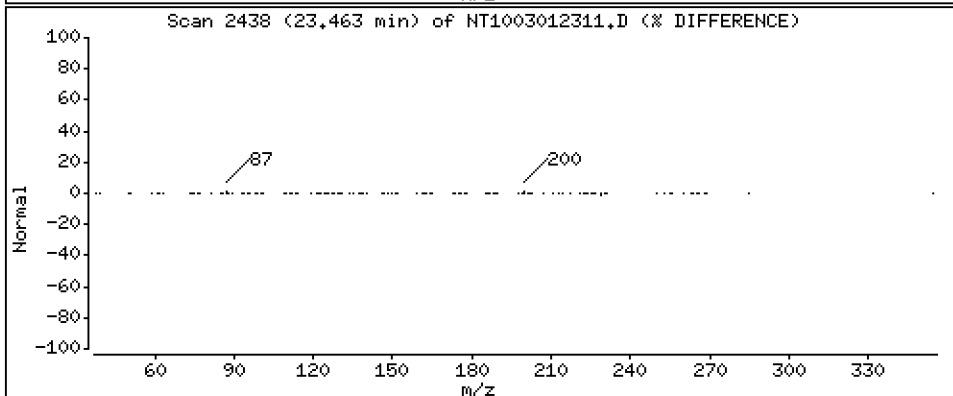
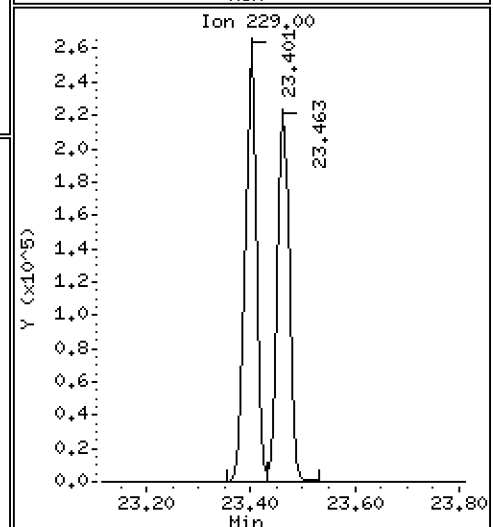
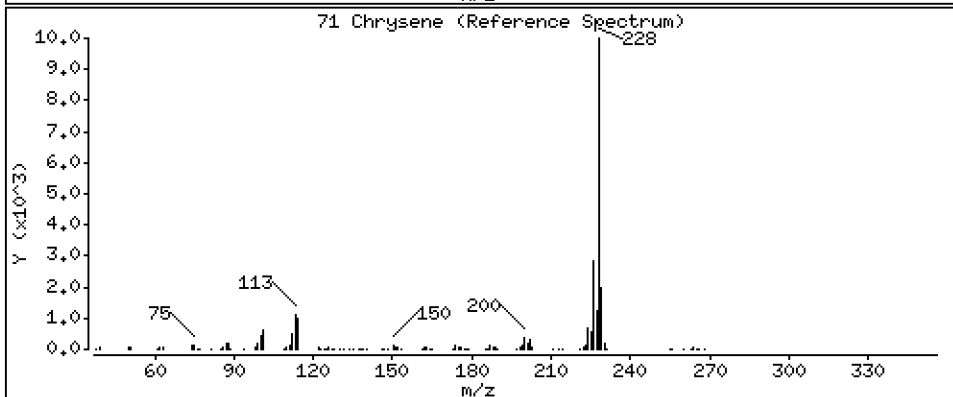
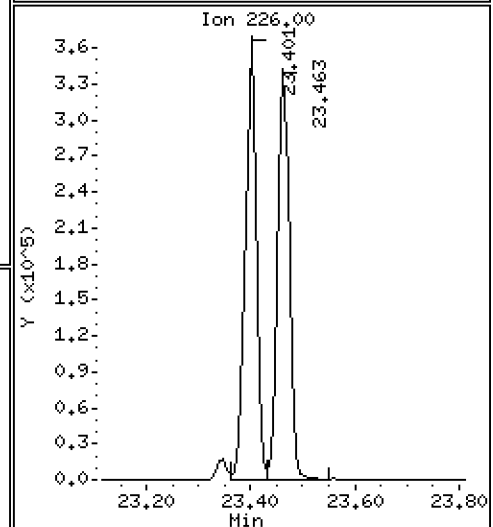
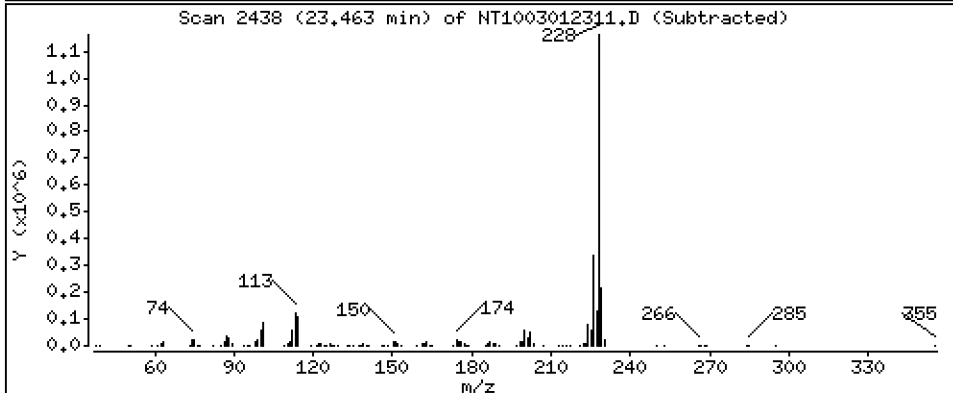
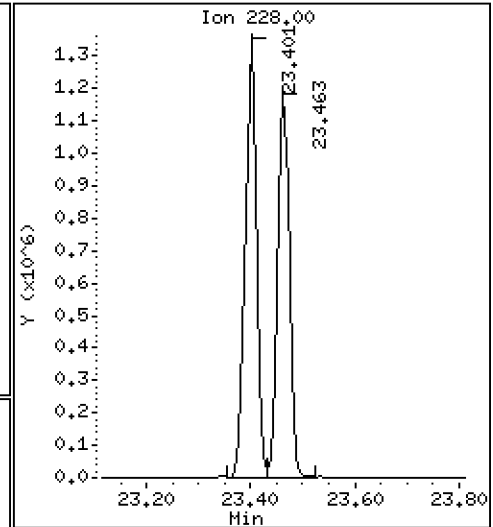
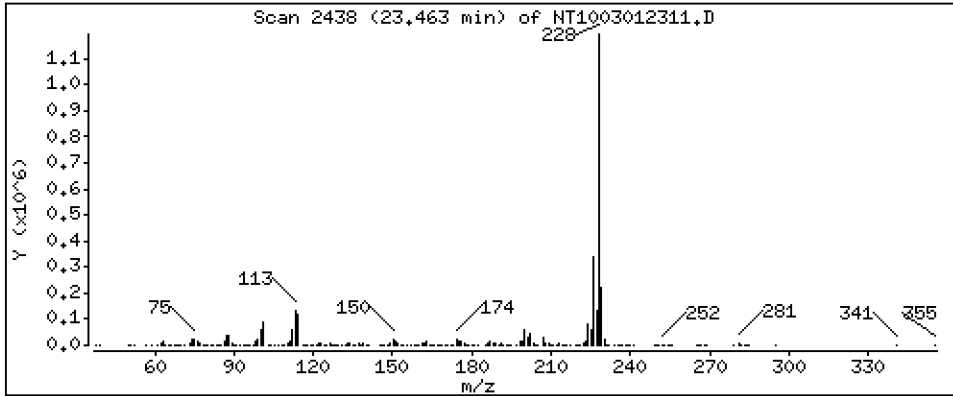
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,967 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

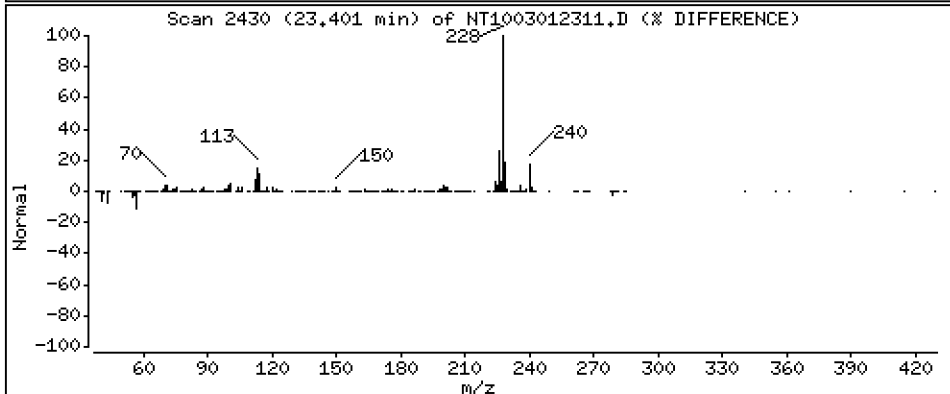
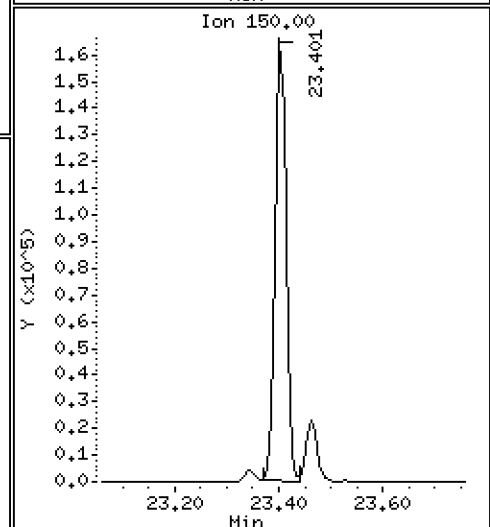
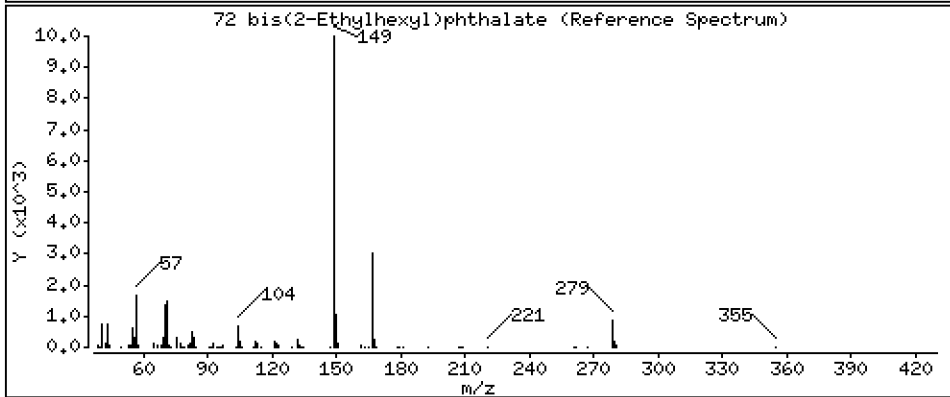
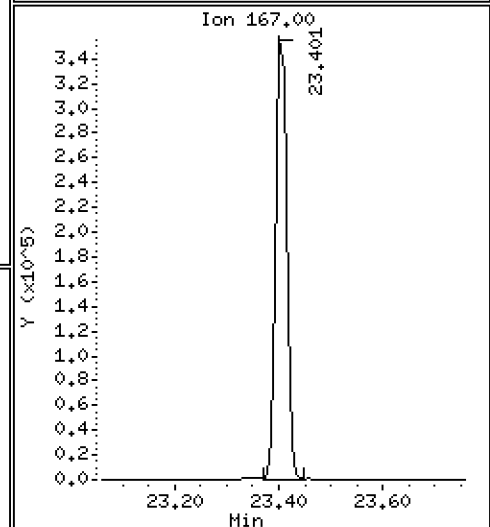
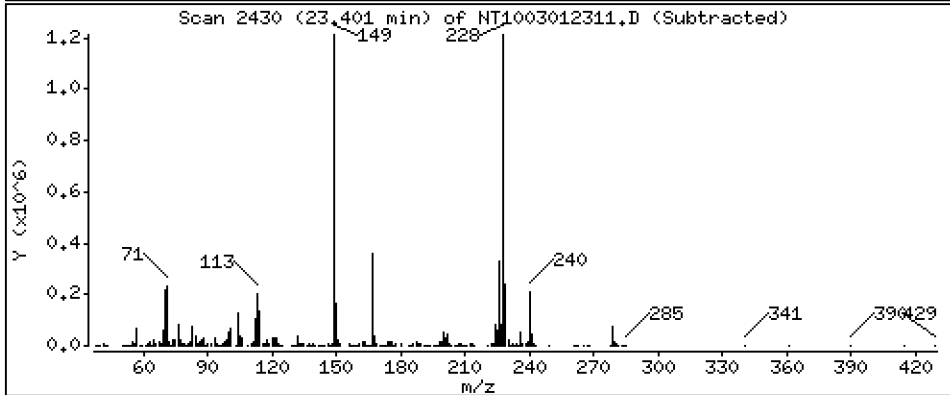
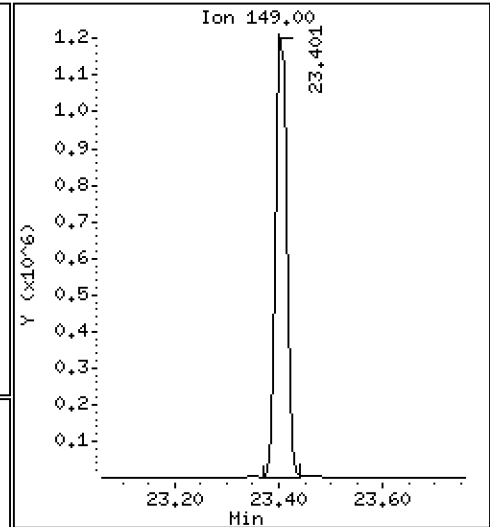
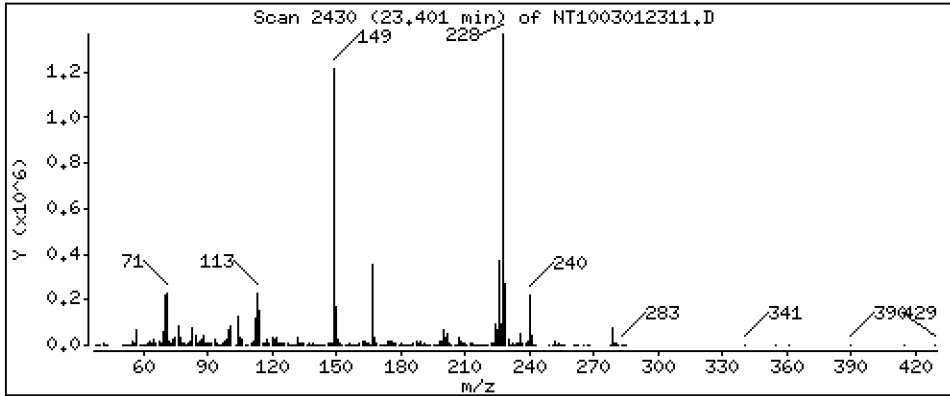
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,956 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

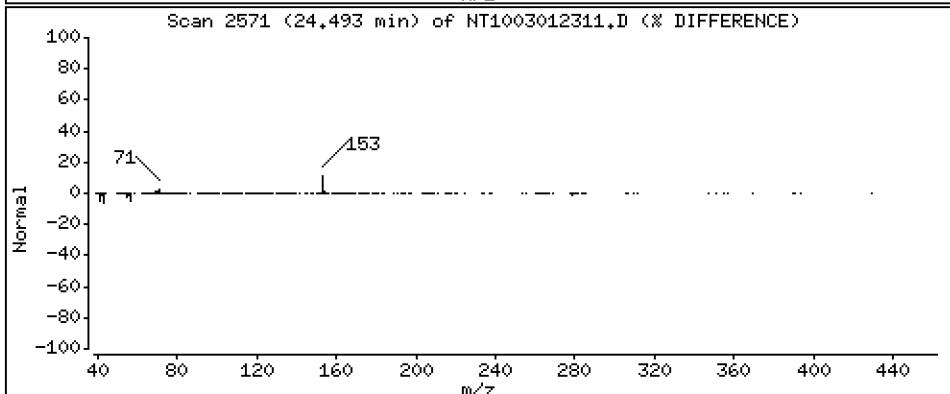
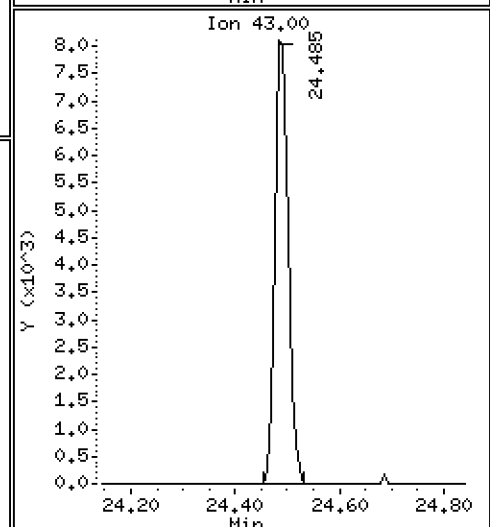
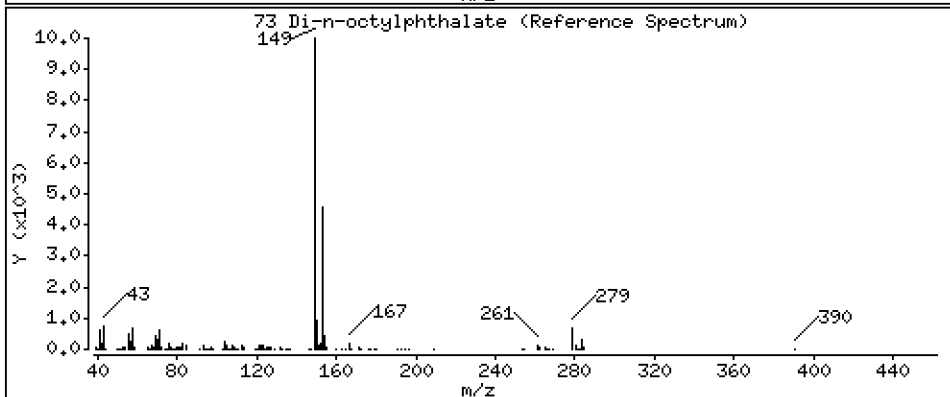
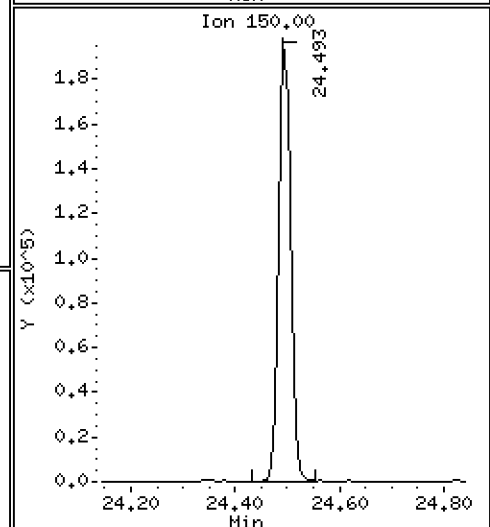
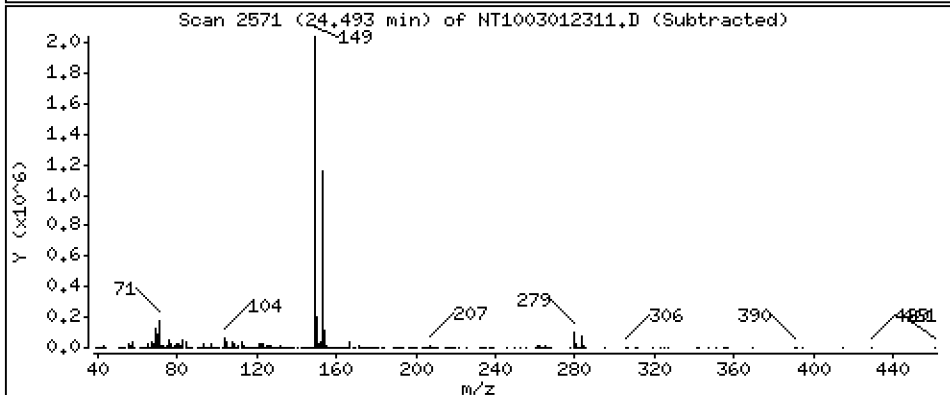
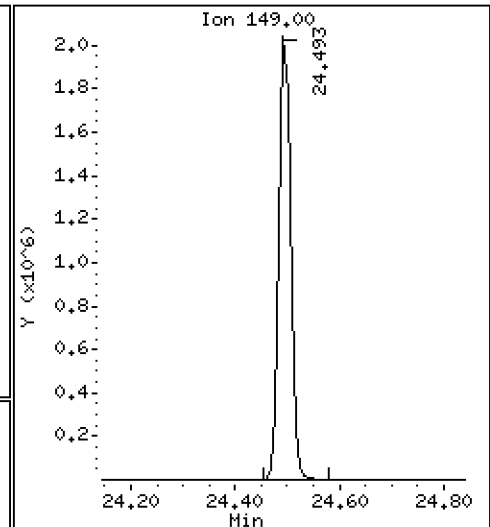
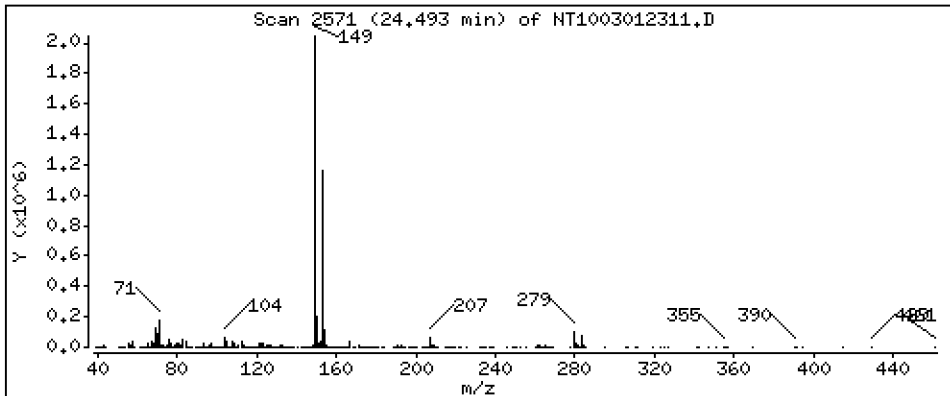
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,844 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

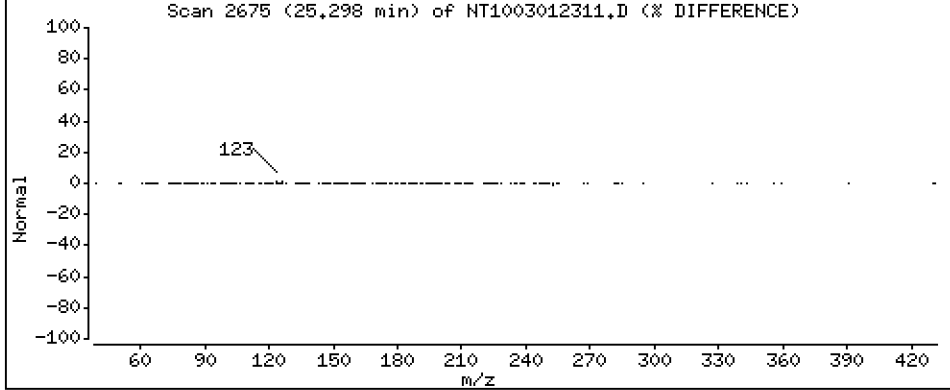
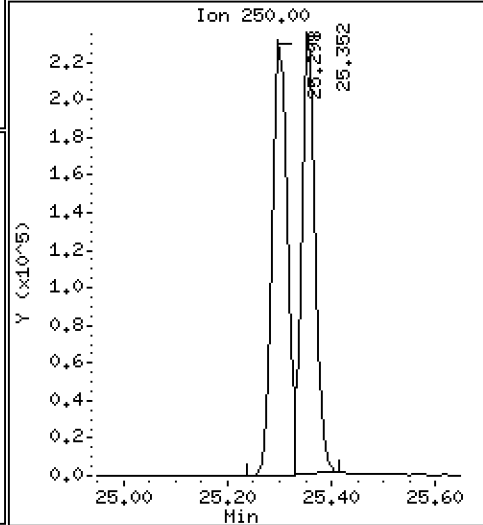
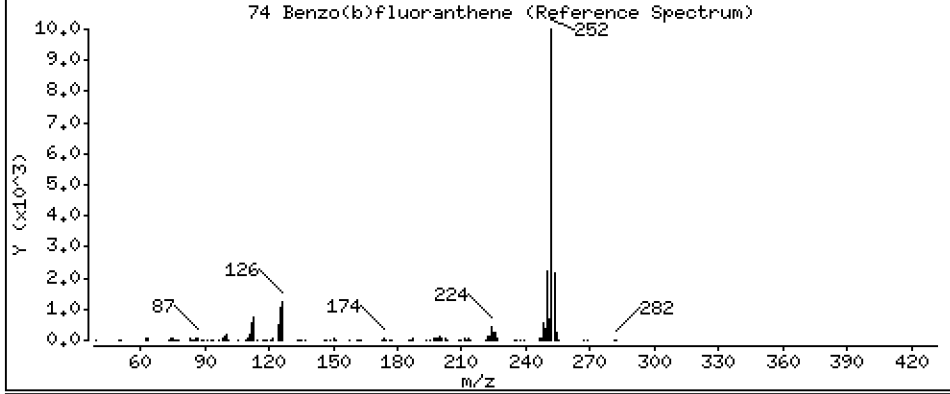
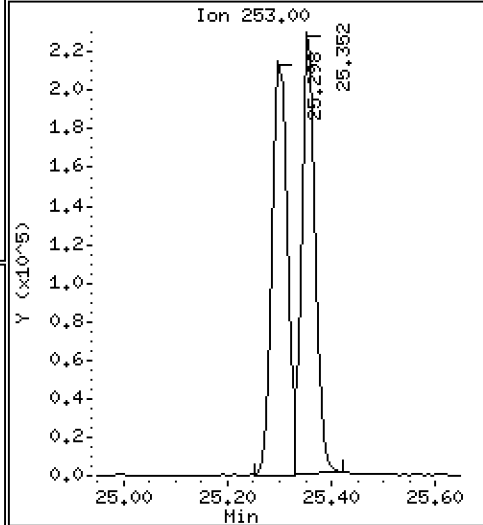
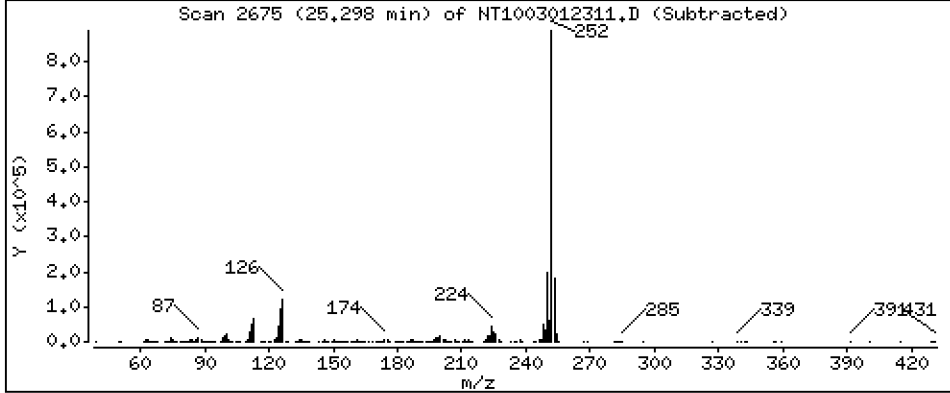
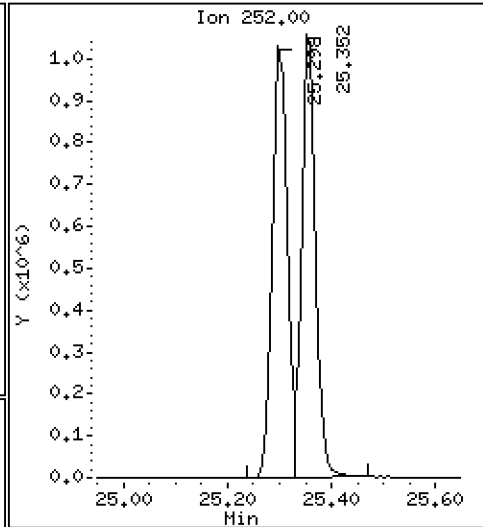
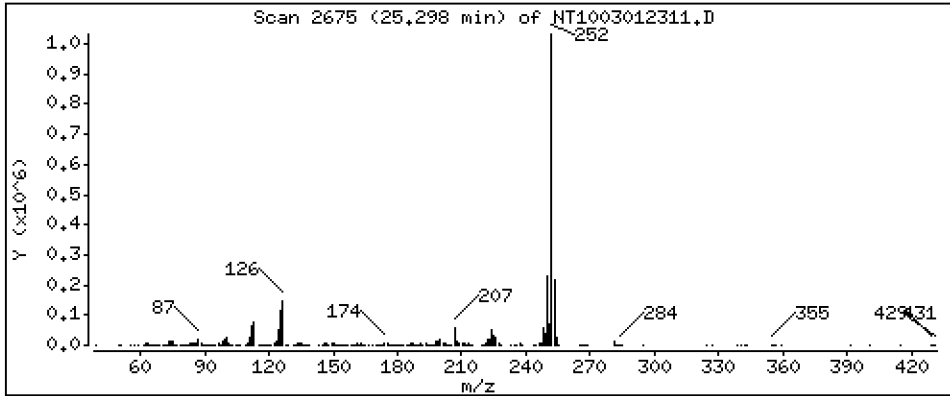
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,319 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

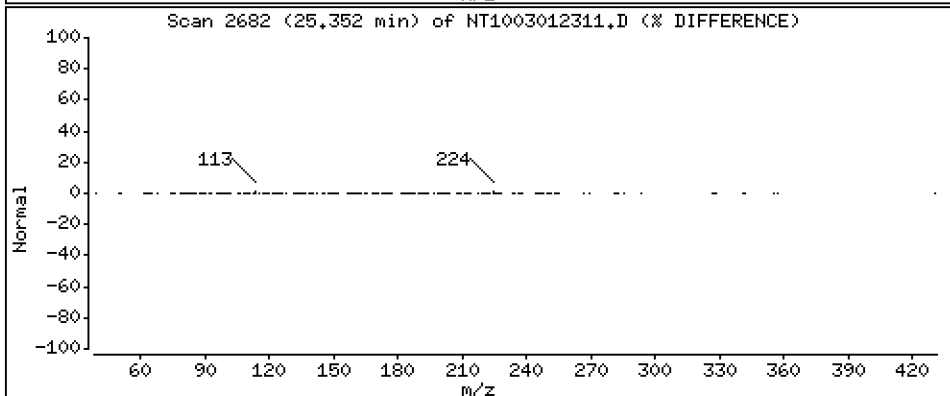
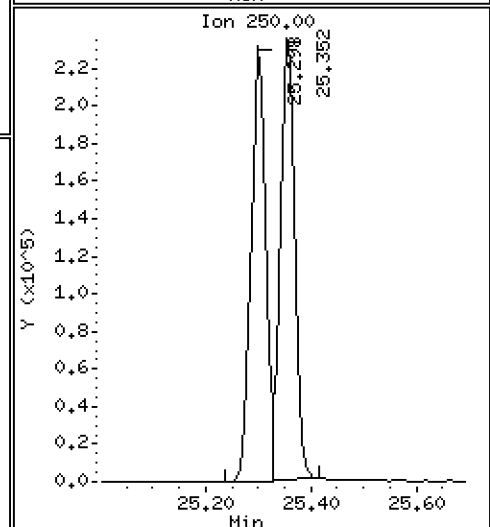
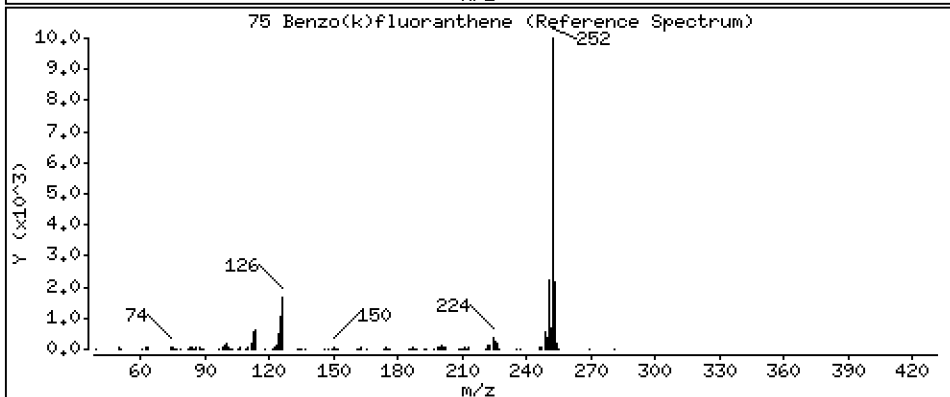
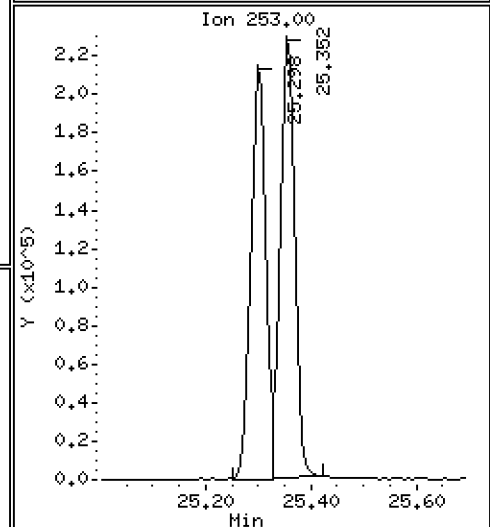
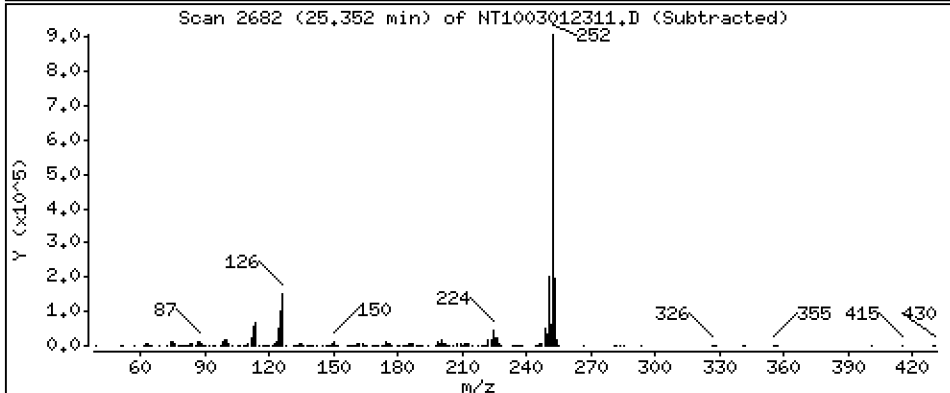
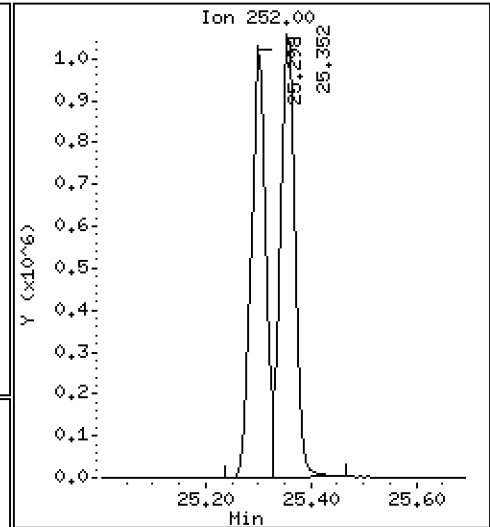
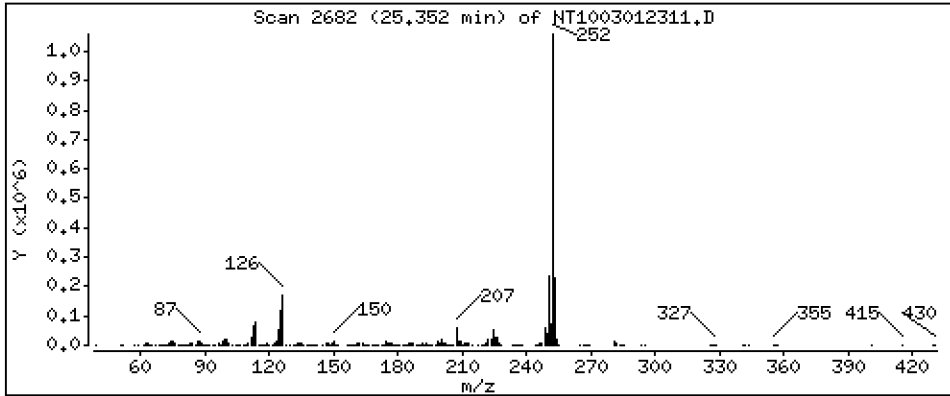
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,563 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

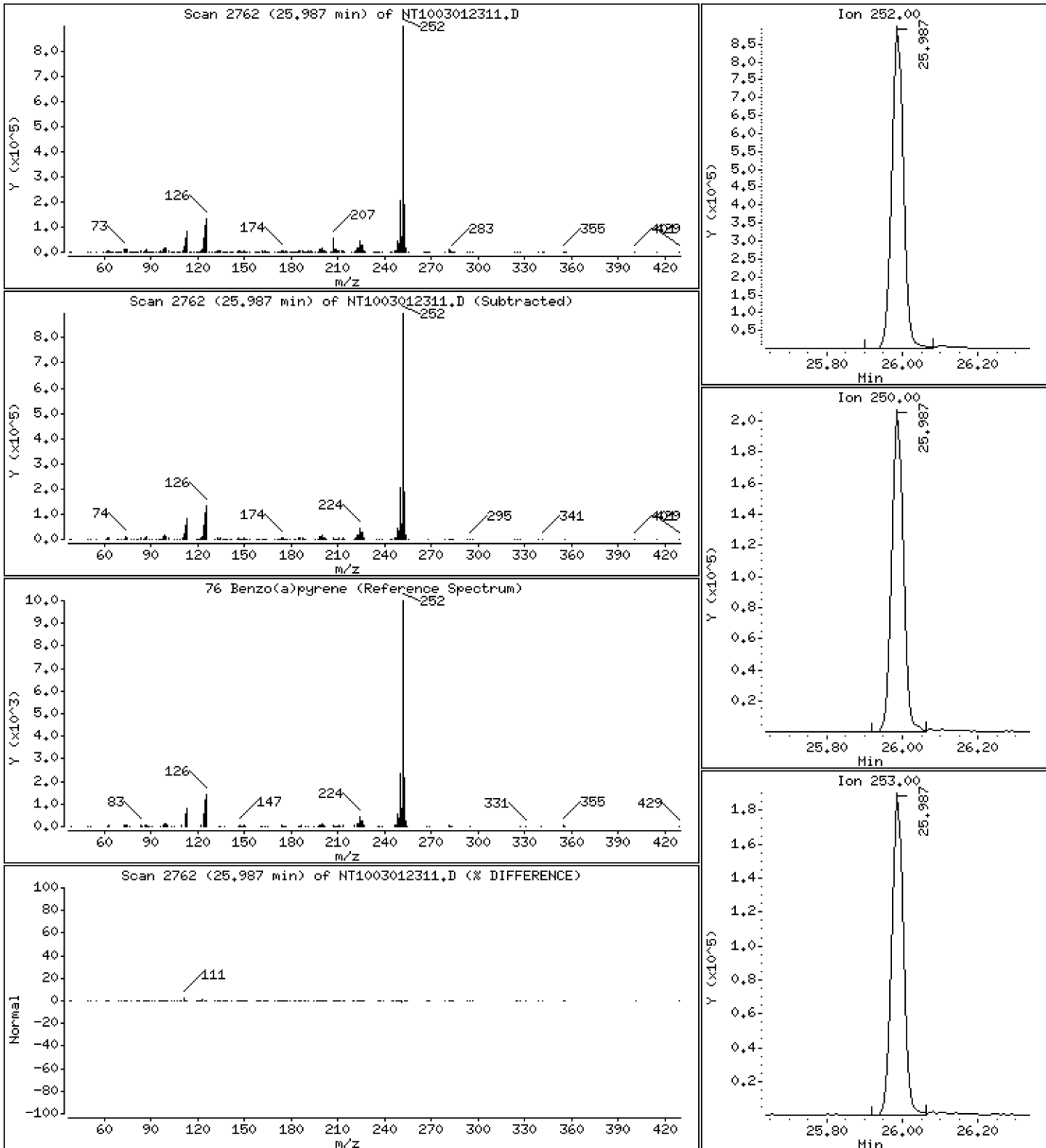
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,445 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

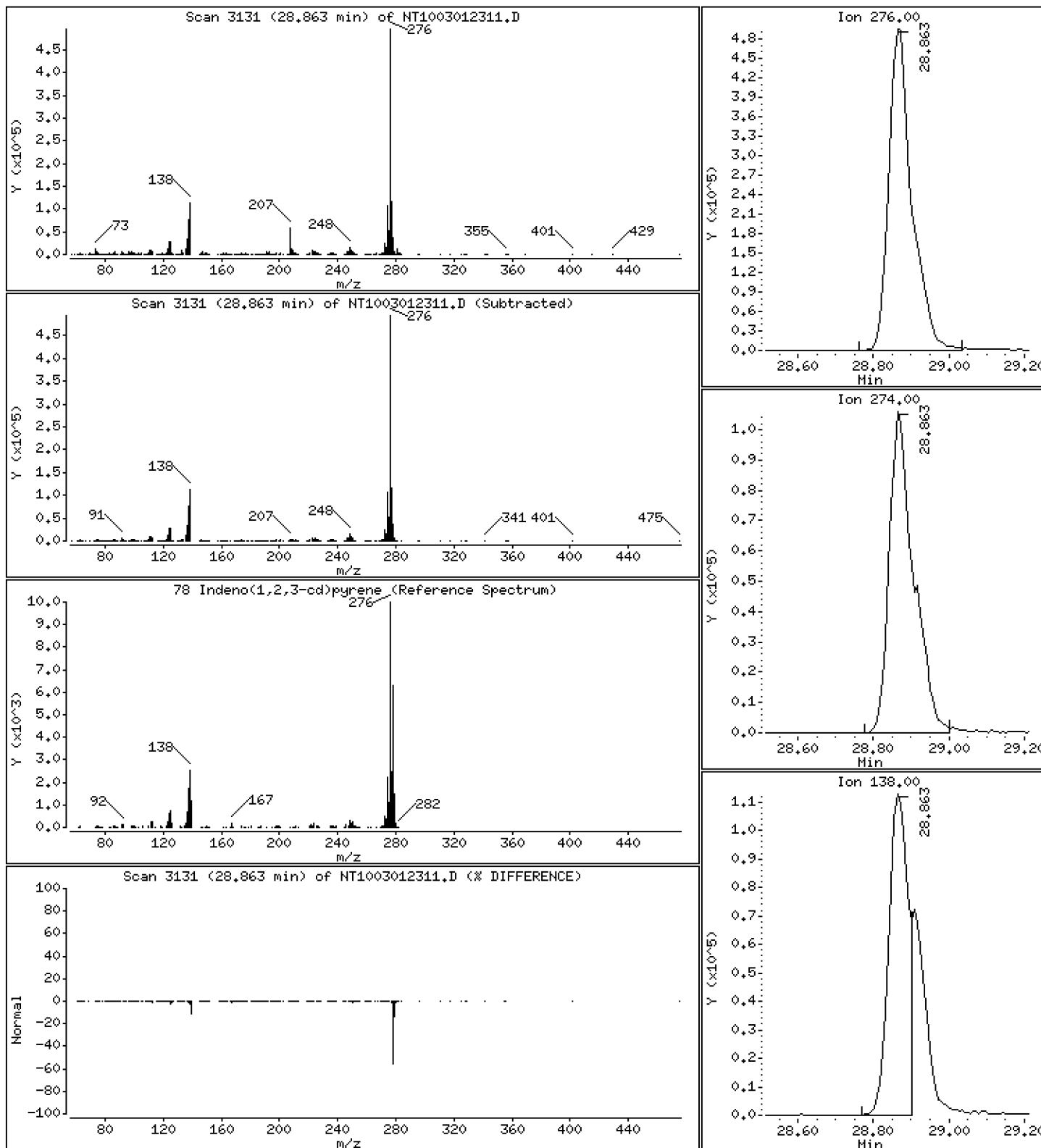
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,345 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

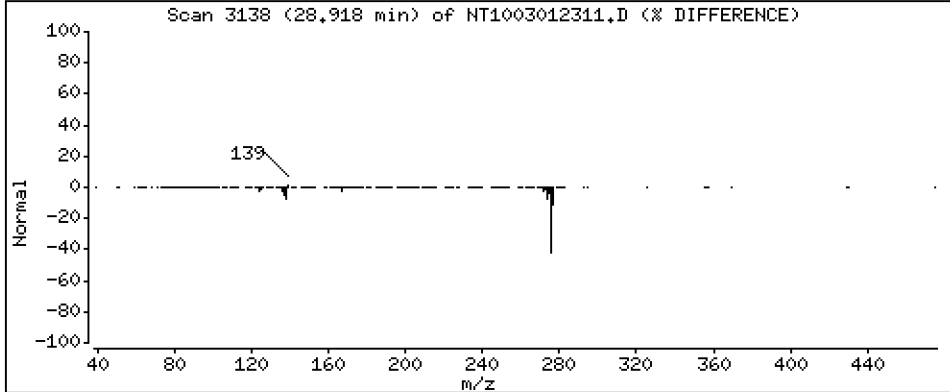
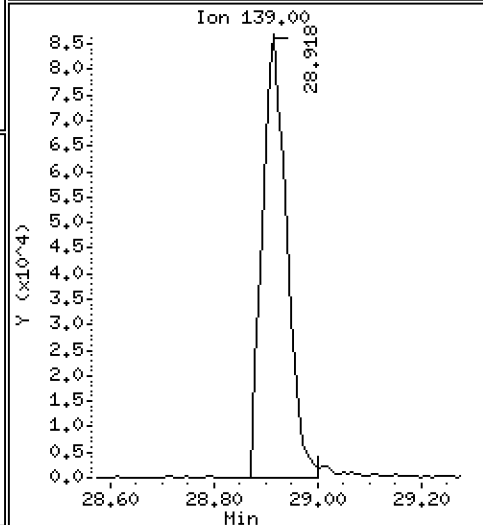
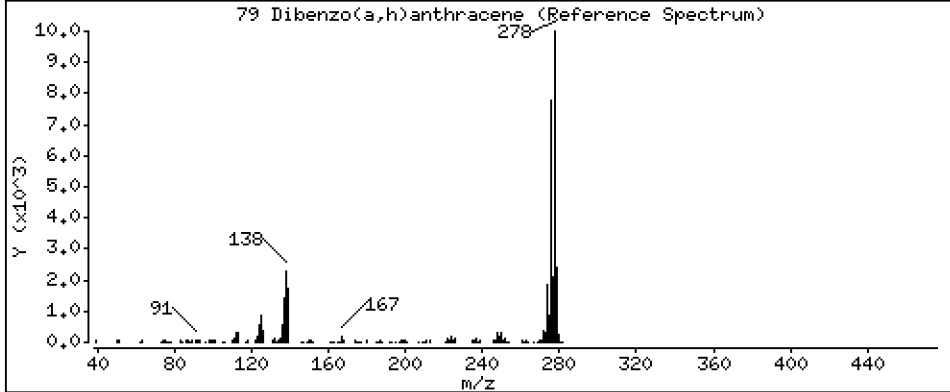
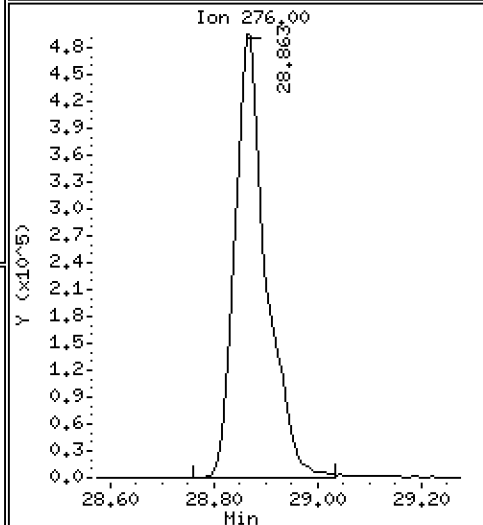
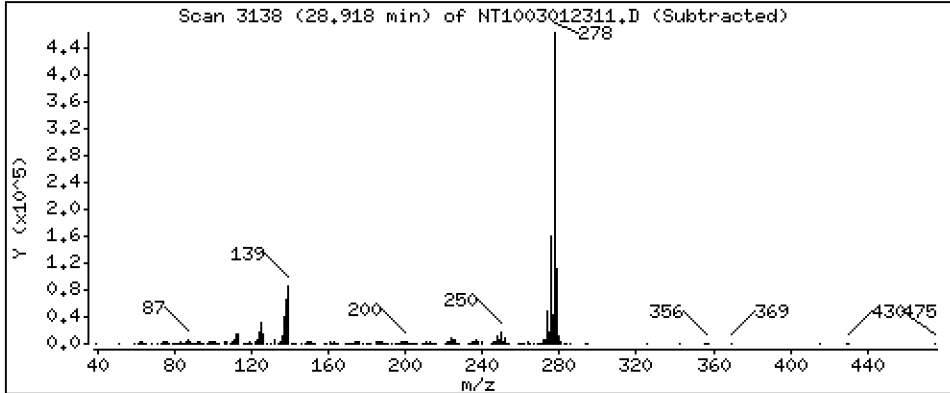
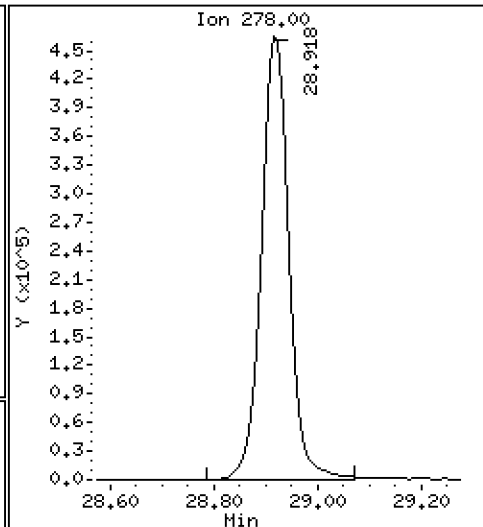
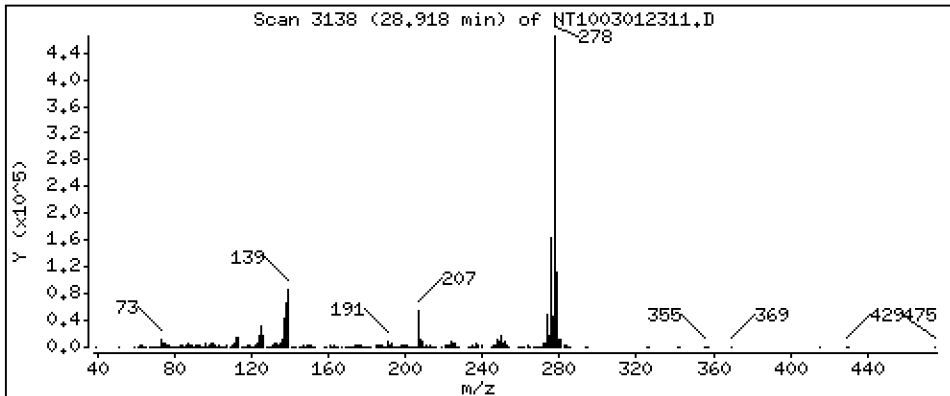
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,608 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

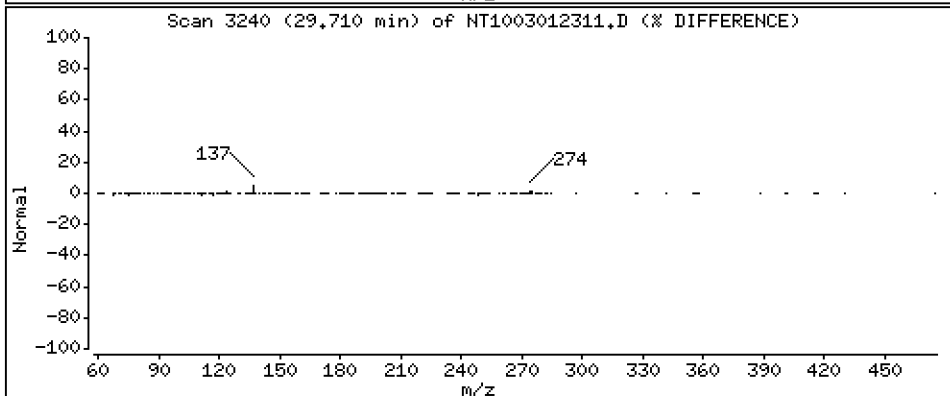
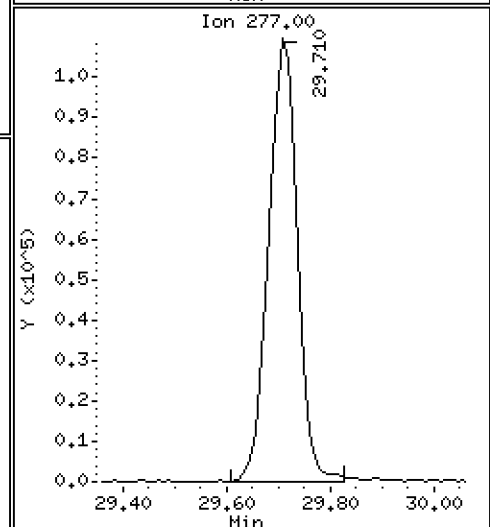
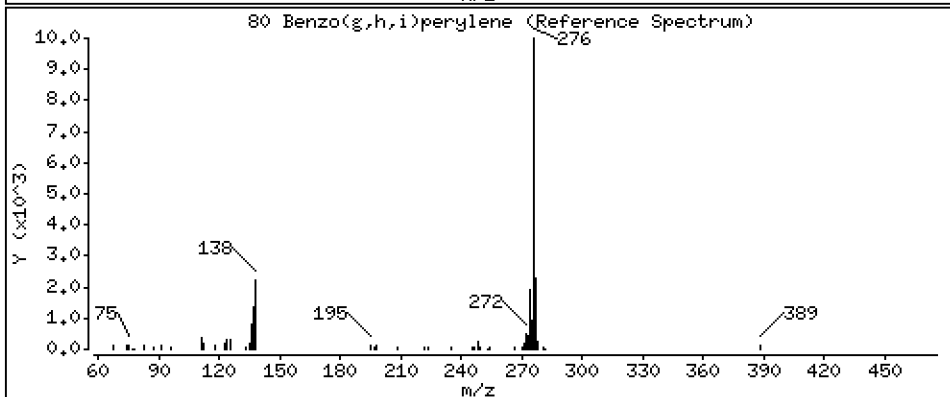
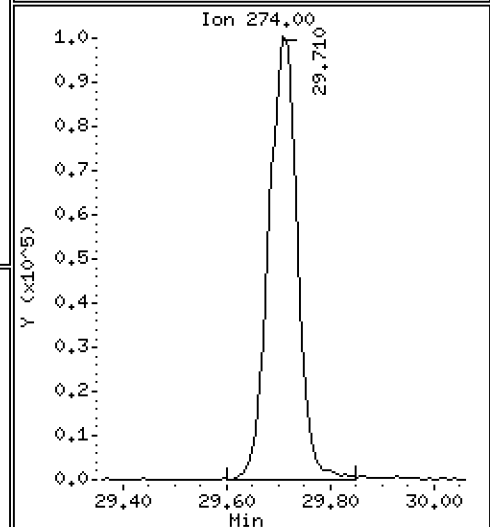
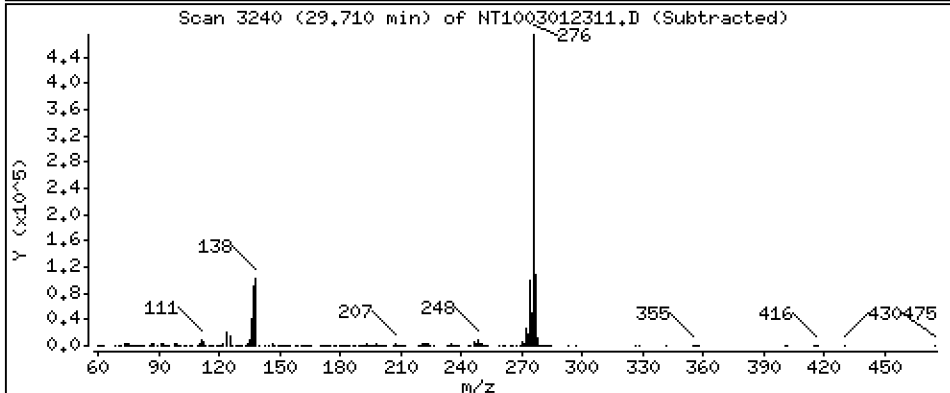
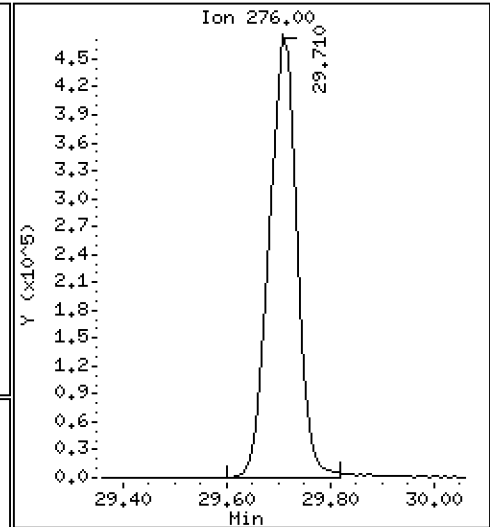
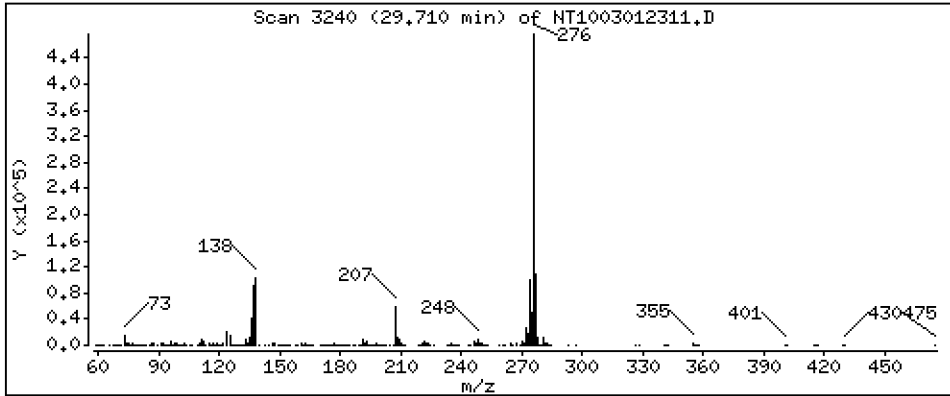
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,602 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

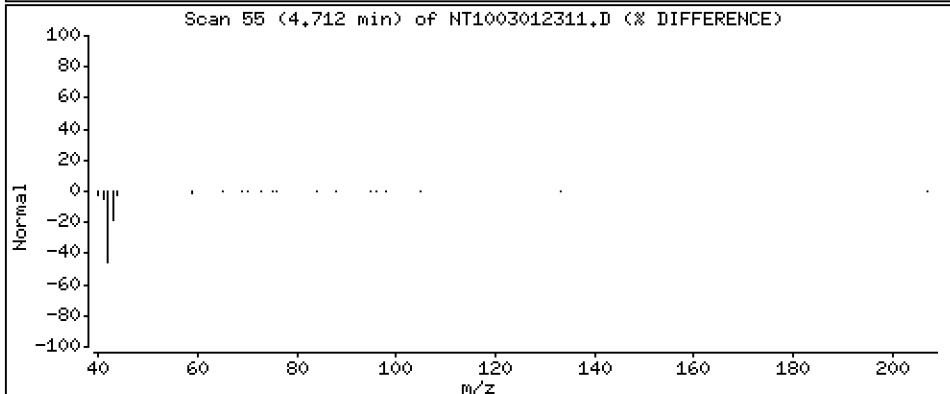
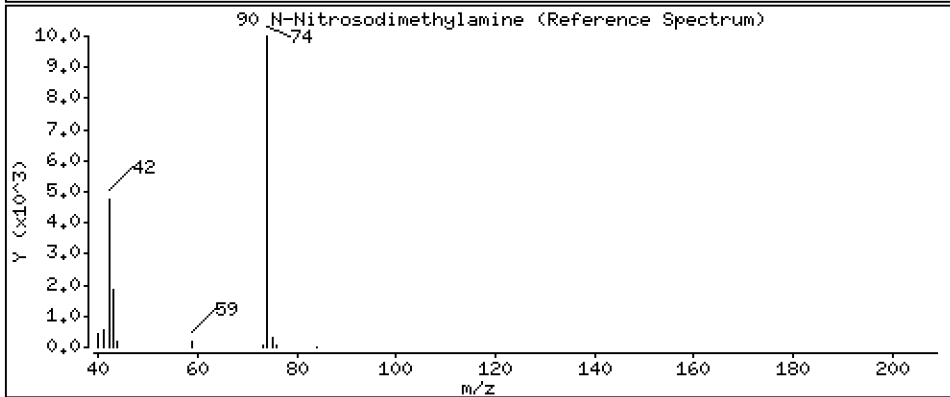
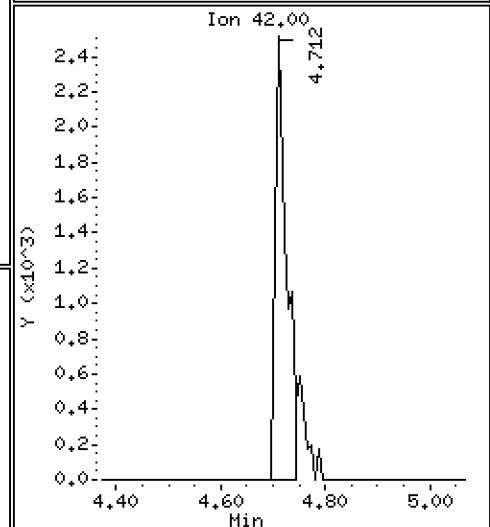
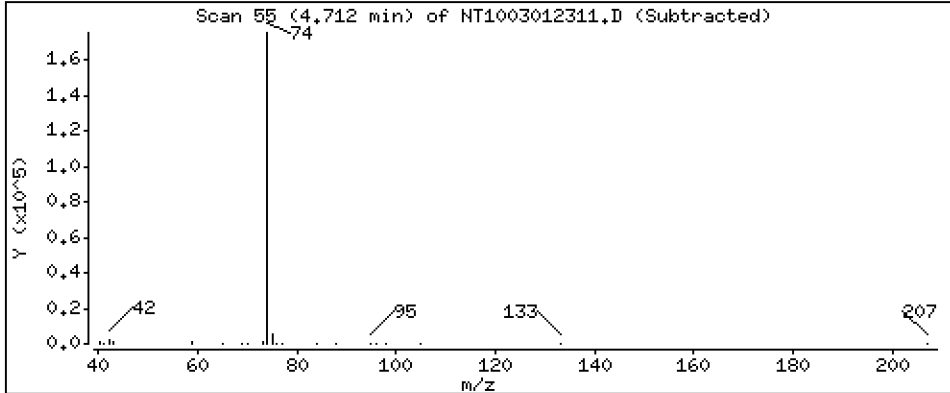
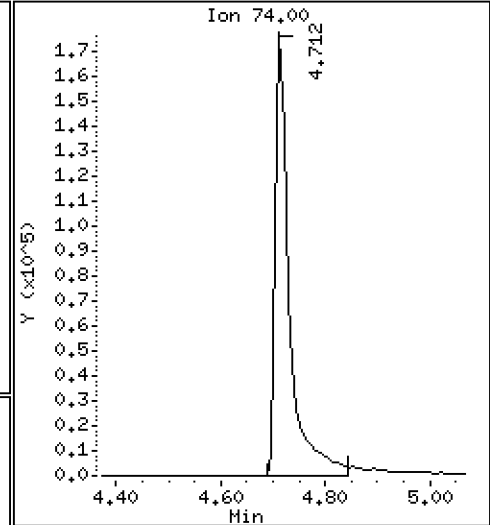
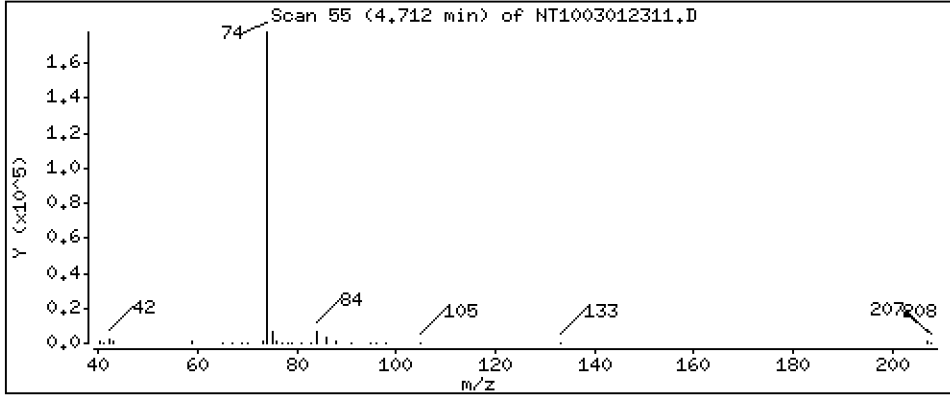
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 5.491 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

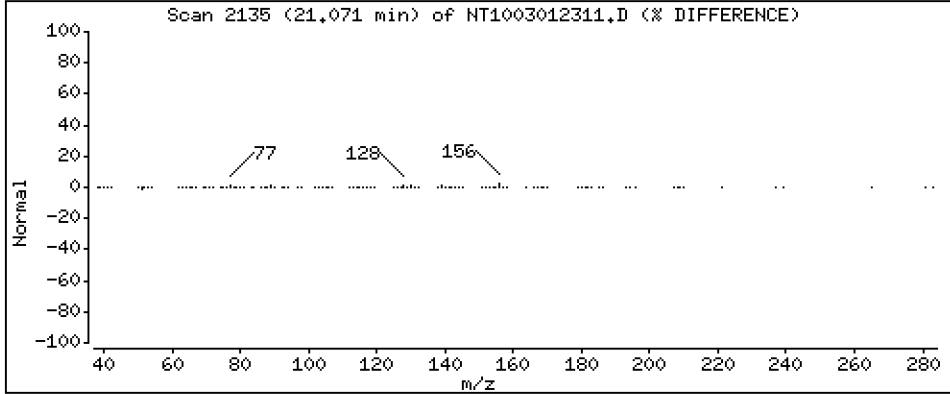
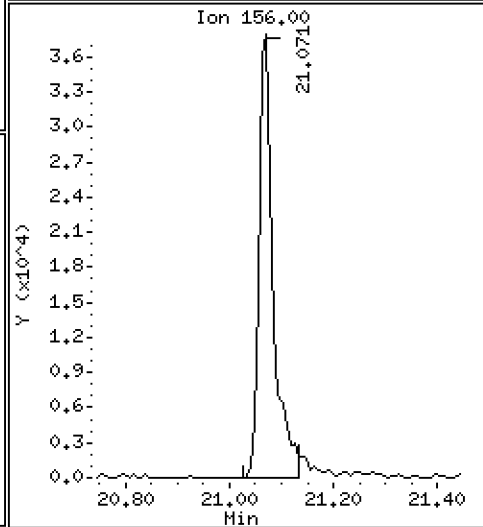
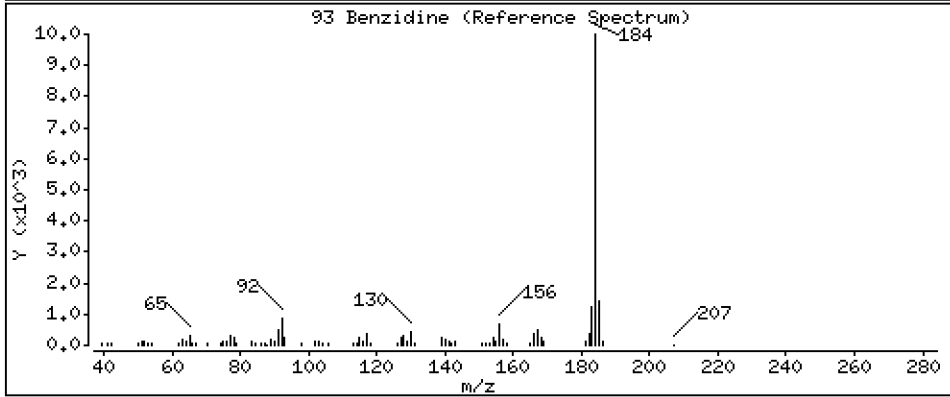
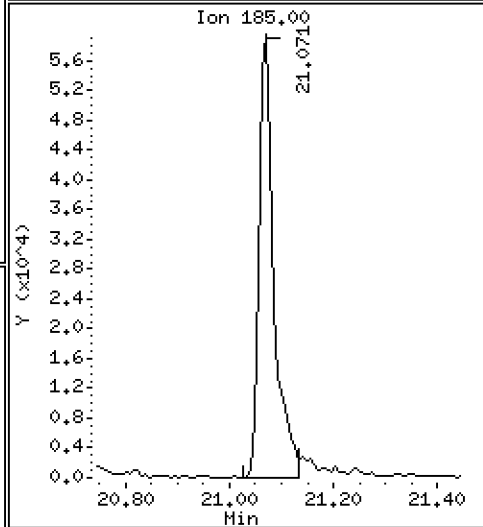
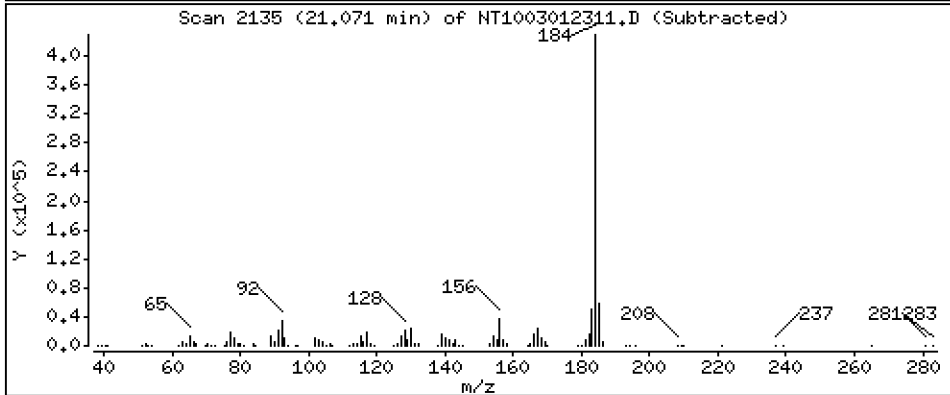
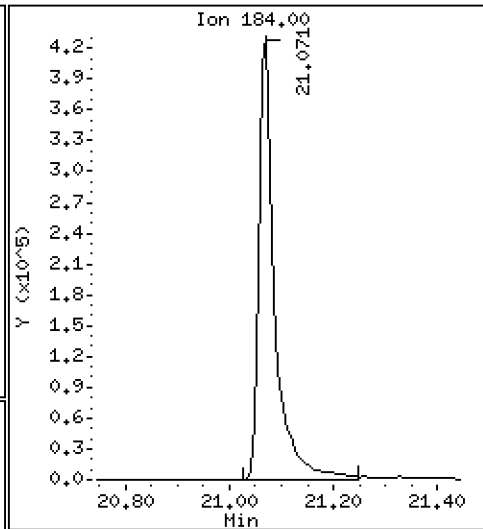
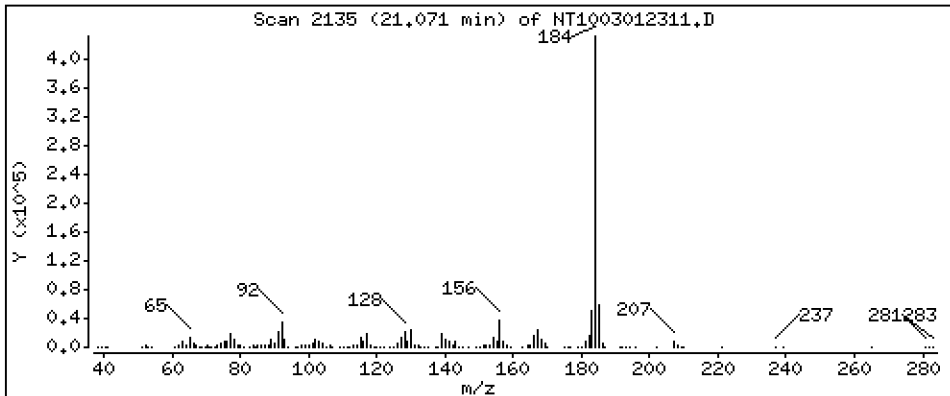
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 5,007 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

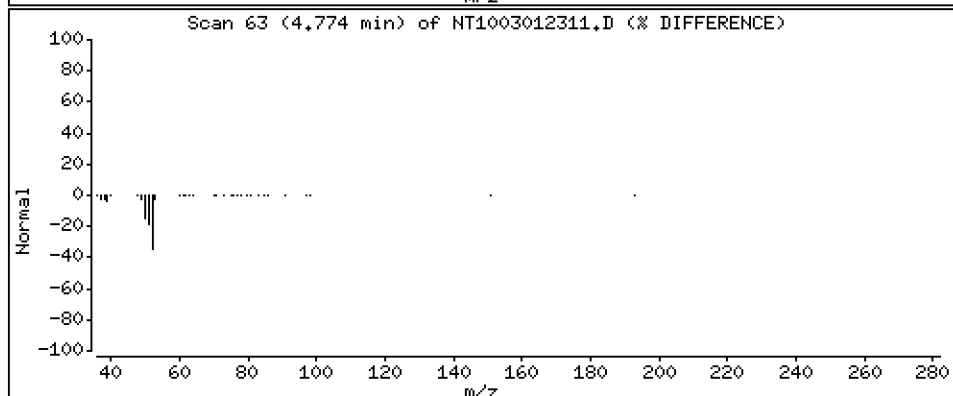
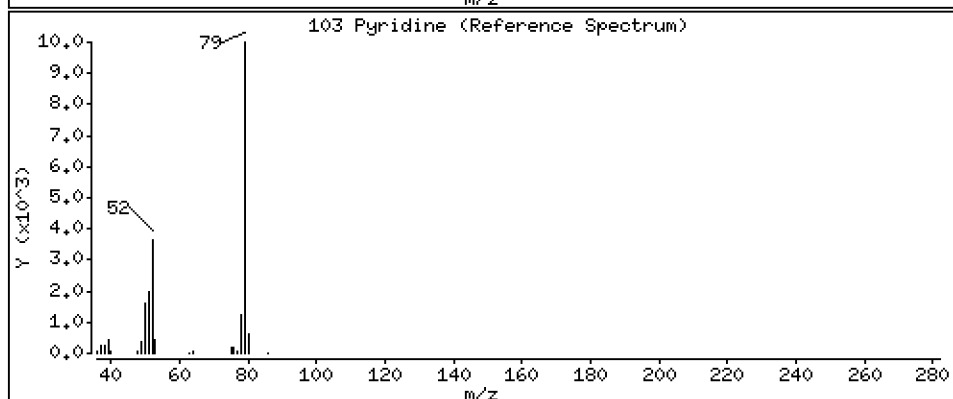
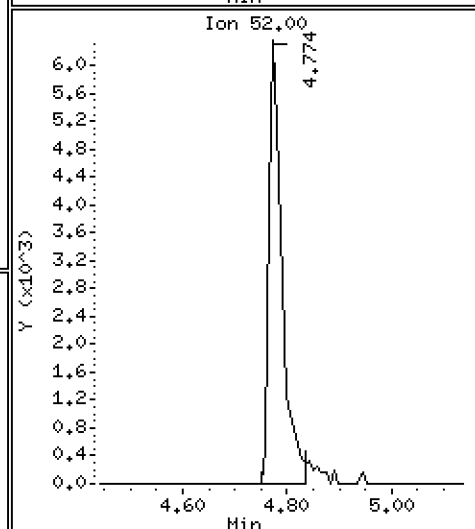
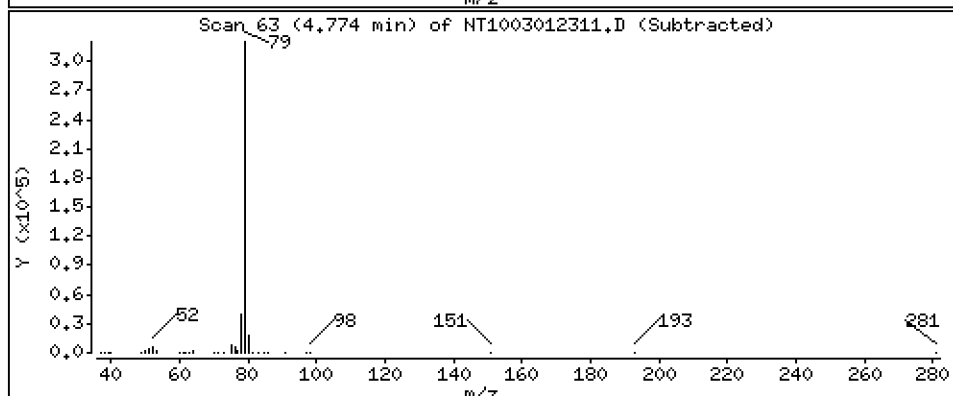
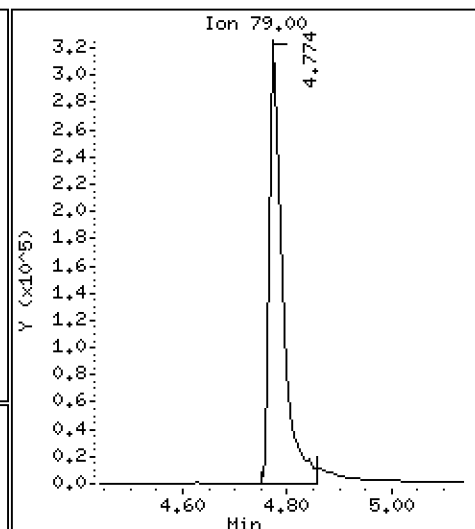
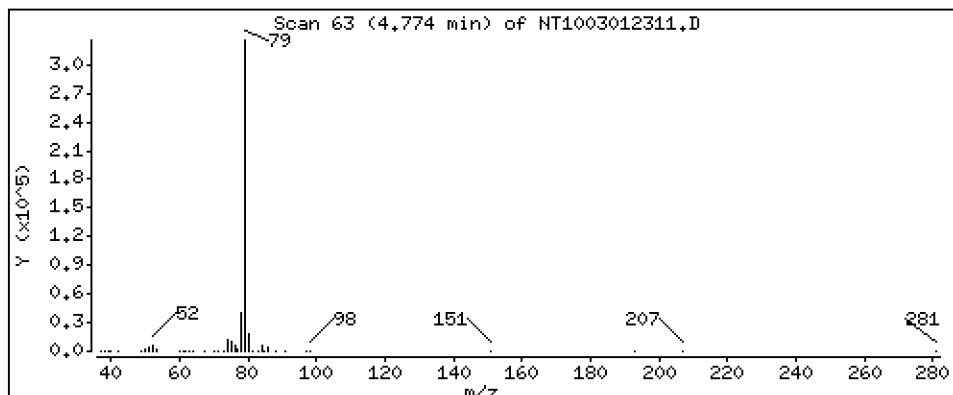
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 5,430 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

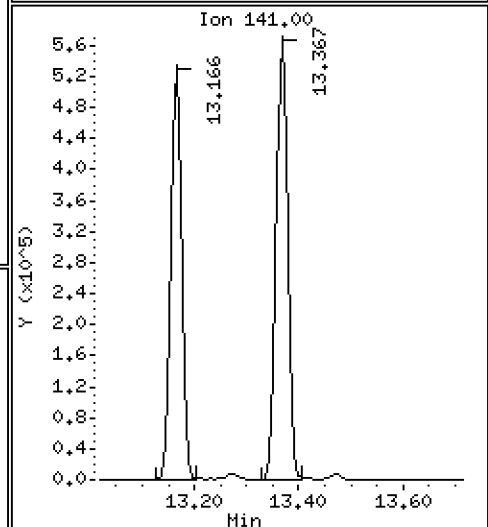
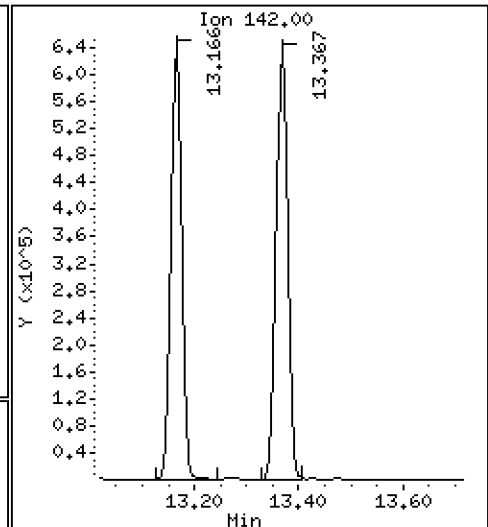
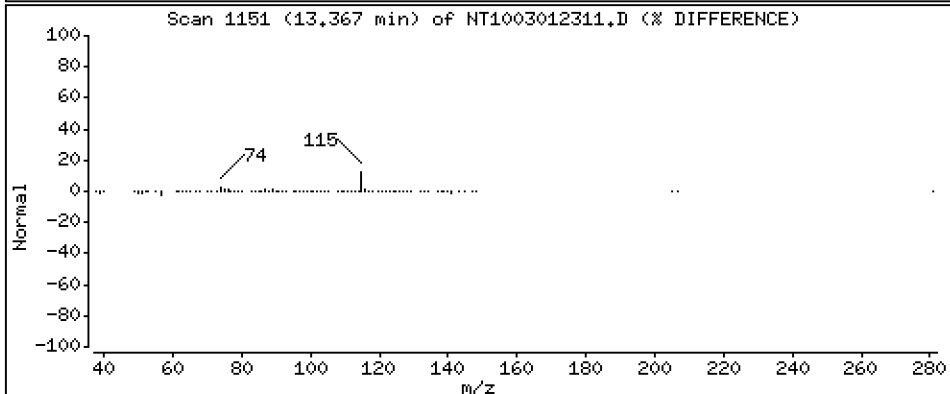
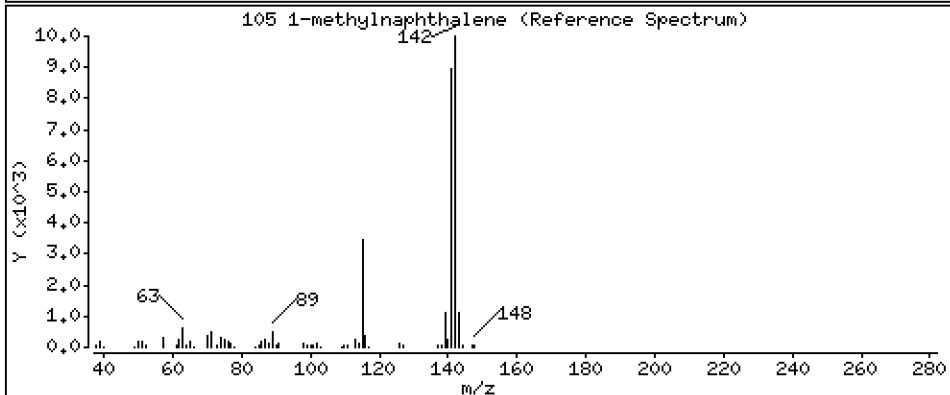
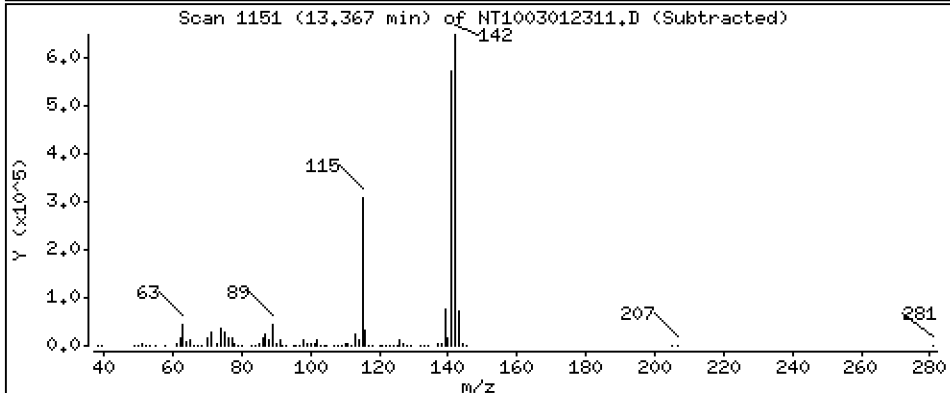
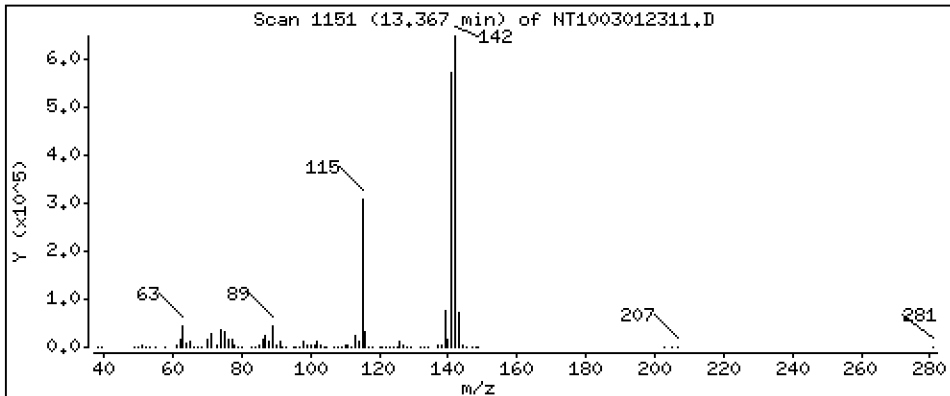
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,219 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

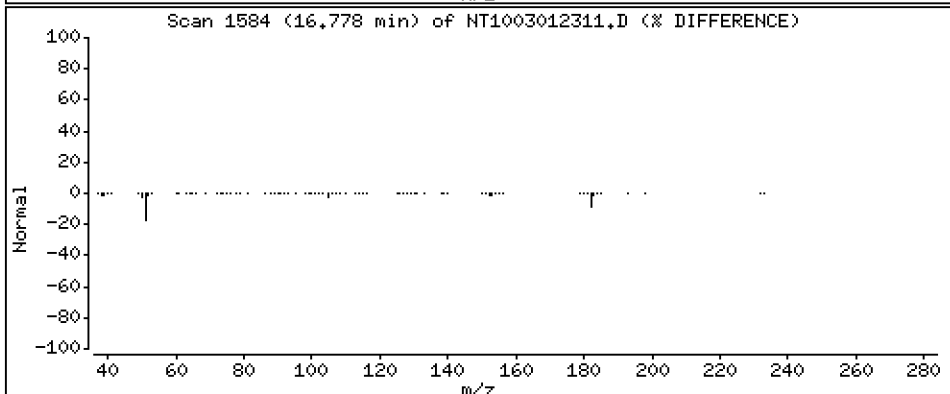
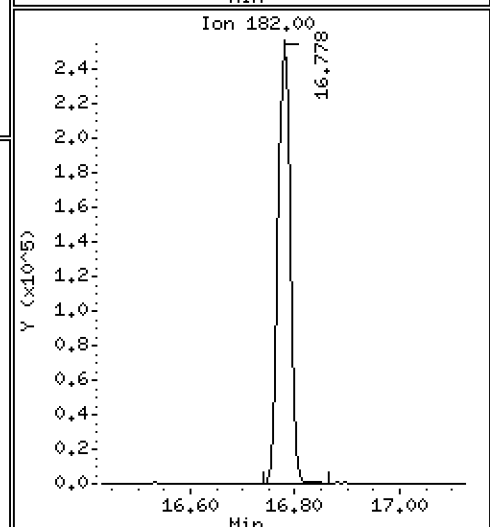
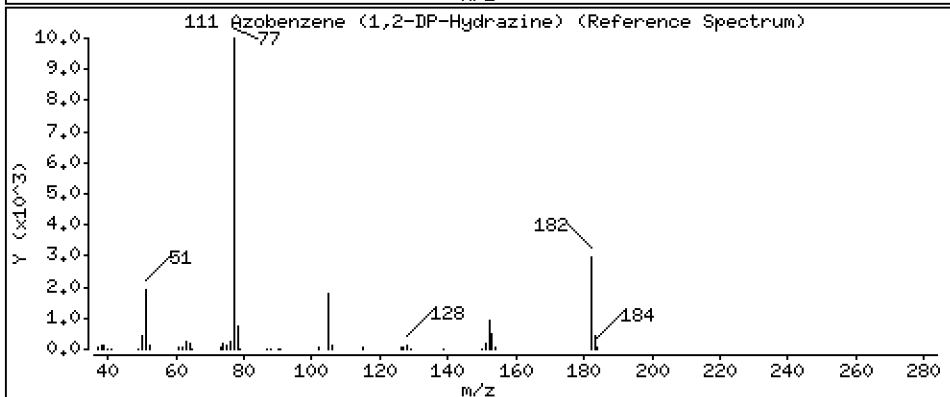
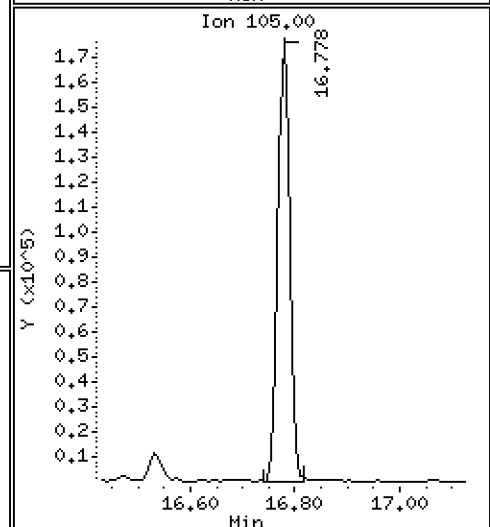
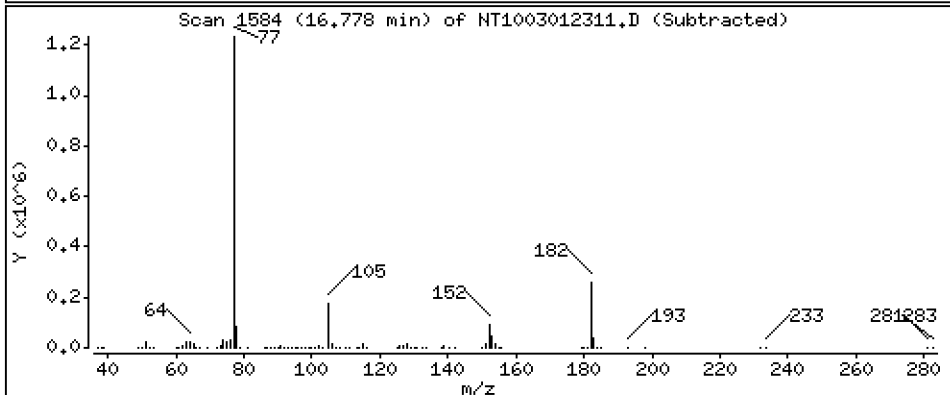
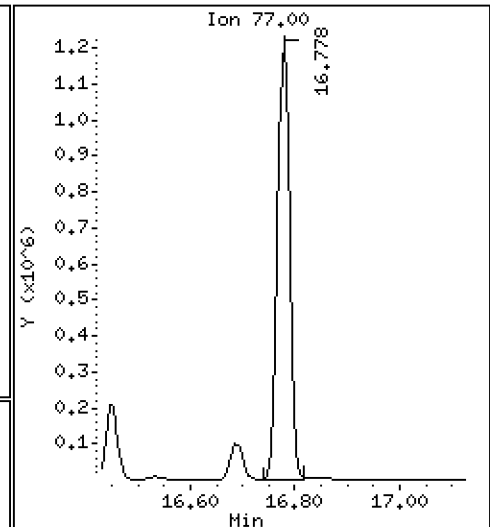
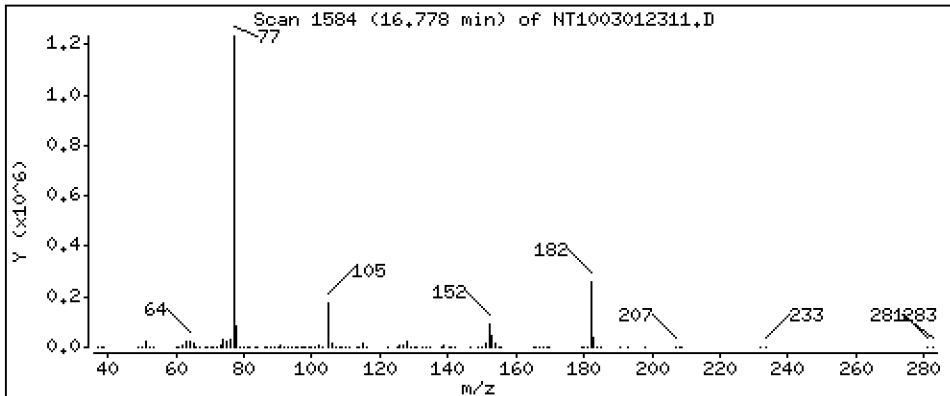
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,953 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

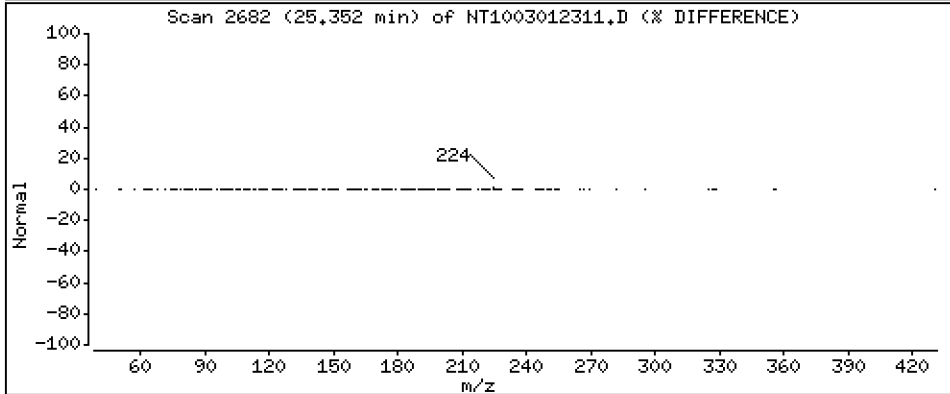
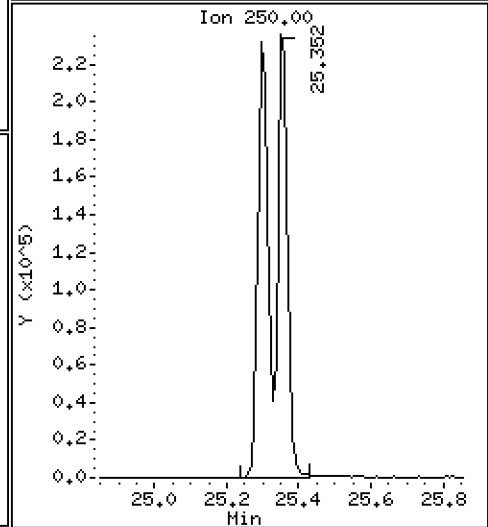
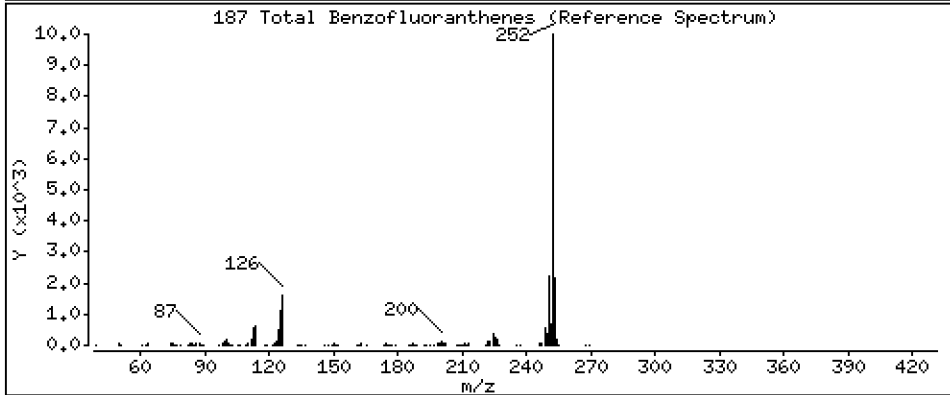
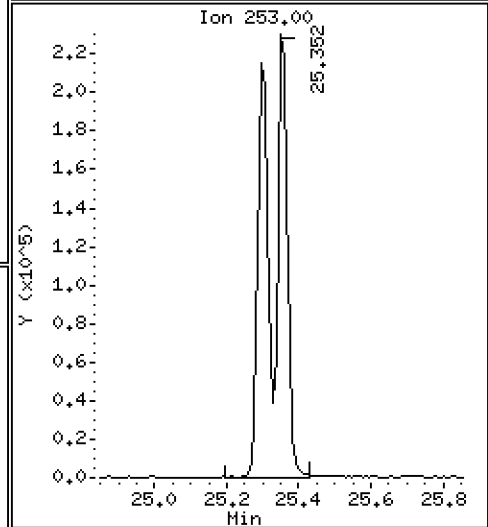
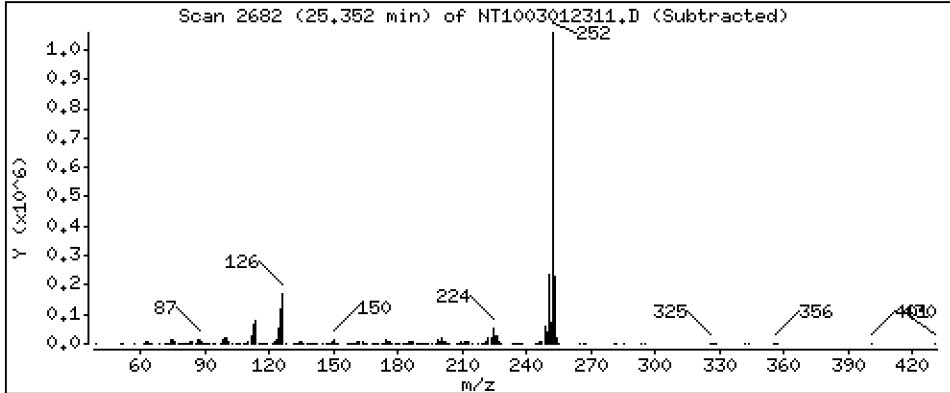
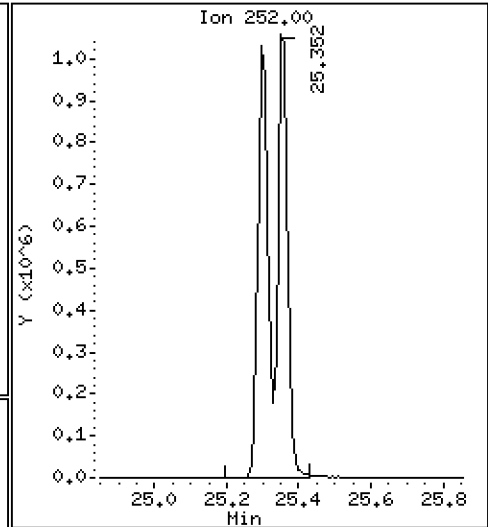
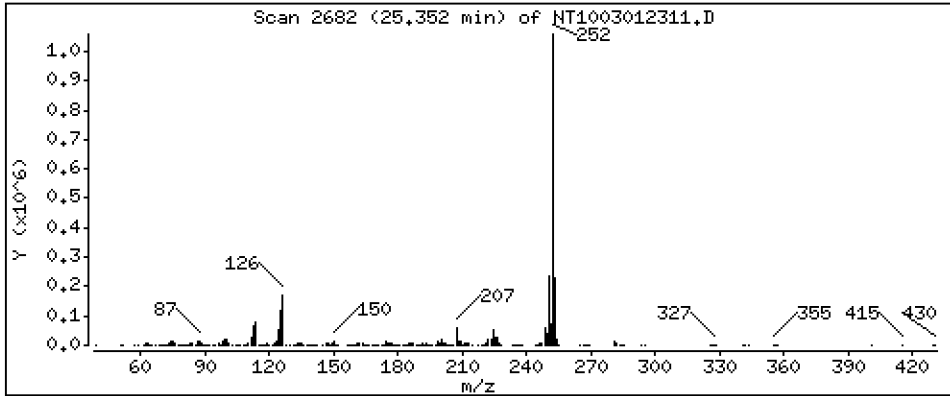
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 8,905 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

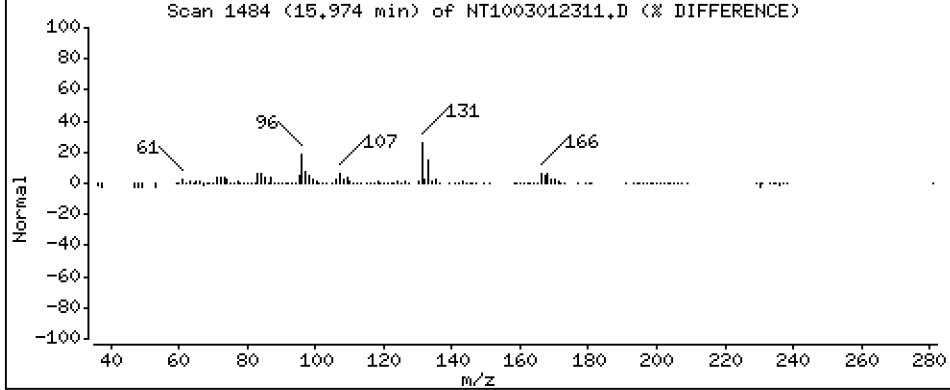
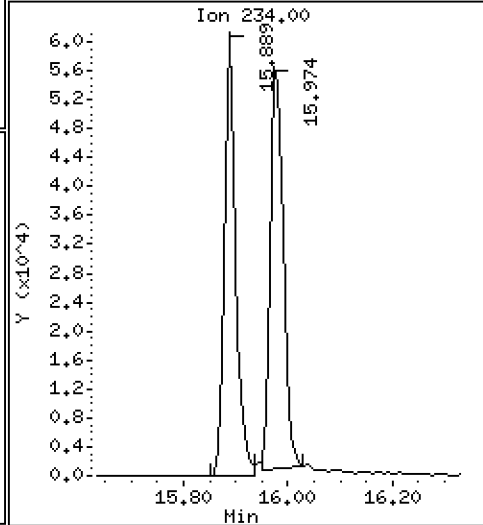
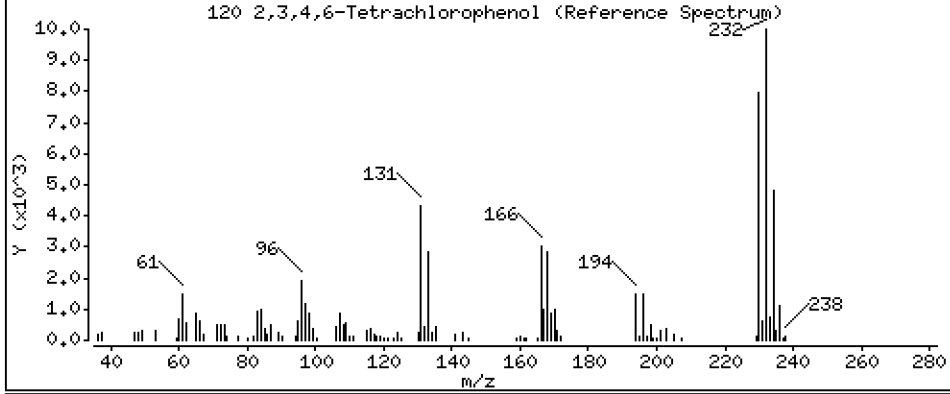
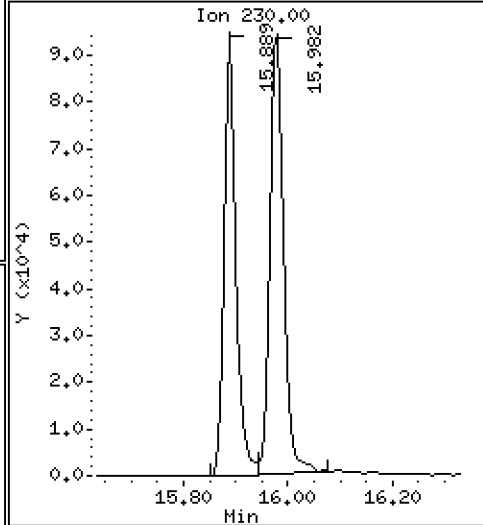
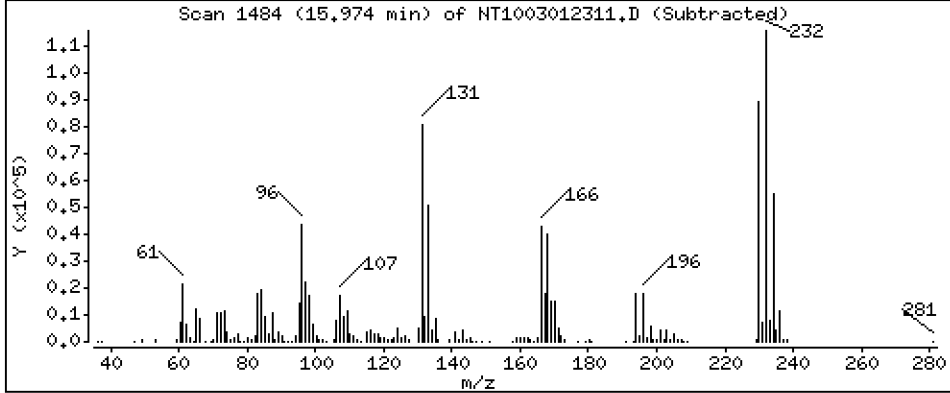
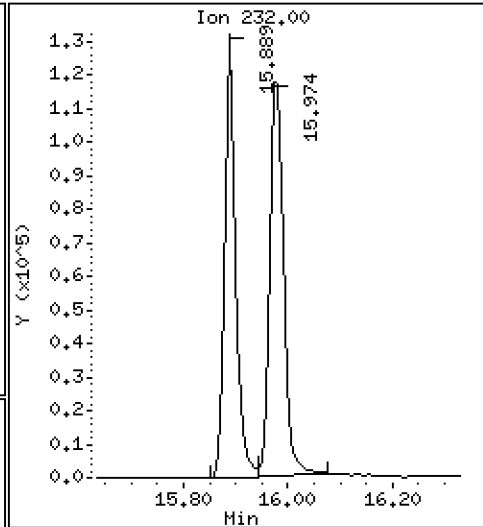
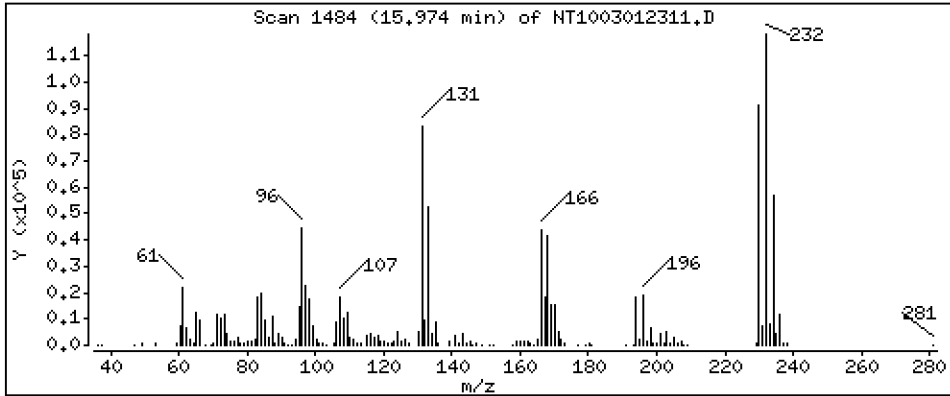
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,534 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012311.D  
 Lab Smp Id: SLC0084-SCV1  
 Inj Date : 01-MAR-2023 21:46  
 Operator : VTS  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		Compound Not Detected.					
\$ 2 Phenol-d5	99		Compound Not Detected.					
3 Phenol	94		8.512	8.512	(0.921)	534295	4.85212	4.852
\$ 5 2-Chlorophenol-d4	132		Compound Not Detected.					
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	498825	5.92811	5.928 (M)
6 2-Chlorophenol	128		8.844	8.844	(0.956)	430747	4.69234	4.692
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	533006	5.26632	5.266
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	283537	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	524367	5.21589	5.216
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.534	(1.000)	283537	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.557	9.565	(1.034)	505415	5.19402	5.194
11 Benzyl alcohol	108		9.472	9.472	(1.024)	283618	4.89779	4.898
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	174821	6.23165	6.232
13 2-Methylphenol	108		9.650	9.650	(1.044)	364596	4.19238	4.192
17 Hexachloroethane	117		10.209	10.209	(1.104)	224586	5.44260	5.443
16 N-Nitroso-di-n-propylamine	70		9.977	9.976	(1.079)	392376	5.90505	5.905
15 4-Methylphenol	108		9.945	9.938	(1.076)	448938	4.23938	4.239
\$ 18 Nitrobenzene-d5	82		Compound Not Detected.					
19 Nitrobenzene	77		10.326	10.326	(0.881)	624582	5.56925	5.569
20 Isophorone	82		10.784	10.784	(0.920)	1098236	7.67155	7.672
21 2-Nitrophenol	139		10.950	10.951	(0.934)	197578	3.24407	3.244
22 2,4-Dimethylphenol	107		10.993	10.993	(0.938)	379240	3.50675	3.507
23 Bis(2-Chloroethoxy)methane	93		11.205	11.205	(0.956)	595145	6.72720	6.727
24 Benzoic acid	105		11.103	11.052	(0.947)	362406	5.63546	5.635
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	379310	4.43743	4.437
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	413079	4.90787	4.908
* 27 Naphthalene-d8	136		11.719	11.719	(1.000)	1089120	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	1468990	5.25508	5.255
29 4-Chloroaniline	127		11.858	11.858	(1.012)	469377	3.79133	3.791
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	307313	5.01449	5.014
31 4-Chloro-3-methylphenol	107		12.802	12.809	(1.092)	402740	4.45246	4.452
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	977687	4.95082	4.951
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	52130	2.56222	2.562

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.722	13.730	(0.896)	241174	4.12027	4.120	
35 2,4,5-Trichlorophenol	196		13.792	13.808	(0.900)	259485	4.14893	4.149 (M)	
§ 36 2-Fluorobiphenyl	172		Compound Not Detected.						
37 2-Chloronaphthalene	162		14.164	14.164	(0.925)	895889	5.26440	5.264	
38 2-Nitroaniline	65		14.365	14.365	(0.938)	237773	5.02711	5.027	
39 Dimethylphthalate	163		14.736	14.736	(0.962)	1056857	5.38446	5.384	
40 Acenaphthylene	152		15.023	15.023	(0.981)	1703355	5.80574	5.806	
41 2,6-Dinitrotoluene	165		14.868	14.868	(0.971)	227062	5.18679	5.187	
* 42 Acenaphthene-d10	164		15.317	15.309	(1.000)	607772	4.00000		
43 3-Nitroaniline	138		15.208	15.224	(0.993)	256002	5.17200	5.172	
44 Acenaphthene	153		15.379	15.378	(1.004)	911910	5.15374	5.154	
45 2,4-Dinitrophenol	184		15.433	15.487	(1.008)	3021	0.26673	0.2667	
46 Dibenzofuran	168		15.742	15.734	(1.028)	1311367	4.99365	4.994	
47 4-Nitrophenol	109		15.533	15.603	(1.014)	133260	3.82233	3.822 (M)	
48 2,4-Dinitrotoluene	165		15.695	15.703	(1.025)	300469	4.72923	4.729	
50 Diethylphthalate	149		16.206	16.198	(1.058)	1172442	5.63859	5.639	
49 Fluorene	166		16.453	16.453	(1.074)	1159050	5.30478	5.305	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	527532	5.25262	5.253	
52 4-Nitroaniline	138		16.469	16.484	(1.075)	278392	5.23237	5.232	
53 4,6-Dinitro-2-methylphenol	198		16.531	16.538	(0.898)	36409	1.29161	1.292	
54 N-Nitrosodiphenylamine	169		16.685	16.693	(0.907)	966268	5.41587	5.416	
§ 55 2,4,6-Tribromophenol	330		Compound Not Detected.						
56 4-Bromophenyl-phenylether	248		17.465	17.472	(0.949)	394706	5.45981	5.460	
57 Hexachlorobenzene	284		17.573	17.573	(0.955)	391196	4.80535	4.805	
58 Pentachlorophenol	266		17.984	17.983	(0.977)	133557	3.49178	3.492	
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1205858	4.00000		
60 Phenanthrene	178		18.448	18.448	(1.003)	1569094	5.08454	5.085	
61 Anthracene	178		18.556	18.556	(1.008)	1371933	4.58472	4.585	
62 Carbazole	167		18.889	18.889	(1.026)	1462441	5.33467	5.335	
63 Di-n-butylphthalate	149		19.585	19.585	(1.064)	2114080	5.46304	5.463	
64 Fluoranthene	202		20.815	20.815	(0.889)	1905220	4.54169	4.542	
65 Pyrene	202		21.248	21.248	(0.907)	1975953	4.62585	4.626	
§ 66 Terphenyl-d14	244		21.519	21.527	(0.919)	6779	0.01961	0.01961	
67 Butylbenzylphthalate	149		22.410	22.410	(0.957)	1022950	4.52520	4.525	
68 Benzo(a)anthracene	228		23.401	23.401	(0.999)	1968545	4.57826	4.578	
* 69 Chrysene-d12	240		23.416	23.416	(1.000)	1219436	4.00000		
70 3,3'-Dichlorobenzidine	252		23.347	23.347	(0.997)	1426681	7.38255	7.383	
71 Chrysene	228		23.463	23.463	(1.002)	1735599	4.96674	4.967	
72 bis(2-Ethylhexyl)phthalate	149		23.401	23.409	(0.956)	1660477	4.95568	4.956	
* 134 Di-n-octylphthalate-d4	153		24.485	24.485	(1.000)	2317357	4.00000		
73 Di-n-octylphthalate	149		24.492	24.492	(1.000)	3003083	5.84397	5.844	
74 Benzo(b)fluoranthene	252		25.298	25.298	(0.969)	1988643	4.31882	4.319	
75 Benzo(k)fluoranthene	252		25.352	25.352	(0.971)	2031546	4.56297	4.563	
76 Benzo(a)pyrene	252		25.987	25.987	(0.996)	1831856	4.44514	4.445	
* 77 Perylene-d12	264		26.103	26.103	(1.000)	1289108	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.863	28.863	(1.106)	2089660	4.34488	4.345	
79 Dibenzo(a,h)anthracene	278		28.917	28.925	(1.108)	1695484	4.60754	4.608	
80 Benzo(g,h,i)perylene	276		29.709	29.709	(1.138)	1753537	4.60249	4.602	
90 N-Nitrosodimethylamine	74		4.712	4.719	(0.510)	316213	5.49082	5.491	
91 Aniline	93		Compound Not Detected.						
93 Benzidine	184		21.071	21.094	(0.900)	932502	5.00739	5.007	
103 Pyridine	79		4.774	4.789	(0.516)	554573	5.42989	5.430	
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	932752	5.21855	5.219	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.778	16.778	(1.095)	1848373	5.95279	5.953	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.352	25.352	(0.971)	3948555	8.90452	8.905
120 2,3,4,6-Tetrachlorophenol	232	15.974	15.982	(1.043)	209122	3.53394	3.534

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012311.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-SCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	283537	-16.02
27 Naphthalene-d8	1265187	632594	2530374	1089120	-13.92
42 Acenaphthene-d10	692385	346193	1384770	607772	-12.22
59 Phenanthrene-d10	1376777	688389	2753554	1205858	-12.41
69 Chrysene-d12	1019524	509762	2039048	1219436	19.61
134 Di-n-octylphthala	2027111	1013556	4054222	2317357	14.32
77 Perylene-d12	1027409	513705	2054818	1289108	25.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.01
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012311.D

Lab ID: SLC0084-SCV1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

---

23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.014	1.019	-0.0051	4-Nitrophenol
1.000	1.031	-0.0310	1,2-Dichlorobenzene-d4

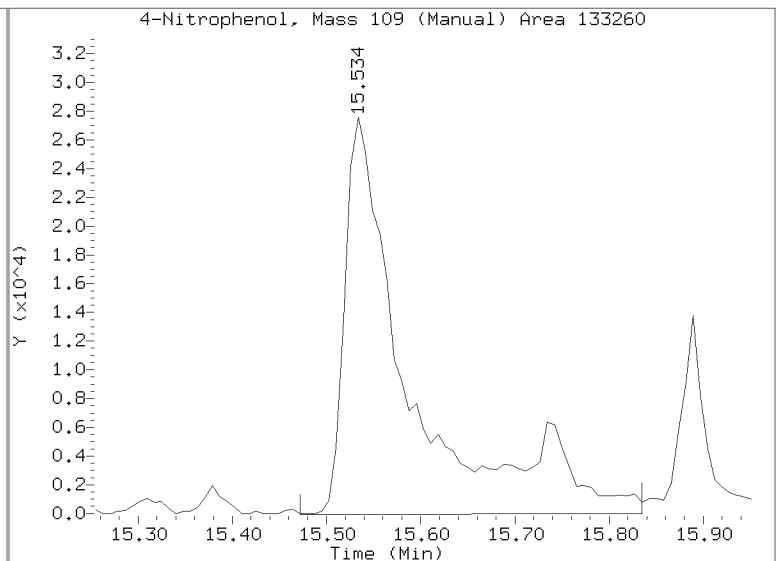
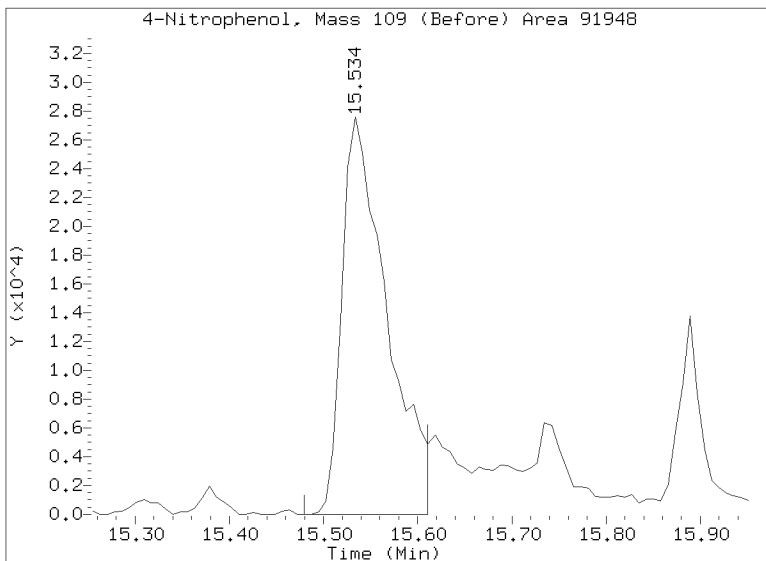
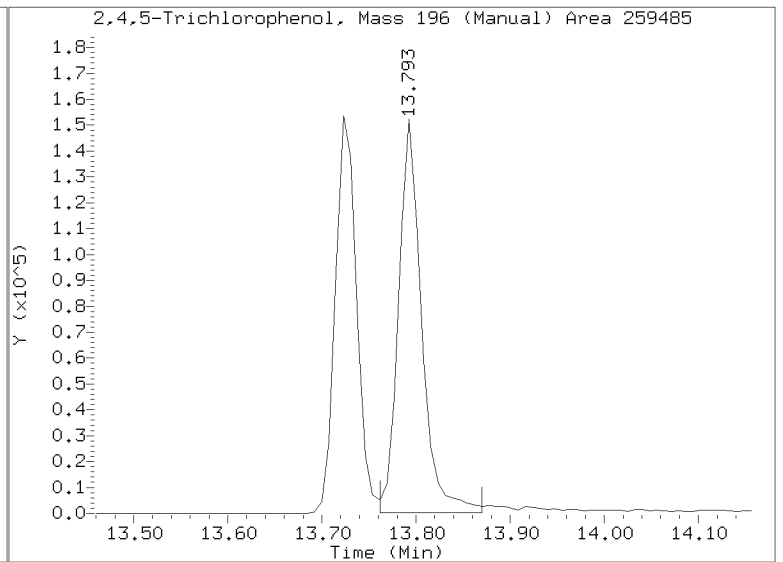
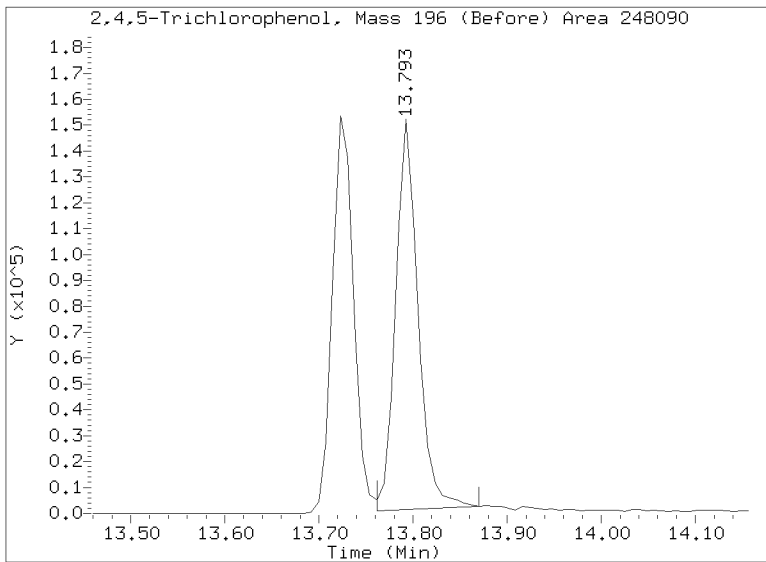
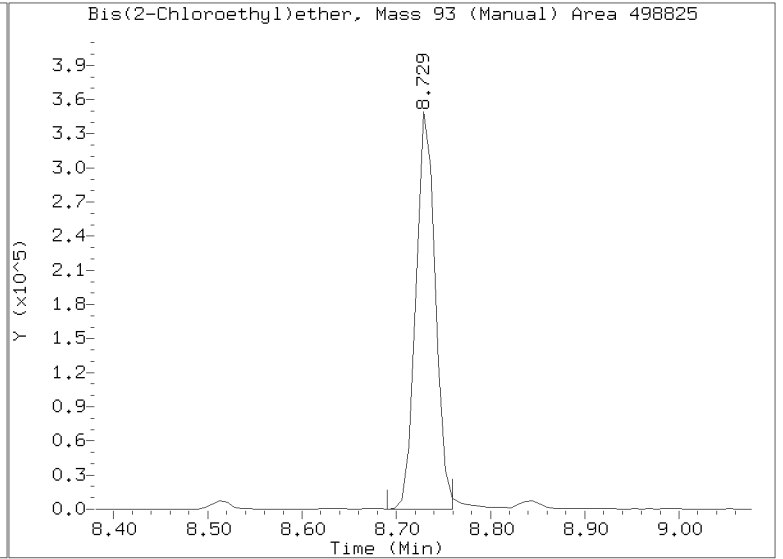
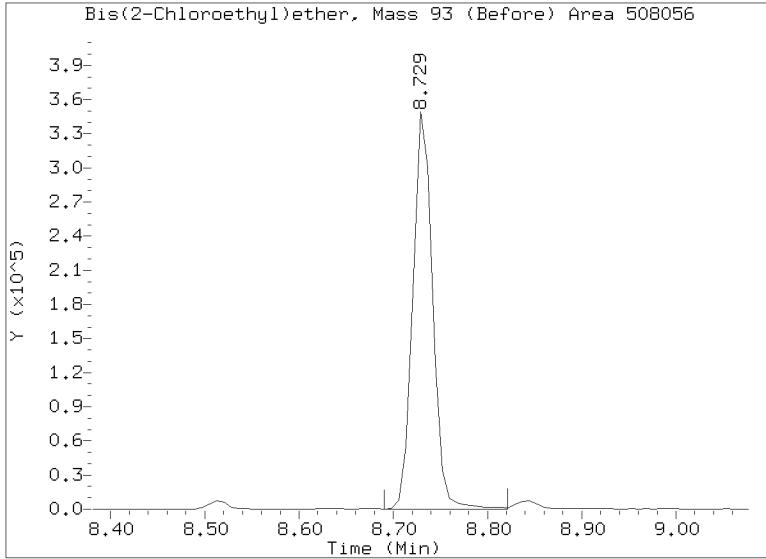
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012311.D  
Injection Date: 01-MAR-2023 21:46  
Lab ID: SLC0084-SCV1 Client ID:  
Report Date: 03/07/2023 12:48





**SECOND-SOURCE  
CALIBRATION VERIFICATION**

**EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Standard ID:** K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.9	-3.0	20.00
bis(2-chloroethyl) ether	5.0000	5.9	18.6	20.00
2-Chlorophenol	5.0000	4.7	-6.2	20.00
1,3-Dichlorobenzene	5.0000	5.3	5.3	20.00
1,4-Dichlorobenzene	5.0000	5.2	4.3	20.00
1,2-Dichlorobenzene	5.0000	5.2	3.9	20.00
Benzyl Alcohol	5.0000	4.9	-2.0	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	6.2	24.6 *	20.00
2-Methylphenol	5.0000	4.2	-16.2	20.00
Hexachloroethane	5.0000	5.4	8.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.9	18.1	20.00
4-Methylphenol	5.0000	4.2	-15.2	20.00
Nitrobenzene	5.0000	5.6	11.4	20.00
Isophorone	5.0000	7.7	53.4 *	20.00
2-Nitrophenol	5.0000	3.2	-35.1 *	20.00
2,4-Dimethylphenol	5.0000	3.5	-29.9 *	20.00
Bis(2-Chloroethoxy)methane	5.0000	6.7	34.5 *	20.00
2,4-Dichlorophenol	5.0000	4.4	-11.3	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-1.8	20.00
Naphthalene	5.0000	5.3	5.1	20.00
Benzoic acid	10.0000	5.6	-43.6 *	20.00
4-Chloroaniline	5.0000	3.8	-24.2 *	20.00
Hexachlorobutadiene	5.0000	5.0	0.3	20.00
4-Chloro-3-Methylphenol	5.0000	4.5	-11.0	20.00
2-Methylnaphthalene	5.0000	5.0	-1.0	20.00
Hexachlorocyclopentadiene	5.0000	2.6	-48.8 *	20.00
2,4,6-Trichlorophenol	5.0000	4.1	-17.6	20.00
2,4,5-Trichlorophenol	5.0000	4.1	-17.0	20.00
2-Chloronaphthalene	5.0000	5.3	5.3	20.00
2-Nitroaniline	5.0000	5.0	0.5	20.00
Acenaphthylene	5.0000	5.8	16.1	20.00
Dimethylphthalate	5.0000	5.4	7.7	20.00





**SECOND-SOURCE  
CALIBRATION VERIFICATION**

**EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Standard ID:** K010066

2,6-Dinitrotoluene	5.0000	5.2	3.7	20.00
Acenaphthene	5.0000	5.2	3.1	20.00
3-Nitroaniline	5.0000	5.2	3.4	20.00
2,4-Dinitrophenol	5.0000	0.3	-94.7 *	20.00
Dibenzofuran	5.0000	5.0	-0.1	20.00
4-Nitrophenol	5.0000	3.8	-23.6 *	20.00
2,4-Dinitrotoluene	5.0000	4.7	-5.4	20.00
Fluorene	5.0000	5.3	6.1	20.00
4-Chlorophenylphenyl ether	5.0000	5.3	5.1	20.00
Diethyl phthalate	5.0000	5.6	12.8	20.00
4-Nitroaniline	5.0000	5.2	4.6	20.00
4,6-Dinitro-2-methylphenol	5.0000	1.3	-74.2 *	20.00
N-Nitrosodiphenylamine	5.0000	5.4	8.3	20.00
4-Bromophenyl phenyl ether	5.0000	5.5	9.2	20.00
Hexachlorobenzene	5.0000	4.8	-3.9	20.00
Pentachlorophenol	5.0000	3.5	-30.2 *	20.00
Phenanthrene	5.0000	5.1	1.7	20.00
Anthracene	5.0000	4.6	-8.3	20.00
Carbazole	5.0000	5.3	6.7	20.00
Di-n-Butylphthalate	5.0000	5.5	9.3	20.00
Fluoranthene	5.0000	4.5	-9.2	20.00
Pyrene	5.0000	4.6	-7.5	20.00
Butylbenzylphthalate	5.0000	4.5	-9.5	20.00
Benzo(a)anthracene	5.0000	4.6	-8.4	20.00
3,3'-Dichlorobenzidine	10.0000	7.4	-26.2 *	20.00
Chrysene	5.0000	5.0	-0.7	20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.0	-0.9	20.00
Di-n-Octylphthalate	5.0000	5.8	16.9	20.00
Benzo(a)fluoranthene, Total	10.0000	8.9	-11.0	20.00
Benzo(a)pyrene	5.0000	4.4	-11.1	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.3	-13.1	20.00
Dibenzo(a,h)anthracene	5.0000	4.6	-7.8	20.00
Benzo(g,h,i)perylene	5.0000	4.6	-8.0	20.00
1-Methylnaphthalene	5.0000	5.2	4.4	20.00
2-Fluorophenol	7.5000	0.00	*	20.00



## SECOND-SOURCE CALIBRATION VERIFICATION

### EPA 8270E

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0084-SCV1

**Sequence:** SLC0084

**Standard ID:** K010066

Phenol-d5	7.5000	0.00	*	20.00
2-Chlorophenol-d4	7.5000	0.00	*	20.00
1,2-Dichlorobenzene-d4	5.0000	4.29	-14.1	20.00
Nitrobenzene-d5	5.0000	0.00	*	20.00
2-Fluorobiphenyl	5.0000	0.00	*	20.00
2,4,6-Tribromophenol	7.5000	0.00	*	20.00
p-Terphenyl-d14	5.0000	0.0196	-99.6 *	20.00

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230301.1\NT1003012311.D

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Client ID:

Sample Info: SEQ-SCV1

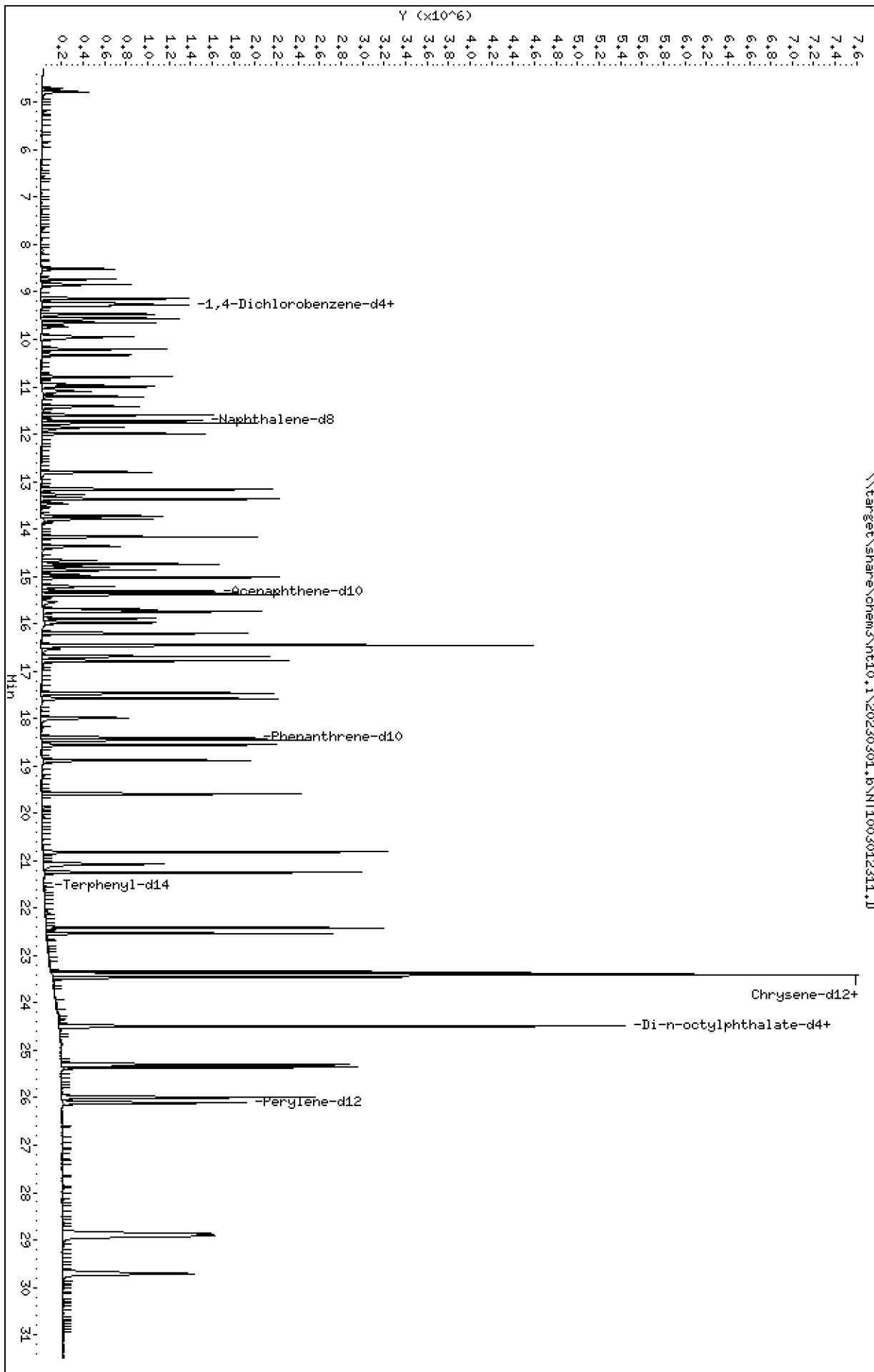
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

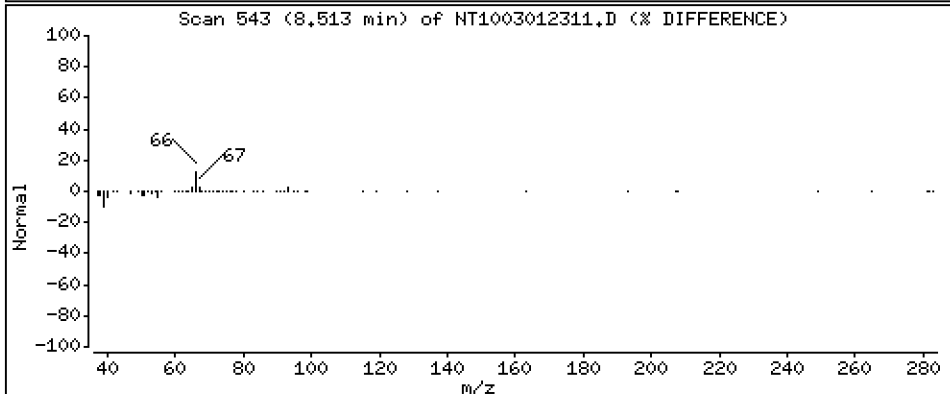
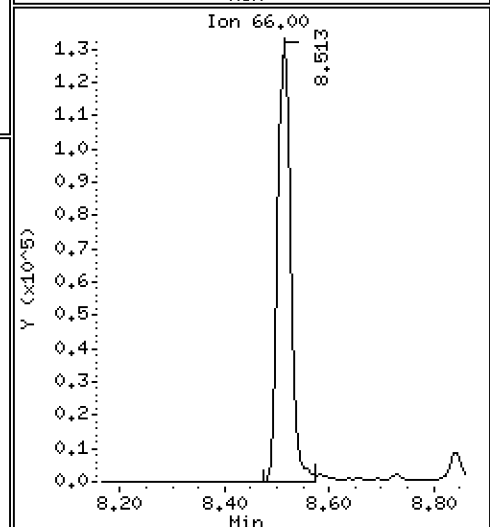
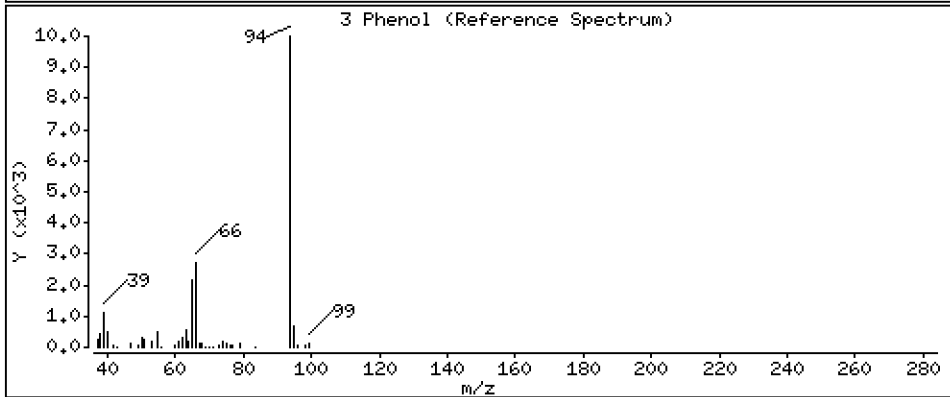
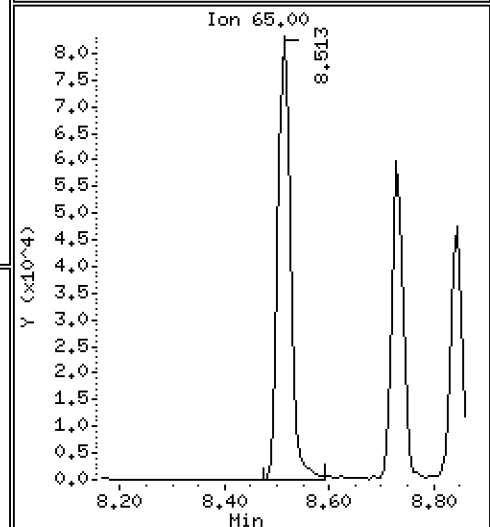
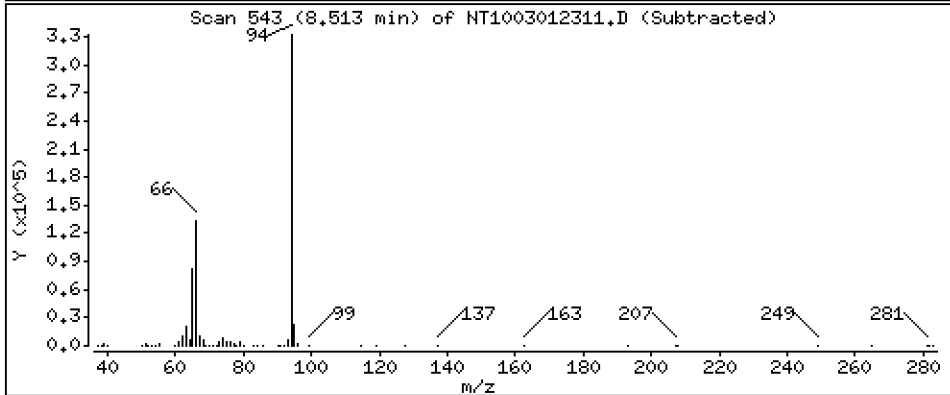
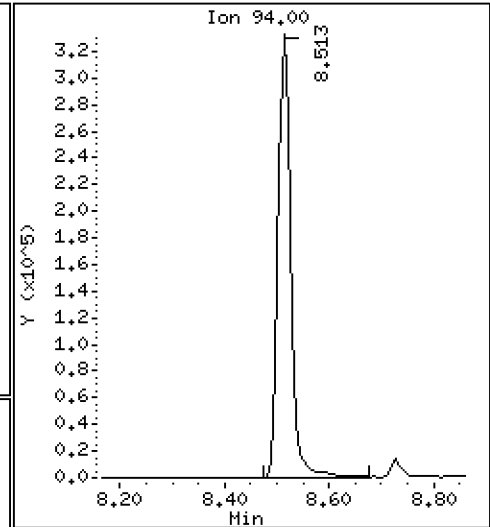
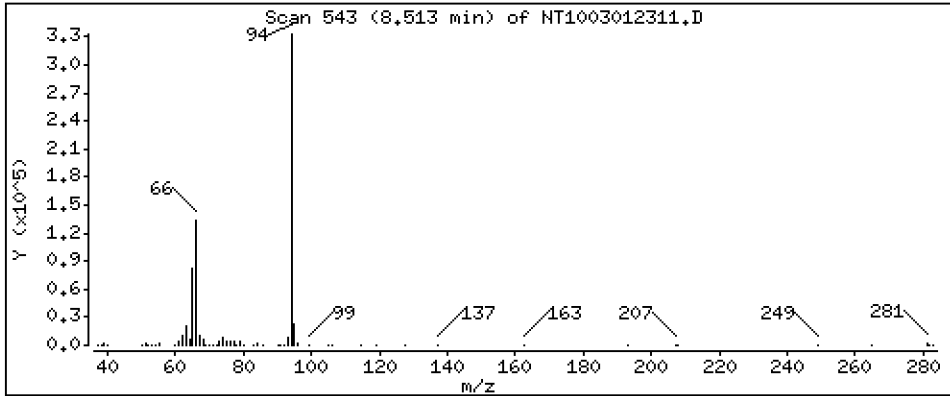
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,852 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

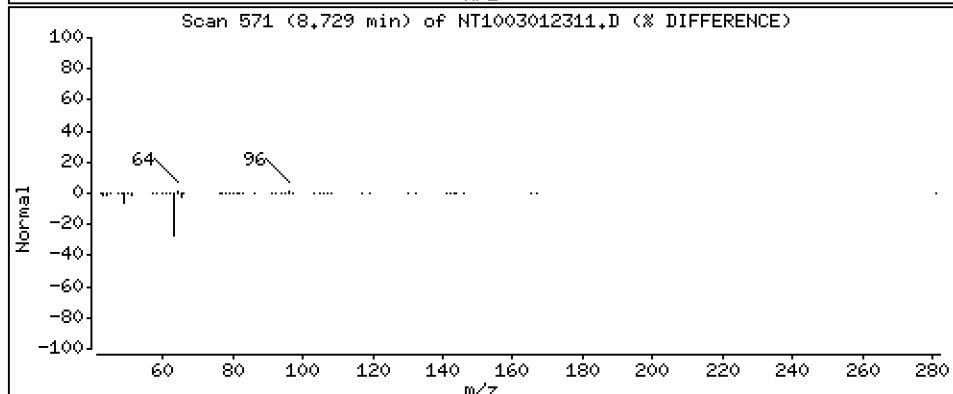
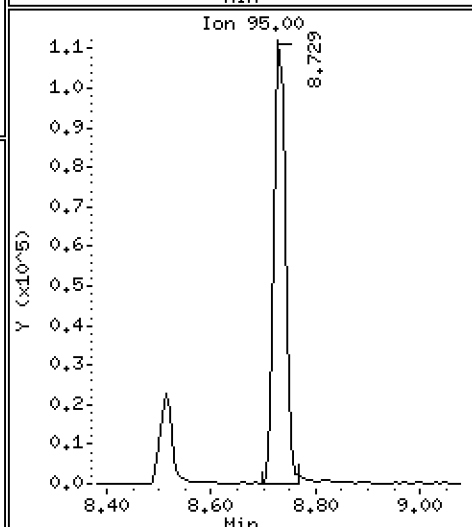
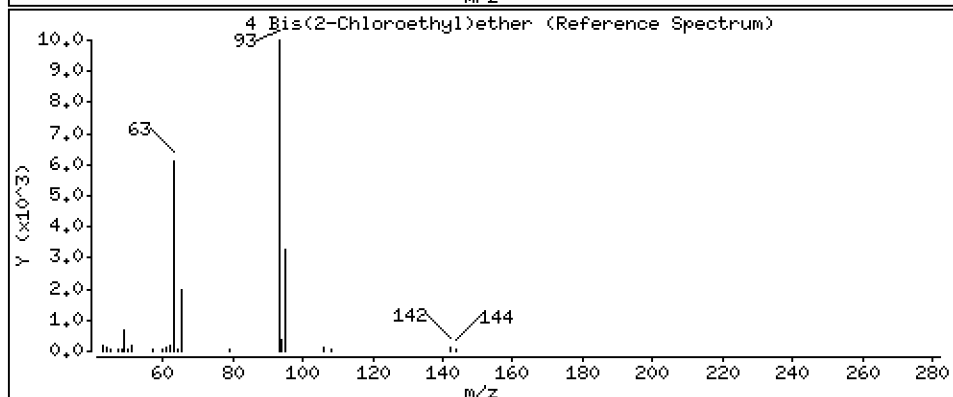
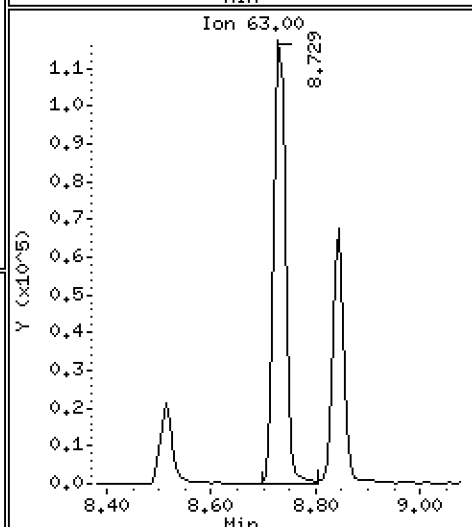
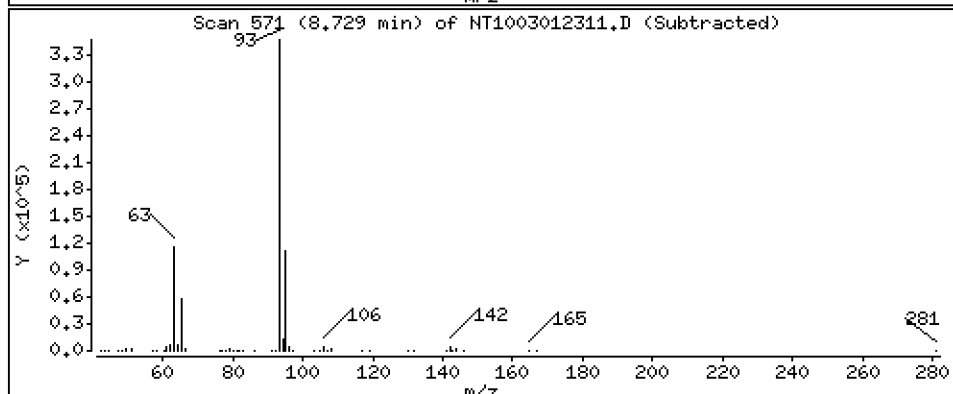
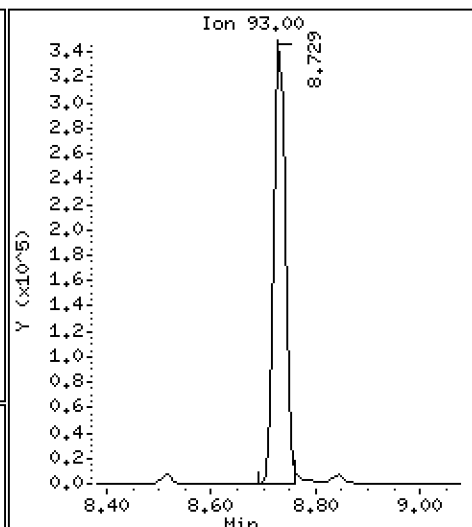
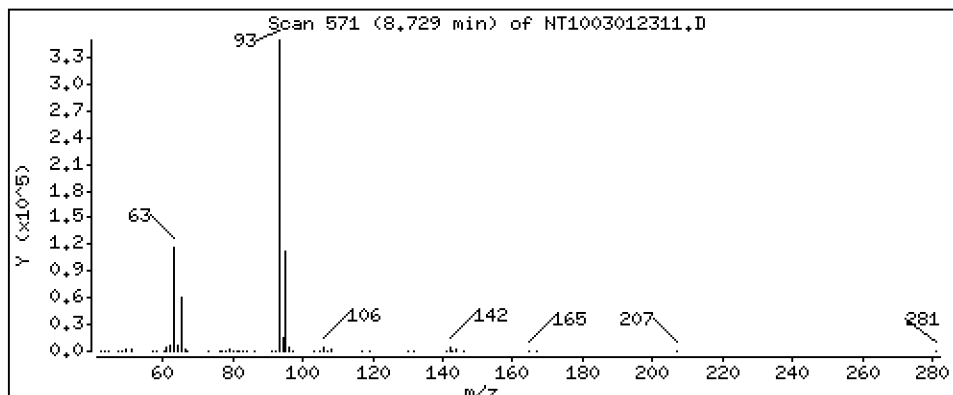
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,928 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

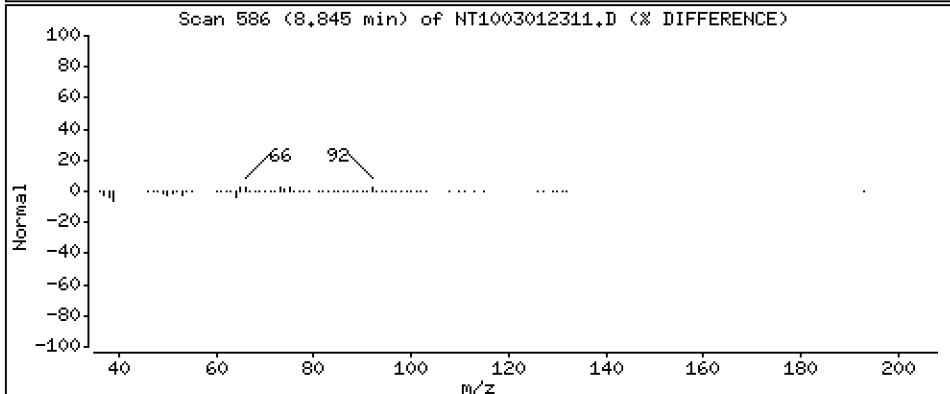
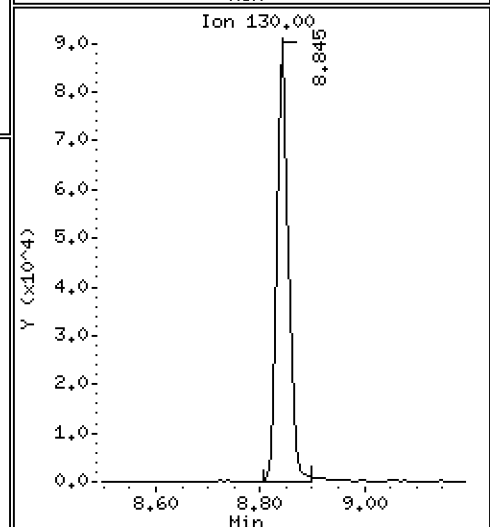
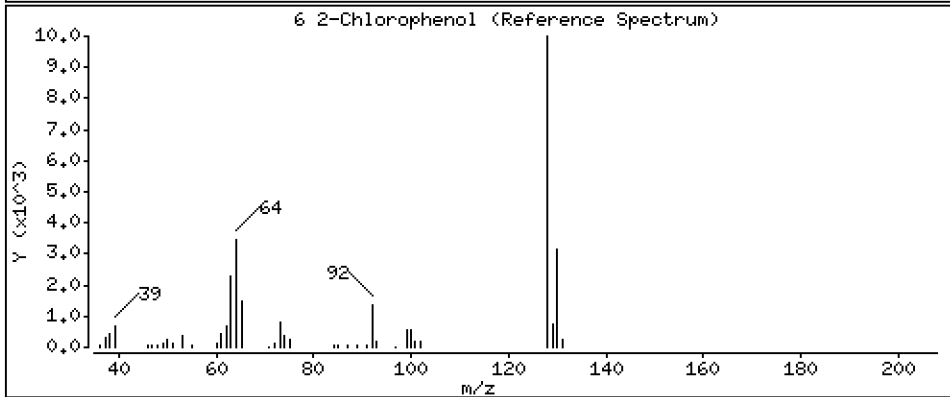
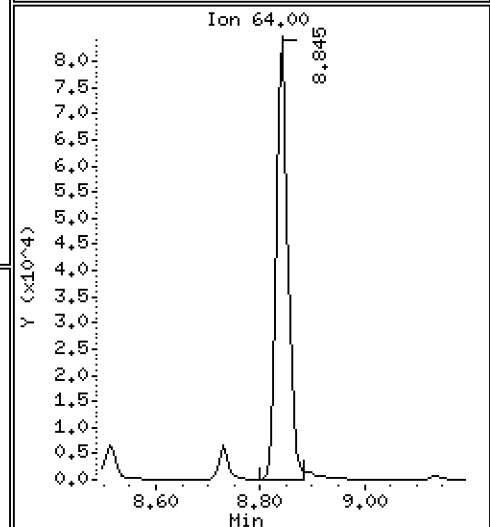
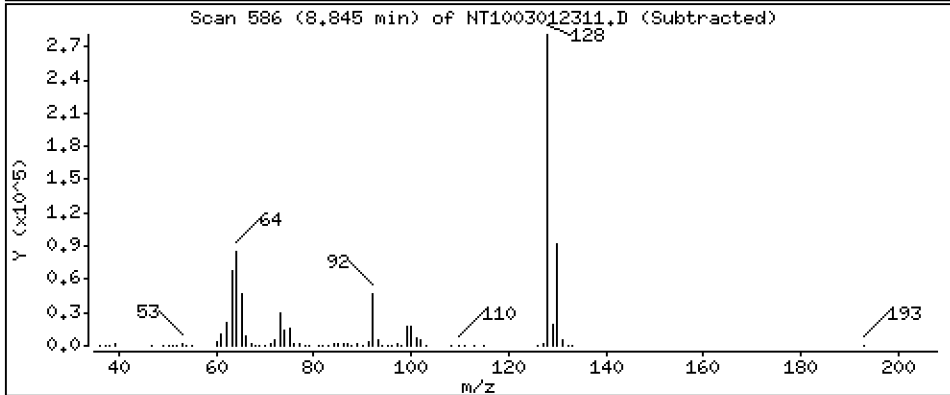
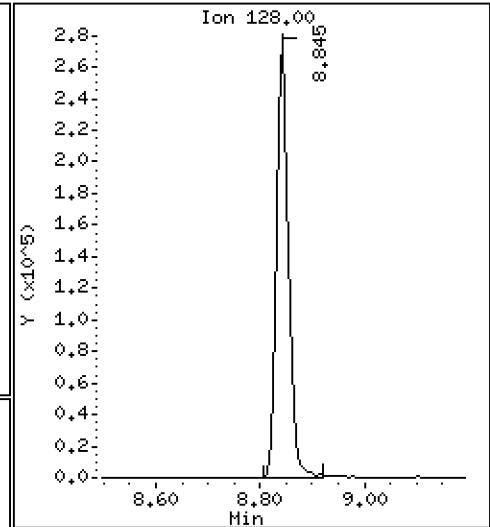
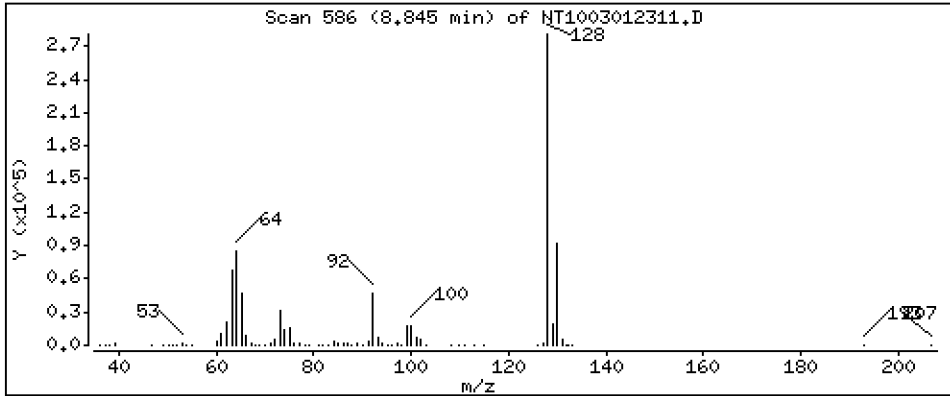
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

6 2-Chlorophenol

Concentration: 4.692 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

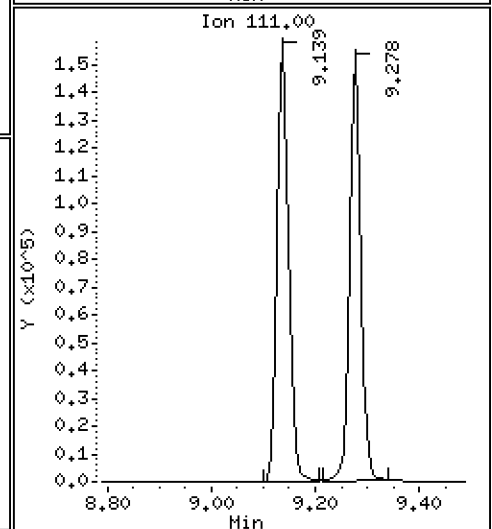
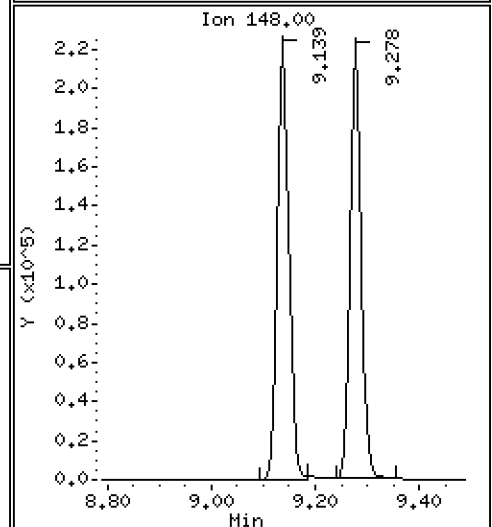
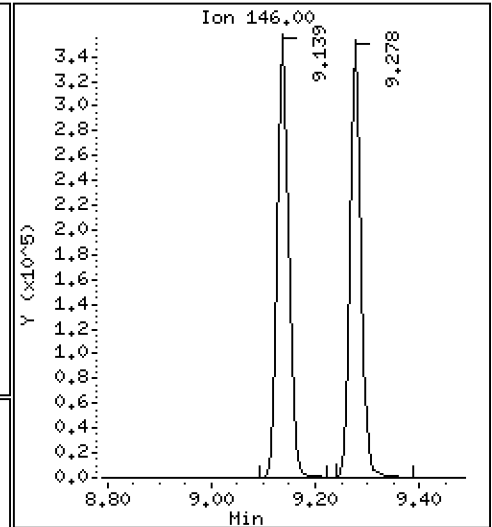
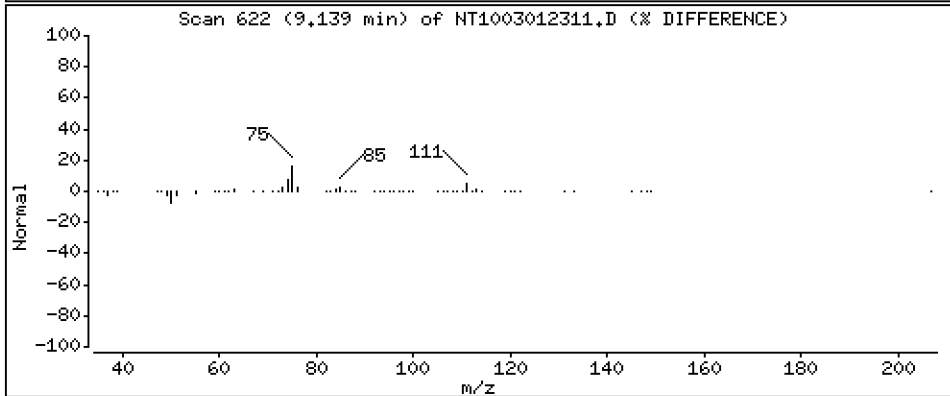
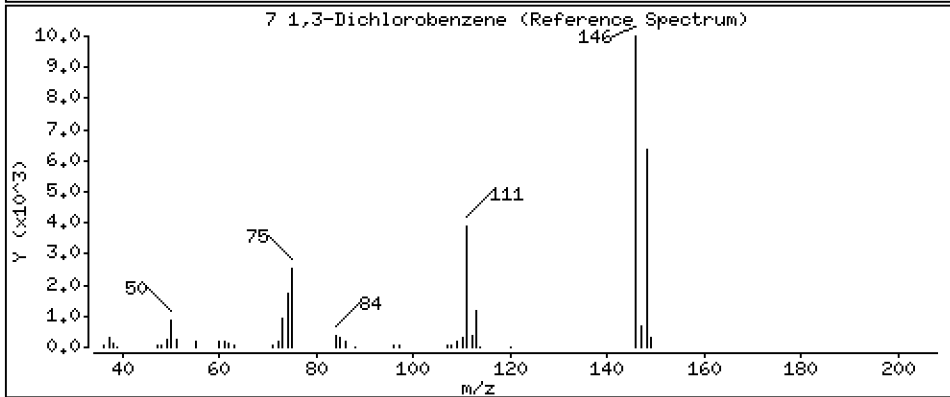
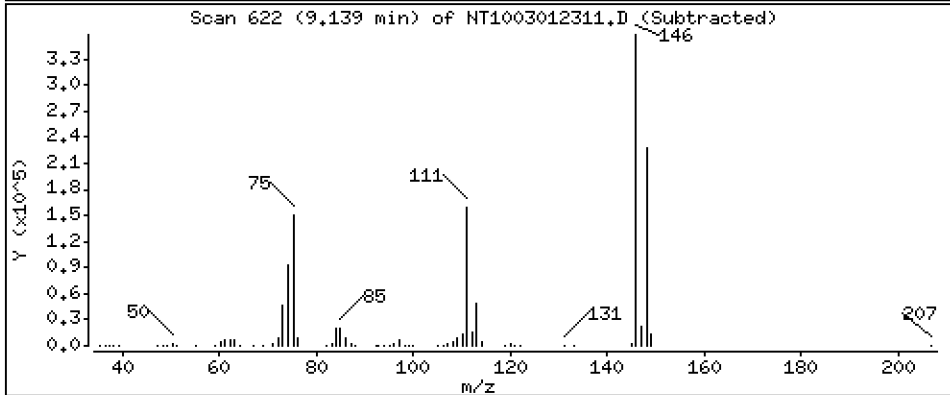
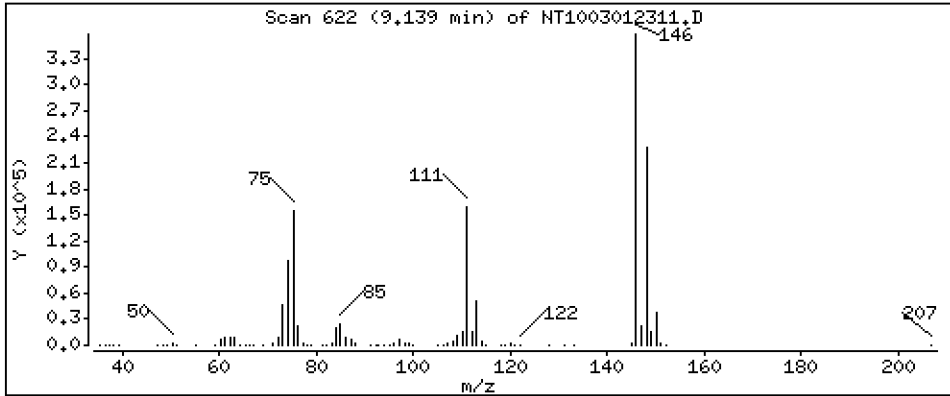
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 5,266 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

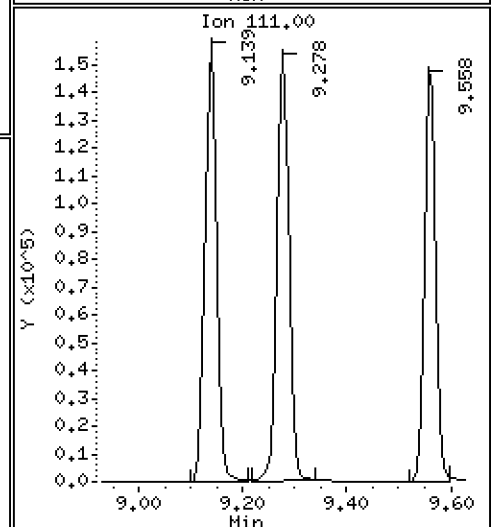
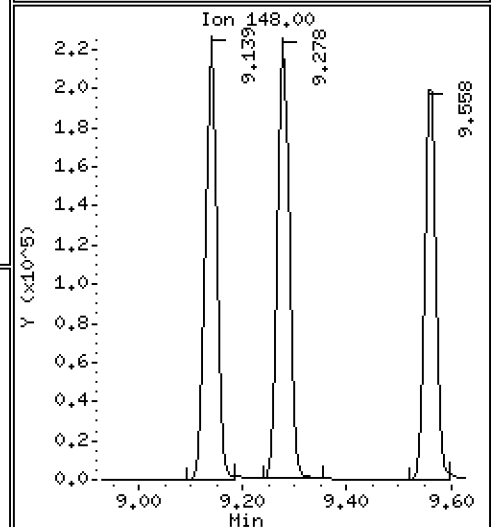
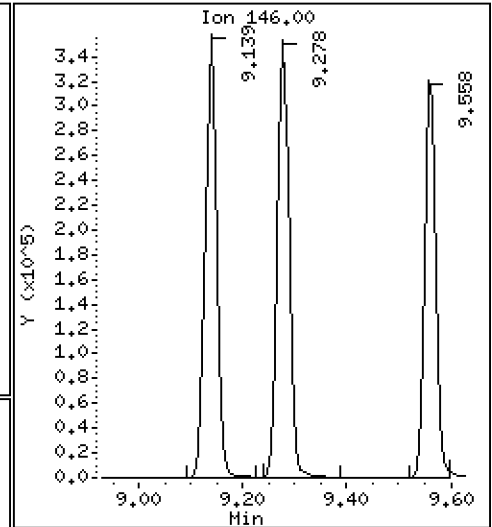
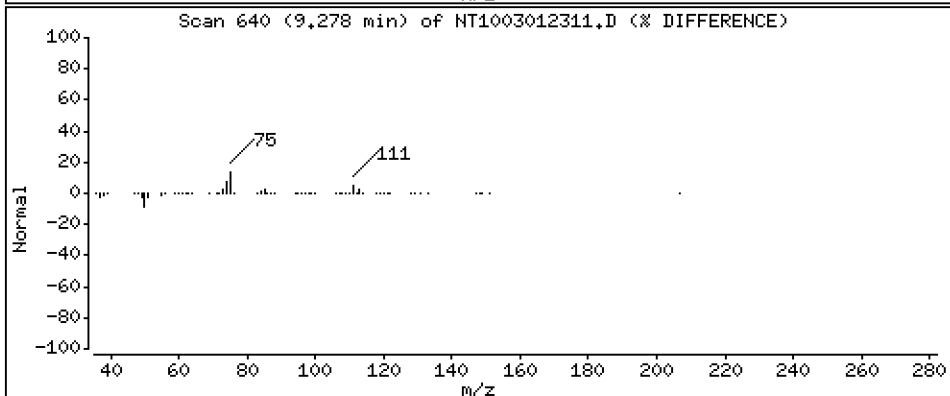
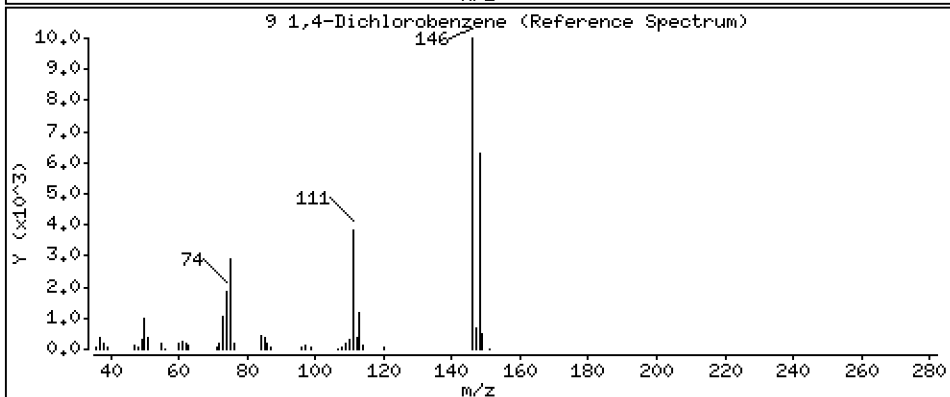
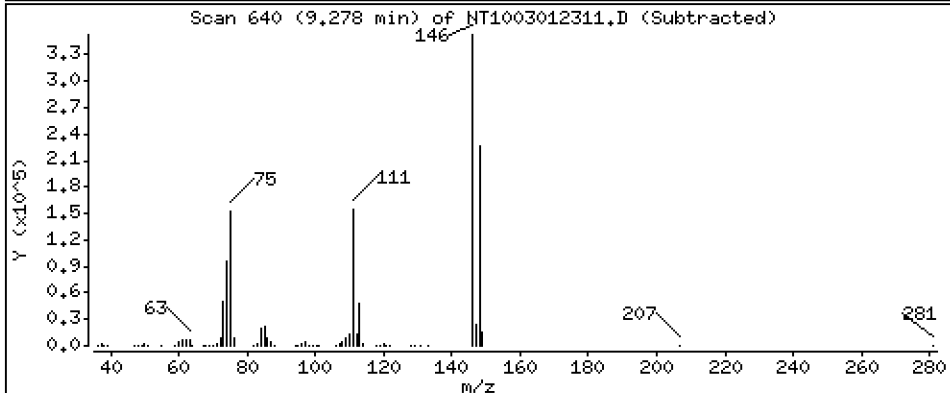
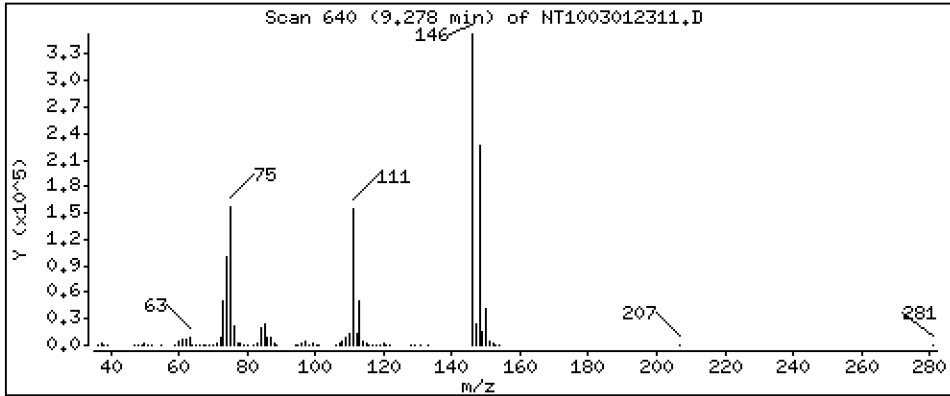
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,216 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

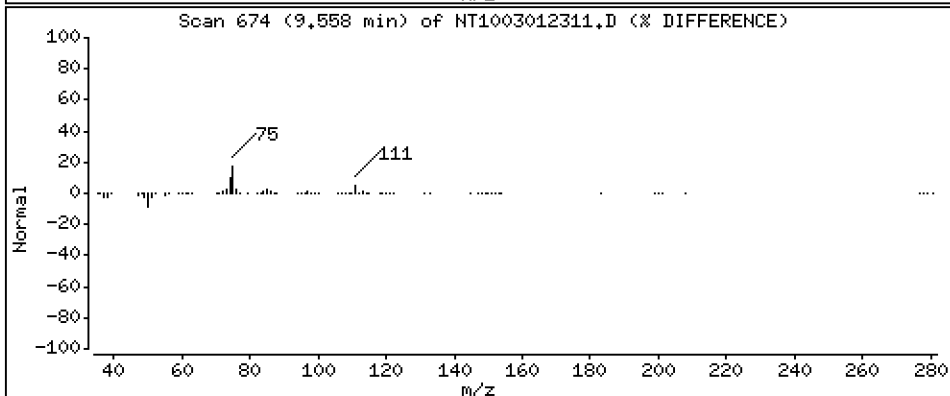
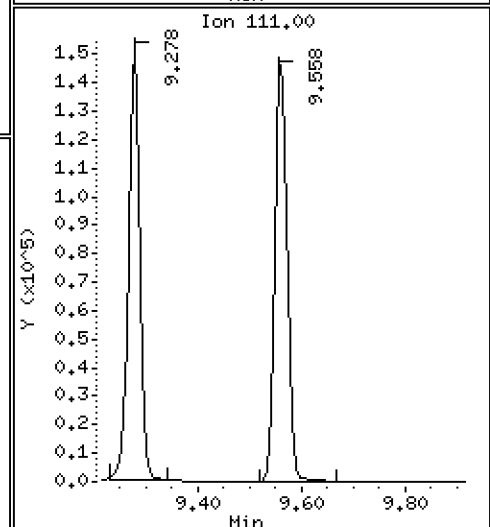
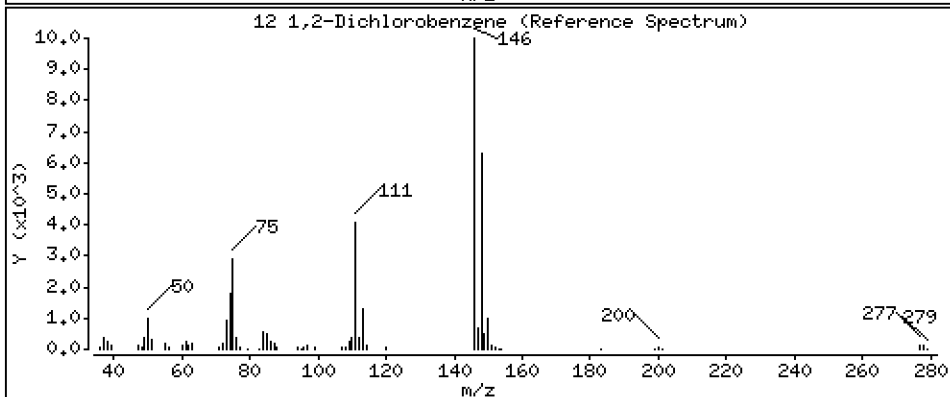
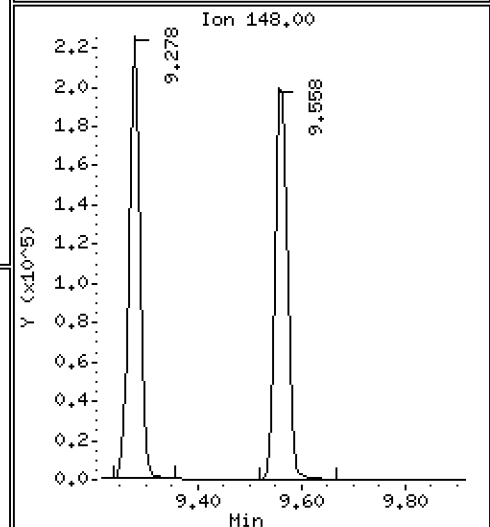
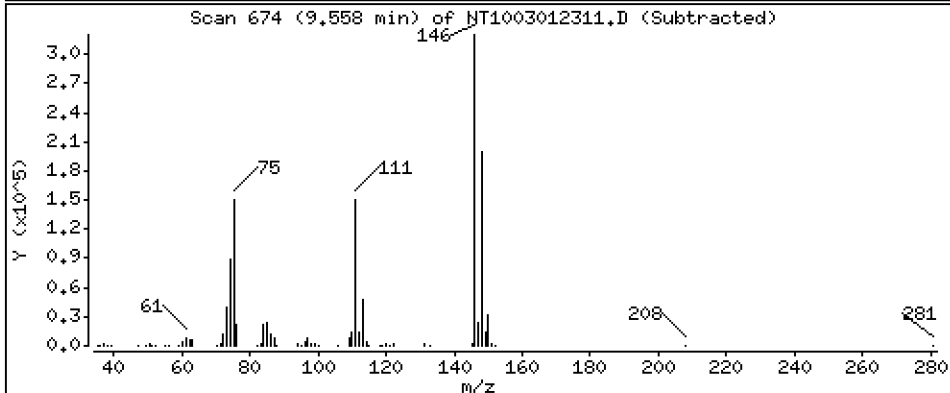
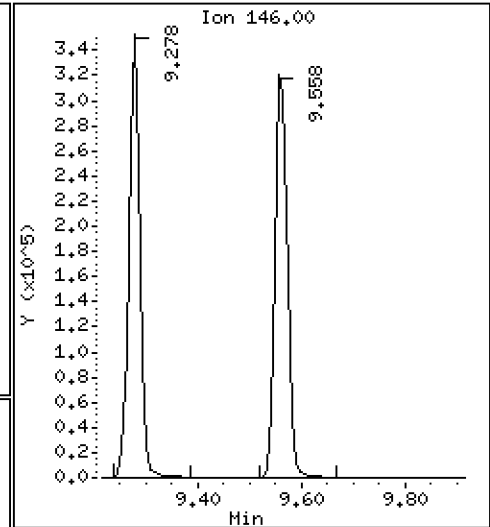
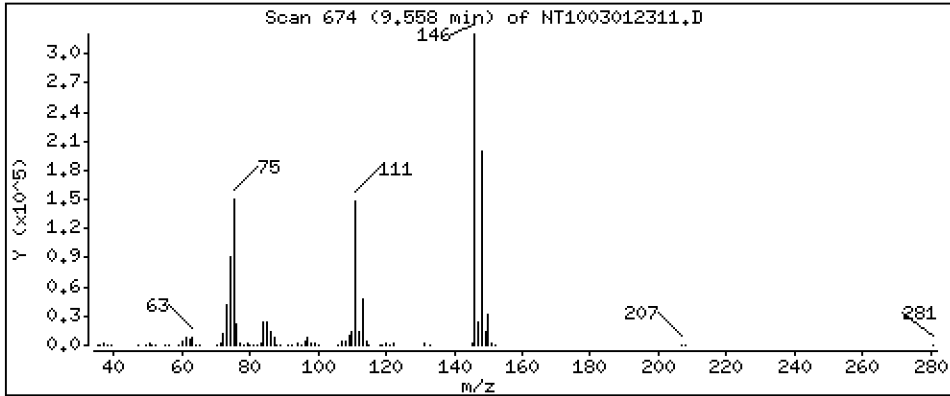
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5.194 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

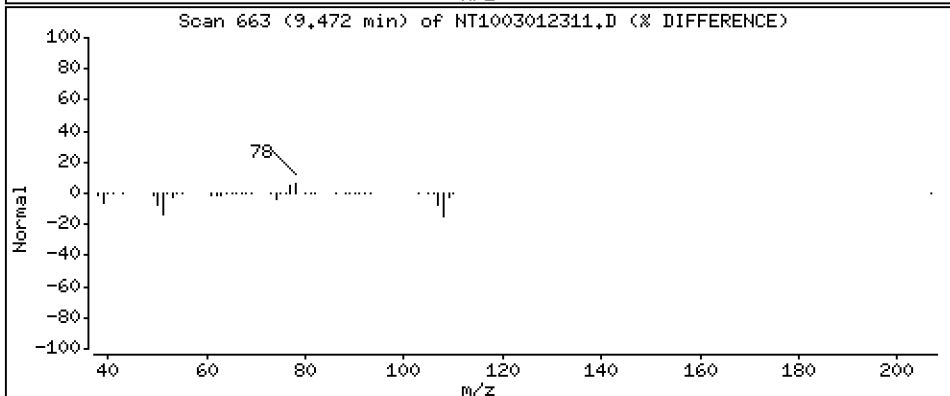
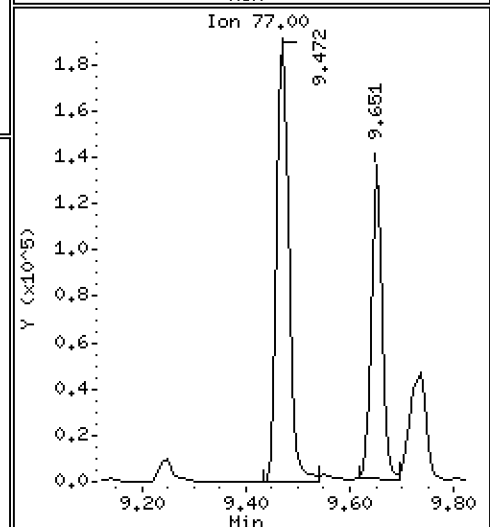
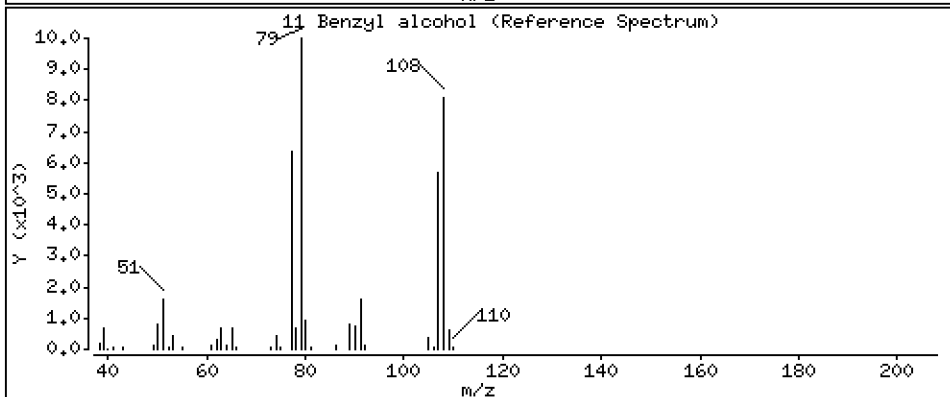
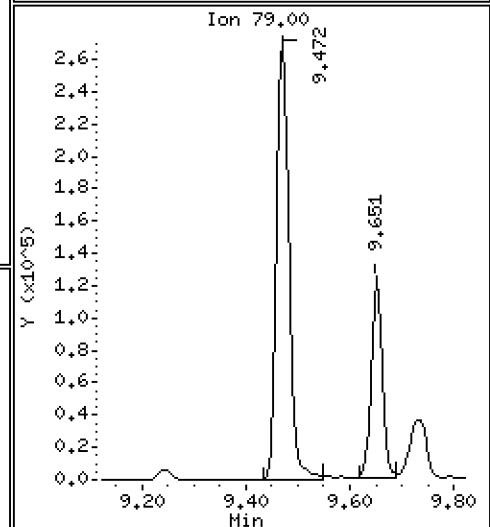
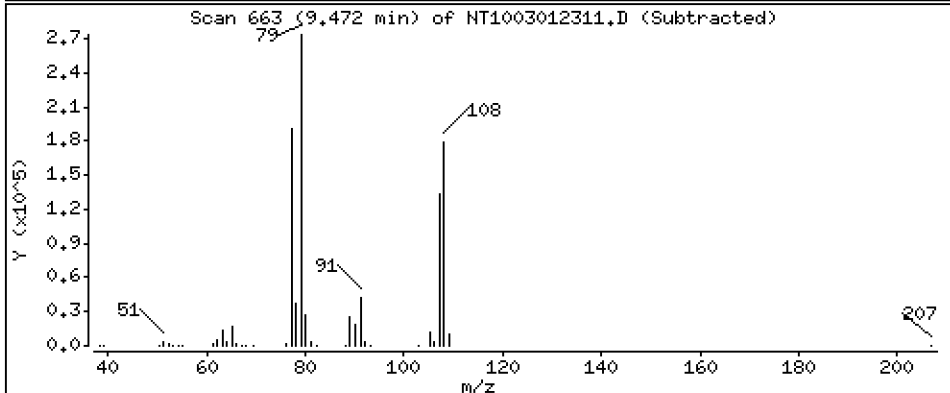
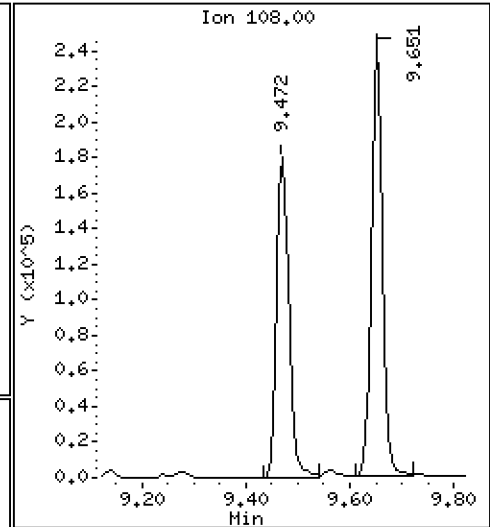
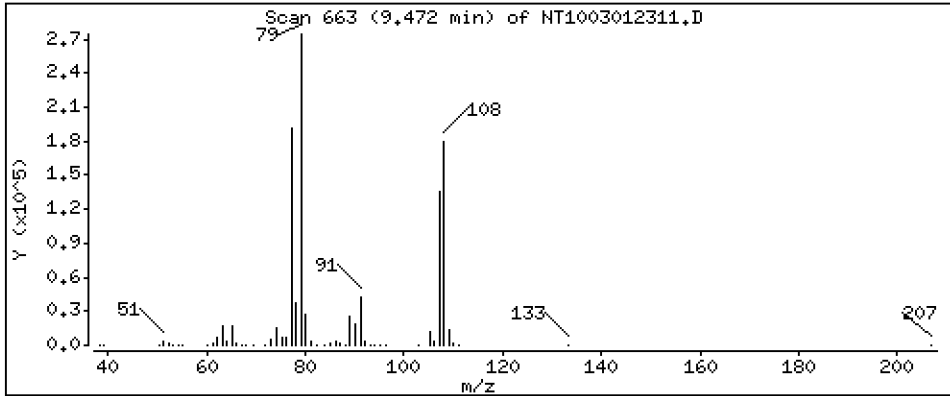
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.898 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

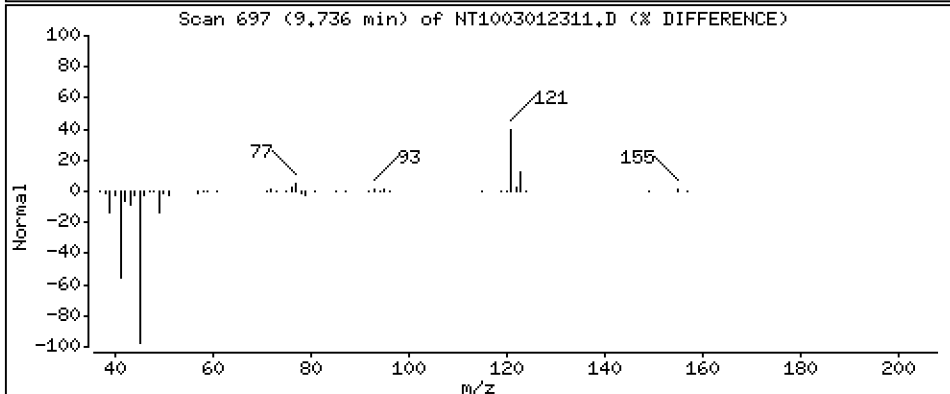
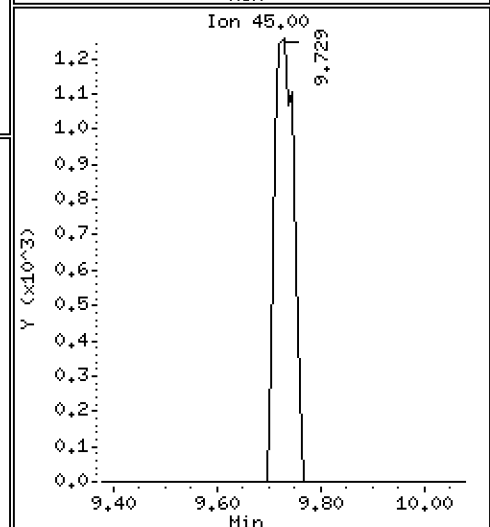
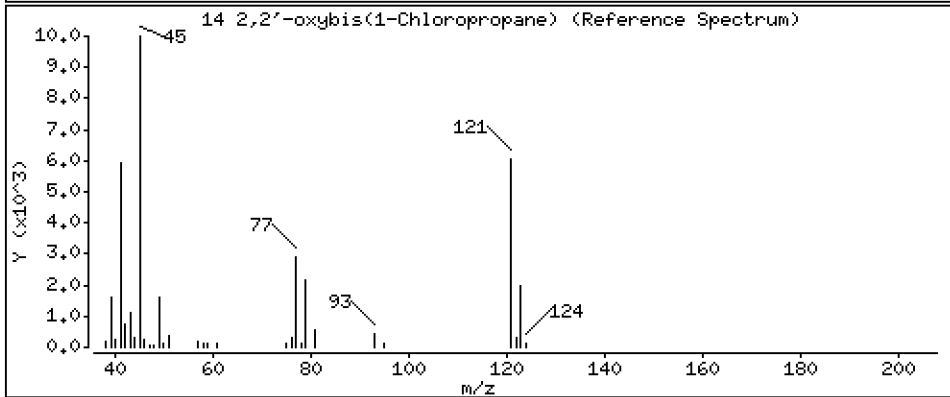
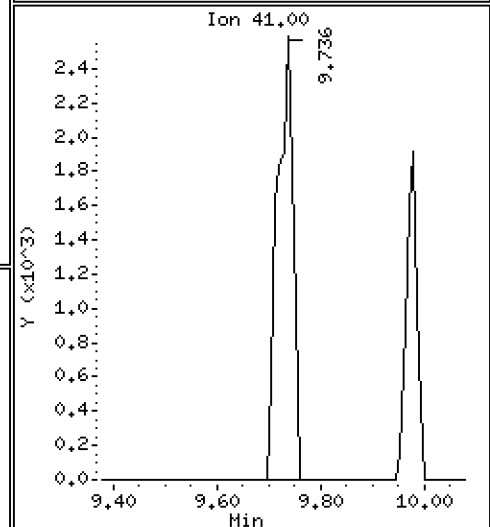
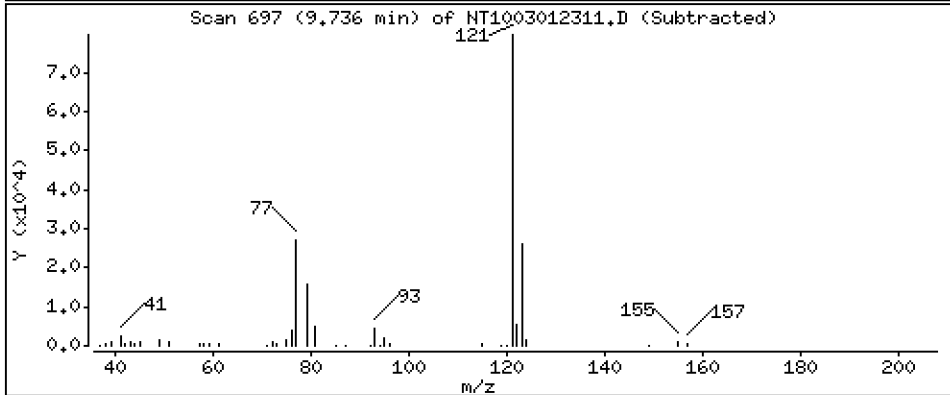
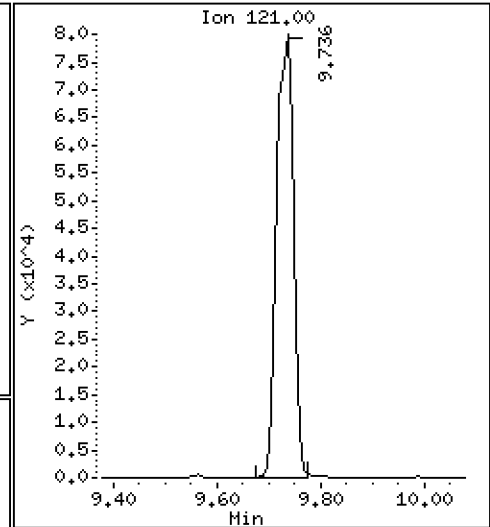
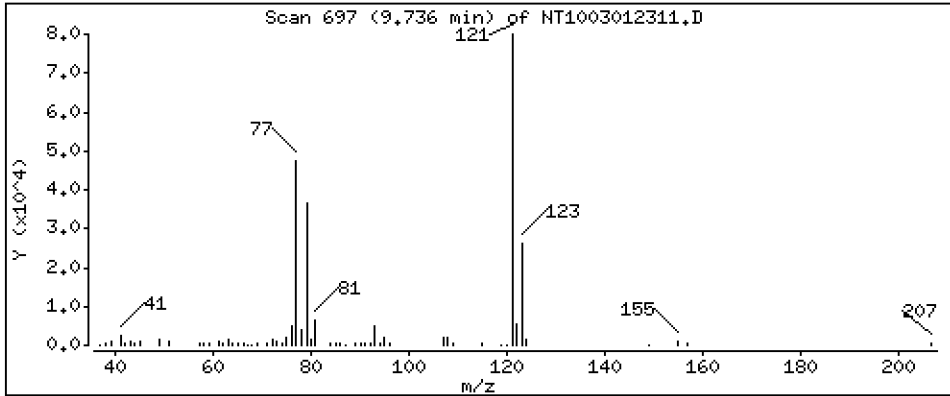
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 6,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

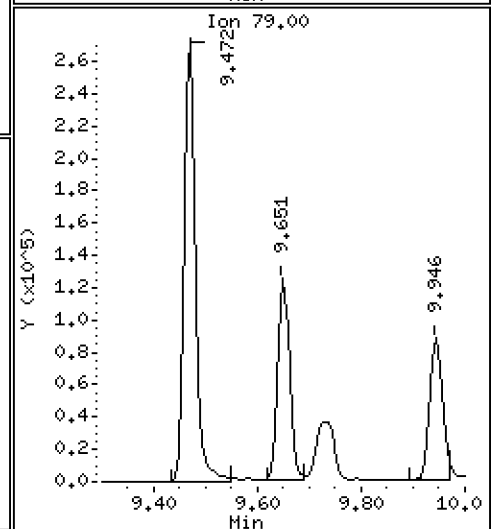
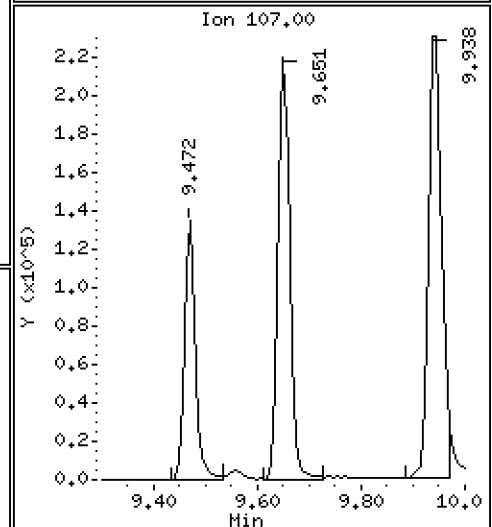
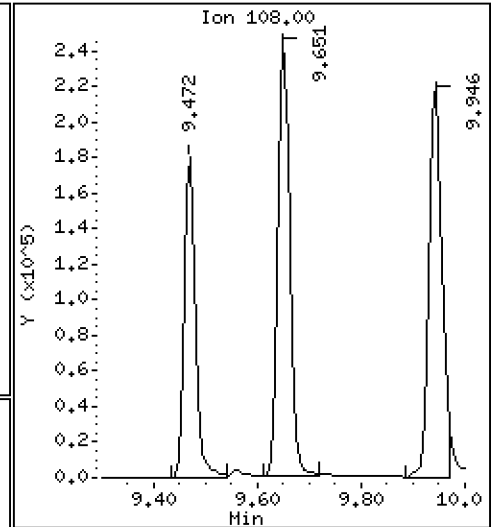
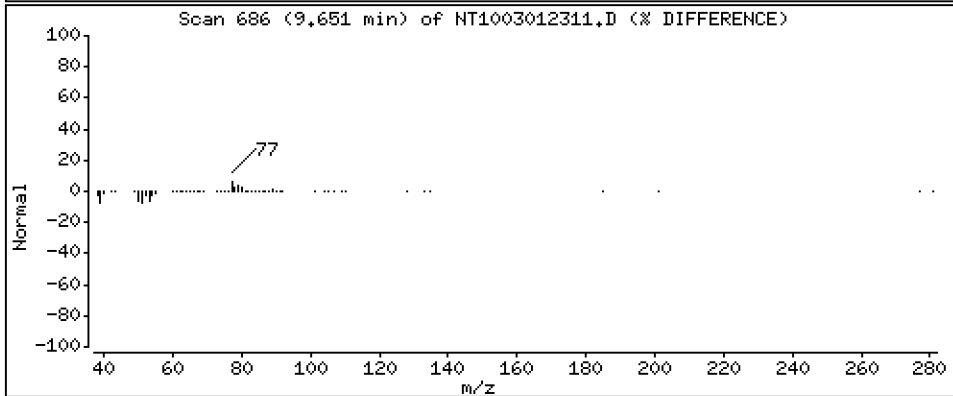
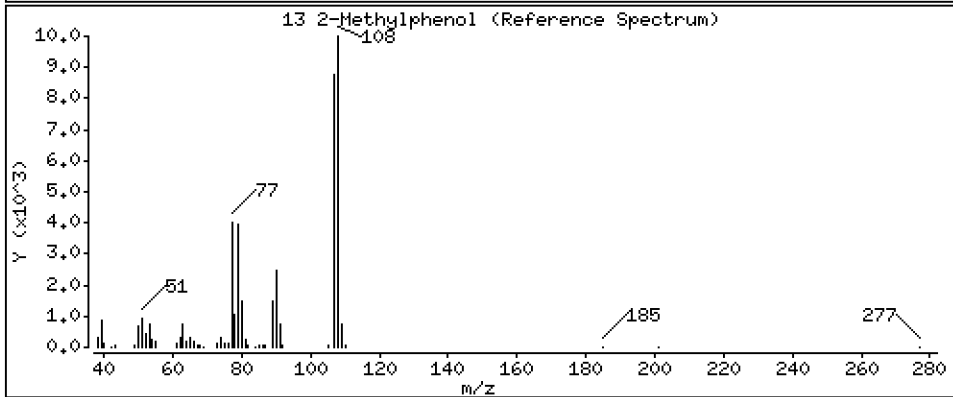
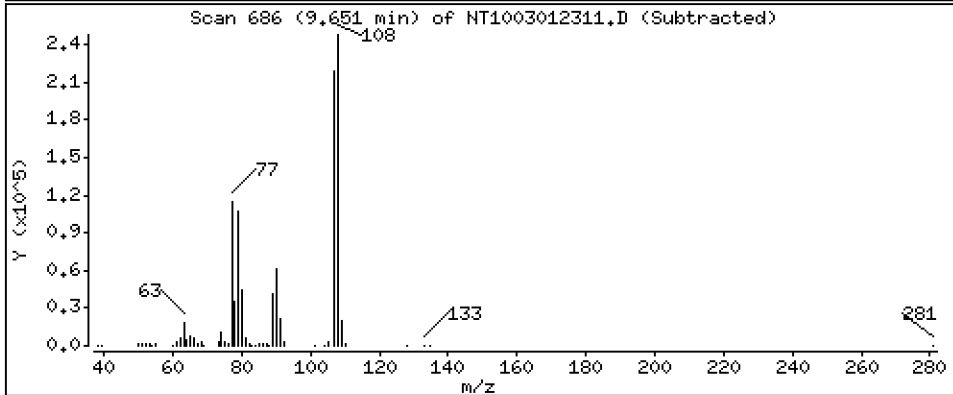
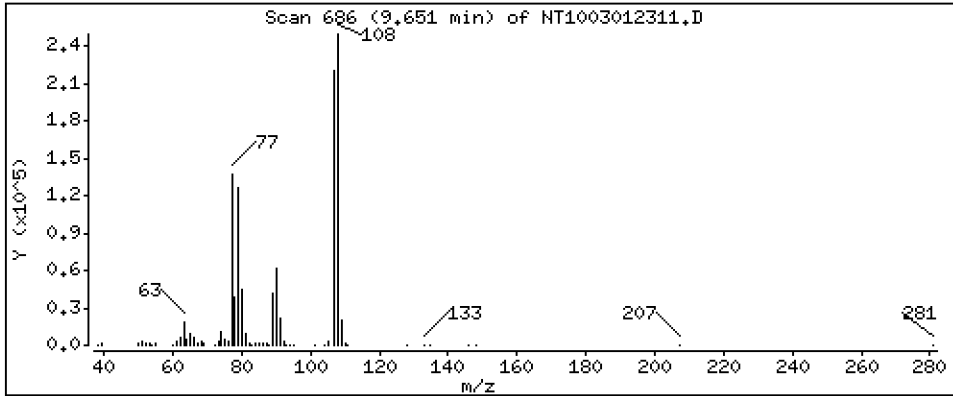
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.192 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

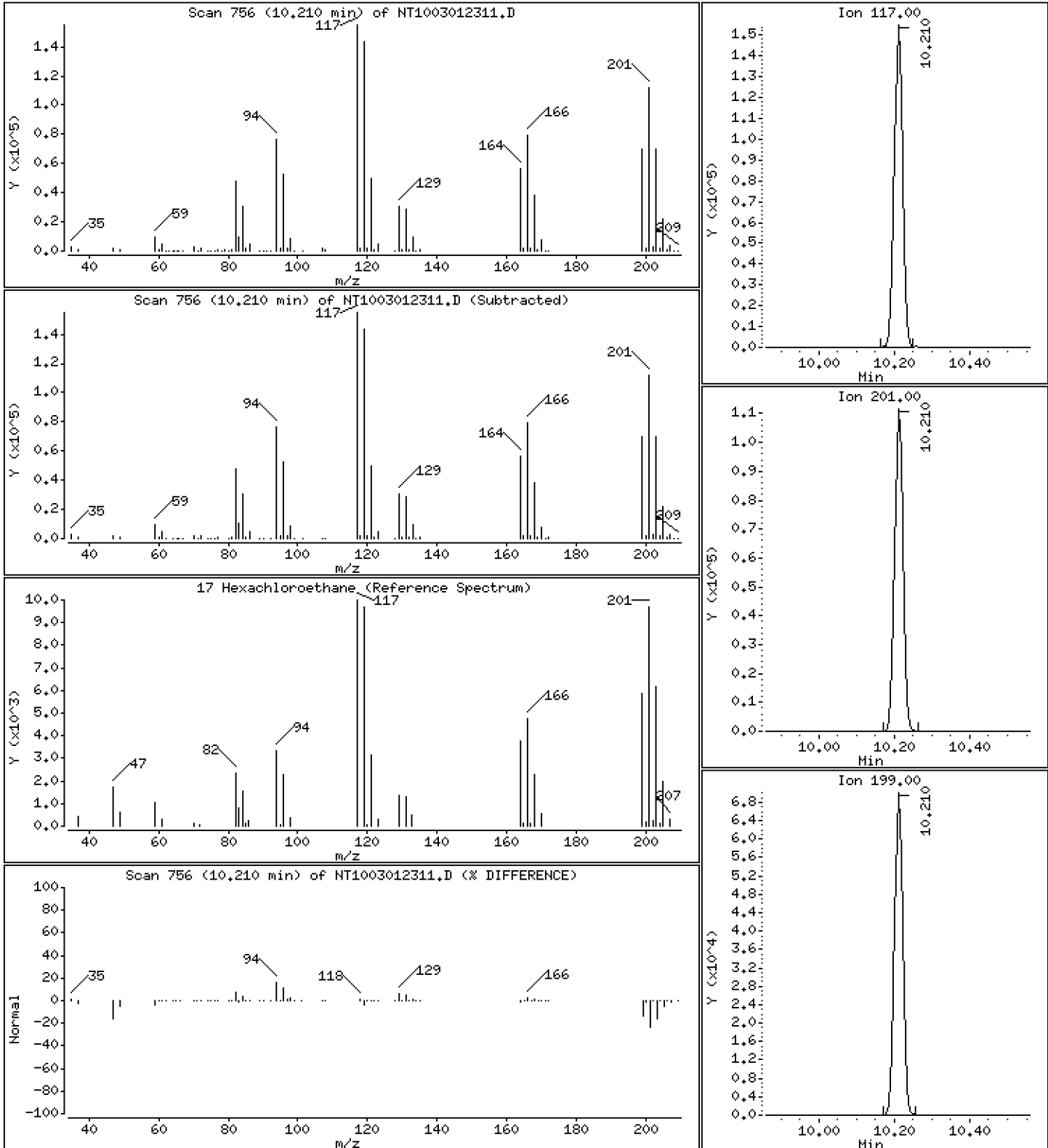
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 5,443 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

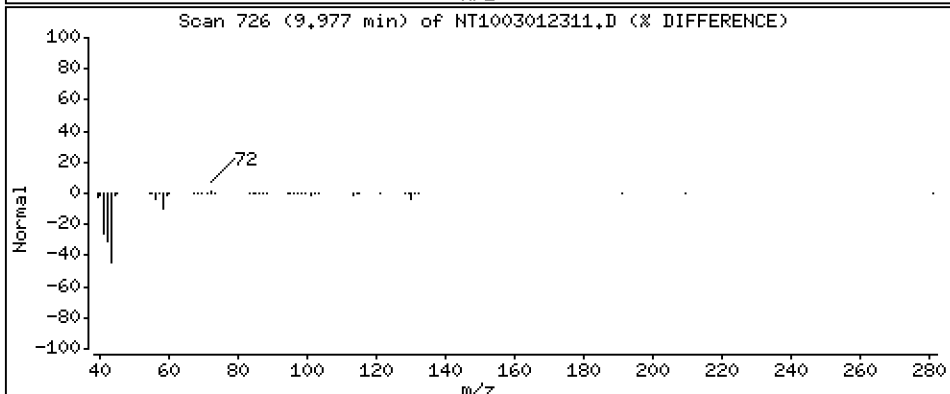
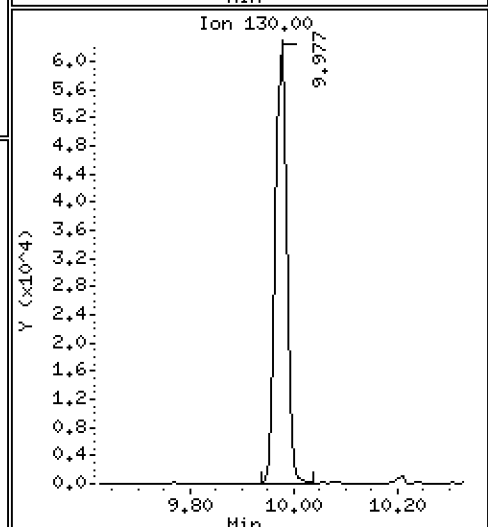
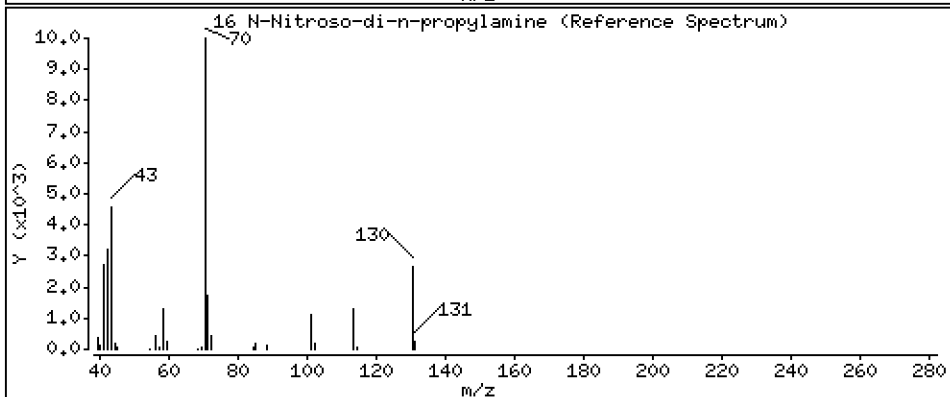
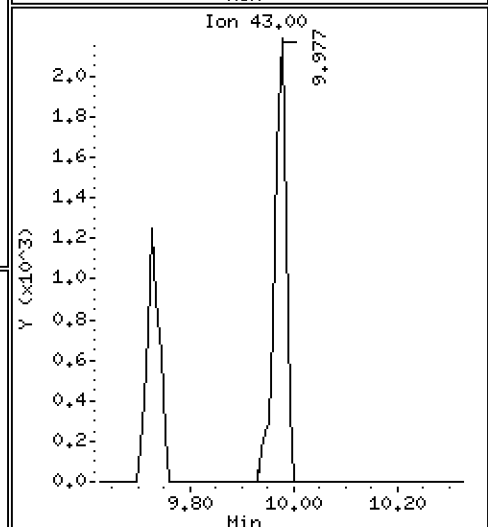
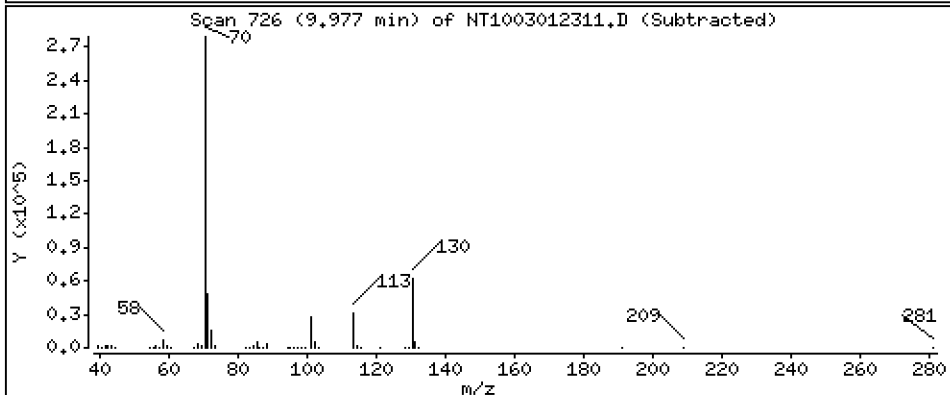
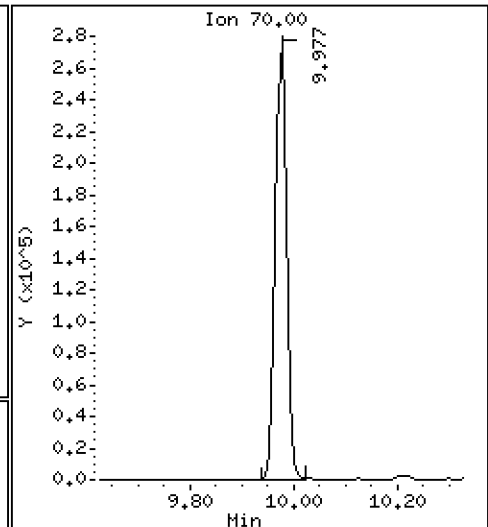
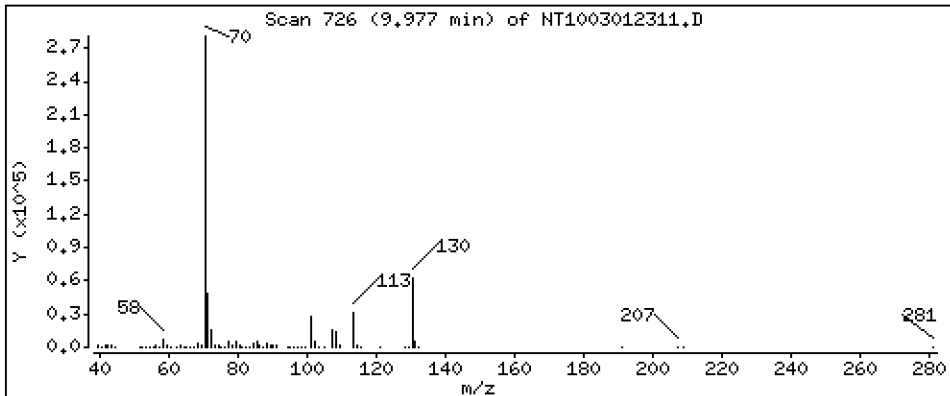
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

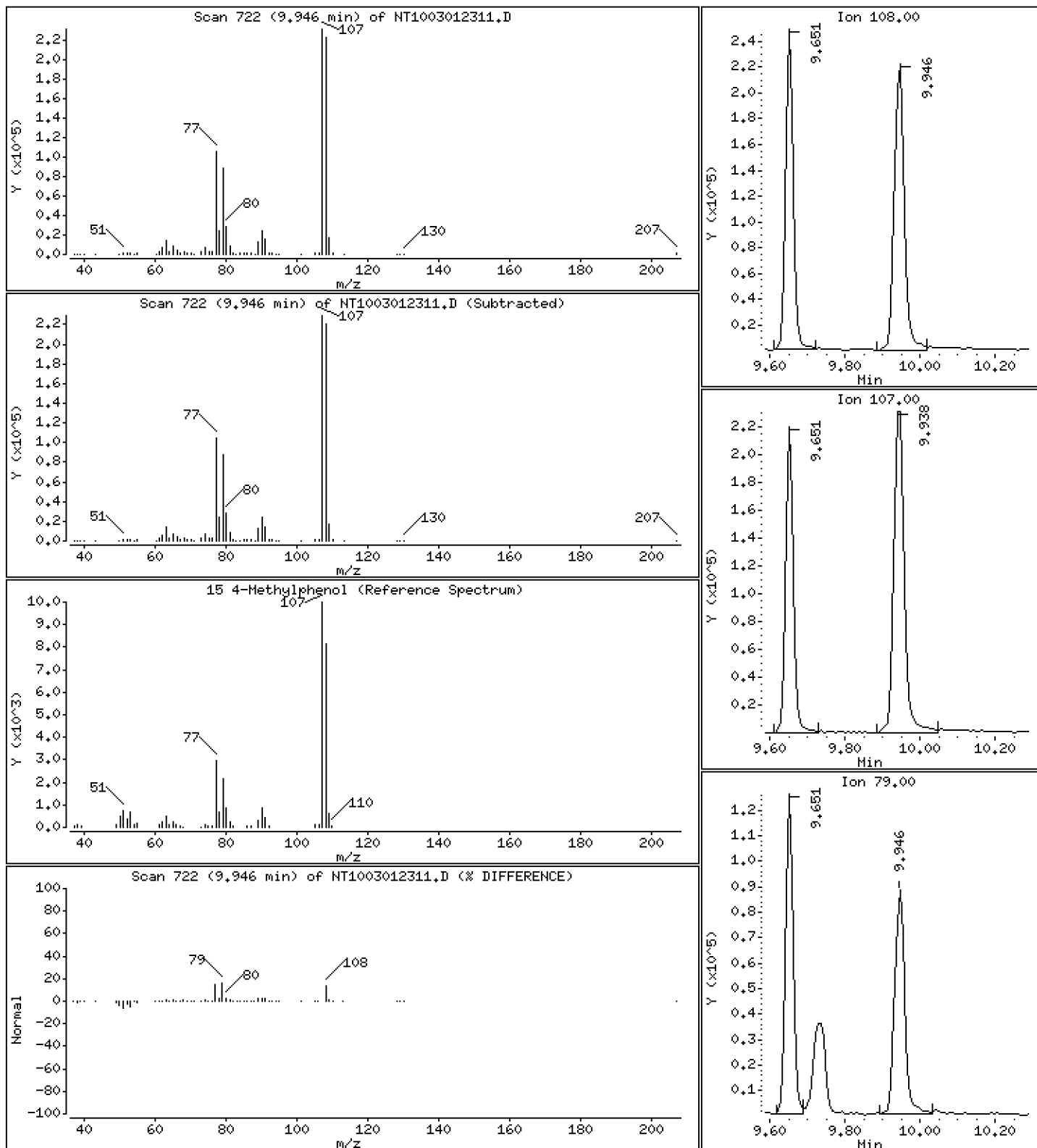
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.239 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

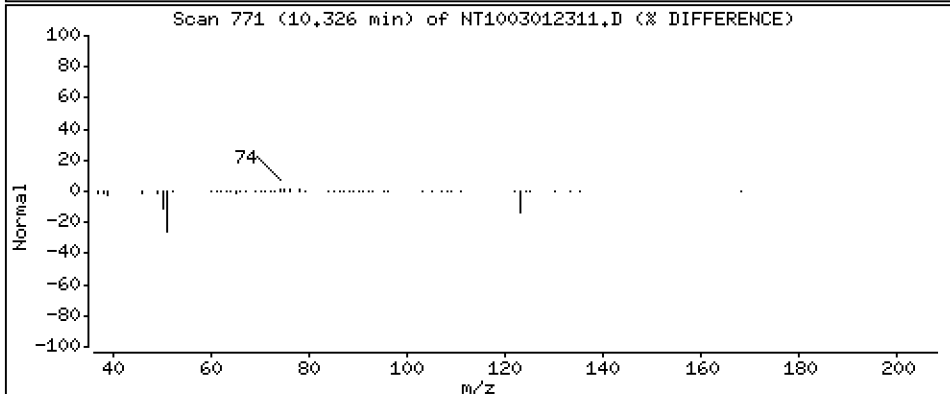
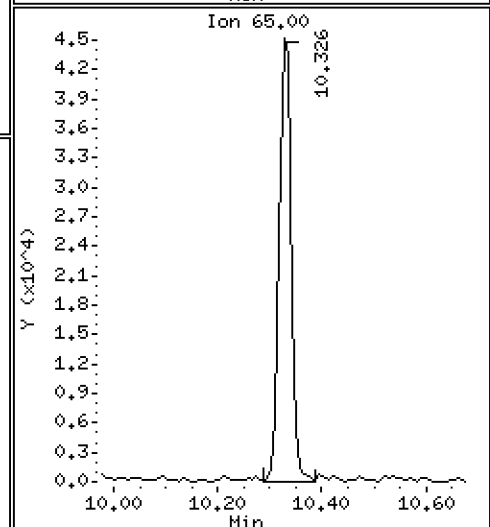
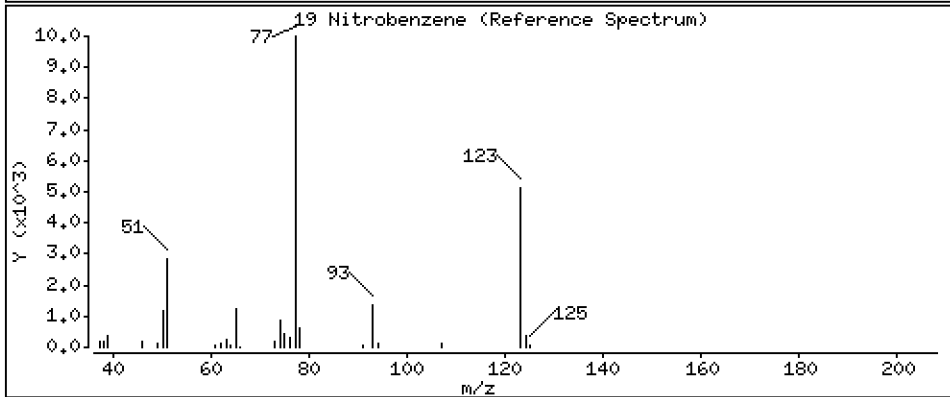
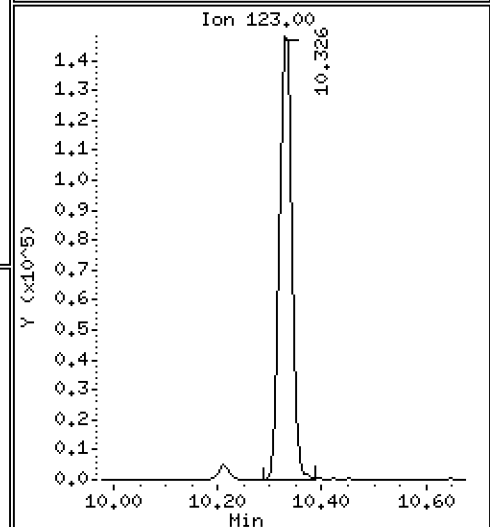
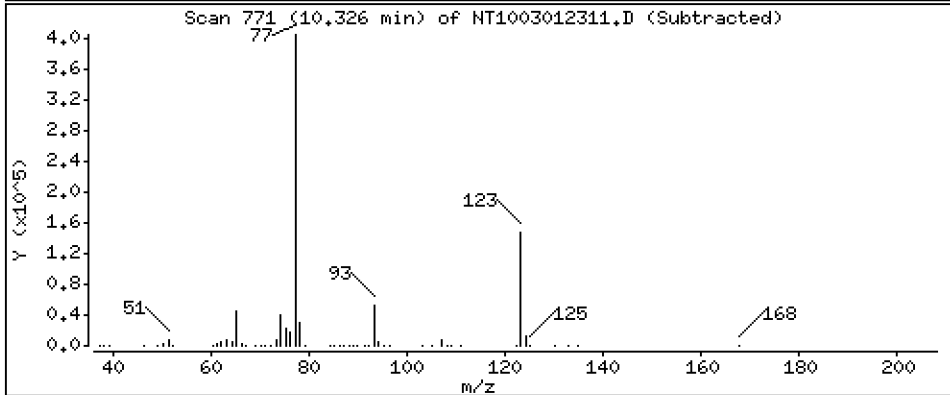
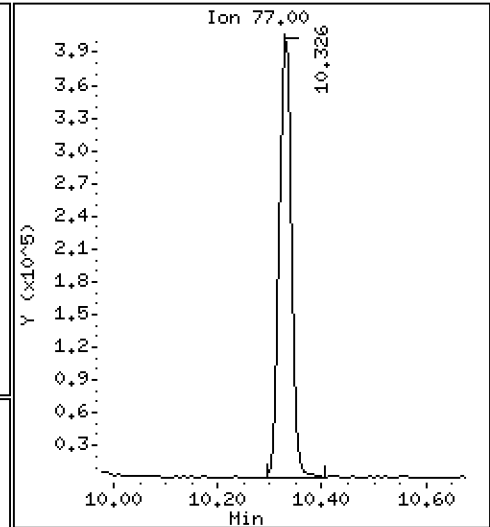
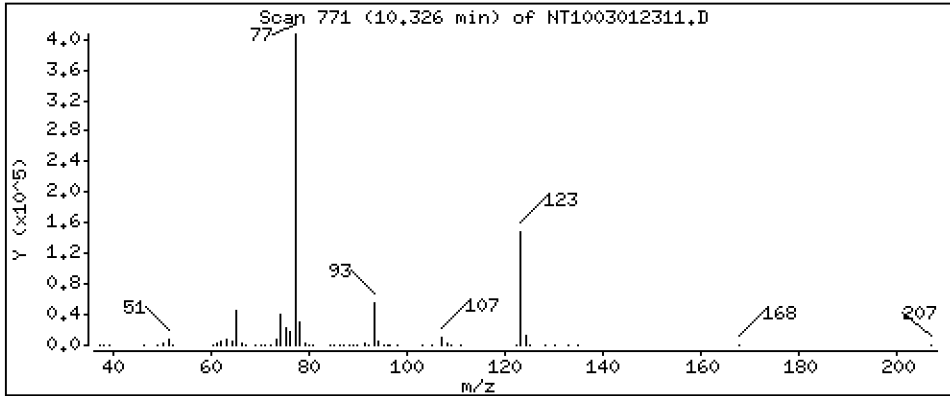
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,569 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

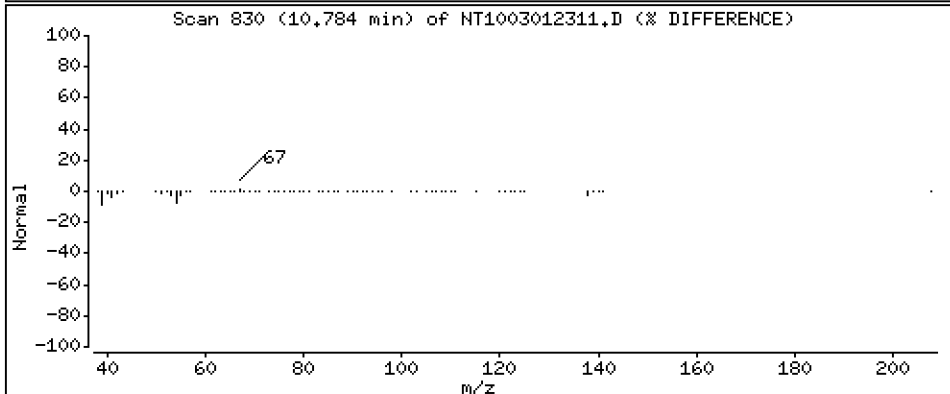
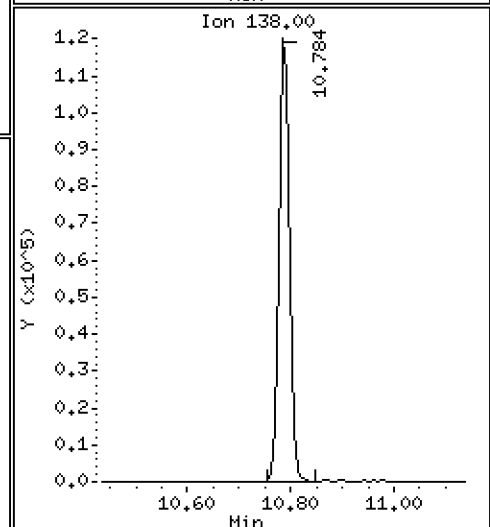
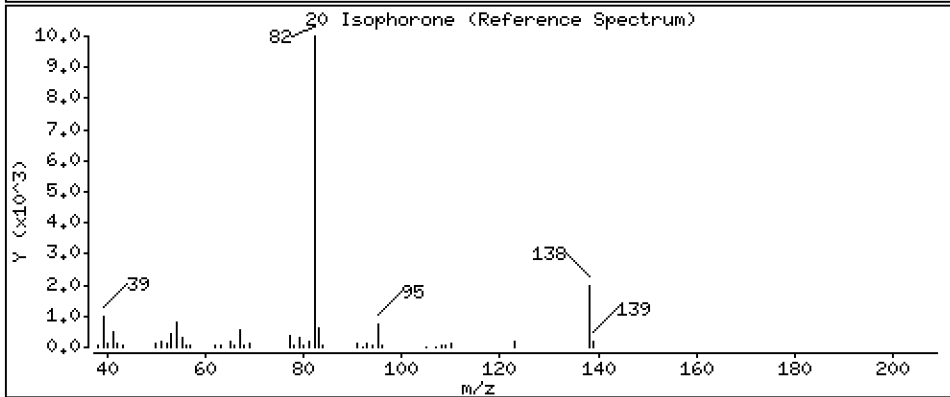
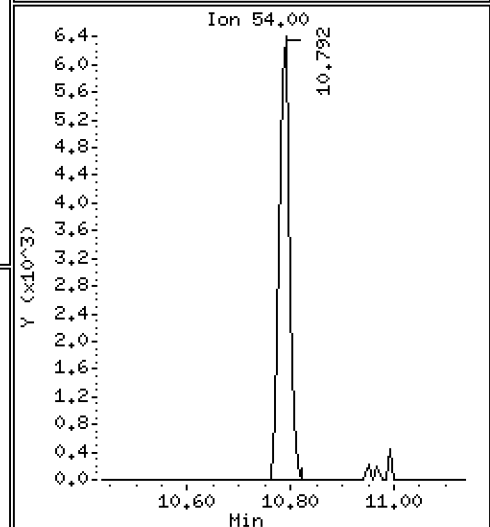
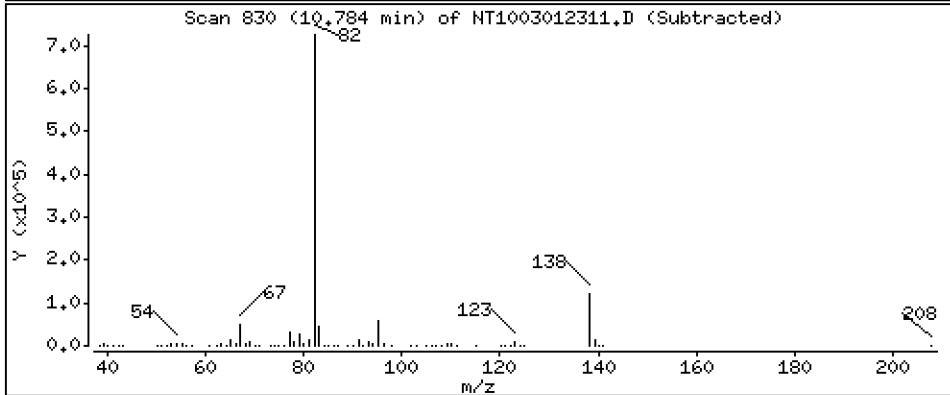
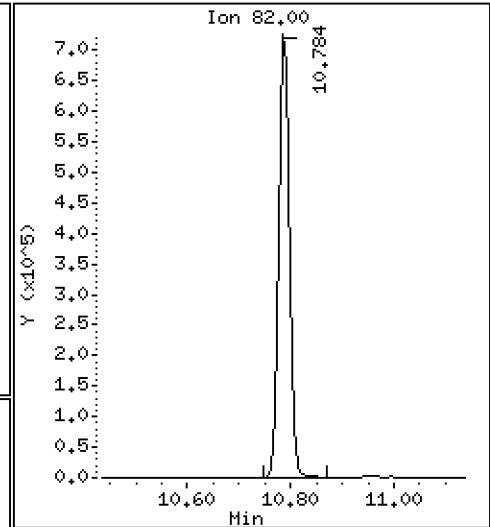
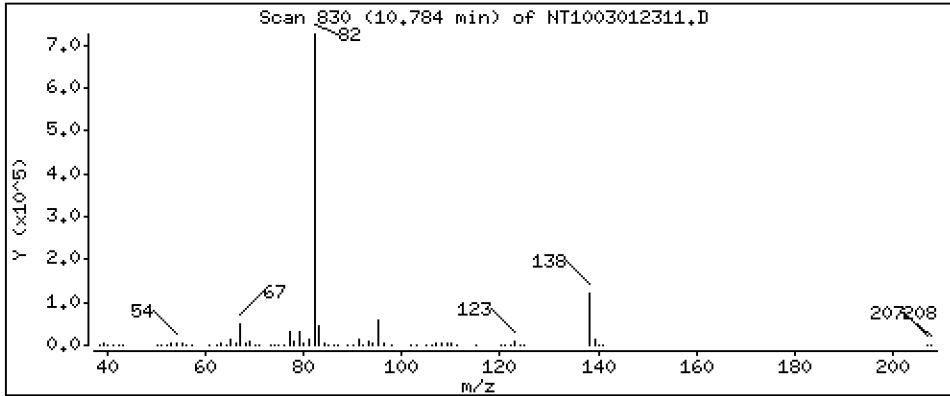
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,672 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

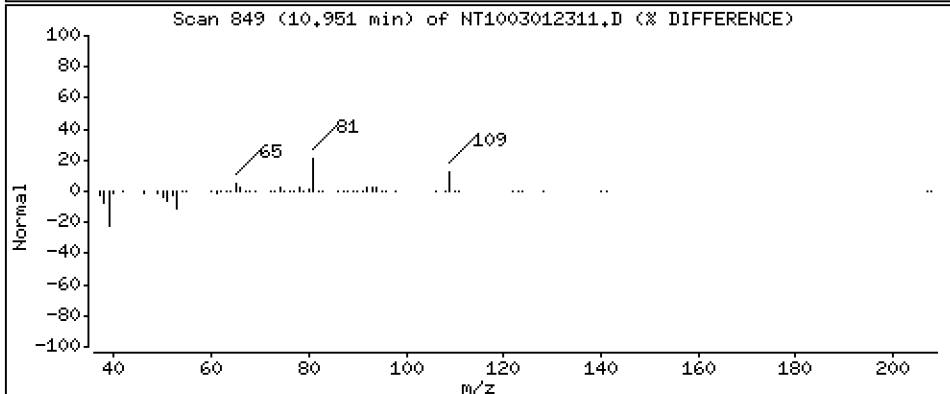
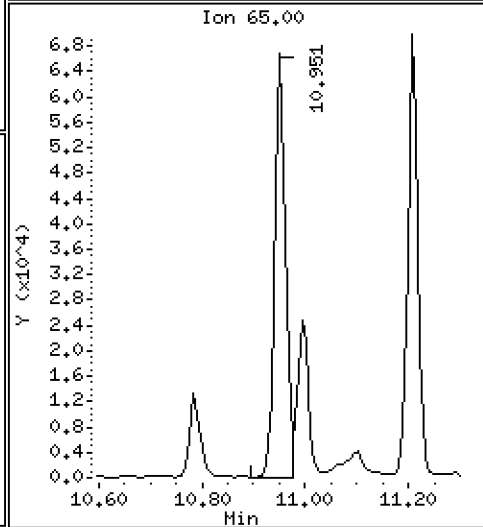
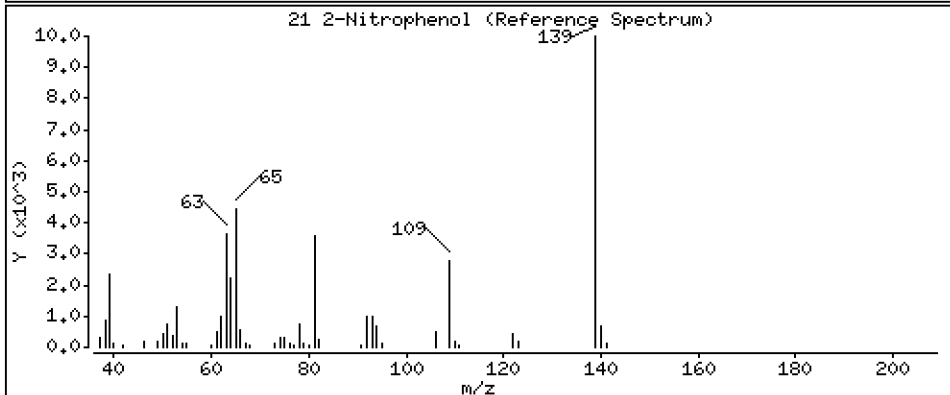
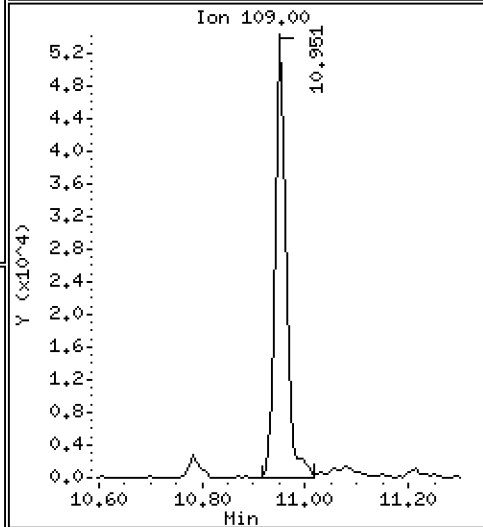
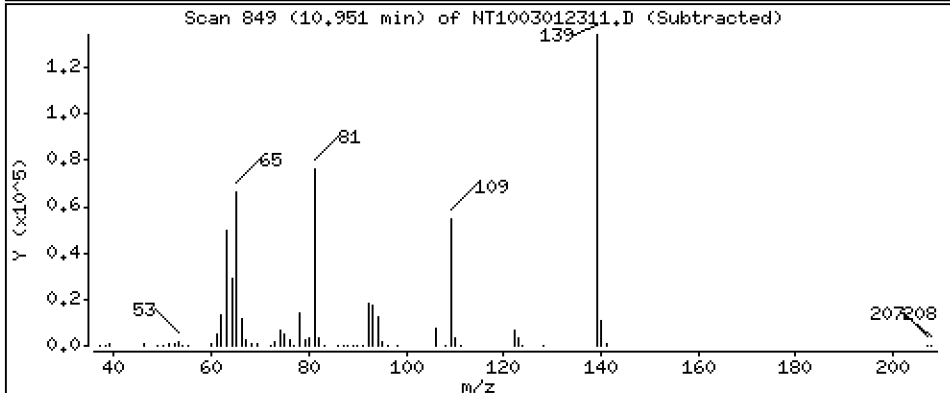
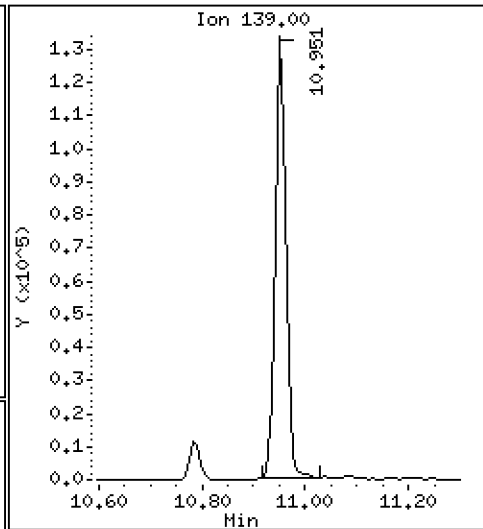
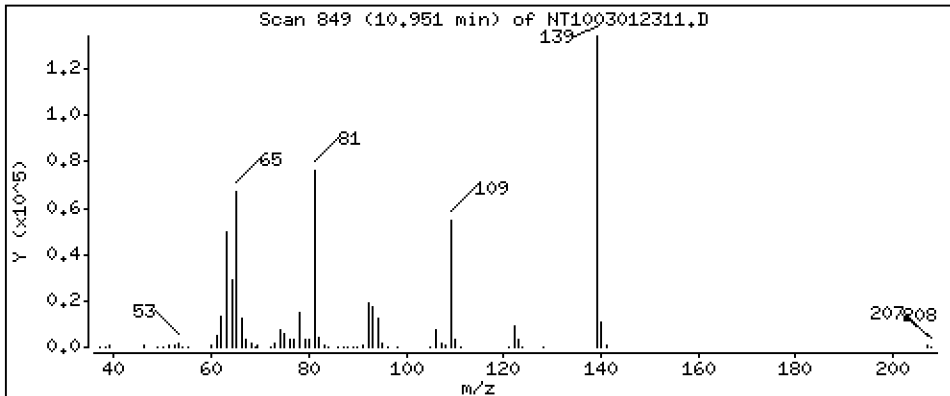
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,244 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

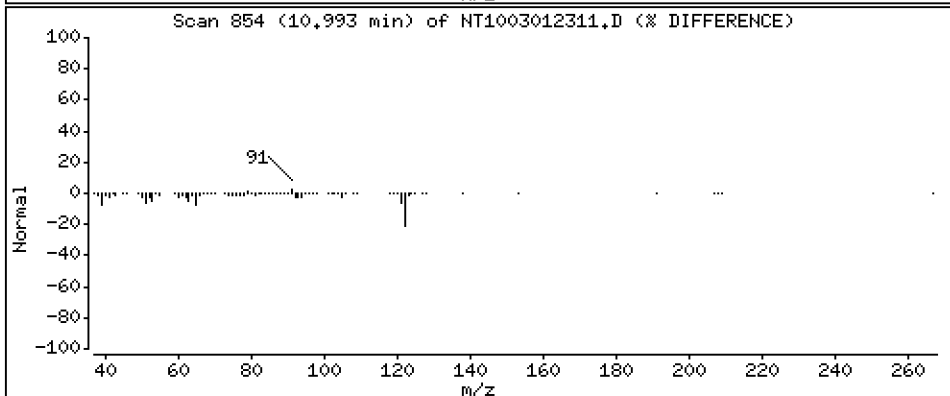
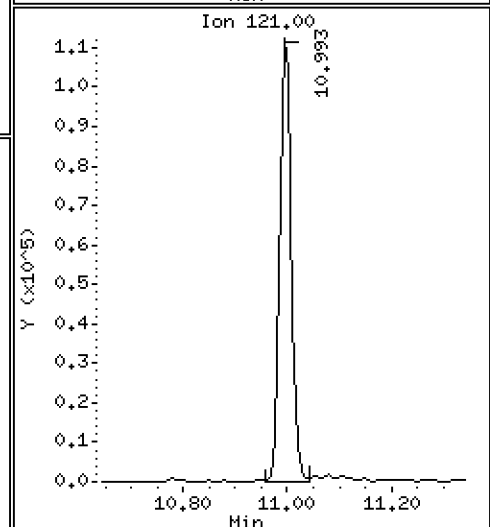
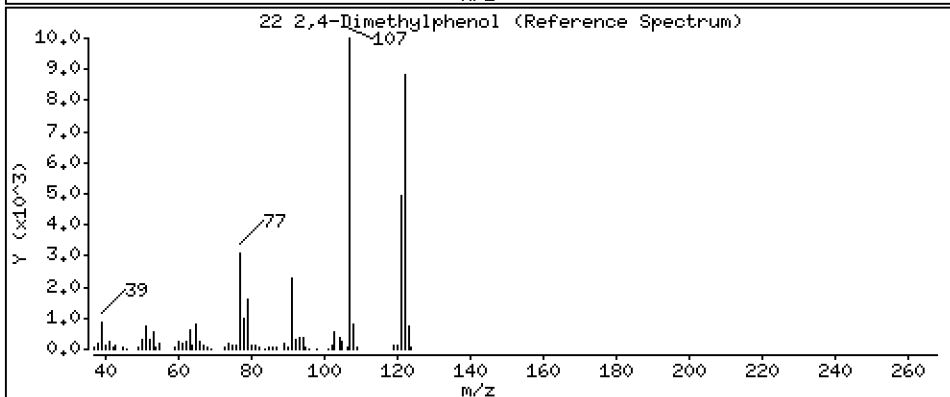
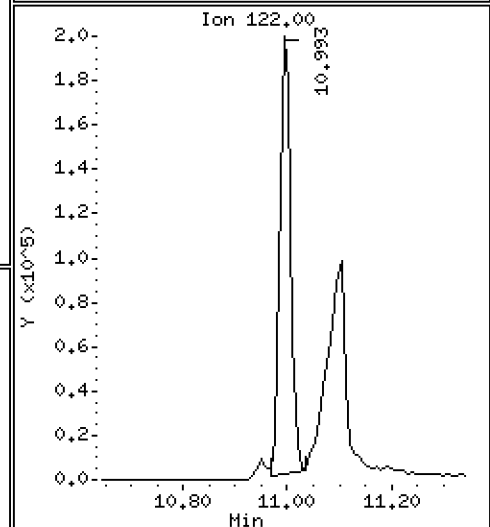
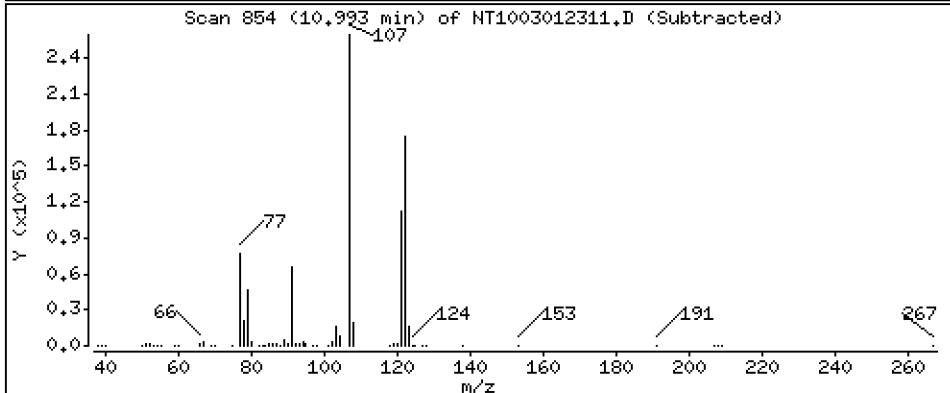
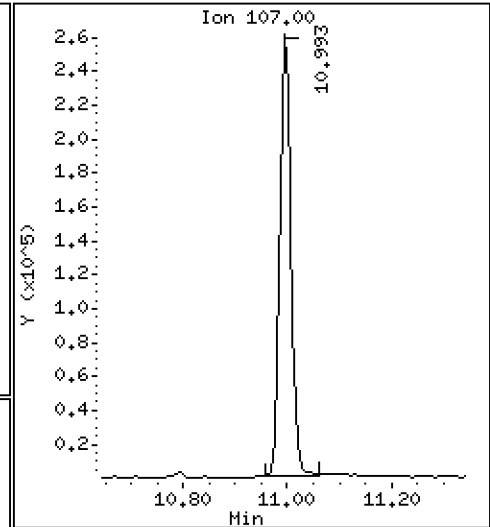
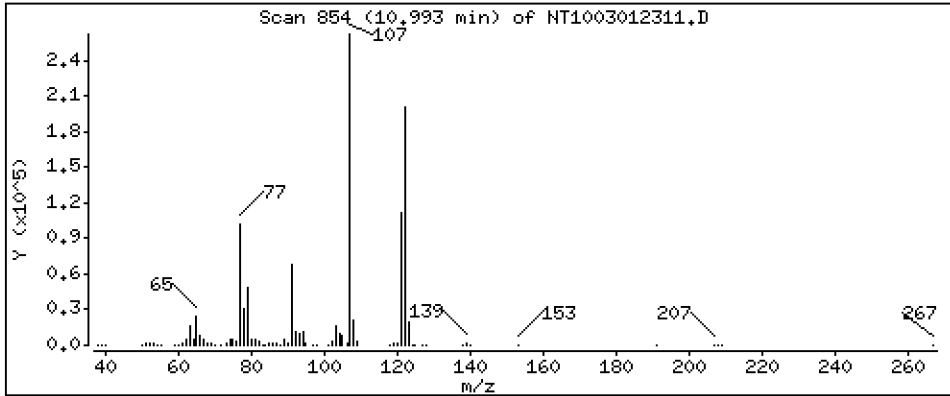
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 3,507 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

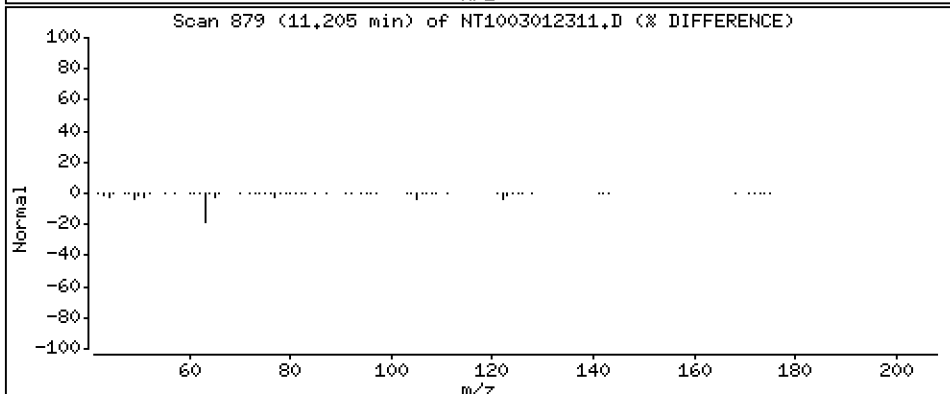
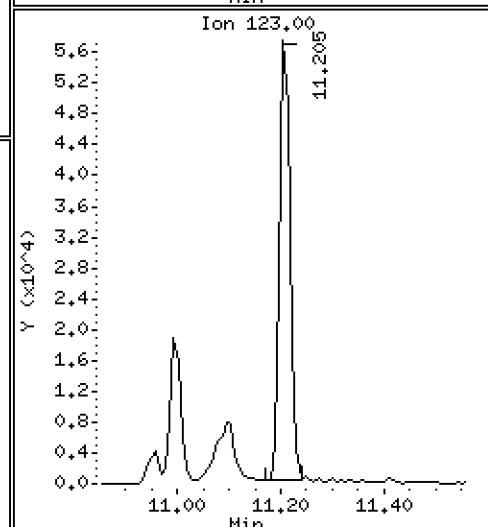
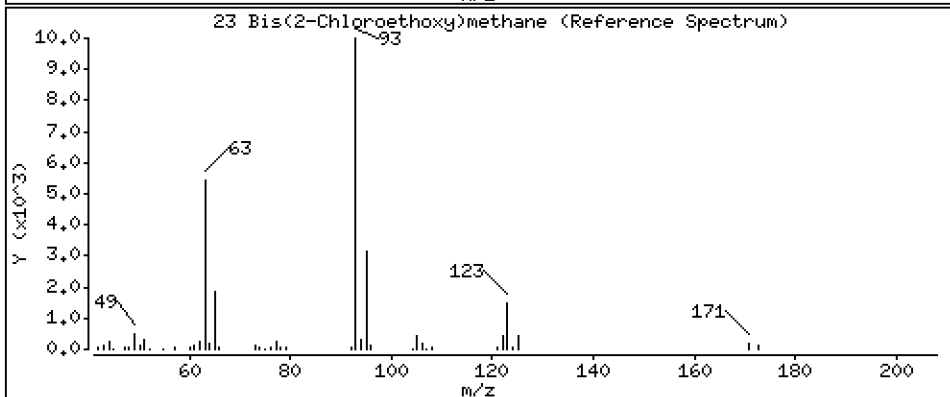
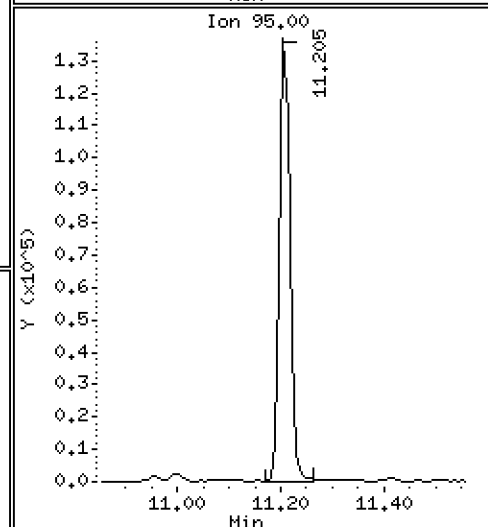
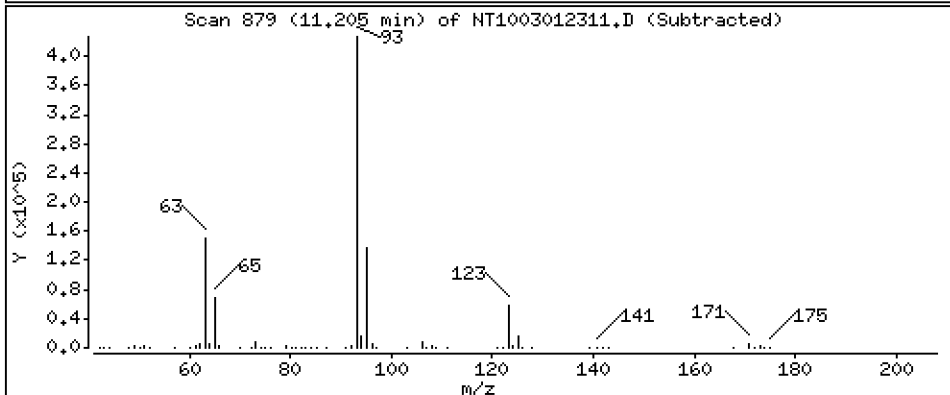
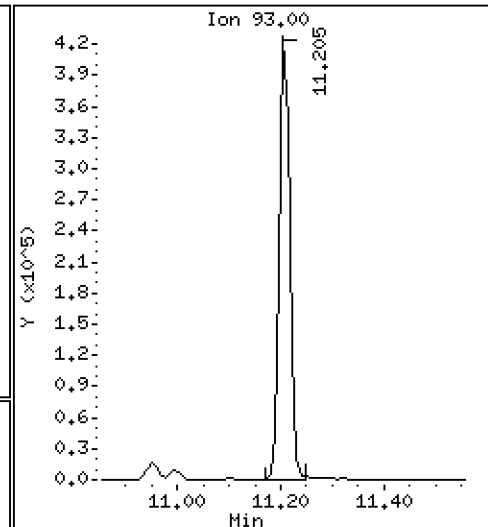
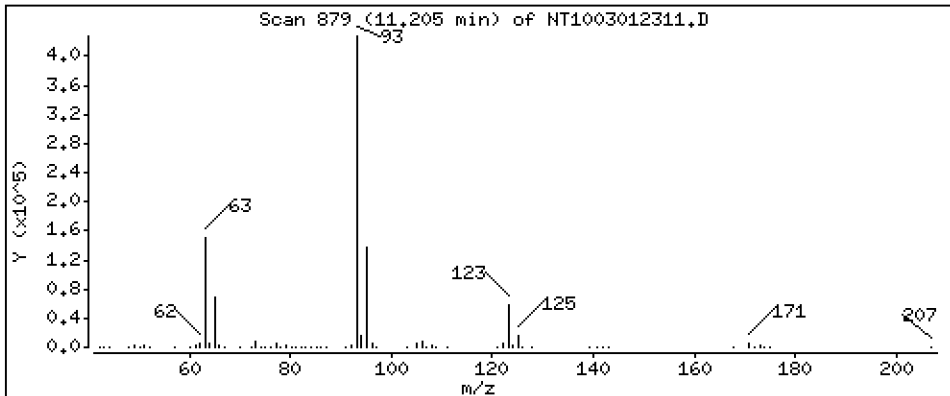
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,727 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

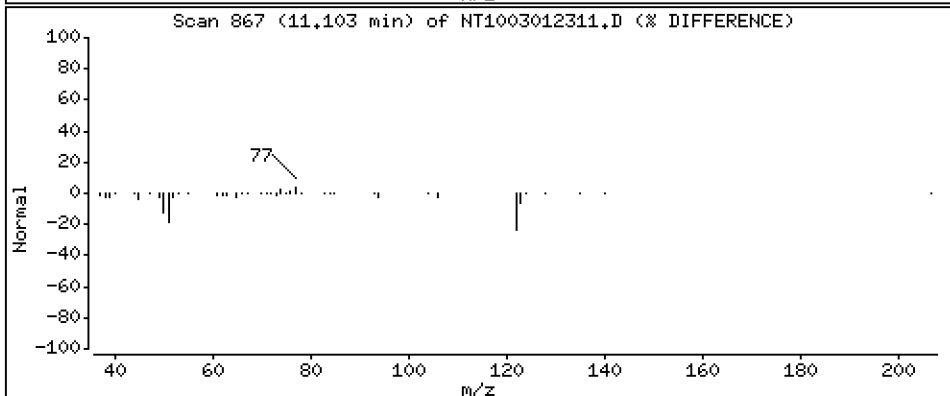
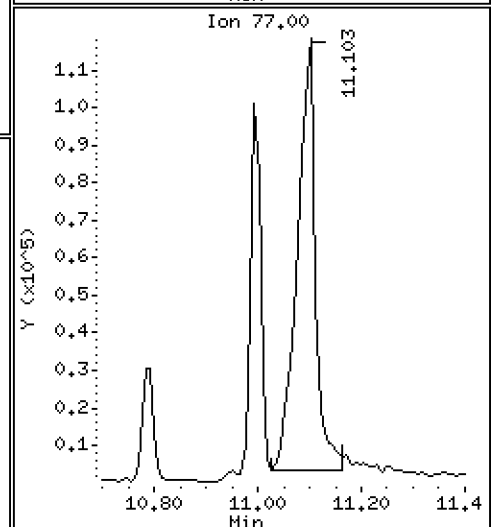
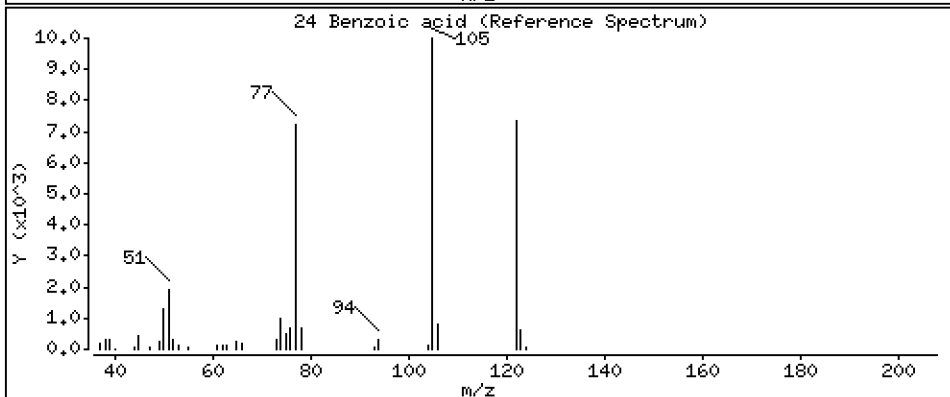
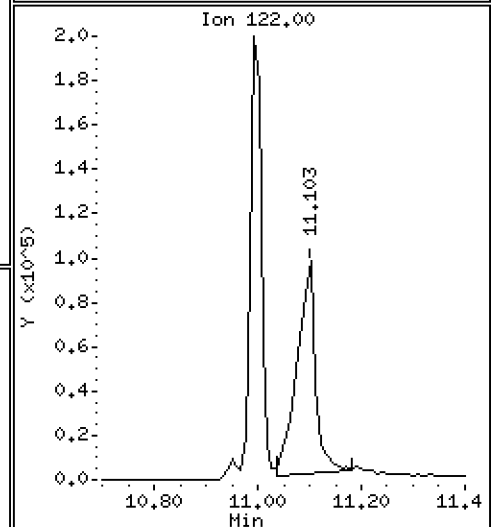
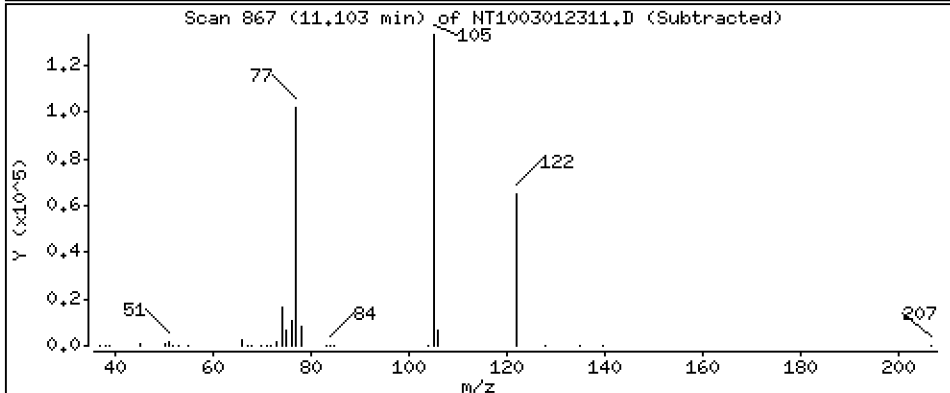
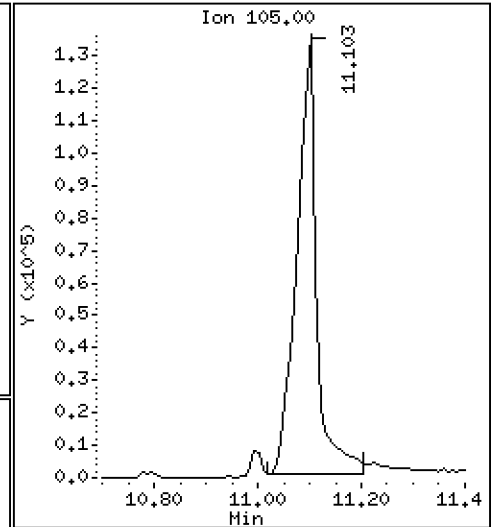
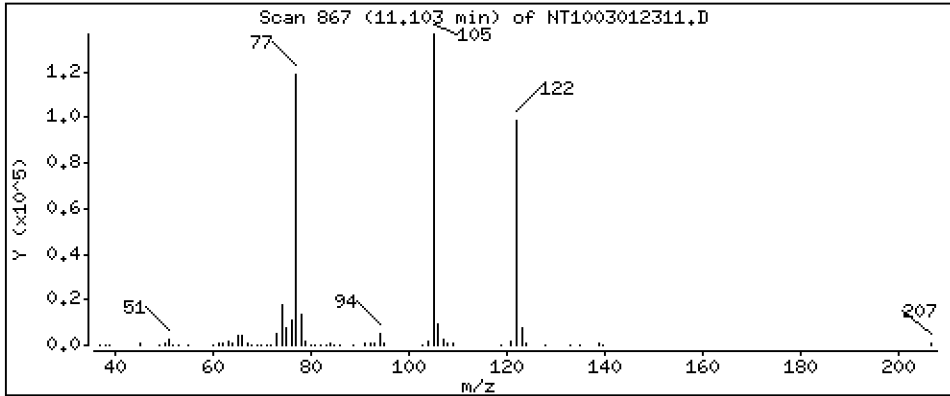
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 5,635 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

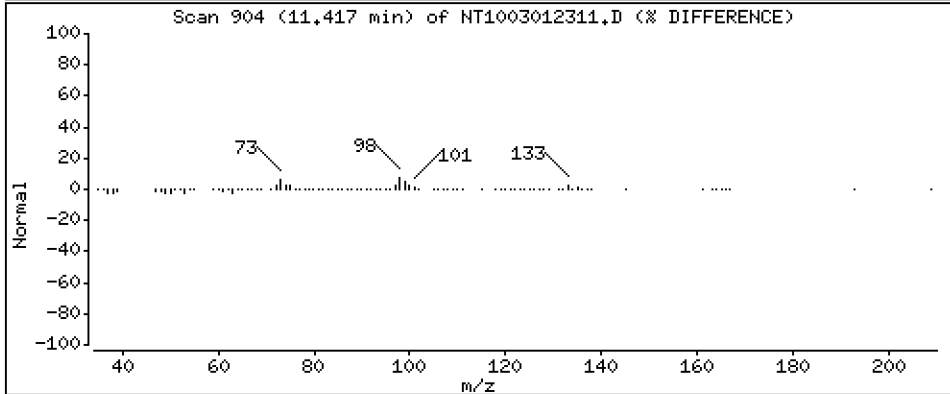
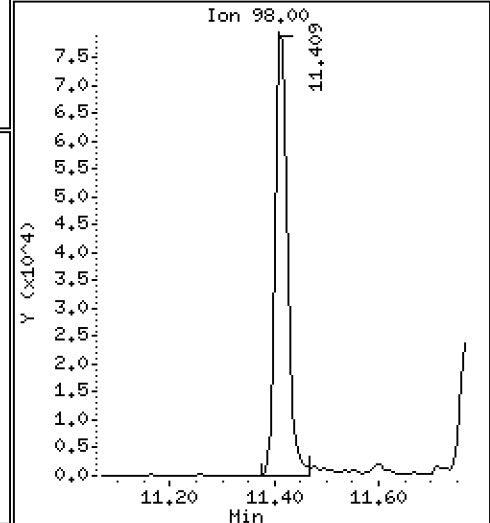
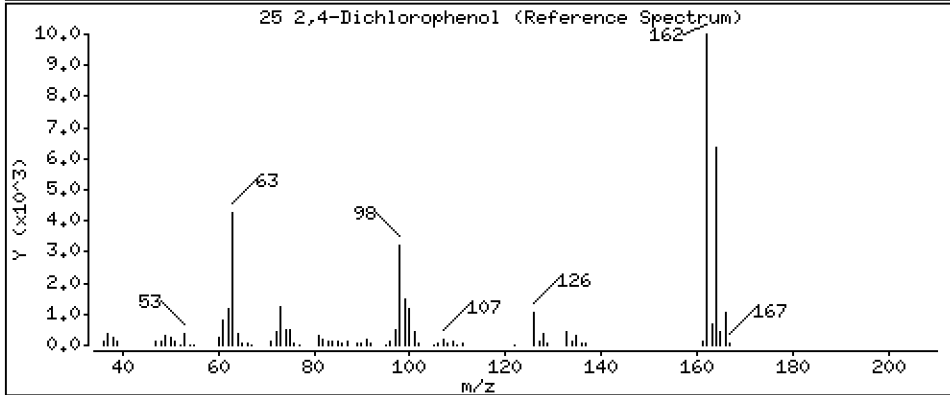
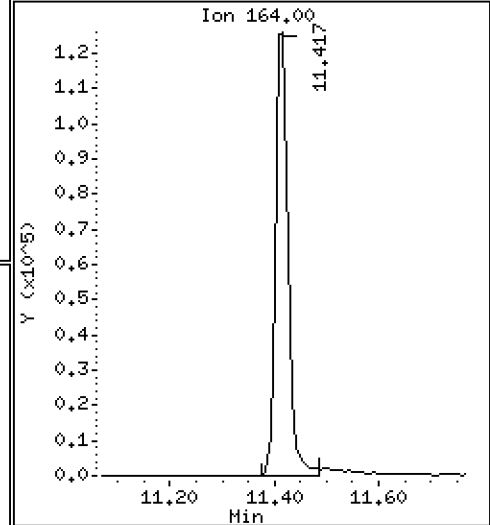
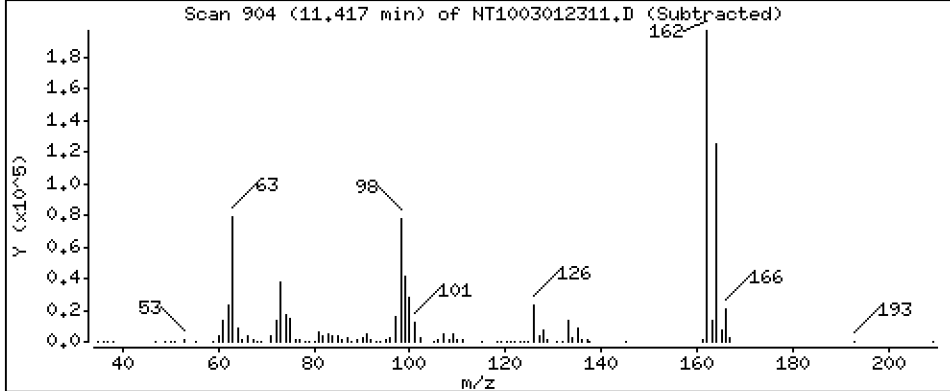
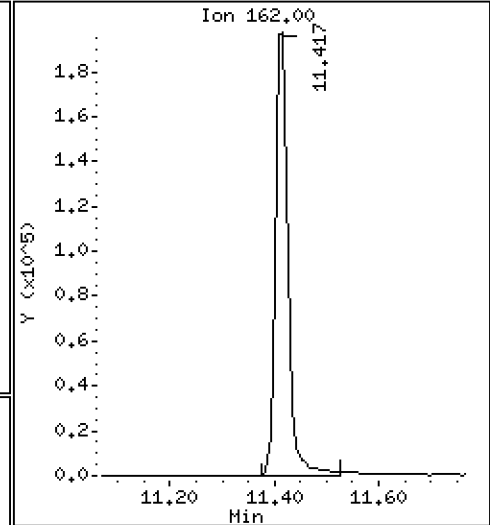
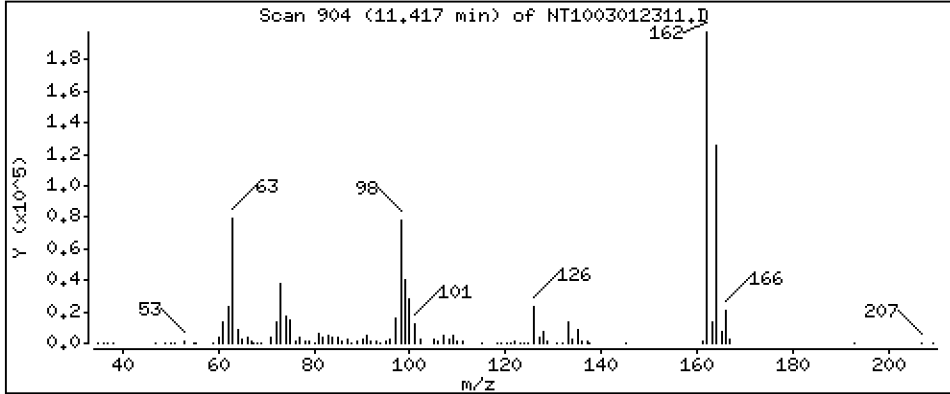
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 4,437 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

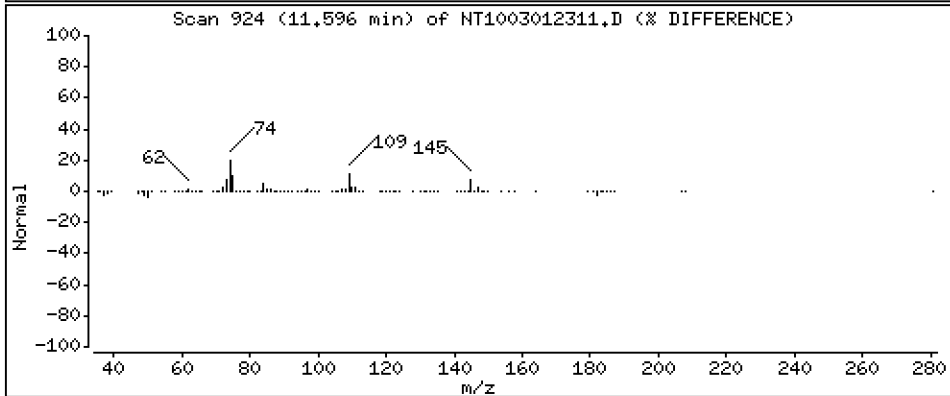
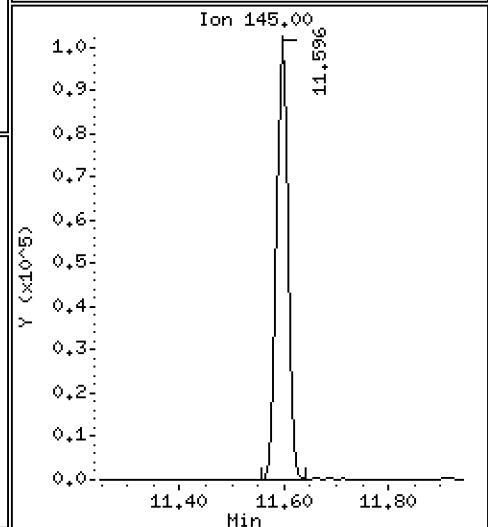
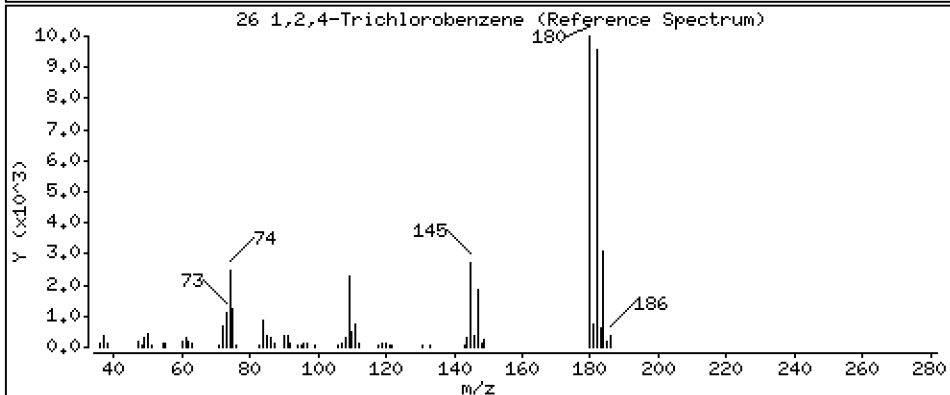
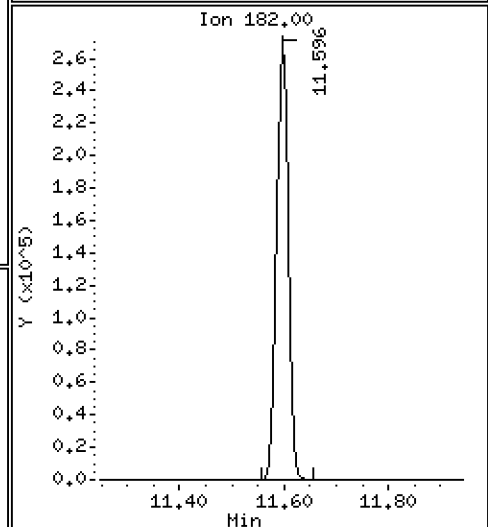
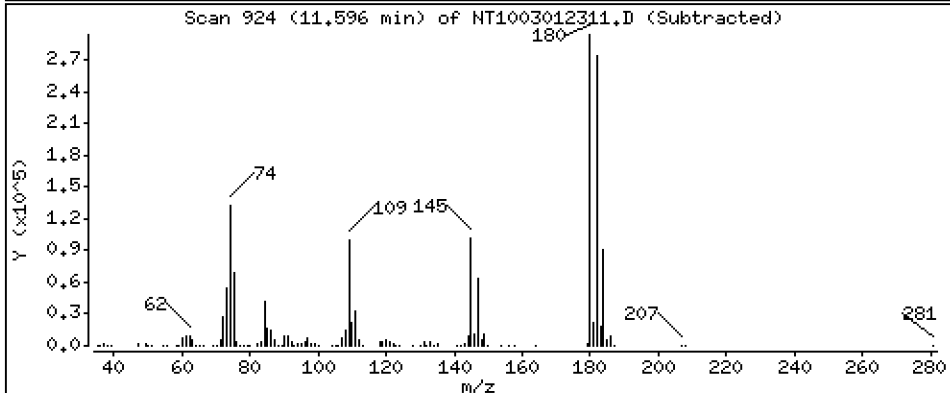
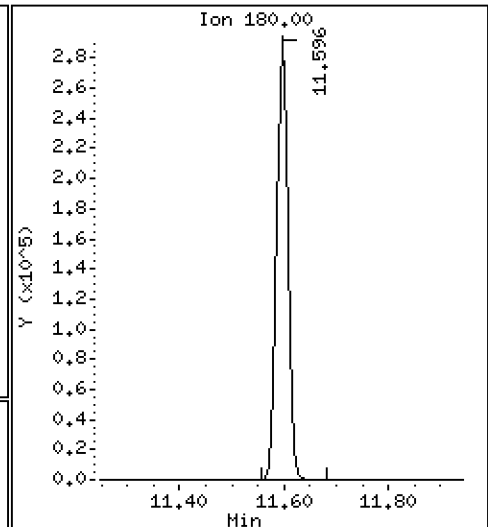
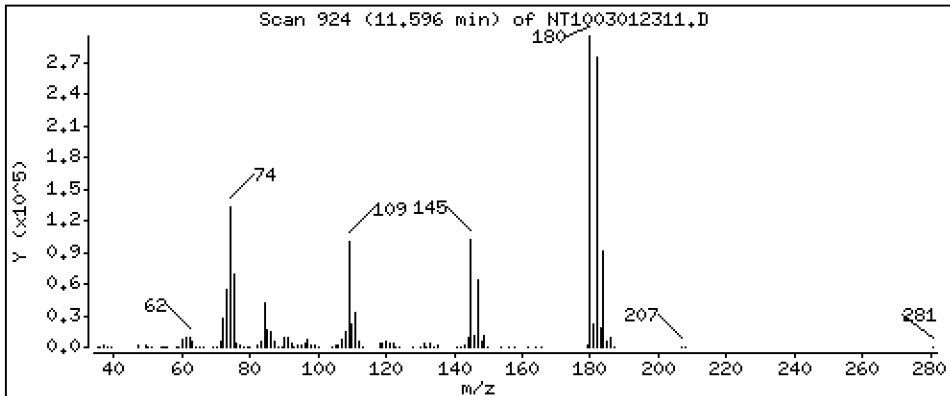
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,908 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

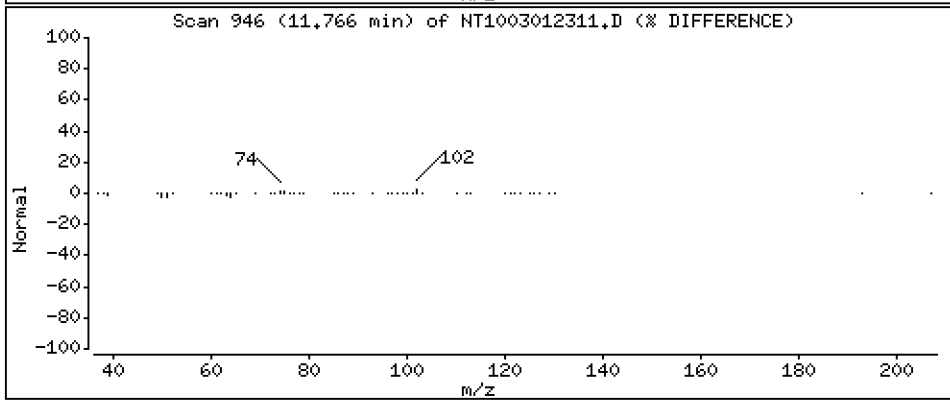
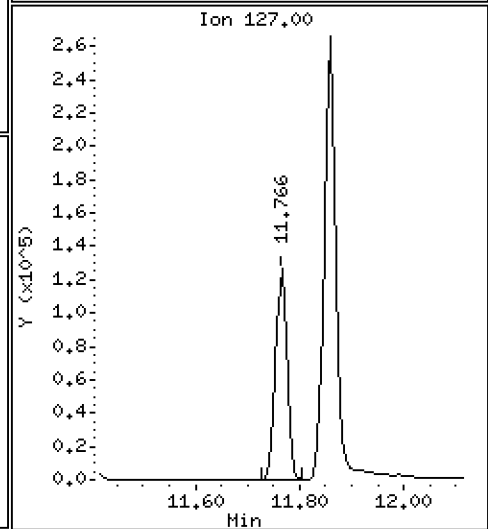
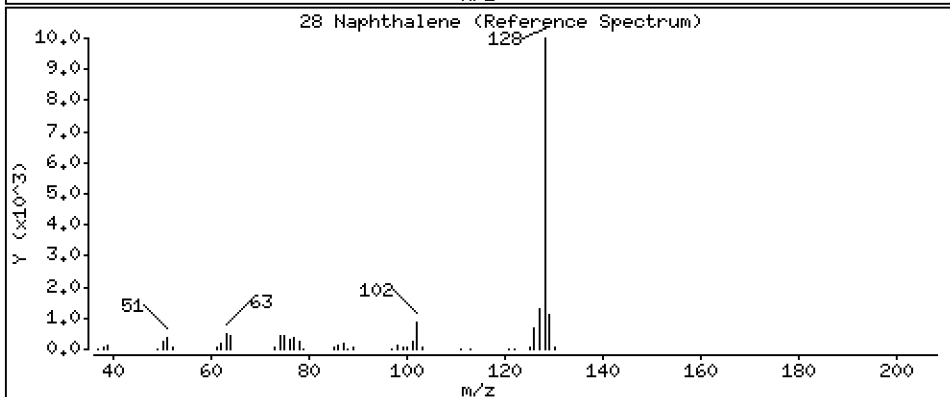
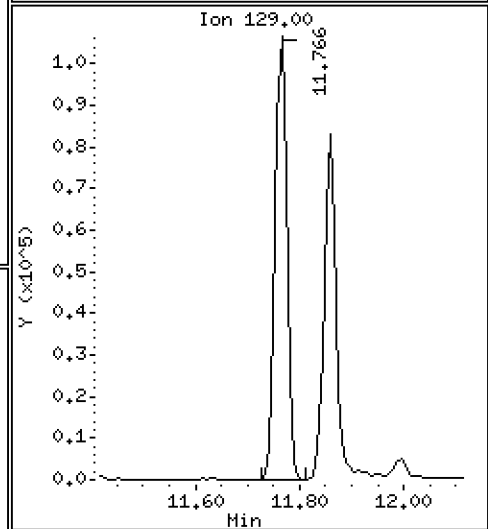
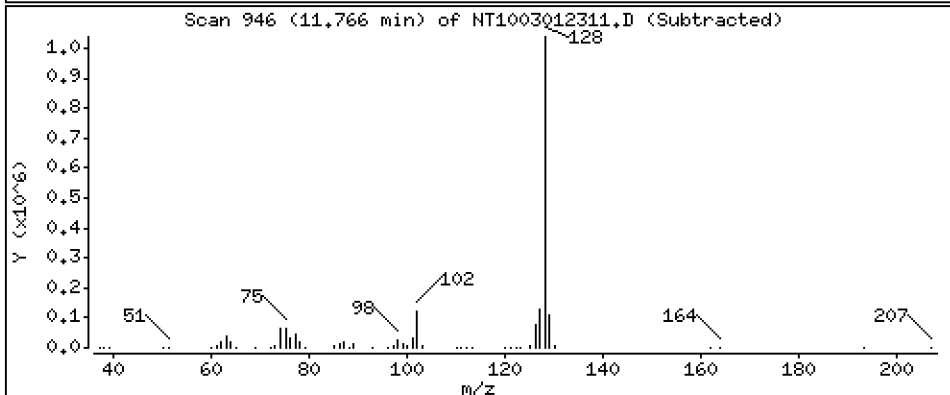
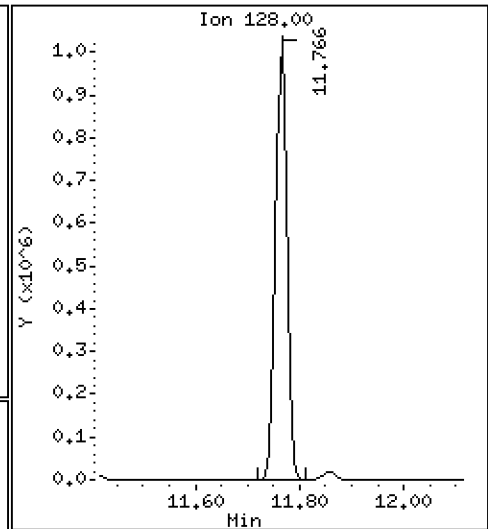
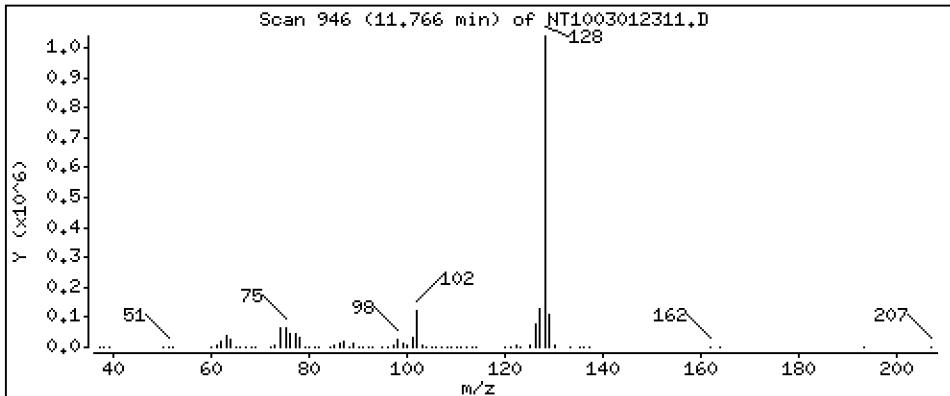
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 5.255 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

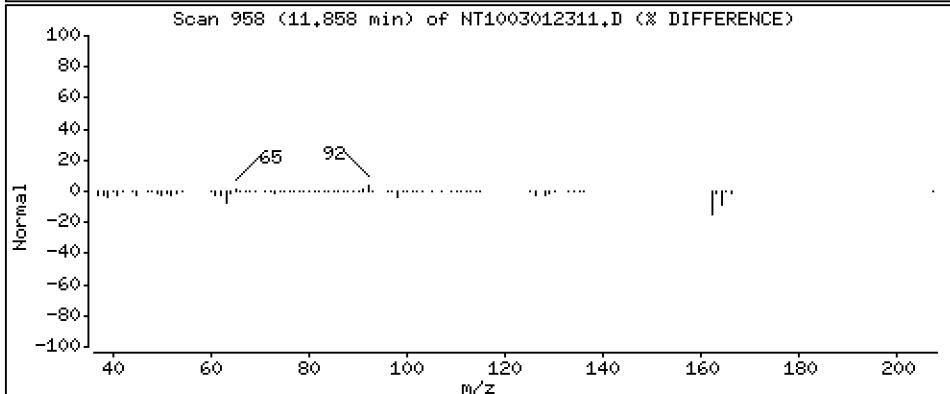
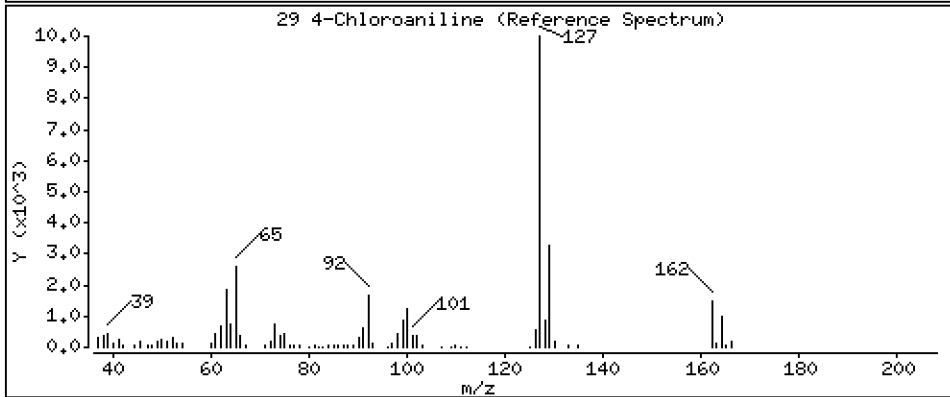
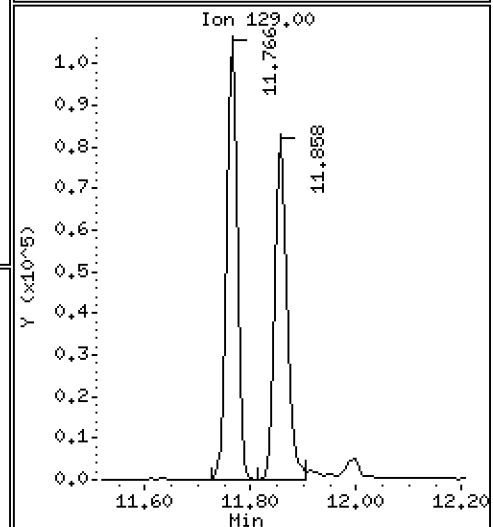
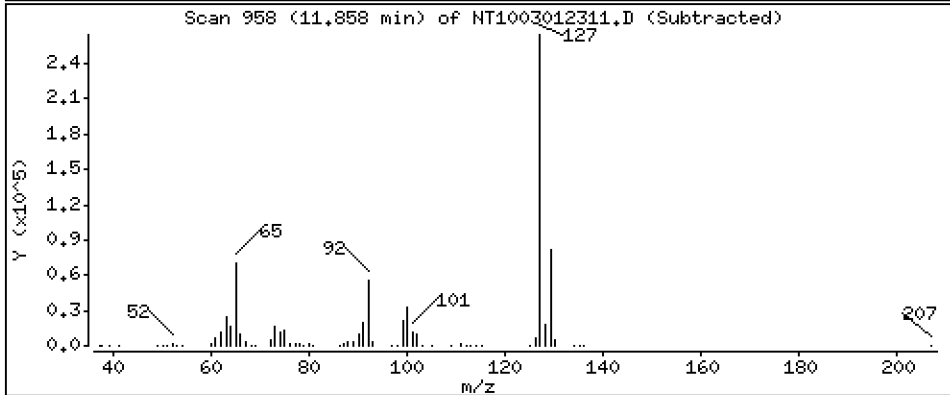
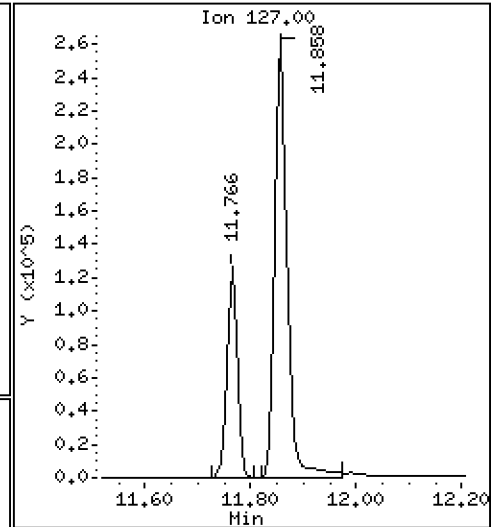
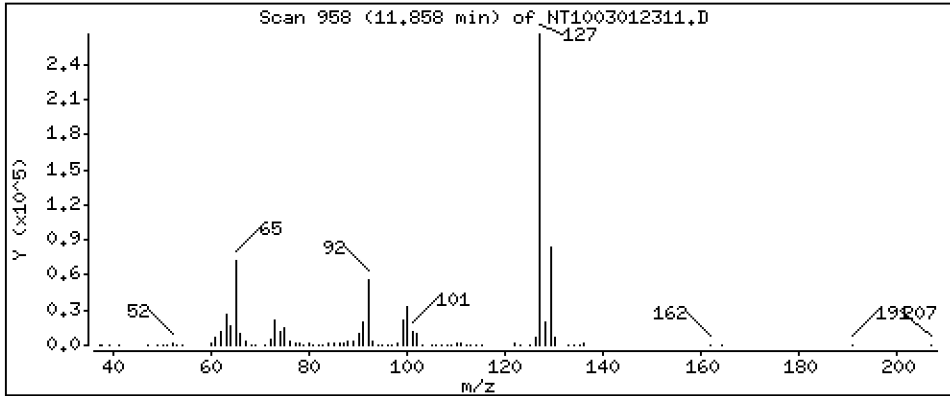
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 3,791 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

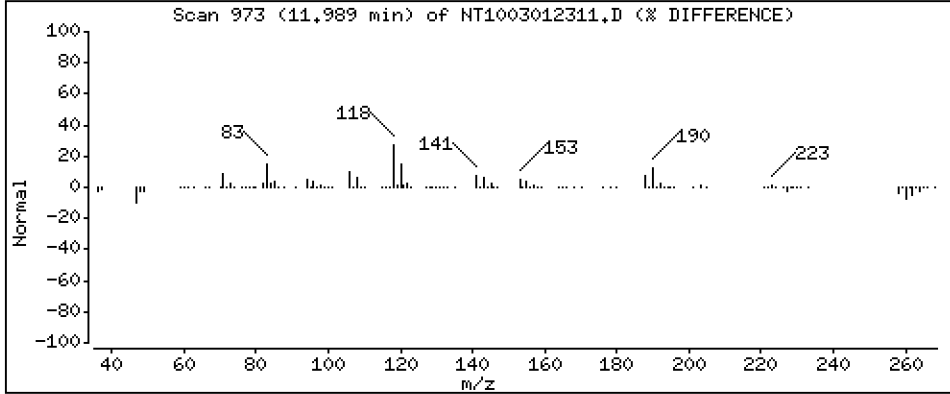
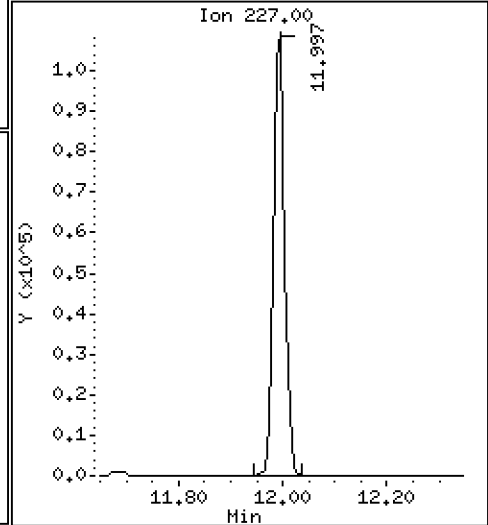
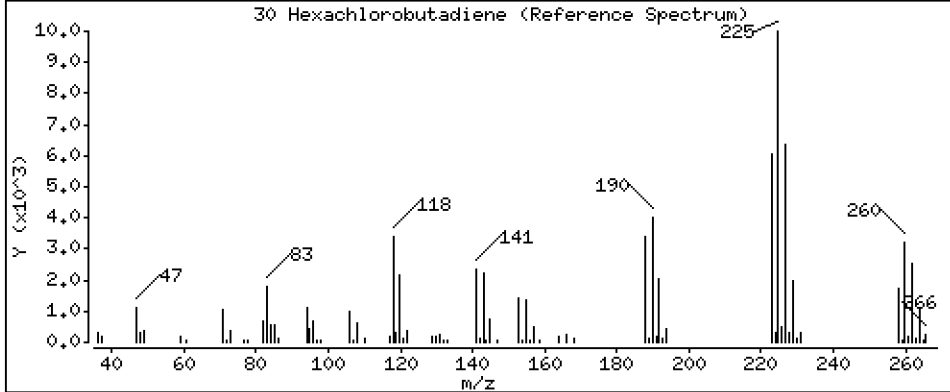
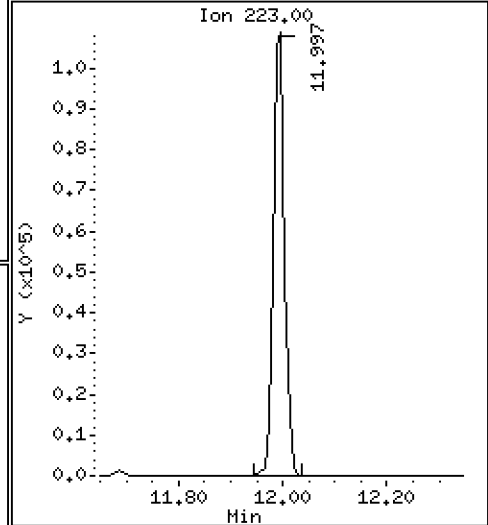
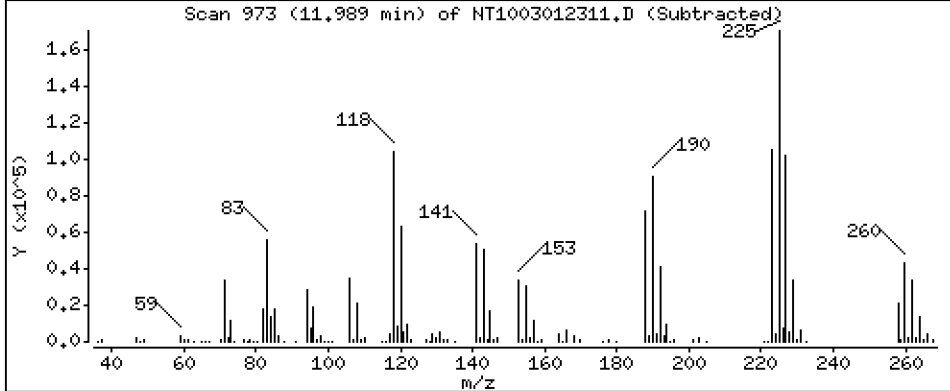
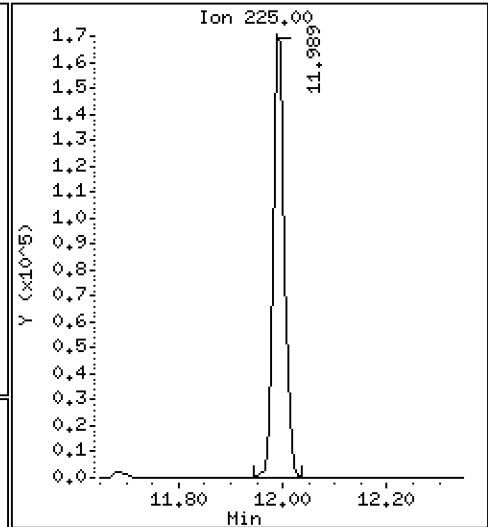
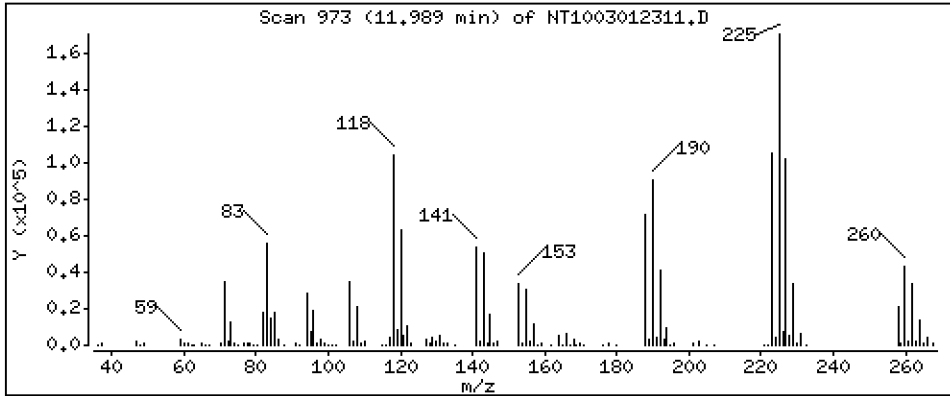
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 5,014 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

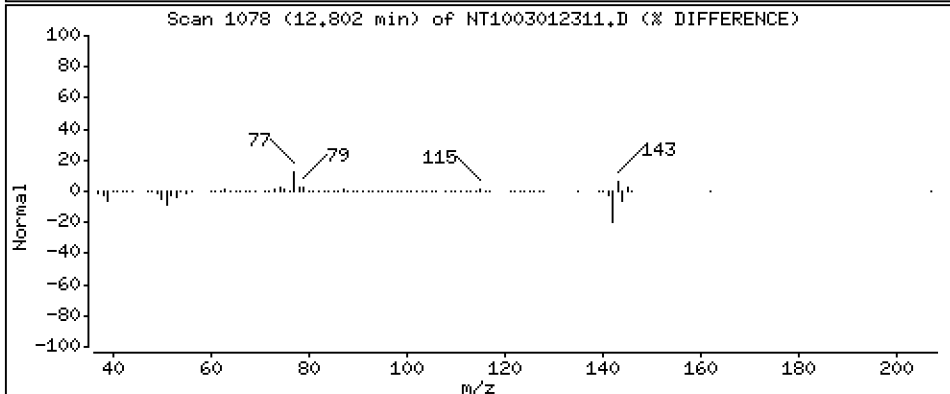
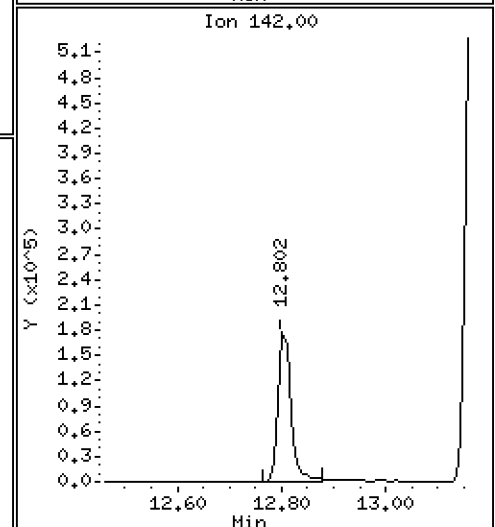
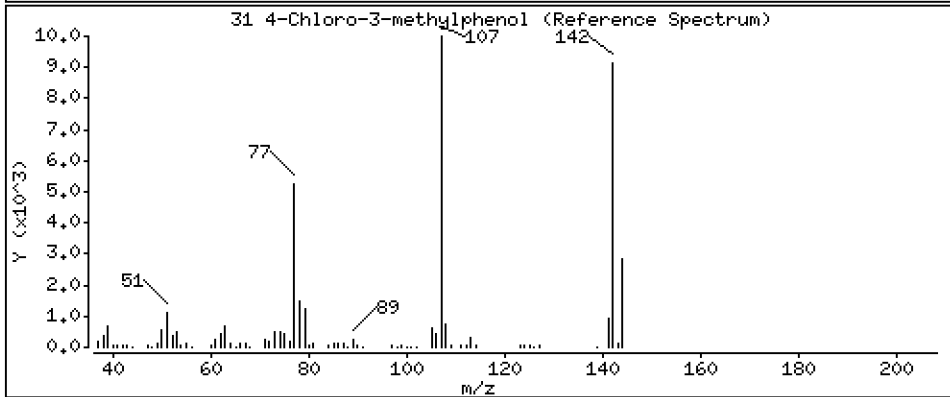
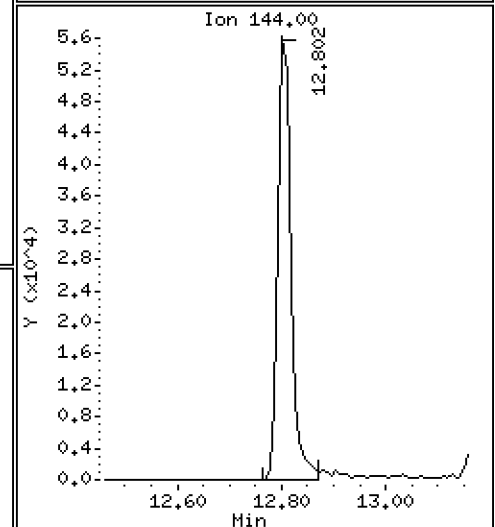
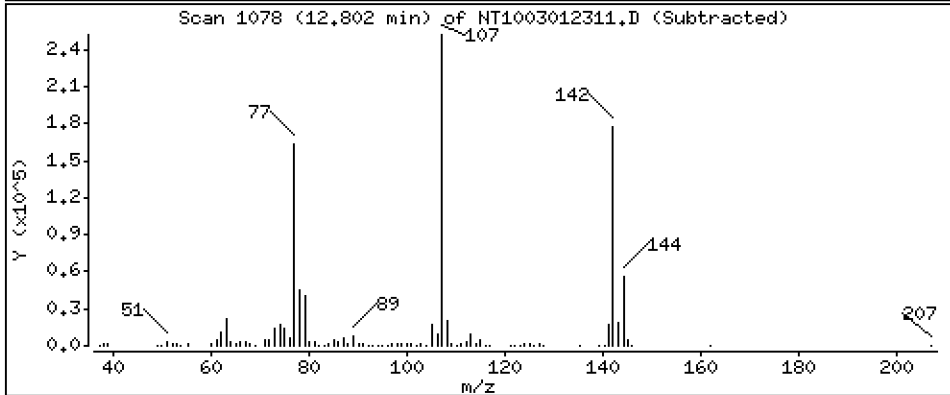
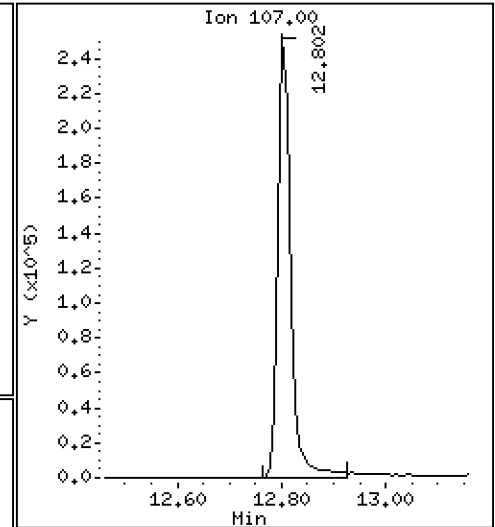
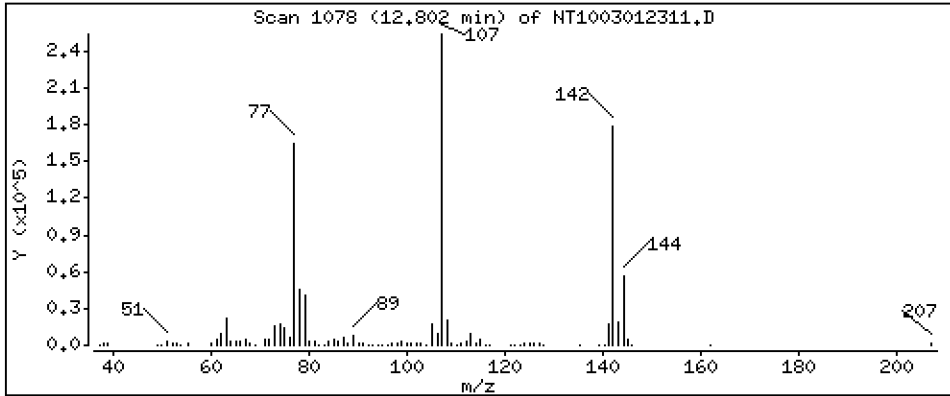
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 4,452 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

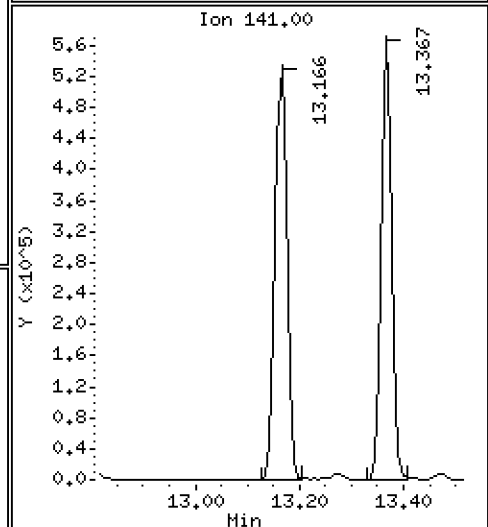
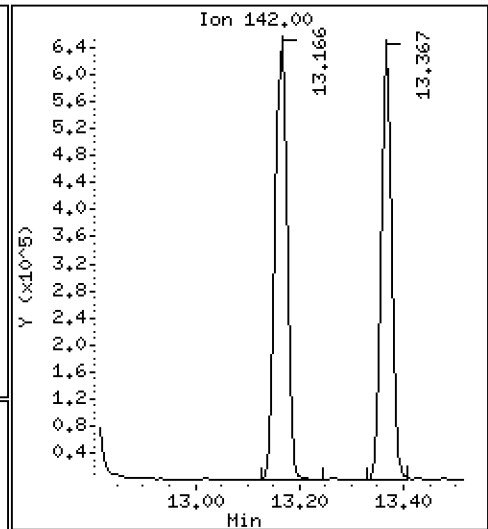
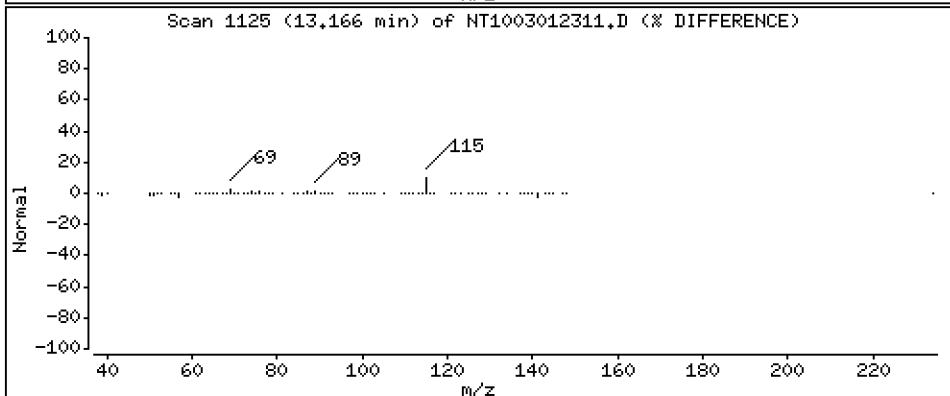
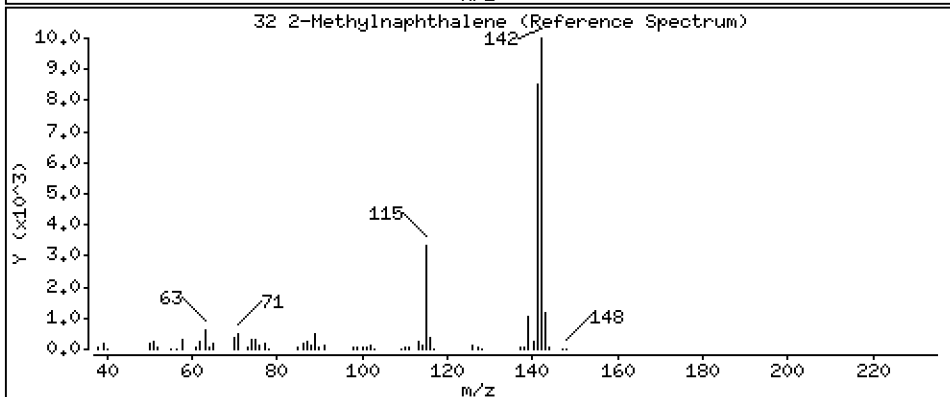
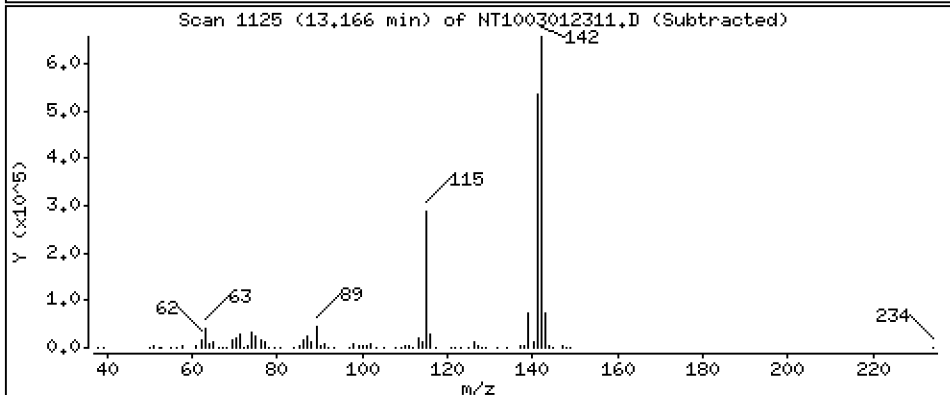
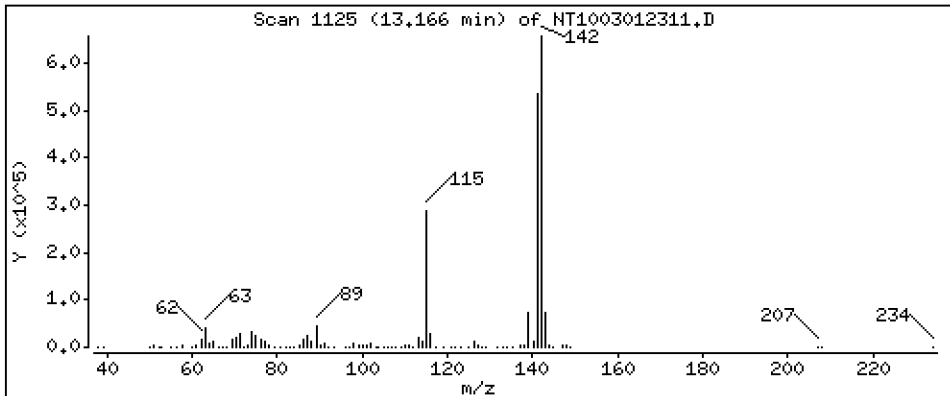
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,951 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

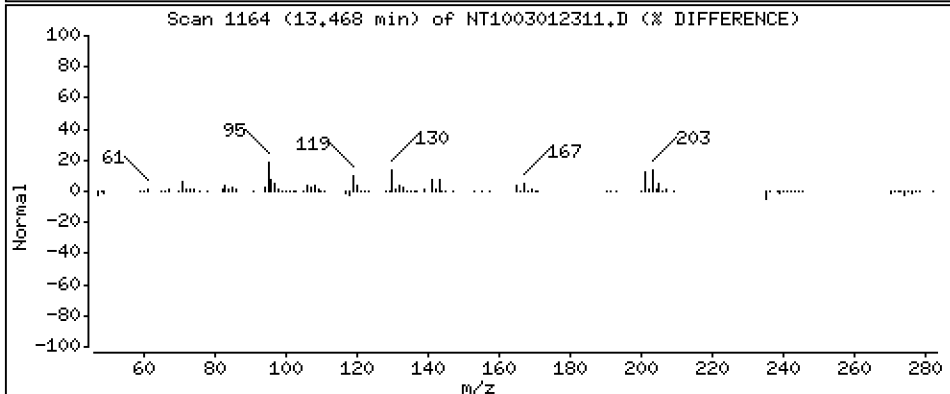
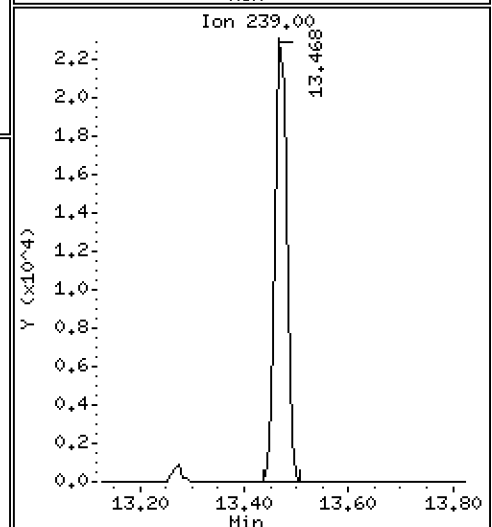
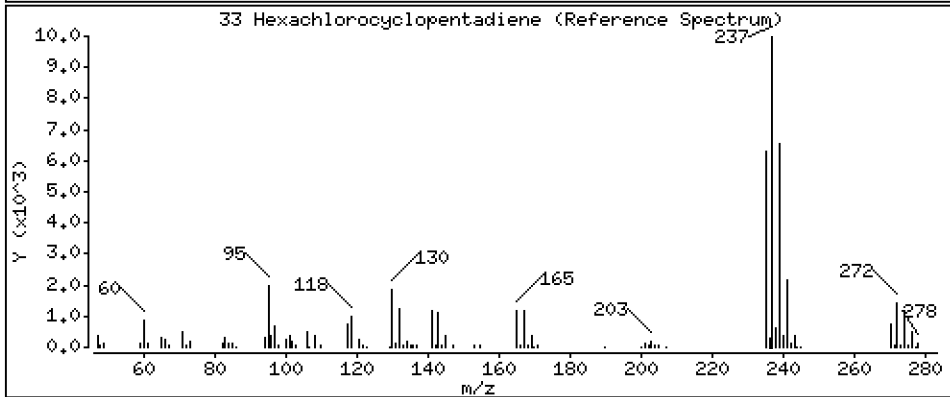
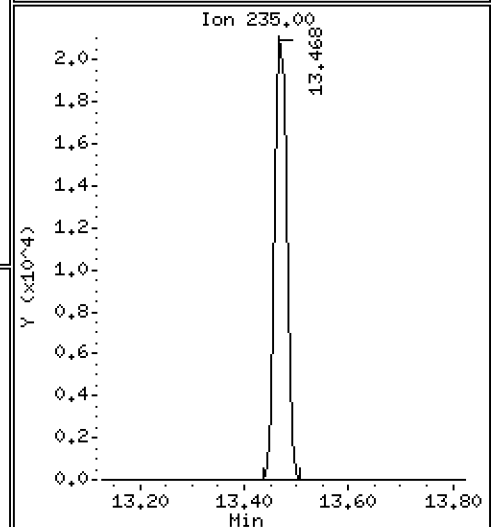
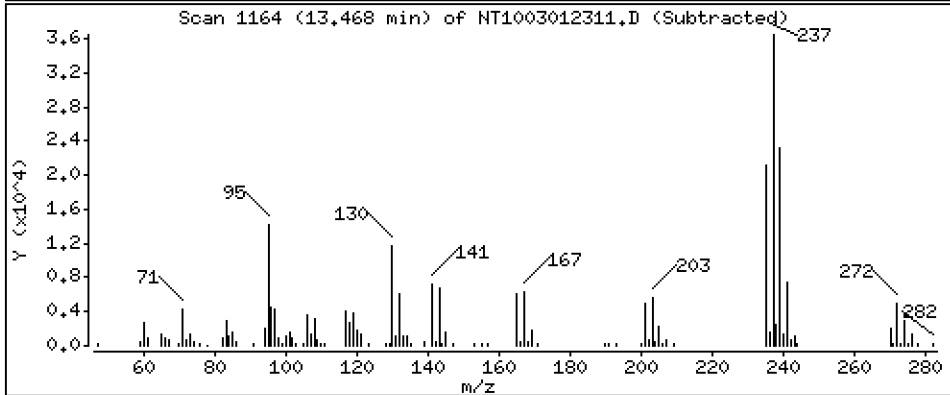
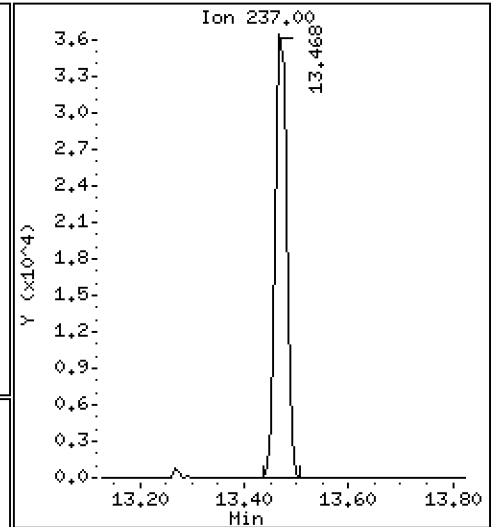
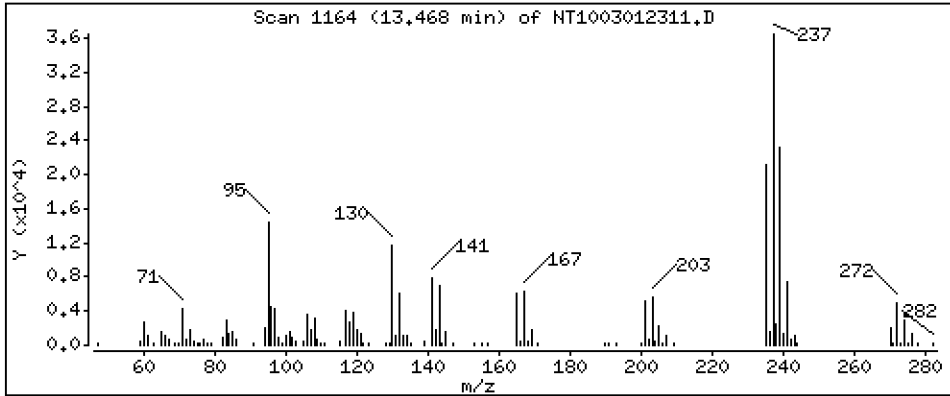
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 2,562 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

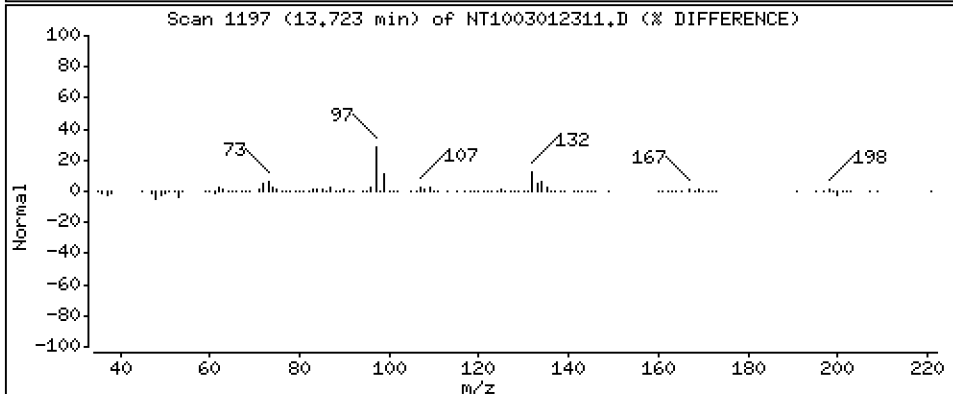
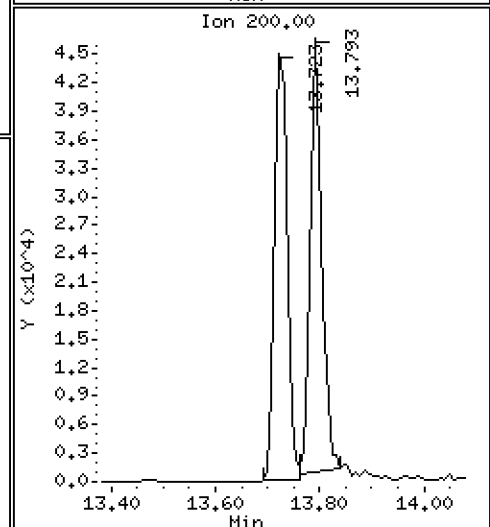
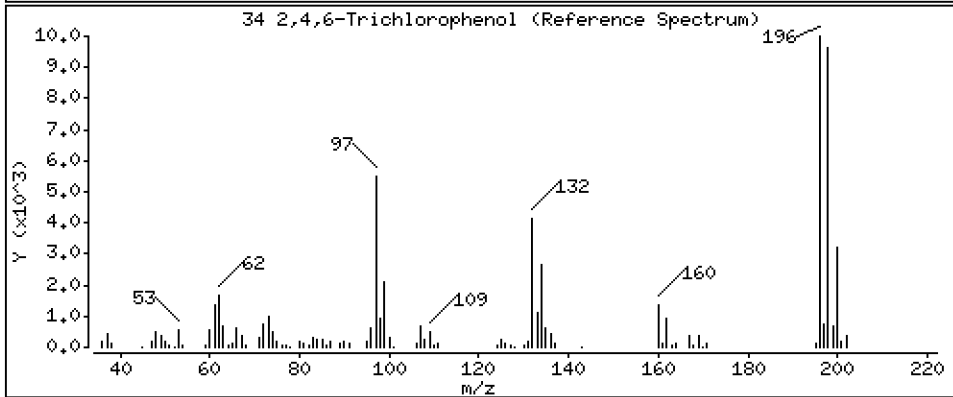
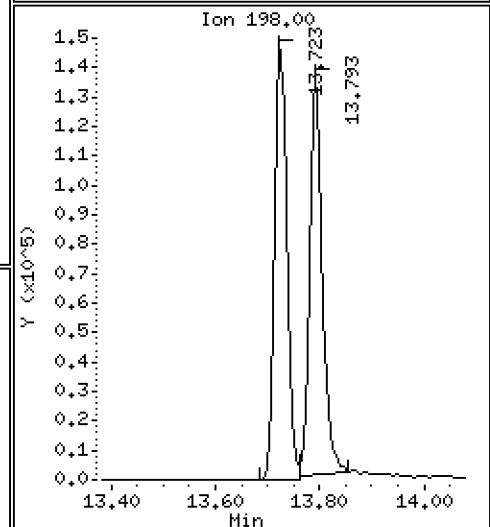
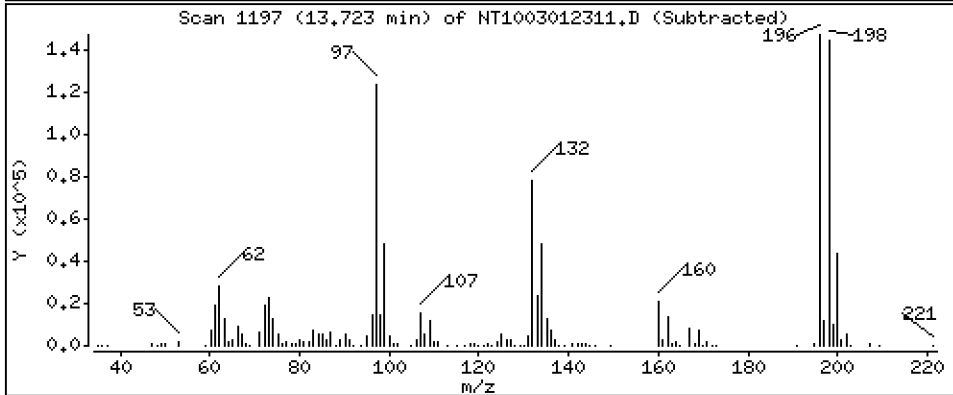
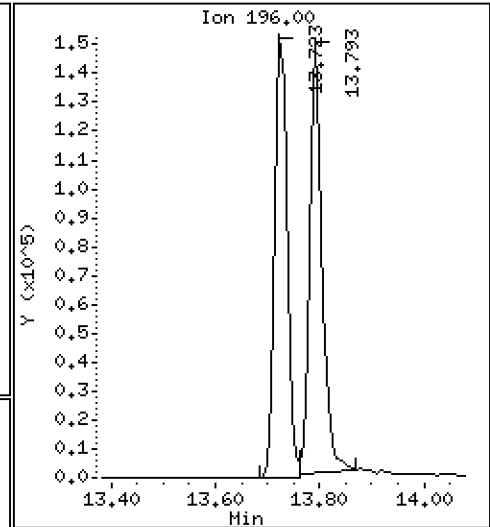
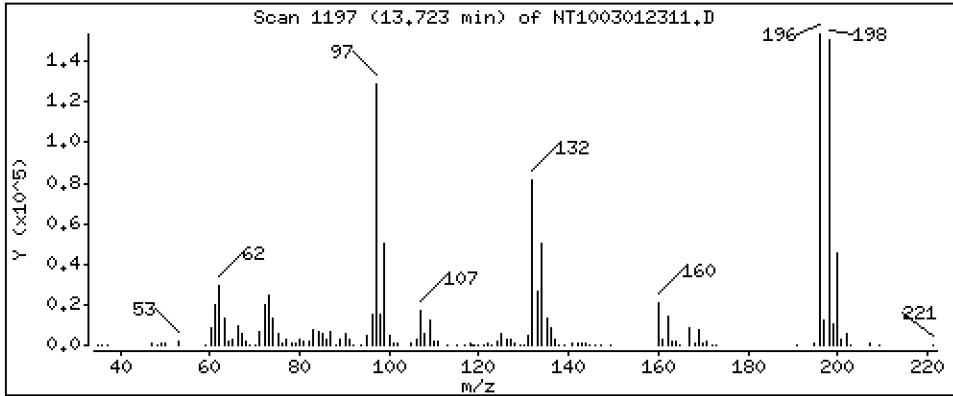
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

34 2,4,6-Trichlorophenol

Concentration: 4.120 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

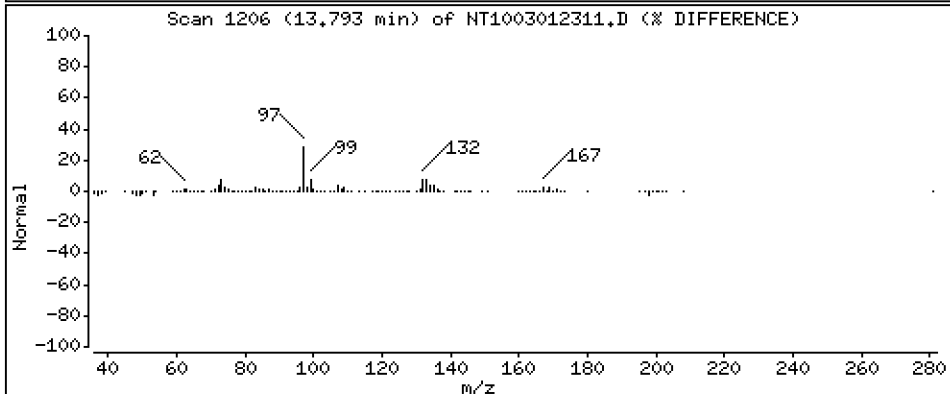
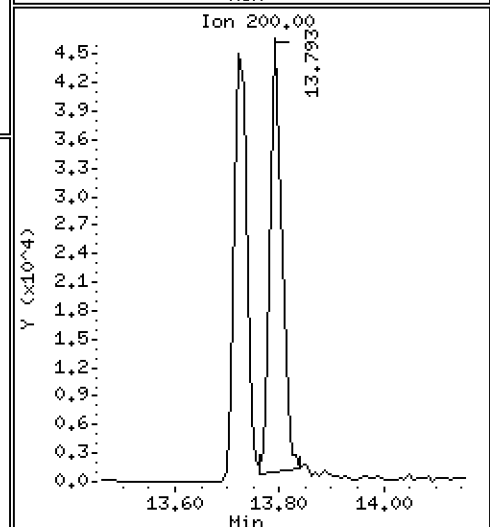
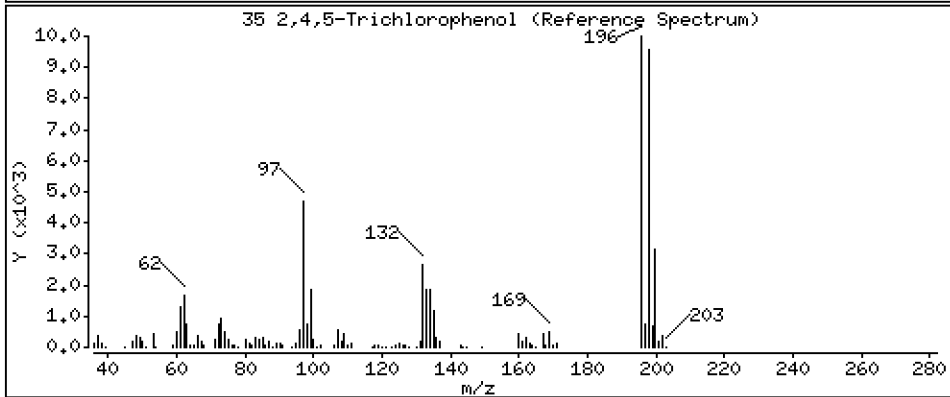
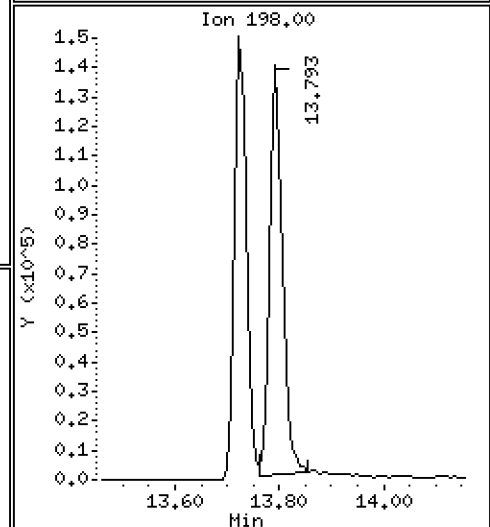
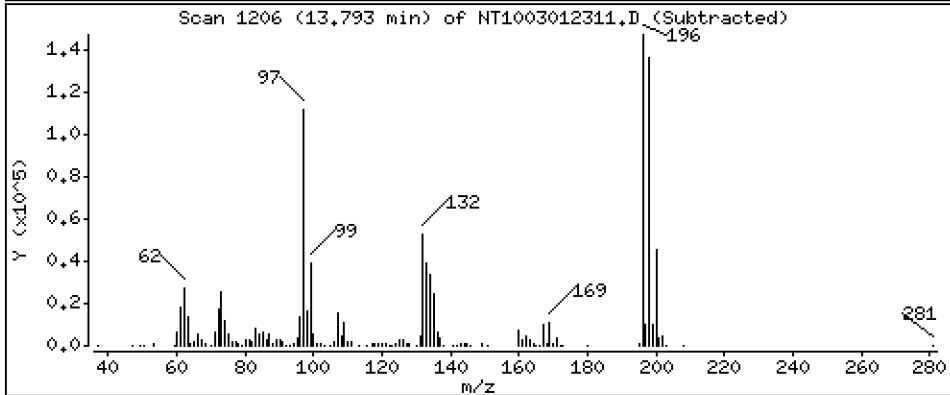
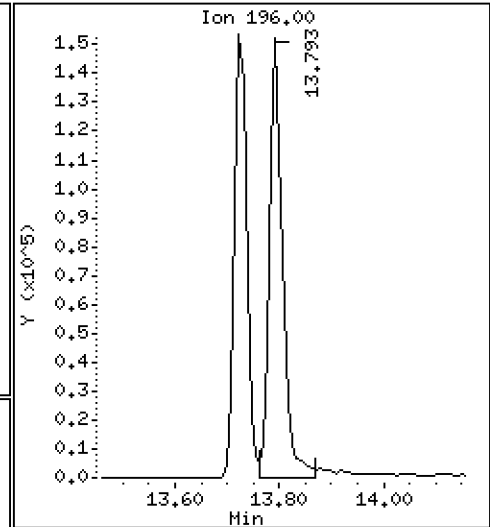
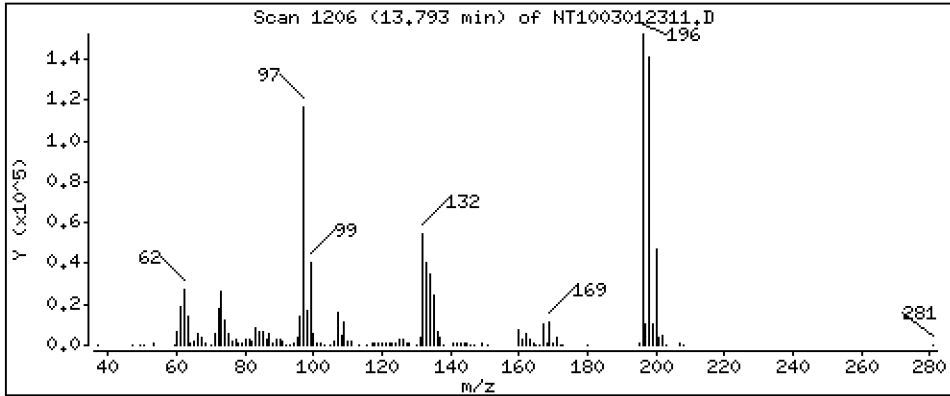
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

35 2,4,5-Trichlorophenol

Concentration: 4.149 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

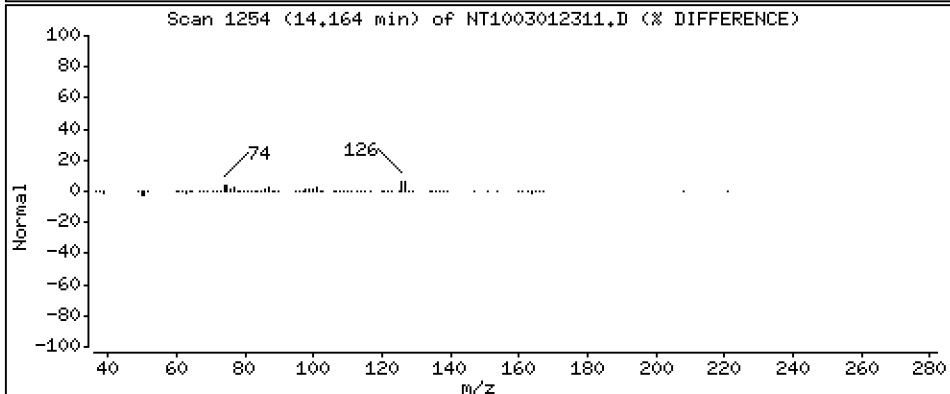
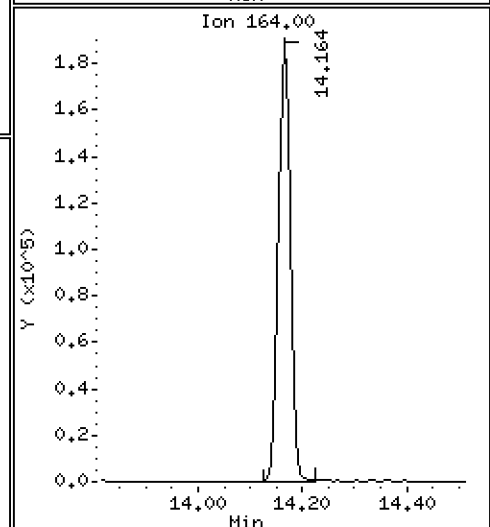
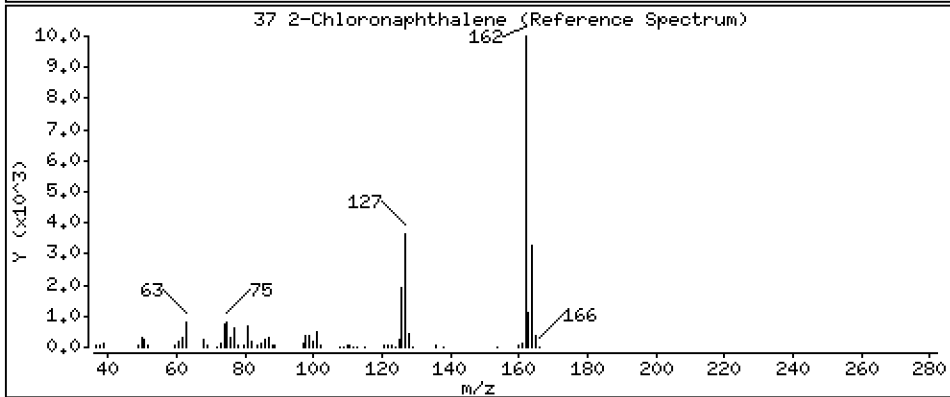
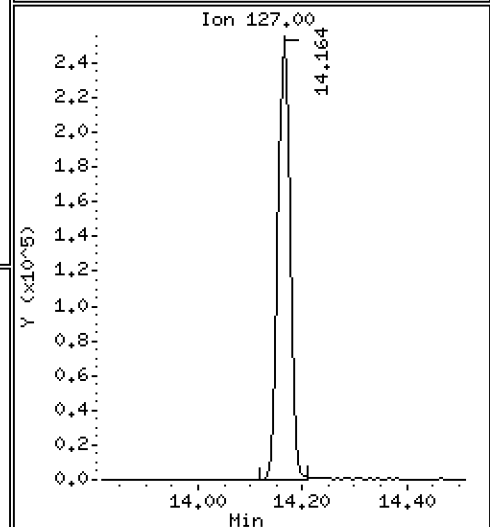
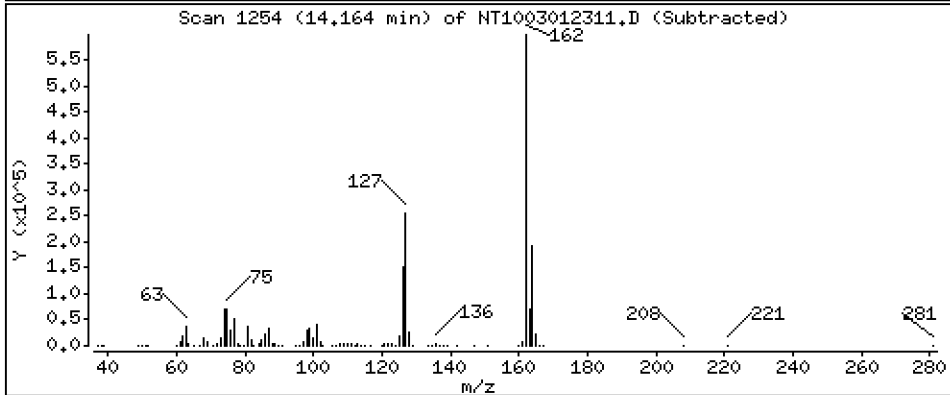
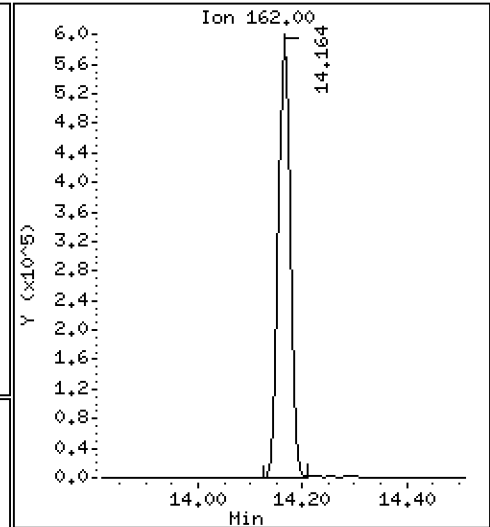
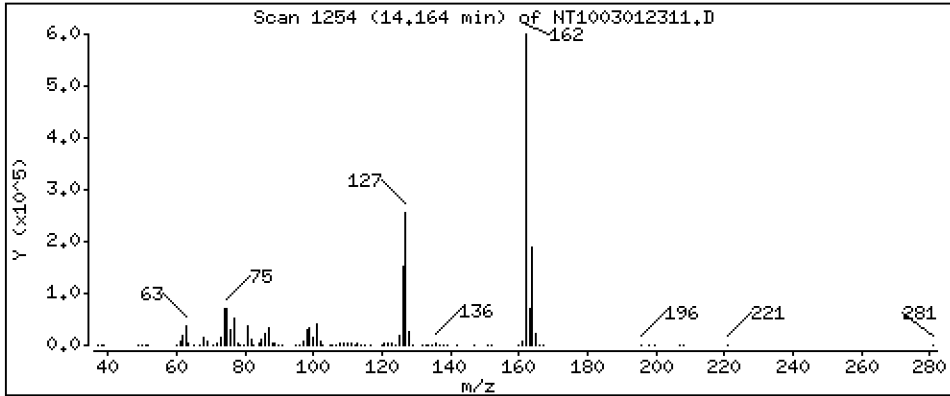
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,264 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

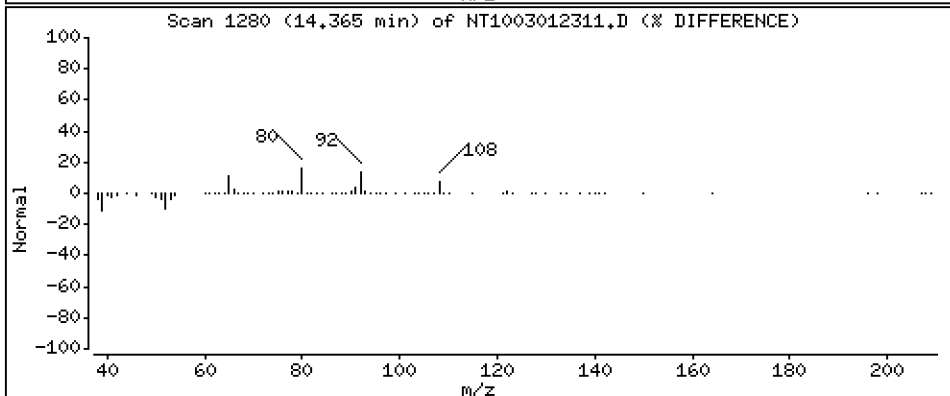
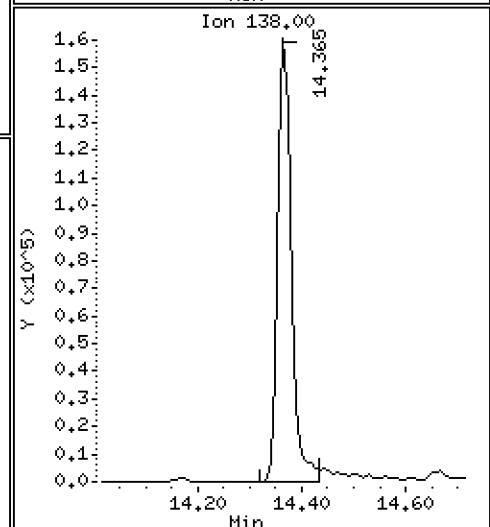
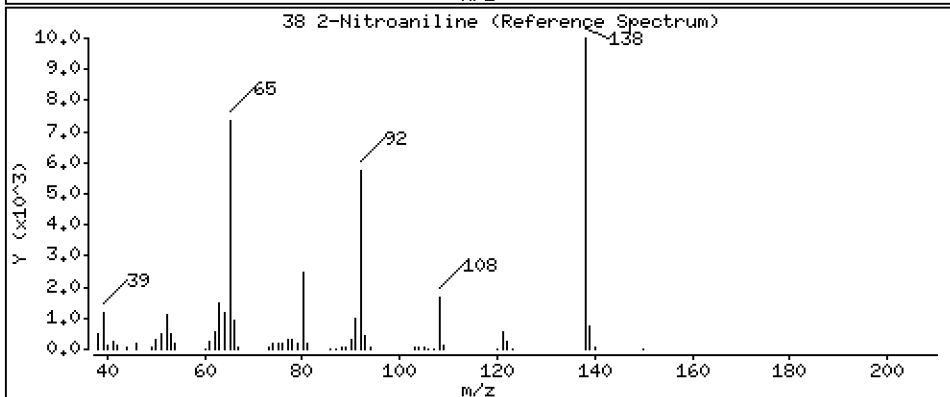
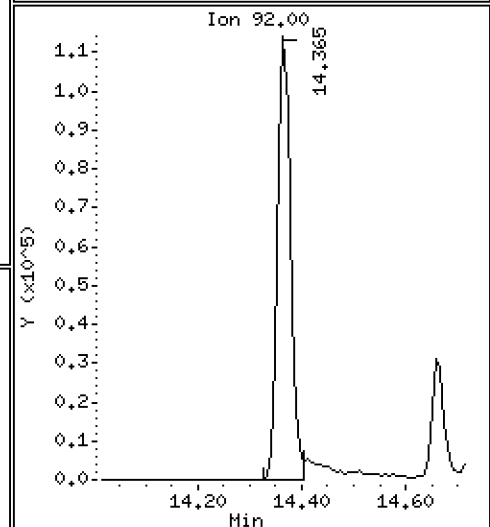
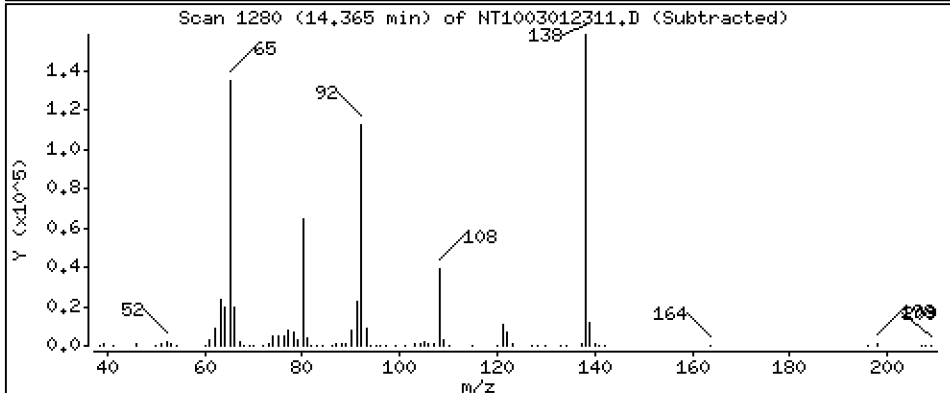
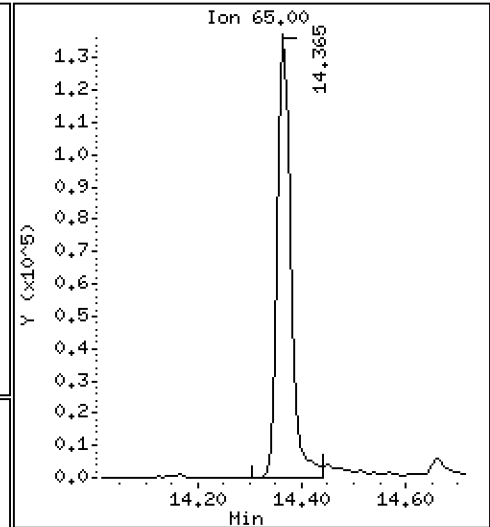
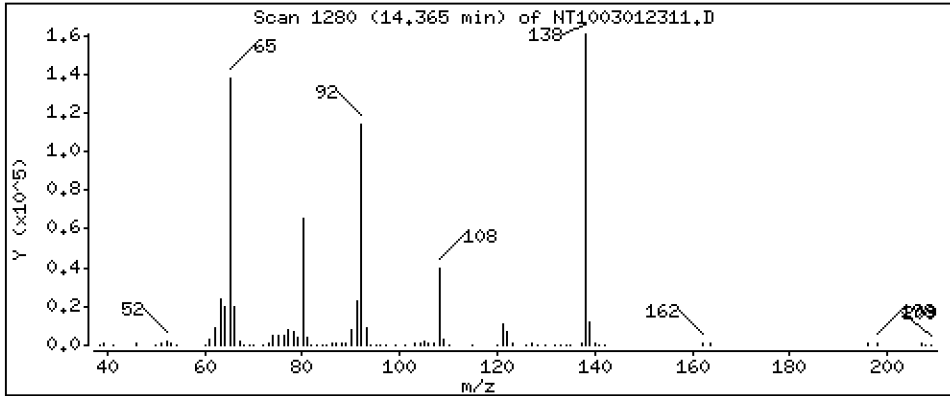
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 5,027 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

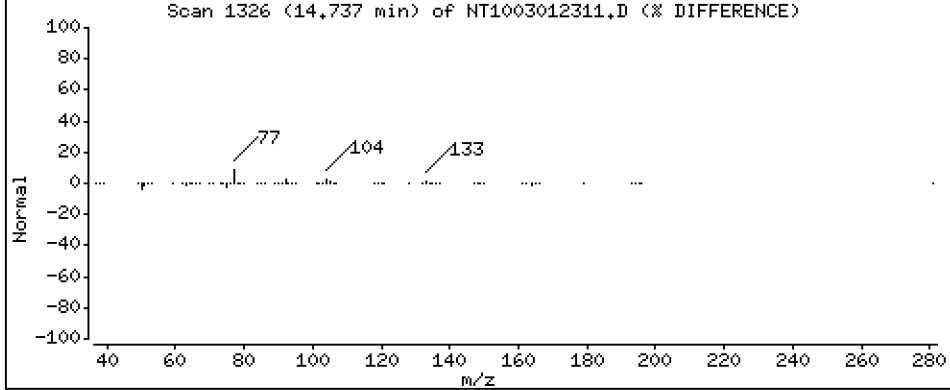
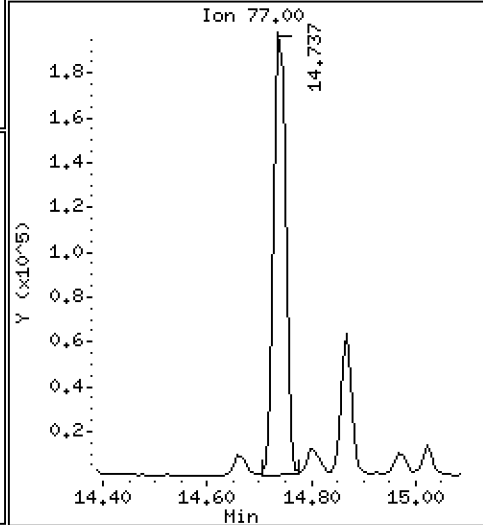
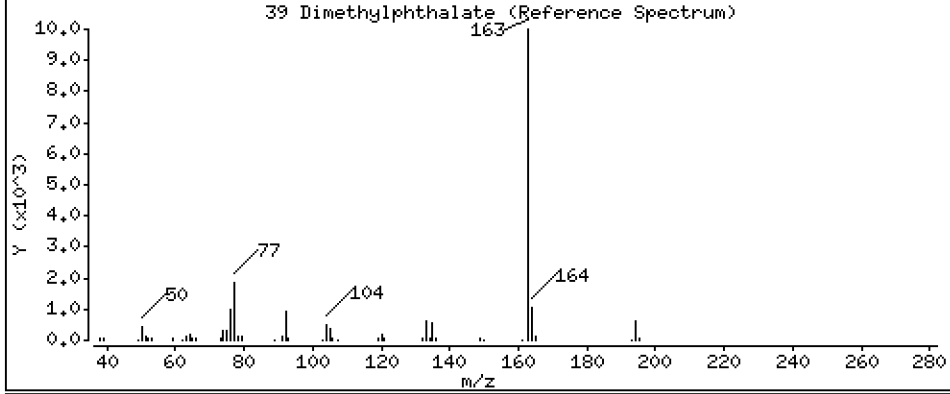
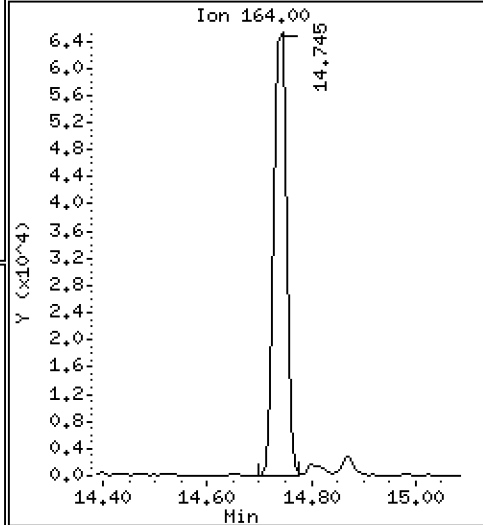
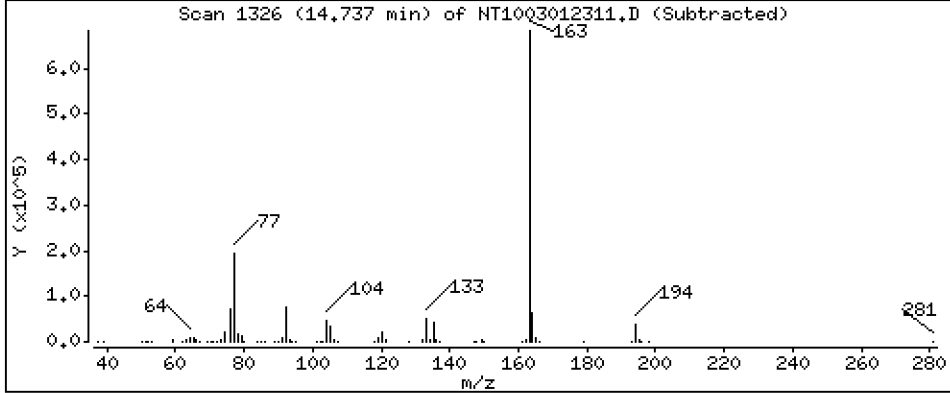
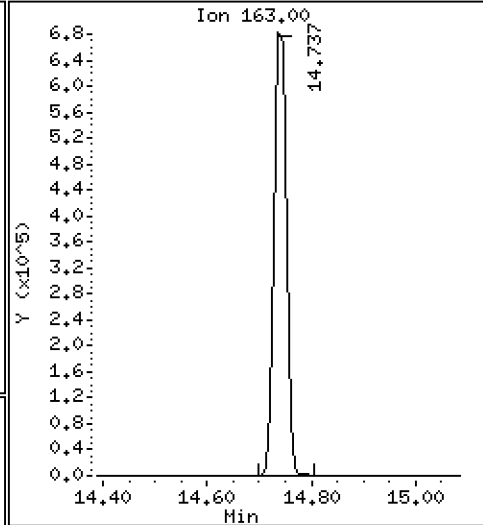
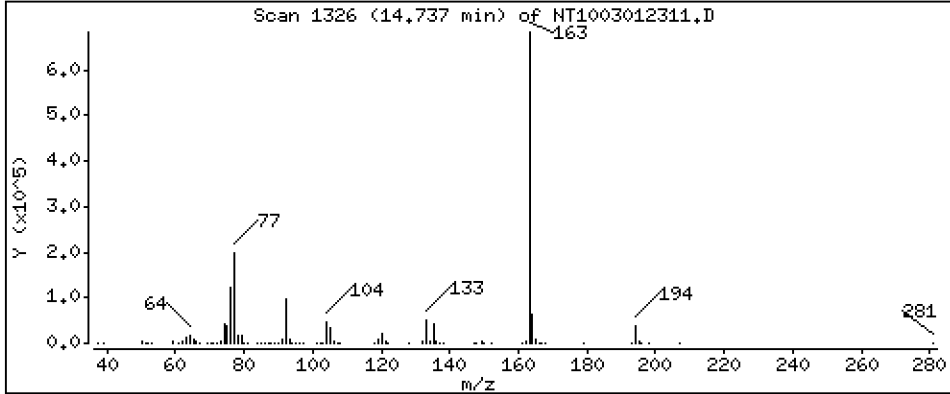
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,384 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

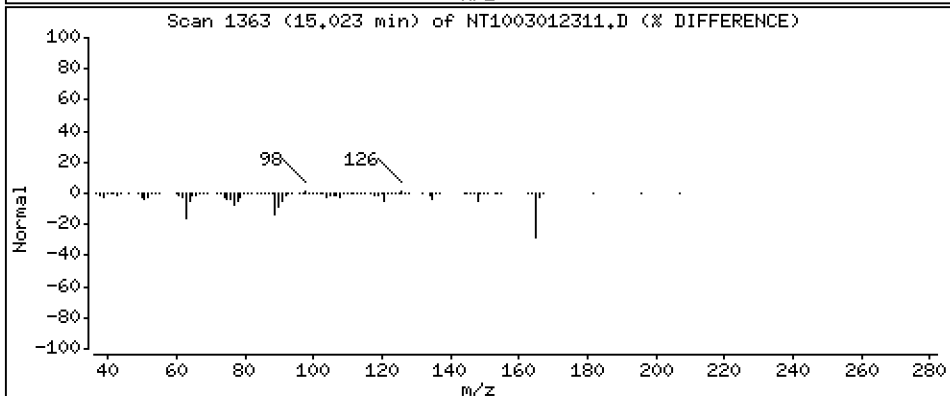
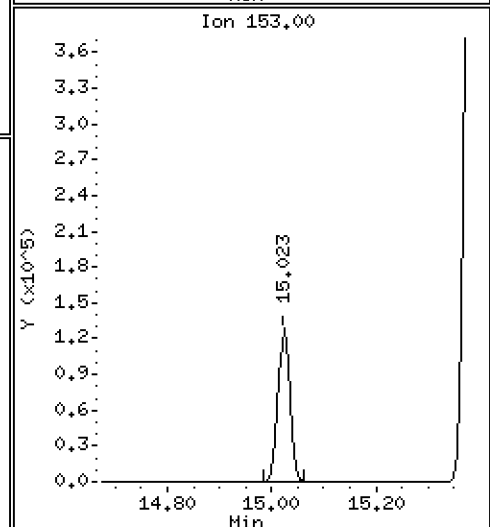
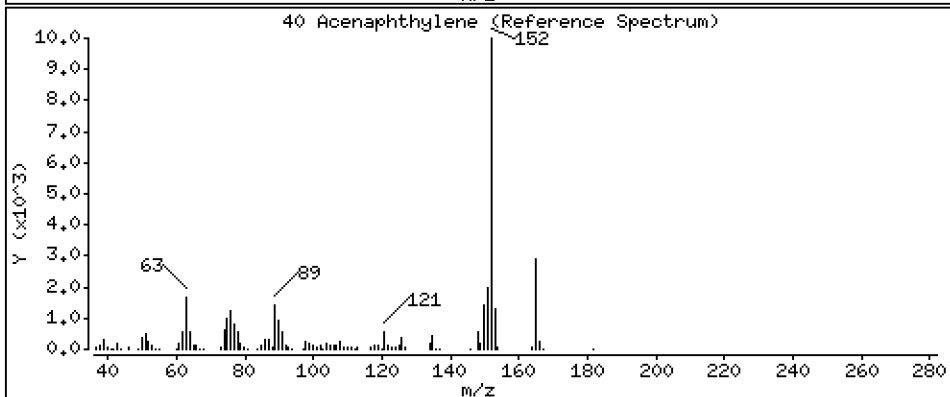
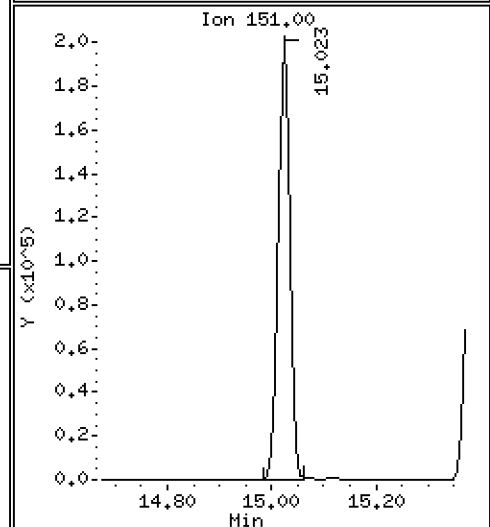
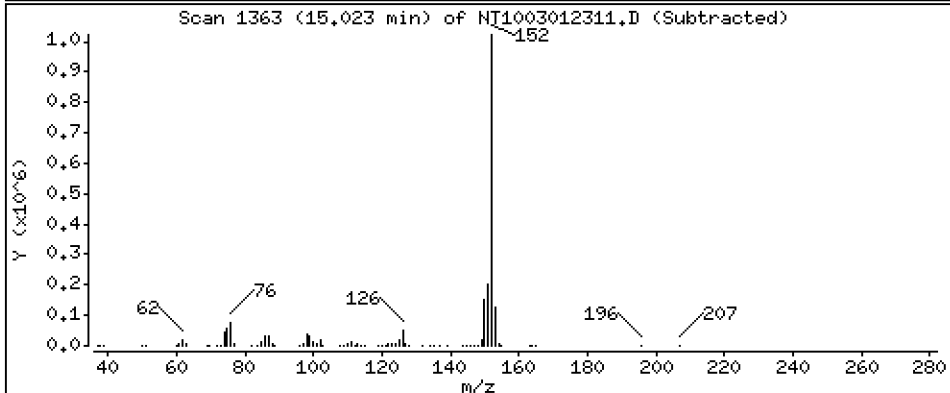
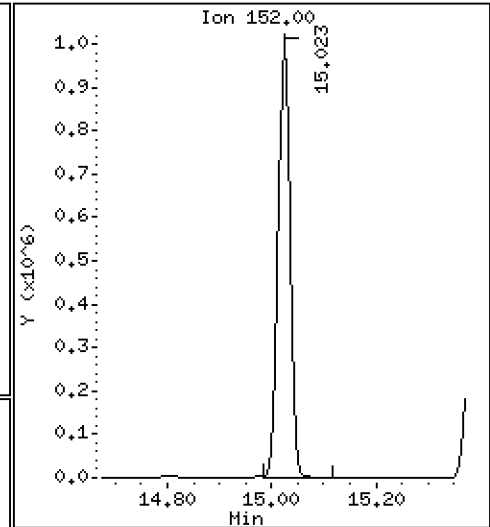
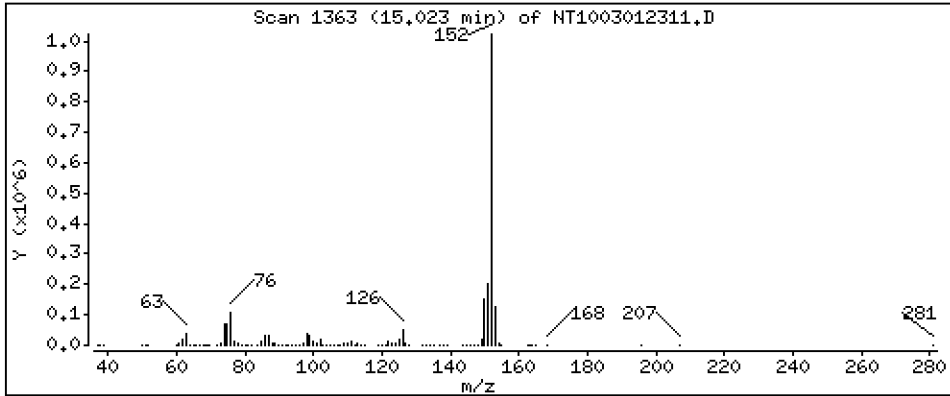
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,806 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

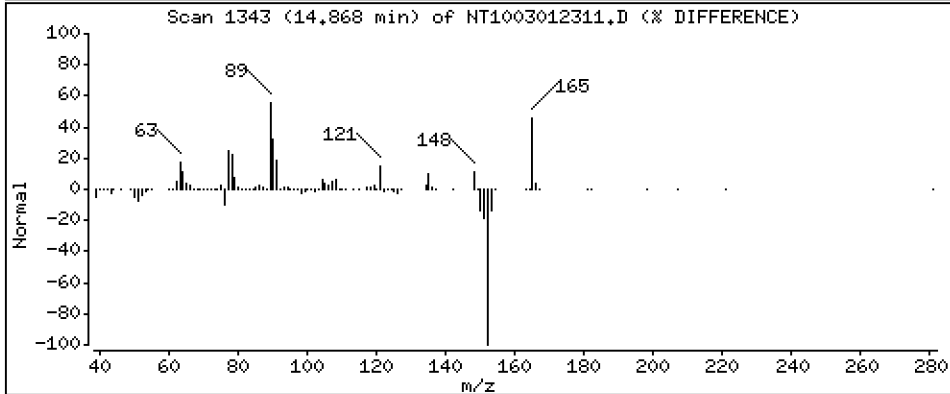
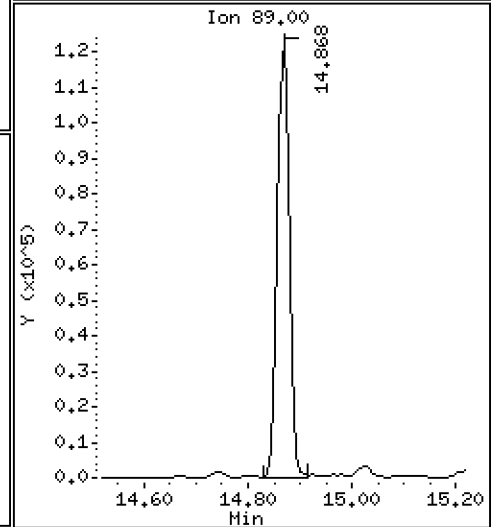
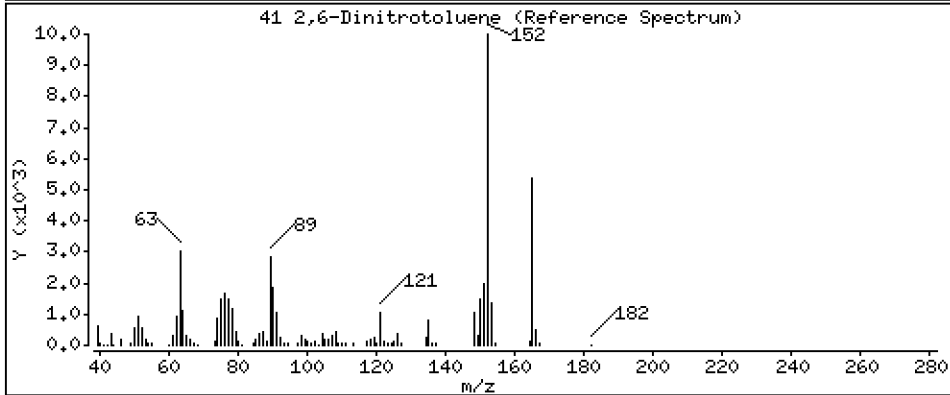
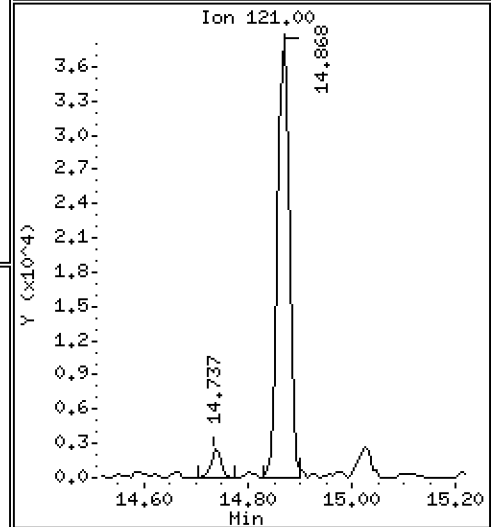
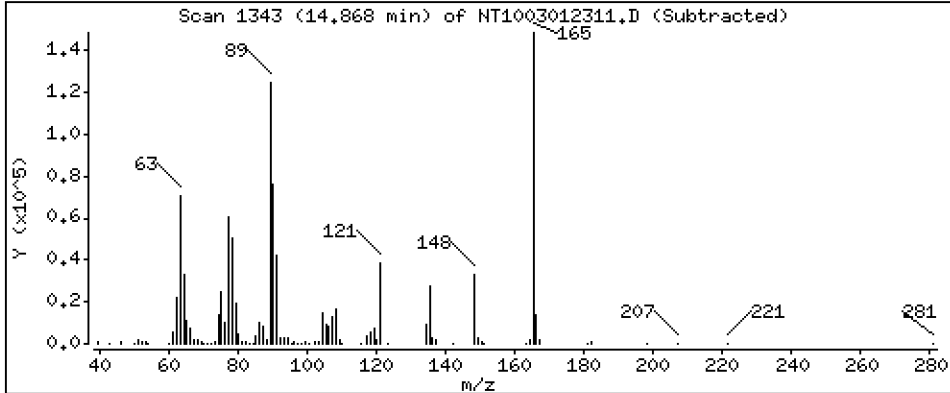
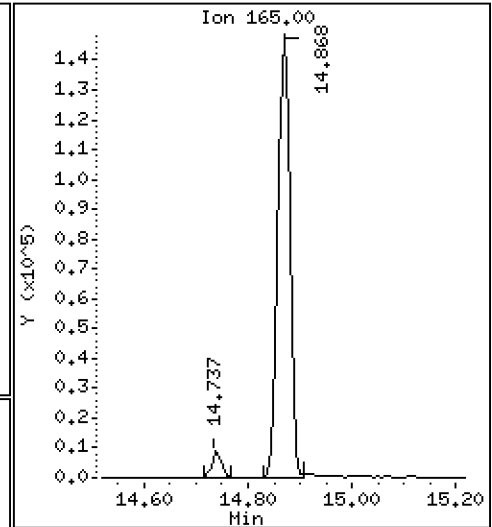
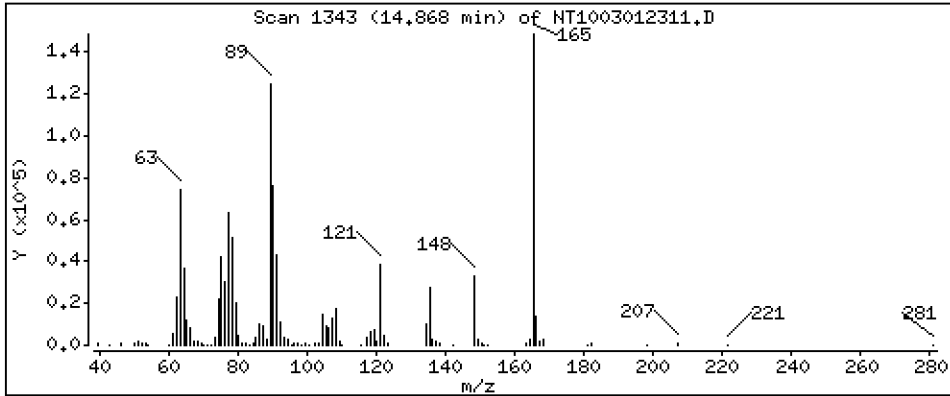
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

41 2,6-Dinitrotoluene

Concentration: 5.187 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

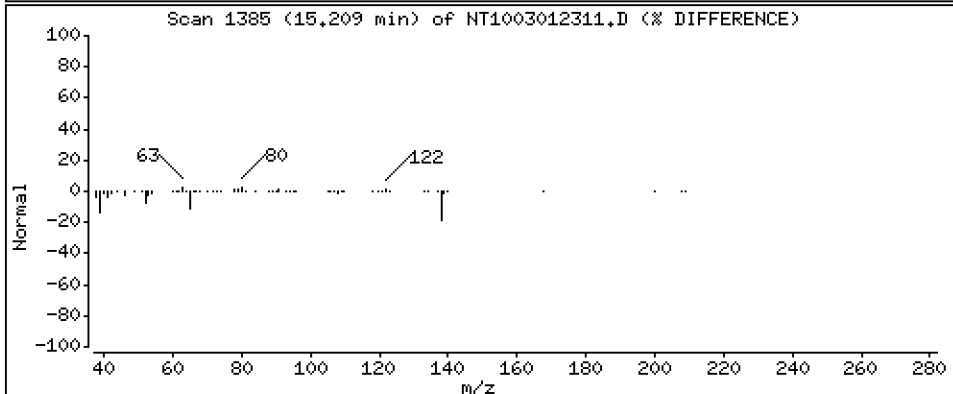
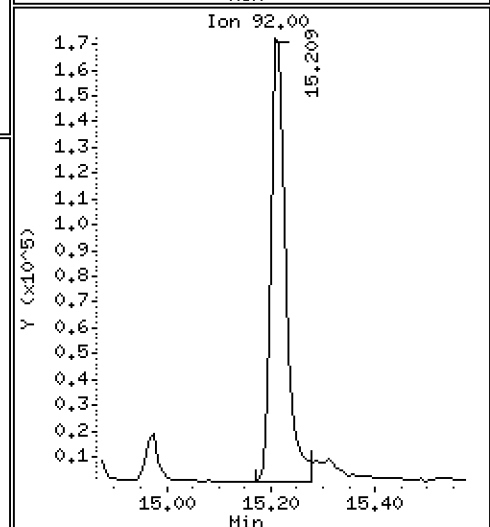
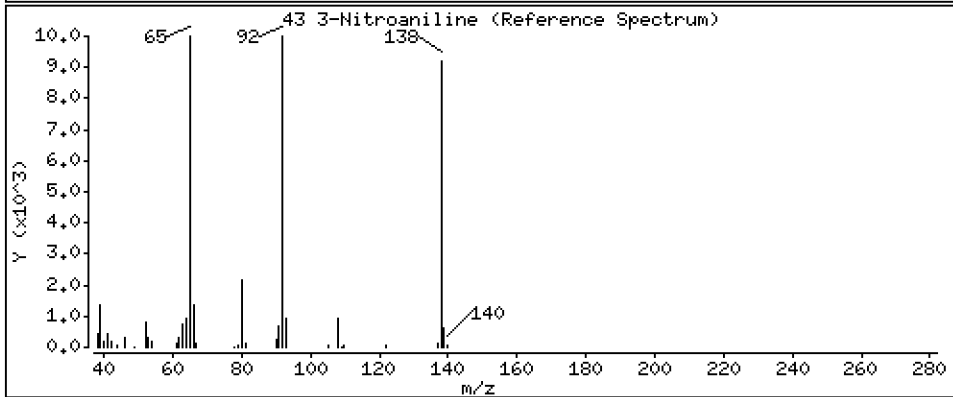
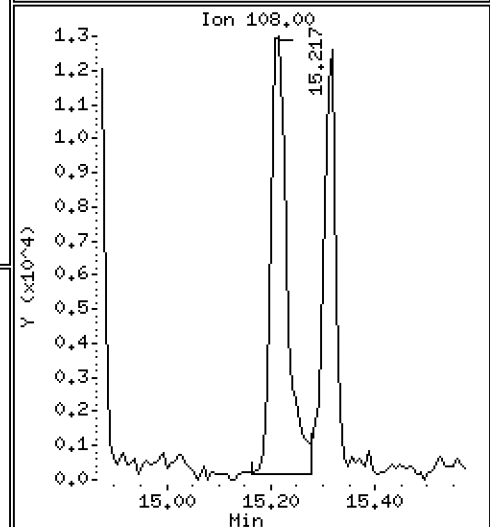
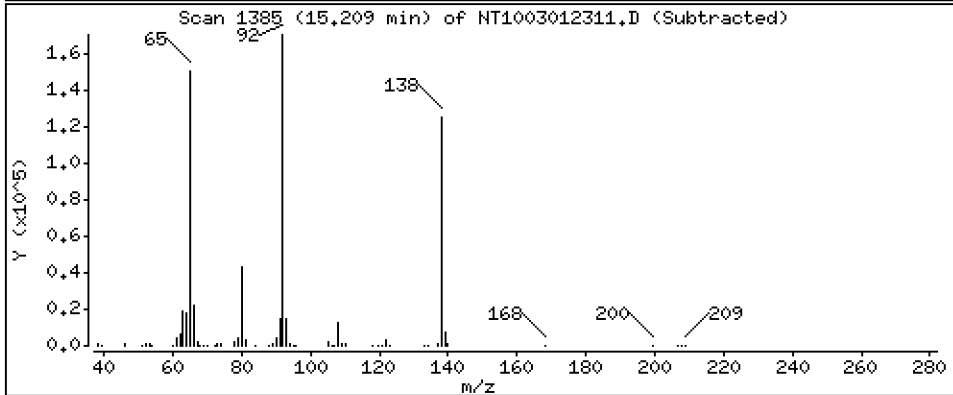
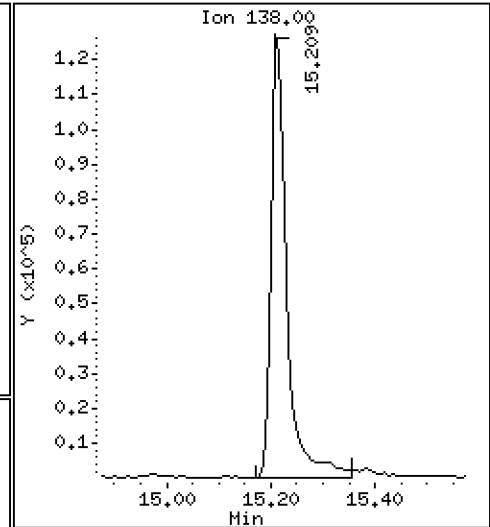
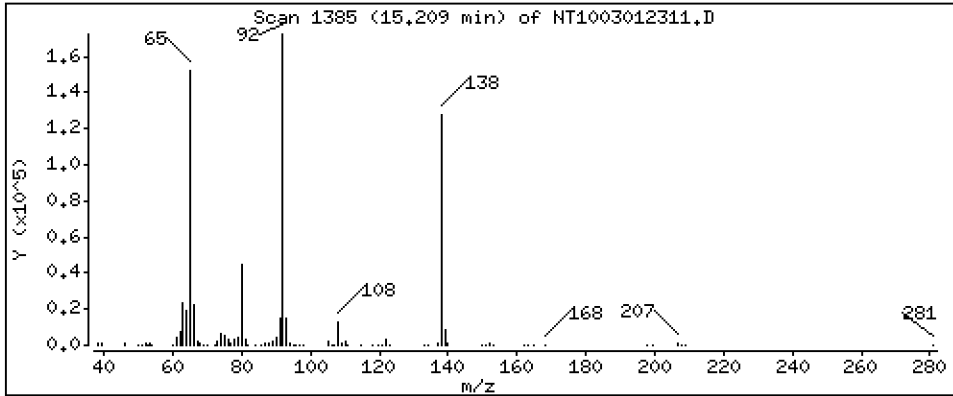
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

43 3-Nitroaniline

Concentration: 5.172 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

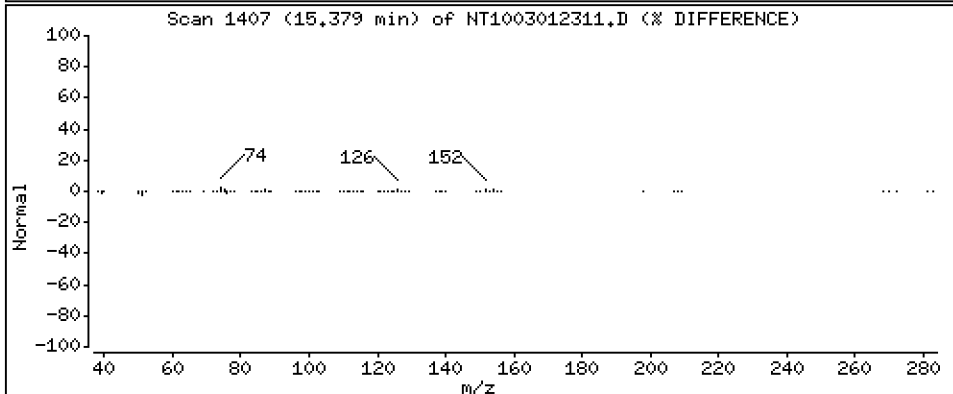
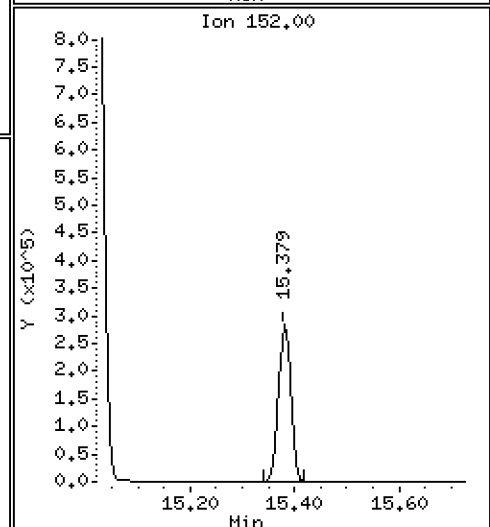
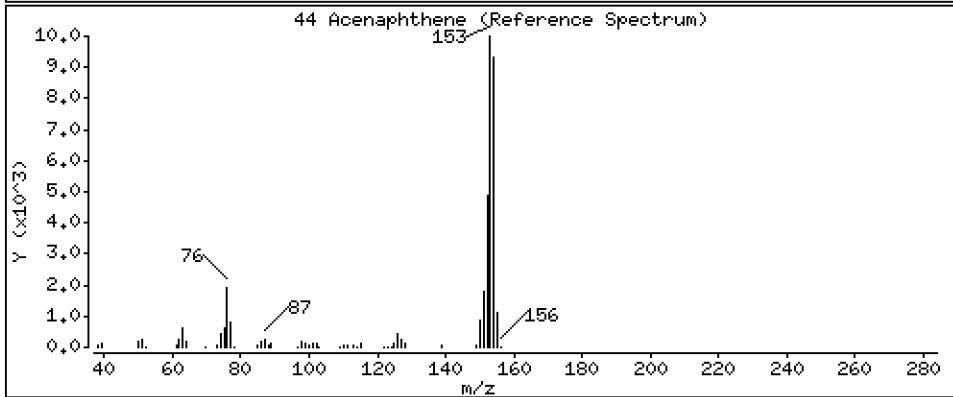
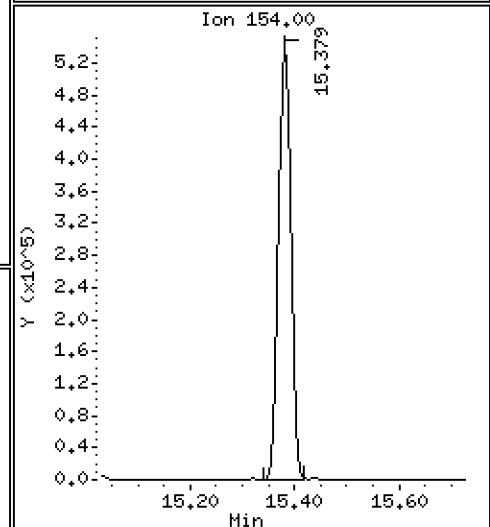
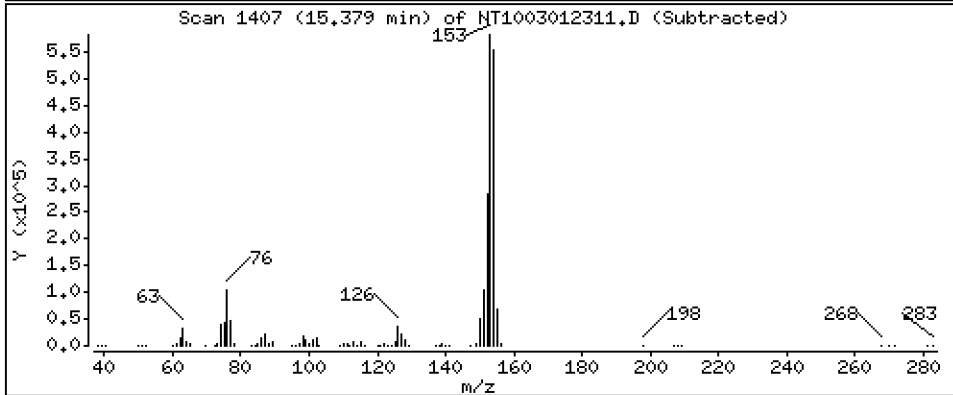
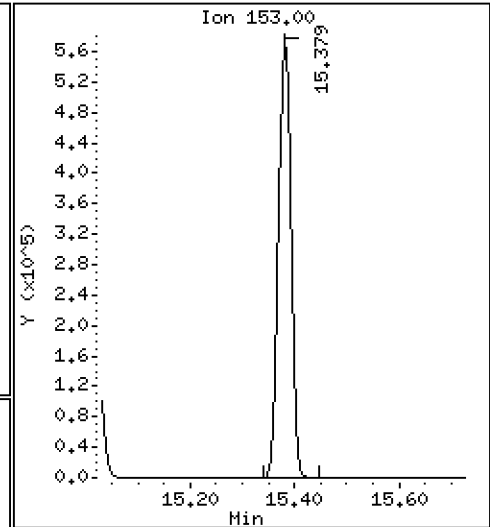
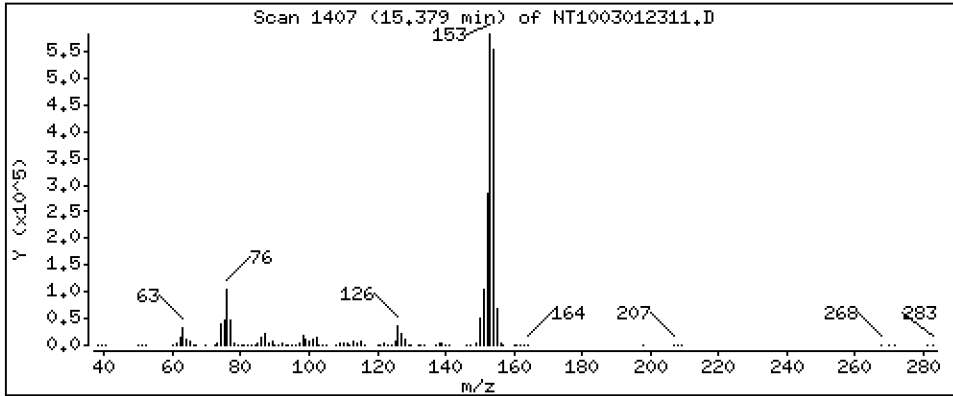
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,154 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

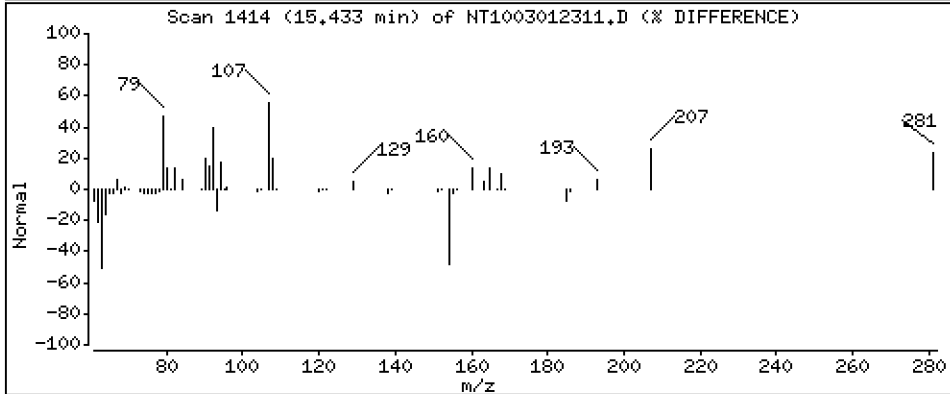
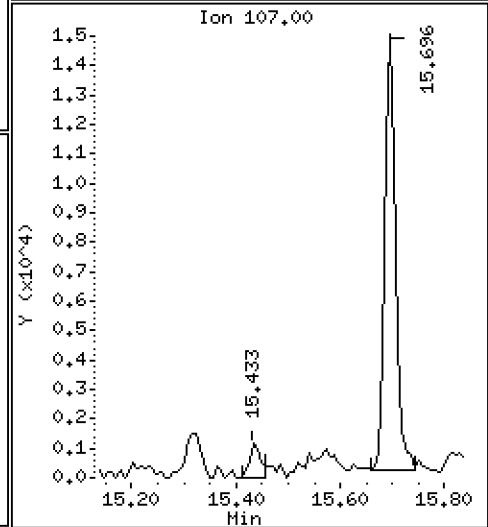
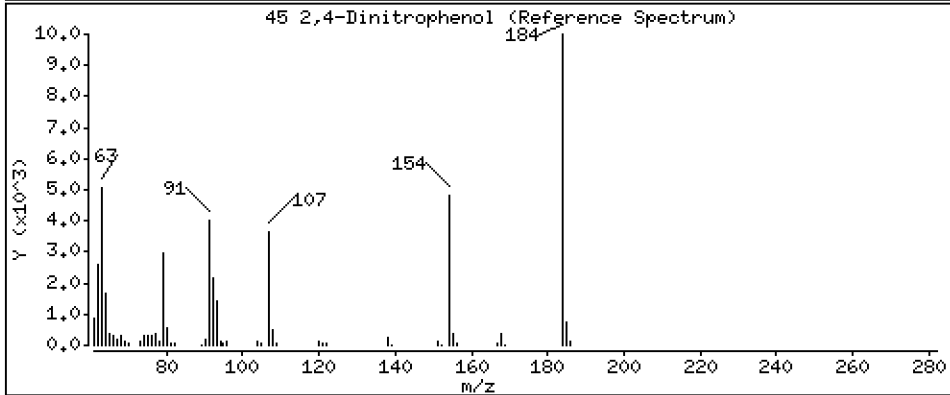
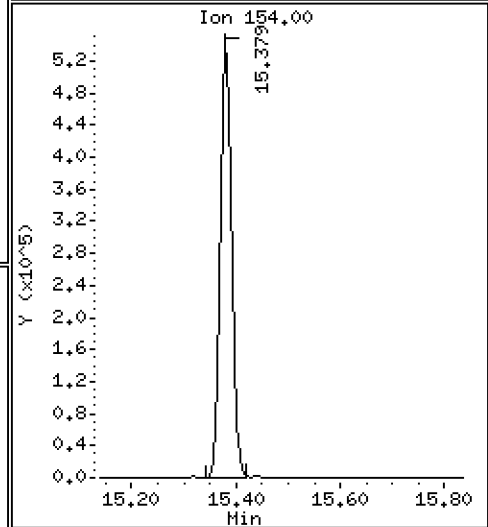
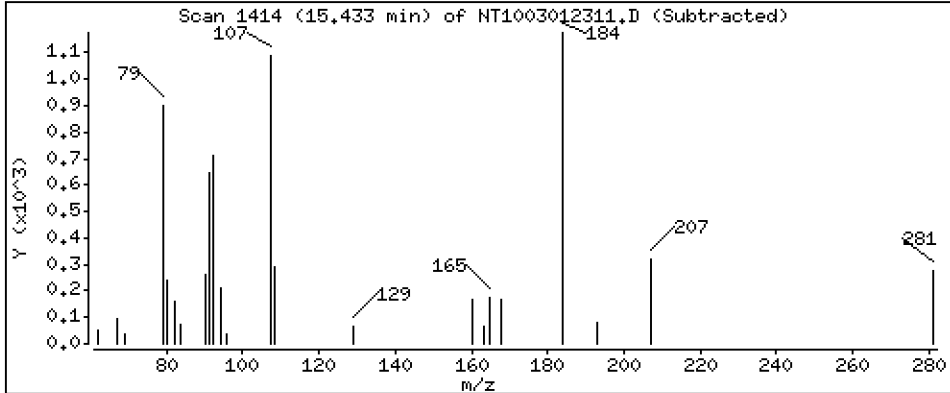
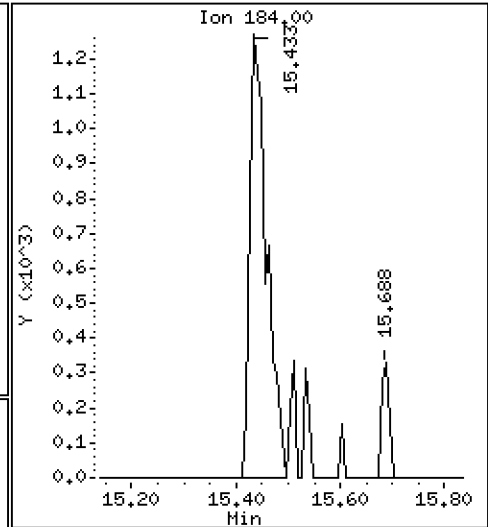
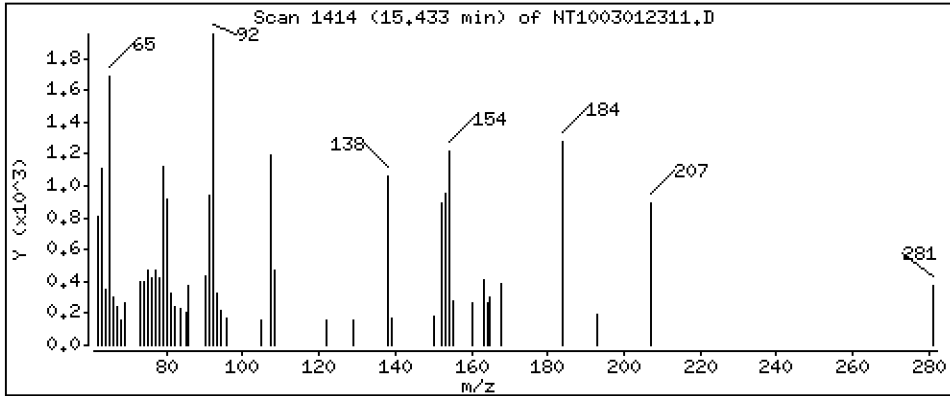
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 0,2667 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

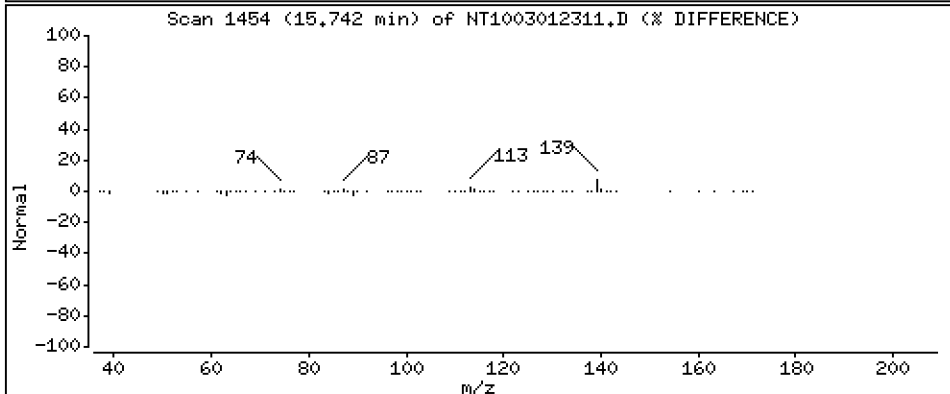
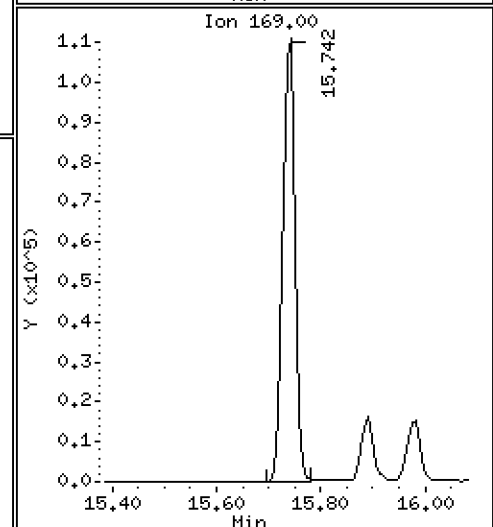
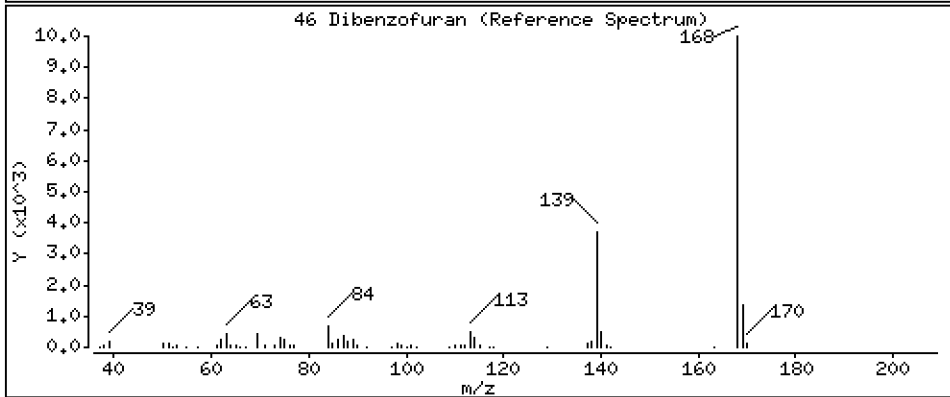
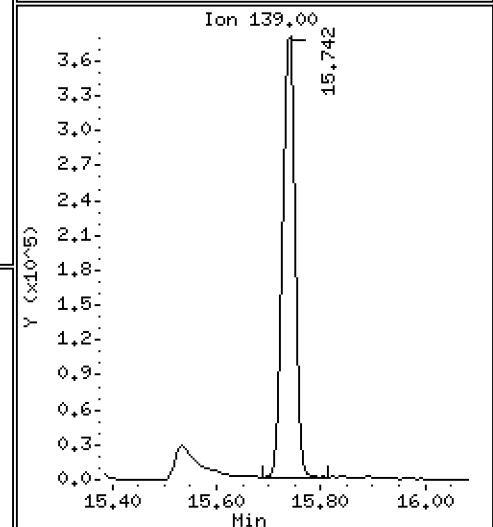
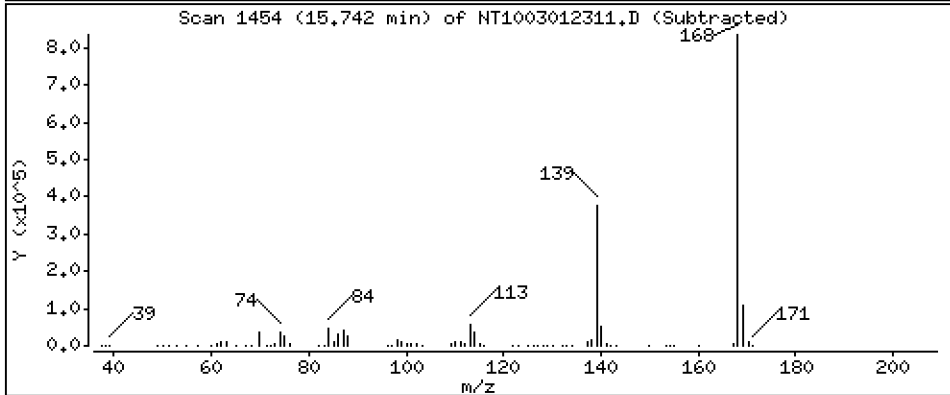
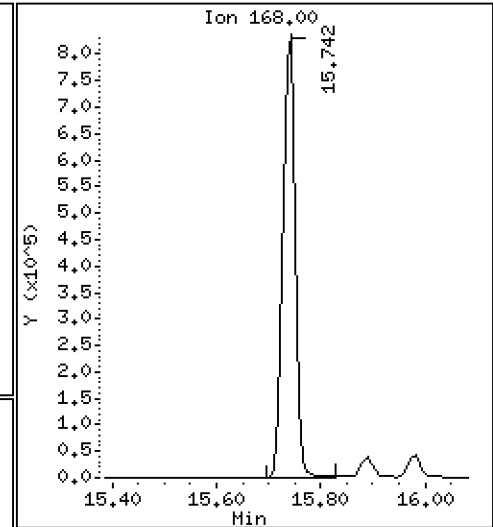
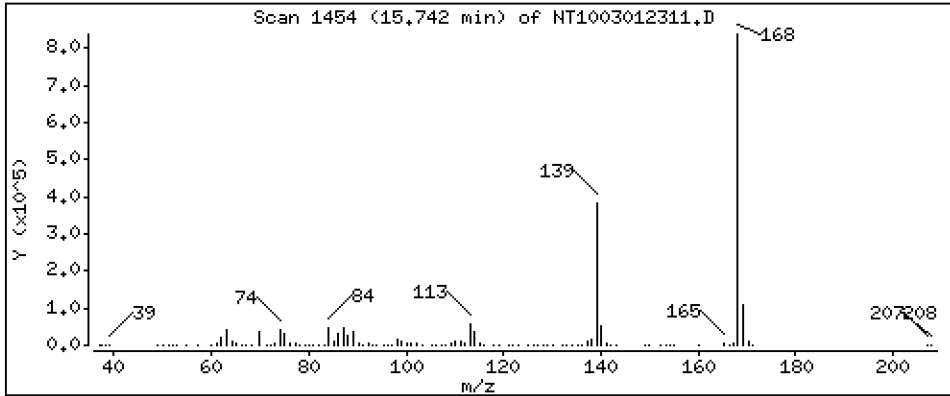
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,994 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

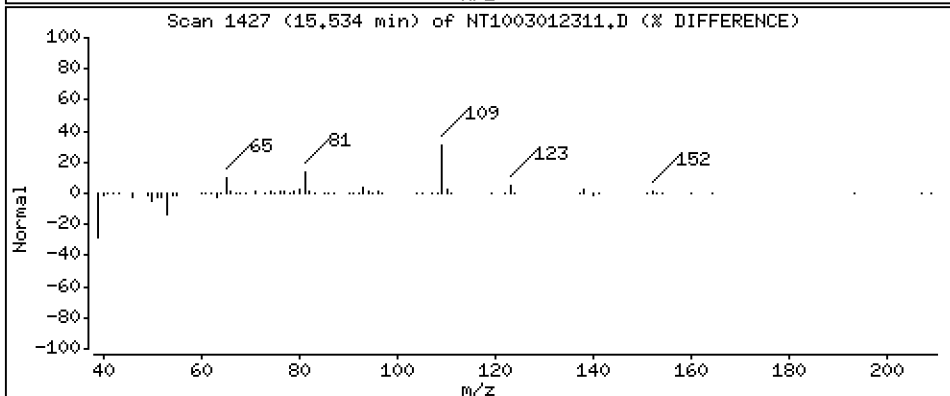
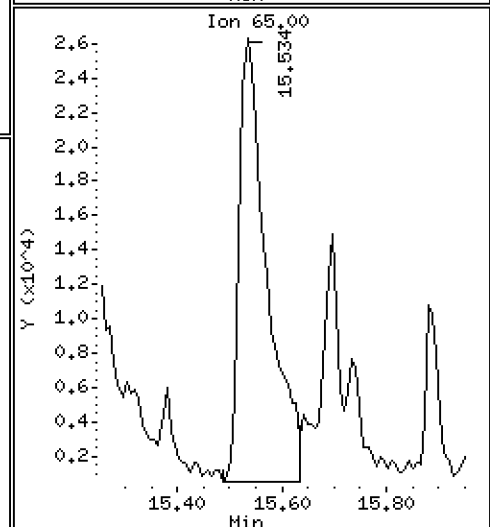
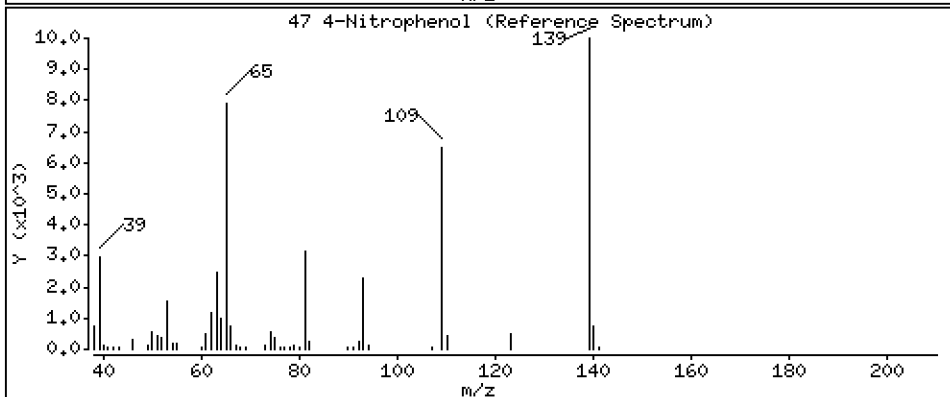
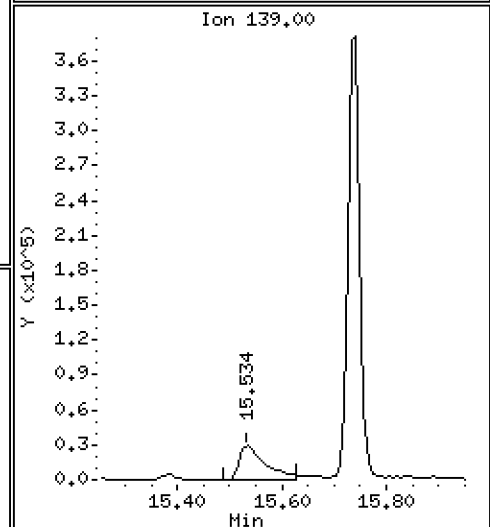
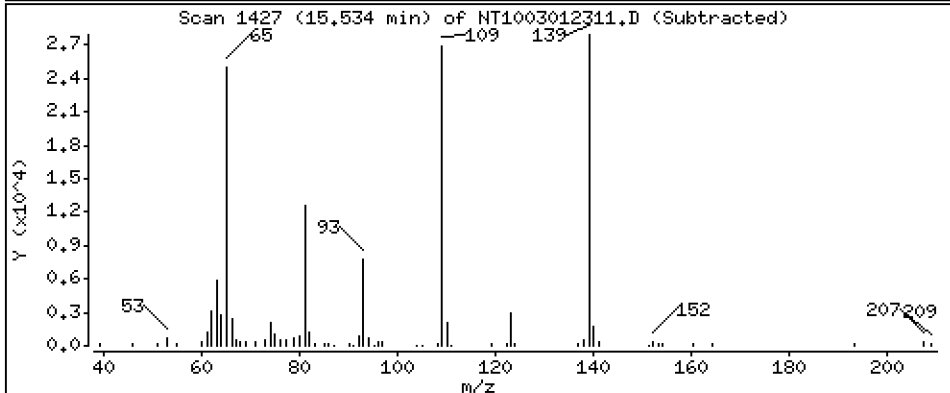
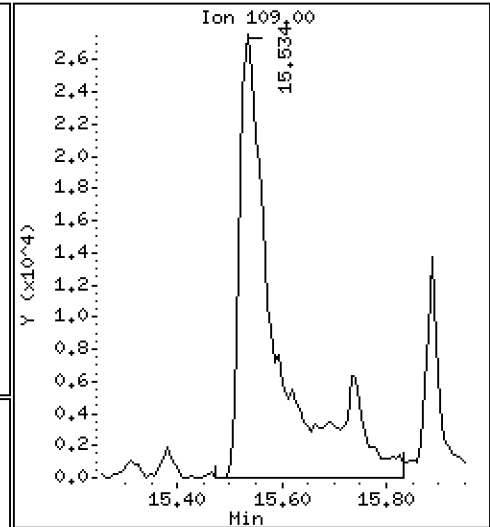
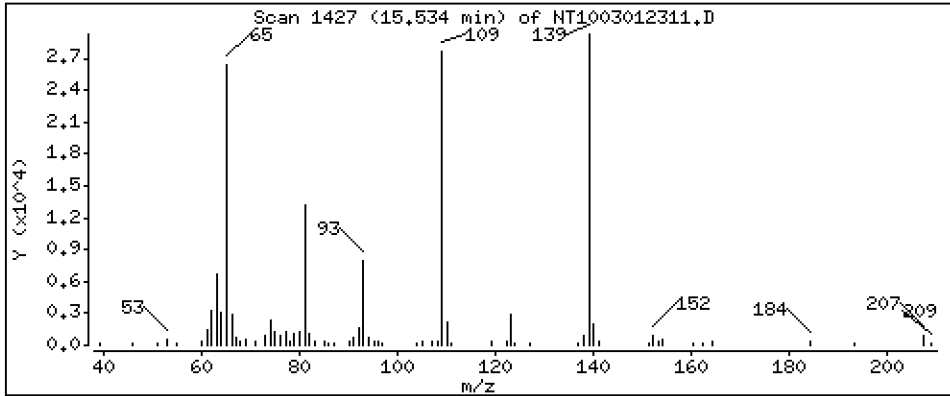
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 3,822 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

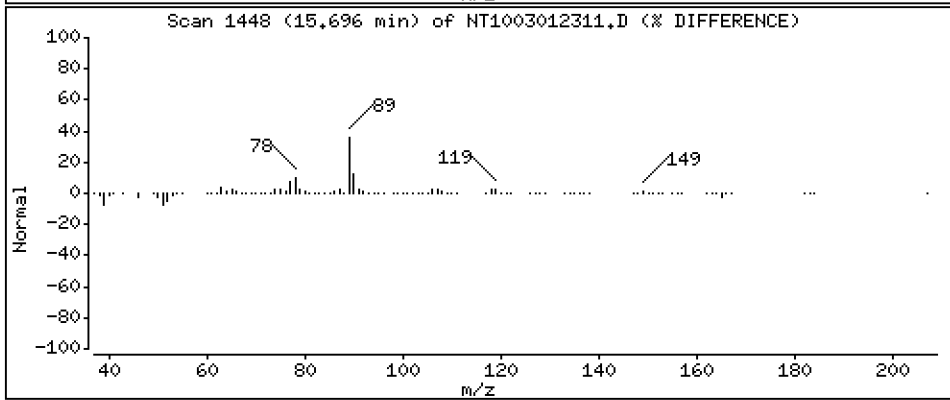
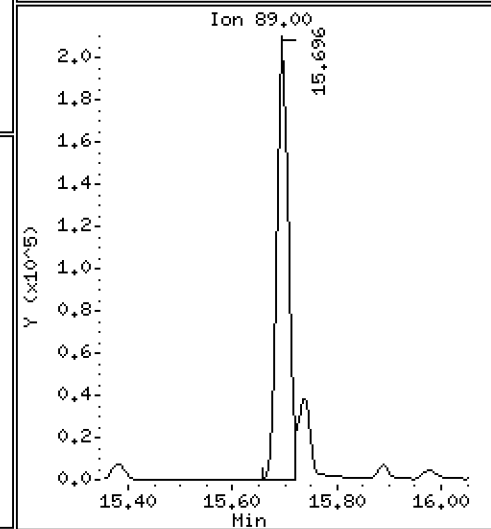
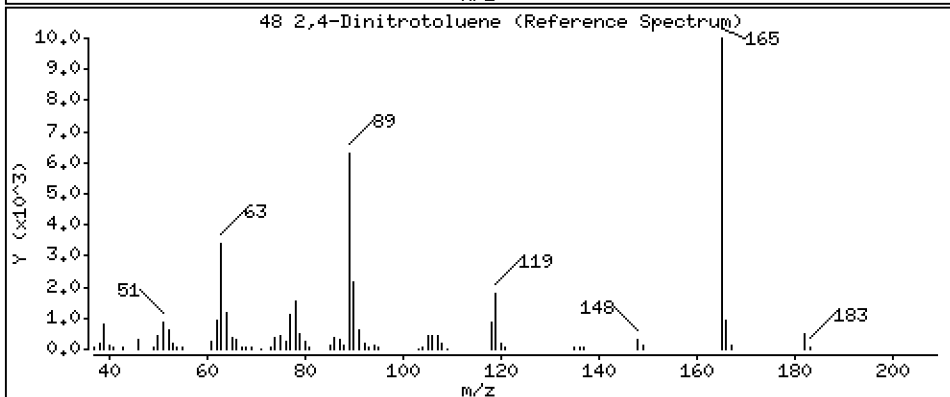
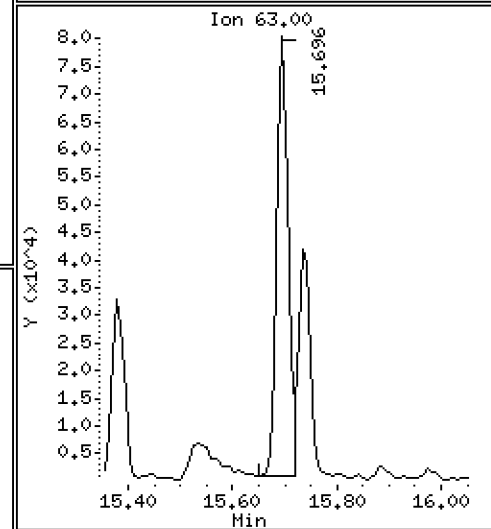
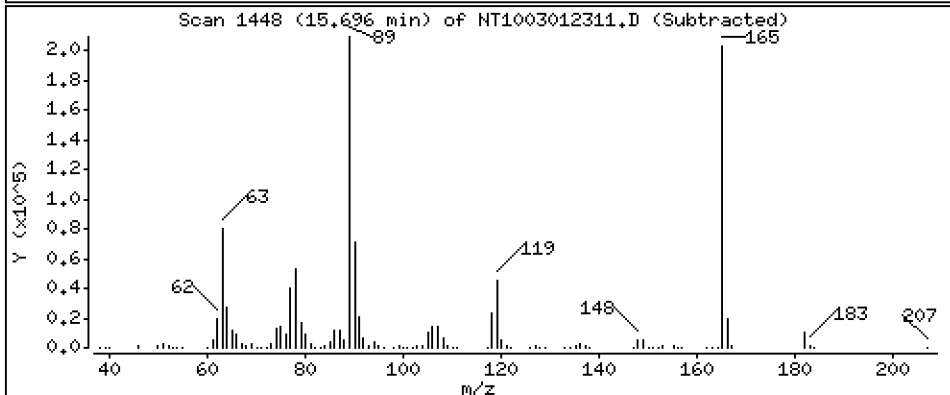
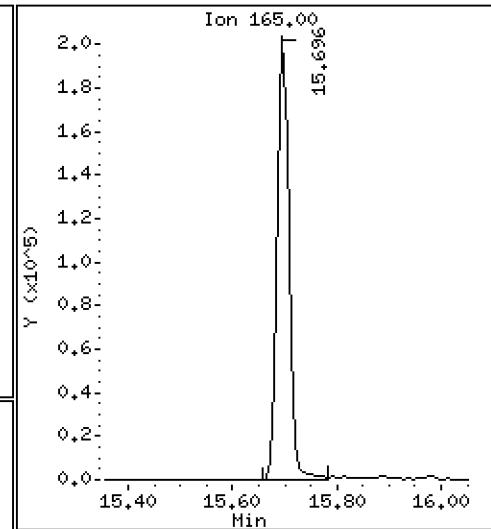
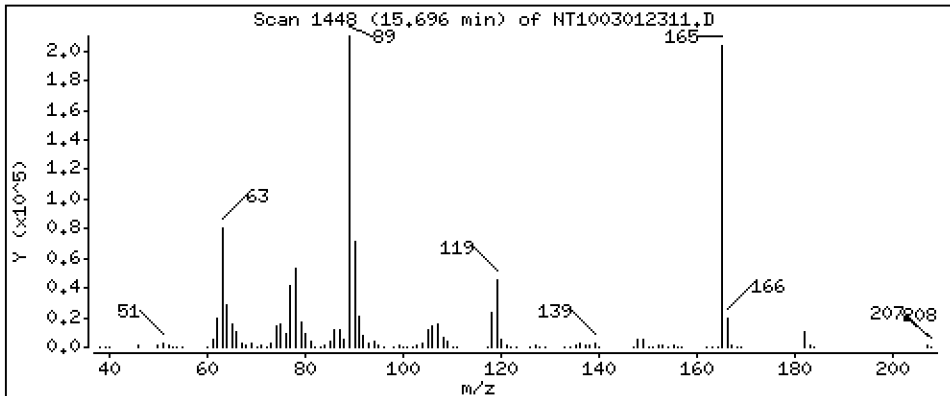
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

48 2,4-Dinitrotoluene

Concentration: 4.729 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

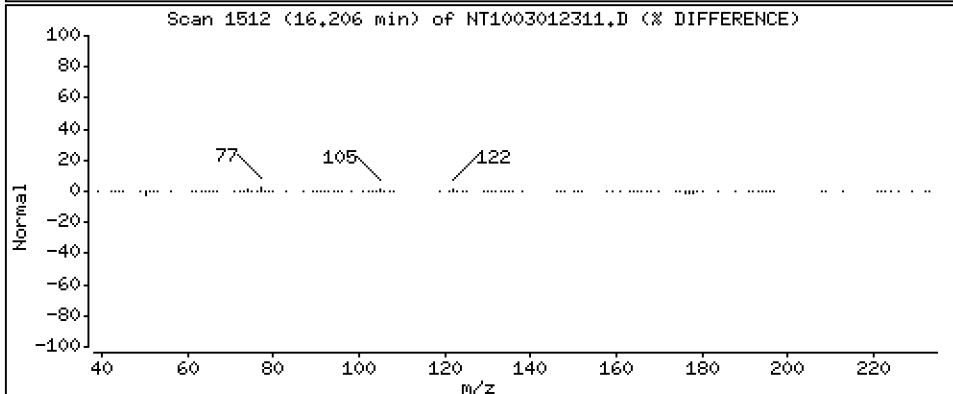
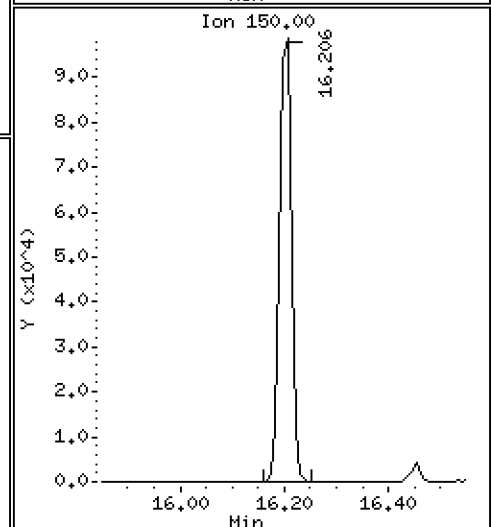
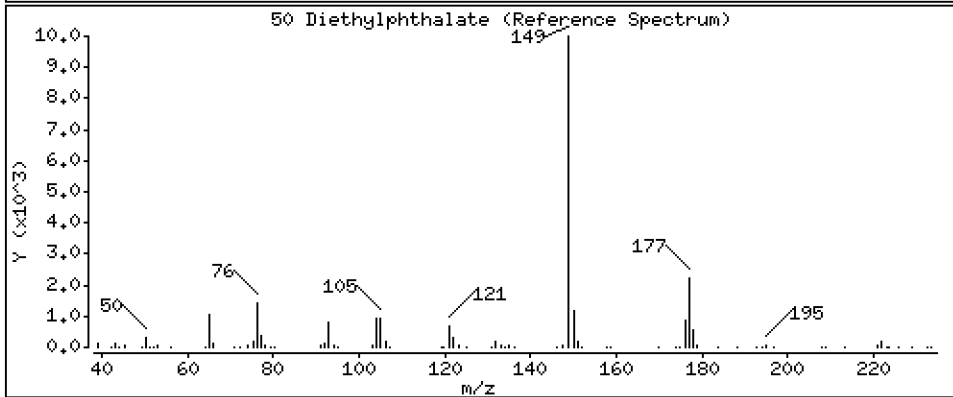
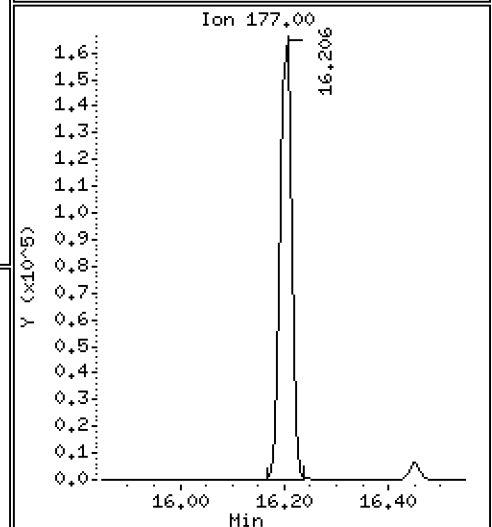
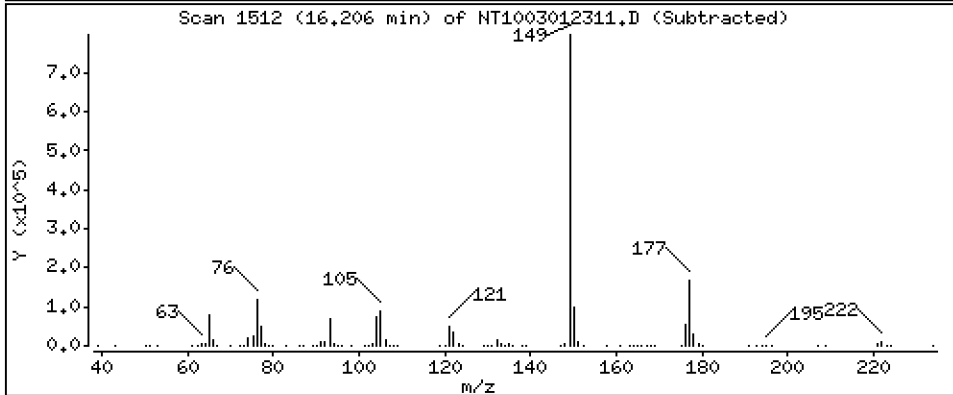
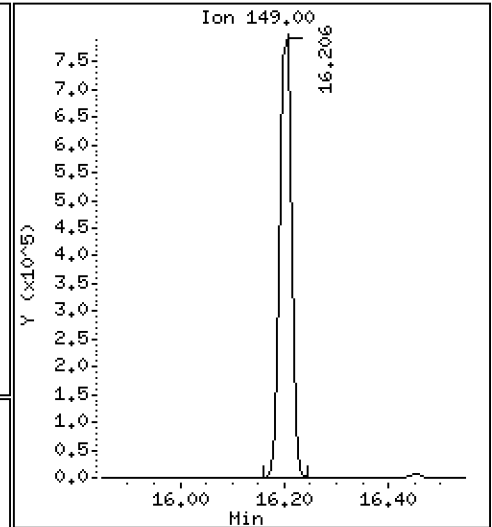
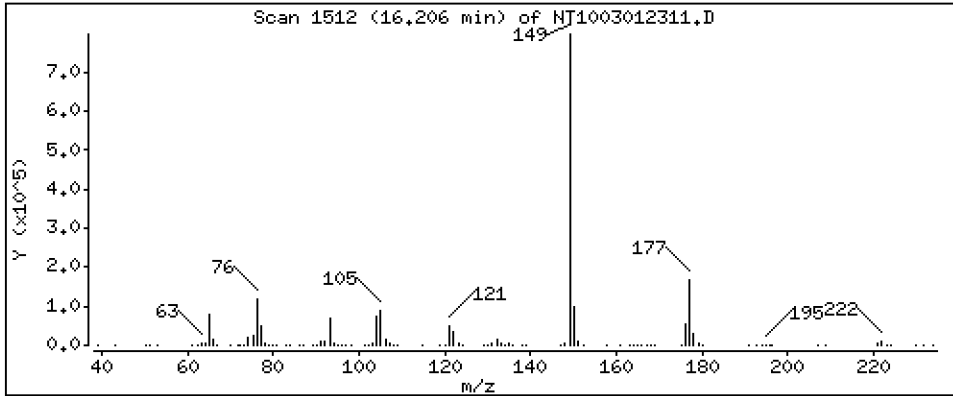
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,639 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

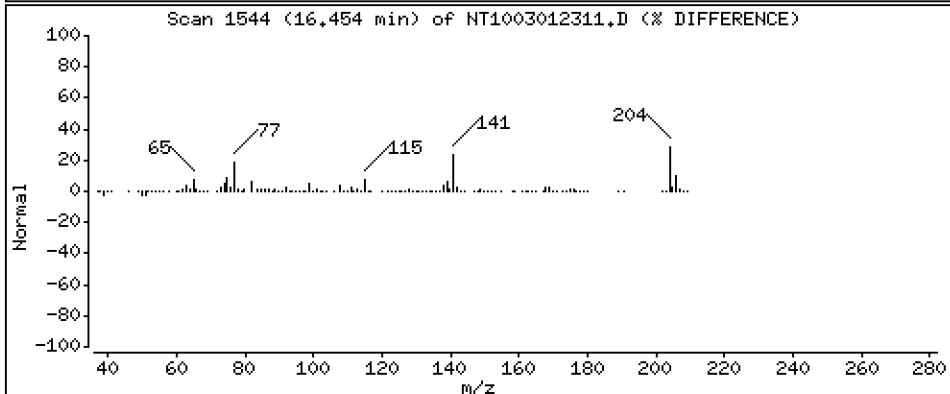
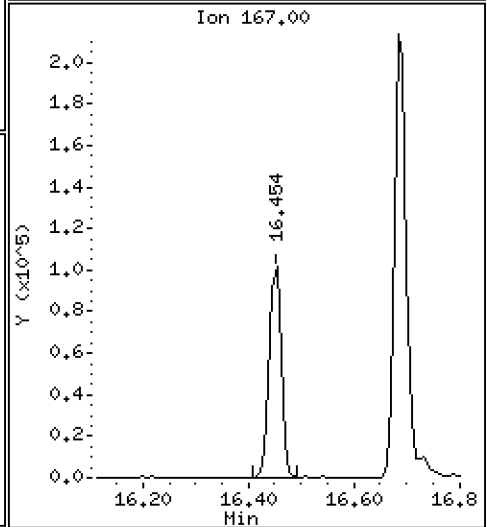
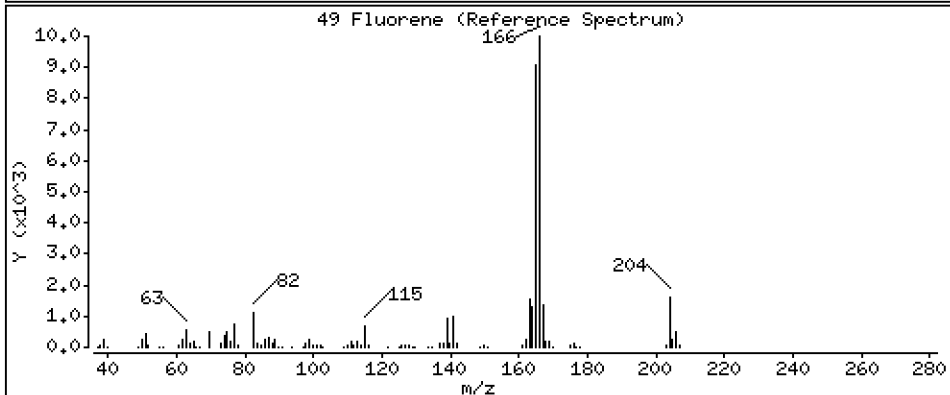
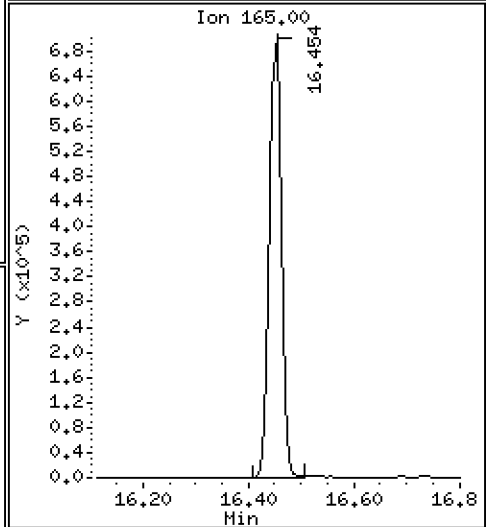
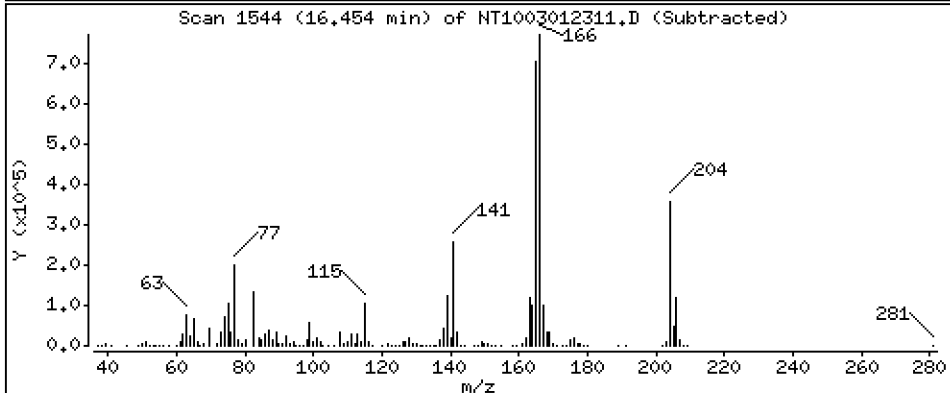
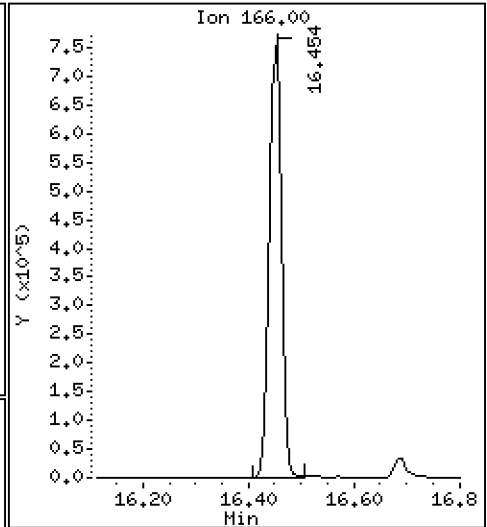
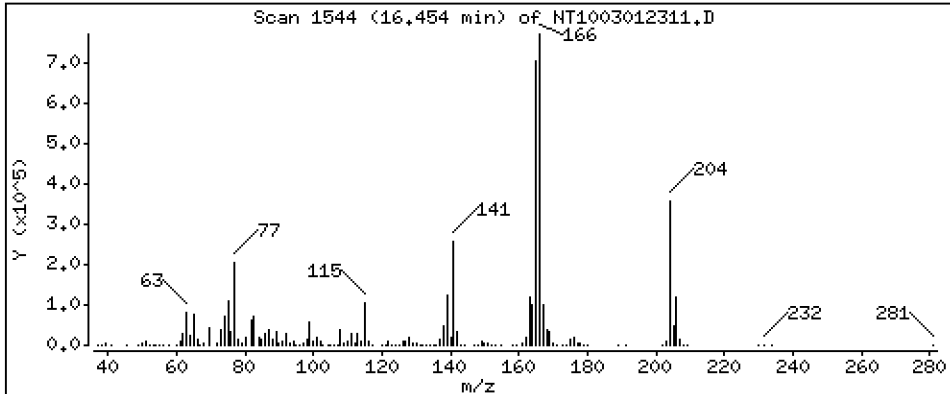
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,305 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

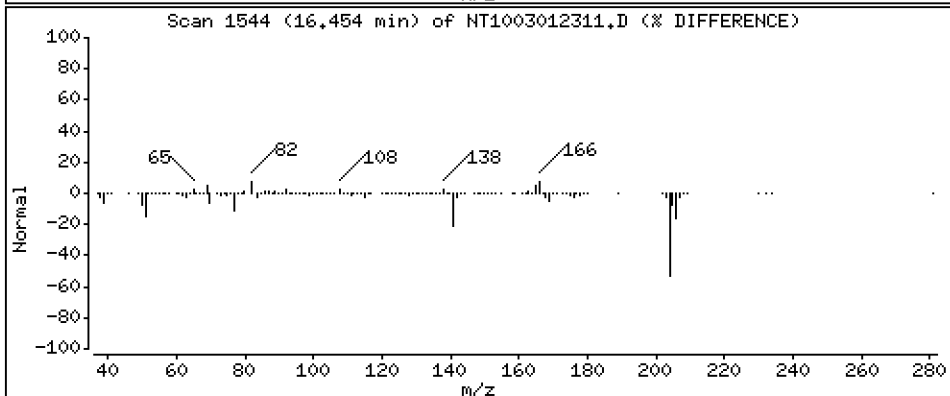
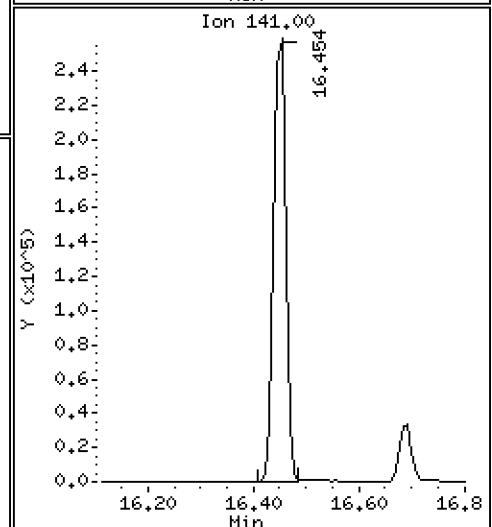
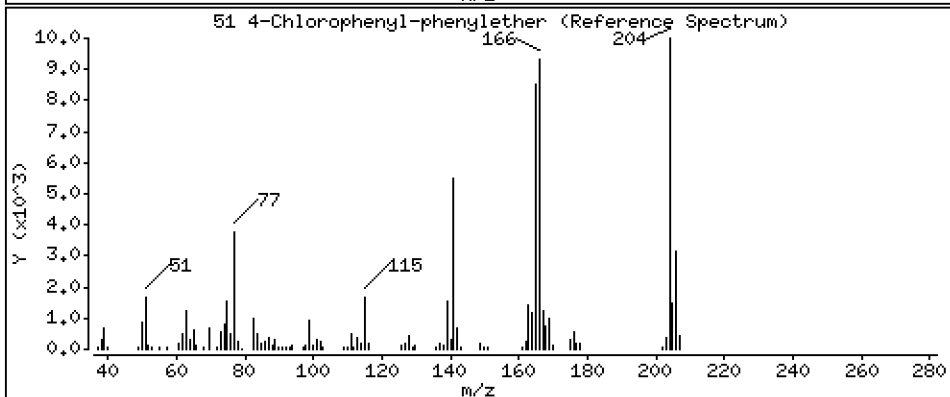
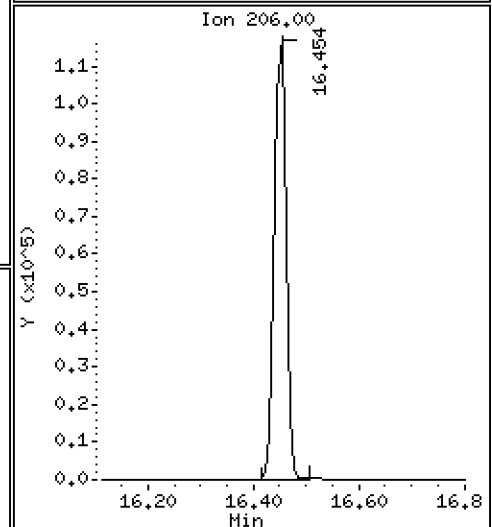
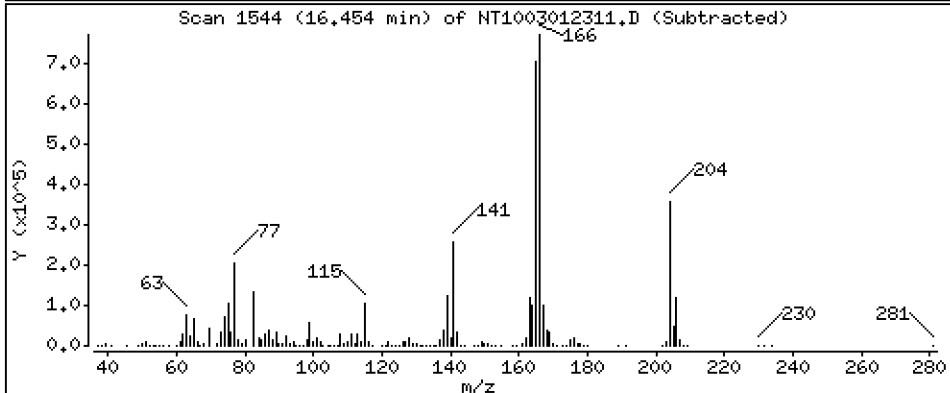
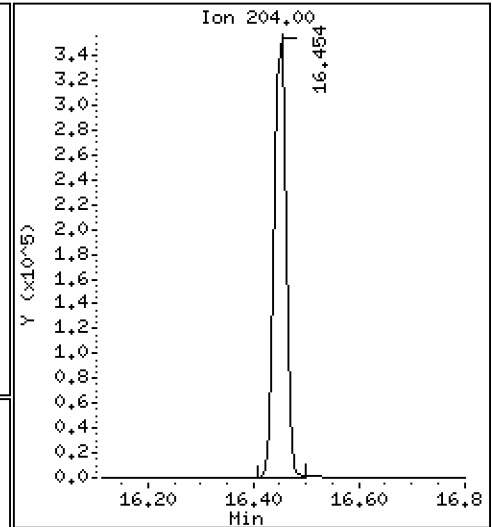
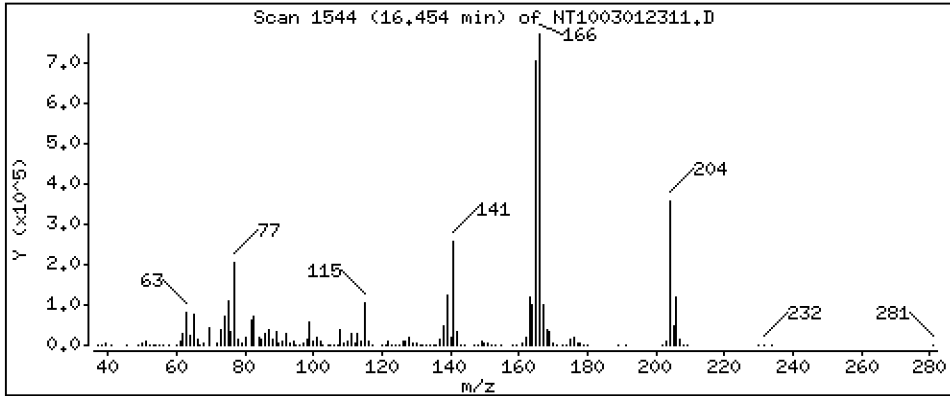
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,253 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

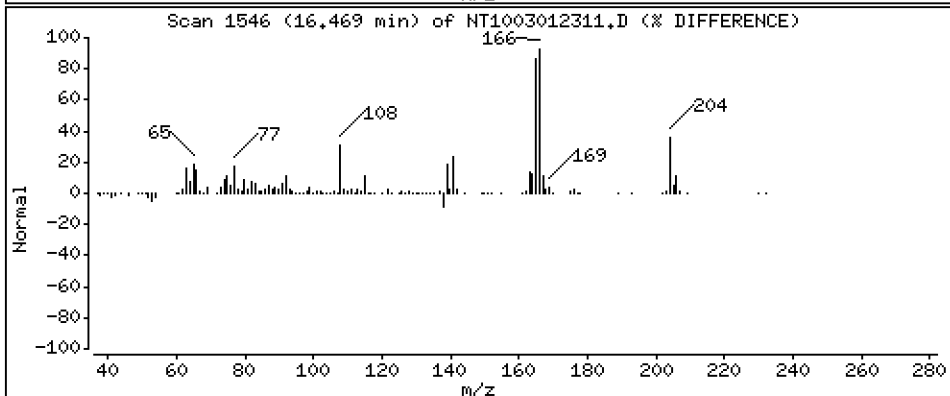
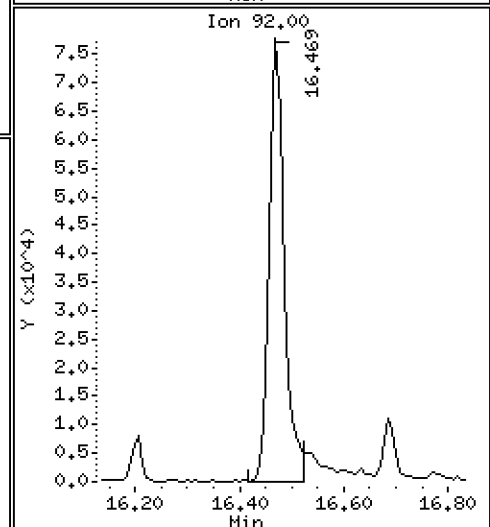
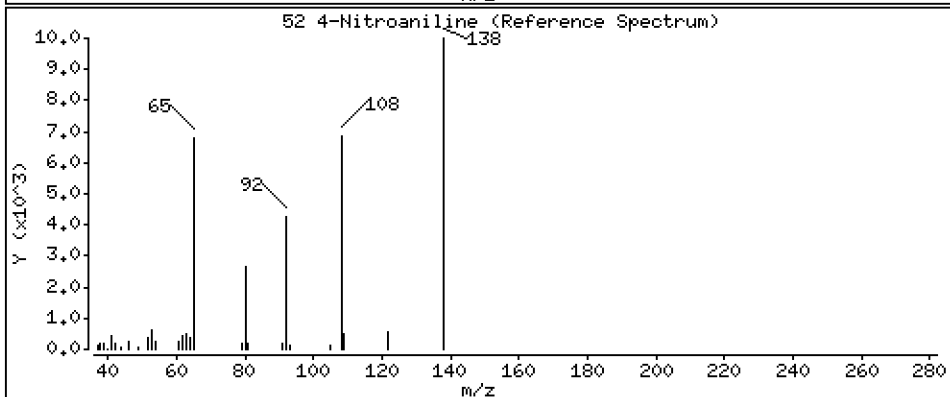
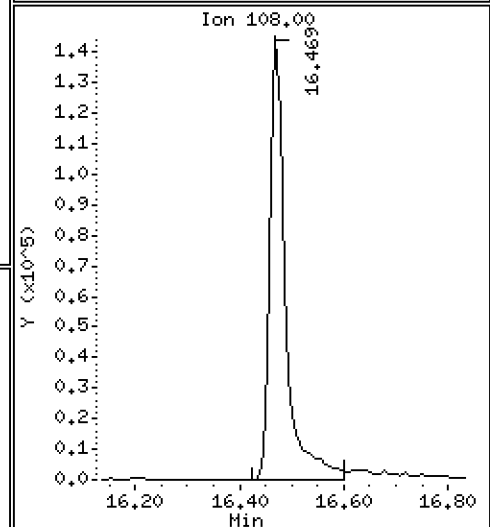
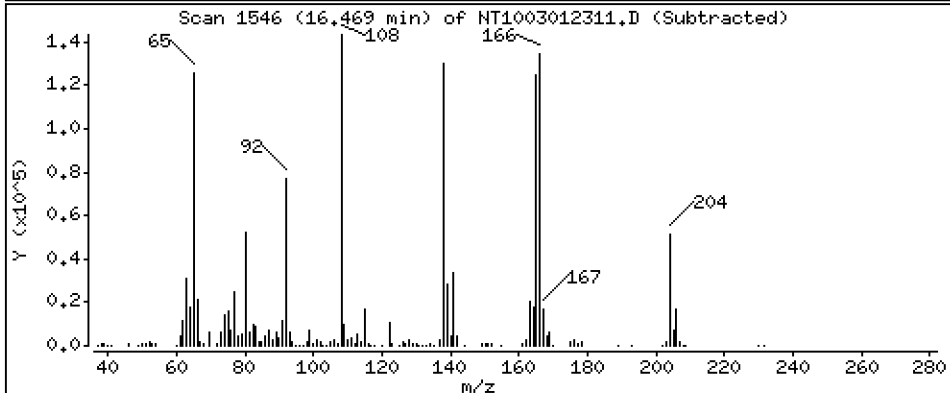
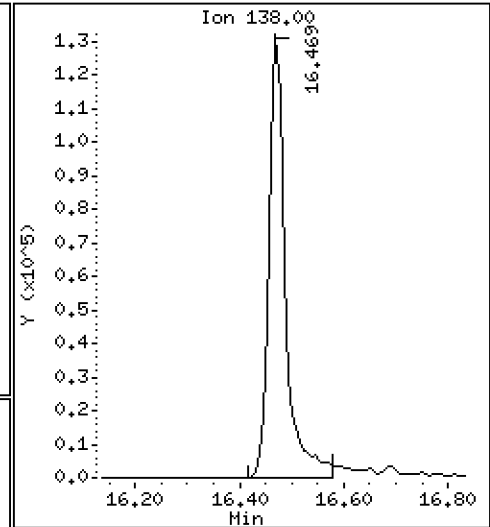
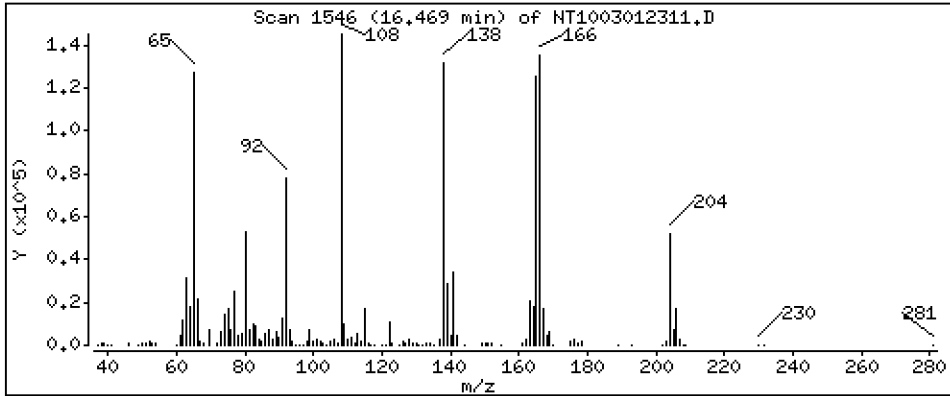
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 5,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

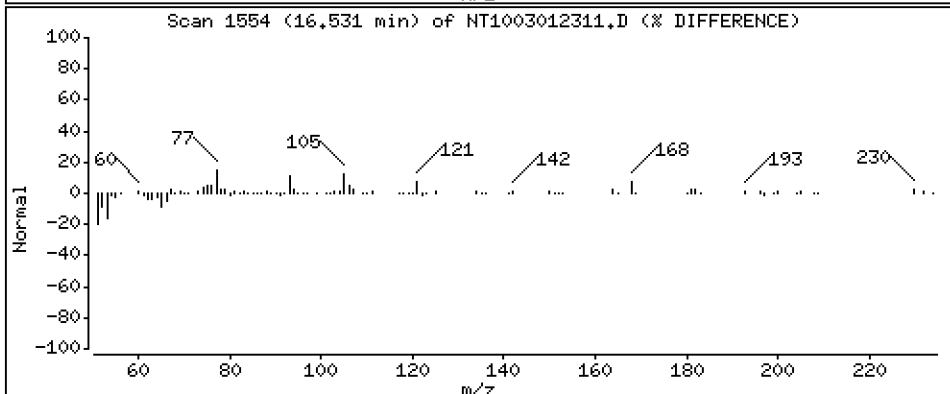
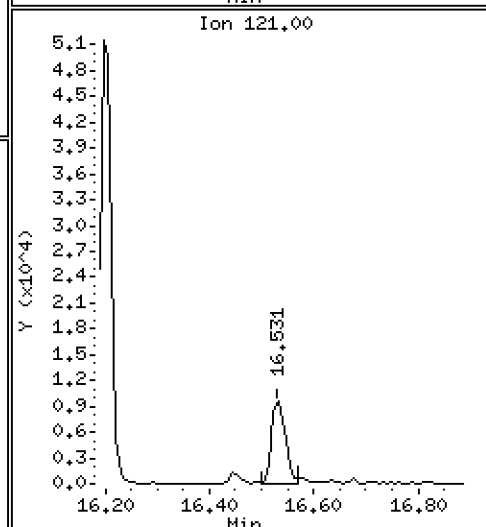
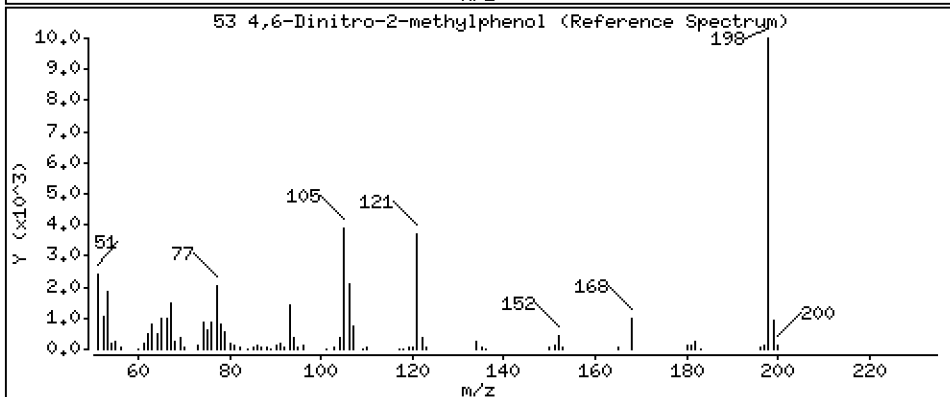
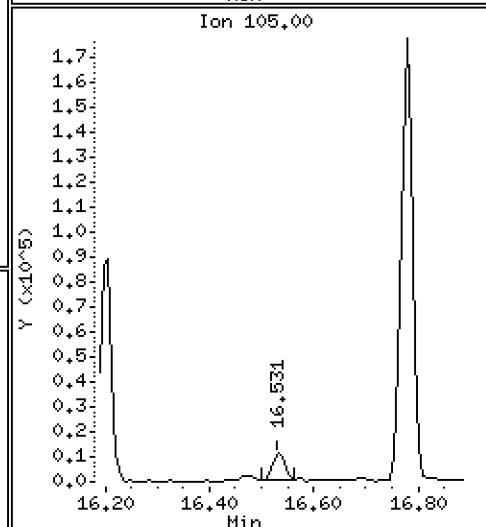
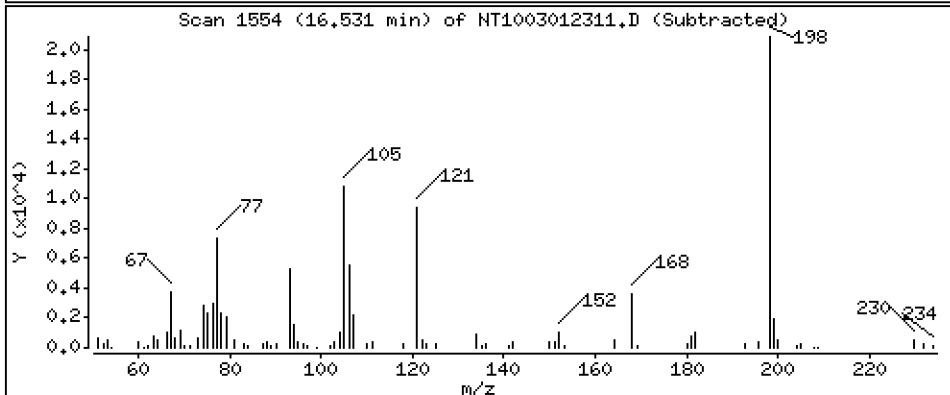
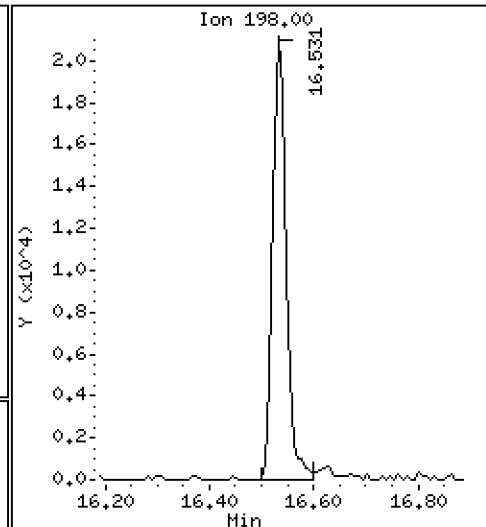
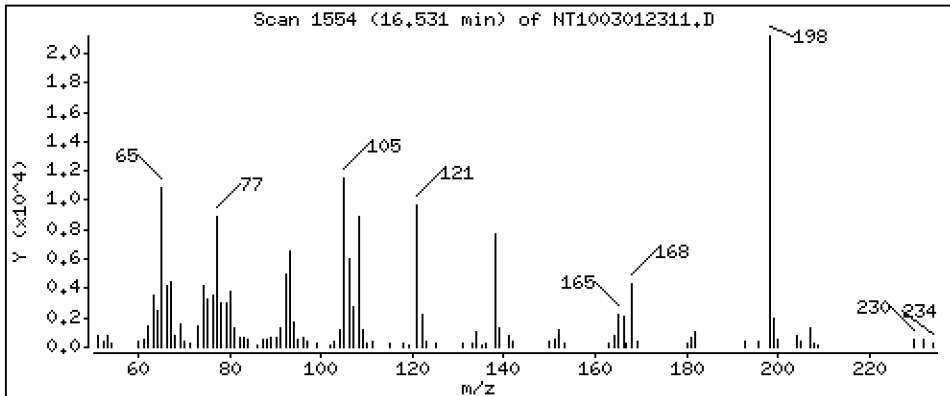
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 1,292 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

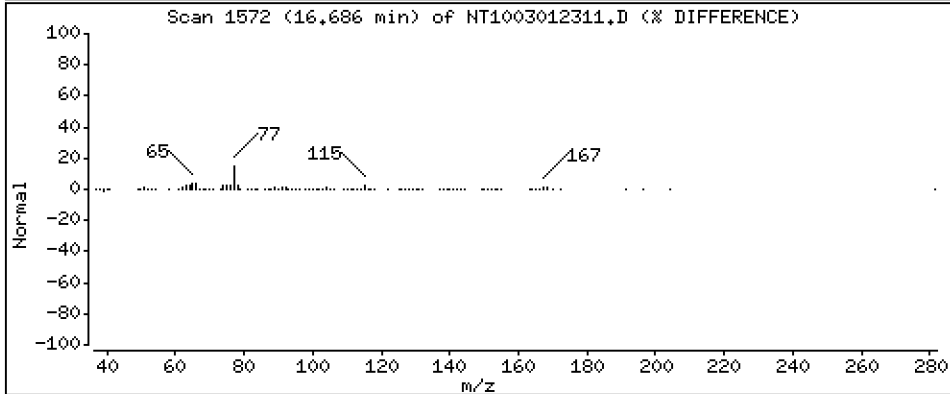
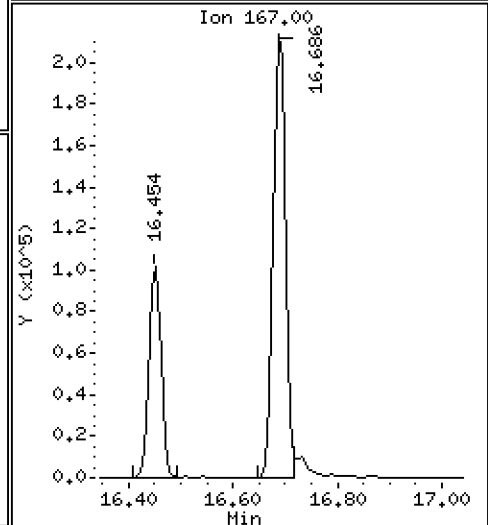
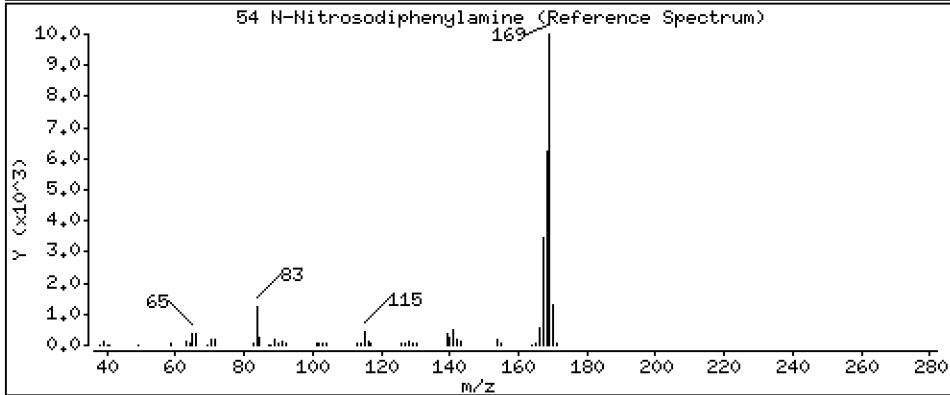
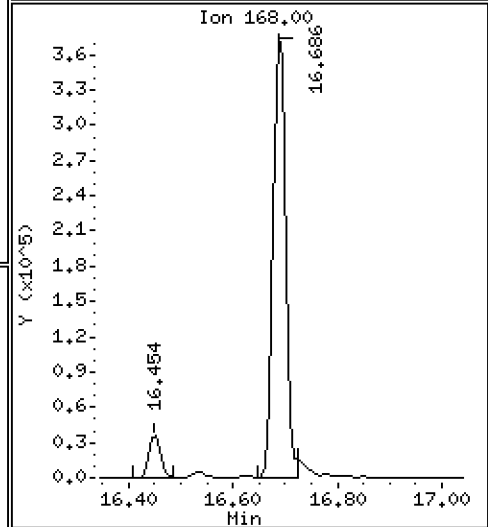
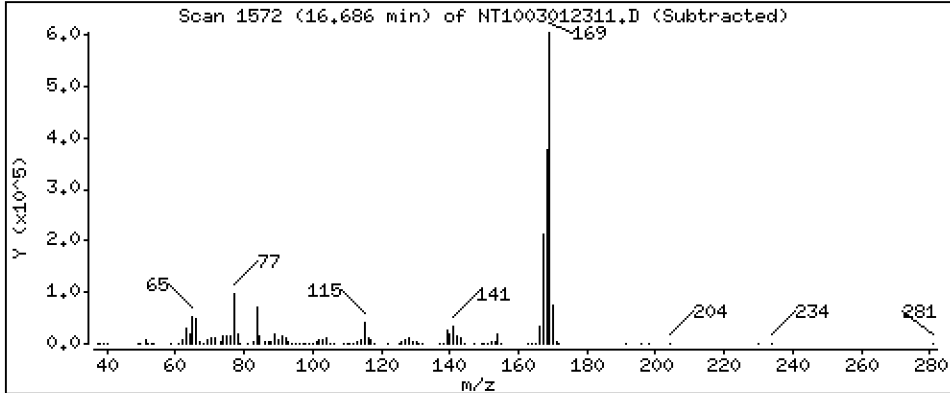
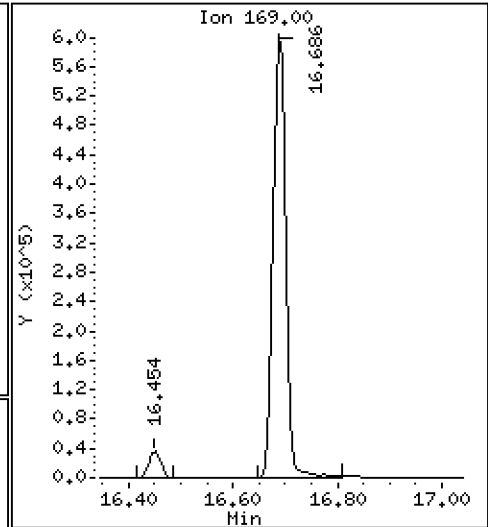
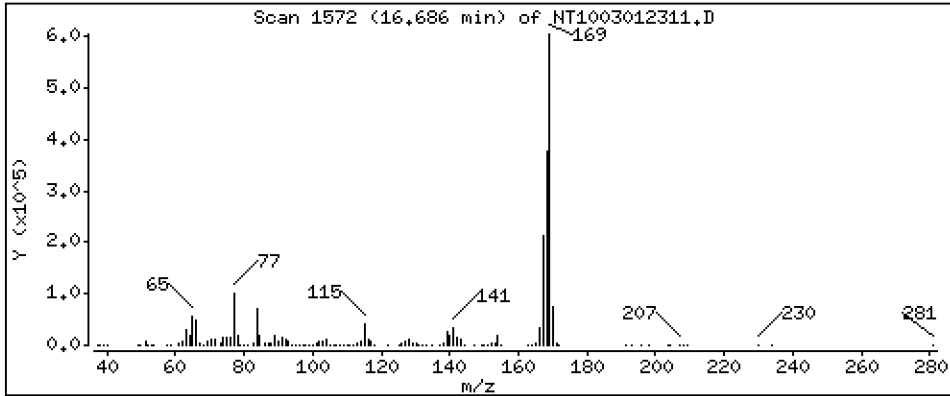
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,416 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

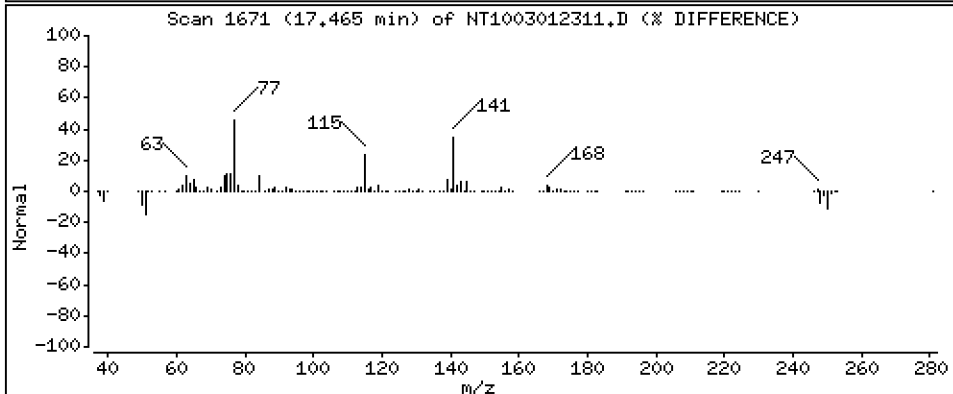
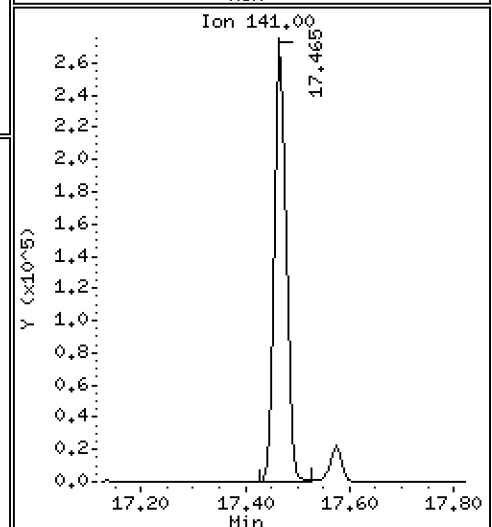
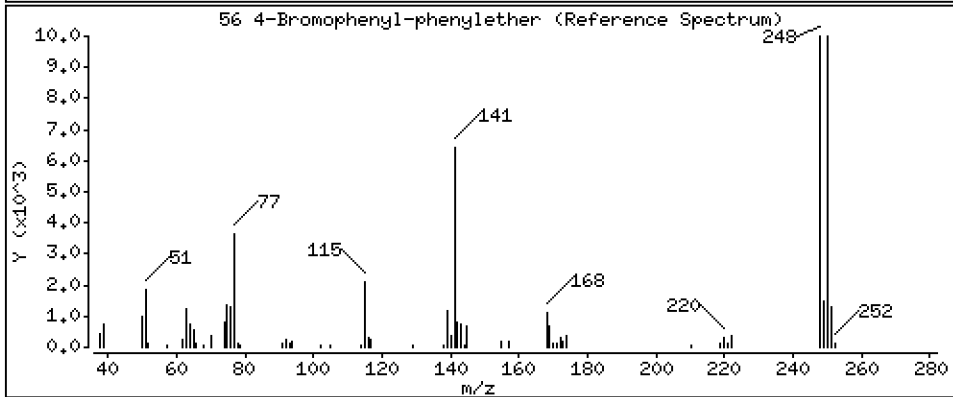
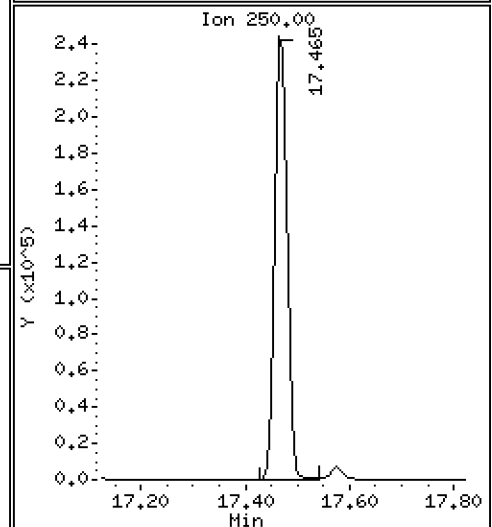
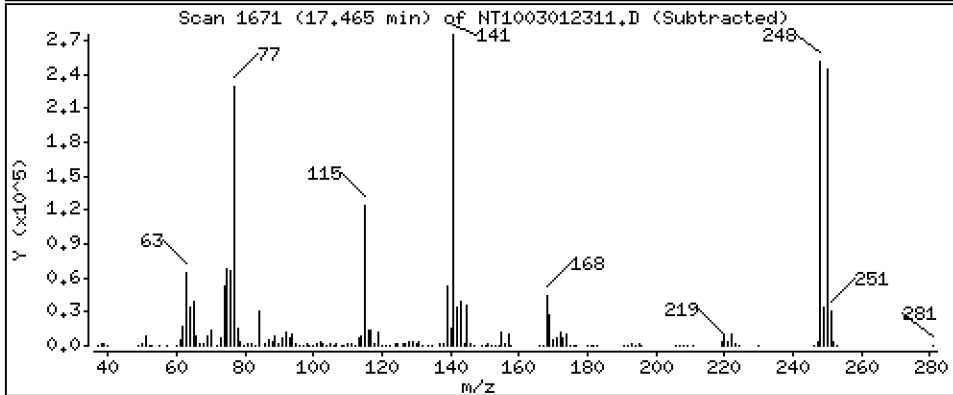
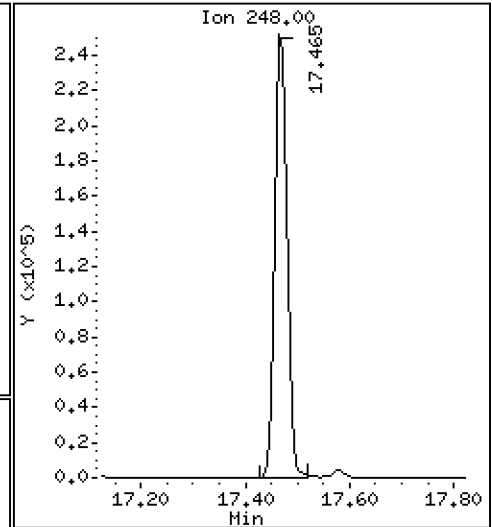
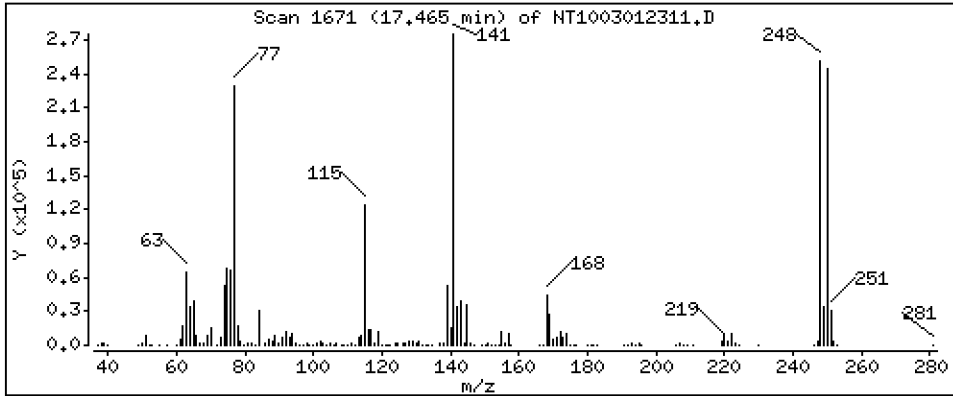
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,460 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

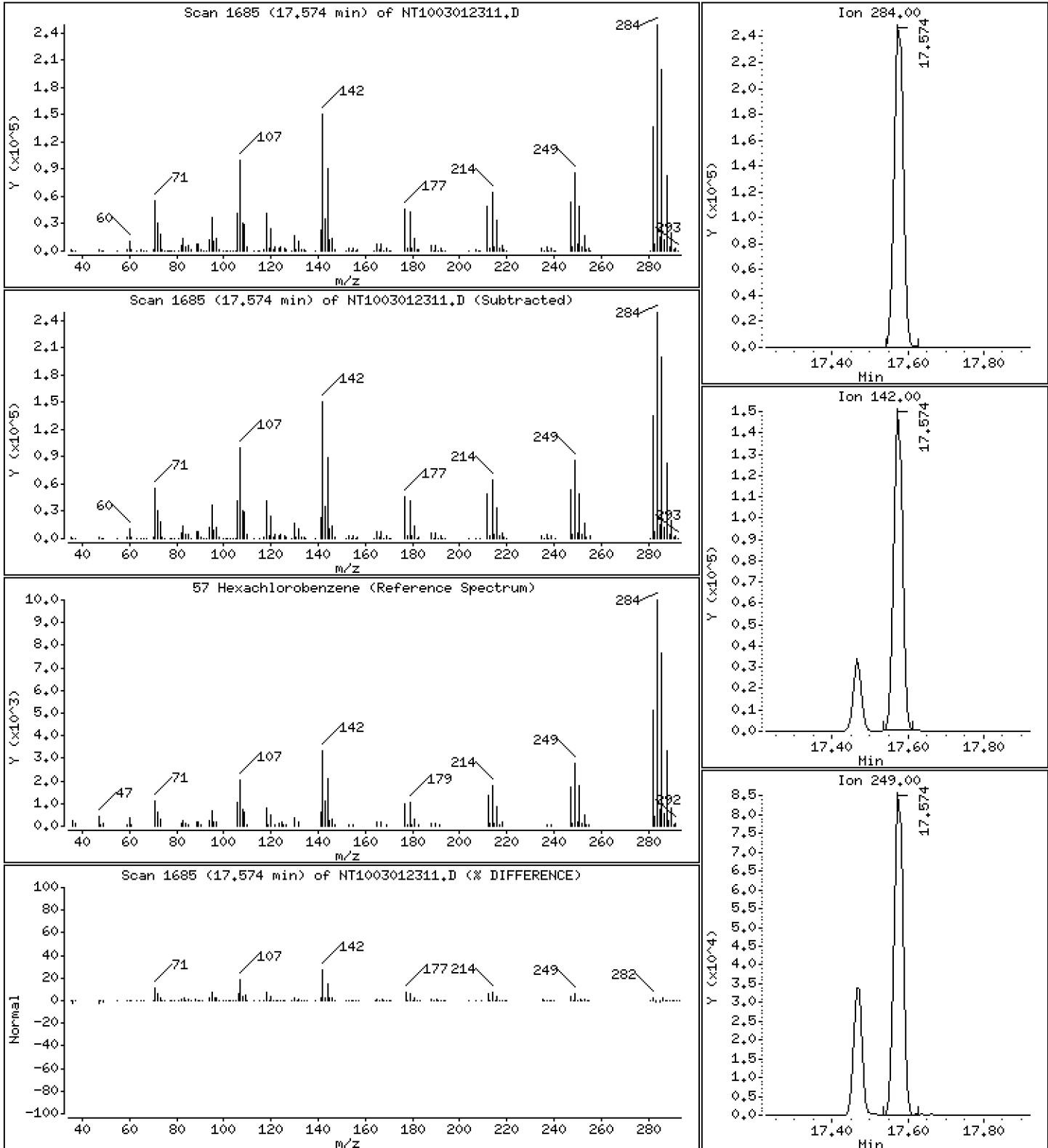
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,805 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

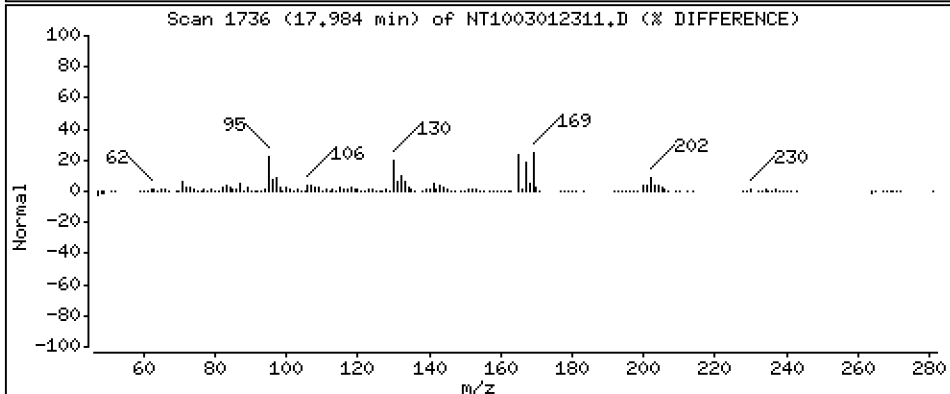
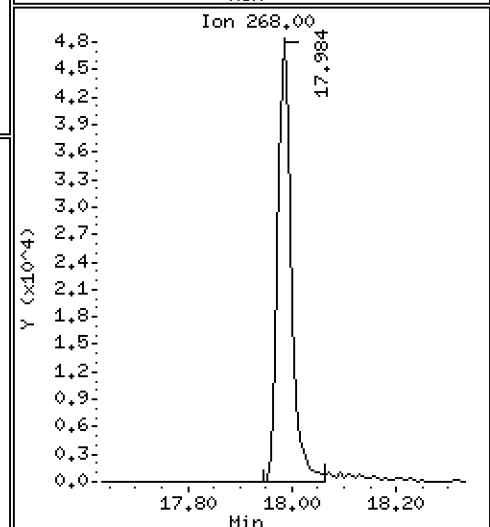
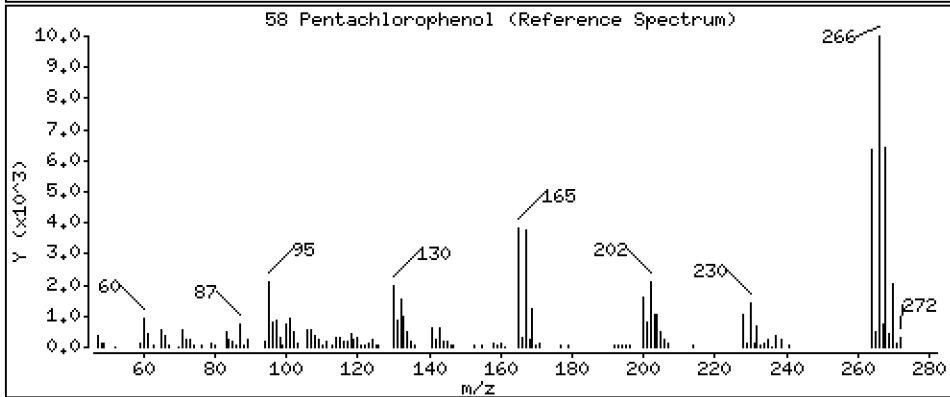
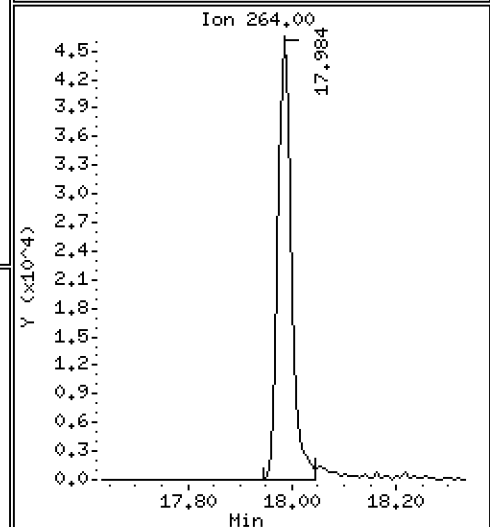
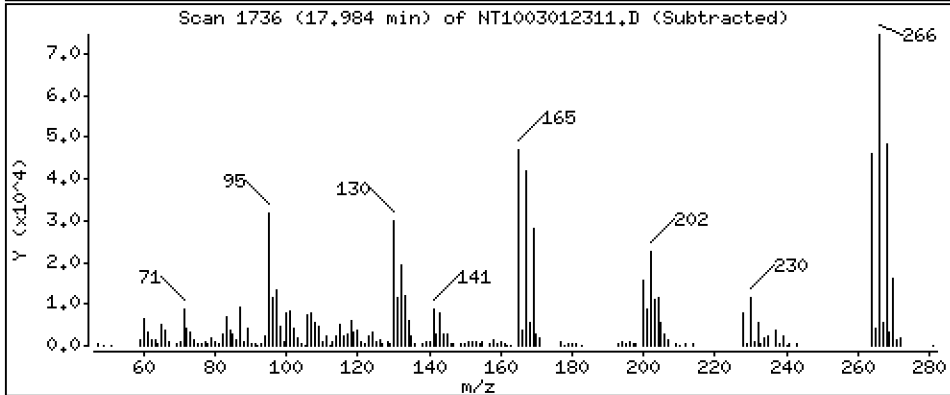
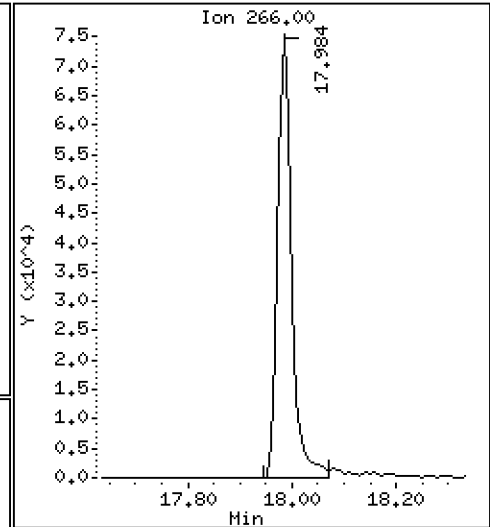
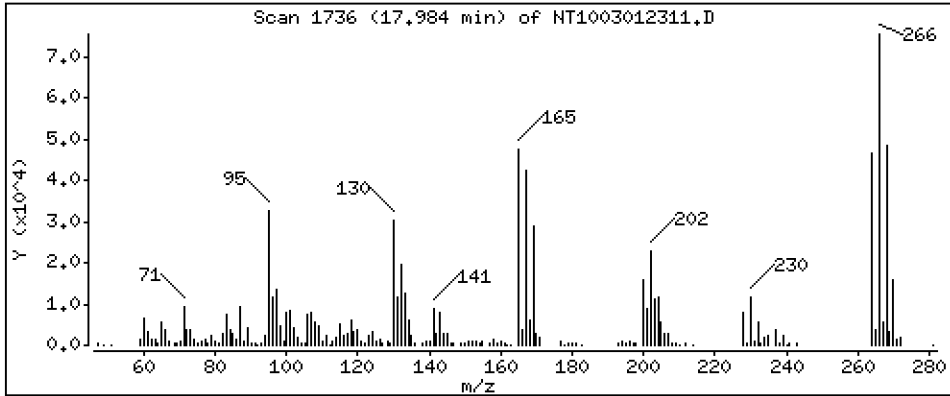
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,492 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

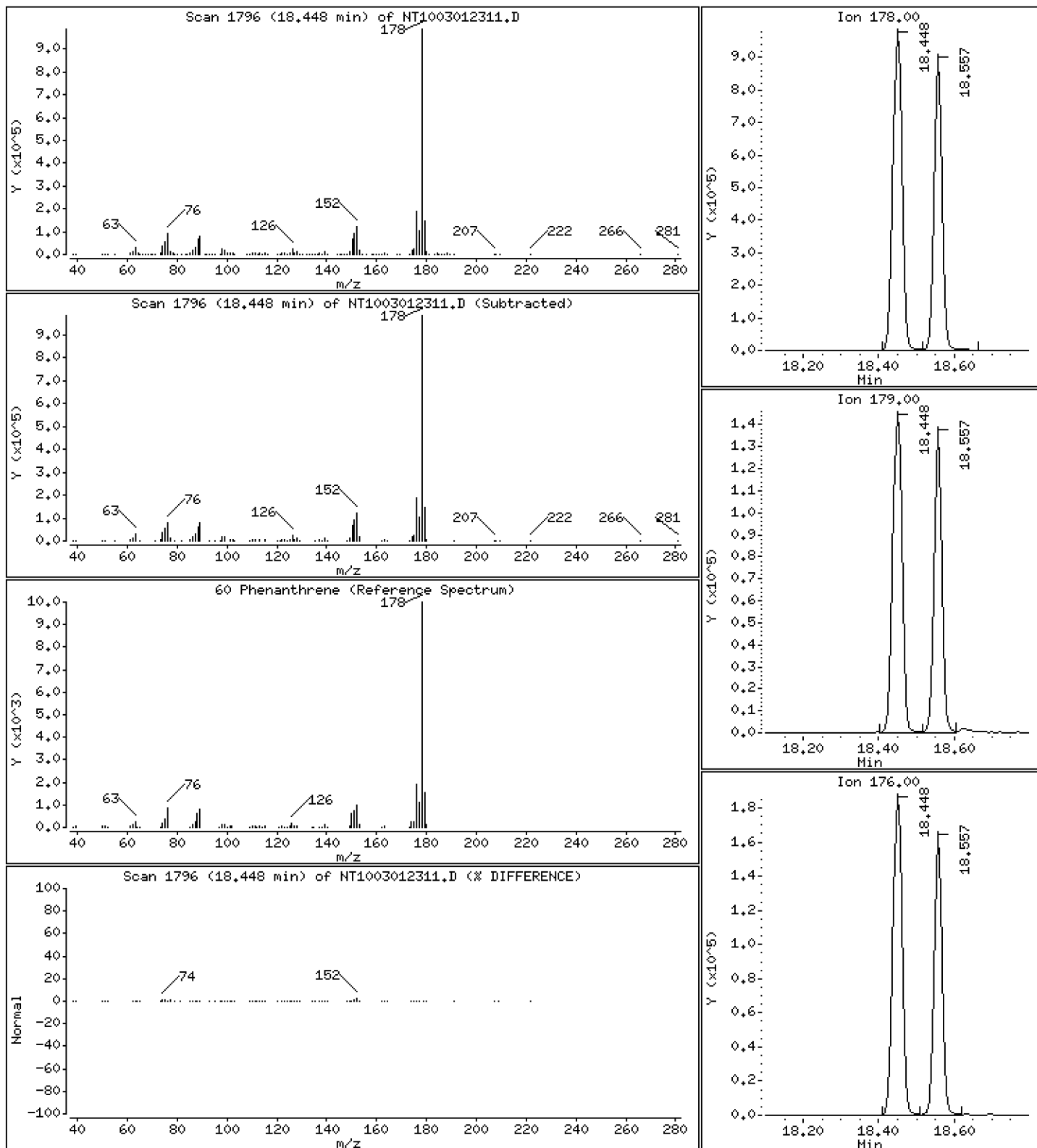
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,085 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

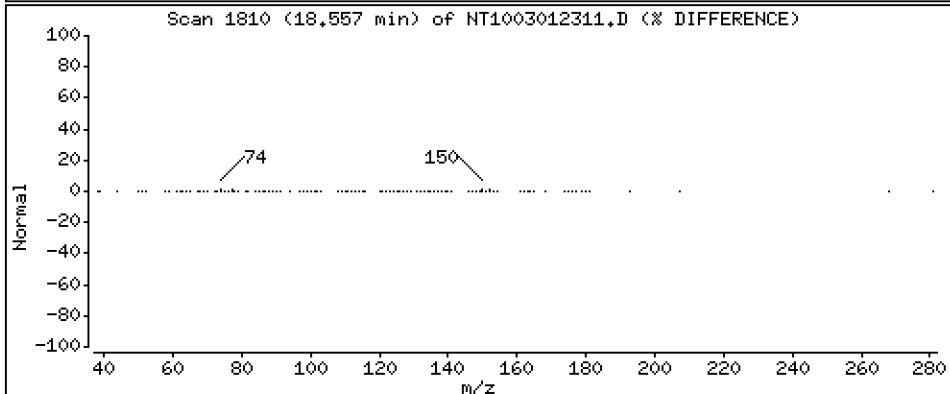
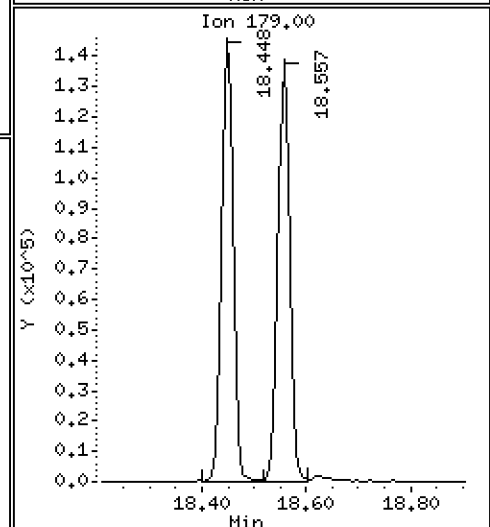
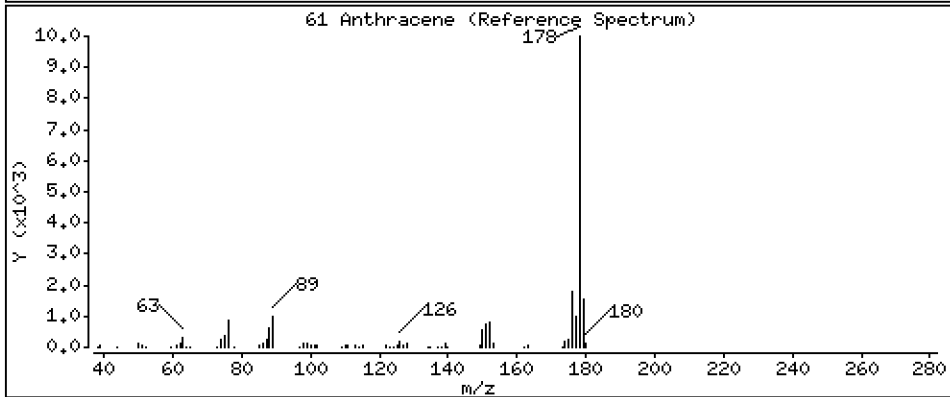
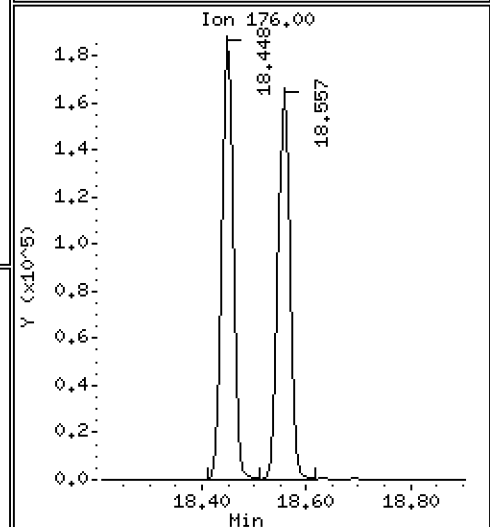
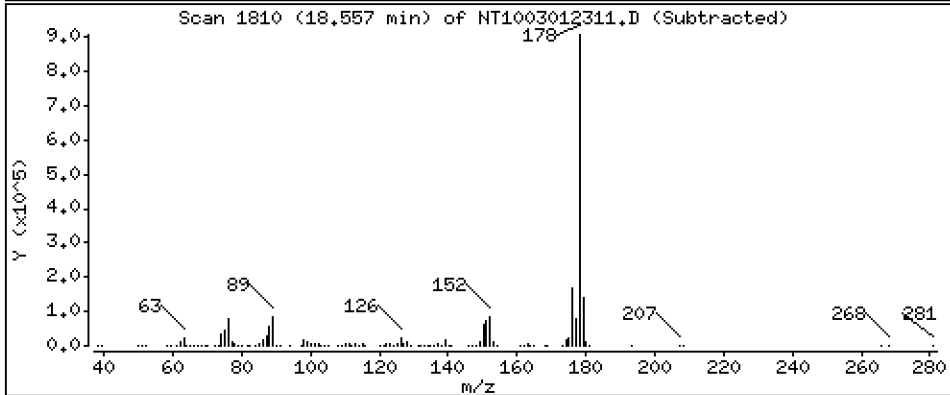
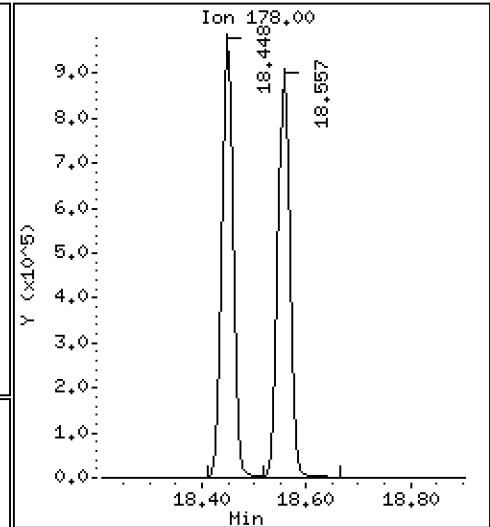
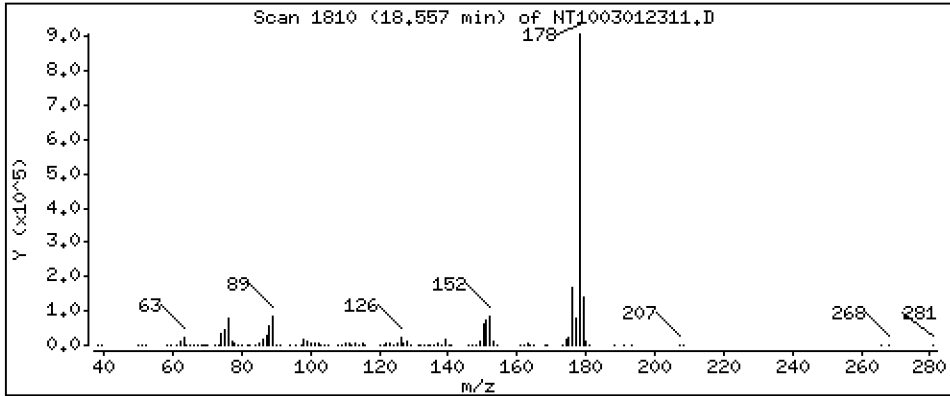
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,585 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

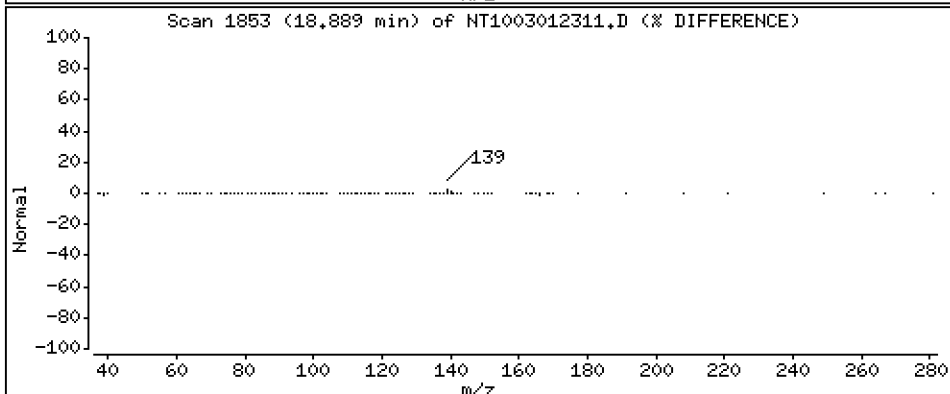
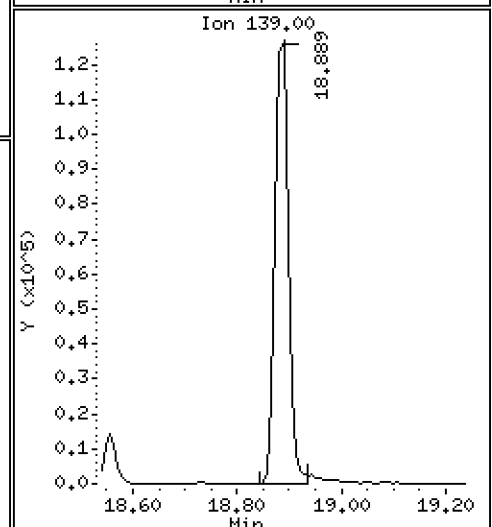
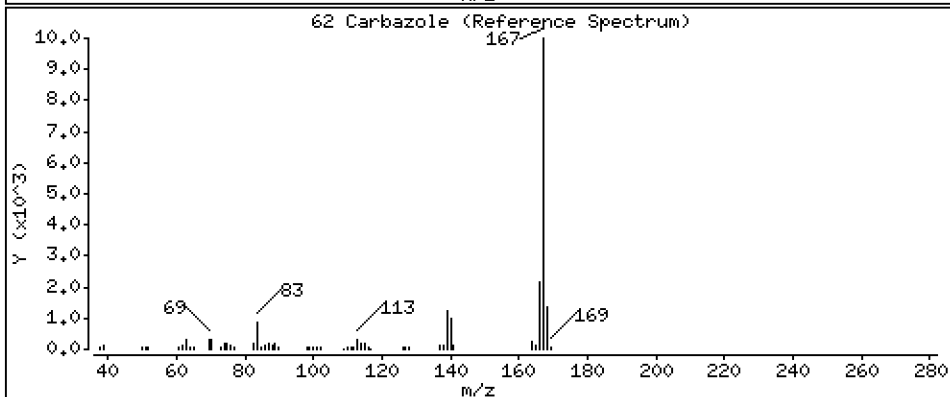
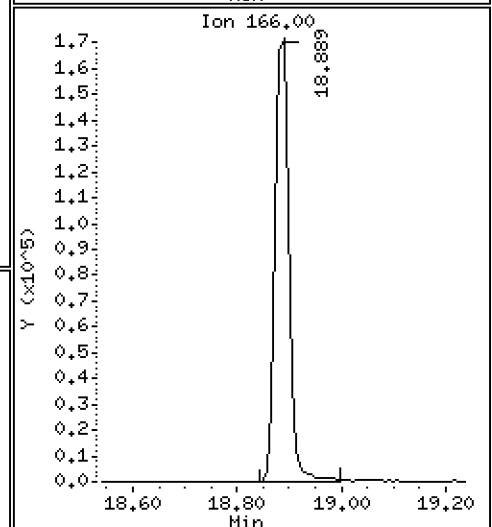
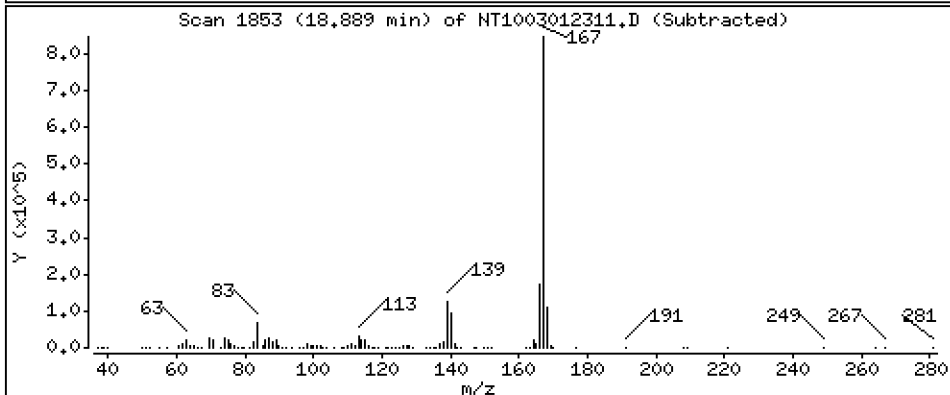
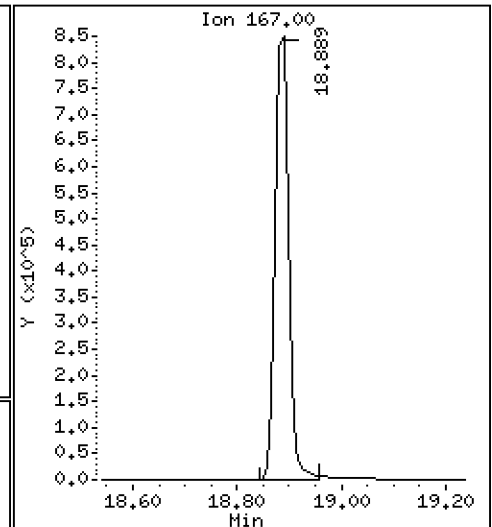
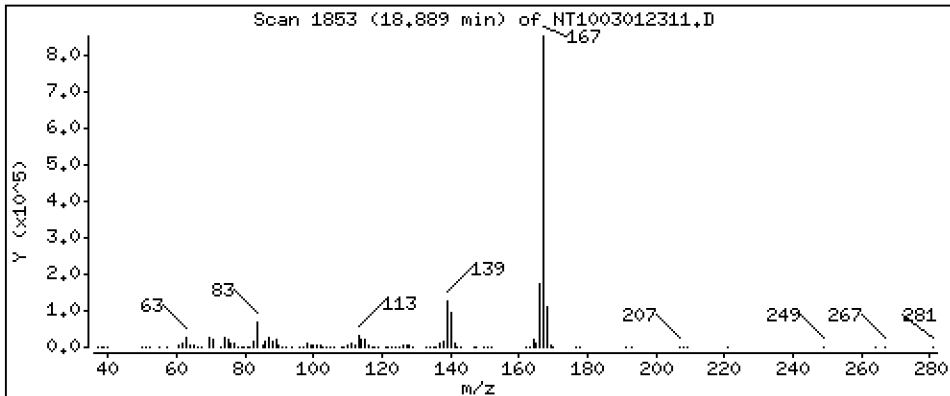
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,335 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

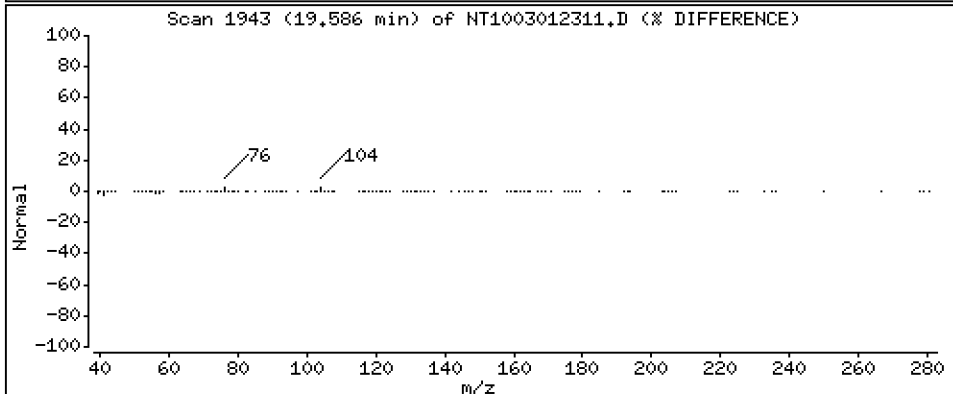
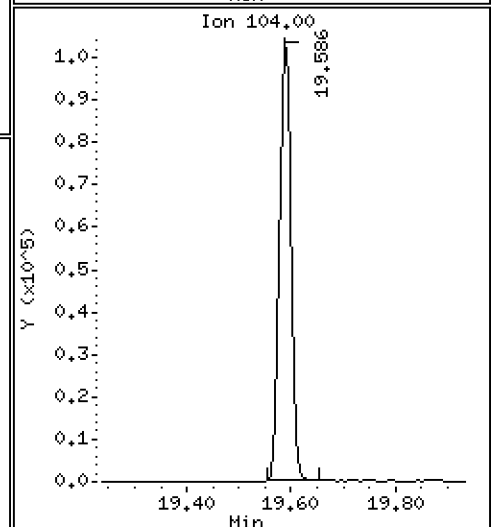
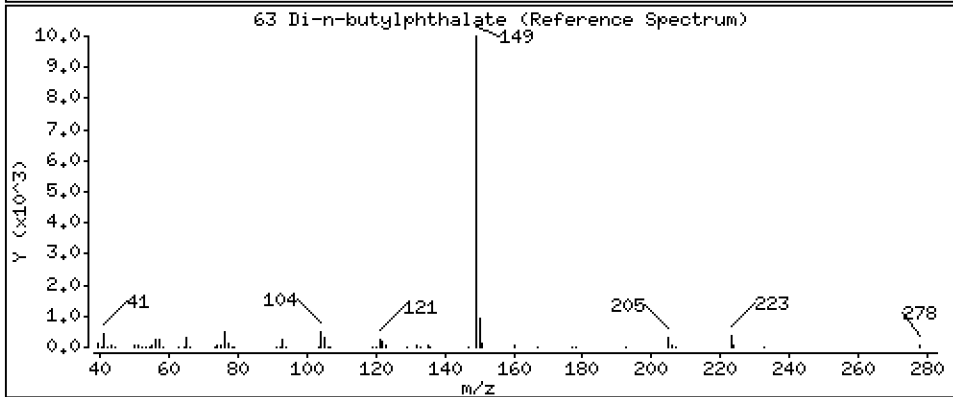
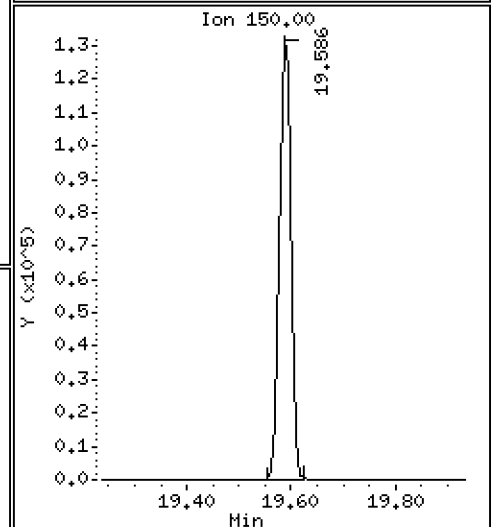
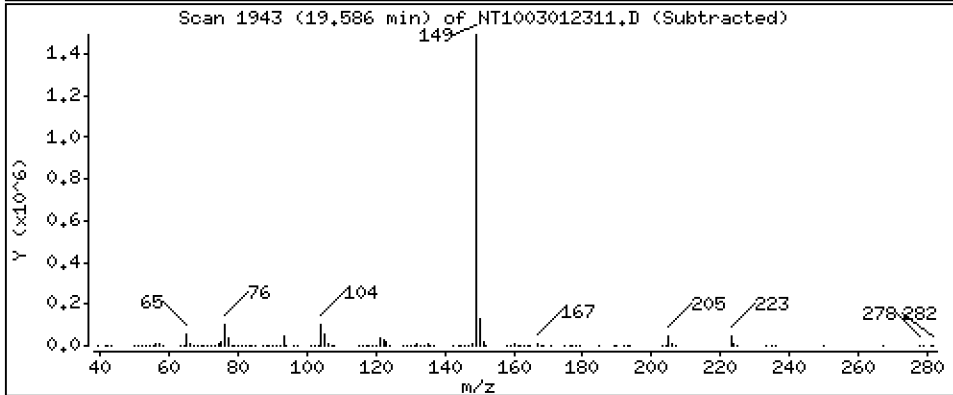
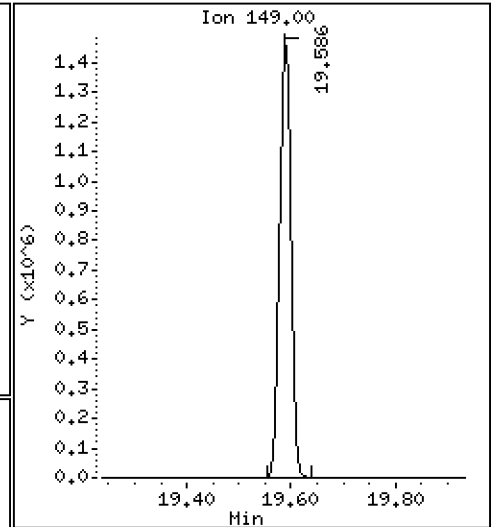
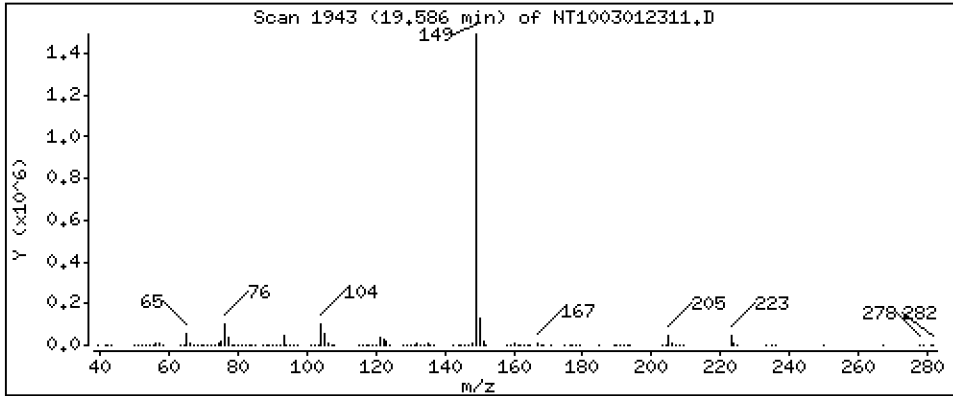
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,463 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

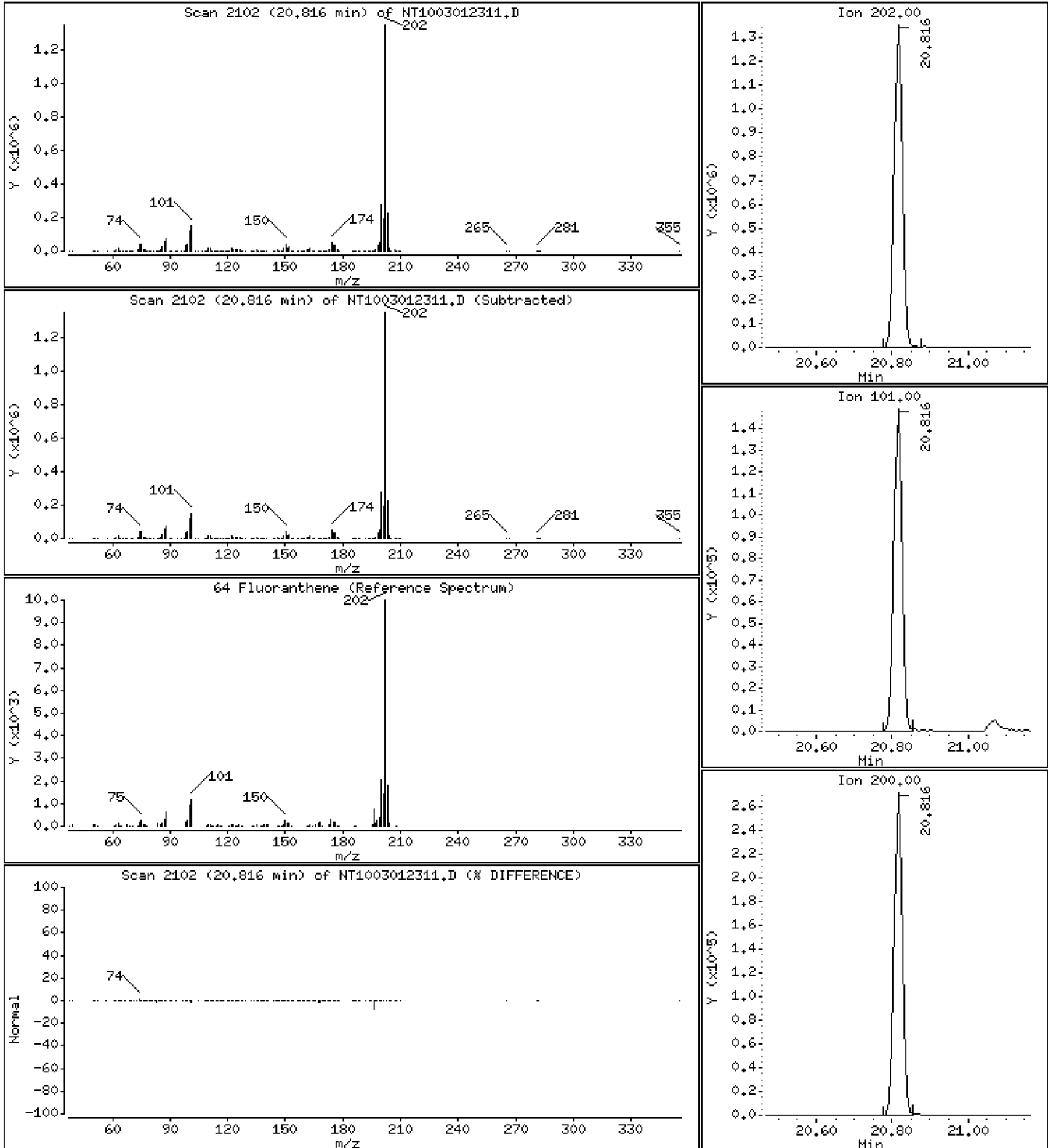
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,542 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

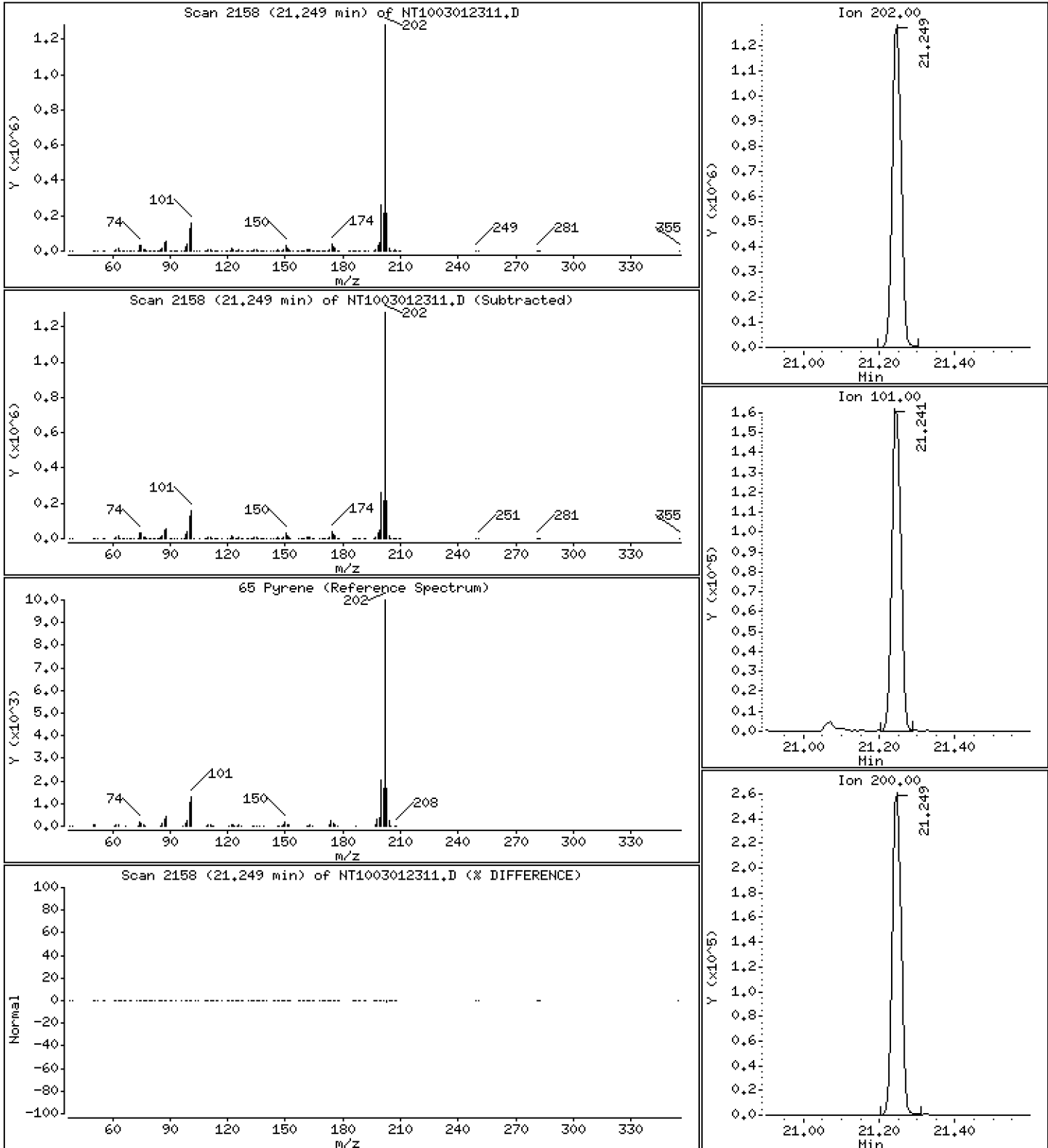
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,626 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

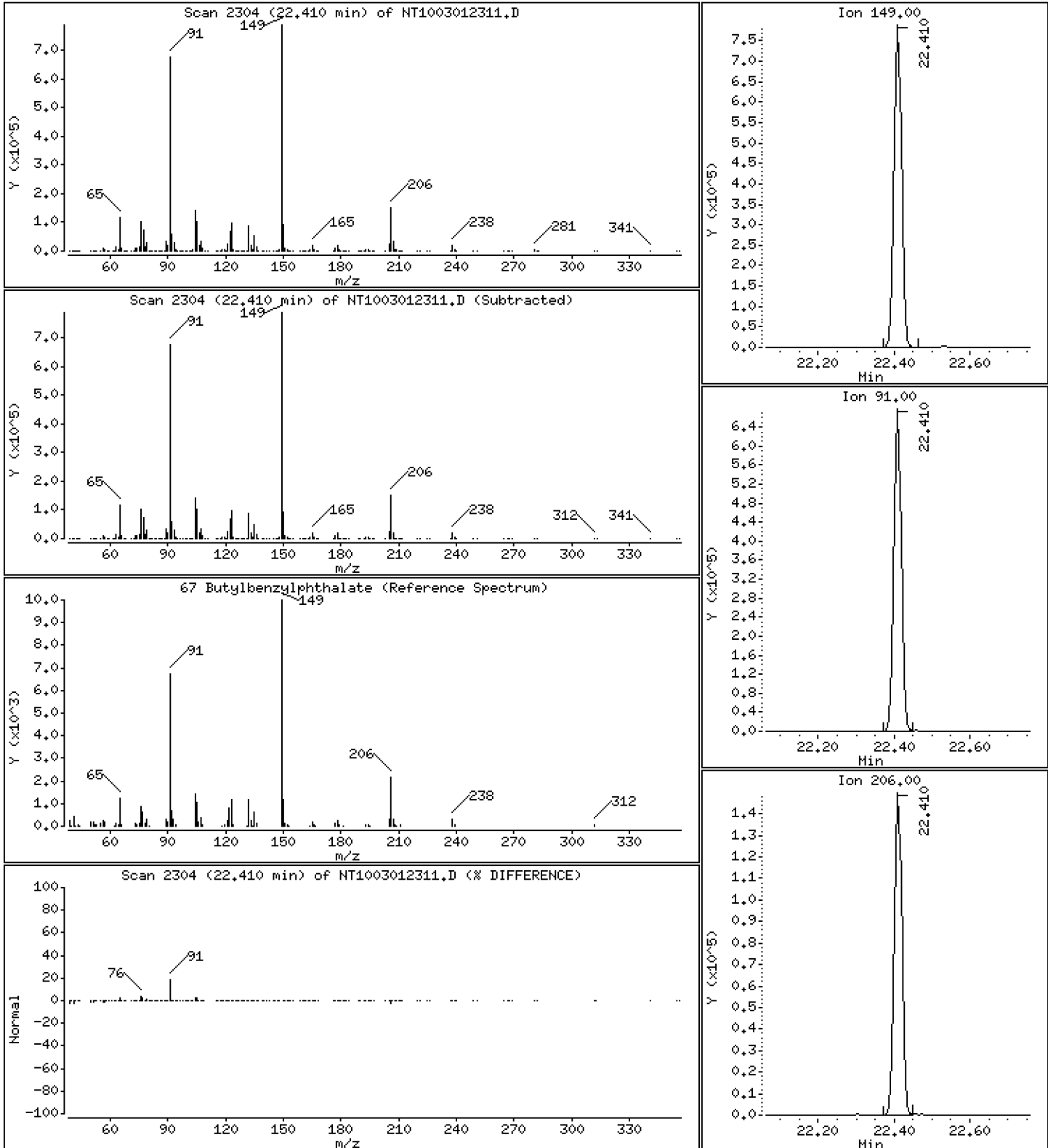
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,525 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

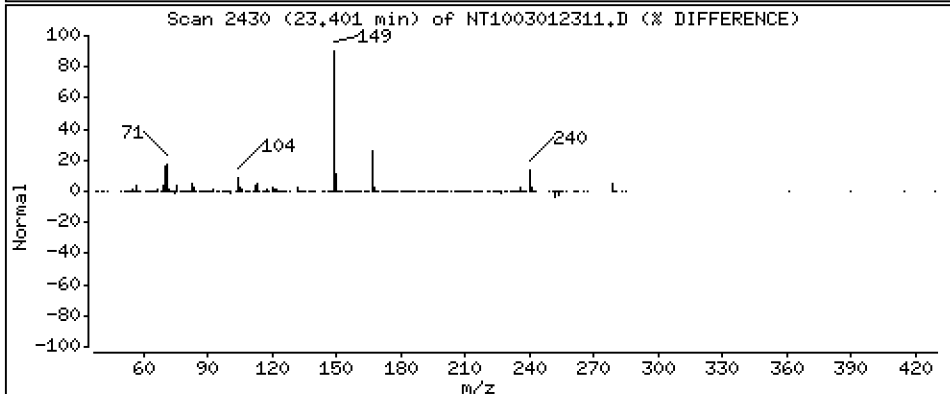
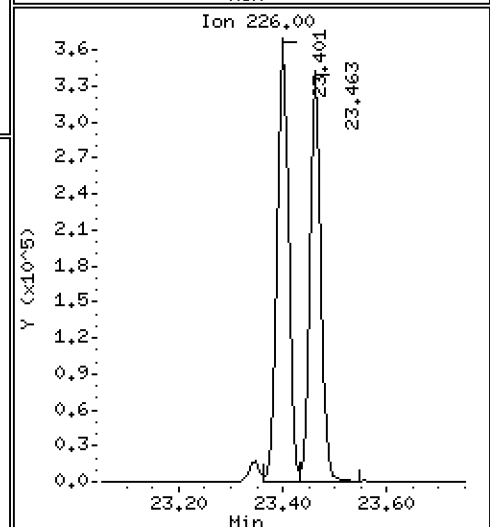
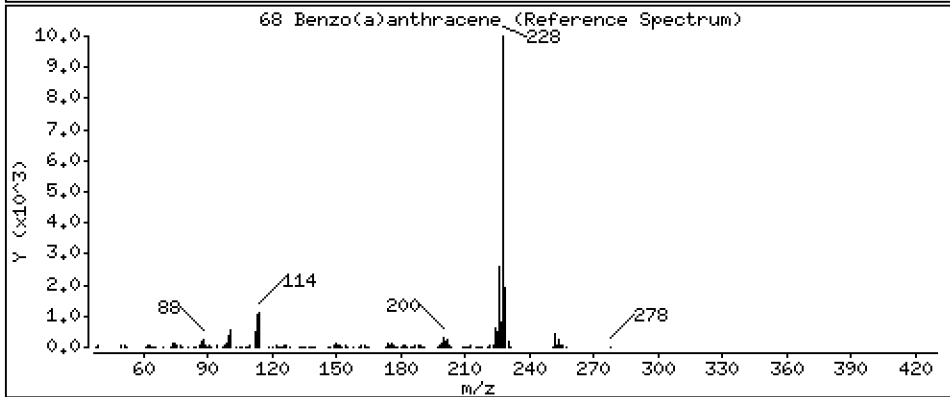
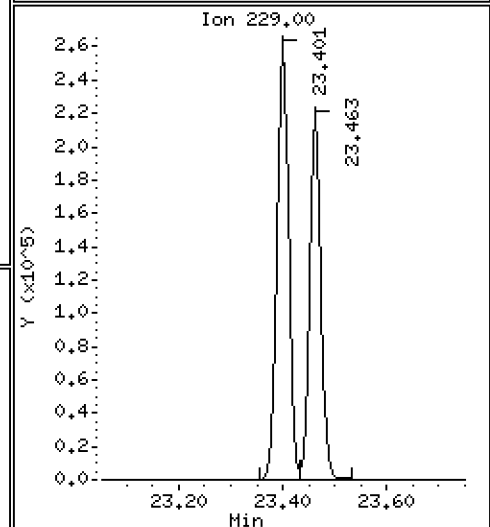
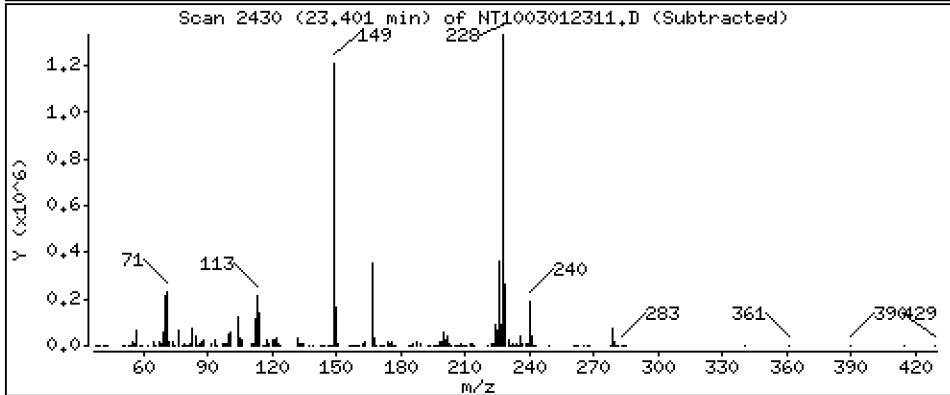
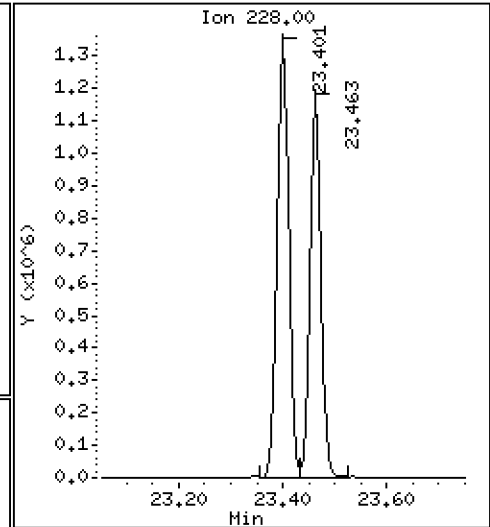
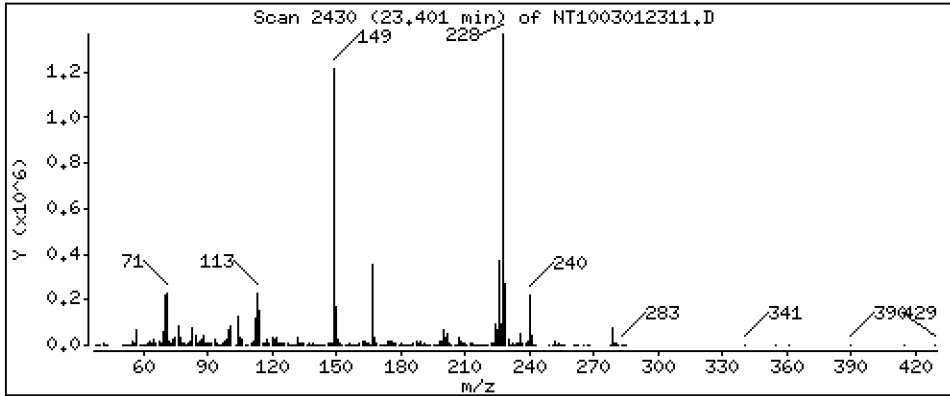
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,578 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

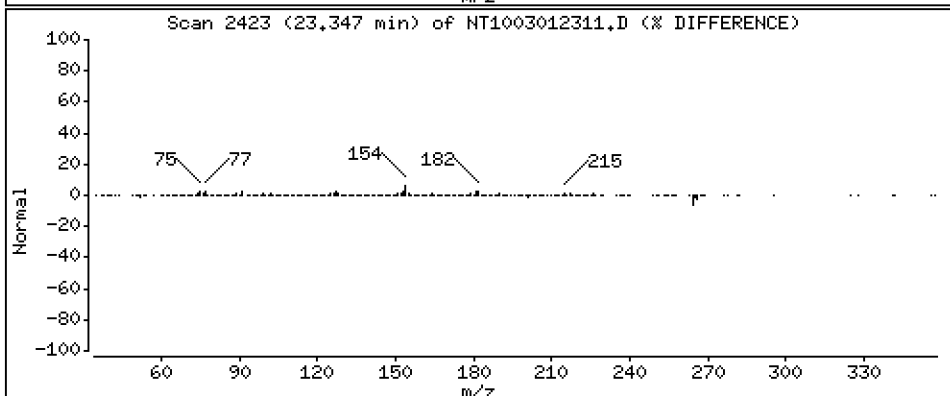
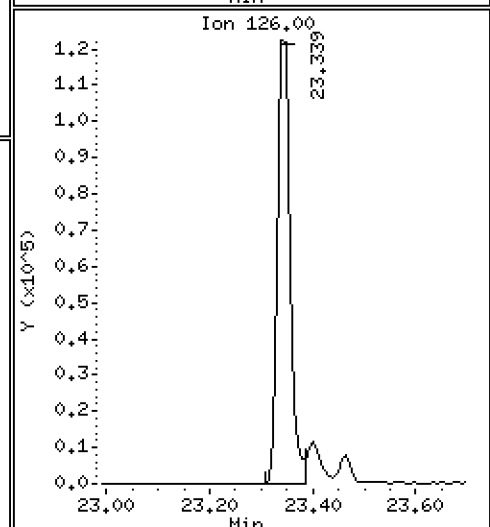
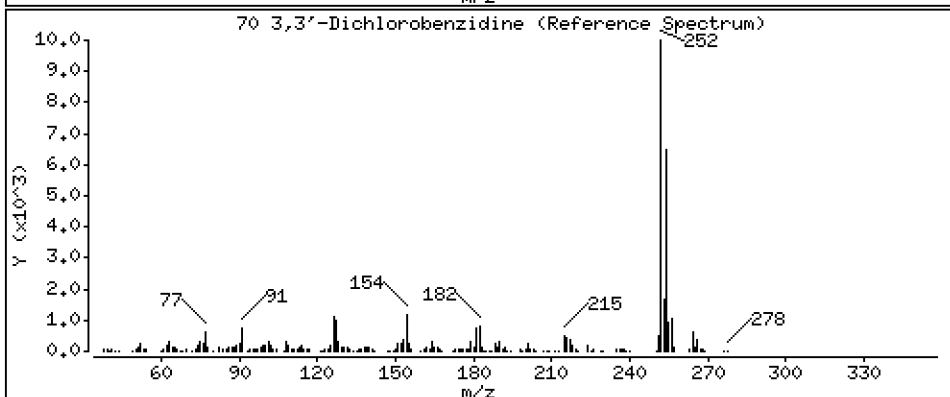
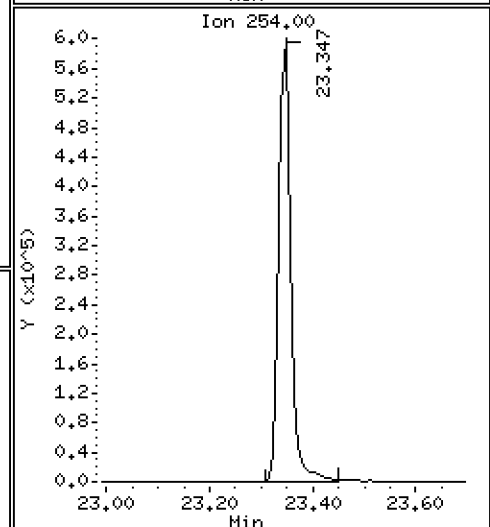
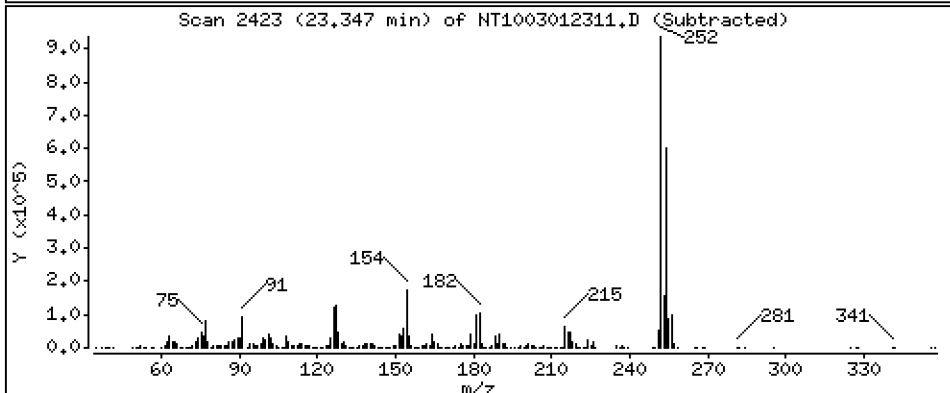
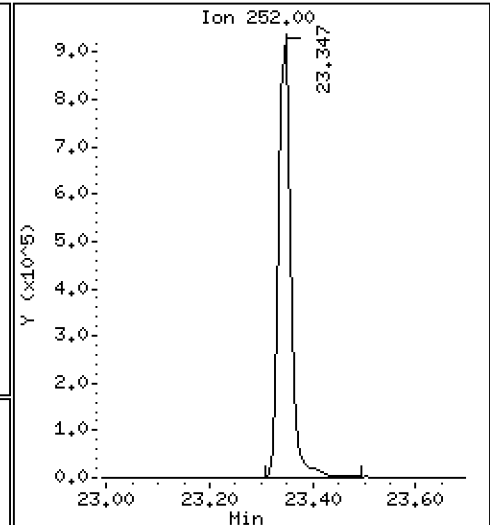
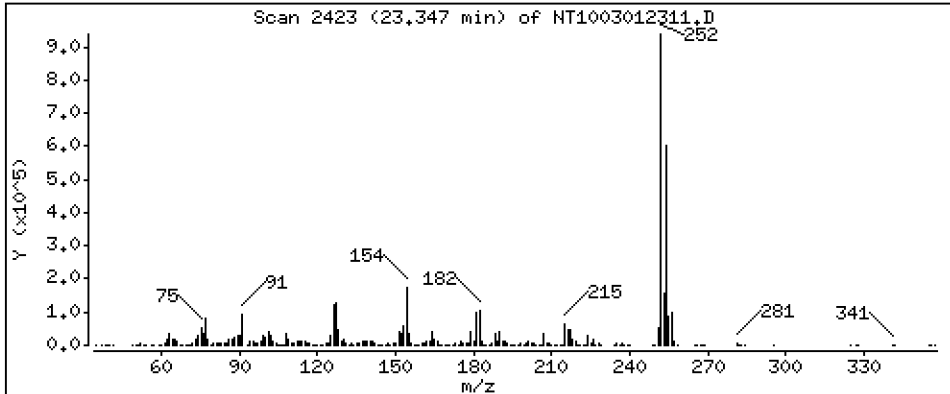
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 7,383 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

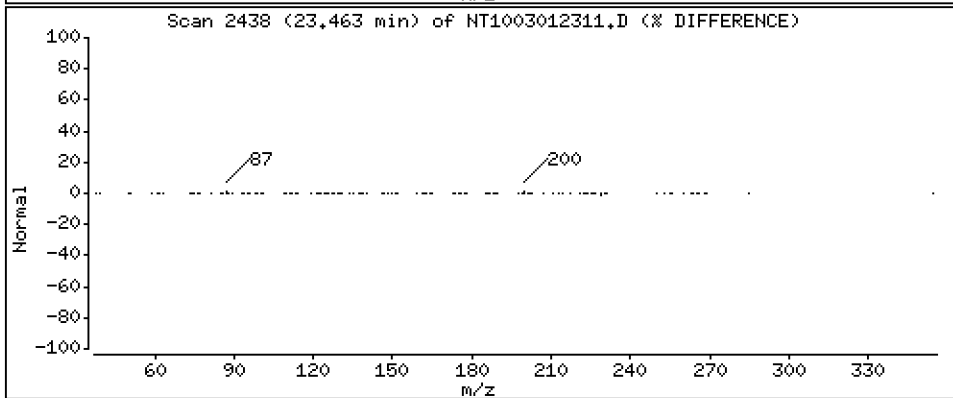
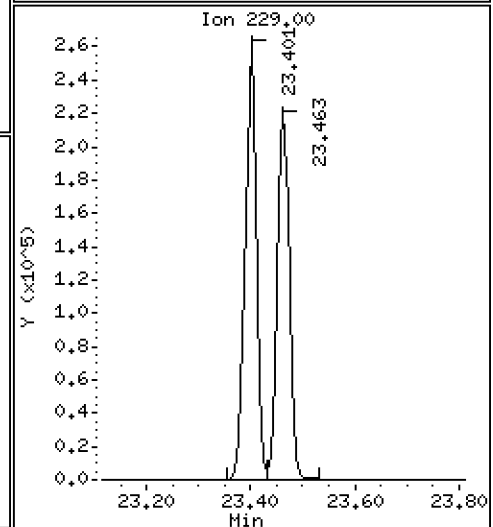
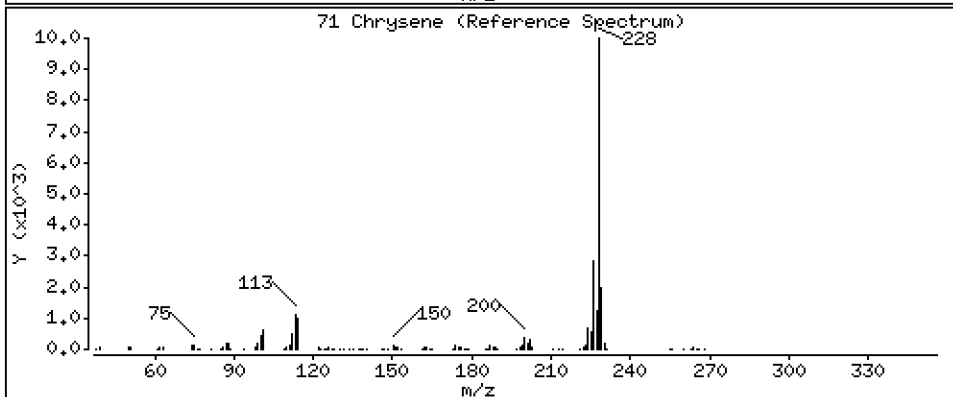
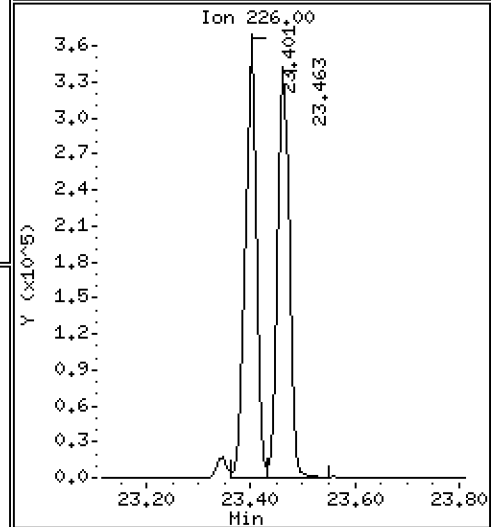
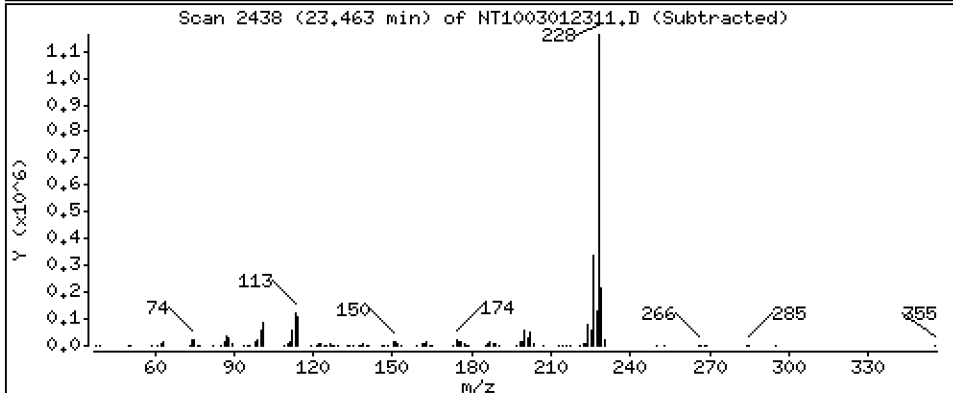
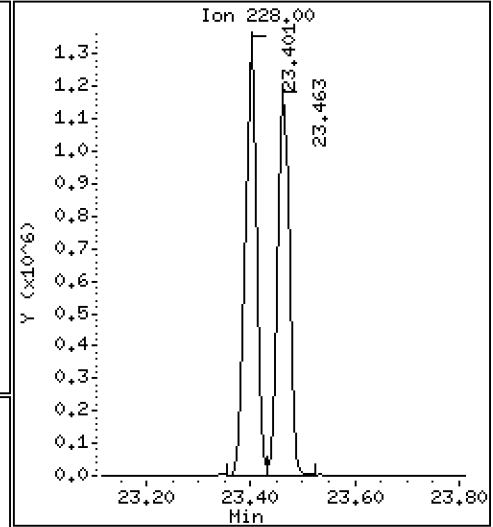
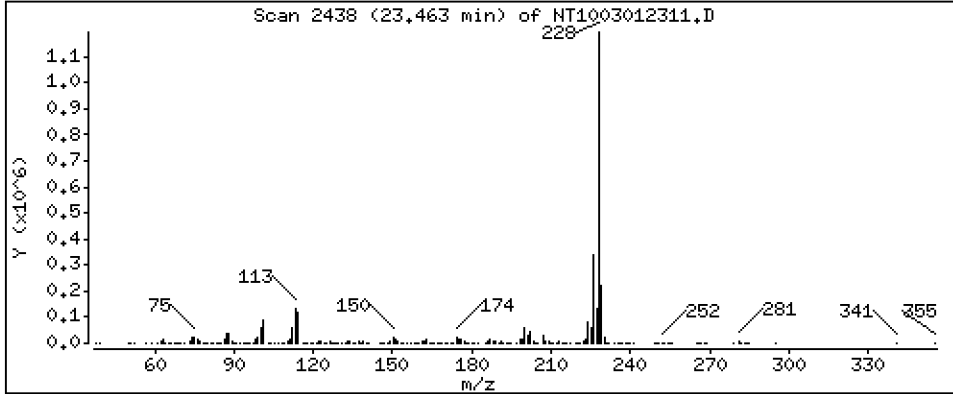
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,967 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

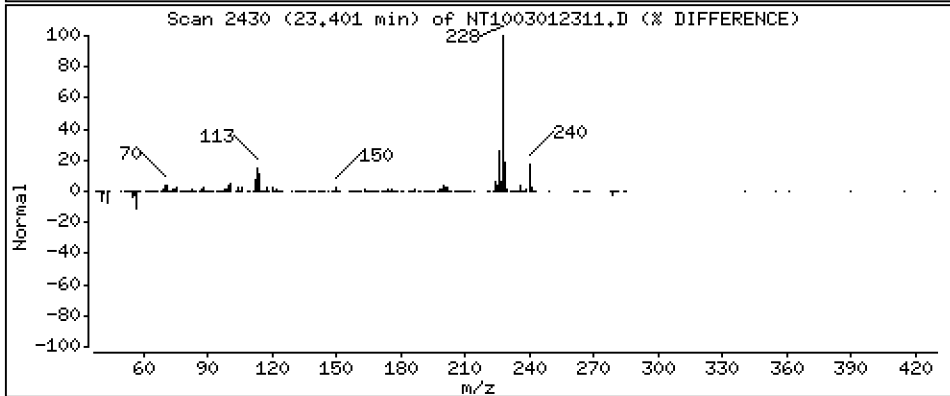
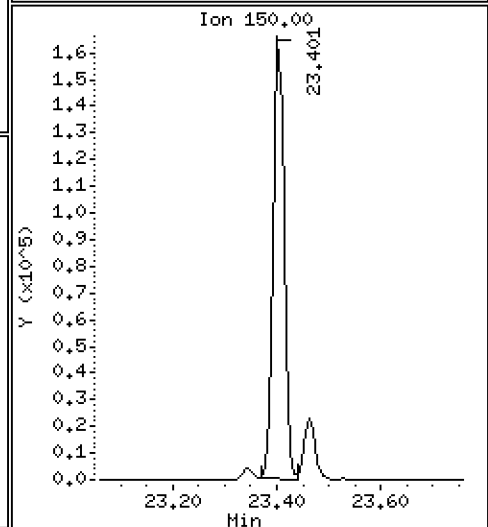
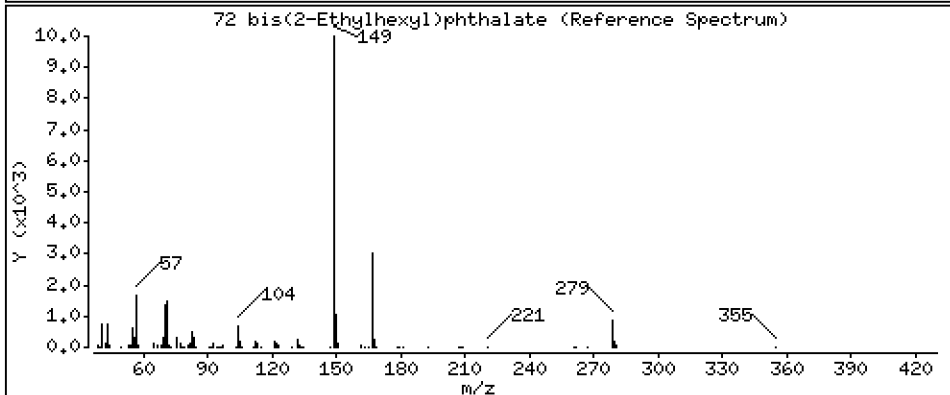
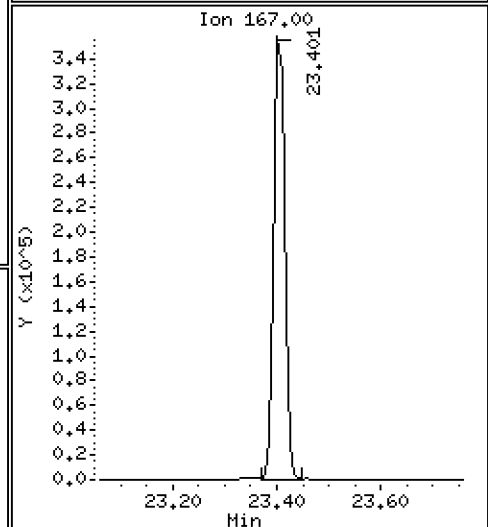
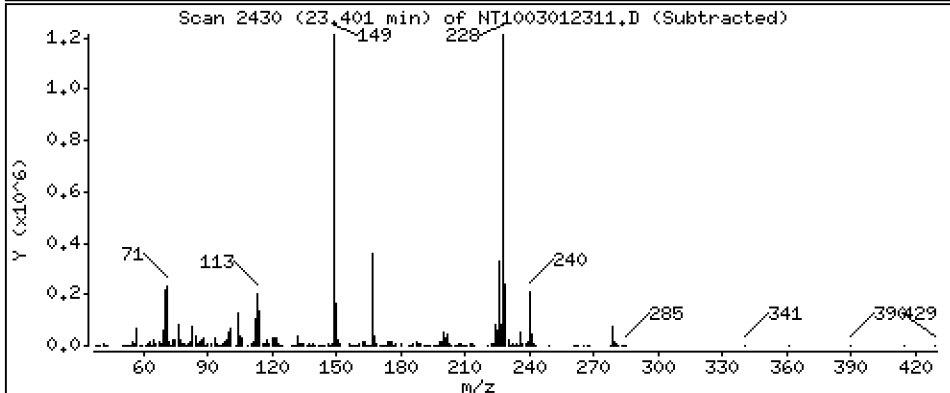
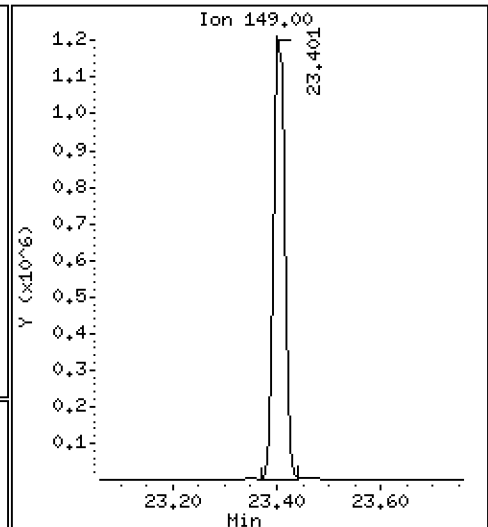
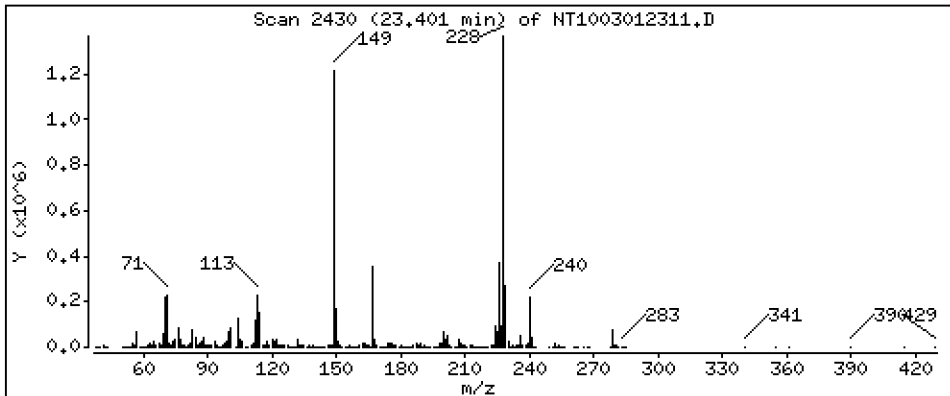
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,956 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

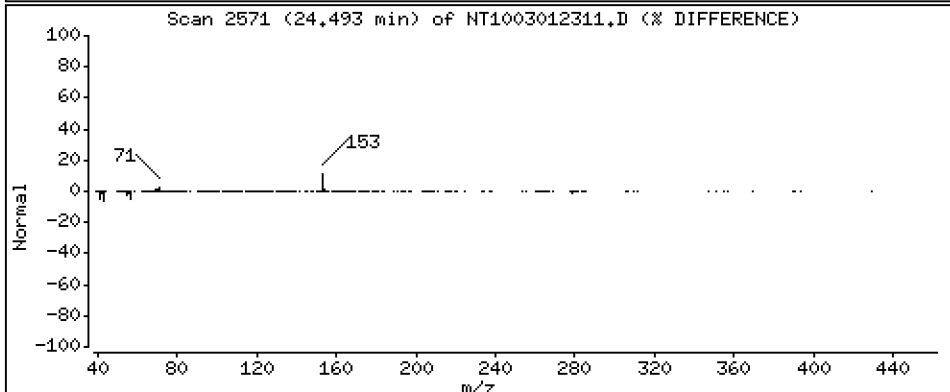
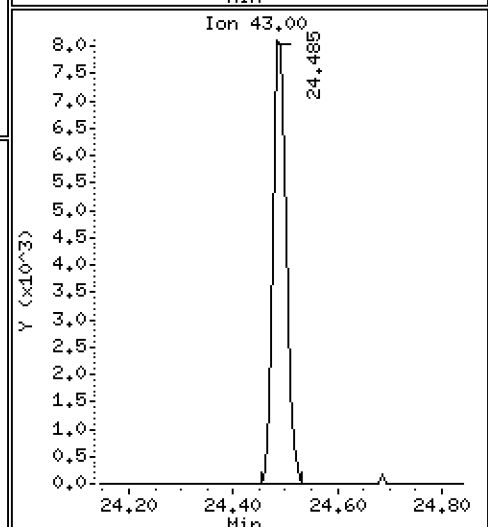
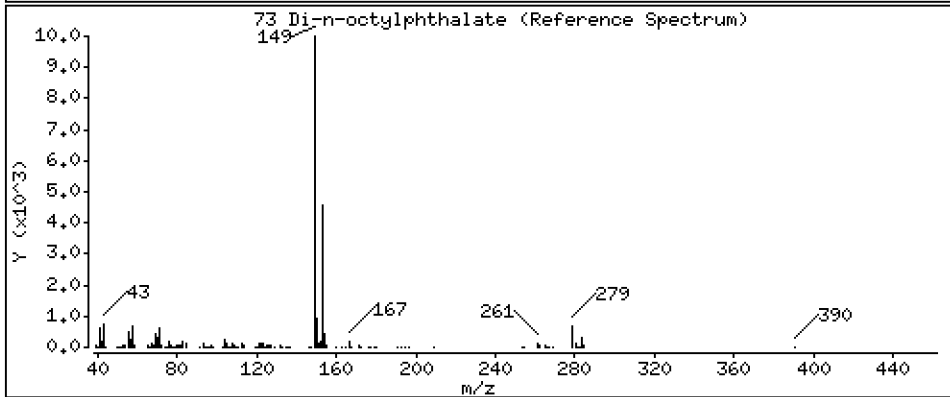
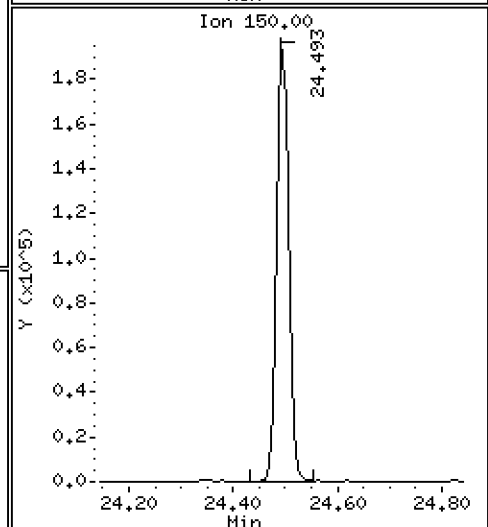
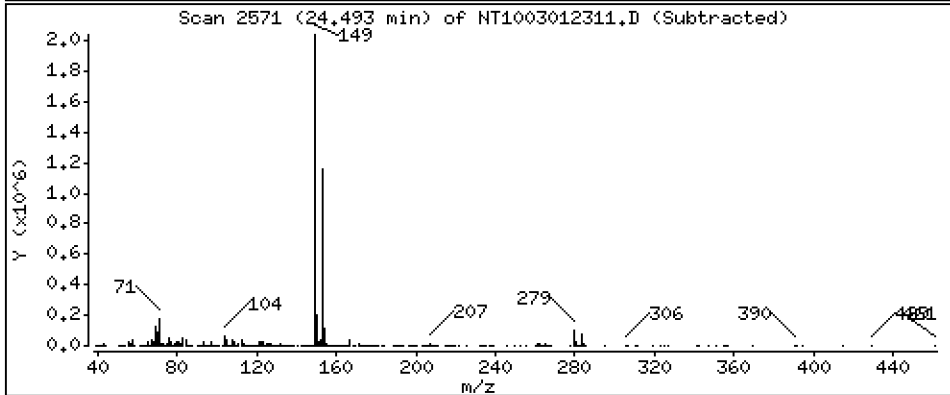
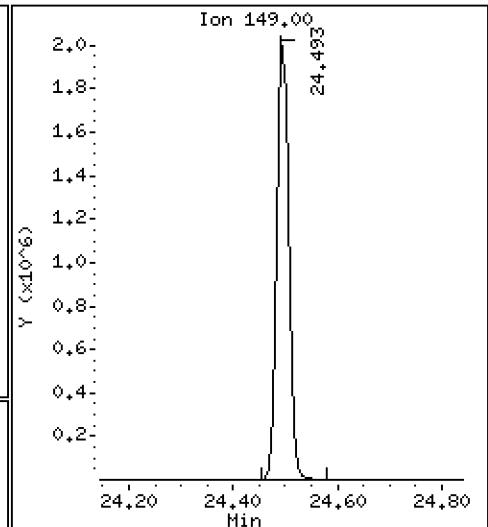
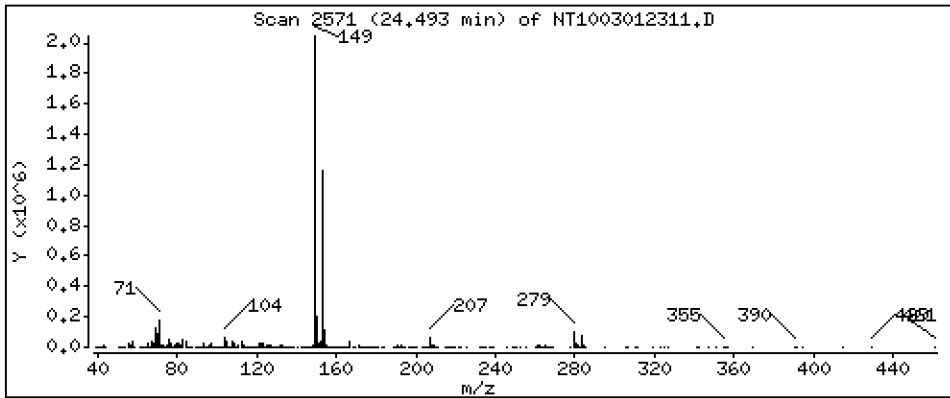
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,844 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

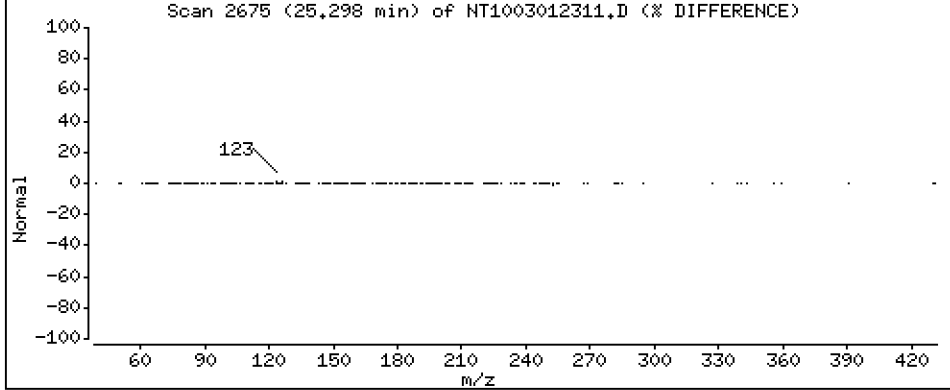
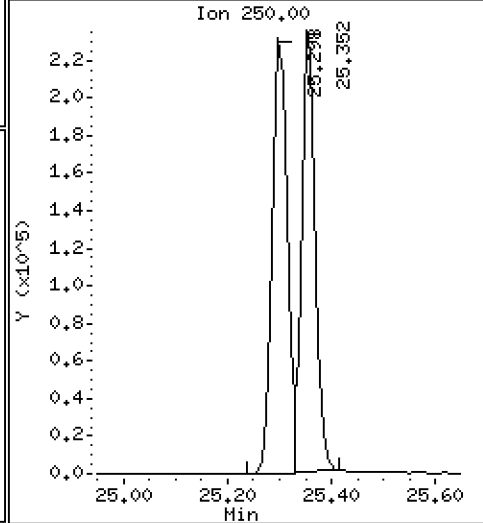
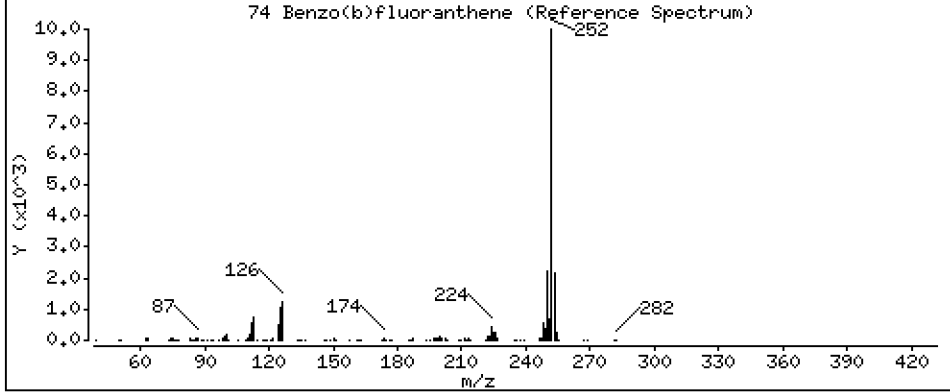
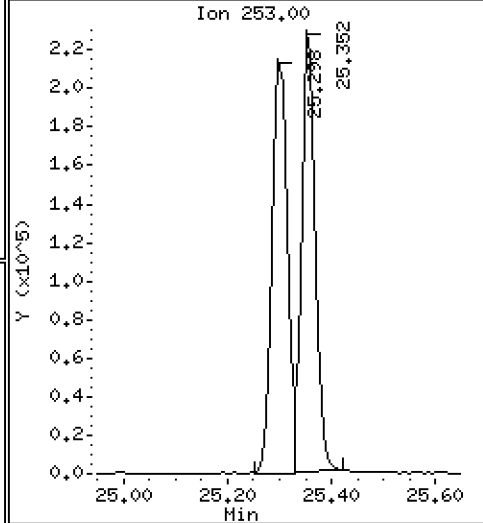
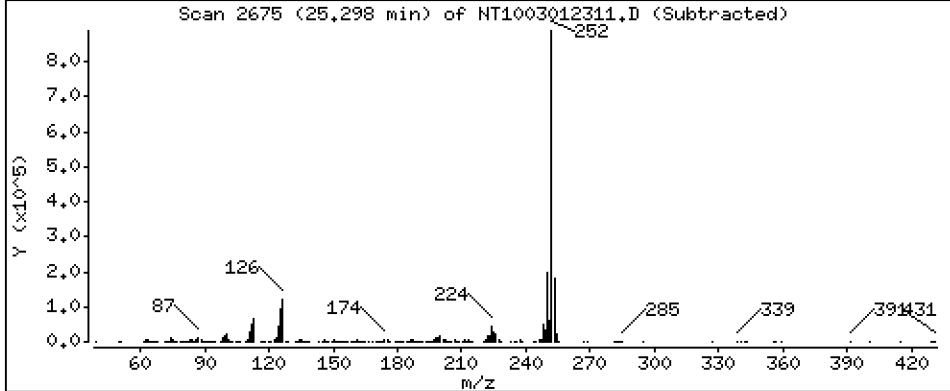
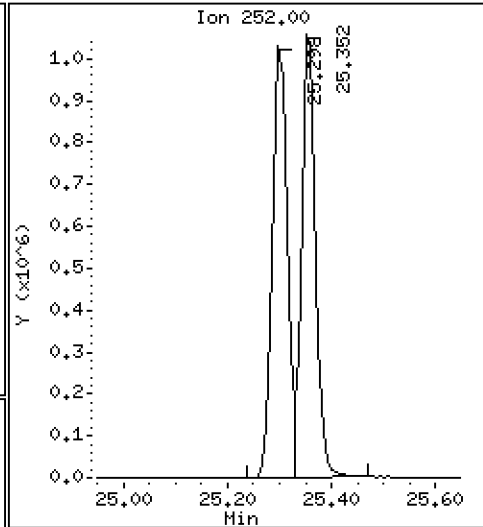
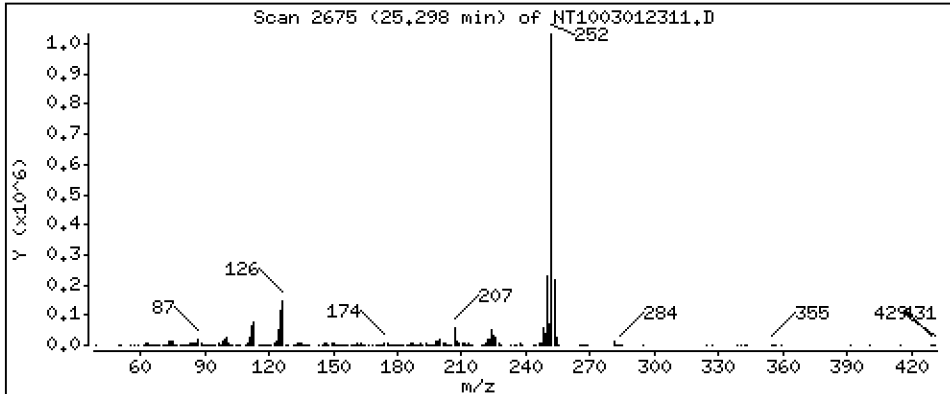
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,319 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

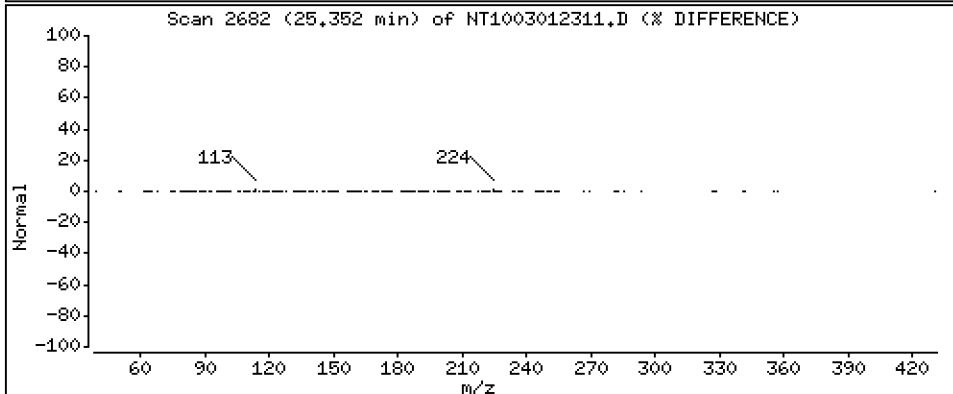
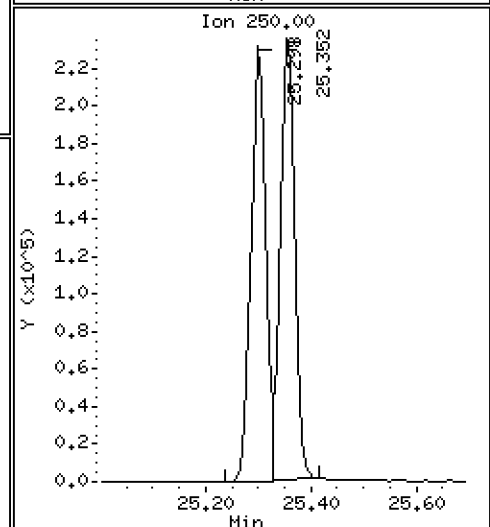
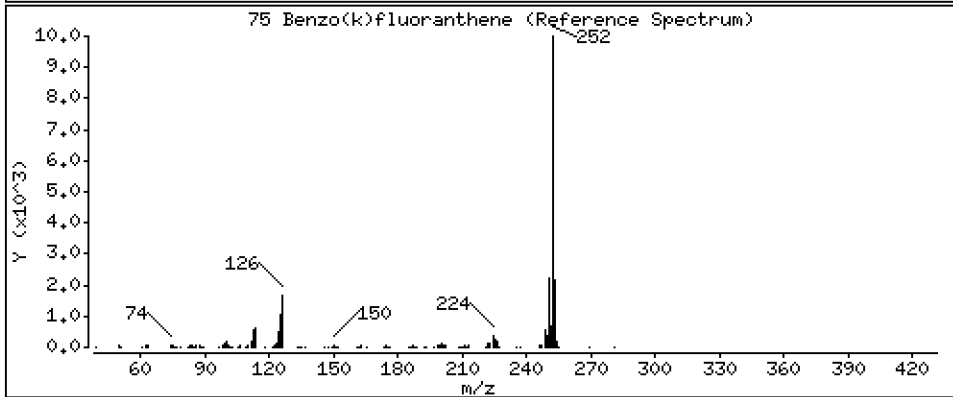
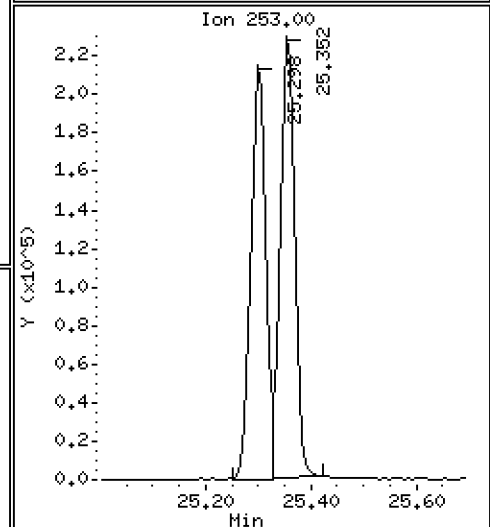
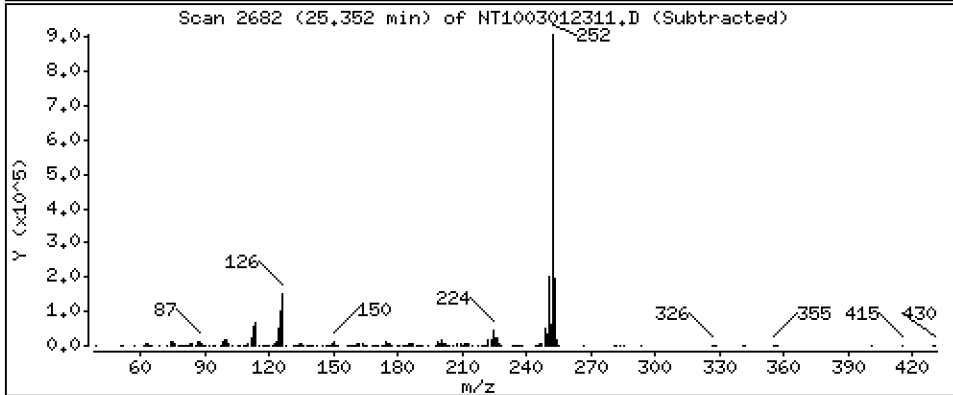
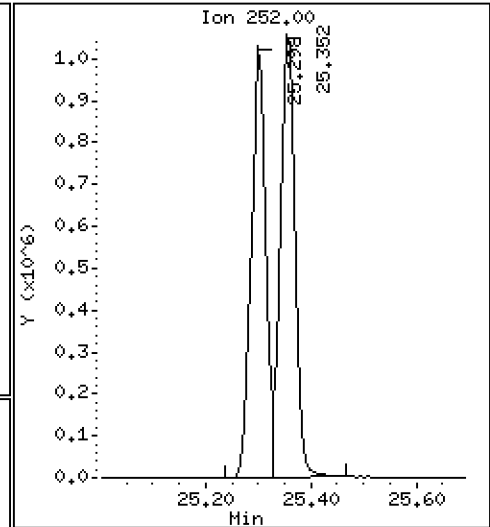
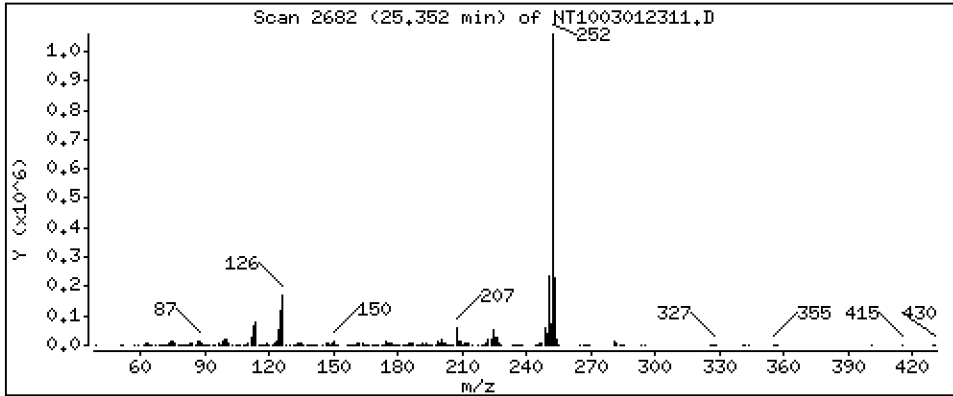
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,563 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

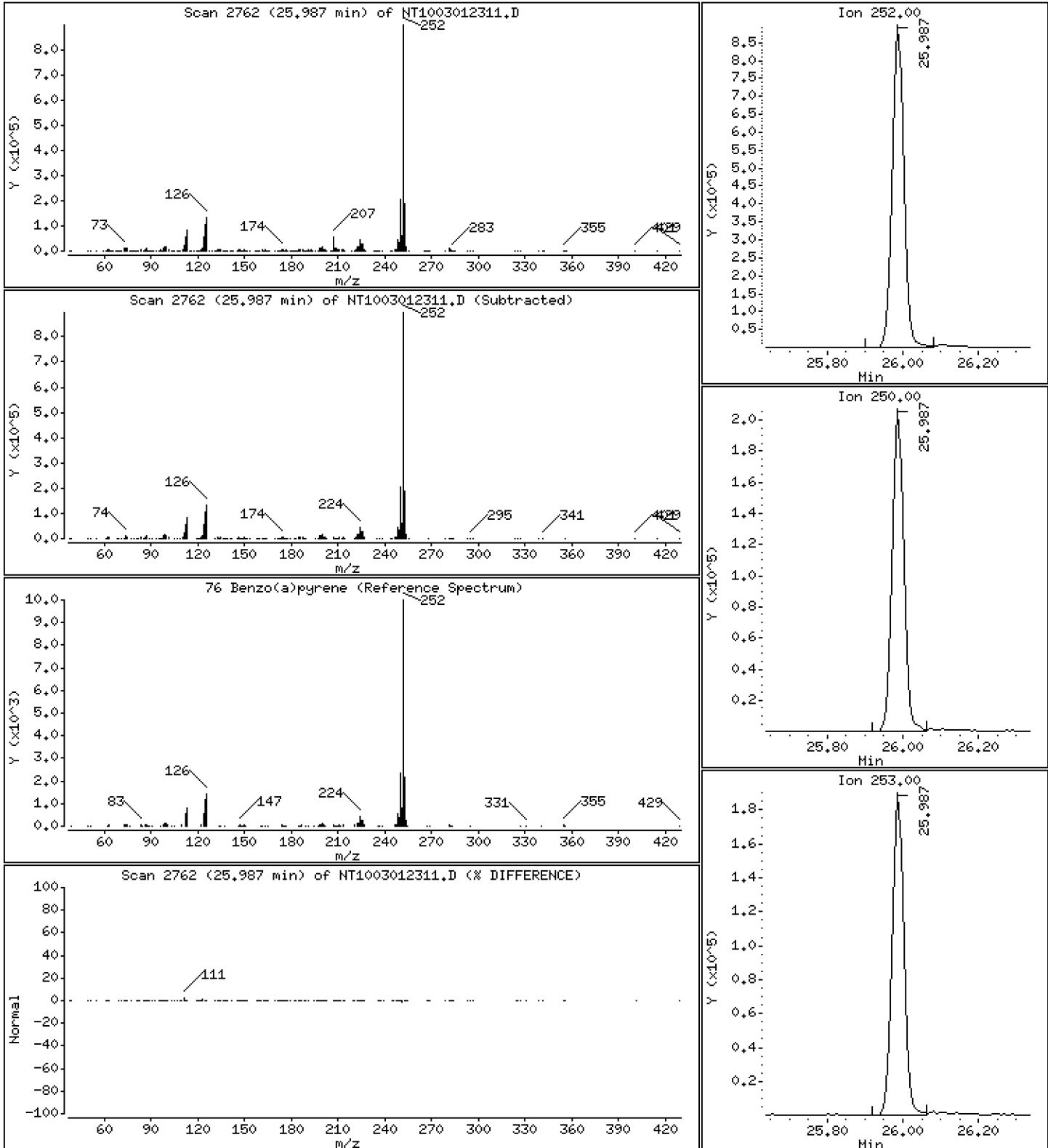
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,445 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

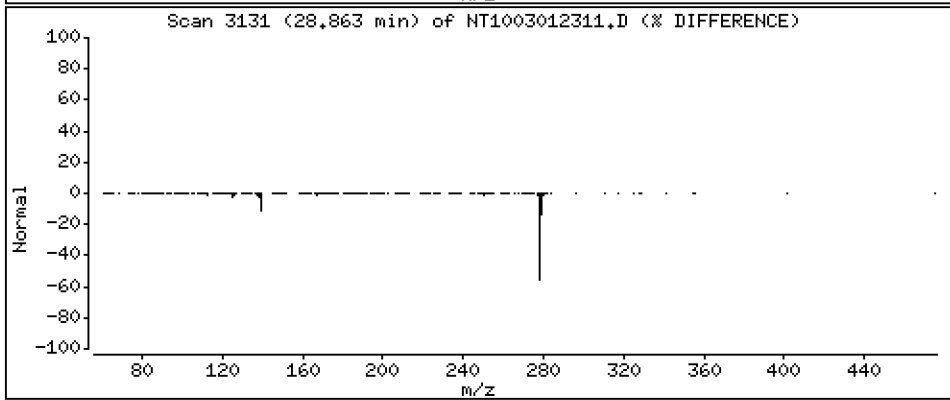
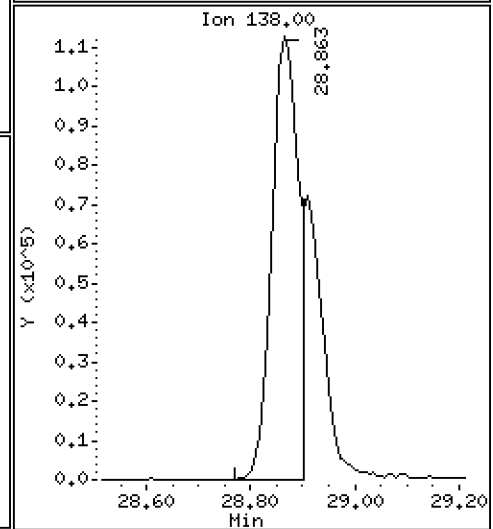
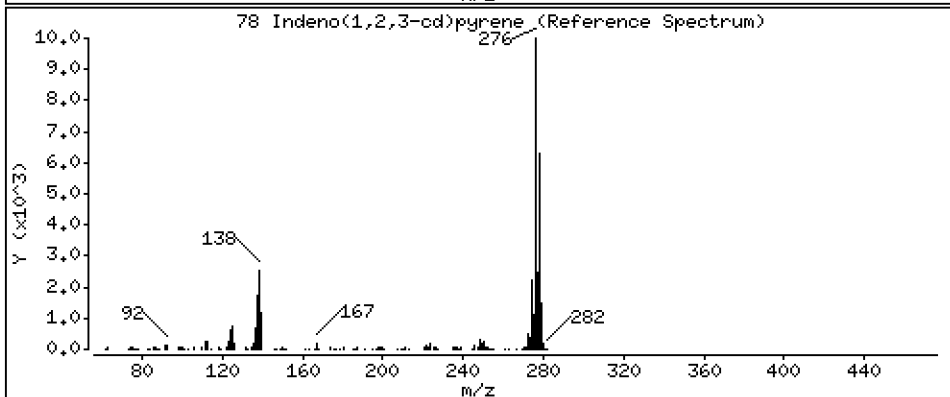
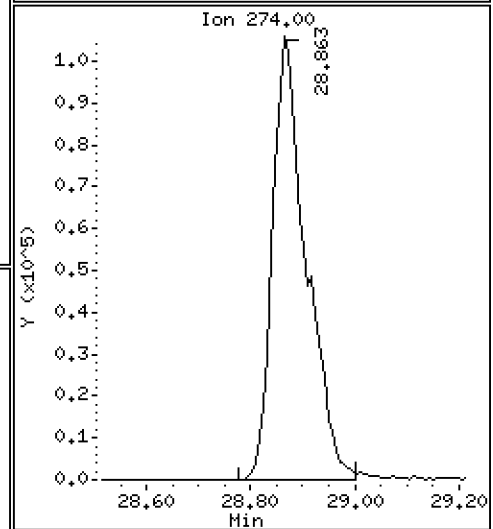
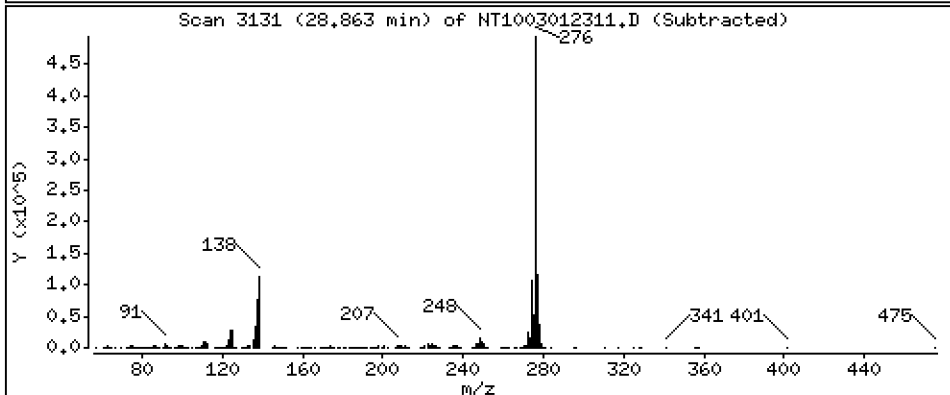
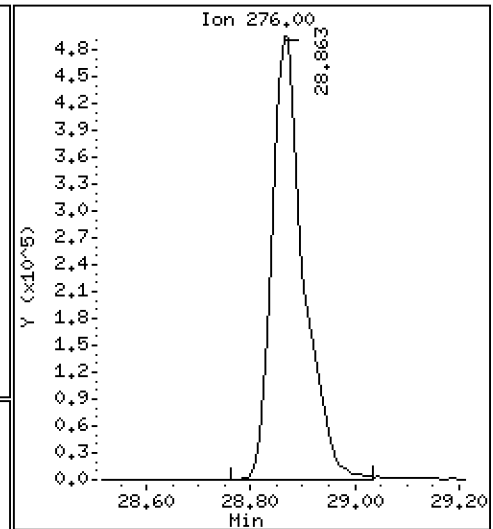
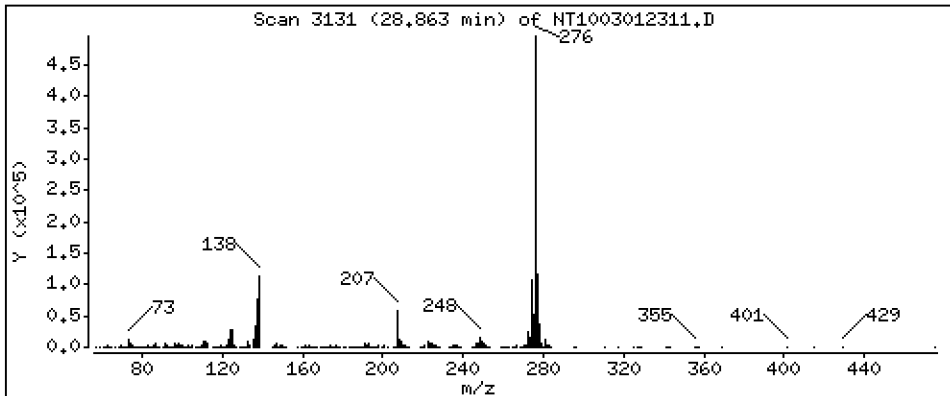
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,345 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

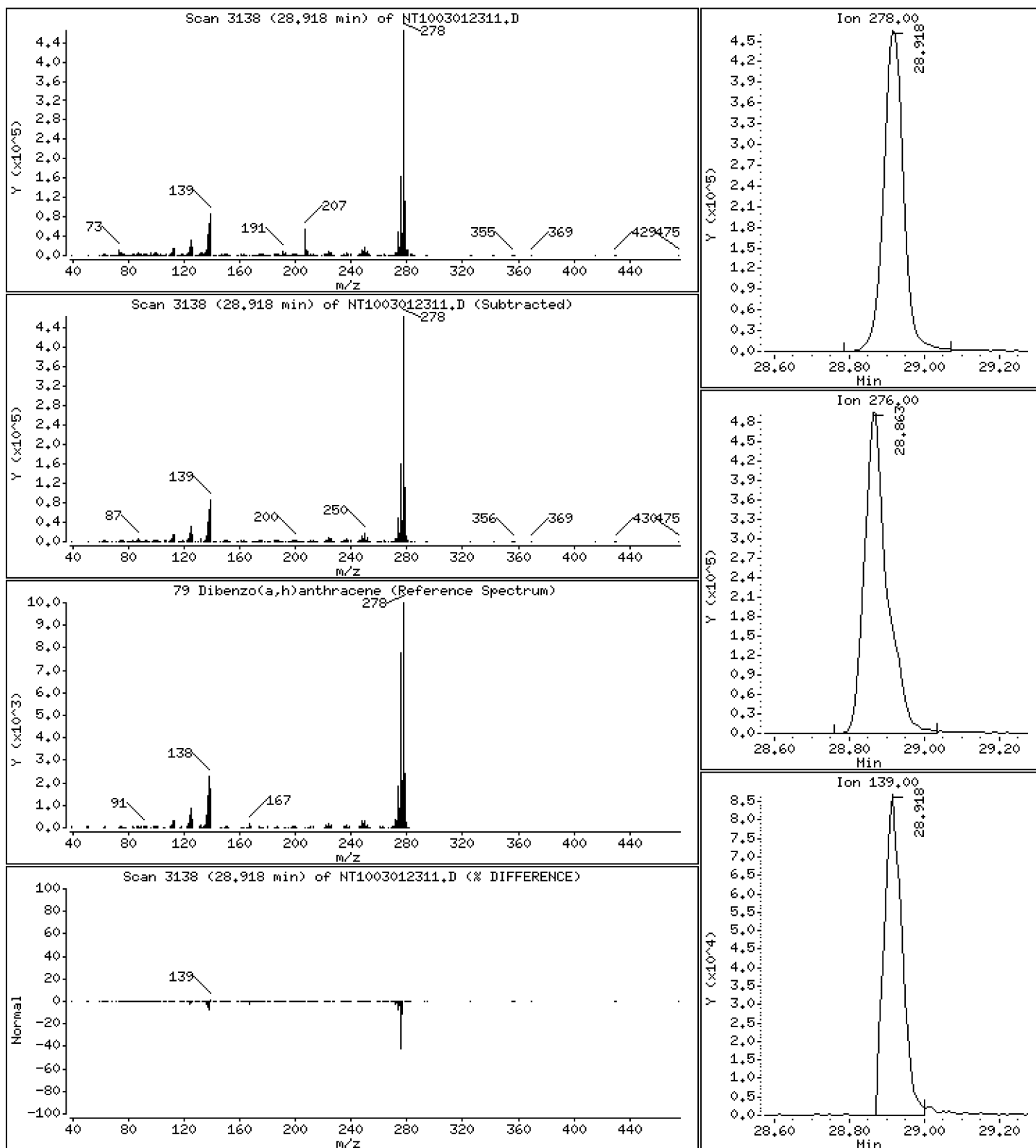
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,608 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

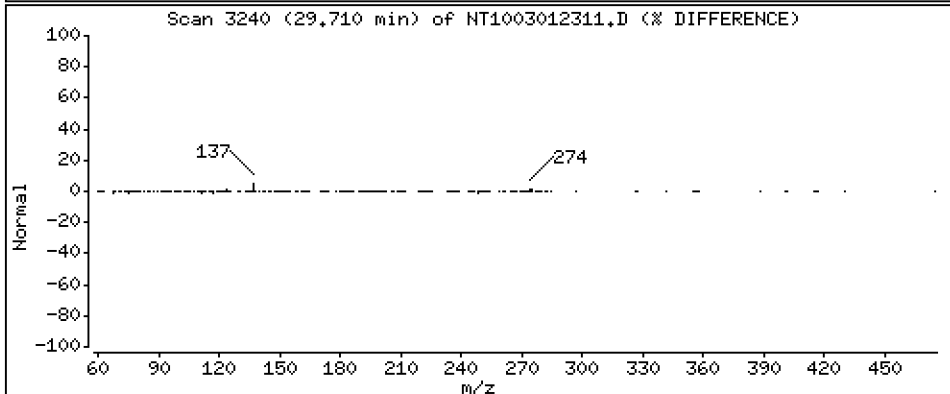
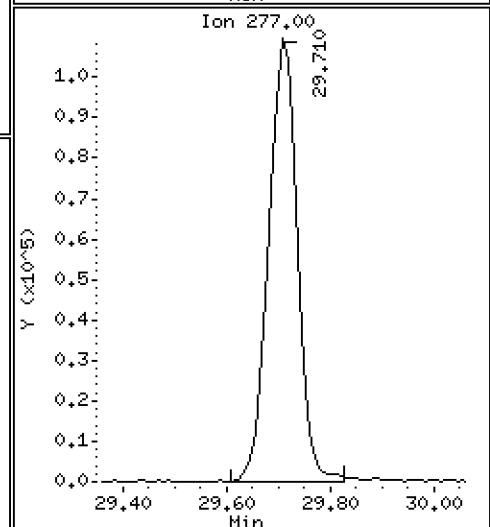
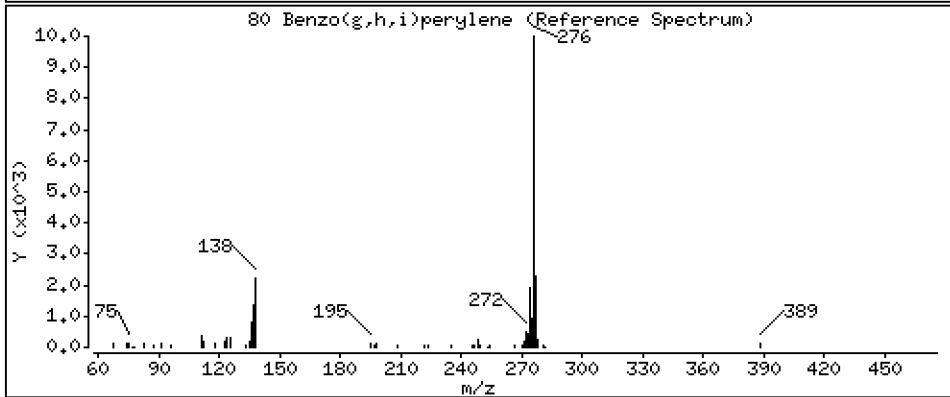
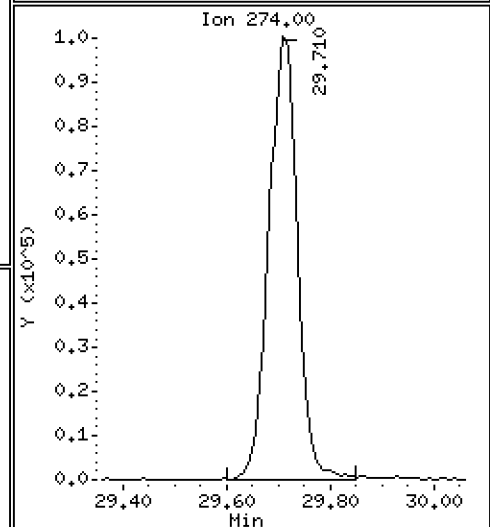
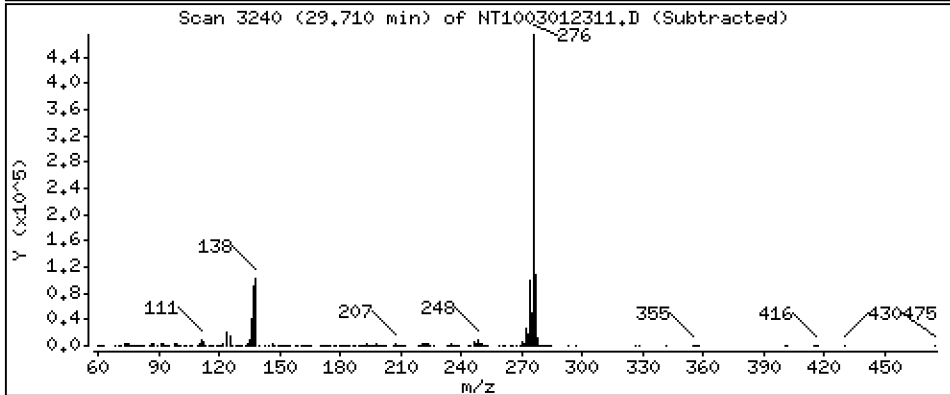
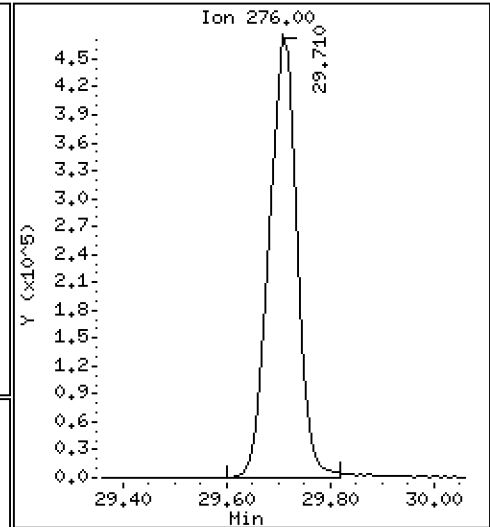
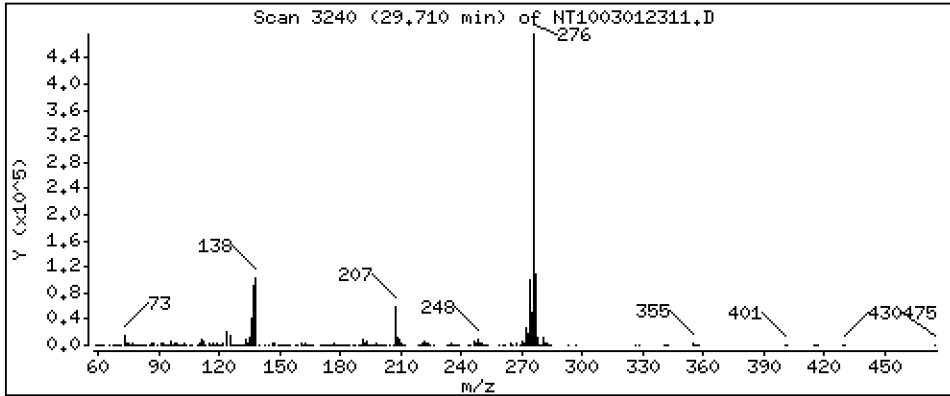
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,602 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

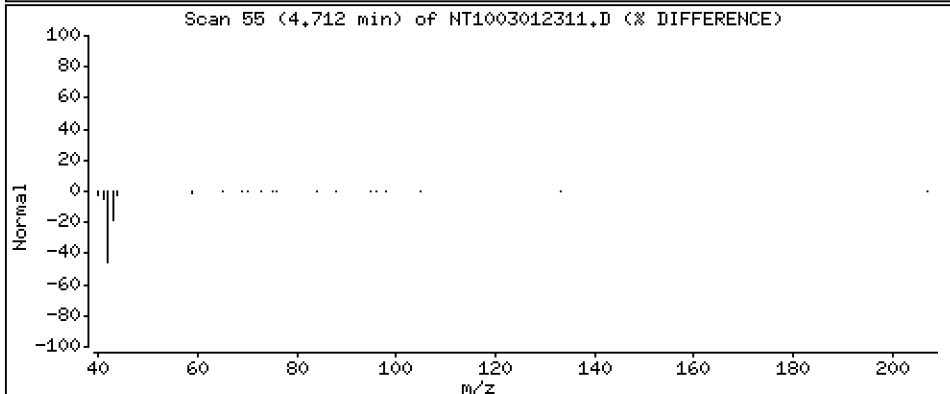
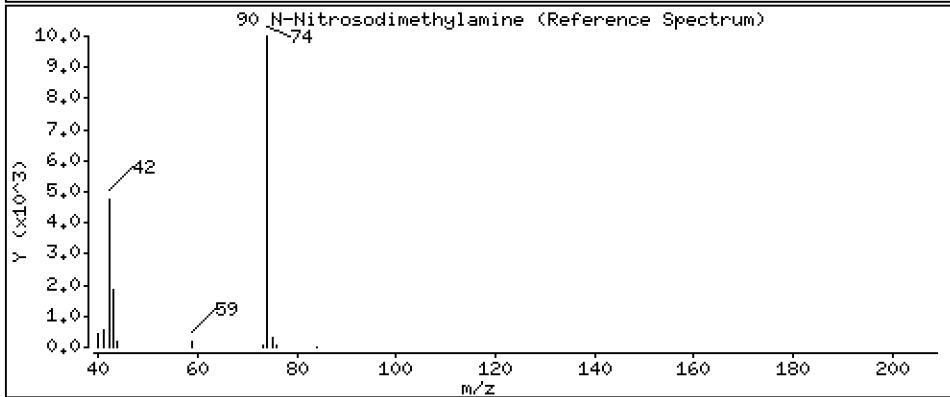
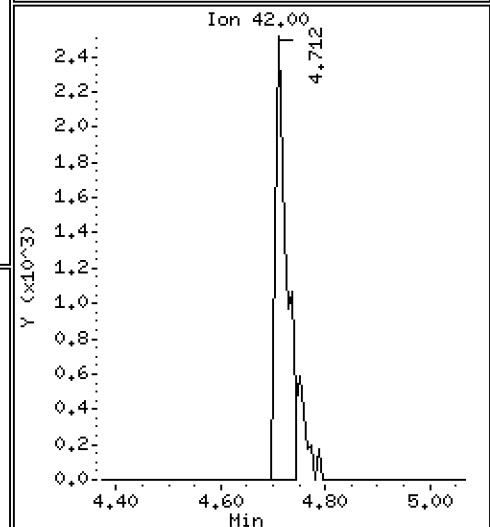
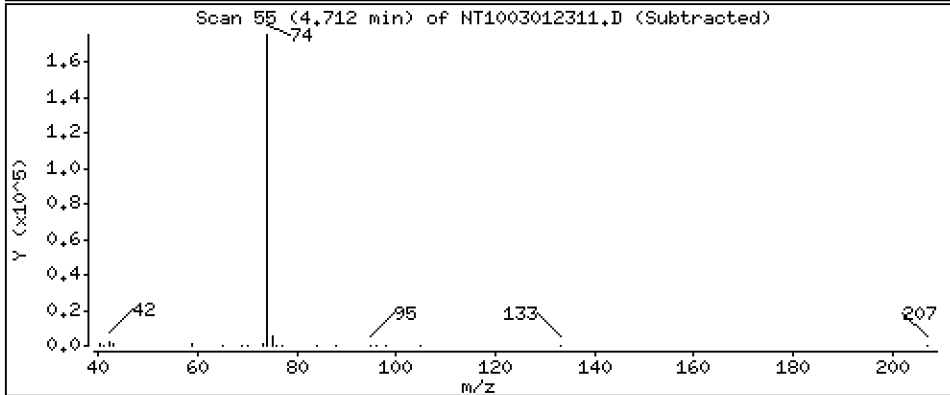
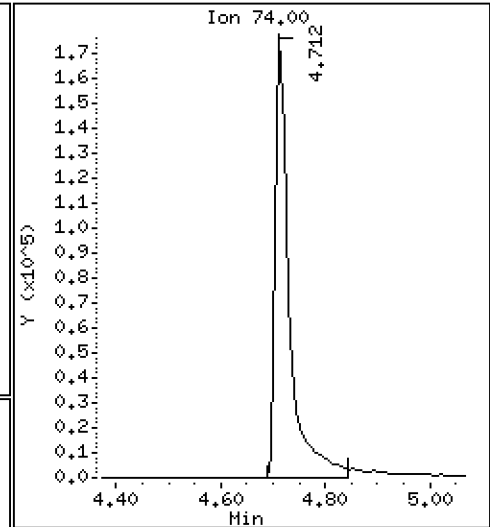
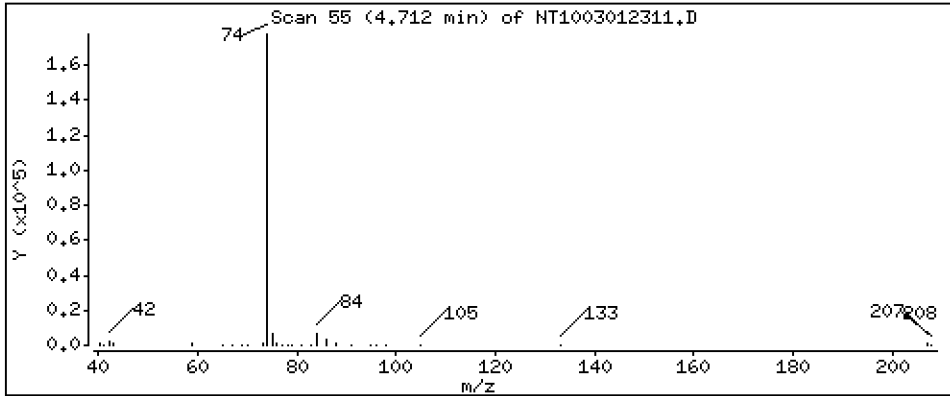
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 5.491 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

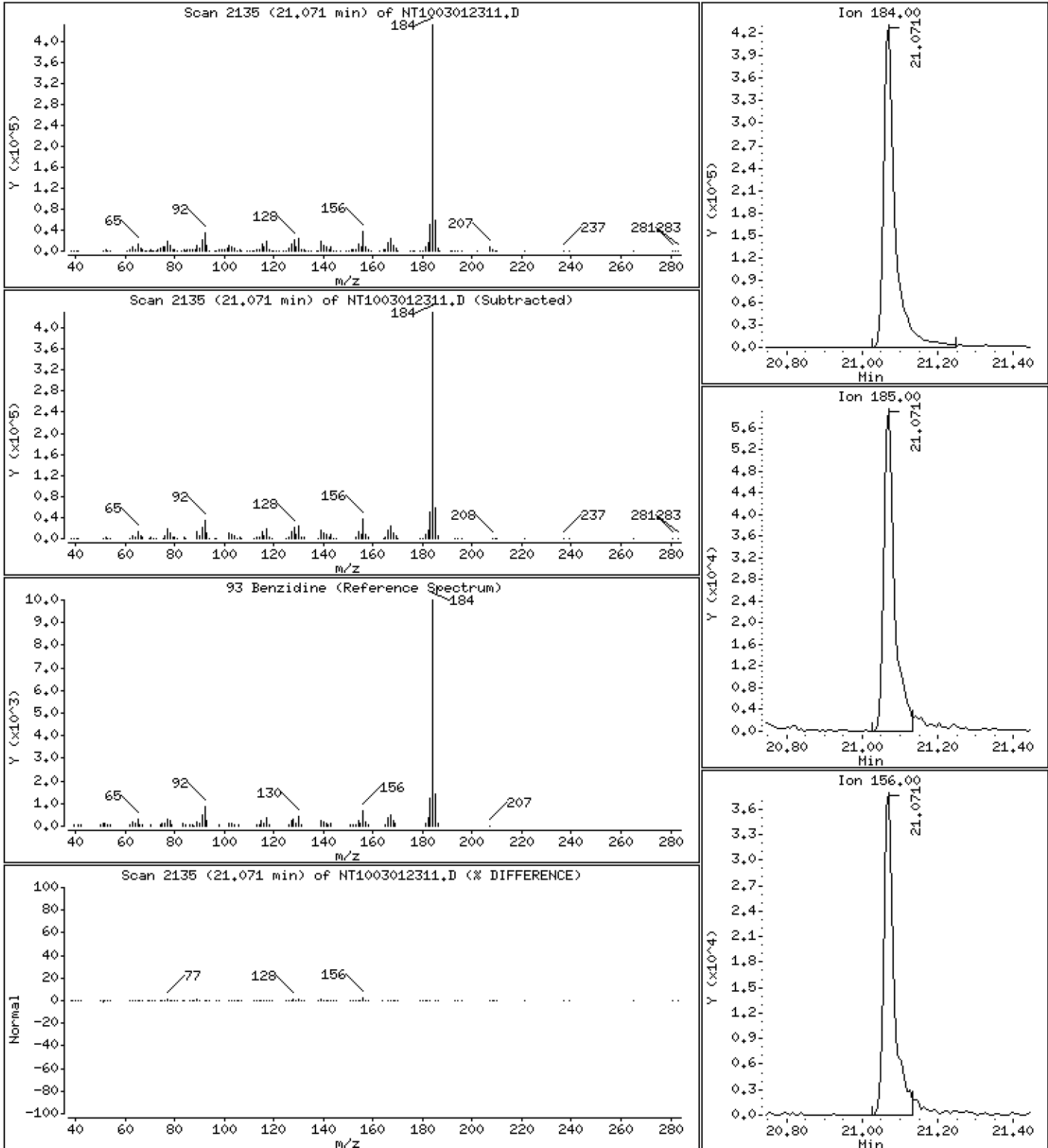
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 5,007 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

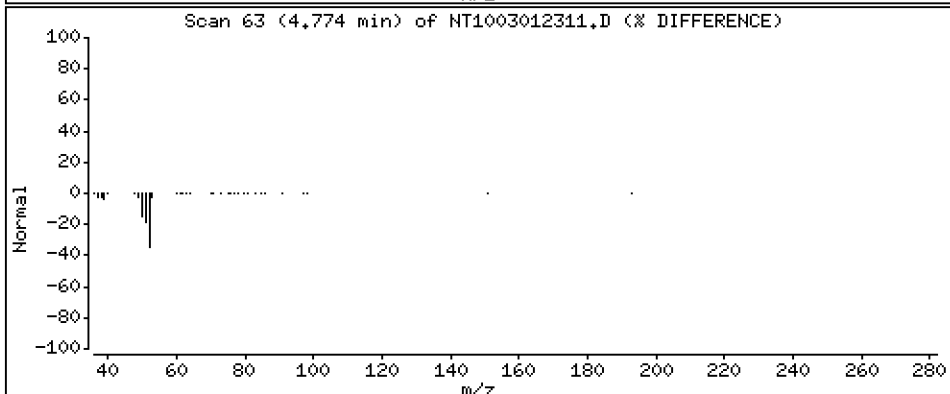
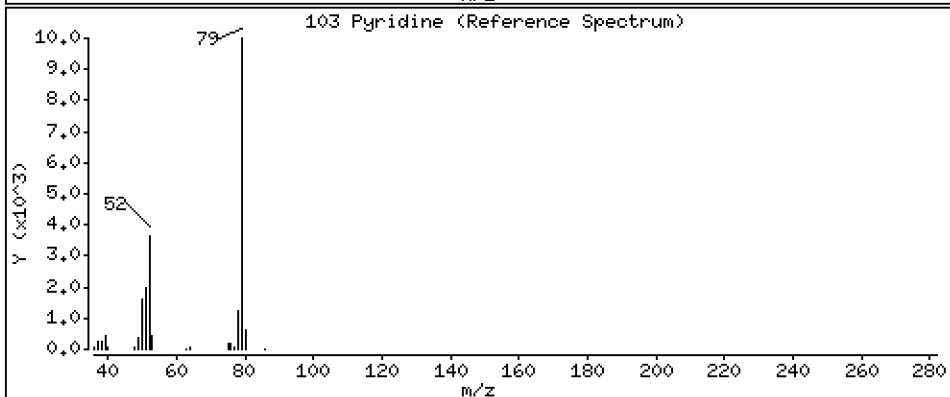
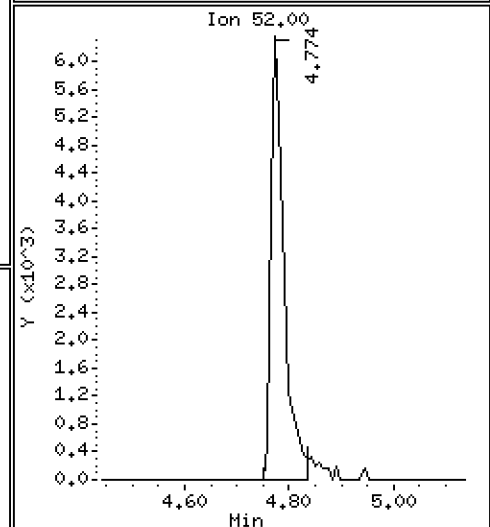
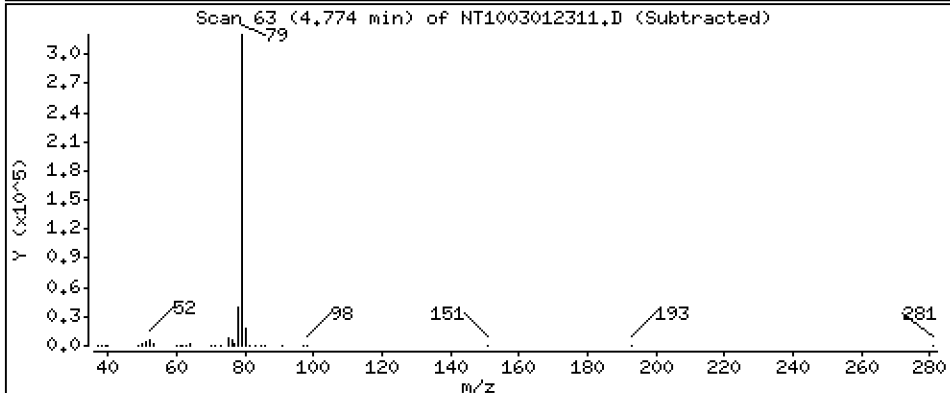
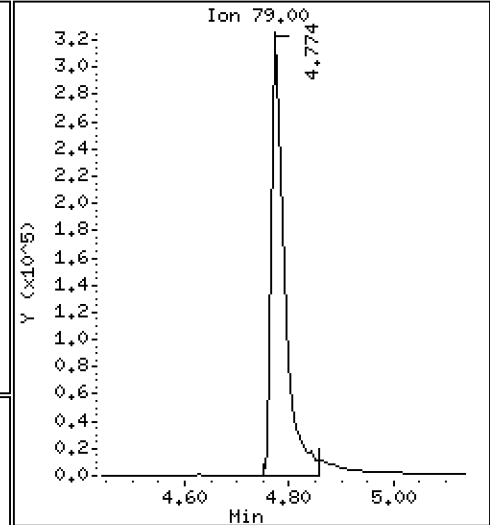
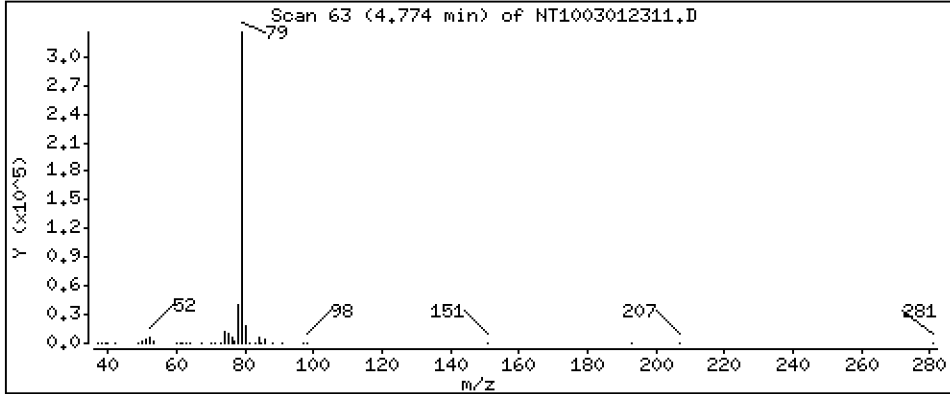
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 5,430 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

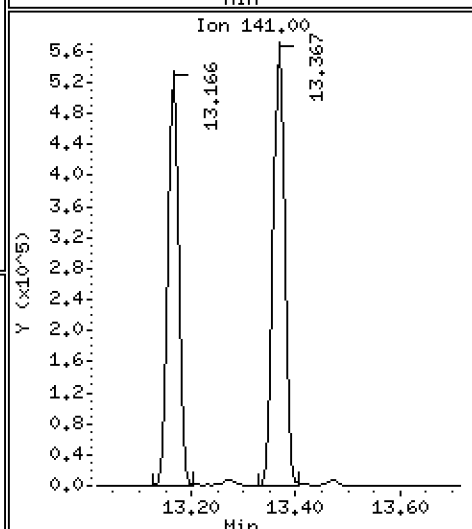
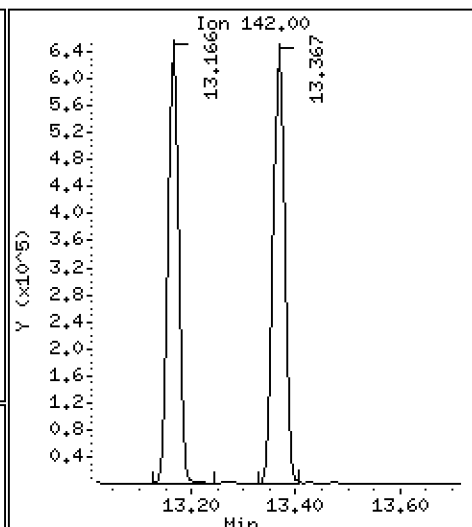
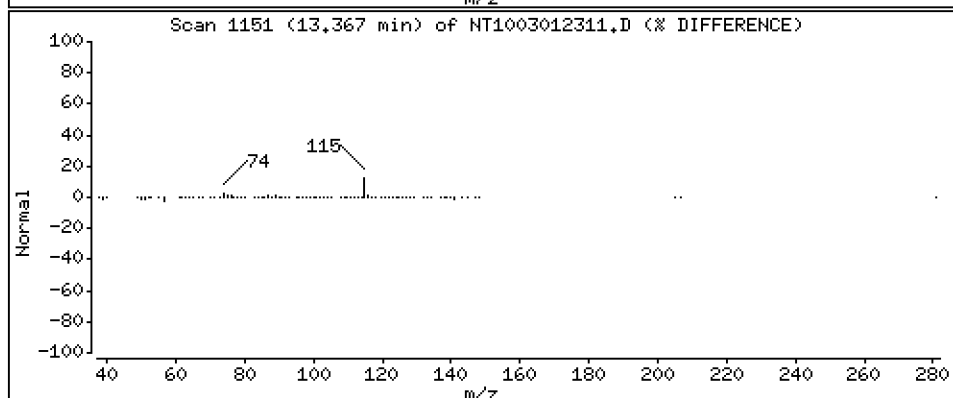
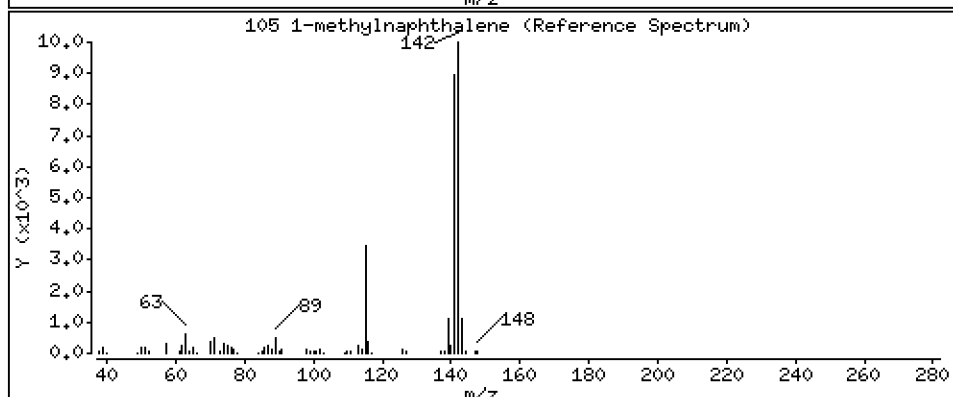
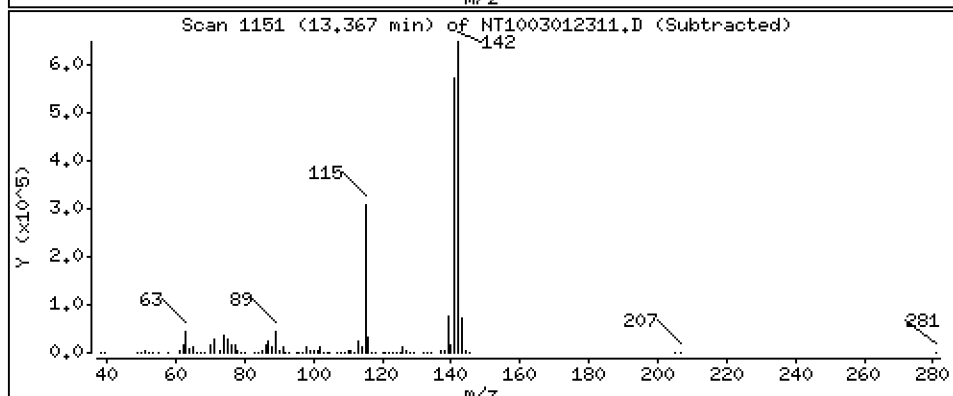
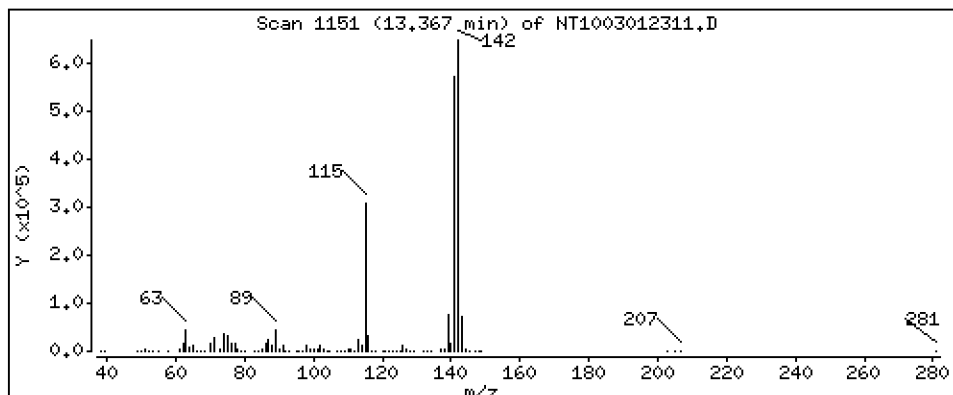
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,219 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

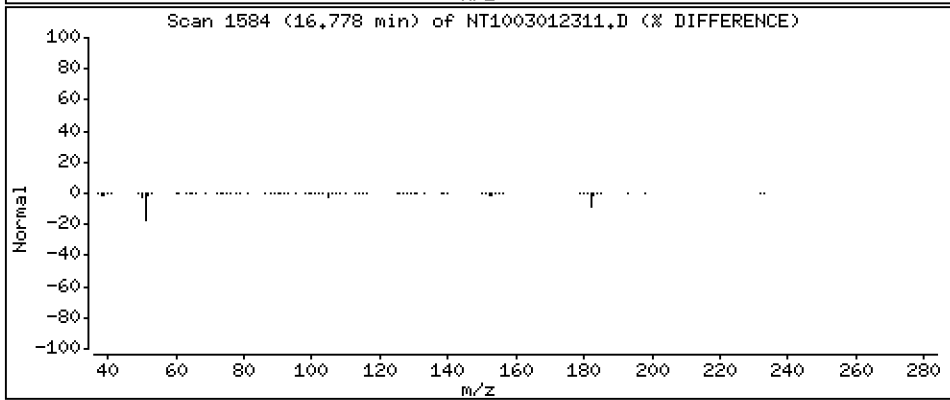
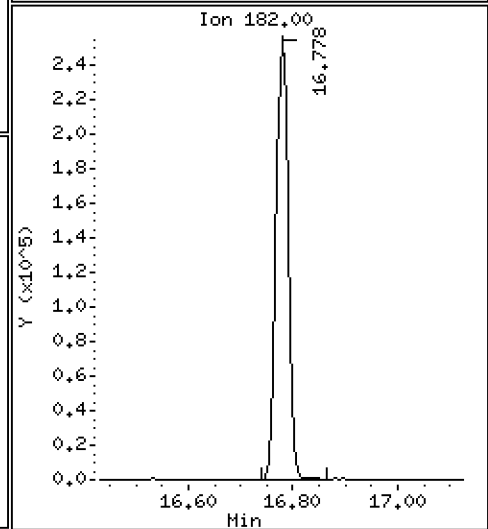
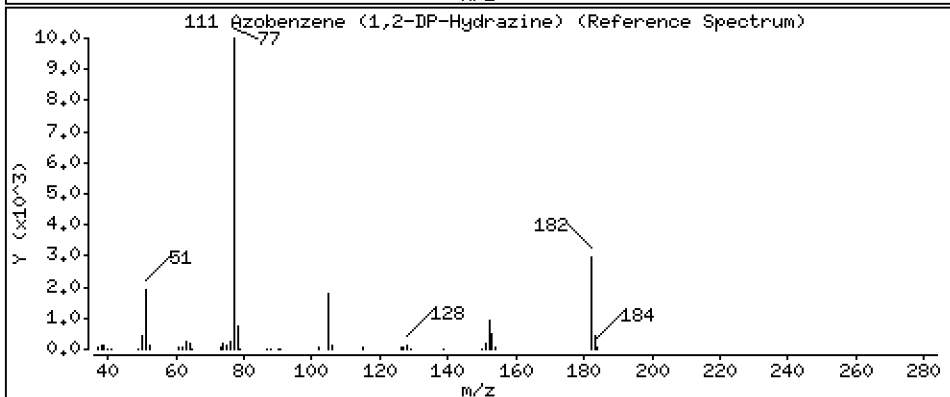
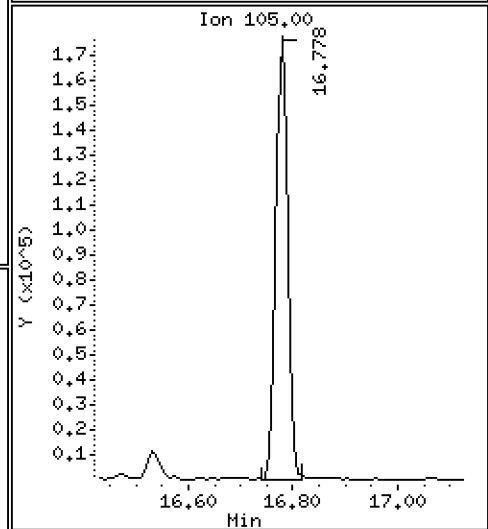
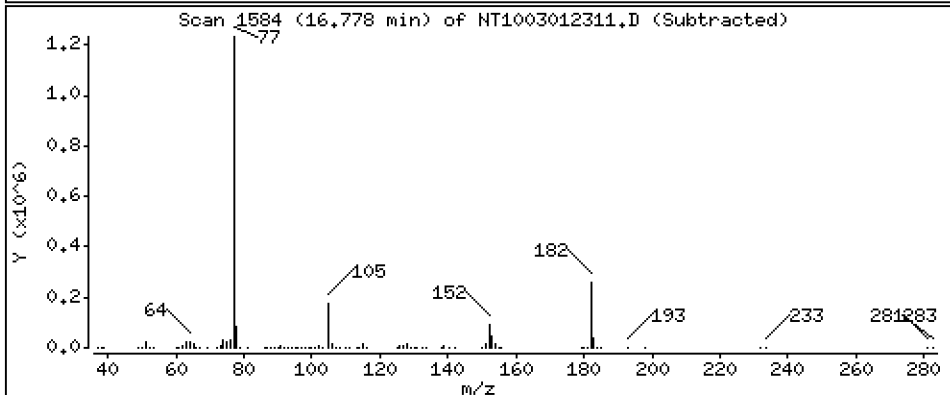
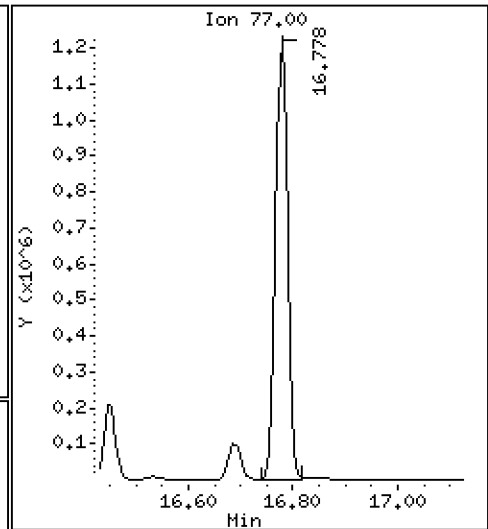
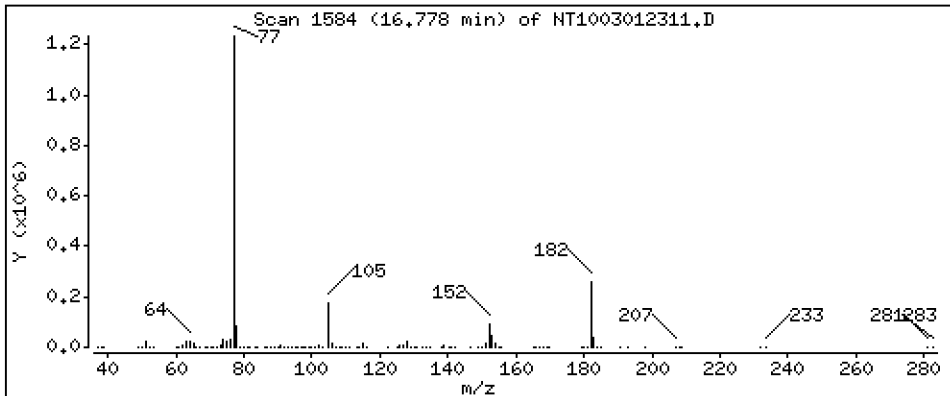
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,953 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

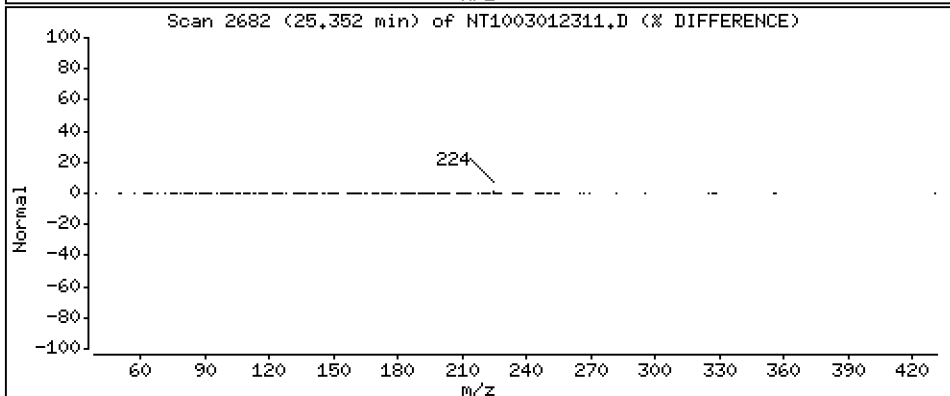
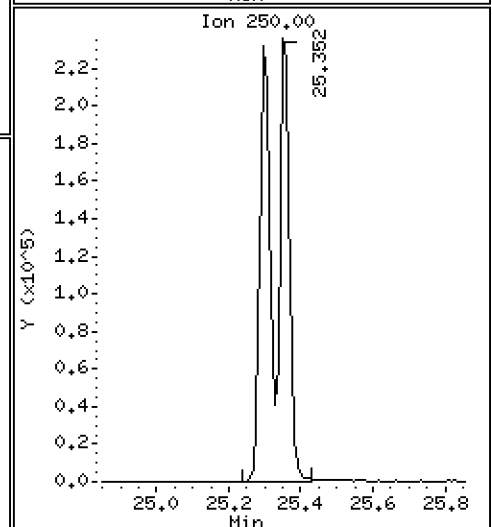
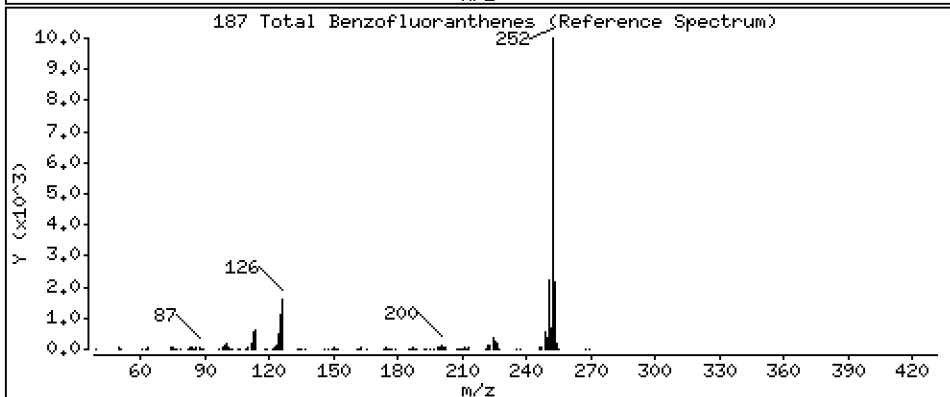
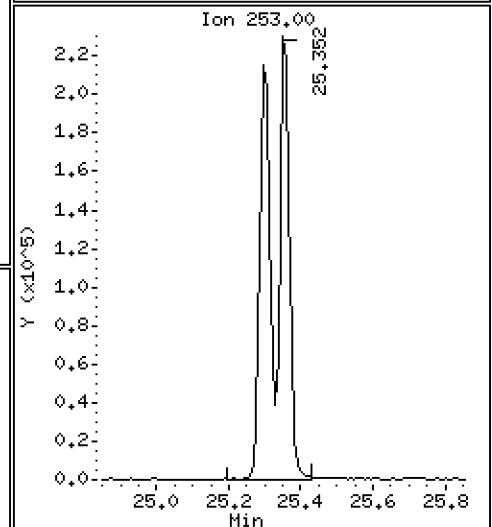
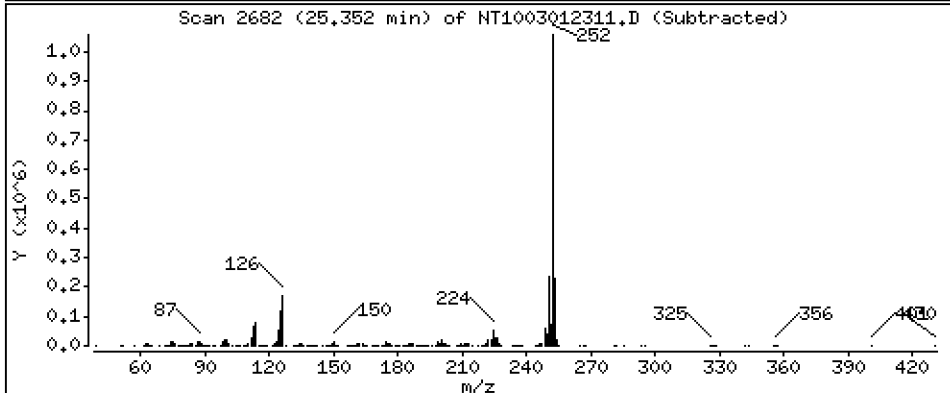
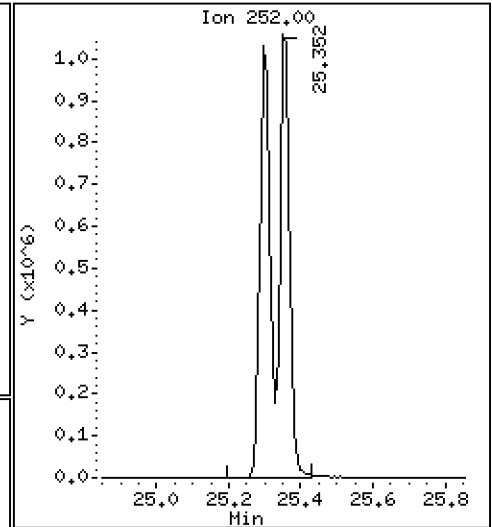
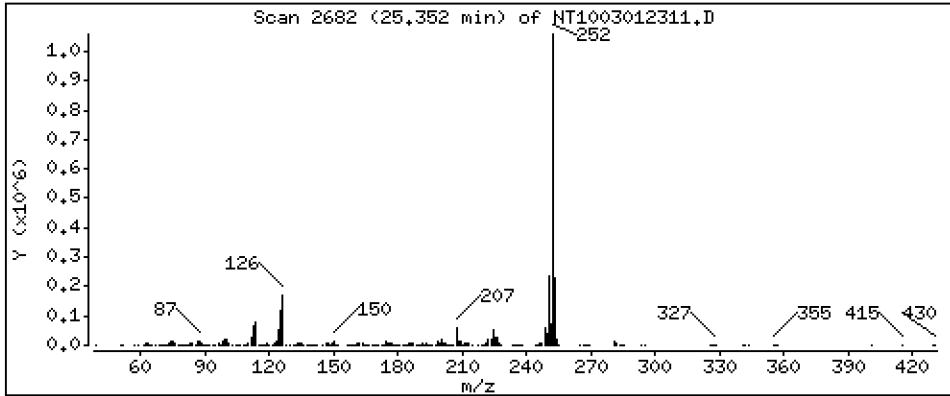
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 8,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

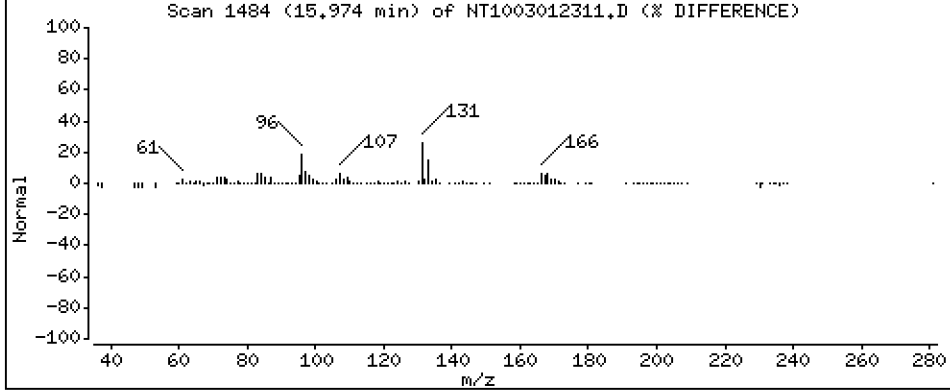
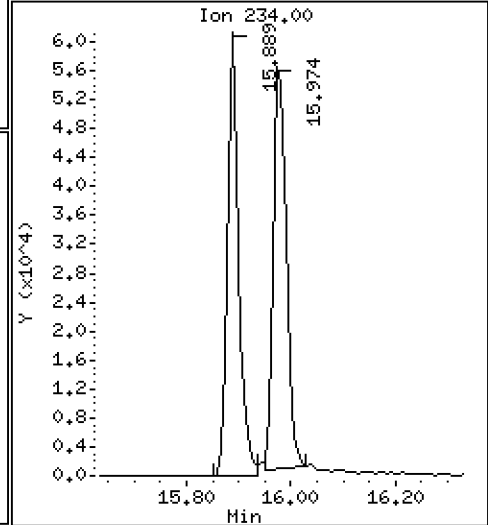
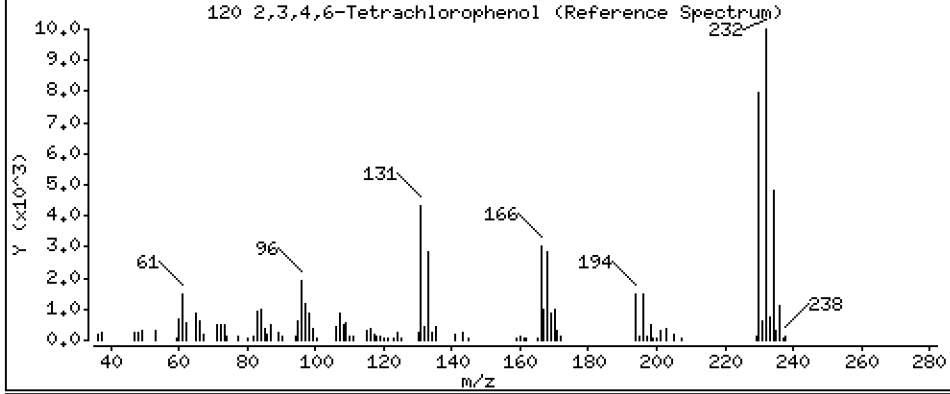
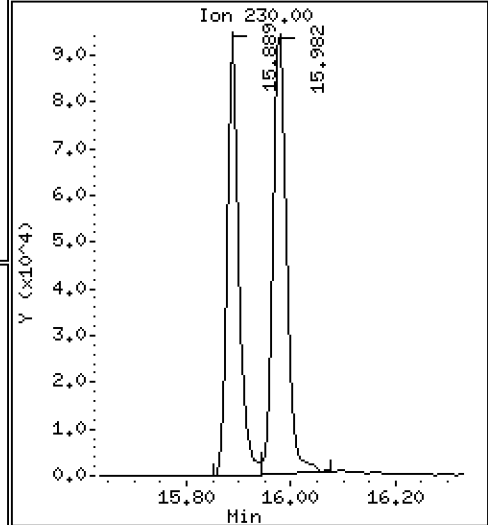
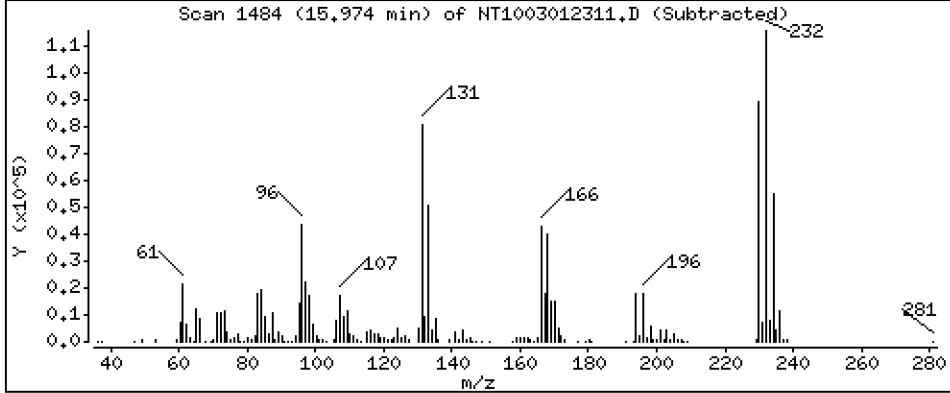
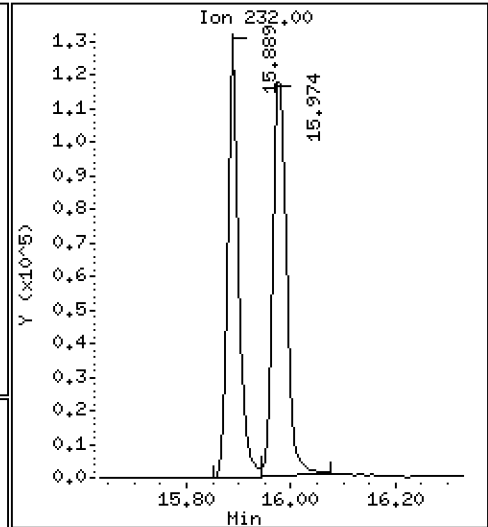
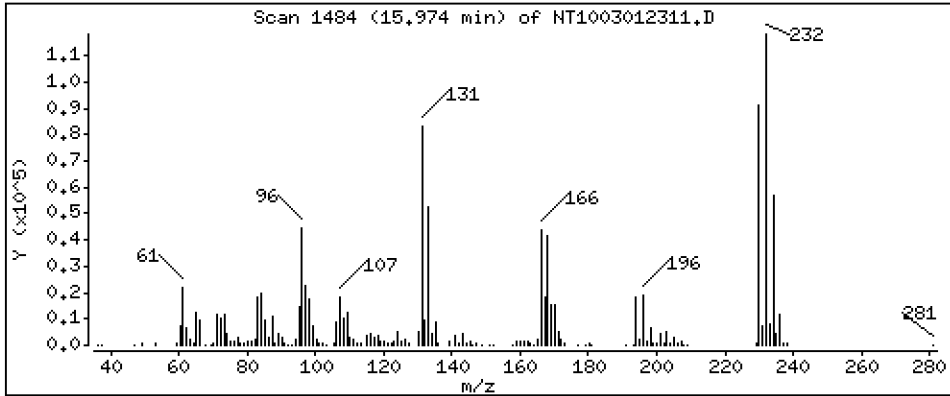
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,534 ug/mL



ARI Labs, Inc.

Semivolatle Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012311.D  
 Lab Smp Id: SLC0084-SCV1  
 Inj Date : 01-MAR-2023 21:46  
 Operator : VTS  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	====		====	=====	=====	=====	=====	=====
\$ 1 2-Fluorophenol	112					Compound Not Detected.		
\$ 2 Phenol-d5	99					Compound Not Detected.		
3 Phenol	94		8.512	8.512	(0.921)	534295	4.85212	4.852
\$ 5 2-Chlorophenol-d4	132					Compound Not Detected.		
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	498825	5.92811	5.928 (M)
6 2-Chlorophenol	128		8.844	8.844	(0.956)	430747	4.69234	4.692
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	533006	5.26632	5.266
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	283537	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	524367	5.21589	5.216
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.534	(1.000)	283537	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.557	9.565	(1.034)	505415	5.19402	5.194
11 Benzyl alcohol	108		9.472	9.472	(1.024)	283618	4.89779	4.898
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	174821	6.23165	6.232
13 2-Methylphenol	108		9.650	9.650	(1.044)	364596	4.19238	4.192
17 Hexachloroethane	117		10.209	10.209	(1.104)	224586	5.44260	5.443
16 N-Nitroso-di-n-propylamine	70		9.977	9.976	(1.079)	392376	5.90505	5.905
15 4-Methylphenol	108		9.945	9.938	(1.076)	448938	4.23938	4.239
\$ 18 Nitrobenzene-d5	82					Compound Not Detected.		
19 Nitrobenzene	77		10.326	10.326	(0.881)	624582	5.56925	5.569
20 Isophorone	82		10.784	10.784	(0.920)	1098236	7.67155	7.672
21 2-Nitrophenol	139		10.950	10.951	(0.934)	197578	3.24407	3.244
22 2,4-Dimethylphenol	107		10.993	10.993	(0.938)	379240	3.50675	3.507
23 Bis(2-Chloroethoxy)methane	93		11.205	11.205	(0.956)	595145	6.72720	6.727
24 Benzoic acid	105		11.103	11.052	(0.947)	362406	5.63546	5.635
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	379310	4.43743	4.437
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	413079	4.90787	4.908
* 27 Naphthalene-d8	136		11.719	11.719	(1.000)	1089120	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	1468990	5.25508	5.255
29 4-Chloroaniline	127		11.858	11.858	(1.012)	469377	3.79133	3.791
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	307313	5.01449	5.014
31 4-Chloro-3-methylphenol	107		12.802	12.809	(1.092)	402740	4.45246	4.452
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	977687	4.95082	4.951
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	52130	2.56222	2.562

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.722	13.730	(0.896)	241174	4.12027	4.120	
35 2,4,5-Trichlorophenol	196		13.792	13.808	(0.900)	259485	4.14893	4.149 (M)	
§ 36 2-Fluorobiphenyl	172		Compound Not Detected.						
37 2-Chloronaphthalene	162		14.164	14.164	(0.925)	895889	5.26440	5.264	
38 2-Nitroaniline	65		14.365	14.365	(0.938)	237773	5.02711	5.027	
39 Dimethylphthalate	163		14.736	14.736	(0.962)	1056857	5.38446	5.384	
40 Acenaphthylene	152		15.023	15.023	(0.981)	1703355	5.80574	5.806	
41 2,6-Dinitrotoluene	165		14.868	14.868	(0.971)	227062	5.18679	5.187	
* 42 Acenaphthene-d10	164		15.317	15.309	(1.000)	607772	4.00000		
43 3-Nitroaniline	138		15.208	15.224	(0.993)	256002	5.17200	5.172	
44 Acenaphthene	153		15.379	15.378	(1.004)	911910	5.15374	5.154	
45 2,4-Dinitrophenol	184		15.433	15.487	(1.008)	3021	0.26673	0.2667	
46 Dibenzofuran	168		15.742	15.734	(1.028)	1311367	4.99365	4.994	
47 4-Nitrophenol	109		15.533	15.603	(1.014)	133260	3.82233	3.822 (M)	
48 2,4-Dinitrotoluene	165		15.695	15.703	(1.025)	300469	4.72923	4.729	
50 Diethylphthalate	149		16.206	16.198	(1.058)	1172442	5.63859	5.639	
49 Fluorene	166		16.453	16.453	(1.074)	1159050	5.30478	5.305	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	527532	5.25262	5.253	
52 4-Nitroaniline	138		16.469	16.484	(1.075)	278392	5.23237	5.232	
53 4,6-Dinitro-2-methylphenol	198		16.531	16.538	(0.898)	36409	1.29161	1.292	
54 N-Nitrosodiphenylamine	169		16.685	16.693	(0.907)	966268	5.41587	5.416	
§ 55 2,4,6-Tribromophenol	330		Compound Not Detected.						
56 4-Bromophenyl-phenylether	248		17.465	17.472	(0.949)	394706	5.45981	5.460	
57 Hexachlorobenzene	284		17.573	17.573	(0.955)	391196	4.80535	4.805	
58 Pentachlorophenol	266		17.984	17.983	(0.977)	133557	3.49178	3.492	
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1205858	4.00000		
60 Phenanthrene	178		18.448	18.448	(1.003)	1569094	5.08454	5.085	
61 Anthracene	178		18.556	18.556	(1.008)	1371933	4.58472	4.585	
62 Carbazole	167		18.889	18.889	(1.026)	1462441	5.33467	5.335	
63 Di-n-butylphthalate	149		19.585	19.585	(1.064)	2114080	5.46304	5.463	
64 Fluoranthene	202		20.815	20.815	(0.889)	1905220	4.54169	4.542	
65 Pyrene	202		21.248	21.248	(0.907)	1975953	4.62585	4.626	
§ 66 Terphenyl-d14	244		21.519	21.527	(0.919)	6779	0.01961	0.01961	
67 Butylbenzylphthalate	149		22.410	22.410	(0.957)	1022950	4.52520	4.525	
68 Benzo(a)anthracene	228		23.401	23.401	(0.999)	1968545	4.57826	4.578	
* 69 Chrysene-d12	240		23.416	23.416	(1.000)	1219436	4.00000		
70 3,3'-Dichlorobenzidine	252		23.347	23.347	(0.997)	1426681	7.38255	7.383	
71 Chrysene	228		23.463	23.463	(1.002)	1735599	4.96674	4.967	
72 bis(2-Ethylhexyl)phthalate	149		23.401	23.409	(0.956)	1660477	4.95568	4.956	
* 134 Di-n-octylphthalate-d4	153		24.485	24.485	(1.000)	2317357	4.00000		
73 Di-n-octylphthalate	149		24.492	24.492	(1.000)	3003083	5.84397	5.844	
74 Benzo(b)fluoranthene	252		25.298	25.298	(0.969)	1988643	4.31882	4.319	
75 Benzo(k)fluoranthene	252		25.352	25.352	(0.971)	2031546	4.56297	4.563	
76 Benzo(a)pyrene	252		25.987	25.987	(0.996)	1831856	4.44514	4.445	
* 77 Perylene-d12	264		26.103	26.103	(1.000)	1289108	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.863	28.863	(1.106)	2089660	4.34488	4.345	
79 Dibenzo(a,h)anthracene	278		28.917	28.925	(1.108)	1695484	4.60754	4.608	
80 Benzo(g,h,i)perylene	276		29.709	29.709	(1.138)	1753537	4.60249	4.602	
90 N-Nitrosodimethylamine	74		4.712	4.719	(0.510)	316213	5.49082	5.491	
91 Aniline	93		Compound Not Detected.						
93 Benzidine	184		21.071	21.094	(0.900)	932502	5.00739	5.007	
103 Pyridine	79		4.774	4.789	(0.516)	554573	5.42989	5.430	
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	932752	5.21855	5.219	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.778	16.778	(1.095)	1848373	5.95279	5.953	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.352	25.352	(0.971)	3948555	8.90452	8.905
120 2,3,4,6-Tetrachlorophenol	232	15.974	15.982	(1.043)	209122	3.53394	3.534

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012311.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-SCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	283537	-16.02
27 Naphthalene-d8	1265187	632594	2530374	1089120	-13.92
42 Acenaphthene-d10	692385	346193	1384770	607772	-12.22
59 Phenanthrene-d10	1376777	688389	2753554	1205858	-12.41
69 Chrysene-d12	1019524	509762	2039048	1219436	19.61
134 Di-n-octylphthala	2027111	1013556	4054222	2317357	14.32
77 Perylene-d12	1027409	513705	2054818	1289108	25.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.01
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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



REVIEW SUMMARY FOR FILE - NT1003012311.D

Lab ID: SLC0084-SCV1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

-----  
23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.014	1.019	-0.0051	4-Nitrophenol
1.000	1.031	-0.0310	1,2-Dichlorobenzene-d4

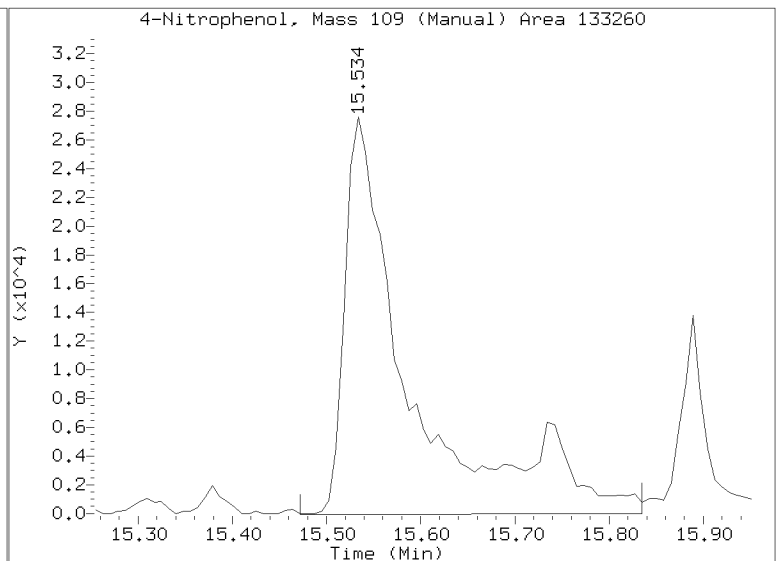
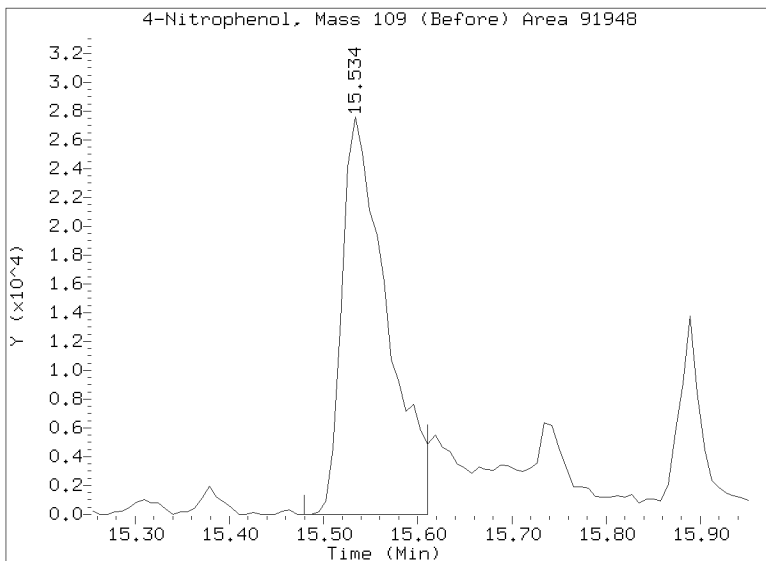
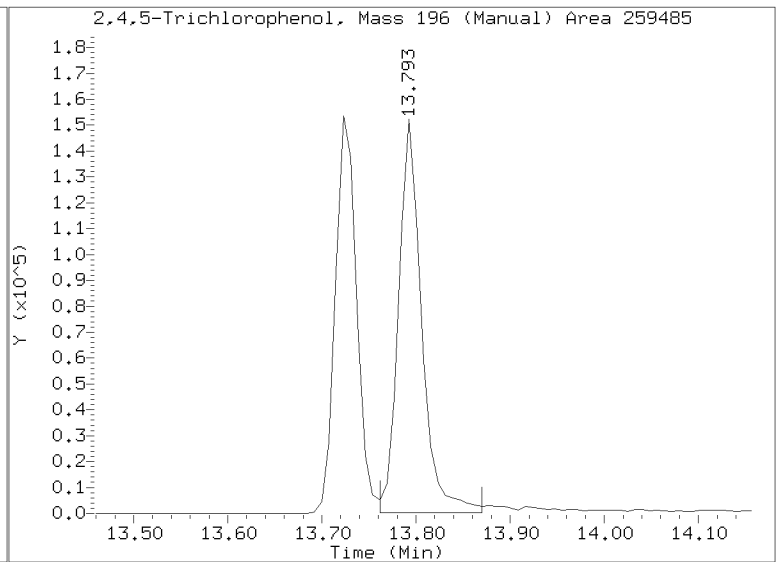
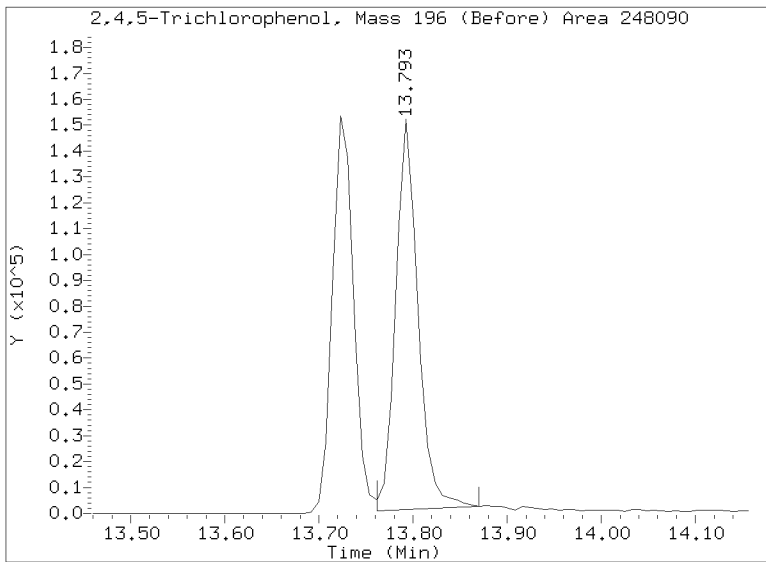
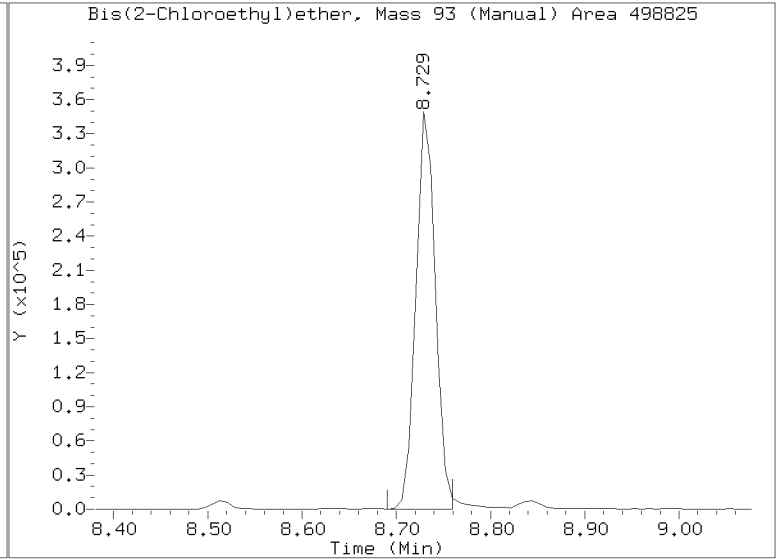
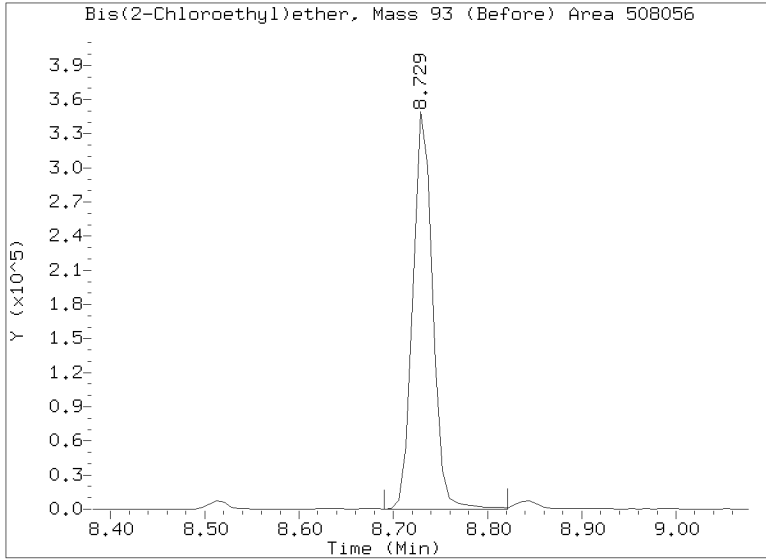
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012311.D  
Injection Date: 01-MAR-2023 21:46  
Lab ID:SLC0084-SCV1 Client ID:  
Report Date: 03/07/2023 12:48





**LOW-CONCENTRATION  
CALIBRATION VERIFICATION  
EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0136-LCV1

**Sequence:** SLC0136

**Standard ID:** K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-13.1	50.00
4-Methylphenol	0.20000	0.1	-43.7	50.00
Naphthalene	0.20000	0.2	-1.4	50.00
2-Methylnaphthalene	0.20000	0.2	-8.0	50.00
Acenaphthylene	0.20000	0.2	-0.5	50.00
Dimethylphthalate	0.20000	0.2	-13.8	50.00
Acenaphthene	0.20000	0.2	-4.6	50.00
Dibenzofuran	0.20000	0.2	-5.6	50.00
Fluorene	0.20000	0.2	-11.4	50.00
Phenanthrene	0.20000	0.2	-2.3	50.00
Anthracene	0.20000	0.2	-8.0	50.00
Fluoranthene	0.20000	0.2	-16.0	50.00
Pyrene	0.20000	0.2	-13.2	50.00
Butylbenzylphthalate	0.20000	0.1	-40.5	50.00
Benzo(a)anthracene	0.20000	0.2	-8.5	50.00
Chrysene	0.20000	0.2	5.0	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	-21.8	50.00
Benzo(a)fluoranthene, Total	0.40000	0.4	-11.9	50.00
Benzo(a)pyrene	0.20000	0.2	-14.1	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.1	-33.8	50.00
Dibenzo(a,h)anthracene	0.20000	0.1	-32.5	50.00
Benzo(g,h,i)perylene	0.20000	0.1	-35.2	50.00
2-Fluorophenol	0.30000	0.282	-6.0	50.00
Phenol-d5	0.30000	0.00	*	50.00
2-Chlorophenol-d4	0.30000	0.277	-7.8	50.00
1,2-Dichlorobenzene-d4	0.20000	4.29	2050 *	50.00
Nitrobenzene-d5	0.20000	0.157	-21.7	50.00
2-Fluorobiphenyl	0.20000	0.199	-0.4	50.00
2,4,6-Tribromophenol	0.30000	0.118	-60.7 *	50.00



**LOW-CONCENTRATION  
CALIBRATION VERIFICATION  
EPA 8270E**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00019

**Laboratory ID:** SLC0136-LCV1

**Sequence:** SLC0136

**Standard ID:** K011105

p-Terphenyl-d14	0.20000	0.172	-13.8	50.00
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\* Values outside of QC limits

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Date: 03-MAR-2023 06:52

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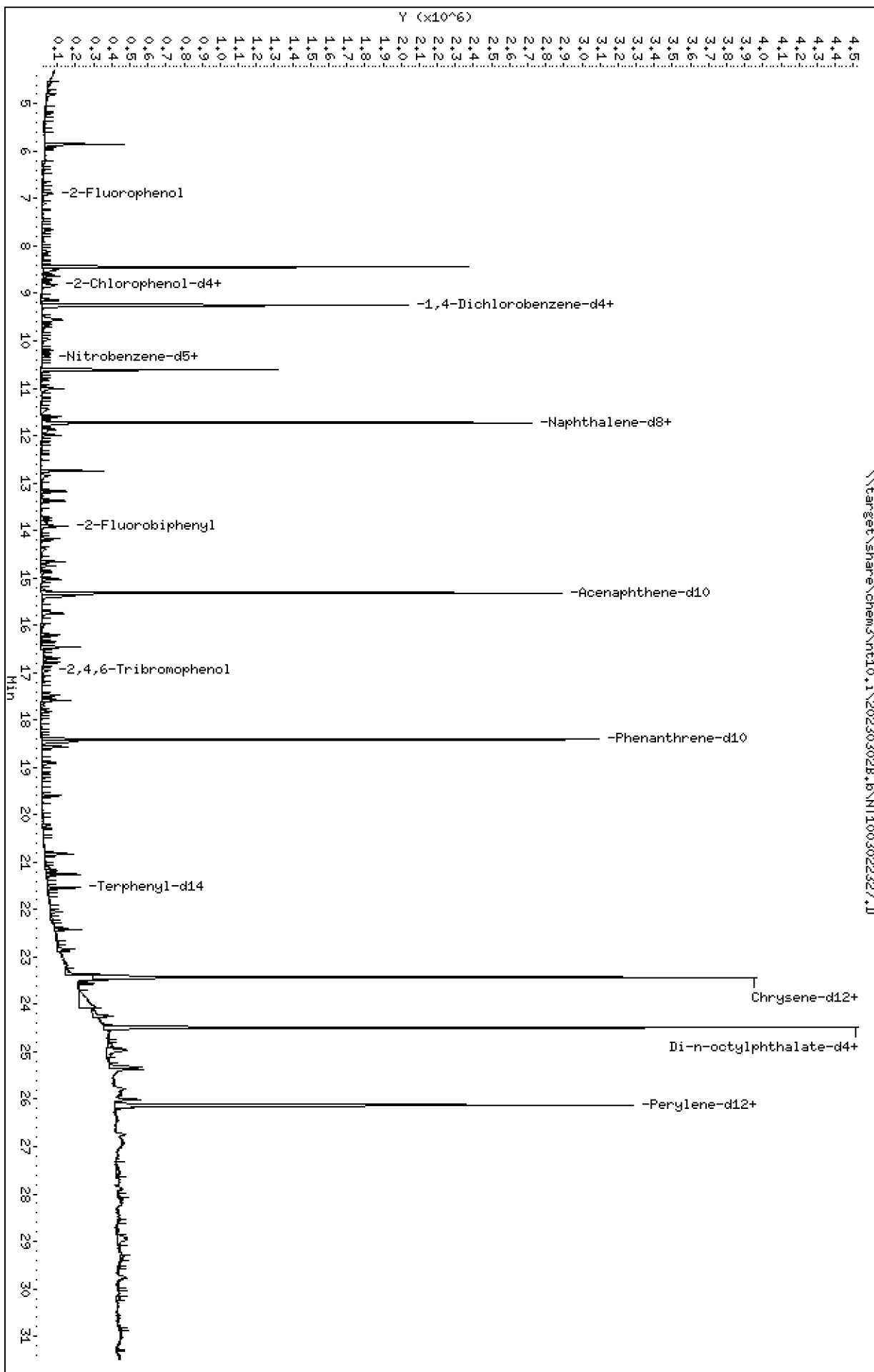
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

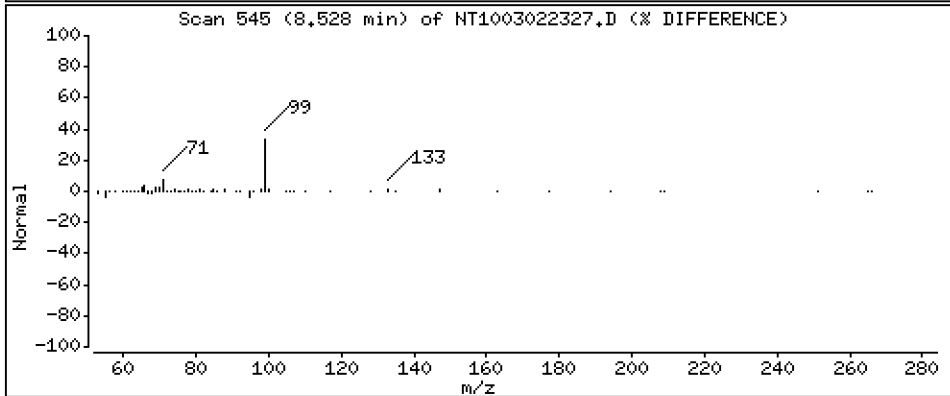
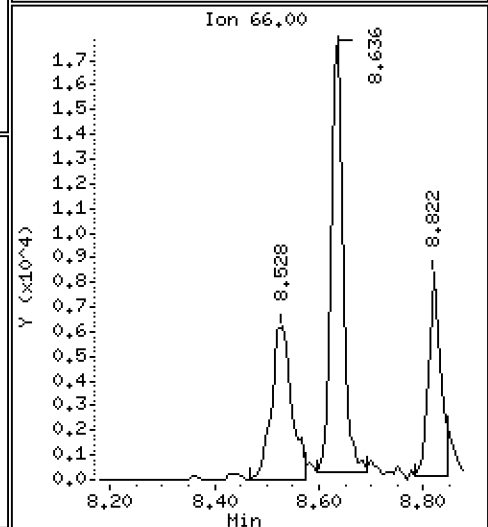
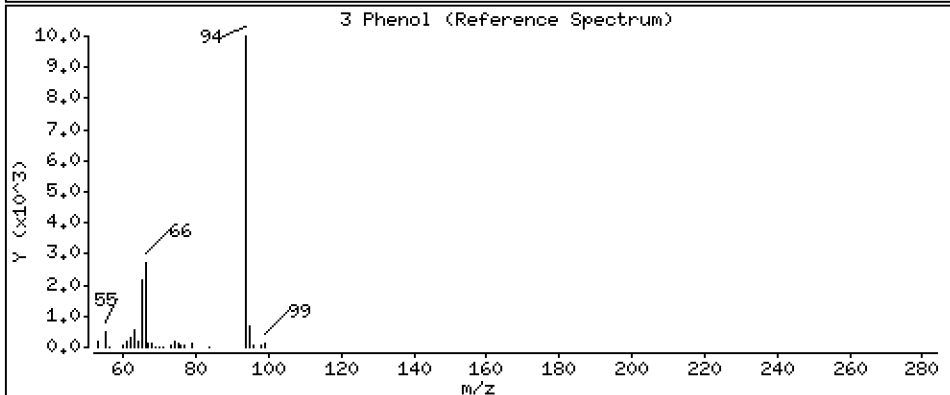
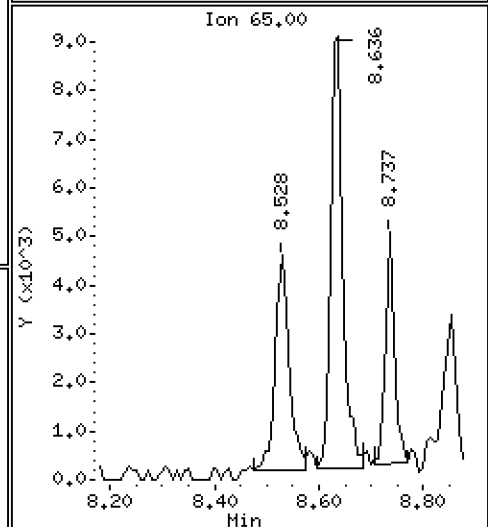
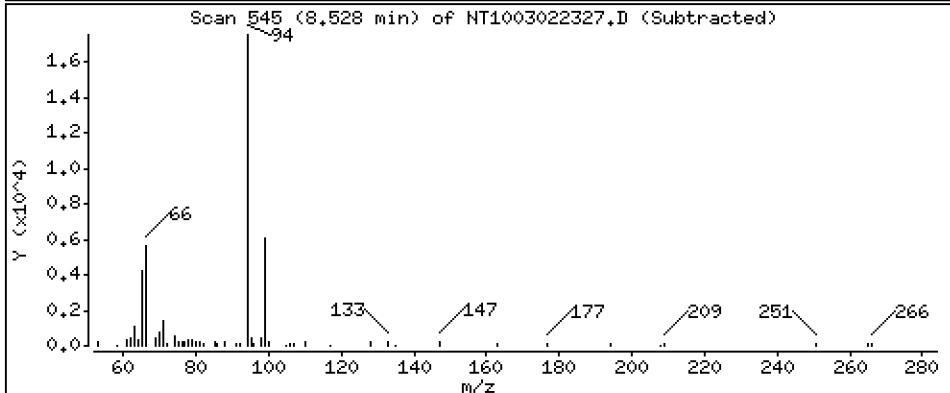
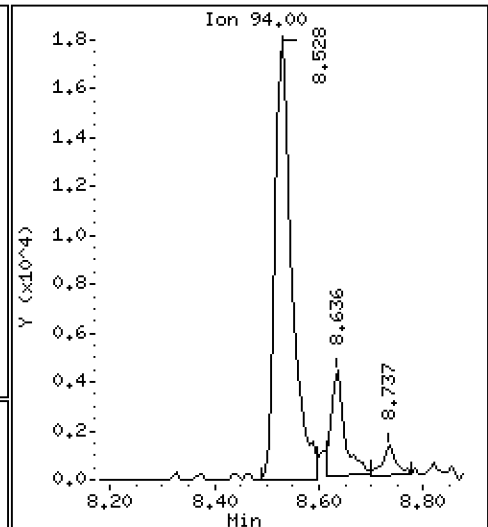
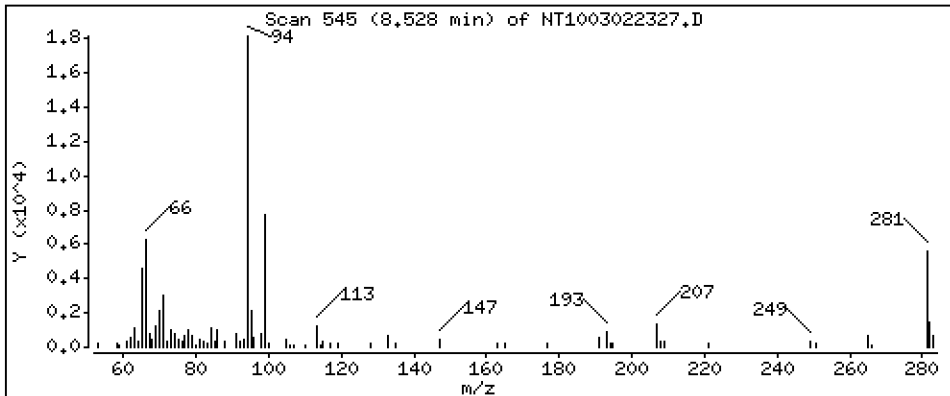
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 0,1738 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

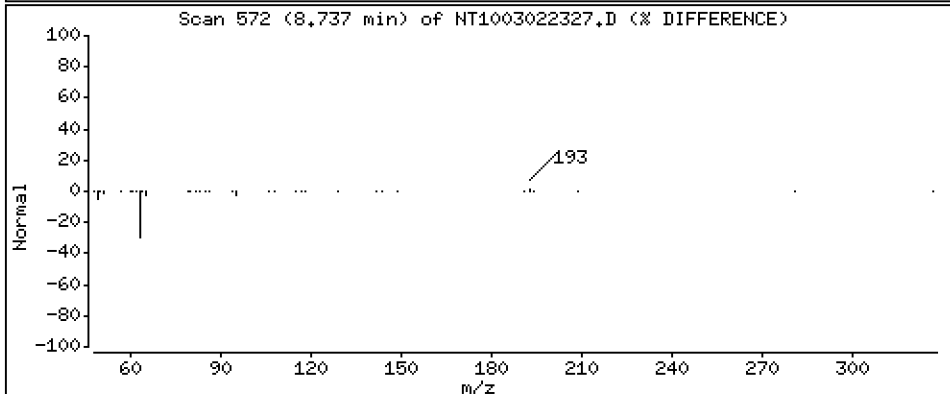
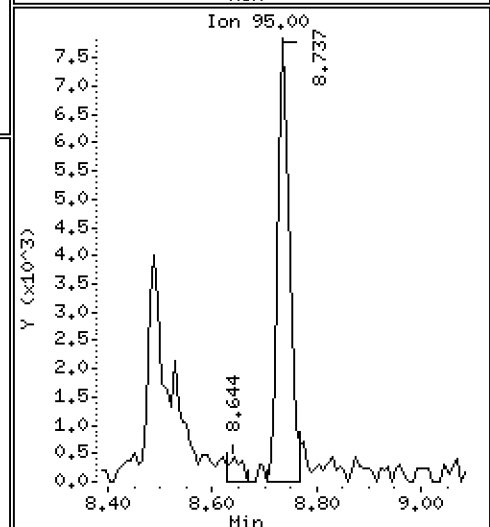
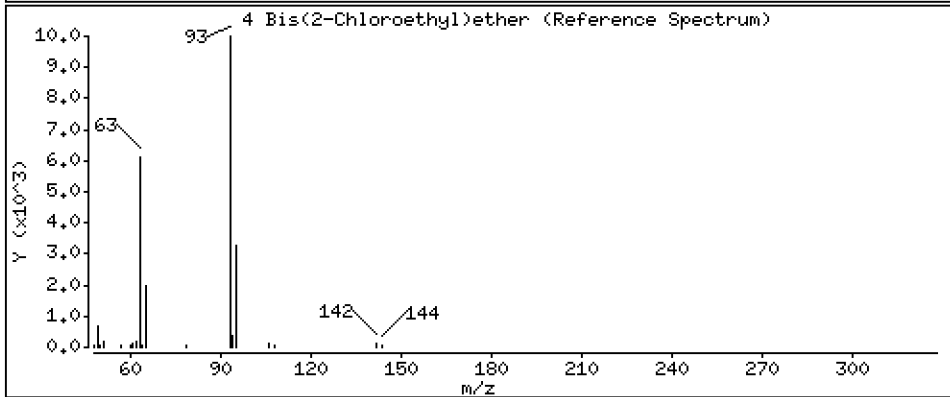
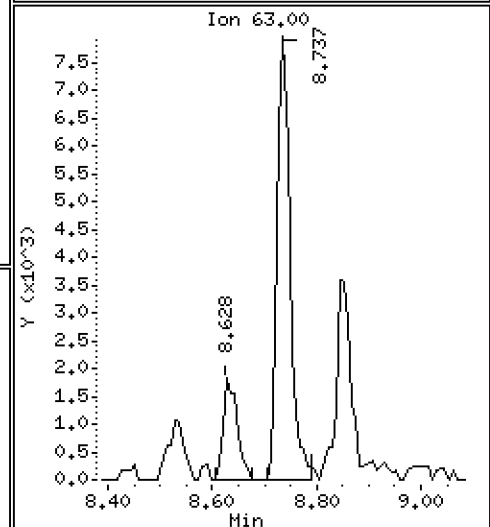
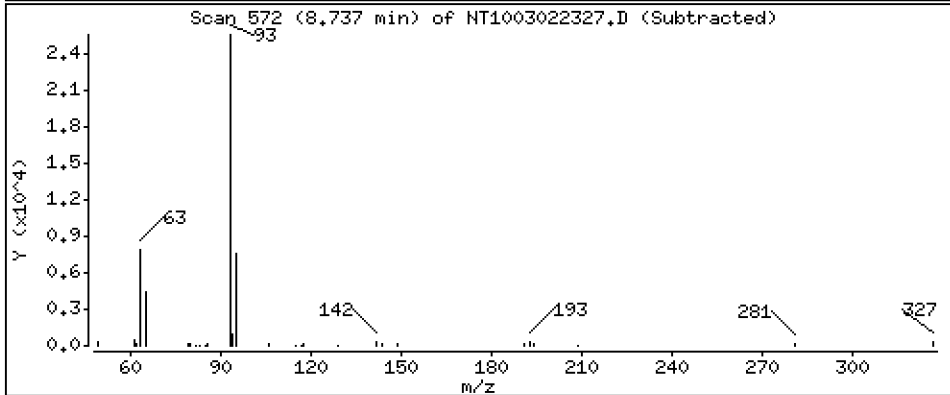
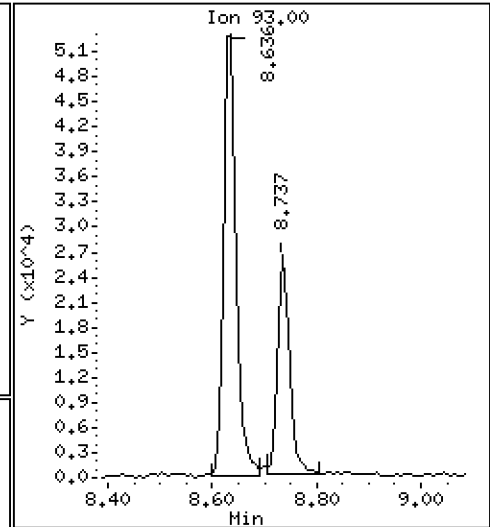
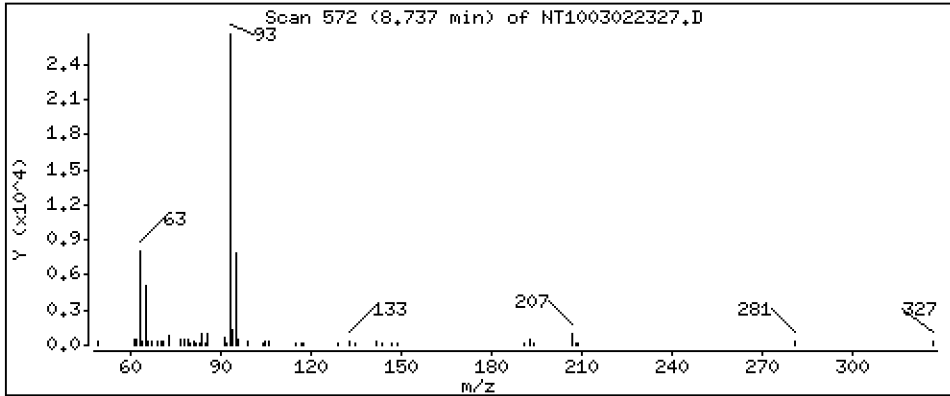
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 0,2266 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

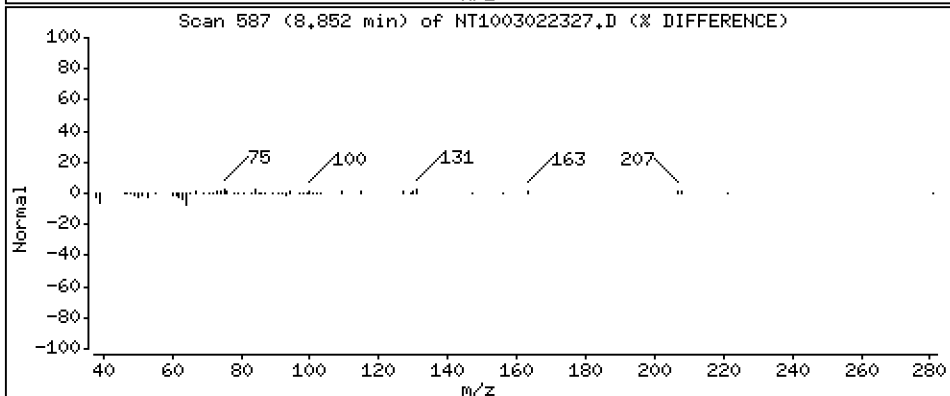
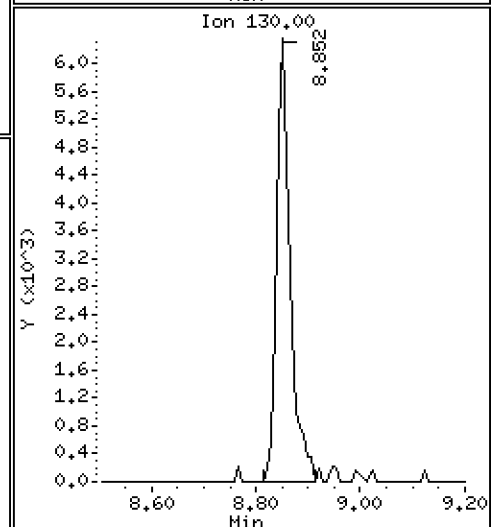
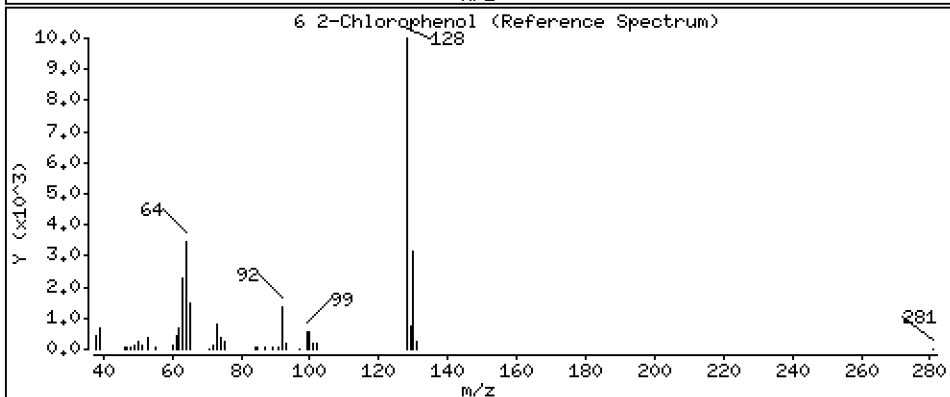
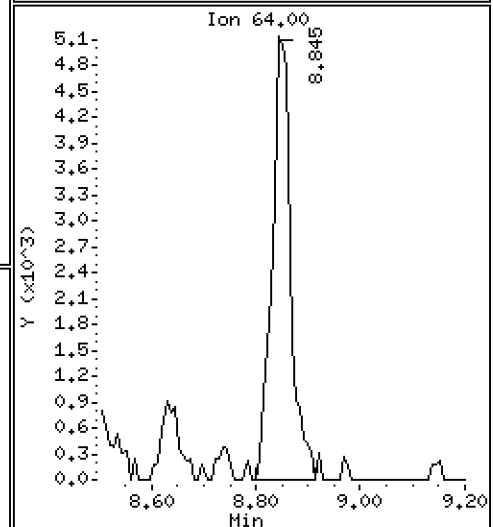
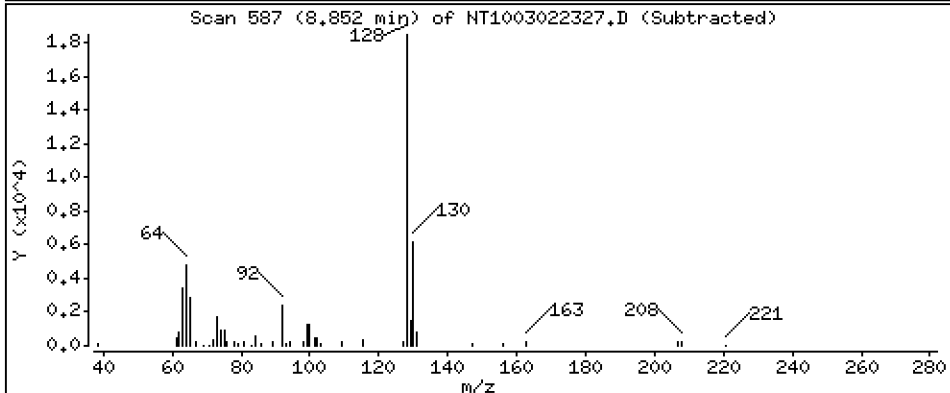
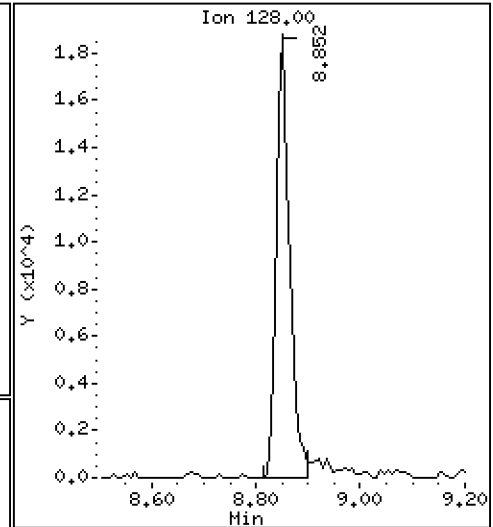
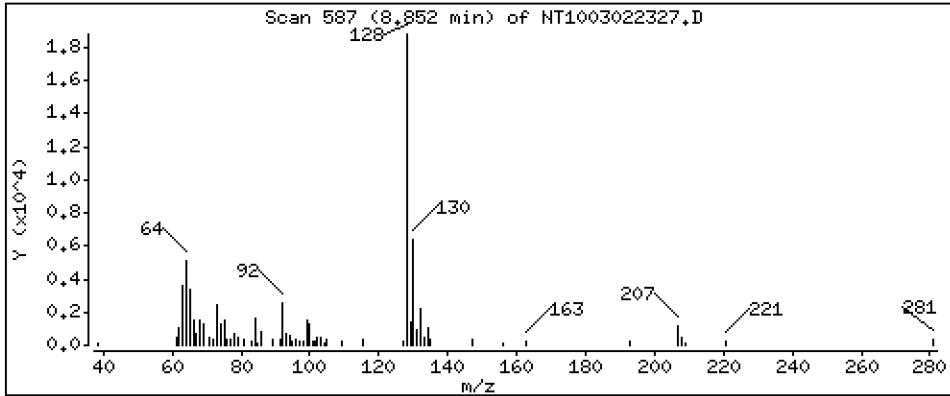
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 0,1743 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

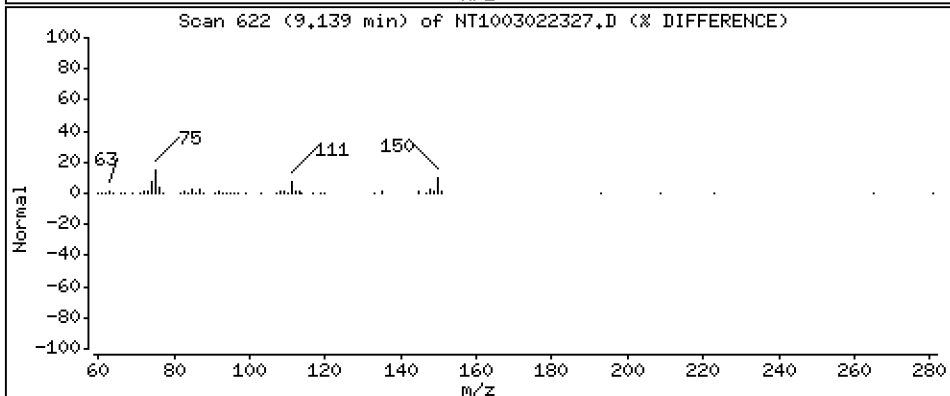
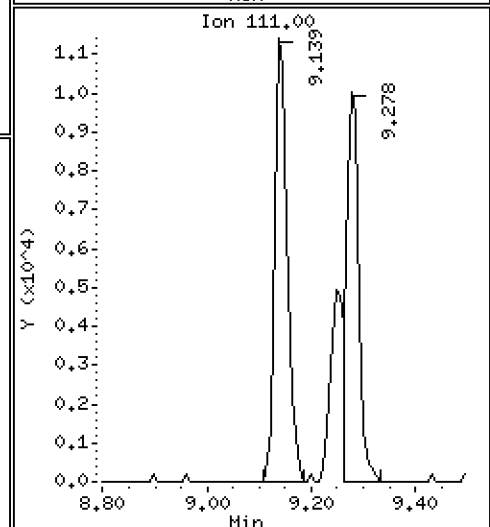
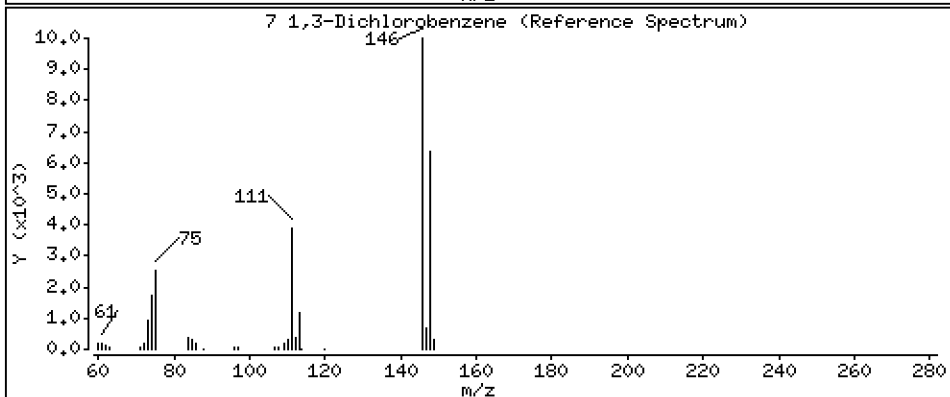
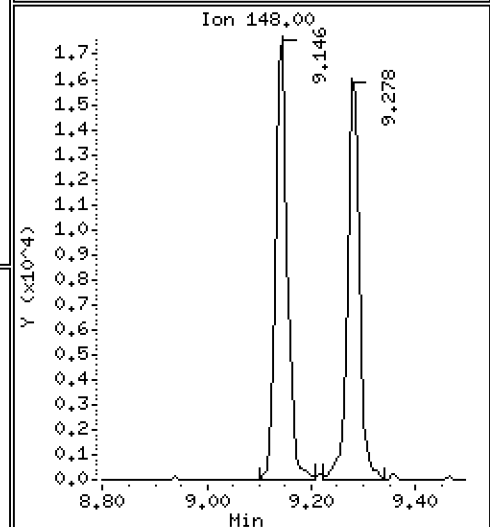
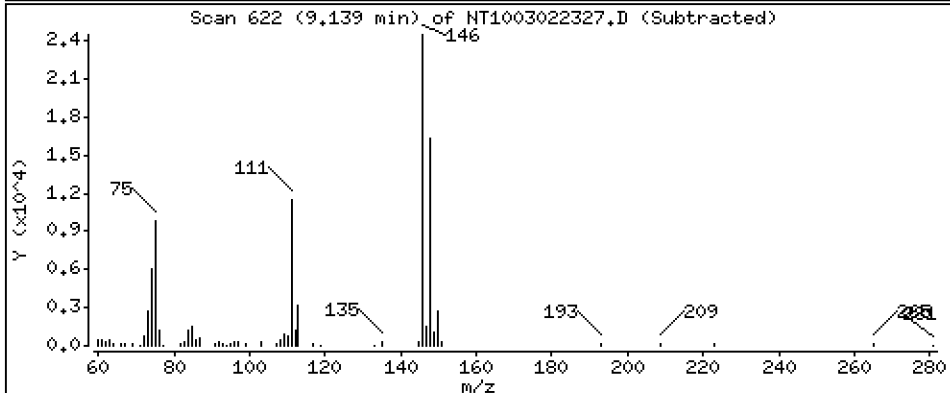
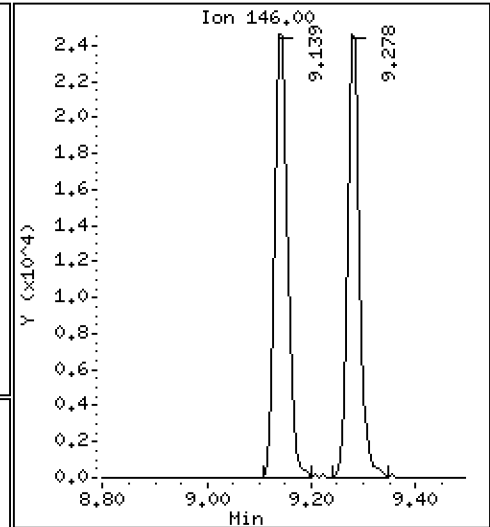
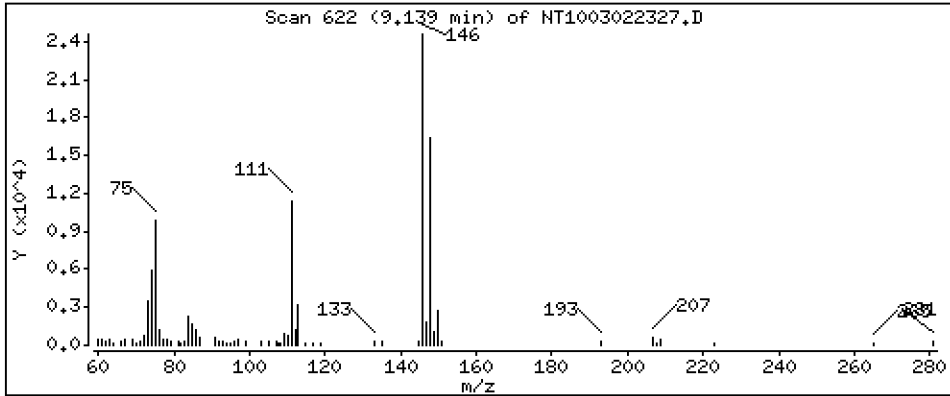
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 0,2081 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

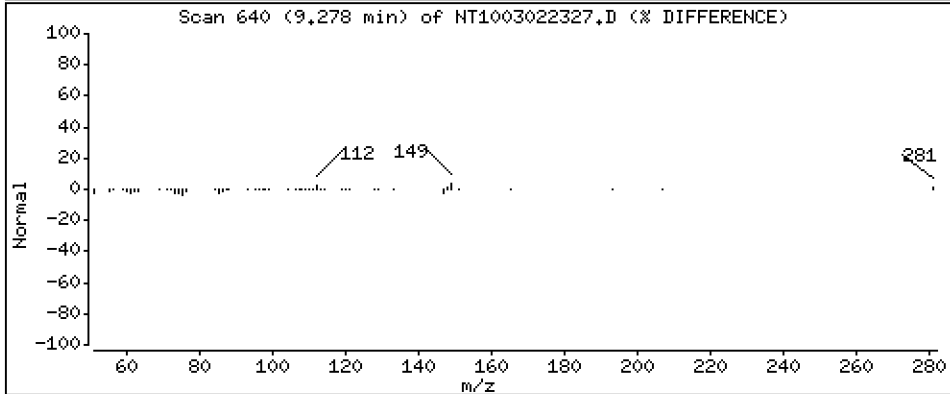
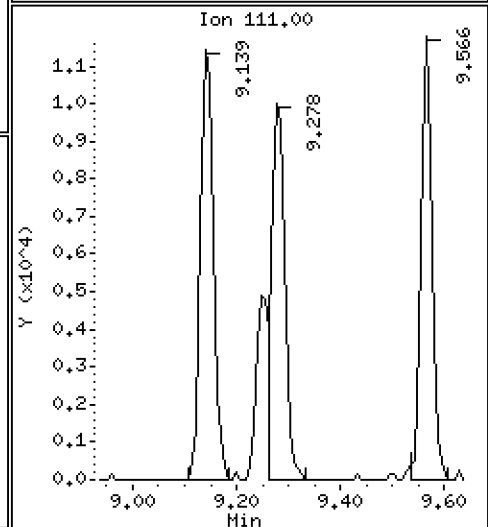
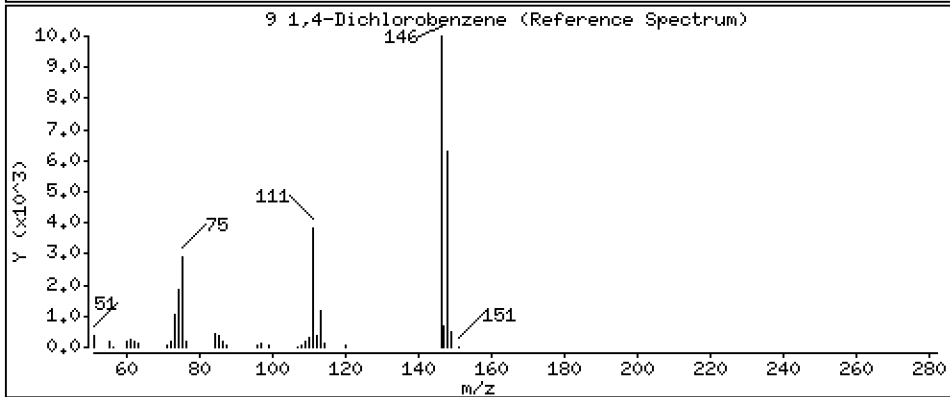
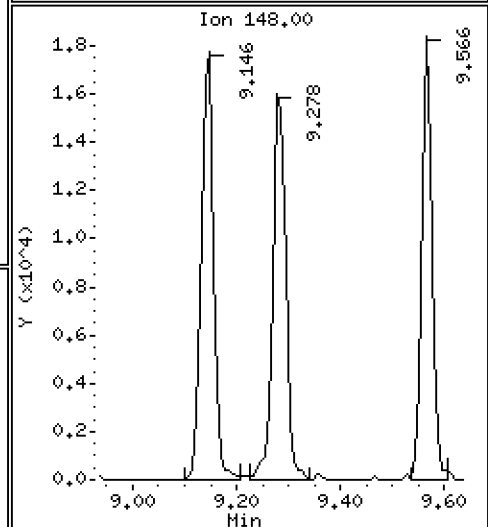
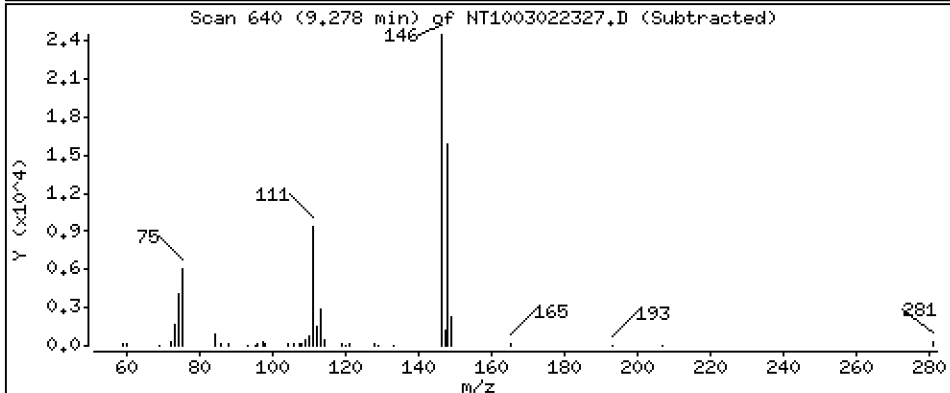
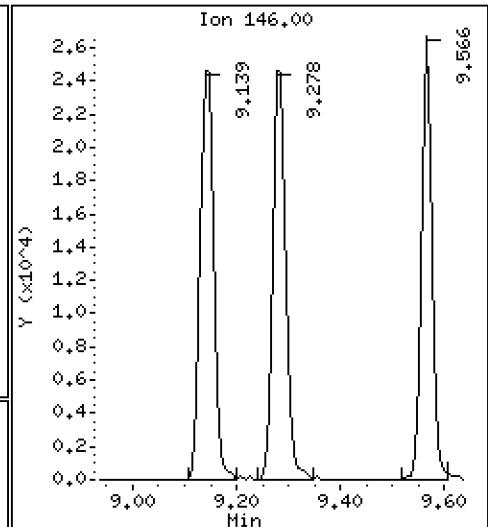
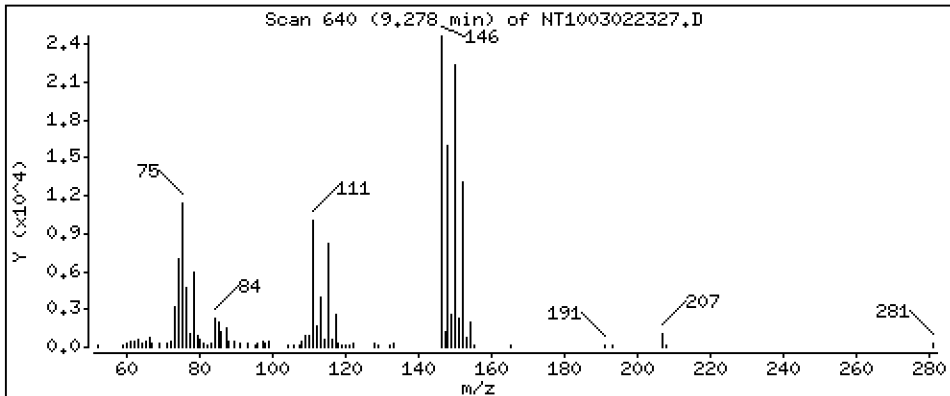
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 0,1980 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

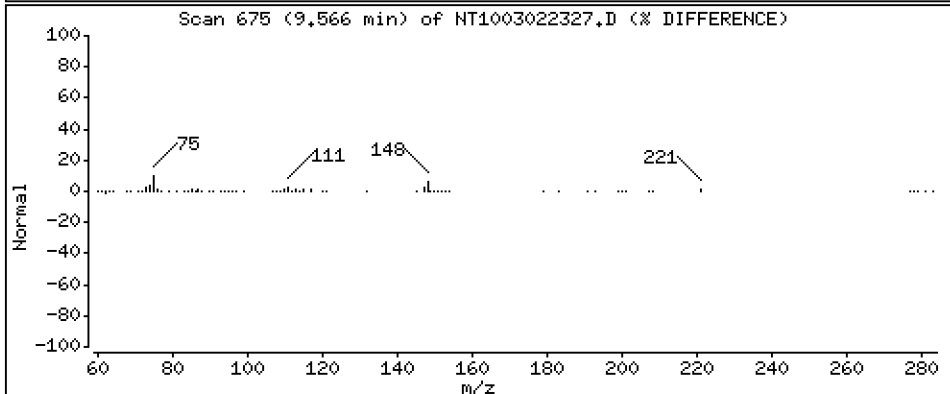
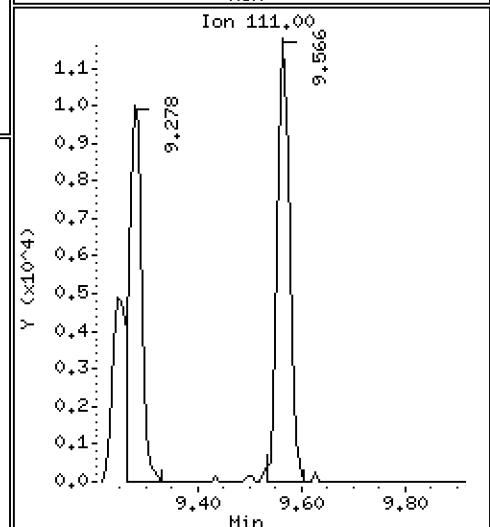
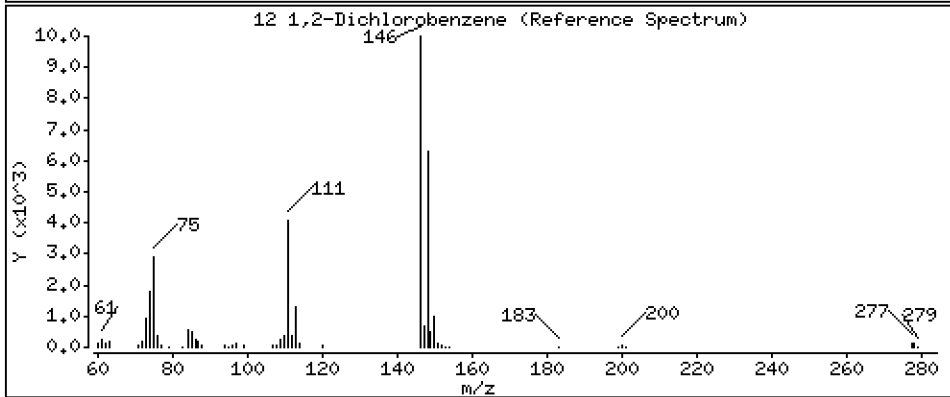
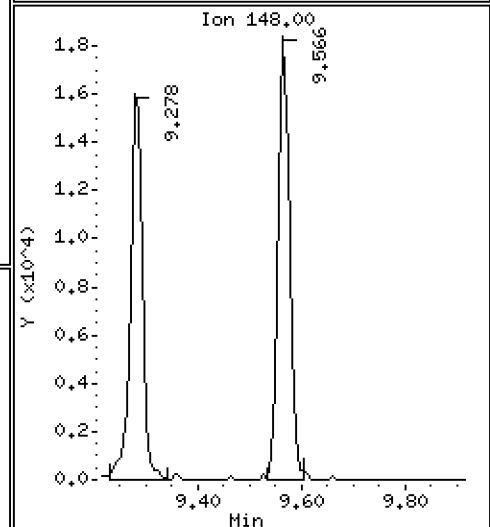
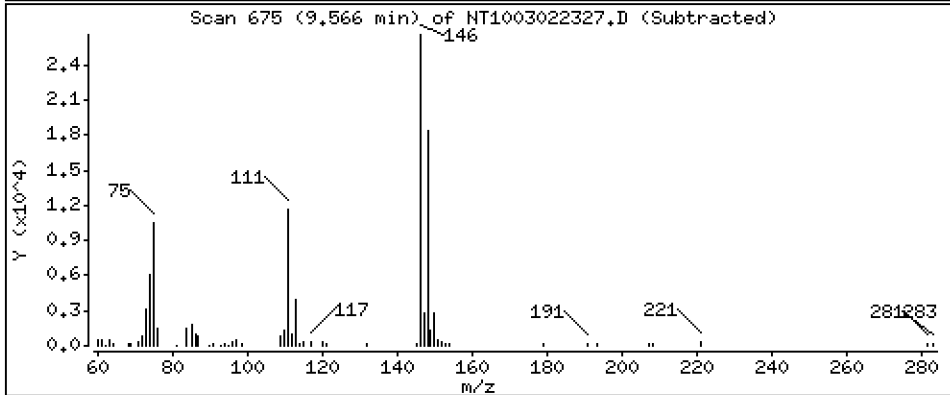
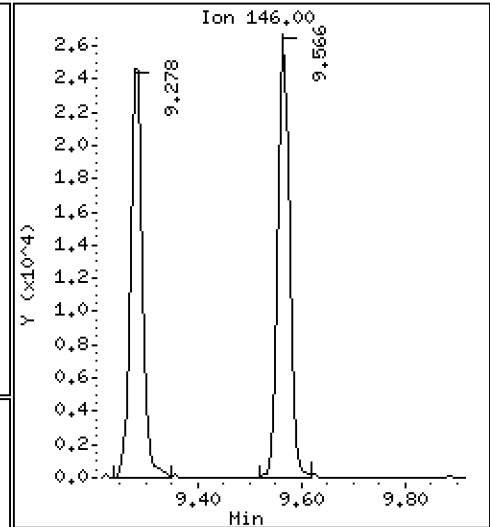
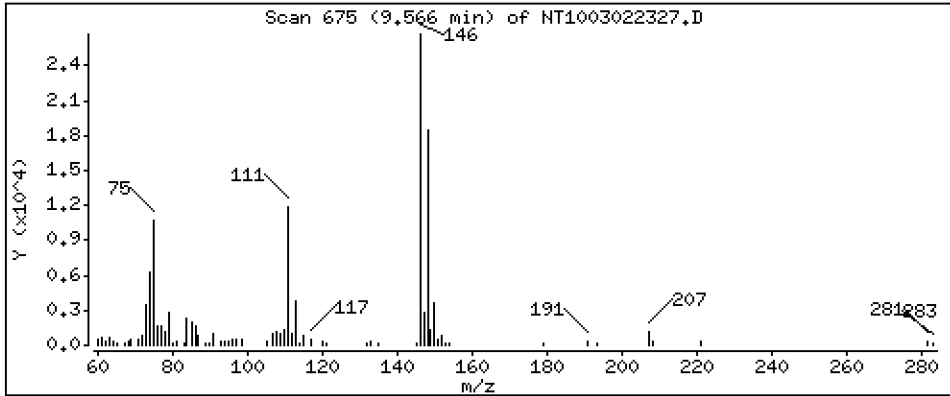
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.1964 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

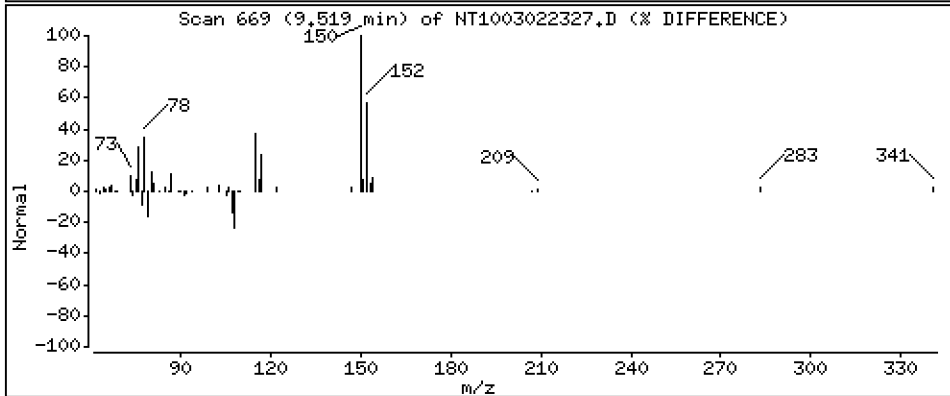
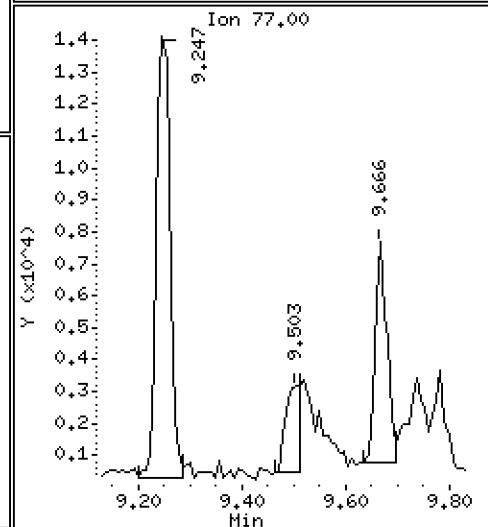
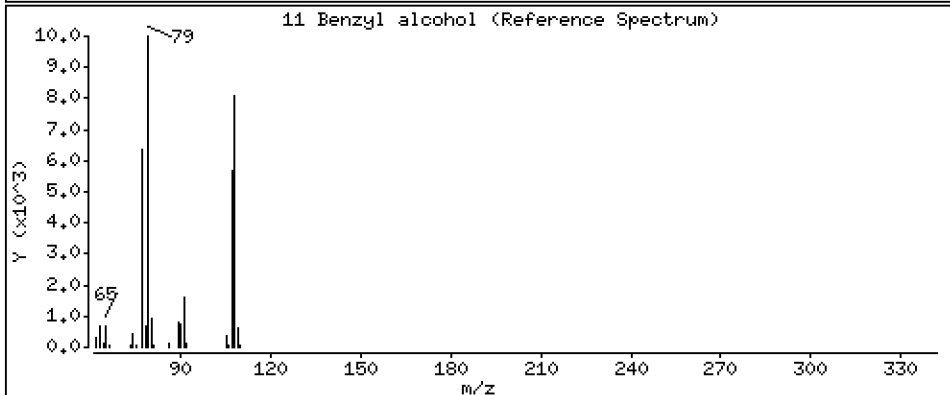
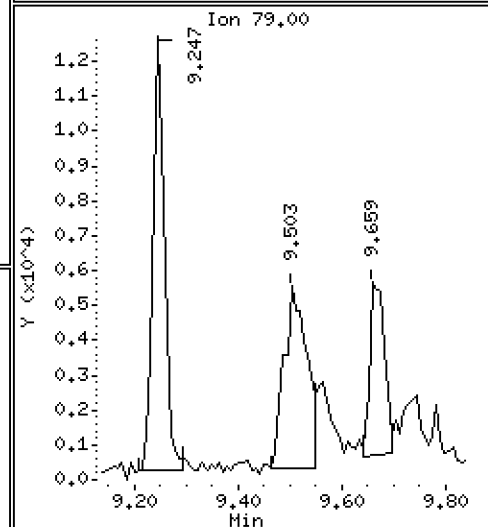
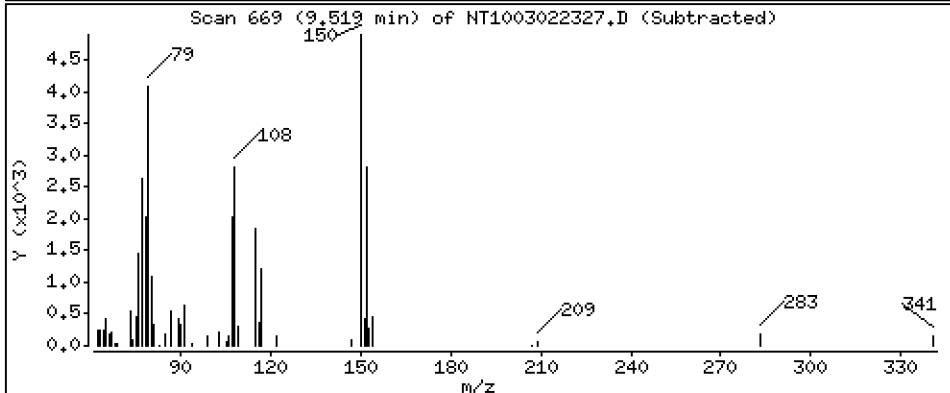
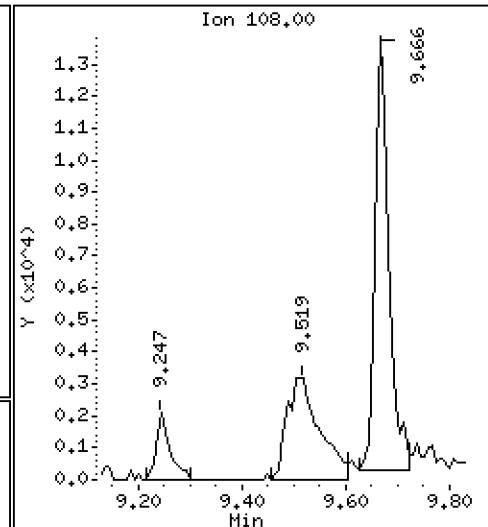
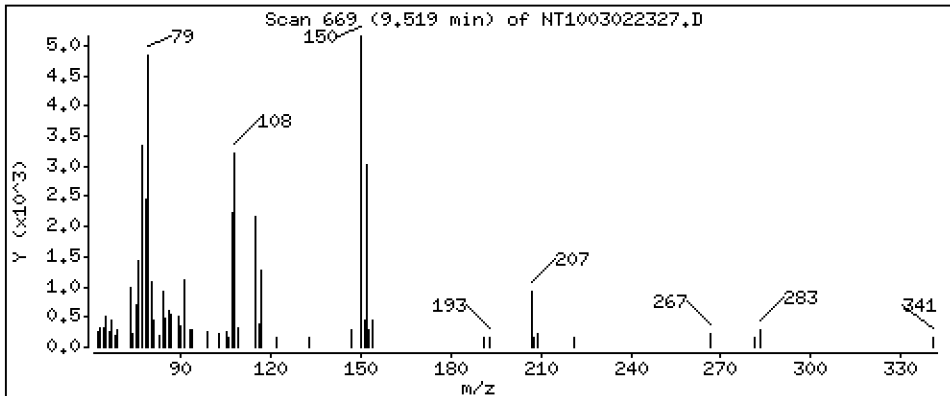
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 0,1220 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

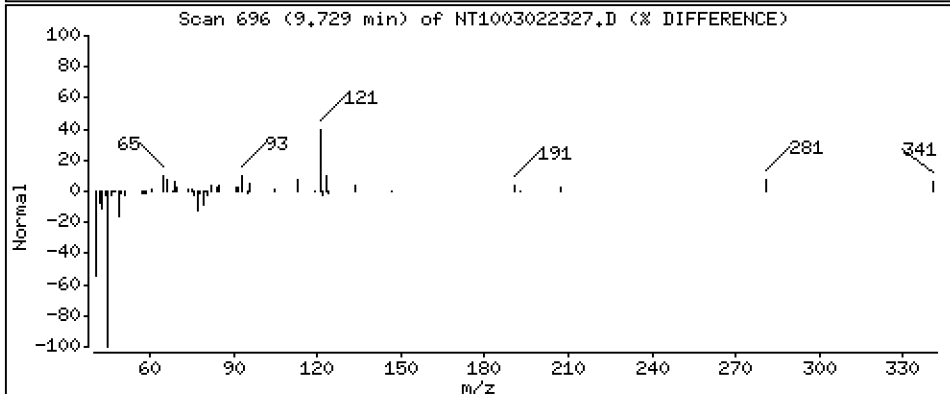
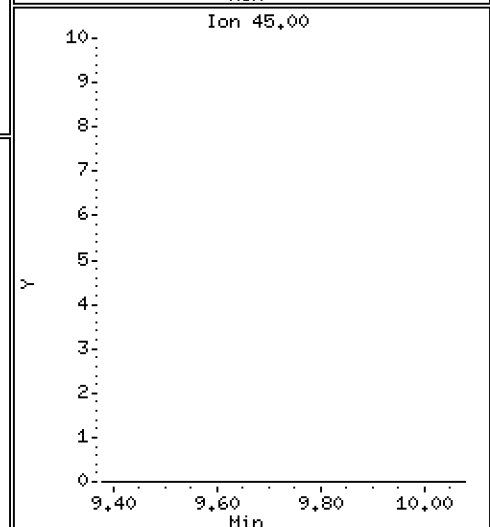
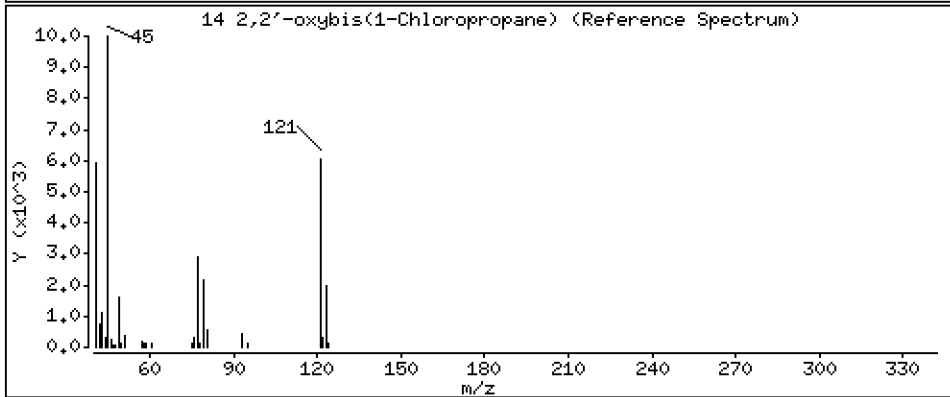
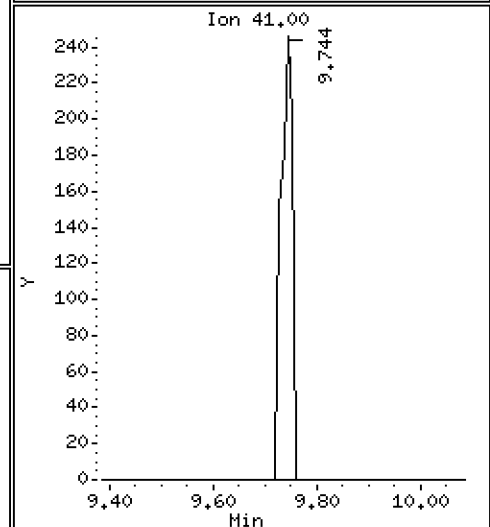
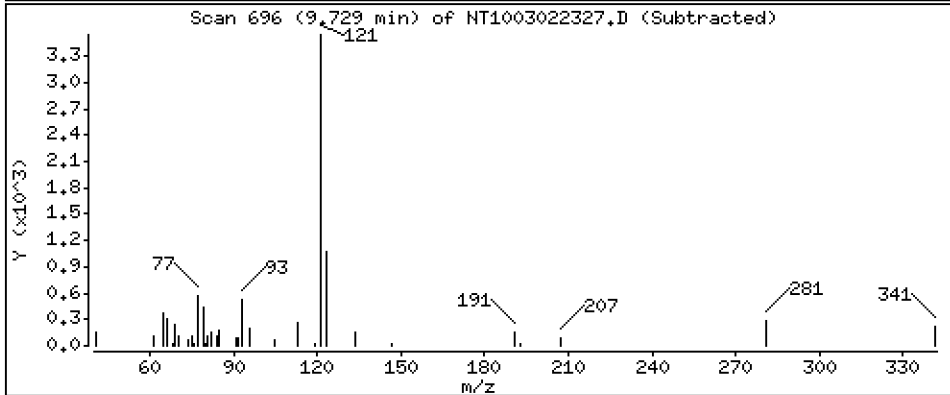
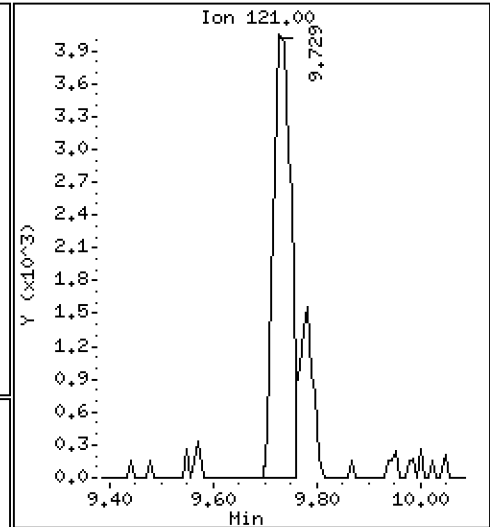
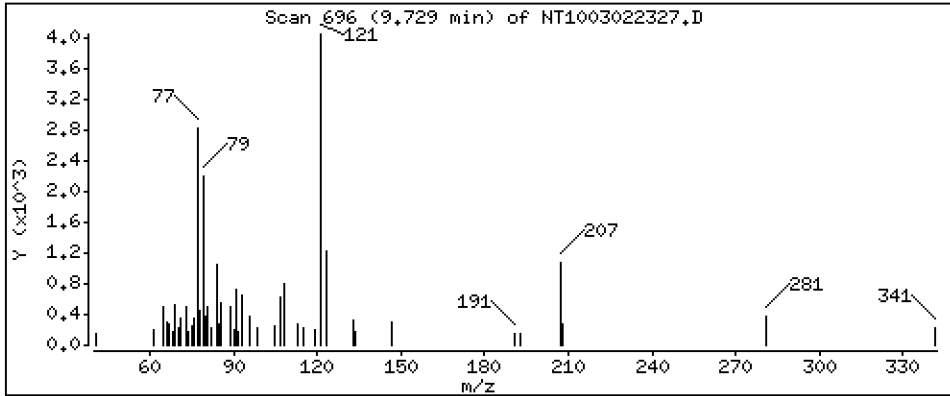
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,1576 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

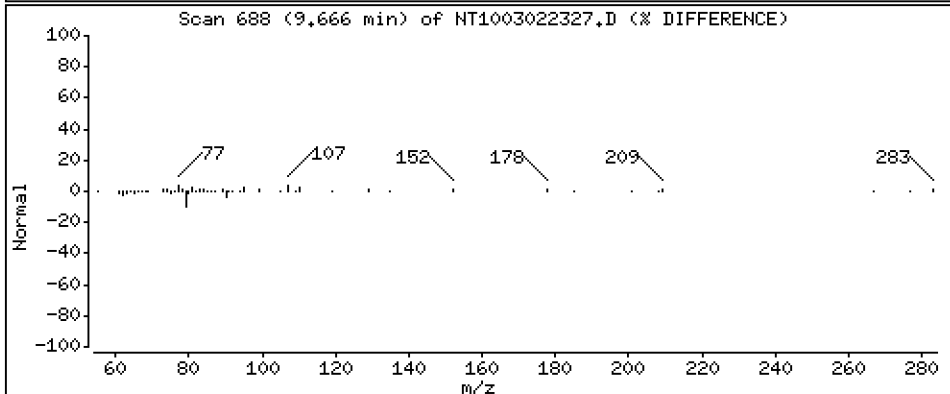
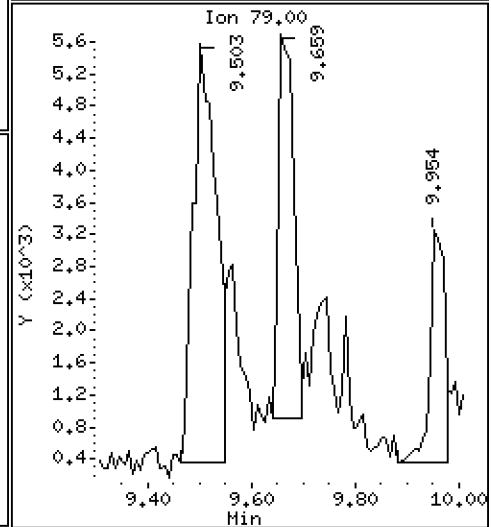
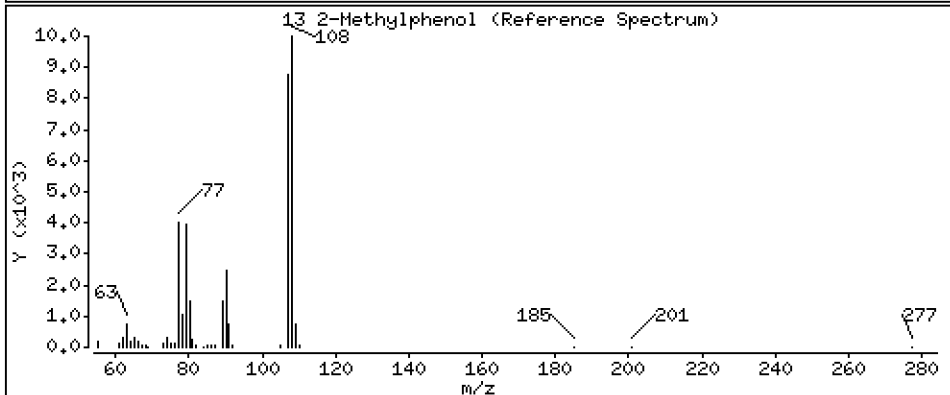
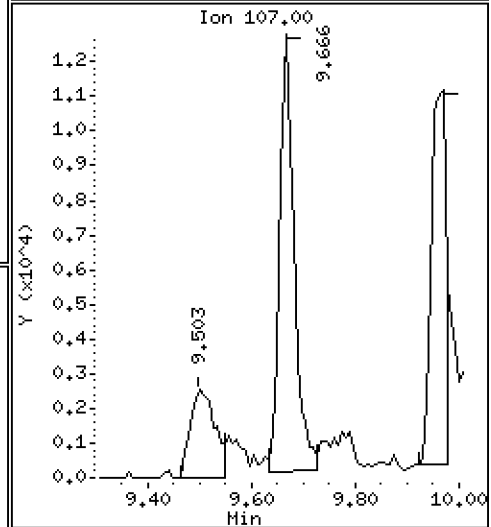
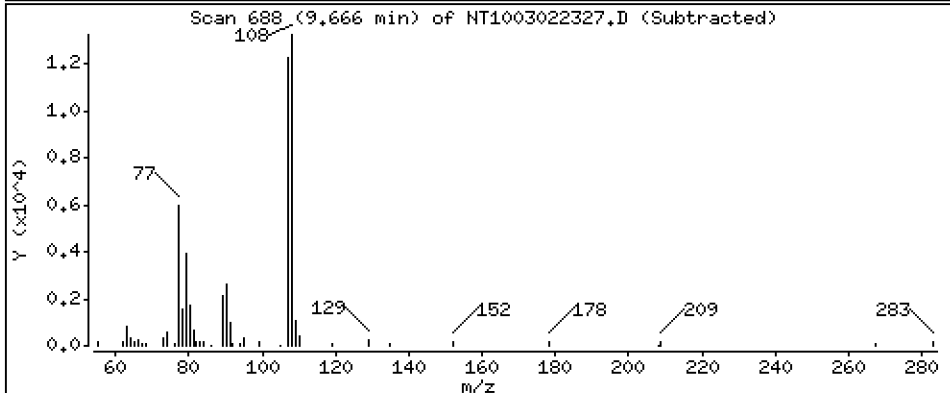
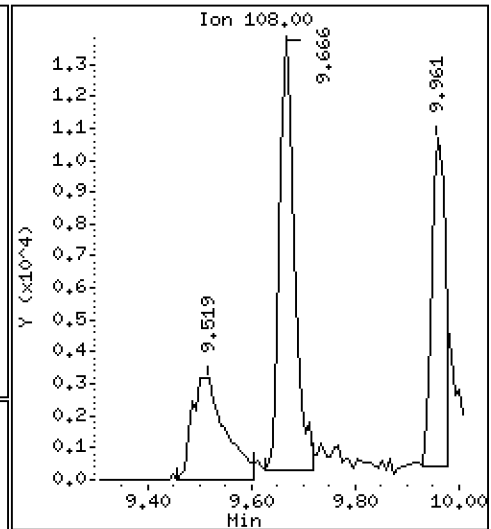
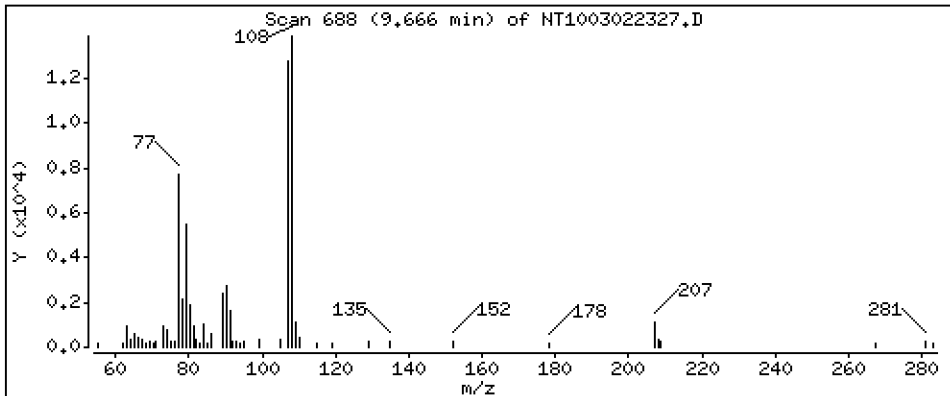
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1488 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

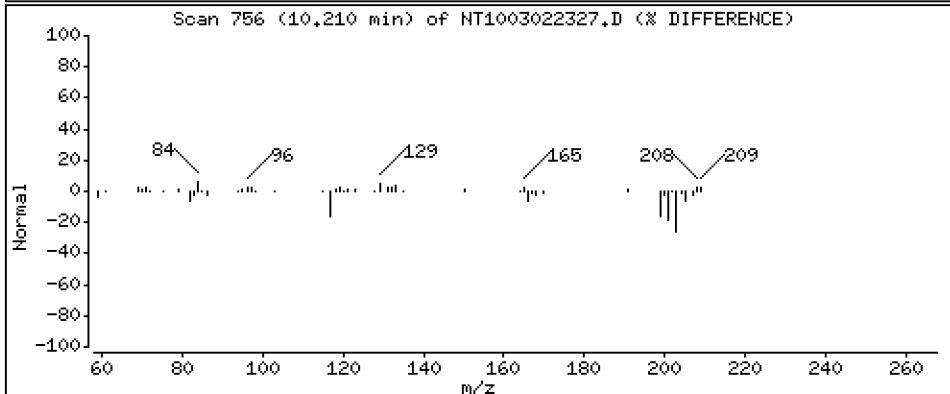
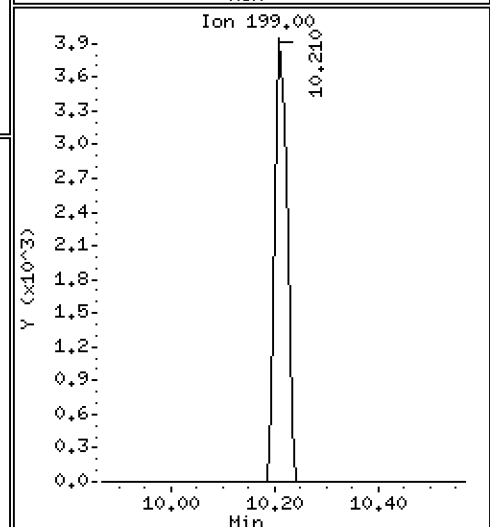
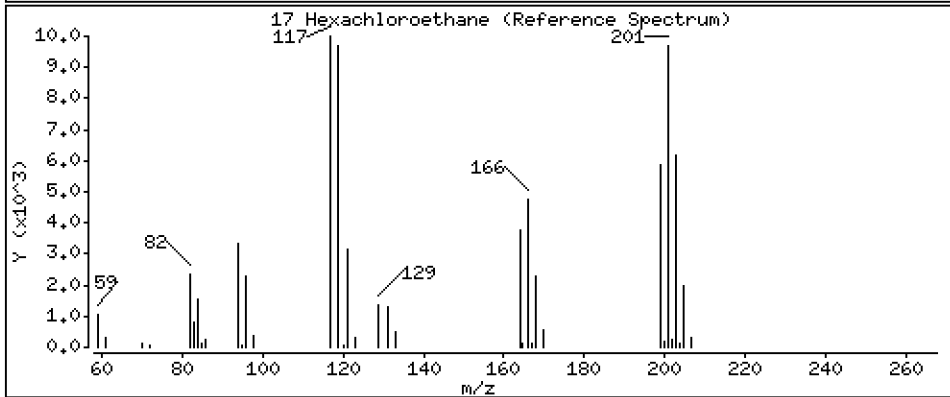
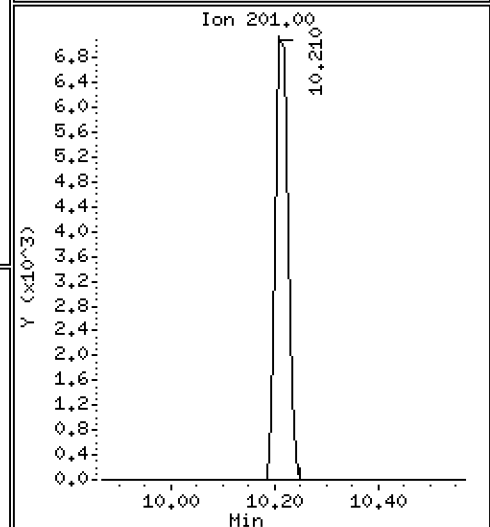
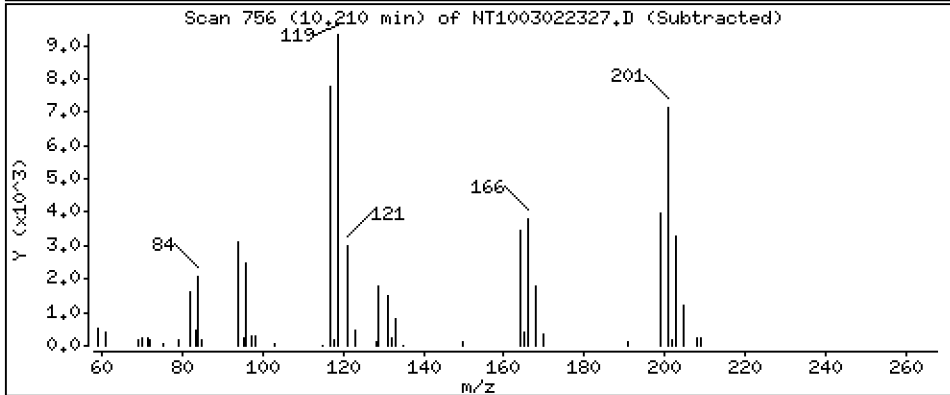
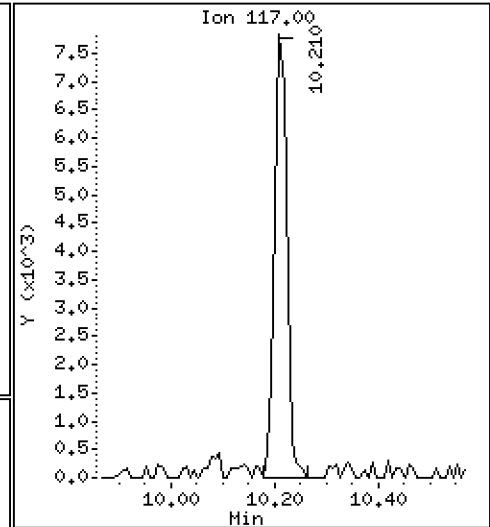
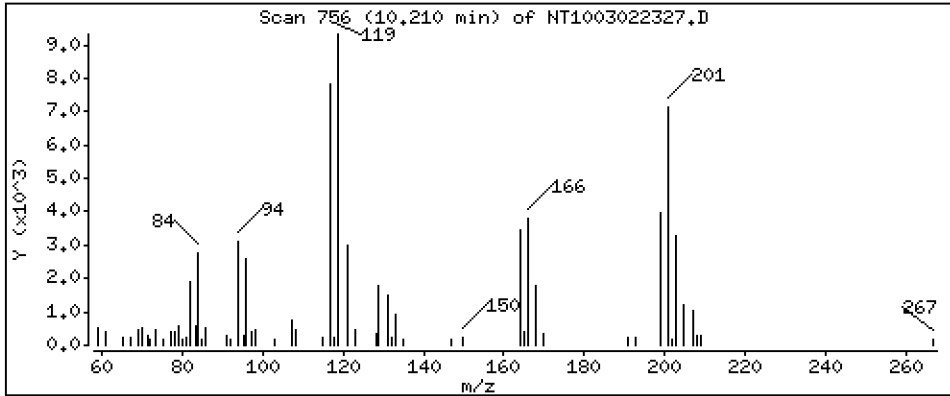
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 0,1455 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

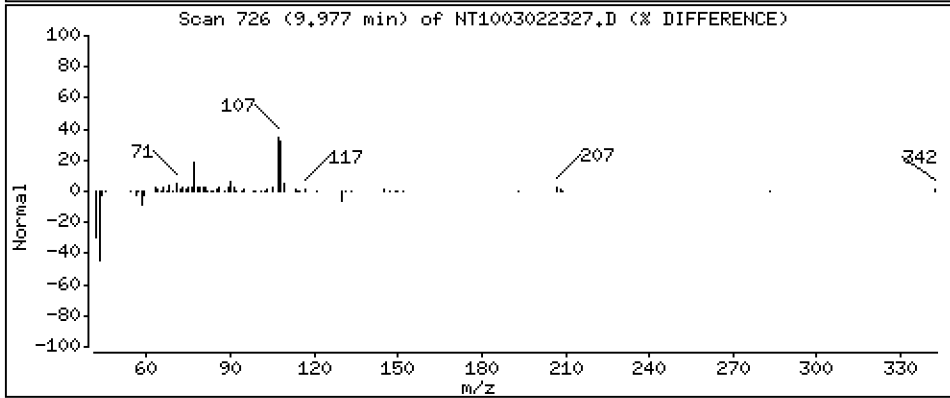
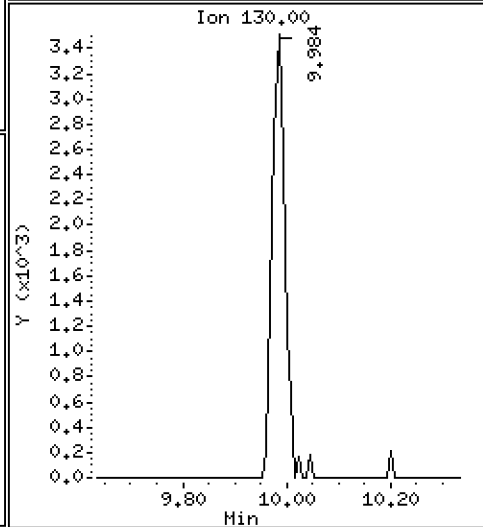
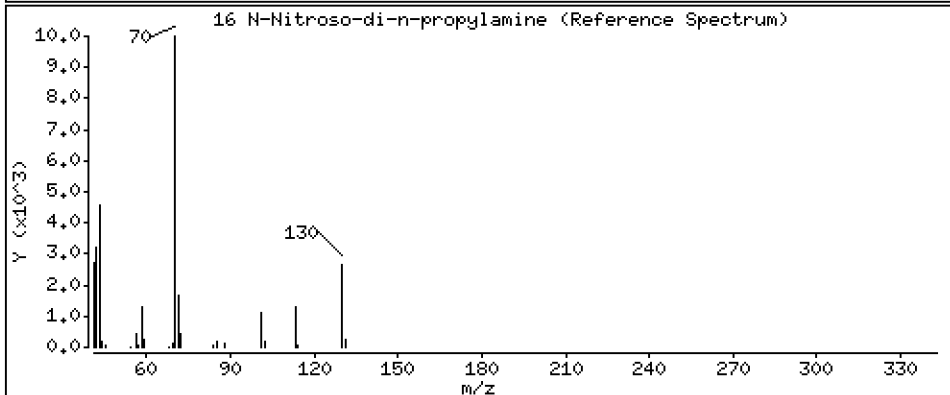
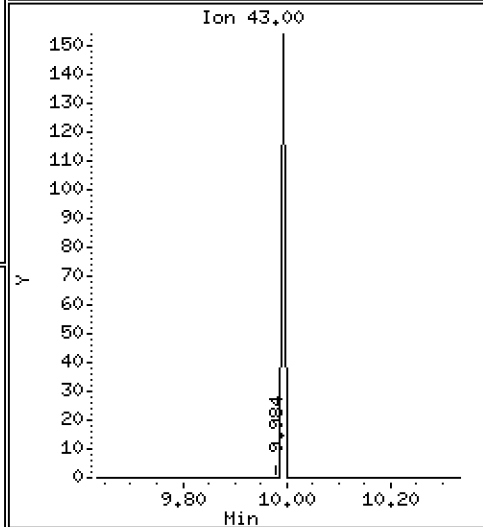
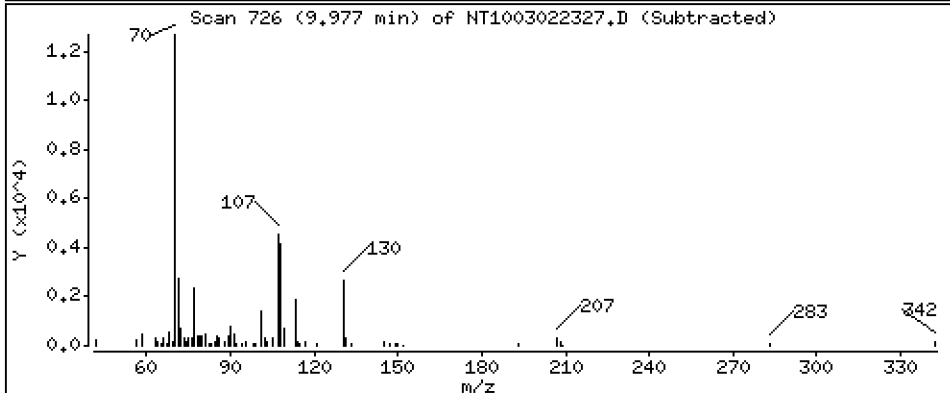
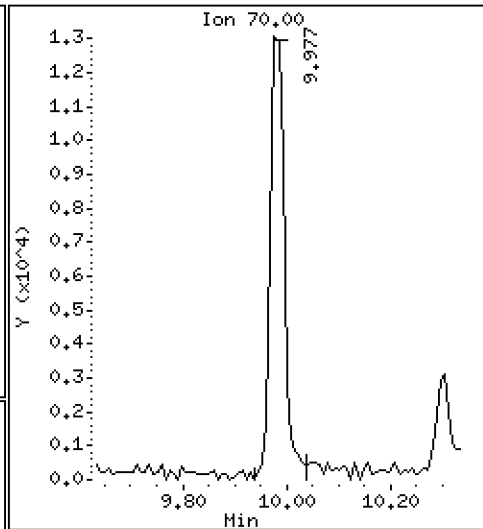
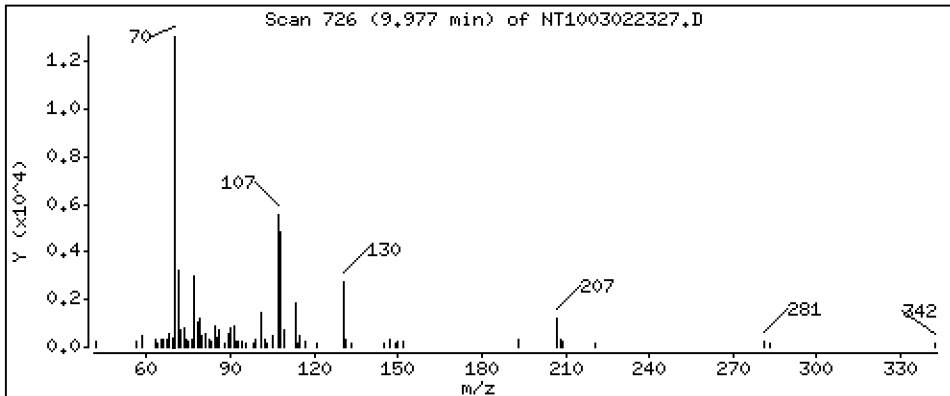
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 0,1774 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

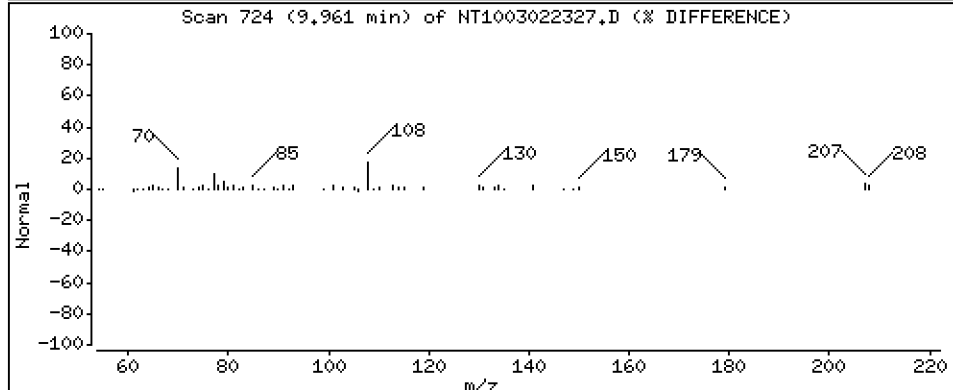
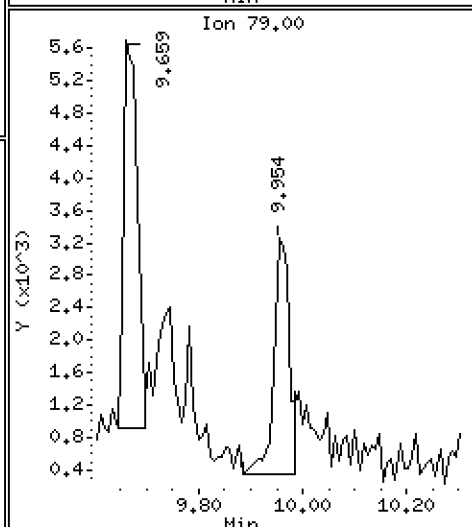
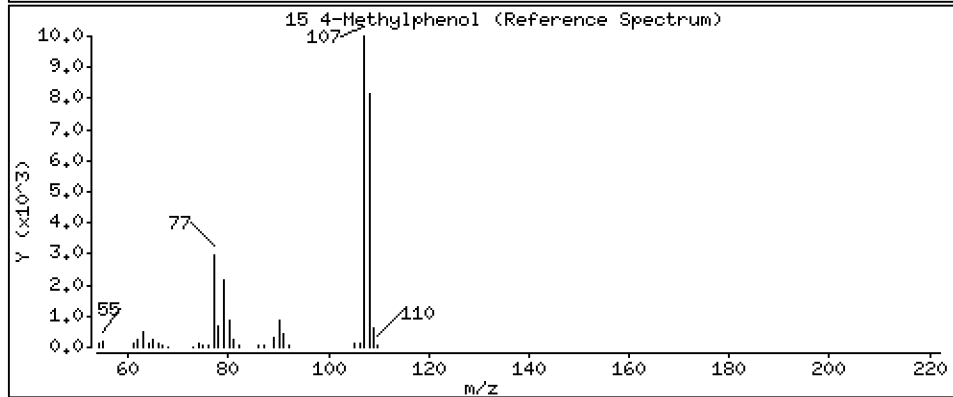
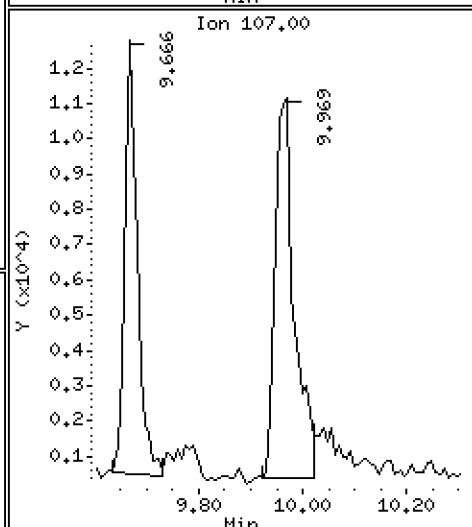
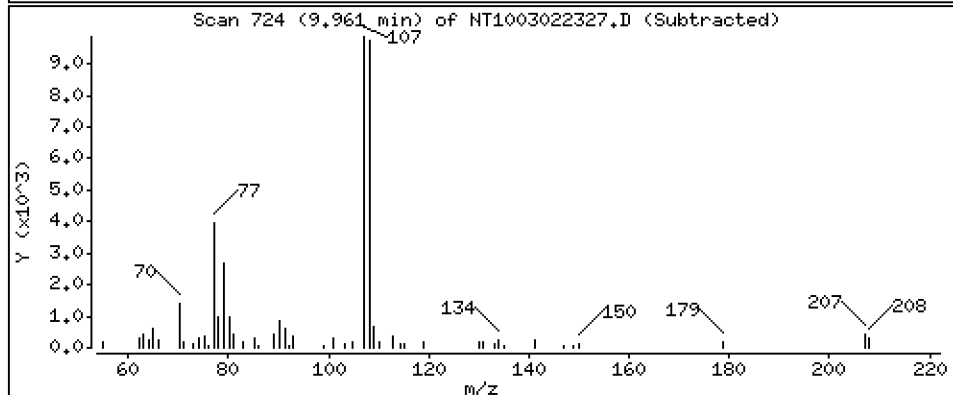
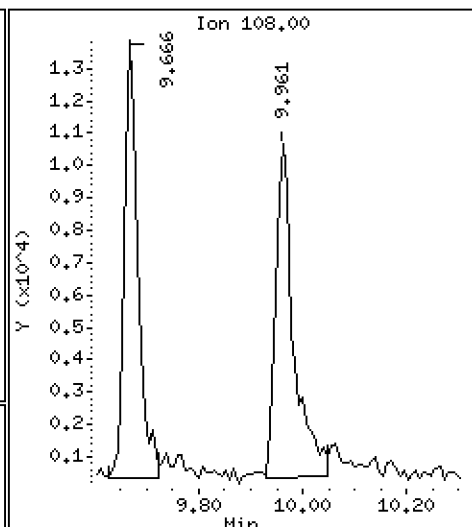
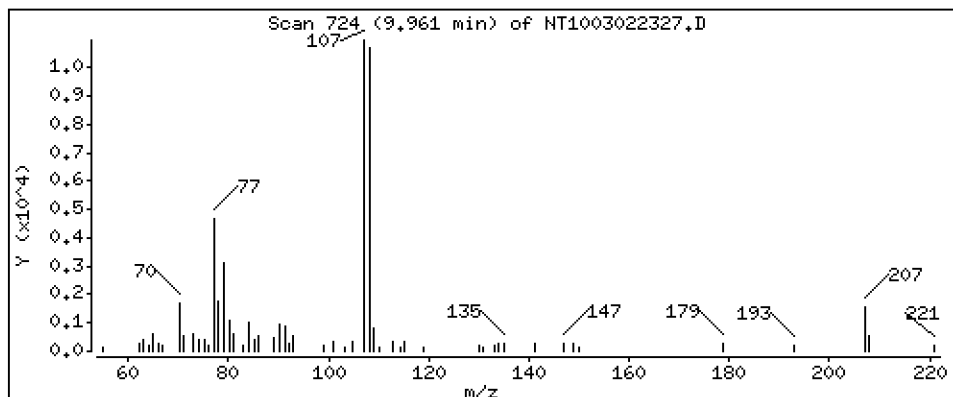
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1126 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

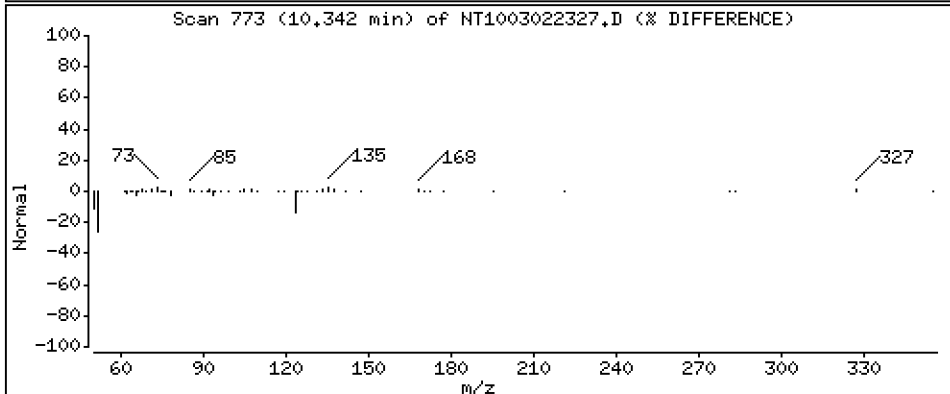
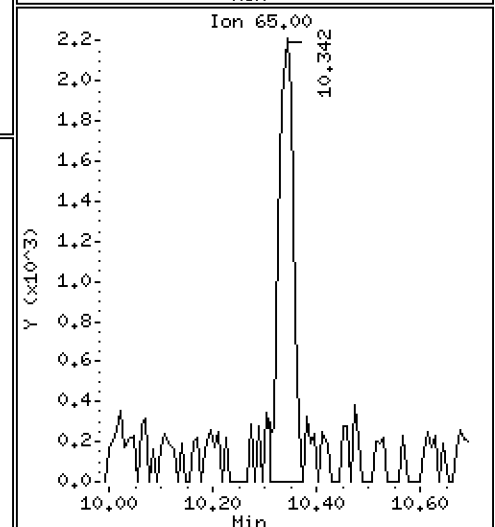
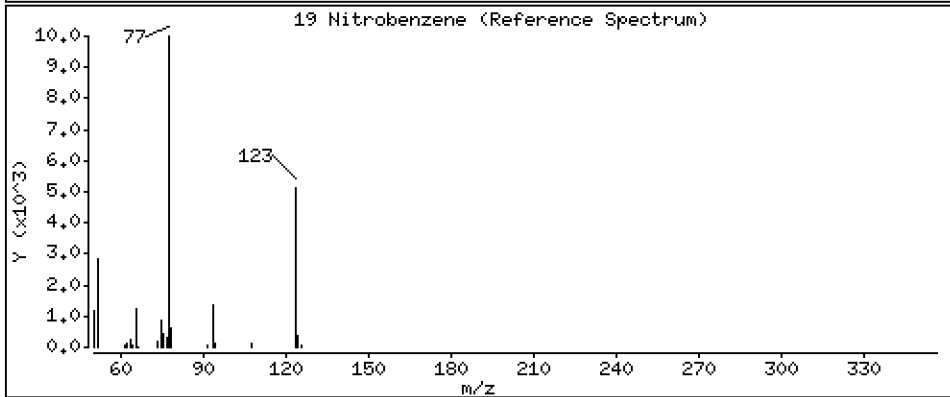
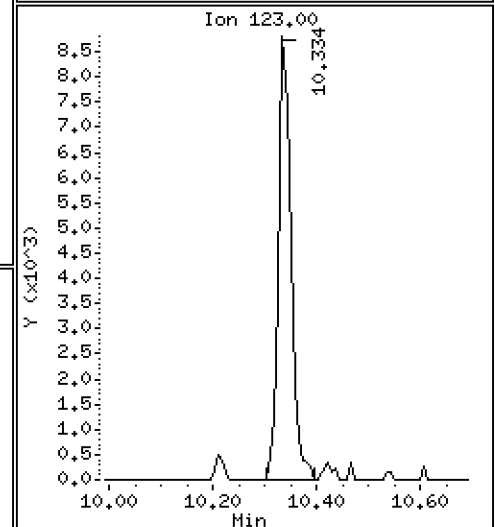
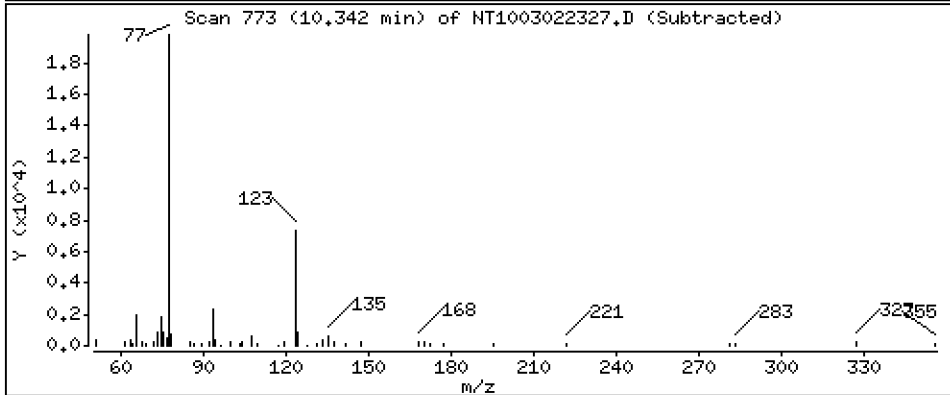
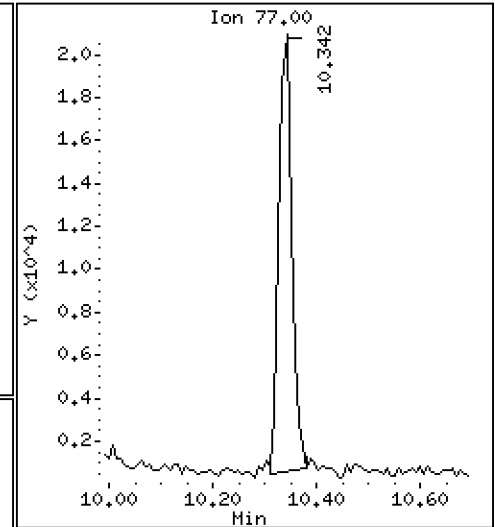
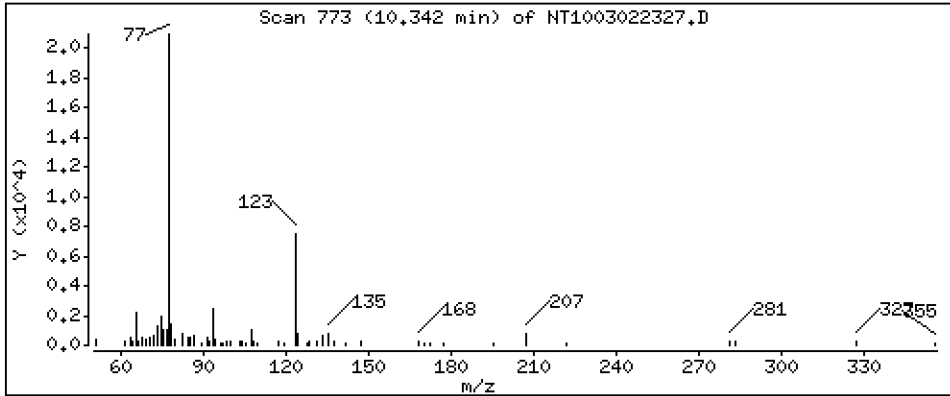
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,1551 ug/mL

19 Nitrobenzene



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

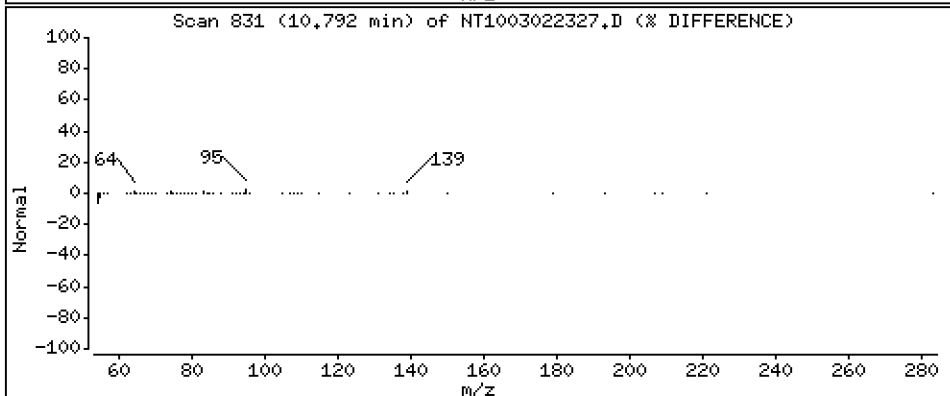
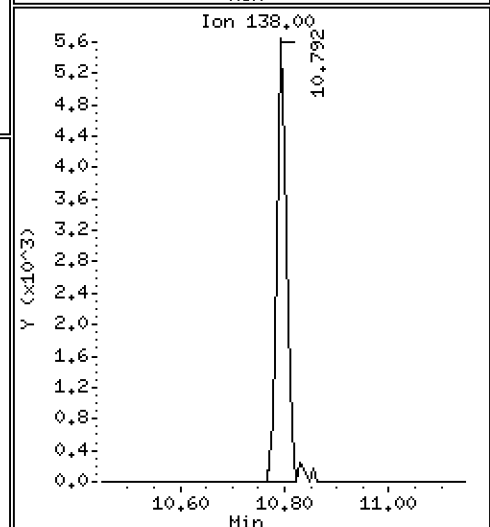
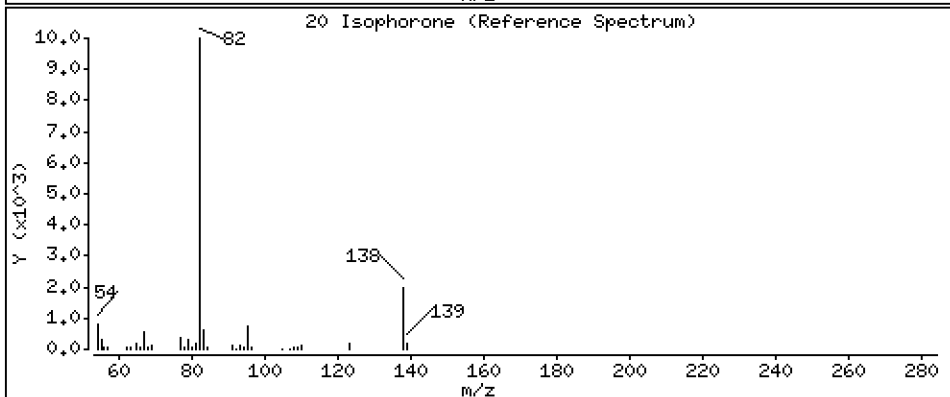
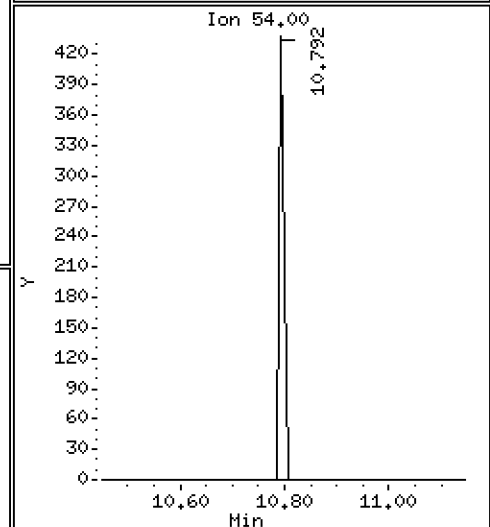
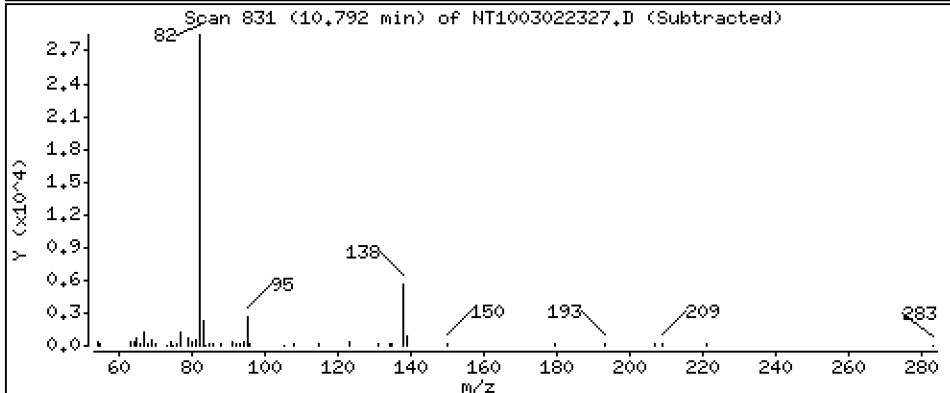
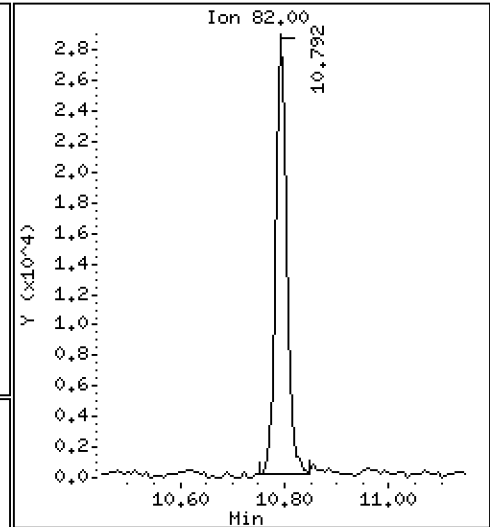
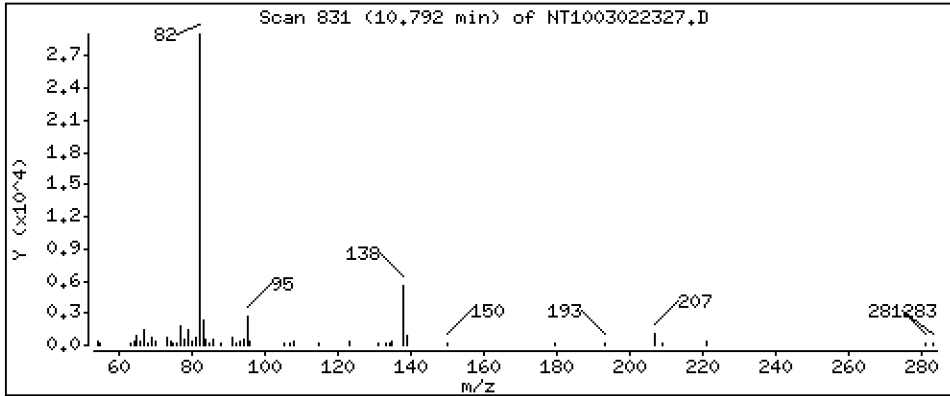
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 0,1594 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

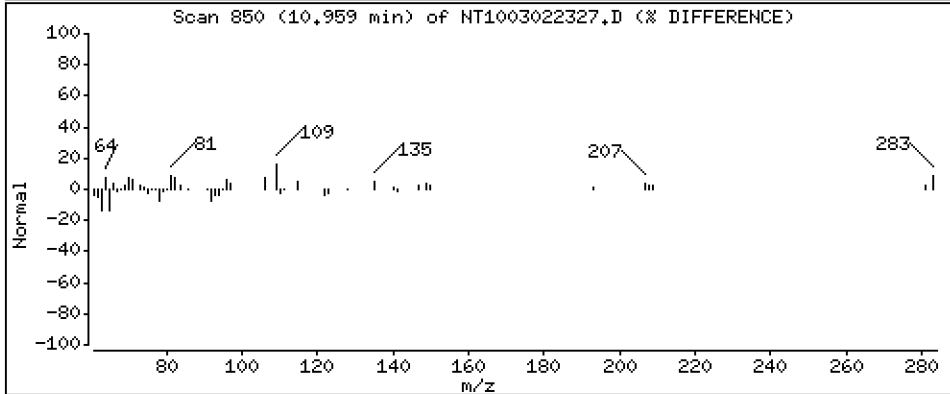
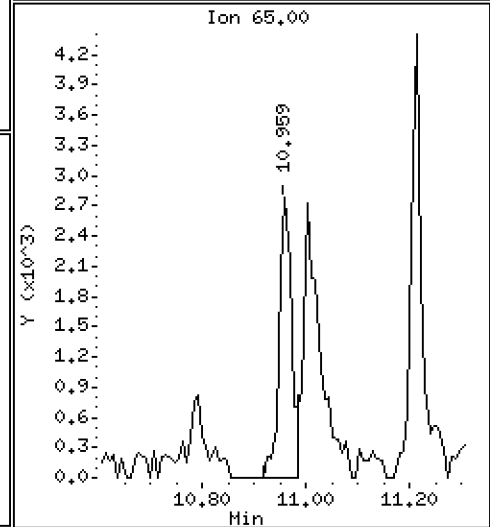
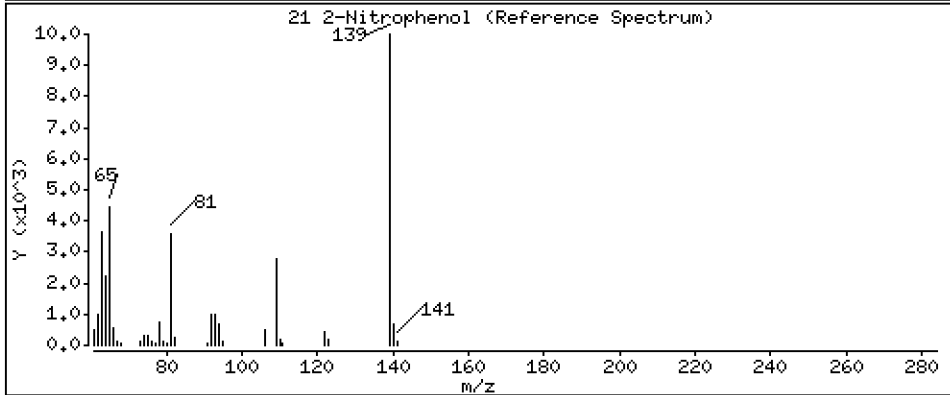
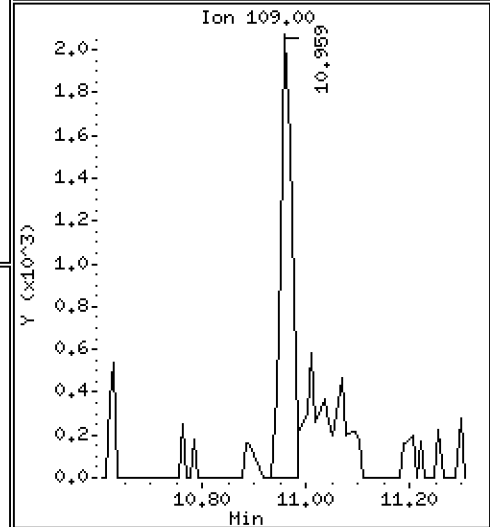
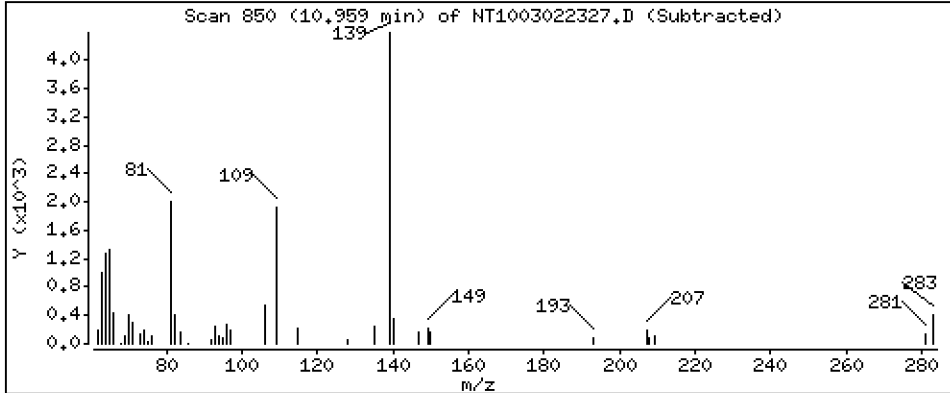
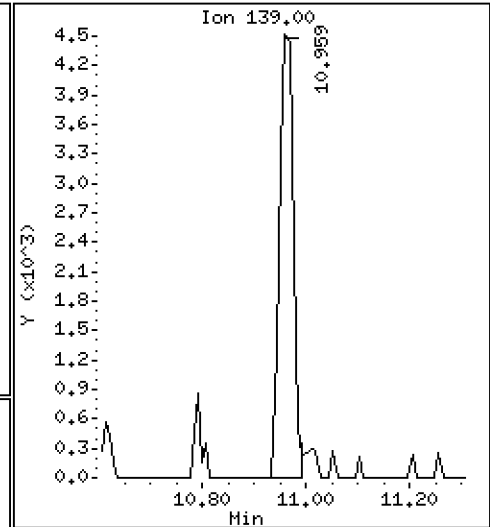
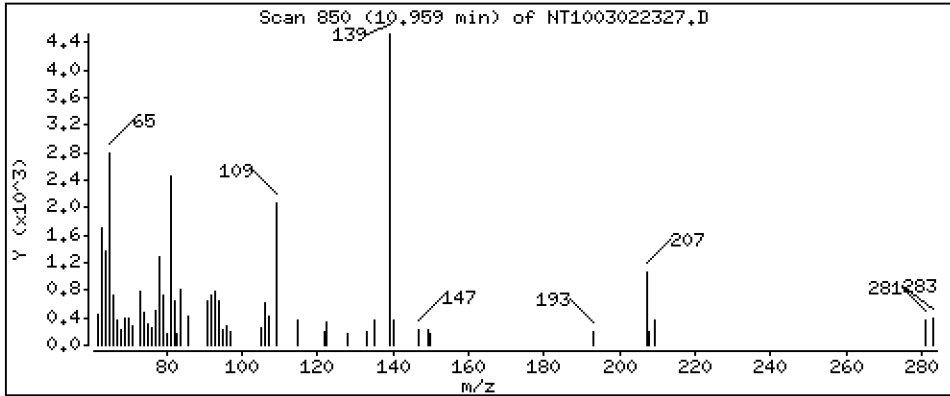
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 0,06980 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

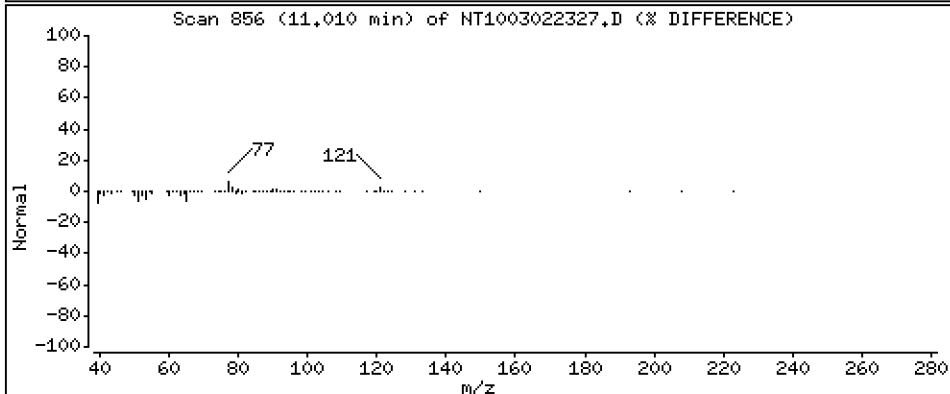
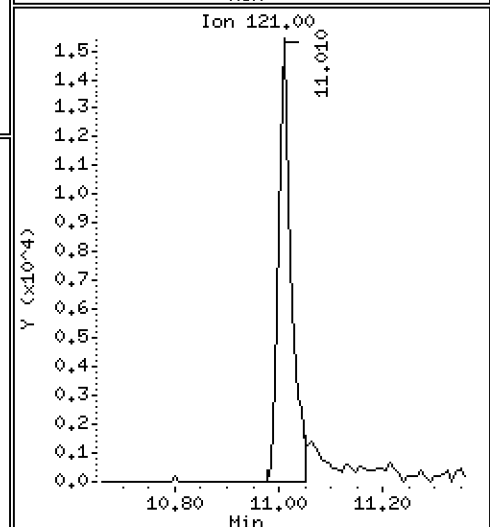
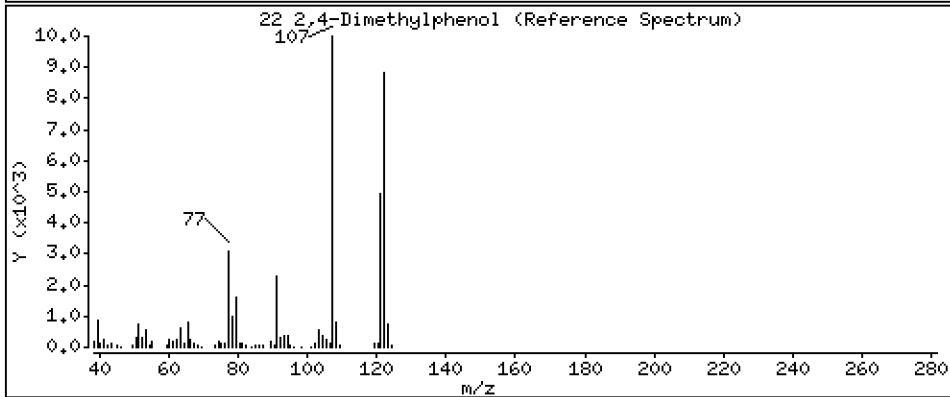
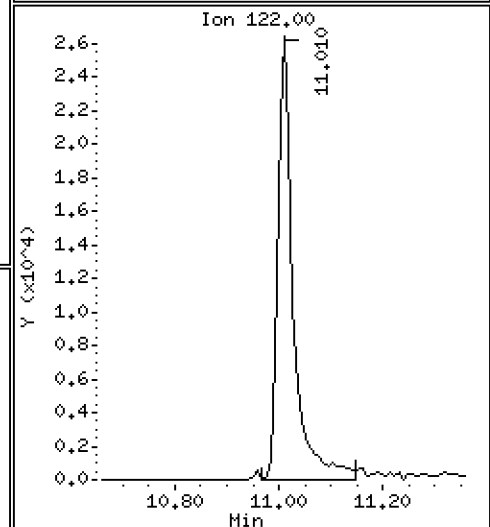
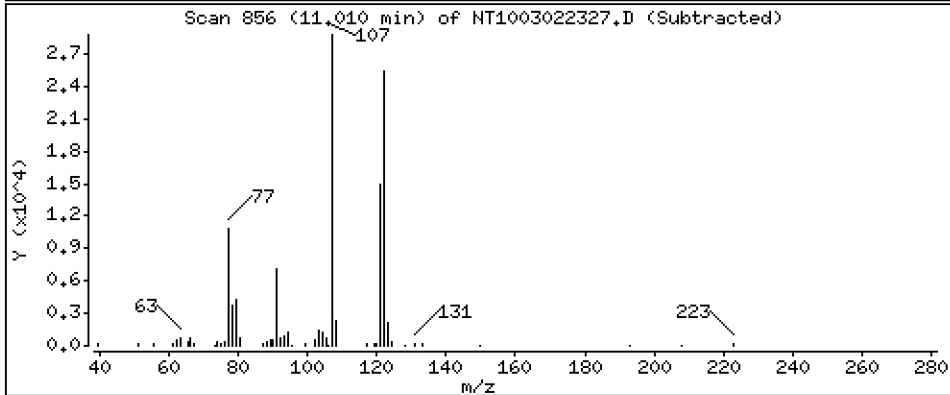
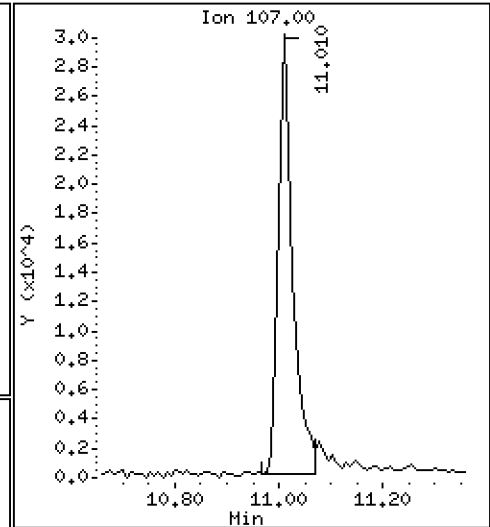
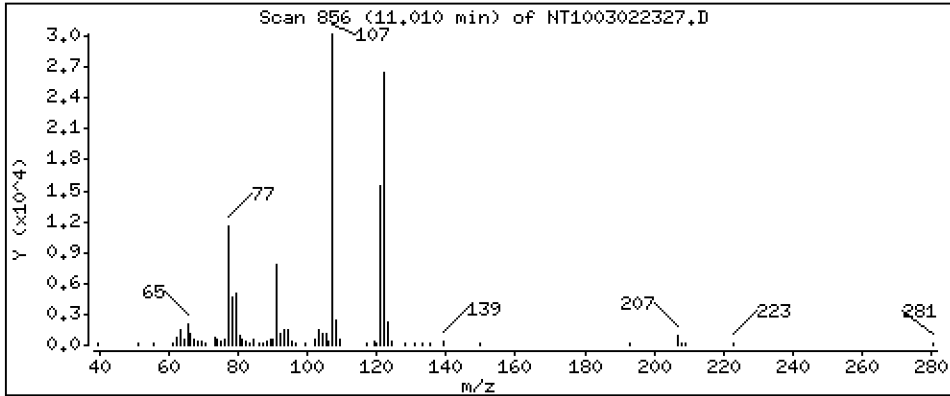
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,2856 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

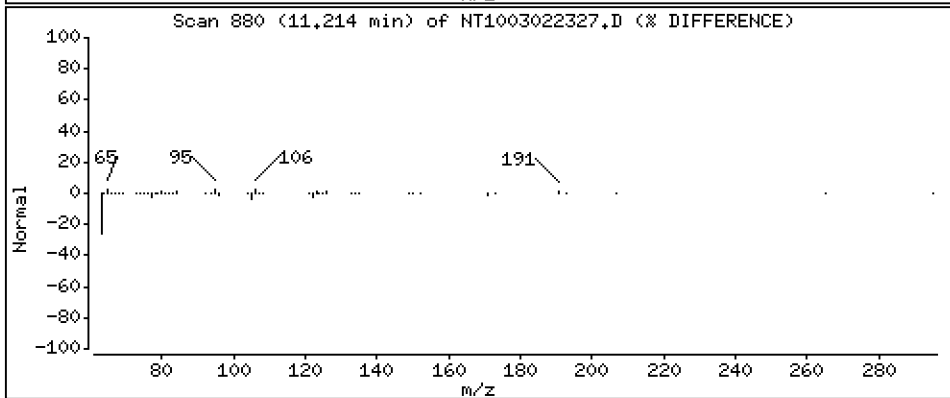
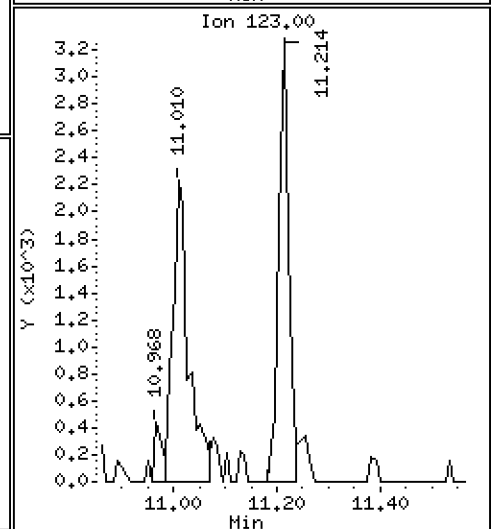
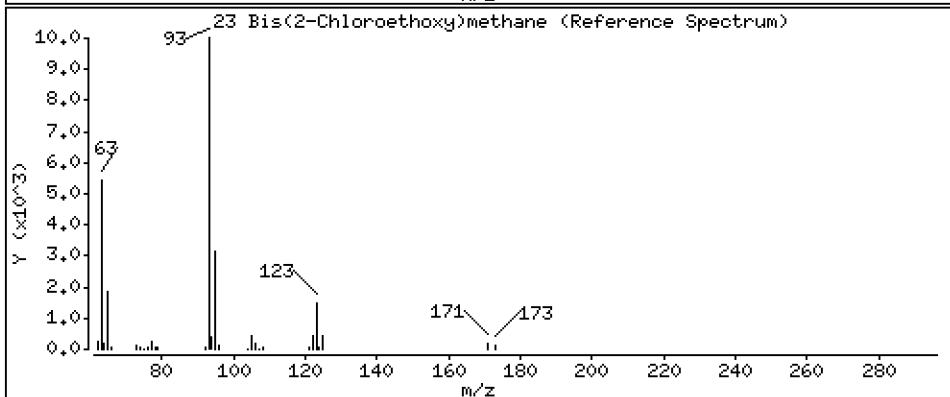
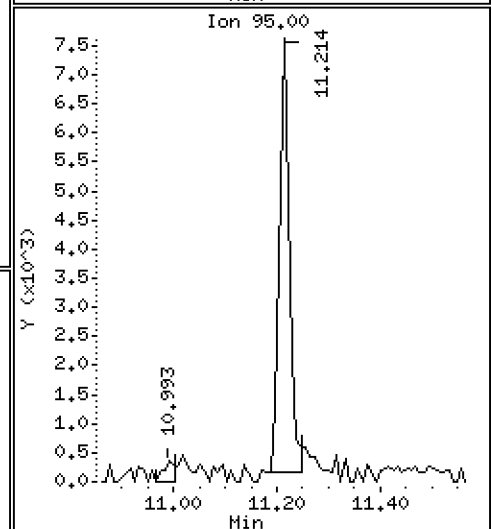
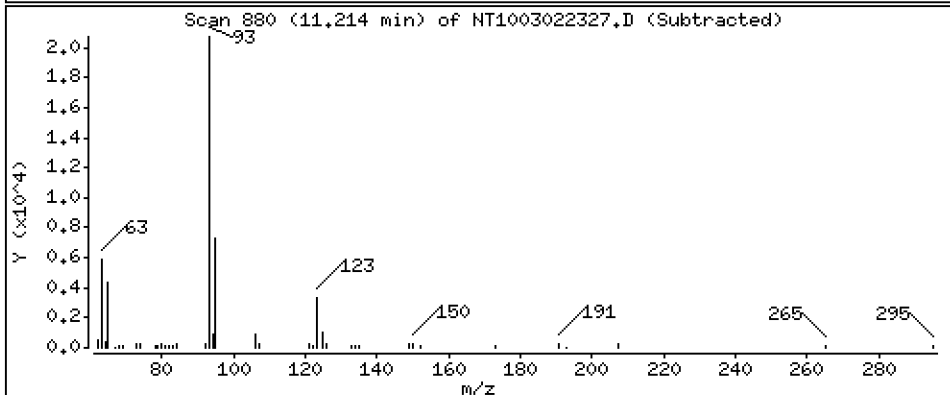
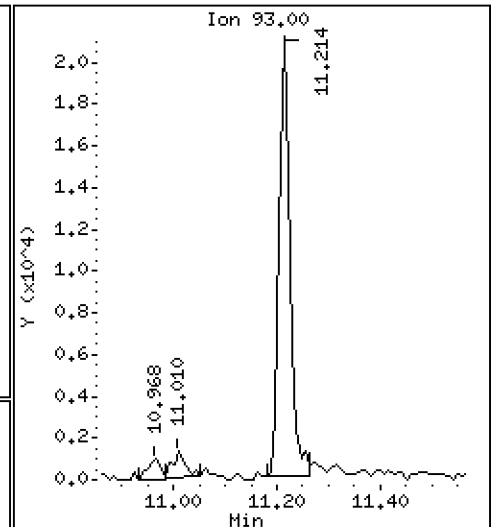
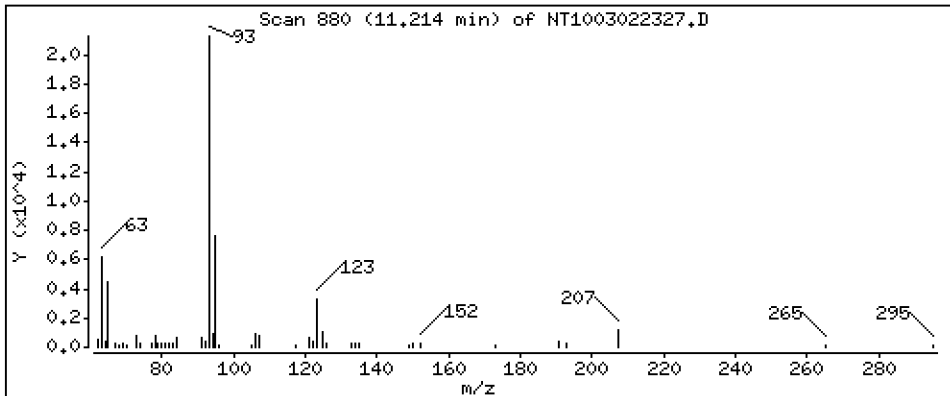
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 0,1815 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

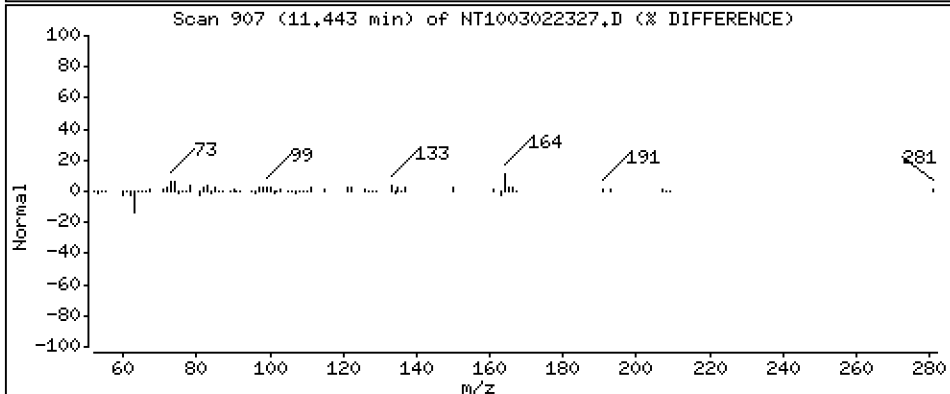
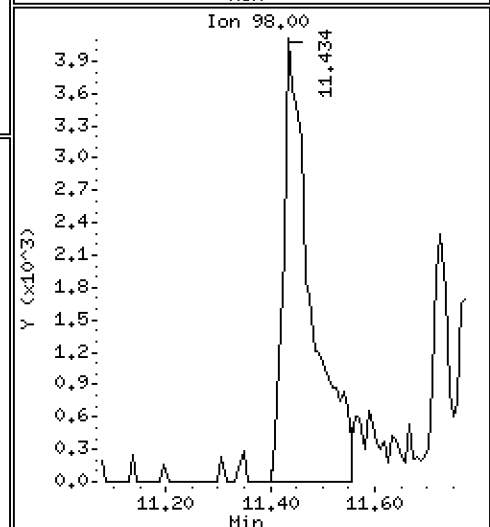
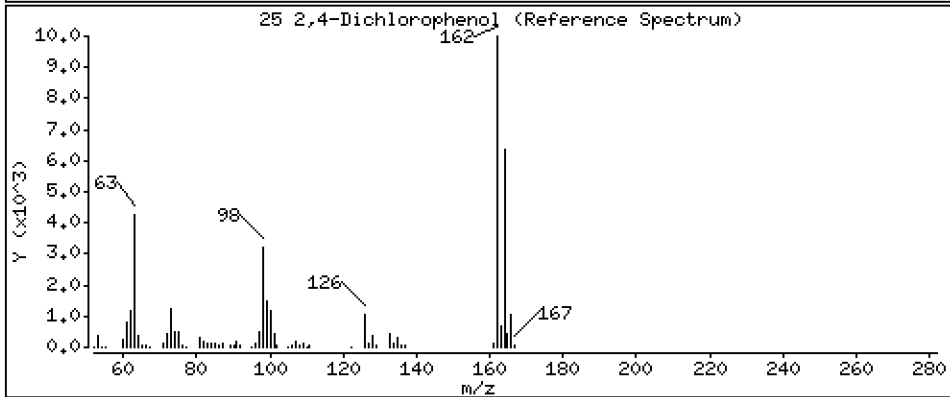
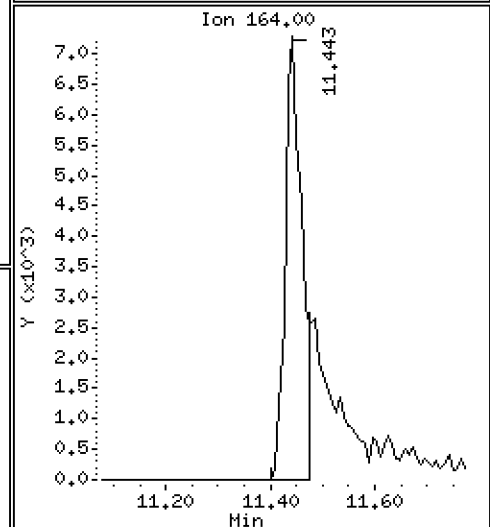
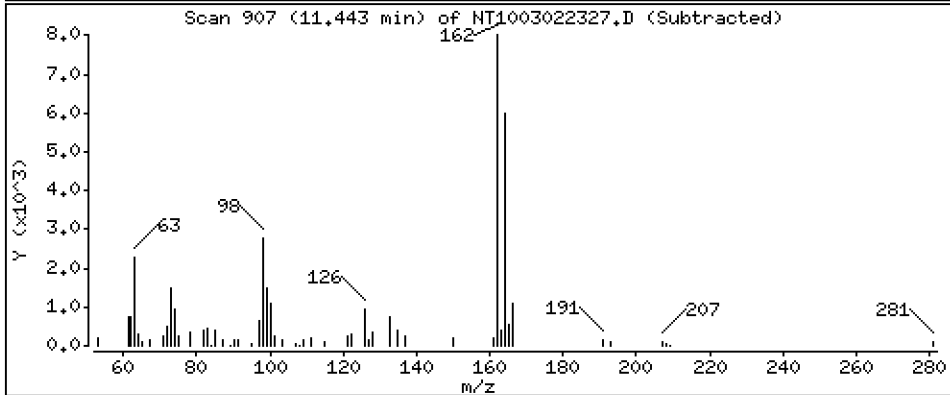
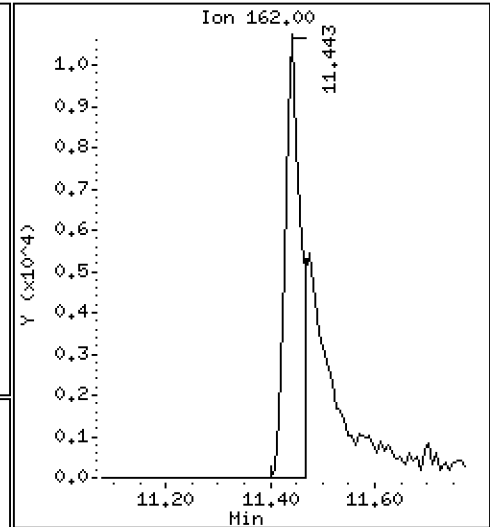
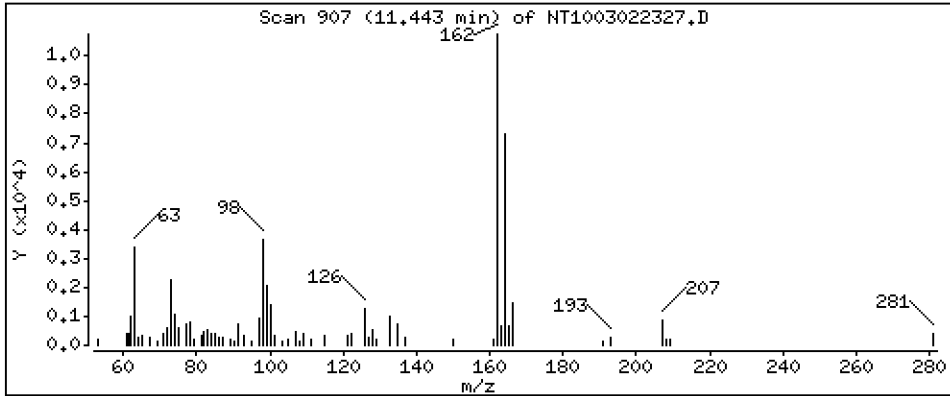
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 0,1401 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

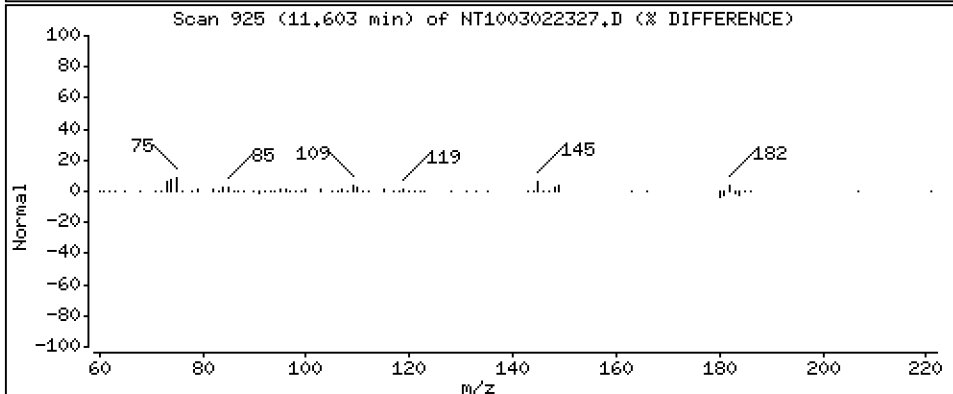
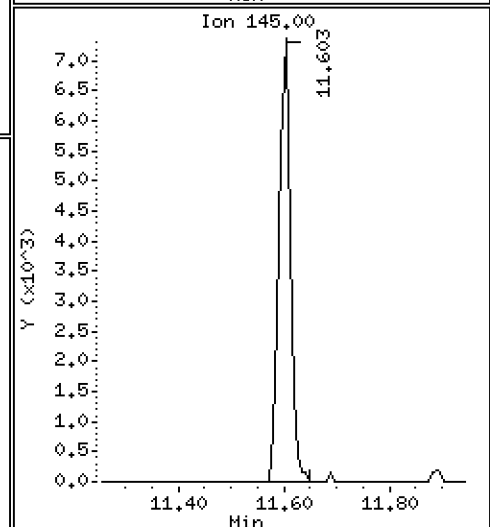
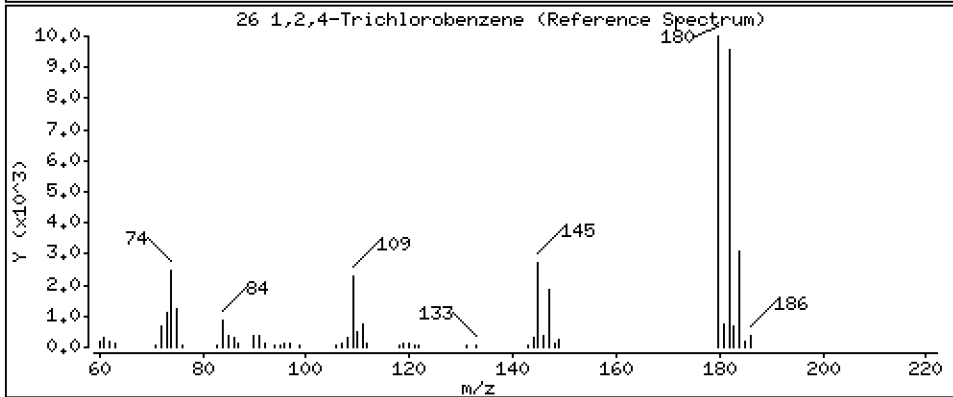
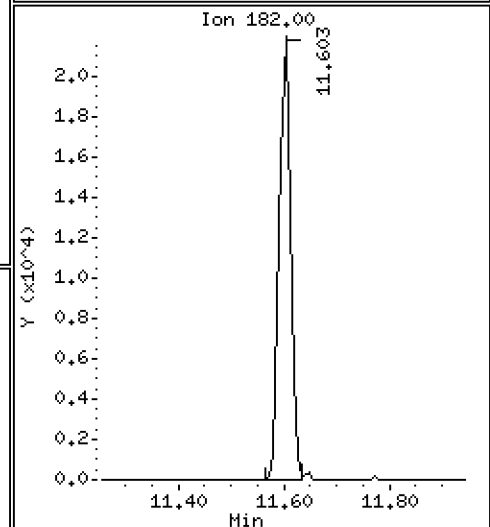
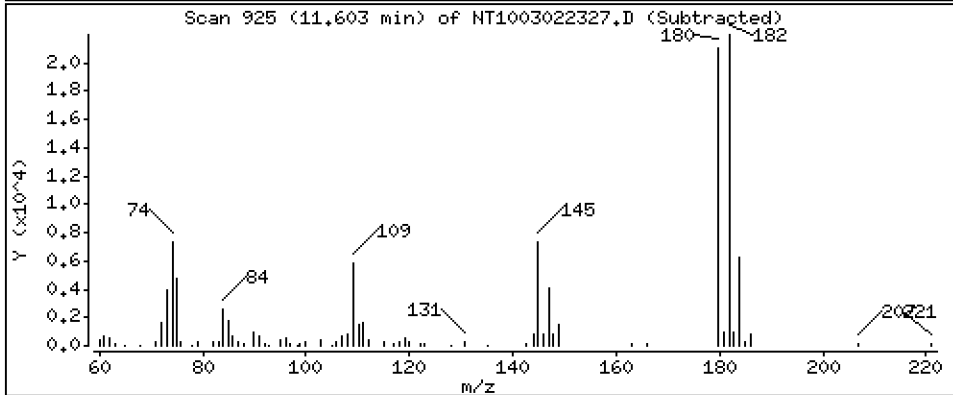
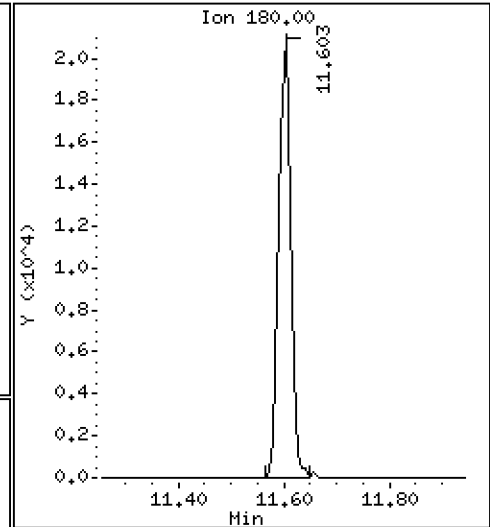
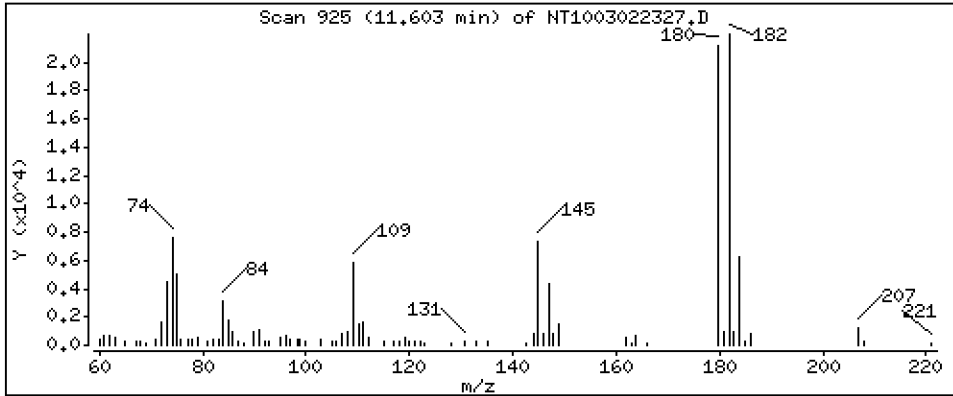
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,1943 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

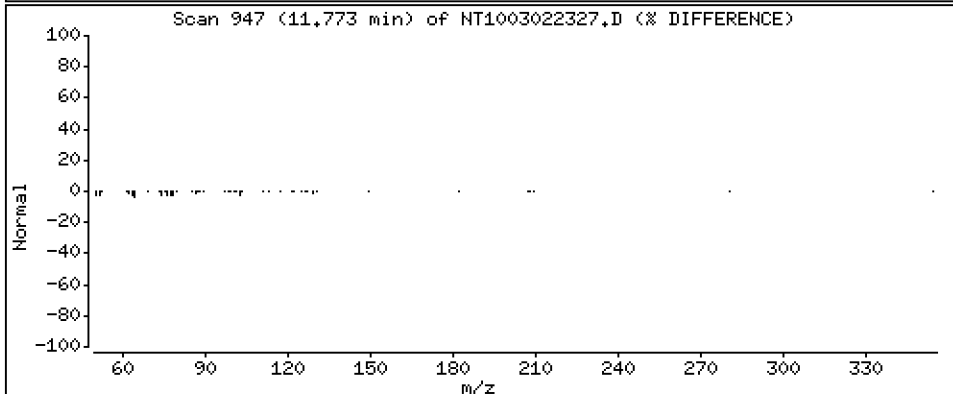
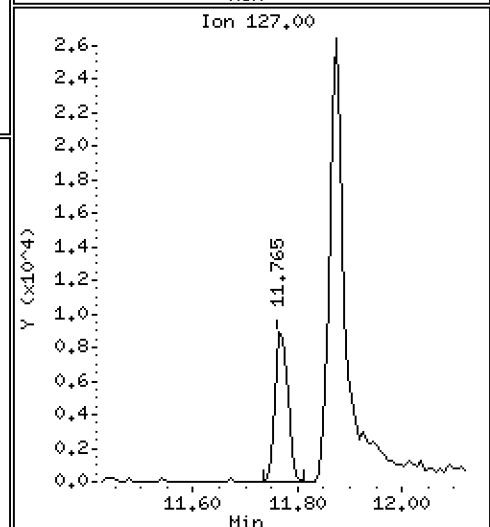
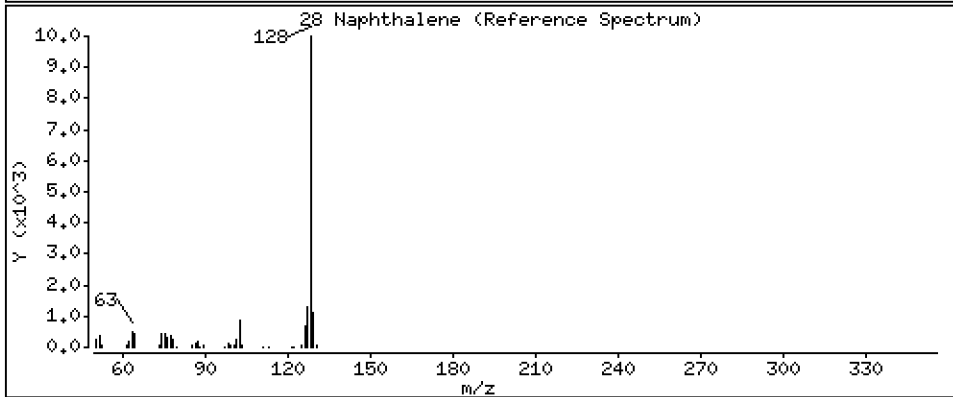
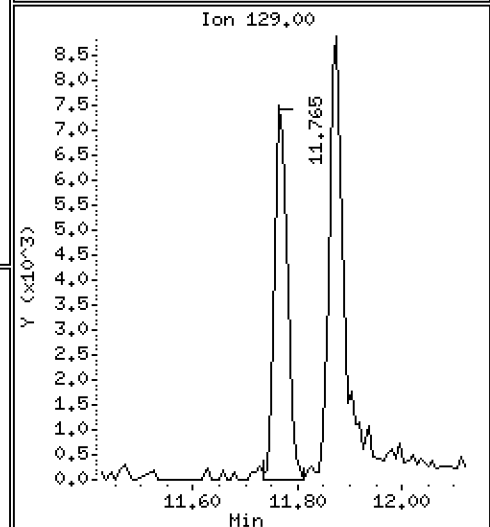
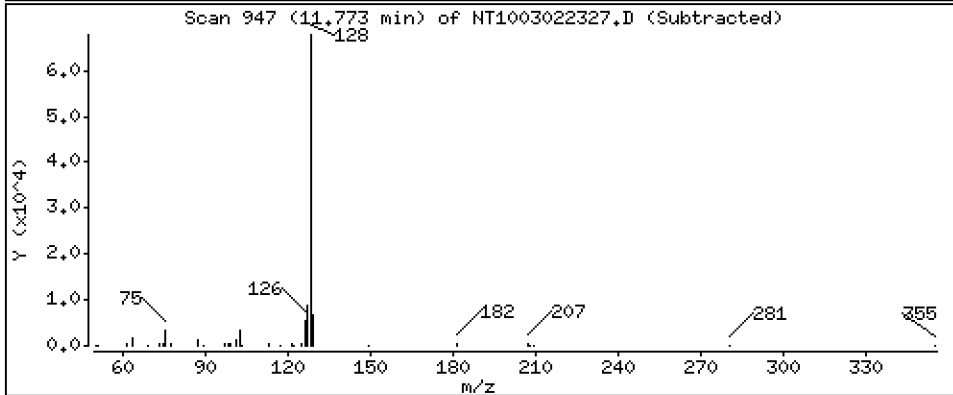
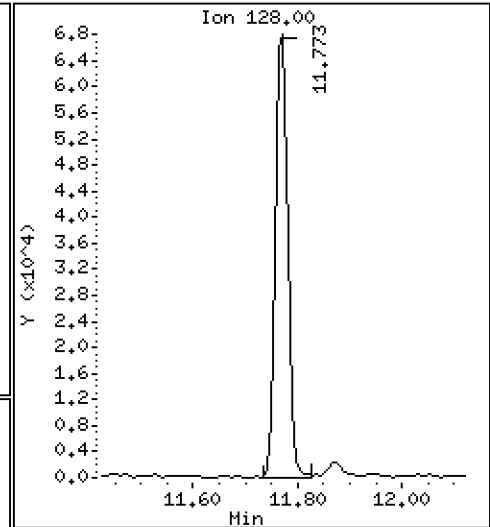
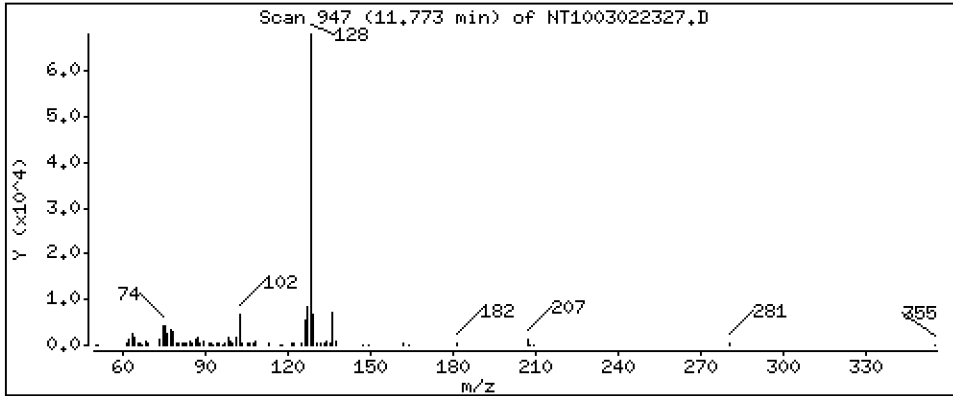
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,1972 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

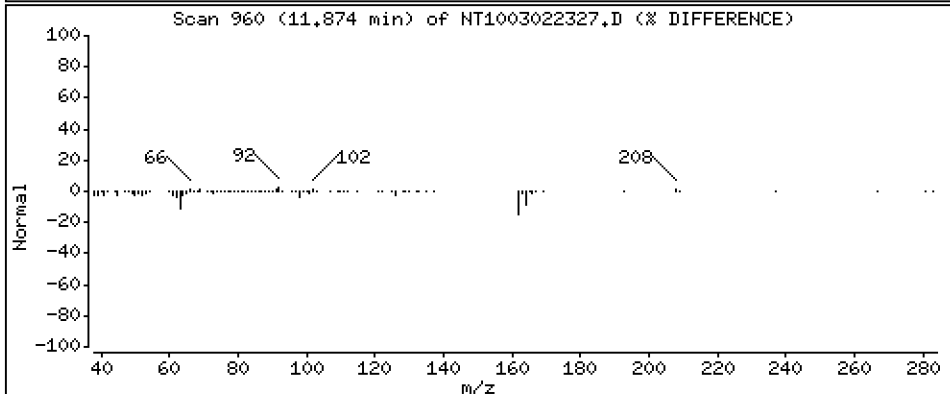
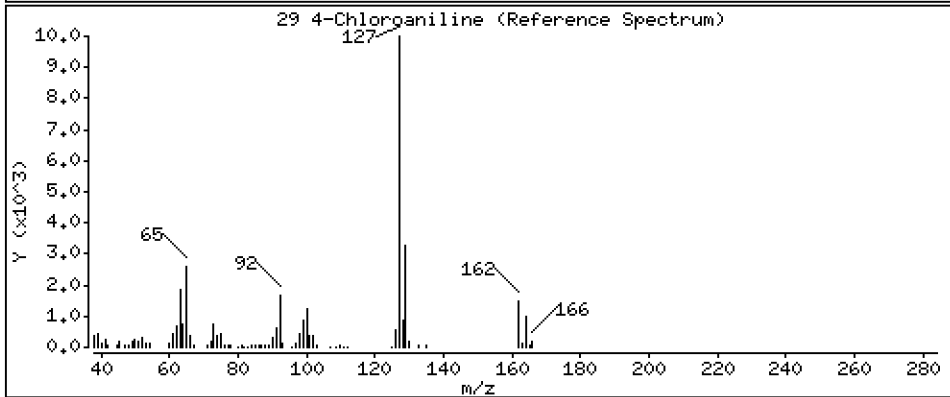
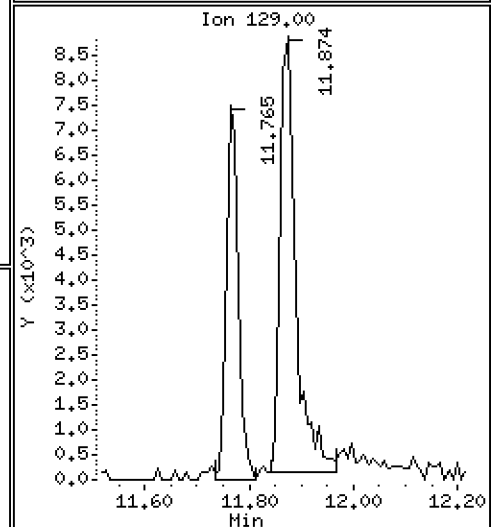
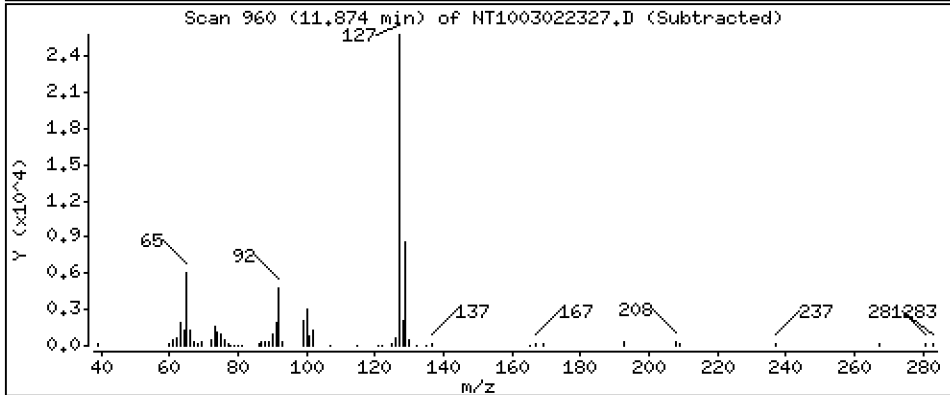
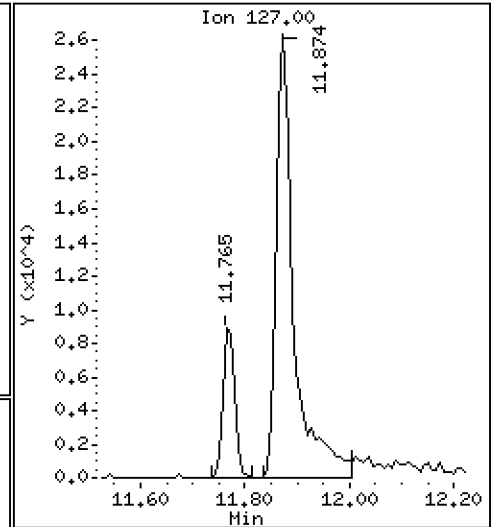
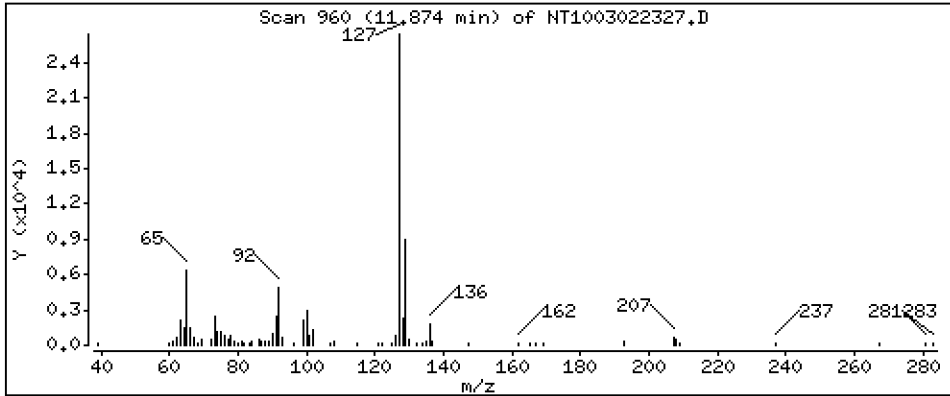
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 0,2703 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

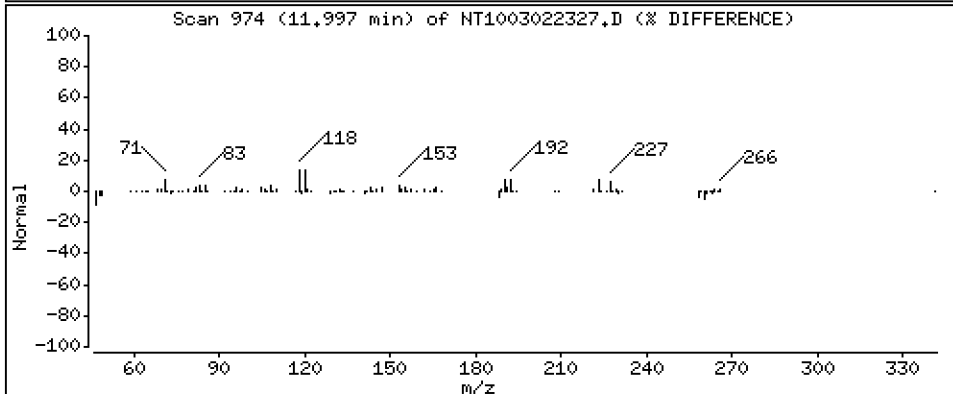
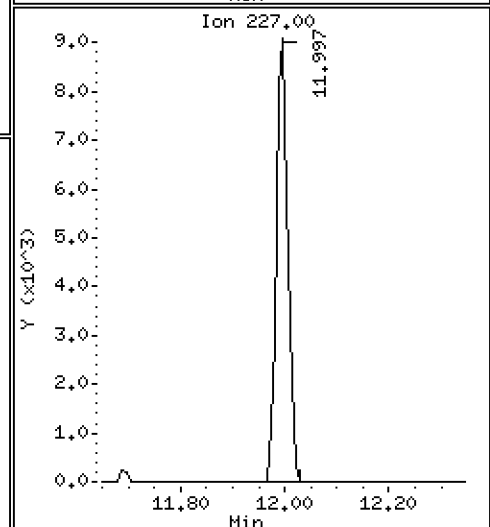
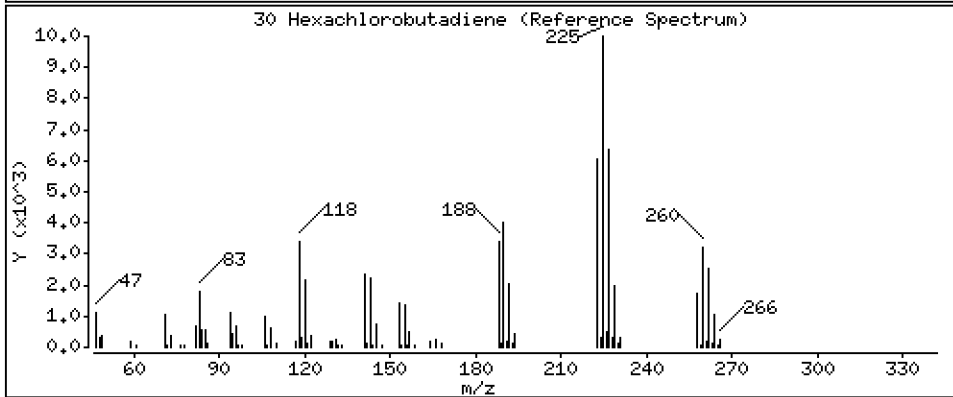
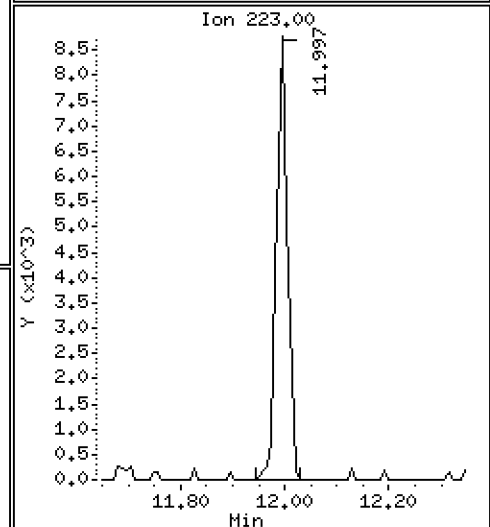
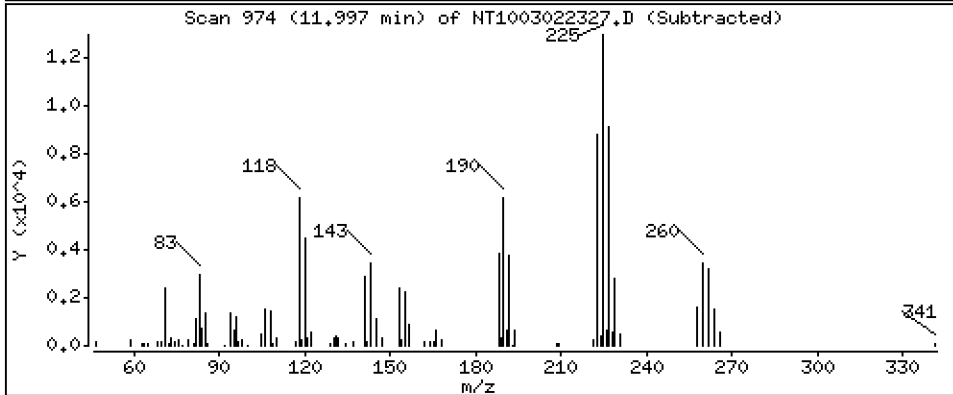
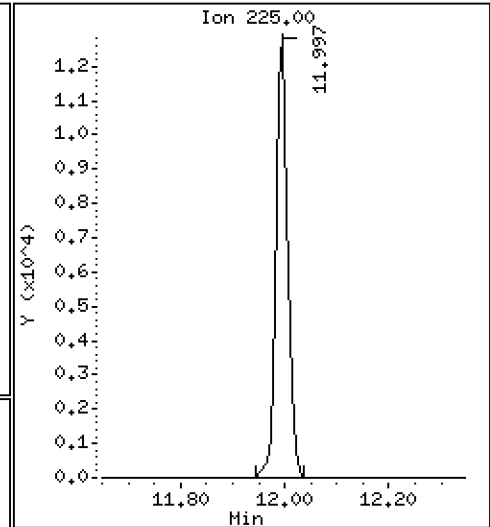
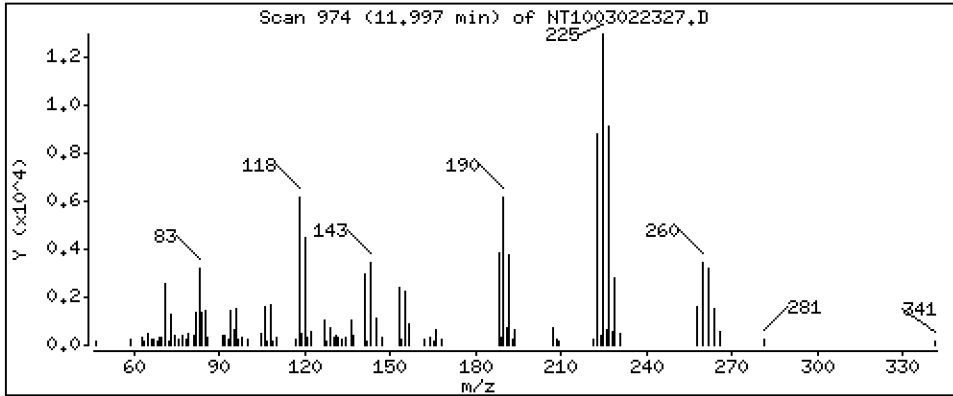
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,1993 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

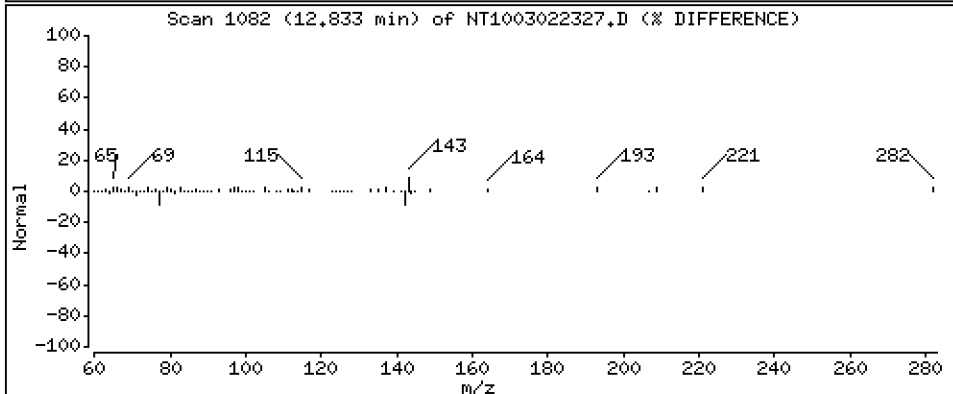
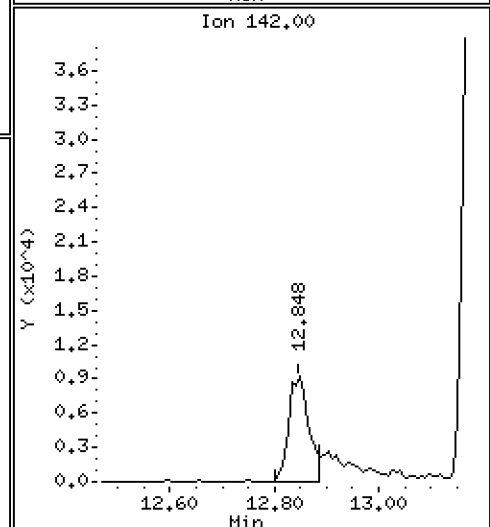
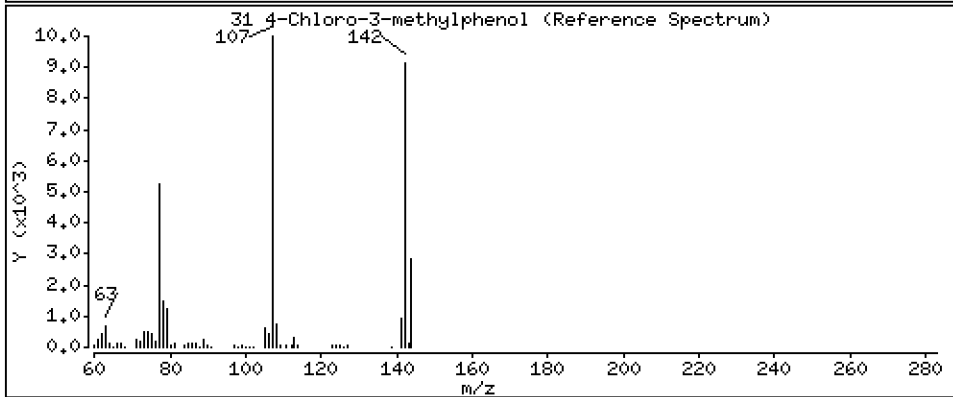
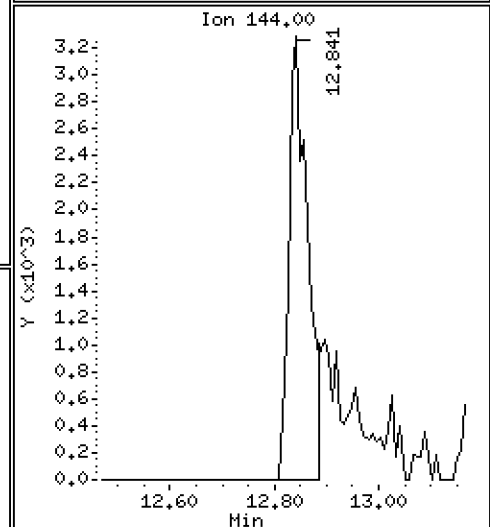
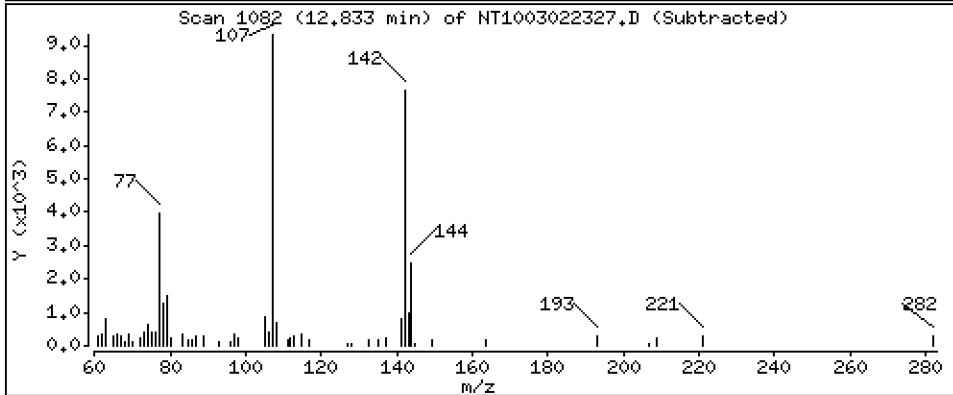
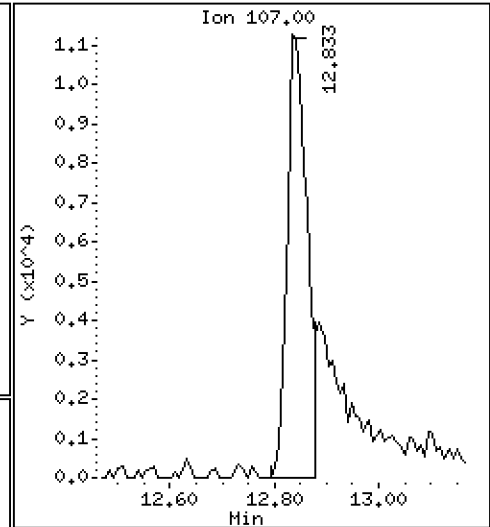
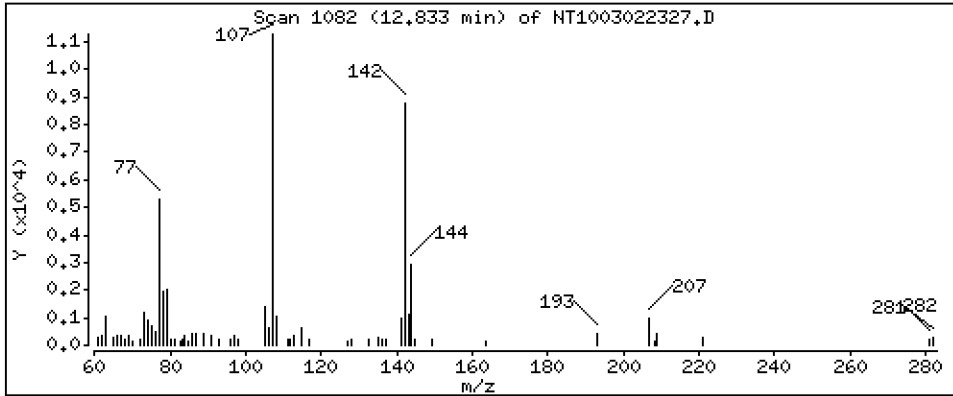
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

31 4-Chloro-3-methylphenol

Concentration: 0.1769 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

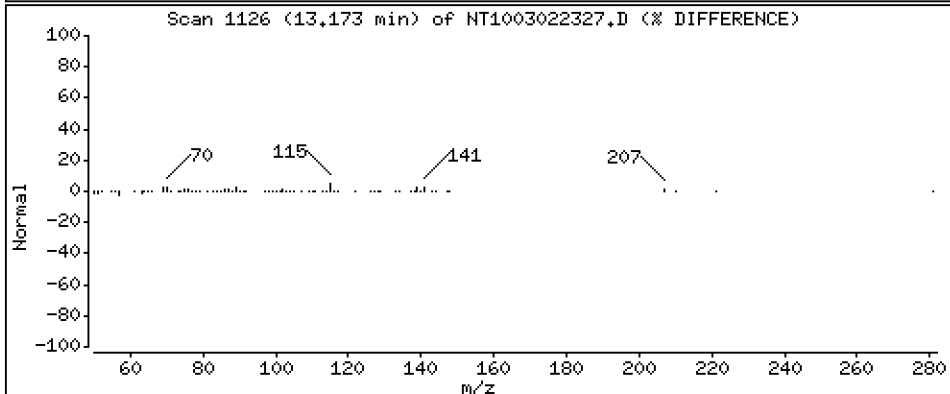
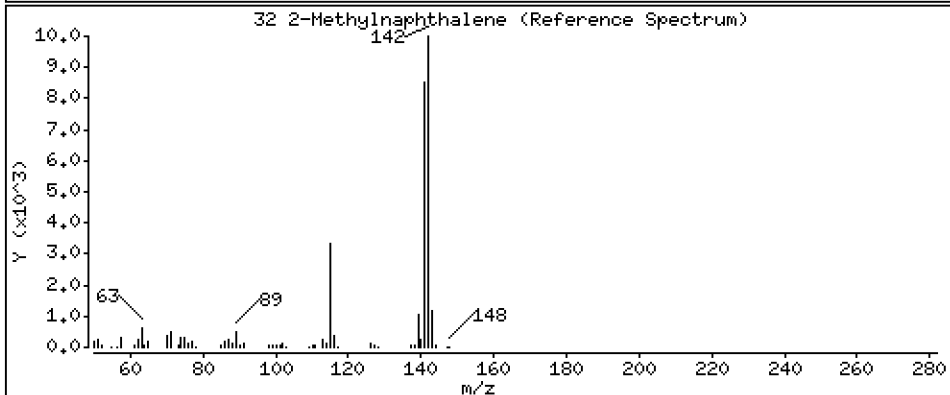
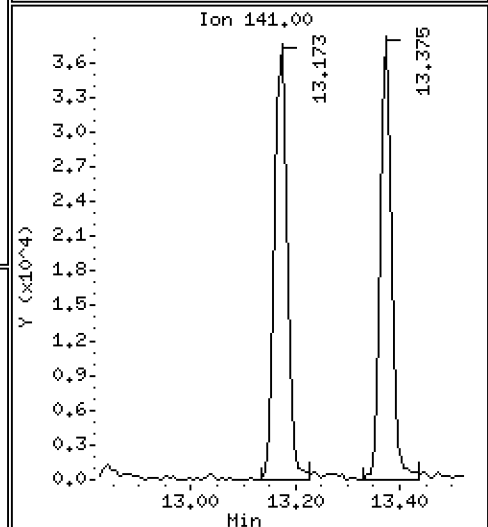
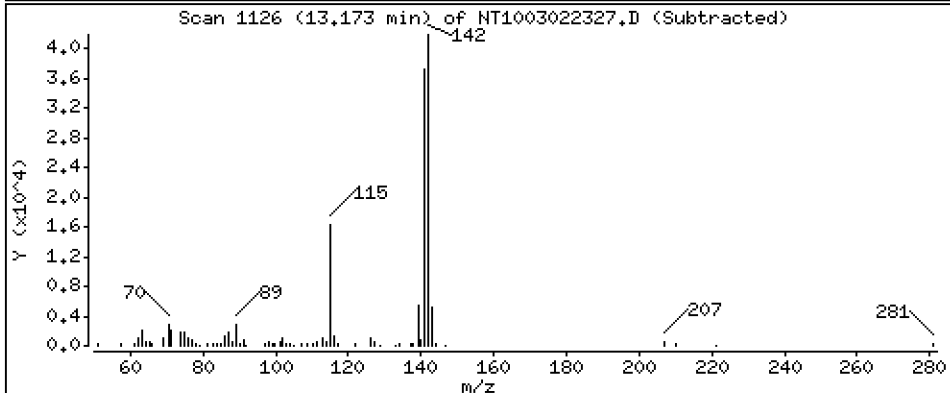
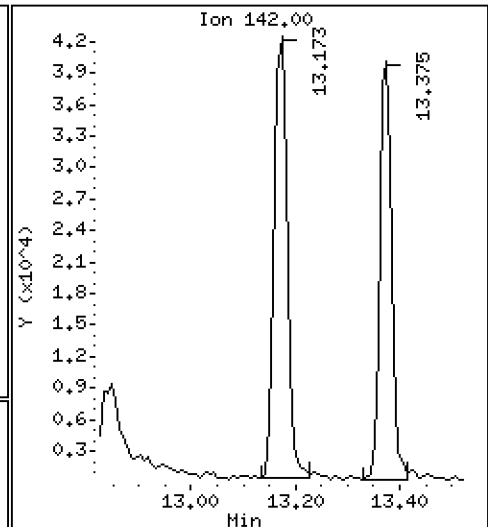
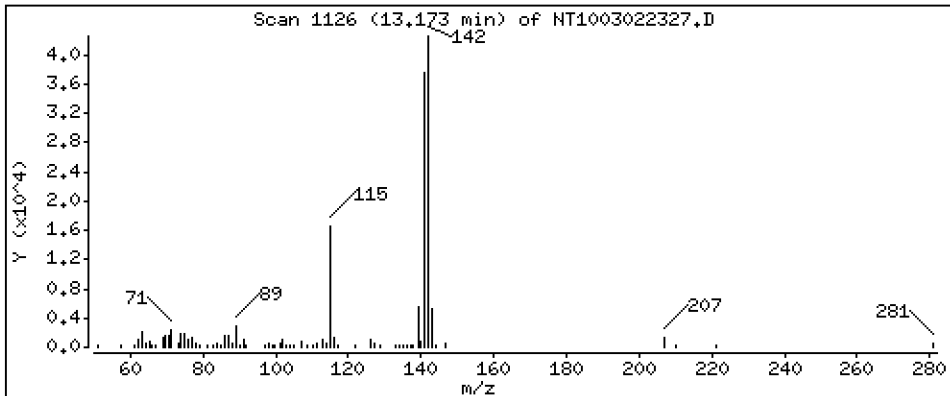
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,1840 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

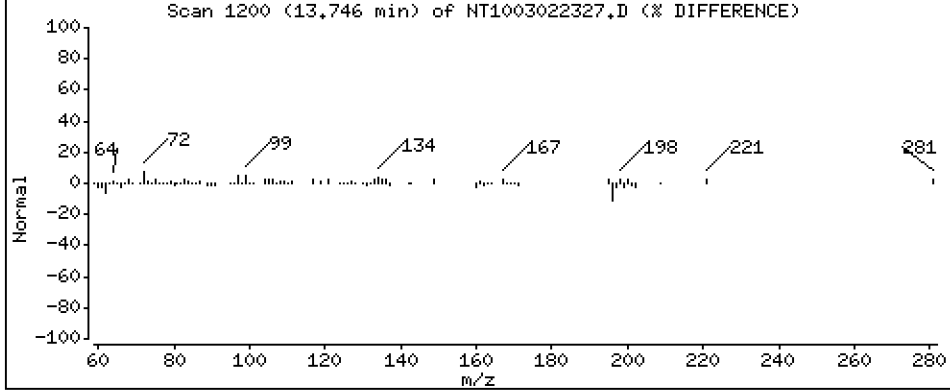
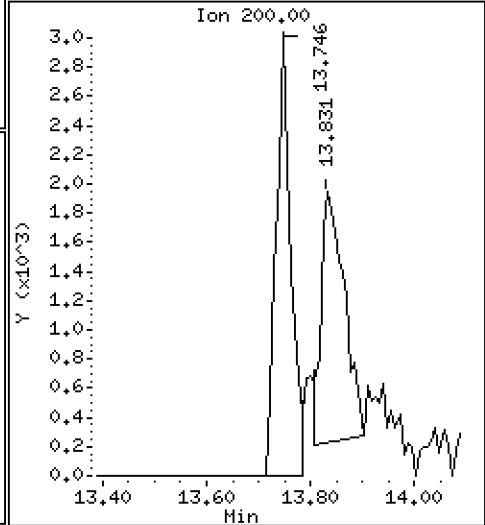
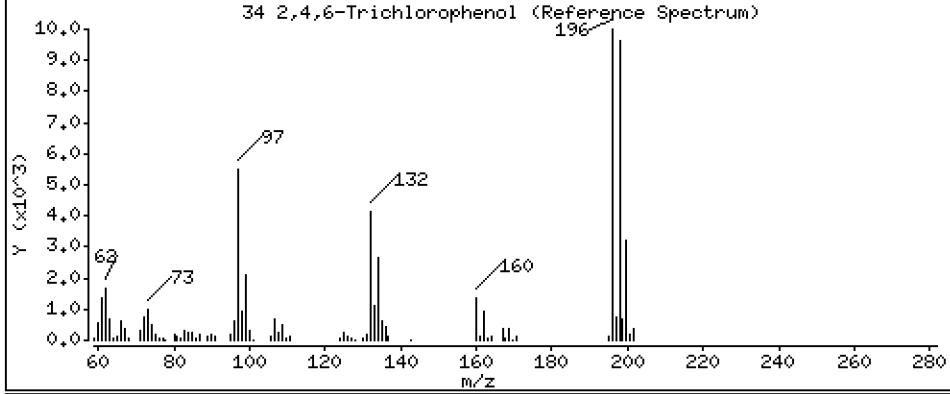
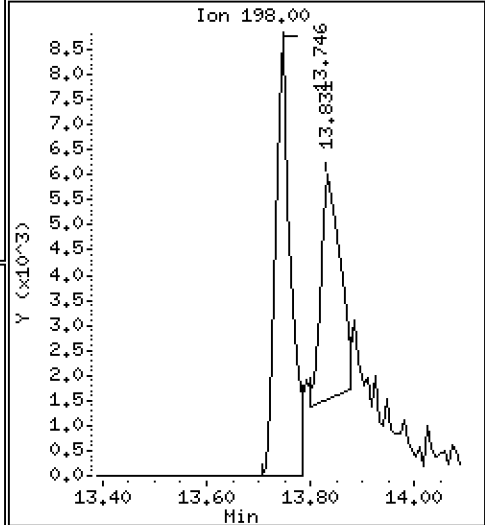
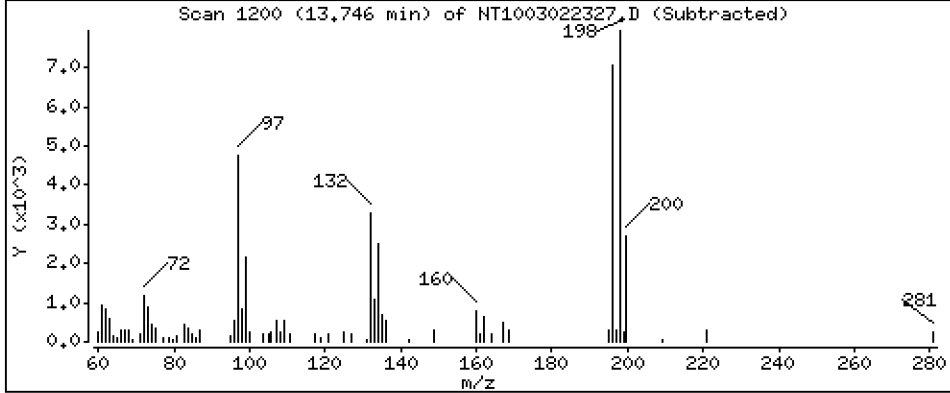
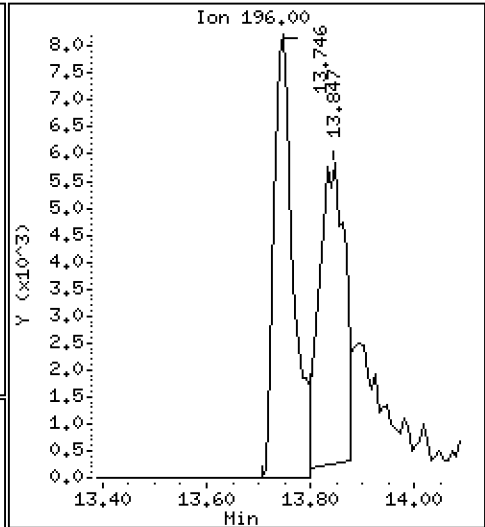
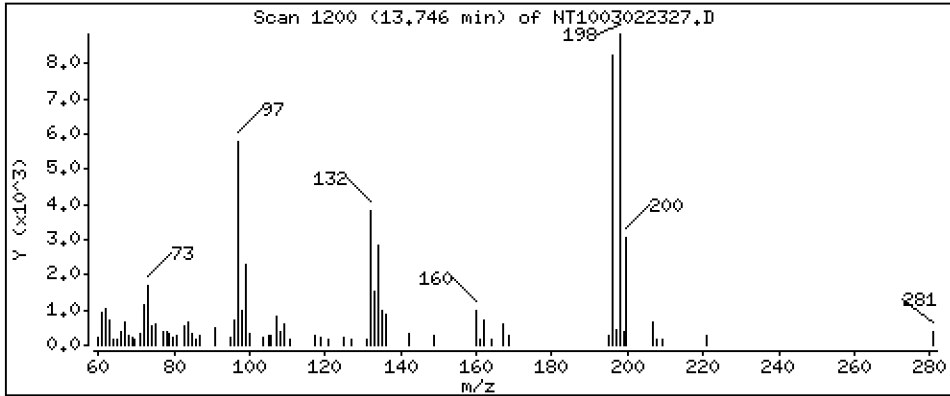
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 0,2024 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

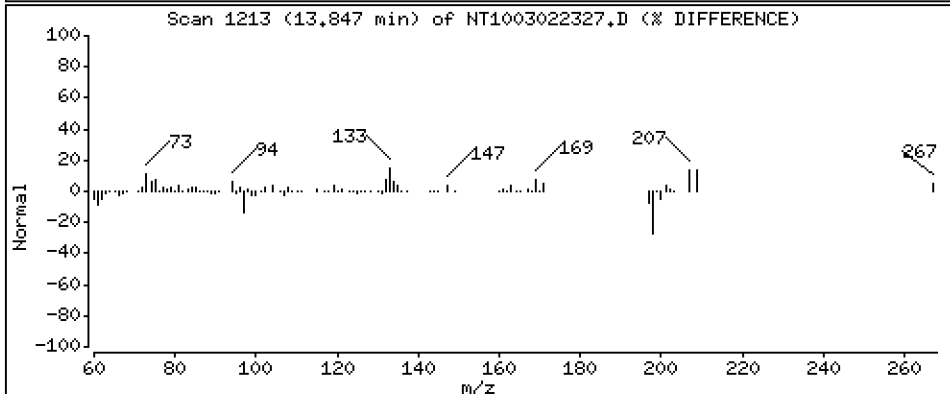
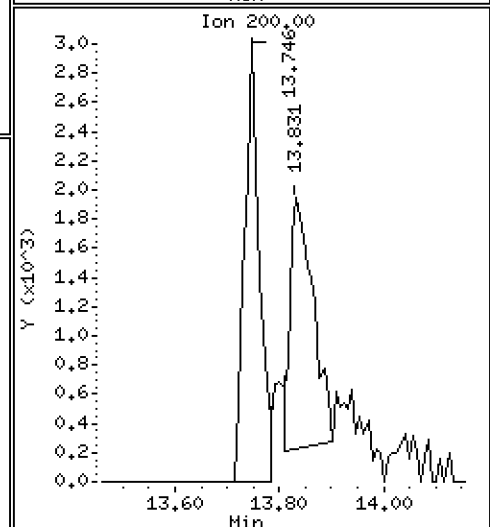
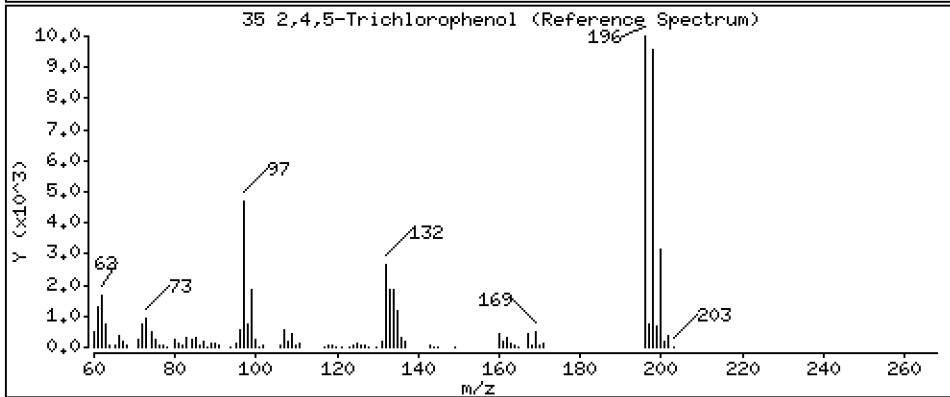
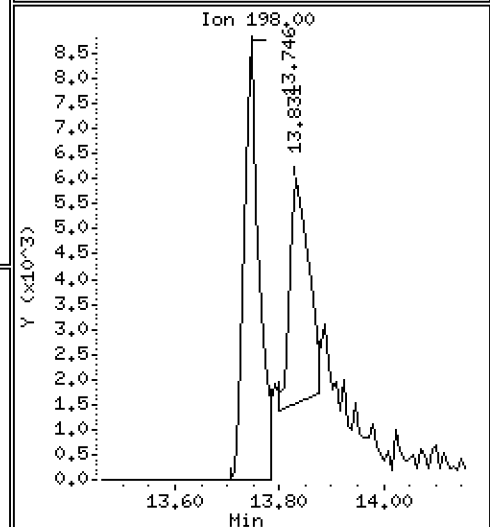
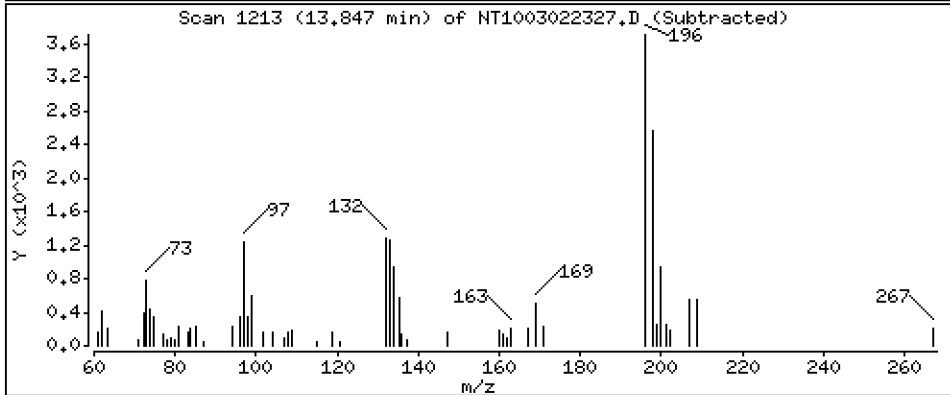
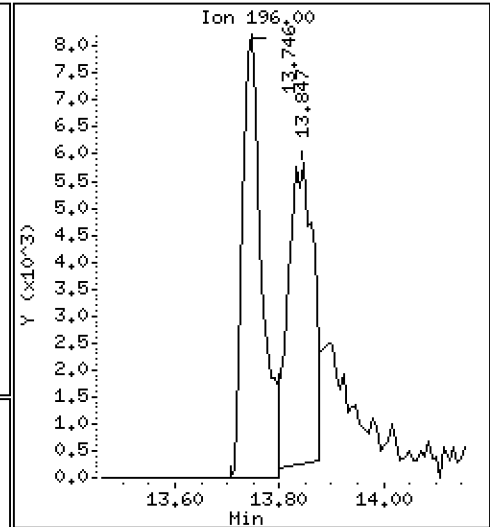
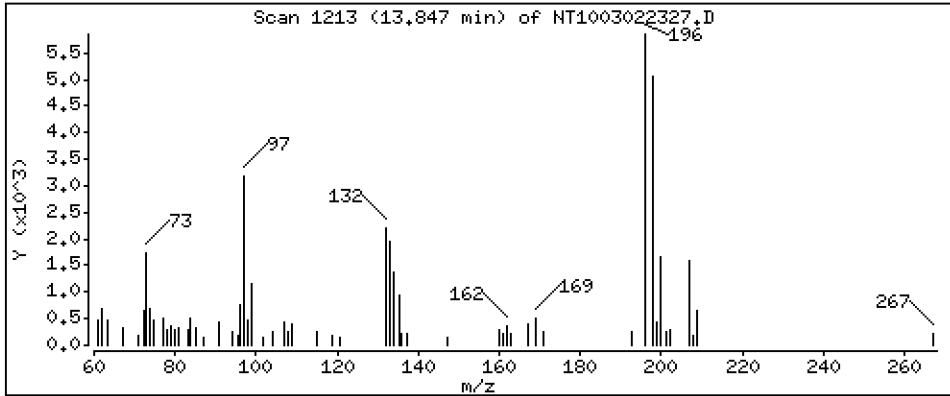
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 0,1777 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

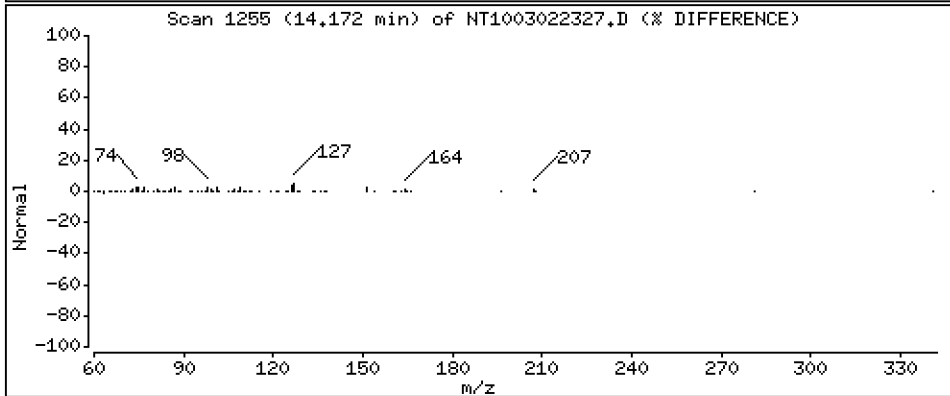
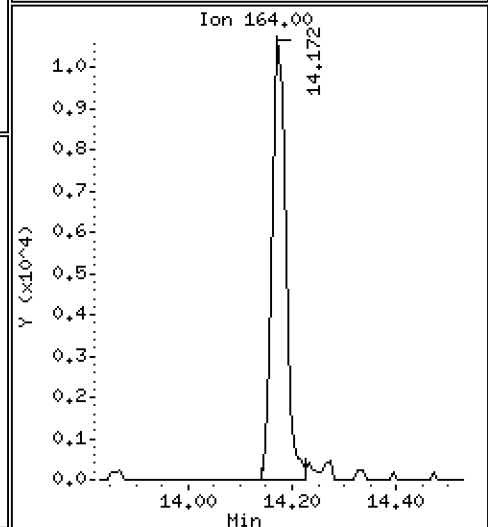
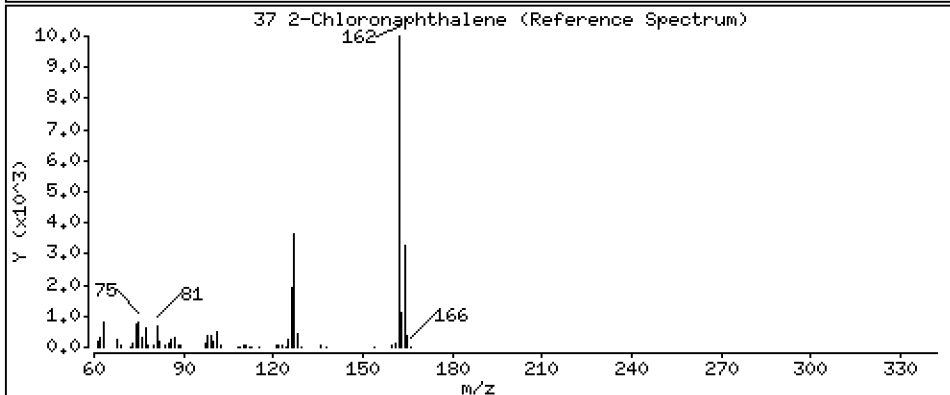
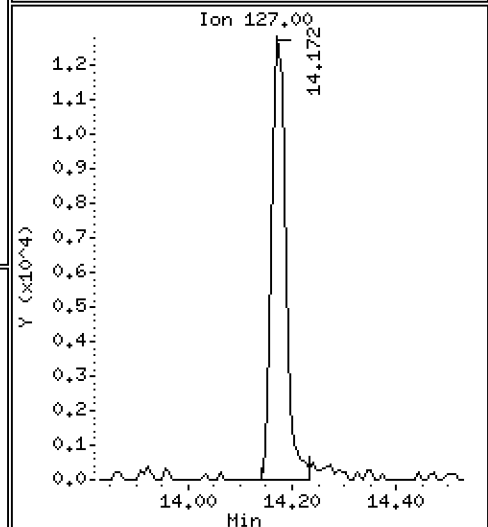
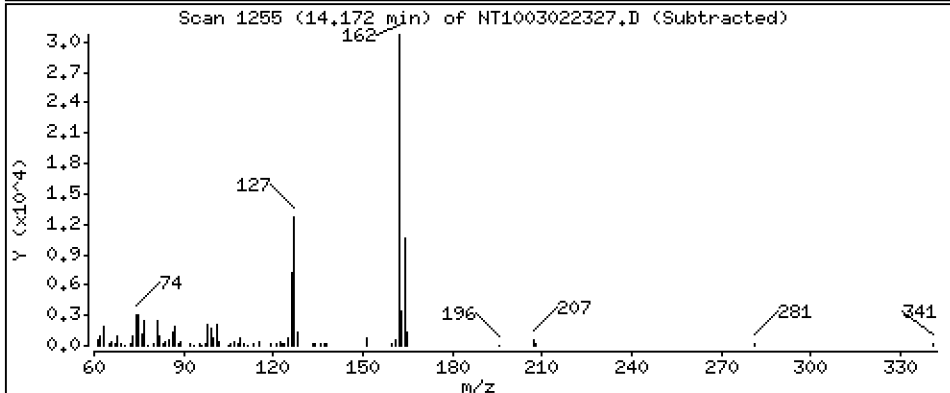
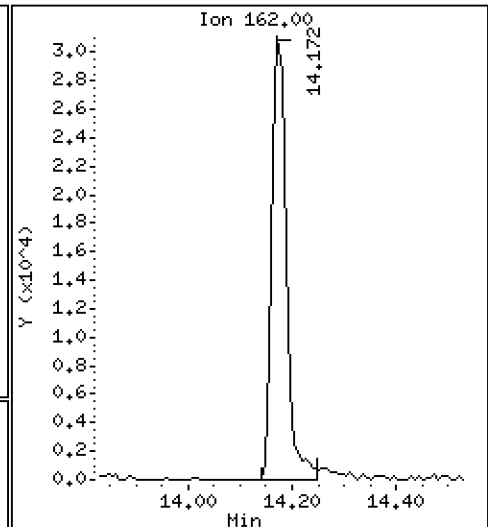
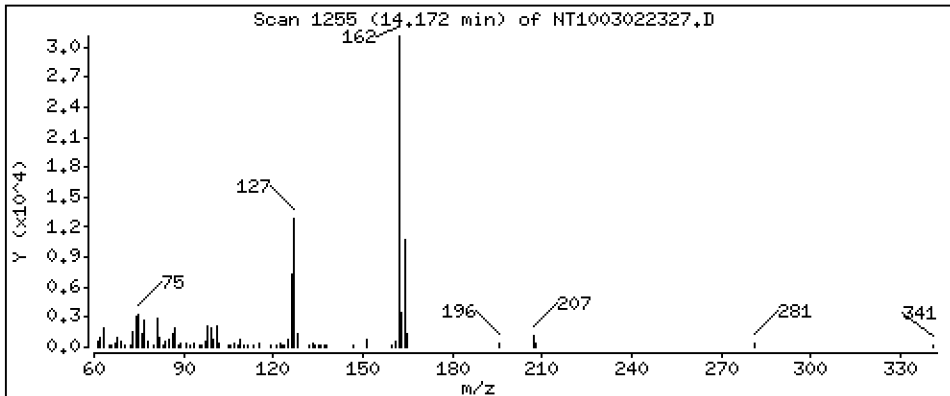
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

37 2-Chloronaphthalene

Concentration: 0.1873 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

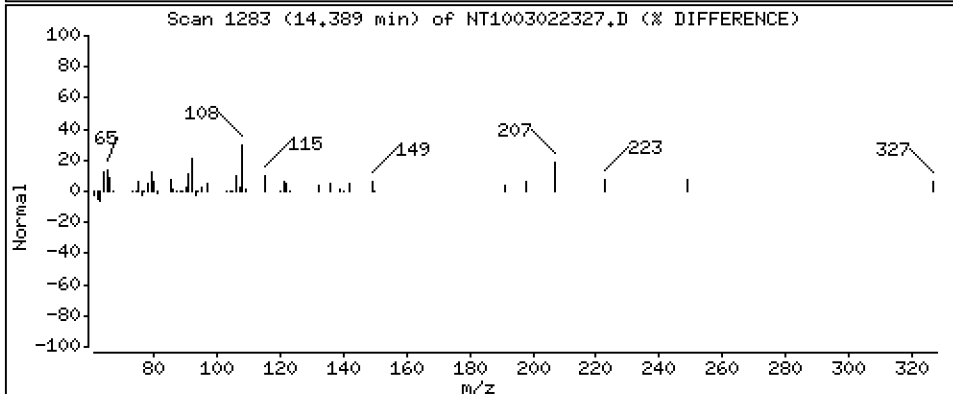
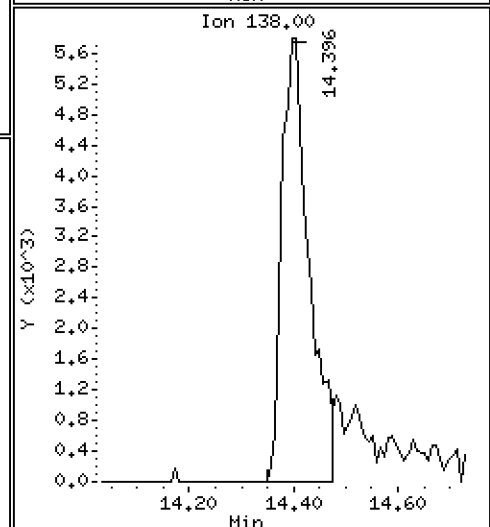
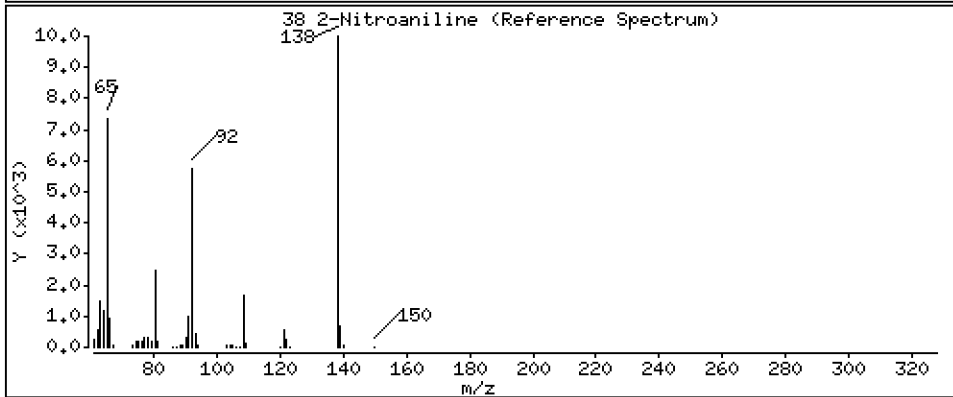
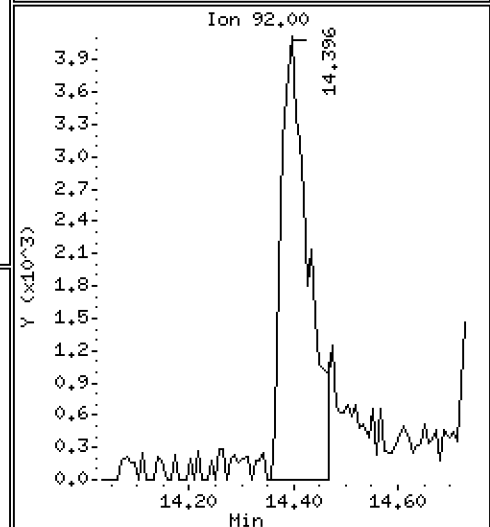
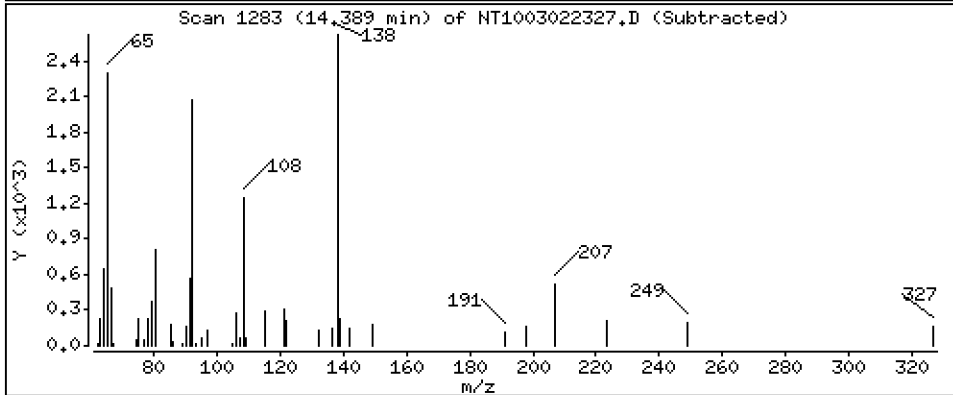
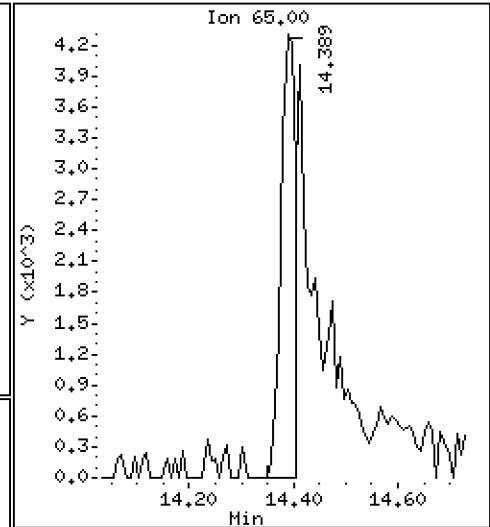
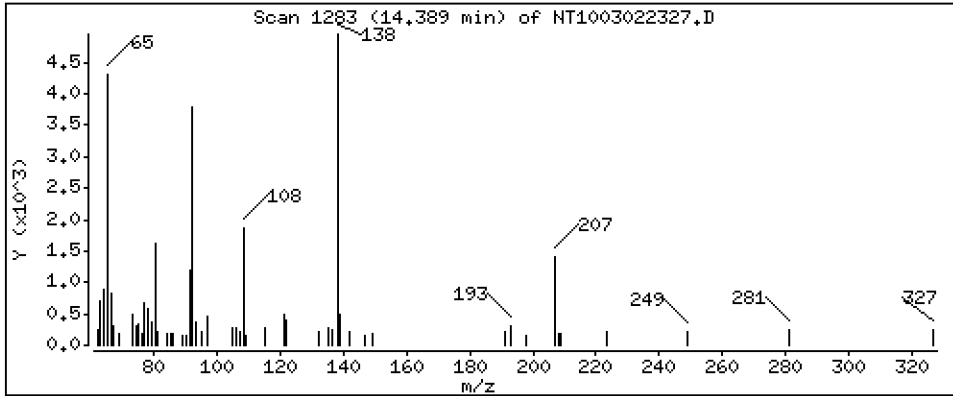
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 0,09370 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

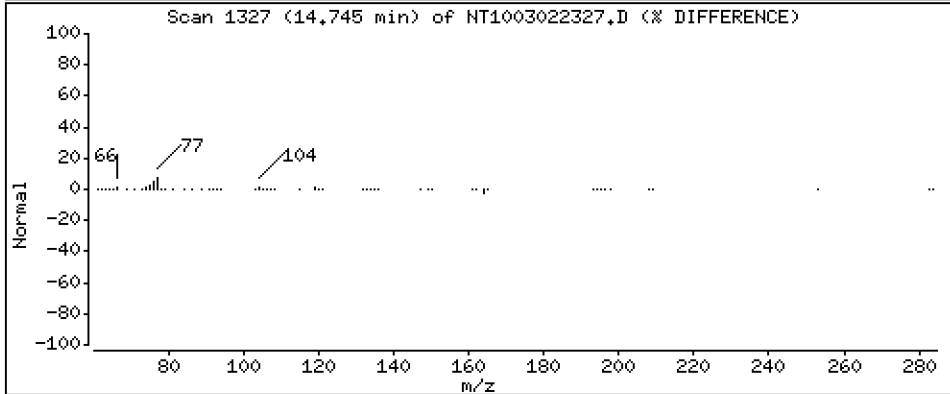
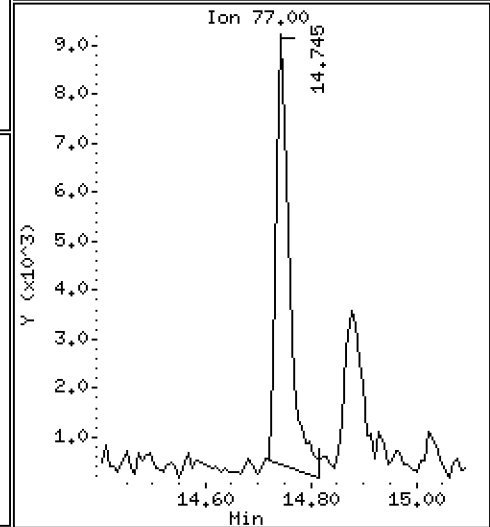
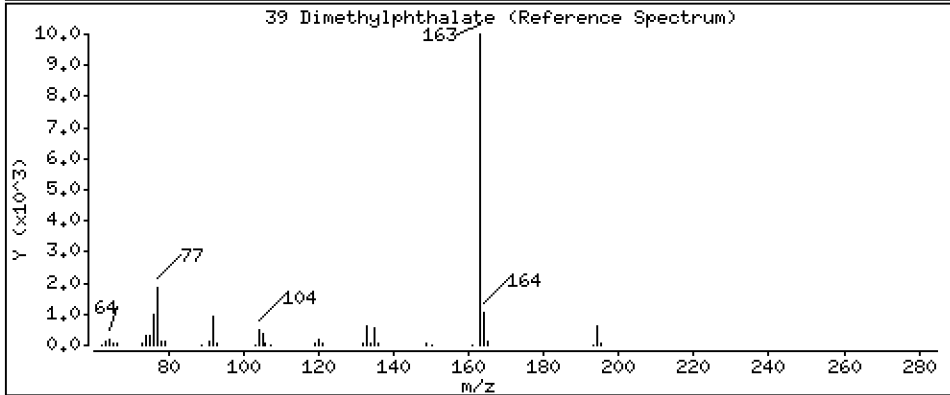
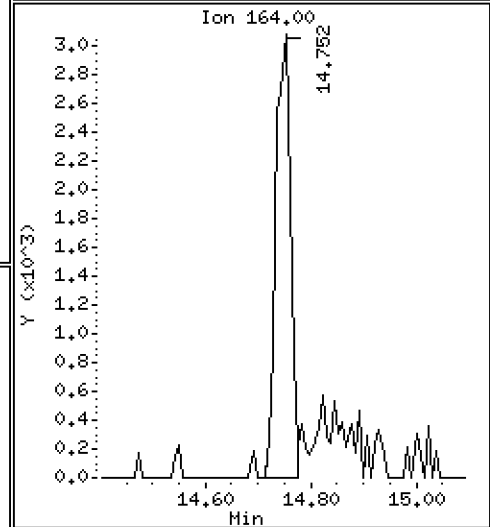
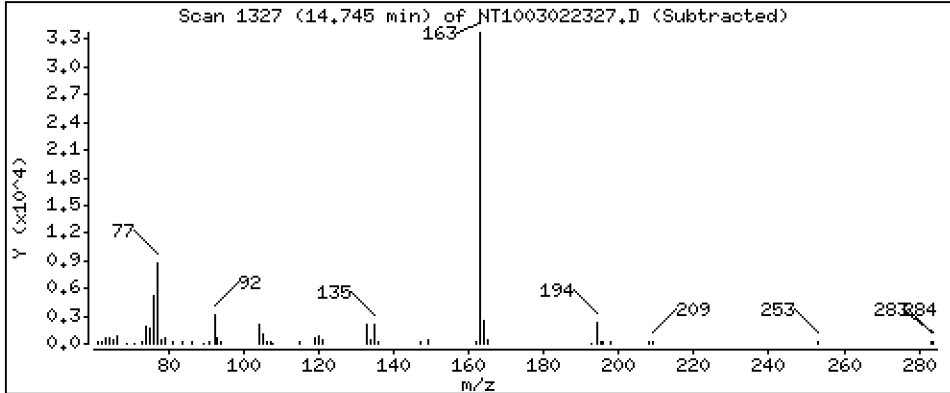
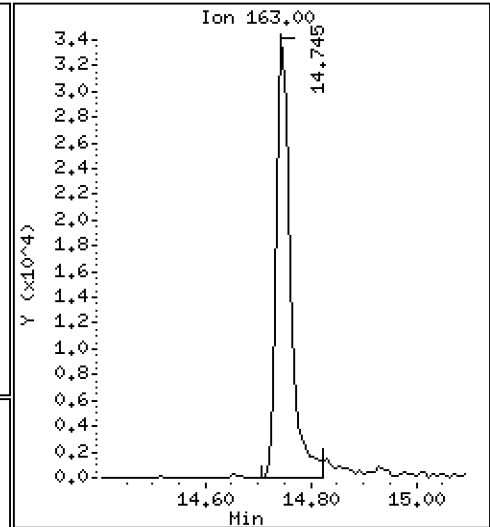
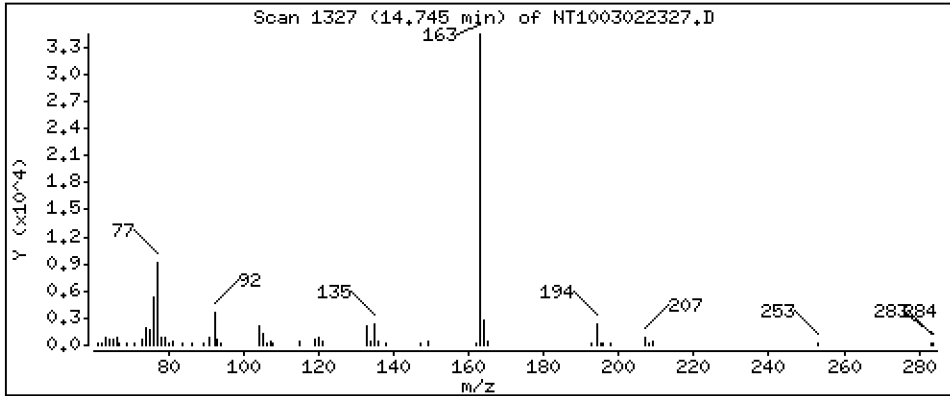
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,1724 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

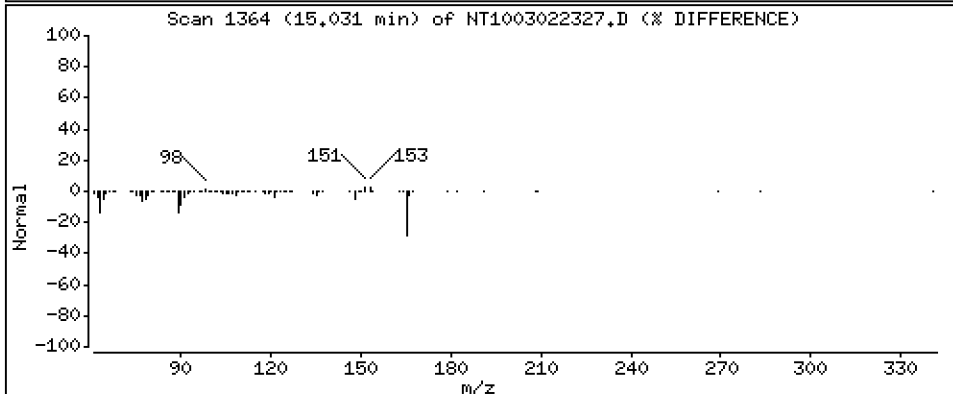
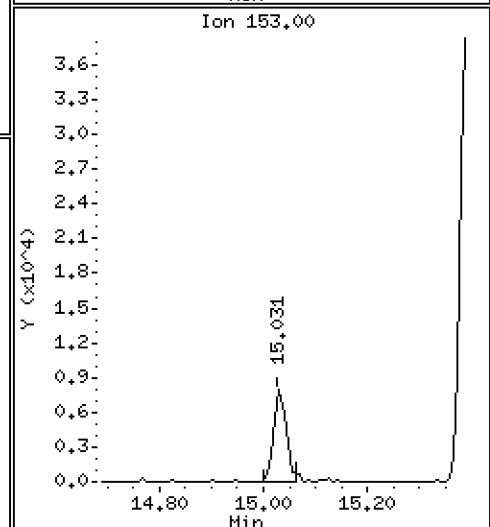
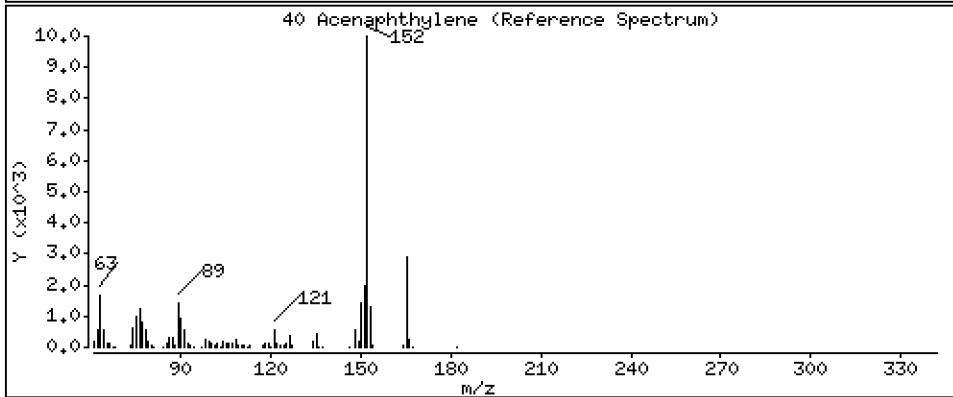
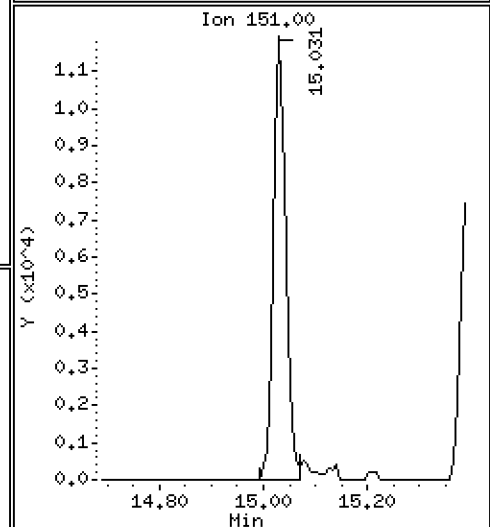
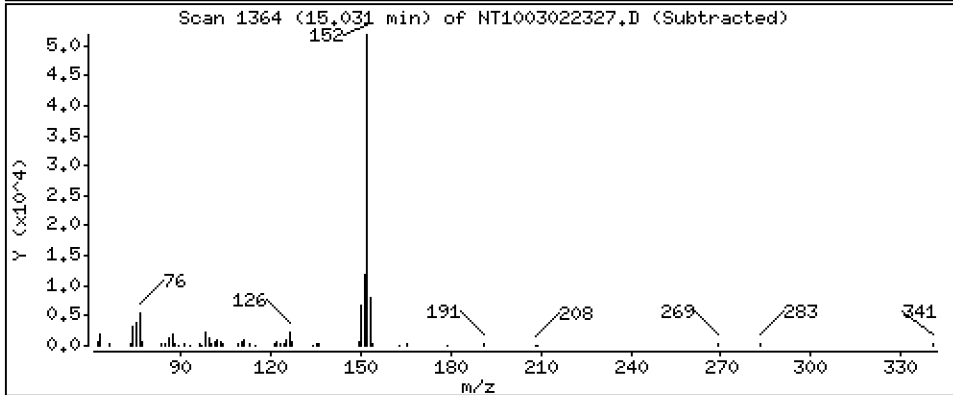
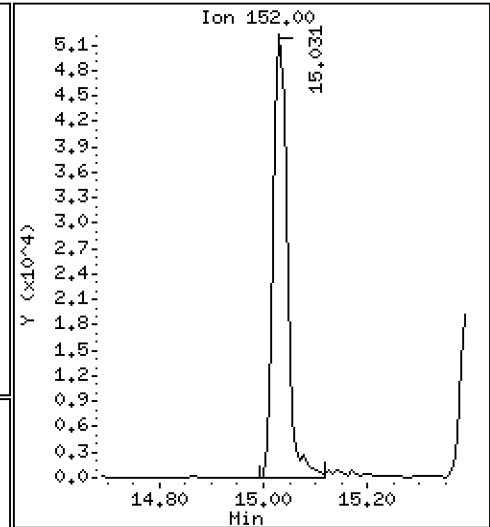
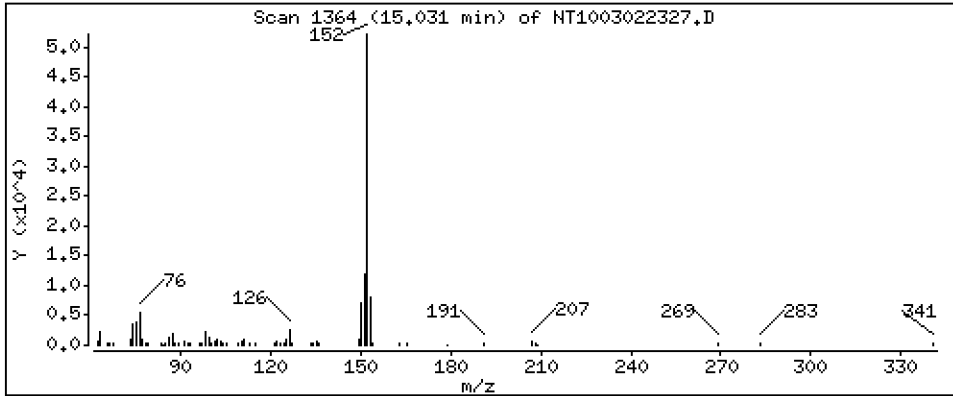
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.1990 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

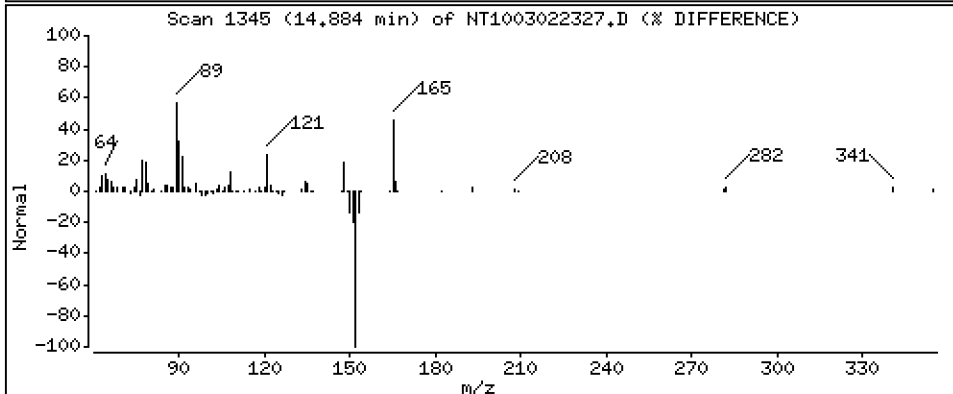
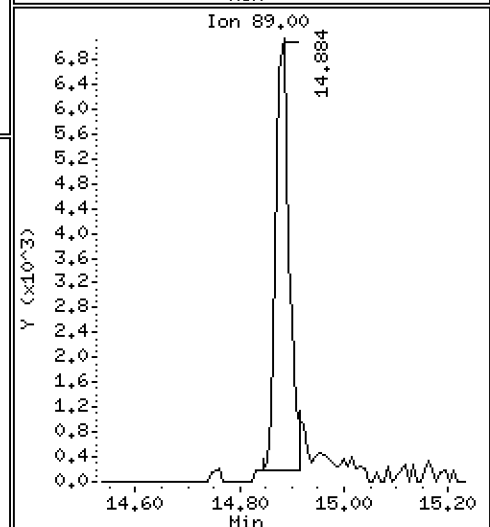
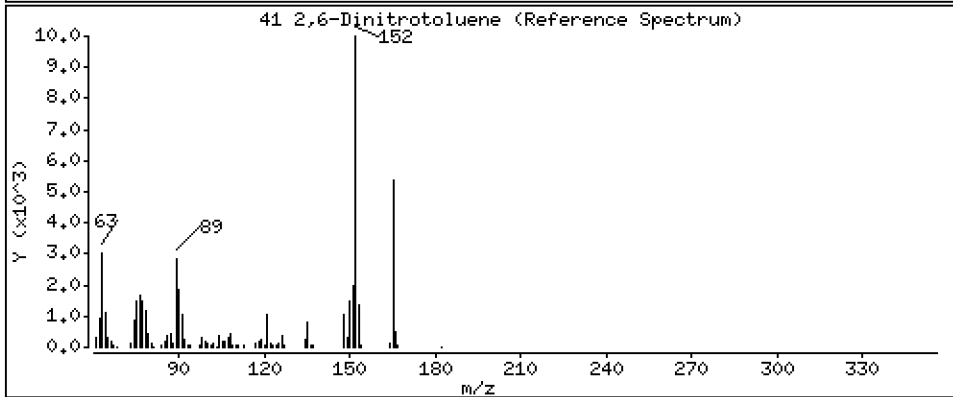
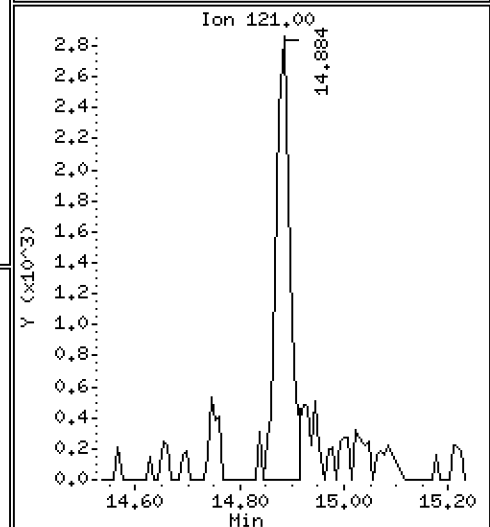
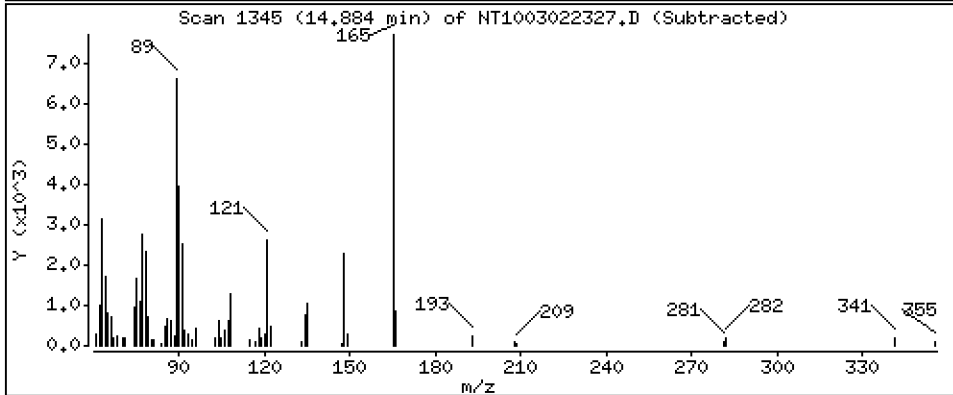
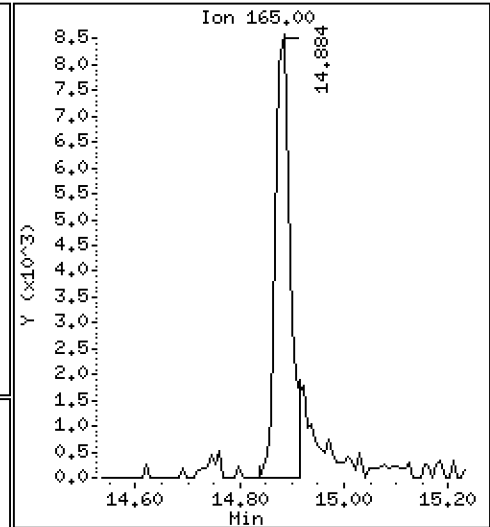
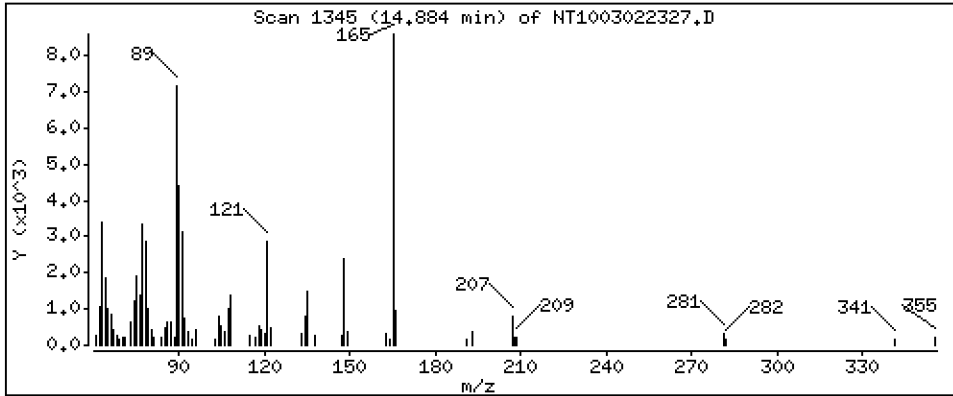
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 0,2090 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

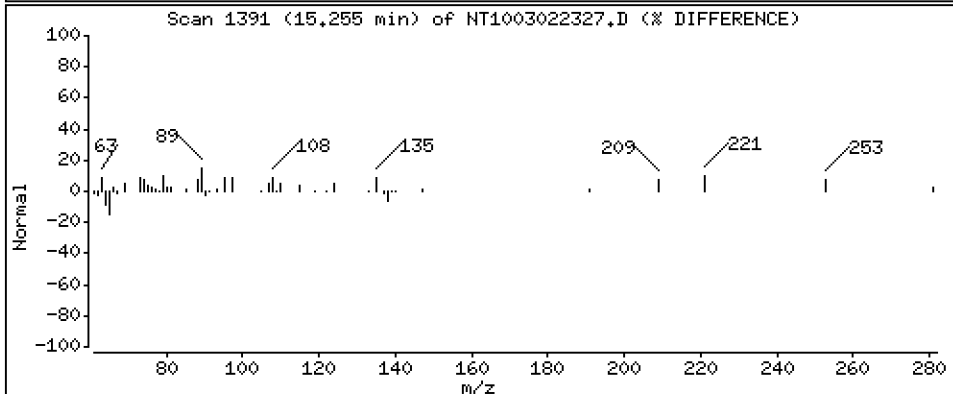
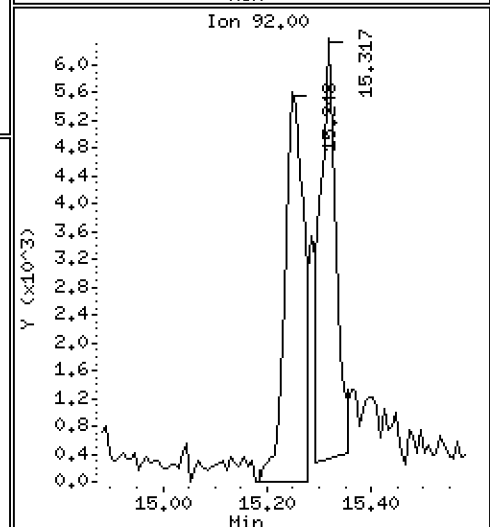
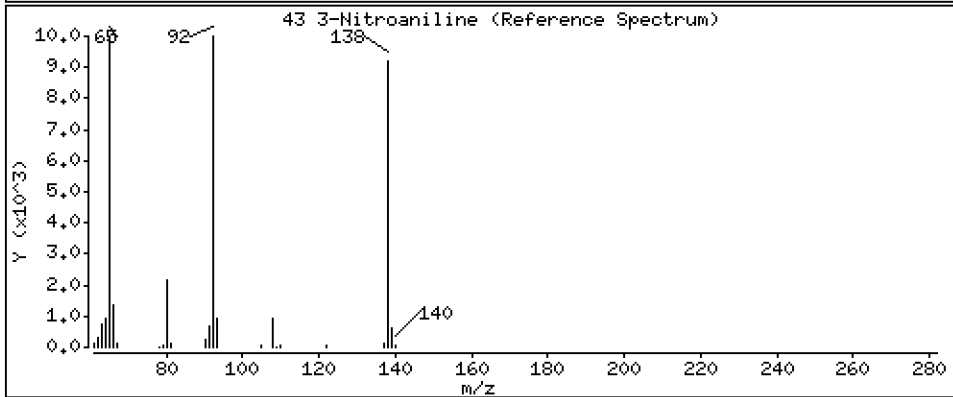
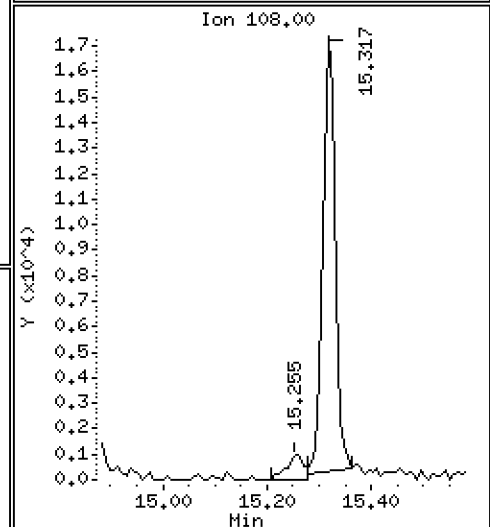
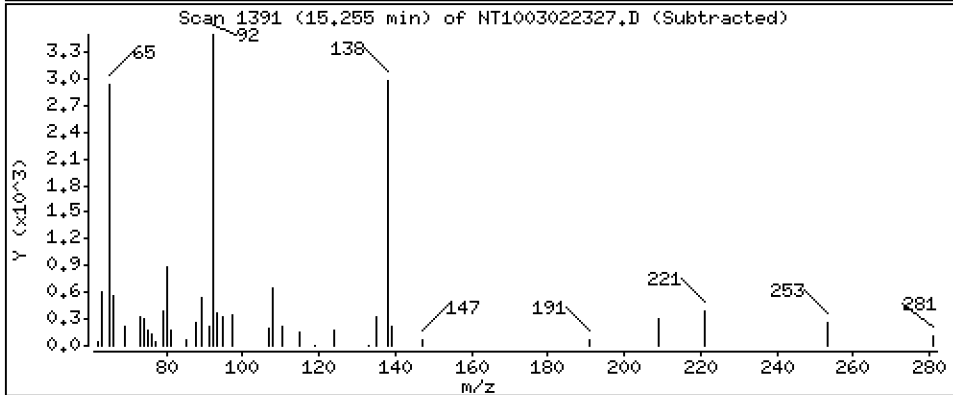
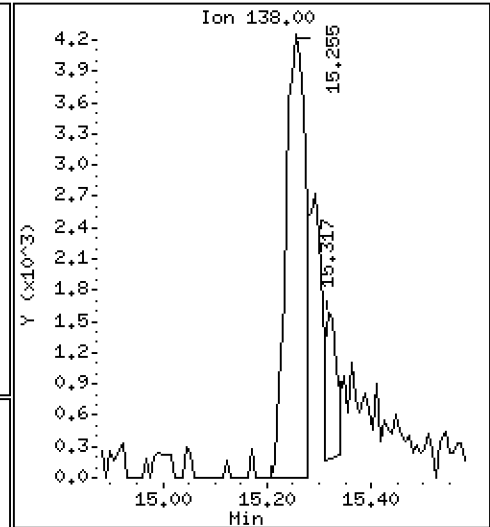
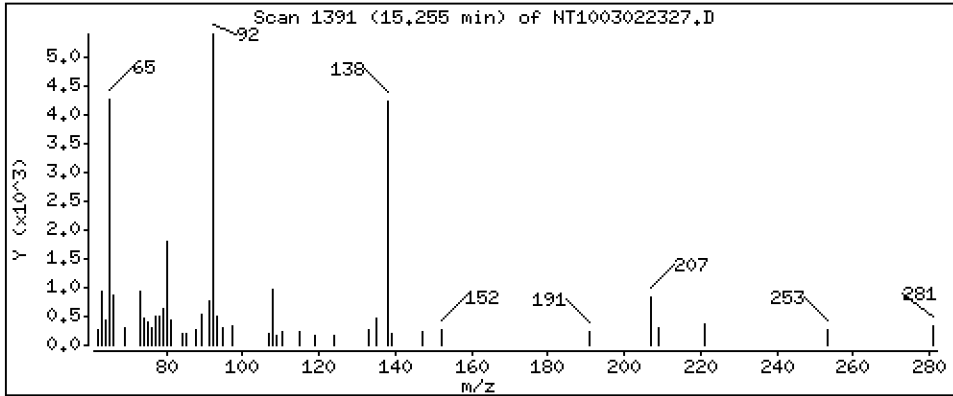
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 0,1263 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

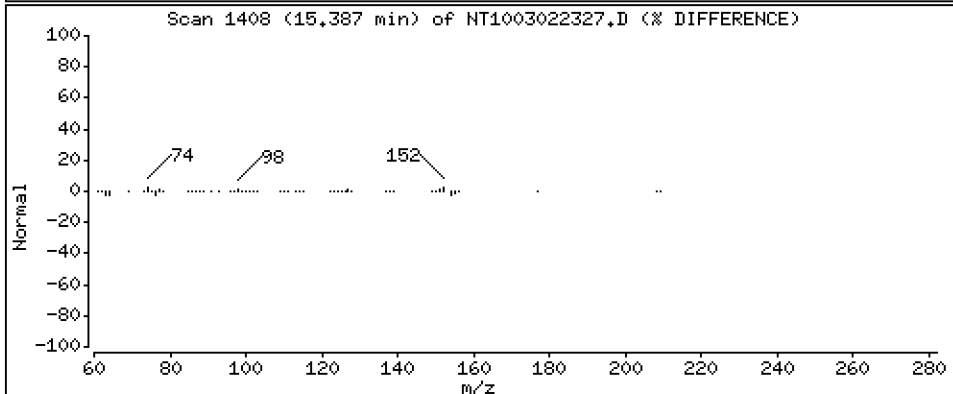
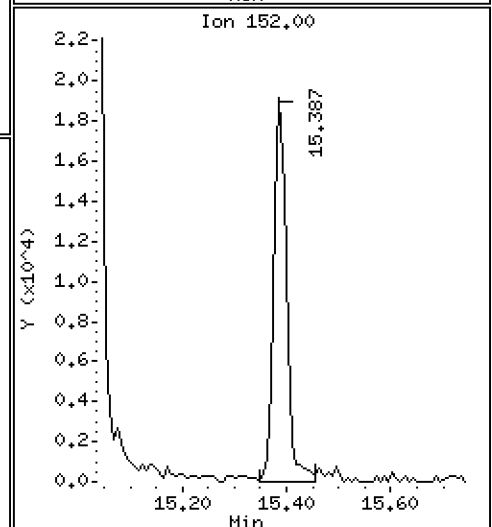
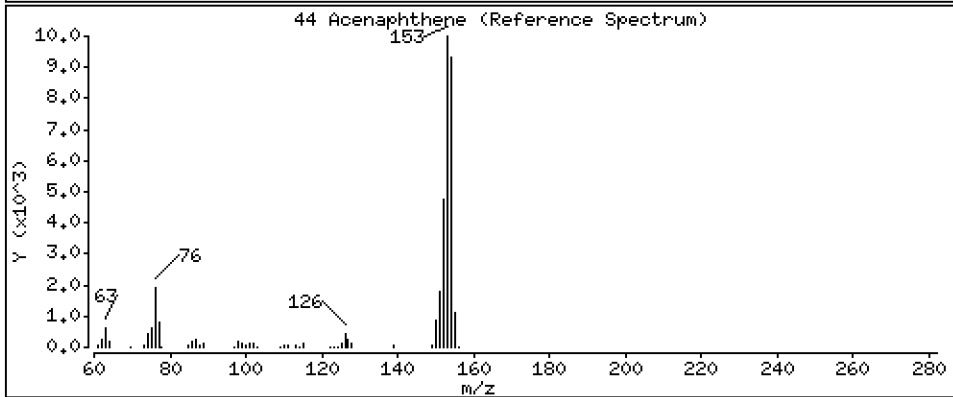
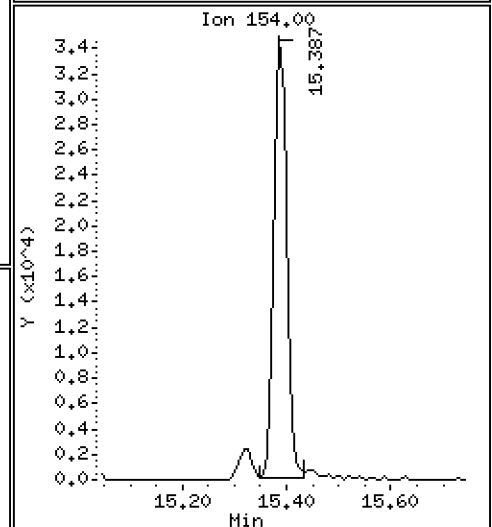
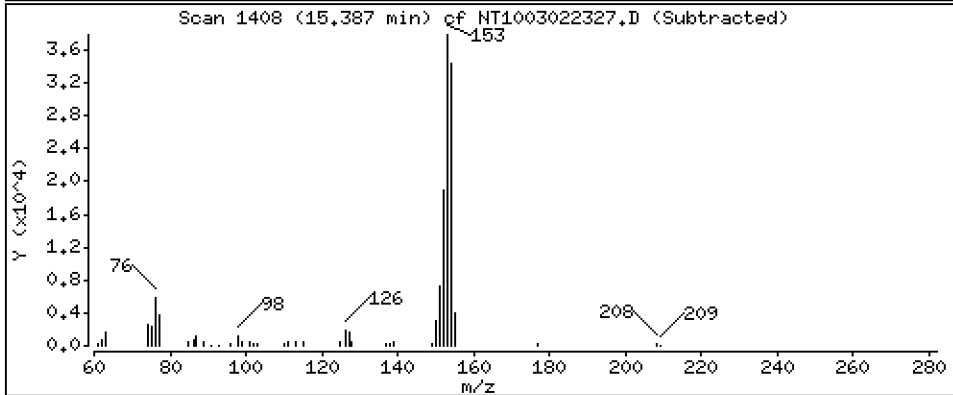
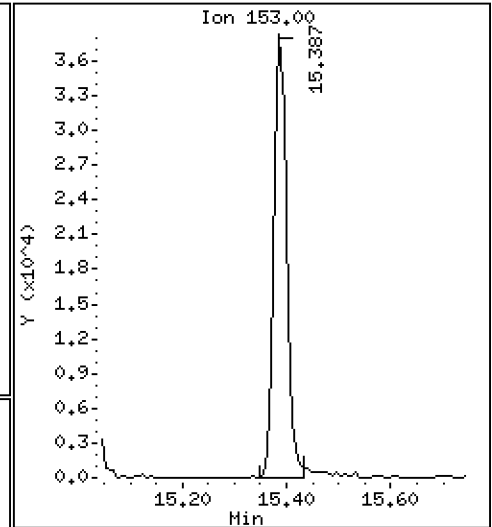
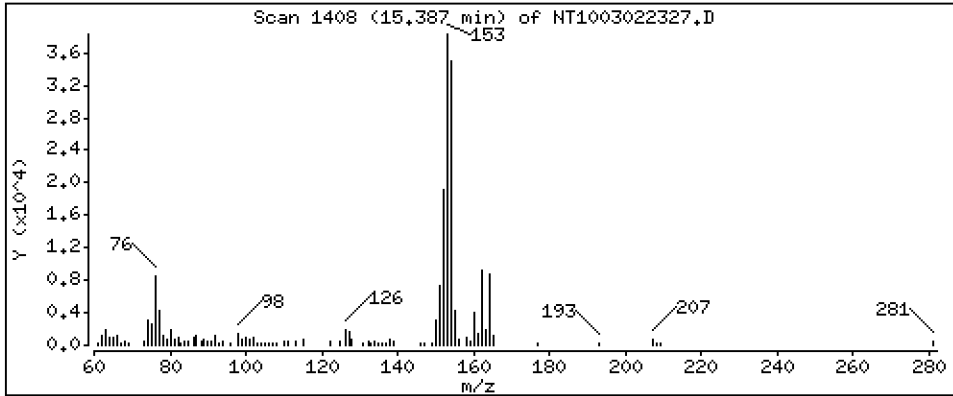
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,1908 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

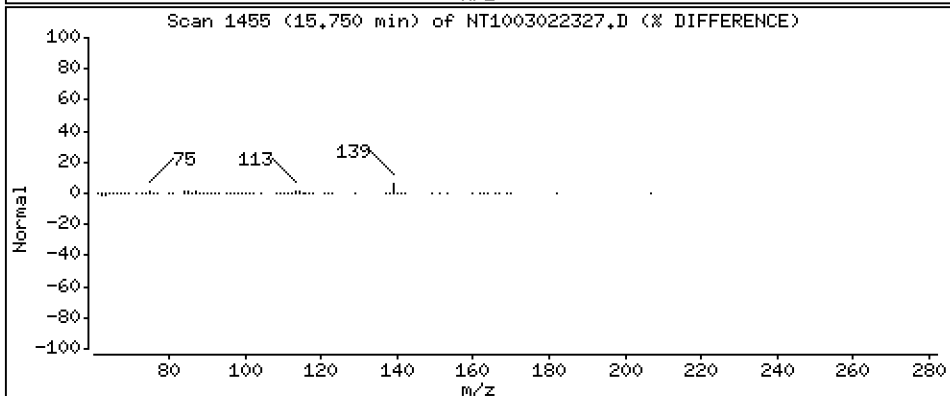
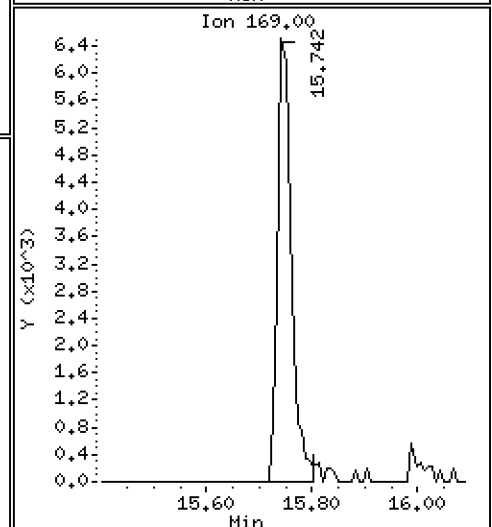
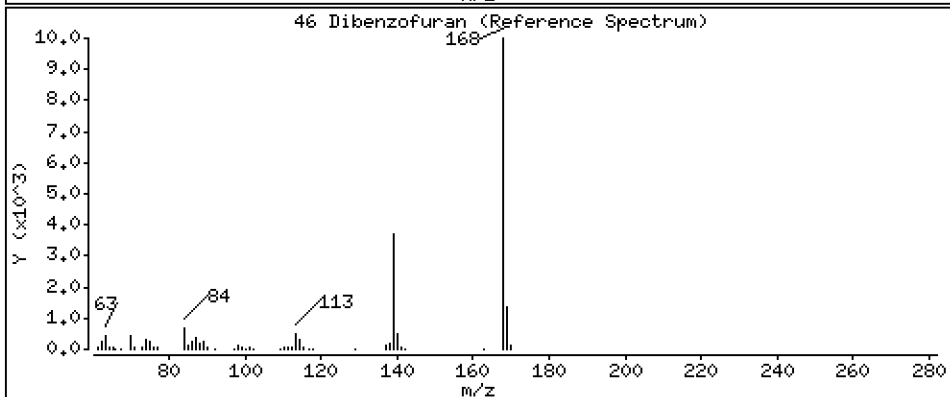
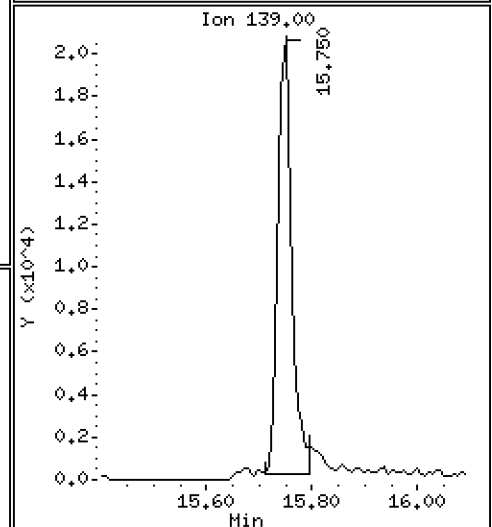
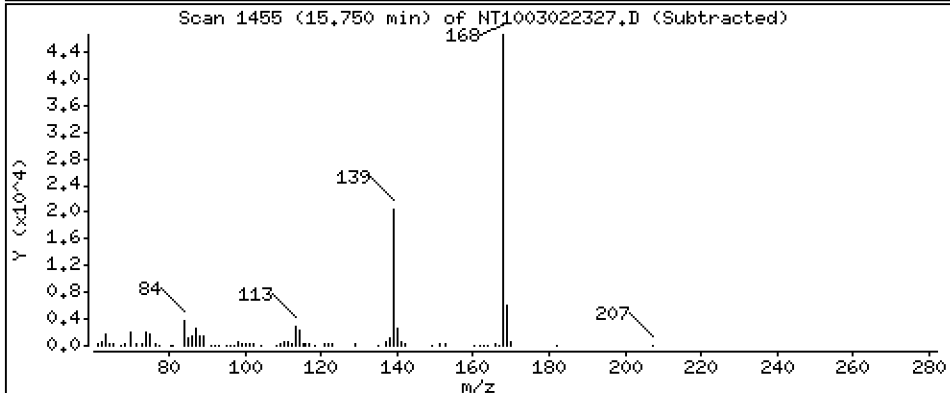
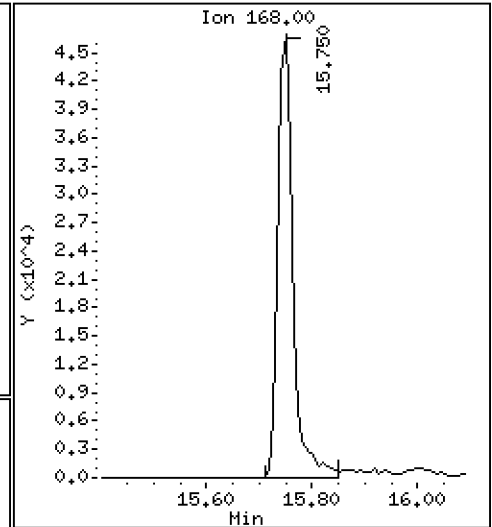
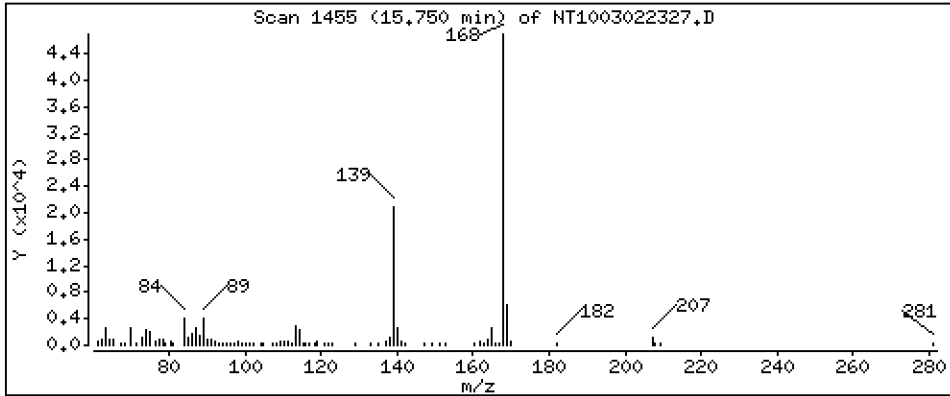
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1888 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

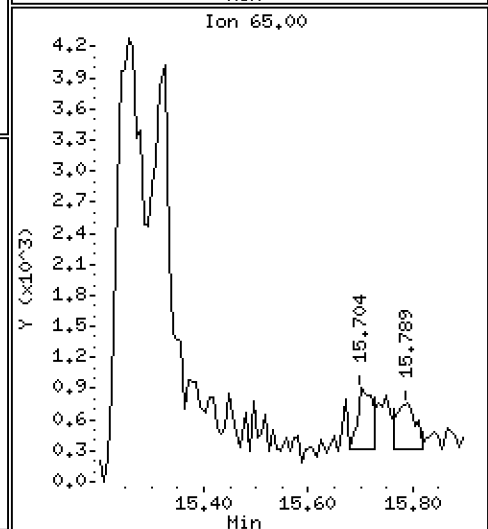
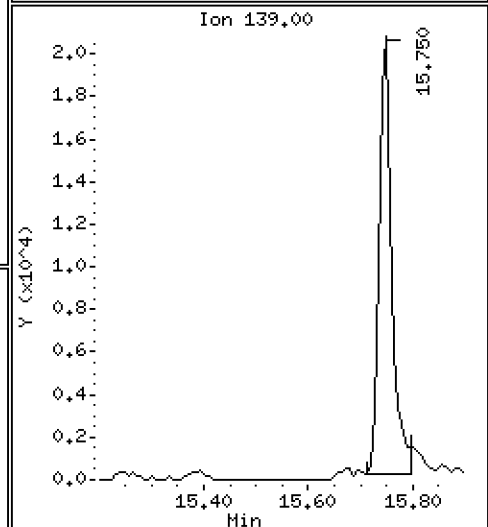
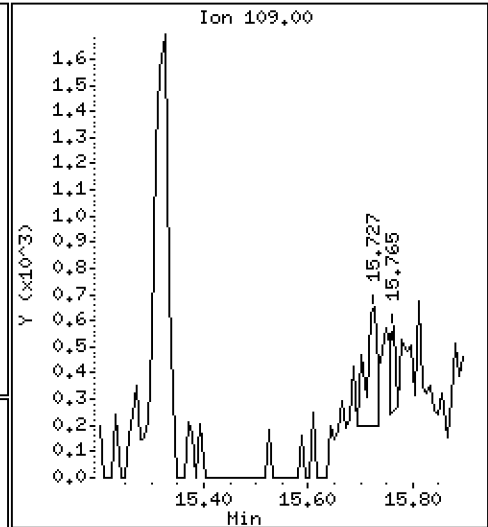
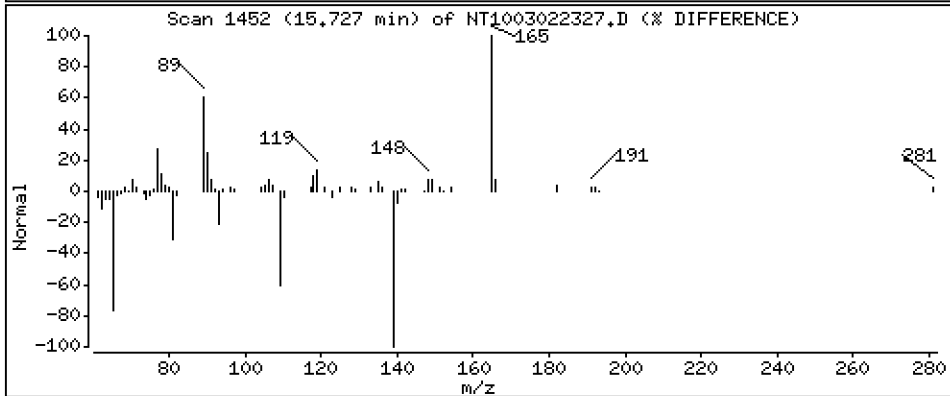
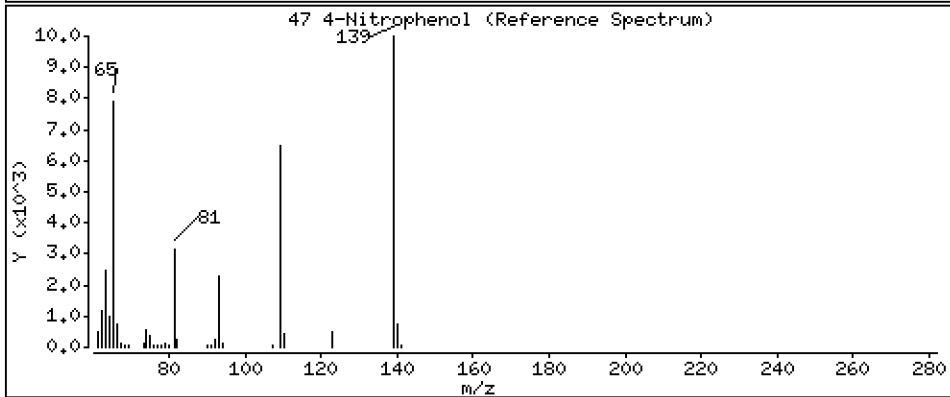
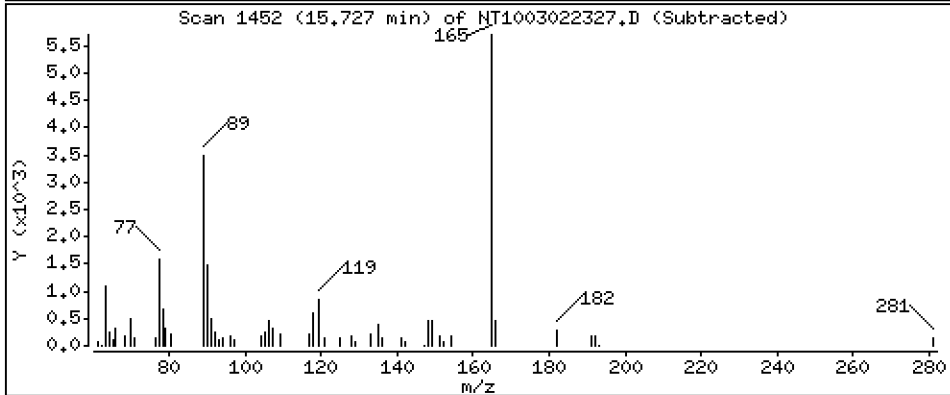
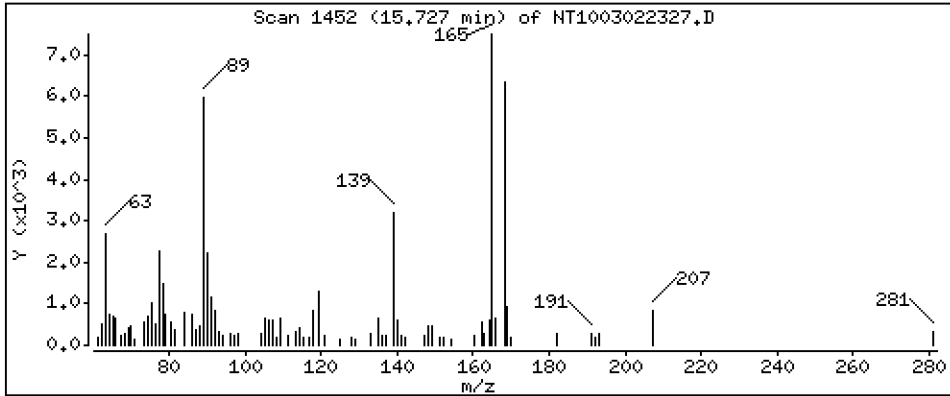
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 0,01114 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

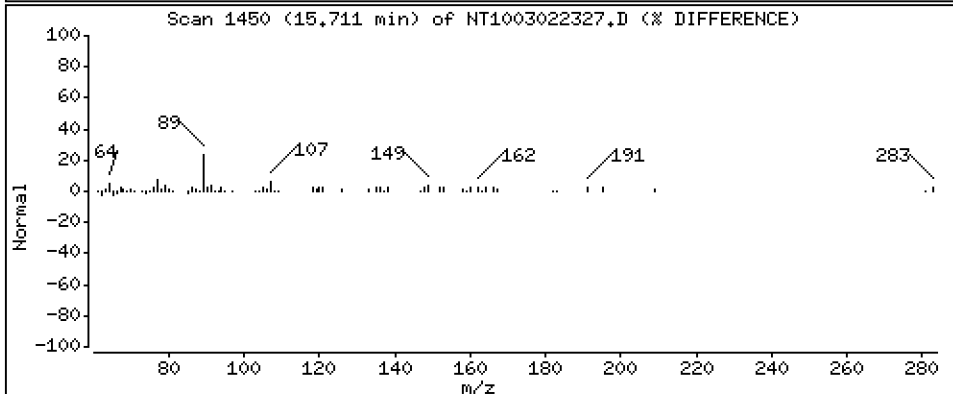
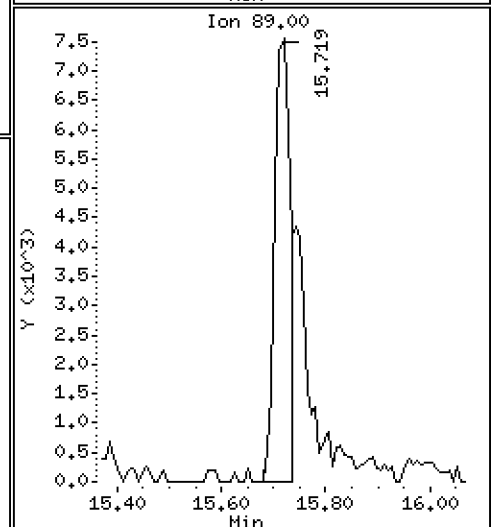
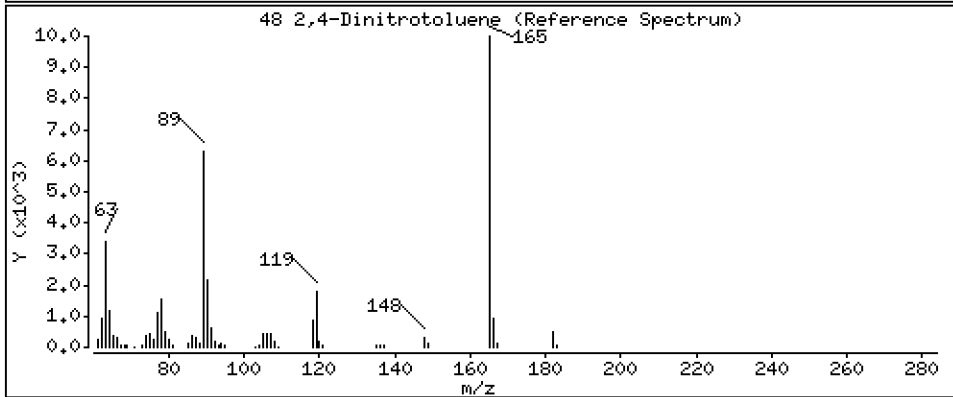
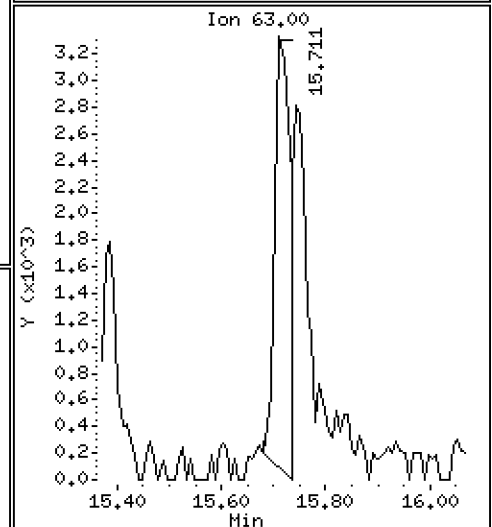
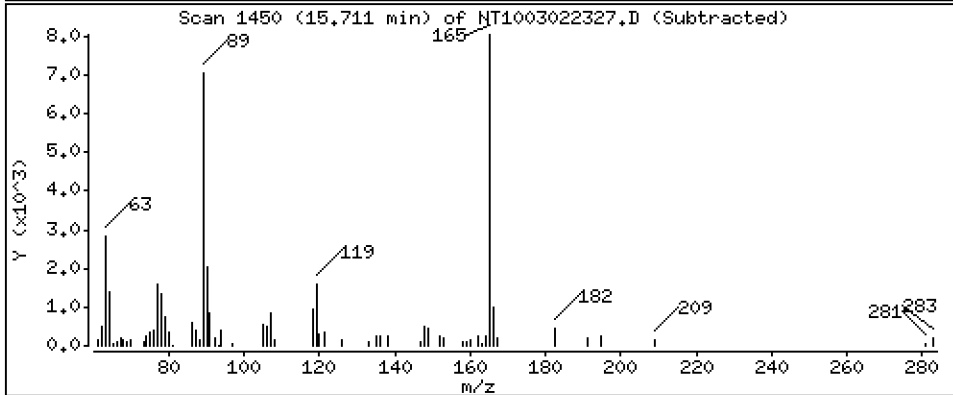
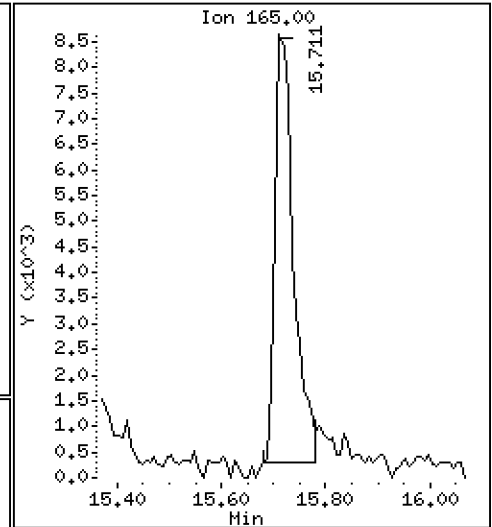
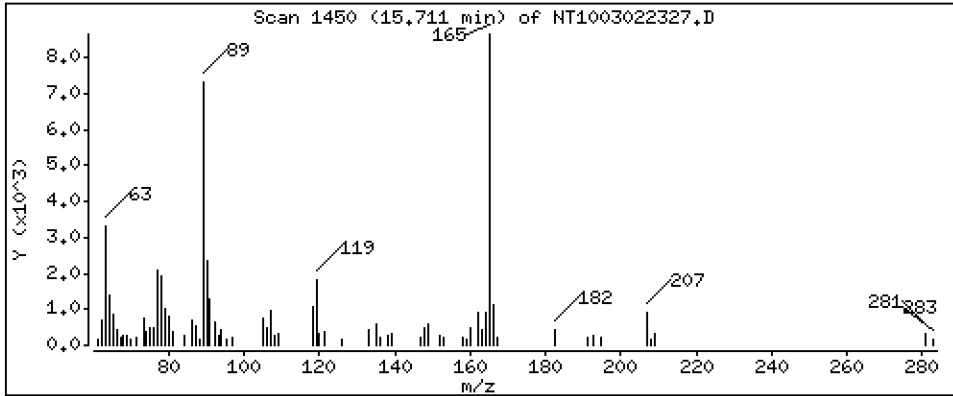
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 0,1778 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

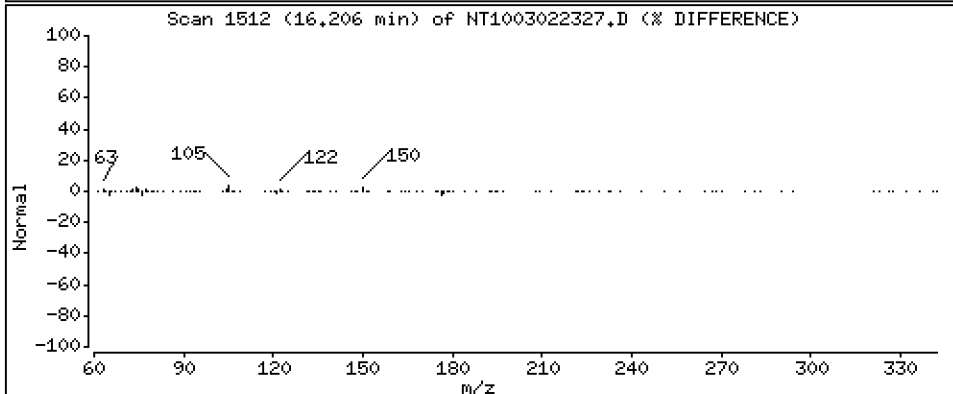
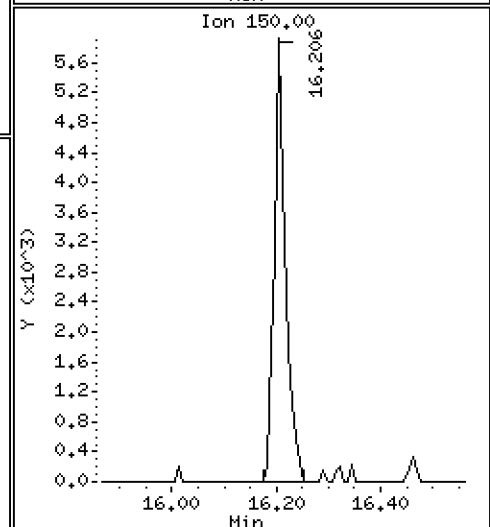
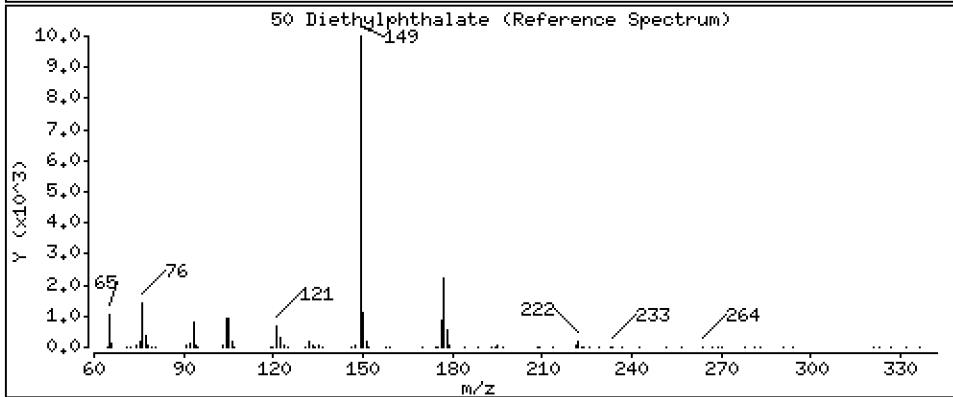
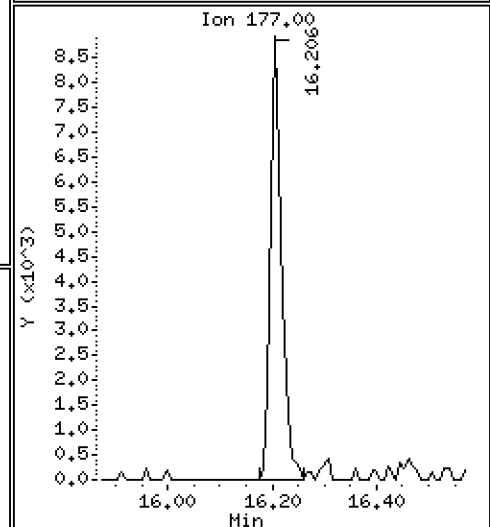
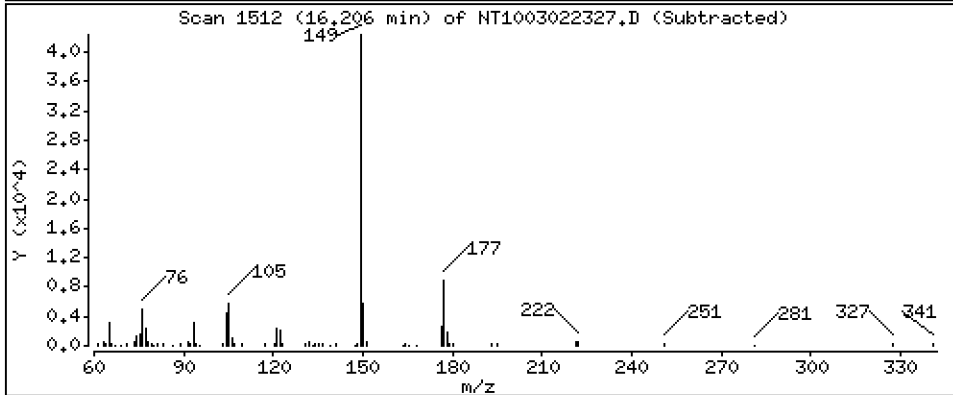
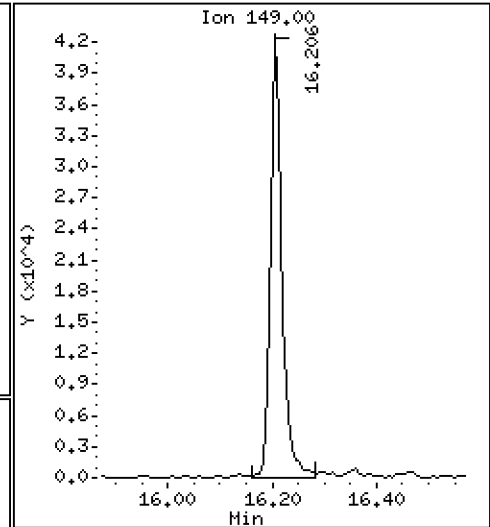
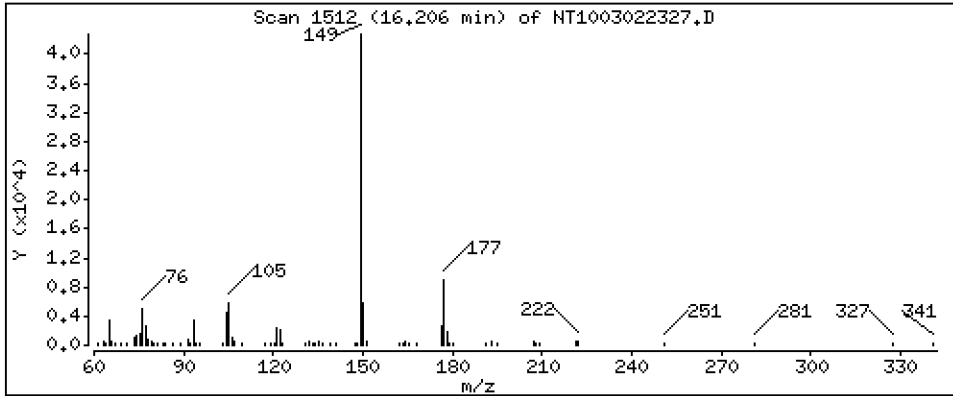
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,1741 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

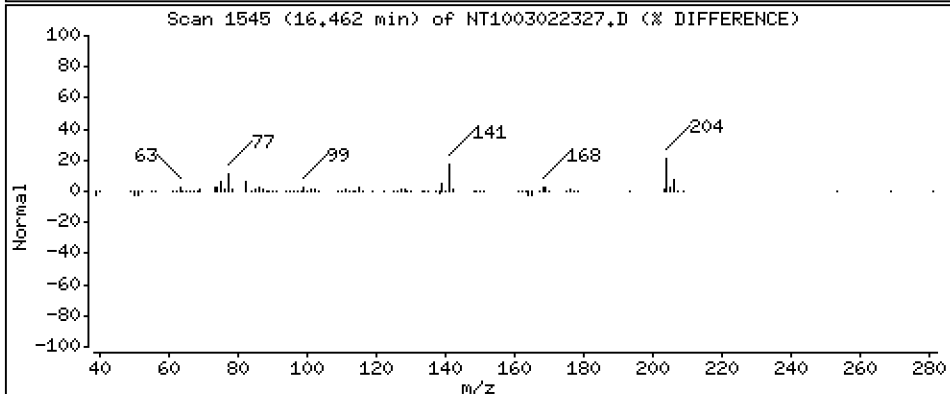
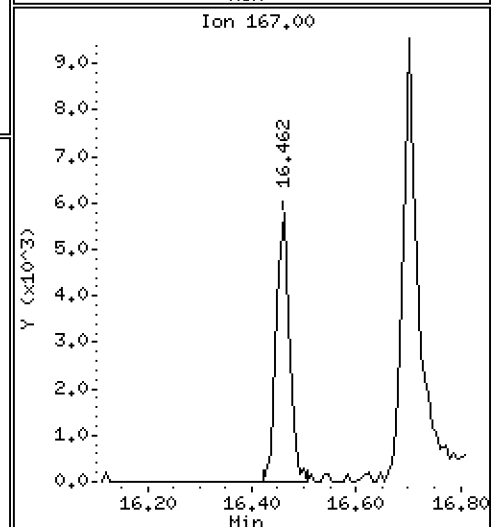
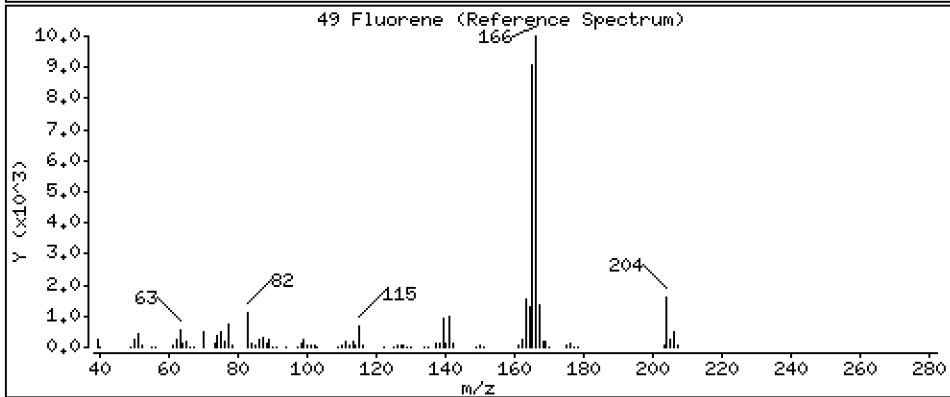
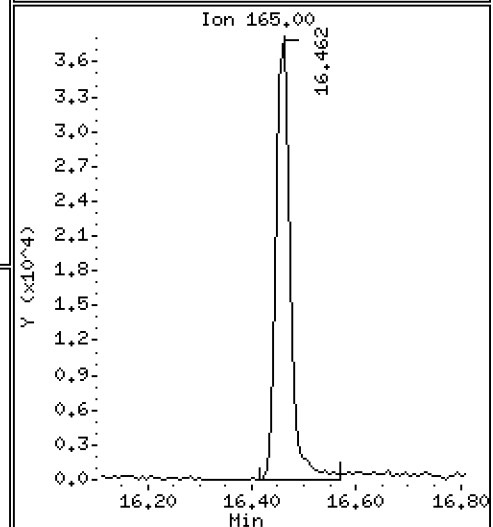
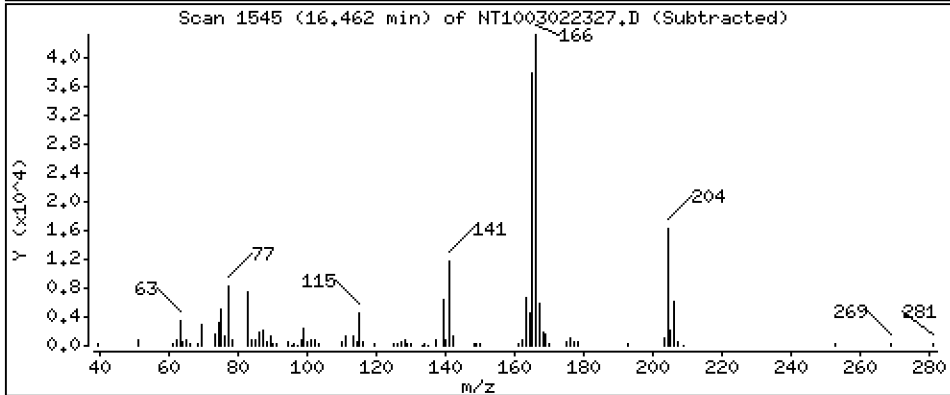
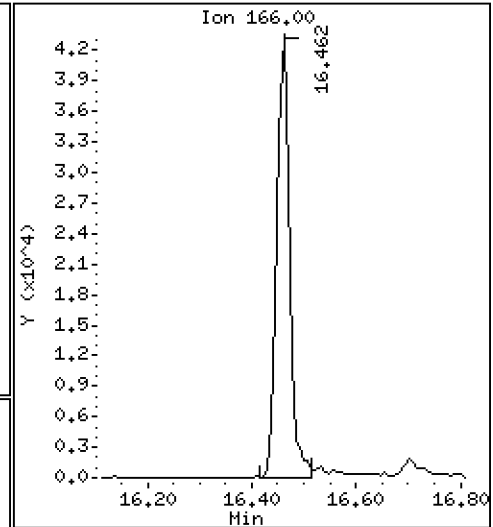
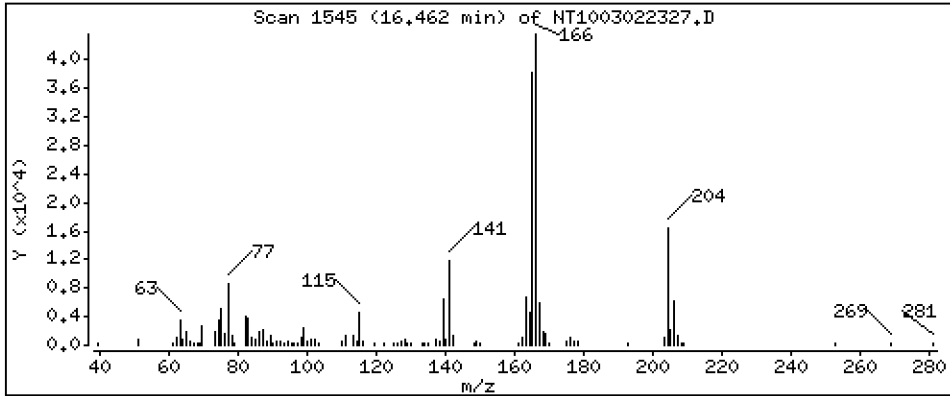
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 0,1771 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

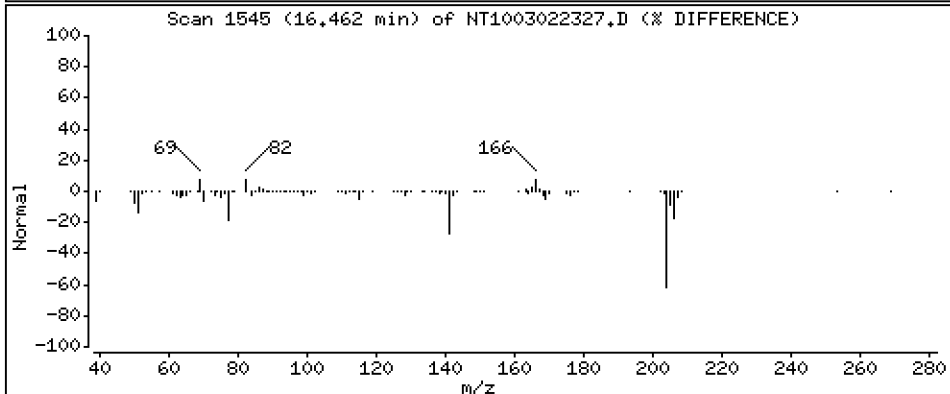
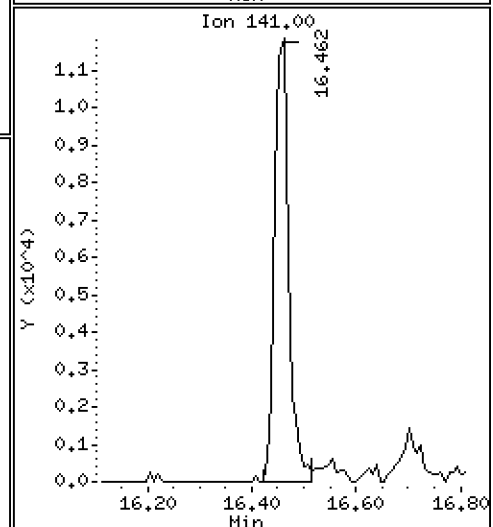
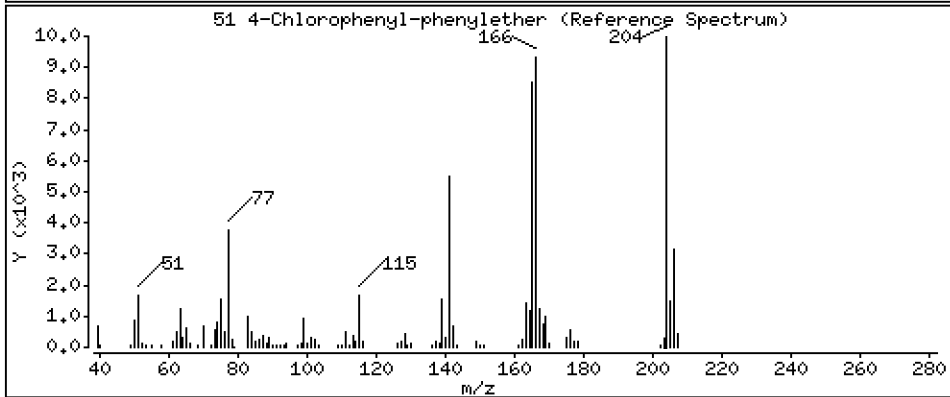
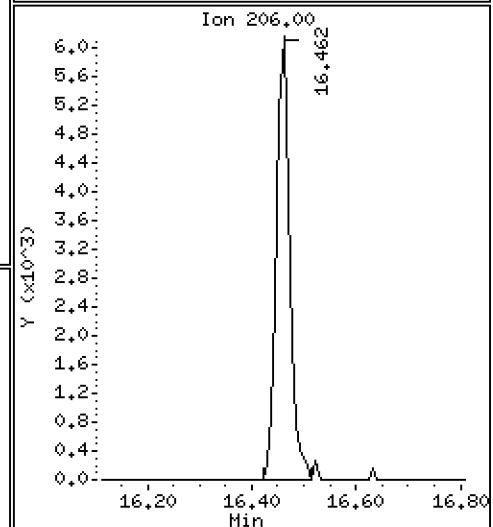
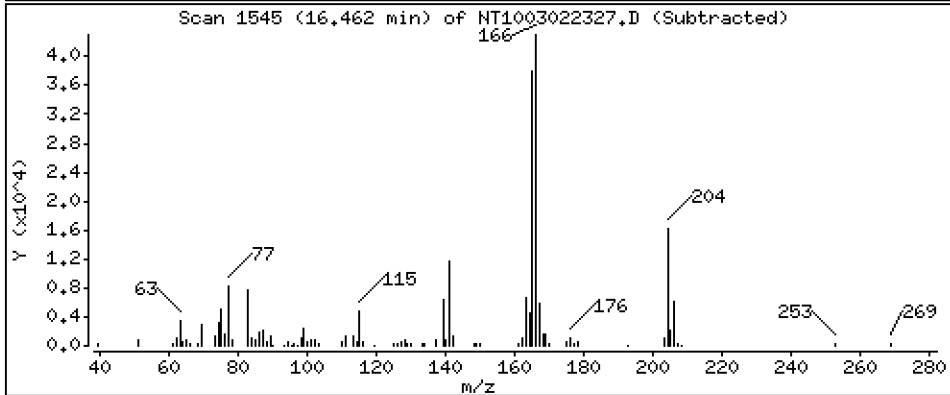
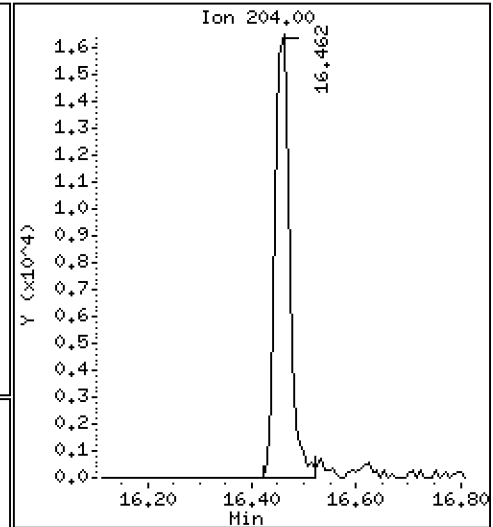
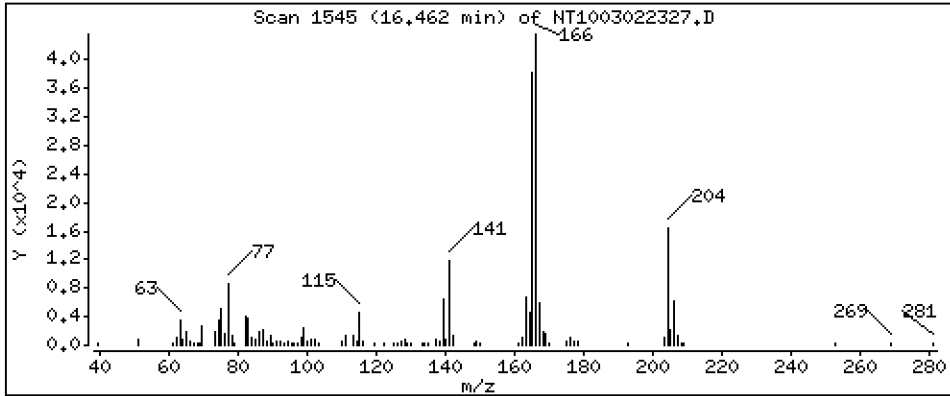
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 0,1791 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

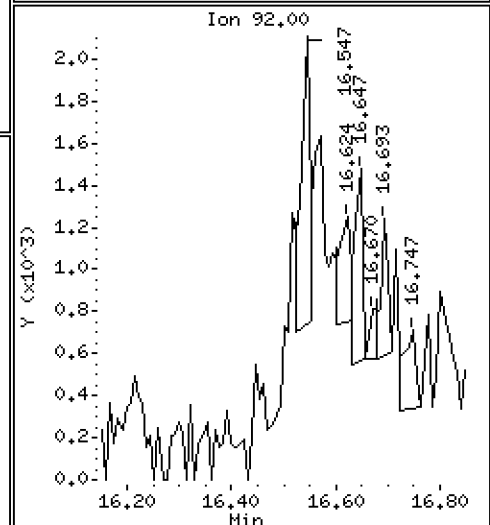
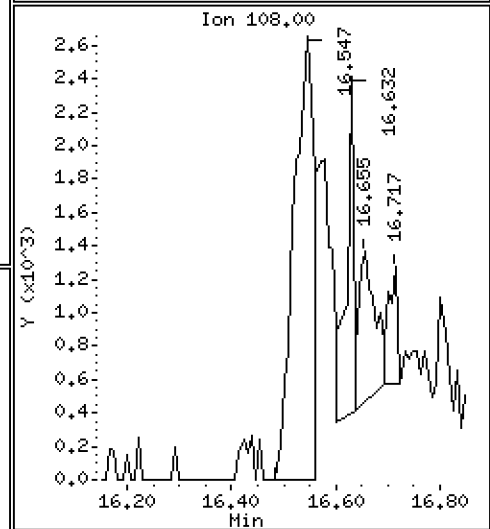
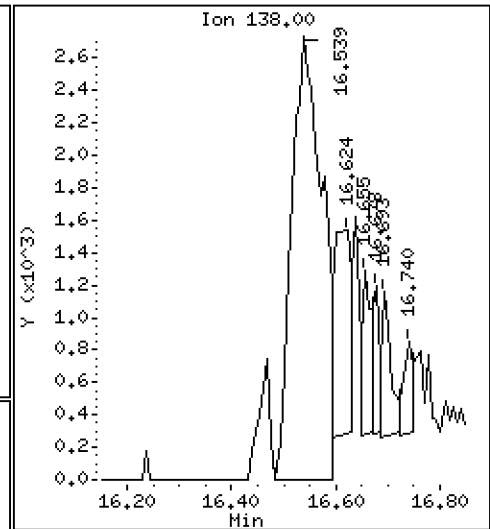
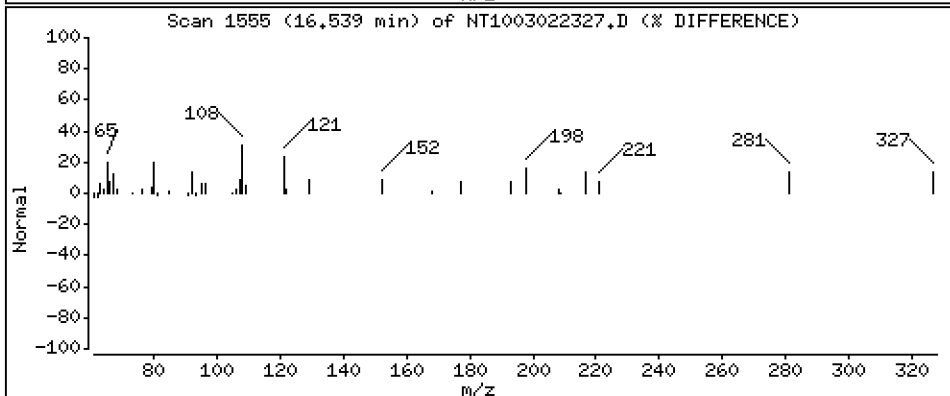
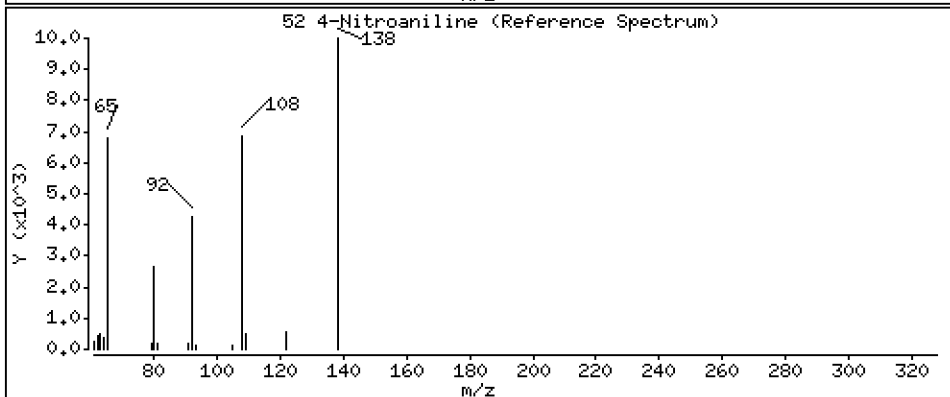
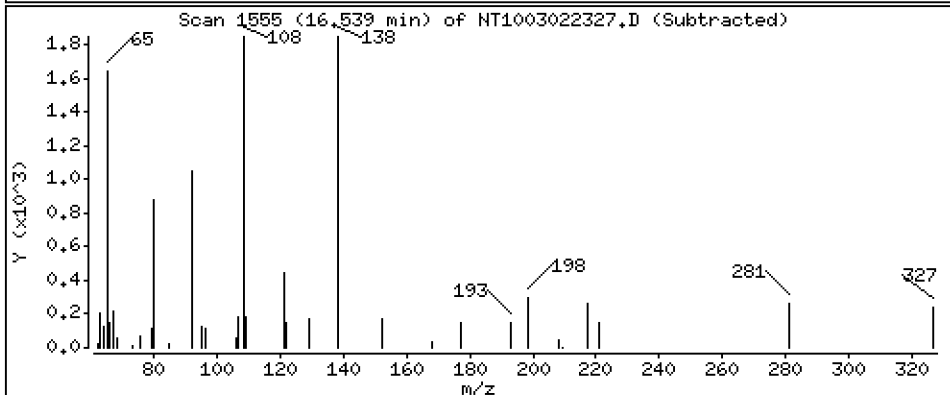
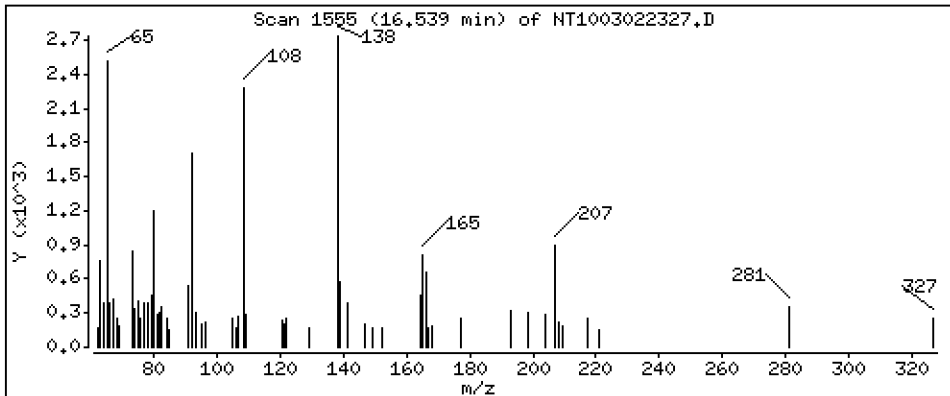
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

52 4-Nitroaniline

Concentration: 0.1179 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

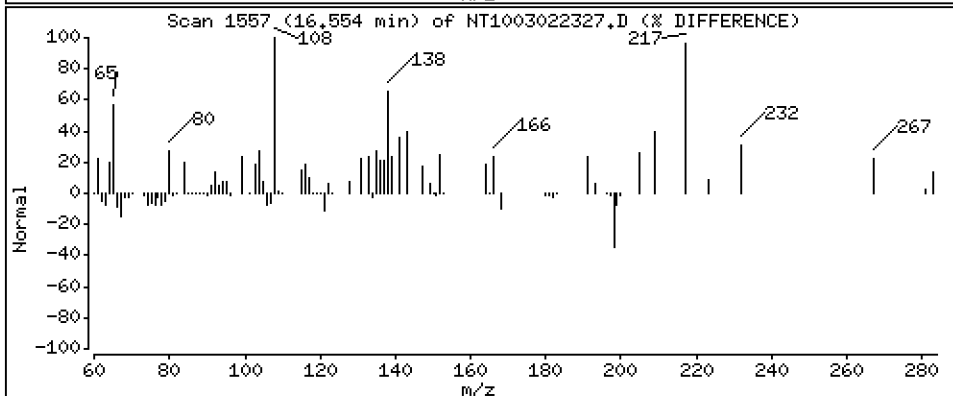
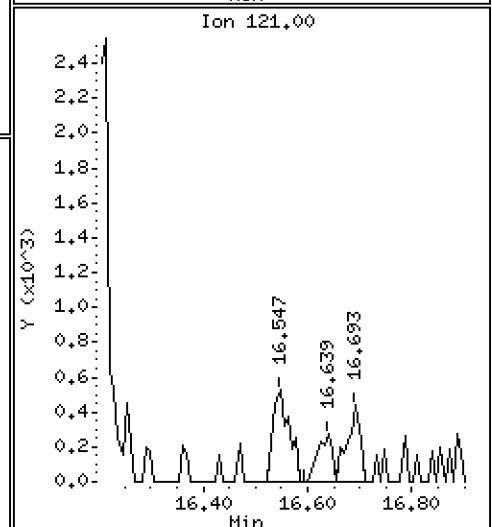
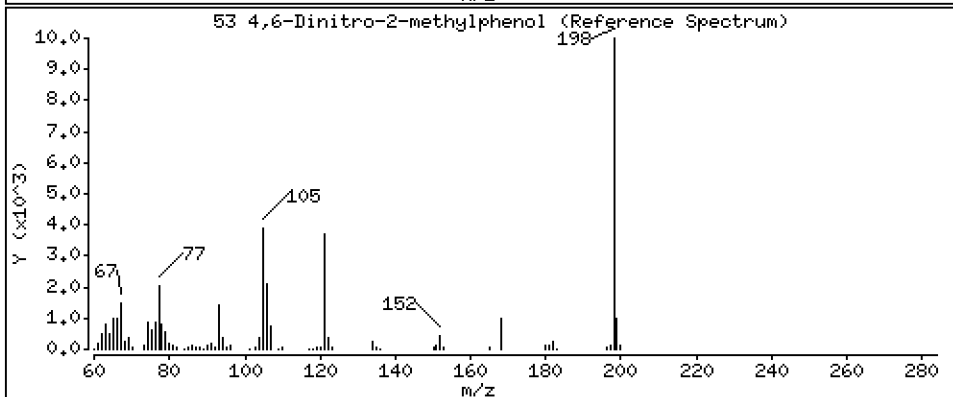
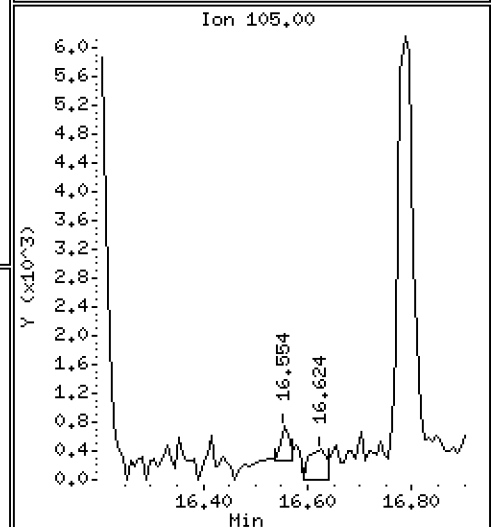
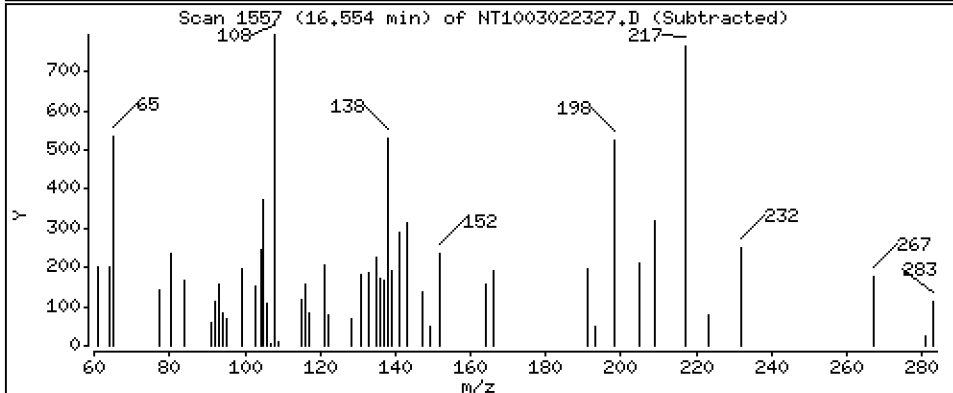
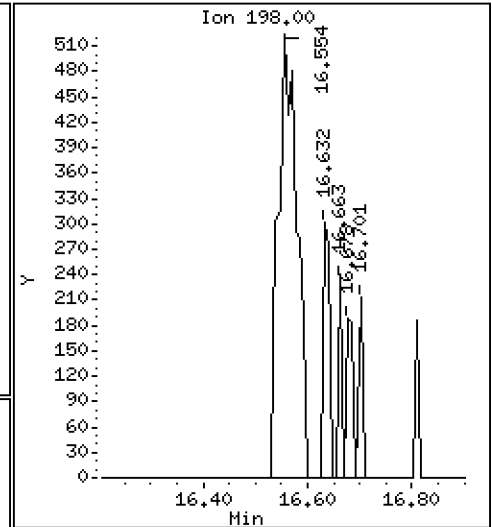
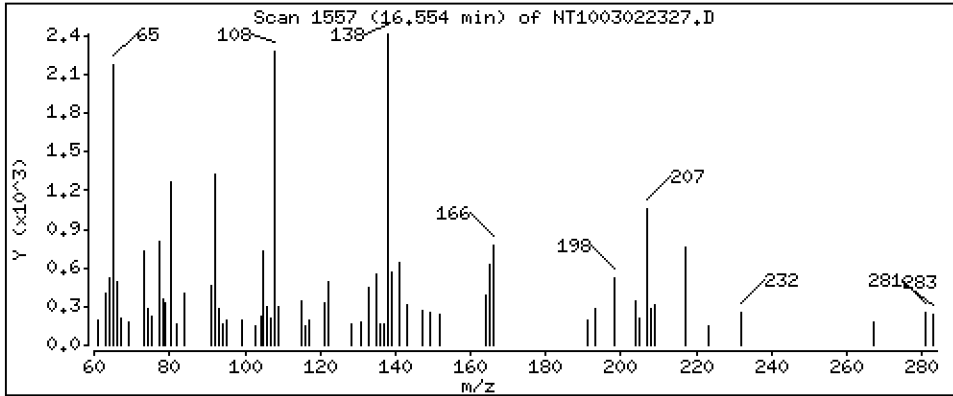
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

53 4,6-Dinitro-2-methylphenol

Concentration: 0.02628 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

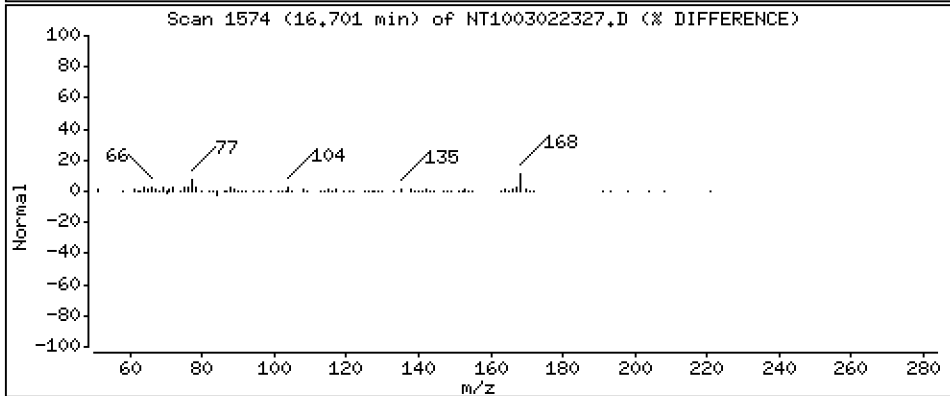
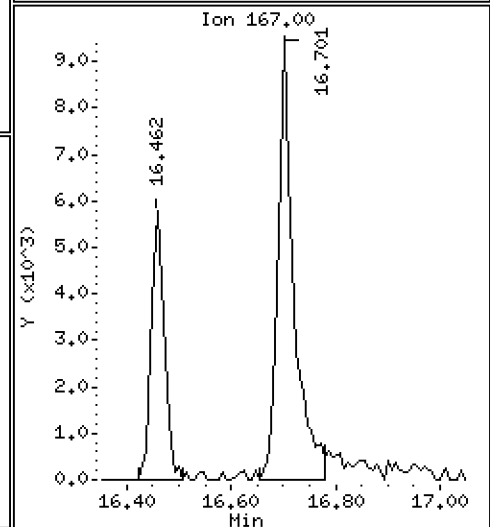
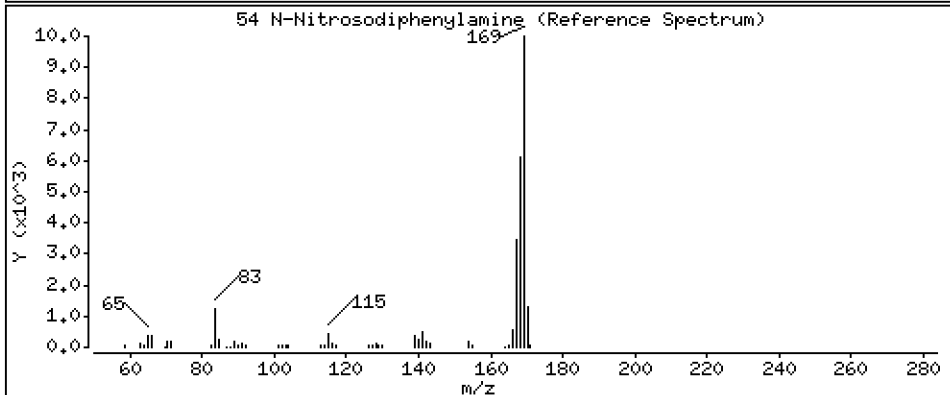
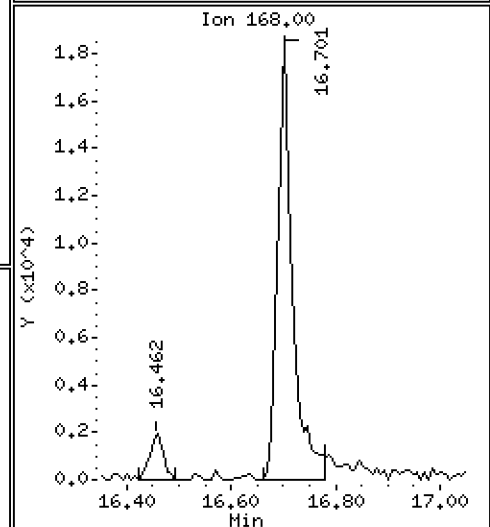
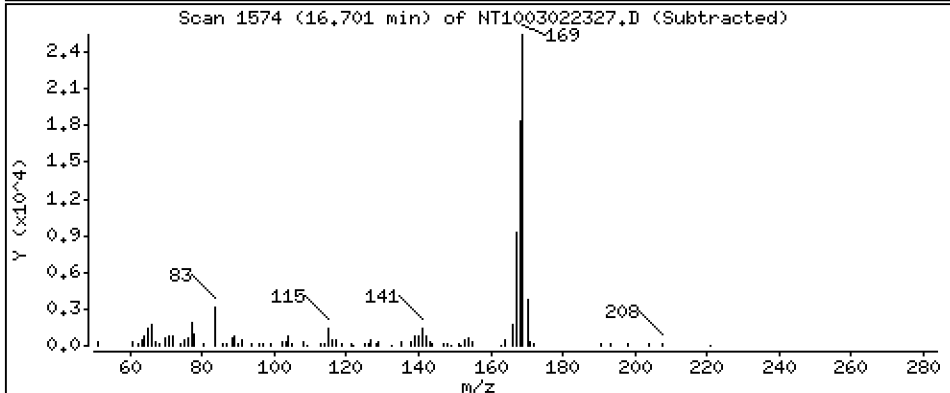
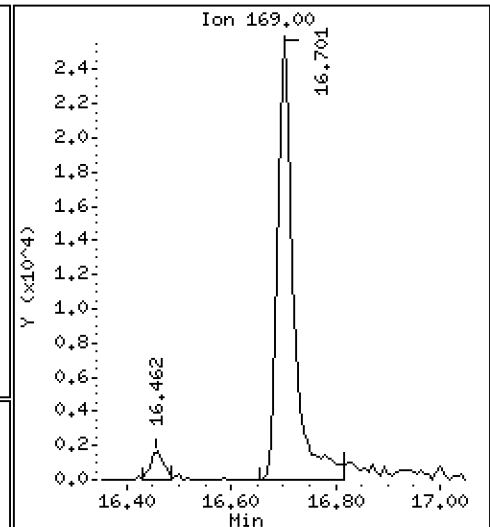
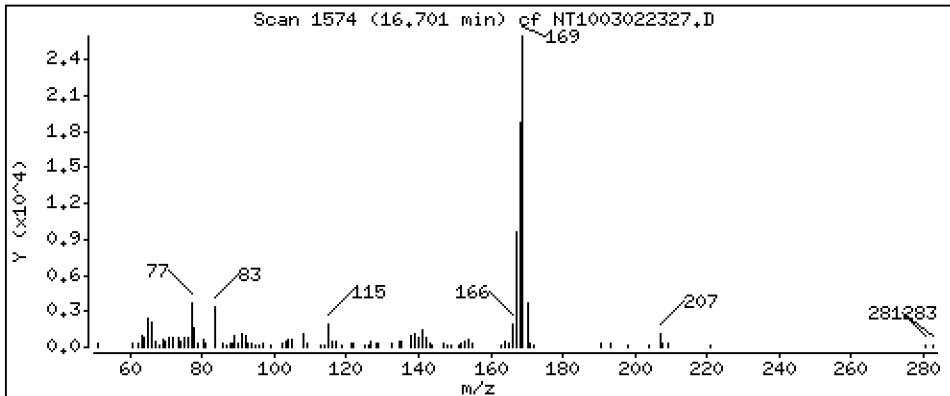
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 0,1742 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

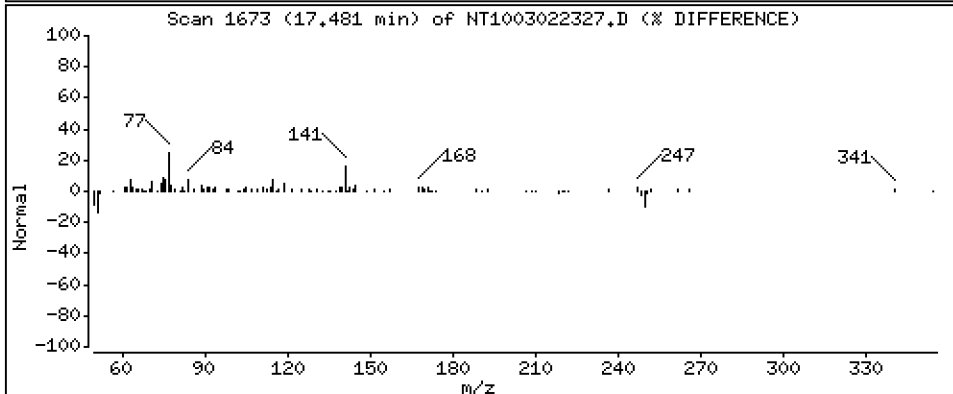
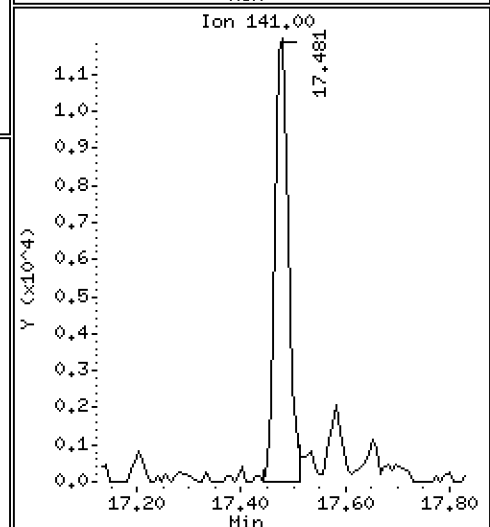
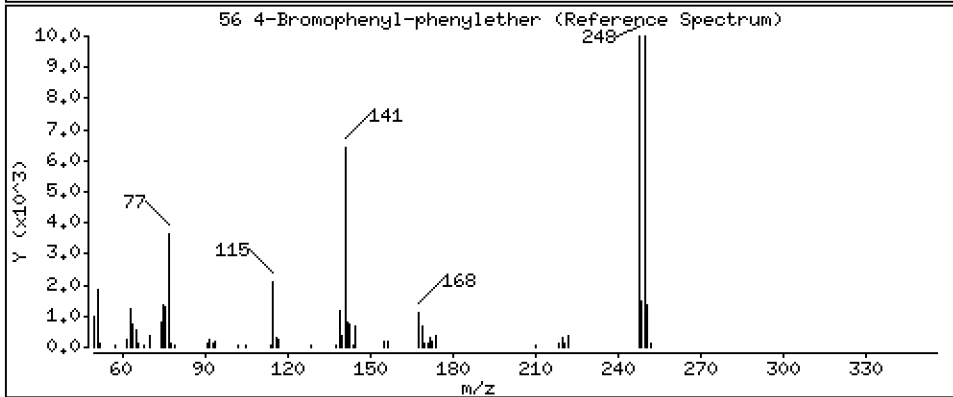
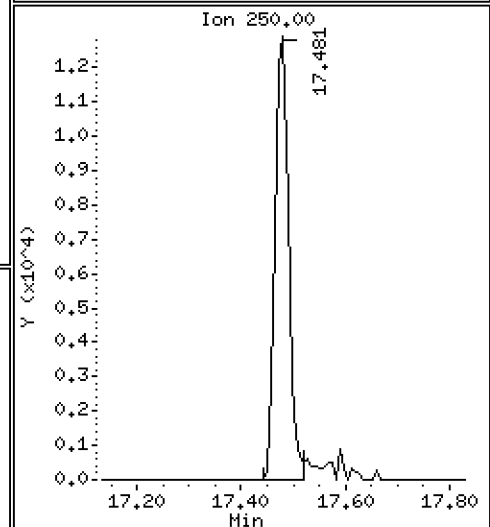
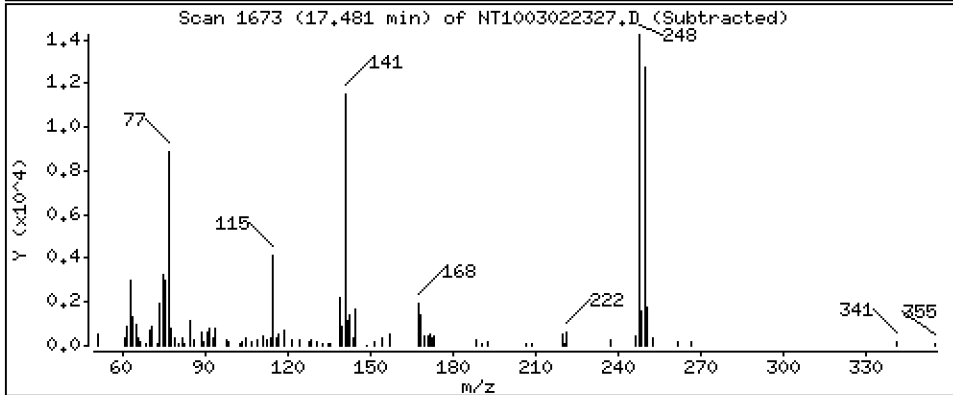
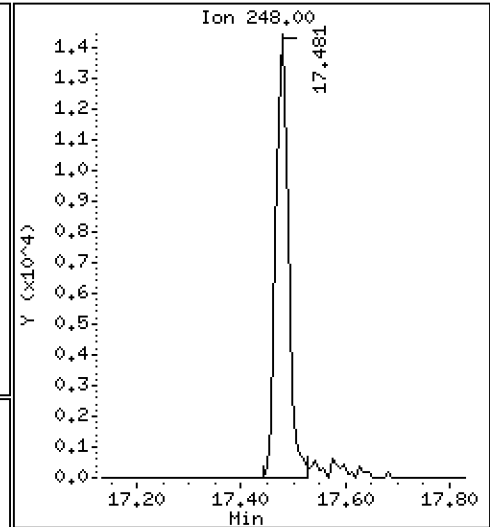
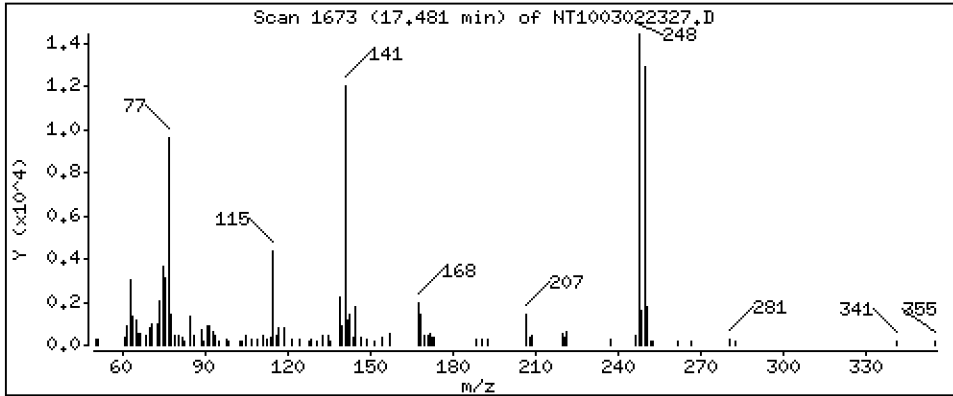
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 0,1823 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

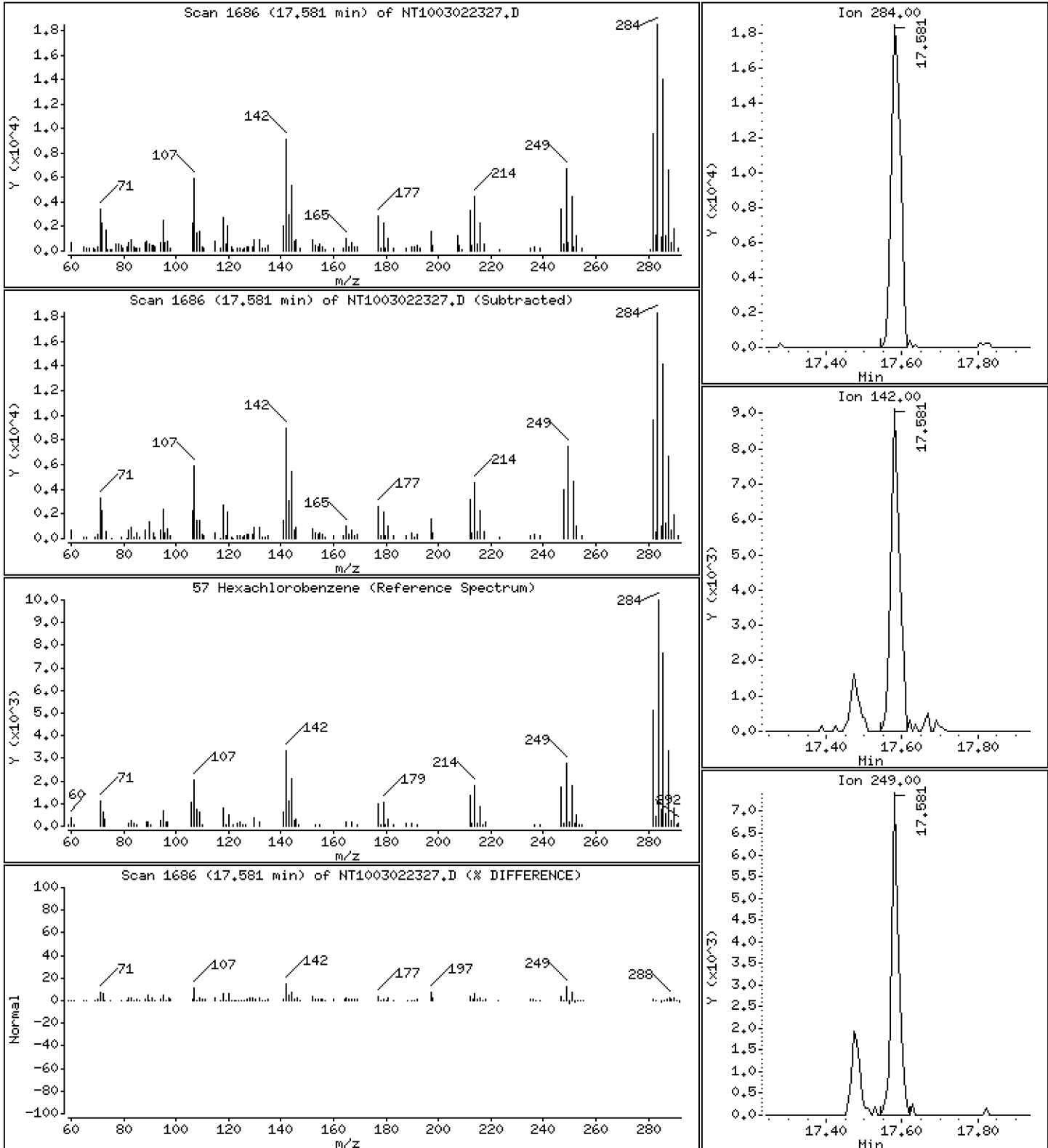
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,2100 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

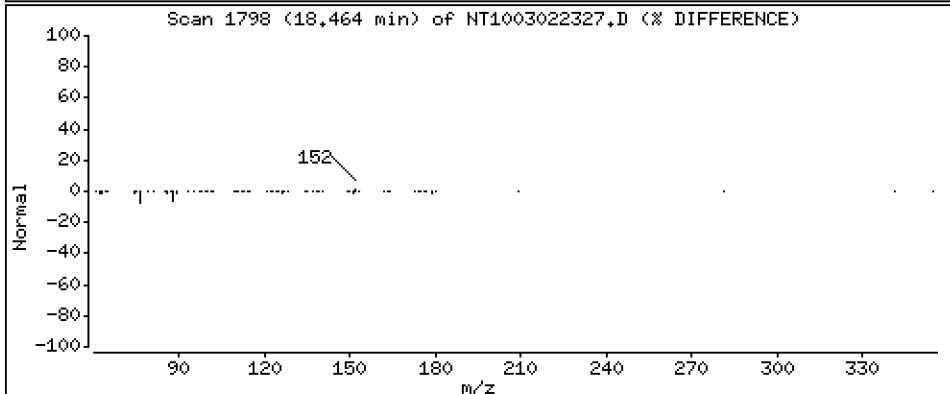
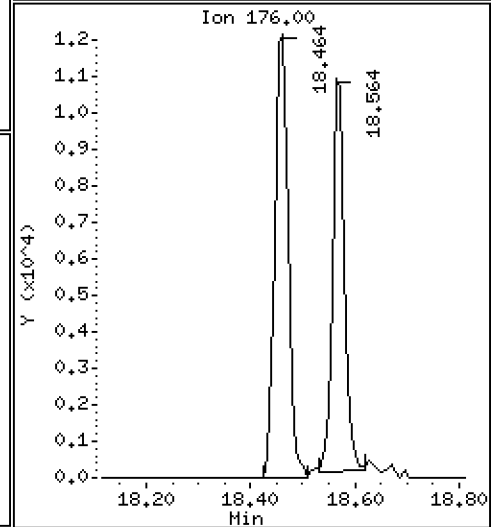
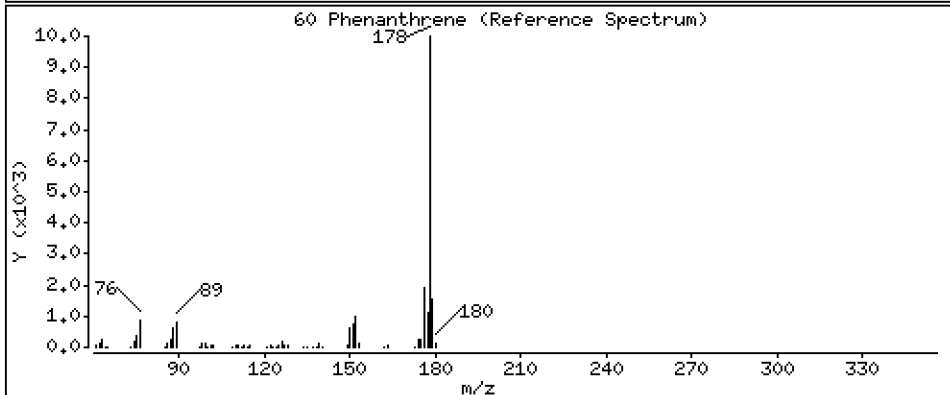
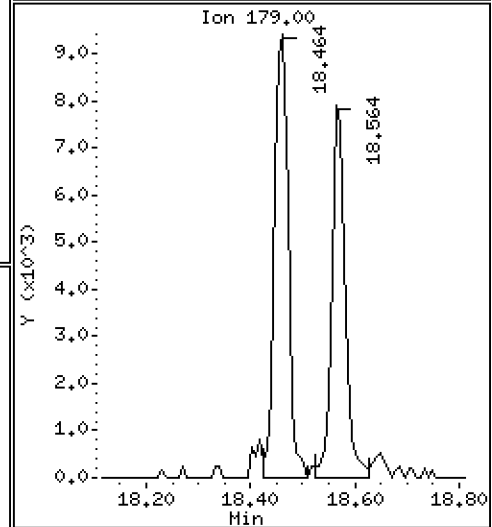
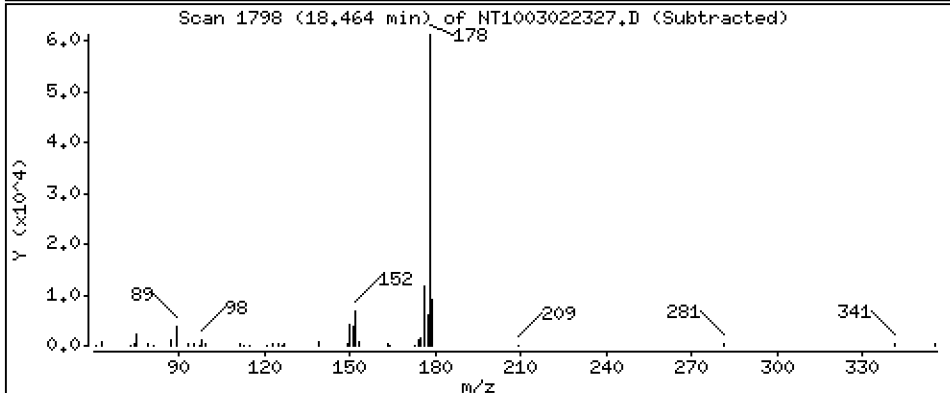
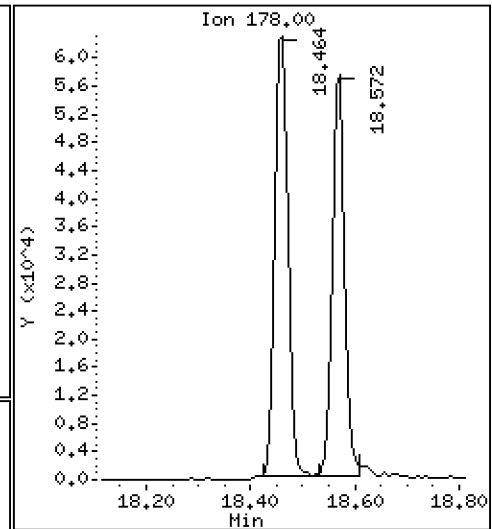
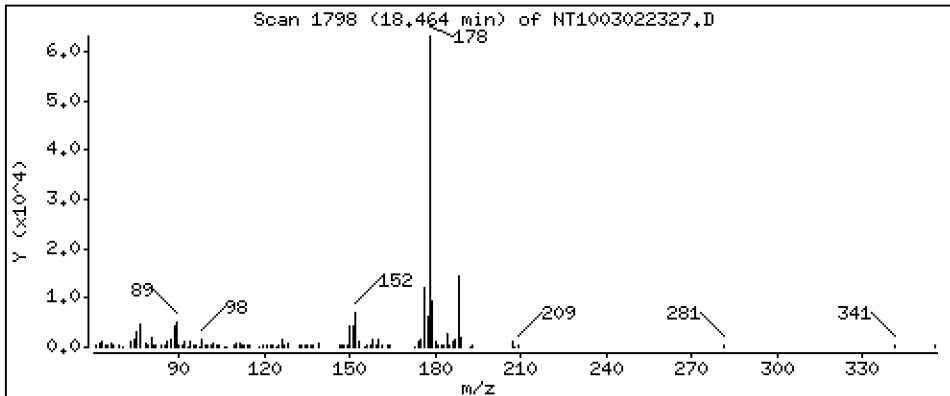
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,1954 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

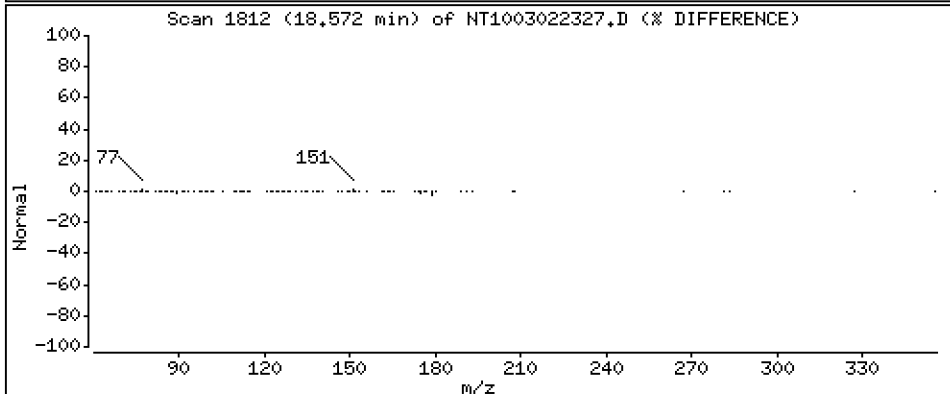
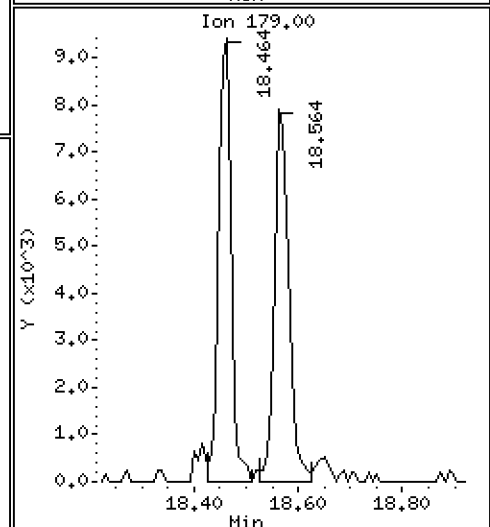
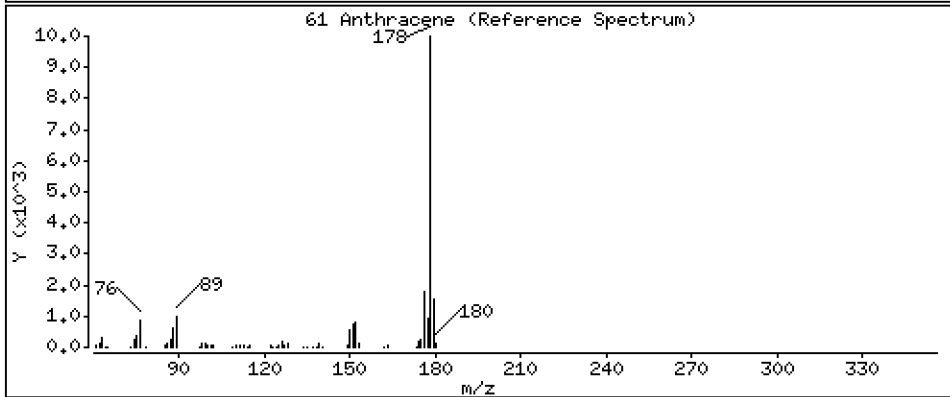
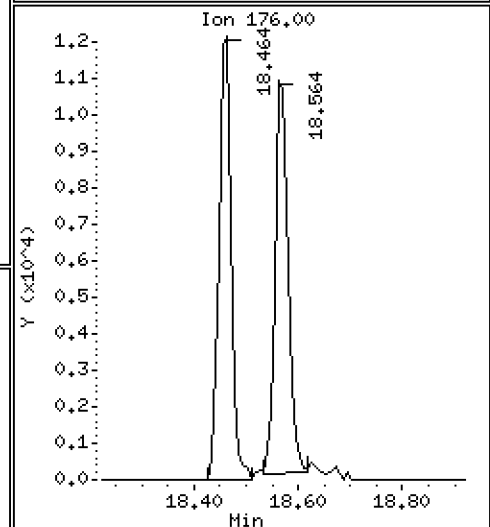
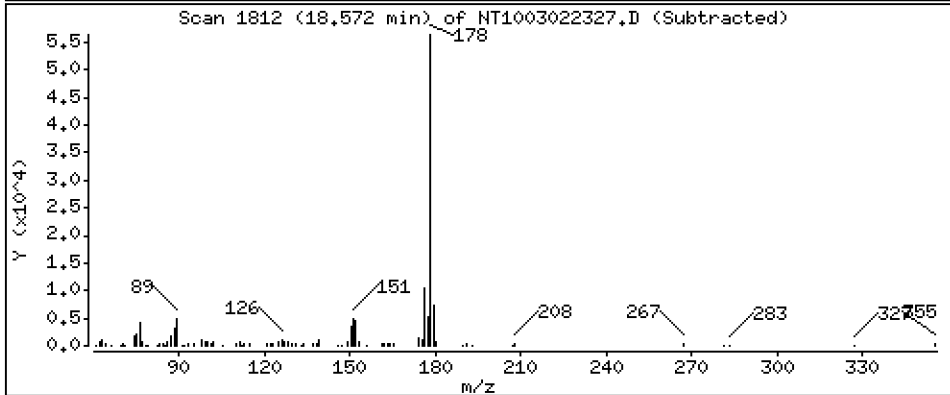
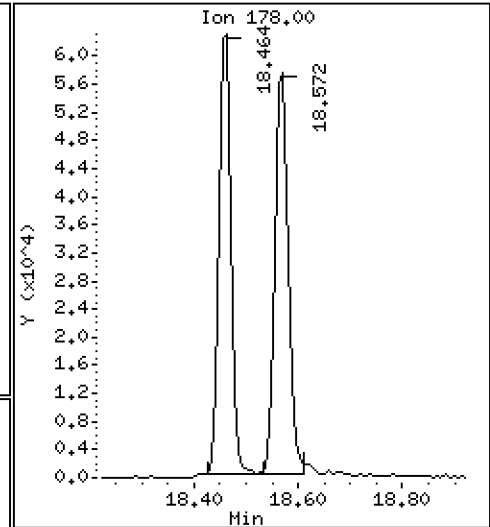
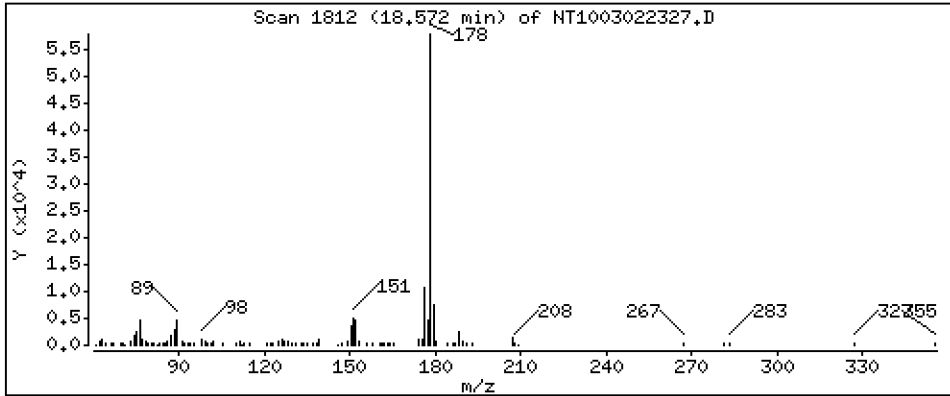
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,1840 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

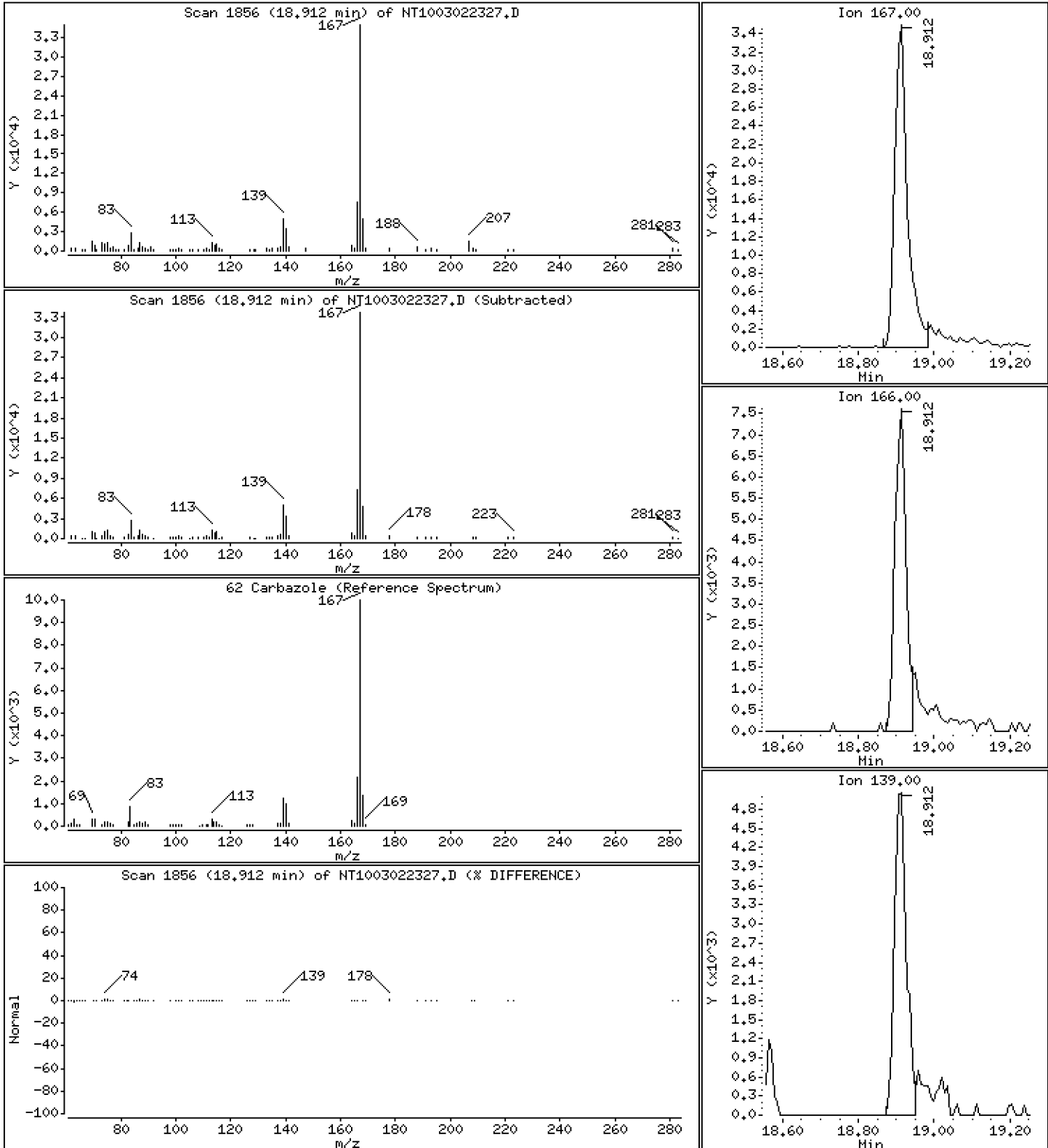
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,1654 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

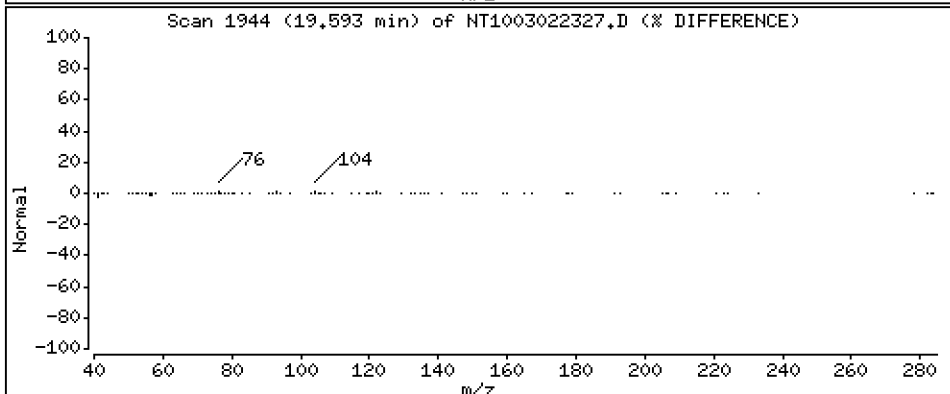
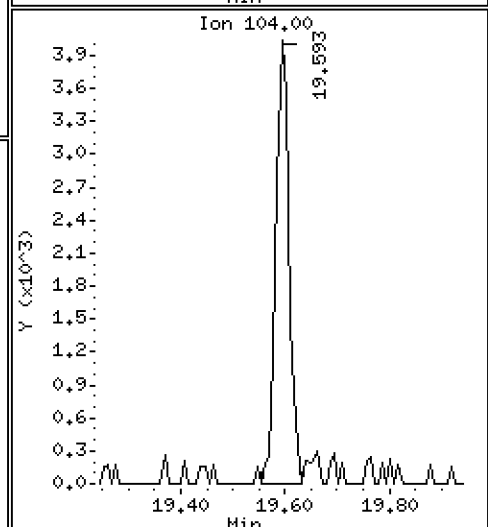
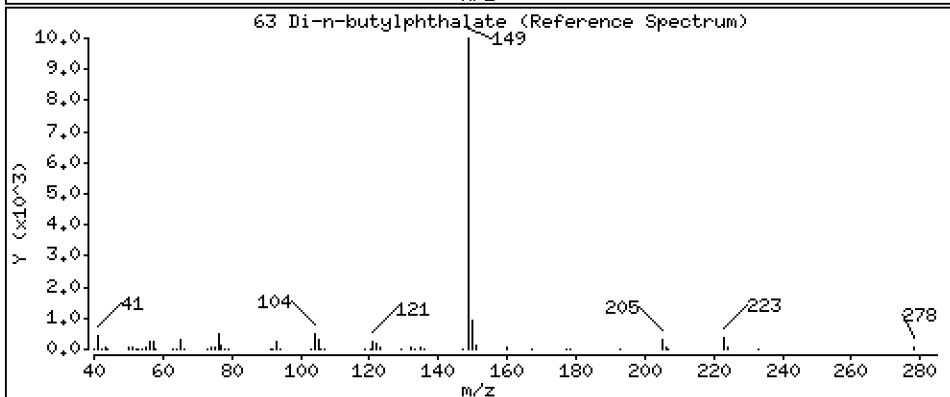
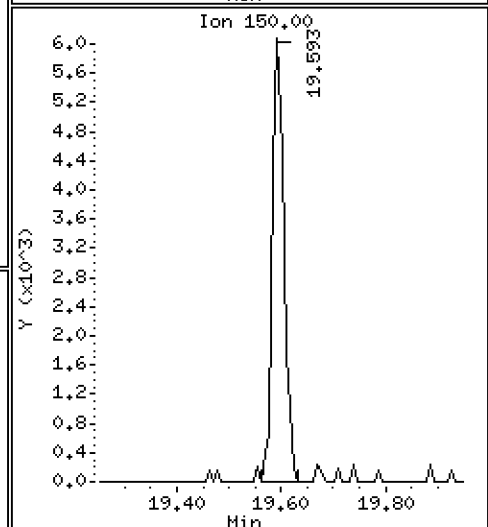
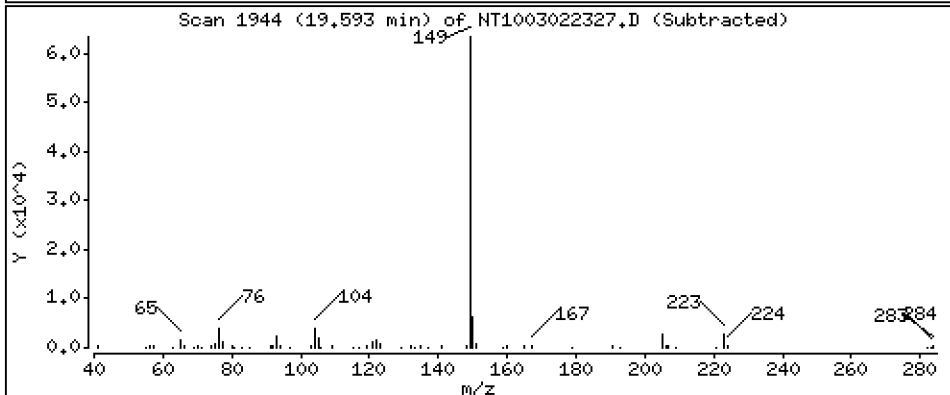
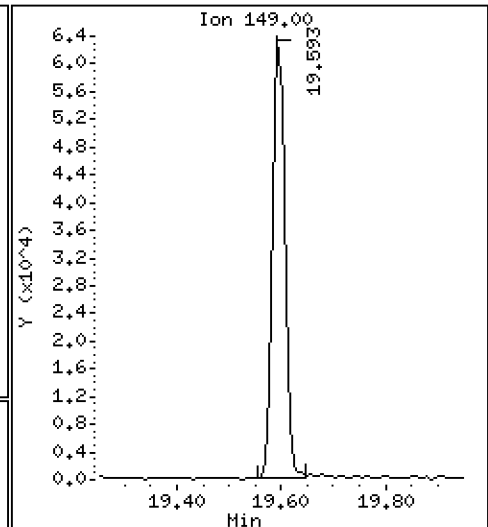
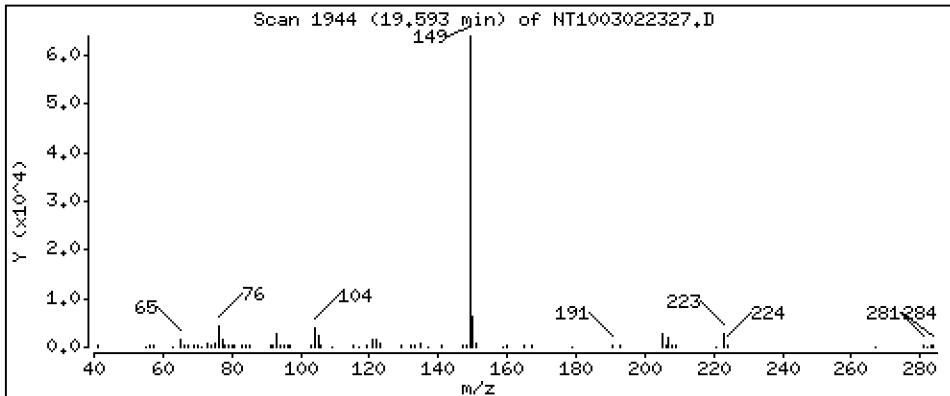
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 0,1493 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

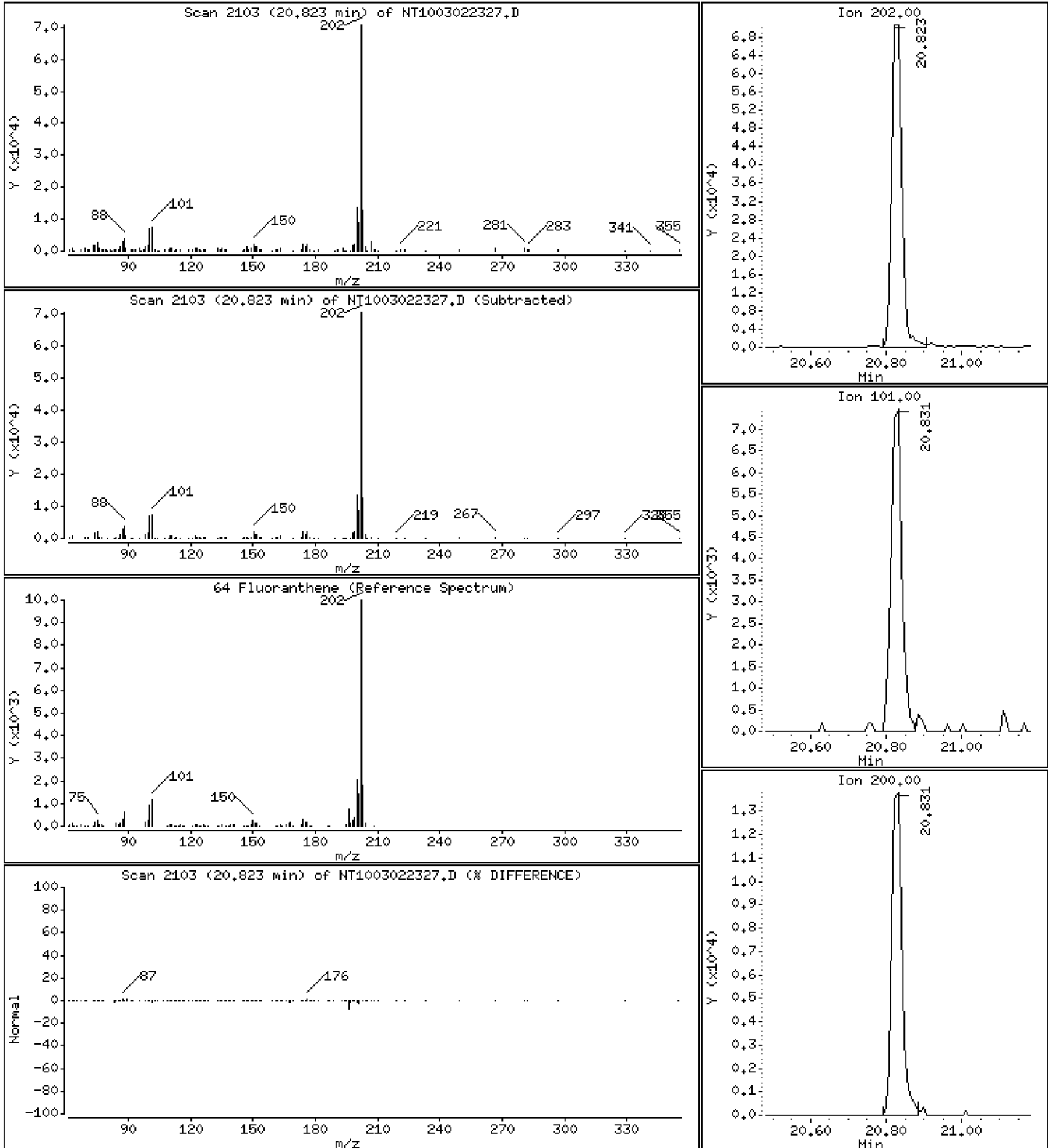
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 0,1680 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

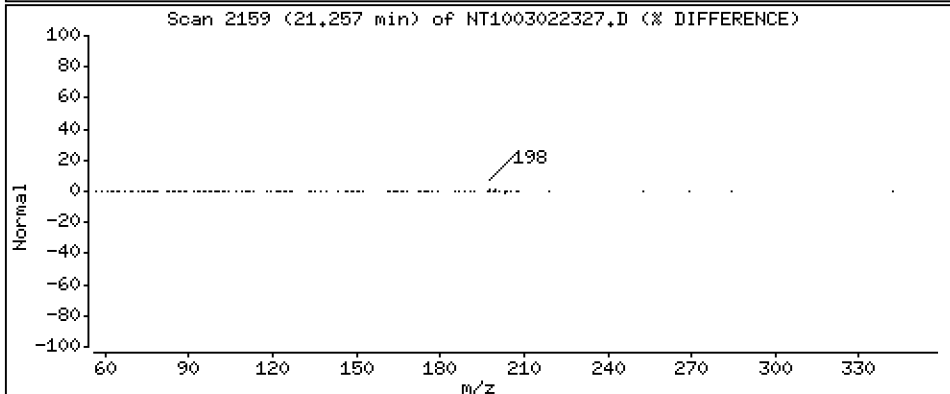
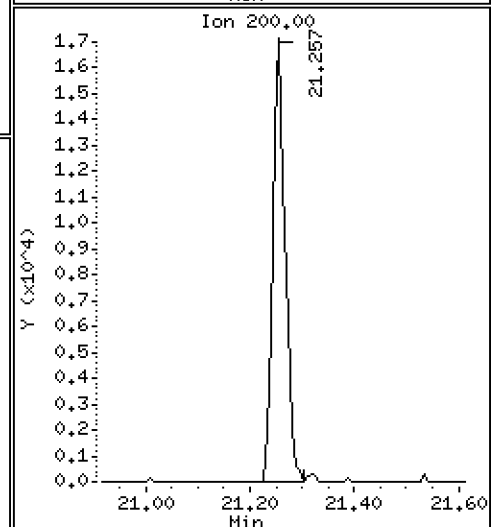
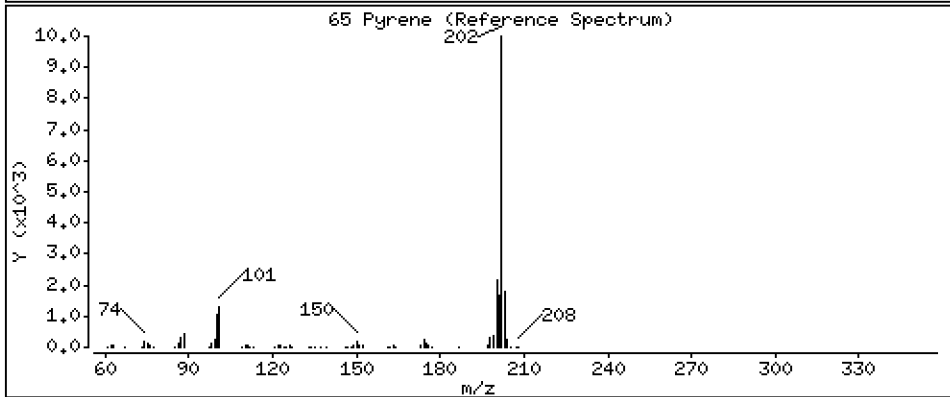
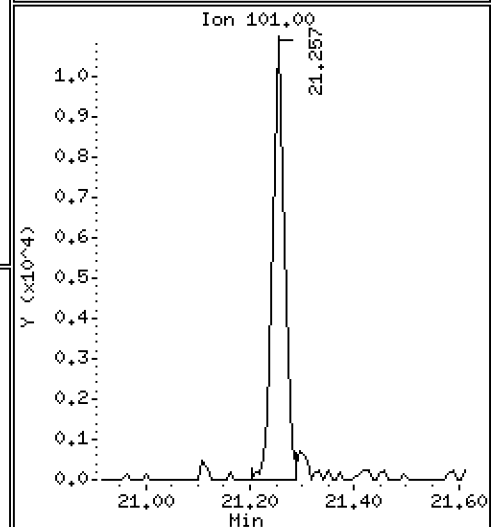
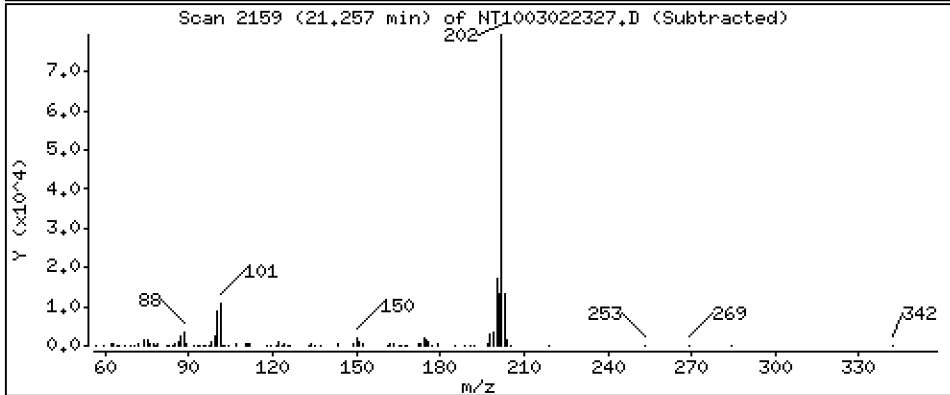
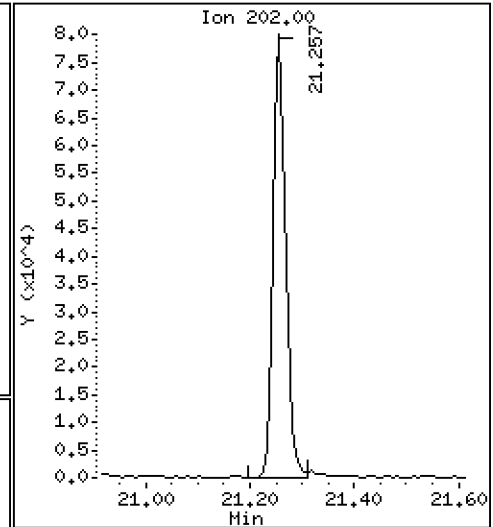
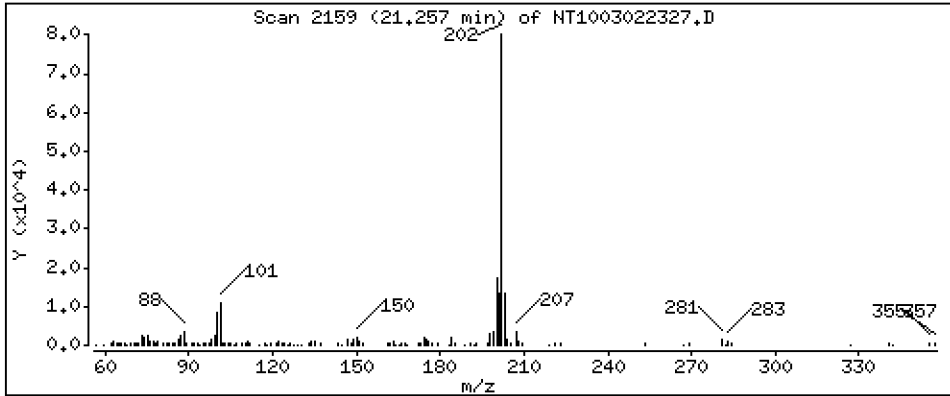
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 0,1736 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

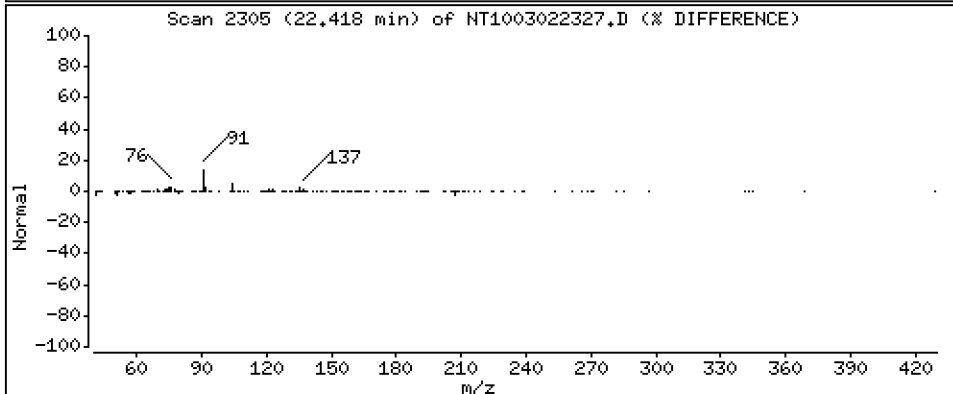
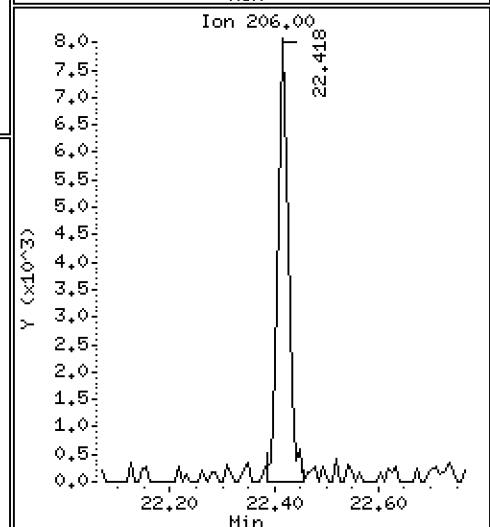
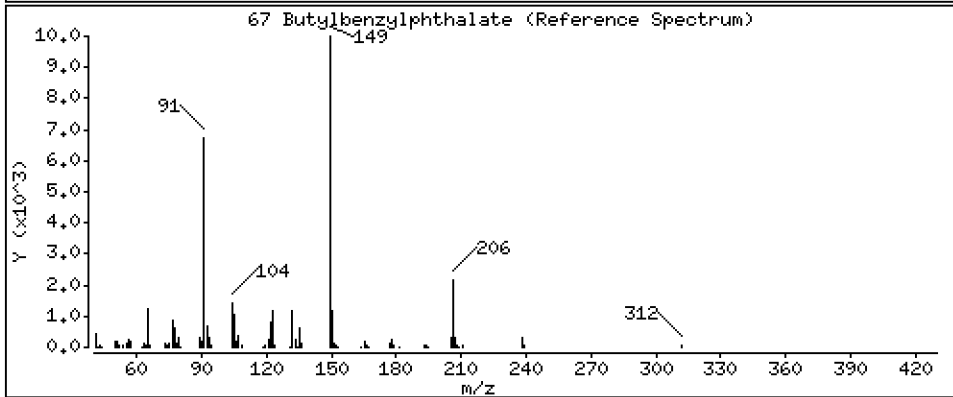
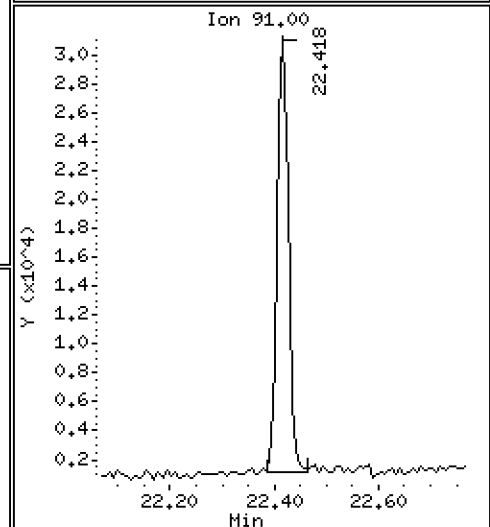
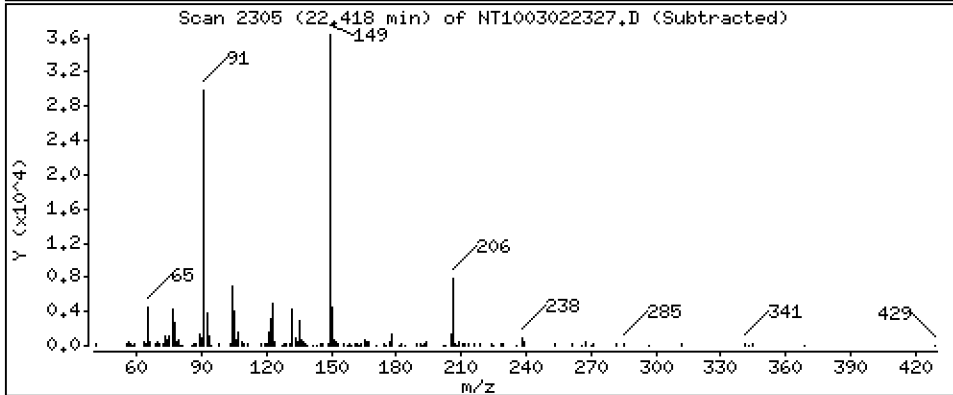
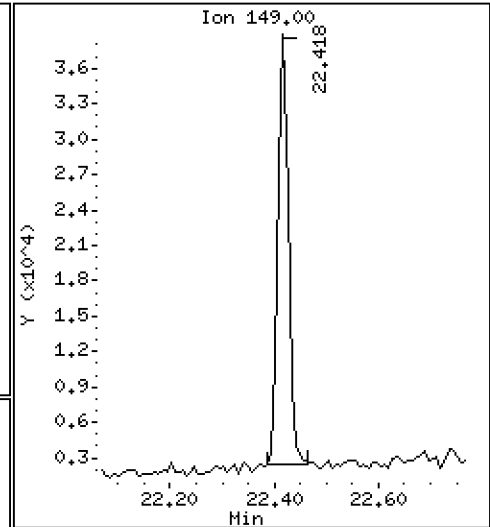
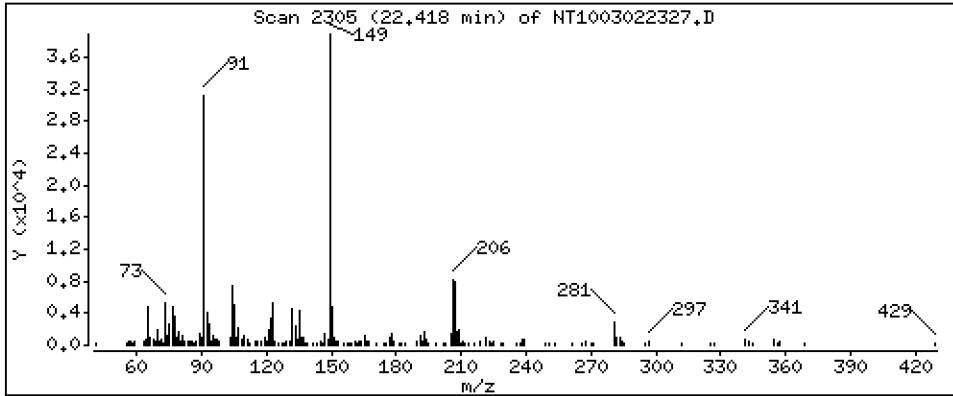
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.1191 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

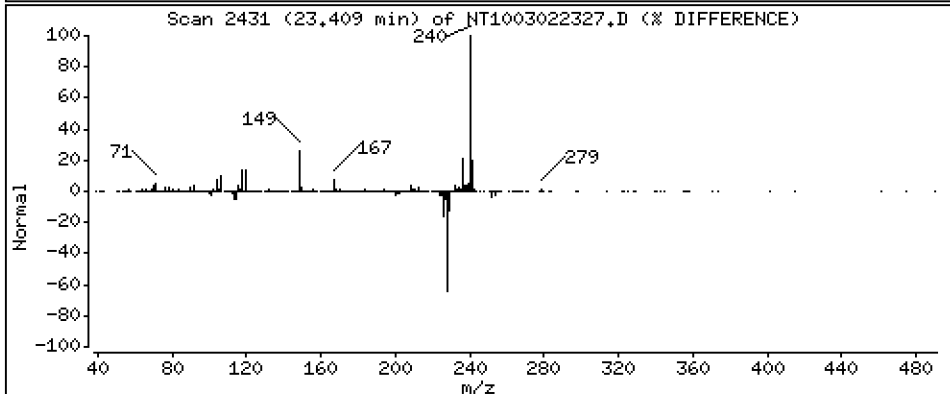
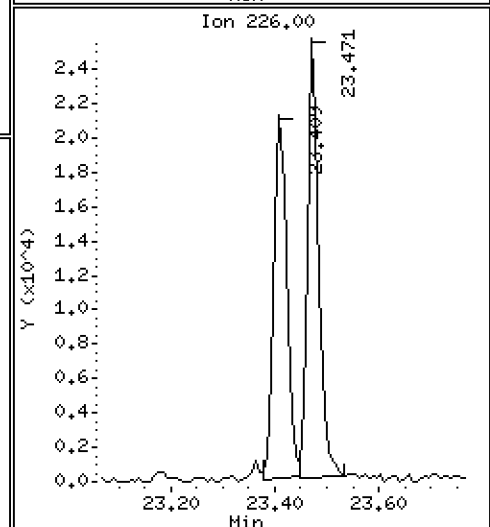
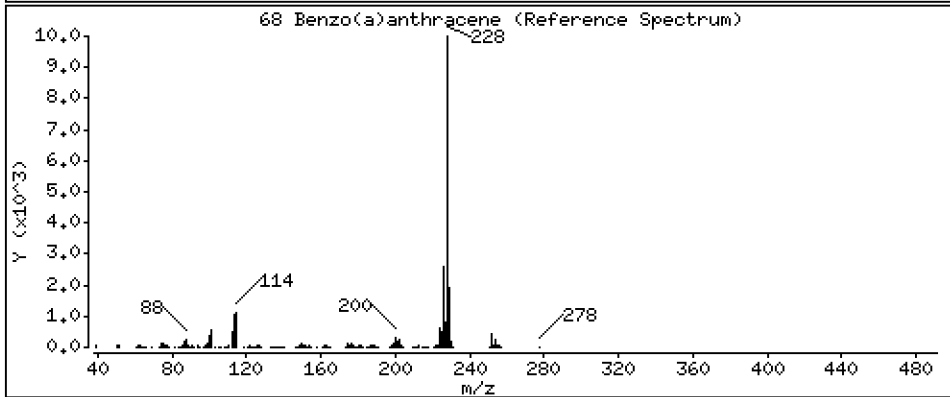
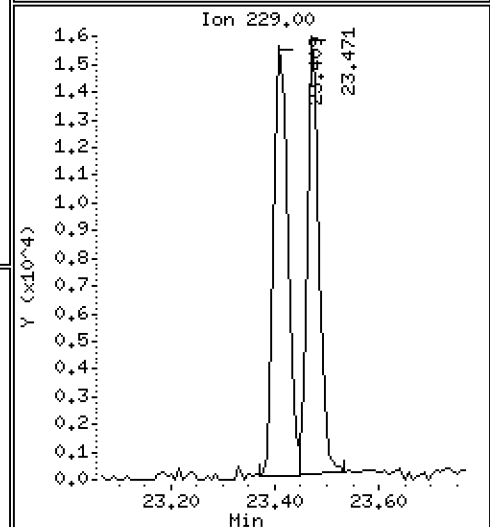
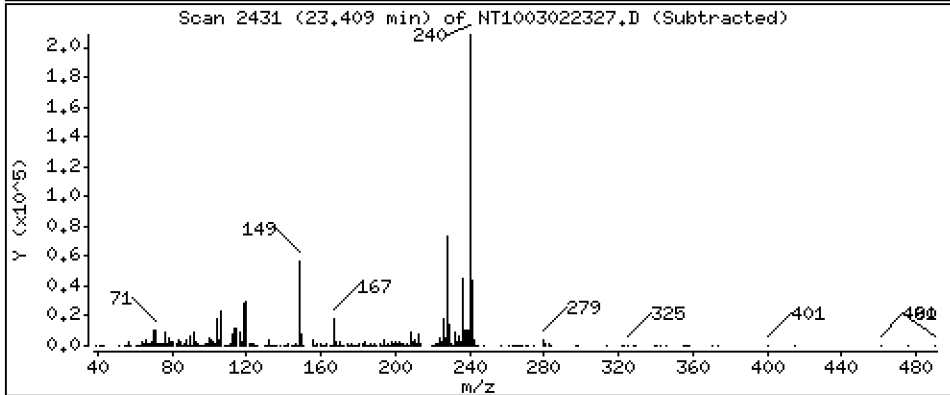
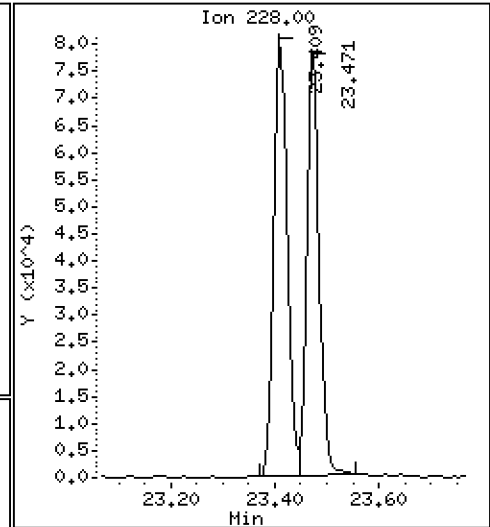
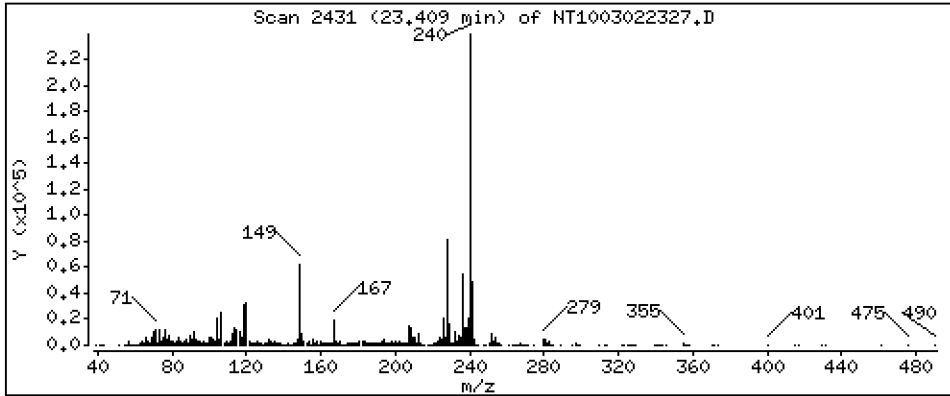
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,1830 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

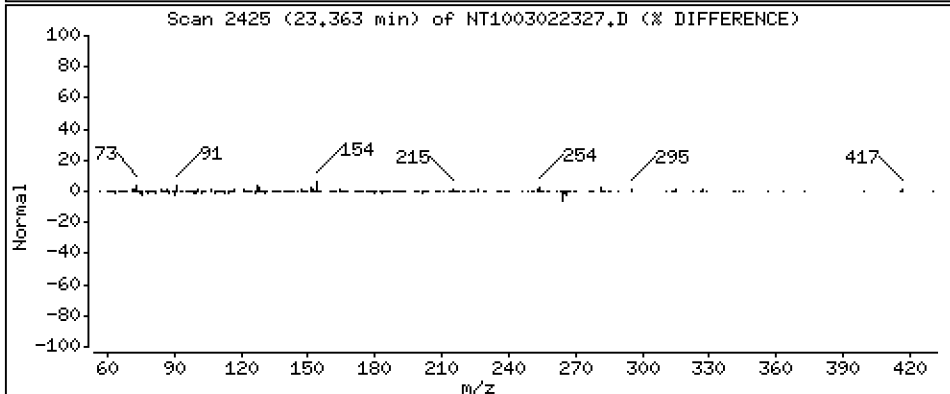
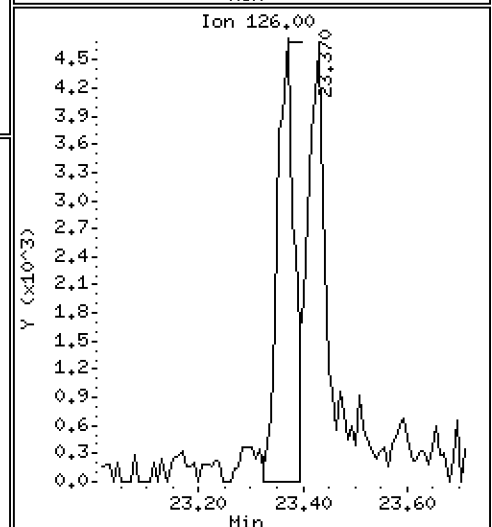
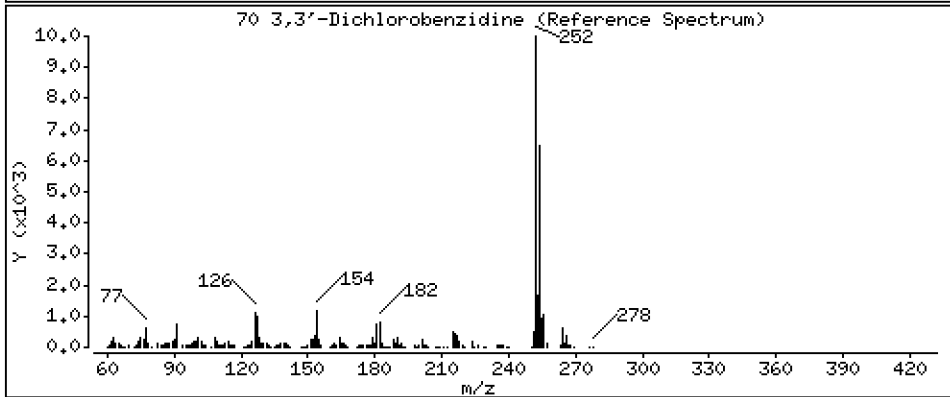
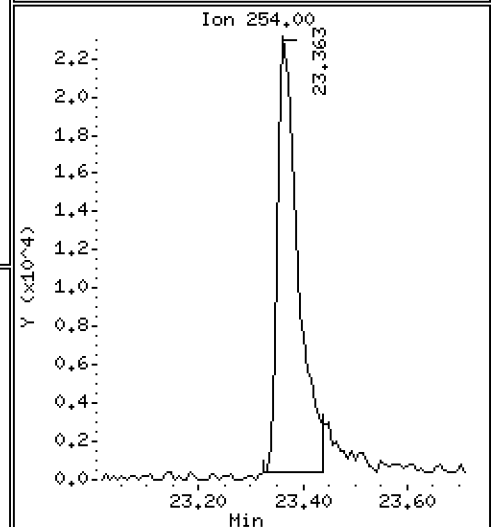
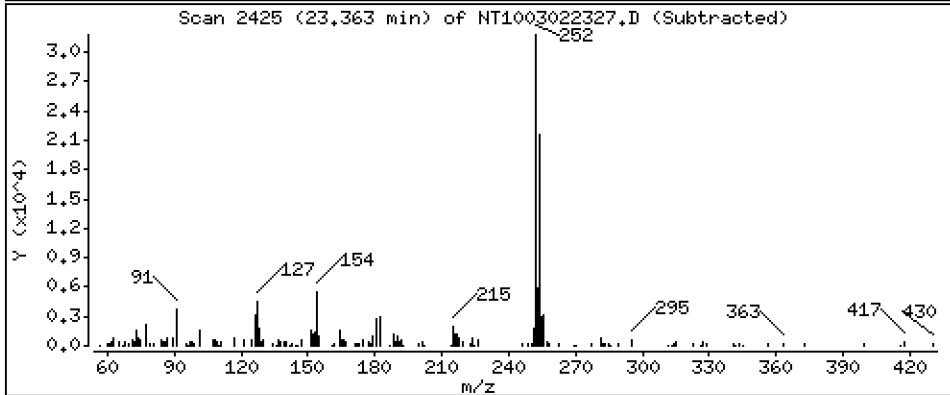
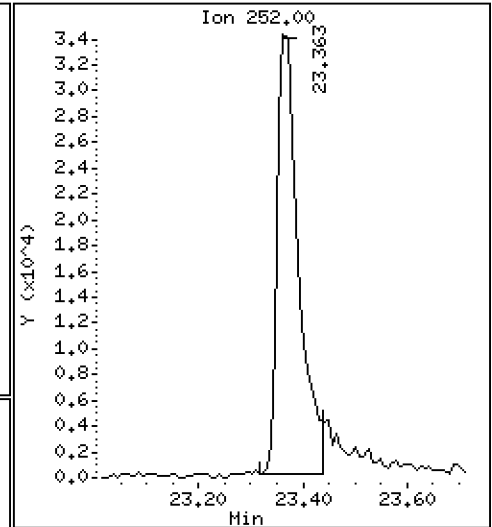
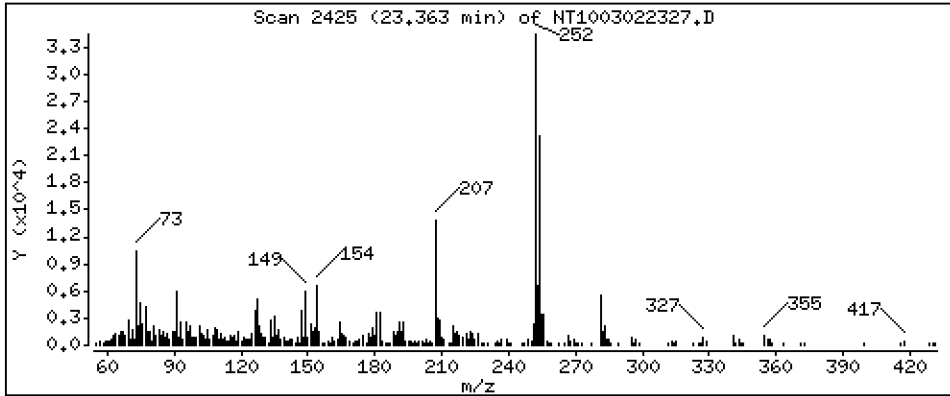
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

70 3,3'-Dichlorobenzidine

Concentration: 0.2858 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

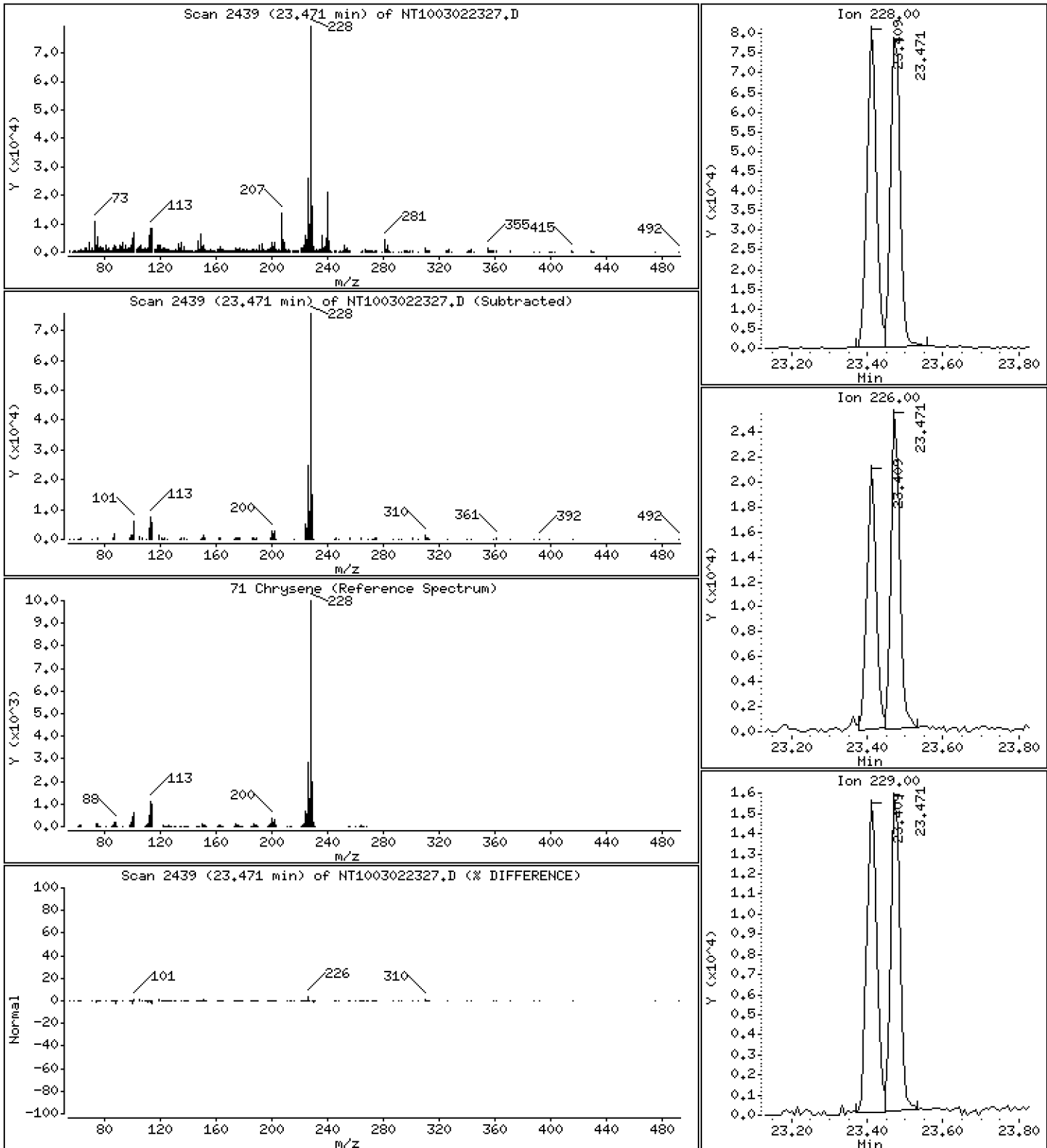
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 0,2100 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

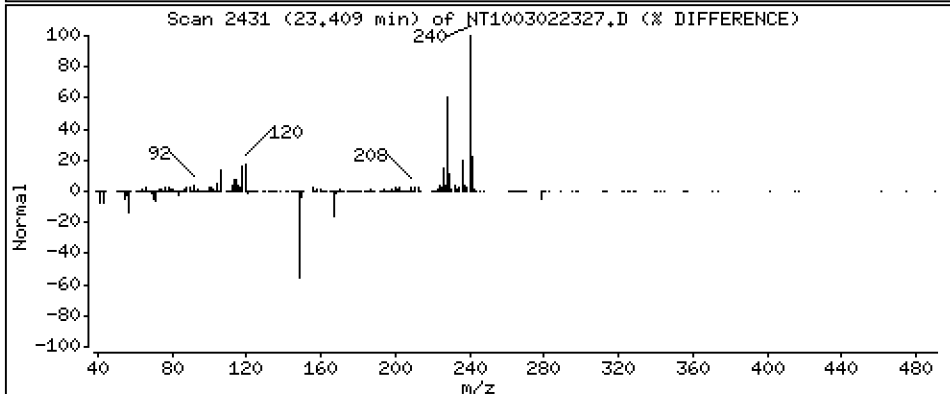
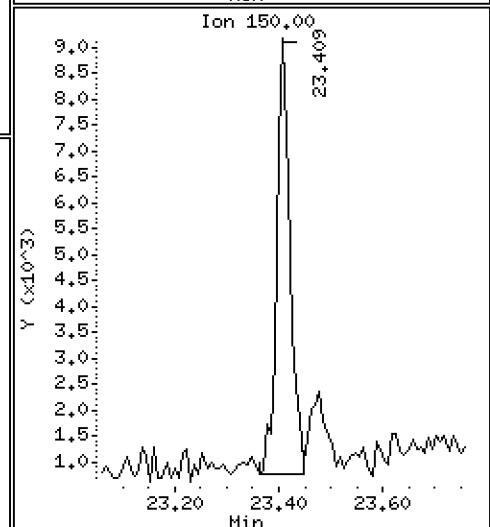
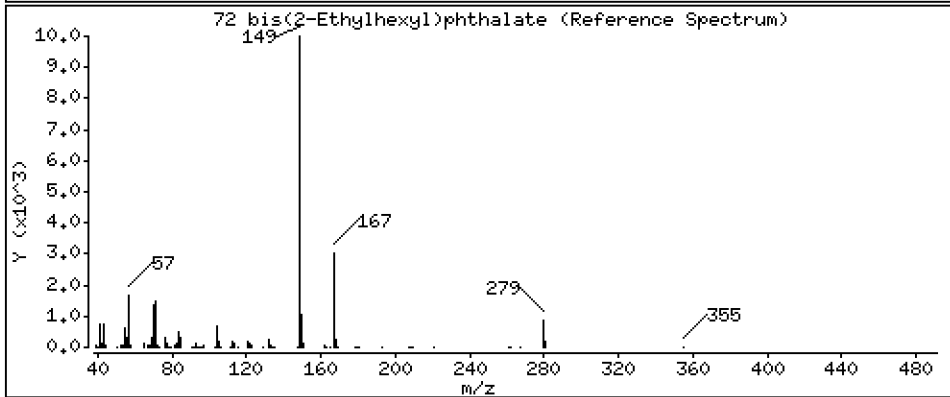
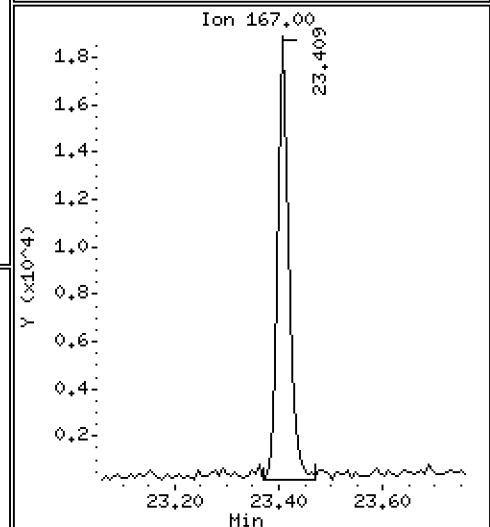
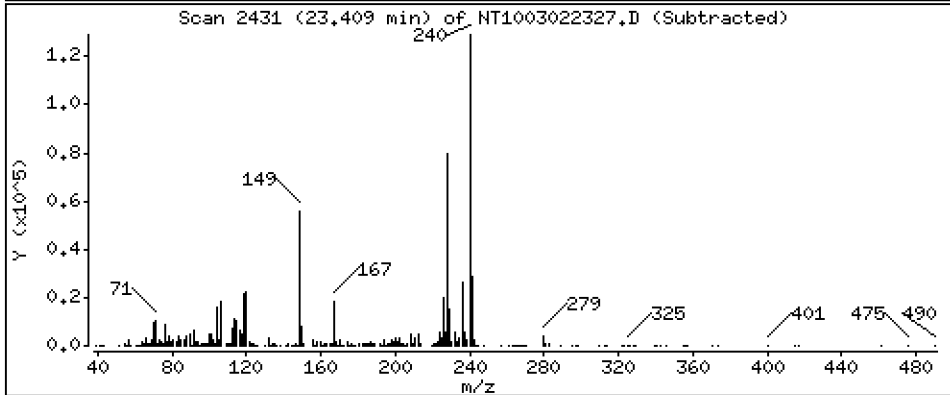
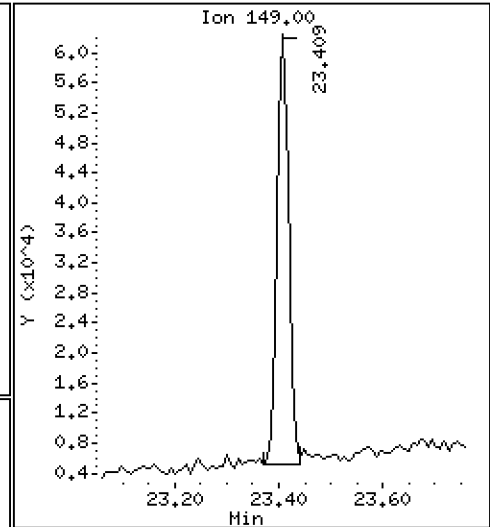
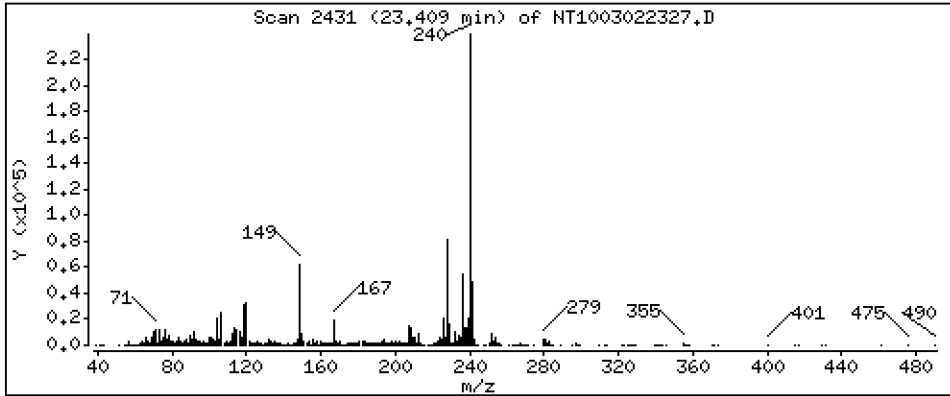
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,1564 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

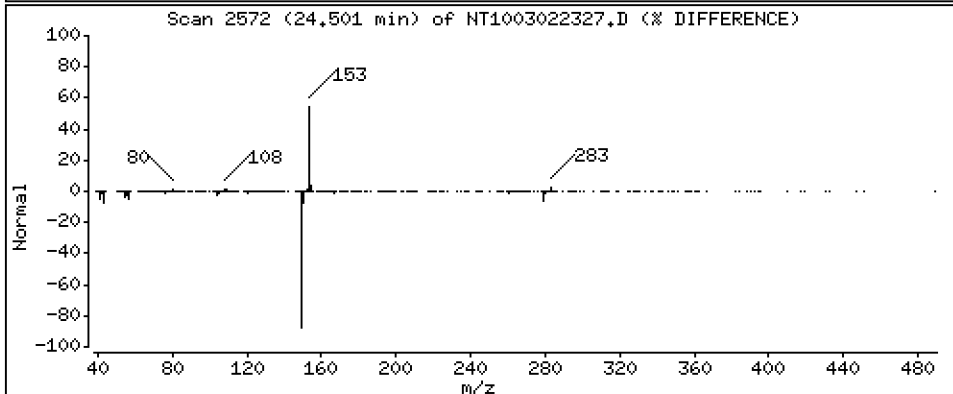
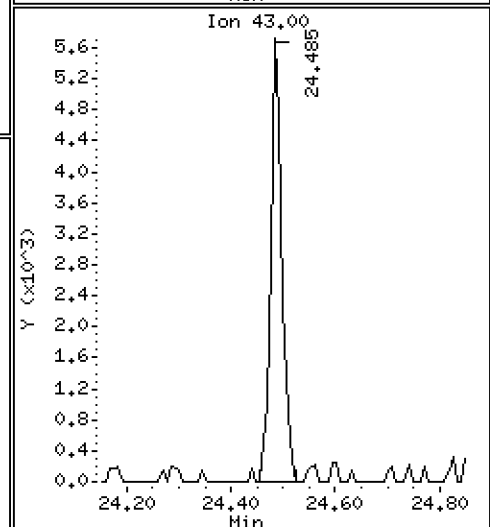
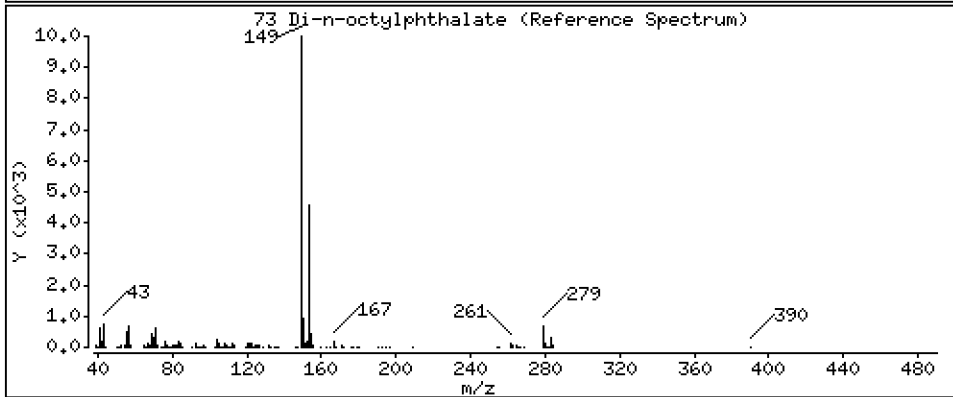
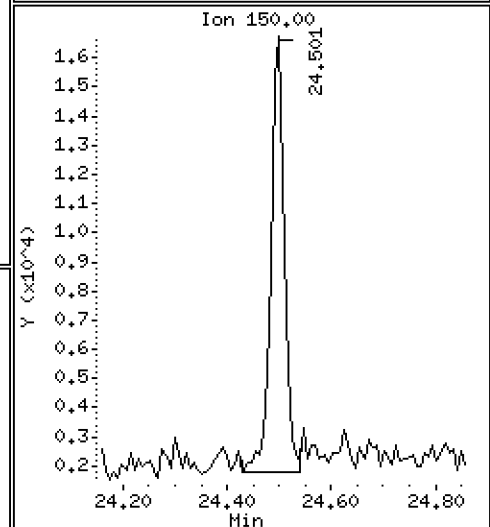
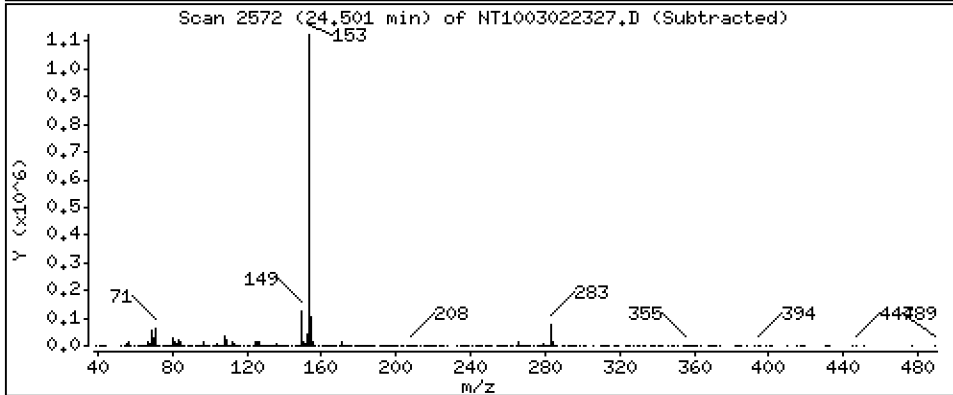
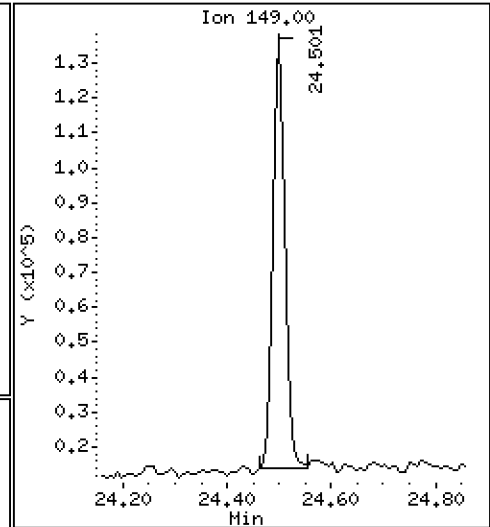
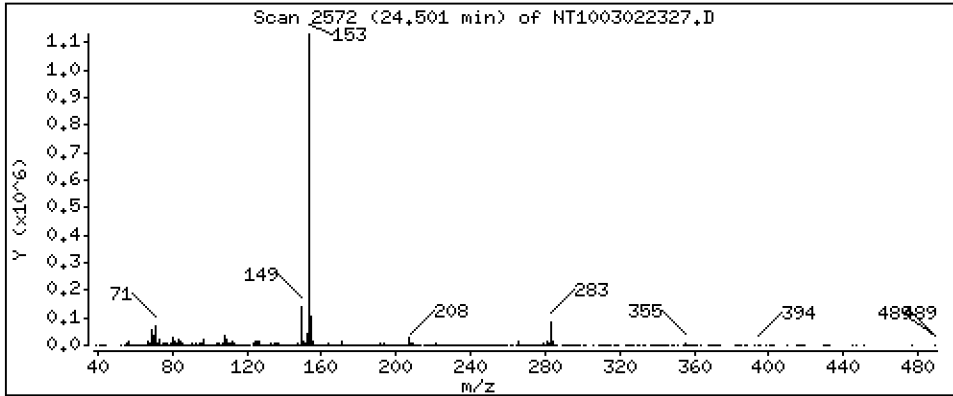
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 0,2173 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

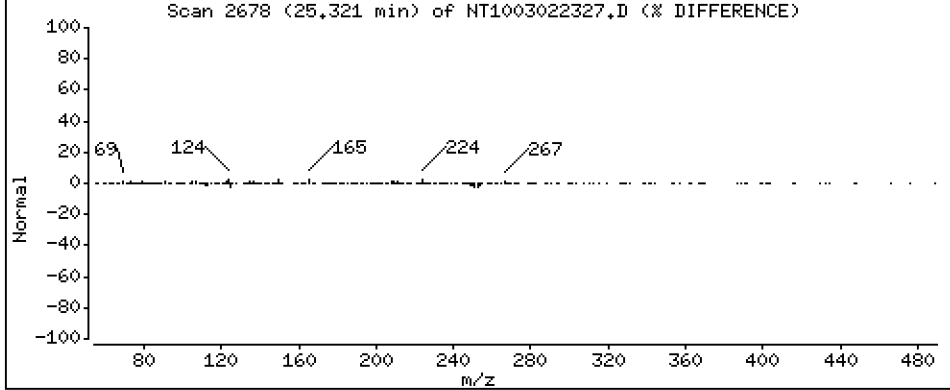
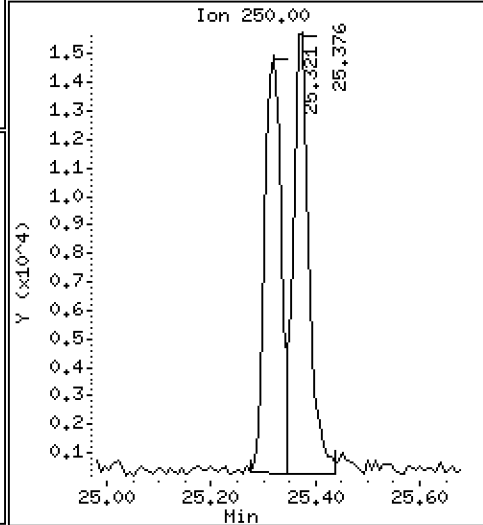
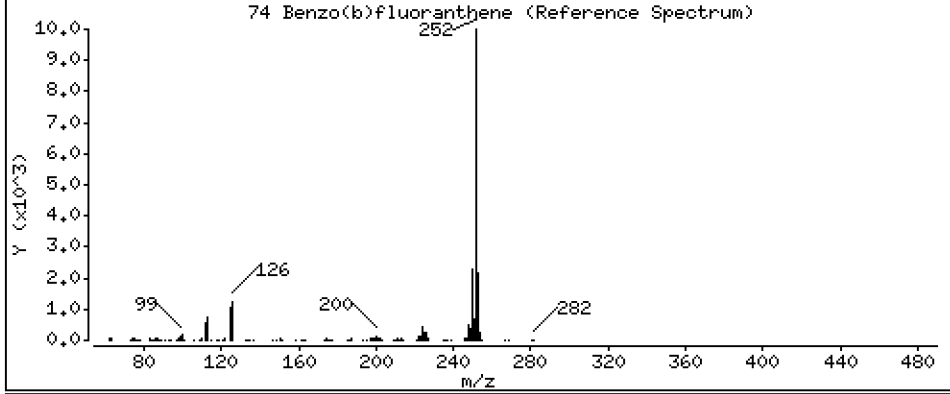
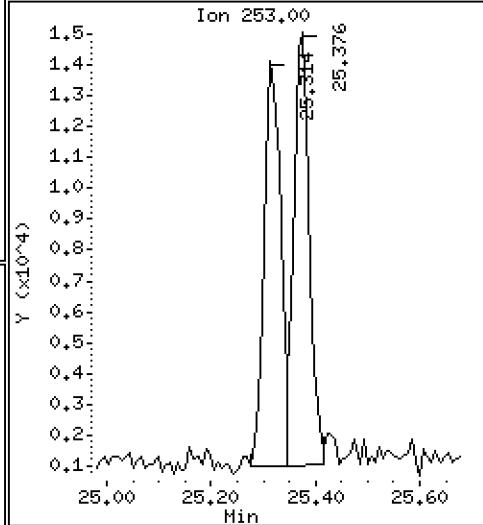
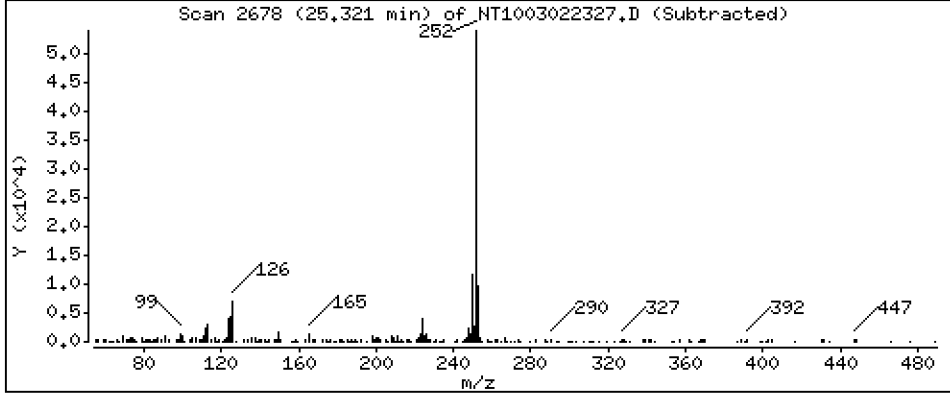
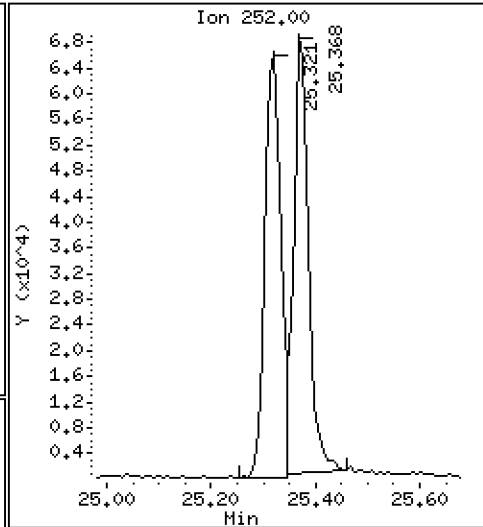
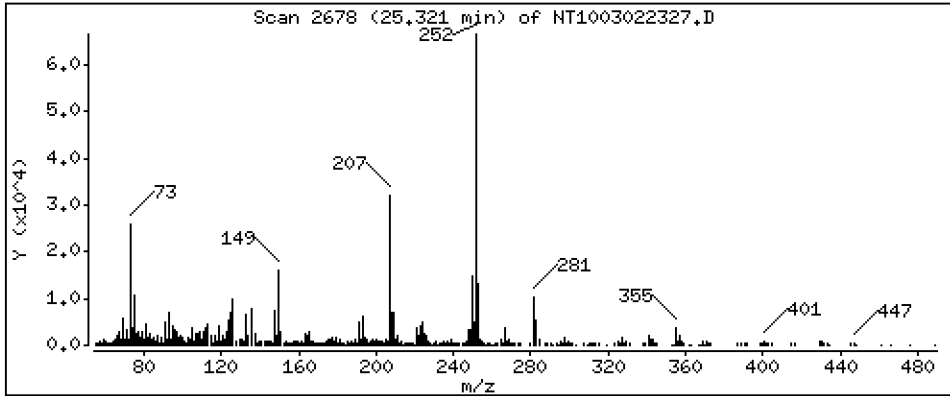
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 0,1674 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

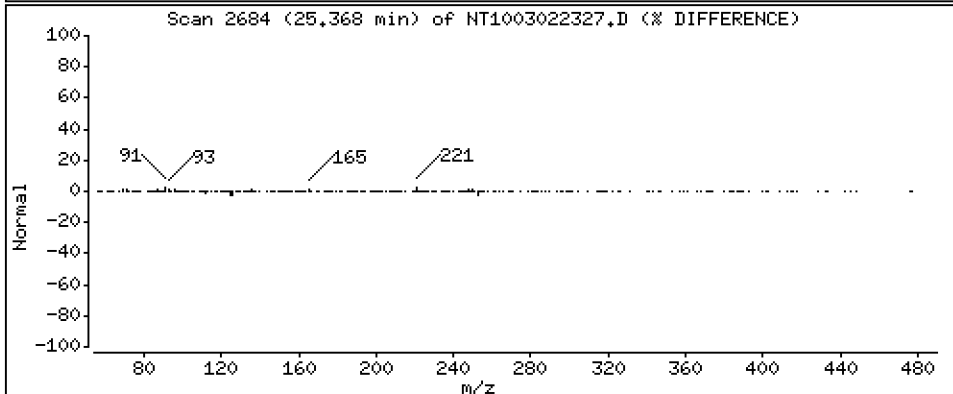
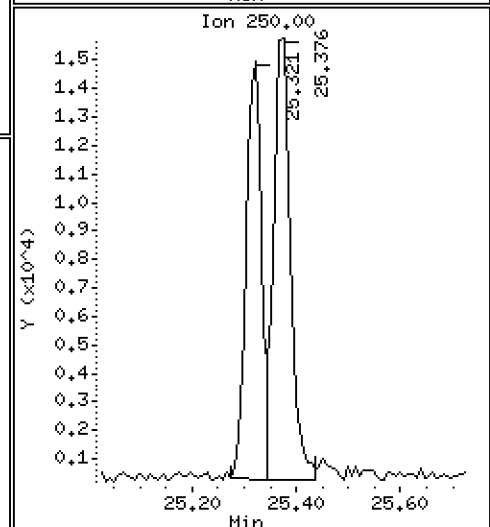
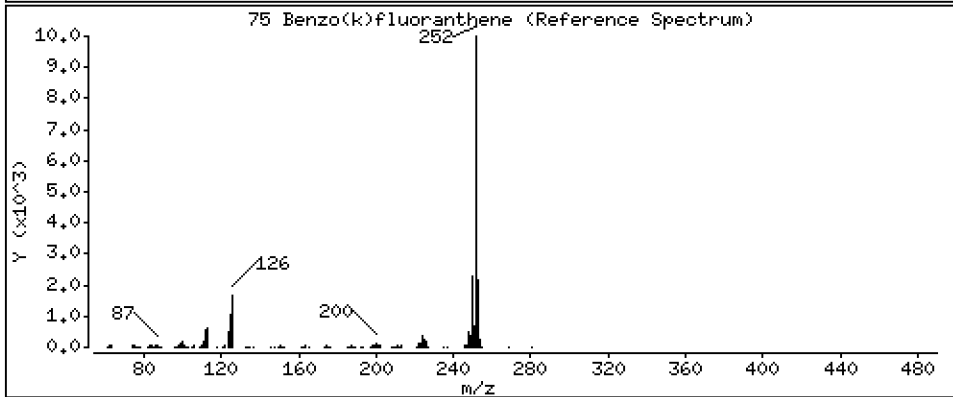
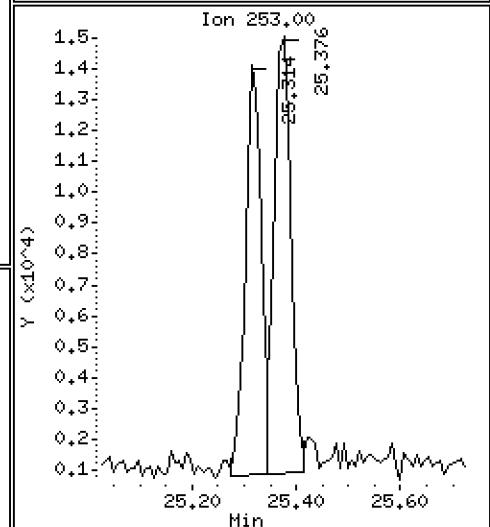
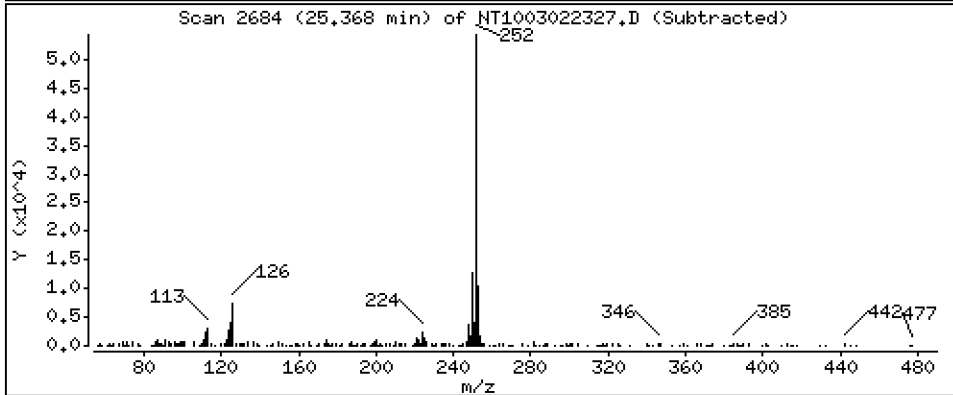
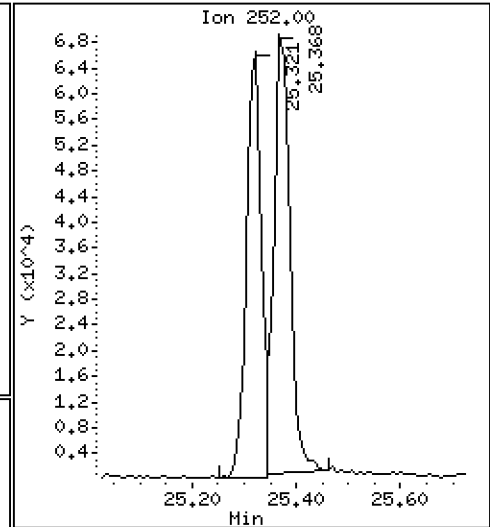
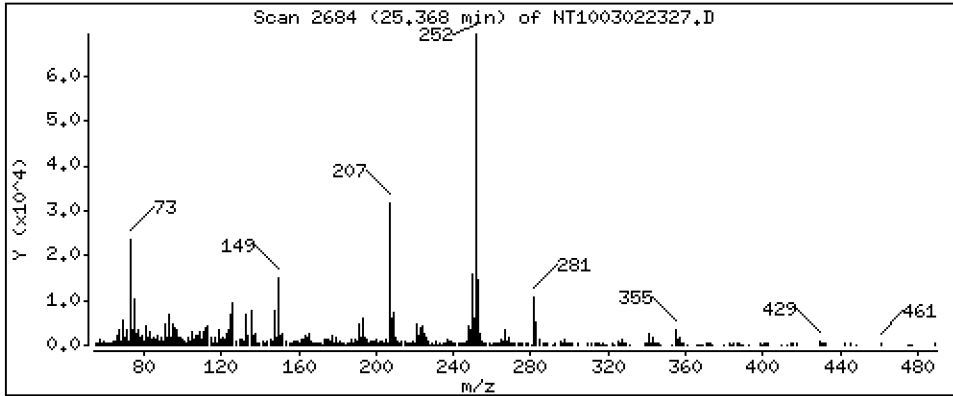
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,1817 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

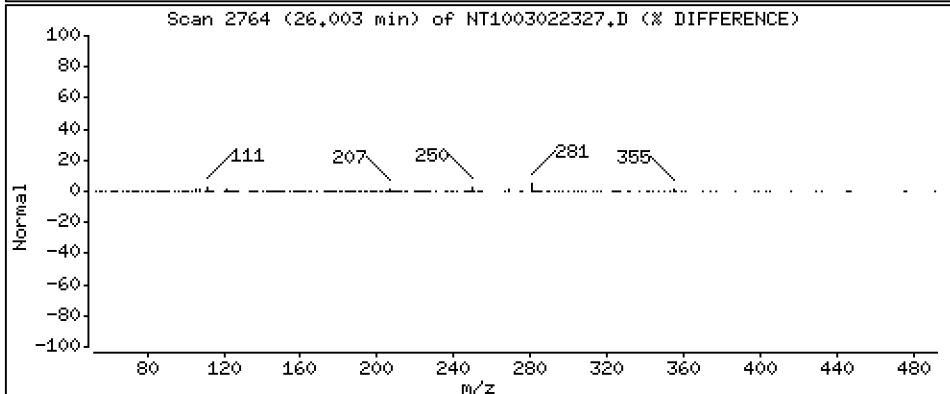
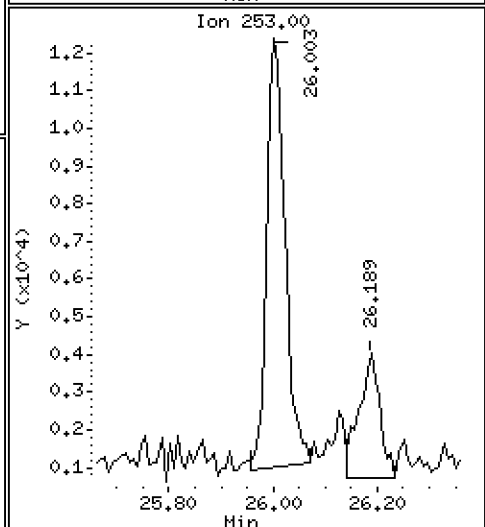
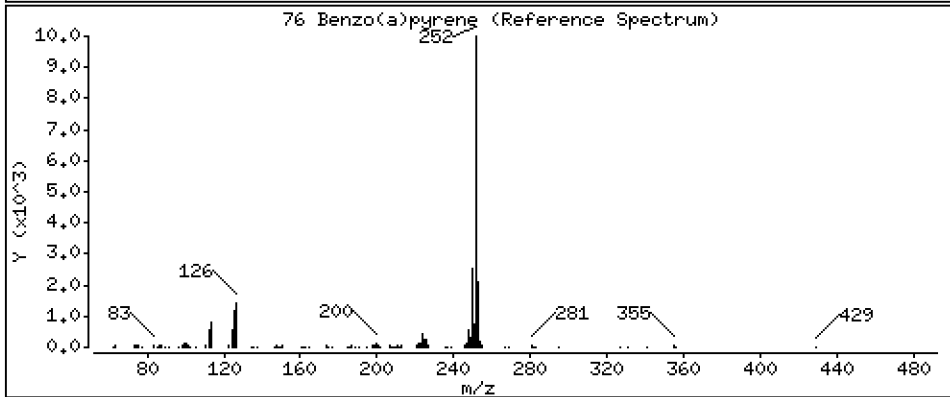
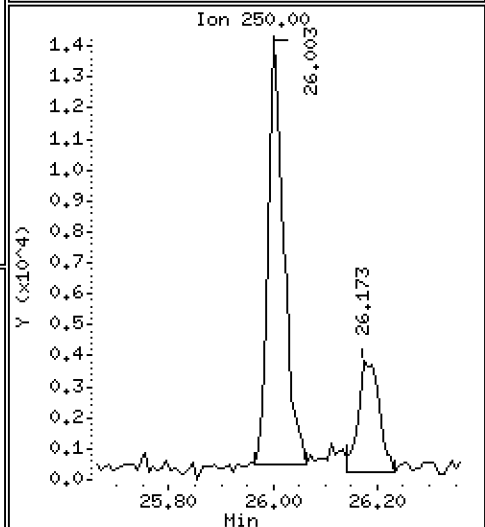
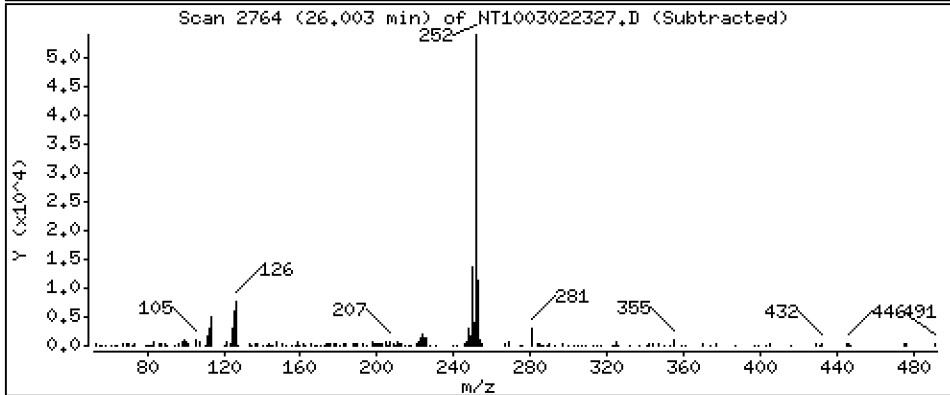
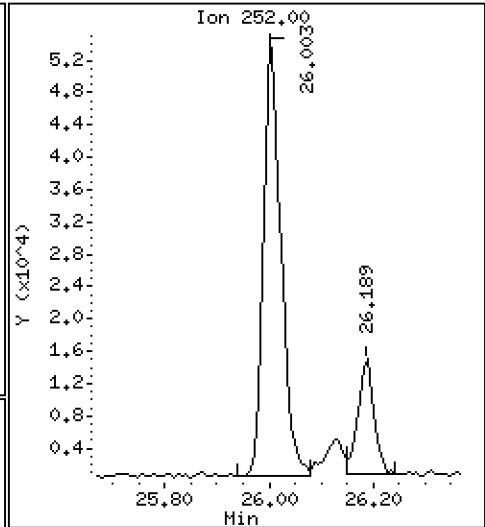
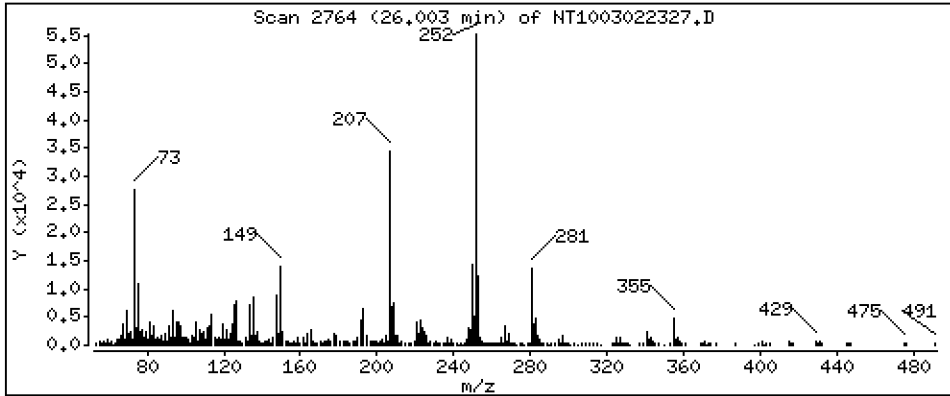
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,1718 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

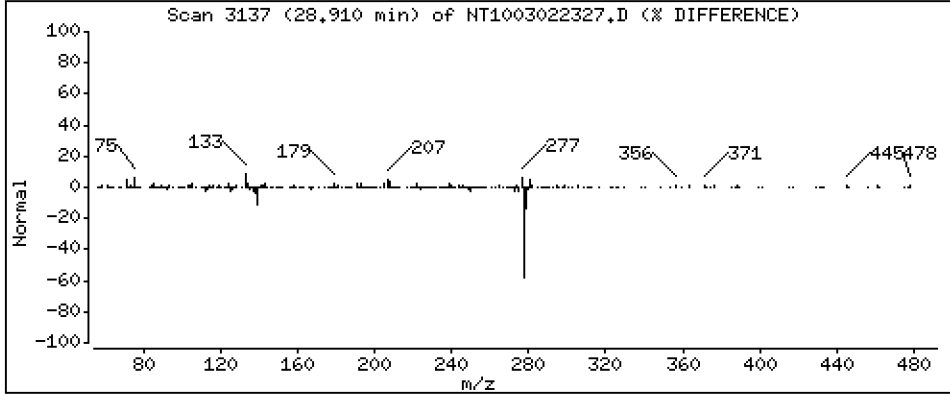
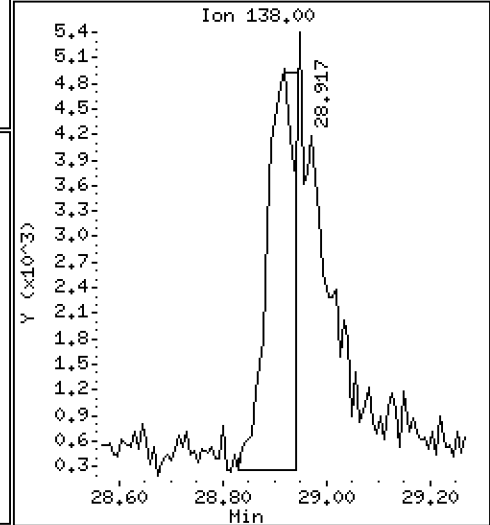
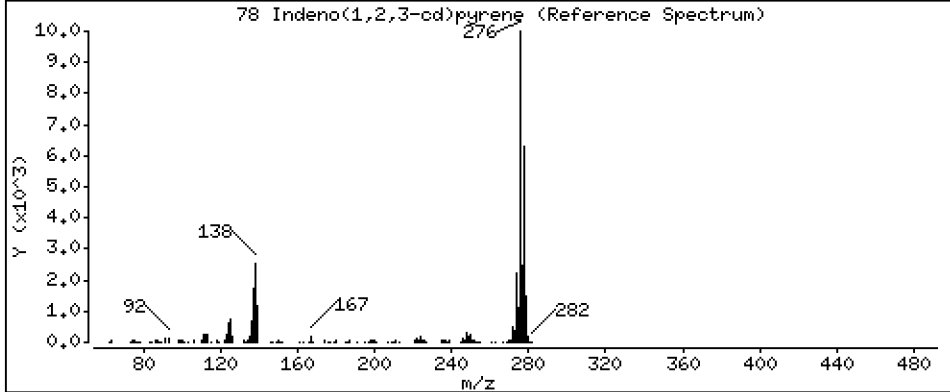
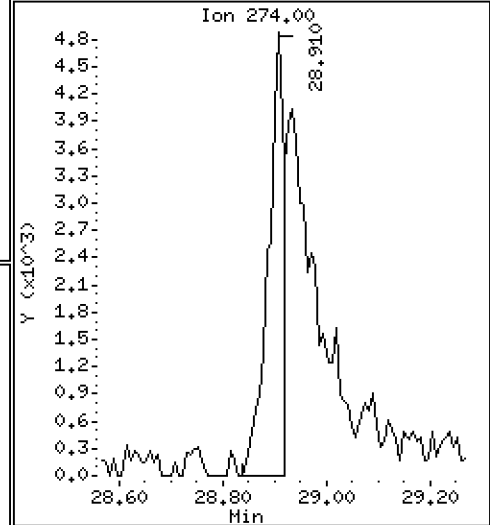
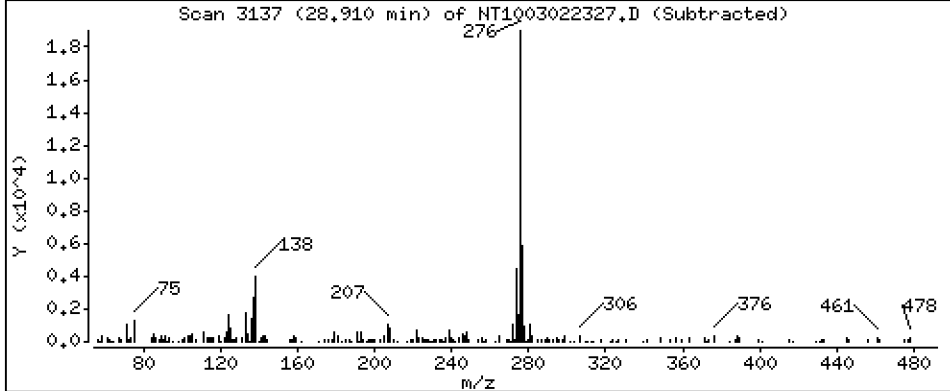
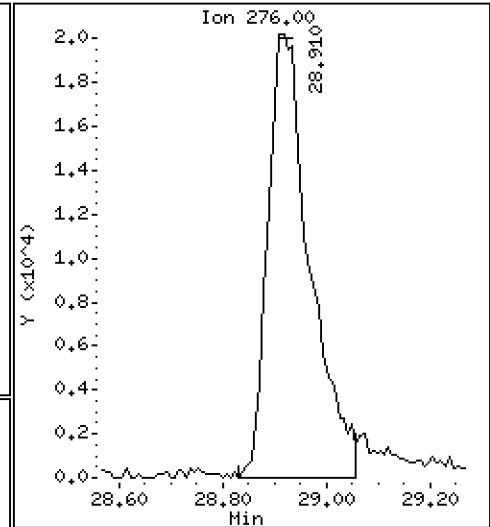
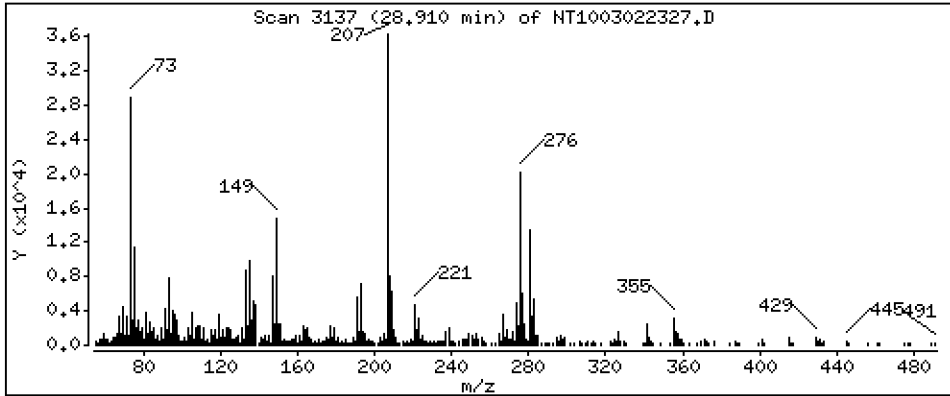
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,1325 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

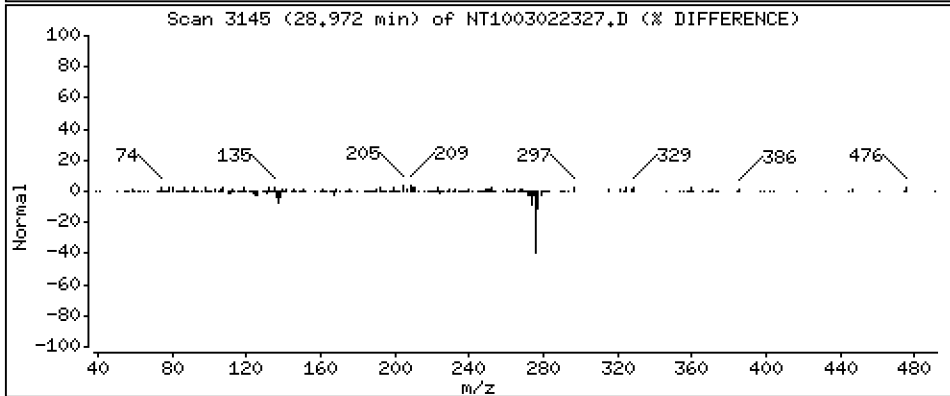
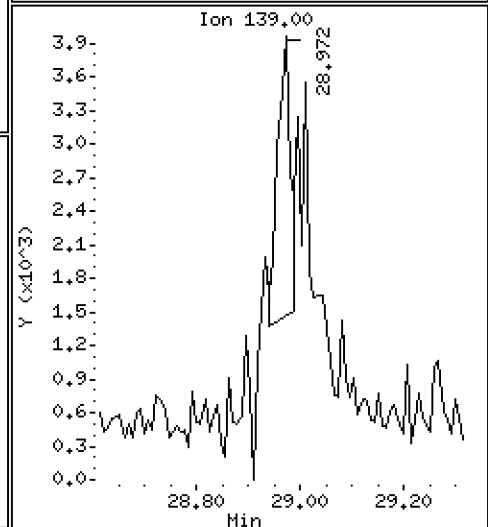
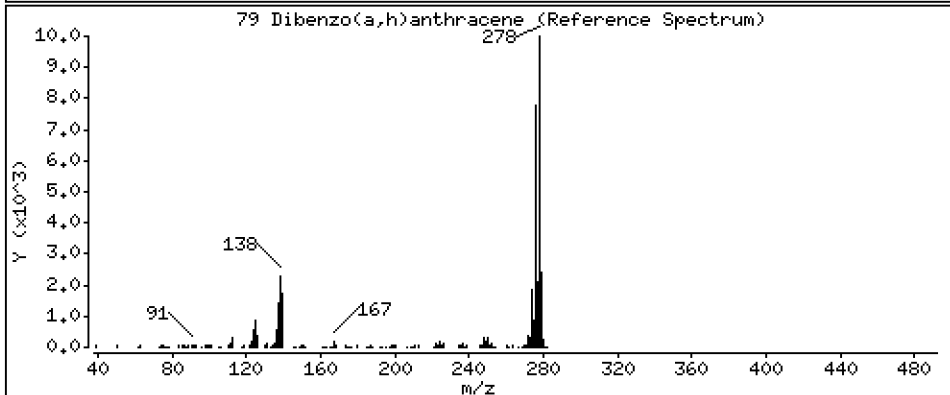
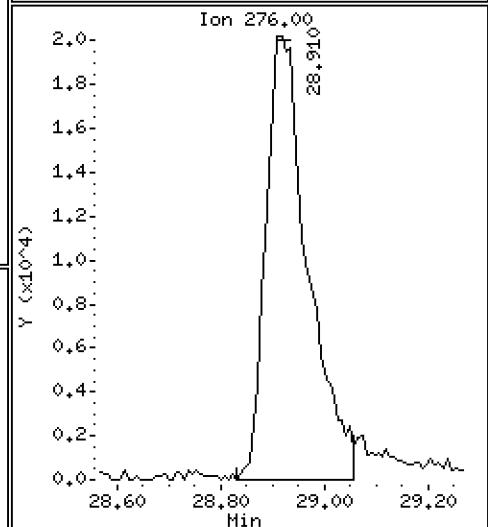
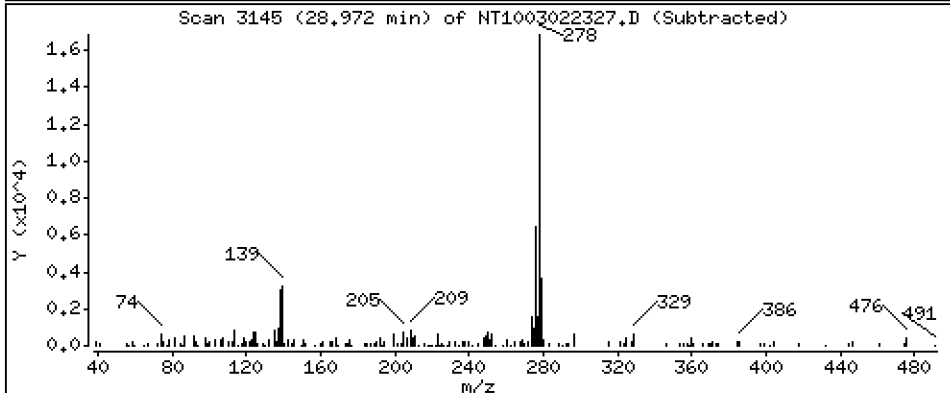
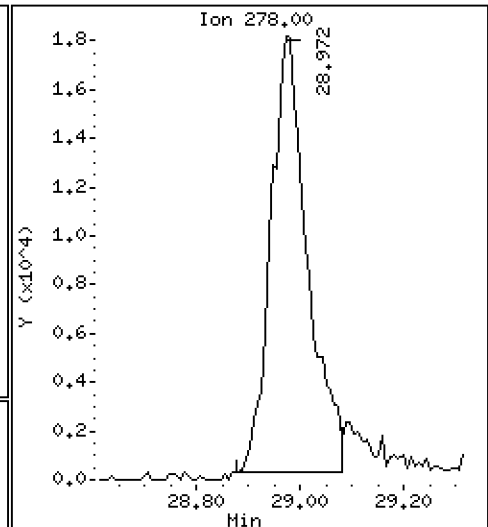
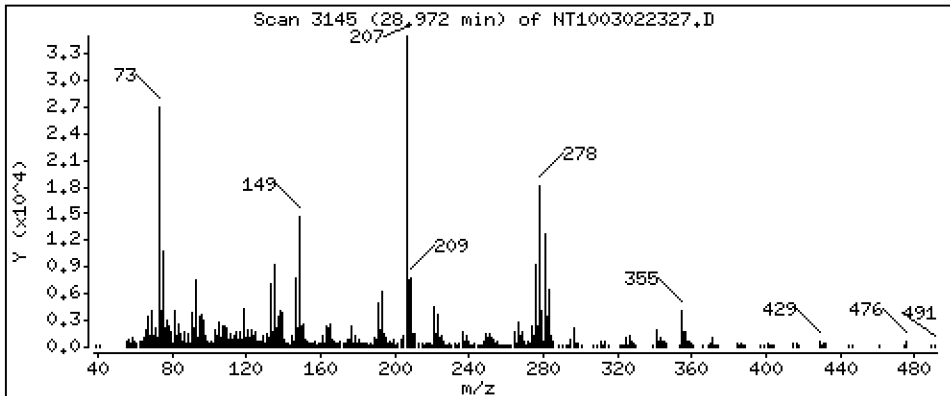
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1349 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

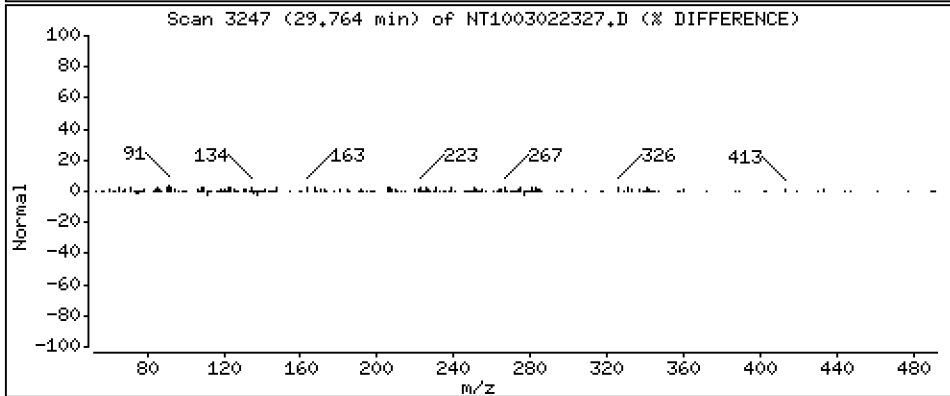
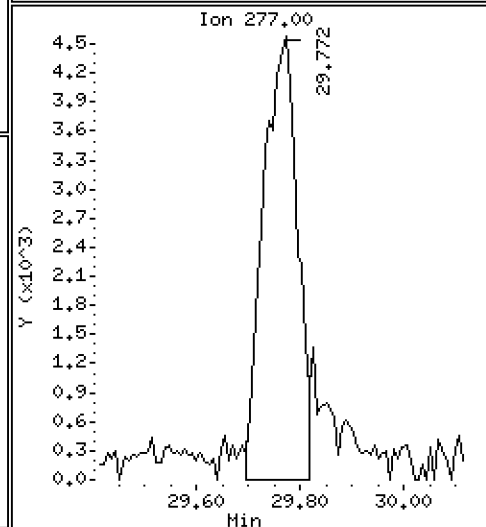
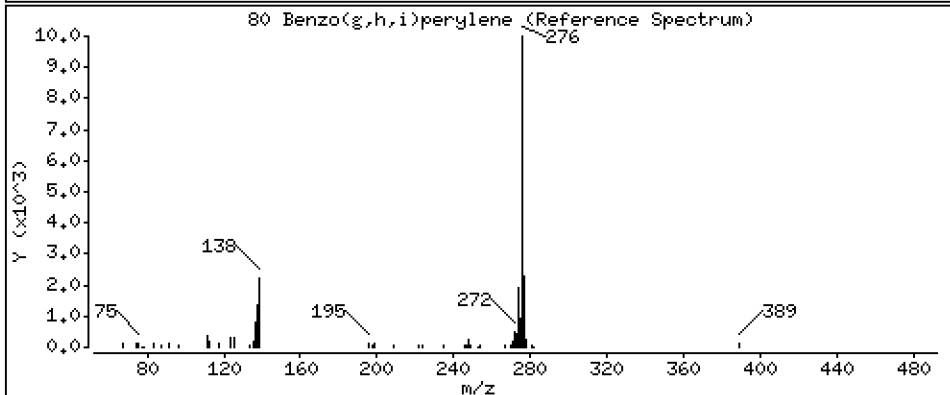
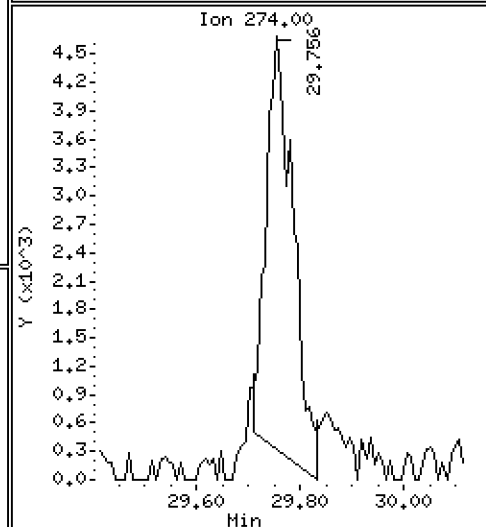
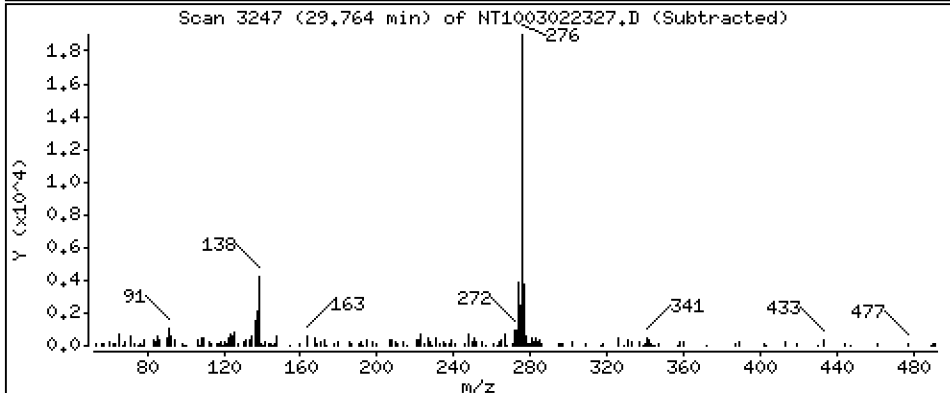
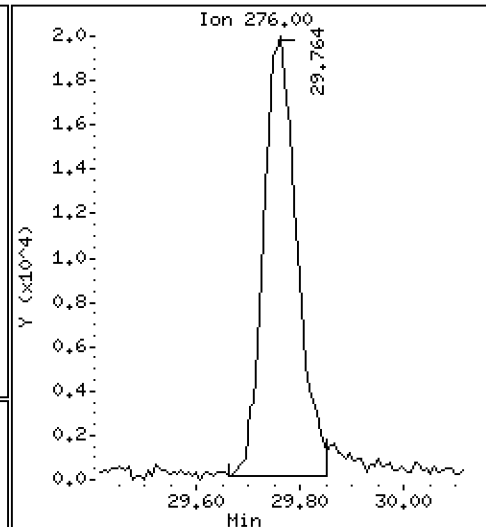
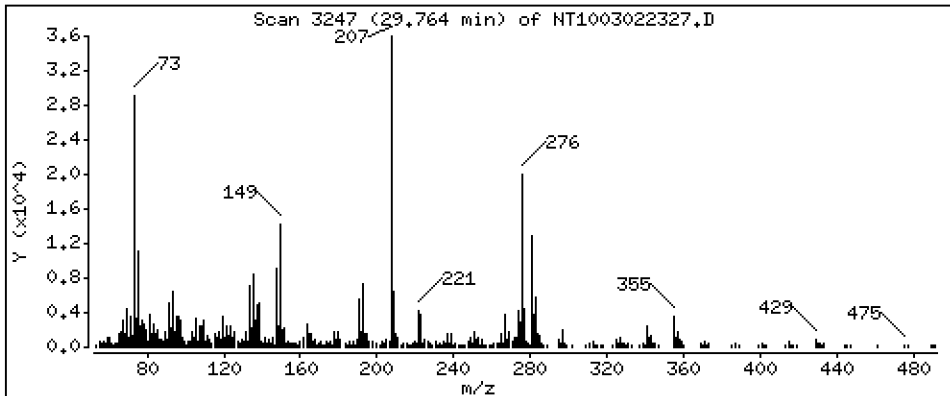
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,1296 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

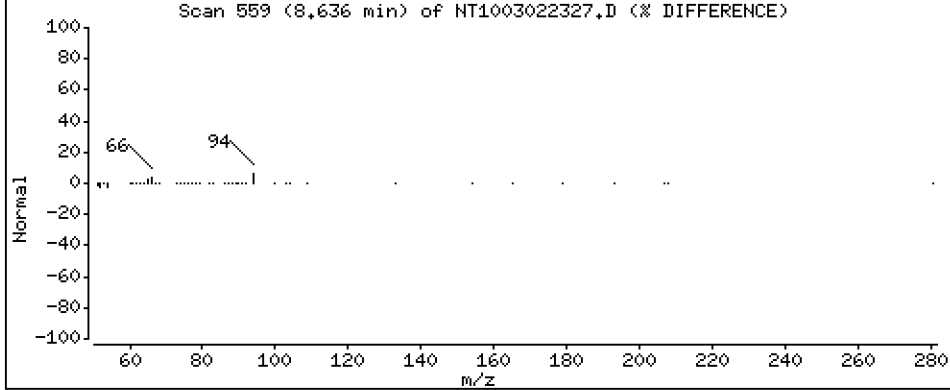
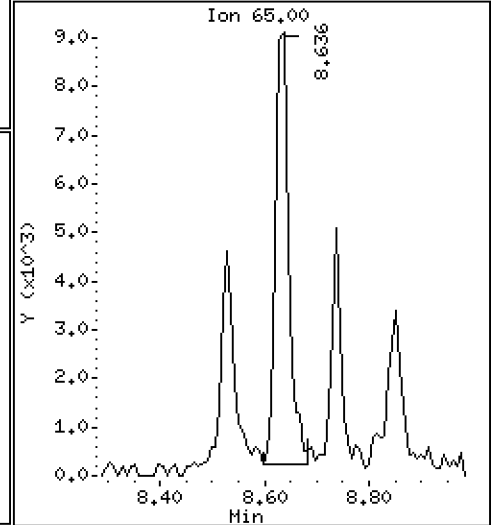
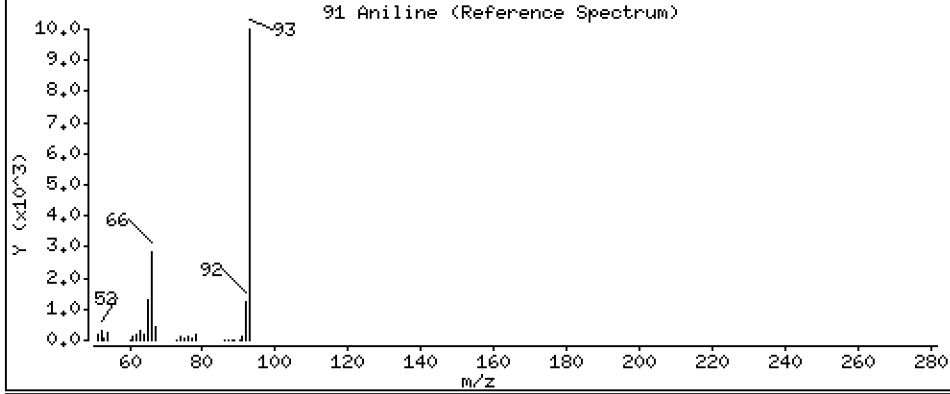
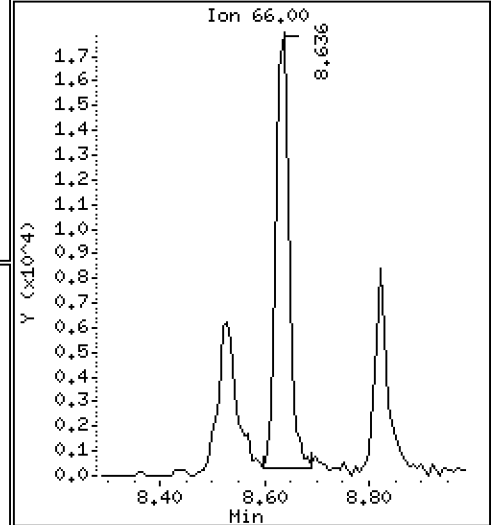
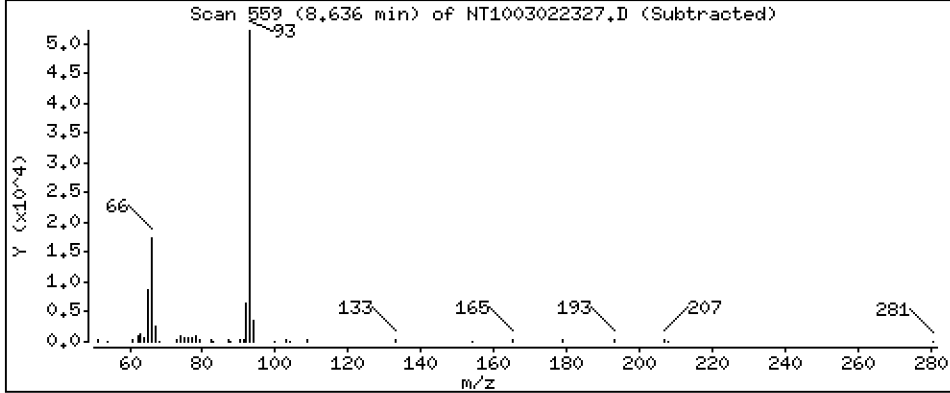
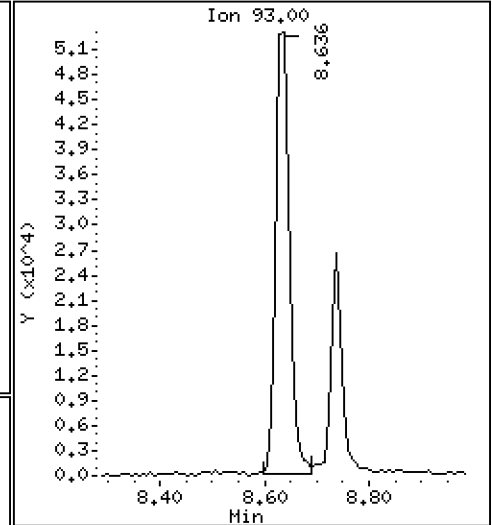
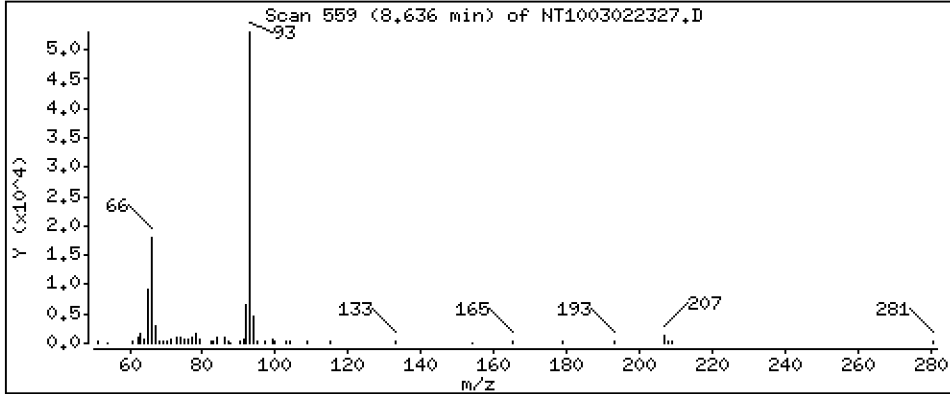
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

91 Aniline

Concentration: 0.3523 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

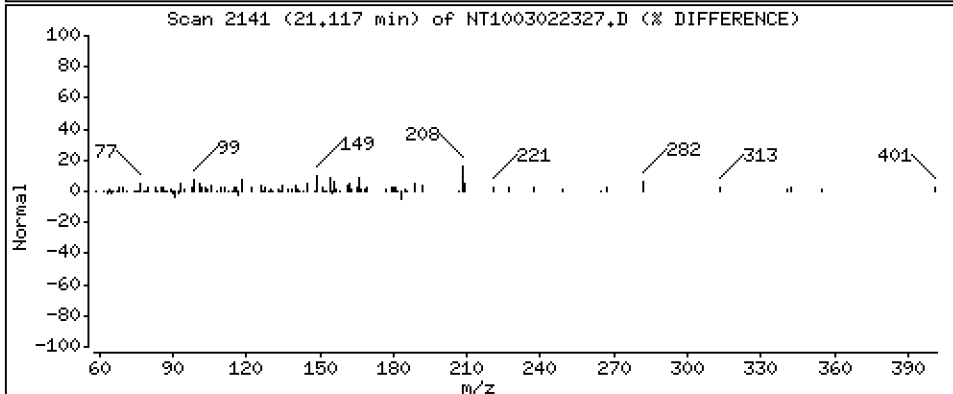
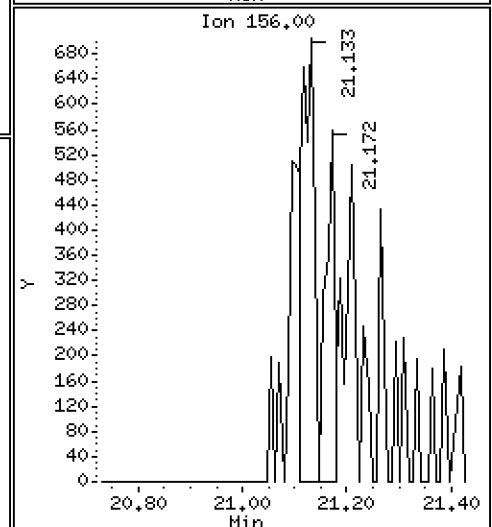
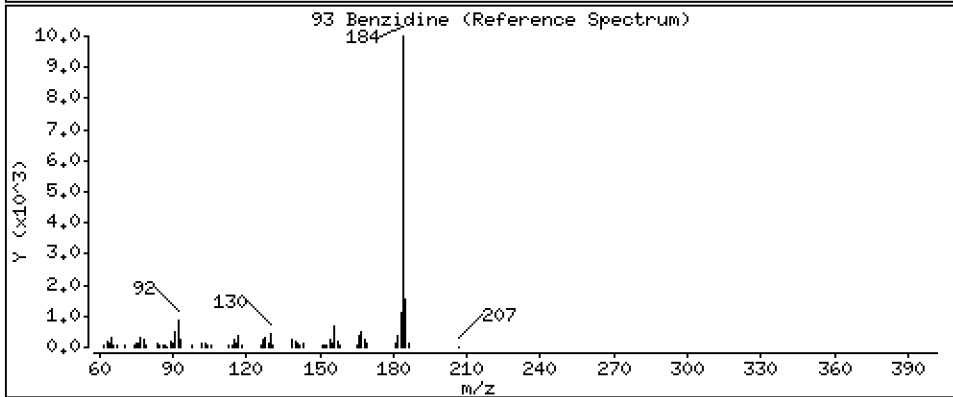
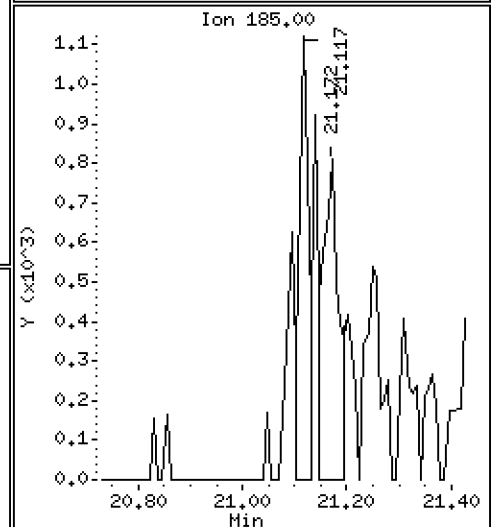
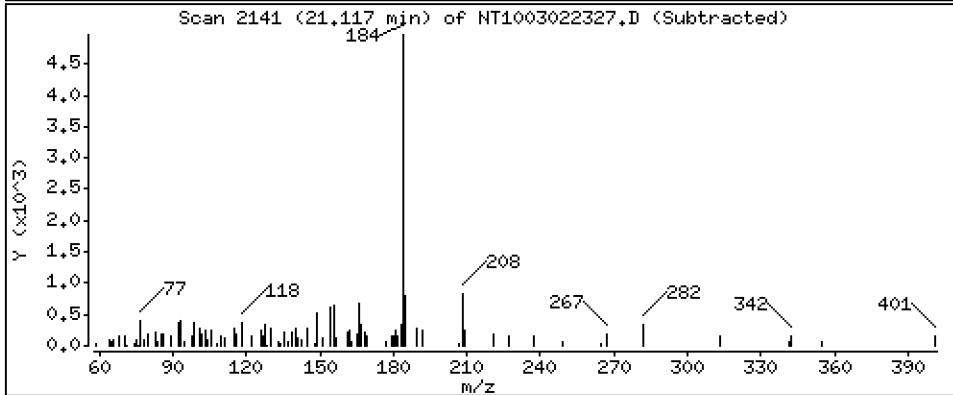
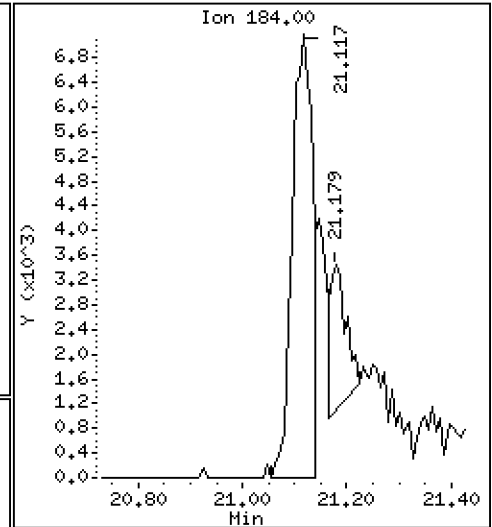
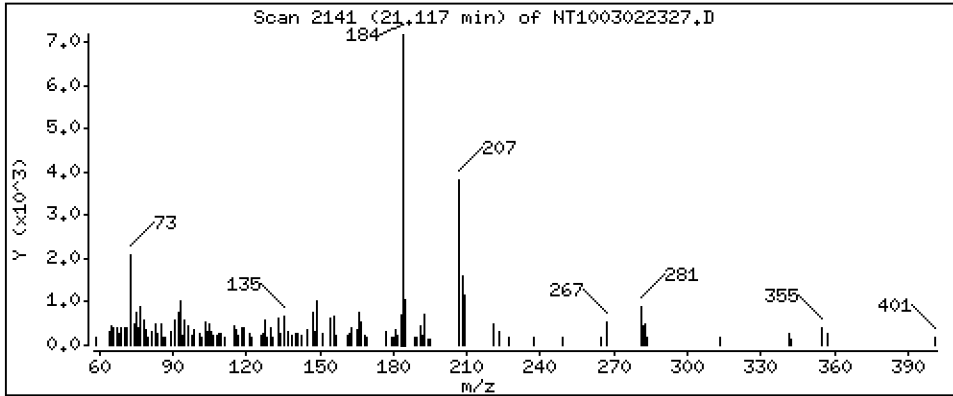
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,06259 ug/mL

93 Benzidine



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

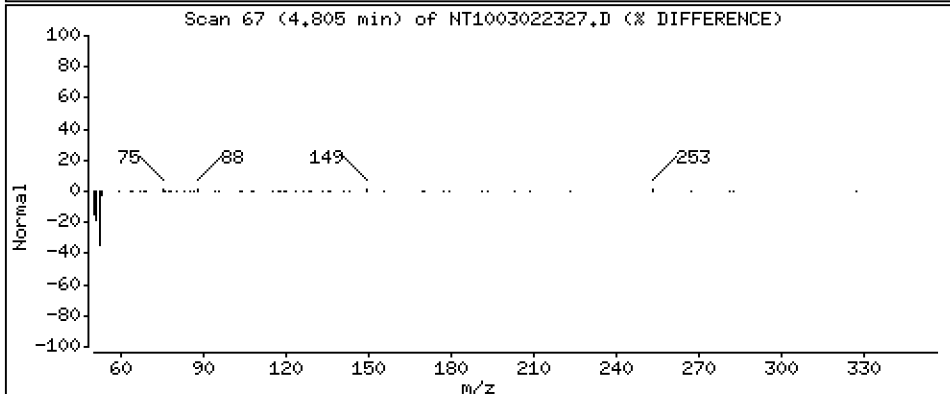
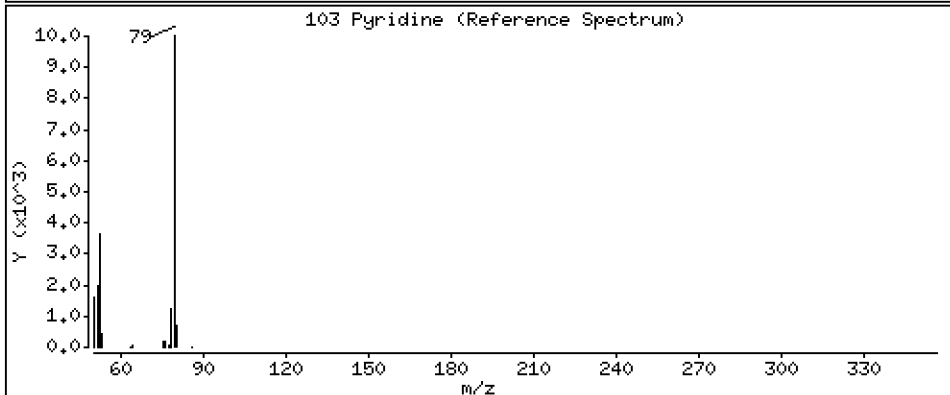
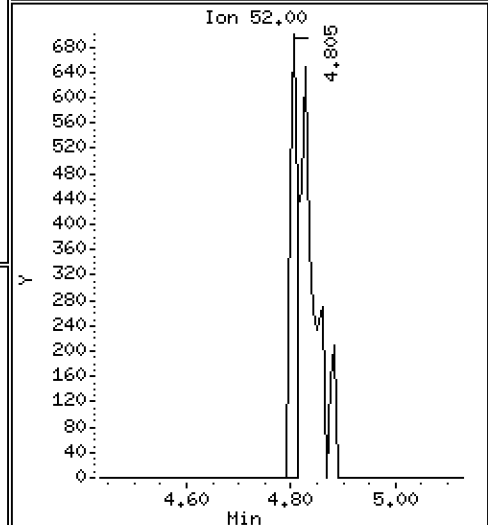
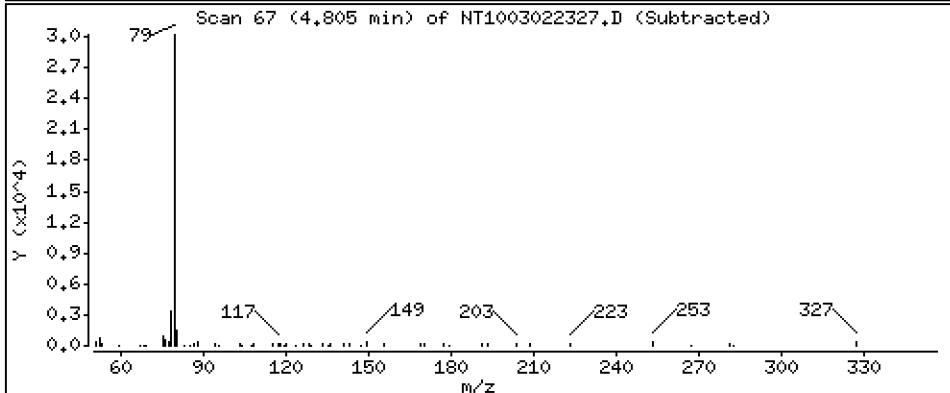
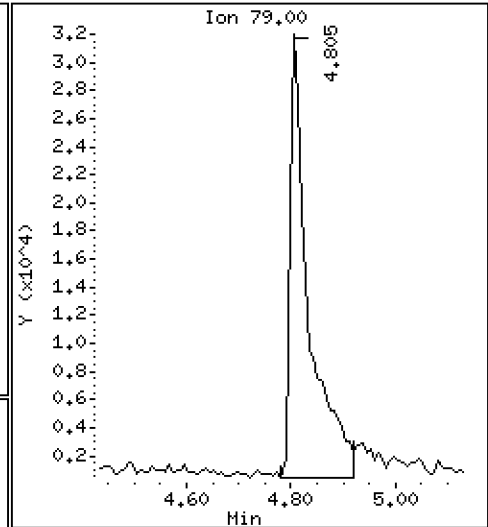
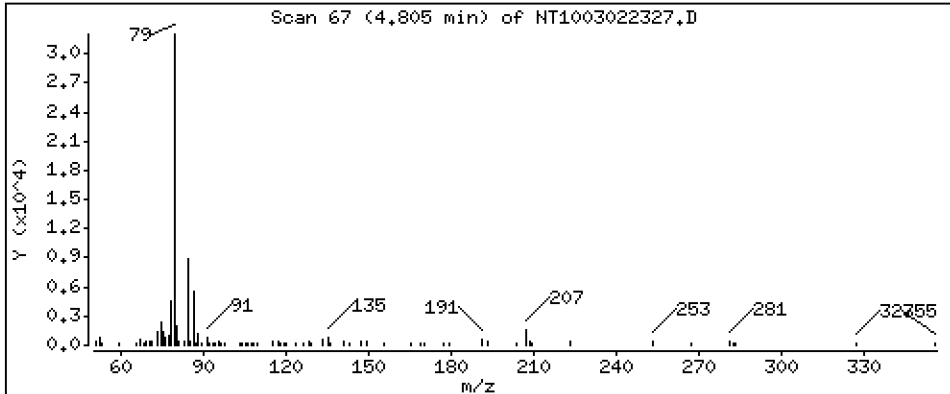
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 0,3841 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

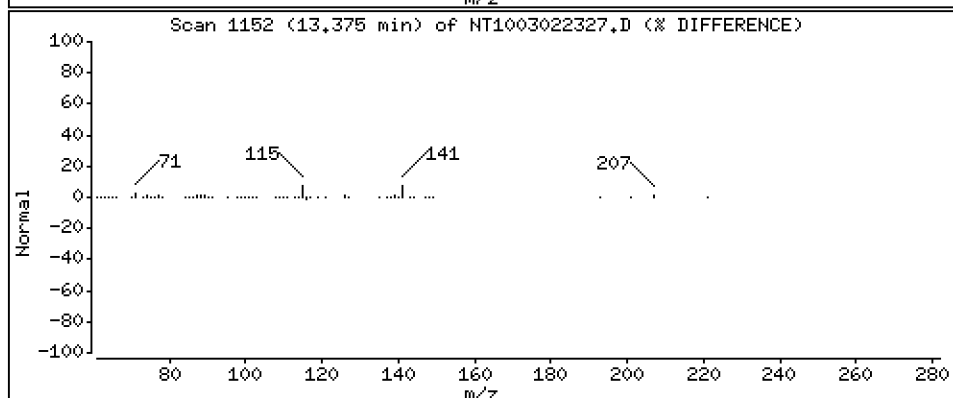
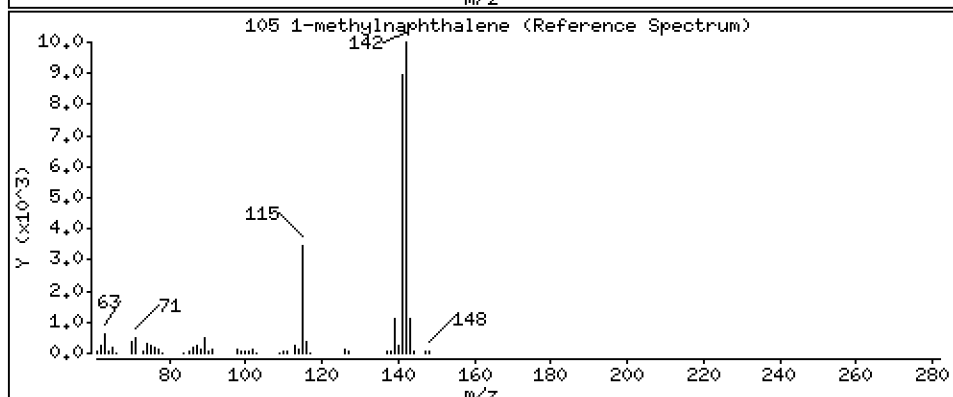
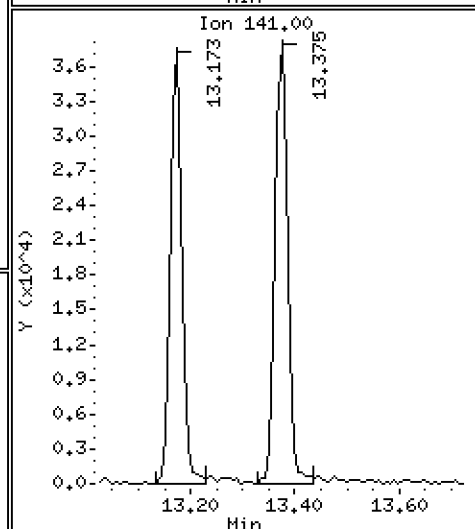
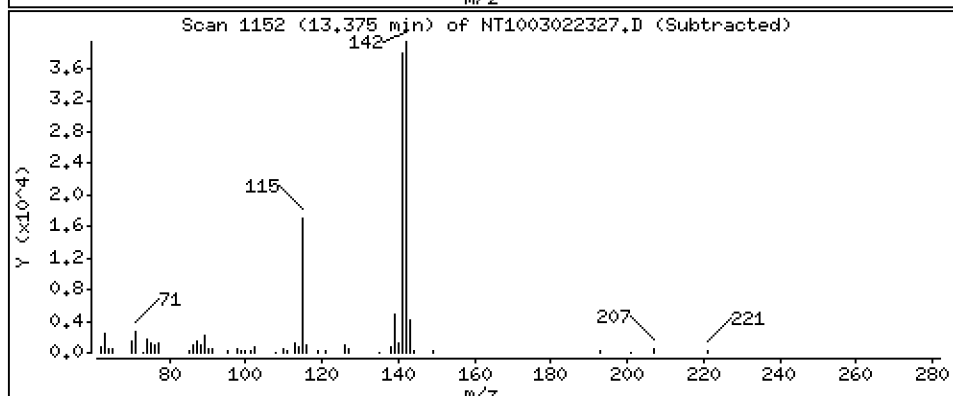
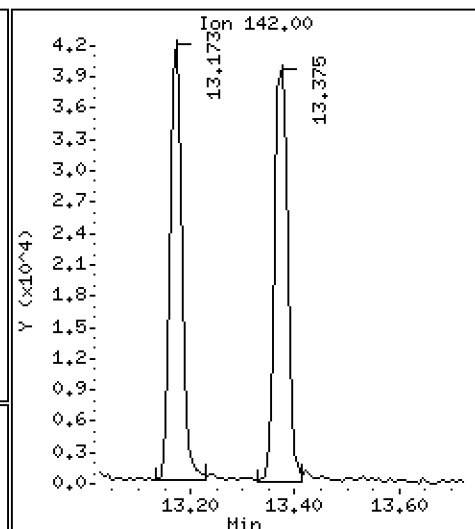
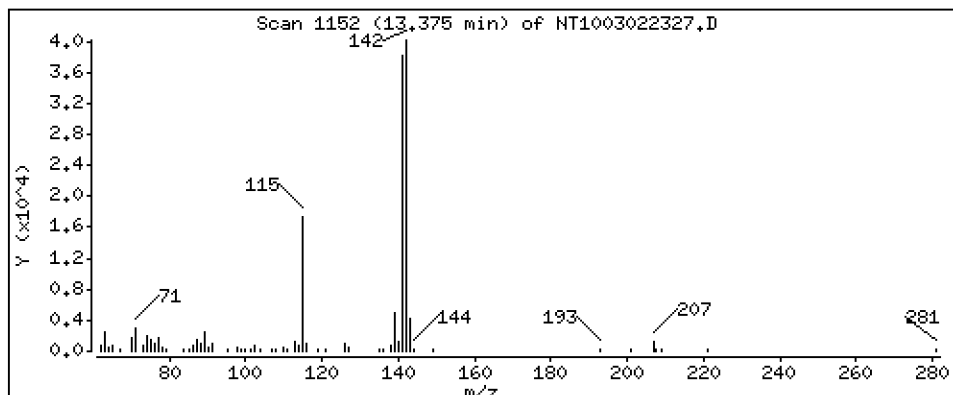
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,1908 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

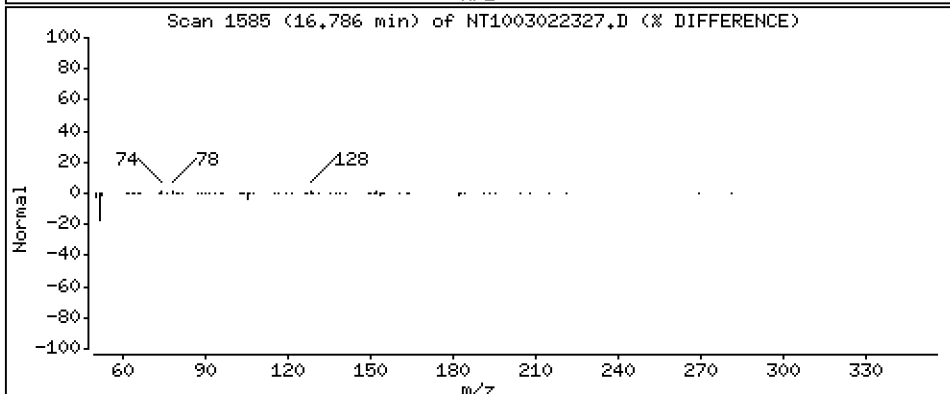
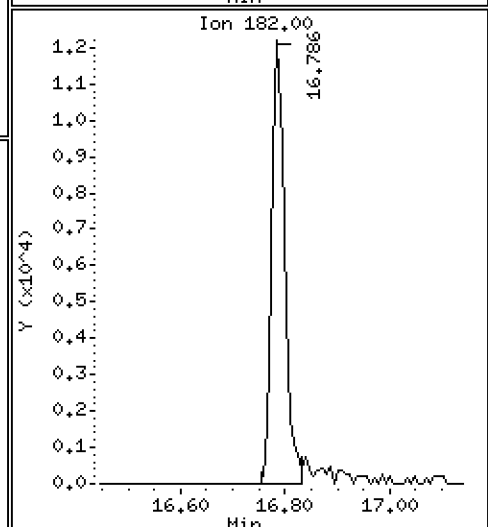
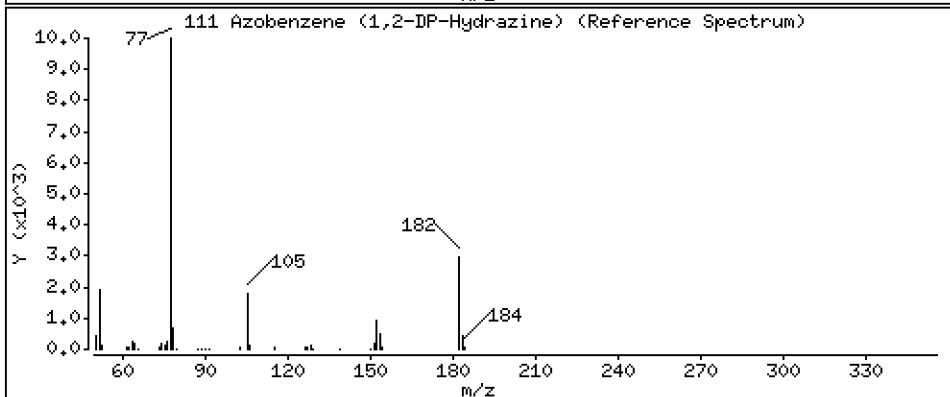
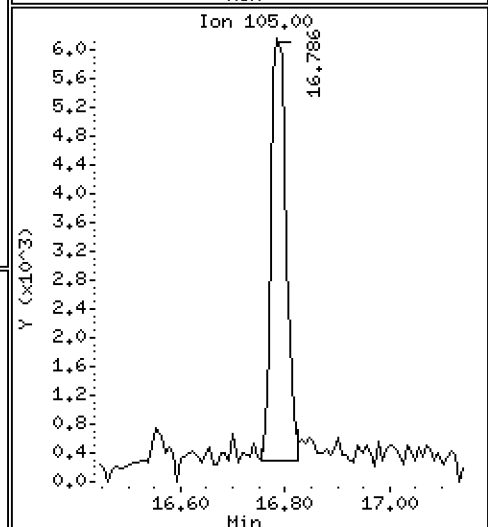
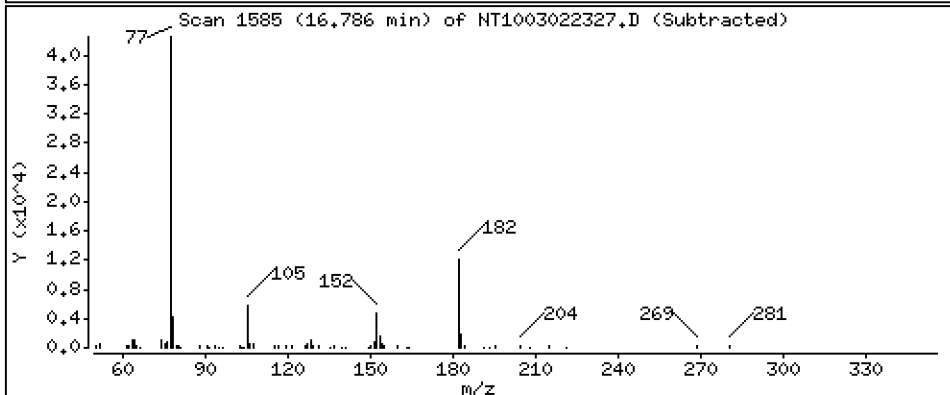
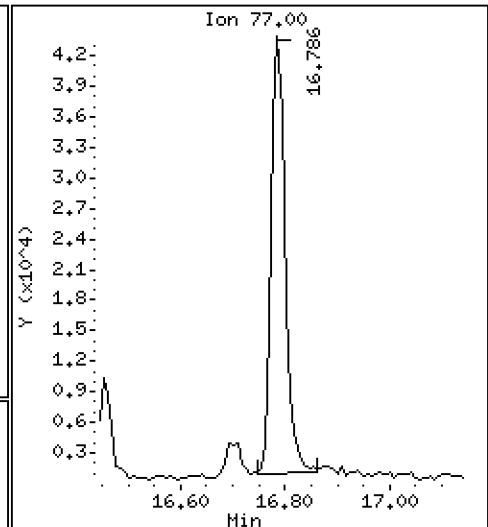
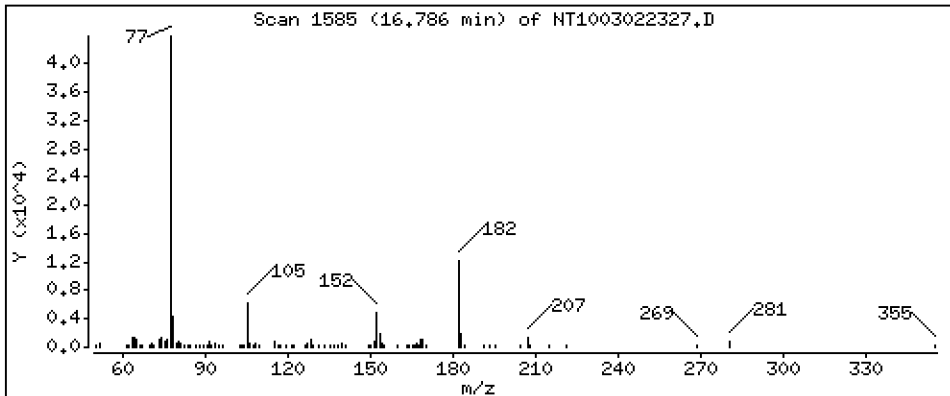
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 0,1346 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

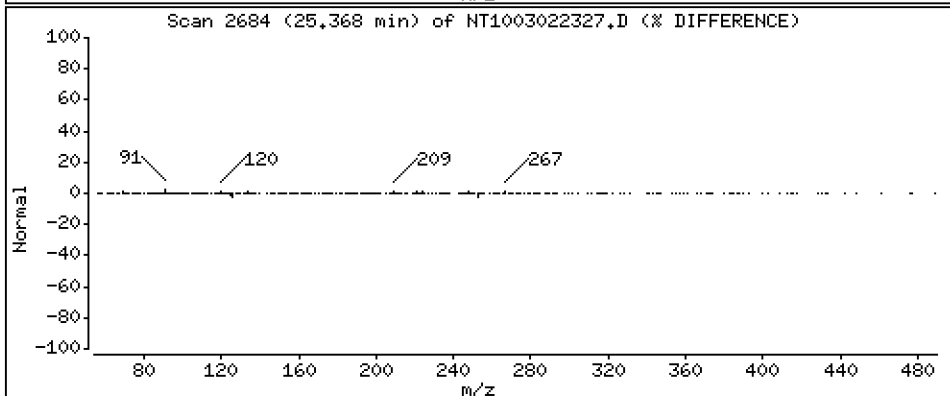
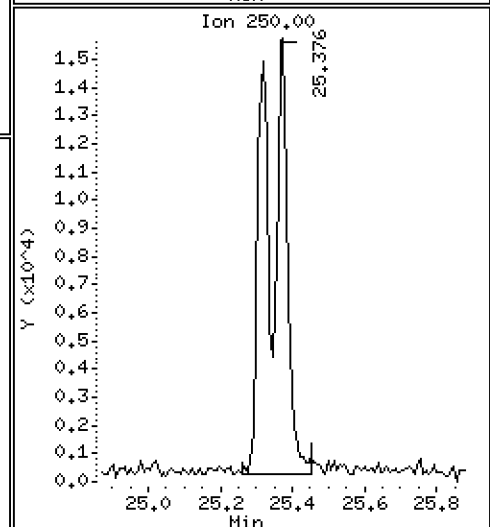
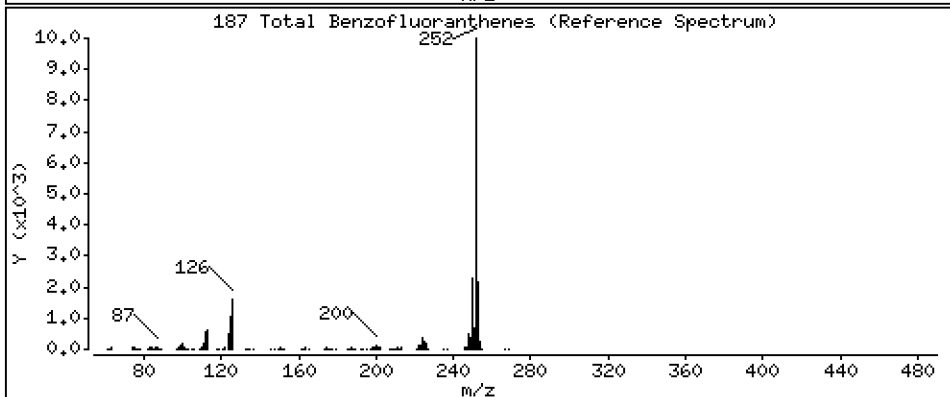
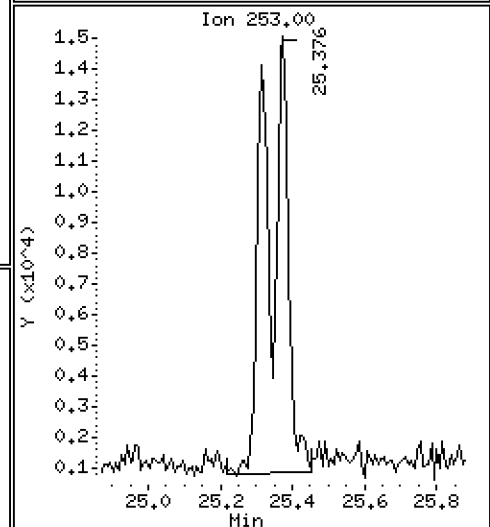
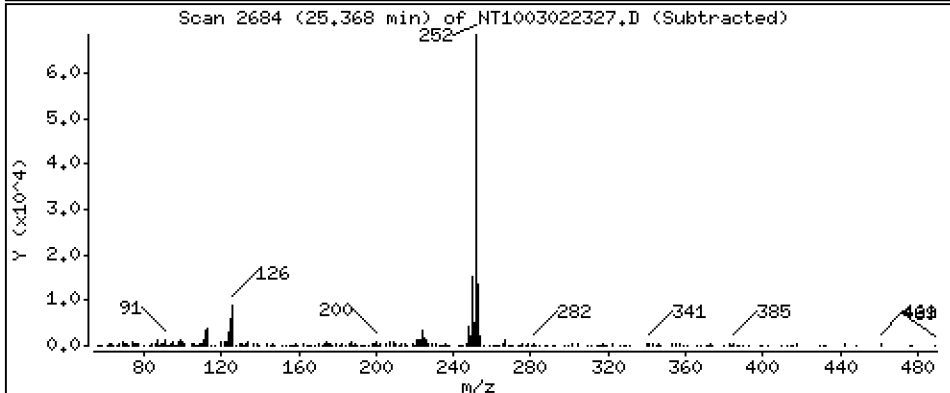
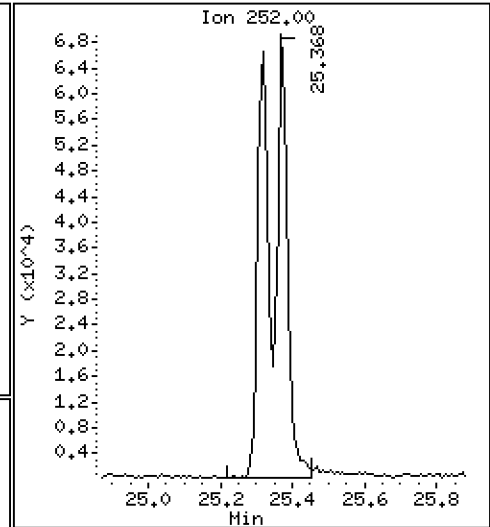
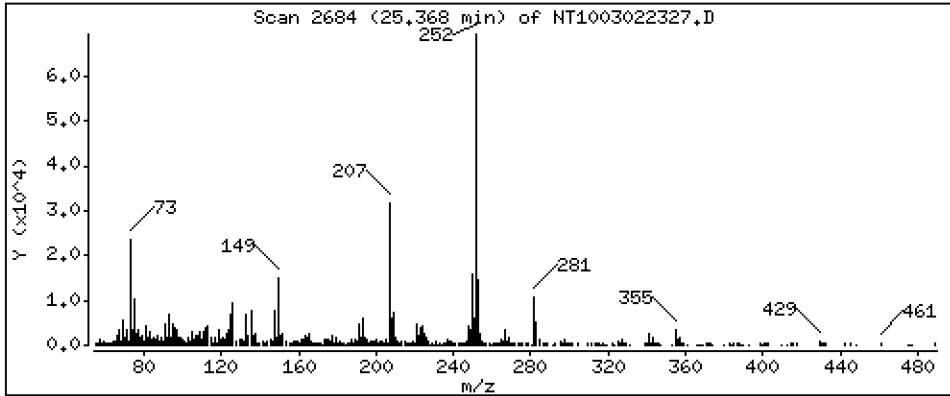
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 0,3526 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

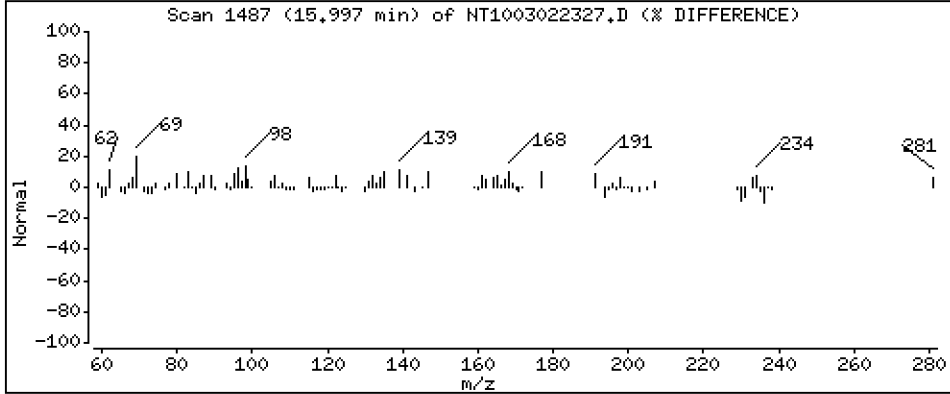
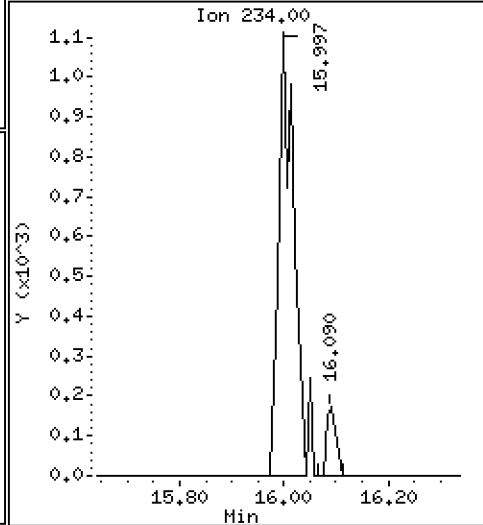
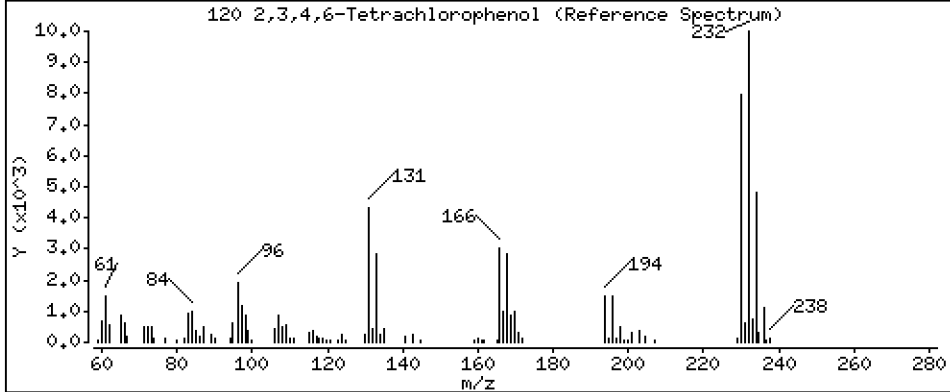
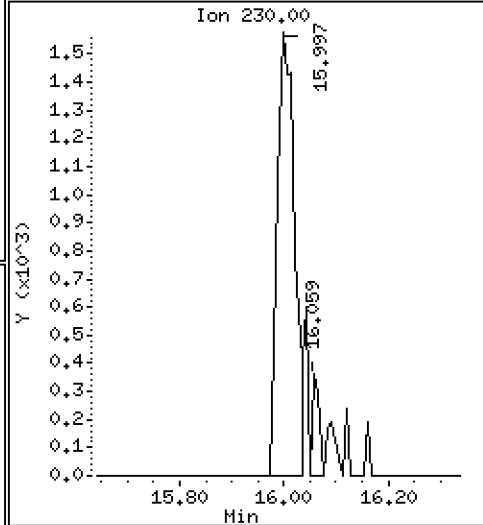
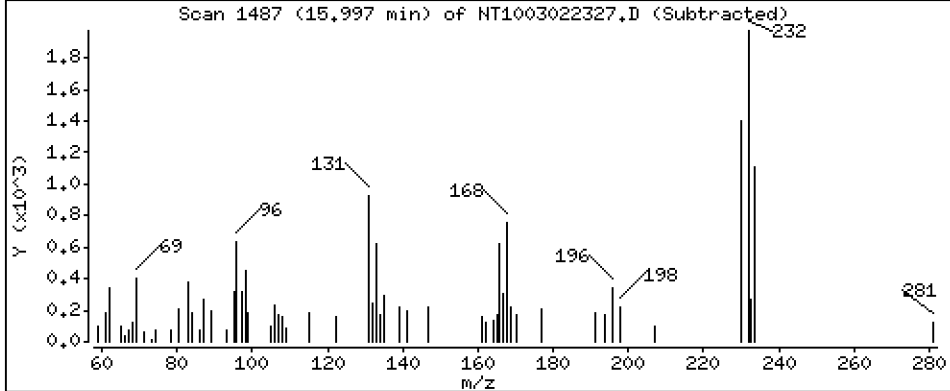
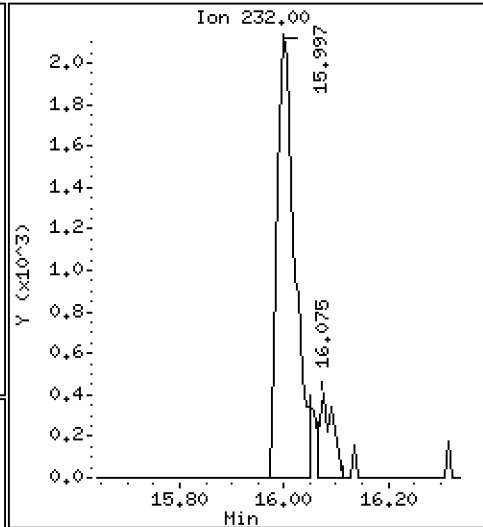
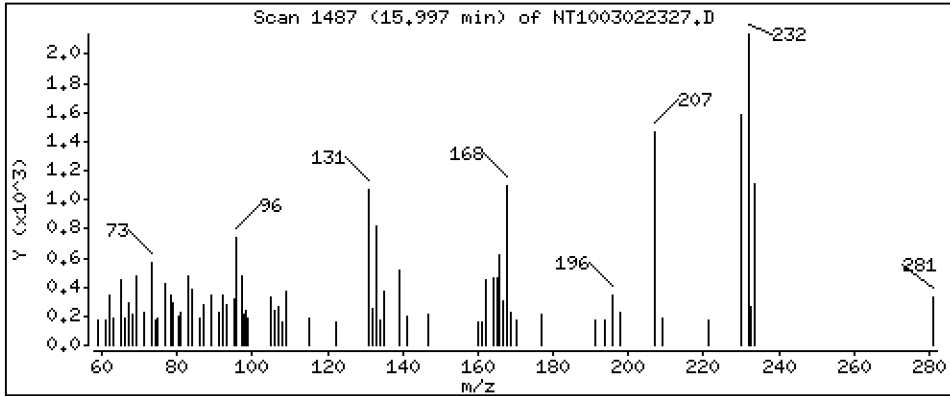
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 0,04759 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022327.D  
 Lab Smp Id: SLC0136-LCV1  
 Inj Date : 03-MAR-2023 06:52  
 Operator : VTS  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Meth Date : 10-Mar-2023 07:33 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	51442	0.28211	0.2821
\$ 2 Phenol-d5	99		Compound Not Detected.					
3 Phenol	94		8.528	8.527	(0.922)	39128	0.17384	0.1738
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	49945	0.27652	0.2765
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	38974	0.22659	0.2266
6 2-Chlorophenol	128		8.852	8.852	(0.957)	32700	0.17427	0.1743
7 1,3-Dichlorobenzene	146		9.138	9.146	(0.988)	43050	0.20809	0.2081
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	579567	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.285	(1.003)	40686	0.19799	0.1980
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.541	(1.000)	579567	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	39055	0.19635	0.1964
11 Benzyl alcohol	108		9.518	9.479	(1.029)	14077	0.12199	0.1220
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.735	(1.052)	9040	0.15765	0.1576
13 2-Methylphenol	108		9.666	9.658	(1.045)	25943	0.14879	0.1488
17 Hexachloroethane	117		10.209	10.217	(1.104)	12269	0.14546	0.1455
16 N-Nitroso-di-n-propylamine	70		9.976	9.984	(1.079)	24095	0.17740	0.1774 (M)
15 4-Methylphenol	108		9.961	9.953	(1.077)	24619	0.11257	0.1126
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	36220	0.15661	0.1566
19 Nitrobenzene	77		10.341	10.341	(0.882)	33643	0.15508	0.1551
20 Isophorone	82		10.791	10.799	(0.920)	44141	0.15939	0.1594
21 2-Nitrophenol	139		10.959	10.958	(0.935)	8404	0.06980	0.06980
22 2,4-Dimethylphenol	107		11.010	11.009	(0.939)	59265	0.28561	0.2856
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	31056	0.18147	0.1815
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		11.442	11.425	(0.976)	22909	0.14014	0.1401
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	31638	0.19432	0.1943
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2106861	4.00000	
28 Naphthalene	128		11.773	11.772	(1.004)	106621	0.19717	0.1972
29 4-Chloroaniline	127		11.873	11.873	(1.013)	63969	0.27027	0.2703
30 Hexachlorobutadiene	225		11.997	11.996	(1.023)	23630	0.19932	0.1993
31 4-Chloro-3-methylphenol	107		12.832	12.817	(1.094)	30424	0.17690	0.1769
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	70291	0.18400	0.1840
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.746	13.738	(0.897)	21162	0.20236	0.2024	
35 2,4,5-Trichlorophenol	196		13.846	13.807	(0.904)	19831	0.17767	0.1777	
§ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	78630	0.19928	0.1993	
37 2-Chloronaphthalene	162		14.171	14.179	(0.925)	58024	0.18733	0.1873	
38 2-Nitroaniline	65		14.388	14.380	(0.939)	7932	0.09370	0.09370	
39 Dimethylphthalate	163		14.744	14.751	(0.963)	61576	0.17236	0.1724	
40 Acenaphthylene	152		15.031	15.038	(0.981)	106246	0.19896	0.1990	
41 2,6-Dinitrotoluene	165		14.883	14.883	(0.972)	16382	0.20896	0.2090	
* 42 Acenaphthene-d10	164		15.317	15.324	(1.000)	1106223	4.00000		
43 3-Nitroaniline	138		15.255	15.231	(0.996)	11382	0.12634	0.1263	
44 Acenaphthene	153		15.386	15.394	(1.005)	61453	0.19081	0.1908	
45 2,4-Dinitrophenol	184		Compound Not Detected.						
46 Dibenzofuran	168		15.750	15.749	(1.028)	90223	0.18876	0.1888	
47 4-Nitrophenol	109		15.726	15.548	(1.027)	694	0.01114	0.01114	
48 2,4-Dinitrotoluene	165		15.711	15.718	(1.026)	20210	0.17783	0.1778	
50 Diethylphthalate	149		16.206	16.221	(1.058)	65877	0.17406	0.1741	
49 Fluorene	166		16.461	16.461	(1.075)	70438	0.17712	0.1771	
51 4-Chlorophenyl-phenylether	204		16.461	16.461	(1.075)	31017	0.17913	0.1791	
52 4-Nitroaniline	138		16.538	16.499	(1.080)	11420	0.11792	0.1179	
53 4,6-Dinitro-2-methylphenol	198		16.554	16.554	(0.899)	1305	0.02628	0.02628	
54 N-Nitrosodiphenylamine	169		16.701	16.700	(0.907)	54938	0.17416	0.1742	
§ 55 2,4,6-Tribromophenol	330		16.963	16.962	(1.107)	8004	0.11787	0.1179	
56 4-Bromophenyl-phenylether	248		17.480	17.480	(0.950)	23305	0.18232	0.1823	
57 Hexachlorobenzene	284		17.581	17.588	(0.955)	30228	0.21001	0.2100	
58 Pentachlorophenol	266		Compound Not Detected.						
* 59 Phenanthrene-d10	188		18.409	18.416	(1.000)	2132079	4.00000		
60 Phenanthrene	178		18.463	18.463	(1.003)	106596	0.19536	0.1954	
61 Anthracene	178		18.571	18.571	(1.009)	97378	0.18405	0.1840	
62 Carbazole	167		18.912	18.904	(1.027)	80147	0.16535	0.1654	
63 Di-n-butylphthalate	149		19.593	19.600	(1.064)	98160	0.14925	0.1493	
64 Fluoranthene	202		20.823	20.830	(0.889)	124055	0.16799	0.1680	
65 Pyrene	202		21.256	21.264	(0.907)	130567	0.17364	0.1736	
§ 66 Terphenyl-d14	244		21.535	21.534	(0.919)	104887	0.17239	0.1724	
67 Butylbenzylphthalate	149		22.417	22.417	(0.957)	48215	0.11907	0.1191	
68 Benzo(a)anthracene	228		23.409	23.416	(0.999)	138545	0.18304	0.1830	
* 69 Chrysene-d12	240		23.432	23.431	(1.000)	2146603	4.00000		
70 3,3'-Dichlorobenzidine	252		23.362	23.362	(0.997)	96347	0.28580	0.2858	
71 Chrysene	228		23.471	23.478	(1.002)	129173	0.20999	0.2100	
72 bis(2-Ethylhexyl)phthalate	149		23.409	23.408	(0.956)	84107	0.15640	0.1564	
* 134 Di-n-octylphthalate-d4	153		24.485	24.492	(1.000)	3835755	4.00000		
73 Di-n-octylphthalate	149		24.500	24.508	(1.001)	184805	0.21727	0.2173	
74 Benzo(b)fluoranthene	252		25.321	25.328	(0.969)	137800	0.16736	0.1674	
75 Benzo(k)fluoranthene	252		25.367	25.375	(0.971)	144039	0.18169	0.1817	
76 Benzo(a)pyrene	252		26.002	26.017	(0.995)	126422	0.17177	0.1718	
* 77 Perylene-d12	264		26.126	26.134	(1.000)	2414341	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.917	(1.107)	113993	0.13249	0.1325	
79 Dibenzo(a,h)anthracene	278		28.971	28.963	(1.109)	88037	0.13495	0.1349	
80 Benzo(g,h,i)perylene	276		29.764	29.763	(1.139)	88826	0.12956	0.1296	
90 N-Nitrosodimethylamine	74		Compound Not Detected.						
91 Aniline	93		8.636	8.635	(0.934)	91935	0.35227	0.3523	
93 Benzidine	184		21.117	21.078	(0.901)	20518	0.06259	0.06259	
103 Pyridine	79		4.804	4.781	(0.520)	80192	0.38412	0.3841	
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	65968	0.19079	0.1908	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.785	16.793	(1.096)	76043	0.13455	0.1346	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.367	25.375	(0.971)	278901	0.35260	0.3526
120 2,3,4,6-Tetrachlorophenol	232	15.997	15.989	(1.044)	4926	0.04759	0.04759

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022327.D Calibration Time: 05:36  
 Lab Smp Id: SLC0136-LCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	579567	-13.94
27 Naphthalene-d8	2475080	1237540	4950160	2106861	-14.88
42 Acenaphthene-d10	1248864	624432	2497728	1106223	-11.42
59 Phenanthrene-d10	2356836	1178418	4713672	2132079	-9.54
69 Chrysene-d12	2717731	1358866	5435462	2146603	-21.01
134 Di-n-octylphthala	4948440	2474220	9896880	3835755	-22.49
77 Perylene-d12	2801934	1400967	5603868	2414341	-13.83

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.41	-0.04
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.03
77 Perylene-d12	26.13	25.63	26.63	26.13	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022327.D

Lab ID: SLC0136-LCV1  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 06:52

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.027	1.015	0.0121	4-Nitrophenol
1.000	1.032	-0.0319	1,2-Dichlorobenzene-d4

RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

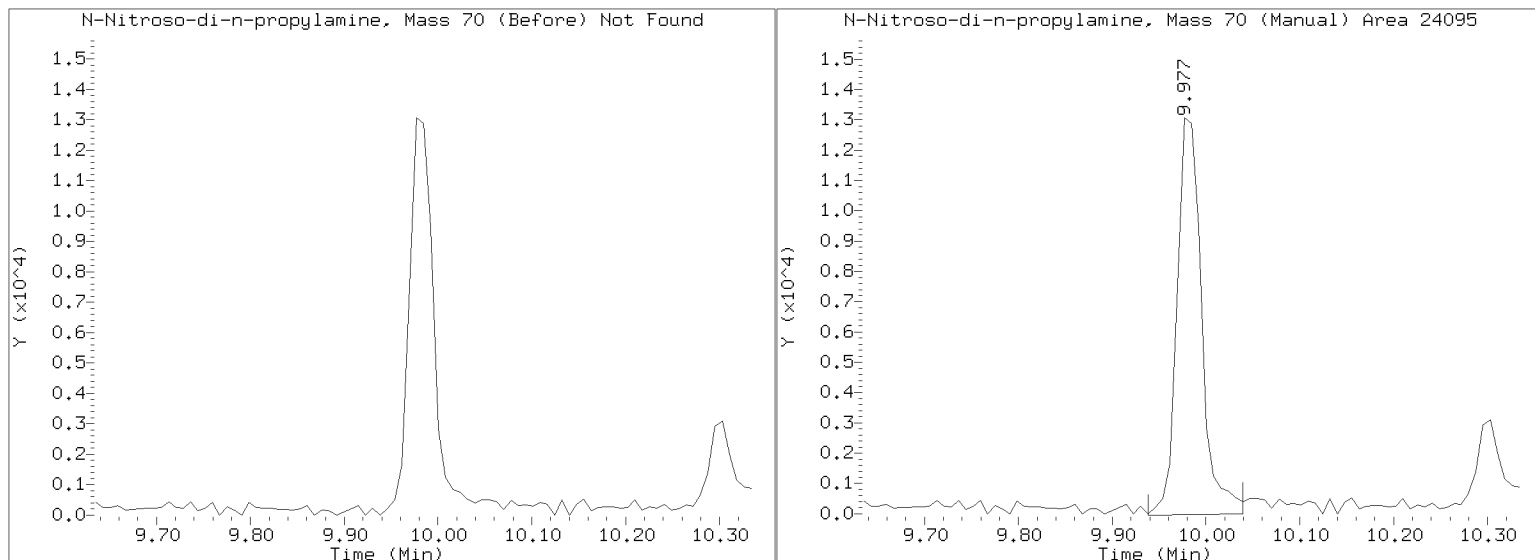
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022327.D

Injection Date: 03-MAR-2023 06:52

Lab ID: SLC0136-LCV1 Client ID:

Report Date: 03/10/2023 07:34







INITIAL CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022302.D

Calibration Date: 03/01/2023

Sequence: SLC0120

Injection Date: 03/02/23

Lab Sample ID: SLC0120-ICV1

Injection Time: 13:34

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.6	1.5534590	1.7302230		11.4	+/-20
bis(2-chloroethyl) ether	A	5.0000	5.3	1.1870870	1.2480360		5.1	+/-20
2-Chlorophenol	A	5.0000	5.2	1.2950380	1.3514340		4.4	+/-20
1,3-Dichlorobenzene	A	5.0000	4.8	1.4278260	1.3834040		-3.1	+/-20
1,4-Dichlorobenzene	A	5.0000	4.8	1.4182650	1.3673980		-3.6	+/-20
1,2-Dichlorobenzene	A	5.0000	4.9	1.3727590	1.3326260		-2.9	+/-20
Benzyl Alcohol	A	5.0000	5.2	0.7104711	0.8438210		3.1	+/-20
2,2'-Oxybis(1-chloropropane)	A	5.0000	4.0	0.3957681	0.3173077		-19.8	+/-20
2-Methylphenol	A	5.0000	5.2	1.0954470	1.2777700		3.6	+/-20
Hexachloroethane	A	5.0000	5.2	0.5821386	0.6034374		3.7	+/-20
N-Nitroso-di-n-Propylamine	A	5.0000	5.5	0.9374094	1.0234950		9.2	+/-20
4-Methylphenol	A	5.0000	5.0	1.2087680	1.4791570		-0.8	+/-20
Nitrobenzene	A	5.0000	5.3	0.4118860	0.4381770		6.4	+/-20
Isophorone	A	5.0000	5.3	0.5257709	0.5556424		5.7	+/-20
2-Nitrophenol	A	5.0000	4.0	0.1627036	0.1774969		-20.3	+/-20 *
2,4-Dimethylphenol	A	10.000	9.7	0.3830403	0.3902462		-3.3	+/-20
Bis(2-Chloroethoxy)methane	A	5.0000	5.5	0.3249172	0.3568713		9.8	+/-20
2,4-Dichlorophenol	A	10.000	9.9	0.2612827	0.3166685		-0.7	+/-20
1,2,4-Trichlorobenzene	A	5.0000	4.7	0.3091179	0.2929423		-5.2	+/-20
Naphthalene	A	5.0000	5.1	1.0266520	1.0454330		1.8	+/-20
Benzoic acid	A	20.000	18.4	0.1970511	0.2235739		-8.2	+/-20
4-Chloroaniline	A	10.000	10.0	0.4009859	0.4662120		0.3	+/-20
Hexachlorobutadiene	A	5.0000	4.6	0.2250808	0.2071407		-8.0	+/-20
4-Chloro-3-Methylphenol	A	10.000	9.7	0.3168628	0.3310519		-2.6	+/-20
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7395758		2.0	+/-20
Hexachlorocyclopentadiene	A	10.000	9.7	0.1096304	0.1359346		-3.4	+/-20
2,4,6-Trichlorophenol	A	10.000	9.7	0.3635155	0.3840945		-3.1	+/-20
2,4,5-Trichlorophenol	A	10.000	9.3	0.3974340	0.3931404		-7.1	+/-20
2-Chloronaphthalene	A	5.0000	5.1	1.1200160	1.1521390		2.9	+/-20
2-Nitroaniline	A	10.000	10.0	0.2857098	0.3165817		-0.09	+/-20

\* Values outside of QC limits



INITIAL CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022302.D

Calibration Date: 03/01/2023

Sequence: SLC0120

Injection Date: 03/02/23

Lab Sample ID: SLC0120-ICV1

Injection Time: 13:34

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Acenaphthylene	A	5.0000	5.6	1.9309320	2.1475750		11.2	+/-20
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2723480		-1.5	+/-20
2,6-Dinitrotoluene	A	10.000	9.7	0.2723393	0.2842343		-2.9	+/-20
Acenaphthene	A	5.0000	4.9	1.1645250	1.1503170		-1.2	+/-20
3-Nitroaniline	A	10.000	10.4	0.3257650	0.3386890		4.0	+/-20
2,4-Dinitrophenol	A	20.000	14.2	0.0558713	0.0553237		-29.2	+/-20 *
Dibenzofuran	A	5.0000	5.1	1.7283260	1.7507210		1.3	+/-20
4-Nitrophenol	A	10.000	8.0	0.2049826	0.1878072		-19.9	+/-20
2,4-Dinitrotoluene	A	10.000	9.4	0.3852197	0.4023936		-5.6	+/-20
Fluorene	A	5.0000	5.1	1.4379840	1.4605930		1.6	+/-20
4-Chlorophenylphenyl ether	A	5.0000	4.8	0.6424026	0.6250126		-4.9	+/-20
Diethyl phthalate	A	5.0000	4.9	1.3684860	1.3342430		-2.5	+/-20
4-Nitroaniline	A	10.000	10.0	0.3501692	0.3512210		0.3	+/-20
4,6-Dinitro-2-methylphenol	A	20.000	18.3	0.0712506	0.0903111		-8.7	+/-20
N-Nitrosodiphenylamine	A	5.0000	5.3	0.5918253	0.6284072		6.2	+/-20
4-Bromophenyl phenyl ether	A	5.0000	5.1	0.2398060	0.2445177		2.0	+/-20
Hexachlorobenzene	A	5.0000	4.7	0.2700430	0.2549971		-5.6	+/-20
Pentachlorophenol	A	10.000	10.1	0.1145550	0.1337595		0.9	+/-20
Phenanthrene	A	5.0000	5.1	1.0236730	1.0469050		2.3	+/-20
Anthracene	A	5.0000	5.3	0.9926226	1.0613560		6.9	+/-20
Carbazole	A	5.0000	5.3	0.9093581	0.9620698		5.8	+/-20
Di-n-Butylphthalate	A	5.0000	5.2	1.1818970	1.3230390		3.3	+/-20
Fluoranthene	A	5.0000	4.4	1.3760330	1.2244530		-11.0	+/-20
Pyrene	A	5.0000	4.5	1.4011560	1.2677940		-9.5	+/-20
Butylbenzylphthalate	A	5.0000	4.1	0.6475451	0.6073393		-18.2	+/-20
Benzo(a)anthracene	A	5.0000	4.7	1.4104100	1.3313		-5.6	+/-20
3,3'-Dichlorobenzidine	A	15.000	11.5	0.5458244	0.4881659		-23.4	+/-20 *
Chrysene	A	5.0000	5.1	1.1462500	1.1792020		2.9	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.6	0.5331838	0.5344341		-7.4	+/-20
Di-n-Octylphthalate	A	5.0000	5.3	0.8870063	0.9476263		6.8	+/-20

\* Values outside of QC limits



INITIAL CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022302.D

Calibration Date: 03/01/2023

Sequence: SLC0120

Injection Date: 03/02/23

Lab Sample ID: SLC0120-ICV1

Injection Time: 13:34

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzofluoranthenes, Total	A	10.000	8.9	1.3383070	1.2313280		-10.5	+/-20
Benzo(a)pyrene	A	5.0000	4.4	1.2312020	1.1302690		-11.6	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.4033590	1.2891440		-13.6	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.6	1.1150690	1.0415170		-8.7	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.5	1.1245240	1.0702560		-9.4	+/-20
1-Methylnaphthalene	A	5.0000	5.1	0.6564478	0.6750240		2.8	+/-20
2-Fluorophenol	A	7.5000	7.76	1.2585100	1.3013430		3.4	+/-20
Phenol-d5	A	7.5000	8.50	1.4611190	1.6561730		13.3	+/-20
2-Chlorophenol-d4	A	7.5000	7.87	1.2465880	1.3082630		4.9	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.81	0.9313544	0.8966005		-3.7	+/-20
Nitrobenzene-d5	A	5.0000	5.34	0.4390871	0.4693084		6.9	+/-20
2-Fluorobiphenyl	A	5.0000	5.12	1.4267270	1.4597930		2.3	+/-20
2,4,6-Tribromophenol	A	7.5000	6.69	0.2287830	0.2296174		-10.8	+/-20
p-Terphenyl-d14	A	5.0000	4.38	1.1337350	0.9935802		-12.4	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	84410.2500	1.0000			
Naphthalene-d8	A	4.0000	4.0	316296.8000	1.0000			
Acenaphthene-d10	A	4.0000	4.0	173096.3000	1.0000			
Phenanthrene-d10	A	4.0000	4.0	344194.3000	1.0000			
Chrysene-d12	A	4.0000	4.0	254881.0000	1.0000			
Di-n-Octylphthalate-d4	A	4.0000	4.0	506777.8000	1.0000			
Perylene-d12	A	4.0000	4.0	256852.3000	1.0000			

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022302.D

Date: 02-MAR-2023 13:34

Client ID:

Sample Info: SEQ-ICV\FULL

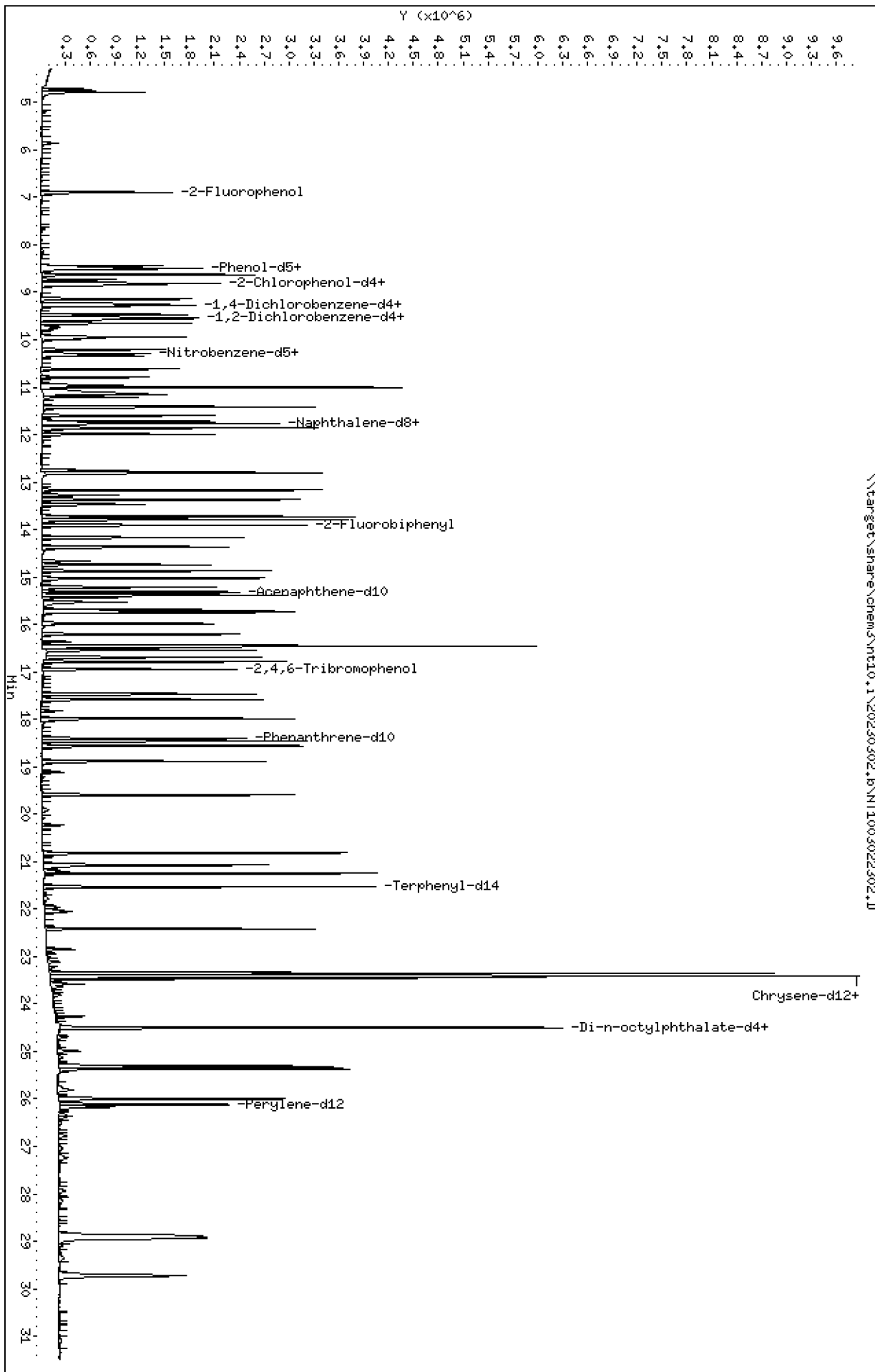
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022302.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022302.D  
 Lab Smp Id: SLC0120-ICV1  
 Inj Date : 02-MAR-2023 13:34  
 Operator : VTS  
 Smp Info : SEQ-ICVFULL  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: NT1003012307.D  
 Continuing Calibration Sample  
 Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112		6.897	6.897	(0.746)	1051577	7.50000	7.755
2 Phenol-d5	99		8.489	8.489	(0.918)	1338305	7.50000	8.501
3 Phenol	94		8.512	8.512	(0.921)	932095	5.00000	5.569
5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1057169	7.50000	7.871
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	672334	5.00000	5.257
6 2-Chlorophenol	128		8.844	8.844	(0.956)	728036	5.00000	5.218
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	745259	5.00000	4.844
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	430971	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	736636	5.00000	4.821
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	483011	5.00000	4.813
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	717904	5.00000	4.854
11 Benzyl alcohol	108		9.472	9.472	(1.024)	454578	5.00000	5.157
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	170938	5.00000	4.009
13 2-Methylphenol	108		9.650	9.650	(1.044)	688352	5.00000	5.182
17 Hexachloroethane	117		10.209	10.209	(1.104)	325080	5.00000	5.183
16 N-Nitroso-di-n-propylamine	70		9.976	9.976	(1.079)	551371	5.00000	5.459
15 4-Methylphenol	108		9.938	9.938	(1.075)	796842	5.00000	4.959
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	944167	5.00000	5.344
19 Nitrobenzene	77		10.333	10.333	(0.881)	881536	5.00000	5.319
20 Isophorone	82		10.791	10.791	(0.920)	1117856	5.00000	5.284
21 2-Nitrophenol	139		10.950	10.950	(0.934)	357093	5.00000	3.987
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	1570215	10.0000	9.667
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	717963	5.00000	5.492
24 Benzoic acid	105		11.154	11.154	(0.951)	1799167	20.0000	18.37
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	1274164	10.0000	9.934
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	589349	5.00000	4.738
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	1609461	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	2103229	5.00000	5.091
29 4-Chloroaniline	127		11.858	11.858	(1.011)	1875875	10.0000	10.03
30 Hexachlorobutadiene	225		11.997	11.997	(1.023)	416731	5.00000	4.601
31 4-Chloro-3-methylphenol	107		12.801	12.801	(1.092)	1332038	10.0000	9.742
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	1487898	5.00000	5.099
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	289919	10.0000	9.656

Compounds	QUANT SIG					AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.722	13.722	(0.896)	819190	10.0000	9.692
35 2,4,5-Trichlorophenol	196	13.792	13.792	(0.900)	838483	10.0000	9.293
§ 36 2-Fluorobiphenyl	172	13.908	13.908	(0.908)	1556710	5.00000	5.116
37 2-Chloronaphthalene	162	14.171	14.171	(0.925)	1228631	5.00000	5.143
38 2-Nitroaniline	65	14.365	14.365	(0.938)	675200	10.0000	9.991
39 Dimethylphthalate	163	14.744	14.744	(0.963)	1356821	5.00000	4.925
40 Acenaphthylene	152	15.023	15.023	(0.981)	2290155	5.00000	5.561
41 2,6-Dinitrotoluene	165	14.868	14.868	(0.971)	606210	10.0000	9.714
* 42 Acenaphthene-d10	164	15.317	15.317	(1.000)	853113	4.00000	
43 3-Nitroaniline	138	15.216	15.216	(0.993)	722350	10.0000	10.40
44 Acenaphthene	153	15.386	15.386	(1.005)	1226688	5.00000	4.939
45 2,4-Dinitrophenol	184	15.433	15.433	(1.008)	235987	20.0000	14.17
46 Dibenzofuran	168	15.742	15.742	(1.028)	1866954	5.00000	5.065
47 4-Nitrophenol	109	15.525	15.525	(1.014)	400552	10.0000	8.010
48 2,4-Dinitrotoluene	165	15.703	15.703	(1.025)	858218	10.0000	9.442
50 Diethylphthalate	149	16.206	16.206	(1.058)	1422825	5.00000	4.875
49 Fluorene	166	16.453	16.453	(1.074)	1557564	5.00000	5.079
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	666508	5.00000	4.755
52 4-Nitroaniline	138	16.476	16.476	(1.076)	749078	10.0000	10.03
53 4,6-Dinitro-2-methylphenol	198	16.538	16.538	(0.899)	702913	20.0000	18.26
54 N-Nitrosodiphenylamine	169	16.693	16.693	(0.907)	1222761	5.00000	5.309
§ 55 2,4,6-Tribromophenol	330	16.947	16.947	(1.106)	367293	7.50000	6.688
56 4-Bromophenyl-phenylether	248	17.472	17.472	(0.950)	475785	5.00000	5.098
57 Hexachlorobenzene	284	17.581	17.581	(0.955)	496176	5.00000	4.721
58 Pentachlorophenol	266	17.983	17.983	(0.977)	520541	10.0000	10.09
* 59 Phenanthrene-d10	188	18.401	18.401	(1.000)	1556648	4.00000	
60 Phenanthrene	178	18.455	18.455	(1.003)	2037079	5.00000	5.113
61 Anthracene	178	18.564	18.564	(1.009)	2065198	5.00000	5.346
62 Carbazole	167	18.889	18.889	(1.026)	1872005	5.00000	5.290
63 Di-n-butylphthalate	149	19.593	19.593	(1.065)	2574383	5.00000	5.165
64 Fluoranthene	202	20.815	20.815	(0.889)	2355637	5.00000	4.449
65 Pyrene	202	21.248	21.248	(0.907)	2439016	5.00000	4.524
§ 66 Terphenyl-d14	244	21.527	21.527	(0.919)	1911477	5.00000	4.382
67 Butylbenzylphthalate	149	22.410	22.410	(0.957)	1168416	5.00000	4.088
68 Benzo(a)anthracene	228	23.409	23.409	(0.999)	2561191	5.00000	4.720
* 69 Chrysene-d12	240	23.424	23.424	(1.000)	1539062	4.00000	
70 3,3'-Dichlorobenzidine	252	23.347	23.347	(0.997)	2817441	15.0000	11.49
71 Chrysene	228	23.470	23.470	(1.002)	2268581	5.00000	5.144
72 bis(2-Ethylhexyl)phthalate	149	23.409	23.409	(0.956)	1970439	5.00000	4.630
* 134 Di-n-octylphthalate-d4	153	24.492	24.492	(1.000)	2949571	4.00000	
73 Di-n-octylphthalate	149	24.500	24.500	(1.000)	3493864	5.00000	5.342
74 Benzo(b)fluoranthene	252	25.305	25.305	(0.969)	2543555	5.00000	4.356
75 Benzo(k)fluoranthene	252	25.367	25.367	(0.971)	2574720	5.00000	4.562
76 Benzo(a)pyrene	252	25.994	25.994	(0.995)	2308657	5.00000	4.421
* 77 Perylene-d12	264	26.118	26.118	(1.000)	1634059	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.878	28.878	(1.106)	2633172	5.00000	4.320
79 Dibenzo(a,h)anthracene	278	28.932	28.932	(1.108)	2127376	5.00000	4.563
80 Benzo(g,h,i)perylene	276	29.725	29.725	(1.138)	2186076	5.00000	4.530
90 N-Nitrosodimethylamine	74	4.719	4.719	(0.510)	915029	10.0000	10.45
91 Aniline	93	8.628	8.628	(0.933)	2079542	10.0000	10.72
93 Benzidine	184	21.070	21.070	(0.900)	1883448	10.0000	8.013
103 Pyridine	79	4.781	4.781	(0.517)	1572112	10.0000	10.13
105 1-methylnaphthalene	142	13.366	13.366	(1.140)	1358031	5.00000	5.141
111 Azobenzene (1,2-DP-Hydrazine)	77	16.785	16.785	(1.096)	2377556	5.00000	5.455

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
187 Total Benzofluoranthenes	252		25.367	25.367	(0.971)	5030155	10.0000	8.947
120 2,3,4,6-Tetrachlorophenol	232		15.981	15.981	(1.043)	394765	5.00000	4.685

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003022302.D Calibration Time: 17:21  
 Lab Smp Id: SLC0120-ICV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	430971	0.00
27 Naphthalene-d8	1609461	804731	3218922	1609461	0.00
42 Acenaphthene-d10	853113	426557	1706226	853113	0.00
59 Phenanthrene-d10	1556648	778324	3113296	1556648	0.00
69 Chrysene-d12	1539062	769531	3078124	1539062	0.00
134 Di-n-octylphthala	2949571	1474786	5899142	2949571	0.00
77 Perylene-d12	1634059	817030	3268118	1634059	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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



REVIEW SUMMARY FOR FILE - NT1003022302.D

Lab ID: SLC0120-ICV1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 13:34

RT CO-ELUTION COMPOUNDS

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23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

No RRT check. Ccal file.

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b

Instrument: nt10.i Date: 02-MAR-2023 Method: 20230302.b\ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R <sup>2</sup>
2,4-Dinitrophenol	0.989

ICV CAL: NT1003022302.D 02-MAR-2023 13:34

Compound	%D
2-Nitrophenol	-20.3
2,4-Dinitrophenol	-29.1
3,3'-Dichlorobenzidine	-23.4



INITIAL CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022314ICV.D

Calibration Date: 03/01/2023

Sequence: SLC0132

Injection Date: 03/02/23

Lab Sample ID: SLC0132-ICV1

Injection Time: 22:38

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.7	1.5534590	1.7839690		14.8	+/-20
4-Methylphenol	A	5.0000	5.2	1.2087680	1.5368820		3.1	+/-20
Naphthalene	A	5.0000	5.0	1.0266520	1.0354560		0.9	+/-20
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7424575		2.4	+/-20
Acenaphthylene	A	5.0000	5.8	1.9309320	2.2485030		16.4	+/-20
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2755930		-1.3	+/-20
Acenaphthene	A	5.0000	5.1	1.1645250	1.1945120		2.6	+/-20
Dibenzofuran	A	5.0000	5.2	1.7283260	1.7843320		3.2	+/-20
Fluorene	A	5.0000	5.1	1.4379840	1.4762590		2.7	+/-20
Phenanthrene	A	5.0000	5.2	1.0236730	1.0623820		3.8	+/-20
Anthracene	A	5.0000	5.5	0.9926226	1.0984360		10.7	+/-20
Fluoranthene	A	5.0000	4.1	1.3760330	1.1290070		-18.0	+/-20
Pyrene	A	5.0000	4.2	1.4011560	1.1698140		-16.5	+/-20
Butylbenzylphthalate	A	5.0000	3.9	0.6475451	0.5829659		-21.6	+/-20 *
Benzo(a)anthracene	A	5.0000	4.9	1.4104100	1.3746290		-2.5	+/-20
Chrysene	A	5.0000	5.3	1.1462500	1.2107550		5.6	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.4	0.5331838	0.5106953		-11.4	+/-20
Benzofluoranthenes, Total	A	10.0000	8.9	1.3383070	1.2224100		-11.2	+/-20
Benzo(a)pyrene	A	5.0000	4.5	1.2312020	1.1389420		-10.9	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.4033590	1.2680450		-14.9	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.6	1.1150690	1.0445360		-8.5	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.3	1.1245240	1.0134420		-14.0	+/-20
2-Fluorophenol	A	7.5000	7.68	1.2585100	1.2890020		2.4	+/-20
Phenol-d5	A	7.5000	8.78	1.4611190	1.7107550		17.1	+/-20
2-Chlorophenol-d4	A	7.5000	8.10	1.2465880	1.3468280		8.0	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.97	0.9313544	0.9253556		-0.6	+/-20
Nitrobenzene-d5	A	5.0000	5.36	0.4390871	0.4708707		7.2	+/-20
2-Fluorobiphenyl	A	5.0000	5.30	1.4267270	1.5111870		5.9	+/-20
2,4,6-Tribromophenol	A	7.5000	7.13	0.2287830	0.2456601		-4.9	+/-20
p-Terphenyl-d14	A	5.0000	4.18	1.1337350	0.9466857		-16.5	+/-20

\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230302A.B\NT10030223141CV.D

Date: 02-MAR-2023 22:38

Client ID:

Sample Info: SEQ-CV\FULL

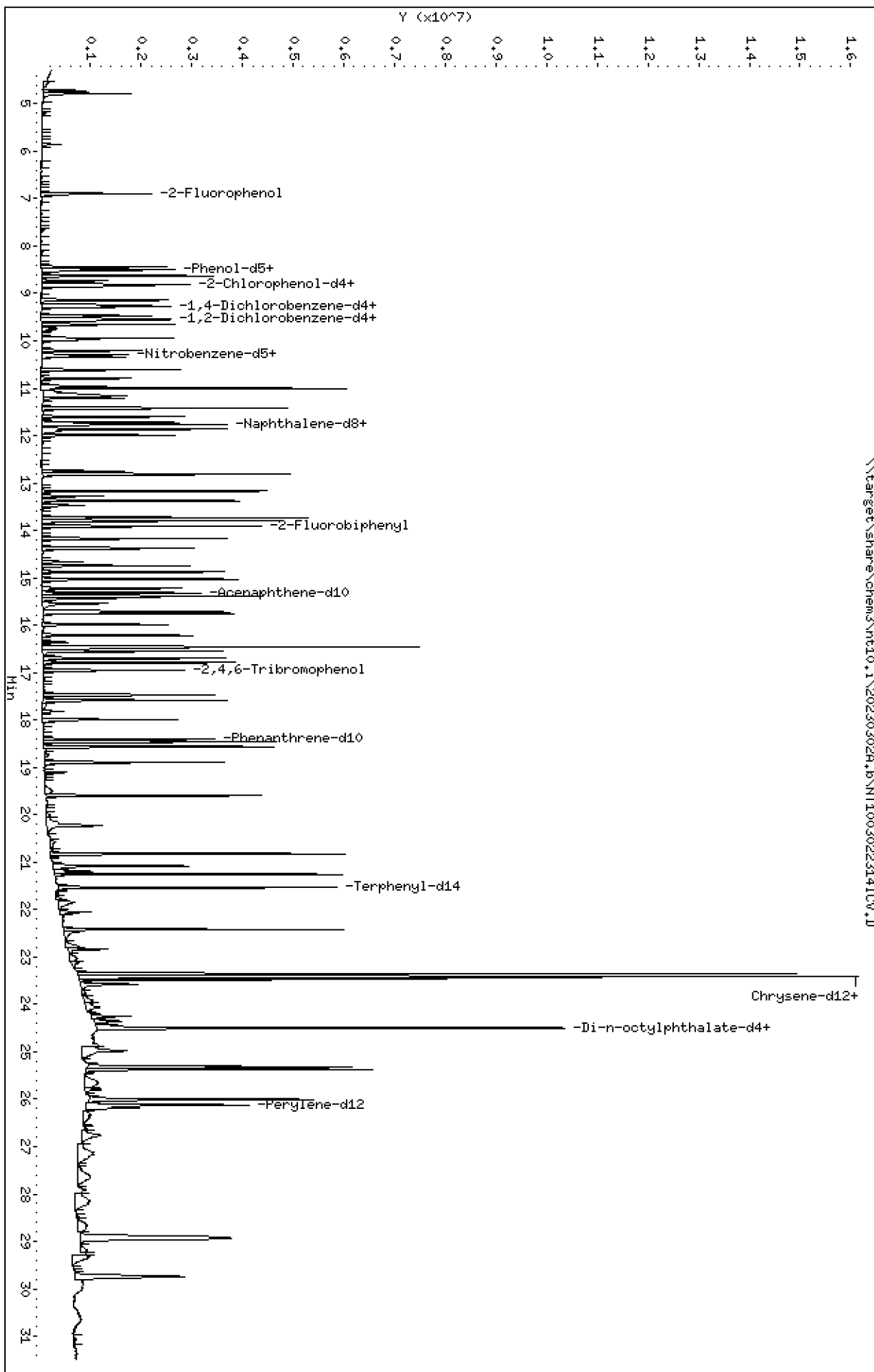
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302A.b\NT1003022314ICV.D

Lab Smp Id: SLC0206-ICV1

Inj Date : 02-MAR-2023 22:38

Operator : VTS

Inst ID: nt10.i

Smp Info : SEQ-CCVFULL

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302A.b\ABN.m

Meth Date : 09-Mar-2023 15:47 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 2

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	1448112	7.50000	7.682
\$ 2 Phenol-d5	99		8.497	8.497	(0.919)	1921924	7.50000	8.781
3 Phenol	94		8.520	8.520	(0.921)	1336117	5.00000	5.742
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1513075	7.50000	8.103
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	961448	5.00000	5.407
6 2-Chlorophenol	128		8.844	8.844	(0.956)	1051243	5.00000	5.419
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	1052113	5.00000	4.919
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	599166	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	1026093	5.00000	4.830
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	693052	5.00000	4.968
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	992876	5.00000	4.829
11 Benzyl alcohol	108		9.480	9.480	(1.025)	635157	5.00000	5.182
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	235266	5.00000	3.969
13 2-Methylphenol	108		9.658	9.658	(1.044)	976313	5.00000	5.284
17 Hexachloroethane	117		10.209	10.209	(1.104)	424142	5.00000	4.864
16 N-Nitroso-di-n-propylamine	70		9.977	9.977	(1.079)	781041	5.00000	5.562
15 4-Methylphenol	108		9.946	9.946	(1.076)	1151059	5.00000	5.155
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	1295354	5.00000	5.362
19 Nitrobenzene	77		10.334	10.334	(0.881)	1173793	5.00000	5.180
20 Isophorone	82		10.791	10.791	(0.920)	1578817	5.00000	5.458
21 2-Nitrophenol	139		10.959	10.959	(0.935)	514402	5.00000	4.206
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	2113141	10.0000	9.518
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	982299	5.00000	5.495
24 Benzoic acid	105		11.171	11.171	(0.953)	1995627	20.0000	15.02
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	1753608	10.0000	9.997
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	817096	5.00000	4.804
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2200781	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	2848515	5.00000	5.043
29 4-Chloroaniline	127		11.865	11.865	(1.012)	2414687	10.0000	9.462
30 Hexachlorobutadiene	225		11.997	11.997	(1.023)	580725	5.00000	4.689
31 4-Chloro-3-methylphenol	107		12.809	12.809	(1.092)	1873652	10.0000	10.01
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	2042483	5.00000	5.118
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	194854	10.0000	5.043

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.730	13.730	(0.896)	1131064	10.0000	10.04
35 2,4,5-Trichlorophenol	196	13.800	13.800	(0.901)	1186907	10.0000	9.855
§ 36 2-Fluorobiphenyl	172	13.916	13.916	(0.909)	2144254	5.00000	5.296
37 2-Chloronaphthalene	162	14.171	14.171	(0.925)	1668996	5.00000	5.251
38 2-Nitroaniline	65	14.373	14.373	(0.938)	897823	10.0000	9.984
39 Dimethylphthalate	163	14.744	14.744	(0.963)	1809965	5.00000	4.937
40 Acenaphthylene	152	15.031	15.031	(0.981)	3190446	5.00000	5.822
41 2,6-Dinitrotoluene	165	14.876	14.876	(0.971)	839477	10.0000	10.10
* 42 Acenaphthene-d10	164	15.317	15.317	(1.000)	1135136	4.00000	
43 3-Nitroaniline	138	15.224	15.224	(0.994)	936327	10.0000	10.13
44 Acenaphthene	153	15.386	15.386	(1.005)	1694917	5.00000	5.129
45 2,4-Dinitrophenol	184	15.440	15.440	(1.008)	378204	20.0000	16.90
46 Dibenzofuran	168	15.750	15.750	(1.028)	2531825	5.00000	5.162
47 4-Nitrophenol	109	15.541	15.541	(1.015)	534484	10.0000	8.032
48 2,4-Dinitrotoluene	165	15.711	15.711	(1.026)	1185023	10.0000	9.784
50 Diethylphthalate	149	16.214	16.214	(1.059)	1851516	5.00000	4.768
49 Fluorene	166	16.453	16.453	(1.074)	2094694	5.00000	5.133
51 4-Chlorophenyl-phenylether	204	16.453	16.453	(1.074)	907517	5.00000	4.860
52 4-Nitroaniline	138	16.492	16.492	(1.077)	1037373	10.0000	10.44
53 4,6-Dinitro-2-methylphenol	198	16.546	16.546	(0.899)	1113909	20.0000	20.95
54 N-Nitrosodiphenylamine	169	16.701	16.701	(0.907)	1644525	5.00000	5.221
§ 55 2,4,6-Tribromophenol	330	16.955	16.955	(1.107)	522858	7.50000	7.130
56 4-Bromophenyl-phenylether	248	17.473	17.473	(0.949)	670972	5.00000	5.257
57 Hexachlorobenzene	284	17.581	17.581	(0.955)	710415	5.00000	4.943
58 Pentachlorophenol	266	17.991	17.991	(0.977)	457563	10.0000	6.642
* 59 Phenanthrene-d10	188	18.409	18.409	(1.000)	2128944	4.00000	
60 Phenanthrene	178	18.456	18.456	(1.003)	2827191	5.00000	5.189
61 Anthracene	178	18.564	18.564	(1.008)	2923136	5.00000	5.533
62 Carbazole	167	18.897	18.897	(1.026)	2669049	5.00000	5.515
63 Di-n-butylphthalate	149	19.593	19.593	(1.064)	3563889	5.00000	5.226
64 Fluoranthene	202	20.823	20.823	(0.889)	3457054	5.00000	4.102
65 Pyrene	202	21.256	21.256	(0.907)	3582007	5.00000	4.174
§ 66 Terphenyl-d14	244	21.535	21.535	(0.919)	2898780	5.00000	4.175
67 Butylbenzylphthalate	149	22.418	22.418	(0.957)	1785059	5.00000	3.922
68 Benzo(a)anthracene	228	23.409	23.409	(0.999)	4209154	5.00000	4.873
* 69 Chrysene-d12	240	23.424	23.424	(1.000)	2449624	4.00000	
70 3,3'-Dichlorobenzidine	252	23.355	23.355	(0.997)	4523769	15.0000	11.59
71 Chrysene	228	23.471	23.471	(1.002)	3707369	5.00000	5.281
72 bis(2-Ethylhexyl)phthalate	149	23.409	23.409	(0.956)	2996974	5.00000	4.431
* 134 Di-n-octylphthalate-d4	153	24.493	24.493	(1.000)	4694735	4.00000	
73 Di-n-octylphthalate	149	24.500	24.500	(1.000)	5347795	5.00000	5.137
74 Benzo(b)fluoranthene	252	25.313	25.313	(0.969)	3988472	5.00000	4.307
75 Benzo(k)fluoranthene	252	25.375	25.375	(0.971)	4099319	5.00000	4.576
76 Benzo(a)pyrene	252	26.002	26.002	(0.995)	3691905	5.00000	4.453
* 77 Perylene-d12	264	26.126	26.126	(1.000)	2593218	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.902	28.902	(1.106)	4110396	5.00000	4.253
79 Dibenzo(a,h)anthracene	278	28.948	28.948	(1.108)	3385886	5.00000	4.576
80 Benzo(g,h,i)perylene	276	29.740	29.740	(1.138)	3285094	5.00000	4.299
90 N-Nitrosodimethylamine	74	4.720	4.720	(0.510)	1281450	10.0000	10.53
91 Aniline	93	8.628	8.628	(0.933)	2953984	10.0000	10.95
93 Benzidine	184	21.078	21.078	(0.900)	2196315	10.0000	5.871
103 Pyridine	79	4.781	4.781	(0.517)	2271247	10.0000	10.52
105 1-methylnaphthalene	142	13.374	13.374	(1.141)	1852779	5.00000	5.130
111 Azobenzene (1,2-DP-Hydrazine)	77	16.786	16.786	(1.096)	2927826	5.00000	5.049

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
187 Total Benzofluoranthenes	252		25.375	25.375	(0.971)	7924940	10.0000	8.885
120 2,3,4,6-Tetrachlorophenol	232		15.989	15.989	(1.044)	522077	5.00000	4.658



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022314ICV.D  
 Lab Smp Id: SLC0206-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\ABN.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 13:19  
 Level:  
 Sample Type:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	599166	299583	1198332	599166	0.00
27 Naphthalene-d8	2200781	1100391	4401562	2200781	0.00
42 Acenaphthene-d10	1135136	567568	2270272	1135136	0.00
59 Phenanthrene-d10	2128944	1064472	4257888	2128944	0.00
69 Chrysene-d12	2449624	1224812	4899248	2449624	0.00
134 Di-n-octylphthala	4694735	2347368	9389470	4694735	0.00
77 Perylene-d12	2593218	1296609	5186436	2593218	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022314ICV.D

Lab ID: SLC0206-ICV1

nt10.i, 20230302A.b\ABN.m, 02-MAR-2023 22:38

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT CCV RRT DELTA COMPOUND  
-----

NONE

No RRT check. Ccal file.

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302A.b

Instrument: nt10.i Date: 02-MAR-2023 Method: 20230302A.b\ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R <sup>2</sup>
2,4-Dinitrophenol	0.989

ICV CAL: NT1003022314ICV.D 02-MAR-2023 22:38

Compound	%D
2,2'-oxybis(1-Chloropropane)	-20.6
Benzoic acid	-24.9
Hexachlorocyclopentadiene	-49.6
Pentachlorophenol	-33.6
Butylbenzylphthalate	-21.6
3,3'-Dichlorobenzidine	-22.7
Benzidine	-41.3



INITIAL CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022325ICV.D

Calibration Date: 03/01/2023

Sequence: SLC0136

Injection Date: 03/03/23

Lab Sample ID: SLC0136-ICV1

Injection Time: 05:36

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.5	1.5534590	1.7143970		10.4	+/-20
4-Methylphenol	A	5.0000	4.5	1.2087680	1.3336500		-10.7	+/-20
Naphthalene	A	5.0000	5.0	1.0266520	1.0224820		-0.4	+/-20
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7338252		1.2	+/-20
Acenaphthylene	A	5.0000	5.7	1.9309320	2.2034420		14.1	+/-20
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2689490		-1.8	+/-20
Acenaphthene	A	5.0000	5.1	1.1645250	1.1887500		2.1	+/-20
Dibenzofuran	A	5.0000	5.2	1.7283260	1.7800890		3.0	+/-20
Fluorene	A	5.0000	5.1	1.4379840	1.4696500		2.2	+/-20
Phenanthrene	A	5.0000	5.1	1.0236730	1.0509190		2.7	+/-20
Anthracene	A	5.0000	5.5	0.9926226	1.0888130		9.7	+/-20
Fluoranthene	A	5.0000	4.1	1.3760330	1.1406580		-17.1	+/-20
Pyrene	A	5.0000	4.2	1.4011560	1.1748540		-16.2	+/-20
Butylbenzylphthalate	A	5.0000	3.7	0.6475451	0.5513184		-25.9	+/-20 *
Benzo(a)anthracene	A	5.0000	5.0	1.4104100	1.4005830		-0.7	+/-20
Chrysene	A	5.0000	5.3	1.1462500	1.2161060		6.1	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.4	0.5331838	0.5114622		-11.3	+/-20
Benzofluoranthenes, Total	A	10.0000	9.1	1.3383070	1.2513650		-9.2	+/-20
Benzo(a)pyrene	A	5.0000	4.5	1.2312020	1.1527590		-9.9	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.0	1.4033590	1.1921920		-19.8	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.3	1.1150690	0.9894349		-13.0	+/-20
Benzo(g,h,i)perylene	A	5.0000	3.9	1.1245240	0.9128509		-22.3	+/-20 *
2-Fluorophenol	A	7.5000	7.68	1.2585100	1.2880380		2.3	+/-20
Phenol-d5	A	7.5000	8.70	1.4611190	1.6951350		16.0	+/-20
2-Chlorophenol-d4	A	7.5000	8.14	1.2465880	1.3536320		8.6	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	5.02	0.9313544	0.9358205		0.5	+/-20
Nitrobenzene-d5	A	5.0000	5.13	0.4390871	0.4503150		2.6	+/-20
2-Fluorobiphenyl	A	5.0000	5.46	1.4267270	1.5572970		9.2	+/-20
2,4,6-Tribromophenol	A	7.5000	7.09	0.2287830	0.2440251		-5.5	+/-20
p-Terphenyl-d14	A	5.0000	4.23	1.1337350	0.9593738		-15.4	+/-20

\* Values outside of QC limits



**INITIAL CALIBRATION CHECK**  
**EPA 8270E**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00019</u>
Lab File ID:	<u>NT1003022325ICV.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0136</u>	Injection Date:	<u>03/03/23</u>
Lab Sample ID:	<u>SLC0136-ICV1</u>	Injection Time:	<u>05:36</u>
Sequence Name:	<u>ABN 5</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	84410.2500	1.0000			
Naphthalene-d8	A	4.0000	4.0	316296.8000	1.0000			
Acenaphthene-d10	A	4.0000	4.0	173096.3000	1.0000			
Phenanthrene-d10	A	4.0000	4.0	344194.3000	1.0000			
Chrysene-d12	A	4.0000	4.0	254881.0000	1.0000			*
Di-n-Octylphthalate-d4	A	4.0000	4.0	506777.8000	1.0000			*
Perylene-d12	A	4.0000	4.0	256852.3000	1.0000			*

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302B.B\NT10030223251CV.D

Date: 03-MAR-2023 05:36

Client ID:

Sample Info: SEQ-CV\FULL

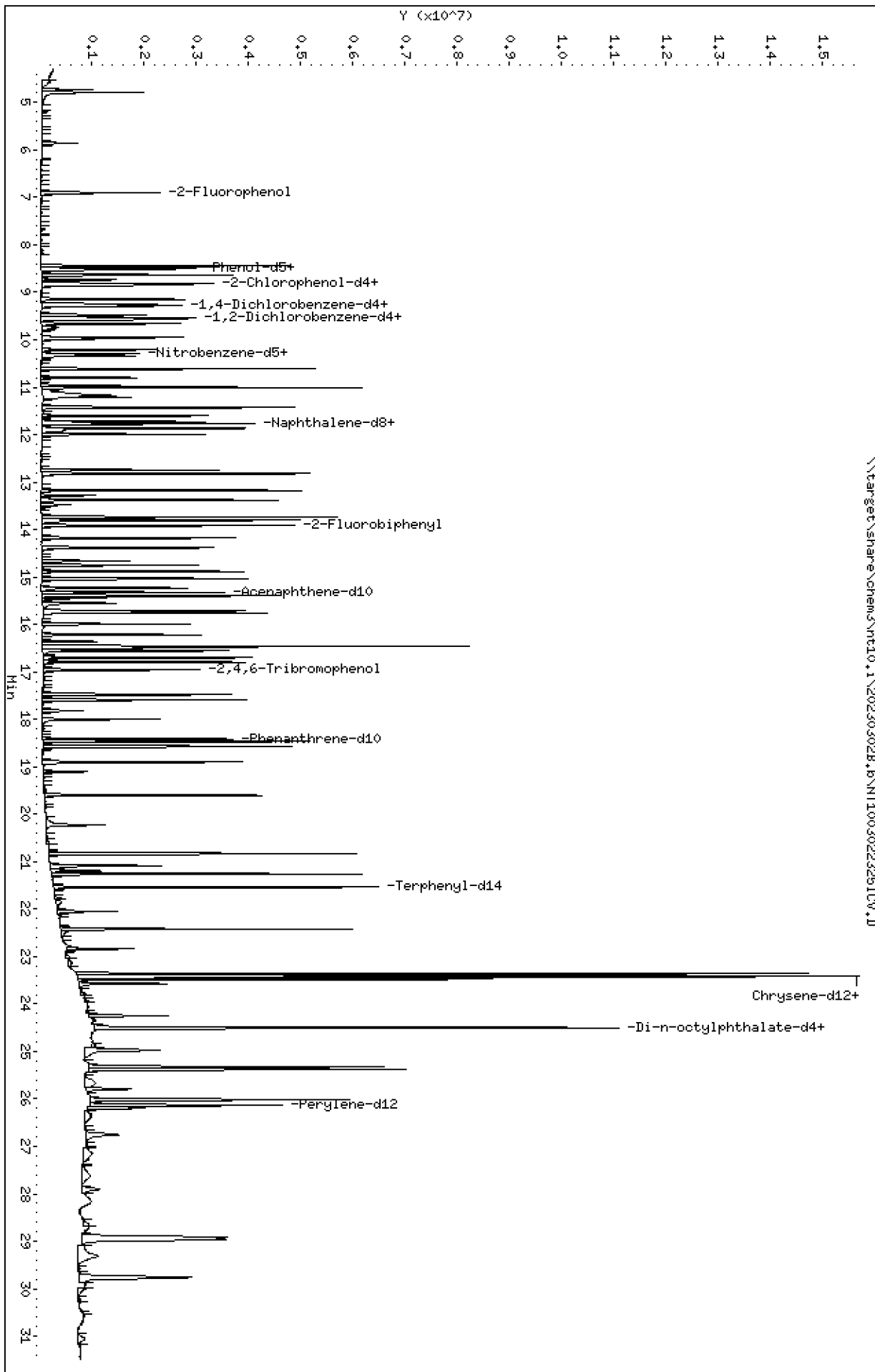
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.B\NT10030223251CV.D



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022325ICV.D

Lab Smp Id: SLC0136-ICV1

Inj Date : 03-MAR-2023 05:36

Operator : VTS

Inst ID: nt10.i

Smp Info : SEQ-CCVFULL

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 2

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	AMOUNTS					
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)
1 2-Fluorophenol	112		6.905	6.905	(0.747)	1626480	7.50000	7.676
2 Phenol-d5	99		8.504	8.504	(0.920)	2140546	7.50000	8.701
3 Phenol	94		8.527	8.527	(0.922)	1443246	5.00000	5.518
5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1709310	7.50000	8.144
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	1048479	5.00000	5.246
6 2-Chlorophenol	128		8.852	8.852	(0.957)	1185759	5.00000	5.438
7 1,3-Dichlorobenzene	146		9.146	9.146	(0.989)	1169771	5.00000	4.866
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.246	(1.000)	673471	4.00000	
9 1,4-Dichlorobenzene	146		9.285	9.285	(1.004)	1148697	5.00000	4.810
\$ 10 1,2-Dichlorobenzene-d4	152		9.541	9.541	(1.032)	787810	5.00000	5.024
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	1125154	5.00000	4.868
11 Benzyl alcohol	108		9.479	9.479	(1.025)	694184	5.00000	5.043
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.735	(1.053)	255820	5.00000	3.839
13 2-Methylphenol	108		9.658	9.658	(1.044)	1054384	5.00000	5.082
17 Hexachloroethane	117		10.217	10.217	(1.105)	469885	5.00000	4.794
16 N-Nitroso-di-n-propylamine	70		9.984	9.984	(1.080)	813754	5.00000	5.156
15 4-Methylphenol	108		9.953	9.953	(1.076)	1122718	5.00000	4.466
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	1393207	5.00000	5.128
19 Nitrobenzene	77		10.341	10.341	(0.882)	1267177	5.00000	4.972
20 Isophorone	82		10.799	10.799	(0.921)	1647373	5.00000	5.064
21 2-Nitrophenol	139		10.958	10.958	(0.935)	566612	5.00000	4.117
22 2,4-Dimethylphenol	107		11.009	11.009	(0.939)	2287566	10.0000	9.170
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	1038573	5.00000	5.166
24 Benzoic acid	105		11.179	11.179	(0.953)	1736234	20.0000	11.71
25 2,4-Dichlorophenol	162		11.425	11.425	(0.974)	2067451	10.0000	10.47
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	939258	5.00000	4.911
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2475080	4.00000	
28 Naphthalene	128		11.772	11.772	(1.004)	3163406	5.00000	4.980
29 4-Chloroaniline	127		11.873	11.873	(1.013)	2676625	10.0000	9.330
30 Hexachlorobutadiene	225		11.996	11.996	(1.023)	658788	5.00000	4.730
31 4-Chloro-3-methylphenol	107		12.817	12.817	(1.093)	2010188	10.0000	9.567
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	2270345	5.00000	5.059
33 Hexachlorocyclopentadiene	237		13.474	13.474	(0.879)	129204	10.0000	3.080

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.738	13.738	(0.896)	1264218	10.0000	10.19
35 2,4,5-Trichlorophenol	196	13.807	13.807	(0.901)	1374155	10.0000	10.34
§ 36 2-Fluorobiphenyl	172	13.916	13.916	(0.908)	2431065	5.00000	5.458
37 2-Chloronaphthalene	162	14.179	14.179	(0.925)	1892507	5.00000	5.412
38 2-Nitroaniline	65	14.380	14.380	(0.938)	930959	10.0000	9.429
39 Dimethylphthalate	163	14.751	14.751	(0.963)	1980931	5.00000	4.912
40 Acenaphthylene	152	15.038	15.038	(0.981)	3439749	5.00000	5.706
41 2,6-Dinitrotoluene	165	14.883	14.883	(0.971)	909175	10.0000	9.944
* 42 Acenaphthene-d10	164	15.324	15.324	(1.000)	1248864	4.00000	
43 3-Nitroaniline	138	15.231	15.231	(0.994)	981598	10.0000	9.651
44 Acenaphthene	153	15.394	15.394	(1.005)	1855734	5.00000	5.104
45 2,4-Dinitrophenol	184	15.448	15.448	(1.008)	309119	20.0000	12.75
46 Dibenzofuran	168	15.749	15.749	(1.028)	2778862	5.00000	5.150
47 4-Nitrophenol	109	15.548	15.548	(1.015)	564718	10.0000	7.726
48 2,4-Dinitrotoluene	165	15.718	15.718	(1.026)	1288797	10.0000	9.677
50 Diethylphthalate	149	16.221	16.221	(1.059)	2011981	5.00000	4.709
49 Fluorene	166	16.461	16.461	(1.074)	2294241	5.00000	5.110
51 4-Chlorophenyl-phenylether	204	16.461	16.461	(1.074)	1027447	5.00000	4.994
52 4-Nitroaniline	138	16.499	16.499	(1.077)	1095832	10.0000	10.02
53 4,6-Dinitro-2-methylphenol	198	16.554	16.554	(0.899)	1111675	20.0000	19.02
54 N-Nitrosodiphenylamine	169	16.700	16.700	(0.907)	1774087	5.00000	5.088
§ 55 2,4,6-Tribromophenol	330	16.962	16.962	(1.107)	571414	7.50000	7.085
56 4-Bromophenyl-phenylether	248	17.480	17.480	(0.949)	750373	5.00000	5.311
57 Hexachlorobenzene	284	17.588	17.588	(0.955)	803183	5.00000	5.048
58 Pentachlorophenol	266	17.999	17.999	(0.977)	393895	10.0000	5.212
* 59 Phenanthrene-d10	188	18.416	18.416	(1.000)	2356836	4.00000	
60 Phenanthrene	178	18.463	18.463	(1.003)	3096054	5.00000	5.133
61 Anthracene	178	18.571	18.571	(1.008)	3207692	5.00000	5.485
62 Carbazole	167	18.904	18.904	(1.026)	2974323	5.00000	5.551
63 Di-n-butylphthalate	149	19.600	19.600	(1.064)	3918094	5.00000	5.191
64 Fluoranthene	202	20.830	20.830	(0.889)	3875003	5.00000	4.145
65 Pyrene	202	21.264	21.264	(0.907)	3991172	5.00000	4.192
§ 66 Terphenyl-d14	244	21.534	21.534	(0.919)	3259150	5.00000	4.231
67 Butylbenzylphthalate	149	22.417	22.417	(0.957)	1872919	5.00000	3.706
68 Benzo(a)anthracene	228	23.416	23.416	(0.999)	4758009	5.00000	4.965
* 69 Chrysene-d12	240	23.431	23.431	(1.000)	2717731	4.00000	
70 3,3'-Dichlorobenzidine	252	23.362	23.362	(0.997)	4767797	15.0000	11.02
71 Chrysene	228	23.478	23.478	(1.002)	4131311	5.00000	5.305
72 bis(2-Ethylhexyl)phthalate	149	23.408	23.408	(0.956)	3163675	5.00000	4.437
* 134 Di-n-octylphthalate-d4	153	24.492	24.492	(1.000)	4948440	4.00000	
73 Di-n-octylphthalate	149	24.508	24.508	(1.001)	5594743	5.00000	5.099
74 Benzo(b)fluoranthene	252	25.328	25.328	(0.969)	4396459	5.00000	4.389
75 Benzo(k)fluoranthene	252	25.375	25.375	(0.971)	4521767	5.00000	4.667
76 Benzo(a)pyrene	252	26.017	26.017	(0.996)	4037443	5.00000	4.504
* 77 Perylene-d12	264	26.134	26.134	(1.000)	2801934	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.917	28.917	(1.106)	4175553	5.00000	4.010 (M)
79 Dibenzo(a,h)anthracene	278	28.963	28.963	(1.108)	3465414	5.00000	4.348
80 Benzo(g,h,i)perylene	276	29.763	29.763	(1.139)	3197185	5.00000	3.887 (M)
90 N-Nitrosodimethylamine	74	4.727	4.727	(0.511)	1457284	10.0000	10.65
91 Aniline	93	8.635	8.635	(0.934)	3162667	10.0000	10.43
93 Benzidine	184	21.078	21.078	(0.900)	1773208	10.0000	4.272
103 Pyridine	79	4.781	4.781	(0.517)	2470447	10.0000	10.18
105 1-methylnaphthalene	142	13.374	13.374	(1.141)	2047046	5.00000	5.040
111 Azobenzene (1,2-DP-Hydrazine)	77	16.793	16.793	(1.096)	2980269	5.00000	4.671



Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	
187 Total Benzofluoranthenes	252		25.375	25.375	(0.971)	8765605	10.0000	9.085
120 2,3,4,6-Tetrachlorophenol	232		15.989	15.989	(1.043)	542987	5.00000	4.417

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022325ICV.D  
 Lab Smp Id: SLC0136-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 22:38  
 Level:  
 Sample Type:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	673471	0.00
27 Naphthalene-d8	2475080	1237540	4950160	2475080	0.00
42 Acenaphthene-d10	1248864	624432	2497728	1248864	0.00
59 Phenanthrene-d10	2356836	1178418	4713672	2356836	0.00
69 Chrysene-d12	2717731	1358866	5435462	2717731	0.00
134 Di-n-octylphthala	4948440	2474220	9896880	4948440	0.00
77 Perylene-d12	2801934	1400967	5603868	2801934	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022325ICV.D

Lab ID: SLC0136-ICV1

nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 05:36

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

No RRT check. Ccal file.

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

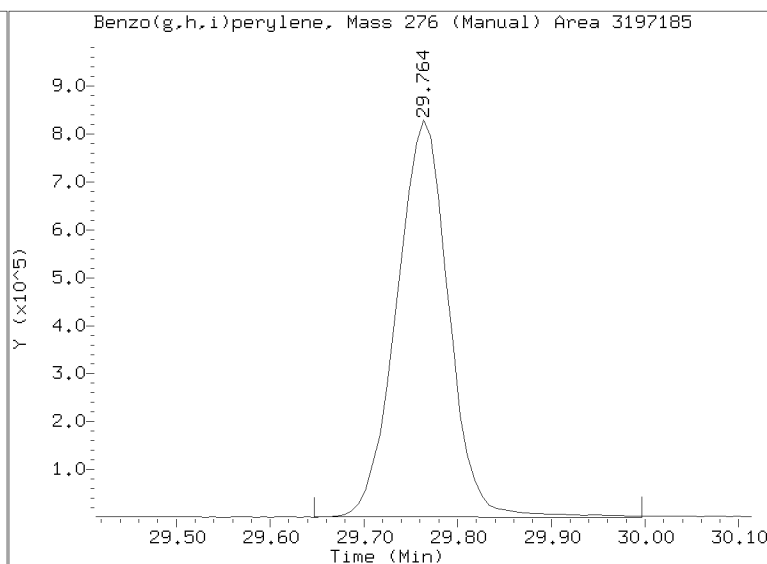
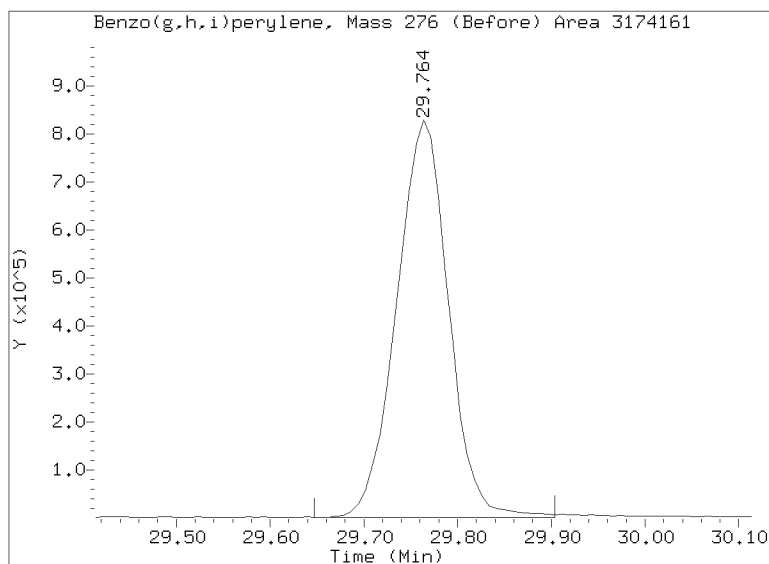
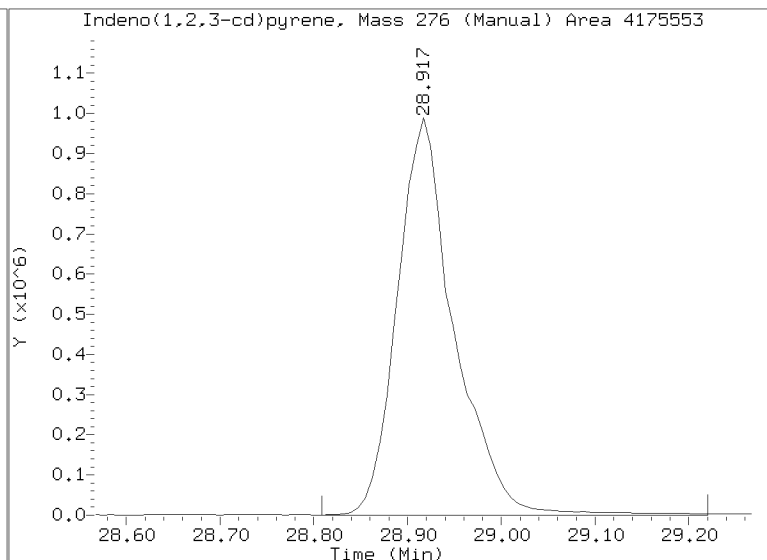
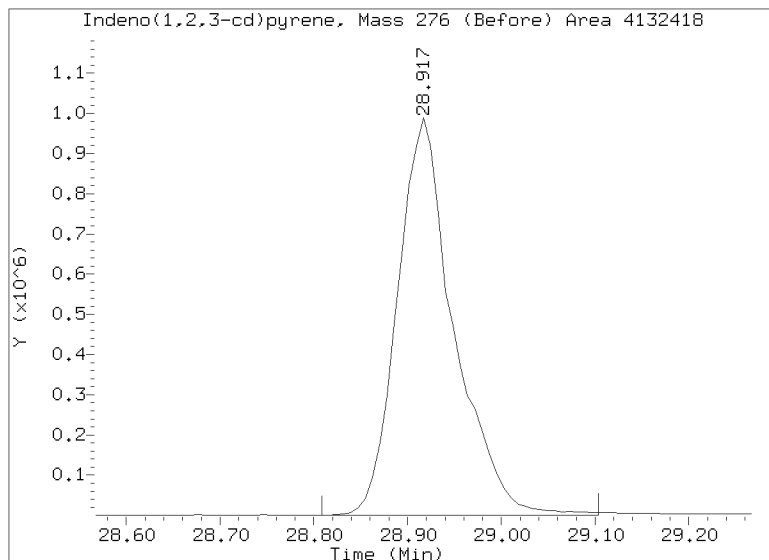
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022325ICV.D

Injection Date: 03-MAR-2023 05:36

Lab ID:SLC0136-ICV1 Client ID:

Report Date: 03/10/2023 07:33



Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b

Instrument: nt10.i Date: 03-MAR-2023 Method: 20230302B.b\ABN.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R <sup>2</sup>
2,4-Dinitrophenol	0.989

ICV CAL: NT1003022325ICV.D 03-MAR-2023 05:36

Compound	%D
2,2'-oxybis(1-Chloropropane)	-23.2
Benzoic acid	-41.4
Hexachlorocyclopentadiene	-69.2
2,4-Dinitrophenol	-36.3
4-Nitrophenol	-22.7
Pentachlorophenol	-47.9
Butylbenzylphthalate	-25.9
3,3'-Dichlorobenzidine	-26.5
Benzo(g,h,i)perylene	-22.3
Benzidine	-57.3



SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003012311.D

Calibration Date: 03/01/2023

Sequence: SLC0084

Injection Date: 03/01/23

Lab Sample ID: SLC0084-SCV1

Injection Time: 21:46

Sequence Name: SCV 5.0

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.9	1.5534590	1.5075140		-3.0	+/-20
bis(2-chloroethyl) ether	A	5.0000	5.9	1.1870870	1.4074350		18.6	+/-20
2-Chlorophenol	A	5.0000	4.7	1.2950380	1.2153530		-6.2	+/-20
1,3-Dichlorobenzene	A	5.0000	5.3	1.4278260	1.5038770		5.3	+/-20
1,4-Dichlorobenzene	A	5.0000	5.2	1.4182650	1.4795020		4.3	+/-20
1,2-Dichlorobenzene	A	5.0000	5.2	1.3727590	1.4260290		3.9	+/-20
Benzyl Alcohol	A	5.0000	4.9	0.7104711	0.8002285		-2.0	+/-20
2,2'-Oxybis(1-chloropropane)	A	5.0000	6.2	0.3957681	0.4932577		24.6	+/-20 *
2-Methylphenol	A	5.0000	4.2	1.0954470	1.0287080		-16.2	+/-20
Hexachloroethane	A	5.0000	5.4	0.5821386	0.6336697		8.9	+/-20
N-Nitroso-di-n-Propylamine	A	5.0000	5.9	0.9374094	1.1070890		18.1	+/-20
4-Methylphenol	A	5.0000	4.2	1.2087680	1.2666790		-15.2	+/-20
Nitrobenzene	A	5.0000	5.6	0.4118860	0.4587792		11.4	+/-20
Isophorone	A	5.0000	7.7	0.5257709	0.8066960		53.4	+/-20 *
2-Nitrophenol	A	5.0000	3.2	0.1627036	0.1451285		-35.1	+/-20 *
2,4-Dimethylphenol	A	5.0000	3.5	0.3830403	0.2785662		-29.9	+/-20 *
Bis(2-Chloroethoxy)methane	A	5.0000	6.7	0.3249172	0.4371566		34.5	+/-20 *
2,4-Dichlorophenol	A	5.0000	4.4	0.2612827	0.2786176		-11.3	+/-20
1,2,4-Trichlorobenzene	A	5.0000	4.9	0.3091179	0.3034222		-1.8	+/-20
Naphthalene	A	5.0000	5.3	1.0266520	1.0790290		5.1	+/-20
Benzoic acid	A	10.000	5.6	0.1970511	0.1331005		-43.6	+/-20 *
4-Chloroaniline	A	5.0000	3.8	0.4009859	0.3447752		-24.2	+/-20 *
Hexachlorobutadiene	A	5.0000	5.0	0.2250808	0.2257331		0.3	+/-20
4-Chloro-3-Methylphenol	A	5.0000	4.5	0.3168628	0.2958278		-11.0	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7252818	0.7181482		-1.0	+/-20
Hexachlorocyclopentadiene	A	5.0000	2.6	0.1096304	0.0686178		-48.8	+/-20 *
2,4,6-Trichlorophenol	A	5.0000	4.1	0.3635155	0.3174533		-17.6	+/-20
2,4,5-Trichlorophenol	A	5.0000	4.1	0.3974340	0.3415557		-17.0	+/-20
2-Chloronaphthalene	A	5.0000	5.3	1.1200160	1.1792440		5.3	+/-20
2-Nitroaniline	A	5.0000	5.0	0.2857098	0.3129766		0.5	+/-20
Acenaphthylene	A	5.0000	5.8	1.9309320	2.2420970		16.1	+/-20
Dimethylphthalate	A	5.0000	5.4	1.2917940	1.3911230		7.7	+/-20
2,6-Dinitrotoluene	A	5.0000	5.2	0.2723393	0.2988779		3.7	+/-20

\* Values outside of QC limits



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003012311.D

Calibration Date: 03/01/2023

Sequence: SLC0084

Injection Date: 03/01/23

Lab Sample ID: SLC0084-SCV1

Injection Time: 21:46

Sequence Name: SCV 5.0

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Acenaphthene	A	5.0000	5.2	1.1645250	1.2003320		3.1	+/-20
3-Nitroaniline	A	5.0000	5.2	0.3257650	0.3369711		3.4	+/-20
2,4-Dinitrophenol	A	5.0000	0.3	0.0558713	0.0039765		-94.7	+/-20 *
Dibenzofuran	A	5.0000	5.0	1.7283260	1.7261300		-0.1	+/-20
4-Nitrophenol	A	5.0000	3.8	0.2049826	0.1754079		-23.6	+/-20 *
2,4-Dinitrotoluene	A	5.0000	4.7	0.3852197	0.3955023		-5.4	+/-20
Fluorene	A	5.0000	5.3	1.4379840	1.5256380		6.1	+/-20
4-Chlorophenylphenyl ether	A	5.0000	5.3	0.6424026	0.6943814		5.1	+/-20
Diethyl phthalate	A	5.0000	5.6	1.3684860	1.5432660		12.8	+/-20
4-Nitroaniline	A	5.0000	5.2	0.3501692	0.3664427		4.6	+/-20
4,6-Dinitro-2-methylphenol	A	5.0000	1.3	0.0712506	0.0241548		-74.2	+/-20 *
N-Nitrosodiphenylamine	A	5.0000	5.4	0.5918253	0.6410493		8.3	+/-20
4-Bromophenyl phenyl ether	A	5.0000	5.5	0.2398060	0.2618590		9.2	+/-20
Hexachlorobenzene	A	5.0000	4.8	0.2700430	0.2595304		-3.9	+/-20
Pentachlorophenol	A	5.0000	3.5	0.1145550	0.0886055		-30.2	+/-20 *
Phenanthrene	A	5.0000	5.1	1.0236730	1.0409810		1.7	+/-20
Anthracene	A	5.0000	4.6	0.9926226	0.9101788		-8.3	+/-20
Carbazole	A	5.0000	5.3	0.9093581	0.9702244		6.7	+/-20
Di-n-Butylphthalate	A	5.0000	5.5	1.1818970	1.4025400		9.3	+/-20
Fluoranthene	A	5.0000	4.5	1.3760330	1.2499020		-9.2	+/-20
Pyrene	A	5.0000	4.6	1.4011560	1.2963060		-7.5	+/-20
Butylbenzylphthalate	A	5.0000	4.5	0.6475451	0.6710971		-9.5	+/-20
Benzo(a)anthracene	A	5.0000	4.6	1.4104100	1.2914460		-8.4	+/-20
3,3'-Dichlorobenzidine	A	10.000	7.4	0.5458244	0.4679806		-26.2	+/-20 *
Chrysene	A	5.0000	5.0	1.1462500	1.1386240		-0.7	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	5.0	0.5331838	0.5732313		-0.9	+/-20
Di-n-Octylphthalate	A	5.0000	5.8	0.8870063	1.0367270		16.9	+/-20
Benzo(a)fluoranthene, Total	A	10.000	8.9	1.3383070	1.2252050		-11.0	+/-20
Benzo(a)pyrene	A	5.0000	4.4	1.2312020	1.1368210		-11.1	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.4033590	1.2968100		-13.1	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.6	1.1150690	1.0521910		-7.8	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.6	1.1245240	1.0882170		-8.0	+/-20
1-Methylnaphthalene	A	5.0000	5.2	0.6564478	0.6851418		4.4	+/-20
2-Fluorophenol	A	7.5000	0.00	1.2585100				+/-20 *

\* Values outside of QC limits



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8270E**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00019</u>
Lab File ID:	<u>NT1003012311.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0084</u>	Injection Date:	<u>03/01/23</u>
Lab Sample ID:	<u>SLC0084-SCV1</u>	Injection Time:	<u>21:46</u>
Sequence Name:	<u>SCV 5.0</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol-d5	A	7.5000	0.00	1.4611190				+/-20 *
2-Chlorophenol-d4	A	7.5000	0.00	1.2465880				+/-20 *
1,2-Dichlorobenzene-d4	A	5.0000	4.29	0.9313544	0.8000000		-14.1	+/-20
Nitrobenzene-d5	A	5.0000	0.00	0.4390871				+/-20 *
2-Fluorobiphenyl	A	5.0000	0.00	1.4267270				+/-20 *
2,4,6-Tribromophenol	A	7.5000	0.00	0.2287830				+/-20 *
p-Terphenyl-d14	A	5.0000	0.0196	1.1337350	0.0044473		-99.6	+/-20 *

\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230301.1\NT1003012311.D

Date: 01-MAR-2023 21:46

Client ID:

Sample Info: SEQ-SCV1

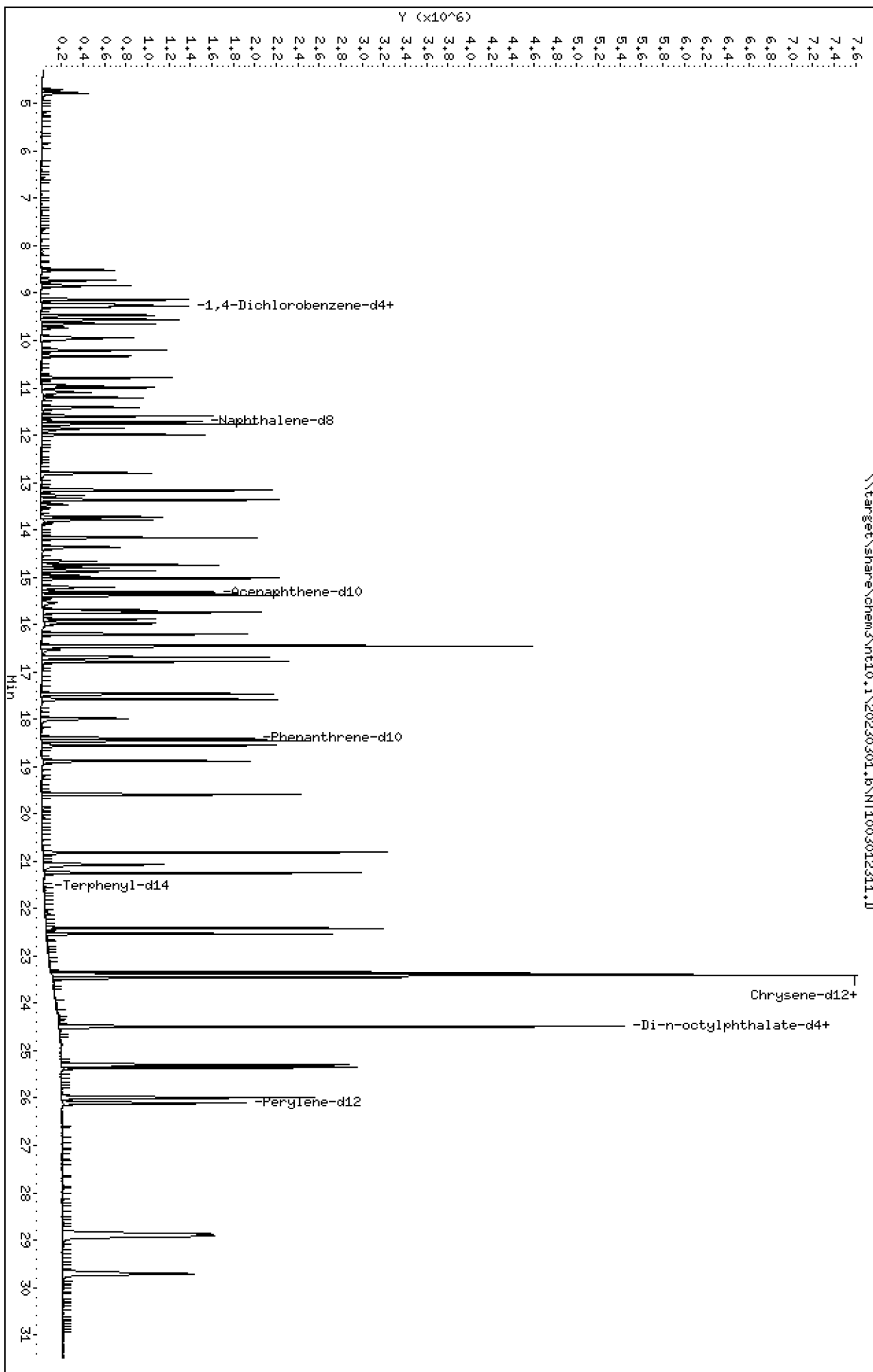
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

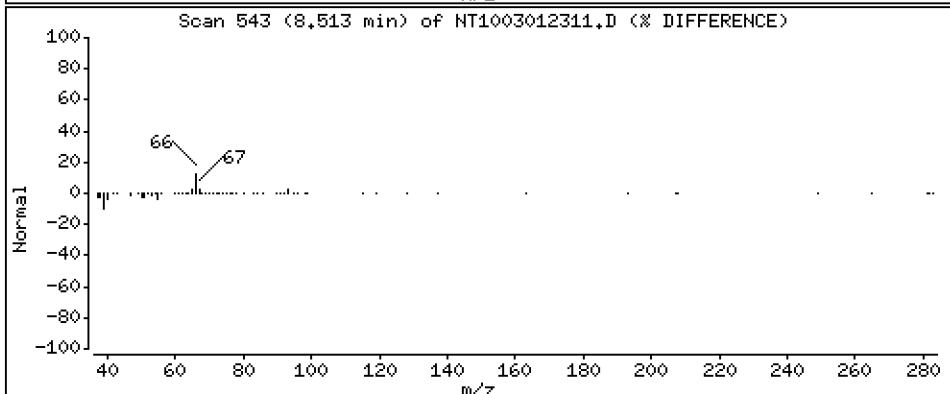
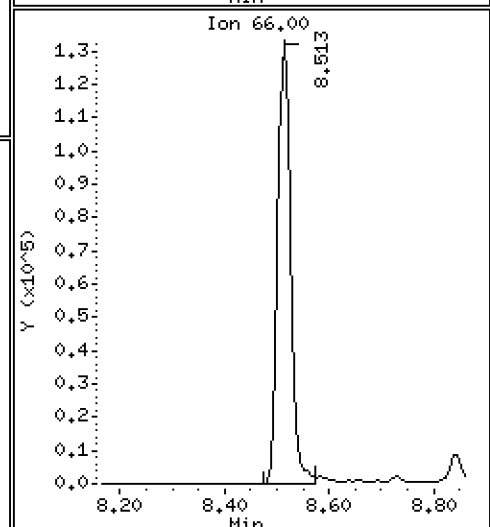
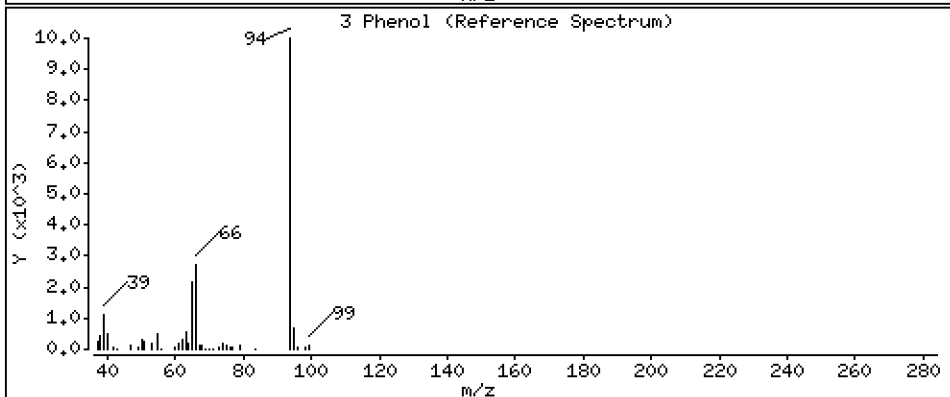
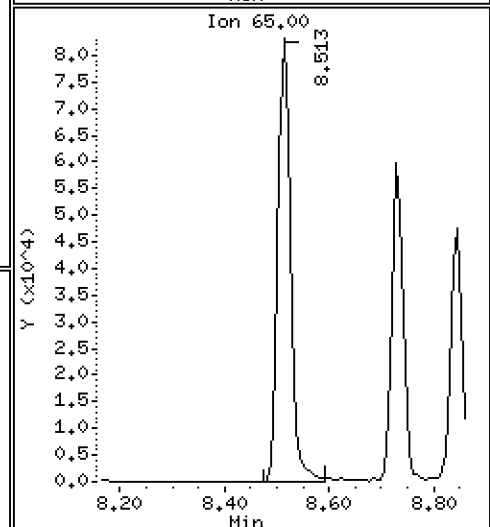
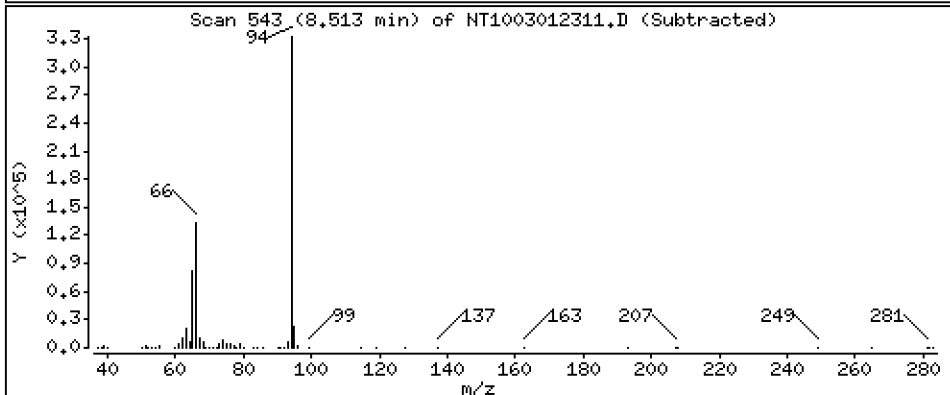
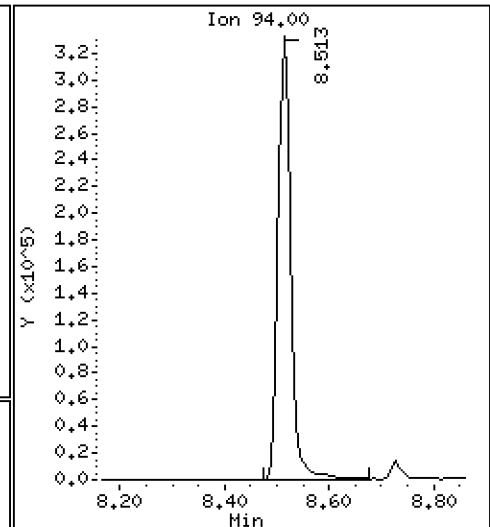
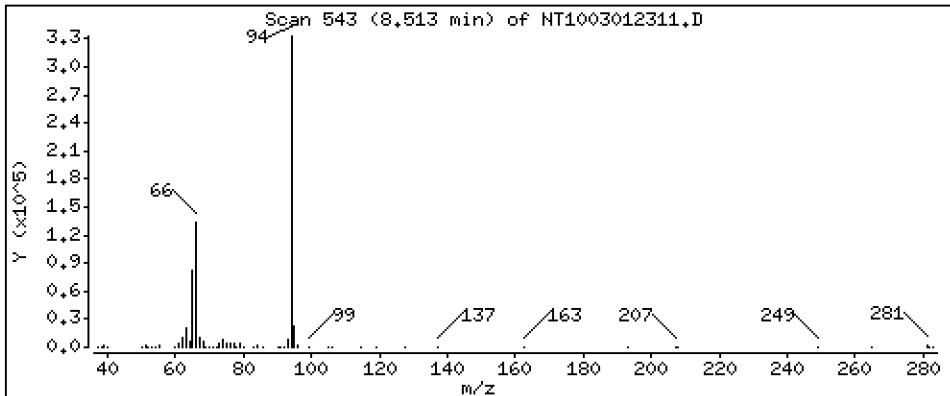
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,852 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

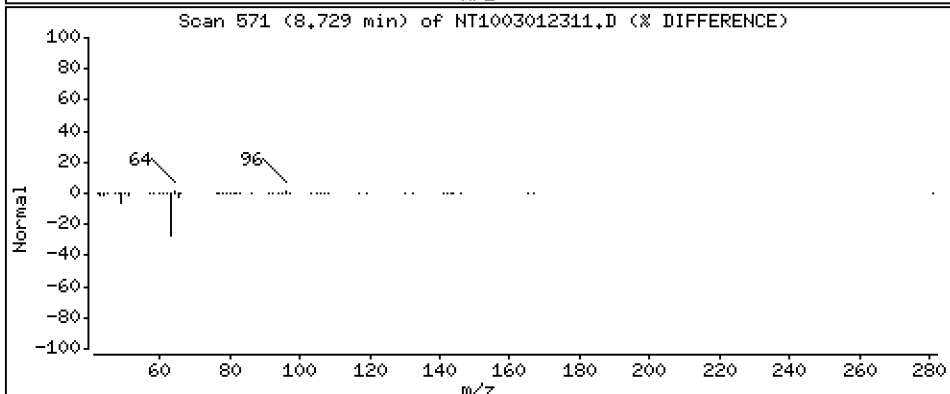
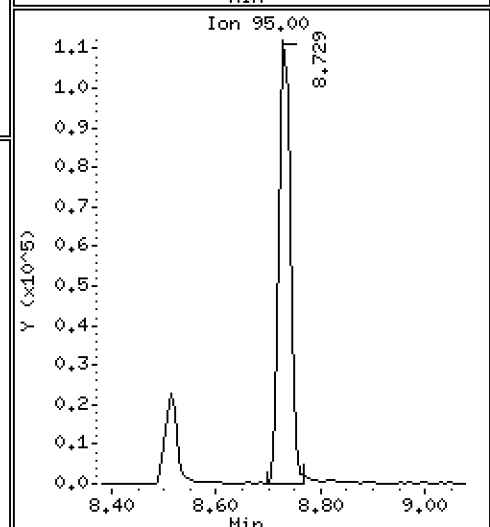
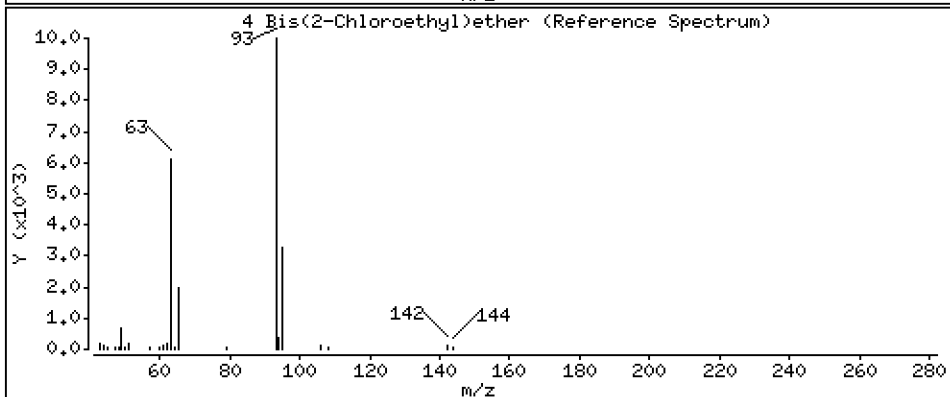
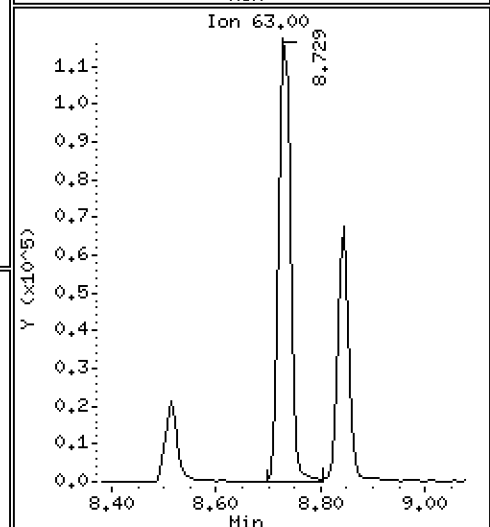
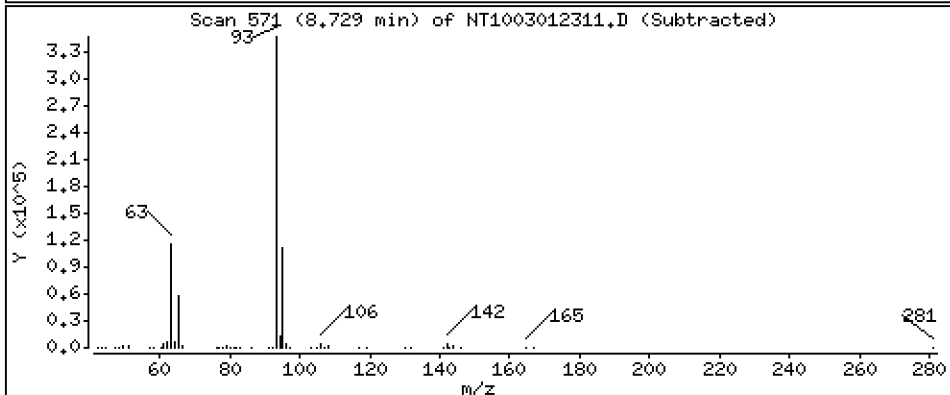
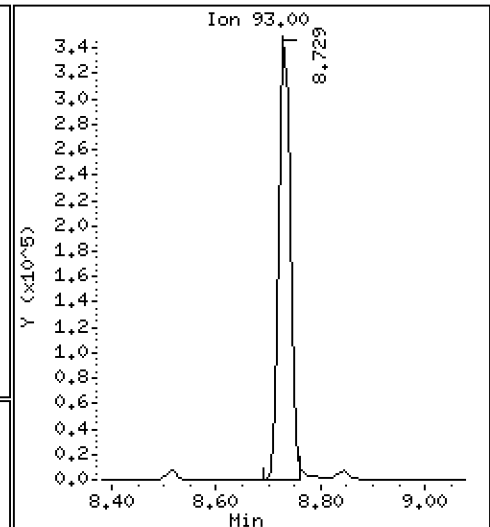
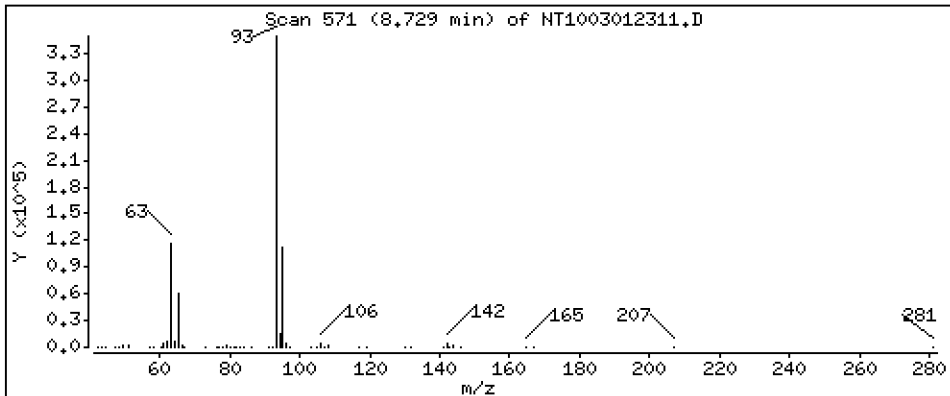
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,928 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

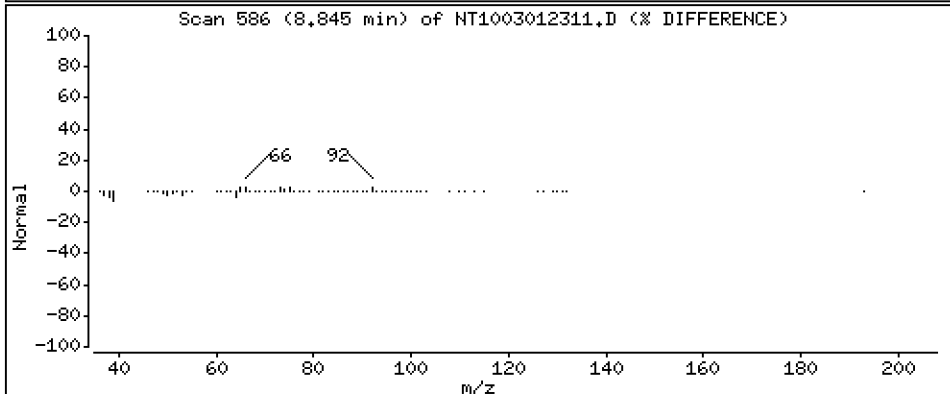
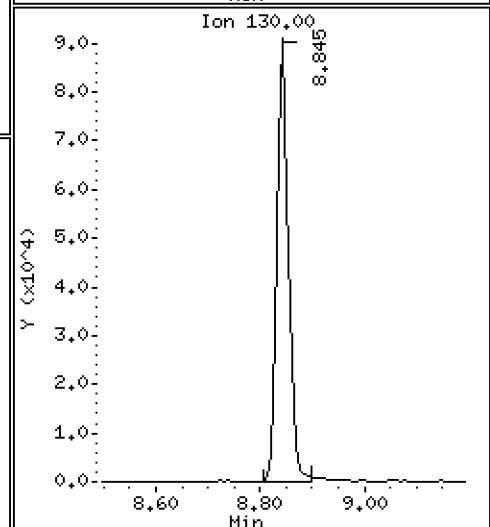
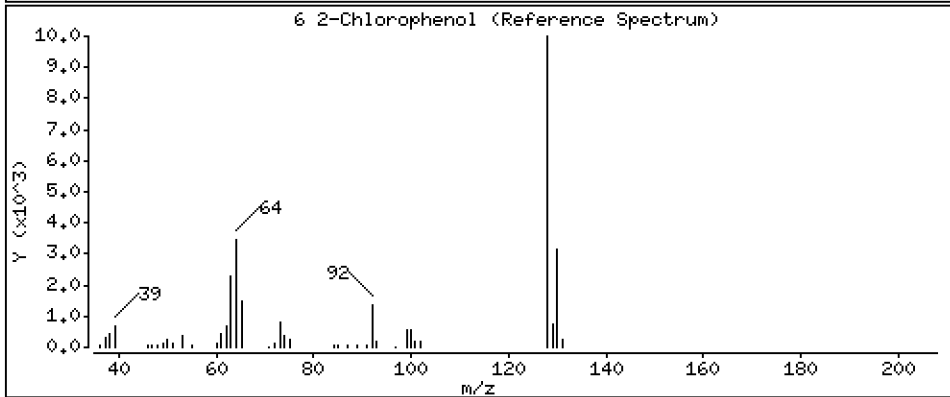
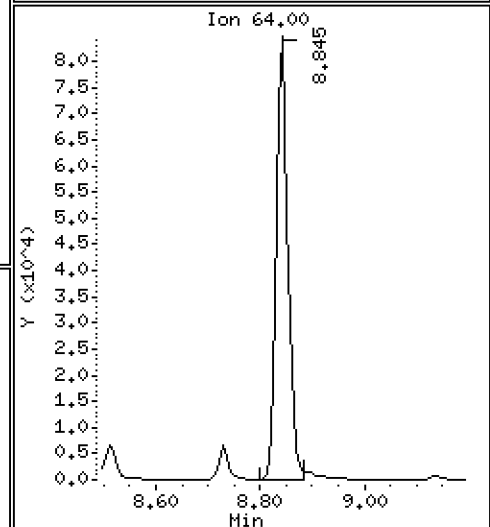
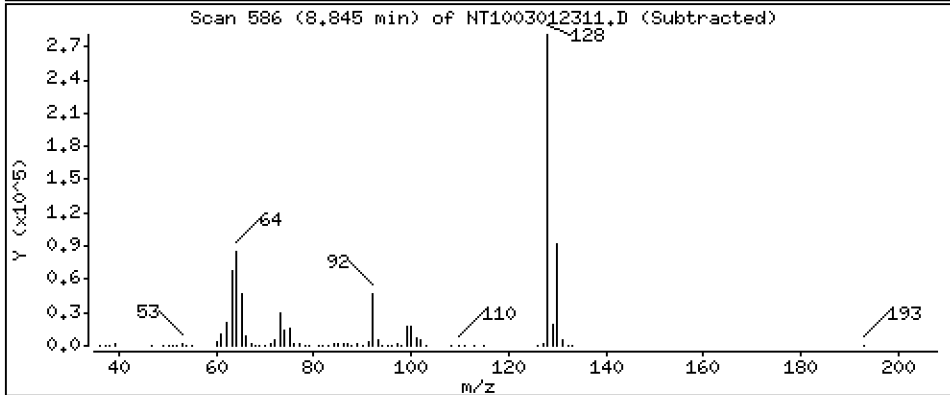
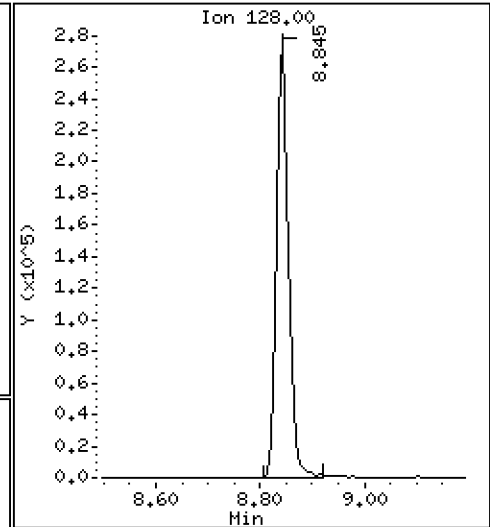
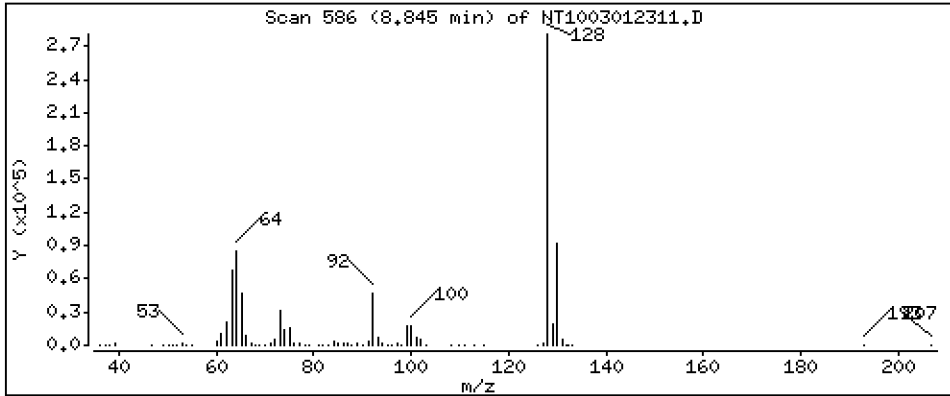
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

6 2-Chlorophenol

Concentration: 4.692 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

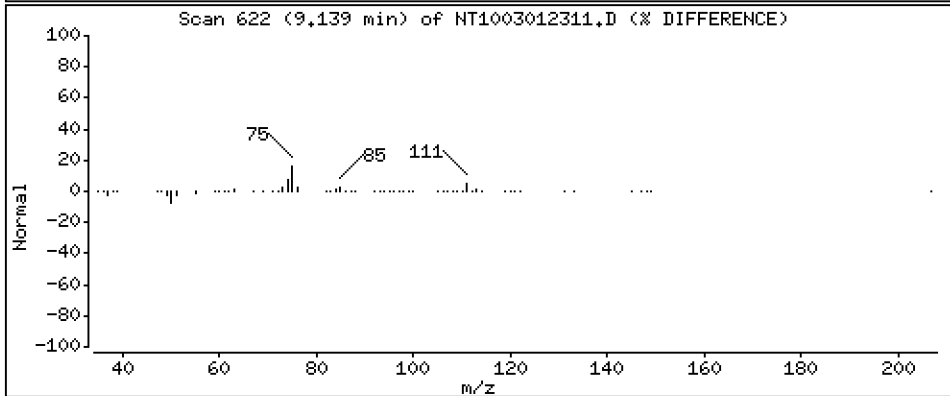
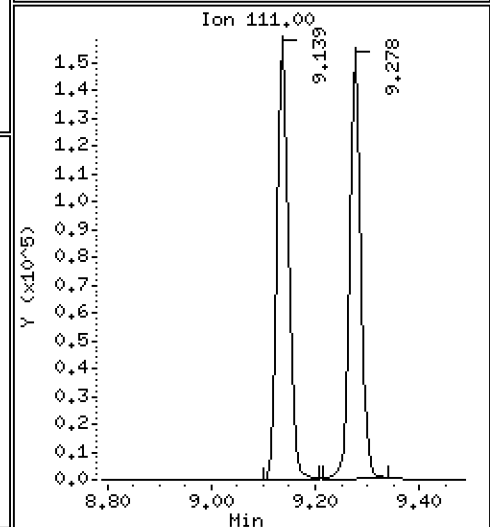
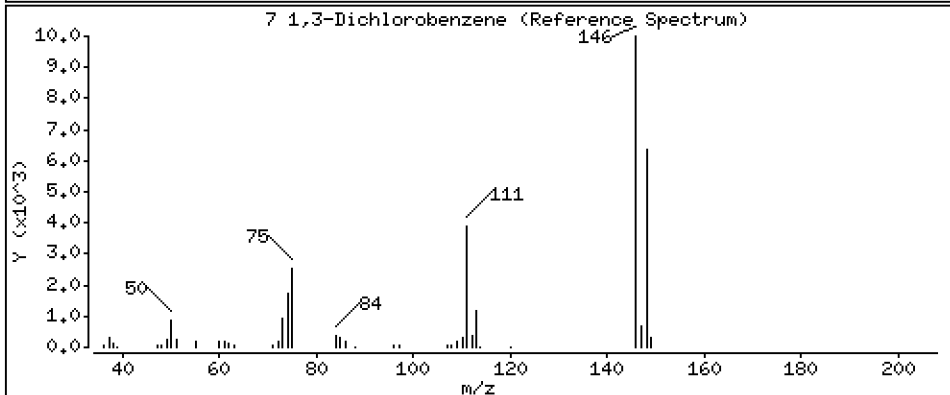
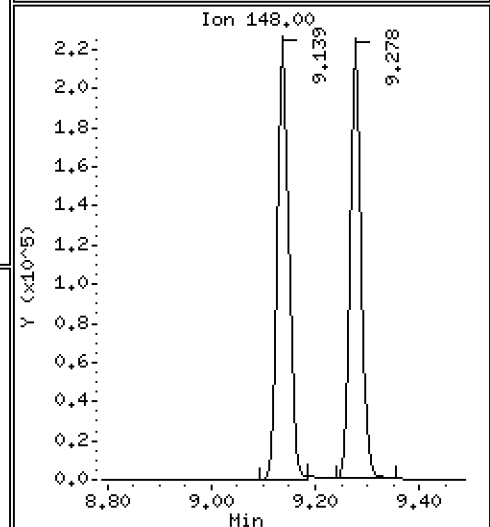
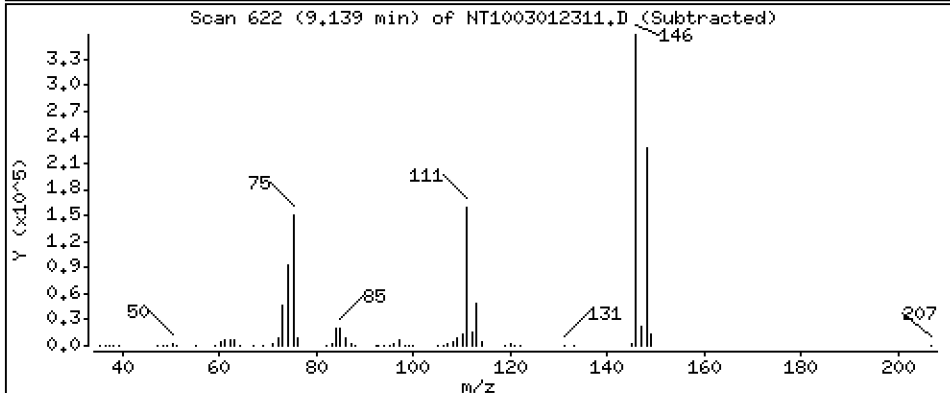
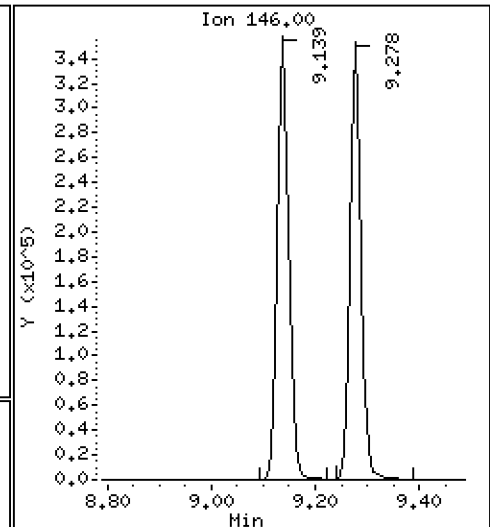
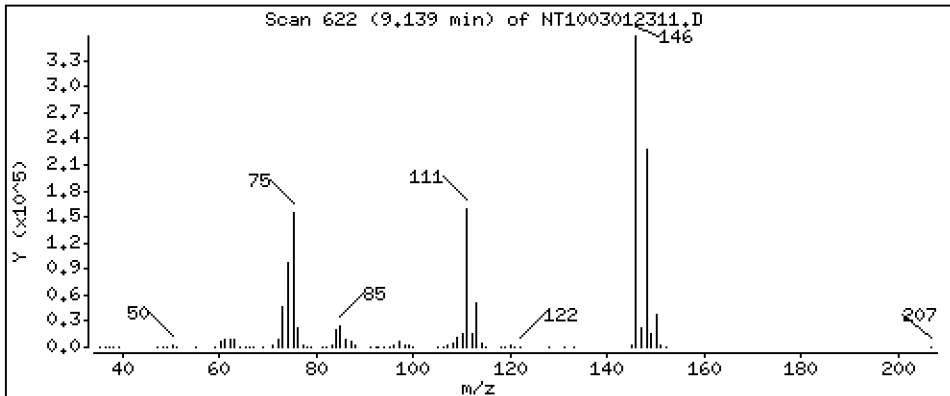
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 5,266 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

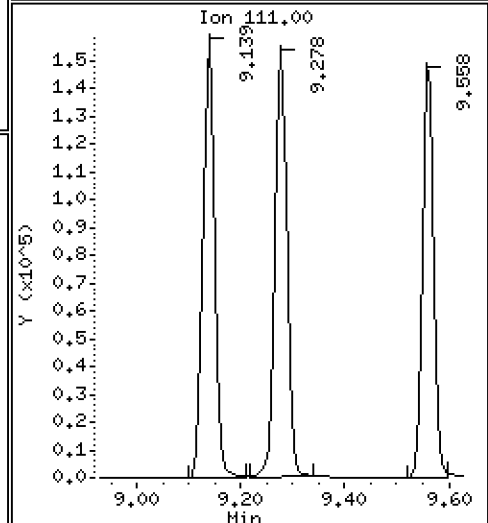
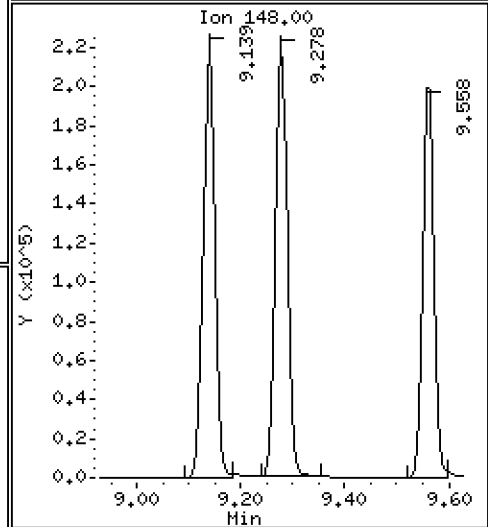
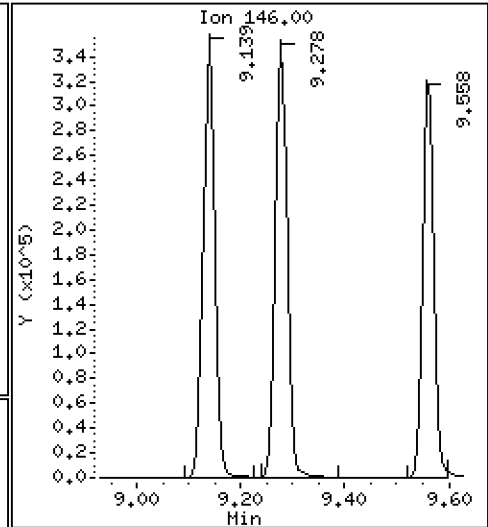
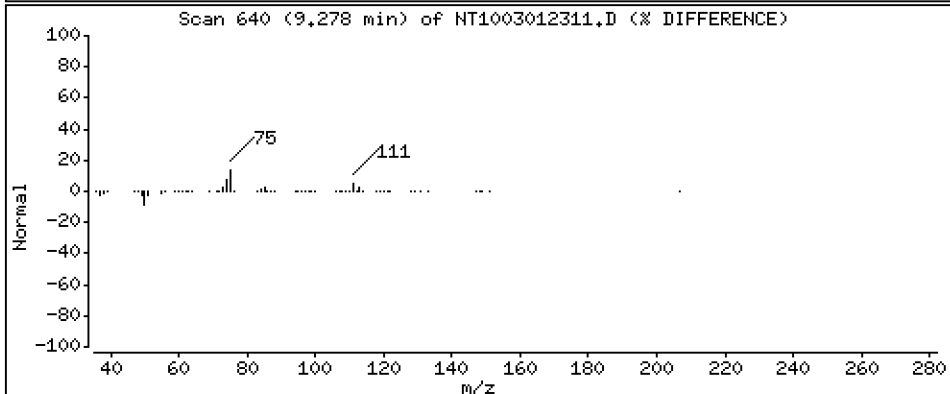
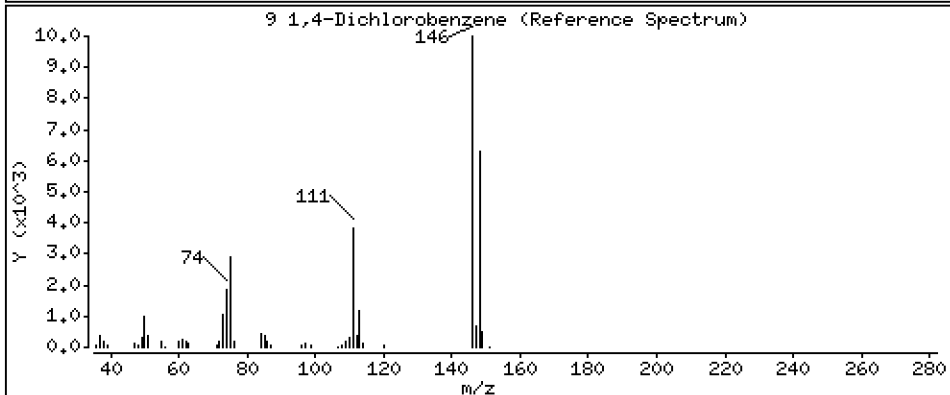
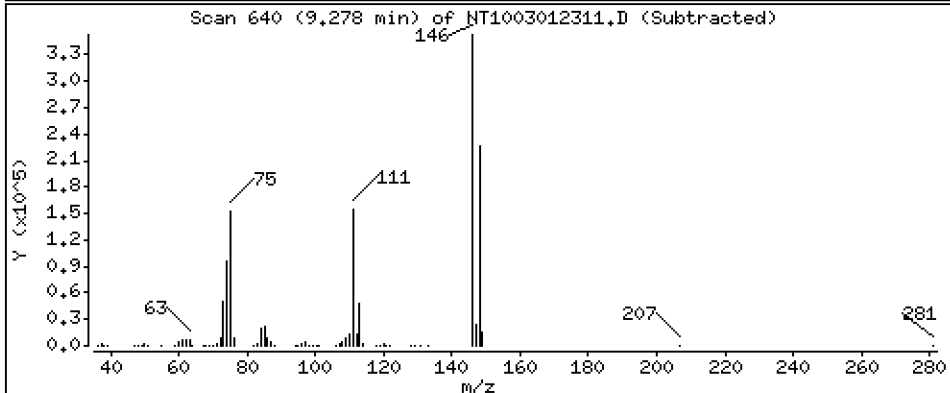
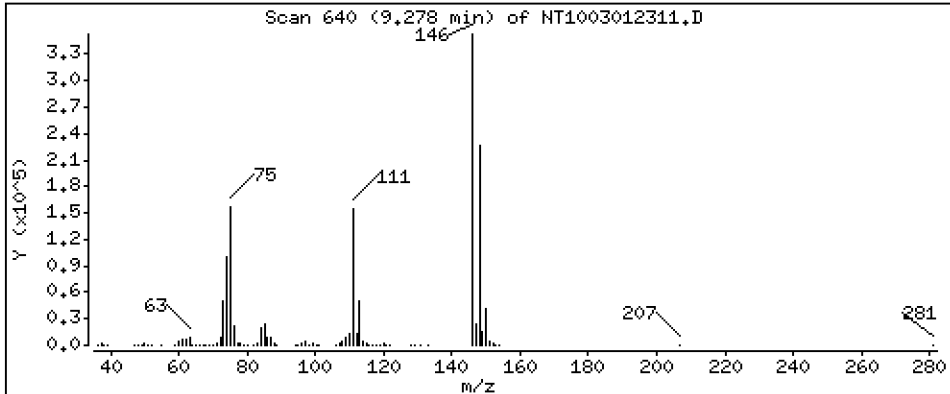
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,216 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

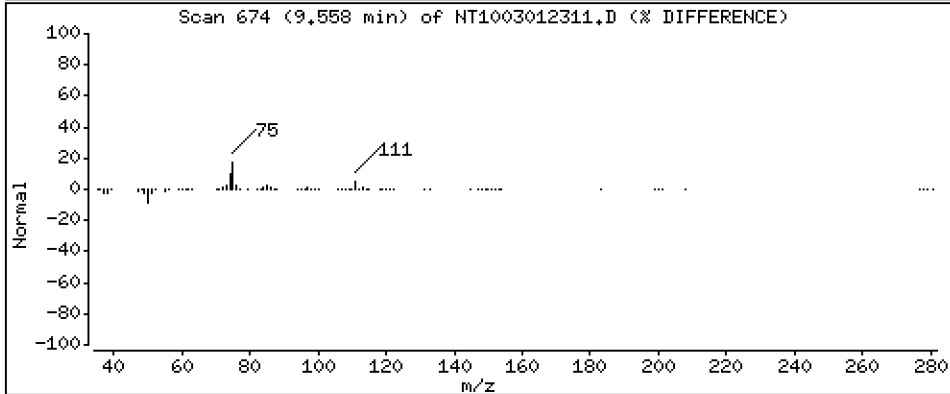
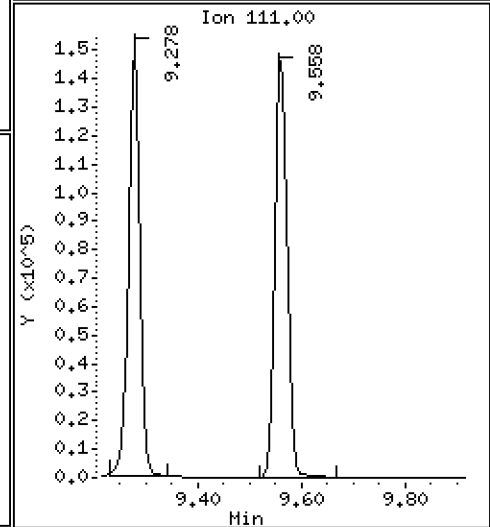
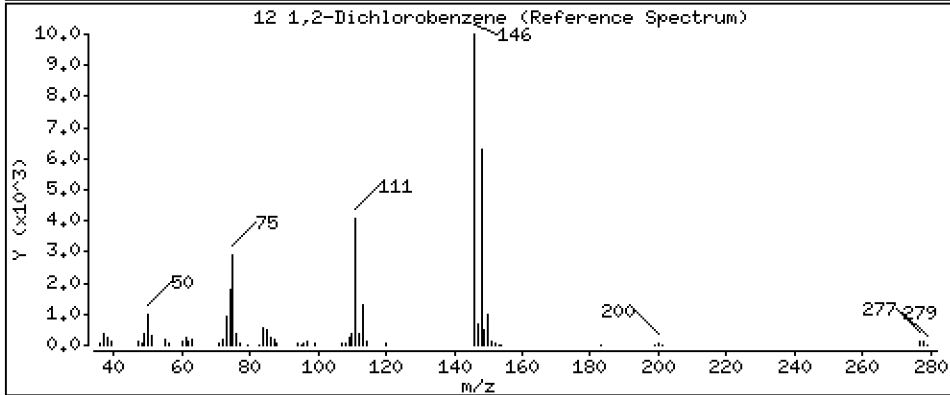
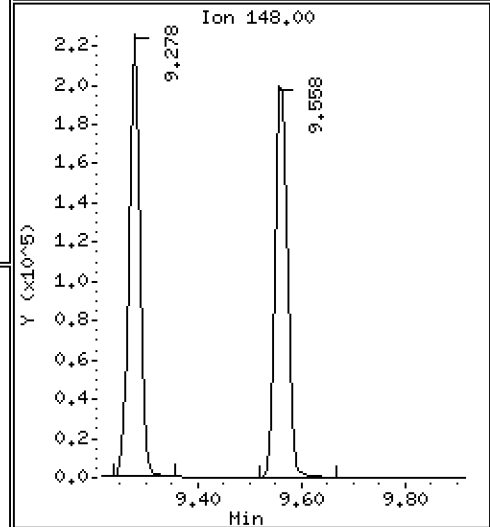
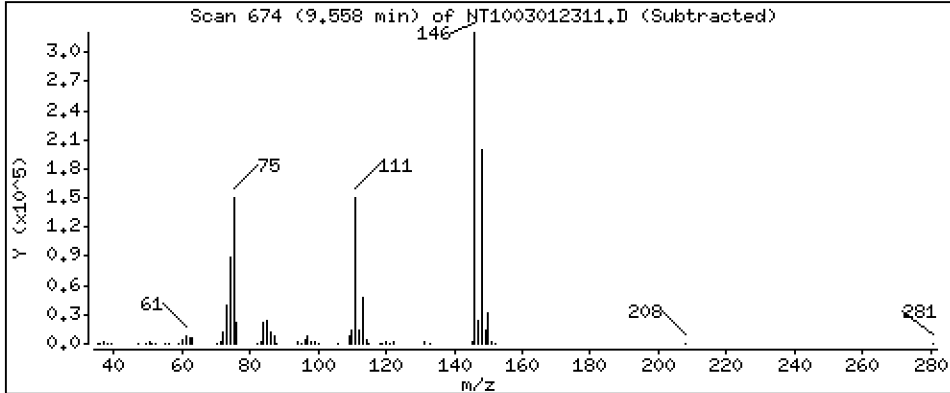
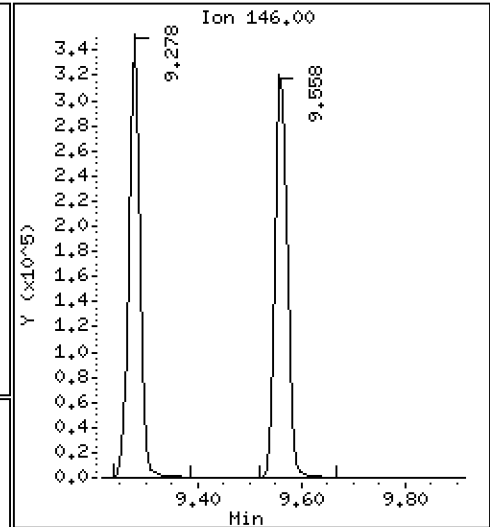
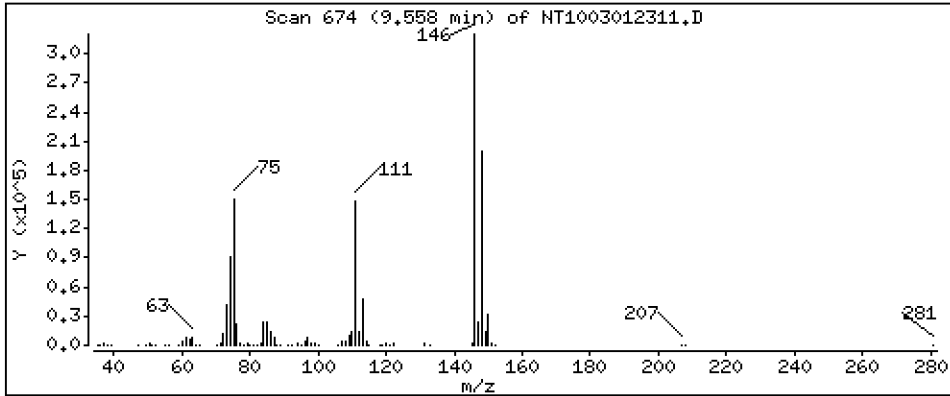
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5.194 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

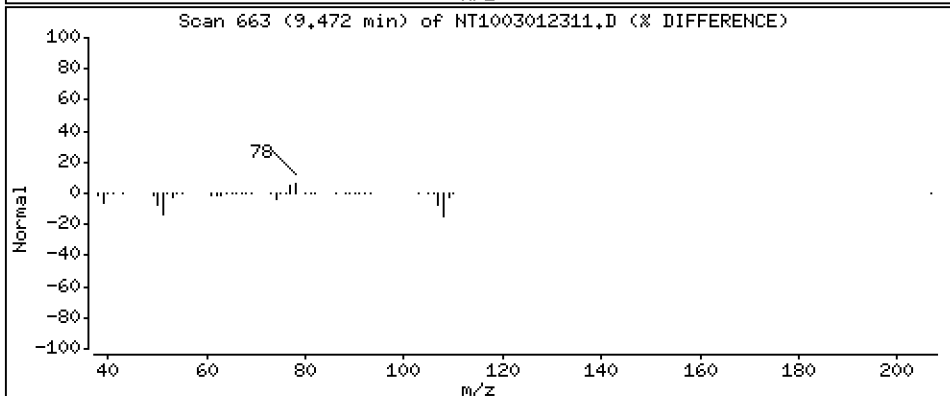
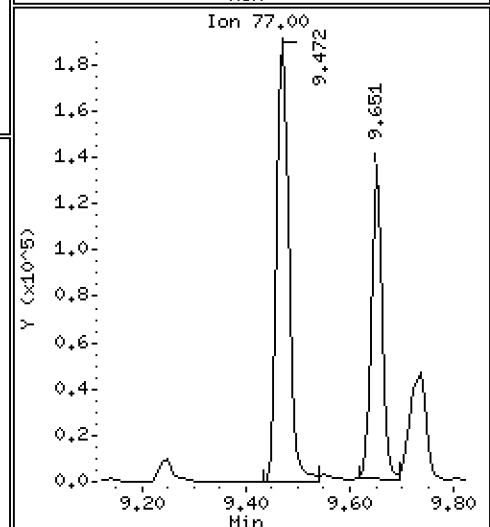
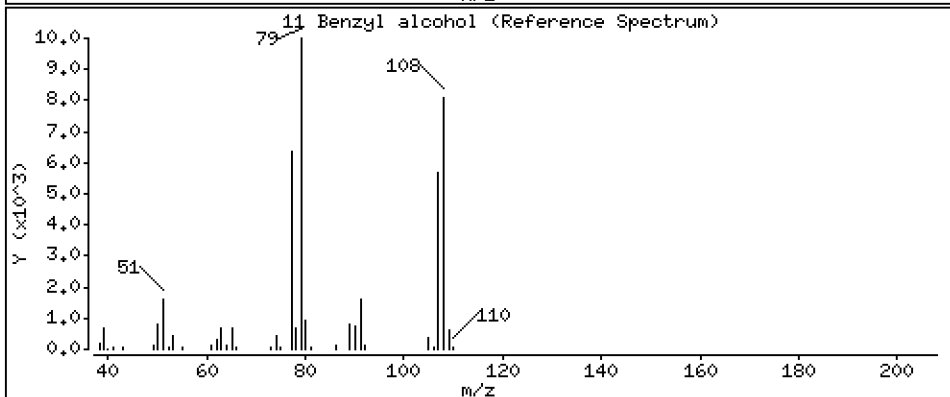
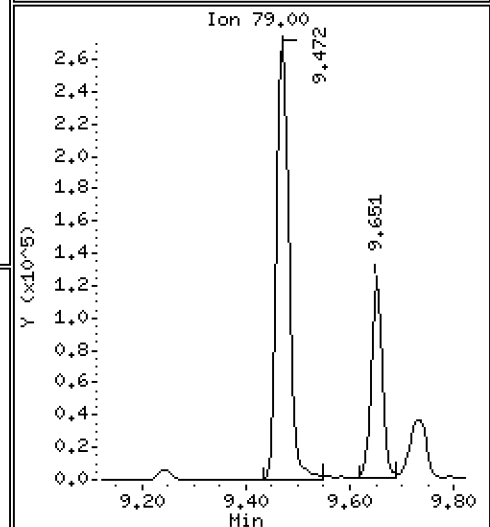
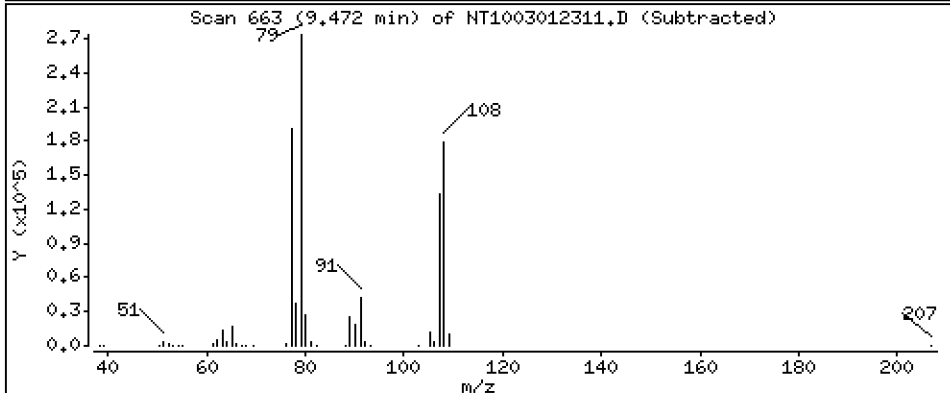
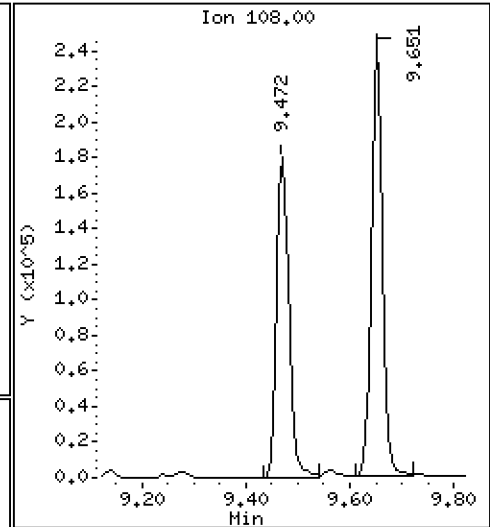
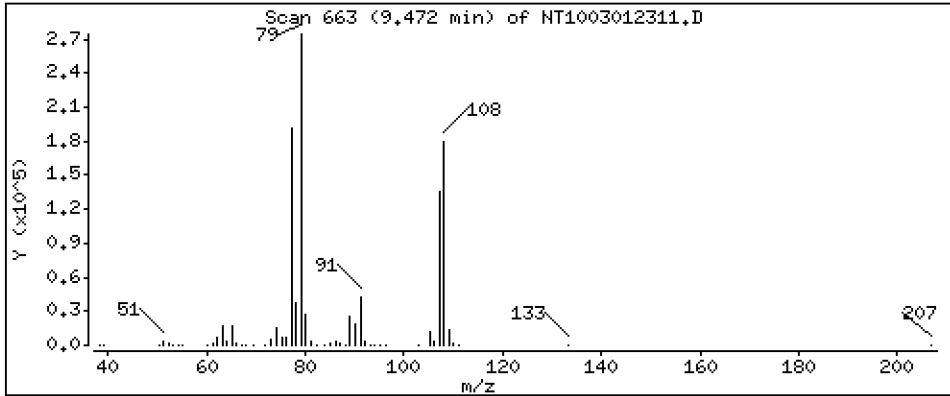
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.898 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

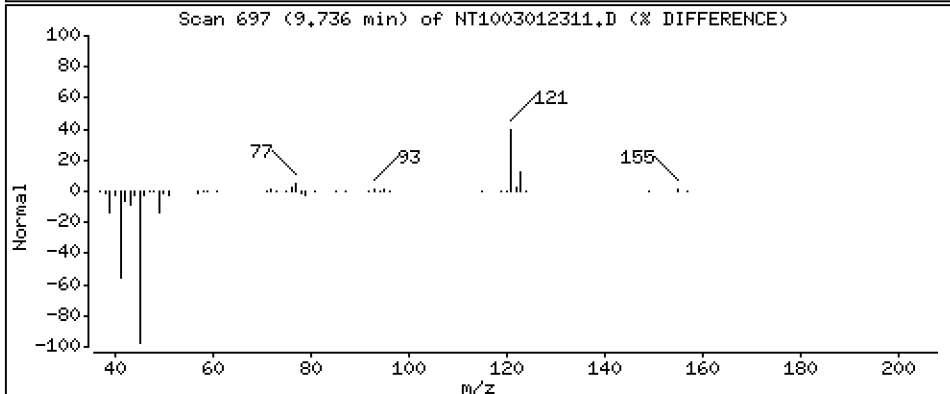
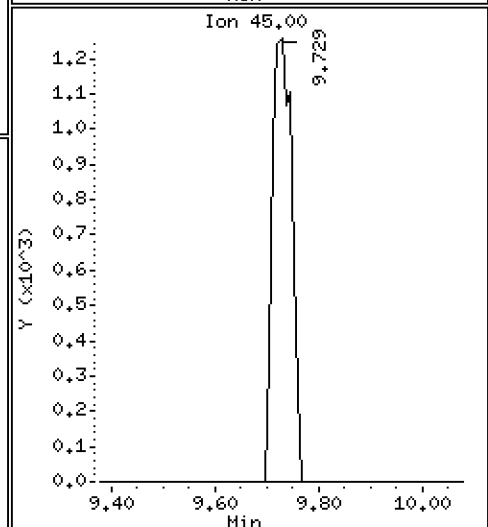
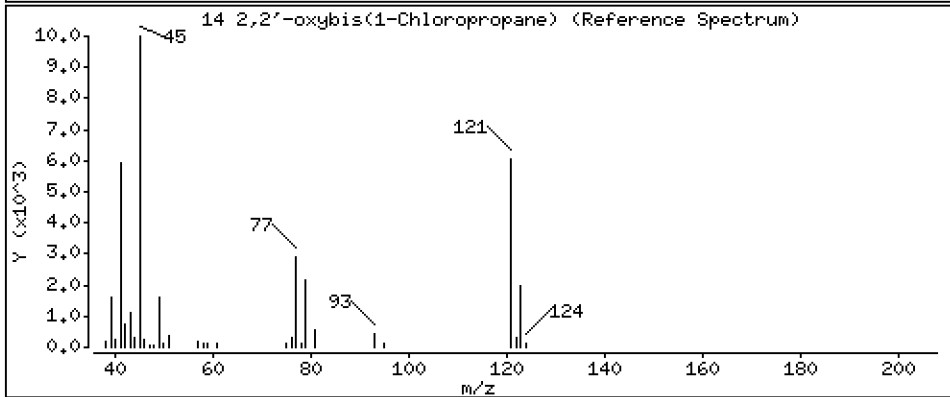
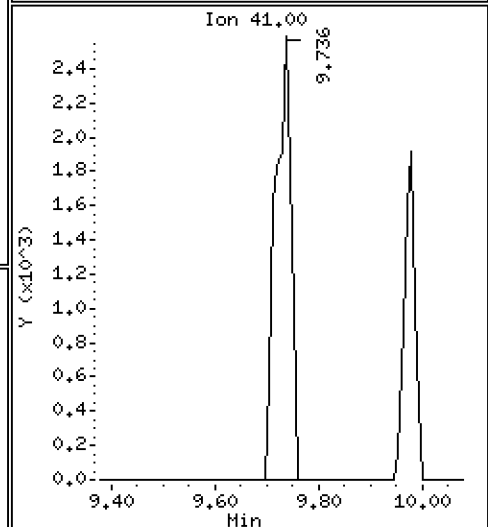
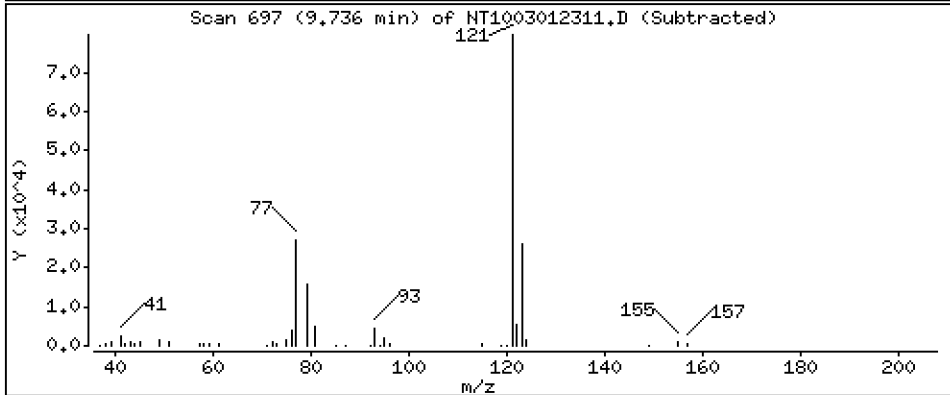
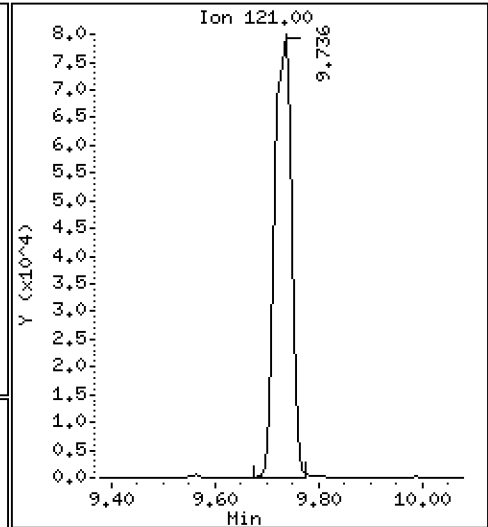
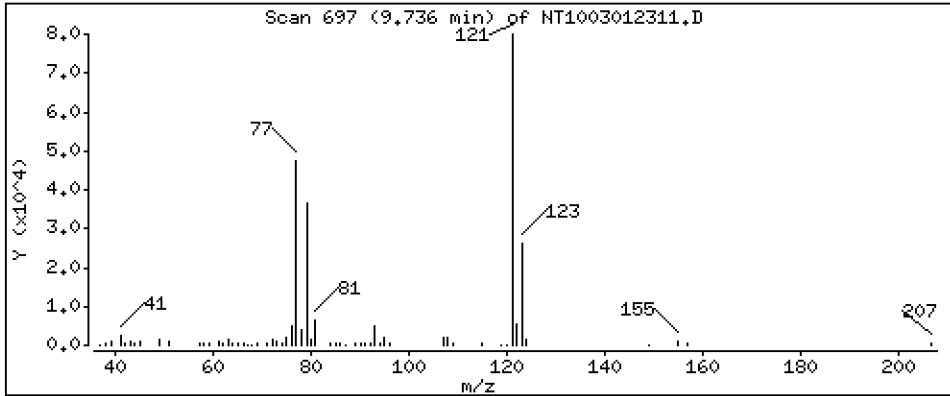
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 6,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

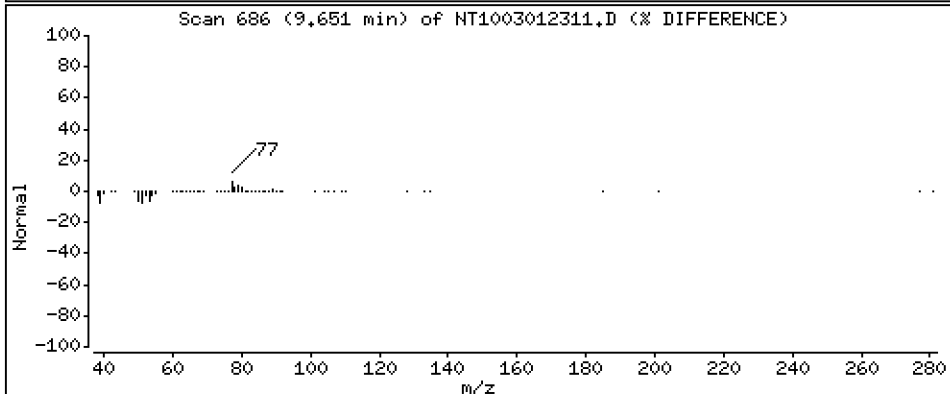
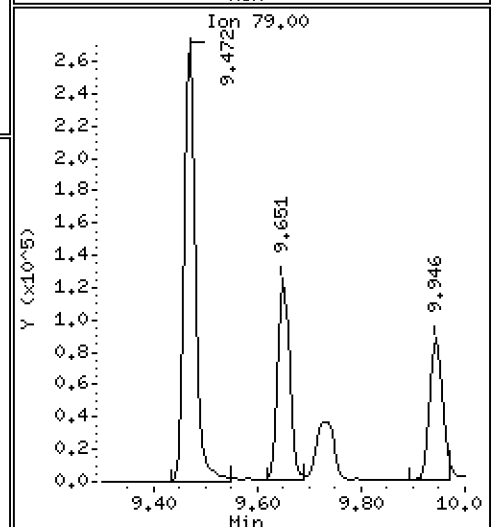
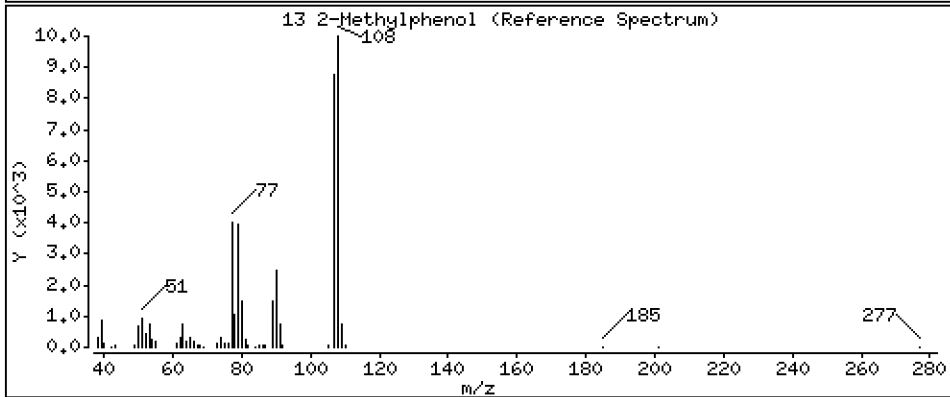
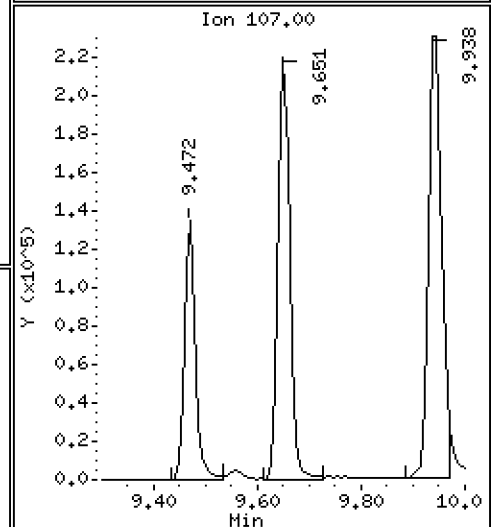
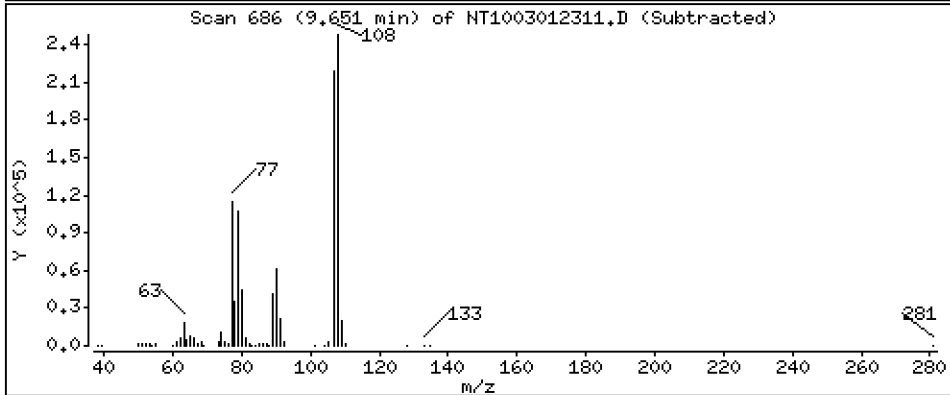
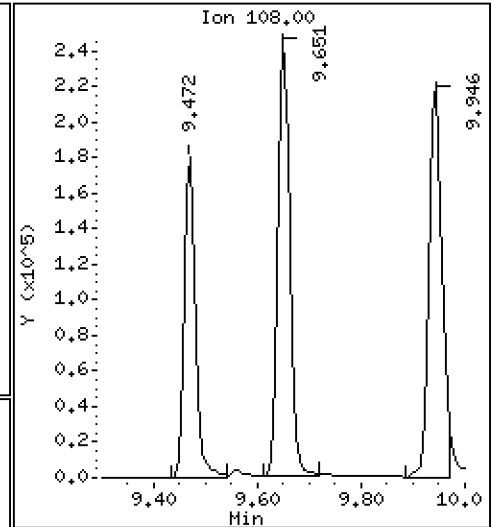
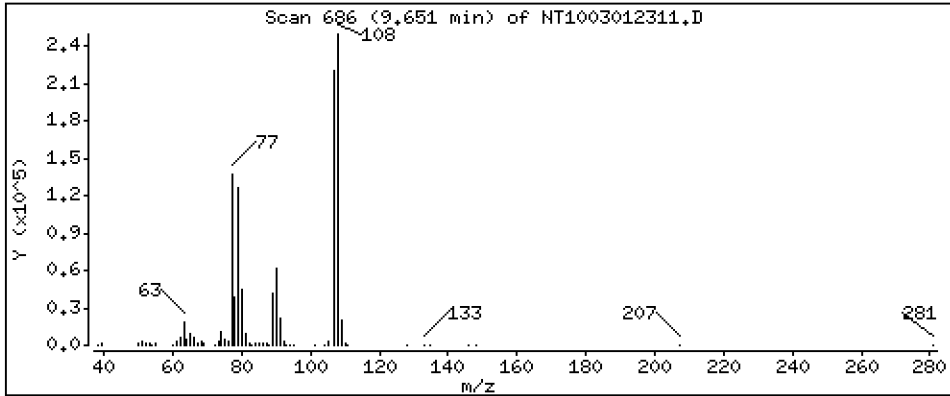
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.192 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

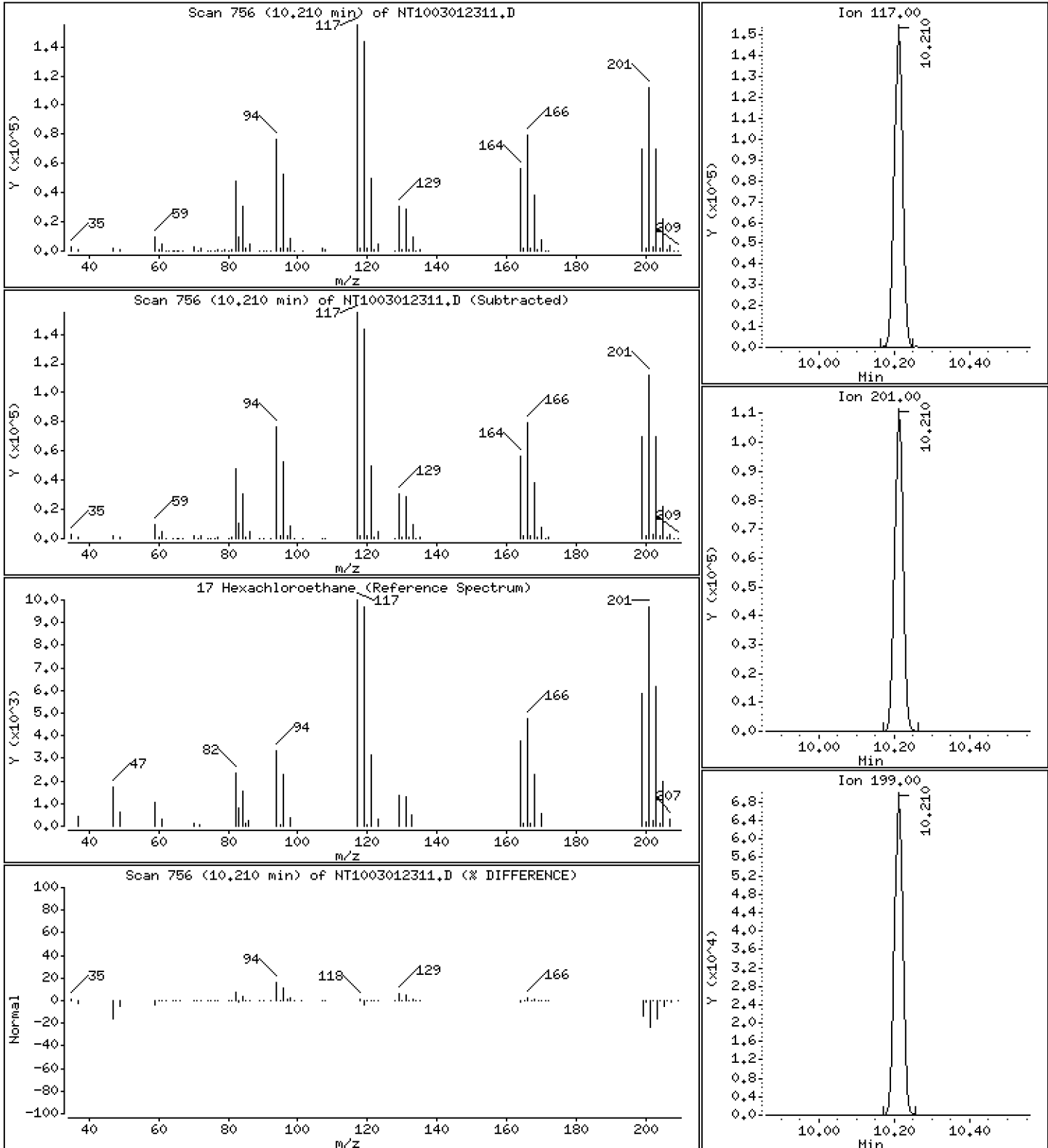
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 5,443 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

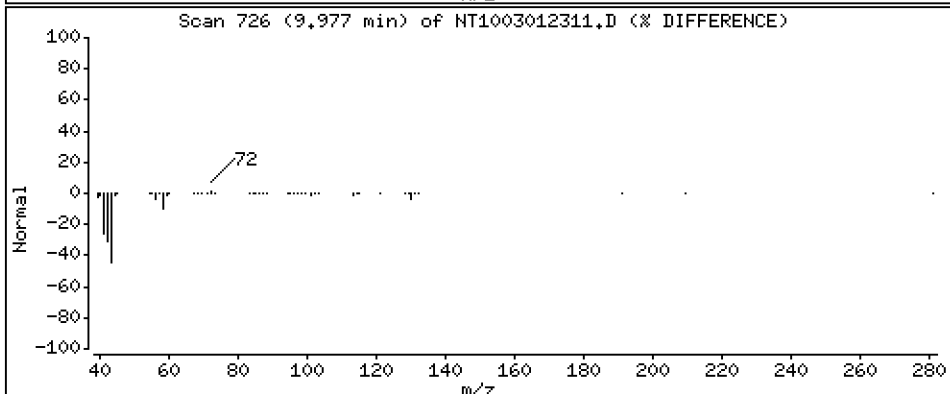
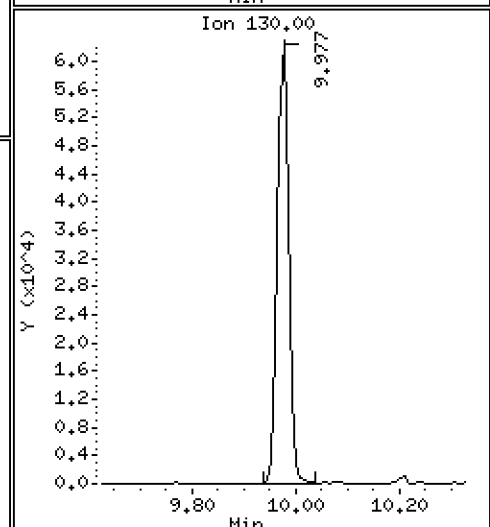
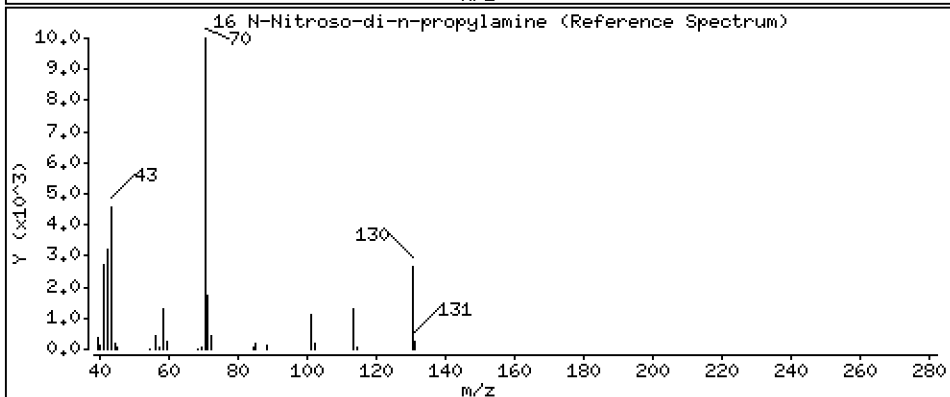
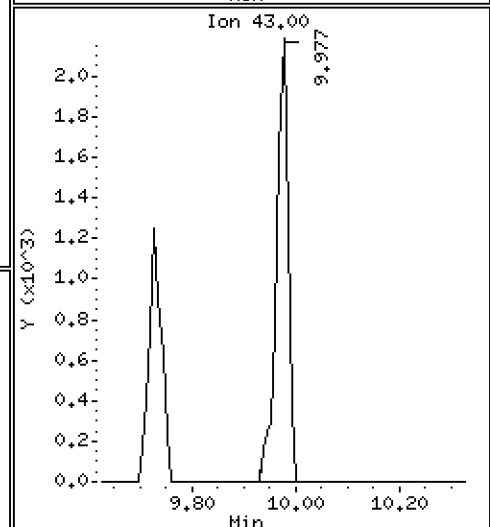
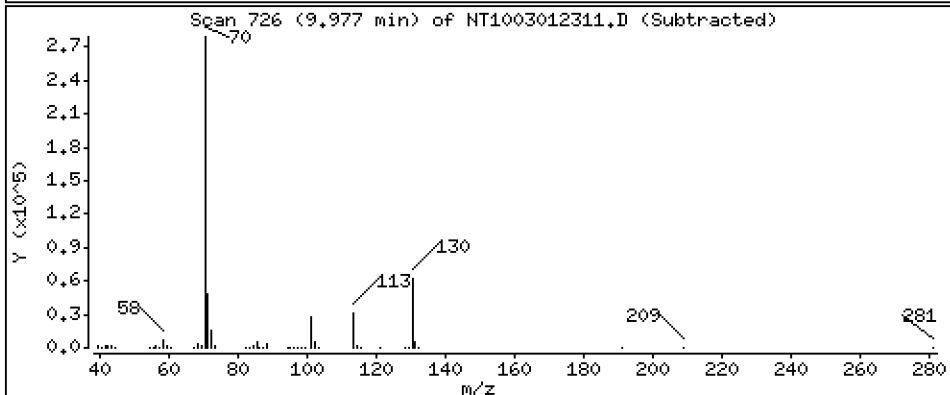
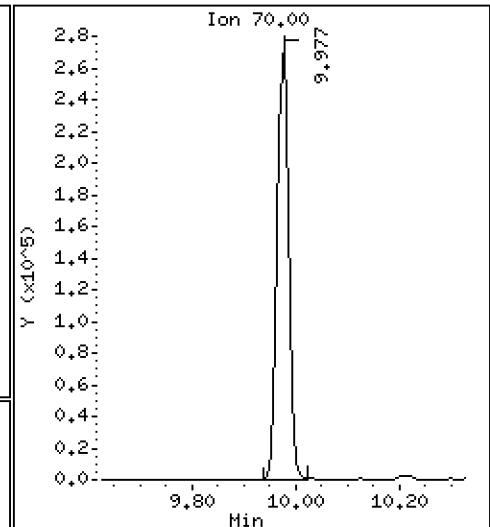
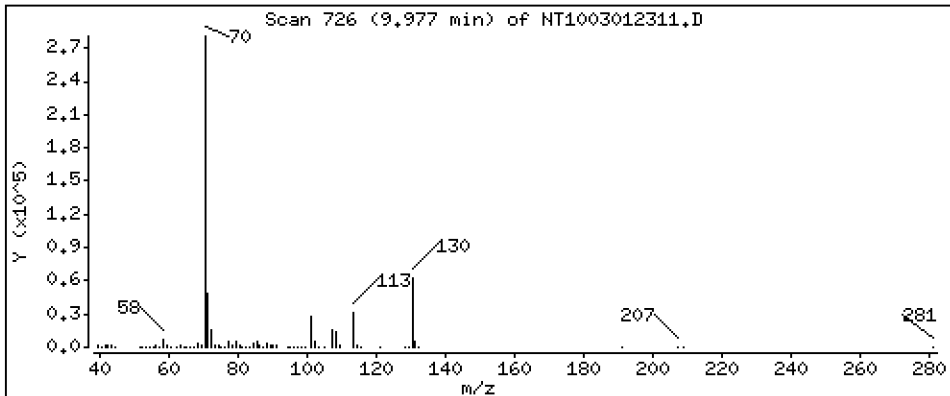
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

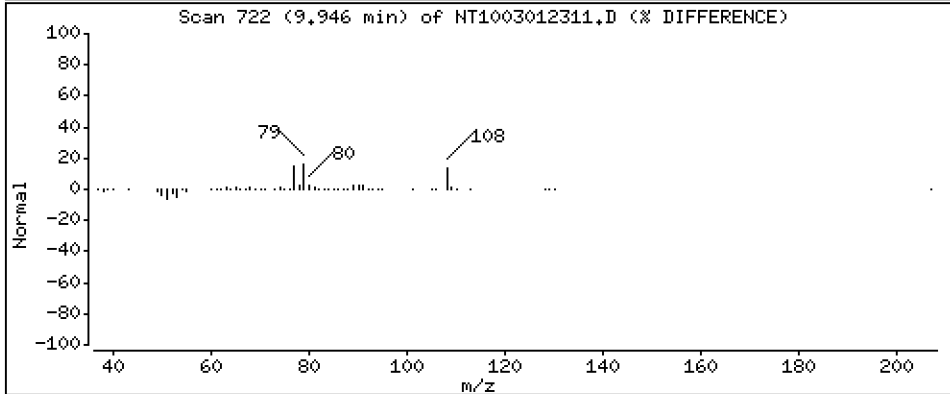
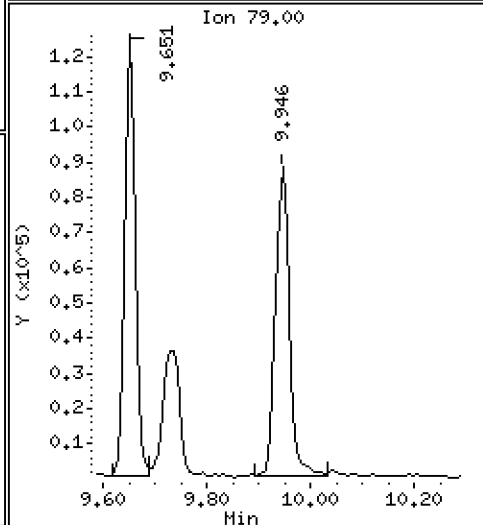
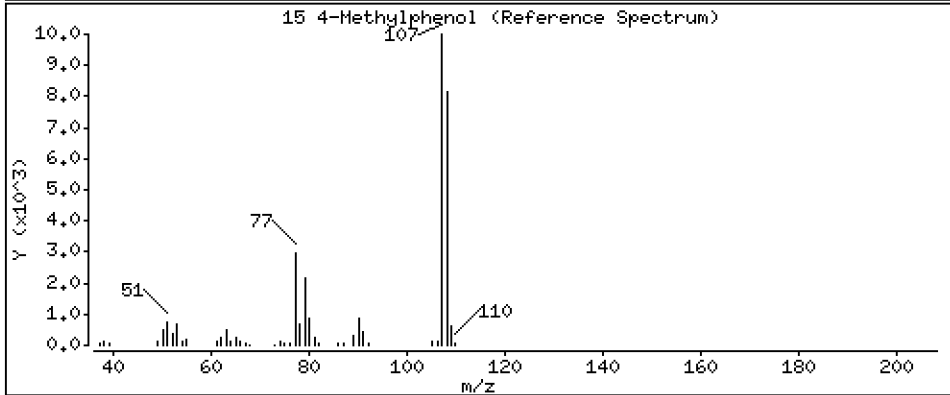
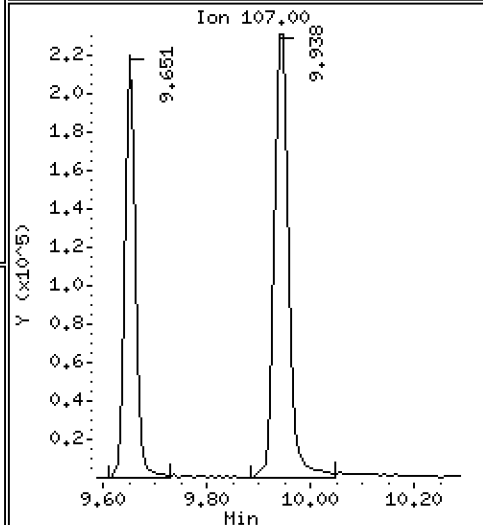
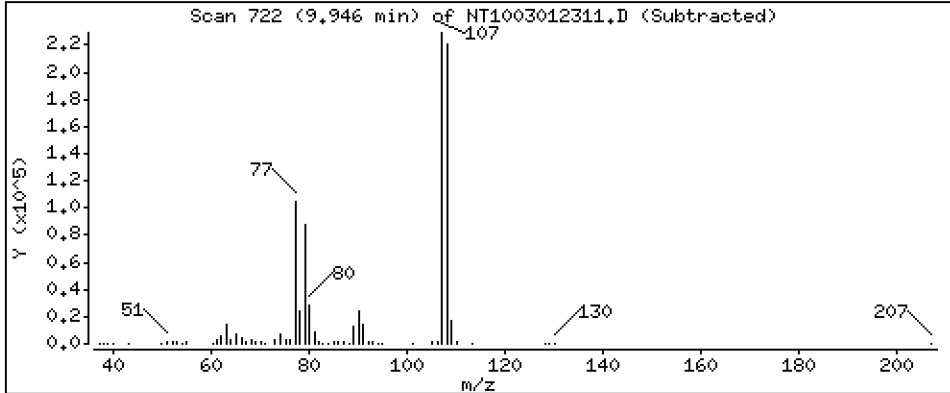
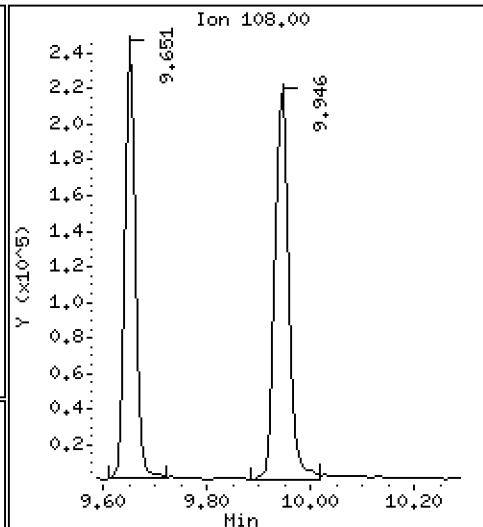
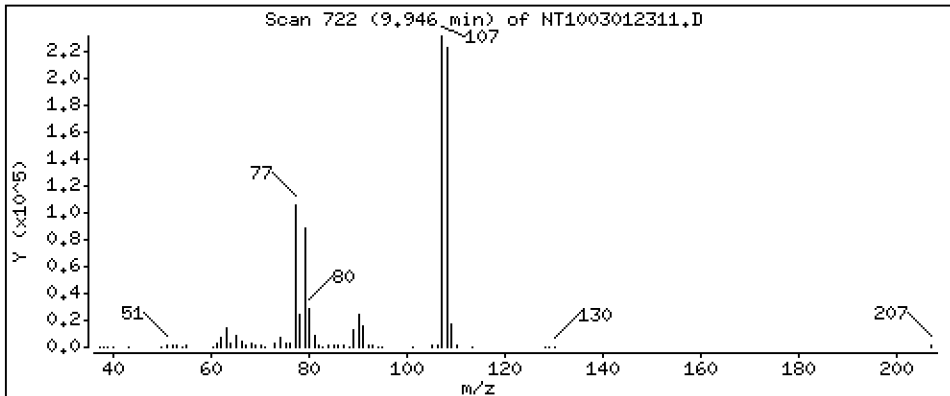
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.239 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

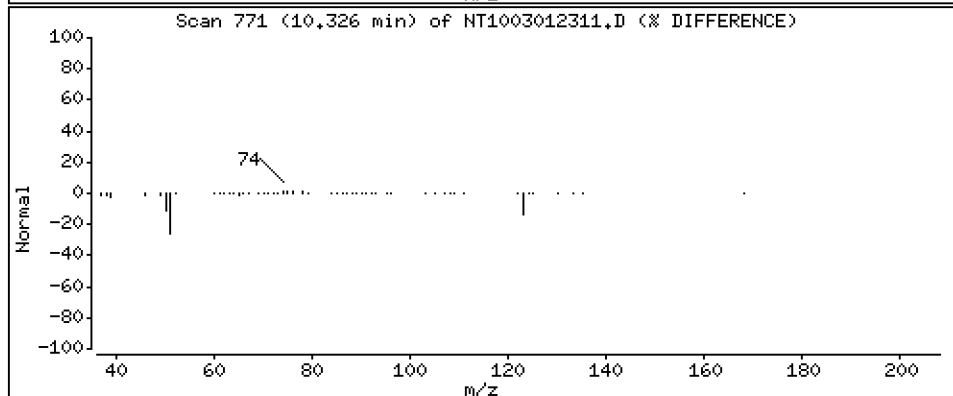
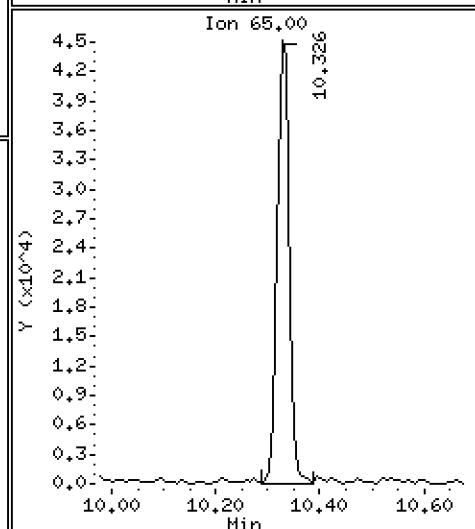
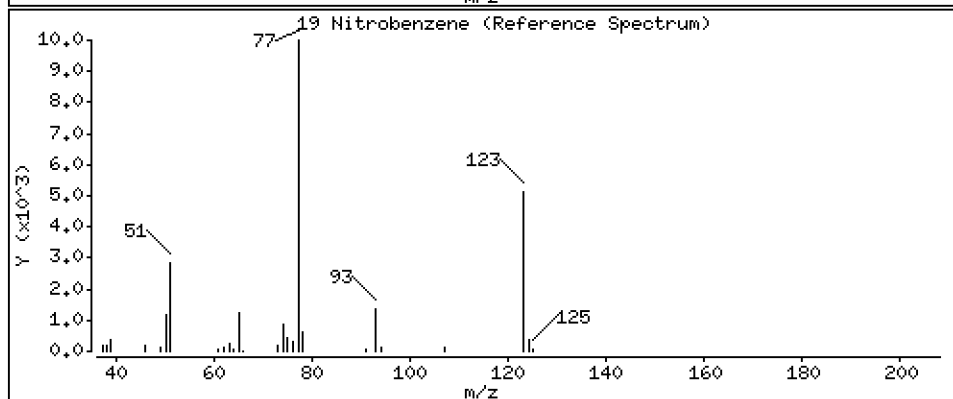
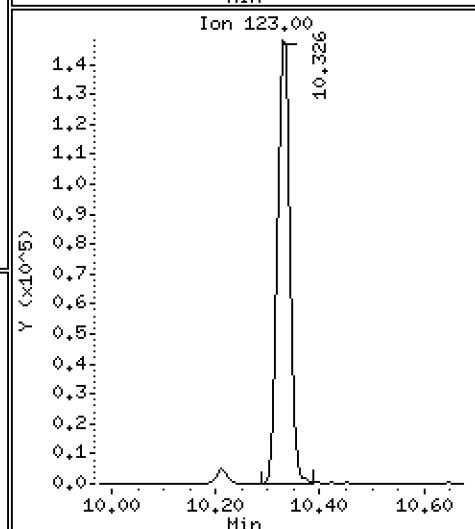
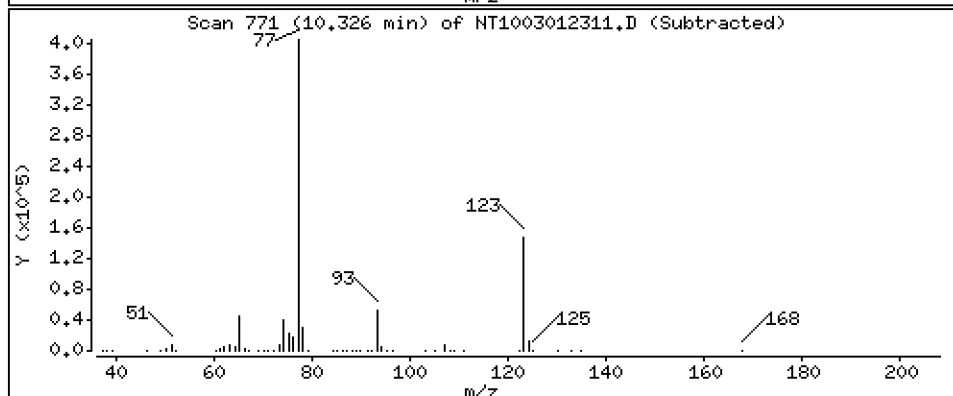
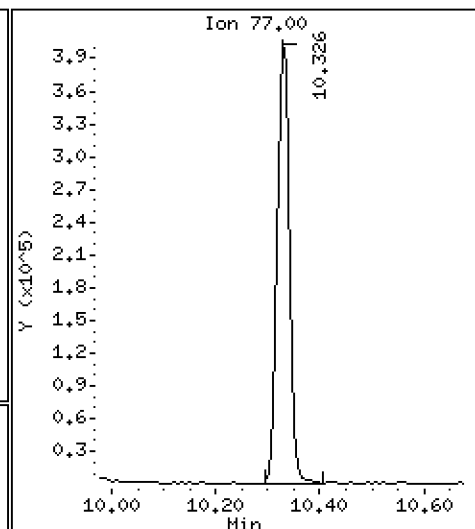
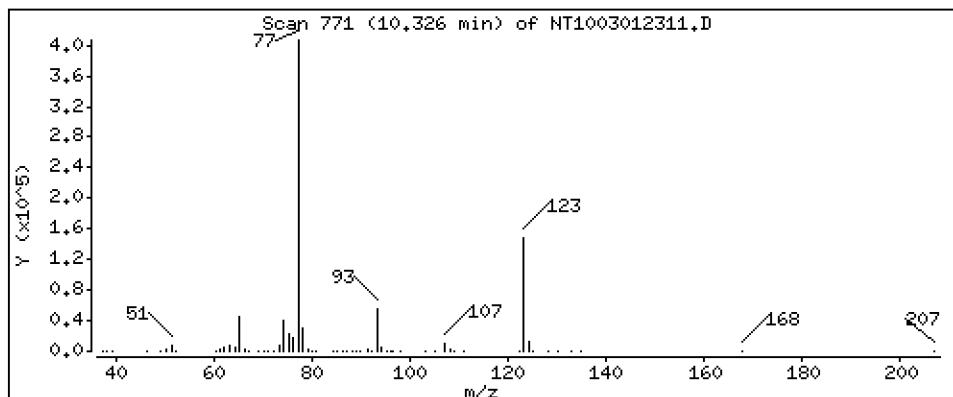
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,569 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

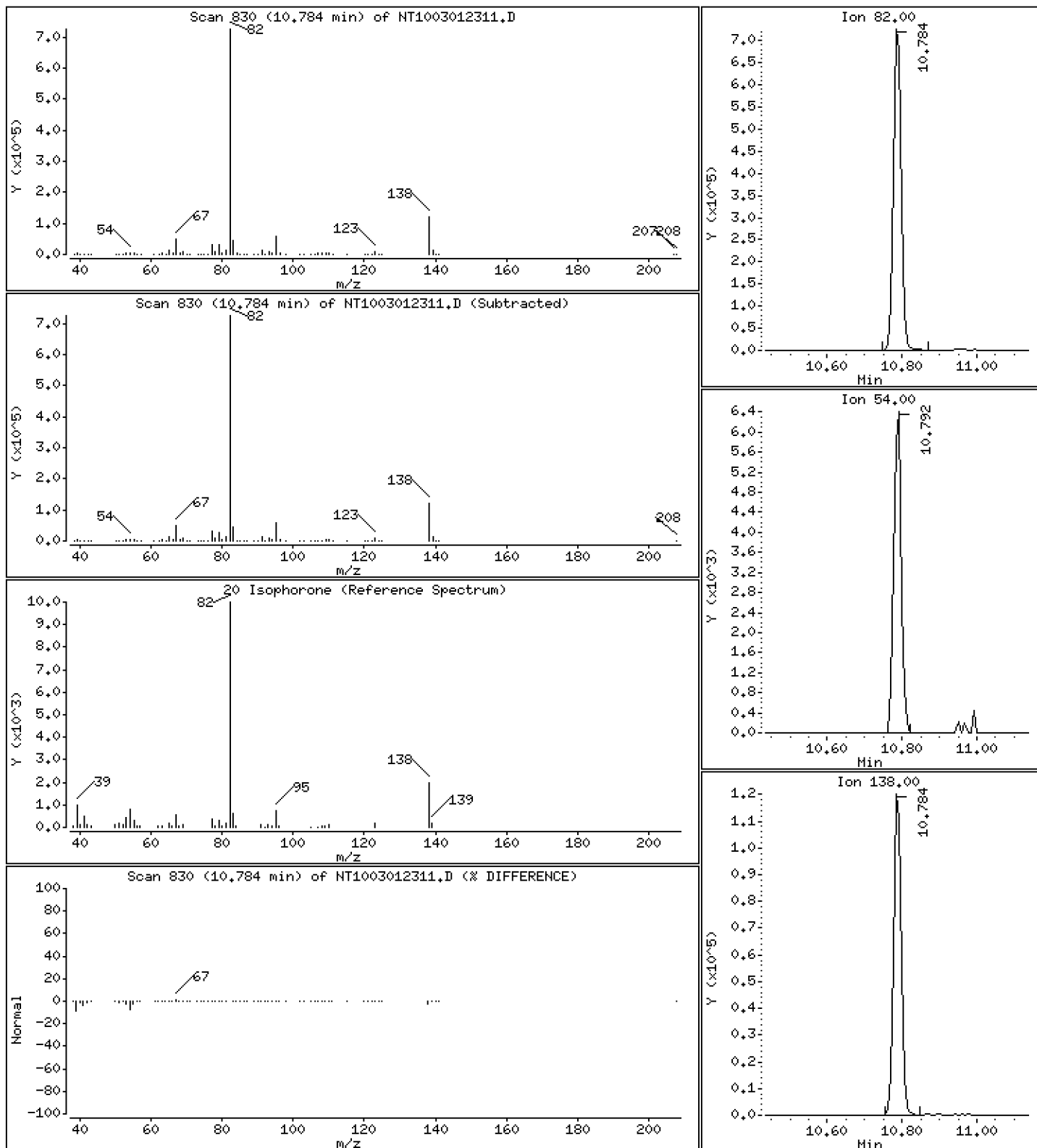
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 7,672 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

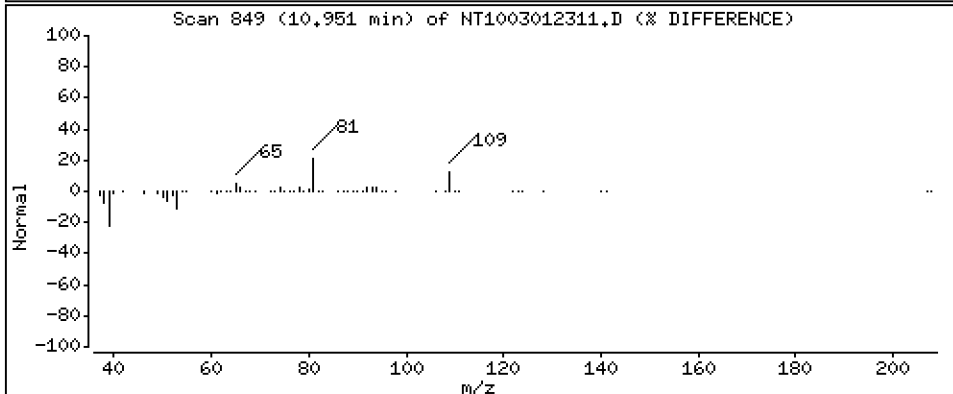
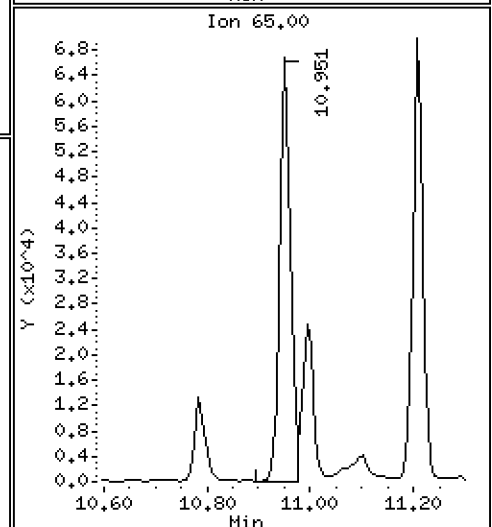
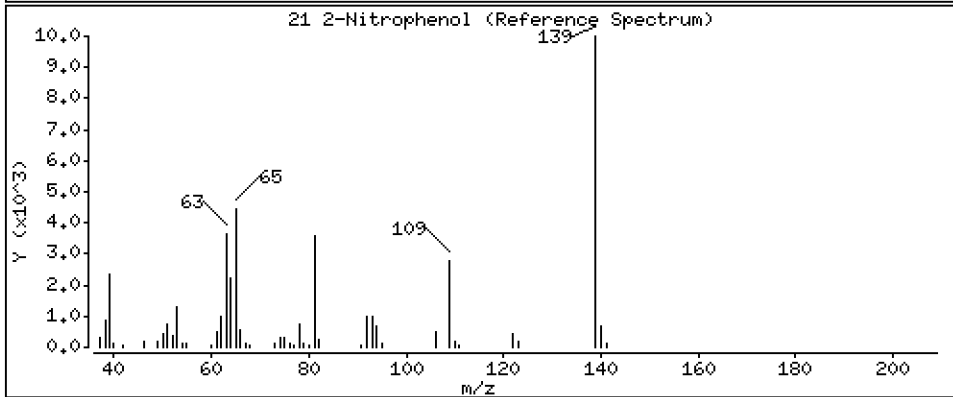
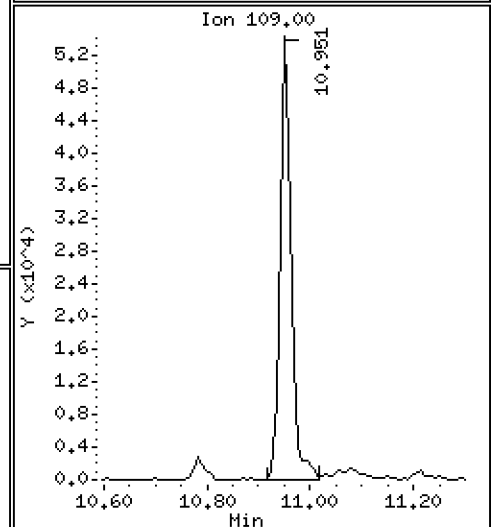
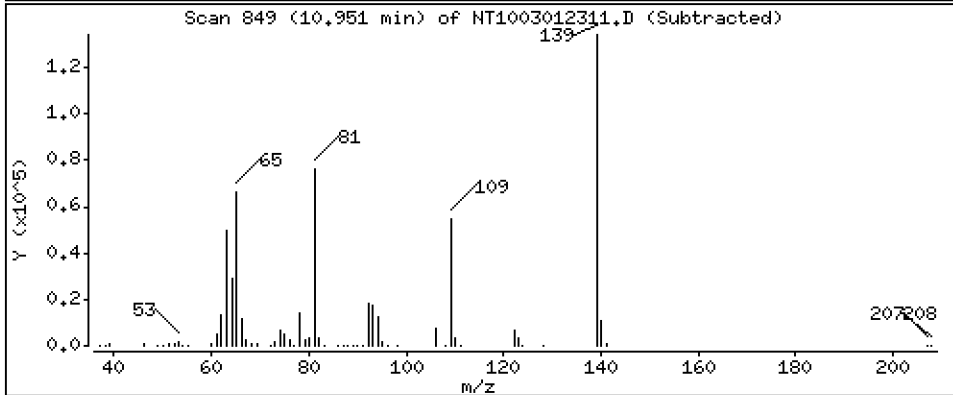
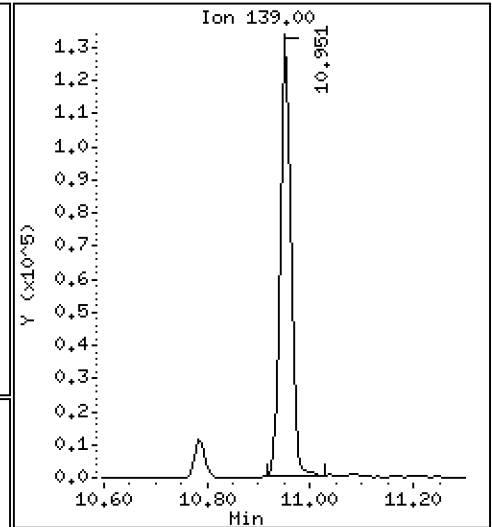
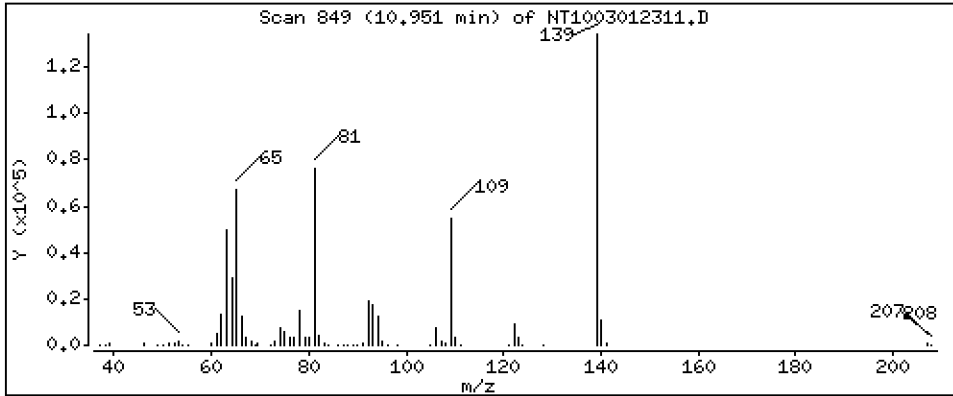
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 3,244 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

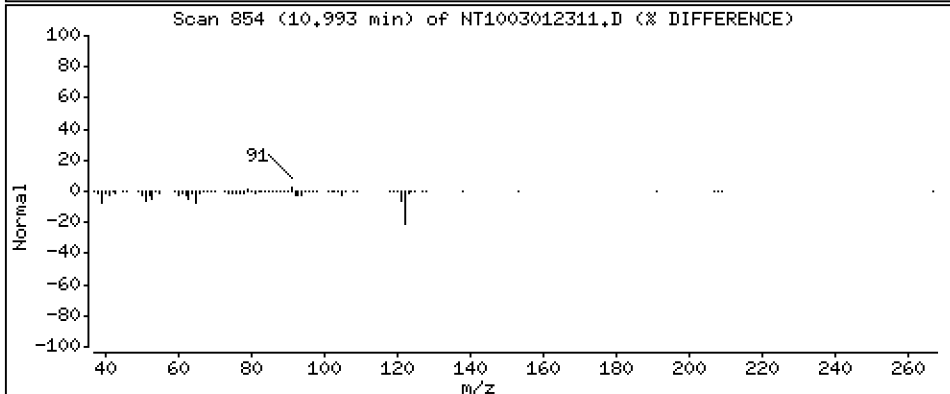
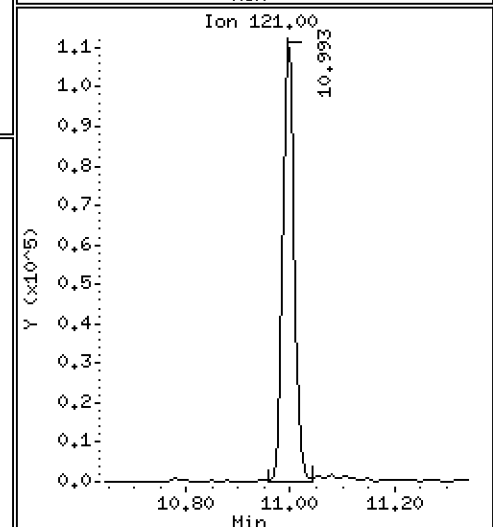
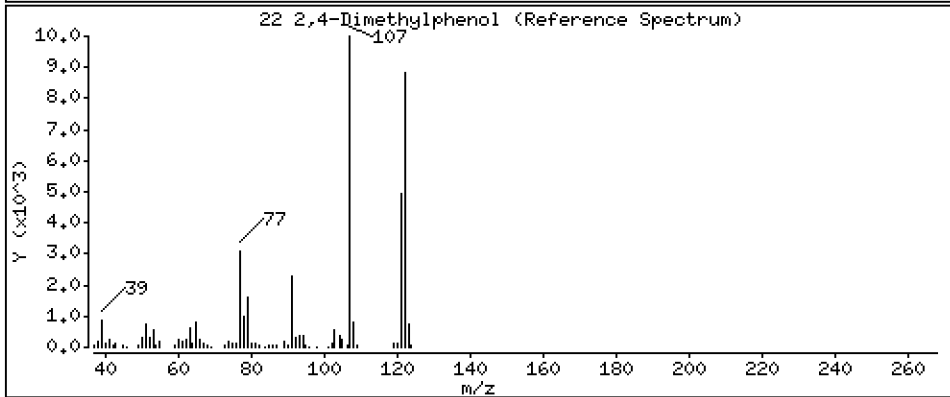
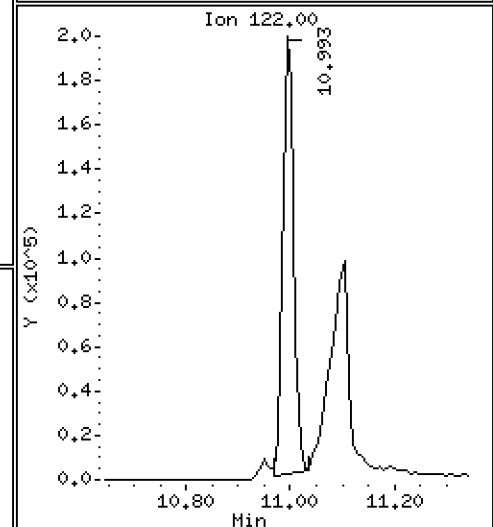
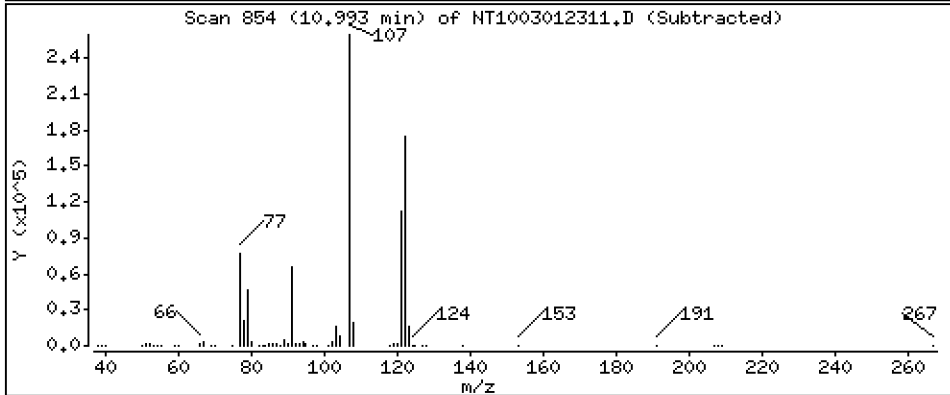
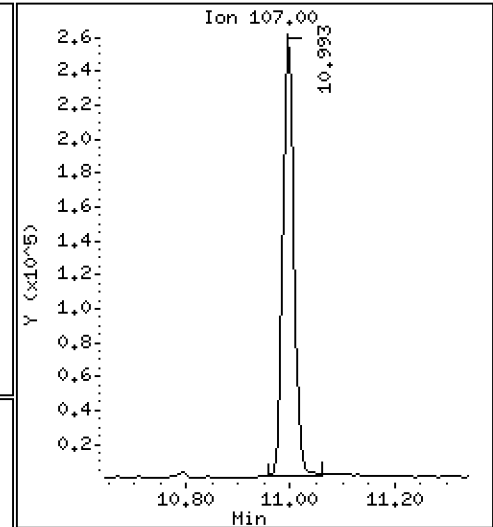
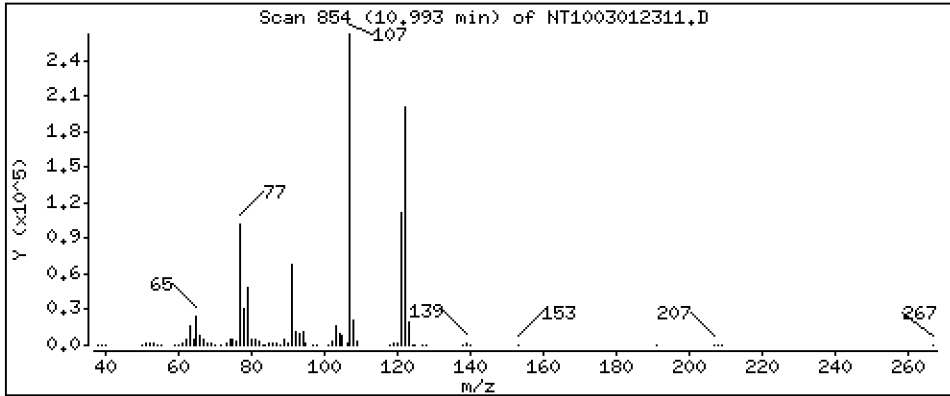
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 3,507 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

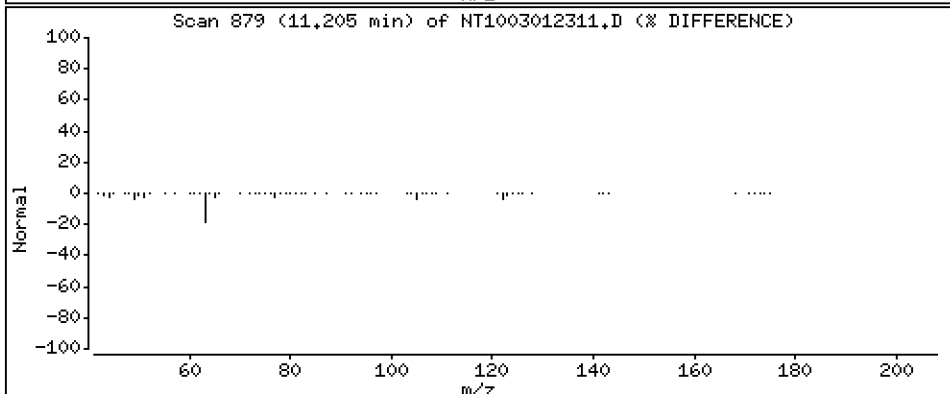
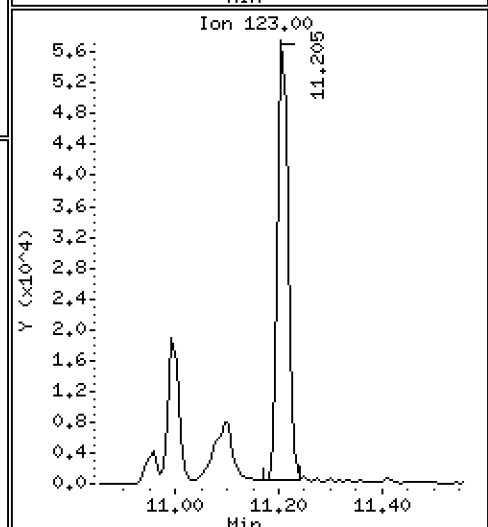
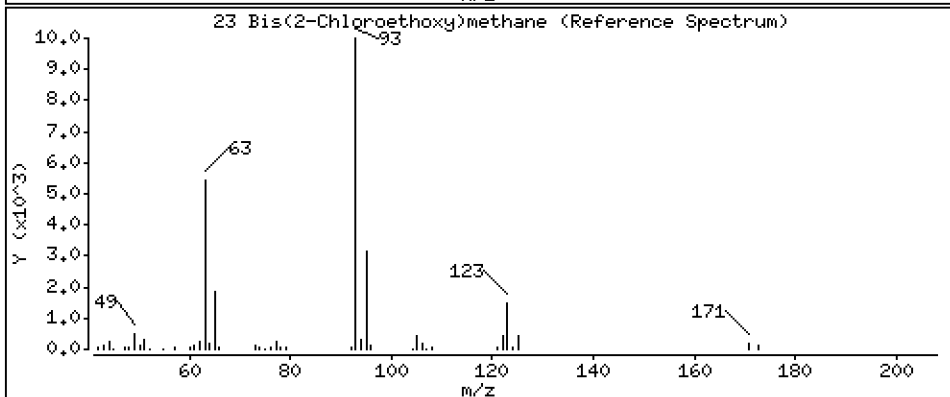
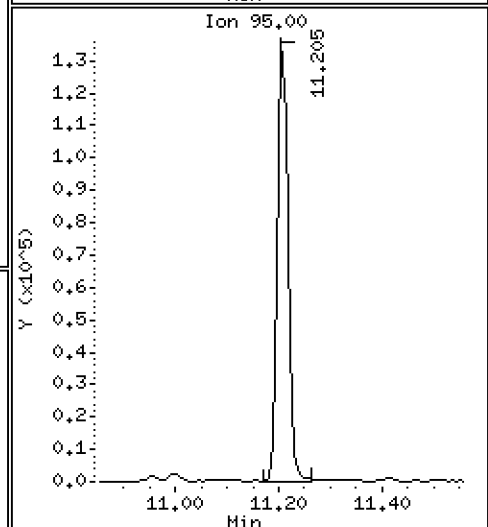
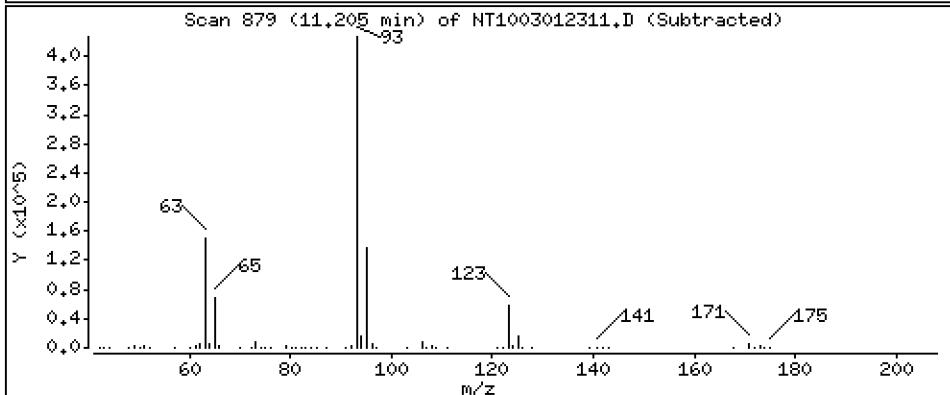
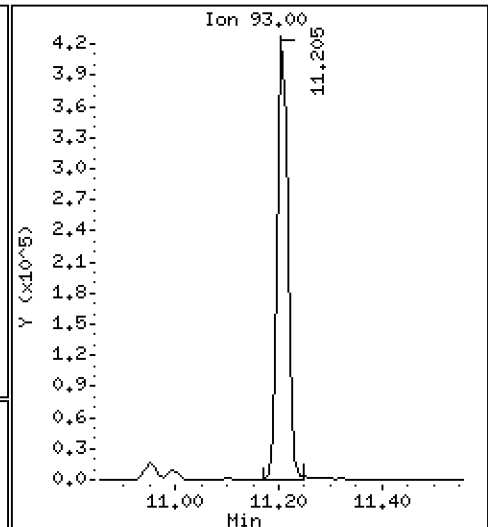
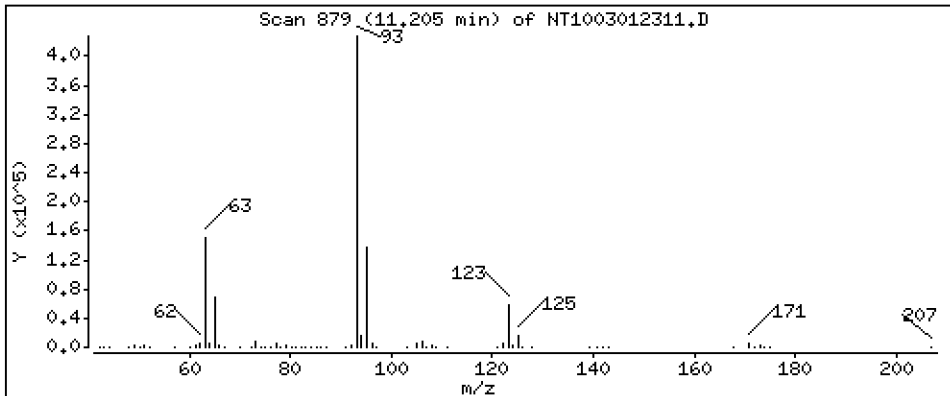
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 6,727 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

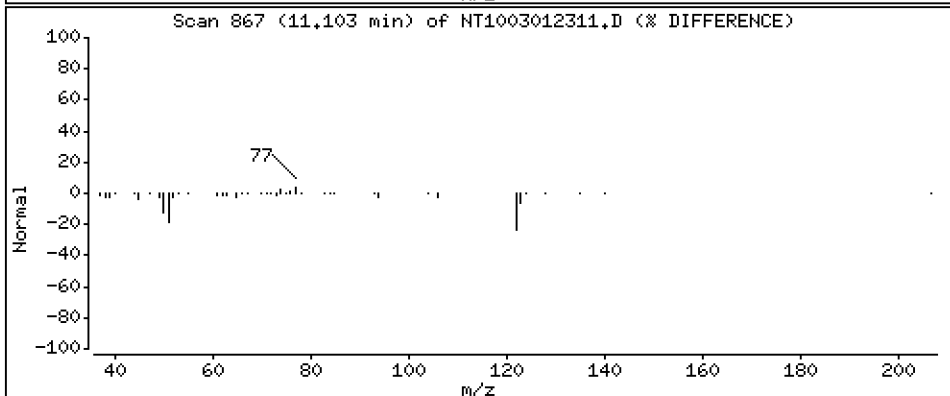
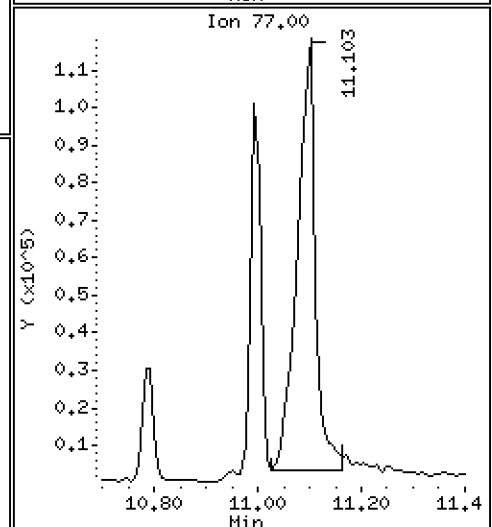
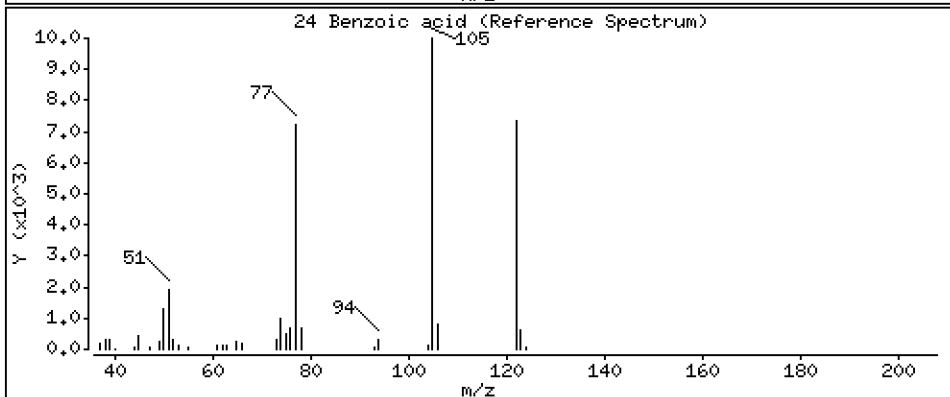
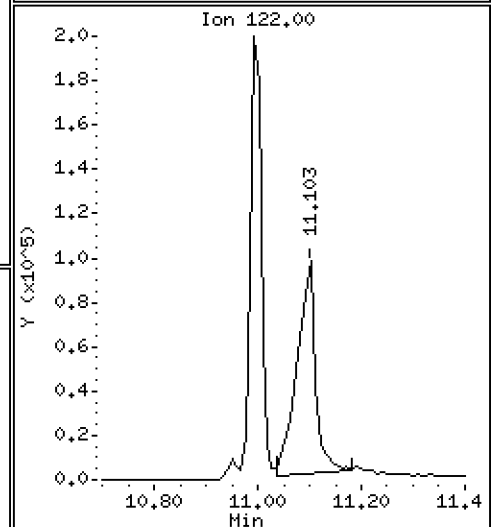
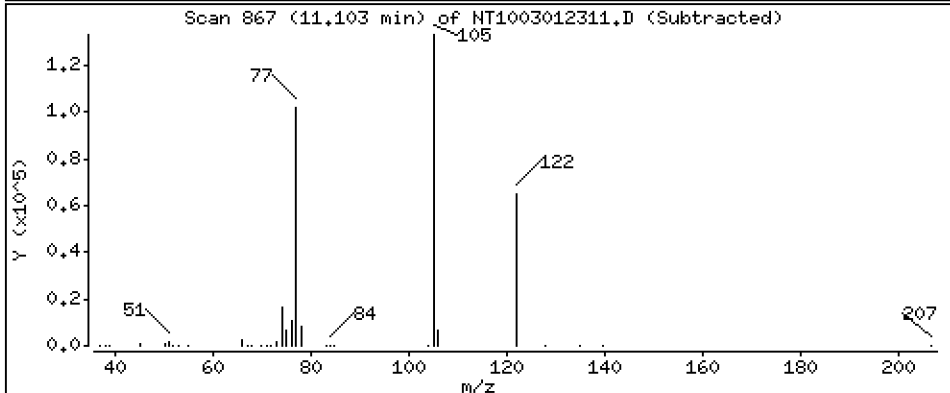
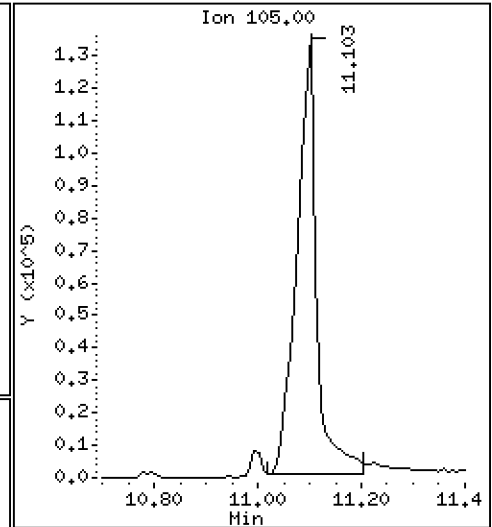
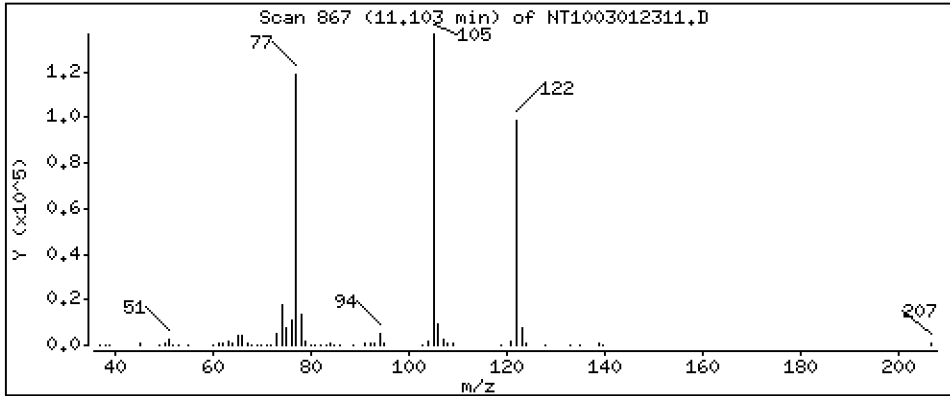
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 5,635 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

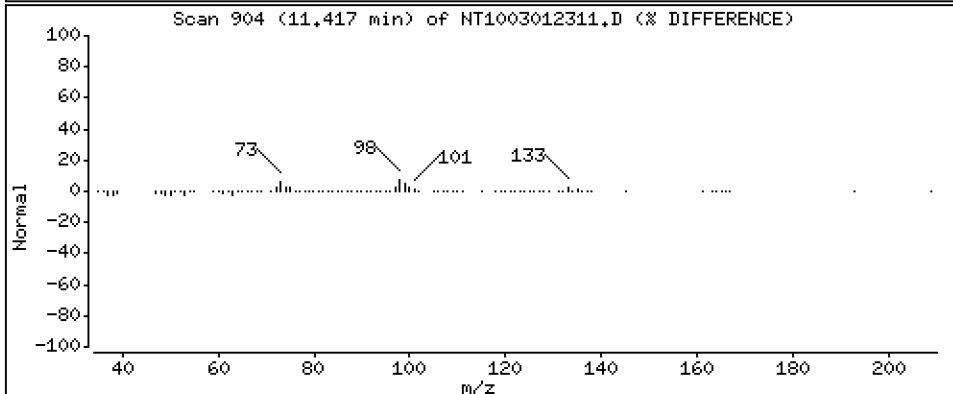
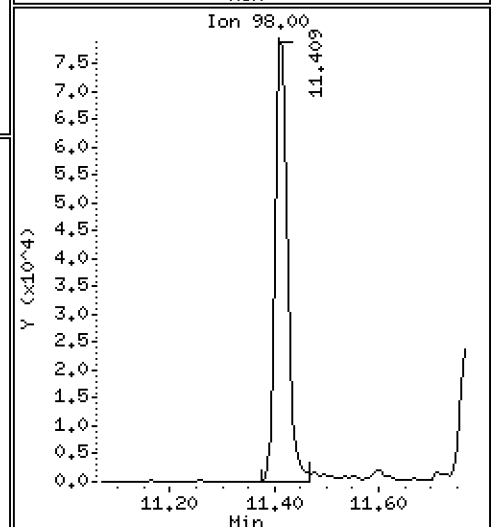
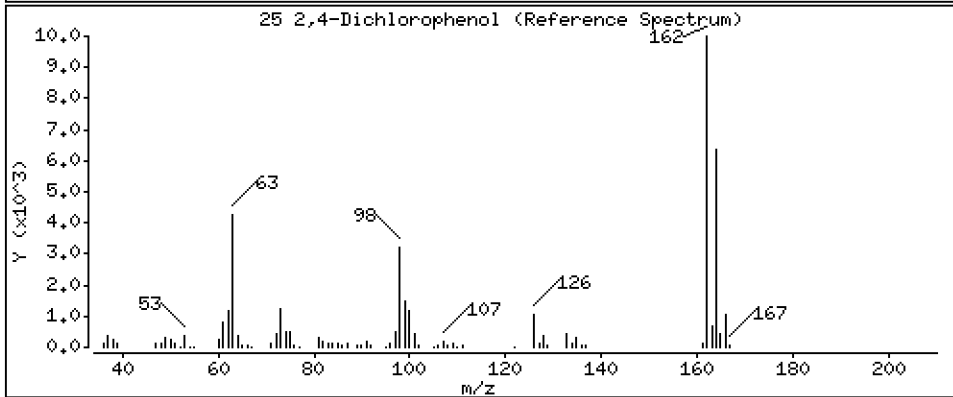
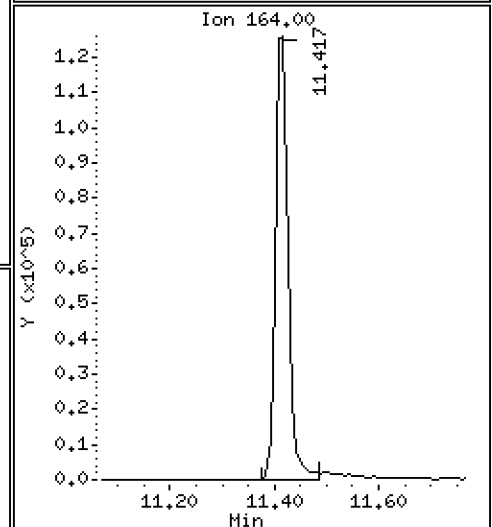
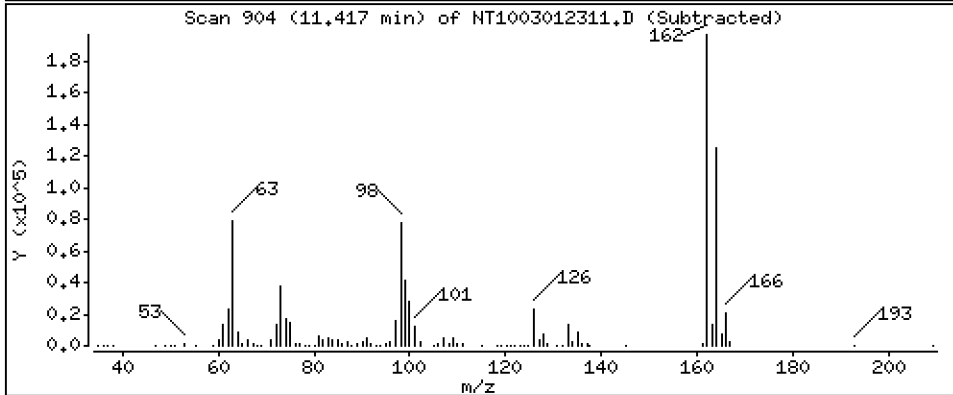
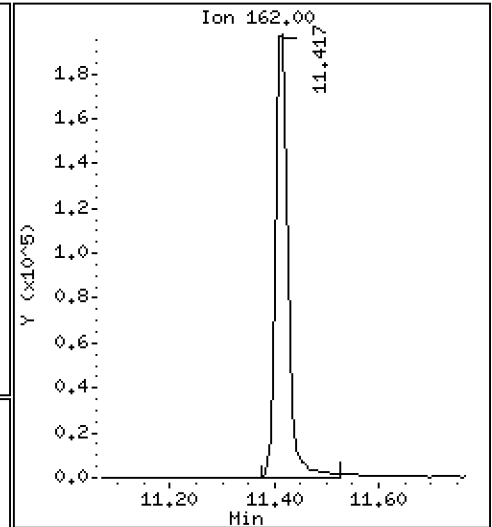
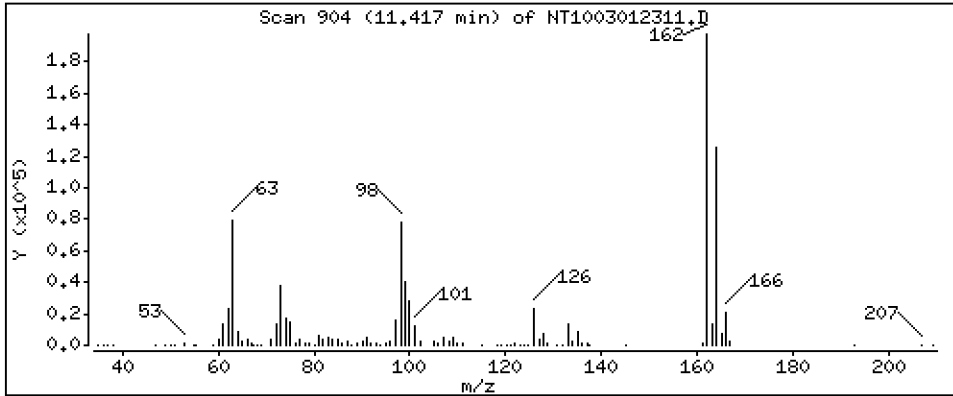
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 4,437 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

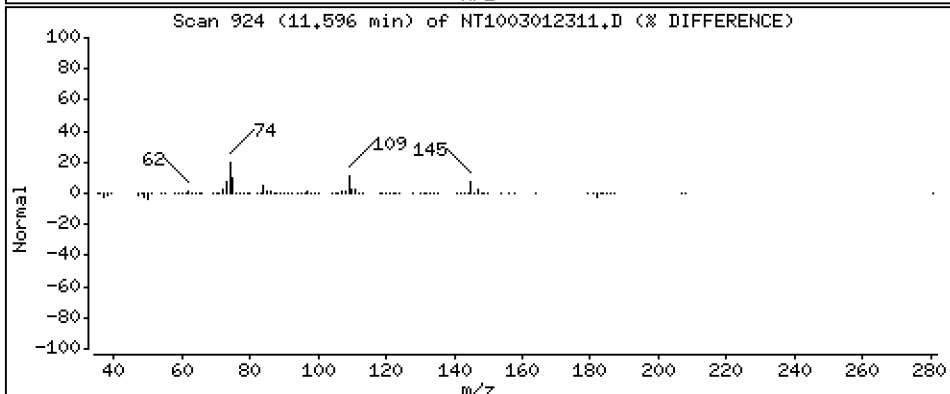
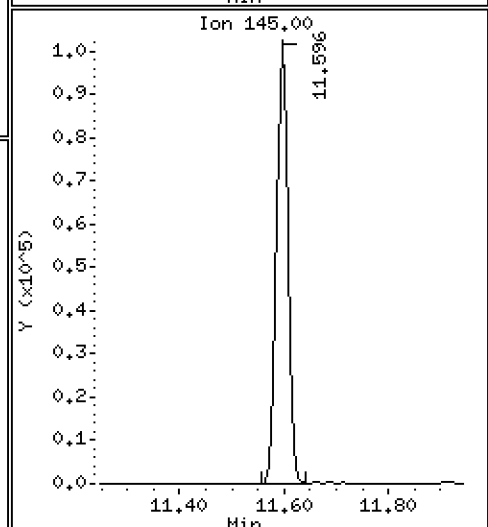
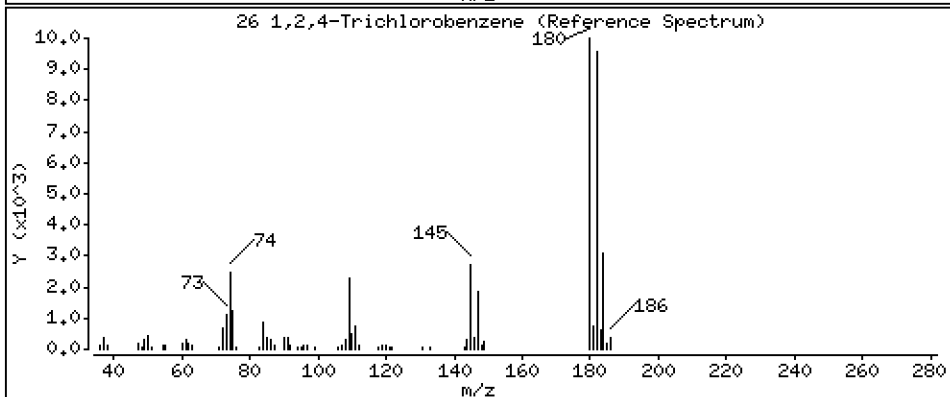
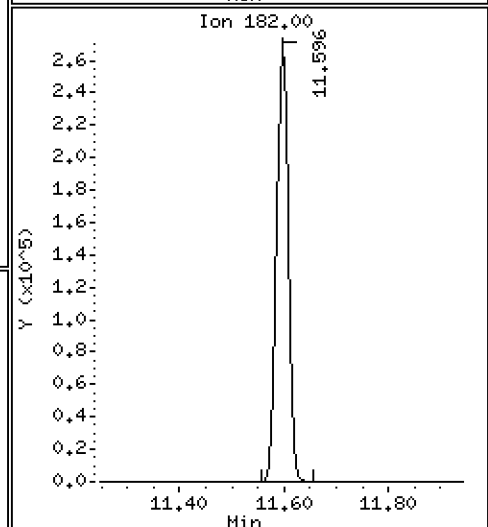
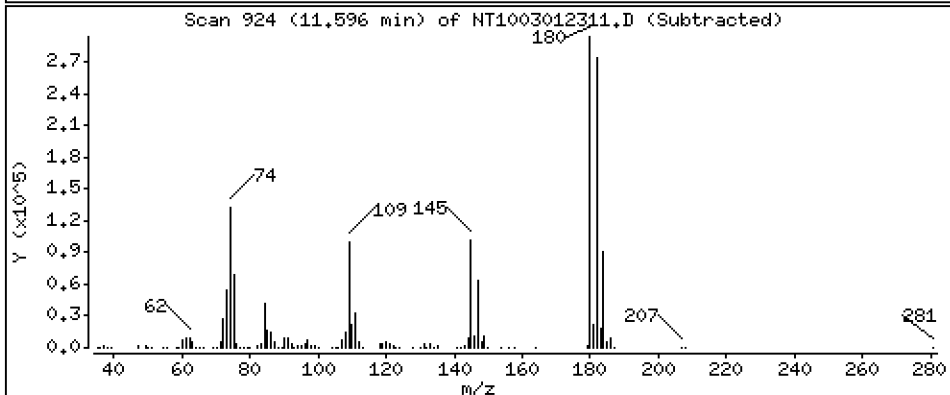
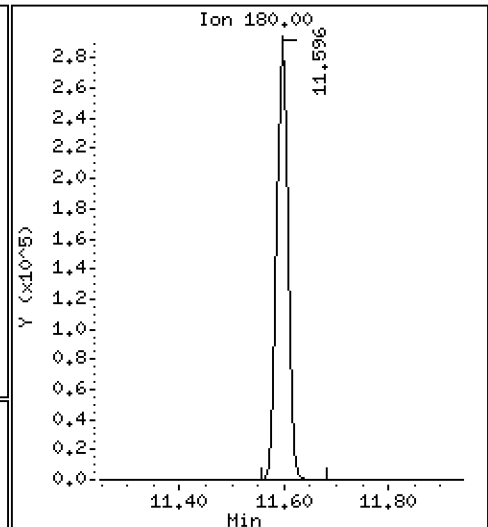
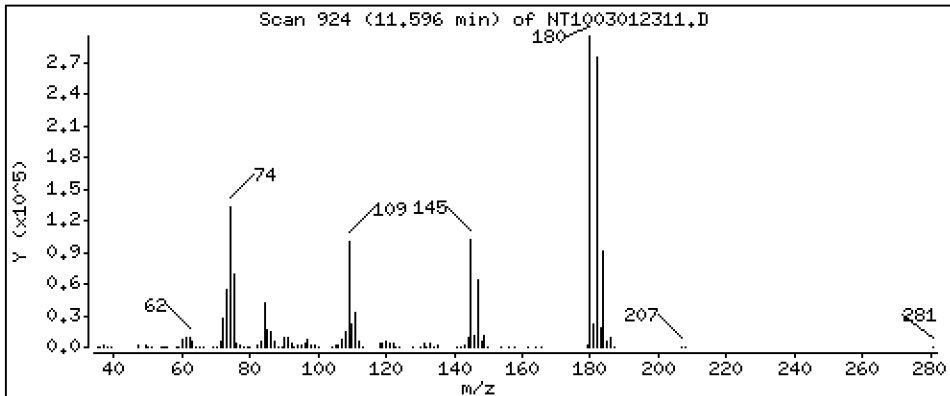
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,908 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

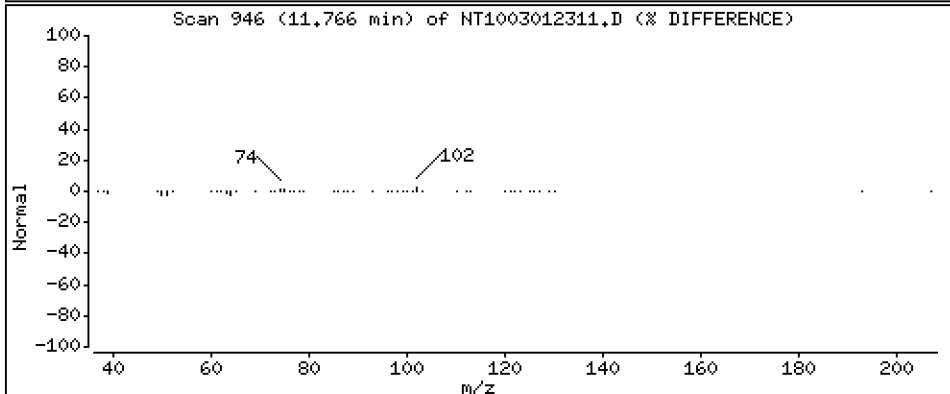
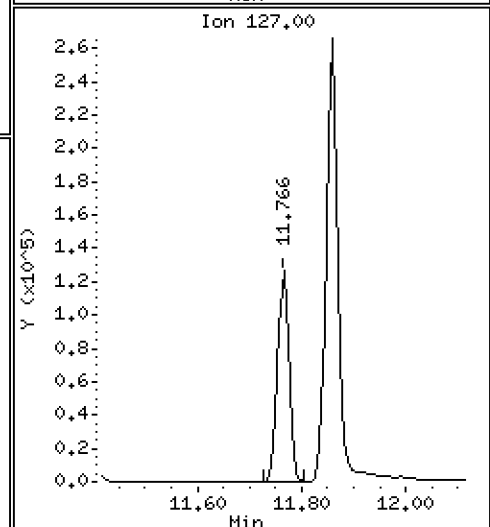
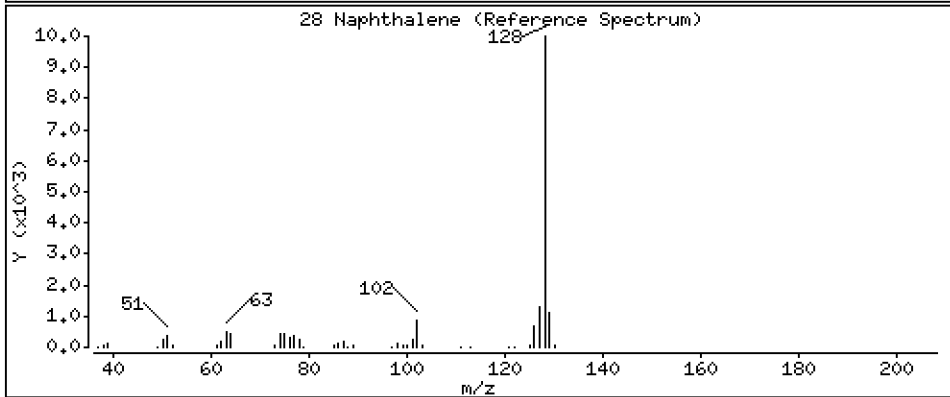
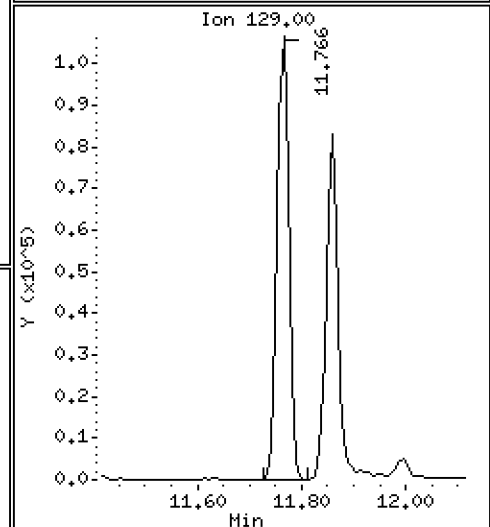
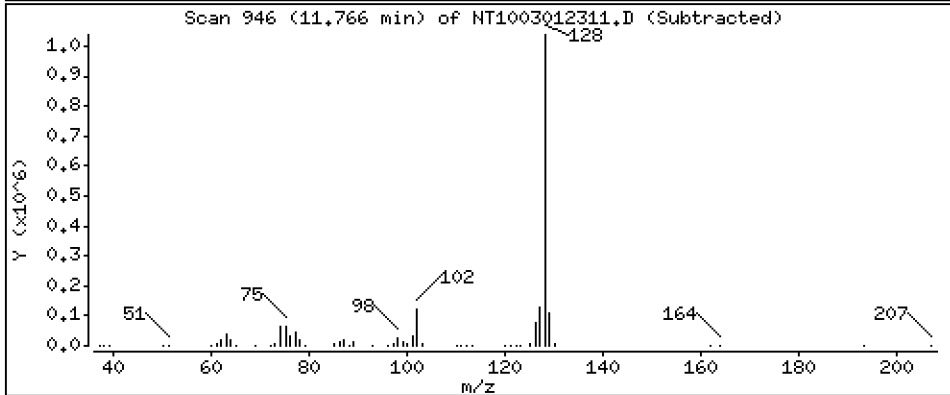
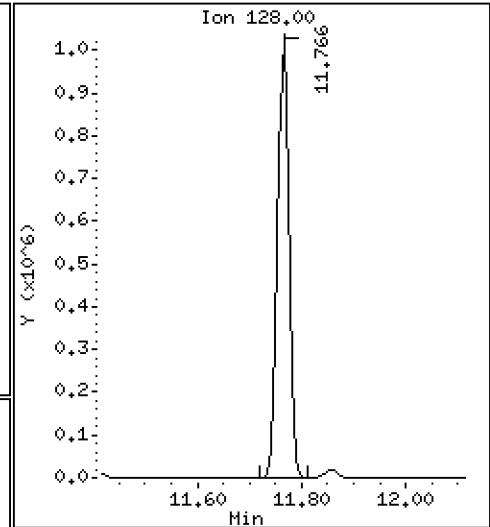
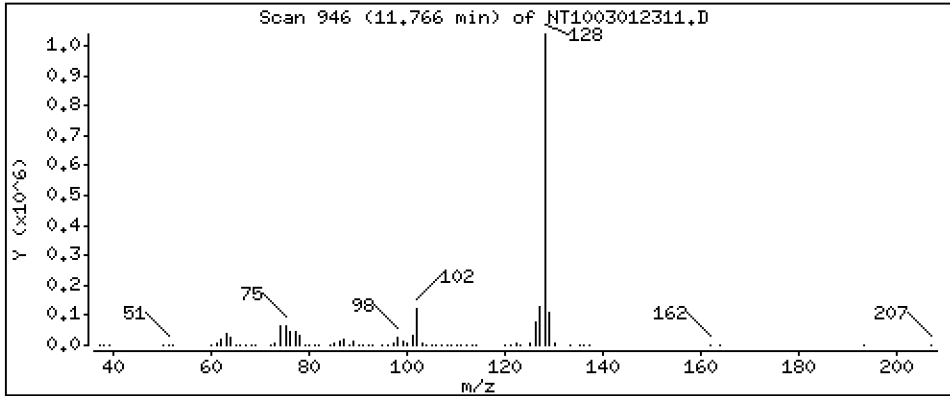
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 5,255 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

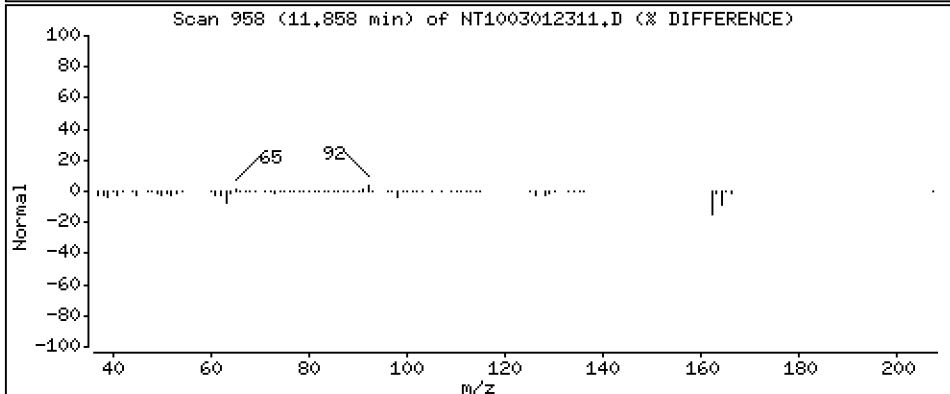
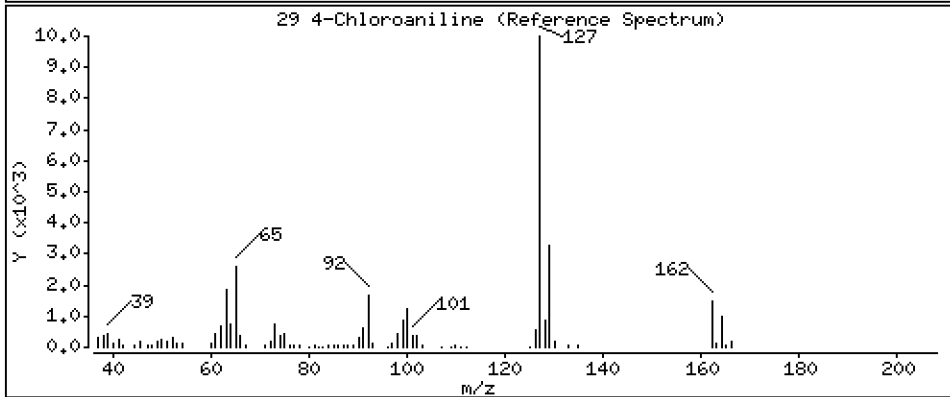
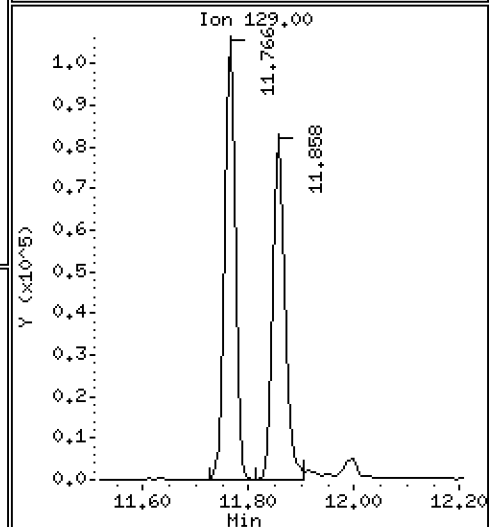
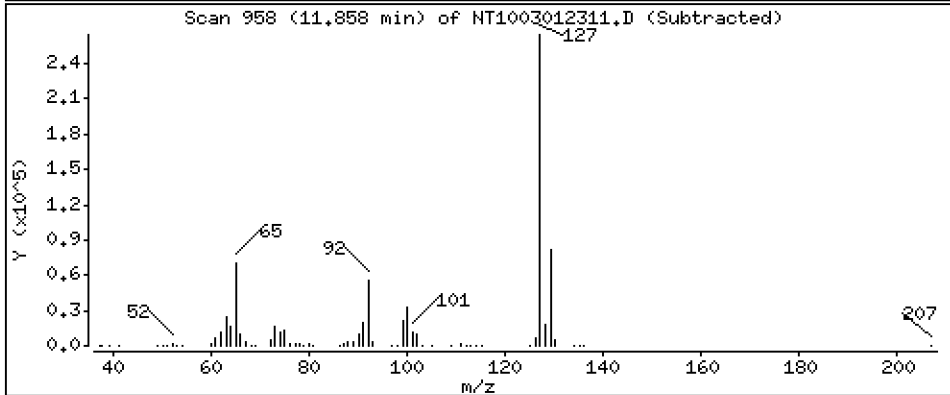
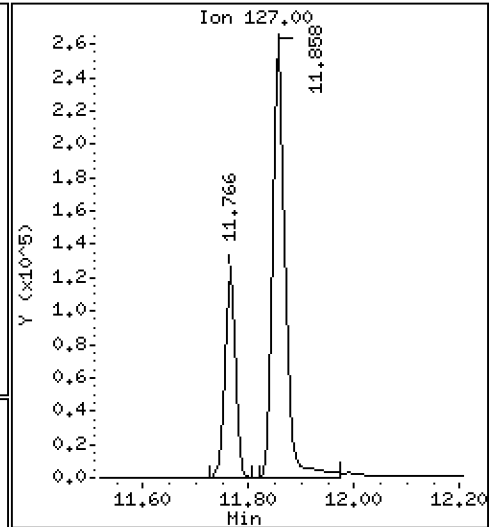
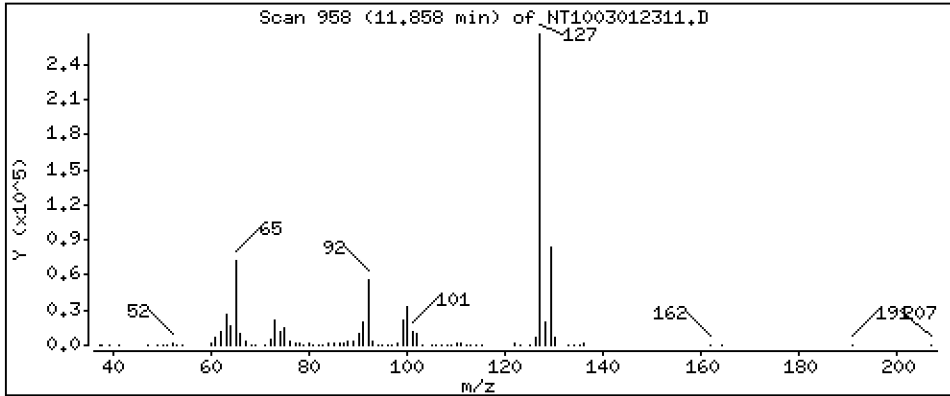
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 3,791 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

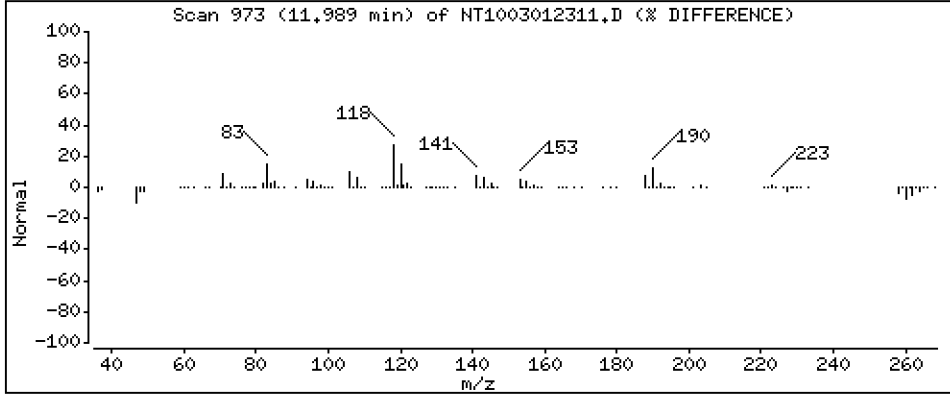
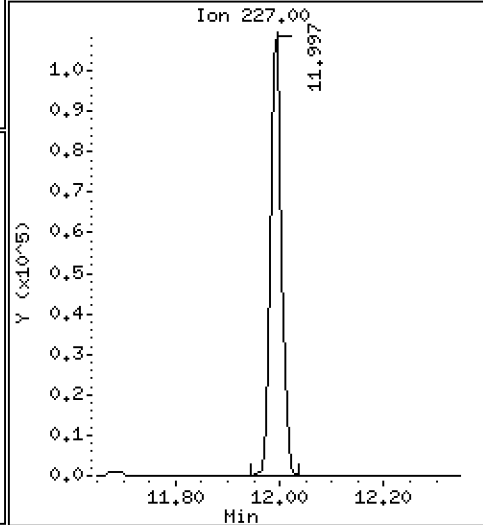
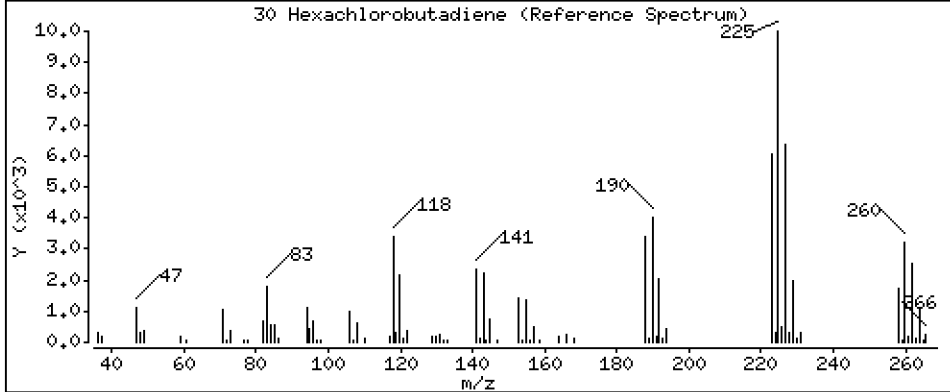
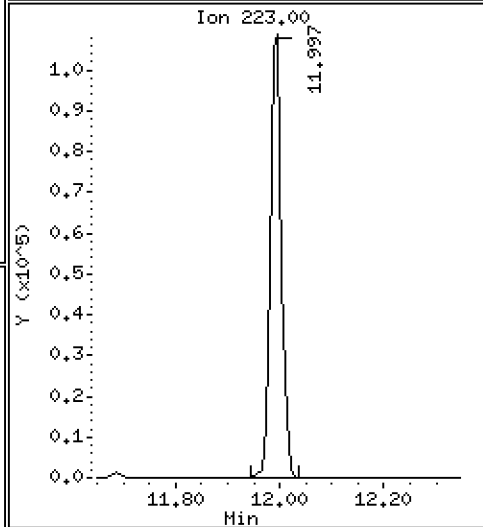
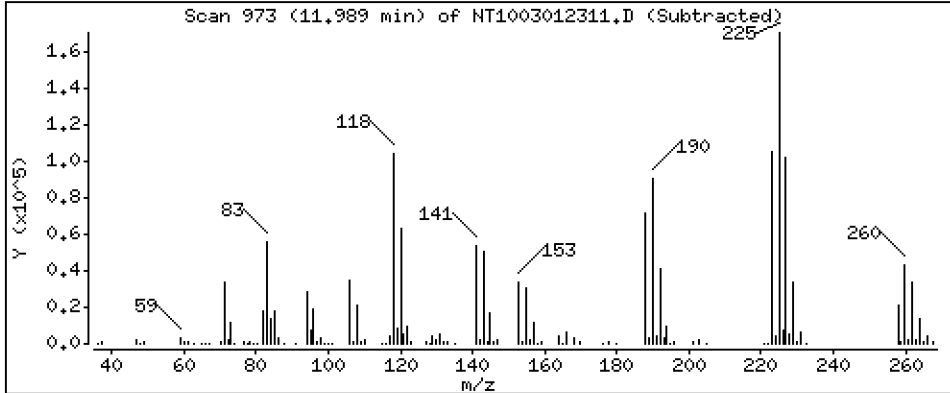
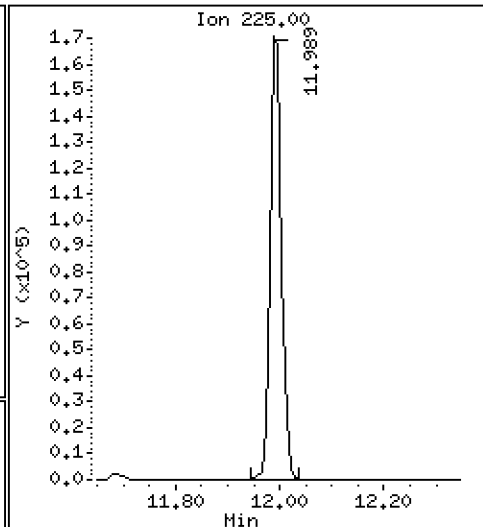
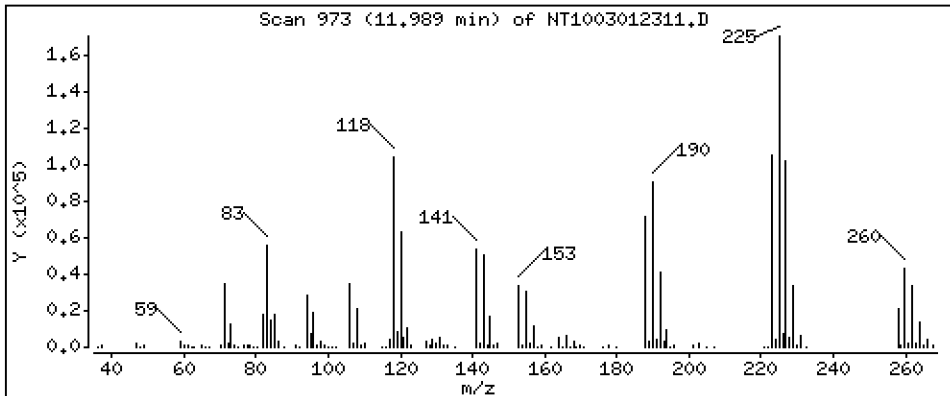
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 5,014 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

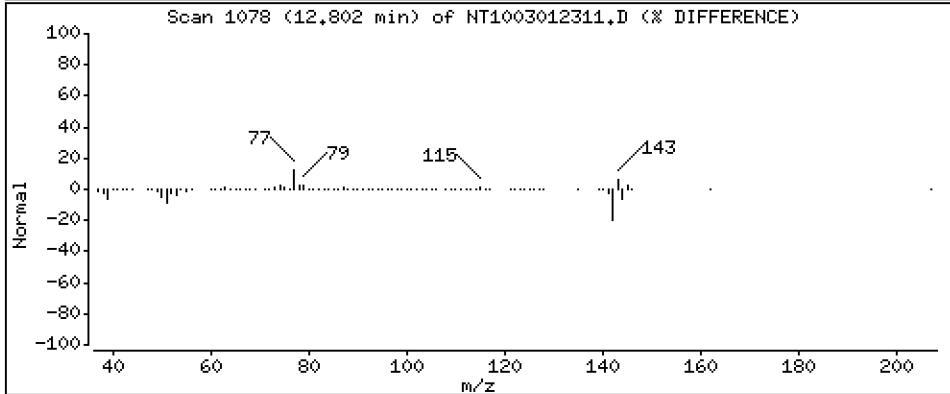
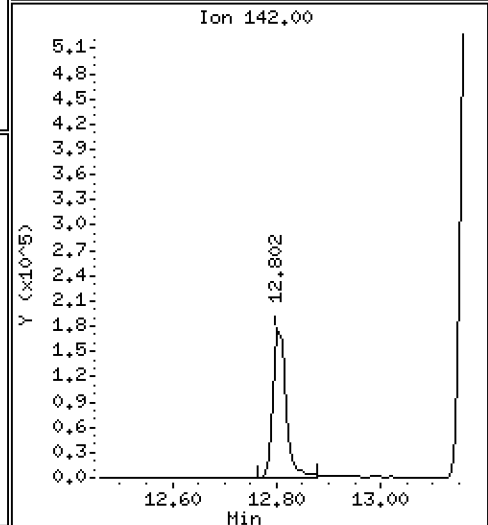
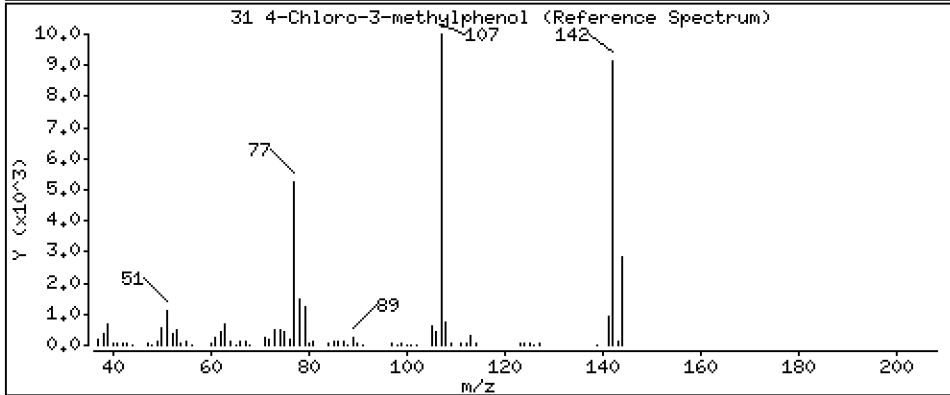
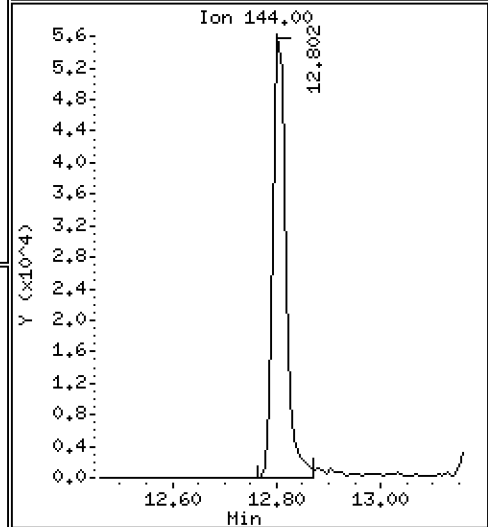
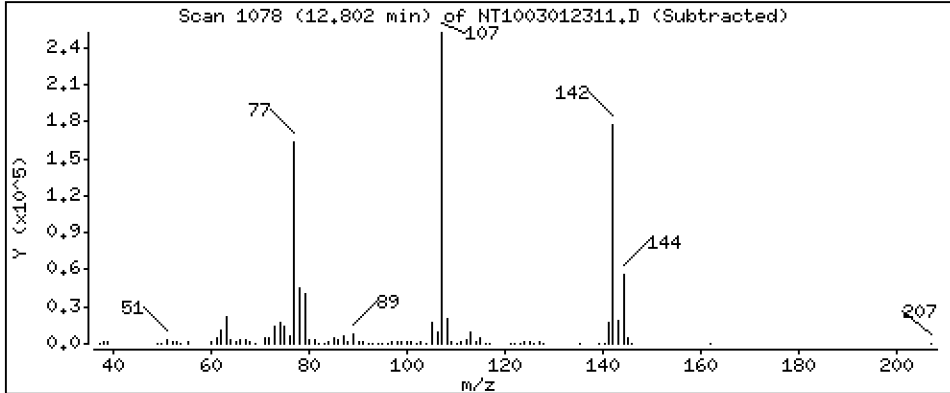
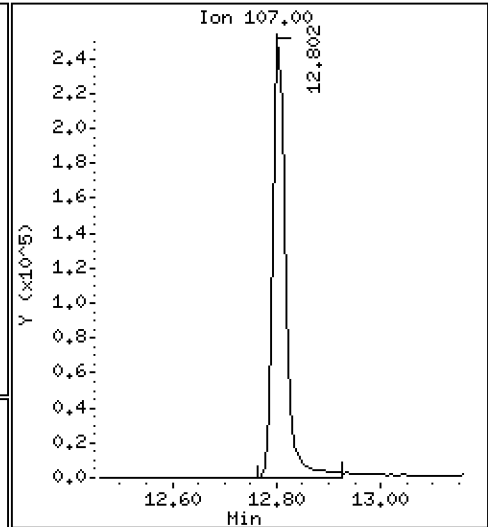
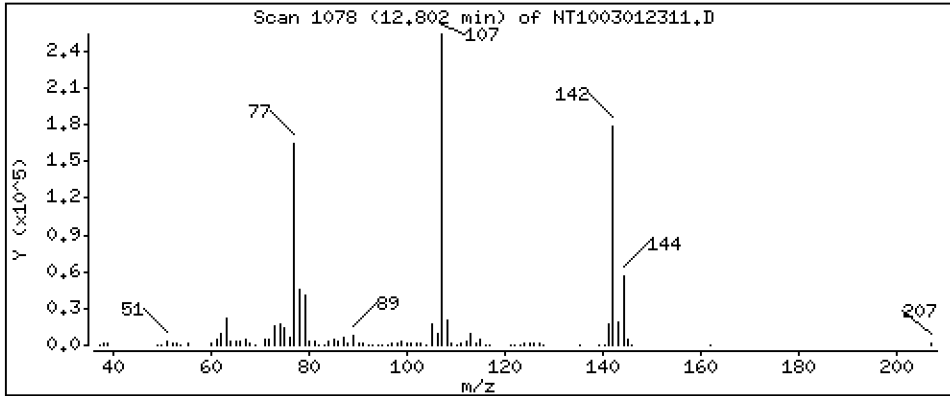
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 4,452 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

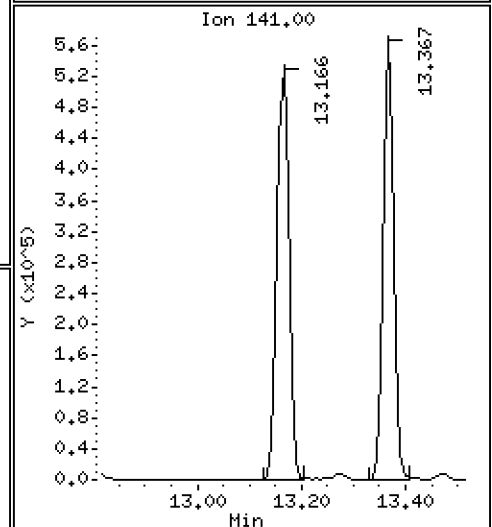
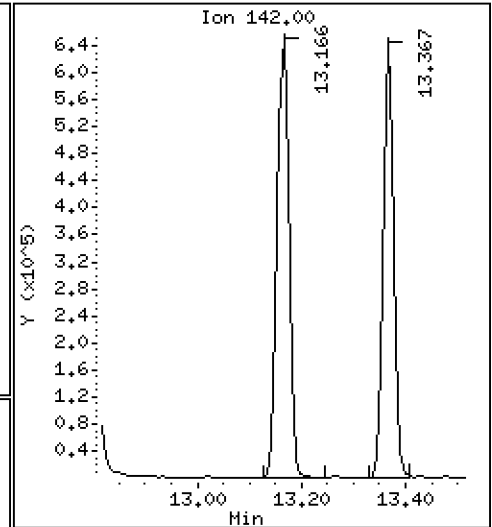
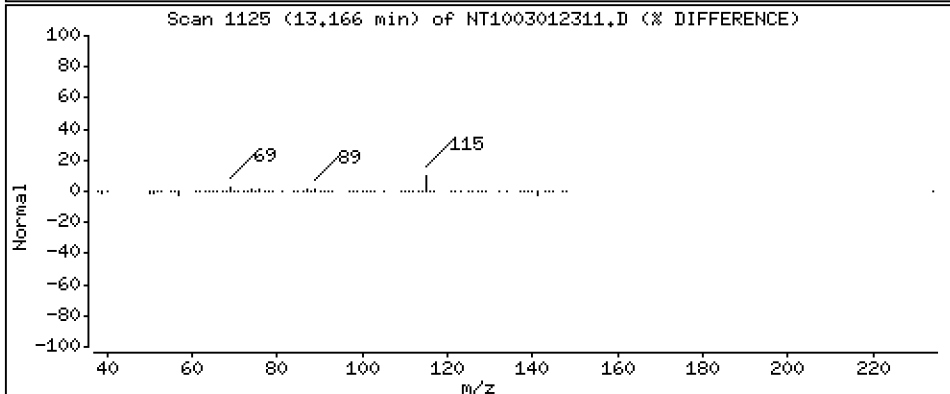
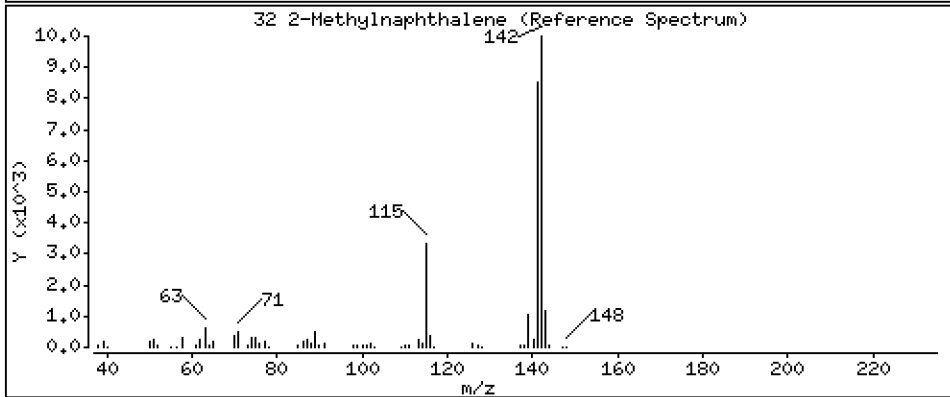
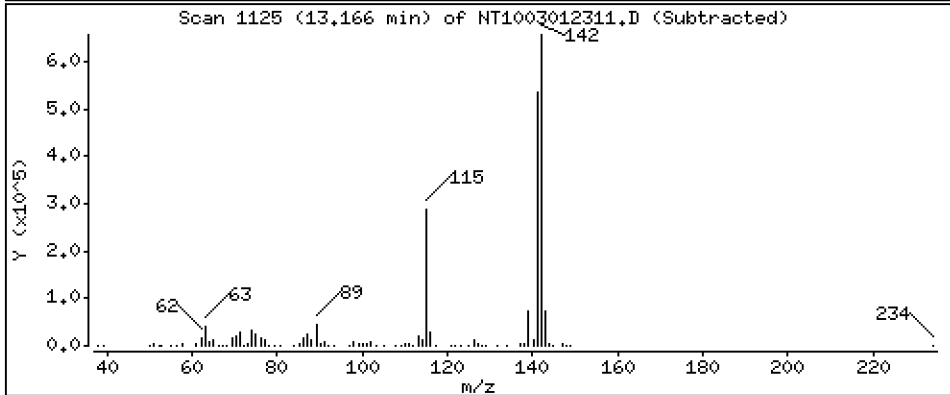
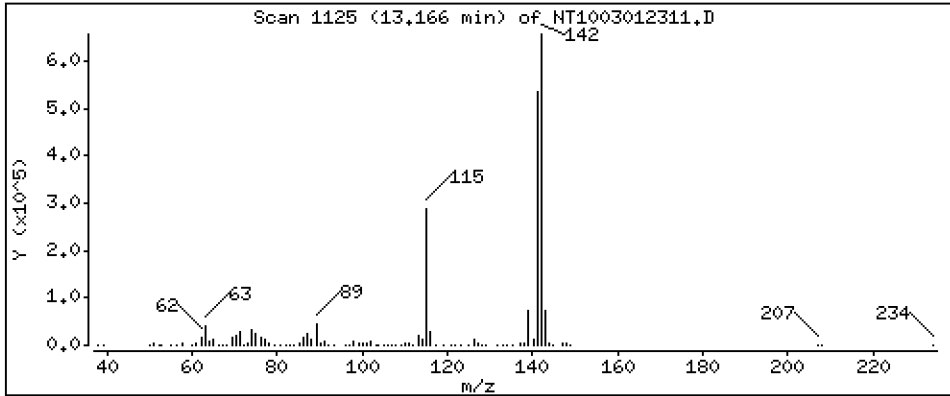
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 4,951 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

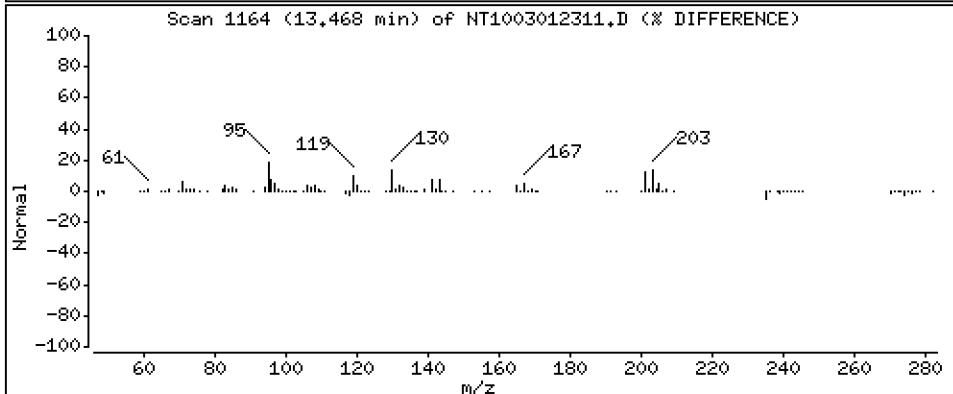
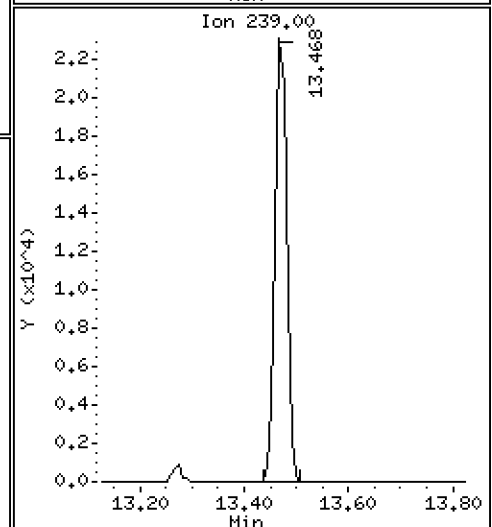
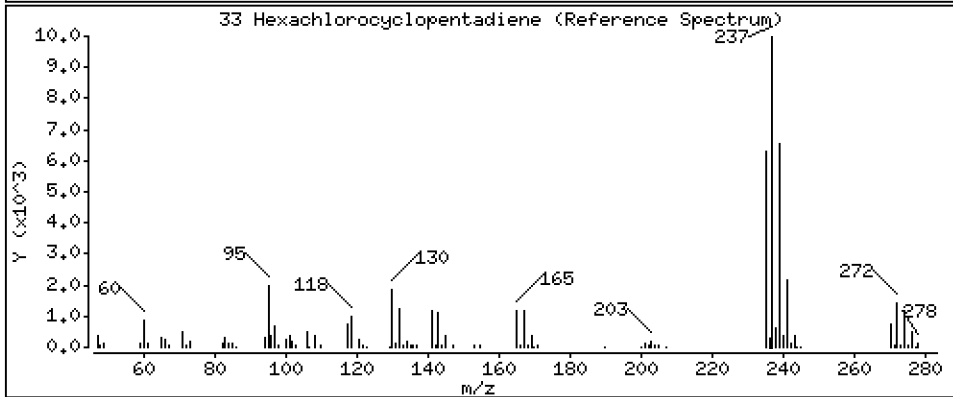
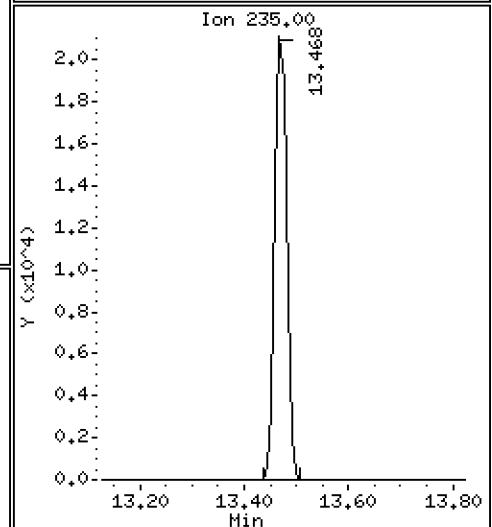
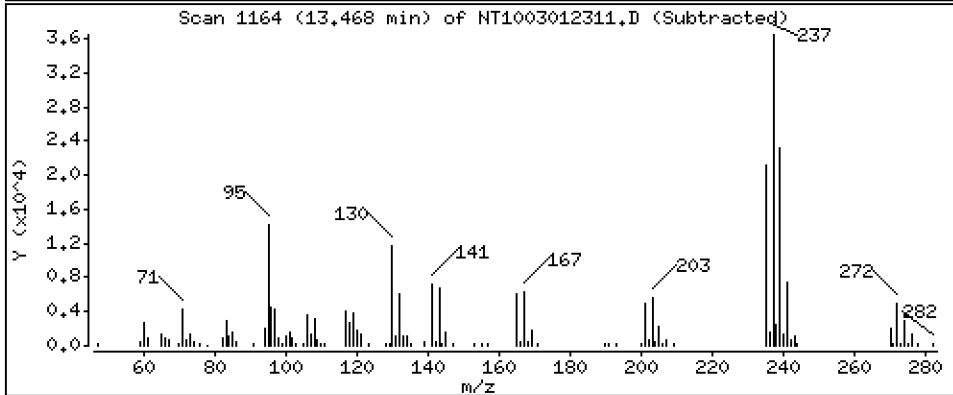
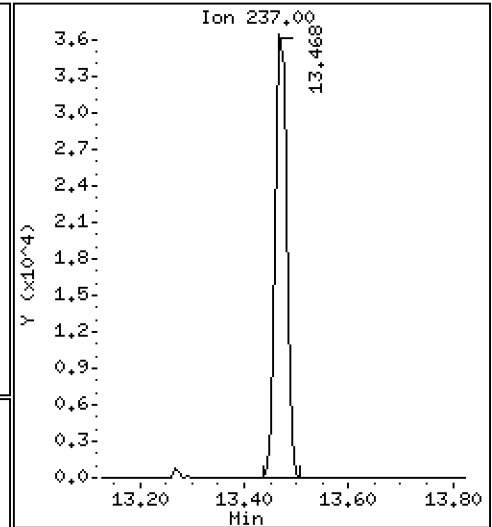
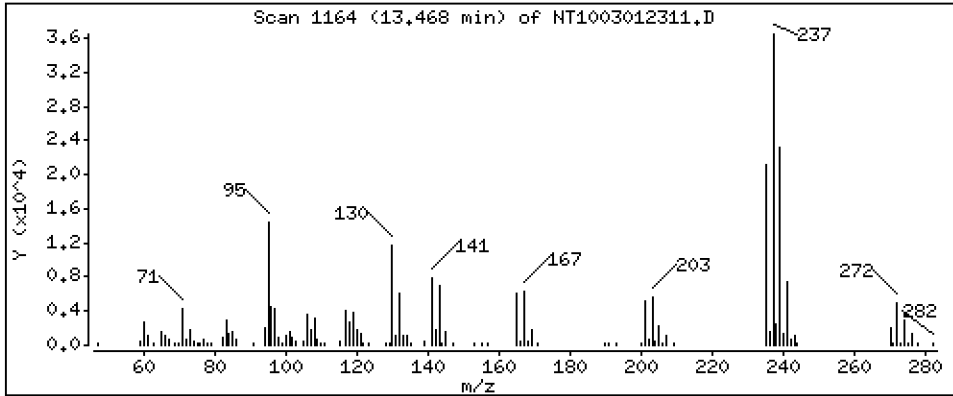
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 2,562 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

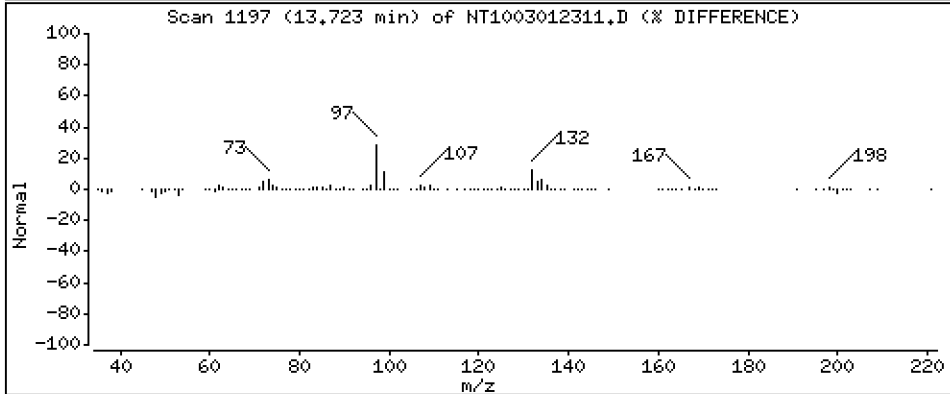
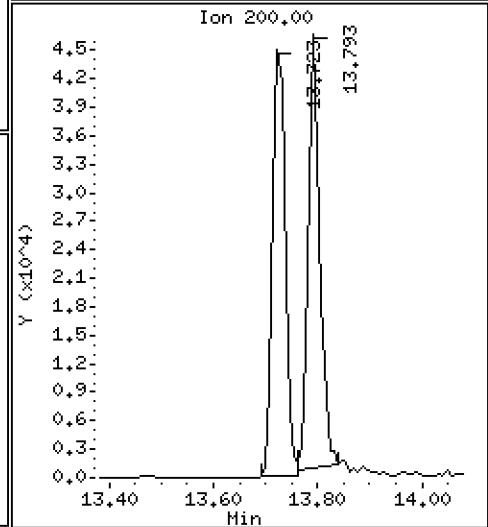
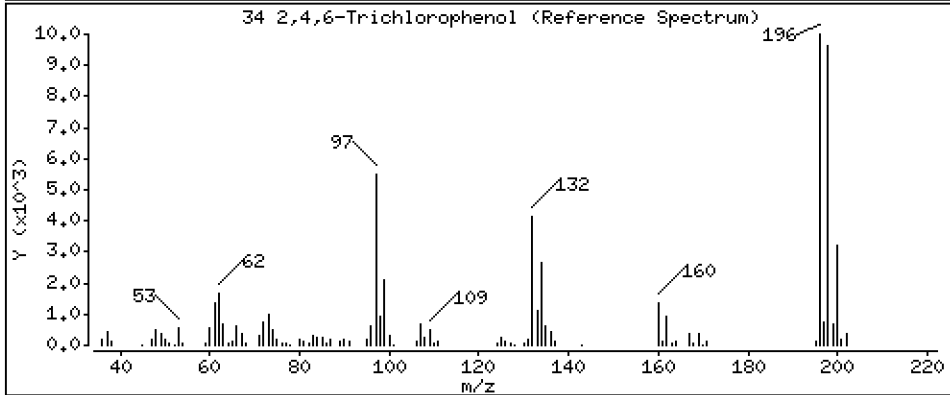
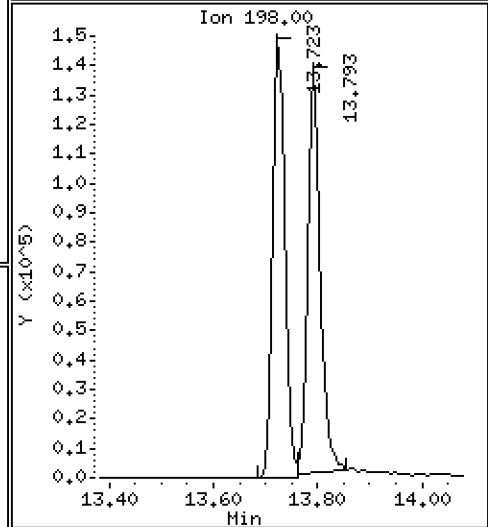
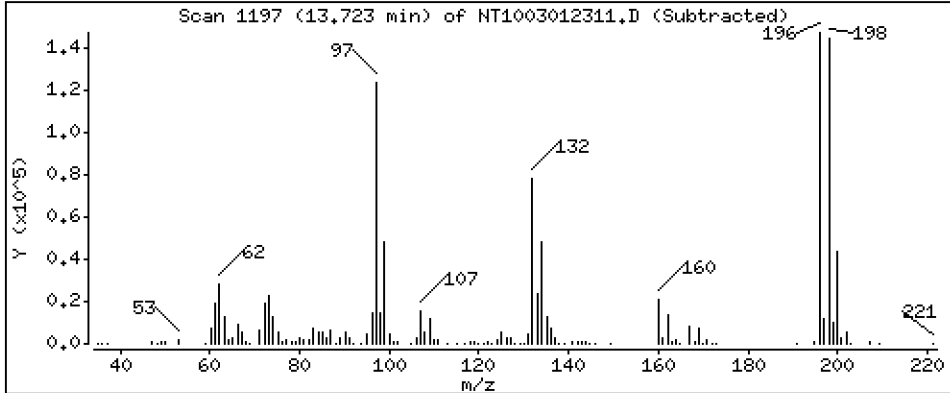
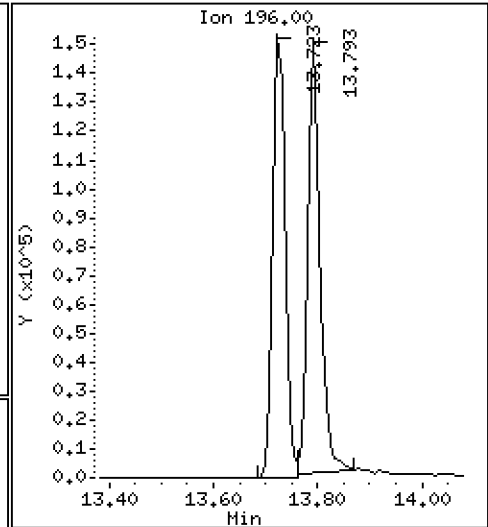
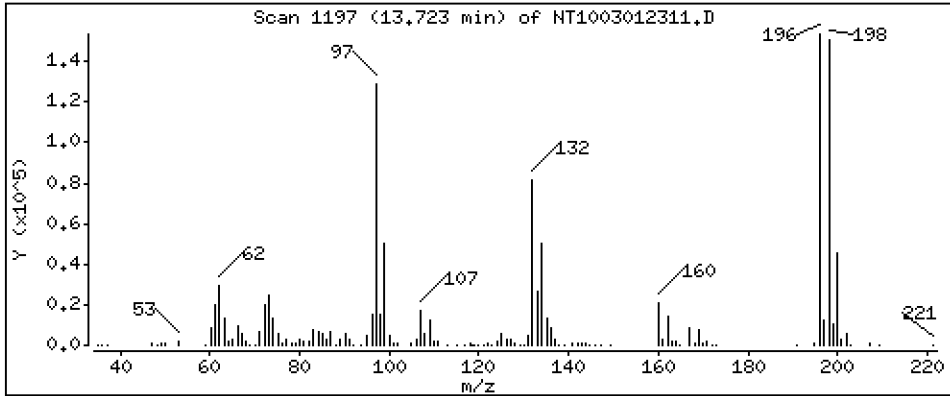
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 4,120 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

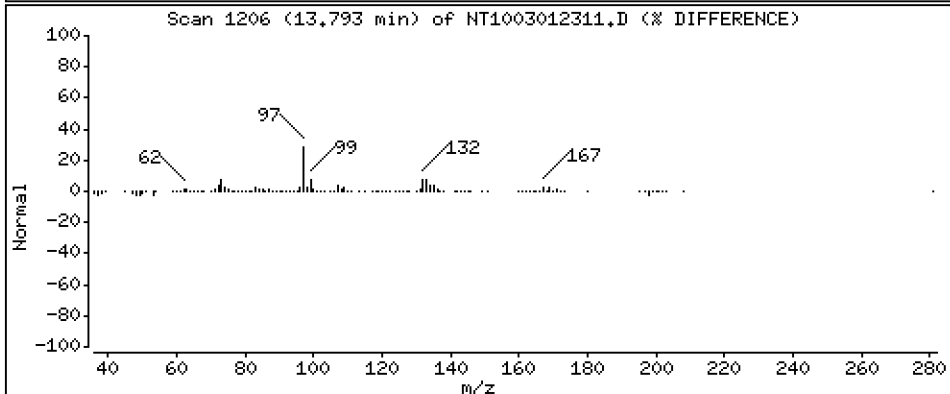
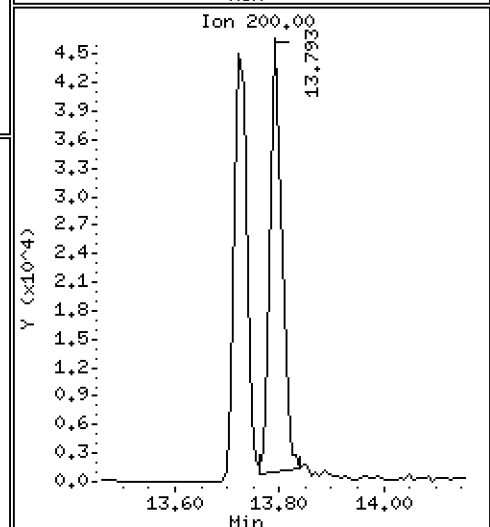
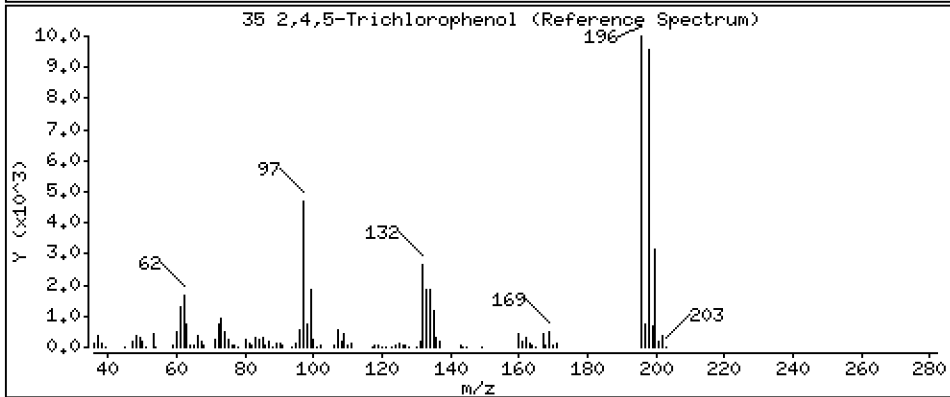
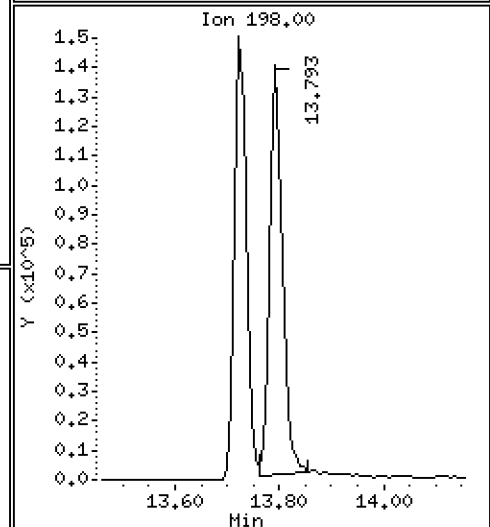
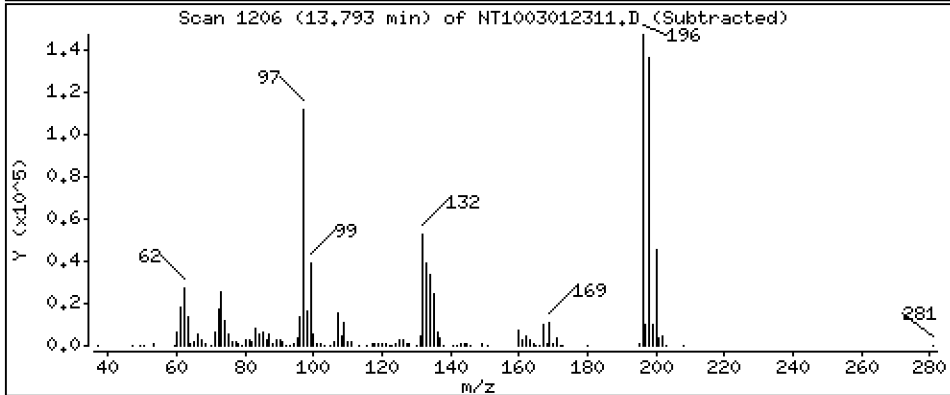
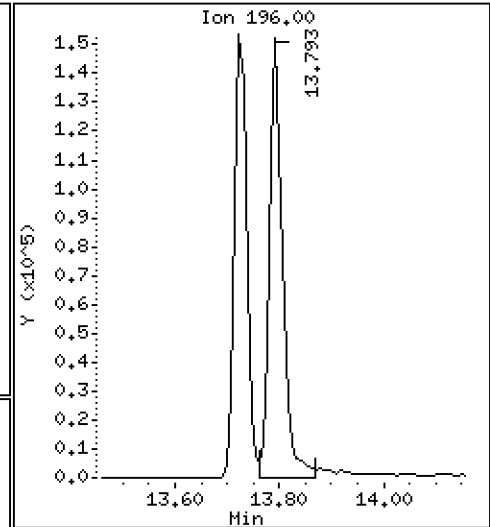
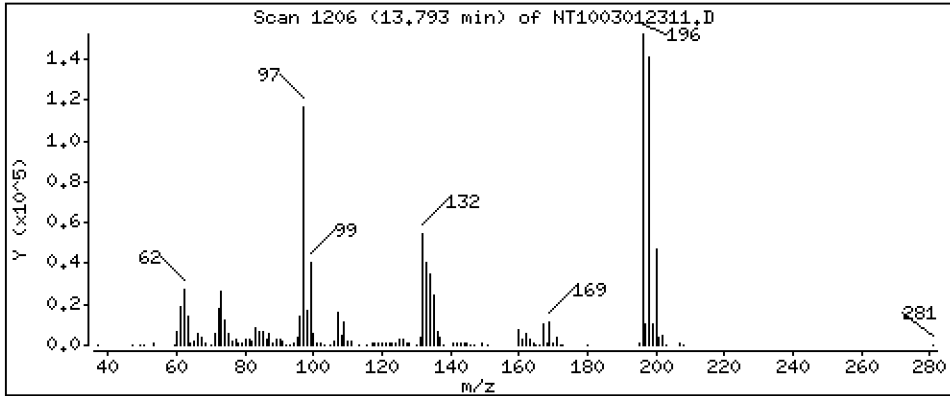
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 4,149 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

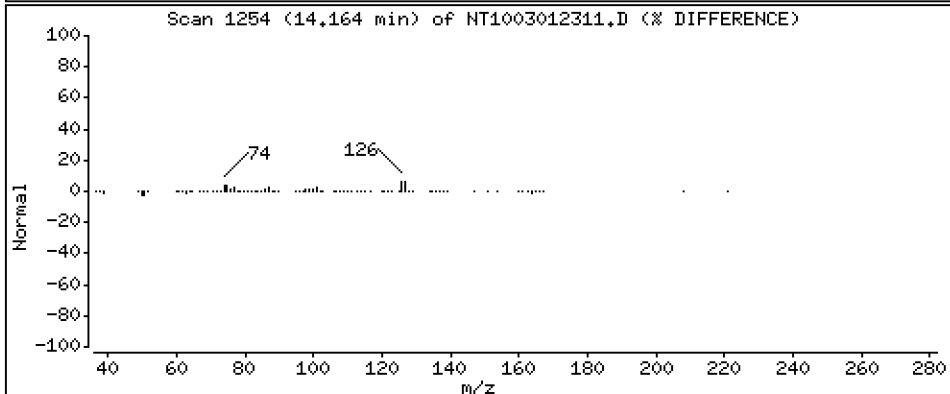
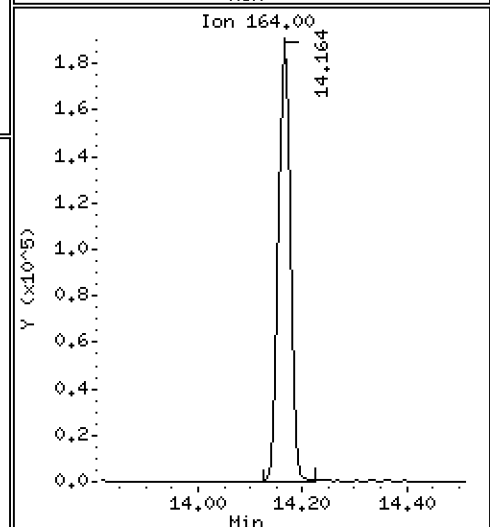
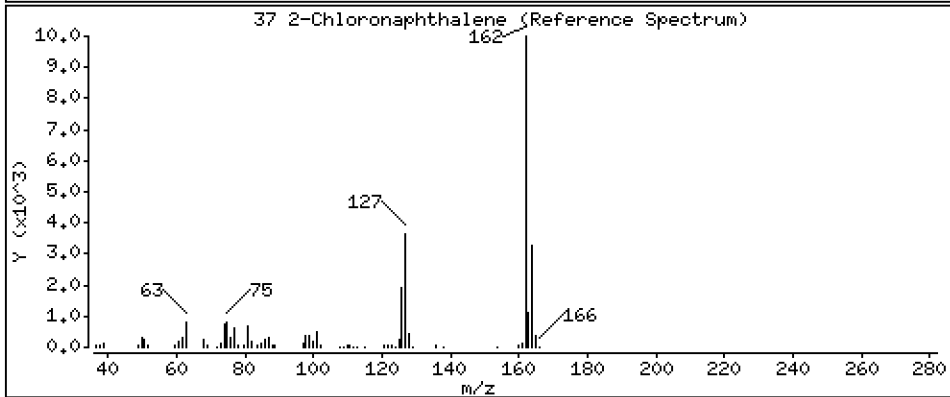
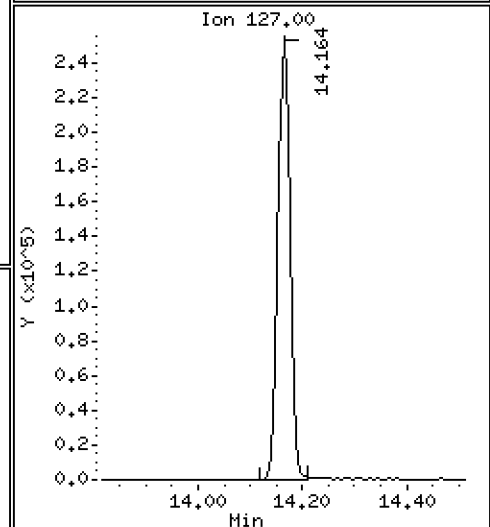
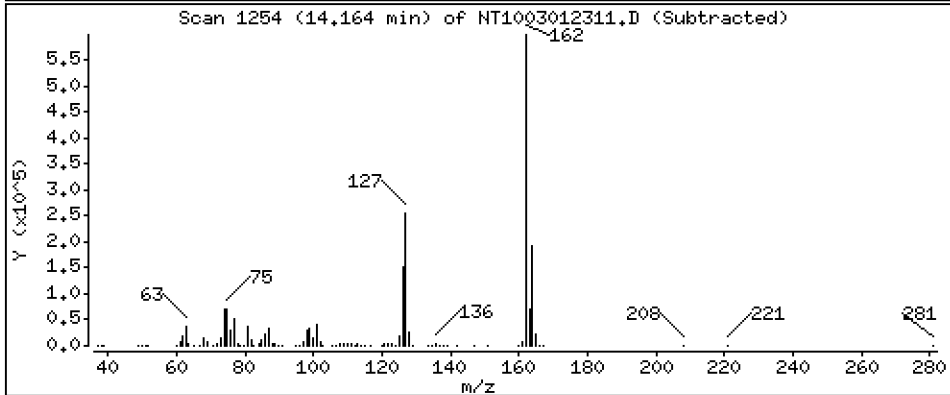
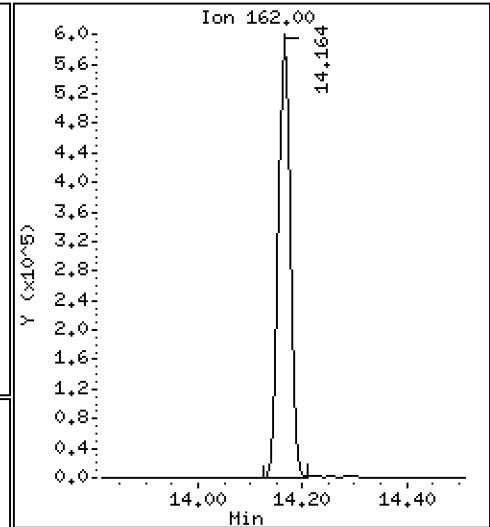
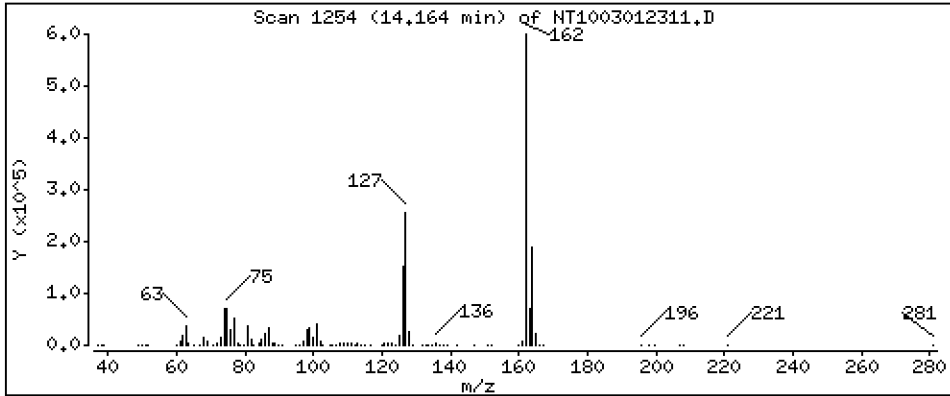
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,264 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

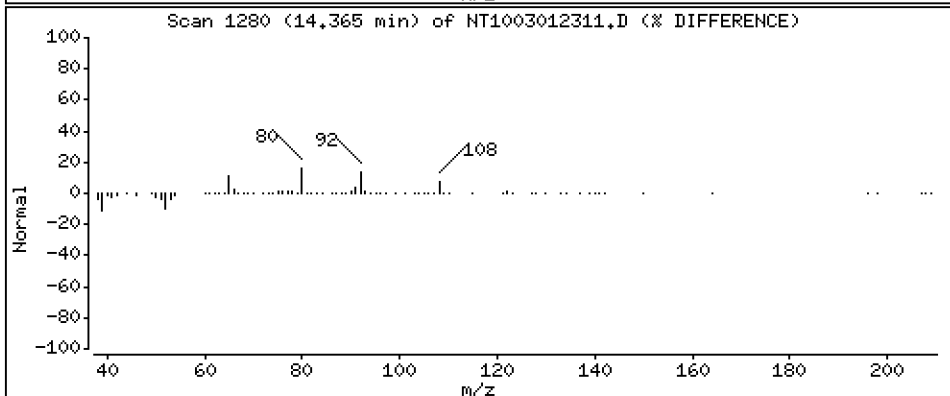
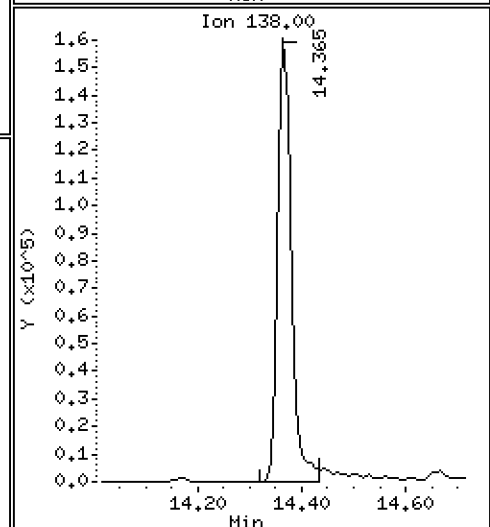
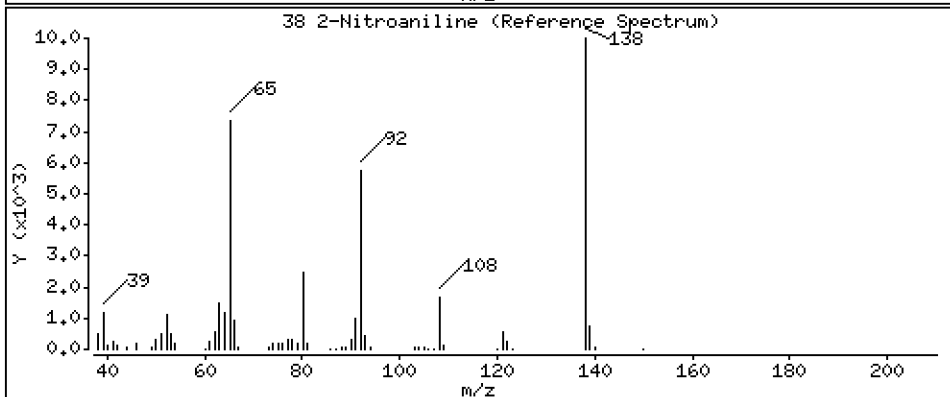
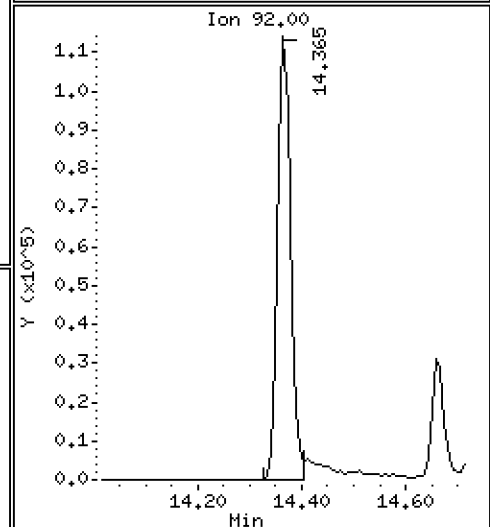
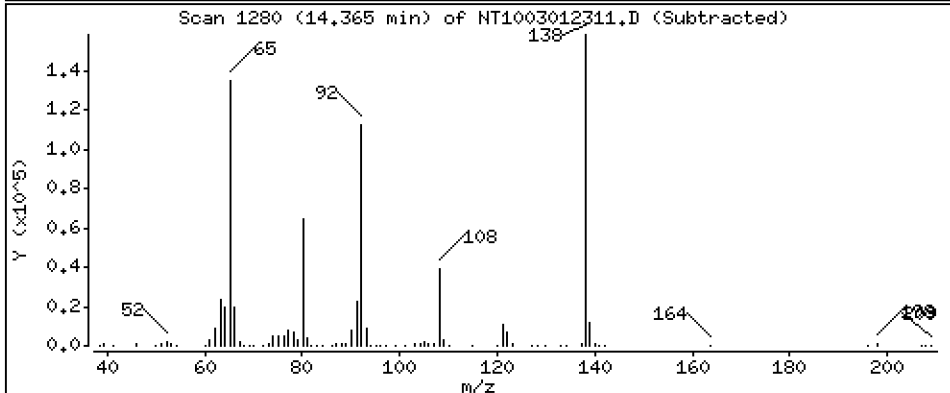
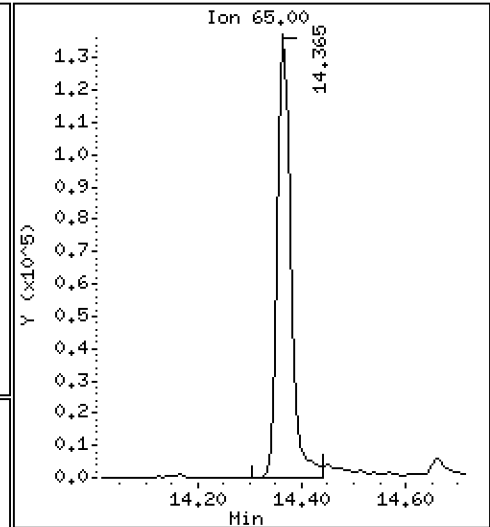
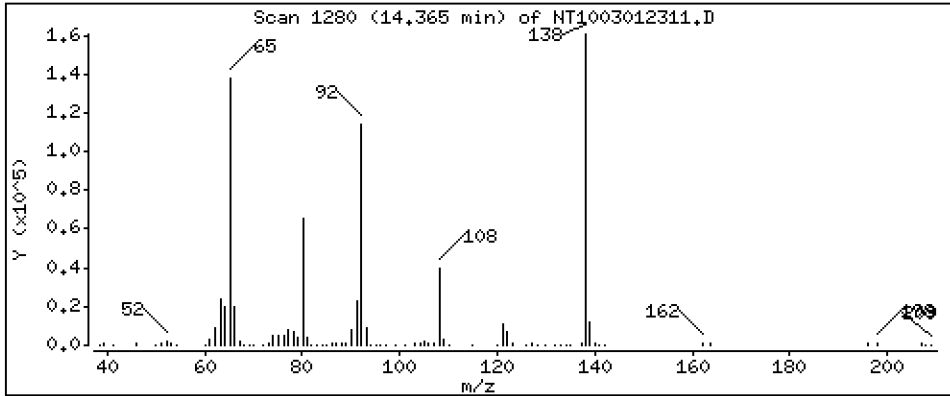
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 5,027 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

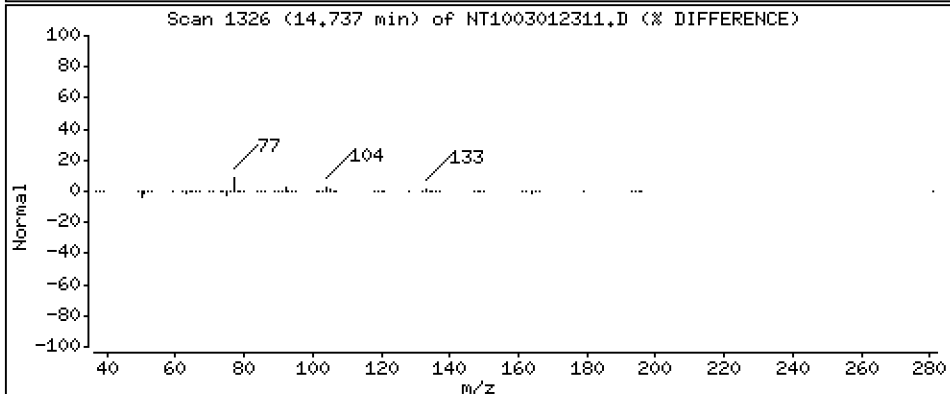
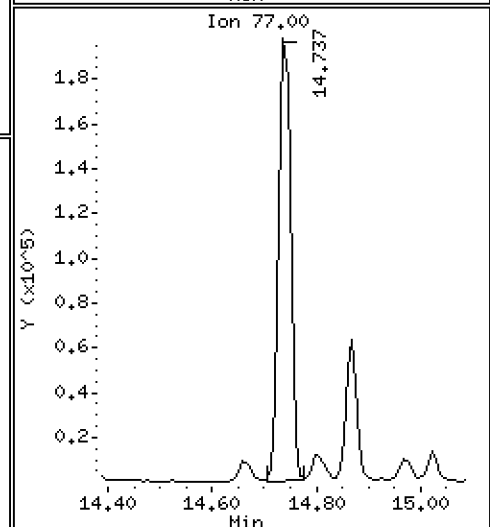
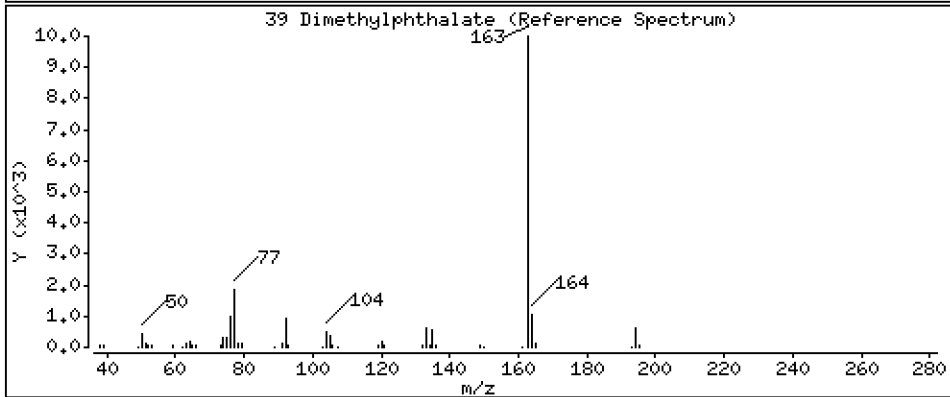
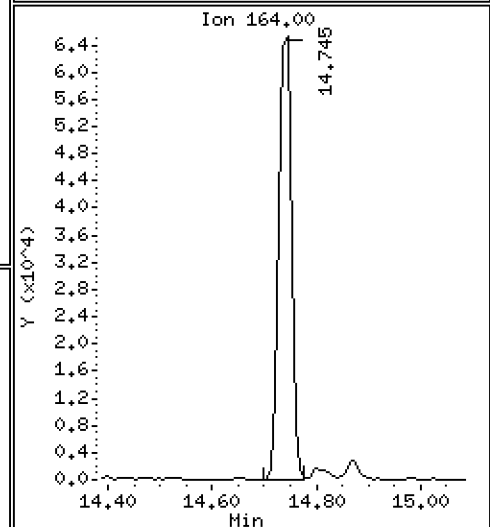
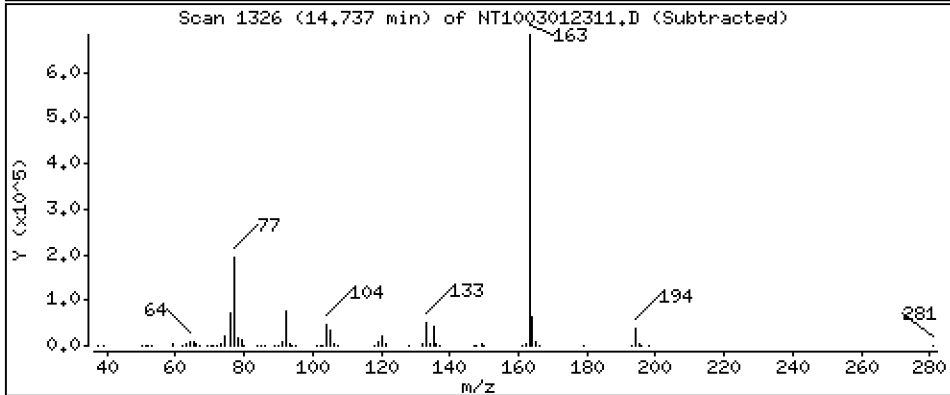
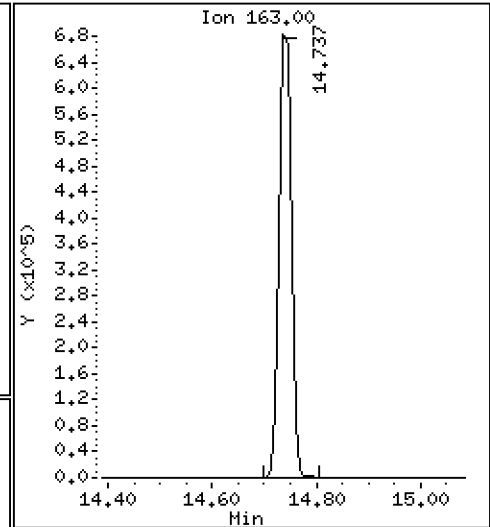
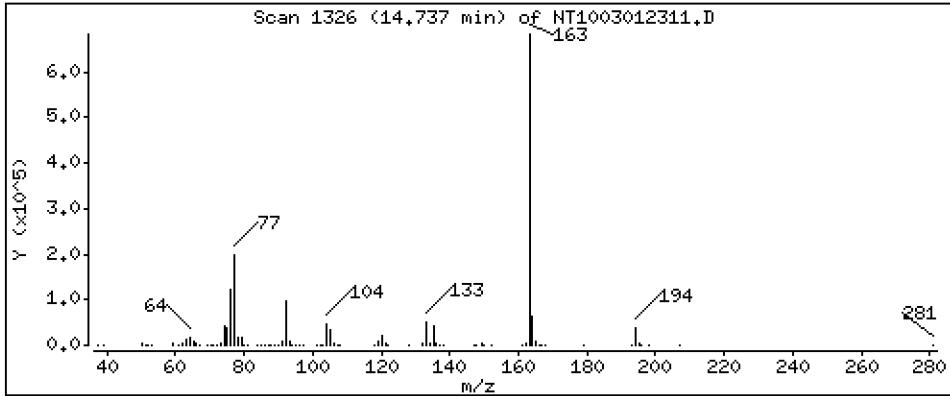
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,384 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

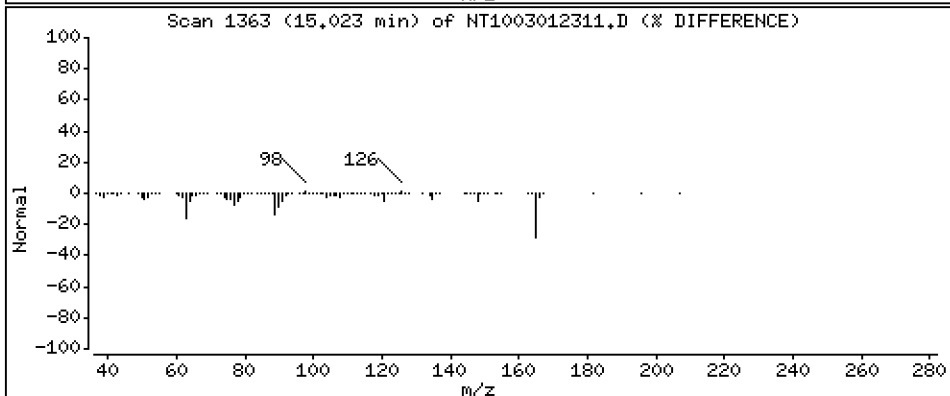
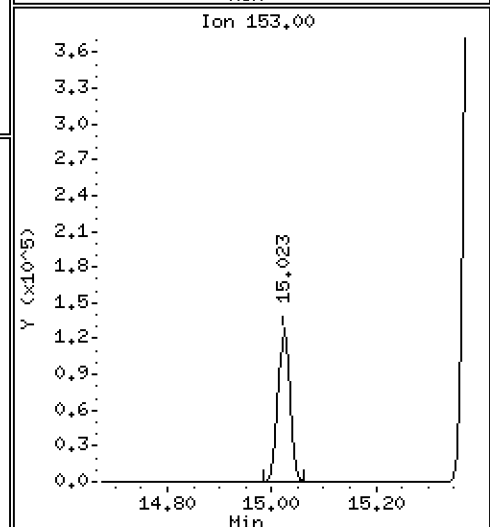
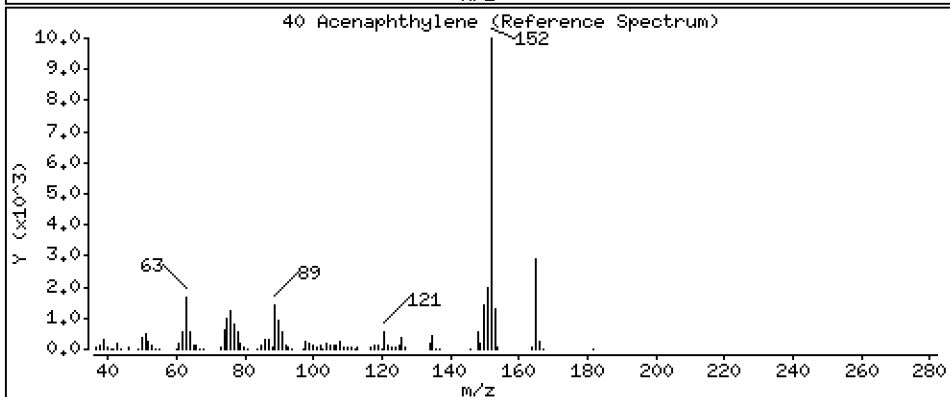
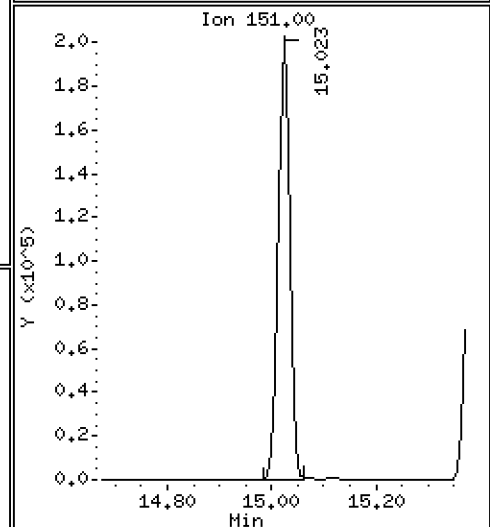
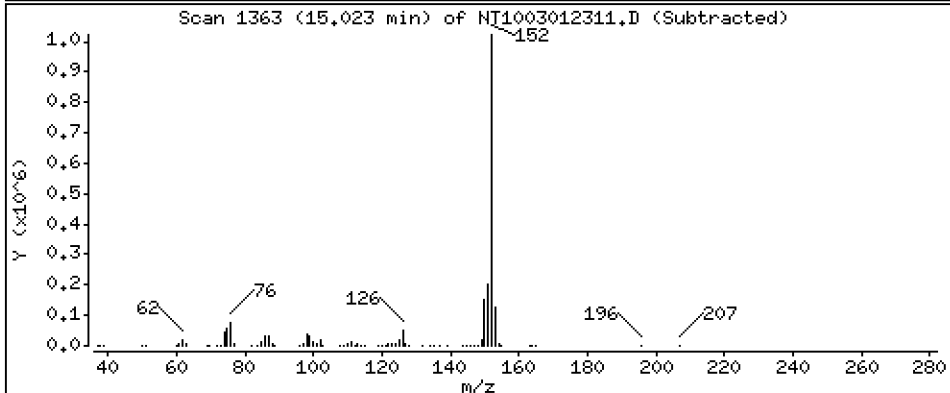
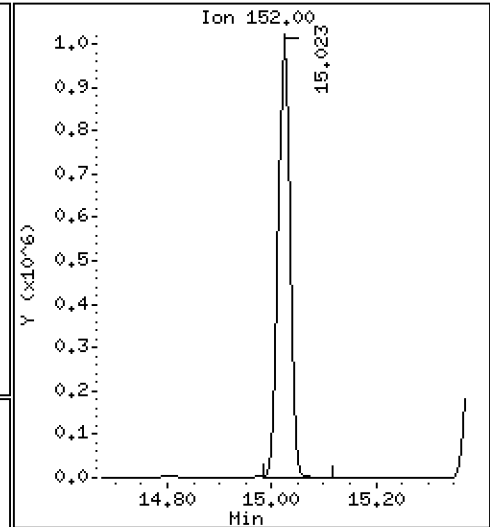
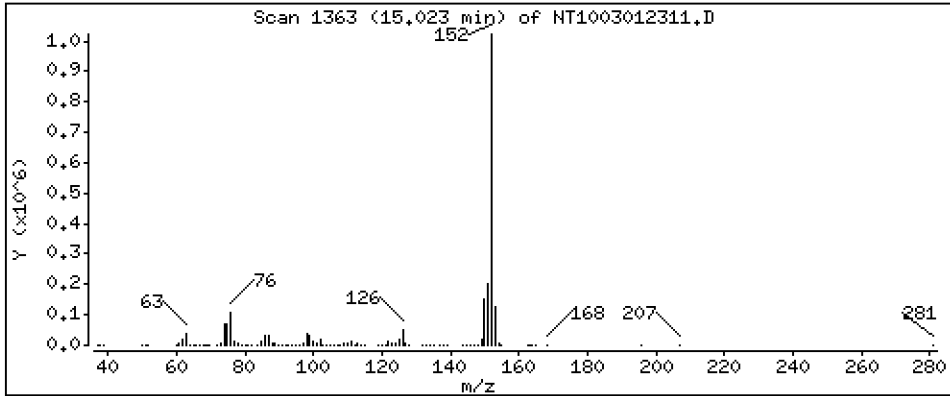
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,806 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

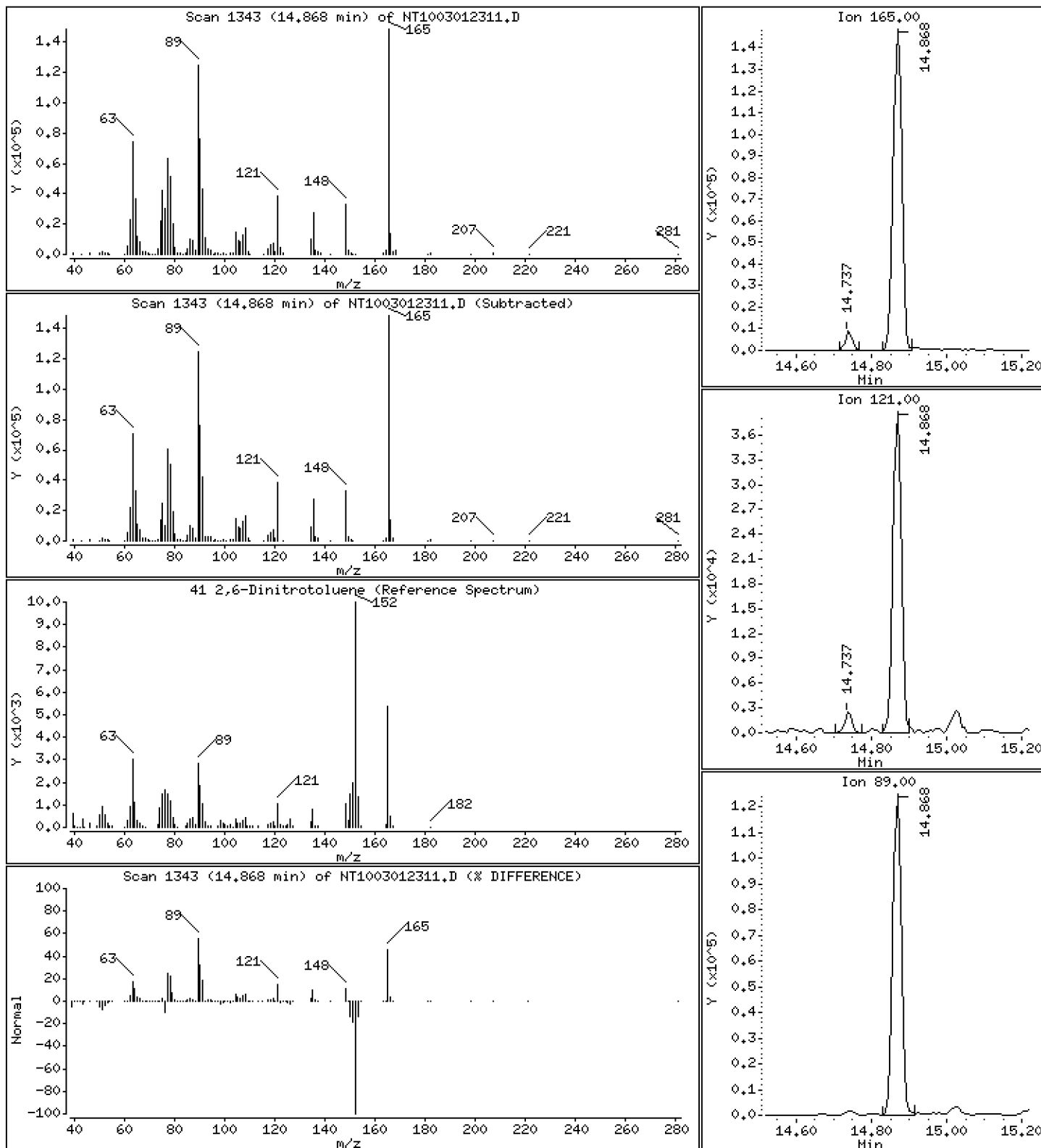
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

41 2,6-Dinitrotoluene

Concentration: 5.187 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

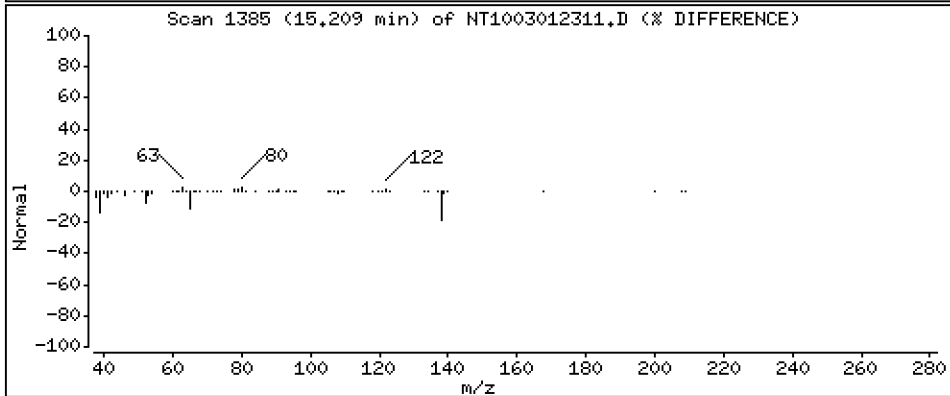
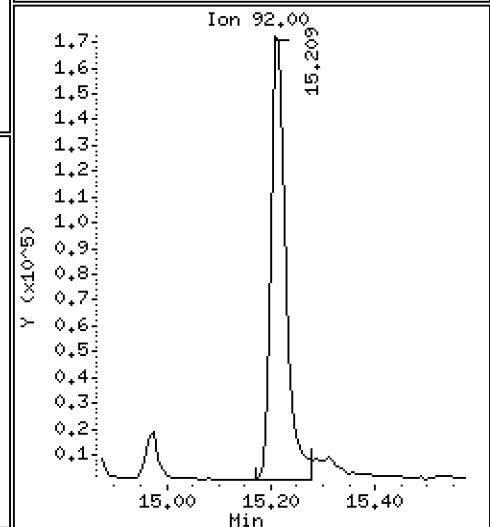
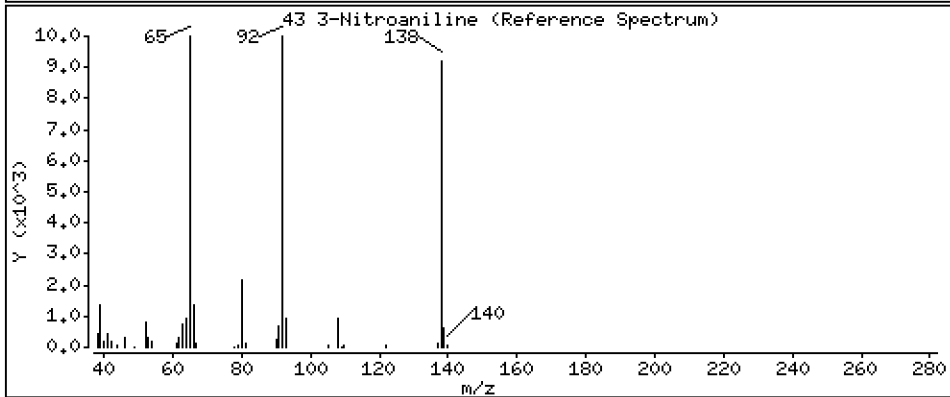
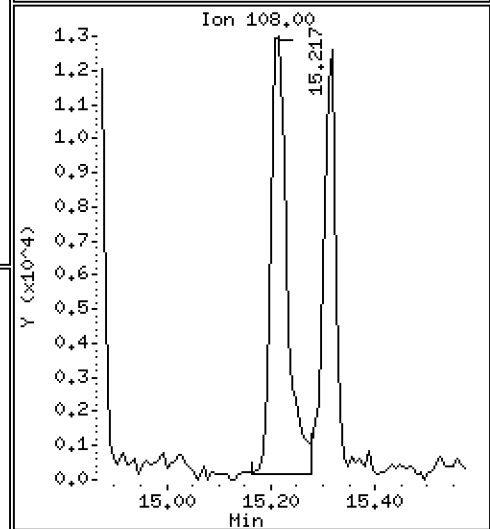
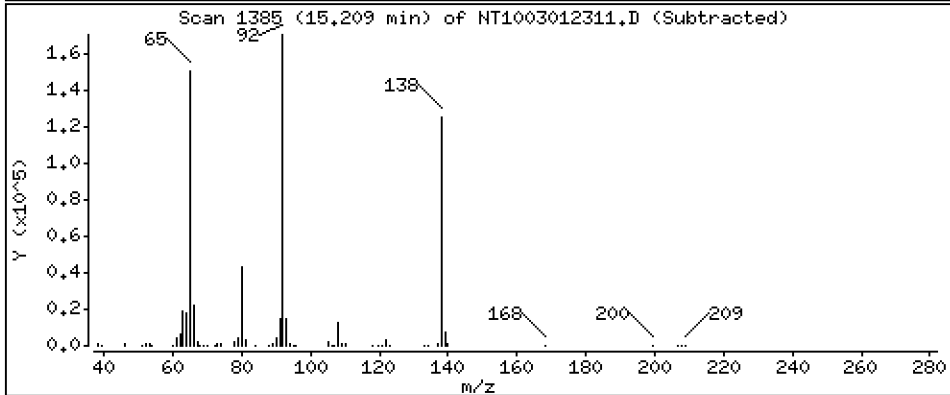
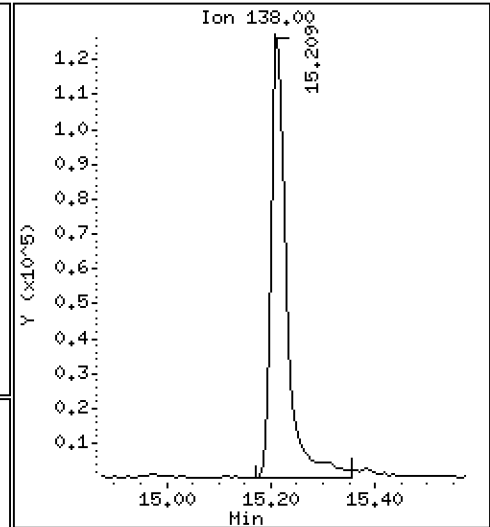
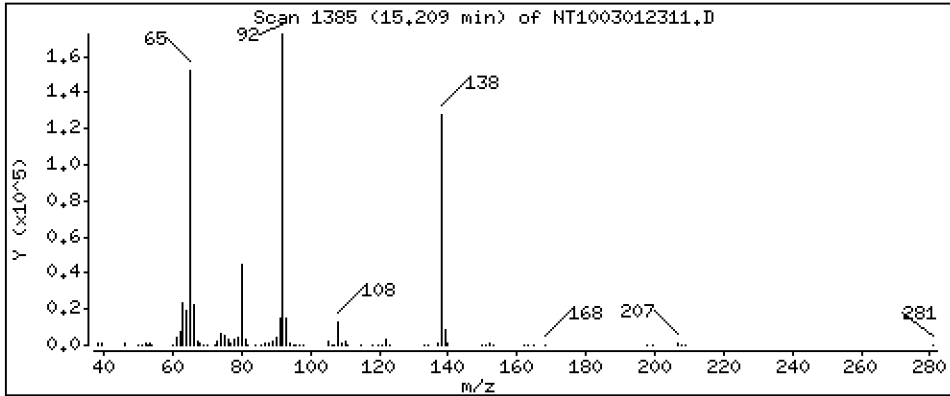
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 5,172 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

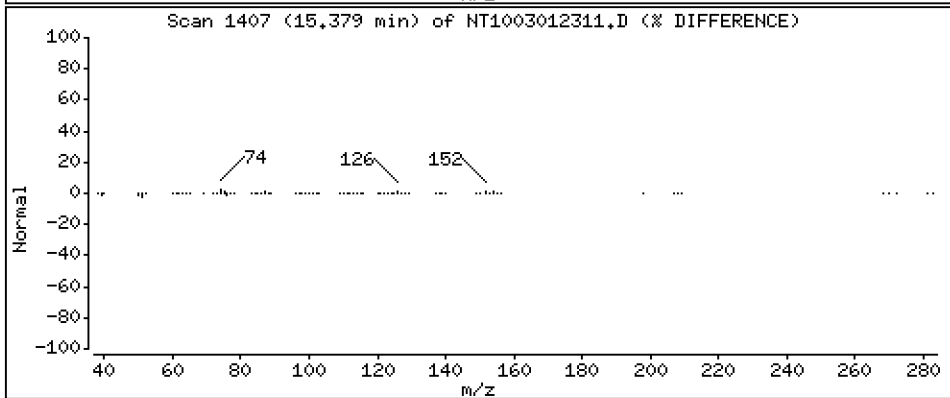
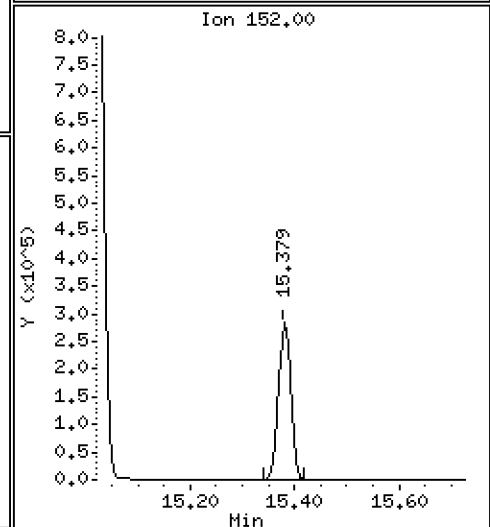
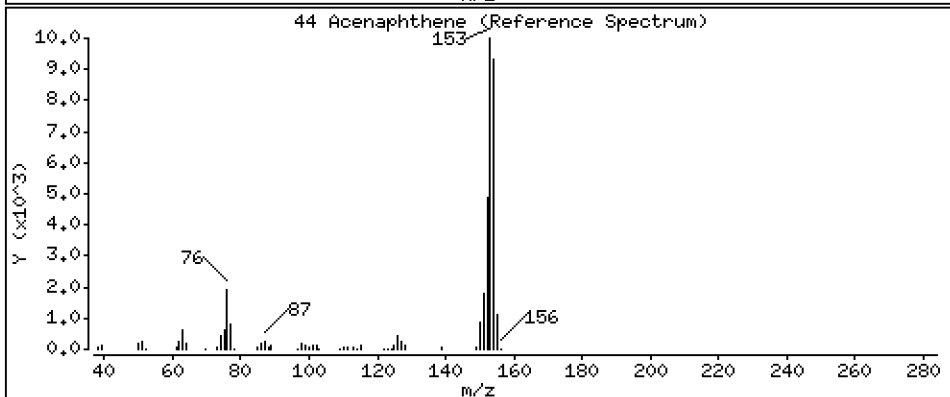
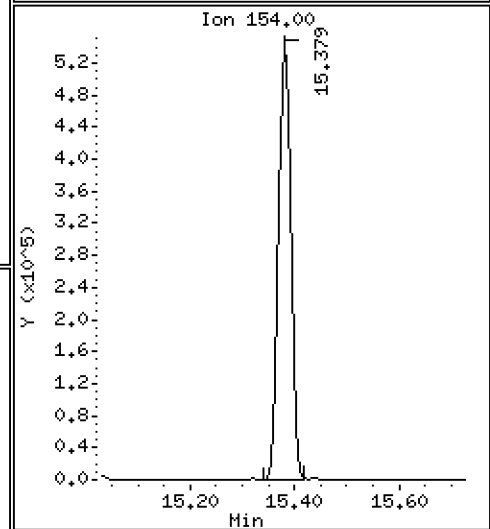
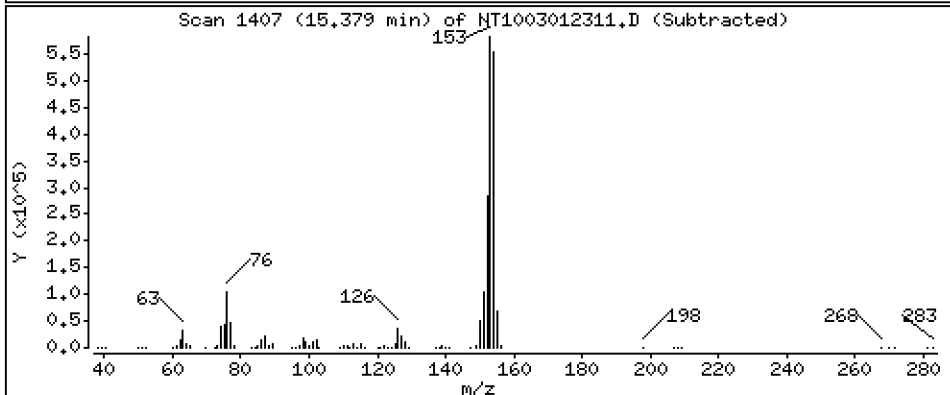
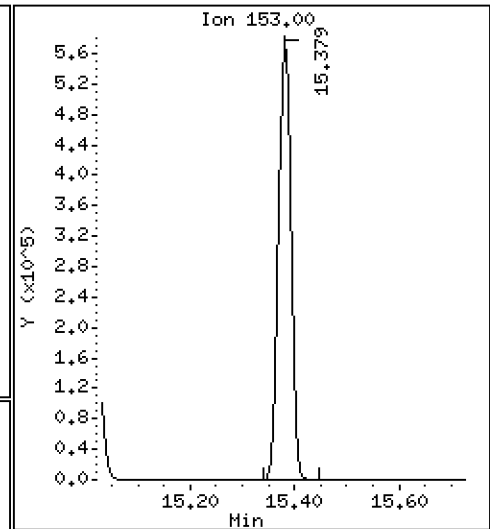
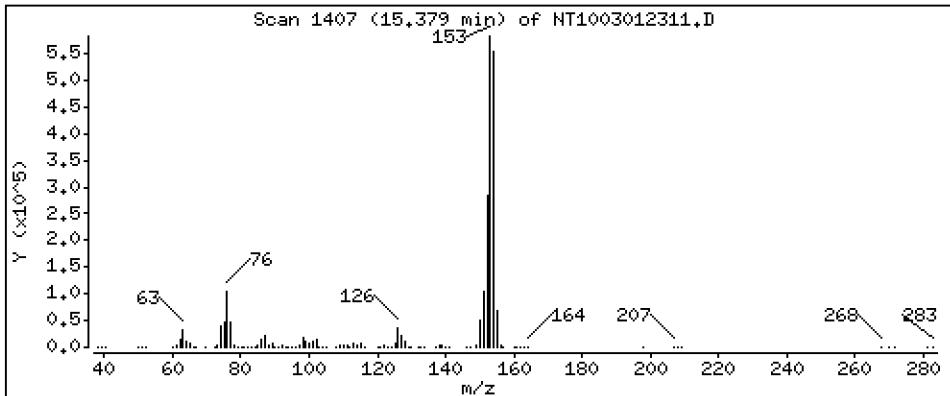
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,154 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

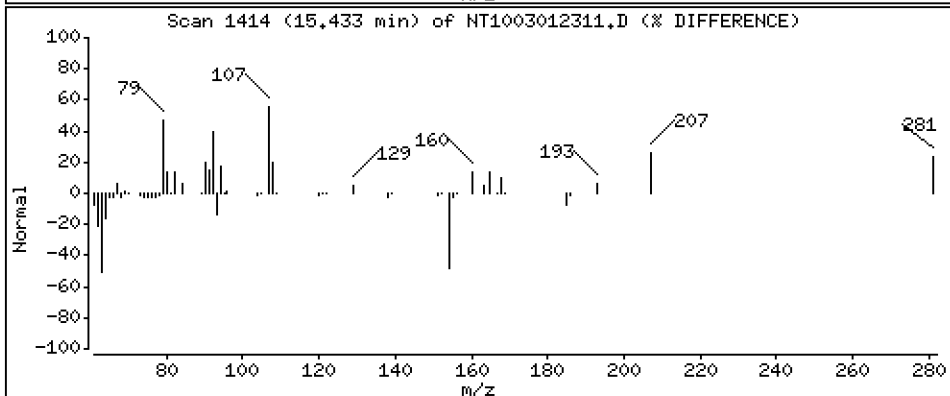
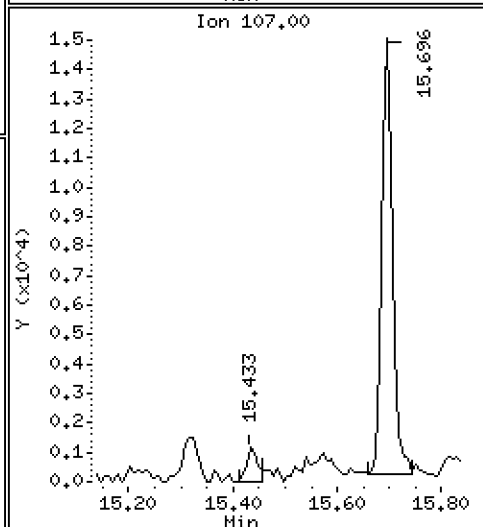
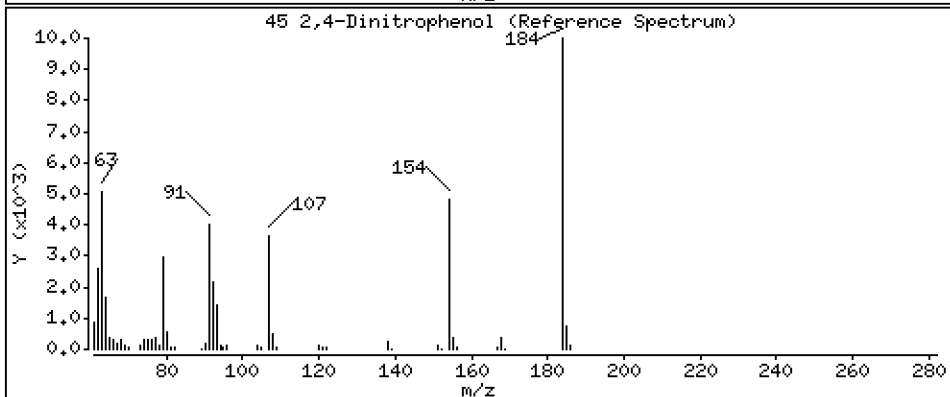
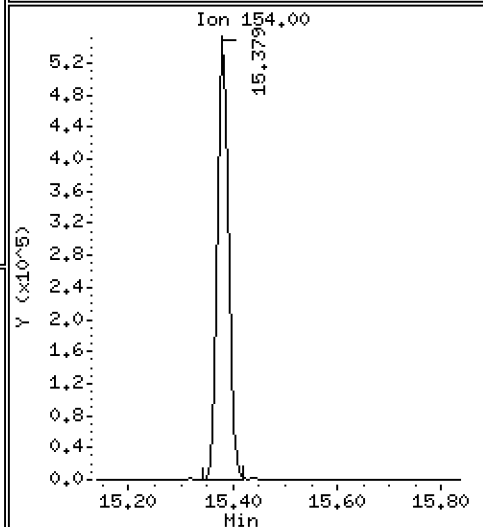
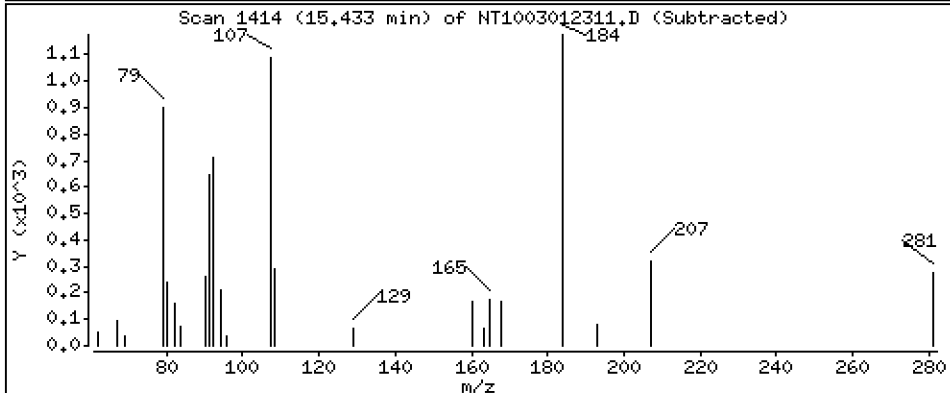
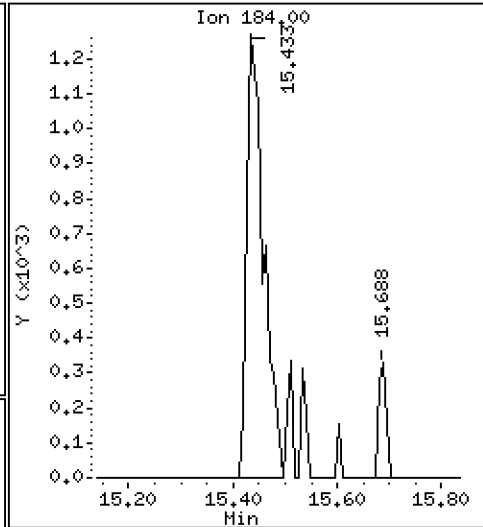
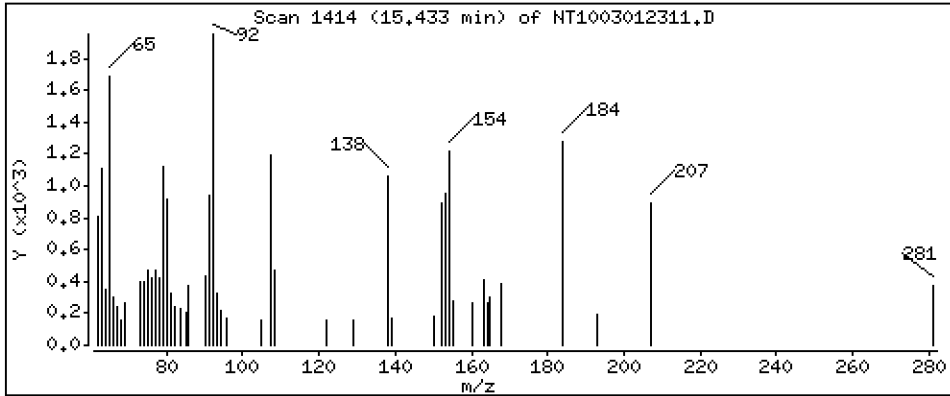
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 0,2667 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

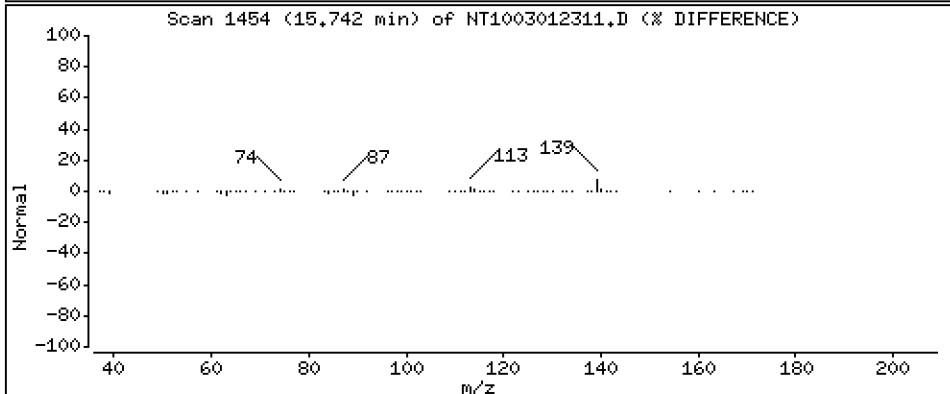
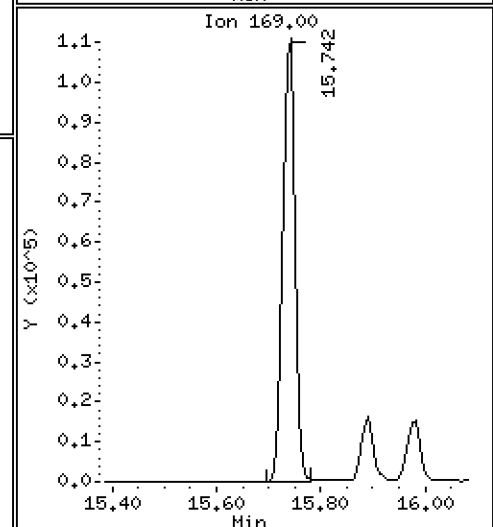
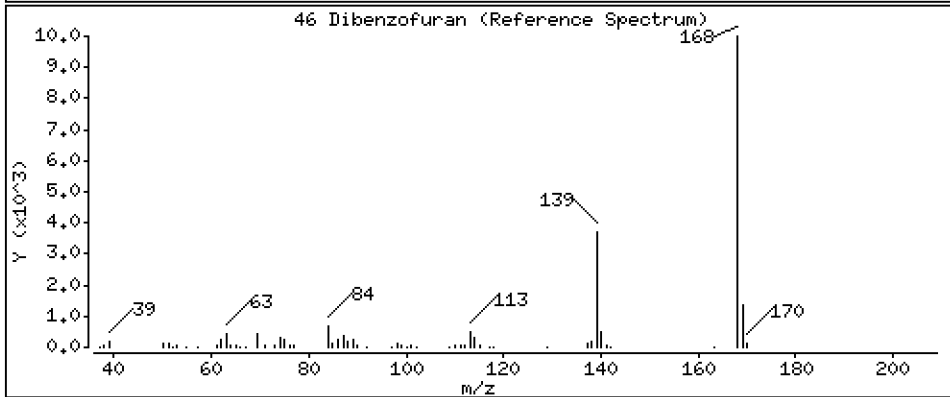
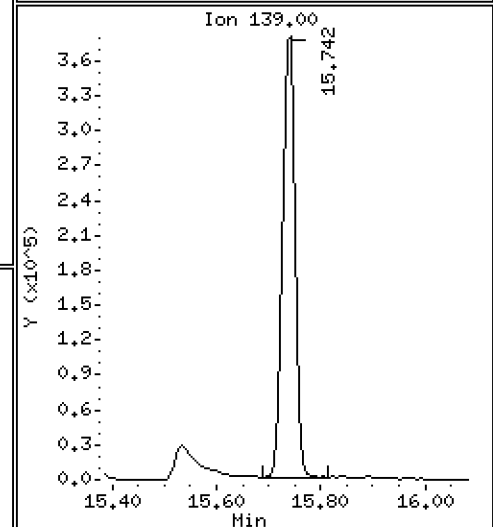
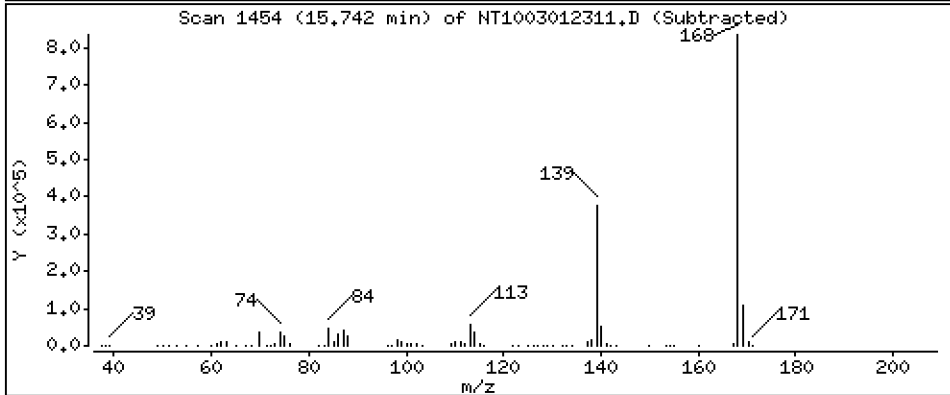
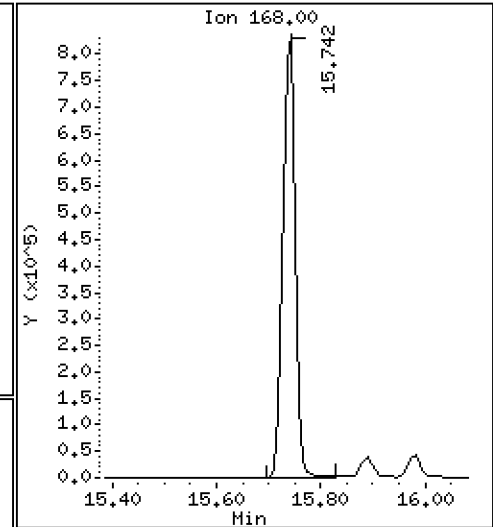
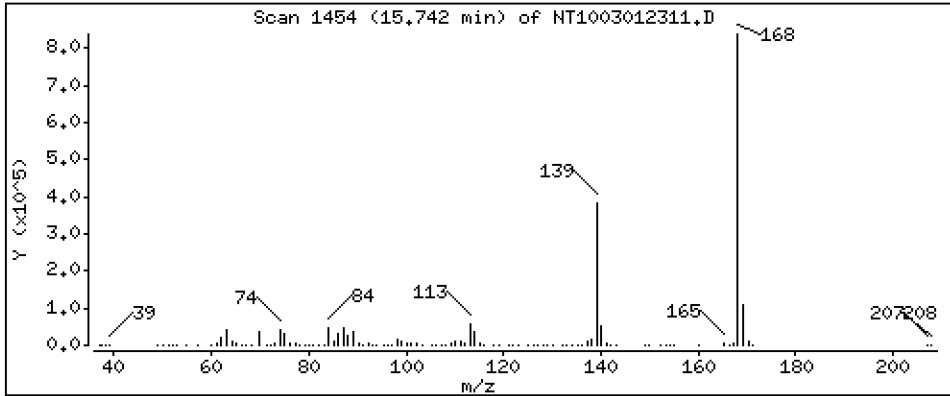
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 4,994 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

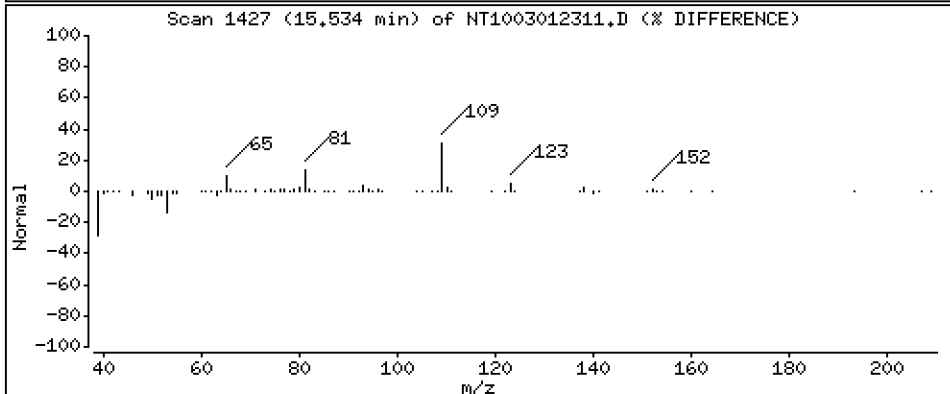
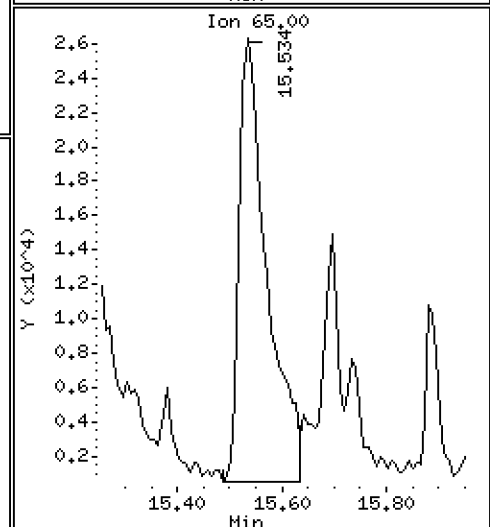
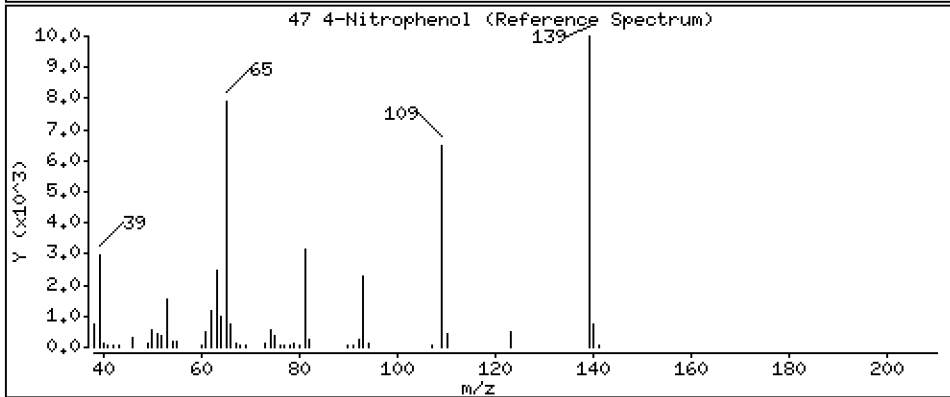
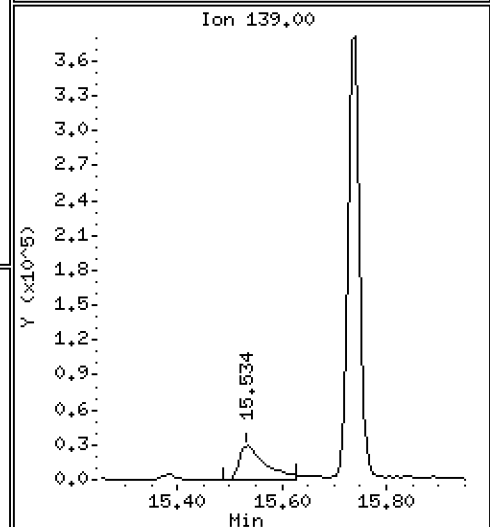
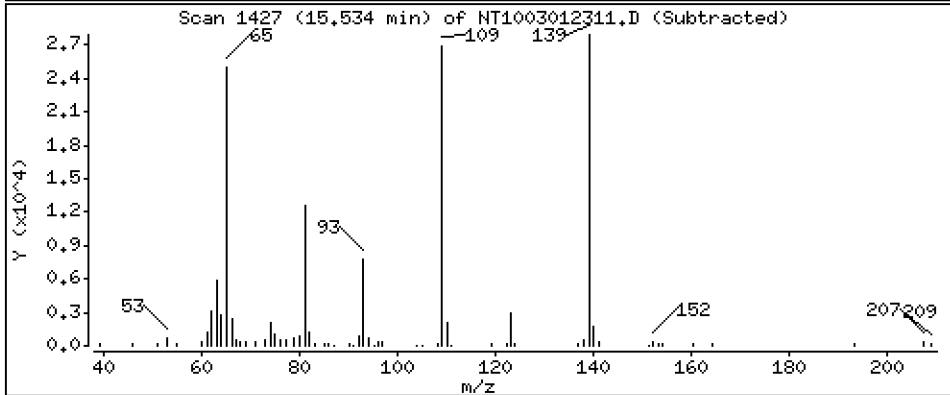
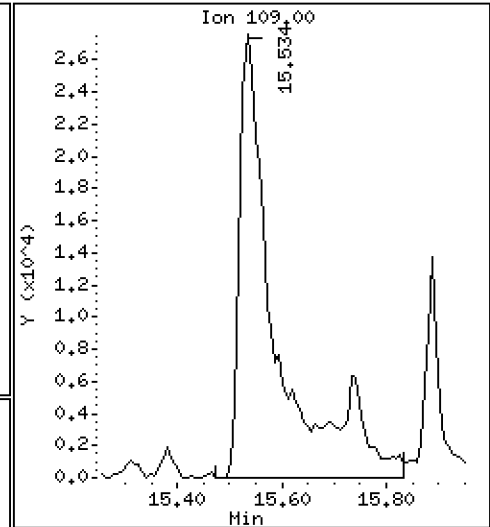
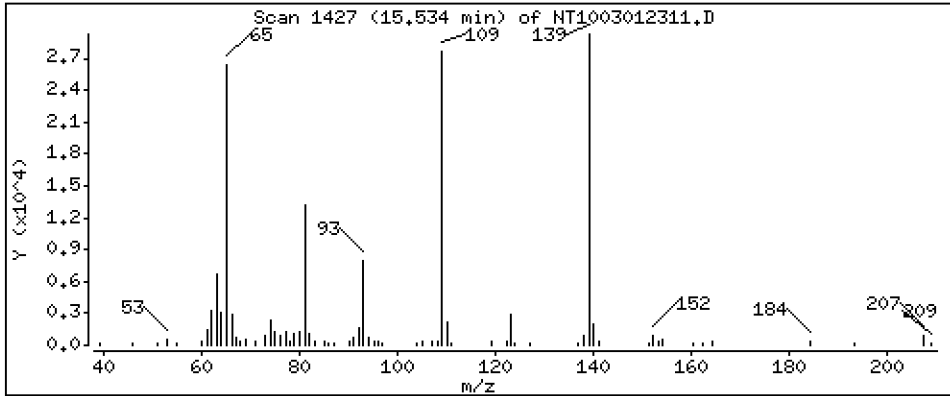
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 3,822 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

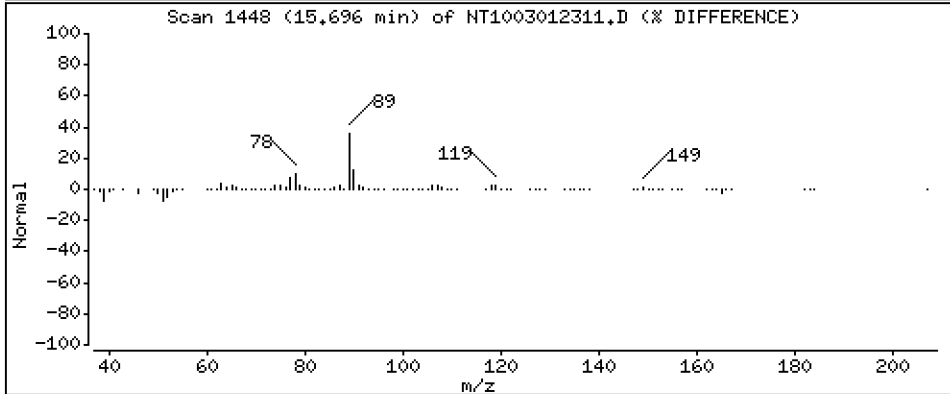
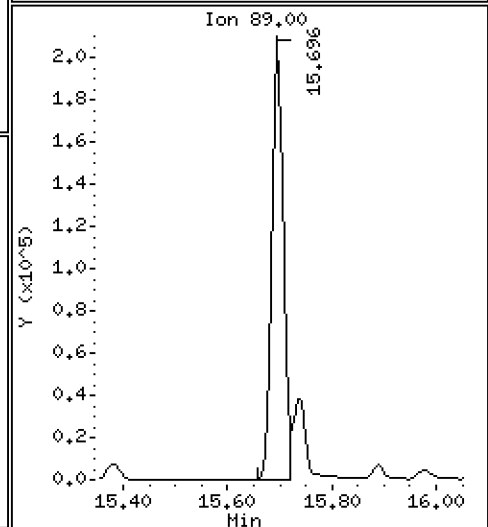
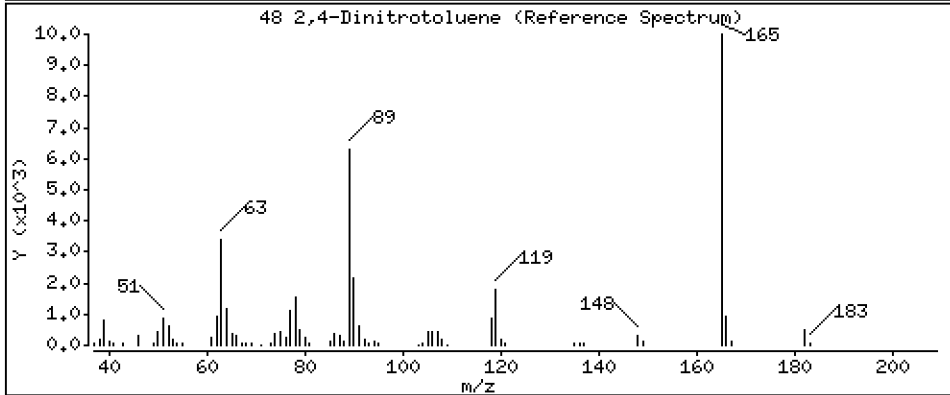
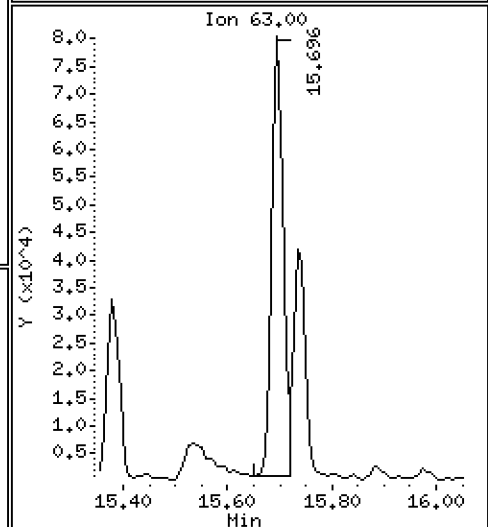
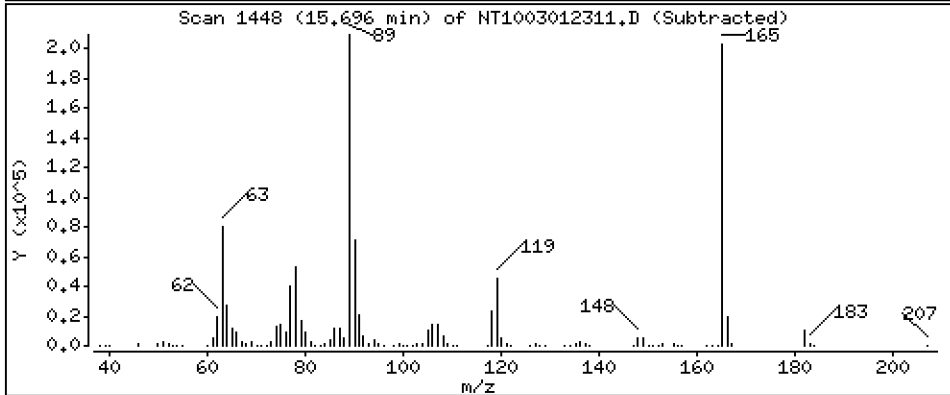
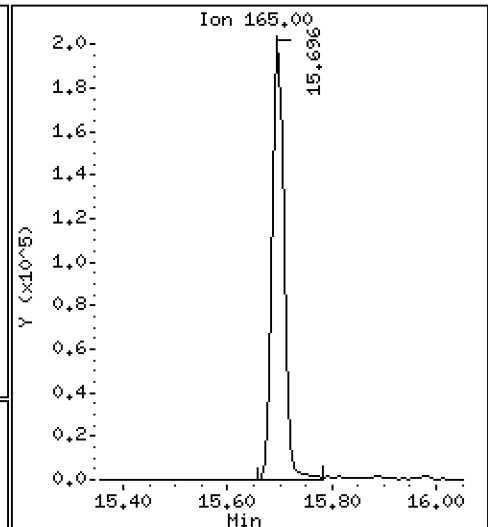
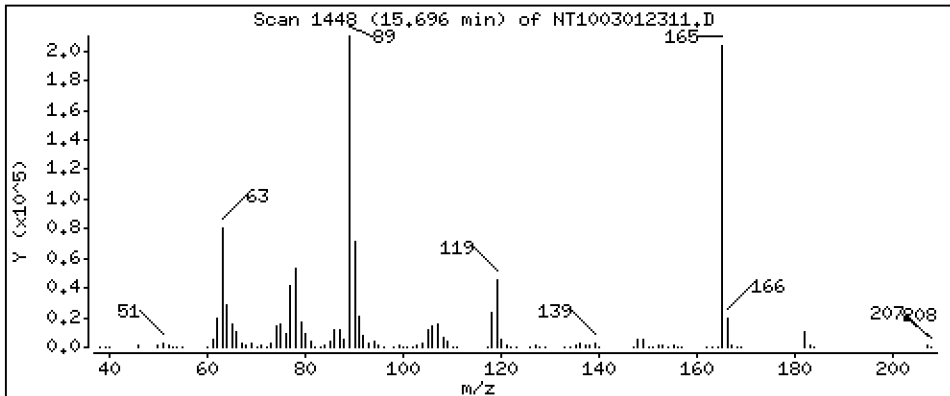
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

48 2,4-Dinitrotoluene

Concentration: 4.729 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

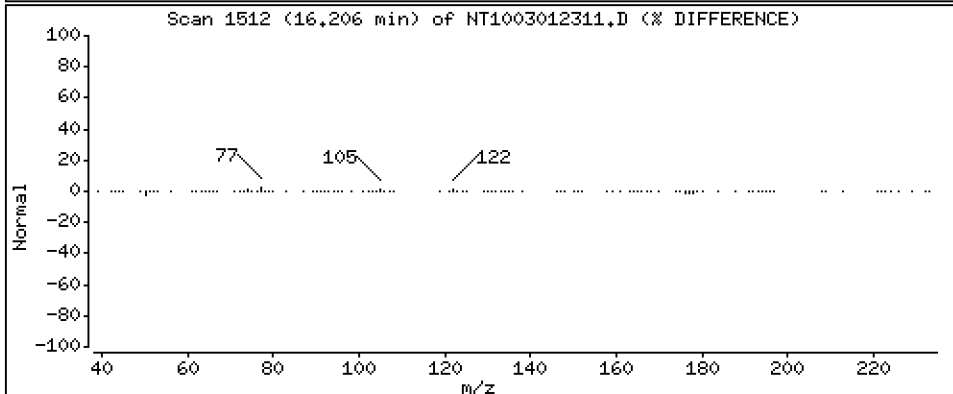
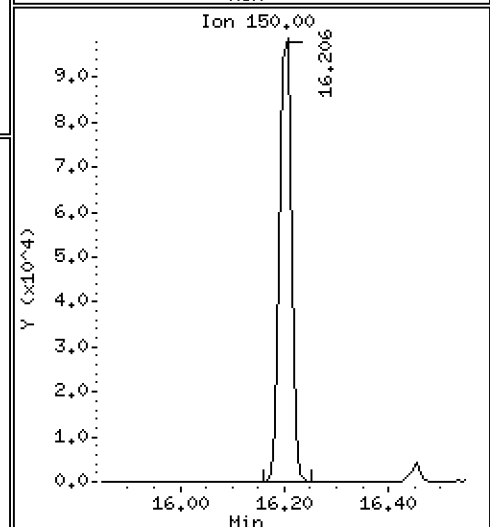
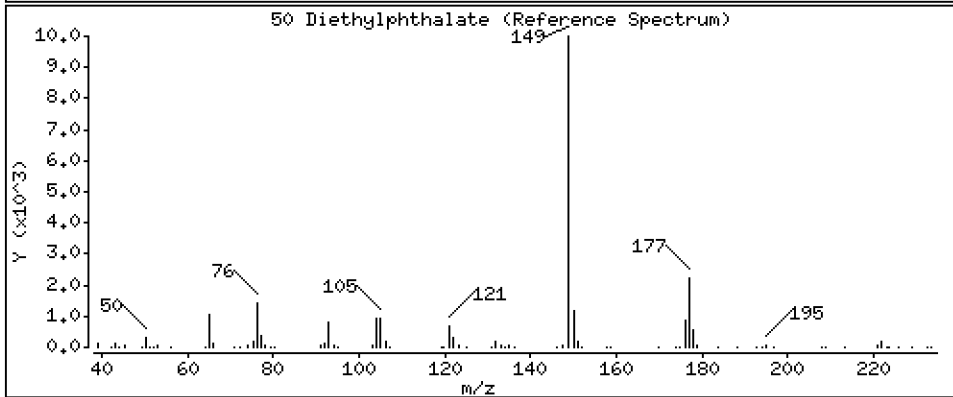
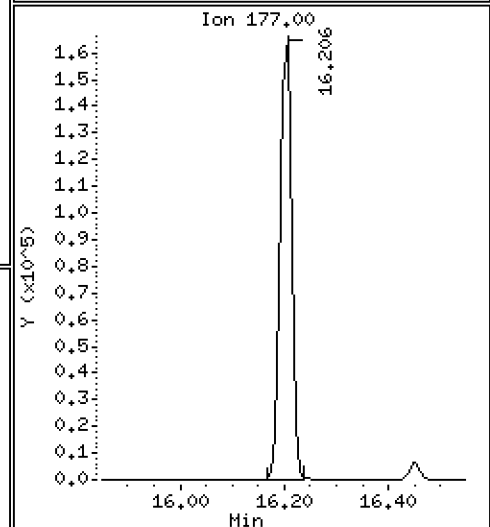
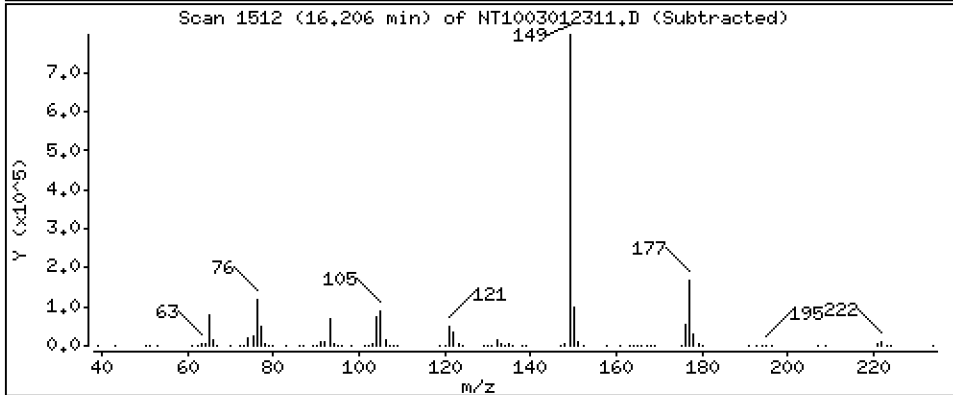
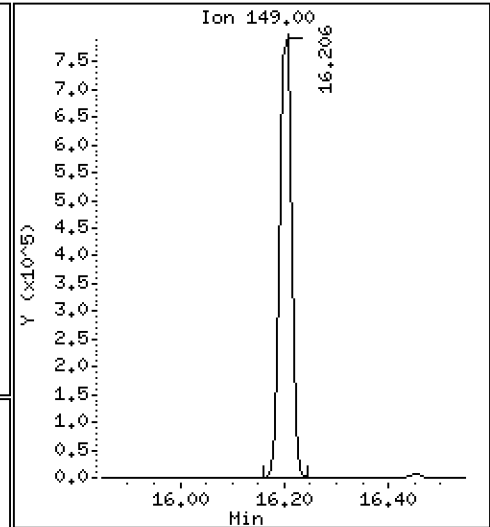
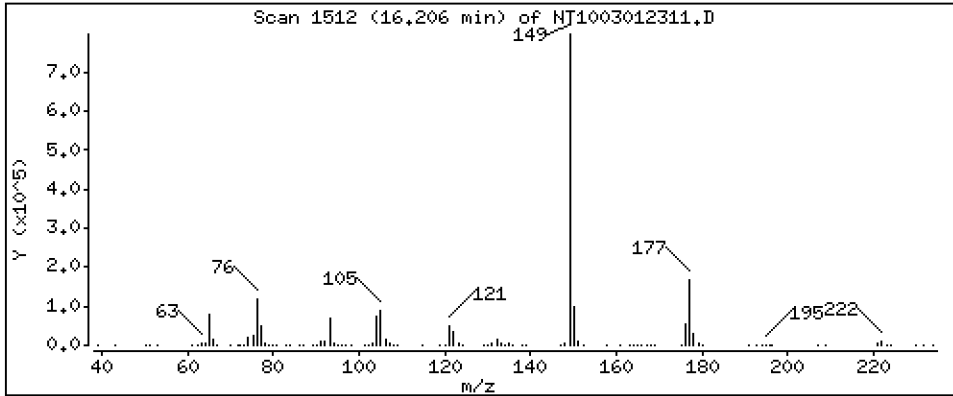
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,639 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

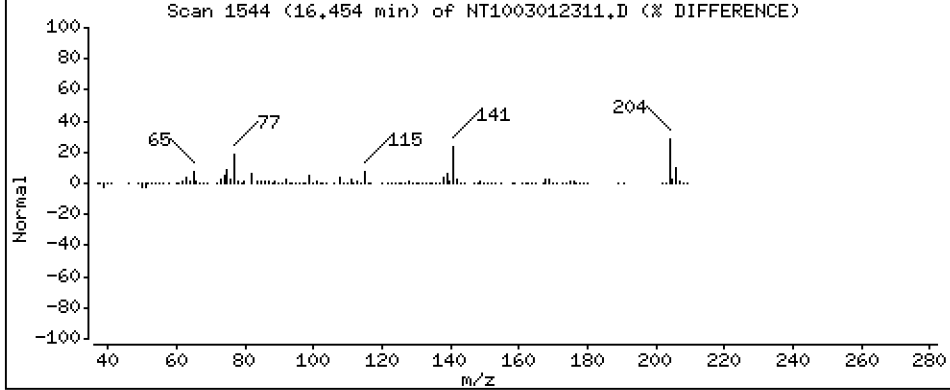
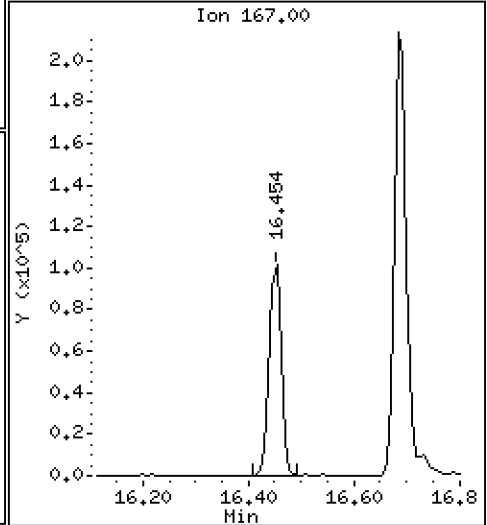
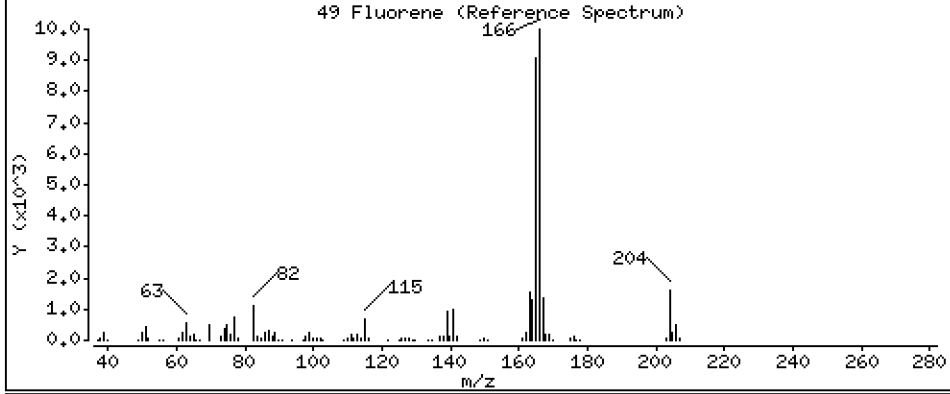
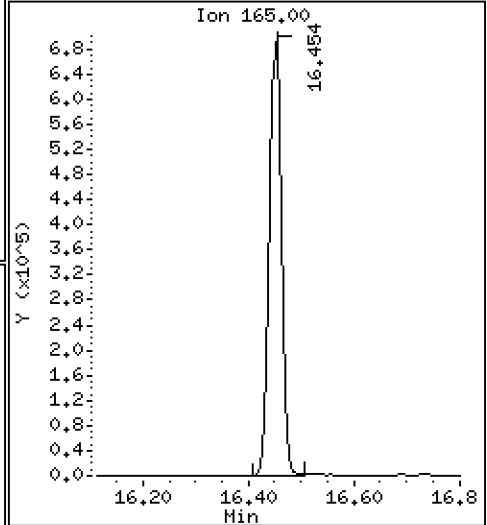
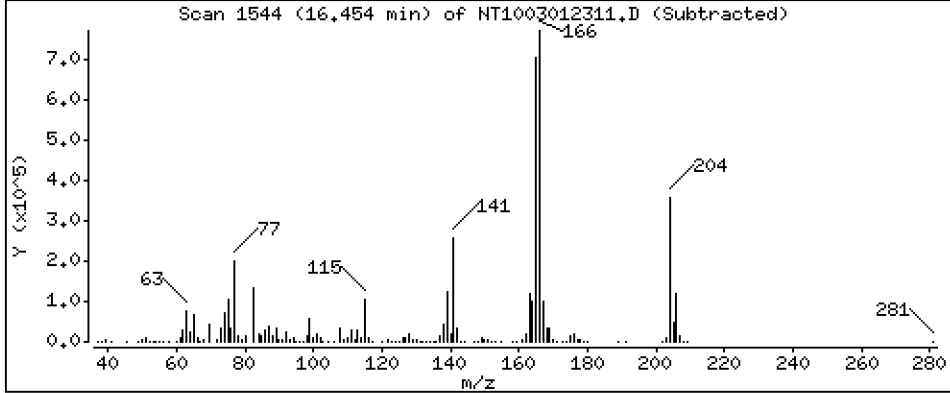
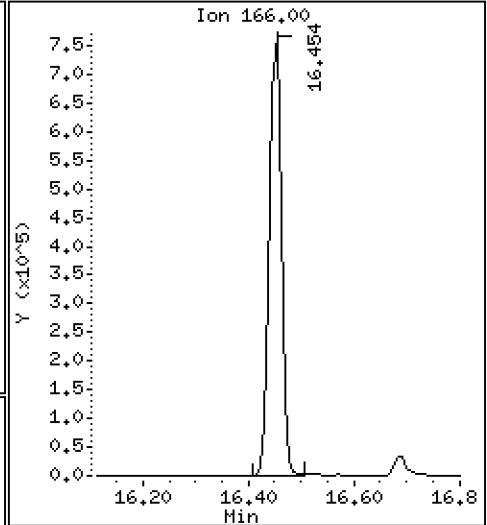
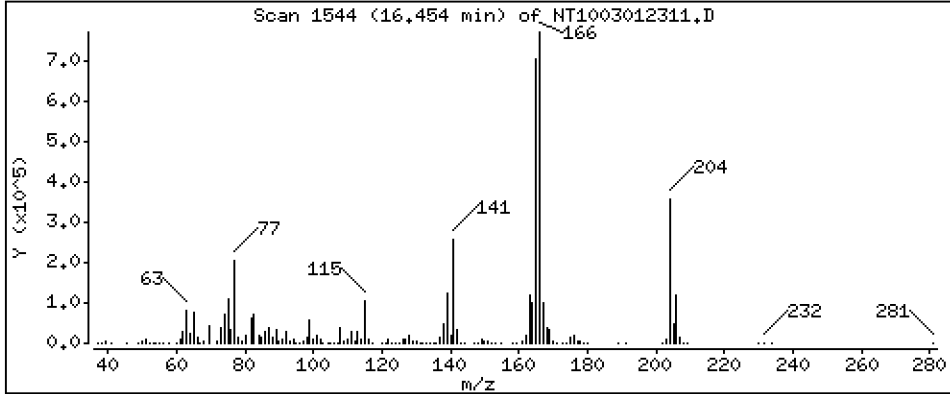
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,305 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

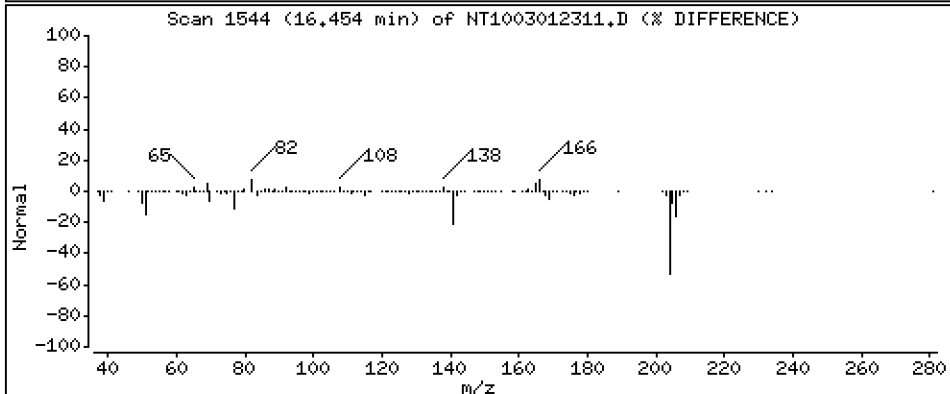
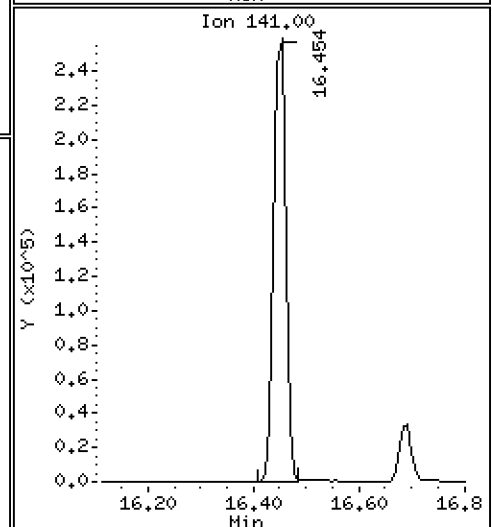
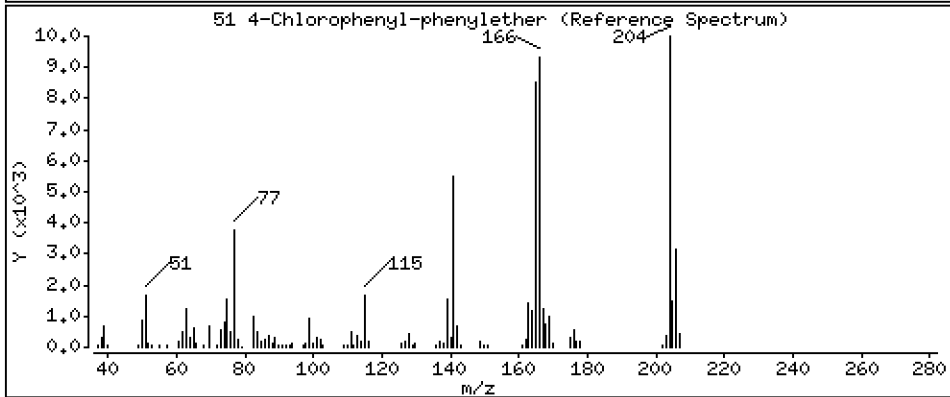
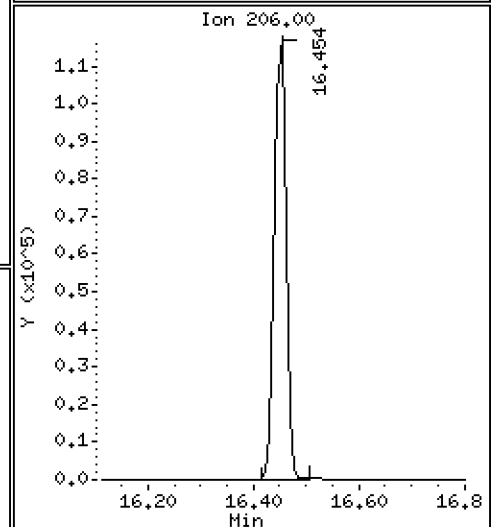
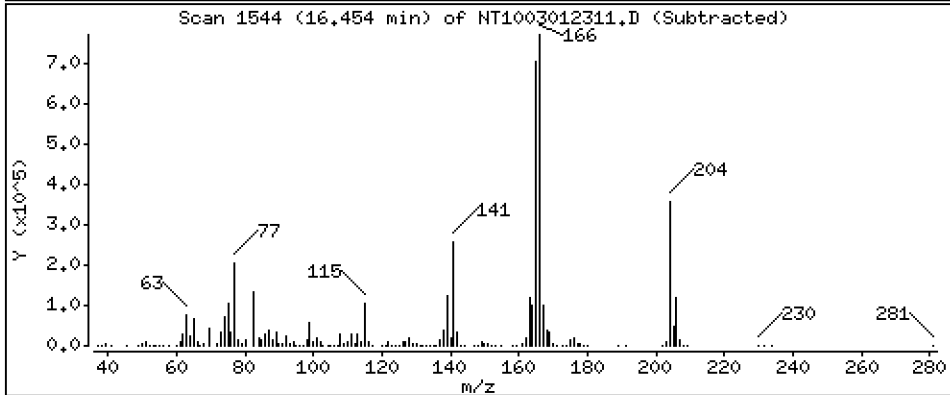
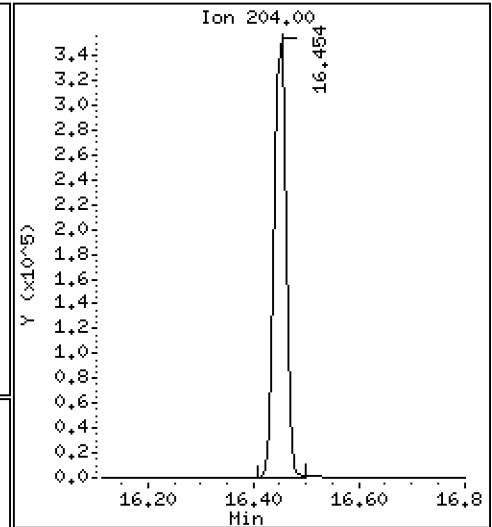
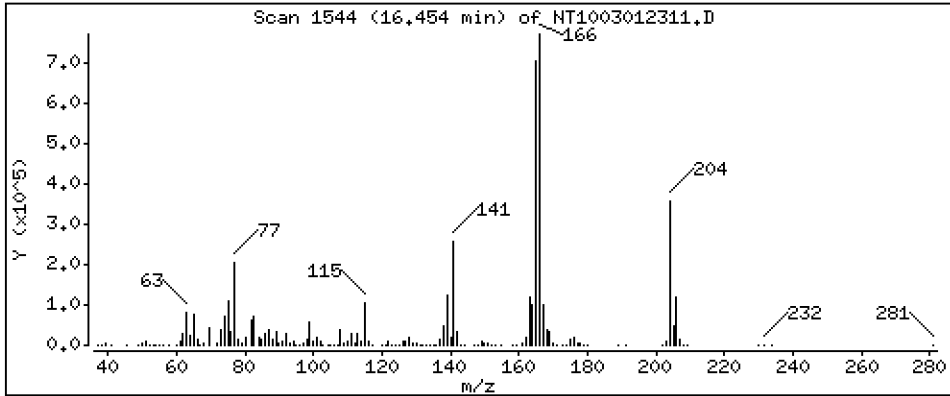
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,253 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

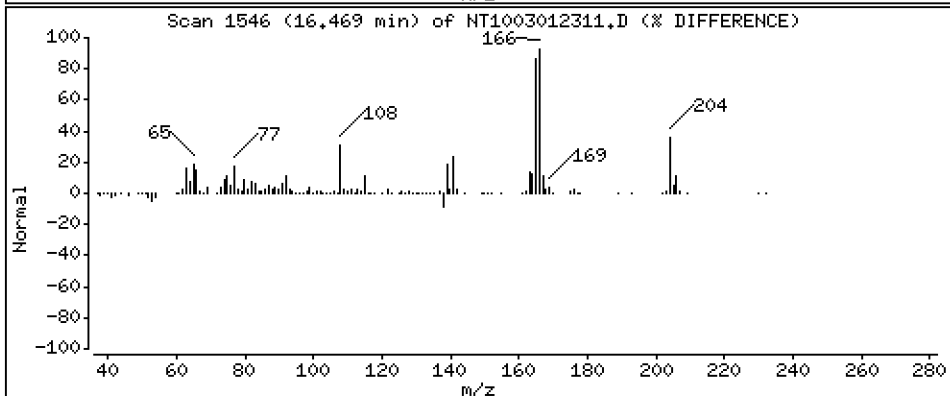
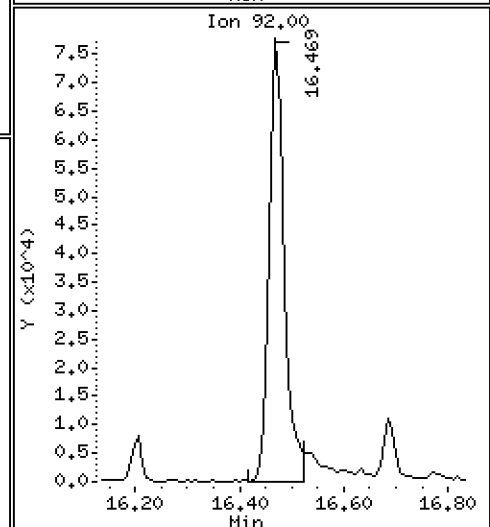
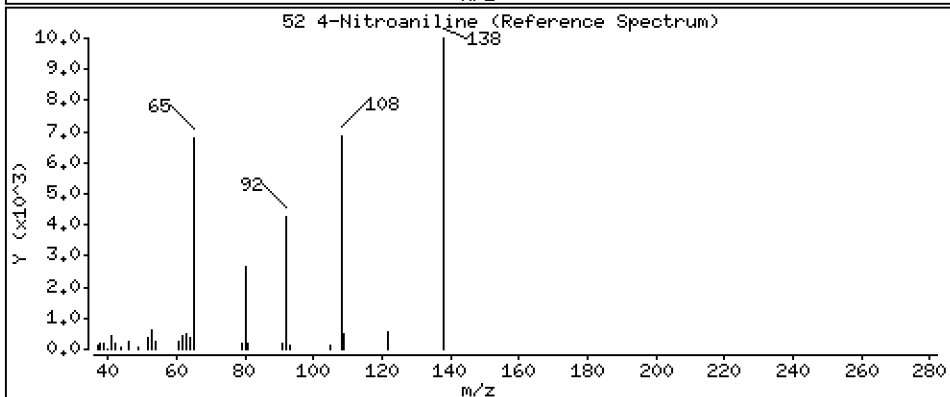
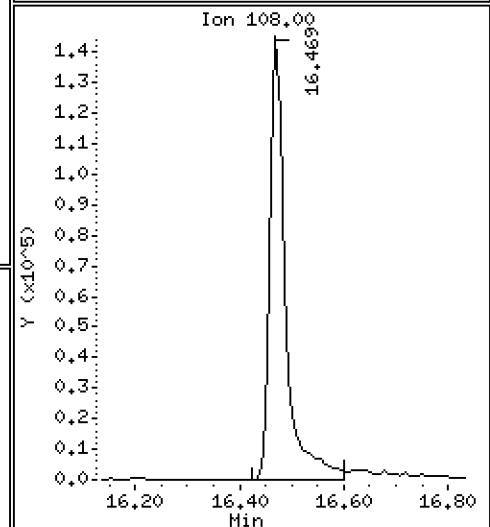
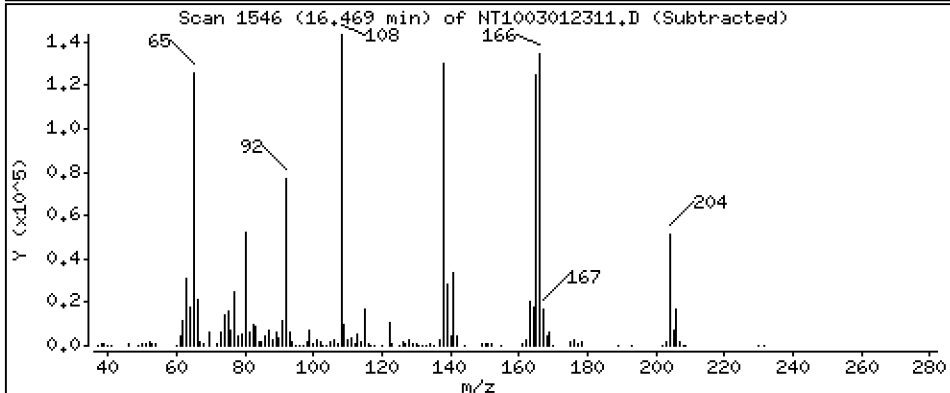
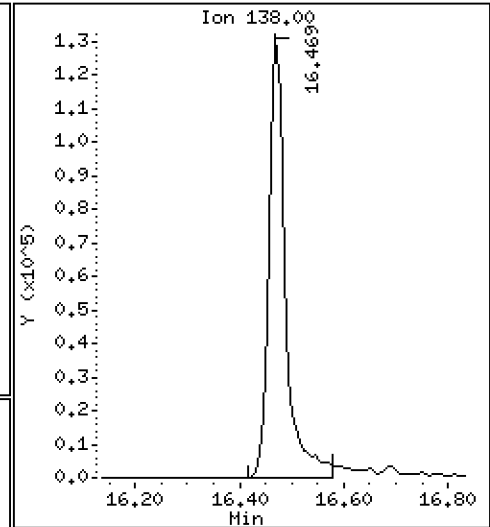
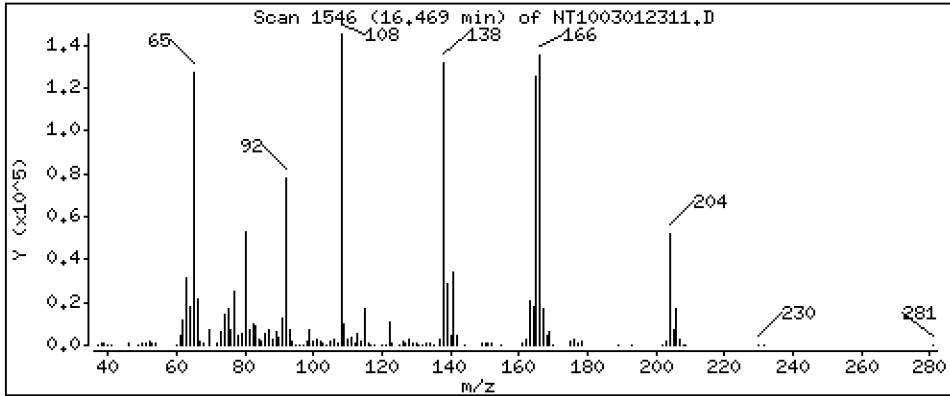
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 5,232 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

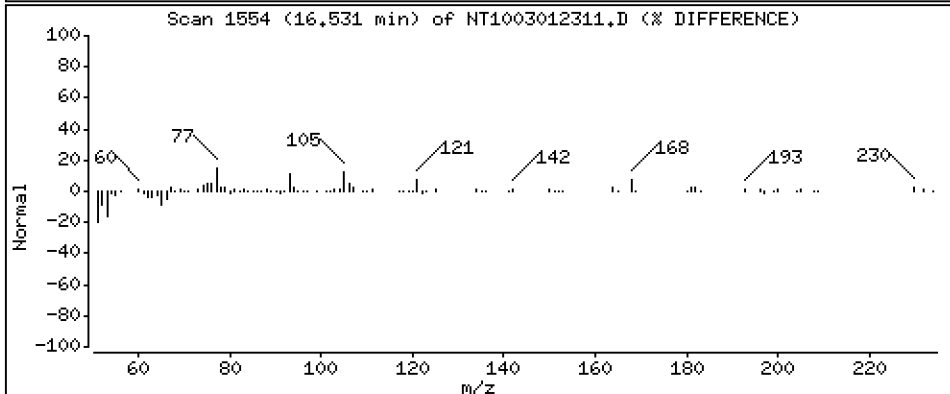
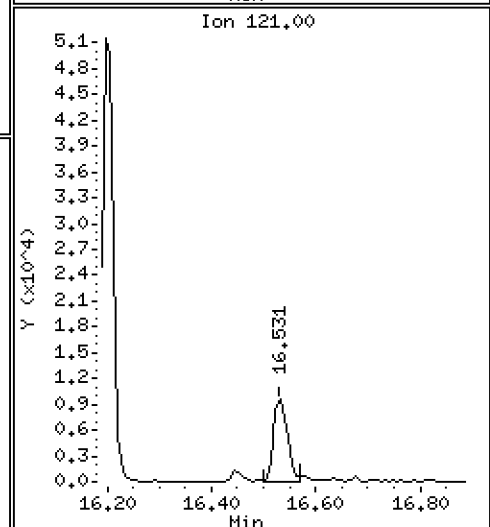
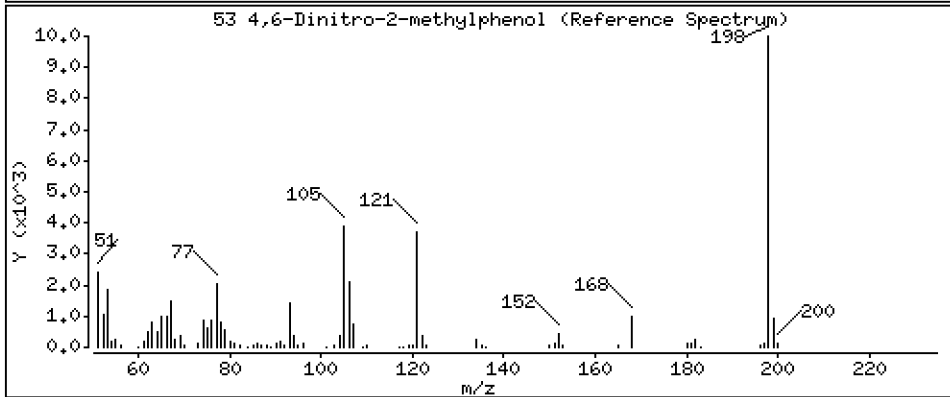
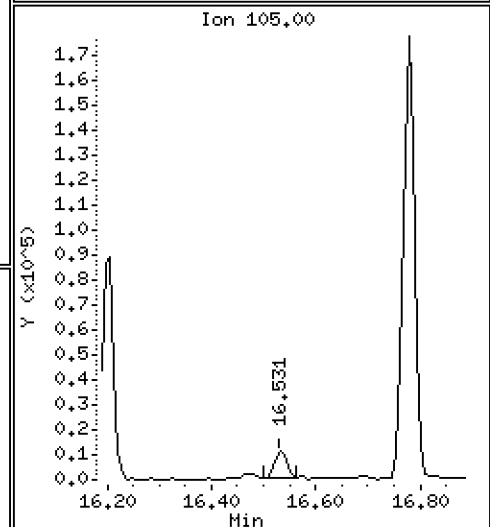
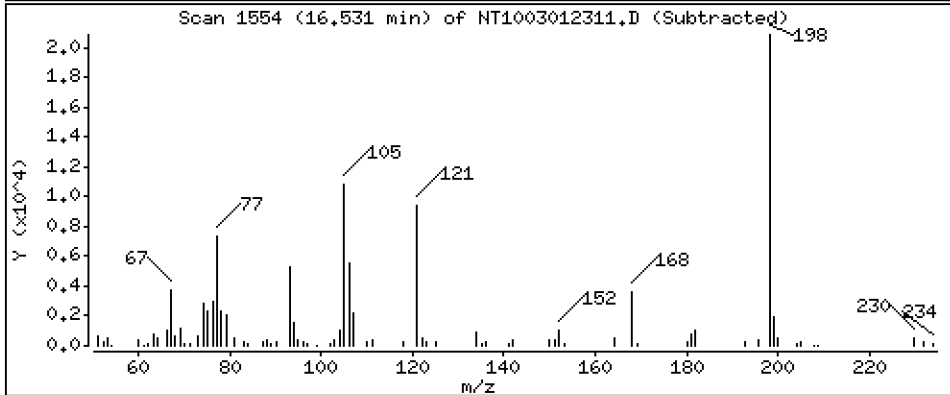
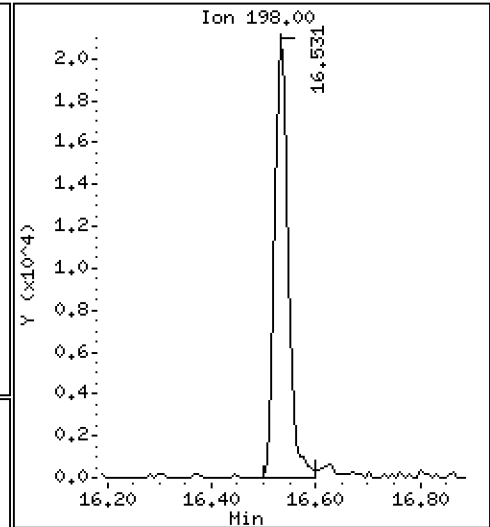
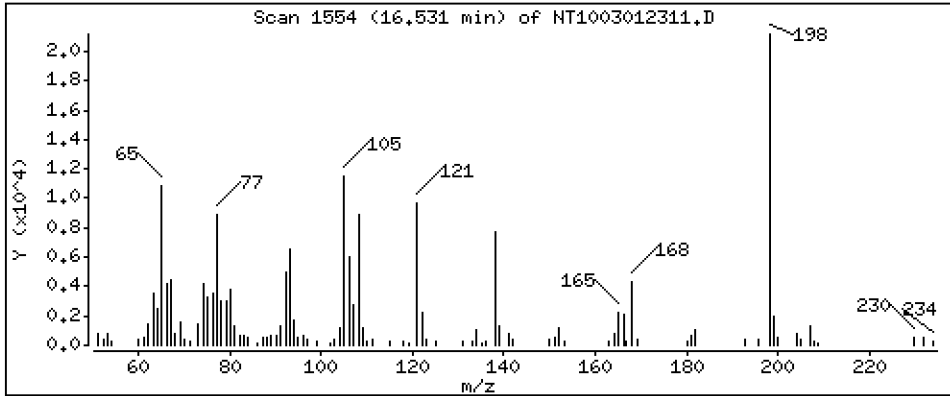
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 1,292 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

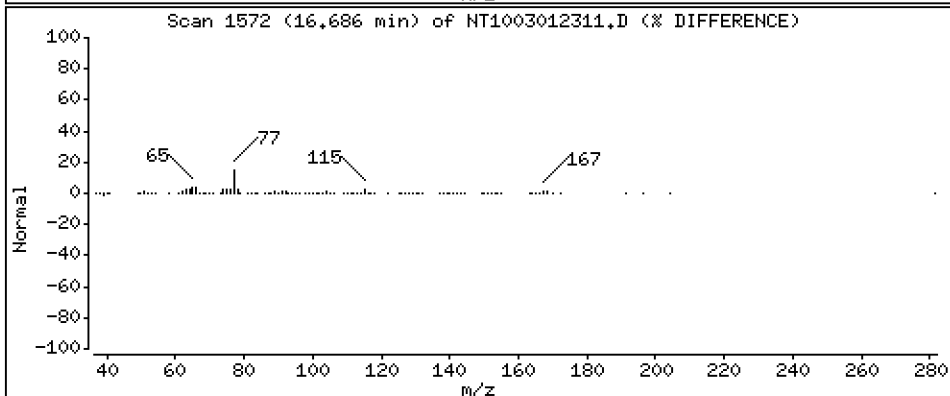
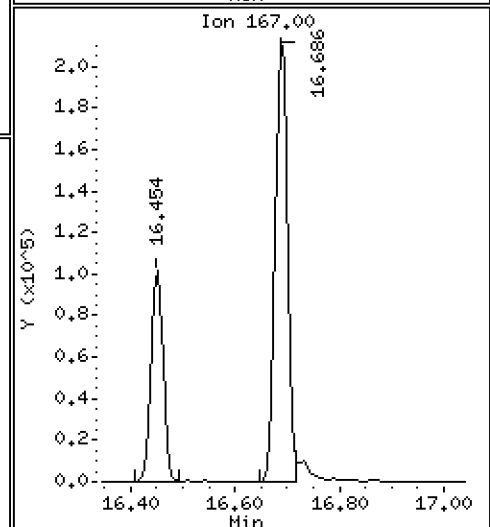
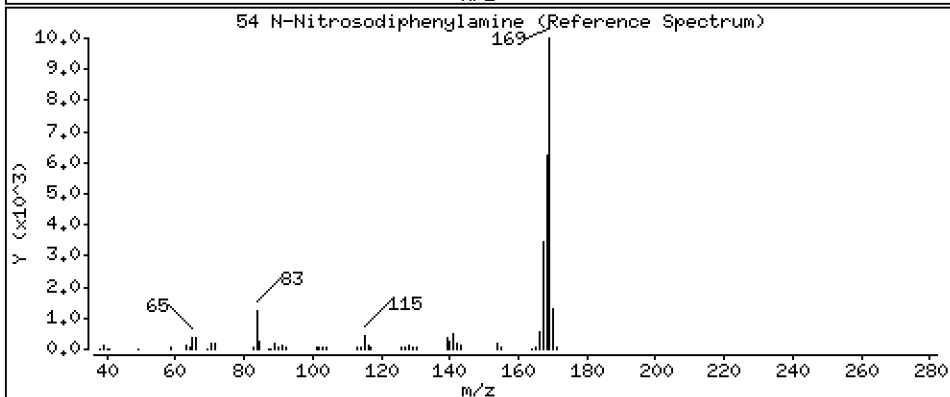
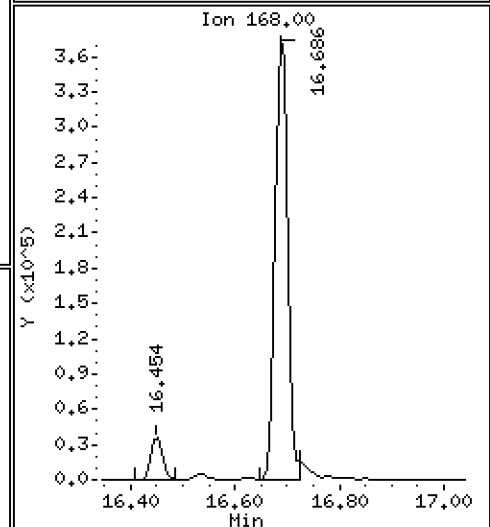
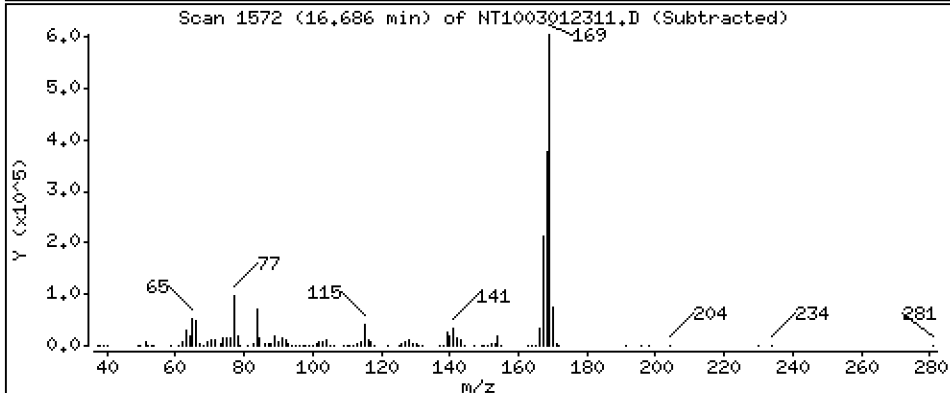
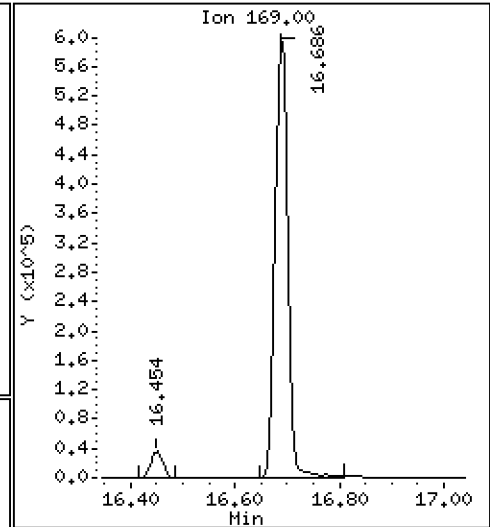
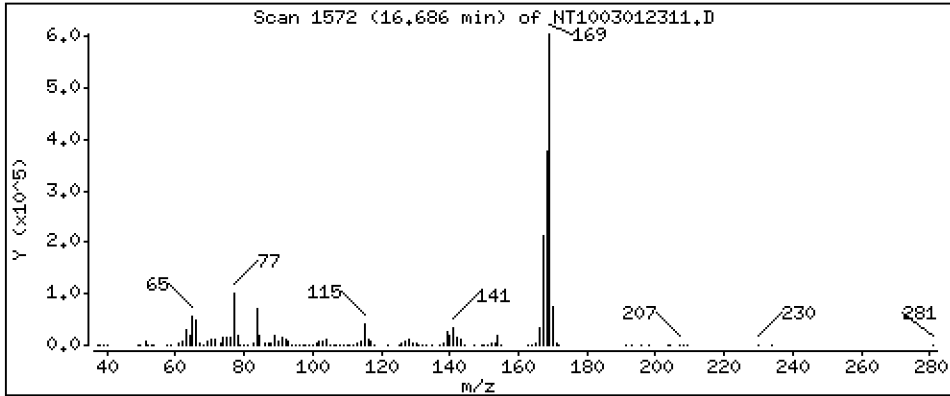
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,416 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

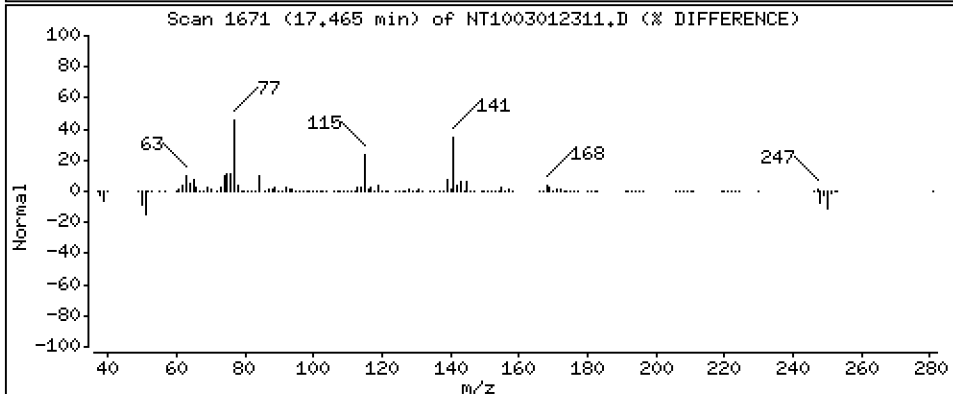
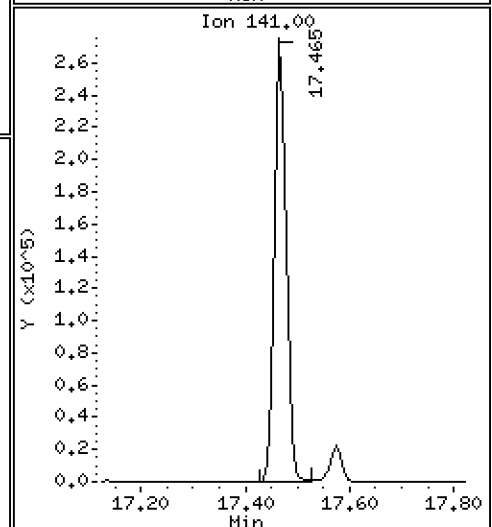
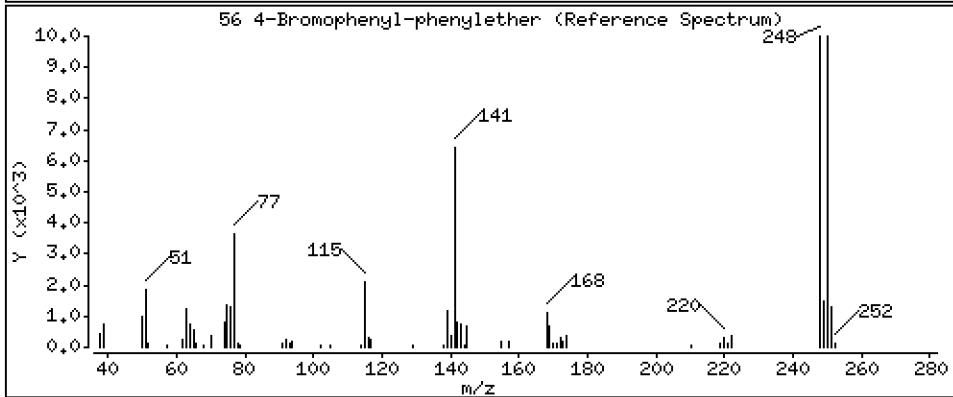
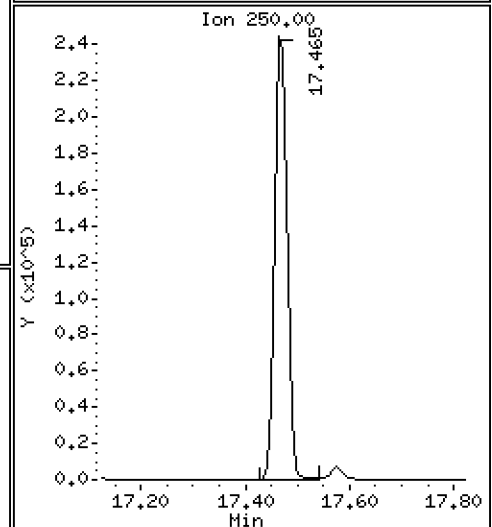
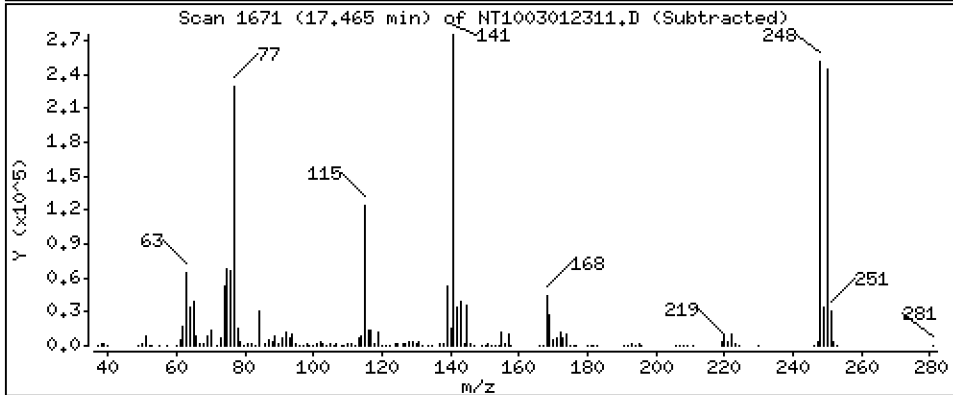
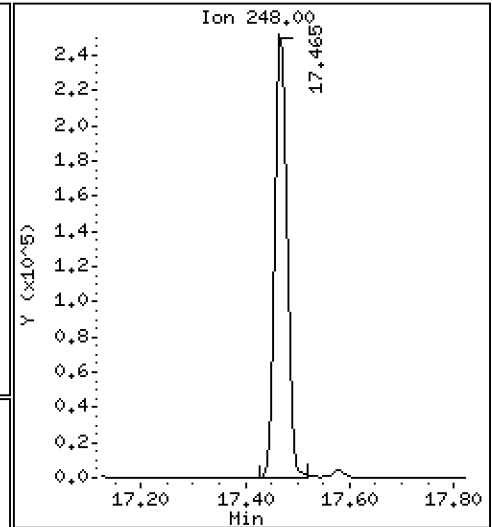
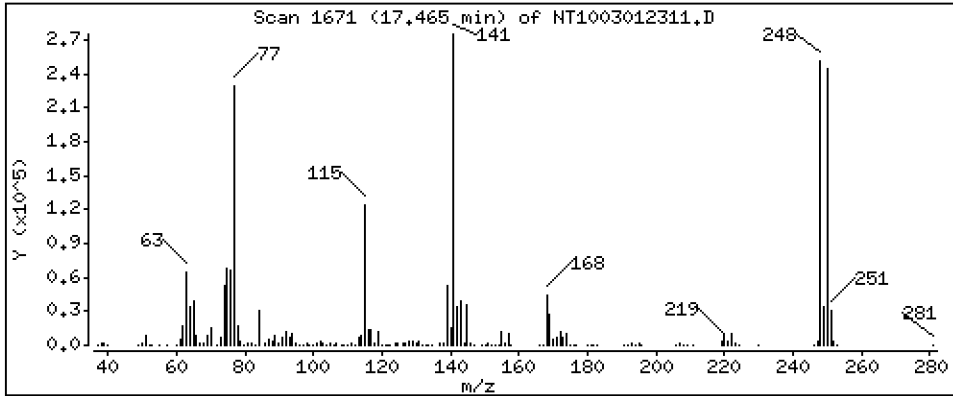
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,460 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

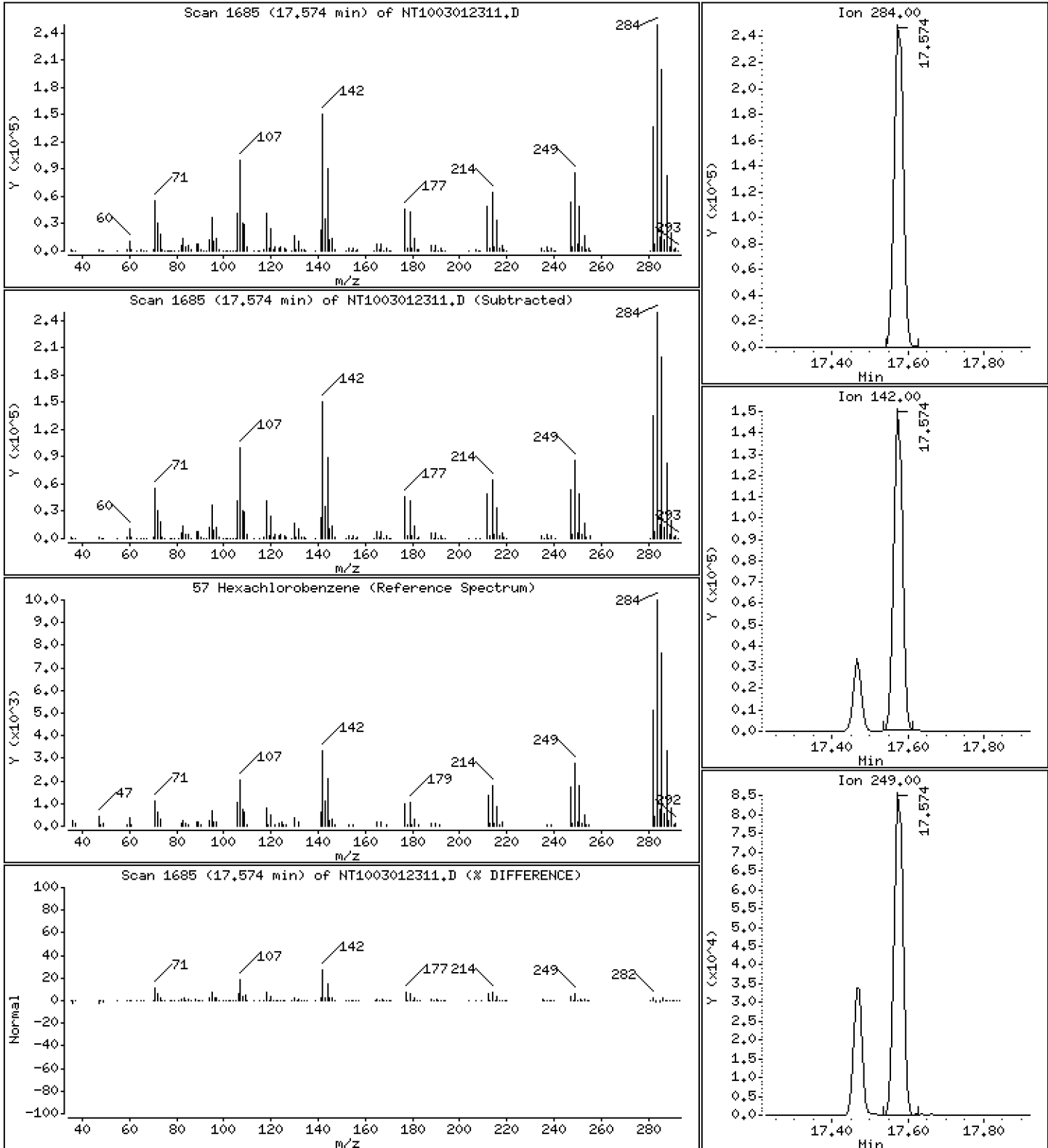
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,805 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

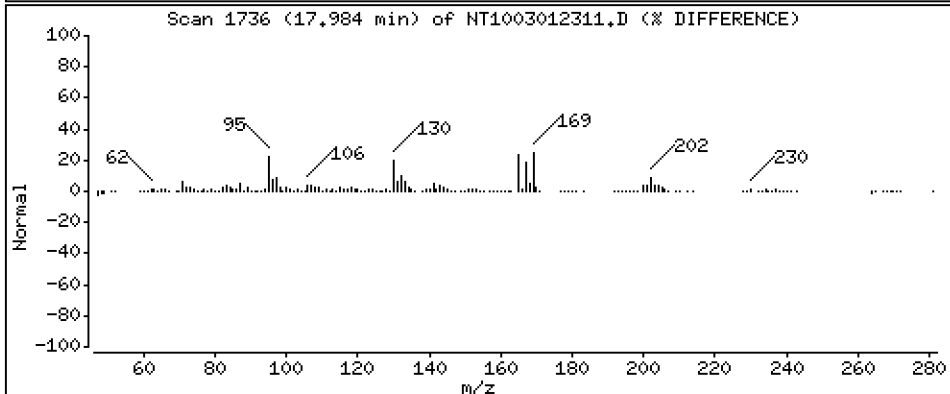
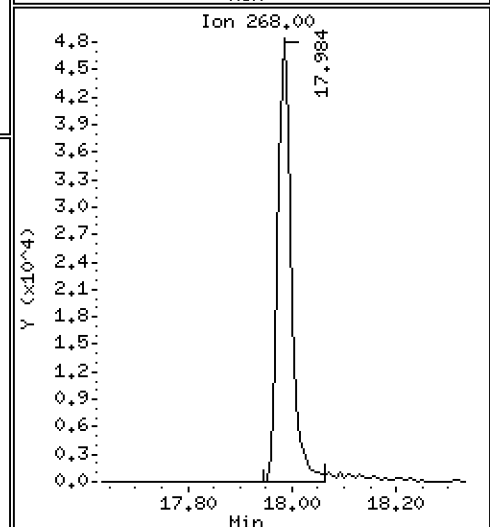
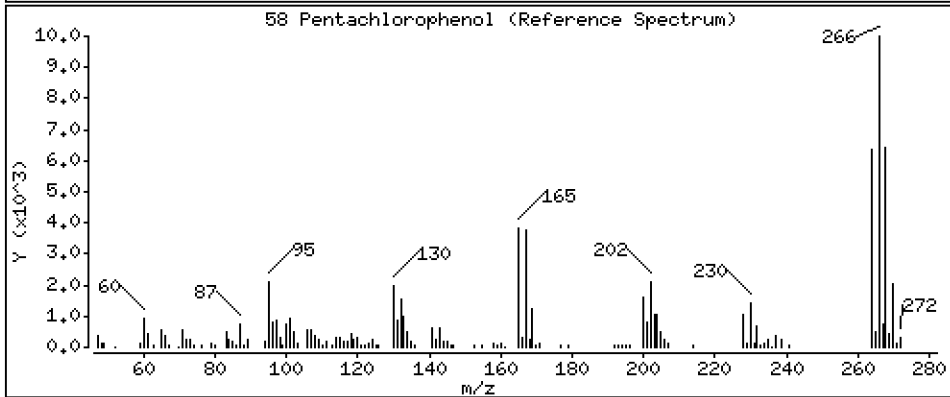
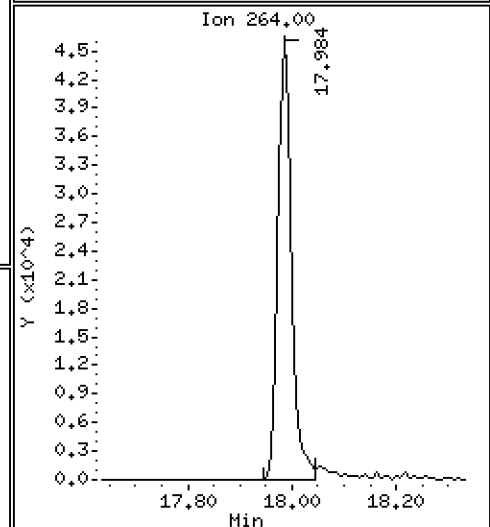
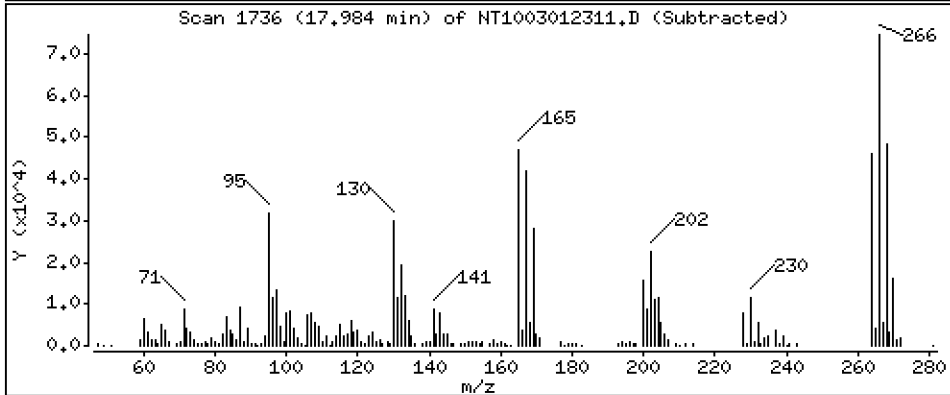
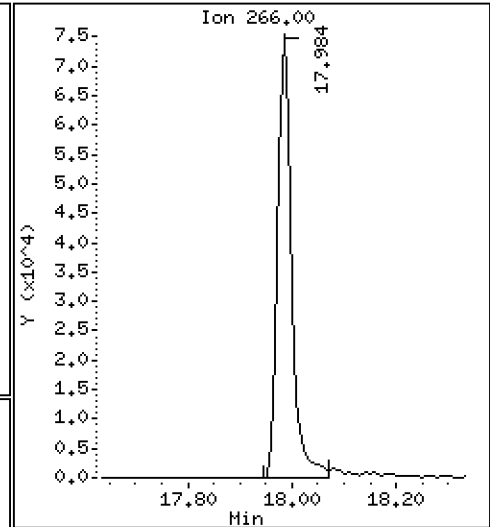
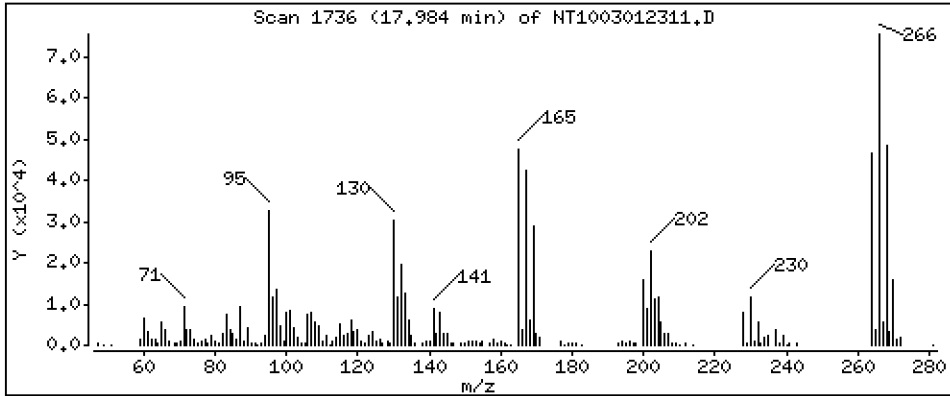
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,492 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

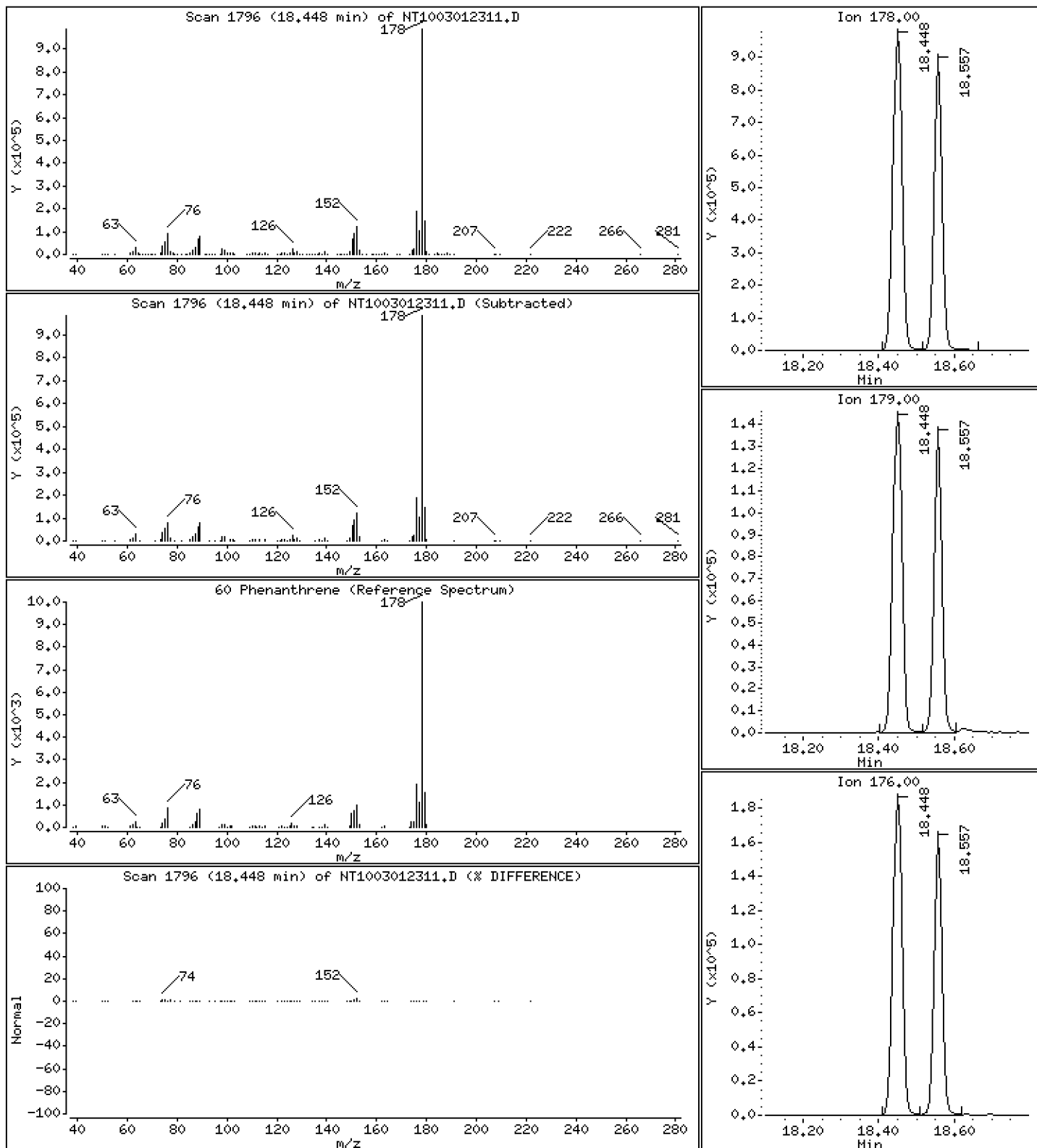
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,085 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

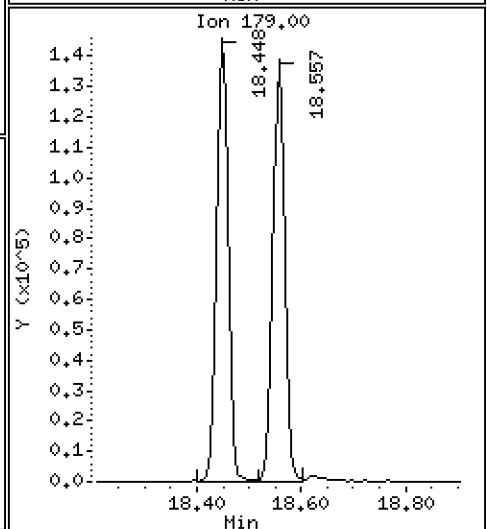
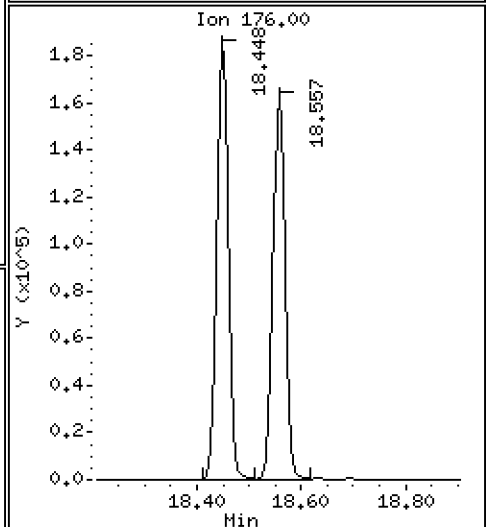
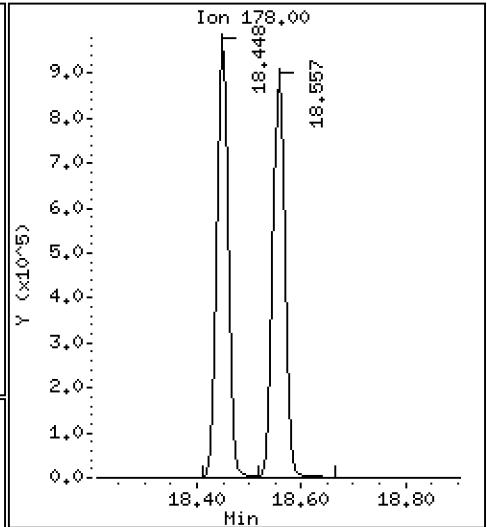
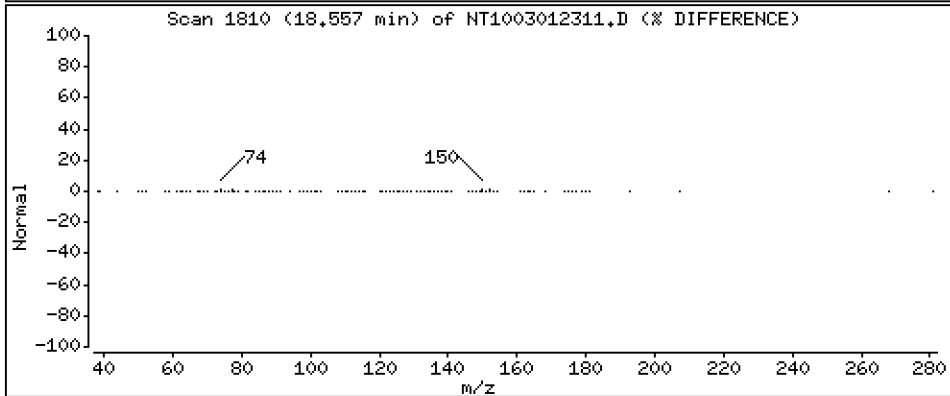
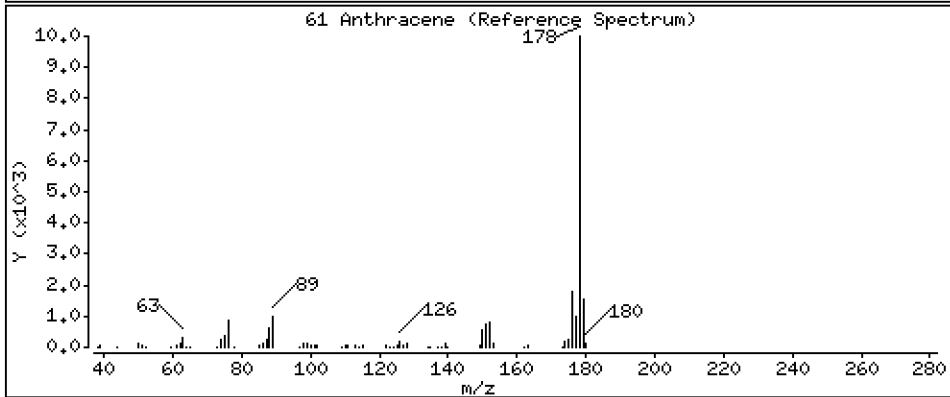
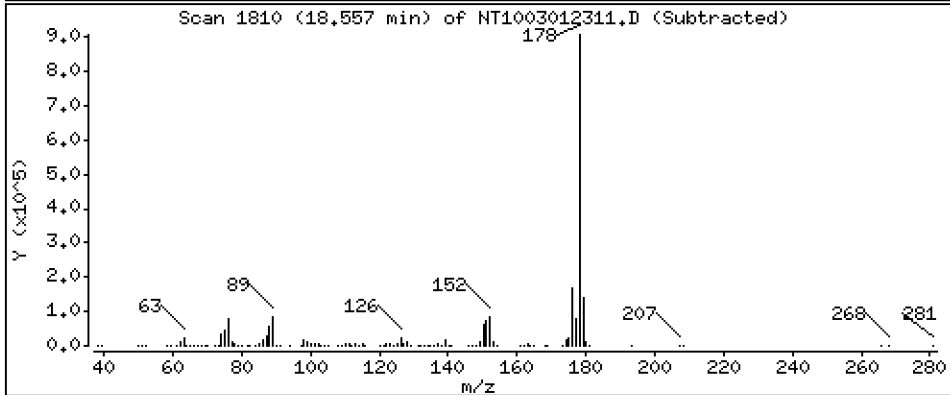
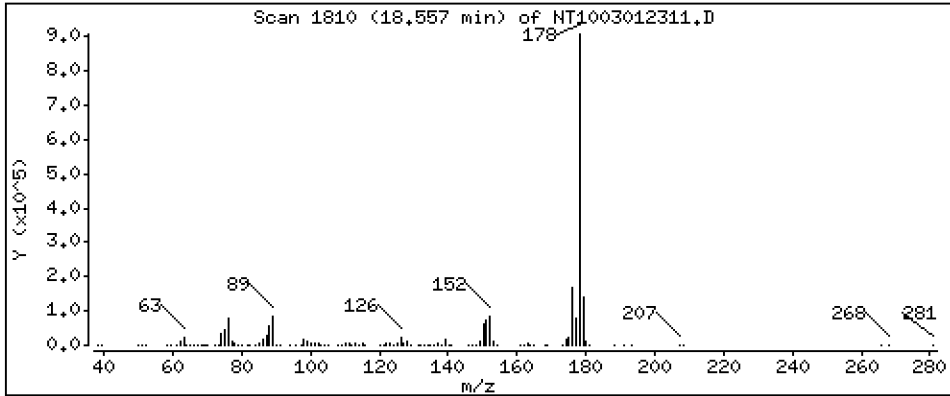
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 4,585 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

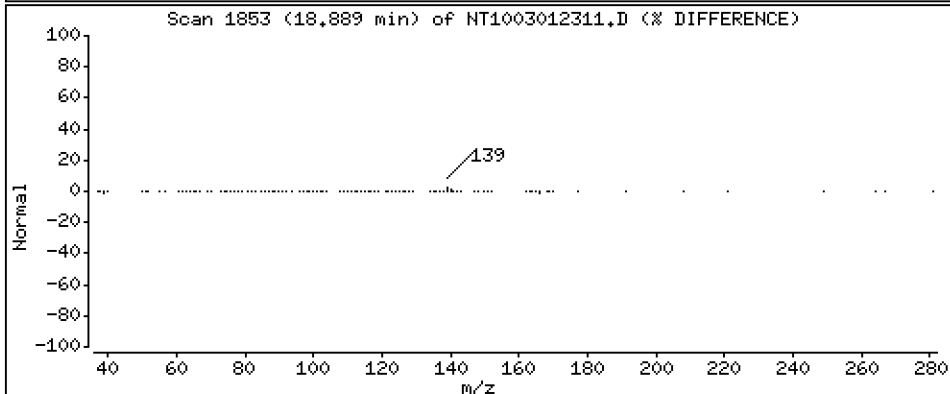
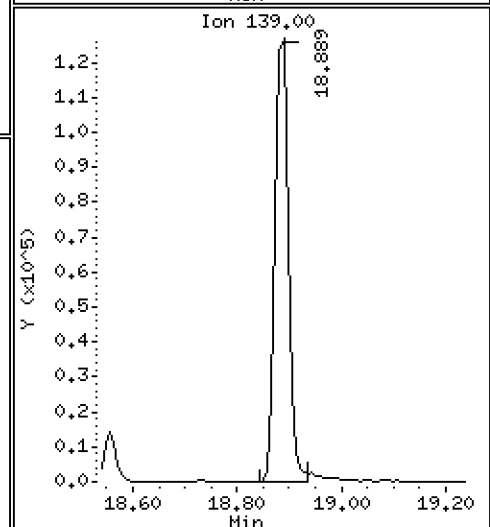
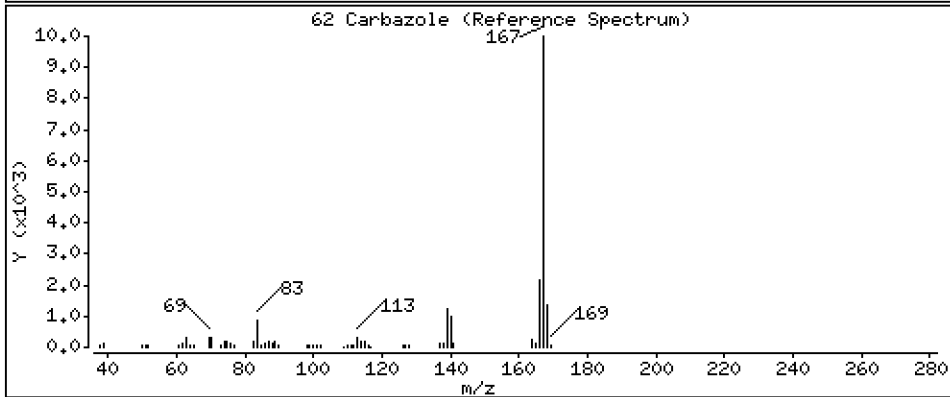
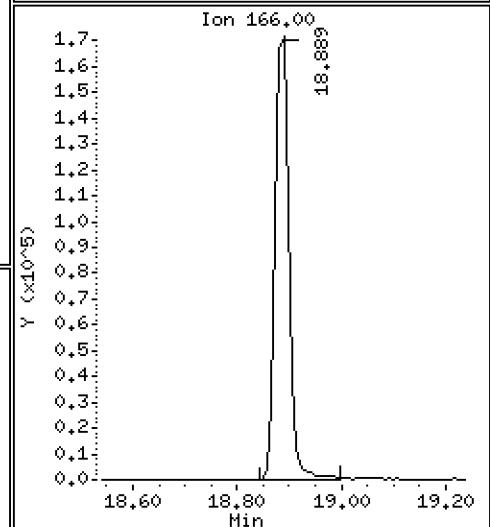
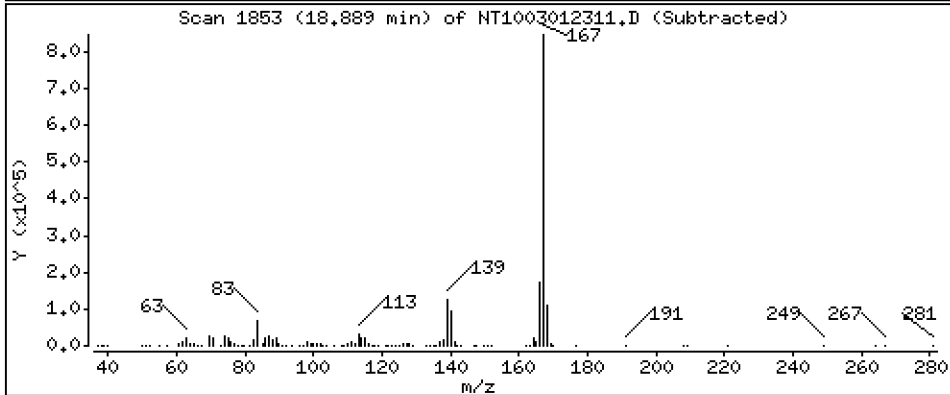
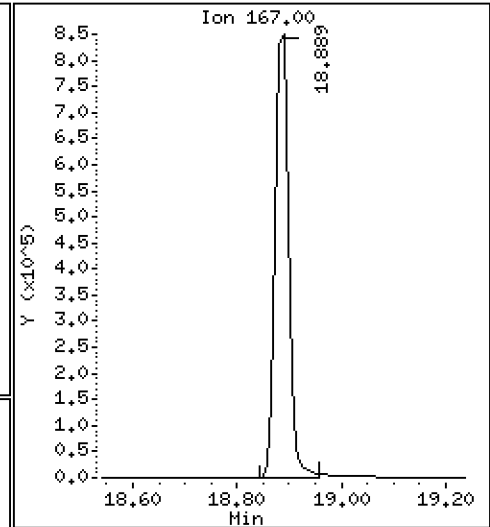
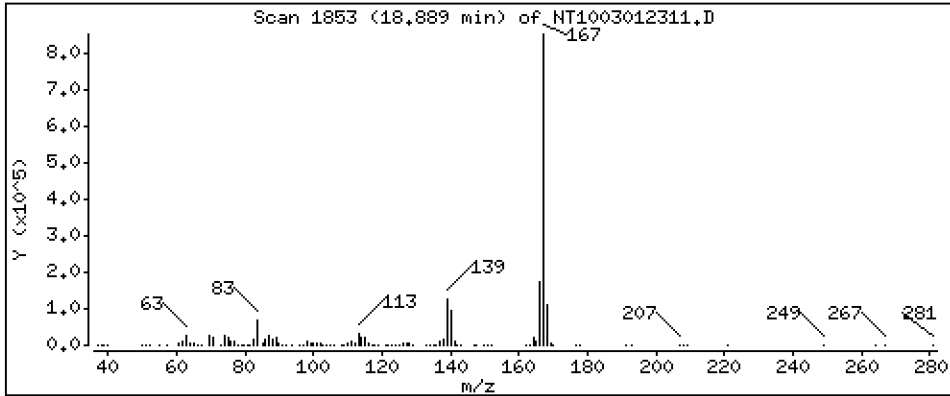
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,335 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

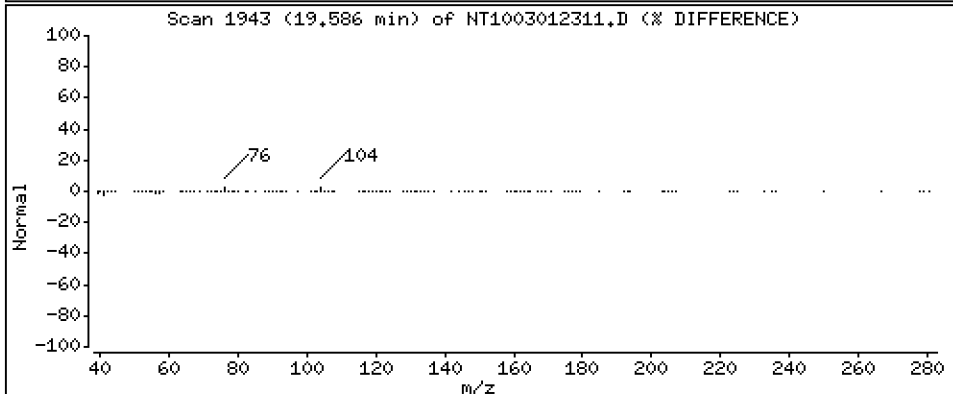
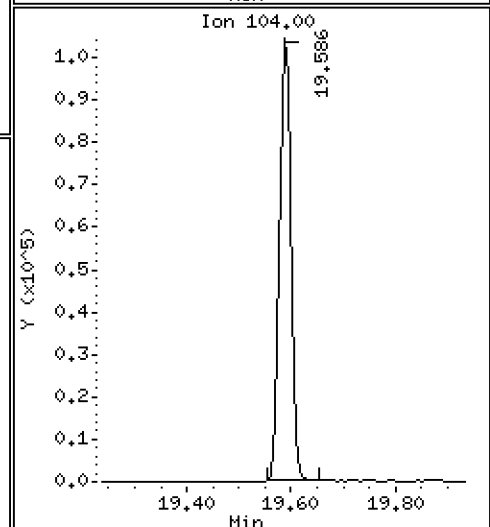
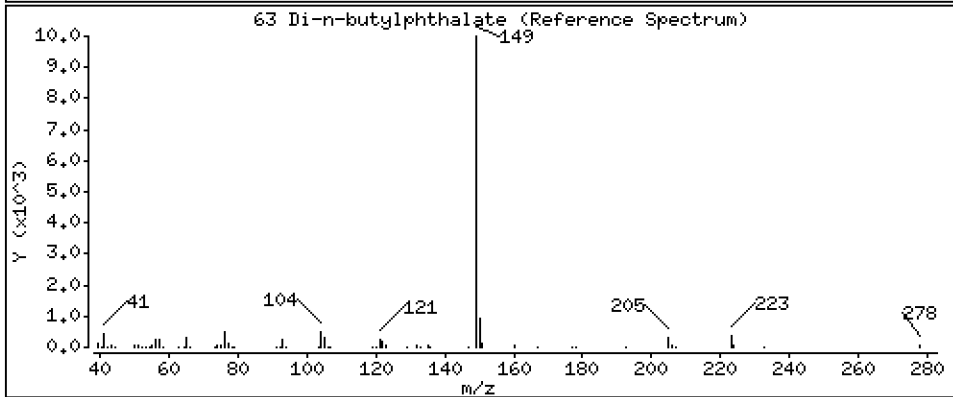
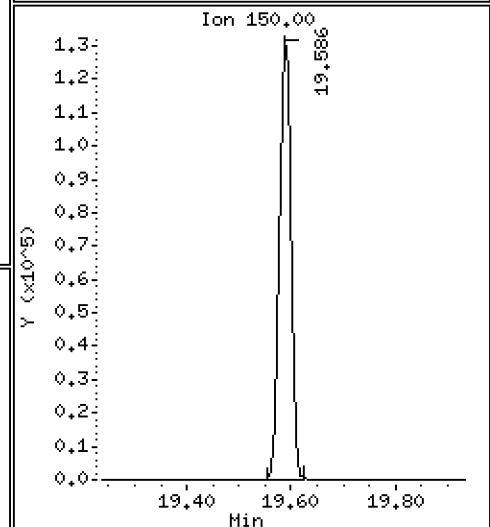
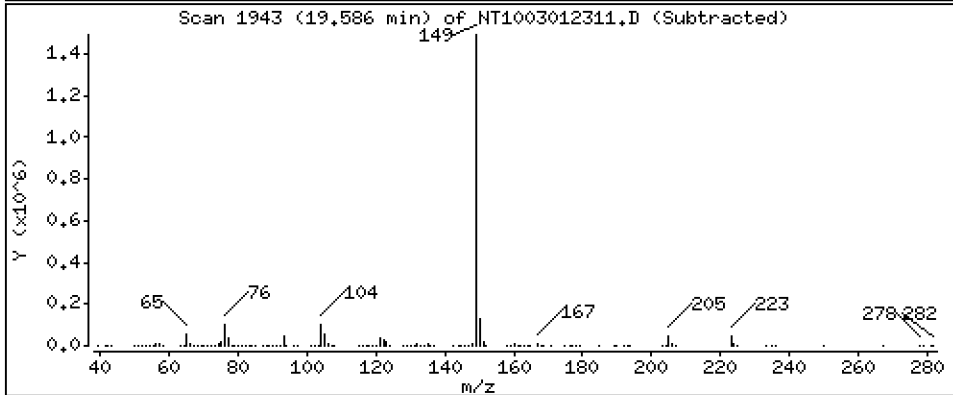
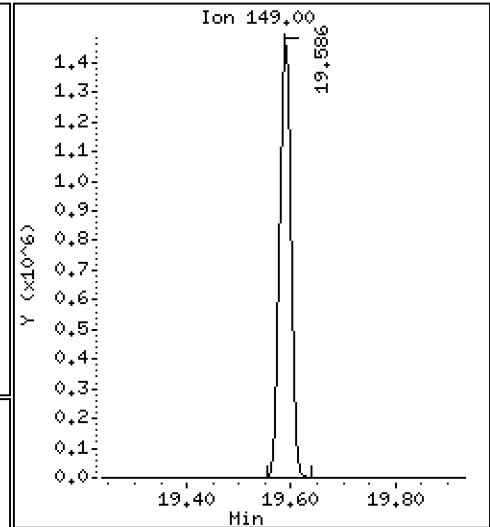
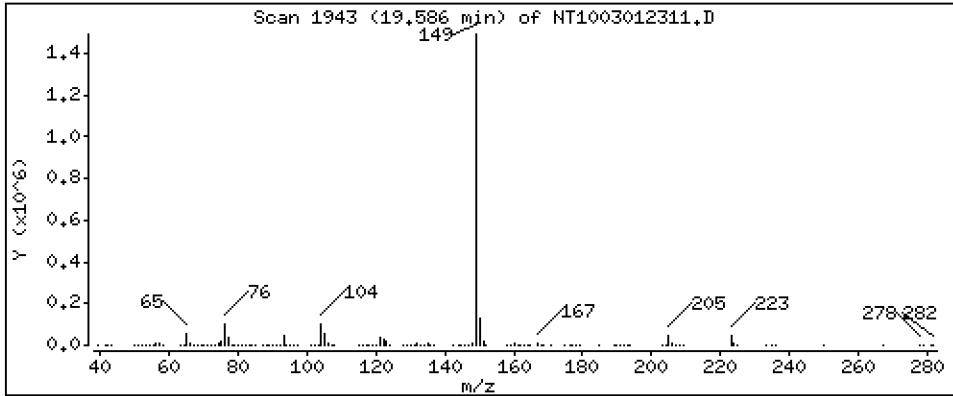
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,463 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

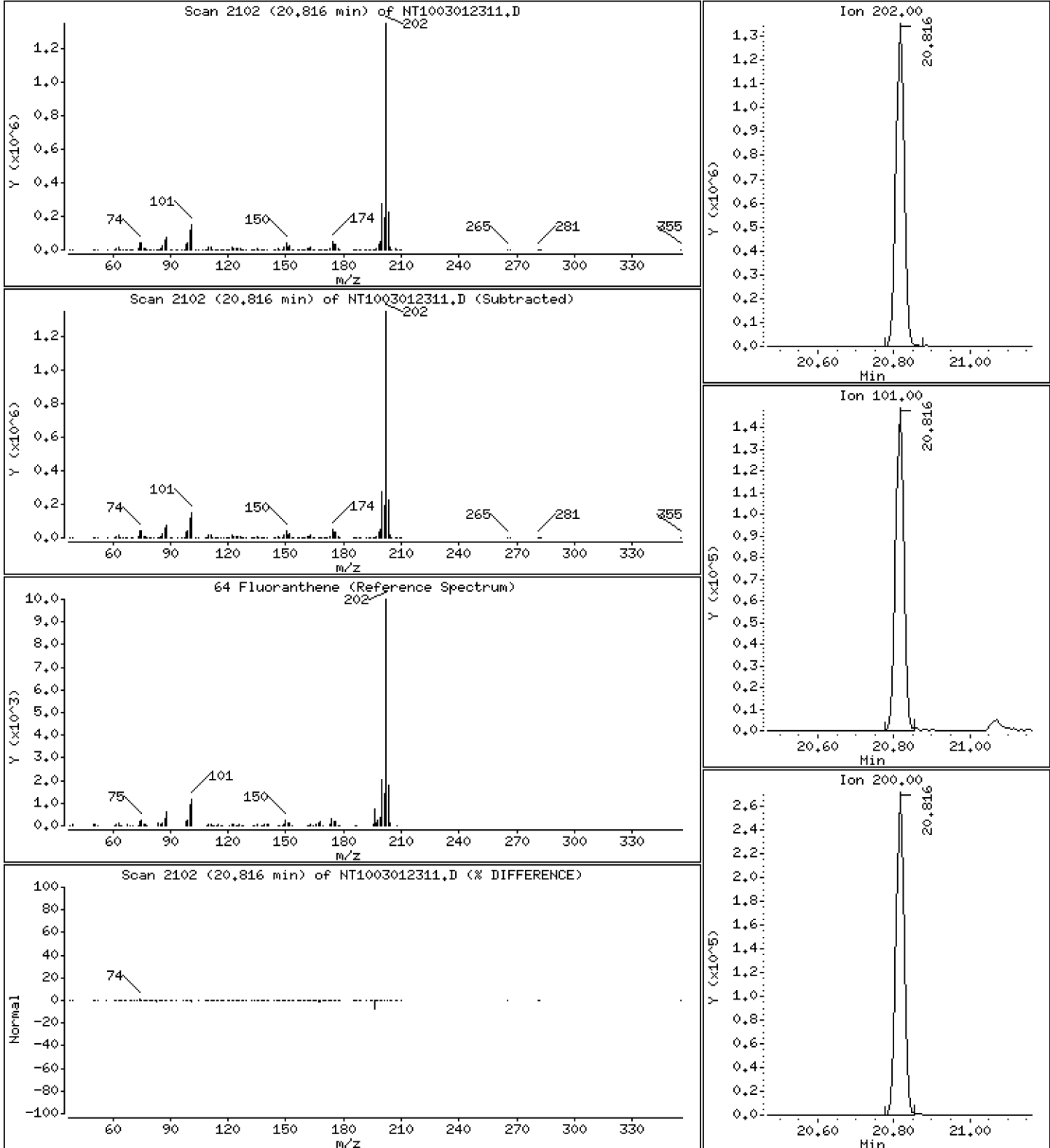
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,542 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

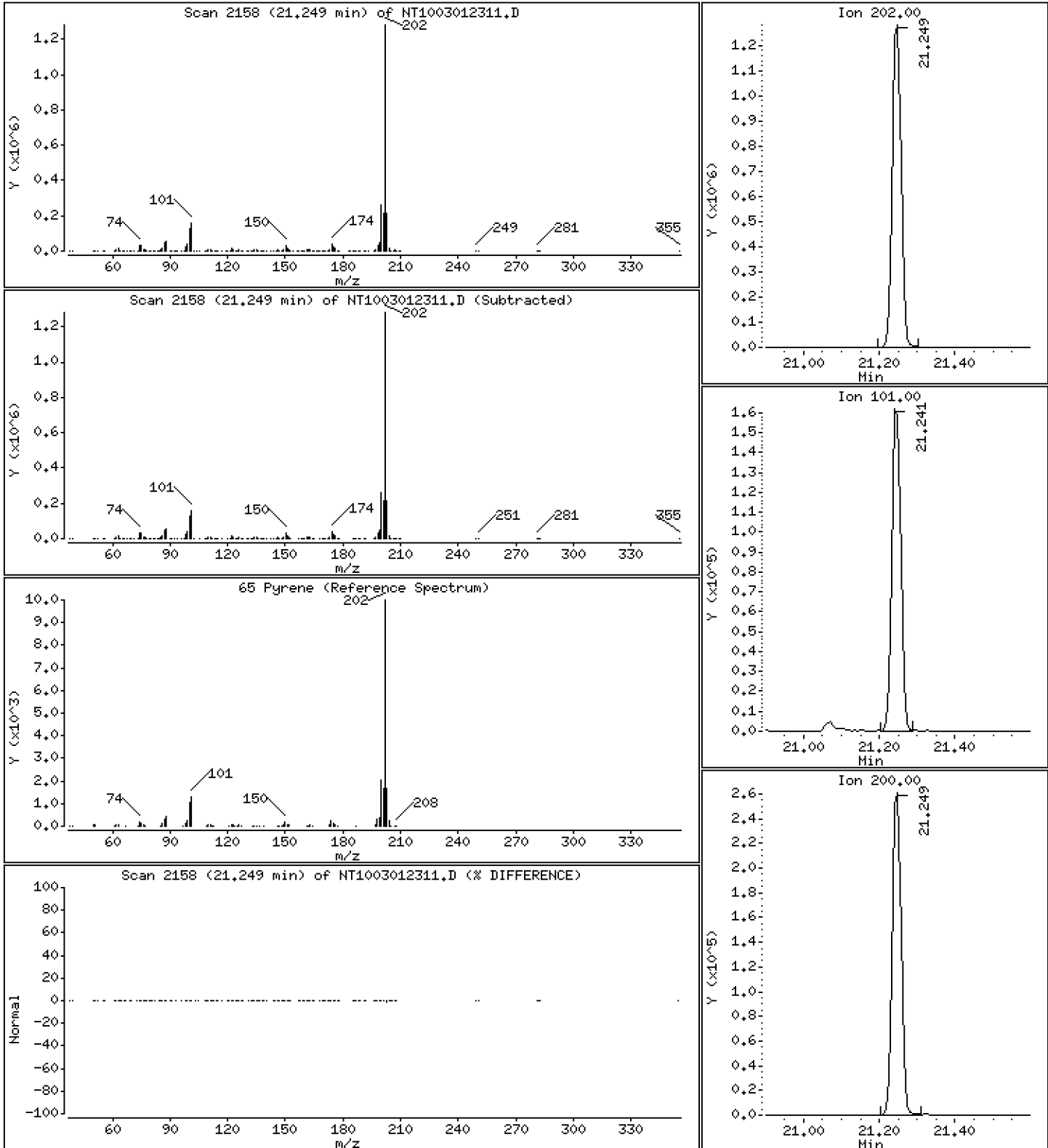
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,626 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

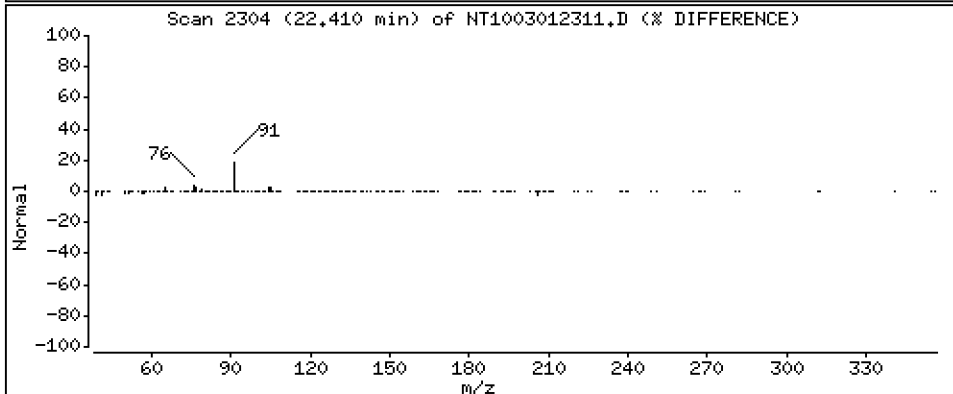
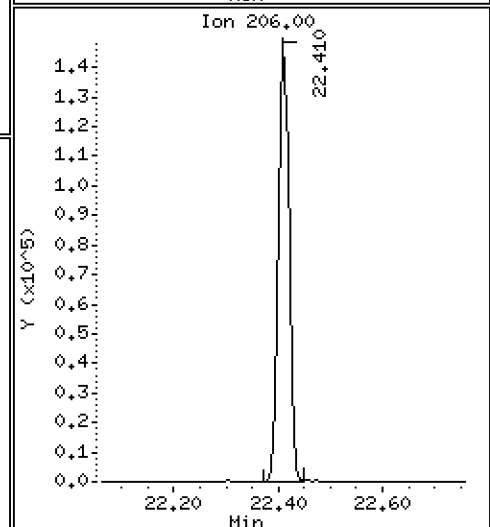
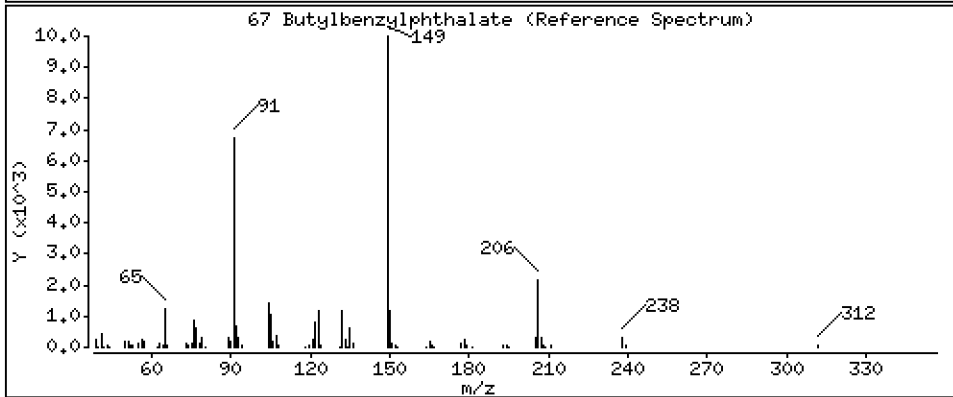
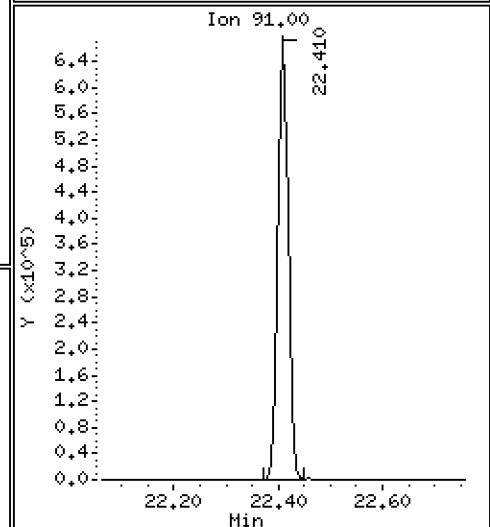
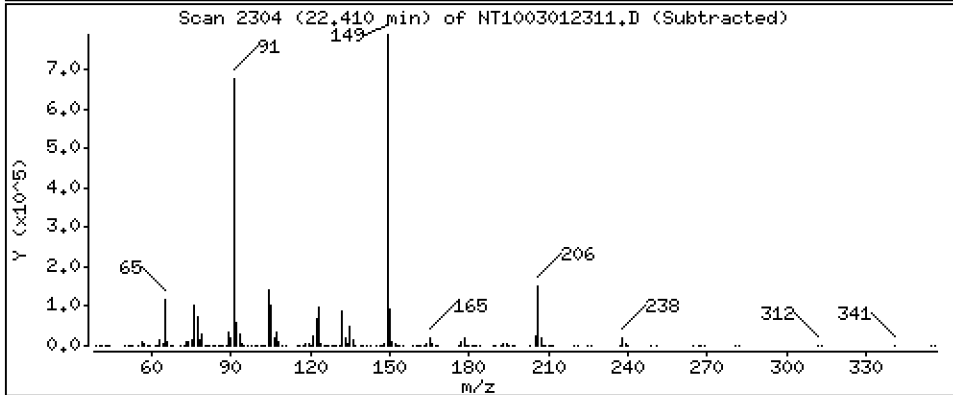
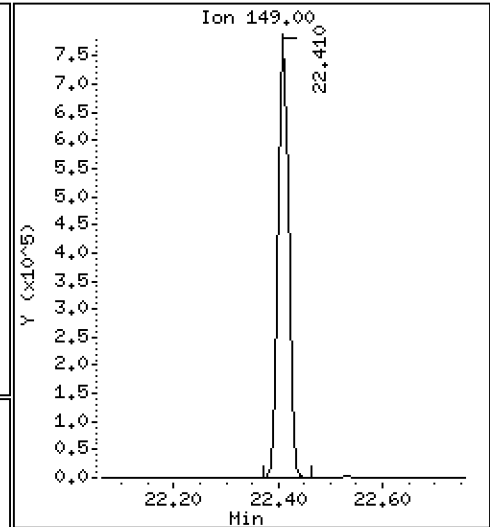
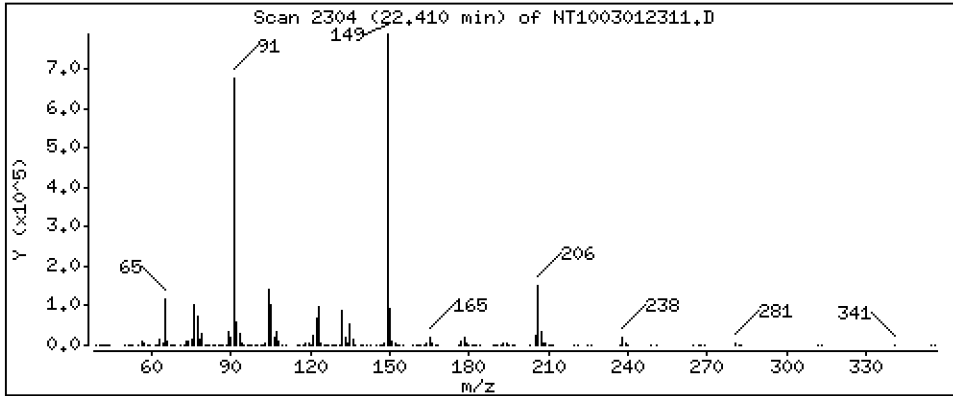
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,525 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

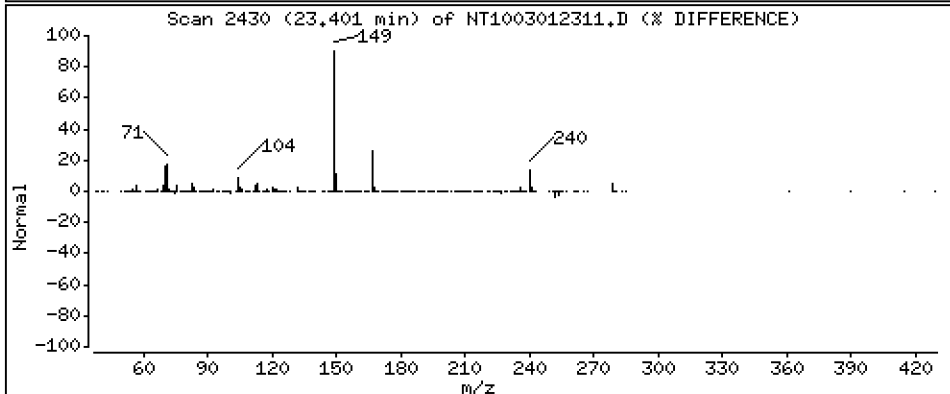
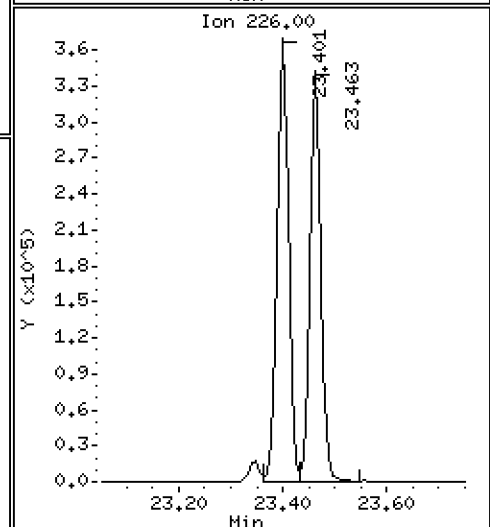
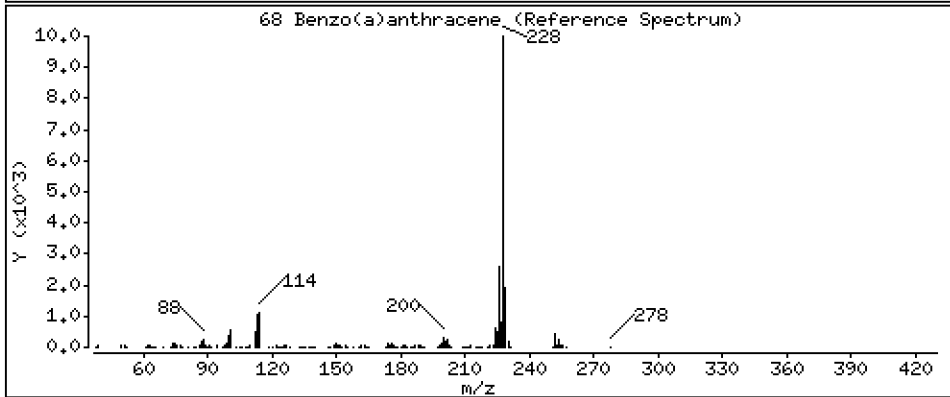
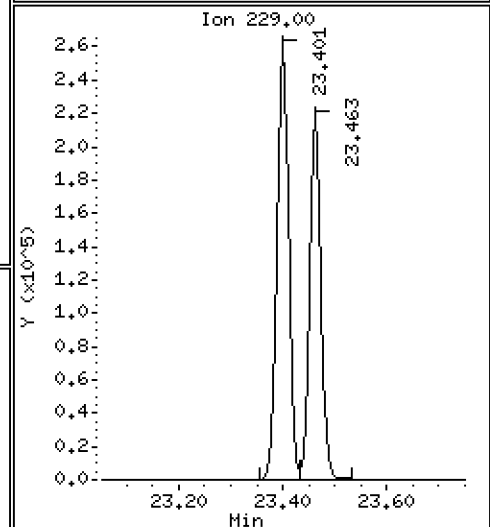
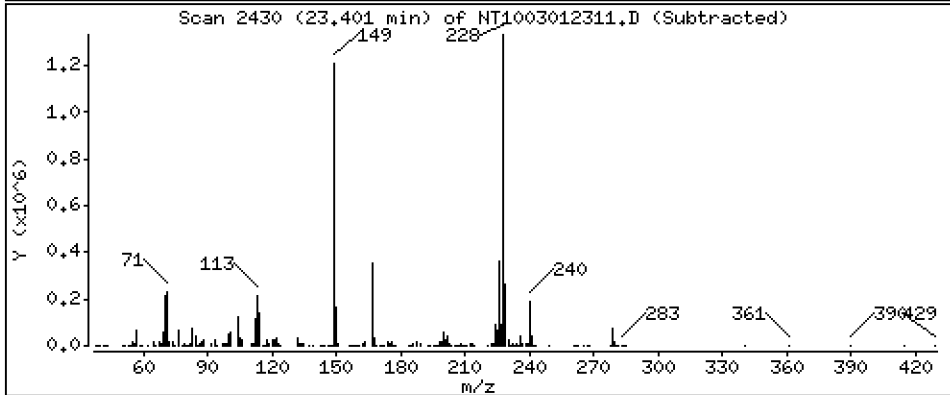
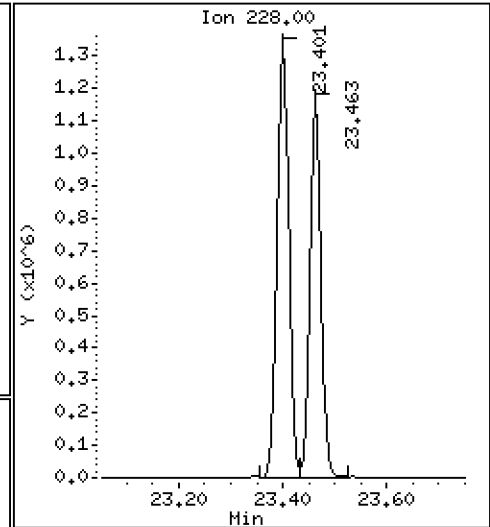
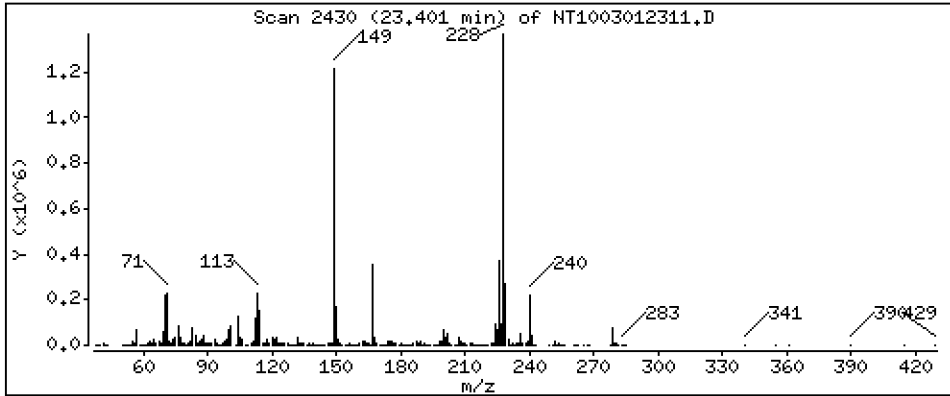
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,578 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

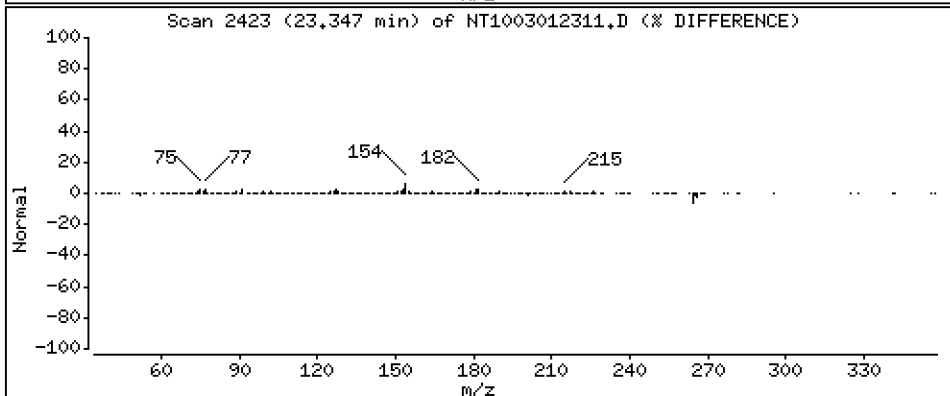
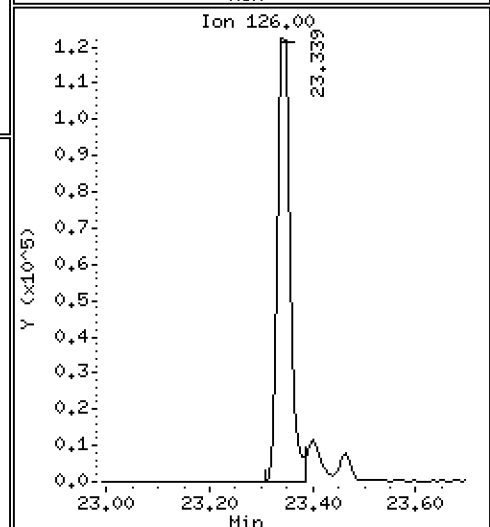
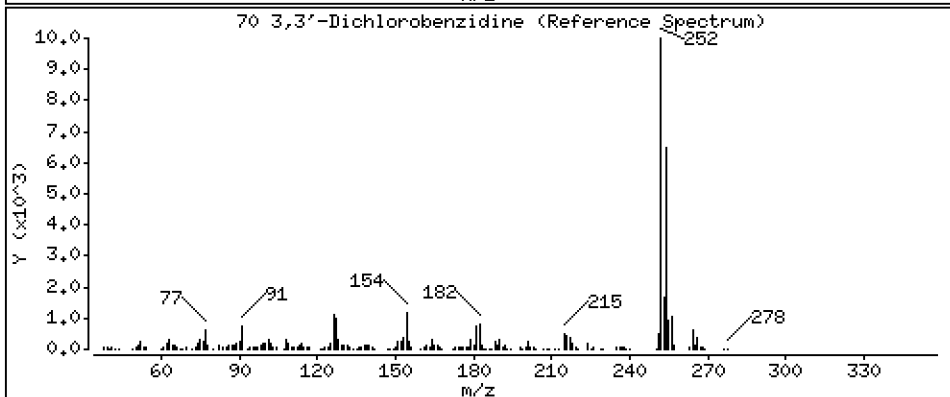
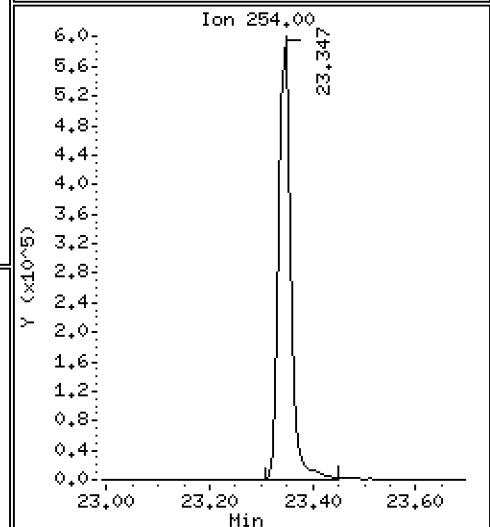
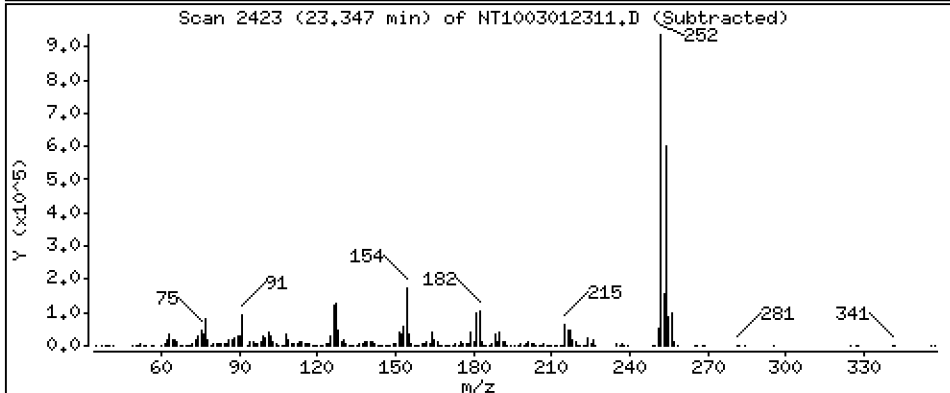
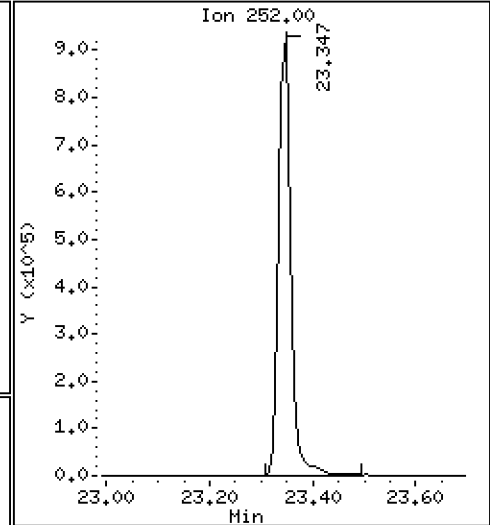
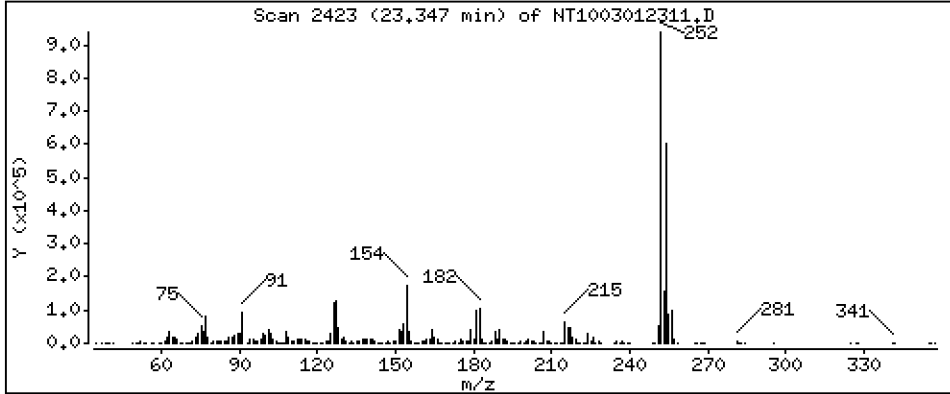
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 7,383 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

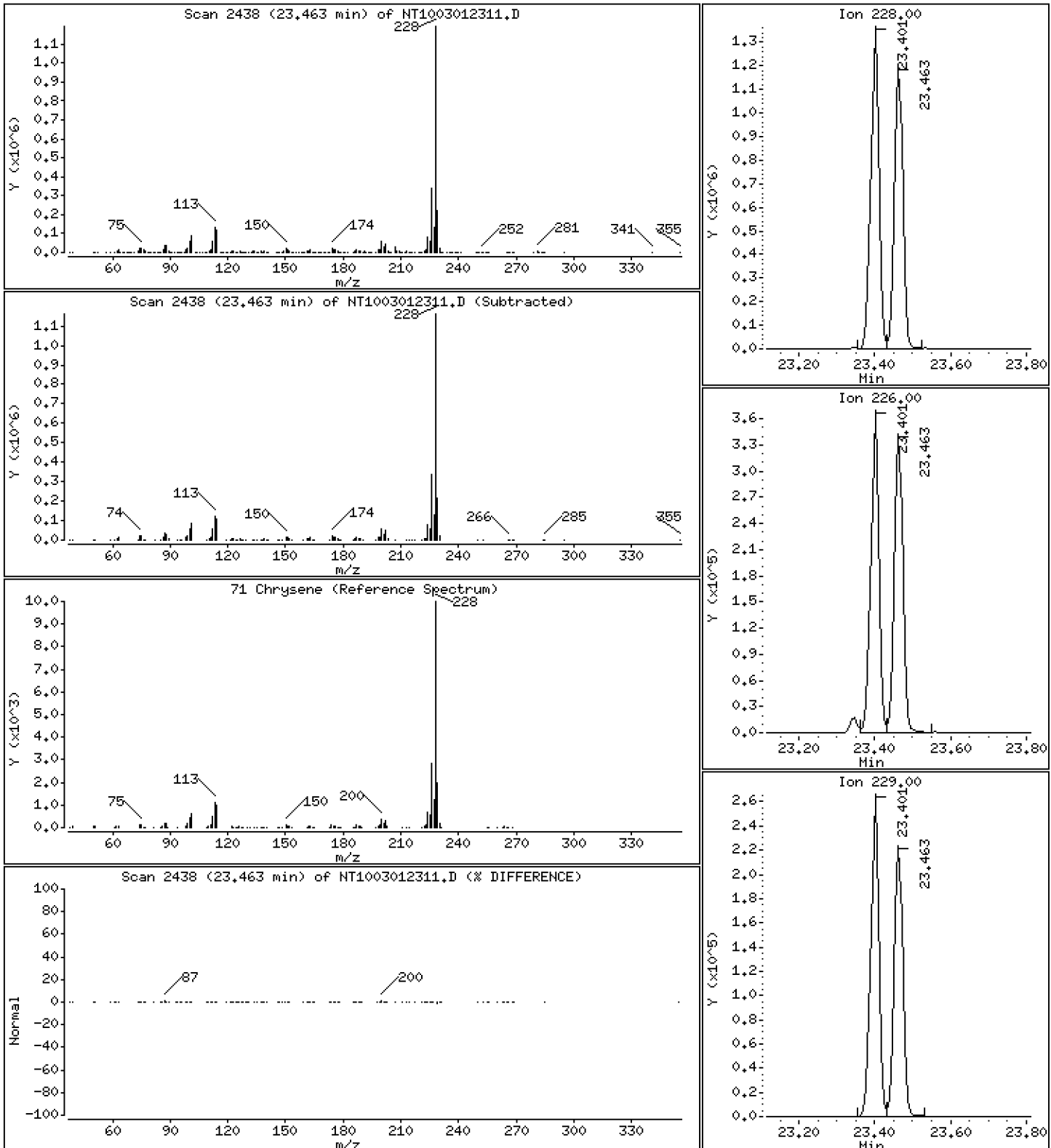
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 4,967 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

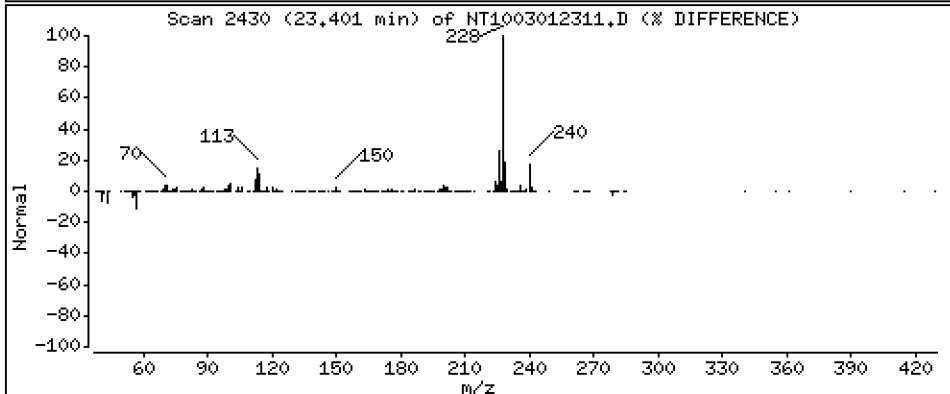
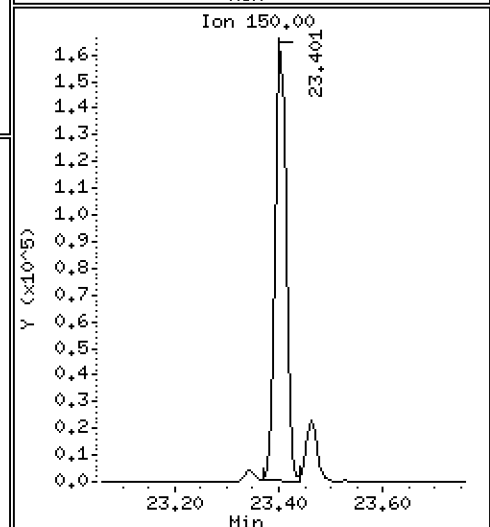
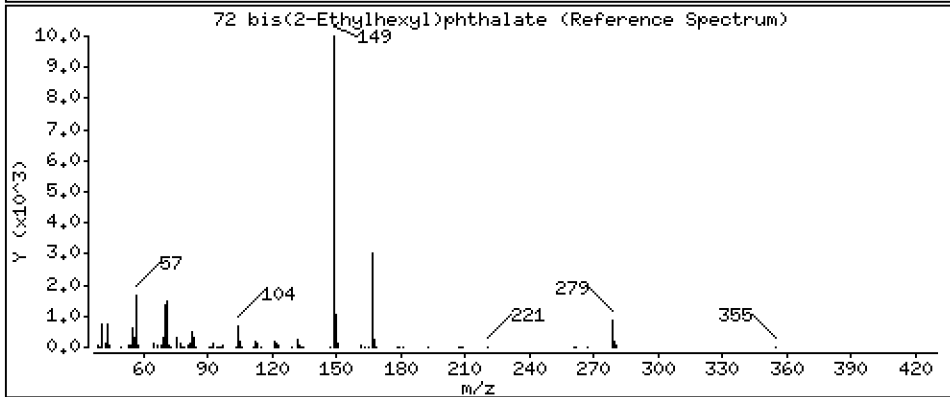
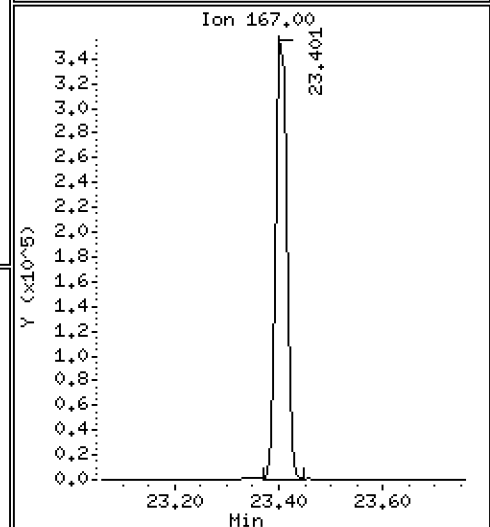
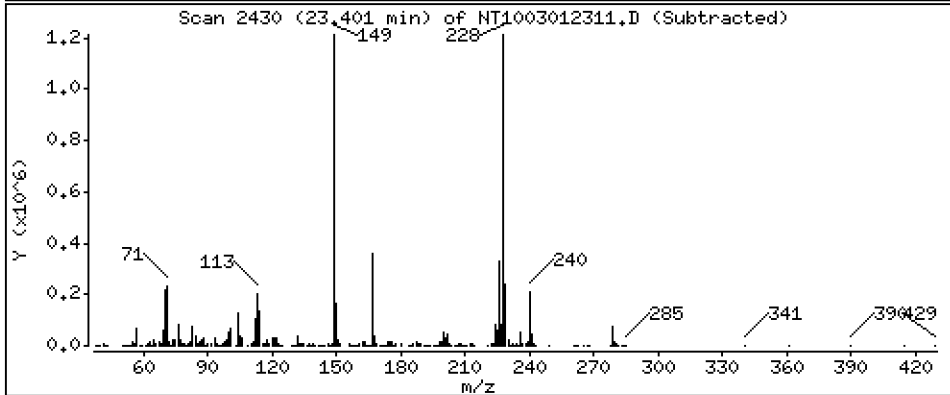
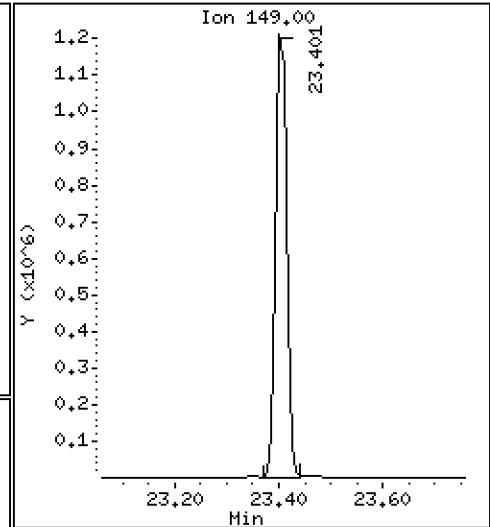
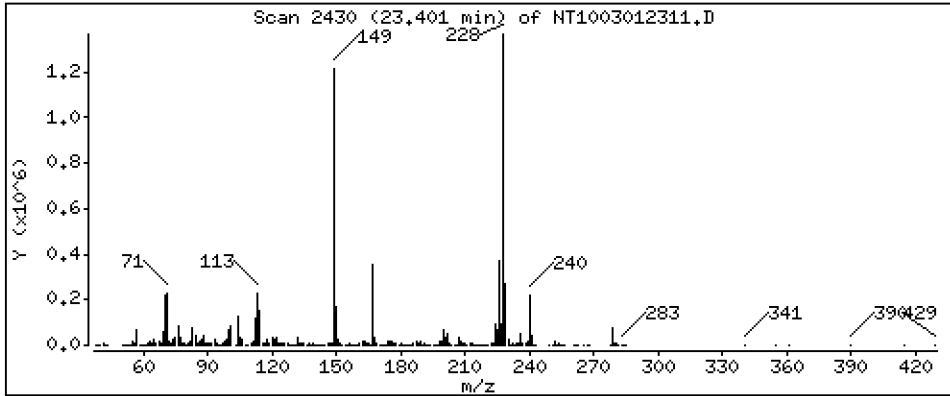
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,956 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

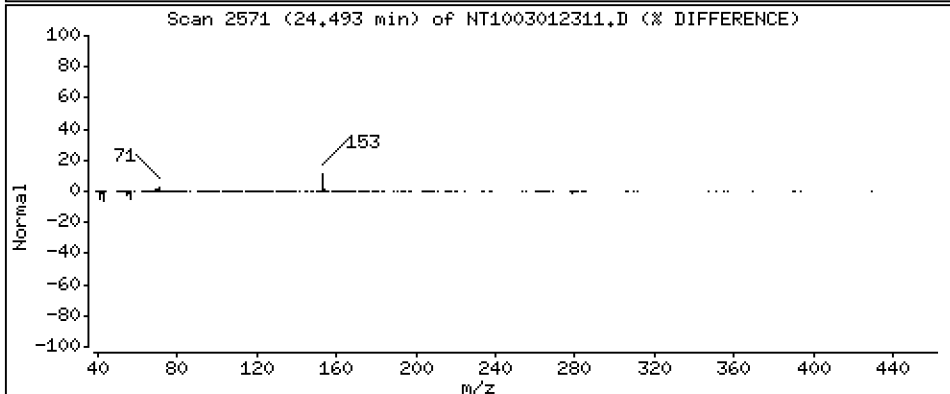
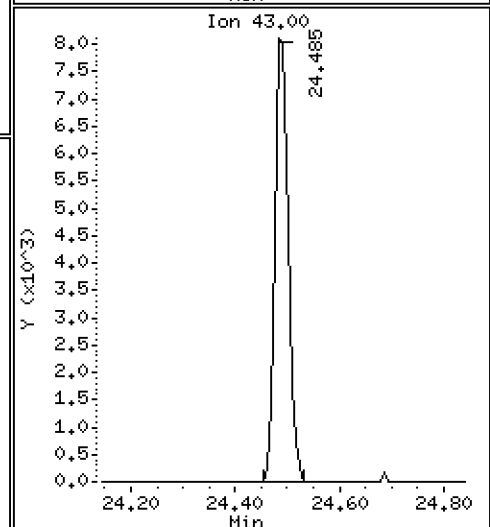
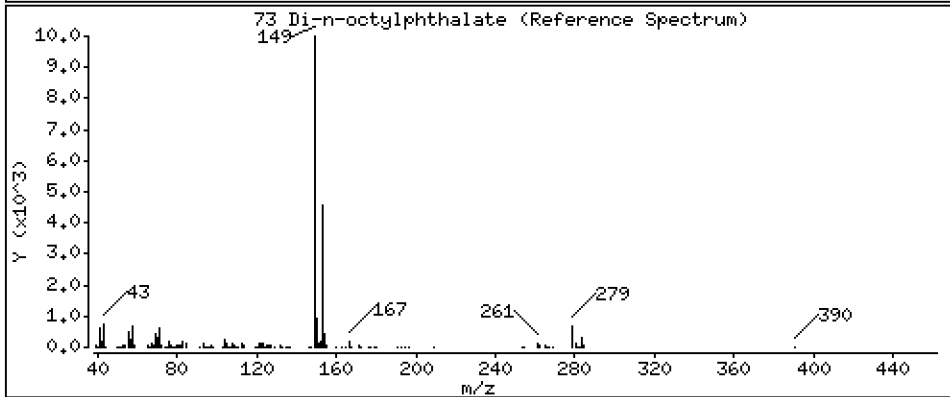
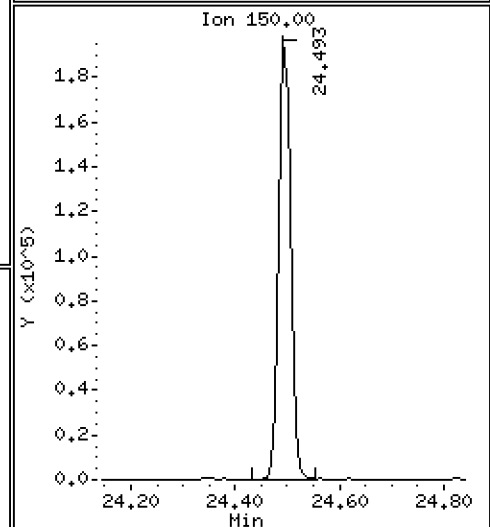
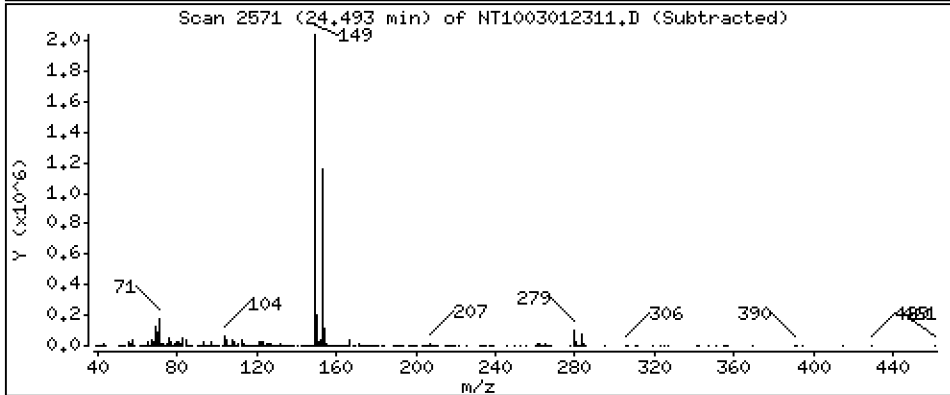
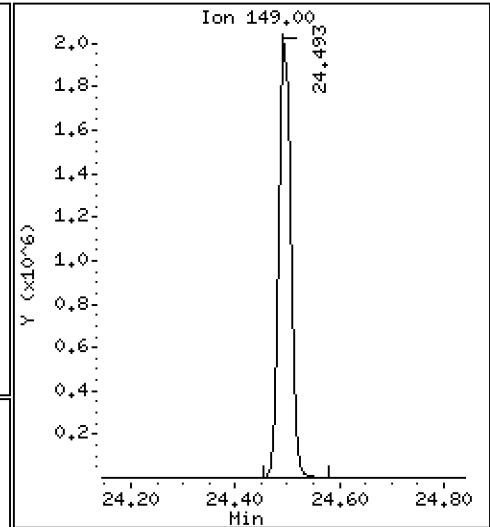
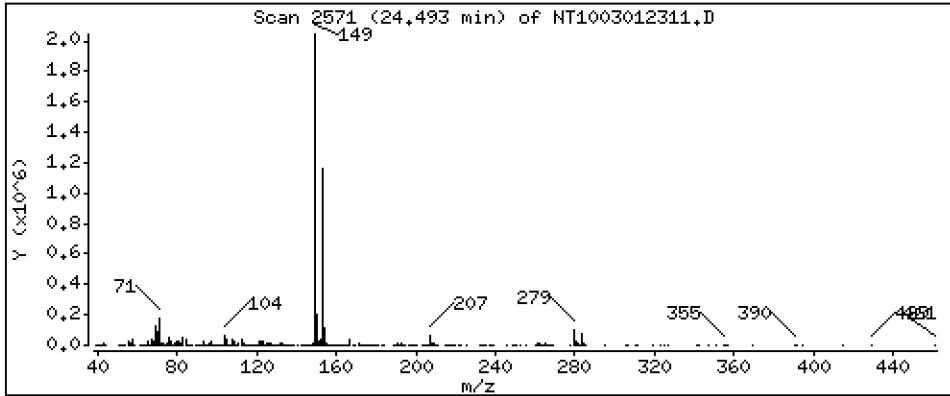
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,844 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

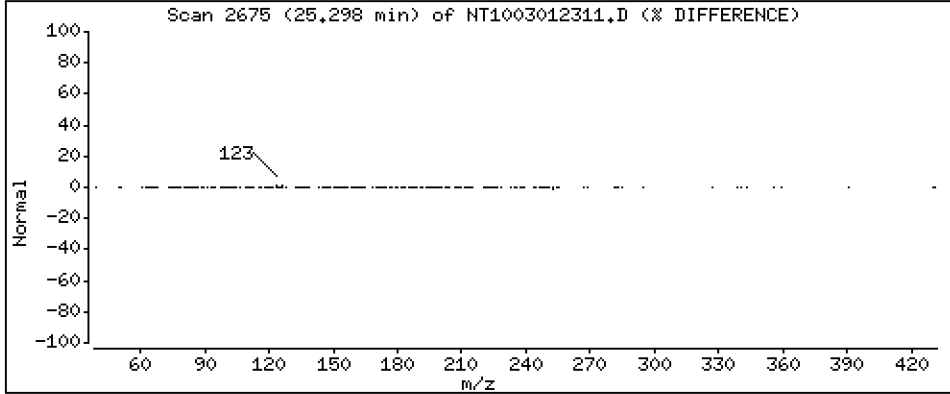
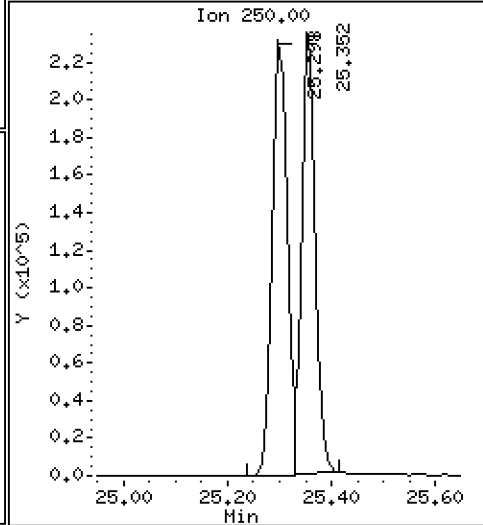
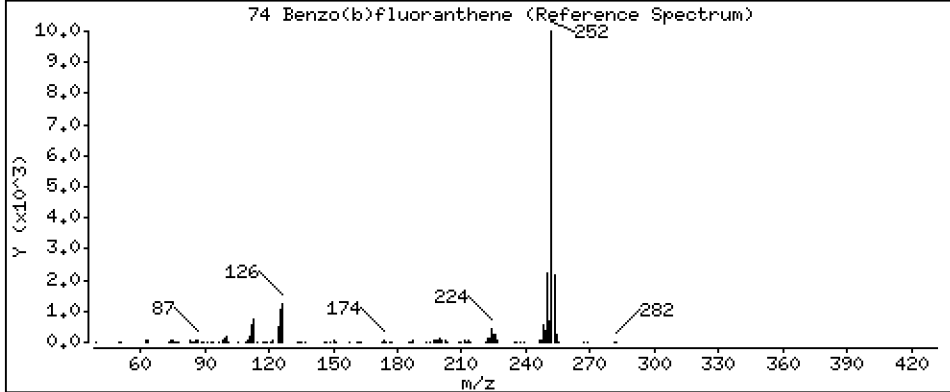
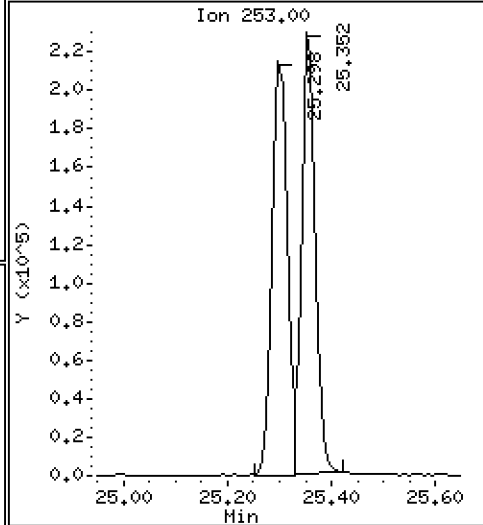
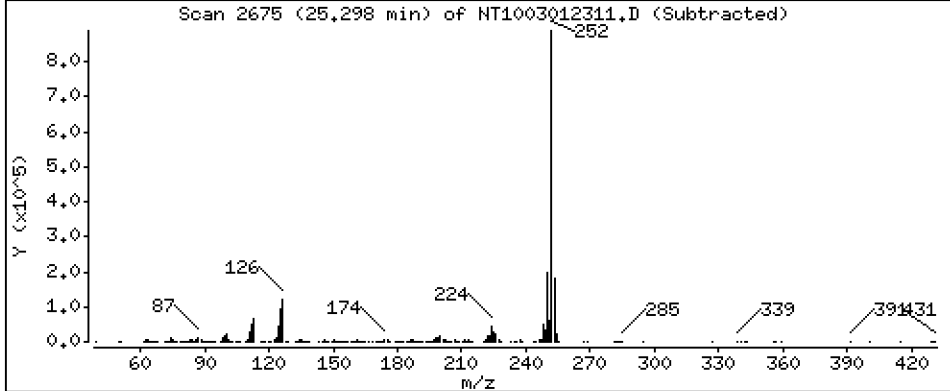
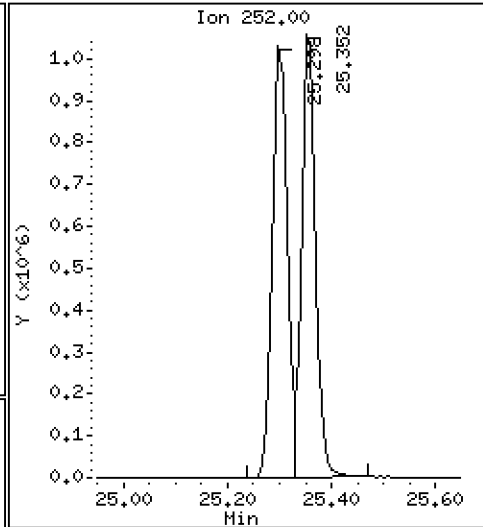
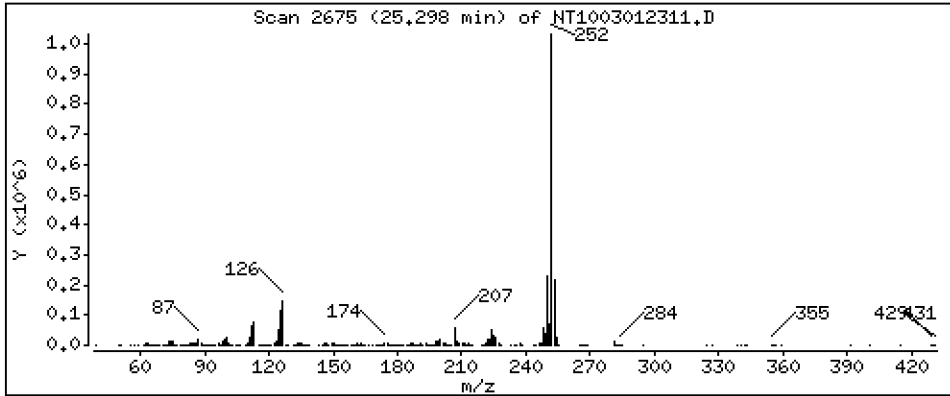
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,319 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

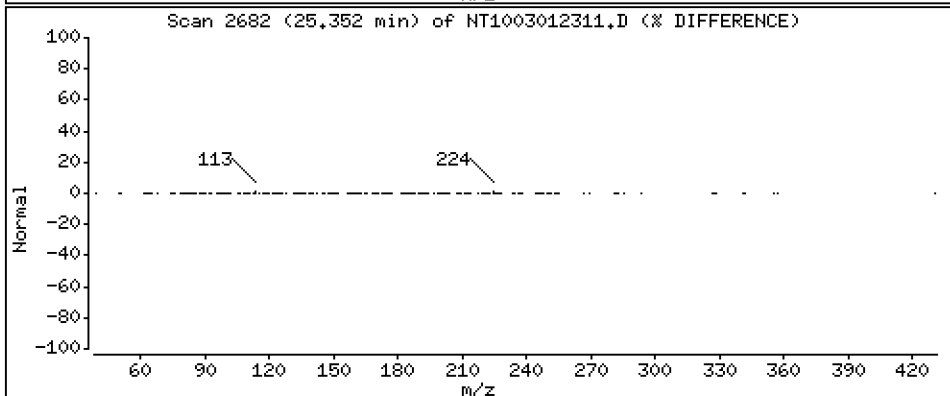
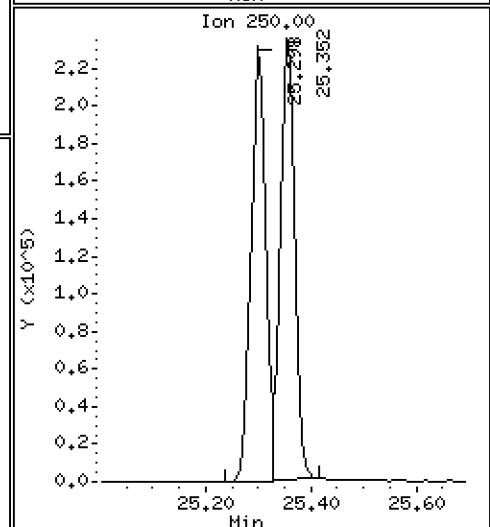
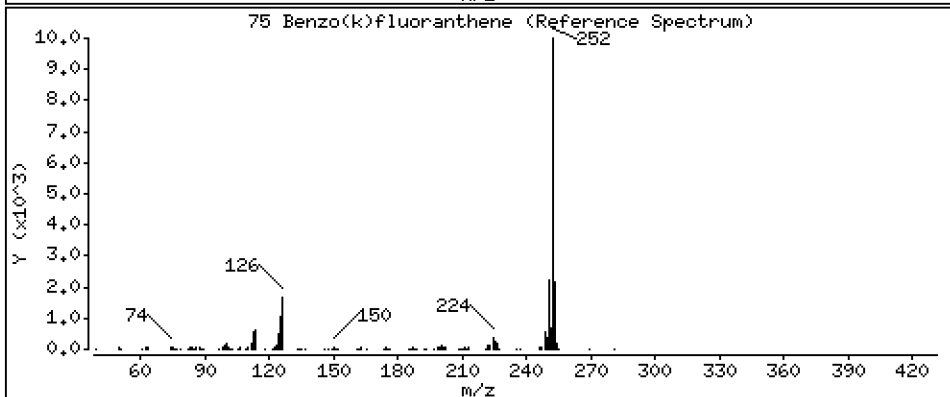
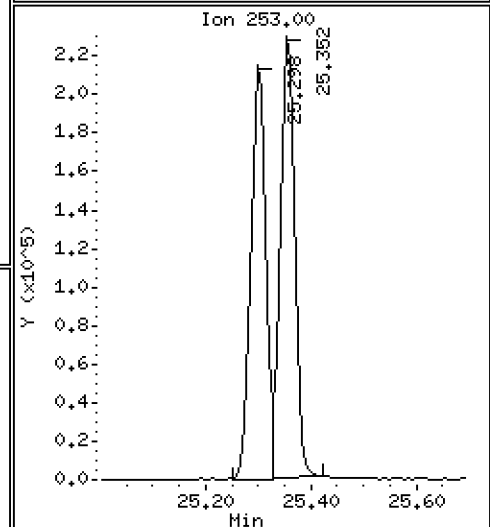
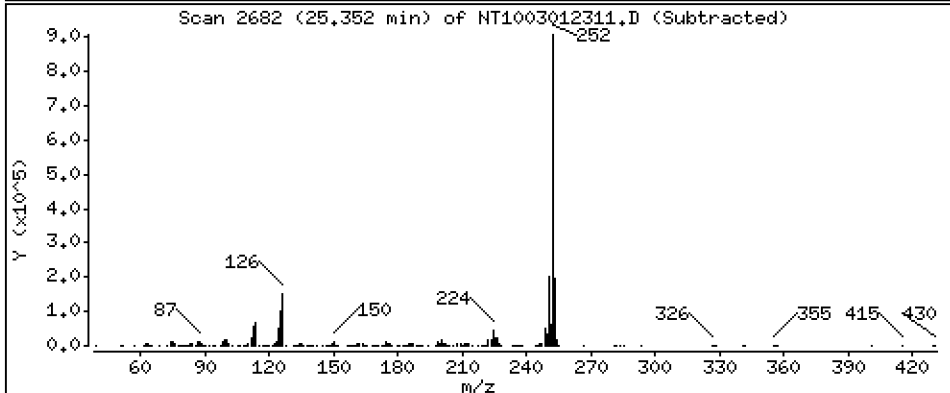
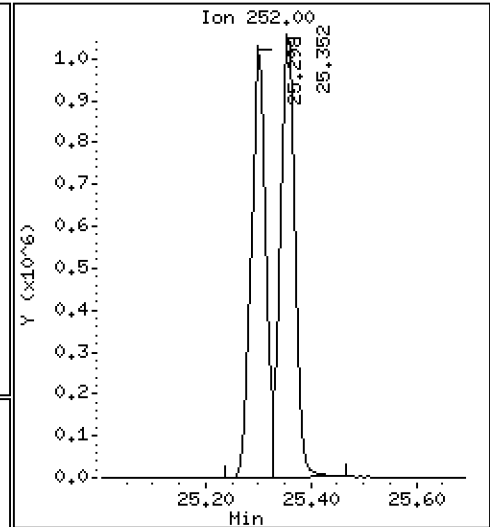
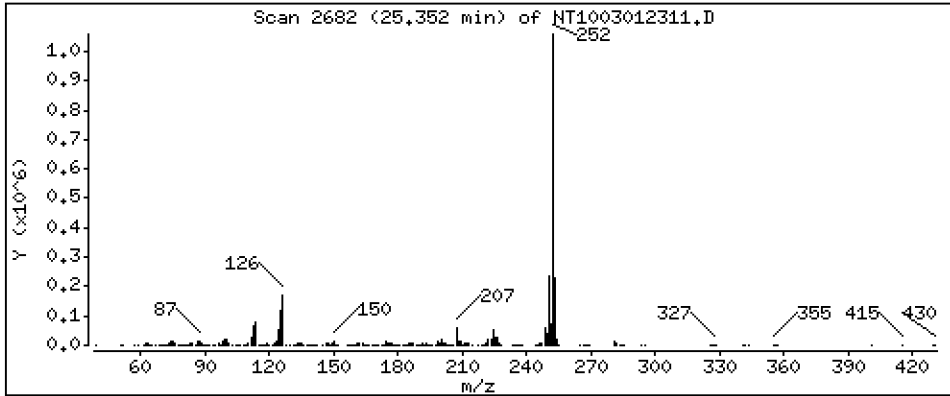
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,563 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

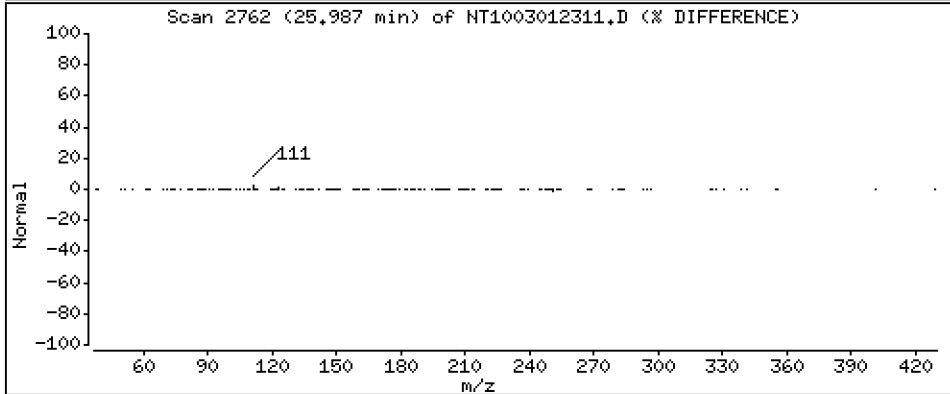
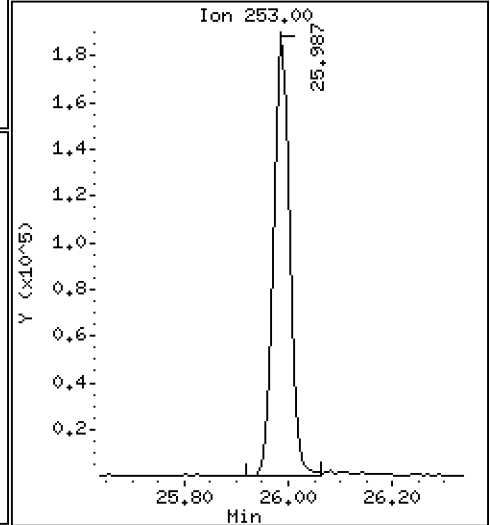
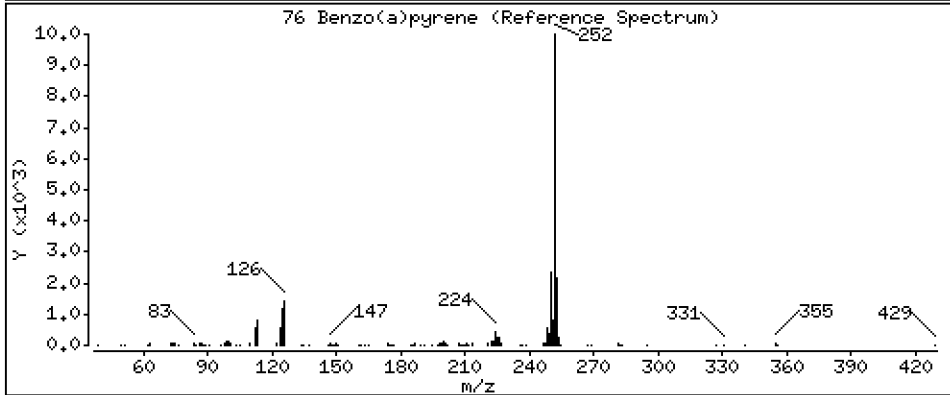
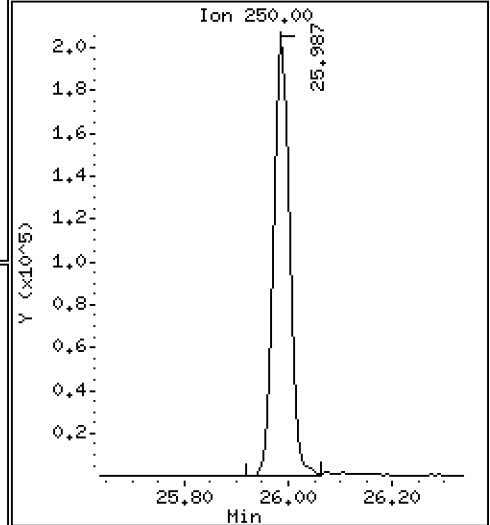
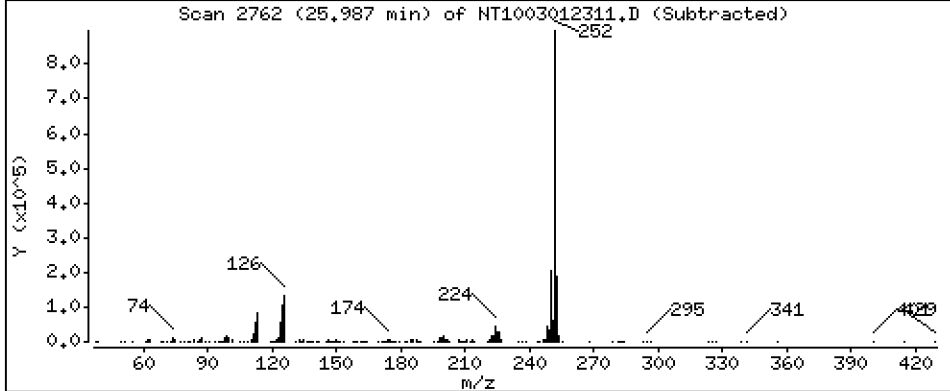
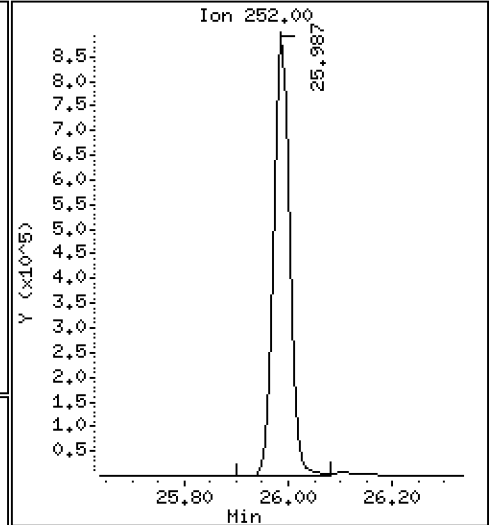
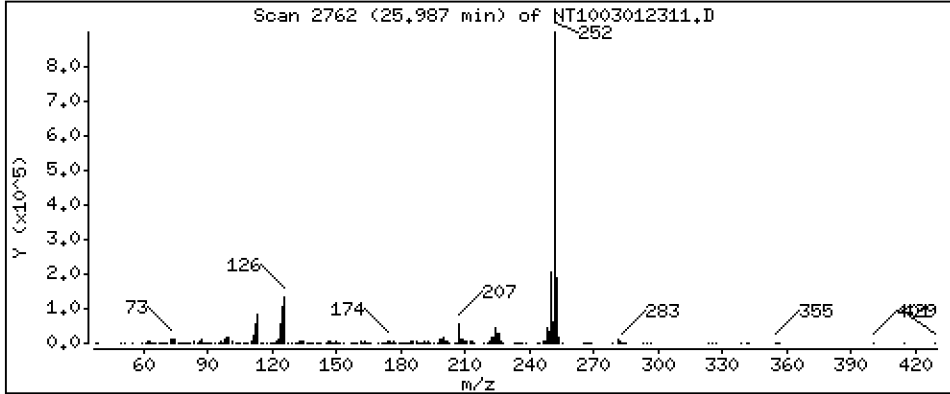
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,445 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

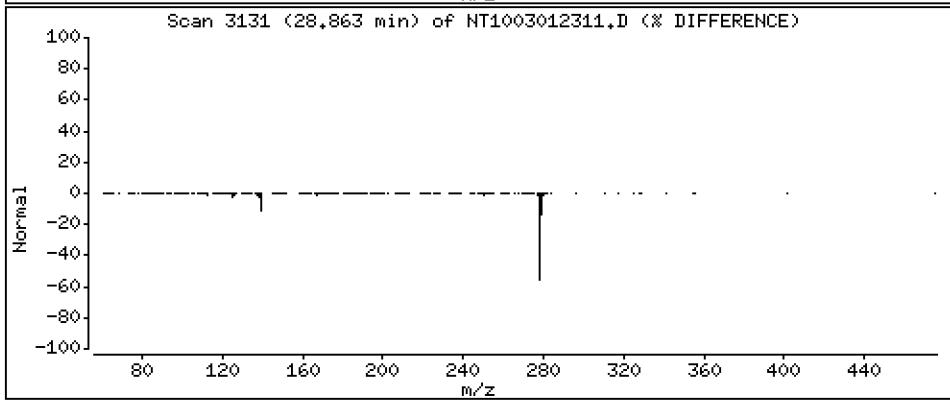
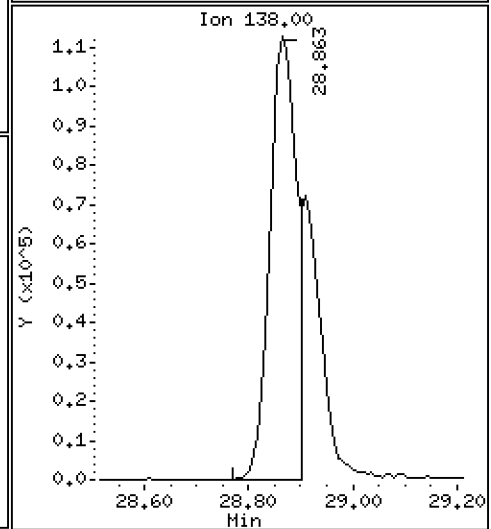
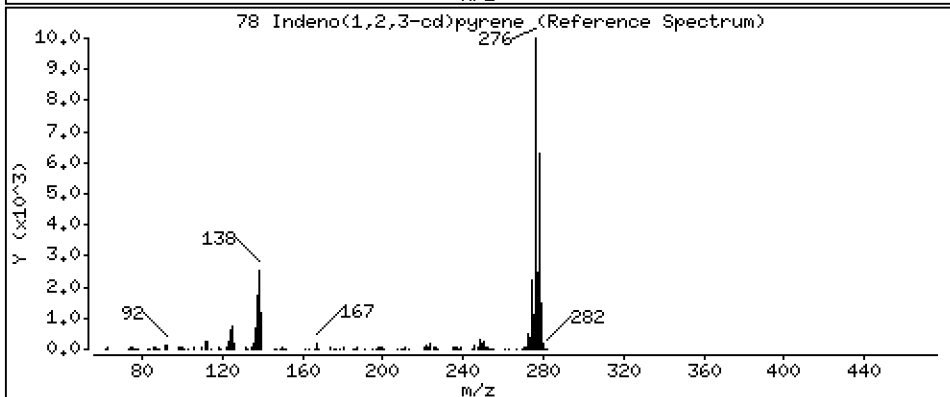
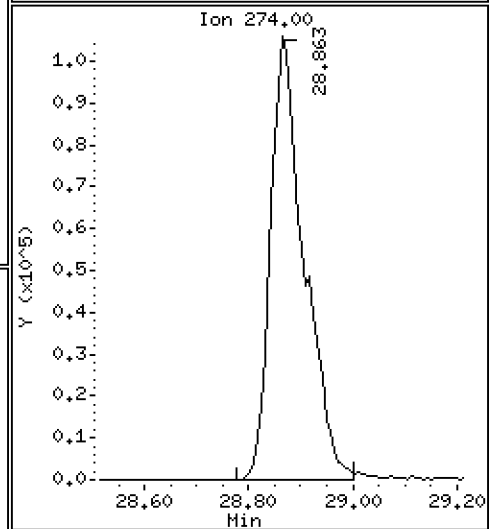
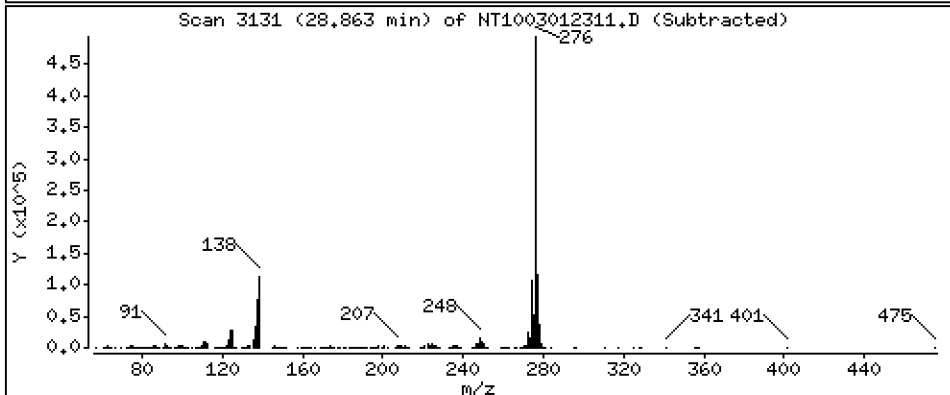
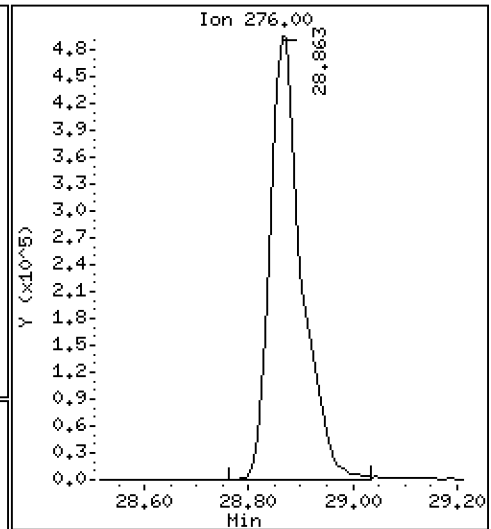
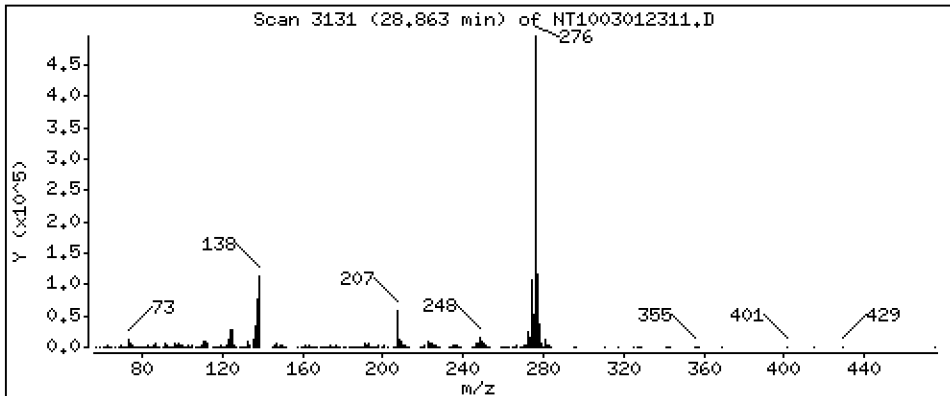
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,345 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

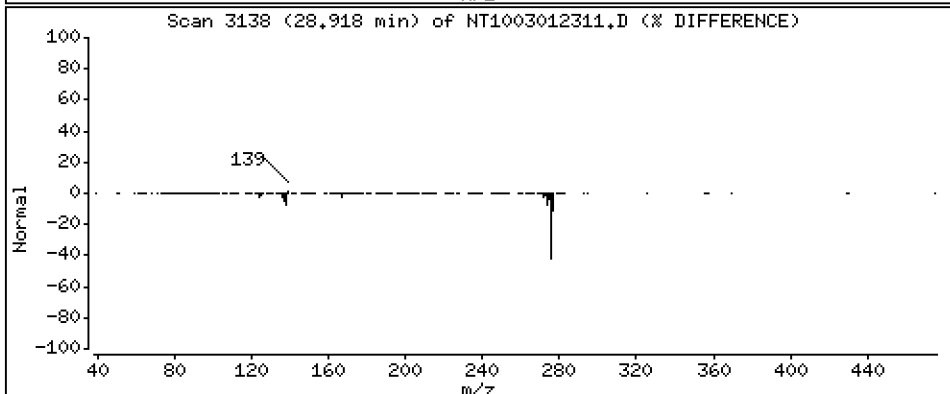
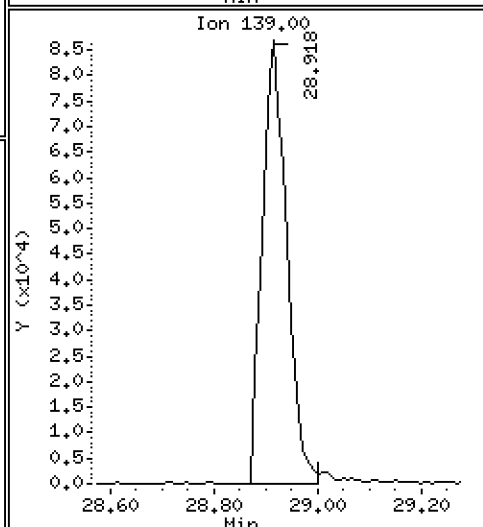
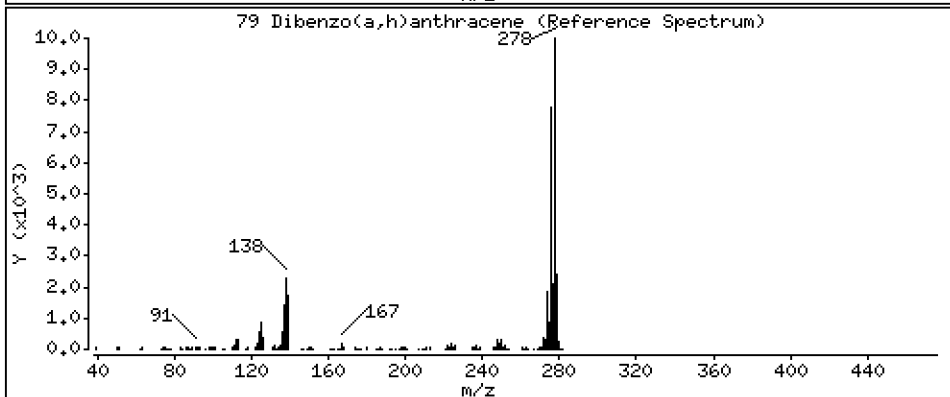
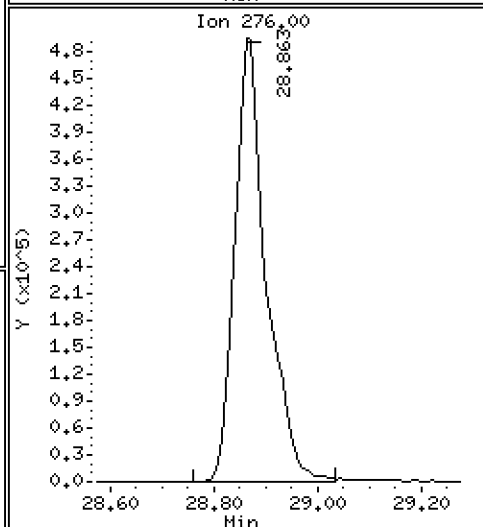
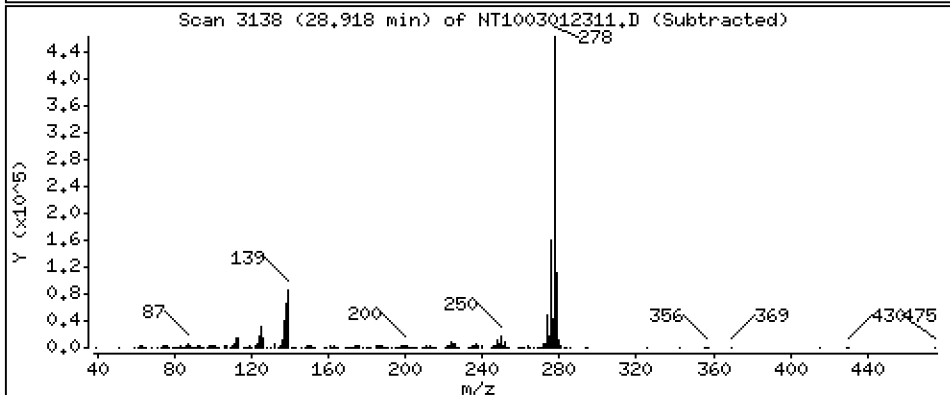
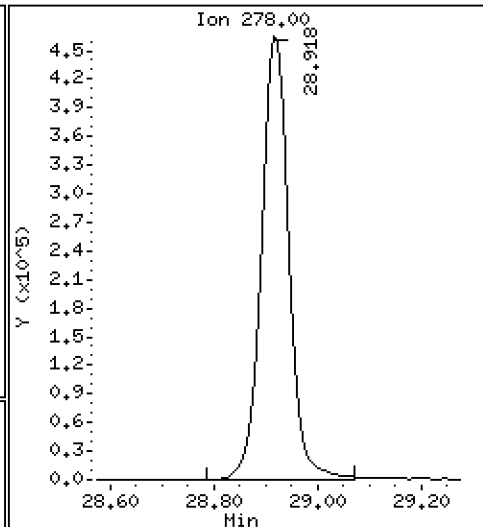
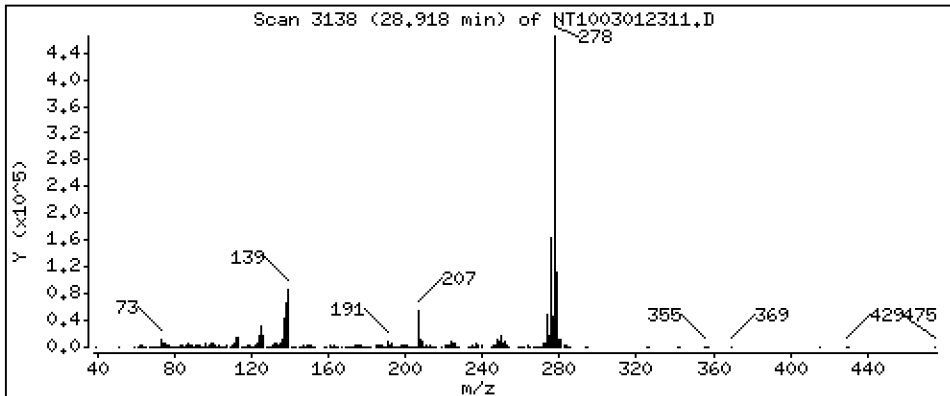
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,608 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

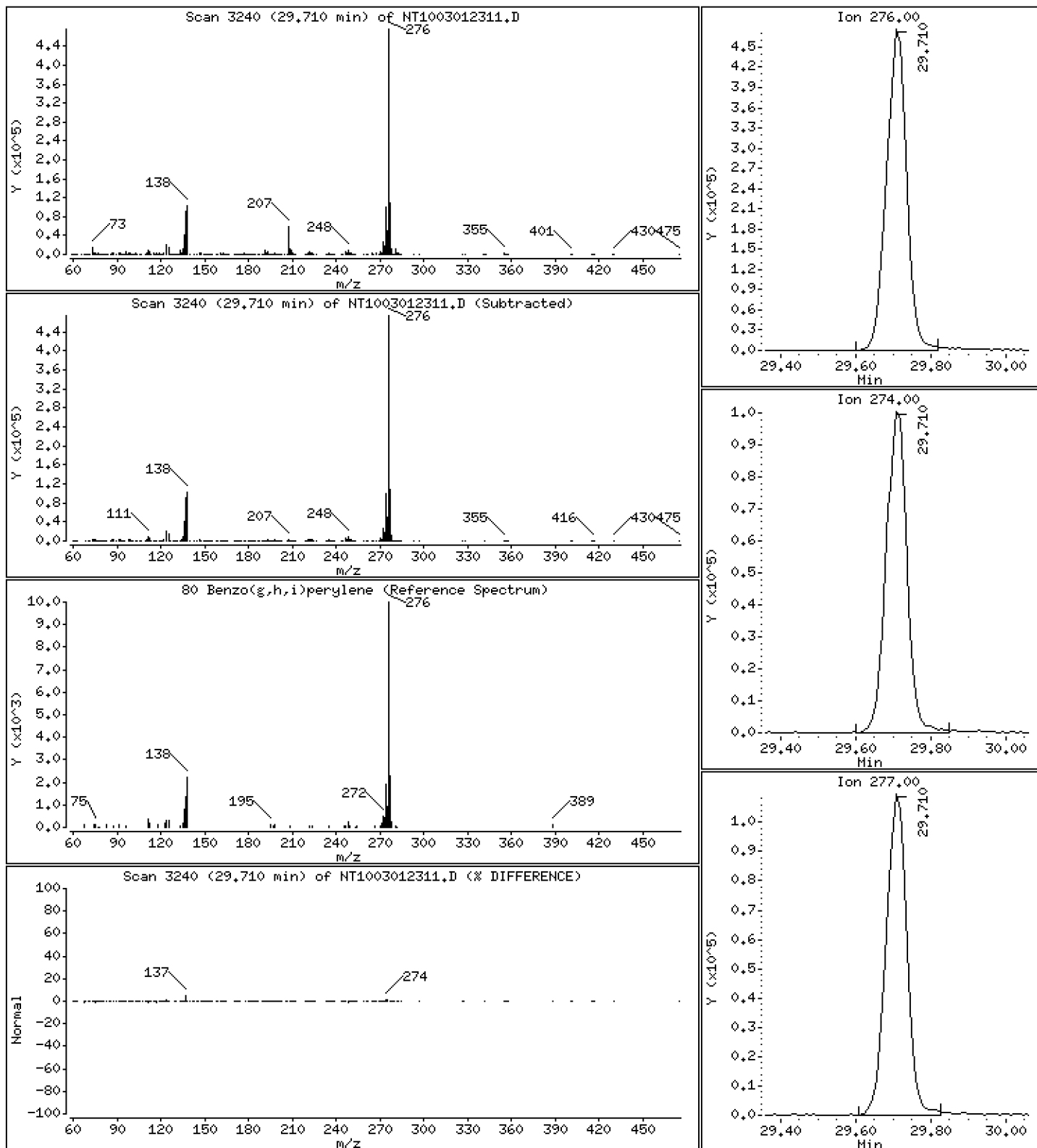
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,602 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

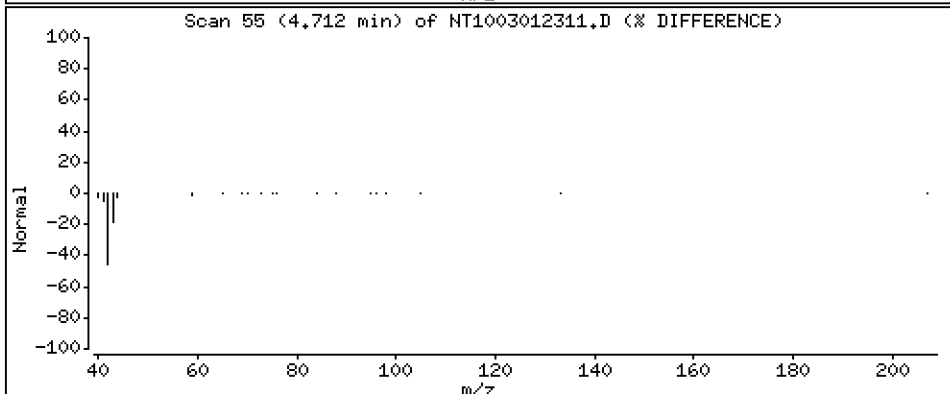
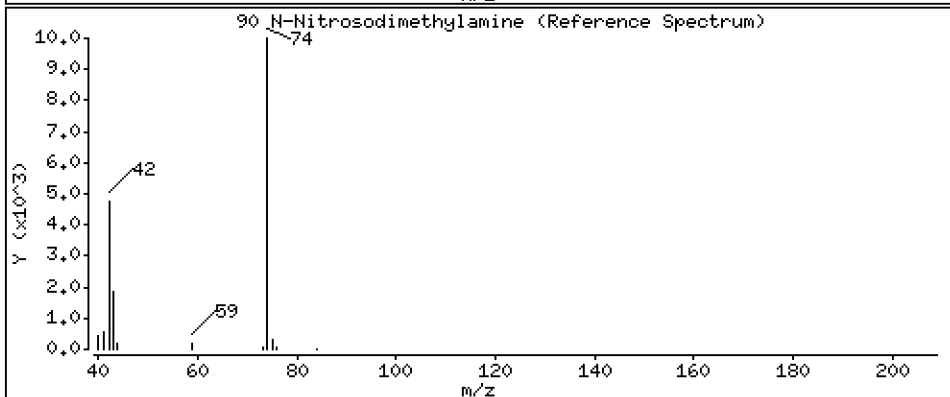
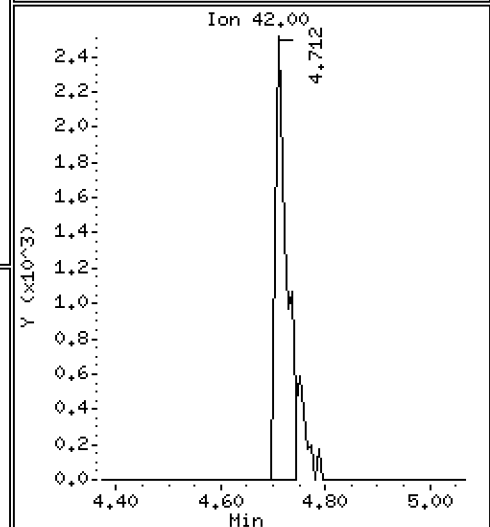
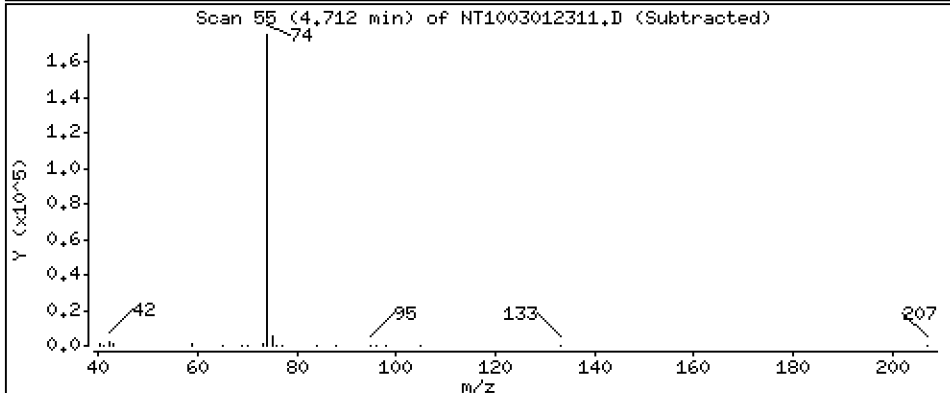
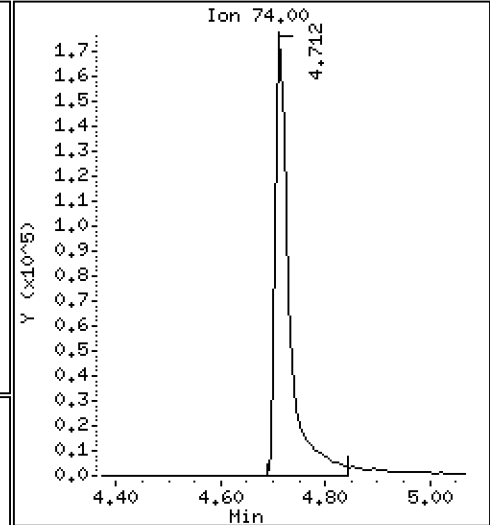
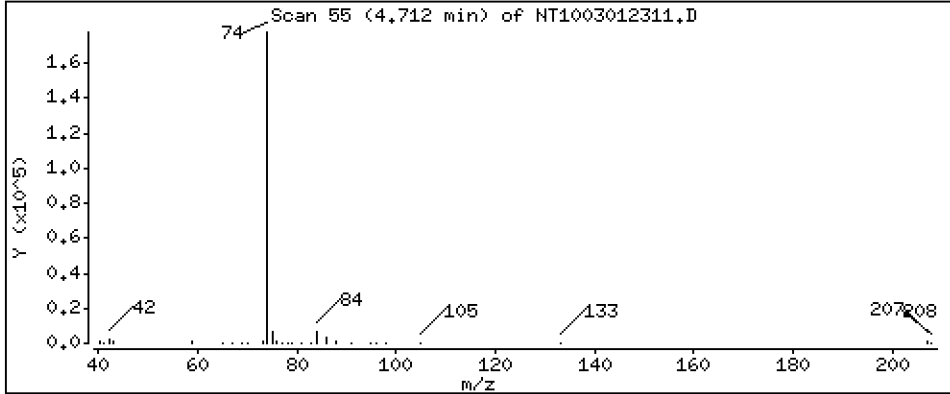
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 5.491 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

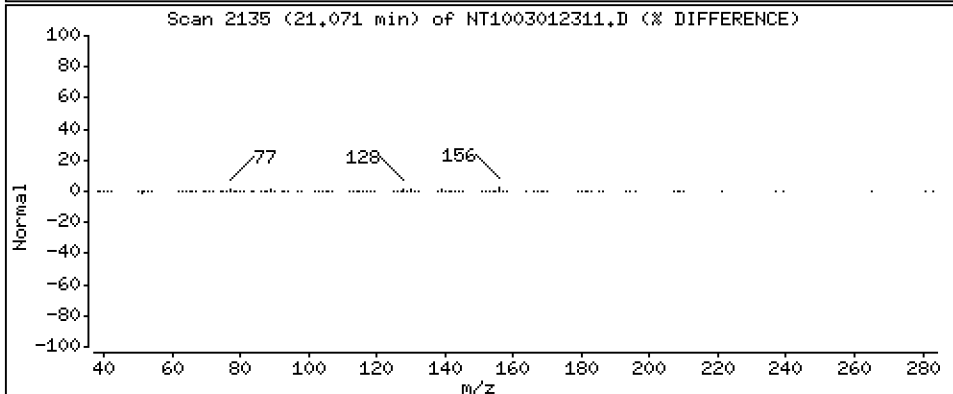
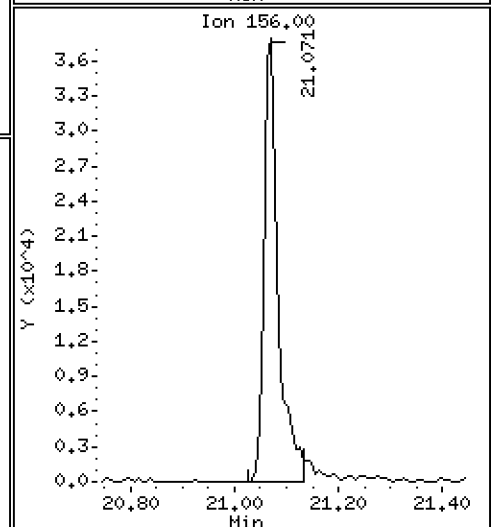
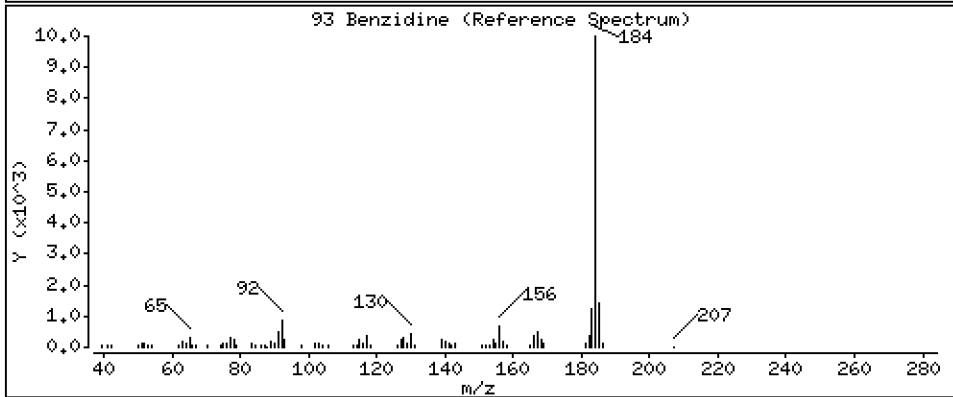
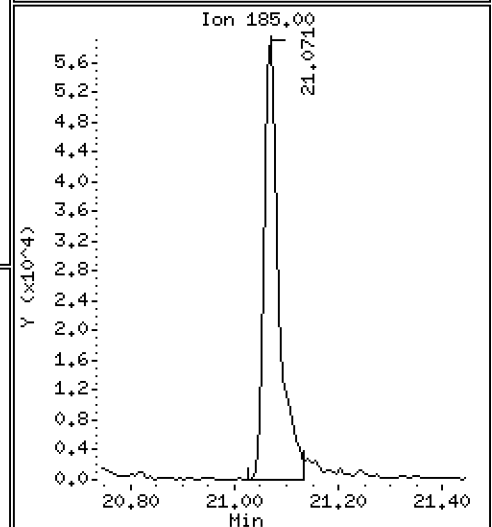
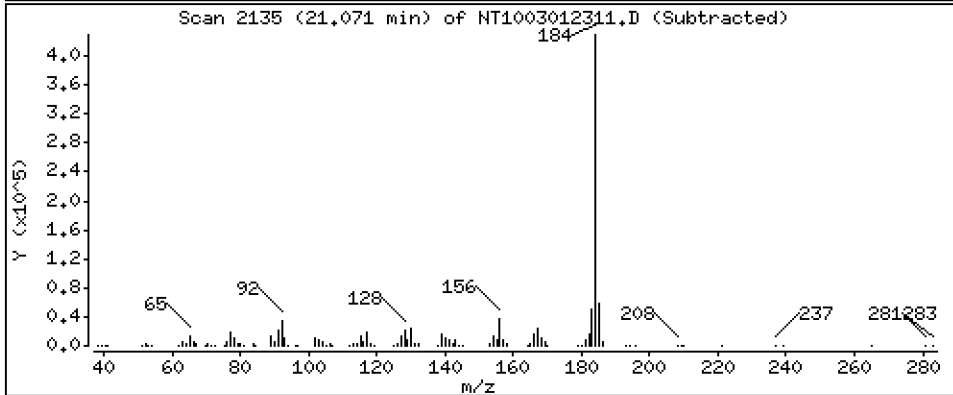
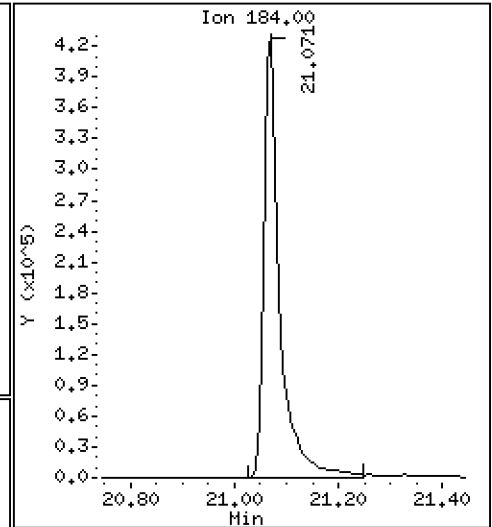
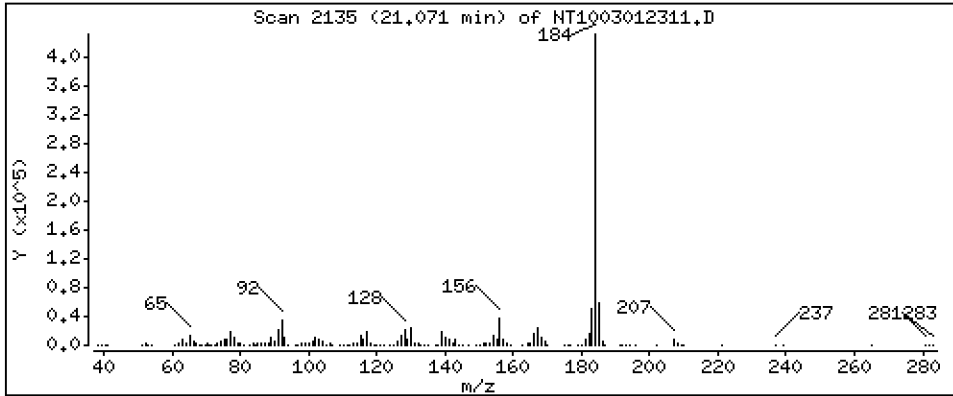
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 5,007 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

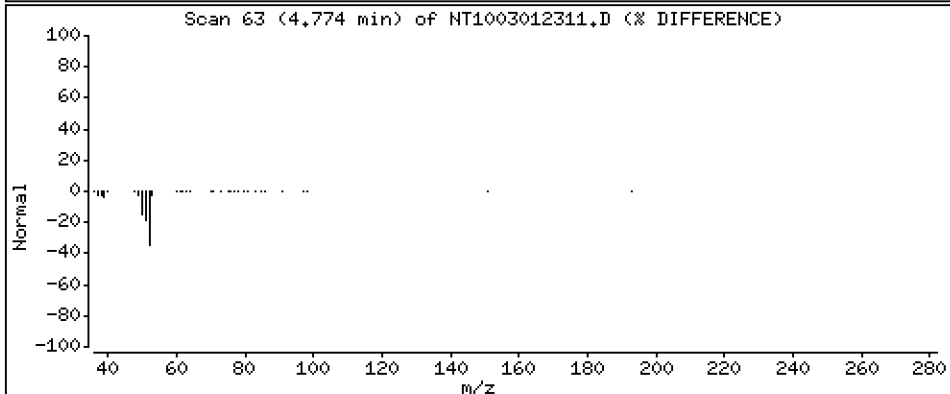
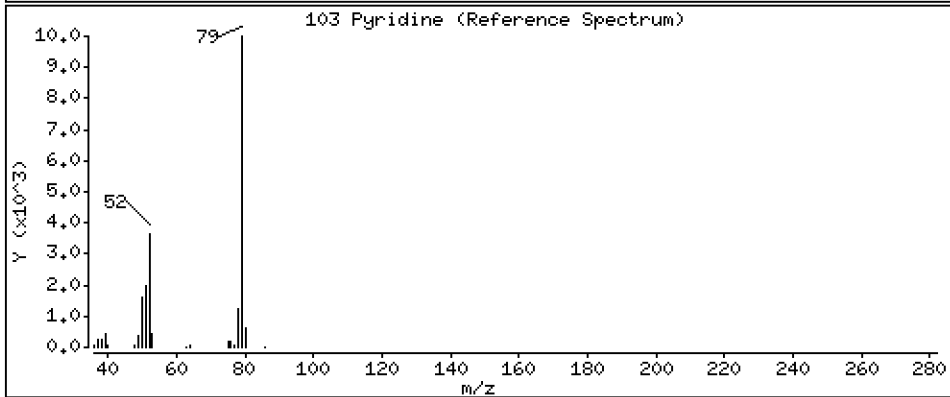
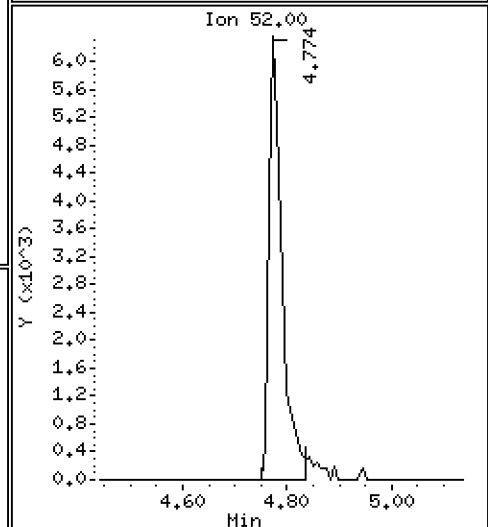
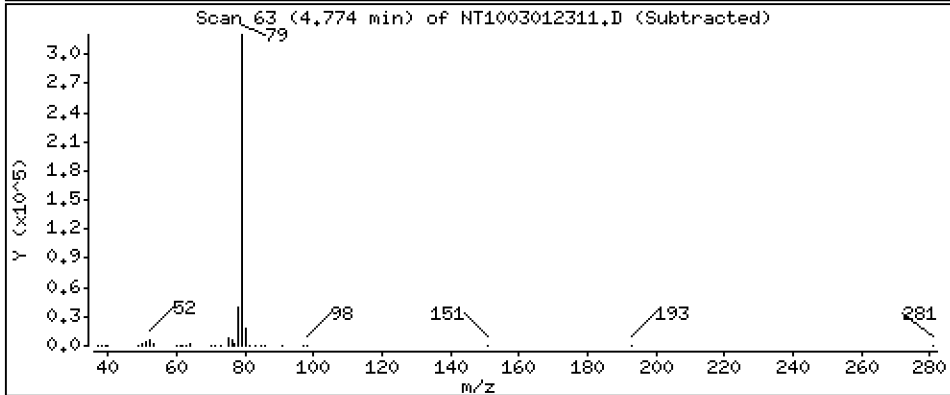
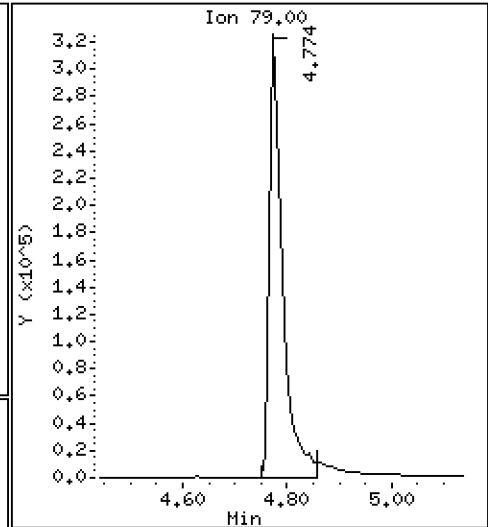
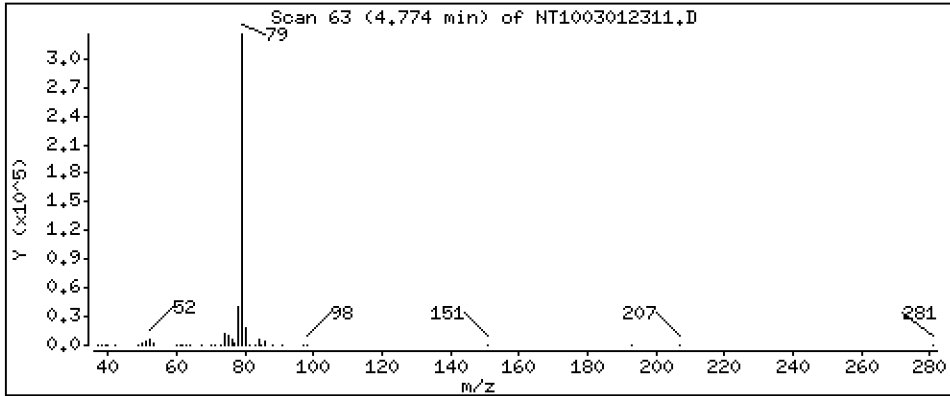
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 5,430 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

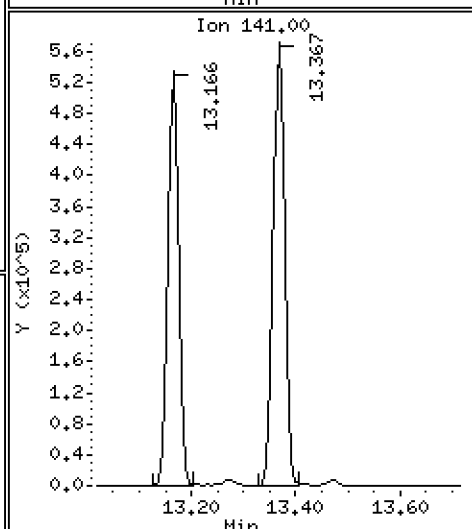
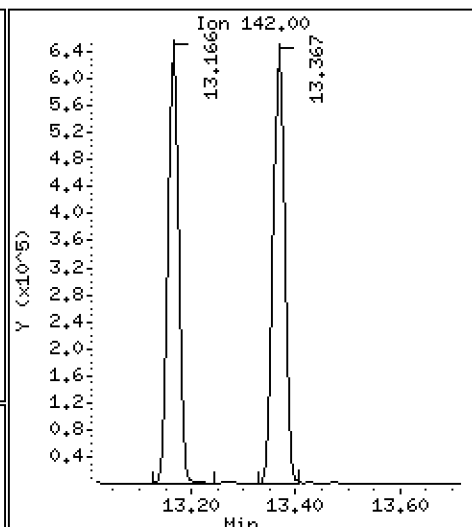
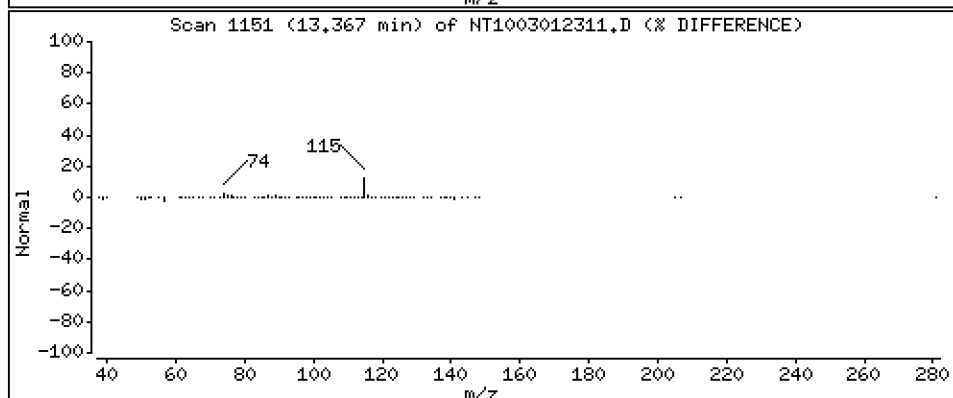
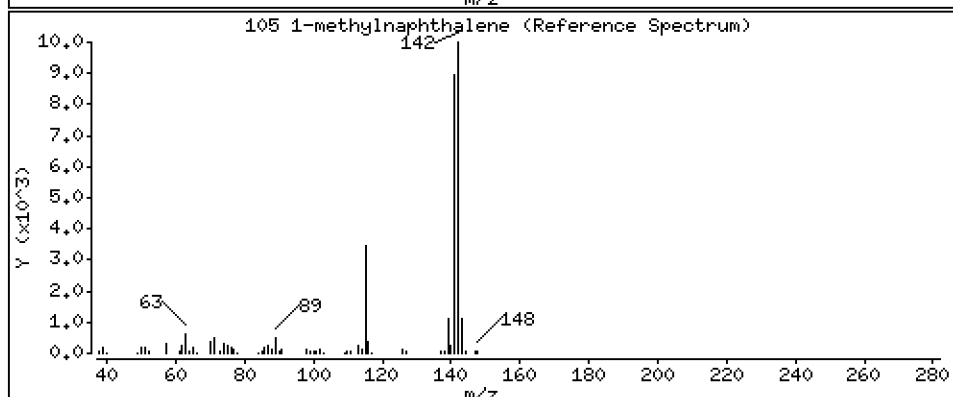
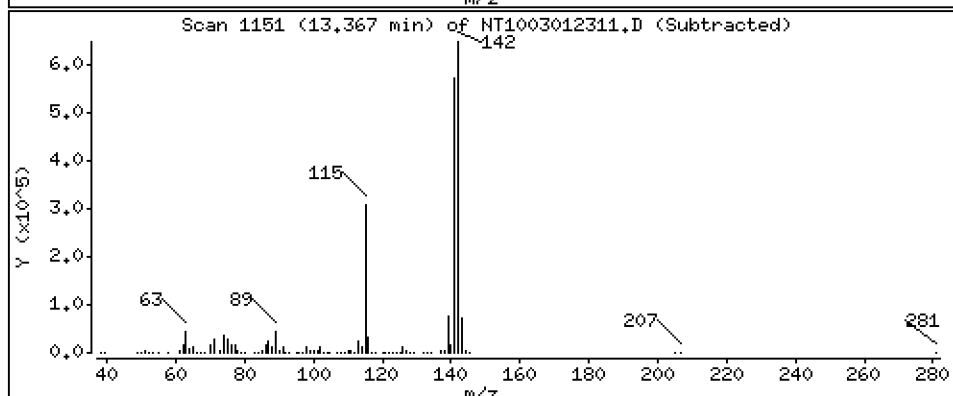
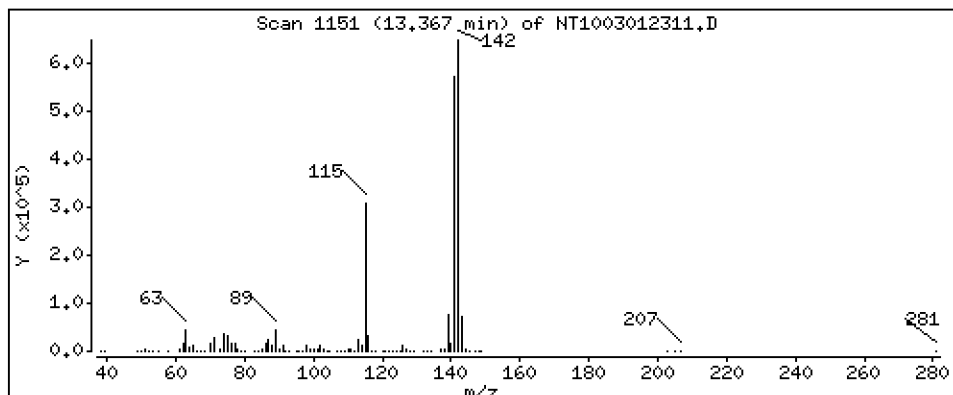
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,219 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

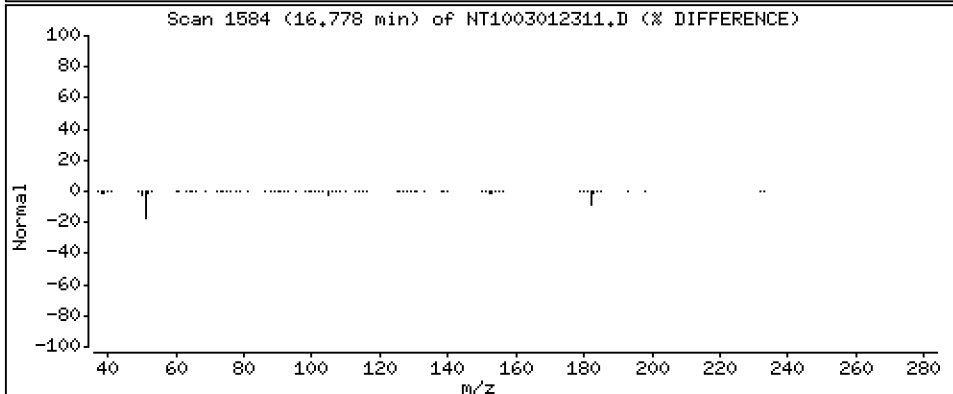
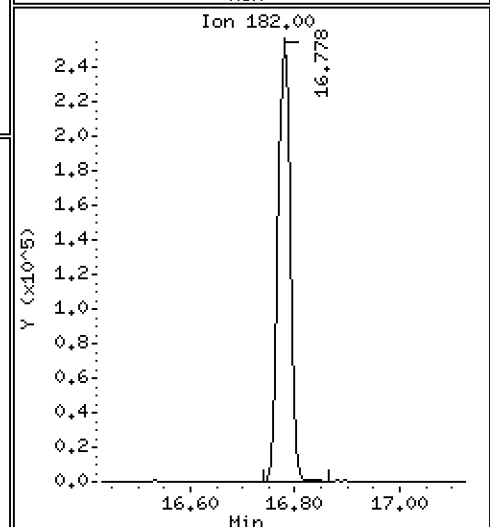
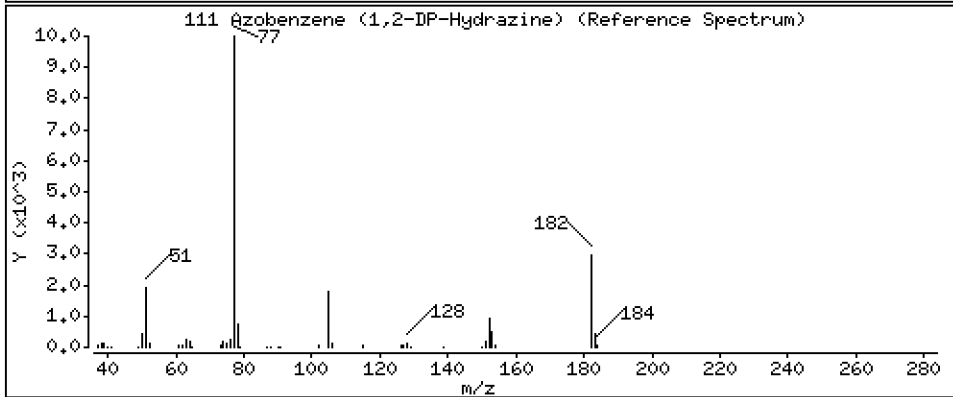
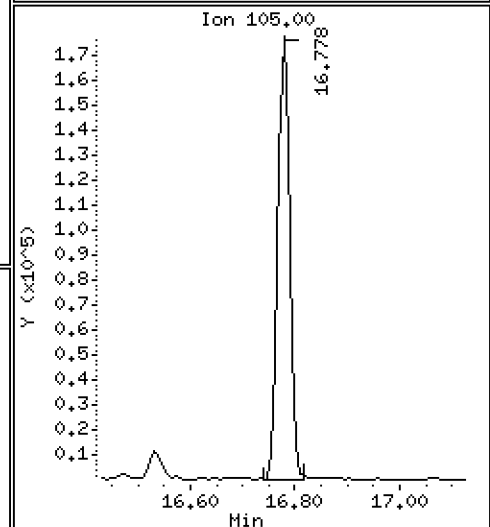
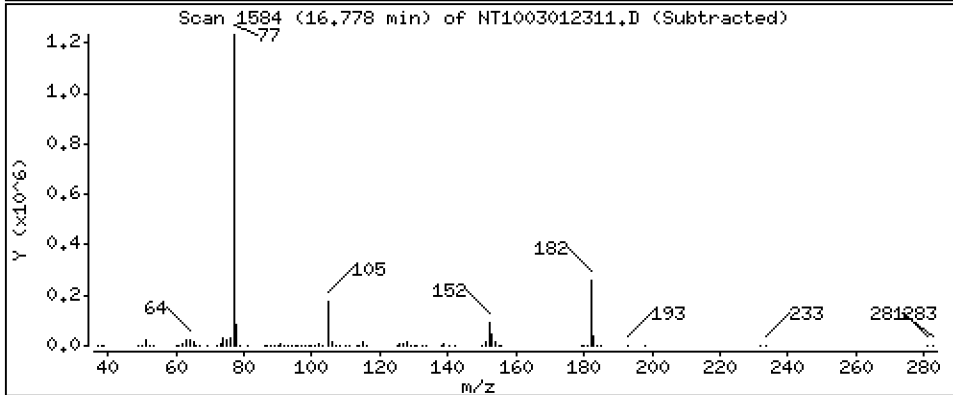
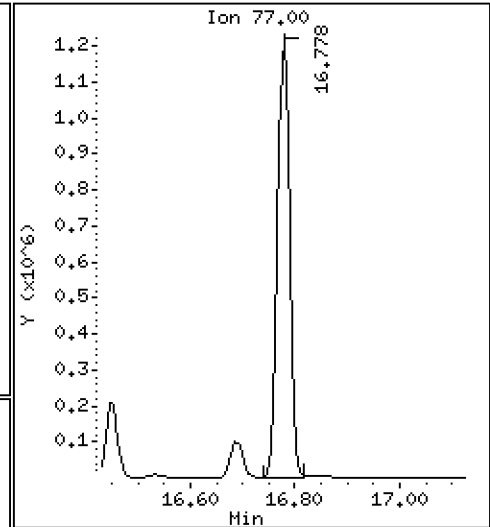
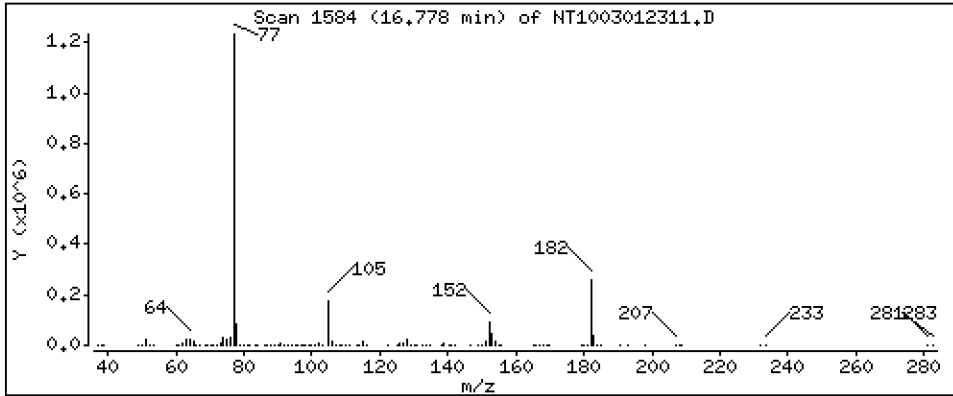
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,953 ug/mL





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

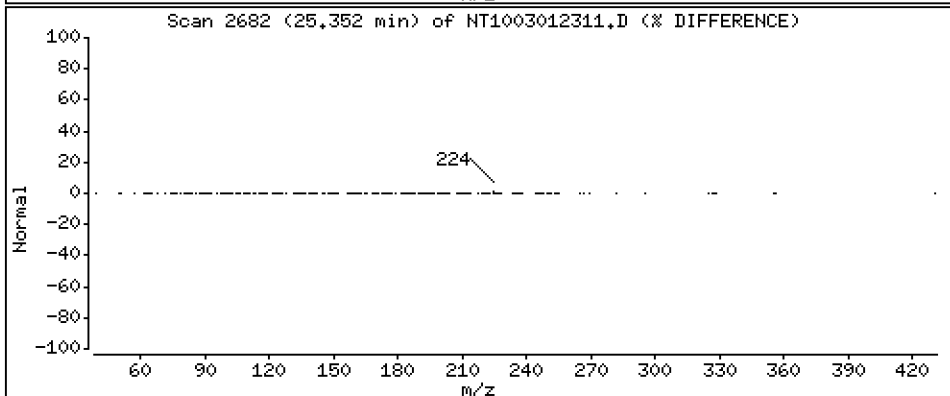
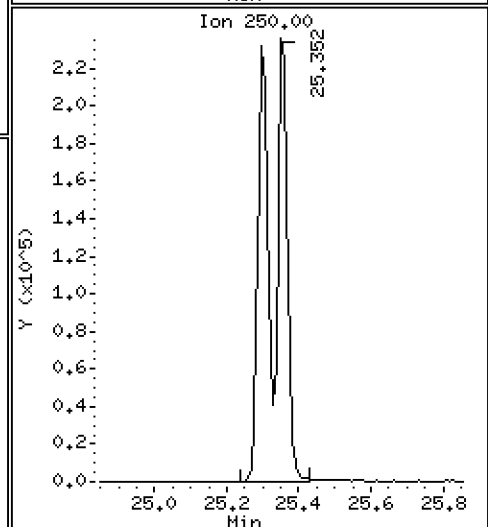
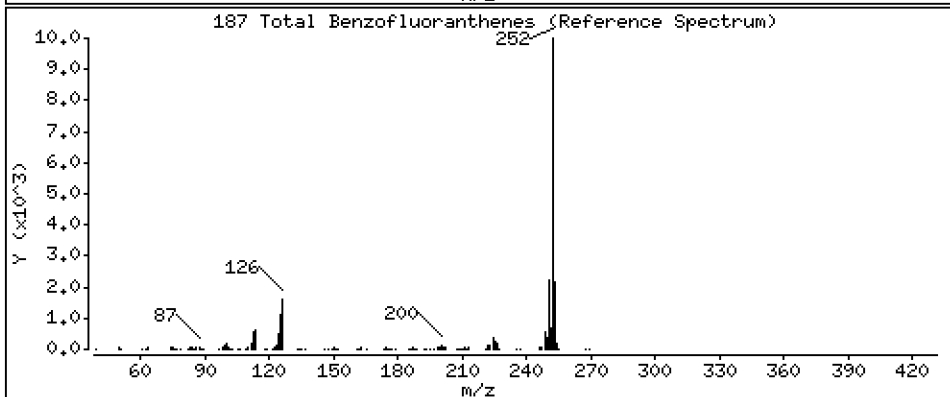
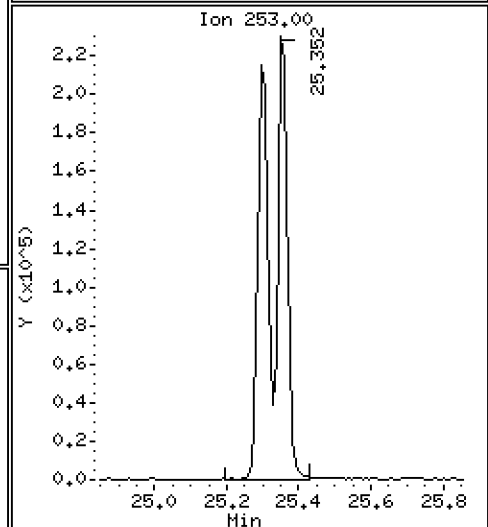
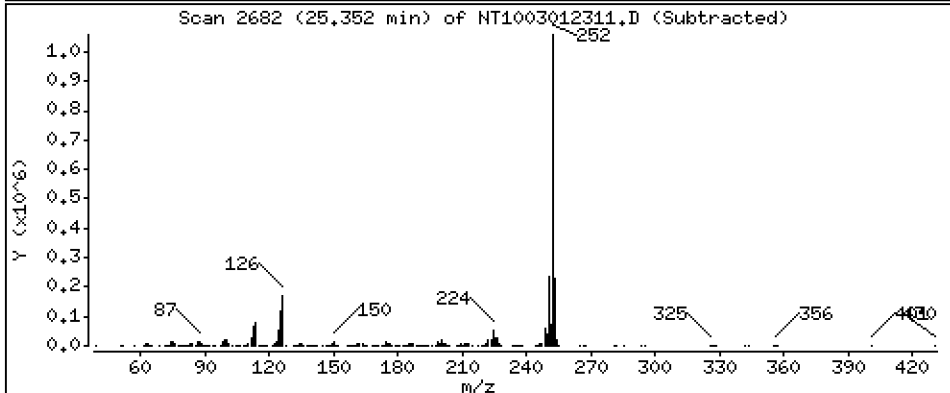
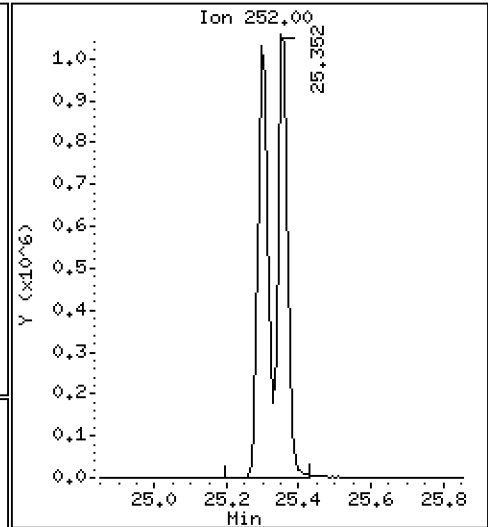
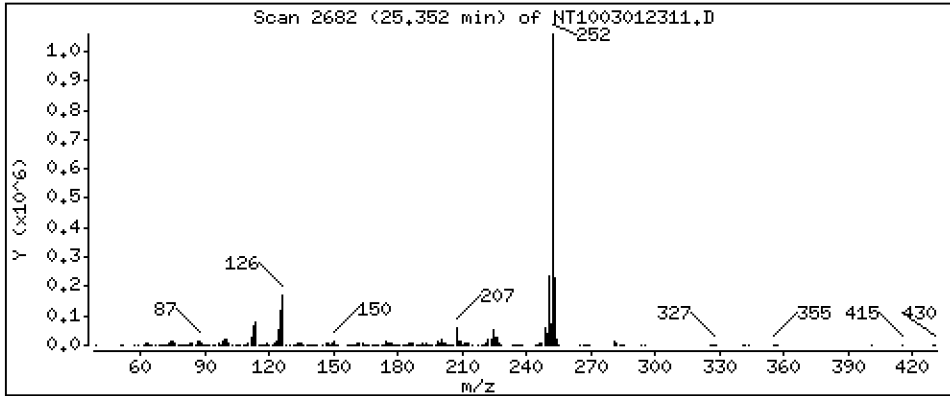
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 8,905 ug/mL



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

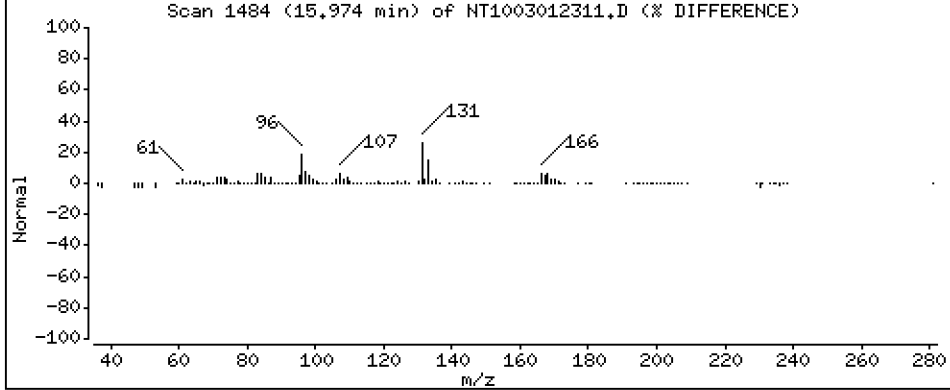
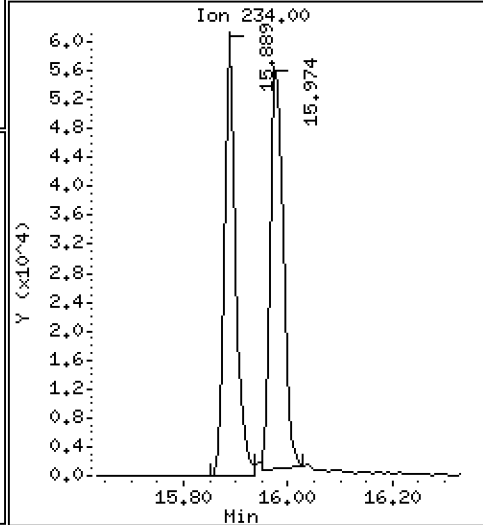
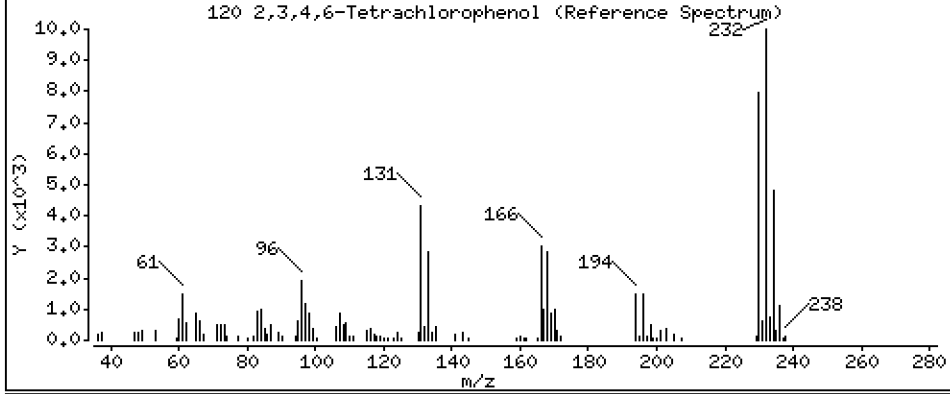
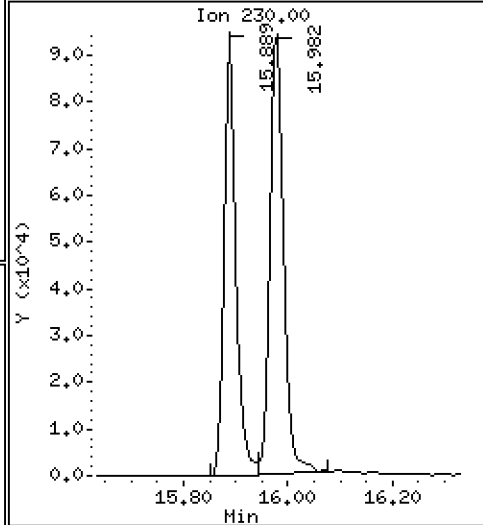
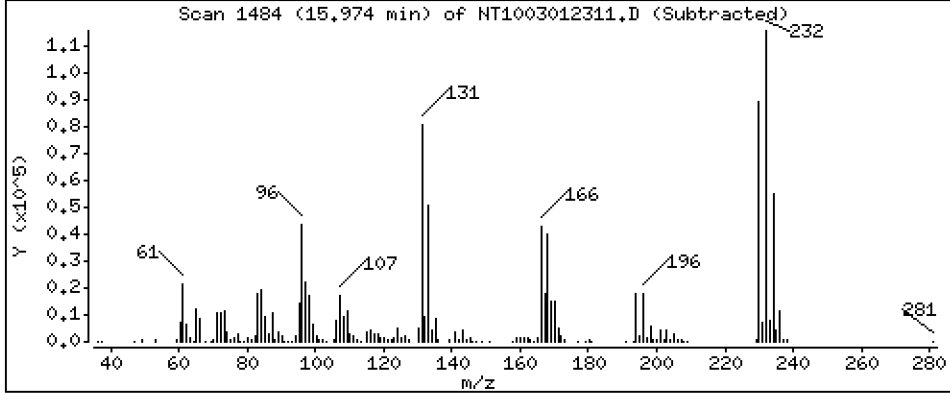
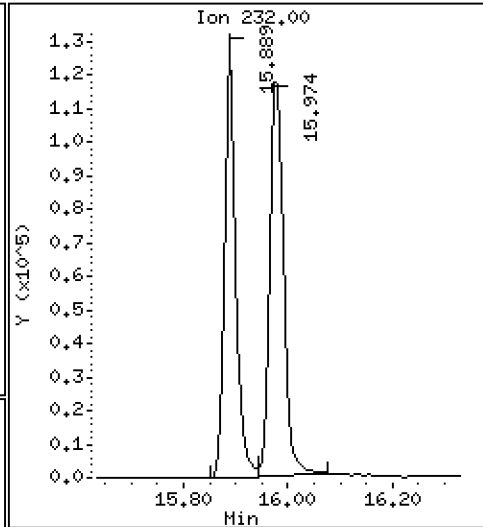
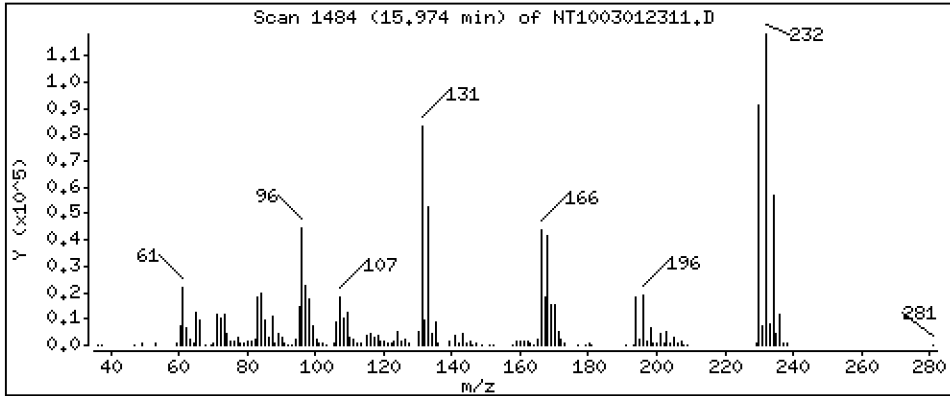
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 3,534 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230301.b\NT1003012311.D  
 Lab Smp Id: SLC0084-SCV1  
 Inj Date : 01-MAR-2023 21:46  
 Operator : VTS  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Meth Date : 07-Mar-2023 12:44 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		Compound Not Detected.					
\$ 2 Phenol-d5	99		Compound Not Detected.					
3 Phenol	94		8.512	8.512	(0.921)	534295	4.85212	4.852
\$ 5 2-Chlorophenol-d4	132		Compound Not Detected.					
4 Bis(2-Chloroethyl)ether	93		8.728	8.728	(0.944)	498825	5.92811	5.928 (M)
6 2-Chlorophenol	128		8.844	8.844	(0.956)	430747	4.69234	4.692
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	533006	5.26632	5.266
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	283537	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	524367	5.21589	5.216
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.534	(1.000)	283537	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.557	9.565	(1.034)	505415	5.19402	5.194
11 Benzyl alcohol	108		9.472	9.472	(1.024)	283618	4.89779	4.898
14 2,2'-oxybis(1-Chloropropane)	121		9.736	9.728	(1.053)	174821	6.23165	6.232
13 2-Methylphenol	108		9.650	9.650	(1.044)	364596	4.19238	4.192
17 Hexachloroethane	117		10.209	10.209	(1.104)	224586	5.44260	5.443
16 N-Nitroso-di-n-propylamine	70		9.977	9.976	(1.079)	392376	5.90505	5.905
15 4-Methylphenol	108		9.945	9.938	(1.076)	448938	4.23938	4.239
\$ 18 Nitrobenzene-d5	82		Compound Not Detected.					
19 Nitrobenzene	77		10.326	10.326	(0.881)	624582	5.56925	5.569
20 Isophorone	82		10.784	10.784	(0.920)	1098236	7.67155	7.672
21 2-Nitrophenol	139		10.950	10.951	(0.934)	197578	3.24407	3.244
22 2,4-Dimethylphenol	107		10.993	10.993	(0.938)	379240	3.50675	3.507
23 Bis(2-Chloroethoxy)methane	93		11.205	11.205	(0.956)	595145	6.72720	6.727
24 Benzoic acid	105		11.103	11.052	(0.947)	362406	5.63546	5.635
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	379310	4.43743	4.437
26 1,2,4-Trichlorobenzene	180		11.595	11.595	(0.989)	413079	4.90787	4.908
* 27 Naphthalene-d8	136		11.719	11.719	(1.000)	1089120	4.00000	
28 Naphthalene	128		11.765	11.765	(1.004)	1468990	5.25508	5.255
29 4-Chloroaniline	127		11.858	11.858	(1.012)	469377	3.79133	3.791
30 Hexachlorobutadiene	225		11.989	11.997	(1.023)	307313	5.01449	5.014
31 4-Chloro-3-methylphenol	107		12.802	12.809	(1.092)	402740	4.45246	4.452
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	977687	4.95082	4.951
33 Hexachlorocyclopentadiene	237		13.467	13.475	(0.879)	52130	2.56222	2.562

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.722	13.730	(0.896)	241174	4.12027	4.120	
35 2,4,5-Trichlorophenol	196		13.792	13.808	(0.900)	259485	4.14893	4.149 (M)	
§ 36 2-Fluorobiphenyl	172		Compound Not Detected.						
37 2-Chloronaphthalene	162		14.164	14.164	(0.925)	895889	5.26440	5.264	
38 2-Nitroaniline	65		14.365	14.365	(0.938)	237773	5.02711	5.027	
39 Dimethylphthalate	163		14.736	14.736	(0.962)	1056857	5.38446	5.384	
40 Acenaphthylene	152		15.023	15.023	(0.981)	1703355	5.80574	5.806	
41 2,6-Dinitrotoluene	165		14.868	14.868	(0.971)	227062	5.18679	5.187	
* 42 Acenaphthene-d10	164		15.317	15.309	(1.000)	607772	4.00000		
43 3-Nitroaniline	138		15.208	15.224	(0.993)	256002	5.17200	5.172	
44 Acenaphthene	153		15.379	15.378	(1.004)	911910	5.15374	5.154	
45 2,4-Dinitrophenol	184		15.433	15.487	(1.008)	3021	0.26673	0.2667	
46 Dibenzofuran	168		15.742	15.734	(1.028)	1311367	4.99365	4.994	
47 4-Nitrophenol	109		15.533	15.603	(1.014)	133260	3.82233	3.822 (M)	
48 2,4-Dinitrotoluene	165		15.695	15.703	(1.025)	300469	4.72923	4.729	
50 Diethylphthalate	149		16.206	16.198	(1.058)	1172442	5.63859	5.639	
49 Fluorene	166		16.453	16.453	(1.074)	1159050	5.30478	5.305	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	527532	5.25262	5.253	
52 4-Nitroaniline	138		16.469	16.484	(1.075)	278392	5.23237	5.232	
53 4,6-Dinitro-2-methylphenol	198		16.531	16.538	(0.898)	36409	1.29161	1.292	
54 N-Nitrosodiphenylamine	169		16.685	16.693	(0.907)	966268	5.41587	5.416	
§ 55 2,4,6-Tribromophenol	330		Compound Not Detected.						
56 4-Bromophenyl-phenylether	248		17.465	17.472	(0.949)	394706	5.45981	5.460	
57 Hexachlorobenzene	284		17.573	17.573	(0.955)	391196	4.80535	4.805	
58 Pentachlorophenol	266		17.984	17.983	(0.977)	133557	3.49178	3.492	
* 59 Phenanthrene-d10	188		18.401	18.401	(1.000)	1205858	4.00000		
60 Phenanthrene	178		18.448	18.448	(1.003)	1569094	5.08454	5.085	
61 Anthracene	178		18.556	18.556	(1.008)	1371933	4.58472	4.585	
62 Carbazole	167		18.889	18.889	(1.026)	1462441	5.33467	5.335	
63 Di-n-butylphthalate	149		19.585	19.585	(1.064)	2114080	5.46304	5.463	
64 Fluoranthene	202		20.815	20.815	(0.889)	1905220	4.54169	4.542	
65 Pyrene	202		21.248	21.248	(0.907)	1975953	4.62585	4.626	
§ 66 Terphenyl-d14	244		21.519	21.527	(0.919)	6779	0.01961	0.01961	
67 Butylbenzylphthalate	149		22.410	22.410	(0.957)	1022950	4.52520	4.525	
68 Benzo(a)anthracene	228		23.401	23.401	(0.999)	1968545	4.57826	4.578	
* 69 Chrysene-d12	240		23.416	23.416	(1.000)	1219436	4.00000		
70 3,3'-Dichlorobenzidine	252		23.347	23.347	(0.997)	1426681	7.38255	7.383	
71 Chrysene	228		23.463	23.463	(1.002)	1735599	4.96674	4.967	
72 bis(2-Ethylhexyl)phthalate	149		23.401	23.409	(0.956)	1660477	4.95568	4.956	
* 134 Di-n-octylphthalate-d4	153		24.485	24.485	(1.000)	2317357	4.00000		
73 Di-n-octylphthalate	149		24.492	24.492	(1.000)	3003083	5.84397	5.844	
74 Benzo(b)fluoranthene	252		25.298	25.298	(0.969)	1988643	4.31882	4.319	
75 Benzo(k)fluoranthene	252		25.352	25.352	(0.971)	2031546	4.56297	4.563	
76 Benzo(a)pyrene	252		25.987	25.987	(0.996)	1831856	4.44514	4.445	
* 77 Perylene-d12	264		26.103	26.103	(1.000)	1289108	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.863	28.863	(1.106)	2089660	4.34488	4.345	
79 Dibenzo(a,h)anthracene	278		28.917	28.925	(1.108)	1695484	4.60754	4.608	
80 Benzo(g,h,i)perylene	276		29.709	29.709	(1.138)	1753537	4.60249	4.602	
90 N-Nitrosodimethylamine	74		4.712	4.719	(0.510)	316213	5.49082	5.491	
91 Aniline	93		Compound Not Detected.						
93 Benzidine	184		21.071	21.094	(0.900)	932502	5.00739	5.007	
103 Pyridine	79		4.774	4.789	(0.516)	554573	5.42989	5.430	
105 1-methylnaphthalene	142		13.366	13.366	(1.141)	932752	5.21855	5.219	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.778	16.778	(1.095)	1848373	5.95279	5.953	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.352	25.352	(0.971)	3948555	8.90452	8.905
120 2,3,4,6-Tetrachlorophenol	232	15.974	15.982	(1.043)	209122	3.53394	3.534

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 01-MAR-2023  
 Lab File ID: NT1003012311.D Calibration Time: 17:21  
 Lab Smp Id: SLC0084-SCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230301.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	337641	168821	675282	283537	-16.02
27 Naphthalene-d8	1265187	632594	2530374	1089120	-13.92
42 Acenaphthene-d10	692385	346193	1384770	607772	-12.22
59 Phenanthrene-d10	1376777	688389	2753554	1205858	-12.41
69 Chrysene-d12	1019524	509762	2039048	1219436	19.61
134 Di-n-octylphthala	2027111	1013556	4054222	2317357	14.32
77 Perylene-d12	1027409	513705	2054818	1289108	25.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.01
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012311.D

Lab ID: SLC0084-SCV1  
nt10.i, 20230301.b\ABN.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

-----  
23.401 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.014	1.019	-0.0051	4-Nitrophenol
1.000	1.031	-0.0310	1,2-Dichlorobenzene-d4

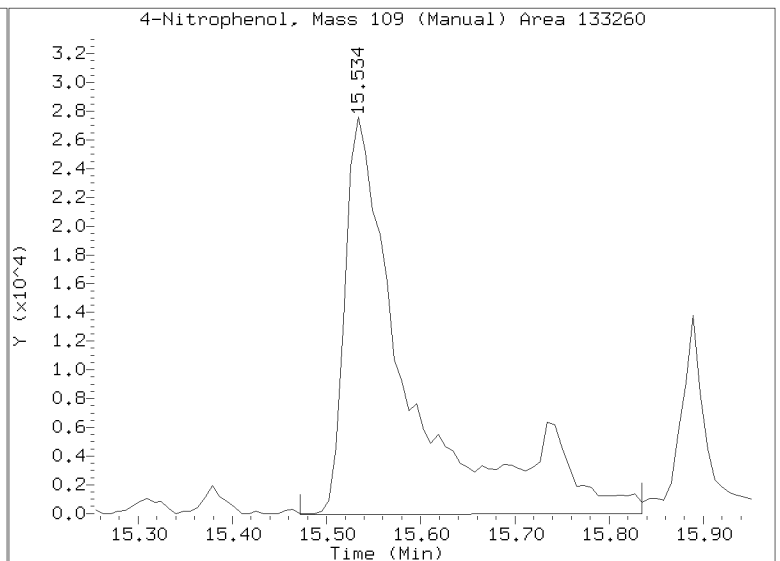
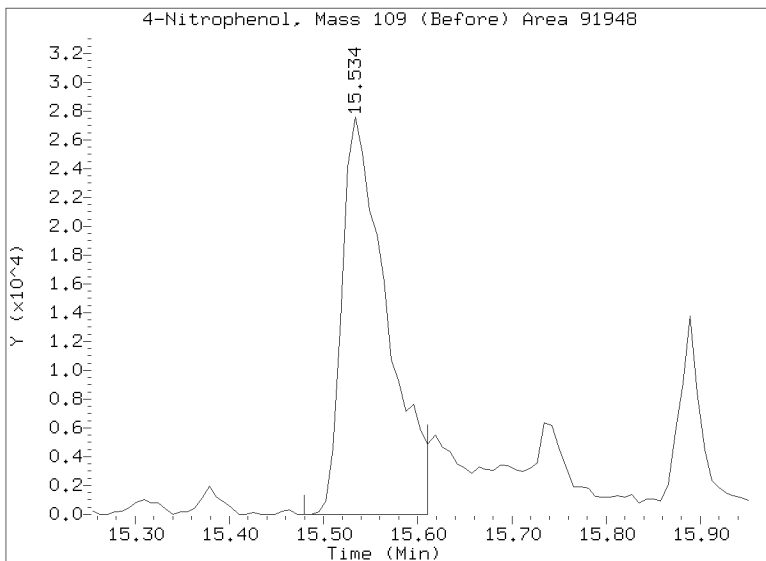
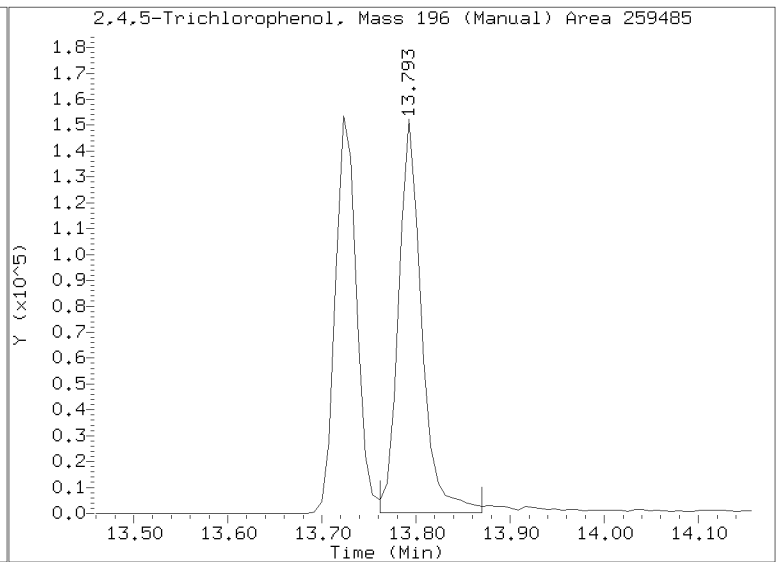
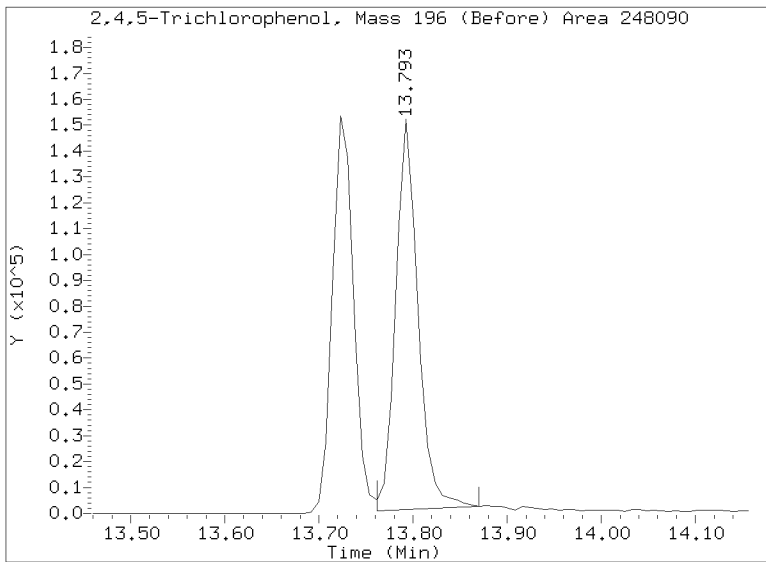
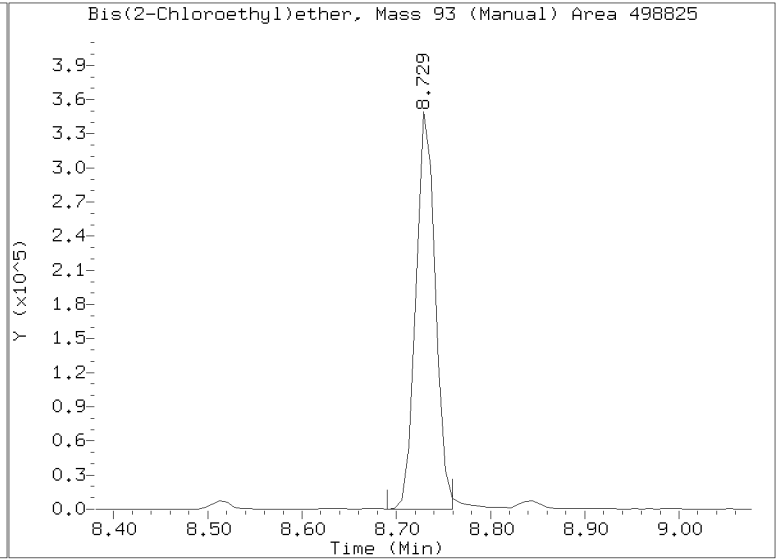
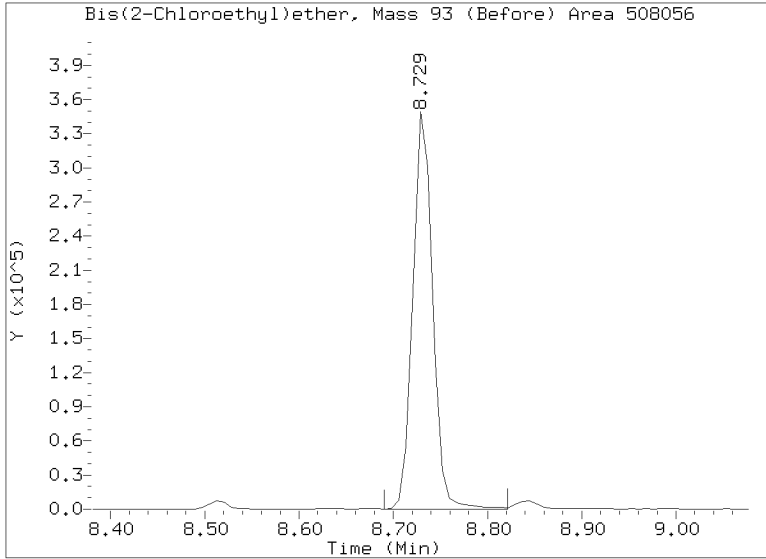
RRT check based on Ccal File: NT1003012307.D

On Column LOD for nt10.i, 20230301.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/NT1003012311.D  
Injection Date: 01-MAR-2023 21:46  
Lab ID: SLC0084-SCV1 Client ID:  
Report Date: 03/07/2023 12:48







**CONTINUING CALIBRATION CHECK**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022314.D

Calibration Date: 03/01/2023

Sequence: SLC0120

Injection Date: 03/02/23

Lab Sample ID: SLC0120-CCV1

Injection Time: 22:38

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	5.7	1.5534590	1.7839690		14.8	+/-50
bis(2-chloroethyl) ether	A	5.0000	5.4	1.1870870	1.2837150		8.1	+/-50
2-Chlorophenol	A	5.0000	5.4	1.2950380	1.4036080		8.4	+/-50
1,3-Dichlorobenzene	A	5.0000	4.9	1.4278260	1.4047700		-1.6	+/-50
1,4-Dichlorobenzene	A	5.0000	4.8	1.4182650	1.3700280		-3.4	+/-50
1,2-Dichlorobenzene	A	5.0000	4.8	1.3727590	1.3256770		-3.4	+/-50
Benzyl Alcohol	A	5.0000	5.2	0.7104711	0.8480548		3.6	+/-50
2,2'-Oxybis(1-chloropropane)	A	5.0000	4.0	0.3957681	0.3141246		-20.6	+/-50
2-Methylphenol	A	5.0000	5.3	1.0954470	1.3035630		5.7	+/-50
Hexachloroethane	A	5.0000	4.9	0.5821386	0.5663098		-2.7	+/-50
N-Nitroso-di-n-Propylamine	A	5.0000	5.6	0.9374094	1.0428380		11.2	+/-50
4-Methylphenol	A	5.0000	5.2	1.2087680	1.5368820		3.1	+/-50
Nitrobenzene	A	5.0000	5.2	0.4118860	0.4266823		3.6	+/-50
Isophorone	A	5.0000	5.5	0.5257709	0.5739115		9.2	+/-50
2-Nitrophenol	A	5.0000	4.2	0.1627036	0.1869889		-15.9	+/-50
2,4-Dimethylphenol	A	10.000	9.5	0.3830403	0.3840711		-4.8	+/-50
Bis(2-Chloroethoxy)methane	A	5.0000	5.5	0.3249172	0.3570729		9.9	+/-50
2,4-Dichlorophenol	A	10.000	10.0	0.2612827	0.3187247		-0.03	+/-50
1,2,4-Trichlorobenzene	A	5.0000	4.8	0.3091179	0.2970204		-3.9	+/-50
Naphthalene	A	5.0000	5.0	1.0266520	1.0354560		0.9	+/-50
Benzoic acid	A	20.000	15.0	0.1970511	0.1813563		-24.9	+/-50
4-Chloroaniline	A	10.000	9.5	0.4009859	0.4388782		-5.4	+/-50
Hexachlorobutadiene	A	5.0000	4.7	0.2250808	0.2110978		-6.2	+/-50
4-Chloro-3-Methylphenol	A	10.000	10.0	0.3168628	0.3405431		0.09	+/-50
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7424575		2.4	+/-50
Hexachlorocyclopentadiene	A	10.000	5.0	0.1096304	0.0686628		-49.6	+/-50
2,4,6-Trichlorophenol	A	10.000	10.0	0.3635155	0.3985651		0.4	+/-50
2,4,5-Trichlorophenol	A	10.000	9.9	0.3974340	0.4182431		-1.4	+/-50
2-Chloronaphthalene	A	5.0000	5.3	1.1200160	1.1762440		5.0	+/-50
2-Nitroaniline	A	10.000	10.0	0.2857098	0.3163755		-0.2	+/-50
Acenaphthylene	A	5.0000	5.8	1.9309320	2.2485030		16.4	+/-50
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2755930		-1.3	+/-50
2,6-Dinitrotoluene	A	10.000	10.1	0.2723393	0.2958155		1.0	+/-50

\* Values outside of QC limits





**CONTINUING CALIBRATION CHECK**  
**EPA 8270E**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00019</u>
Lab File ID:	<u>NT1003022314.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0120</u>	Injection Date:	<u>03/02/23</u>
Lab Sample ID:	<u>SLC0120-CCV1</u>	Injection Time:	<u>22:38</u>
Sequence Name:	<u>ABN 5</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol-d5	A	7.5000	8.78	1.4611190	1.7107550		17.1	+/-50
2-Chlorophenol-d4	A	7.5000	8.10	1.2465880	1.3468280		8.0	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.97	0.9313544	0.9253556		-0.6	+/-50
Nitrobenzene-d5	A	5.0000	5.36	0.4390871	0.4708707		7.2	+/-50
2-Fluorobiphenyl	A	5.0000	5.30	1.4267270	1.5111870		5.9	+/-50
2,4,6-Tribromophenol	A	7.5000	7.13	0.2287830	0.2456601		-4.9	+/-50
p-Terphenyl-d14	A	5.0000	4.18	1.1337350	0.9466857		-16.5	+/-50

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.1\NT1003022314.D

Date: 02-MAR-2023 22:38

Client ID:

Sample Info: SEQ-OCVFULL

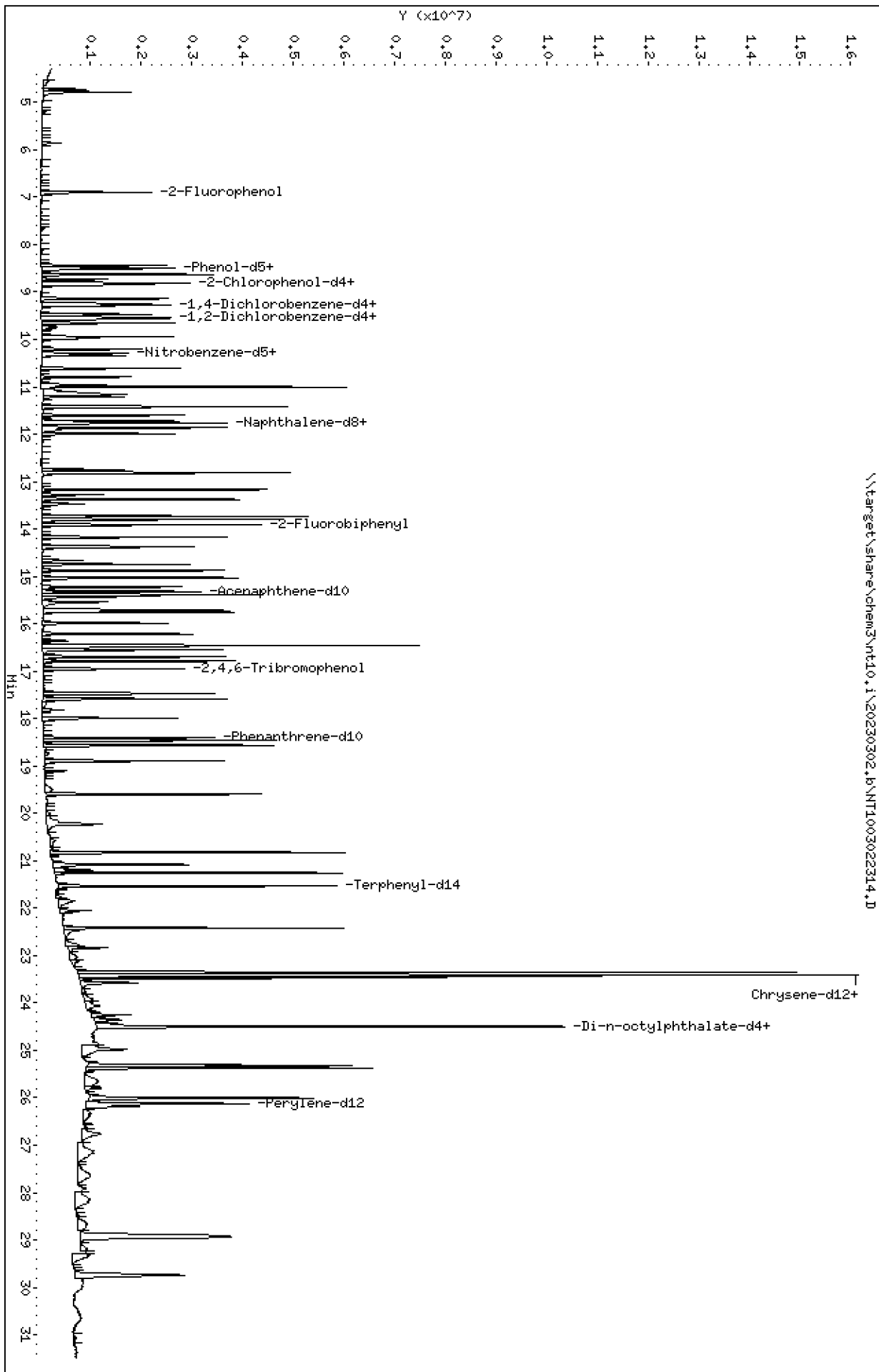
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\NT1003022314.D



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

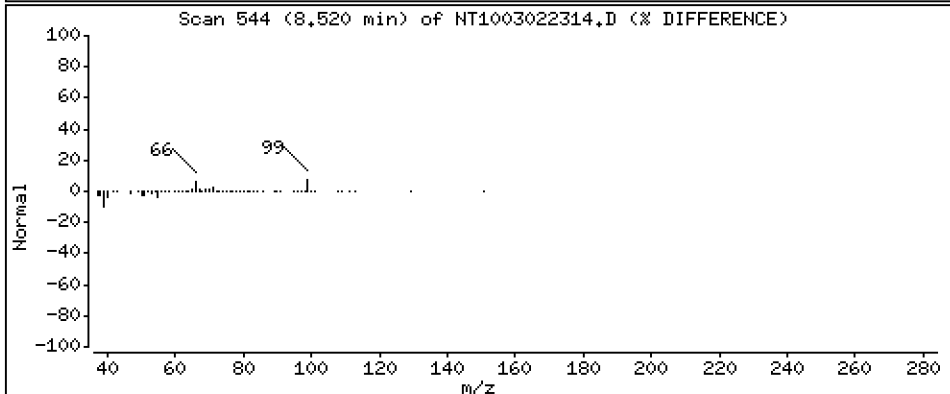
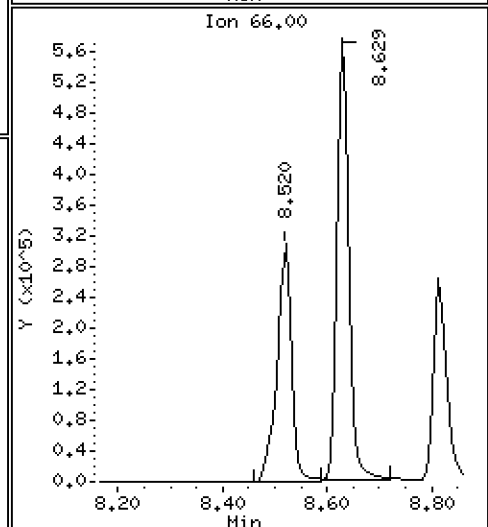
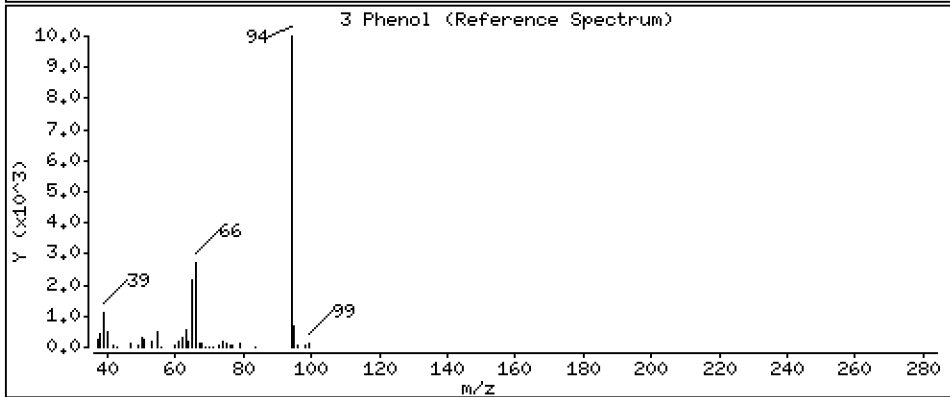
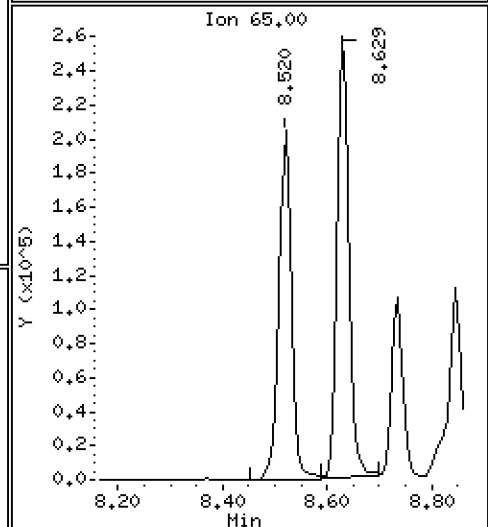
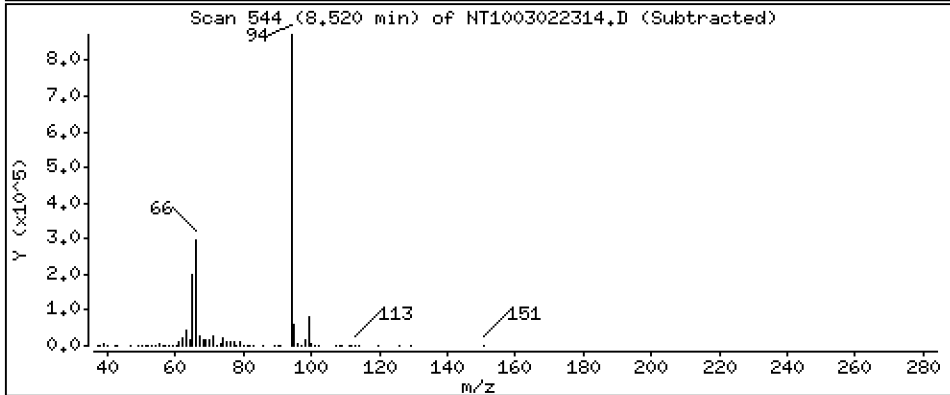
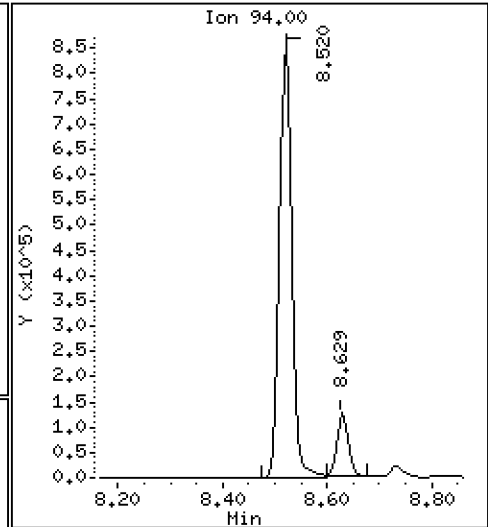
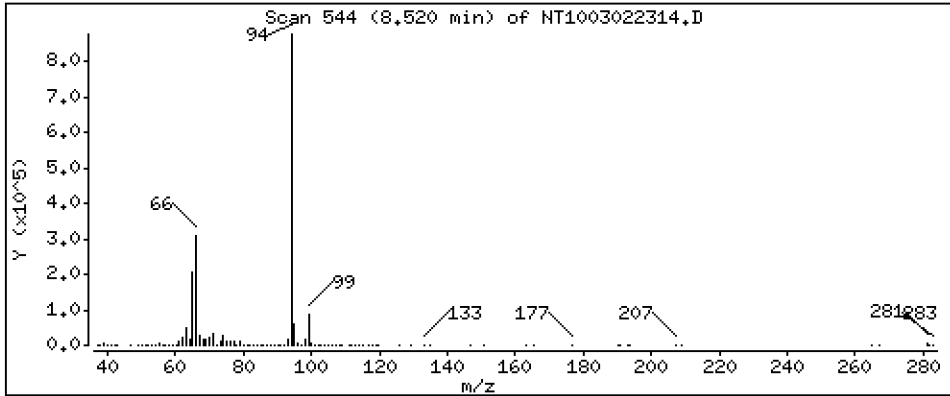
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 5,742 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

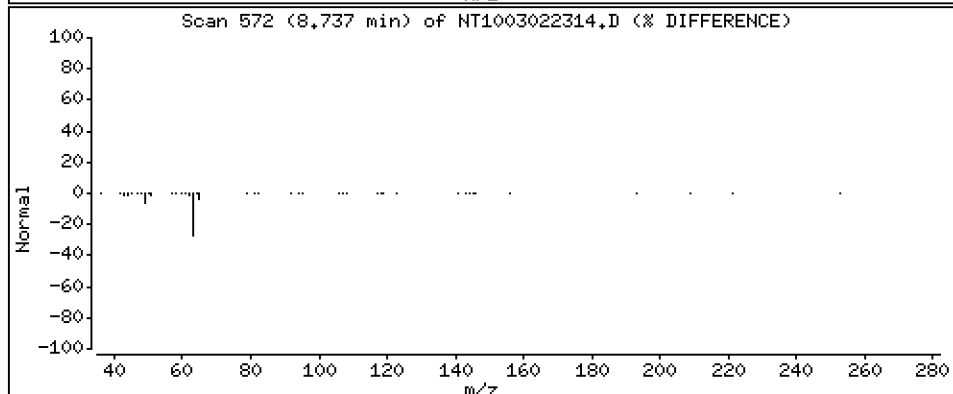
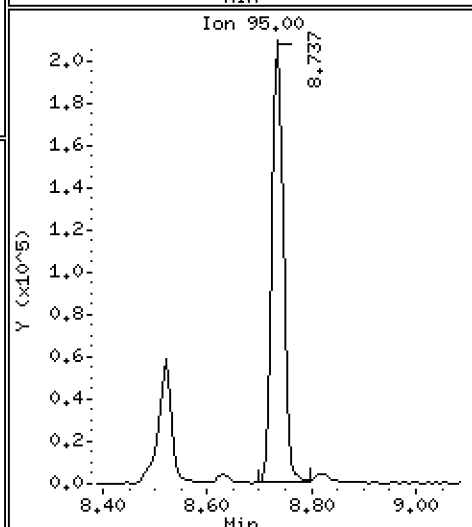
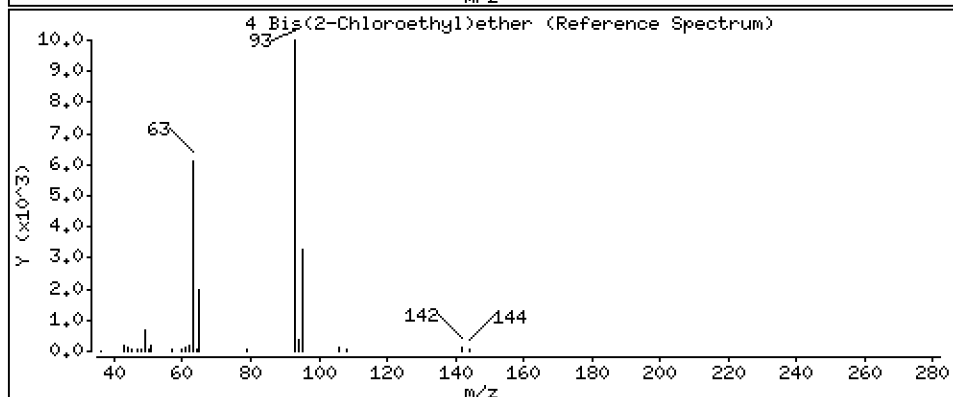
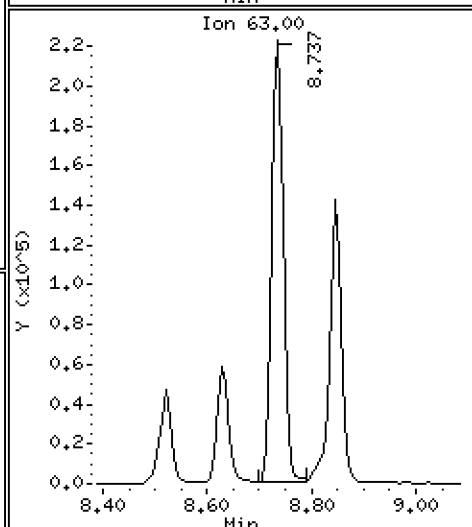
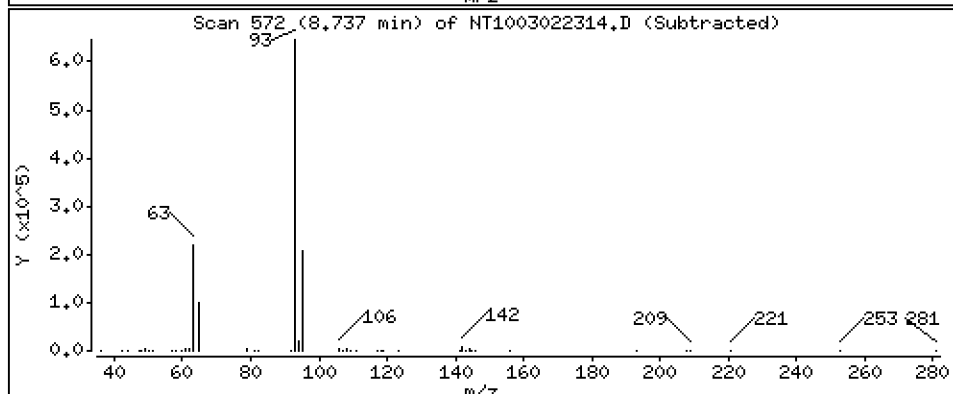
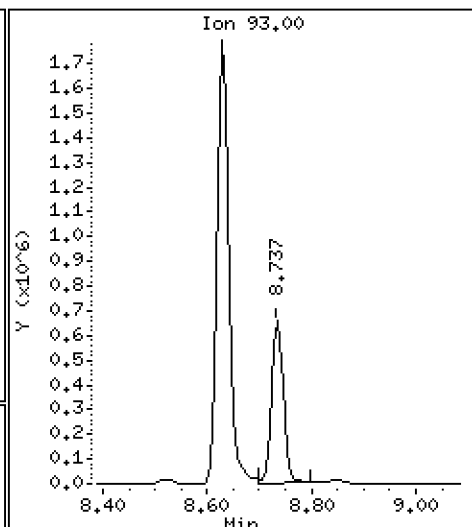
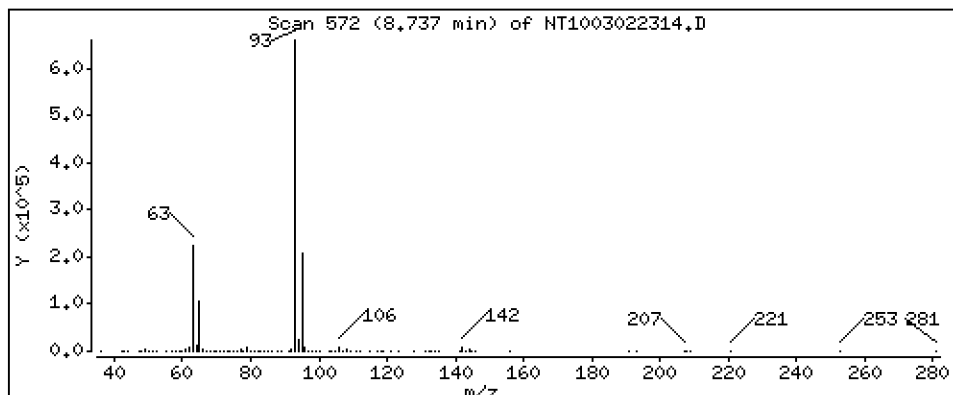
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,407 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

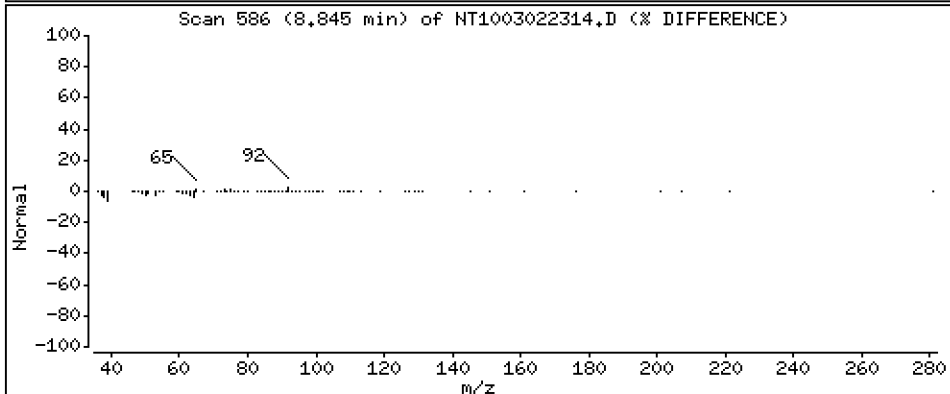
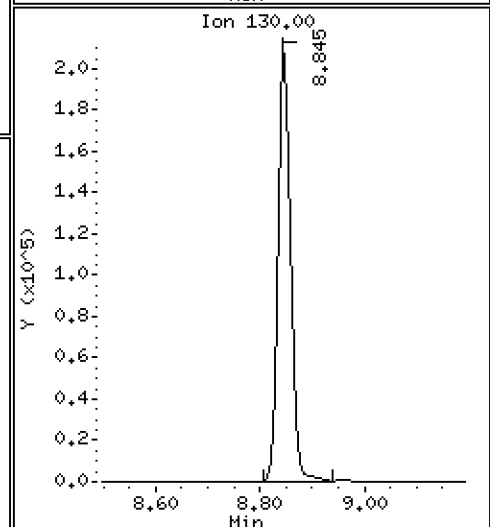
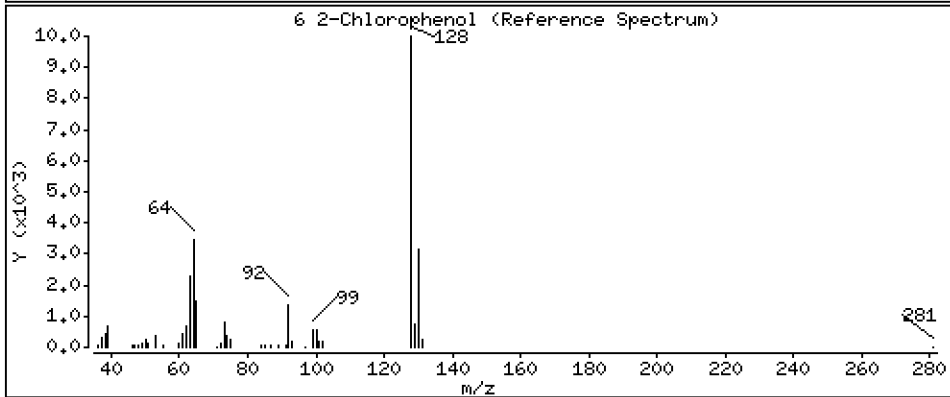
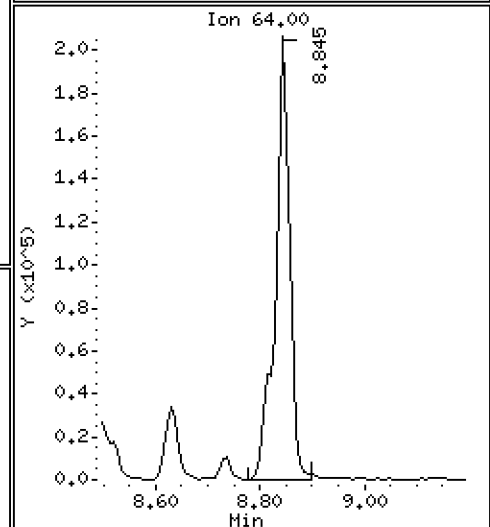
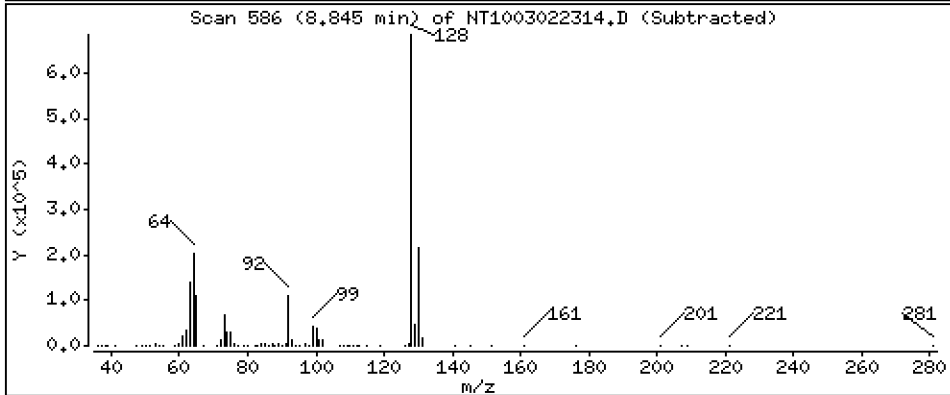
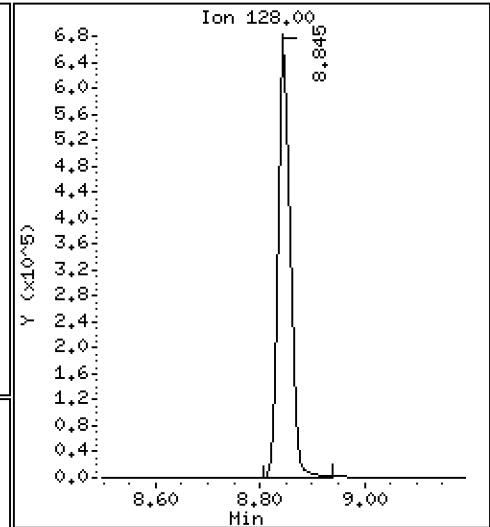
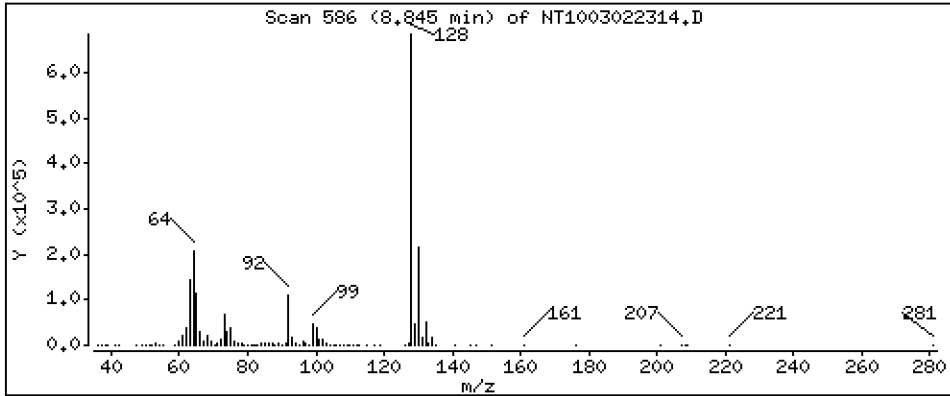
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 5,419 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

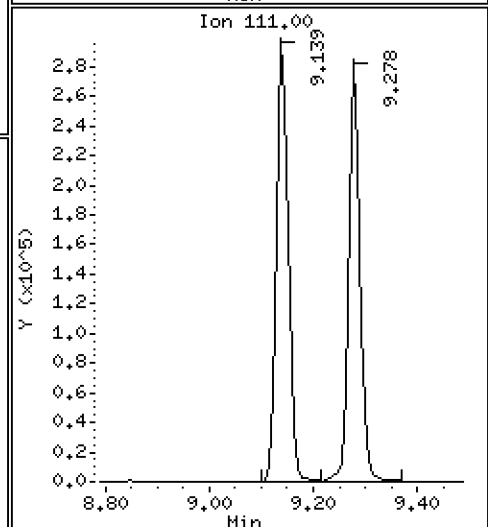
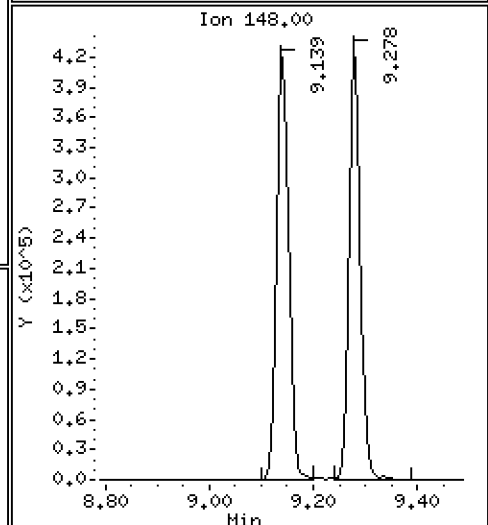
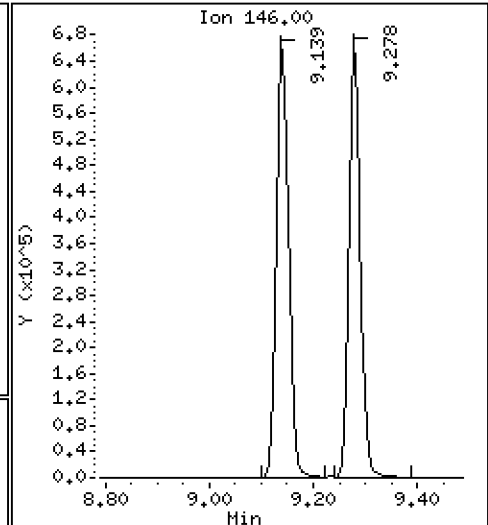
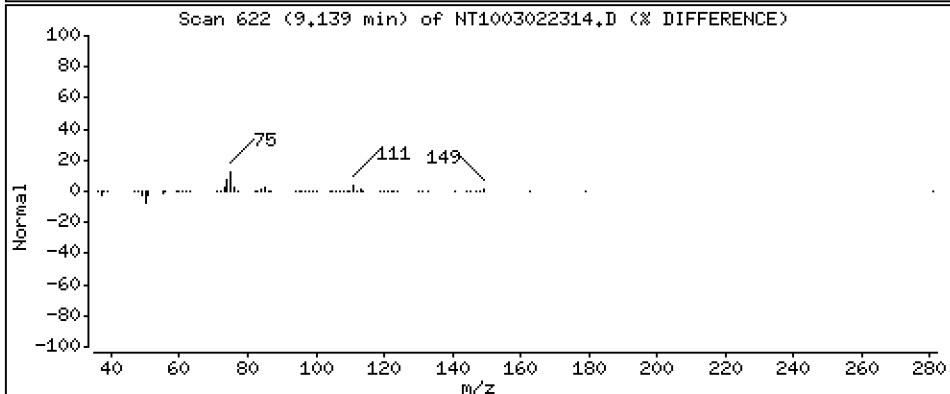
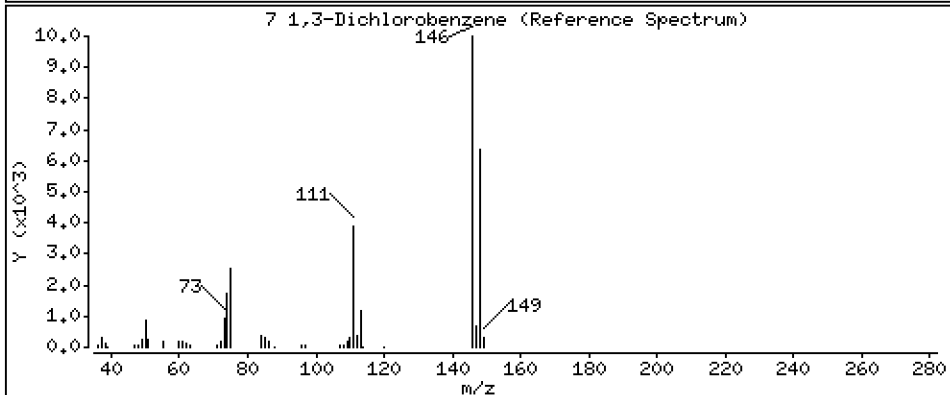
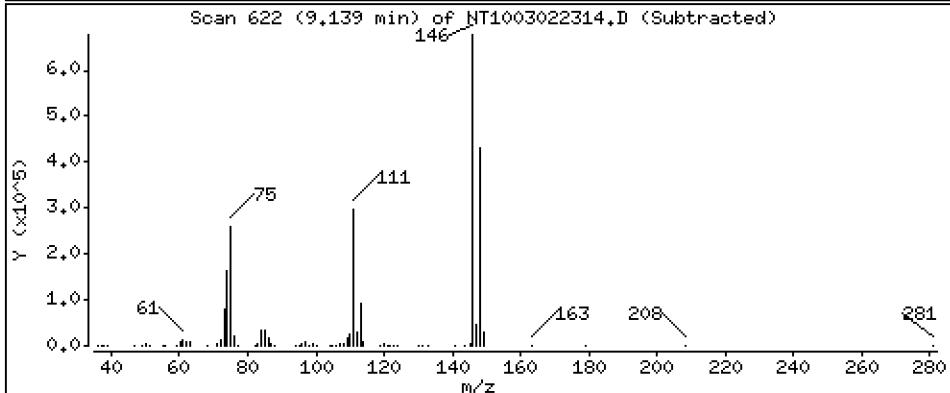
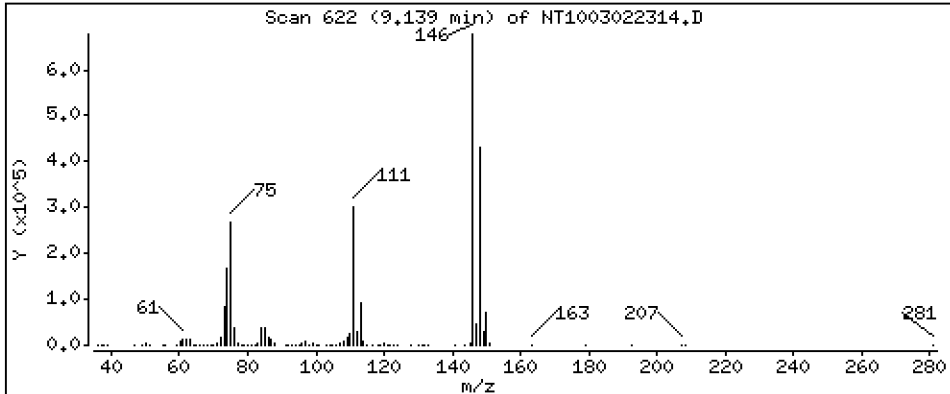
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,919 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

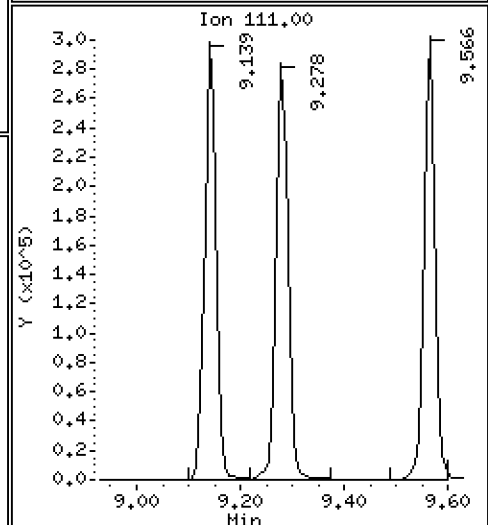
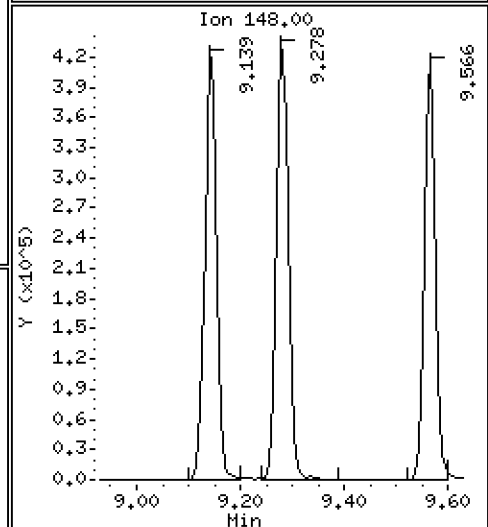
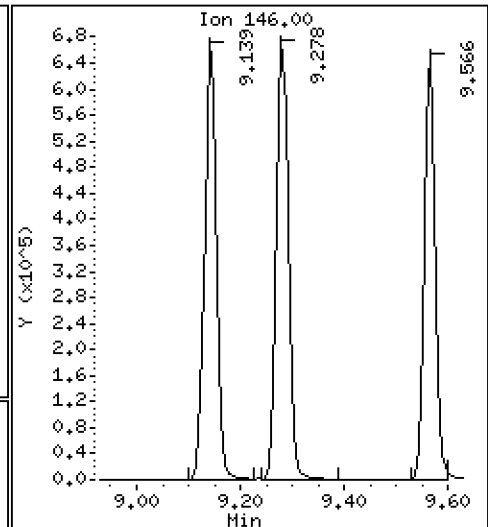
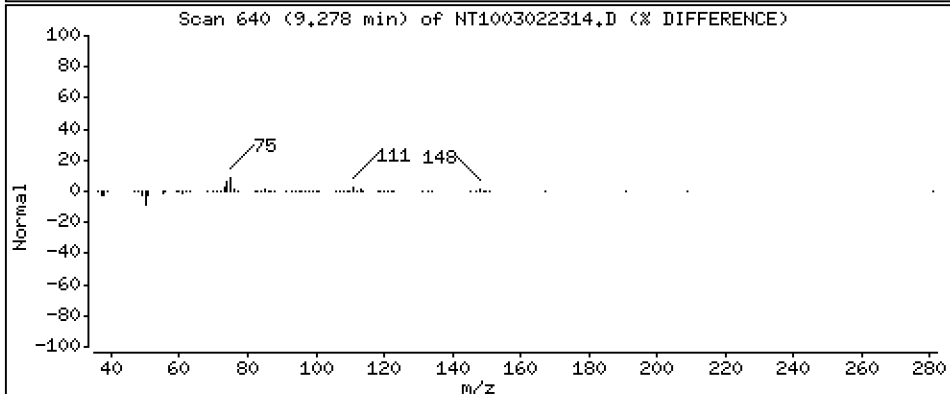
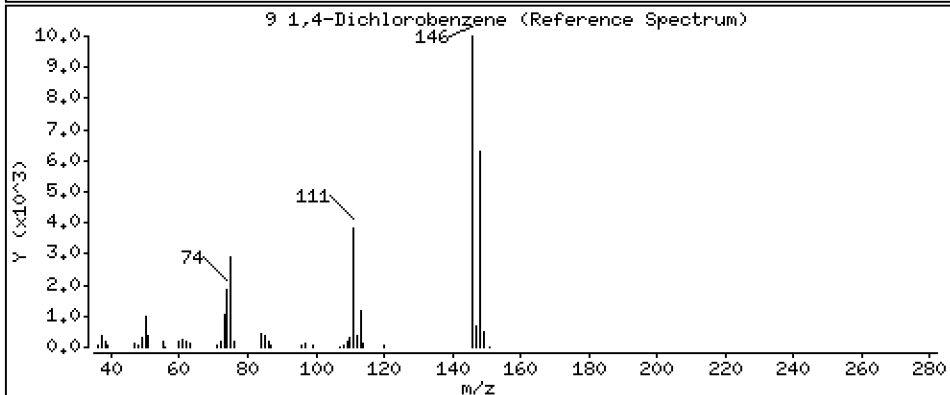
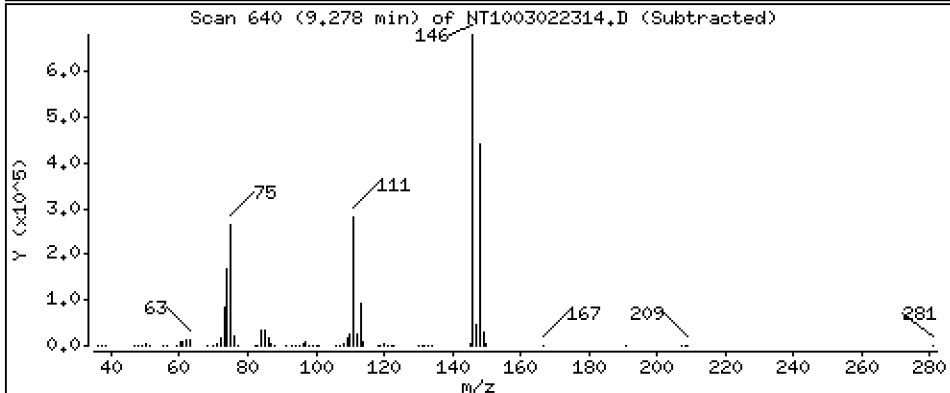
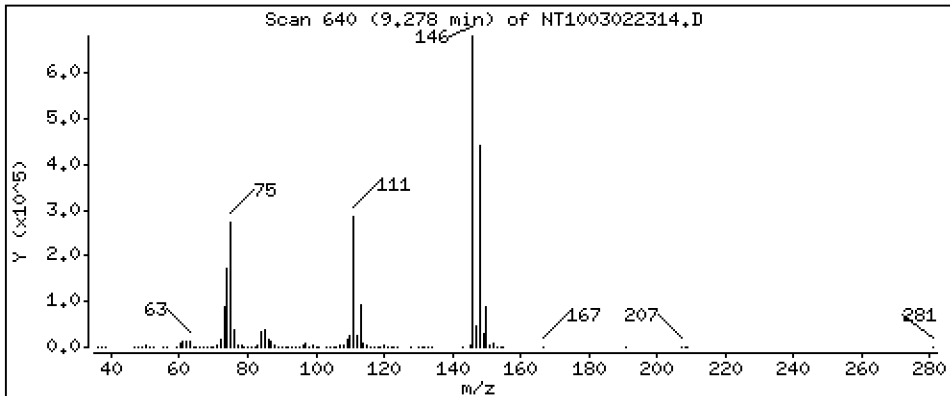
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 4,830 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

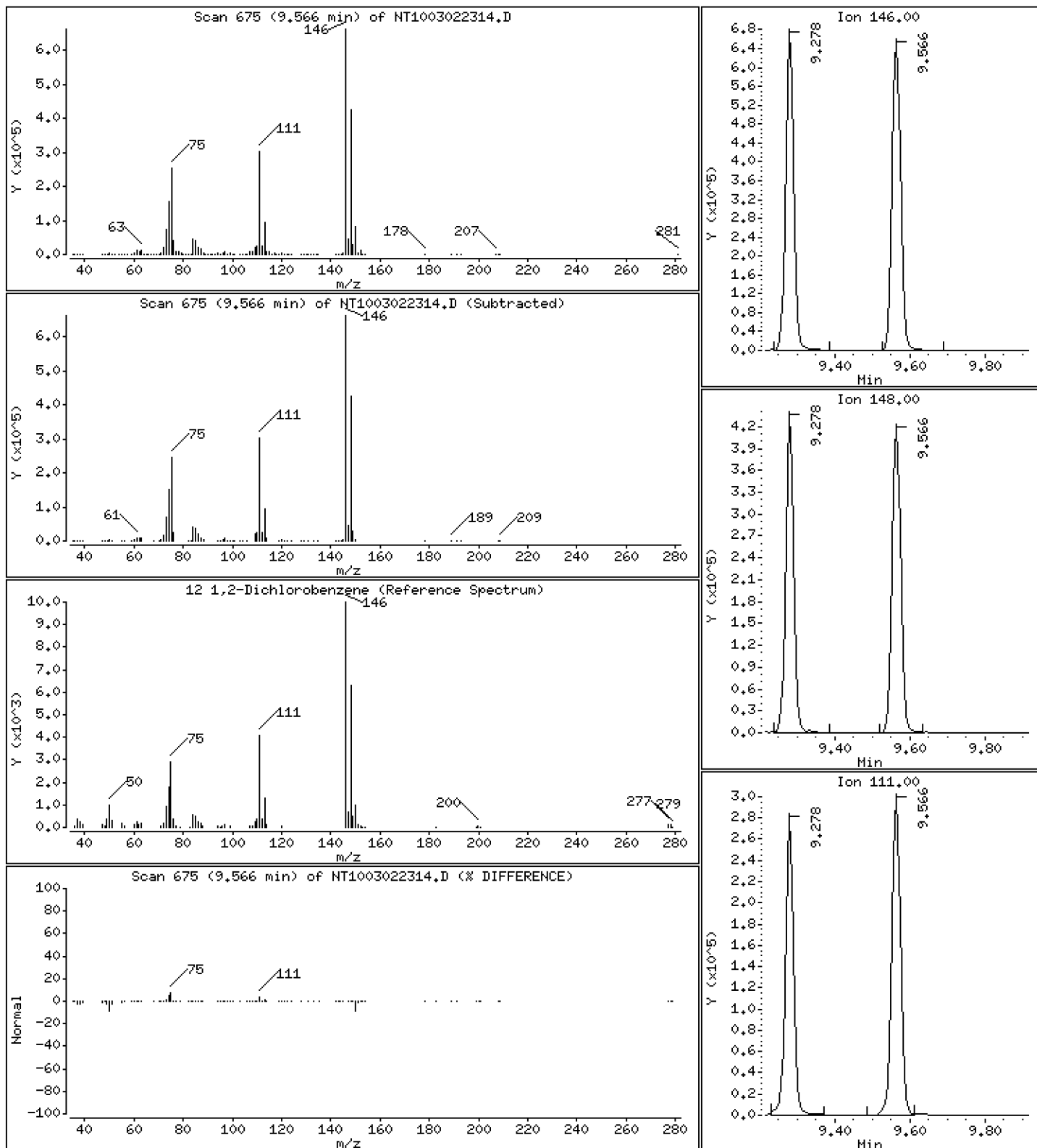
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,829 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

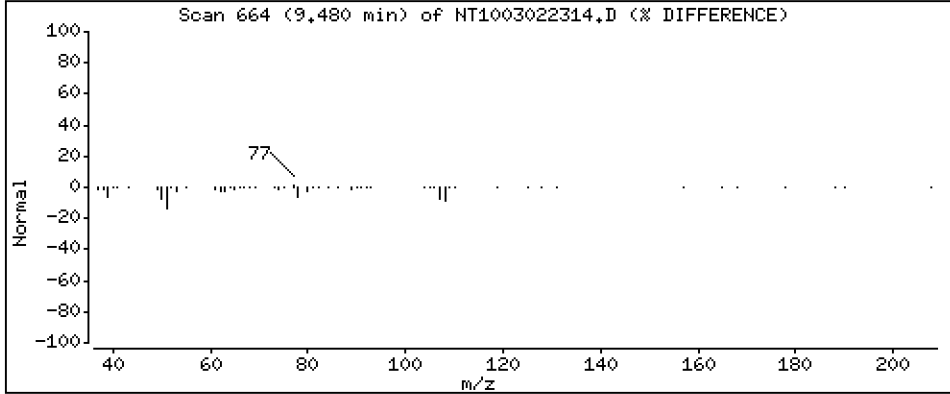
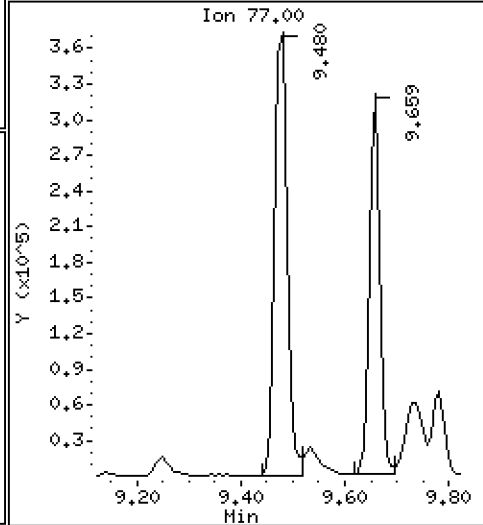
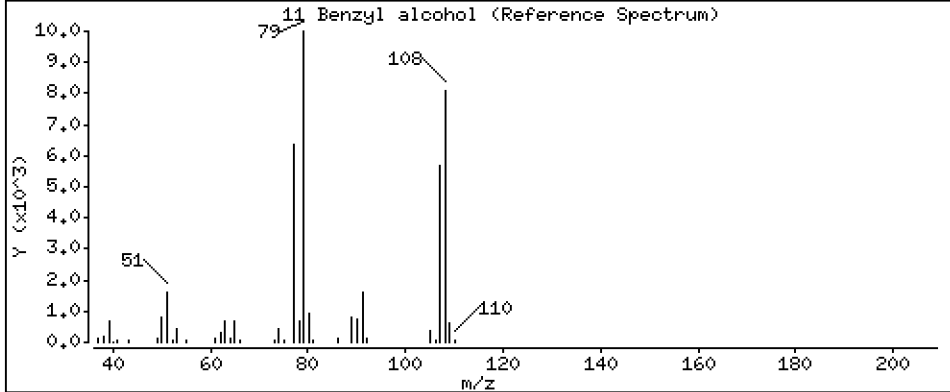
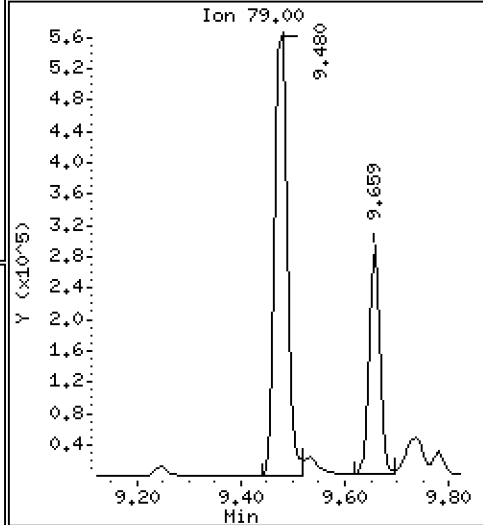
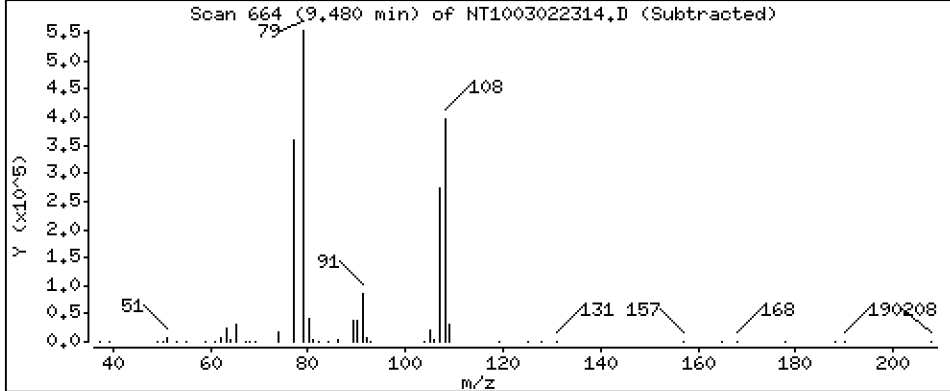
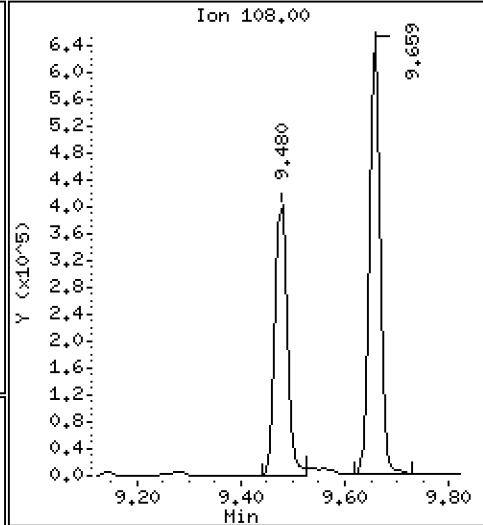
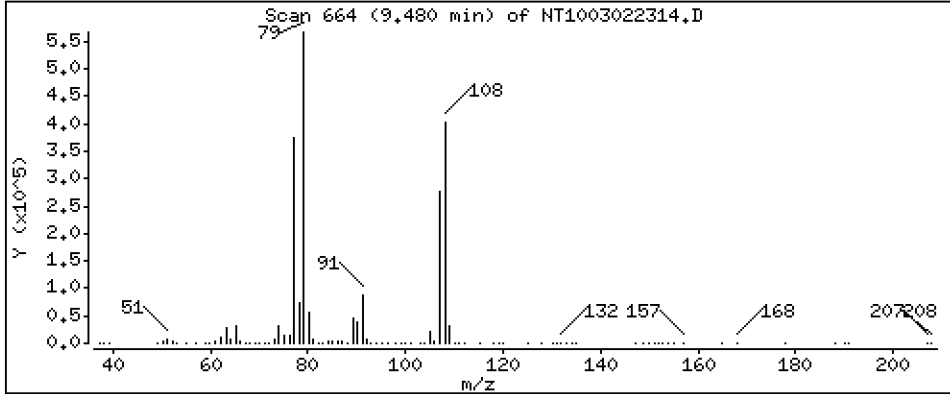
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 5,182 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

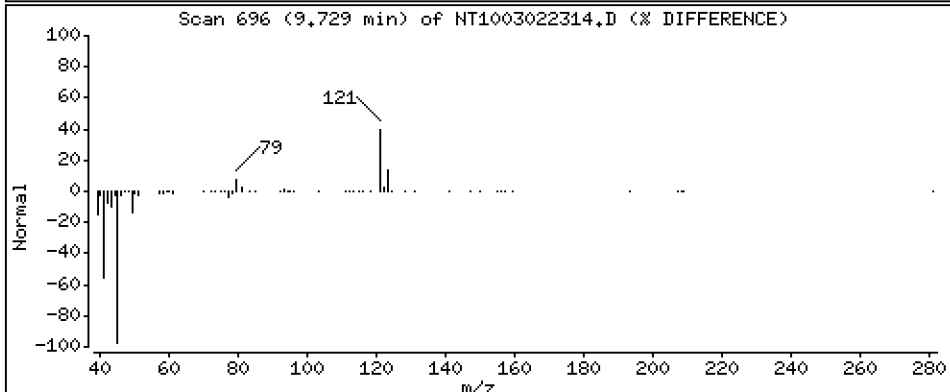
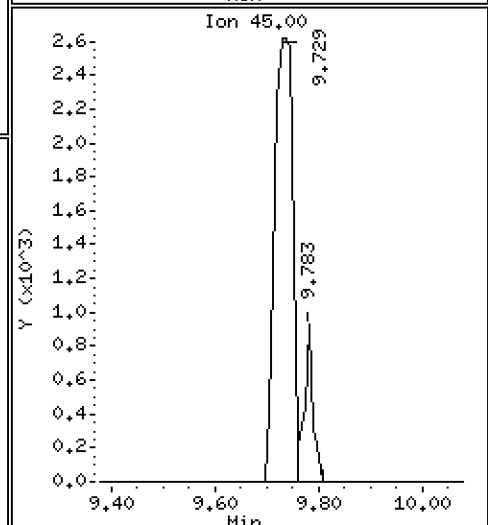
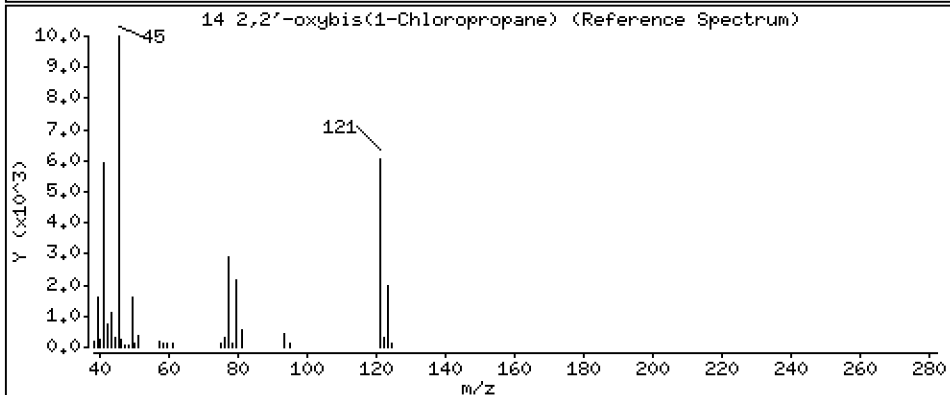
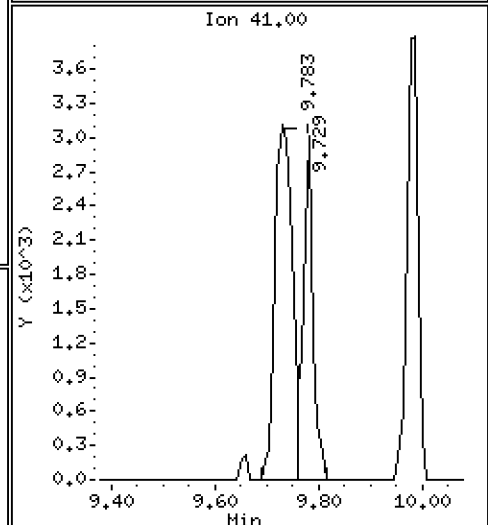
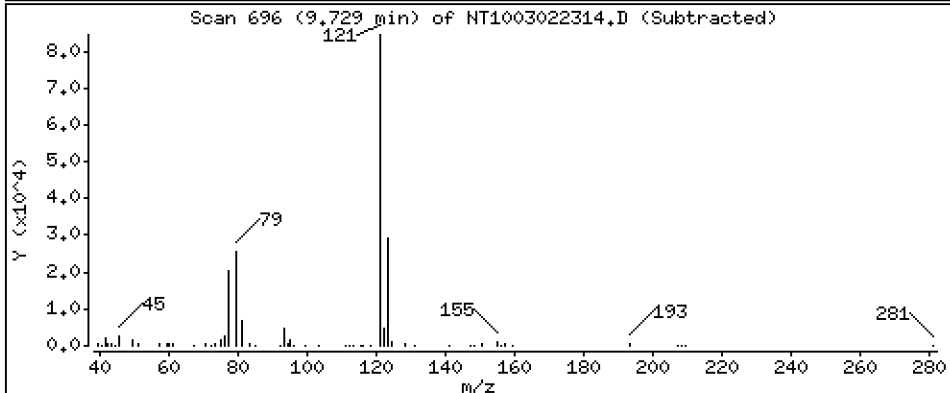
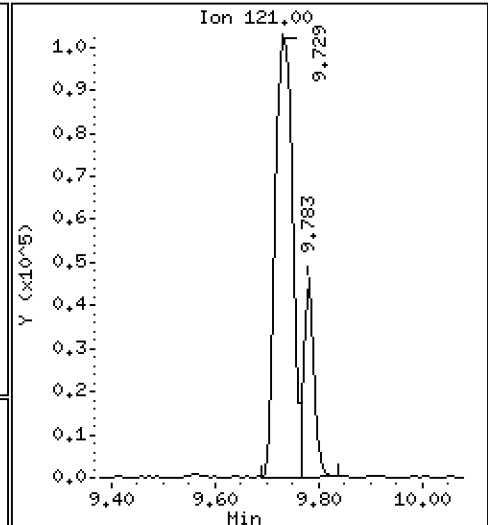
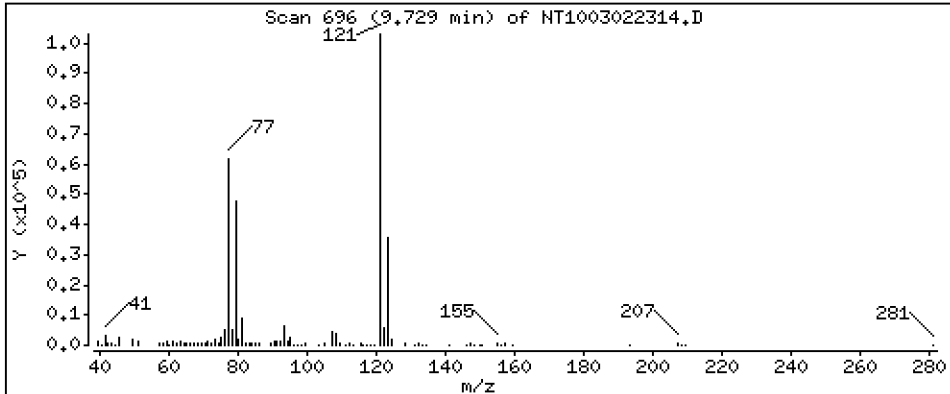
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,969 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

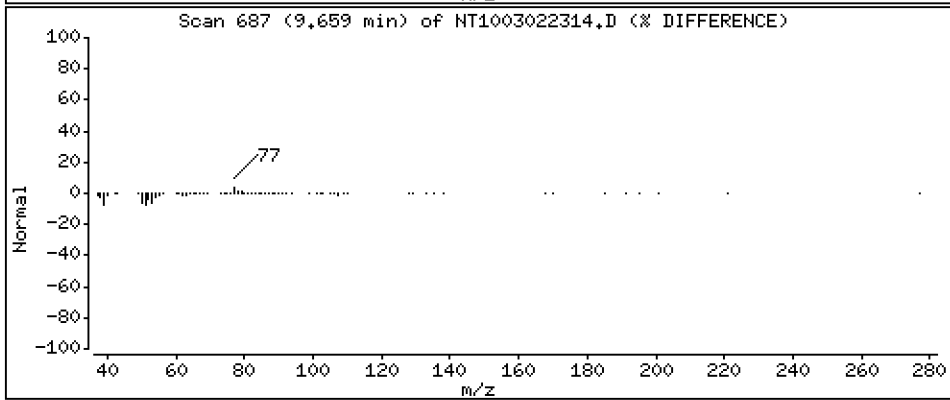
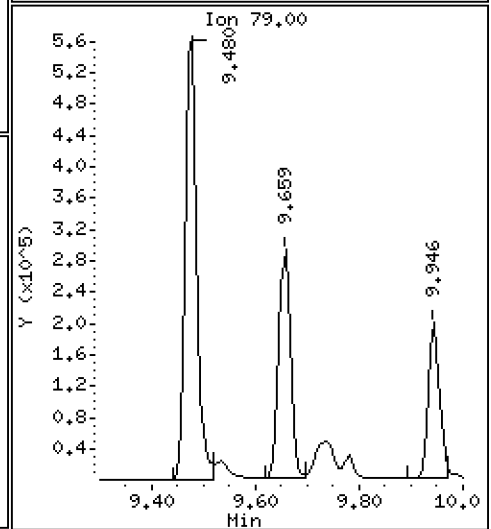
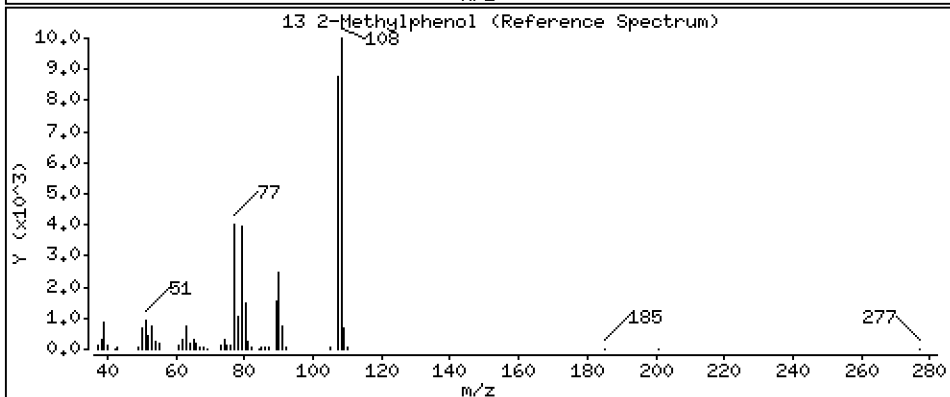
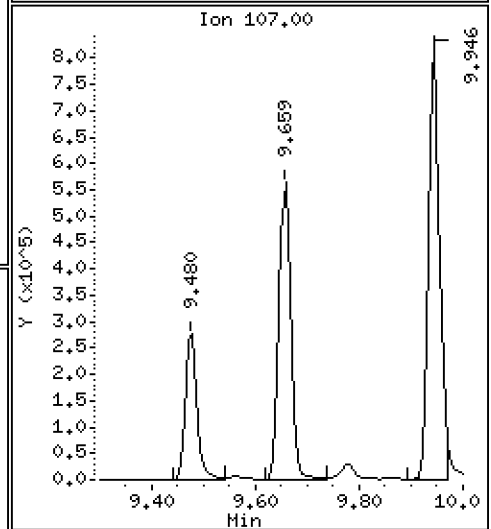
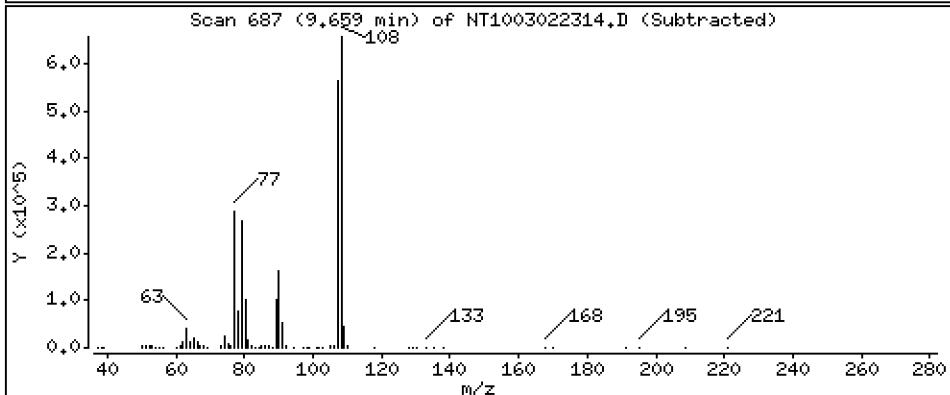
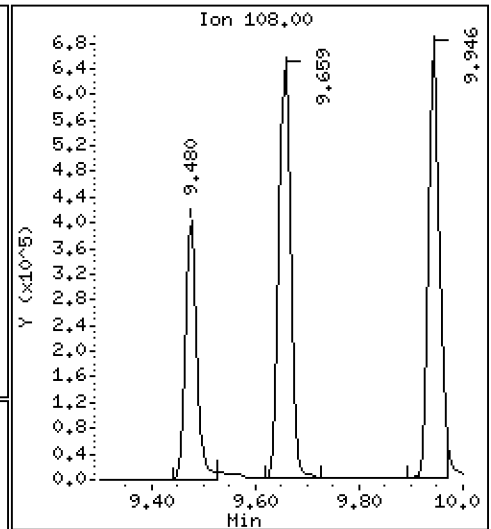
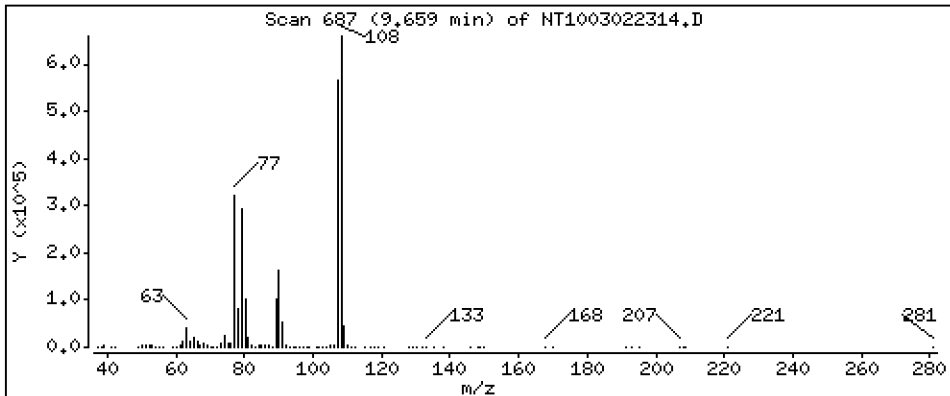
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 5,284 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

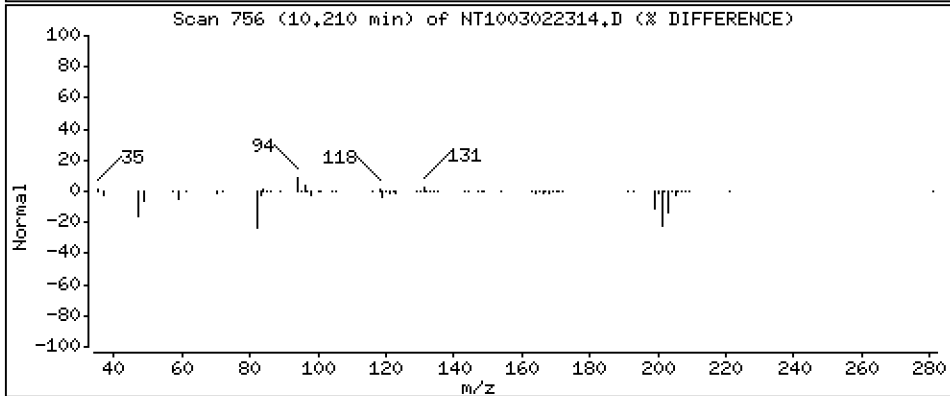
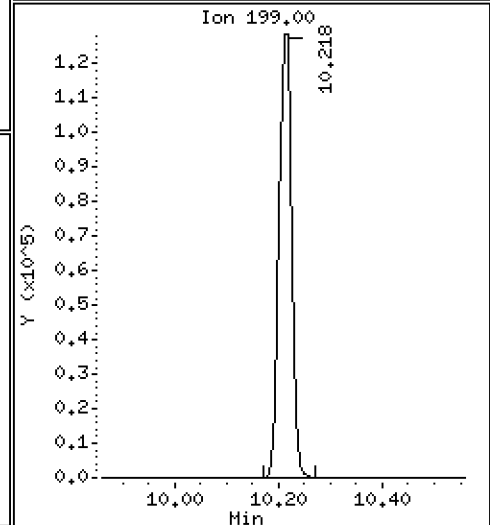
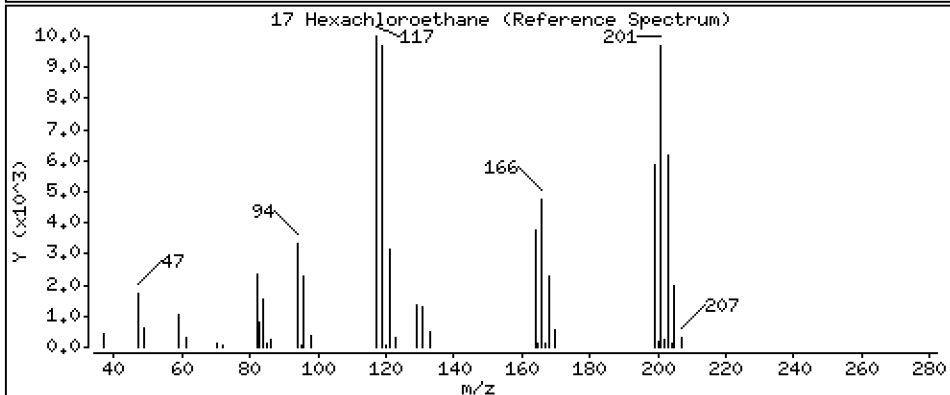
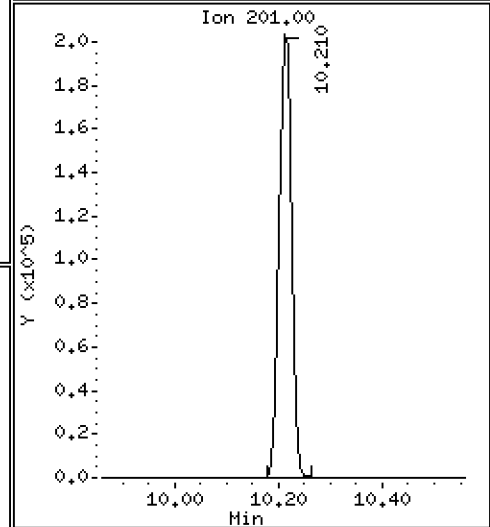
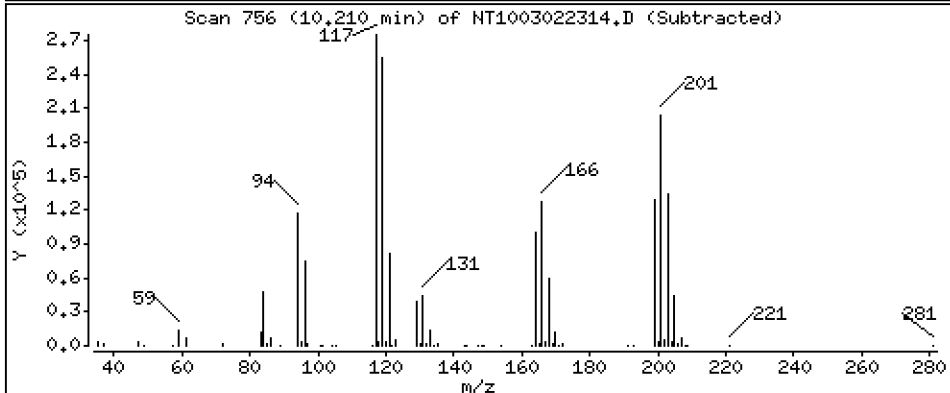
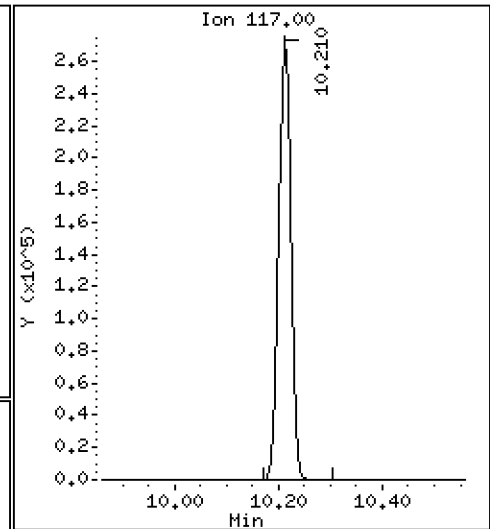
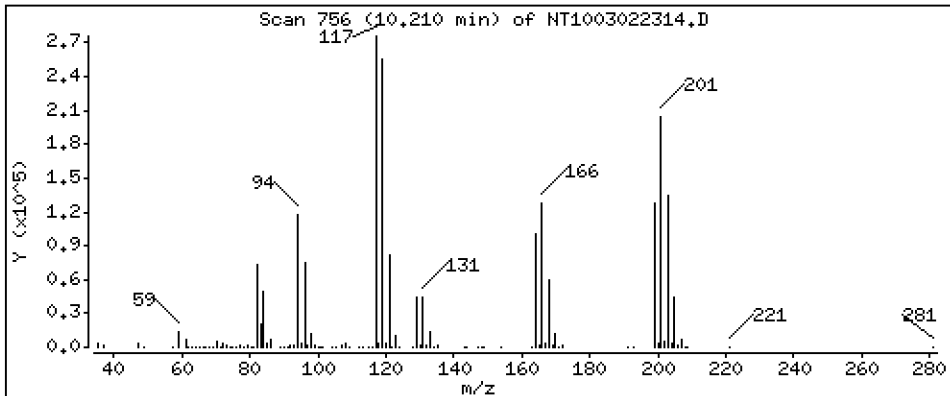
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 4,864 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

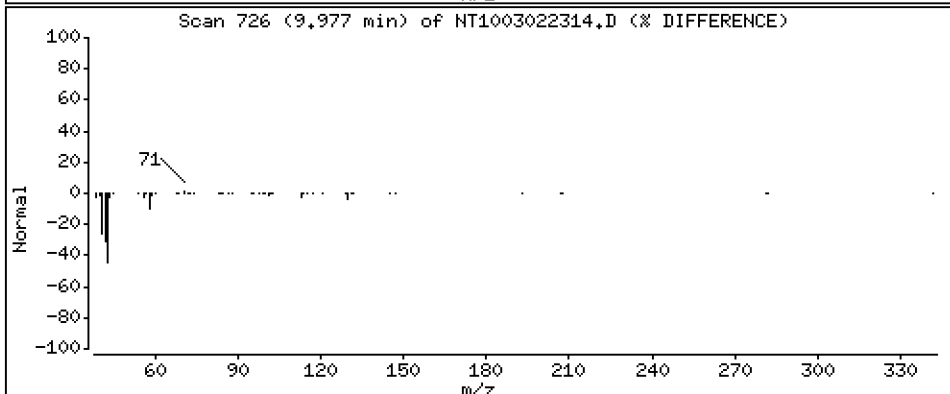
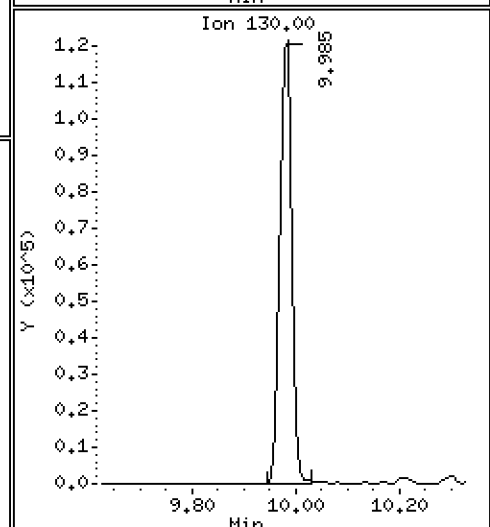
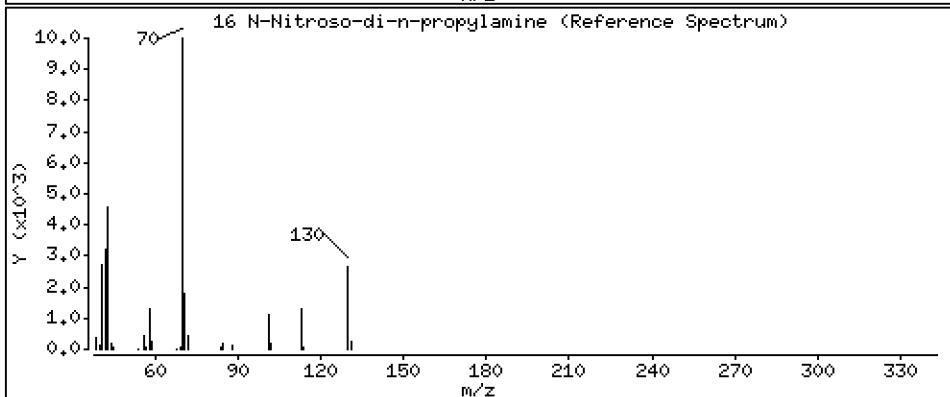
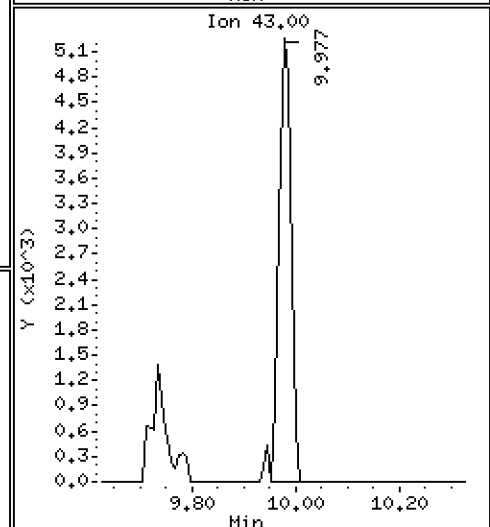
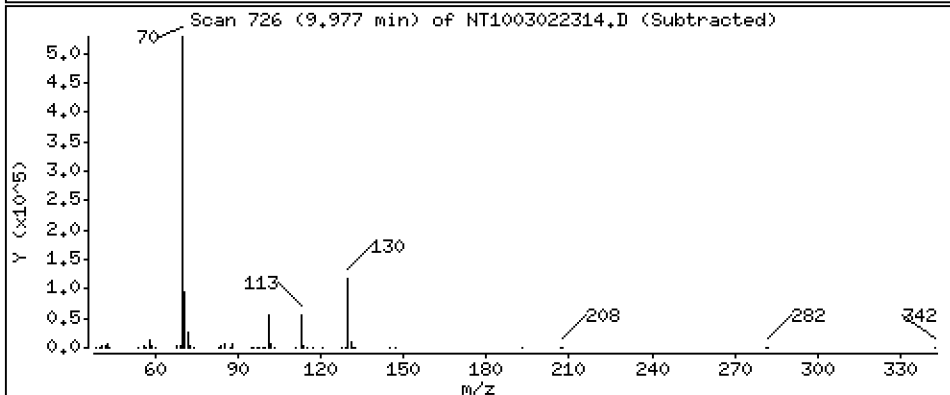
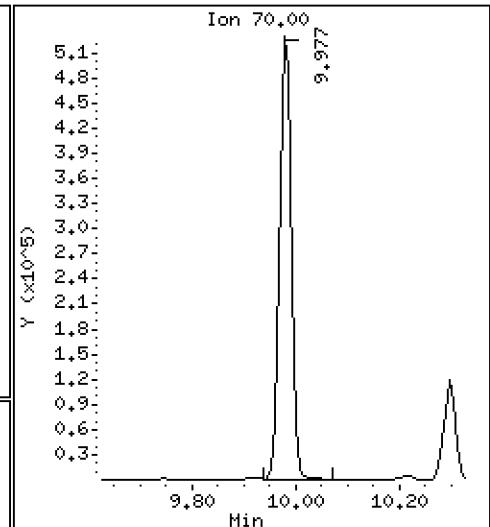
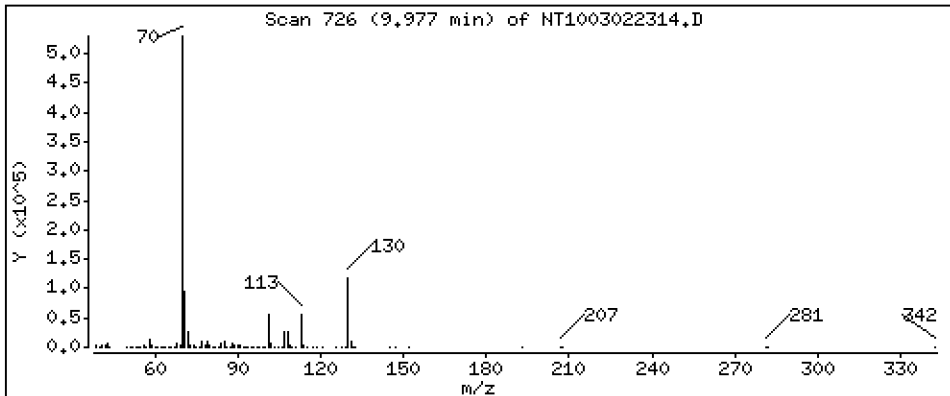
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,562 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

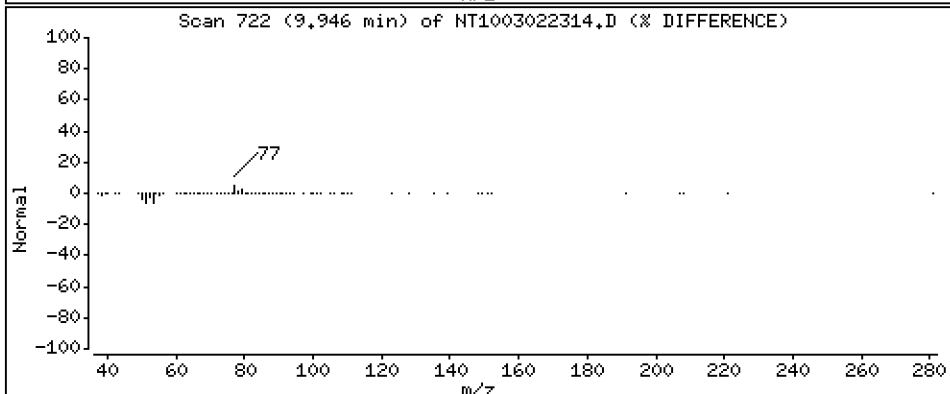
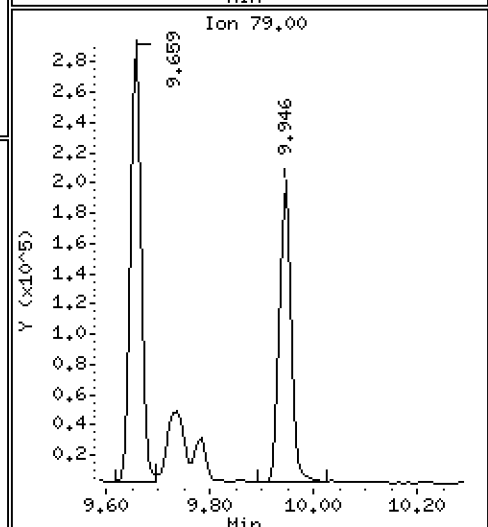
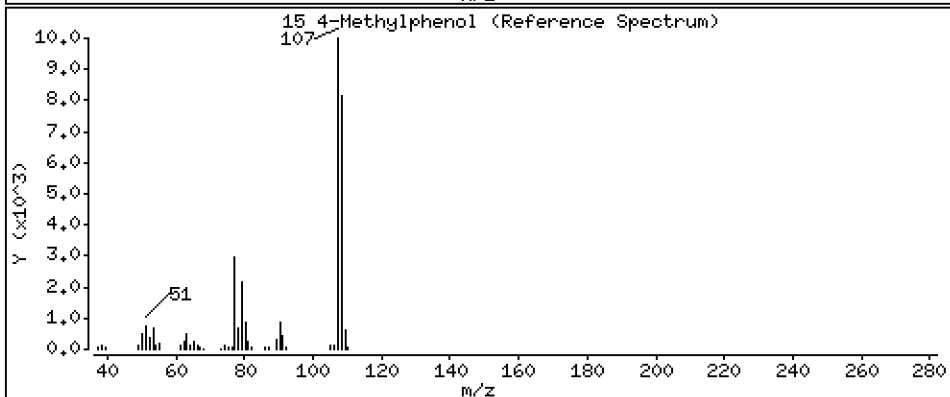
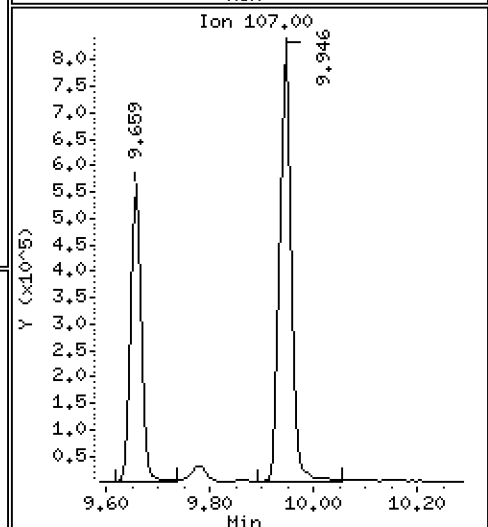
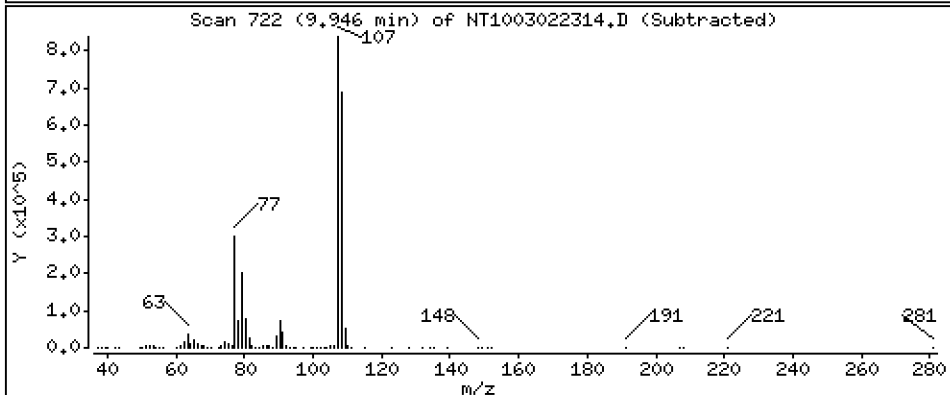
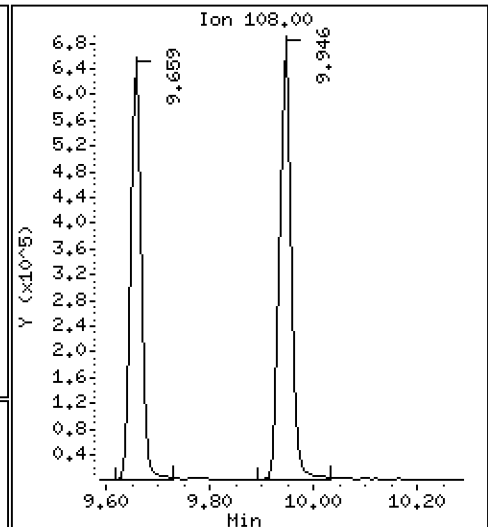
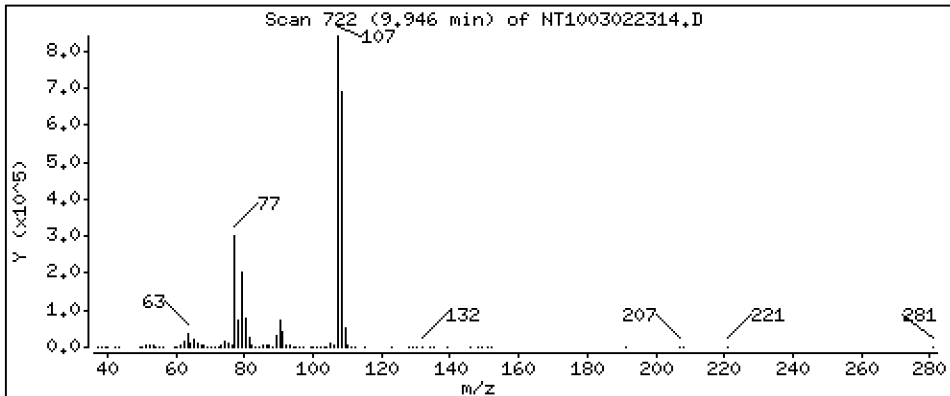
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 5,155 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

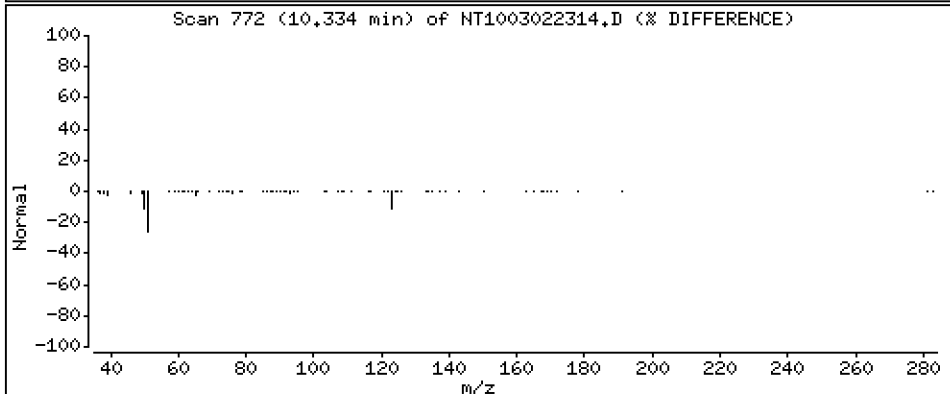
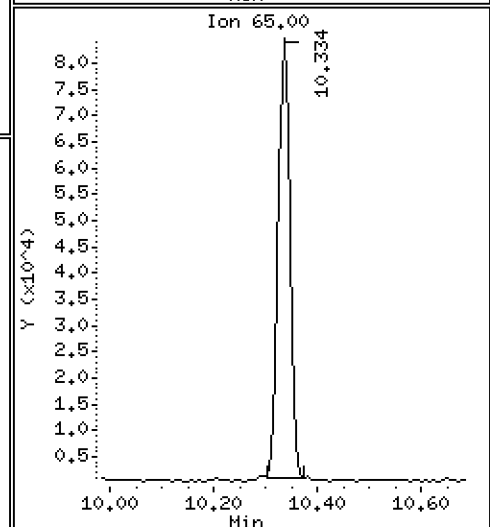
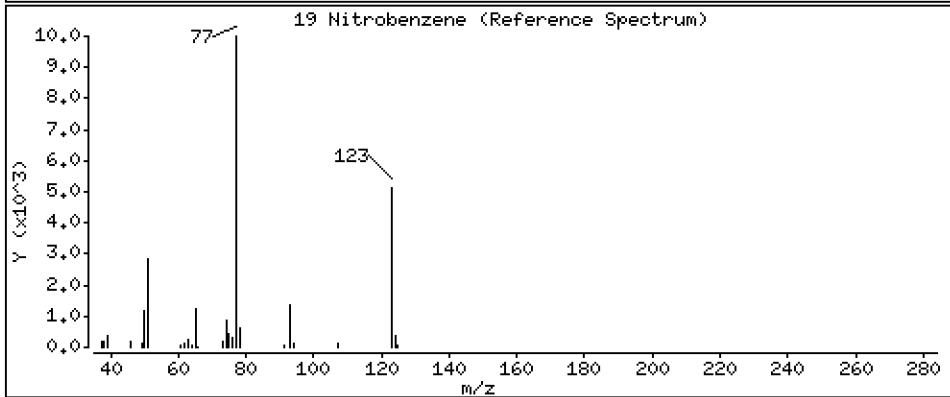
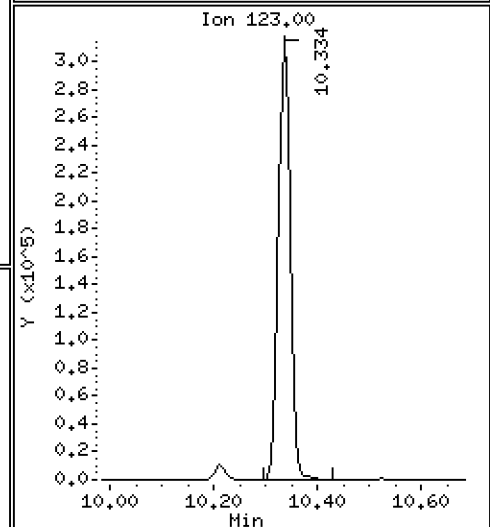
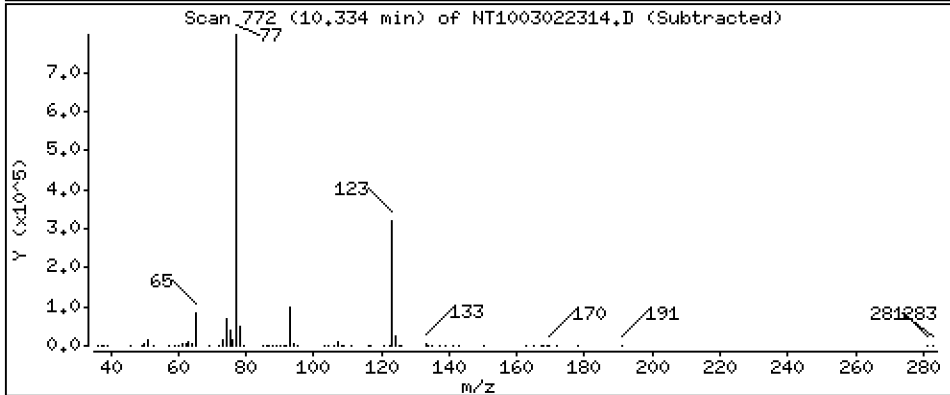
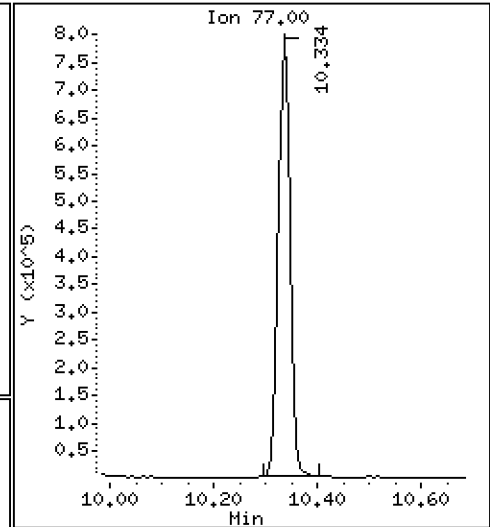
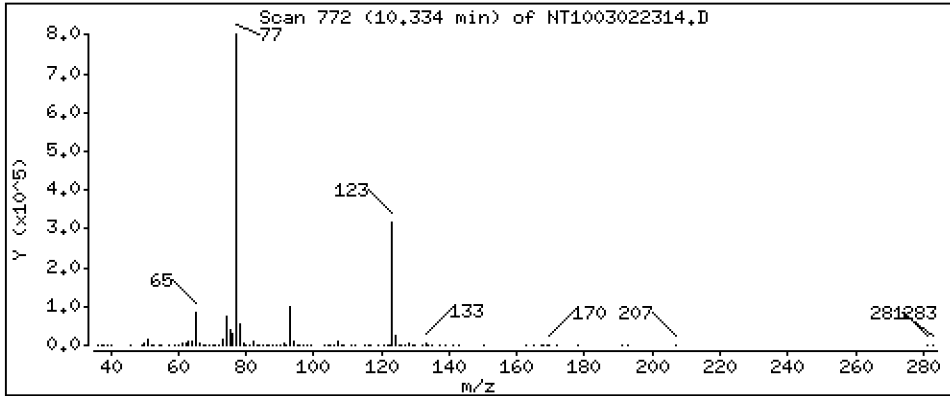
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 5,180 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

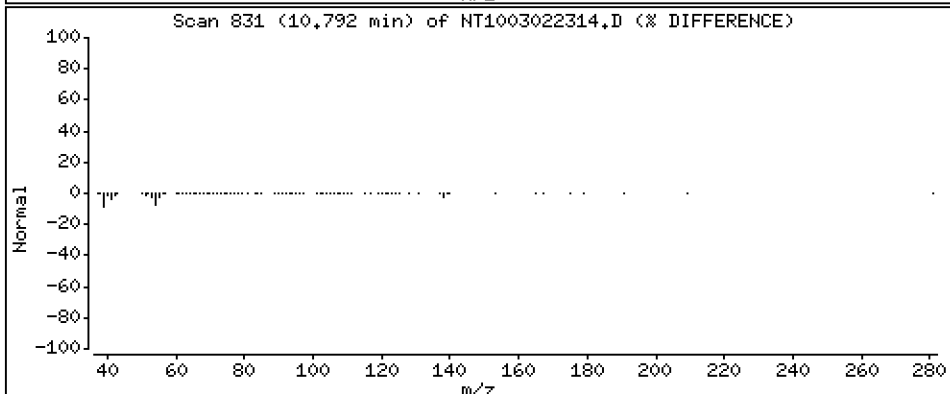
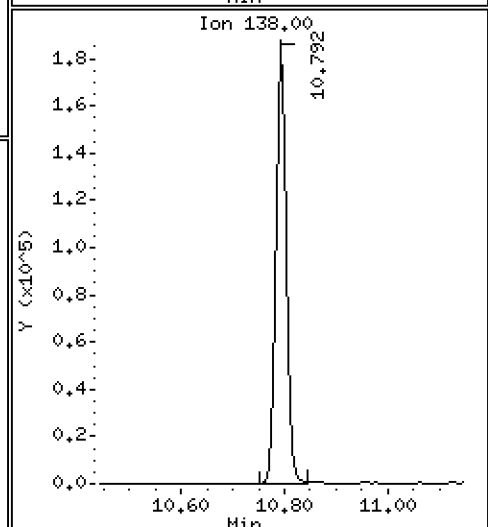
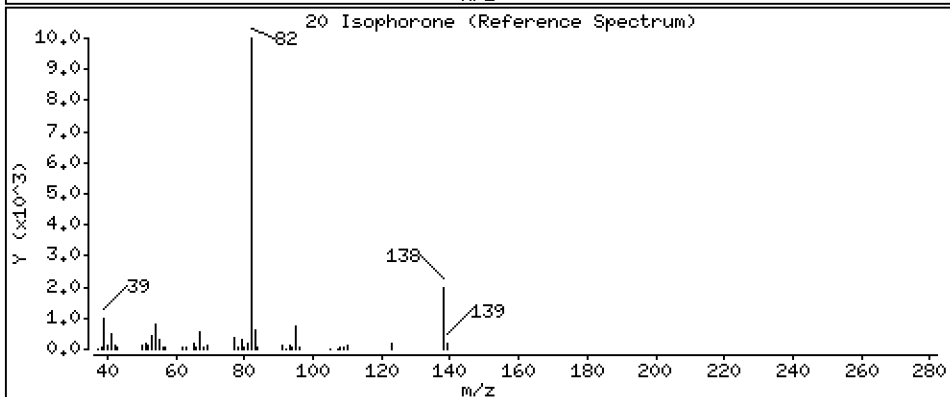
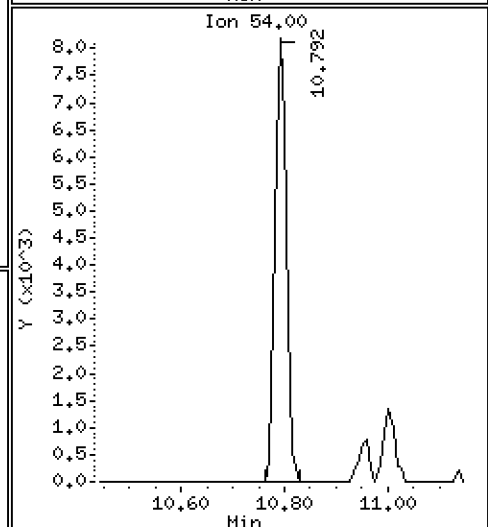
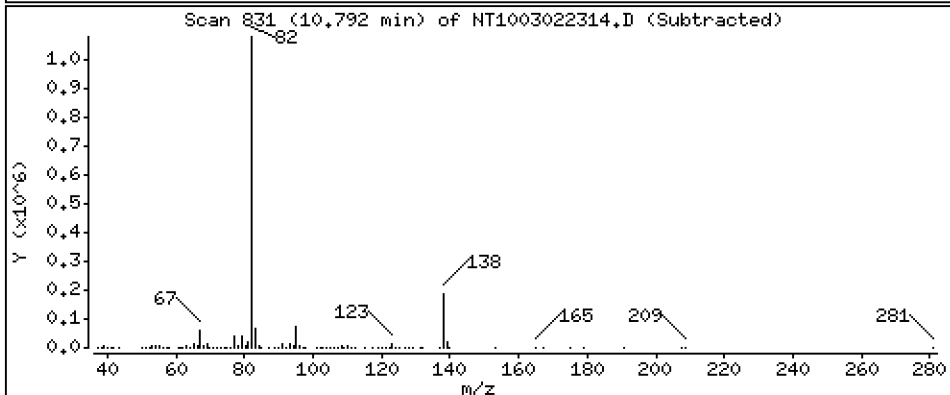
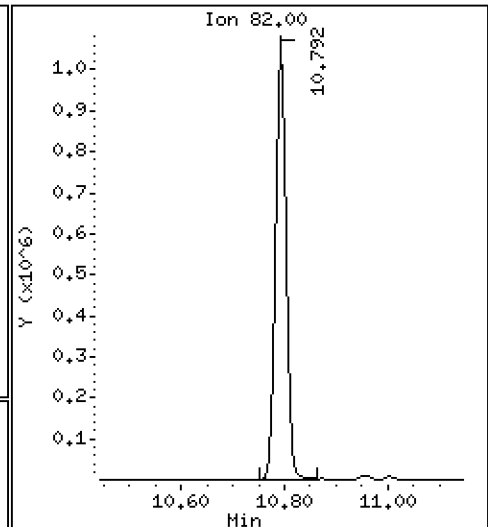
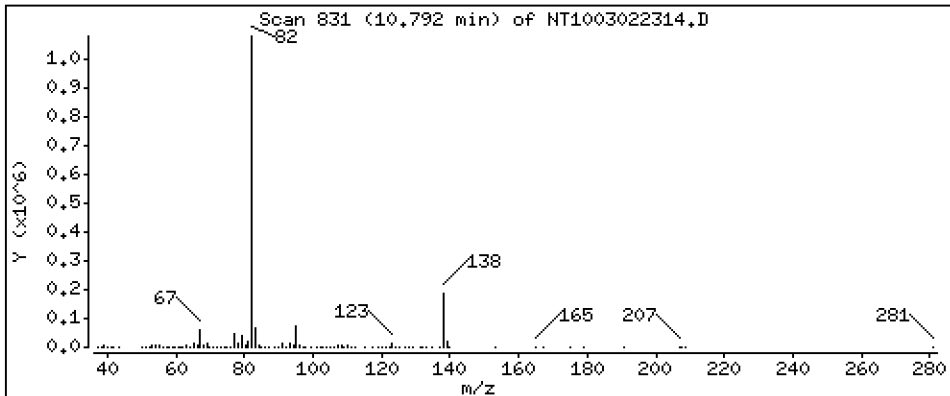
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 5,458 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

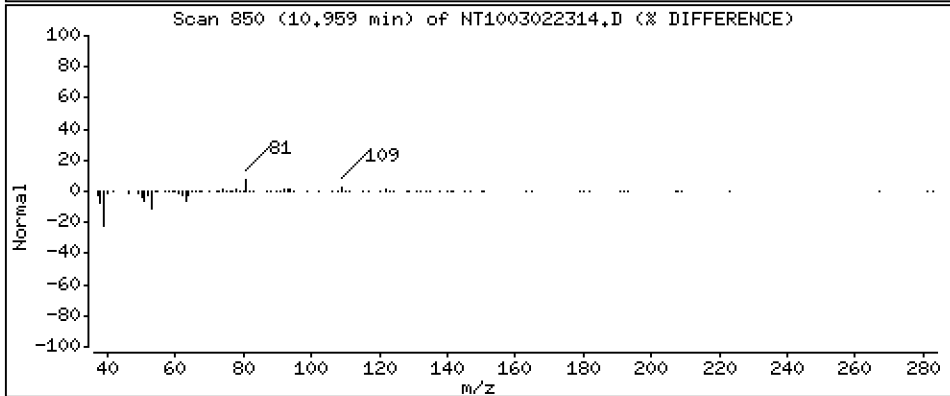
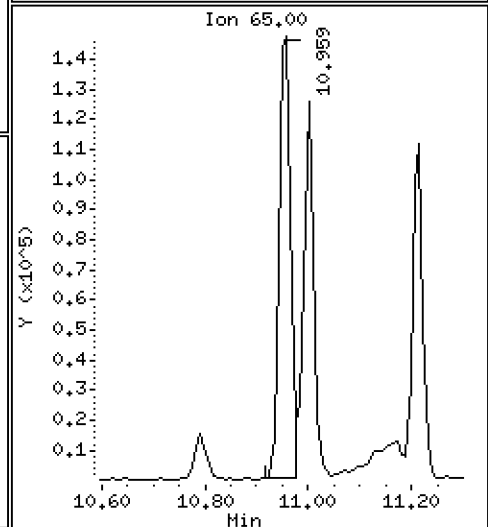
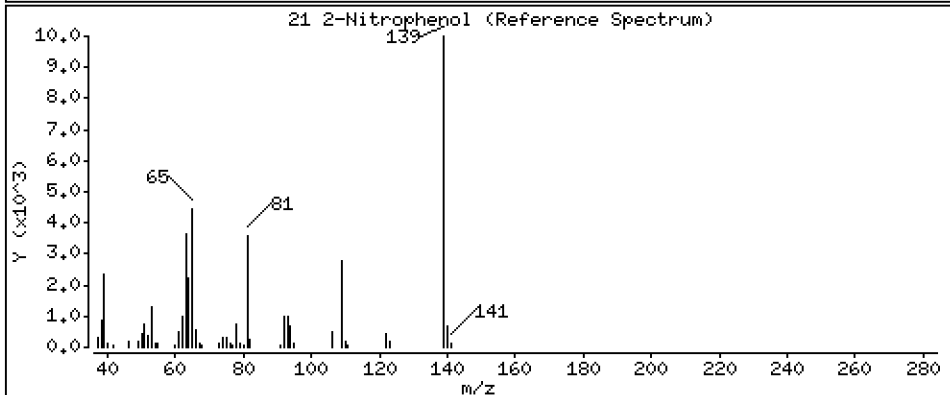
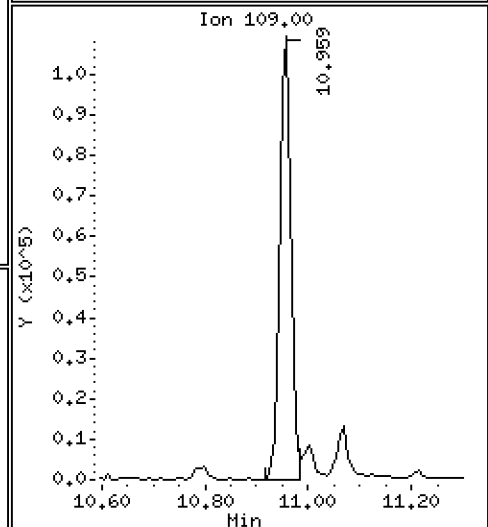
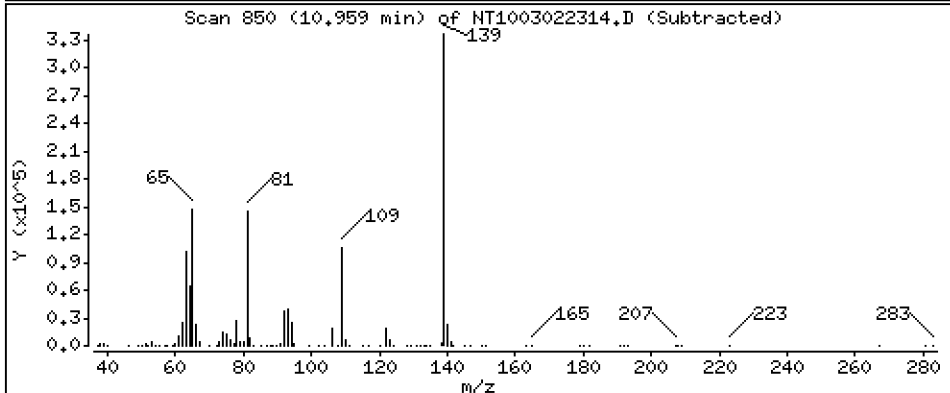
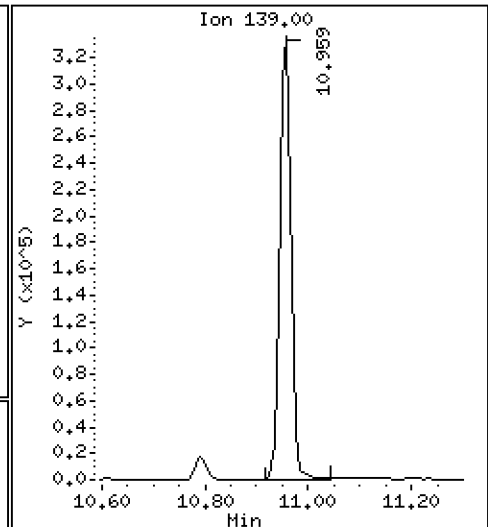
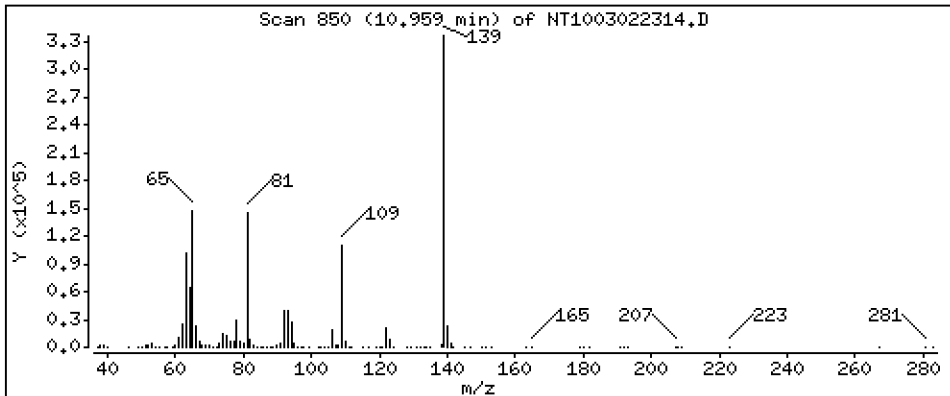
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 4,206 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

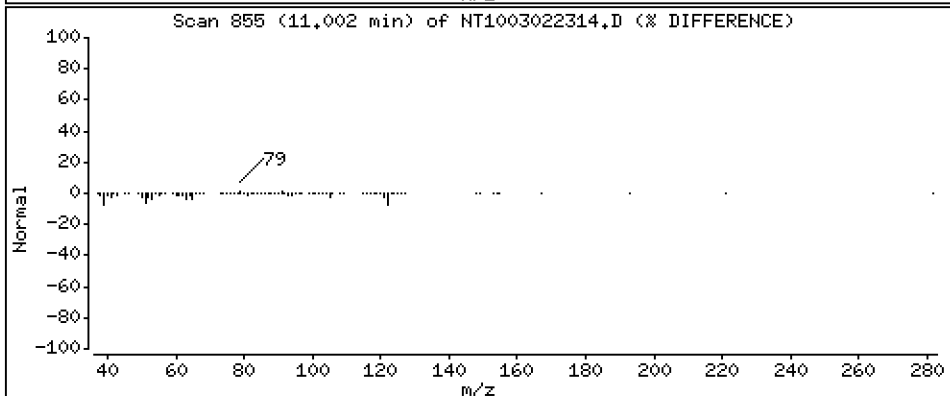
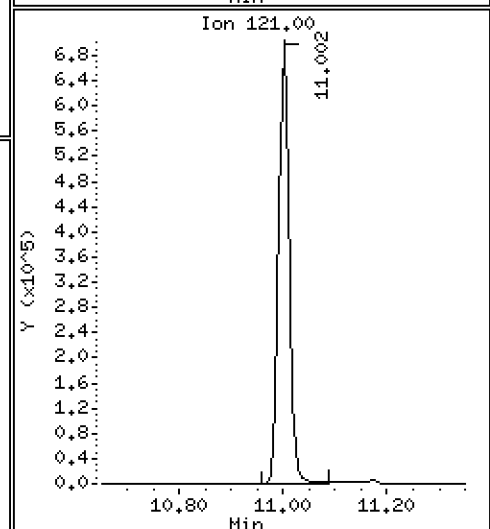
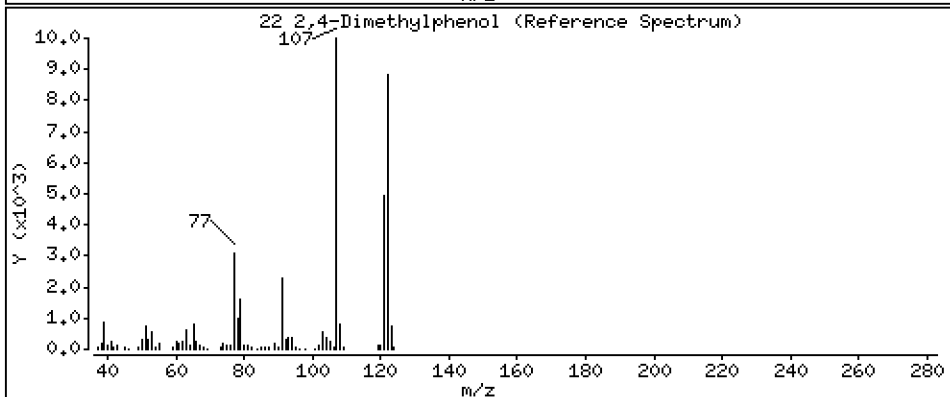
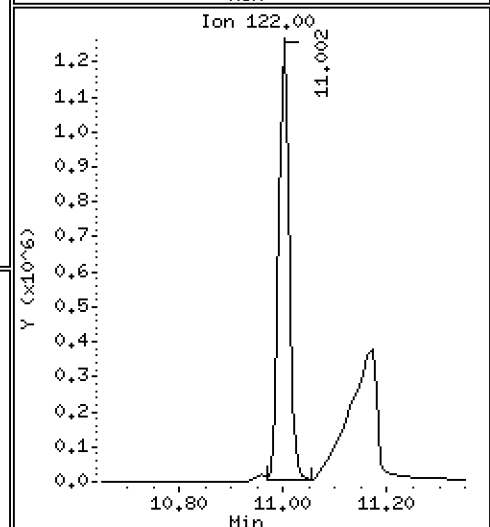
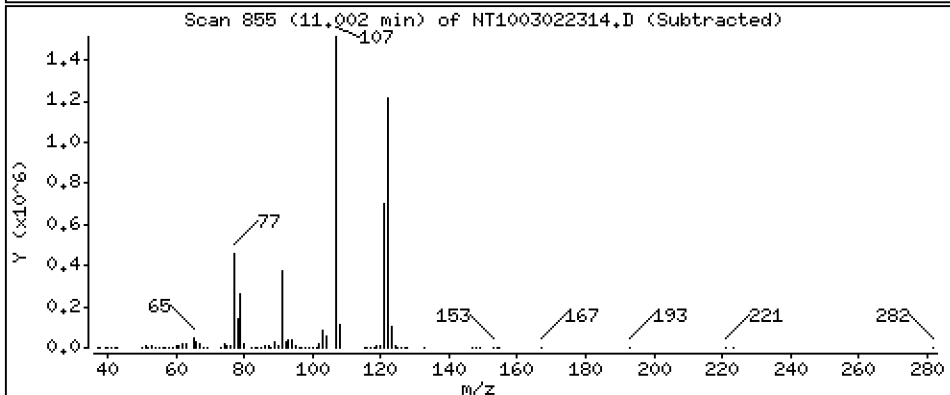
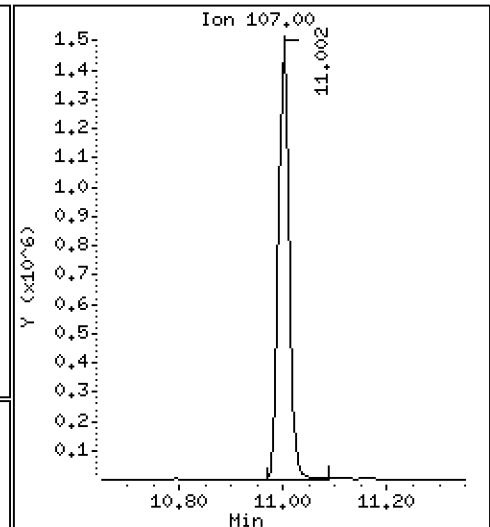
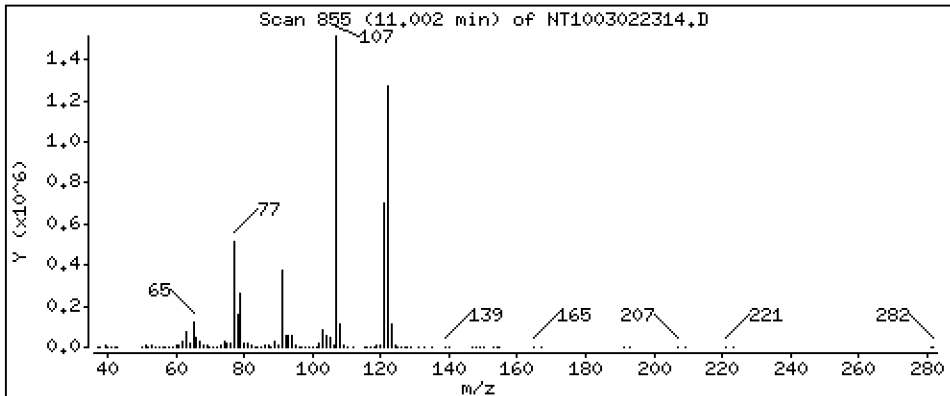
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 9,518 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

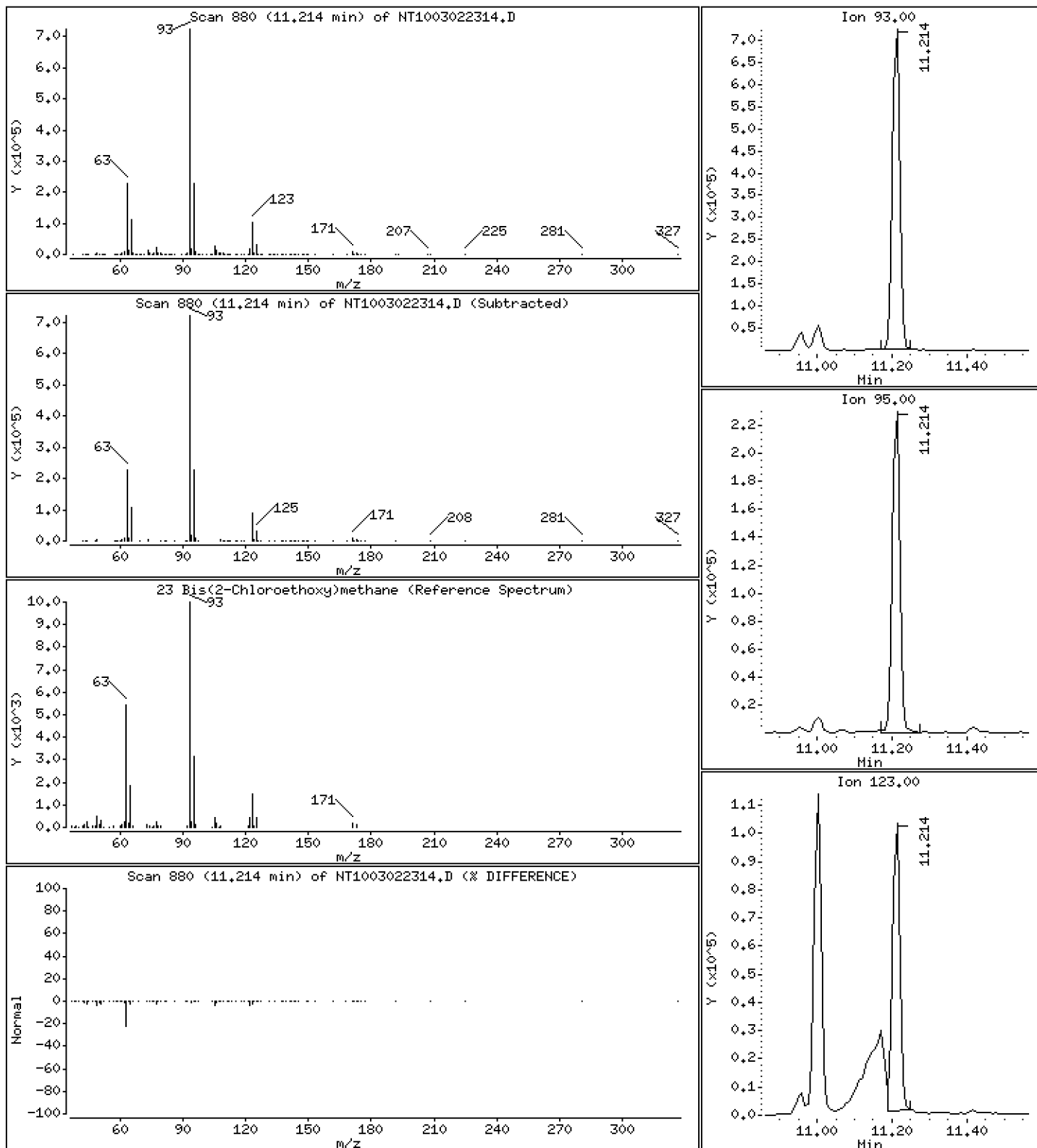
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 5,495 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

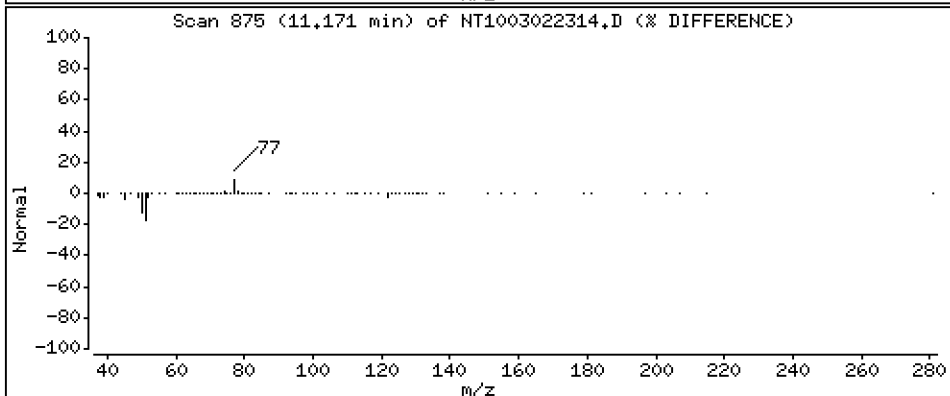
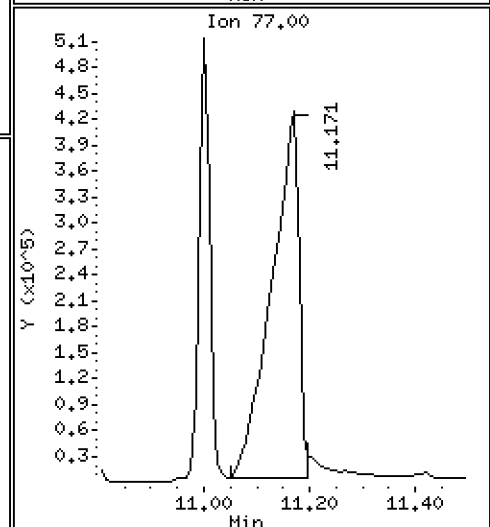
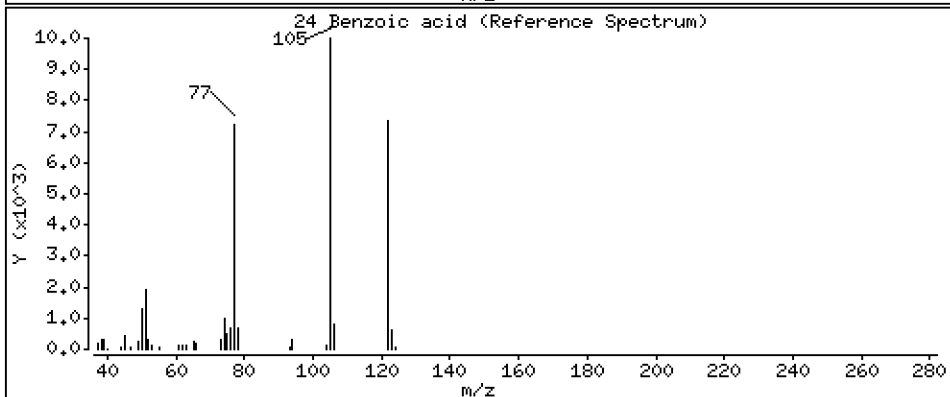
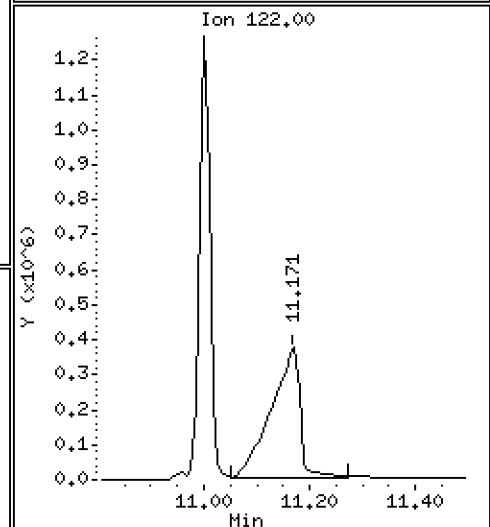
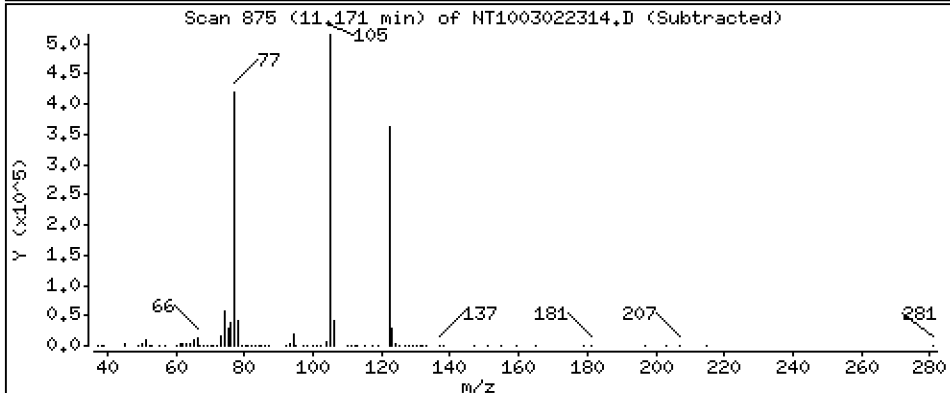
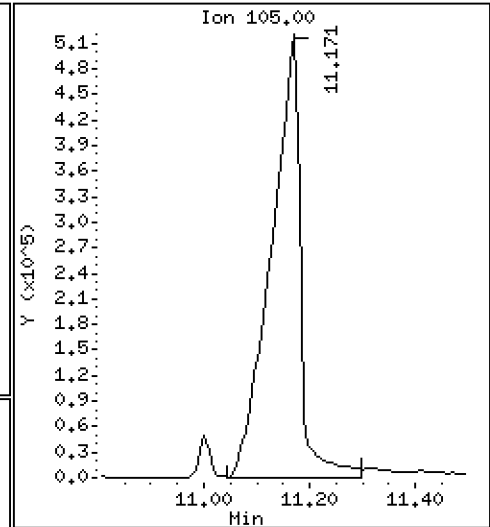
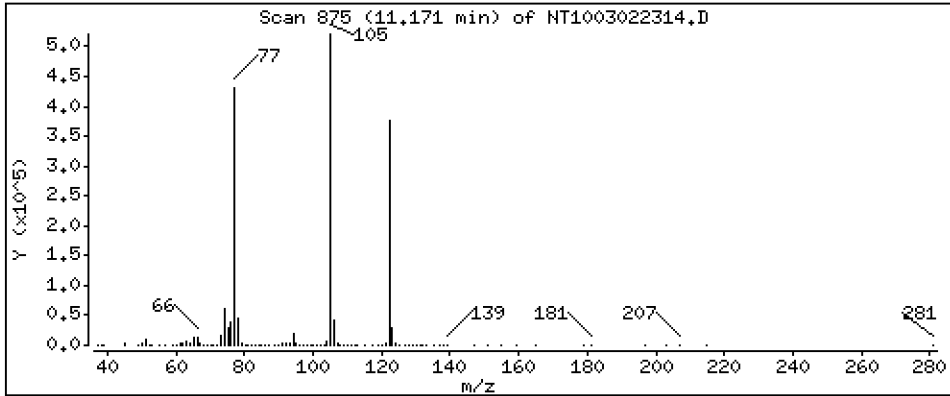
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 15,02 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

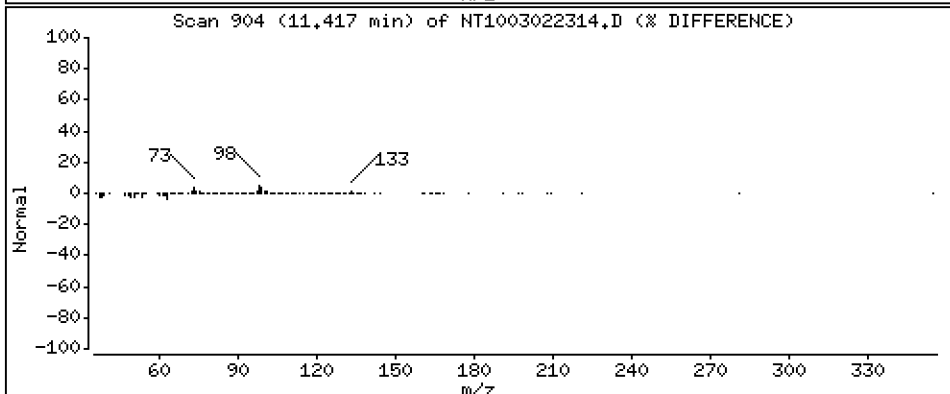
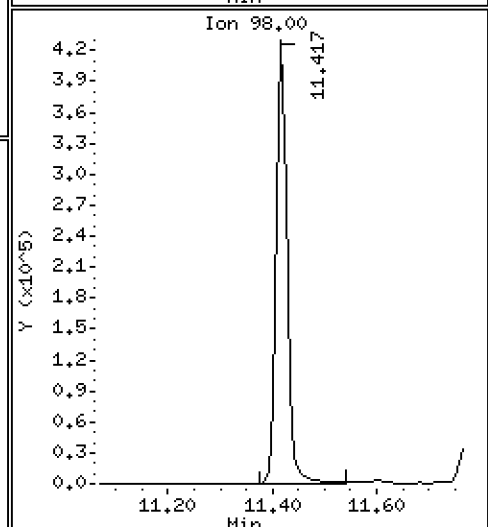
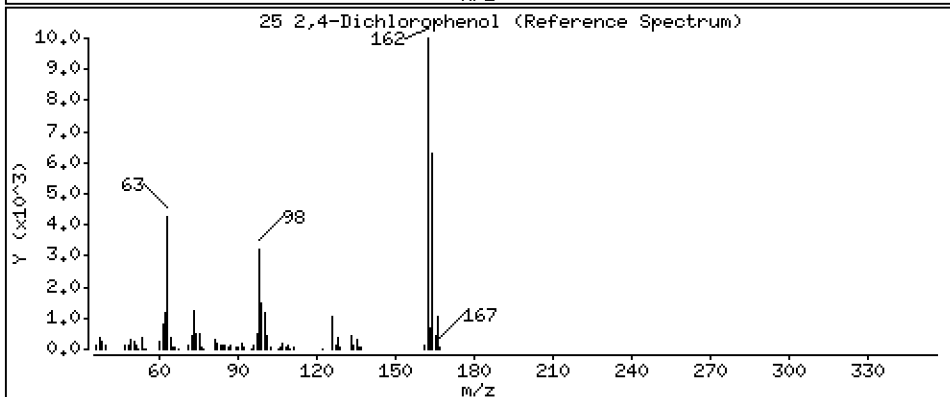
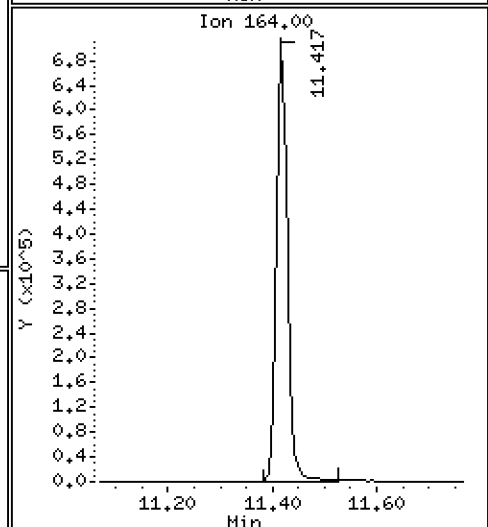
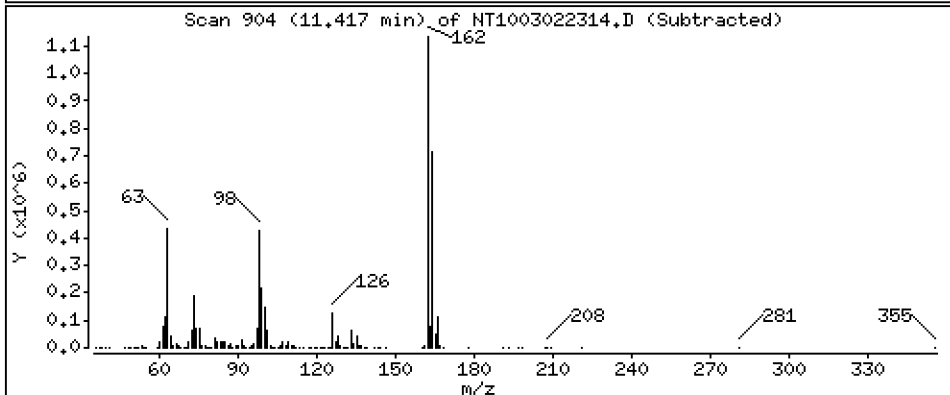
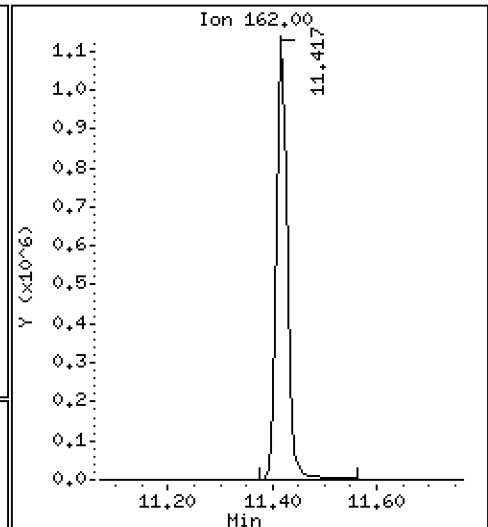
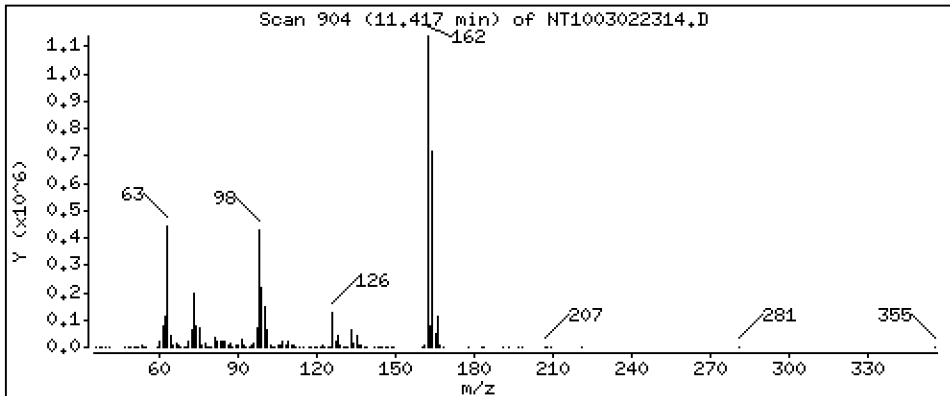
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 9,997 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

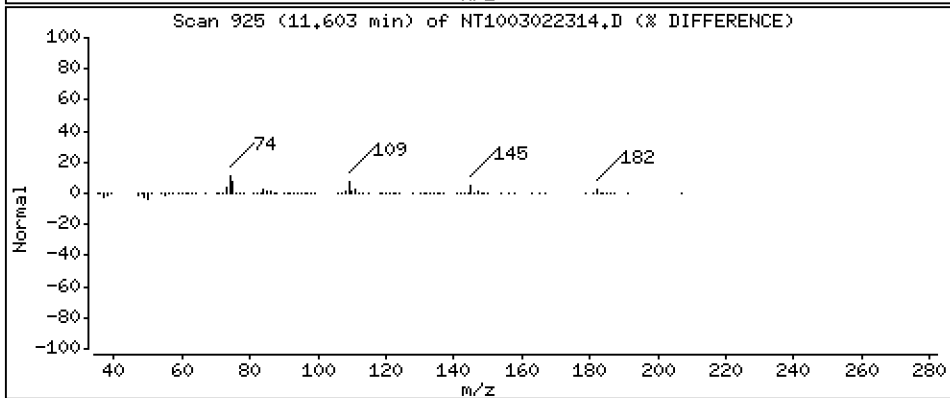
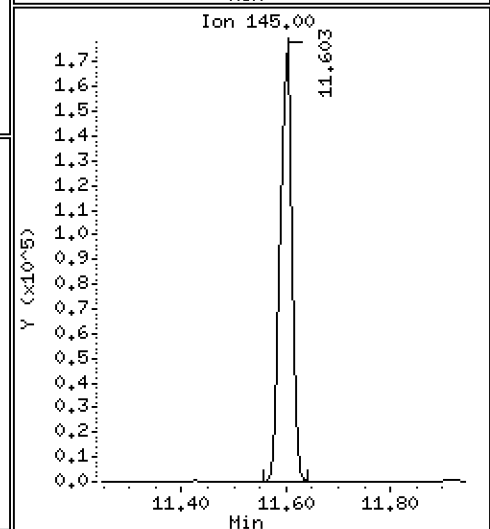
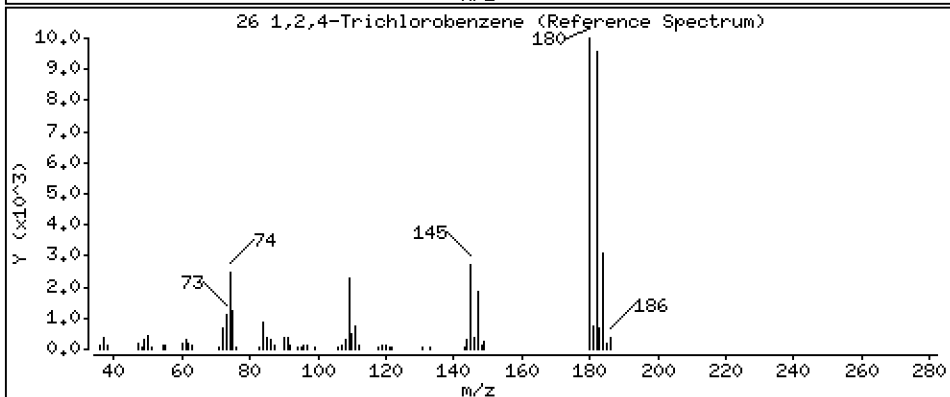
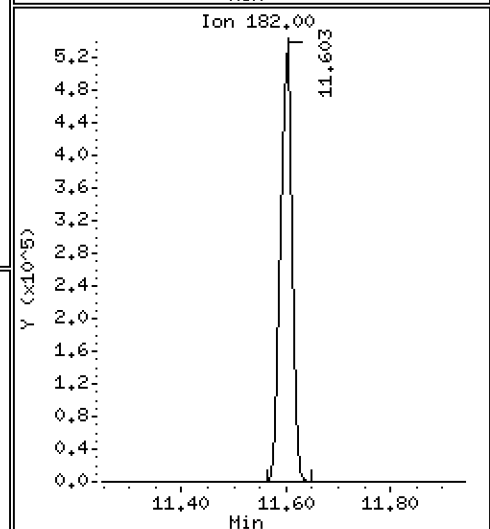
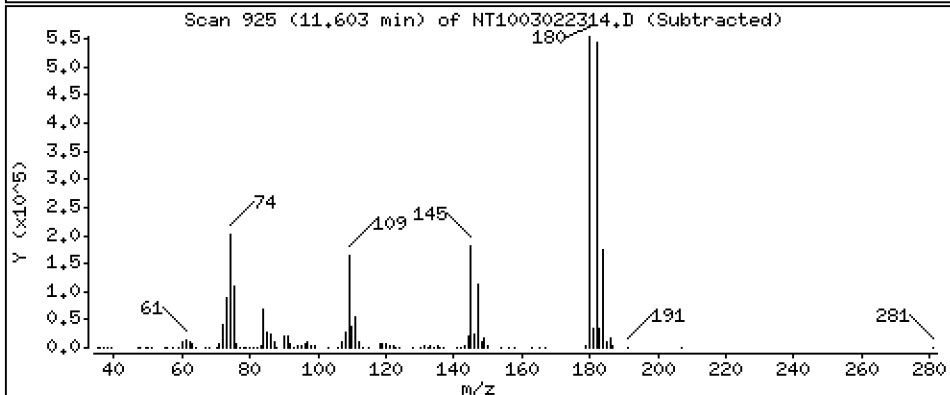
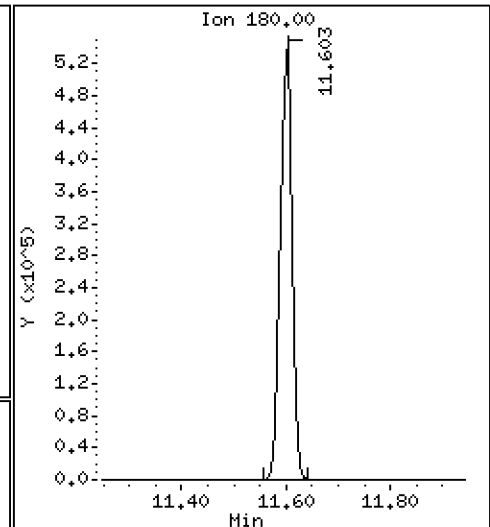
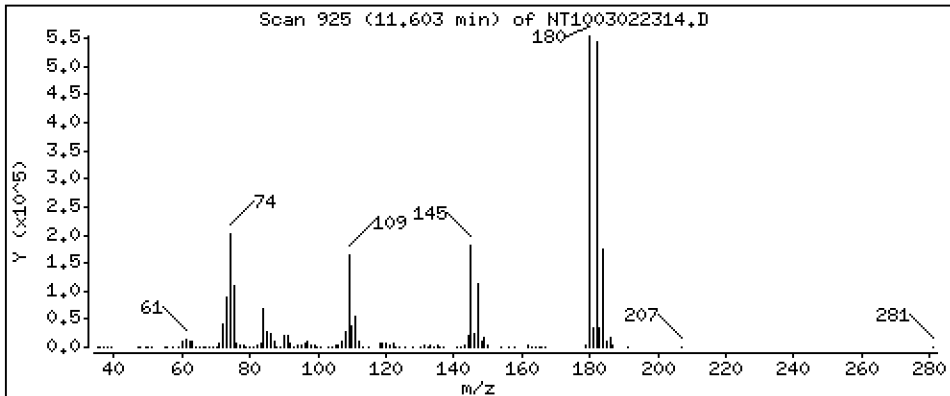
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,804 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

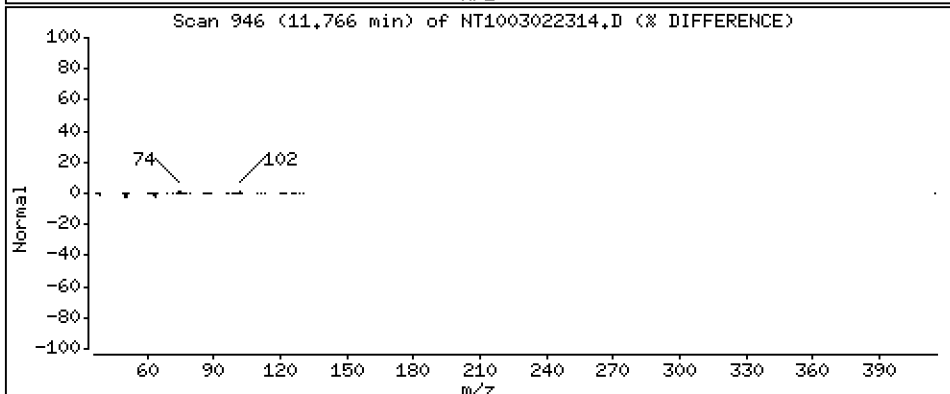
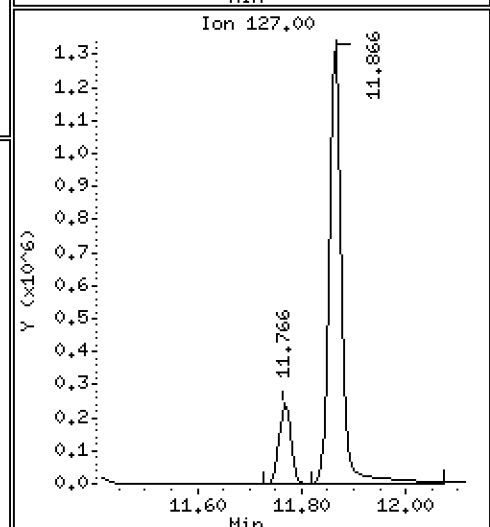
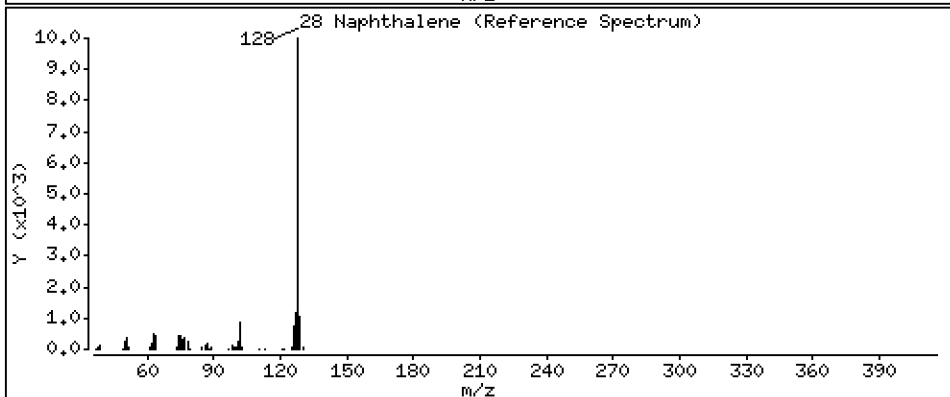
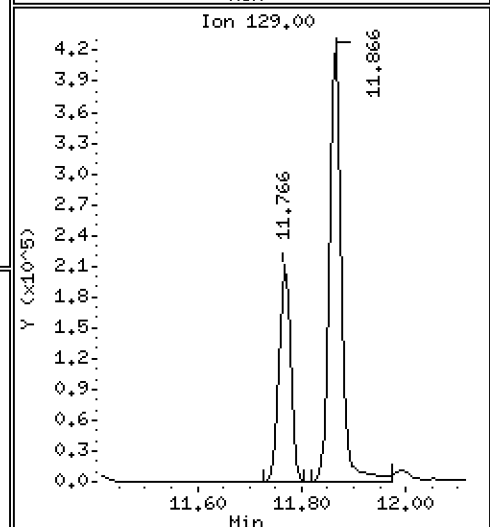
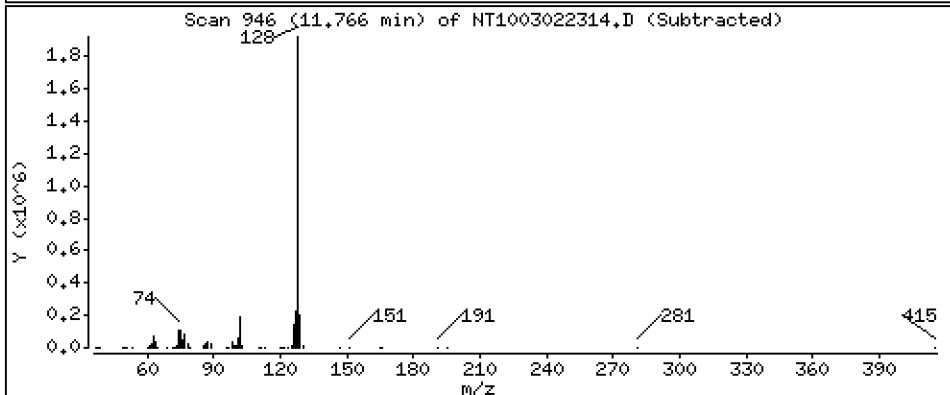
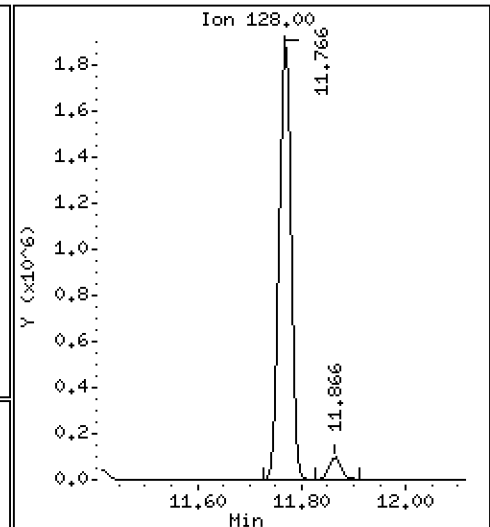
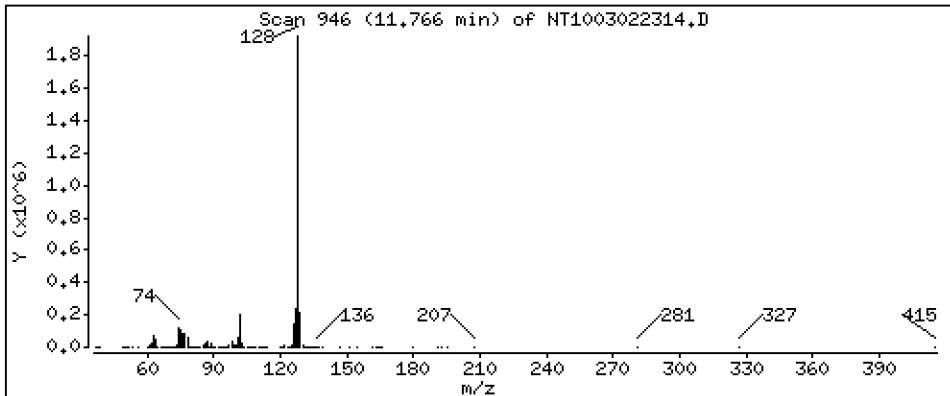
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 5,043 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

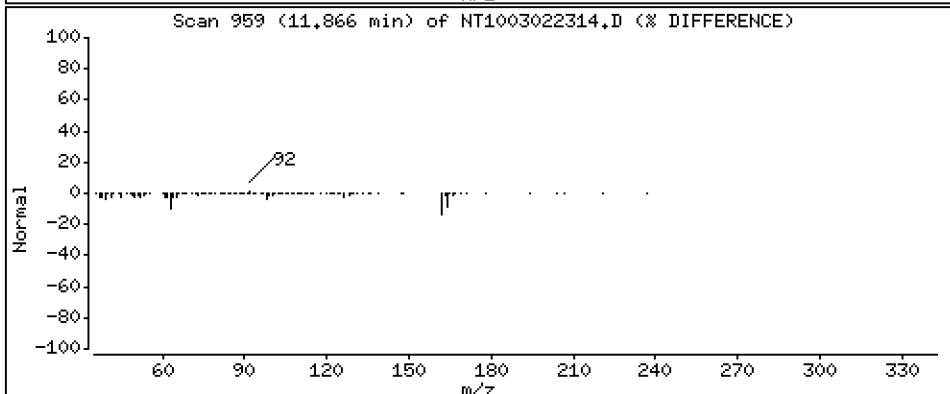
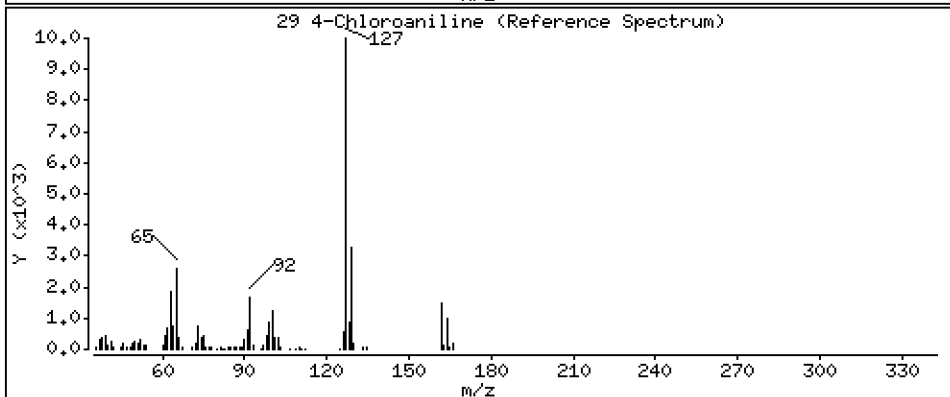
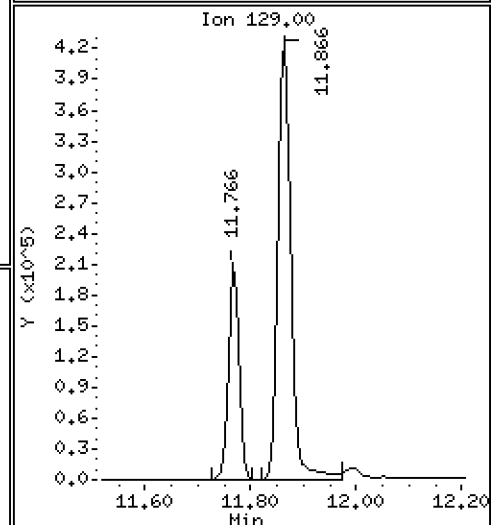
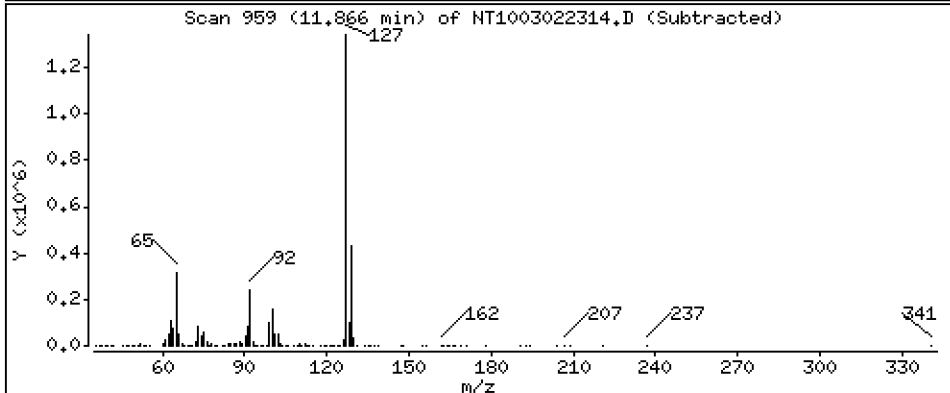
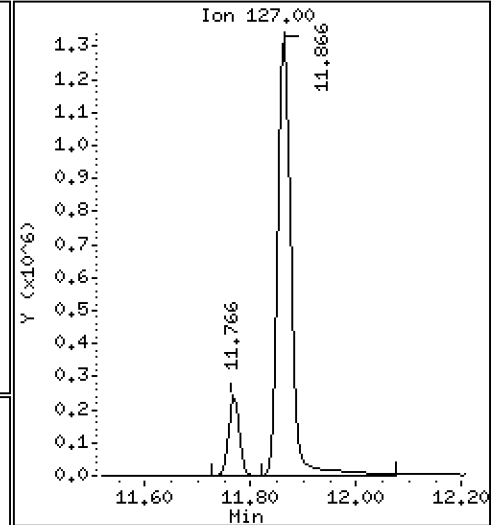
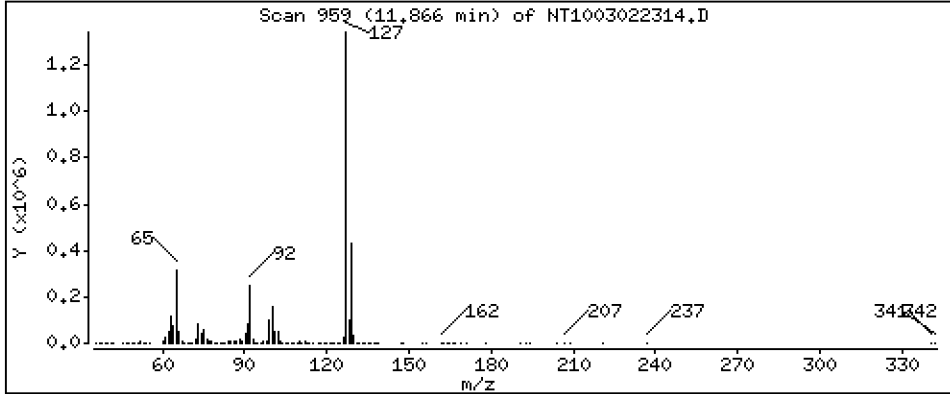
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 9,462 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

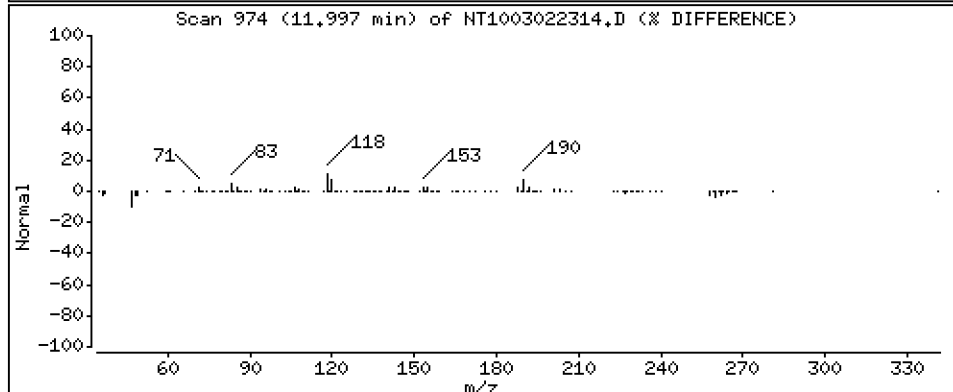
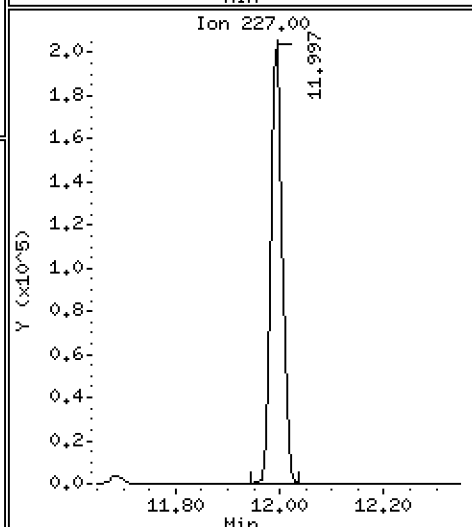
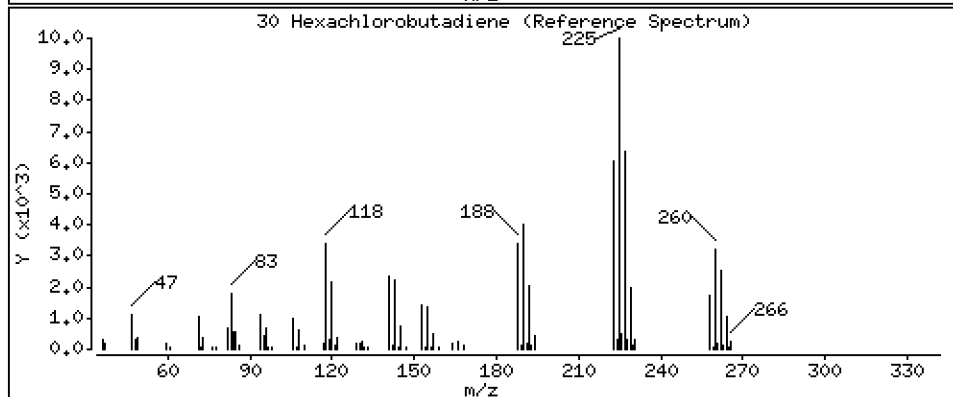
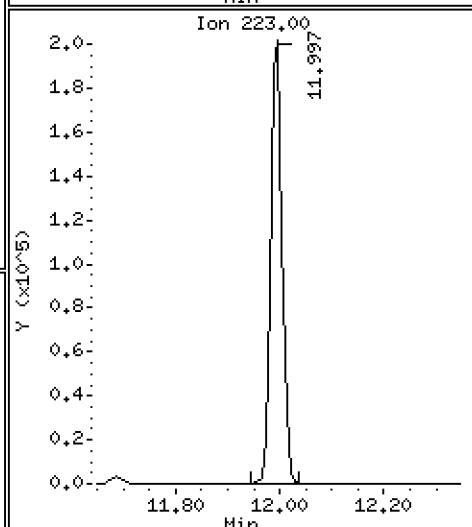
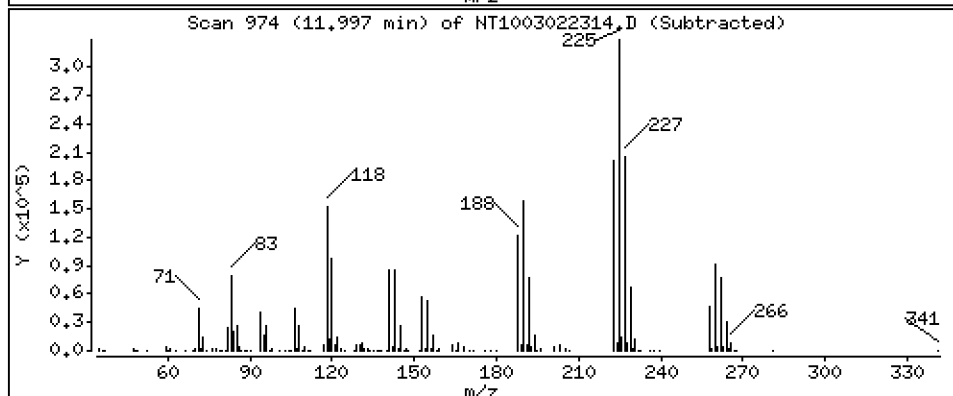
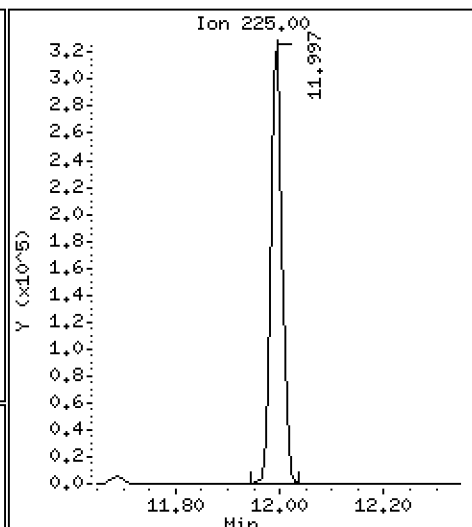
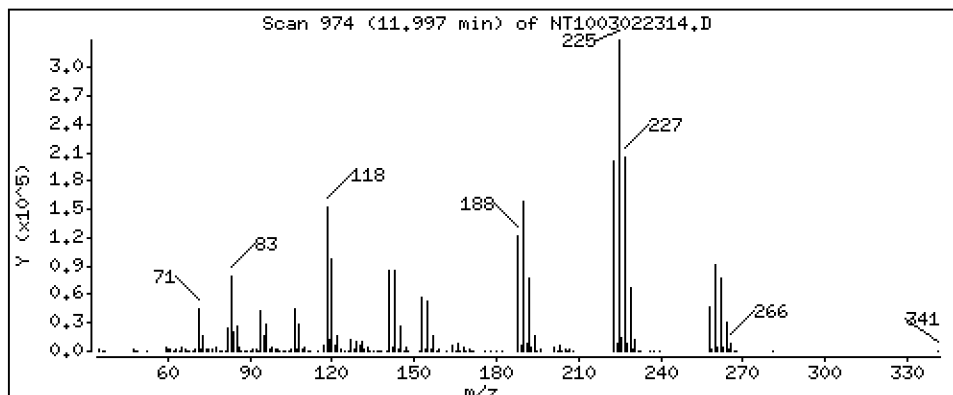
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,689 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

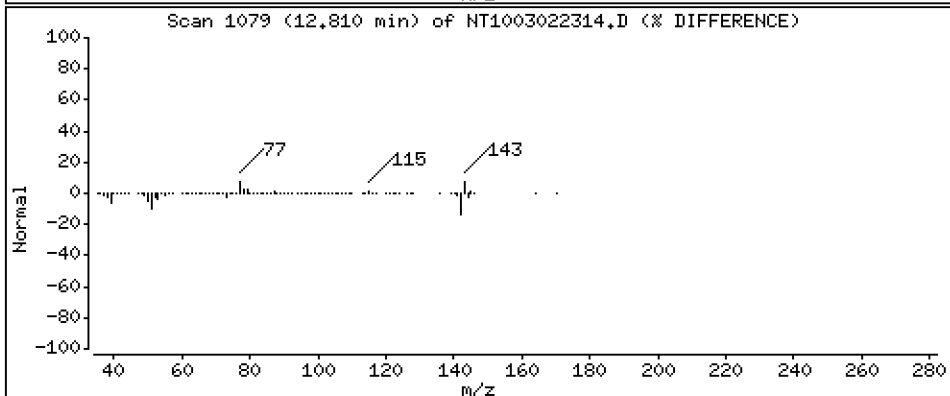
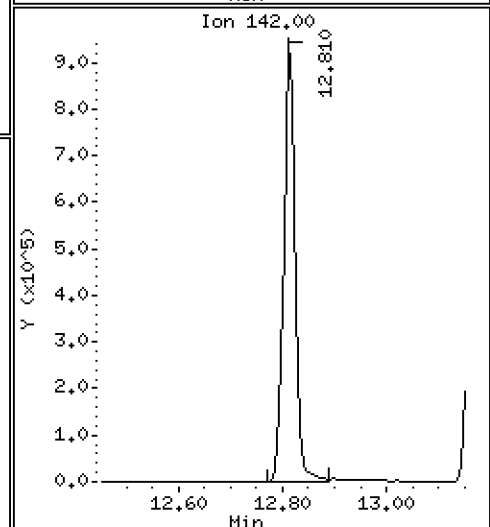
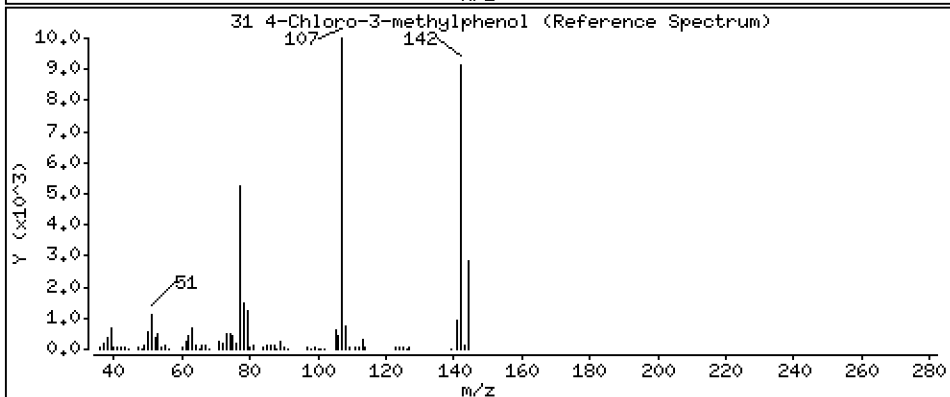
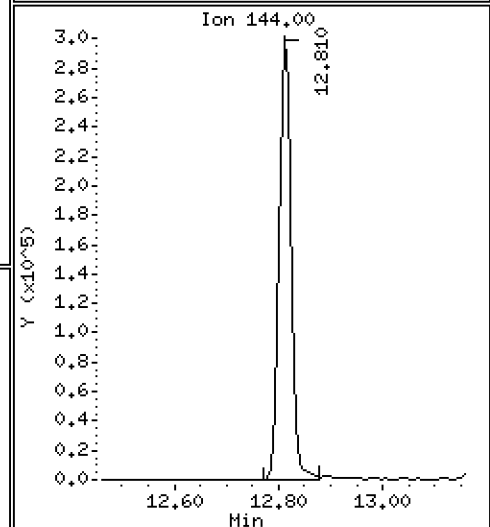
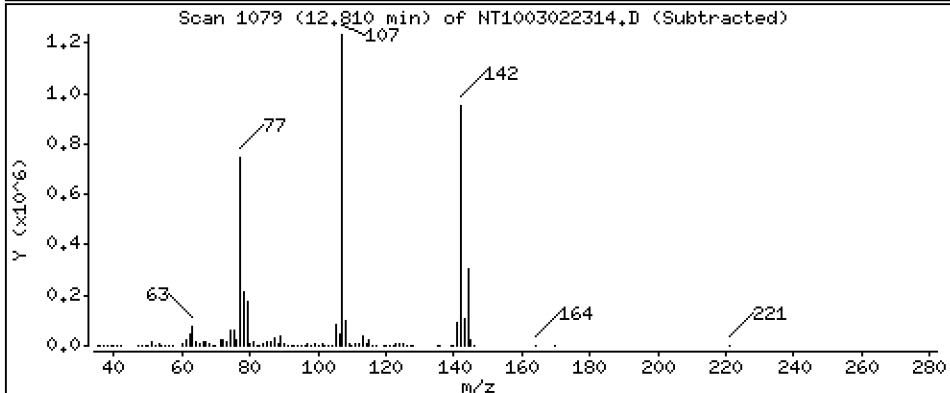
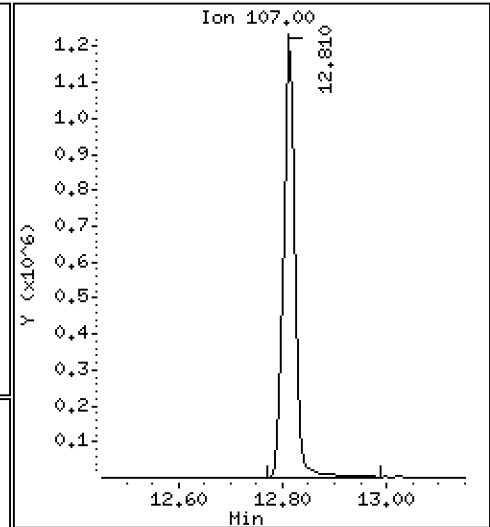
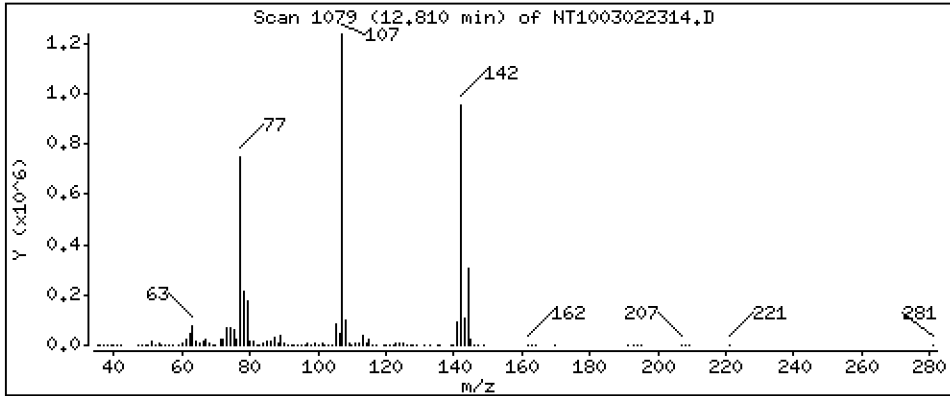
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 10,01 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

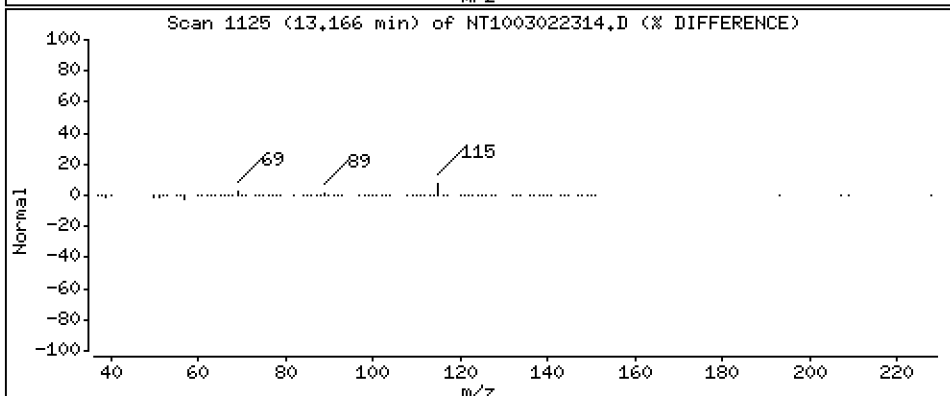
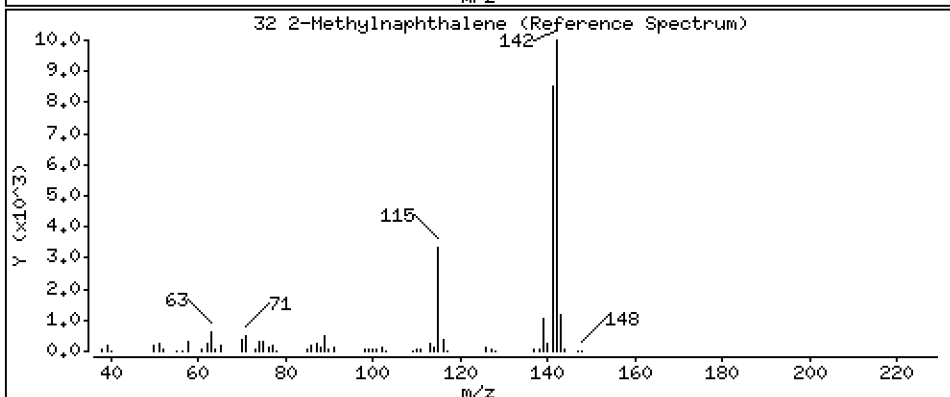
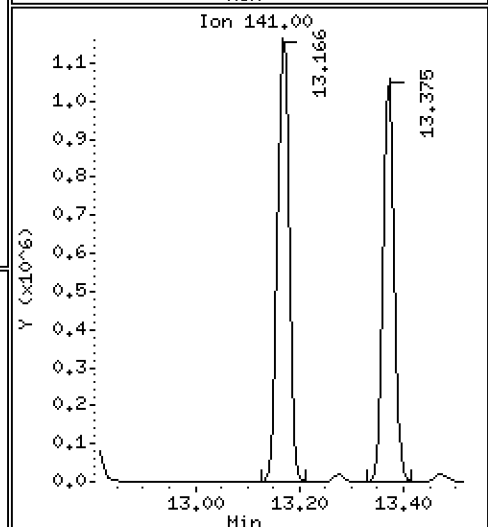
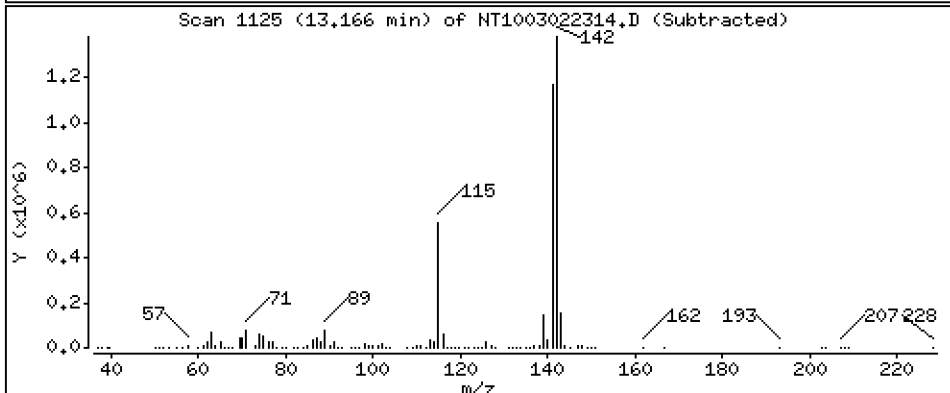
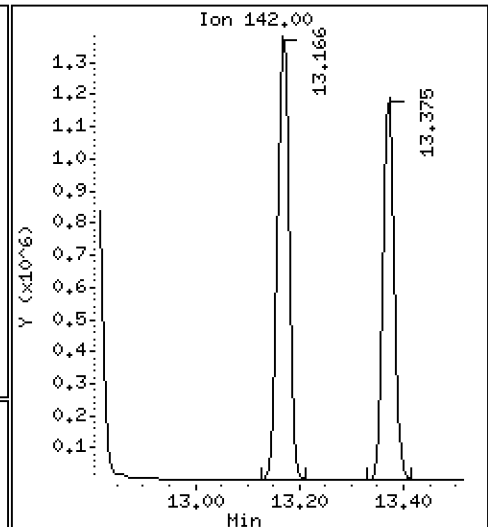
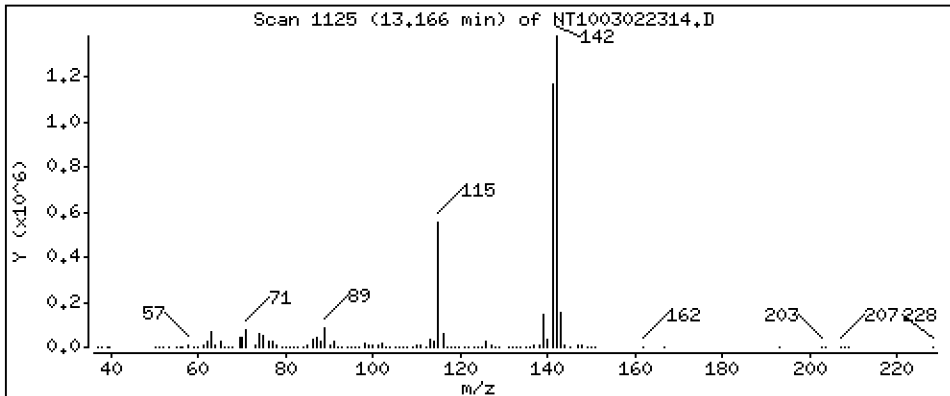
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 5,118 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

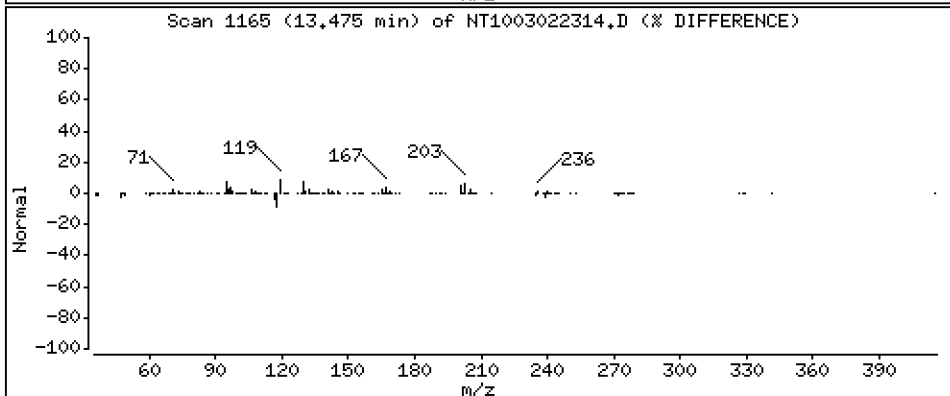
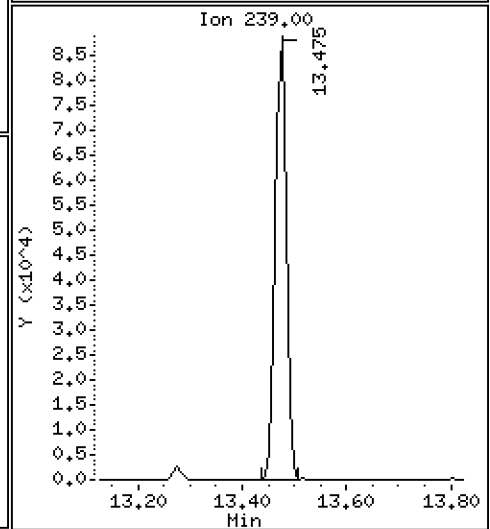
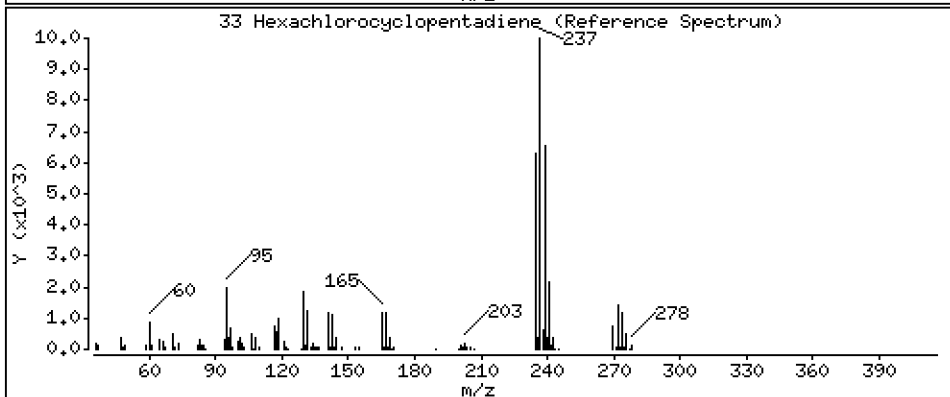
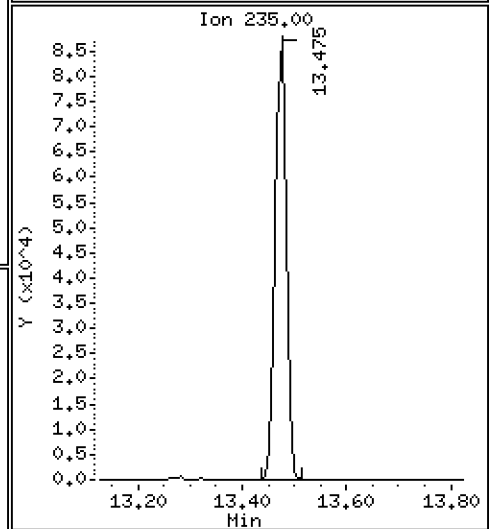
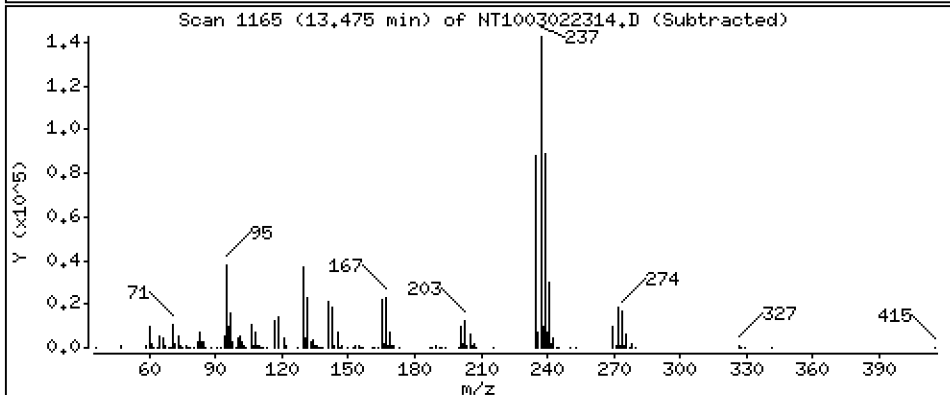
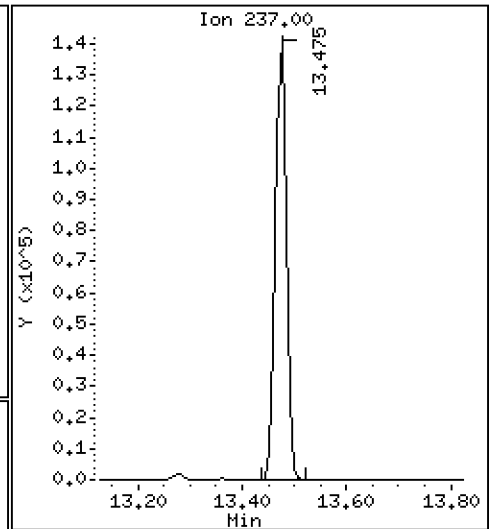
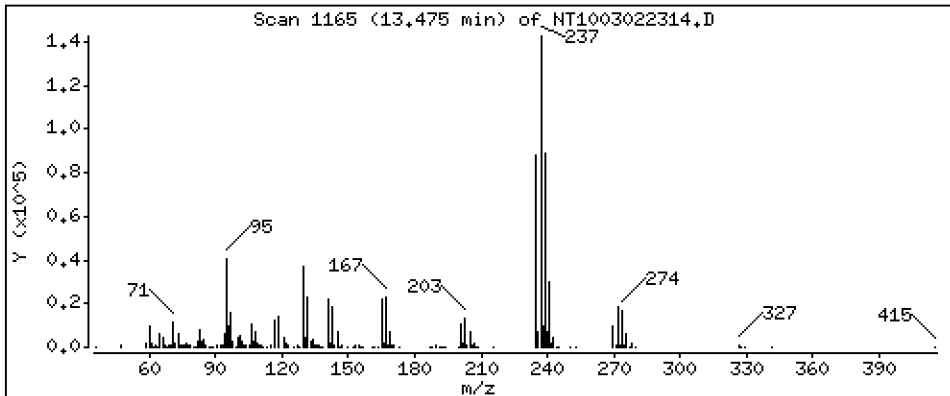
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 5,043 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

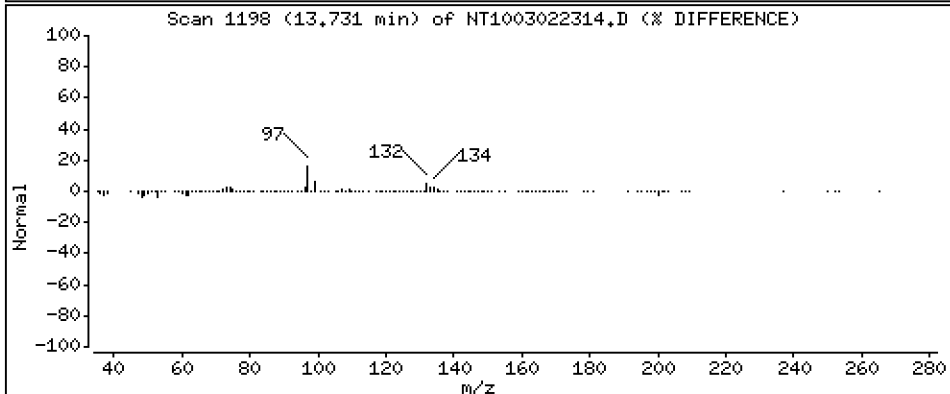
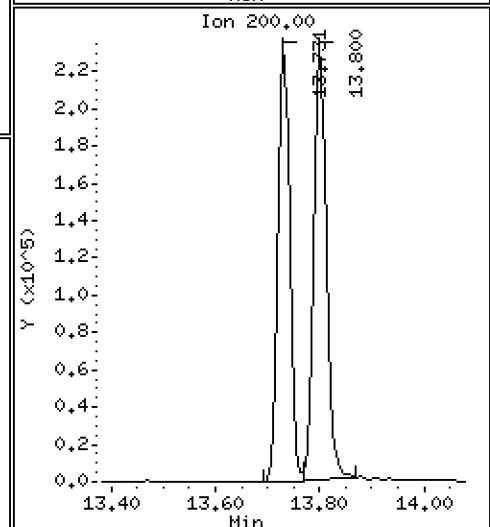
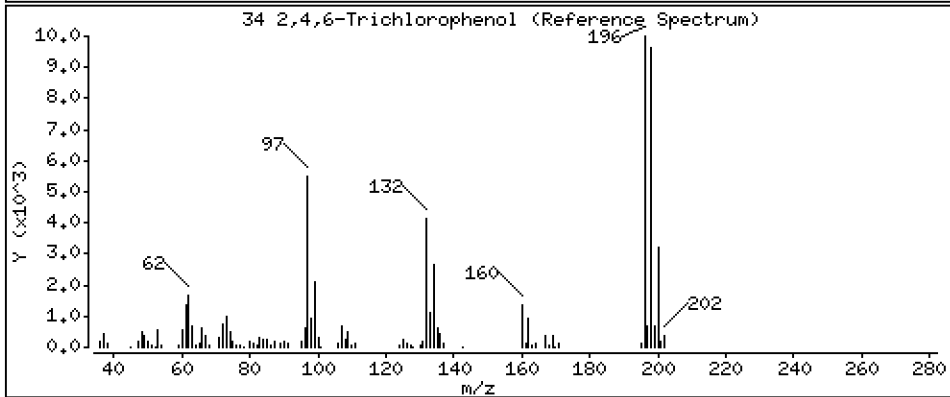
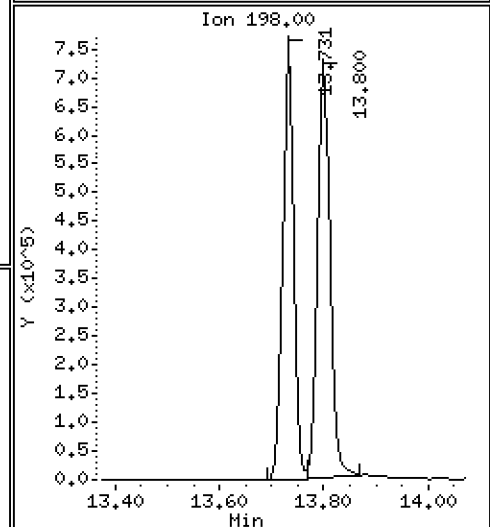
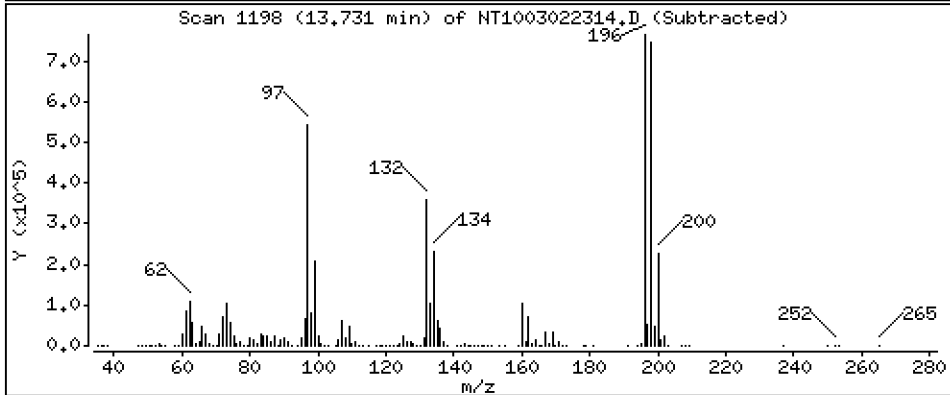
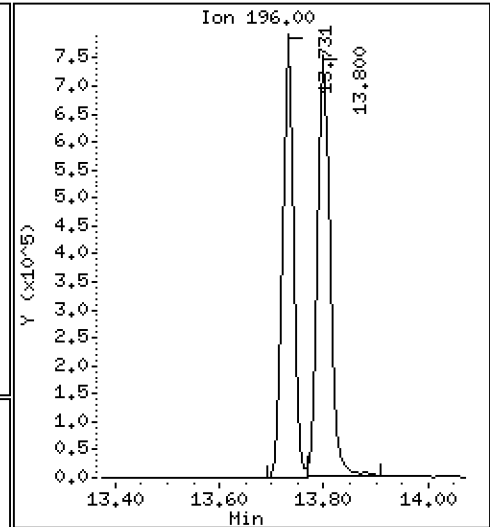
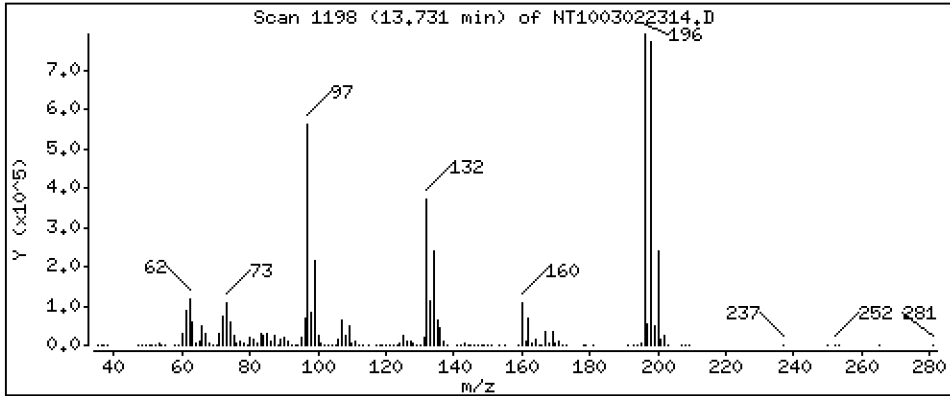
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 10,04 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

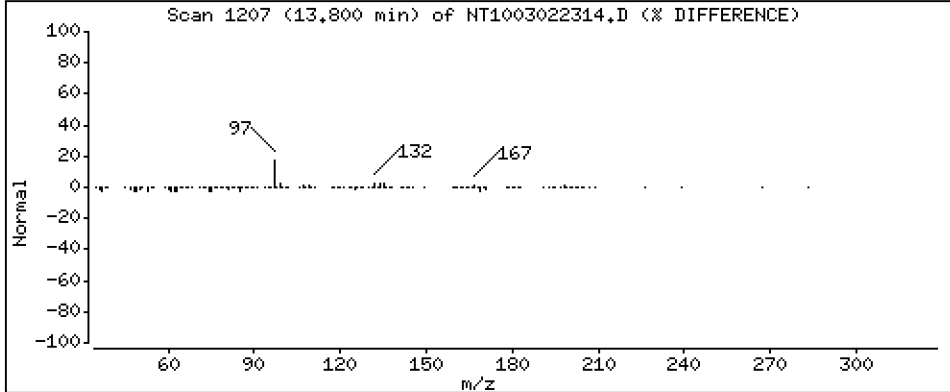
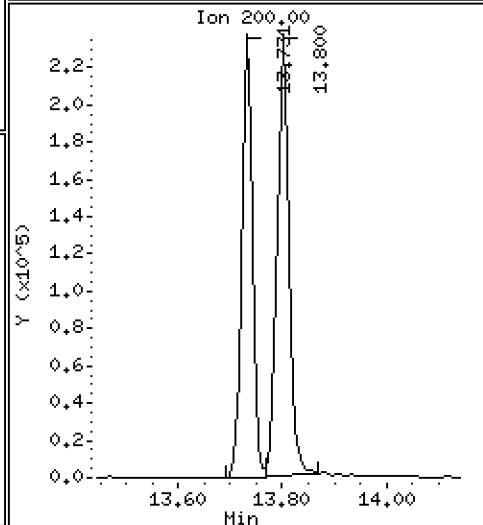
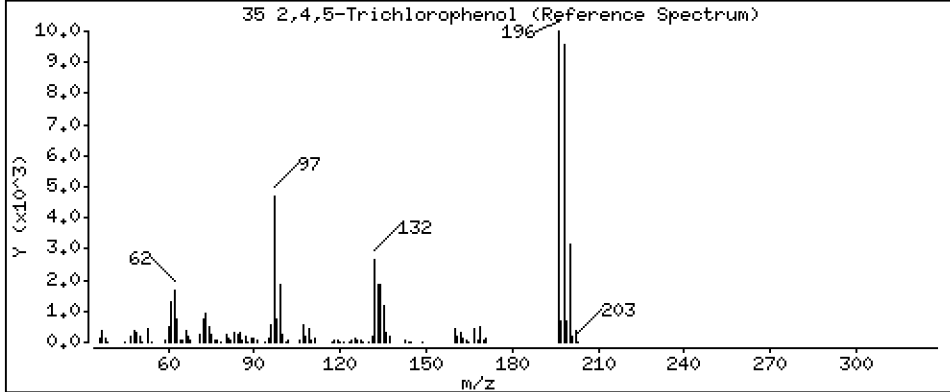
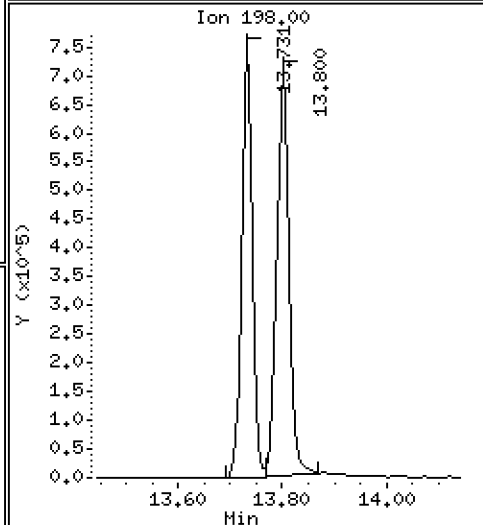
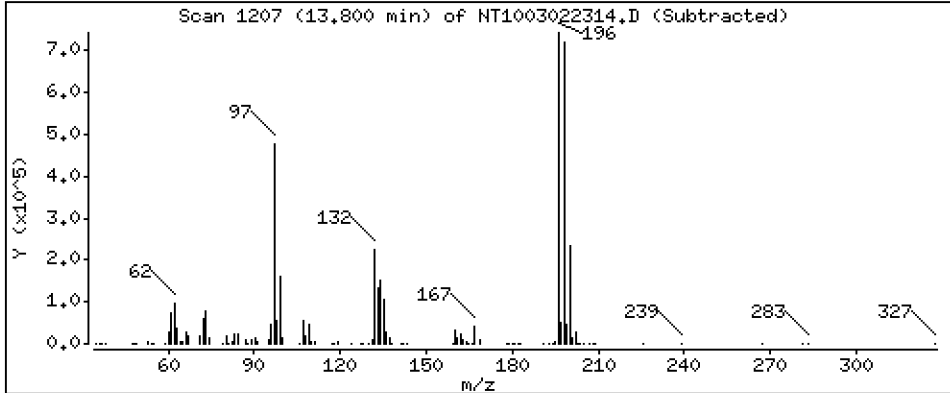
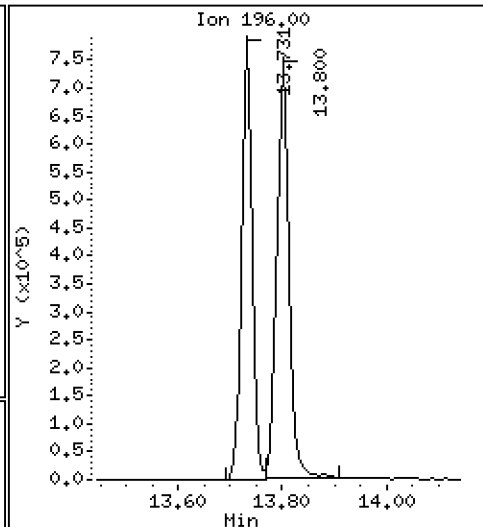
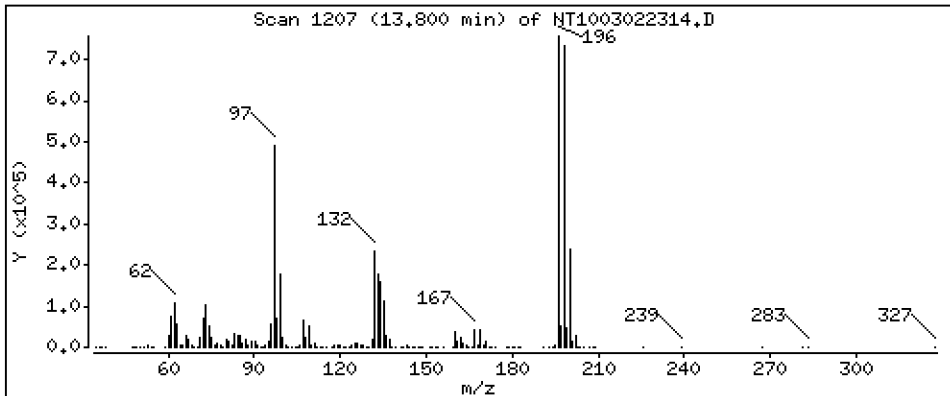
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 9,855 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

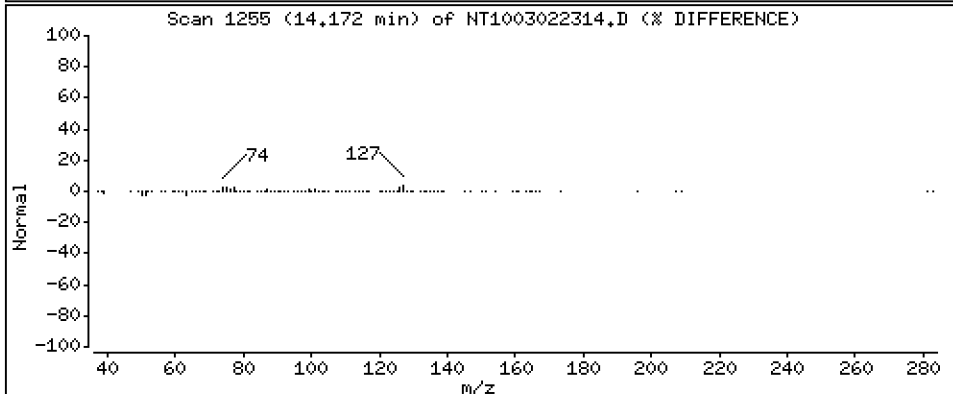
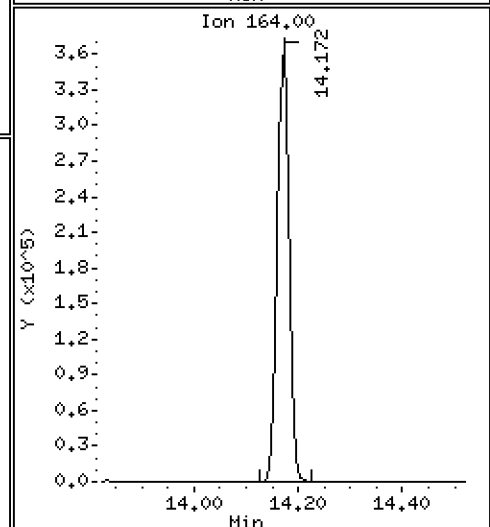
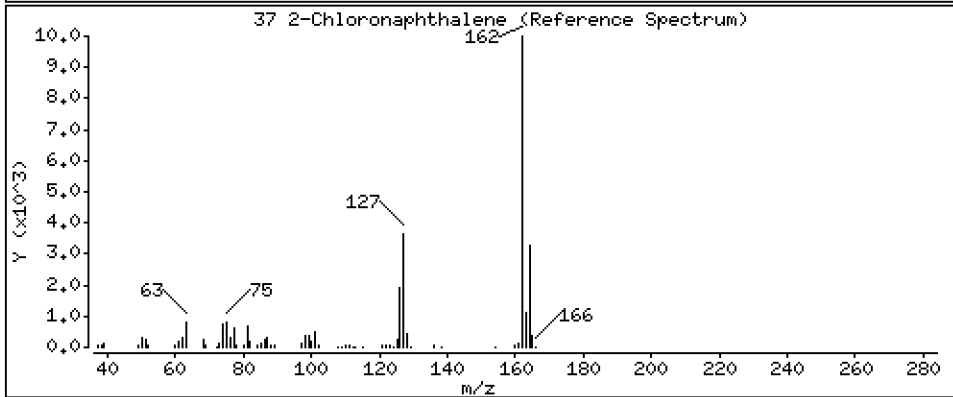
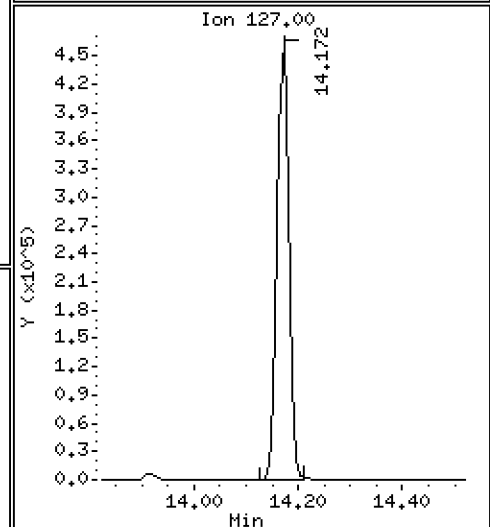
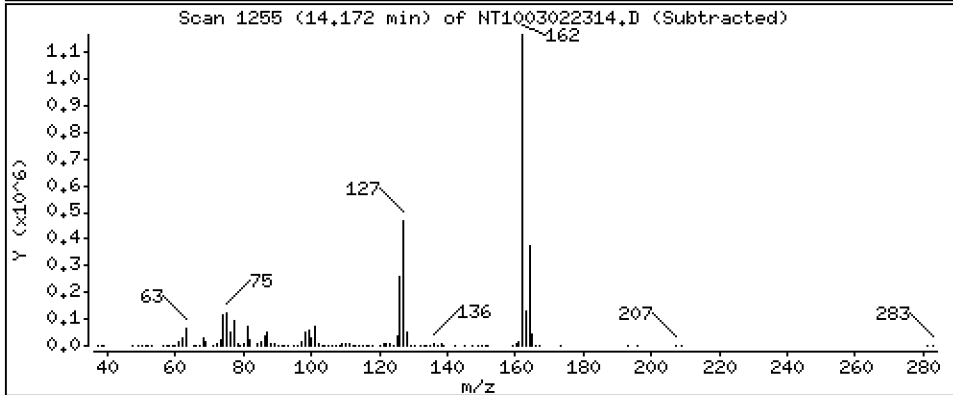
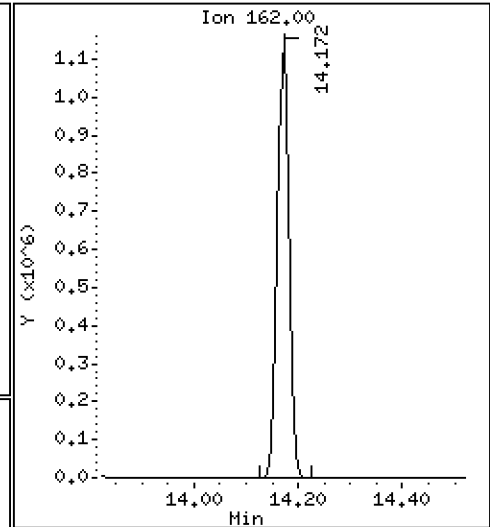
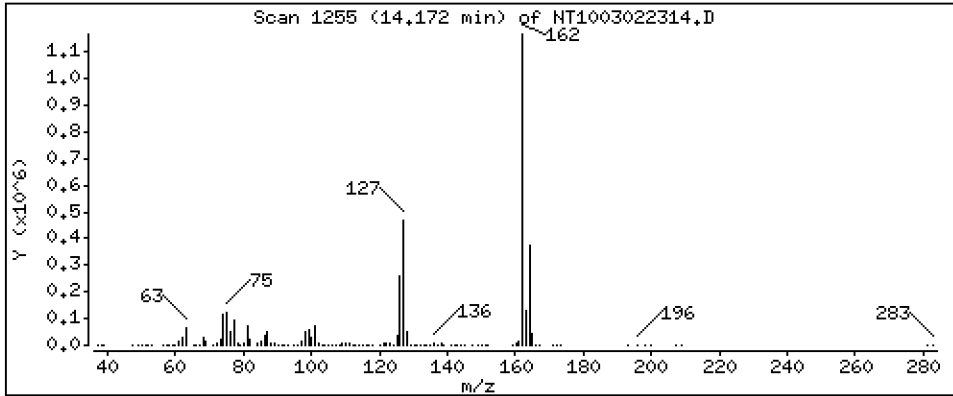
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,251 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

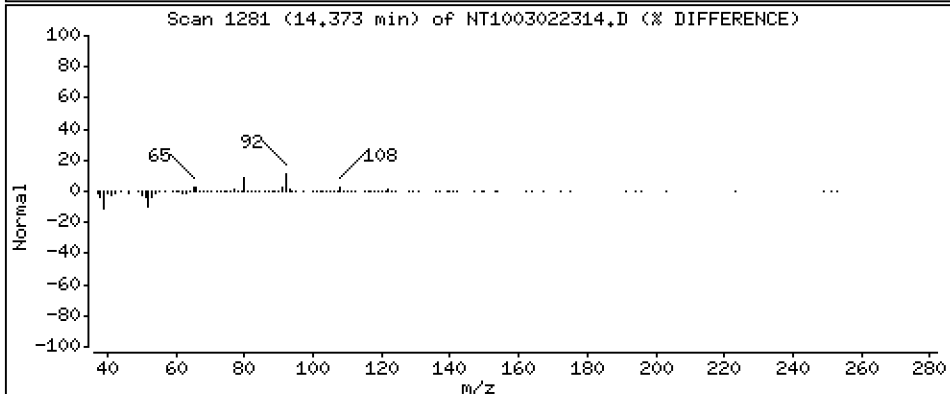
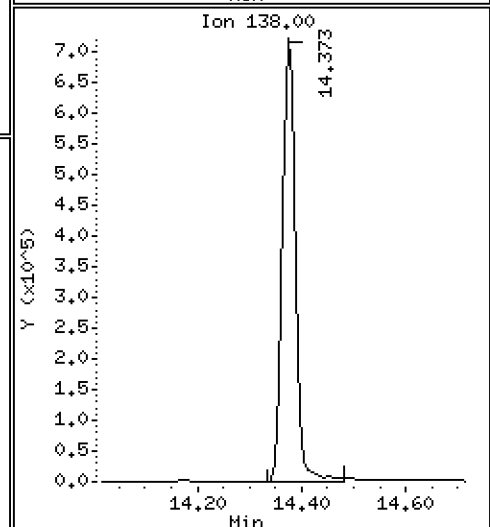
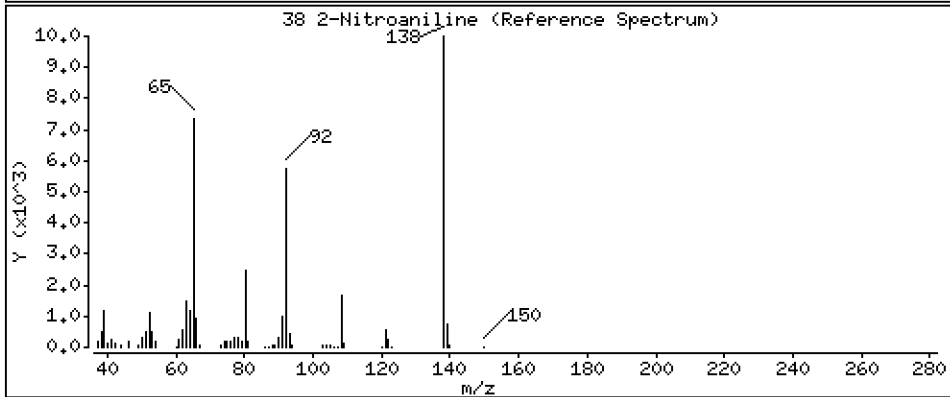
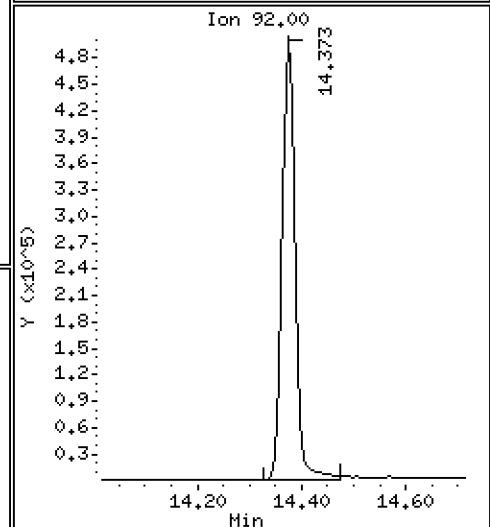
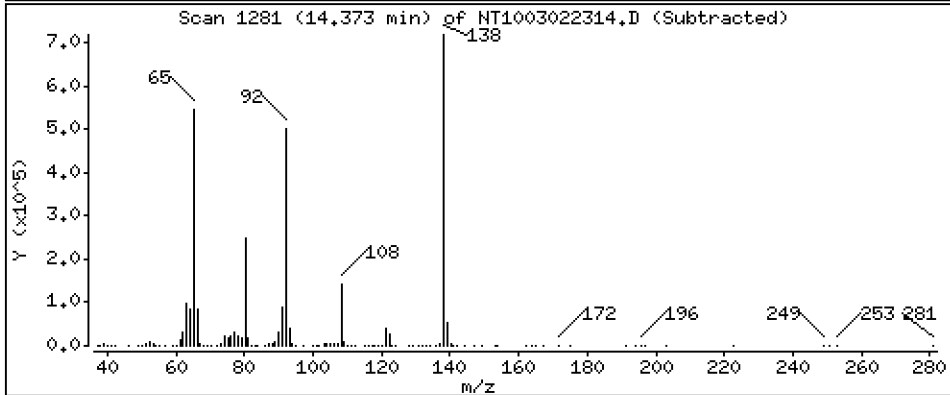
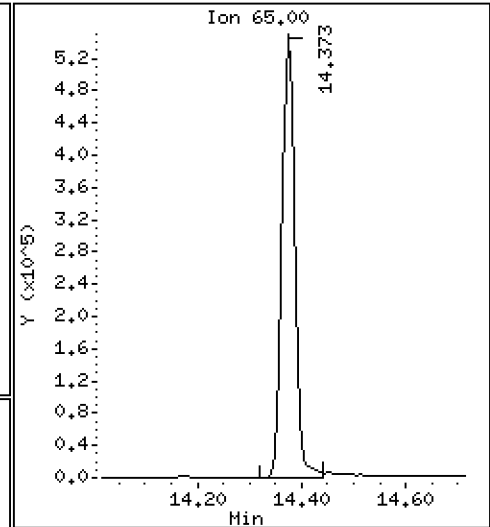
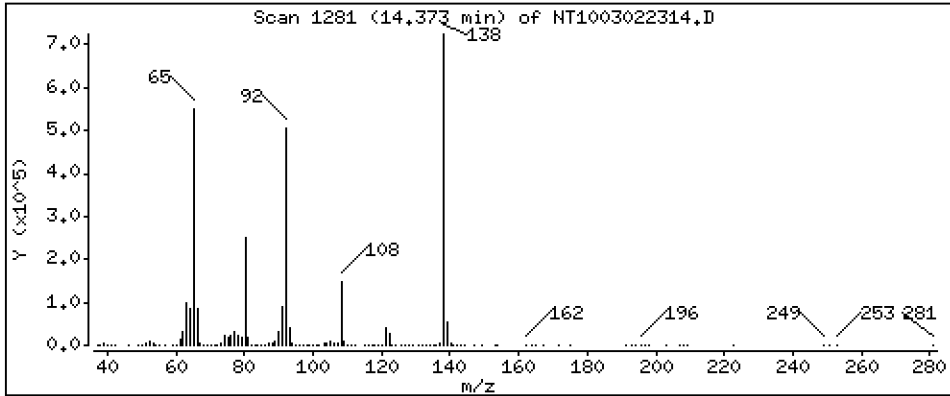
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 9,984 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

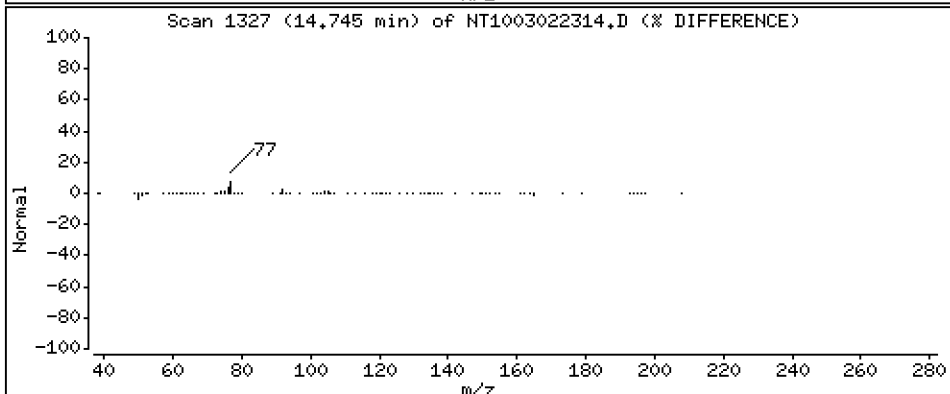
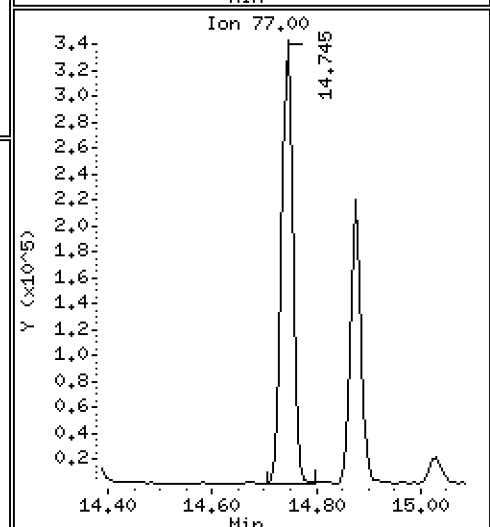
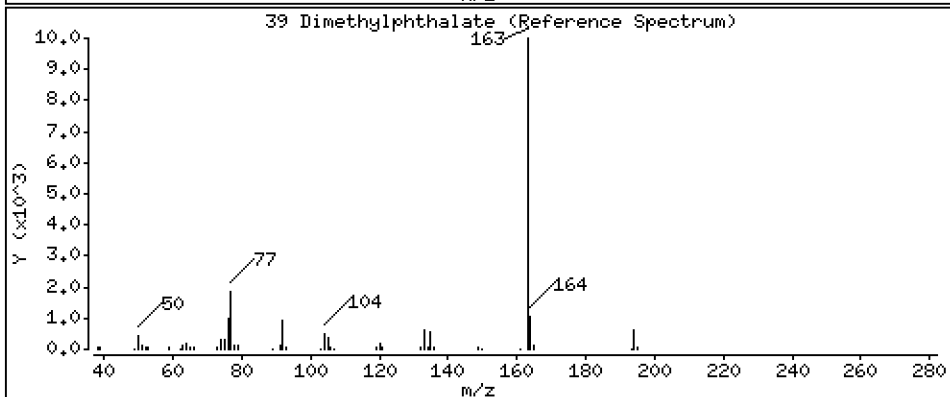
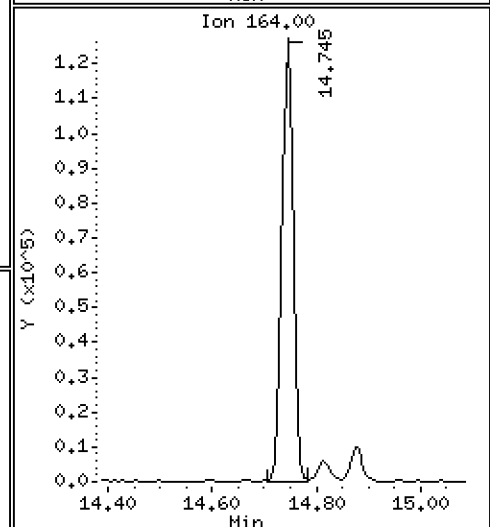
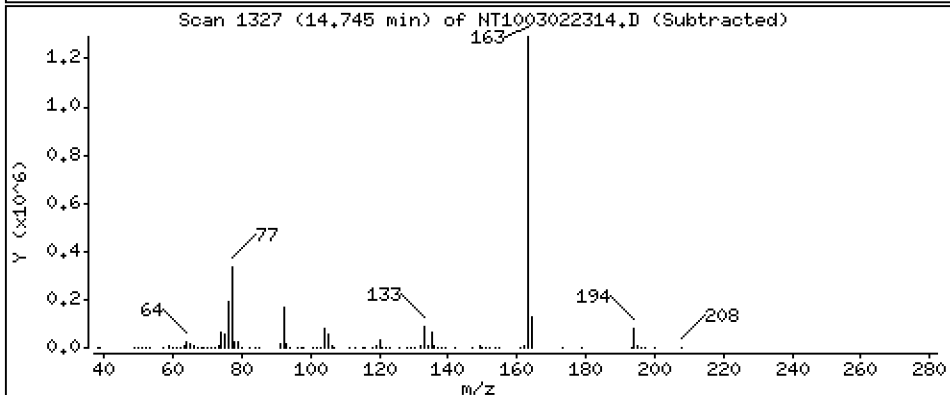
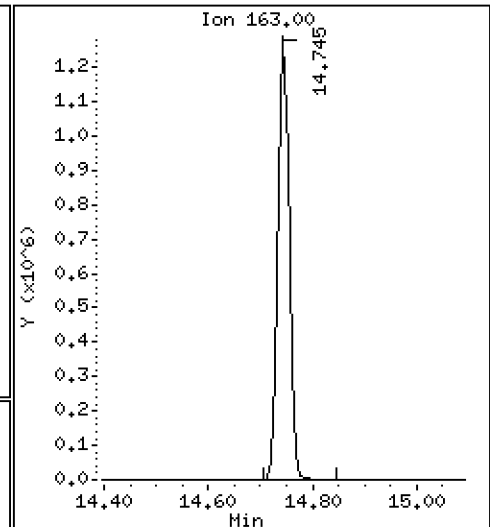
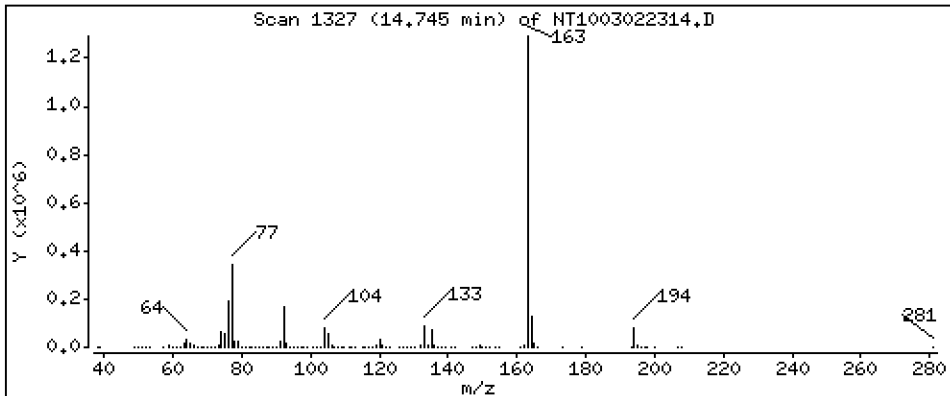
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,937 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

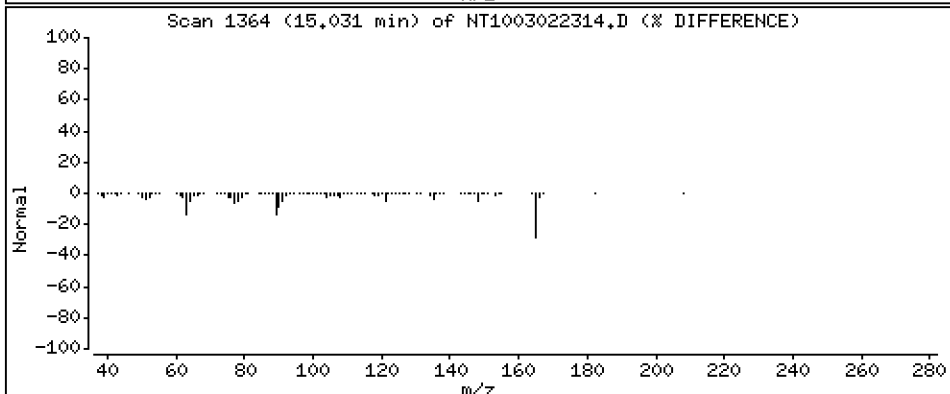
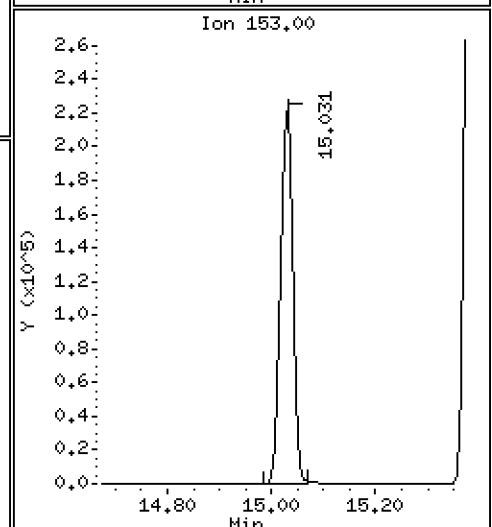
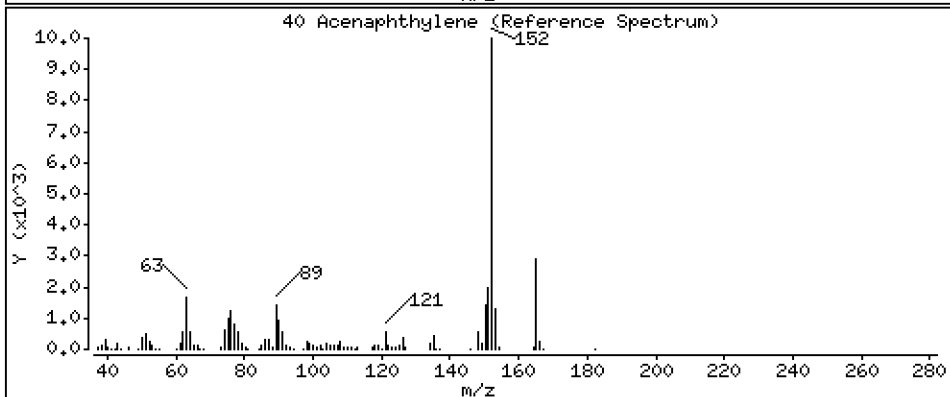
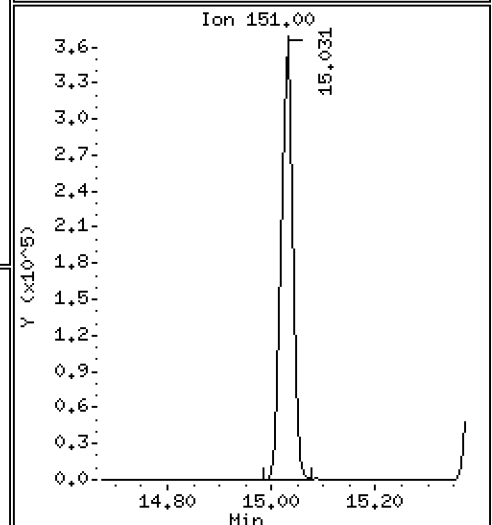
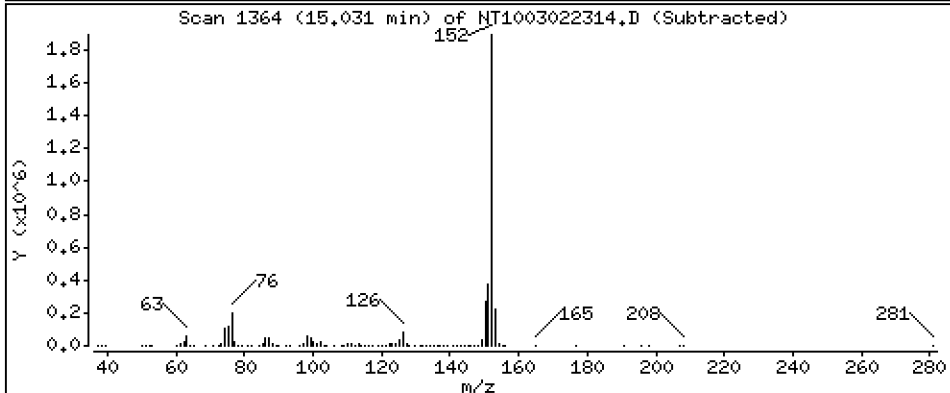
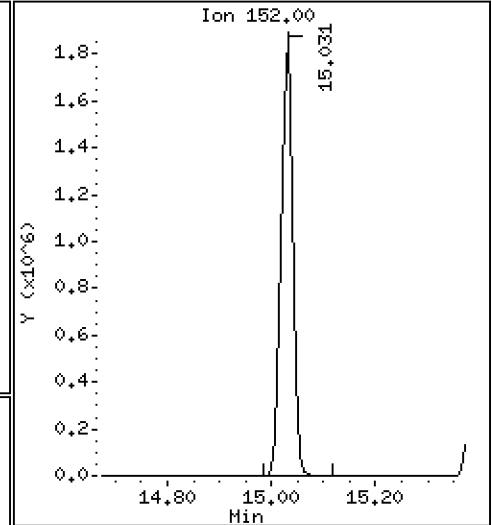
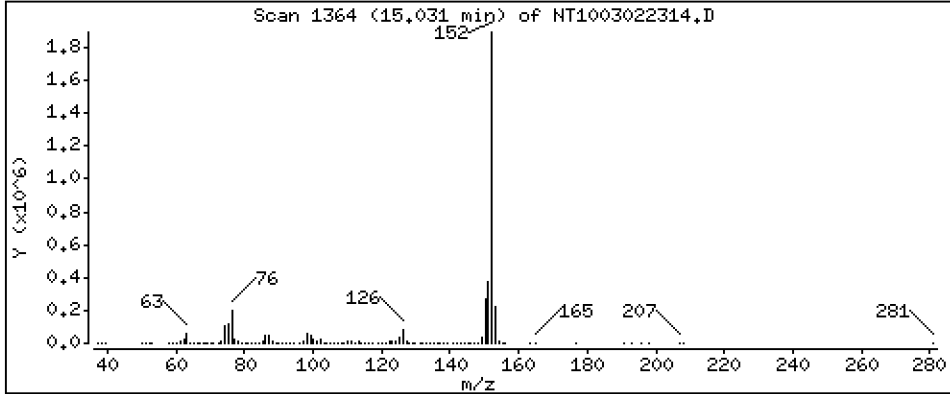
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,822 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

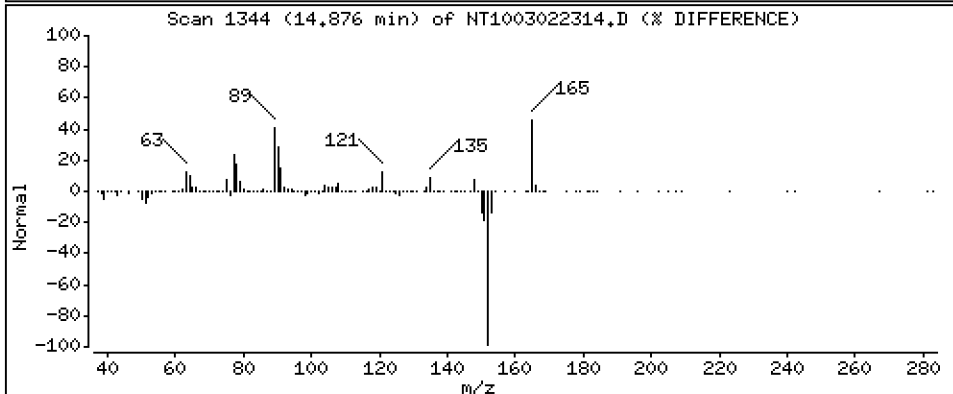
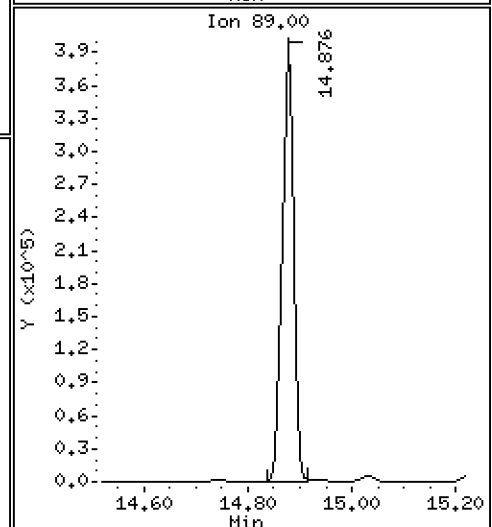
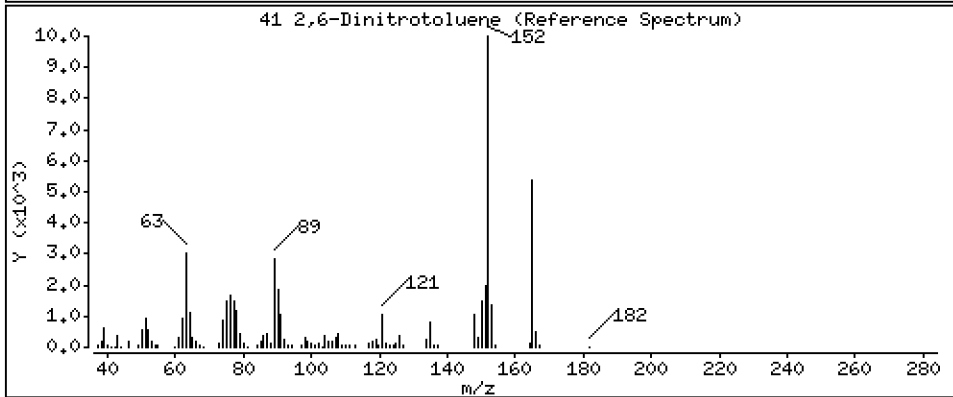
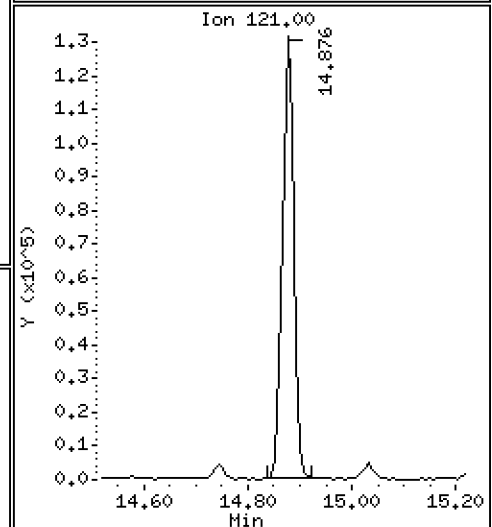
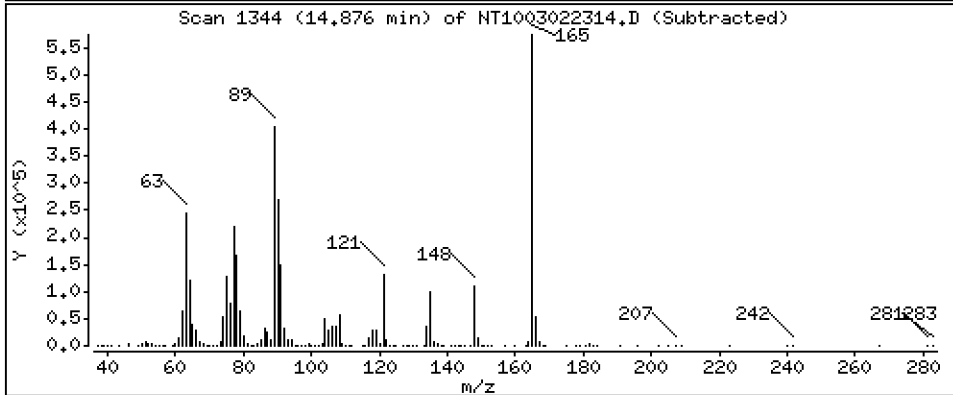
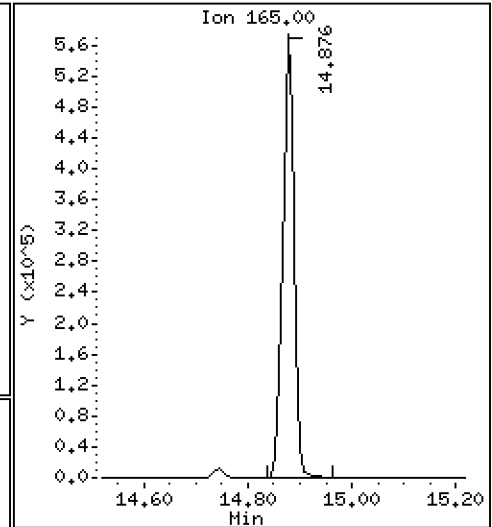
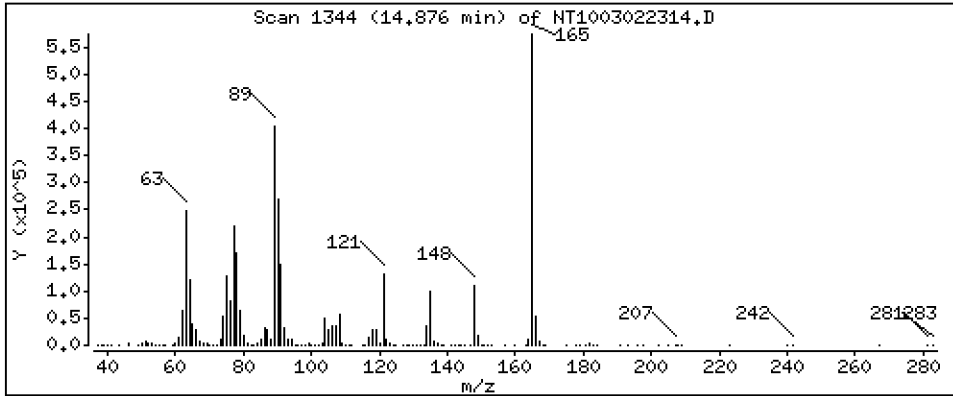
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 10,10 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

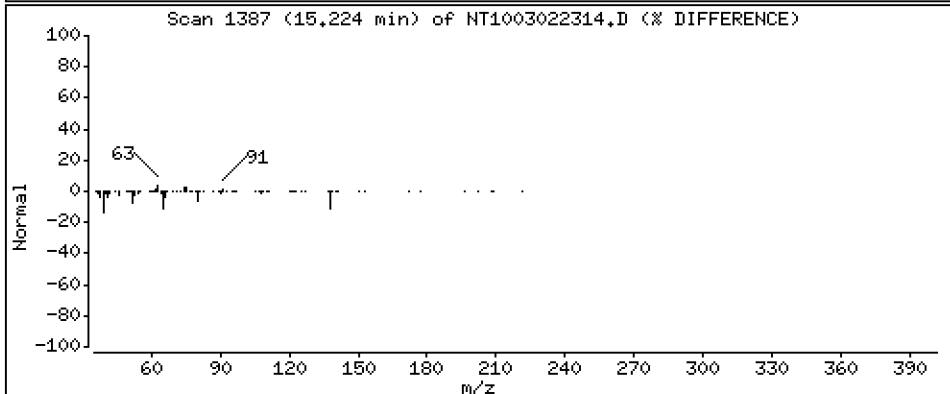
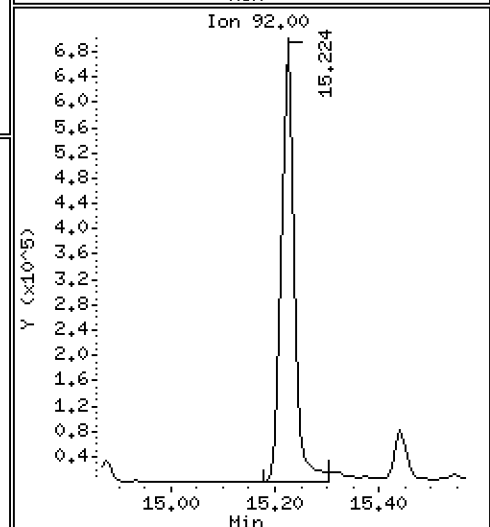
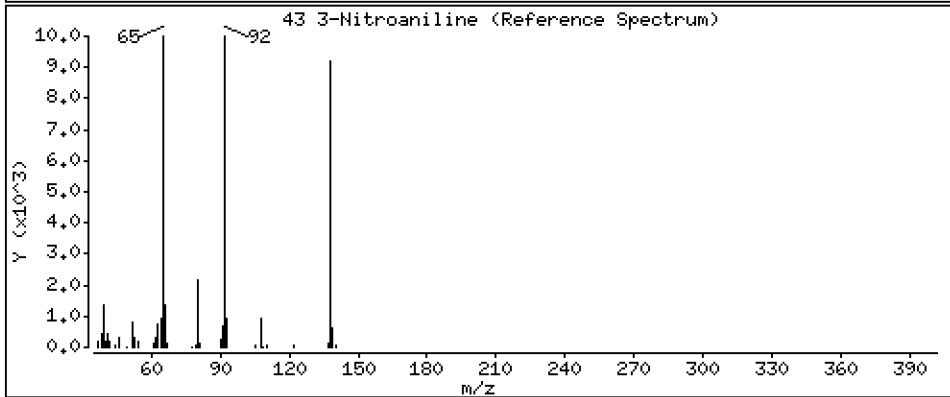
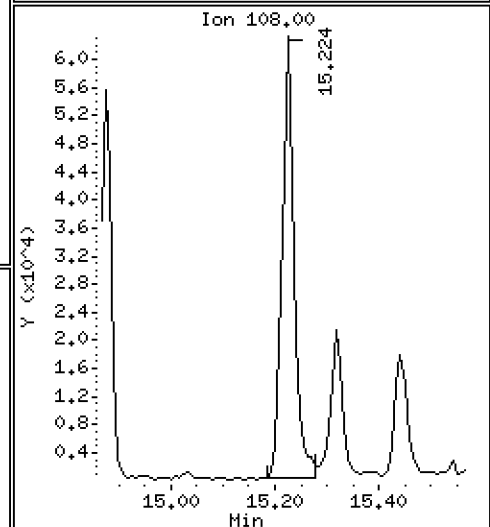
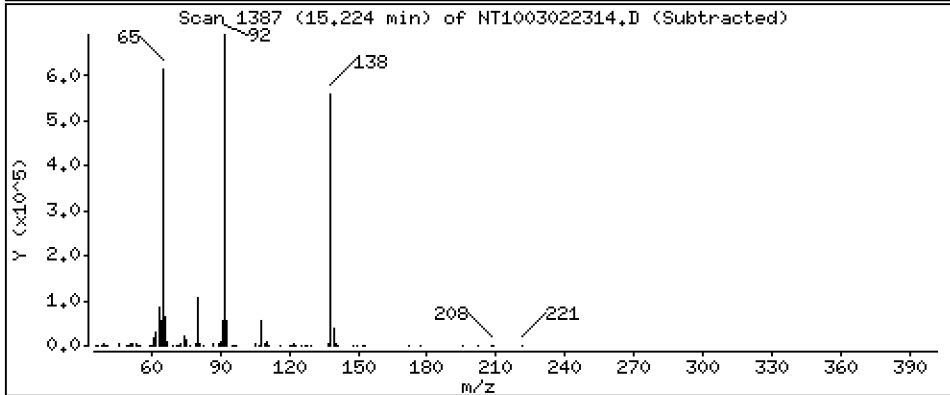
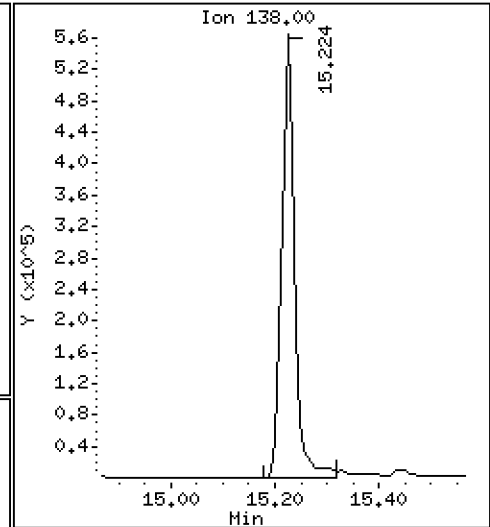
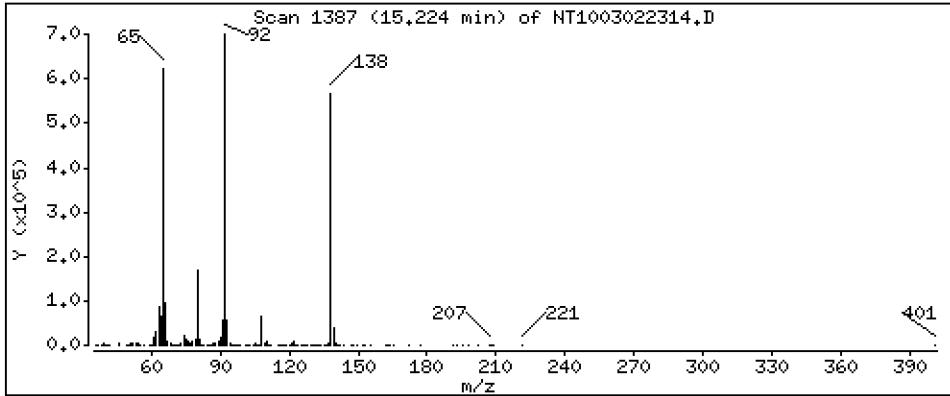
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 10,13 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

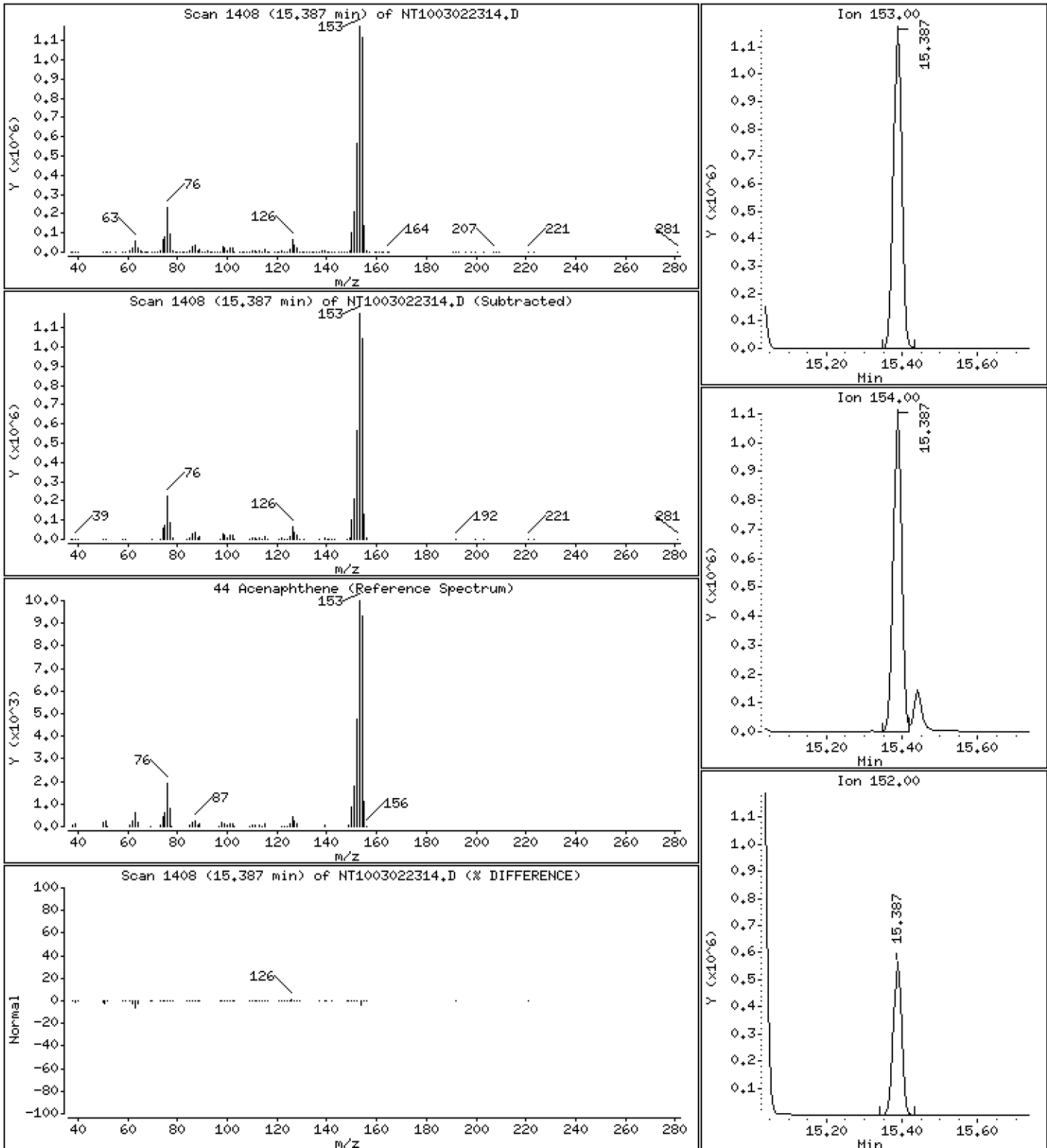
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,129 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

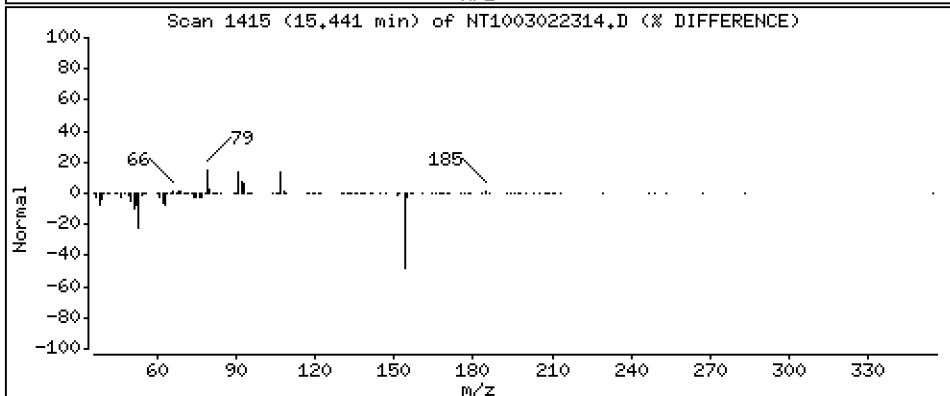
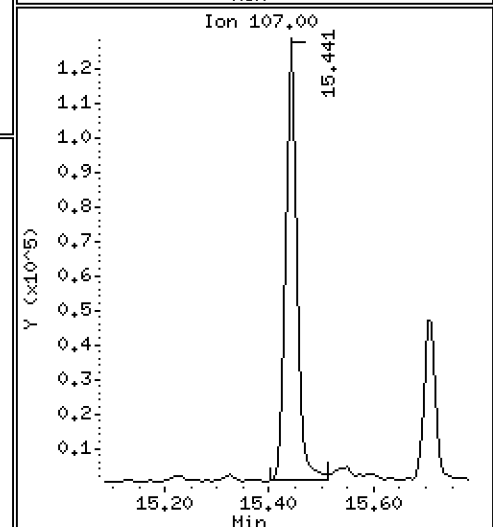
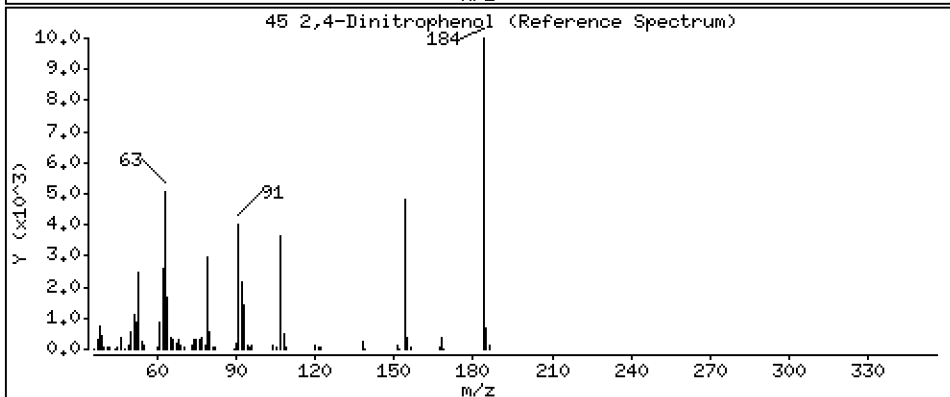
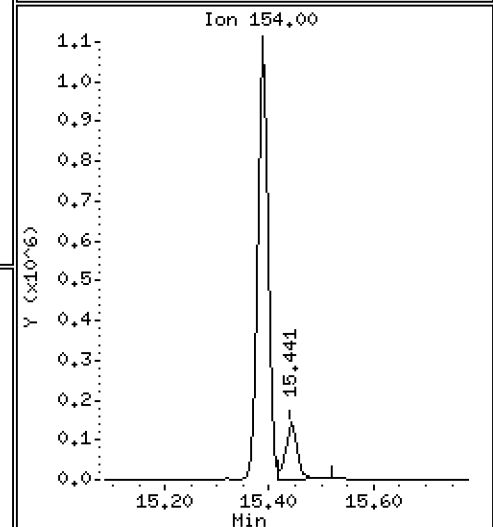
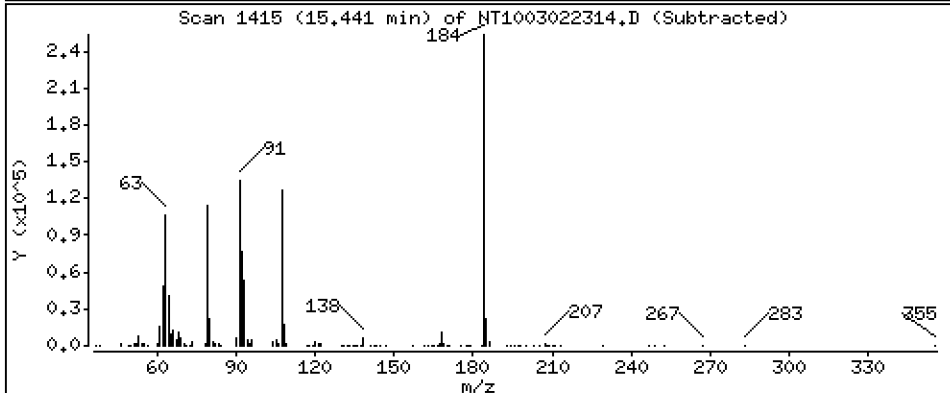
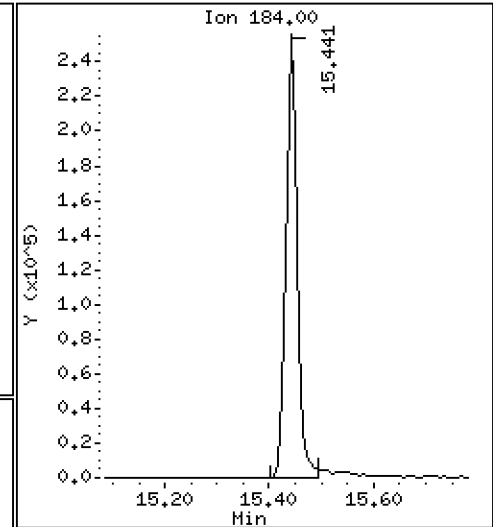
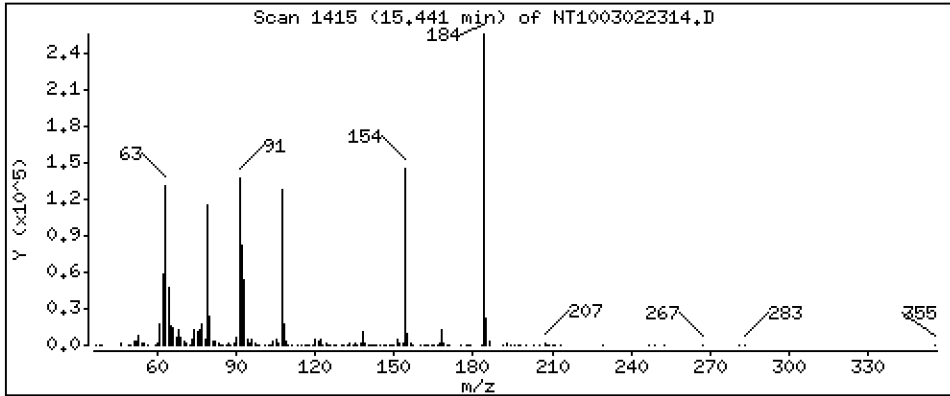
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 16,90 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

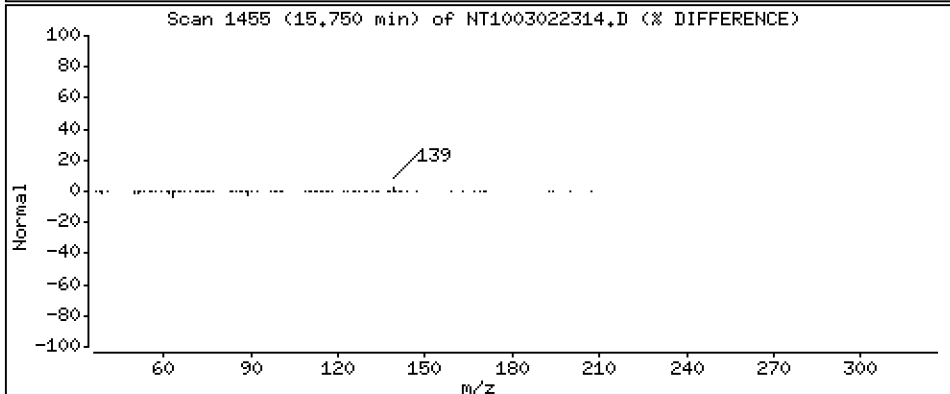
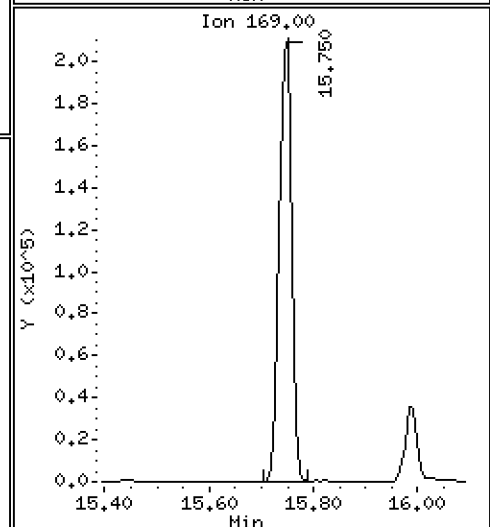
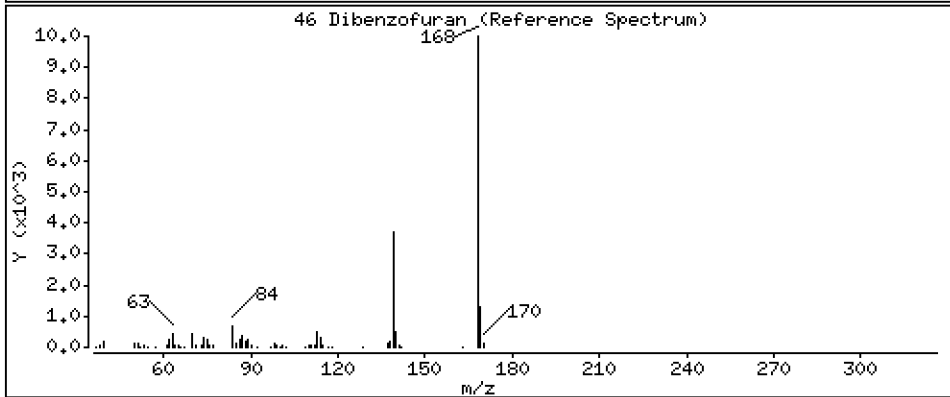
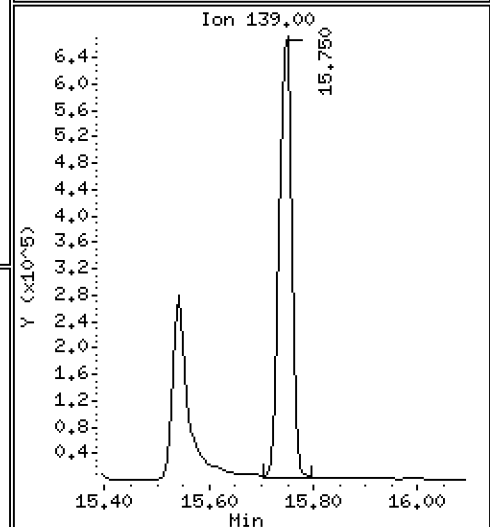
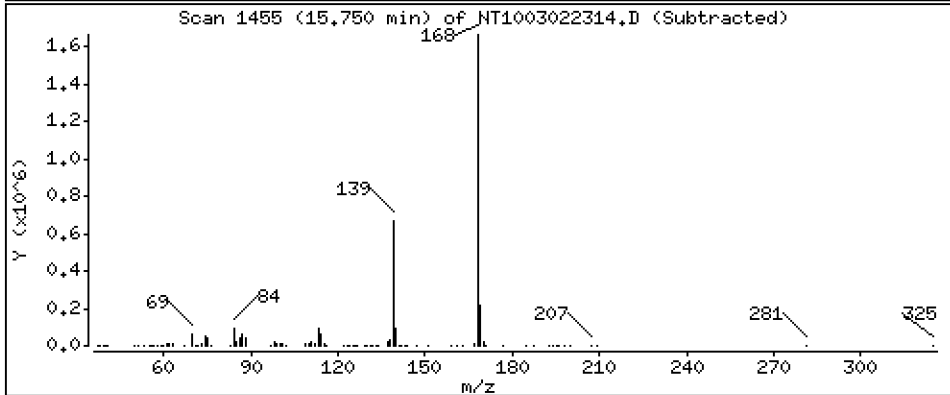
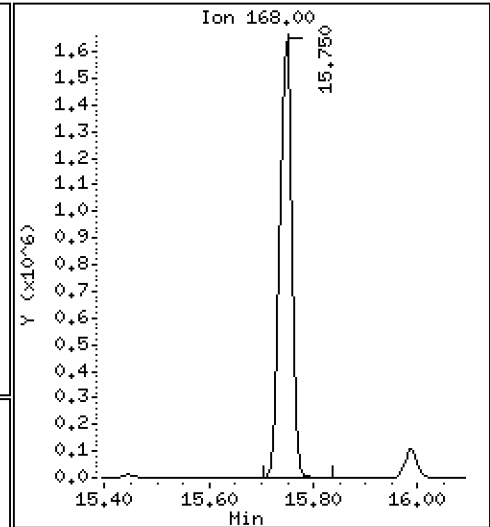
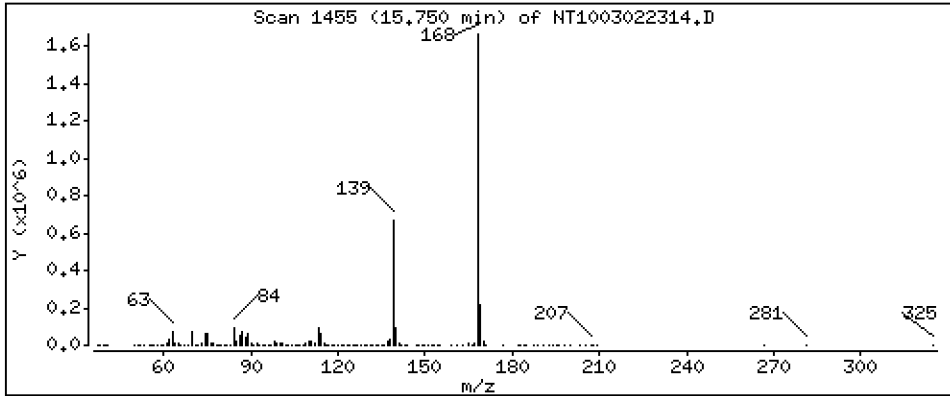
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 5,162 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

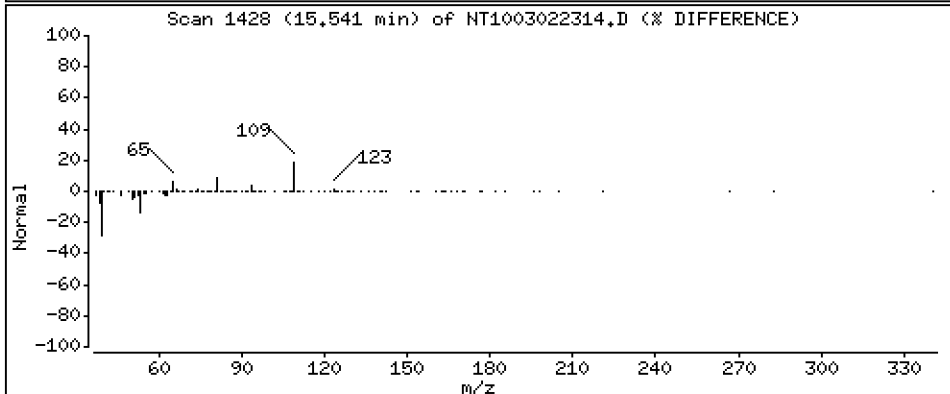
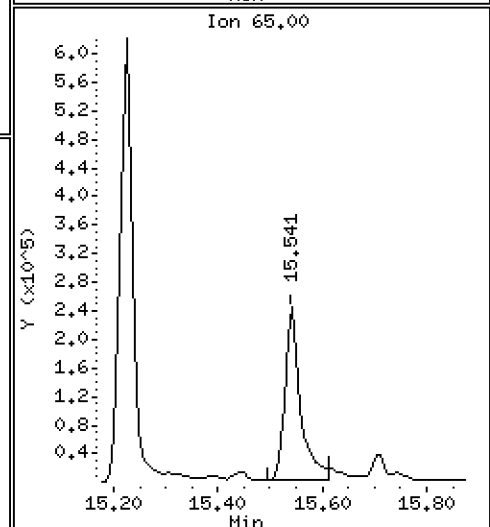
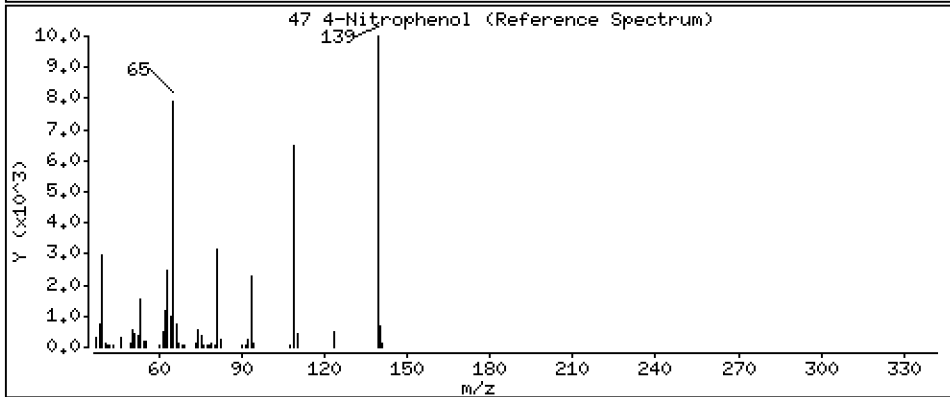
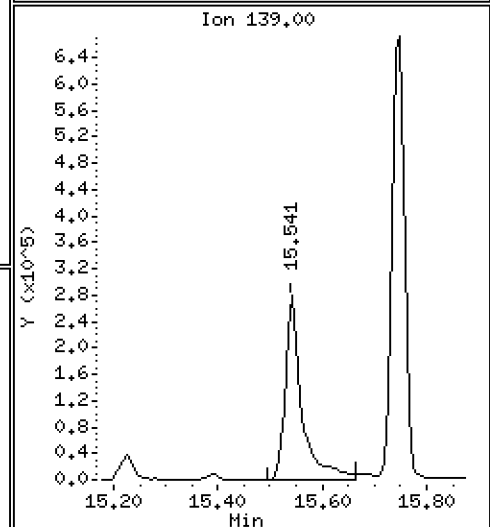
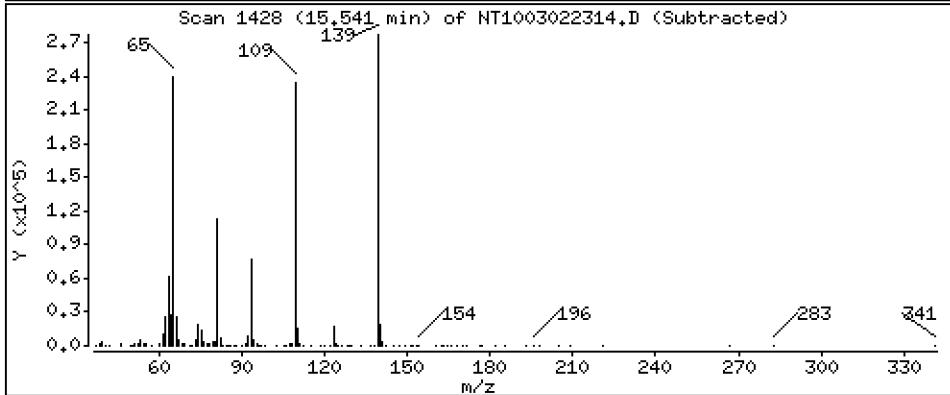
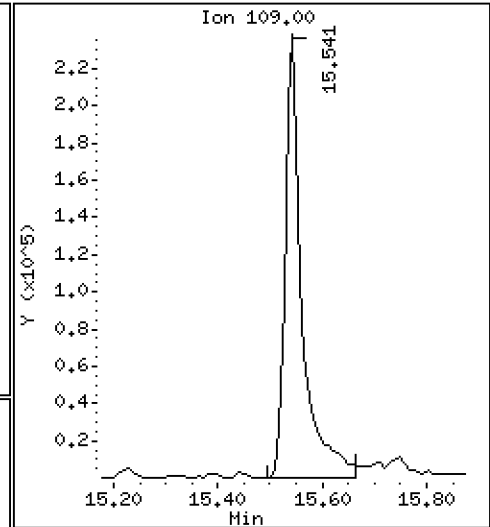
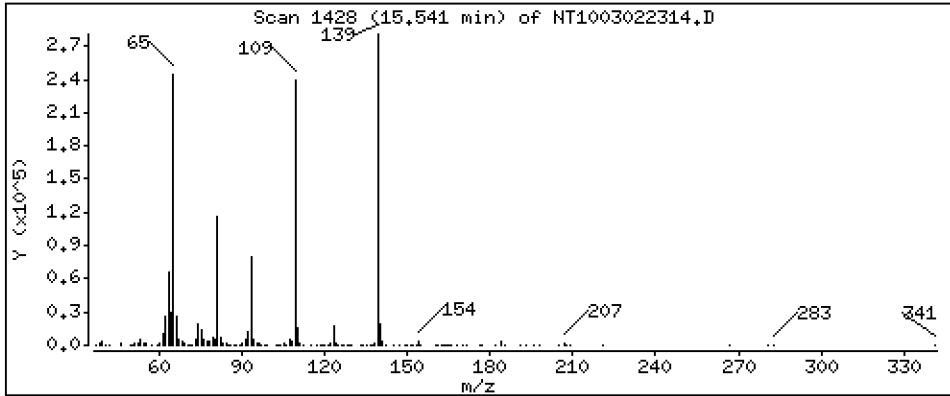
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 8,032 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

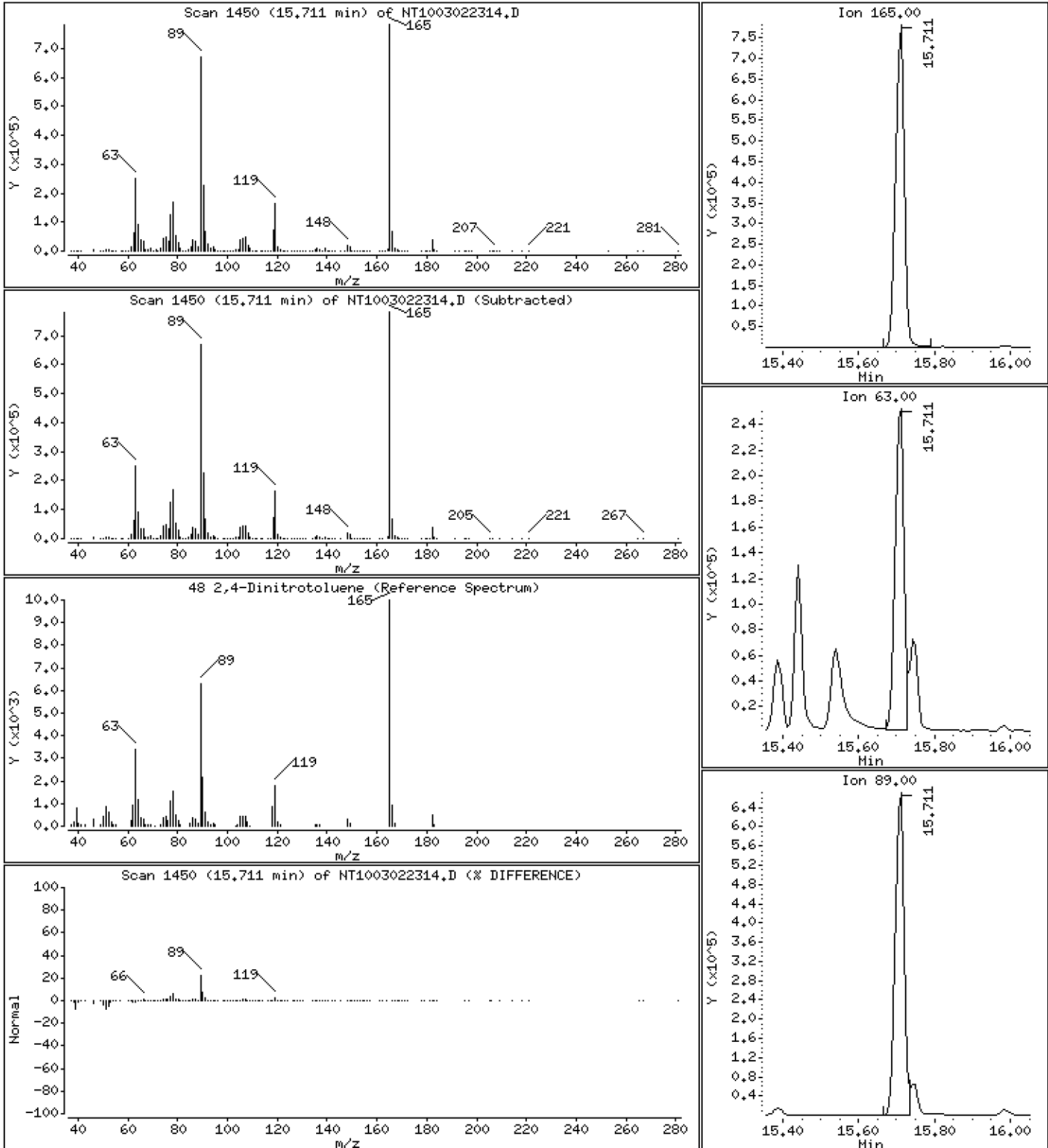
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 9,784 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

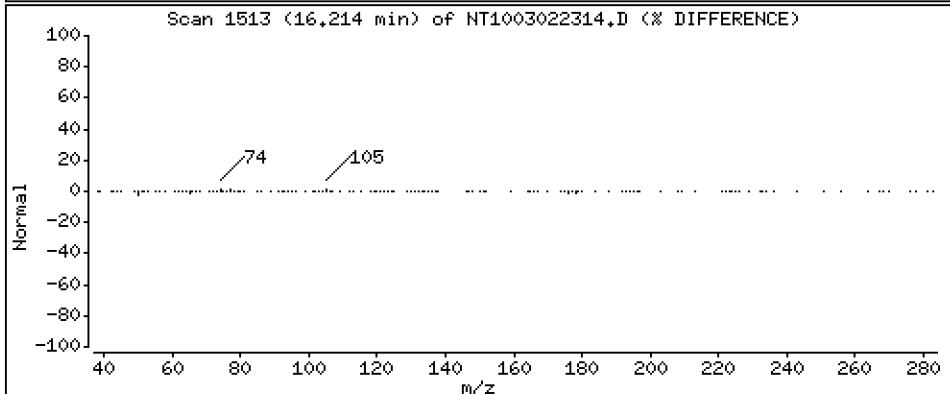
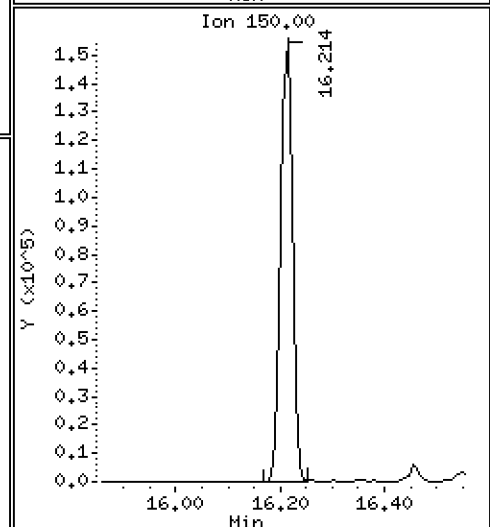
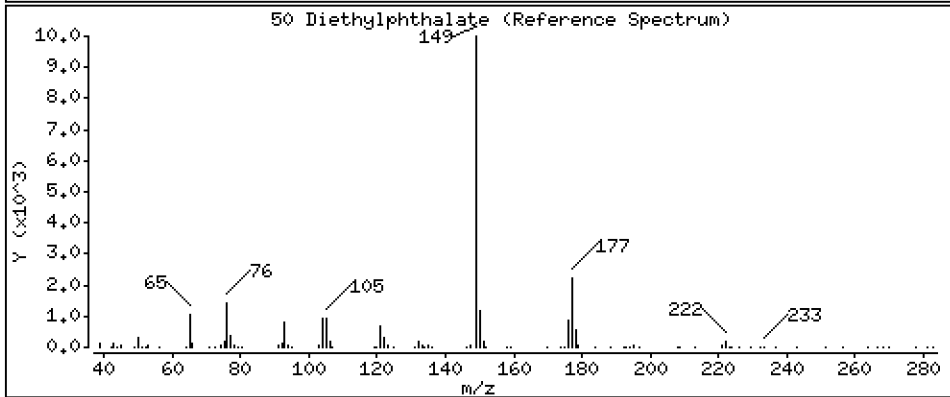
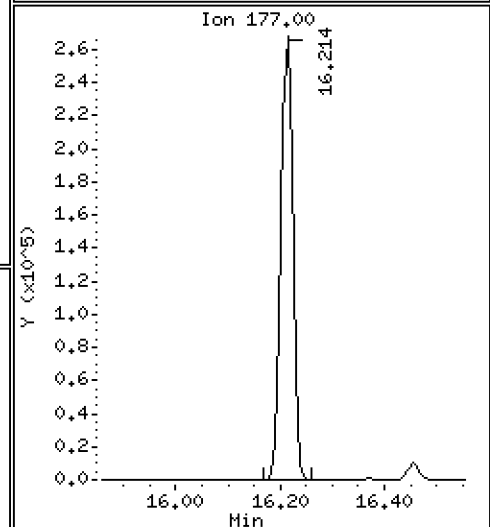
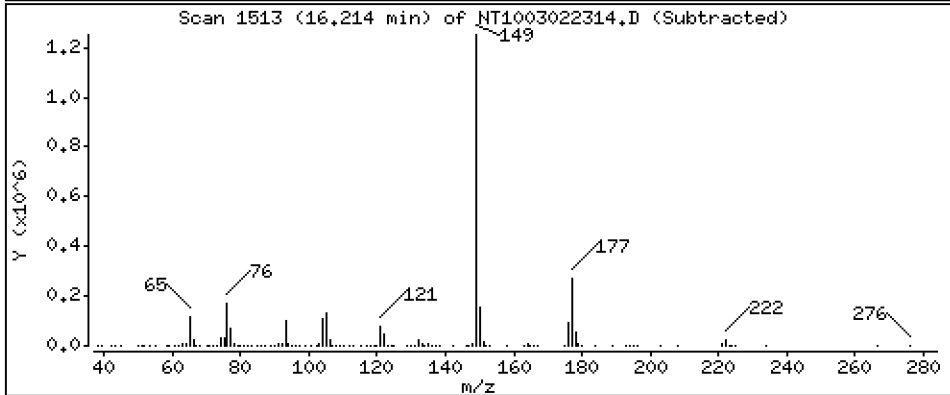
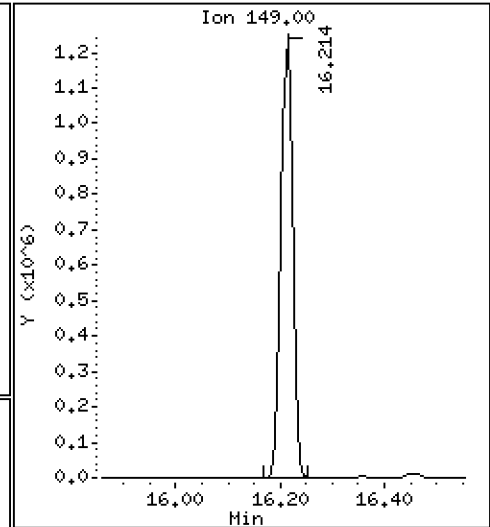
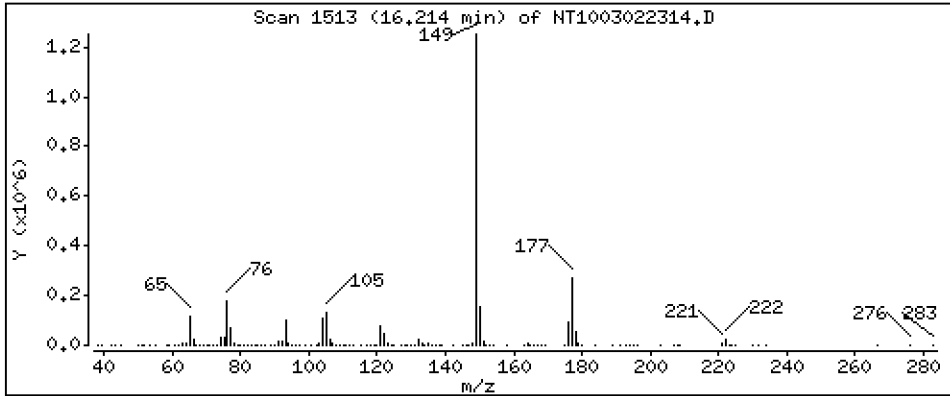
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 4,768 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

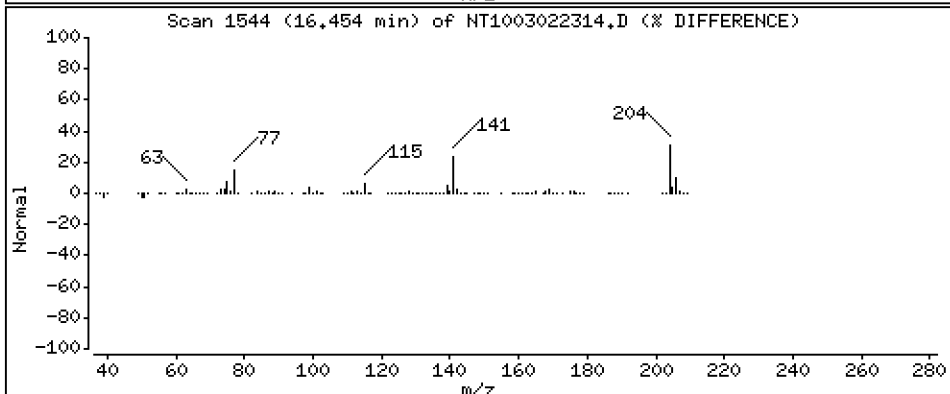
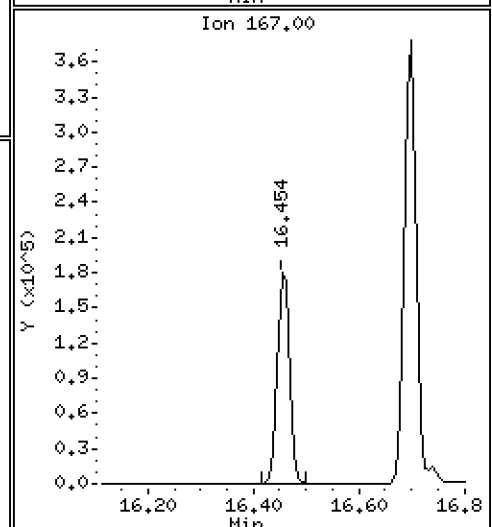
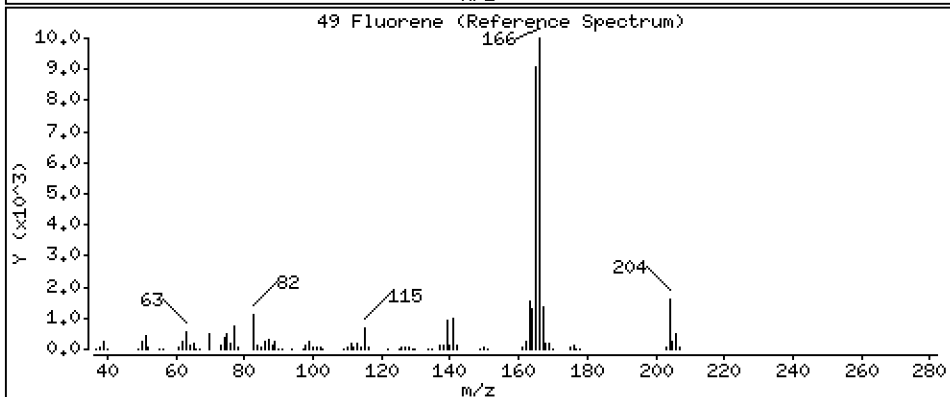
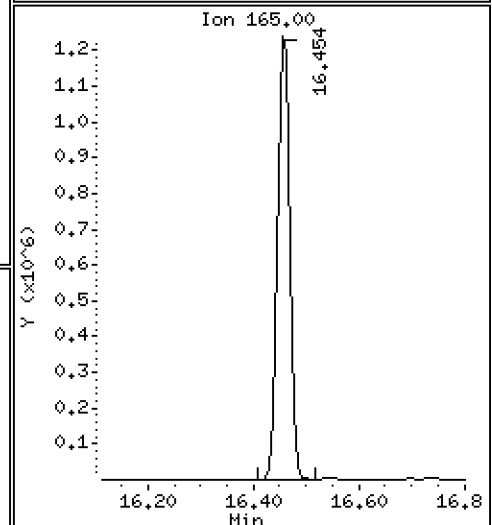
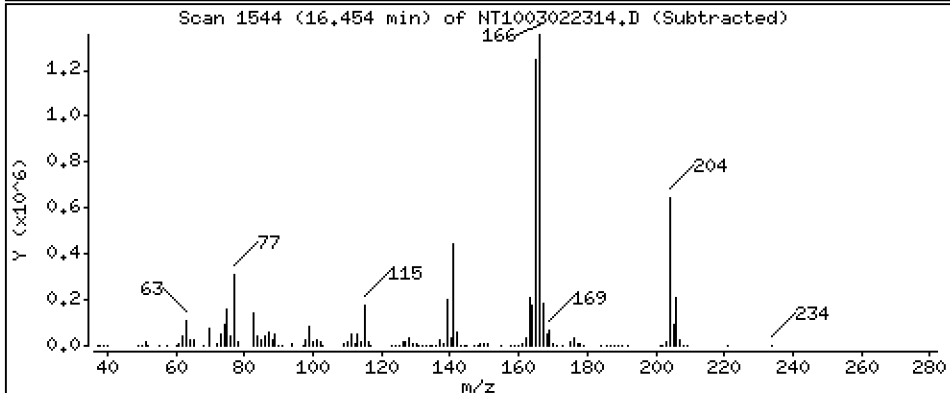
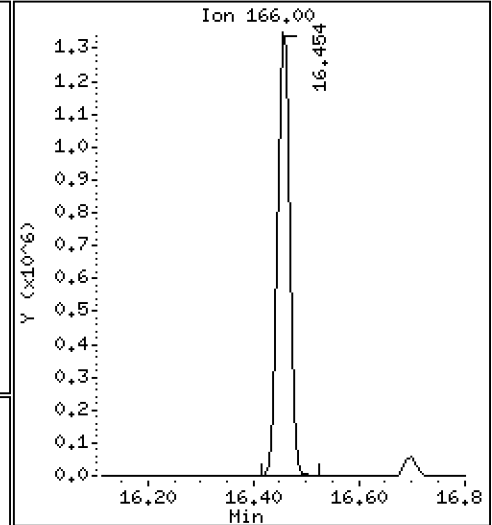
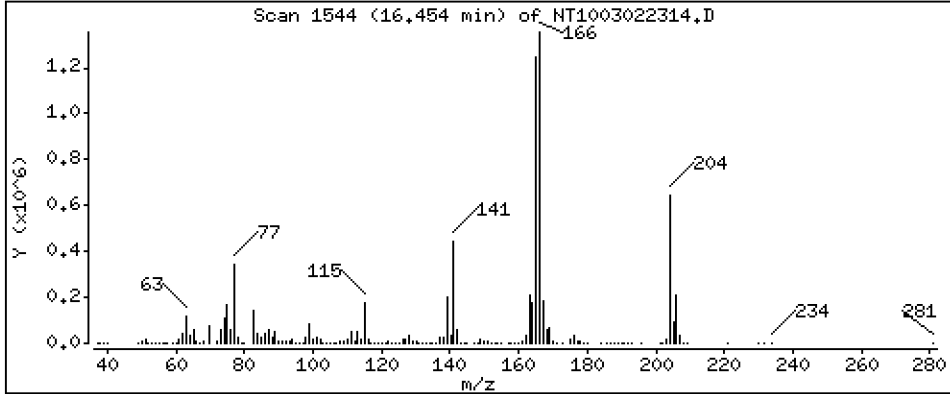
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,133 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

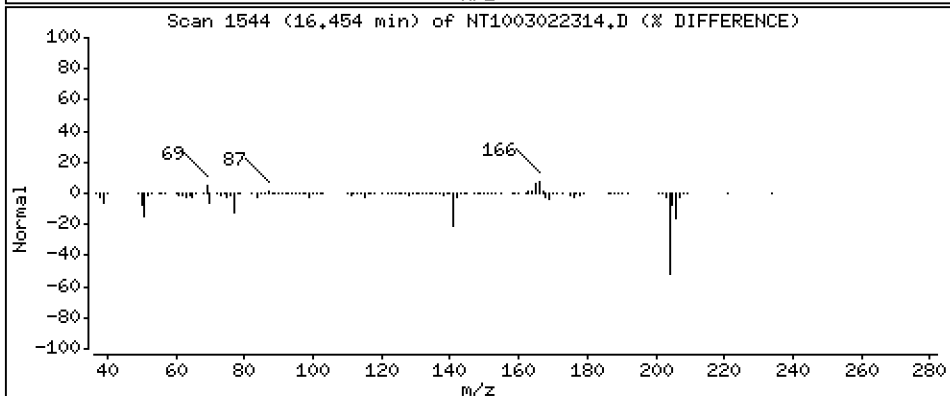
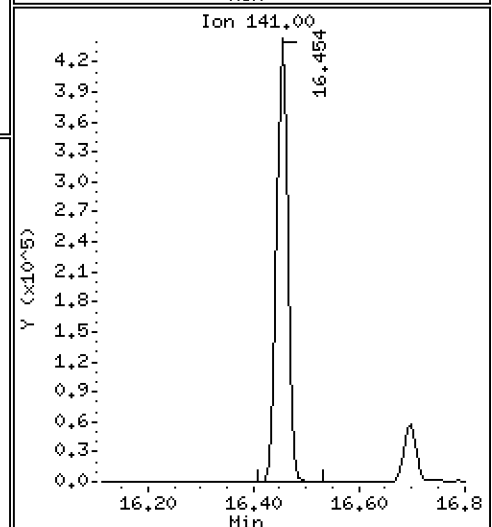
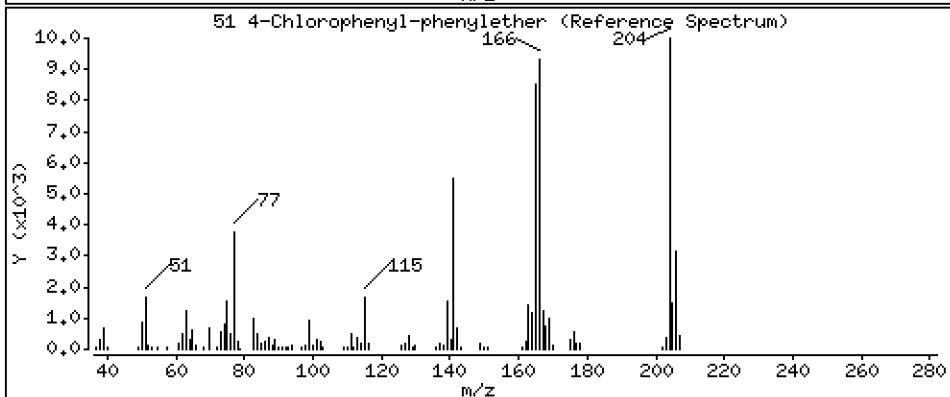
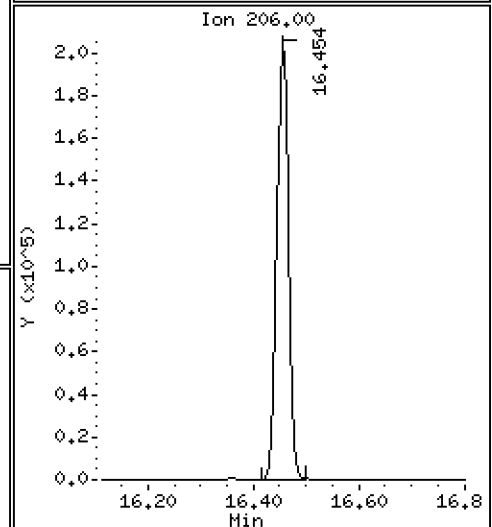
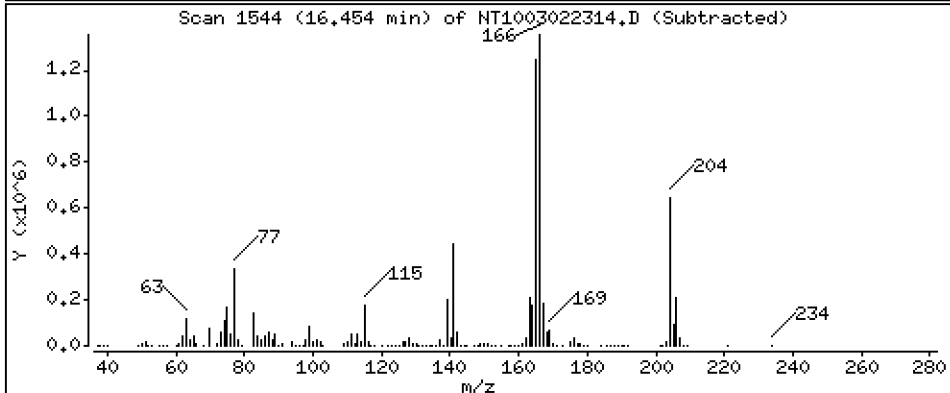
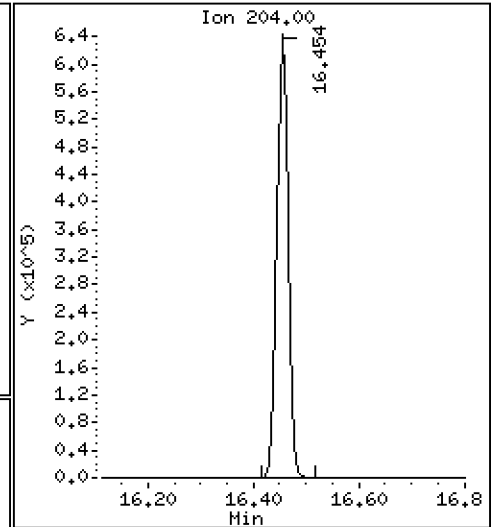
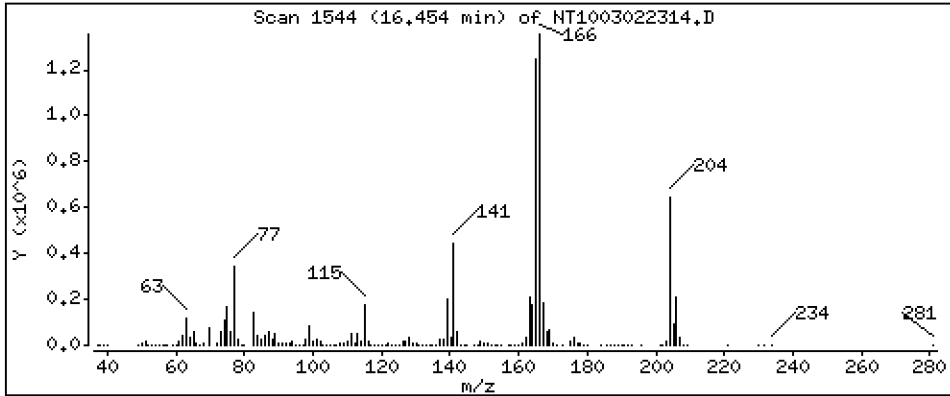
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 4,860 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

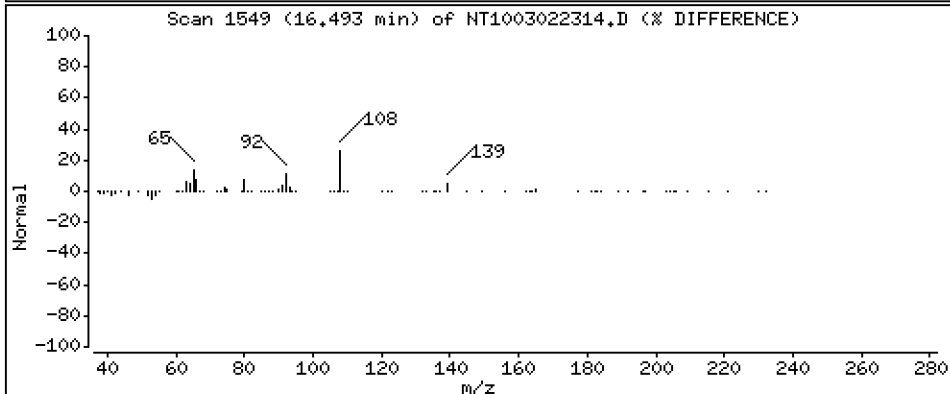
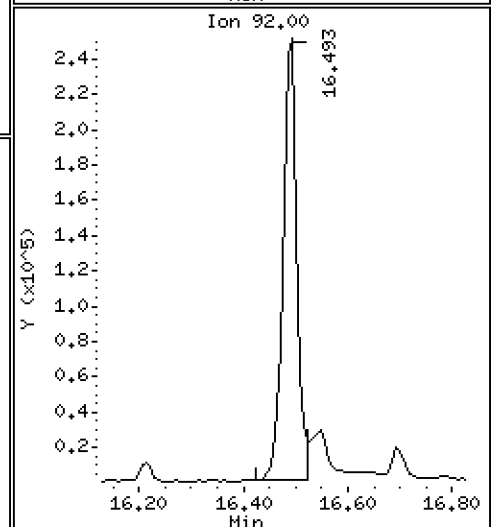
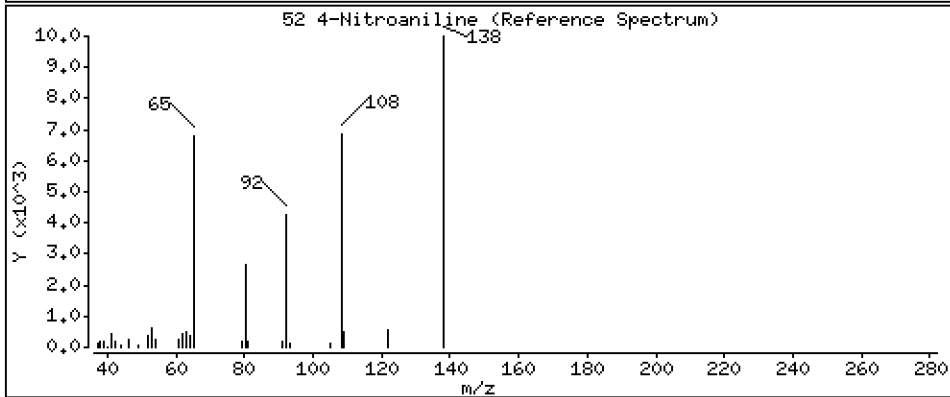
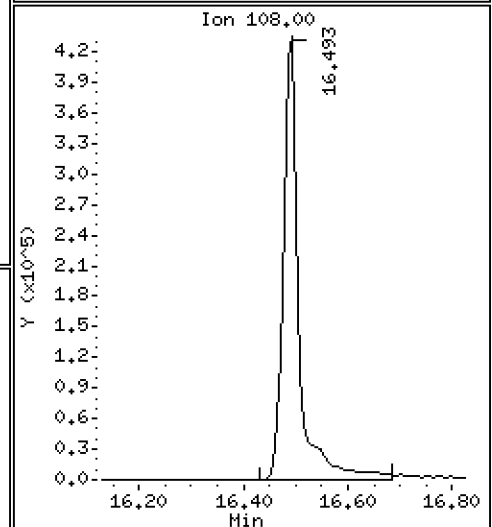
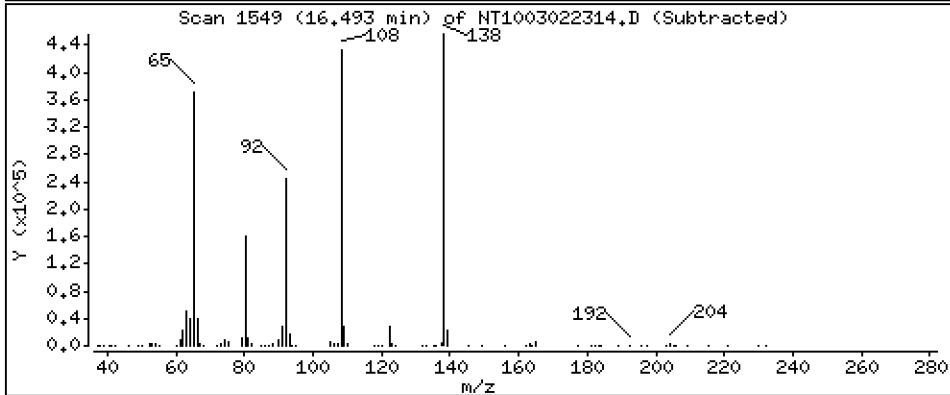
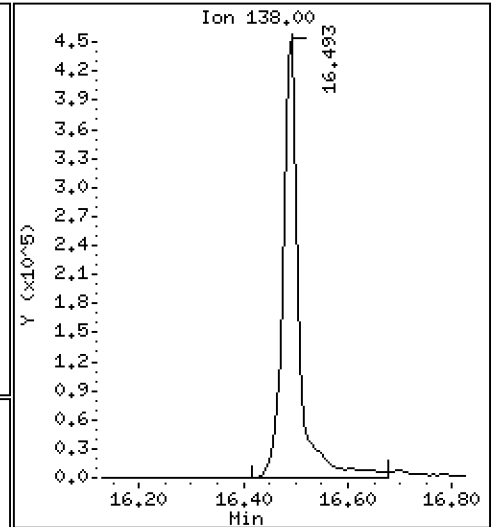
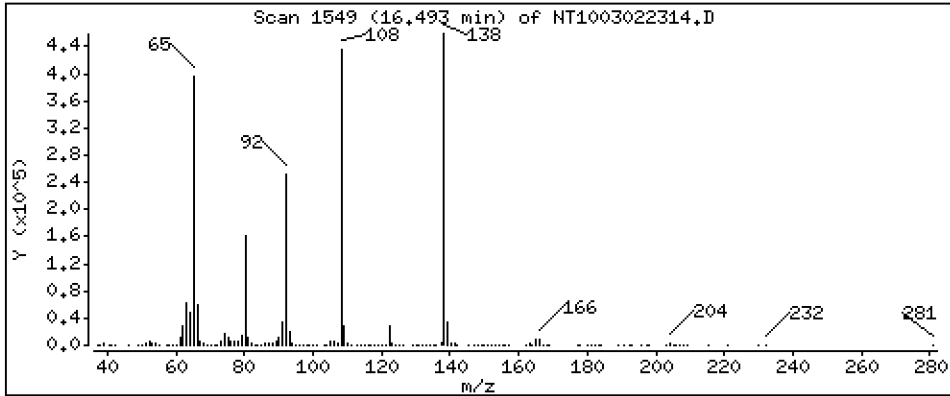
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 10,44 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

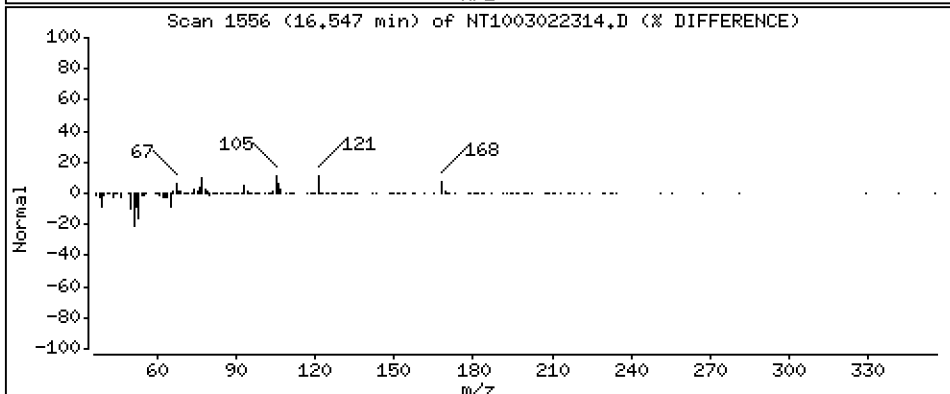
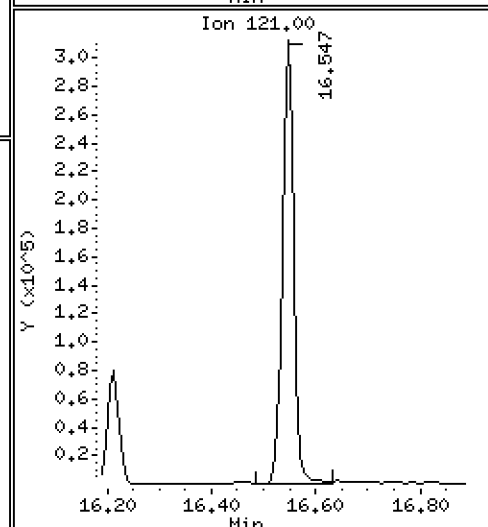
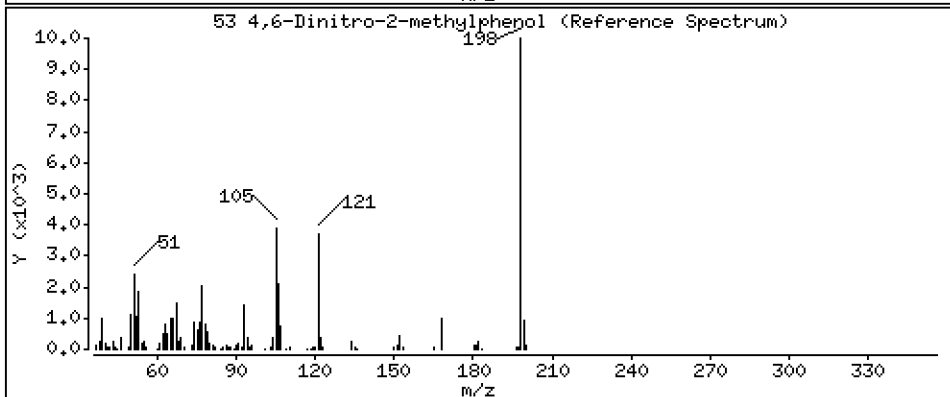
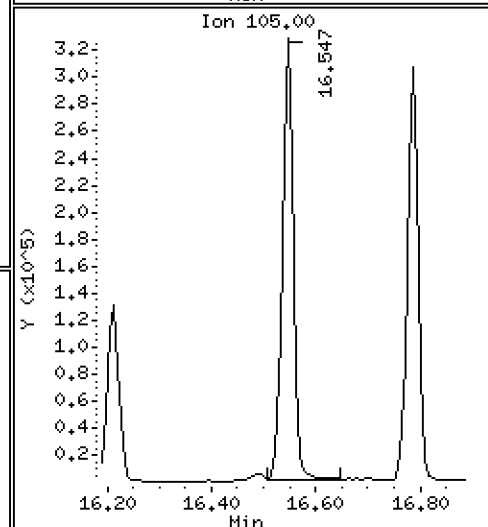
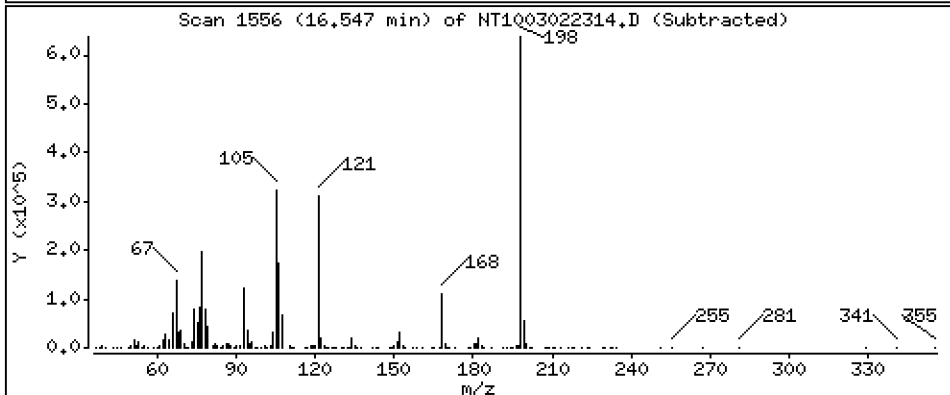
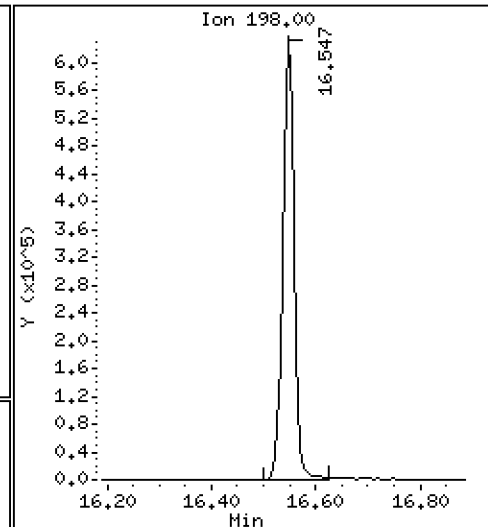
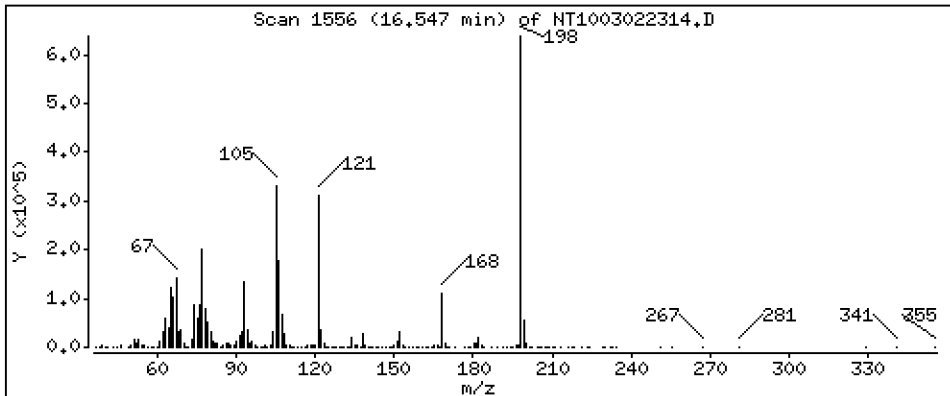
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 20,95 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

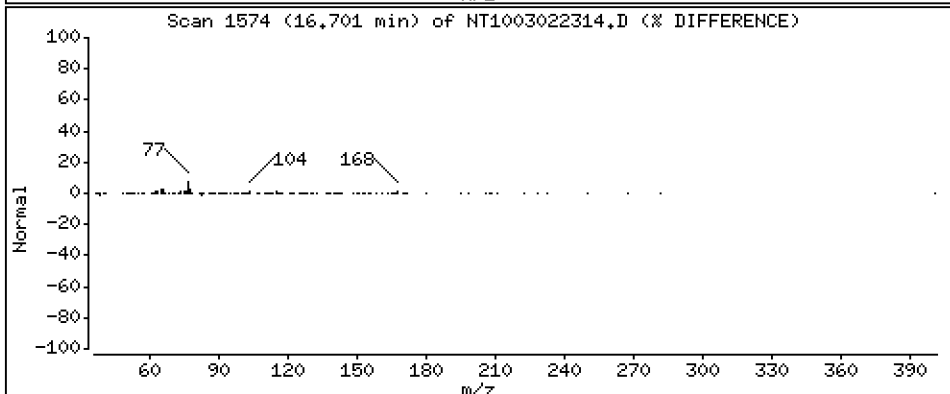
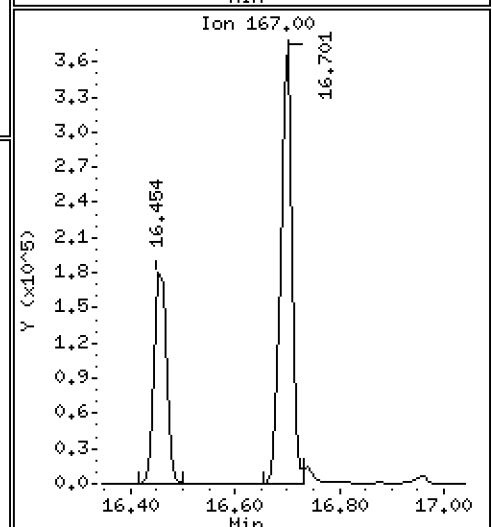
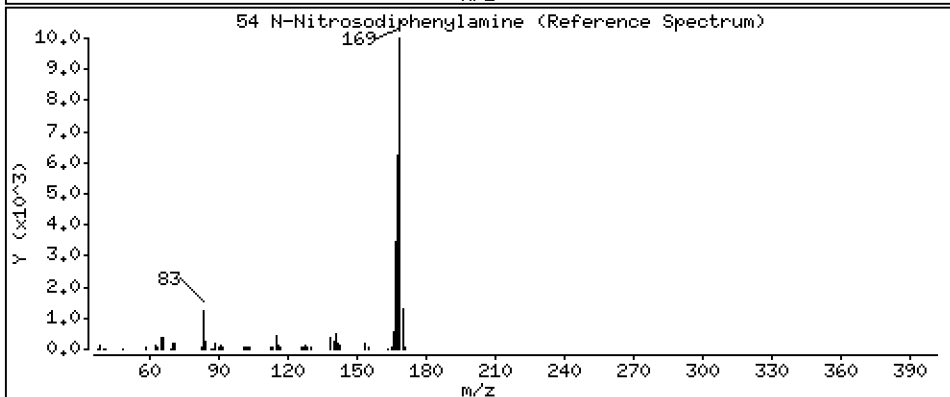
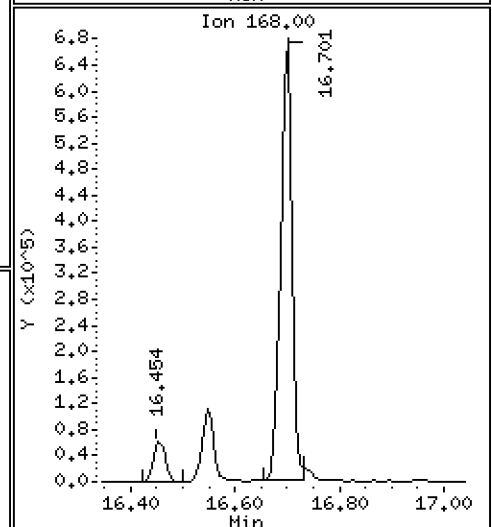
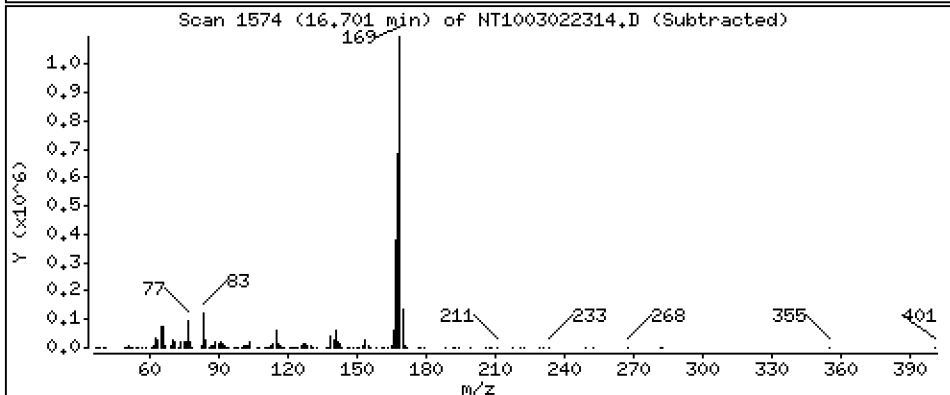
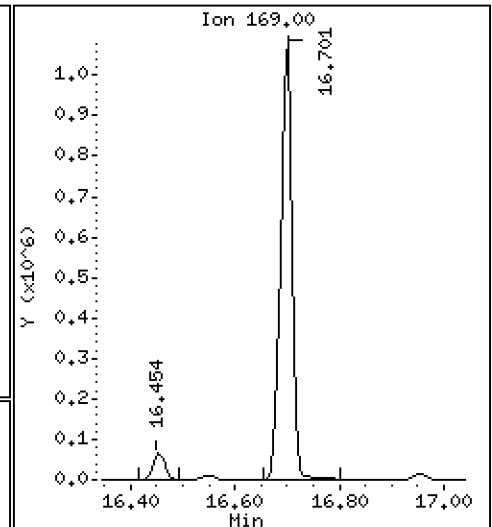
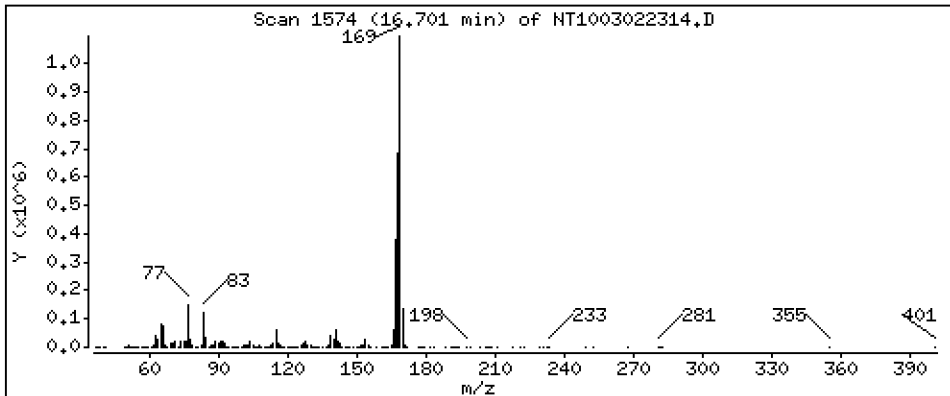
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,221 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

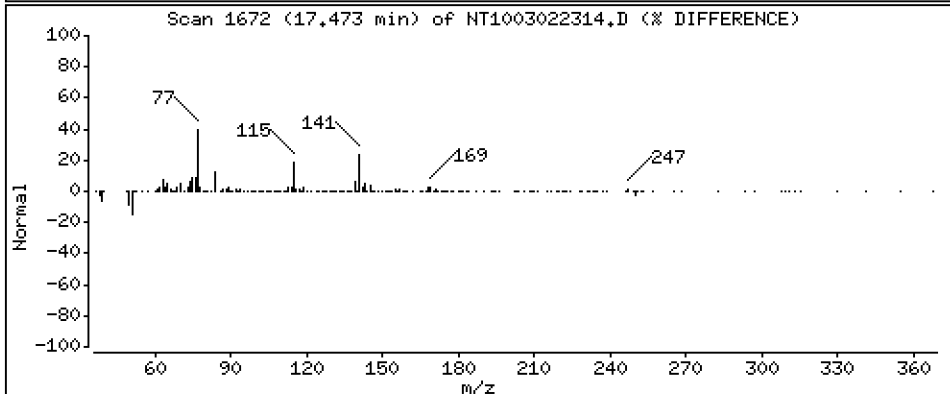
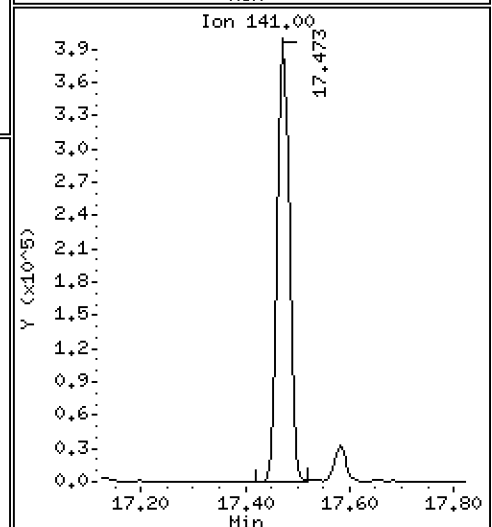
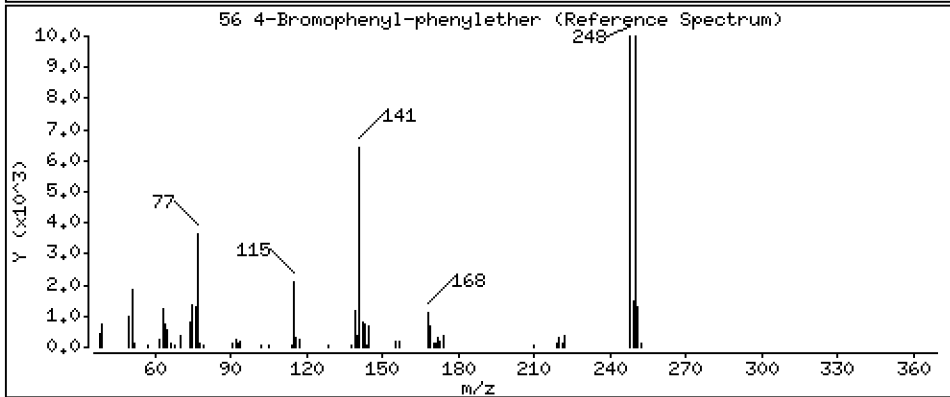
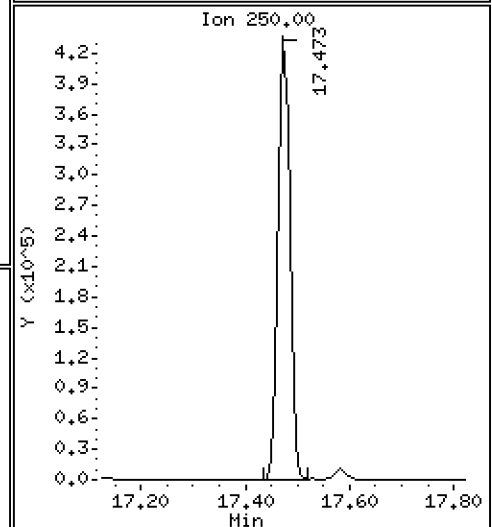
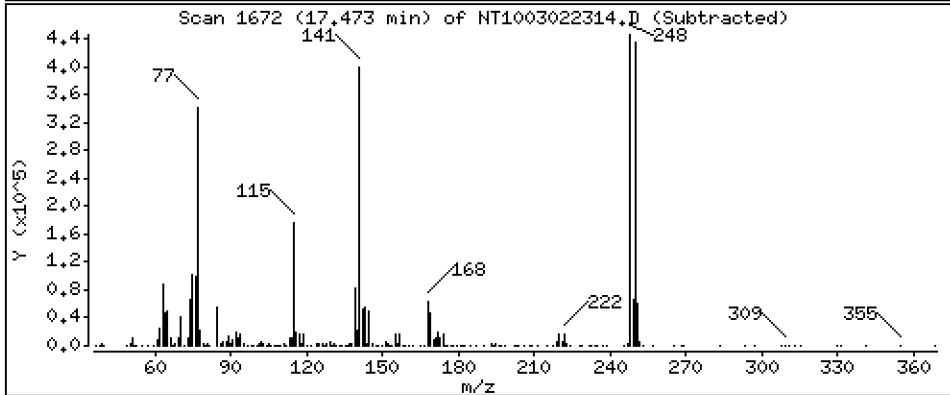
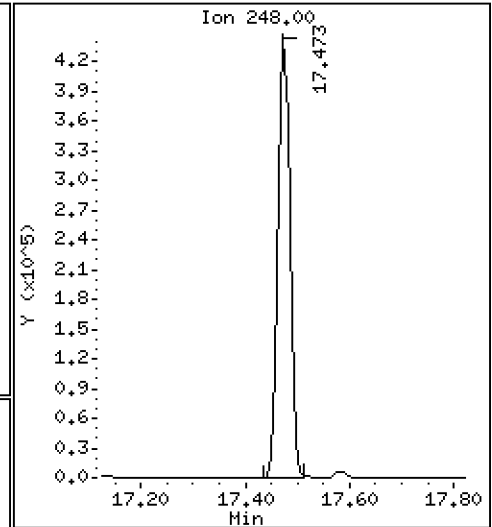
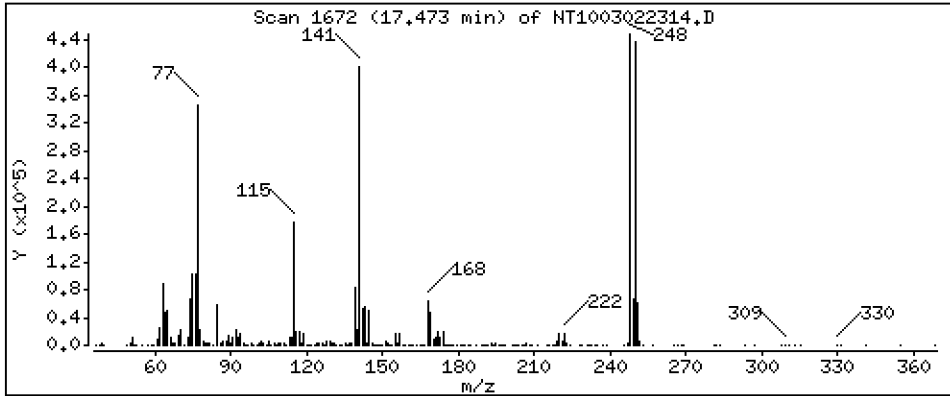
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,257 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

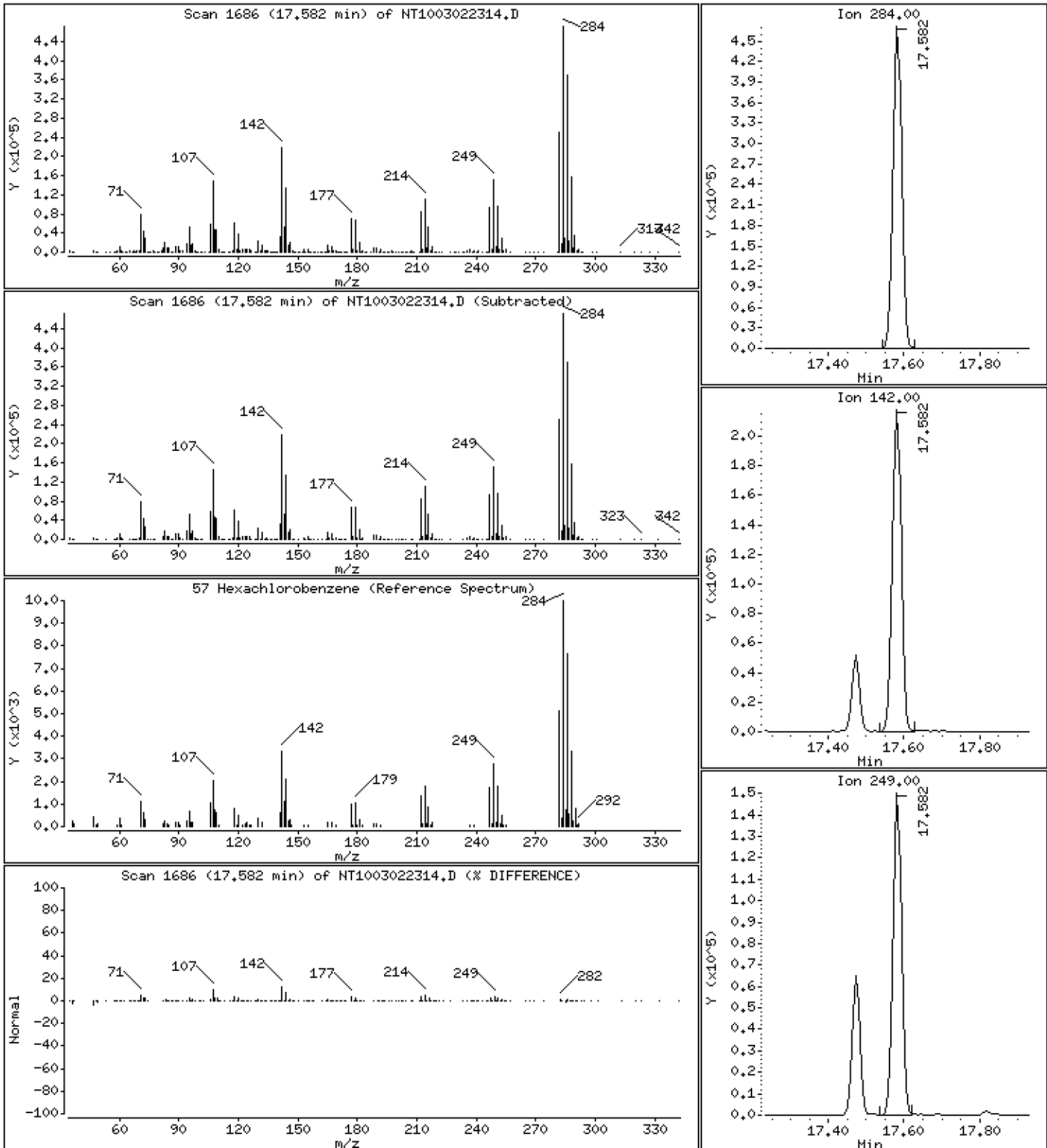
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,943 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

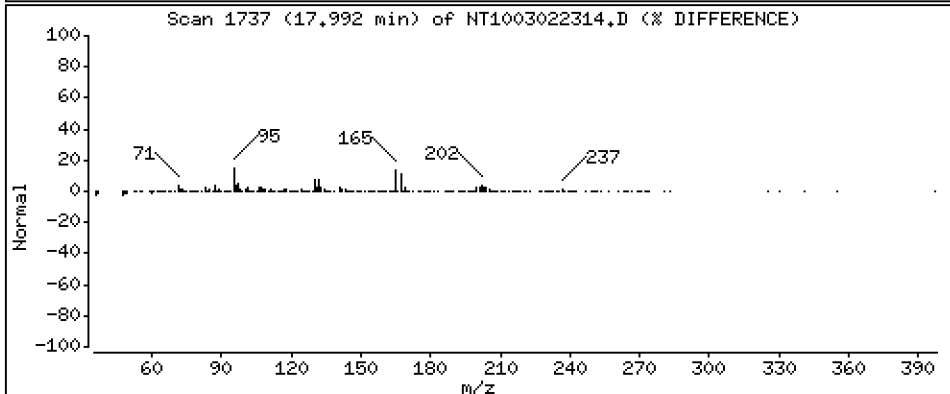
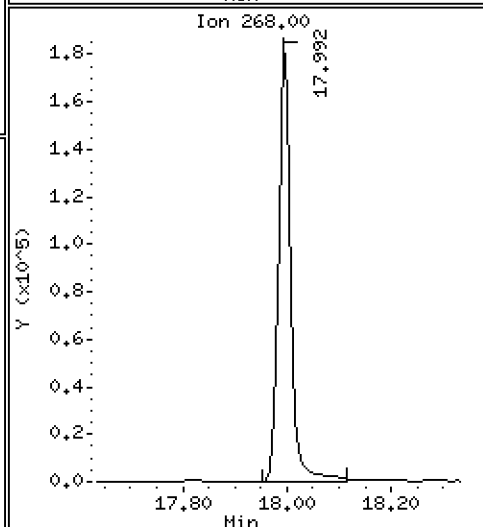
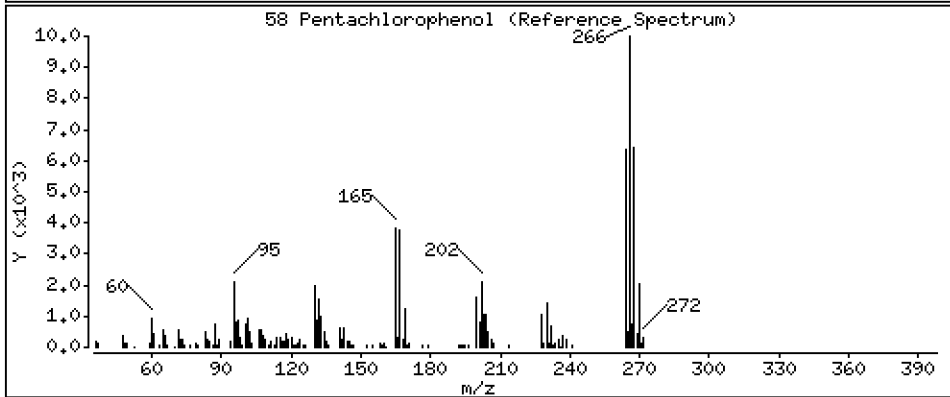
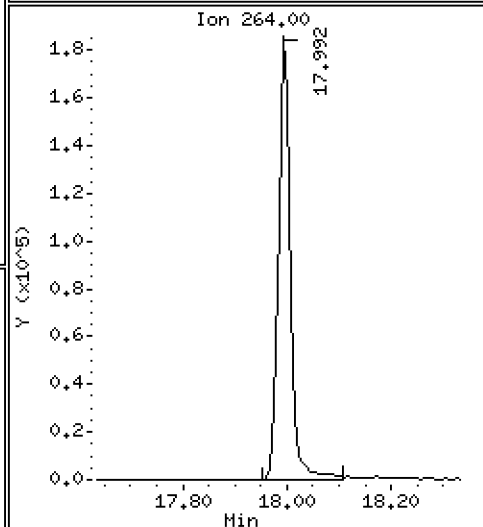
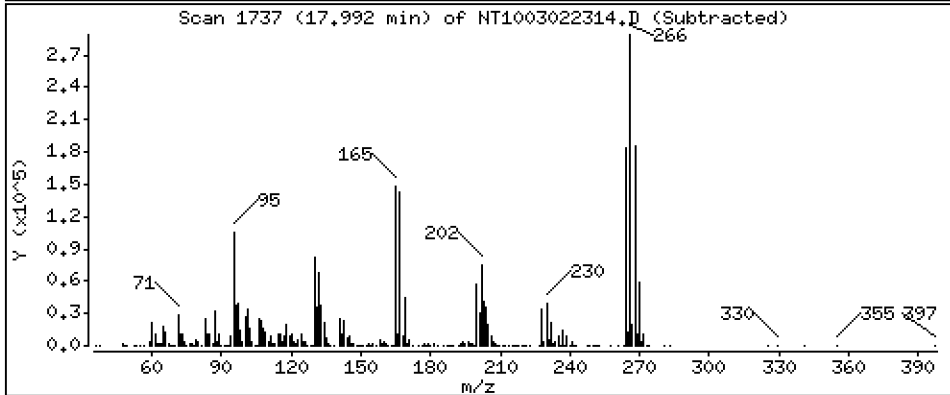
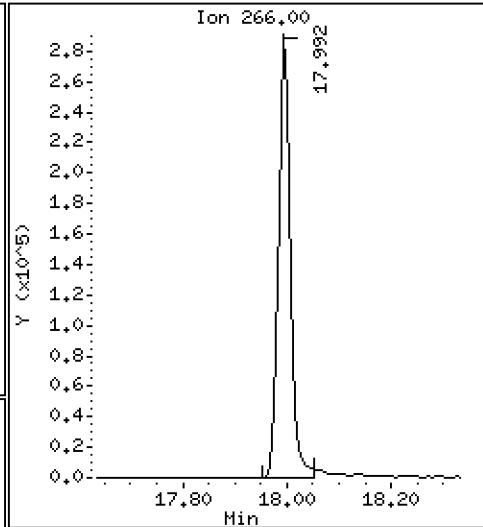
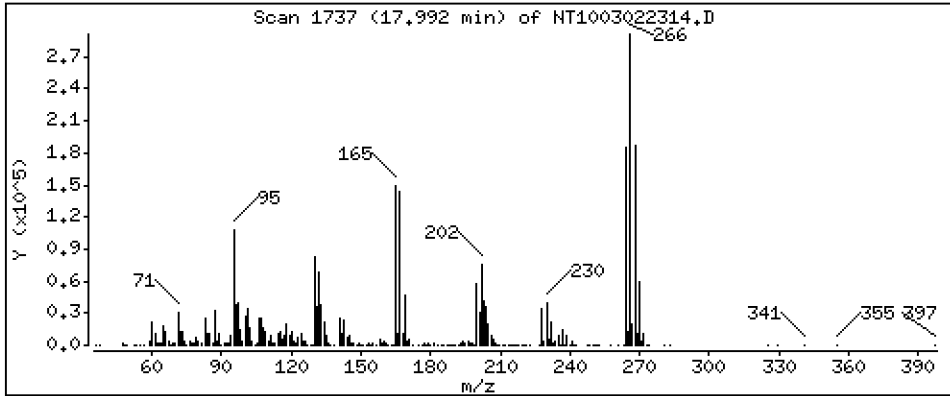
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 6,642 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

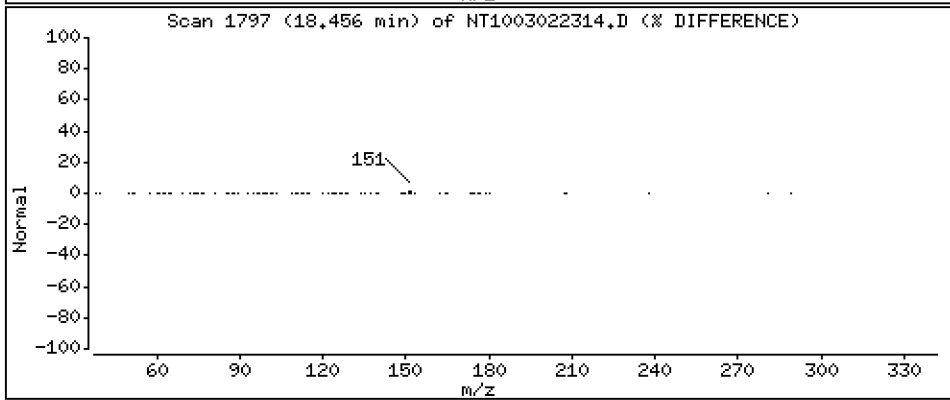
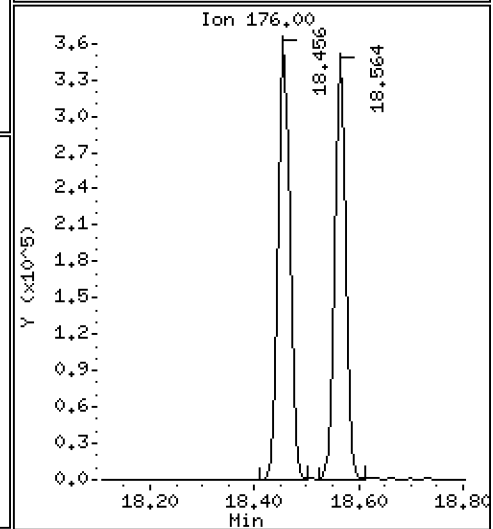
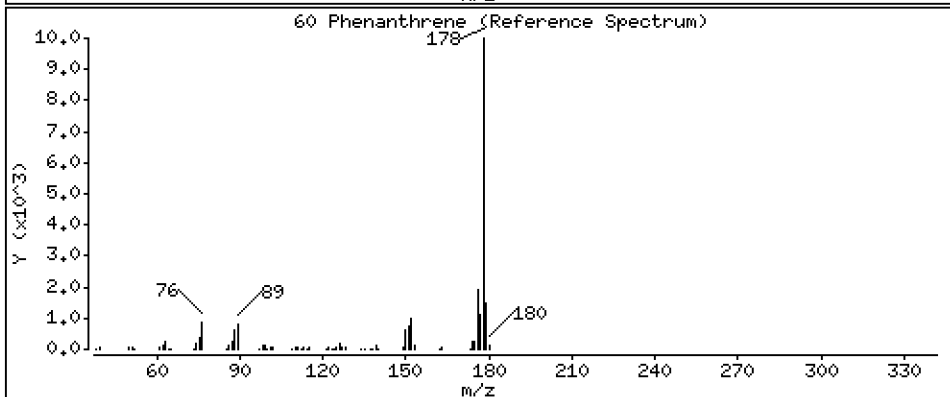
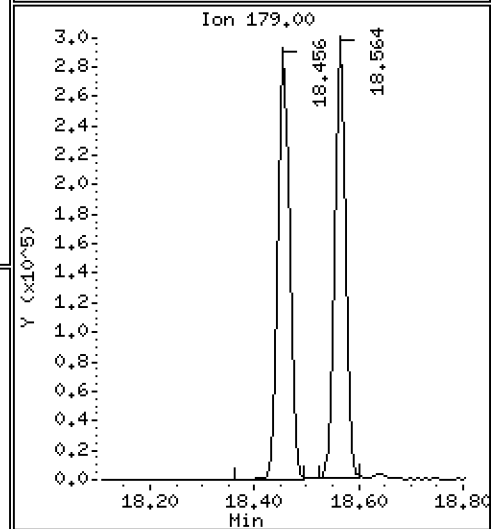
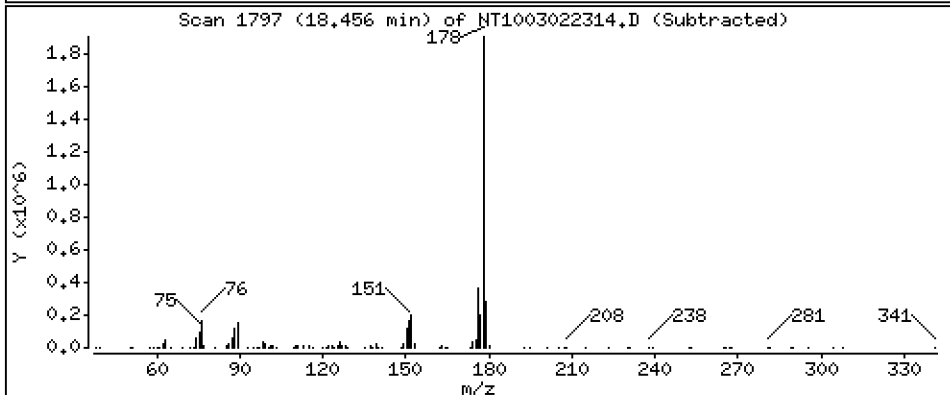
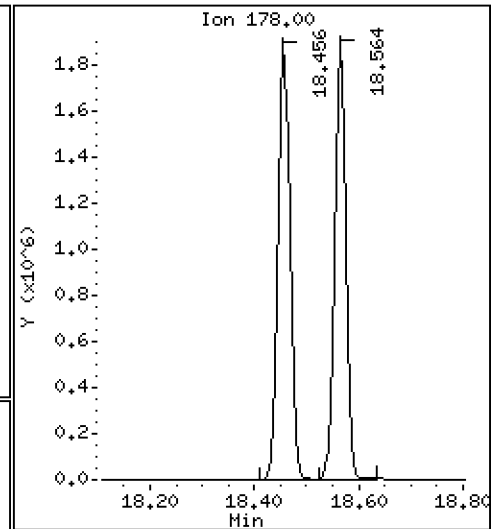
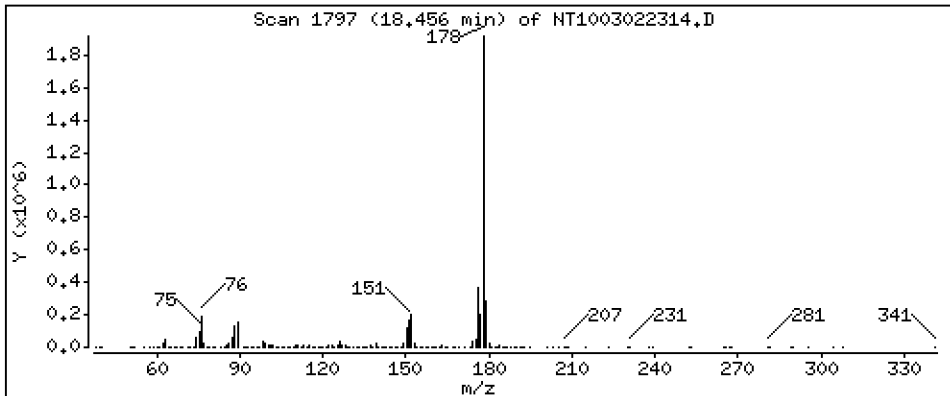
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,189 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

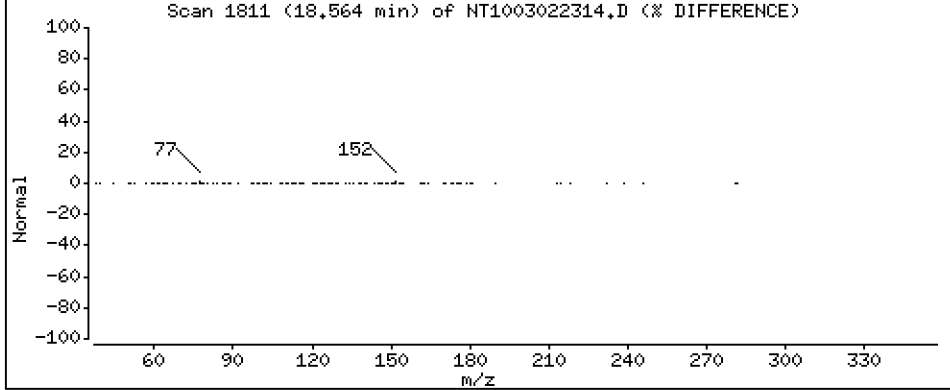
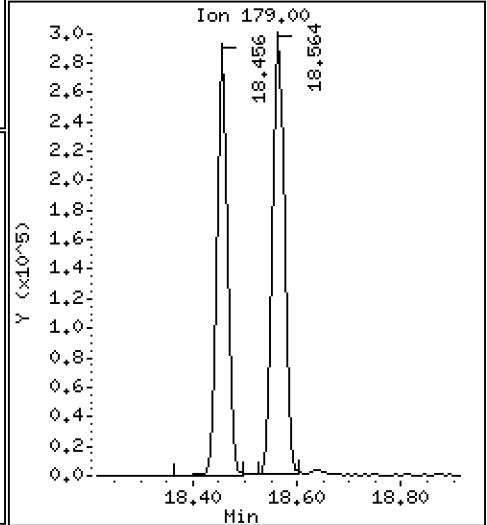
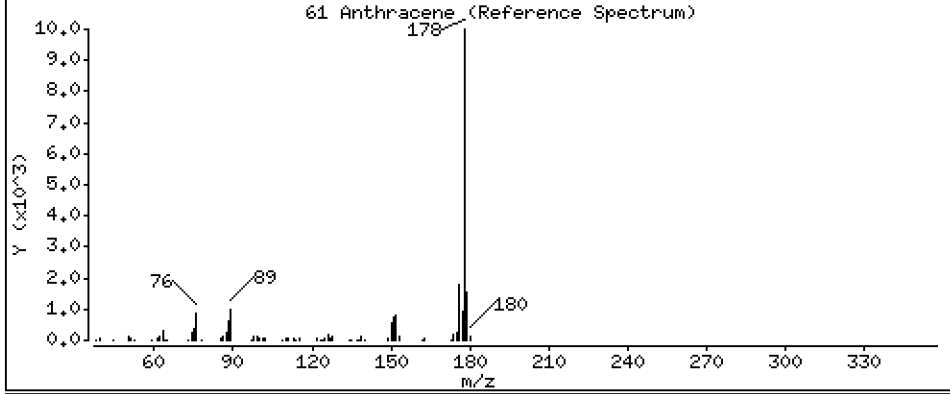
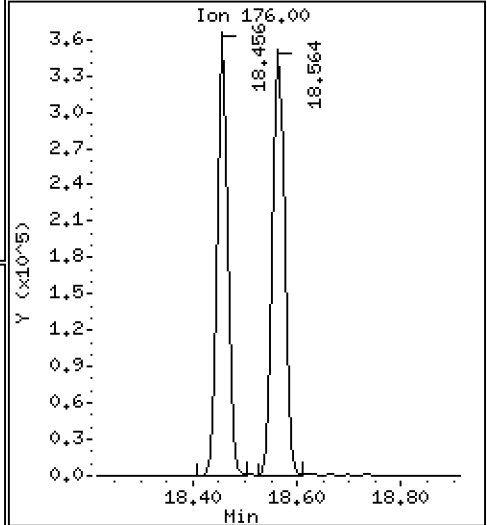
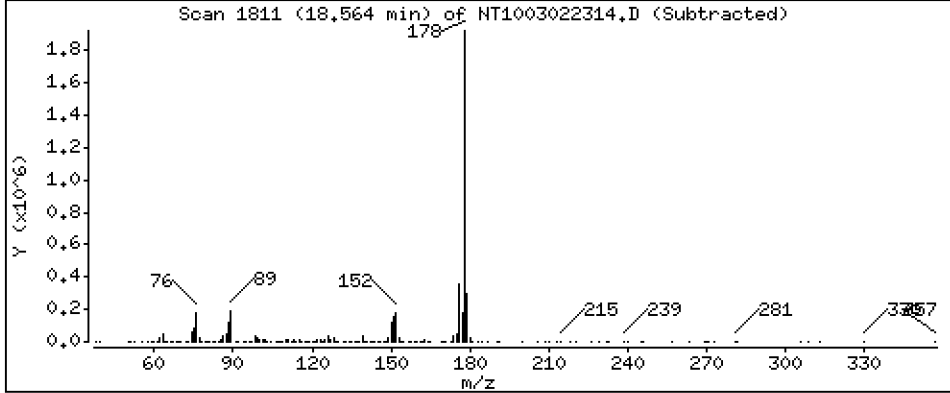
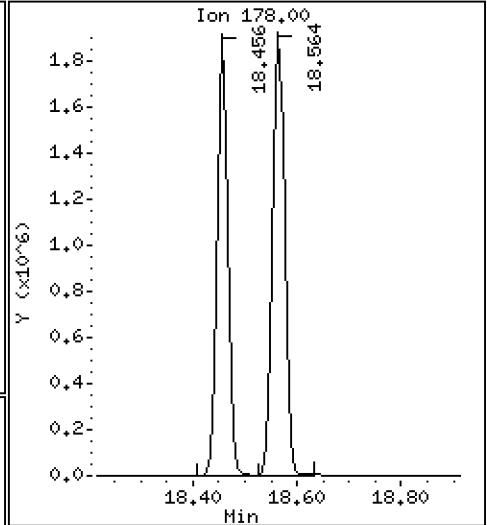
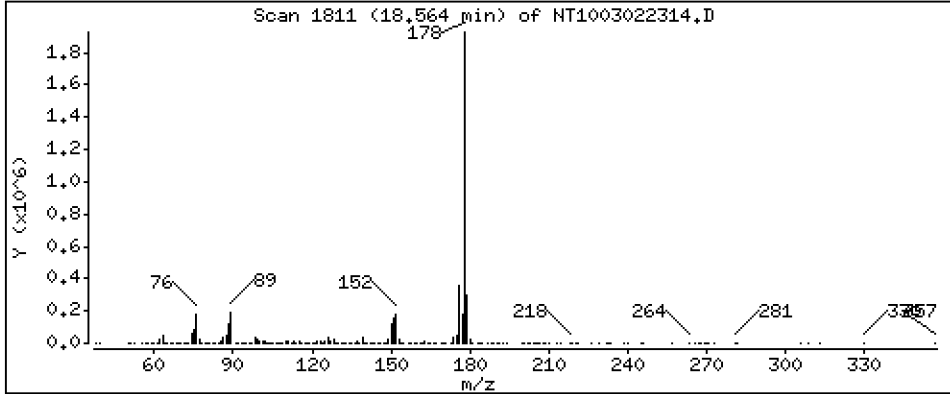
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 5,533 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

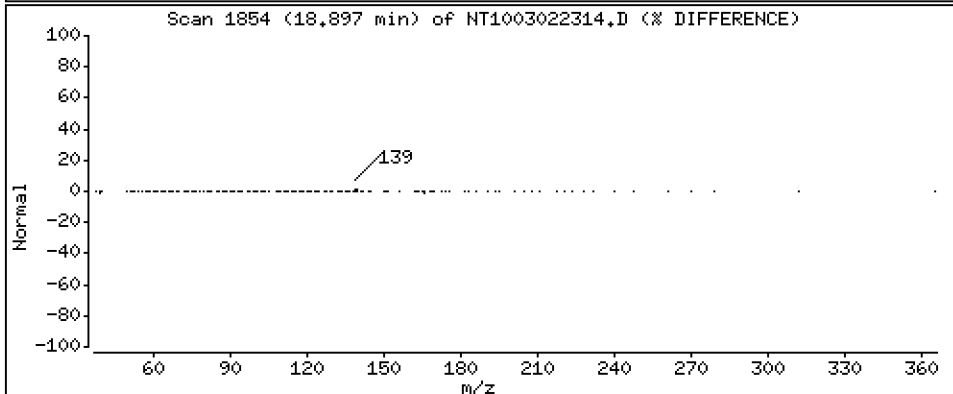
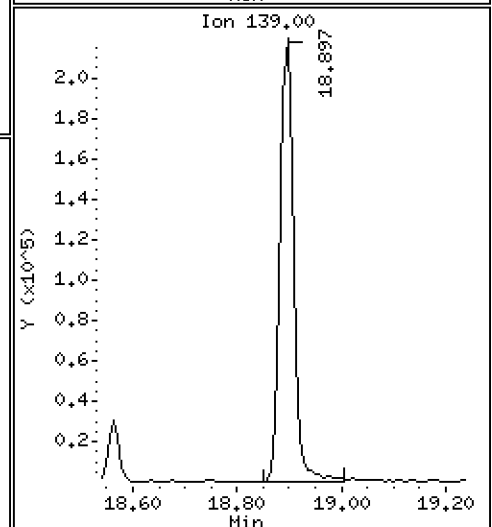
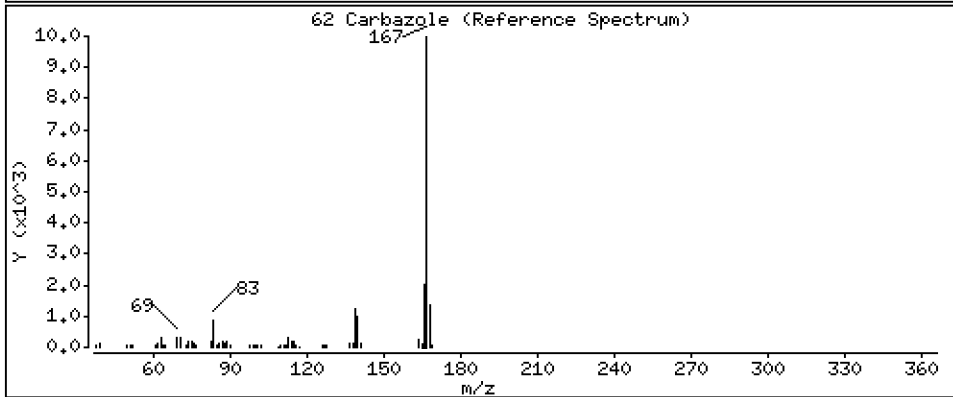
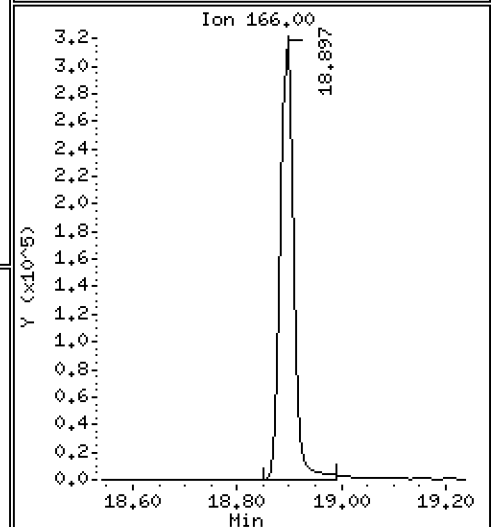
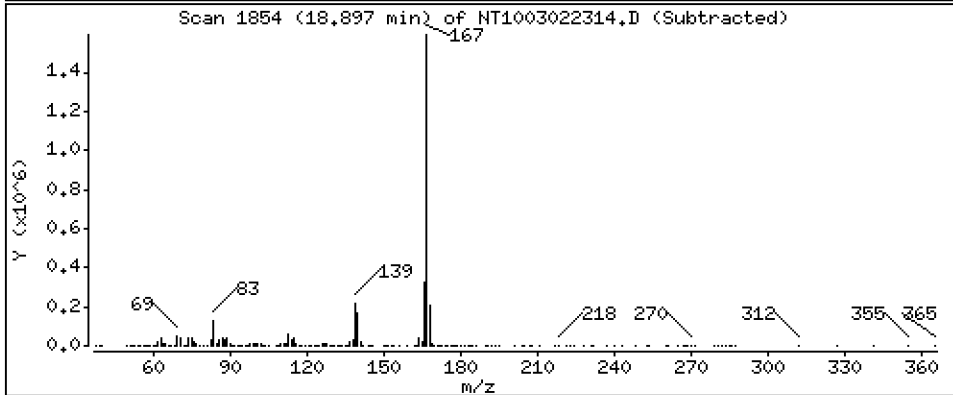
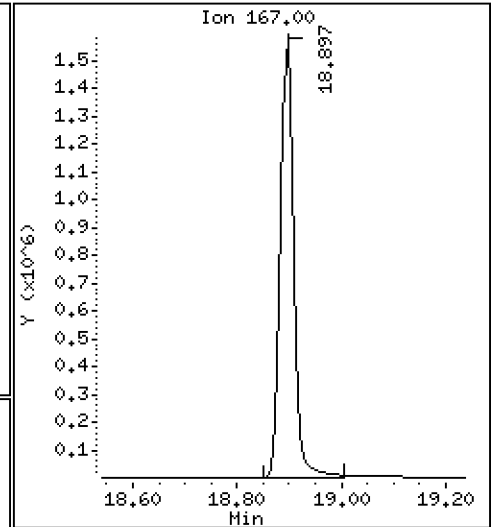
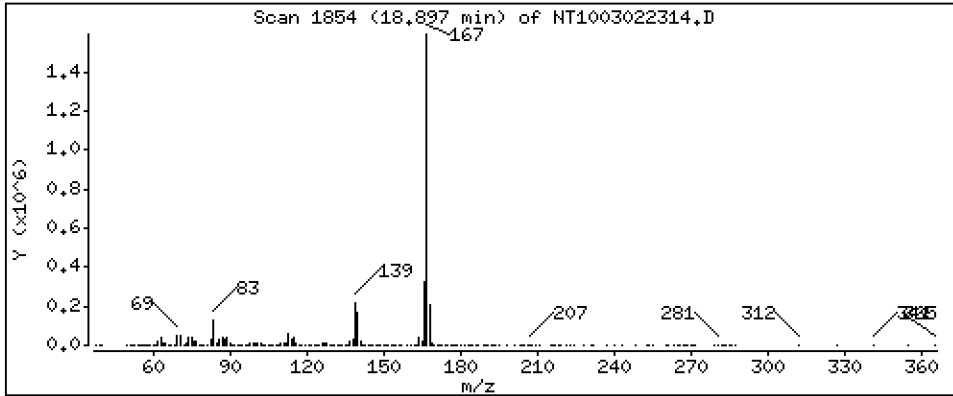
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,515 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

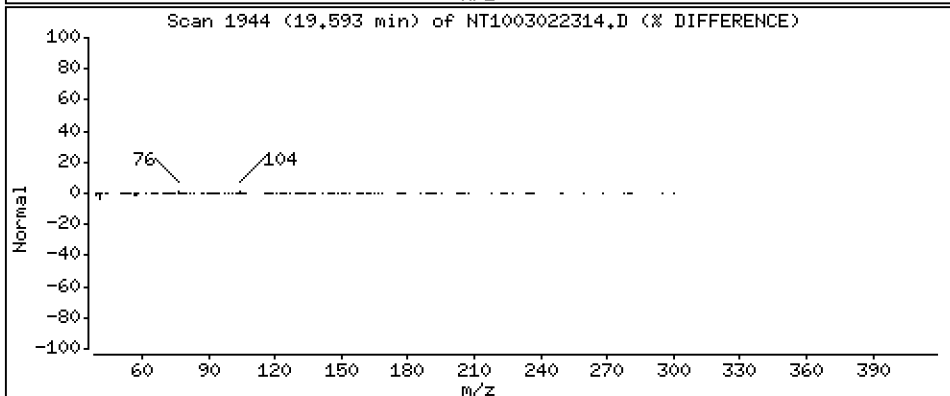
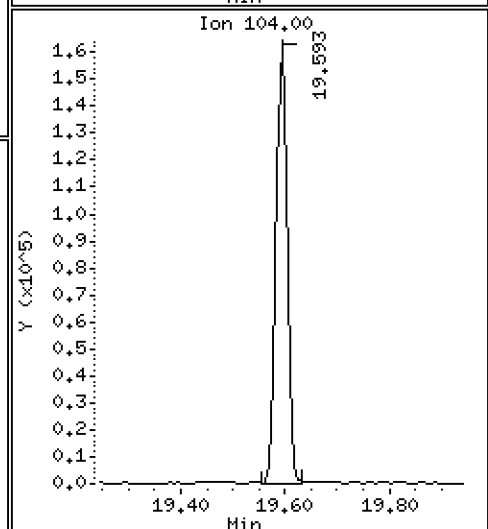
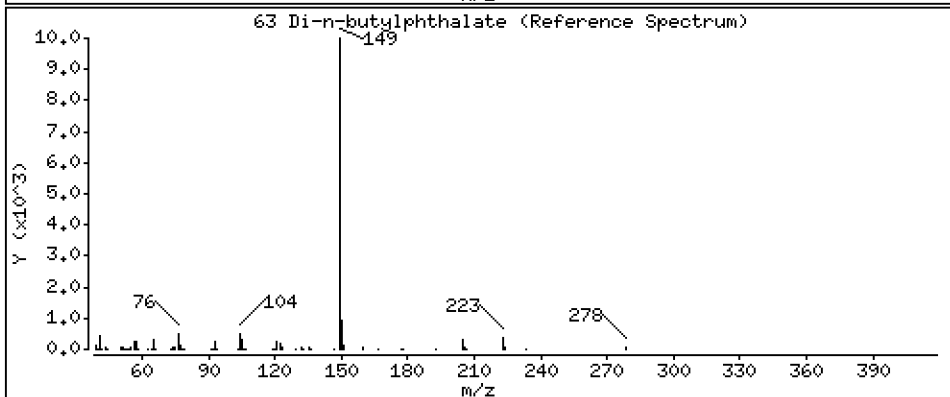
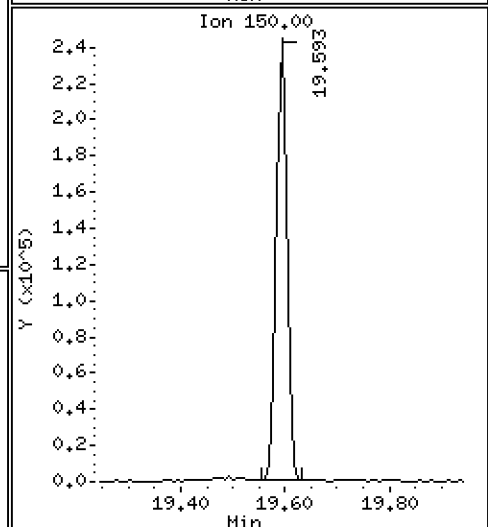
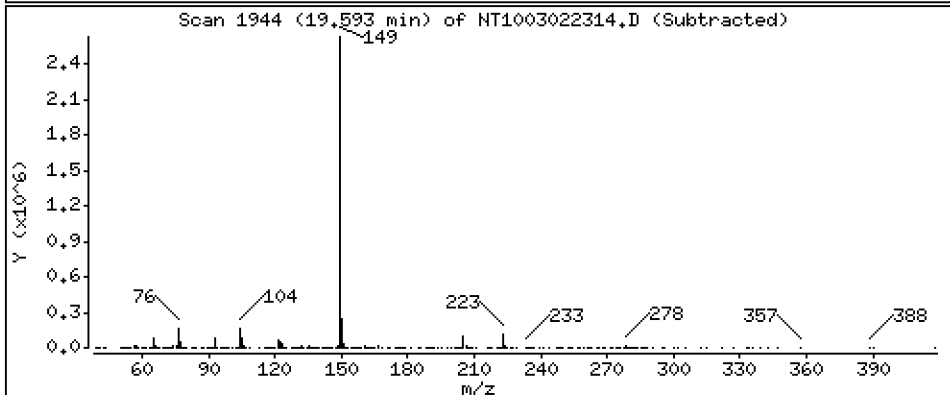
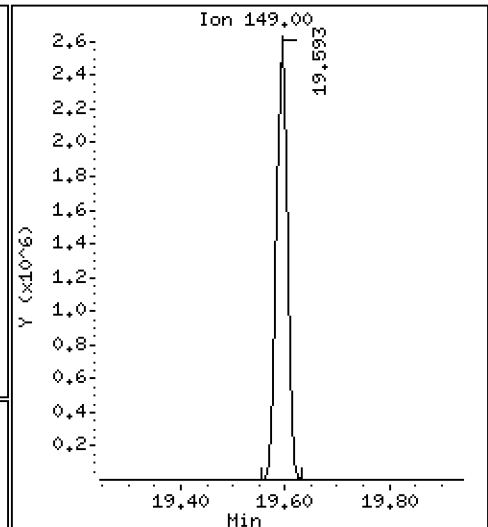
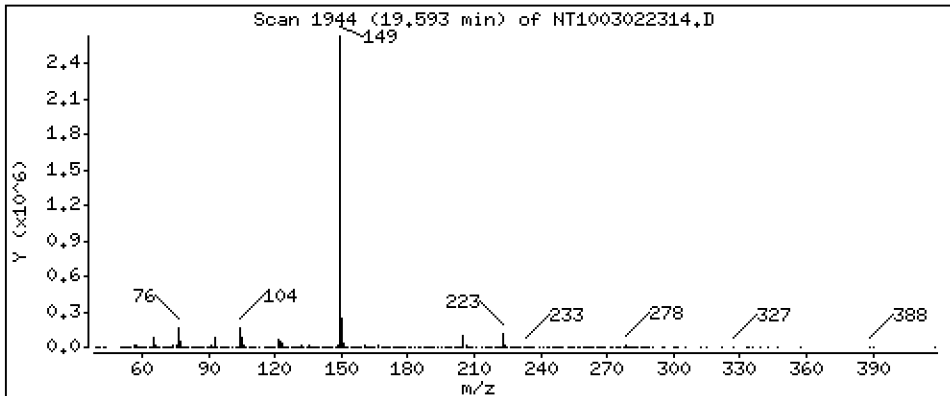
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,226 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

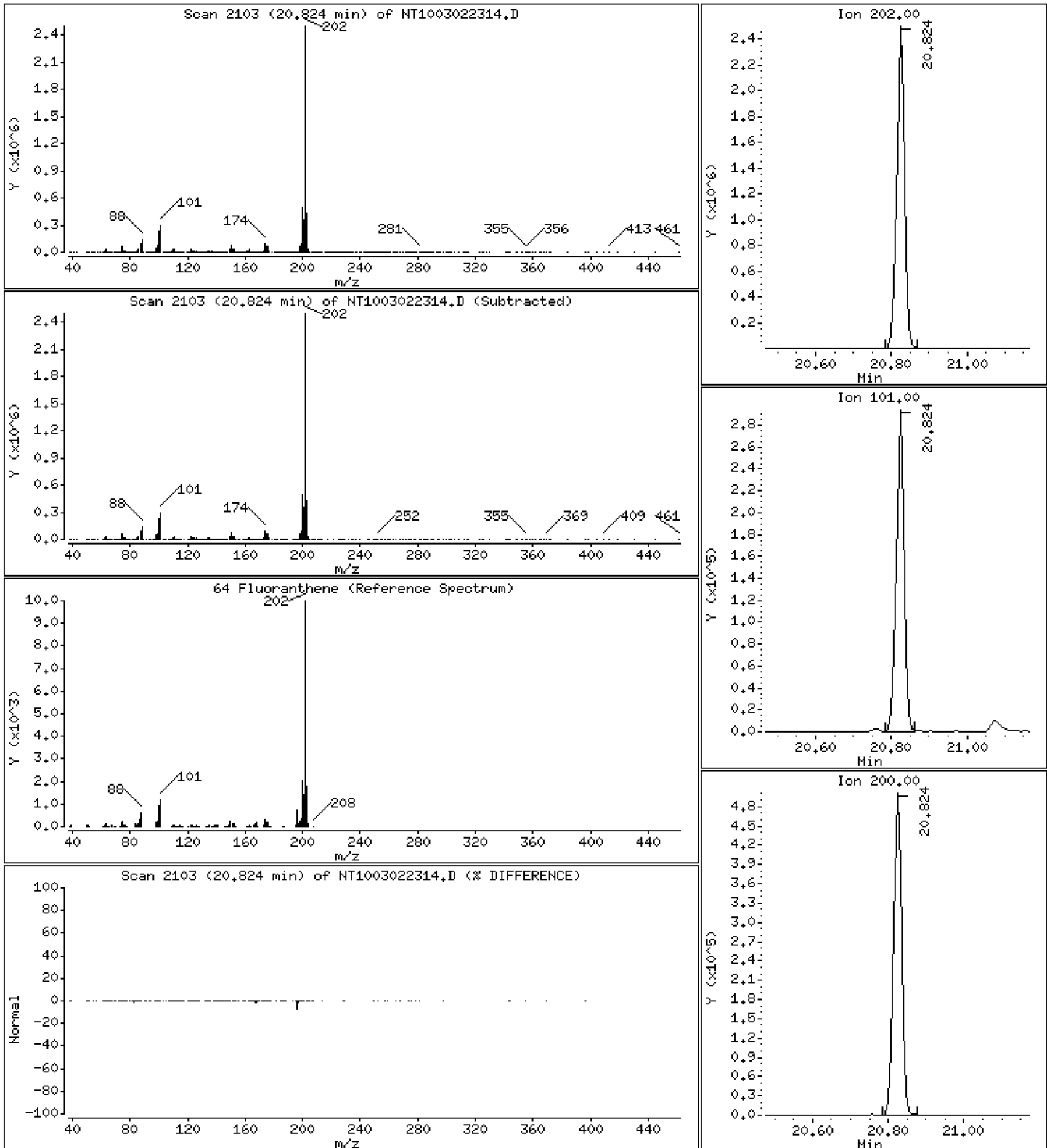
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,102 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

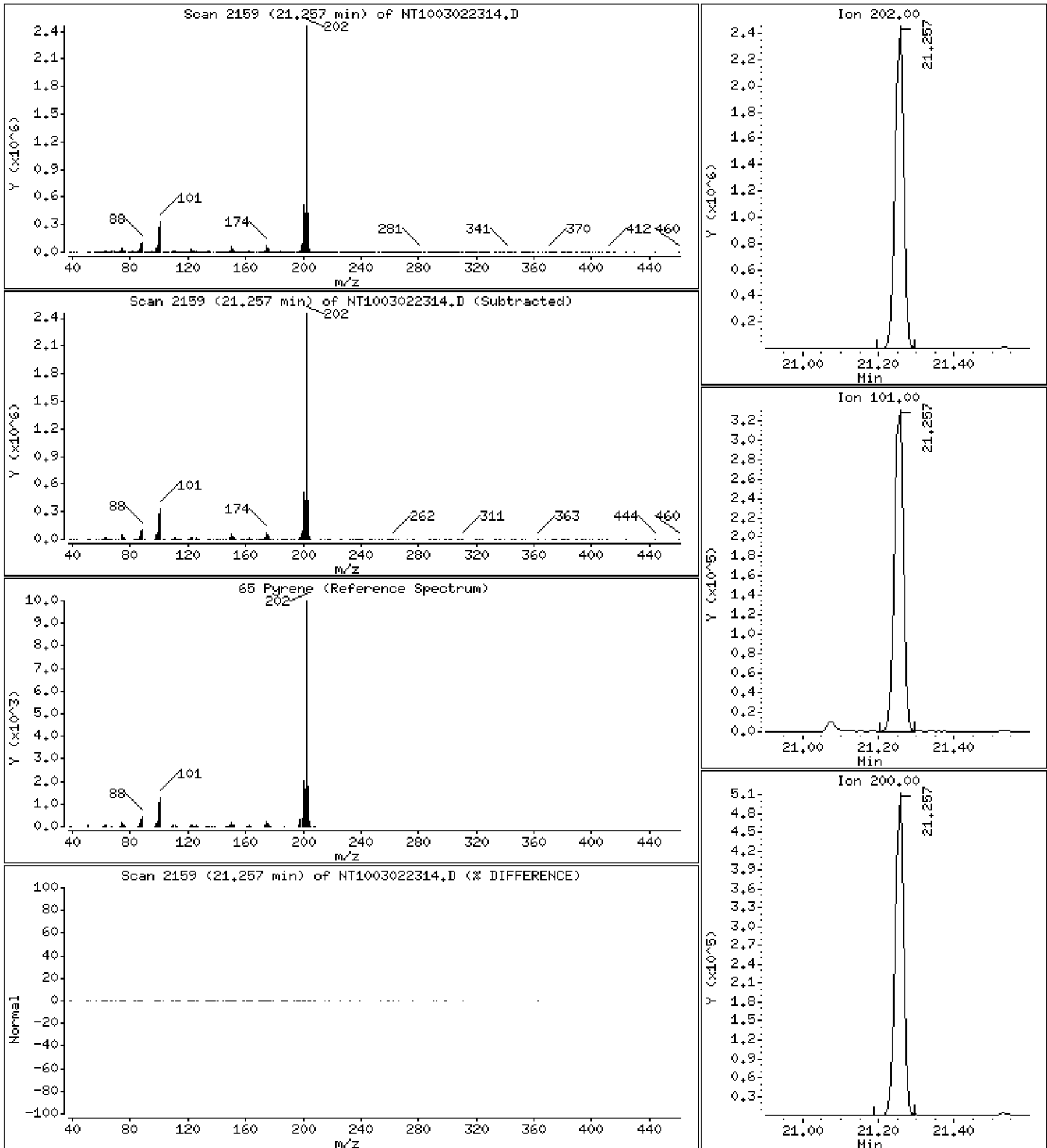
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,174 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

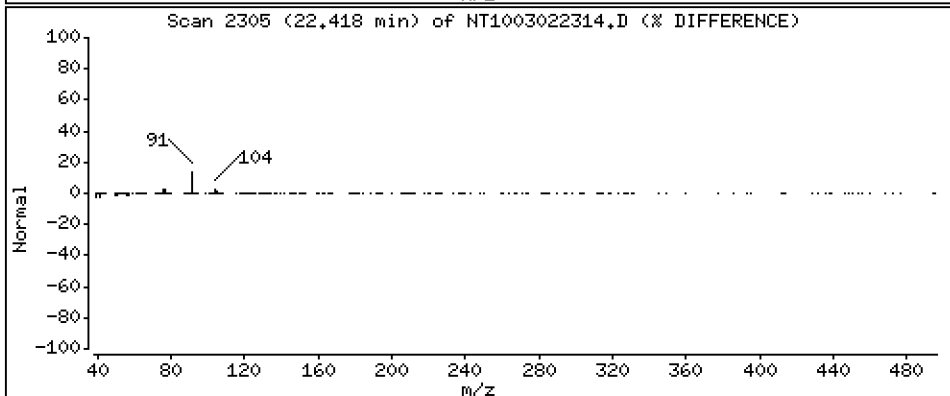
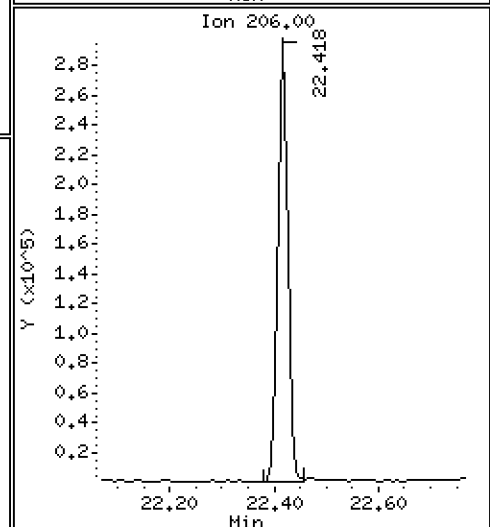
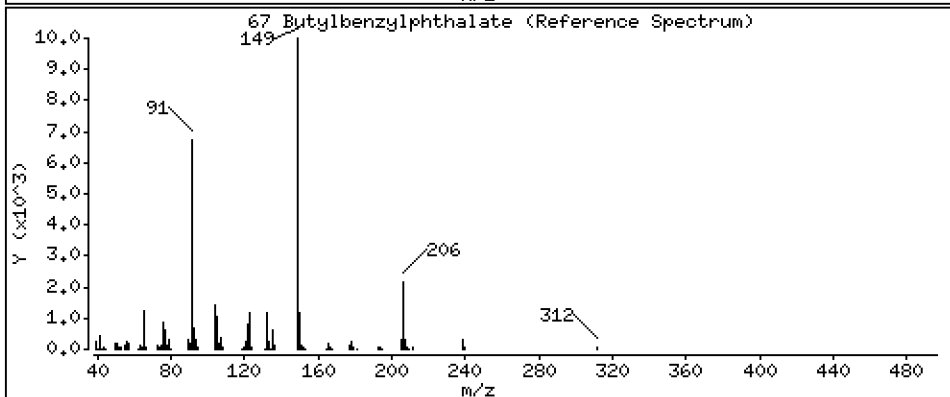
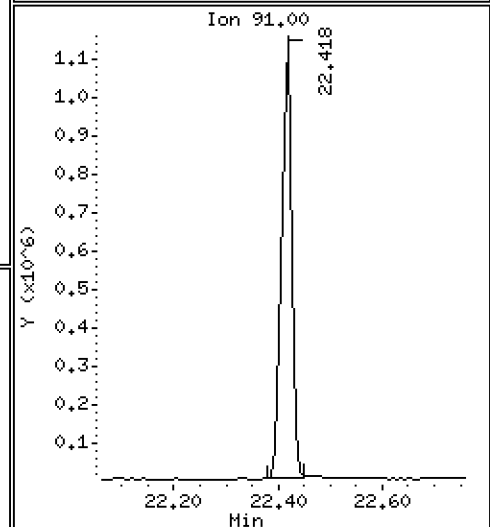
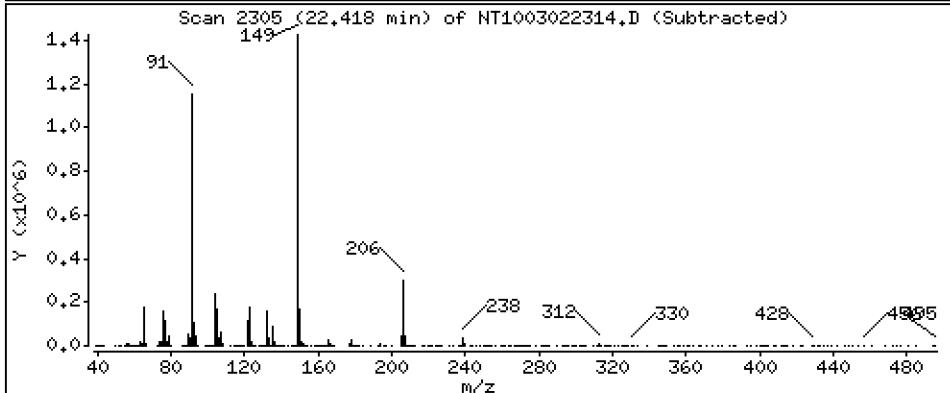
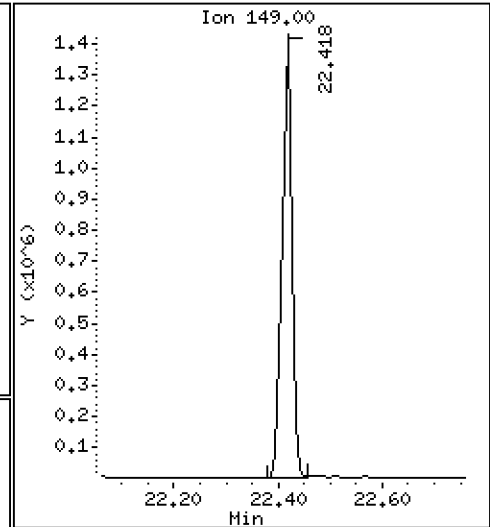
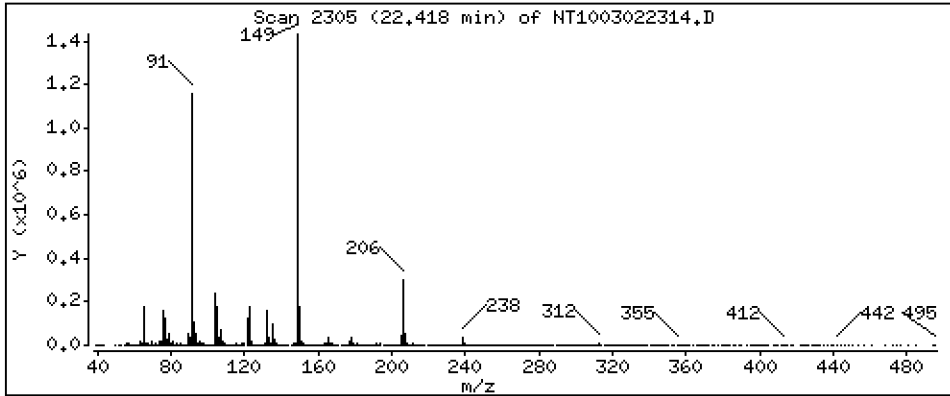
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 3,922 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

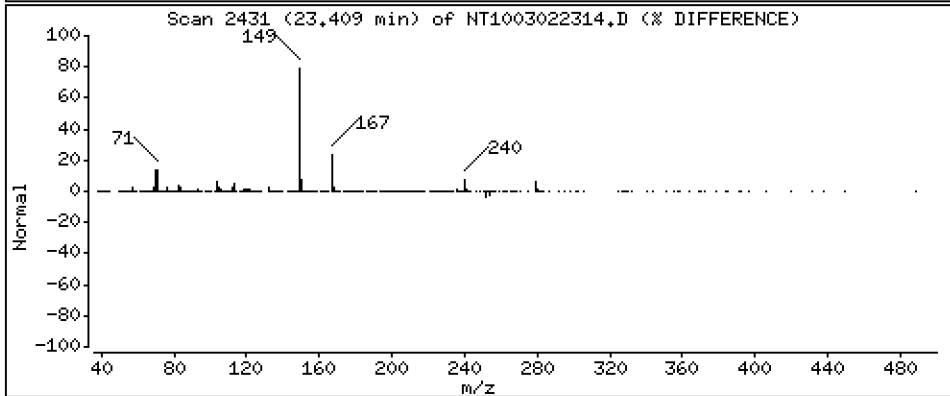
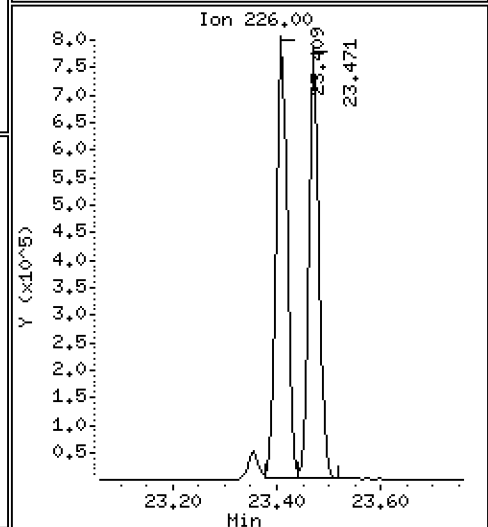
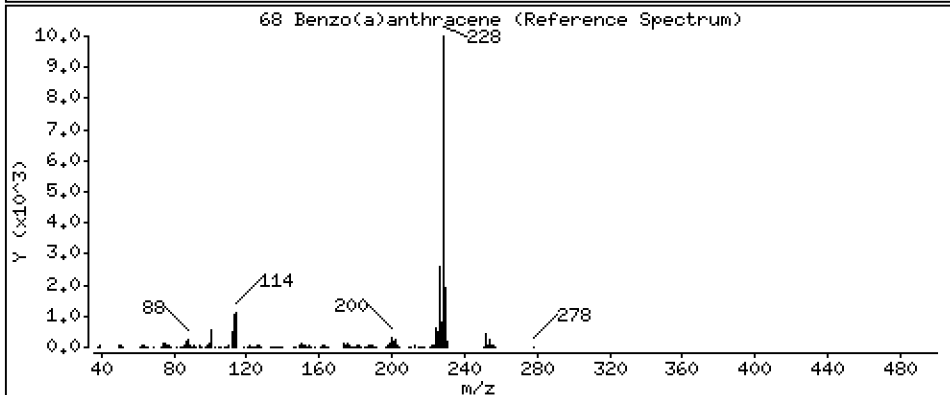
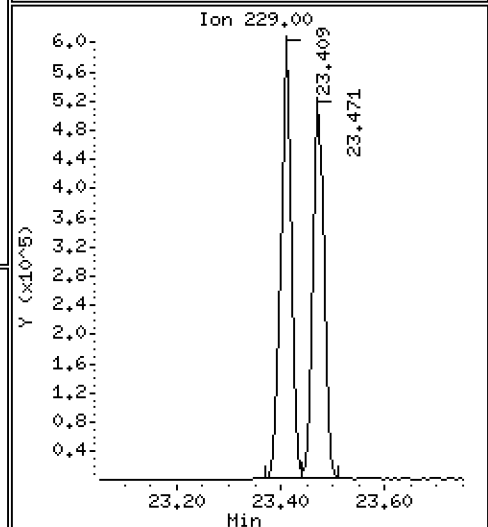
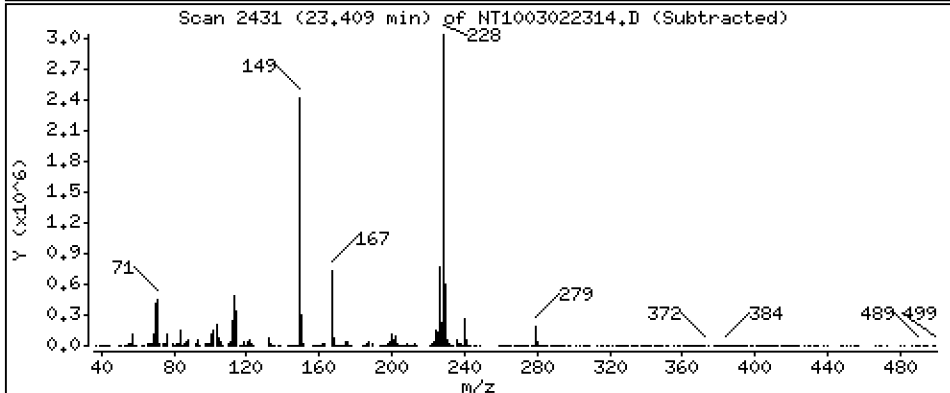
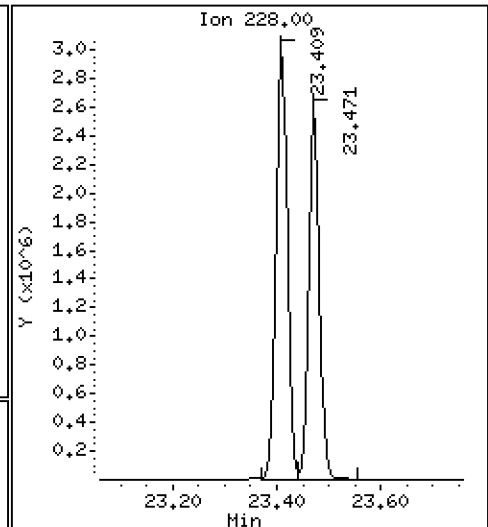
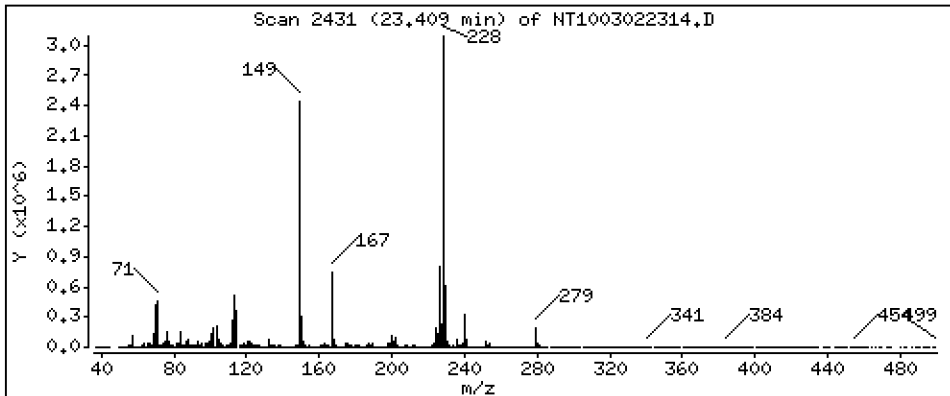
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,873 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

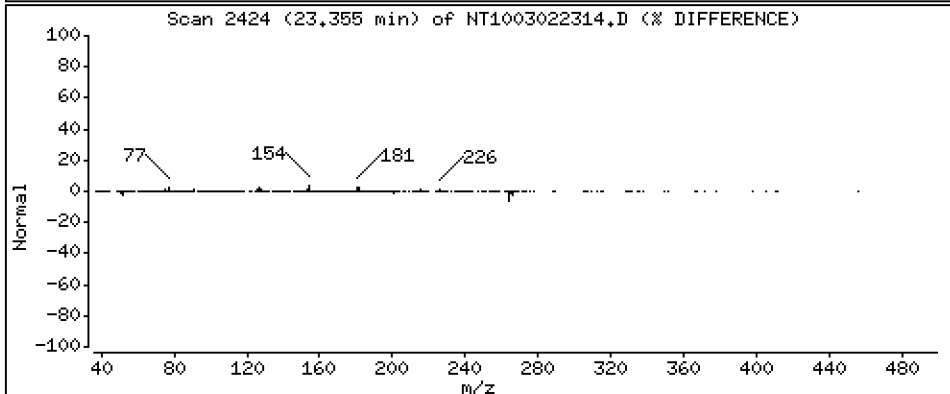
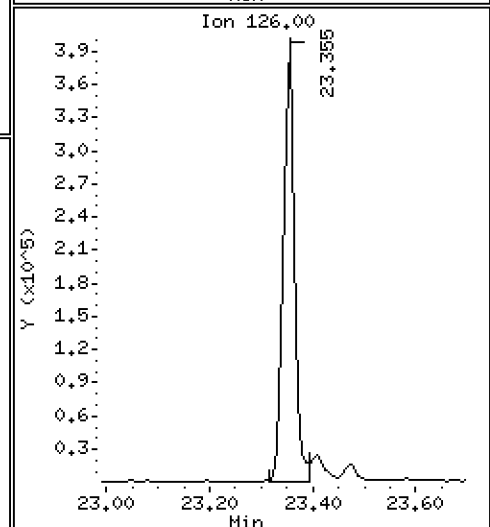
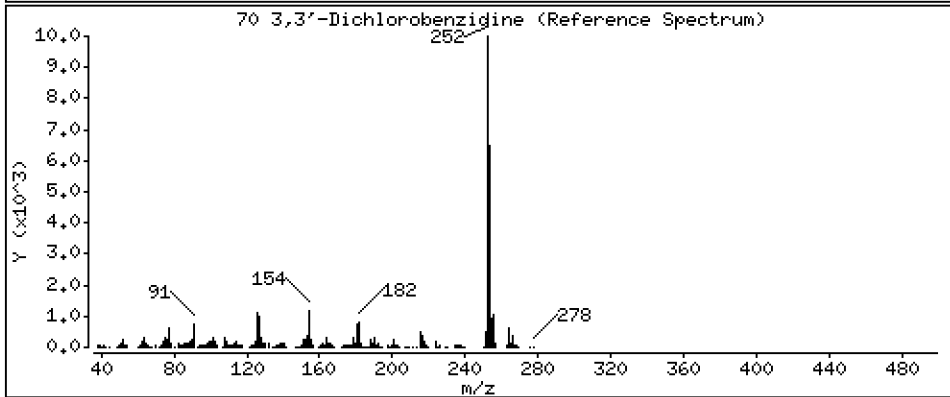
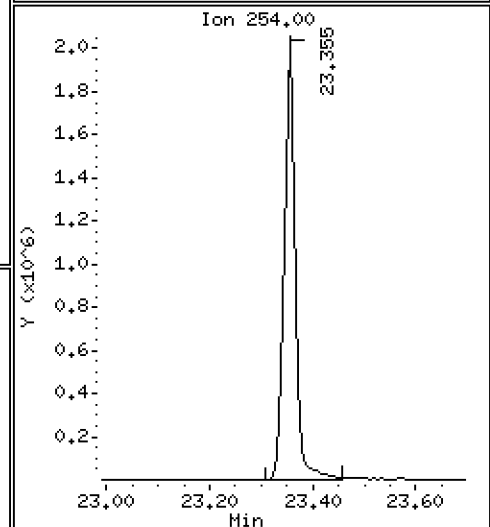
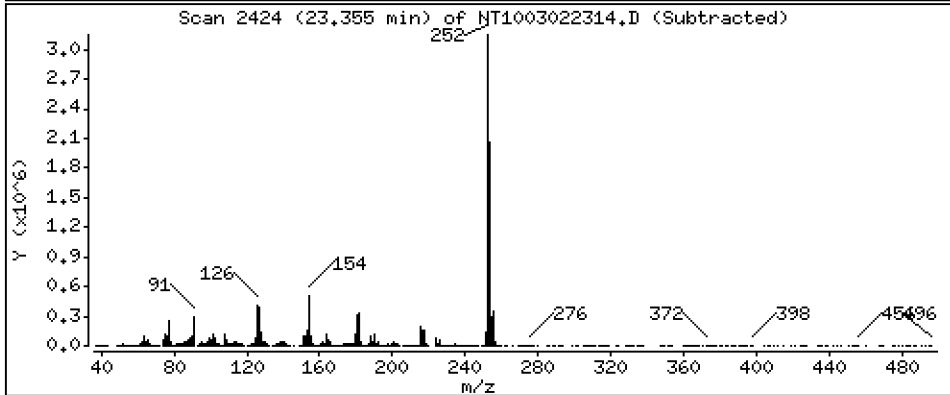
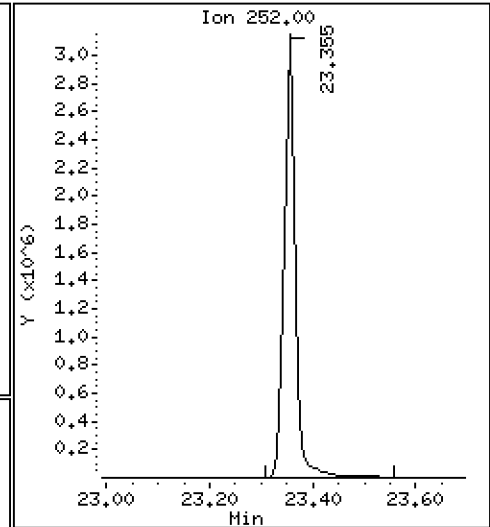
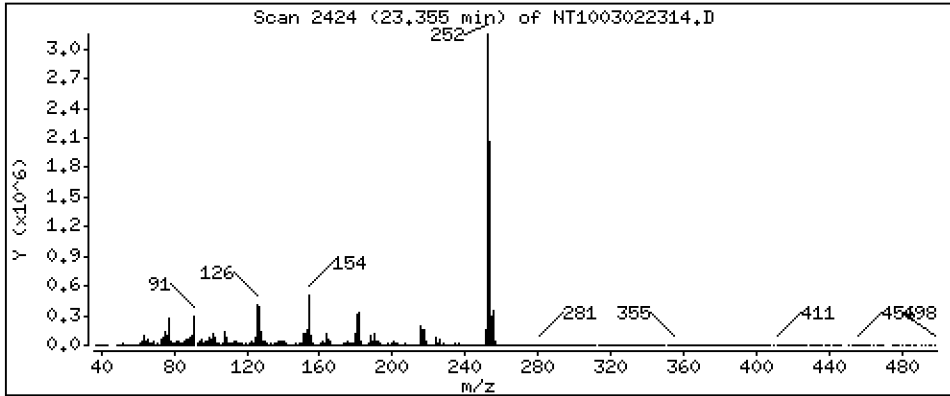
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 11,59 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

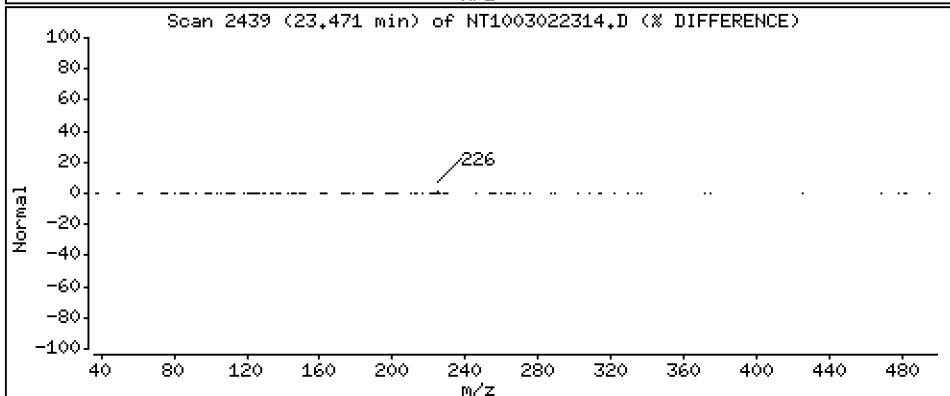
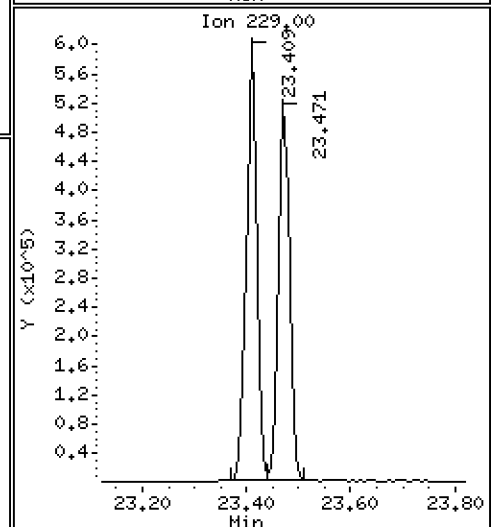
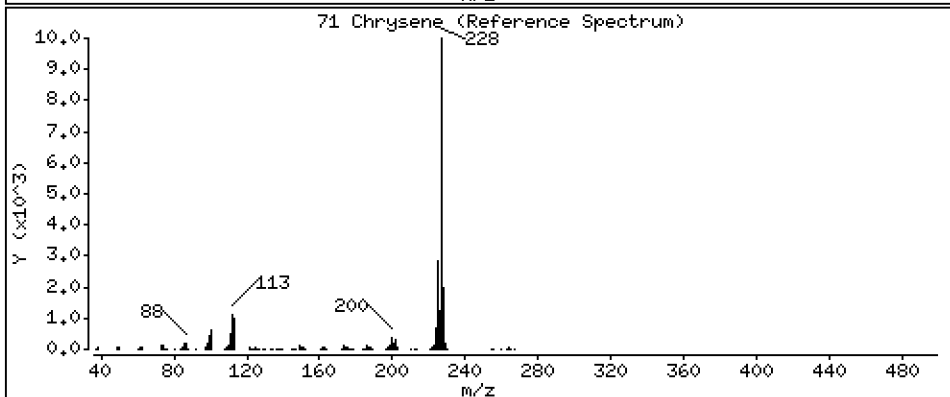
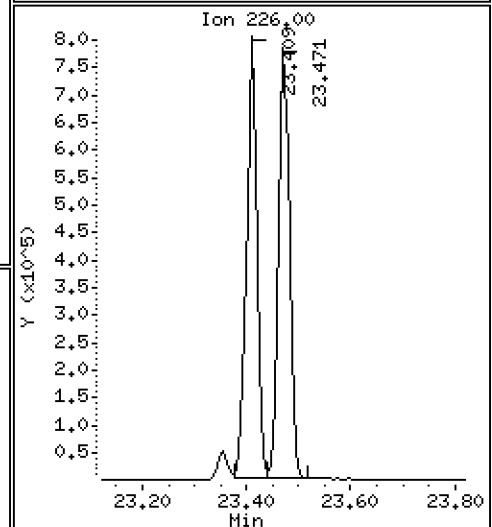
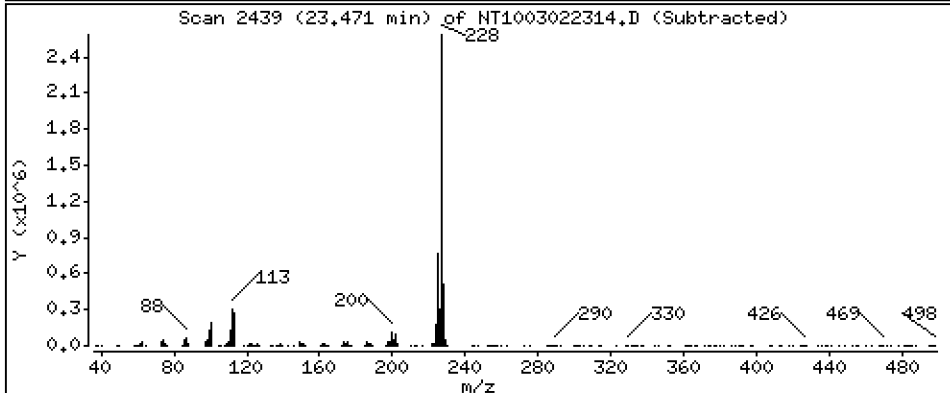
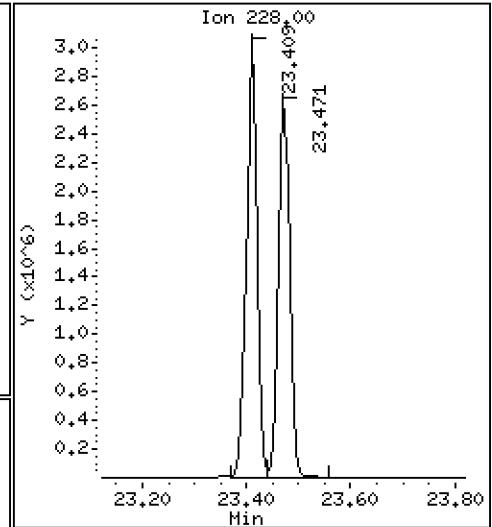
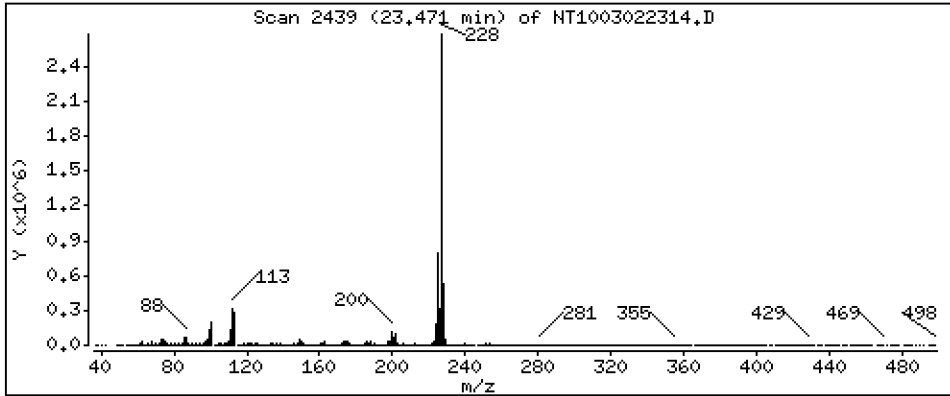
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 5,281 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

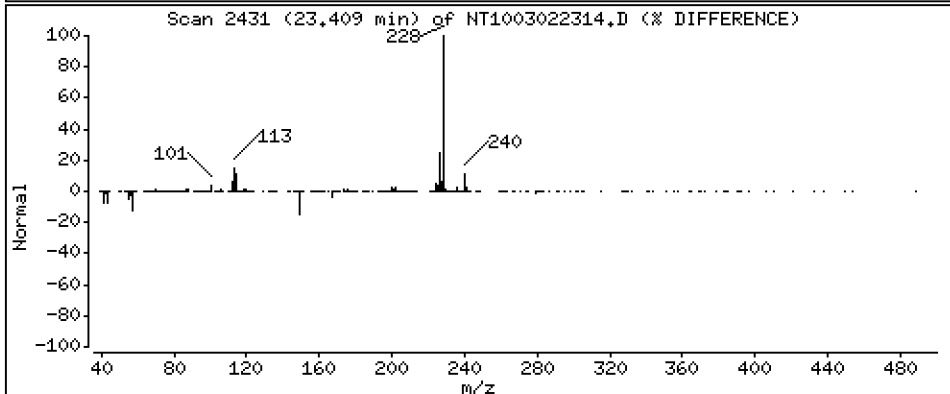
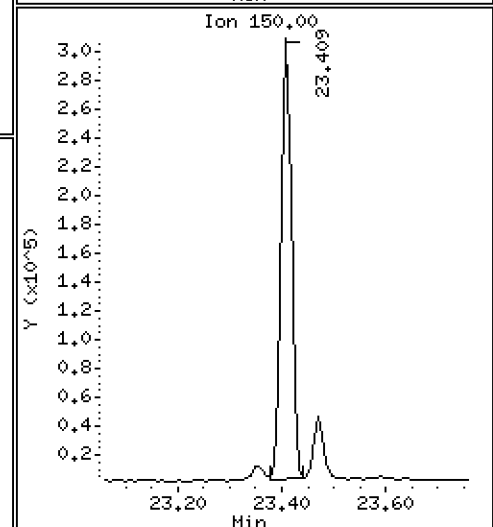
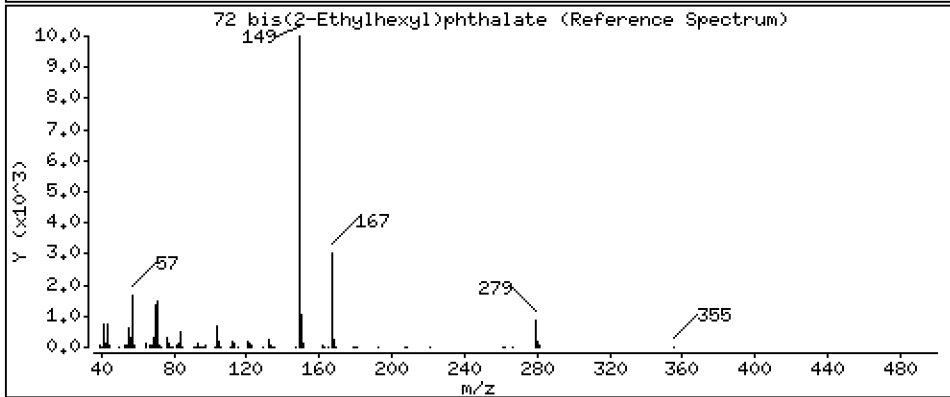
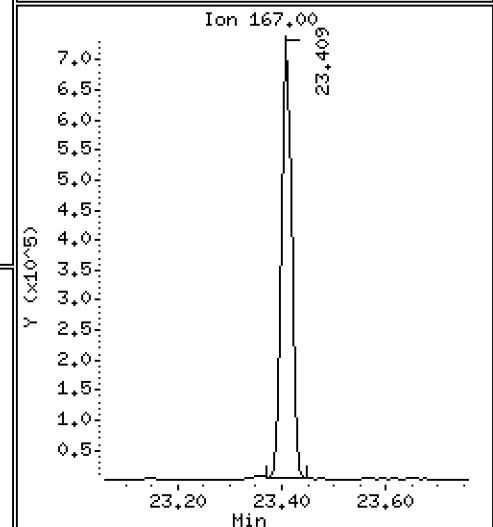
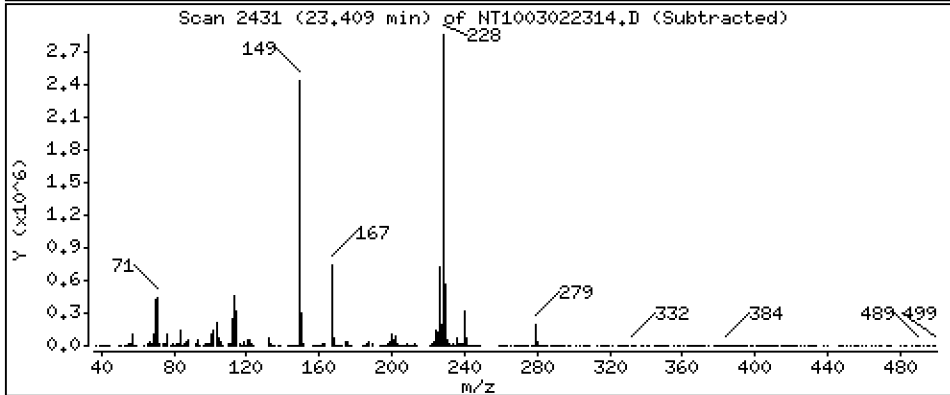
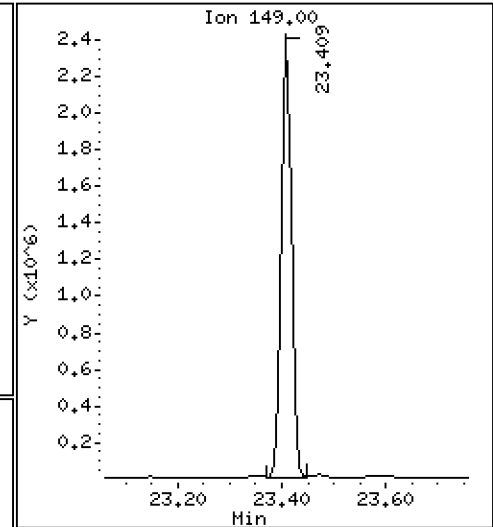
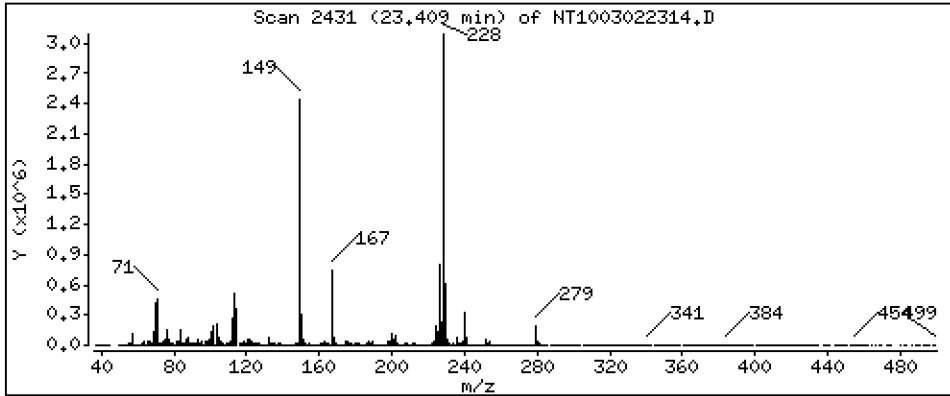
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,431 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

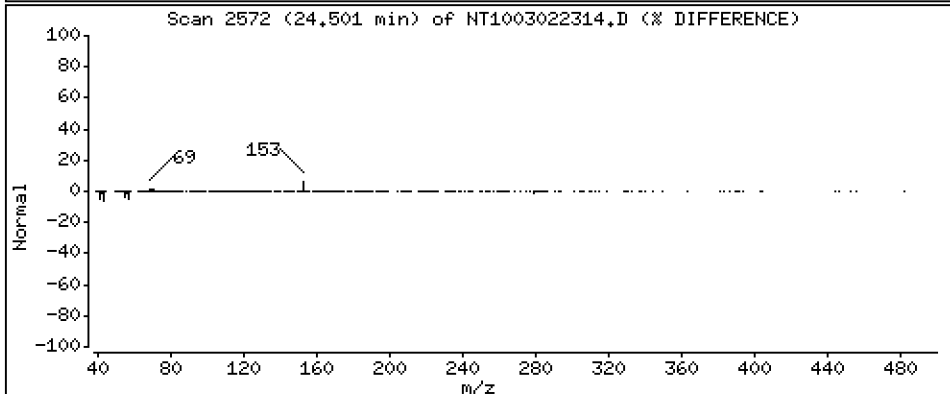
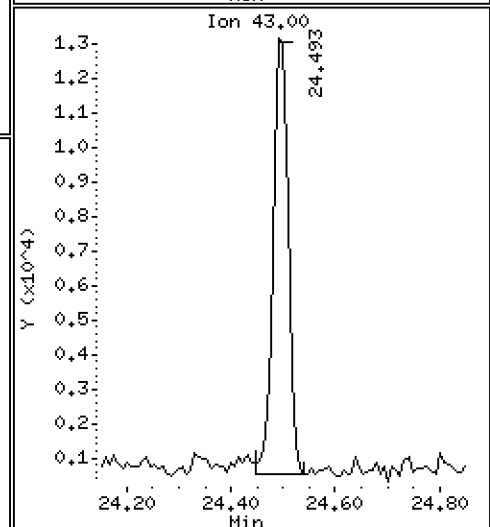
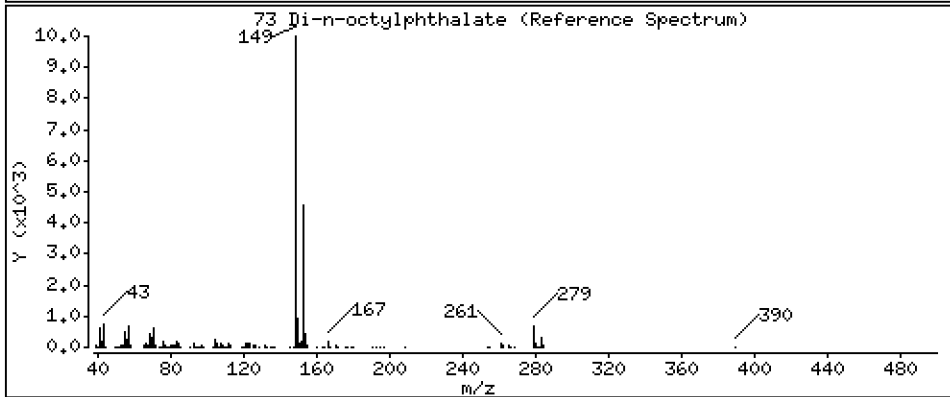
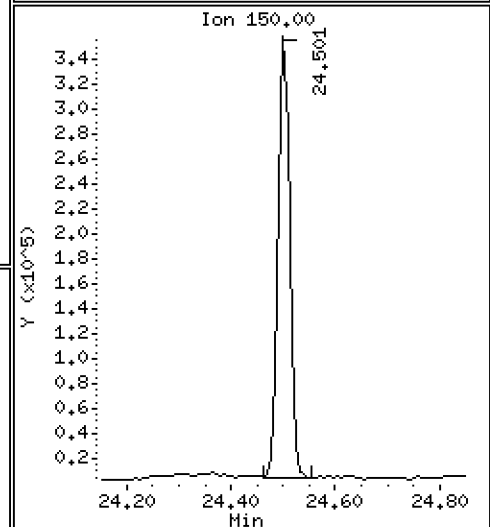
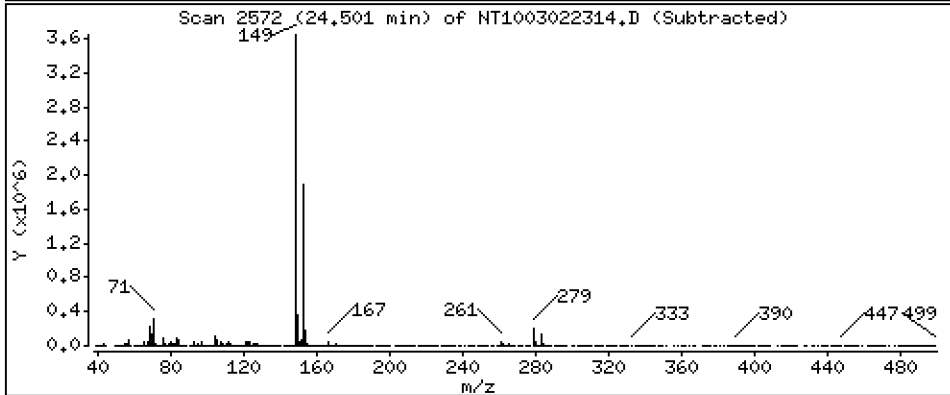
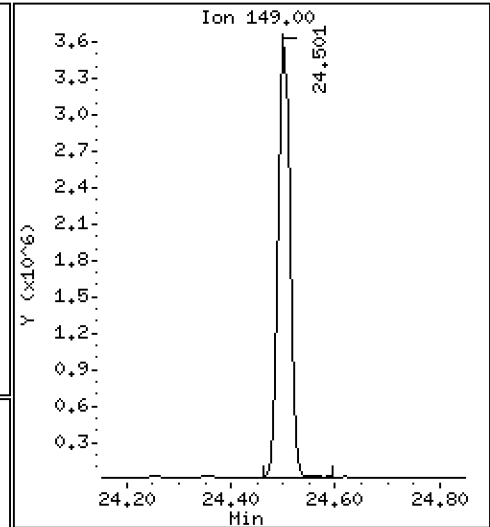
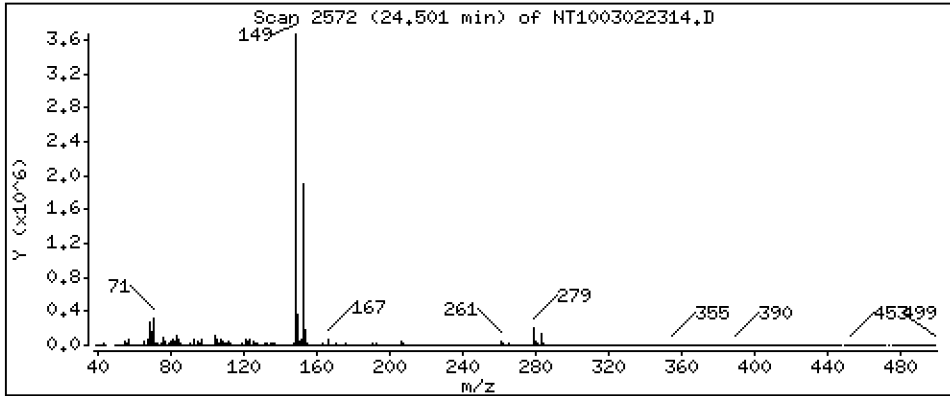
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,137 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

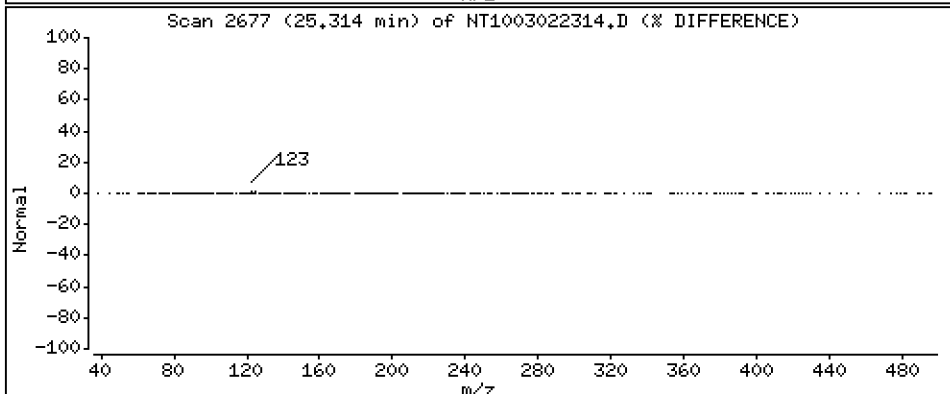
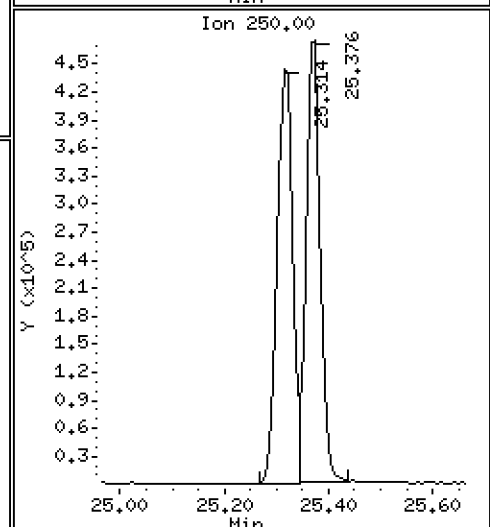
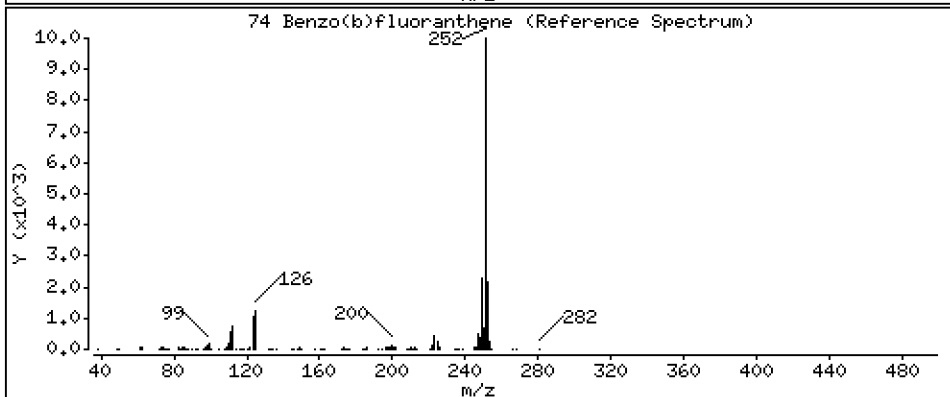
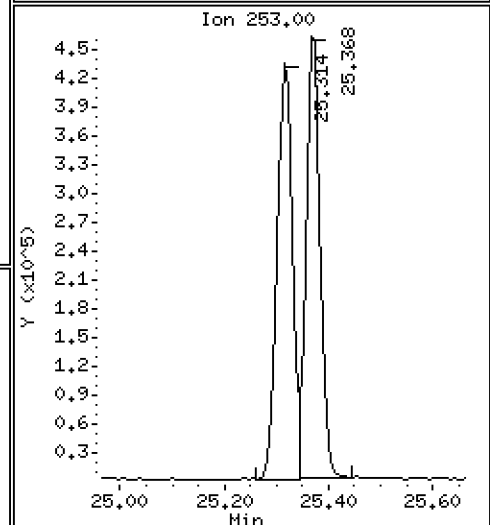
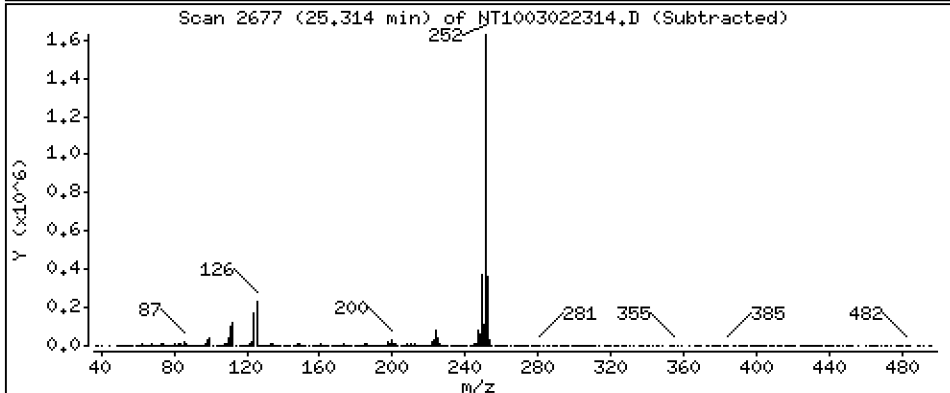
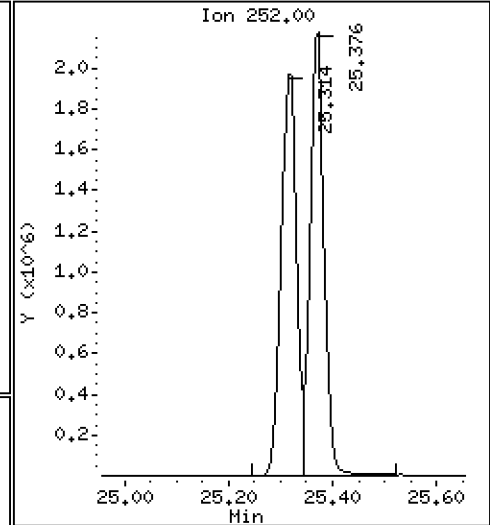
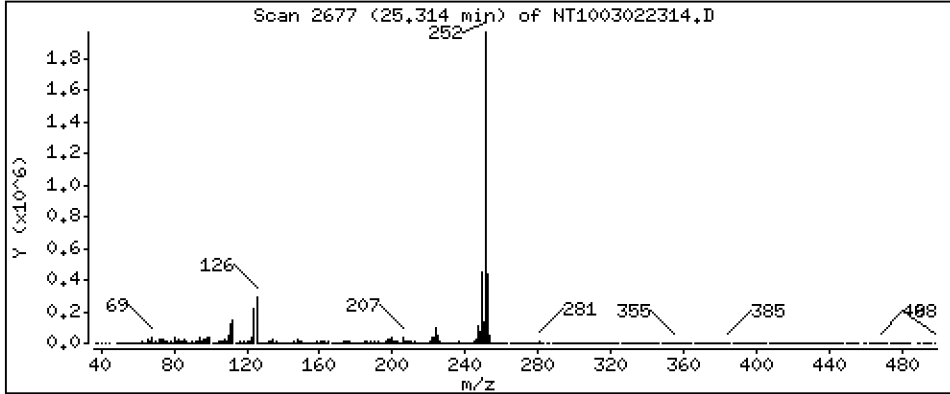
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,307 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

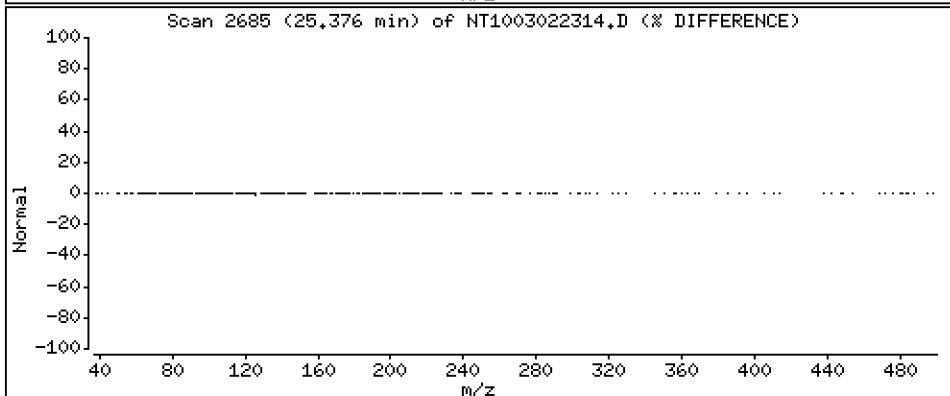
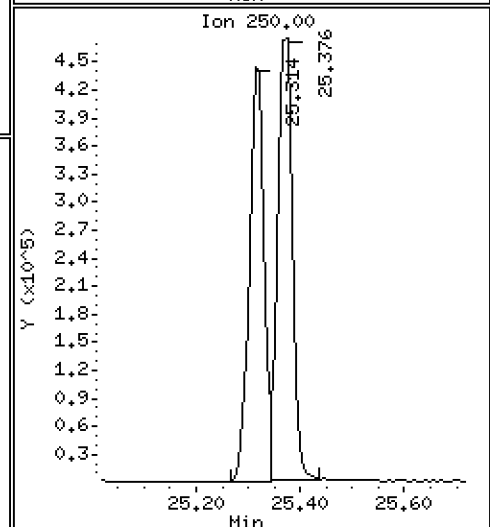
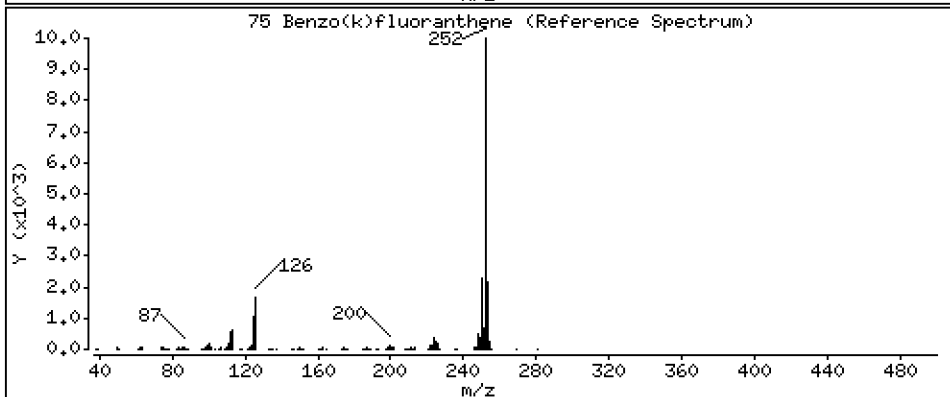
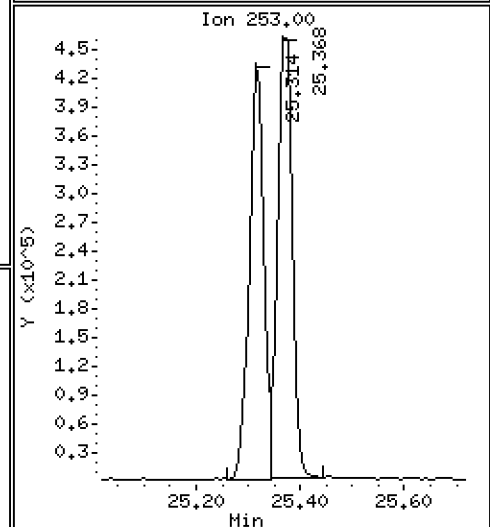
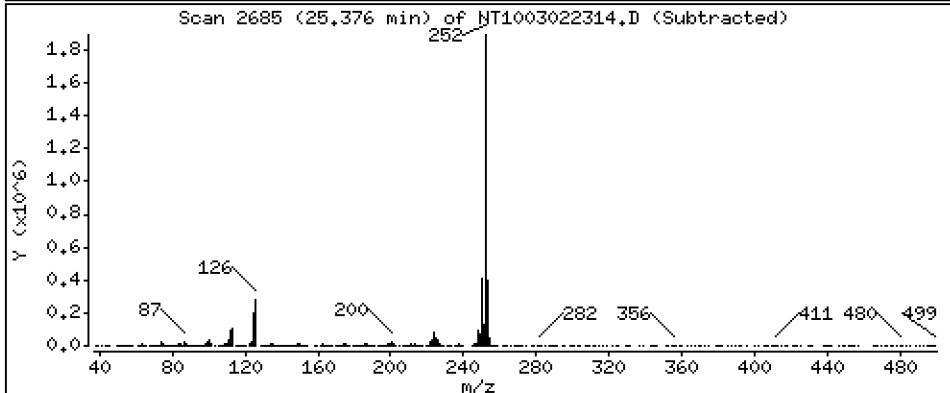
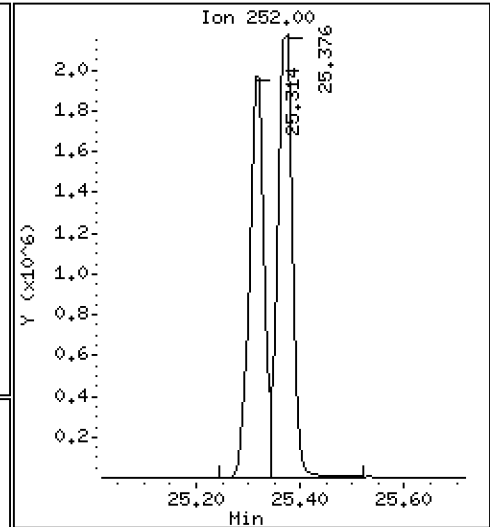
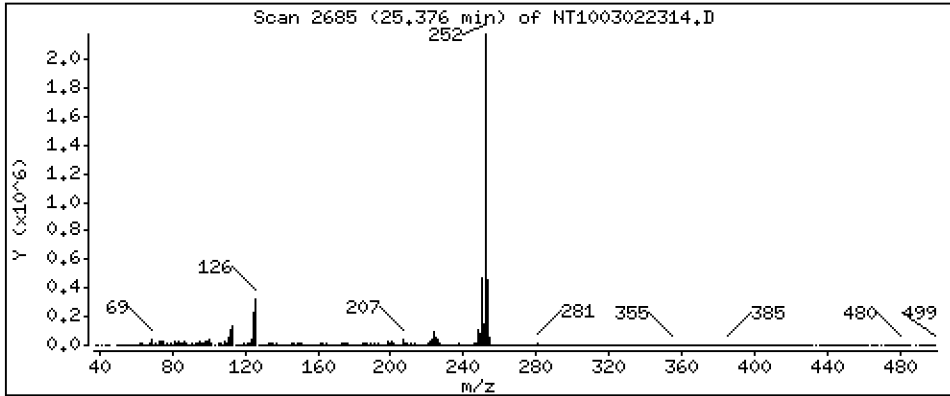
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,576 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

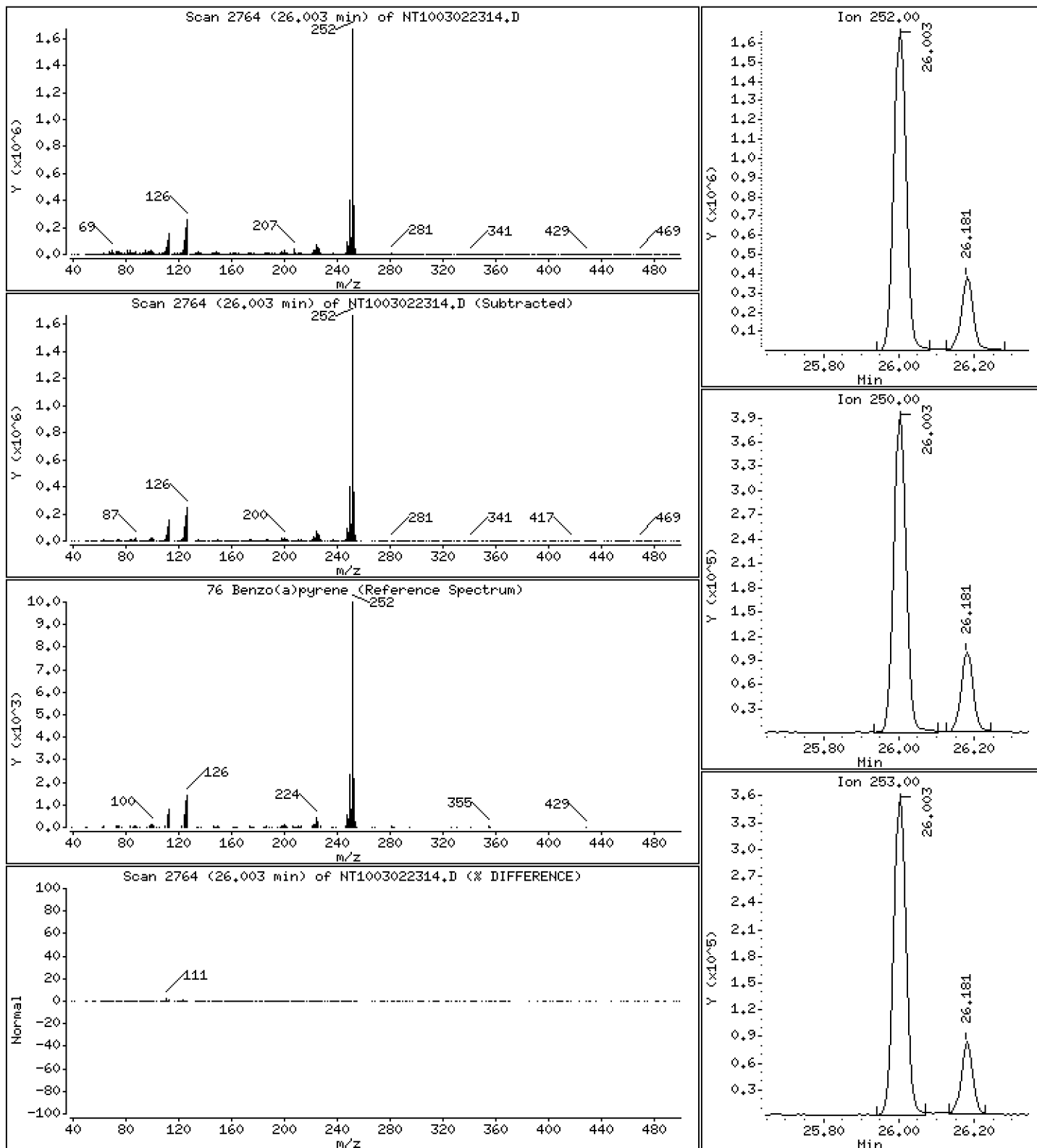
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,453 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

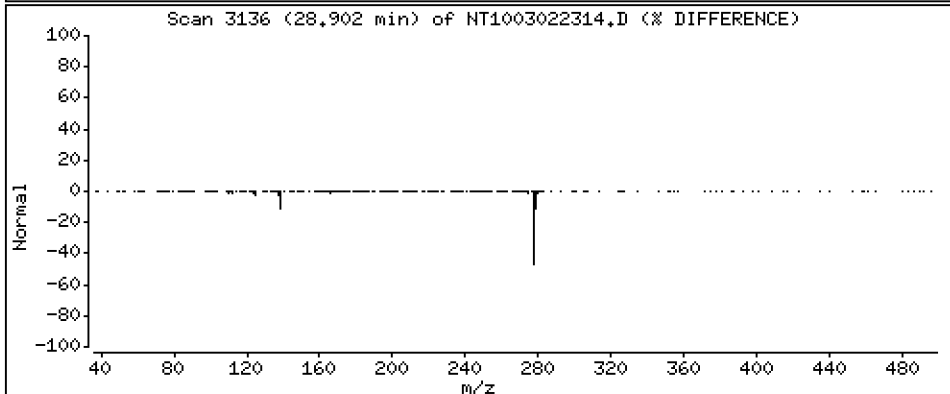
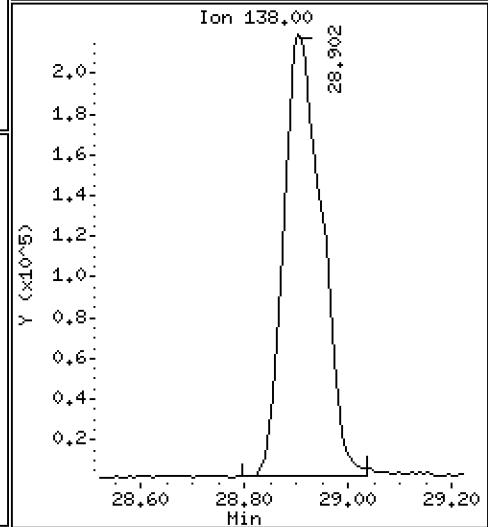
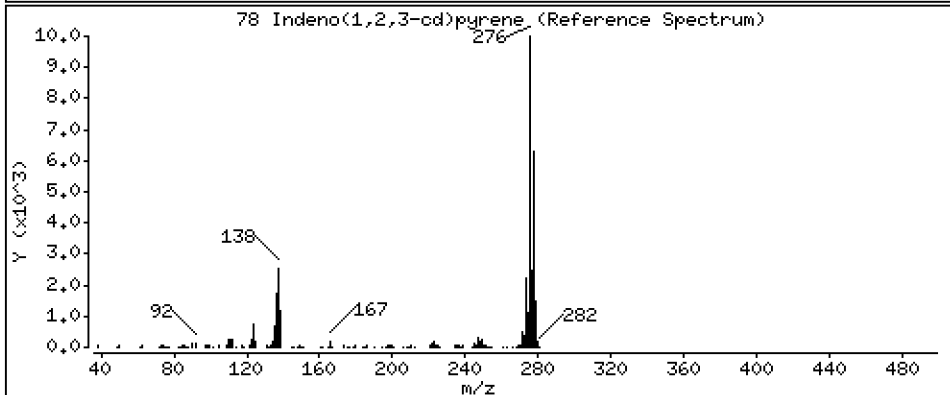
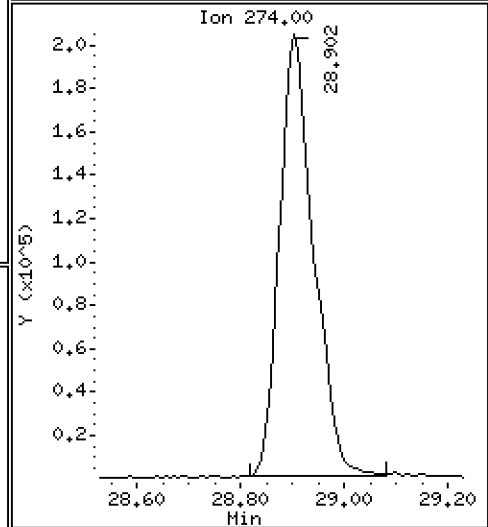
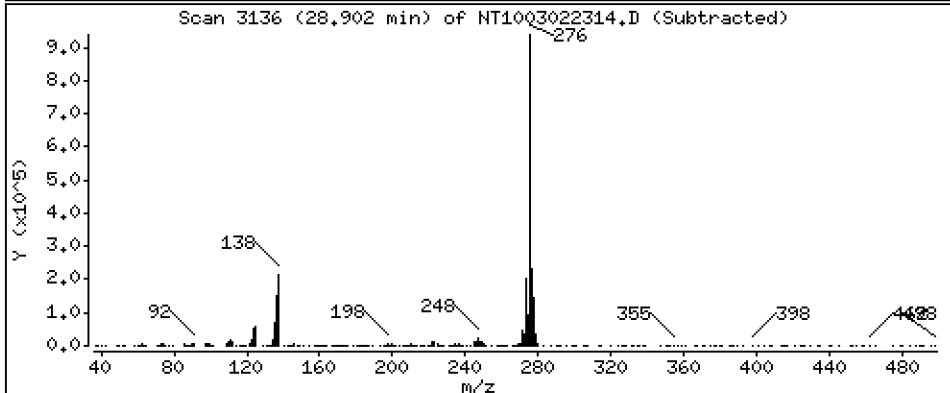
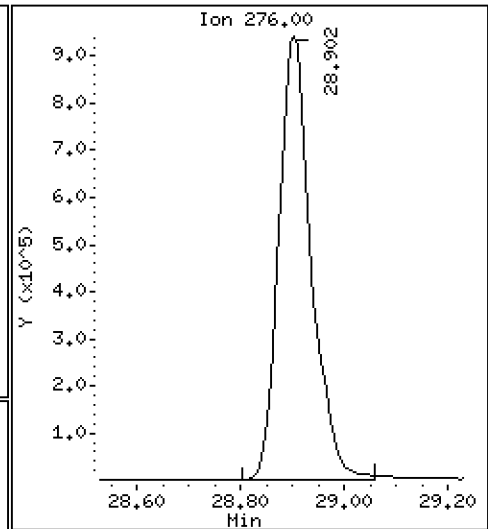
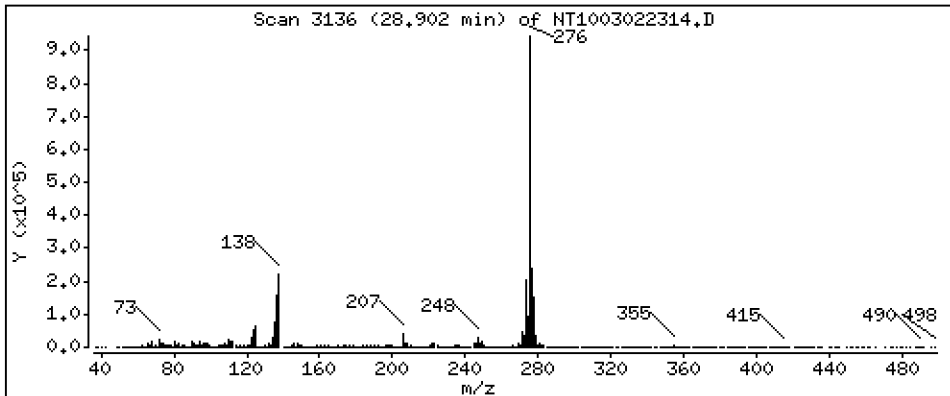
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,253 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

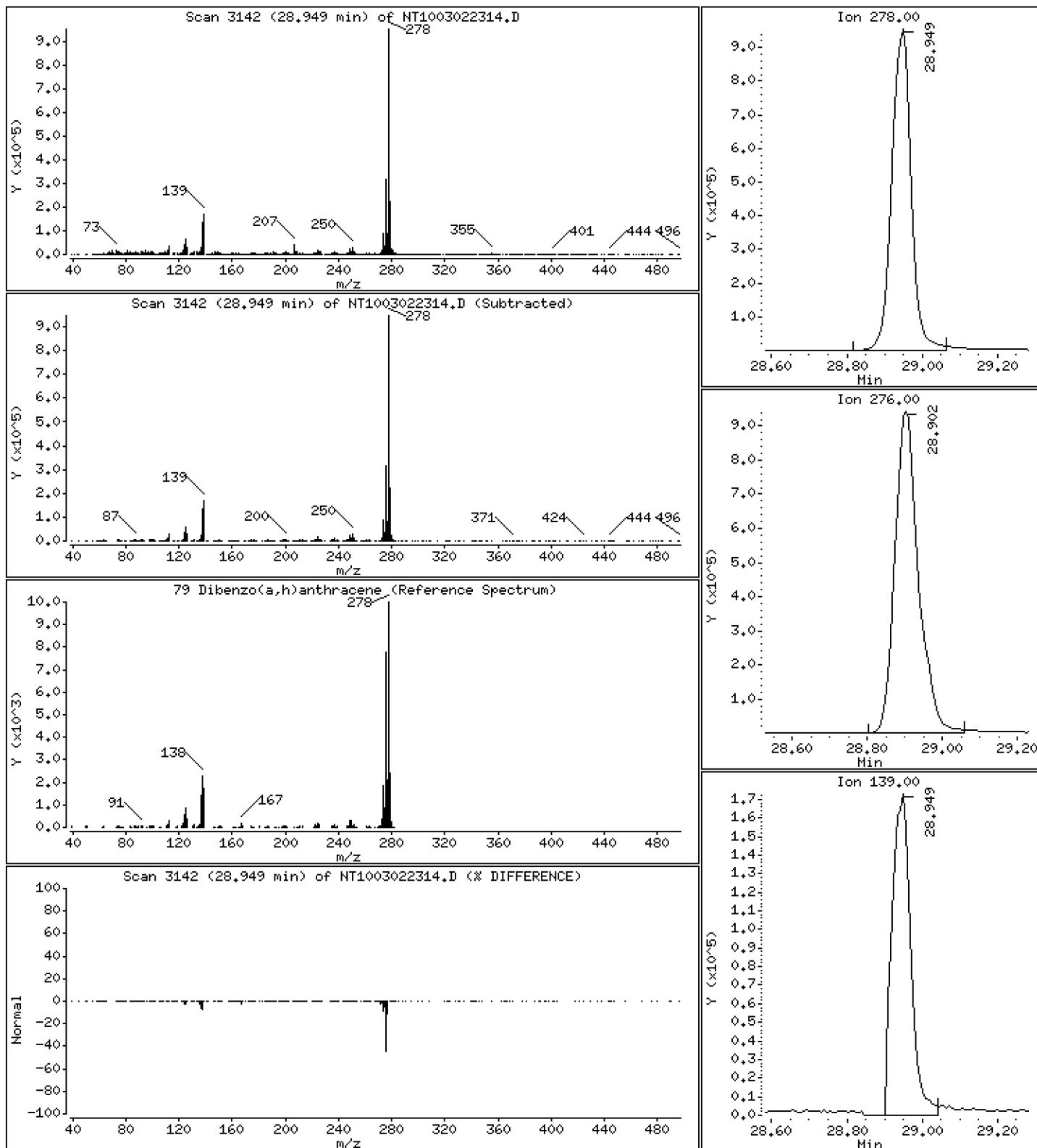
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,576 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

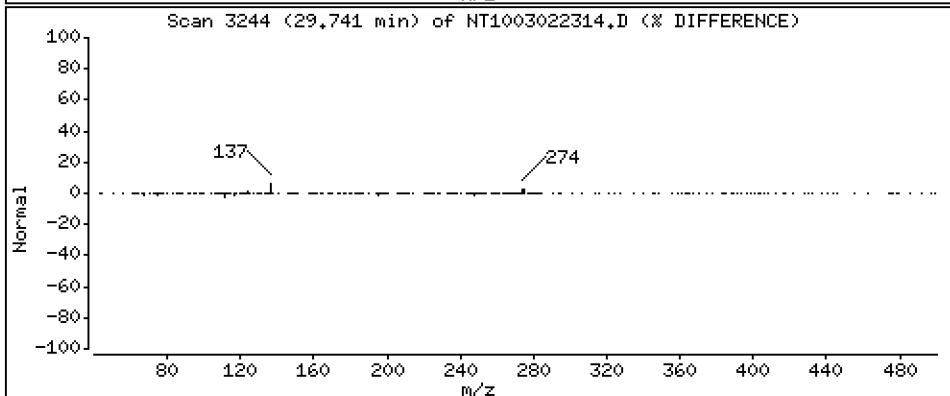
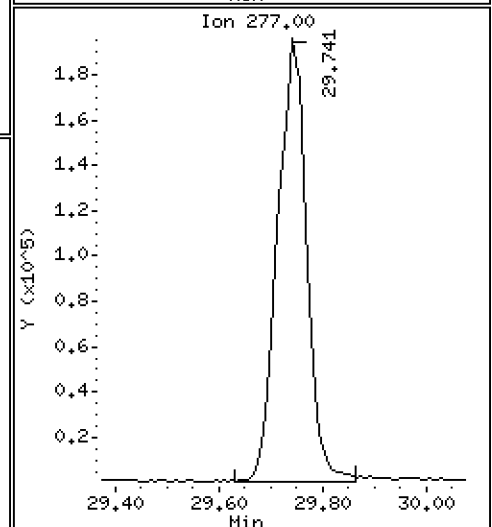
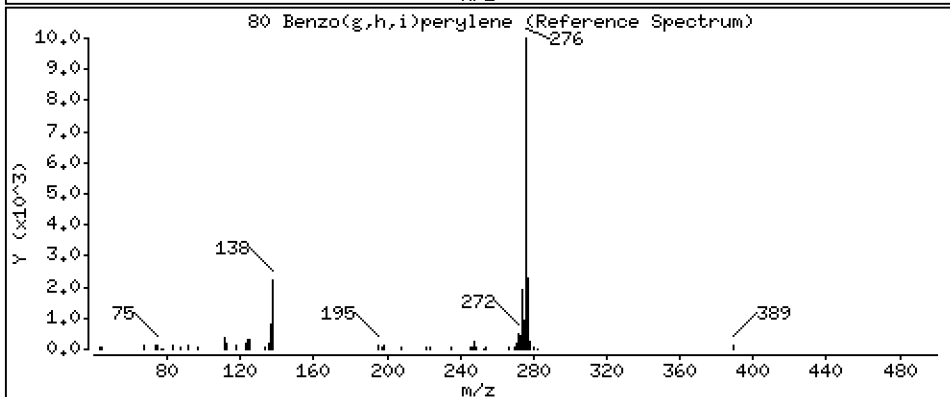
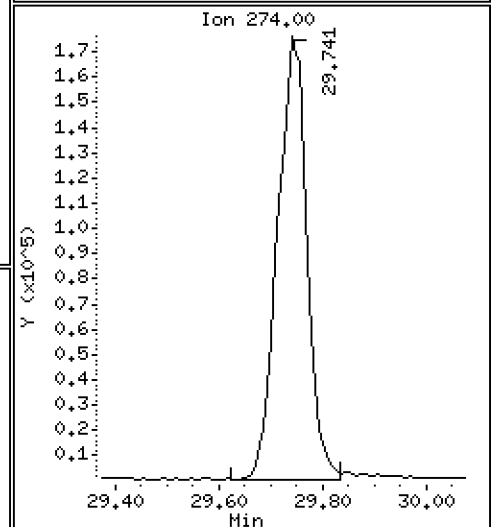
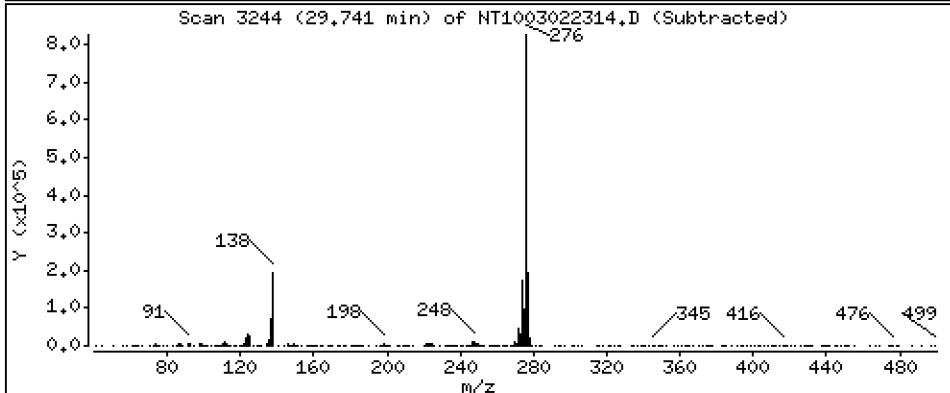
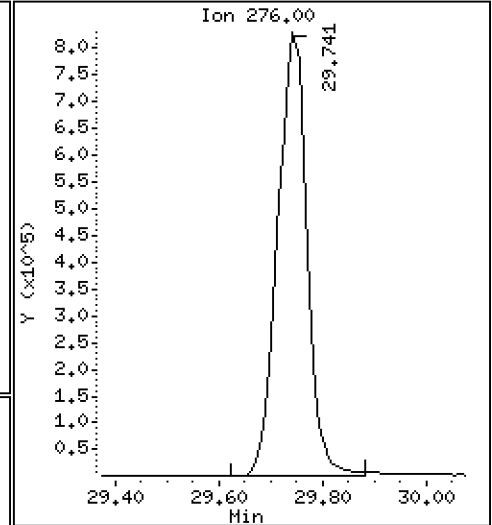
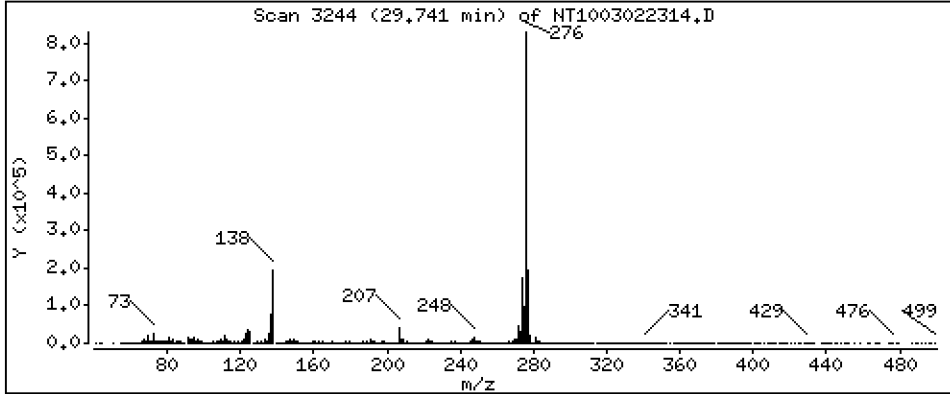
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 4,299 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

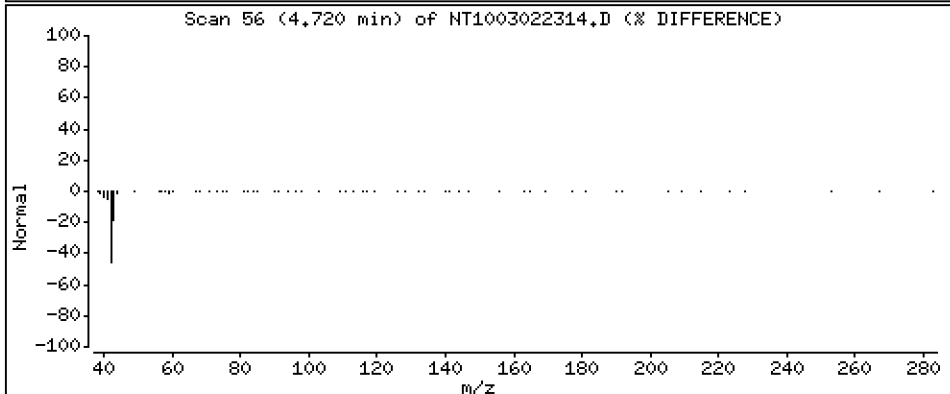
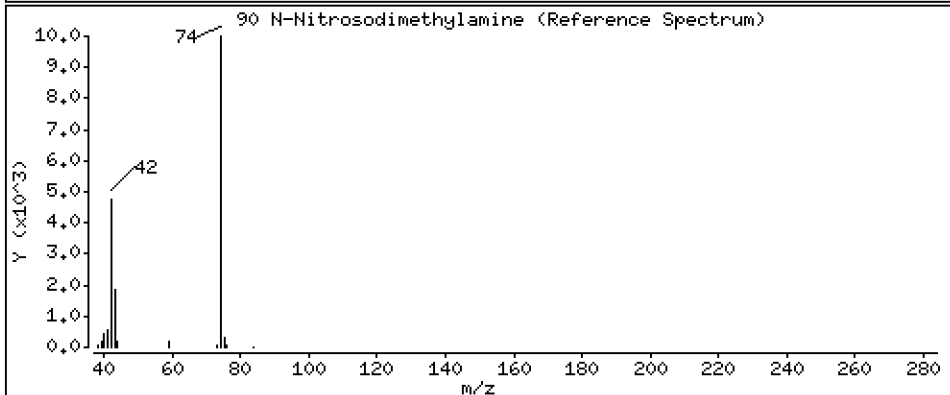
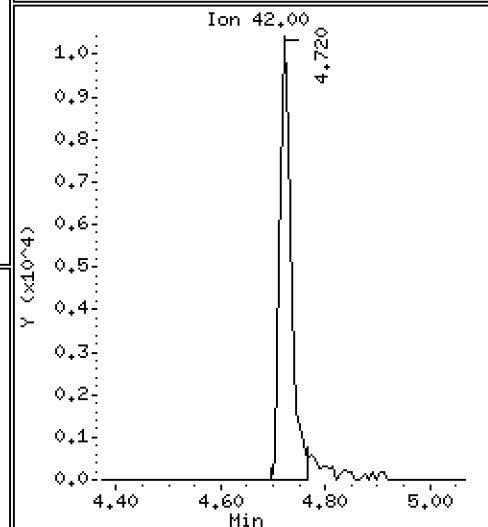
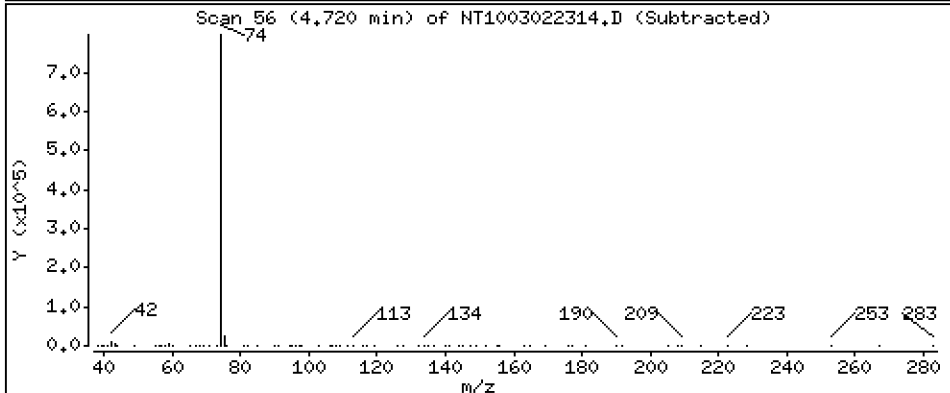
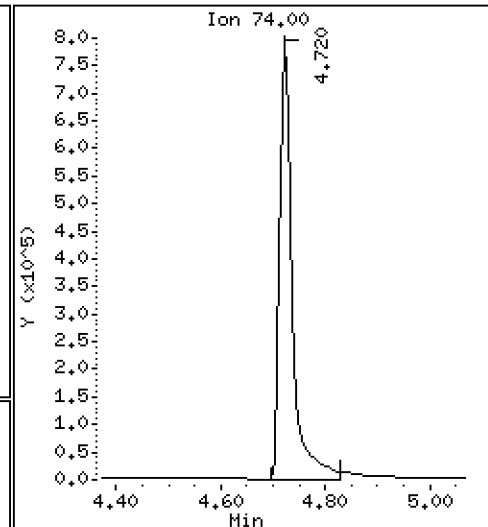
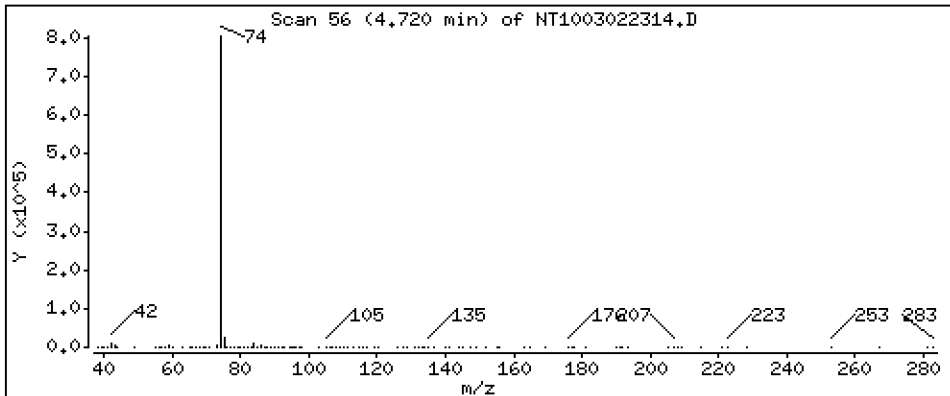
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 10,53 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

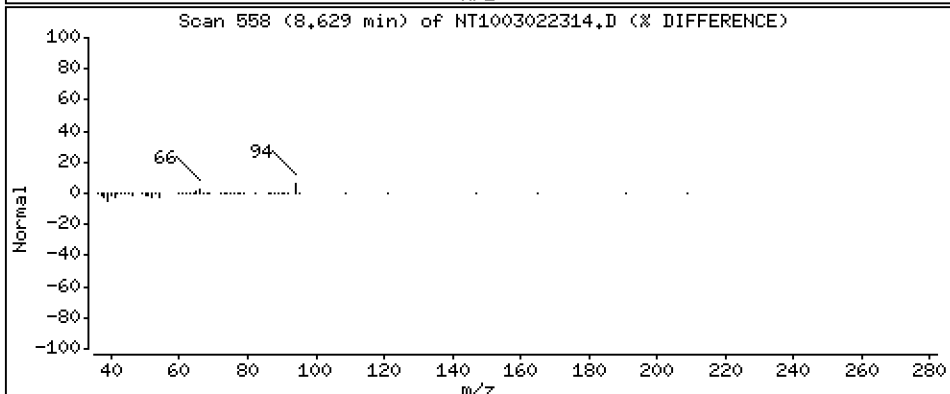
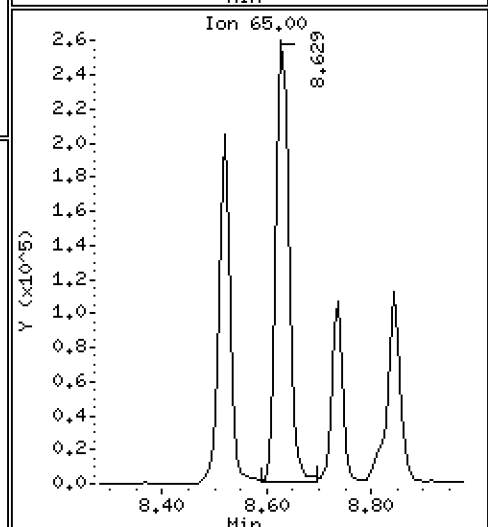
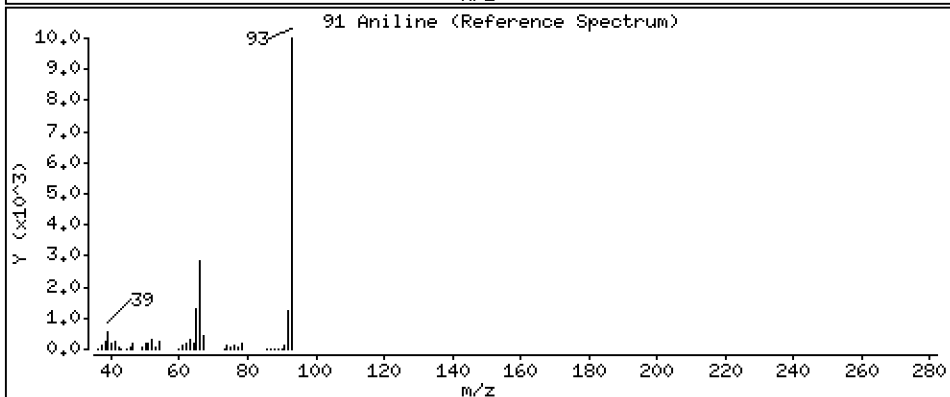
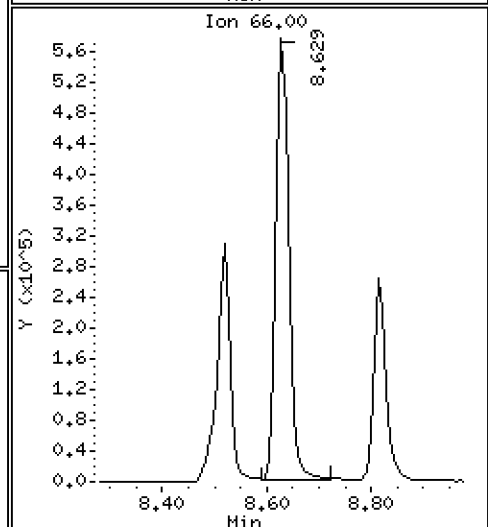
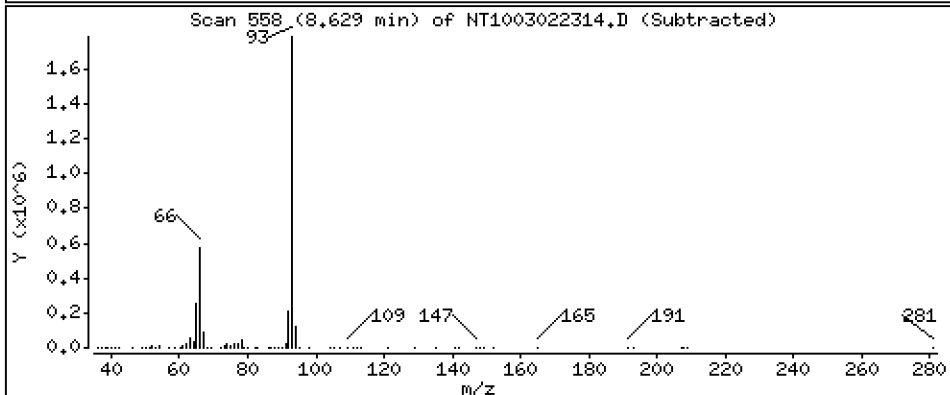
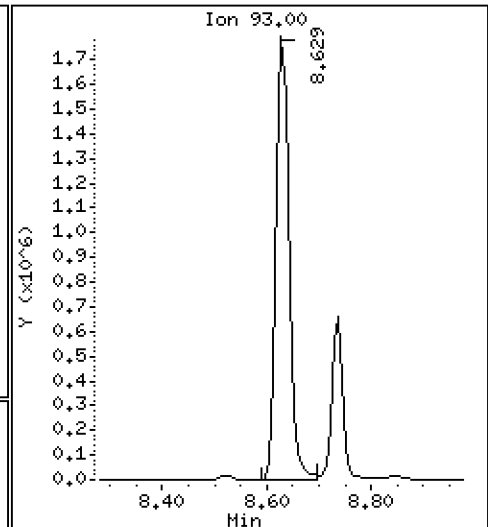
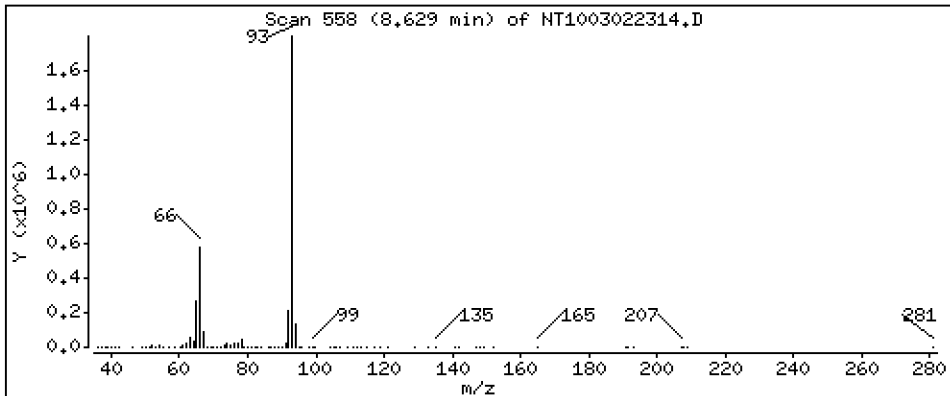
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 10,95 ug/mL





Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

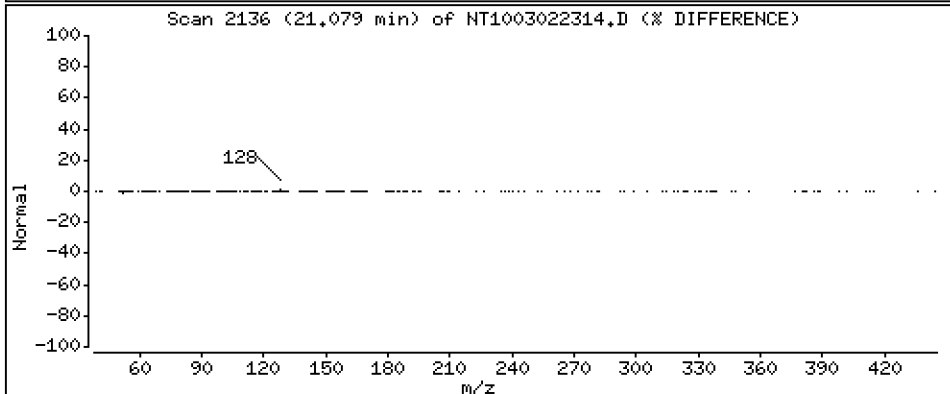
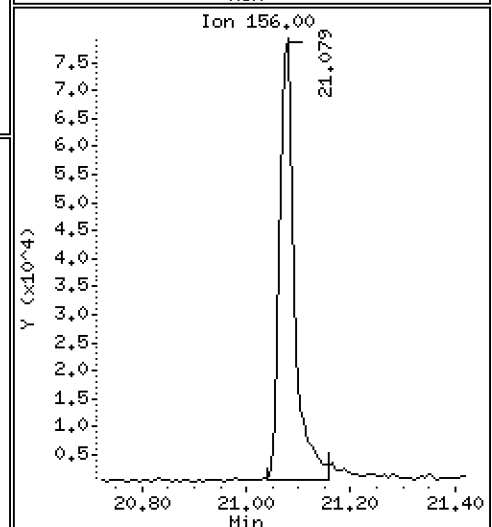
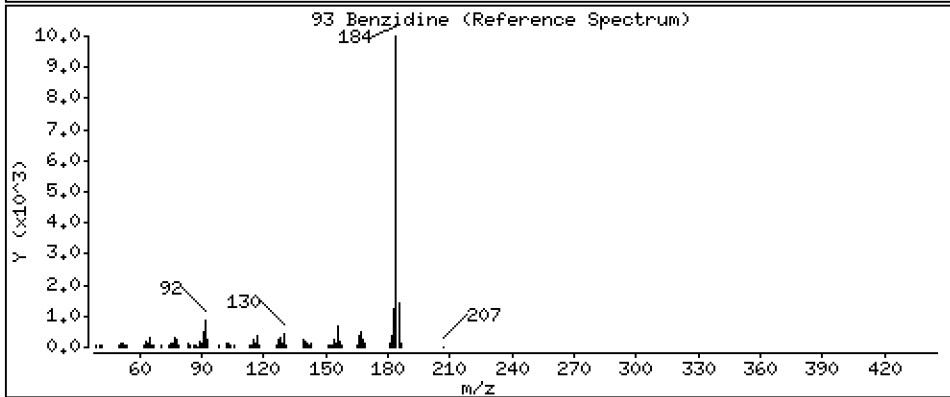
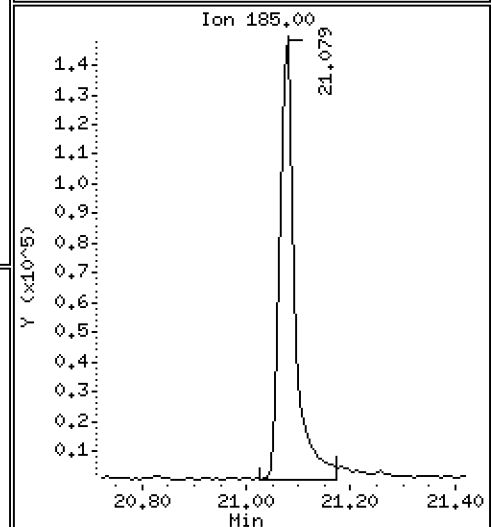
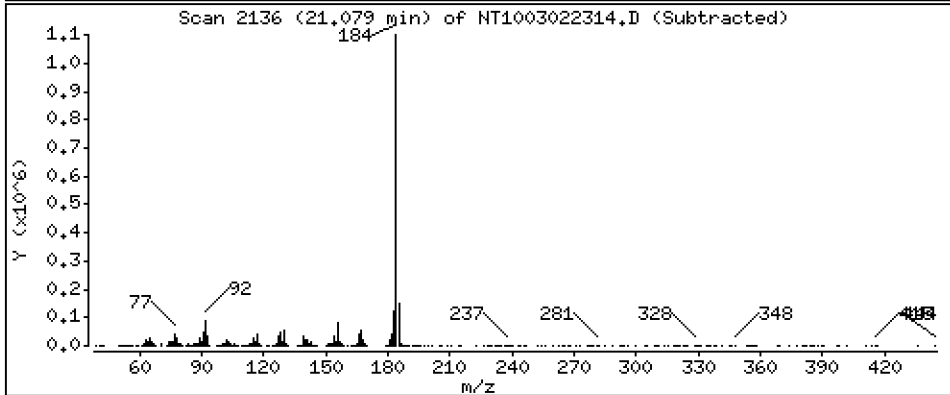
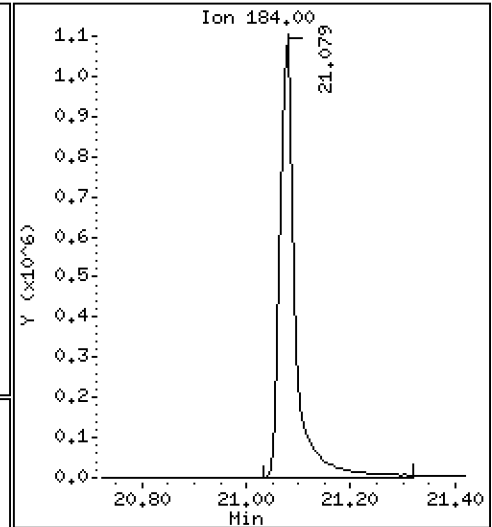
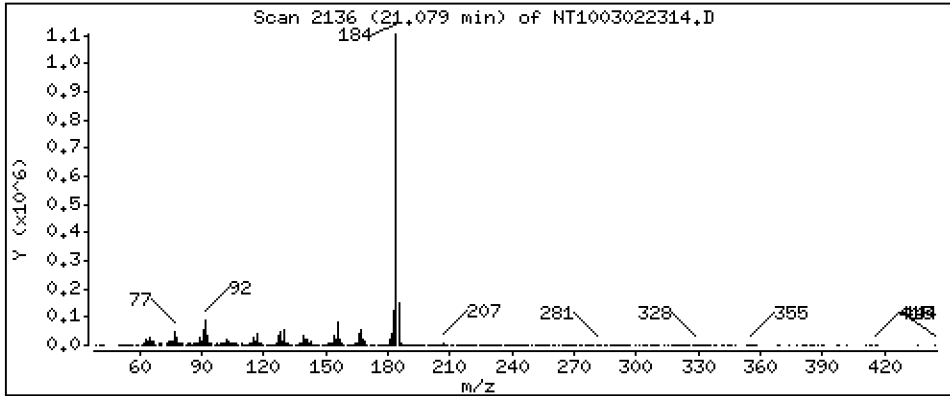
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 5,871 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

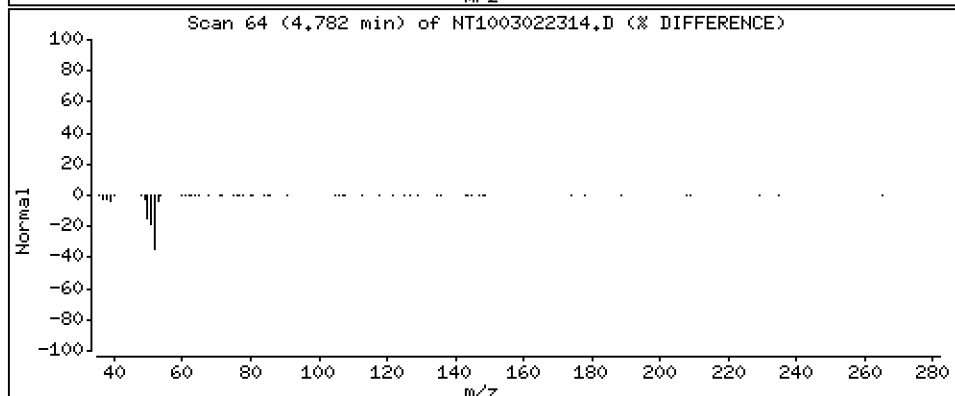
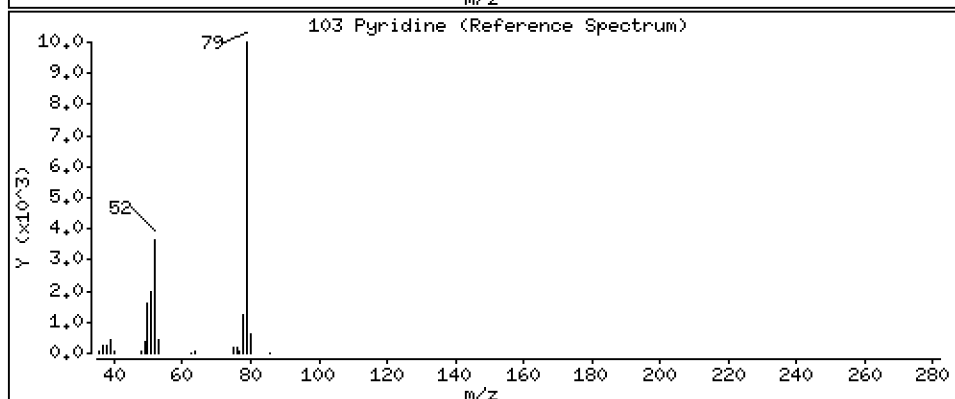
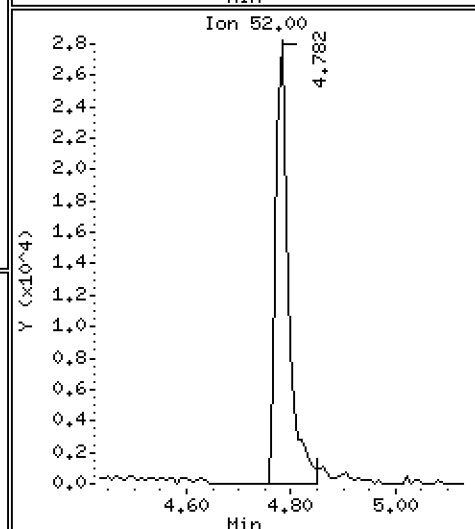
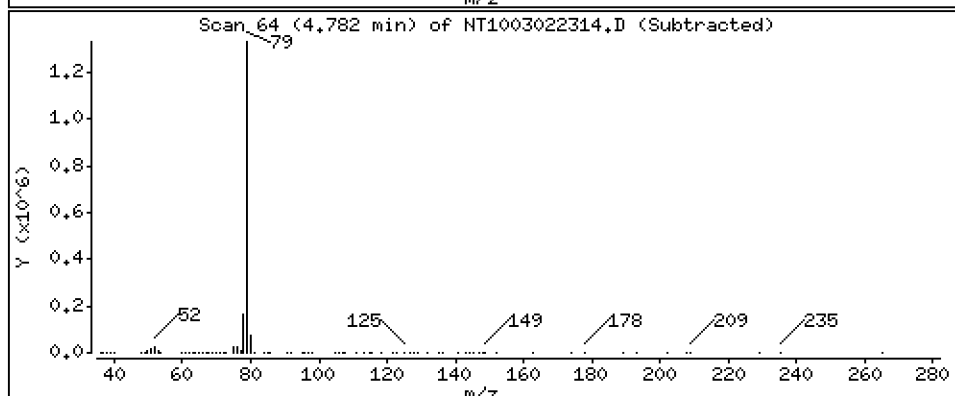
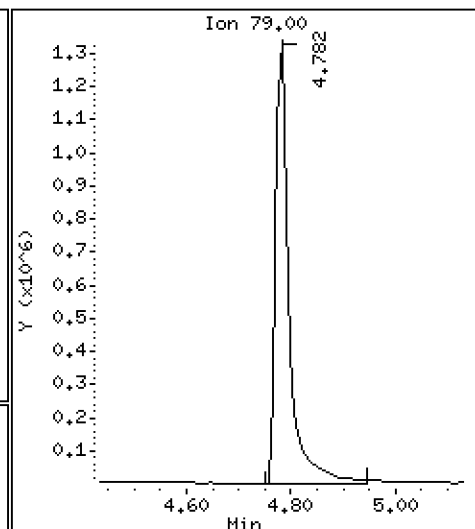
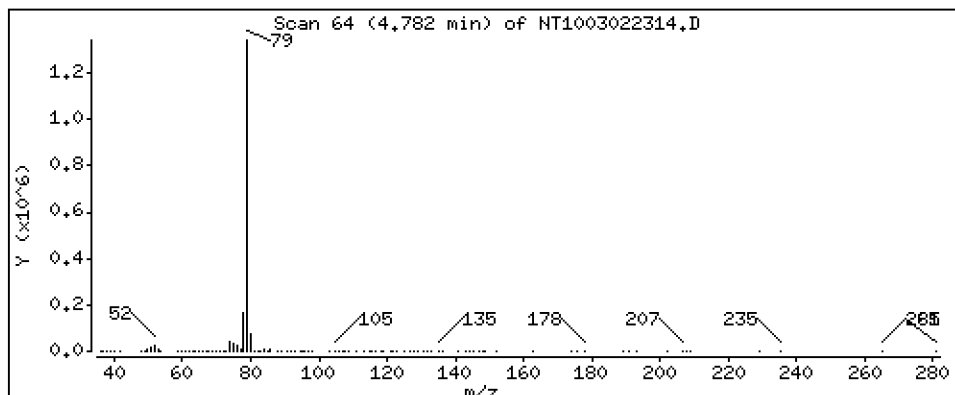
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 10,52 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

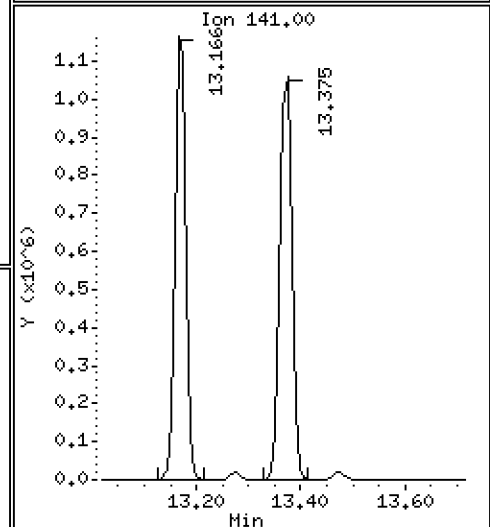
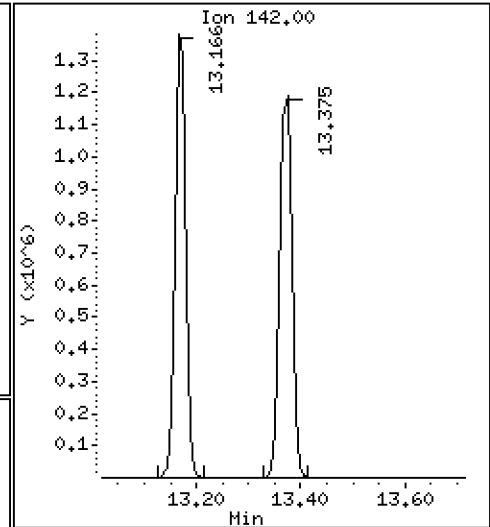
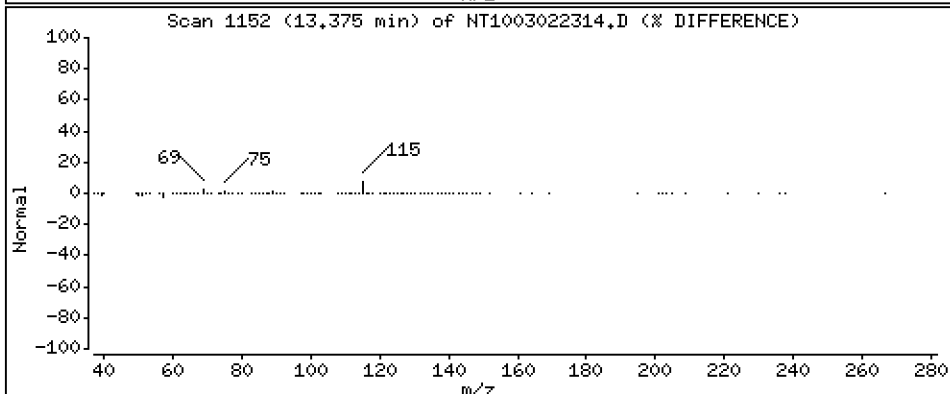
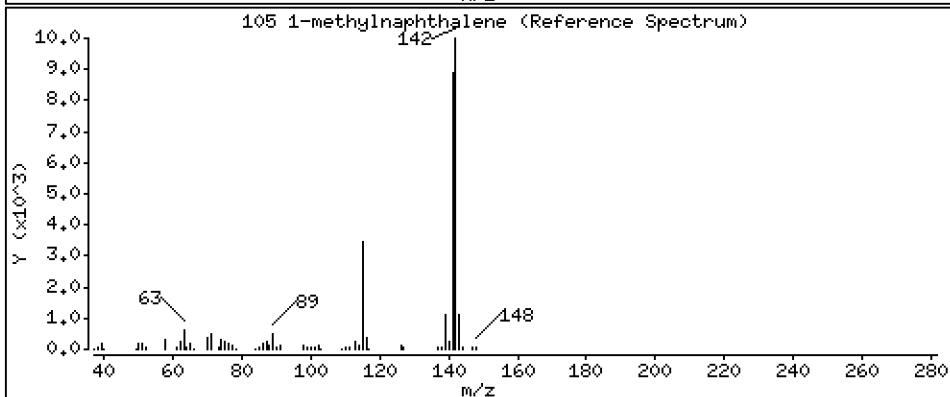
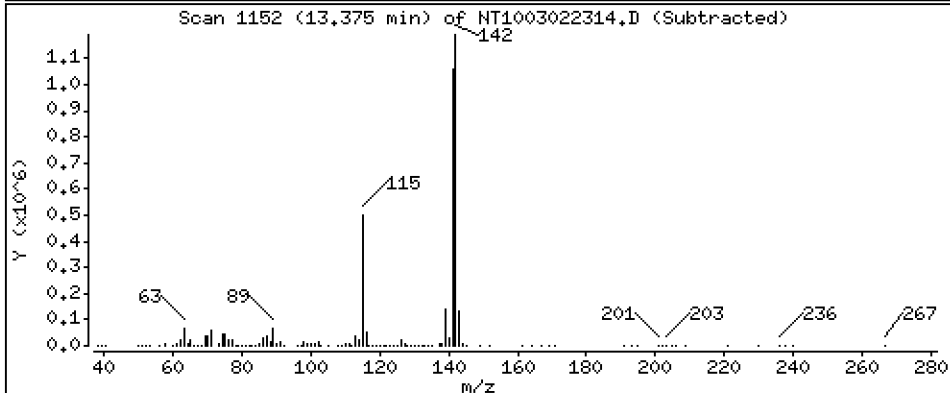
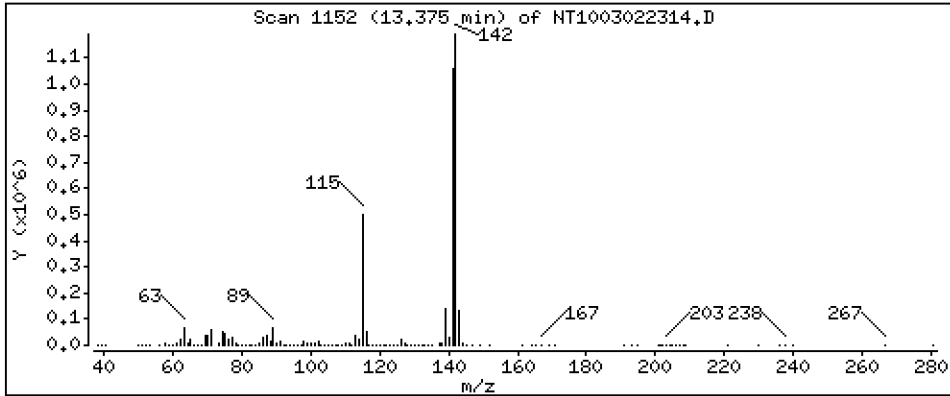
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,130 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

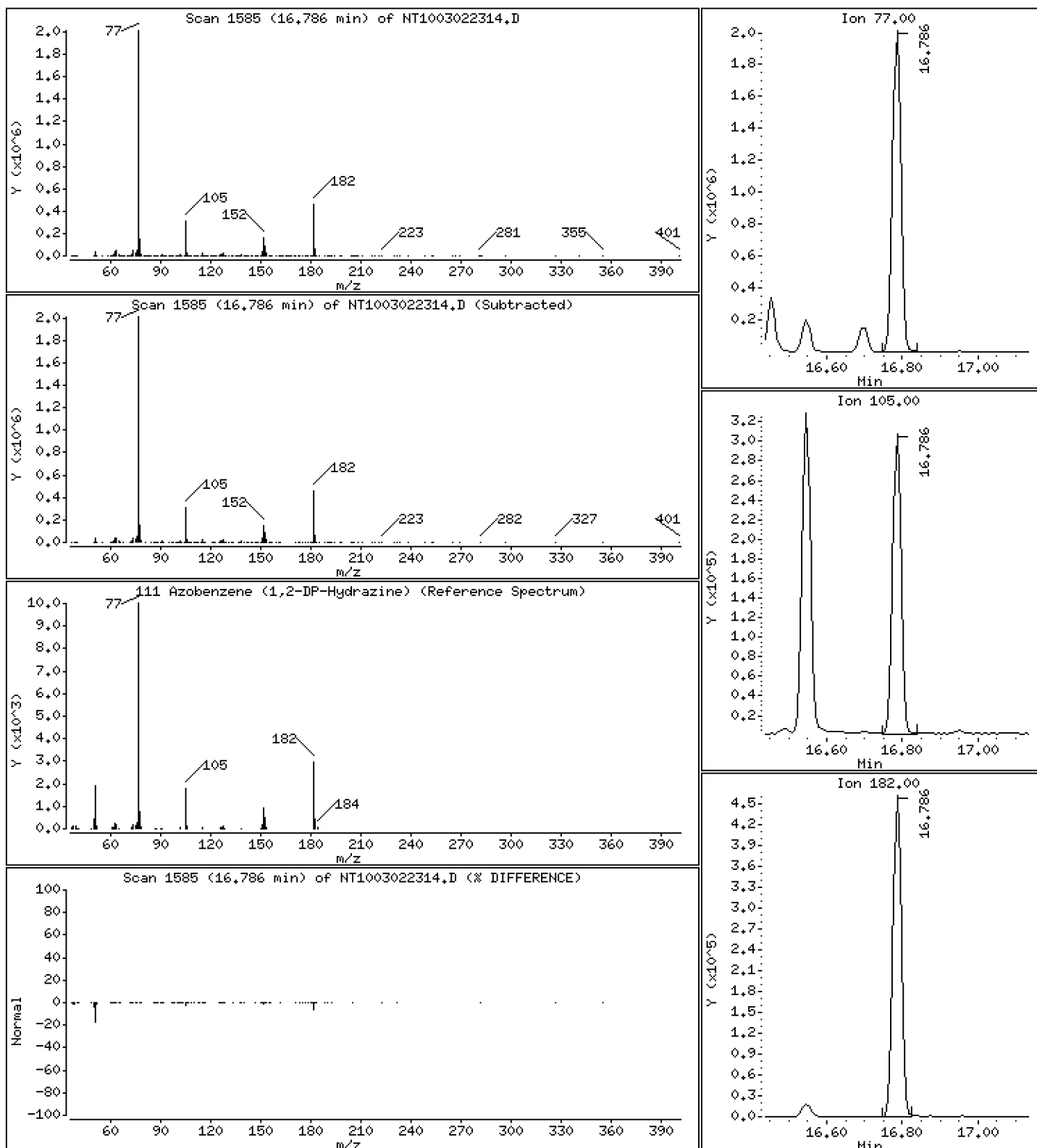
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 5,049 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

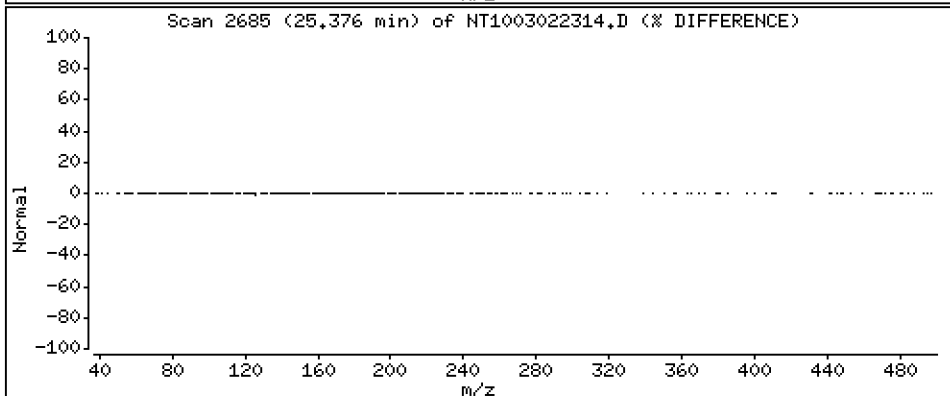
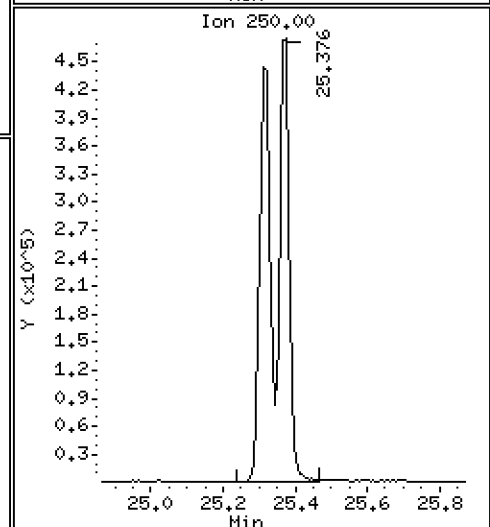
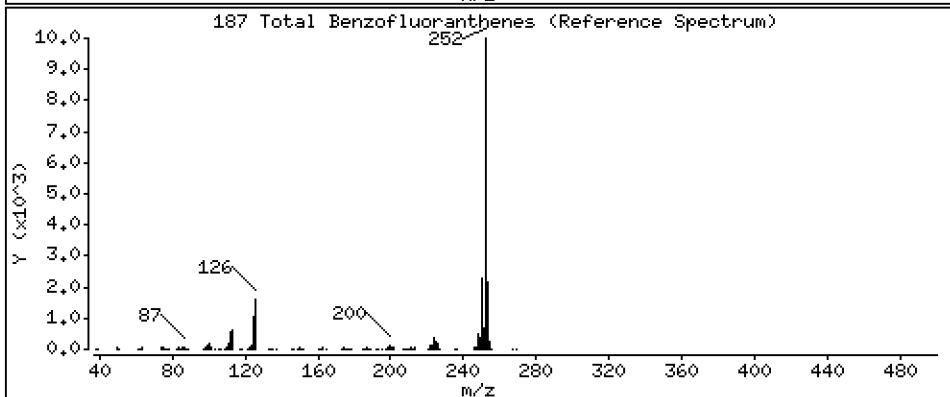
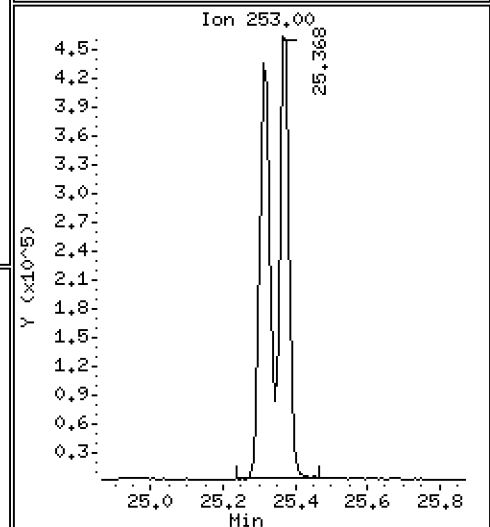
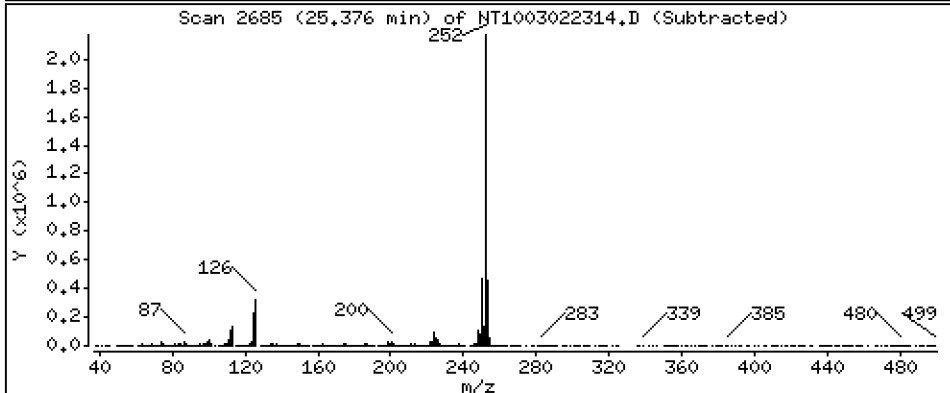
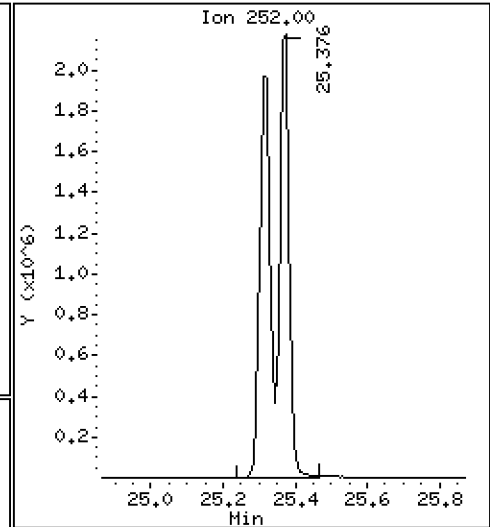
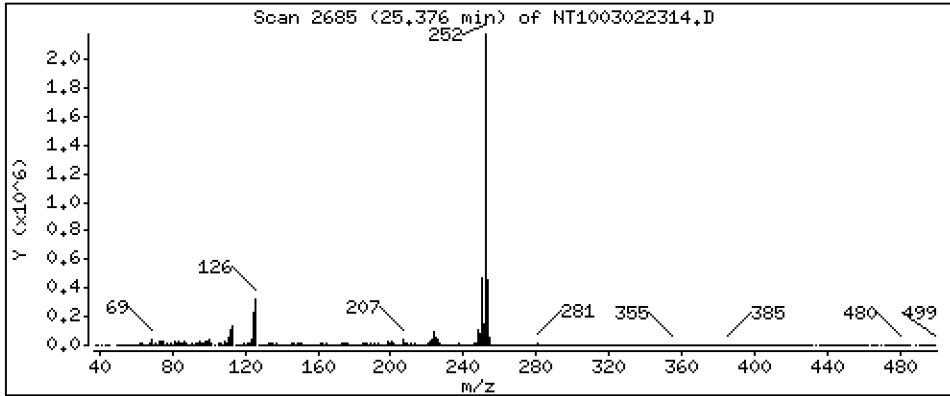
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 8,885 ug/mL



Date : 02-MAR-2023 22:38

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

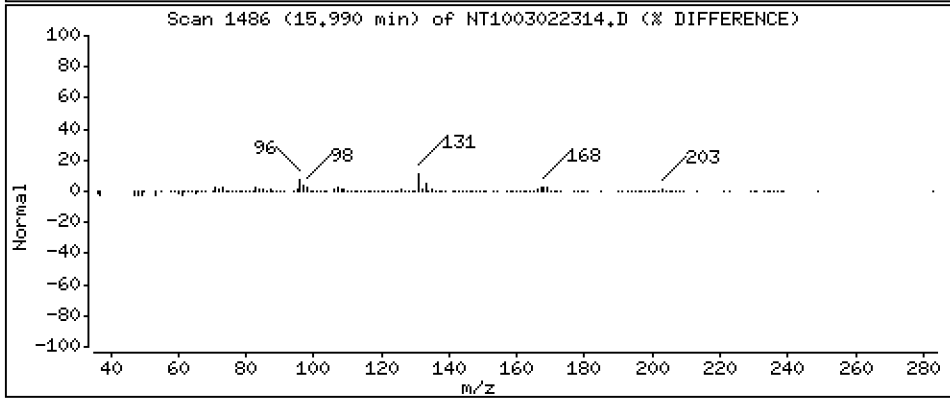
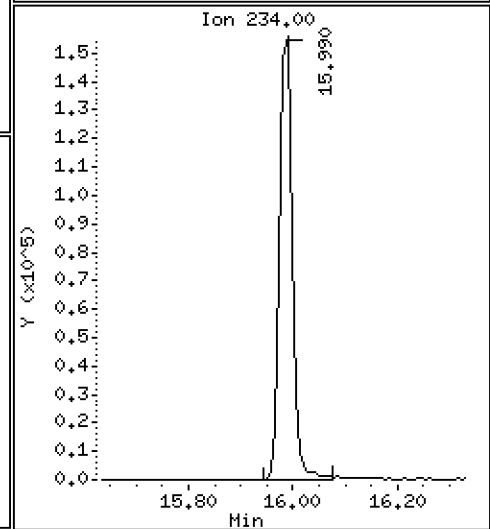
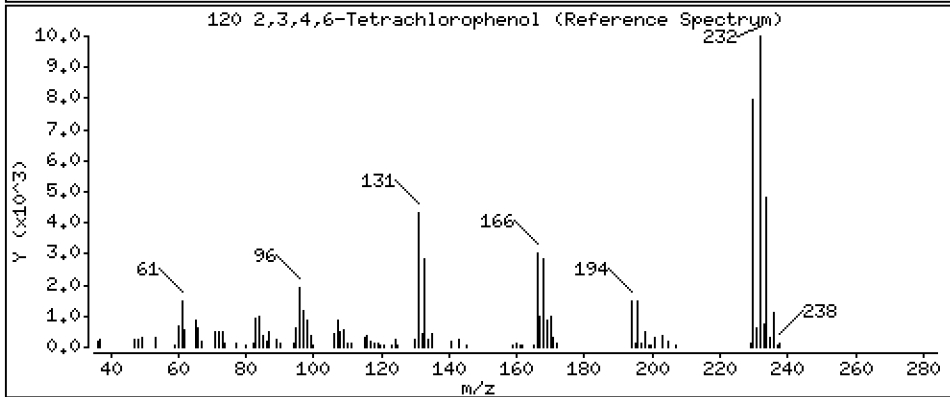
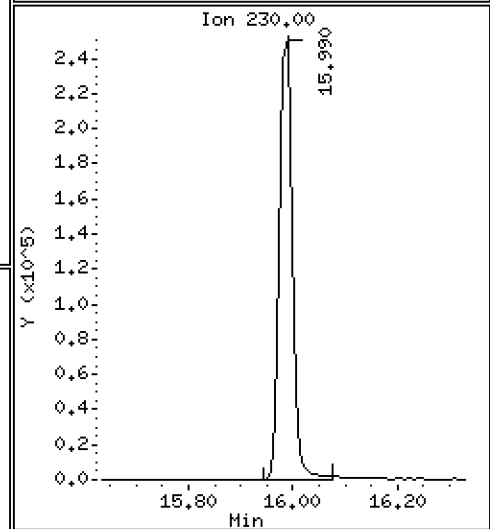
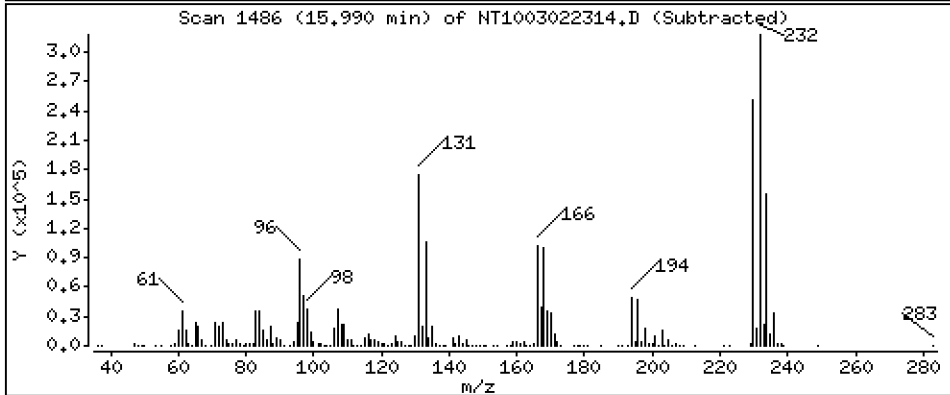
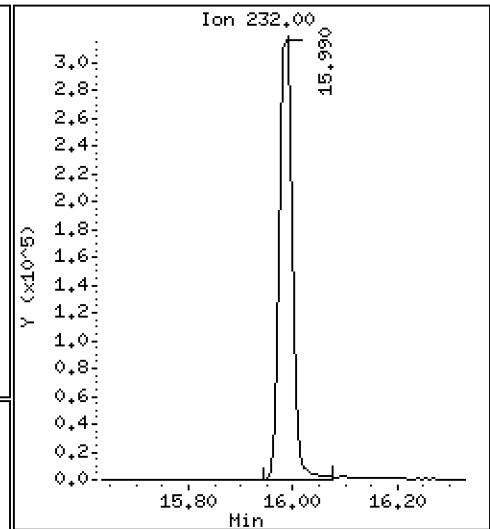
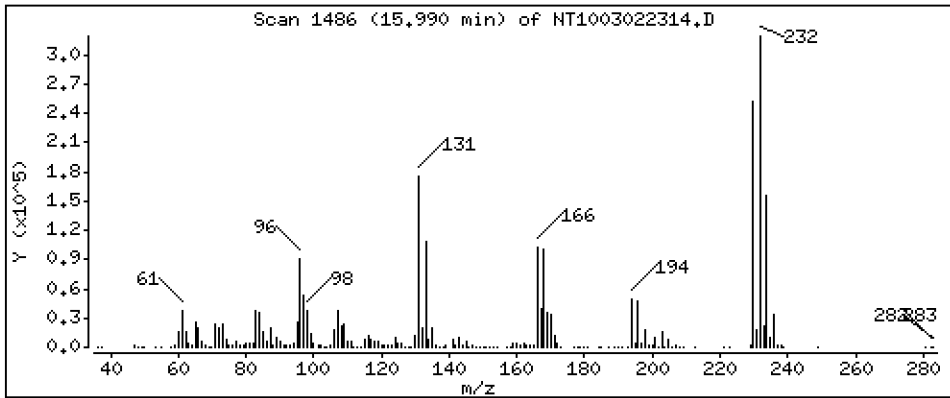
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 4,658 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302.b\NT1003022314.D  
 Lab Smp Id: SLC0120-CCV1  
 Inj Date : 02-MAR-2023 22:38  
 Operator : VTS  
 Smp Info : SEQ-CCVFULL  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Meth Date : 09-Mar-2023 11:29 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/mL)
\$ 1 2-Fluorophenol	112		6.897	6.897	(0.746)	1448112	7.68172	7.682
\$ 2 Phenol-d5	99		8.497	8.489	(0.919)	1921924	8.78139	8.781
3 Phenol	94		8.520	8.512	(0.921)	1336117	5.74192	5.742
\$ 5 2-Chlorophenol-d4	132		8.813	8.813	(0.953)	1513075	8.10308	8.103
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	961448	5.40700	5.407
6 2-Chlorophenol	128		8.844	8.844	(0.956)	1051243	5.41918	5.419
7 1,3-Dichlorobenzene	146		9.138	9.138	(0.988)	1052113	4.91926	4.919
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.247	(1.000)	599166	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.278	(1.003)	1026093	4.82995	4.830
\$ 10 1,2-Dichlorobenzene-d4	152		9.534	9.534	(1.031)	693052	4.96780	4.968
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	992876	4.82851	4.829
11 Benzyl alcohol	108		9.480	9.472	(1.025)	635157	5.18233	5.182
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.728	(1.052)	235266	3.96854	3.969
13 2-Methylphenol	108		9.658	9.650	(1.044)	976313	5.28379	5.284
17 Hexachloroethane	117		10.209	10.209	(1.104)	424142	4.86405	4.864
16 N-Nitroso-di-n-propylamine	70		9.977	9.976	(1.079)	781041	5.56234	5.562
15 4-Methylphenol	108		9.946	9.938	(1.076)	1151059	5.15529	5.155
\$ 18 Nitrobenzene-d5	82		10.295	10.295	(0.878)	1295354	5.36193	5.362
19 Nitrobenzene	77		10.334	10.333	(0.881)	1173793	5.17962	5.180
20 Isophorone	82		10.791	10.791	(0.920)	1578817	5.45781	5.458
21 2-Nitrophenol	139		10.959	10.950	(0.935)	514402	4.20624	4.206
22 2,4-Dimethylphenol	107		11.001	11.001	(0.938)	2113141	9.51800	9.518
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	982299	5.49483	5.495
24 Benzoic acid	105		11.171	11.154	(0.953)	1995627	15.0219	15.02
25 2,4-Dichlorophenol	162		11.417	11.417	(0.974)	1753608	9.99657	9.997
26 1,2,4-Trichlorobenzene	180		11.603	11.595	(0.989)	817096	4.80432	4.804
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2200781	4.00000	
28 Naphthalene	128		11.765	11.765	(1.003)	2848515	5.04288	5.043
29 4-Chloroaniline	127		11.865	11.858	(1.012)	2414687	9.46171	9.462
30 Hexachlorobutadiene	225		11.997	11.997	(1.023)	580725	4.68938	4.689
31 4-Chloro-3-methylphenol	107		12.809	12.801	(1.092)	1873652	10.0091	10.01
32 2-Methylnaphthalene	142		13.165	13.165	(1.123)	2042483	5.11841	5.118
33 Hexachlorocyclopentadiene	237		13.475	13.475	(0.880)	194854	5.04322	5.043

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.730	13.722	(0.896)	1131064	10.0382	10.04	
35 2,4,5-Trichlorophenol	196		13.800	13.792	(0.901)	1186907	9.85548	9.855	
§ 36 2-Fluorobiphenyl	172		13.916	13.908	(0.909)	2144254	5.29599	5.296	
37 2-Chloronaphthalene	162		14.171	14.171	(0.925)	1668996	5.25101	5.251	
38 2-Nitroaniline	65		14.373	14.365	(0.938)	897823	9.98434	9.984	
39 Dimethylphthalate	163		14.744	14.744	(0.963)	1809965	4.93730	4.937	
40 Acenaphthylene	152		15.031	15.023	(0.981)	3190446	5.82232	5.822	
41 2,6-Dinitrotoluene	165		14.876	14.868	(0.971)	839477	10.0958	10.10	
* 42 Acenaphthene-d10	164		15.317	15.317	(1.000)	1135136	4.00000		
43 3-Nitroaniline	138		15.224	15.216	(0.994)	936327	10.1283	10.13	
44 Acenaphthene	153		15.386	15.386	(1.005)	1694917	5.12875	5.129	
45 2,4-Dinitrophenol	184		15.440	15.433	(1.008)	378204	16.9007	16.90	
46 Dibenzofuran	168		15.750	15.742	(1.028)	2531825	5.16202	5.162	
47 4-Nitrophenol	109		15.541	15.525	(1.015)	534484	8.03170	8.032	
48 2,4-Dinitrotoluene	165		15.711	15.703	(1.026)	1185023	9.78442	9.784	
50 Diethylphthalate	149		16.214	16.206	(1.059)	1851516	4.76759	4.768	
49 Fluorene	166		16.453	16.453	(1.074)	2094694	5.13309	5.133	
51 4-Chlorophenyl-phenylether	204		16.453	16.453	(1.074)	907517	4.86007	4.860	
52 4-Nitroaniline	138		16.492	16.476	(1.077)	1037373	10.4392	10.44	
53 4,6-Dinitro-2-methylphenol	198		16.546	16.538	(0.899)	1113909	20.9543	20.95	
54 N-Nitrosodiphenylamine	169		16.701	16.693	(0.907)	1644525	5.22087	5.221	
§ 55 2,4,6-Tribromophenol	330		16.955	16.947	(1.107)	522858	7.13041	7.130	
56 4-Bromophenyl-phenylether	248		17.473	17.472	(0.949)	670972	5.25703	5.257	
57 Hexachlorobenzene	284		17.581	17.581	(0.955)	710415	4.94282	4.943	
58 Pentachlorophenol	266		17.991	17.983	(0.977)	457563	6.64158	6.642	
* 59 Phenanthrene-d10	188		18.409	18.401	(1.000)	2128944	4.00000		
60 Phenanthrene	178		18.456	18.455	(1.003)	2827191	5.18907	5.189	
61 Anthracene	178		18.564	18.564	(1.008)	2923136	5.53300	5.533	
62 Carbazole	167		18.897	18.889	(1.026)	2669049	5.51464	5.515	
63 Di-n-butylphthalate	149		19.593	19.593	(1.064)	3563889	5.22614	5.226	
64 Fluoranthene	202		20.823	20.815	(0.889)	3457054	4.10240	4.102	
65 Pyrene	202		21.256	21.248	(0.907)	3582007	4.17446	4.174	
§ 66 Terphenyl-d14	244		21.535	21.527	(0.919)	2898780	4.17508	4.175	
67 Butylbenzylphthalate	149		22.418	22.410	(0.957)	1785059	3.92176	3.922	
68 Benzo(a)anthracene	228		23.409	23.409	(0.999)	4209154	4.87315	4.873	
* 69 Chrysene-d12	240		23.424	23.424	(1.000)	2449624	4.00000		
70 3,3'-Dichlorobenzidine	252		23.355	23.347	(0.997)	4523769	11.5891	11.59	
71 Chrysene	228		23.471	23.470	(1.002)	3707369	5.28138	5.281	
72 bis(2-Ethylhexyl)phthalate	149		23.409	23.409	(0.956)	2996974	4.43059	4.431	
* 134 Di-n-octylphthalate-d4	153		24.493	24.492	(1.000)	4694735	4.00000		
73 Di-n-octylphthalate	149		24.500	24.500	(1.000)	5347795	5.13685	5.137	
74 Benzo(b)fluoranthene	252		25.313	25.305	(0.969)	3988472	4.30654	4.307	
75 Benzo(k)fluoranthene	252		25.375	25.367	(0.971)	4099319	4.57626	4.576	
76 Benzo(a)pyrene	252		26.002	25.994	(0.995)	3691905	4.45301	4.453	
* 77 Perylene-d12	264		26.126	26.118	(1.000)	2593218	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.902	28.878	(1.106)	4110396	4.25306	4.253	
79 Dibenzo(a,h)anthracene	278		28.948	28.932	(1.108)	3385886	4.57595	4.576	
80 Benzo(g,h,i)perylene	276		29.740	29.725	(1.138)	3285094	4.29859	4.299	
90 N-Nitrosodimethylamine	74		4.720	4.719	(0.510)	1281450	10.5298	10.53	
91 Aniline	93		8.628	8.628	(0.933)	2953984	10.9486	10.95	
93 Benzidine	184		21.078	21.070	(0.900)	2196315	5.87105	5.871	
103 Pyridine	79		4.781	4.781	(0.517)	2271247	10.5235	10.52	
105 1-methylnaphthalene	142		13.374	13.366	(1.141)	1852779	5.12987	5.130	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.786	16.785	(1.096)	2927826	5.04858	5.049	



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.375	25.367	(0.971)	7924940	8.88526	8.885
120 2,3,4,6-Tetrachlorophenol	232	15.989	15.981	(1.044)	522077	4.65848	4.658

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 02-MAR-2023  
 Lab File ID: NT1003022314.D Calibration Time: 13:34  
 Lab Smp Id: SLC0120-CCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	430971	215486	861942	599166	39.03
27 Naphthalene-d8	1609461	804731	3218922	2200781	36.74
42 Acenaphthene-d10	853113	426557	1706226	1135136	33.06
59 Phenanthrene-d10	1556648	778324	3113296	2128944	36.76
69 Chrysene-d12	1539062	769531	3078124	2449624	59.16
134 Di-n-octylphthala	2949571	1474786	5899142	4694735	59.17
77 Perylene-d12	1634059	817030	3268118	2593218	58.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.12	25.62	26.62	26.13	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022314.D

Lab ID: SLC0120-CCV1  
nt10.i, 20230302.b\ABN.m, 02-MAR-2023 22:38

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT CCV RRT DELTA COMPOUND  
-----

NONE

RRT check based on Ccal File: NT1003022302.D

On Column LOD for nt10.i, 20230302.b\ABN.m, ICAL.sub = 0.0000

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



CONTINUING CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022325.D

Calibration Date: 03/01/2023

Sequence: SLC0132

Injection Date: 03/03/23

Lab Sample ID: SLC0132-CCV1

Injection Time: 05:36

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	5.5	1.5534590	1.7143970		10.4	+/-50
4-Methylphenol	A	5.0000	4.5	1.2087680	1.3336500		-10.7	+/-50
Naphthalene	A	5.0000	5.0	1.0266520	1.0224820		-0.4	+/-50
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7338252		1.2	+/-50
Acenaphthylene	A	5.0000	5.7	1.9309320	2.2034420		14.1	+/-50
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2689490		-1.8	+/-50
Acenaphthene	A	5.0000	5.1	1.1645250	1.1887500		2.1	+/-50
Dibenzofuran	A	5.0000	5.1	1.7283260	1.7800890		3.0	+/-50
Fluorene	A	5.0000	5.1	1.4379840	1.4696500		2.2	+/-50
Phenanthrene	A	5.0000	5.1	1.0236730	1.0509190		2.7	+/-50
Anthracene	A	5.0000	5.5	0.9926226	1.0888130		9.7	+/-50
Fluoranthene	A	5.0000	4.1	1.3760330	1.1406580		-17.1	+/-50
Pyrene	A	5.0000	4.2	1.4011560	1.1748540		-16.2	+/-50
Butylbenzylphthalate	A	5.0000	3.7	0.6475451	0.5513184		-25.9	+/-50
Benzo(a)anthracene	A	5.0000	5.0	1.4104100	1.4005830		-0.7	+/-50
Chrysene	A	5.0000	5.3	1.1462500	1.2161060		6.1	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	4.4	0.5331838	0.5114622		-11.3	+/-50
Benzo(a)fluoranthene, Total	A	10.0000	9.1	1.3383070	1.2513650		-9.2	+/-50
Benzo(a)pyrene	A	5.0000	4.5	1.2312020	1.1527590		-9.9	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	4.0	1.4033590	1.1921920		-19.8	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.3	1.1150690	0.9894349		-13.0	+/-50
Benzo(g,h,i)perylene	A	5.0000	3.9	1.1245240	0.9062772		-22.8	+/-50
2-Fluorophenol	A	7.5000	7.68	1.2585100	1.2880380		2.3	+/-50
Phenol-d5	A	7.5000	8.70	1.4611190	1.6951350		16.0	+/-50
2-Chlorophenol-d4	A	7.5000	8.14	1.2465880	1.3536320		8.6	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	5.02	0.9313544	0.9358205		0.5	+/-50
Nitrobenzene-d5	A	5.0000	5.13	0.4390871	0.4503150		2.6	+/-50
2-Fluorobiphenyl	A	5.0000	5.46	1.4267270	1.5572970		9.2	+/-50
2,4,6-Tribromophenol	A	7.5000	7.09	0.2287830	0.2440251		-5.5	+/-50
p-Terphenyl-d14	A	5.0000	4.23	1.1337350	0.9593738		-15.4	+/-50

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302A.B\NT1003022325.D

Date: 03-MAR-2023 05:36

Client ID:

Sample Info: SEQ-OCV\FULL

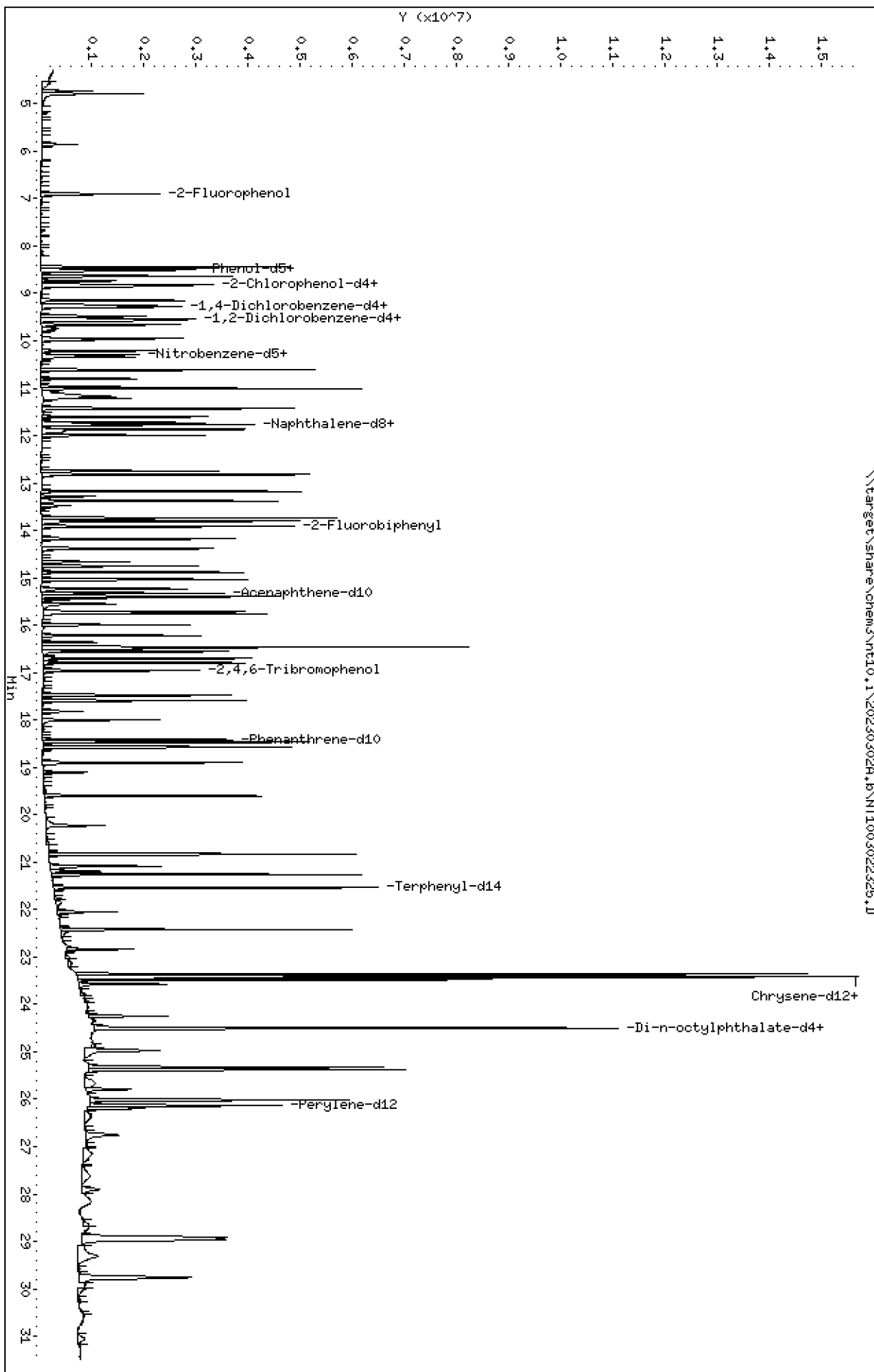
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

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Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

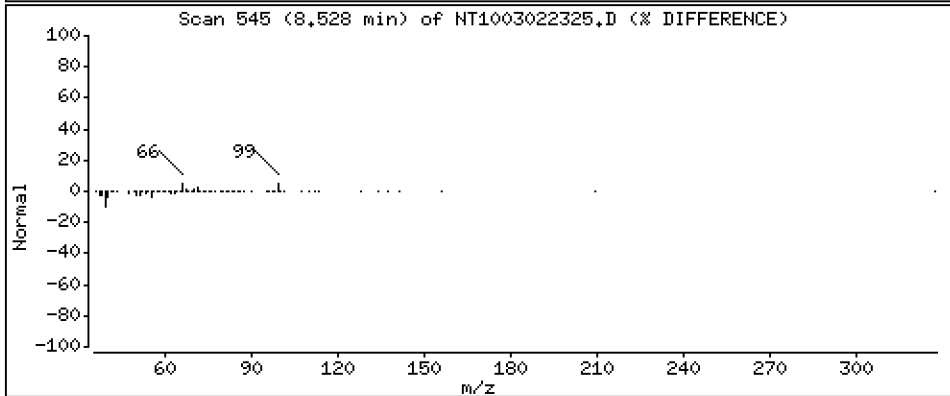
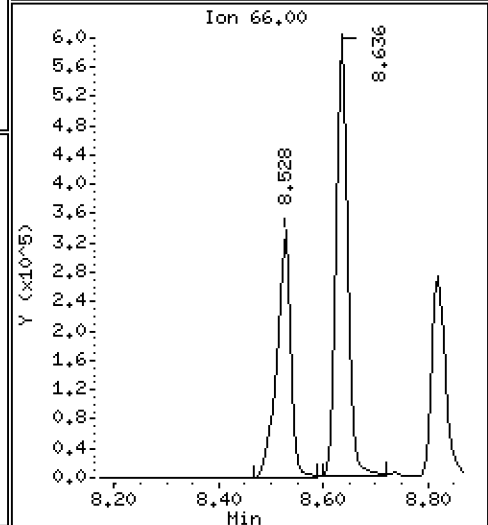
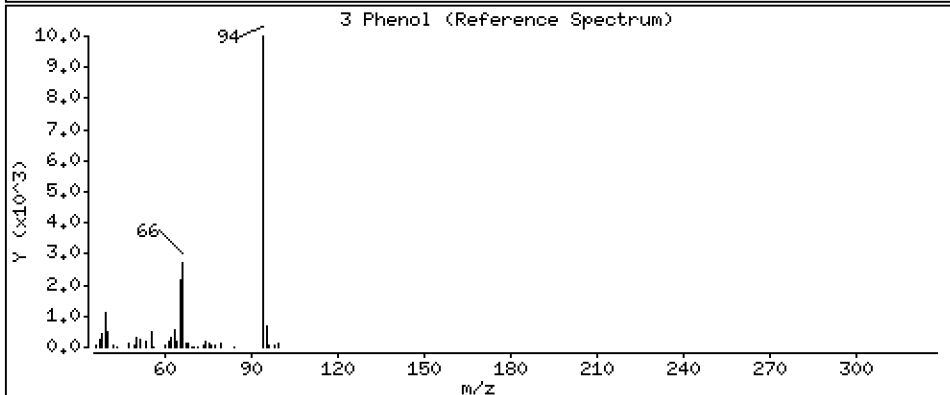
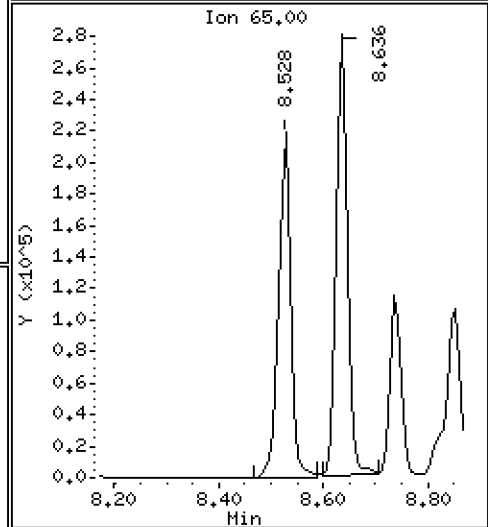
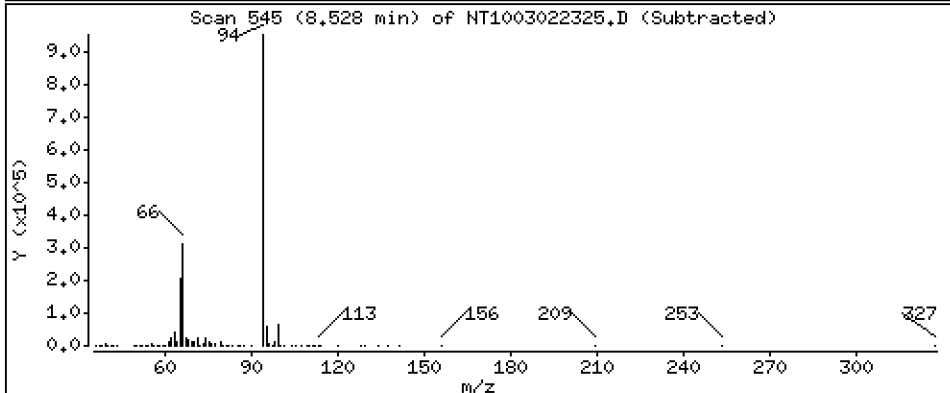
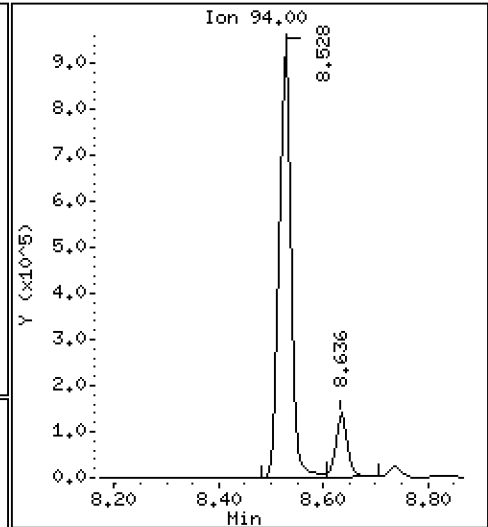
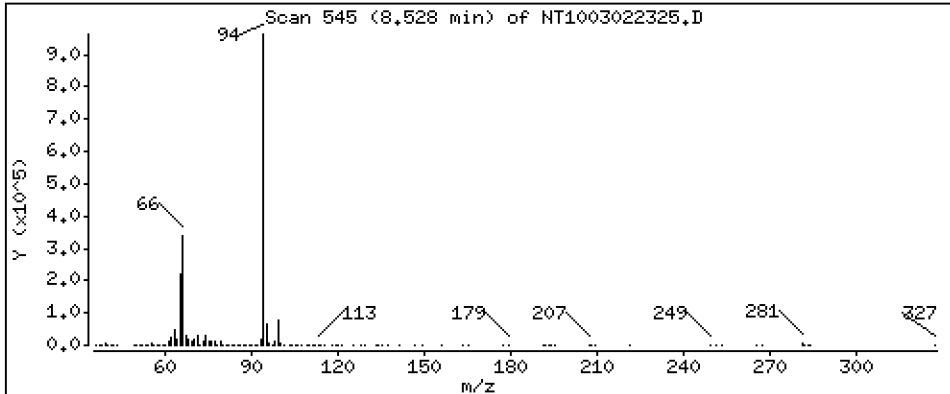
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 5,518 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

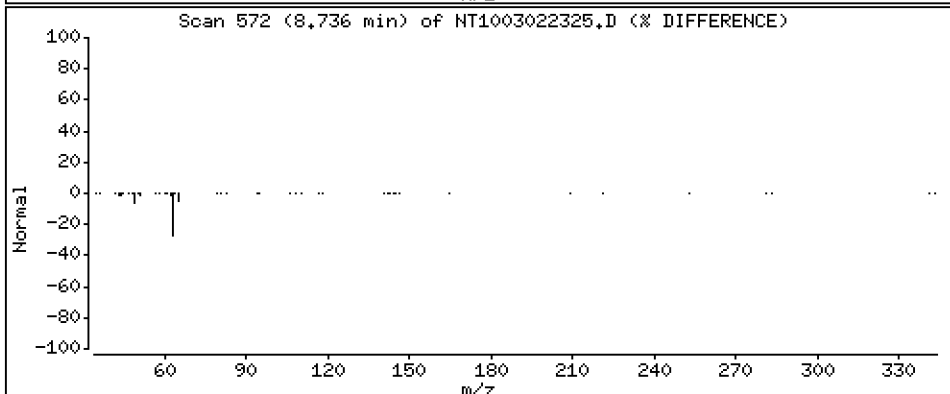
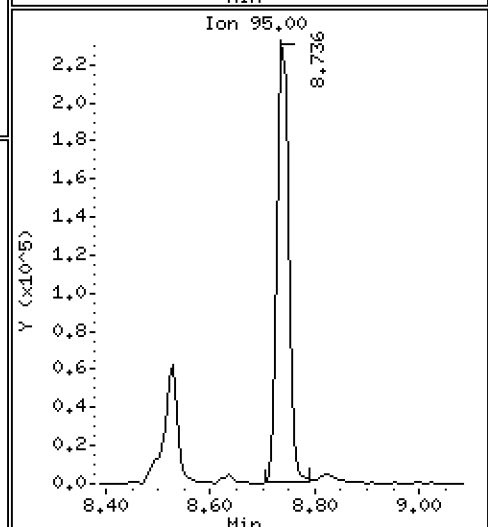
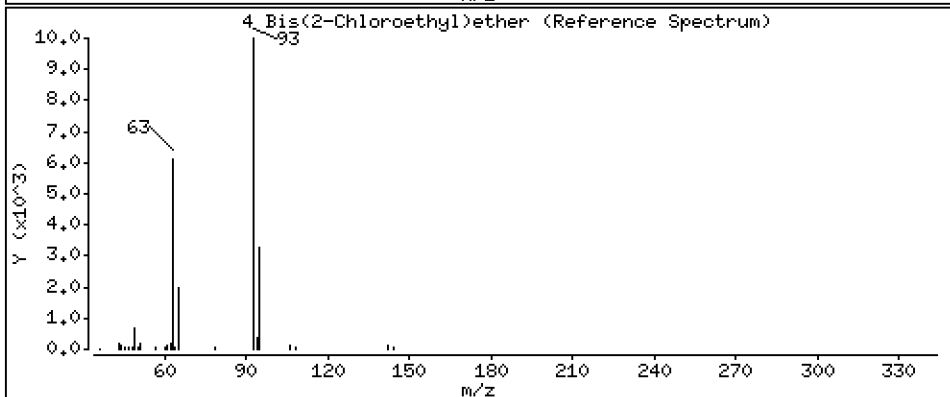
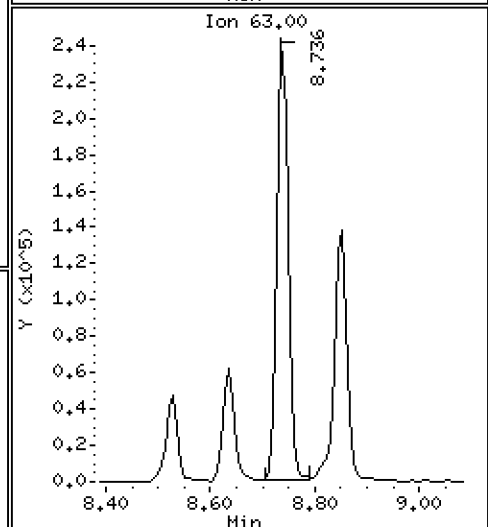
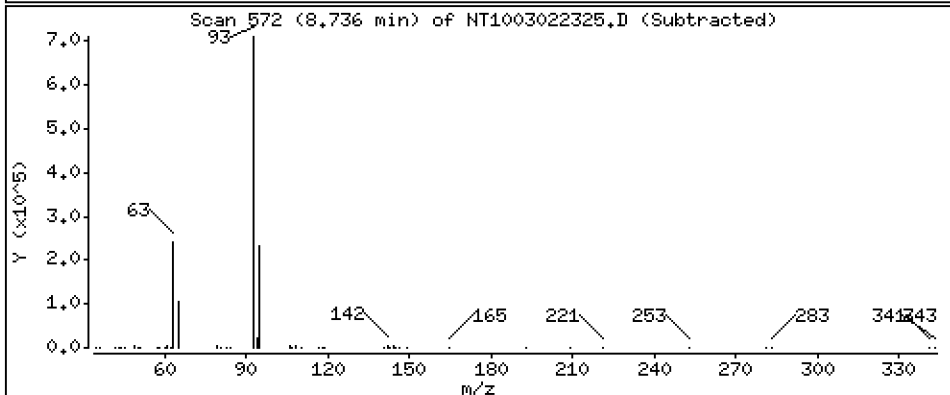
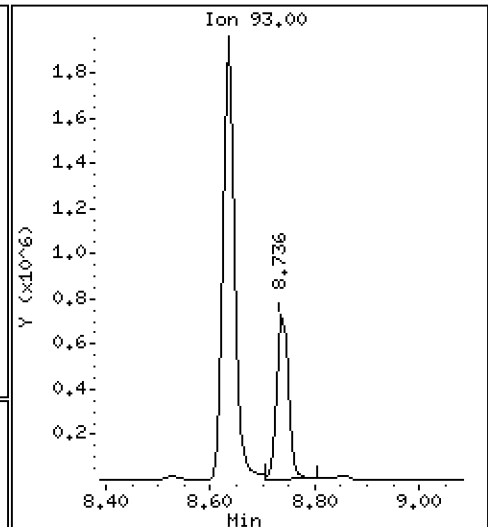
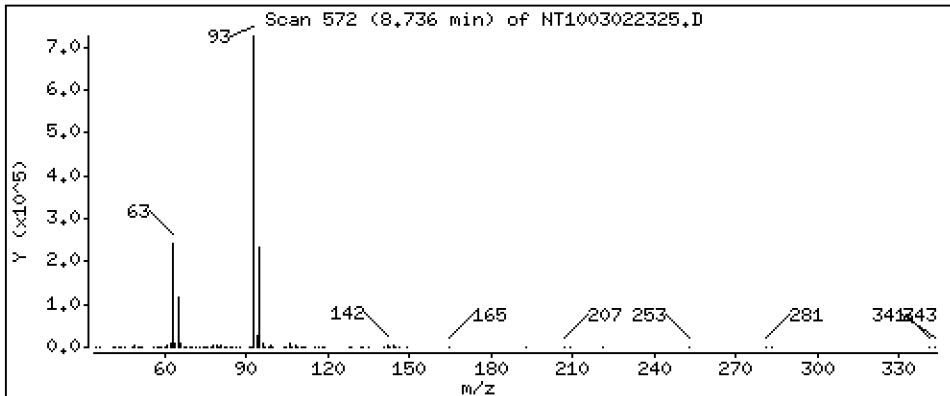
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,246 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

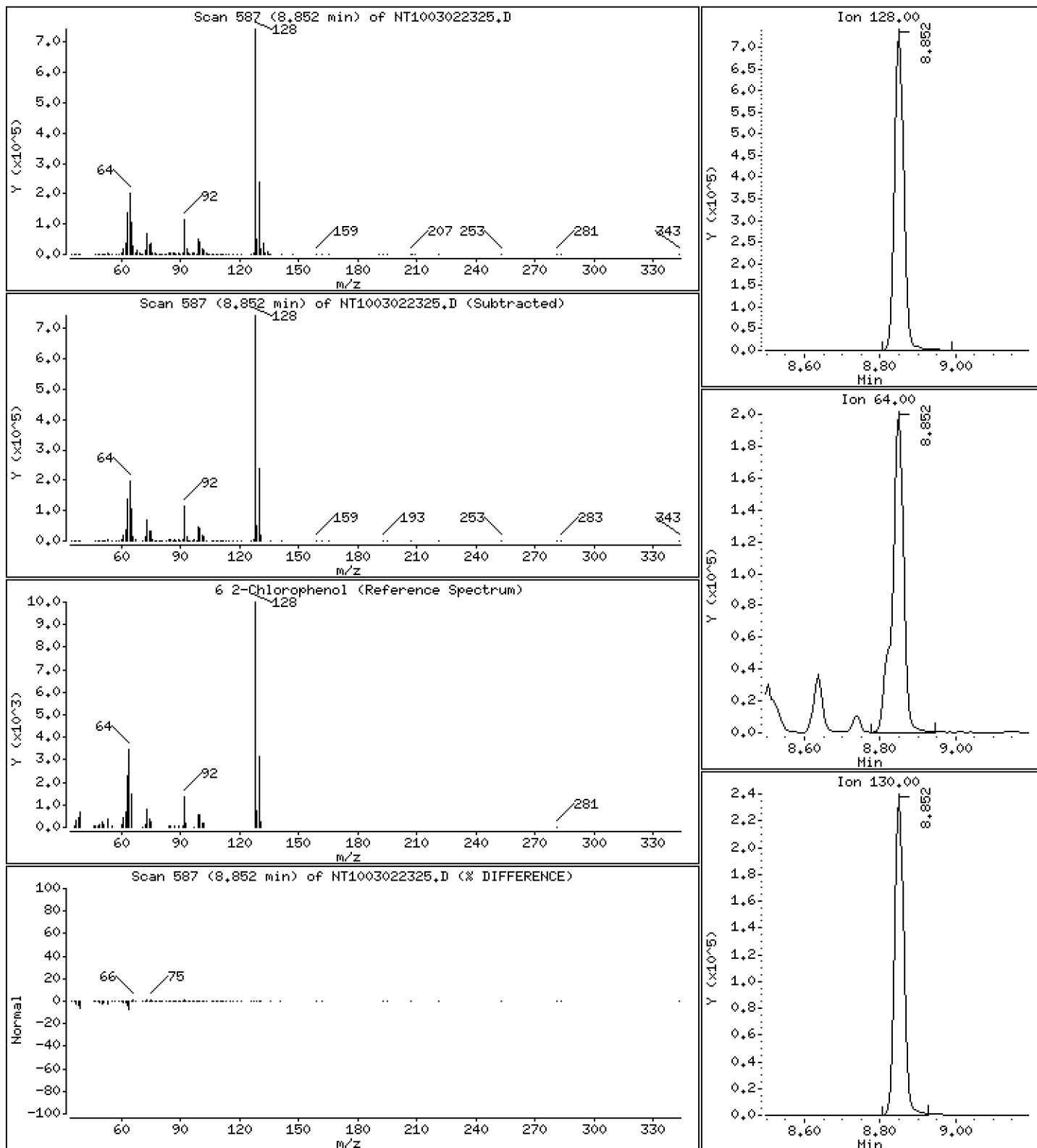
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 5,438 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

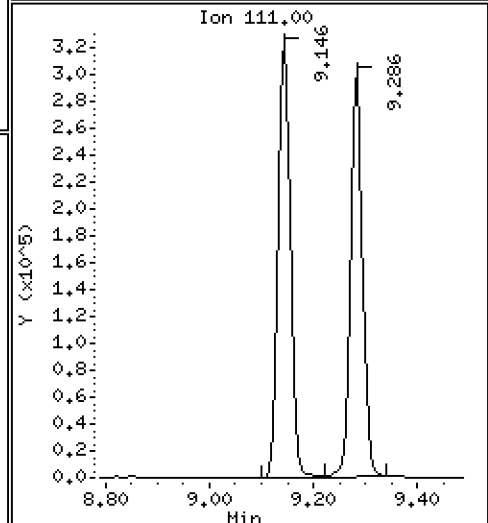
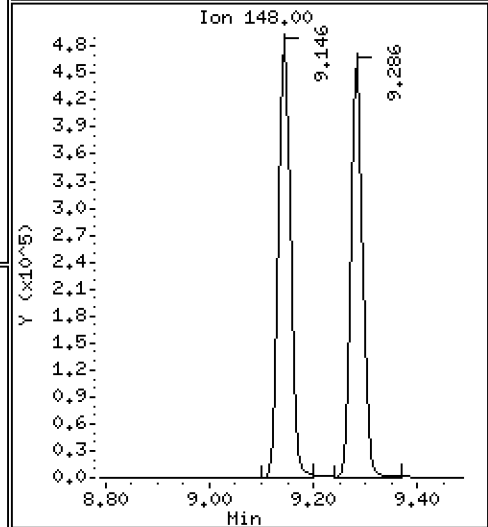
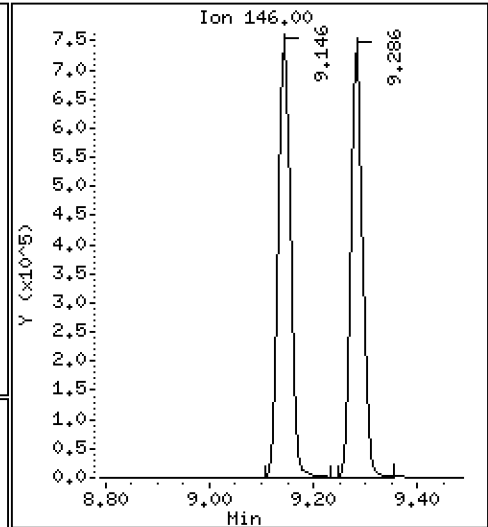
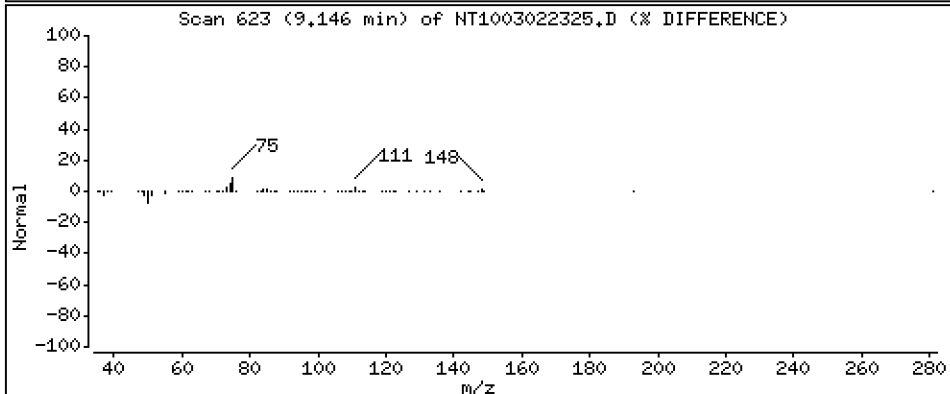
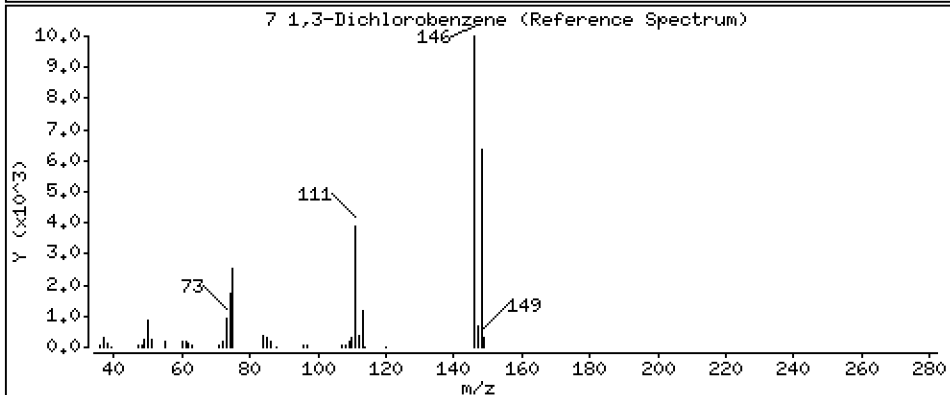
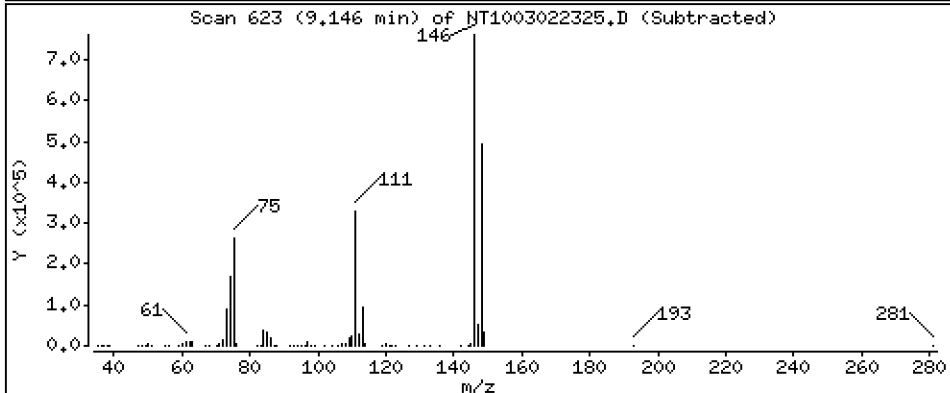
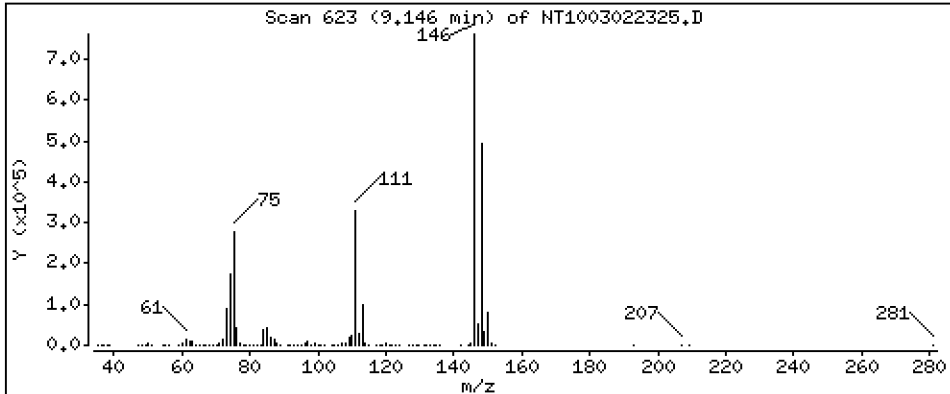
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,866 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

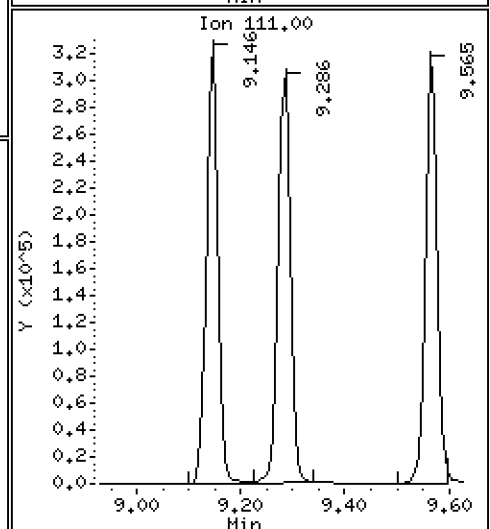
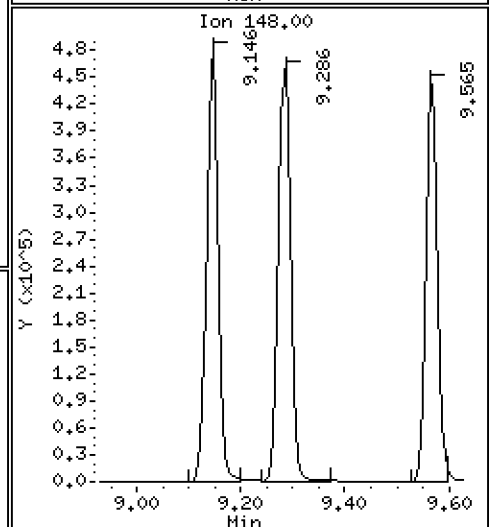
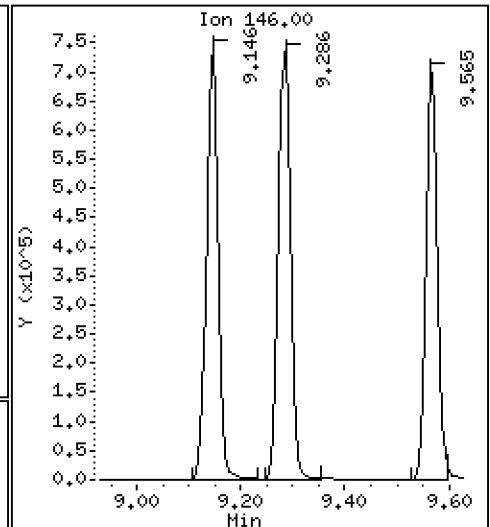
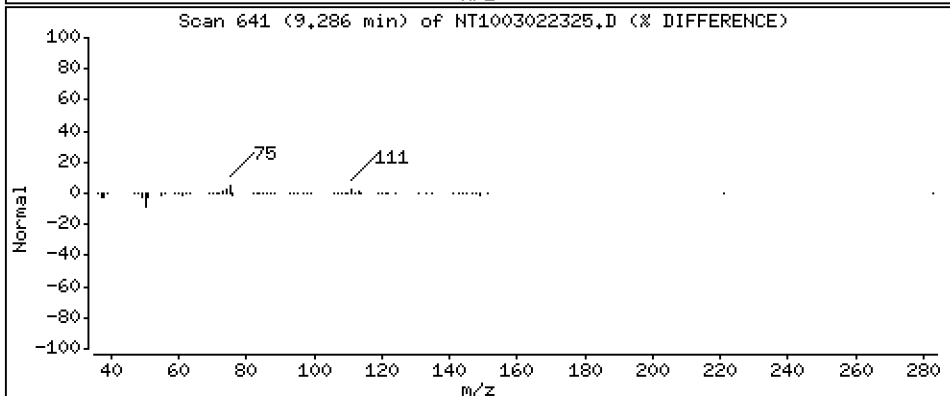
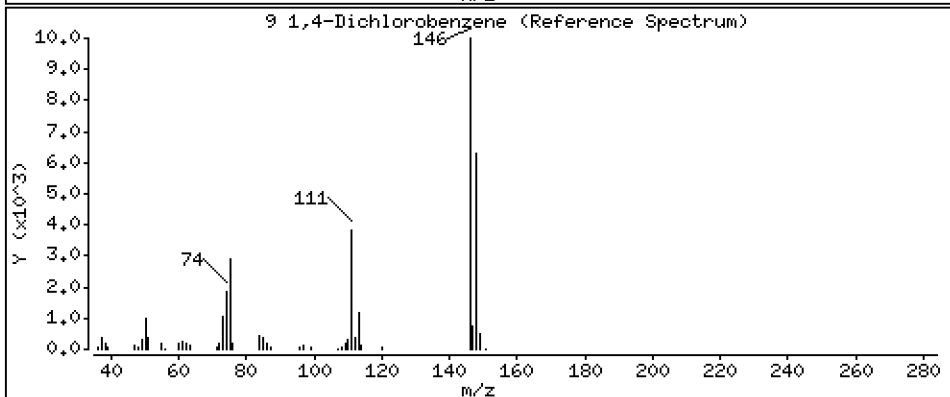
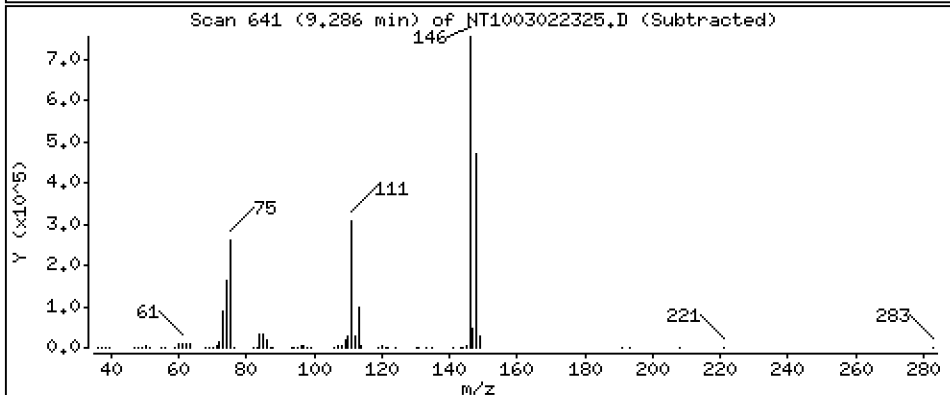
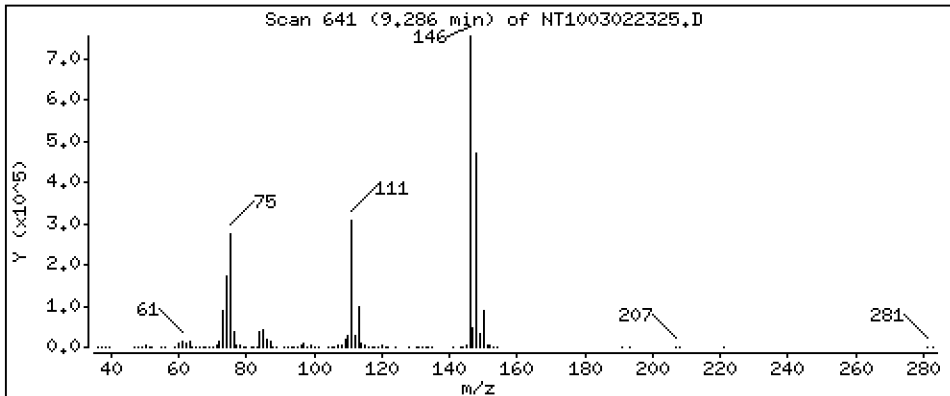
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 4,810 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

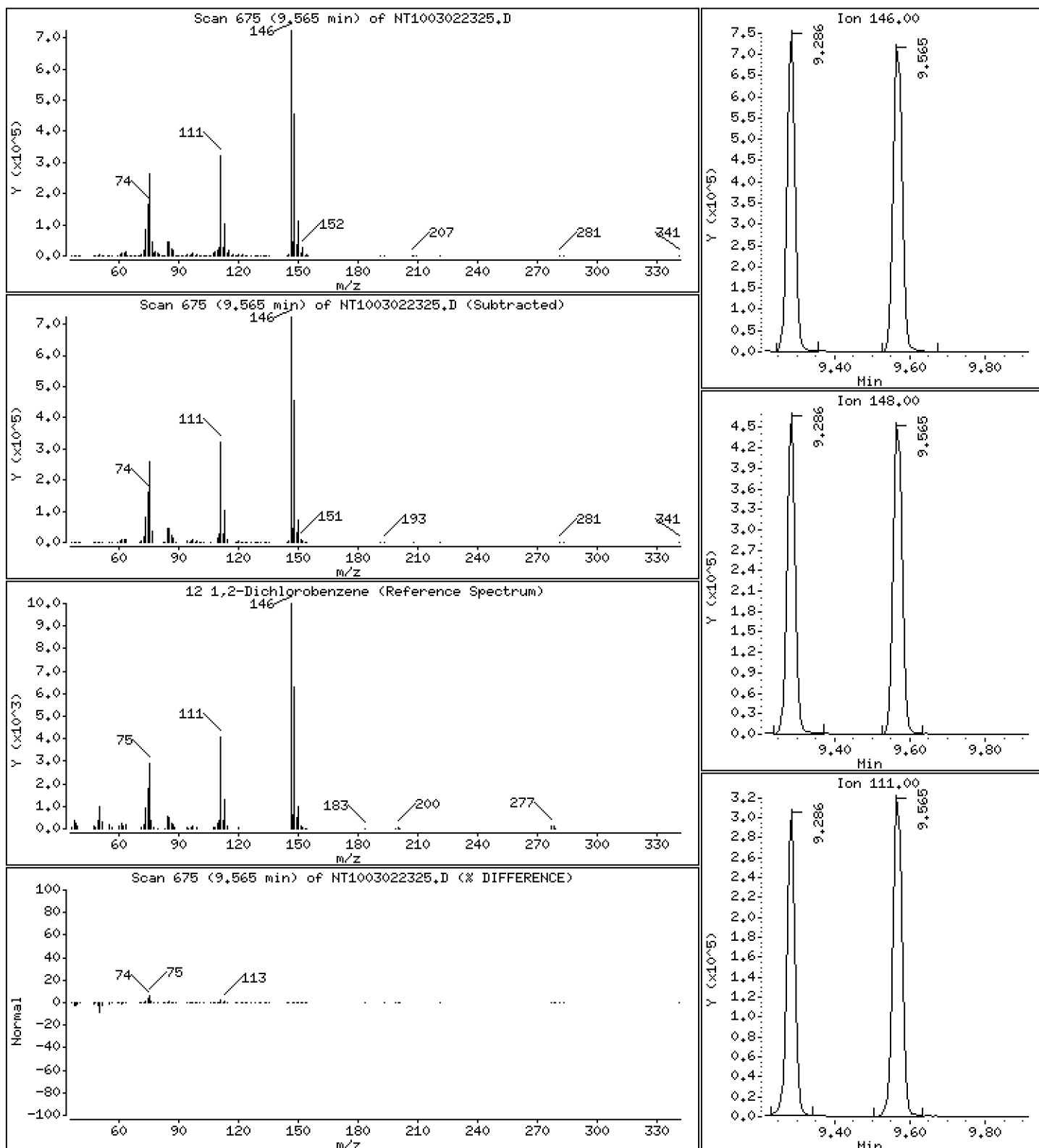
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,868 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

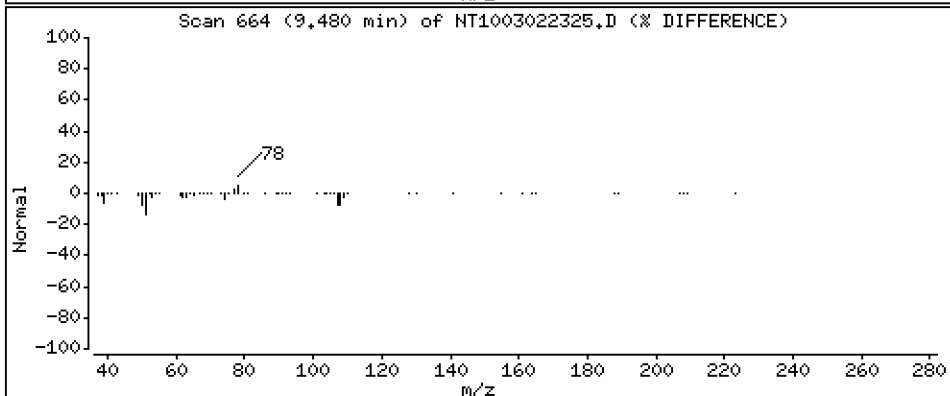
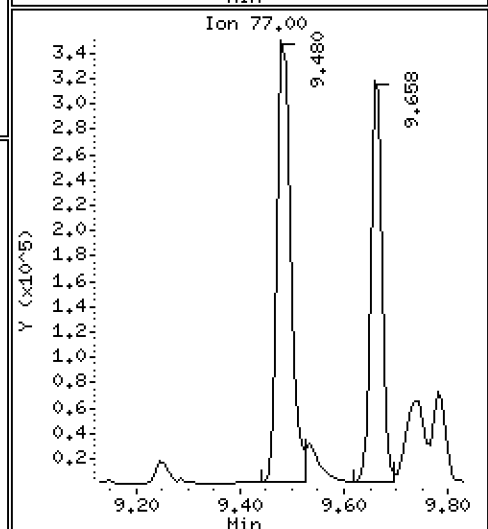
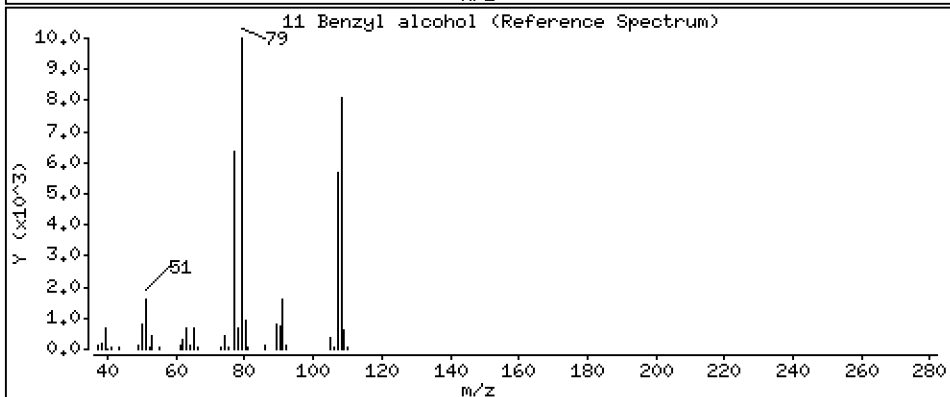
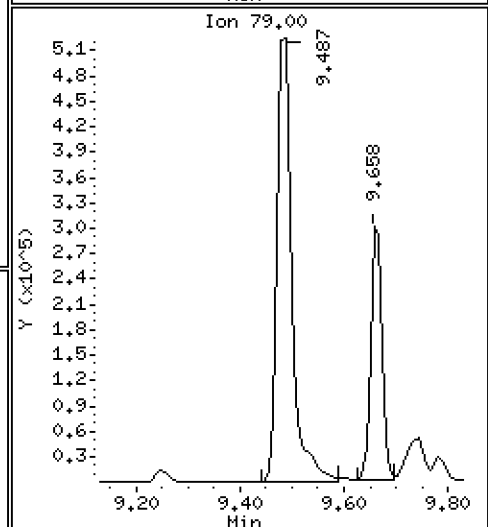
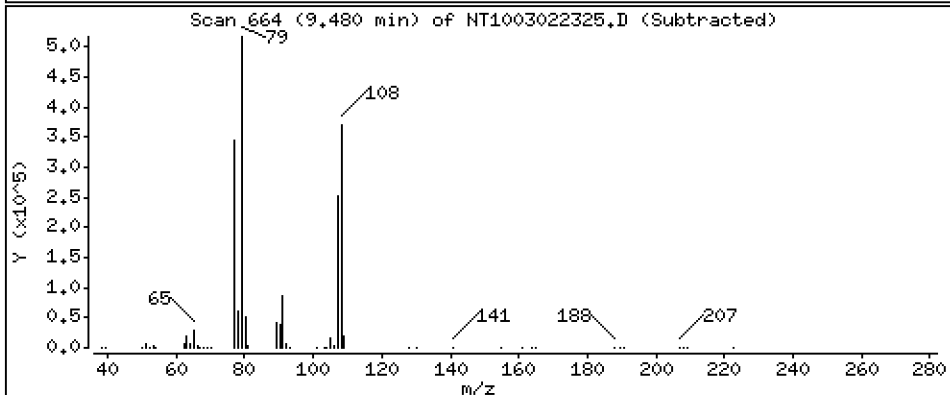
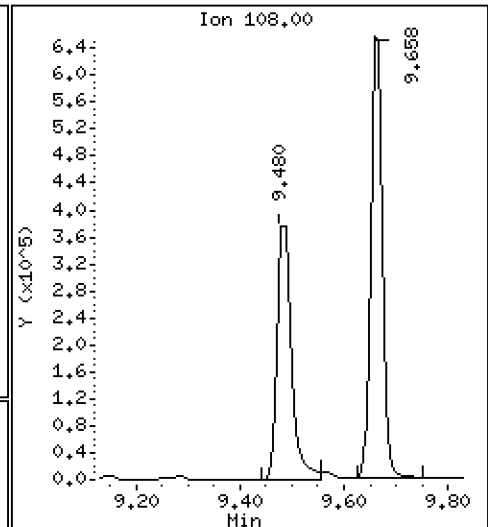
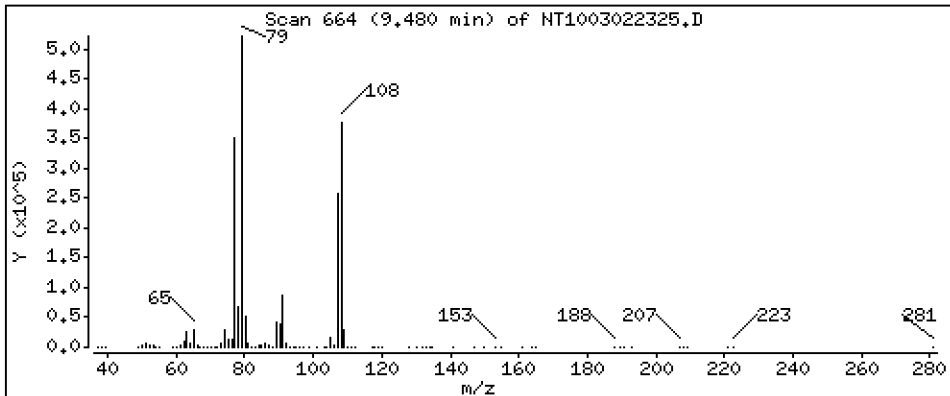
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 5,043 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

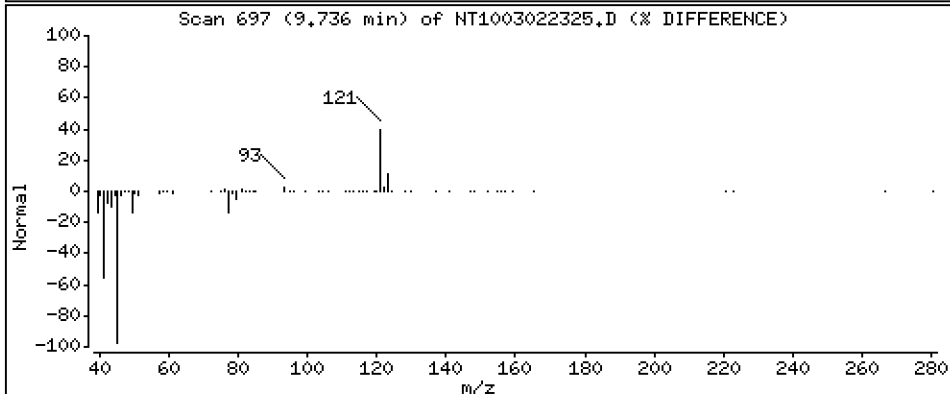
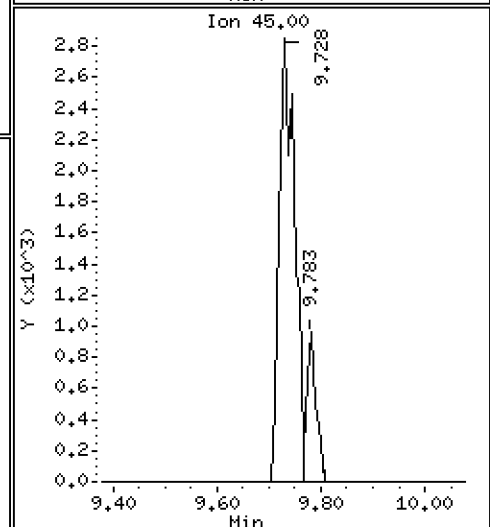
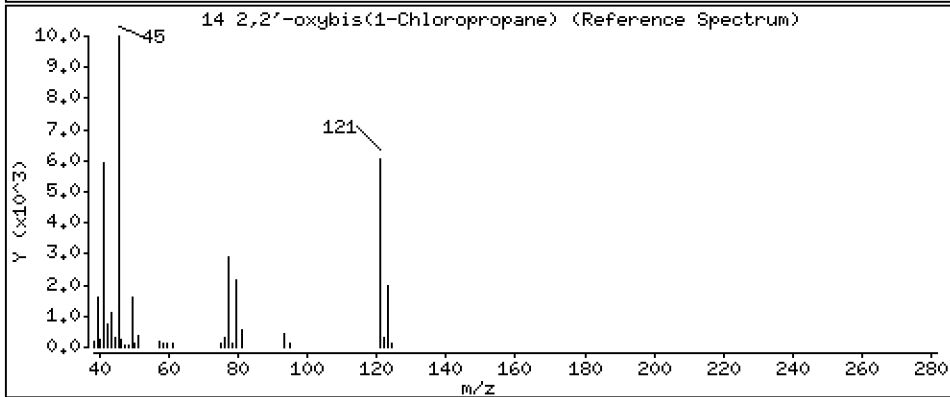
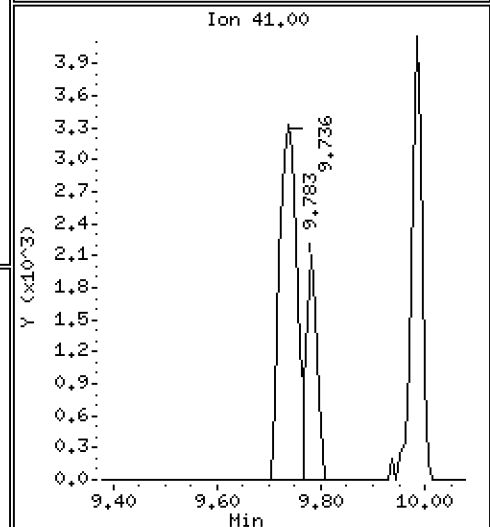
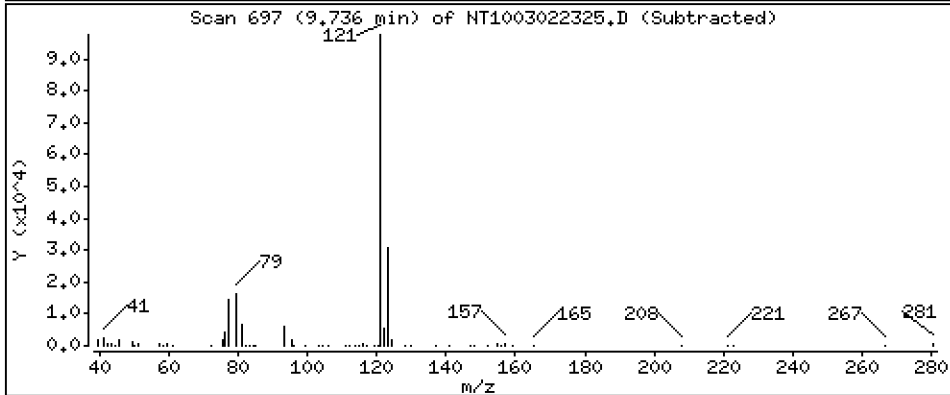
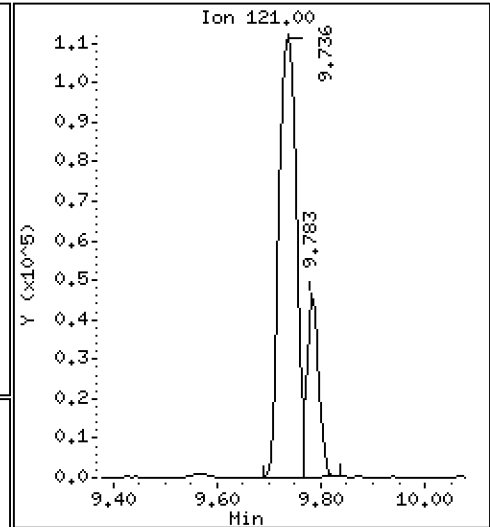
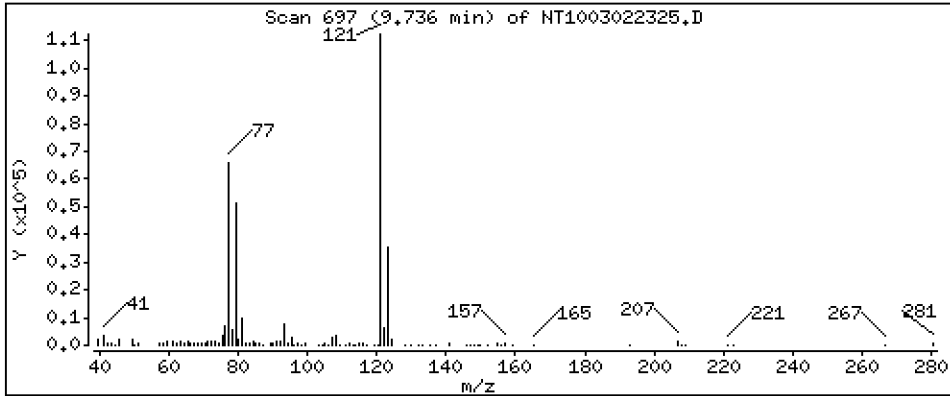
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,839 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

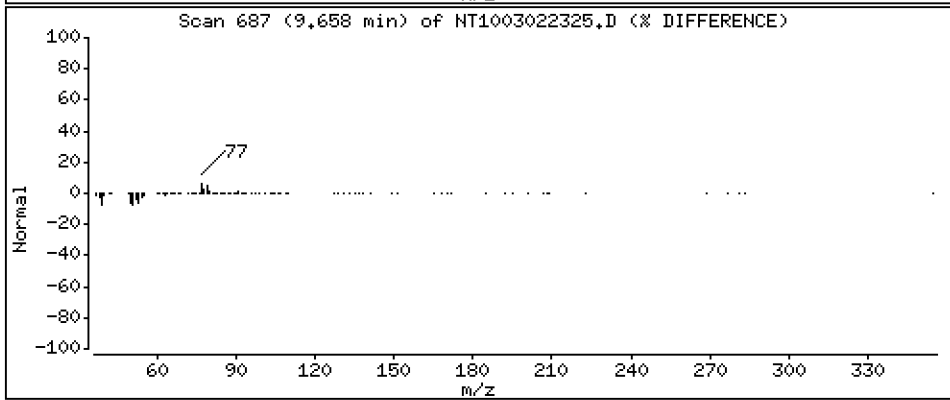
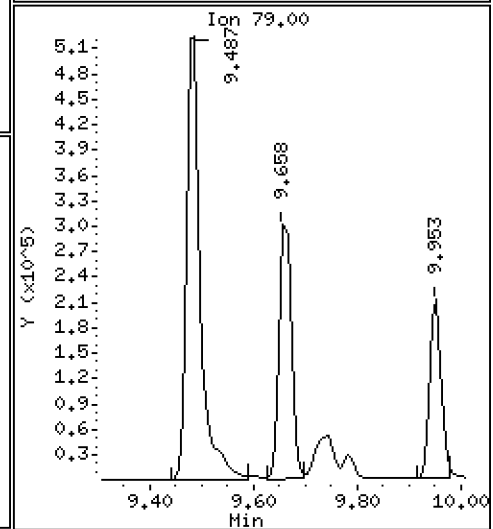
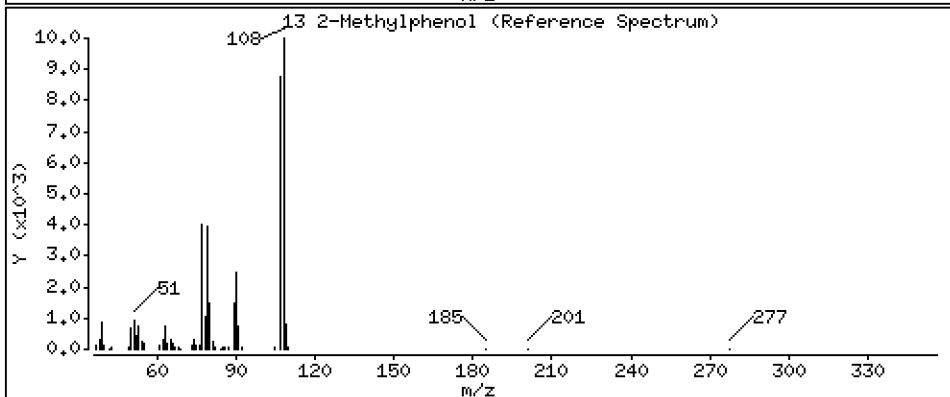
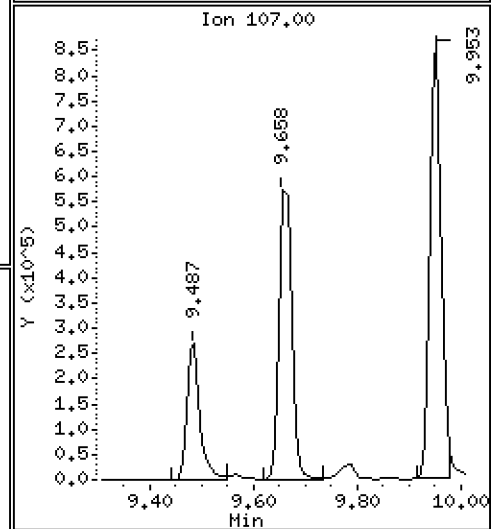
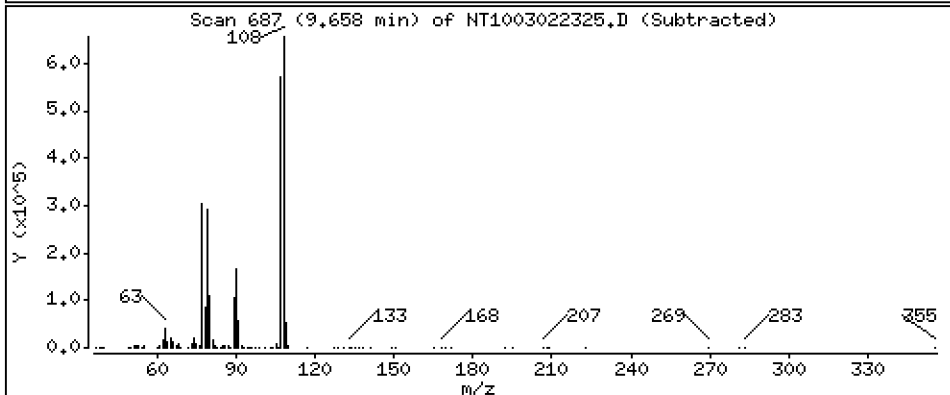
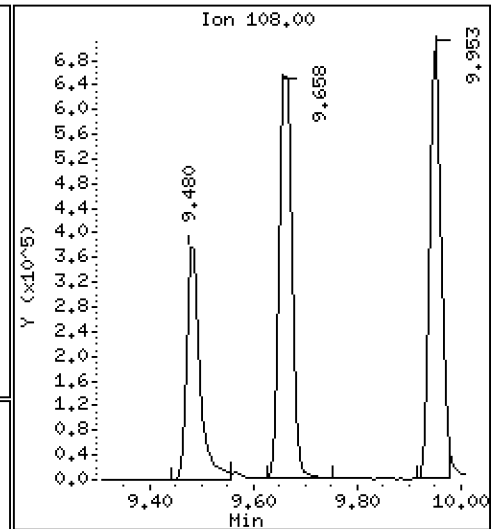
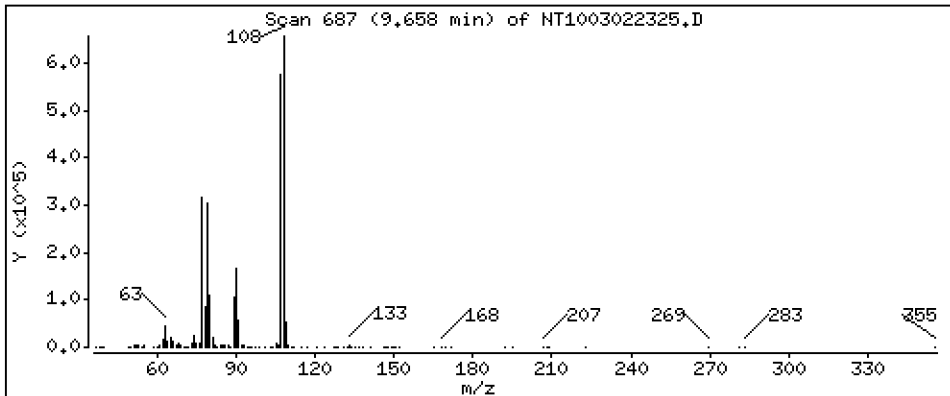
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 5,082 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

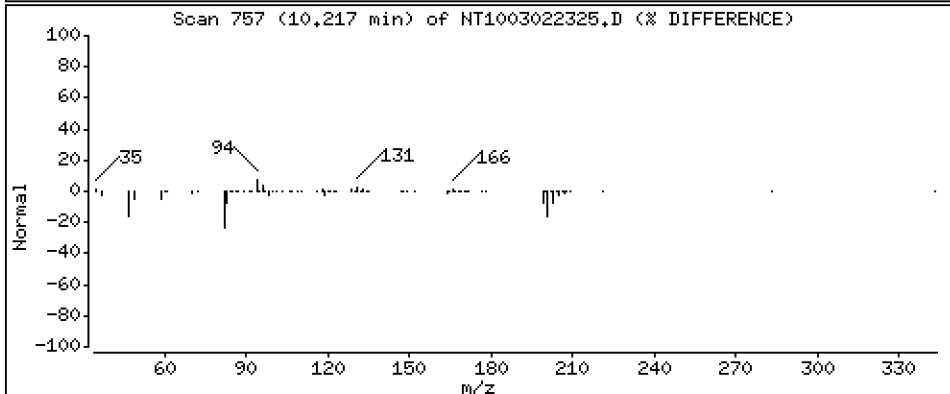
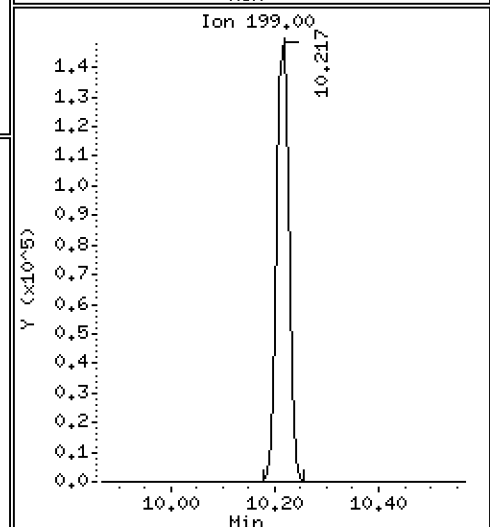
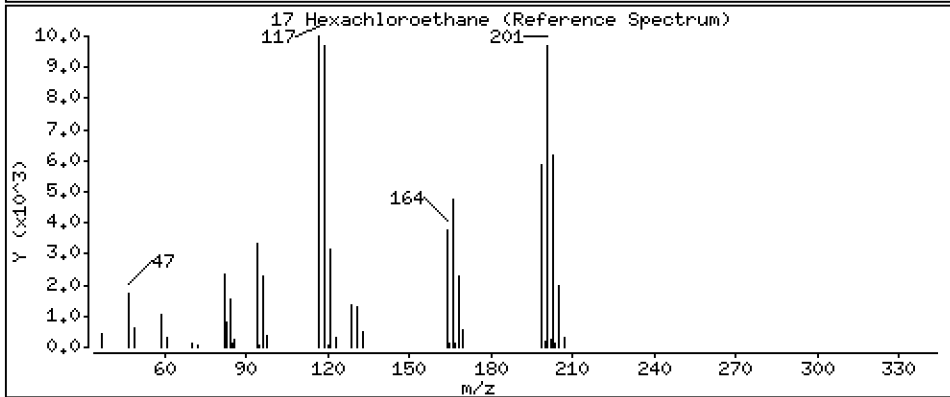
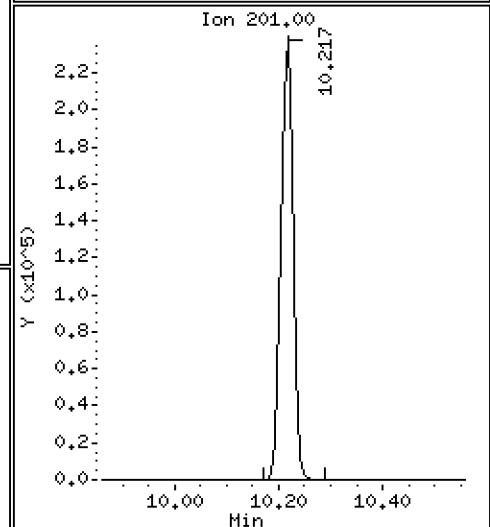
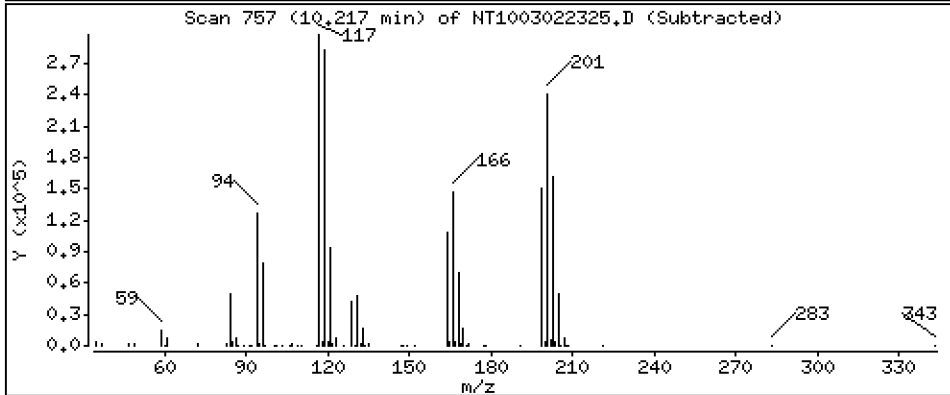
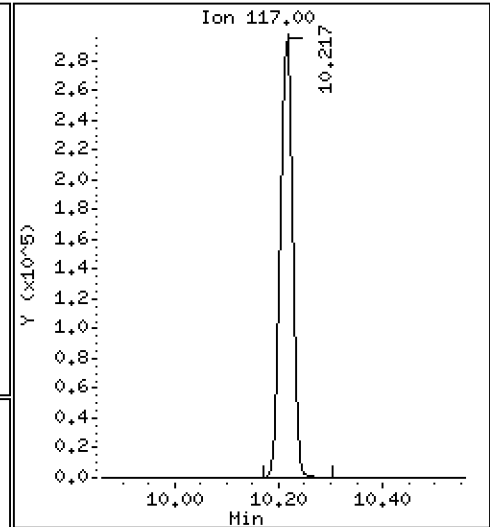
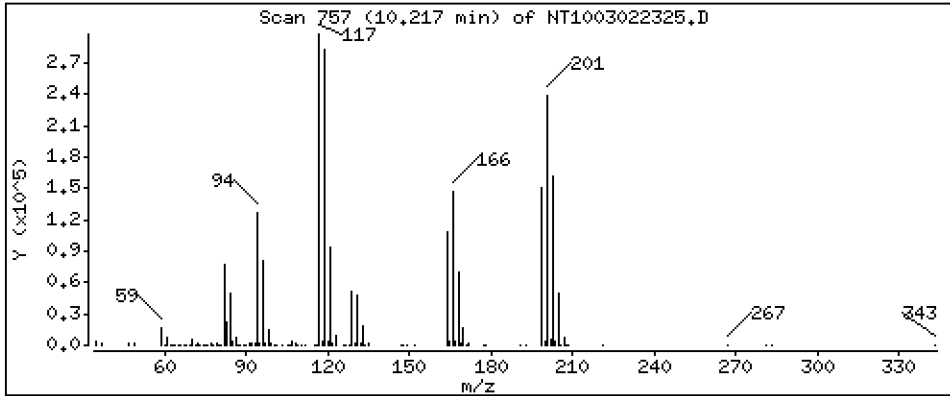
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

17 Hexachloroethane

Concentration: 4.794 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

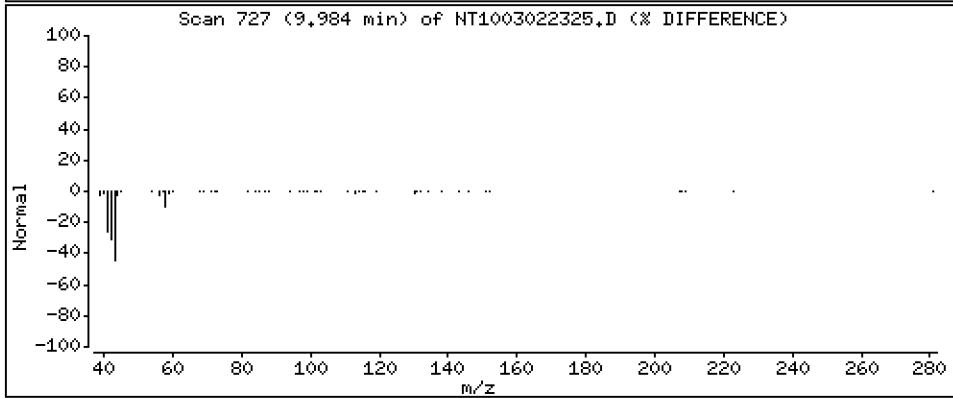
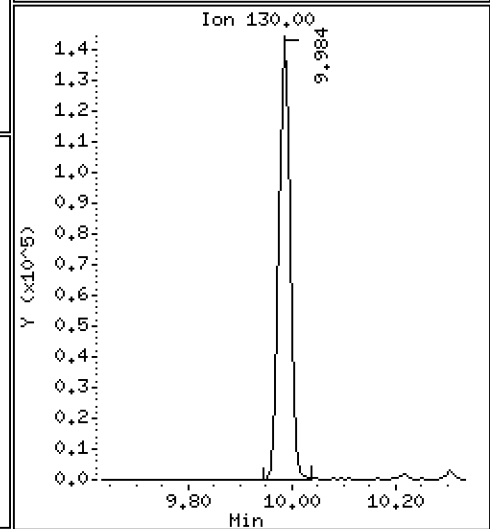
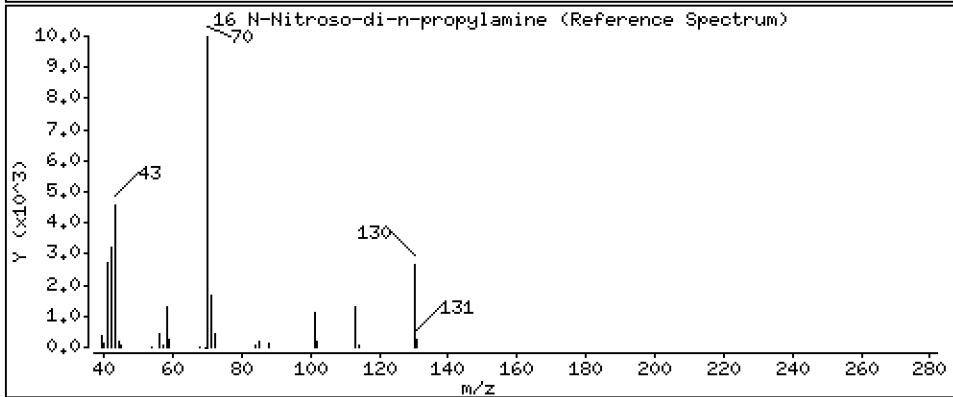
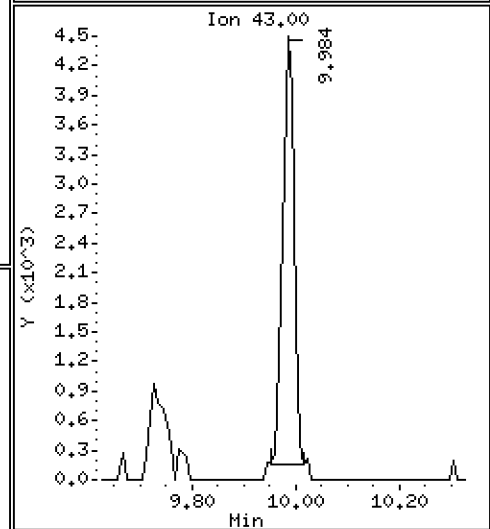
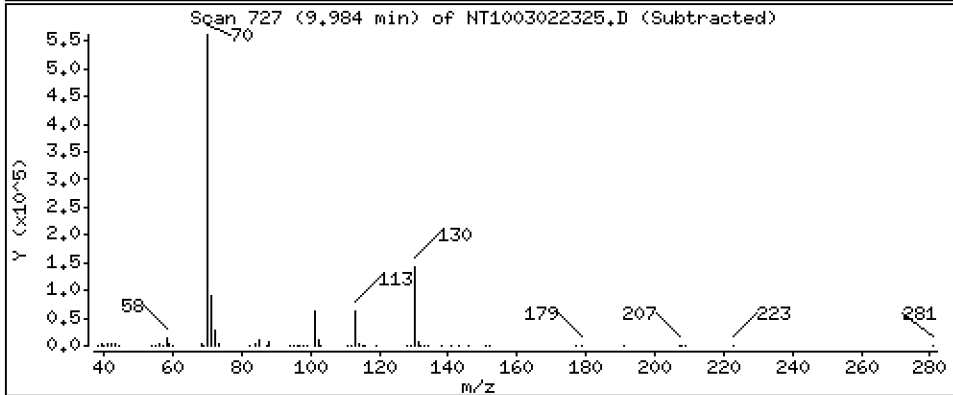
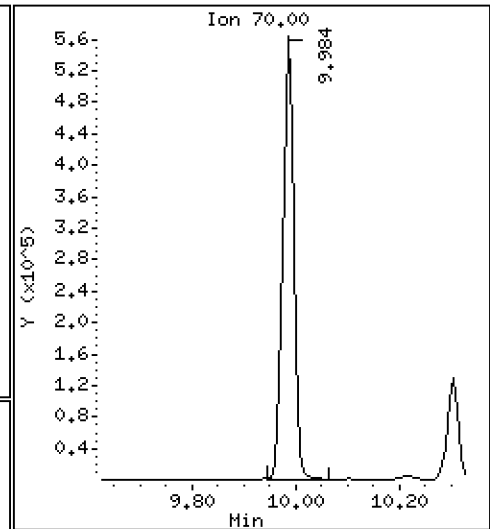
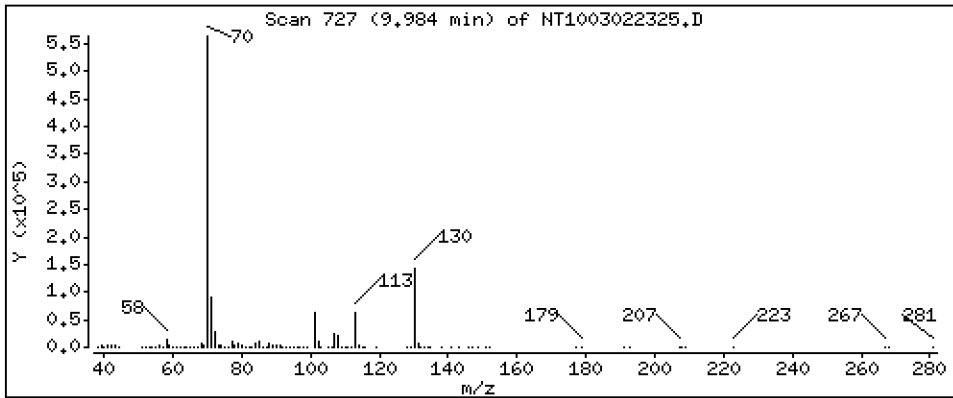
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,156 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

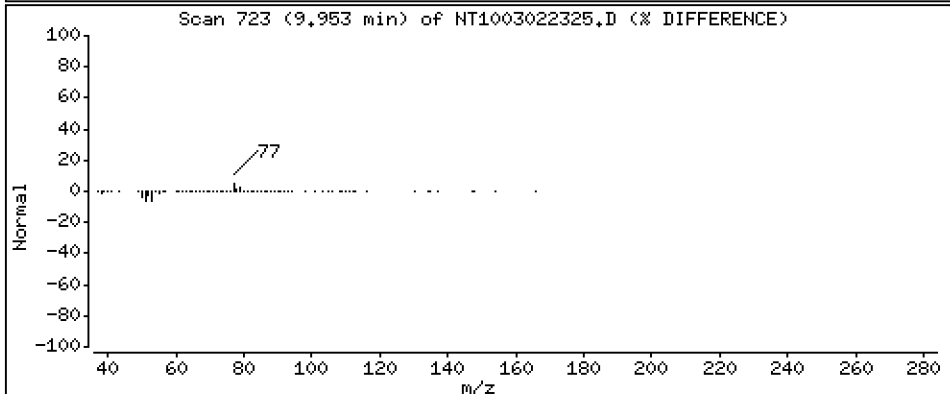
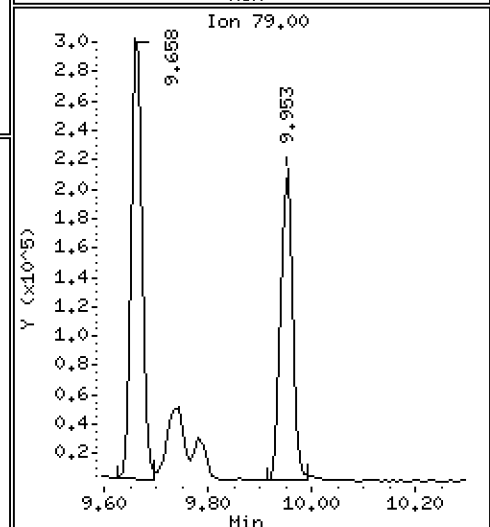
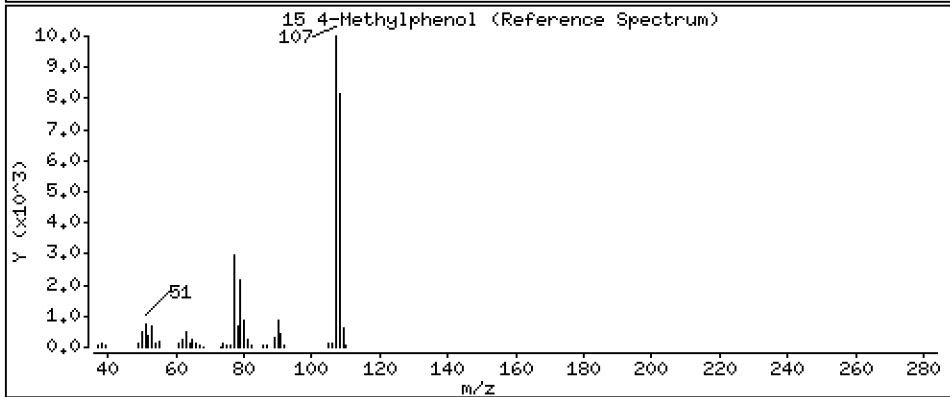
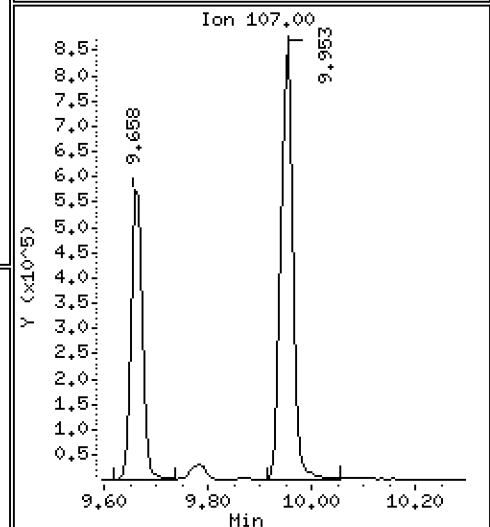
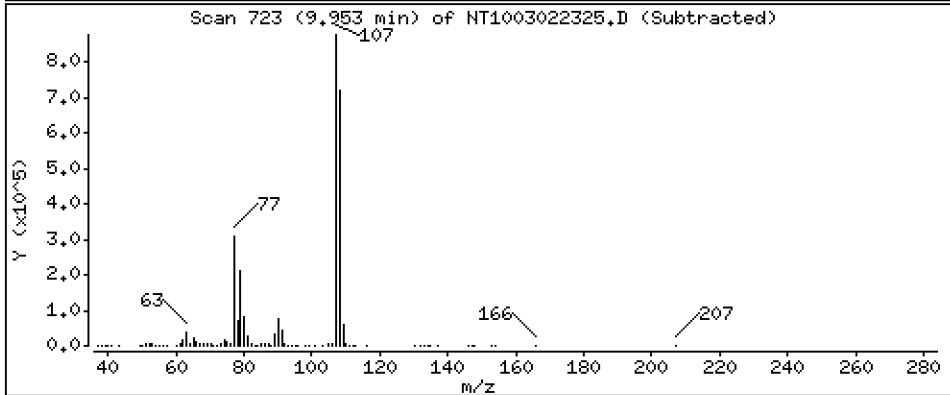
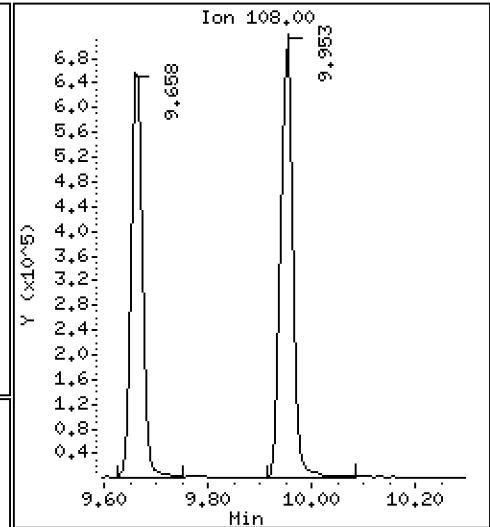
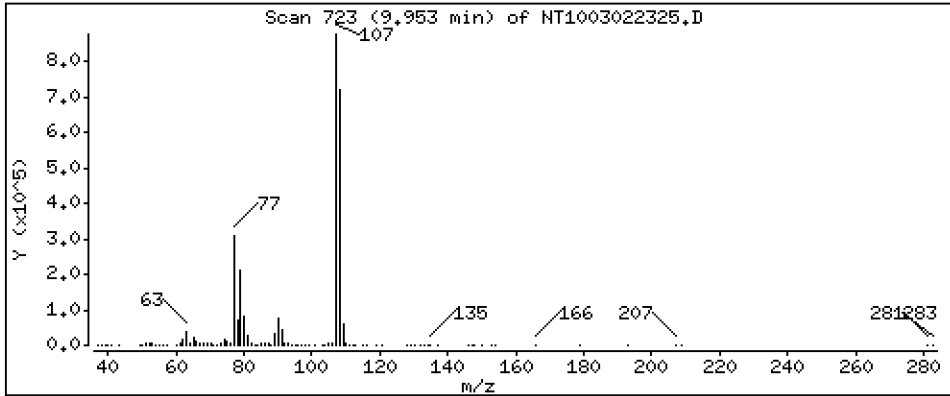
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,466 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

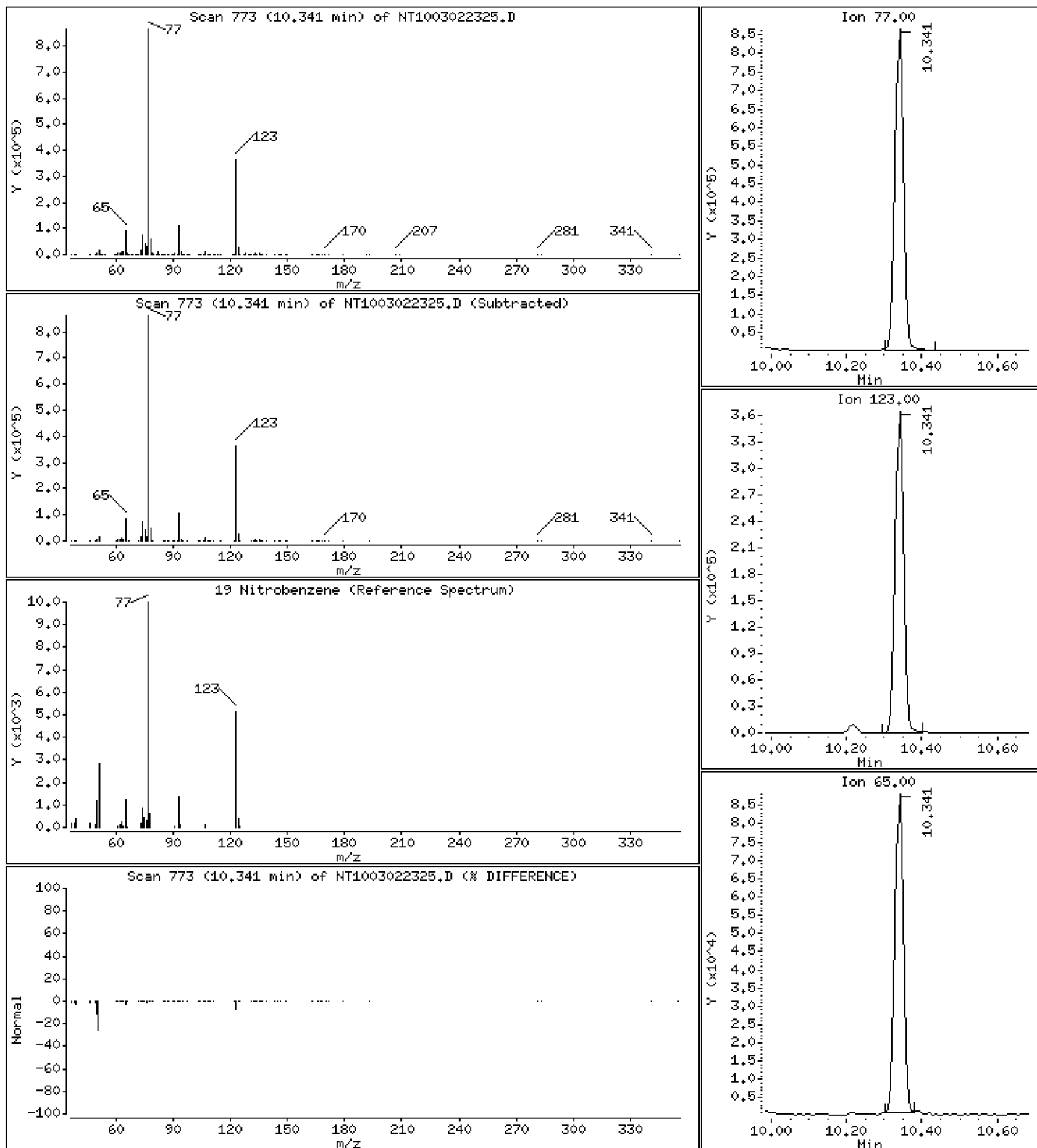
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 4,972 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

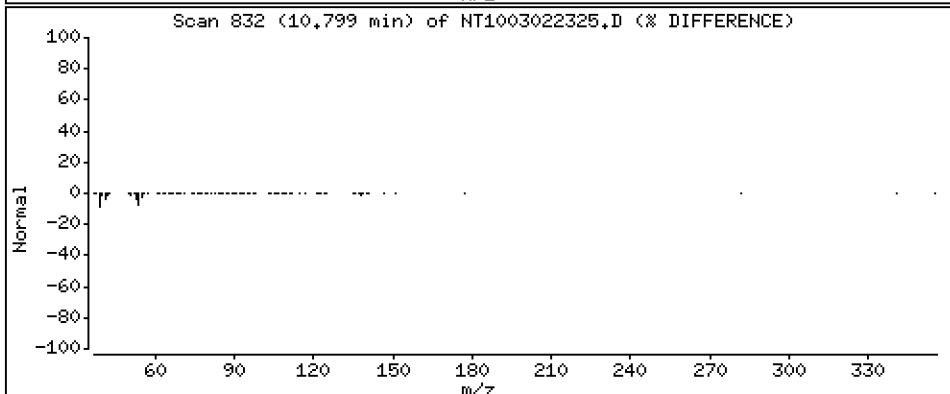
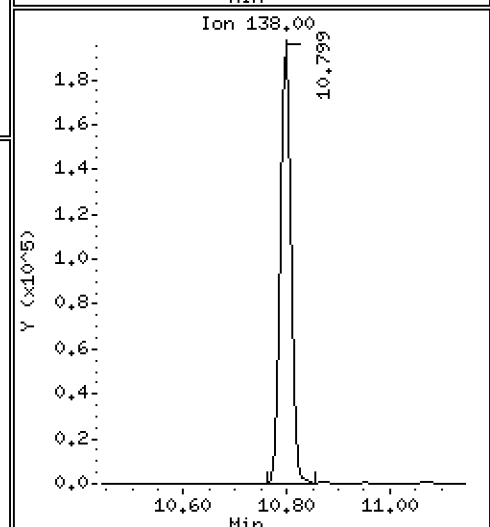
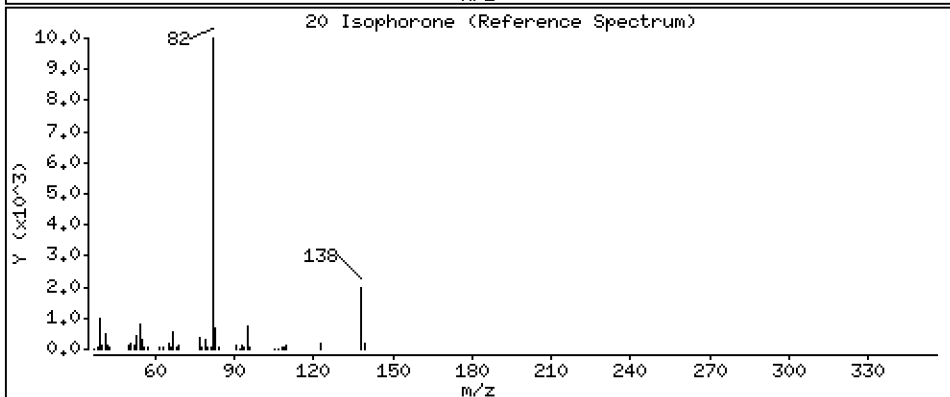
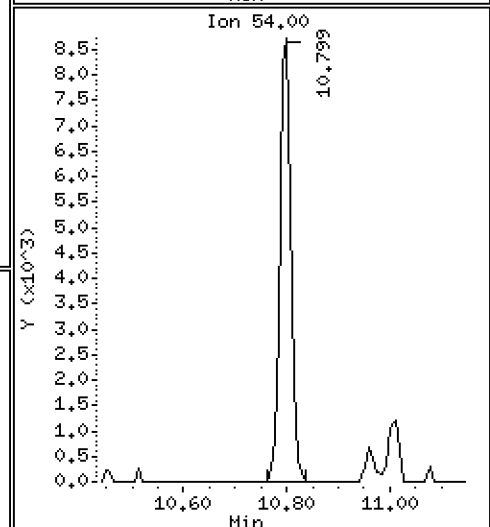
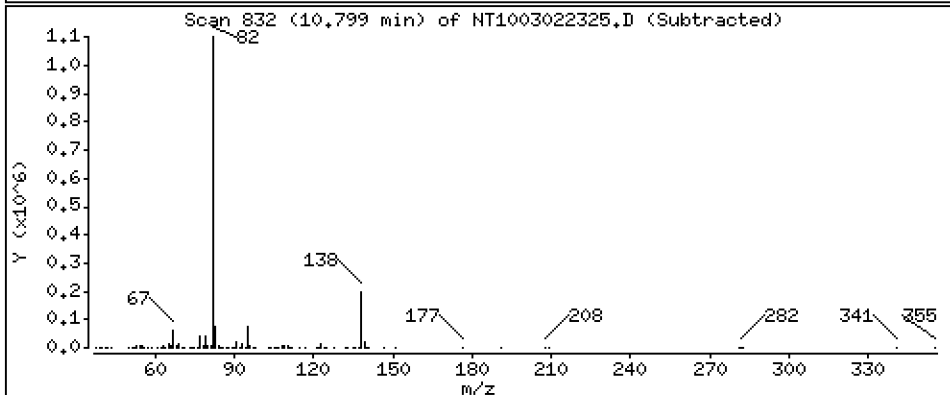
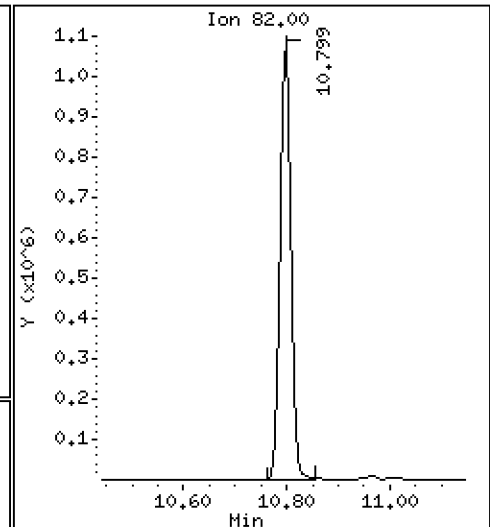
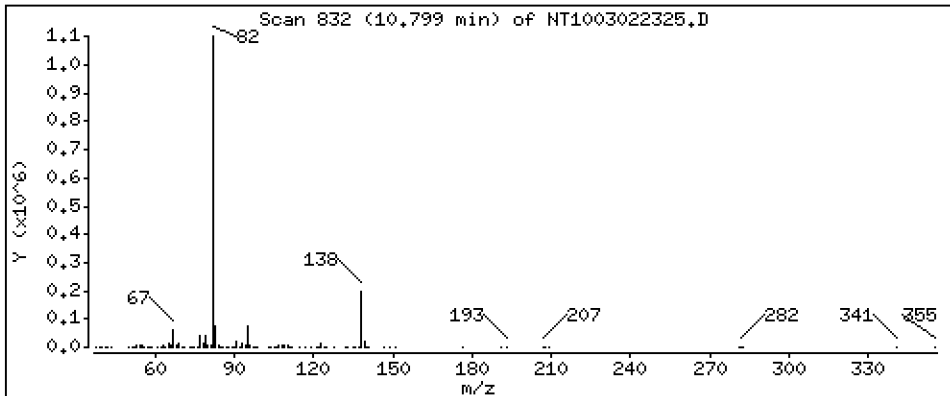
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 5,064 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

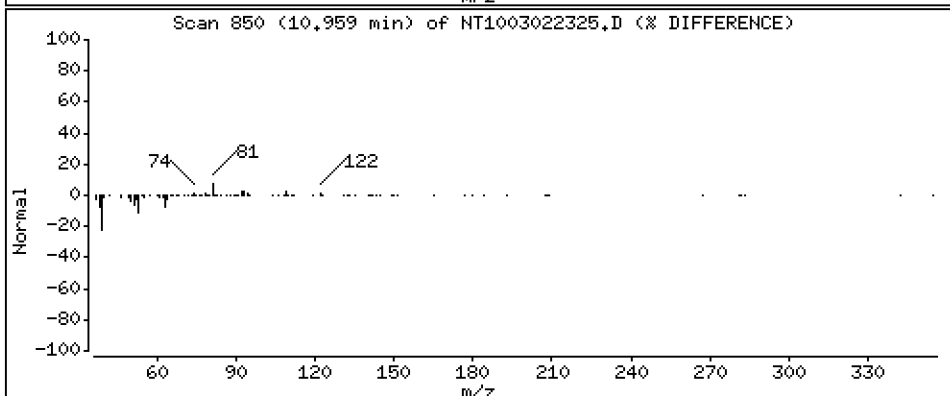
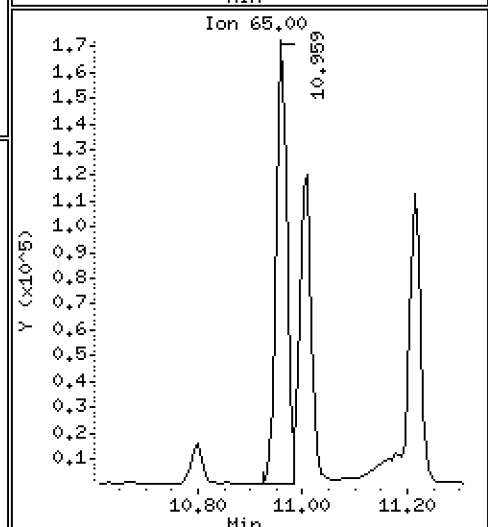
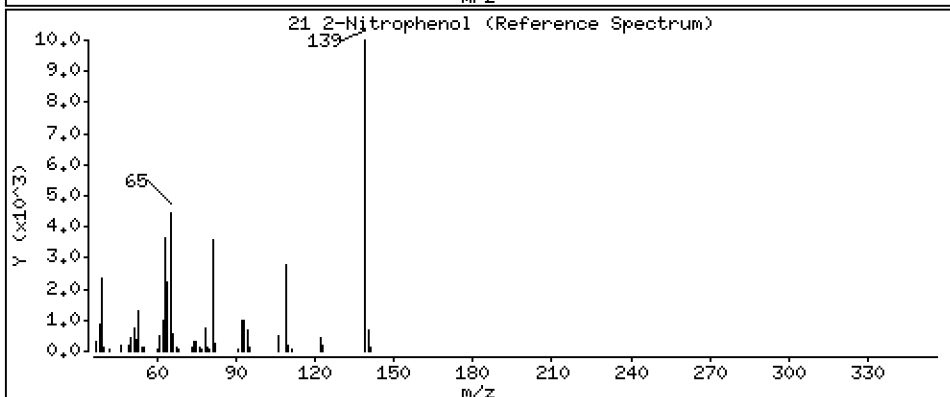
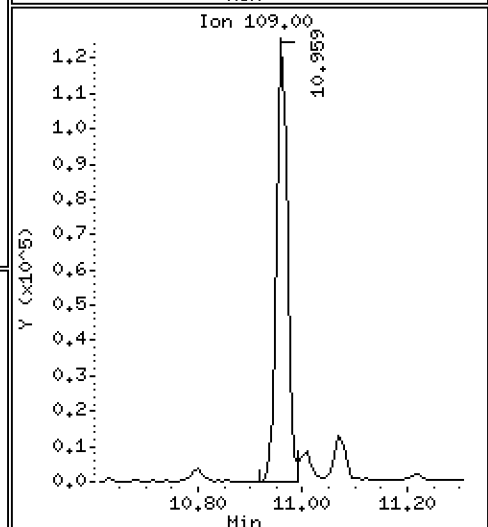
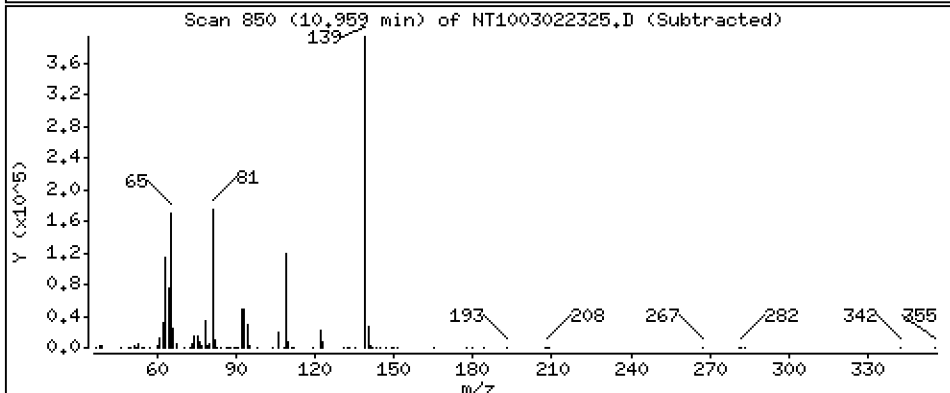
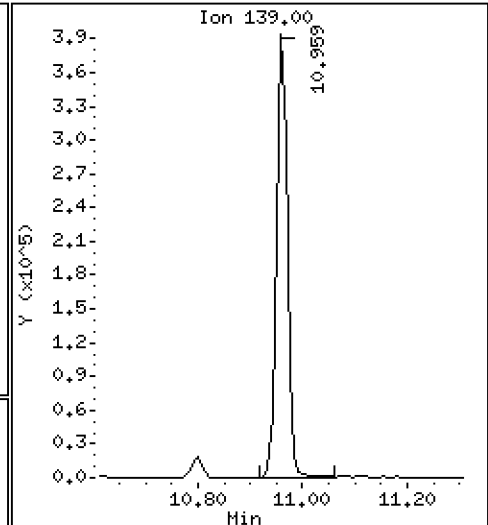
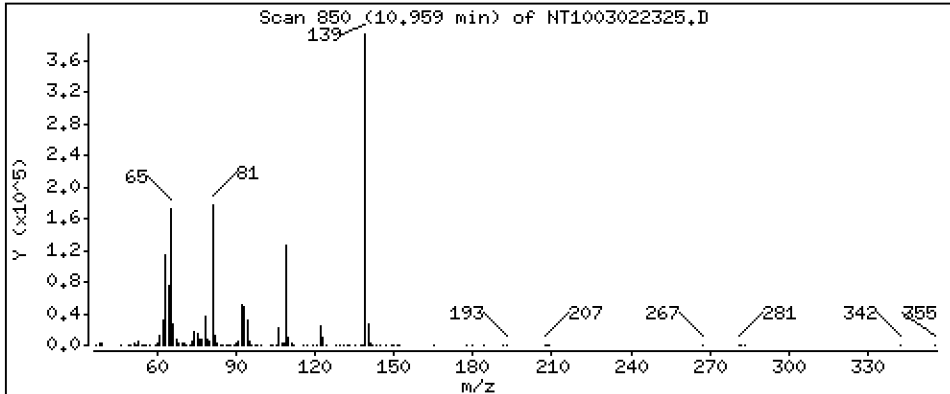
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 4,117 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

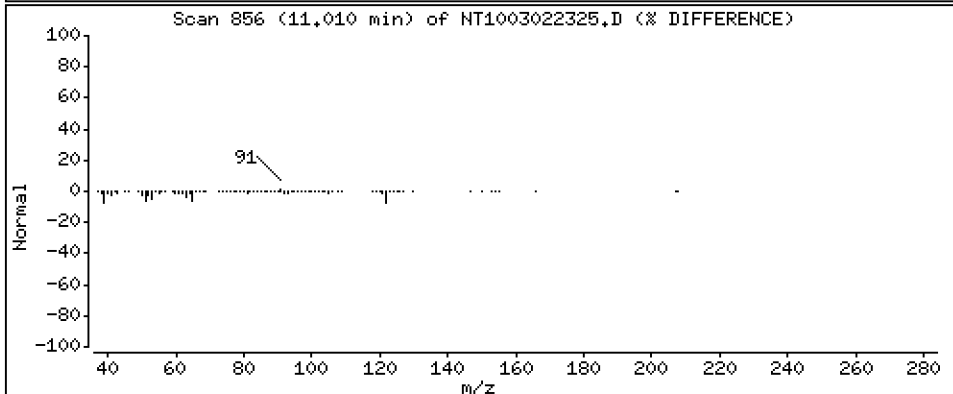
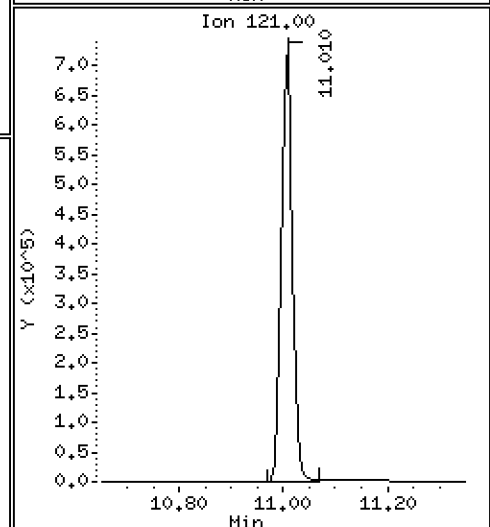
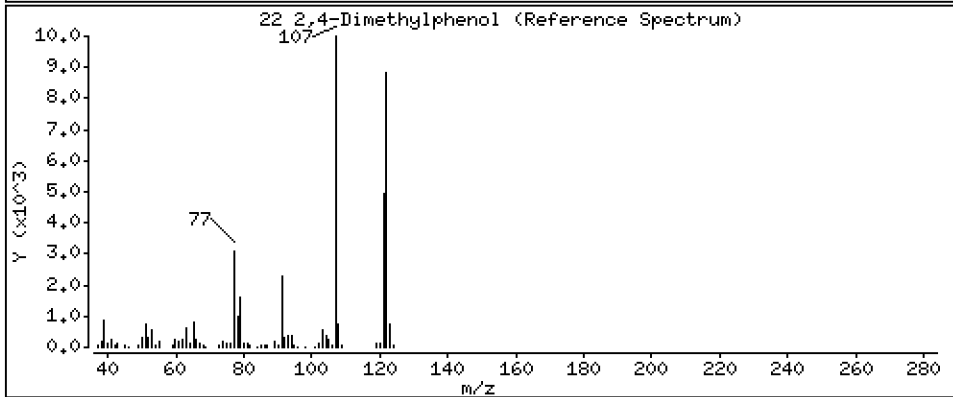
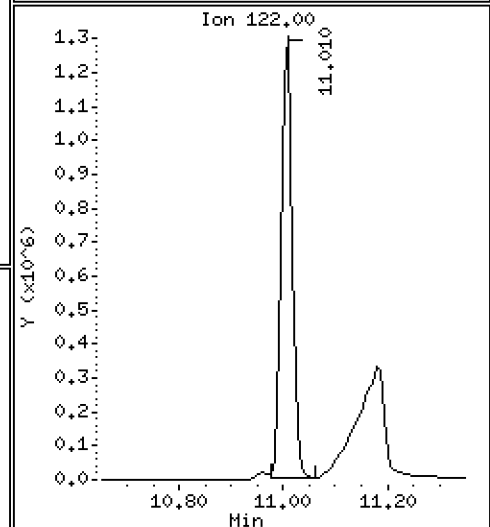
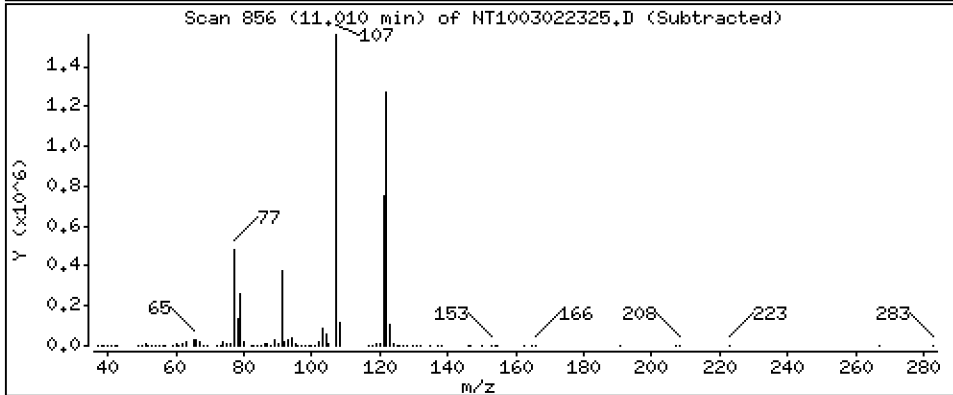
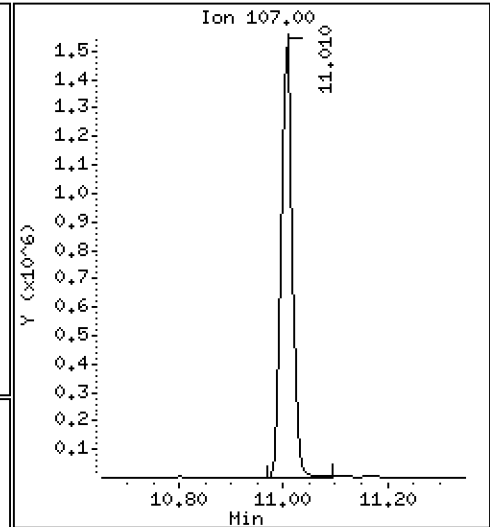
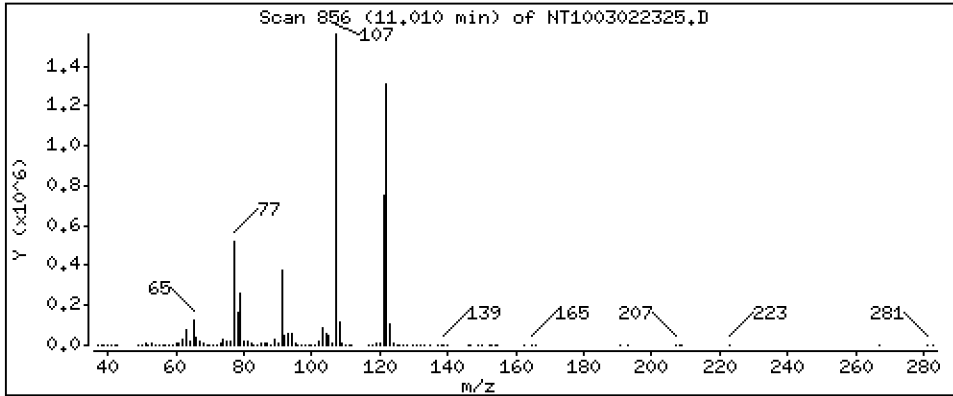
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 9,170 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

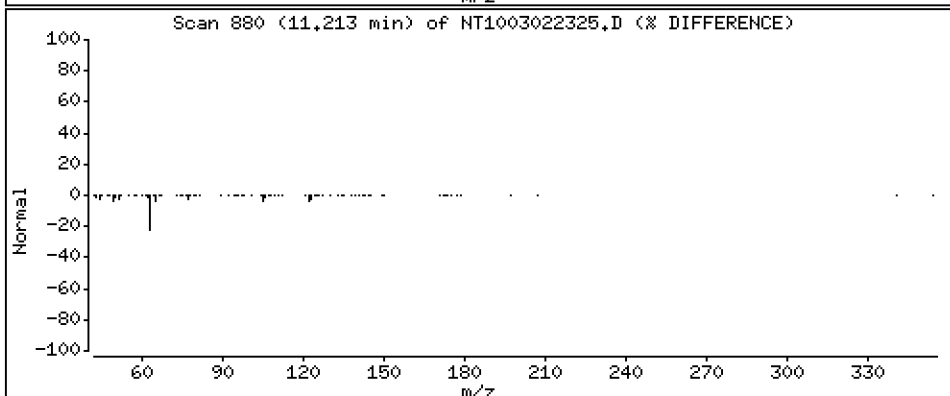
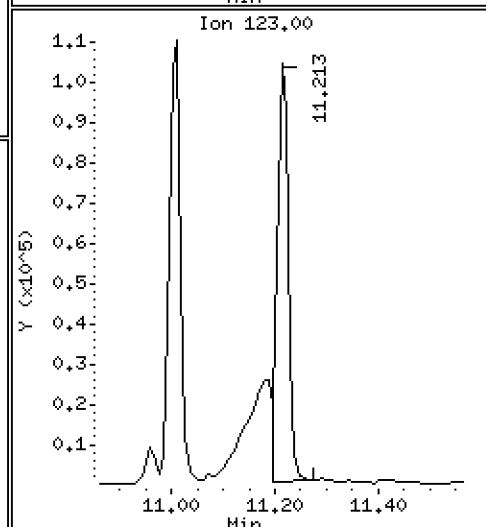
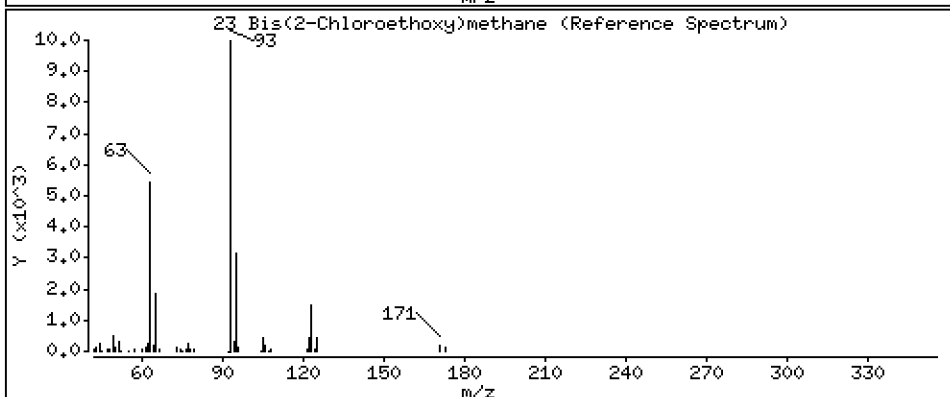
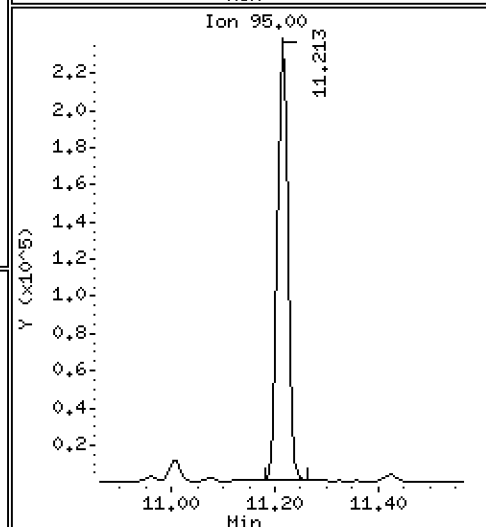
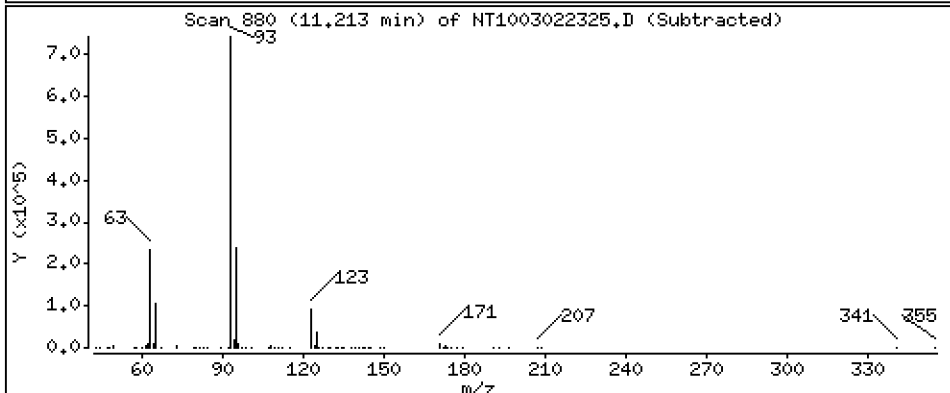
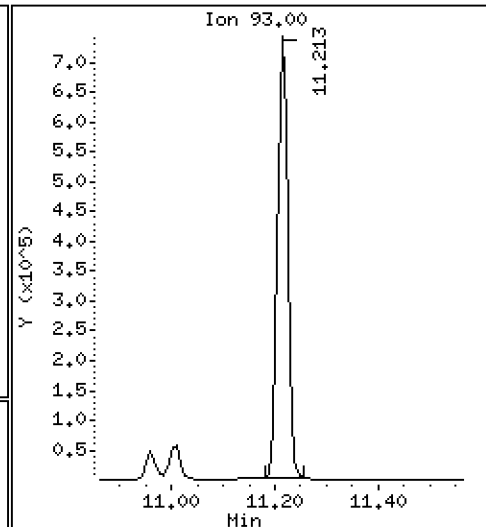
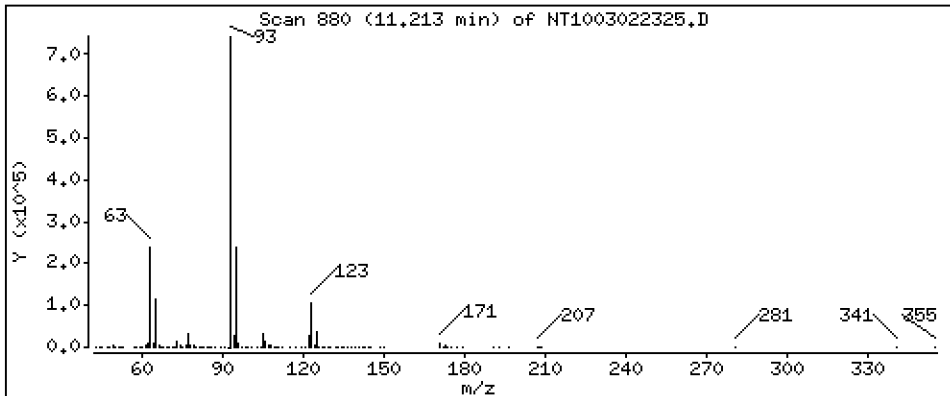
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 5,166 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

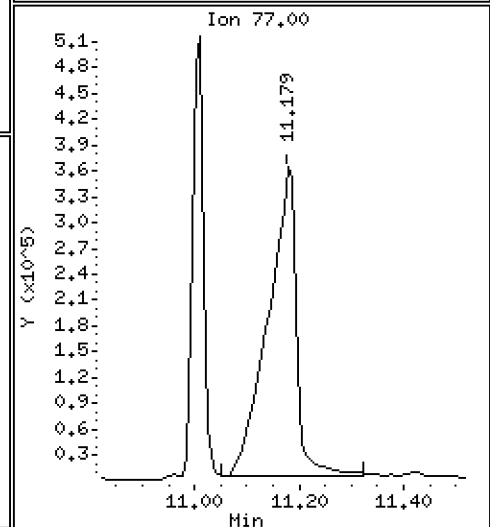
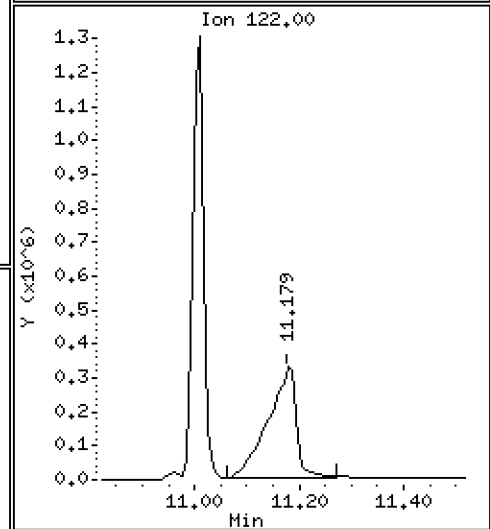
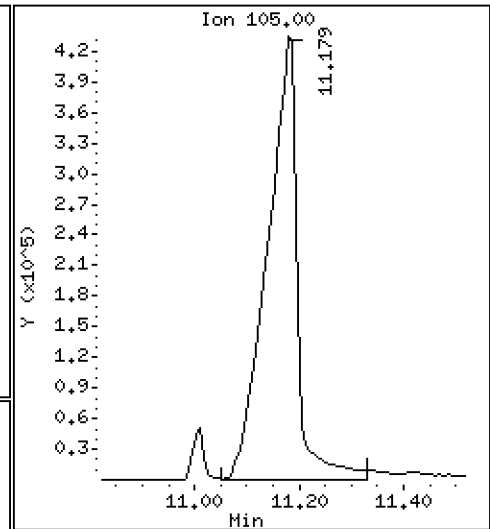
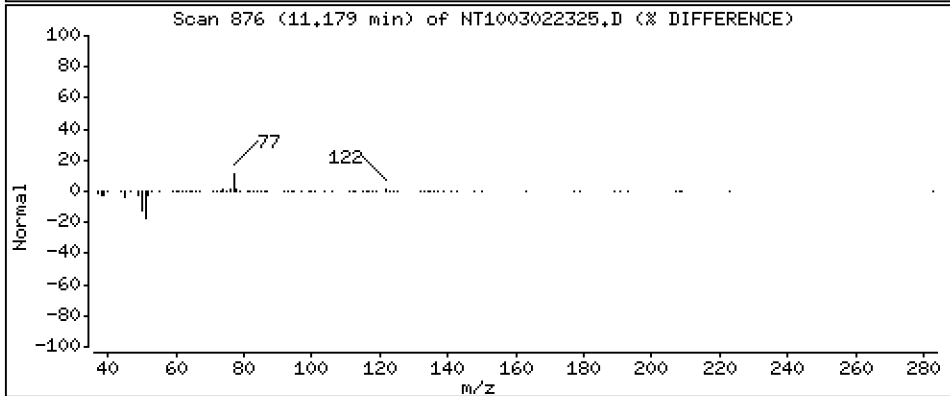
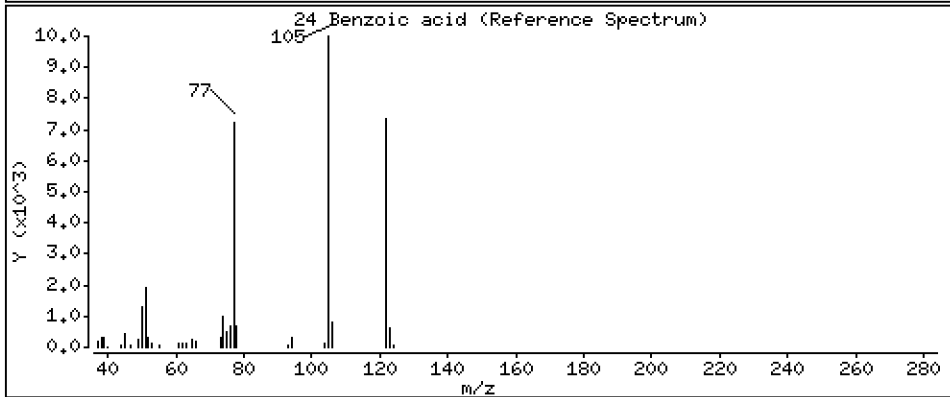
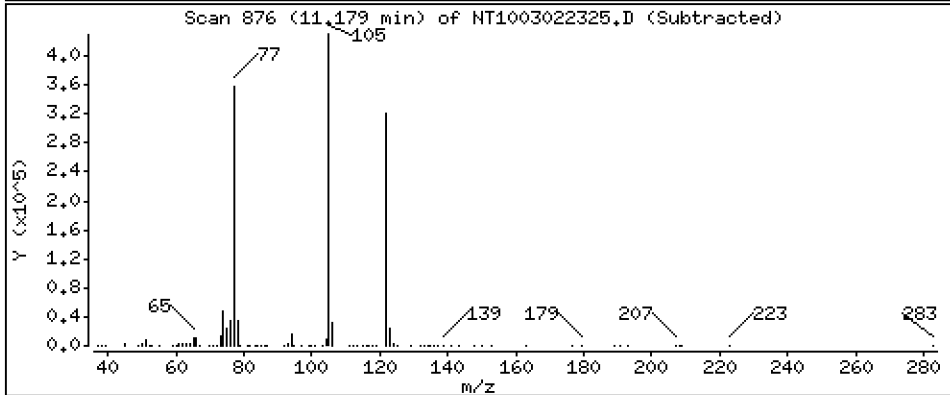
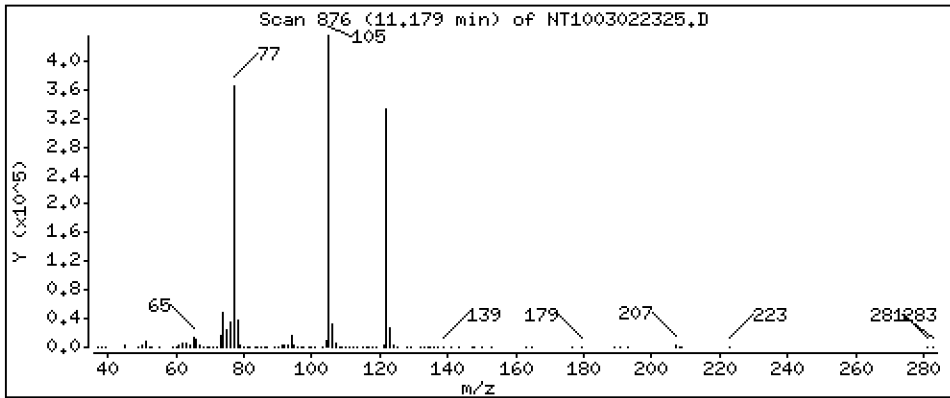
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 11.71 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

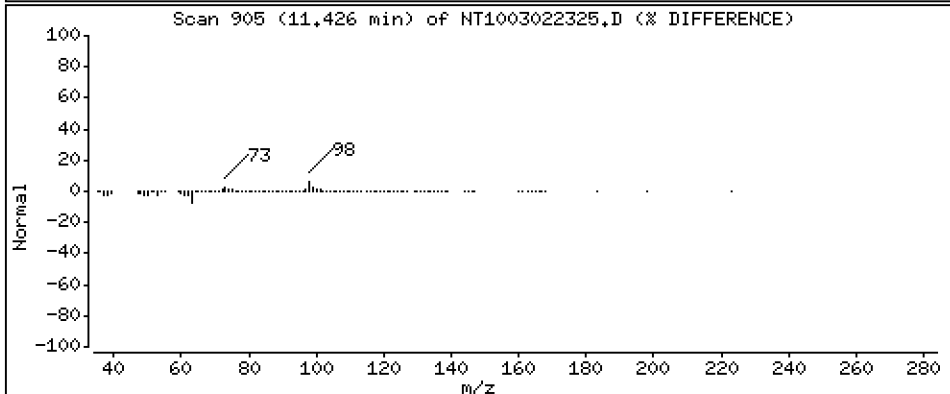
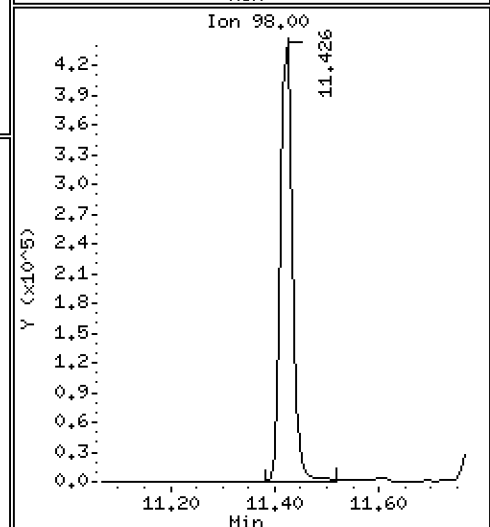
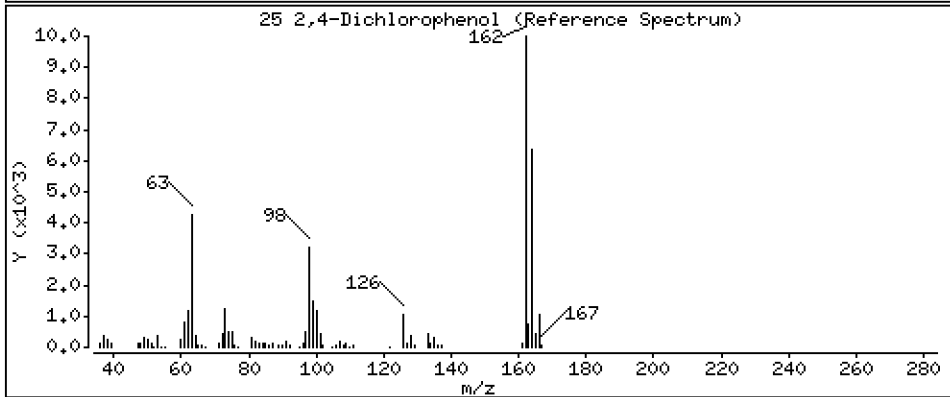
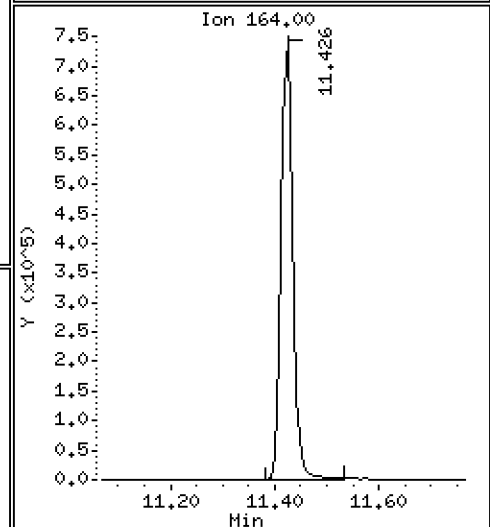
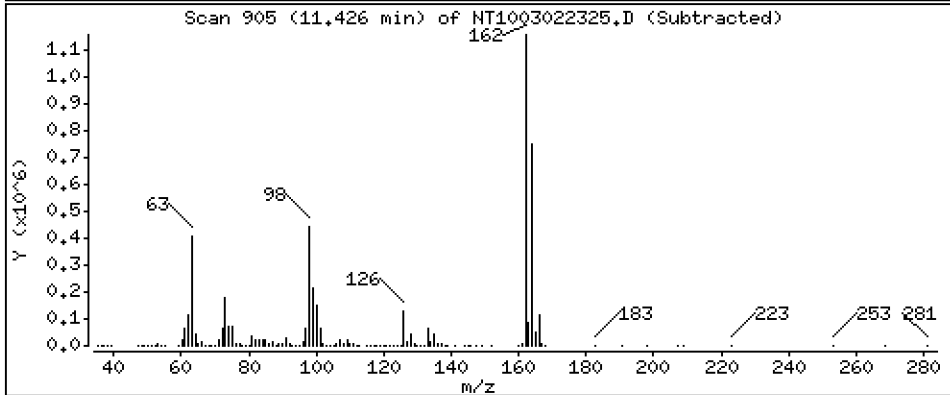
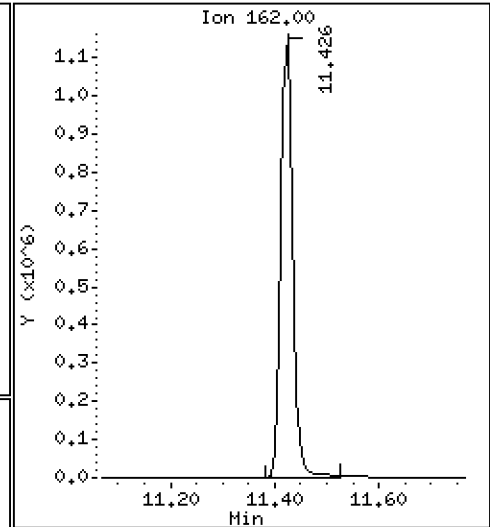
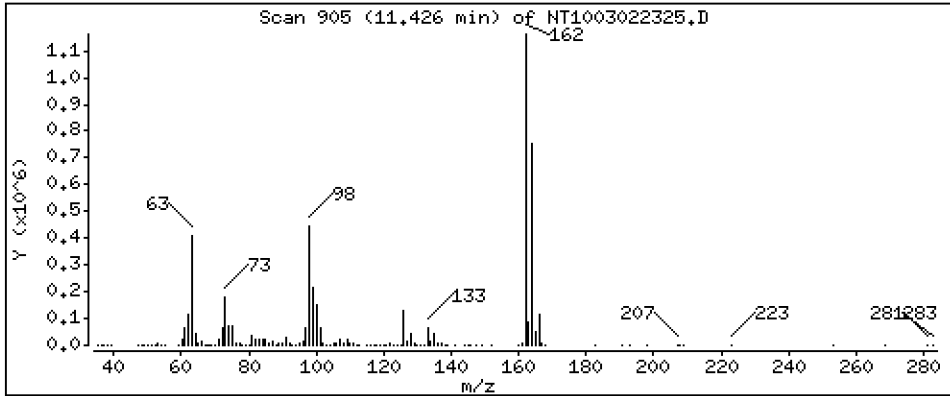
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 10,47 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

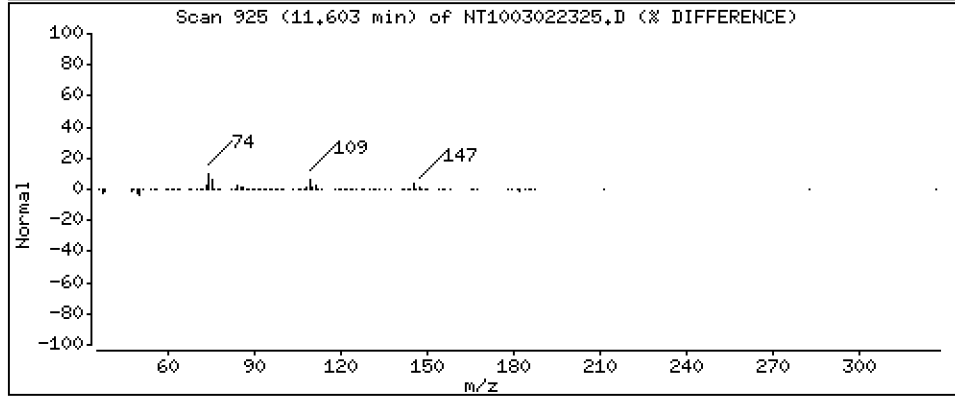
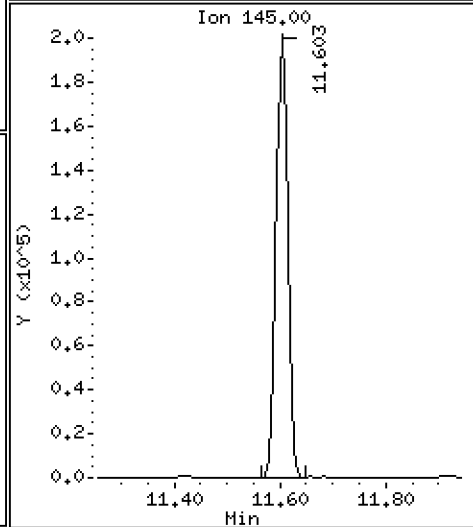
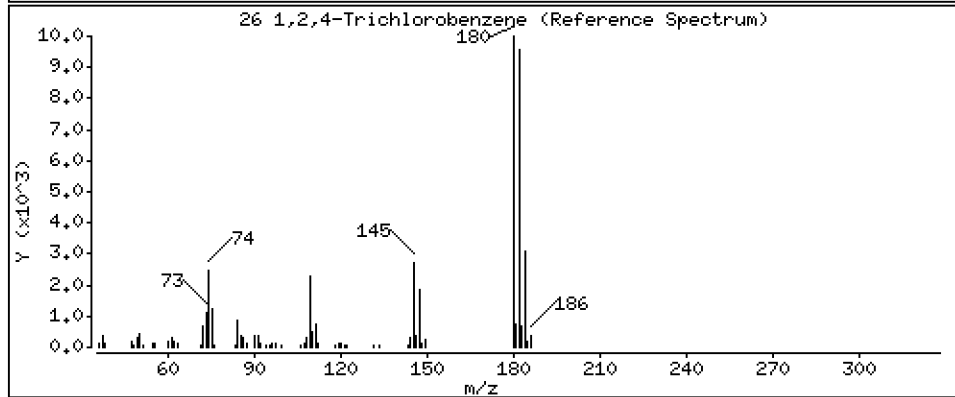
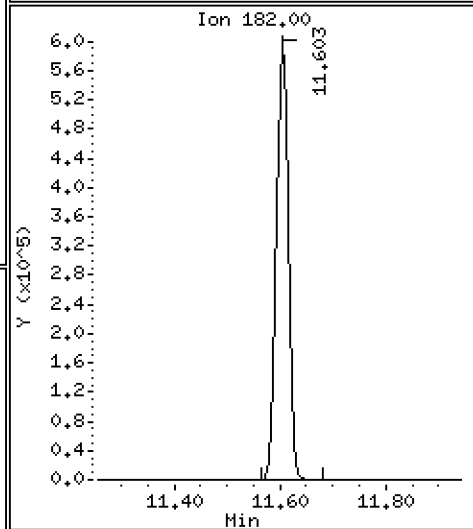
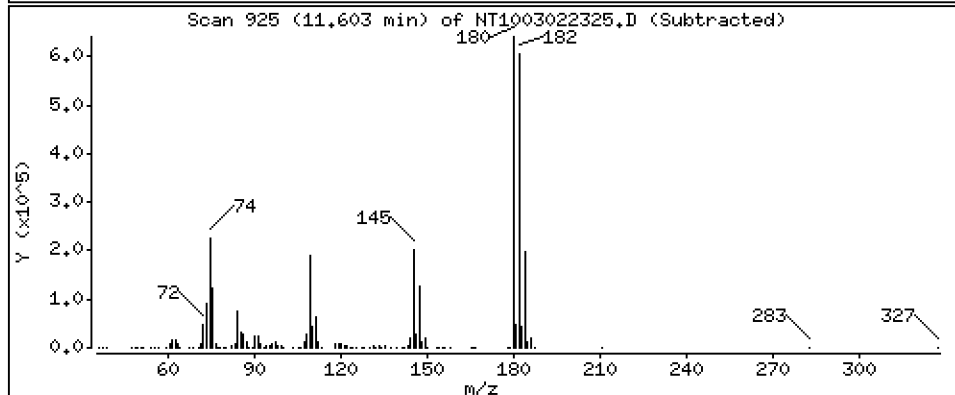
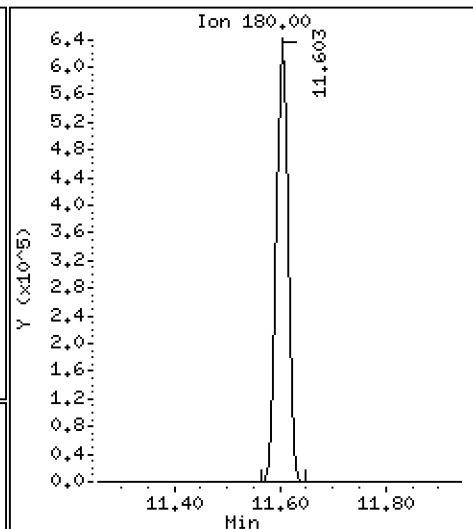
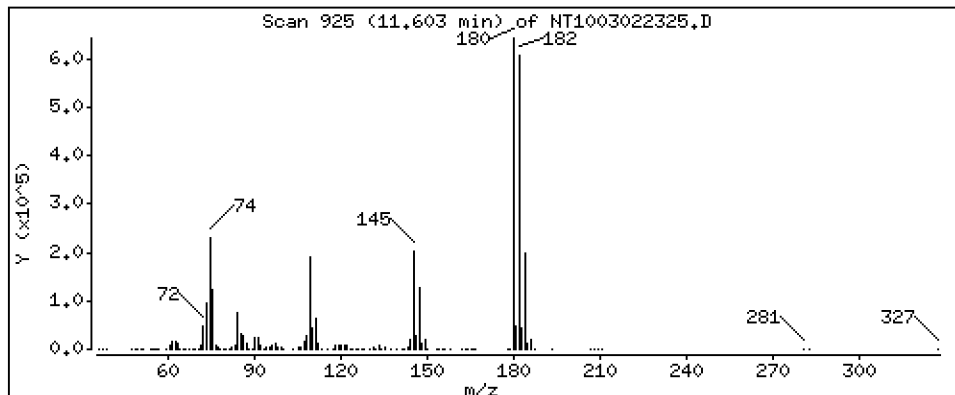
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,911 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

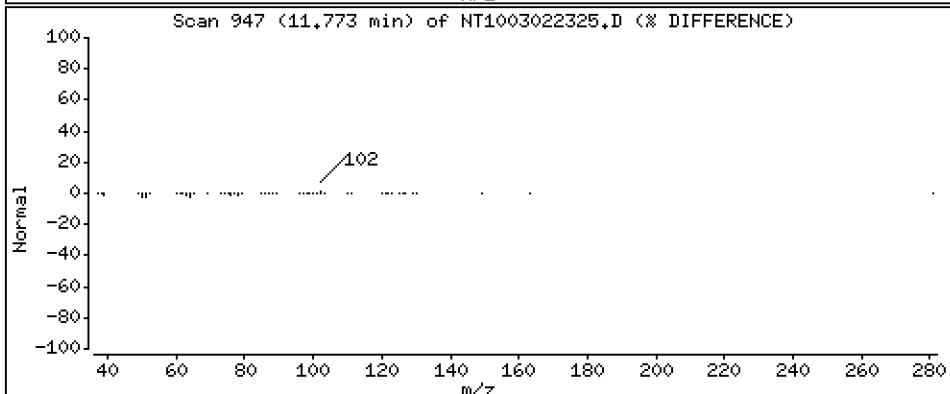
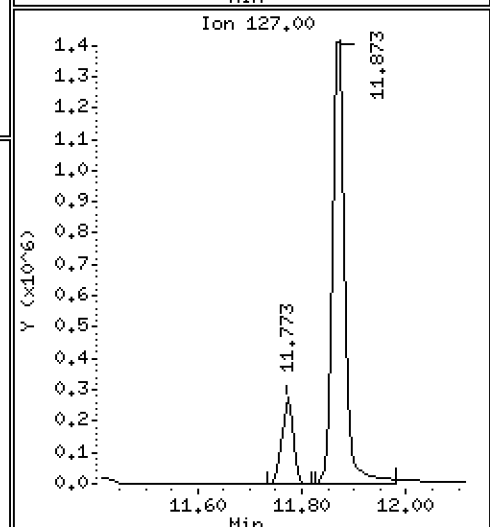
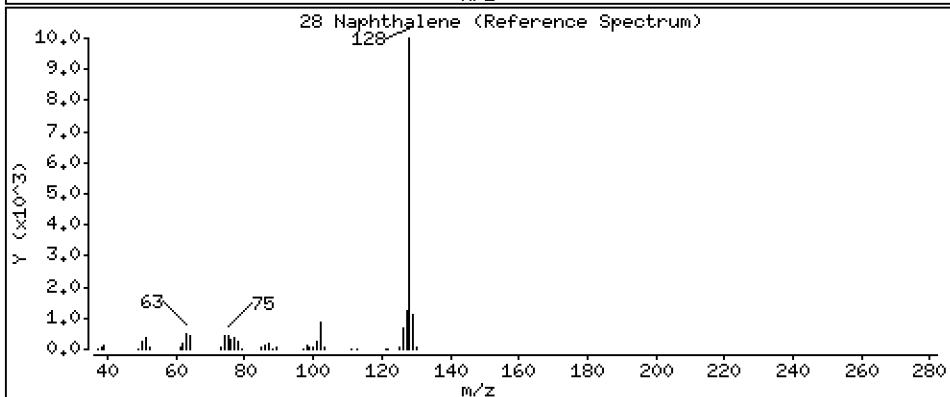
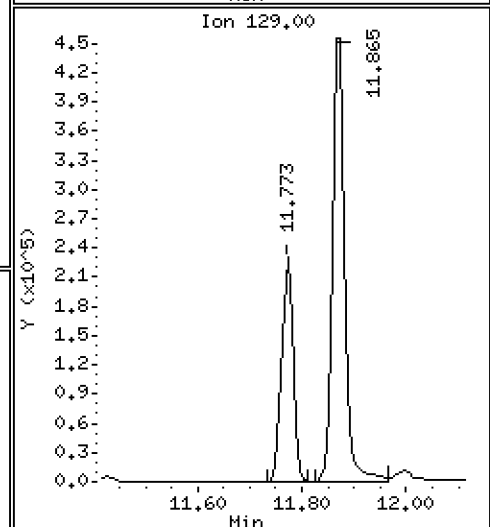
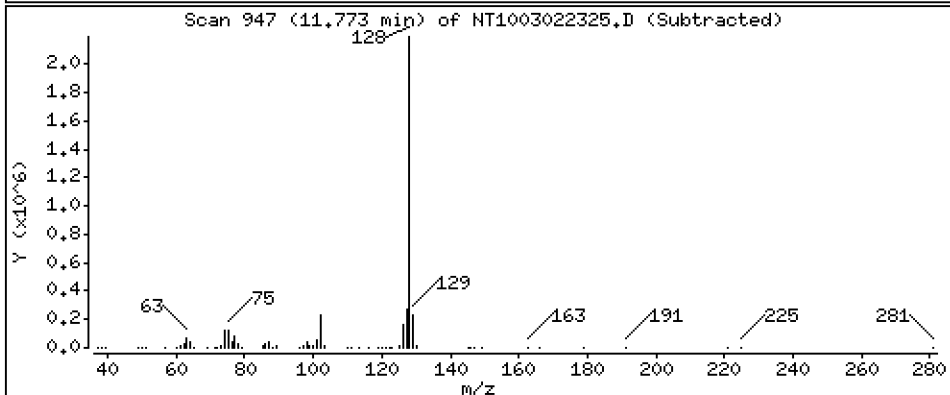
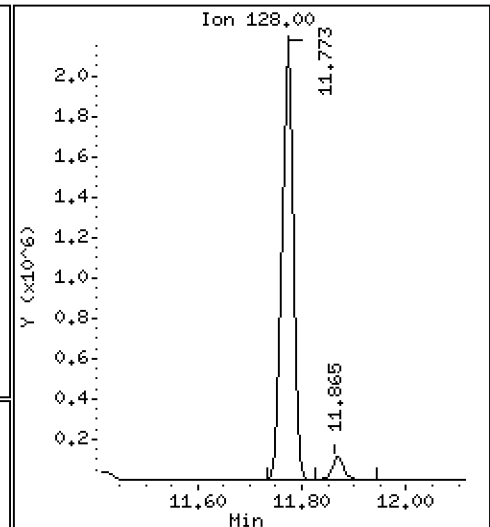
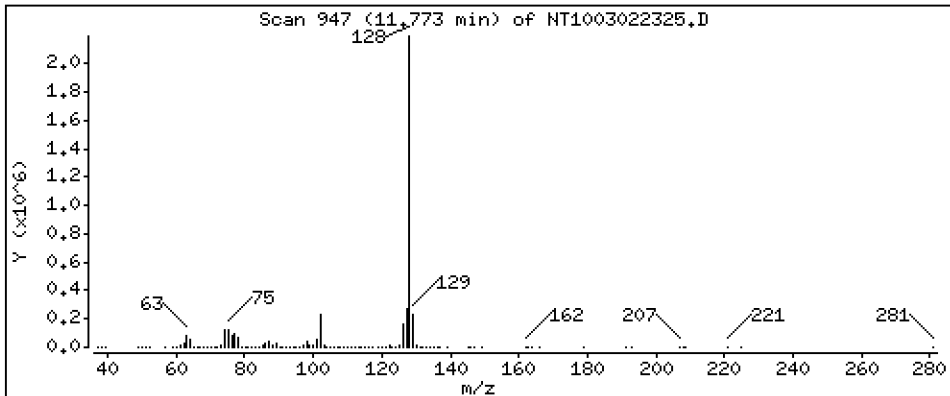
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,980 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

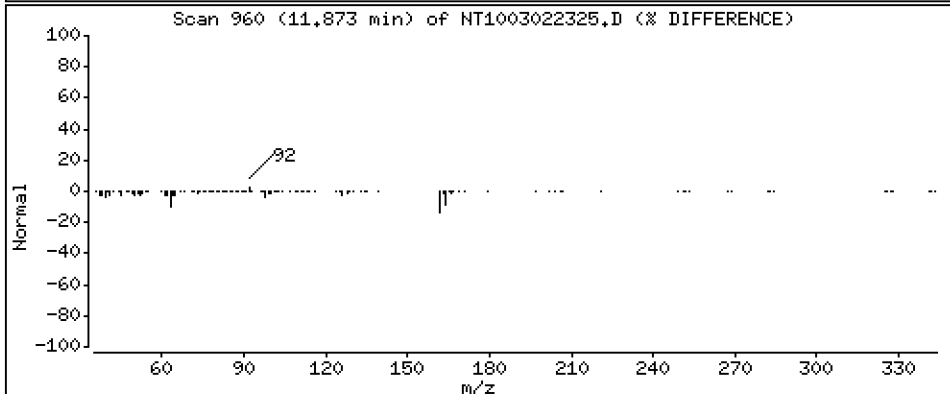
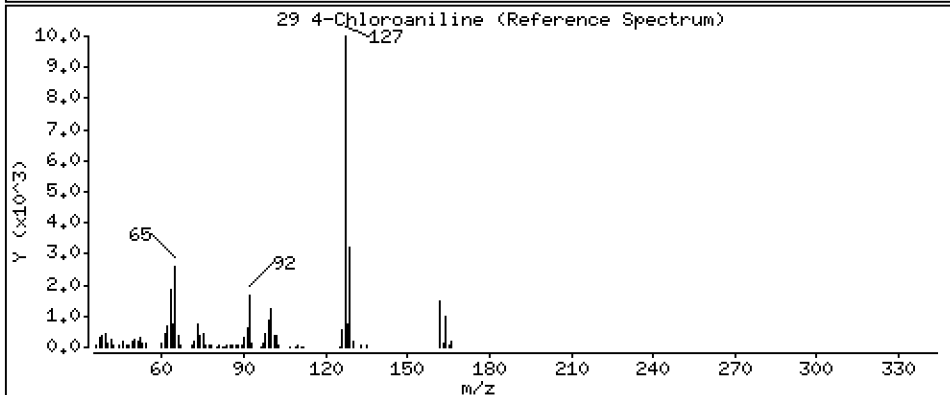
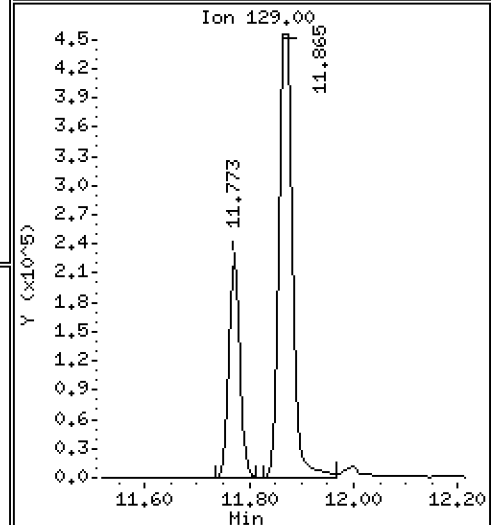
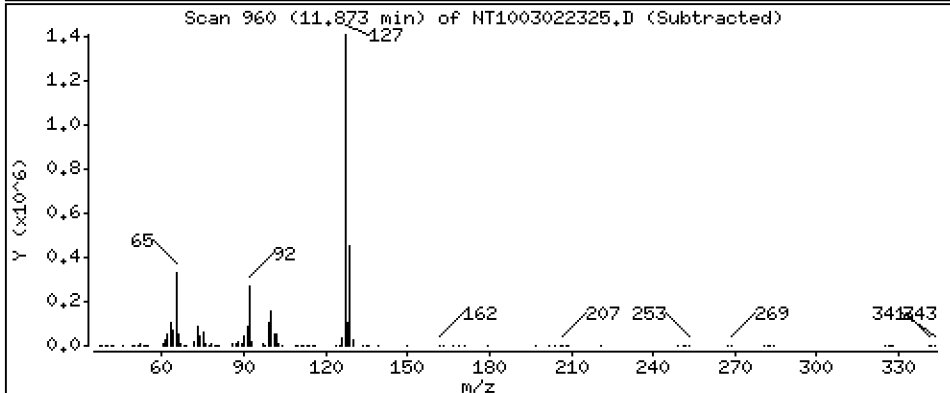
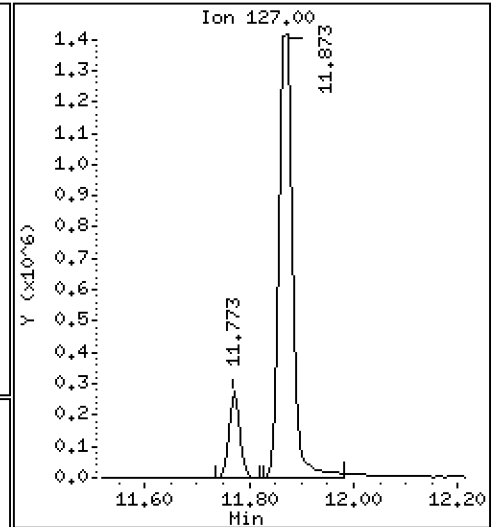
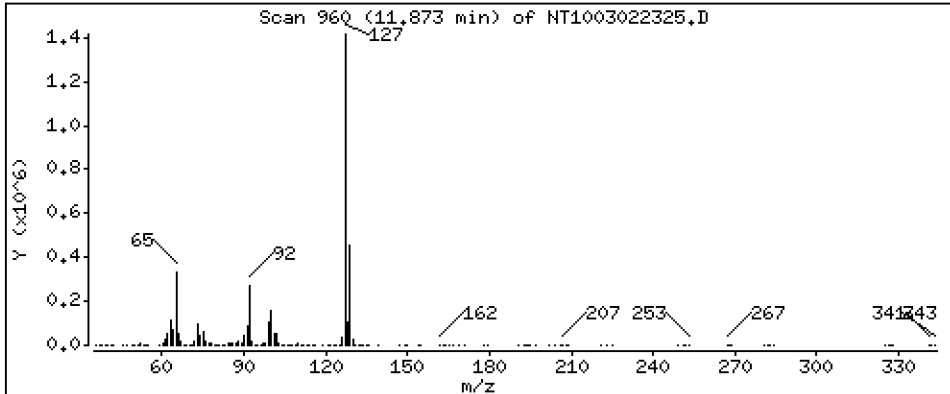
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 9,330 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

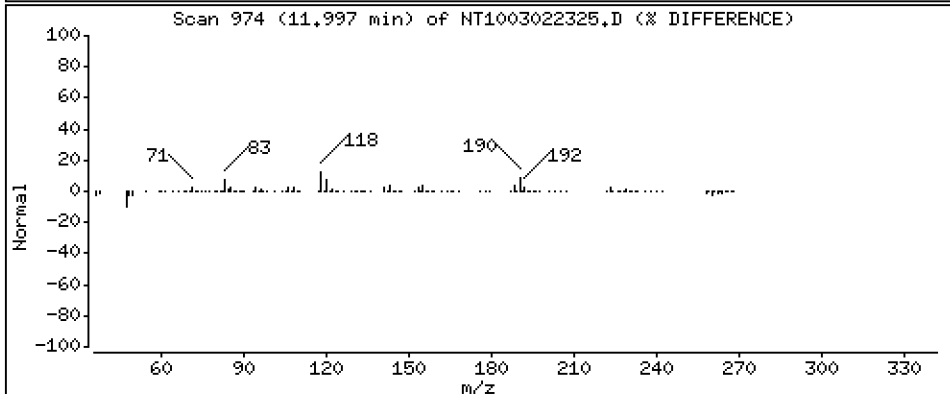
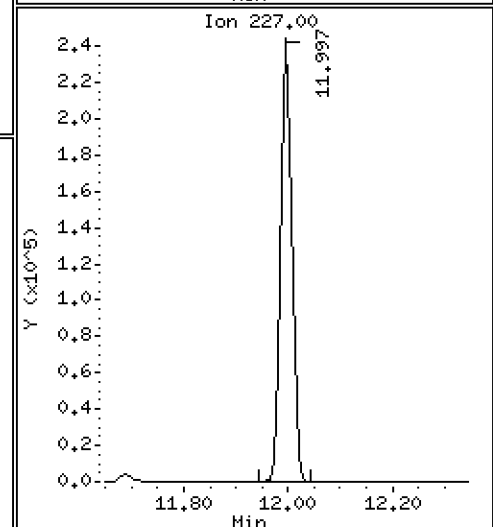
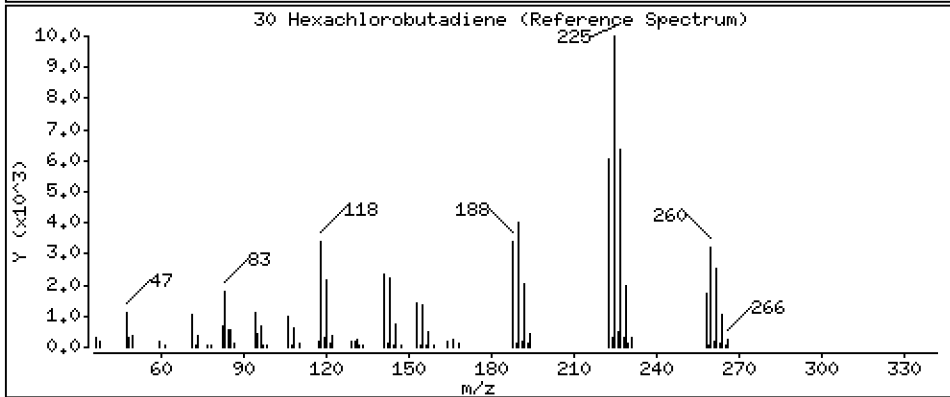
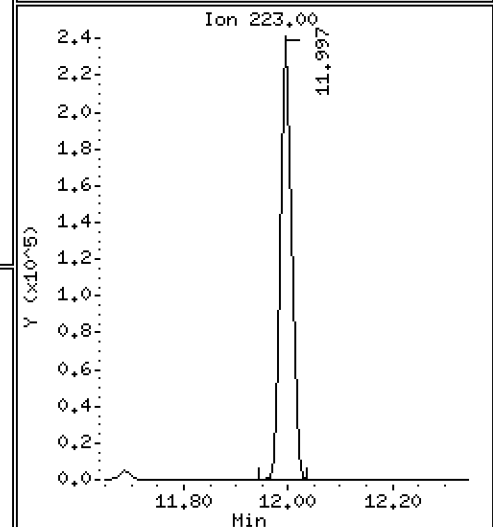
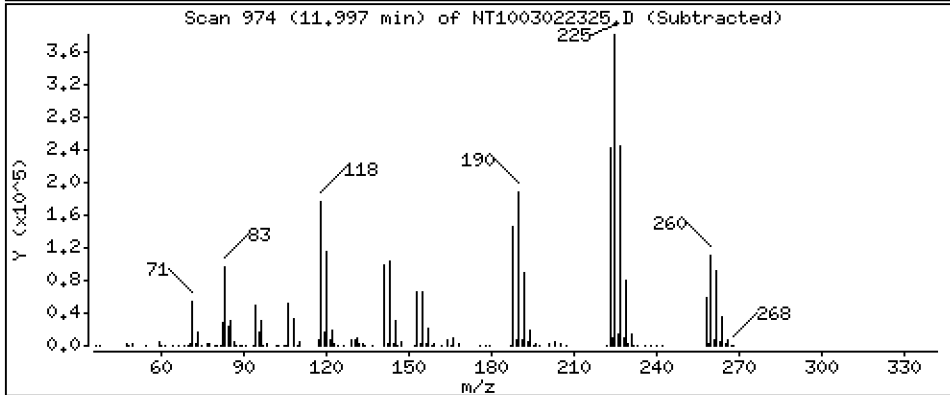
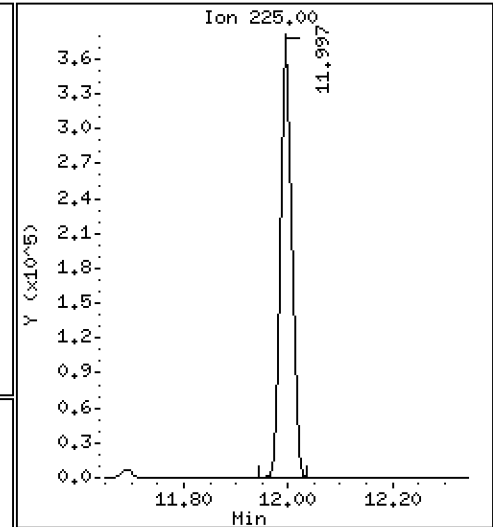
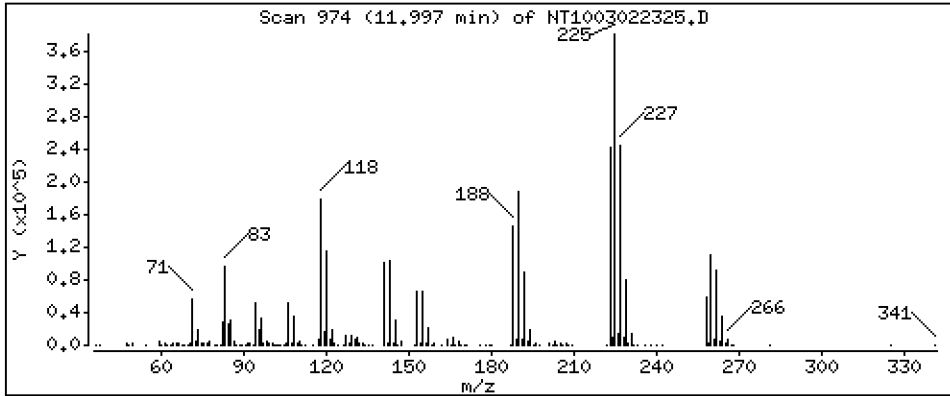
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,730 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

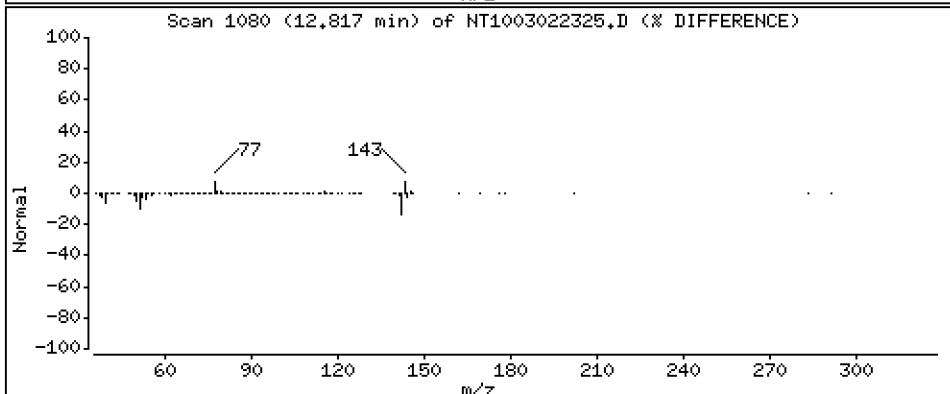
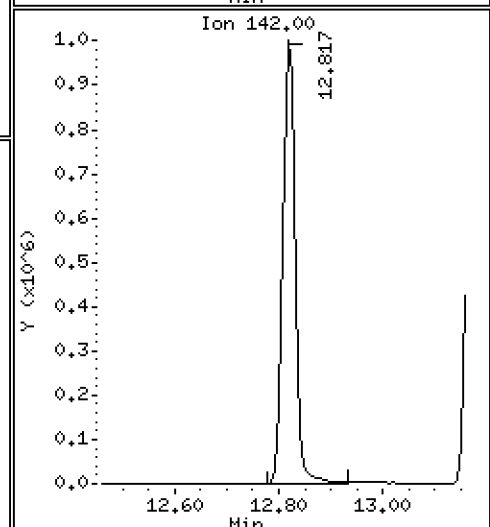
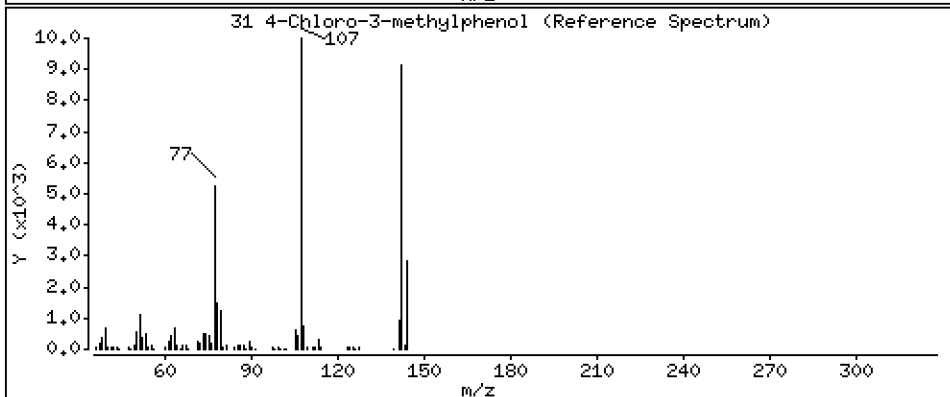
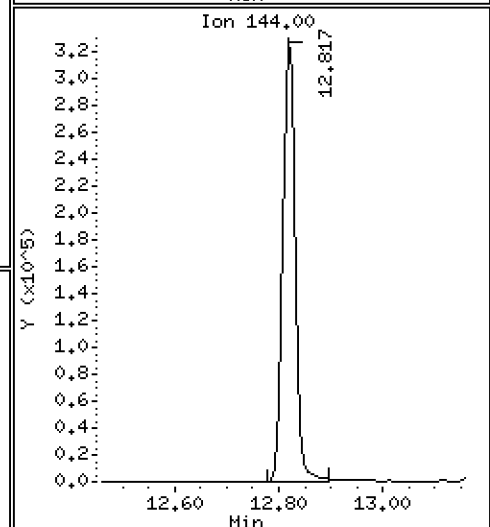
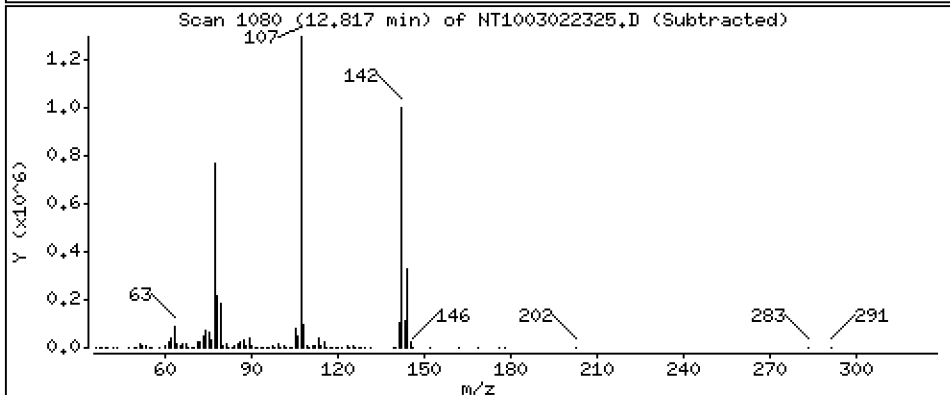
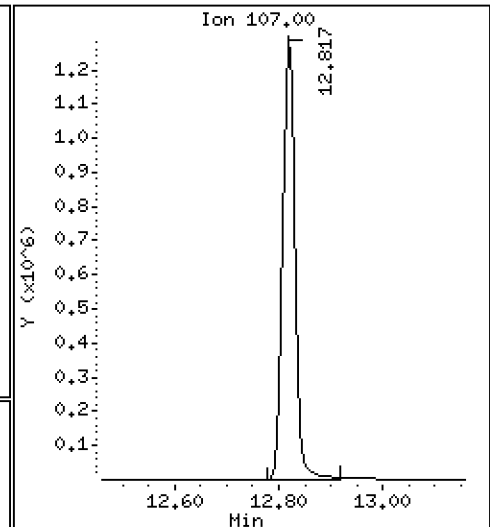
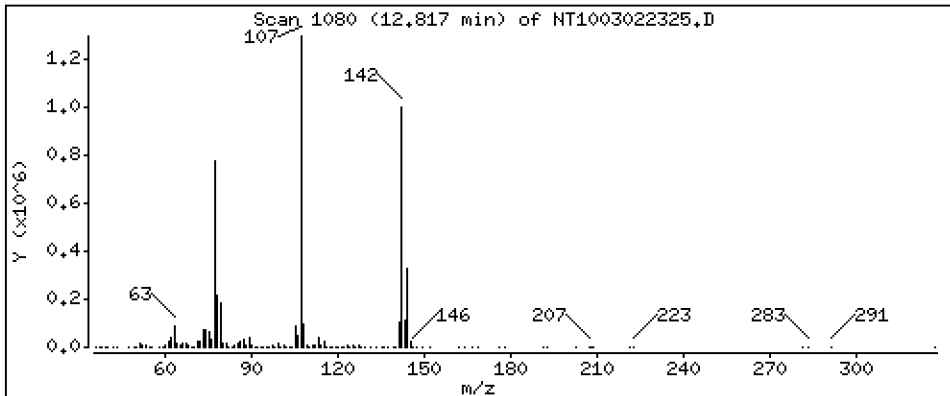
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 9,567 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

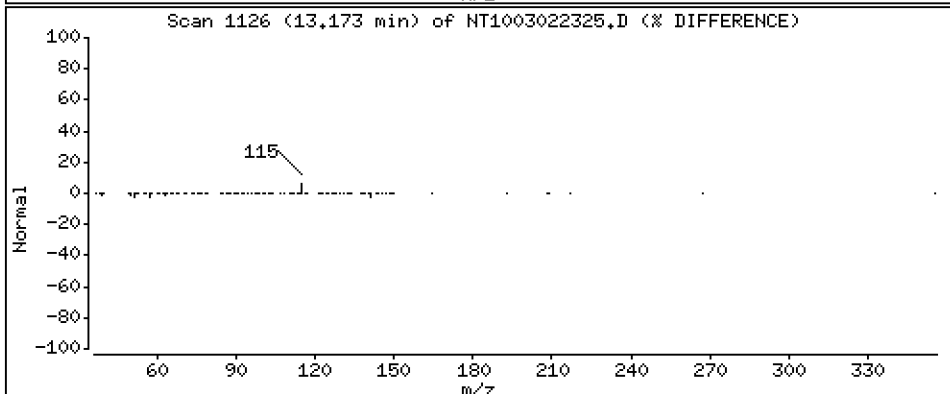
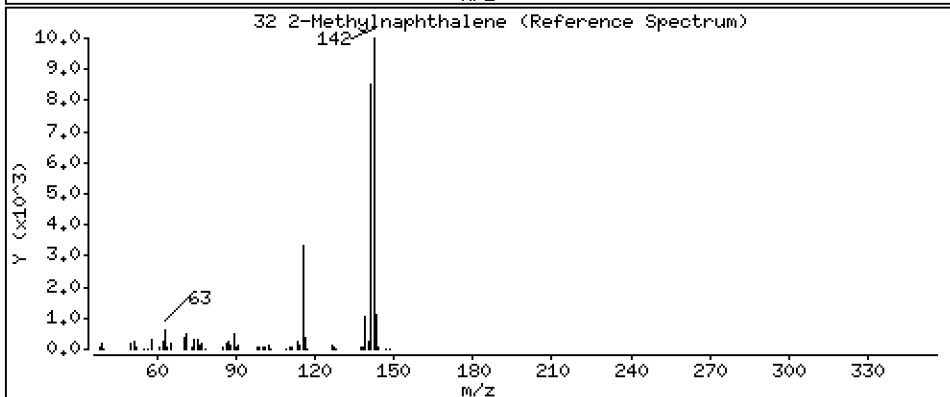
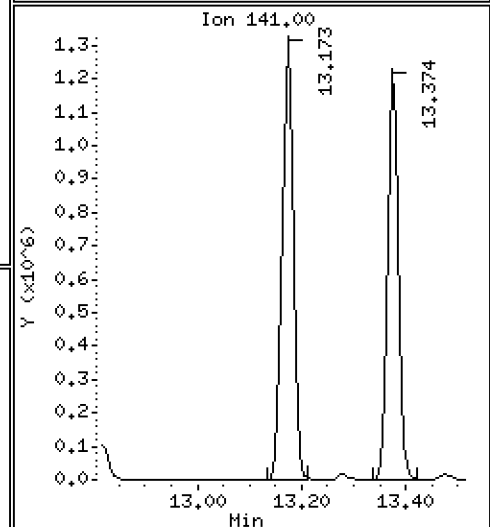
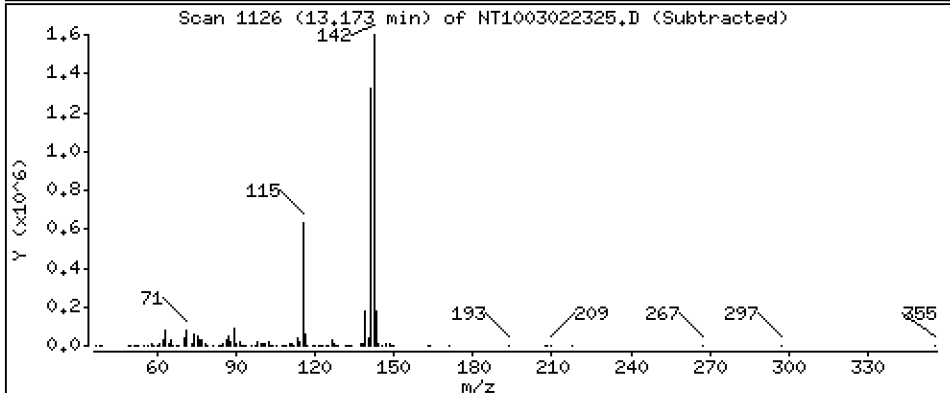
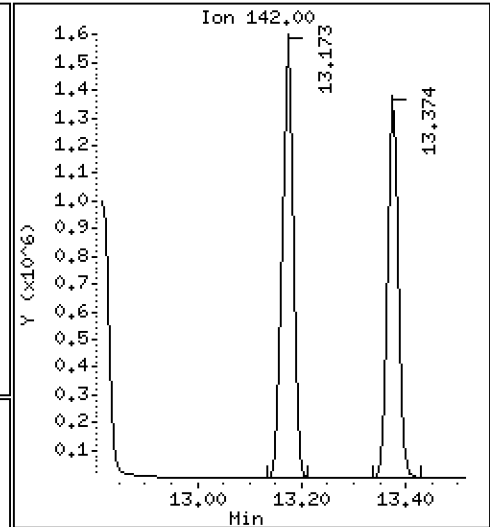
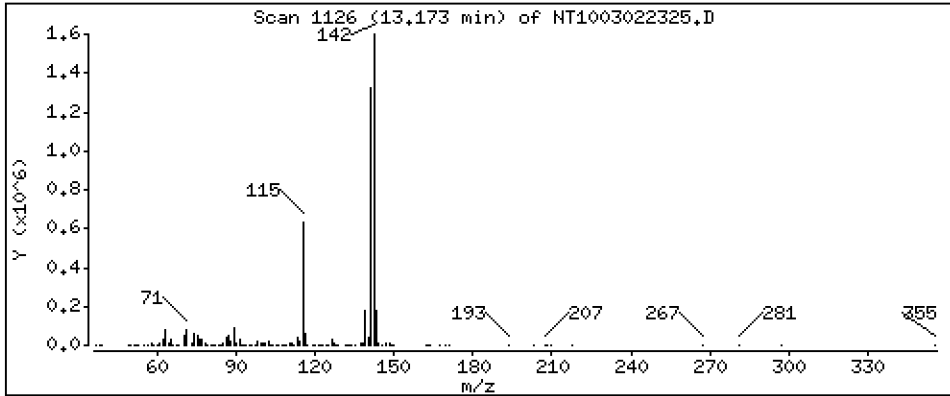
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 5,059 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

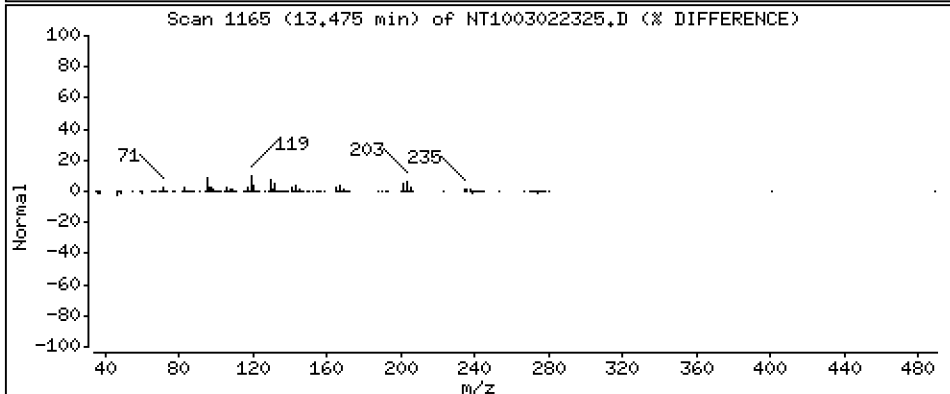
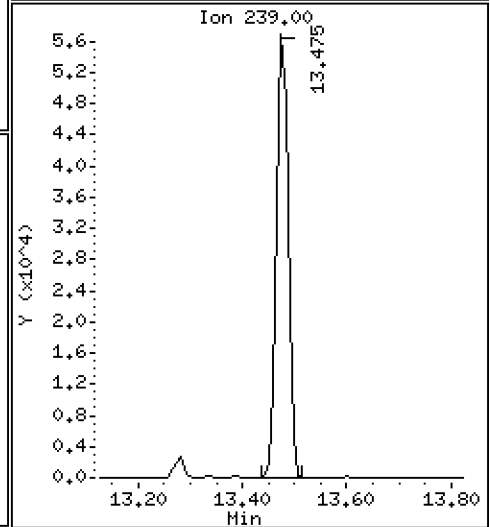
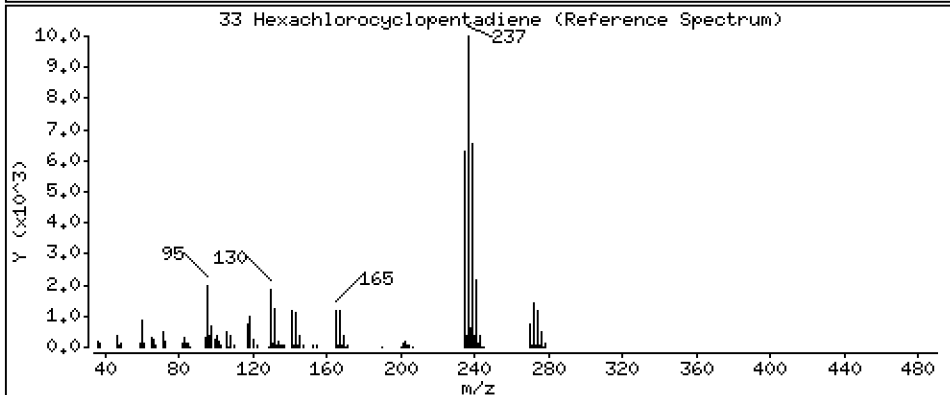
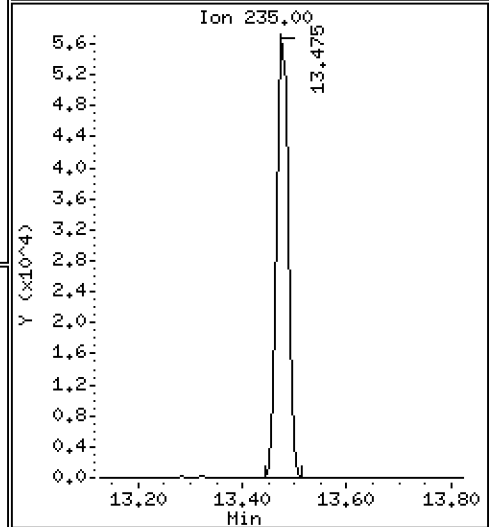
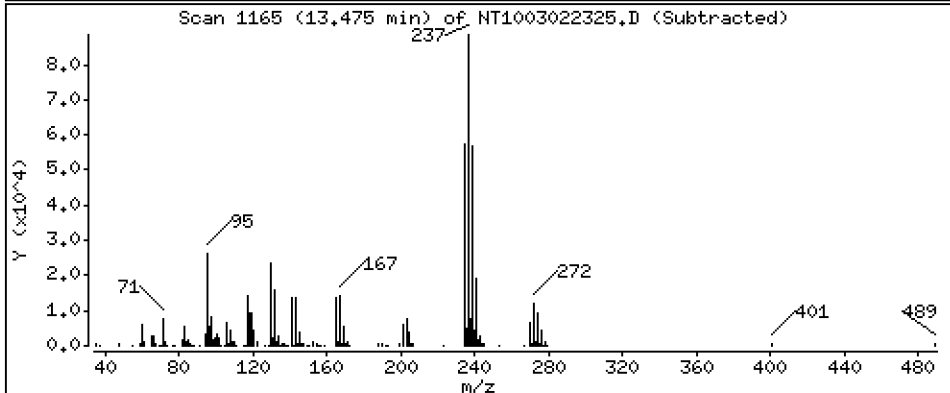
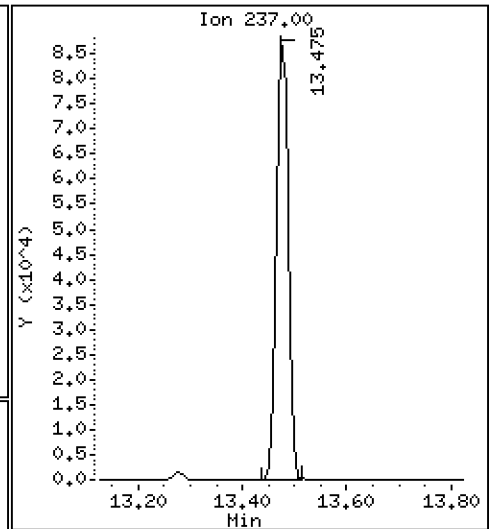
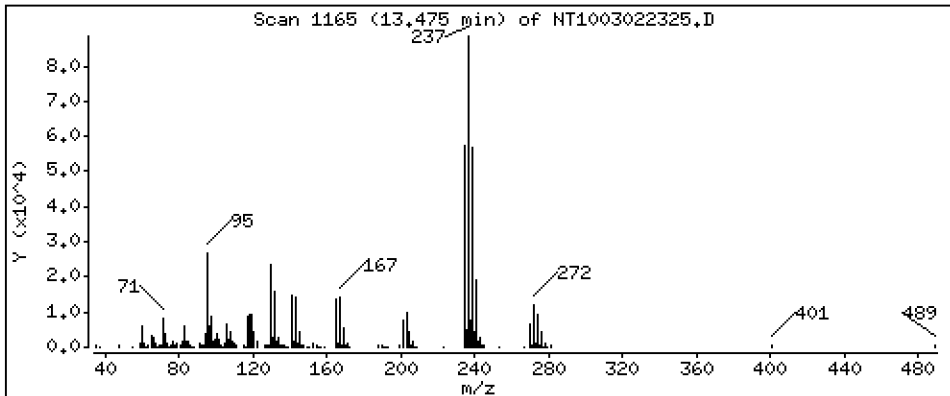
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 3,080 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

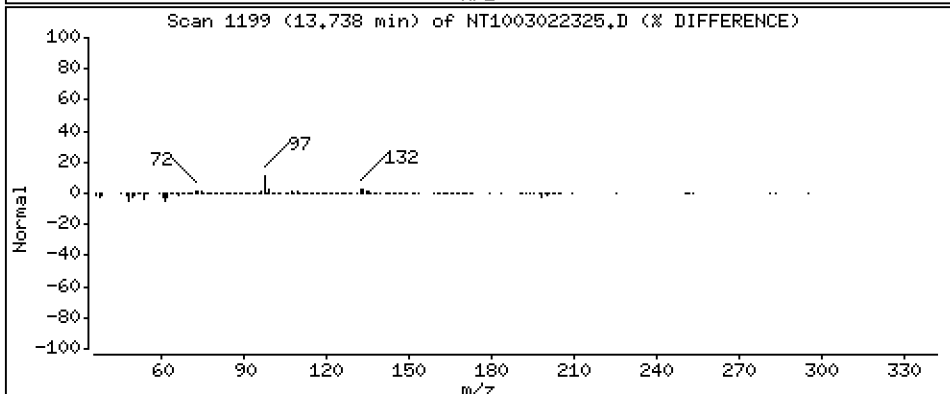
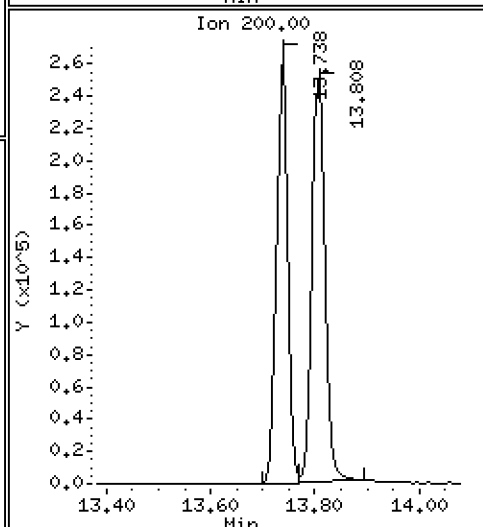
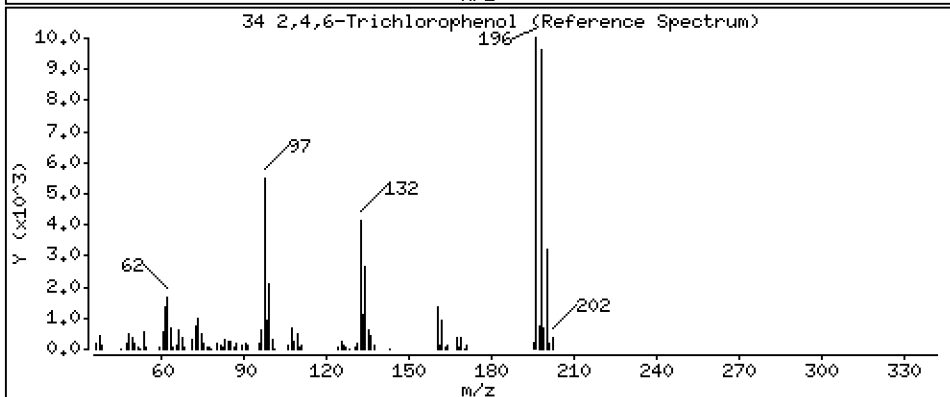
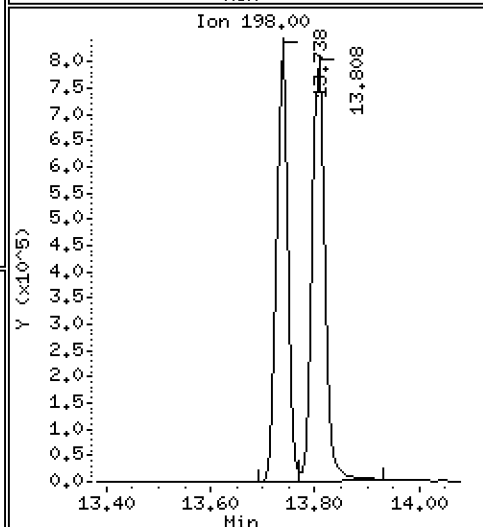
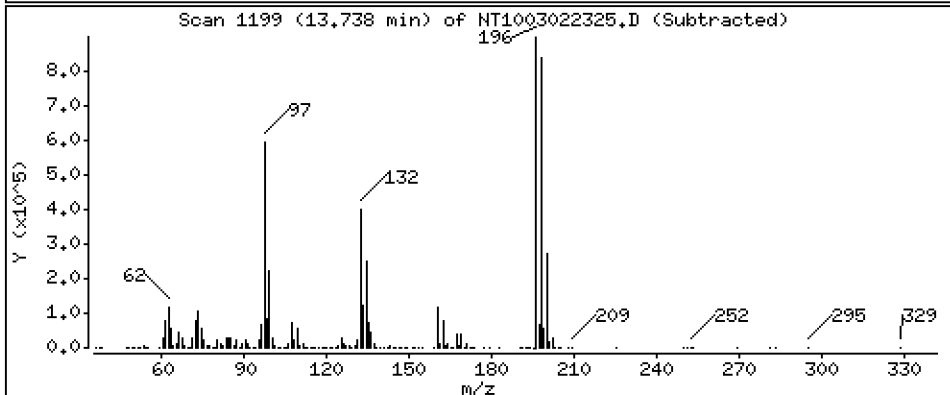
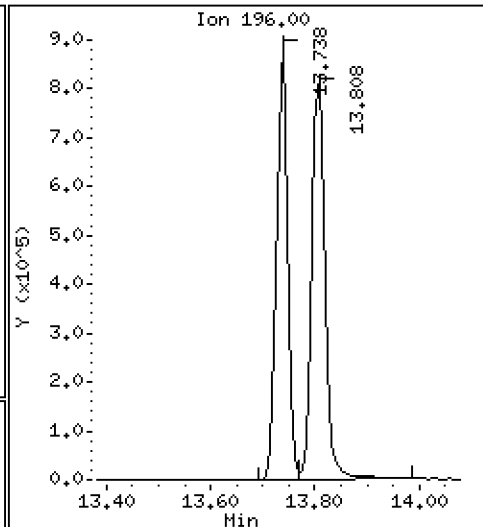
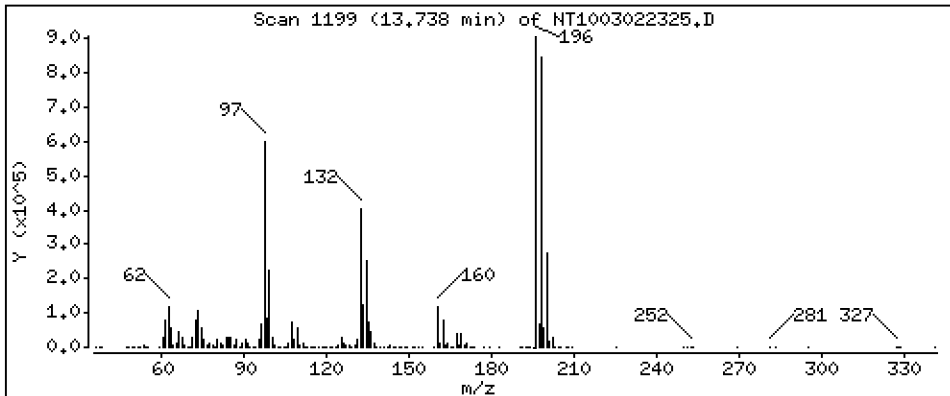
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 10,19 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

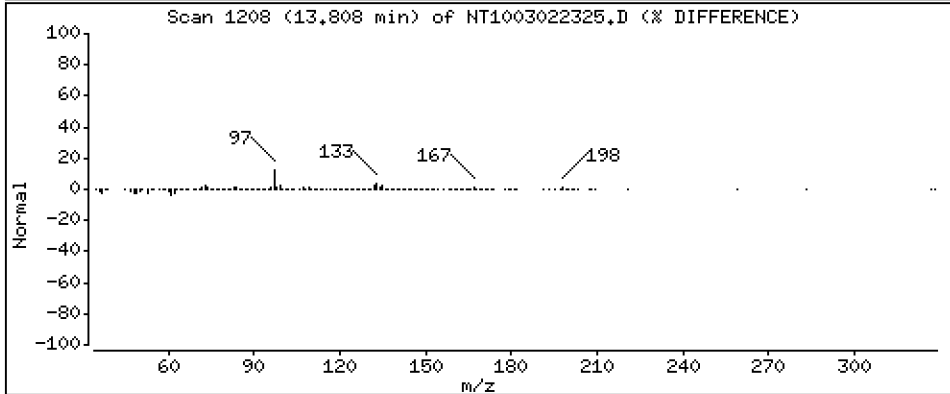
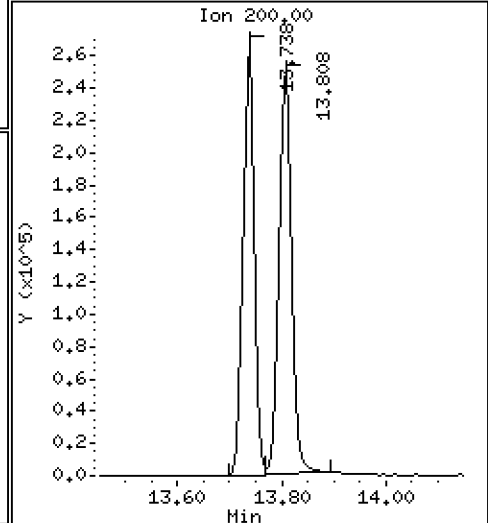
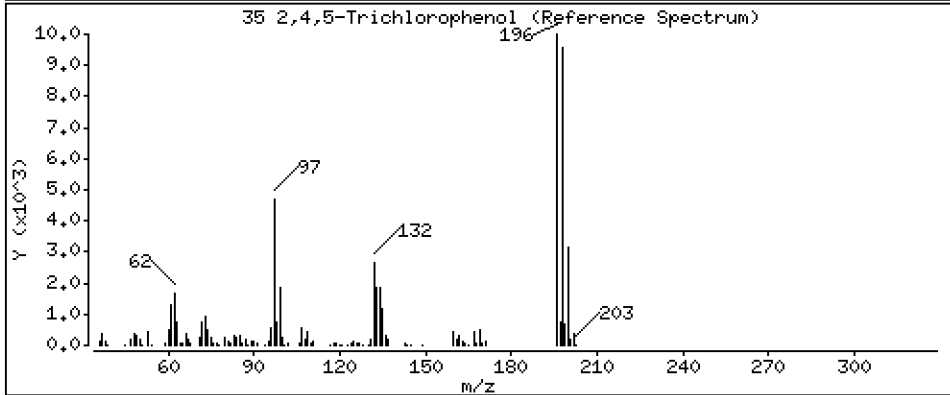
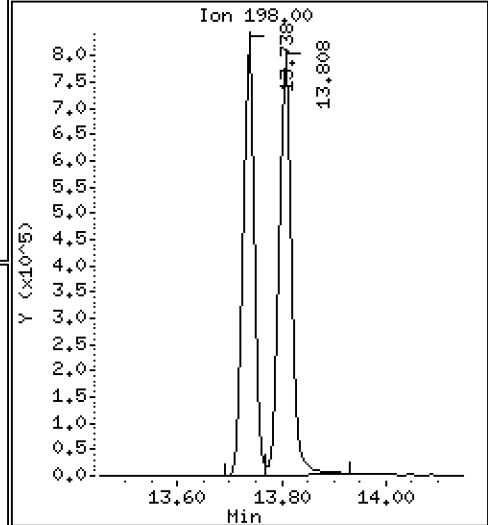
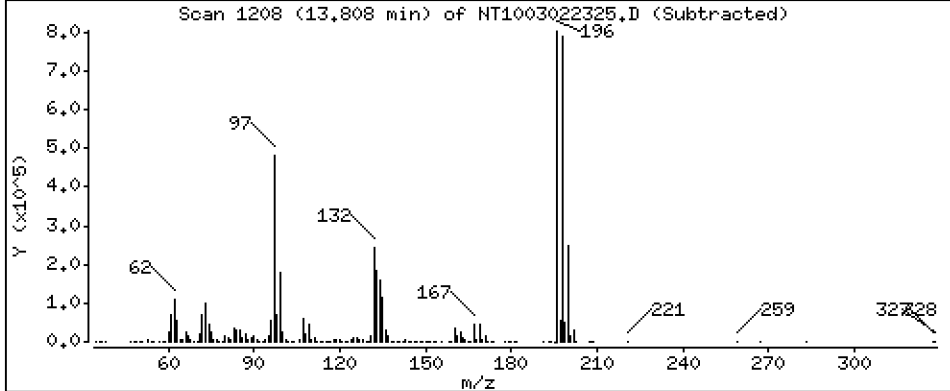
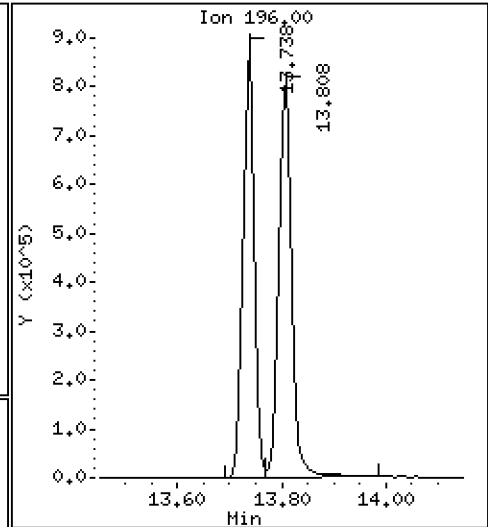
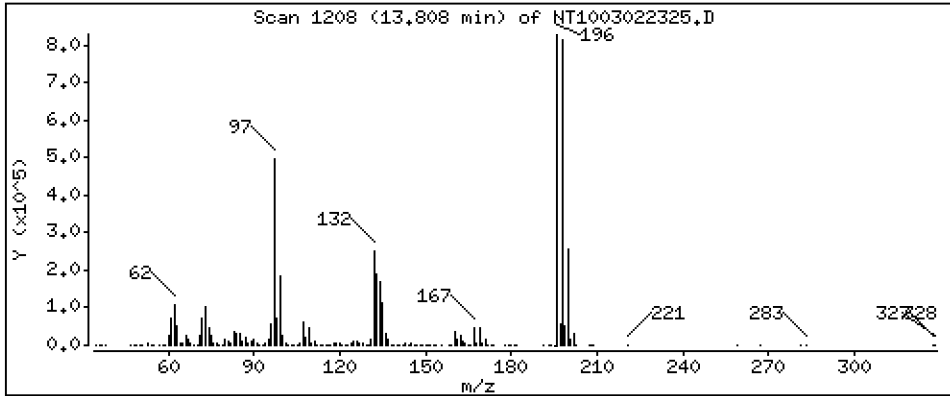
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 10,34 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

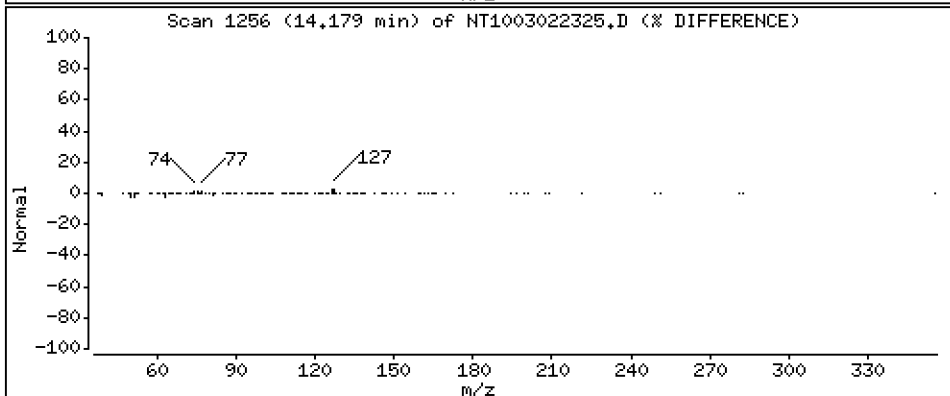
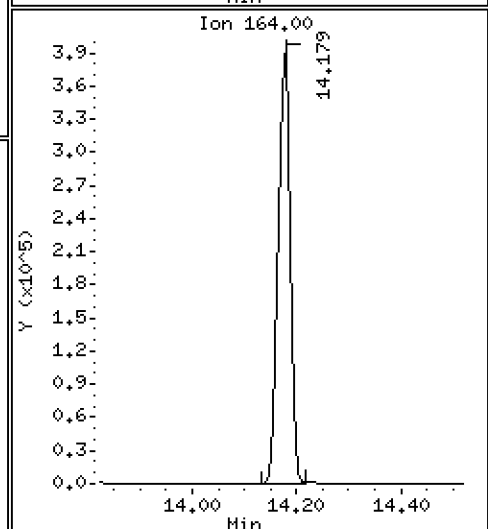
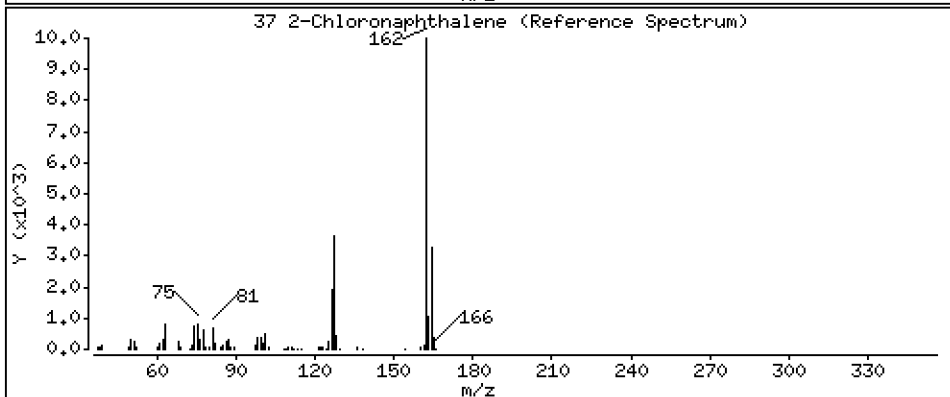
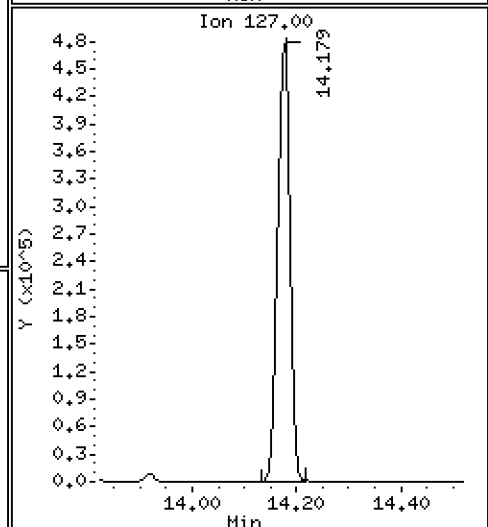
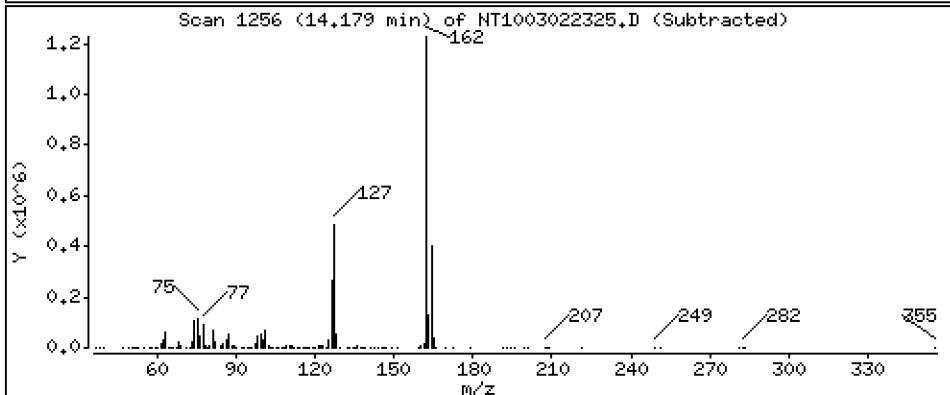
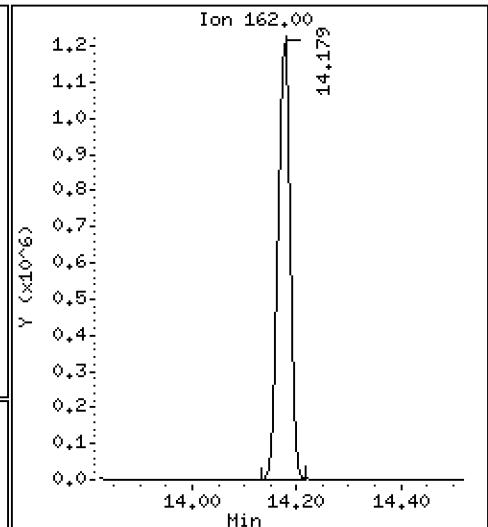
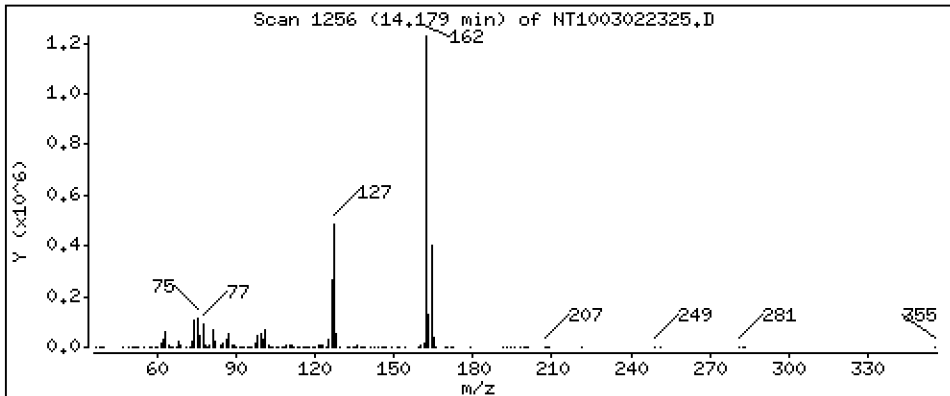
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,412 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

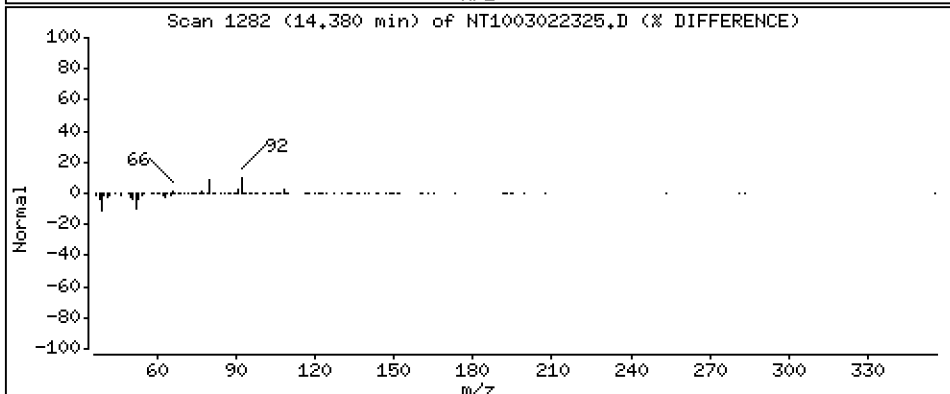
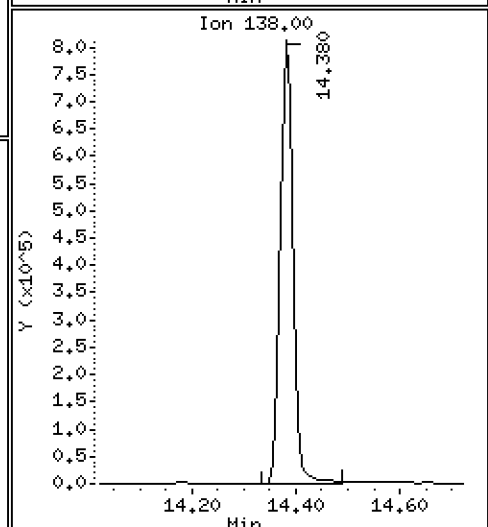
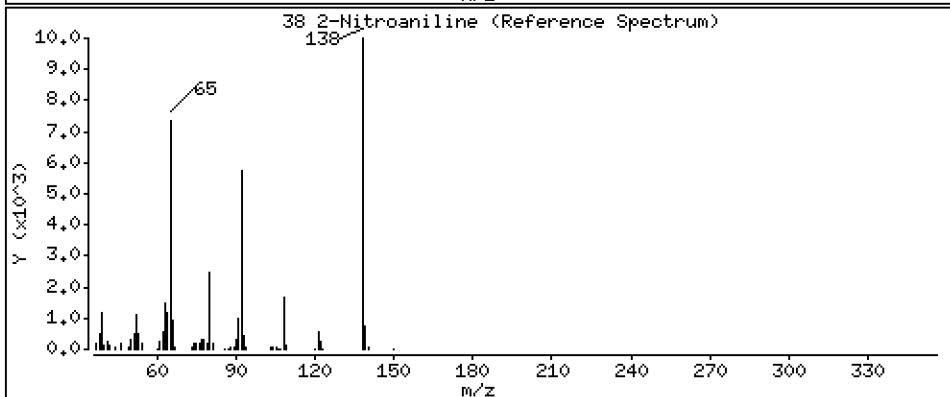
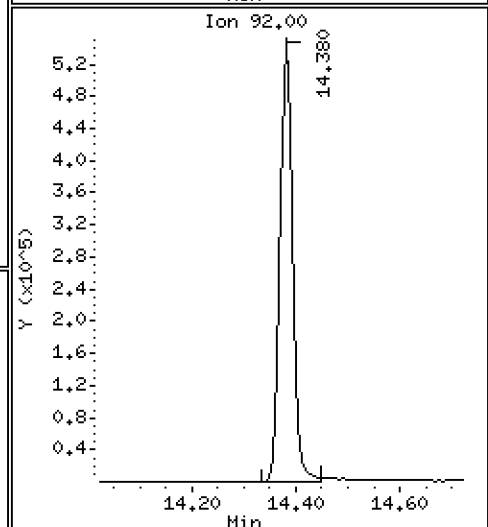
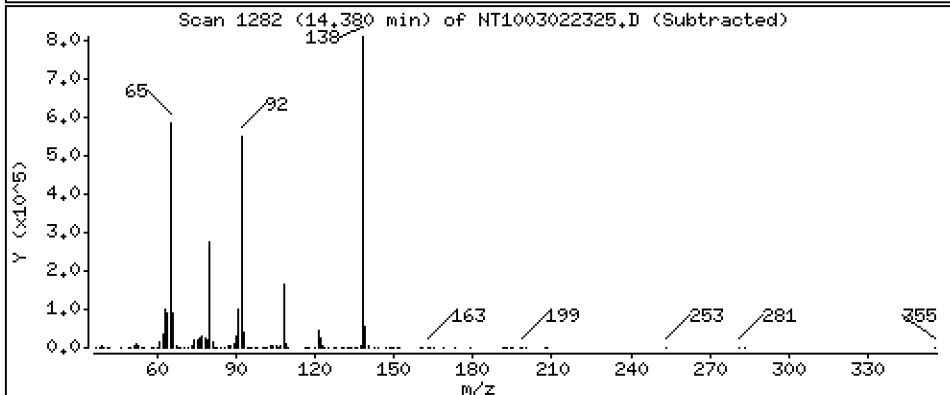
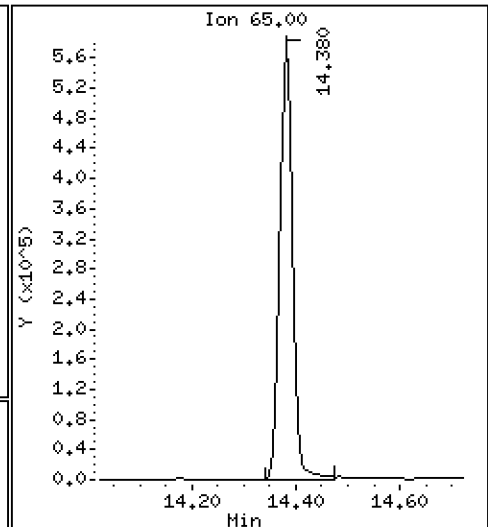
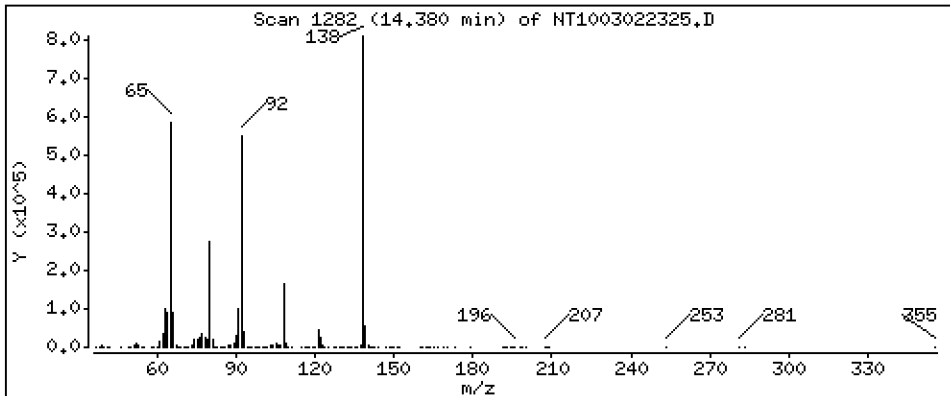
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 9,429 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

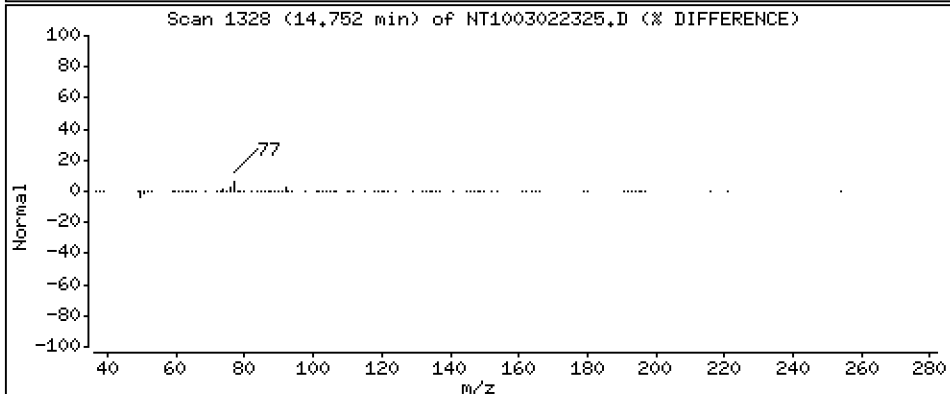
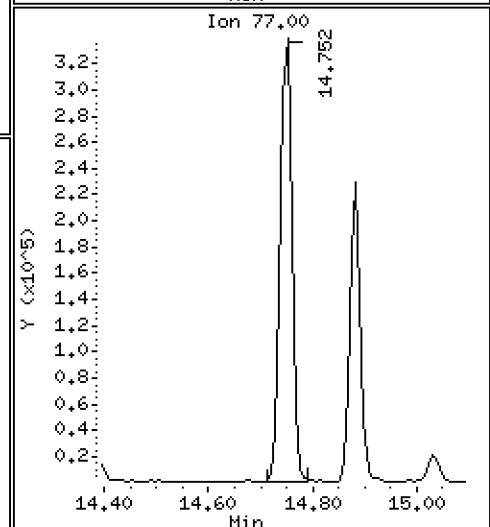
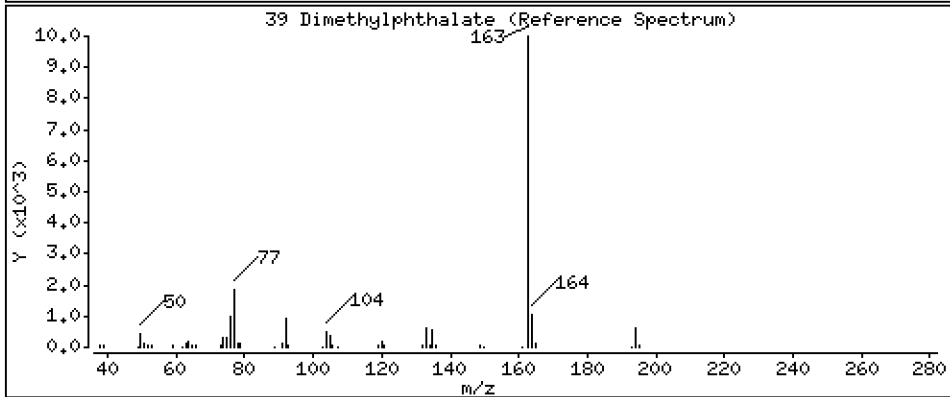
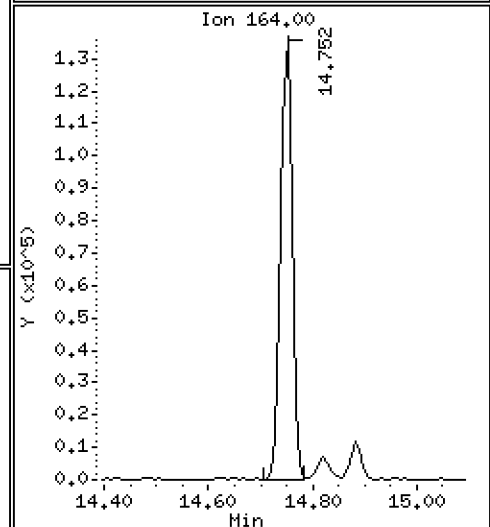
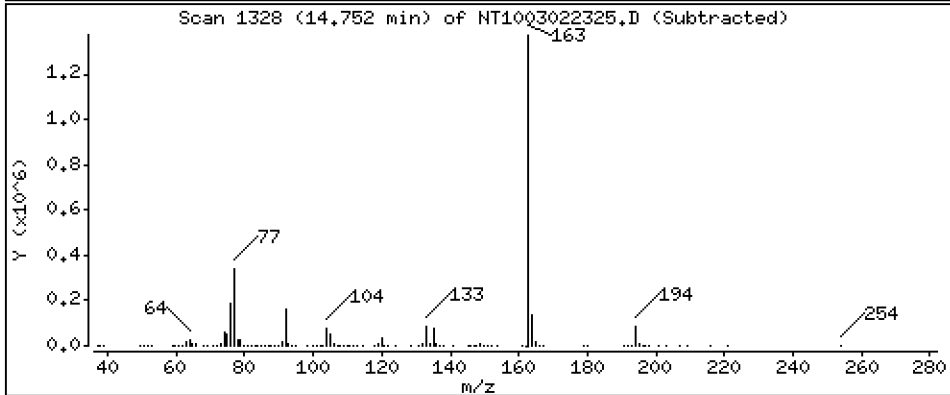
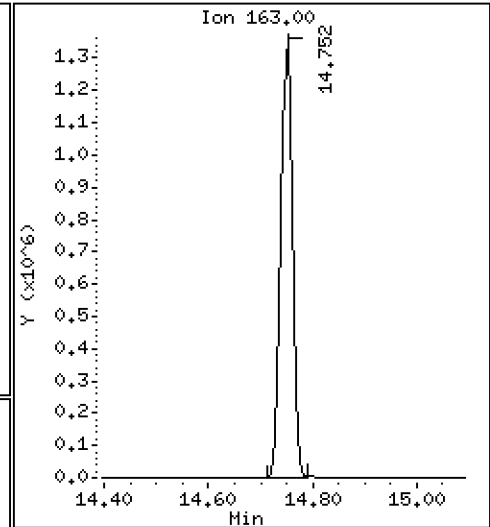
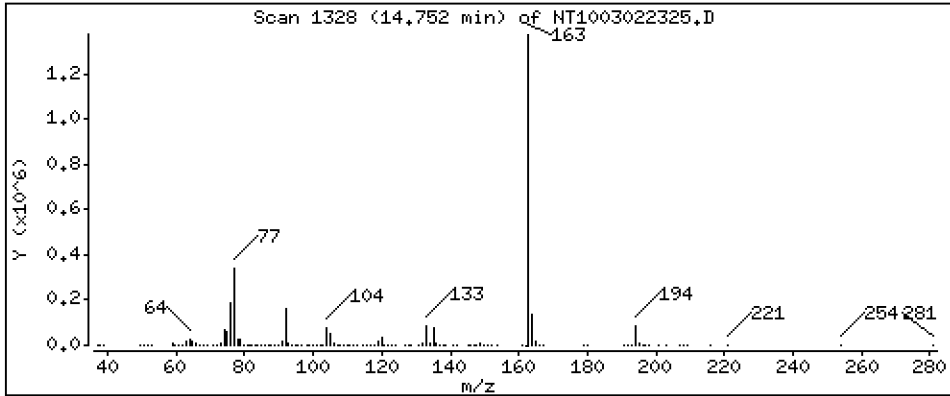
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,912 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

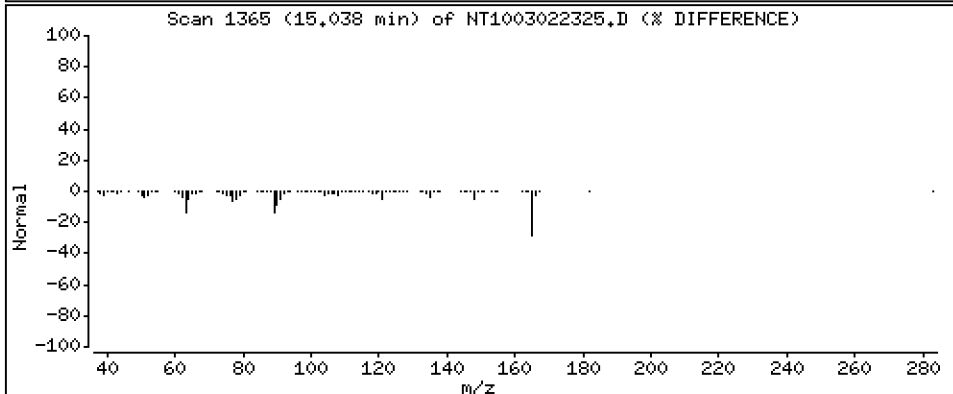
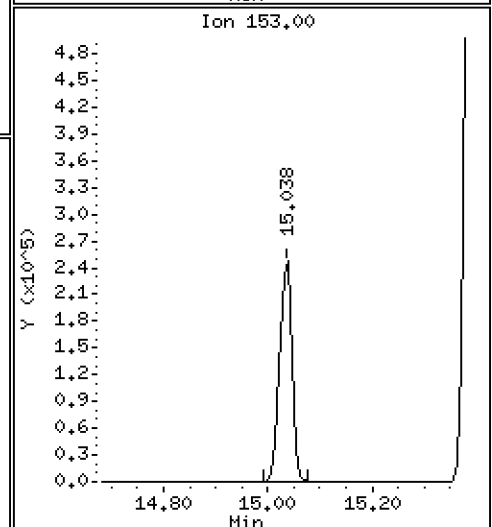
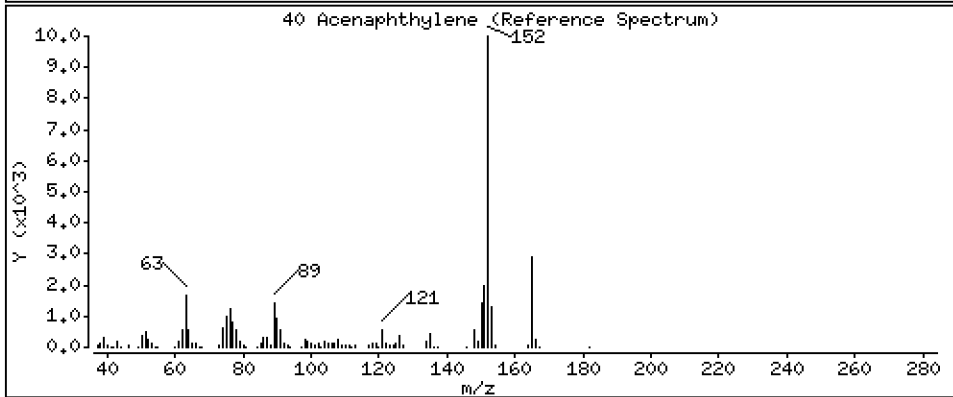
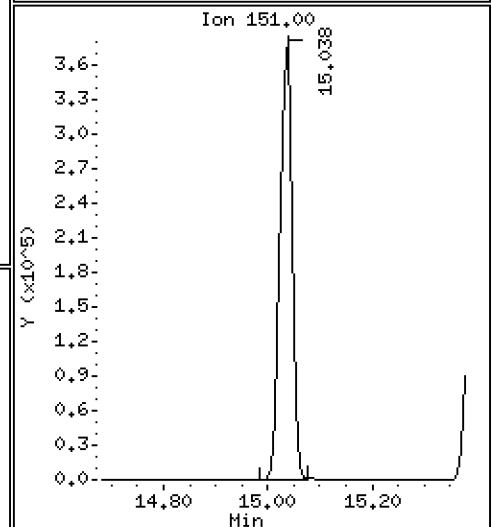
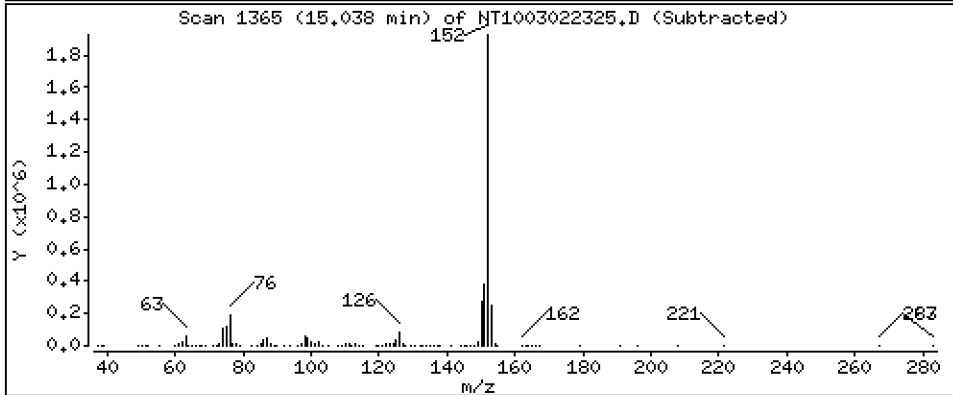
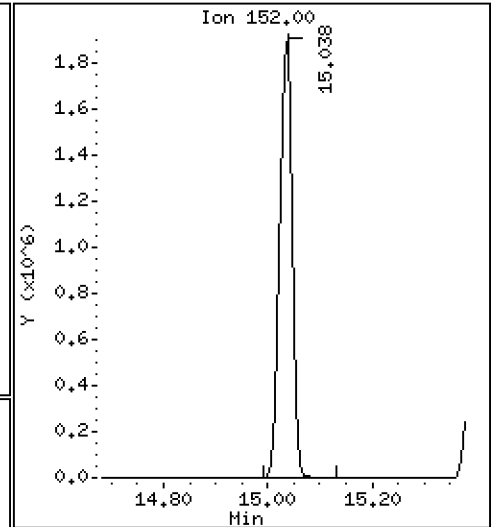
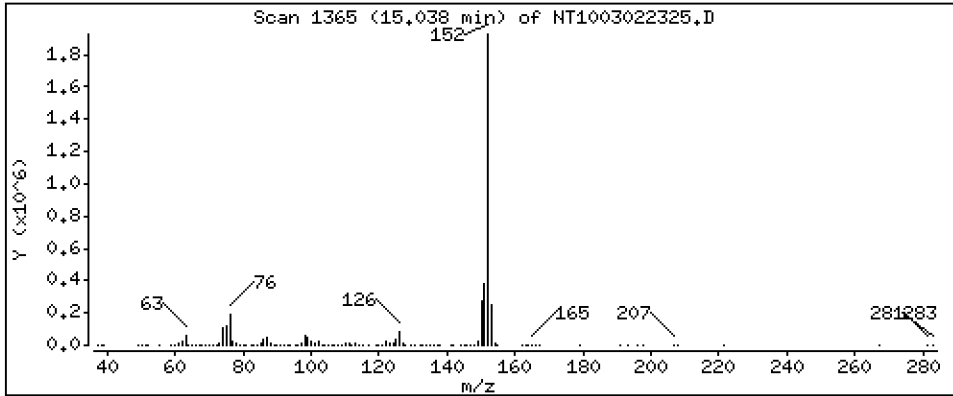
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 5,706 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

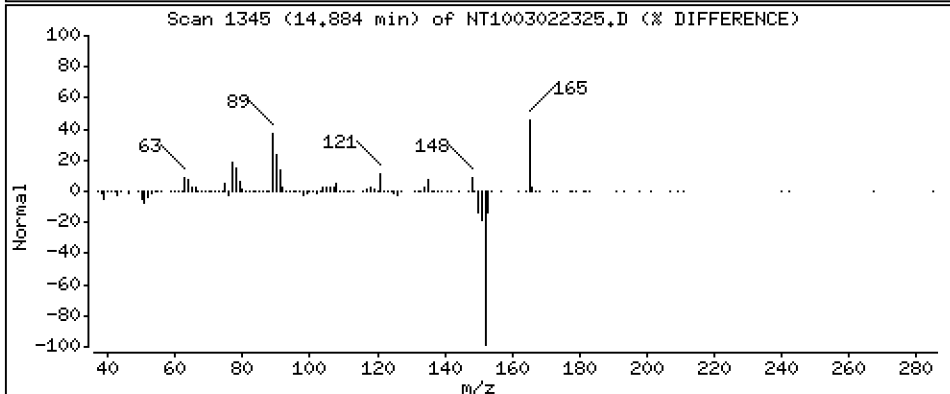
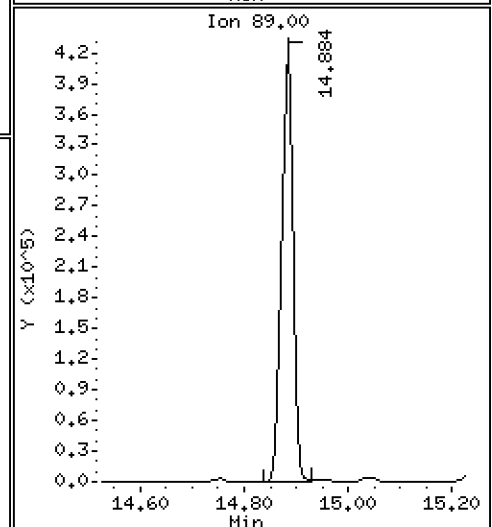
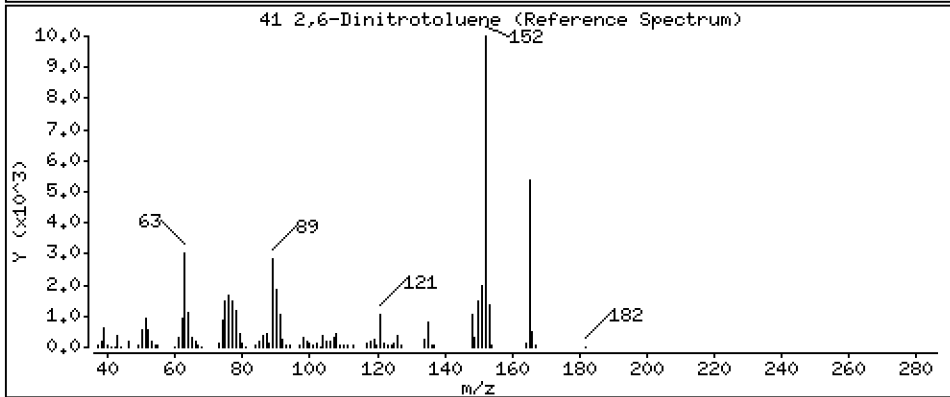
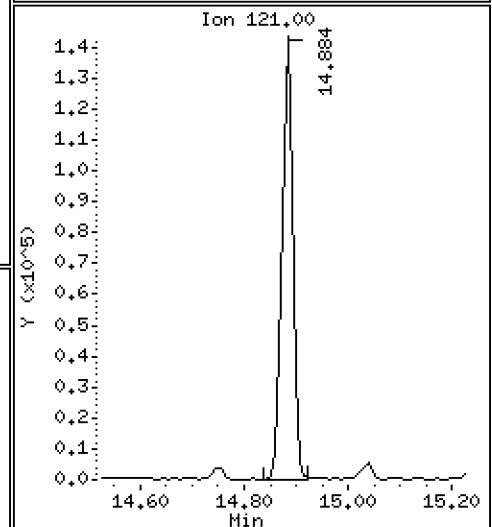
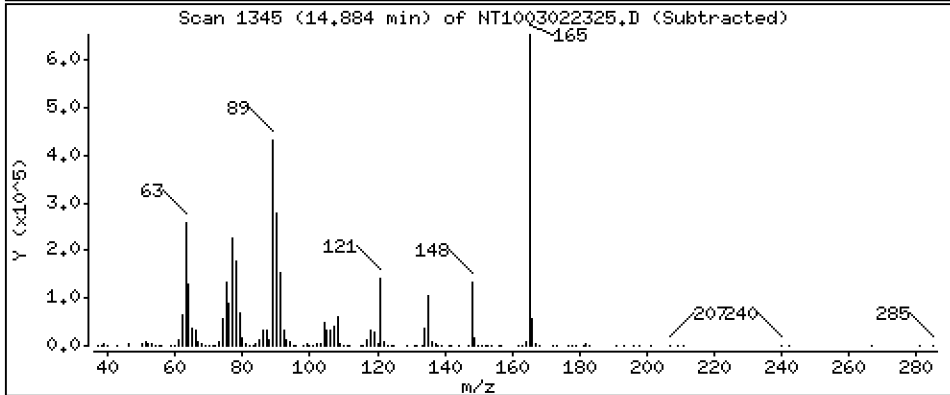
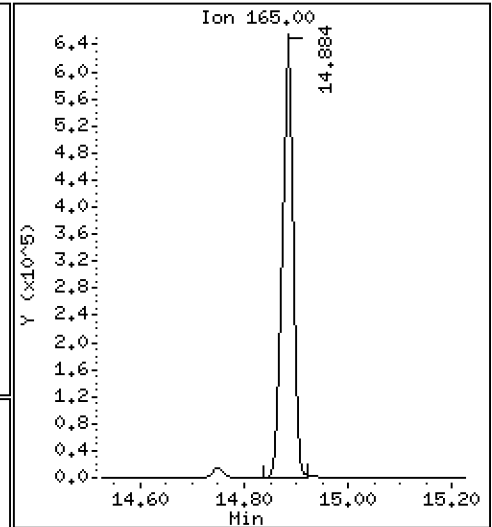
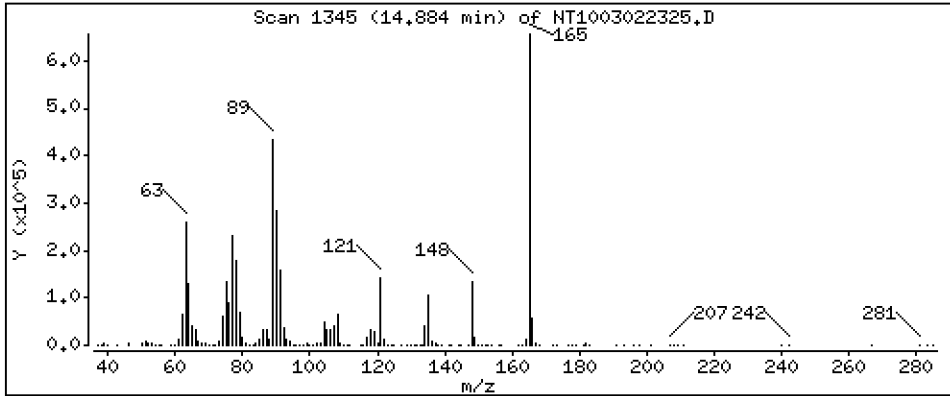
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 9,944 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

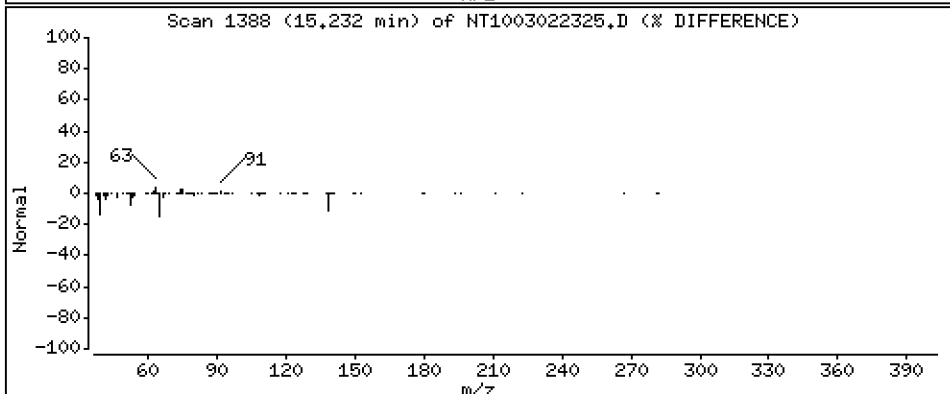
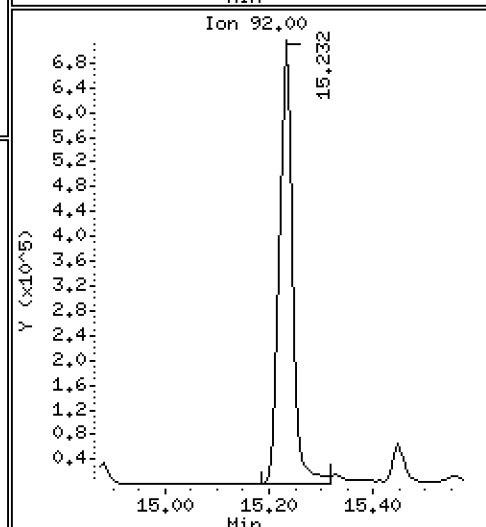
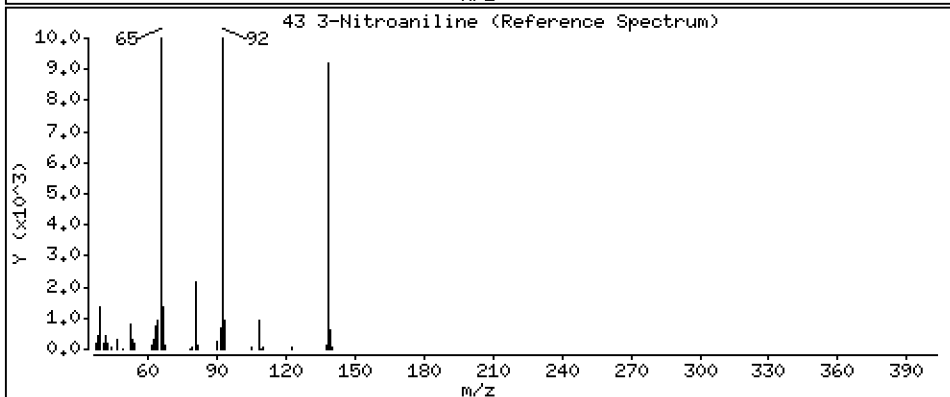
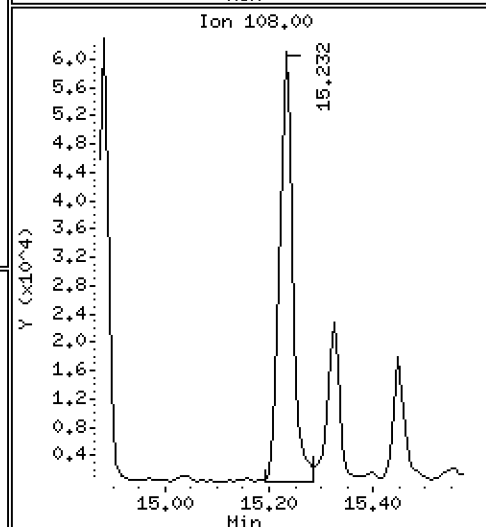
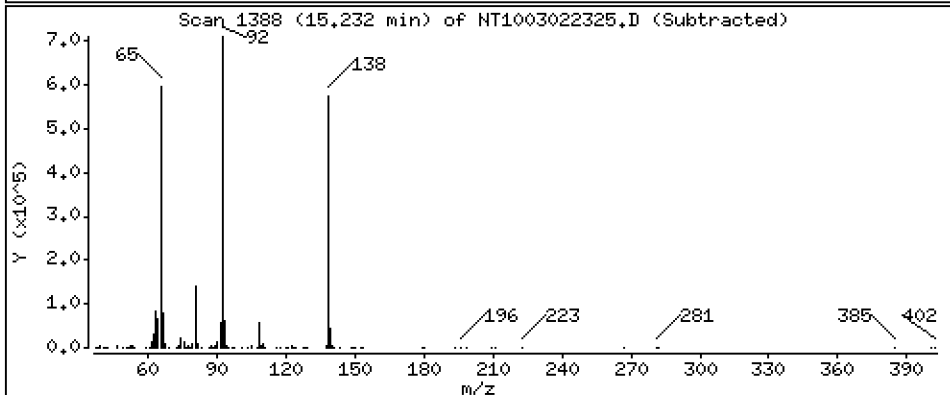
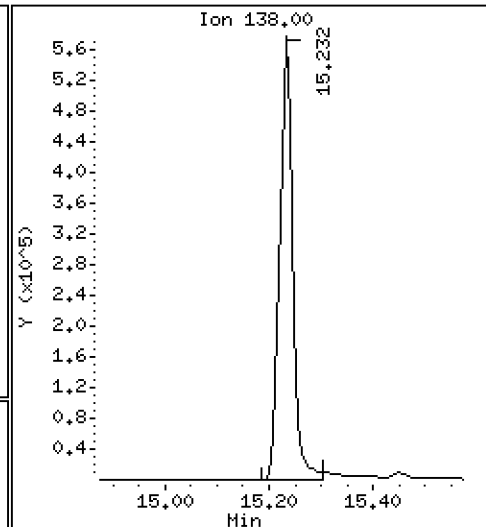
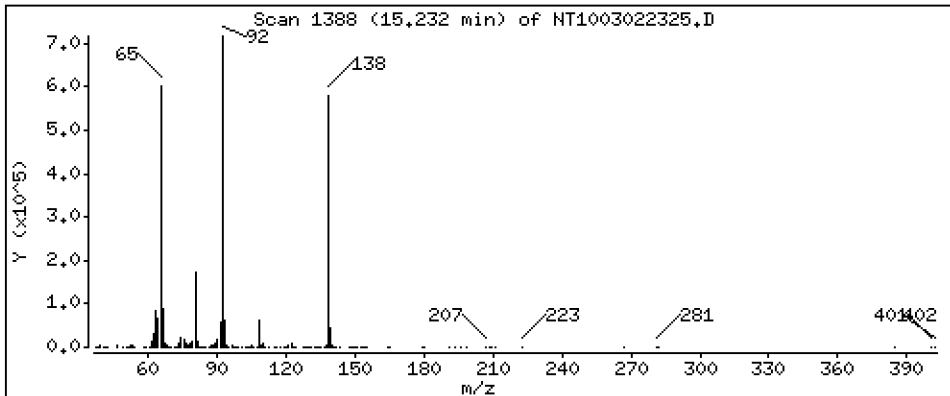
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 9,651 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

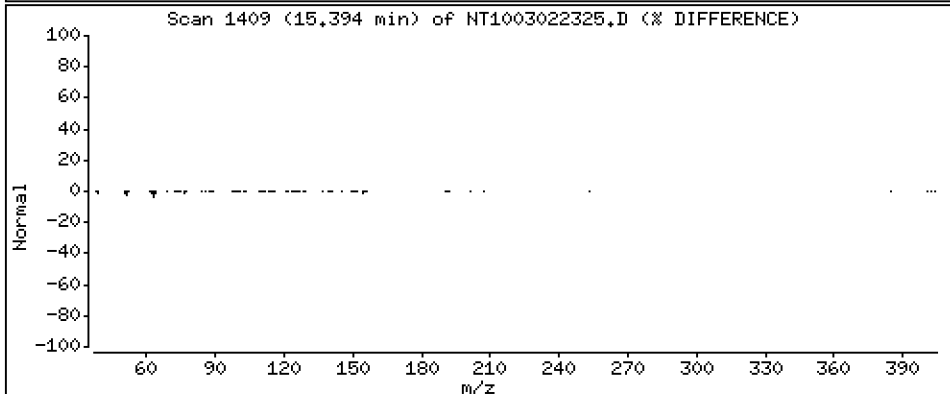
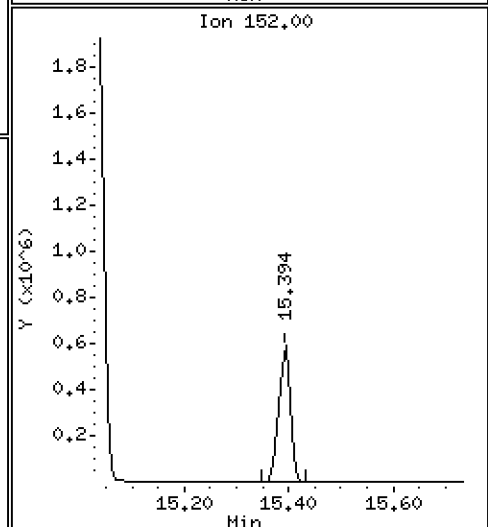
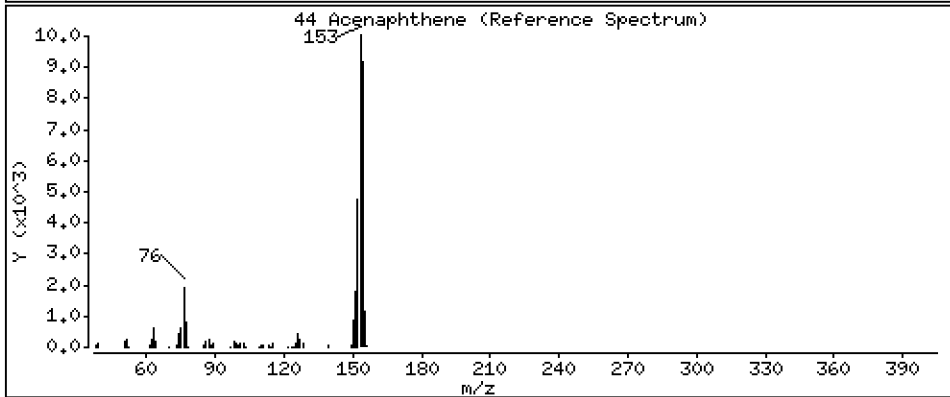
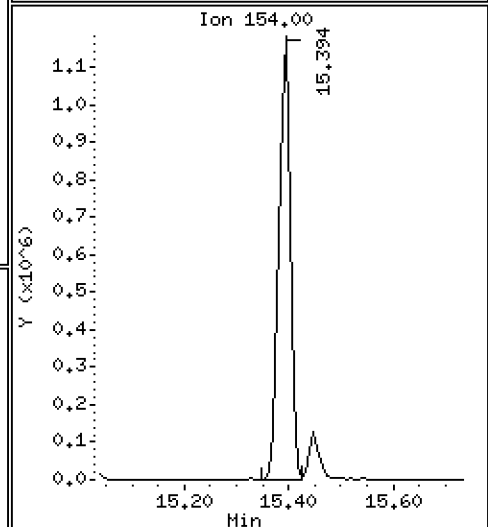
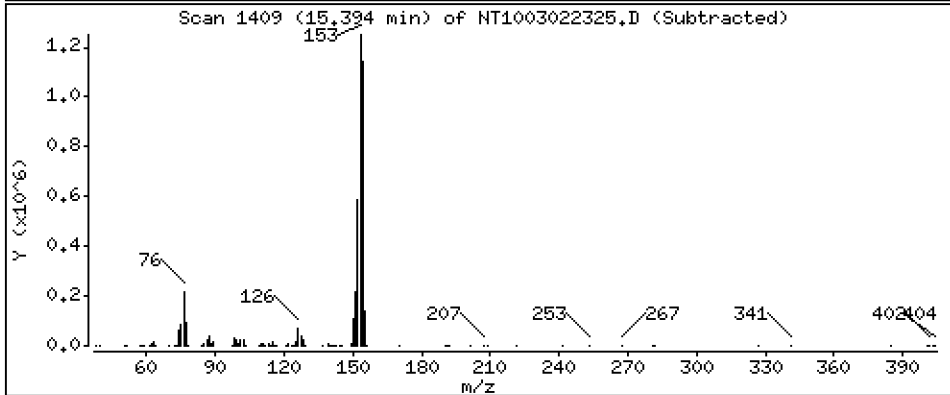
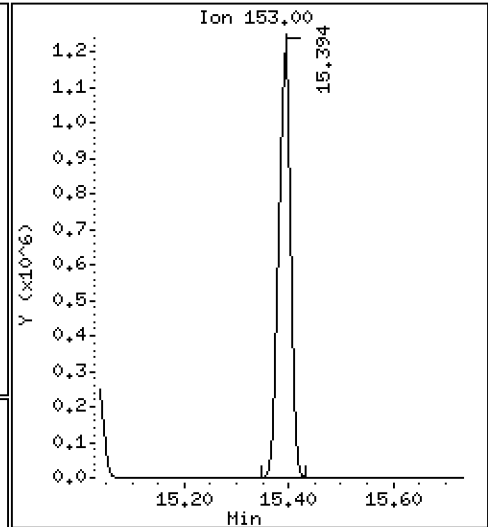
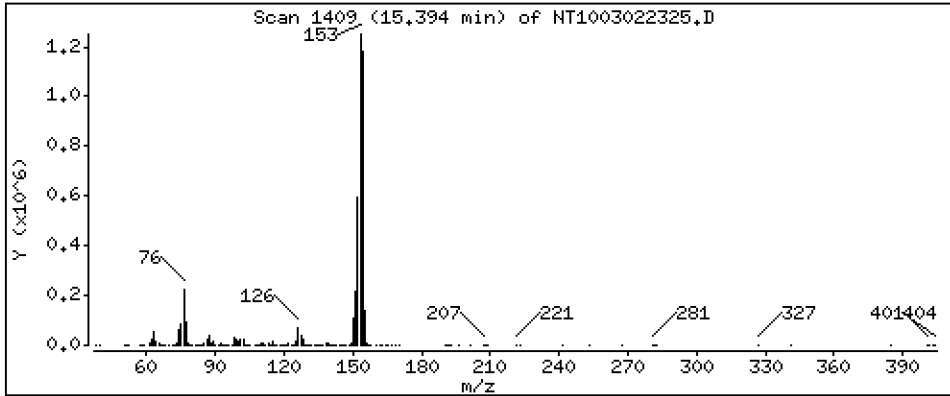
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,104 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

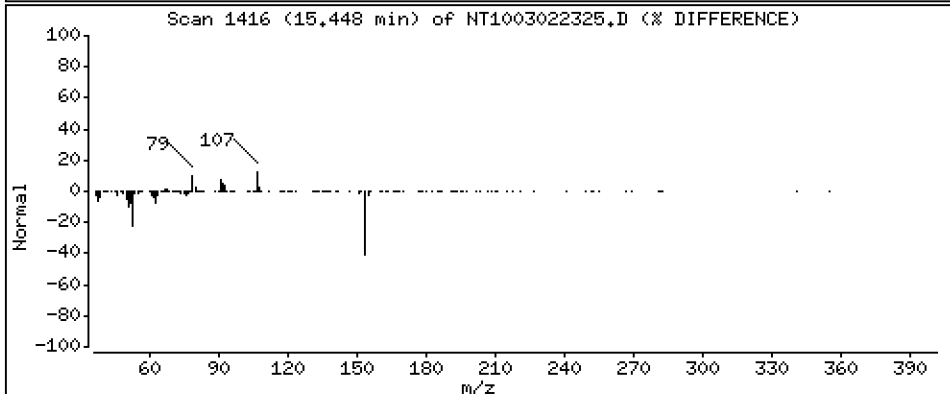
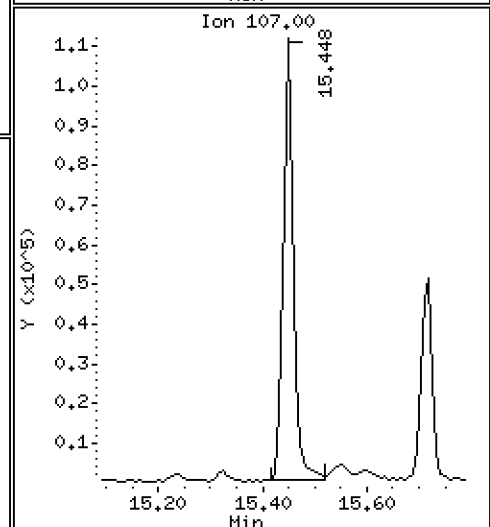
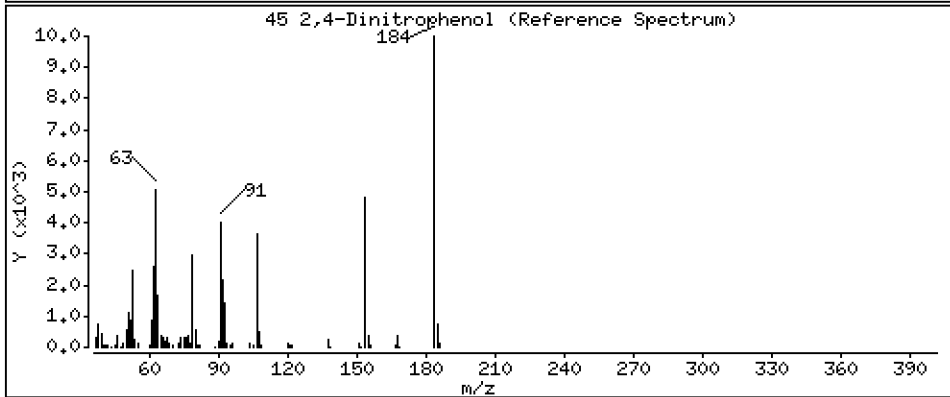
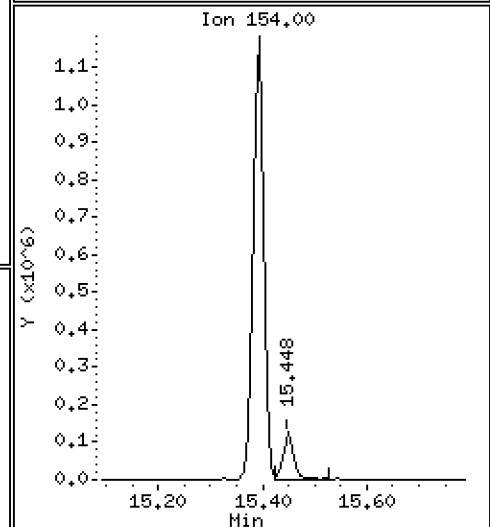
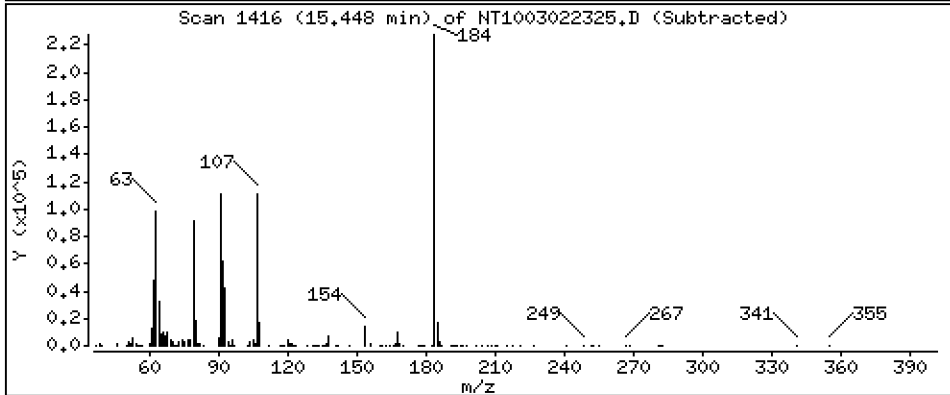
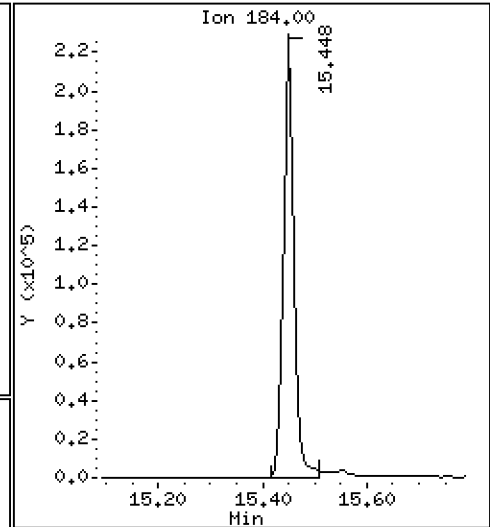
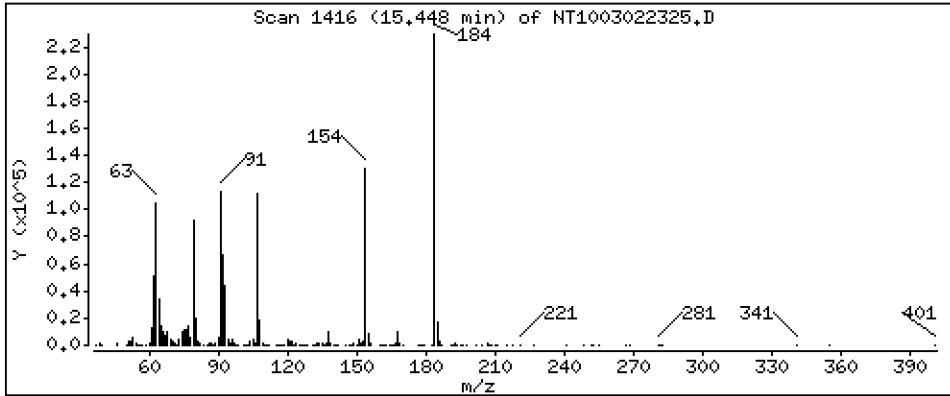
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 12,75 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

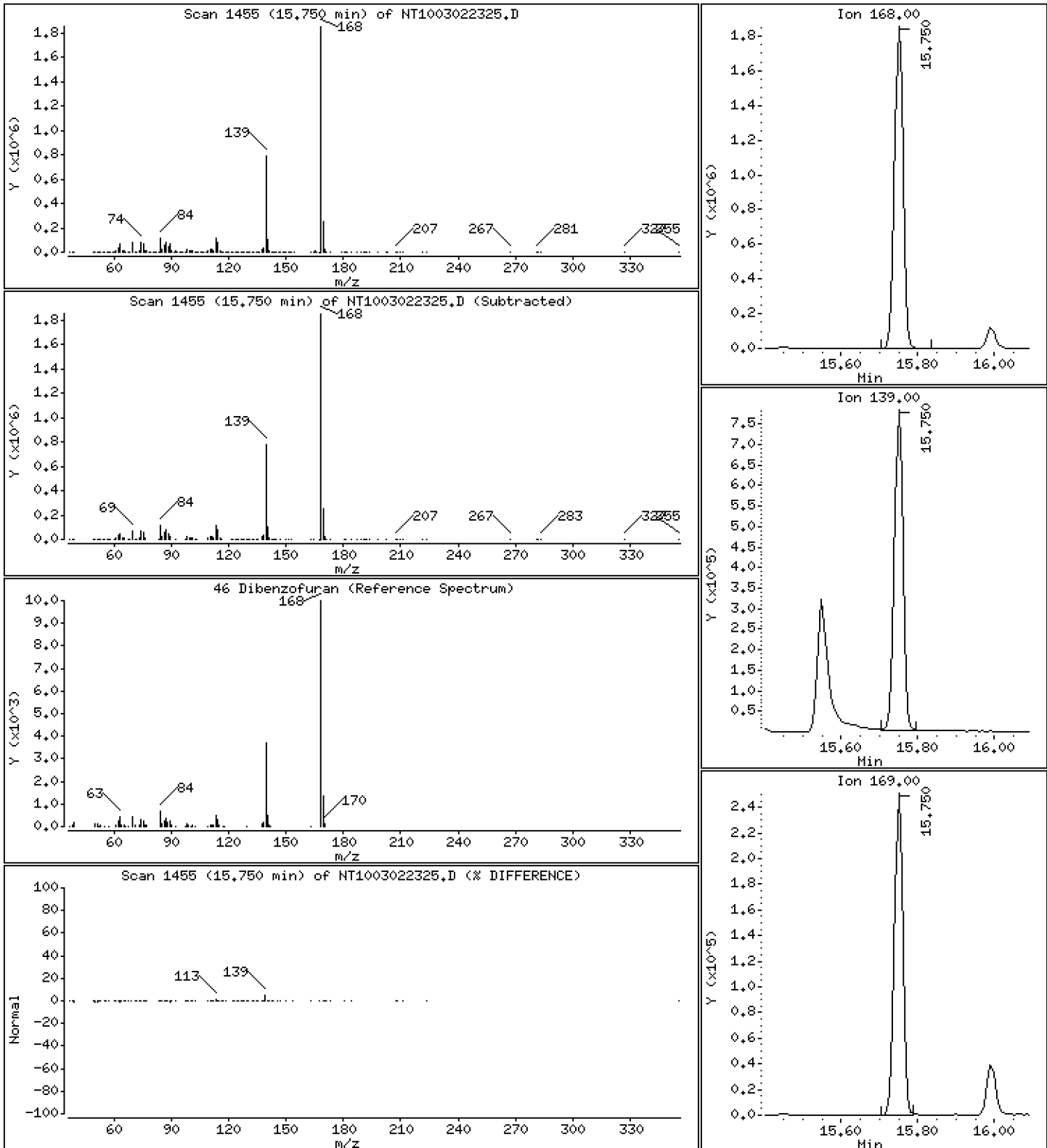
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 5,150 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

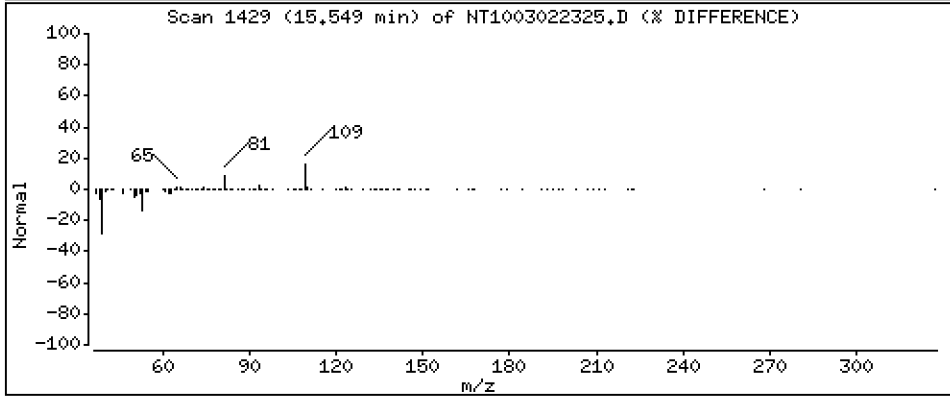
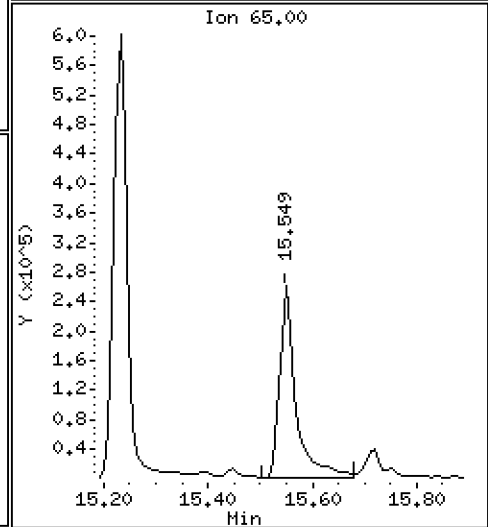
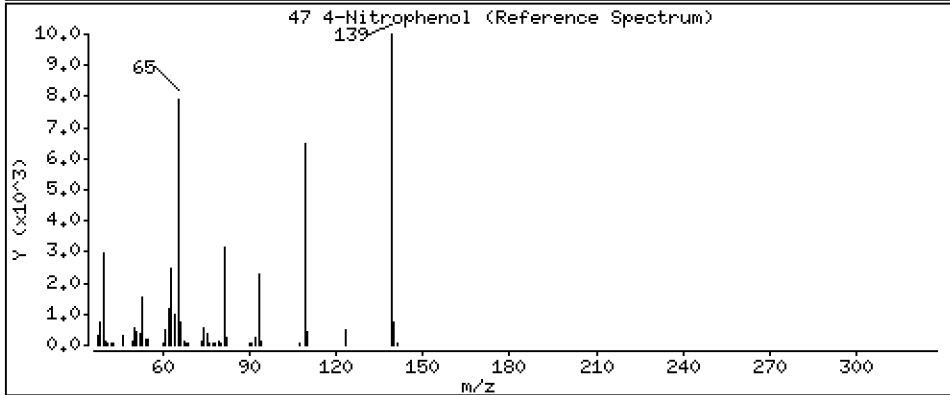
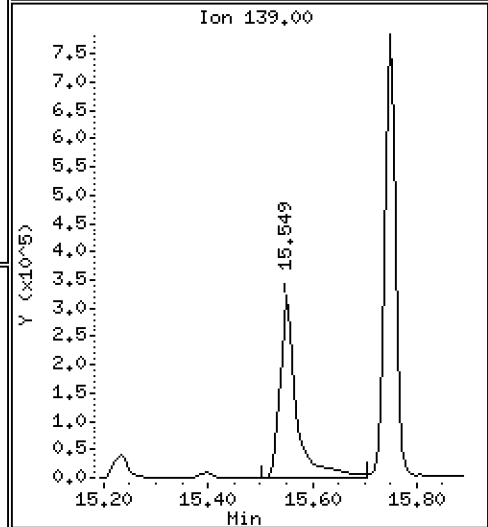
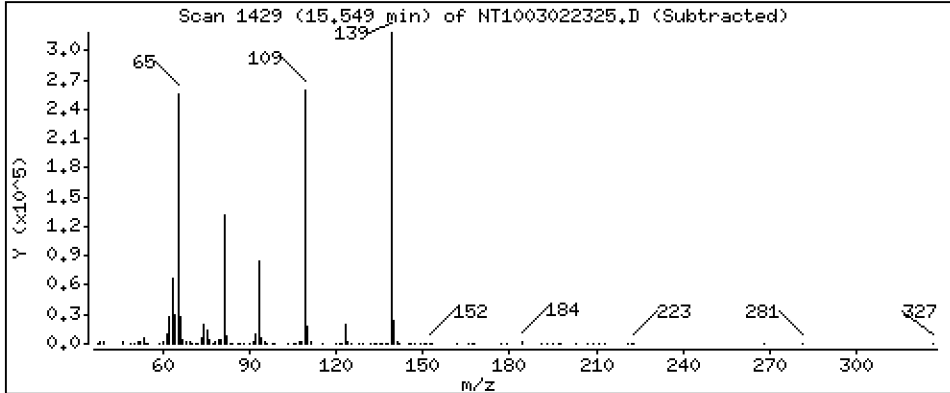
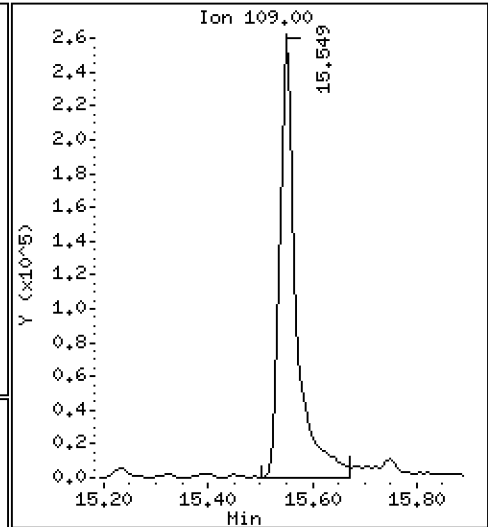
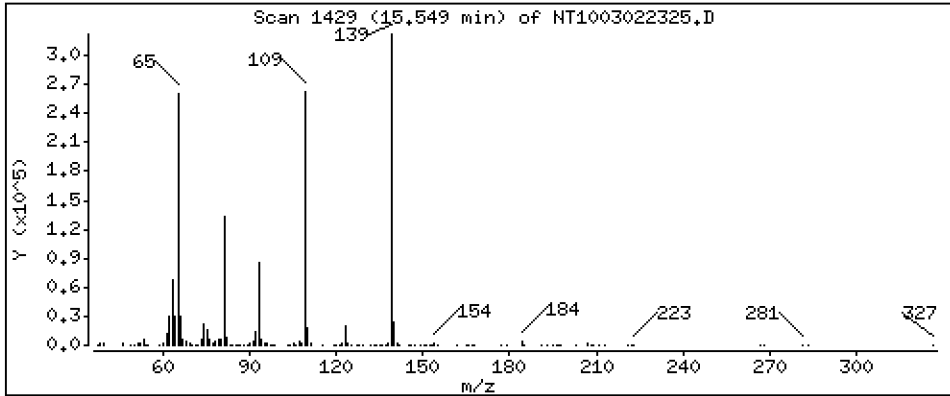
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 7,726 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

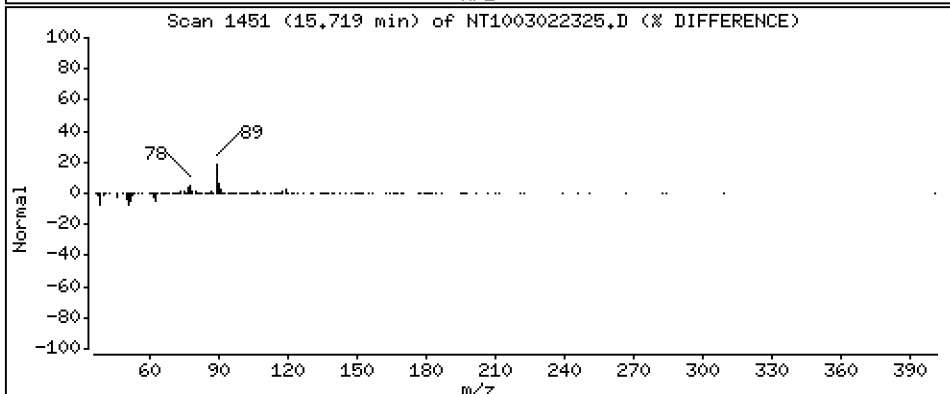
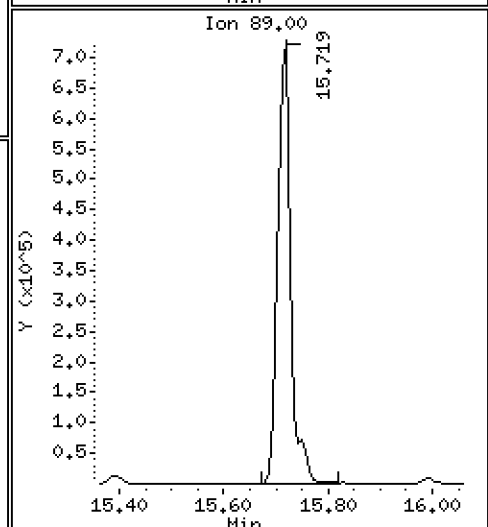
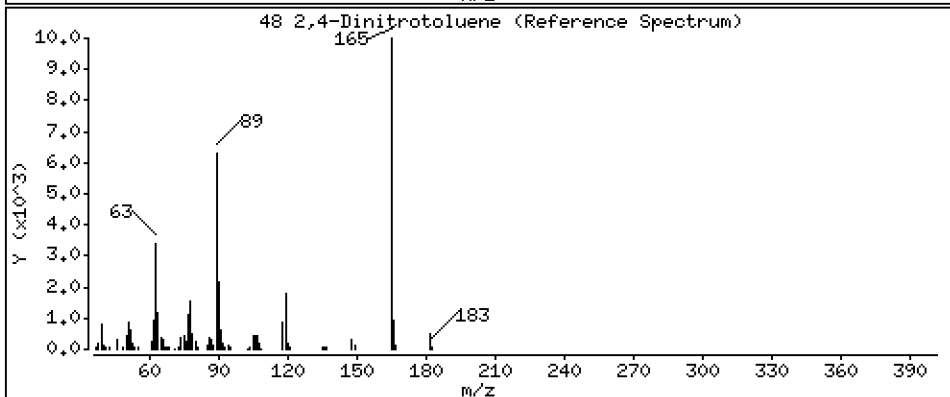
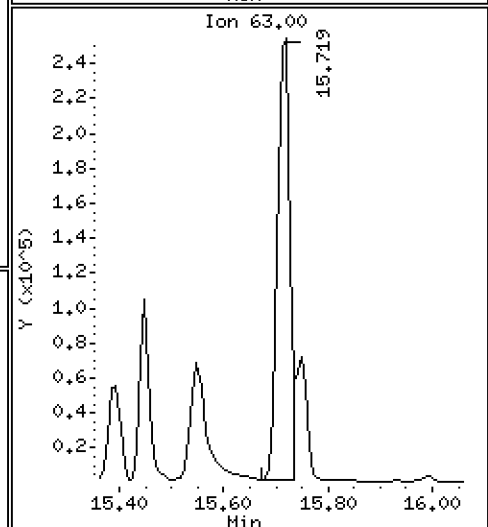
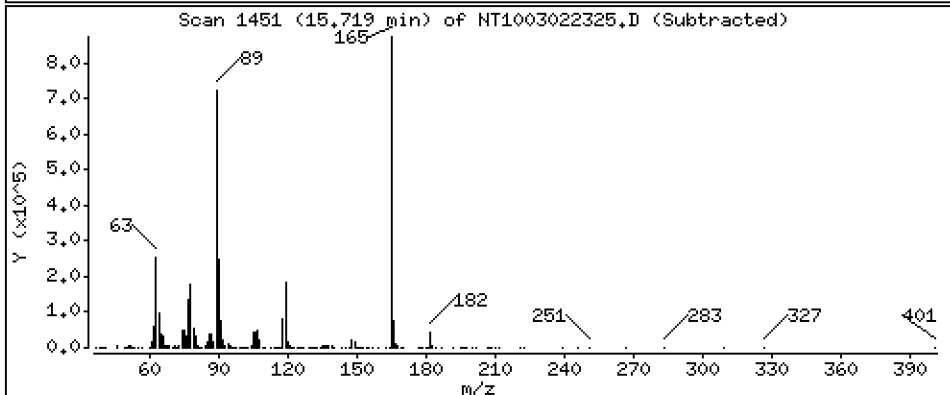
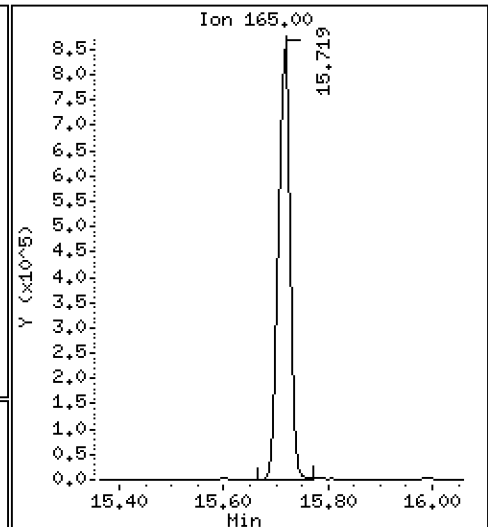
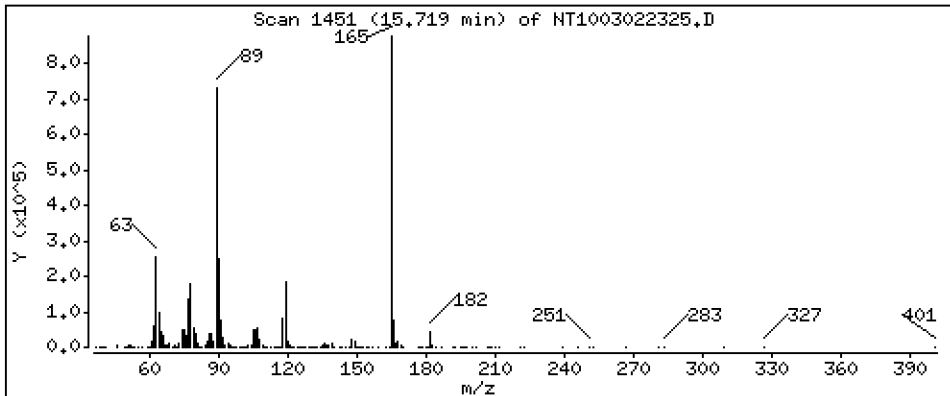
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 9,677 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

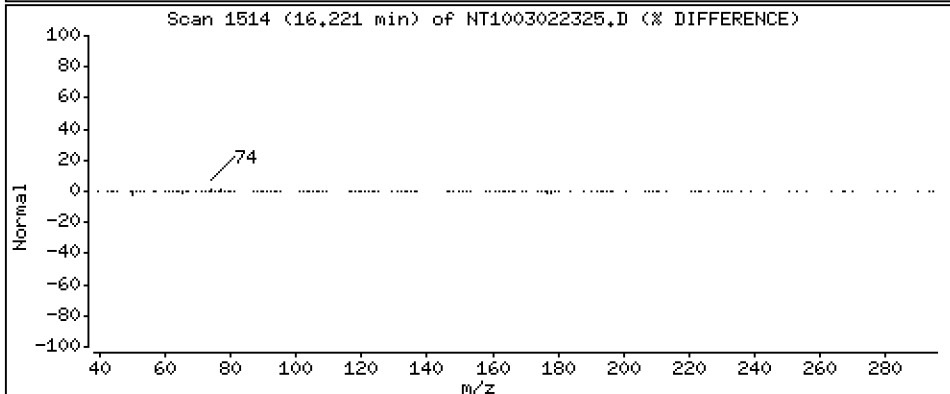
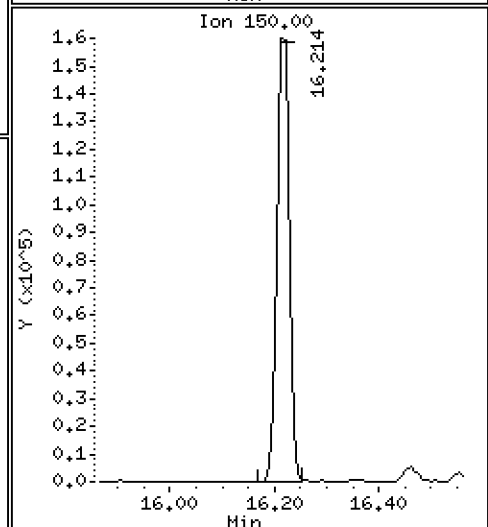
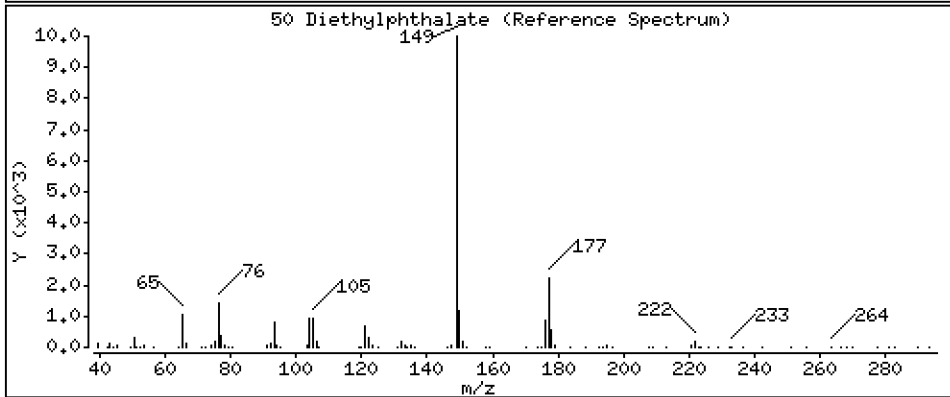
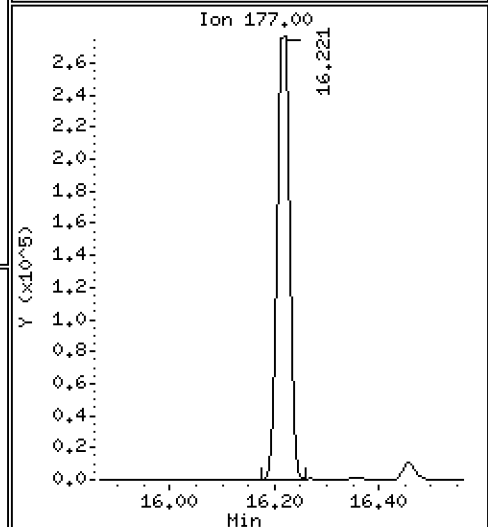
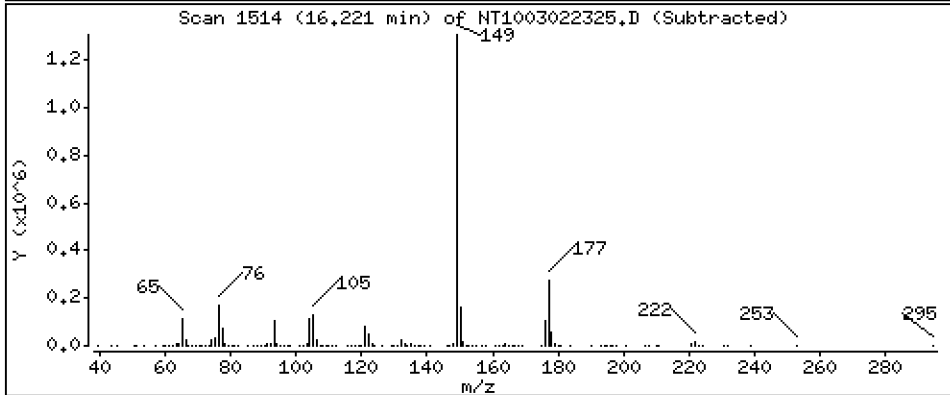
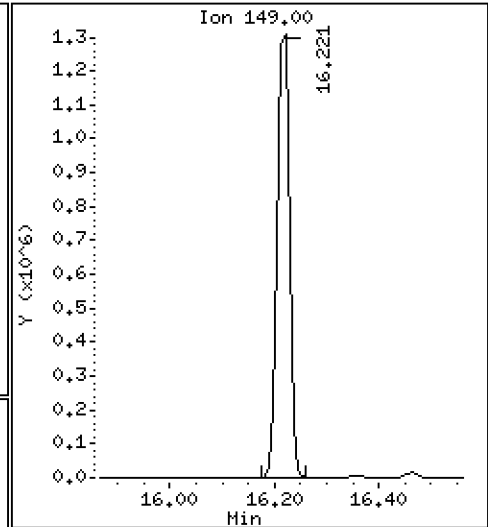
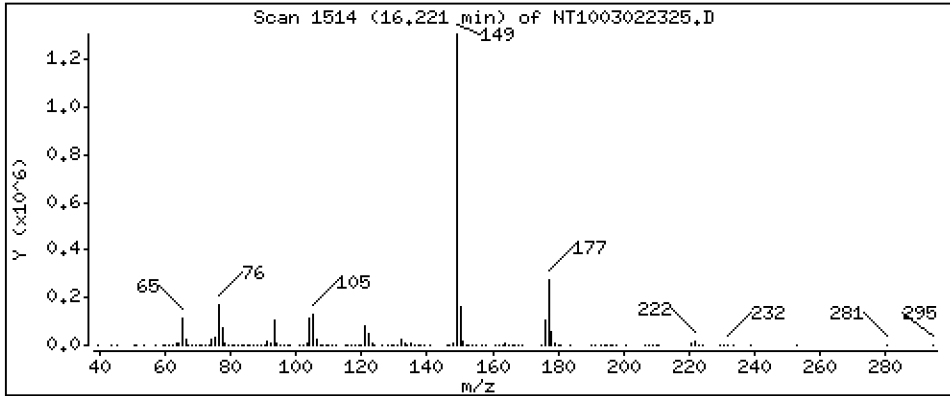
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 4,709 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

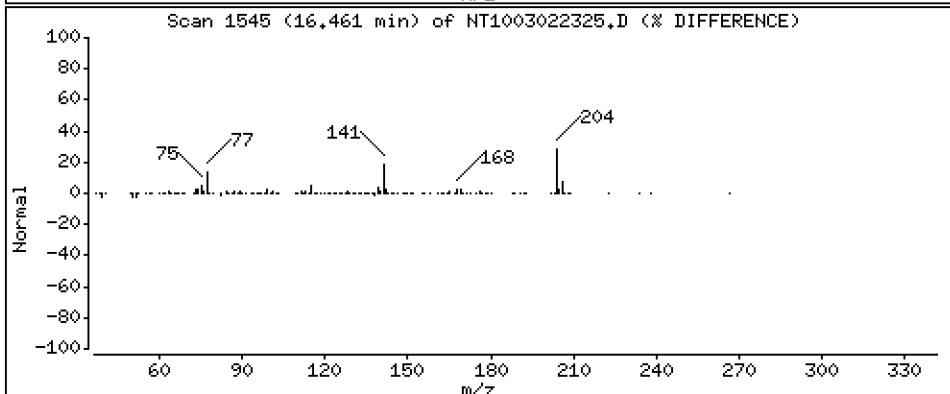
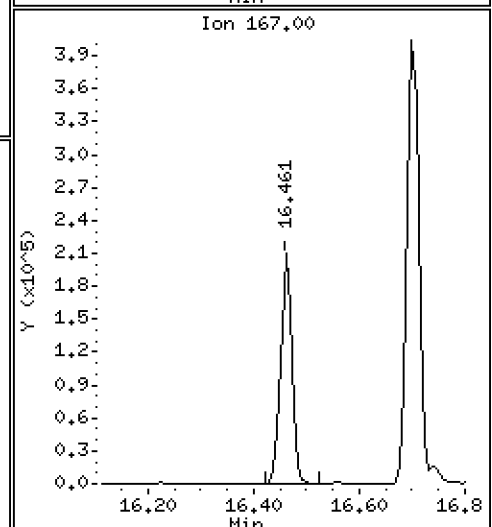
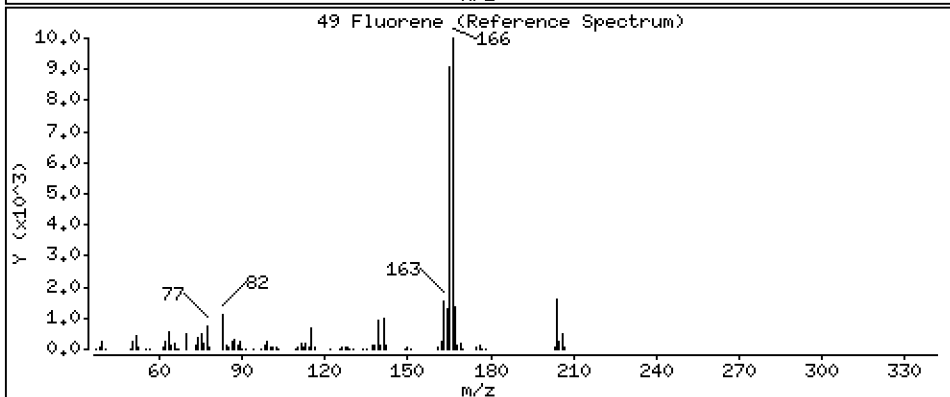
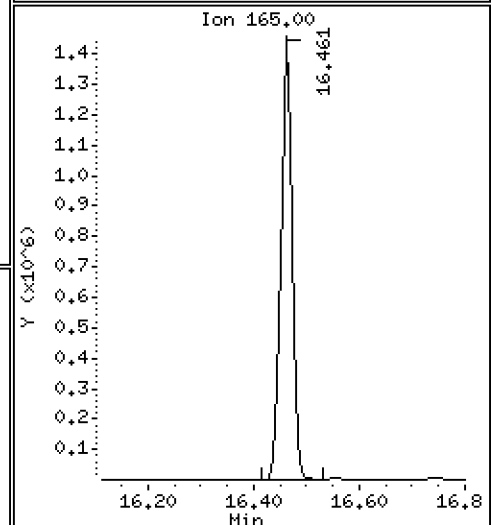
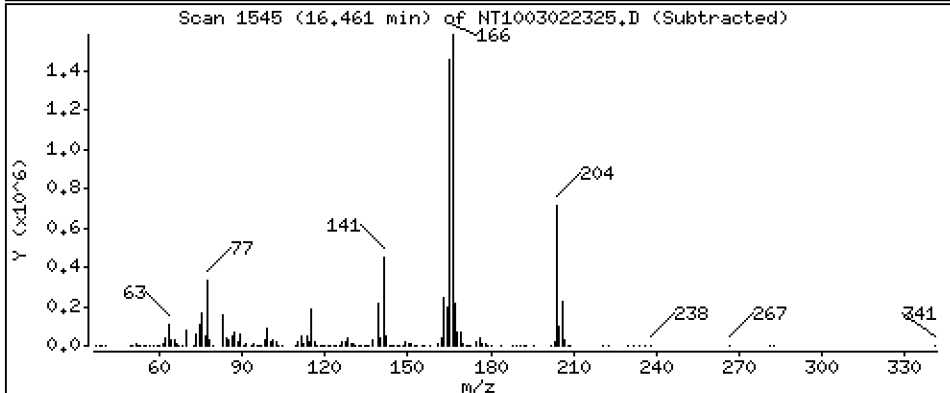
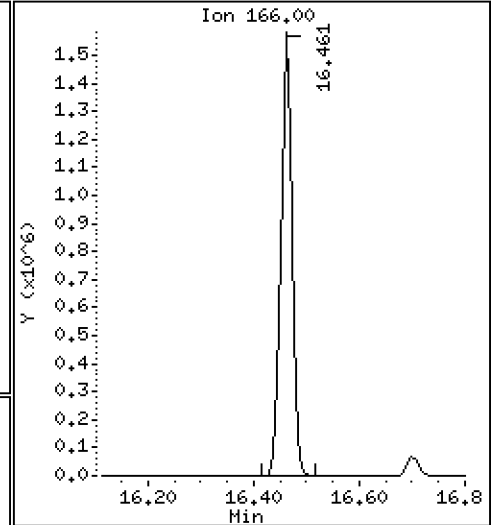
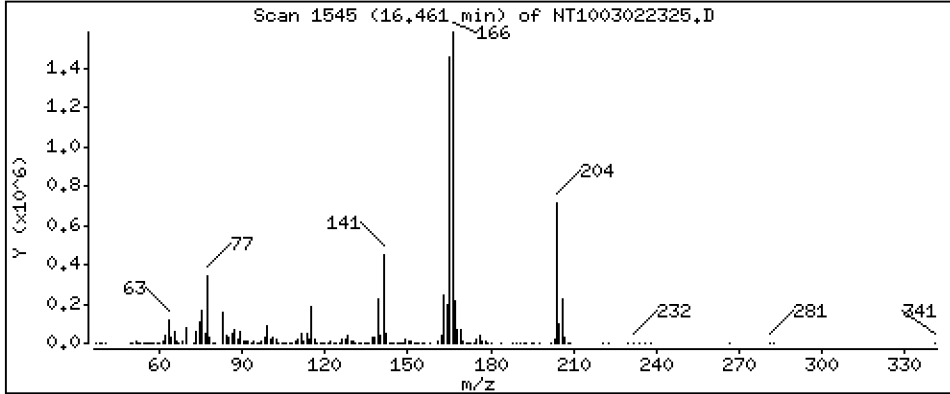
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,110 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

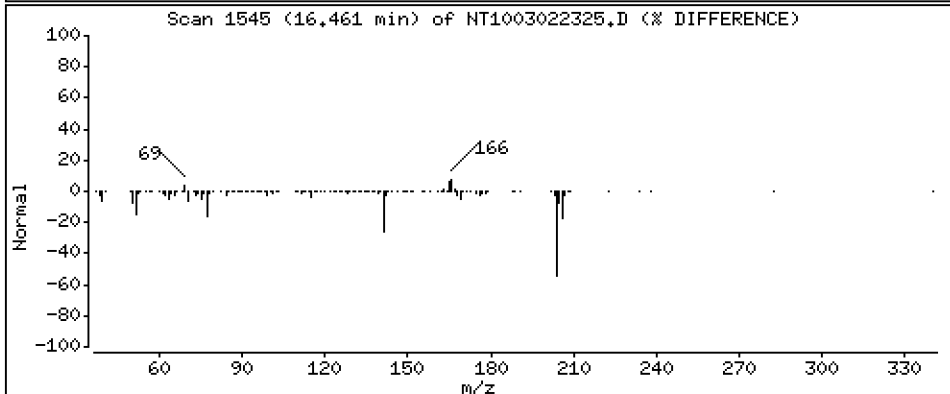
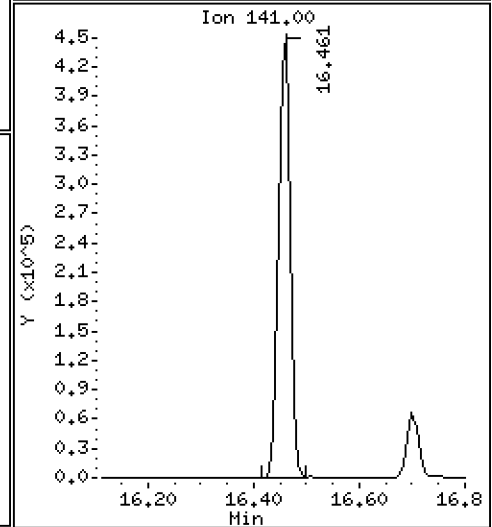
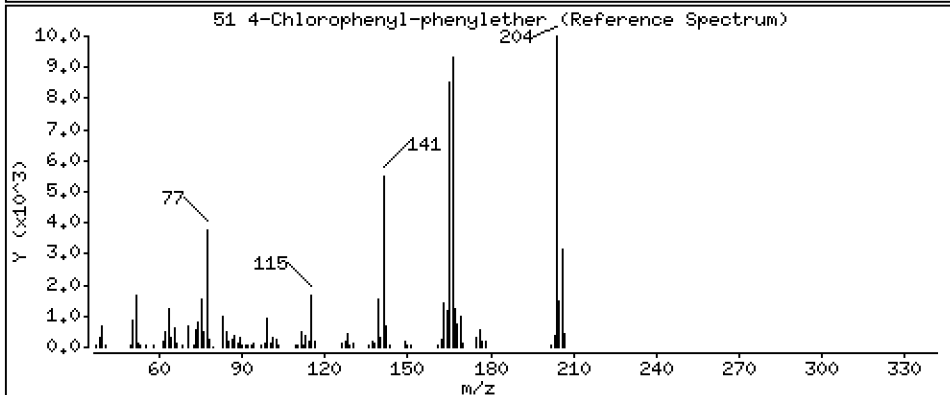
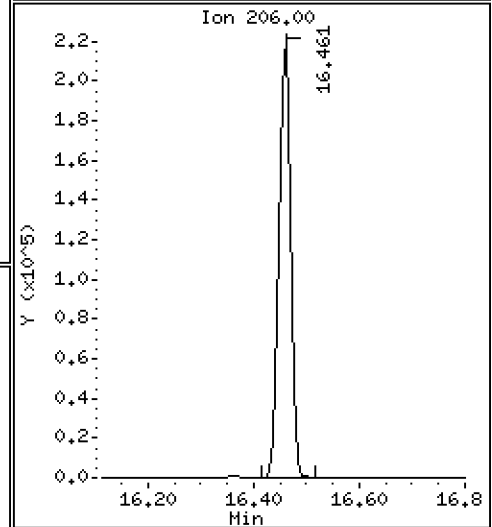
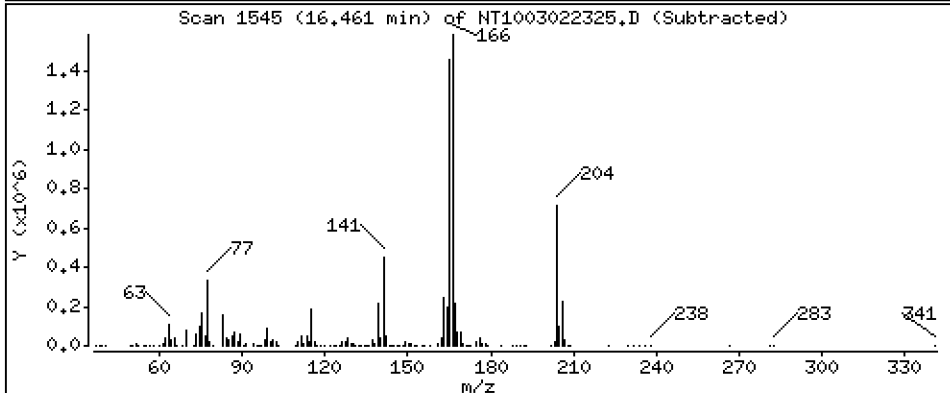
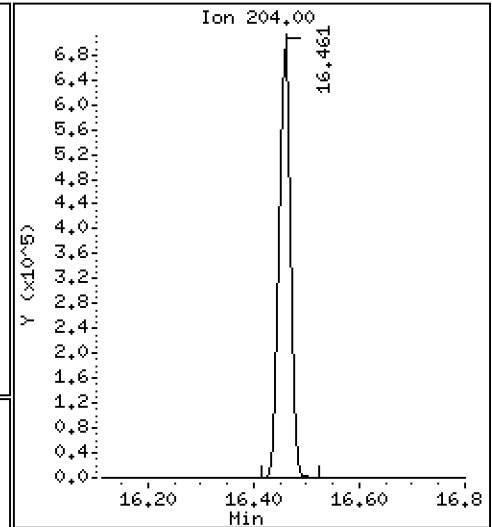
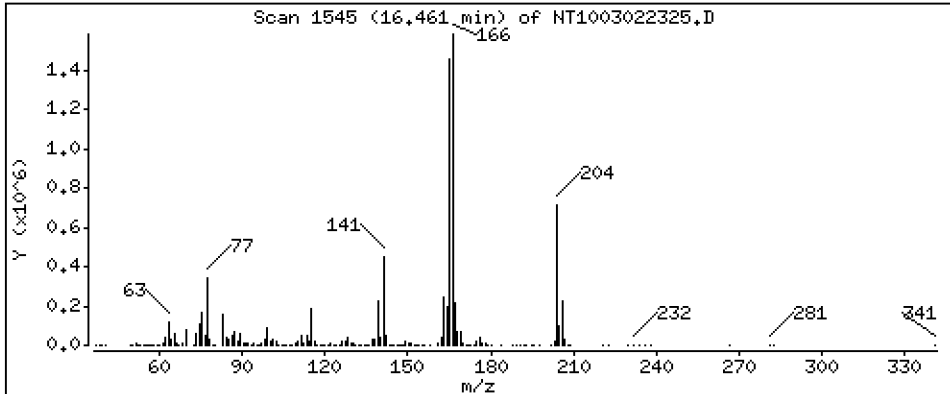
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 4,994 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

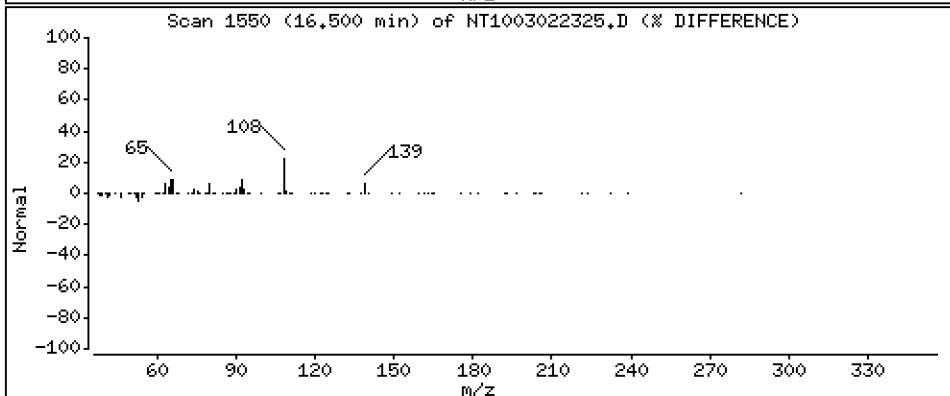
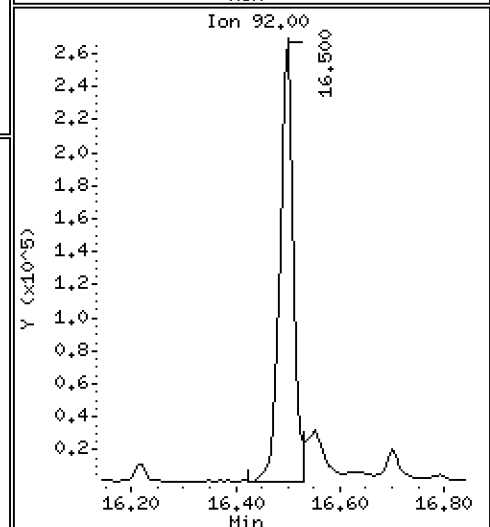
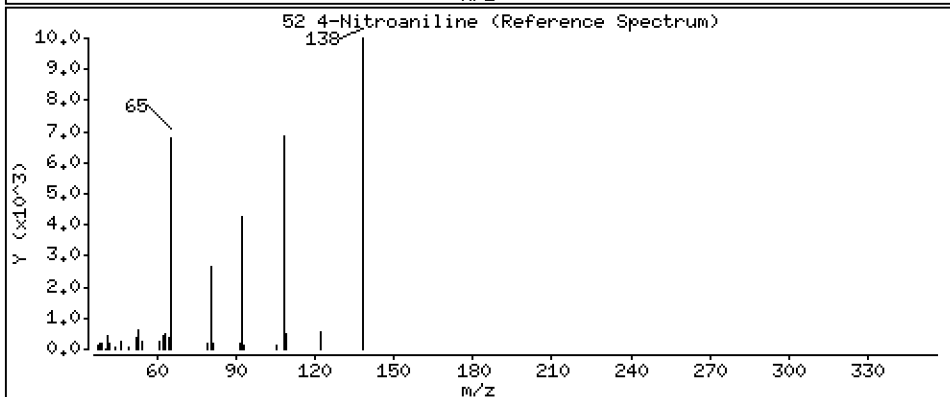
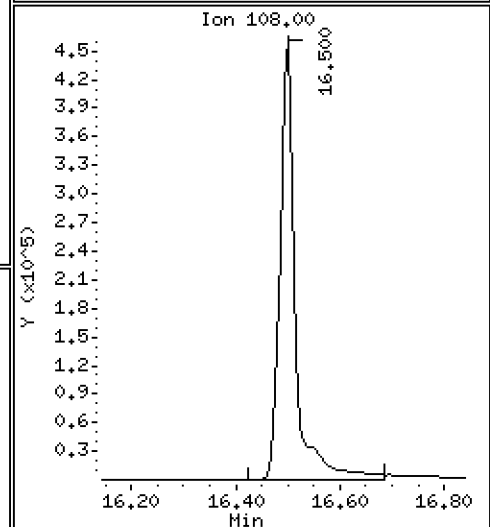
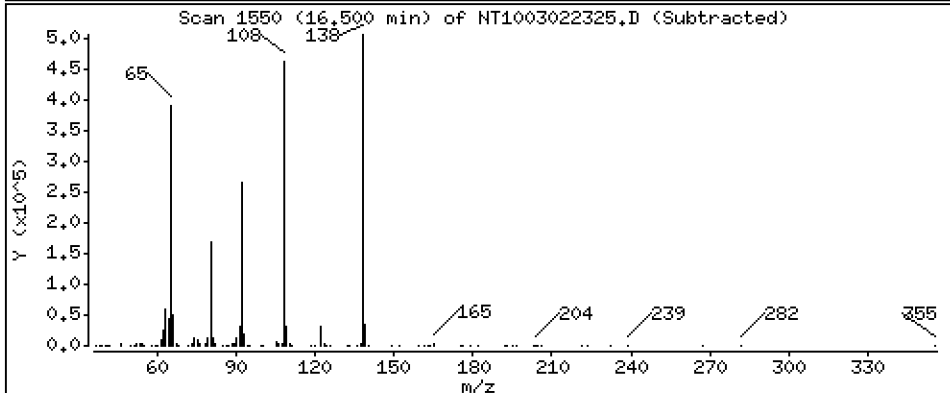
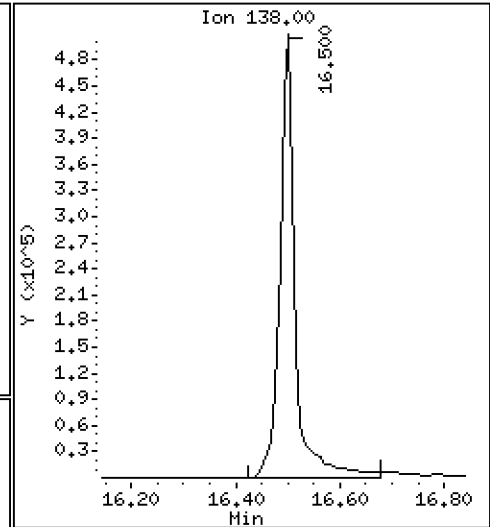
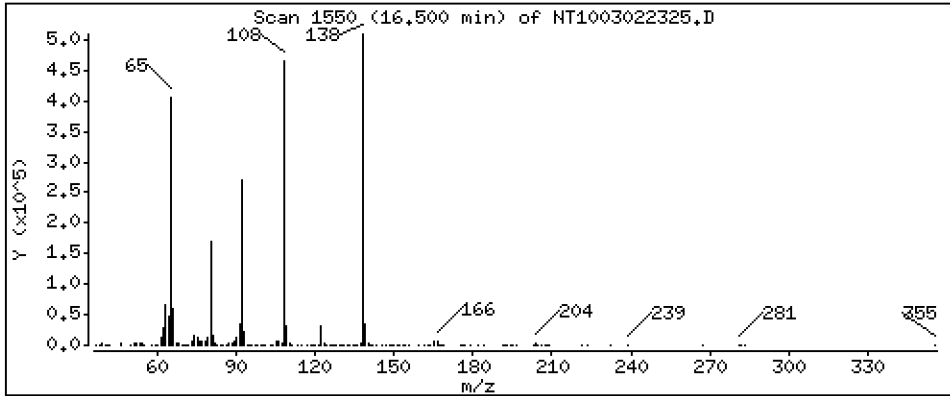
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 10,02 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

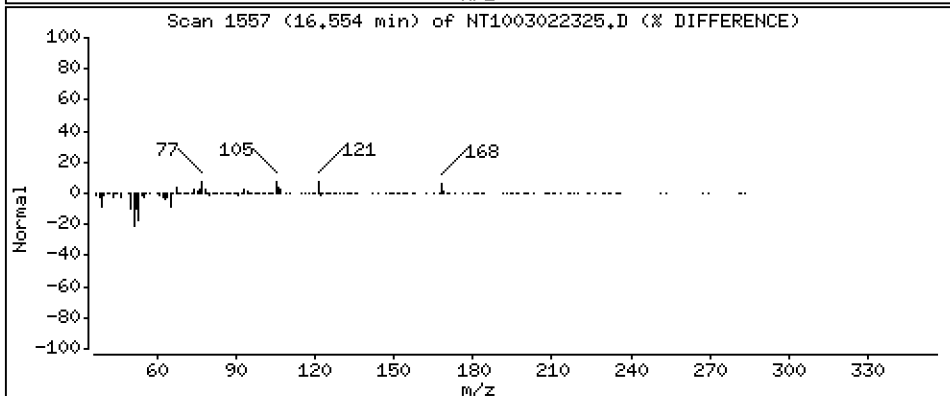
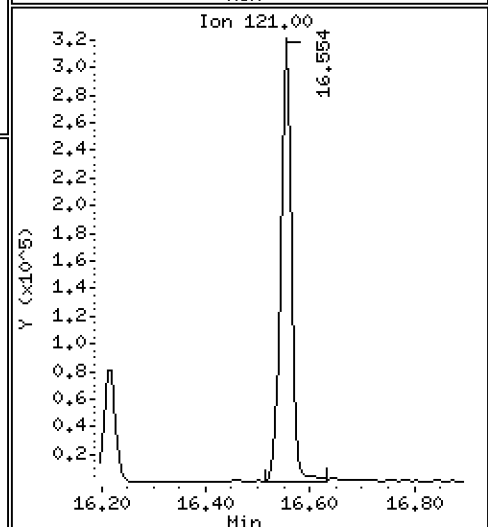
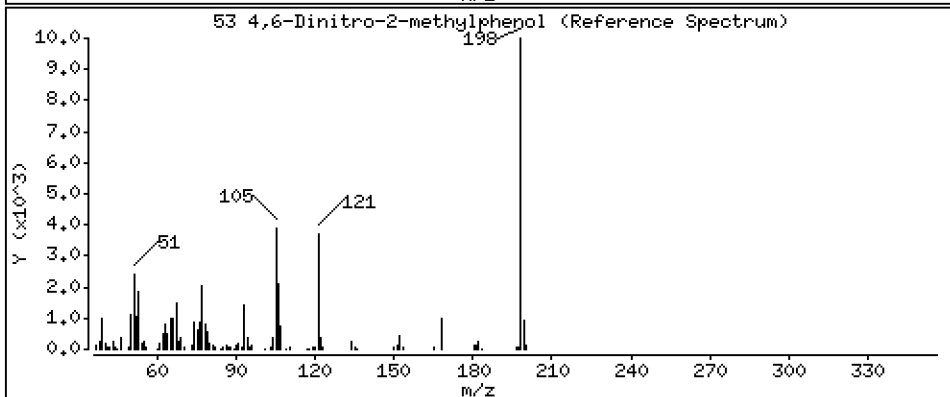
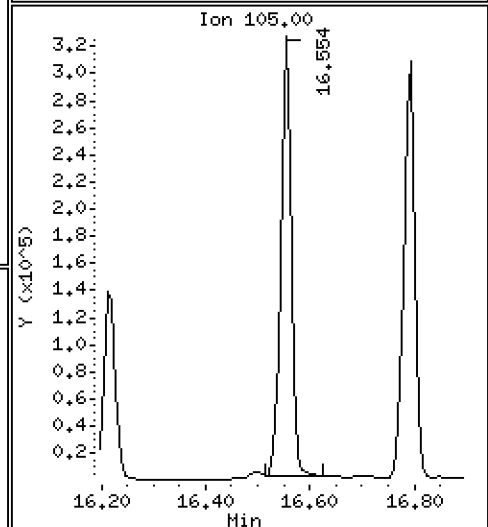
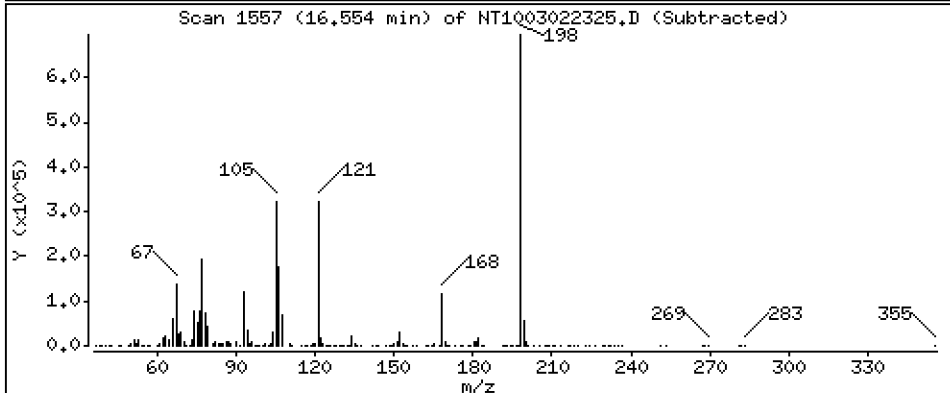
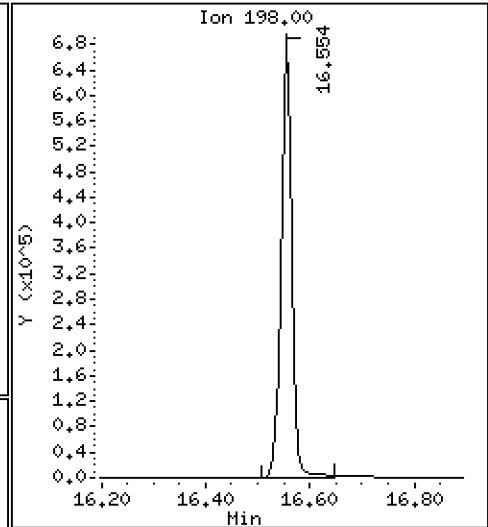
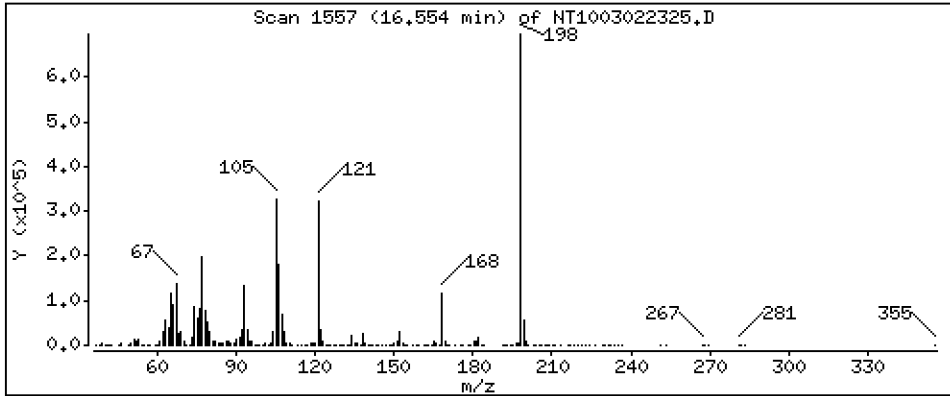
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 19,02 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

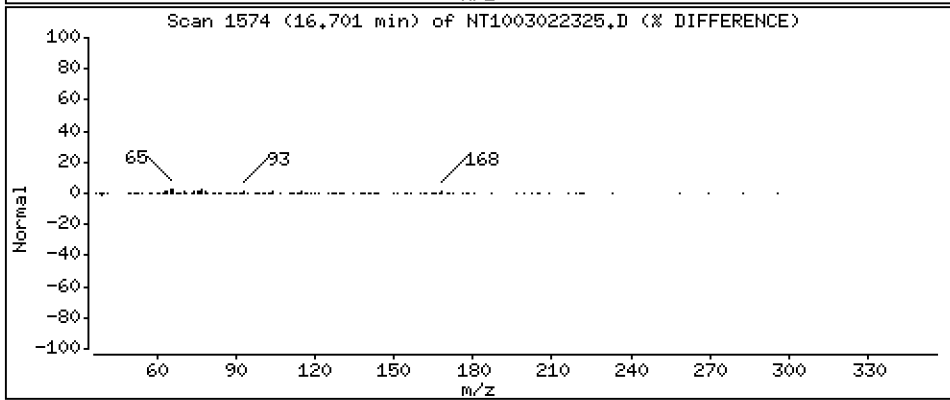
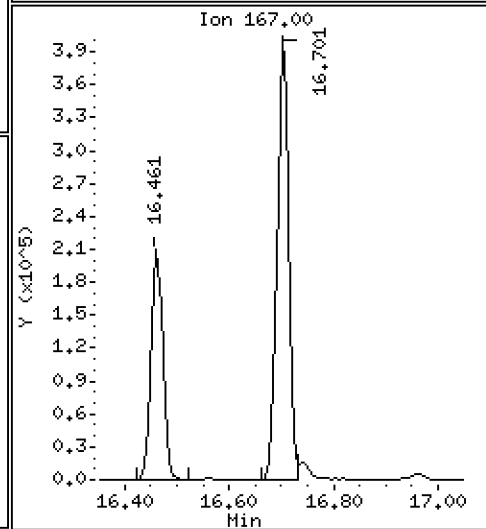
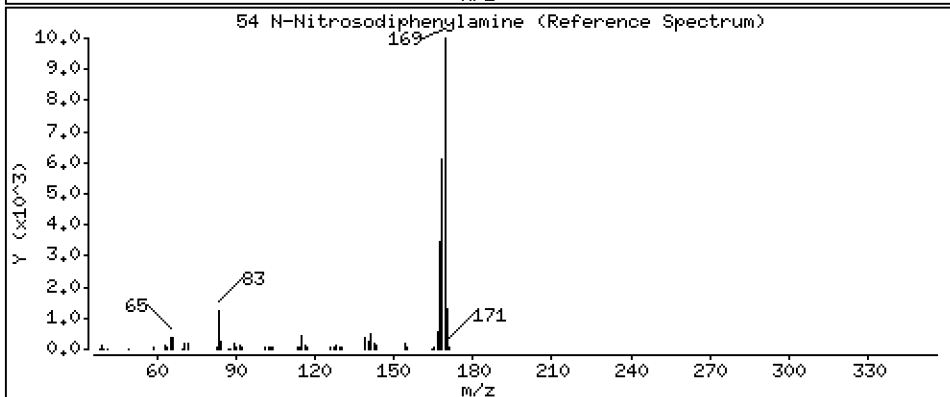
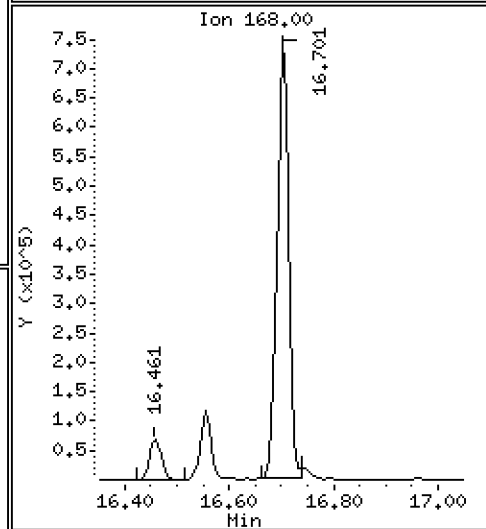
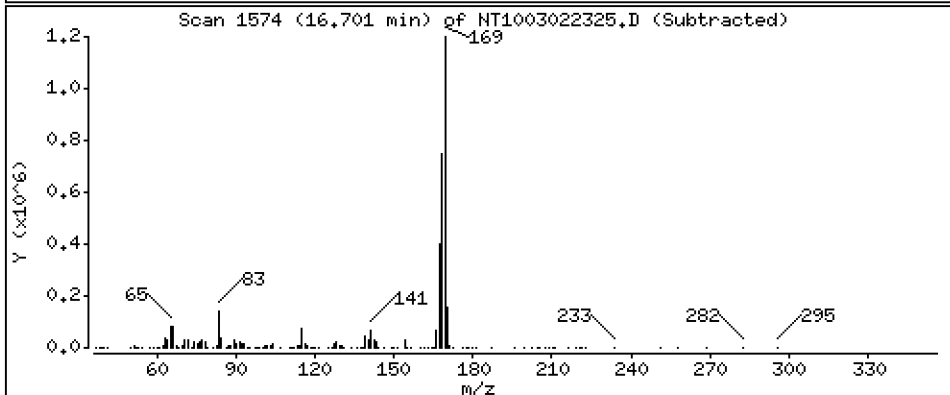
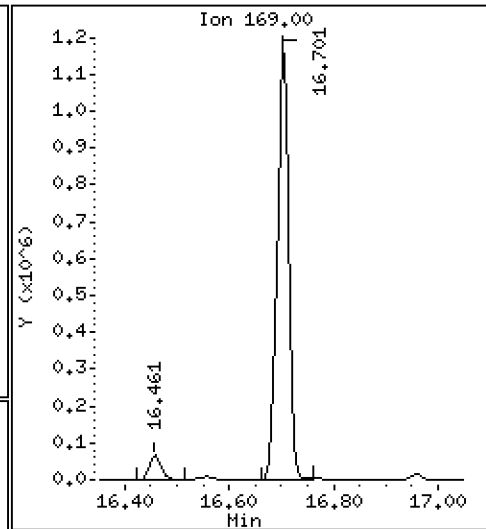
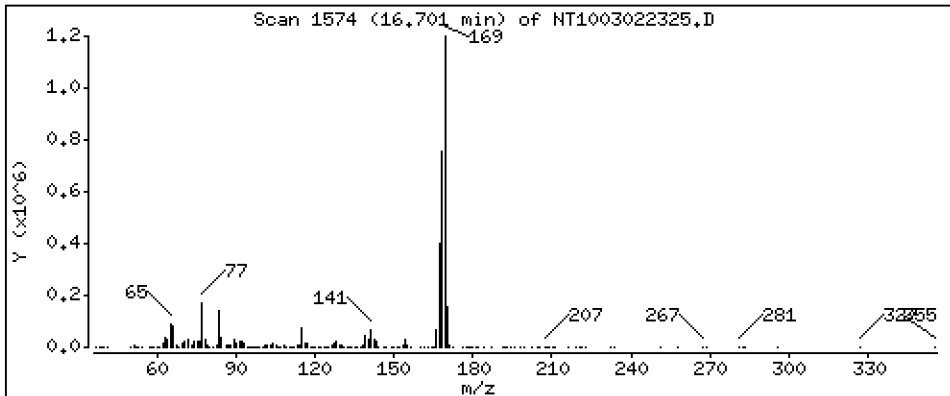
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 5,088 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

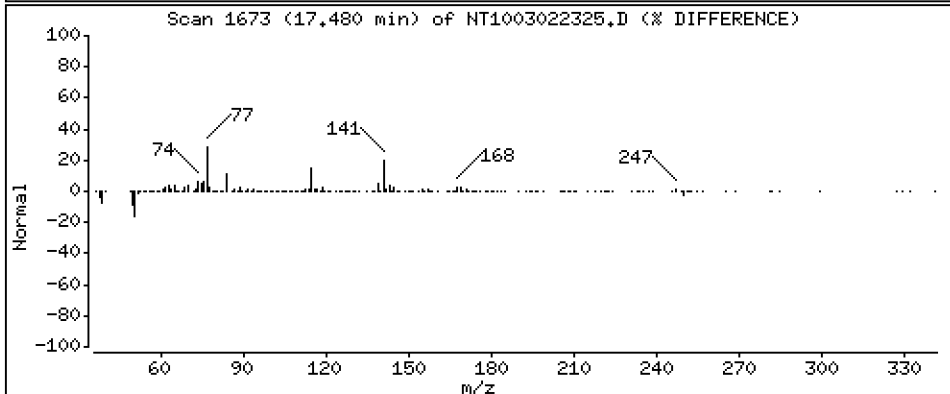
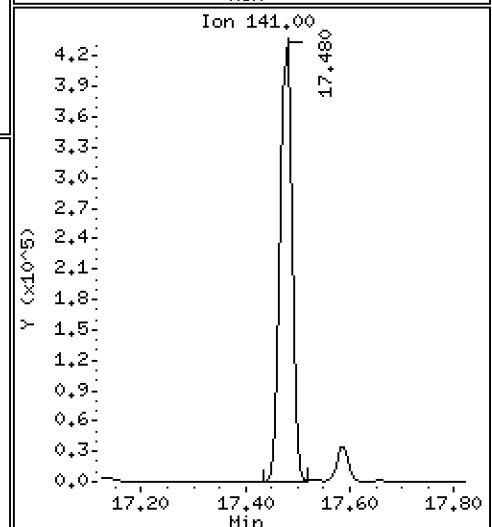
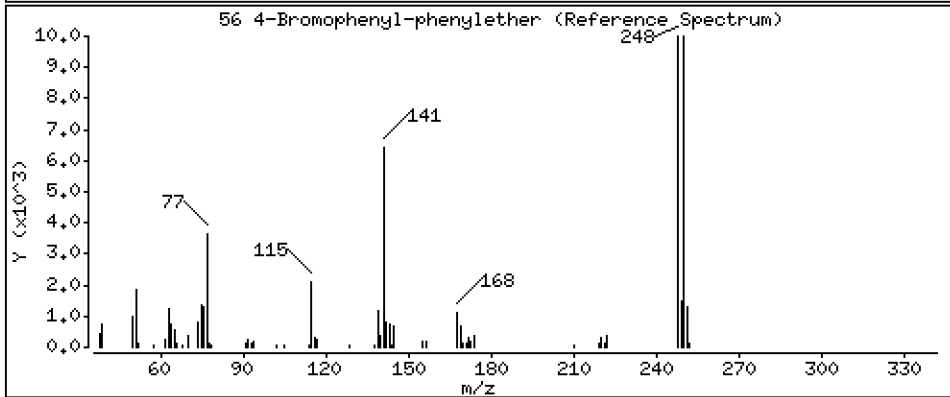
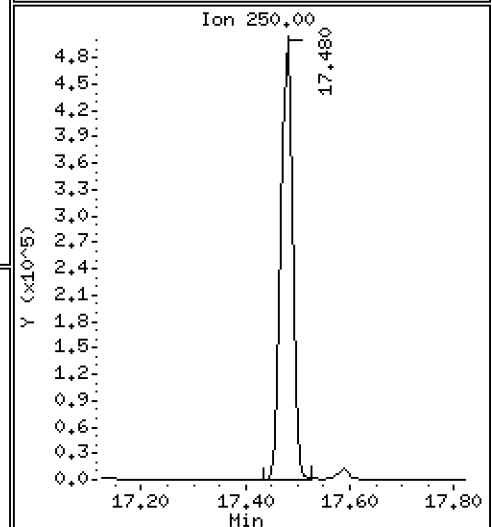
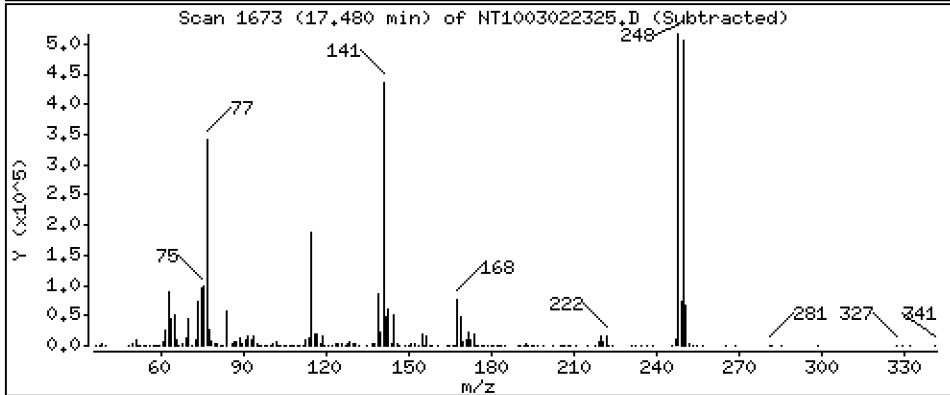
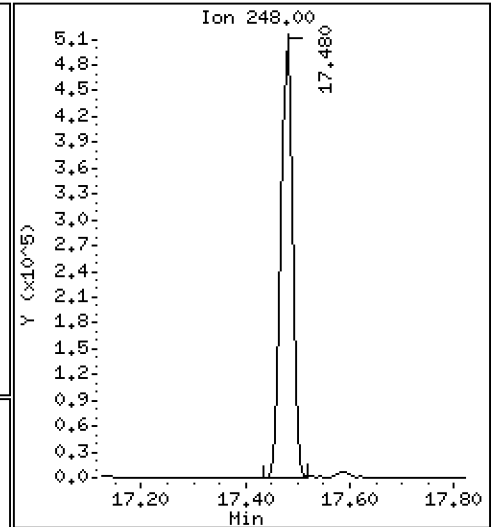
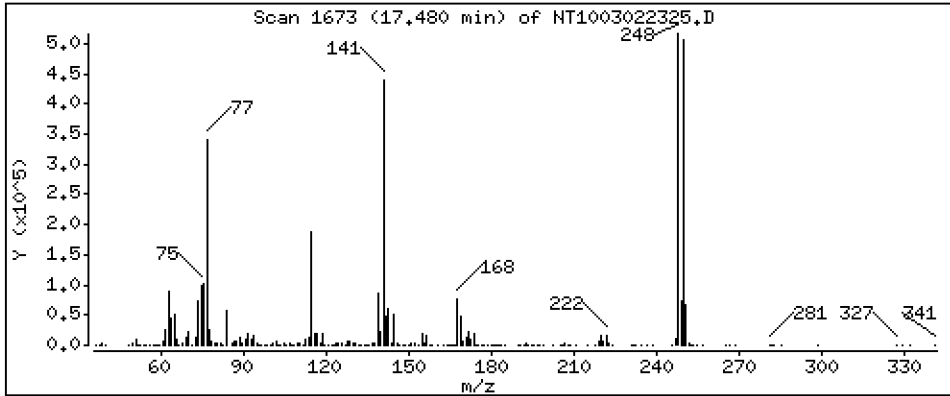
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,311 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

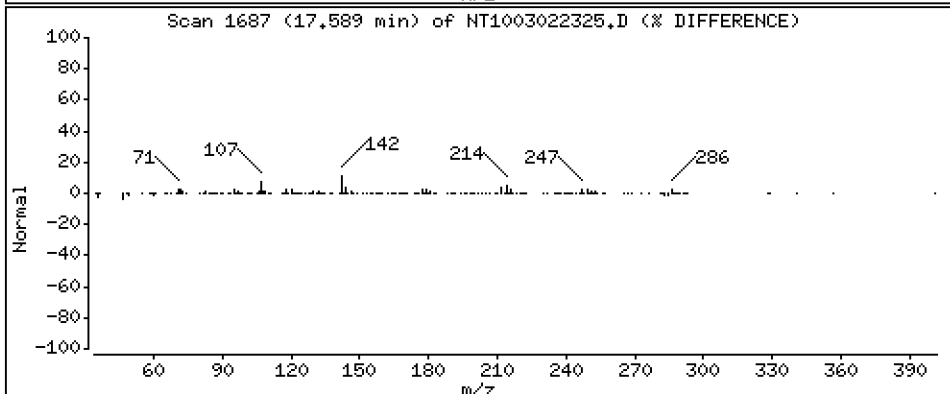
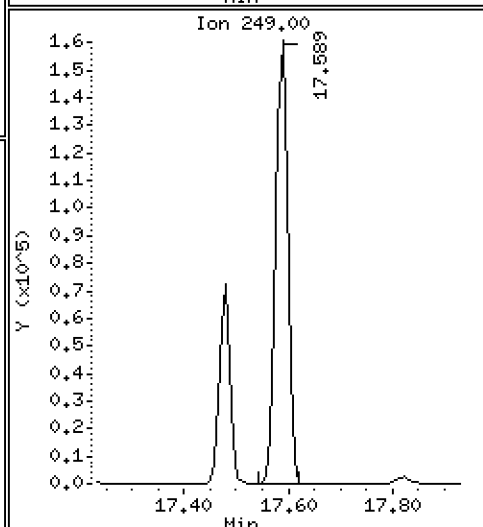
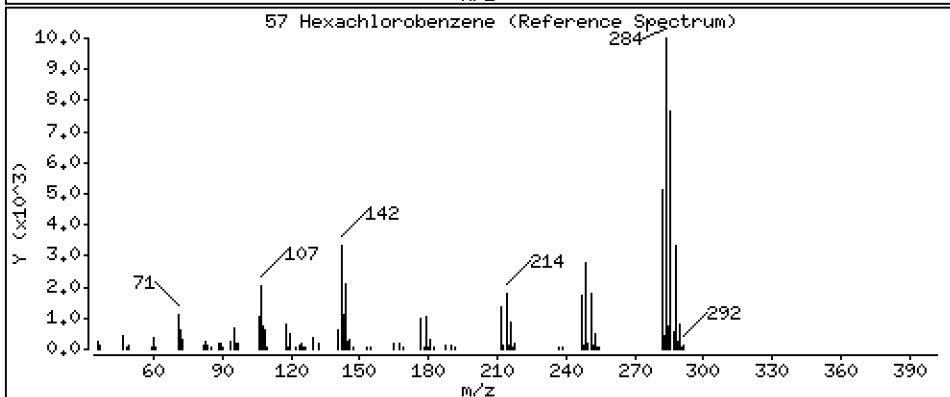
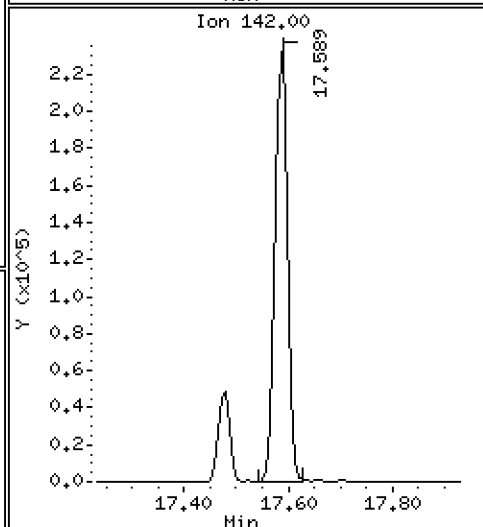
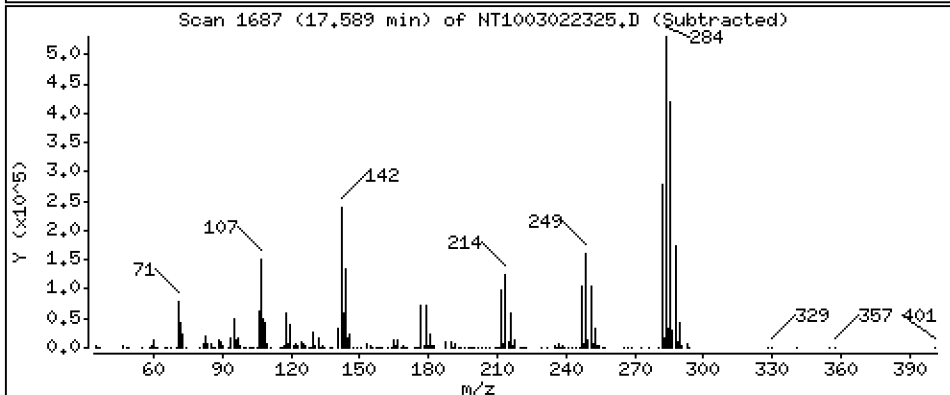
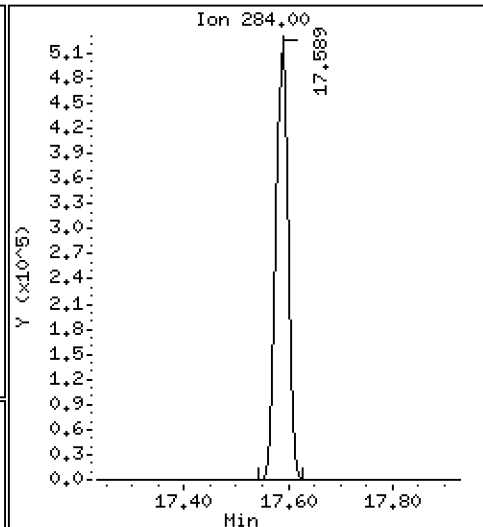
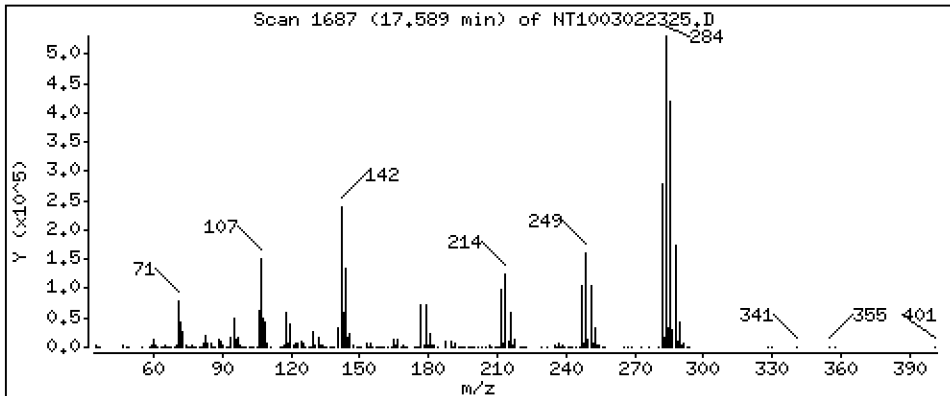
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 5,048 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

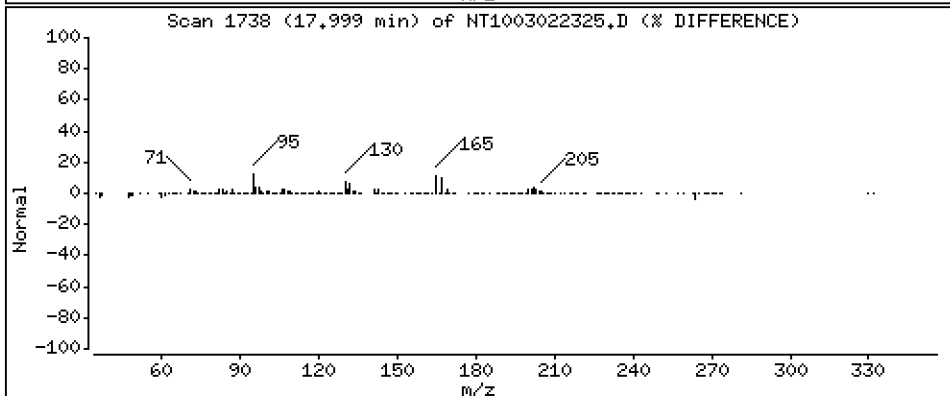
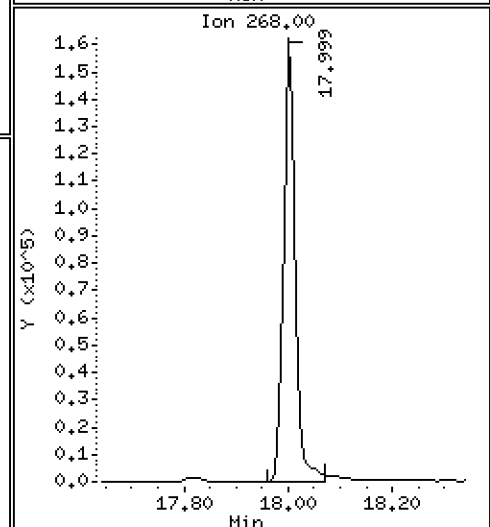
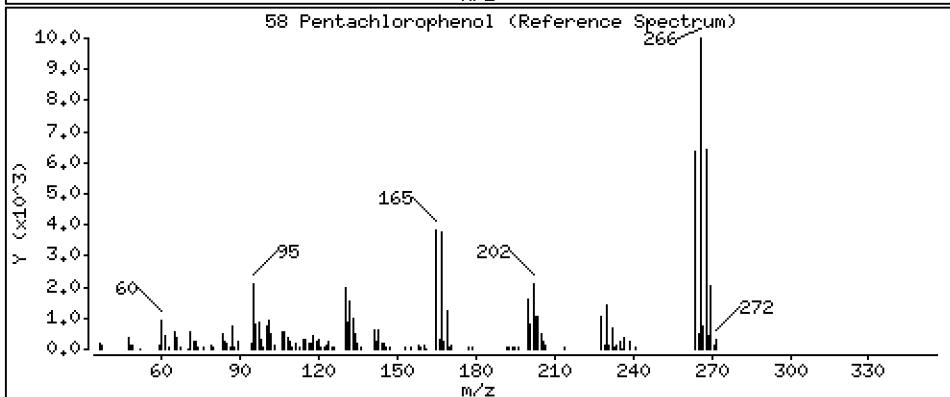
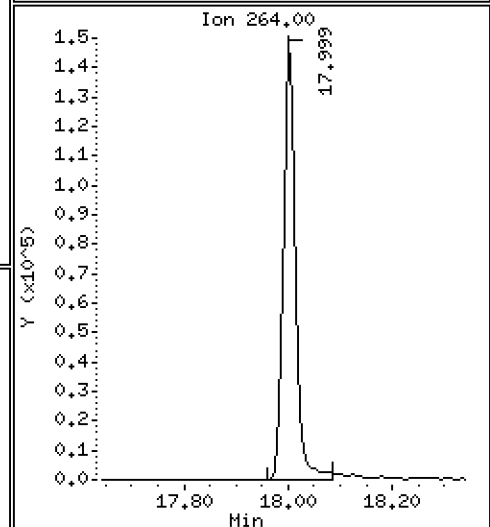
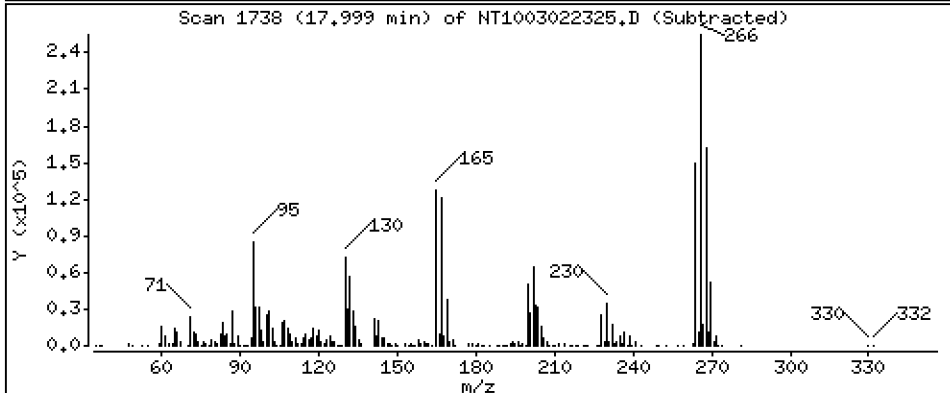
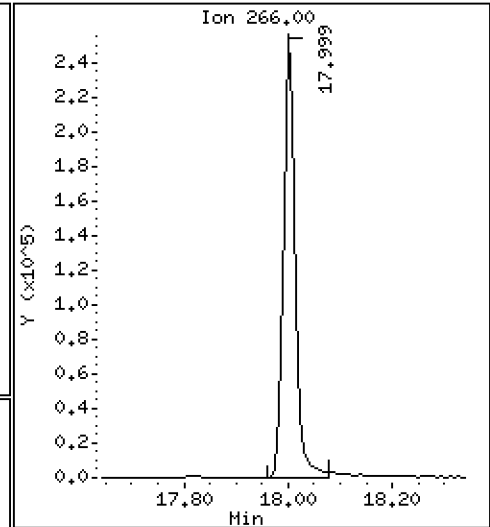
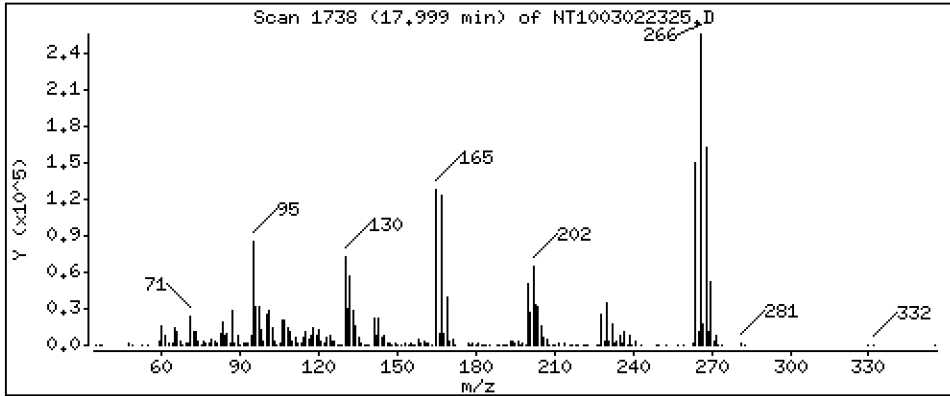
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 5,212 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

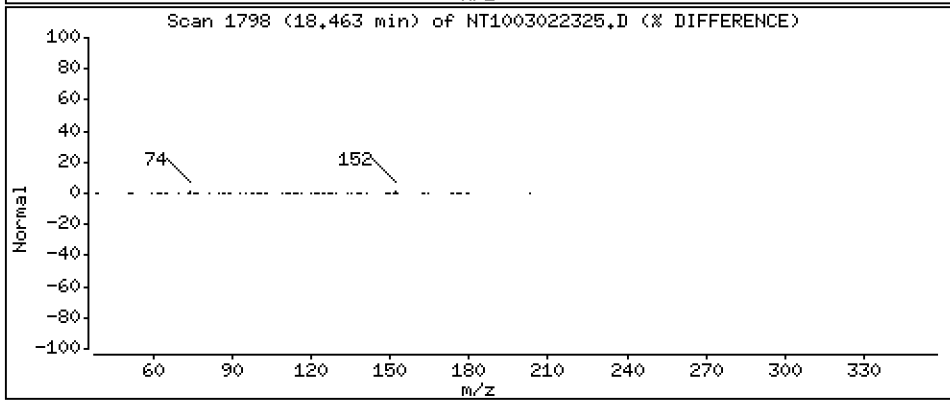
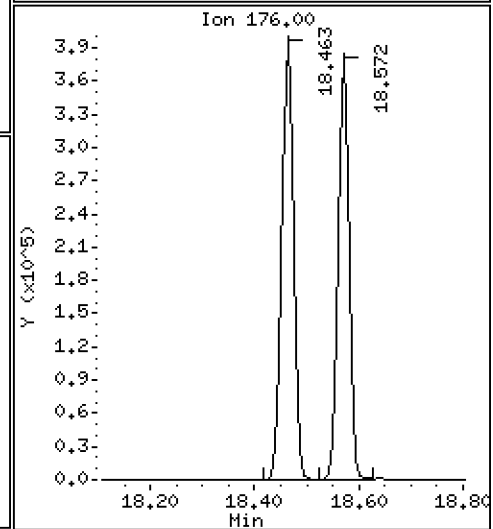
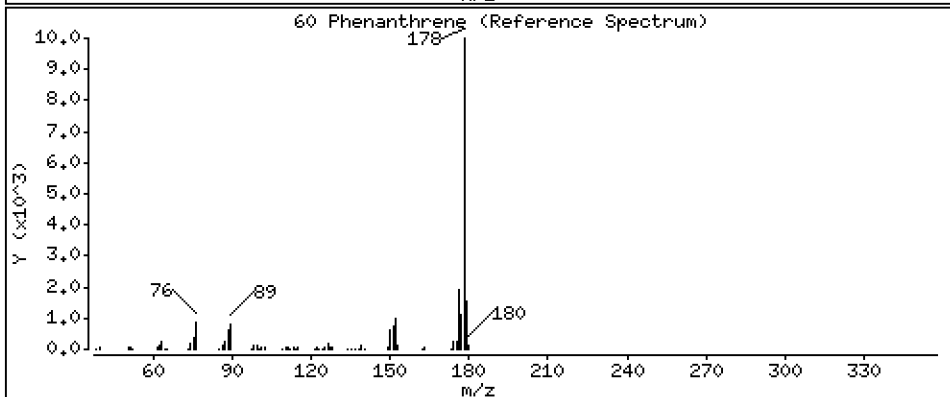
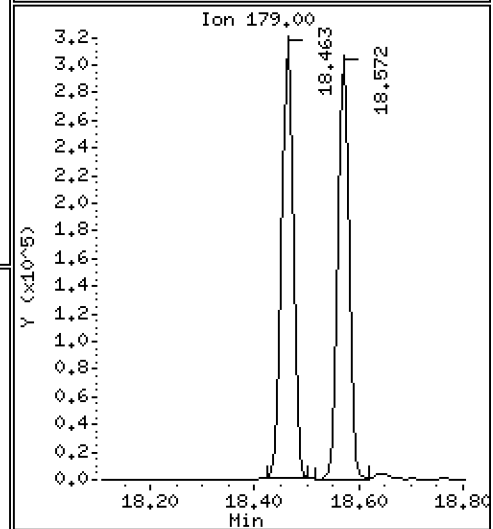
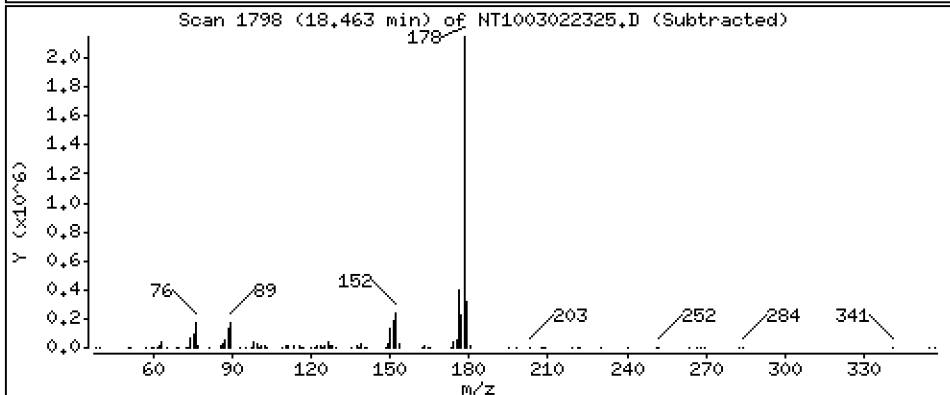
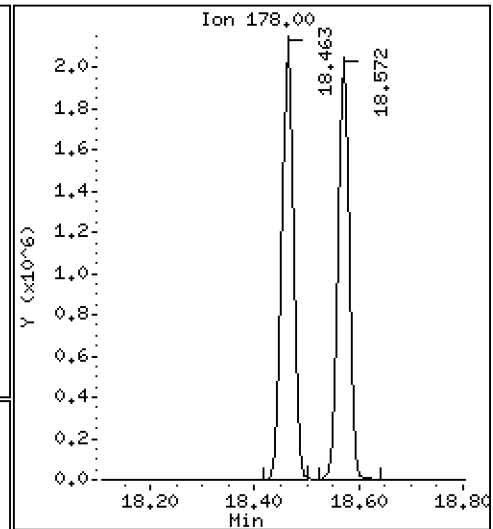
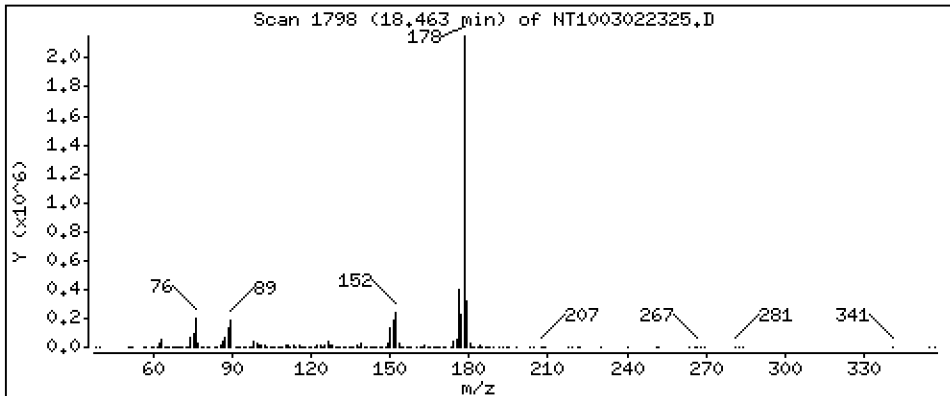
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,133 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

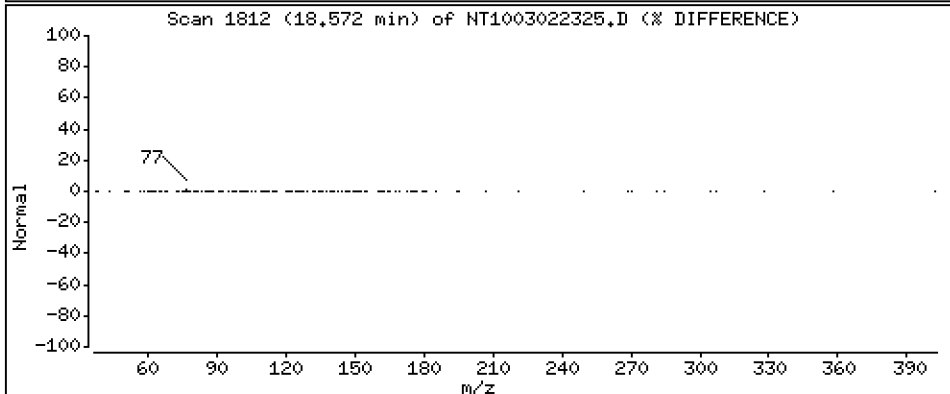
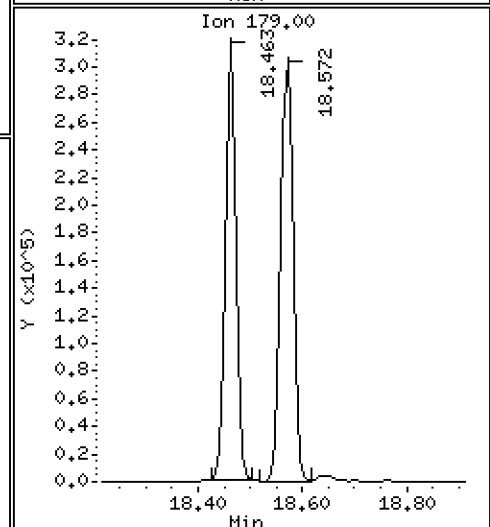
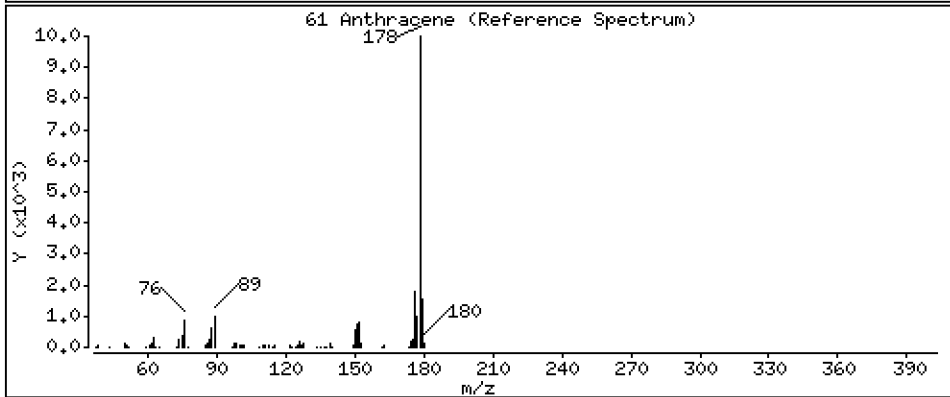
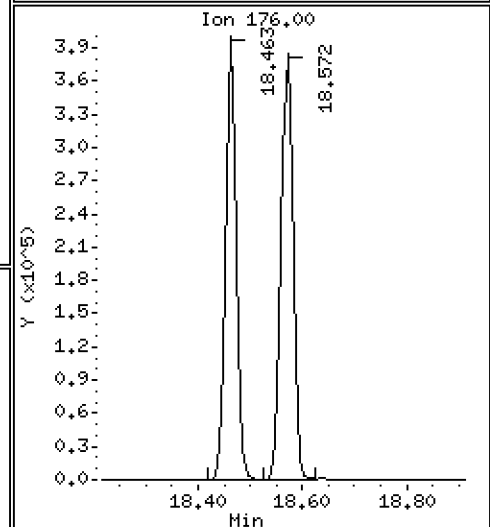
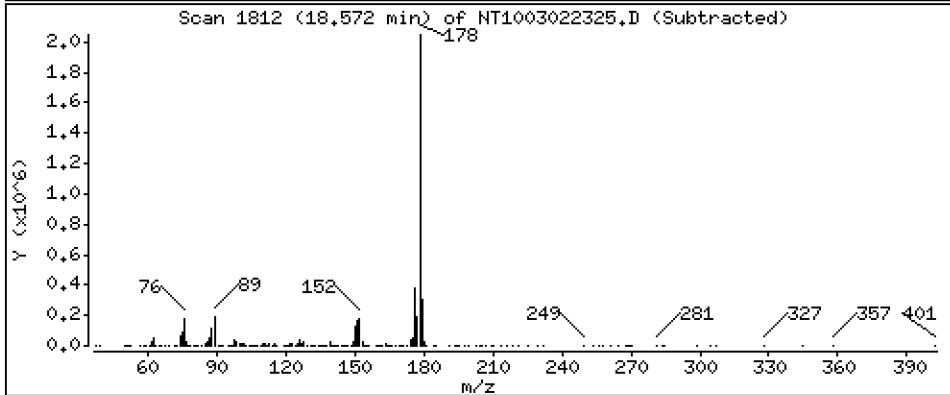
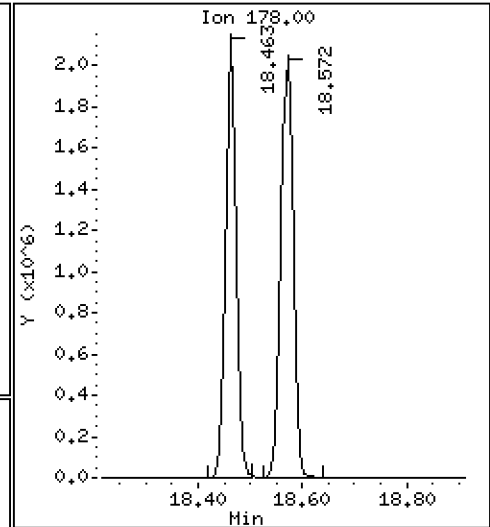
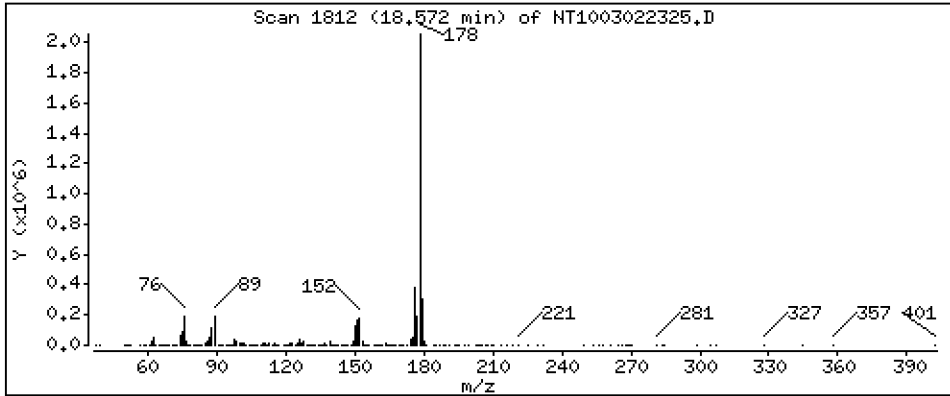
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 5,485 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

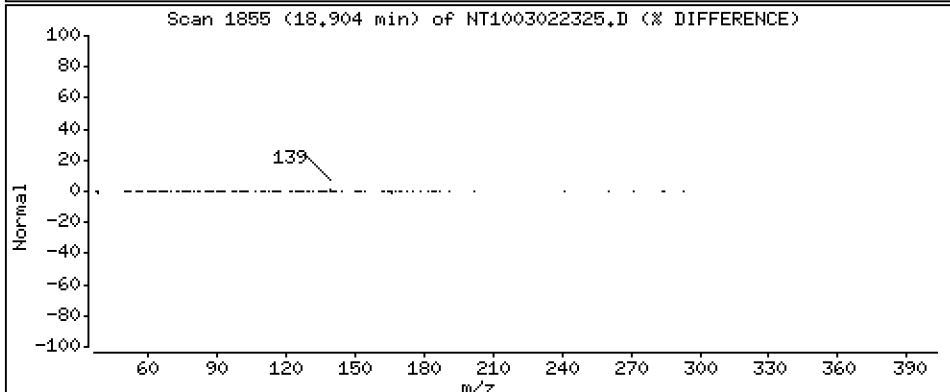
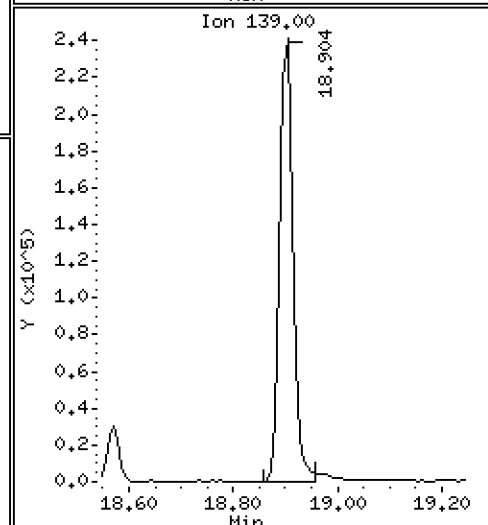
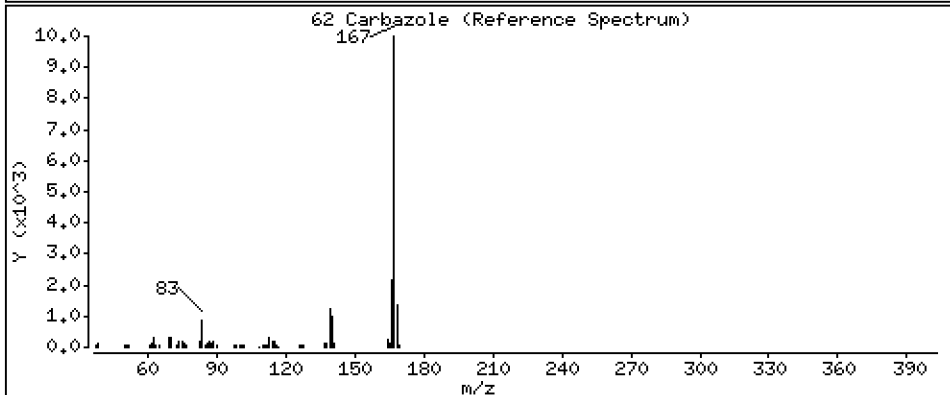
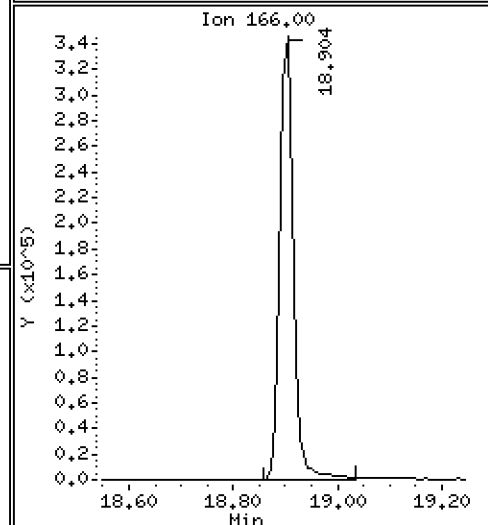
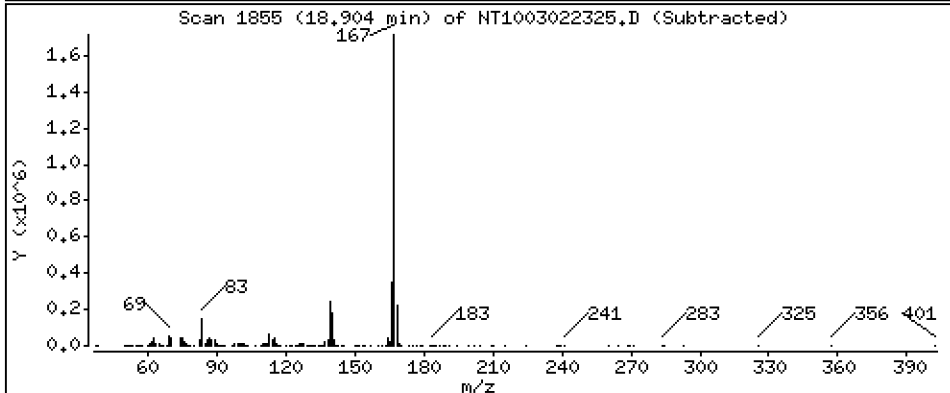
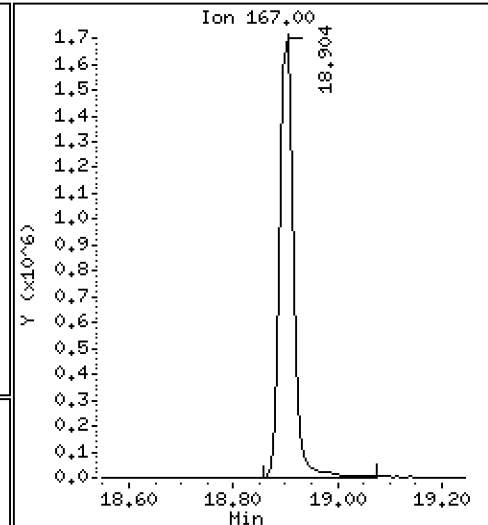
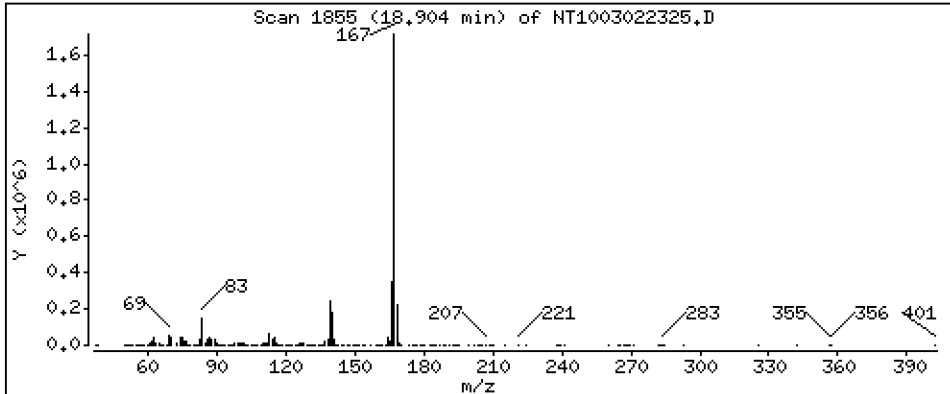
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,551 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

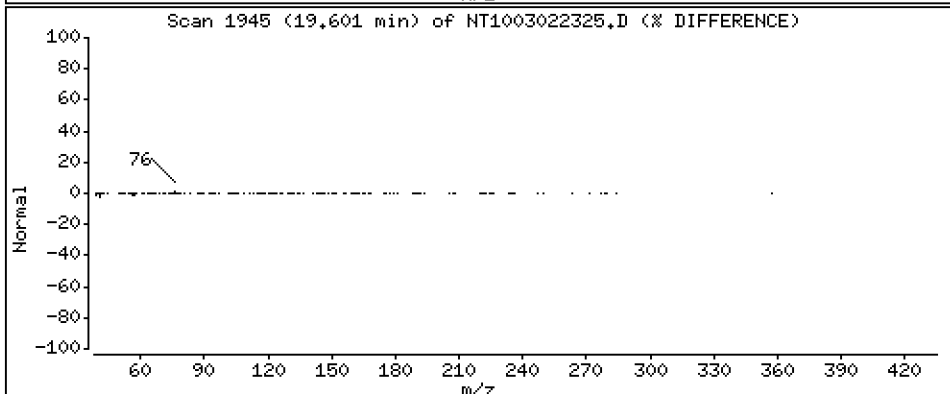
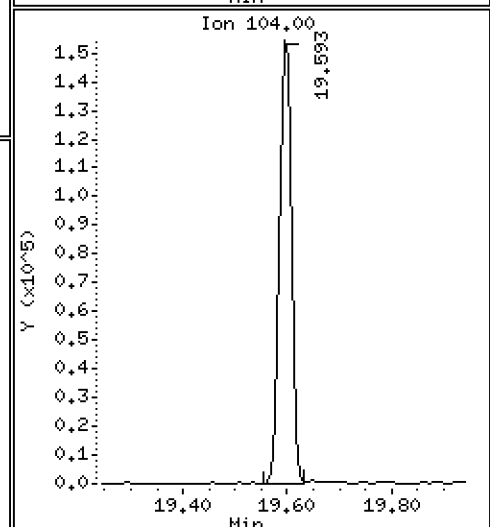
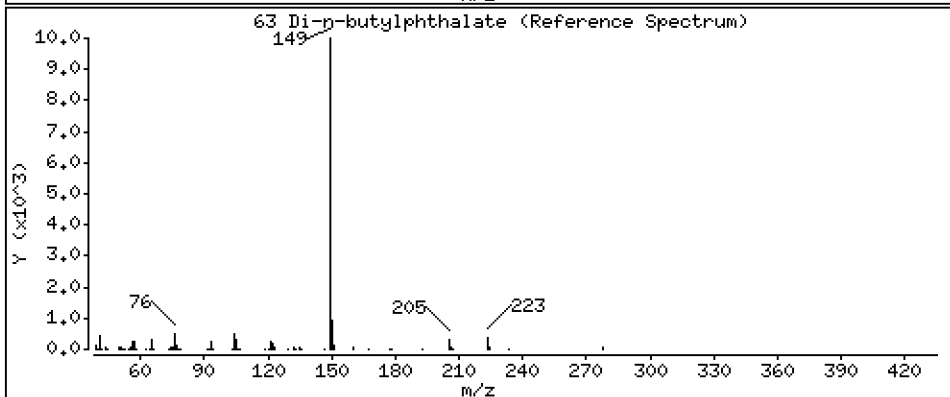
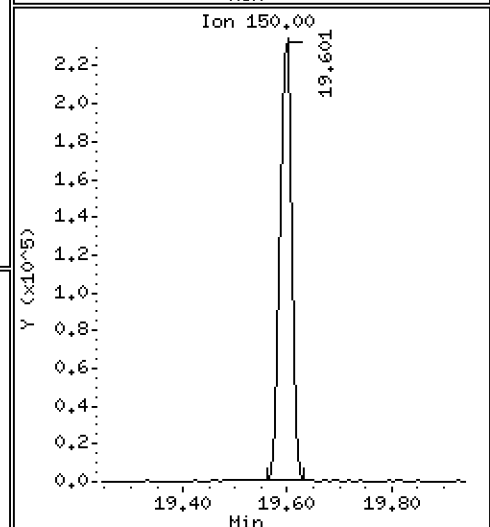
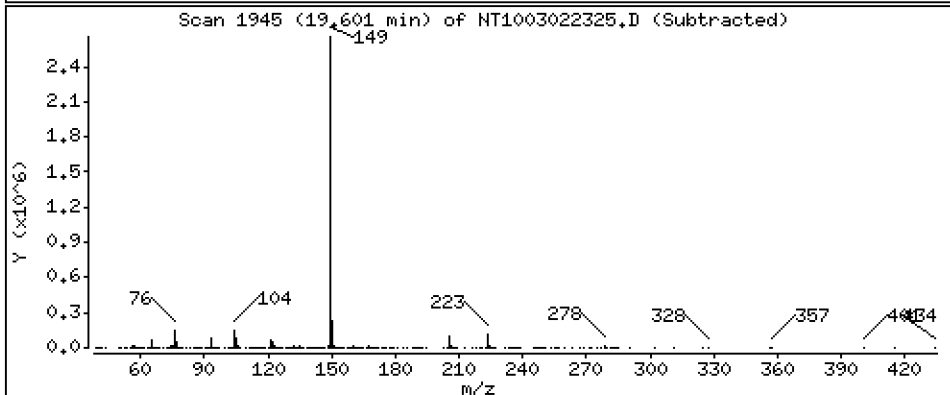
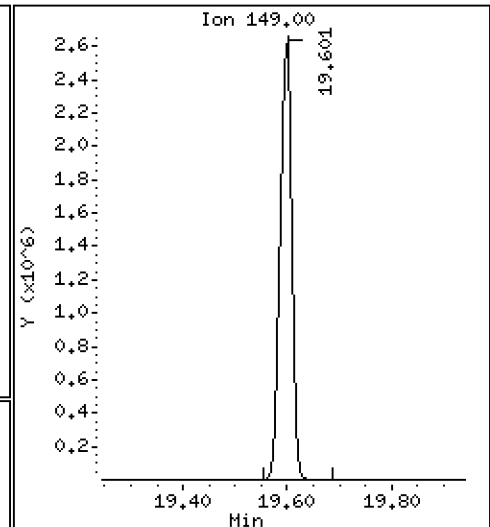
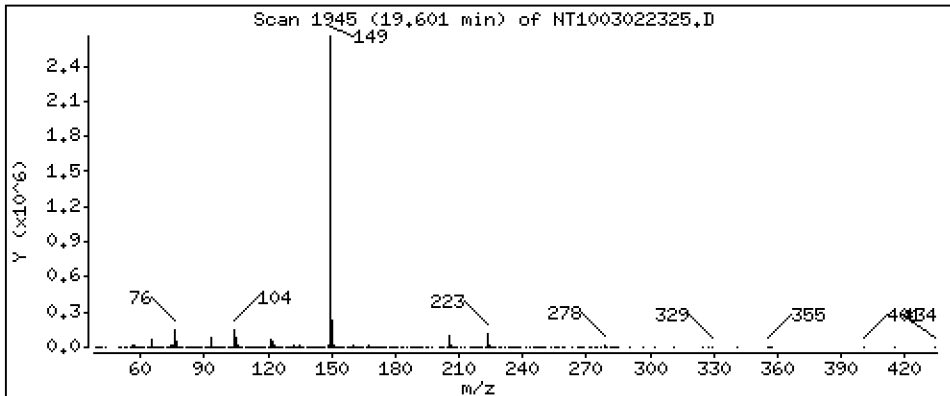
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,191 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

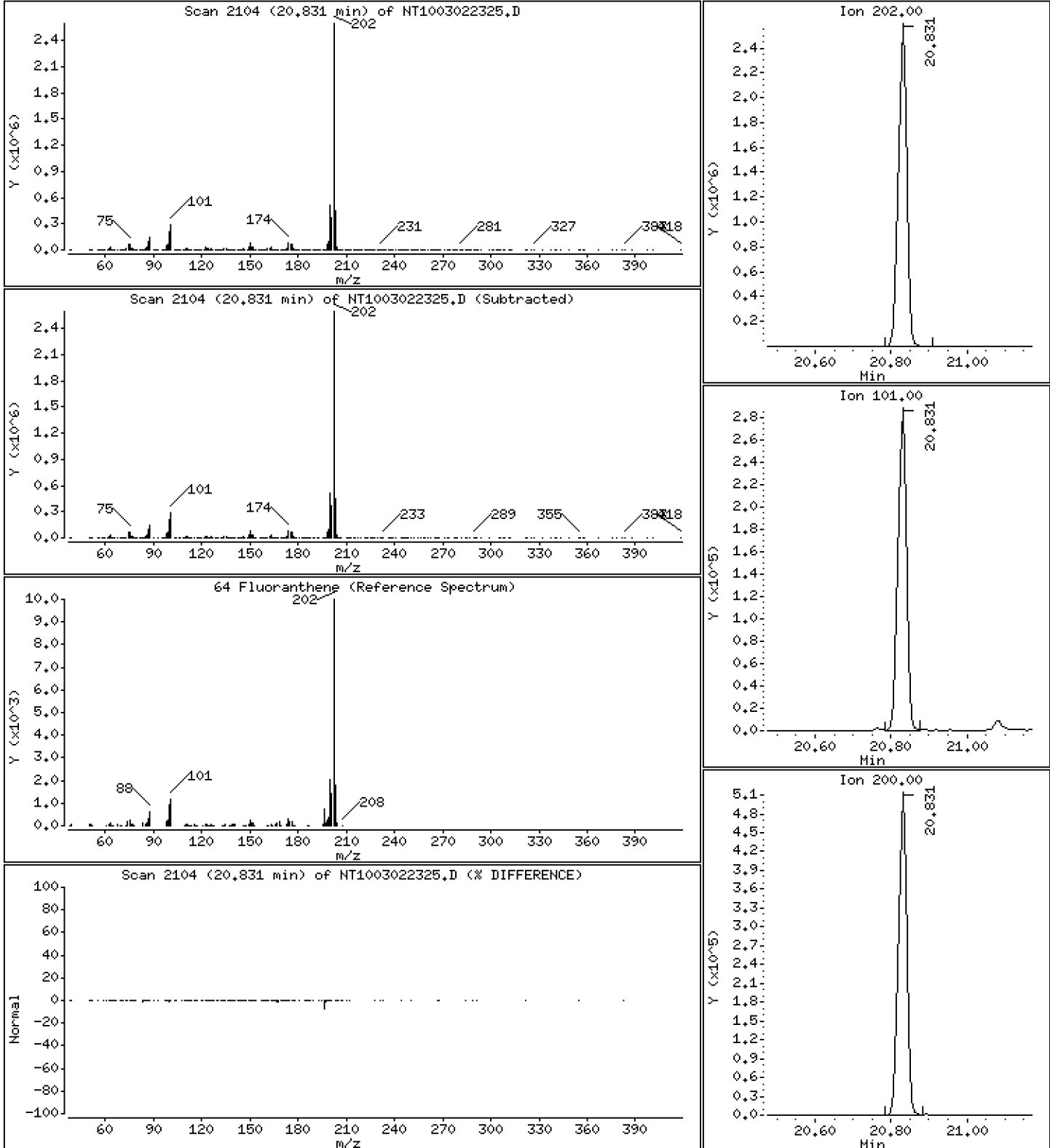
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,145 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

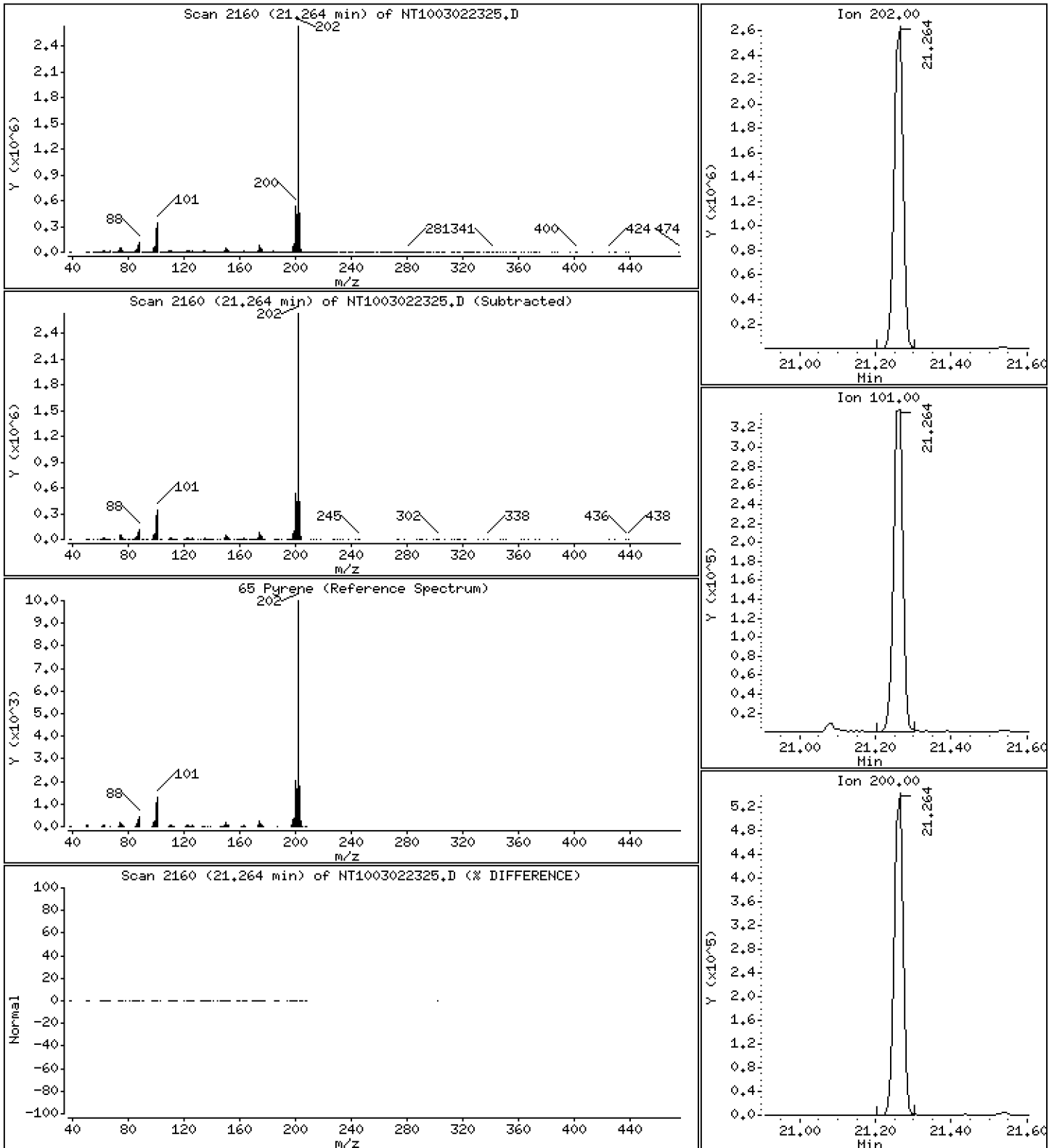
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,192 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

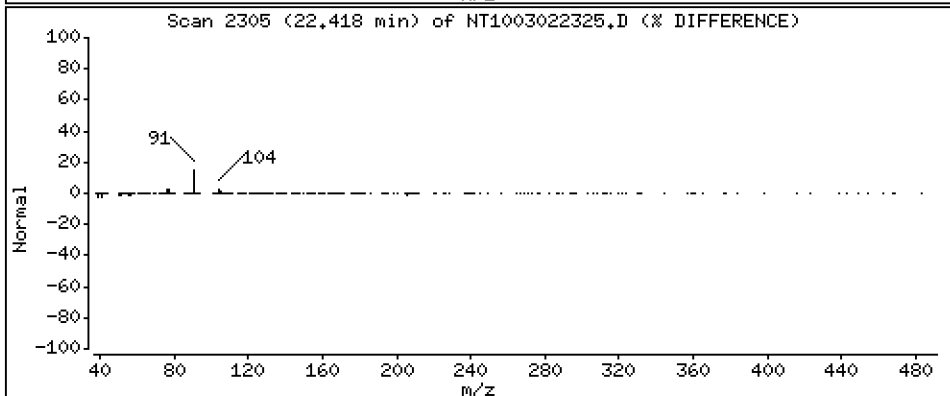
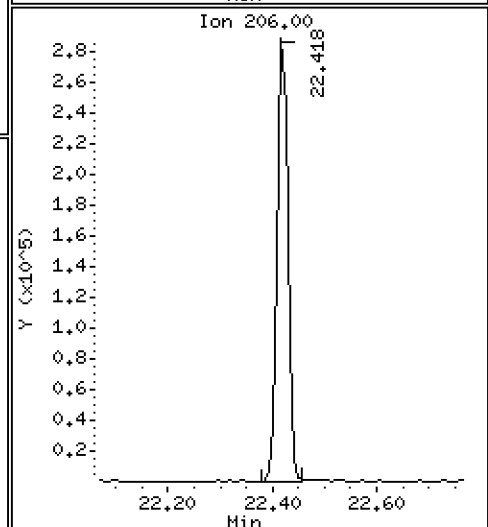
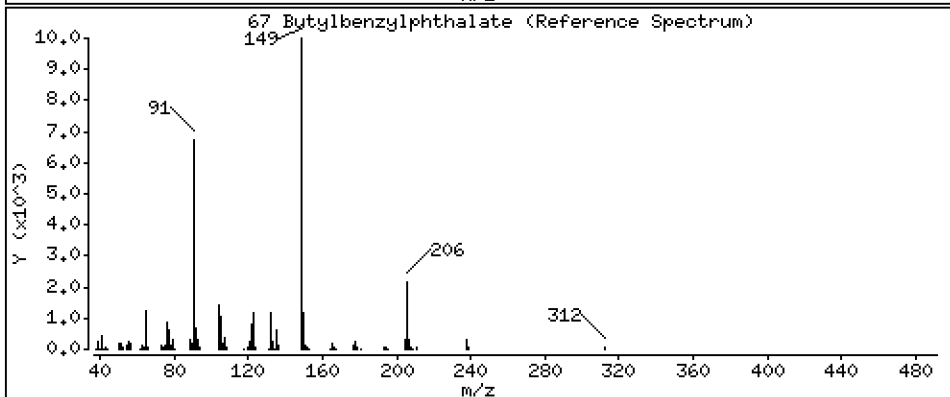
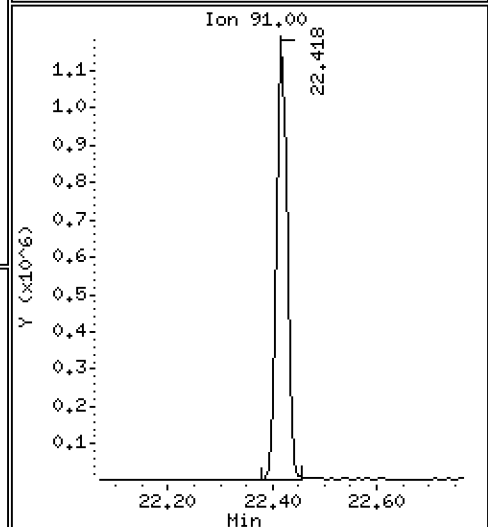
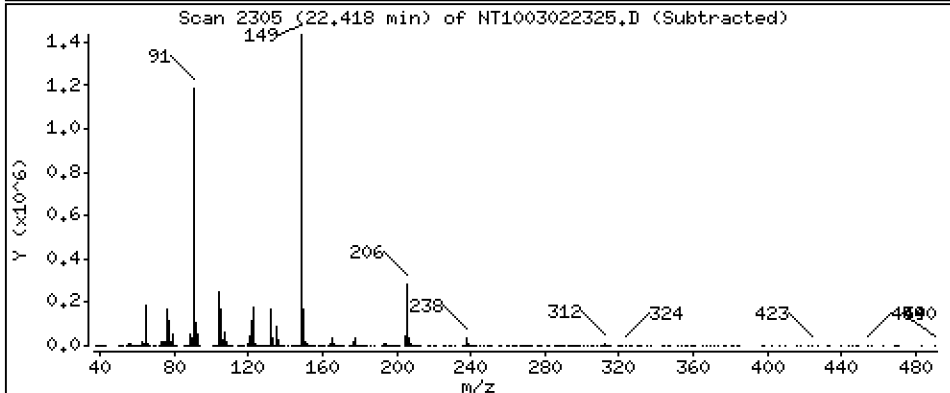
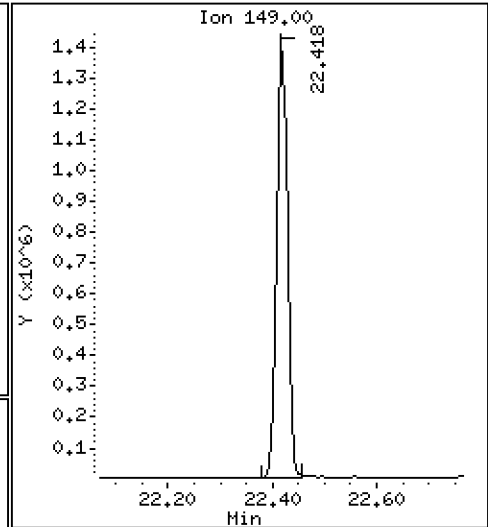
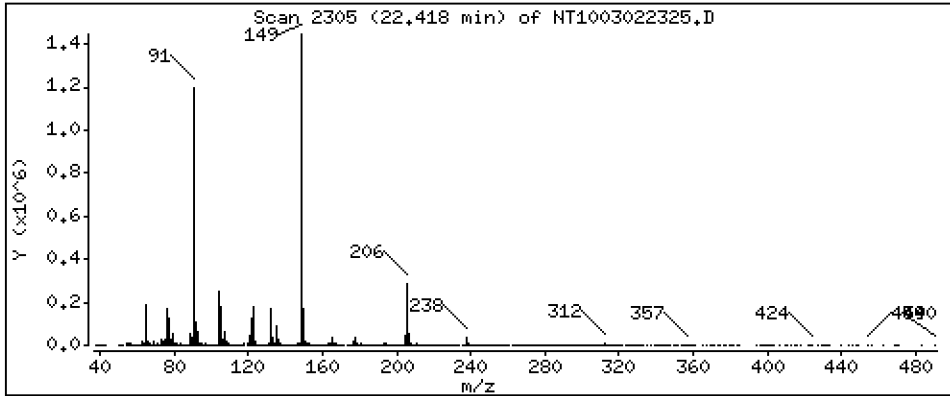
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 3,706 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

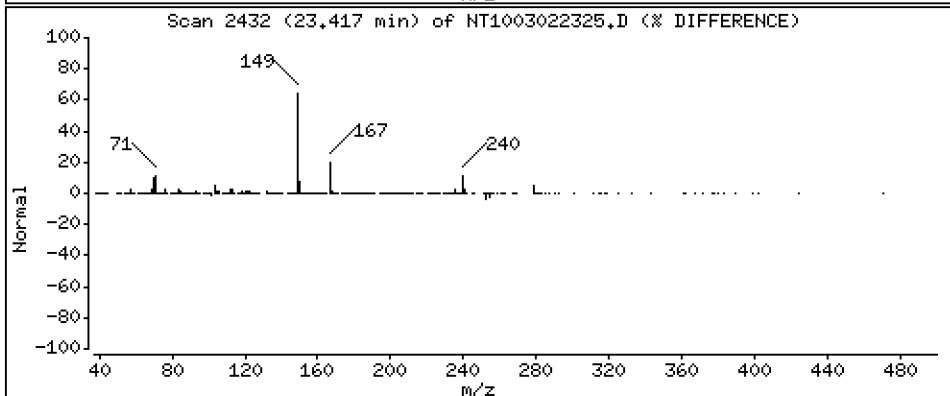
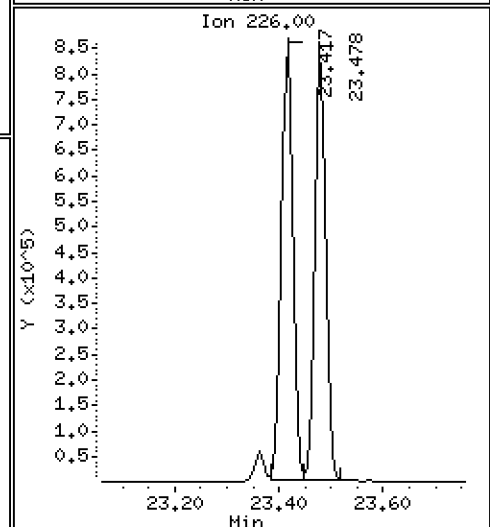
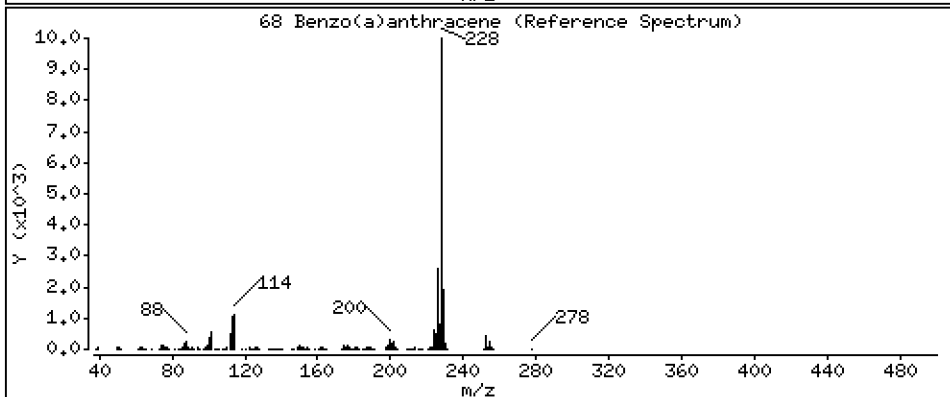
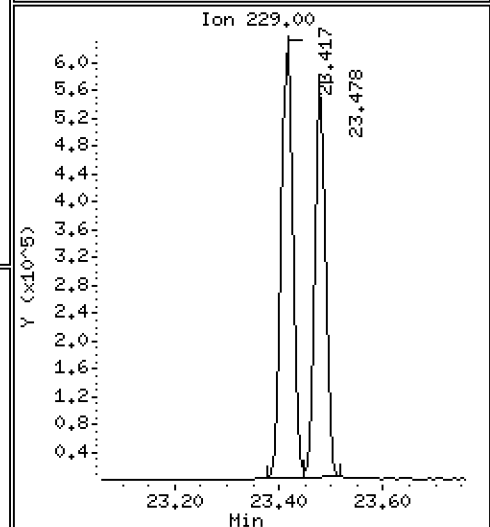
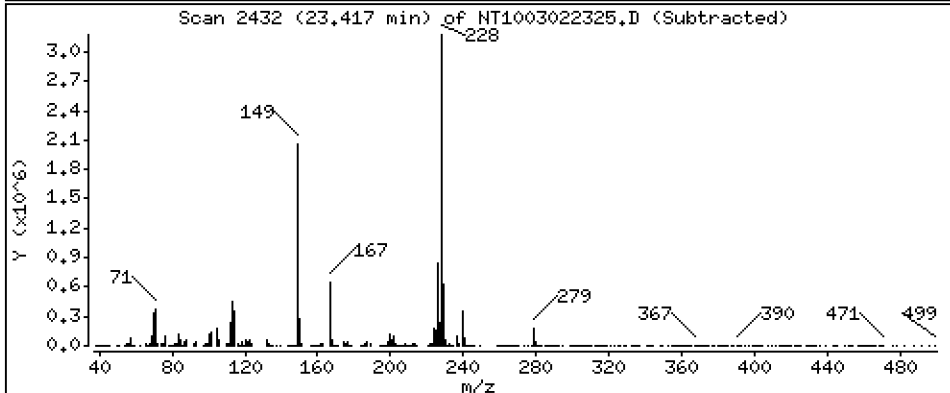
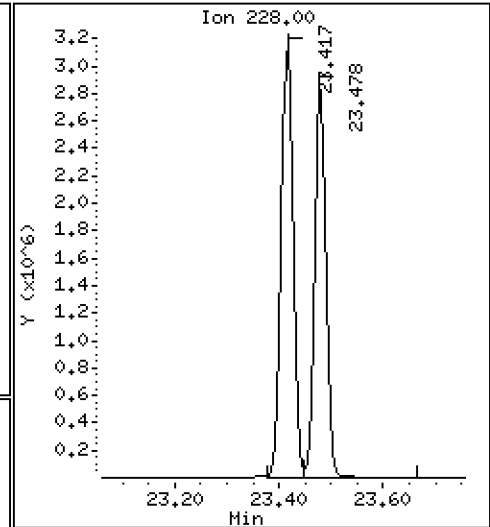
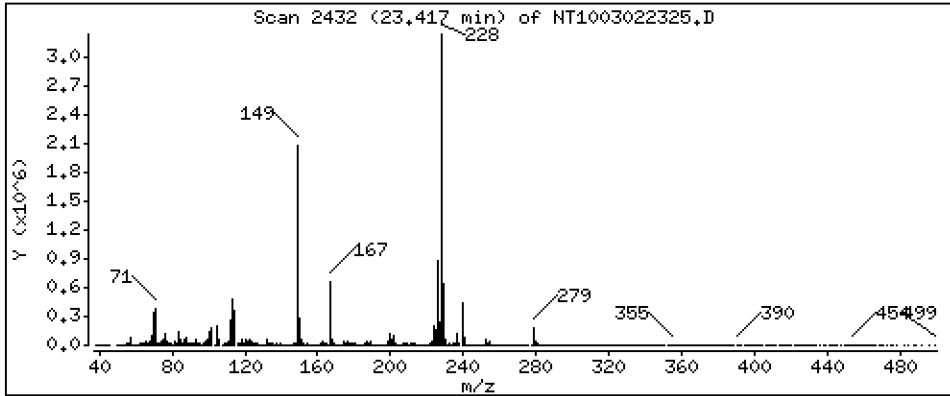
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,965 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

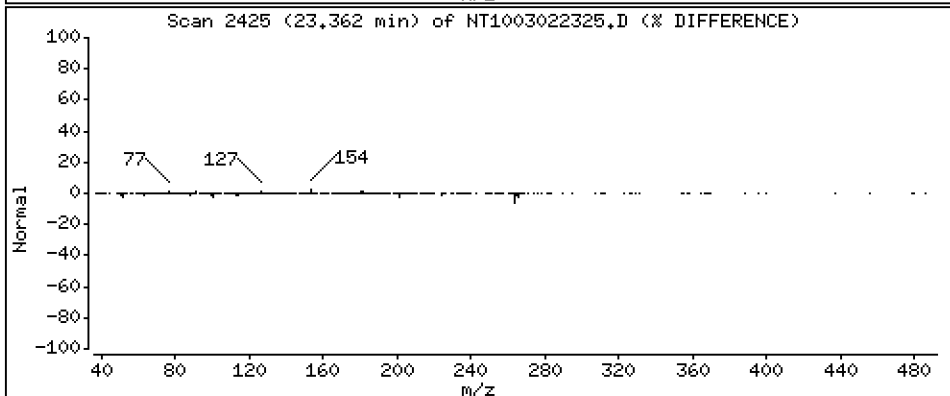
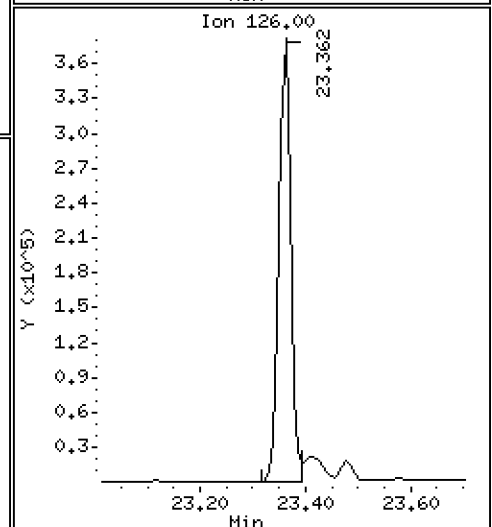
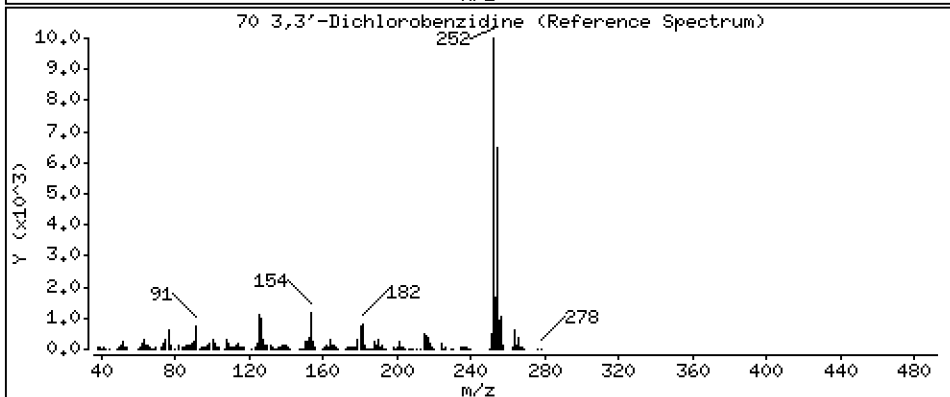
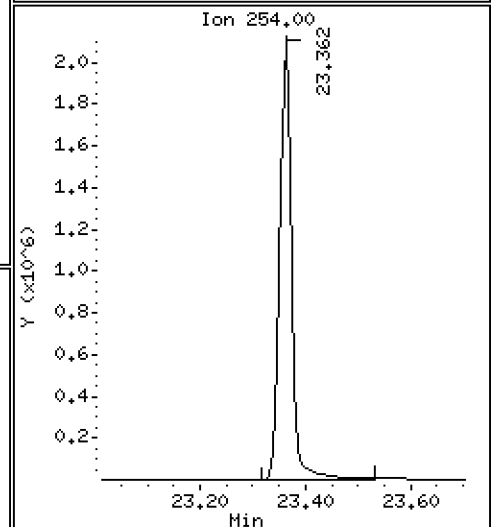
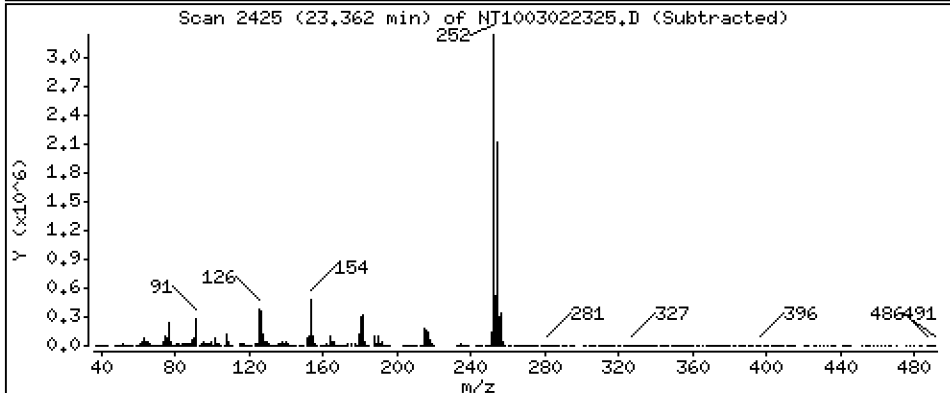
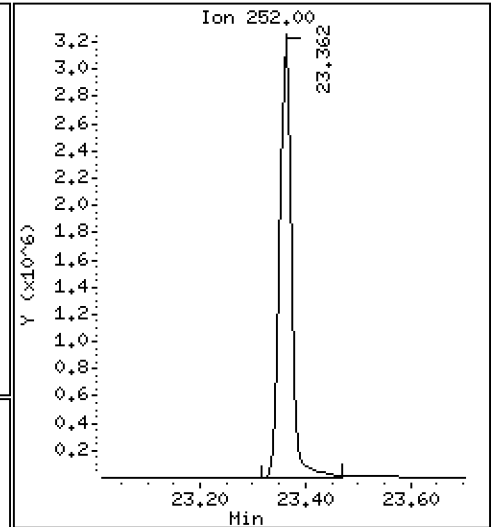
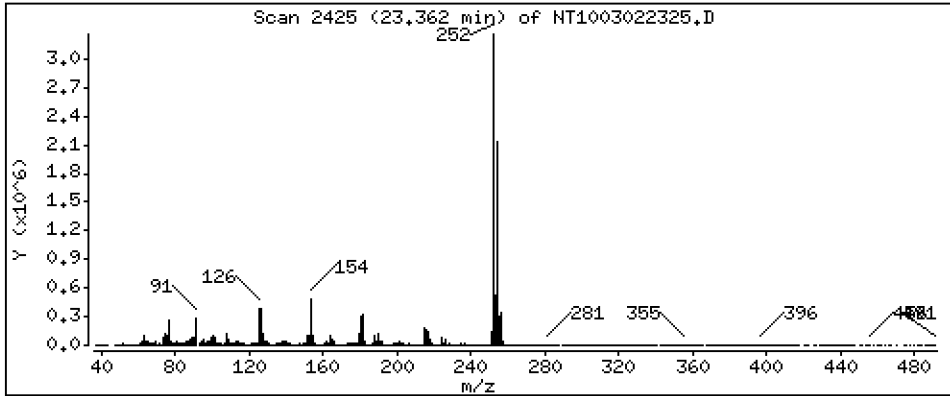
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 11,02 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

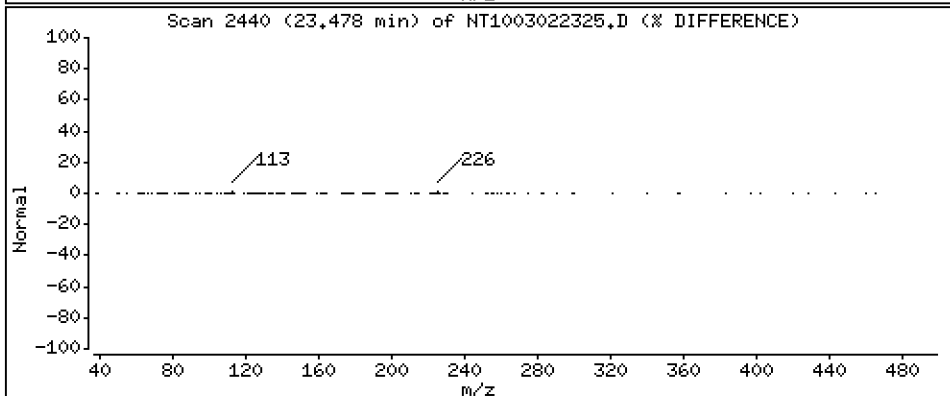
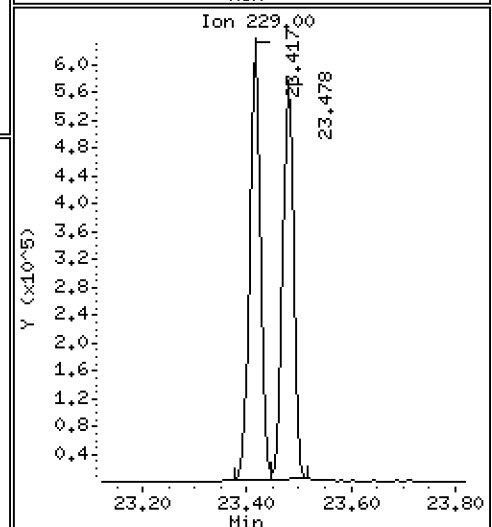
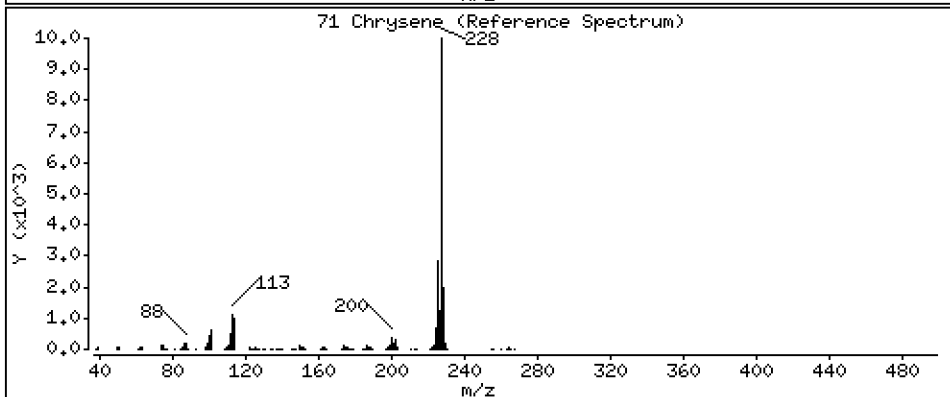
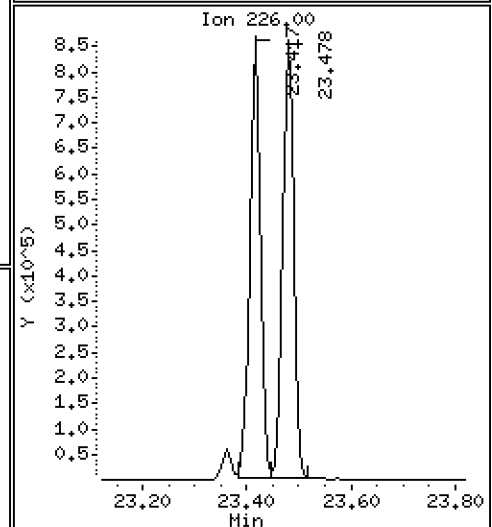
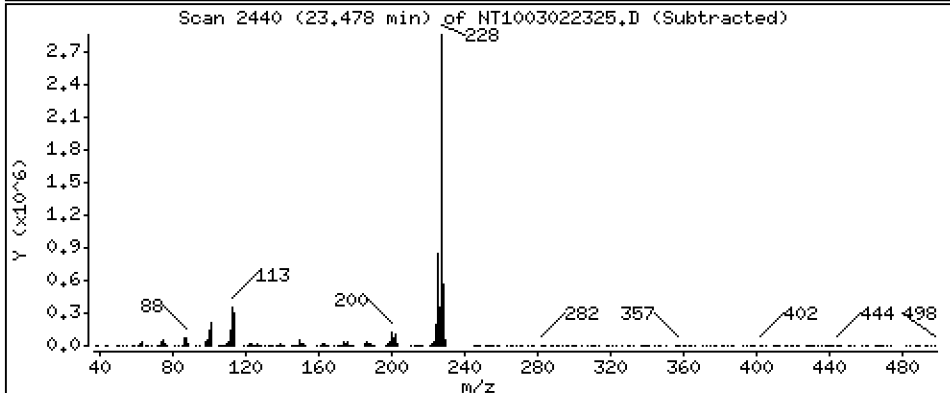
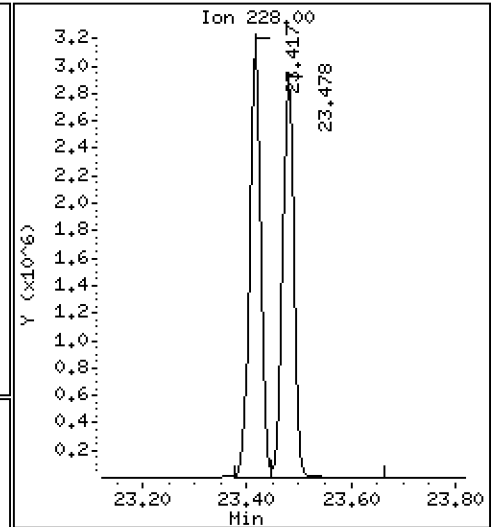
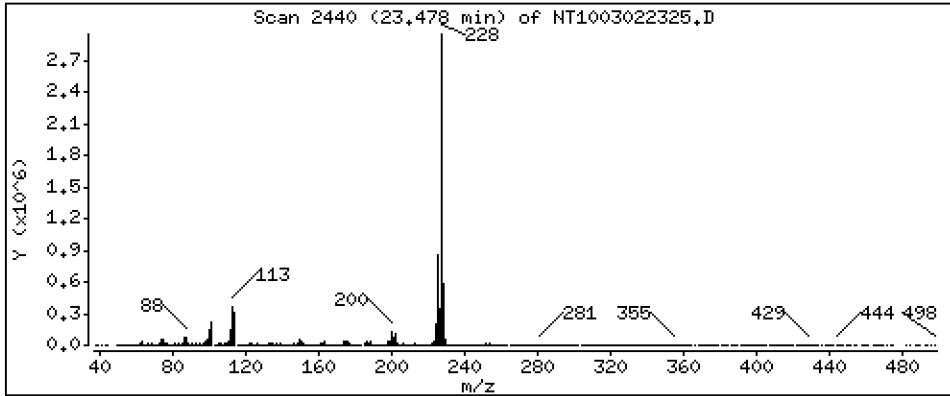
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 5,305 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

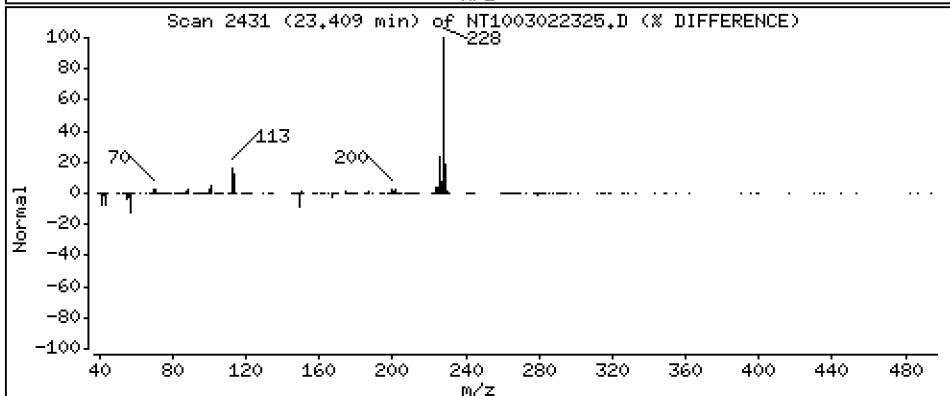
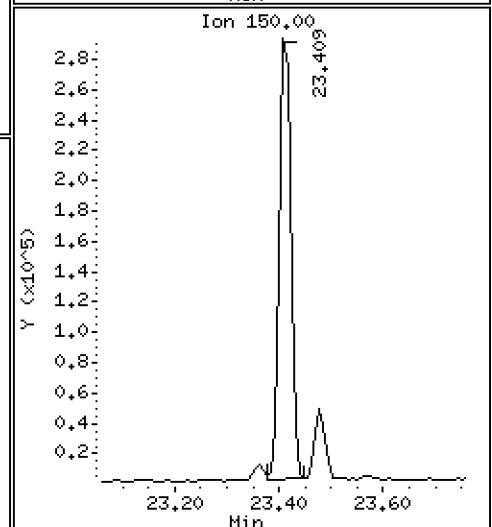
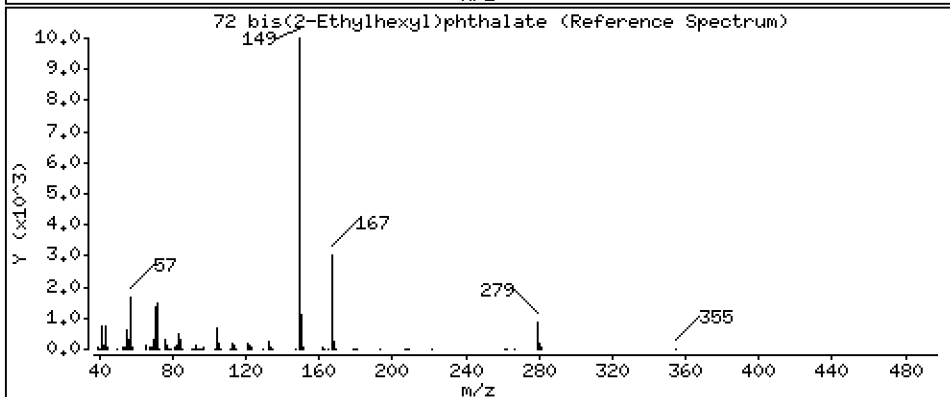
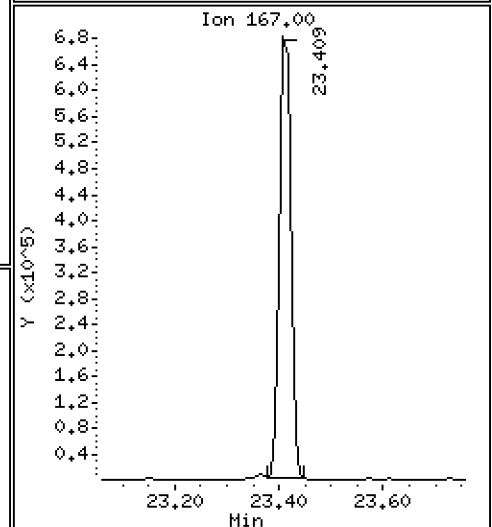
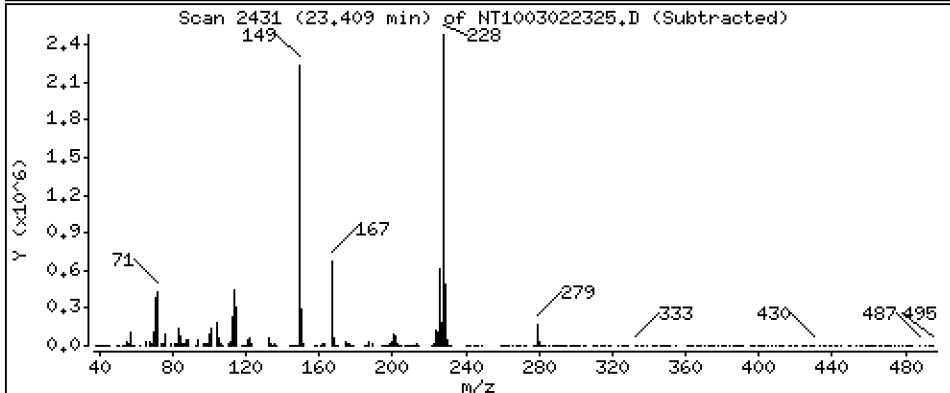
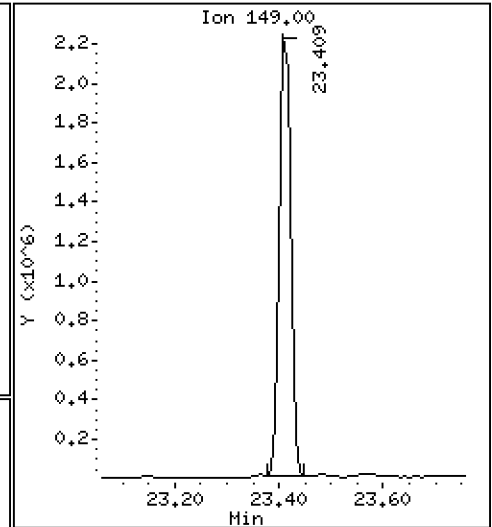
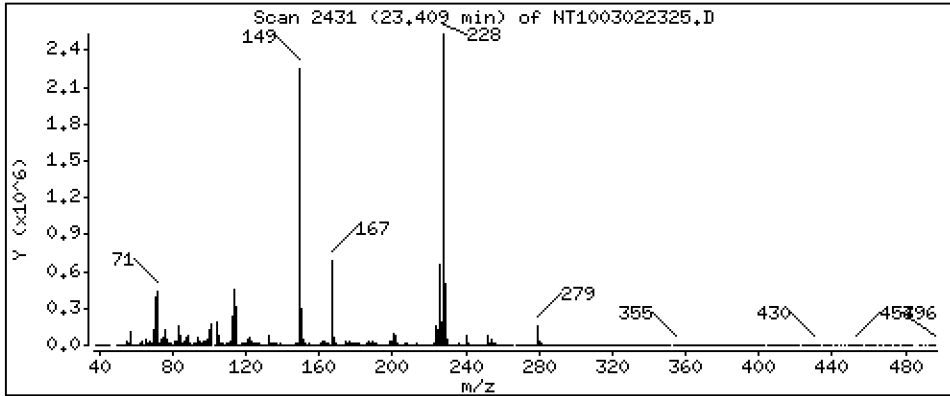
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,437 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

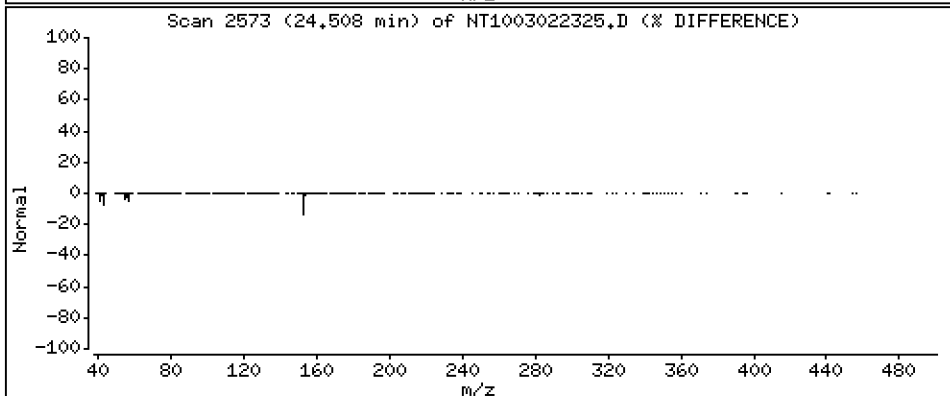
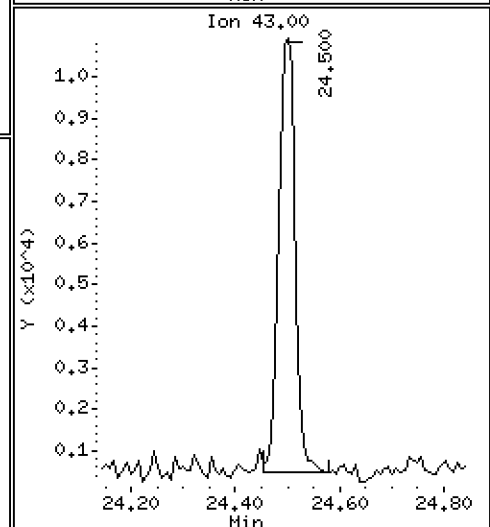
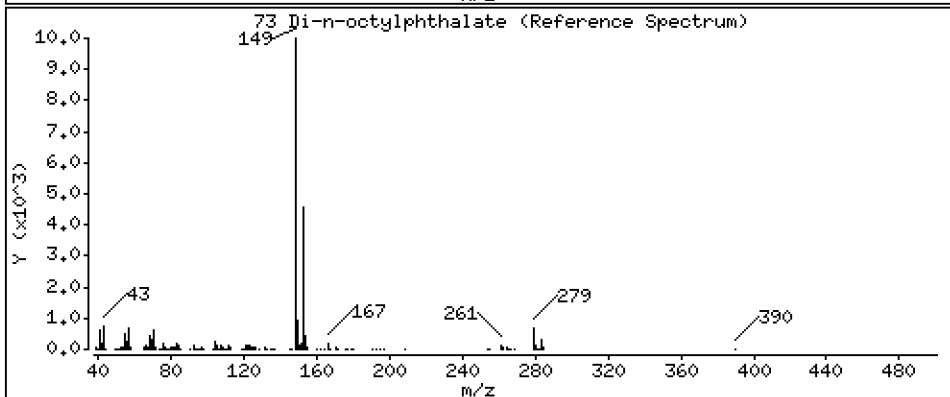
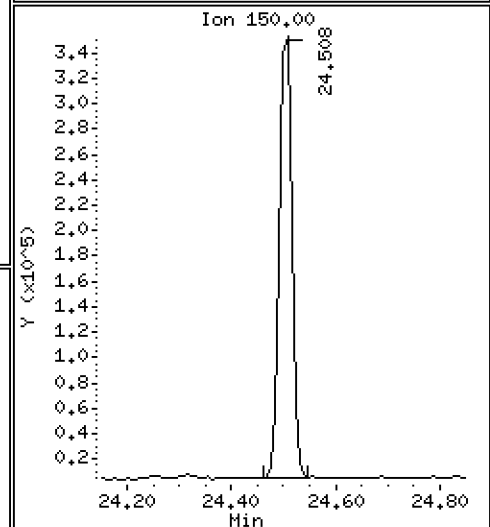
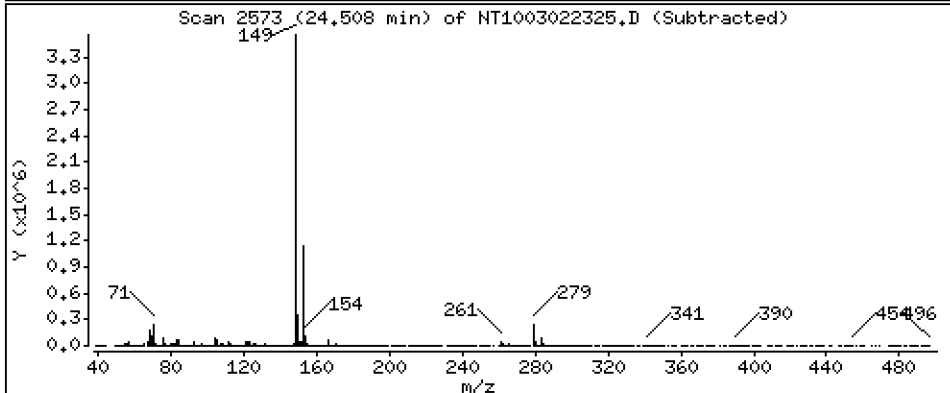
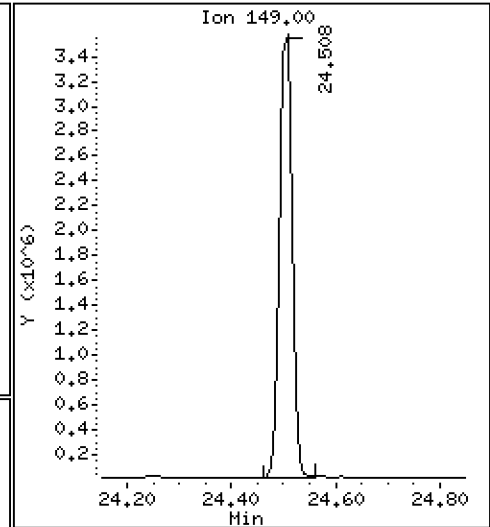
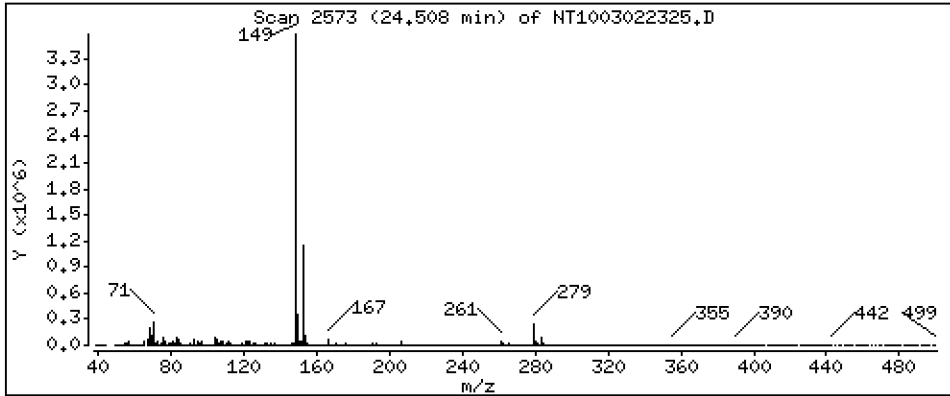
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,099 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

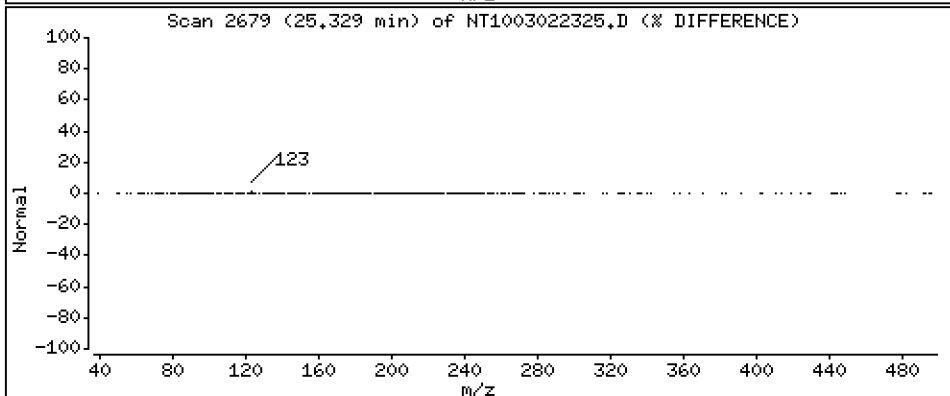
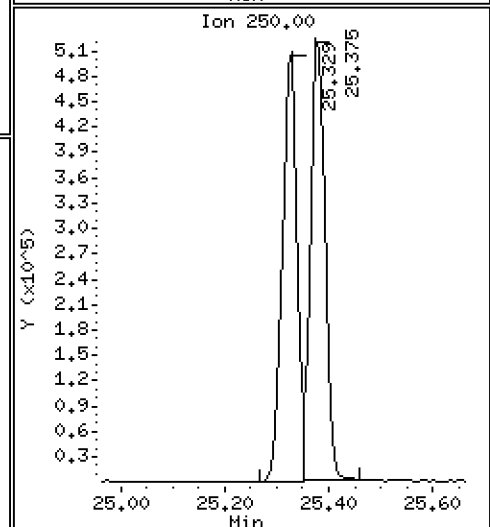
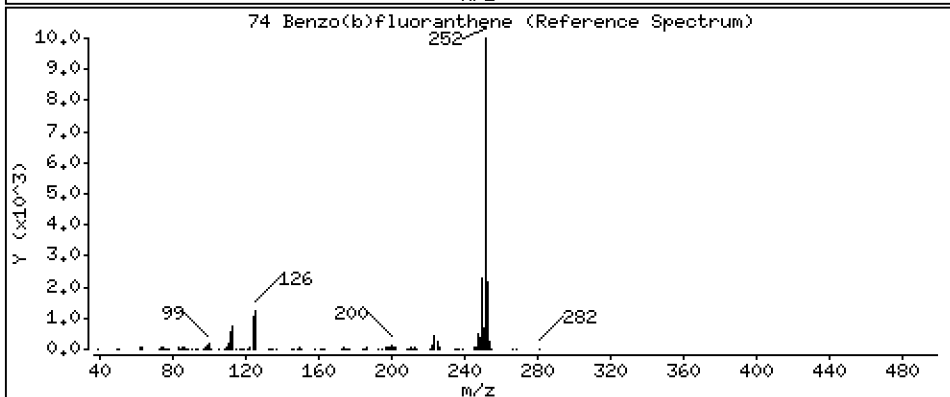
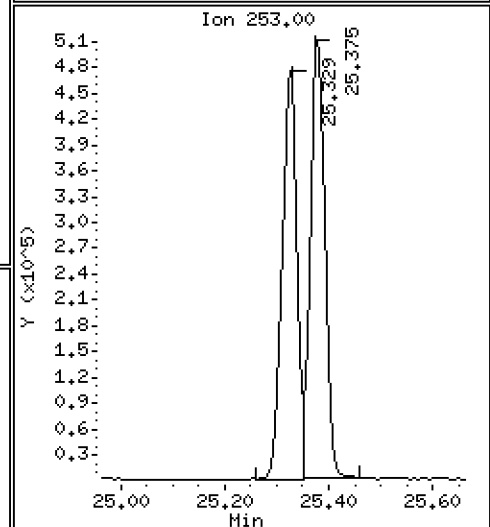
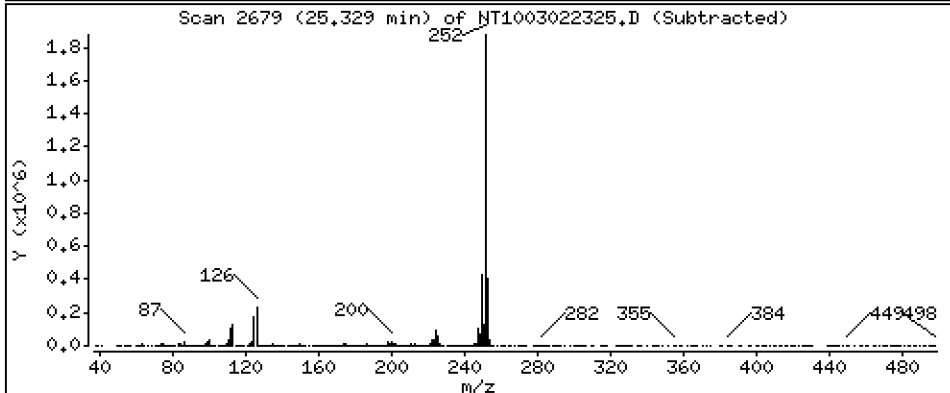
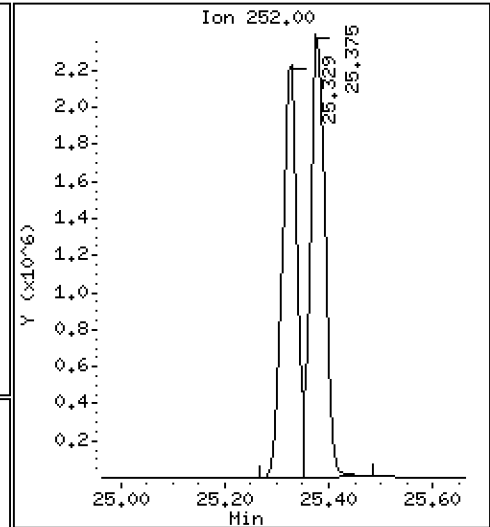
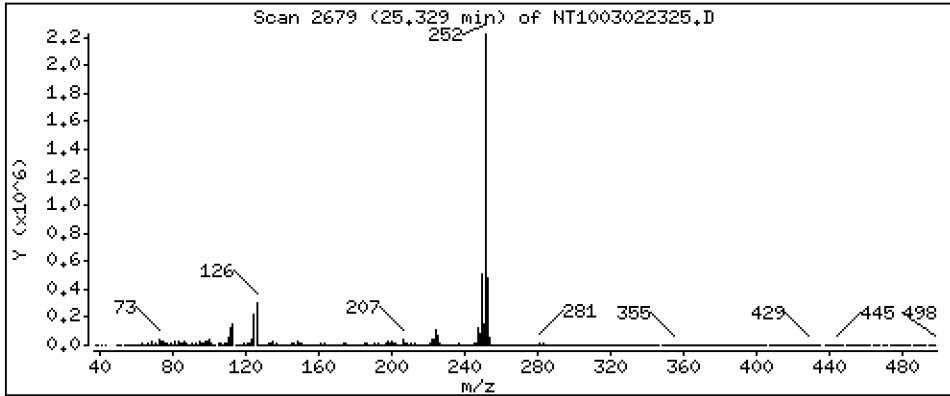
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,389 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

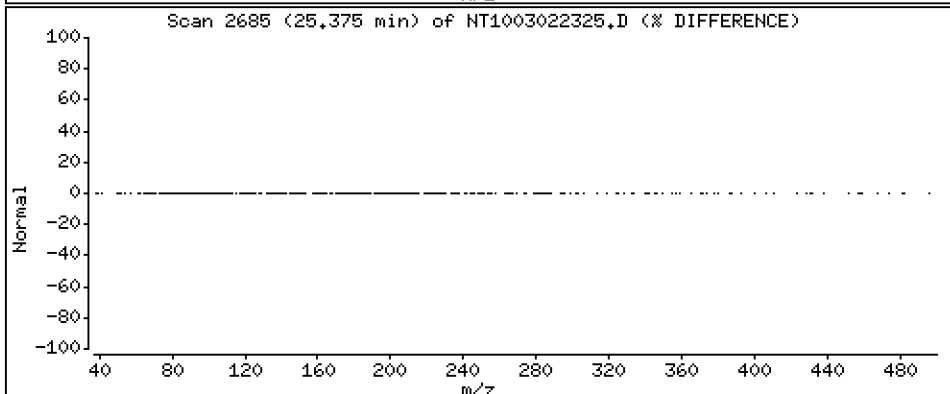
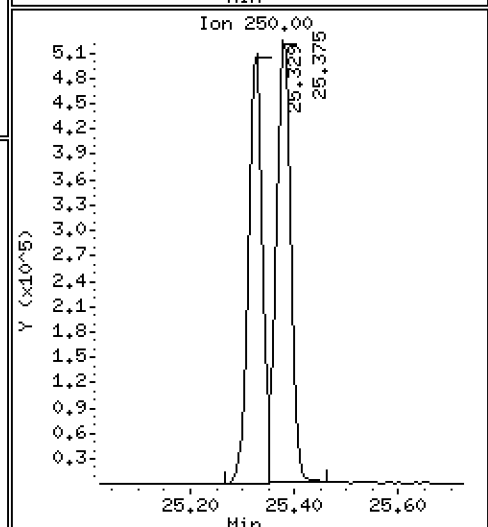
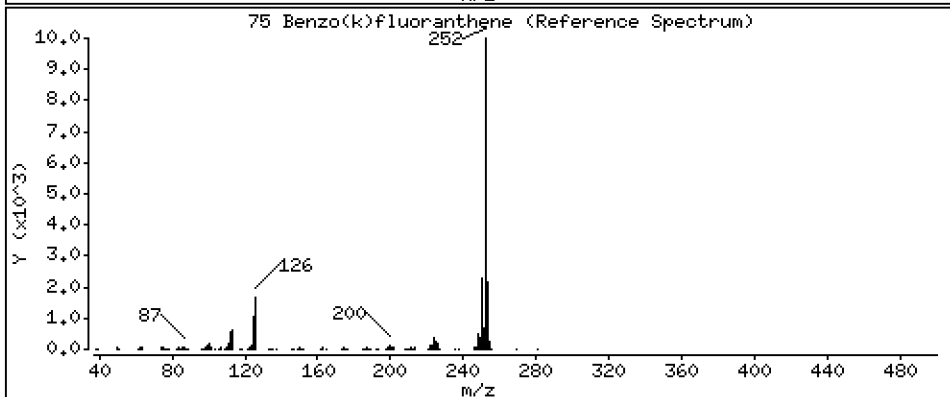
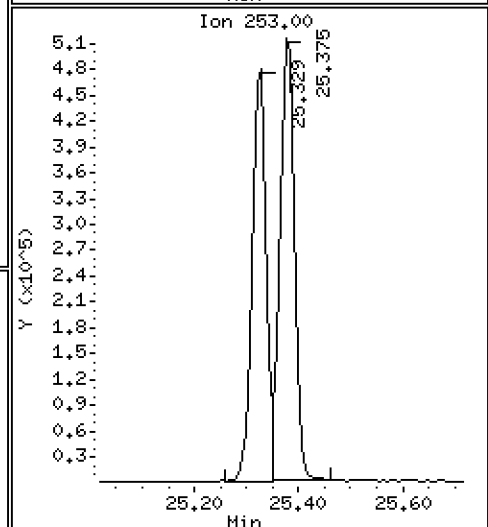
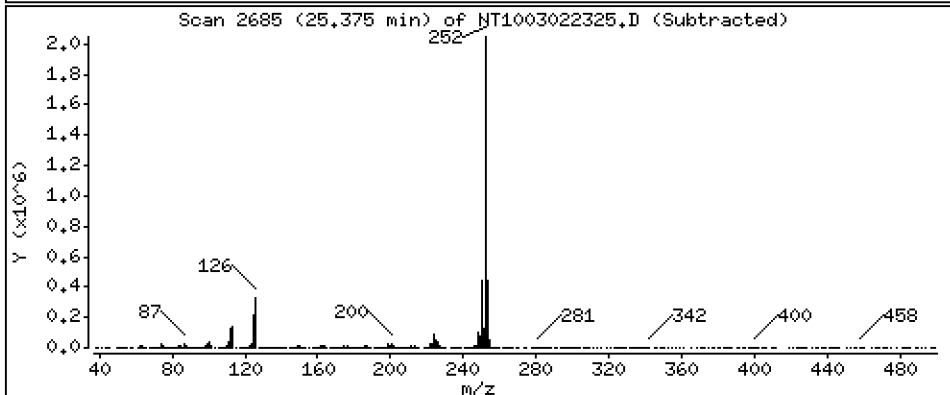
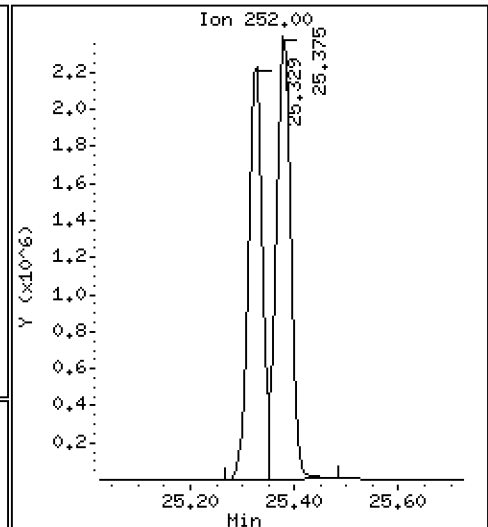
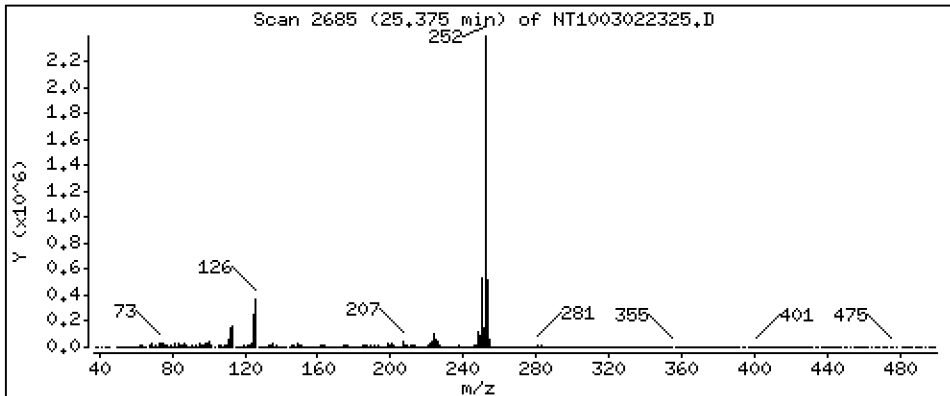
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,667 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

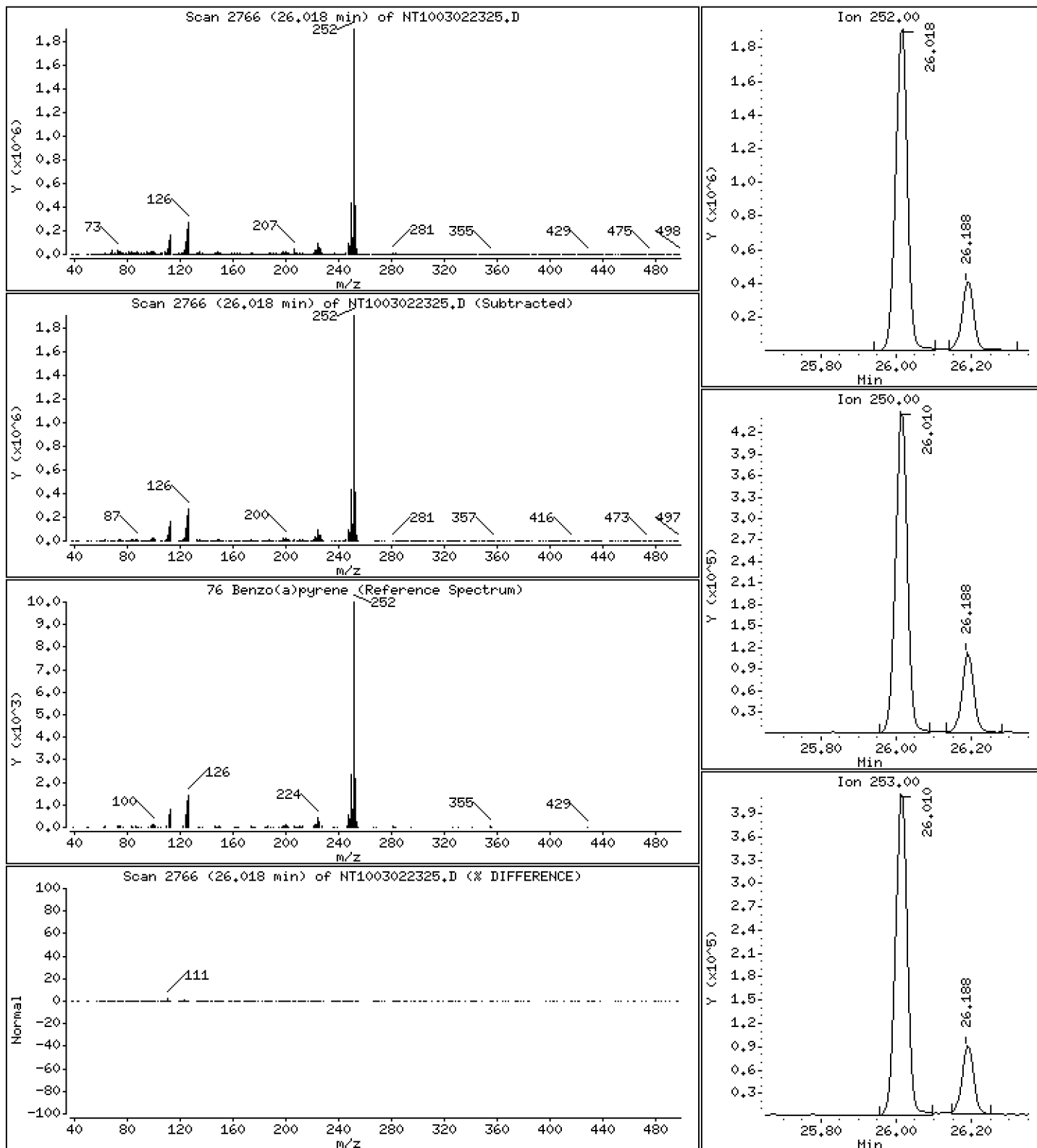
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,504 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

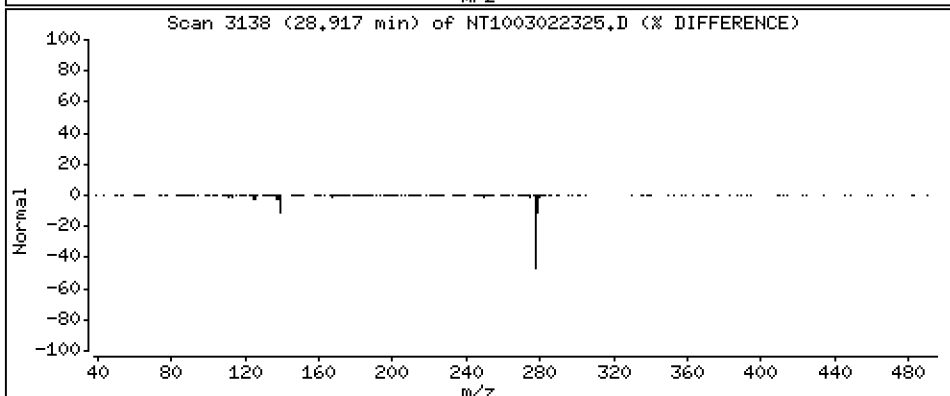
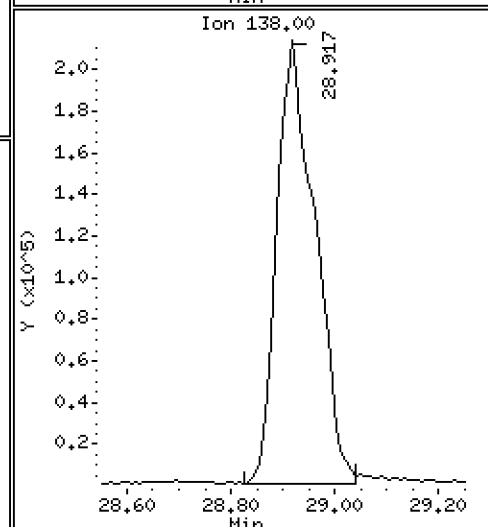
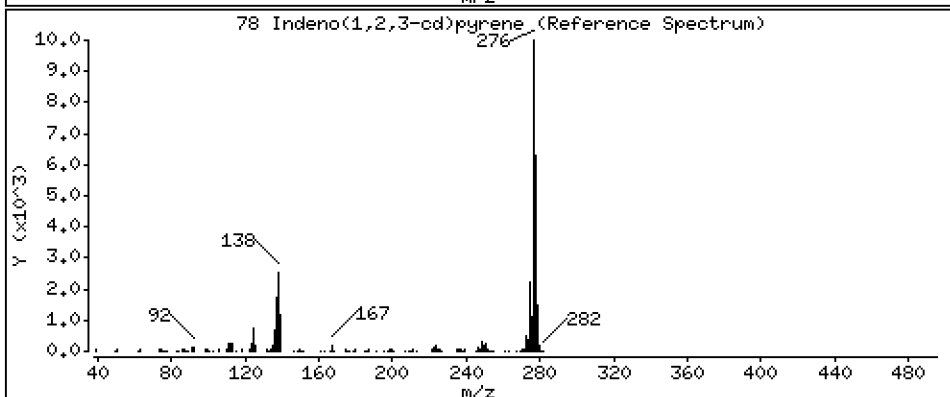
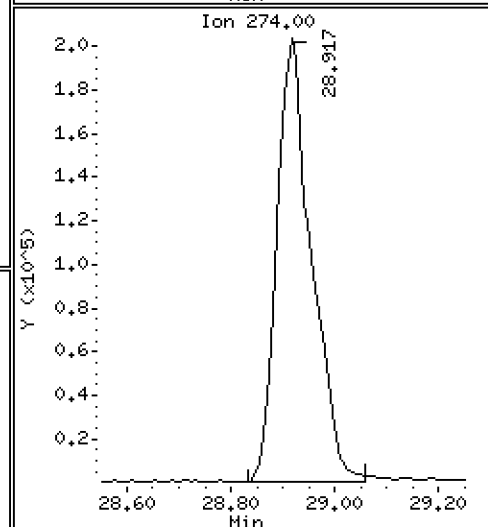
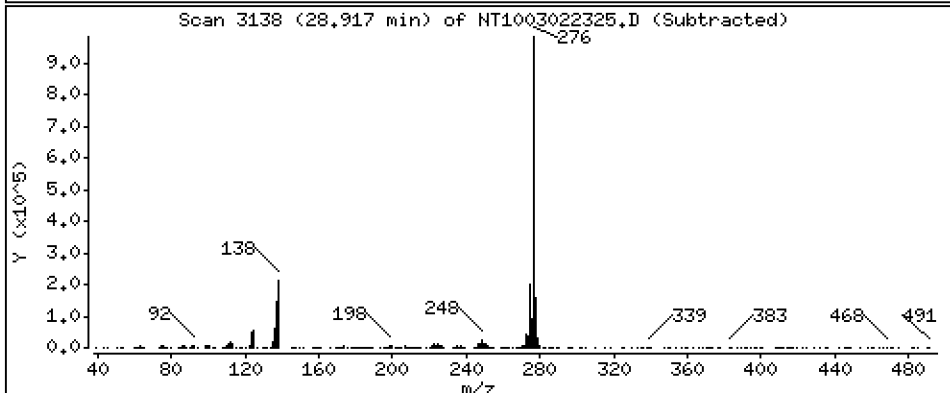
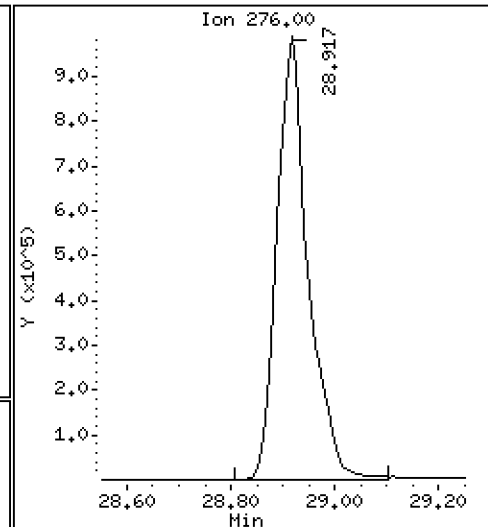
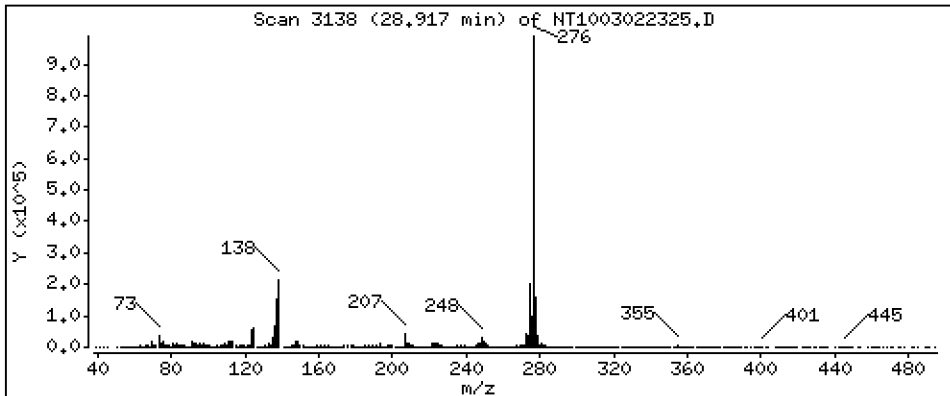
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,970 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

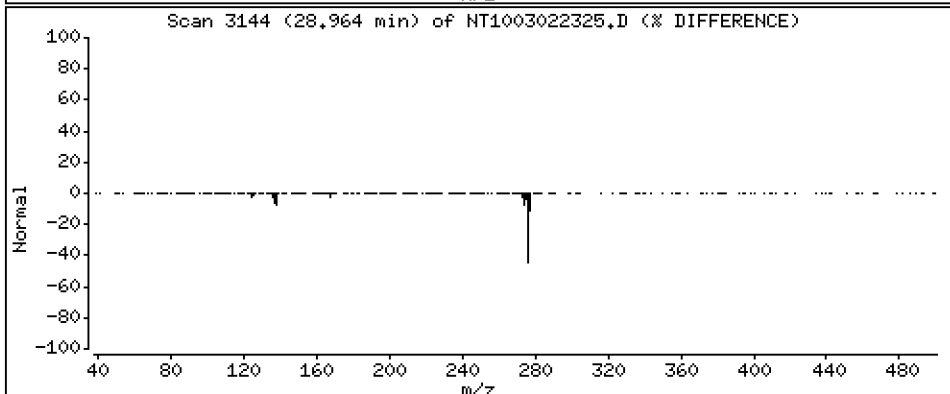
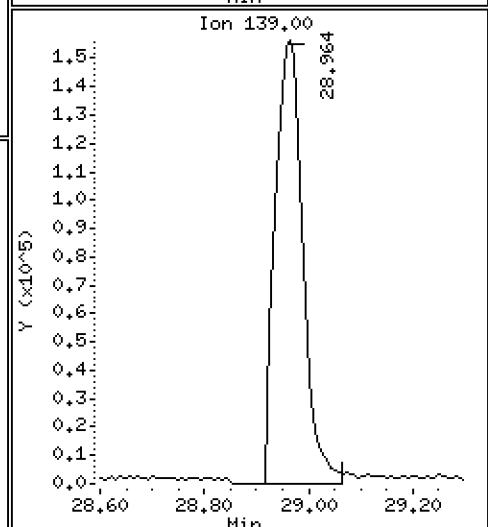
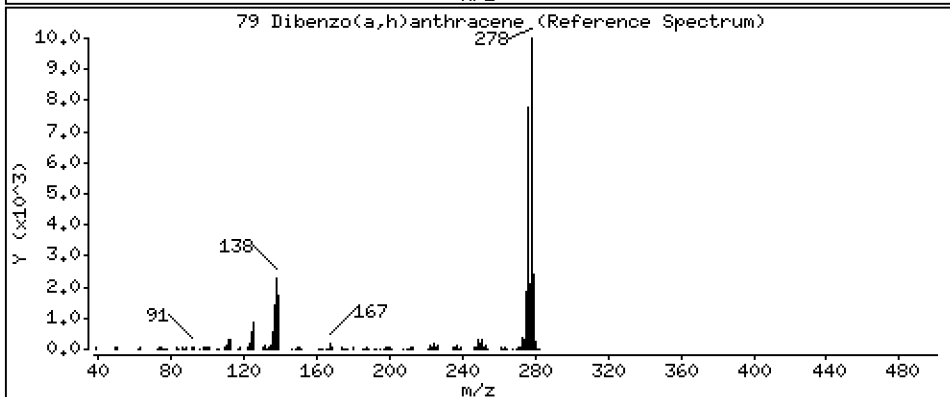
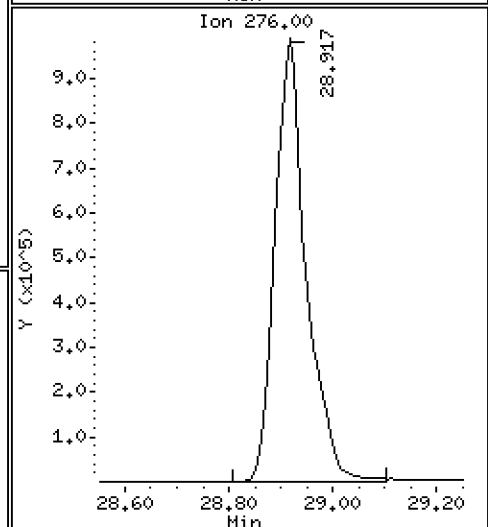
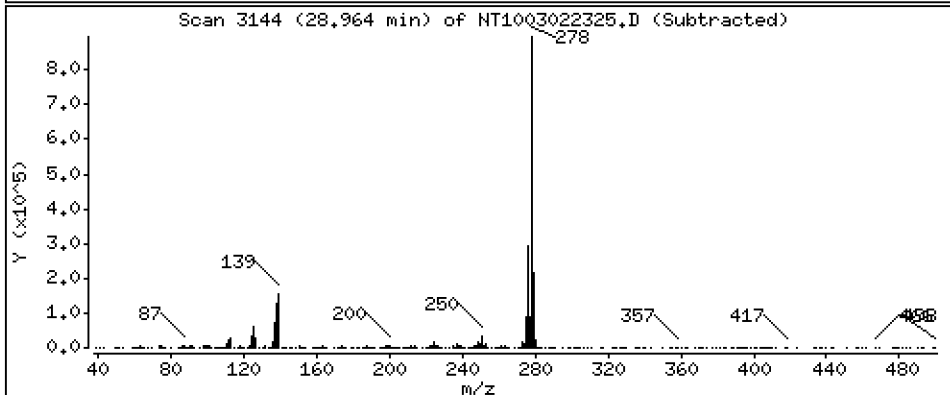
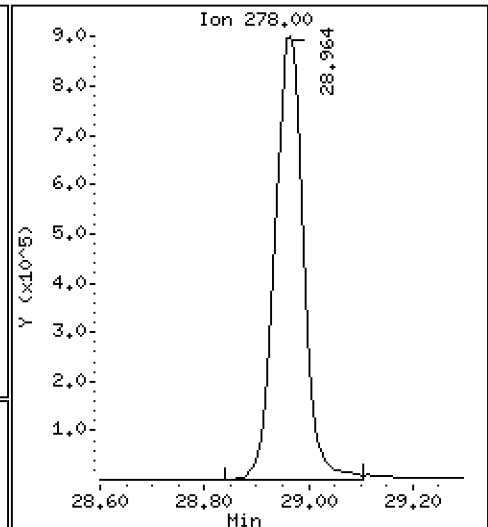
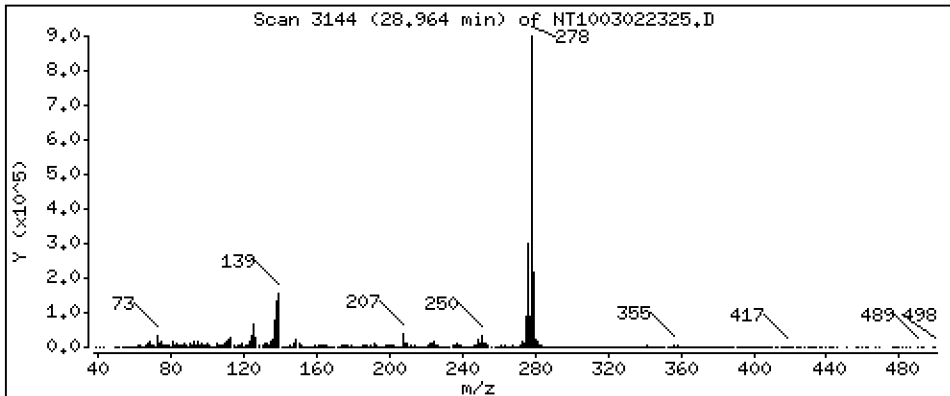
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,348 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

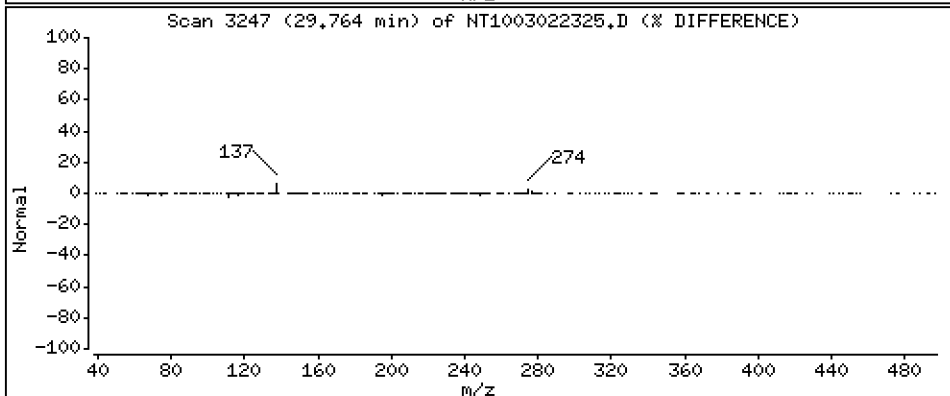
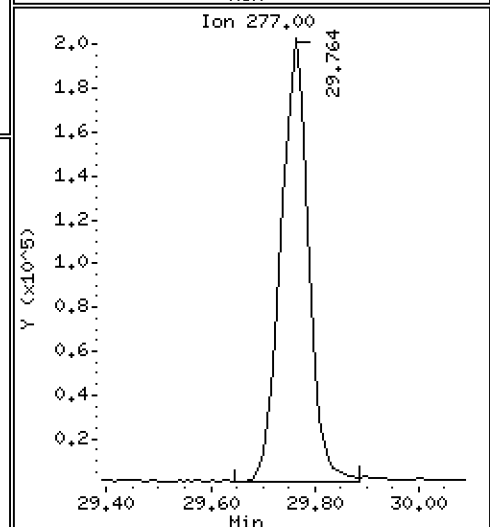
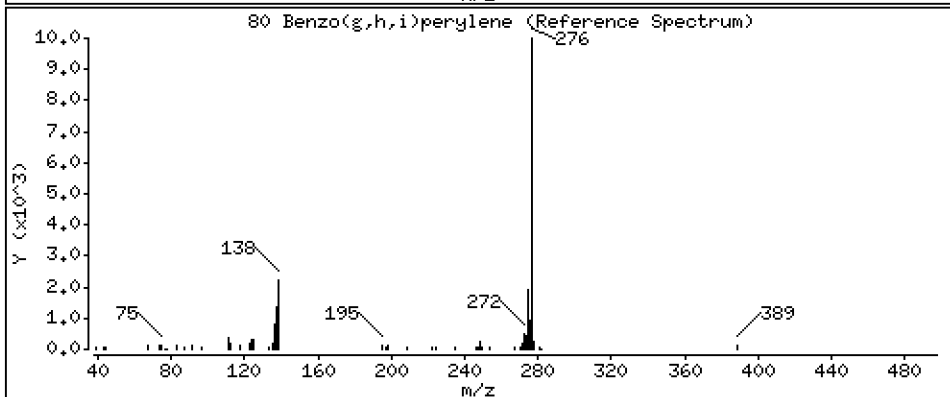
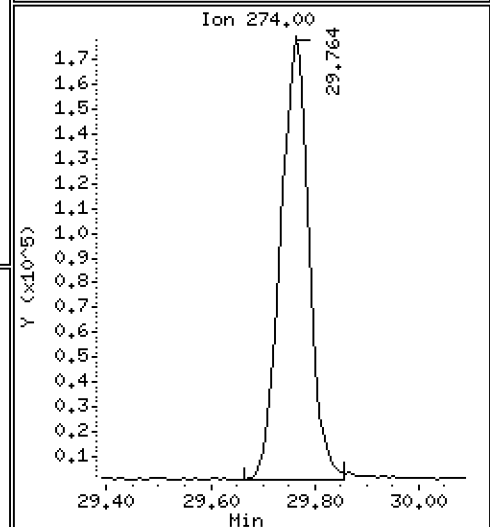
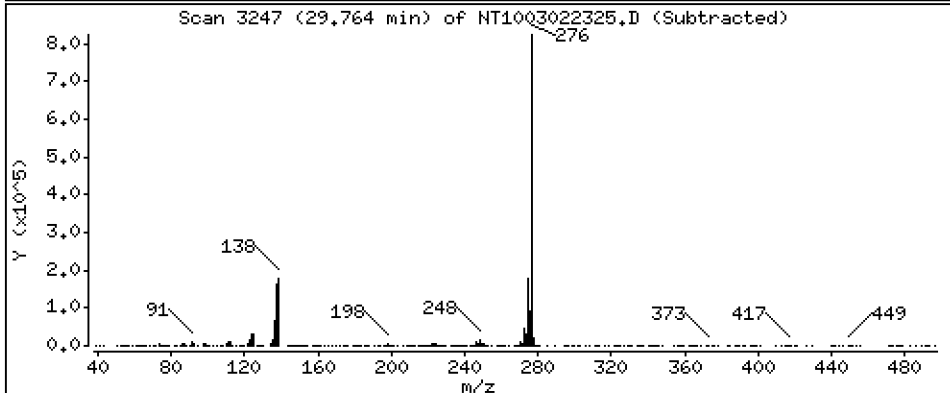
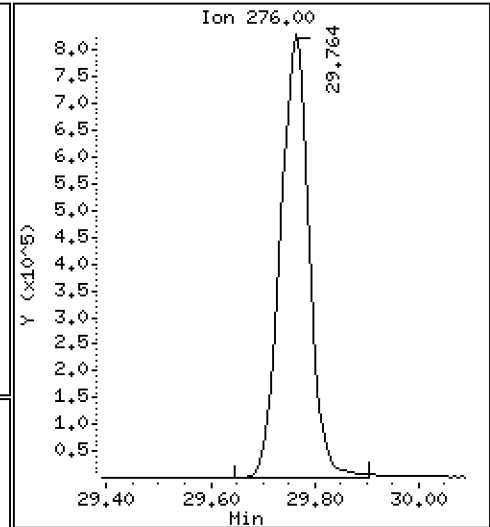
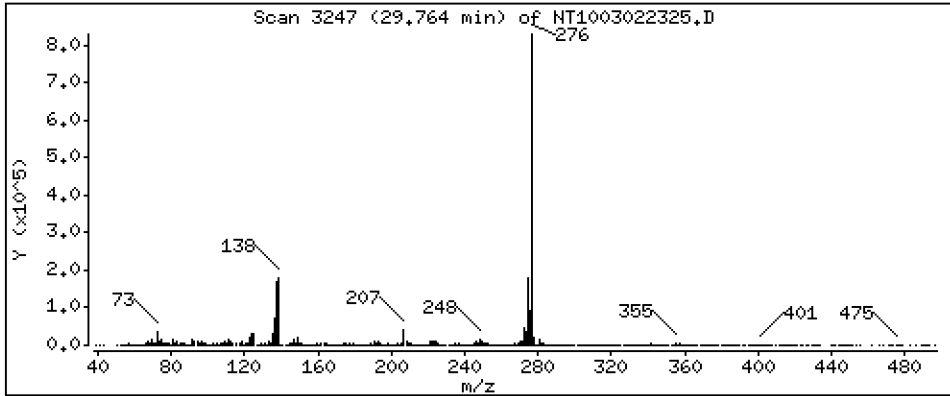
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 3,860 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

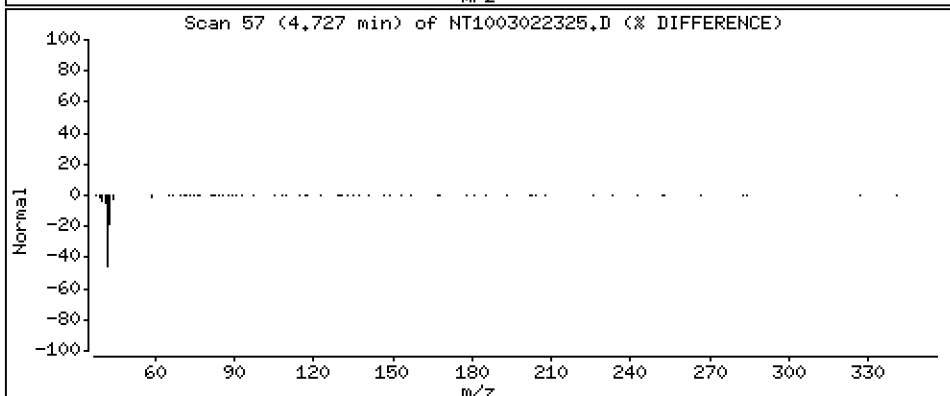
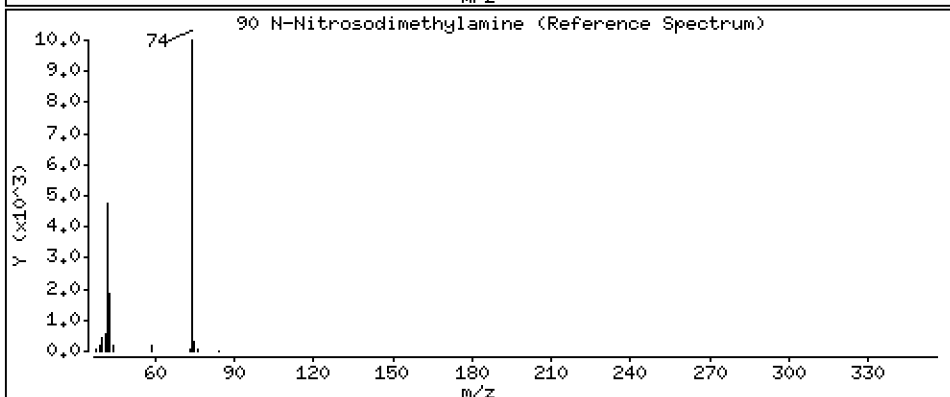
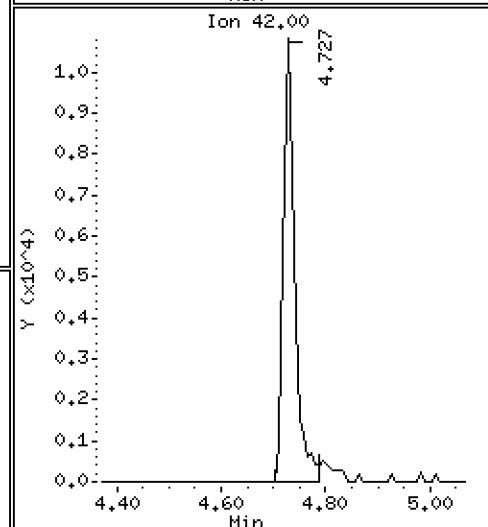
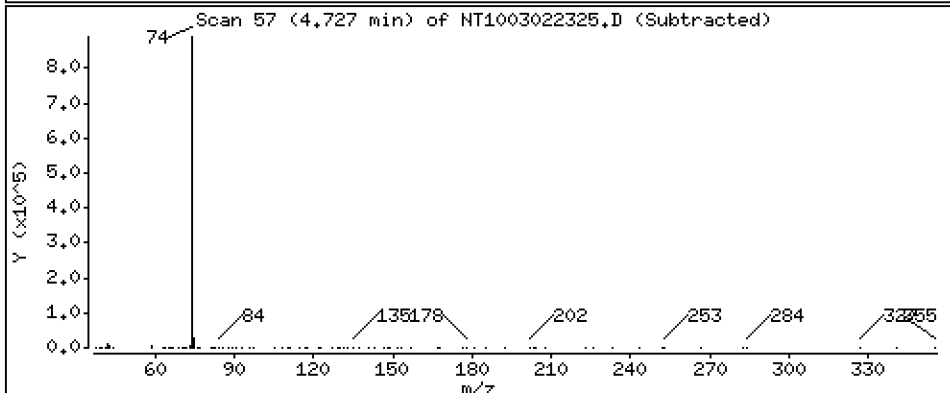
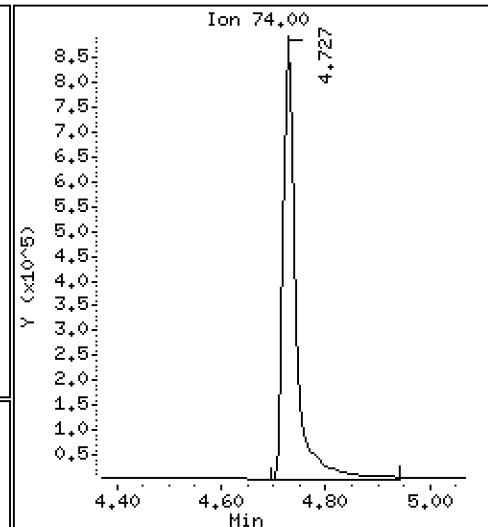
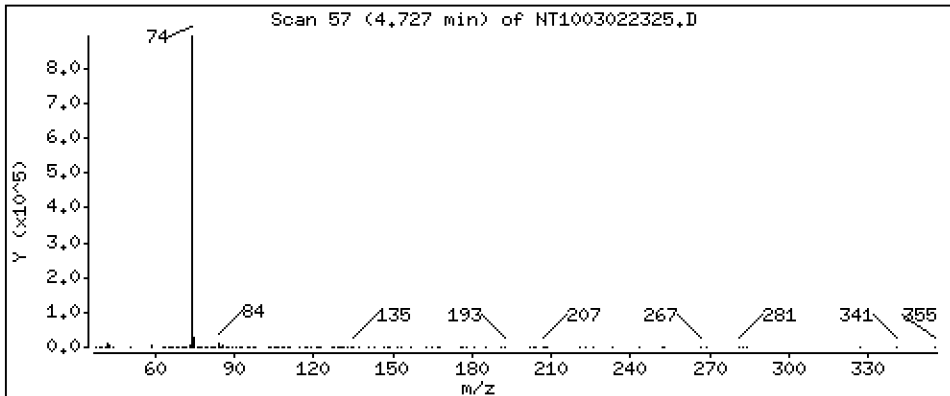
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 10,65 ug/mL





Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

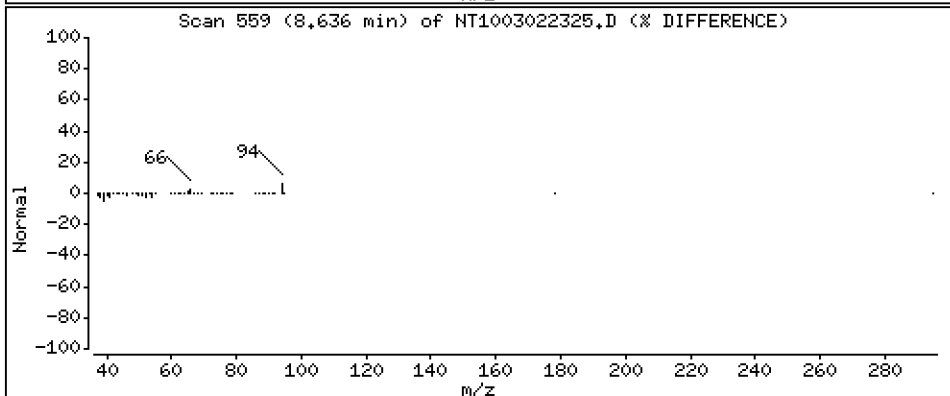
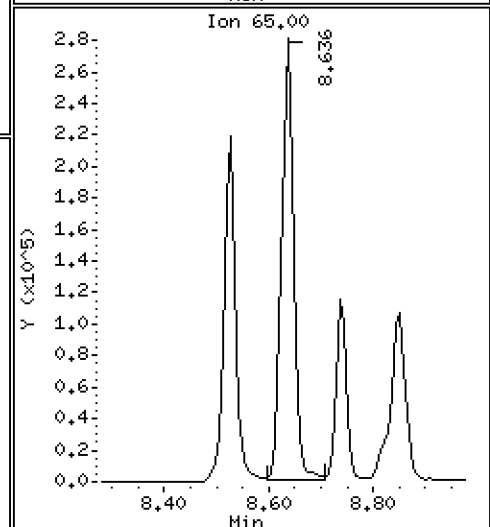
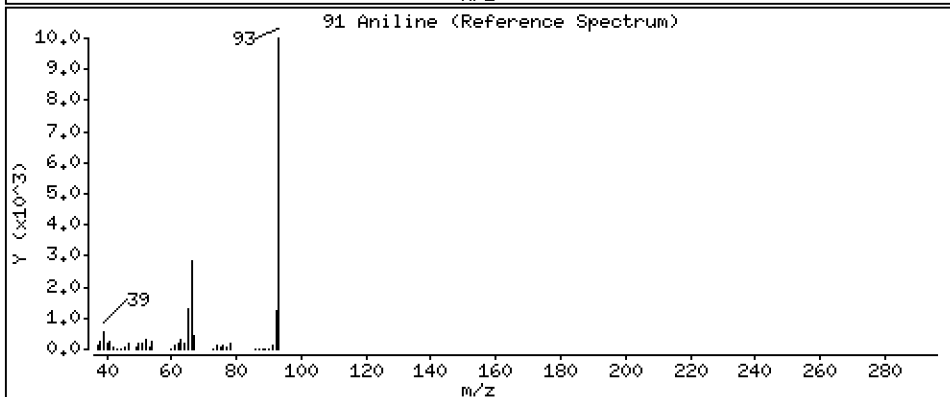
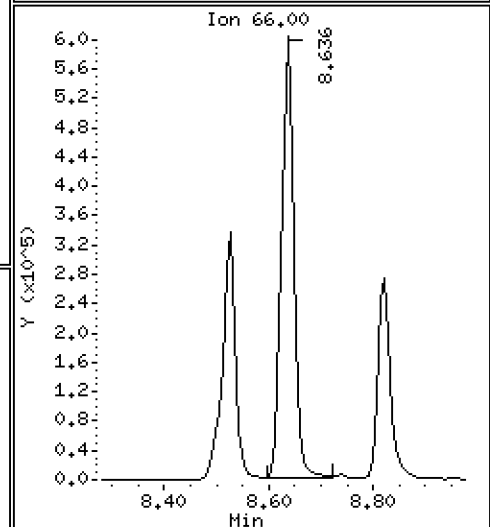
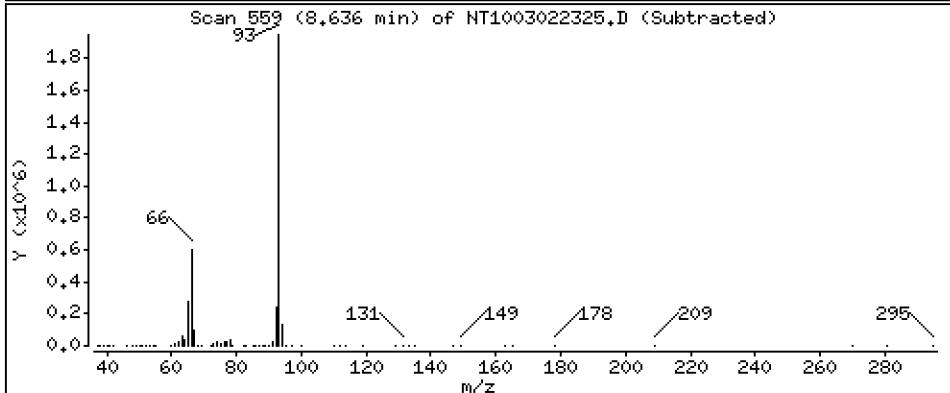
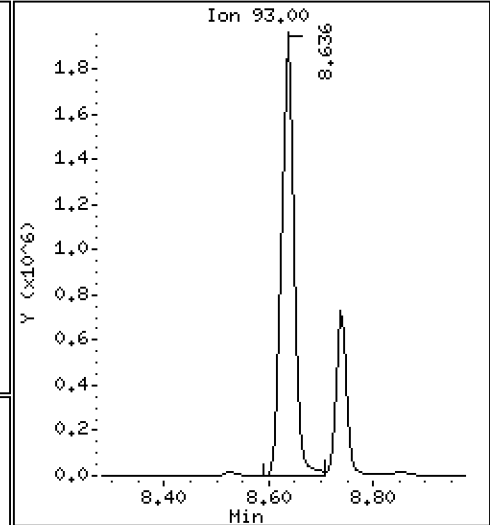
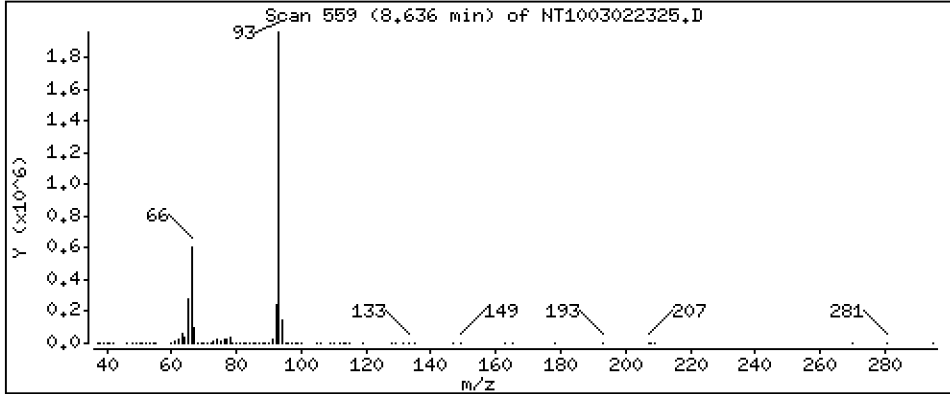
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 10,43 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

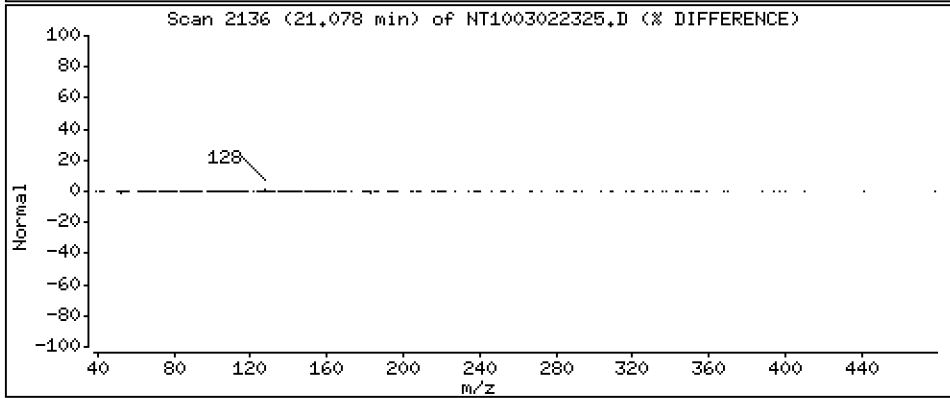
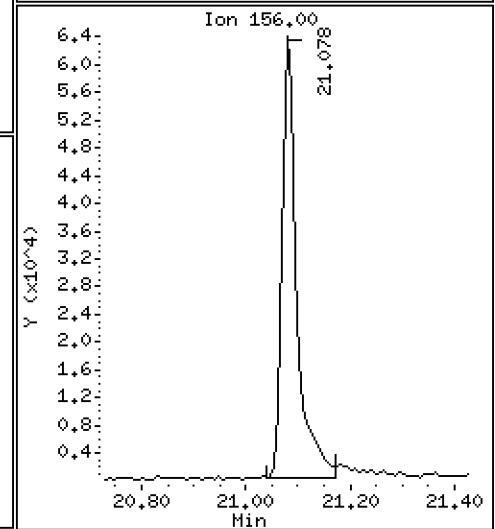
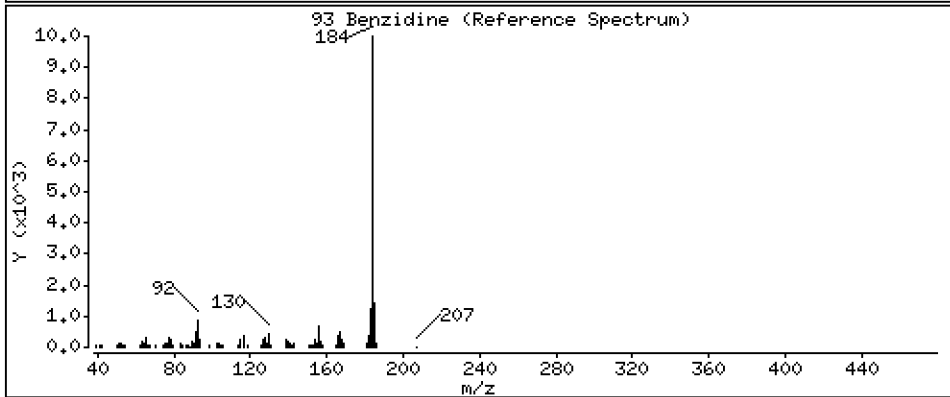
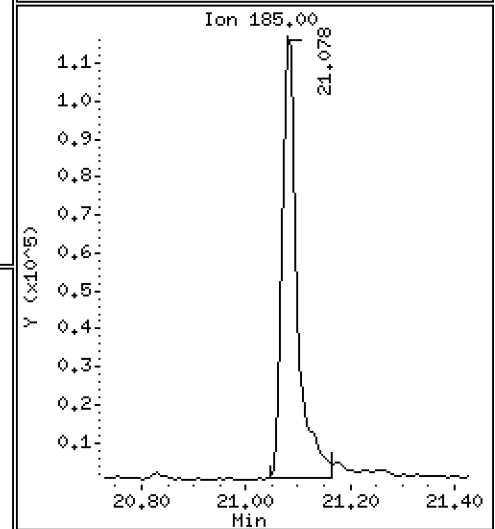
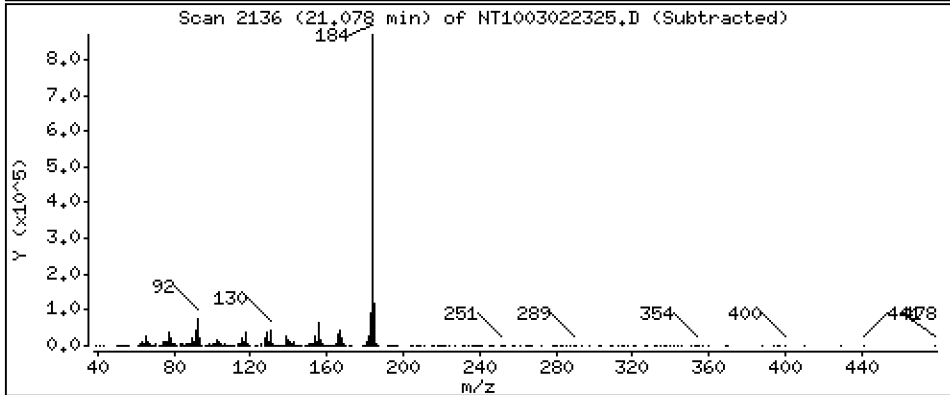
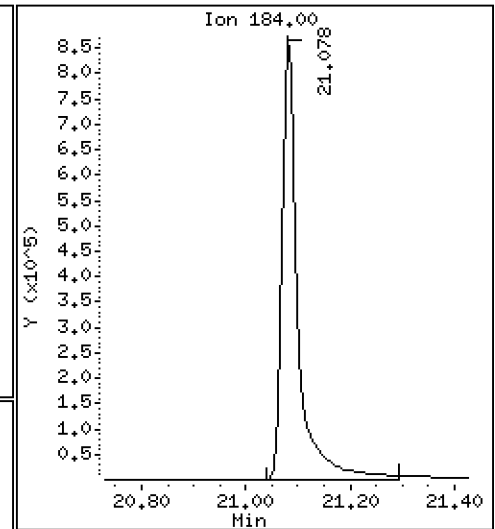
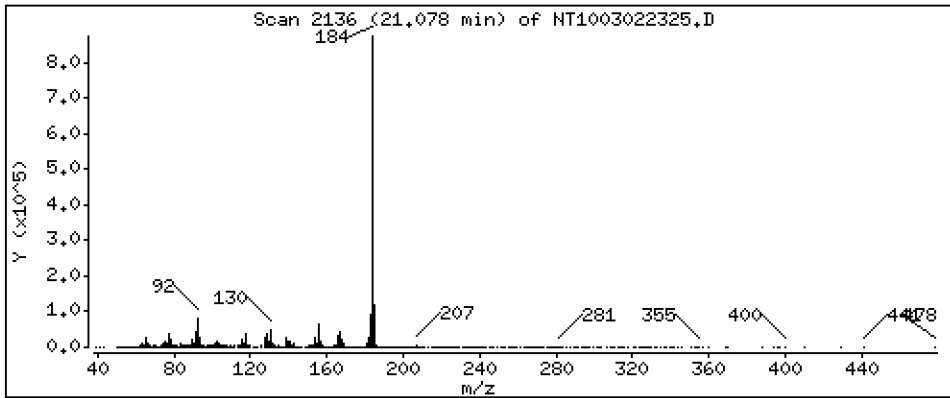
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 4,272 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

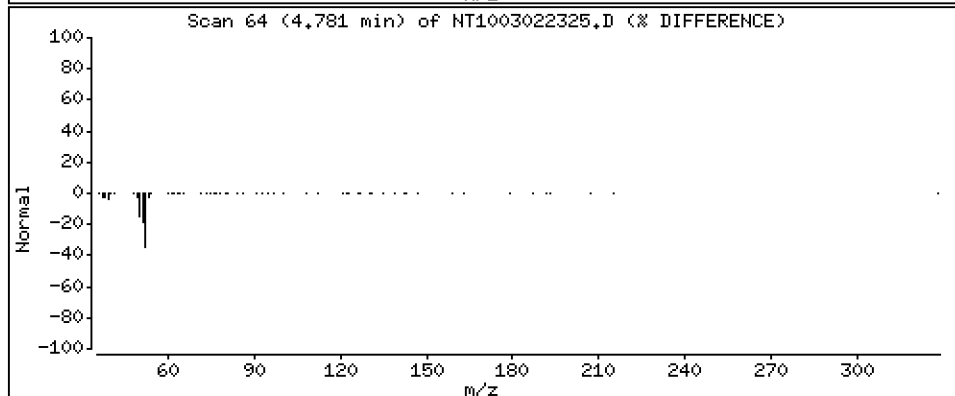
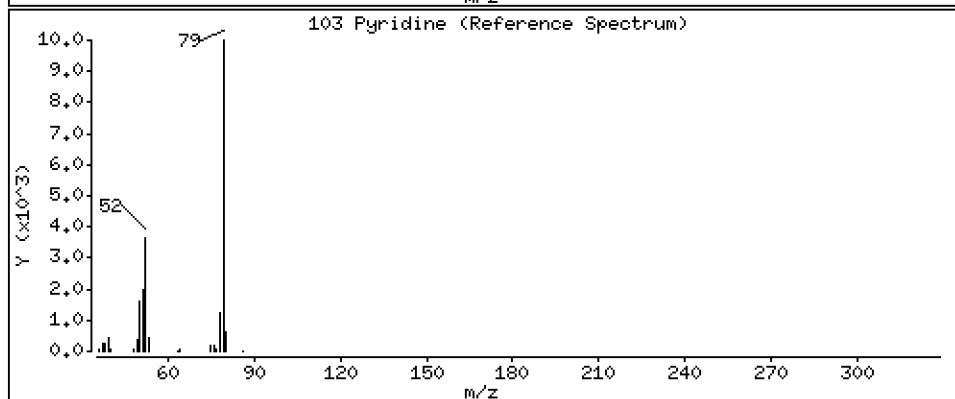
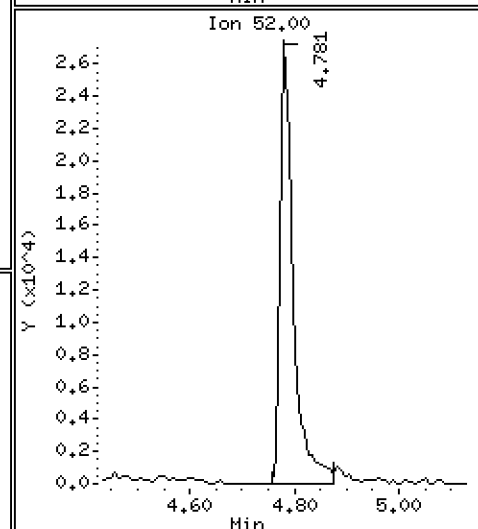
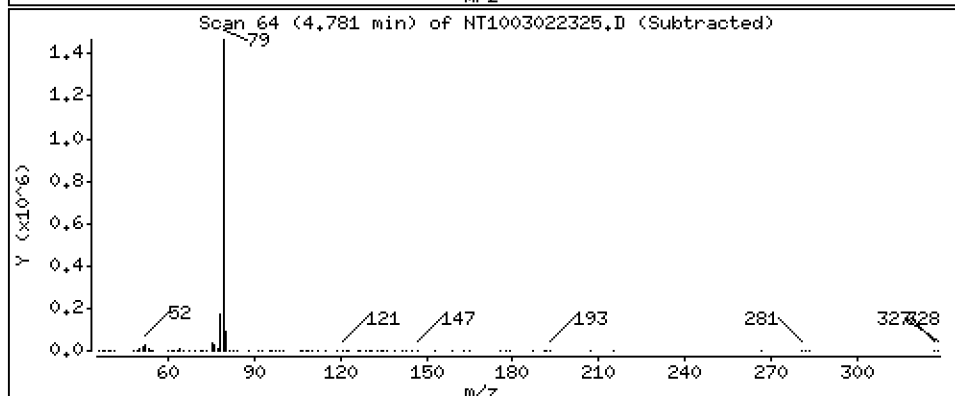
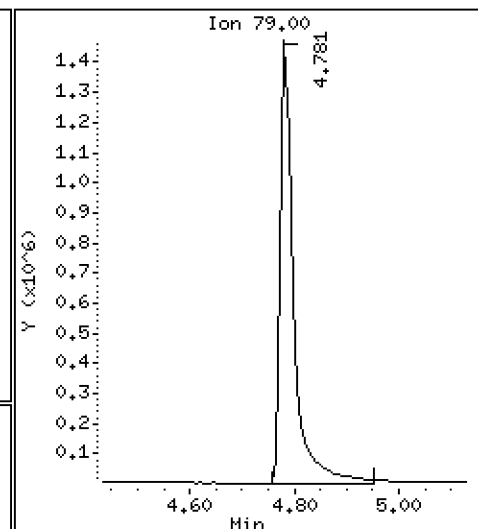
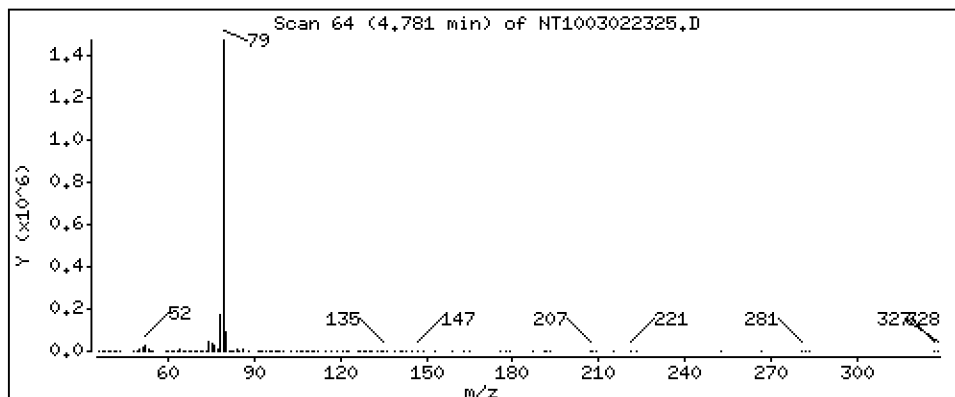
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 10,18 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

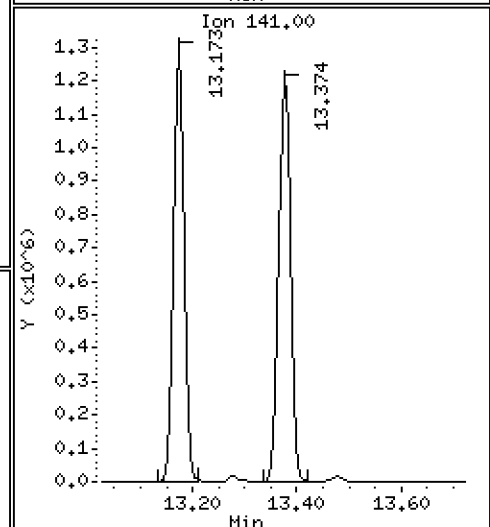
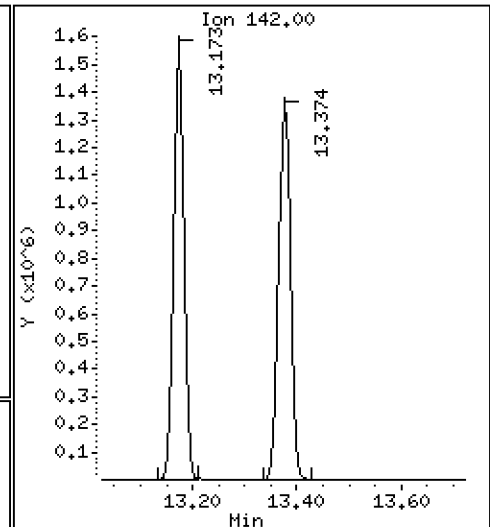
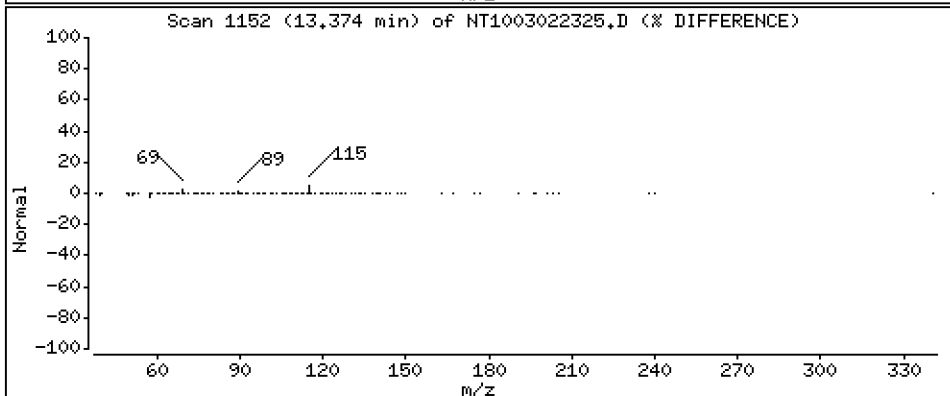
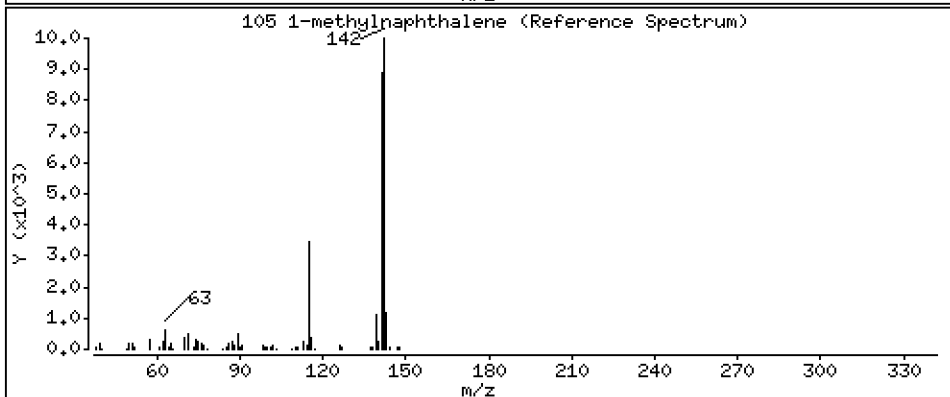
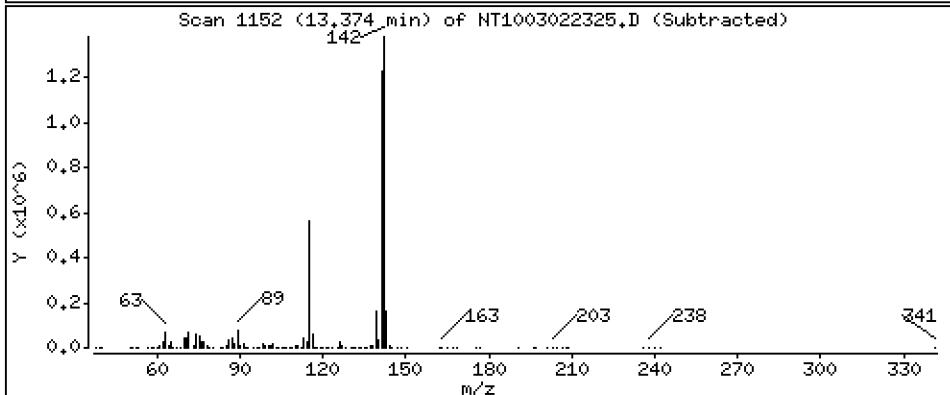
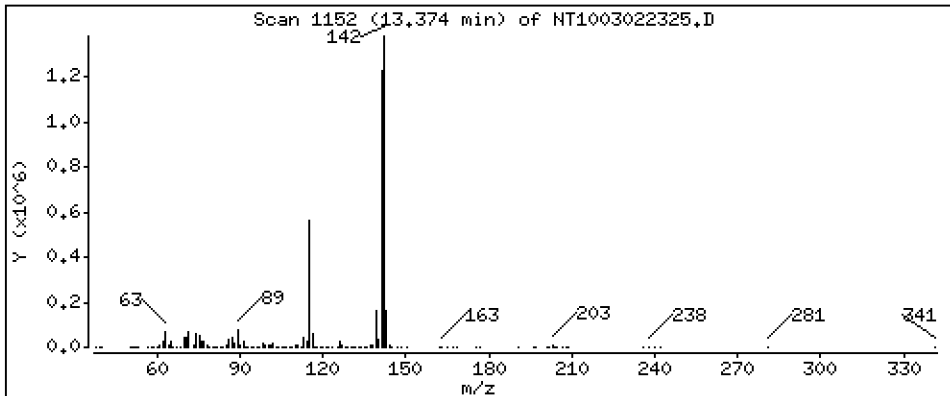
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,040 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

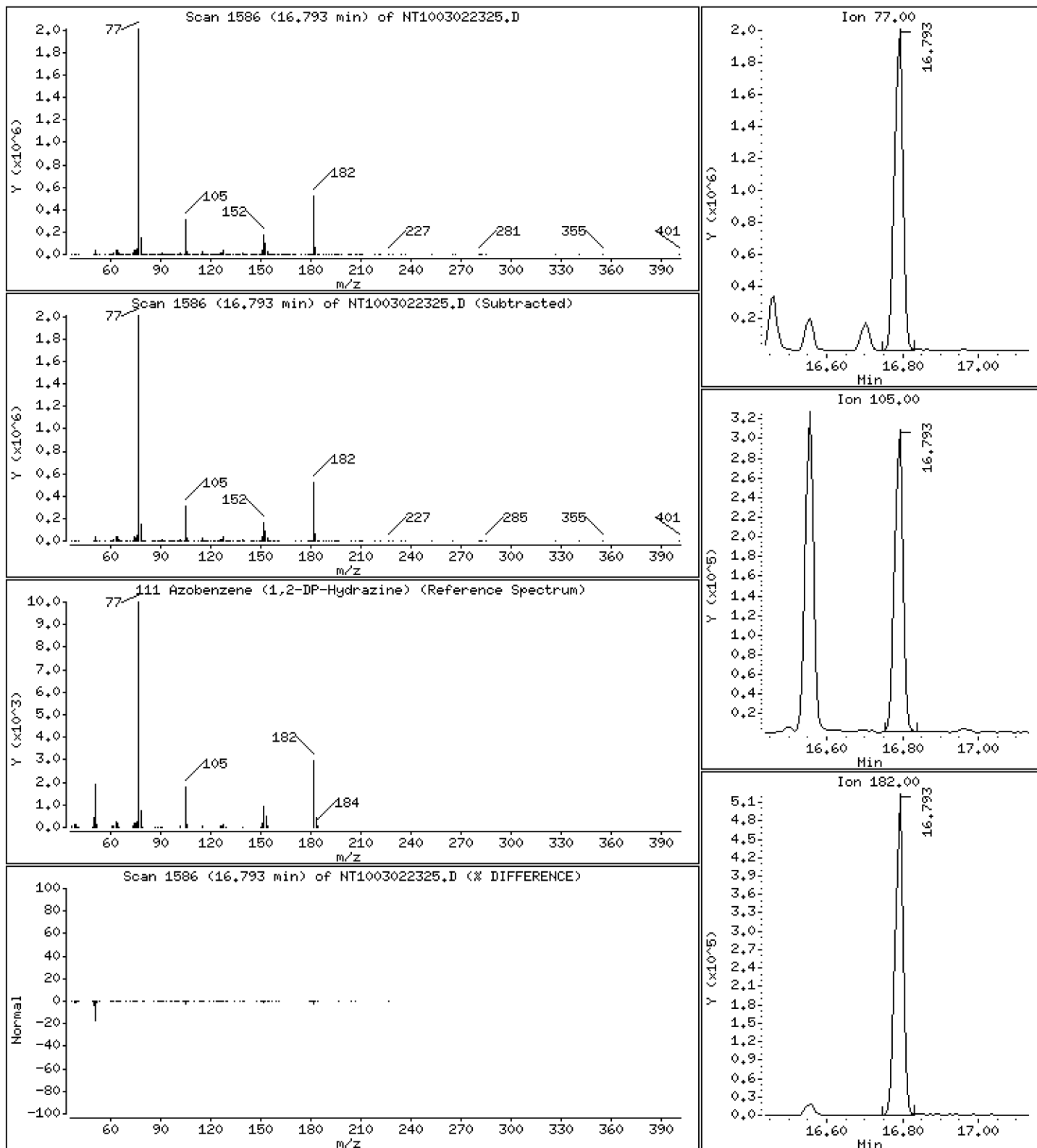
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 4,671 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

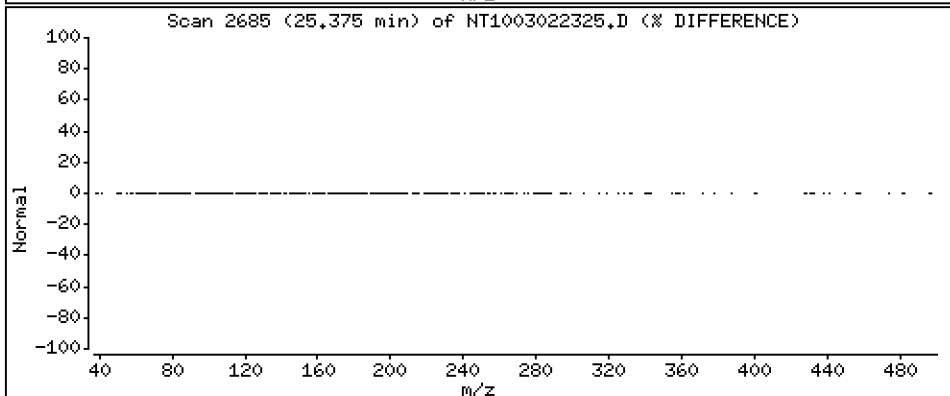
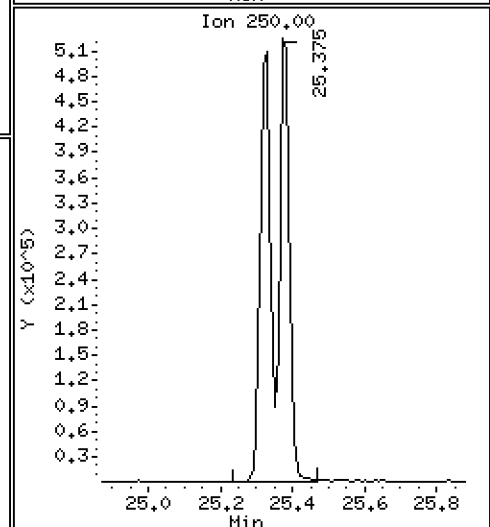
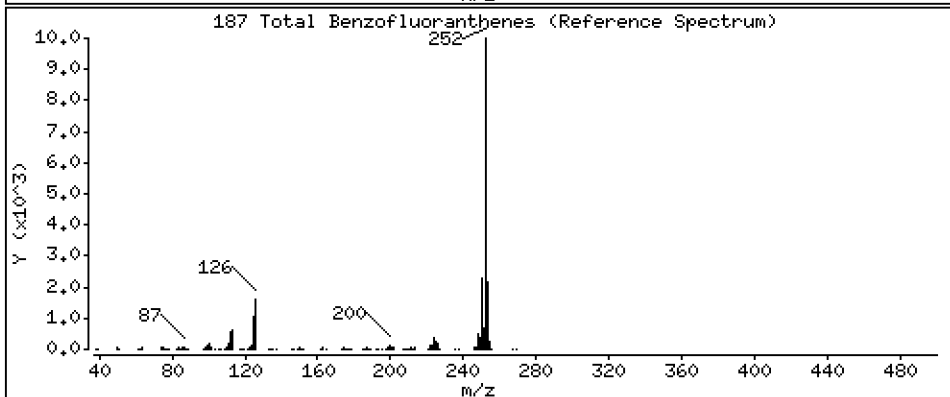
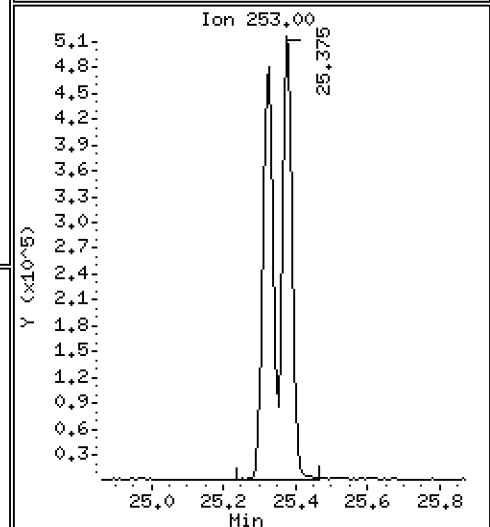
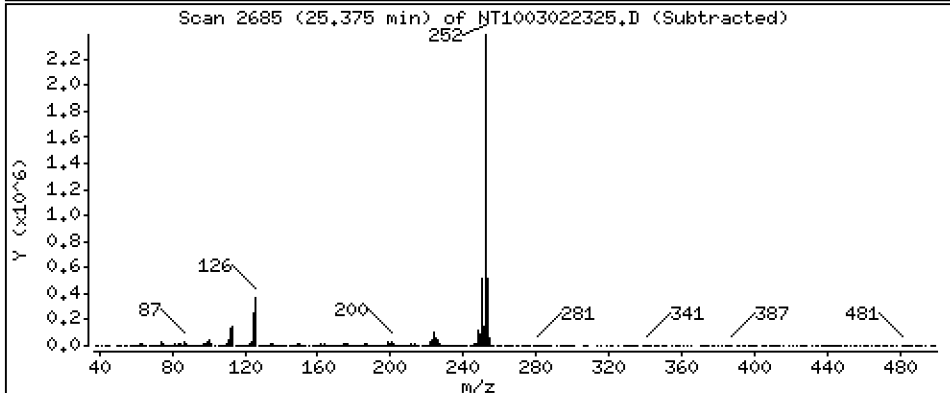
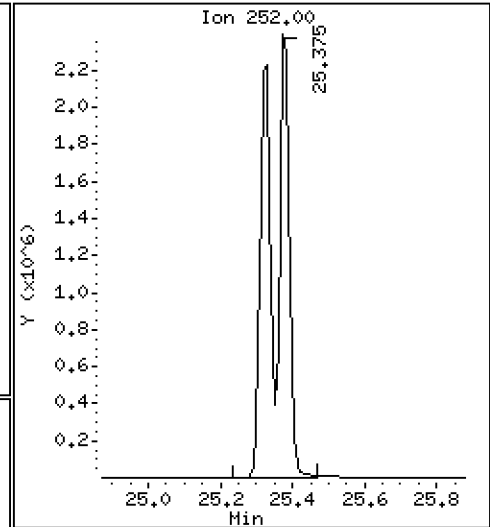
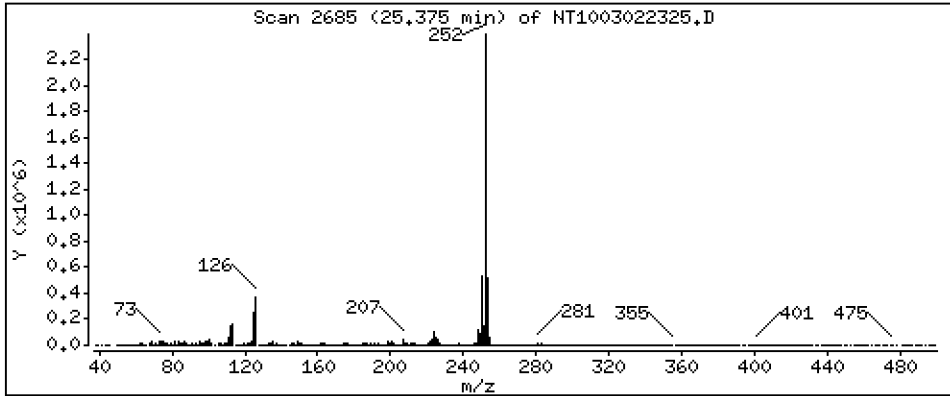
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 9,085 ug/mL



Date : 03-MAR-2023 05:36

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

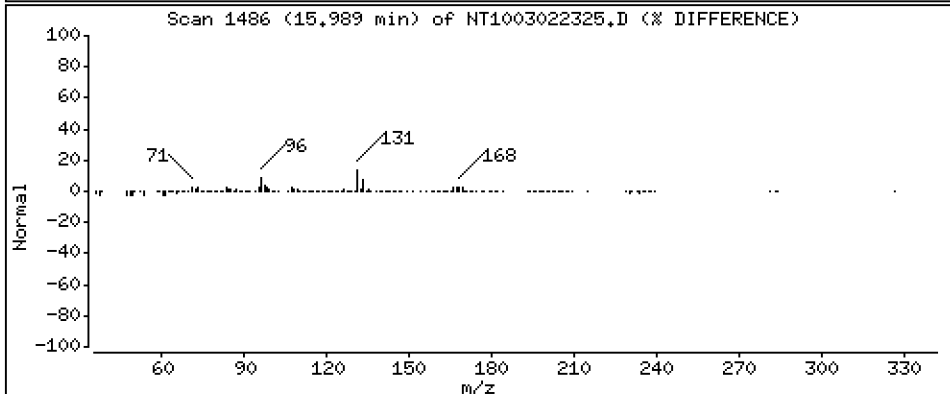
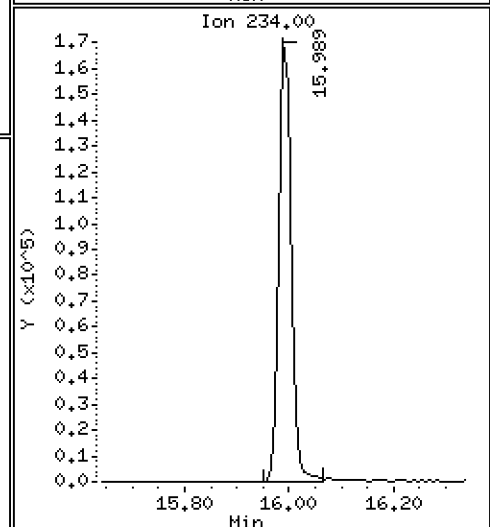
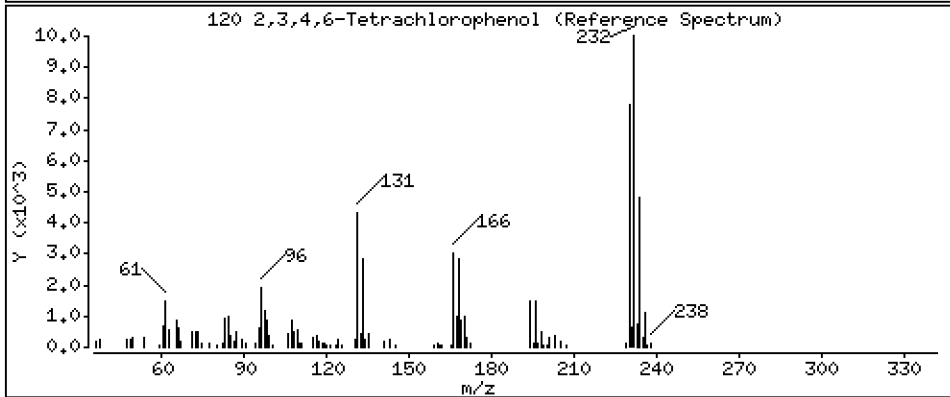
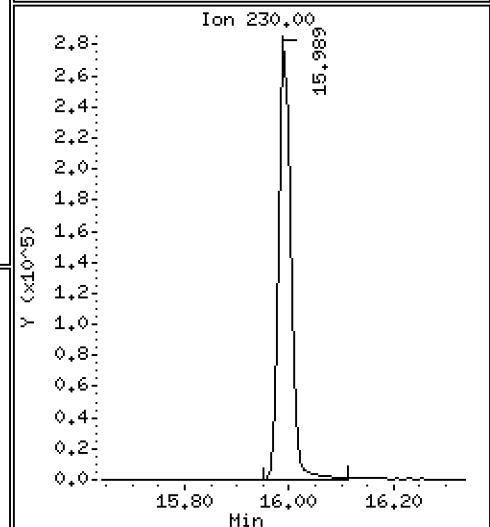
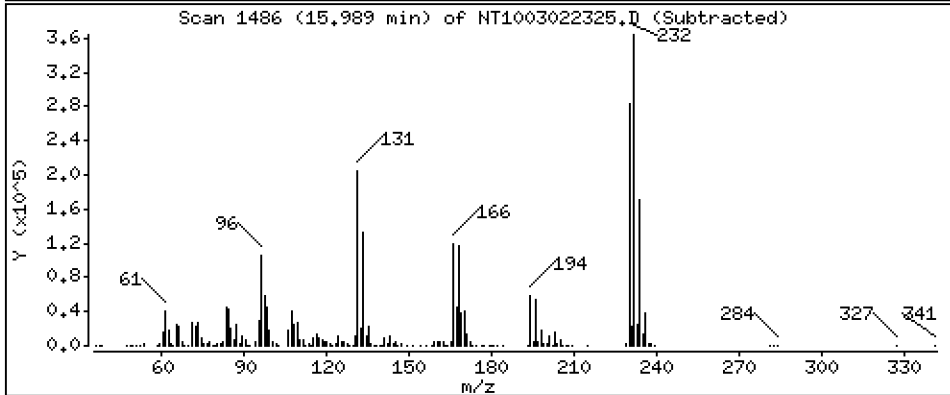
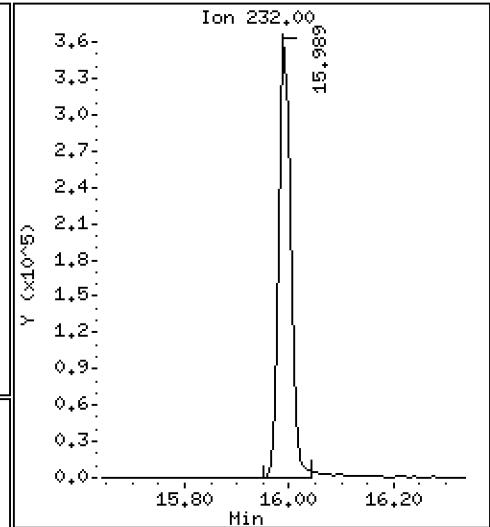
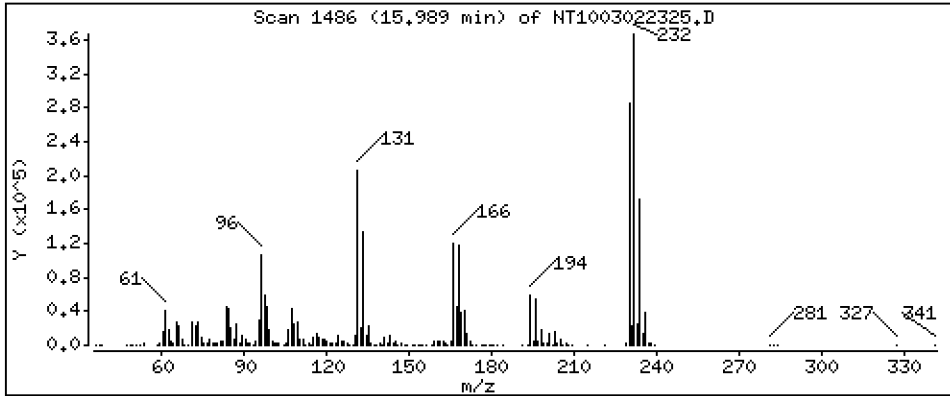
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 4,417 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022325ICV.D

Lab Smp Id: SLC0136-ICV1

Inj Date : 03-MAR-2023 05:36

Operator : VTS

Inst ID: nt10.i

Smp Info : SEQ-CCVFULL

Misc Info :

Comment : 1ul Injection

Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m

Meth Date : 10-Mar-2023 07:33 yev

Quant Type: ISTD

Cal Date : 01-MAR-2023 19:15

Cal File: NT1003012307.D

Als bottle: 2

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: ICAL.sub

Target Version: 4.14

Processing Host: ORGDATA102

Compounds	QUANT	SIG	AMOUNTS					
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	1626480	7.50000	7.676
\$ 2 Phenol-d5	99		8.504	8.504	(0.920)	2140546	7.50000	8.701
3 Phenol	94		8.527	8.527	(0.922)	1443246	5.00000	5.518
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	1709310	7.50000	8.144
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	1048479	5.00000	5.246
6 2-Chlorophenol	128		8.852	8.852	(0.957)	1185759	5.00000	5.438
7 1,3-Dichlorobenzene	146		9.146	9.146	(0.989)	1169771	5.00000	4.866
* 8 1,4-Dichlorobenzene-d4	152		9.246	9.246	(1.000)	673471	4.00000	
9 1,4-Dichlorobenzene	146		9.285	9.285	(1.004)	1148697	5.00000	4.810
\$ 10 1,2-Dichlorobenzene-d4	152		9.541	9.541	(1.032)	787810	5.00000	5.024
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	1125154	5.00000	4.868
11 Benzyl alcohol	108		9.479	9.479	(1.025)	694184	5.00000	5.043
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.735	(1.053)	255820	5.00000	3.839
13 2-Methylphenol	108		9.658	9.658	(1.044)	1054384	5.00000	5.082
17 Hexachloroethane	117		10.217	10.217	(1.105)	469885	5.00000	4.794
16 N-Nitroso-di-n-propylamine	70		9.984	9.984	(1.080)	813754	5.00000	5.156
15 4-Methylphenol	108		9.953	9.953	(1.076)	1122718	5.00000	4.466
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	1393207	5.00000	5.128
19 Nitrobenzene	77		10.341	10.341	(0.882)	1267177	5.00000	4.972
20 Isophorone	82		10.799	10.799	(0.921)	1647373	5.00000	5.064
21 2-Nitrophenol	139		10.958	10.958	(0.935)	566612	5.00000	4.117
22 2,4-Dimethylphenol	107		11.009	11.009	(0.939)	2287566	10.0000	9.170
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	1038573	5.00000	5.166
24 Benzoic acid	105		11.179	11.179	(0.953)	1736234	20.0000	11.71
25 2,4-Dichlorophenol	162		11.425	11.425	(0.974)	2067451	10.0000	10.47
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	939258	5.00000	4.911
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2475080	4.00000	
28 Naphthalene	128		11.772	11.772	(1.004)	3163406	5.00000	4.980
29 4-Chloroaniline	127		11.873	11.873	(1.013)	2676625	10.0000	9.330
30 Hexachlorobutadiene	225		11.996	11.996	(1.023)	658788	5.00000	4.730
31 4-Chloro-3-methylphenol	107		12.817	12.817	(1.093)	2010188	10.0000	9.567
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	2270345	5.00000	5.059
33 Hexachlorocyclopentadiene	237		13.474	13.474	(0.879)	129204	10.0000	3.080



Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
34 2,4,6-Trichlorophenol	196	13.738	13.738	(0.896)	1264218	10.0000	10.19
35 2,4,5-Trichlorophenol	196	13.807	13.807	(0.901)	1374155	10.0000	10.34
§ 36 2-Fluorobiphenyl	172	13.916	13.916	(0.908)	2431065	5.00000	5.458
37 2-Chloronaphthalene	162	14.179	14.179	(0.925)	1892507	5.00000	5.412
38 2-Nitroaniline	65	14.380	14.380	(0.938)	930959	10.0000	9.429
39 Dimethylphthalate	163	14.751	14.751	(0.963)	1980931	5.00000	4.912
40 Acenaphthylene	152	15.038	15.038	(0.981)	3439749	5.00000	5.706
41 2,6-Dinitrotoluene	165	14.883	14.883	(0.971)	909175	10.0000	9.944
* 42 Acenaphthene-d10	164	15.324	15.324	(1.000)	1248864	4.00000	
43 3-Nitroaniline	138	15.231	15.231	(0.994)	981598	10.0000	9.651
44 Acenaphthene	153	15.394	15.394	(1.005)	1855734	5.00000	5.104
45 2,4-Dinitrophenol	184	15.448	15.448	(1.008)	309119	20.0000	12.75
46 Dibenzofuran	168	15.749	15.749	(1.028)	2778862	5.00000	5.150
47 4-Nitrophenol	109	15.548	15.548	(1.015)	564718	10.0000	7.726
48 2,4-Dinitrotoluene	165	15.718	15.718	(1.026)	1288797	10.0000	9.677
50 Diethylphthalate	149	16.221	16.221	(1.059)	2011981	5.00000	4.709
49 Fluorene	166	16.461	16.461	(1.074)	2294241	5.00000	5.110
51 4-Chlorophenyl-phenylether	204	16.461	16.461	(1.074)	1027447	5.00000	4.994
52 4-Nitroaniline	138	16.499	16.499	(1.077)	1095832	10.0000	10.02
53 4,6-Dinitro-2-methylphenol	198	16.554	16.554	(0.899)	1111675	20.0000	19.02
54 N-Nitrosodiphenylamine	169	16.700	16.700	(0.907)	1774087	5.00000	5.088
§ 55 2,4,6-Tribromophenol	330	16.962	16.962	(1.107)	571414	7.50000	7.085
56 4-Bromophenyl-phenylether	248	17.480	17.480	(0.949)	750373	5.00000	5.311
57 Hexachlorobenzene	284	17.588	17.588	(0.955)	803183	5.00000	5.048
58 Pentachlorophenol	266	17.999	17.999	(0.977)	393895	10.0000	5.212
* 59 Phenanthrene-d10	188	18.416	18.416	(1.000)	2356836	4.00000	
60 Phenanthrene	178	18.463	18.463	(1.003)	3096054	5.00000	5.133
61 Anthracene	178	18.571	18.571	(1.008)	3207692	5.00000	5.485
62 Carbazole	167	18.904	18.904	(1.026)	2974323	5.00000	5.551
63 Di-n-butylphthalate	149	19.600	19.600	(1.064)	3918094	5.00000	5.191
64 Fluoranthene	202	20.830	20.830	(0.889)	3875003	5.00000	4.145
65 Pyrene	202	21.264	21.264	(0.907)	3991172	5.00000	4.192
§ 66 Terphenyl-d14	244	21.534	21.534	(0.919)	3259150	5.00000	4.231
67 Butylbenzylphthalate	149	22.417	22.417	(0.957)	1872919	5.00000	3.706
68 Benzo(a)anthracene	228	23.416	23.416	(0.999)	4758009	5.00000	4.965
* 69 Chrysene-d12	240	23.431	23.431	(1.000)	2717731	4.00000	
70 3,3'-Dichlorobenzidine	252	23.362	23.362	(0.997)	4767797	15.0000	11.02
71 Chrysene	228	23.478	23.478	(1.002)	4131311	5.00000	5.305
72 bis(2-Ethylhexyl)phthalate	149	23.408	23.408	(0.956)	3163675	5.00000	4.437
* 134 Di-n-octylphthalate-d4	153	24.492	24.492	(1.000)	4948440	4.00000	
73 Di-n-octylphthalate	149	24.508	24.508	(1.001)	5594743	5.00000	5.099
74 Benzo(b)fluoranthene	252	25.328	25.328	(0.969)	4396459	5.00000	4.389
75 Benzo(k)fluoranthene	252	25.375	25.375	(0.971)	4521767	5.00000	4.667
76 Benzo(a)pyrene	252	26.017	26.017	(0.996)	4037443	5.00000	4.504
* 77 Perylene-d12	264	26.134	26.134	(1.000)	2801934	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.917	28.917	(1.106)	4175553	5.00000	4.010 (M)
79 Dibenzo(a,h)anthracene	278	28.963	28.963	(1.108)	3465414	5.00000	4.348
80 Benzo(g,h,i)perylene	276	29.763	29.763	(1.139)	3197185	5.00000	3.887 (M)
90 N-Nitrosodimethylamine	74	4.727	4.727	(0.511)	1457284	10.0000	10.65
91 Aniline	93	8.635	8.635	(0.934)	3162667	10.0000	10.43
93 Benzidine	184	21.078	21.078	(0.900)	1773208	10.0000	4.272
103 Pyridine	79	4.781	4.781	(0.517)	2470447	10.0000	10.18
105 1-methylnaphthalene	142	13.374	13.374	(1.141)	2047046	5.00000	5.040
111 Azobenzene (1,2-DP-Hydrazine)	77	16.793	16.793	(1.096)	2980269	5.00000	4.671

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	
187 Total Benzofluoranthenes	252		25.375	25.375	(0.971)	8765605	10.0000	9.085
120 2,3,4,6-Tetrachlorophenol	232		15.989	15.989	(1.043)	542987	5.00000	4.417

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022325ICV.D  
 Lab Smp Id: SLC0136-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 22:38  
 Level:  
 Sample Type:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	673471	0.00
27 Naphthalene-d8	2475080	1237540	4950160	2475080	0.00
42 Acenaphthene-d10	1248864	624432	2497728	1248864	0.00
59 Phenanthrene-d10	2356836	1178418	4713672	2356836	0.00
69 Chrysene-d12	2717731	1358866	5435462	2717731	0.00
134 Di-n-octylphthala	4948440	2474220	9896880	4948440	0.00
77 Perylene-d12	2801934	1400967	5603868	2801934	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022325.D

Lab ID: SLC0206-CCV1  
nt10.i, 20230302A.b\ABN.m, 03-MAR-2023 05:36

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

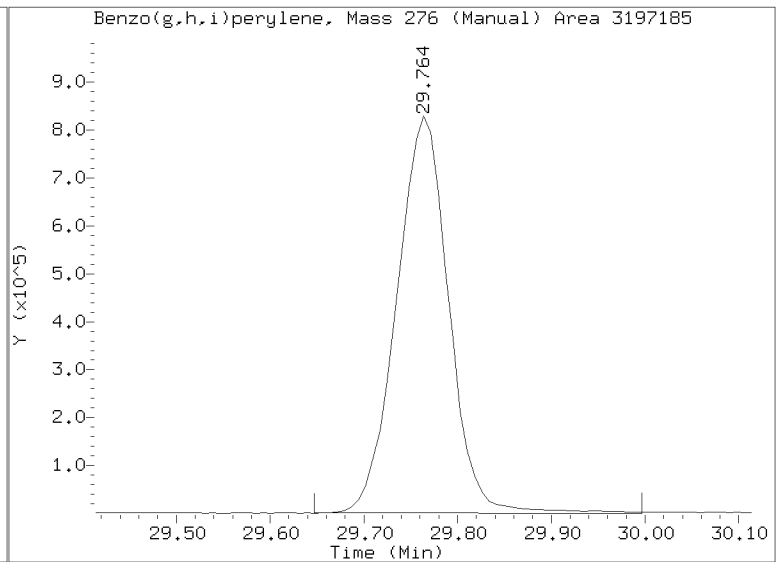
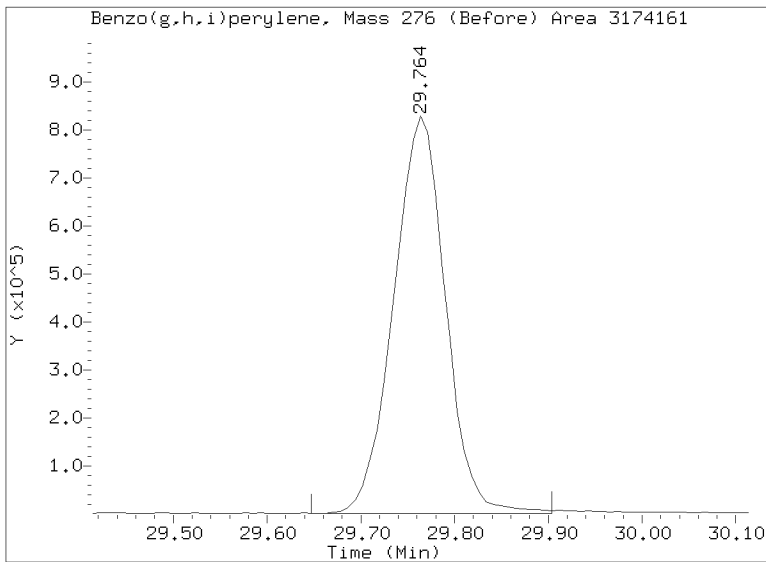
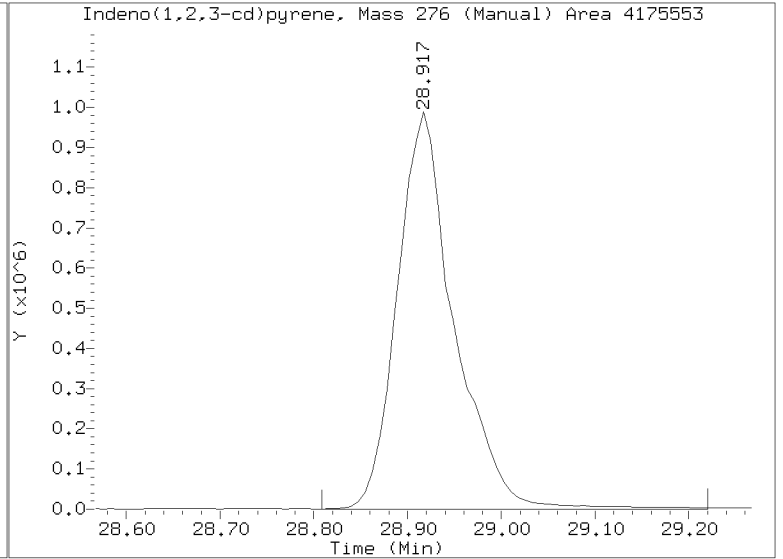
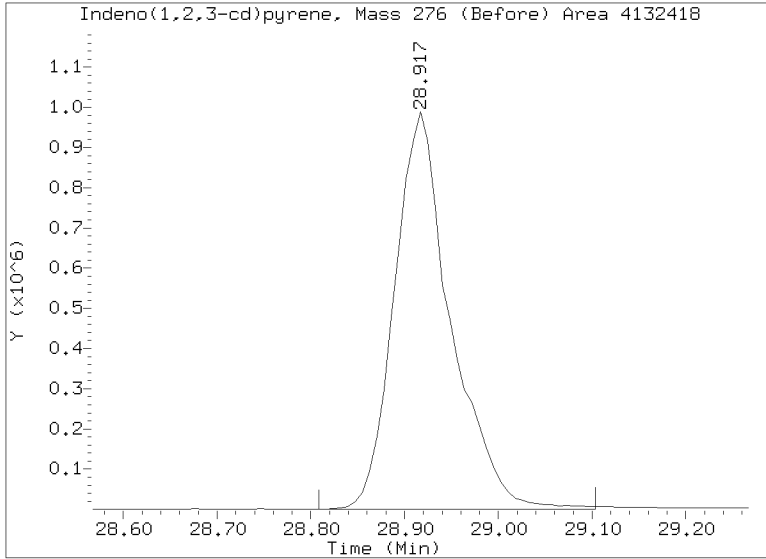
RRT check based on Ccal File: NT1003022314ICV.D

On Column LOD for nt10.i, 20230302A.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022325ICV.D  
Injection Date: 03-MAR-2023 05:36  
Lab ID:SLC0136-ICV1 Client ID:  
Report Date: 03/10/2023 07:33





CONTINUING CALIBRATION CHECK  
EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022334.D

Calibration Date: 03/01/2023

Sequence: SLC0136

Injection Date: 03/03/23

Lab Sample ID: SLC0136-CCV1

Injection Time: 11:18

Sequence Name: ABN 5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	5.5	1.5534590	1.7053310		9.8	+/-50
4-Methylphenol	A	5.0000	4.4	1.2087680	1.3199300		-11.6	+/-50
Naphthalene	A	5.0000	4.9	1.0266520	1.0113860		-1.5	+/-50
2-Methylnaphthalene	A	5.0000	5.1	0.7252818	0.7391350		1.9	+/-50
Acenaphthylene	A	5.0000	5.0	1.9309320	1.9252540		-0.3	+/-50
Dimethylphthalate	A	5.0000	4.9	1.2917940	1.2638300		-2.2	+/-50
Acenaphthene	A	5.0000	5.0	1.1645250	1.1721100		0.7	+/-50
Dibenzofuran	A	5.0000	5.1	1.7283260	1.7760340		2.8	+/-50
Fluorene	A	5.0000	5.1	1.4379840	1.4534740		1.1	+/-50
Phenanthrene	A	5.0000	5.1	1.0236730	1.0460150		2.2	+/-50
Anthracene	A	5.0000	5.5	0.9926226	1.0906540		9.9	+/-50
Fluoranthene	A	5.0000	4.1	1.3760330	1.1317650		-17.8	+/-50
Pyrene	A	5.0000	4.2	1.4011560	1.1816010		-15.7	+/-50
Butylbenzylphthalate	A	5.0000	3.7	0.6475451	0.5576835		-25.0	+/-50
Benzo(a)anthracene	A	5.0000	5.0	1.4104100	1.3990420		-0.8	+/-50
Chrysene	A	5.0000	5.3	1.1462500	1.2184690		6.3	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	4.5	0.5331838	0.5175851		-10.2	+/-50
Benzo(a)fluoranthene, Total	A	10.000	9.4	1.3383070	1.2972840		-6.0	+/-50
Benzo(a)pyrene	A	5.0000	4.6	1.2312020	1.1838520		-7.6	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	3.7	1.4033590	1.1080580		-25.2	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.2	1.1150690	0.9574706		-15.7	+/-50
Benzo(g,h,i)perylene	A	5.0000	3.5	1.1245240	0.8222754		-29.7	+/-50
2-Fluorophenol	A	7.5000	7.71	1.2585100	1.2936170		2.8	+/-50
Phenol-d5	A	7.5000	8.57	1.4611190	1.6703920		14.3	+/-50
2-Chlorophenol-d4	A	7.5000	8.27	1.2465880	1.3749170		10.3	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	5.02	0.9313544	0.9350931		0.4	+/-50
Nitrobenzene-d5	A	5.0000	5.15	0.4390871	0.4521088		3.0	+/-50
2-Fluorobiphenyl	A	5.0000	5.28	1.4267270	1.5064480		5.6	+/-50
2,4,6-Tribromophenol	A	7.5000	6.79	0.2287830	0.2334626		-9.4	+/-50
p-Terphenyl-d14	A	5.0000	4.21	1.1337350	0.9537657		-15.9	+/-50

\* Values outside of QC limits

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302B JB\NT1003022334.D

Date: 03-MAR-2023 11:18

Client ID:

Sample Info: SEQ-OCVFULL

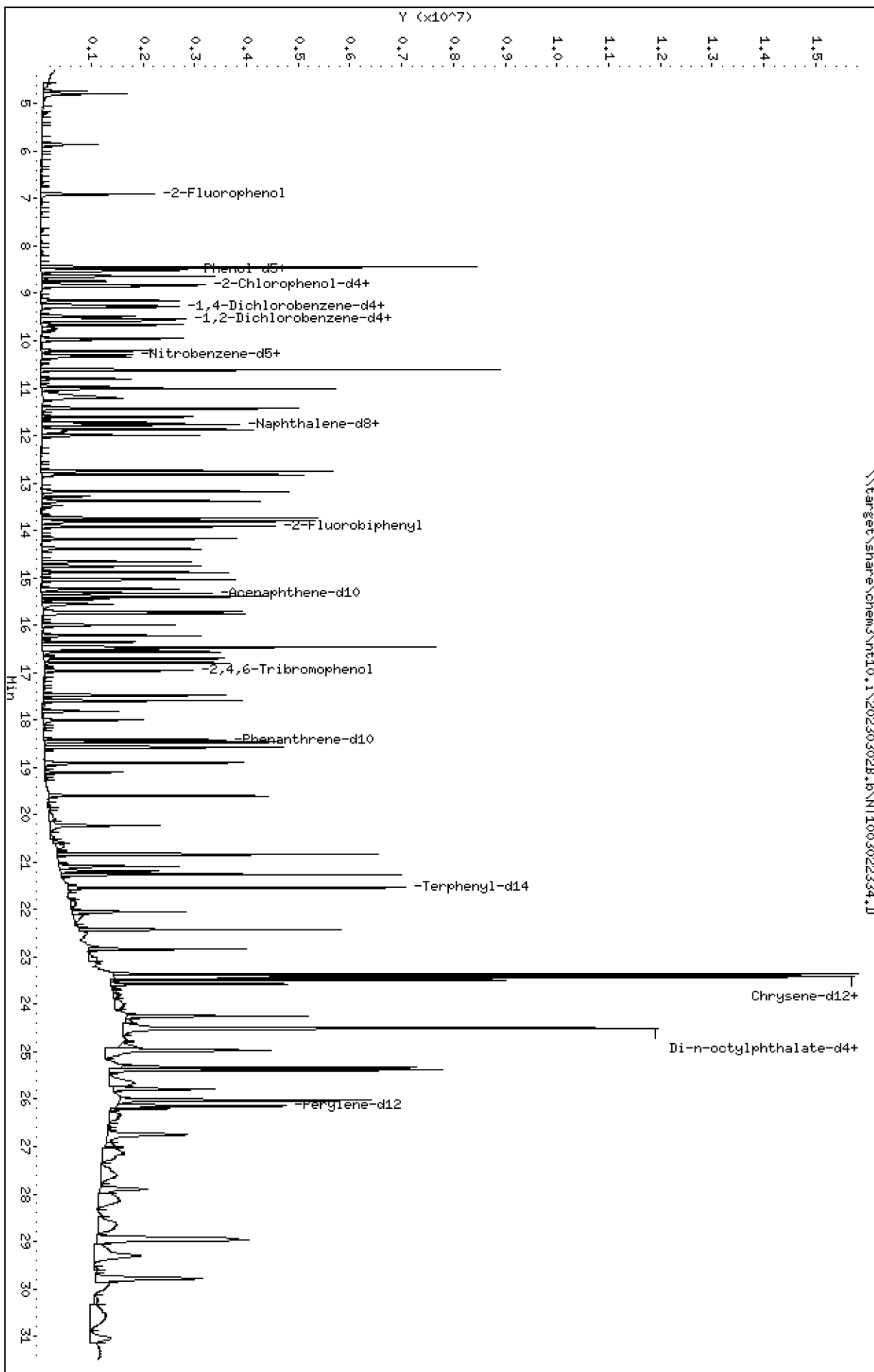
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

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Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

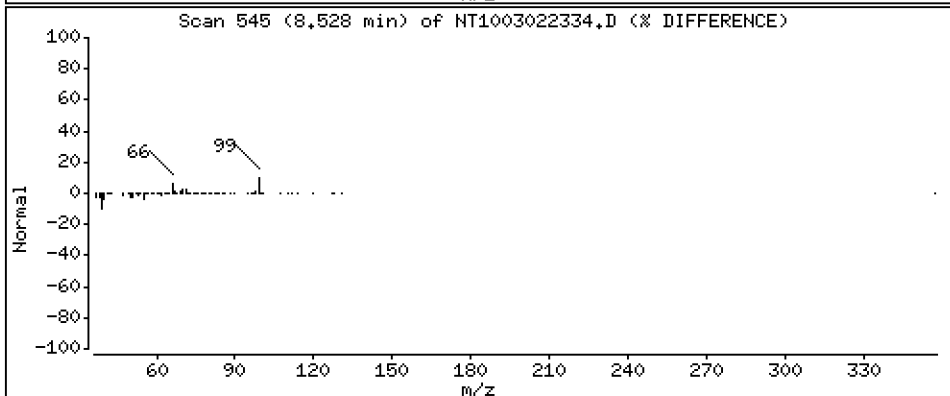
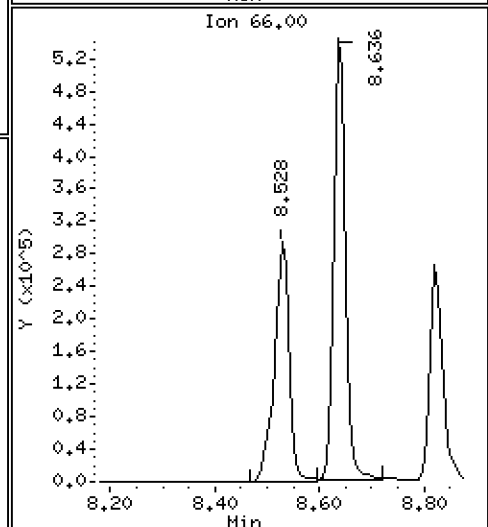
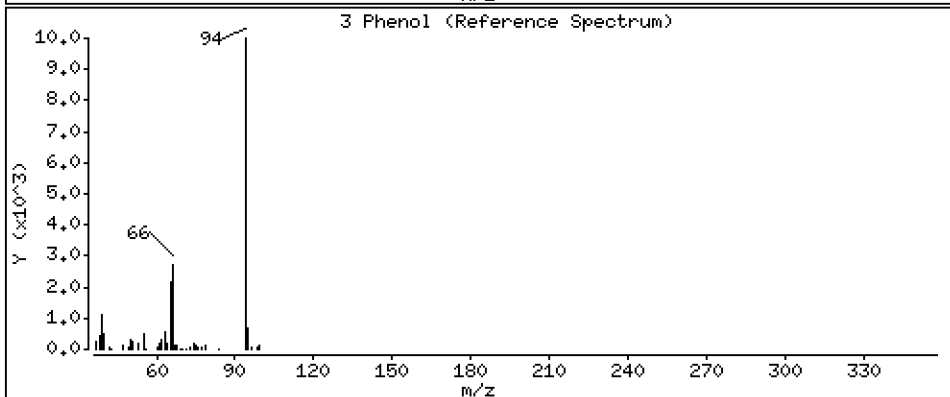
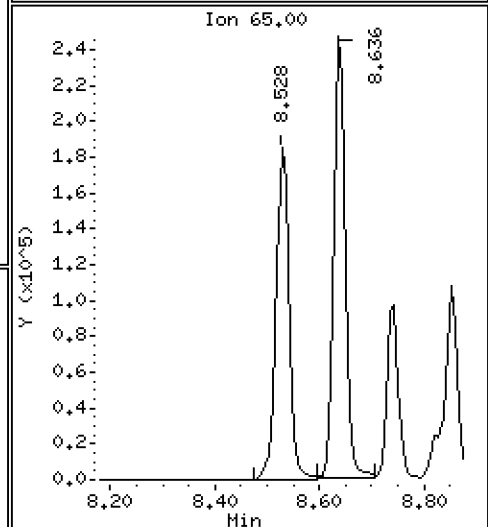
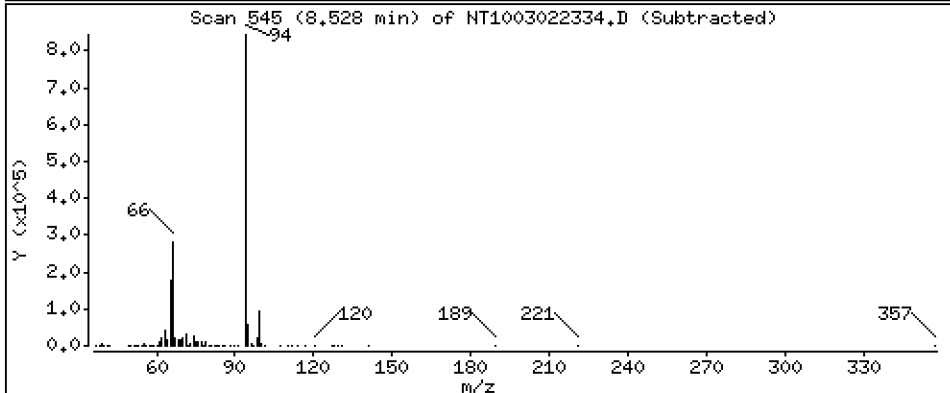
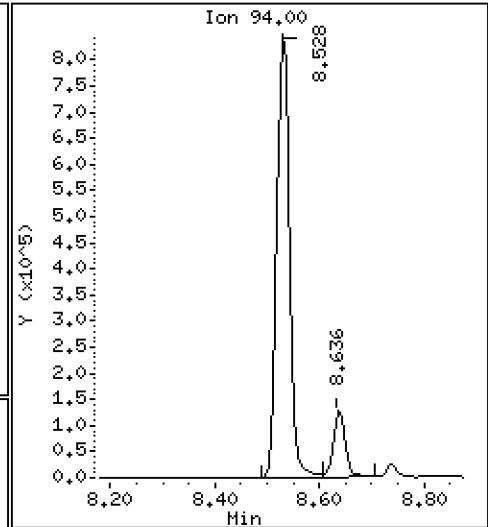
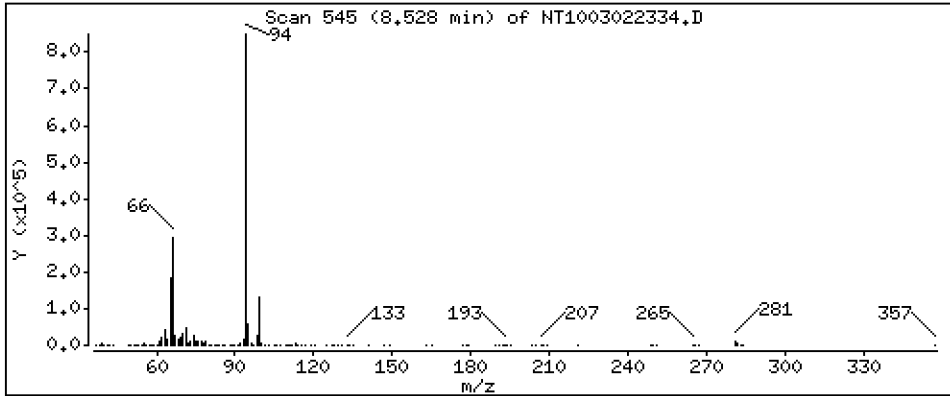
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 5,489 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

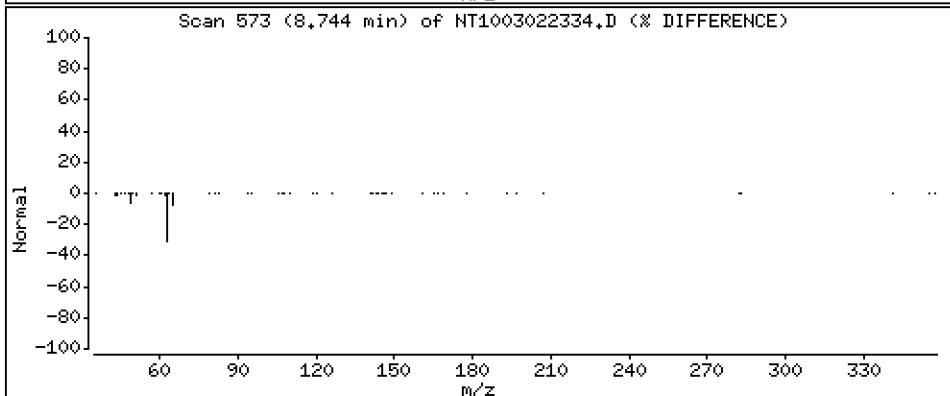
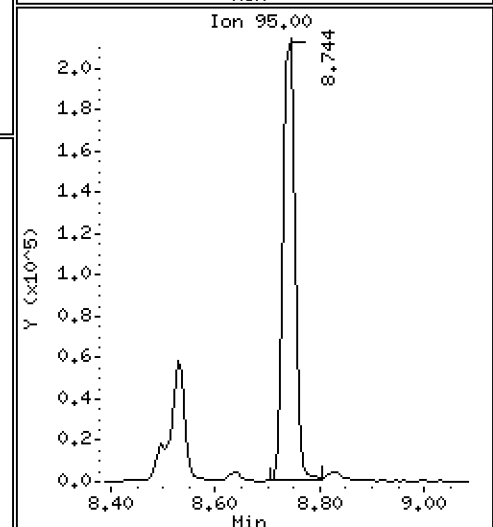
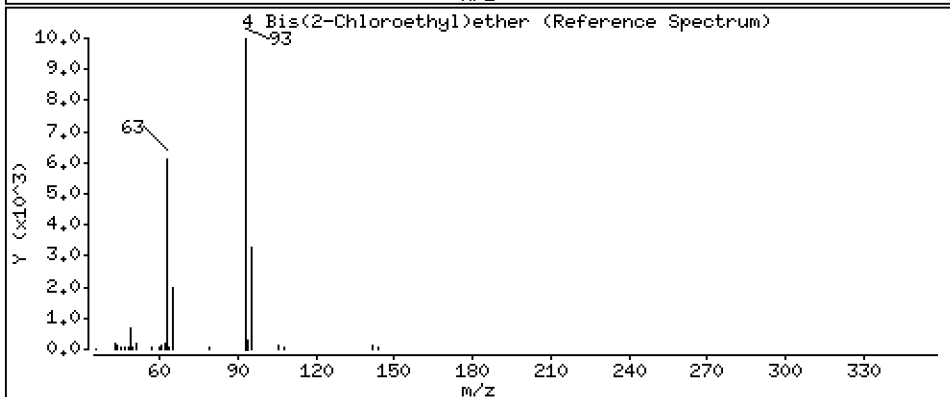
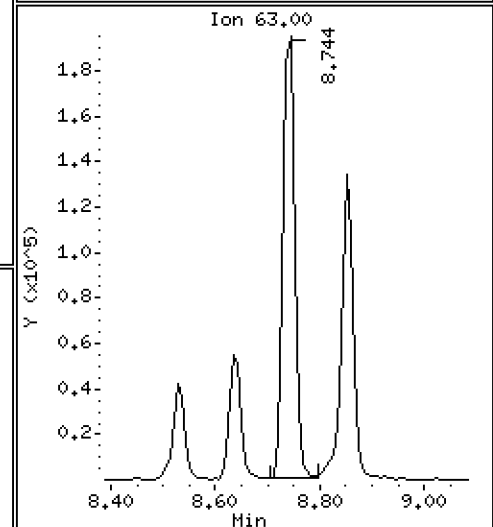
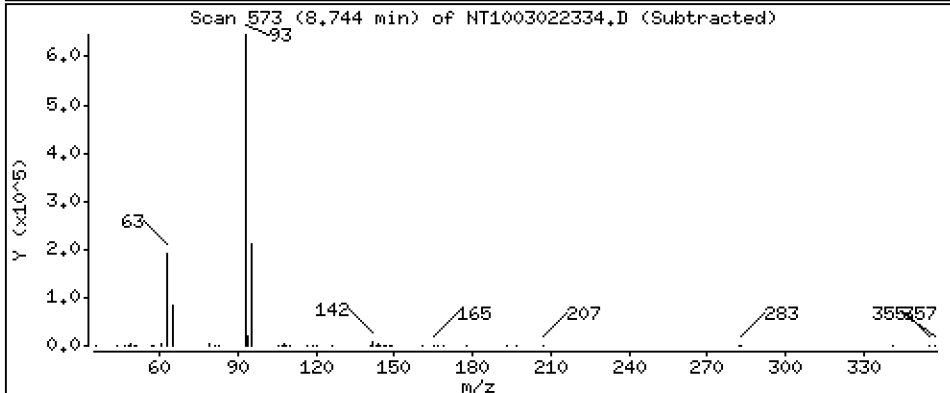
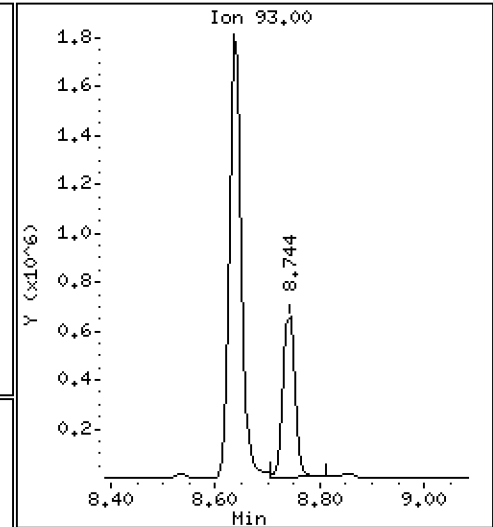
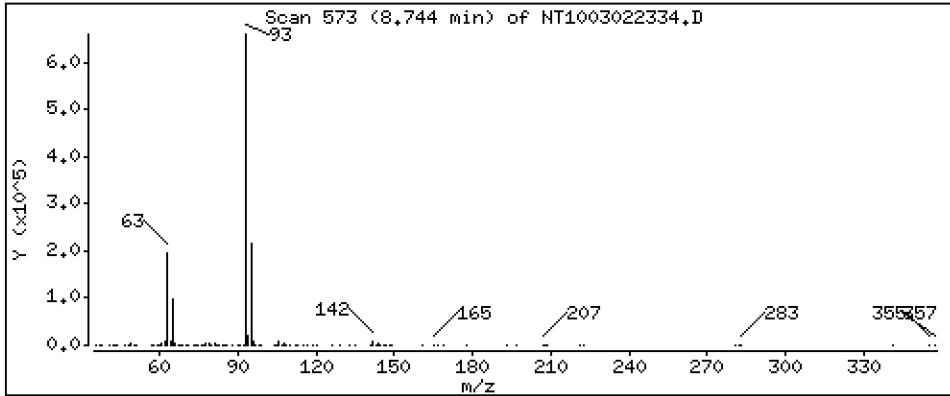
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 5,244 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

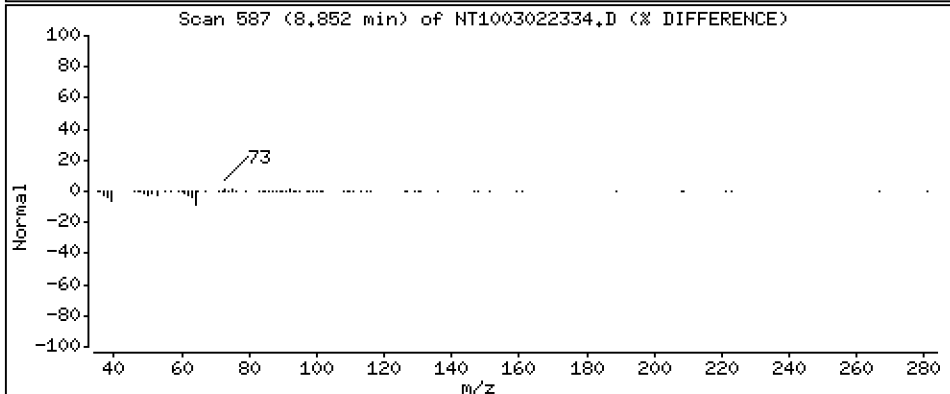
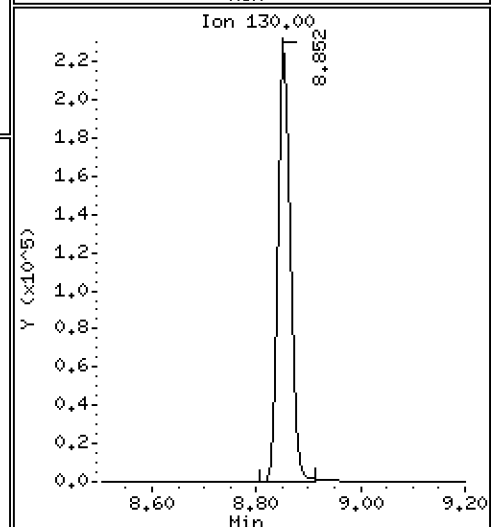
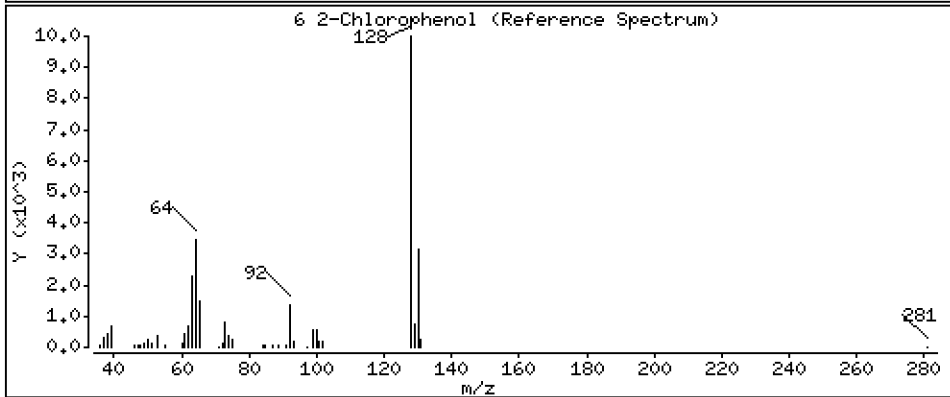
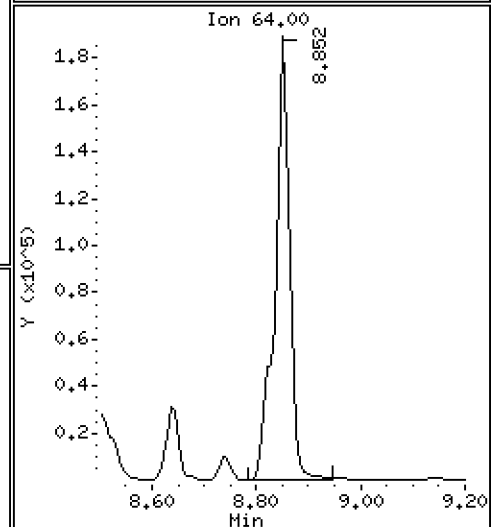
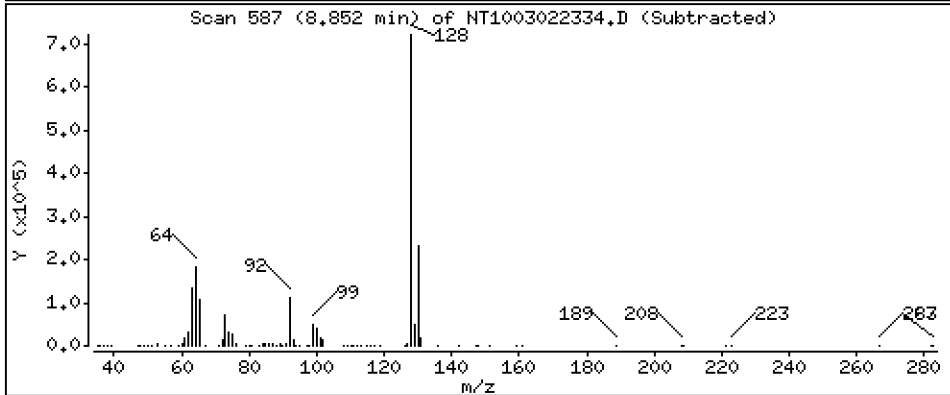
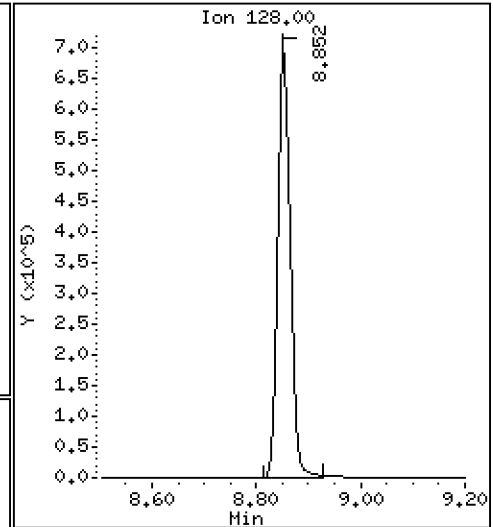
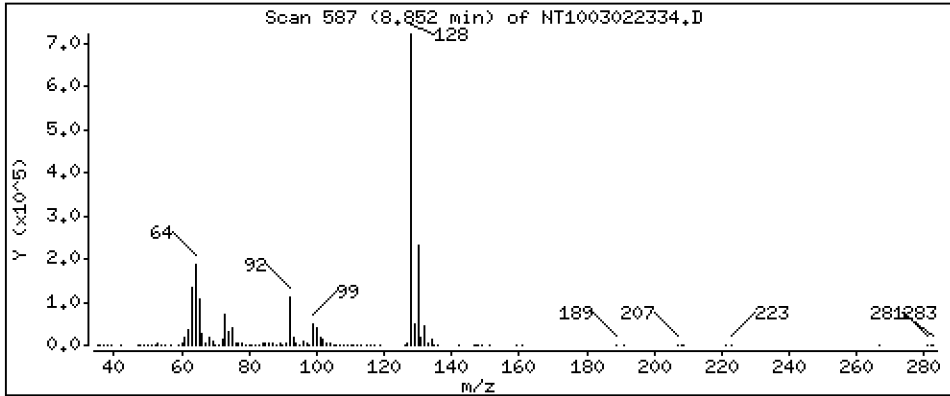
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 5,437 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

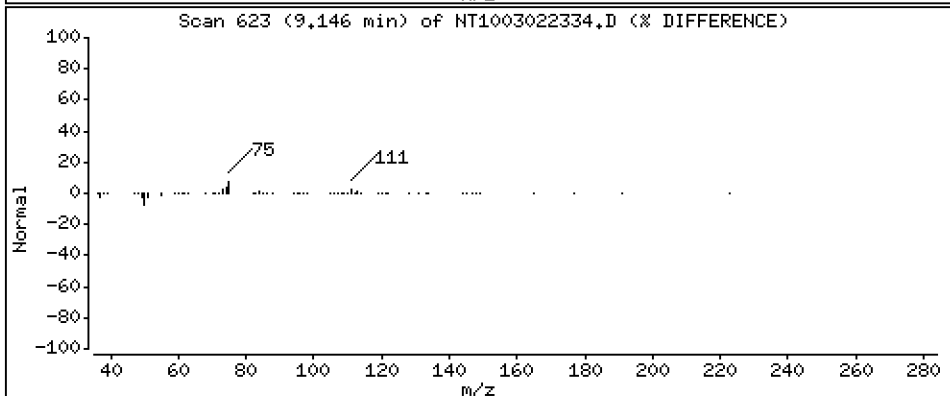
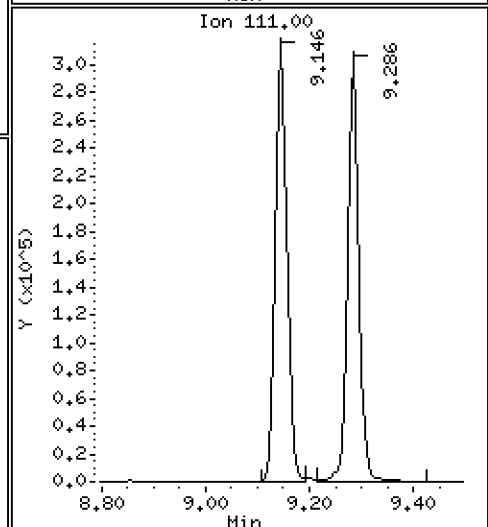
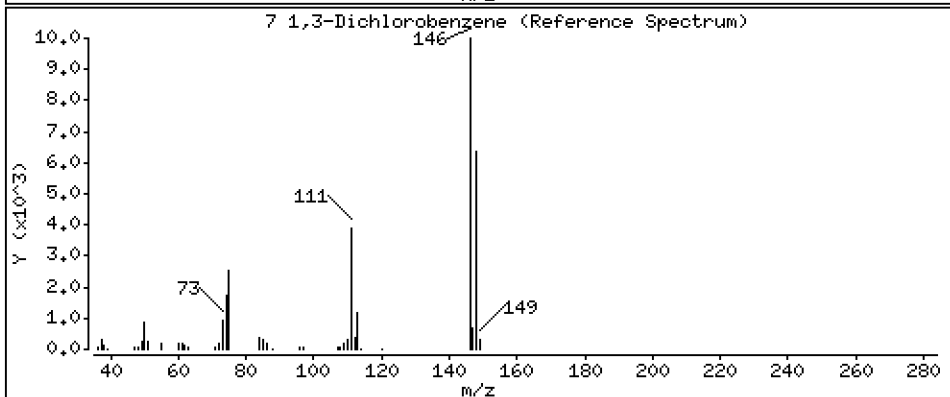
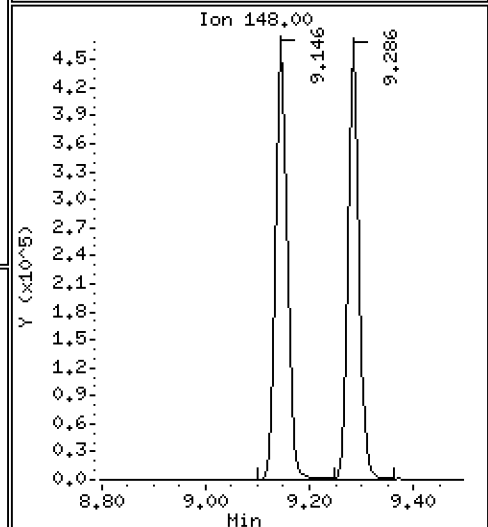
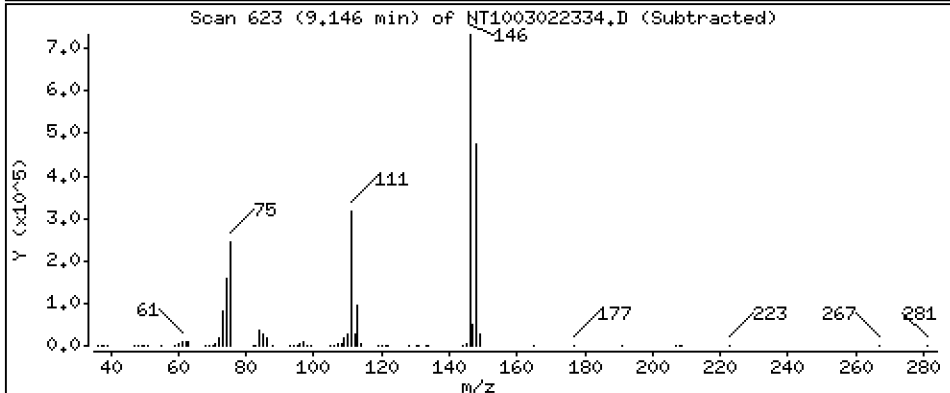
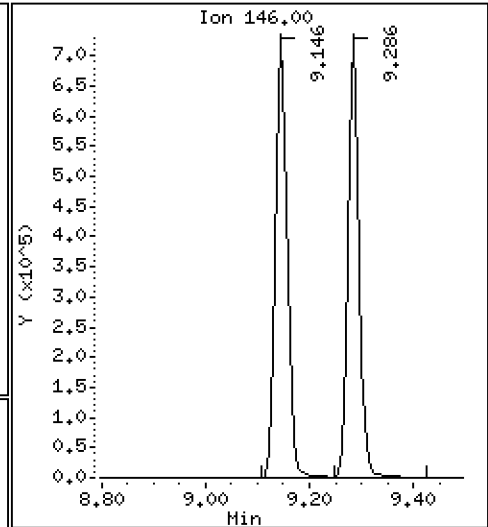
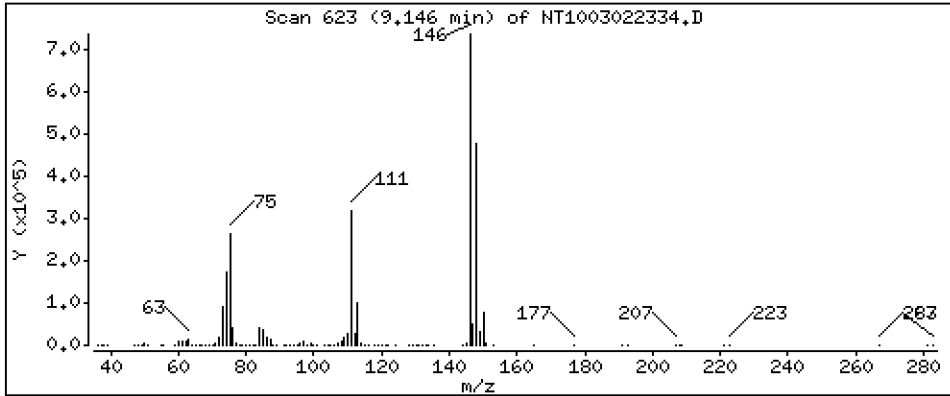
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,884 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

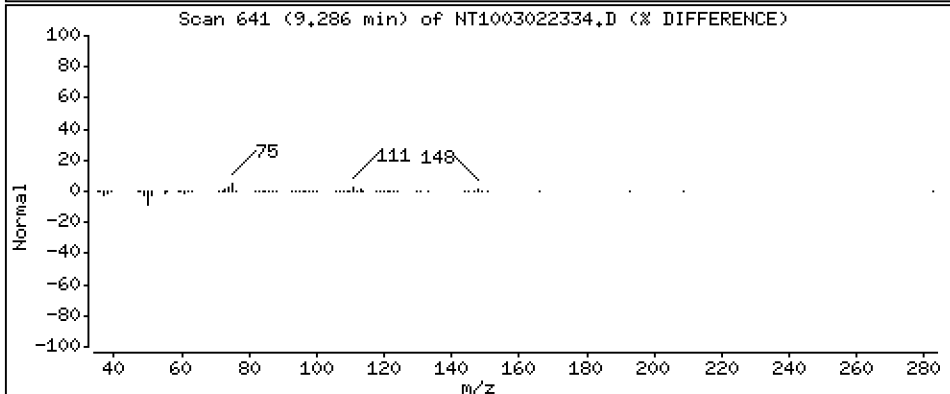
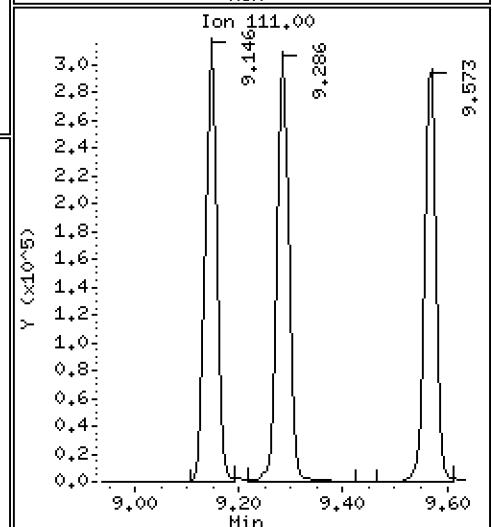
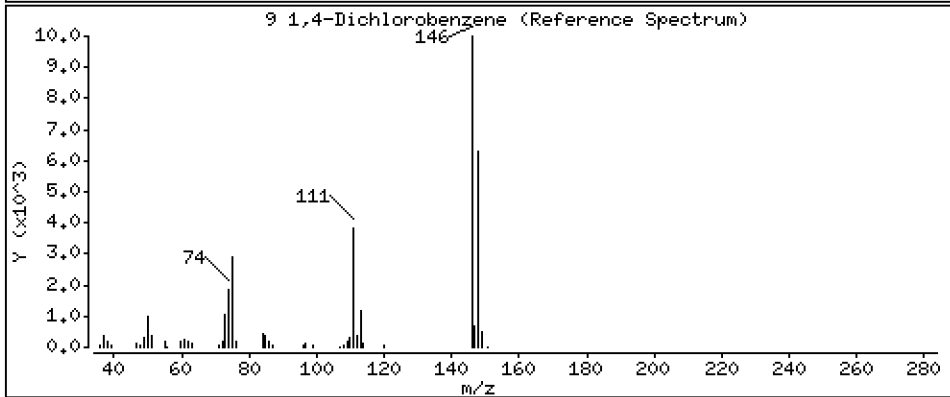
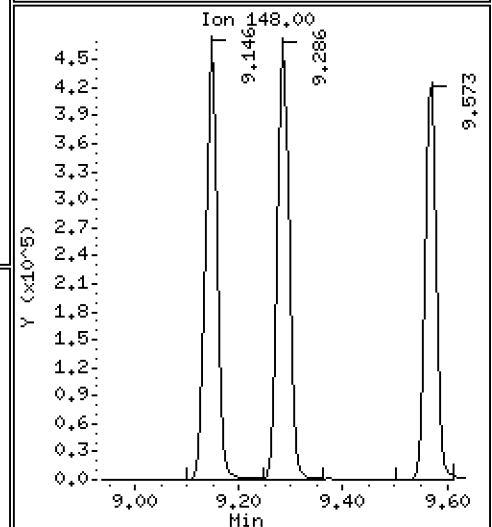
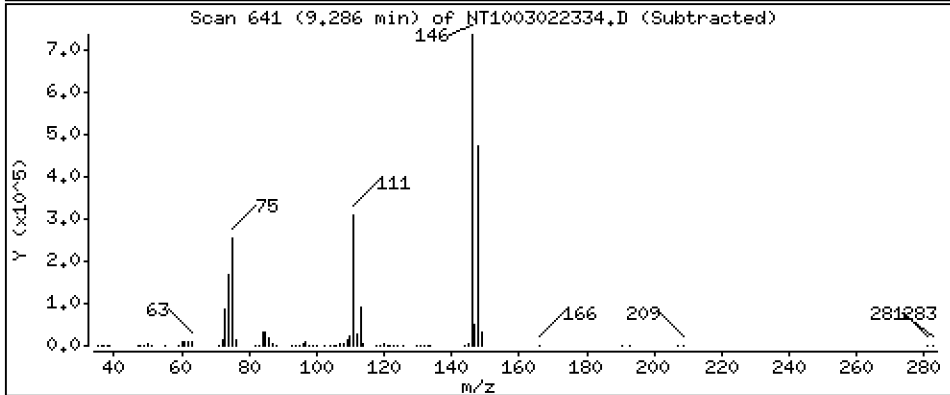
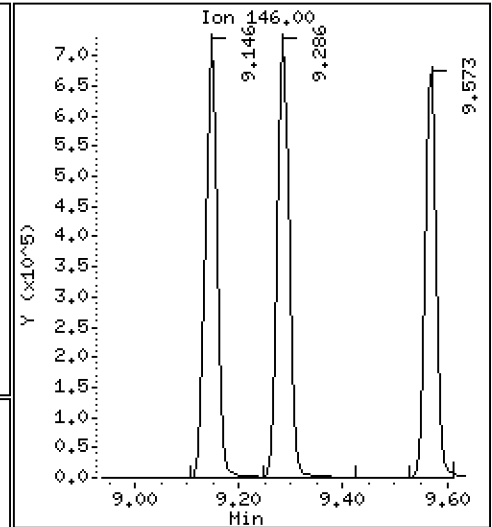
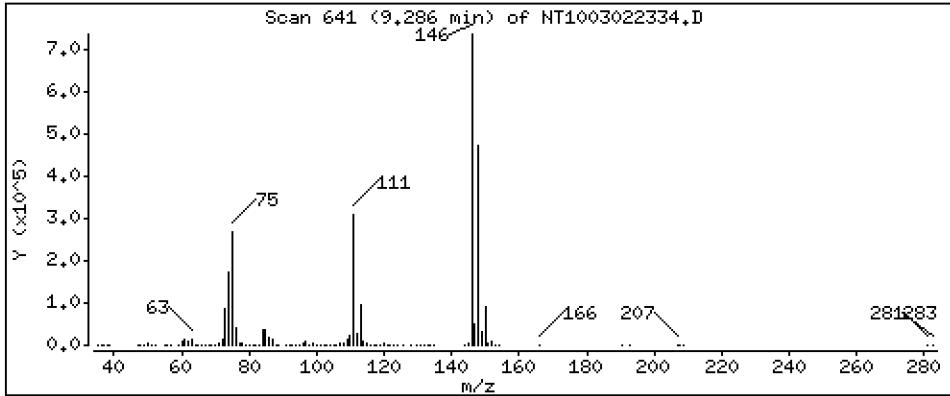
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,245 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

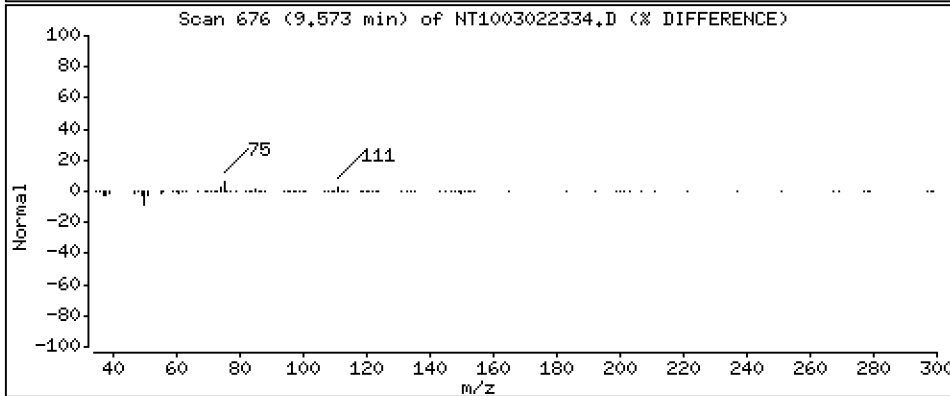
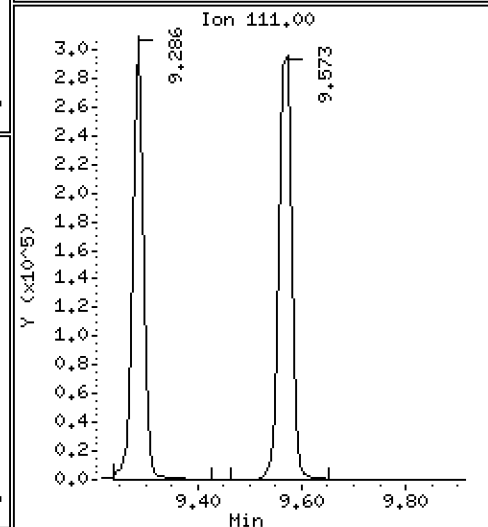
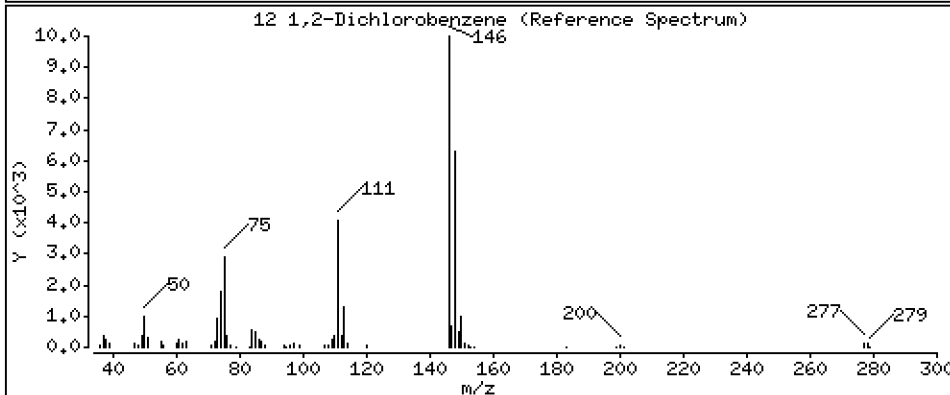
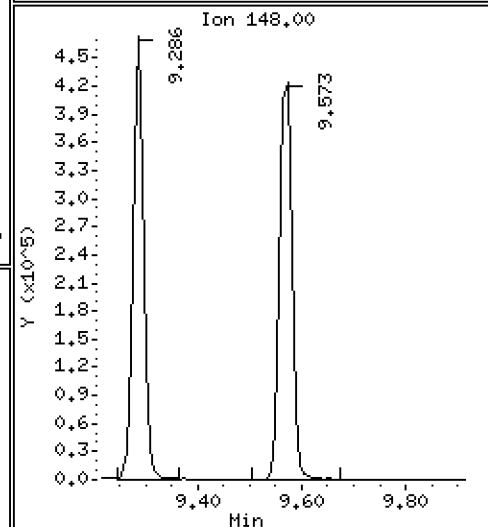
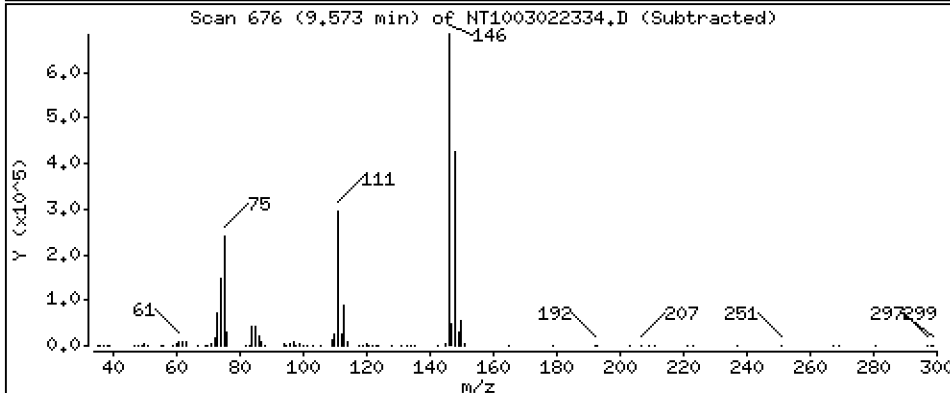
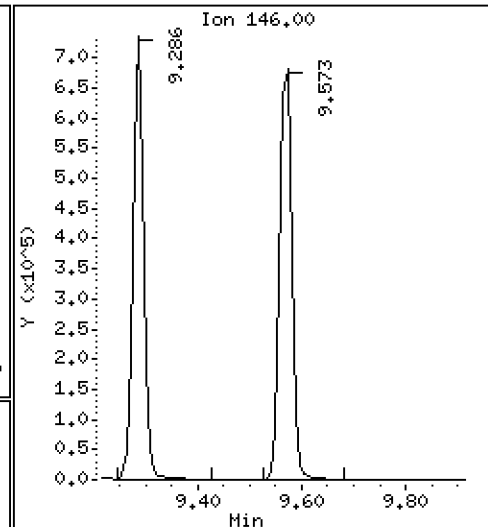
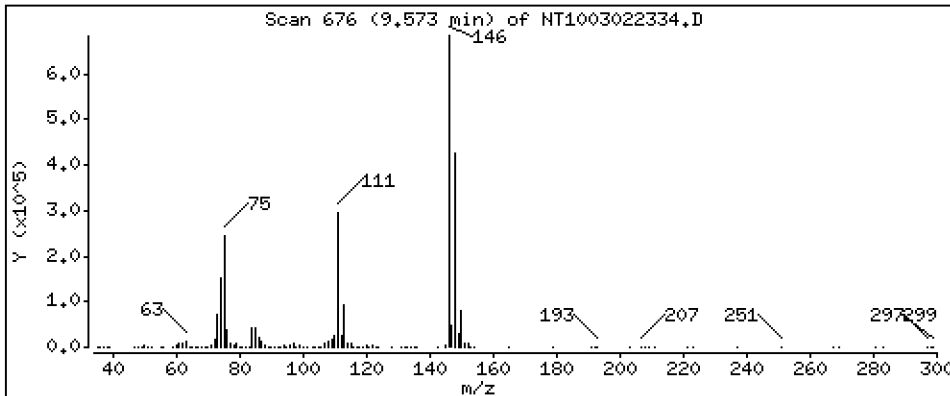
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

12 1,2-Dichlorobenzene

Concentration: 4,841 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

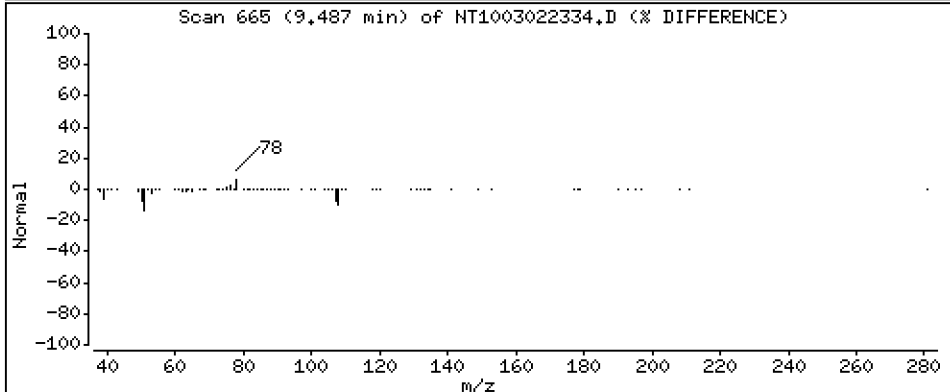
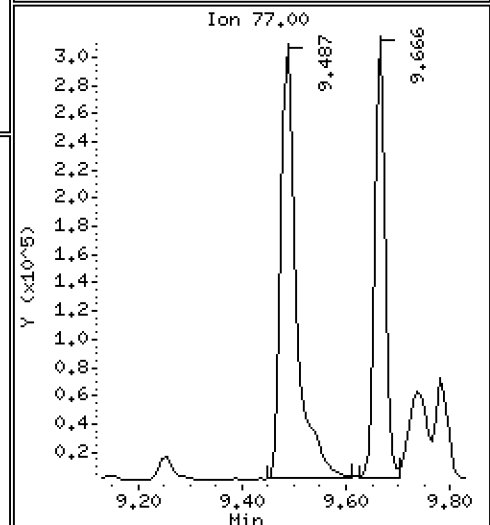
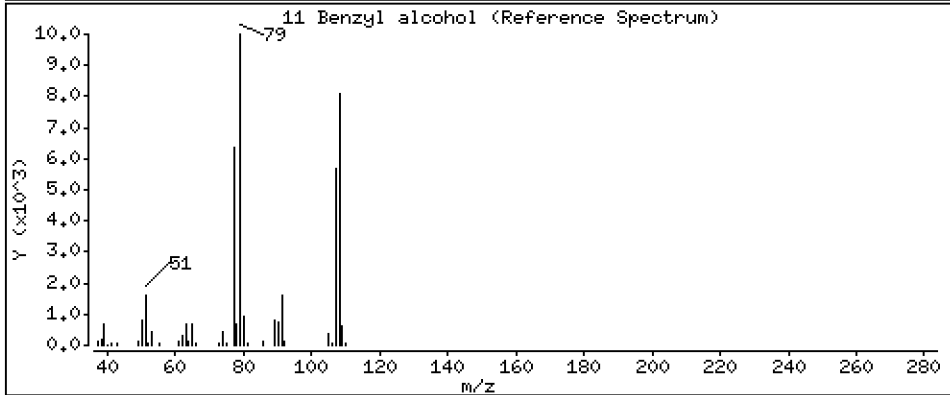
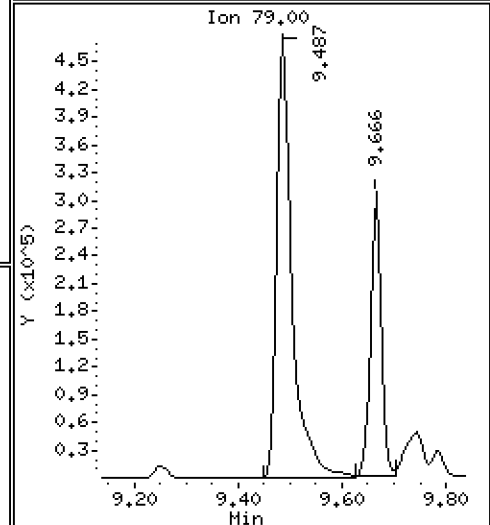
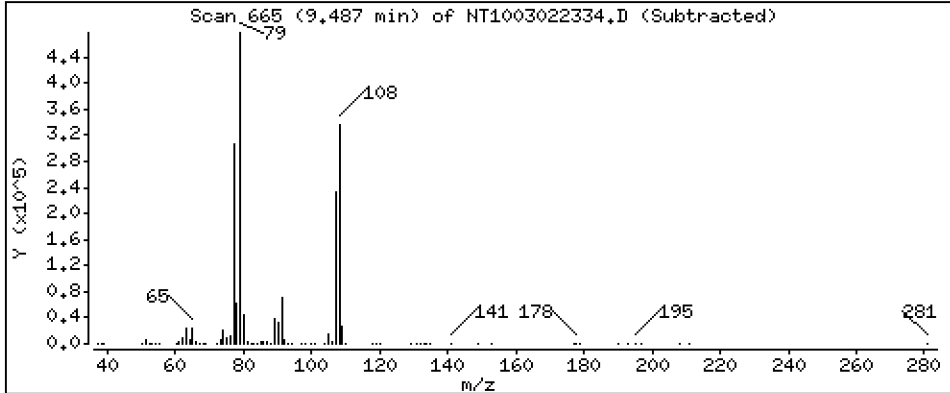
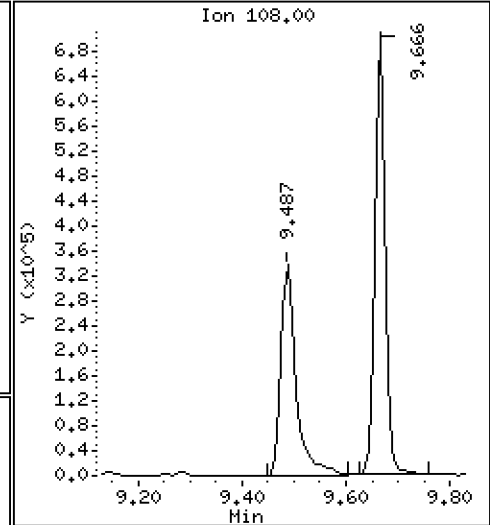
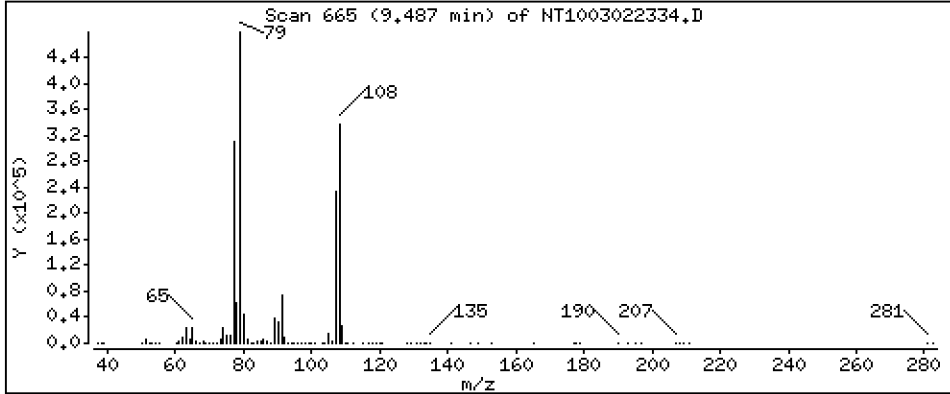
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 5,057 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

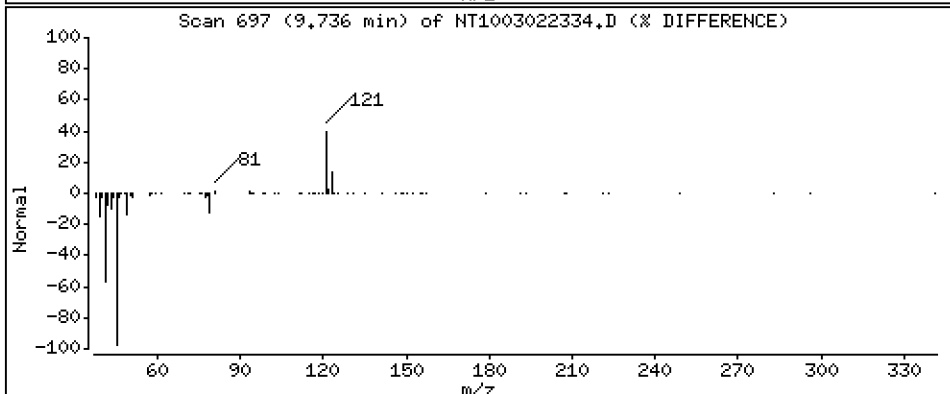
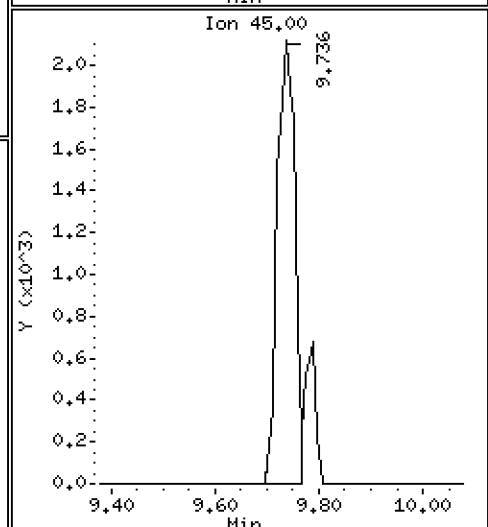
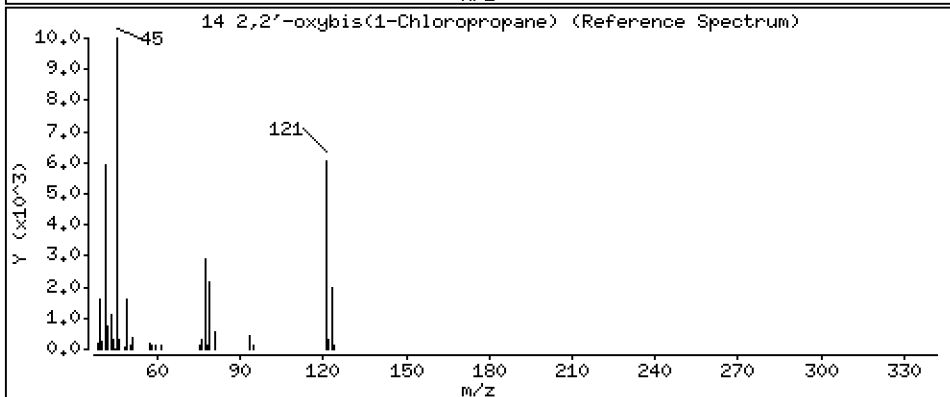
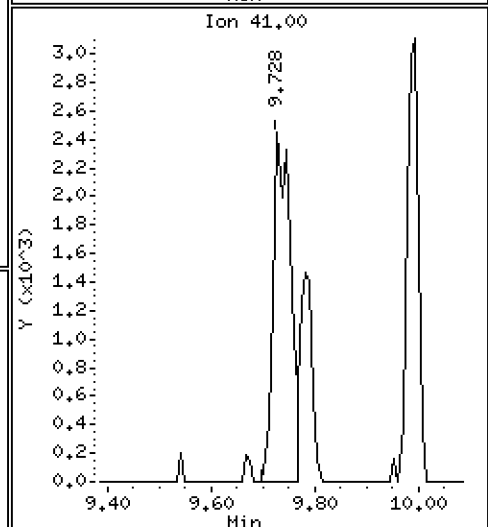
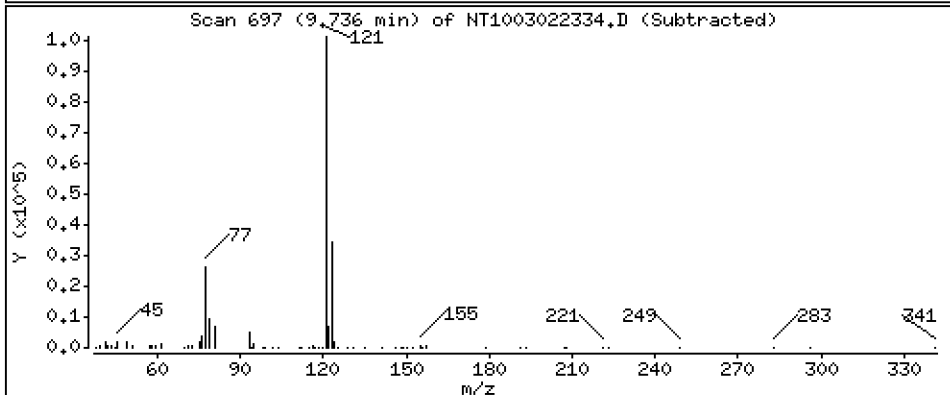
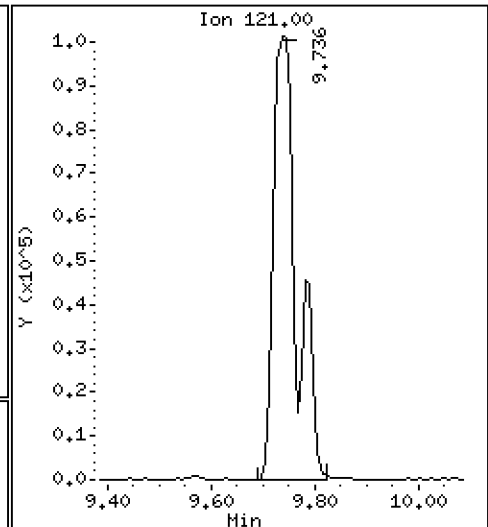
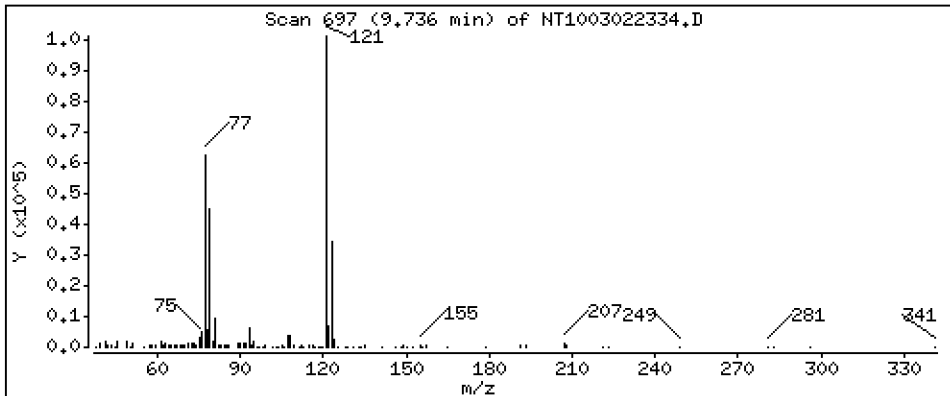
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 4,928 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

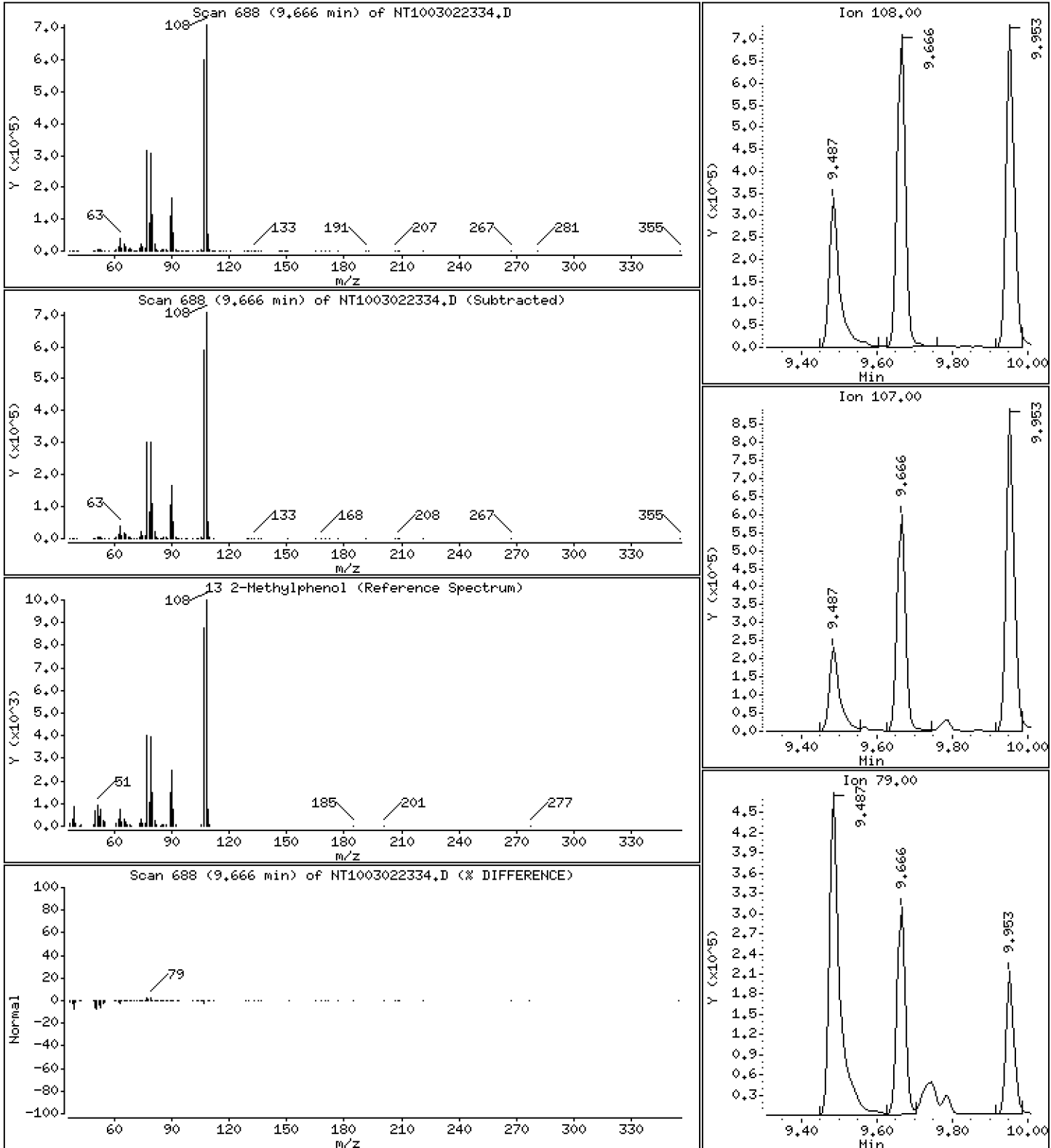
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

13 2-Methylphenol

Concentration: 5,096 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

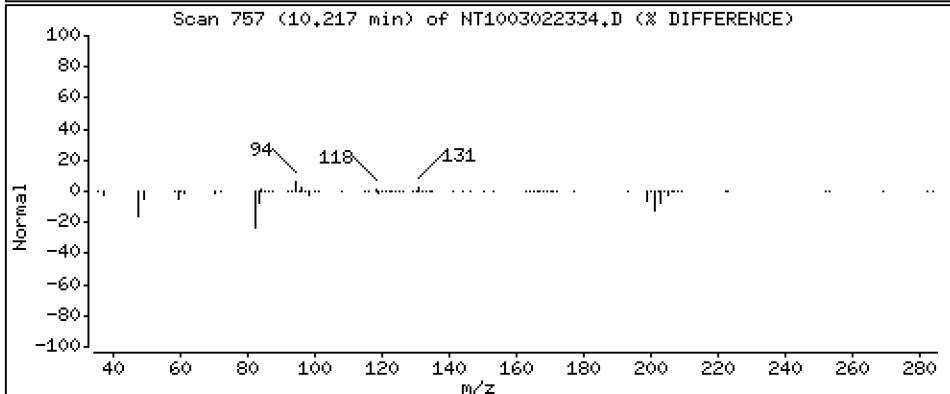
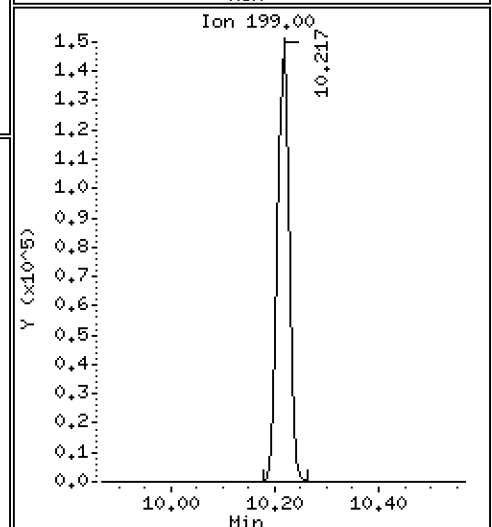
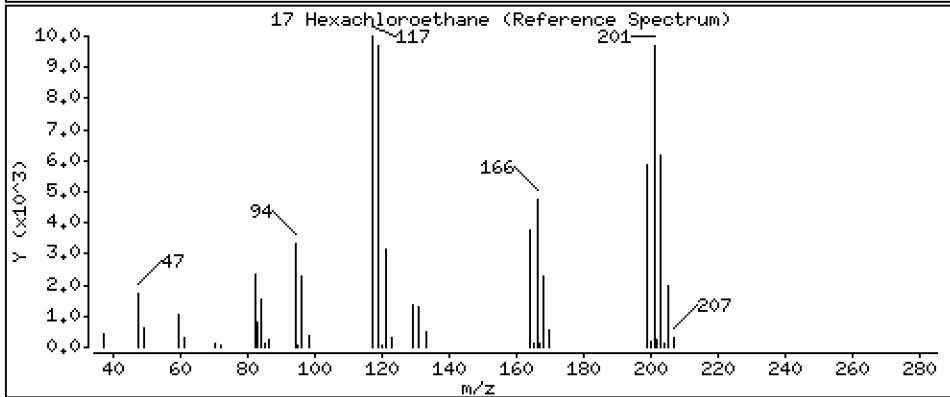
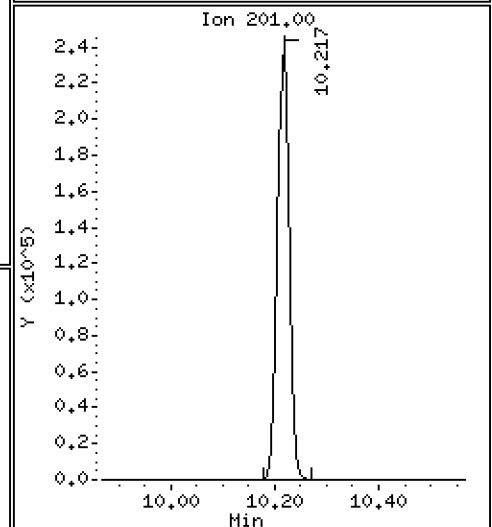
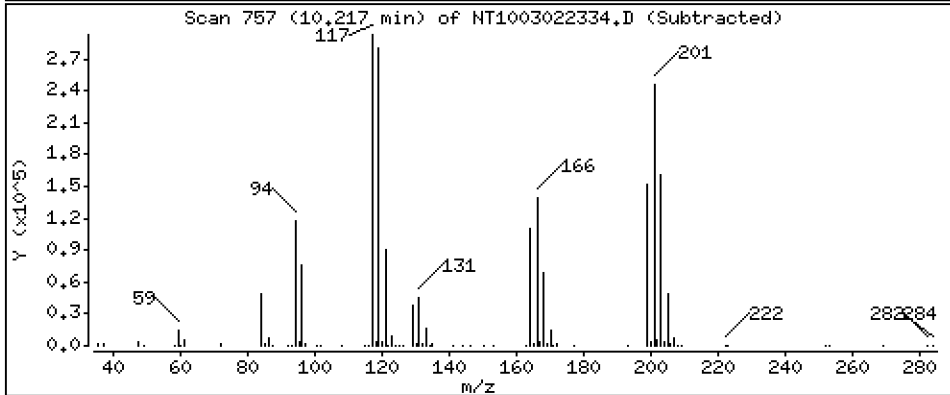
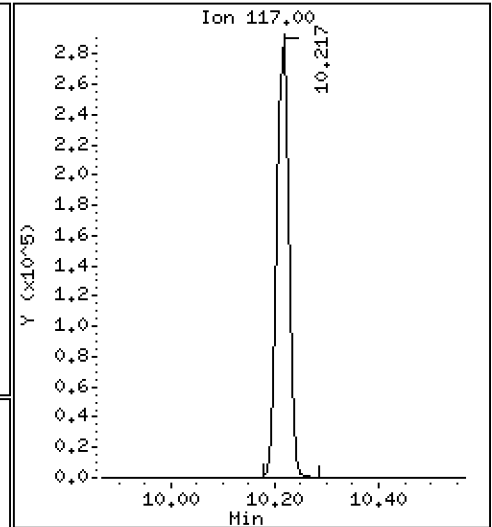
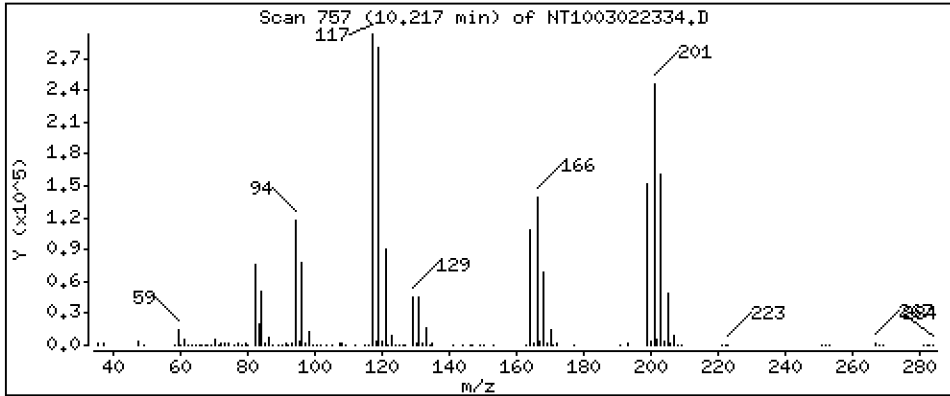
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 4,692 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

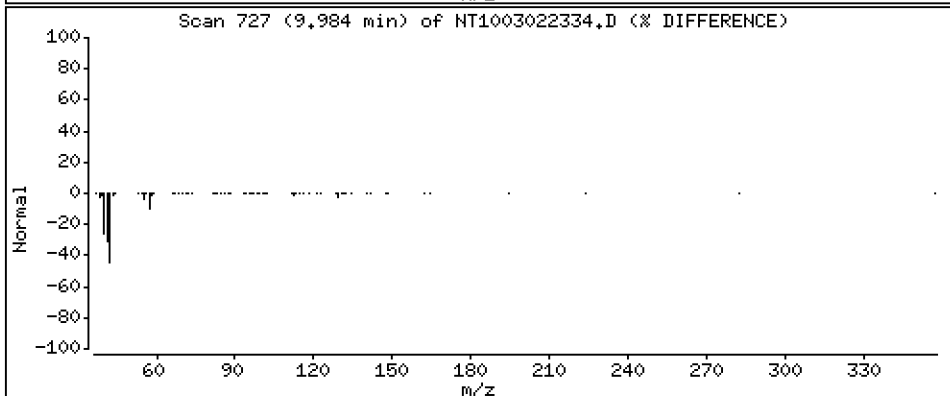
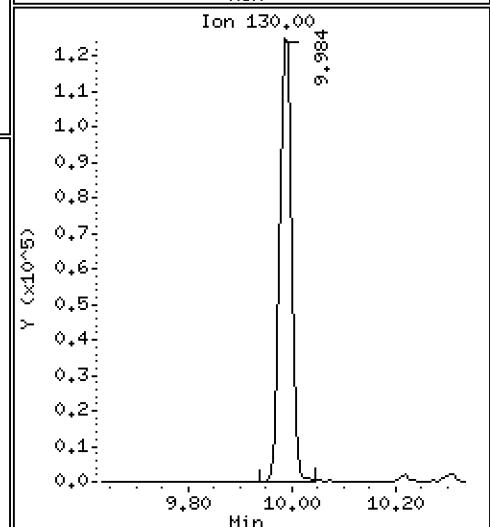
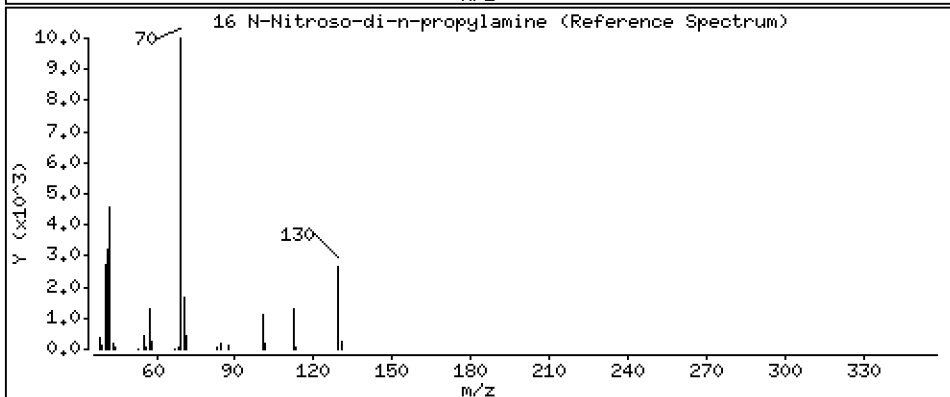
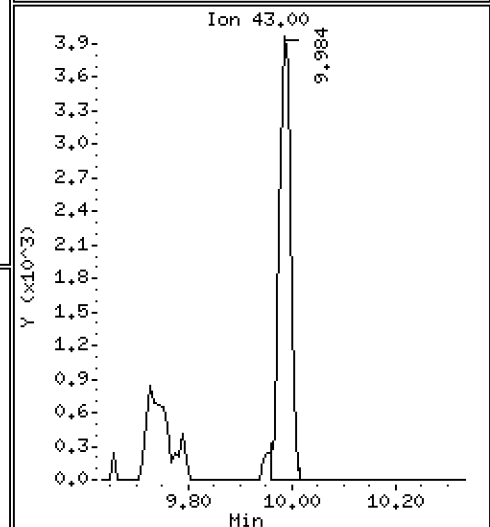
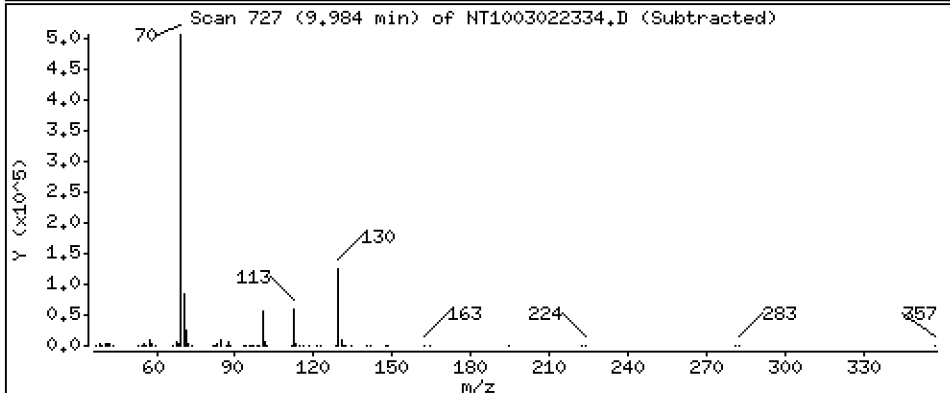
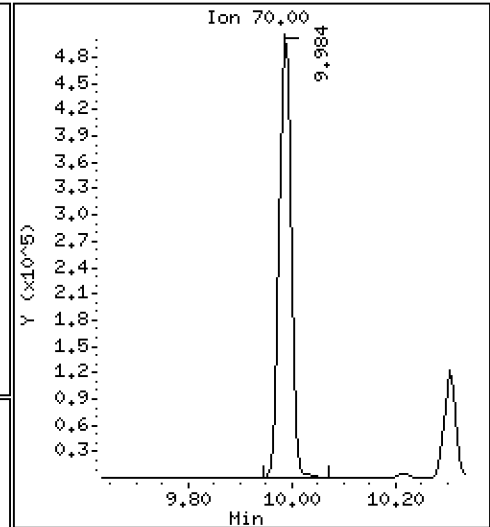
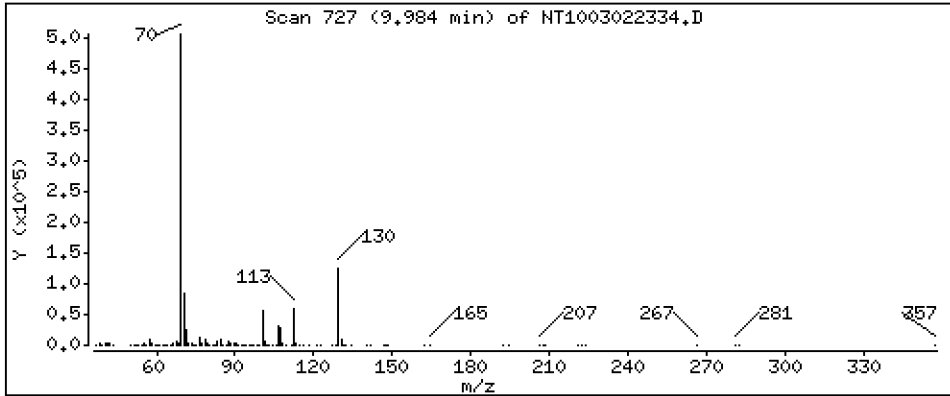
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,112 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

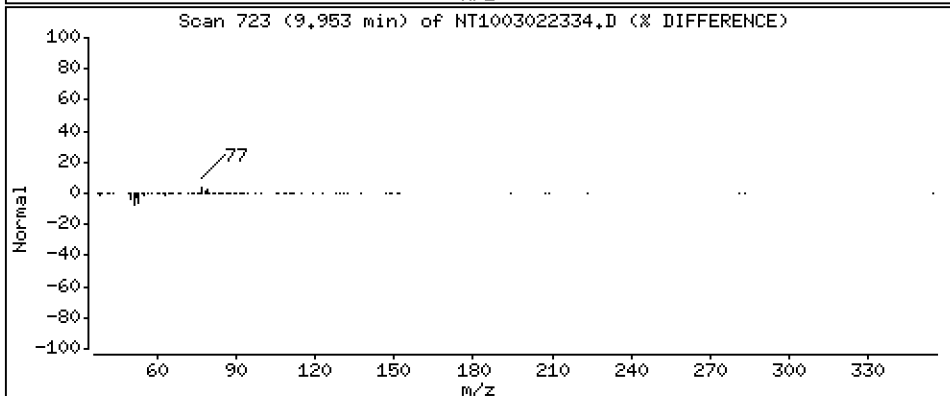
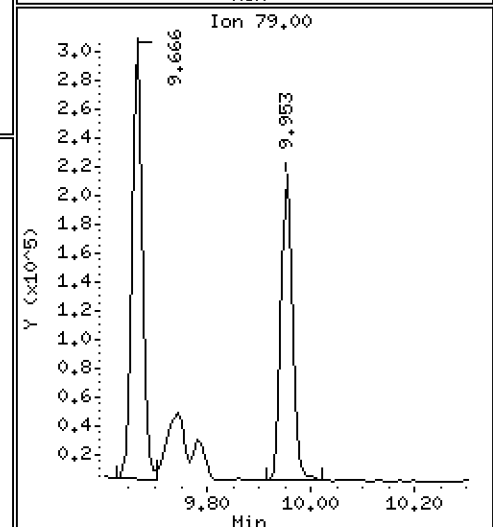
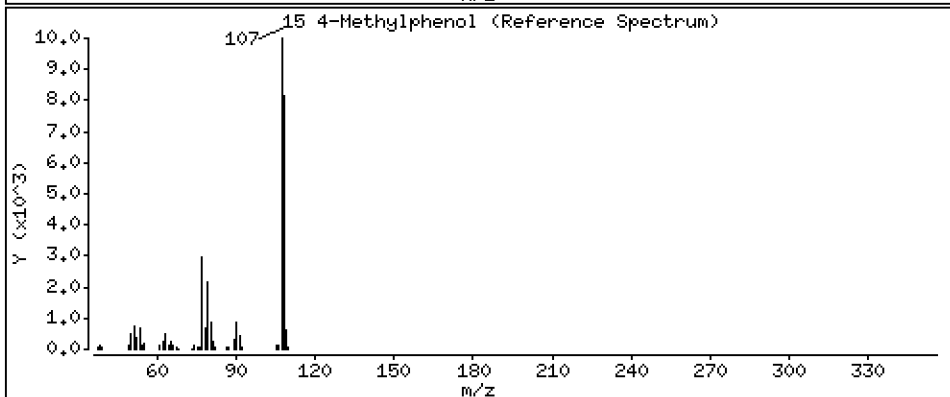
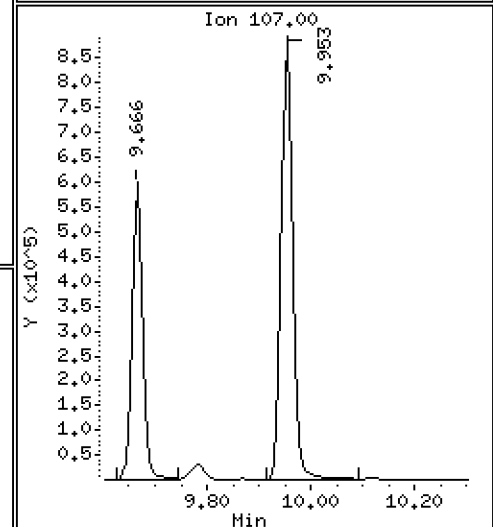
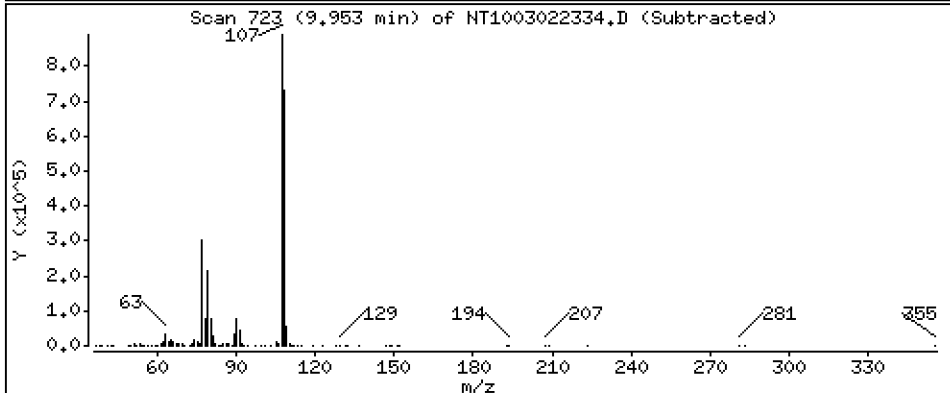
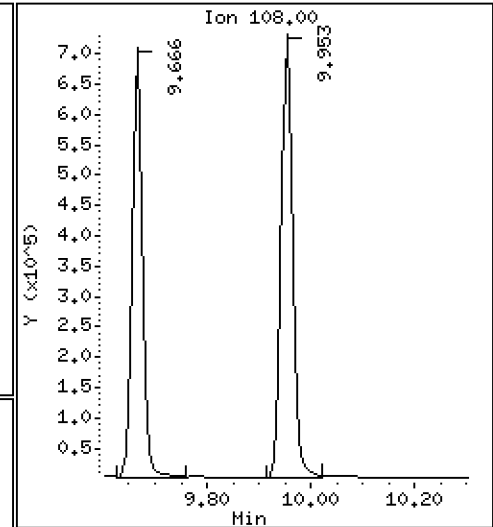
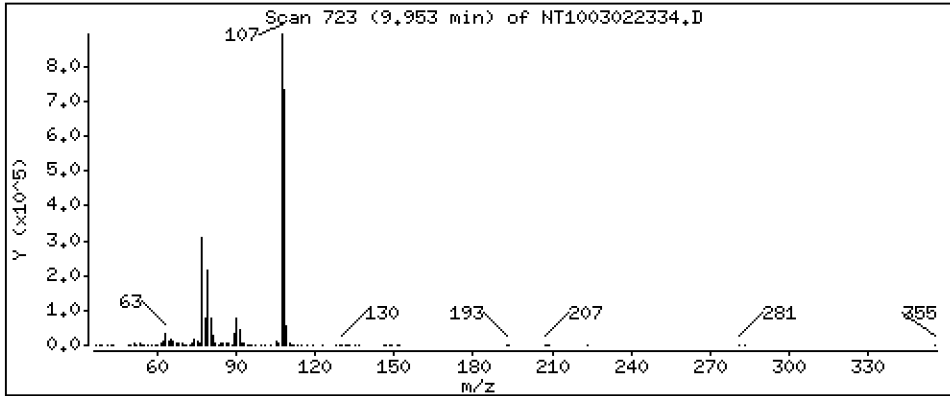
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 4,420 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

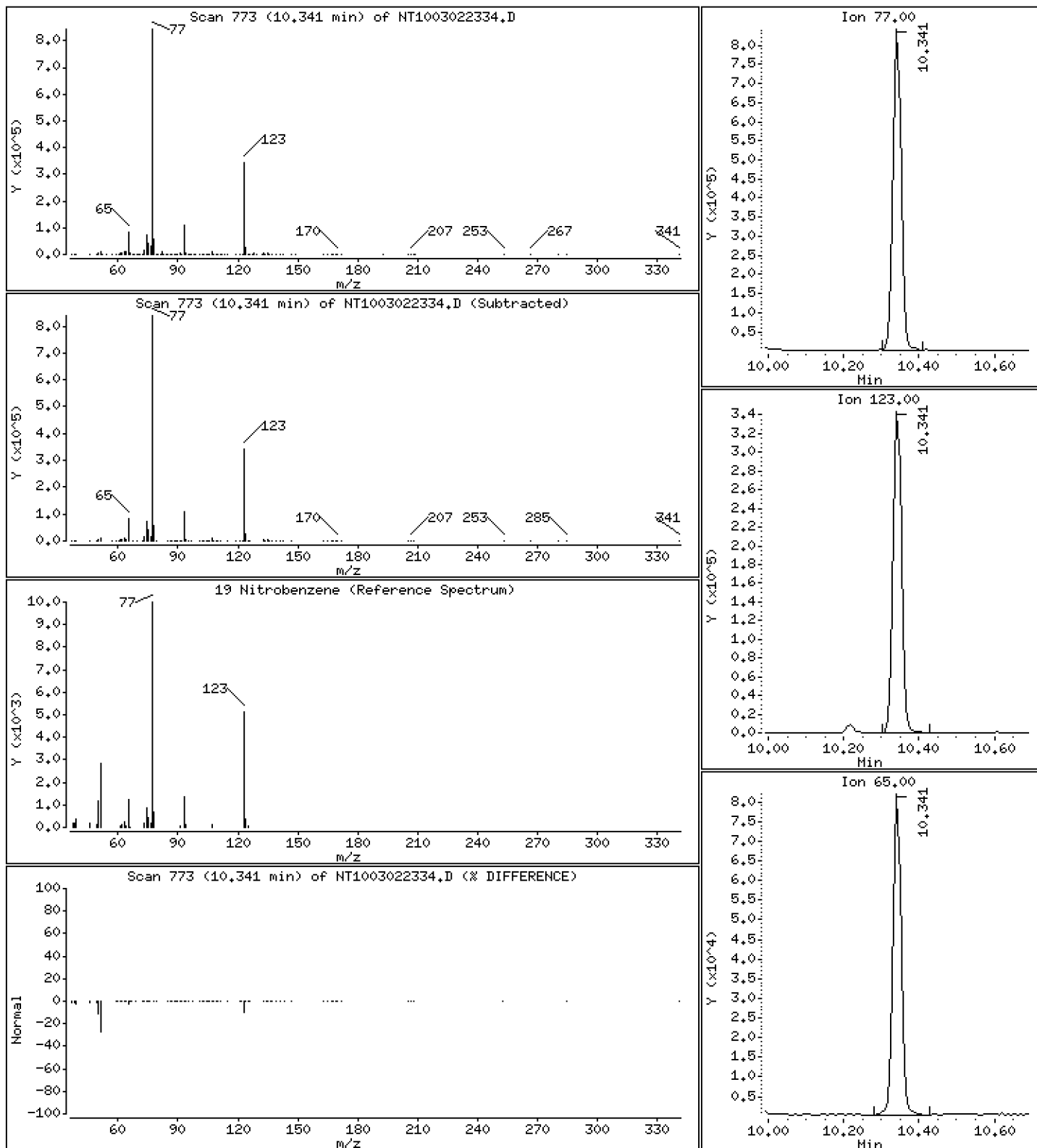
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

19 Nitrobenzene

Concentration: 4,967 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

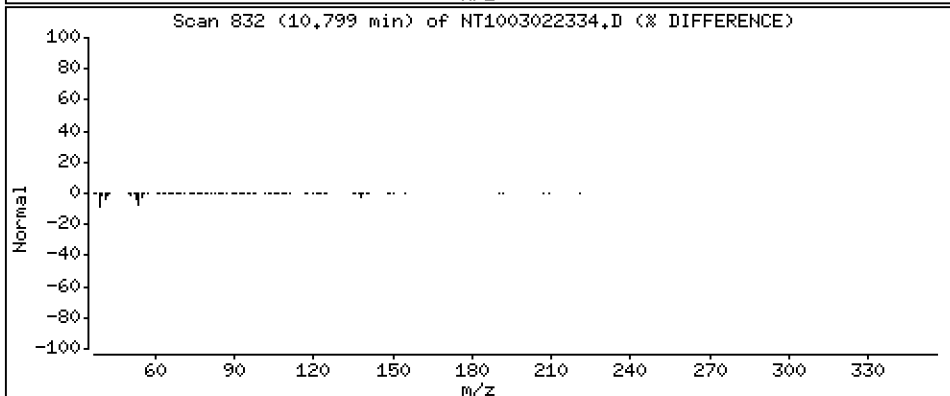
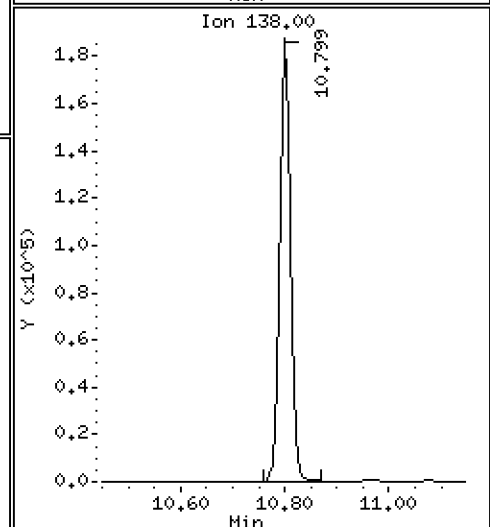
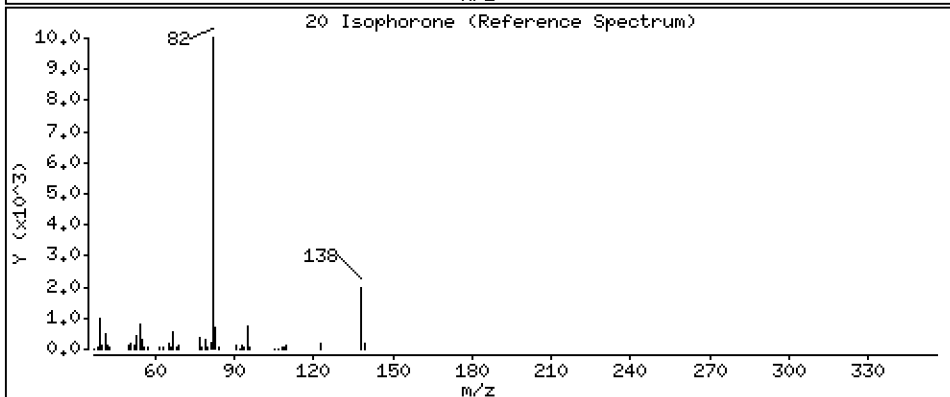
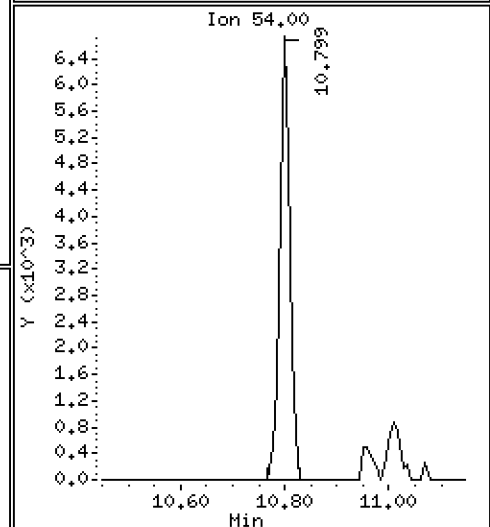
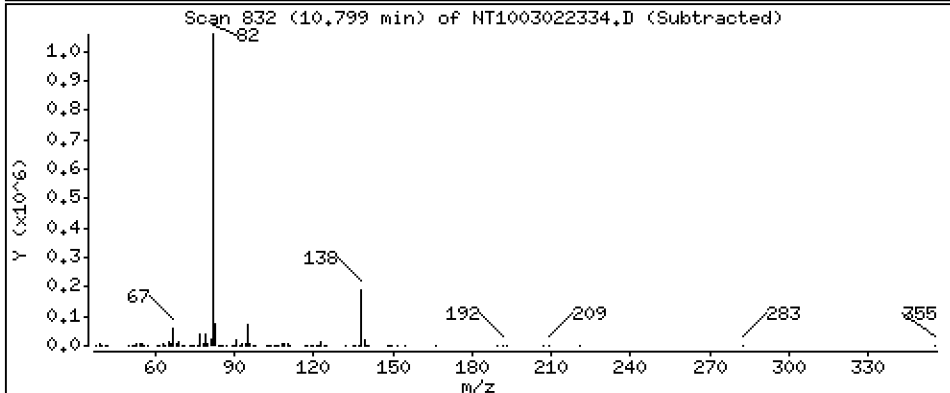
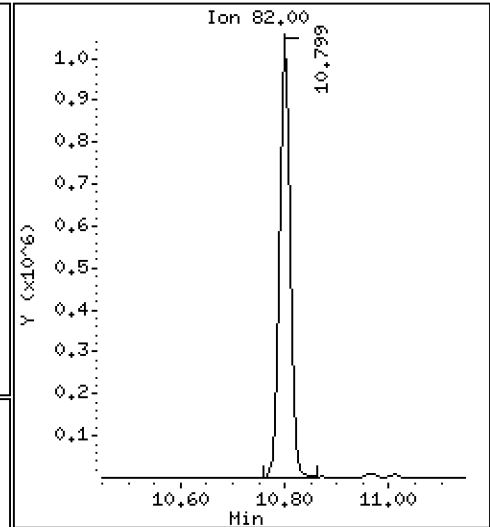
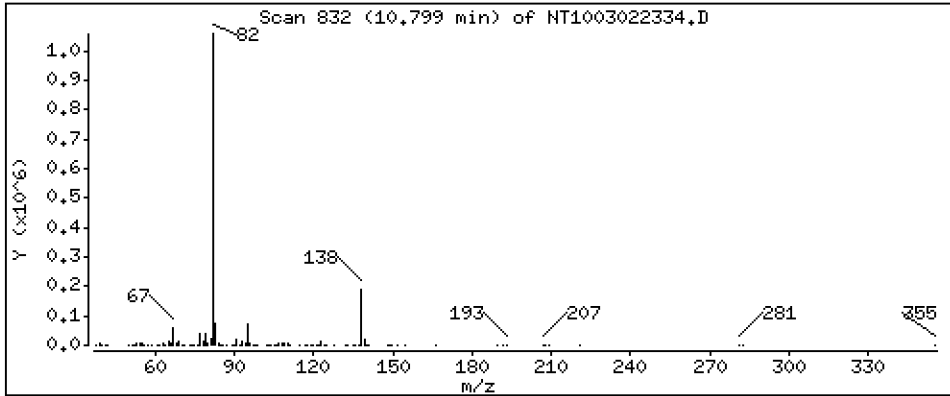
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 5,088 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

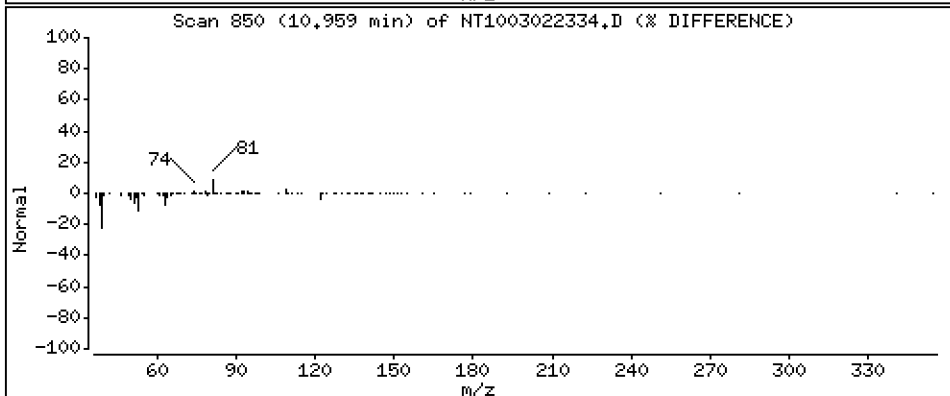
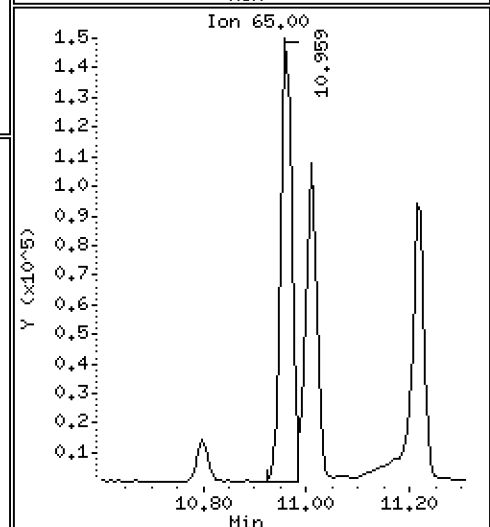
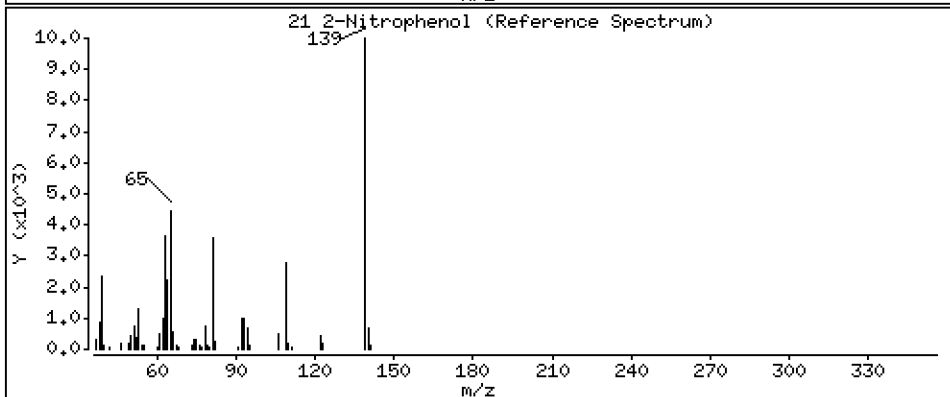
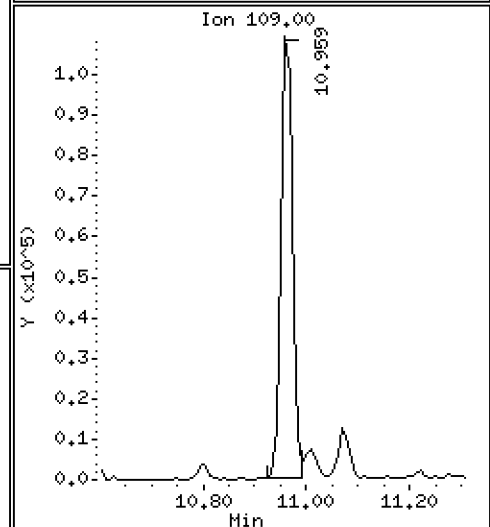
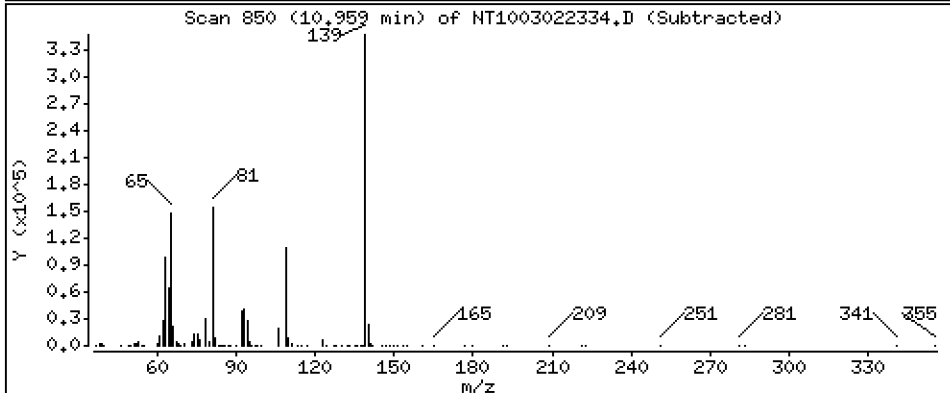
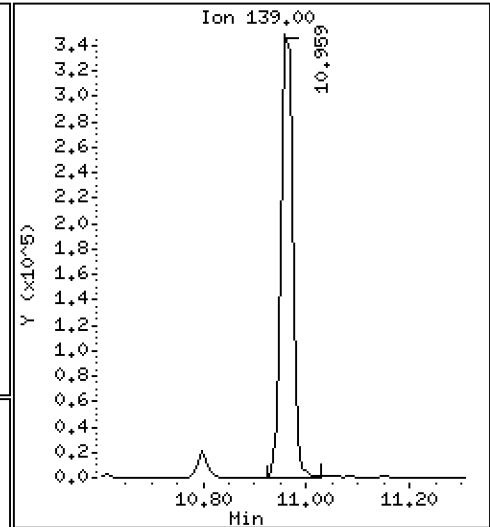
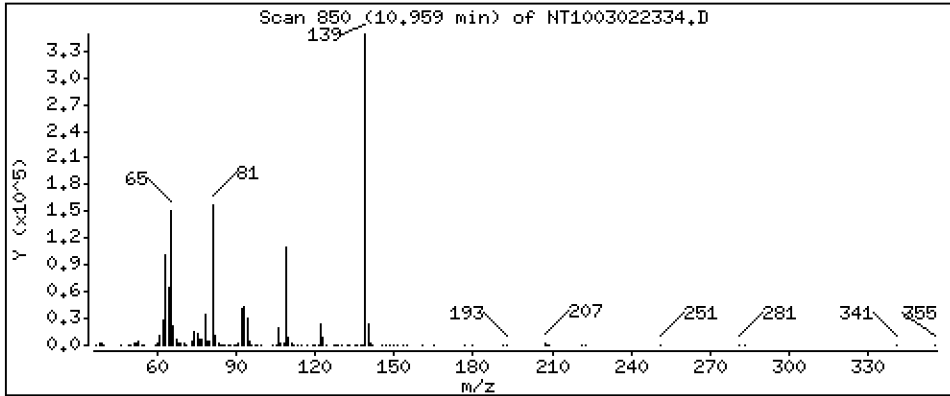
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 4,293 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

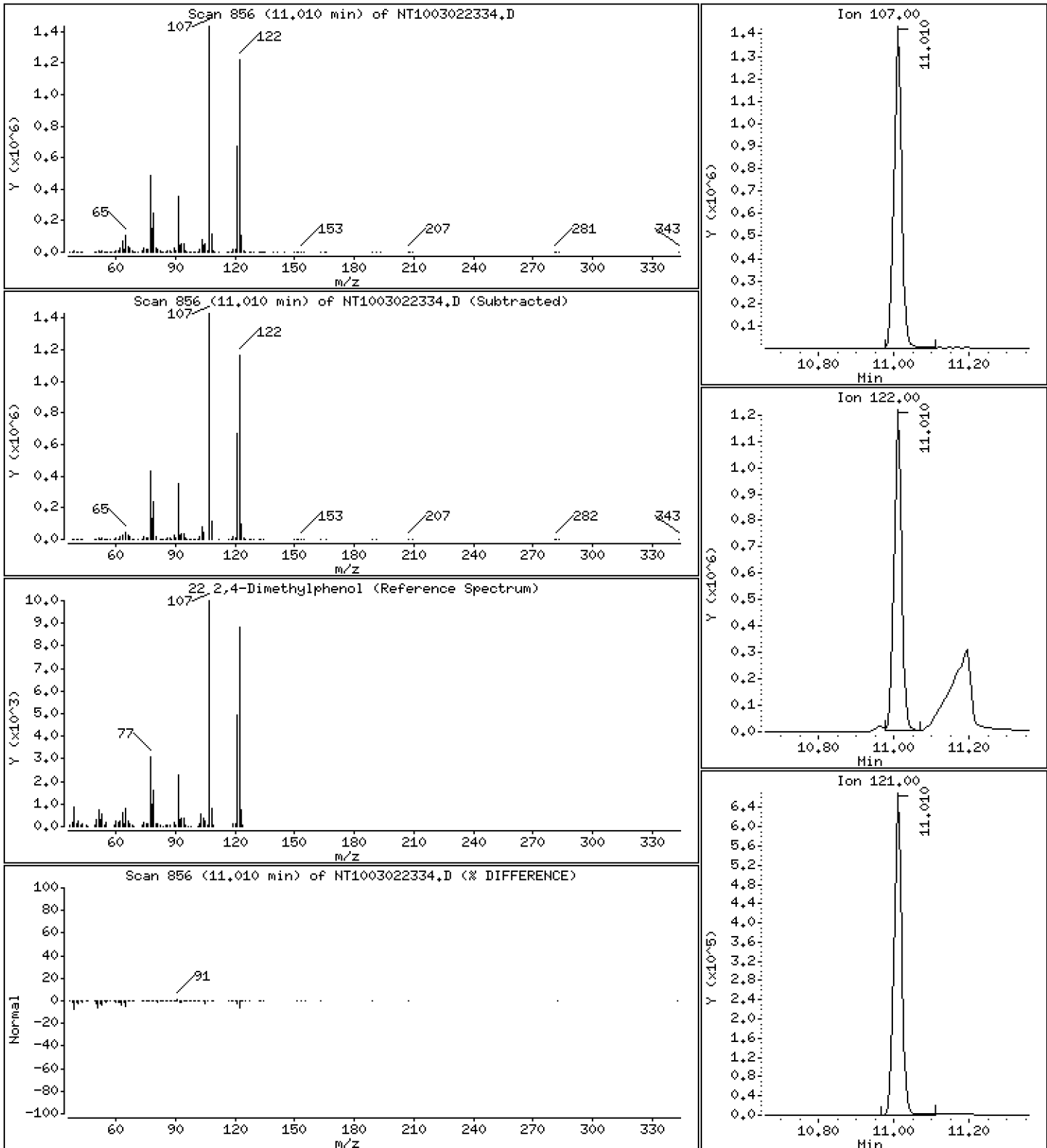
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 8,960 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

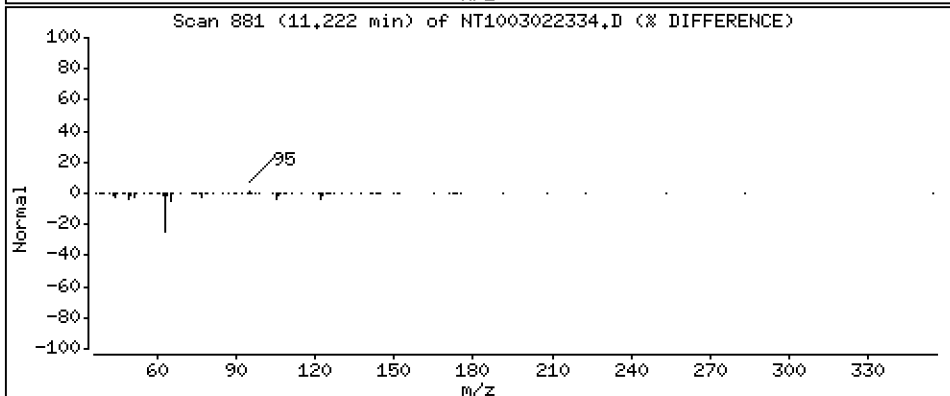
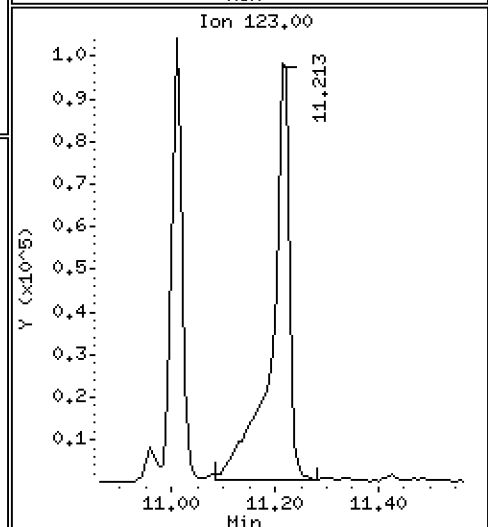
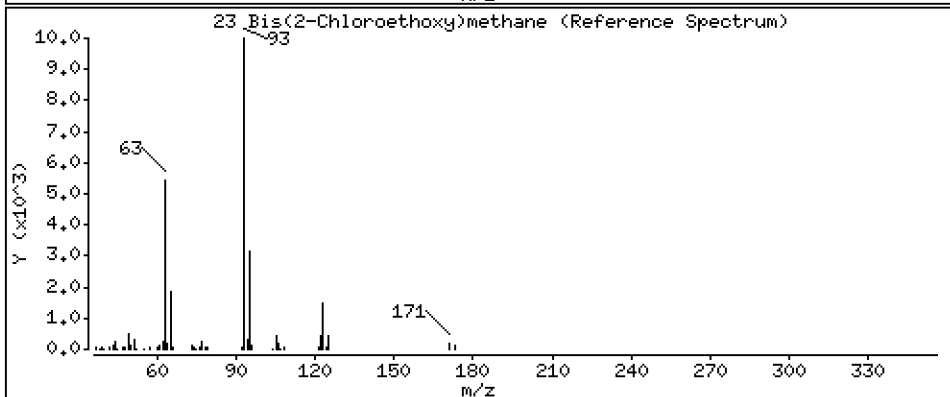
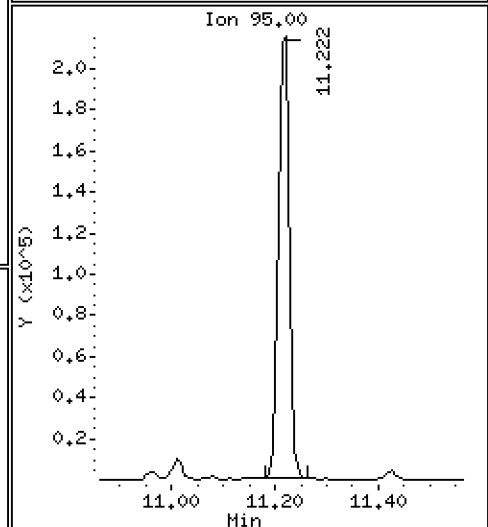
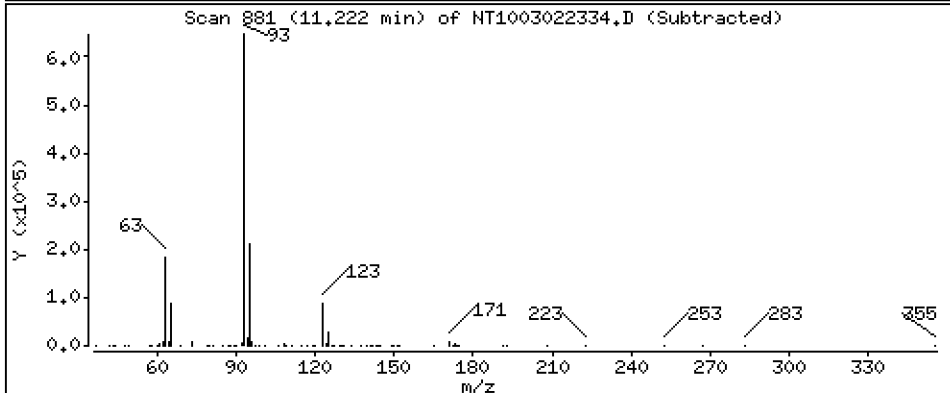
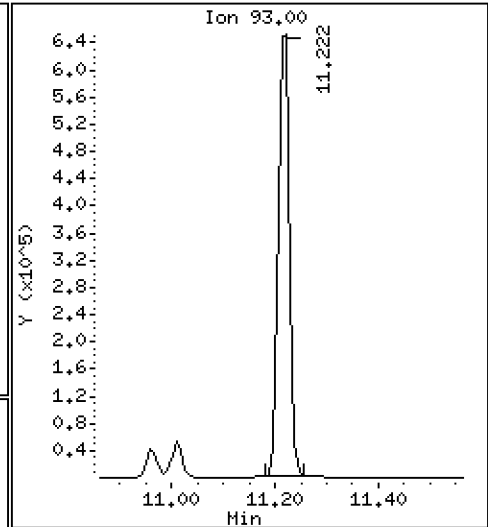
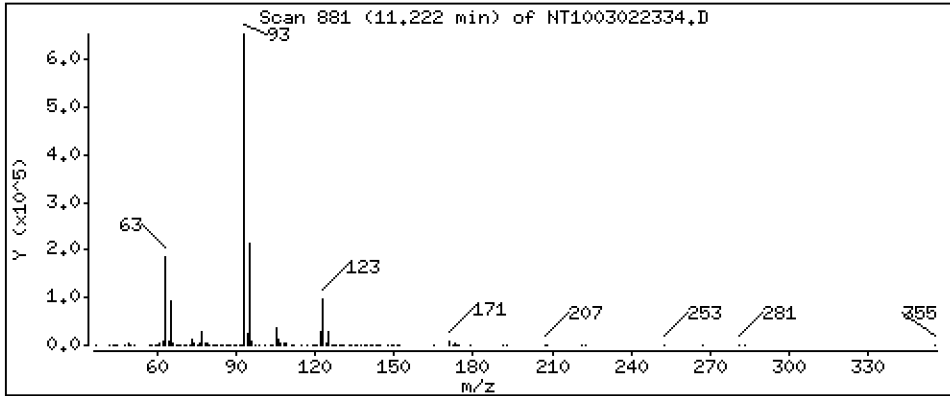
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 5,244 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

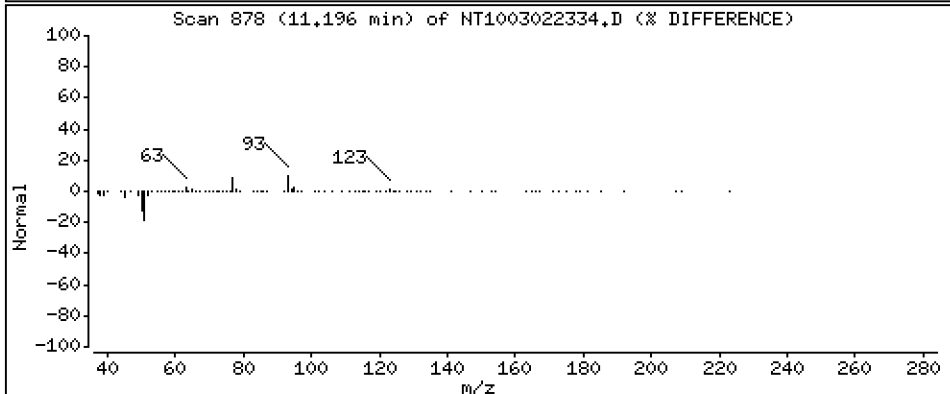
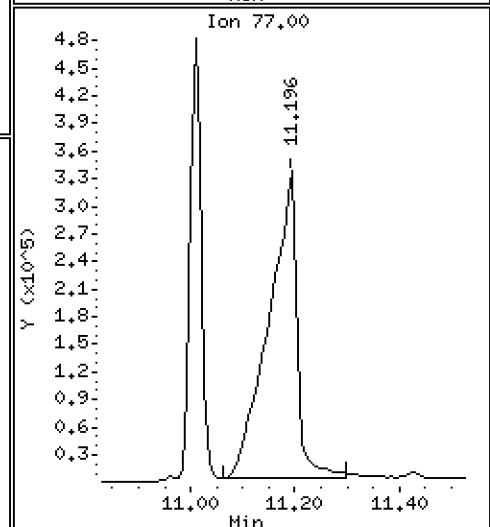
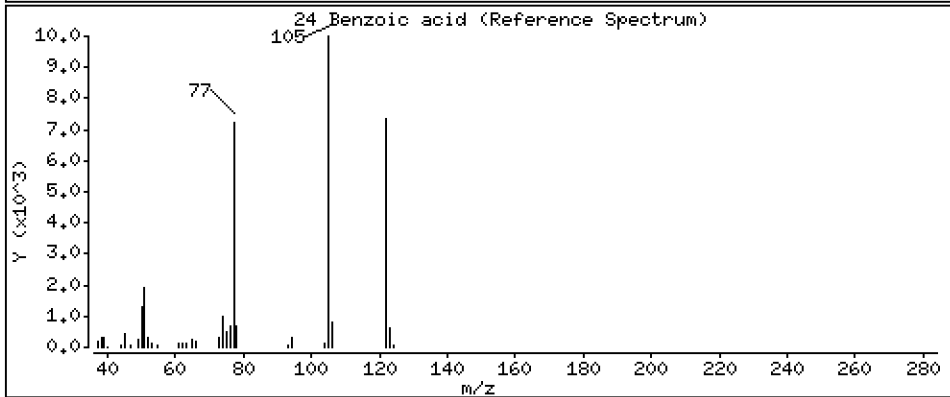
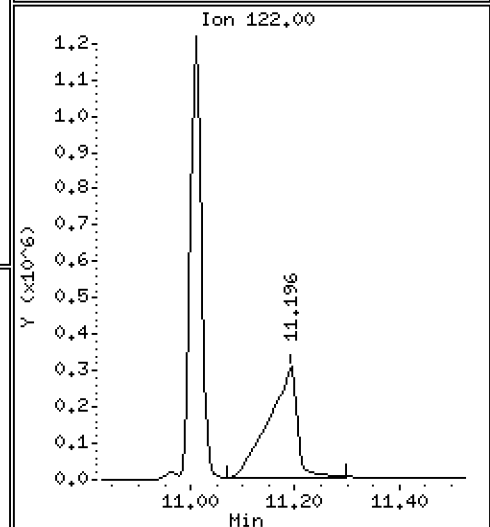
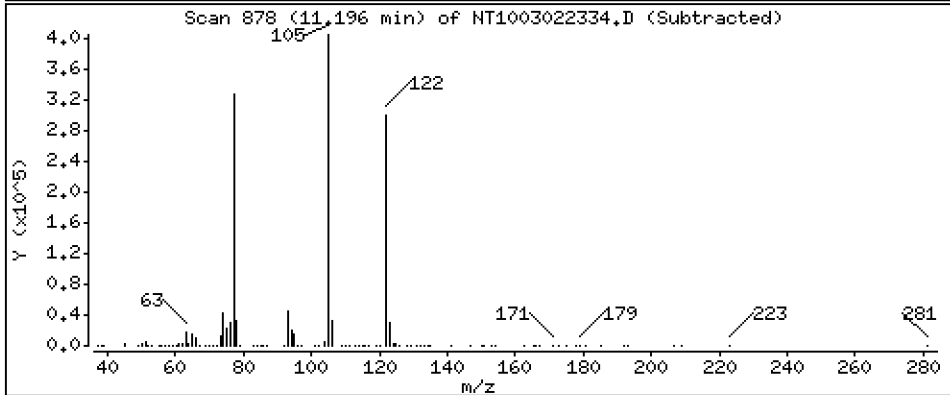
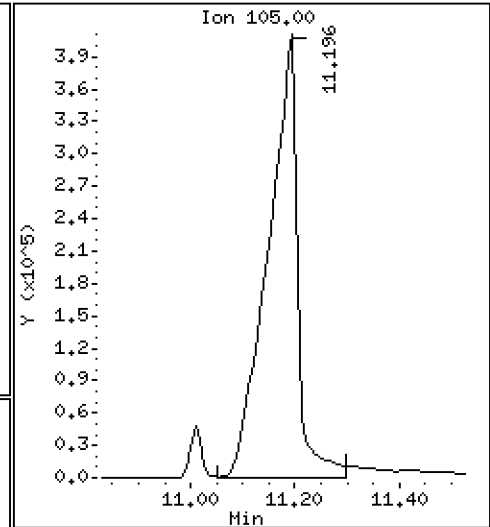
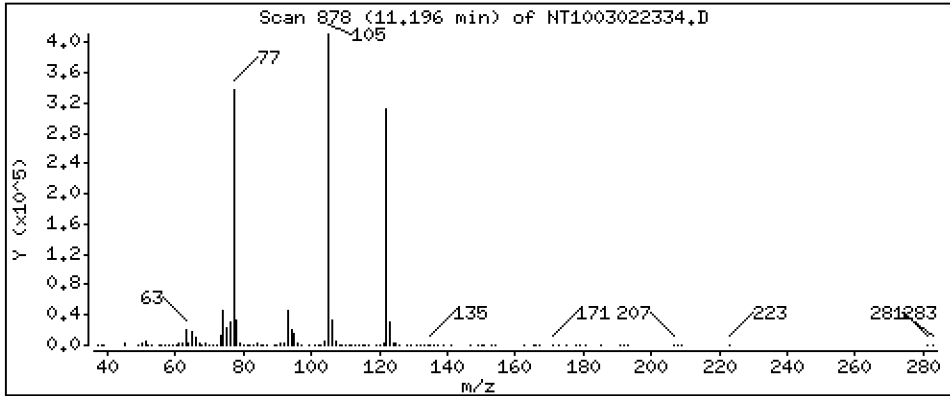
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 11,68 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

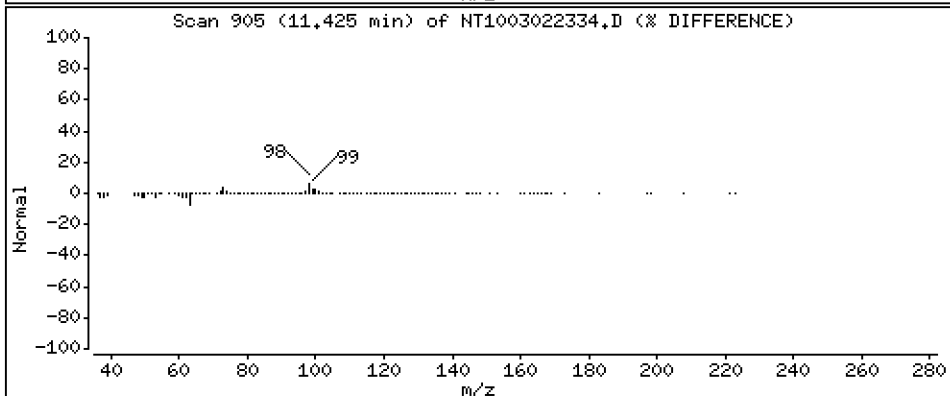
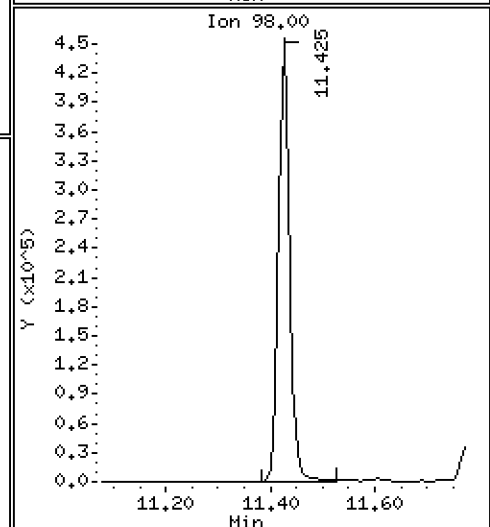
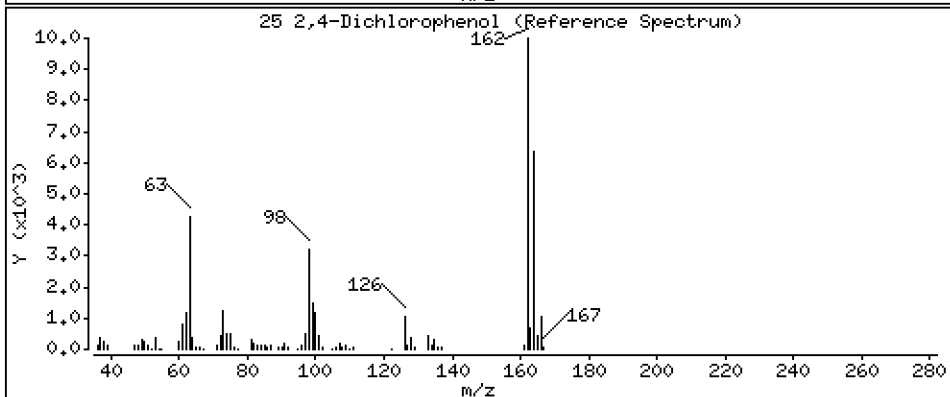
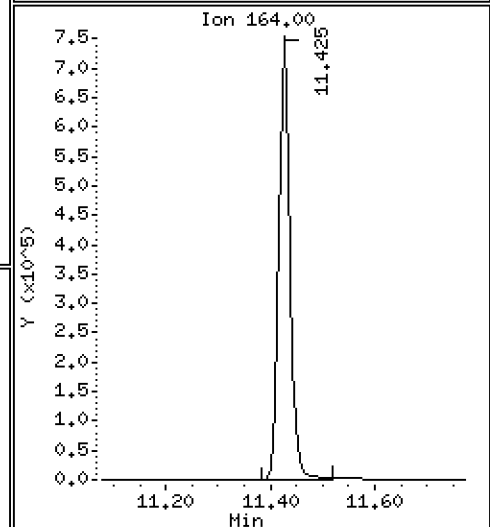
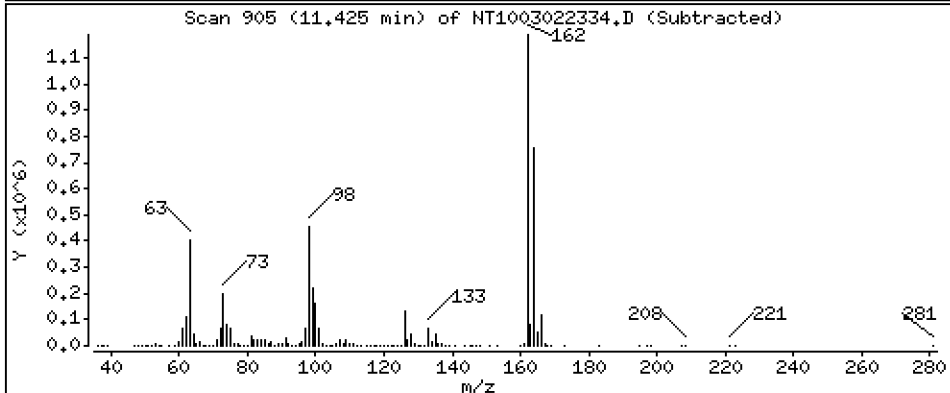
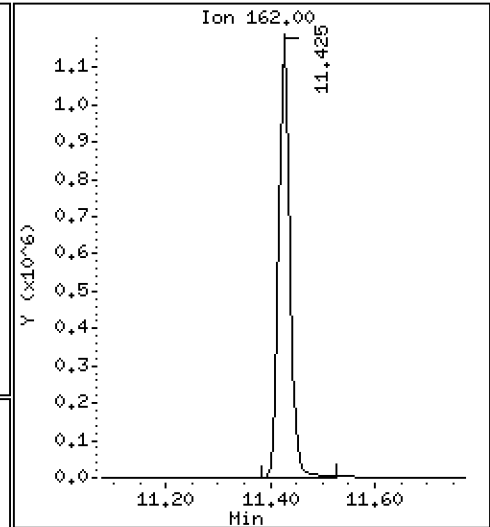
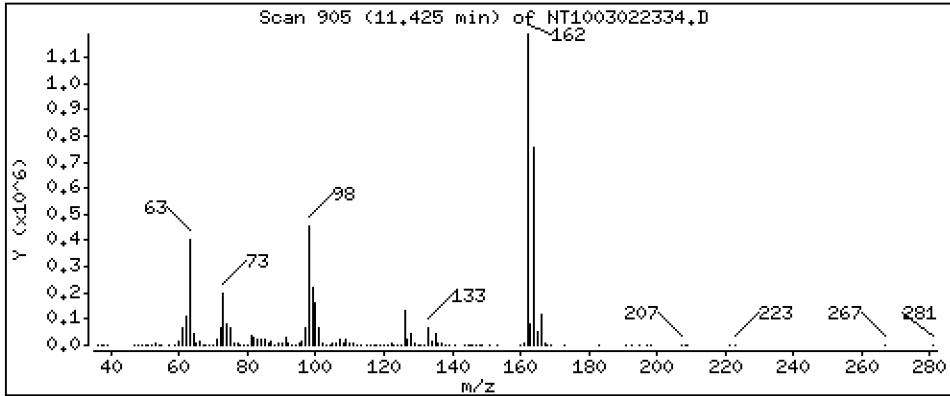
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 10,57 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

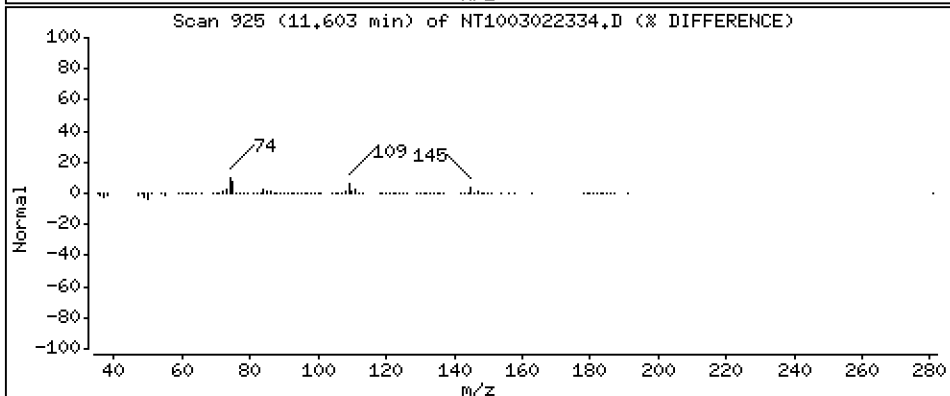
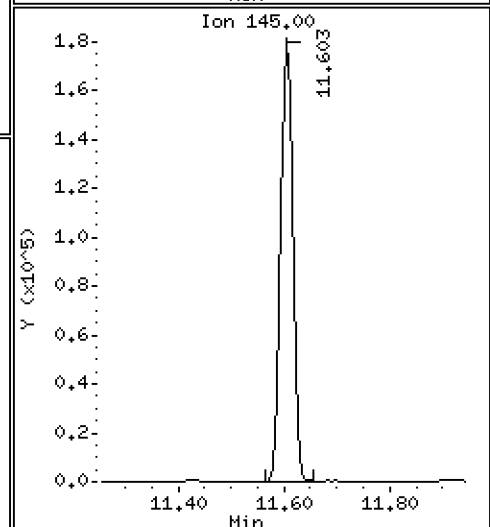
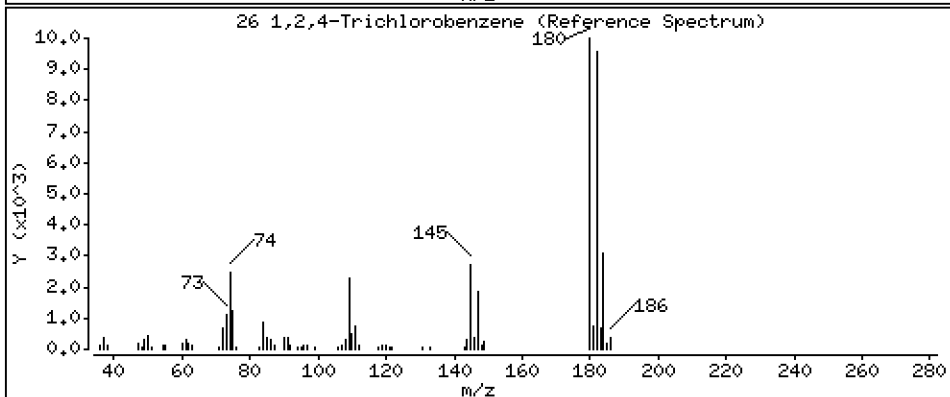
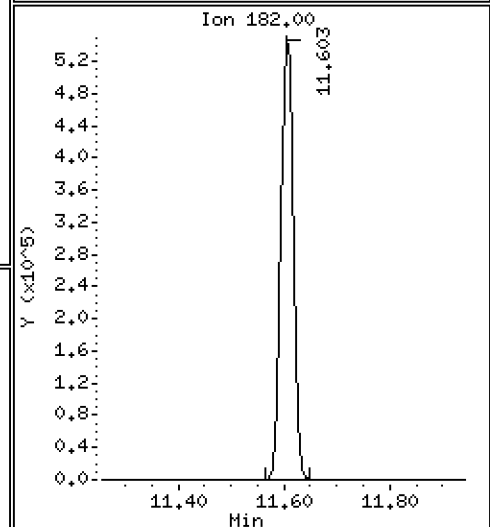
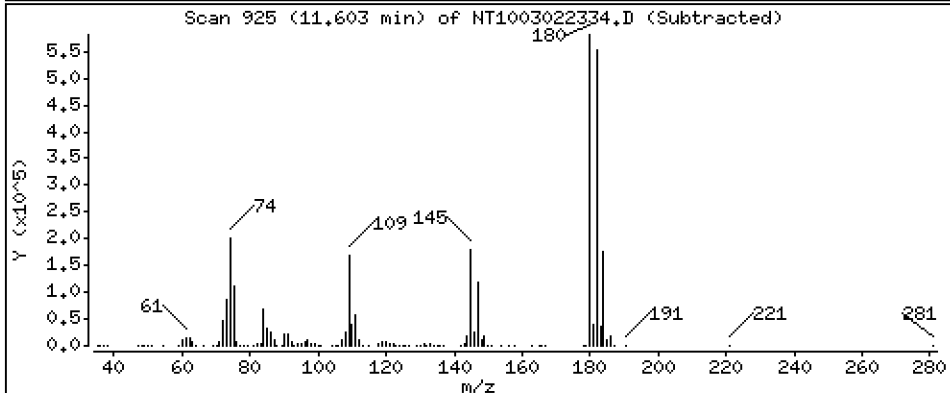
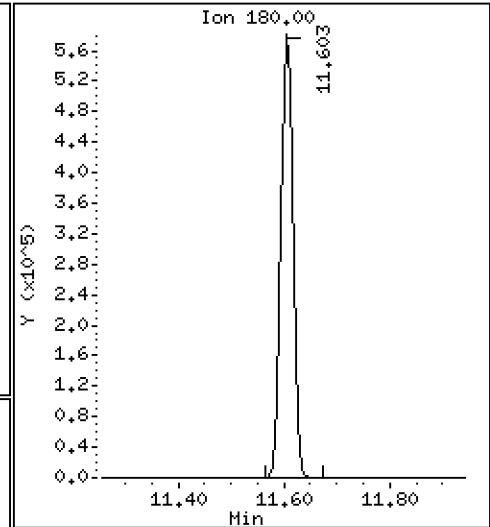
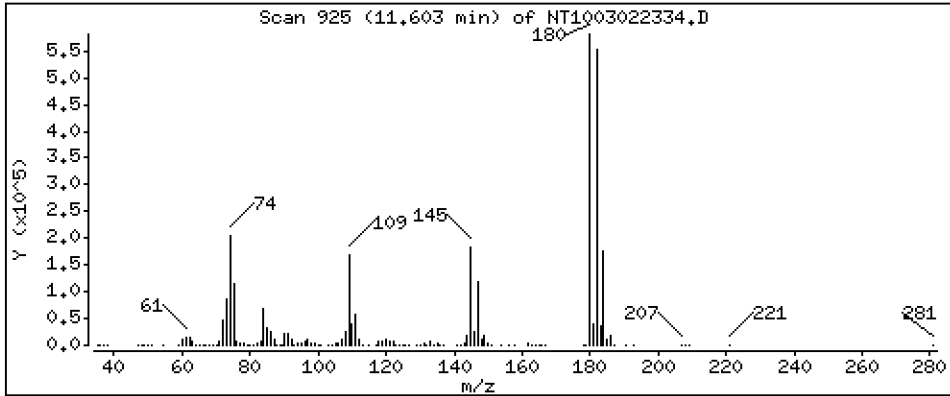
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,977 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

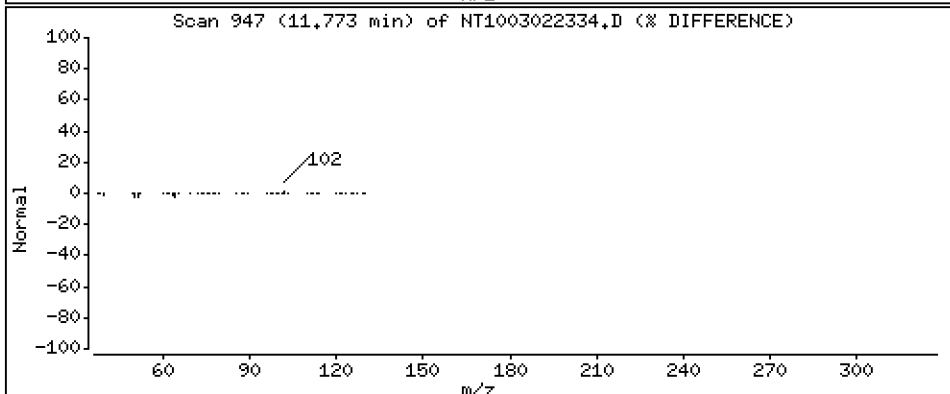
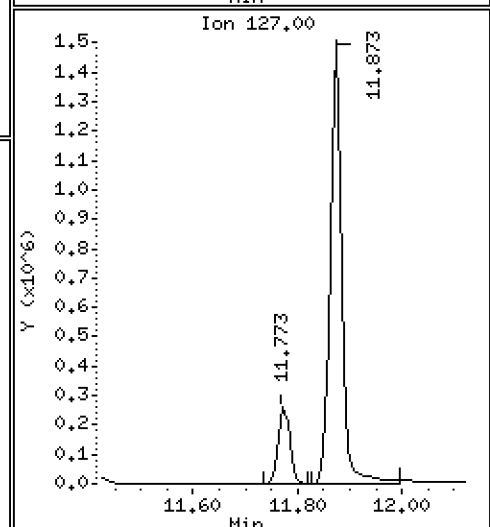
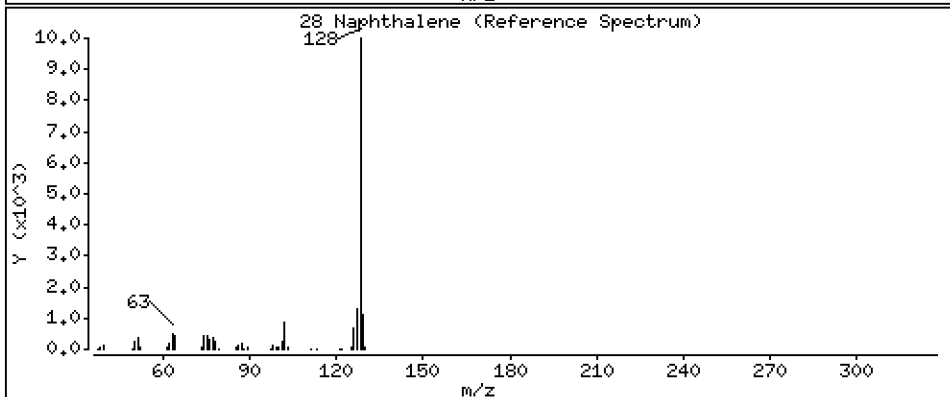
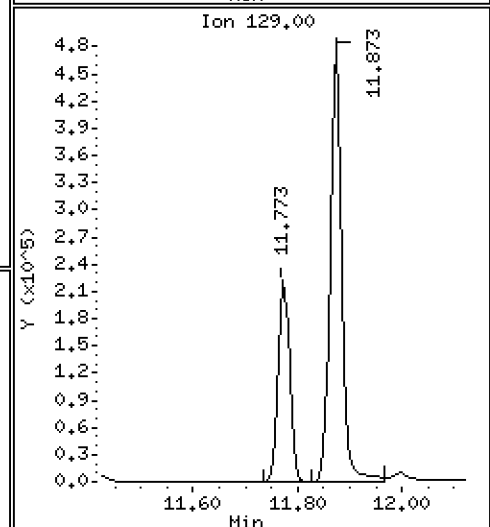
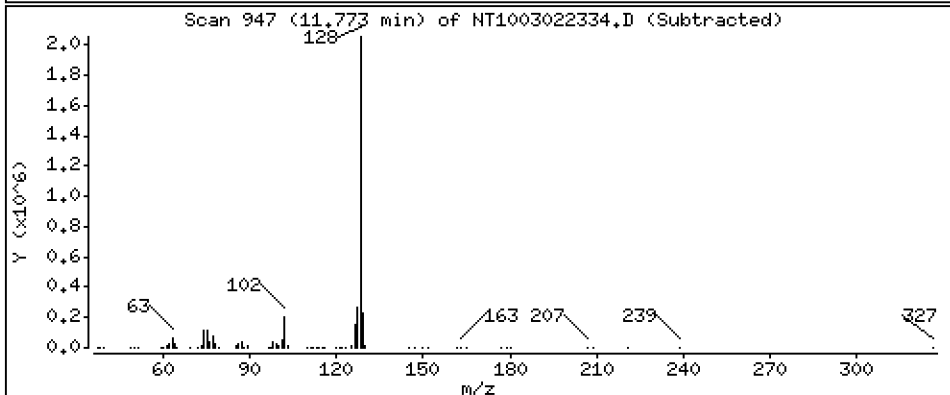
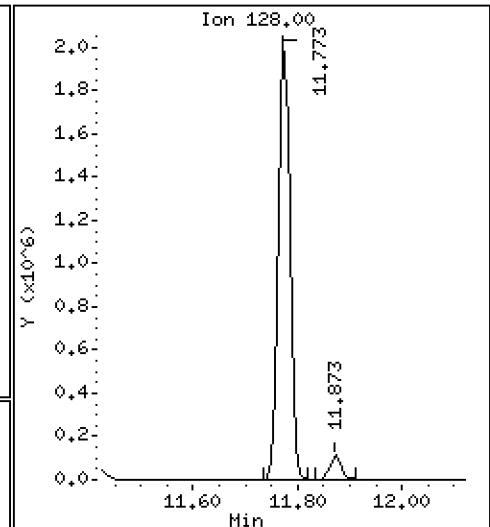
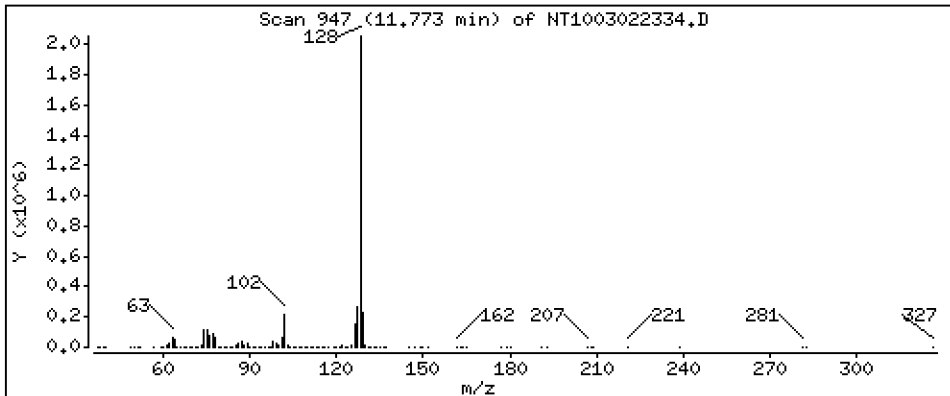
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 4,926 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

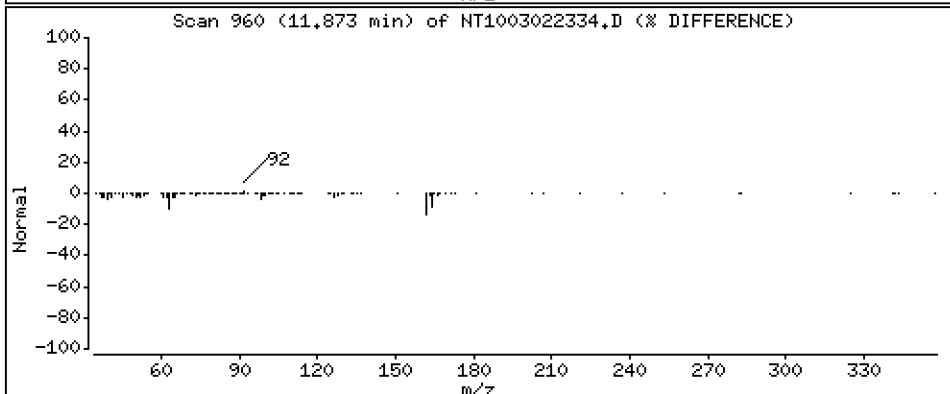
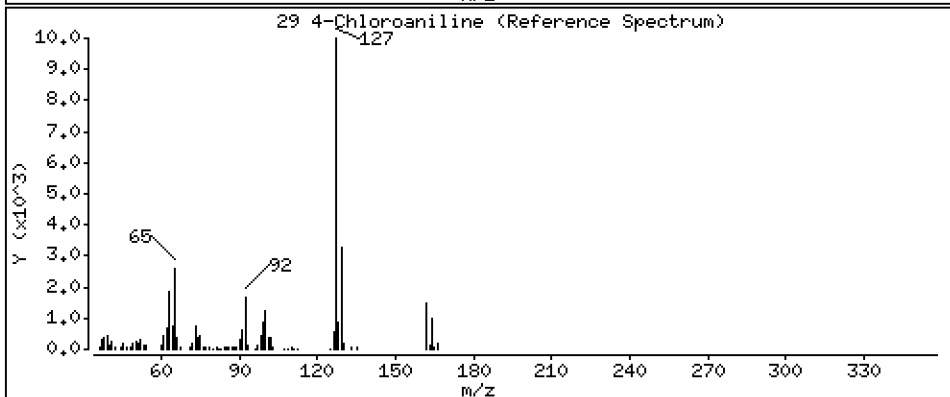
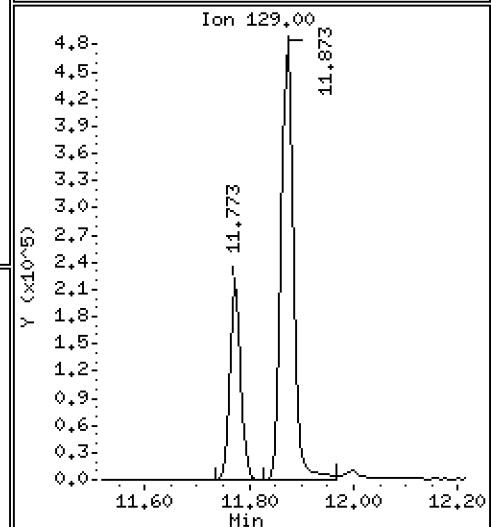
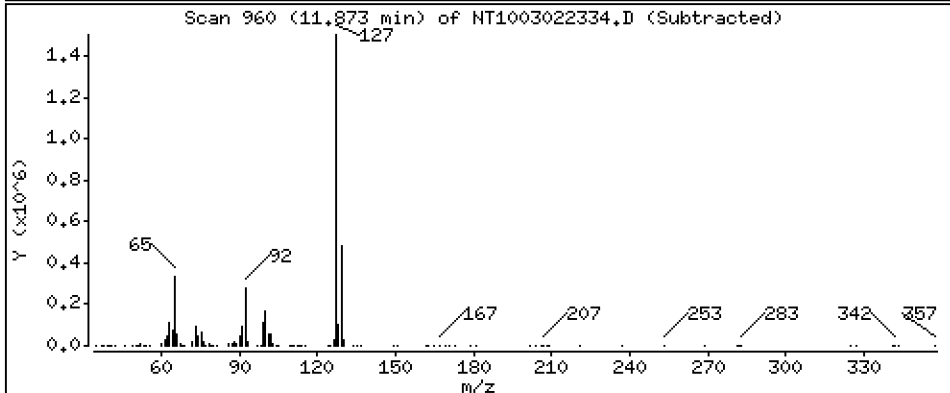
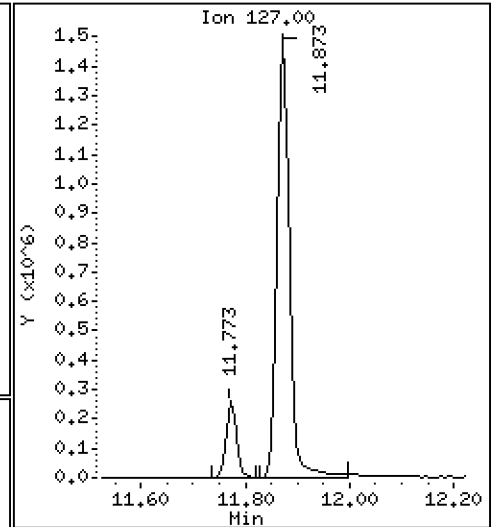
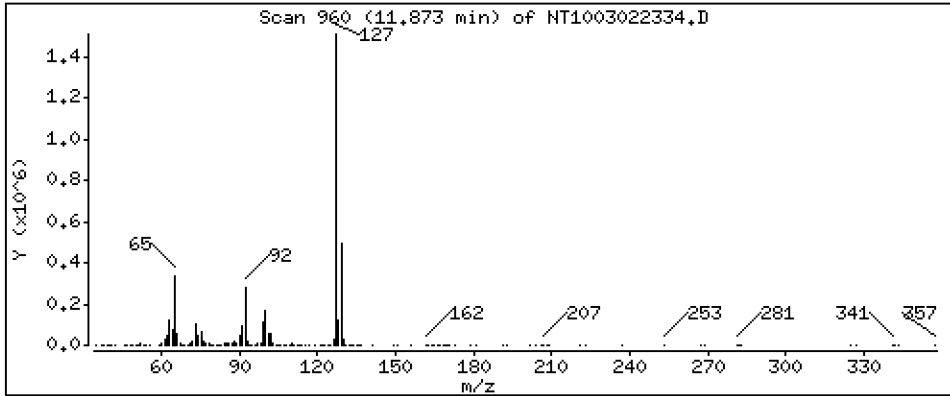
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 9,468 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

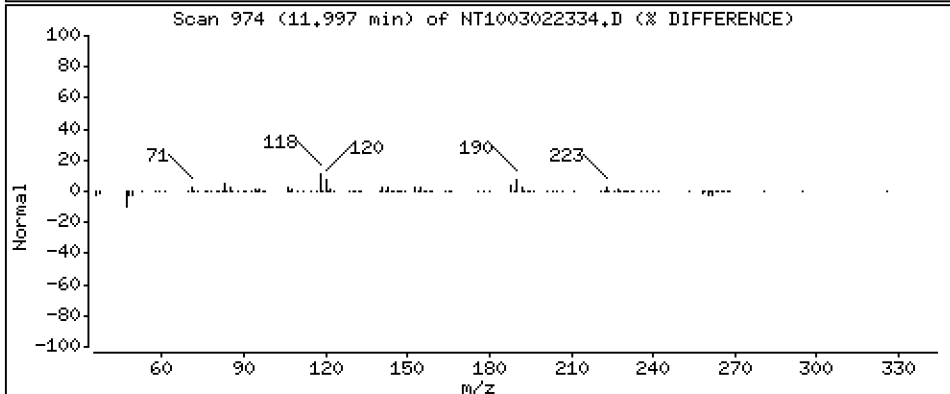
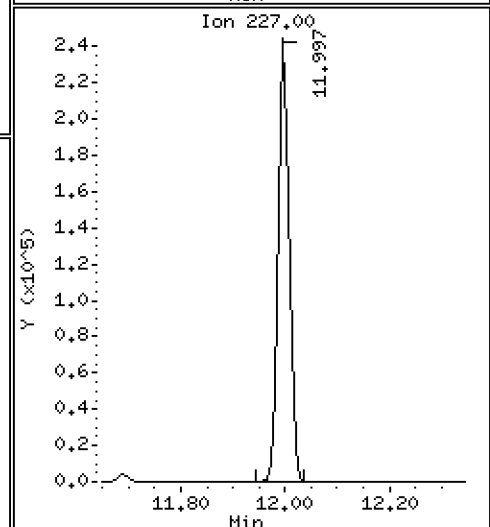
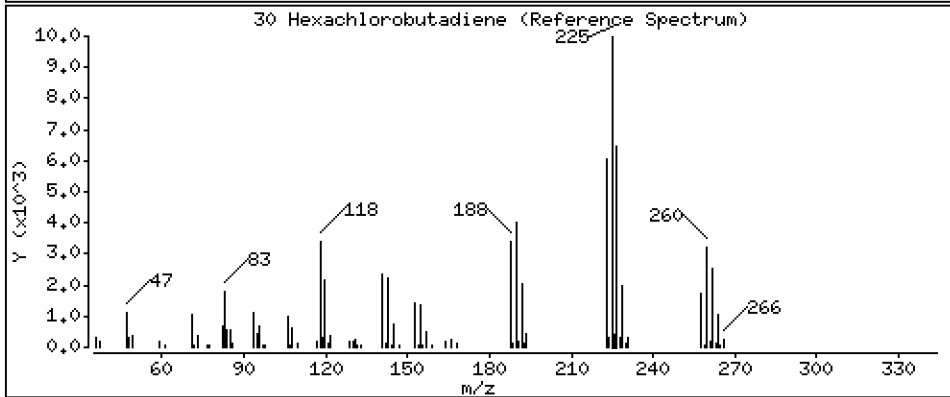
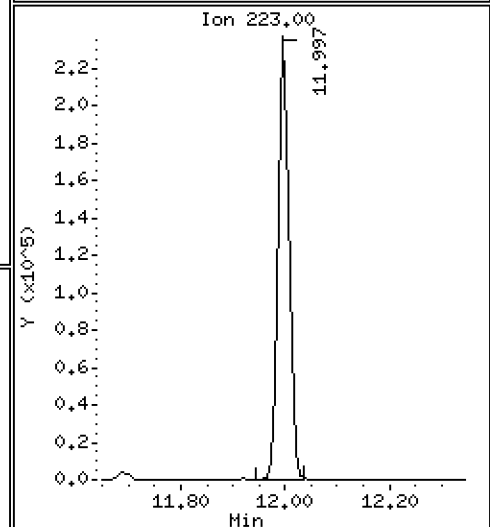
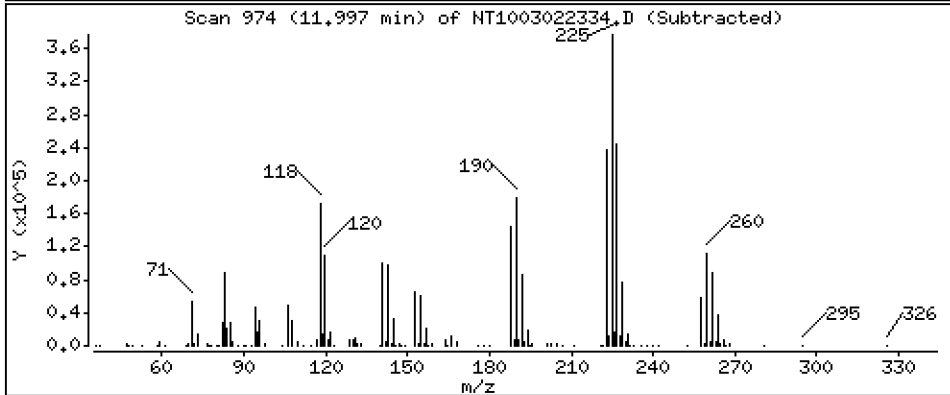
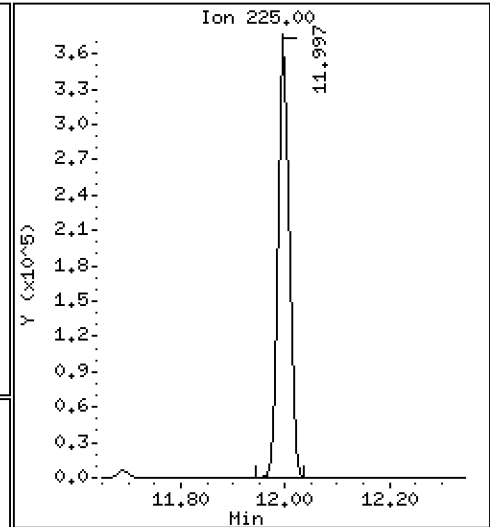
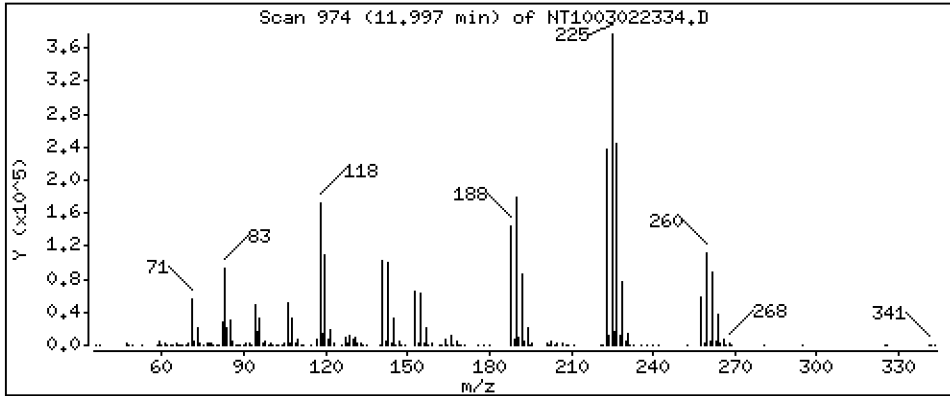
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,913 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

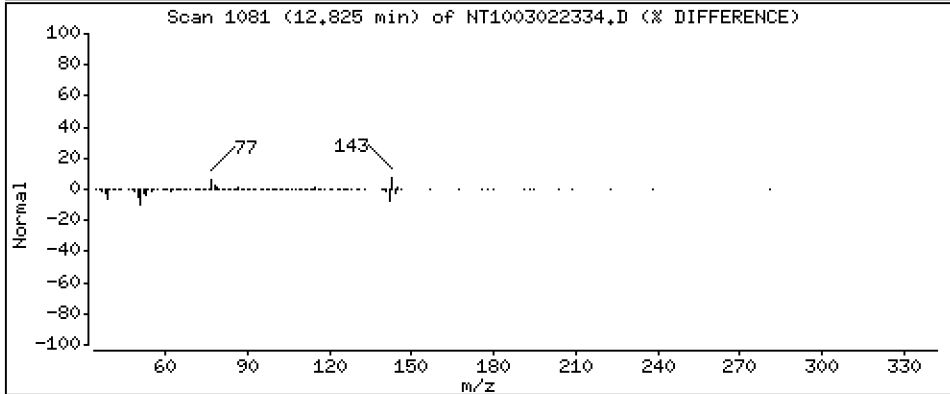
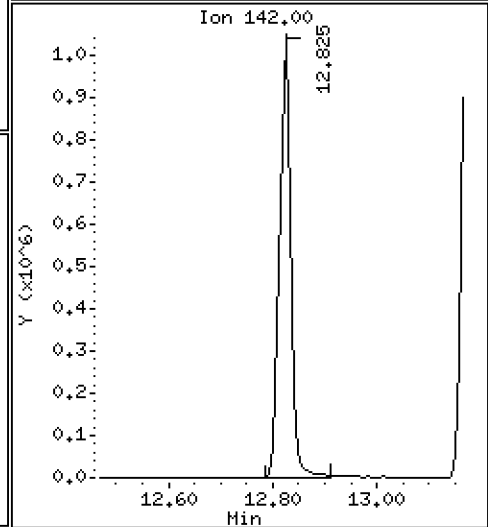
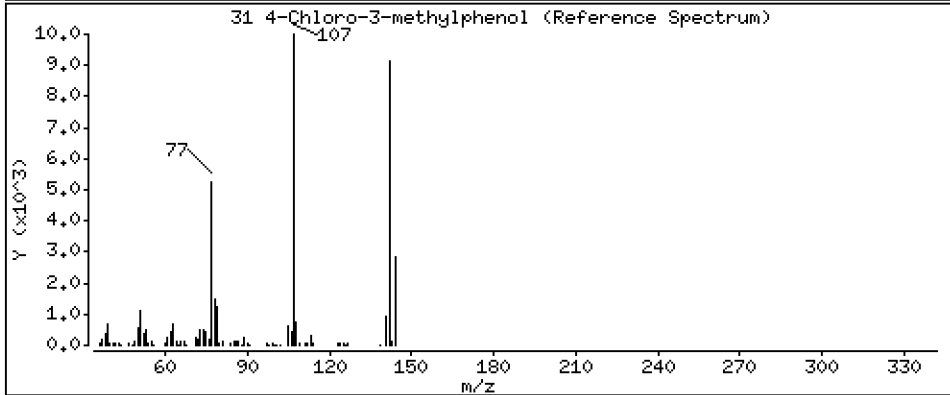
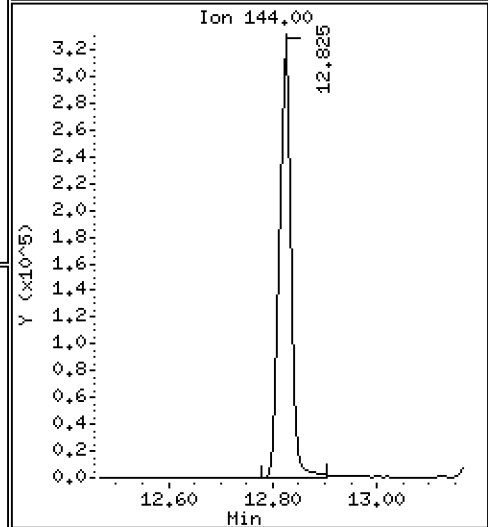
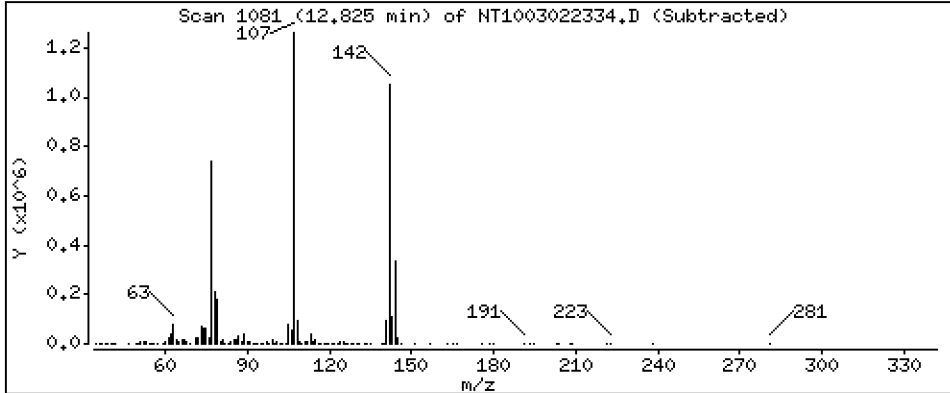
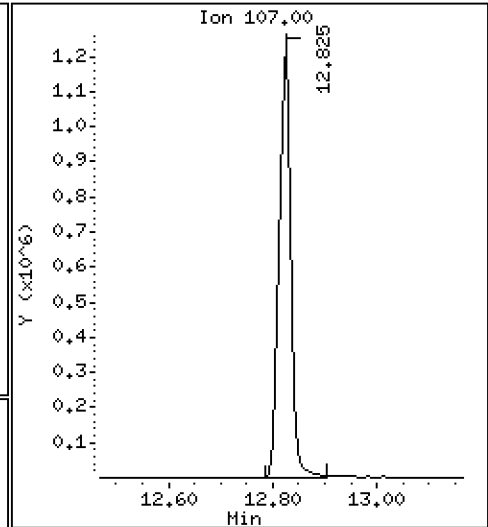
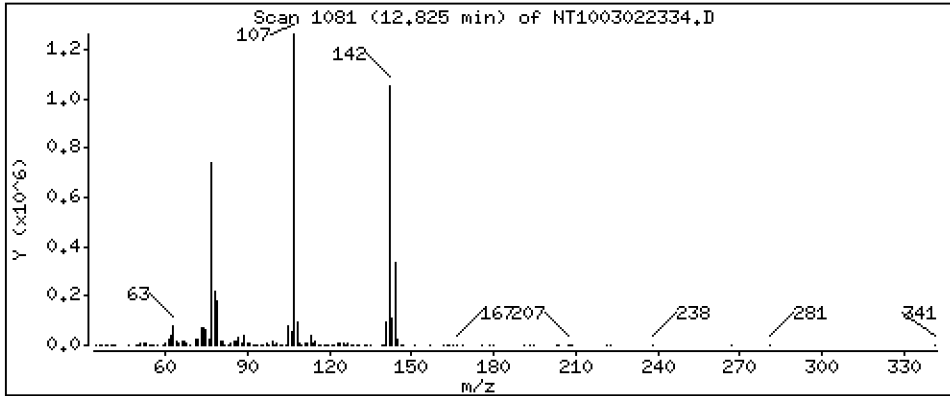
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

31 4-Chloro-3-methylphenol

Concentration: 9,427 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

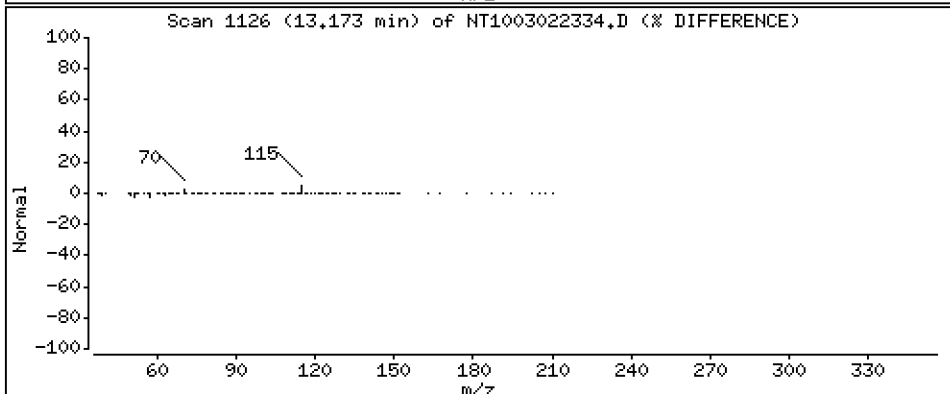
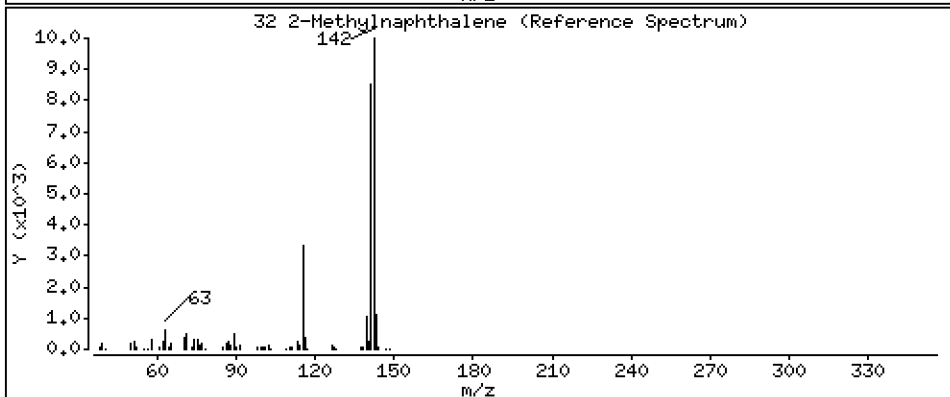
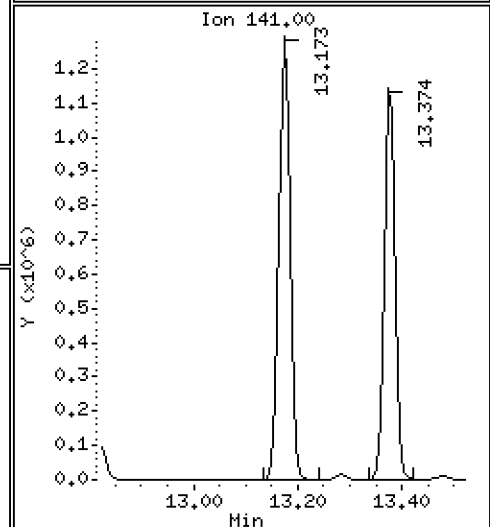
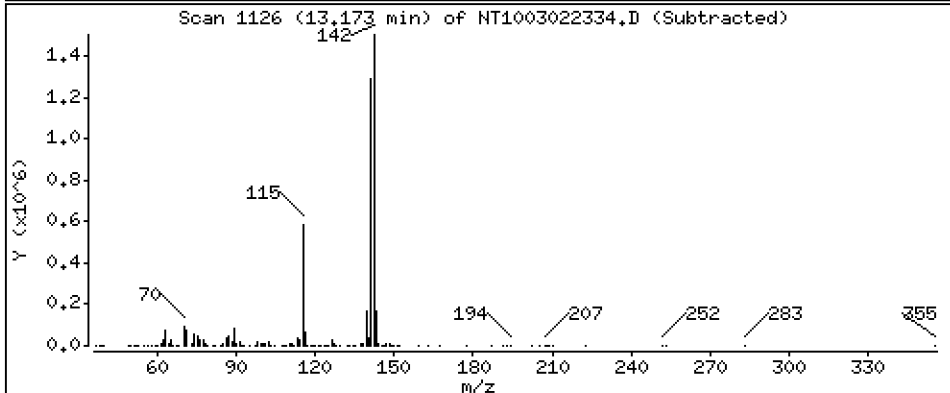
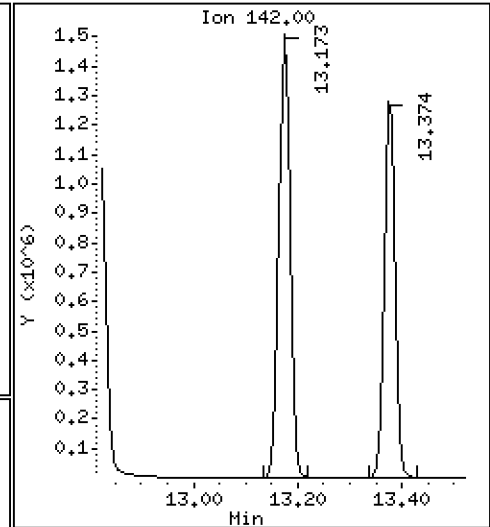
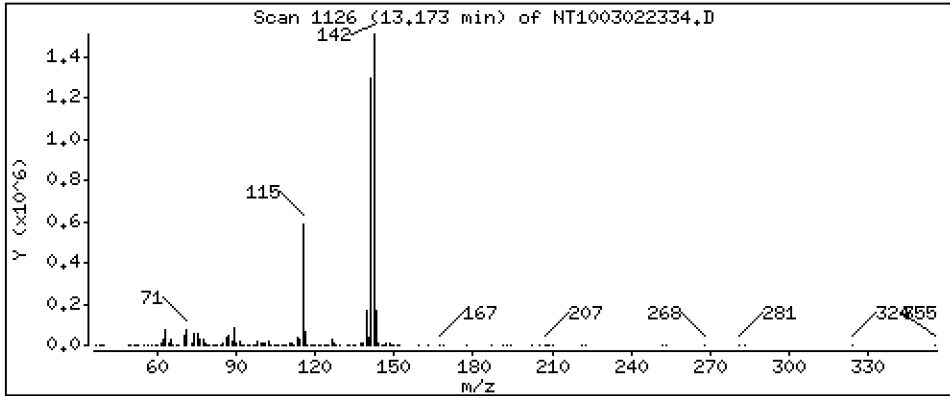
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 5,096 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

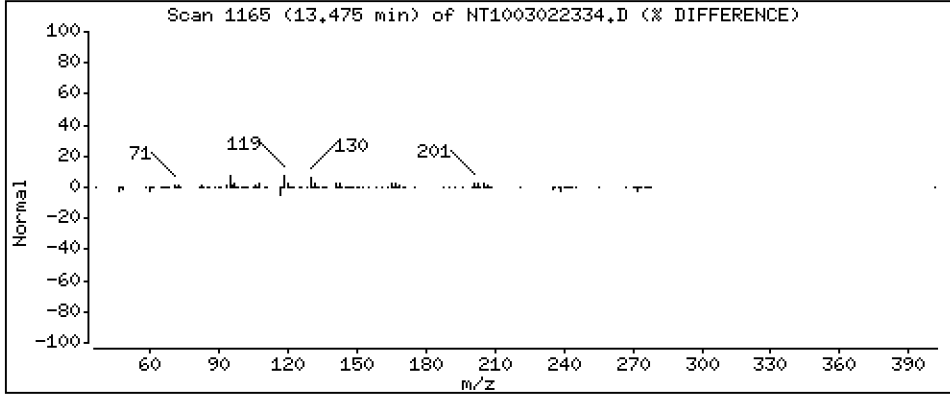
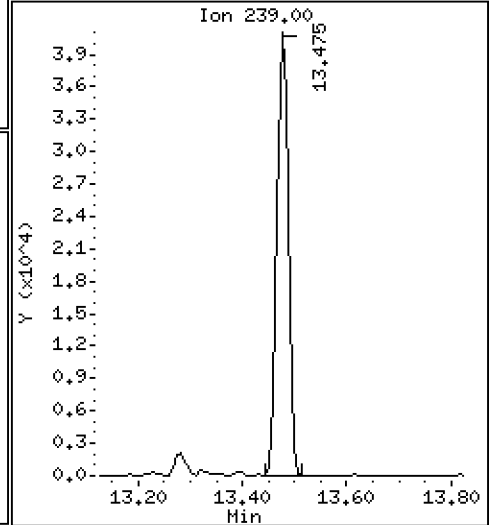
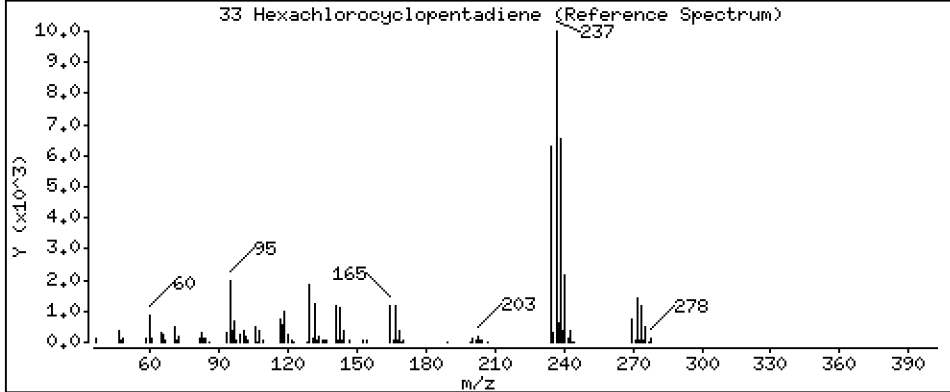
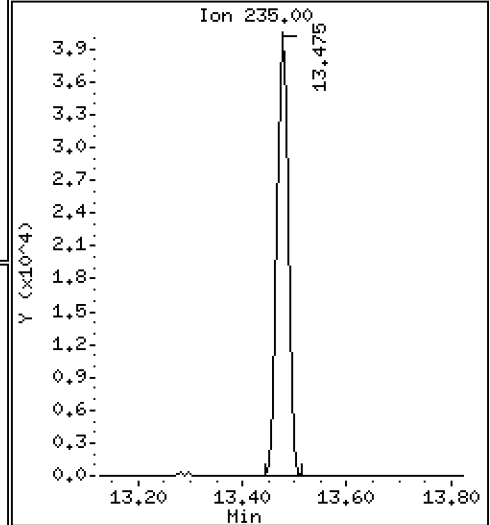
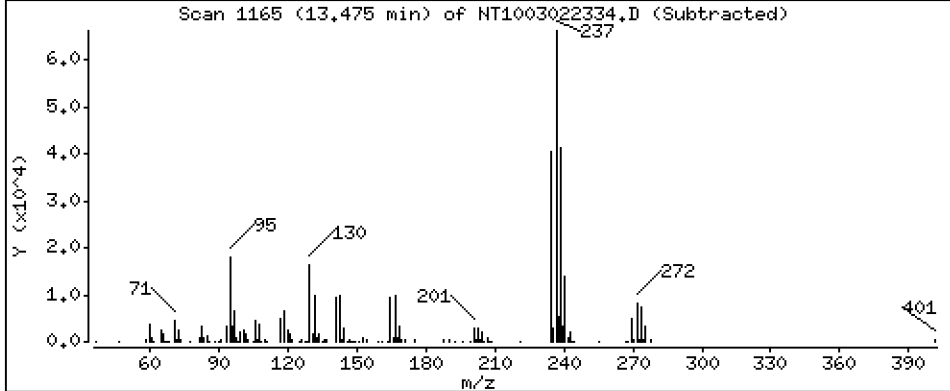
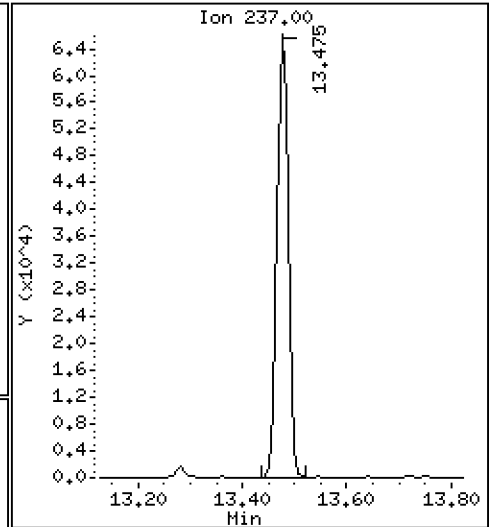
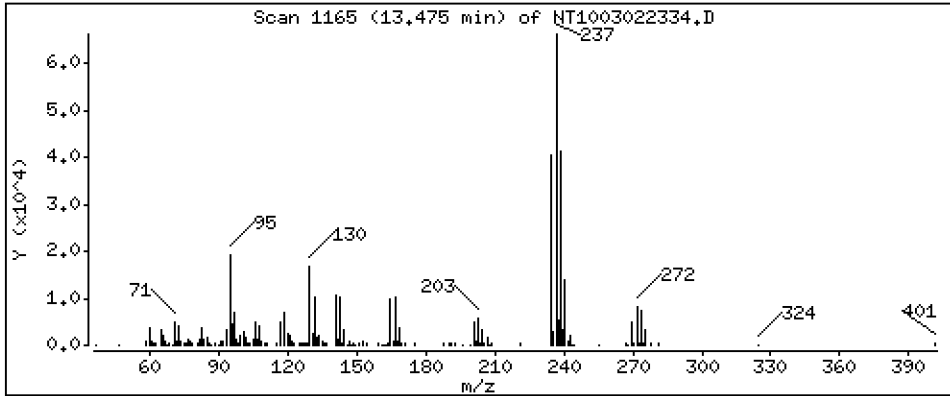
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

33 Hexachlorocyclopentadiene

Concentration: 2,321 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

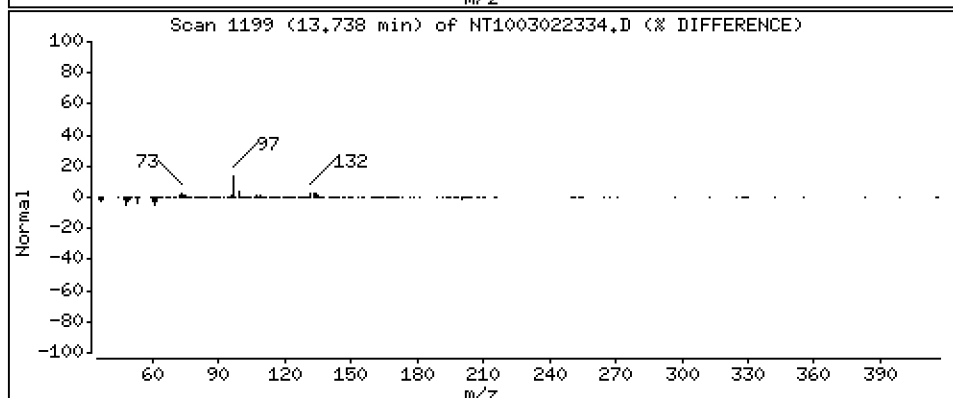
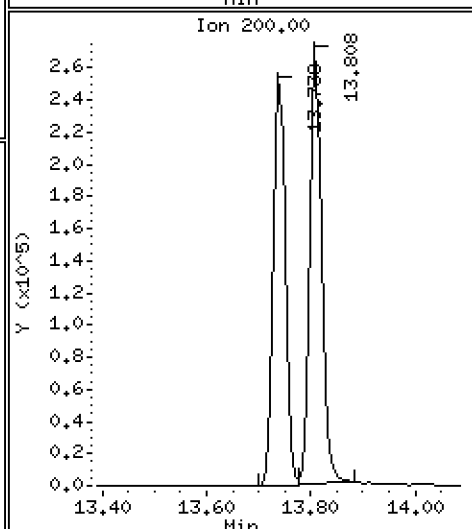
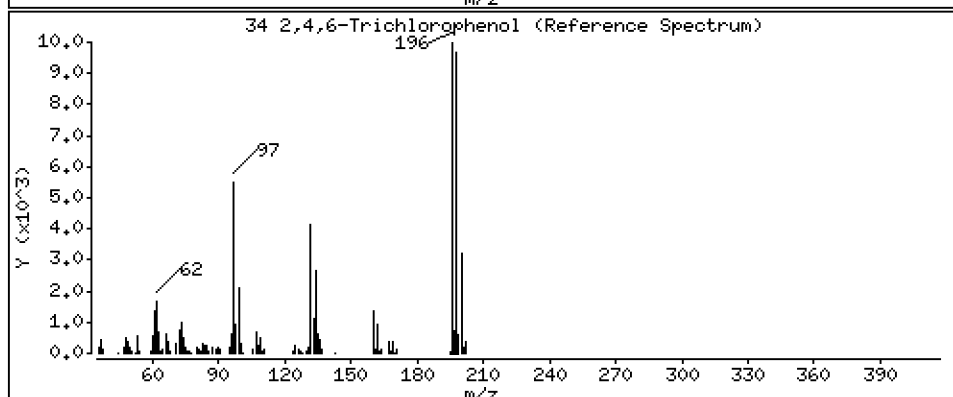
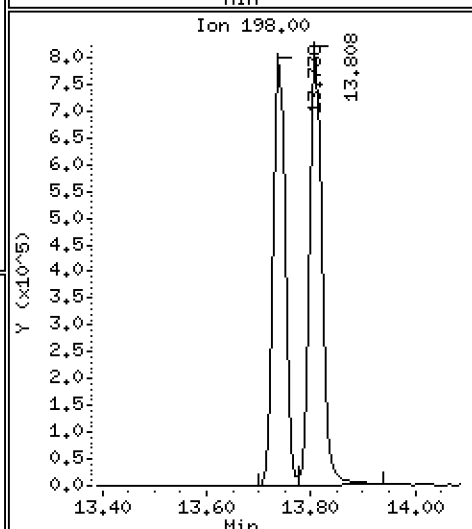
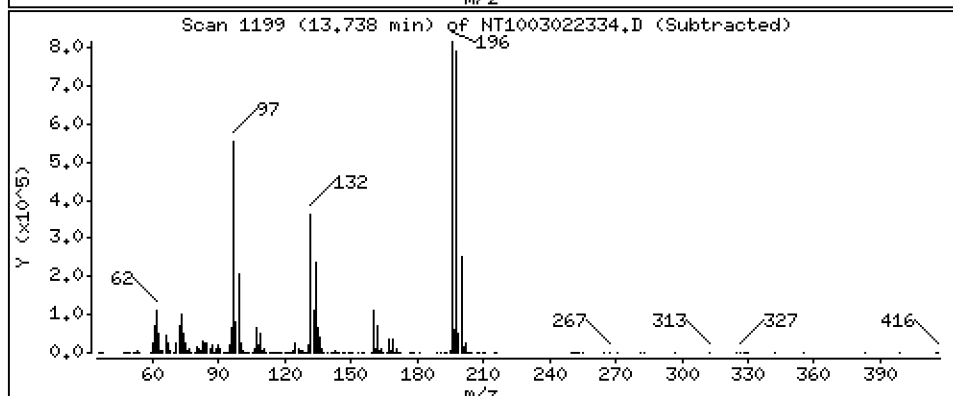
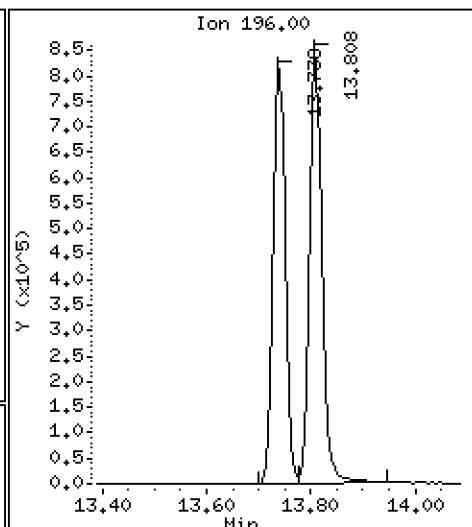
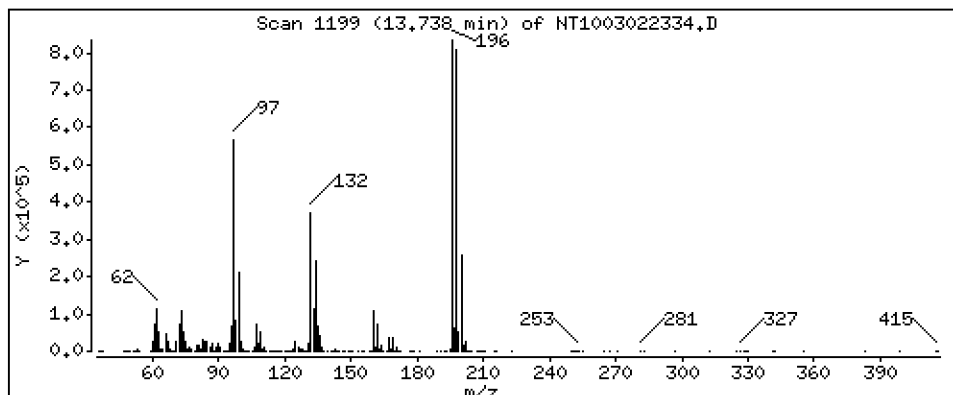
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 10,40 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

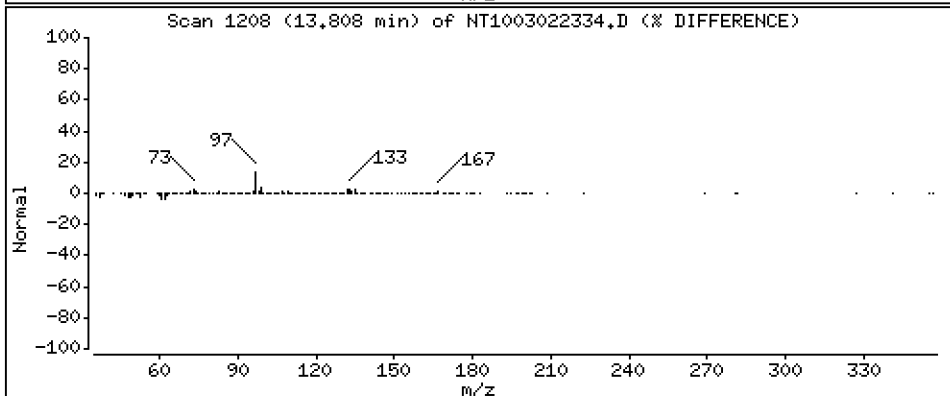
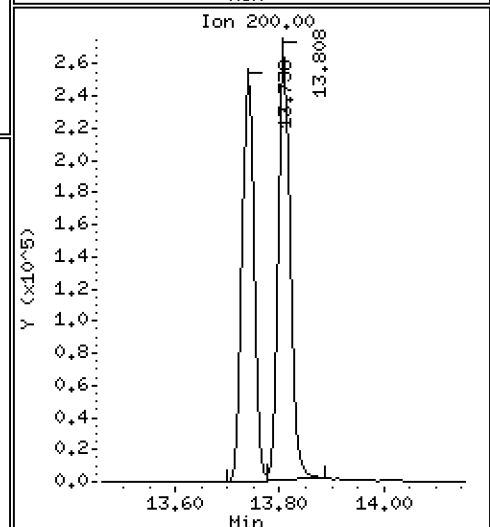
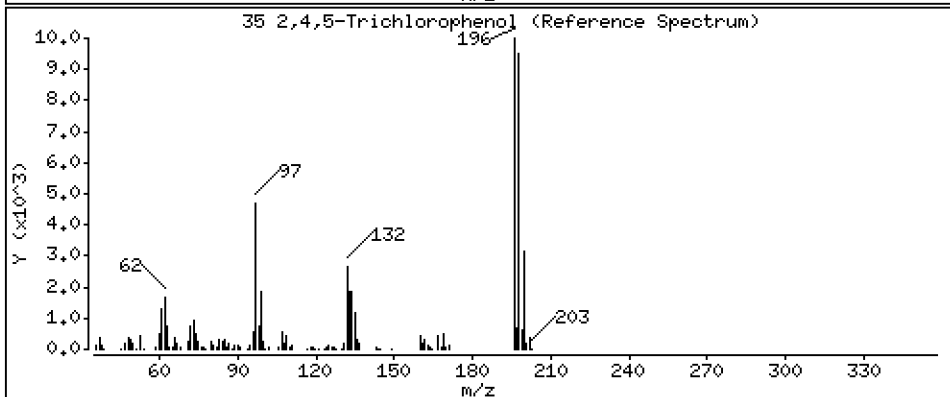
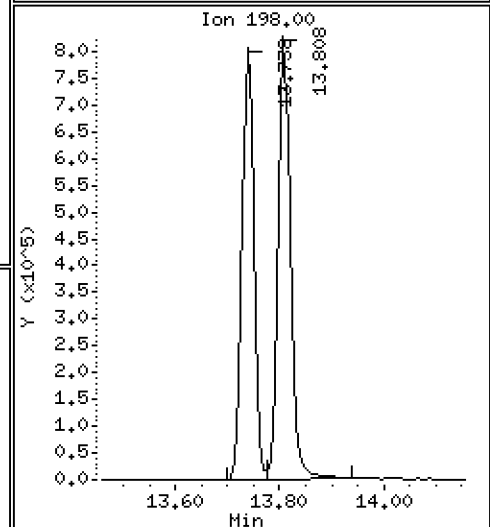
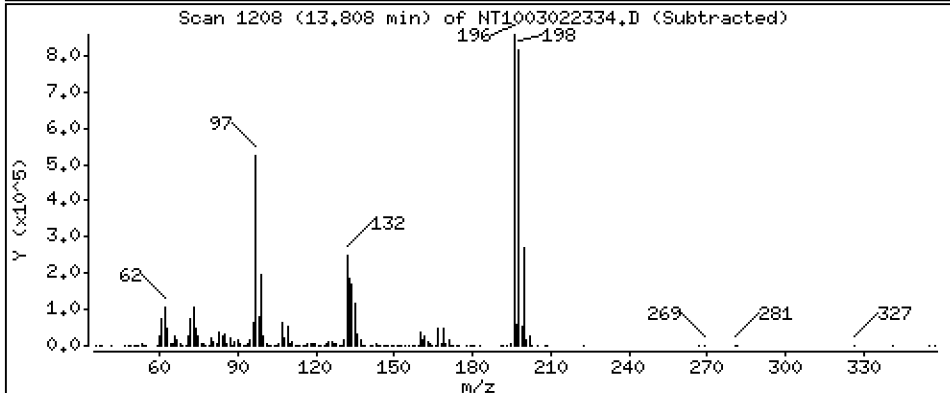
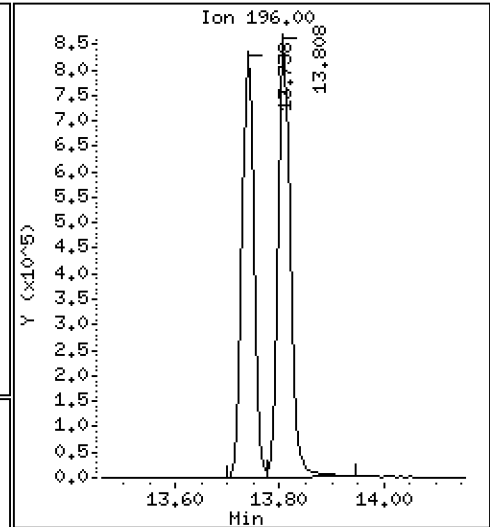
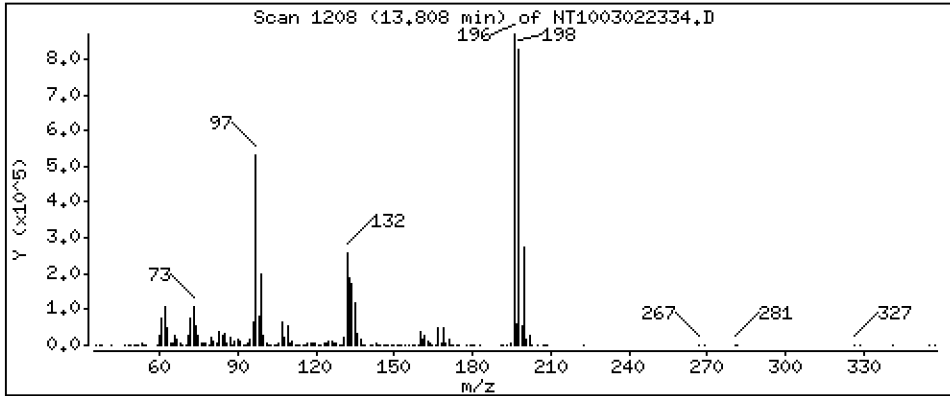
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 10,26 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

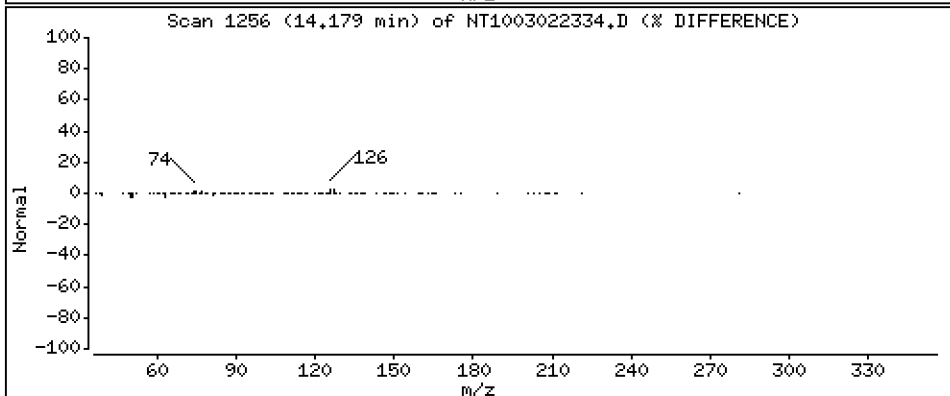
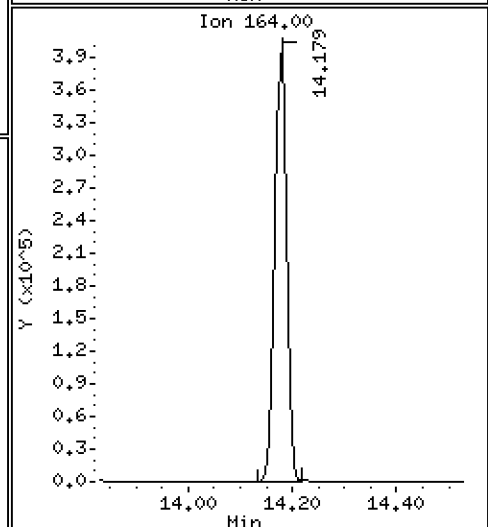
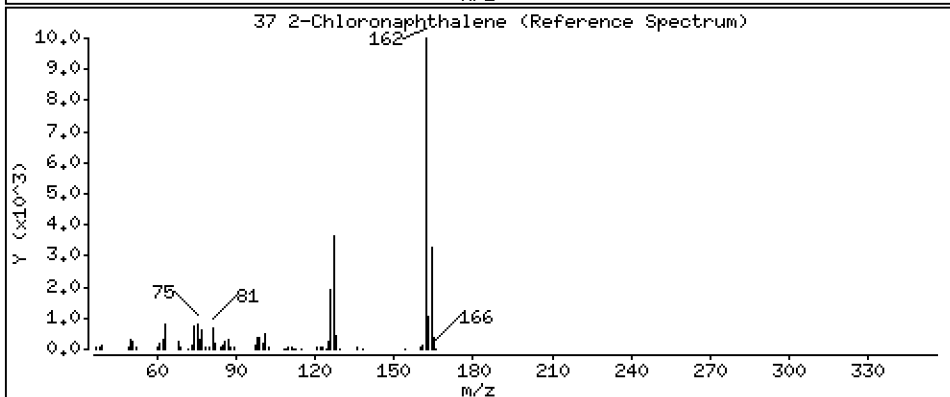
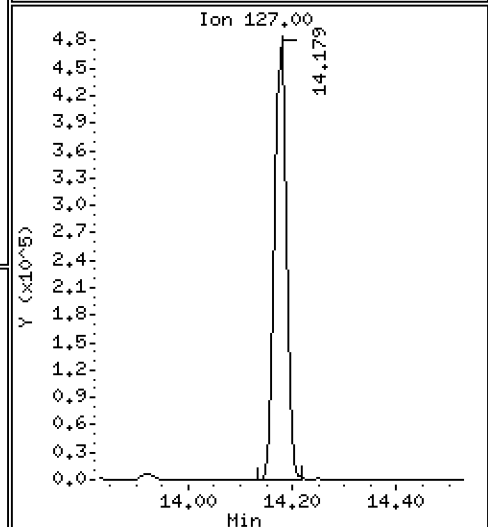
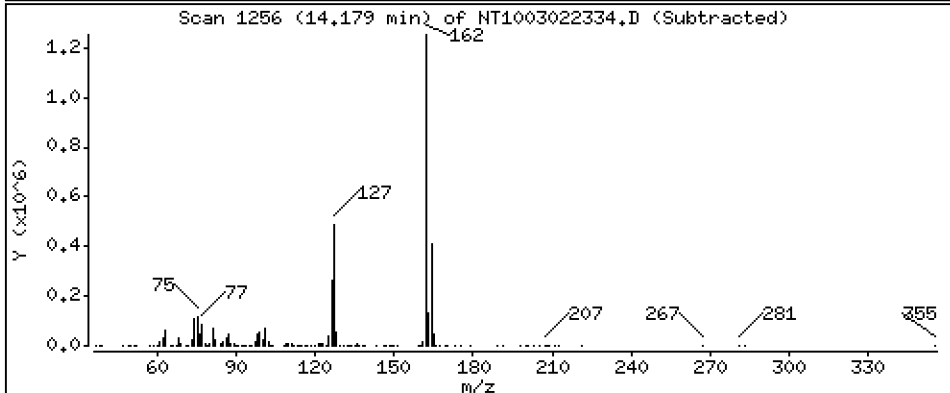
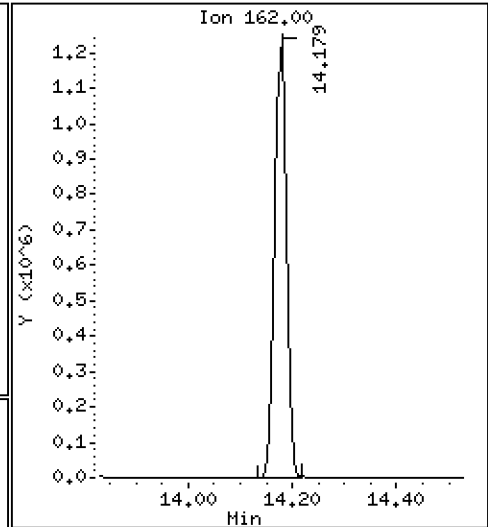
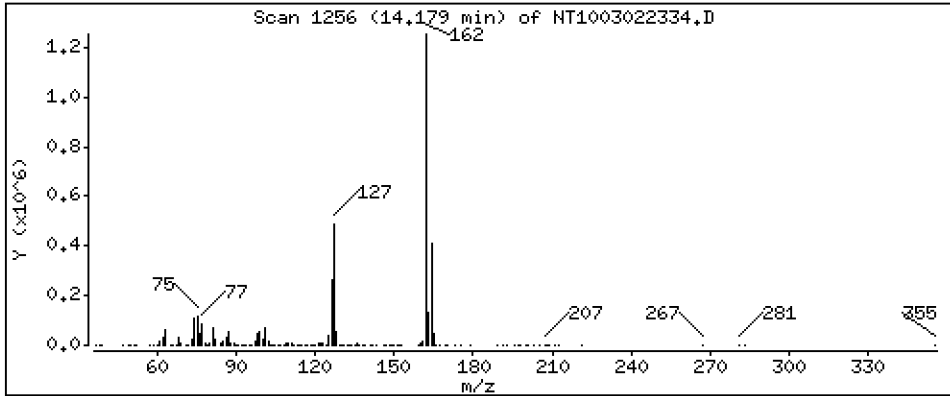
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

37 2-Chloronaphthalene

Concentration: 5,392 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

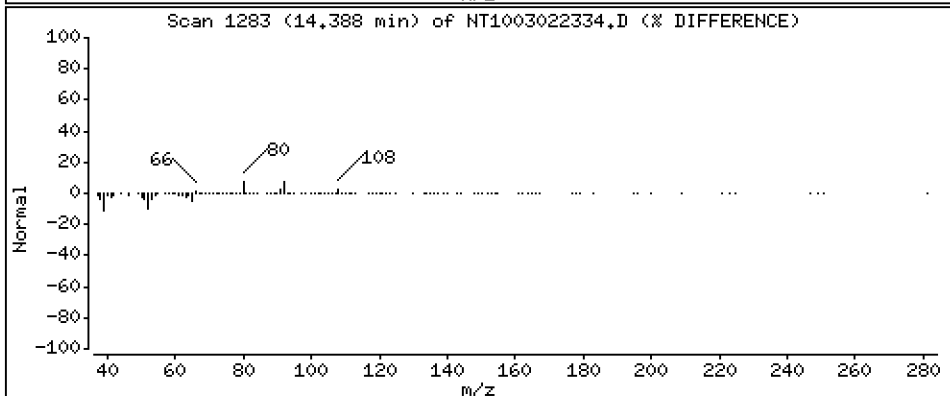
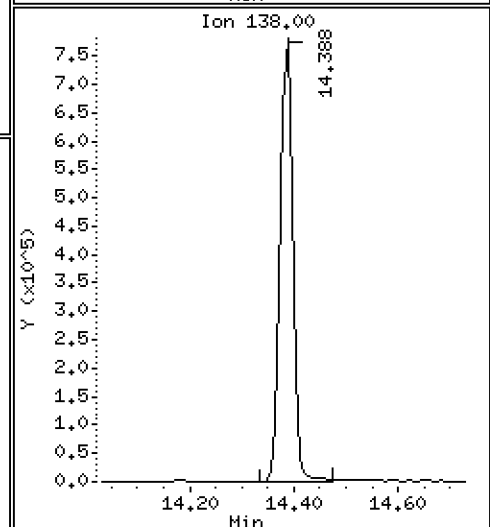
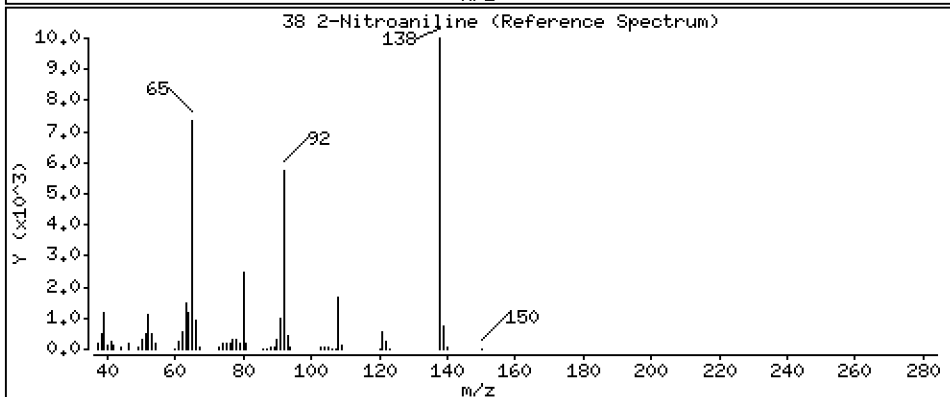
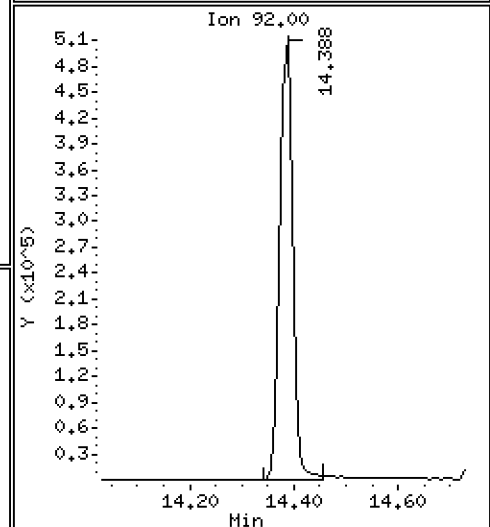
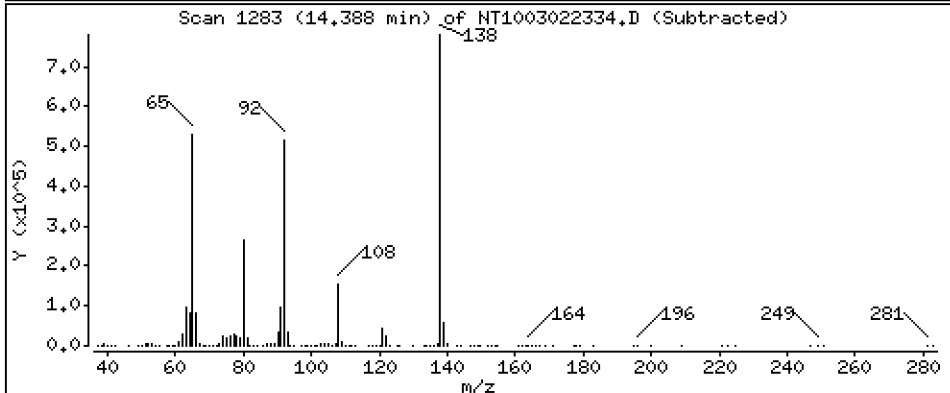
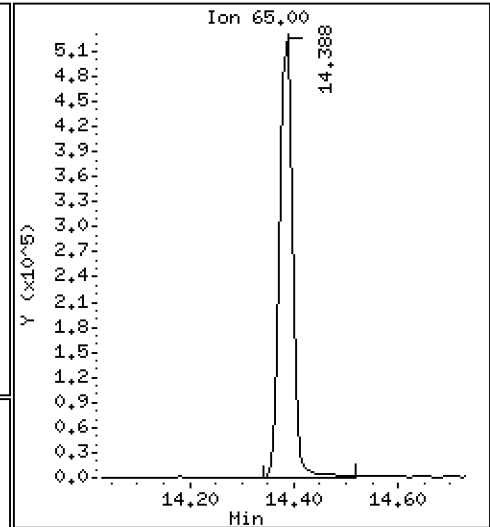
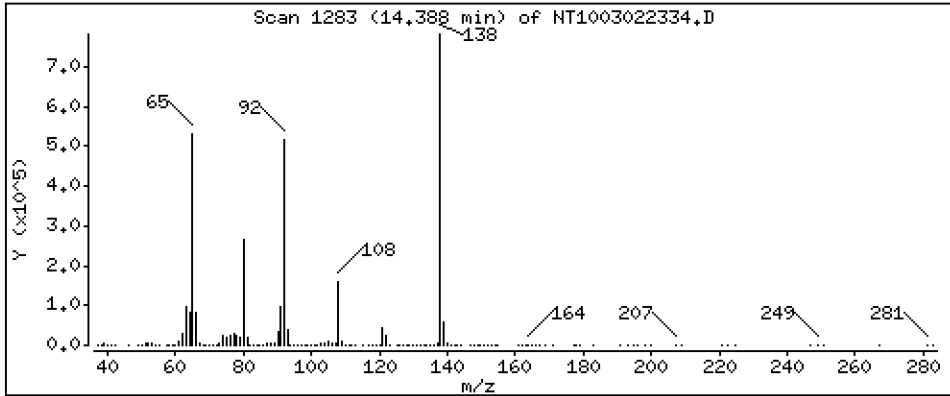
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 9,049 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

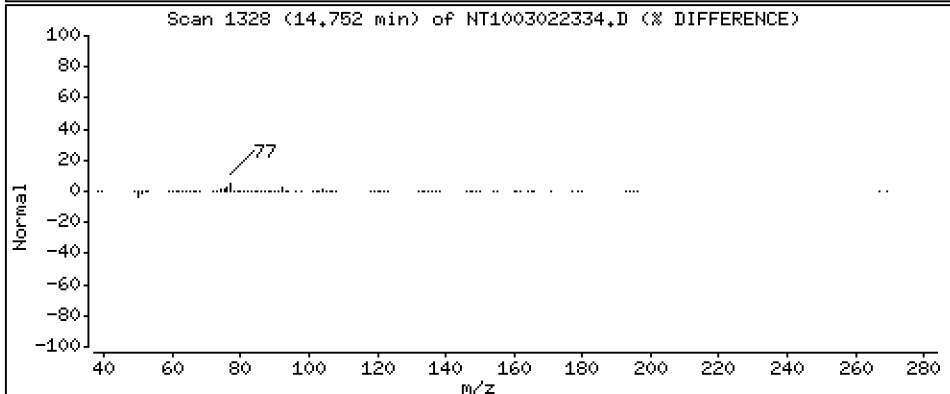
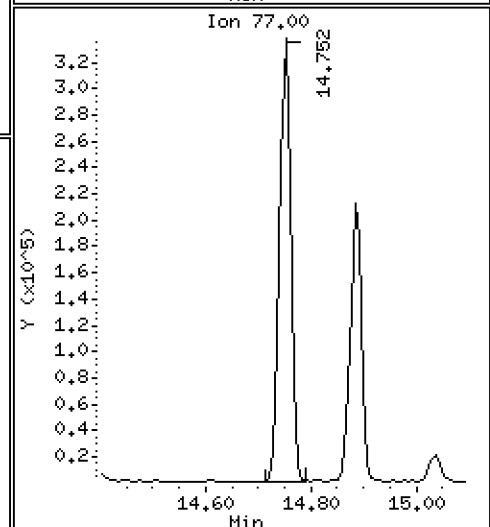
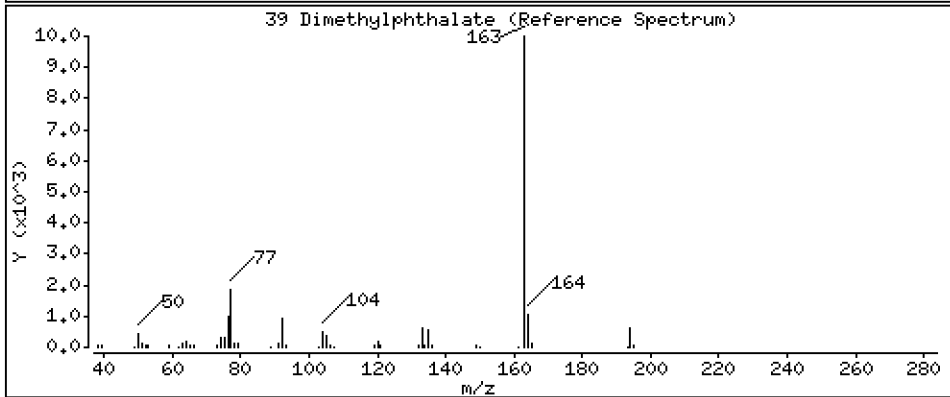
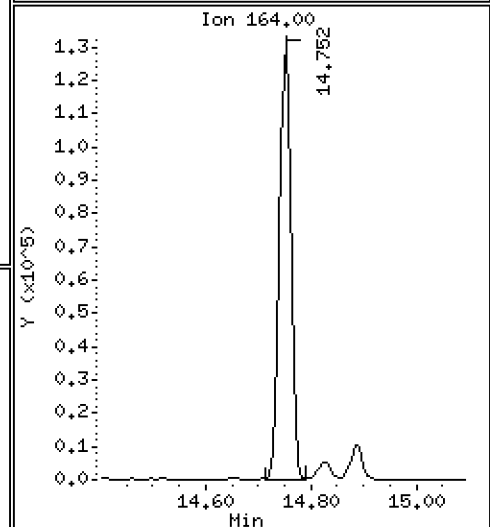
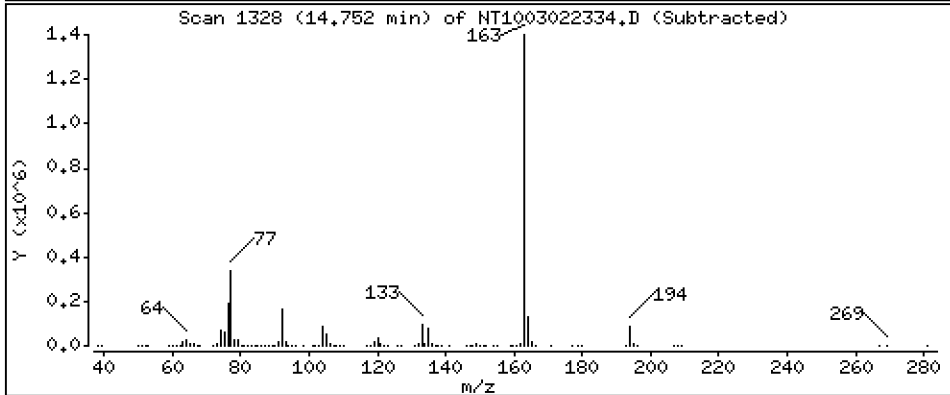
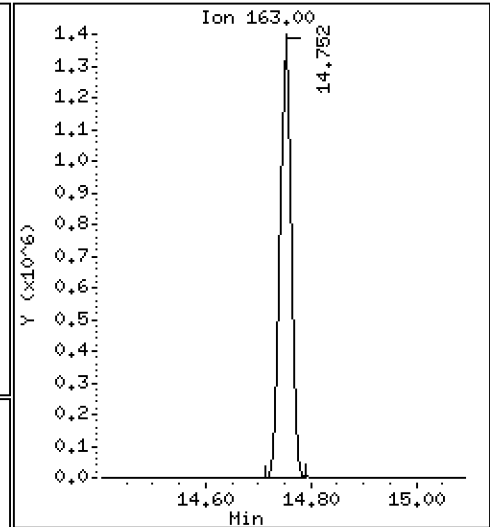
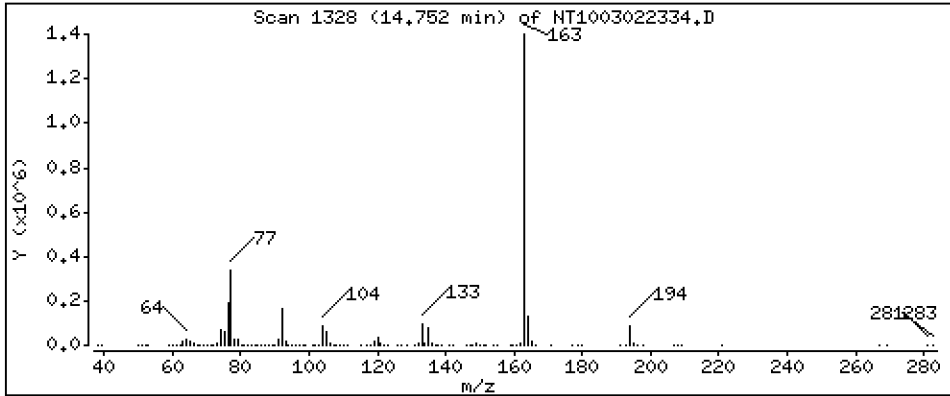
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,892 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

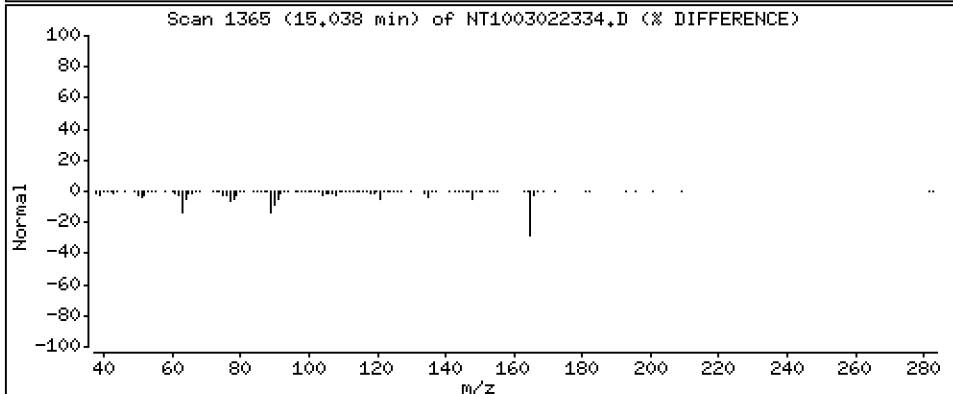
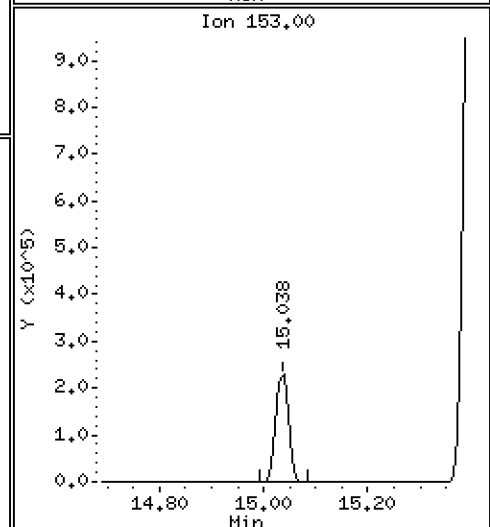
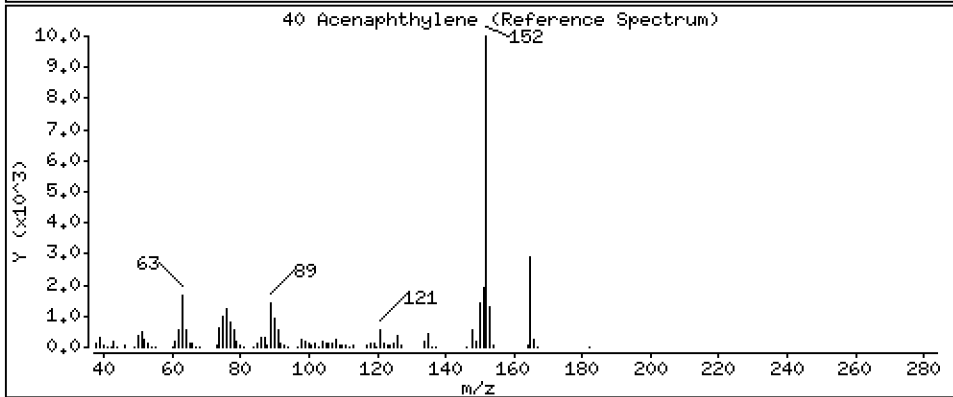
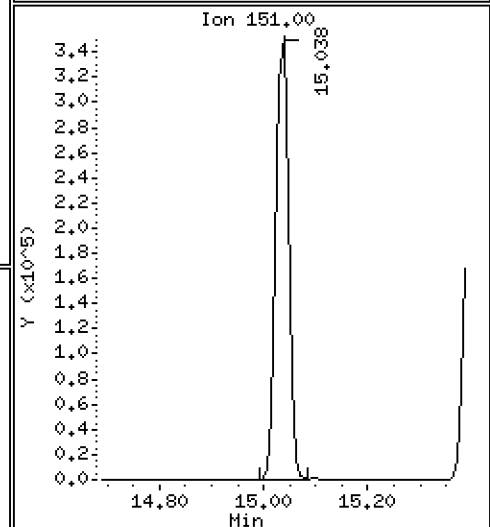
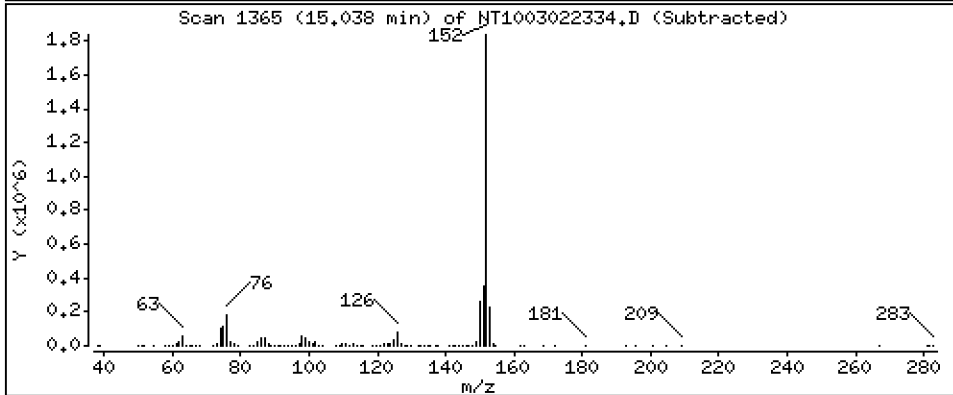
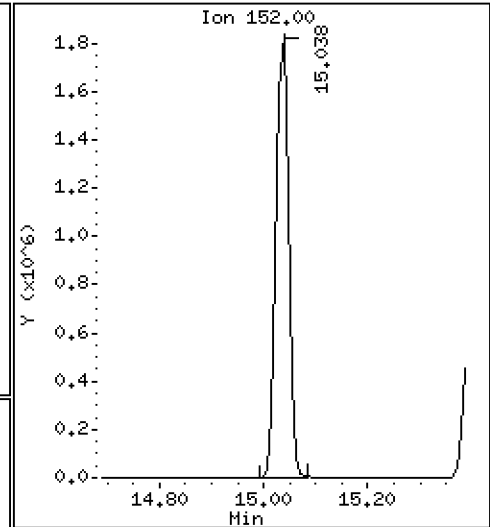
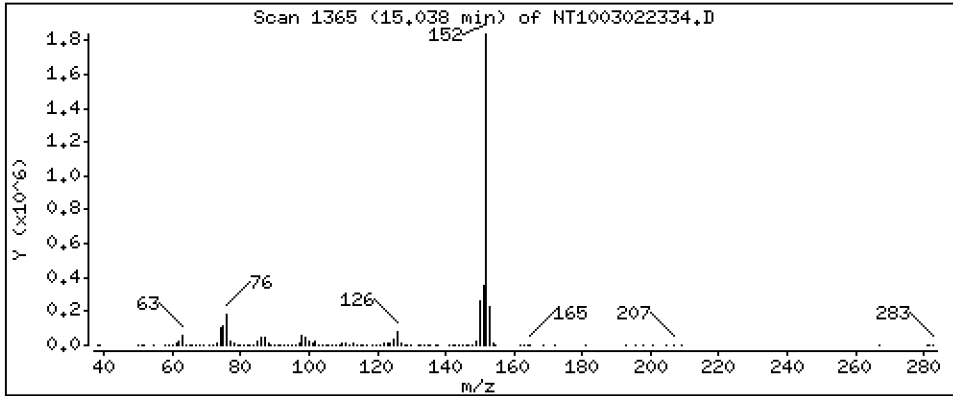
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

40 Acenaphthylene

Concentration: 4,985 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

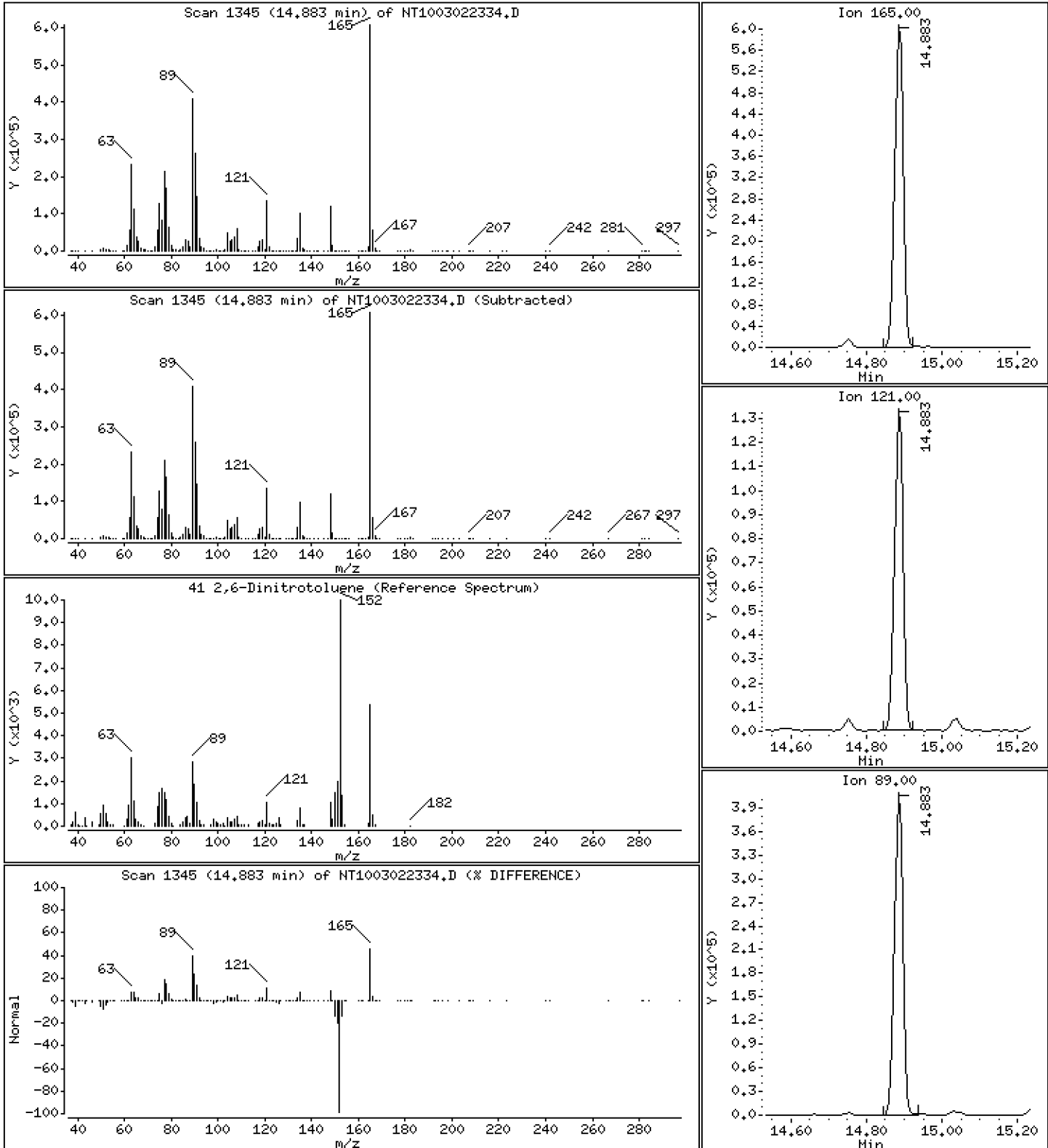
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 10,08 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

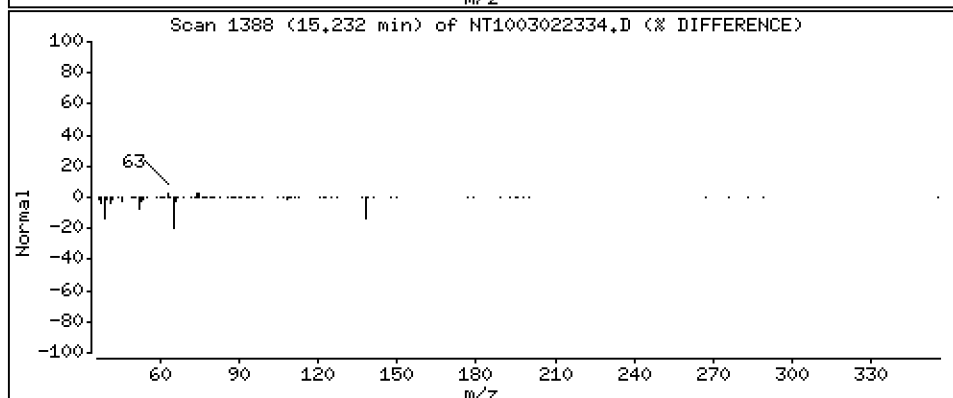
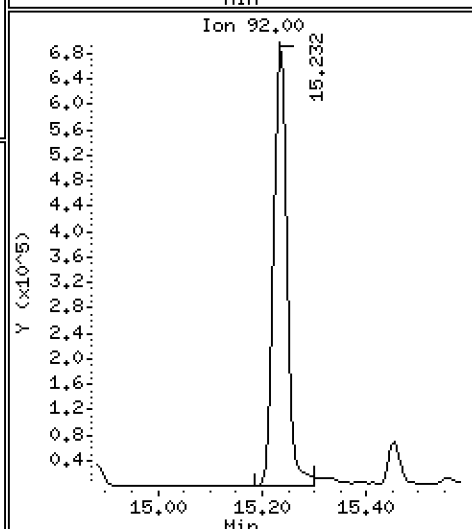
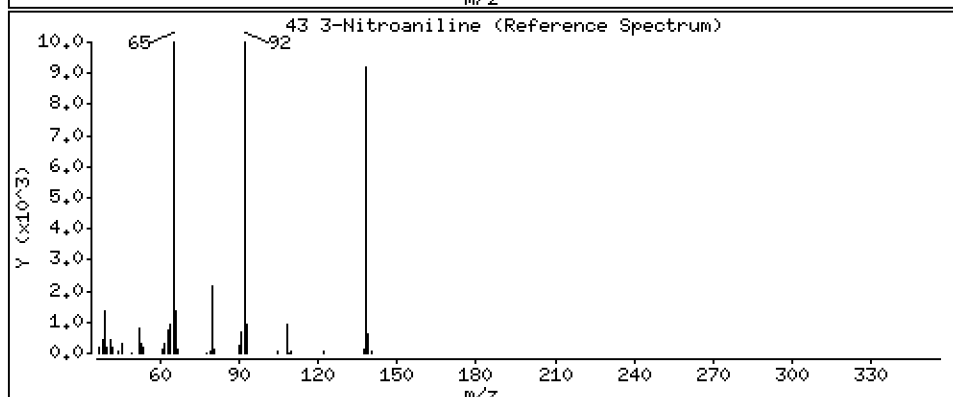
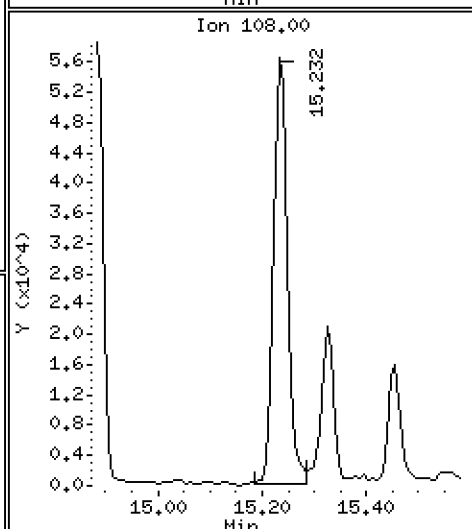
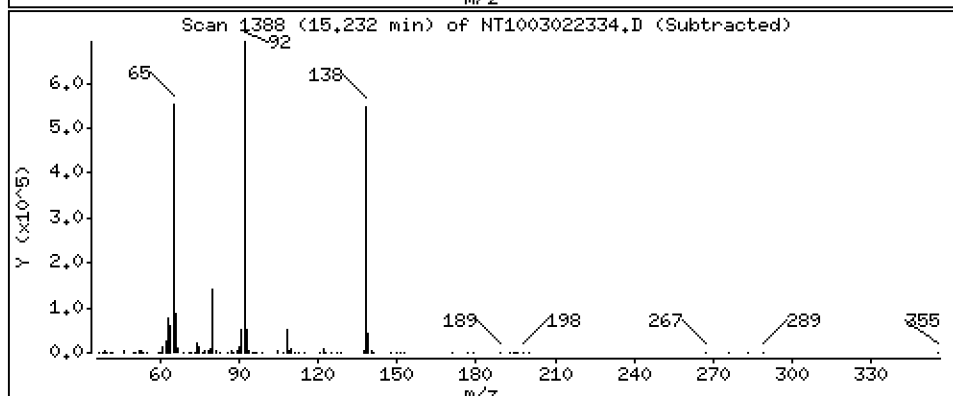
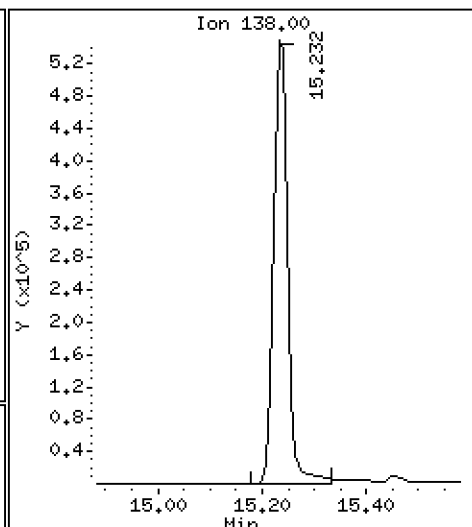
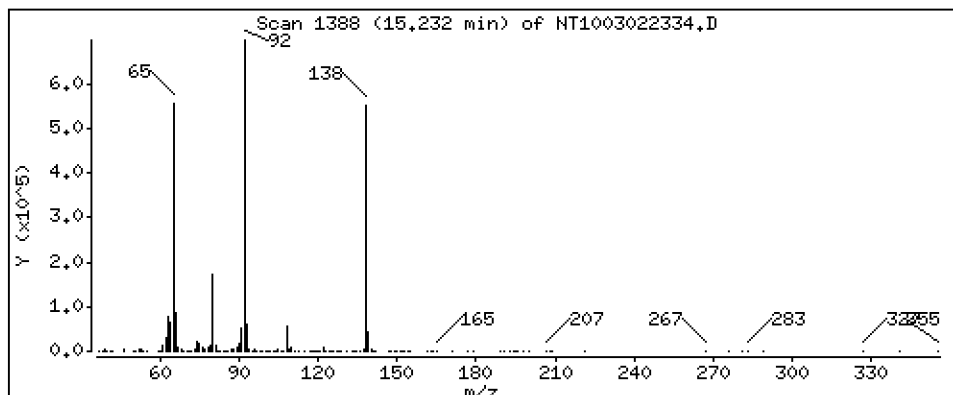
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 9,979 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

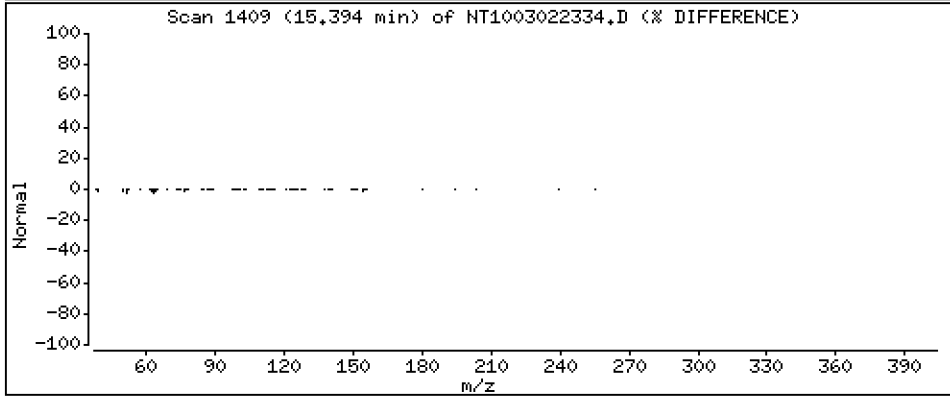
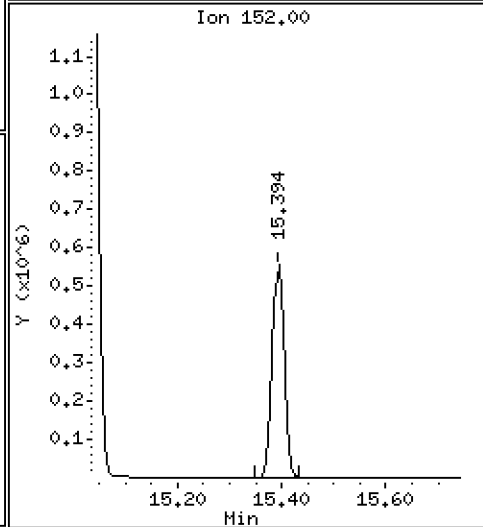
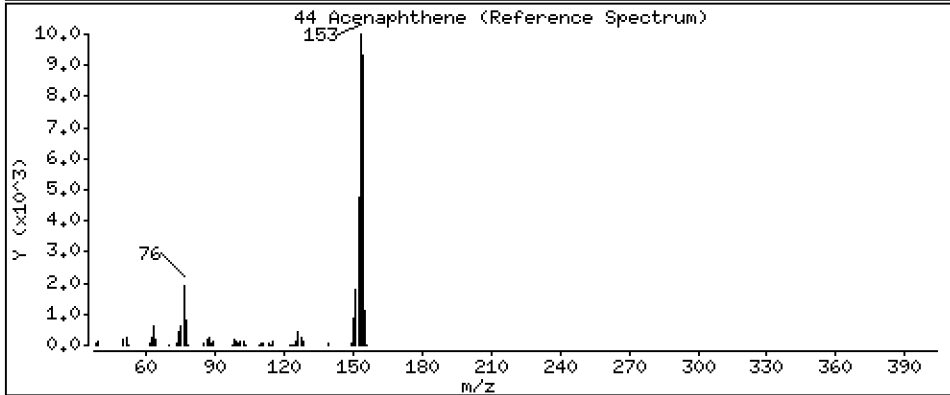
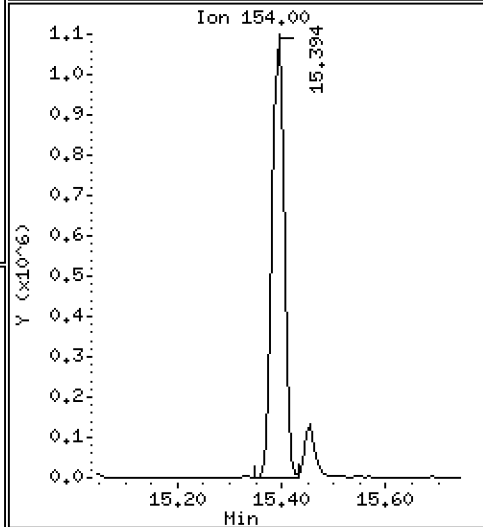
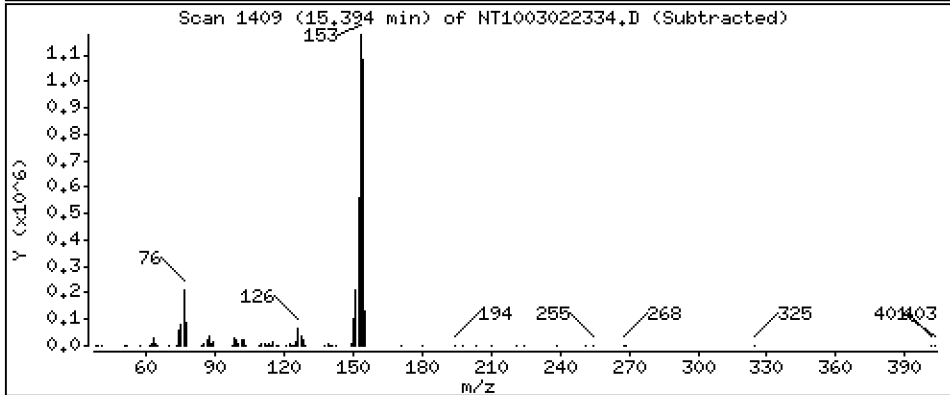
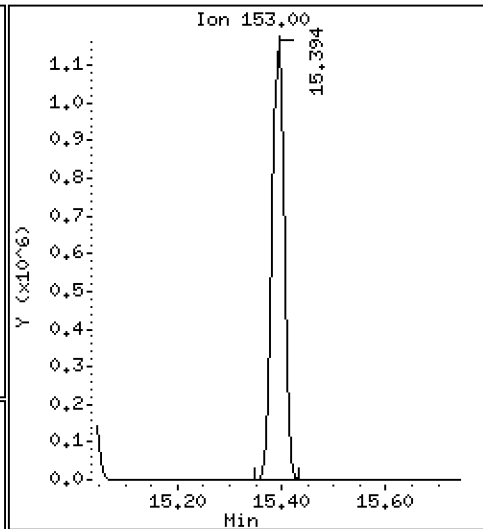
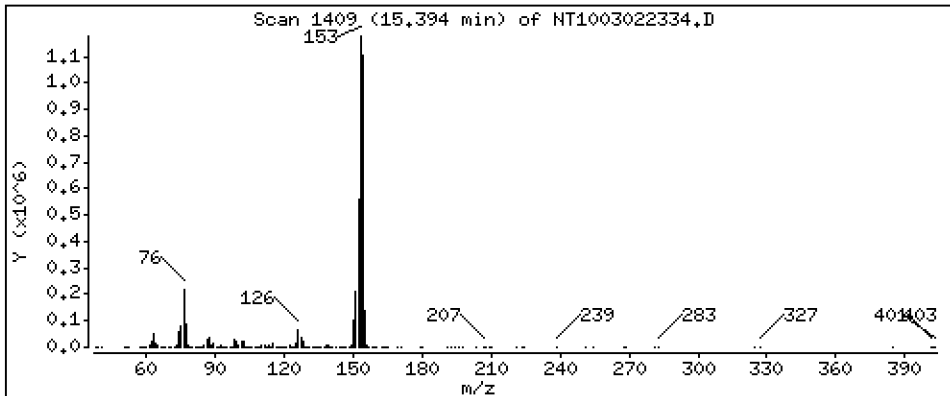
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 5,033 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

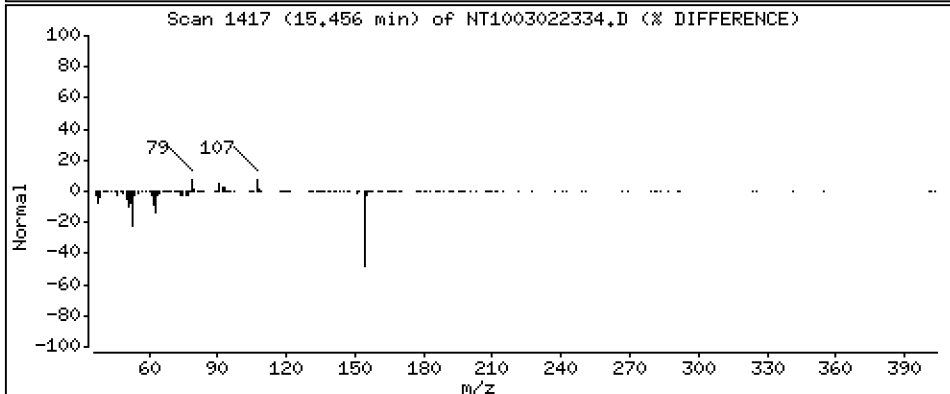
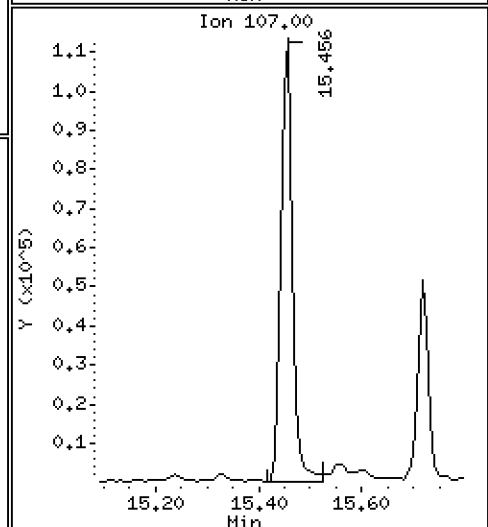
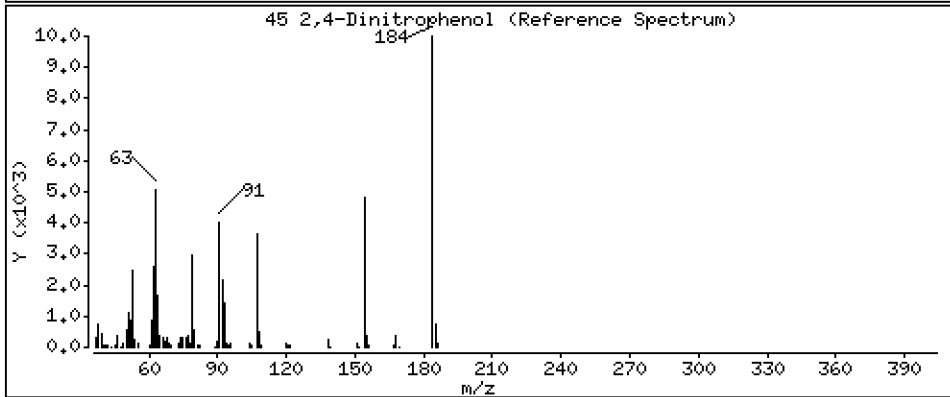
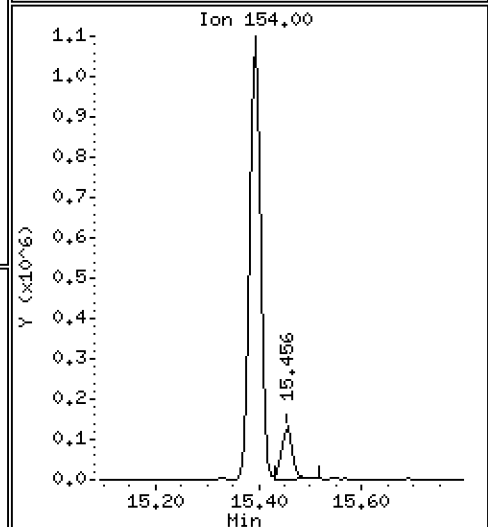
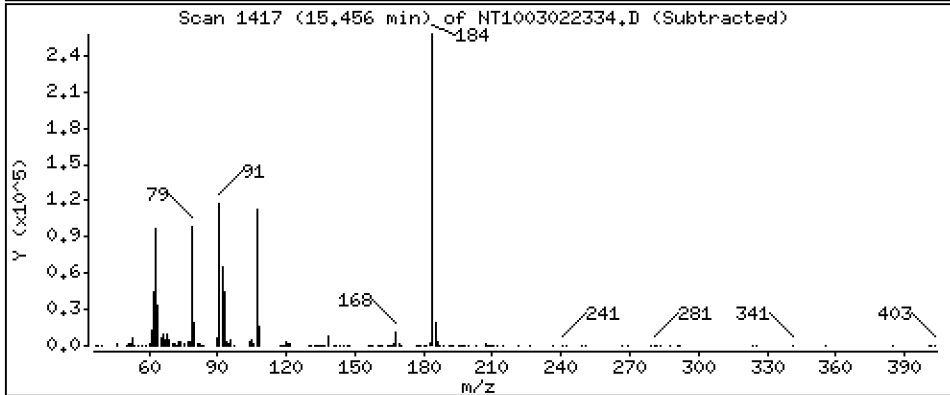
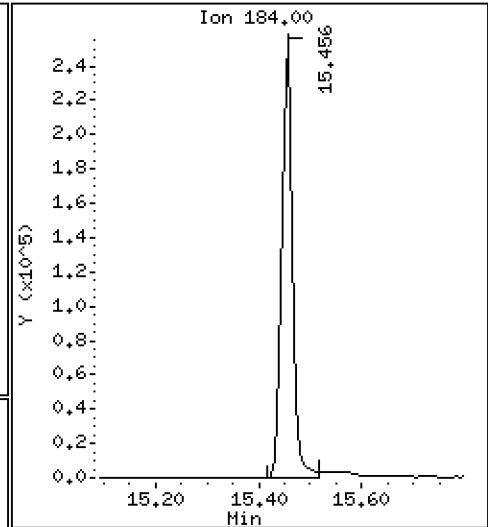
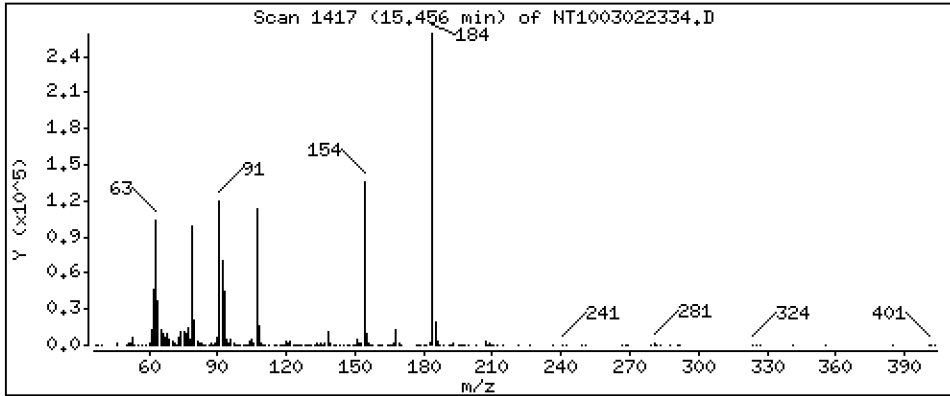
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

45 2,4-Dinitrophenol

Concentration: 14,76 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

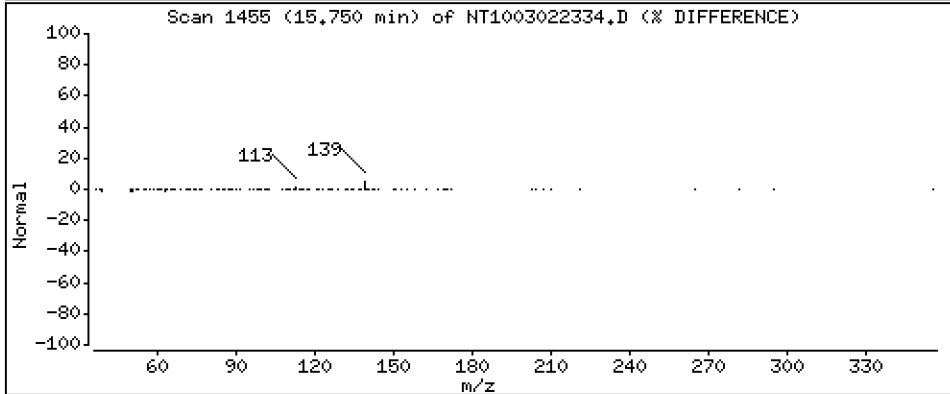
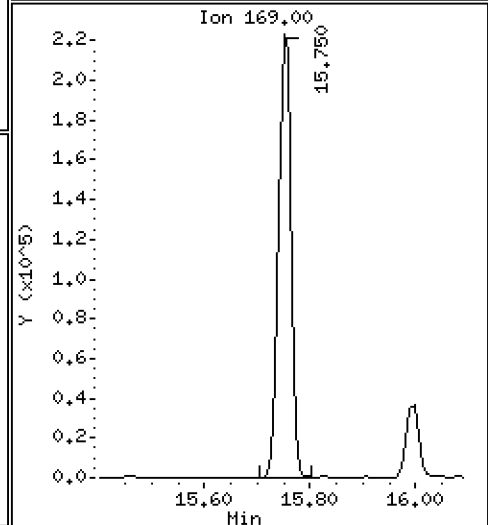
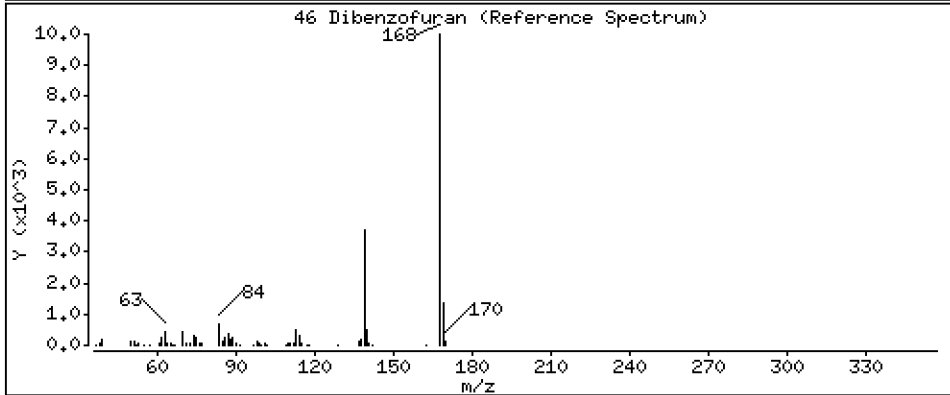
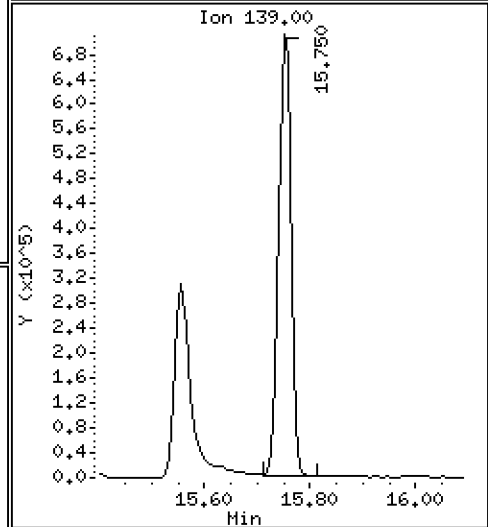
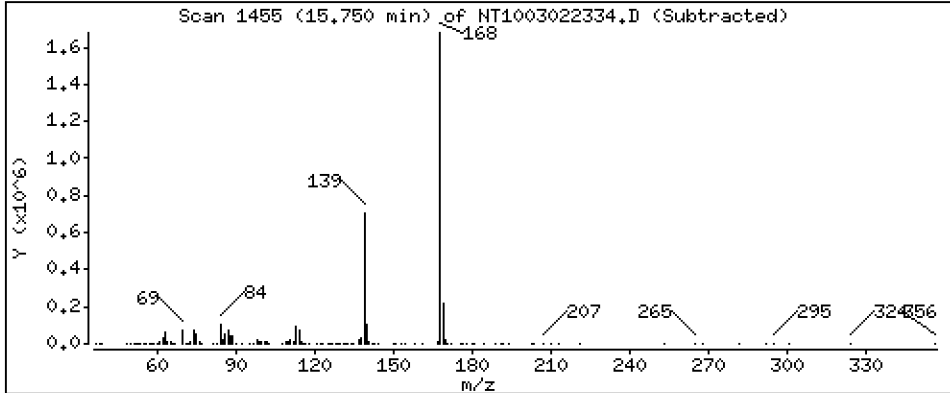
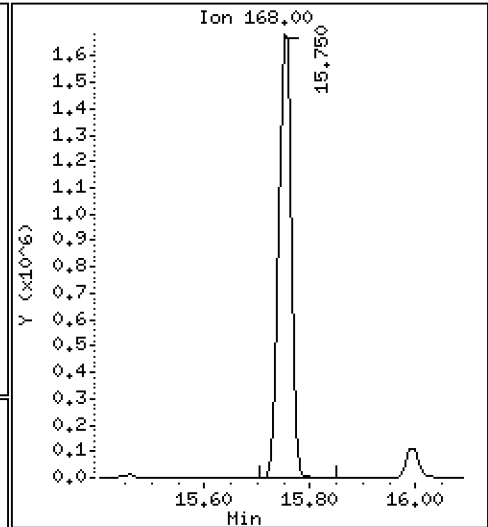
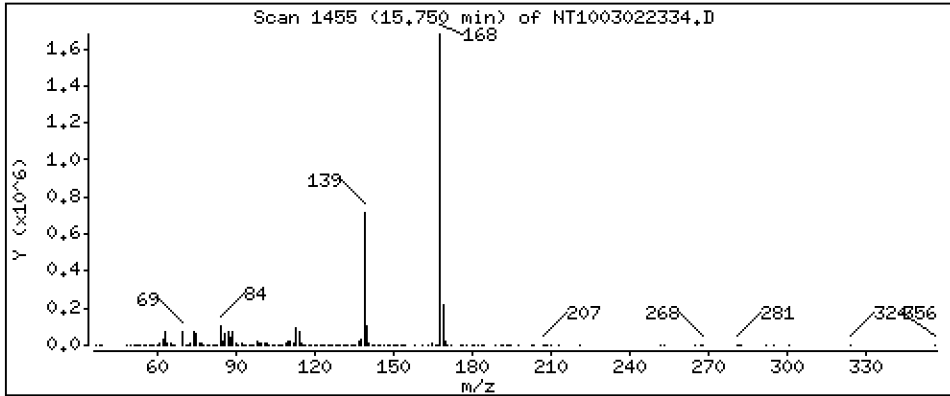
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 5,138 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

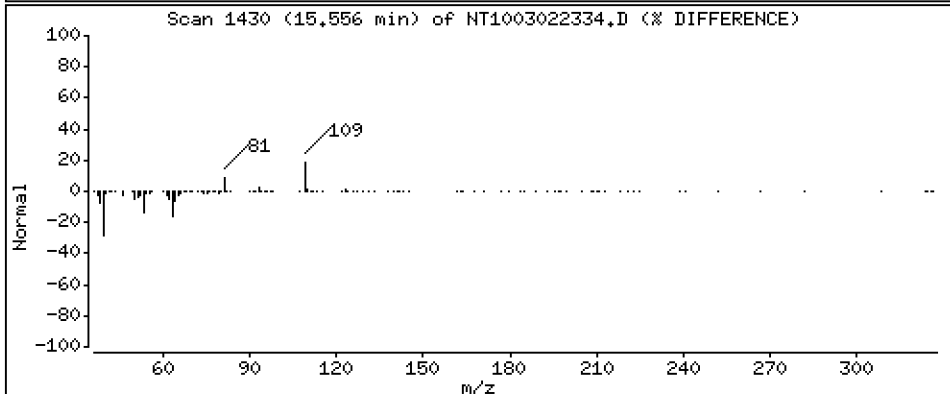
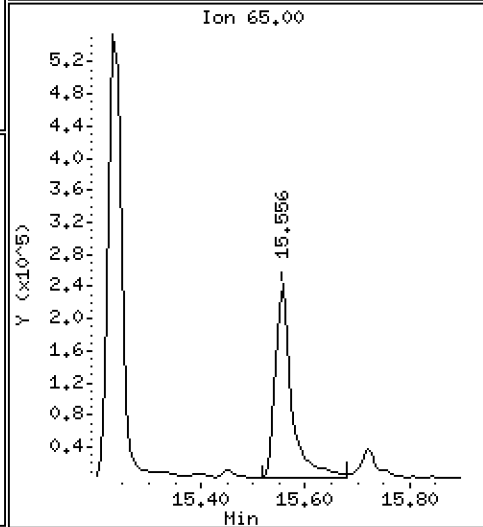
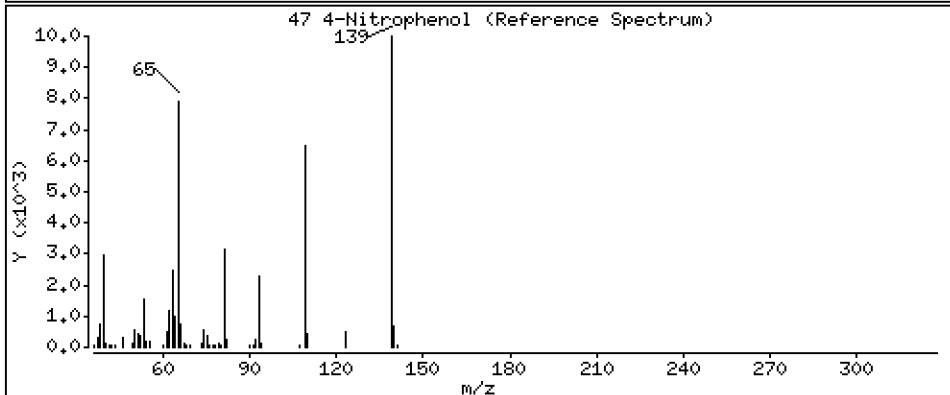
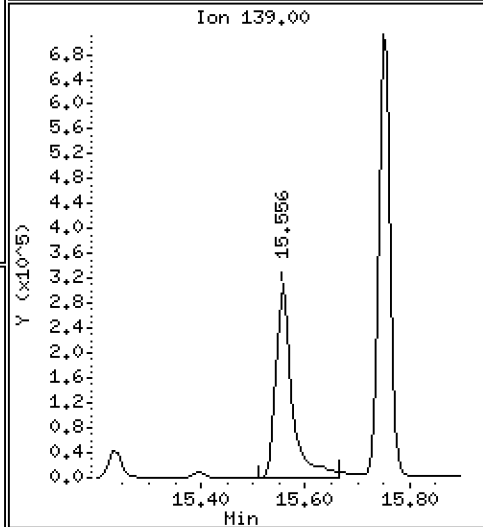
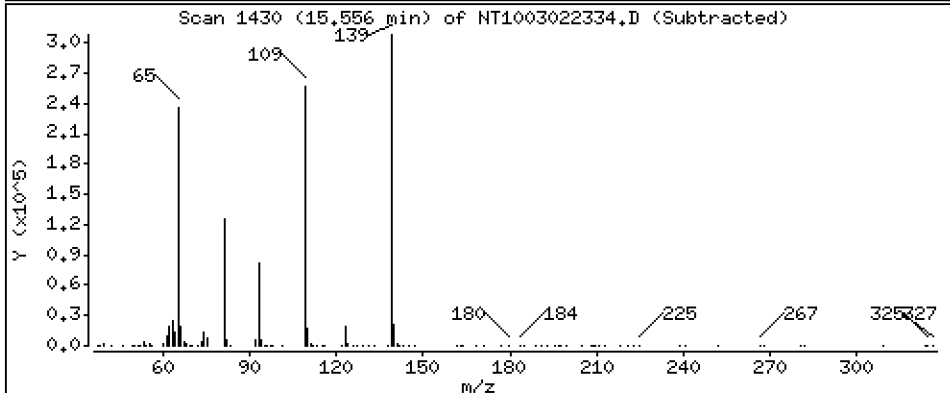
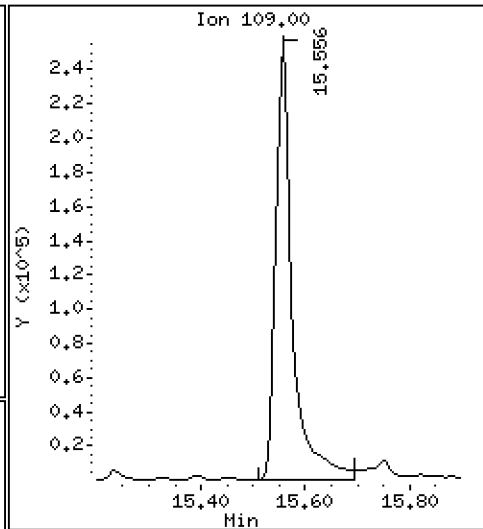
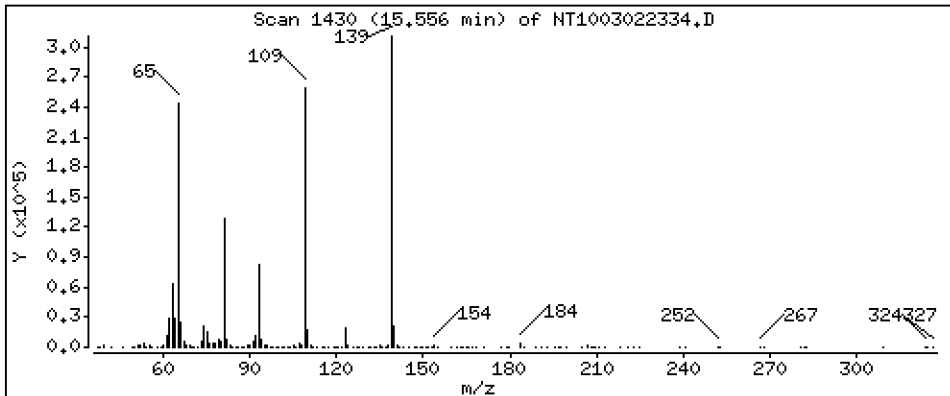
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

47 4-Nitrophenol

Concentration: 7,871 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

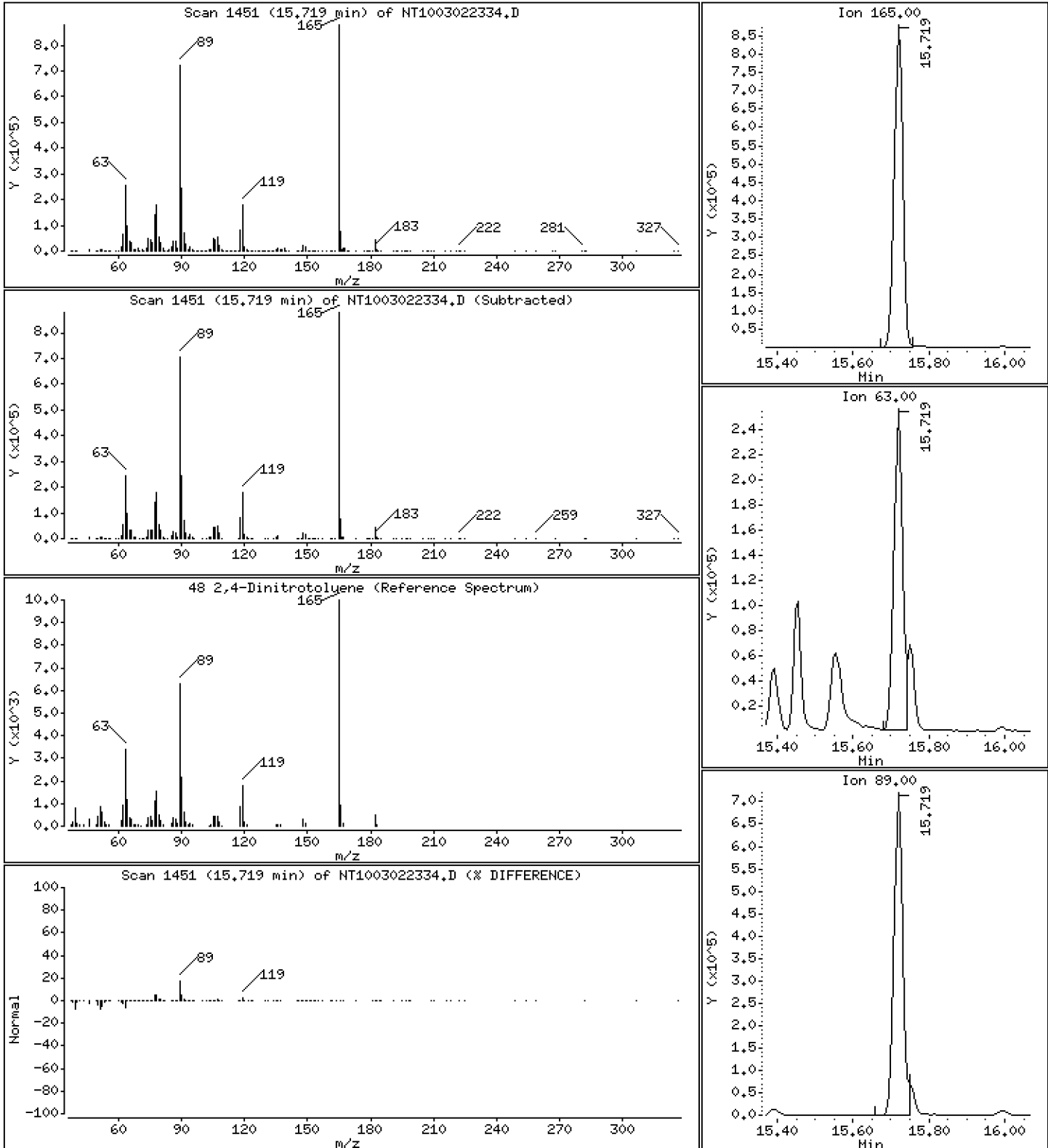
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 9,950 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

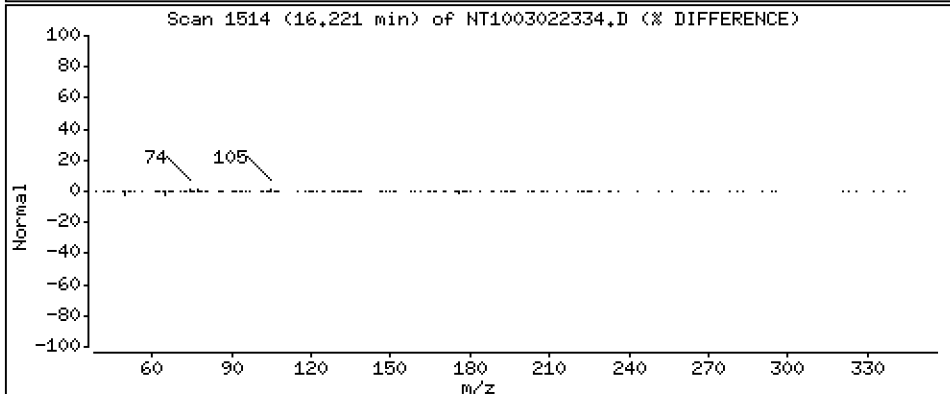
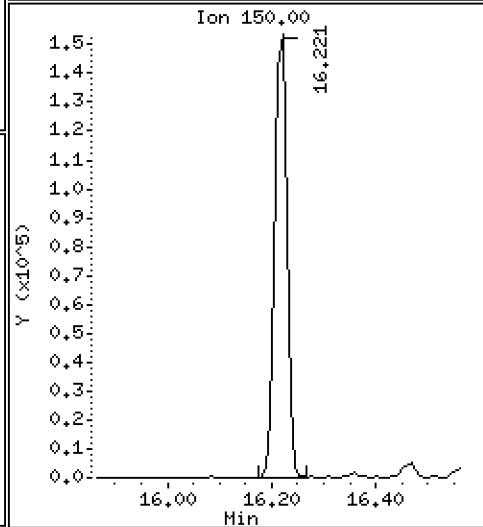
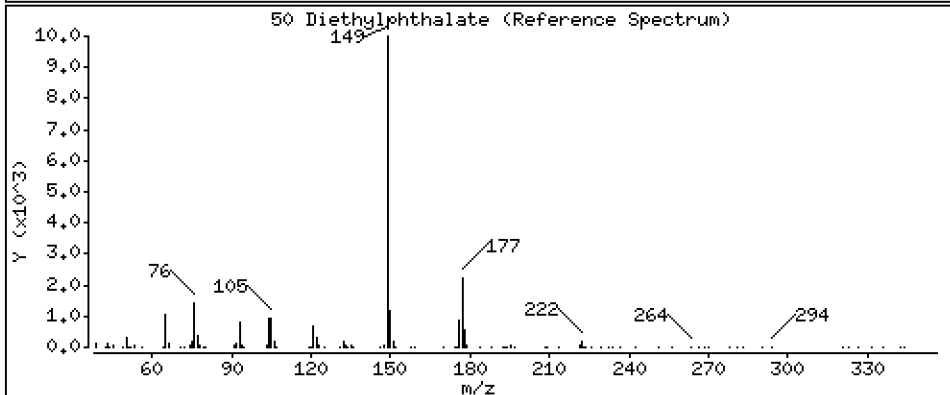
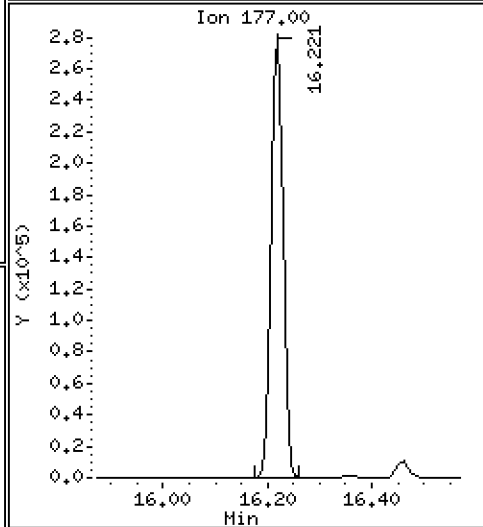
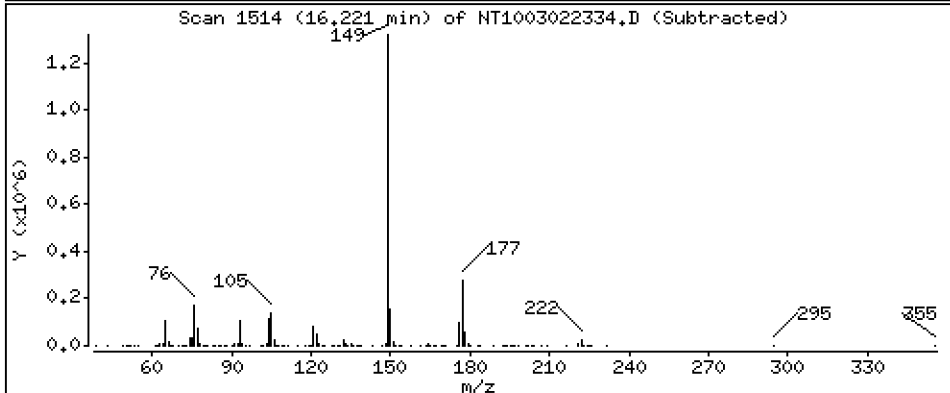
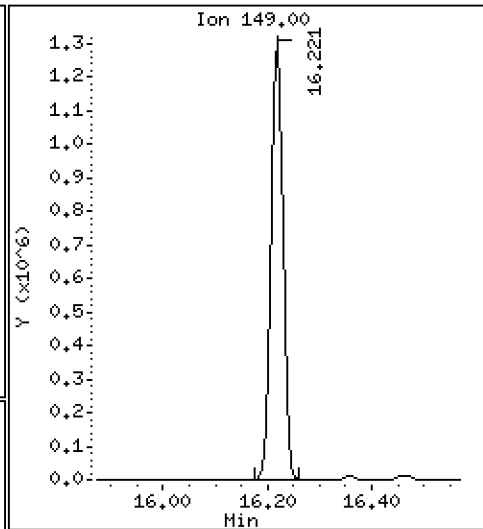
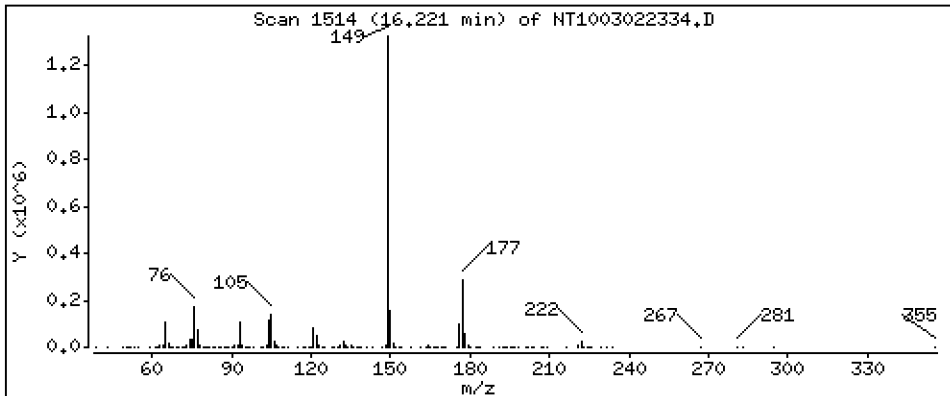
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 4,742 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

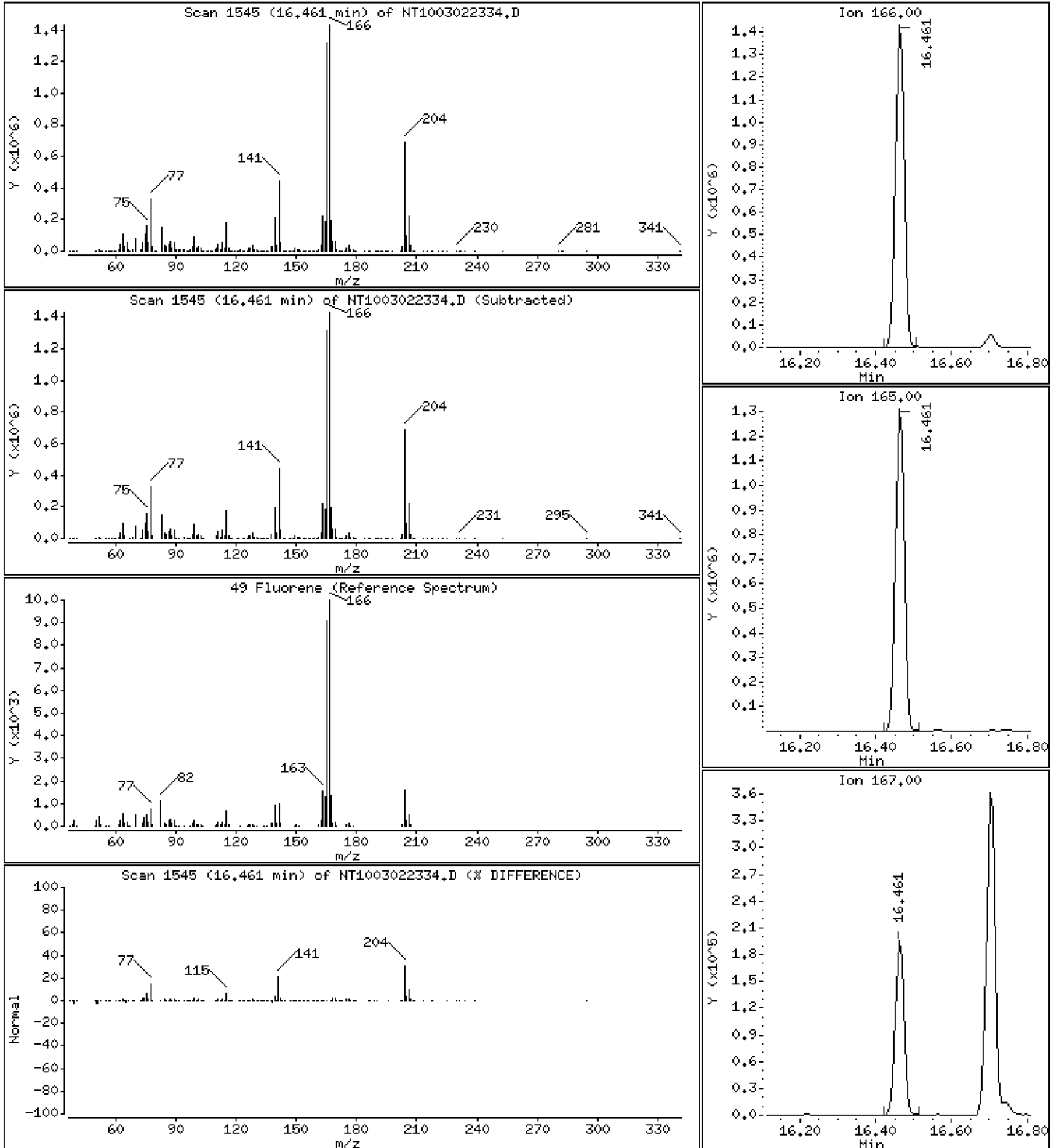
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 5,054 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

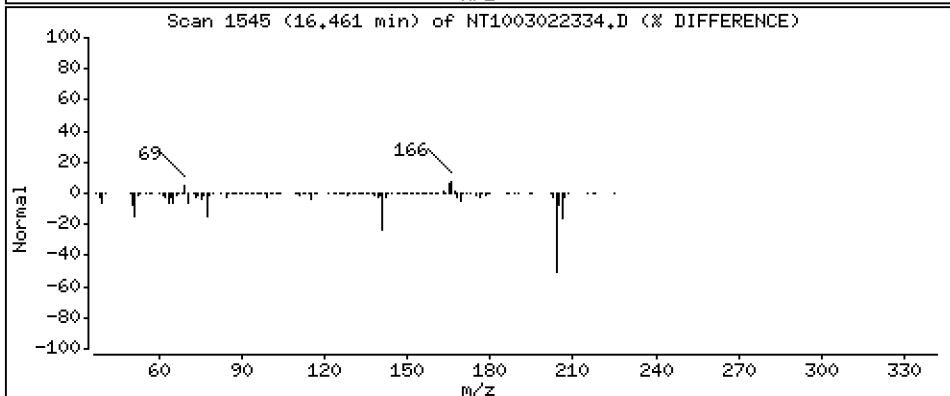
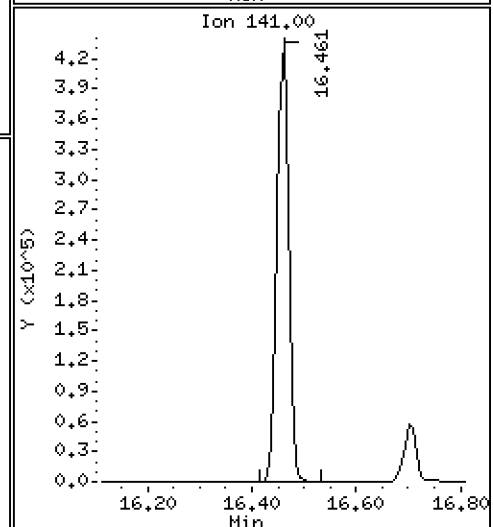
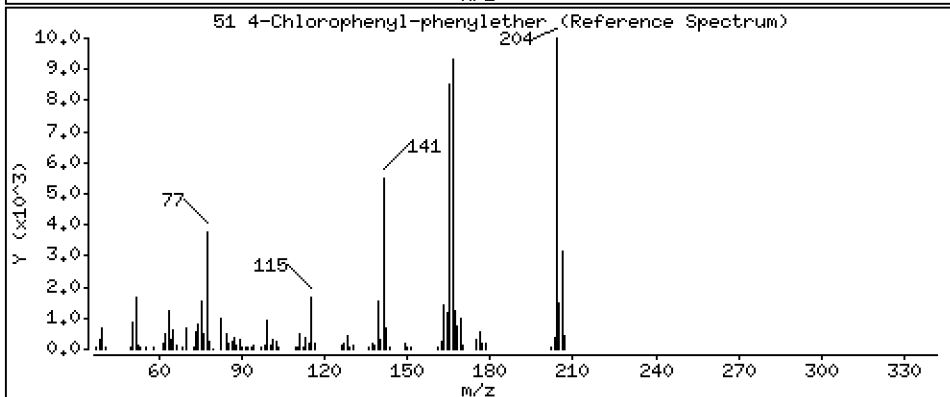
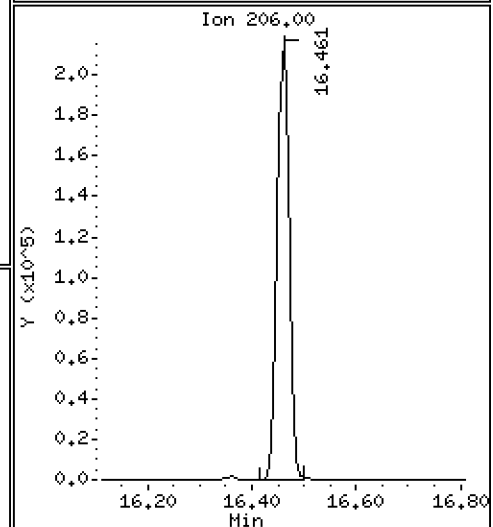
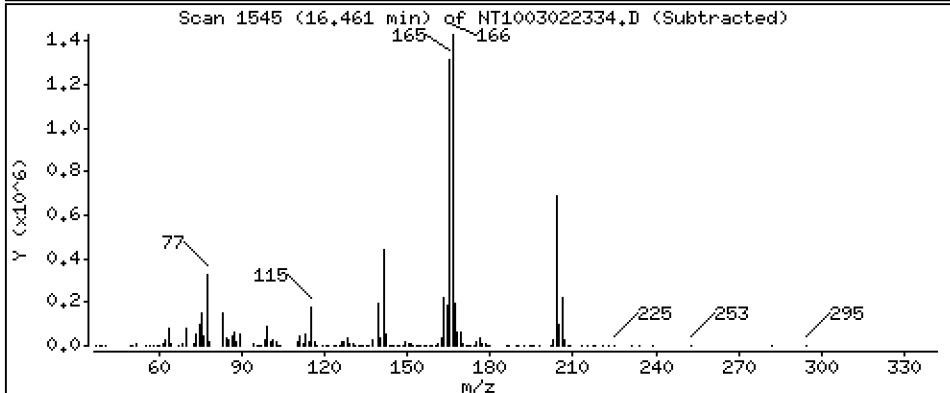
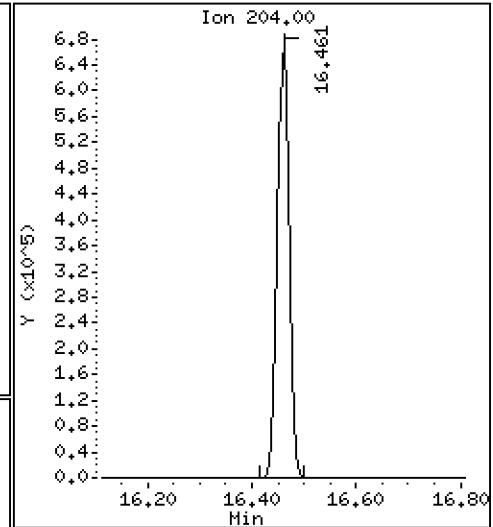
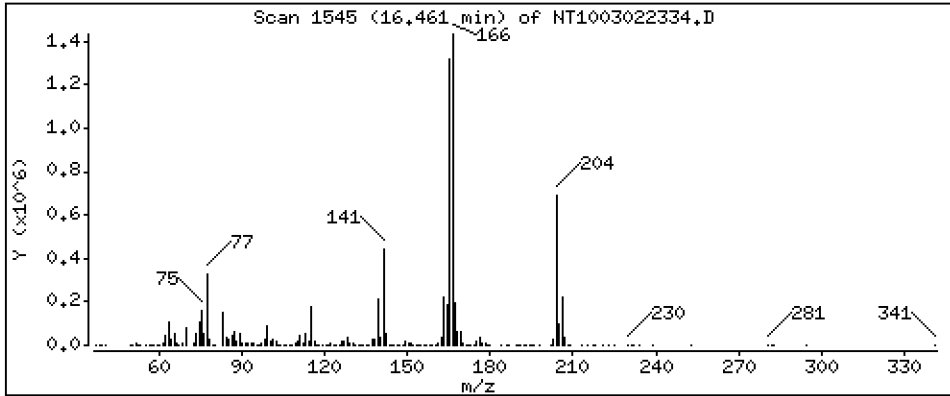
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 5,023 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

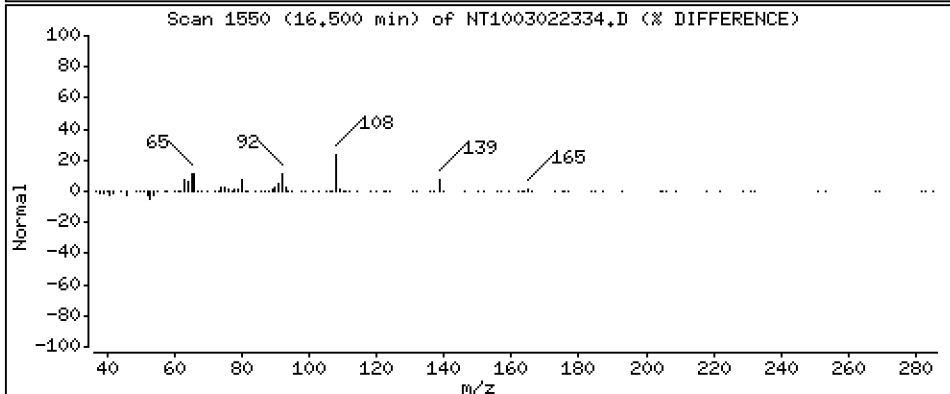
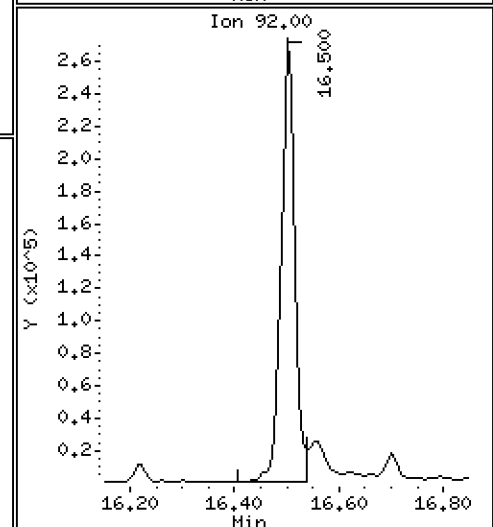
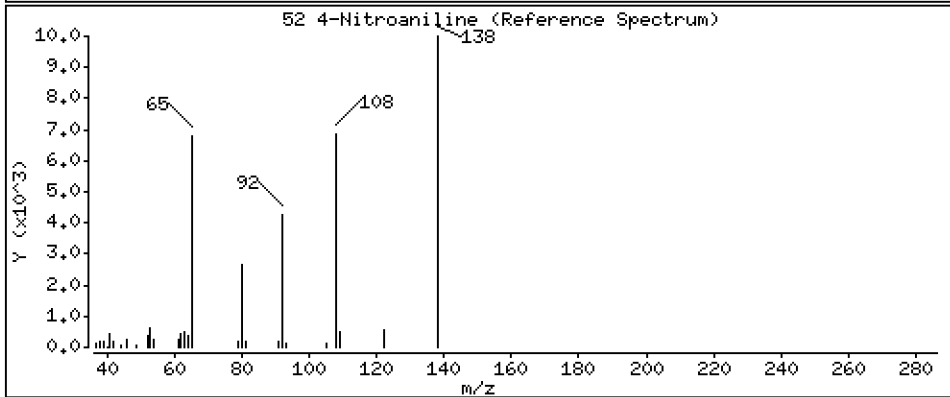
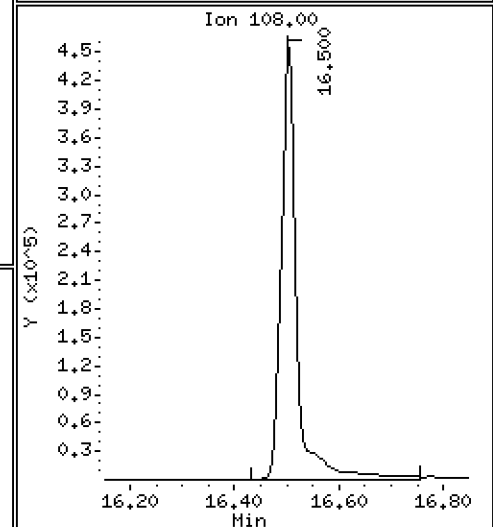
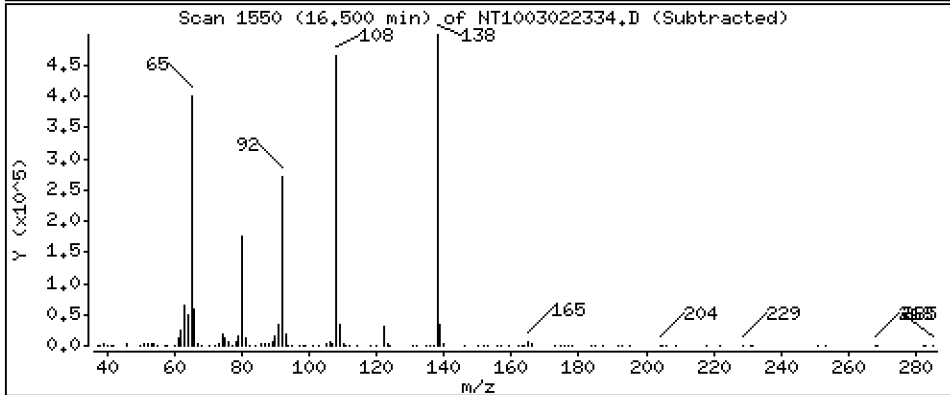
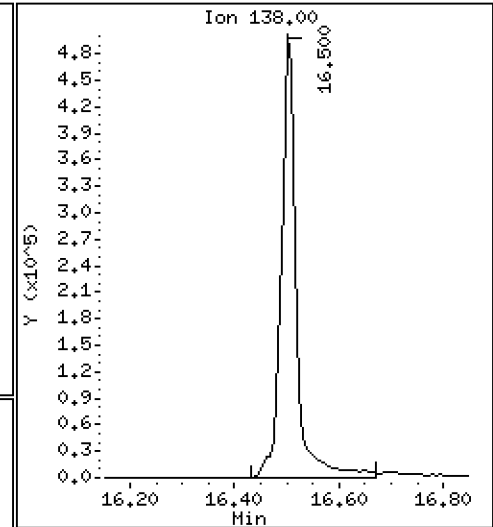
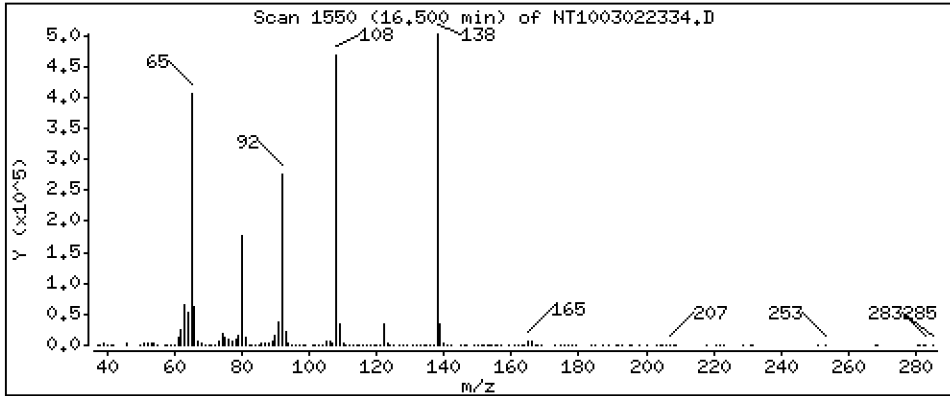
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

52 4-Nitroaniline

Concentration: 10,03 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

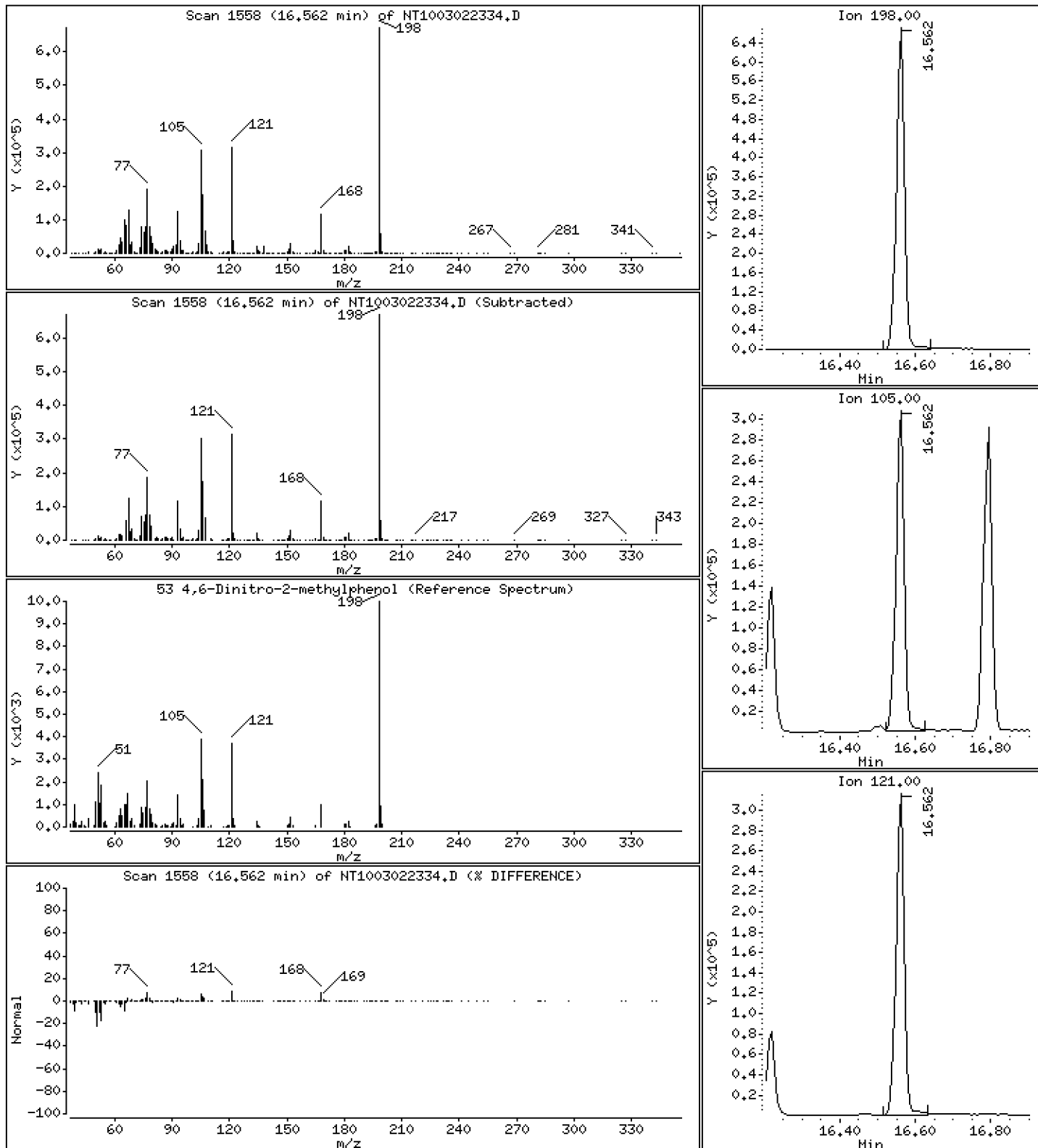
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 19,58 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

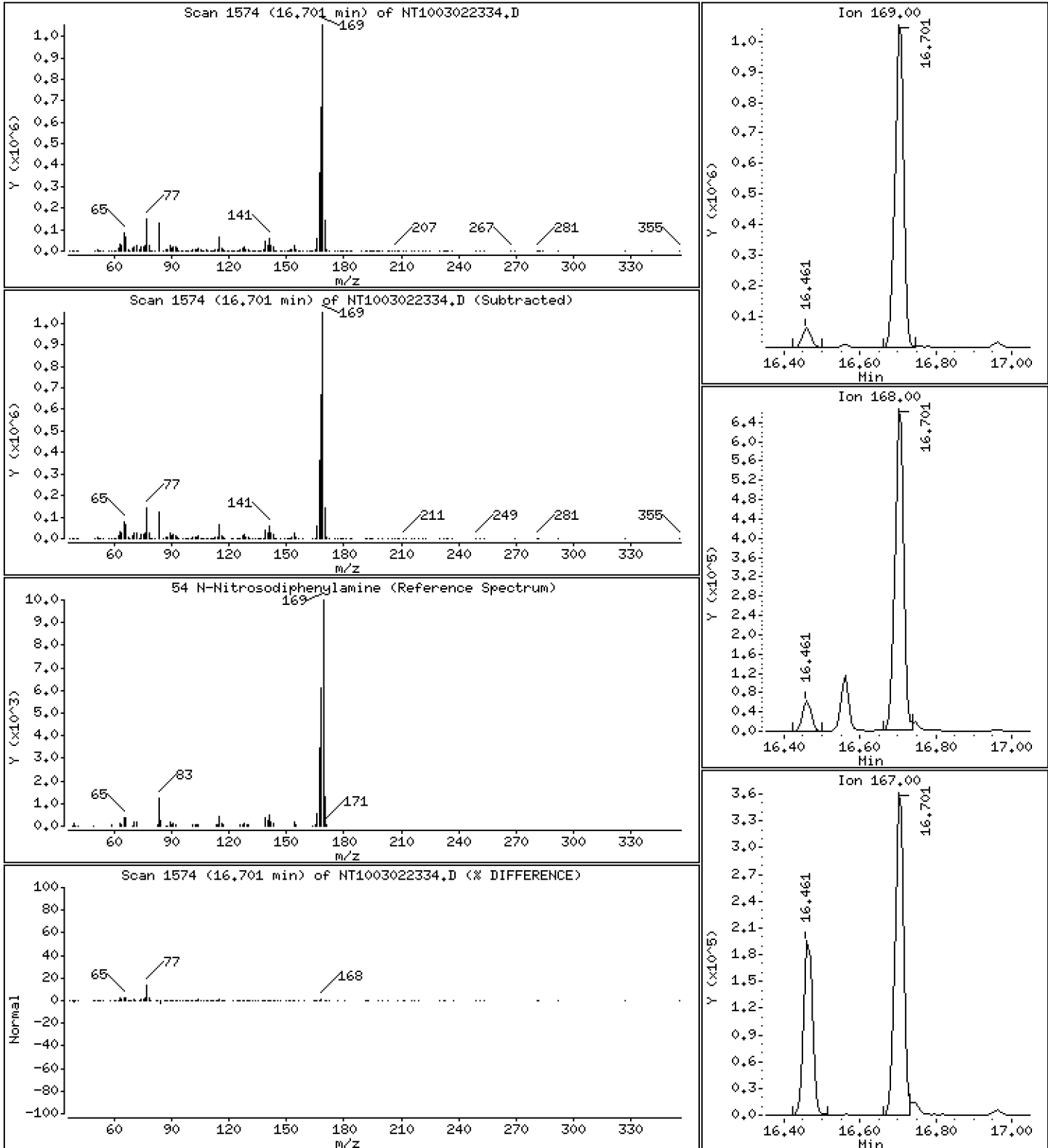
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,803 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

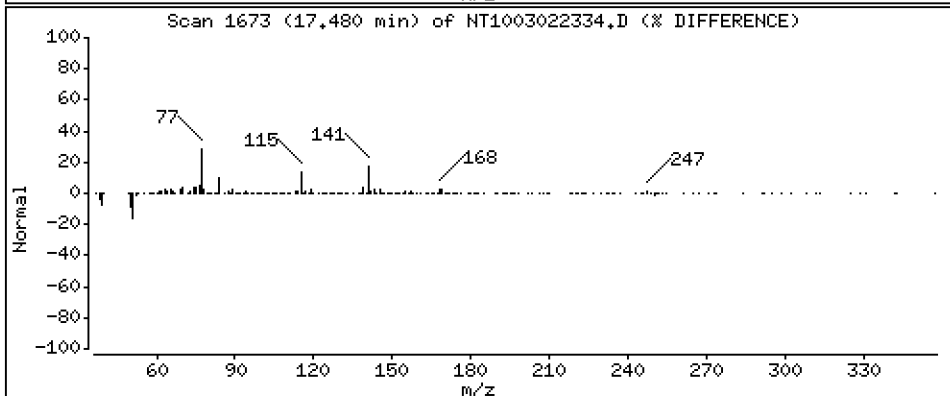
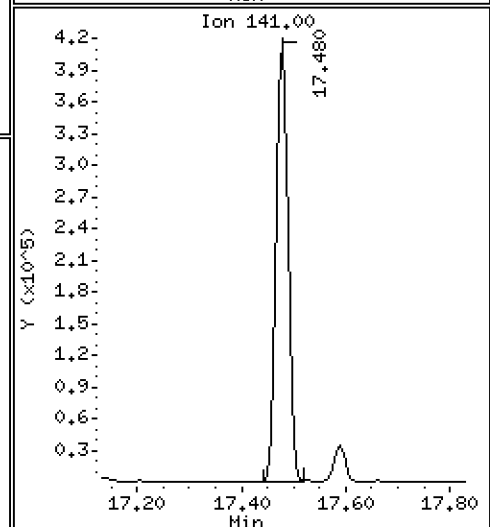
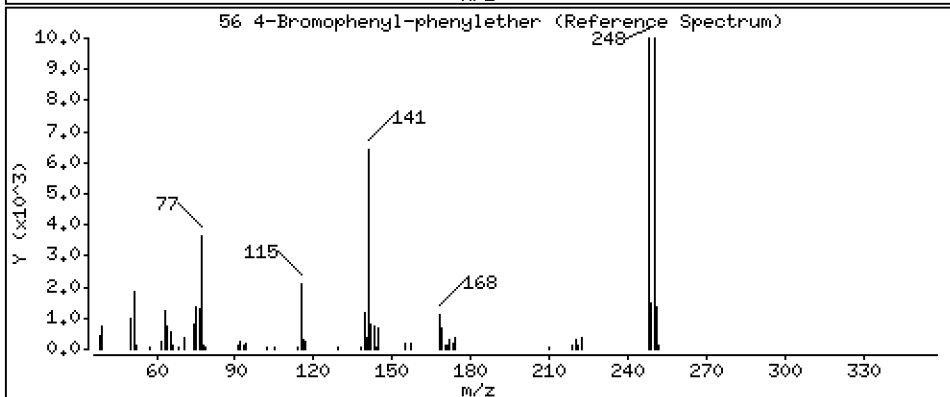
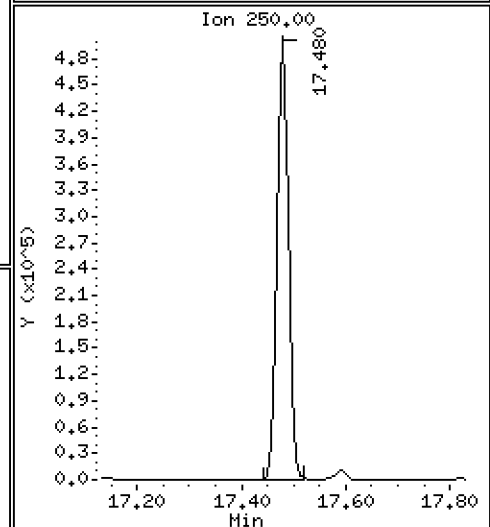
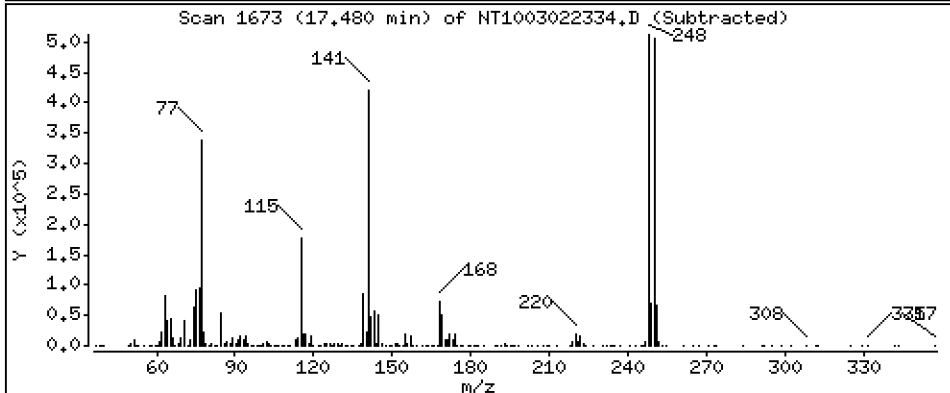
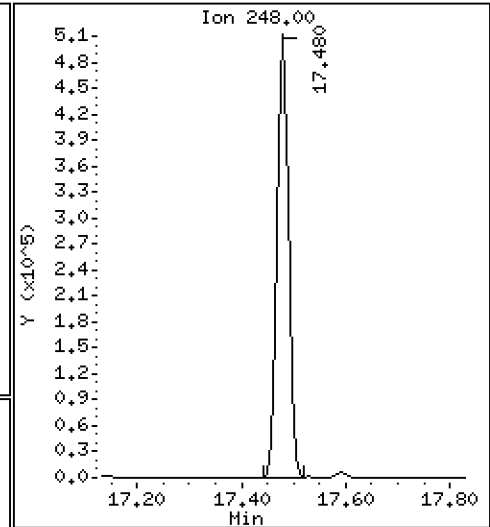
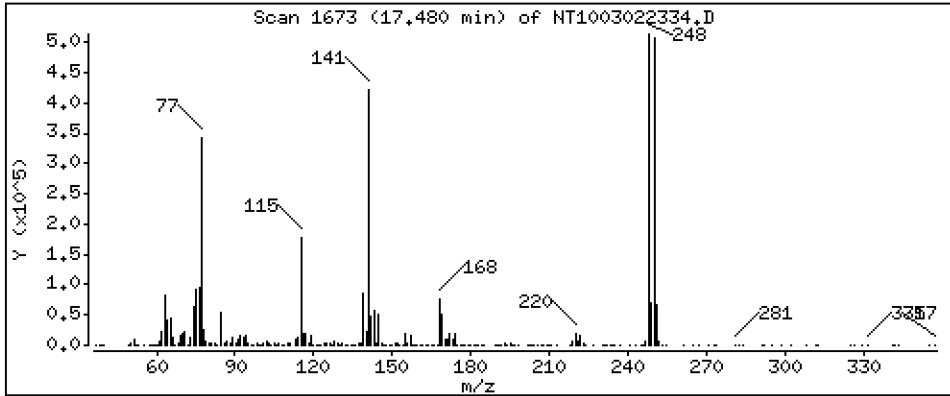
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 5,229 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

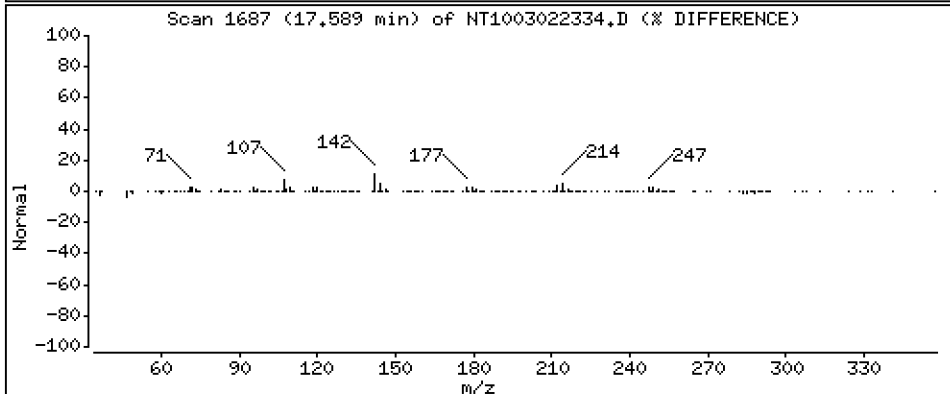
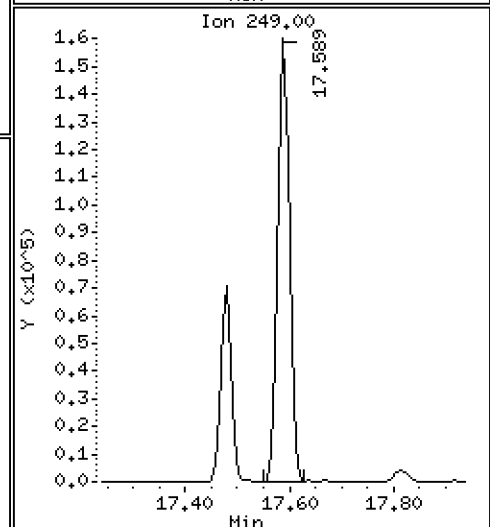
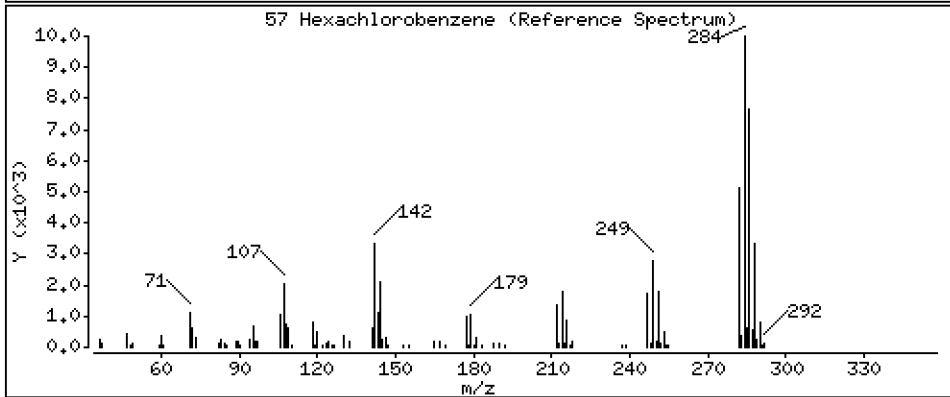
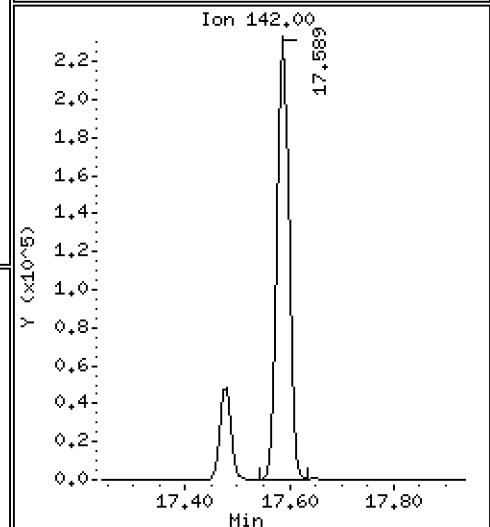
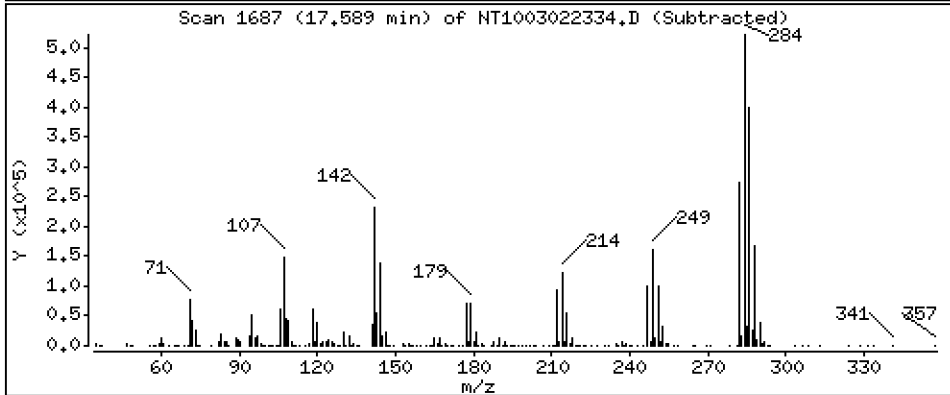
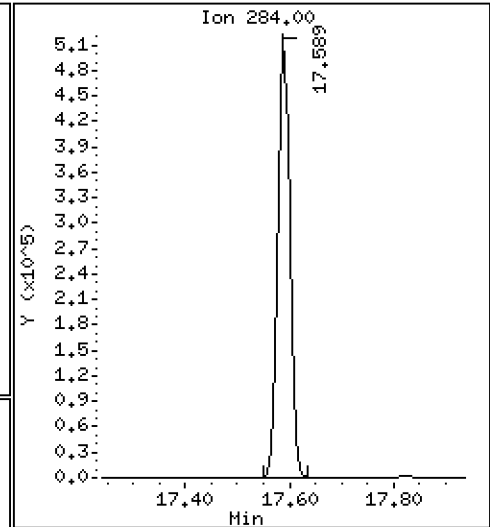
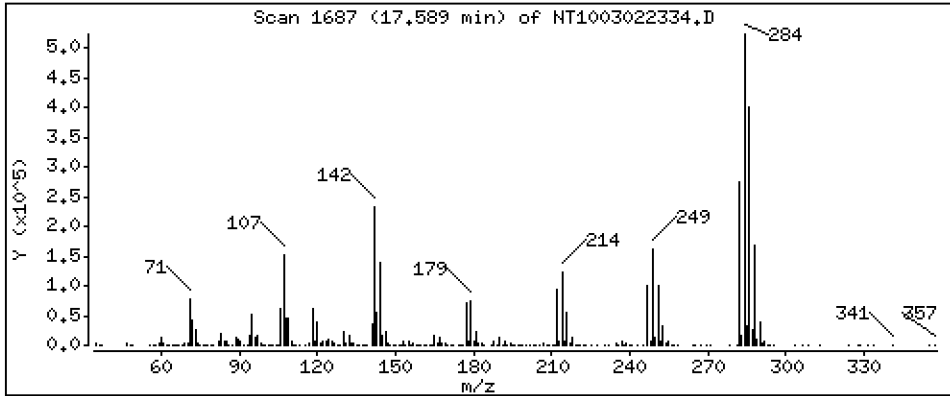
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,952 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

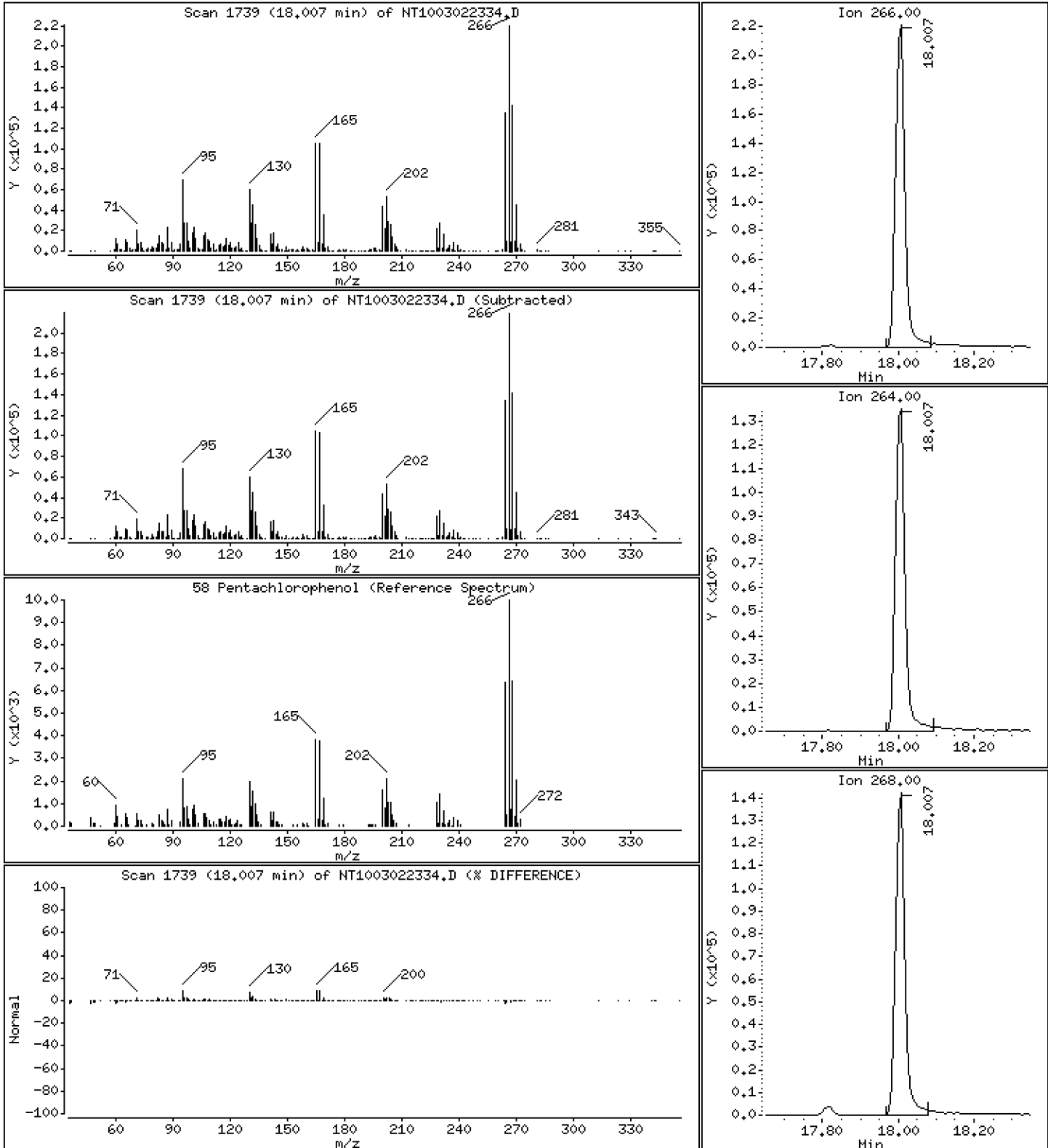
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 4,869 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

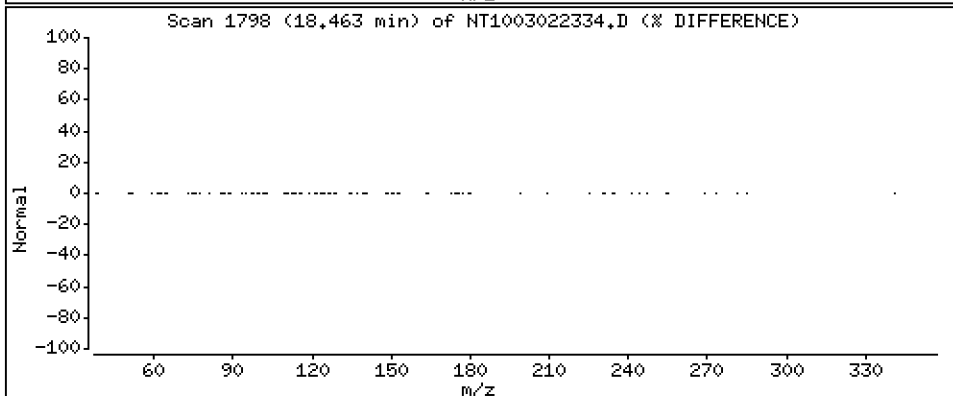
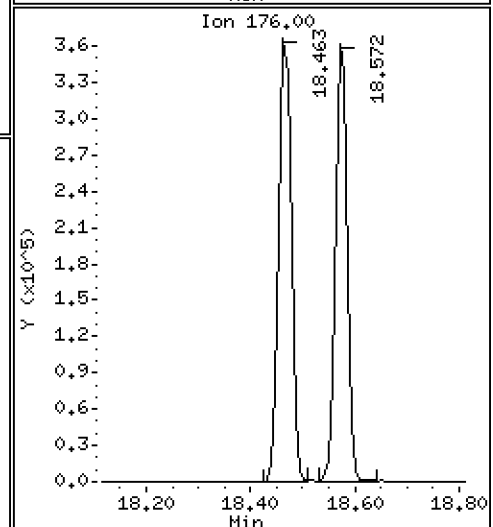
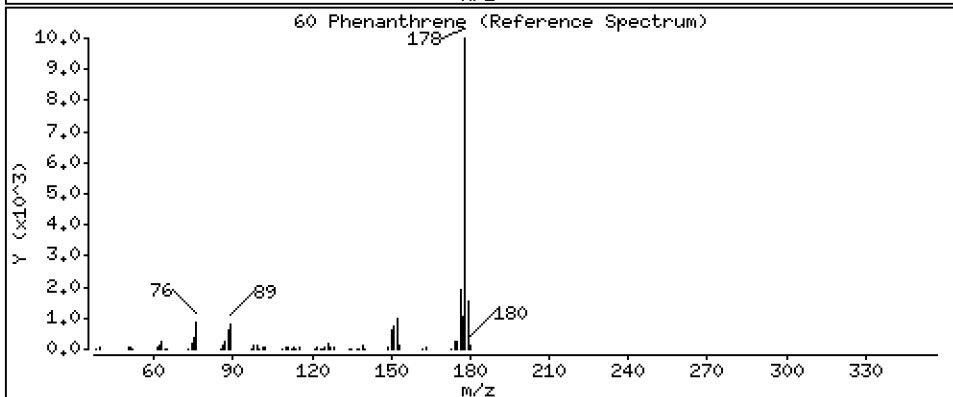
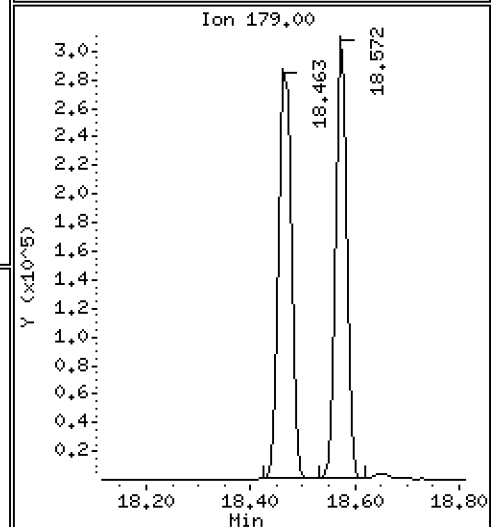
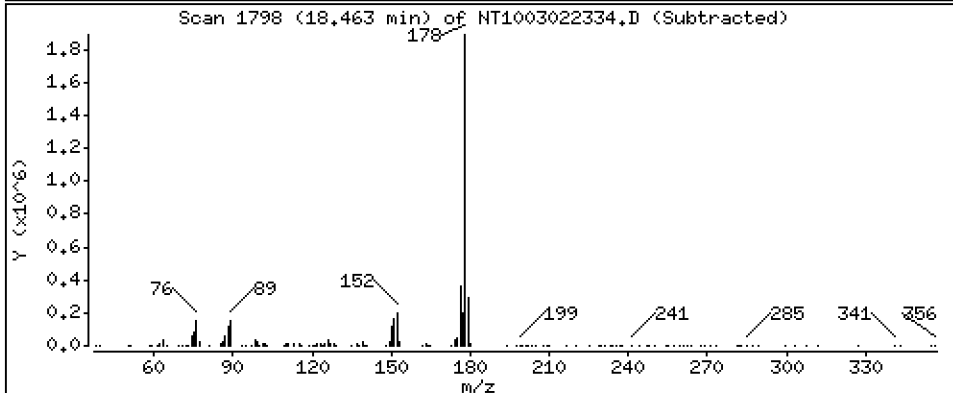
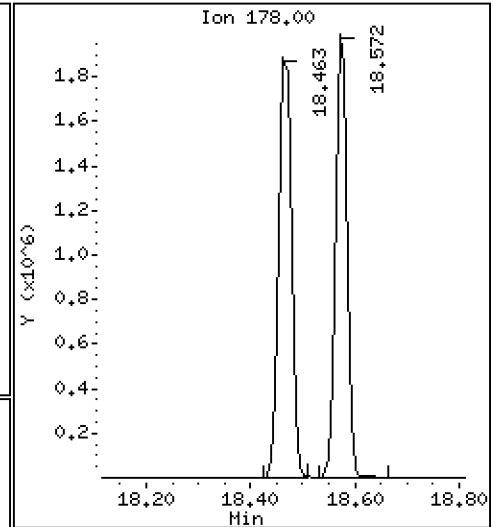
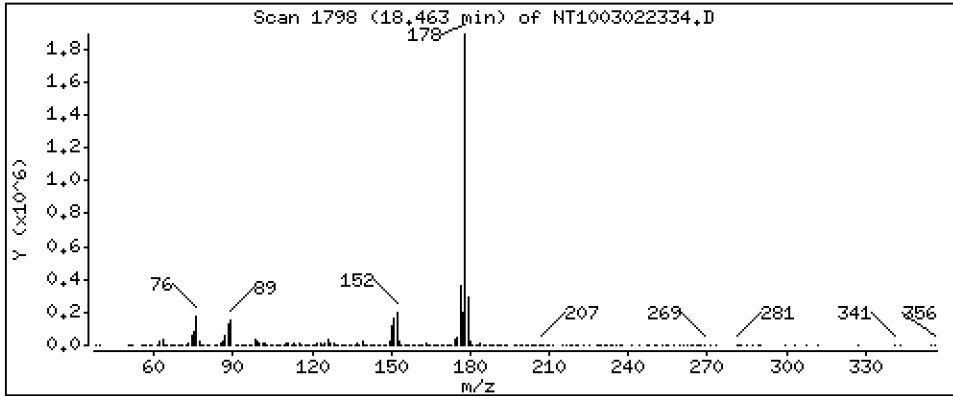
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 5,109 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

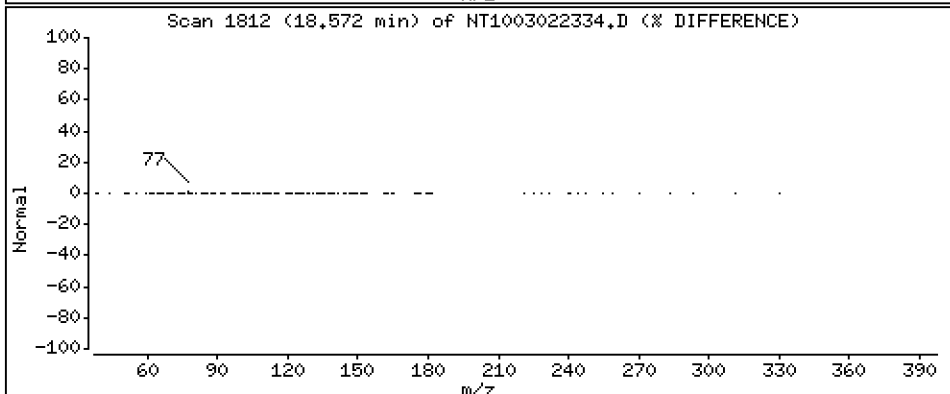
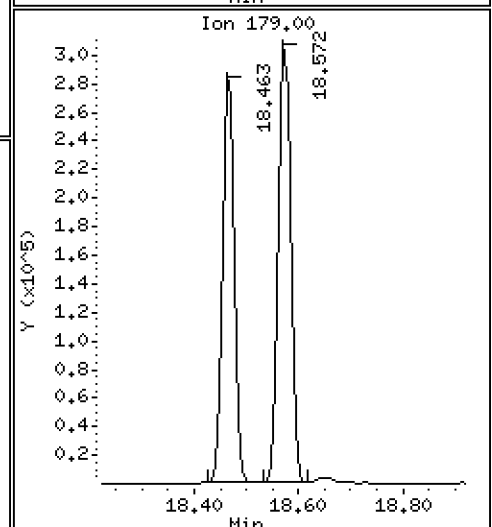
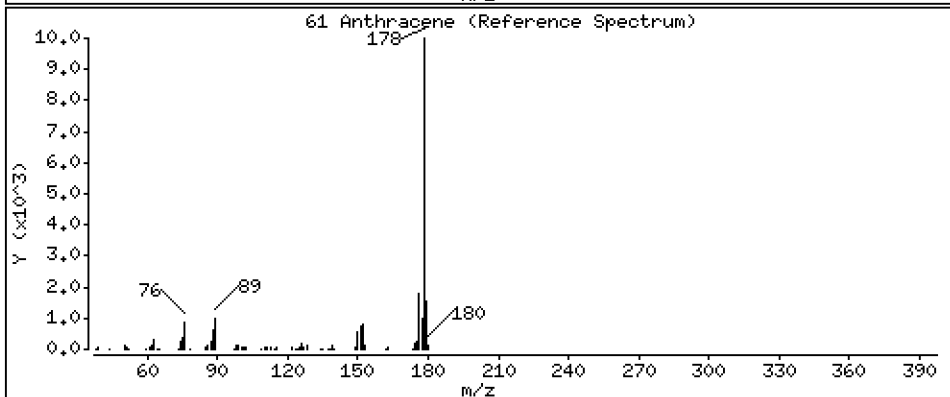
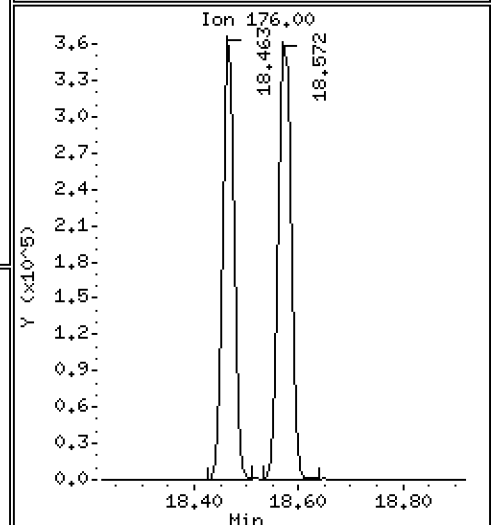
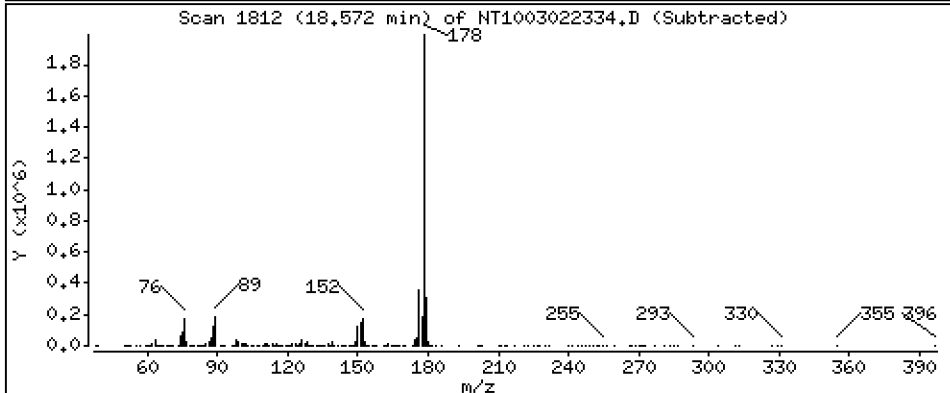
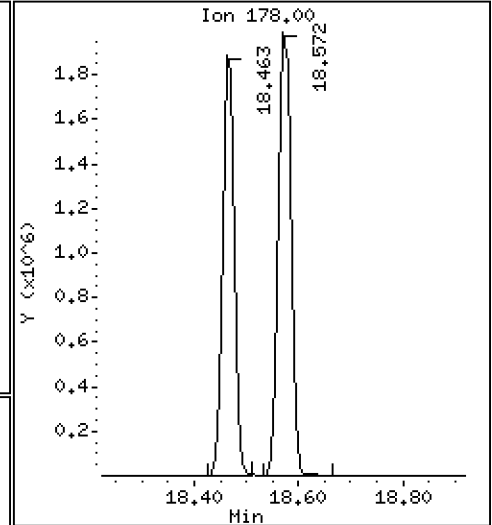
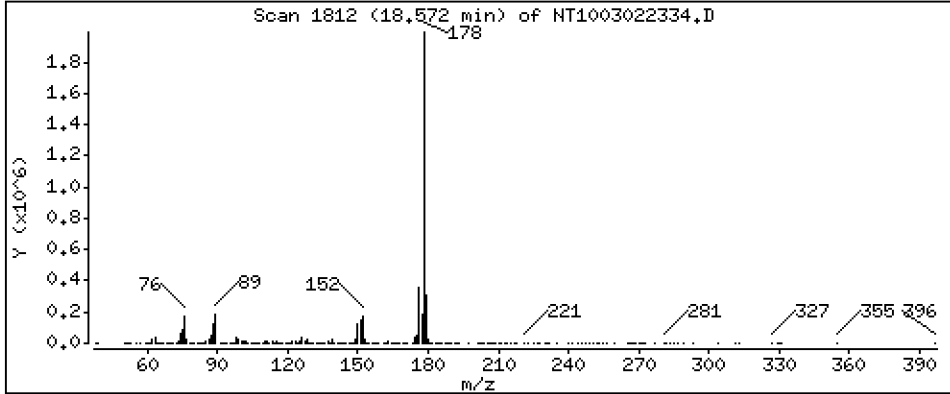
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 5,494 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

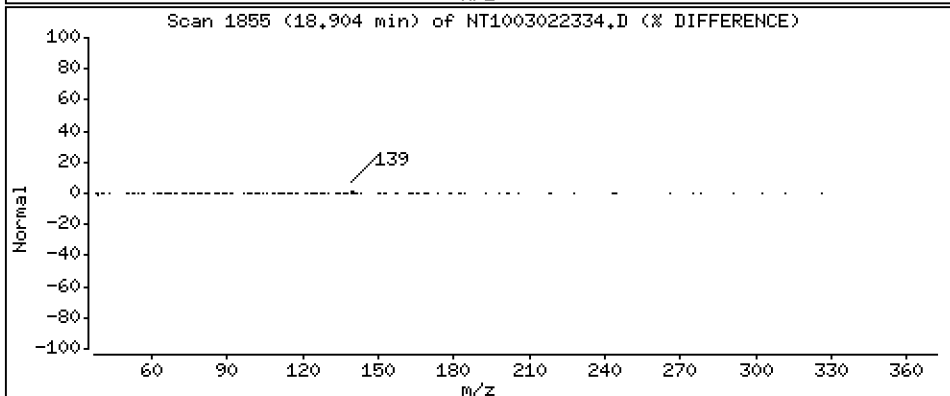
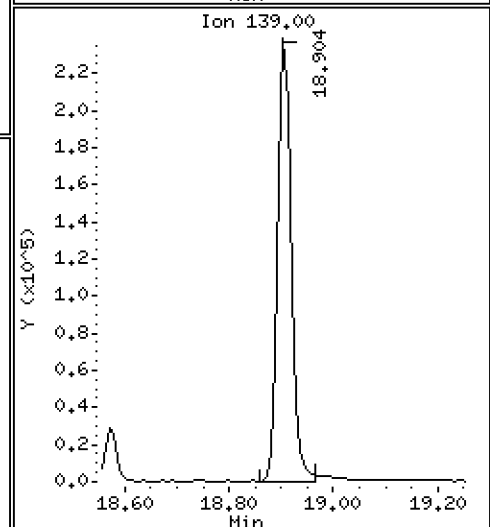
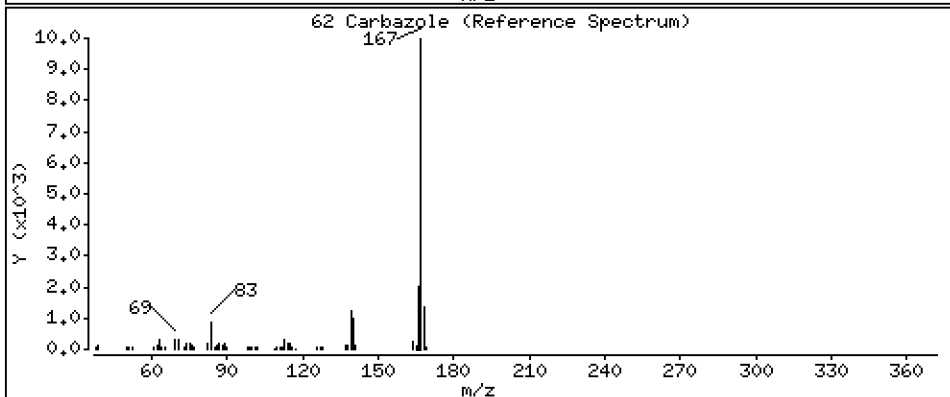
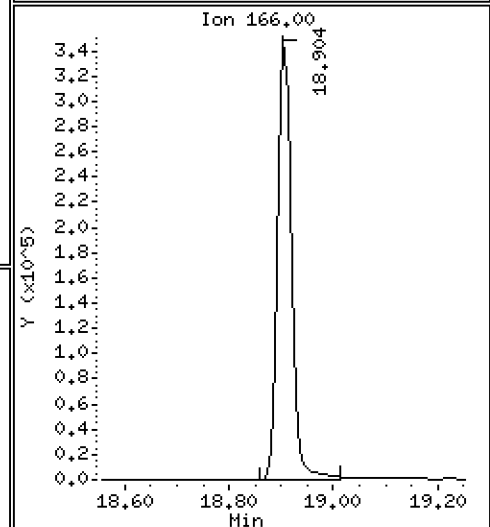
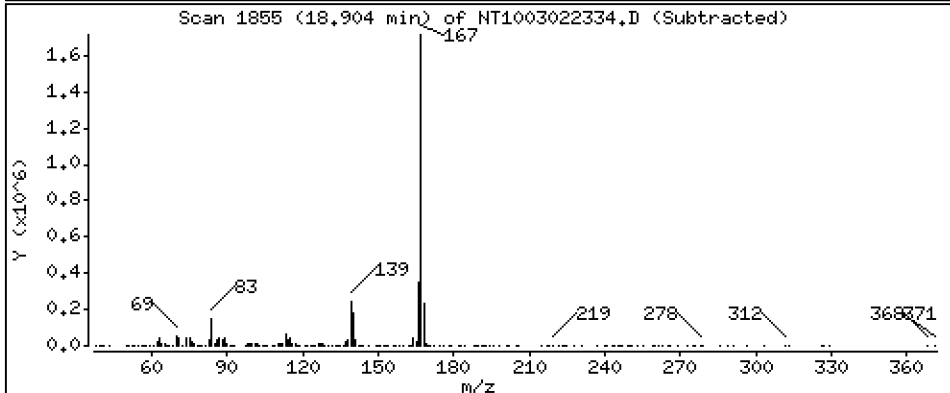
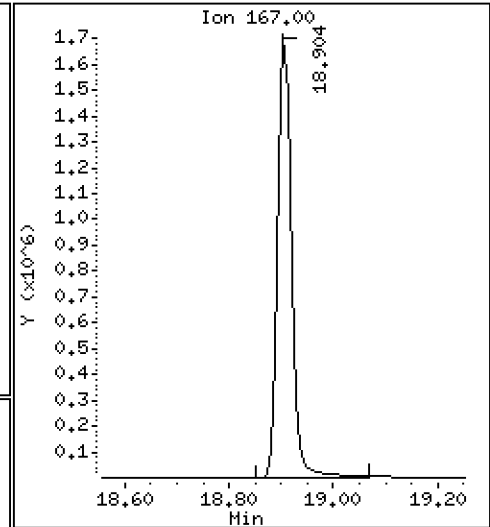
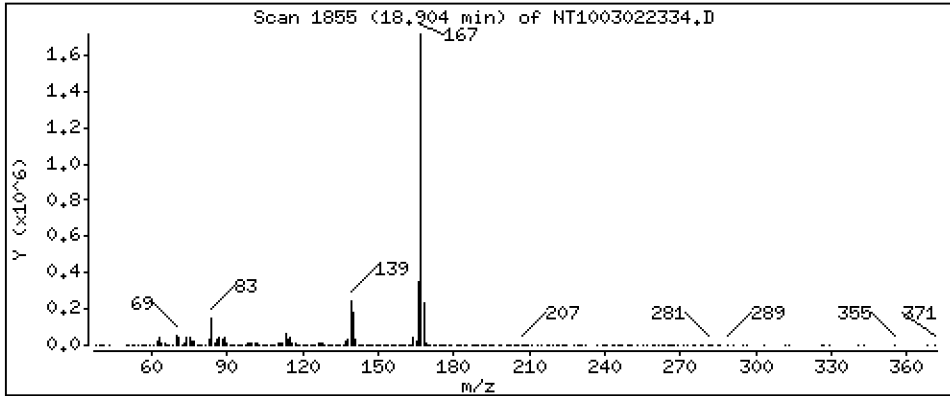
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 5,660 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

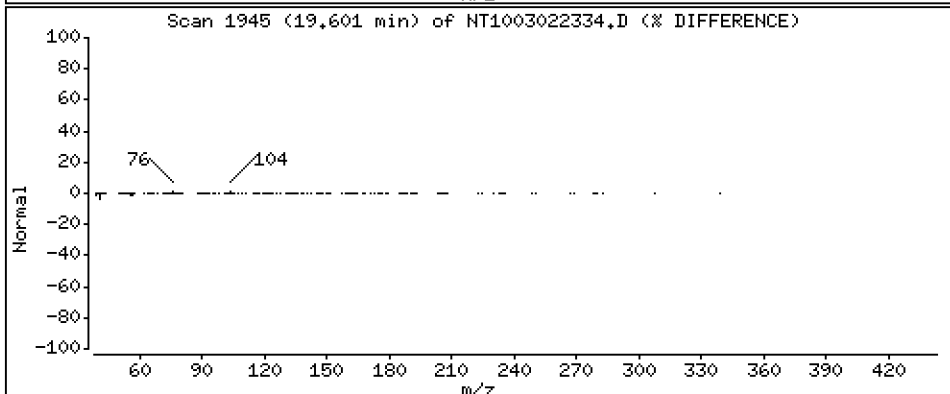
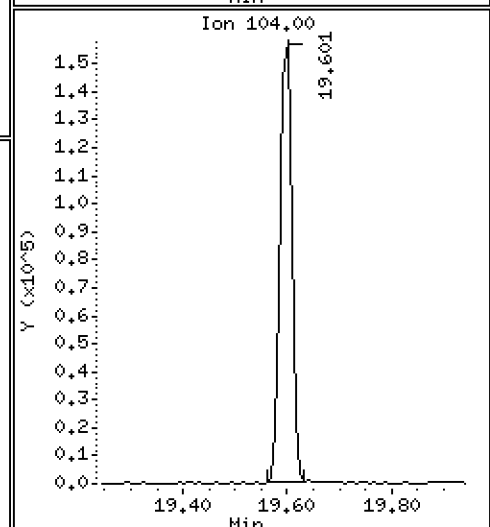
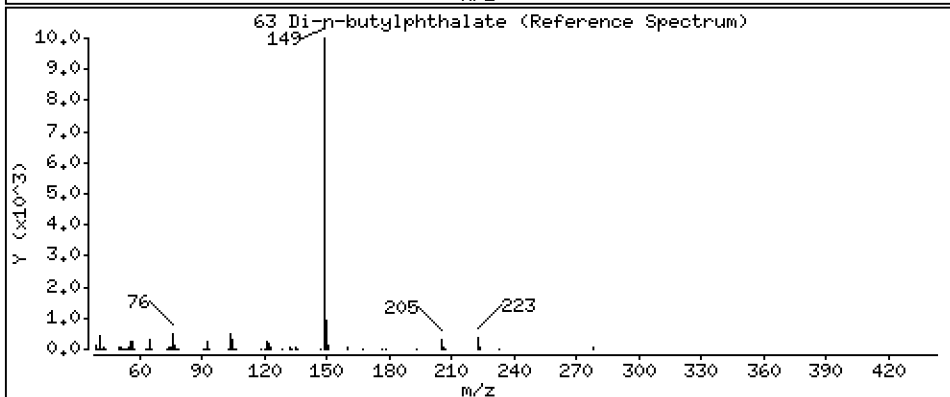
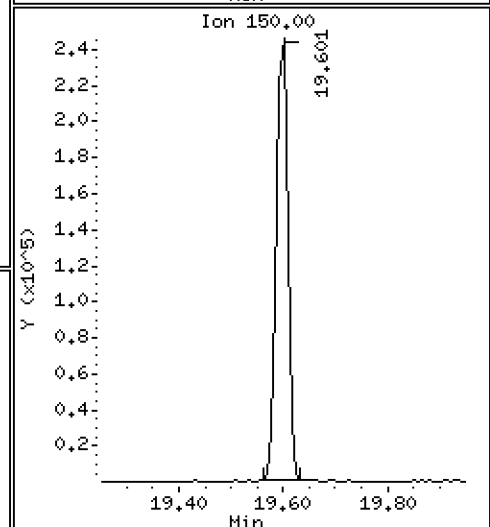
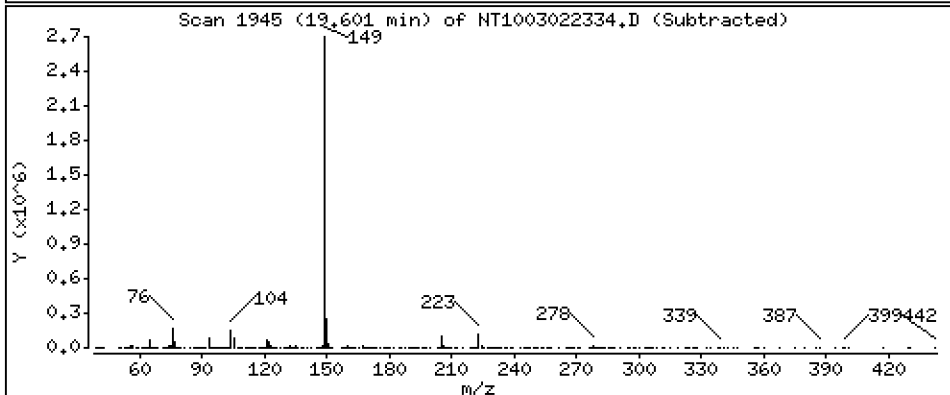
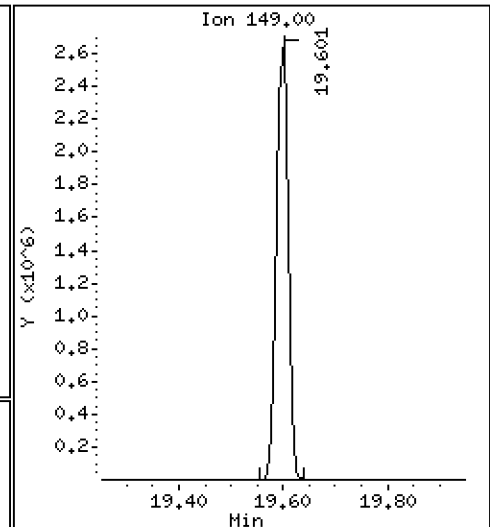
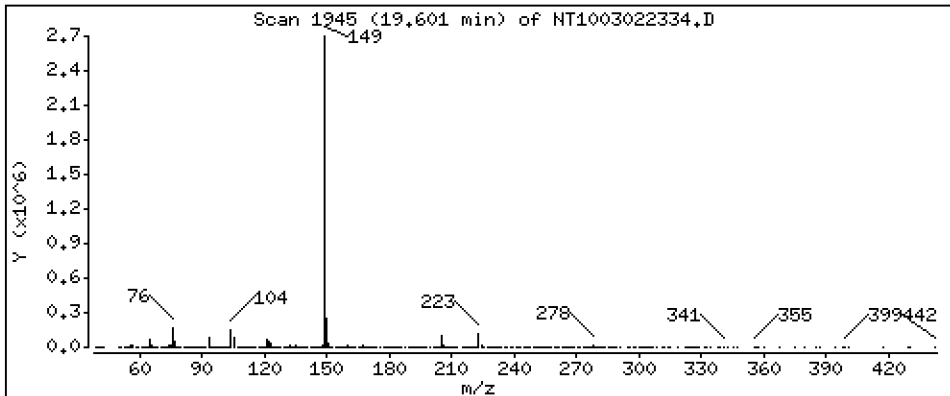
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

63 Di-n-butylphthalate

Concentration: 5,209 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

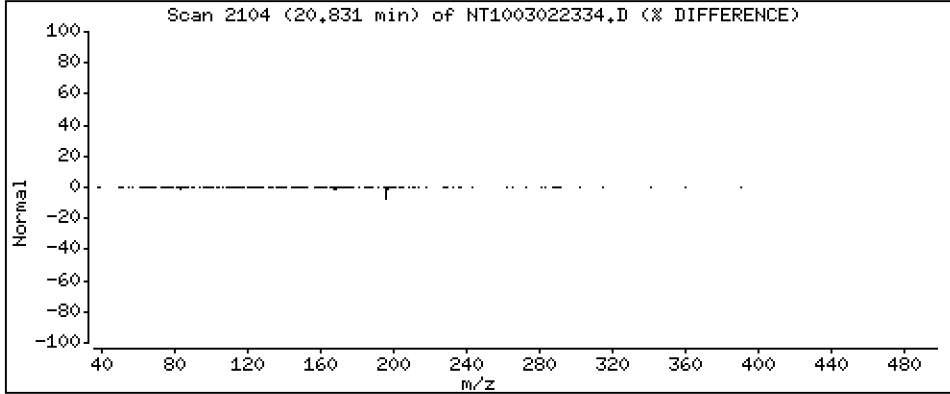
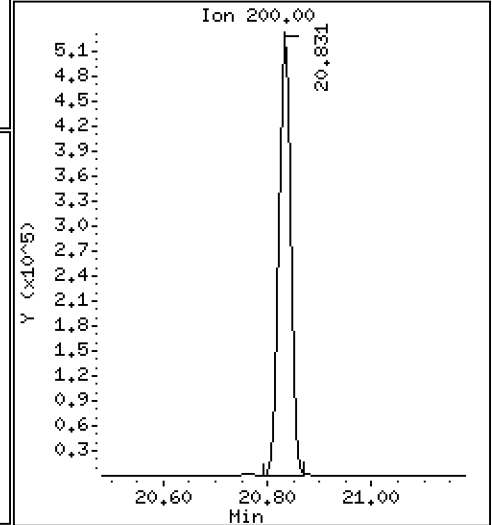
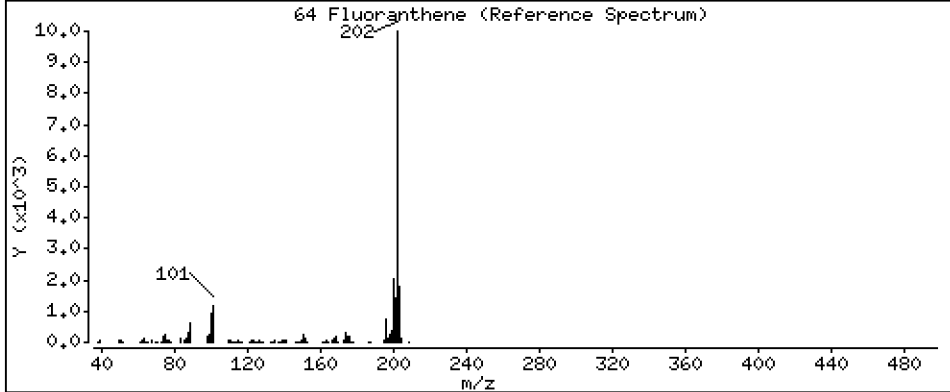
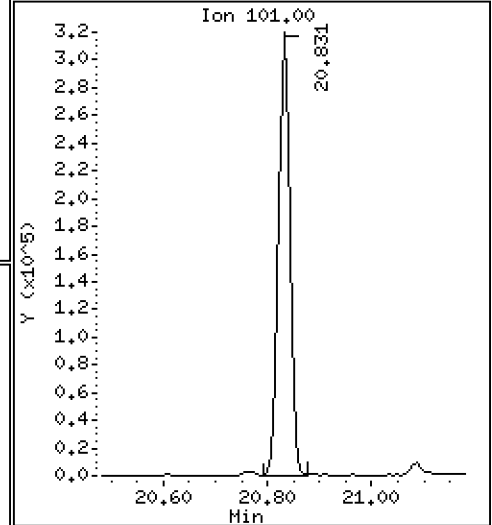
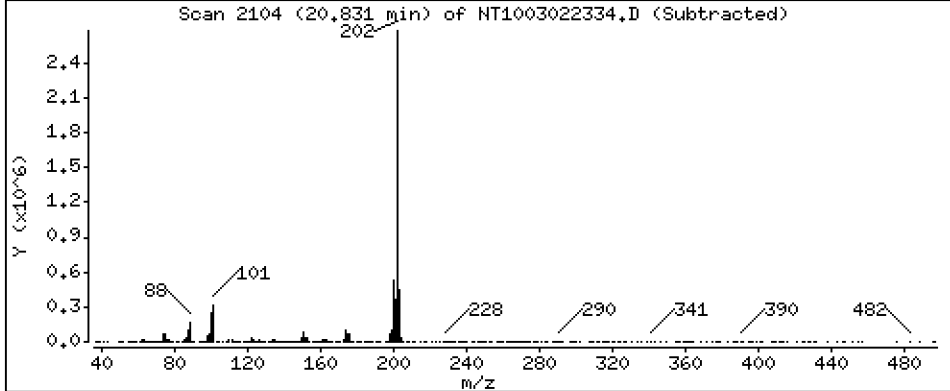
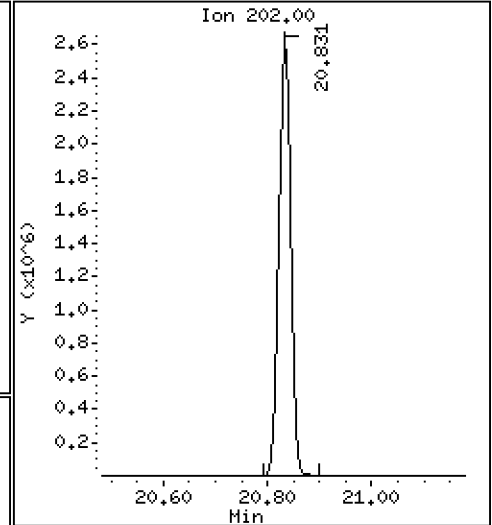
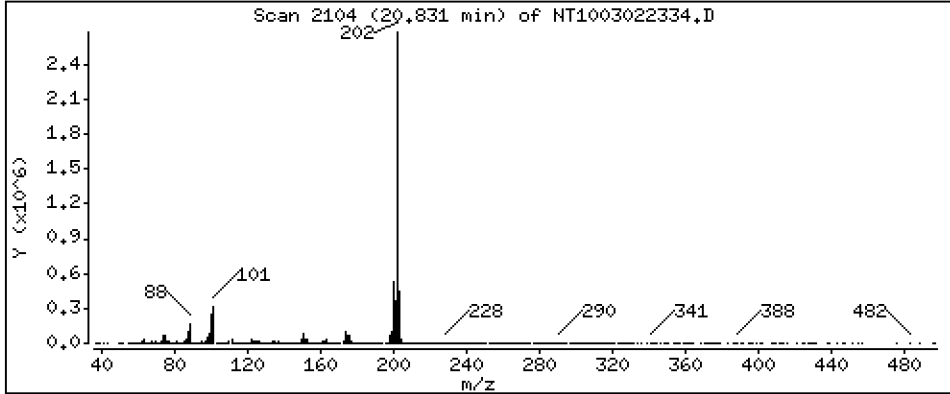
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 4,112 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

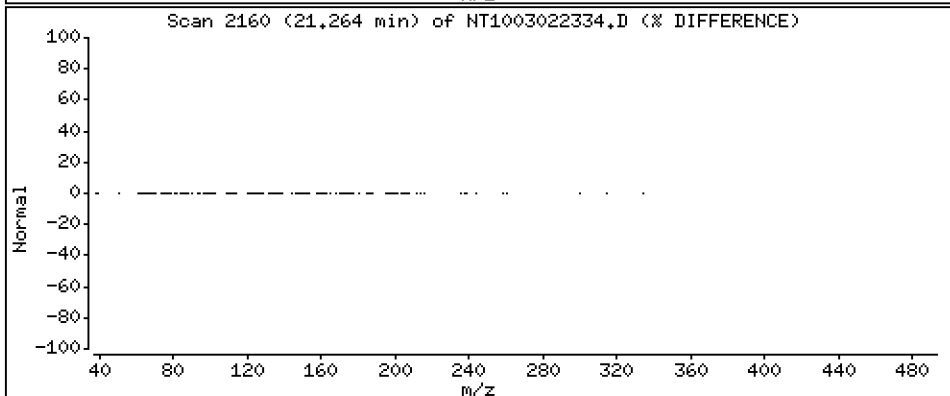
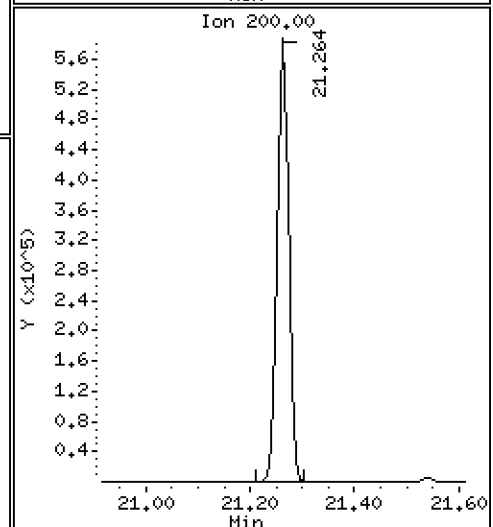
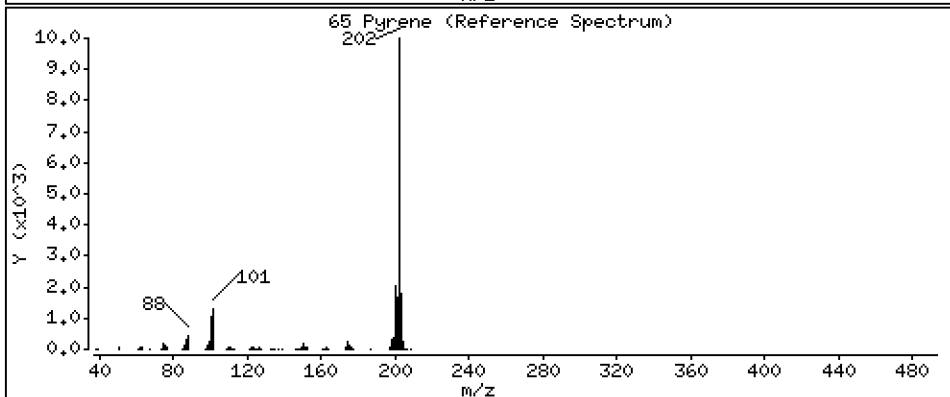
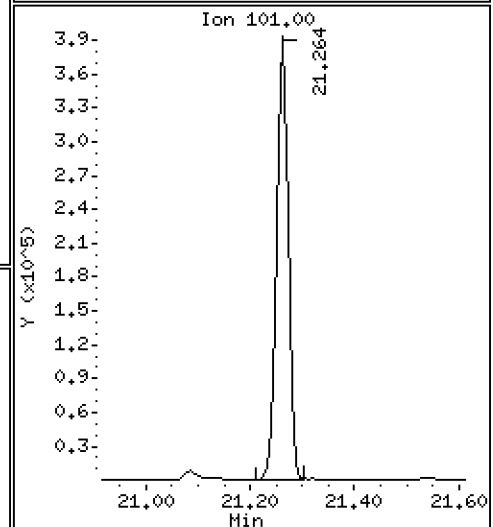
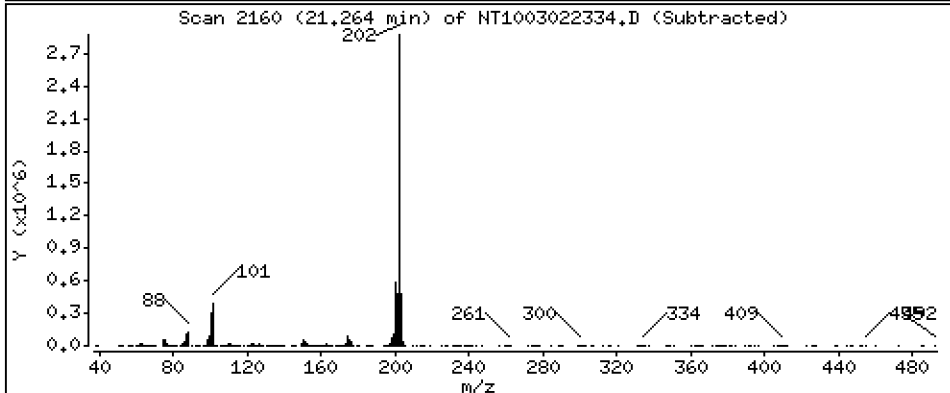
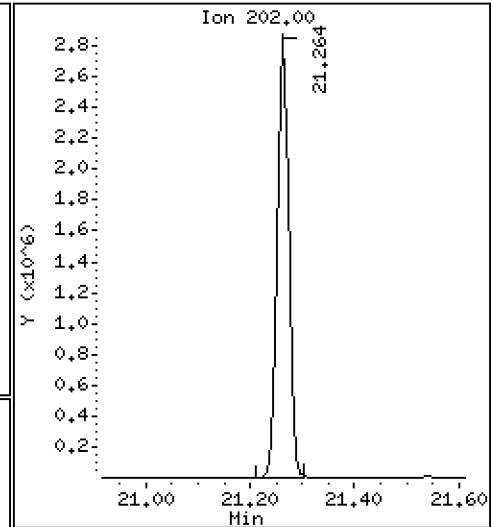
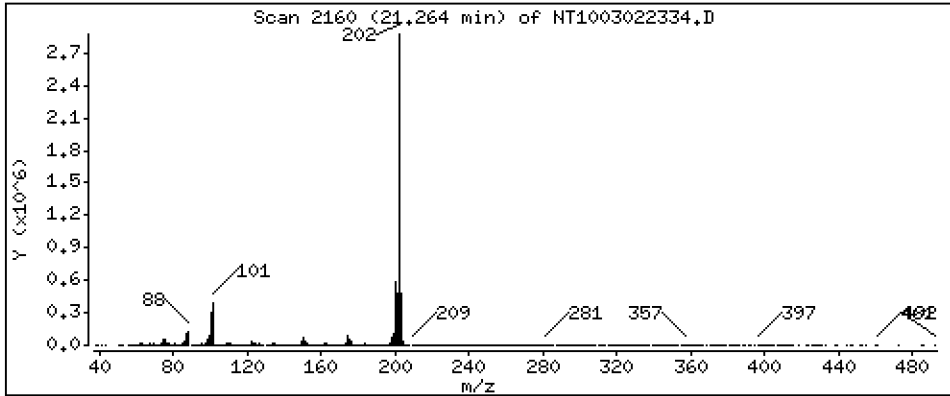
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 4,217 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

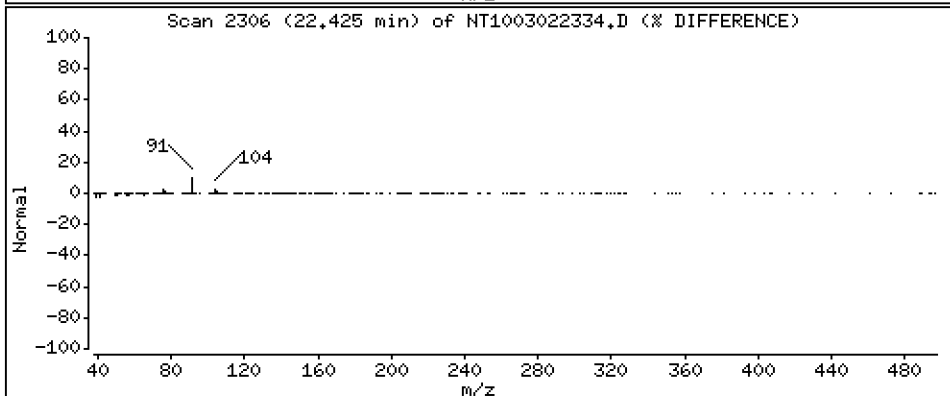
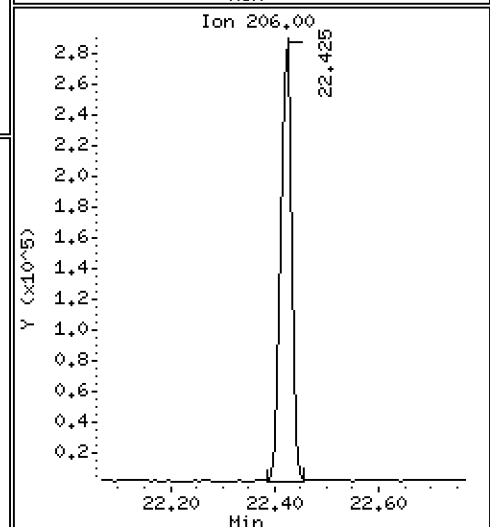
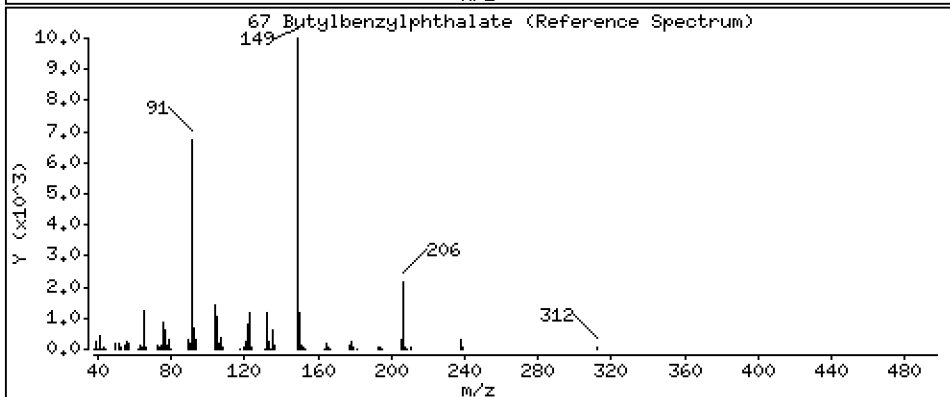
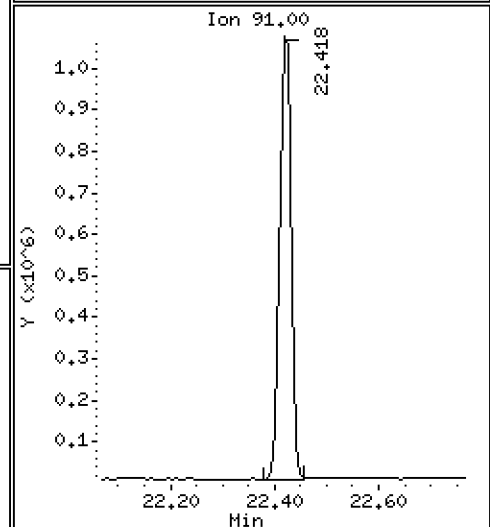
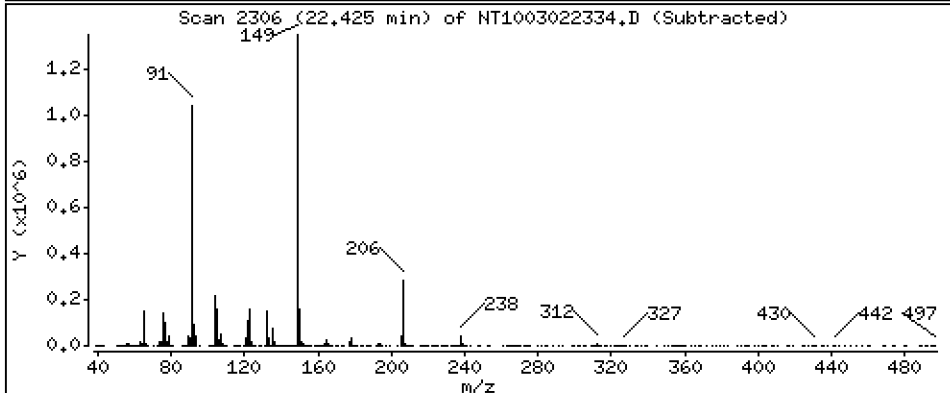
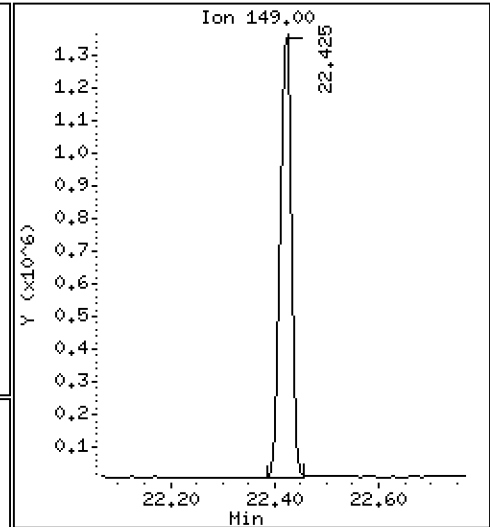
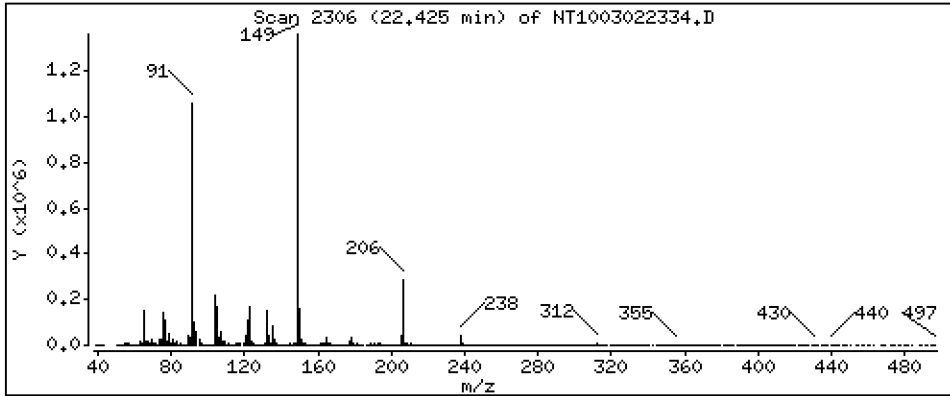
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 3,749 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

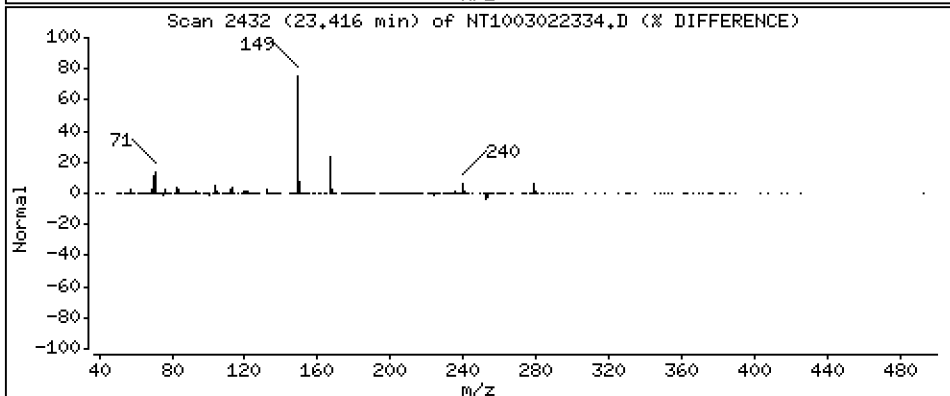
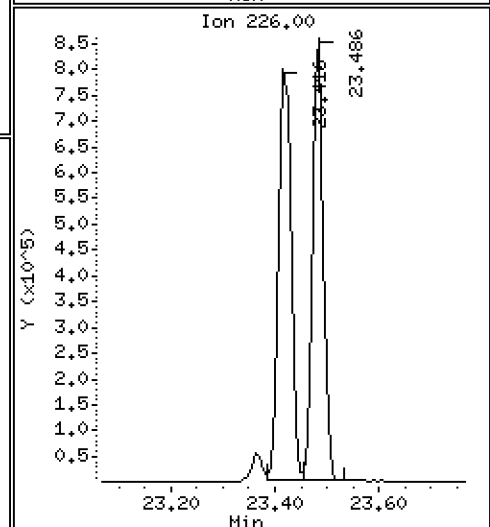
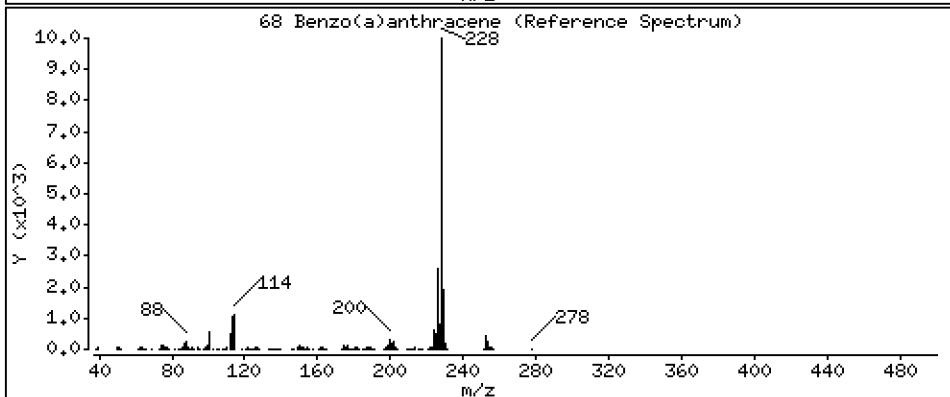
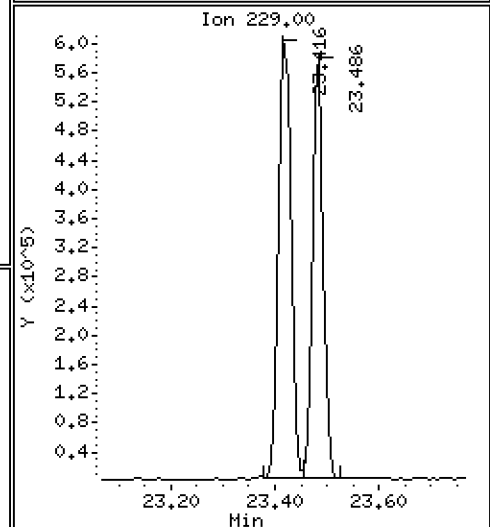
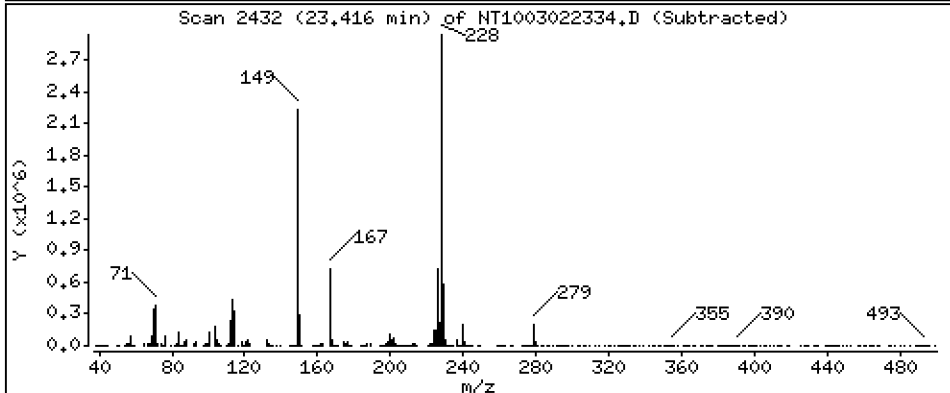
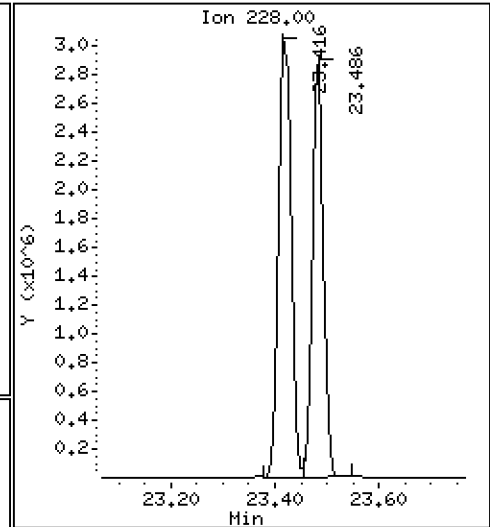
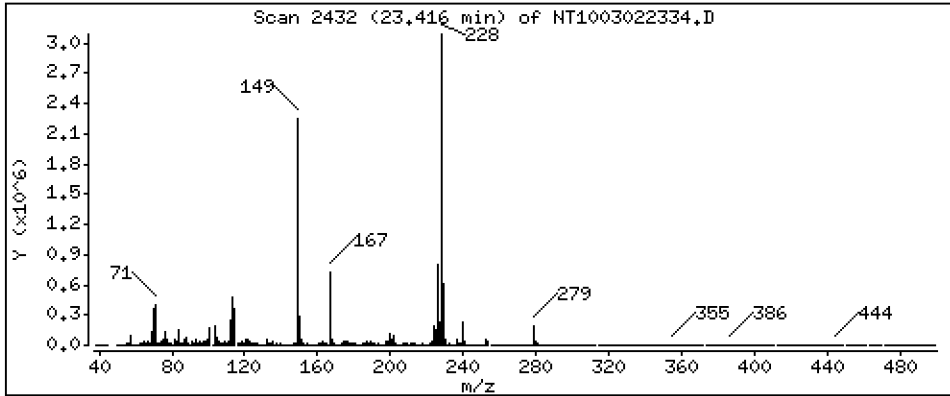
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 4,960 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

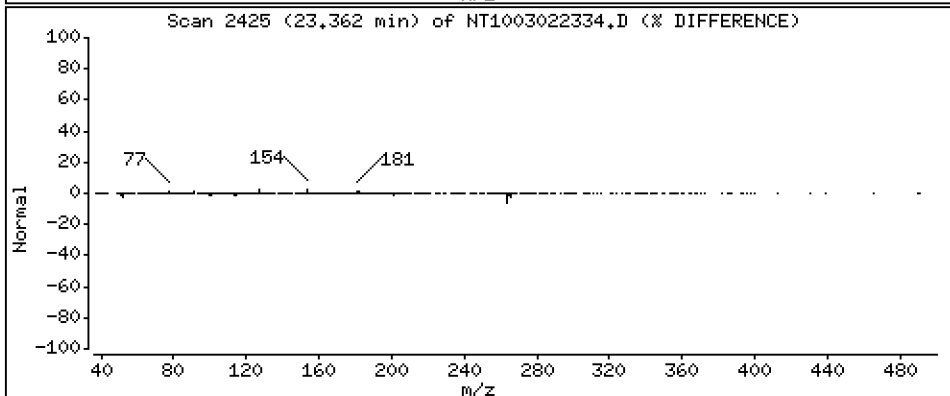
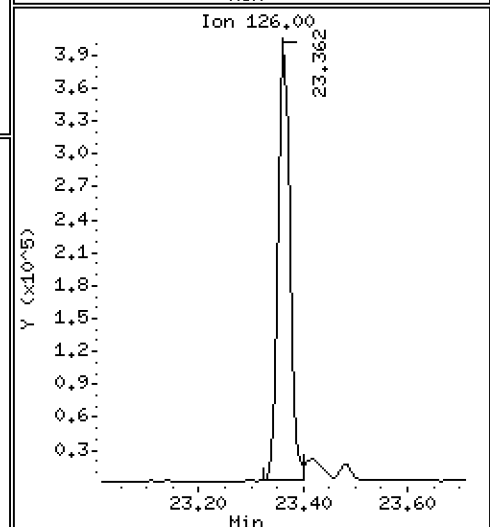
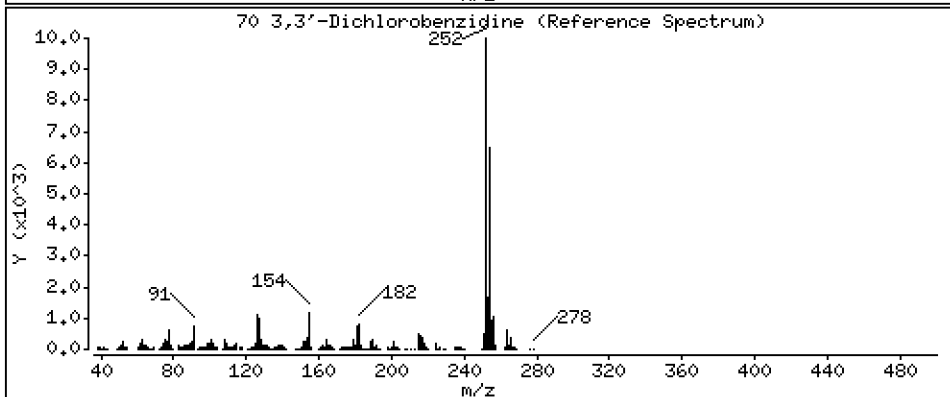
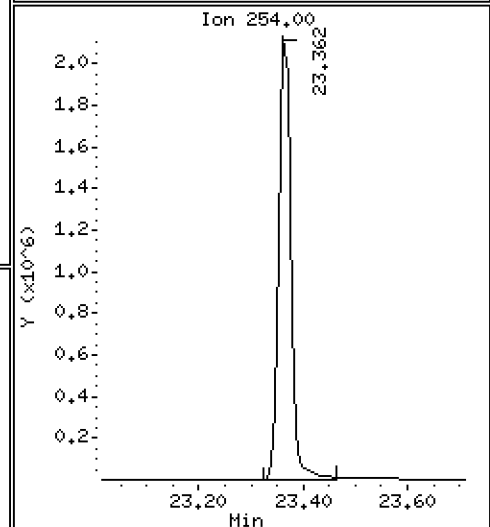
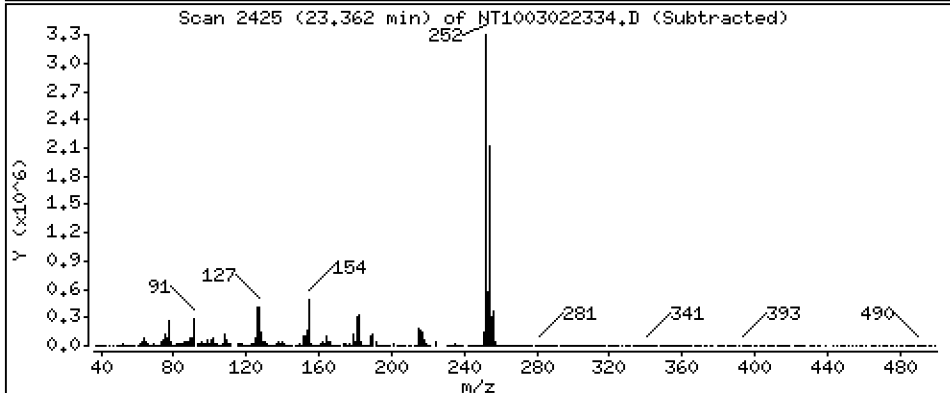
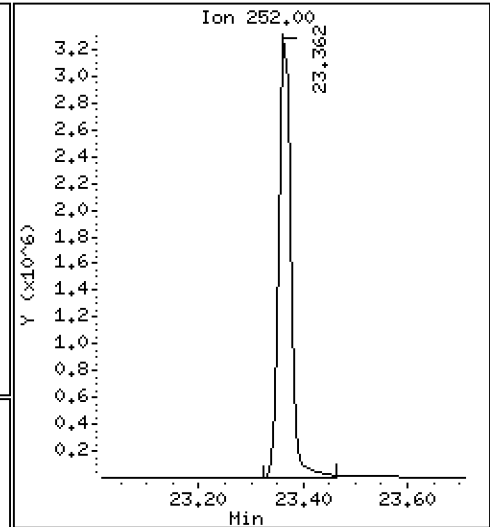
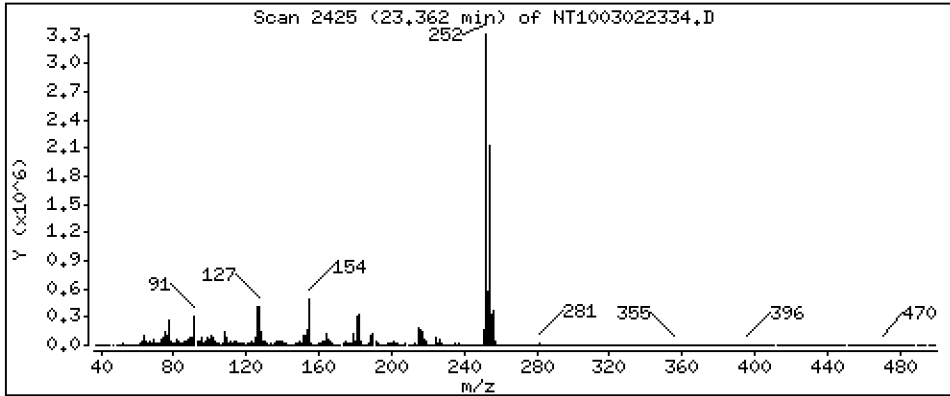
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

70 3,3'-Dichlorobenzidine

Concentration: 11,23 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

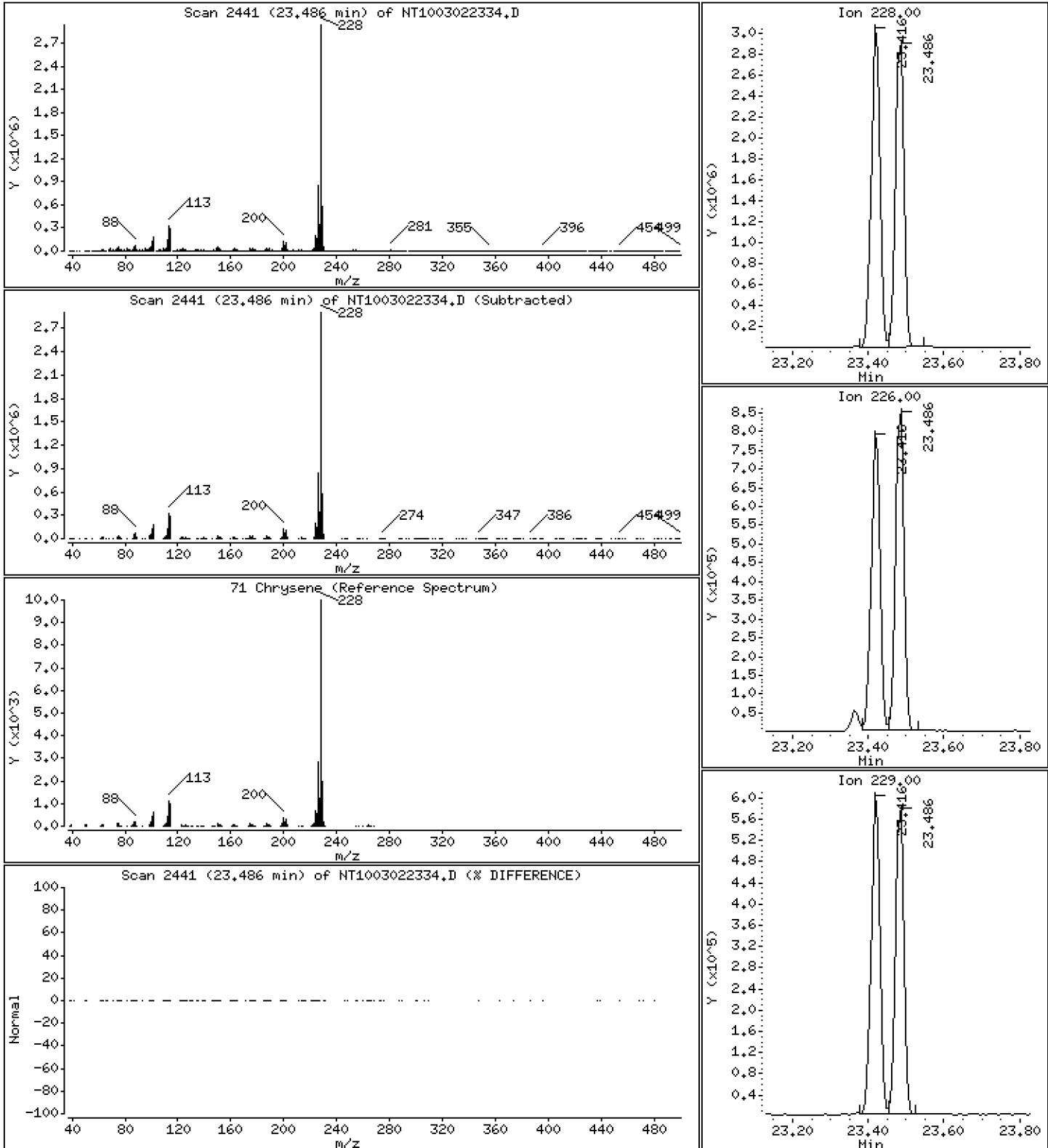
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 5,315 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

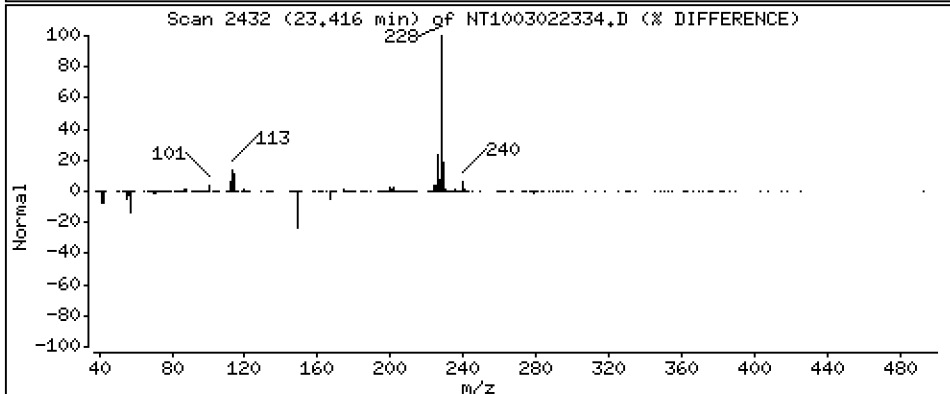
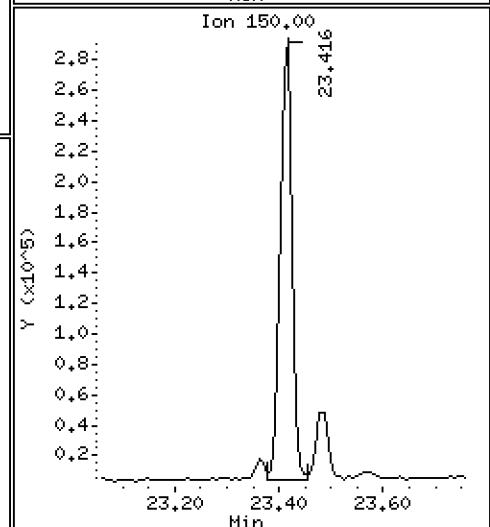
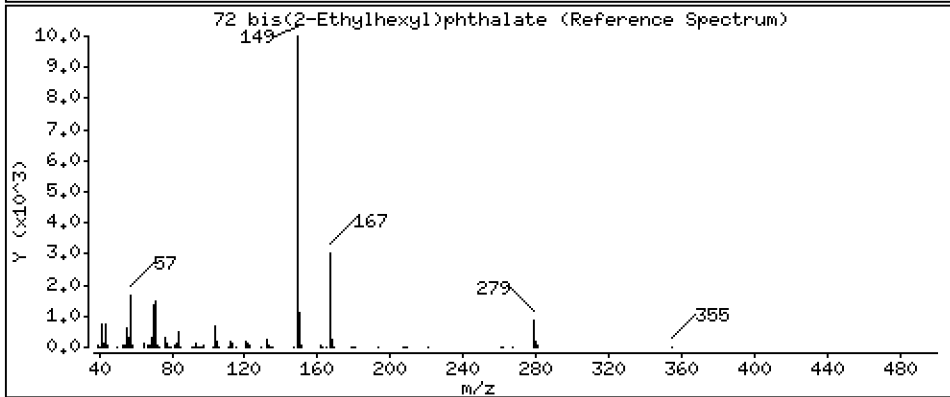
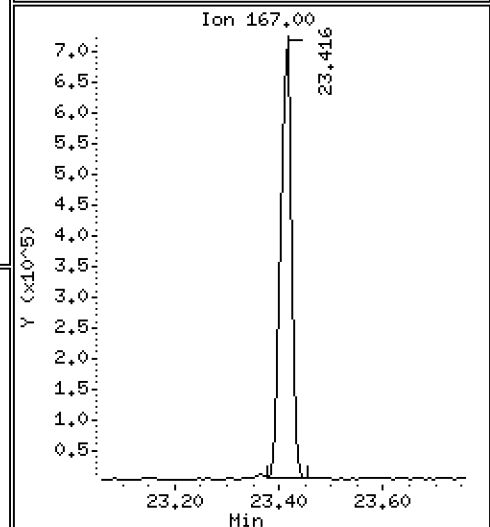
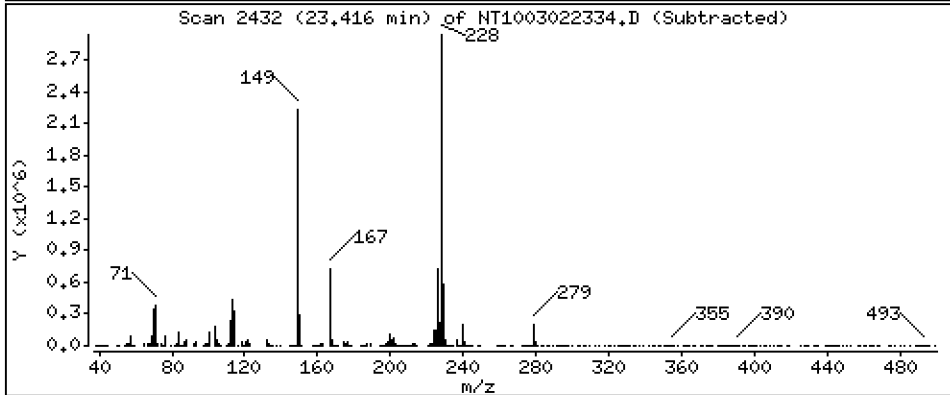
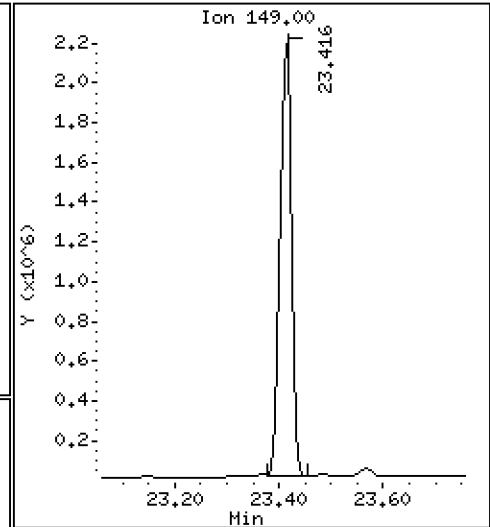
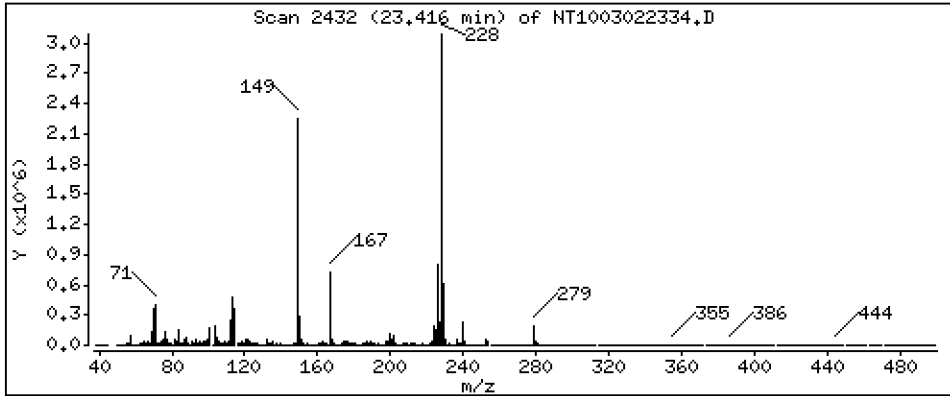
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 4,489 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

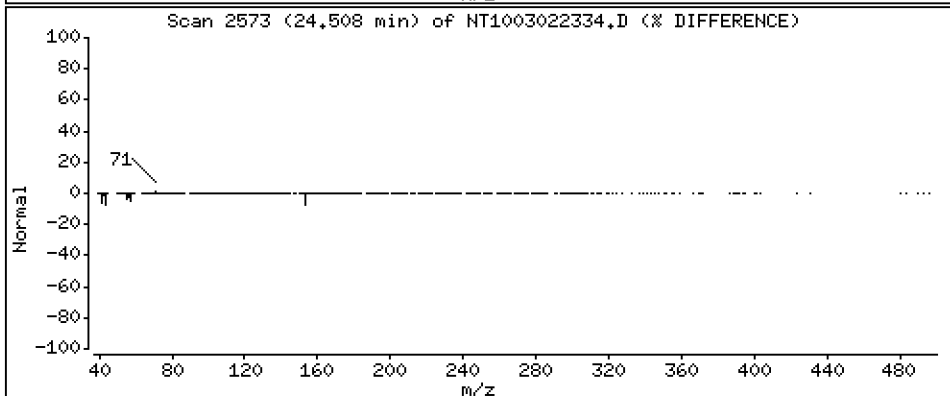
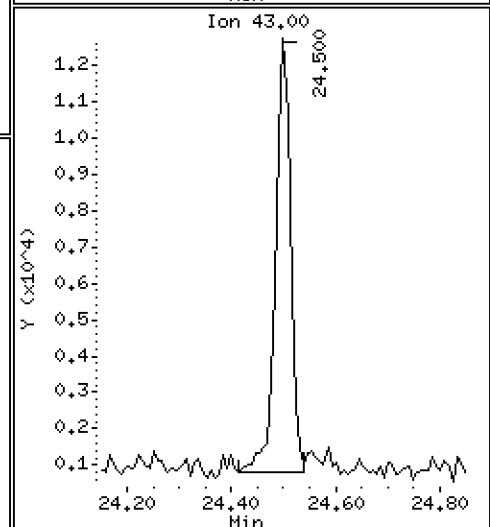
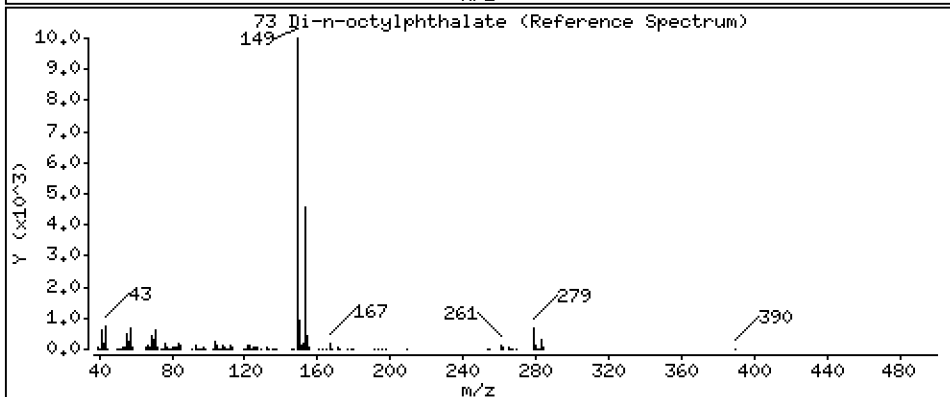
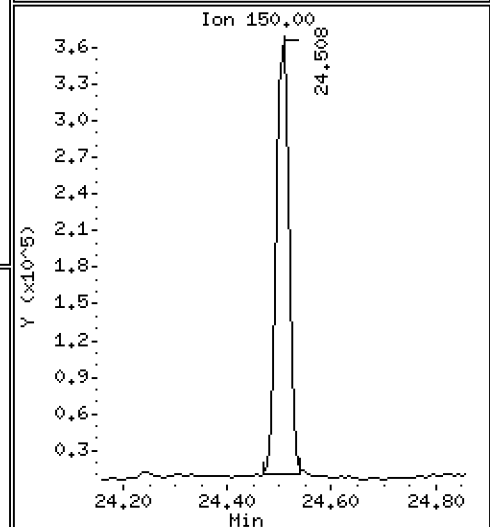
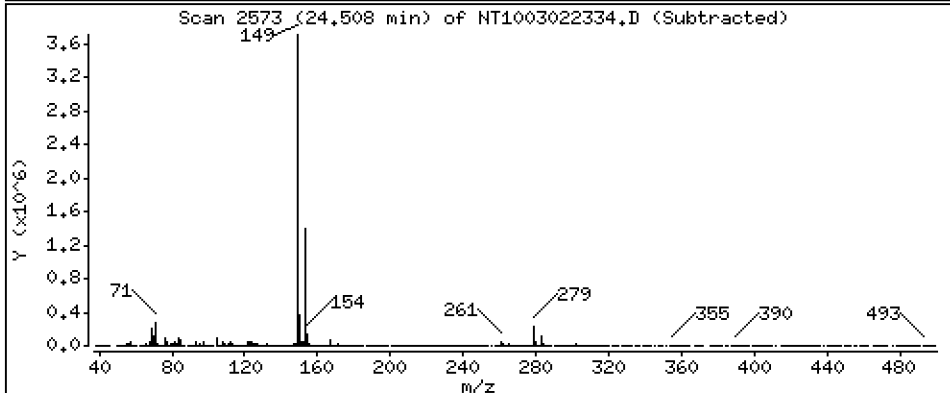
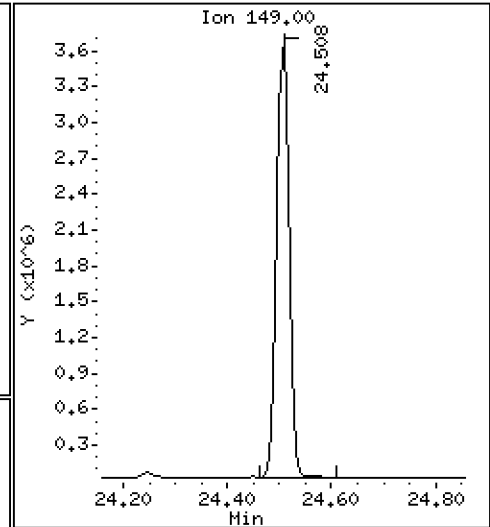
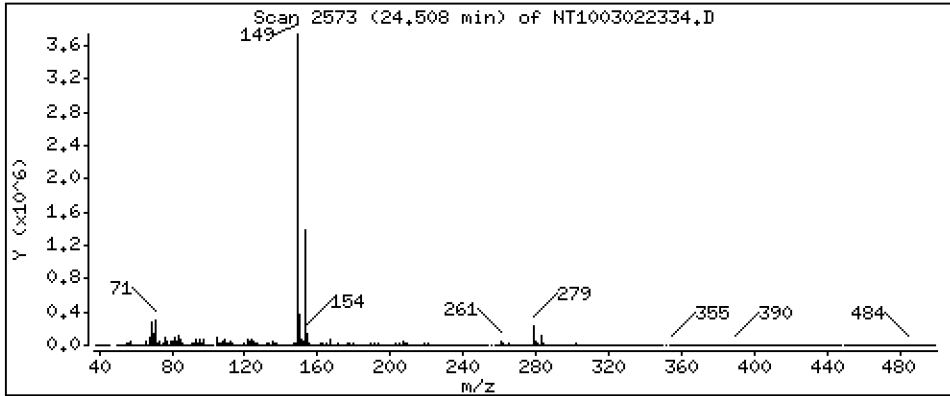
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 5,213 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

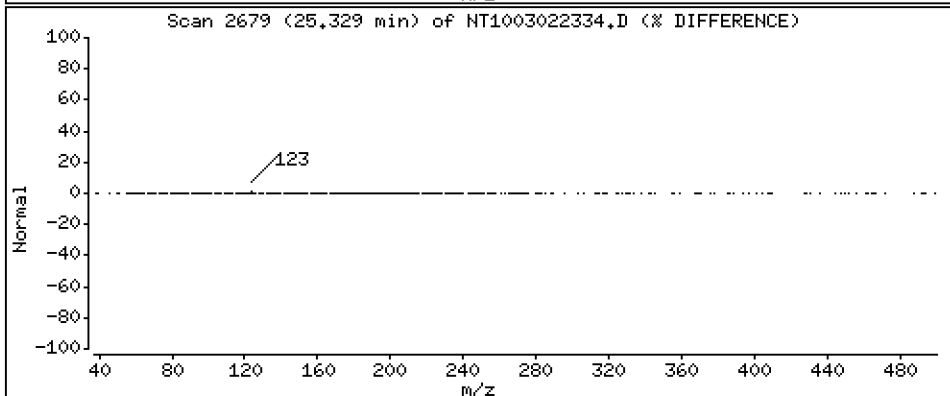
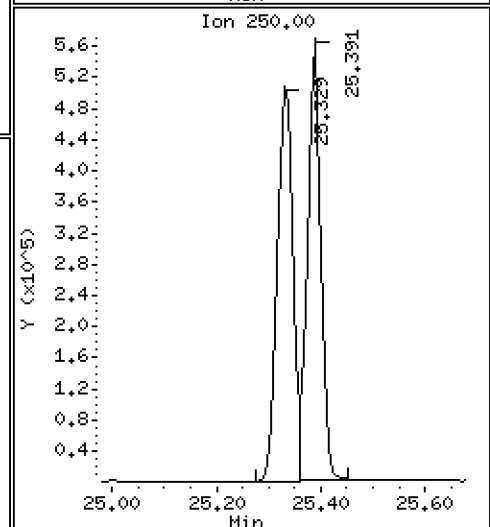
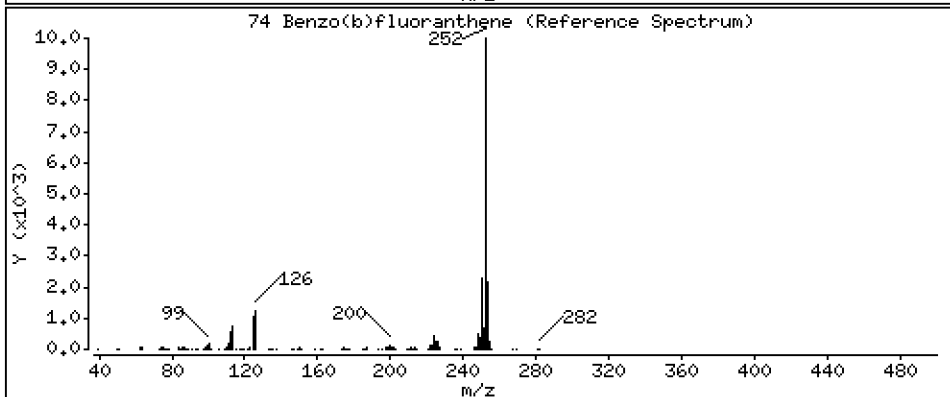
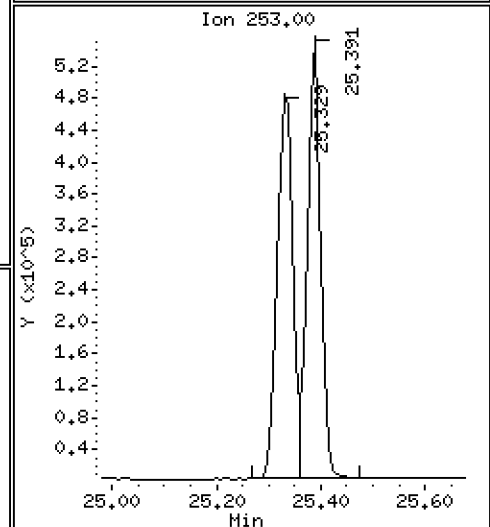
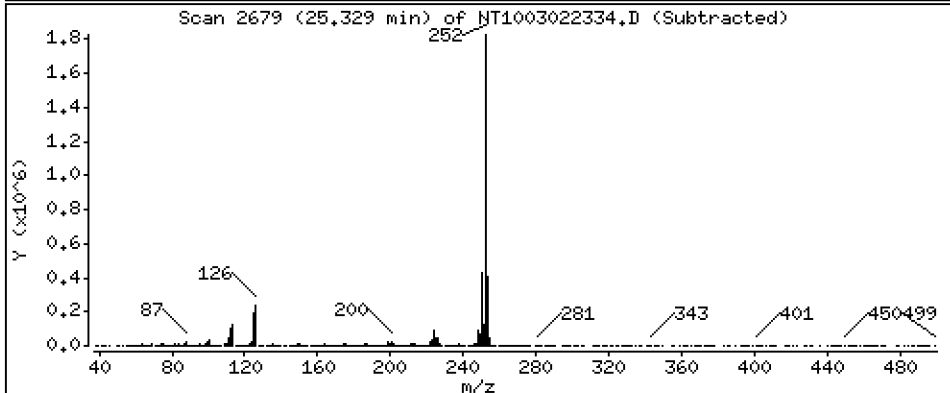
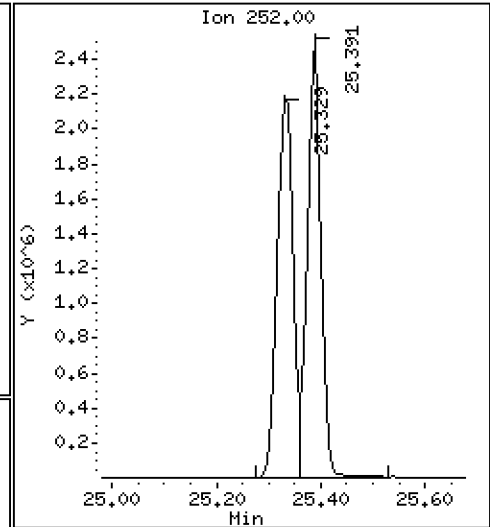
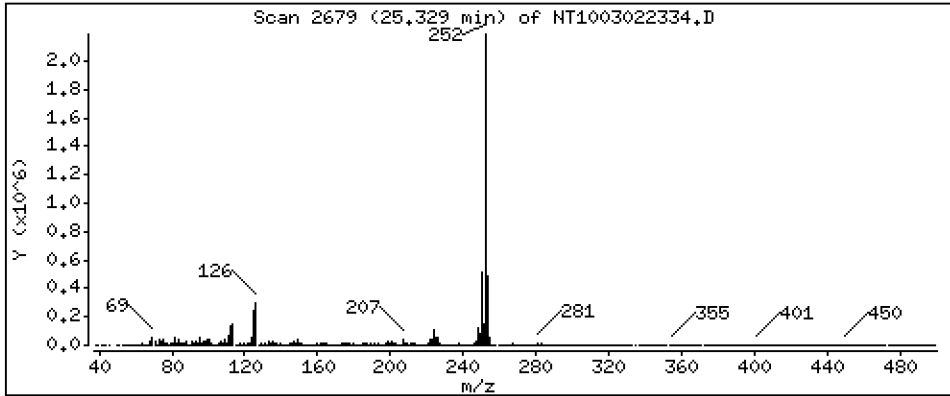
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 4,615 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

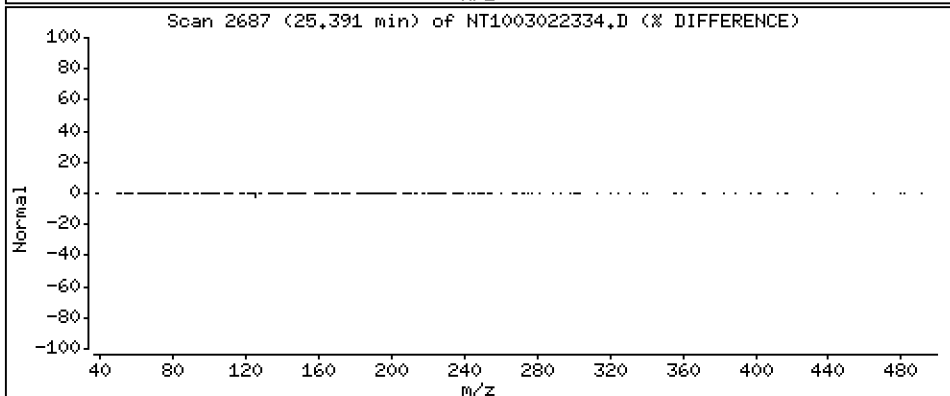
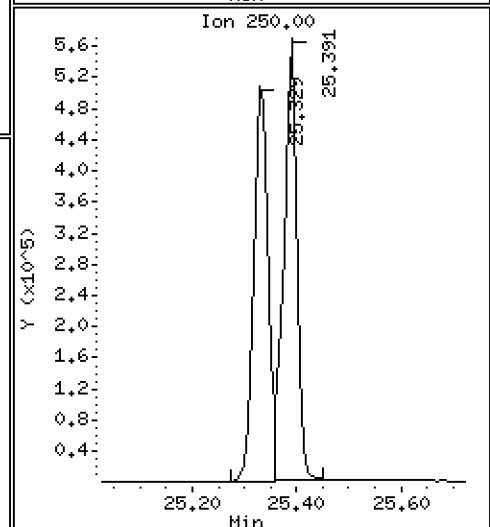
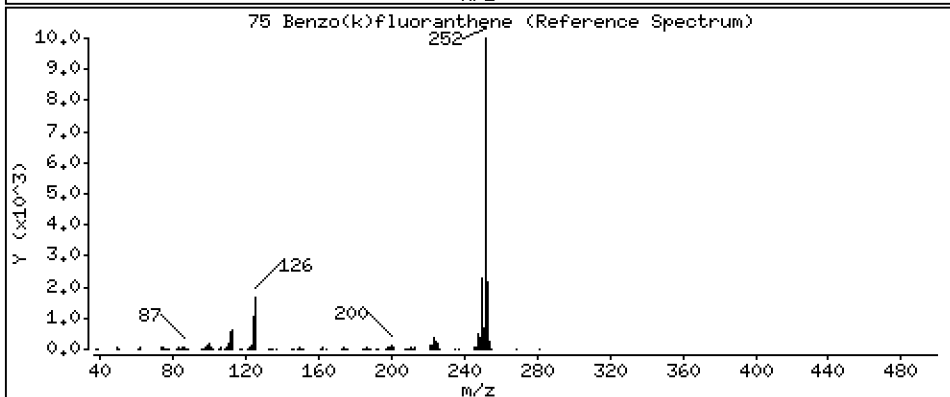
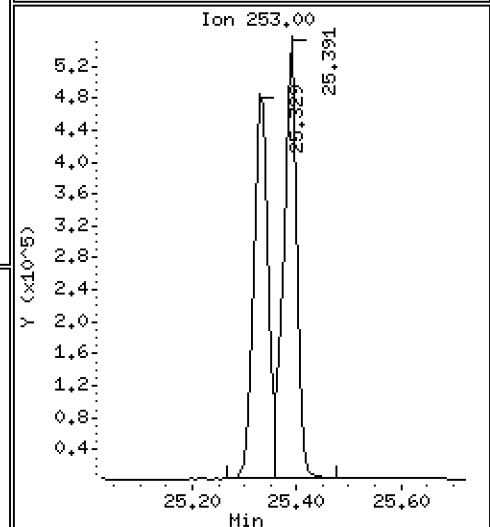
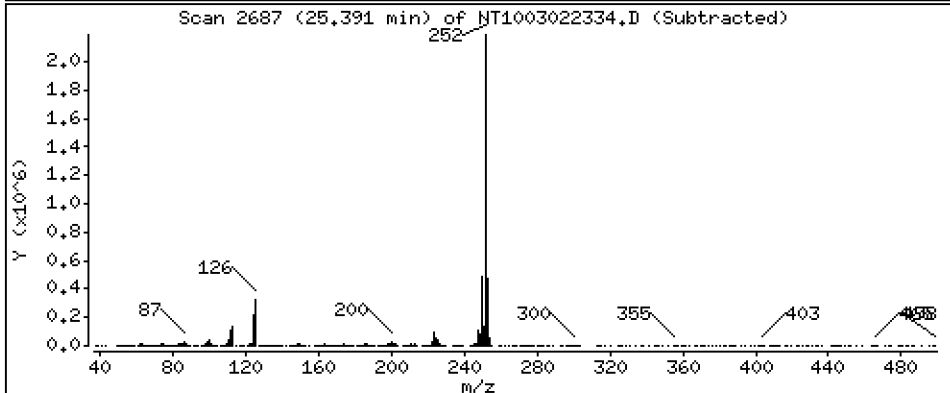
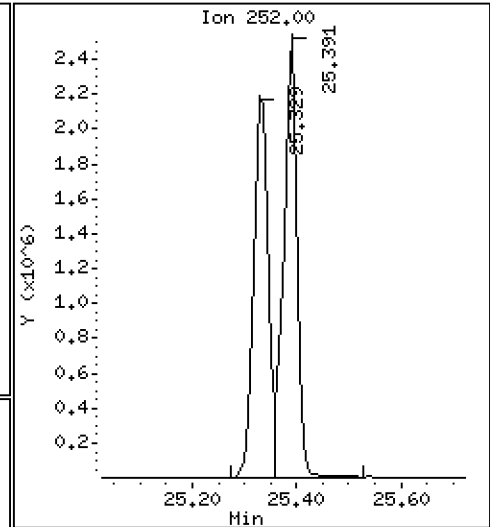
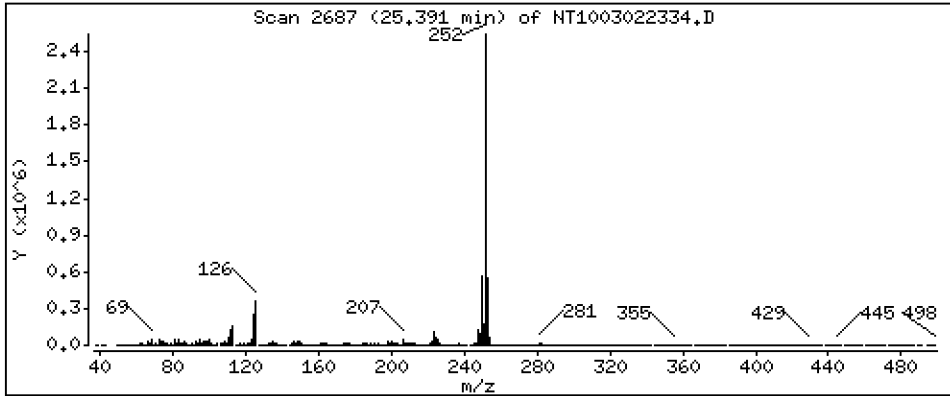
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 4,778 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

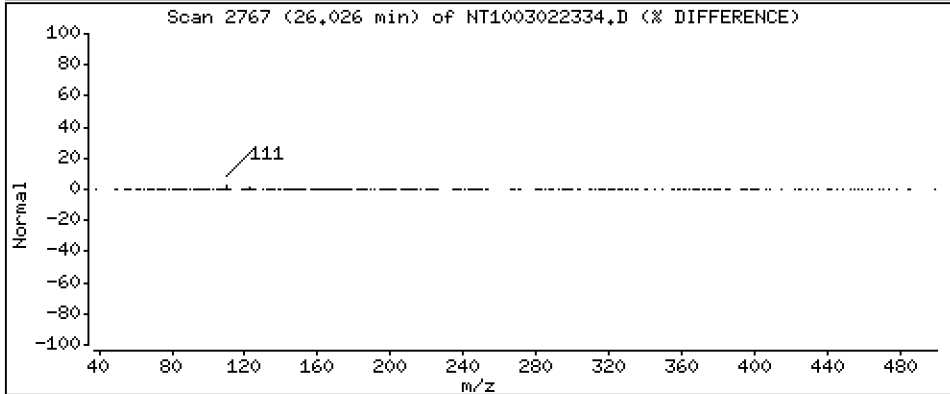
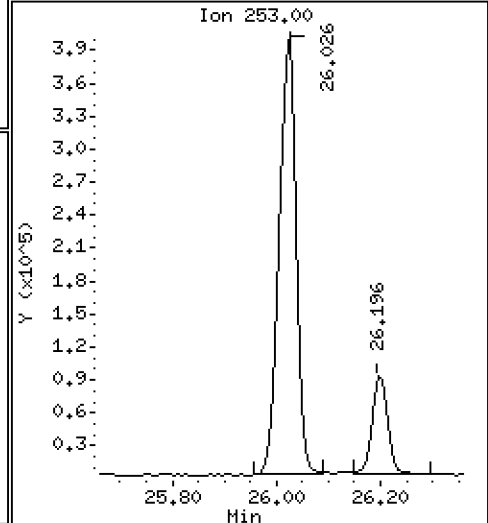
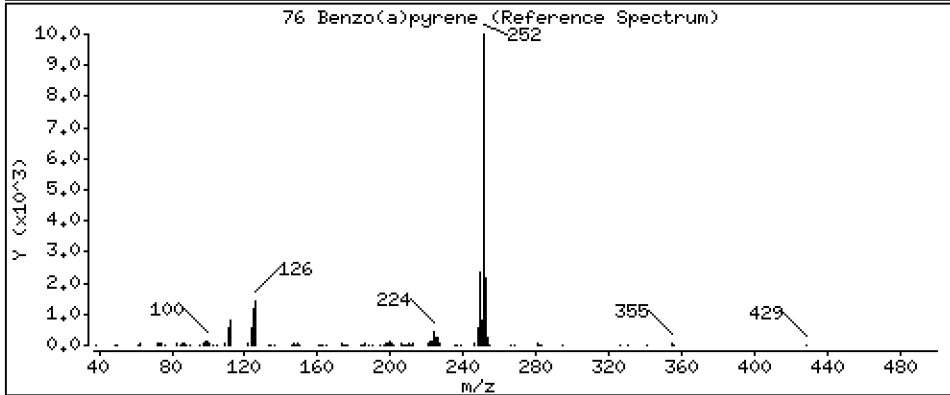
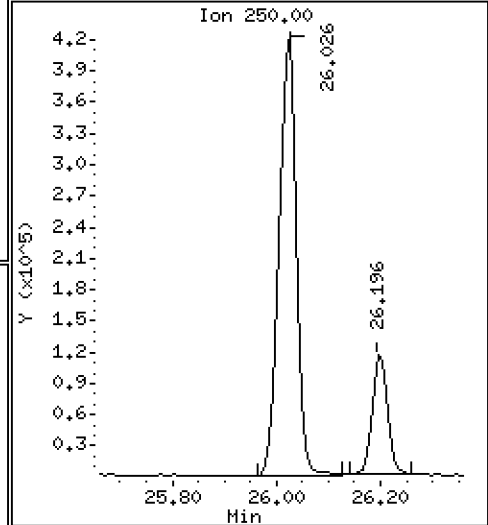
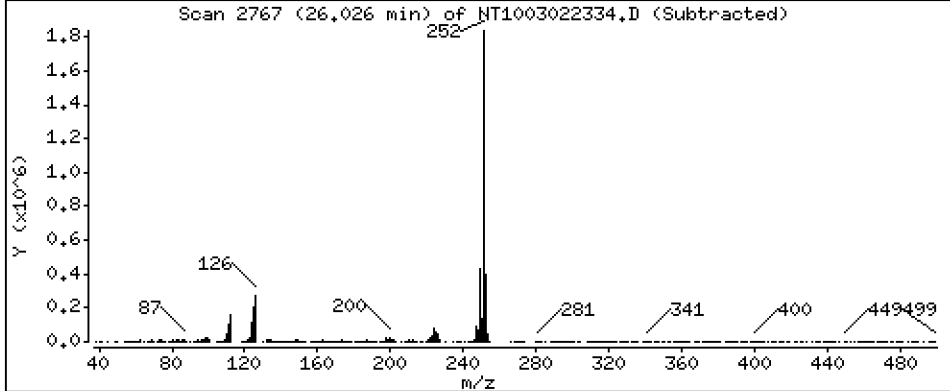
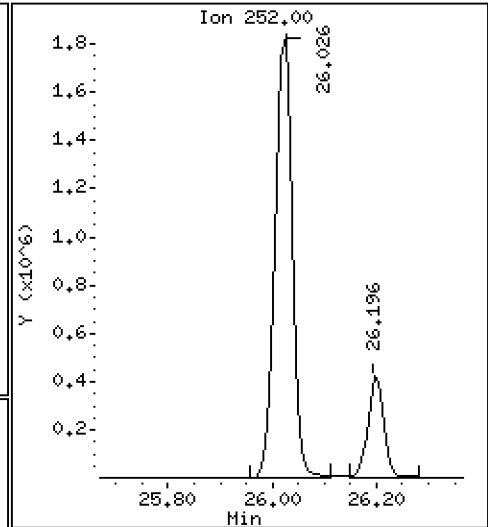
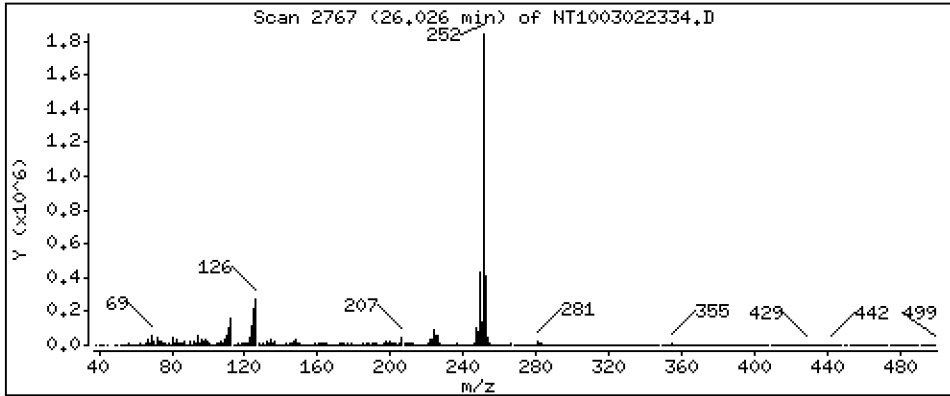
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 4,619 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

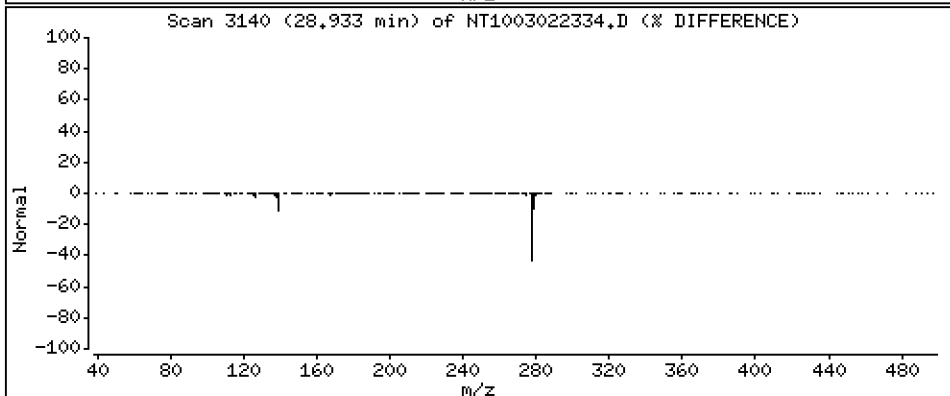
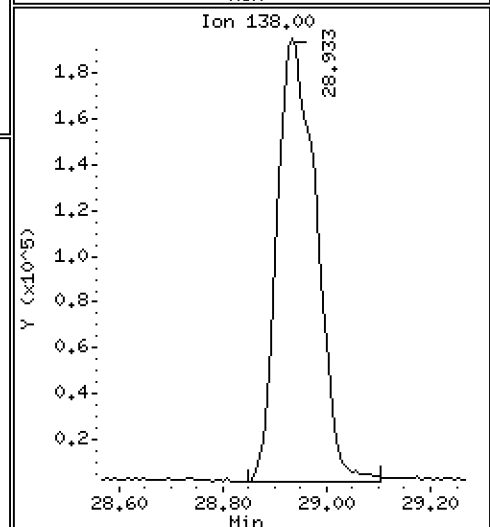
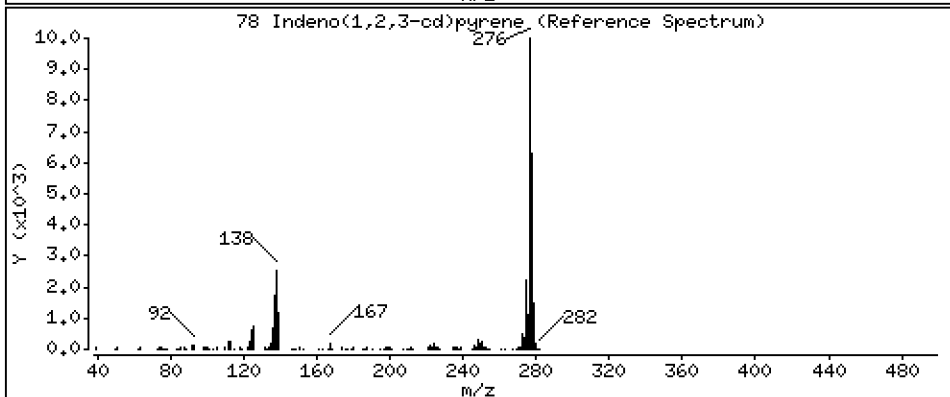
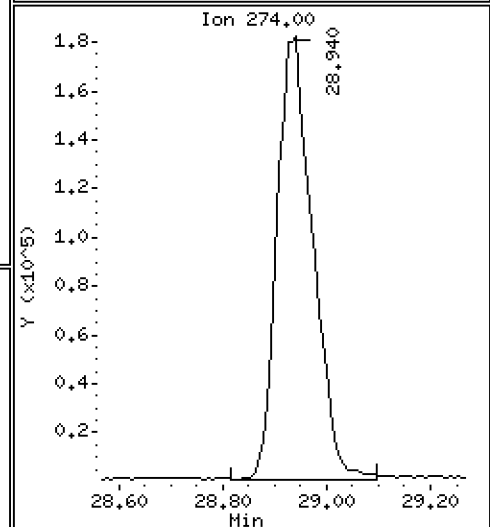
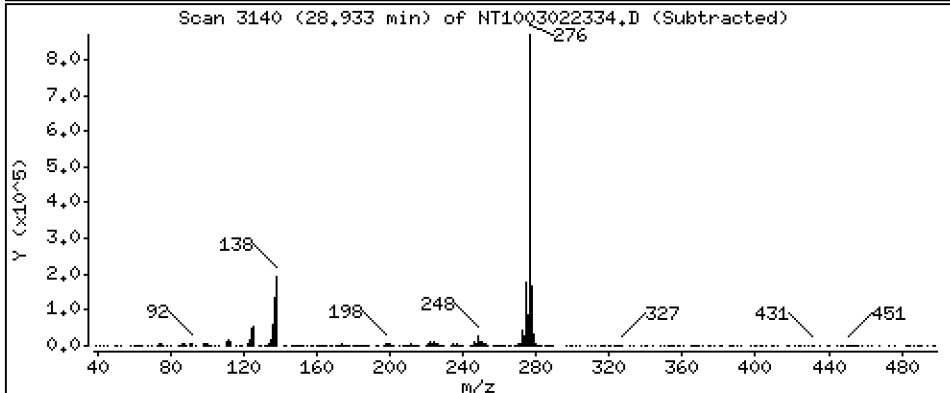
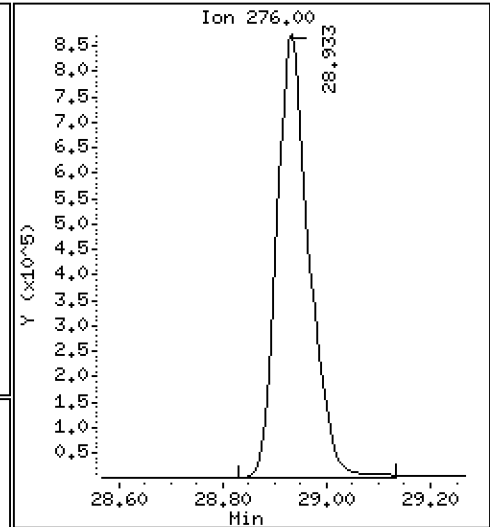
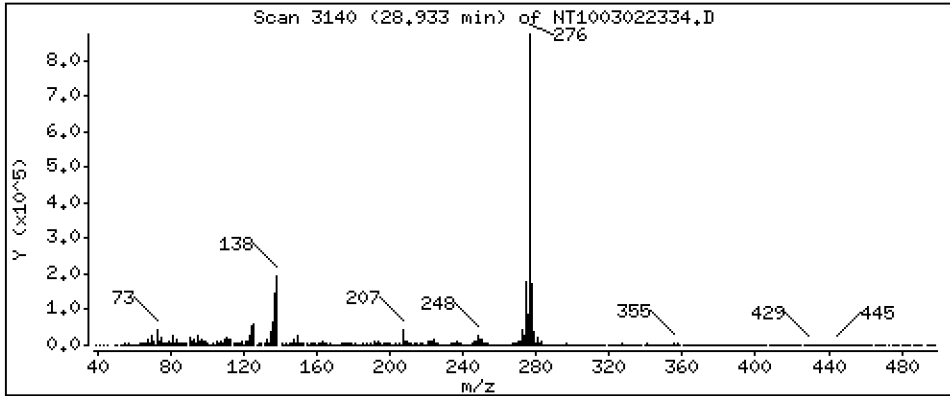
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 3,739 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

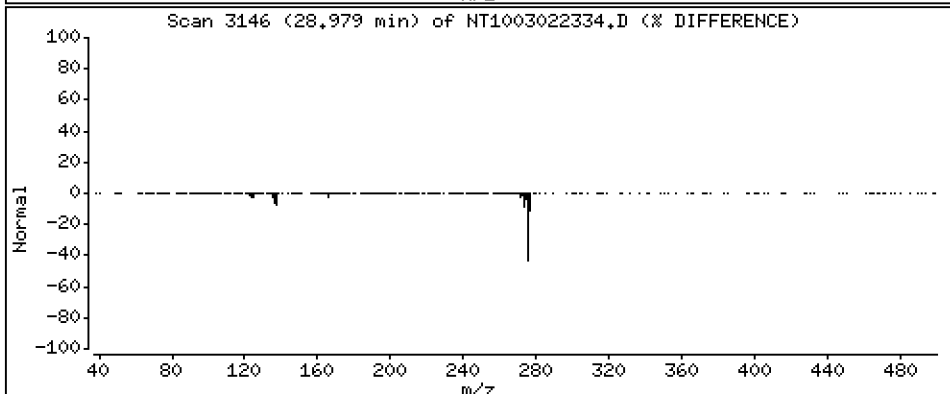
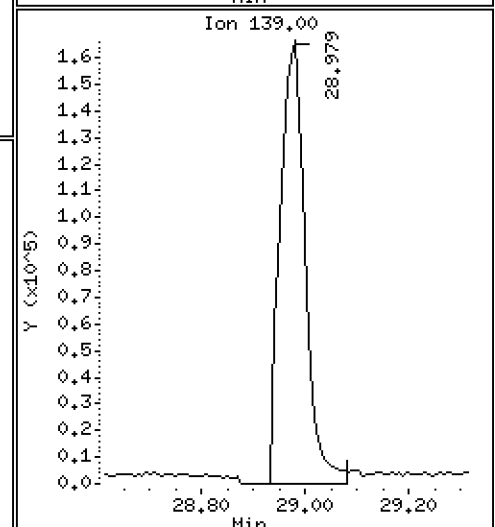
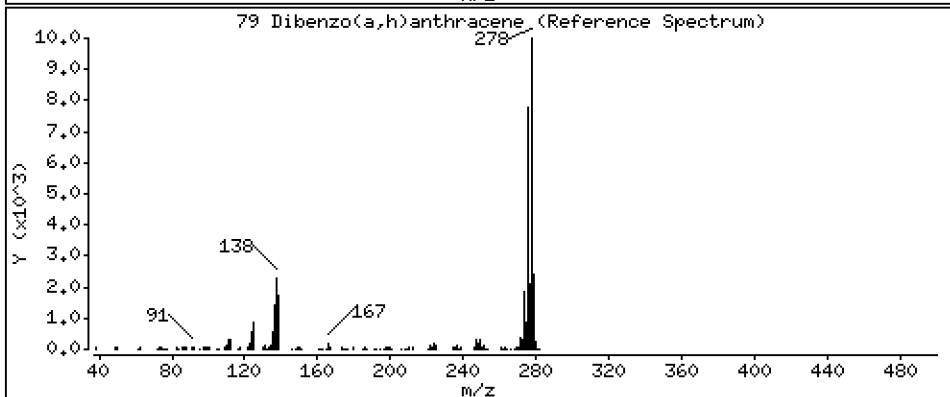
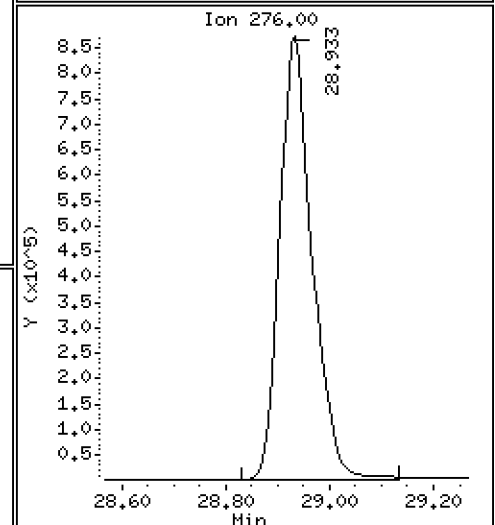
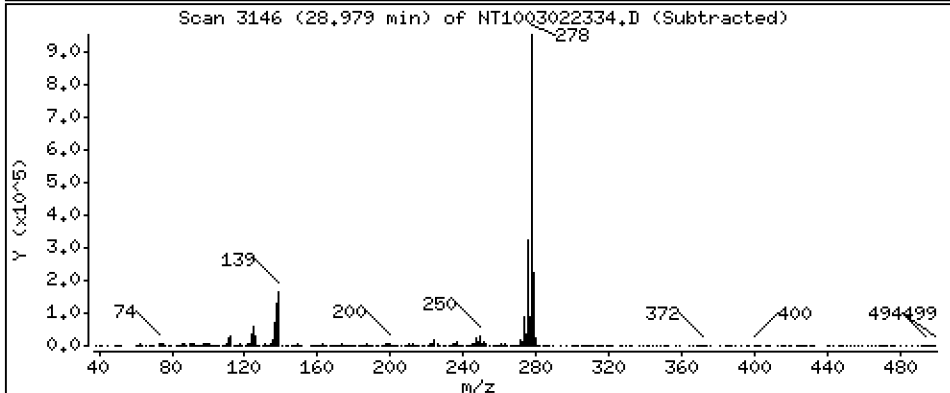
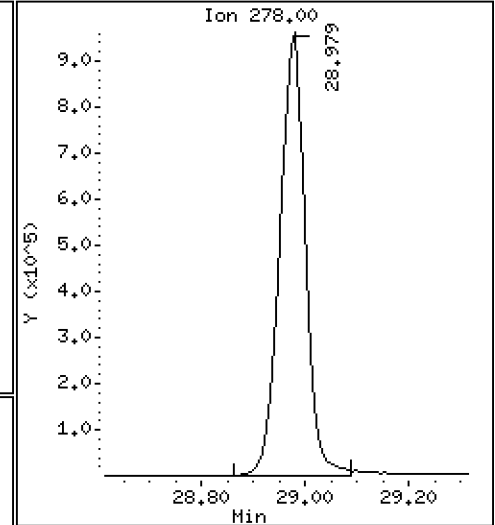
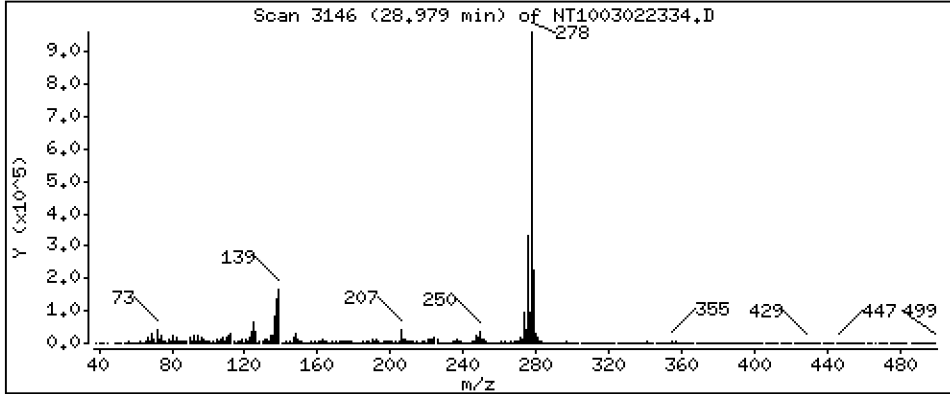
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,215 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

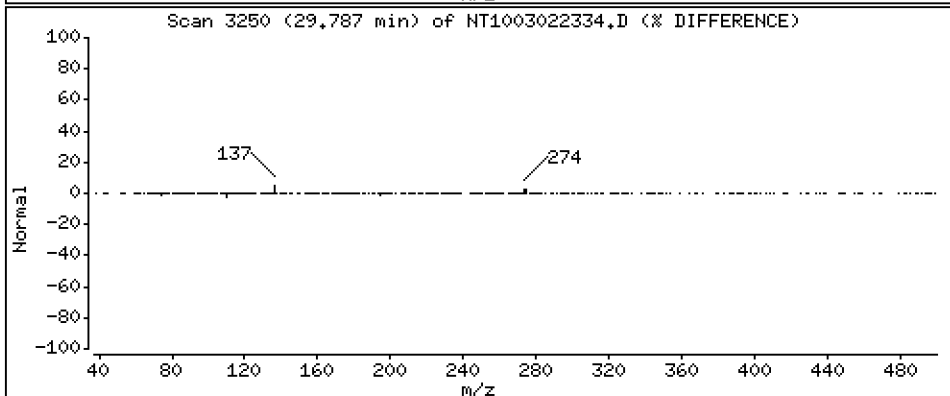
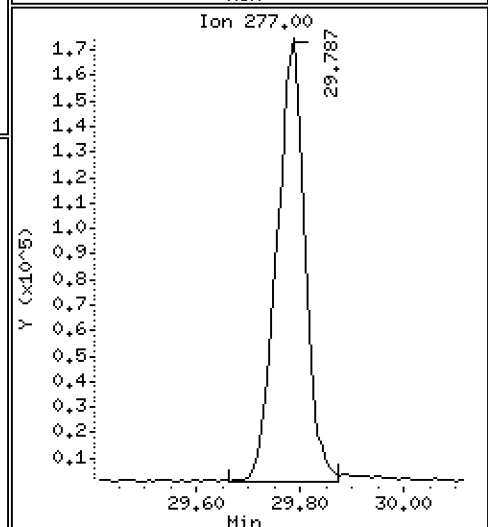
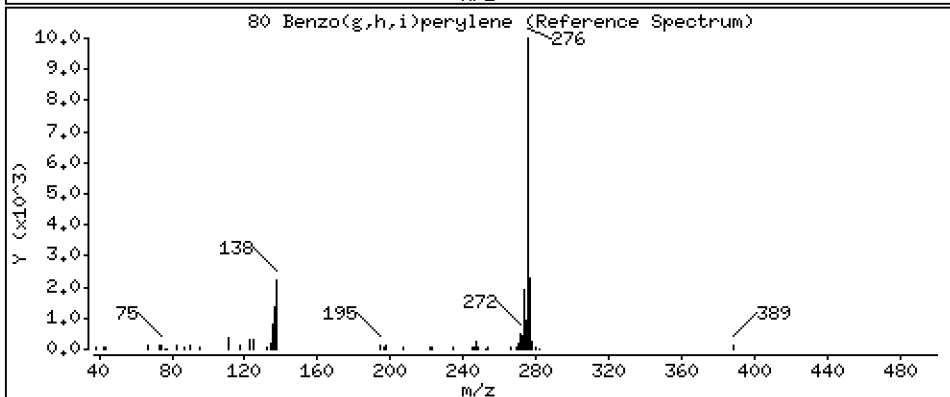
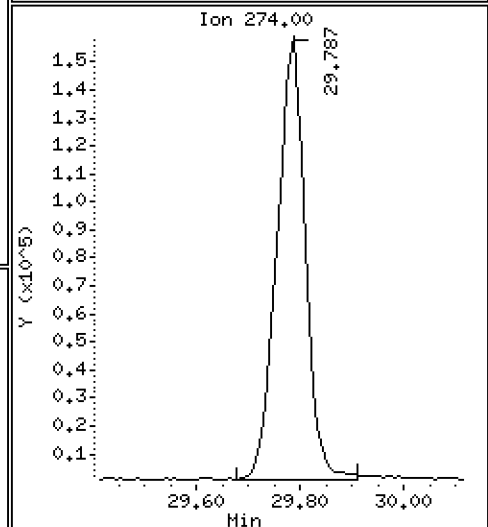
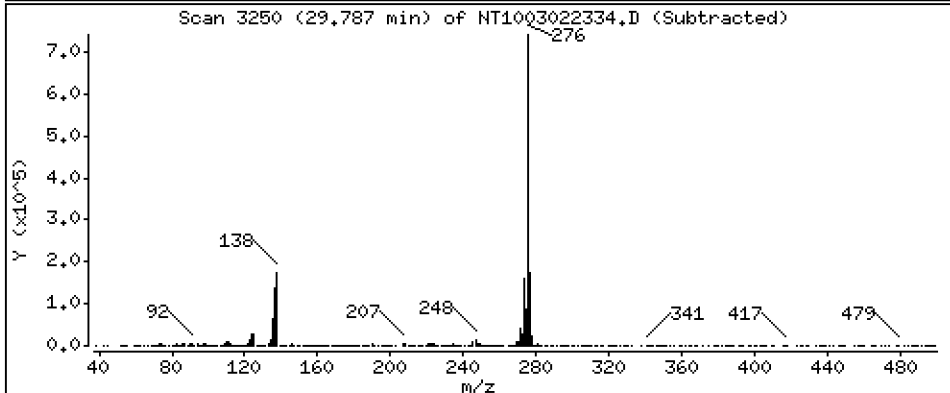
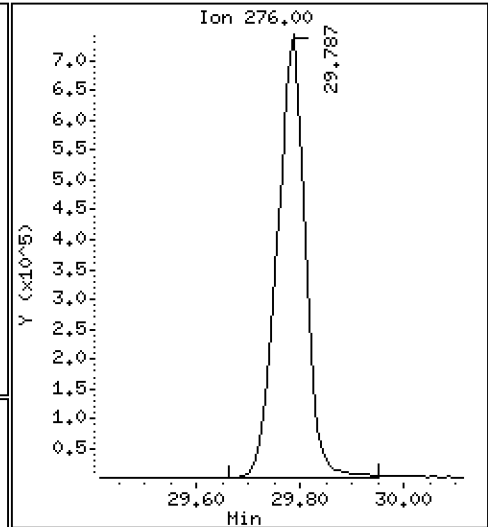
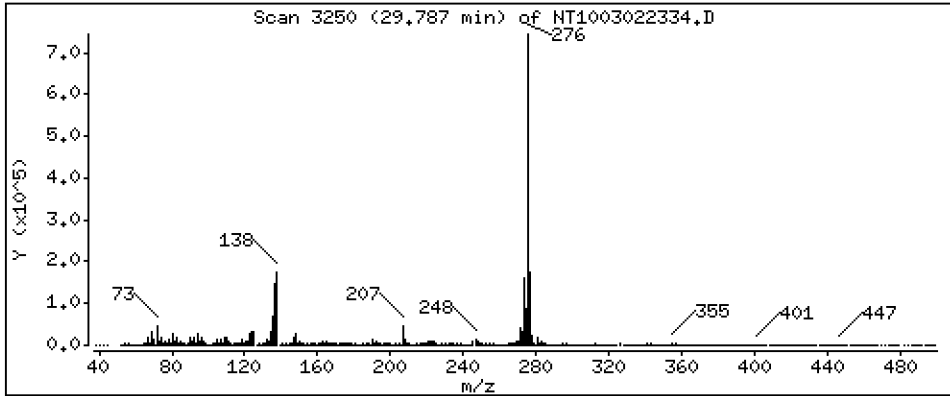
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 3,513 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

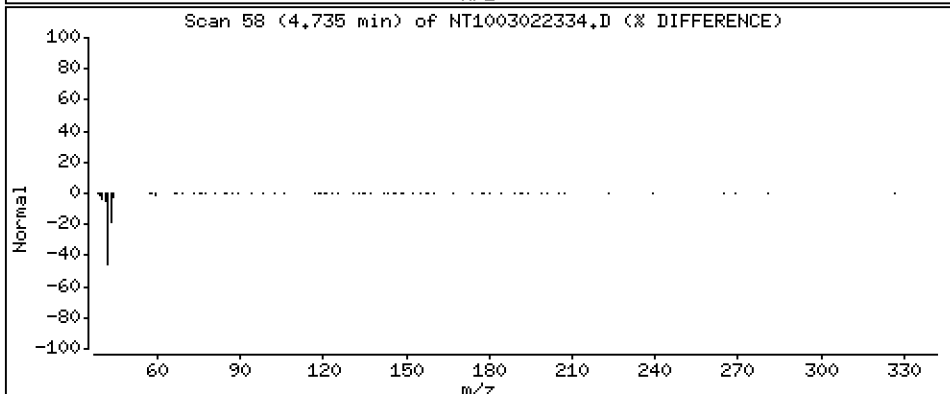
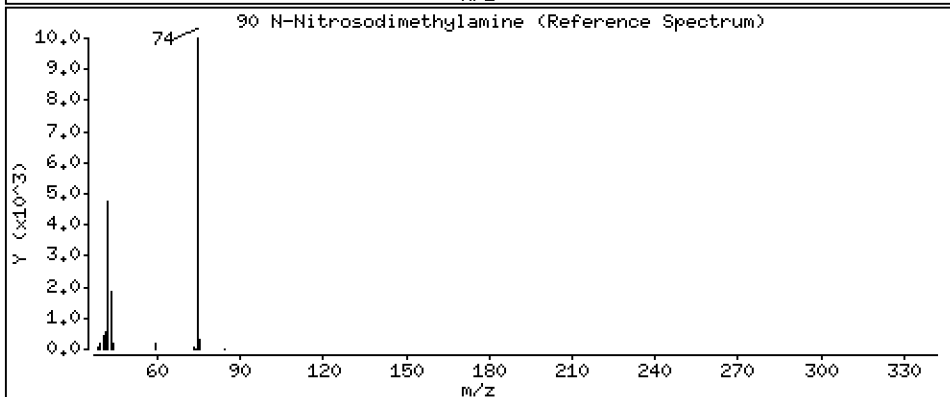
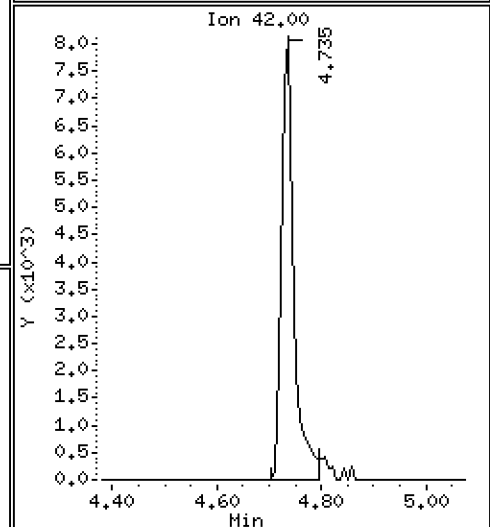
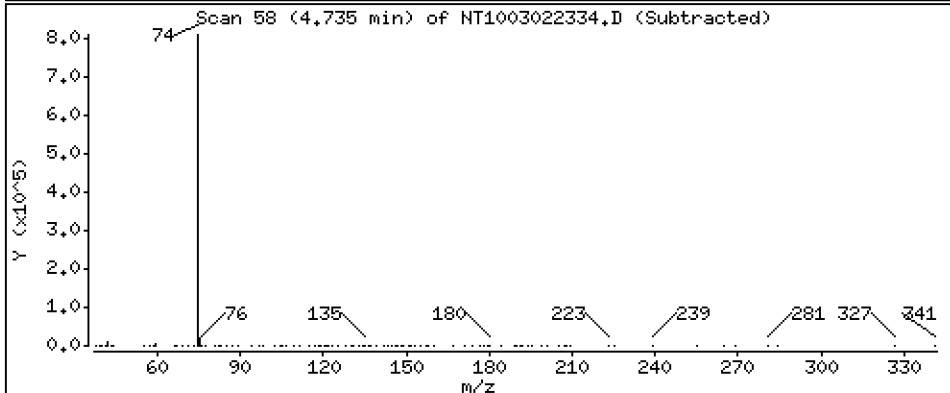
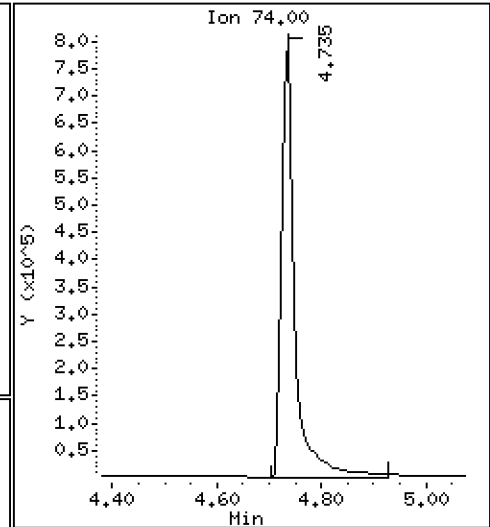
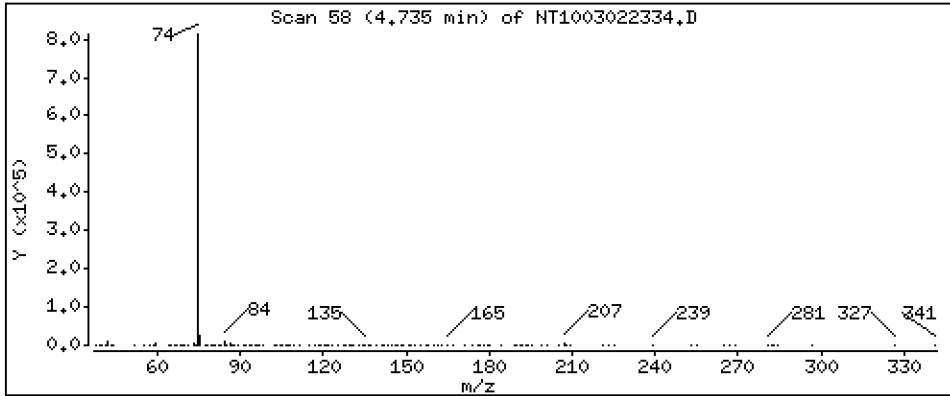
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 10,61 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

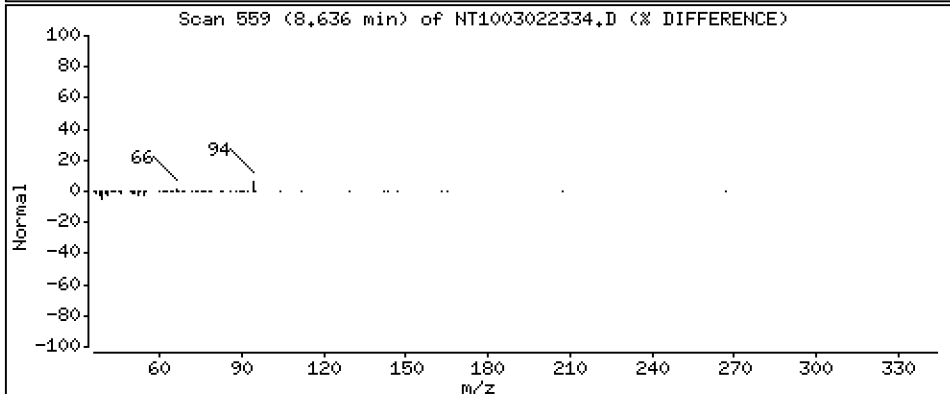
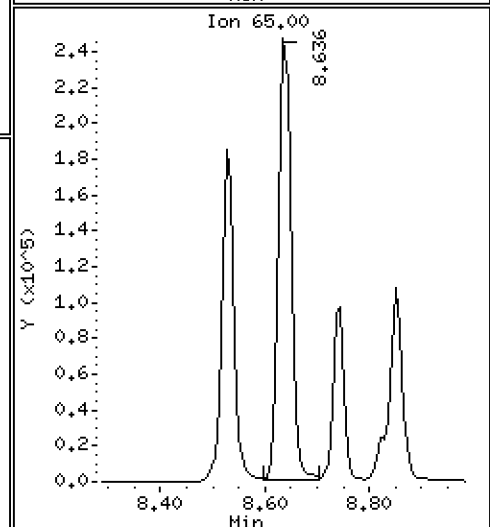
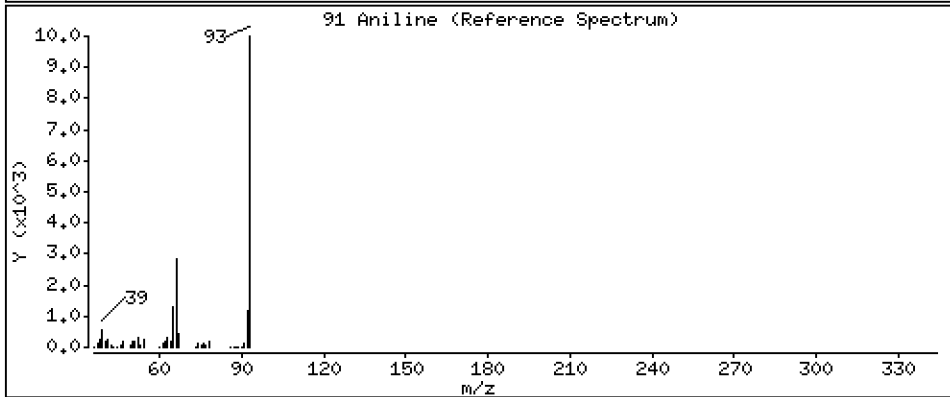
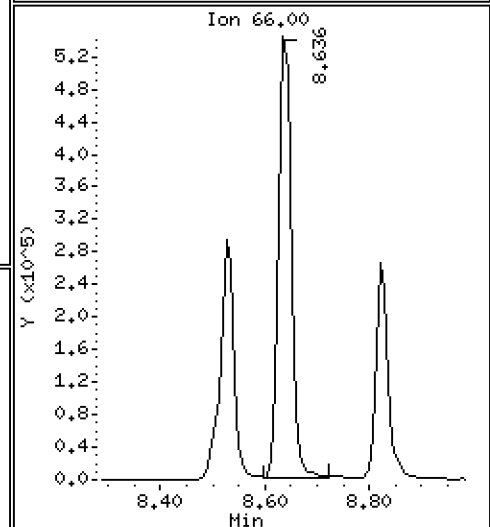
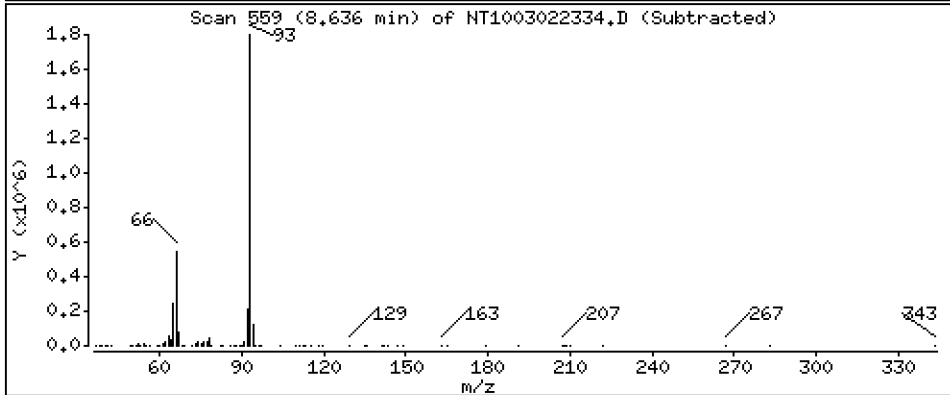
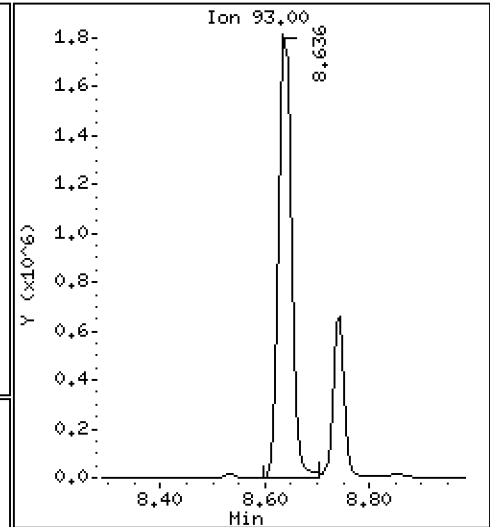
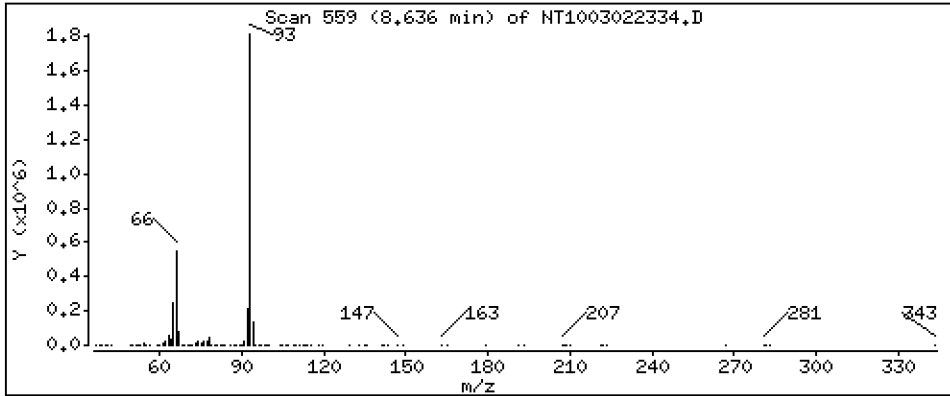
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

91 Aniline

Concentration: 10,31 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

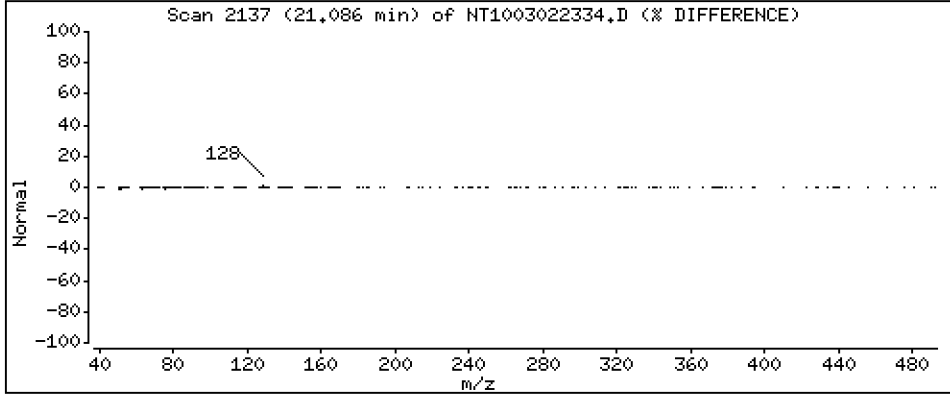
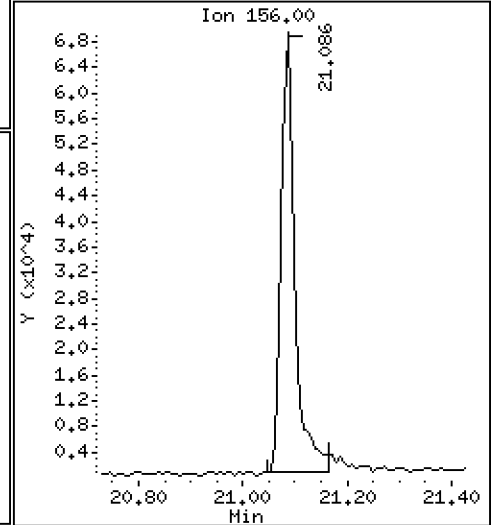
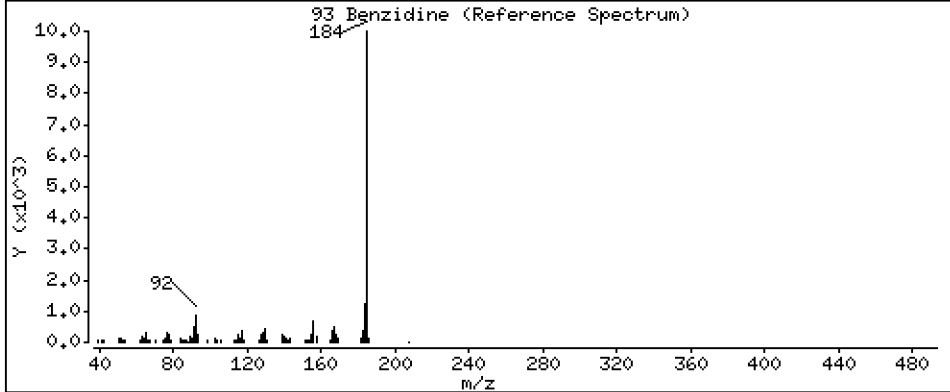
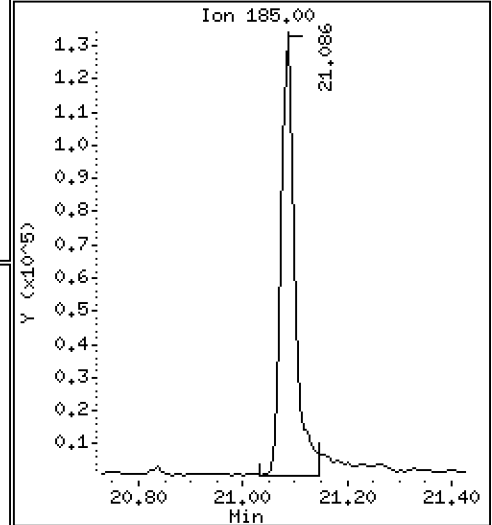
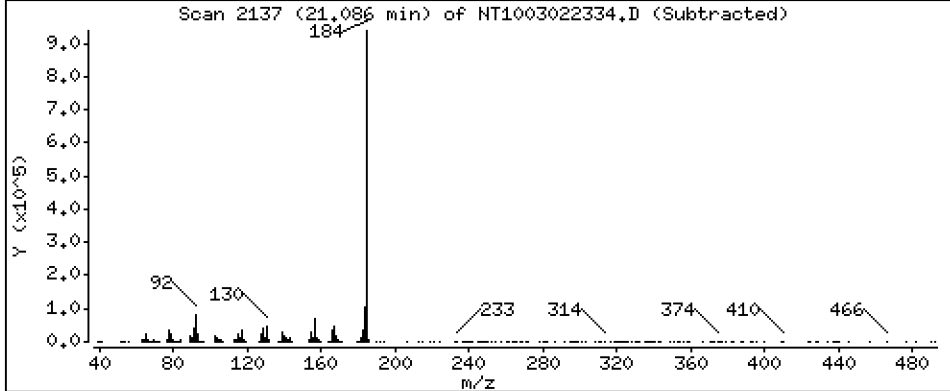
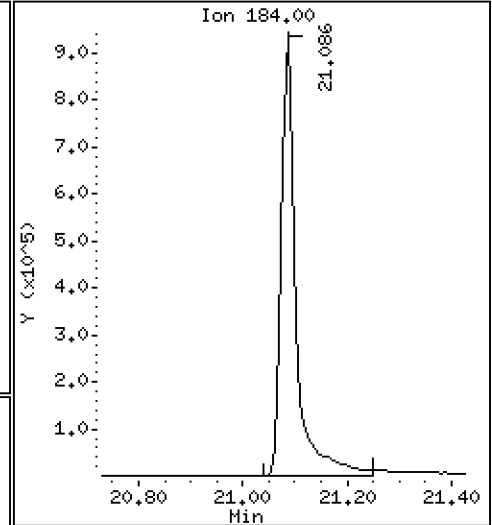
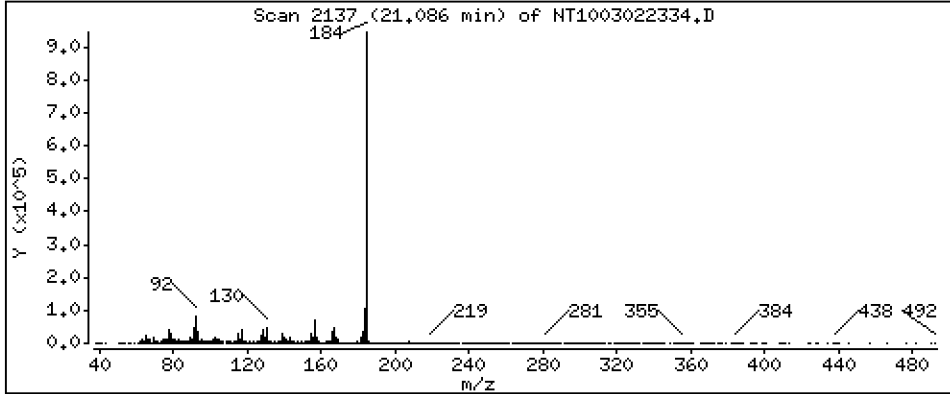
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

93 Benzidine

Concentration: 4,141 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

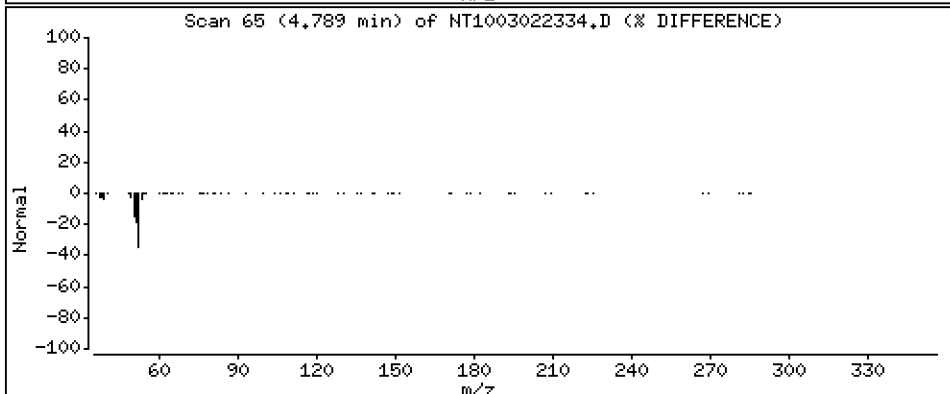
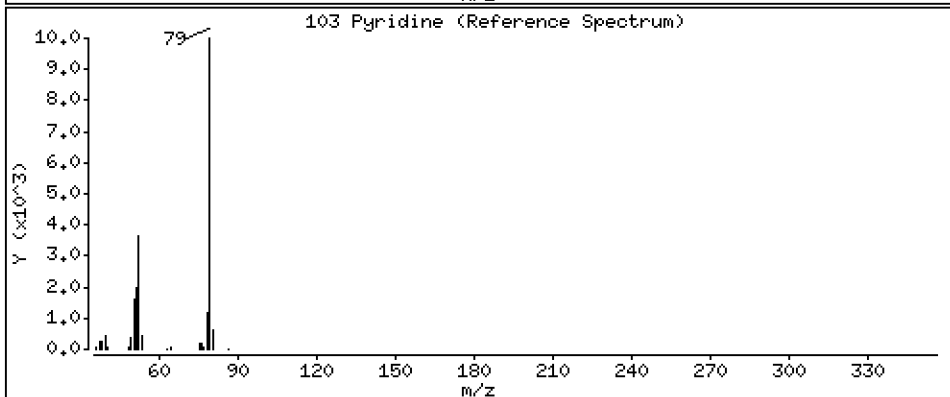
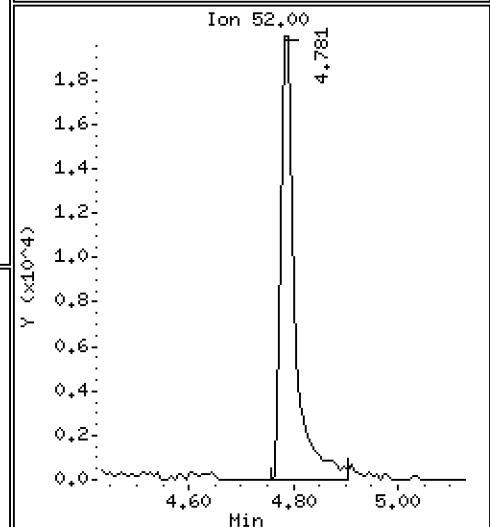
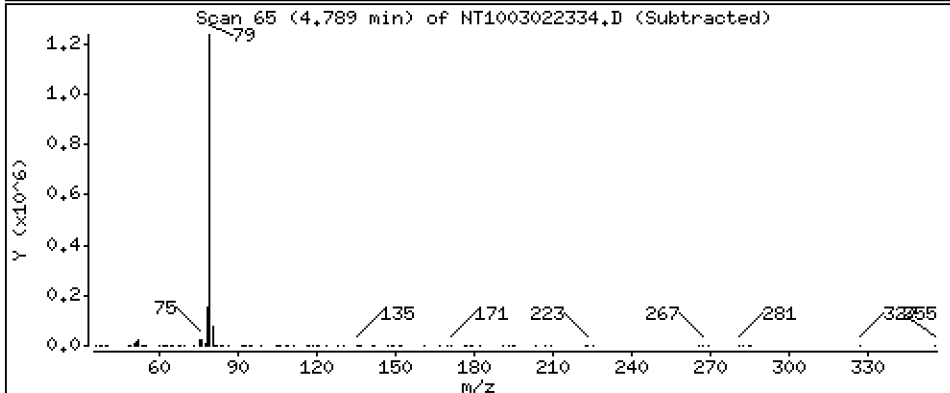
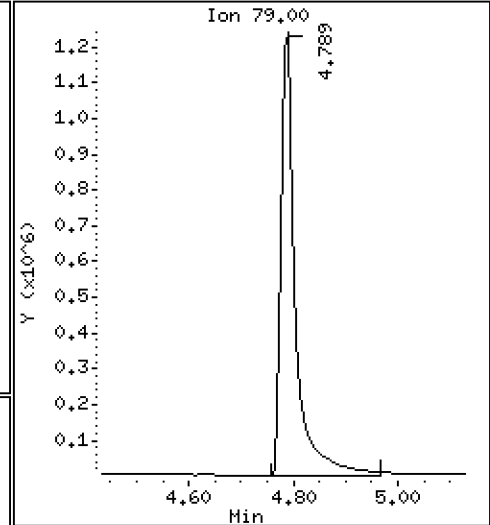
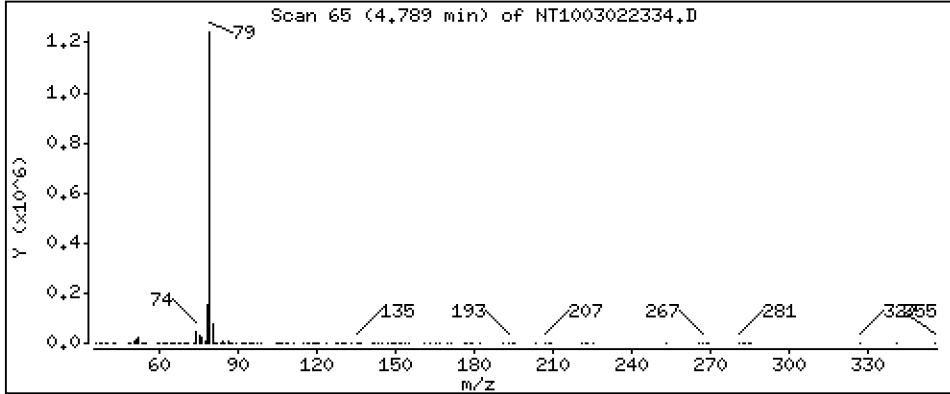
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 10,17 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

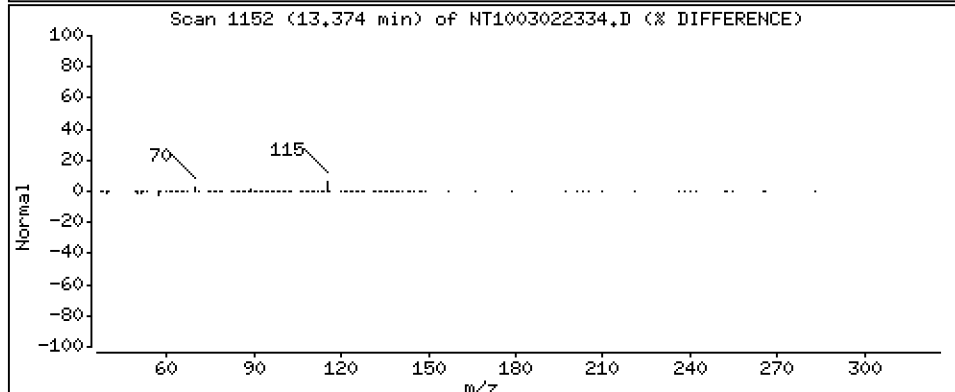
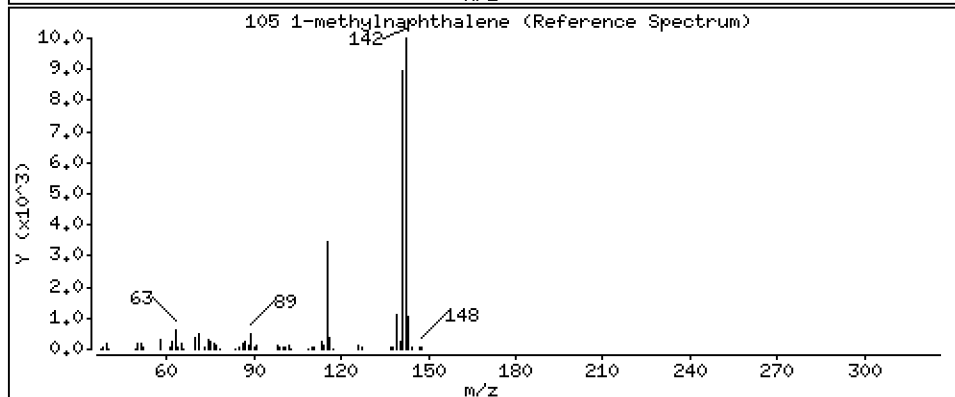
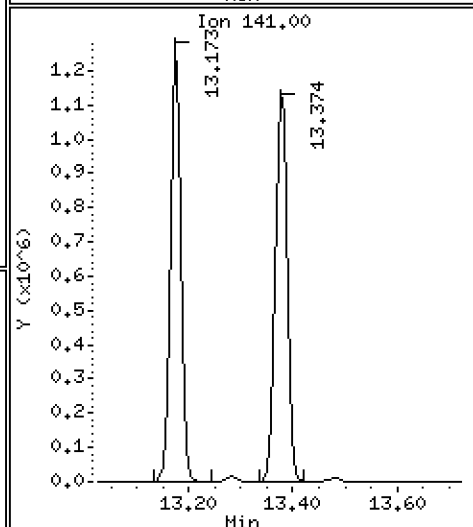
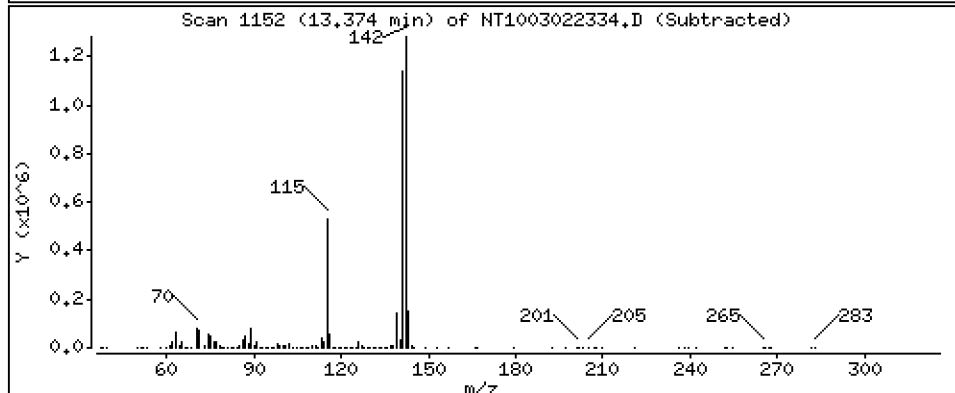
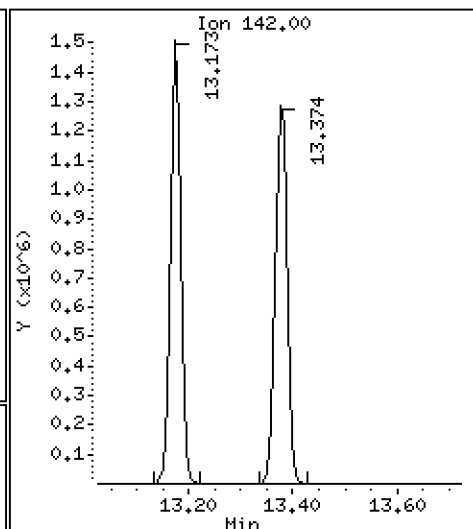
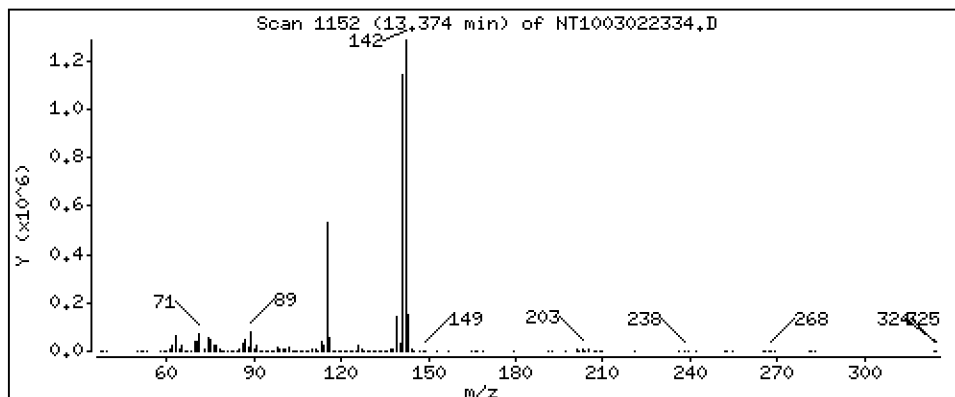
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 5,090 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

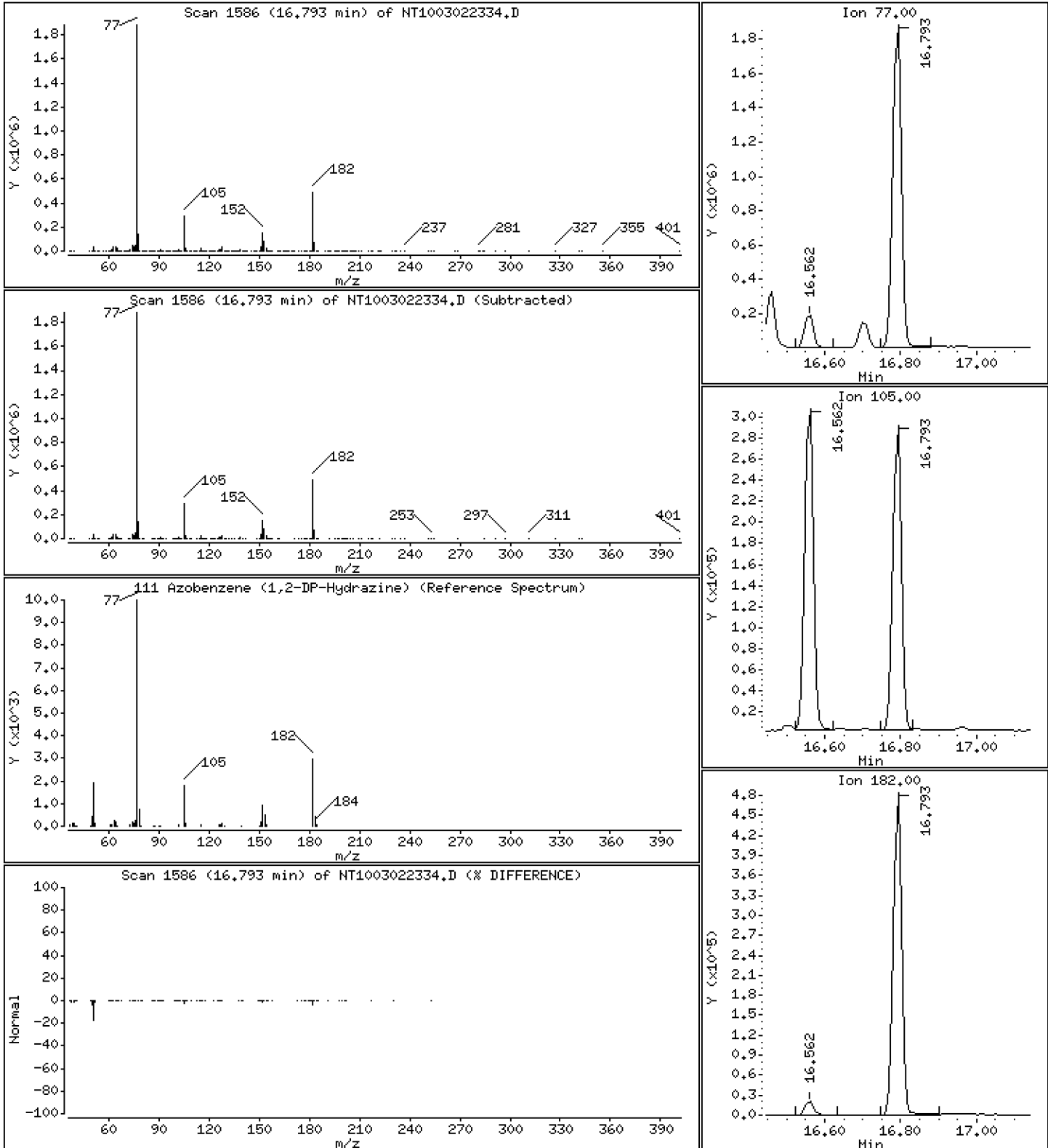
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 4,525 ug/mL



Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

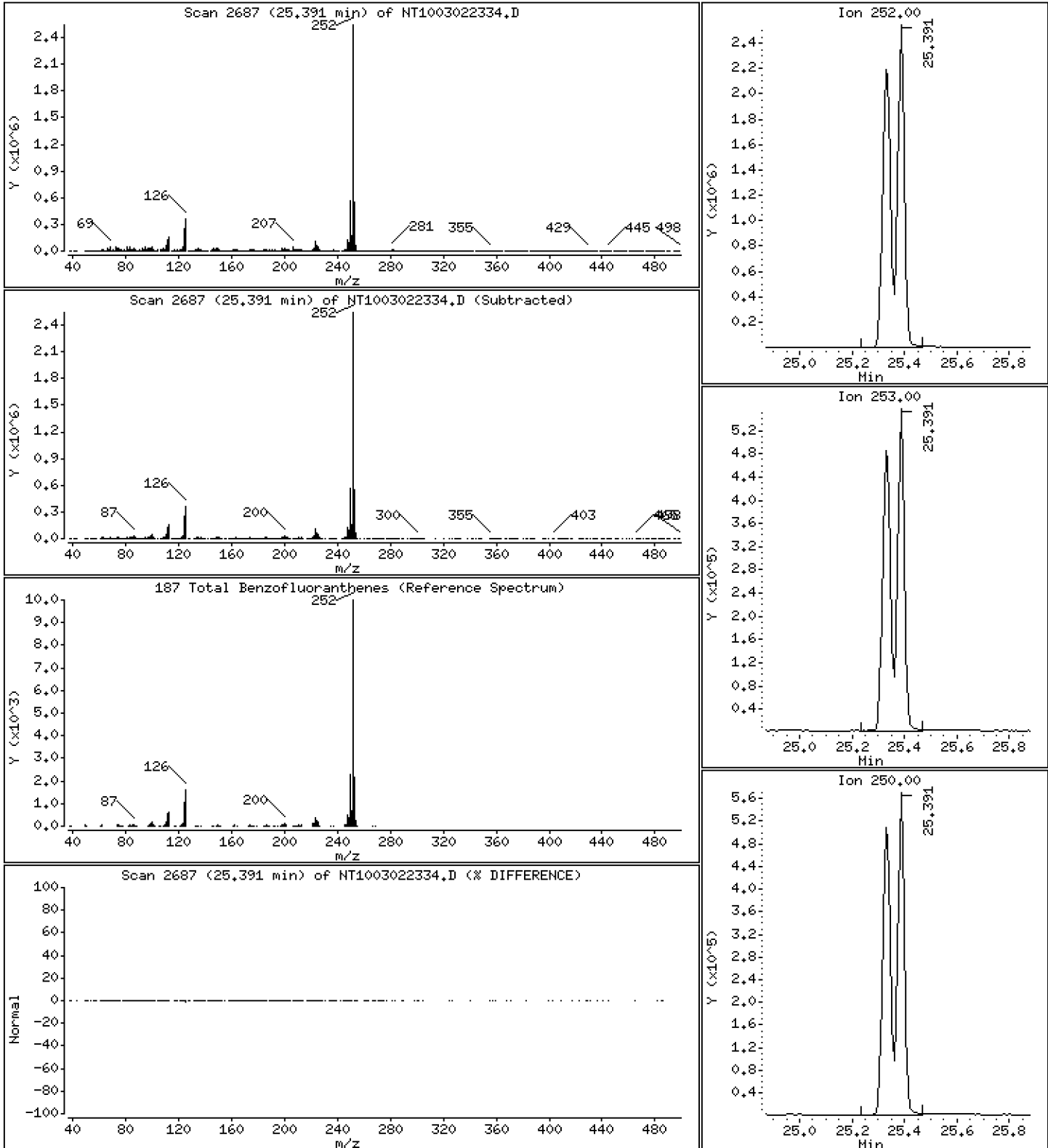
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 9,400 ug/mL





Date : 03-MAR-2023 11:18

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVFULL

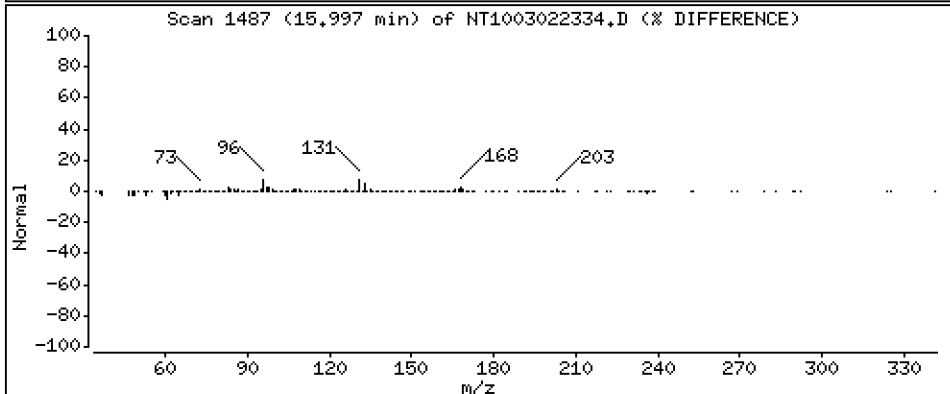
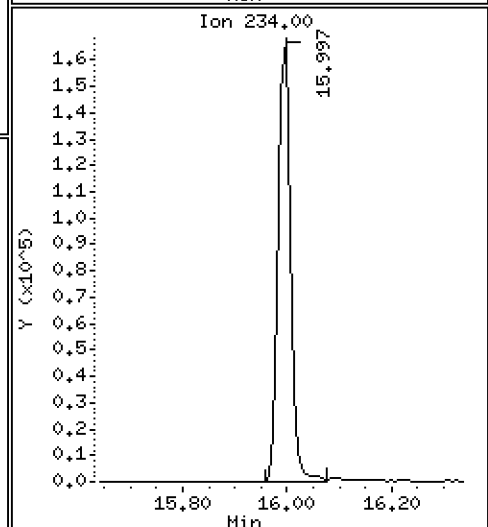
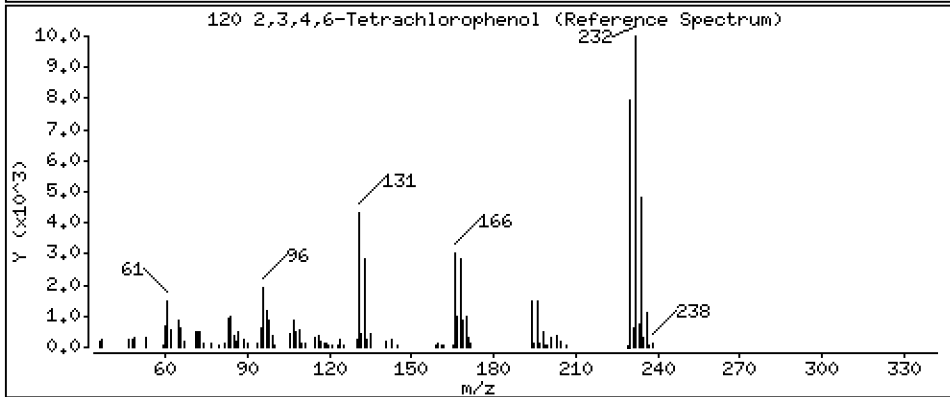
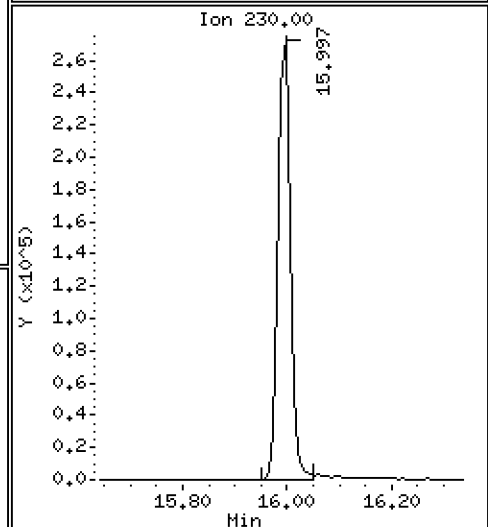
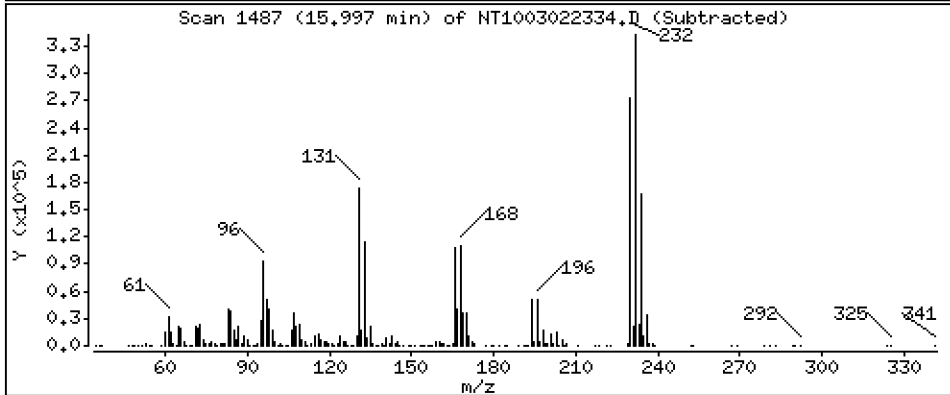
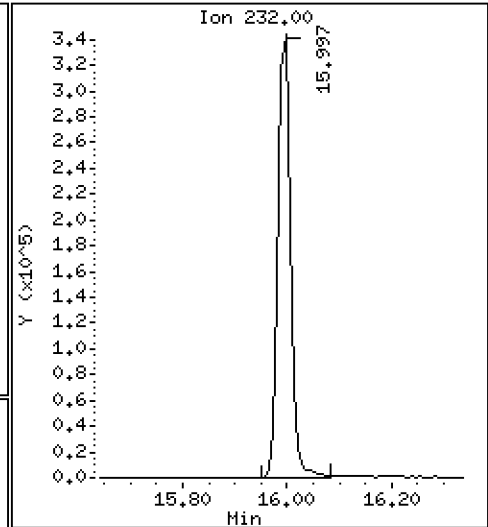
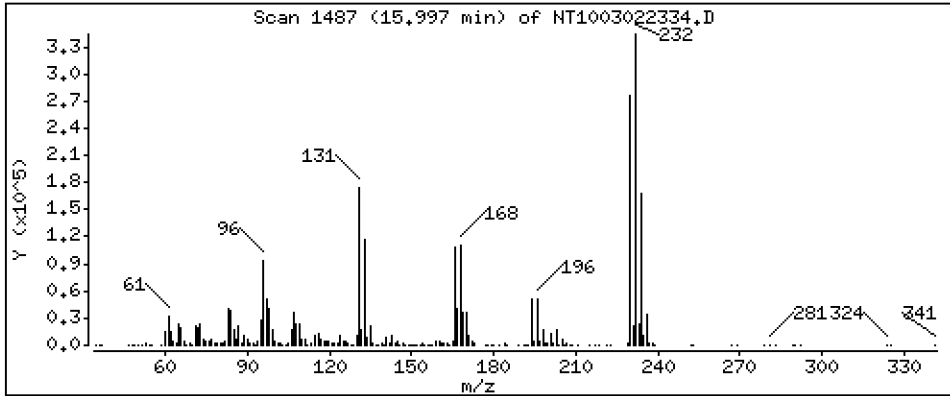
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 4,533 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022334.D  
 Lab Smp Id: SLC0136-CCV1  
 Inj Date : 03-MAR-2023 11:18  
 Operator : VTS  
 Smp Info : SEQ-CCVFULL  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Meth Date : 10-Mar-2023 07:33 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.904	6.905	(0.746)	1551773	7.70922	7.709
\$ 2 Phenol-d5	99		8.504	8.504	(0.919)	2003737	8.57421	8.574
3 Phenol	94		8.527	8.527	(0.921)	1363766	5.48882	5.489
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.953)	1649297	8.27208	8.272
4 Bis(2-Chloroethyl)ether	93		8.743	8.736	(0.945)	995623	5.24386	5.244
6 2-Chlorophenol	128		8.852	8.852	(0.956)	1126069	5.43652	5.437
7 1,3-Dichlorobenzene	146		9.146	9.146	(0.988)	1115417	4.88428	4.884
* 8 1,4-Dichlorobenzene-d4	152		9.254	9.246	(1.000)	639766	4.00000	
9 1,4-Dichlorobenzene	146		9.285	9.285	(1.003)	1189760	5.24494	5.245
\$ 10 1,2-Dichlorobenzene-d4	152		9.541	9.541	(1.031)	747801	5.02007	5.020
12 1,2-Dichlorobenzene	146		9.572	9.565	(1.034)	1062831	4.84070	4.841
11 Benzyl alcohol	108		9.487	9.479	(1.025)	661284	5.05663	5.057
14 2,2'-oxybis(1-Chloropropane)	121		9.735	9.735	(1.052)	311951	4.92816	4.928 (M)
13 2-Methylphenol	108		9.666	9.658	(1.044)	1004462	5.09593	5.096
17 Hexachloroethane	117		10.217	10.217	(1.104)	436855	4.69191	4.692
16 N-Nitroso-di-n-propylamine	70		9.984	9.984	(1.079)	766456	5.11207	5.112
15 4-Methylphenol	108		9.953	9.953	(1.075)	1055558	4.41957	4.420
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.878)	1311150	5.14828	5.148
19 Nitrobenzene	77		10.341	10.341	(0.881)	1186720	4.96743	4.967
20 Isophorone	82		10.799	10.799	(0.920)	1551655	5.08814	5.088
21 2-Nitrophenol	139		10.958	10.958	(0.934)	553156	4.29300	4.293
22 2,4-Dimethylphenol	107		11.009	11.009	(0.938)	2093966	8.96016	8.960
23 Bis(2-Chloroethoxy)methane	93		11.221	11.213	(0.956)	988285	5.24409	5.244
24 Benzoic acid	105		11.196	11.179	(0.954)	1622312	11.6775	11.68
25 2,4-Dichlorophenol	162		11.425	11.425	(0.974)	1958814	10.5748	10.57
26 1,2,4-Trichlorobenzene	180		11.602	11.603	(0.989)	892422	4.97745	4.977
* 27 Naphthalene-d8	136		11.734	11.726	(1.000)	2320061	4.00000	
28 Naphthalene	128		11.772	11.772	(1.003)	2933096	4.92565	4.926
29 4-Chloroaniline	127		11.873	11.873	(1.012)	2547350	9.46814	9.468
30 Hexachlorobutadiene	225		11.996	11.996	(1.022)	641455	4.91347	4.913
31 4-Chloro-3-methylphenol	107		12.824	12.817	(1.093)	1855519	9.42697	9.427
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	2143548	5.09550	5.096
33 Hexachlorocyclopentadiene	237		13.474	13.474	(0.879)	93967	2.32081	2.321

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.738	13.738	(0.896)	1252656	10.3974	10.40	
35 2,4,5-Trichlorophenol	196		13.807	13.807	(0.901)	1322305	10.2648	10.26	
§ 36 2-Fluorobiphenyl	172		13.923	13.916	(0.909)	2281139	5.27938	5.279	
37 2-Chloronaphthalene	162		14.179	14.179	(0.925)	1828854	5.39172	5.392	
38 2-Nitroaniline	65		14.388	14.380	(0.939)	865382	9.04871	9.049	
39 Dimethylphthalate	163		14.751	14.751	(0.963)	1913755	4.89177	4.892	
40 Acenaphthylene	152		15.038	15.038	(0.981)	2915316	4.98530	4.985	
41 2,6-Dinitrotoluene	165		14.883	14.883	(0.971)	894021	10.0756	10.08	
* 42 Acenaphthene-d10	164		15.324	15.324	(1.000)	1211400	4.00000		
43 3-Nitroaniline	138		15.231	15.231	(0.994)	984464	9.97856	9.979	
44 Acenaphthene	153		15.394	15.394	(1.005)	1774868	5.03257	5.033	
45 2,4-Dinitrophenol	184		15.455	15.448	(1.009)	349754	14.7602	14.76	
46 Dibenzofuran	168		15.749	15.749	(1.028)	2689359	5.13802	5.138	
47 4-Nitrophenol	109		15.556	15.548	(1.015)	558524	7.87130	7.871	
48 2,4-Dinitrotoluene	165		15.718	15.718	(1.026)	1286873	9.94958	9.950	
50 Diethylphthalate	149		16.221	16.221	(1.059)	1965097	4.74150	4.742	
49 Fluorene	166		16.461	16.461	(1.074)	2200923	5.05386	5.054	
51 4-Chlorophenyl-phenylether	204		16.461	16.461	(1.074)	1002861	5.02314	5.023	
52 4-Nitroaniline	138		16.499	16.499	(1.077)	1063657	10.0299	10.03	
53 4,6-Dinitro-2-methylphenol	198		16.561	16.554	(0.899)	1137934	19.5783	19.58	
54 N-Nitrosodiphenylamine	169		16.700	16.700	(0.907)	1662610	4.80311	4.803	
§ 55 2,4,6-Tribromophenol	330		16.962	16.962	(1.107)	530281	6.79426	6.794	
56 4-Bromophenyl-phenylether	248		17.480	17.480	(0.949)	733404	5.22888	5.229	
57 Hexachlorobenzene	284		17.588	17.588	(0.955)	782092	4.95166	4.952	
58 Pentachlorophenol	266		18.006	17.999	(0.978)	364481	4.86946	4.869	
* 59 Phenanthrene-d10	188		18.416	18.416	(1.000)	2339560	4.00000		
60 Phenanthrene	178		18.463	18.463	(1.003)	3059019	5.10913	5.109	
61 Anthracene	178		18.571	18.571	(1.008)	3189562	5.49380	5.494	
62 Carbazole	167		18.904	18.904	(1.026)	3010595	5.66035	5.660	
63 Di-n-butylphthalate	149		19.600	19.600	(1.064)	3903385	5.20938	5.209	
64 Fluoranthene	202		20.830	20.830	(0.889)	3921064	4.11242	4.112	
65 Pyrene	202		21.264	21.264	(0.907)	4093723	4.21652	4.217	
§ 66 Terphenyl-d14	244		21.534	21.534	(0.919)	3304375	4.20630	4.206	
67 Butylbenzylphthalate	149		22.425	22.417	(0.957)	1932126	3.74916	3.749	
68 Benzo(a)anthracene	228		23.416	23.416	(0.999)	4847058	4.95970	4.960	
* 69 Chrysene-d12	240		23.439	23.431	(1.000)	2771645	4.00000		
70 3,3'-Dichlorobenzidine	252		23.362	23.362	(0.997)	4958664	11.2326	11.23	
71 Chrysene	228		23.486	23.478	(1.002)	4221454	5.31502	5.315	
72 bis(2-Ethylhexyl)phthalate	149		23.416	23.408	(0.956)	3208420	4.48863	4.489	
* 134 Di-n-octylphthalate-d4	153		24.492	24.492	(1.000)	4959061	4.00000		
73 Di-n-octylphthalate	149		24.508	24.508	(1.001)	5732478	5.21286	5.213	
74 Benzo(b)fluoranthene	252		25.328	25.328	(0.969)	4534005	4.61534	4.615	
75 Benzo(k)fluoranthene	252		25.390	25.375	(0.971)	4534086	4.77759	4.778	
76 Benzo(a)pyrene	252		26.025	26.017	(0.996)	4055371	4.61935	4.619	
* 77 Perylene-d12	264		26.141	26.134	(1.000)	2740459	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.932	28.917	(1.107)	3795736	3.73861	3.739	
79 Dibenzo(a,h)anthracene	278		28.979	28.963	(1.109)	3279886	4.21465	4.215	
80 Benzo(g,h,i)perylene	276		29.787	29.763	(1.139)	2816765	3.51338	3.513	
90 N-Nitrosodimethylamine	74		4.734	4.727	(0.512)	1378336	10.6072	10.61	
91 Aniline	93		8.635	8.635	(0.933)	2970918	10.3126	10.31	
93 Benzidine	184		21.086	21.078	(0.900)	1752664	4.14077	4.141	
103 Pyridine	79		4.789	4.781	(0.517)	2344008	10.1714	10.17	
105 1-methylnaphthalene	142		13.374	13.374	(1.140)	1937966	5.08987	5.090	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.793	16.793	(1.096)	2800486	4.52499	4.525	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.390	25.375	(0.971)	8887882	9.39958	9.400
120 2,3,4,6-Tetrachlorophenol	232	15.996	15.989	(1.044)	541307	4.53315	4.533

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022334.D Calibration Time: 05:36  
 Lab Smp Id: SLC0136-CCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	639766	-5.00
27 Naphthalene-d8	2475080	1237540	4950160	2320061	-6.26
42 Acenaphthene-d10	1248864	624432	2497728	1211400	-3.00
59 Phenanthrene-d10	2356836	1178418	4713672	2339560	-0.73
69 Chrysene-d12	2717731	1358866	5435462	2771645	1.98
134 Di-n-octylphthala	4948440	2474220	9896880	4959061	0.21
77 Perylene-d12	2801934	1400967	5603868	2740459	-2.19

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.08
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.00
77 Perylene-d12	26.13	25.63	26.63	26.14	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022334.D

Lab ID: SLC0136-CCV1

nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 11:18

RT CO-ELUTION COMPOUNDS

-----  
23.416 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT CCV RRT DELTA COMPOUND  
-----

NONE

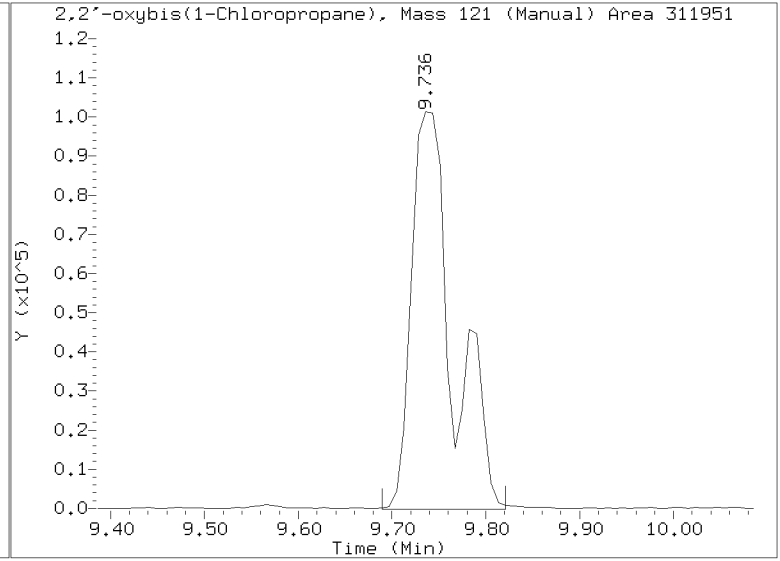
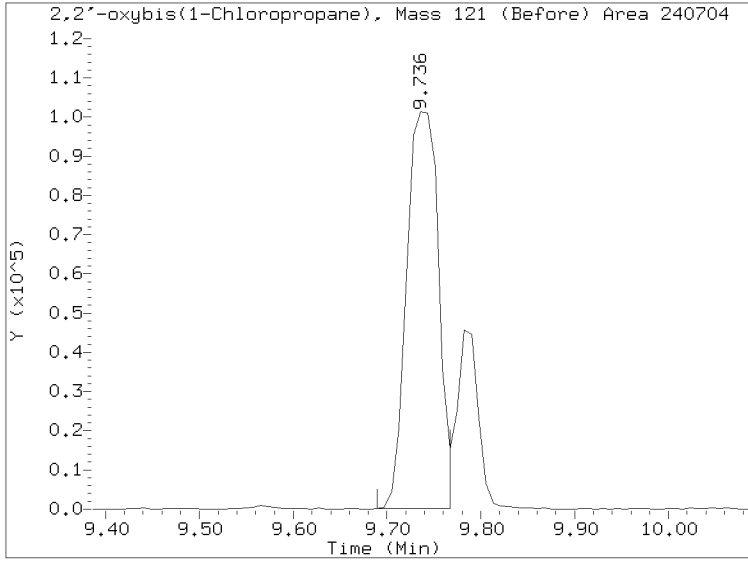
RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022334.D  
Injection Date: 03-MAR-2023 11:18  
Lab ID: SLC0136-CCV1 Client ID:  
Report Date: 03/10/2023 07:36





**LOW-CONCENTRATION  
CONTINUING CALIBRATION CHECK  
EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00019

Lab File ID: NT1003022327.D

Calibration Date: 03/01/2023

Sequence: SLC0136

Injection Date: 03/03/23

Lab Sample ID: SLC0136-LCV1

Injection Time: 06:52

Sequence Name: ABN 0.2

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.5534590	1.3502490		-13.1	+/-50
4-Methylphenol	A	0.20000	0.1	1.2087680	0.8495653		-43.7	+/-50
Naphthalene	A	0.20000	0.2	1.0266520	1.0121310		-1.4	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7252818	0.6672581		-8.0	+/-50
Acenaphthylene	A	0.20000	0.2	1.9309320	1.9208790		-0.5	+/-50
Dimethylphthalate	A	0.20000	0.2	1.2917940	1.1132660		-13.8	+/-50
Acenaphthene	A	0.20000	0.2	1.1645250	1.1110420		-4.6	+/-50
Dibenzofuran	A	0.20000	0.2	1.7283260	1.6311900		-5.6	+/-50
Fluorene	A	0.20000	0.2	1.4379840	1.2734860		-11.4	+/-50
Phenanthrene	A	0.20000	0.2	1.0236730	0.9999254		-2.3	+/-50
Anthracene	A	0.20000	0.2	0.9926226	0.9134558		-8.0	+/-50
Fluoranthene	A	0.20000	0.2	1.3760330	1.1558260		-16.0	+/-50
Pyrene	A	0.20000	0.2	1.4011560	1.2164990		-13.2	+/-50
Butylbenzylphthalate	A	0.20000	0.1	0.6475451	0.4492214		-40.5	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4104100	1.2908300		-8.5	+/-50
Chrysene	A	0.20000	0.2	1.1462500	1.2035110		5.0	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5331838	0.4385421		-21.8	+/-50
Benzo(a)fluoranthene, Total	A	0.40000	0.4	1.3383070	1.1551850		-11.9	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2312020	1.0472590		-14.1	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.1	1.4033590	0.9442991		-33.8	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.1	1.1150690	0.7292839		-32.5	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.1	1.1245240	0.7358198		-35.2	+/-50
2-Fluorophenol	A	0.30000	0.282	1.2585100	1.1834580		-6.0	+/-50
Phenol-d5	A	0.30000	0.00	1.4611190				+/-50 *
2-Chlorophenol-d4	A	0.30000	0.277	1.2465880	1.1490190		-7.8	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	4.29	0.9313544	20		2050	+/-50 *
Nitrobenzene-d5	A	0.20000	0.157	0.4390871	0.3438290		-21.7	+/-50
2-Fluorobiphenyl	A	0.20000	0.199	1.4267270	1.4215940		-0.4	+/-50
2,4,6-Tribromophenol	A	0.30000	0.118	0.2287830	0.0964724		-60.7	+/-50 *
p-Terphenyl-d14	A	0.20000	0.172	1.1337350	0.9772371		-13.8	+/-50

\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\20230302B JB\NT1003022327.D

Date: 03-HR-2023 06:52

Client ID:

Sample Info: SEQ-LCV200

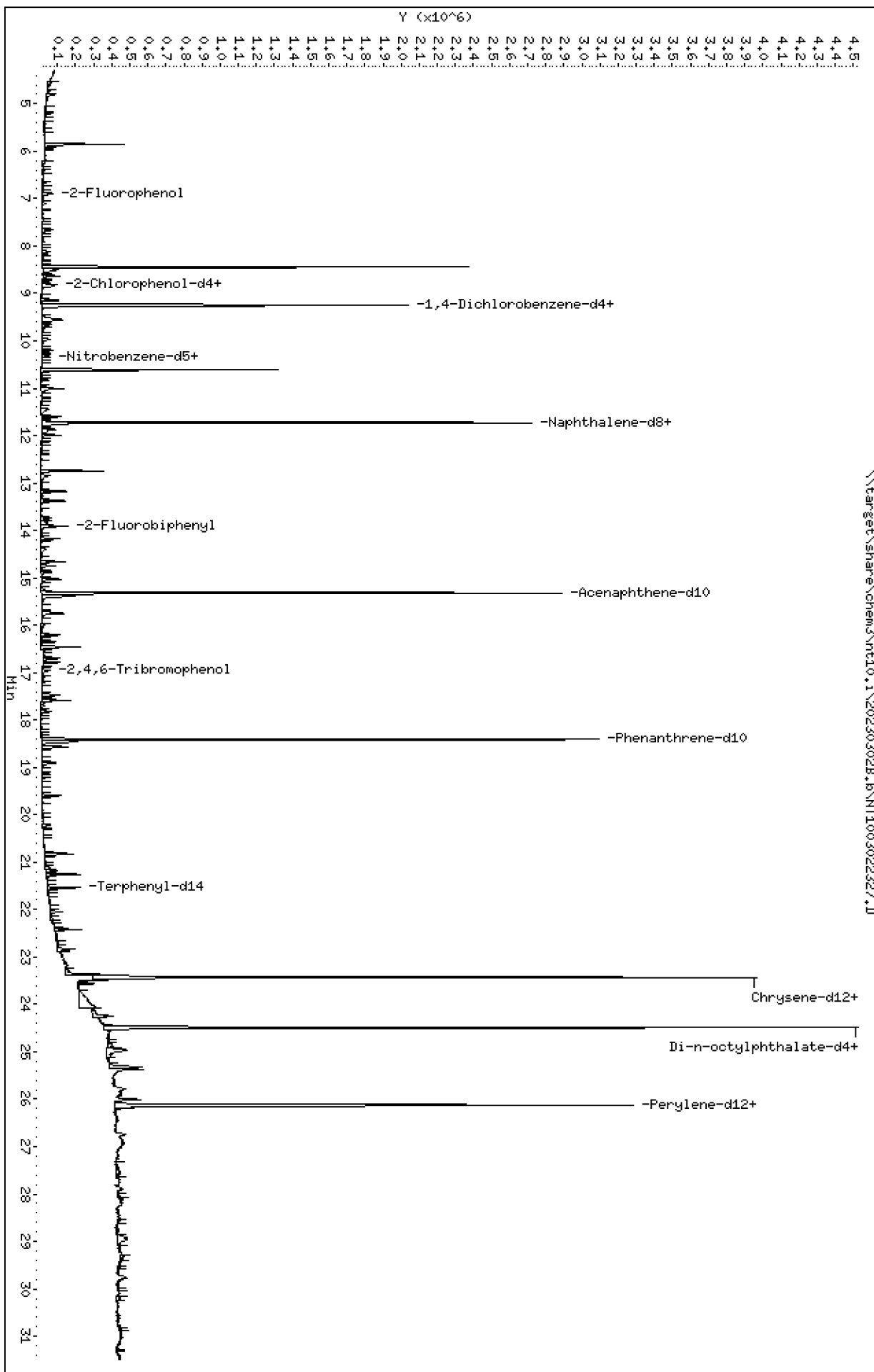
Column phase: ZB-5msi

Instrument: nt10.1

Operator: VTS

Column diameter: 0.25

Page 1



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

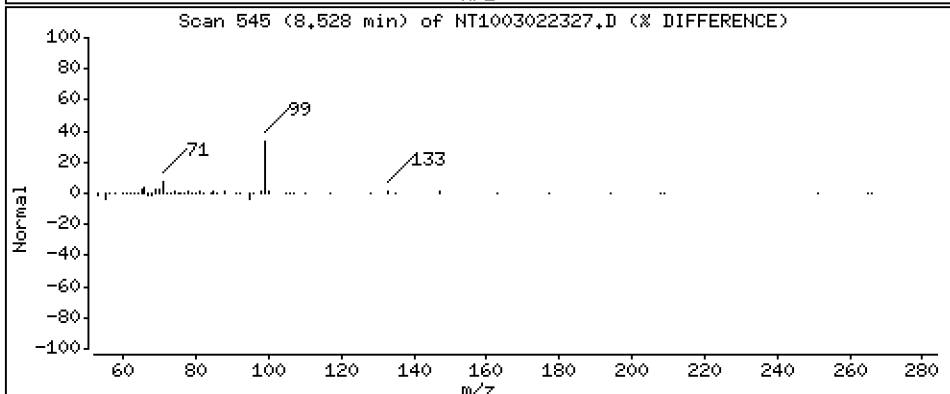
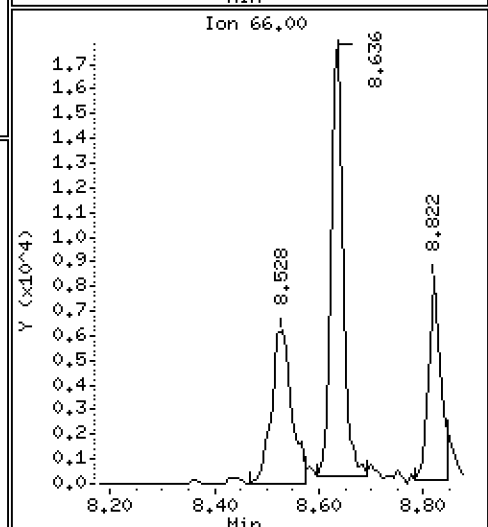
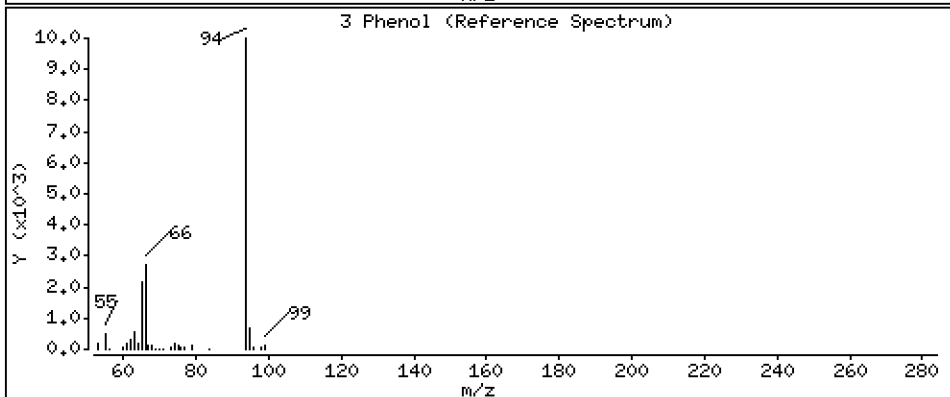
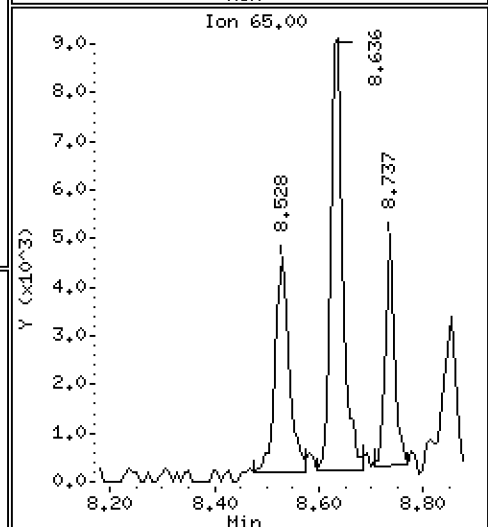
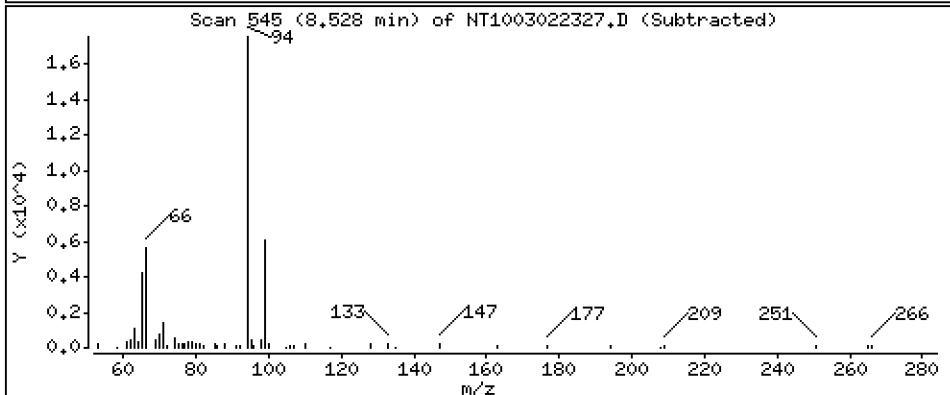
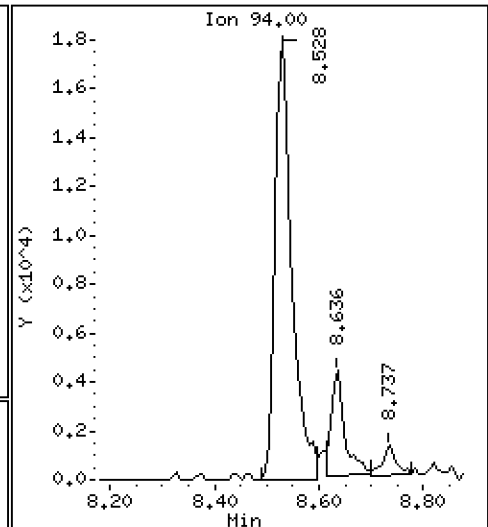
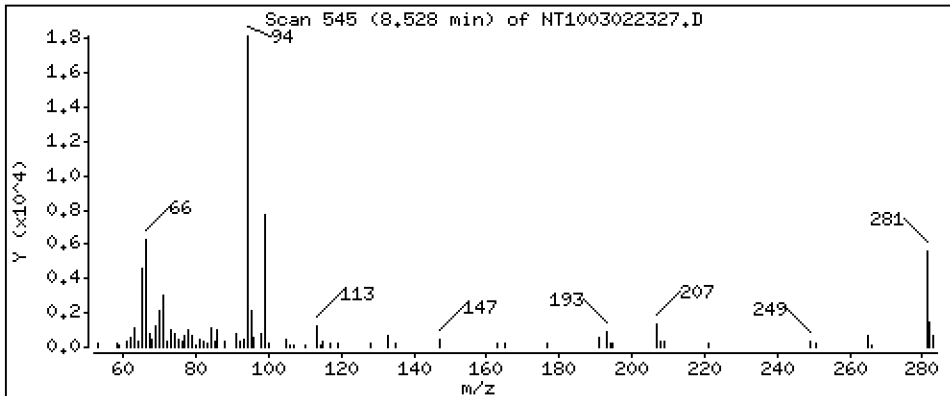
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 0,1738 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

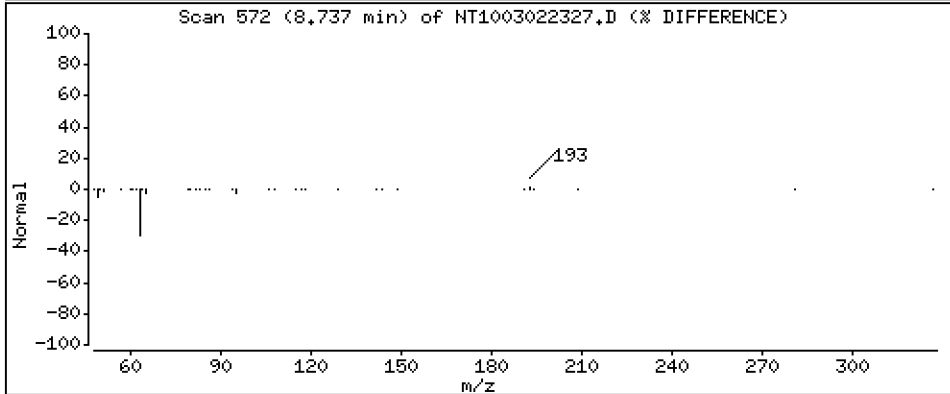
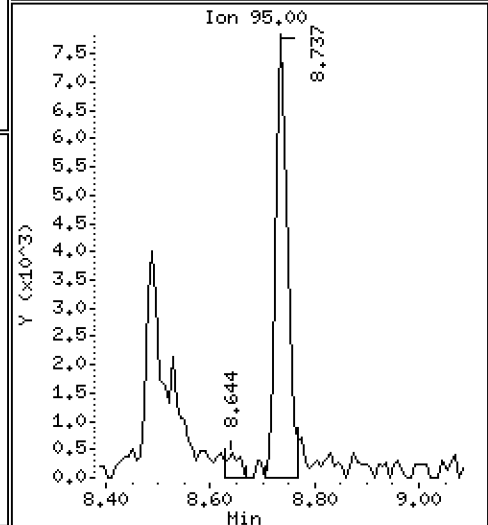
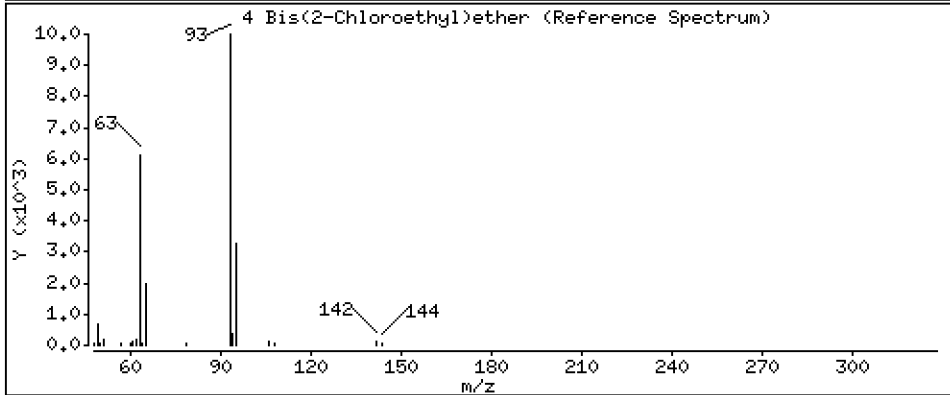
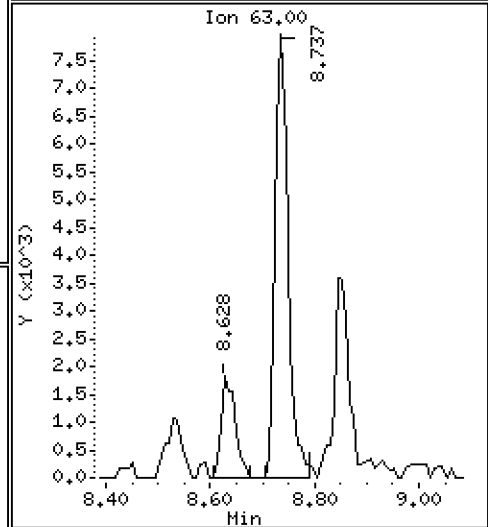
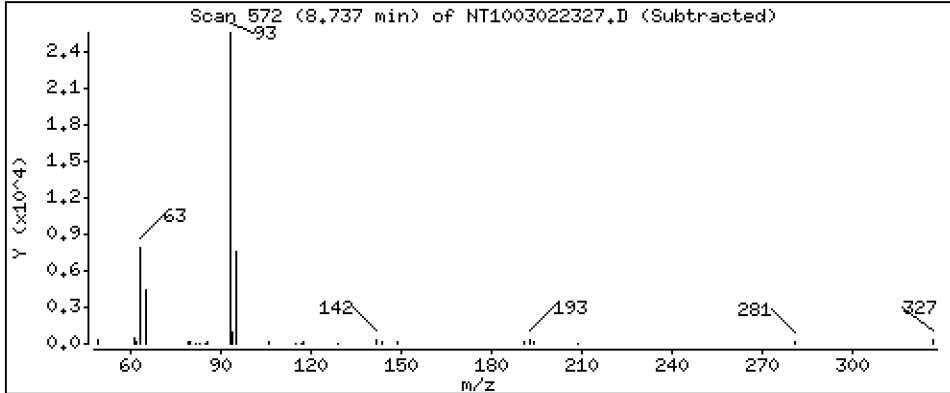
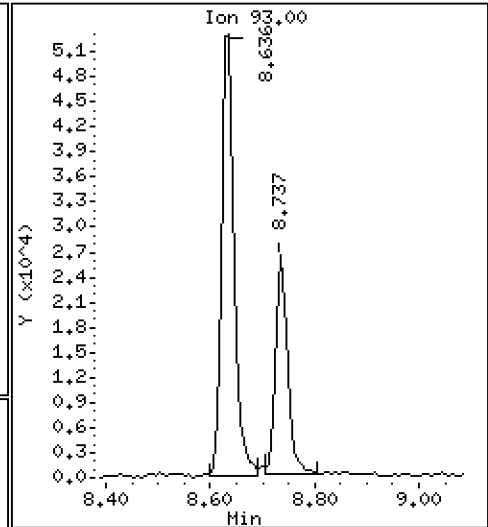
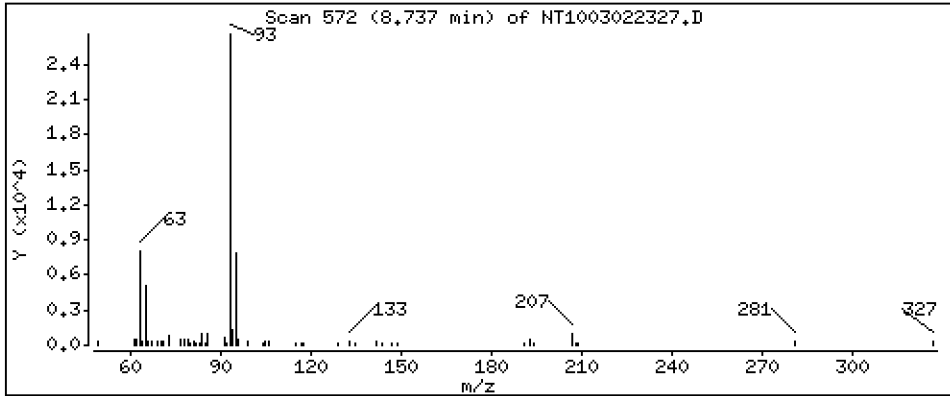
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

4 Bis(2-Chloroethyl)ether

Concentration: 0,2266 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

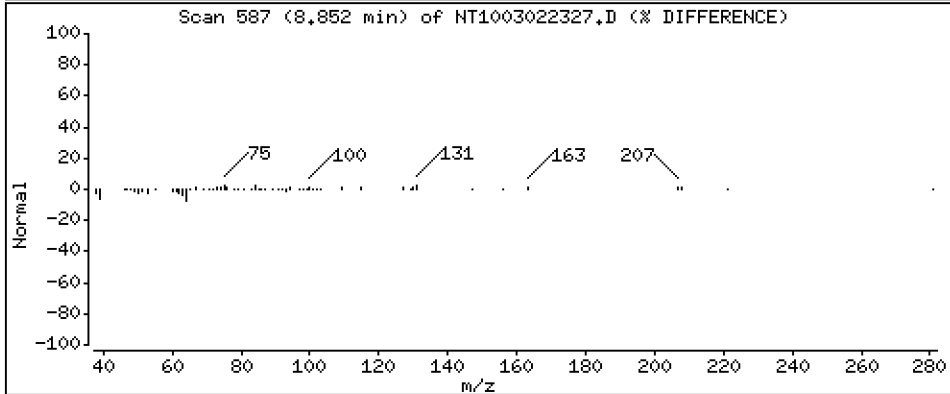
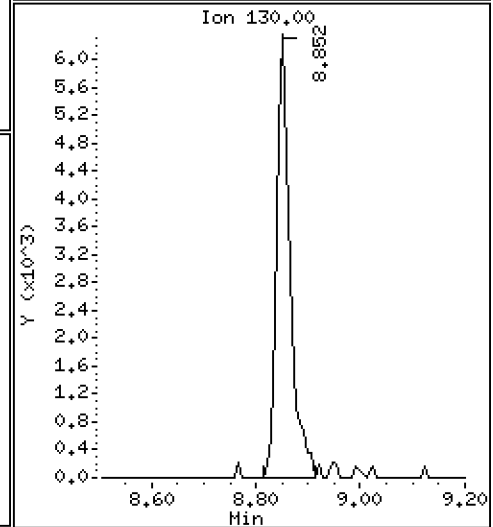
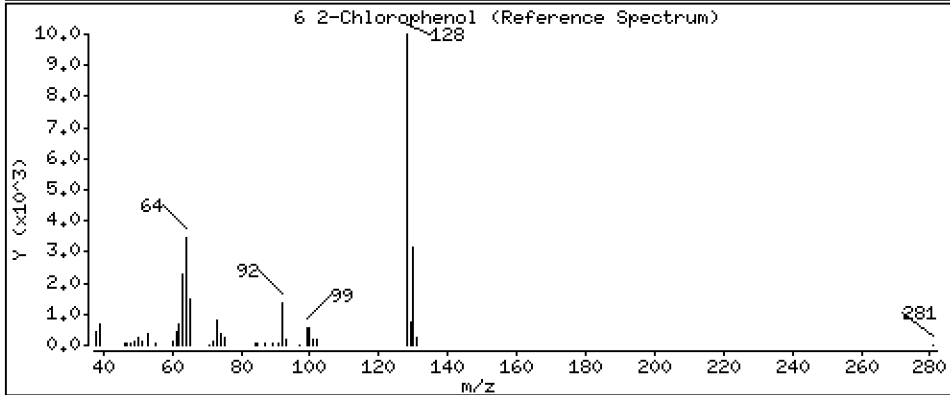
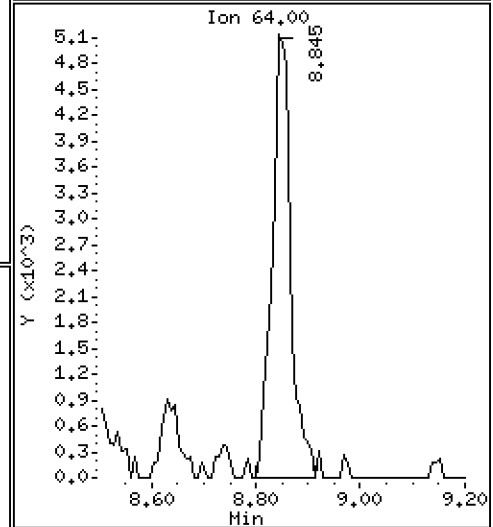
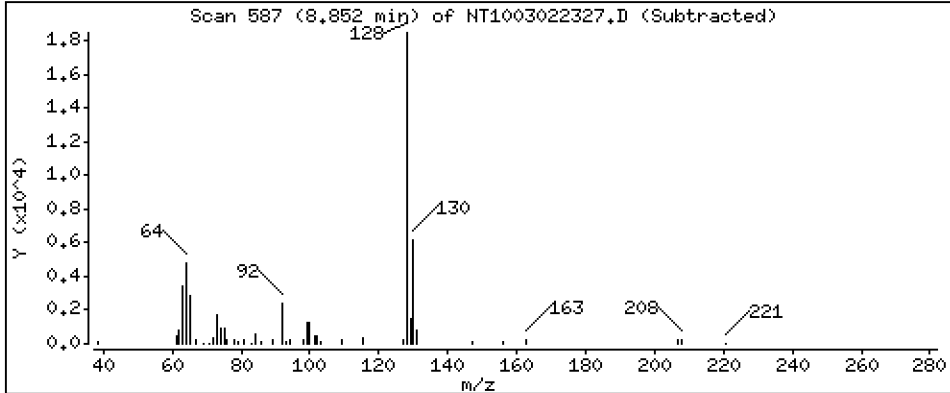
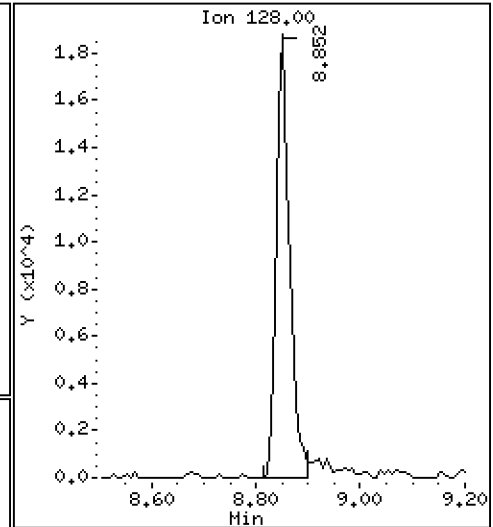
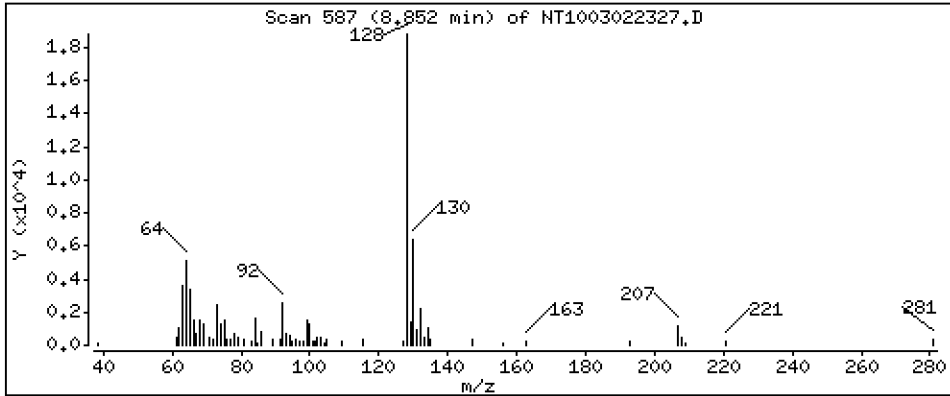
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

6 2-Chlorophenol

Concentration: 0,1743 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

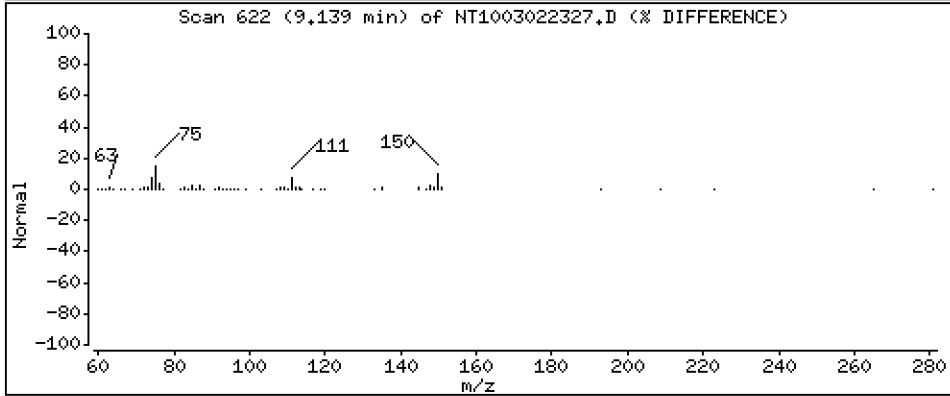
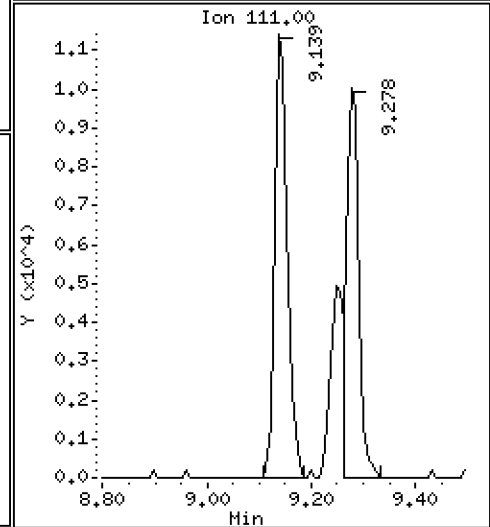
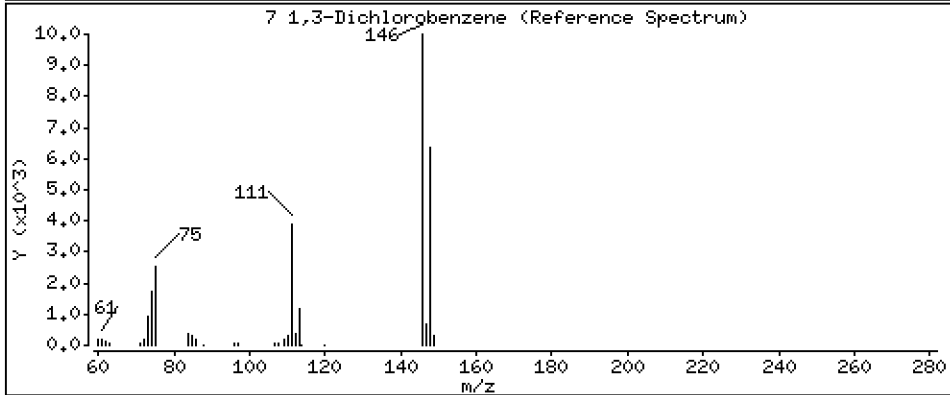
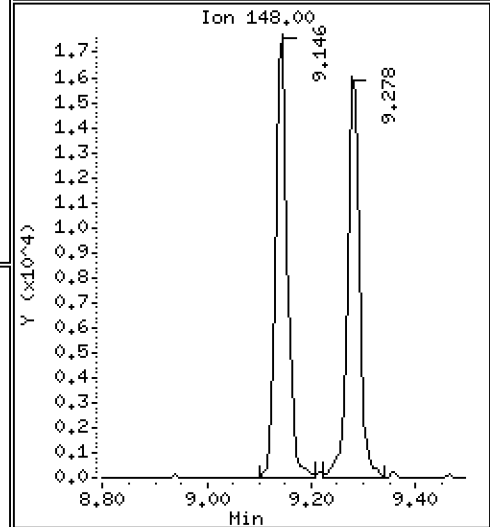
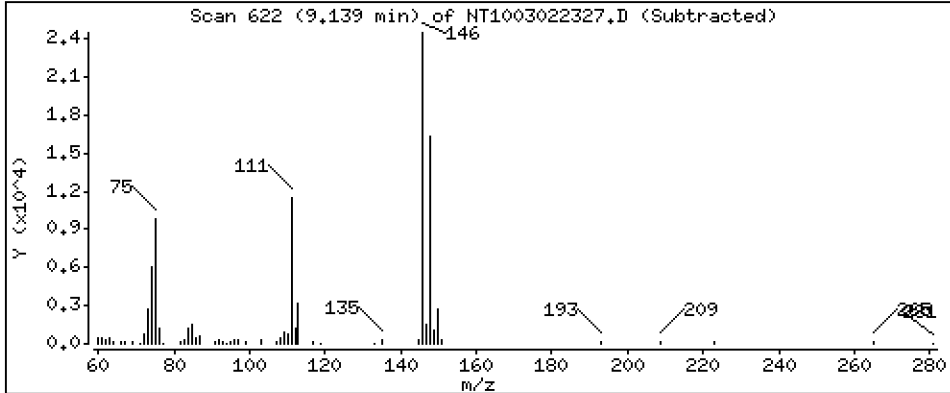
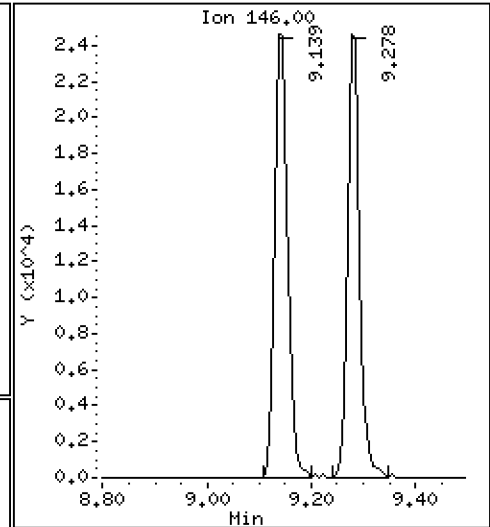
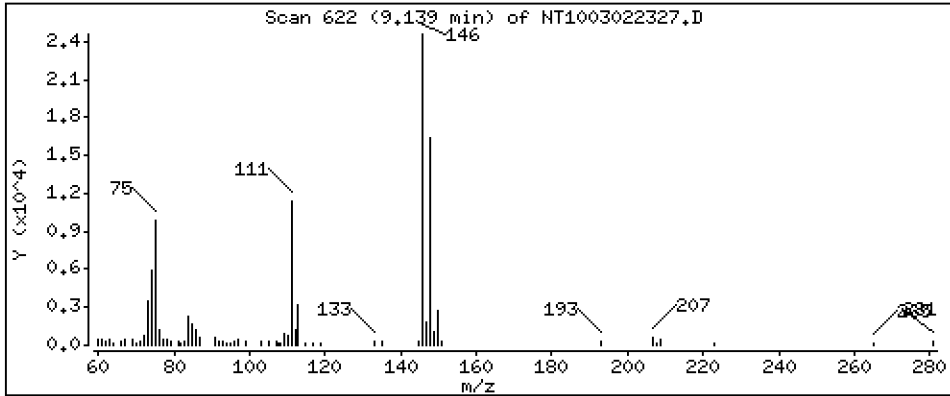
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 0,2081 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

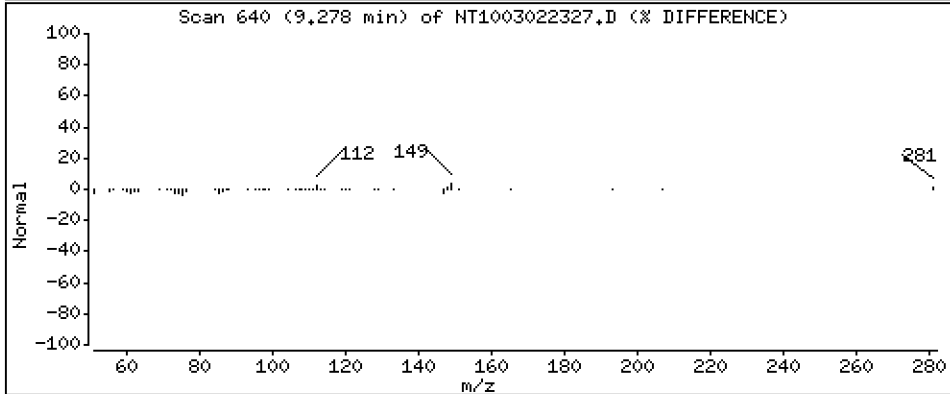
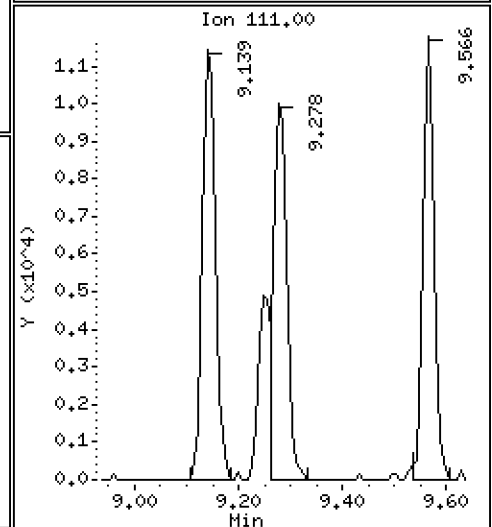
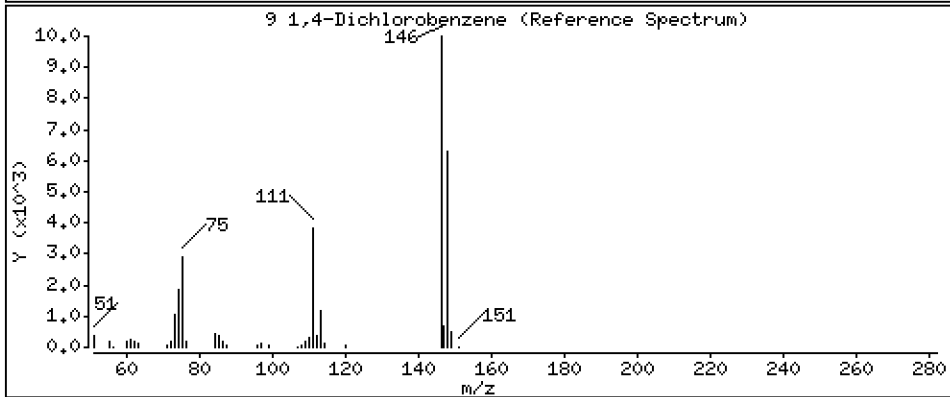
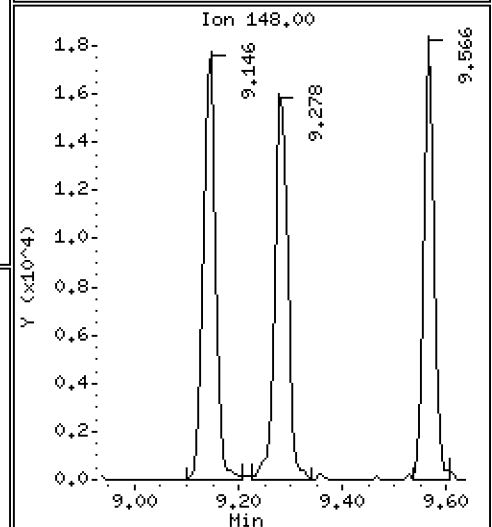
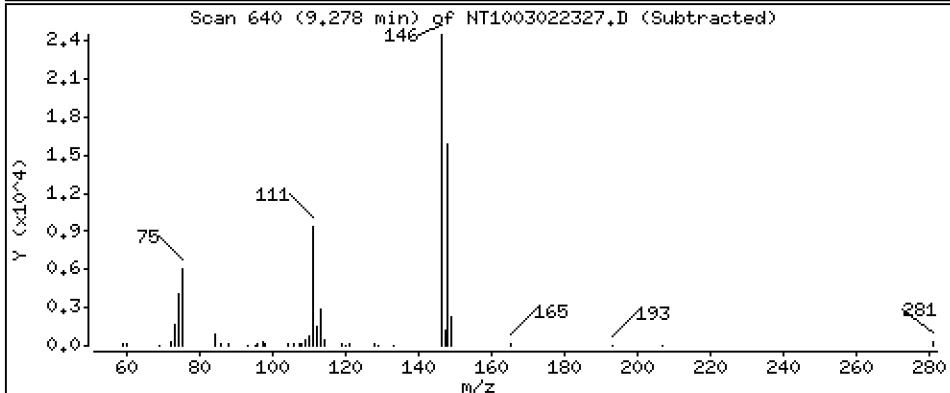
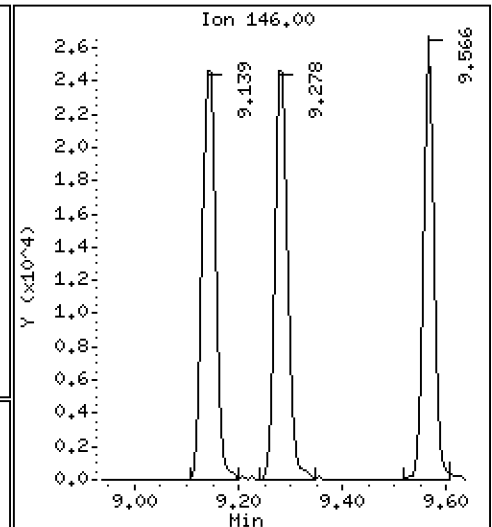
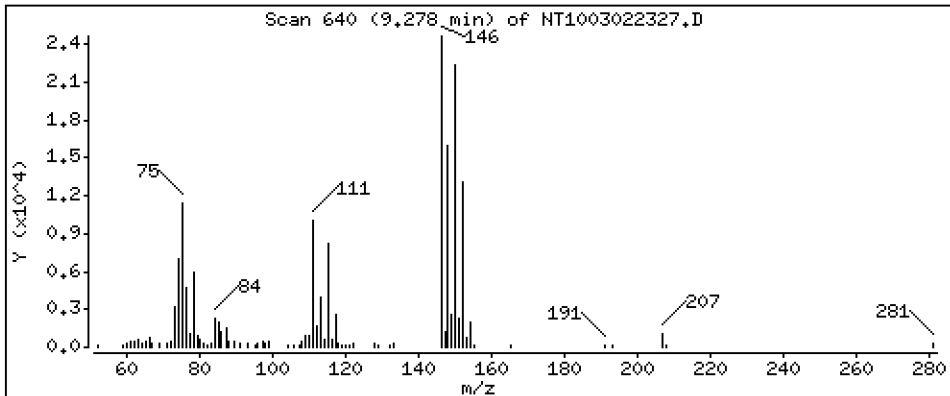
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 0,1980 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

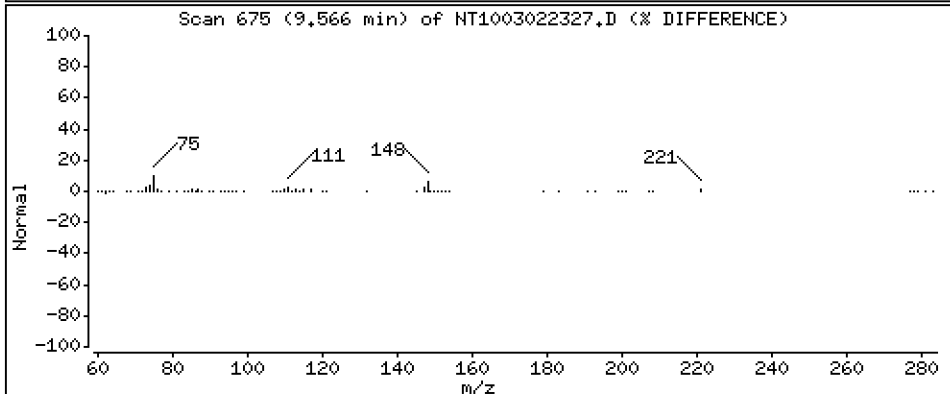
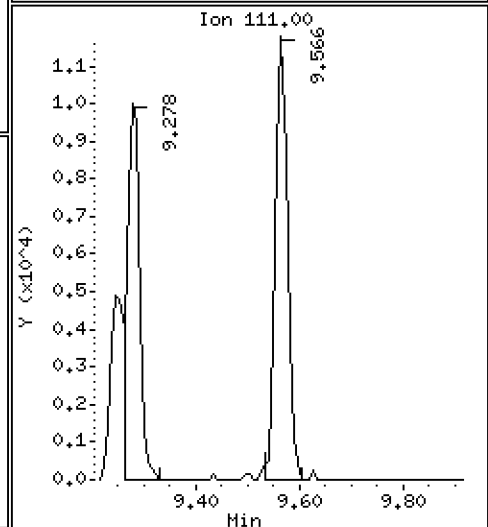
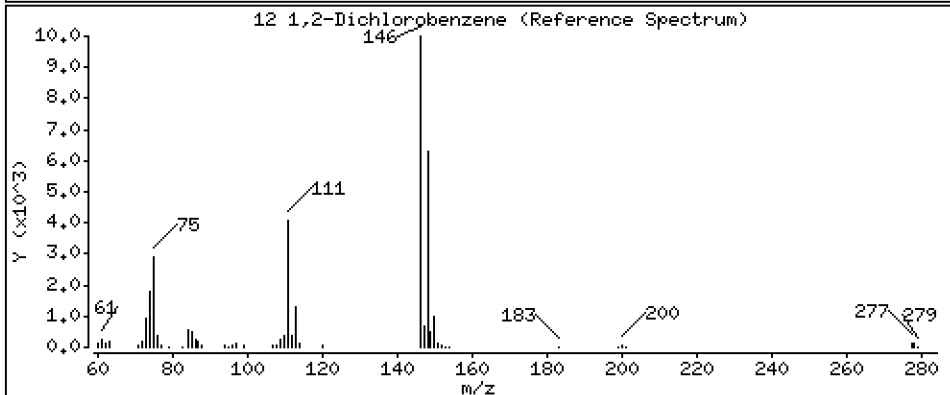
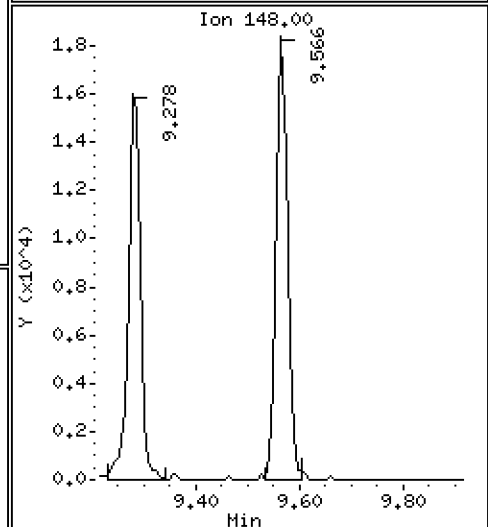
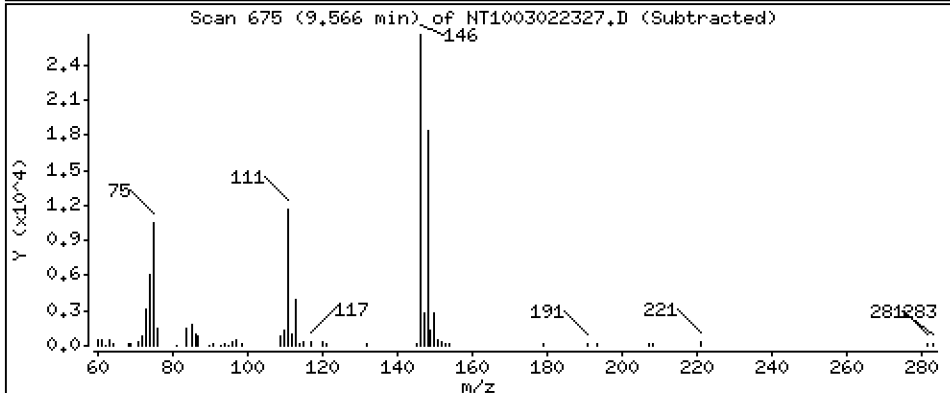
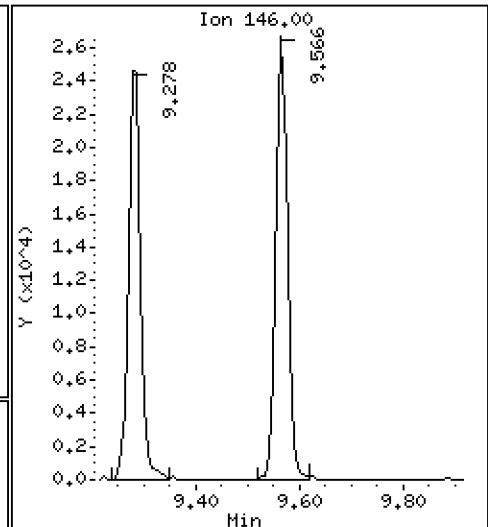
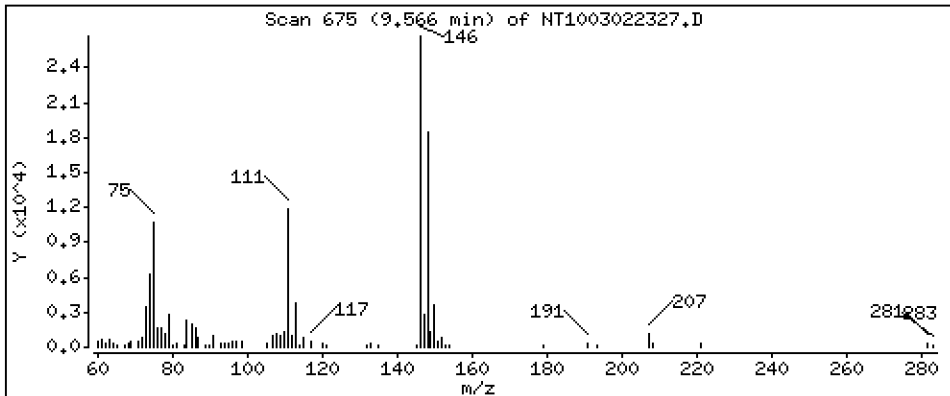
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.1964 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

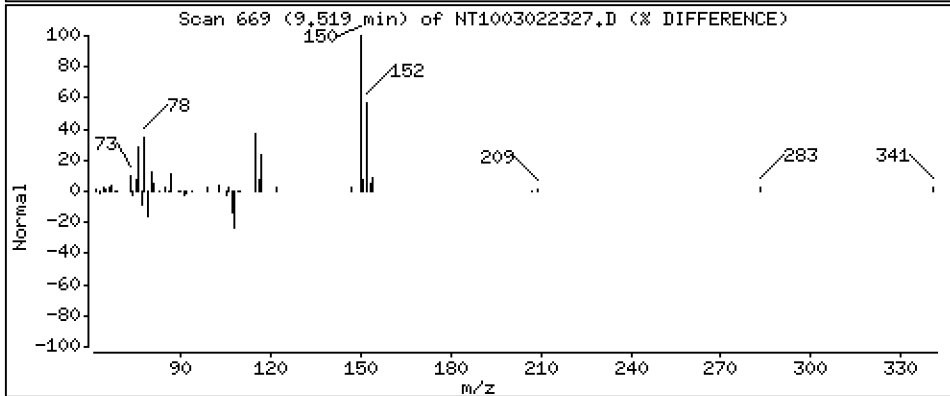
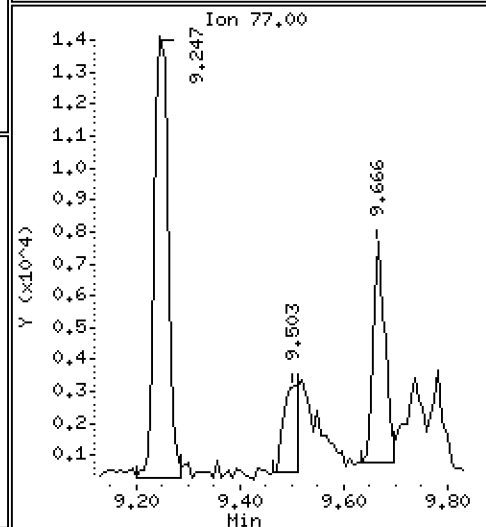
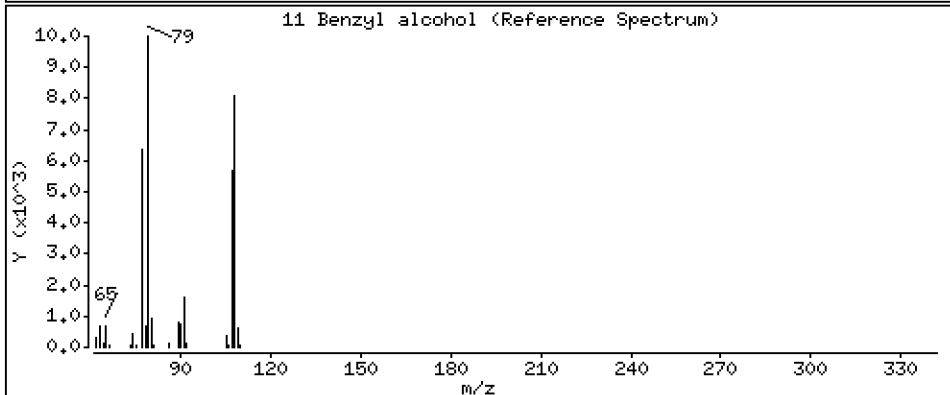
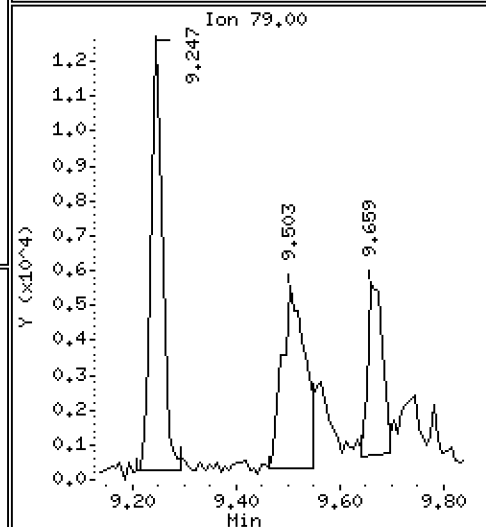
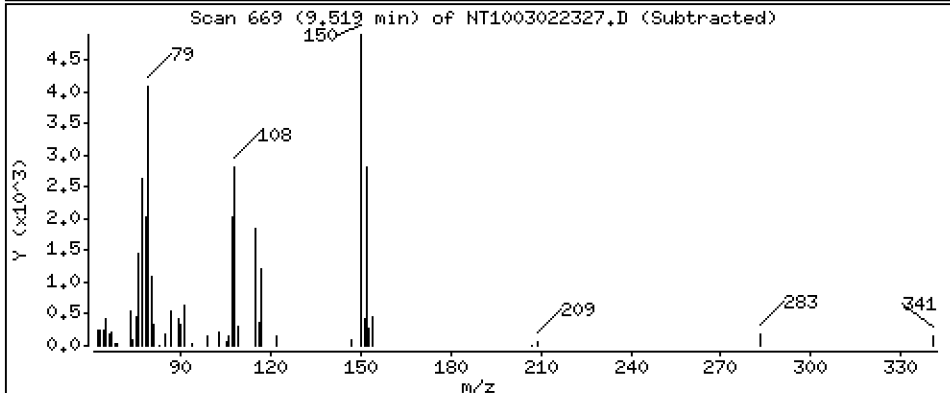
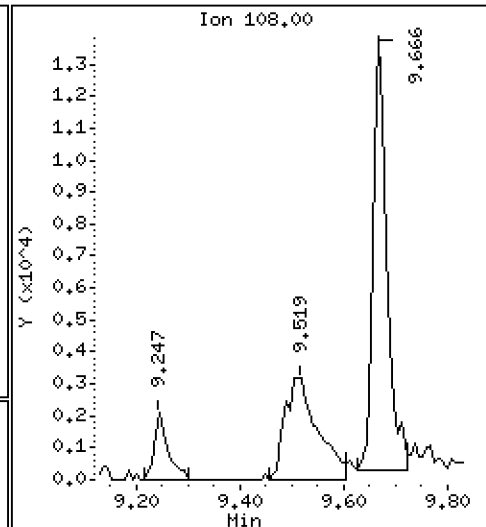
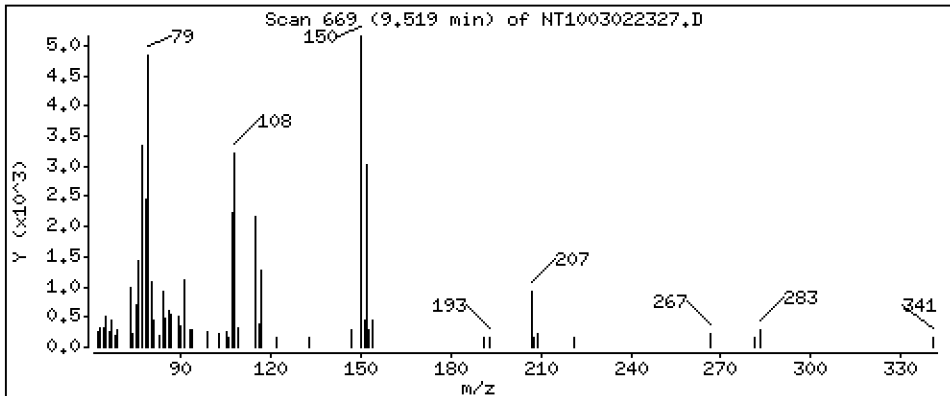
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1220 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

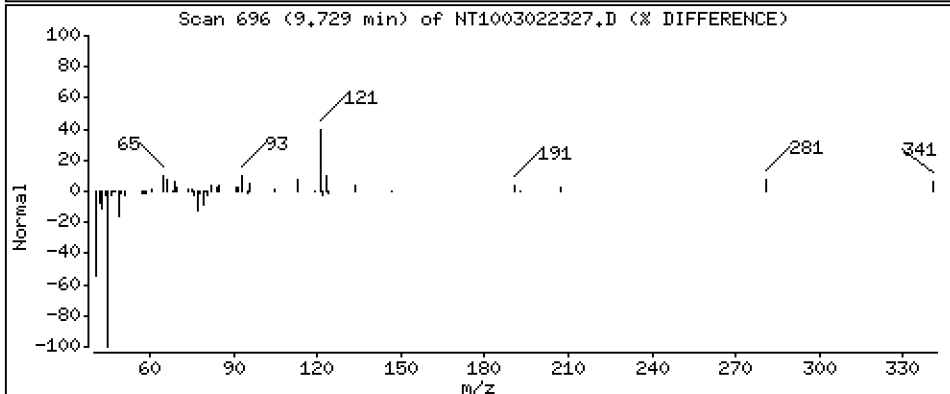
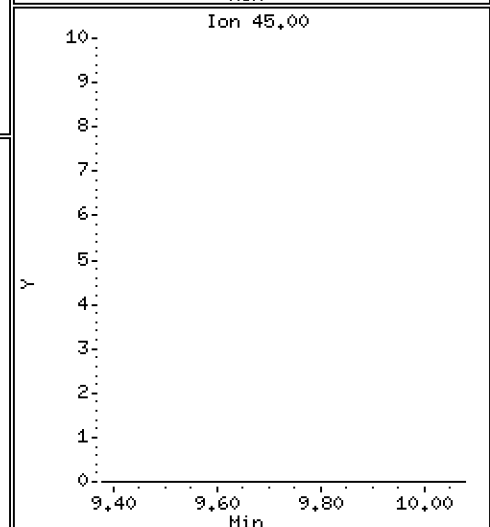
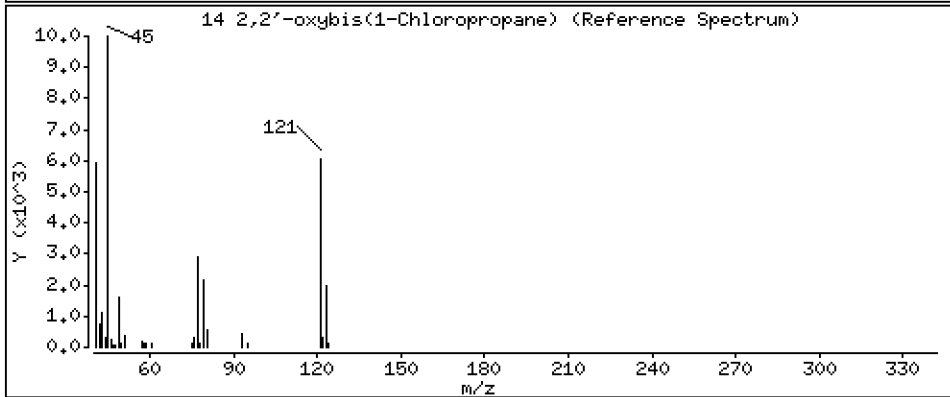
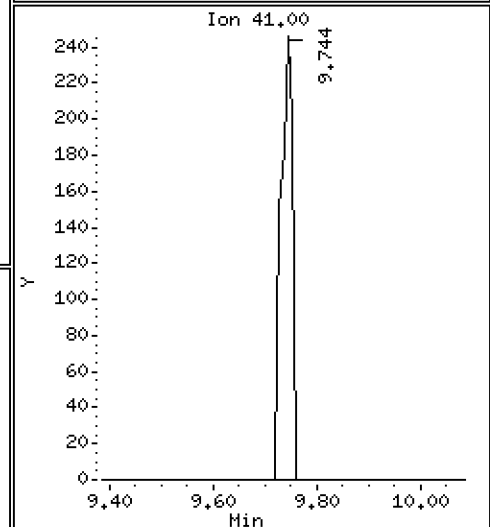
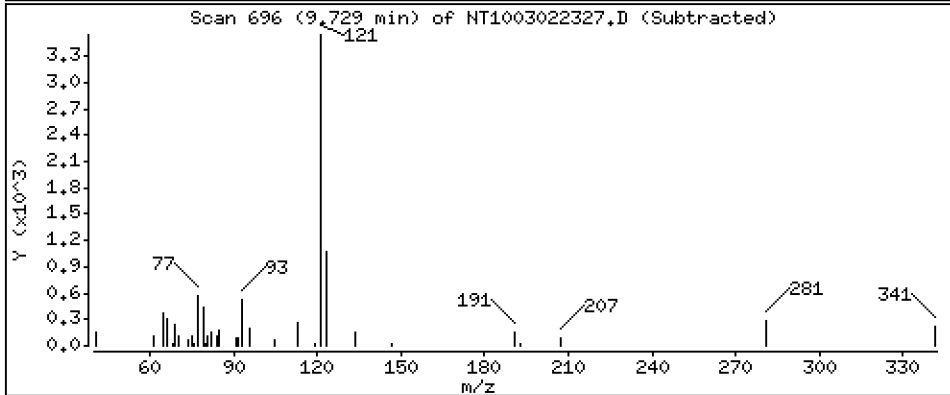
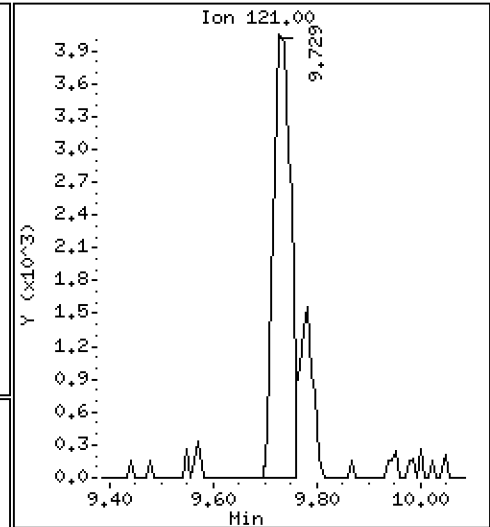
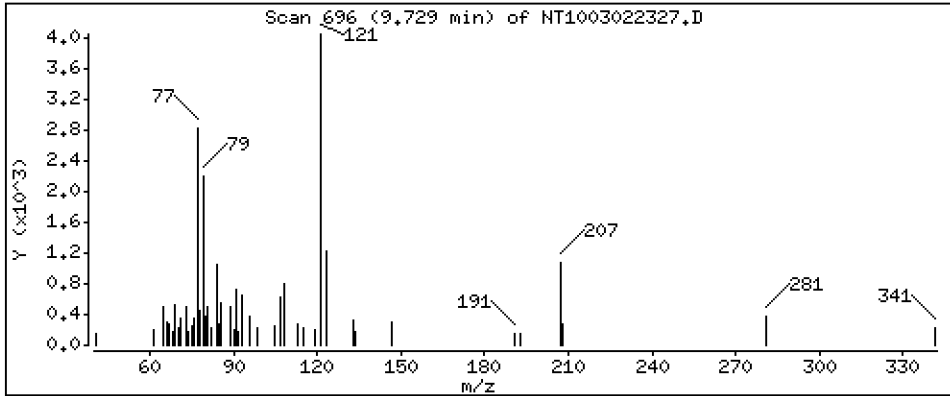
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,1576 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

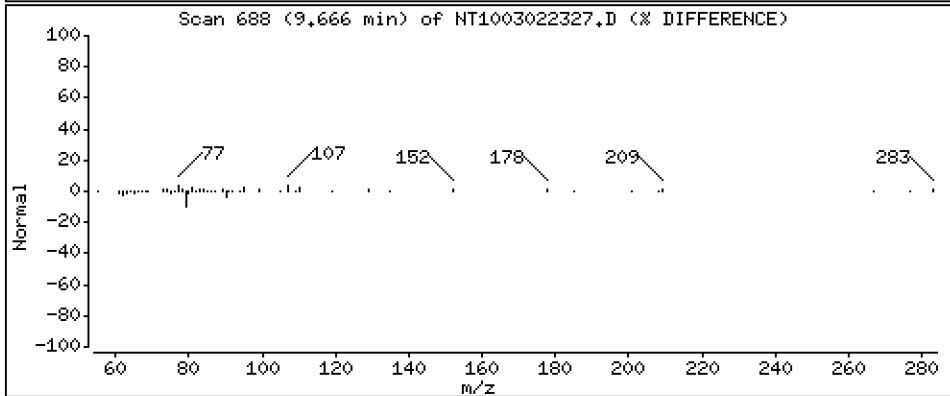
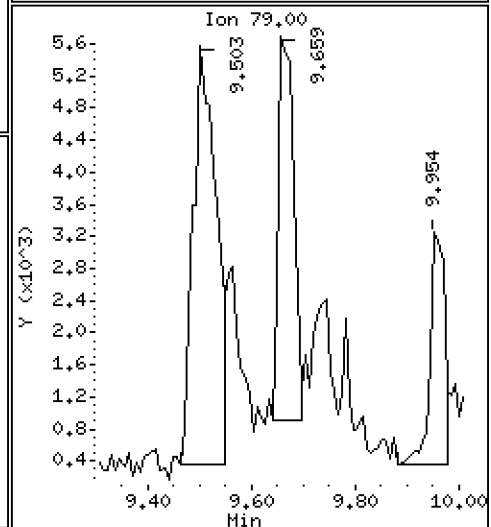
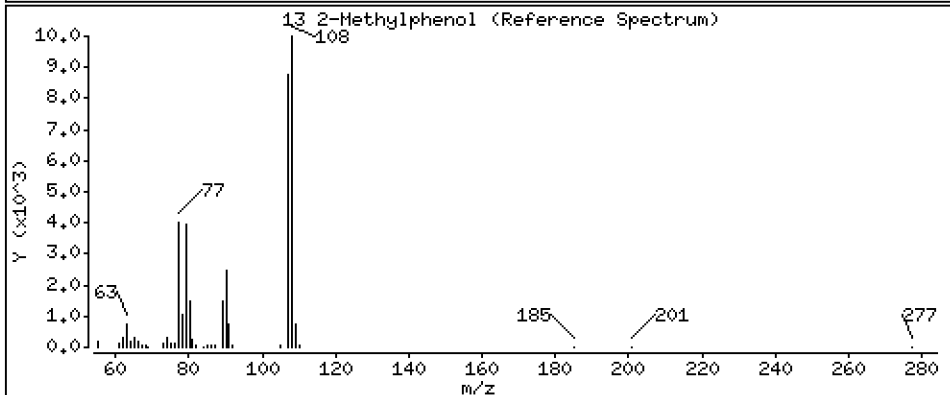
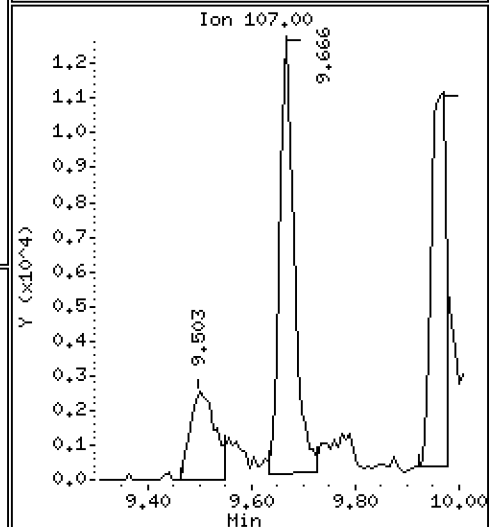
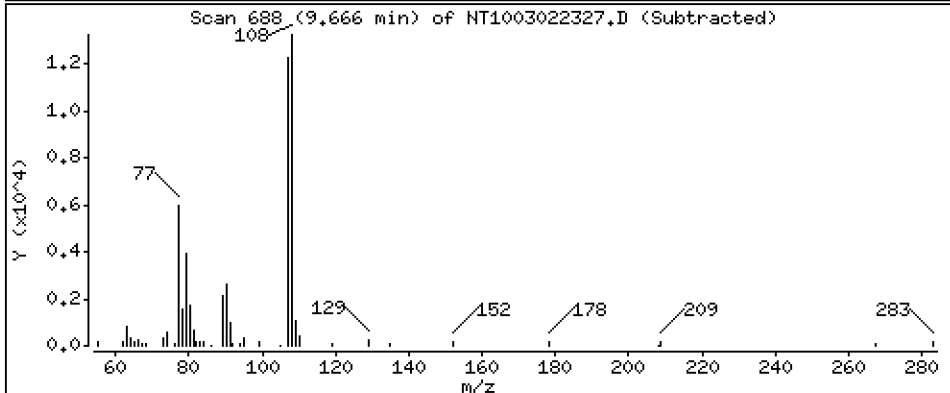
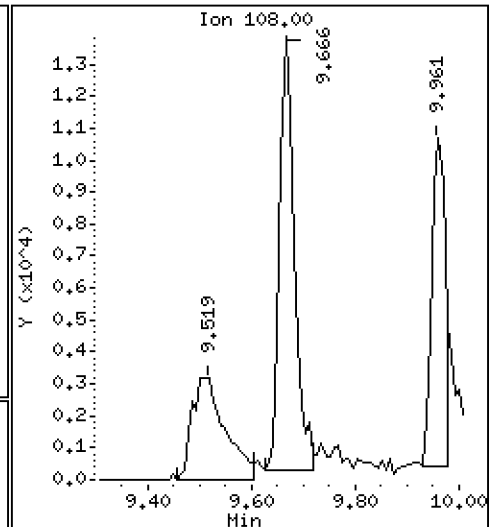
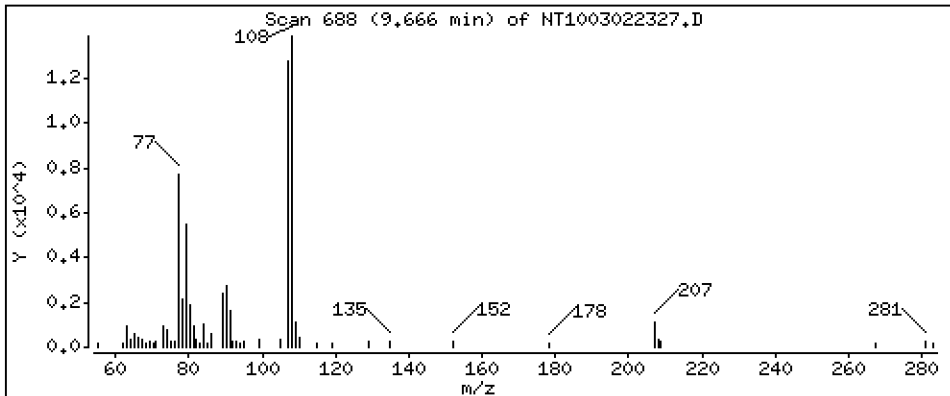
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1488 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

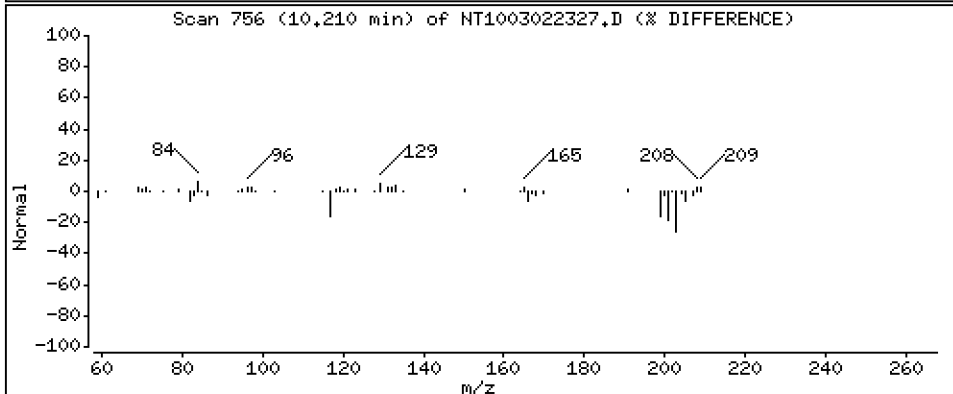
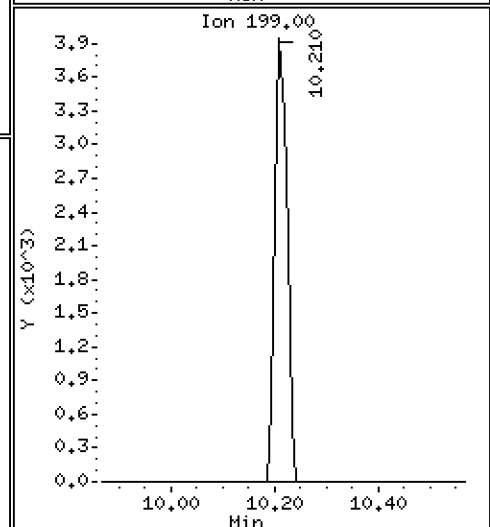
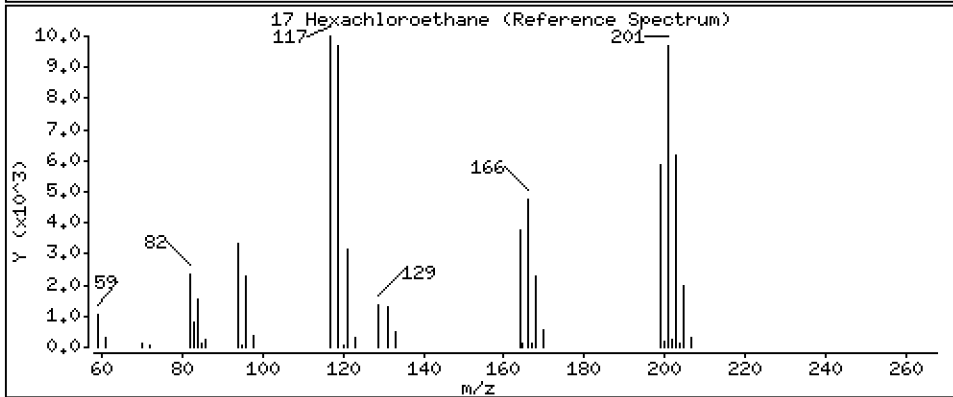
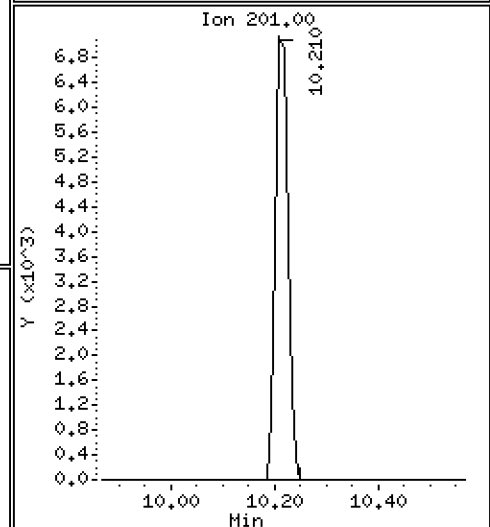
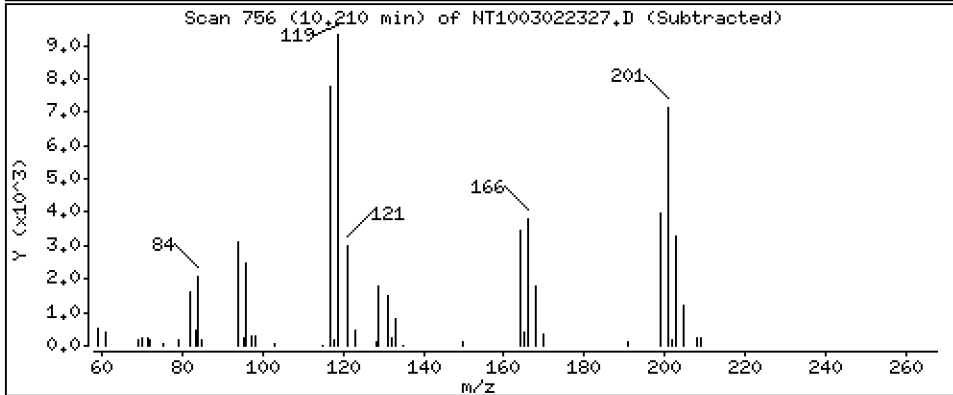
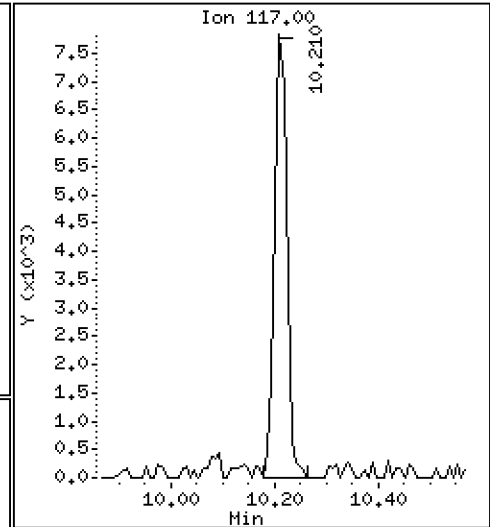
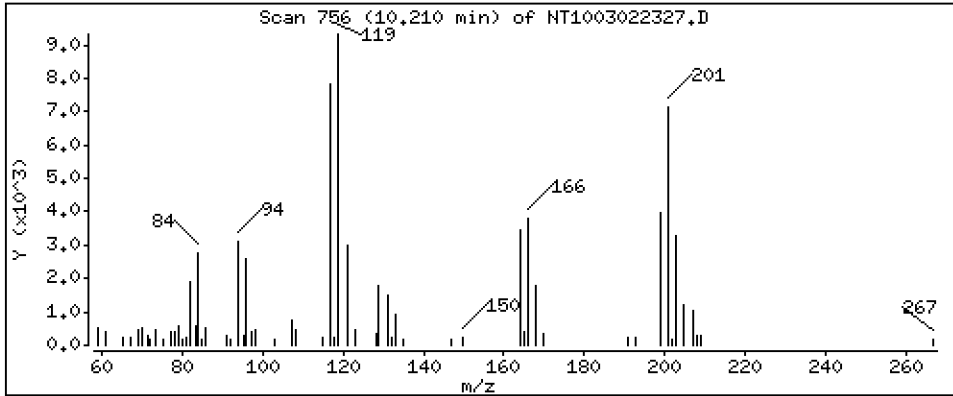
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

17 Hexachloroethane

Concentration: 0,1455 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

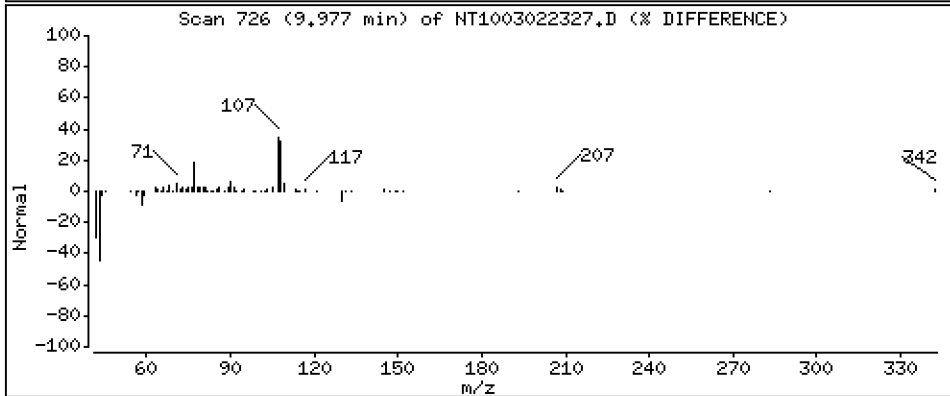
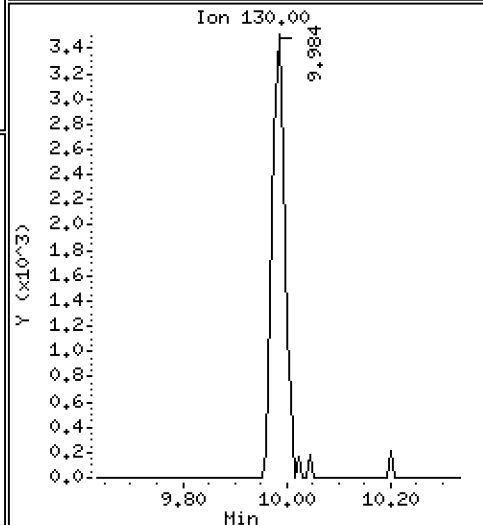
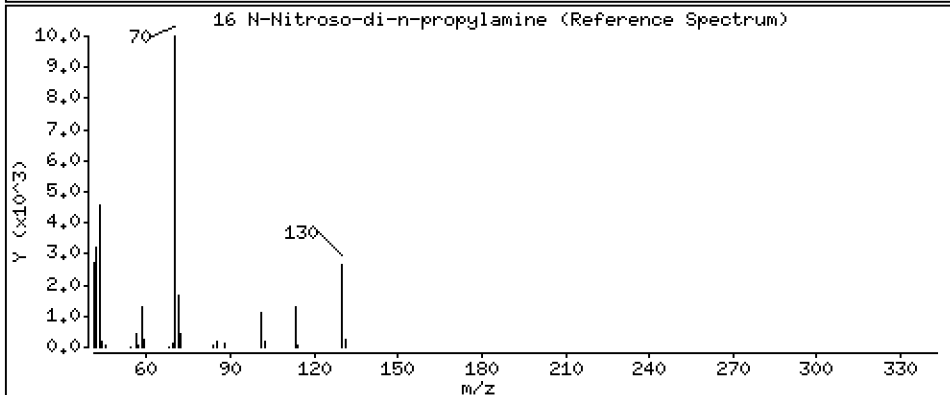
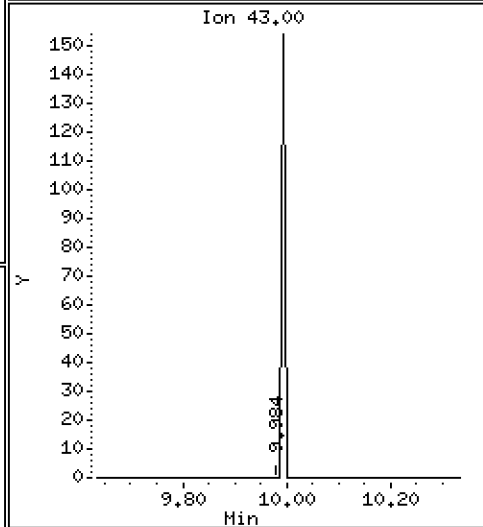
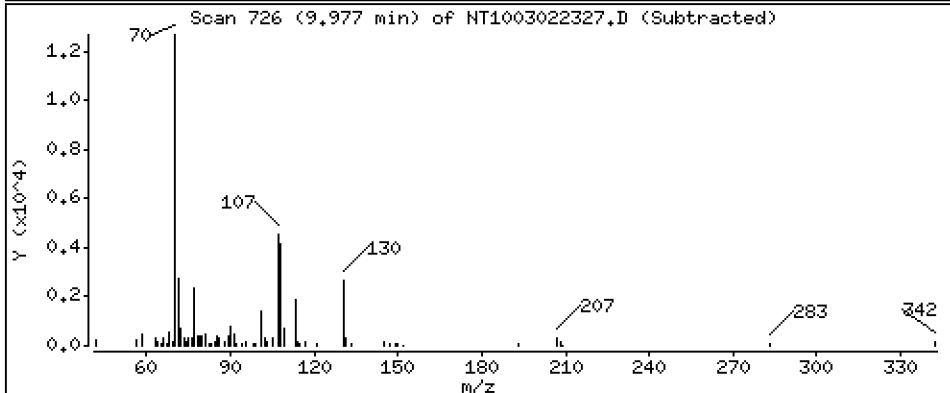
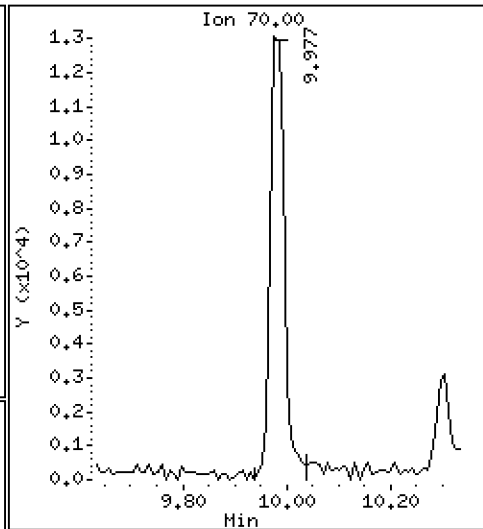
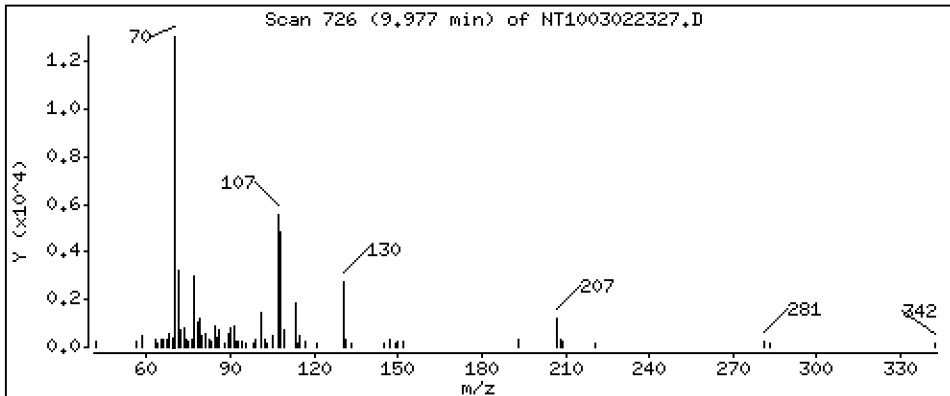
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 0,1774 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

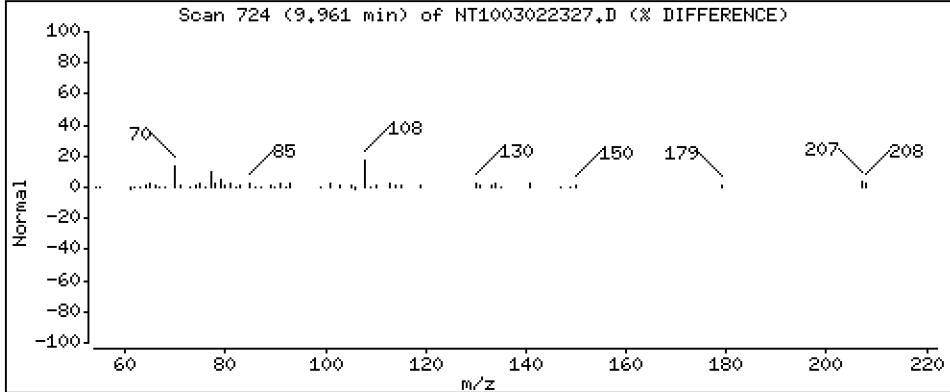
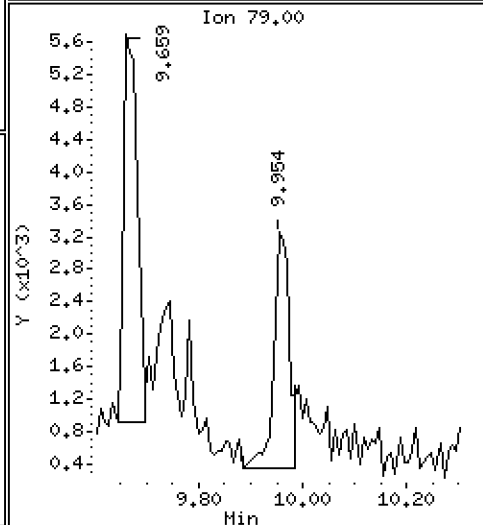
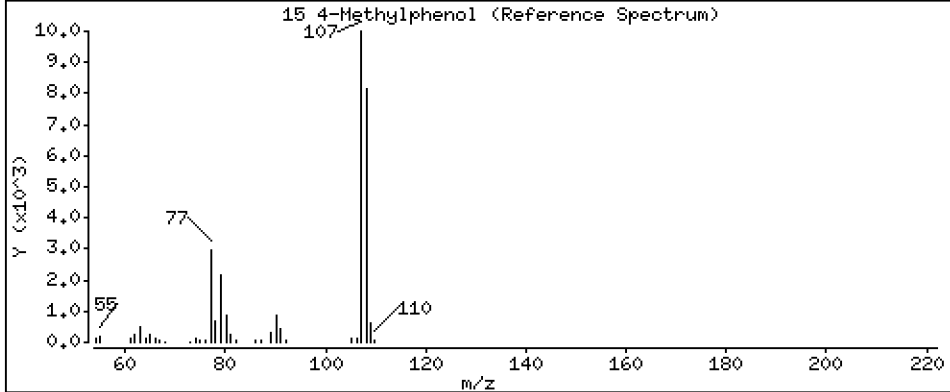
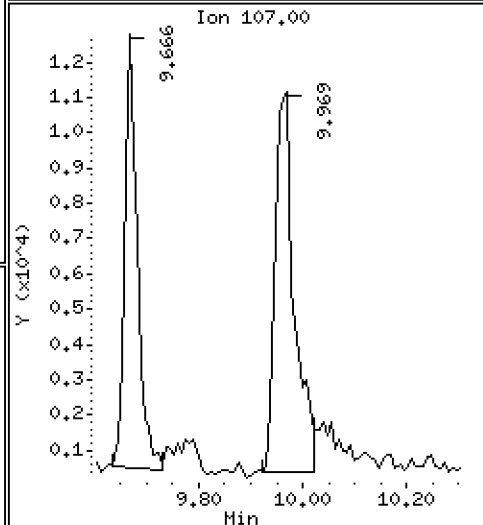
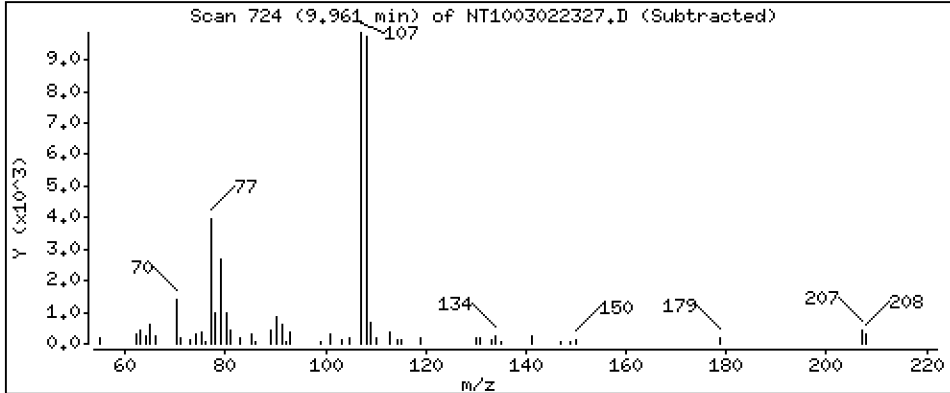
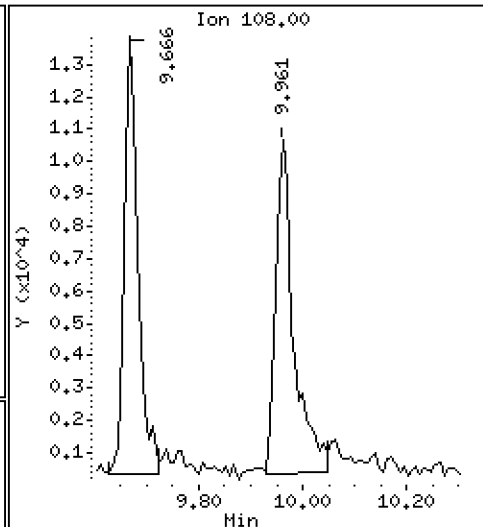
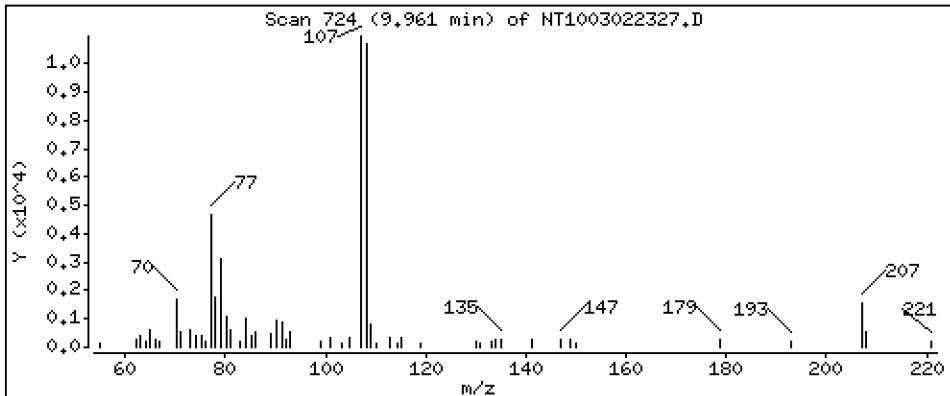
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1126 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

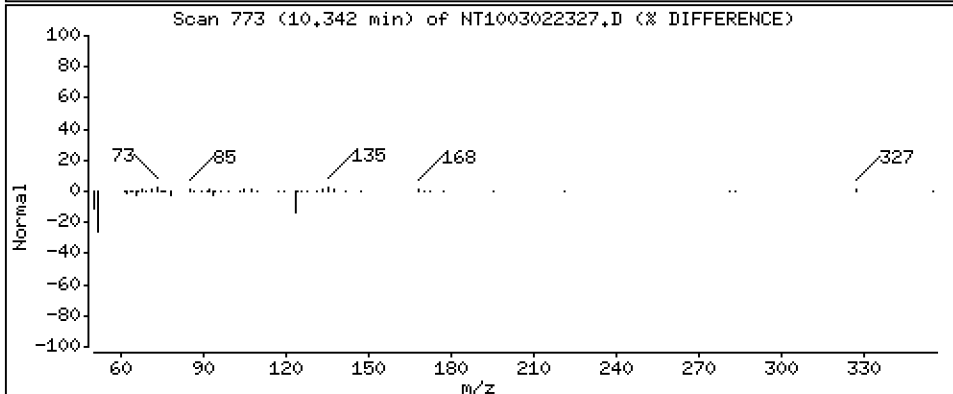
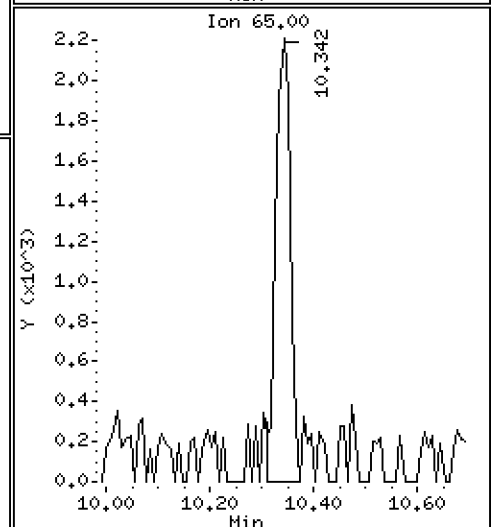
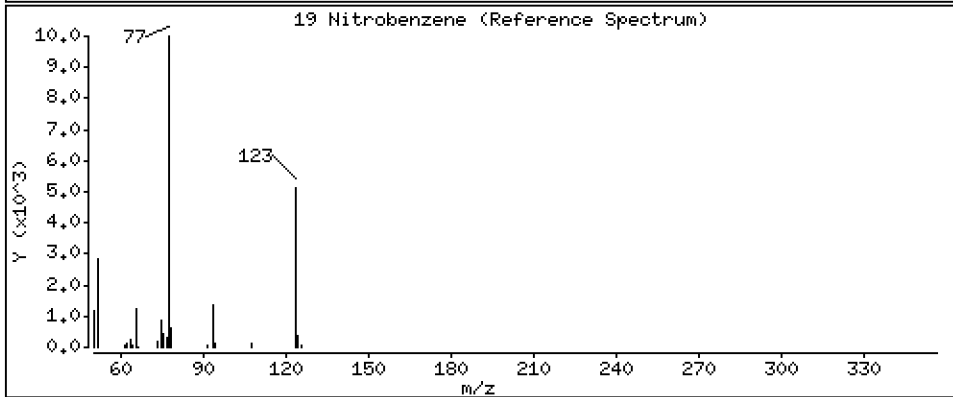
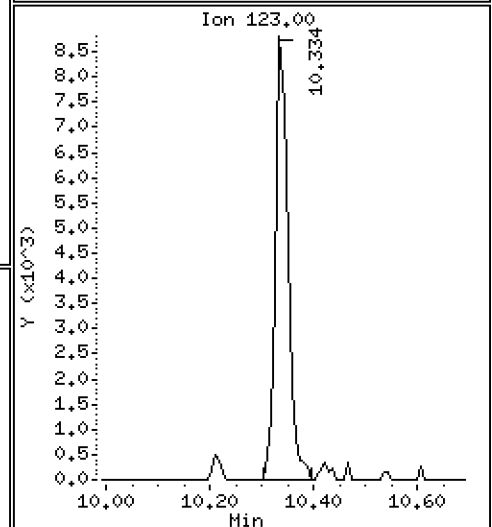
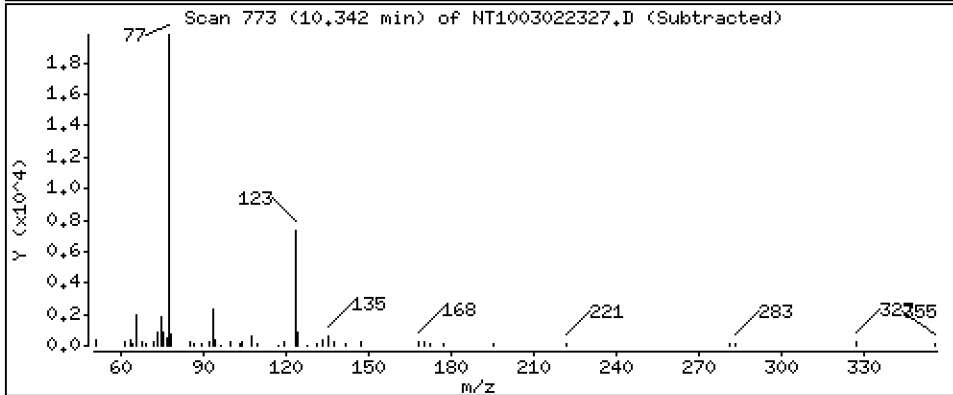
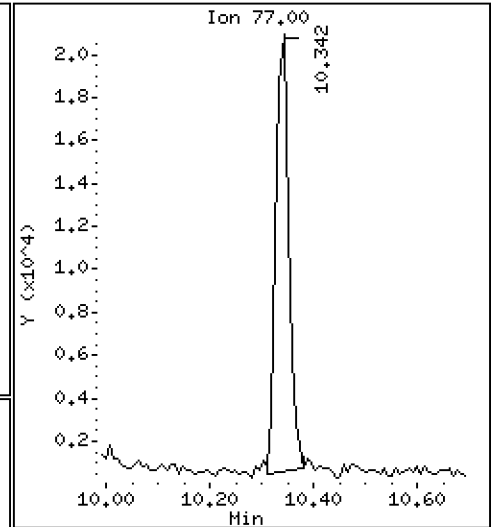
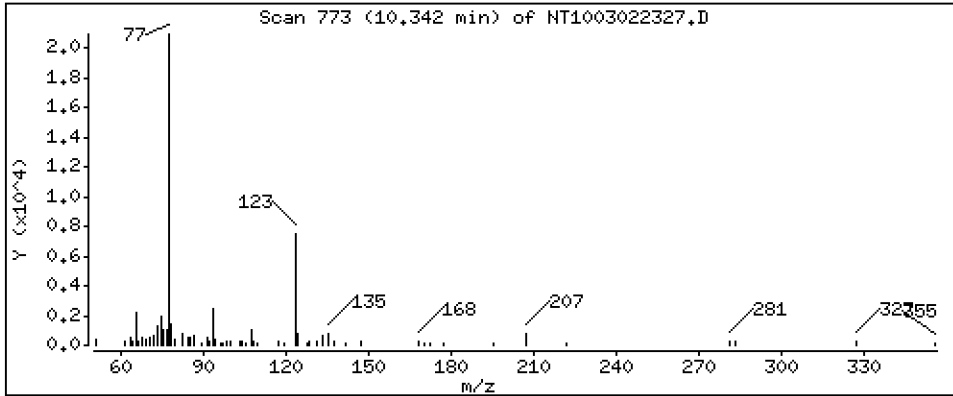
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,1551 ug/mL

19 Nitrobenzene



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

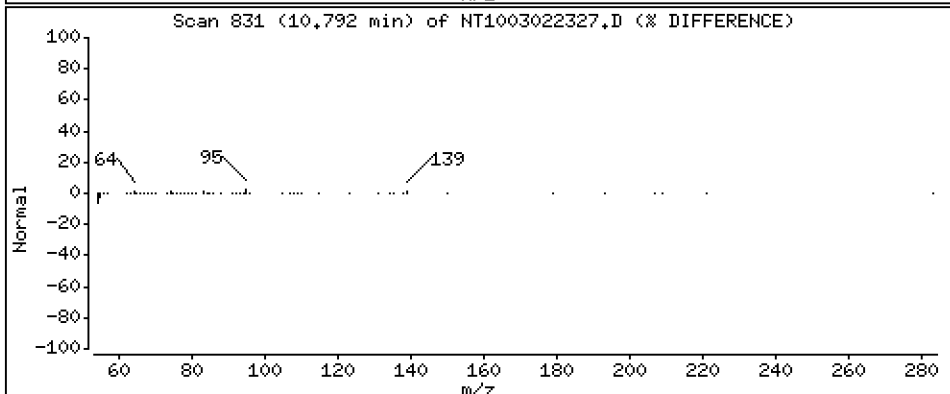
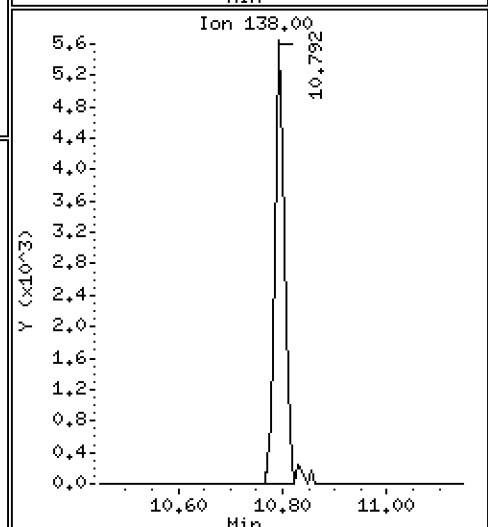
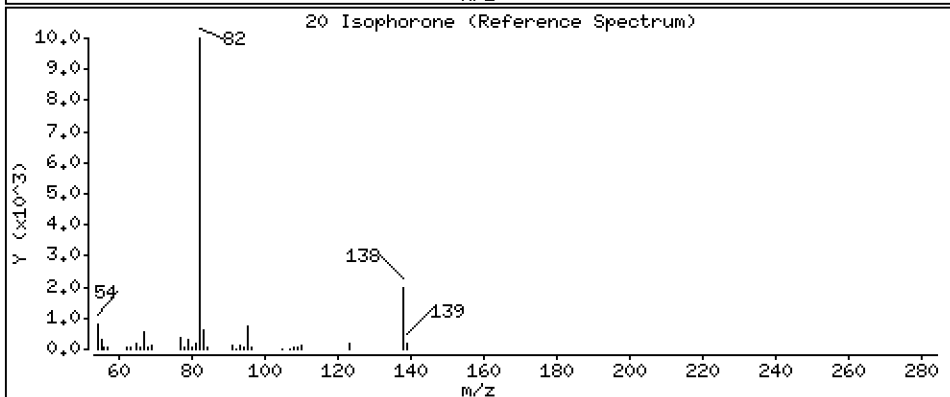
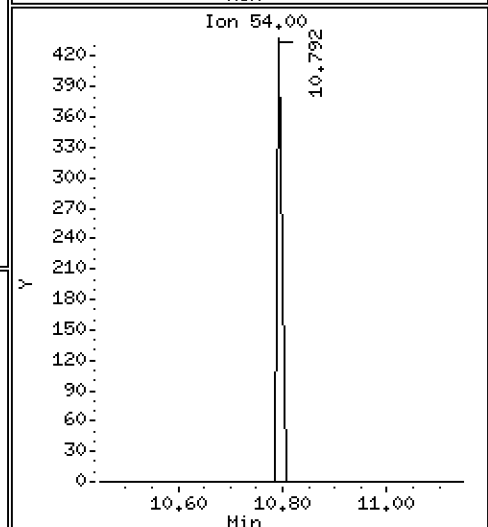
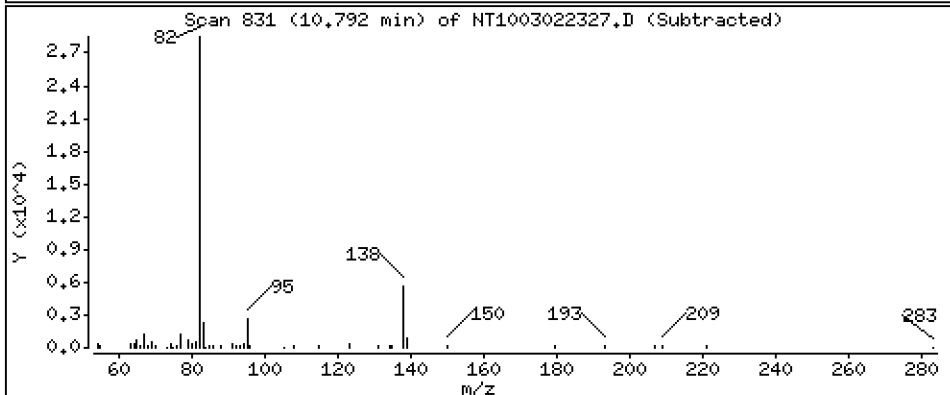
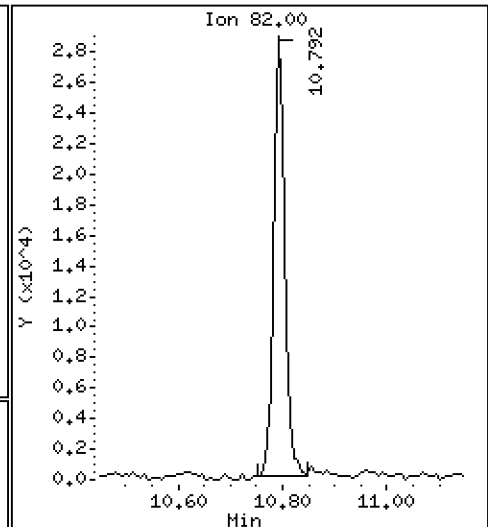
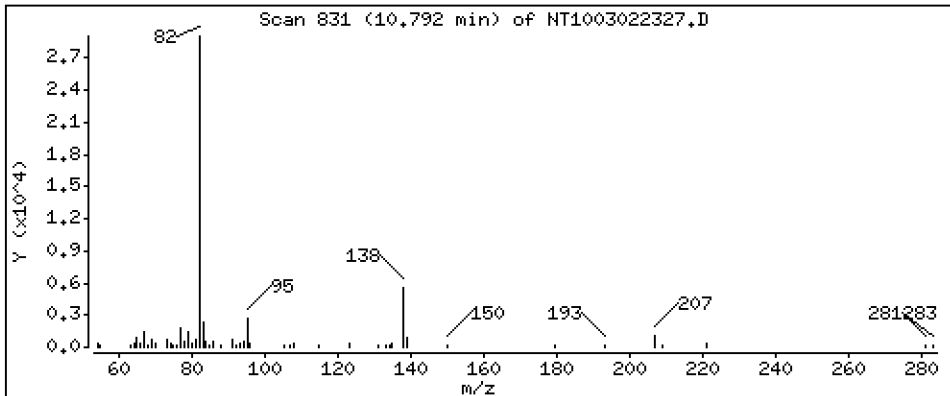
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

20 Isophorone

Concentration: 0,1594 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

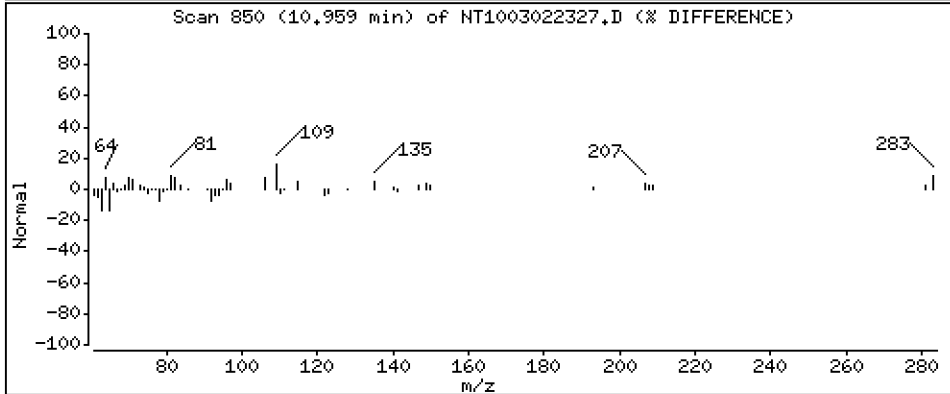
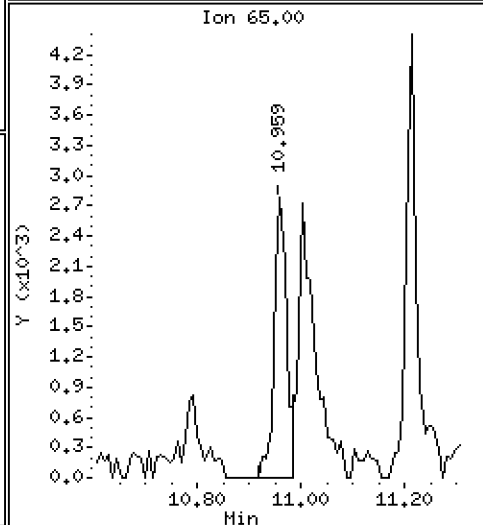
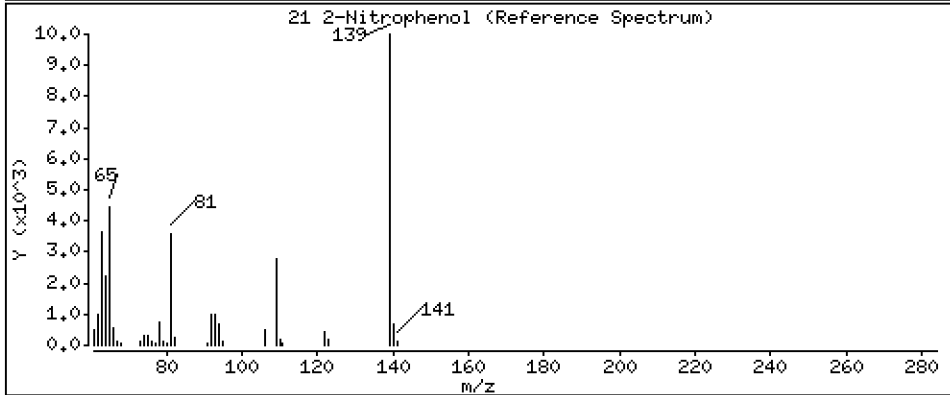
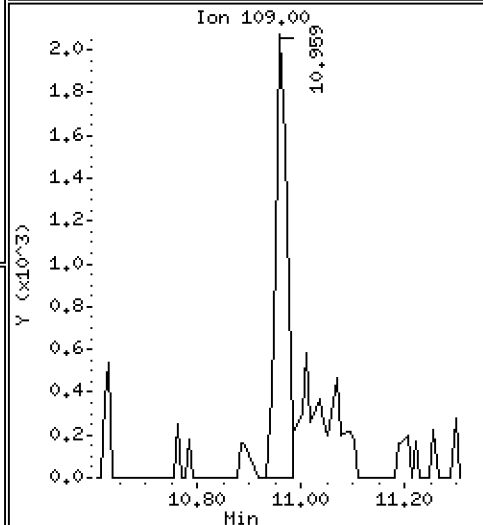
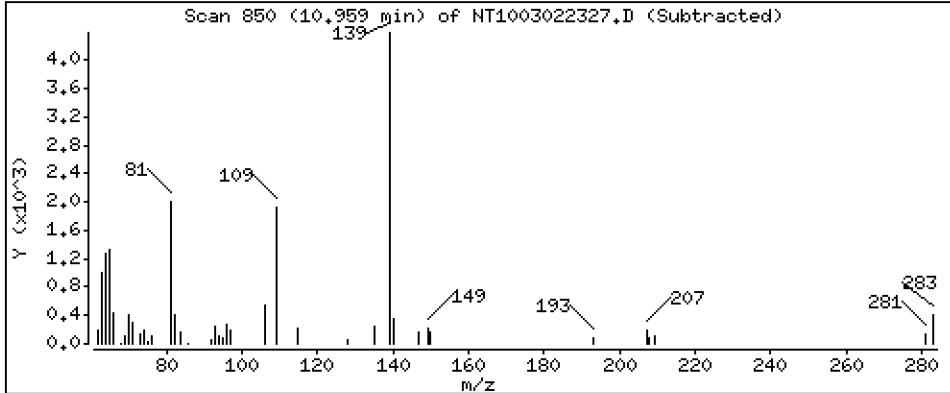
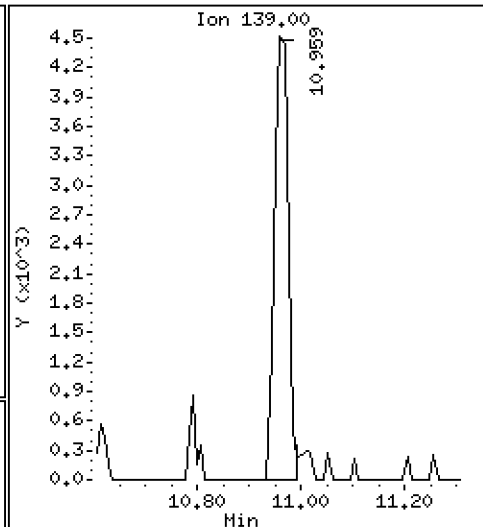
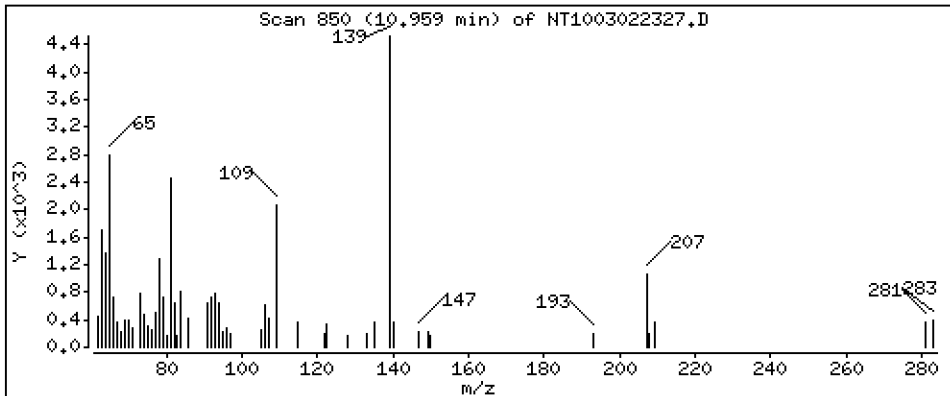
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

21 2-Nitrophenol

Concentration: 0,06980 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

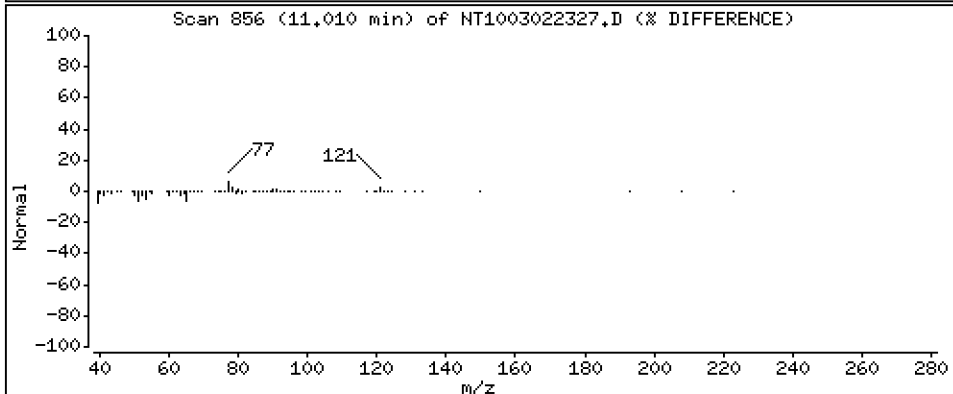
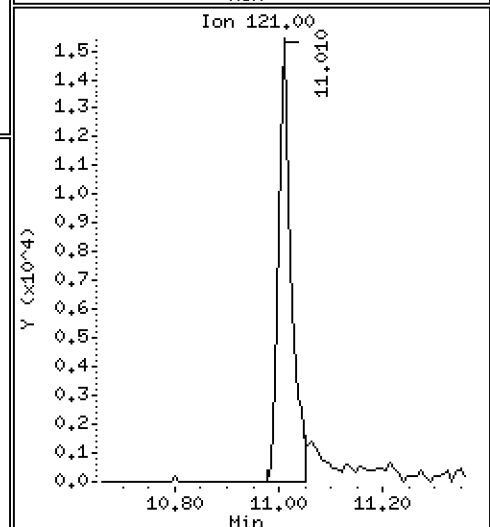
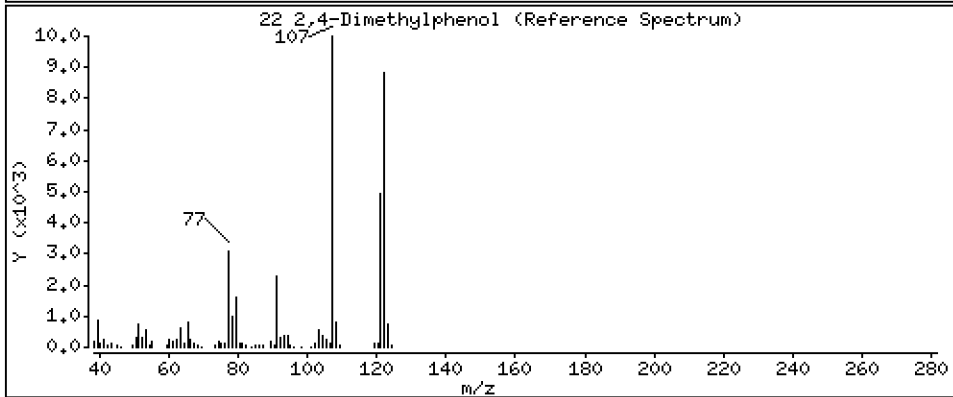
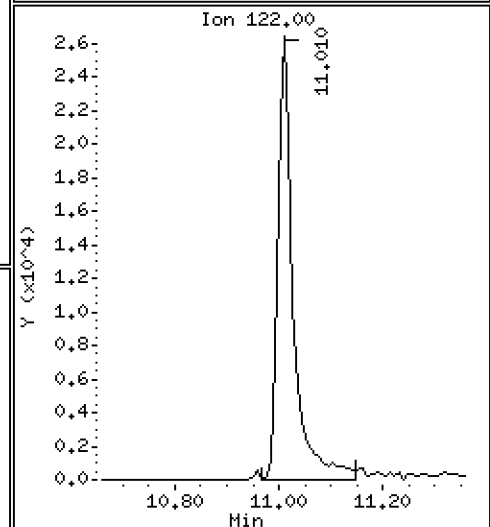
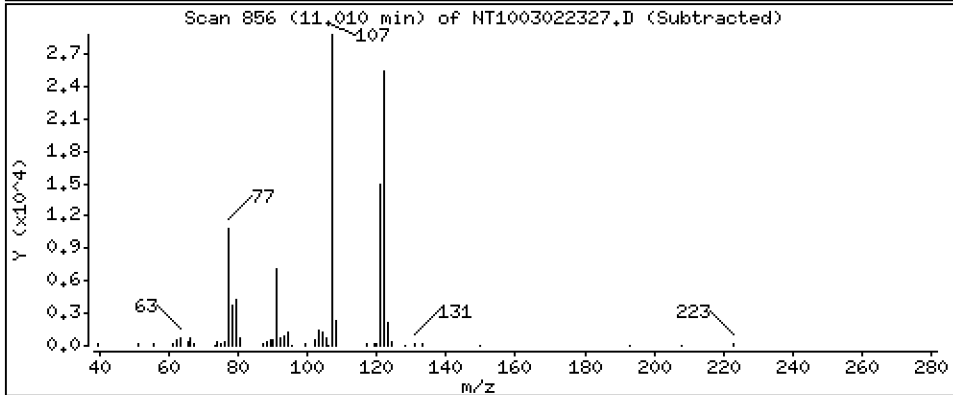
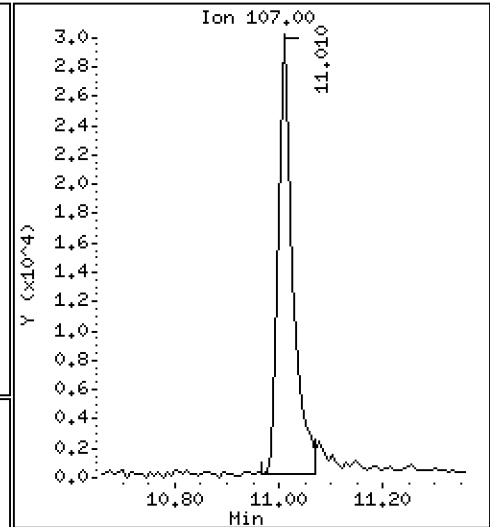
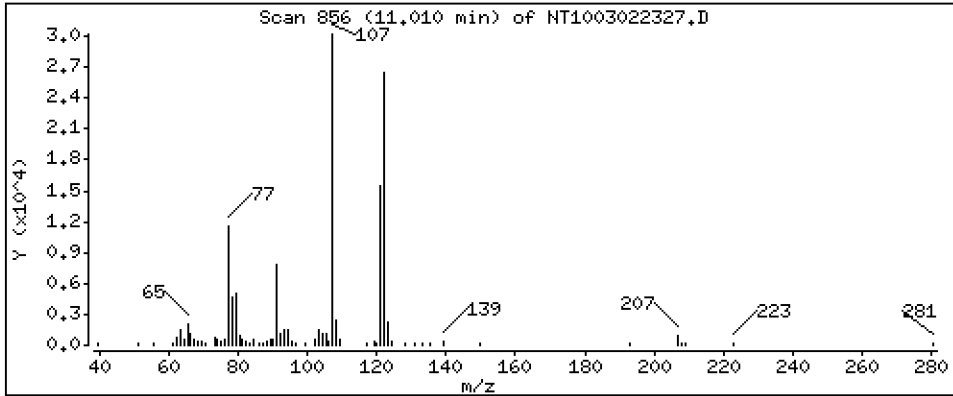
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,2856 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

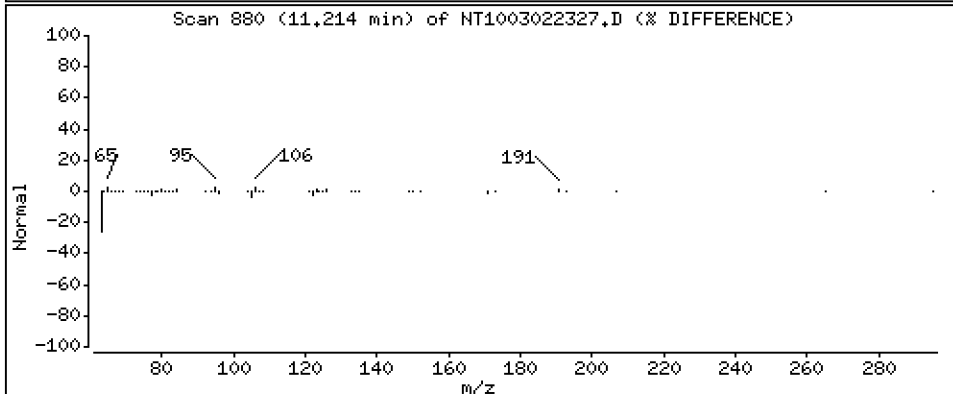
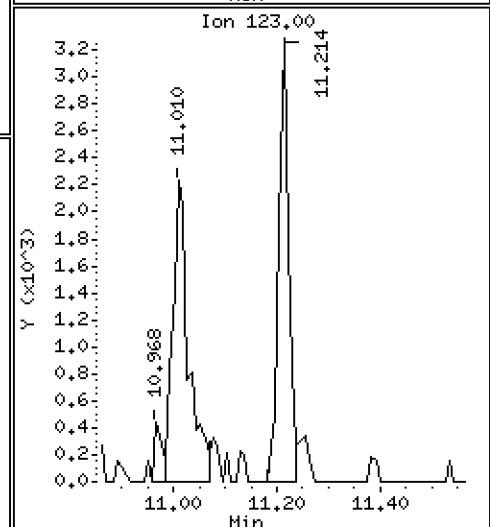
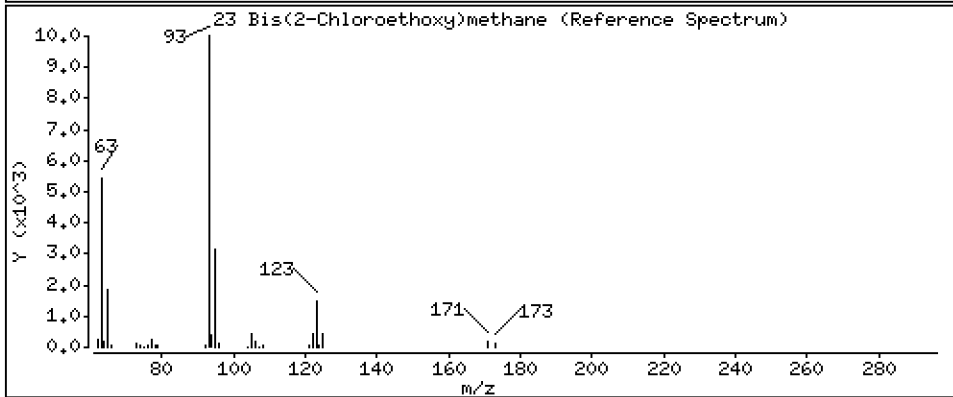
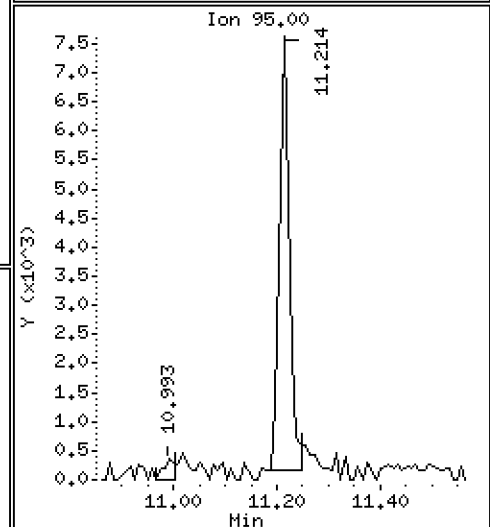
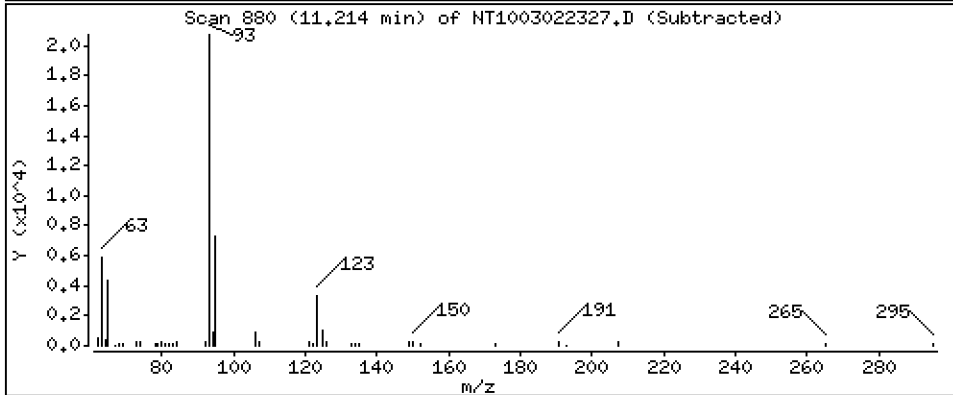
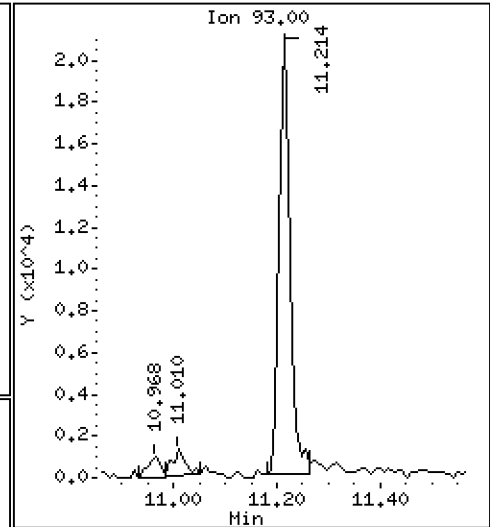
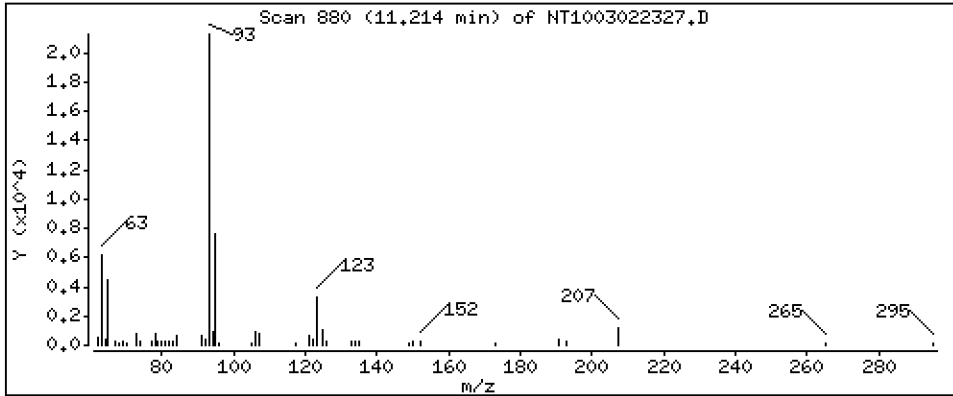
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

23 Bis(2-Chloroethoxy)methane

Concentration: 0,1815 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

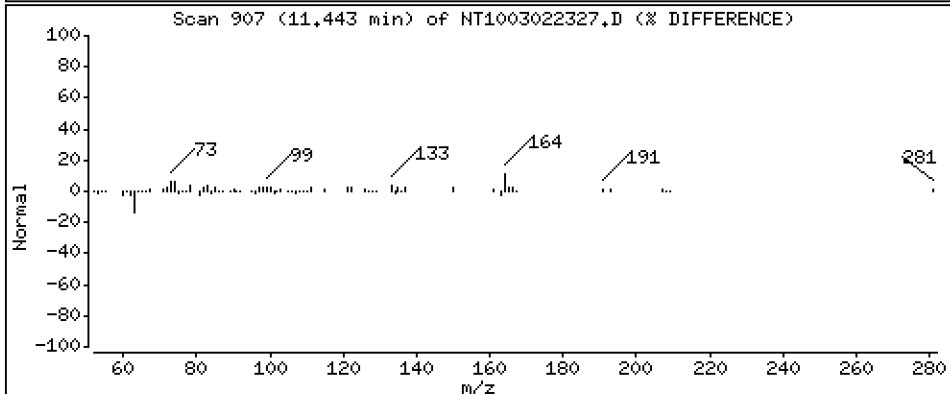
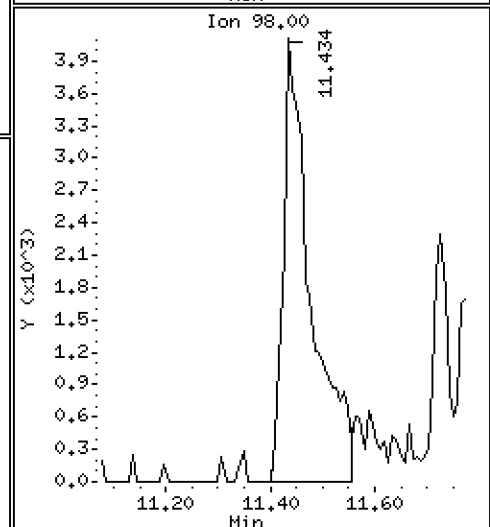
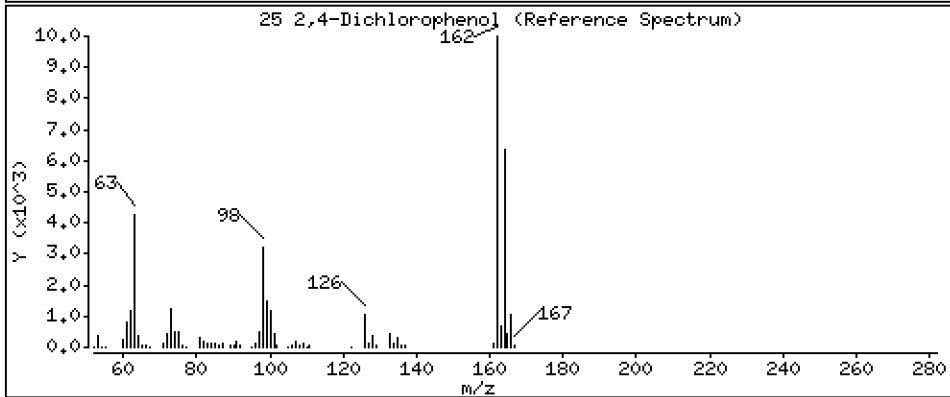
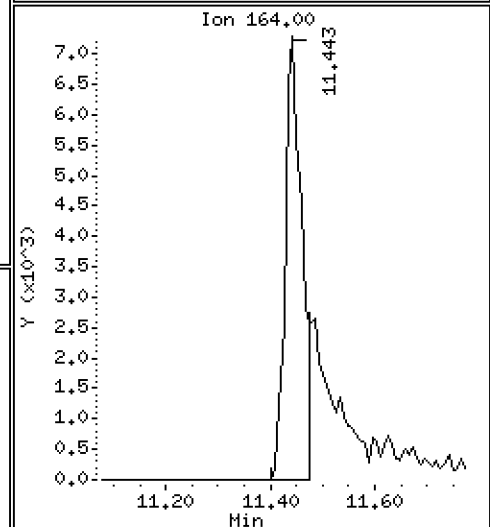
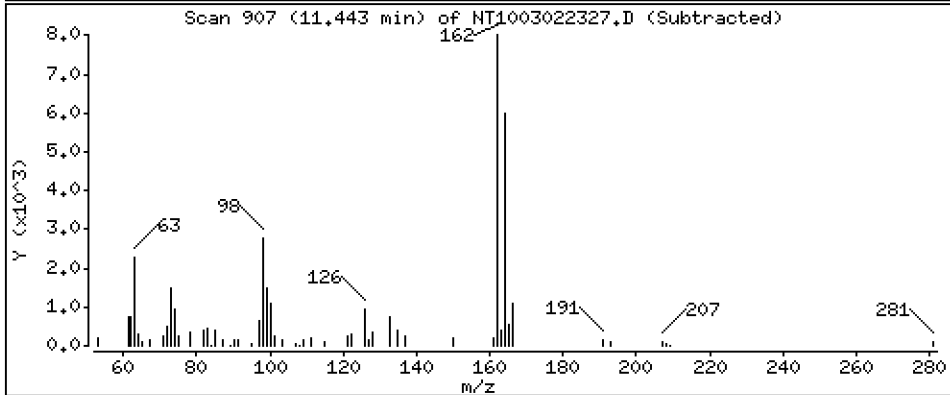
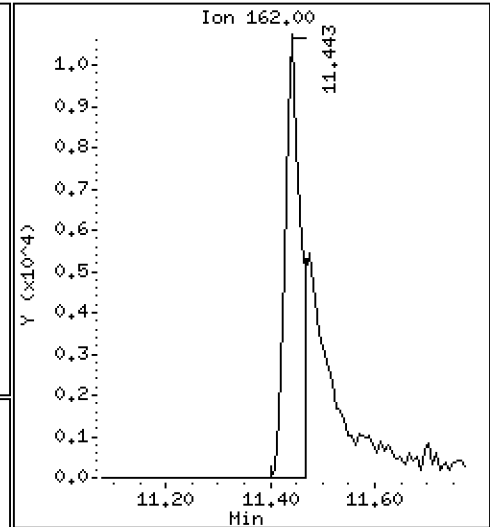
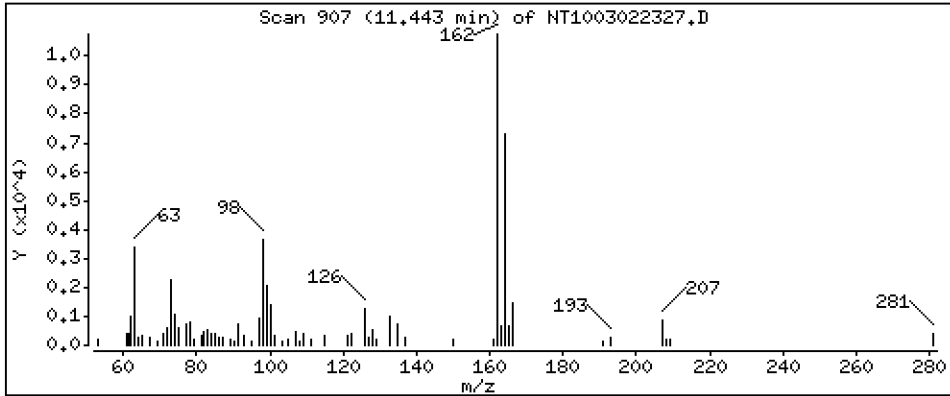
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

25 2,4-Dichlorophenol

Concentration: 0,1401 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

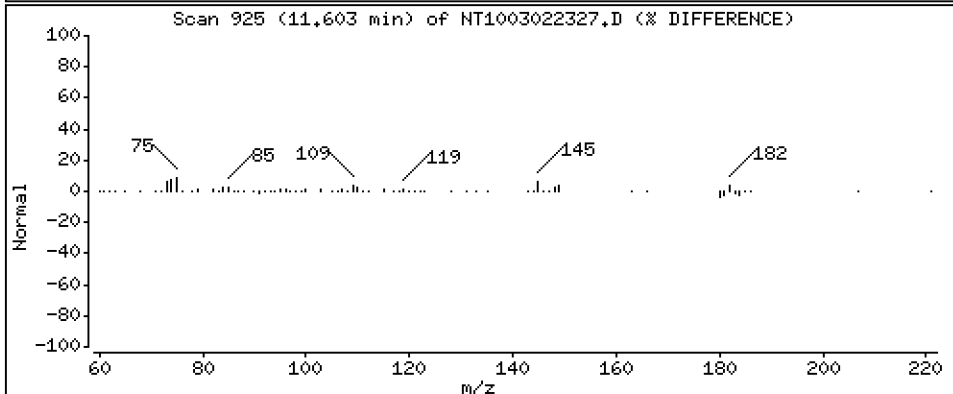
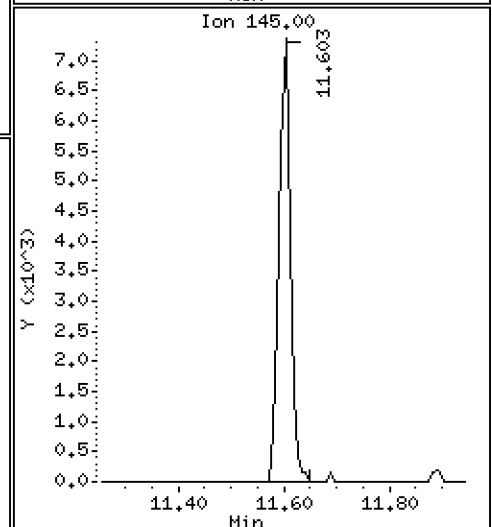
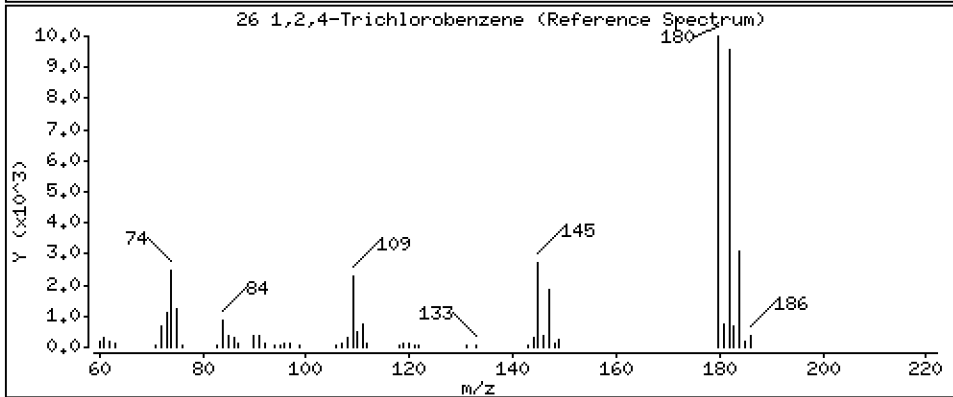
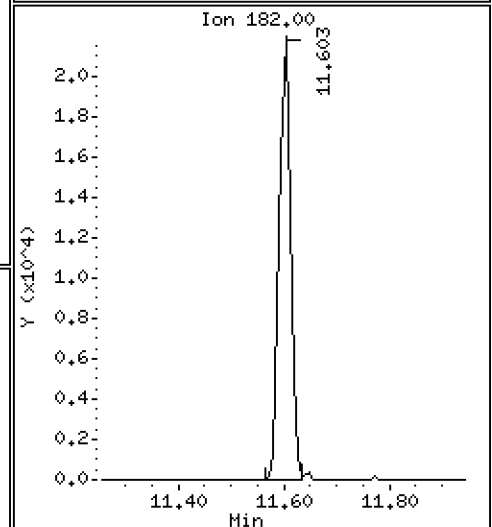
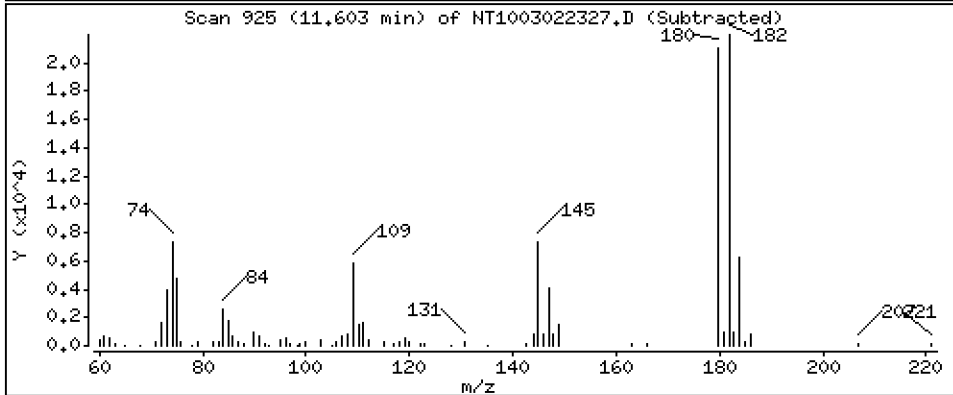
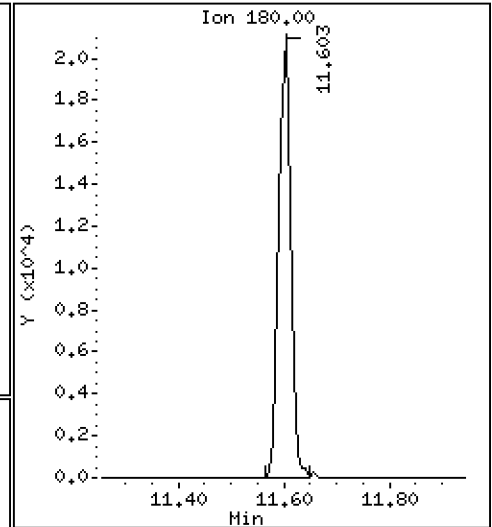
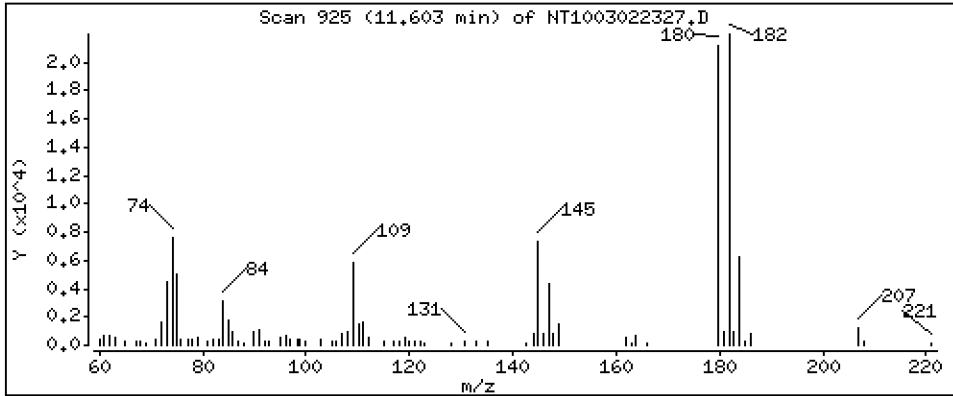
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,1943 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

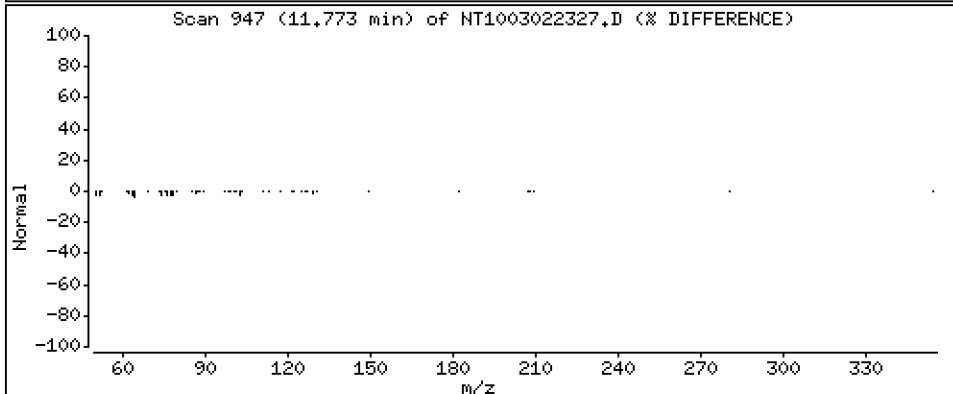
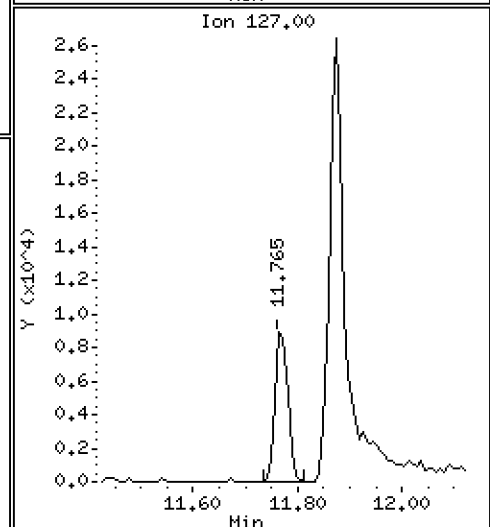
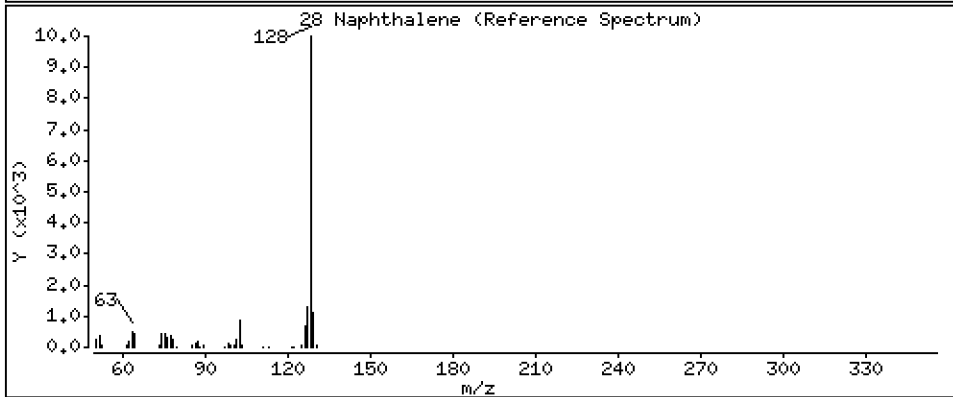
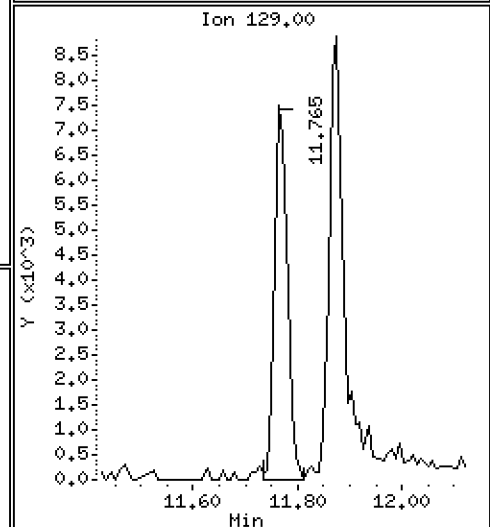
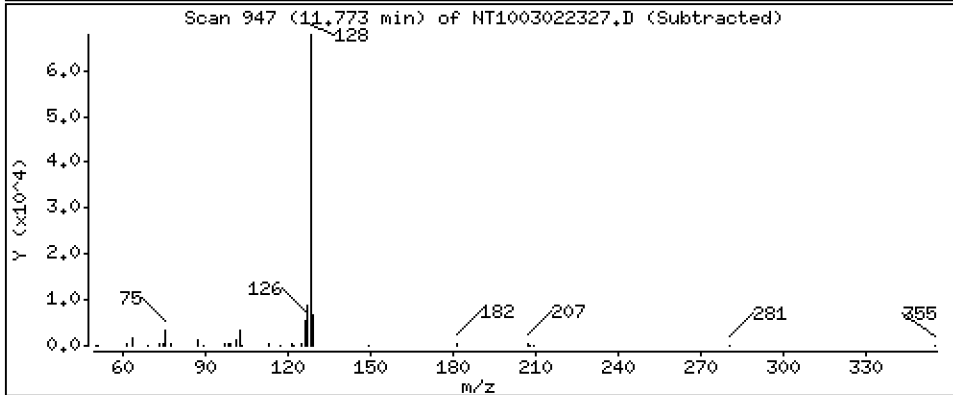
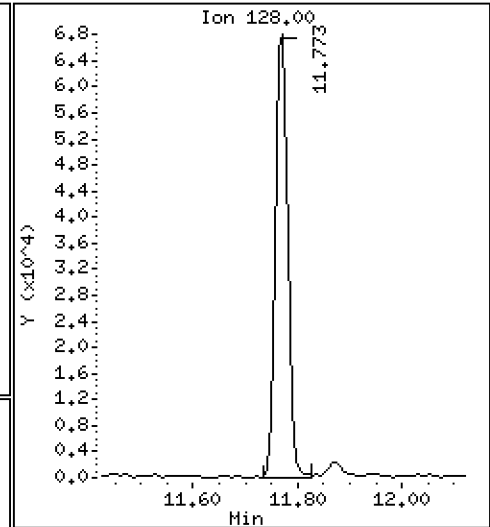
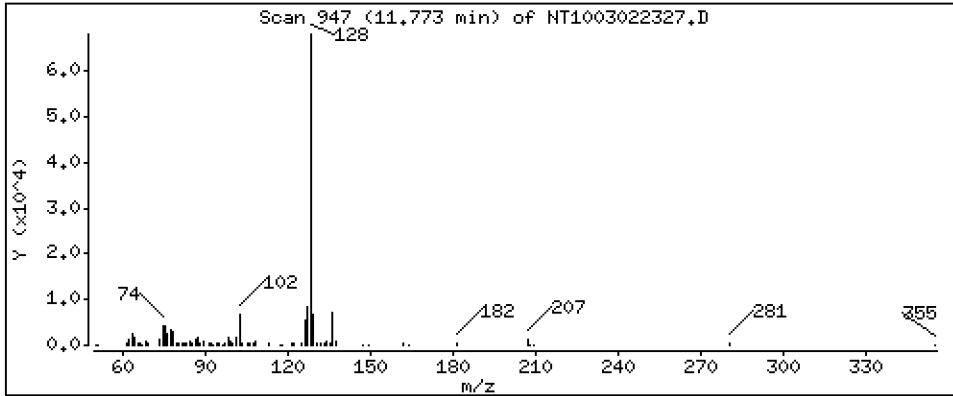
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

28 Naphthalene

Concentration: 0,1972 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

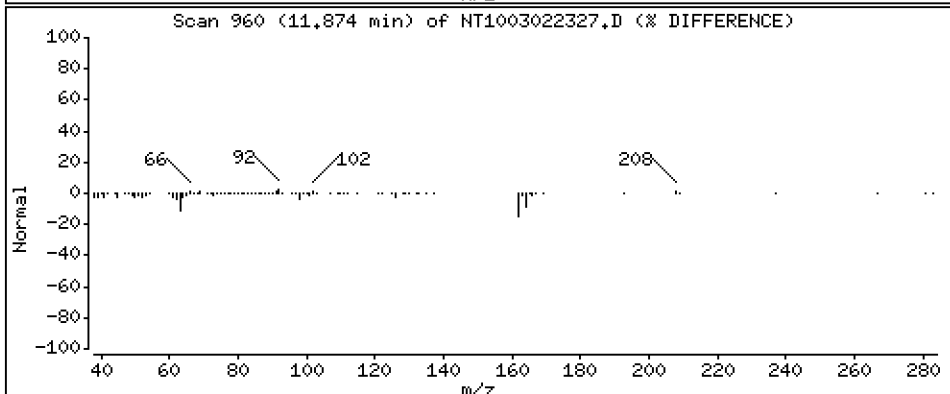
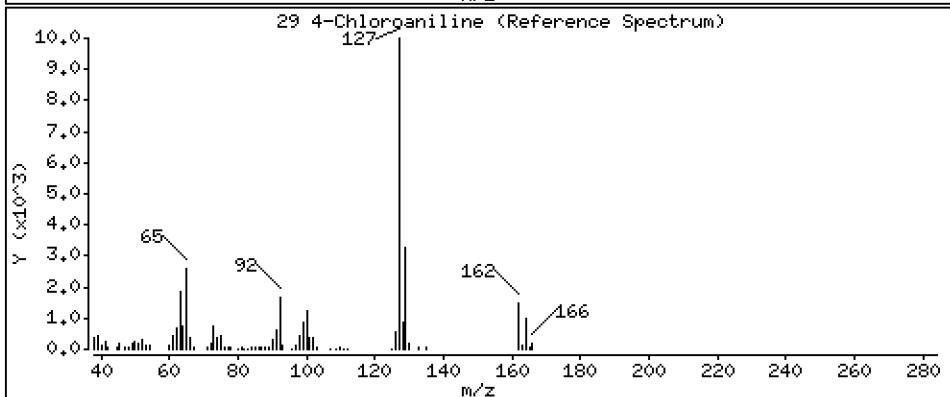
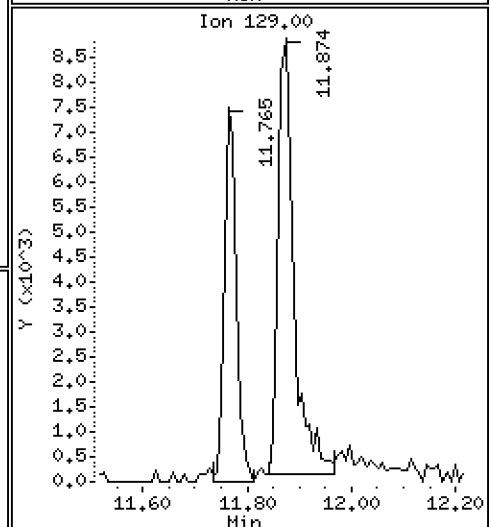
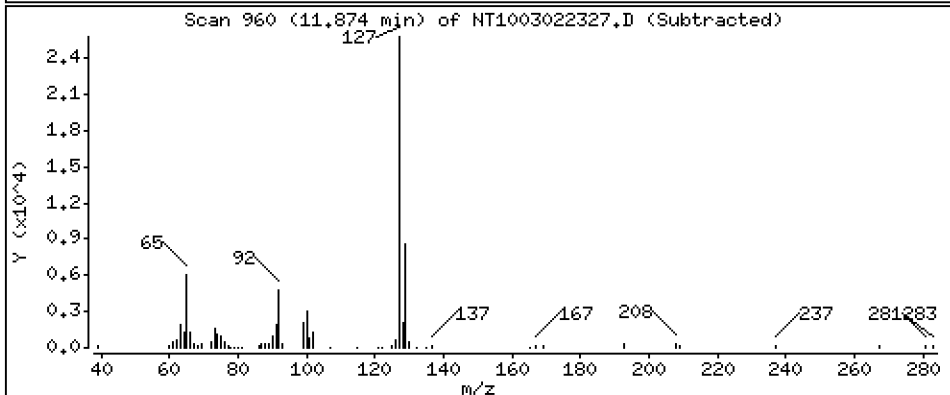
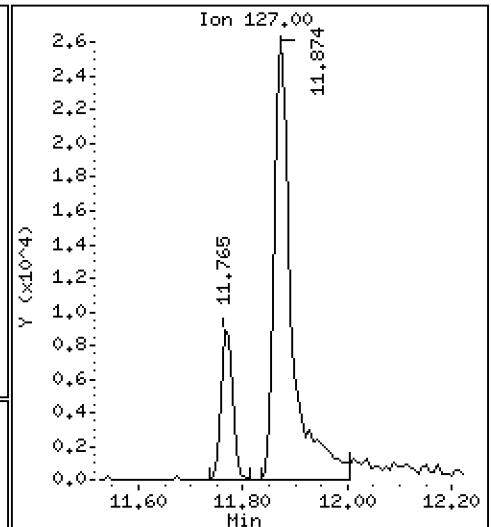
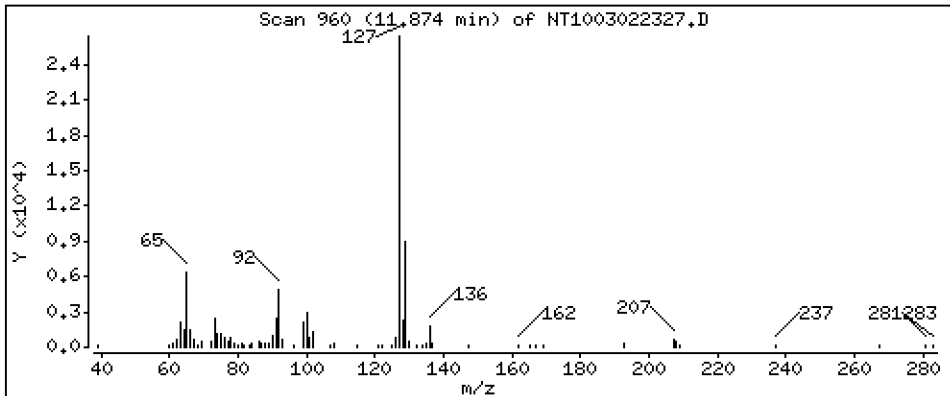
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

29 4-Chloroaniline

Concentration: 0,2703 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

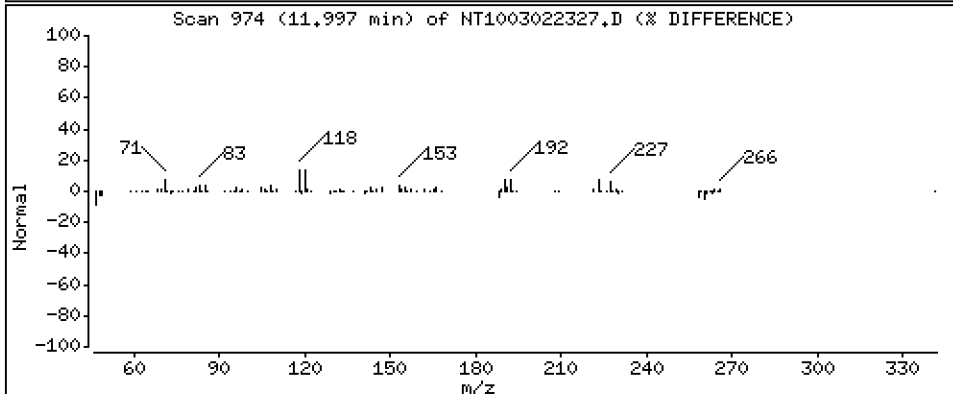
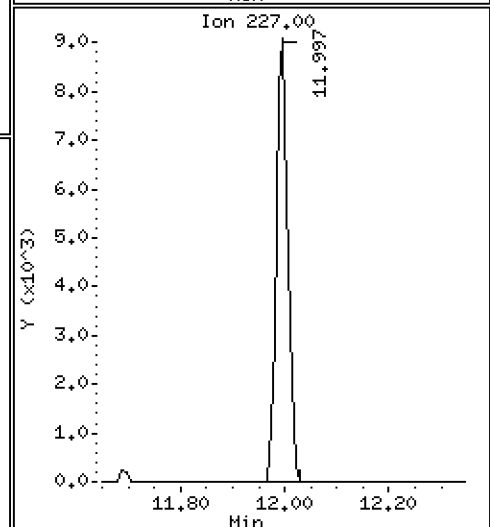
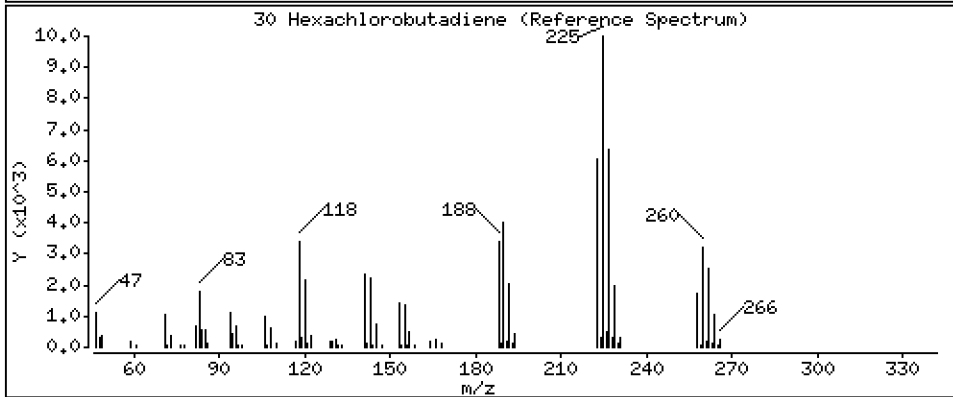
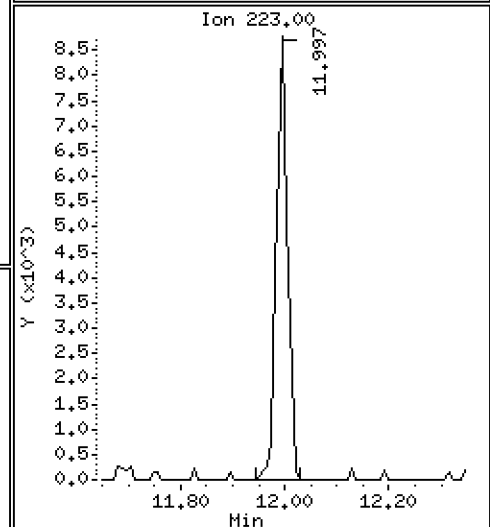
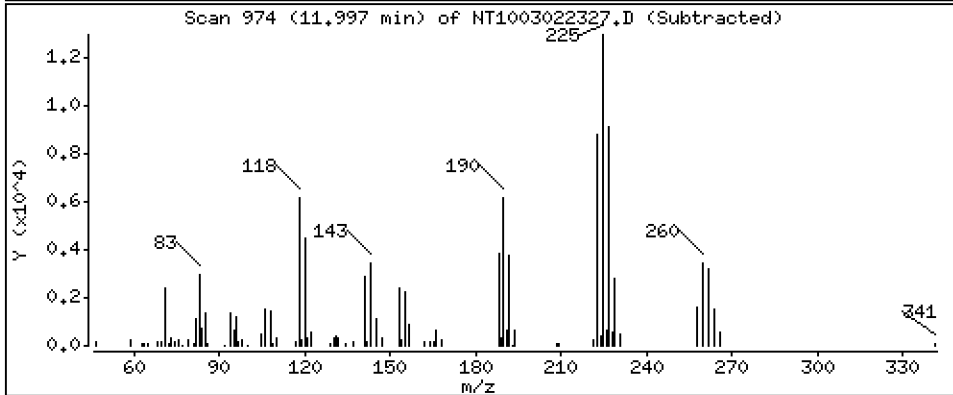
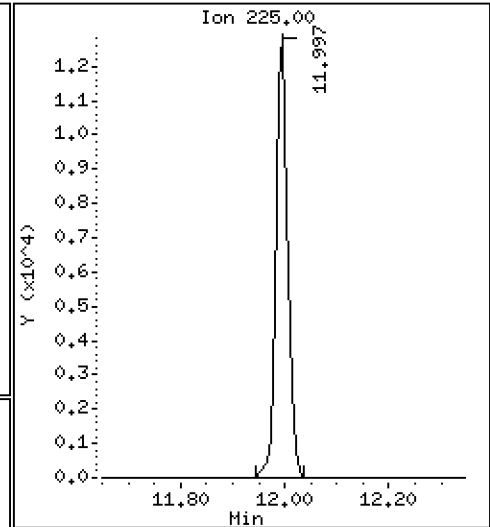
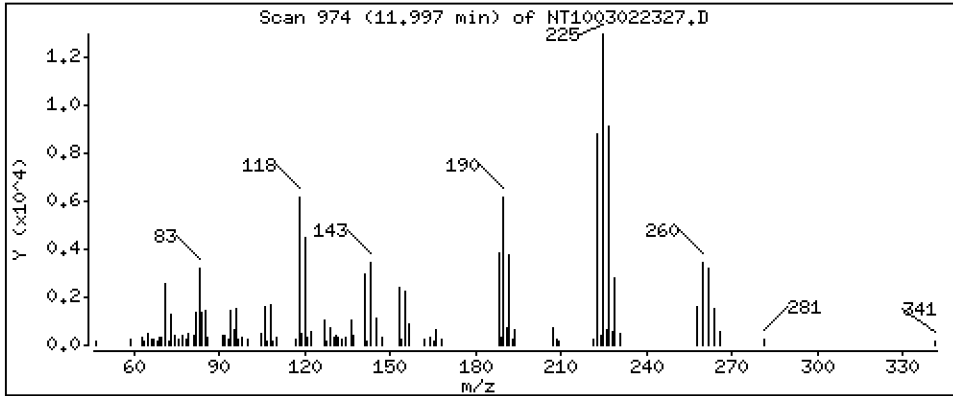
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,1993 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

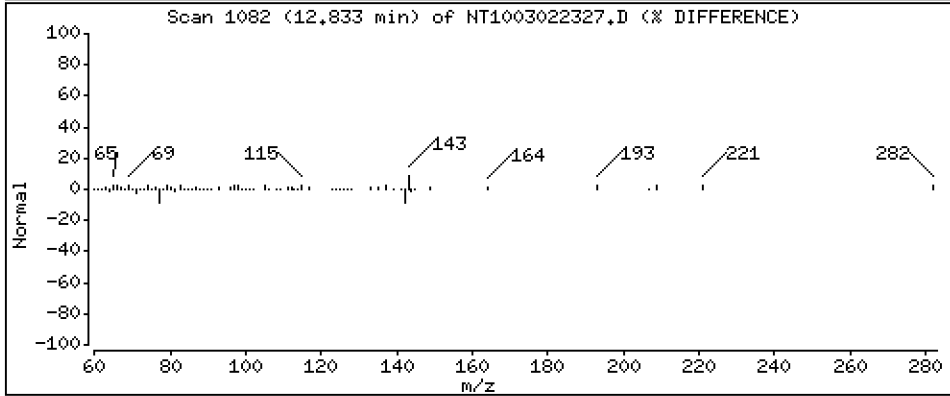
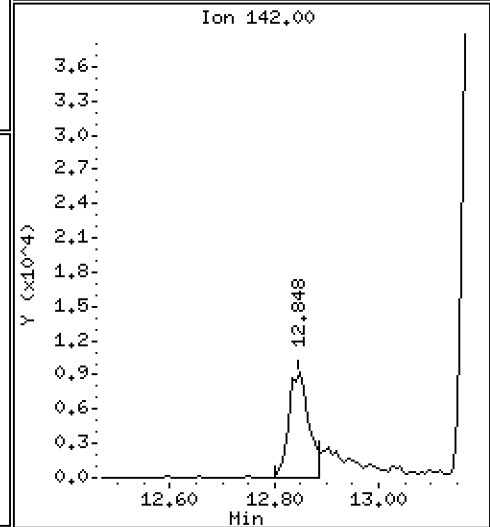
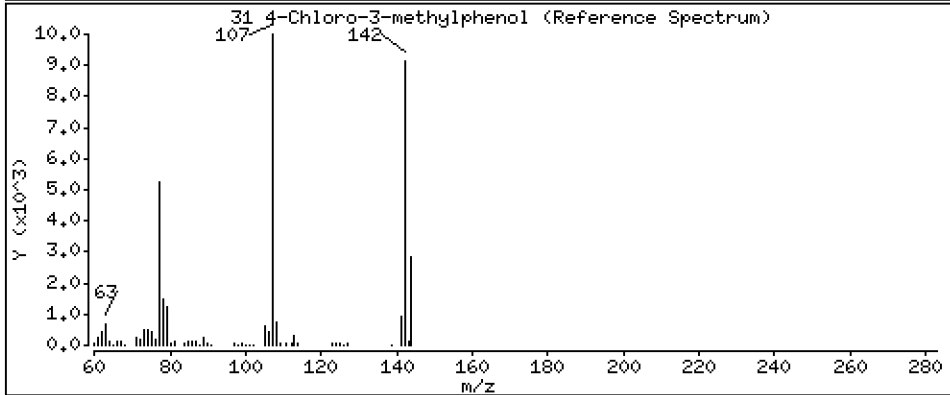
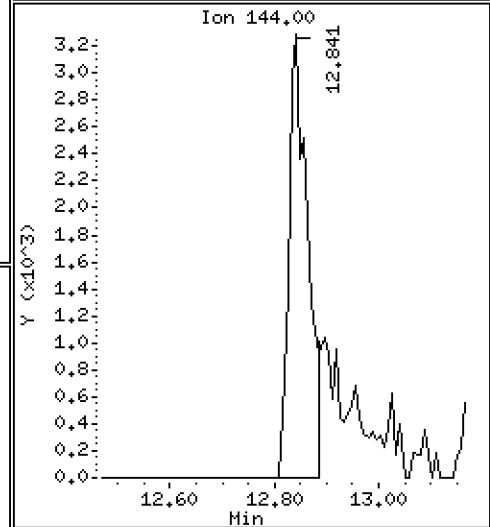
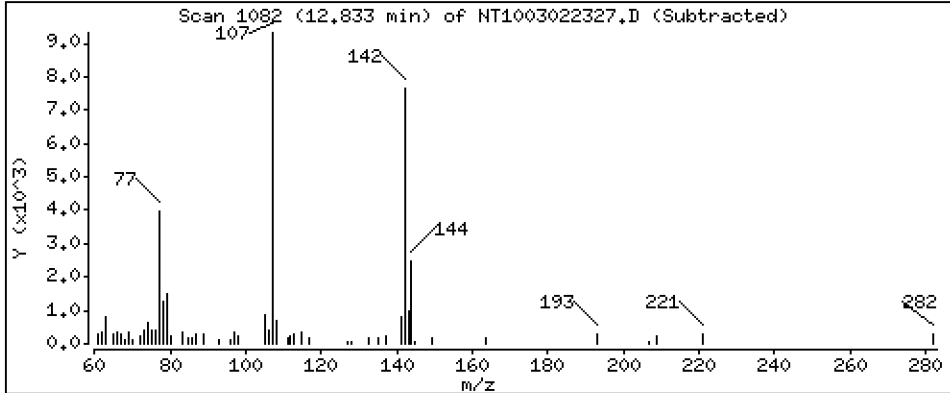
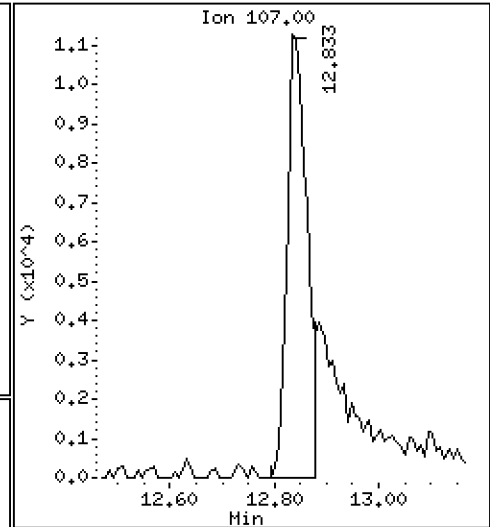
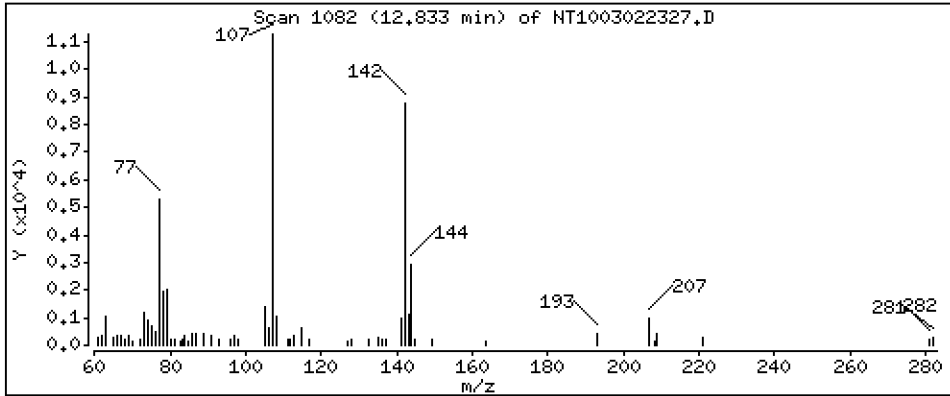
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

31 4-Chloro-3-methylphenol

Concentration: 0.1769 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

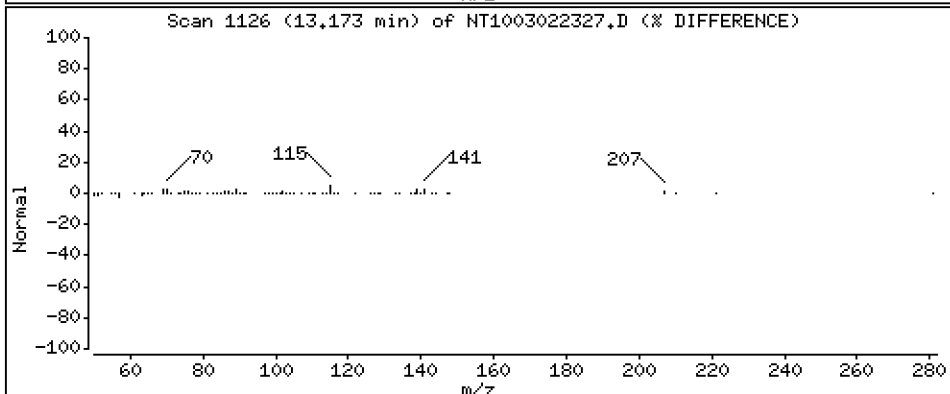
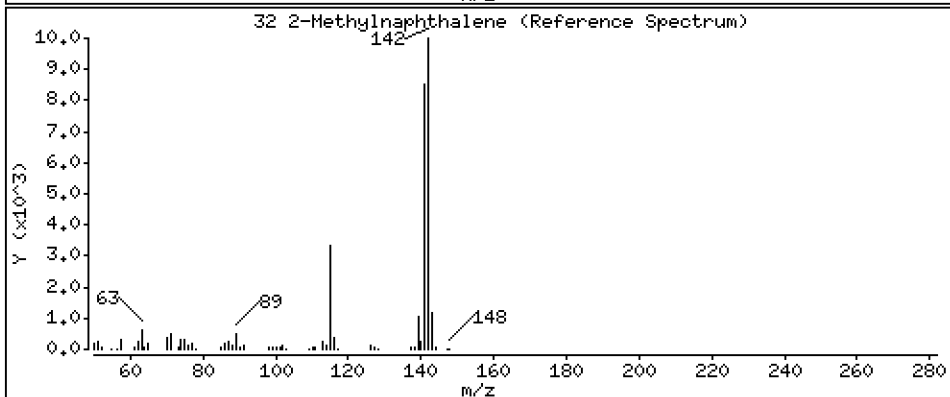
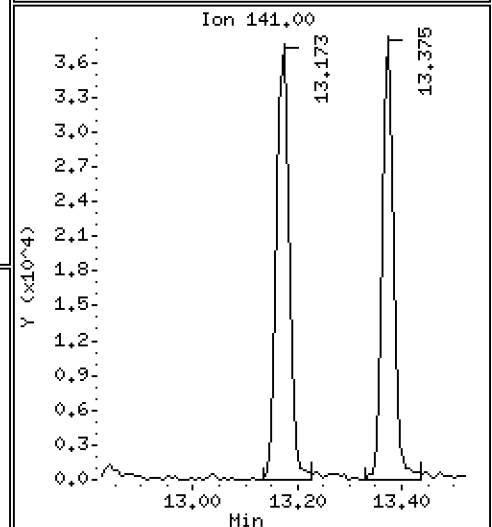
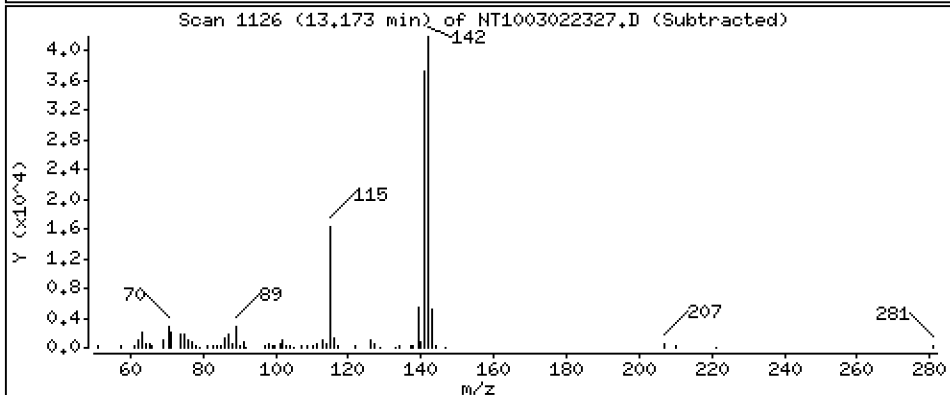
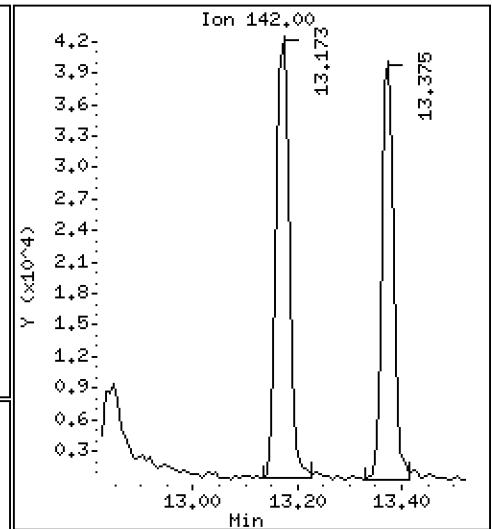
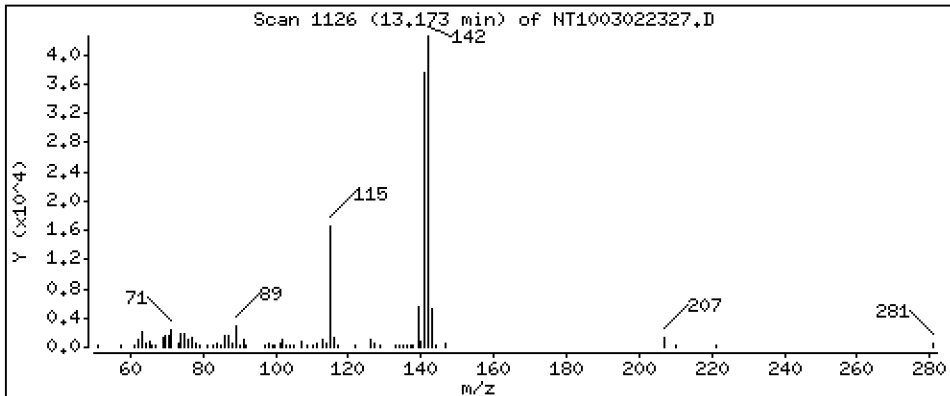
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

32 2-Methylnaphthalene

Concentration: 0,1840 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

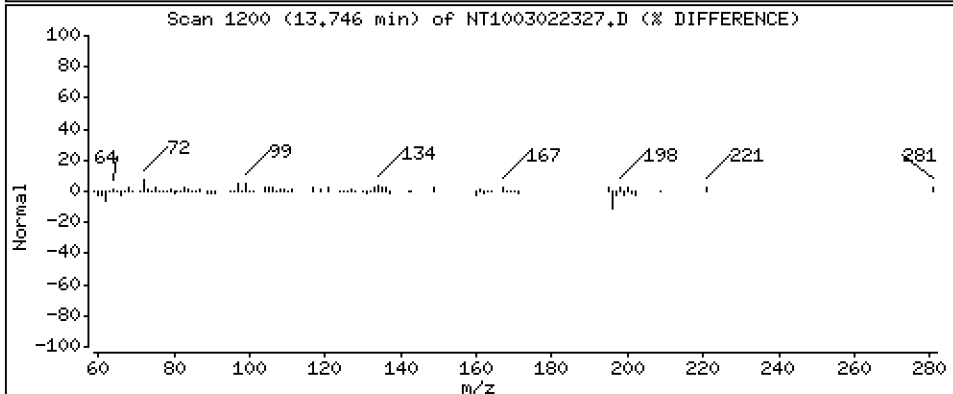
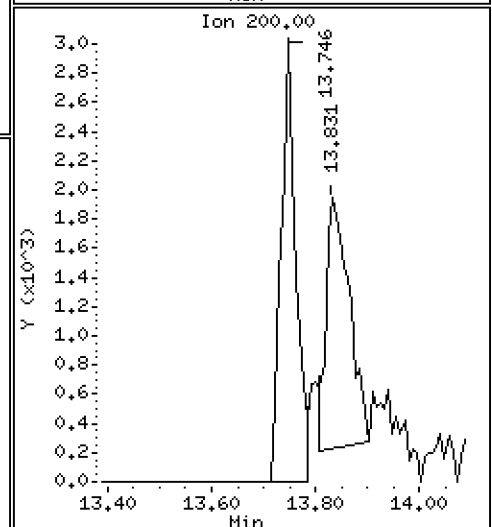
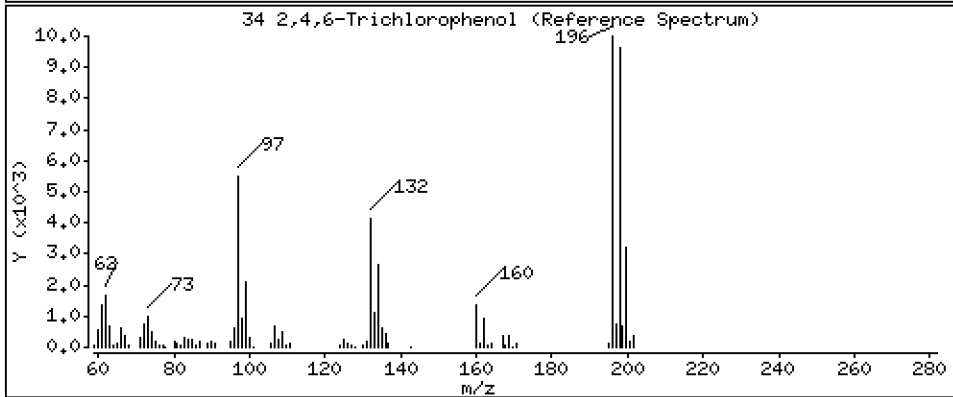
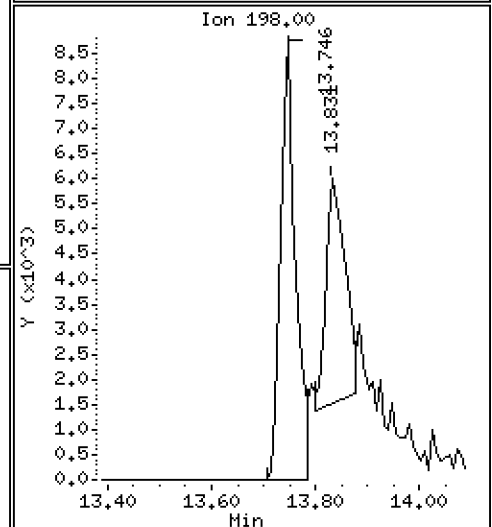
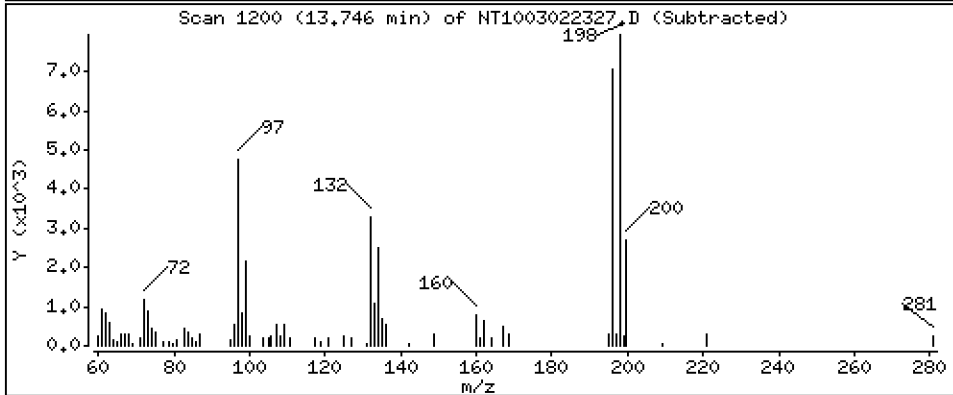
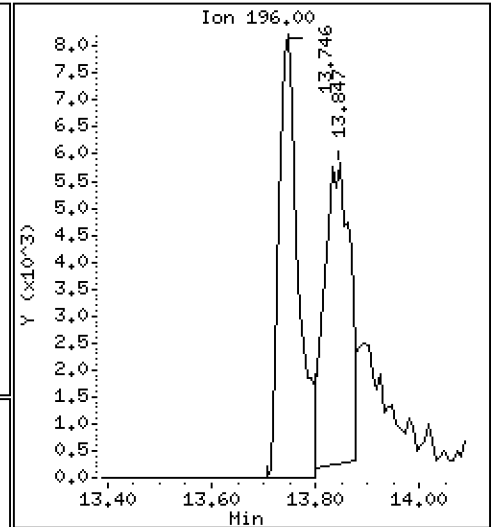
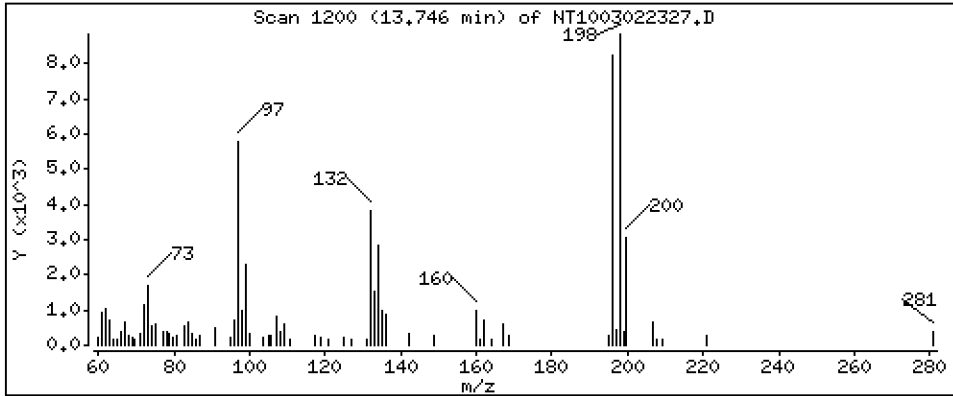
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

34 2,4,6-Trichlorophenol

Concentration: 0,2024 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

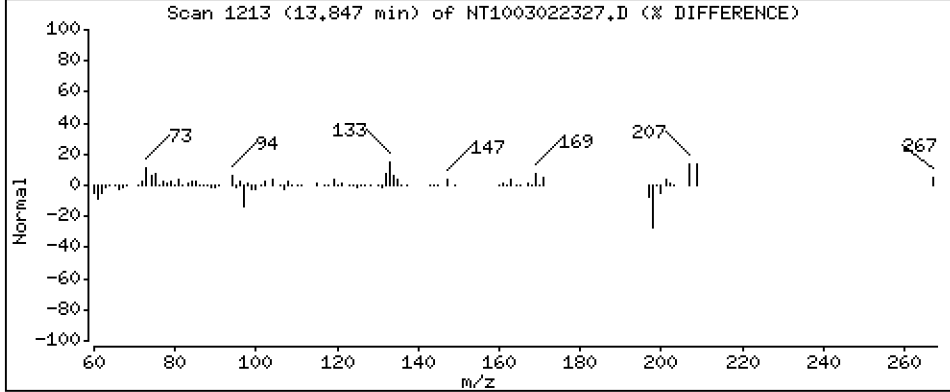
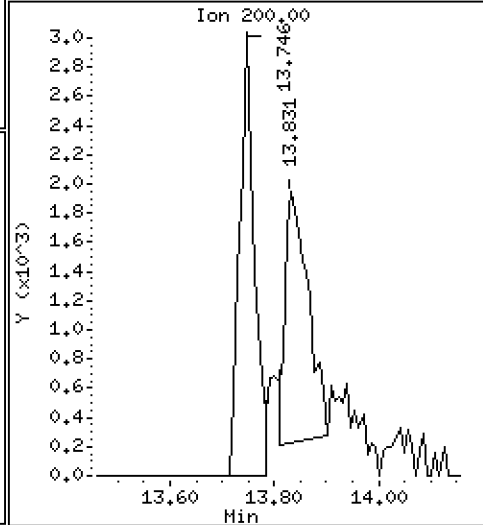
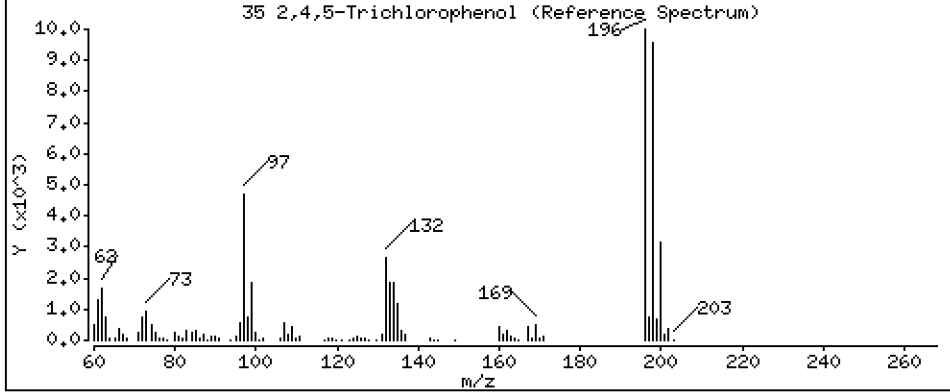
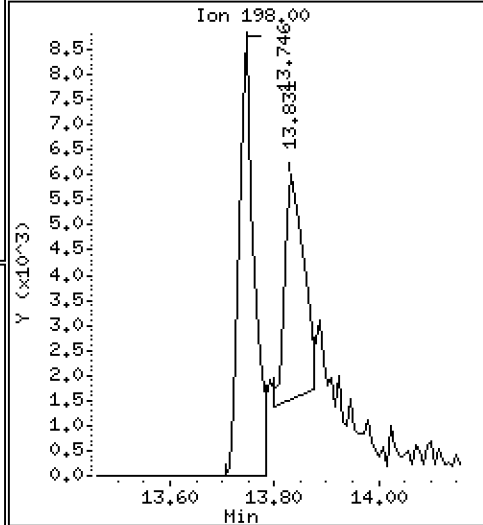
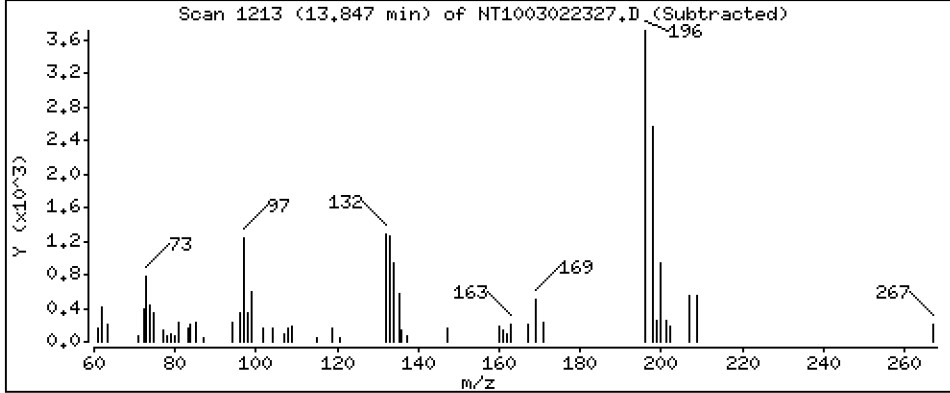
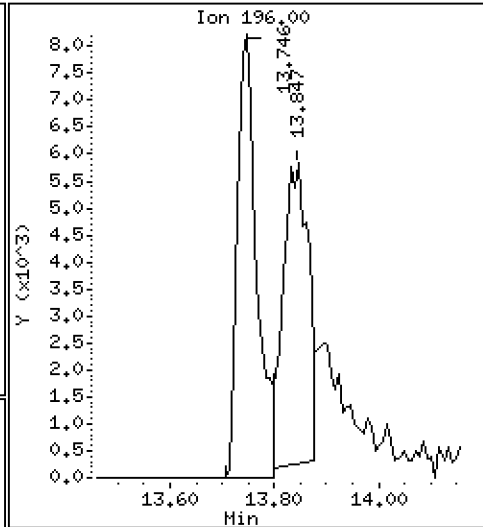
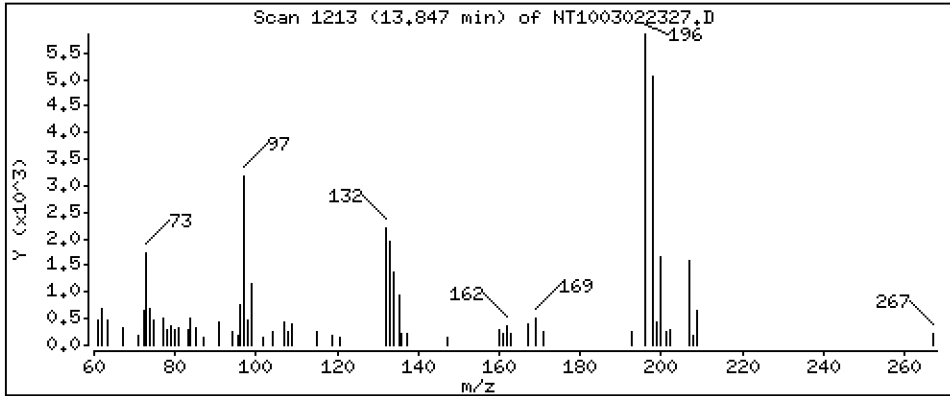
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

35 2,4,5-Trichlorophenol

Concentration: 0,1777 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

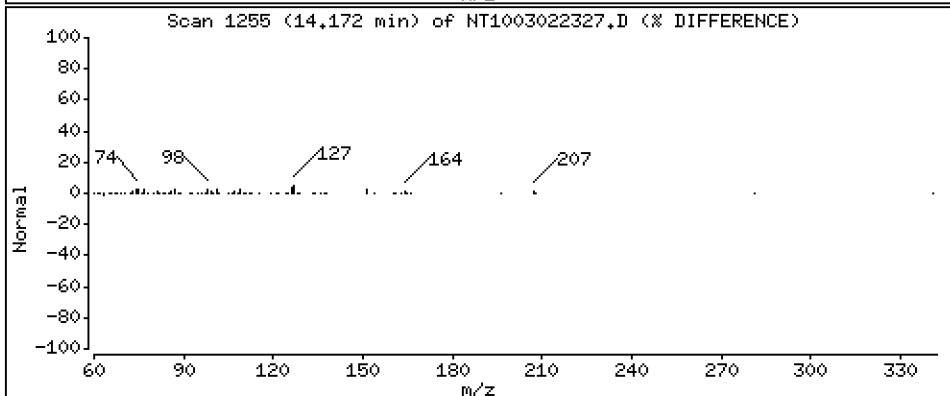
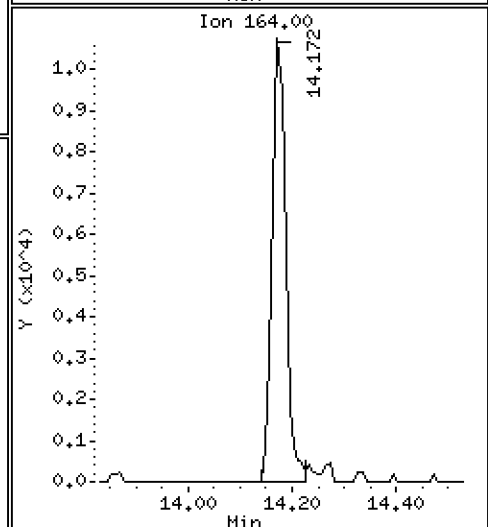
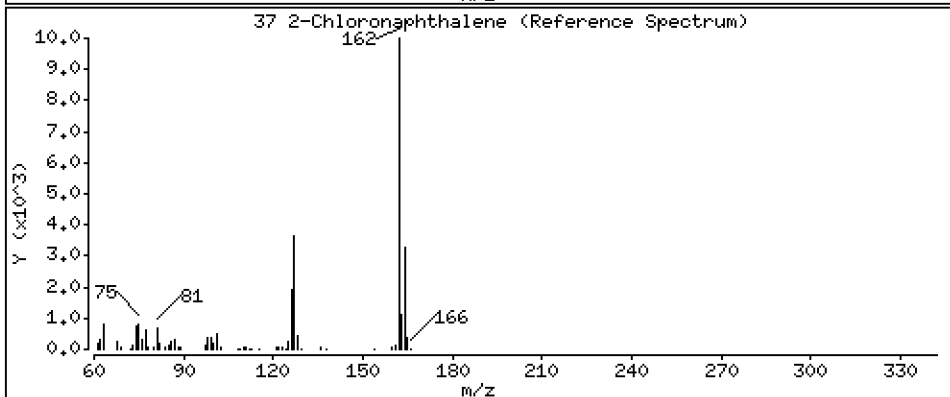
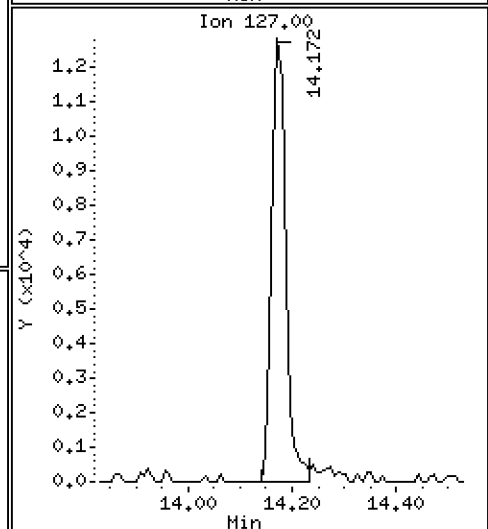
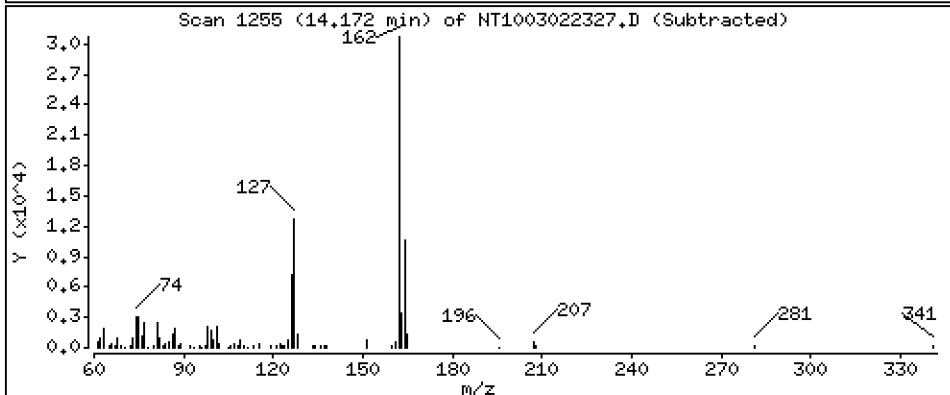
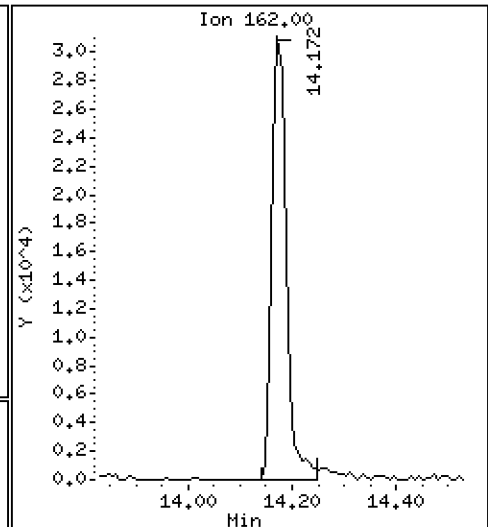
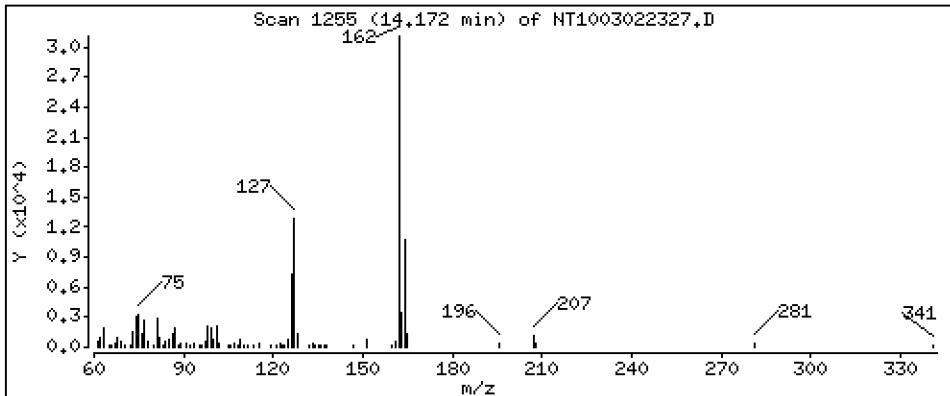
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

37 2-Chloronaphthalene

Concentration: 0.1873 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

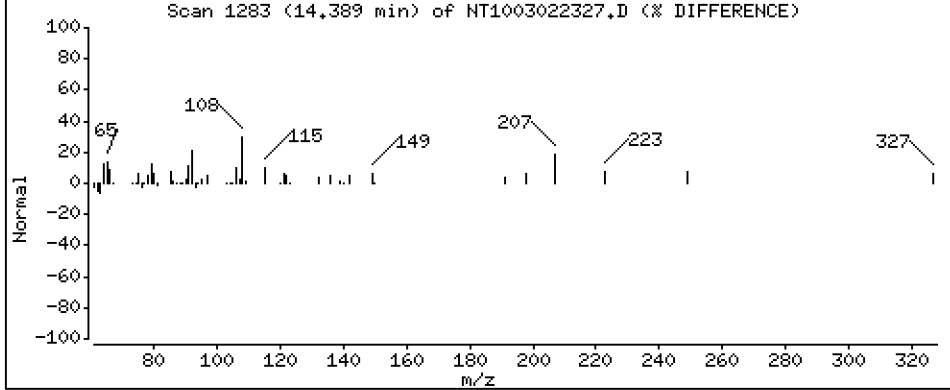
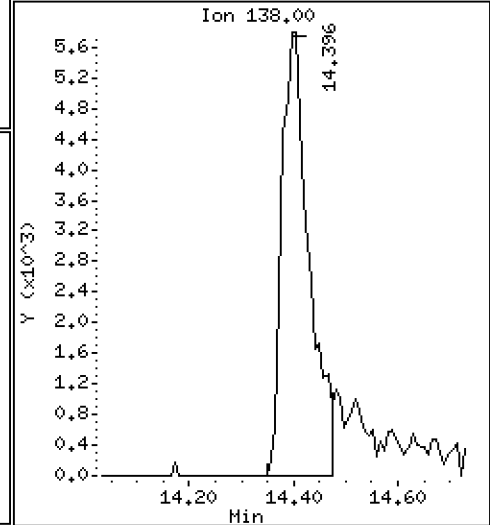
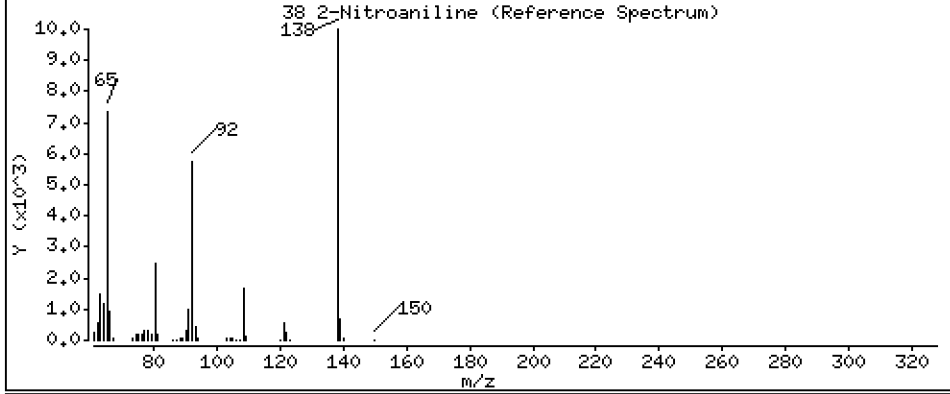
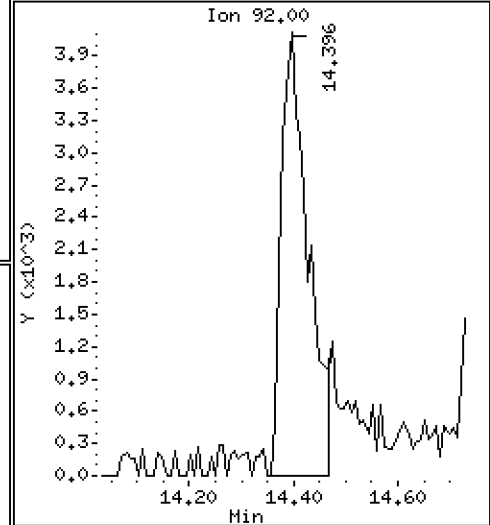
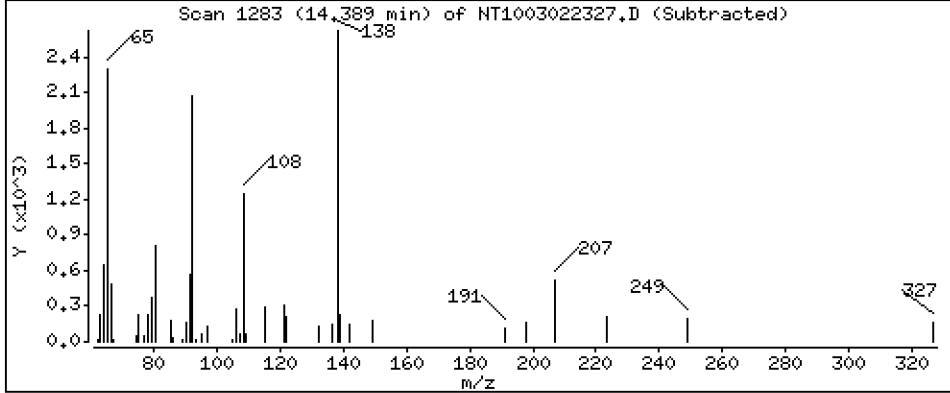
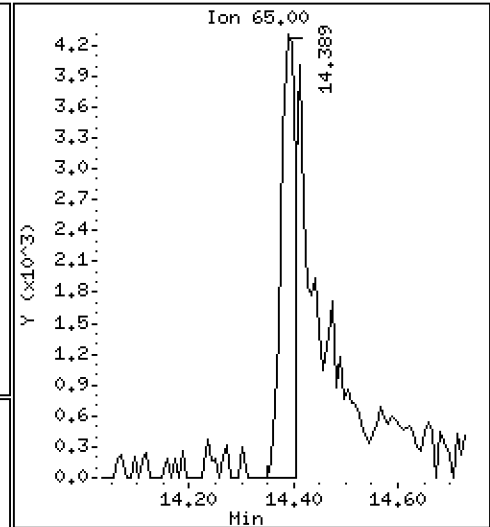
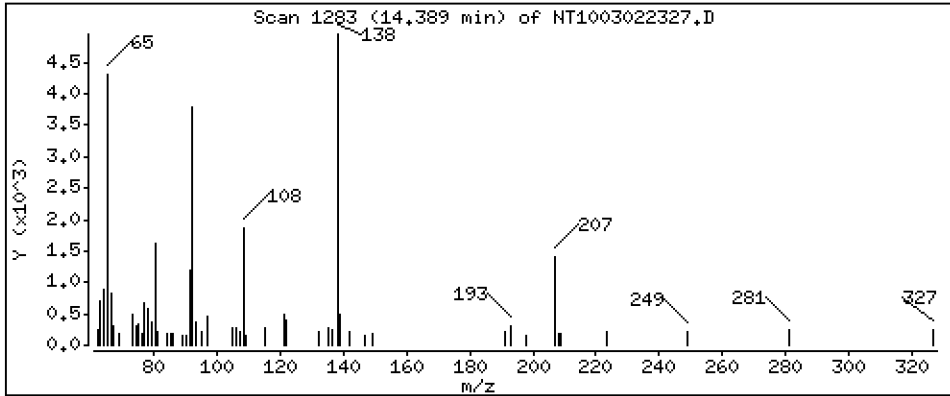
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

38 2-Nitroaniline

Concentration: 0,09370 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

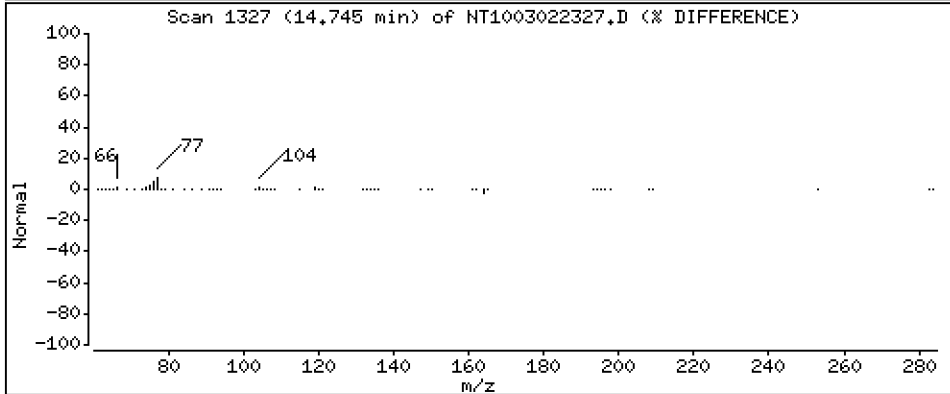
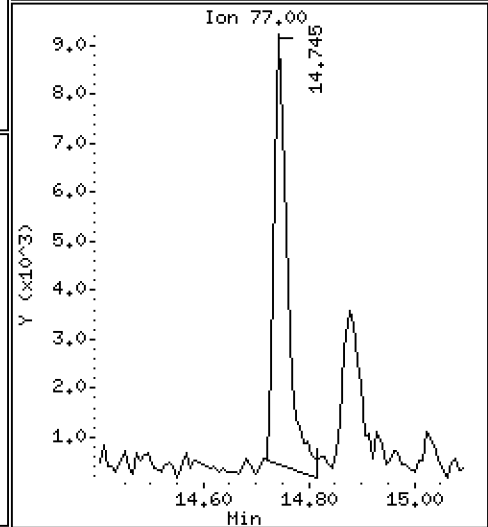
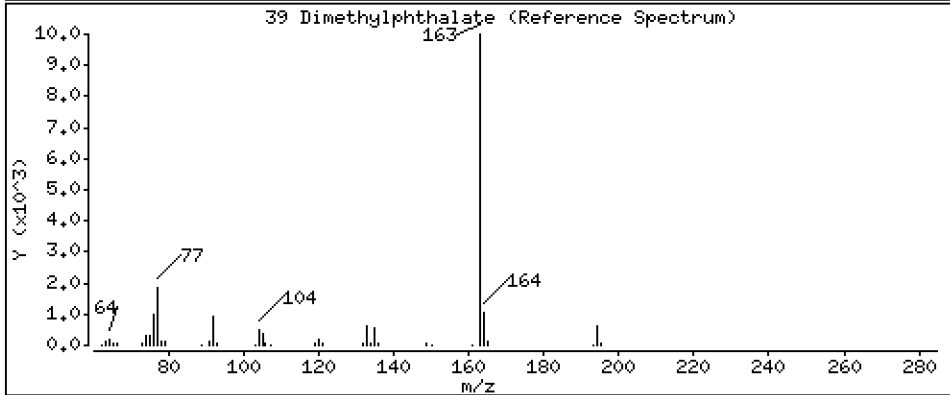
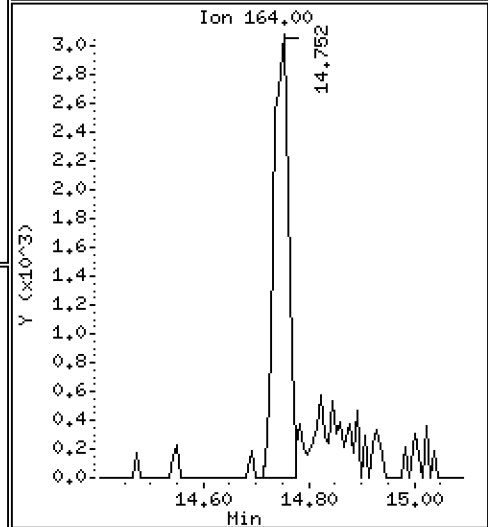
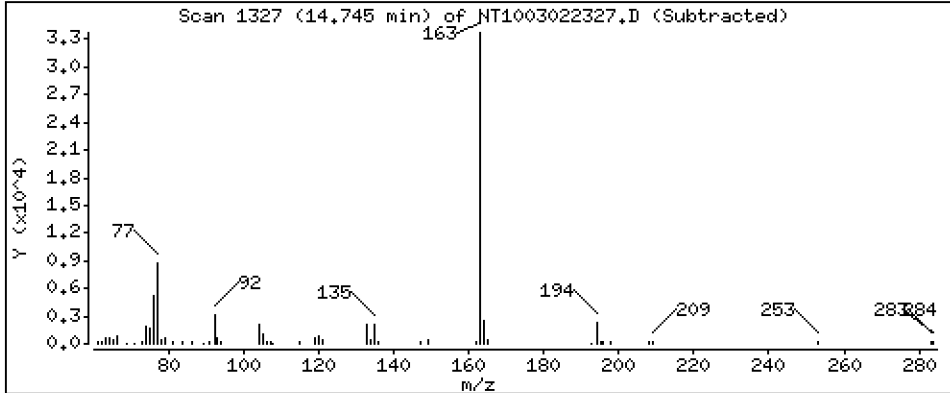
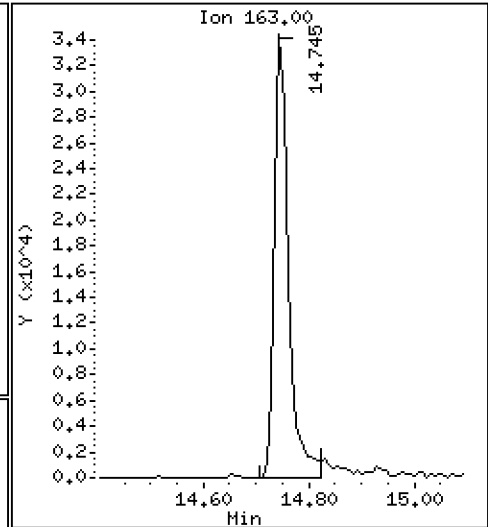
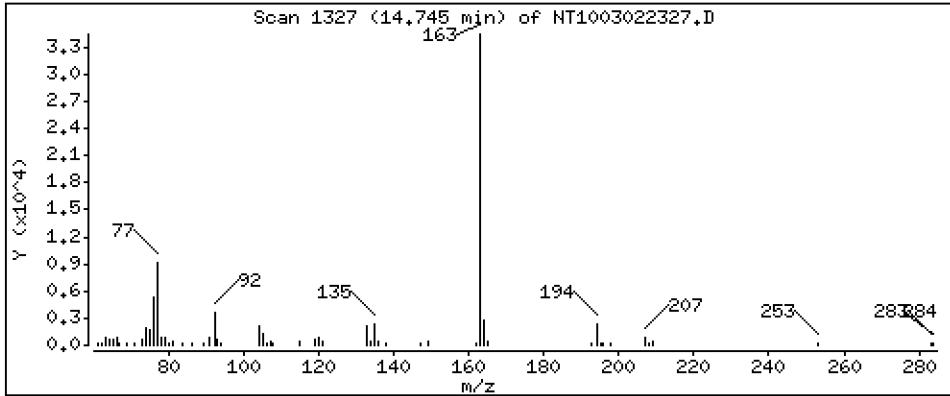
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,1724 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

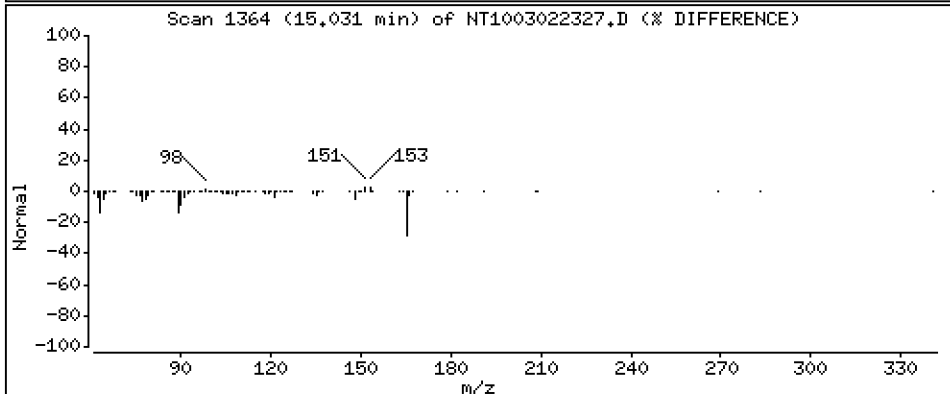
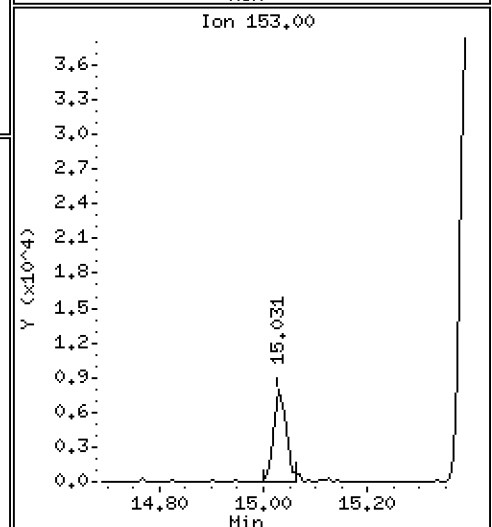
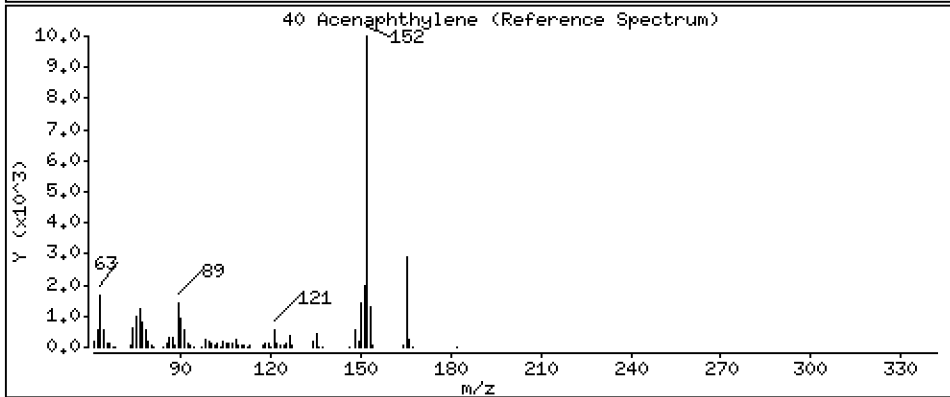
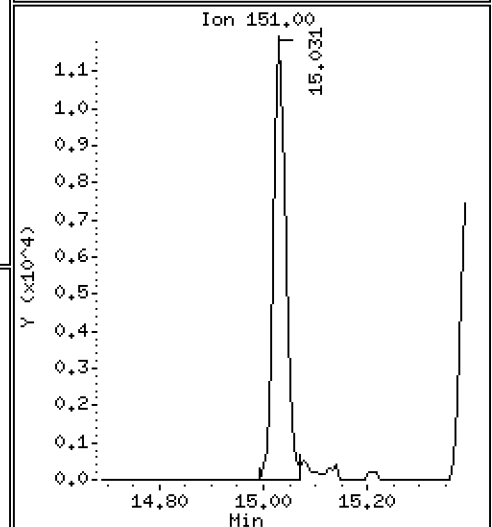
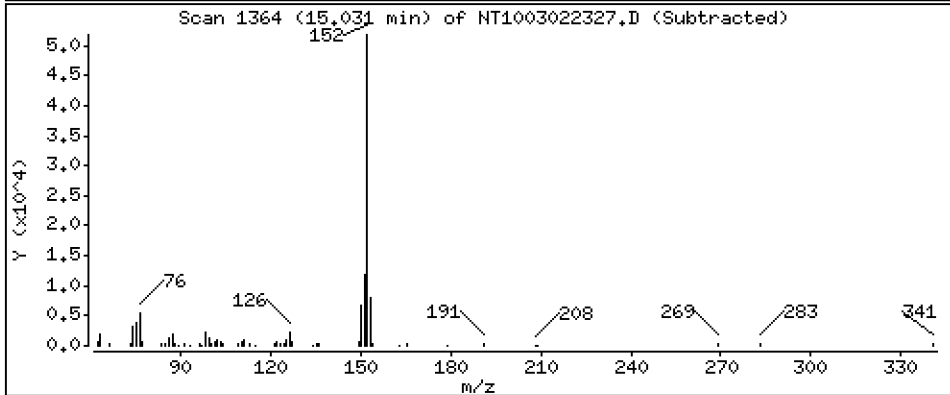
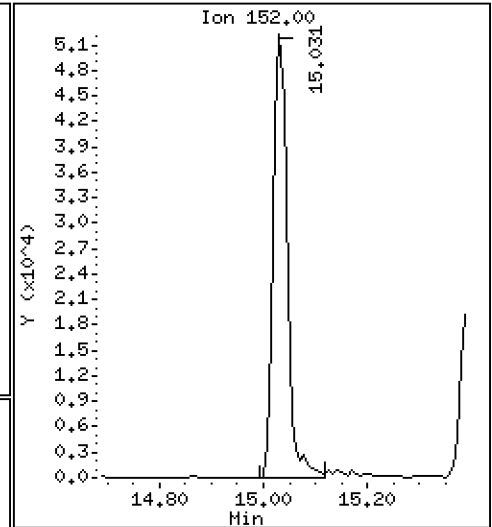
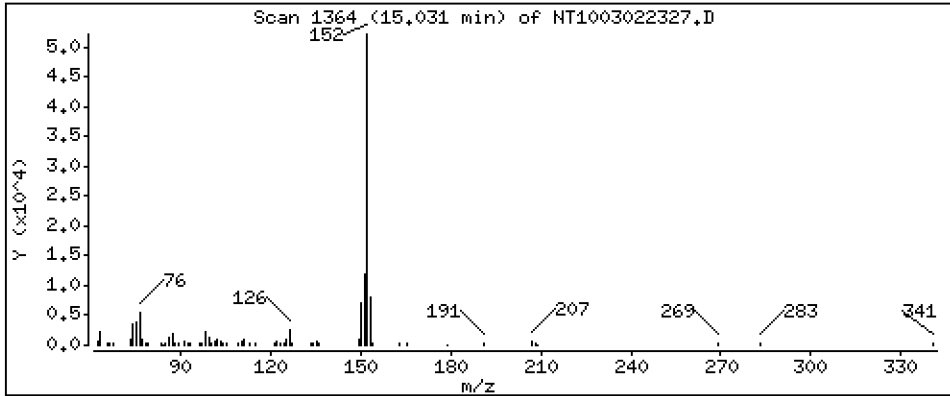
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 0.1990 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

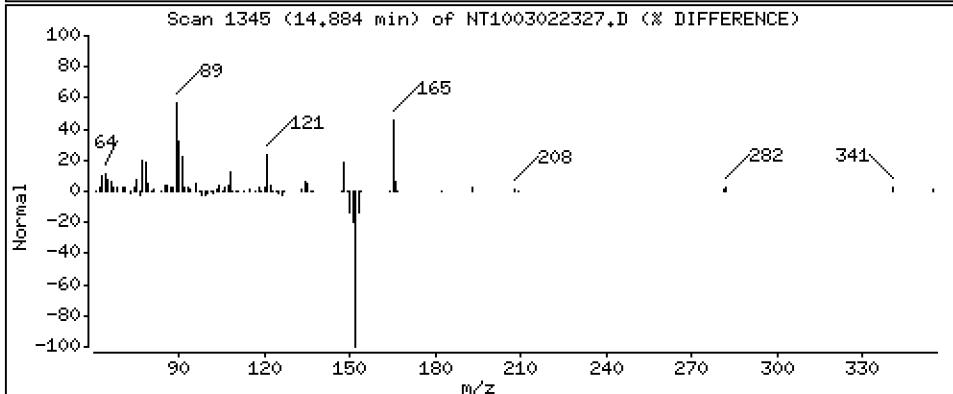
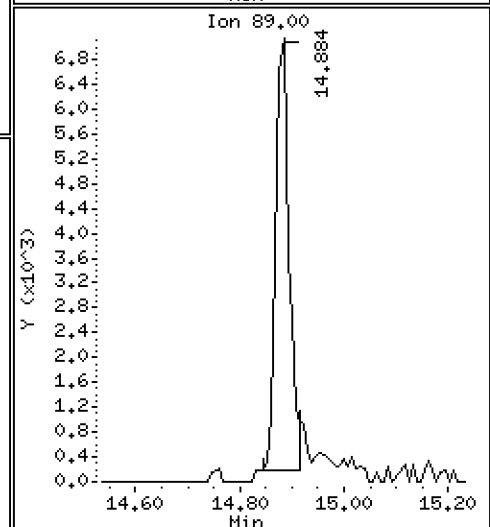
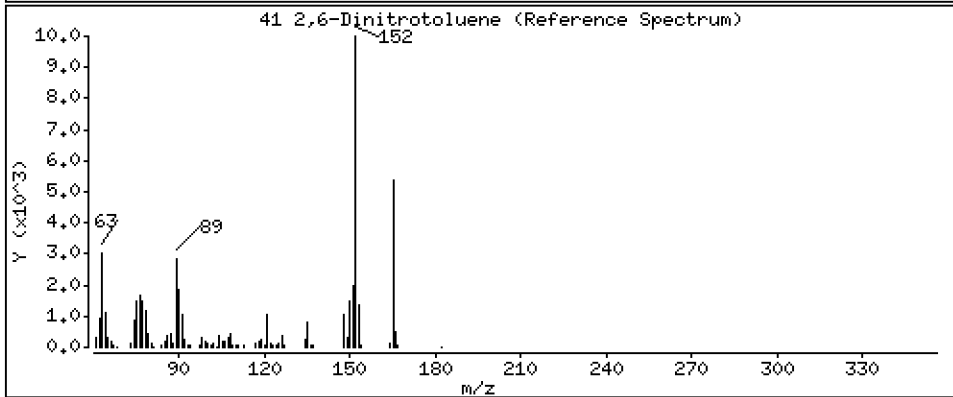
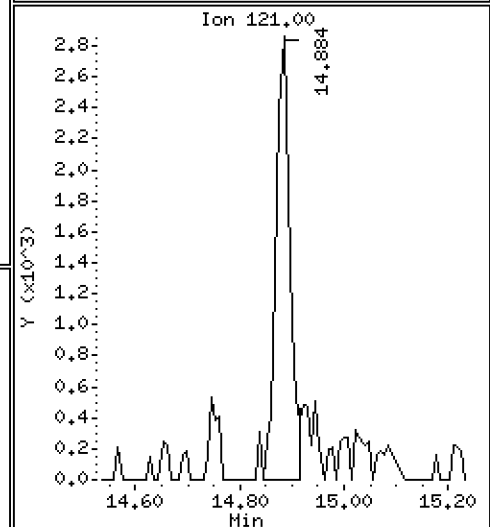
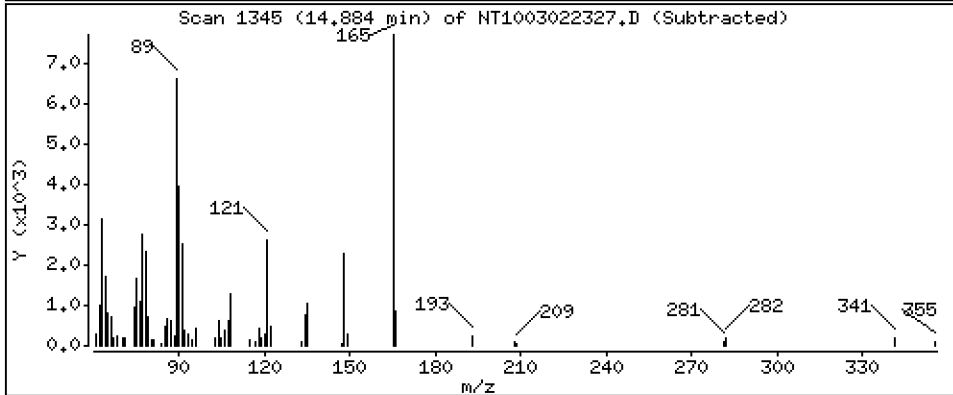
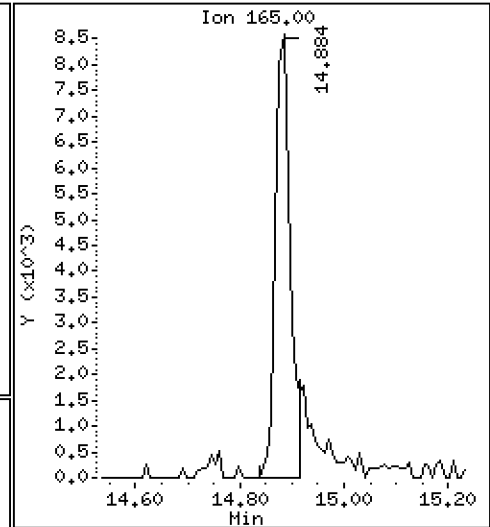
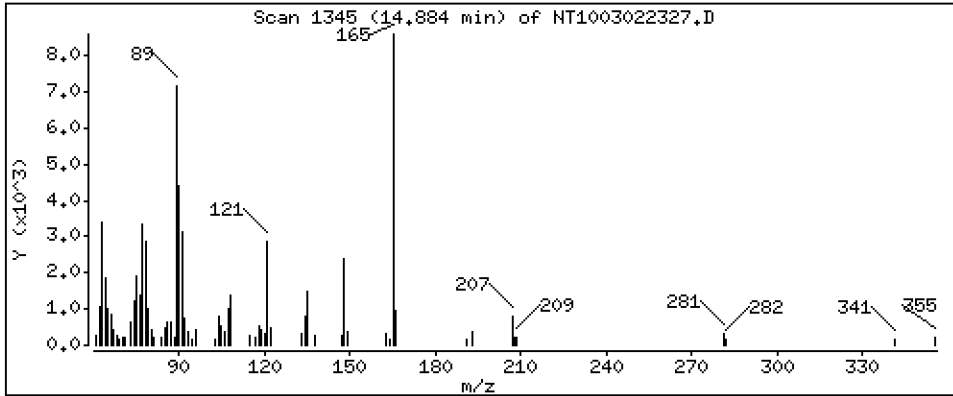
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

41 2,6-Dinitrotoluene

Concentration: 0,2090 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

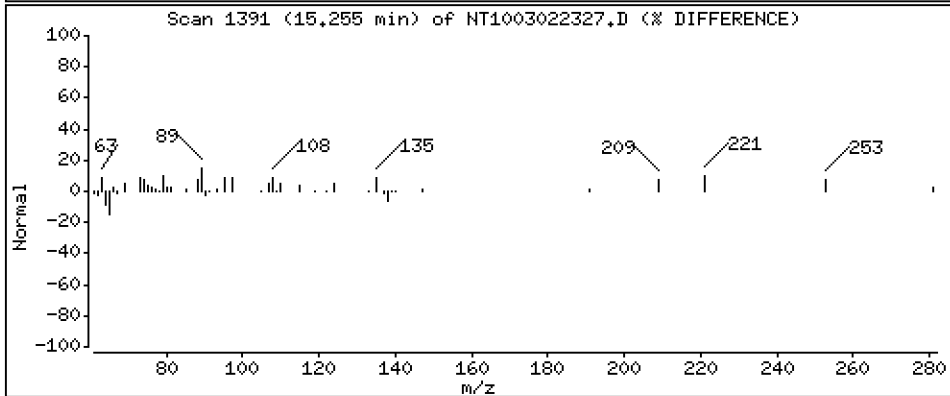
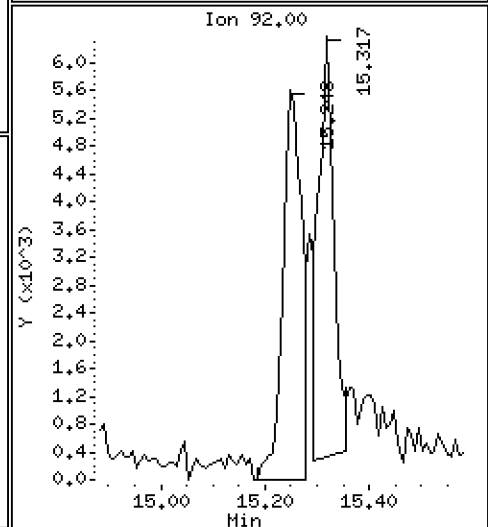
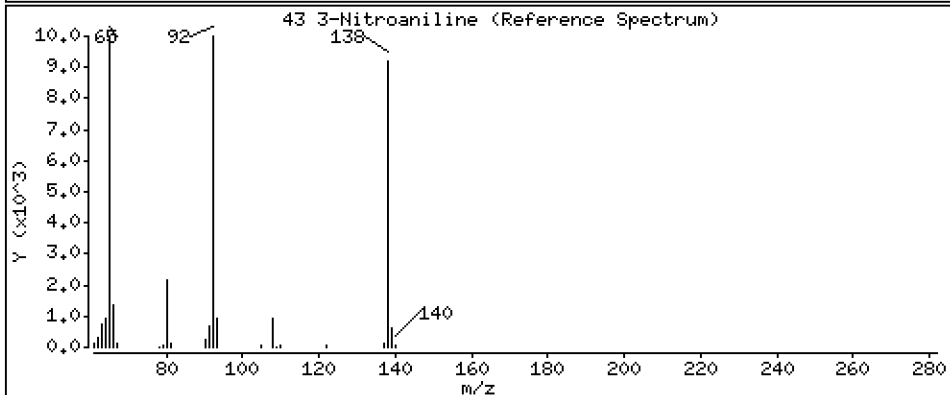
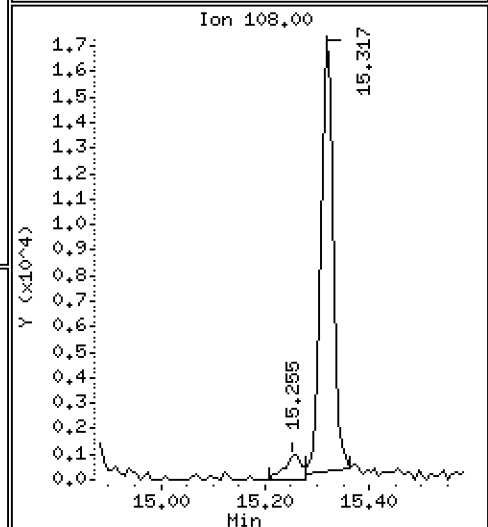
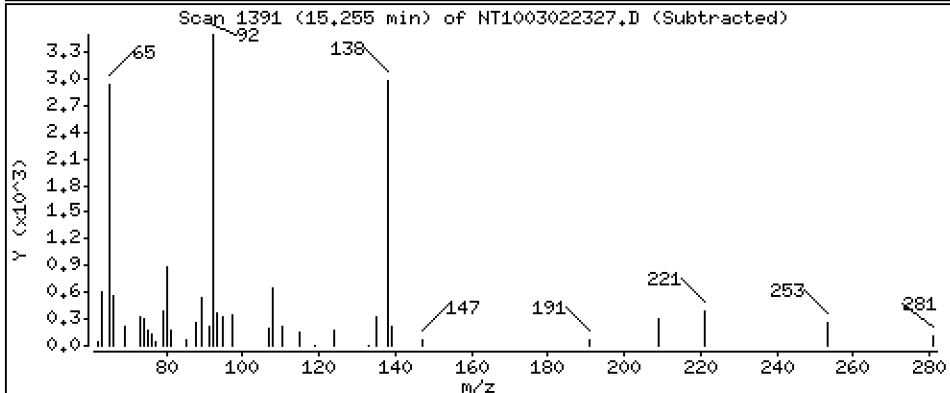
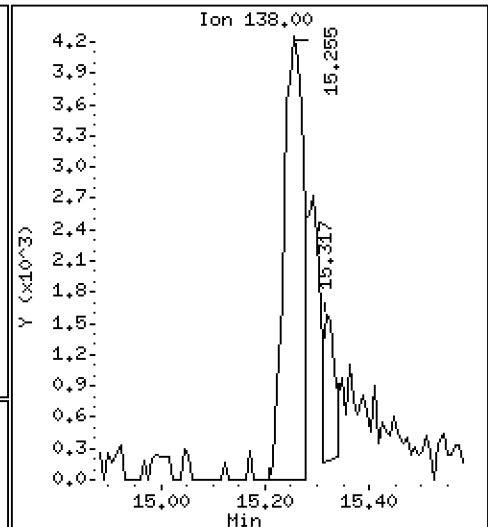
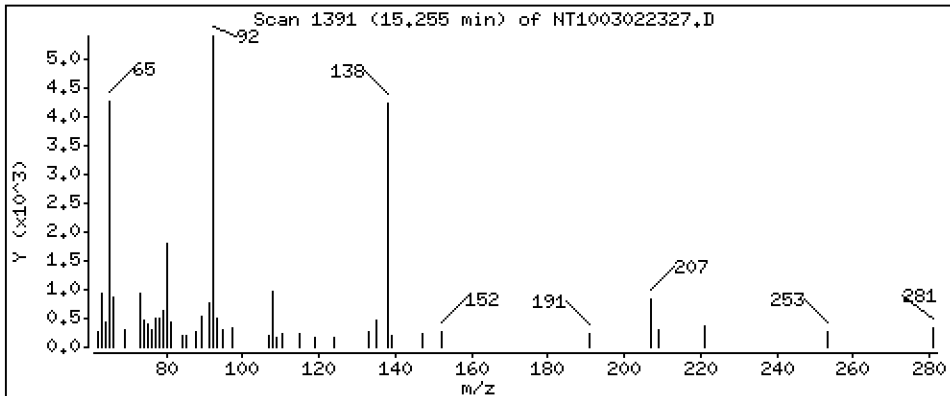
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

43 3-Nitroaniline

Concentration: 0,1263 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

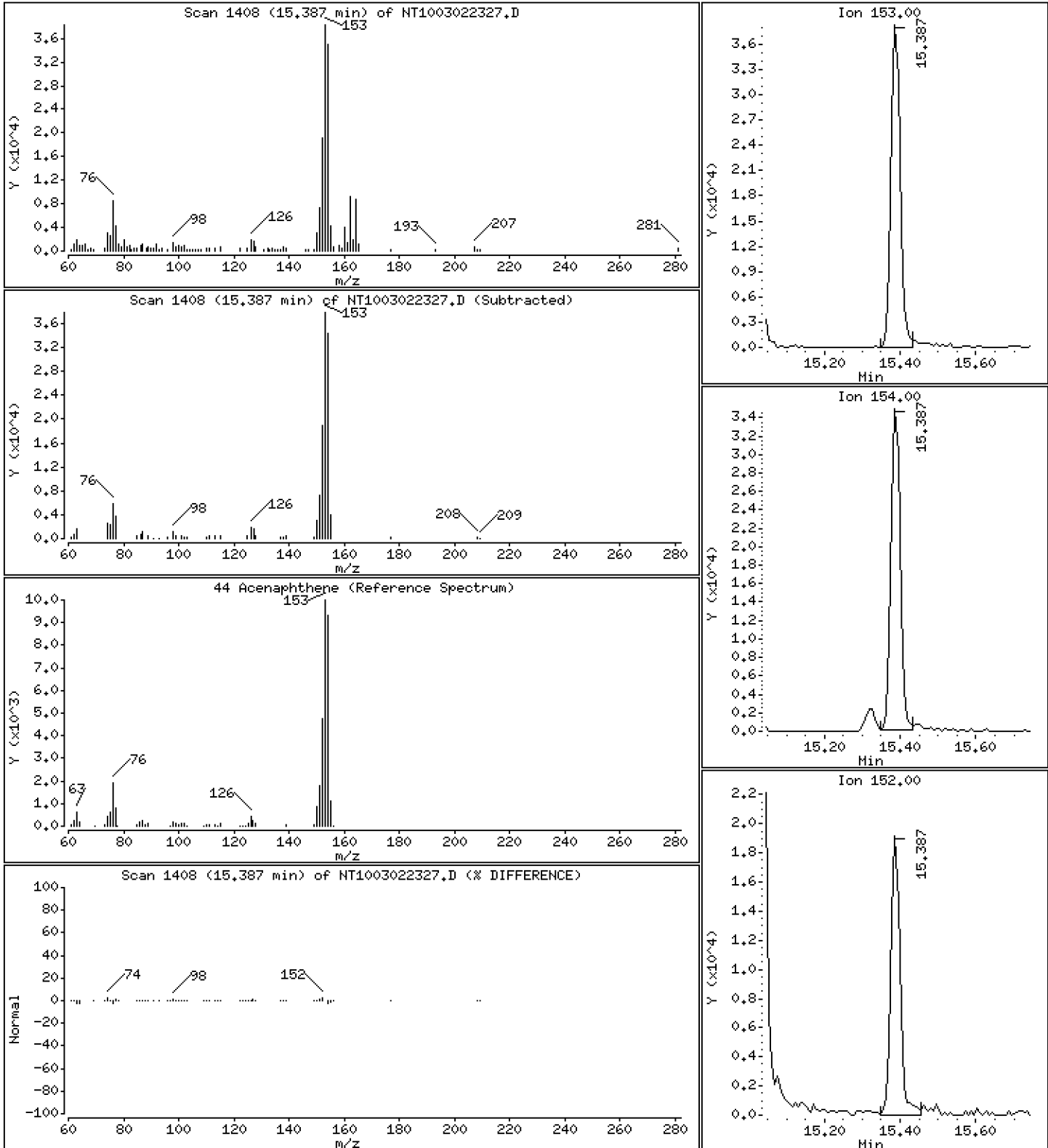
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

44 Acenaphthene

Concentration: 0,1908 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

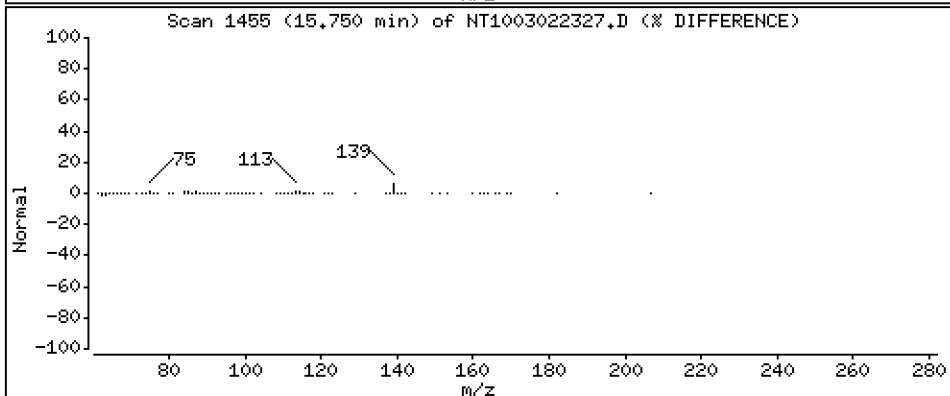
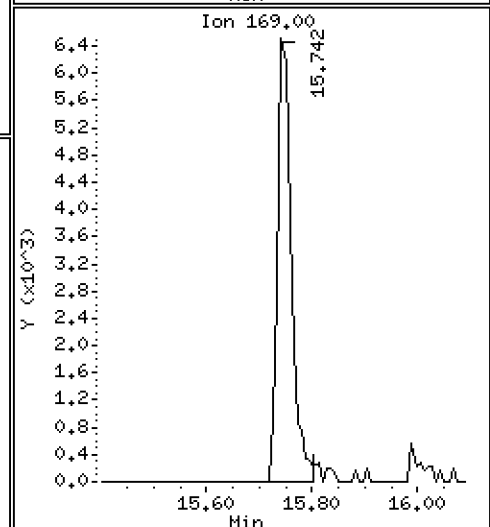
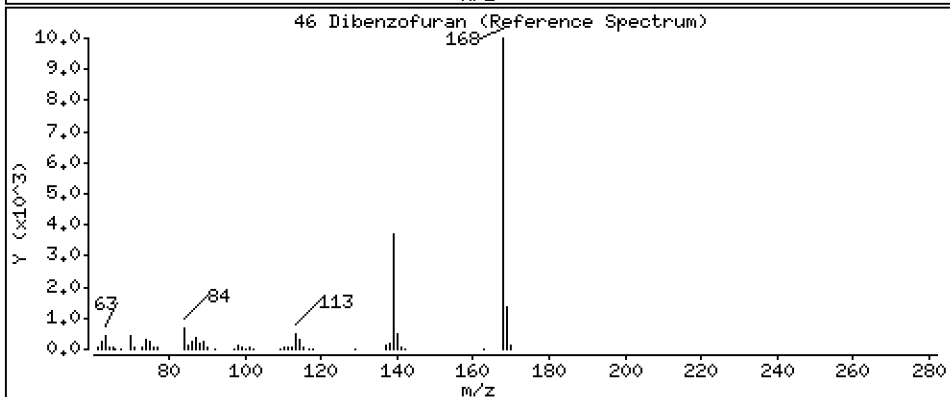
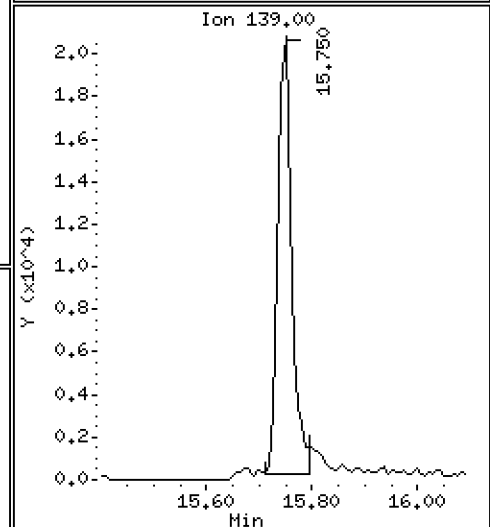
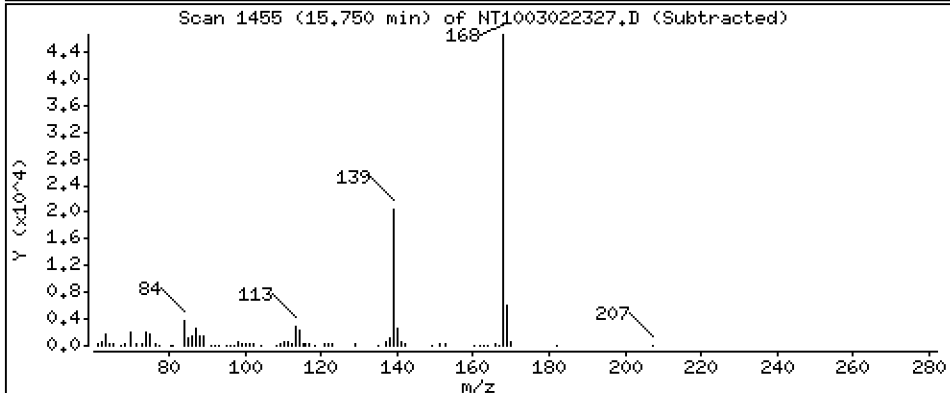
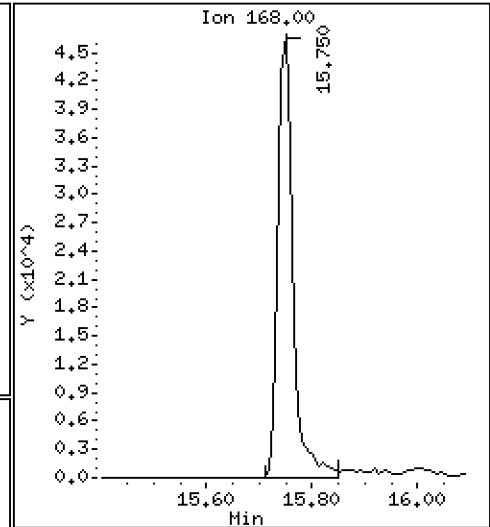
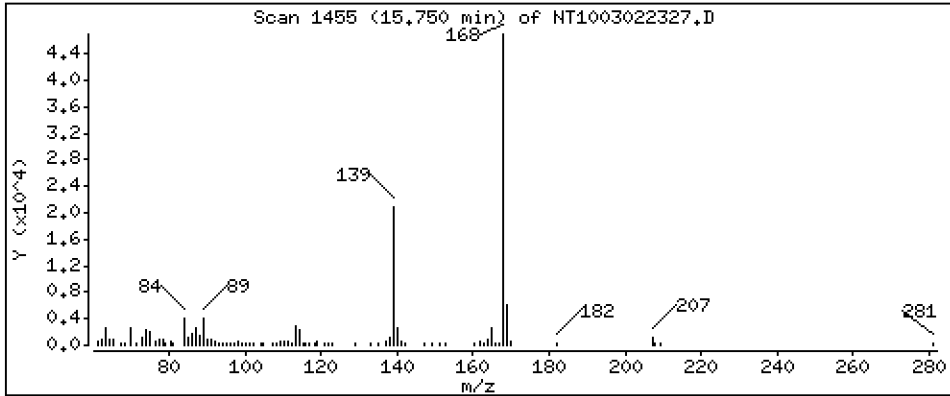
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

46 Dibenzofuran

Concentration: 0,1888 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

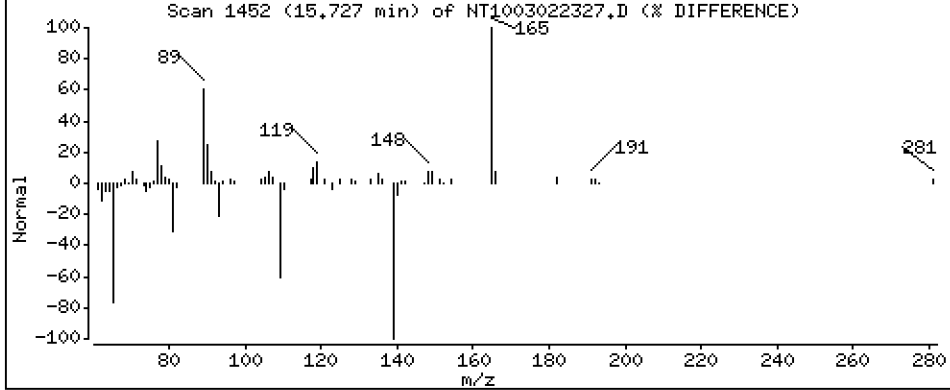
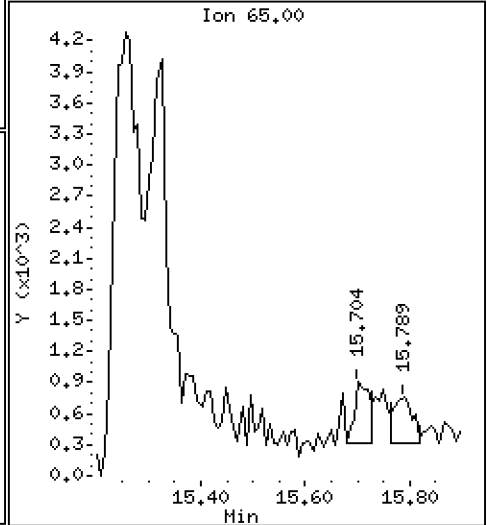
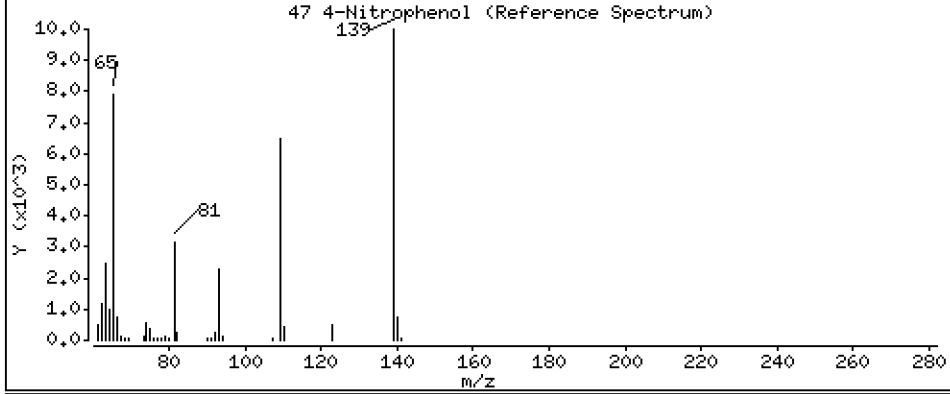
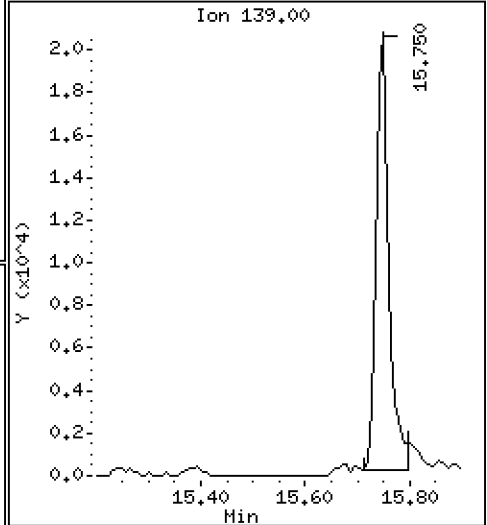
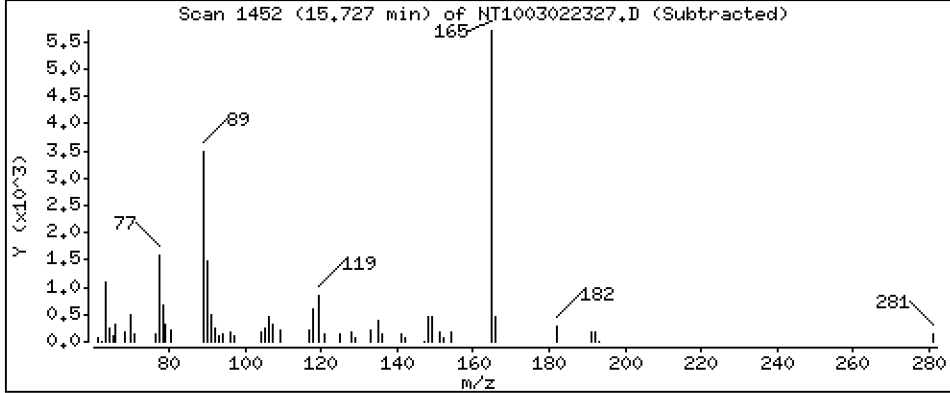
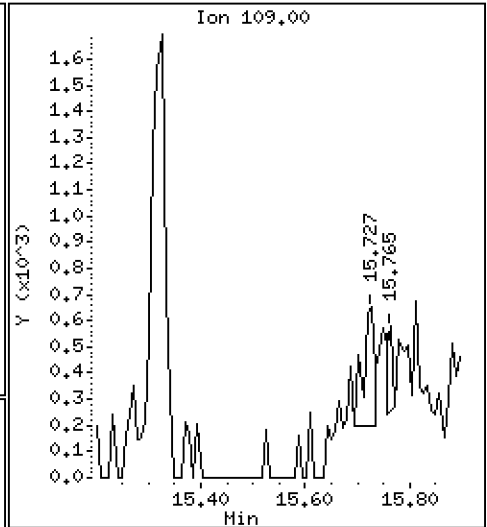
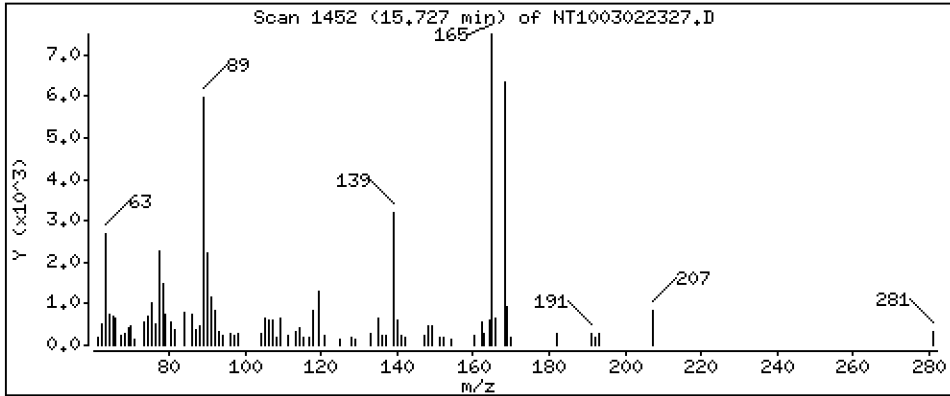
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

47 4-Nitrophenol

Concentration: 0.01114 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

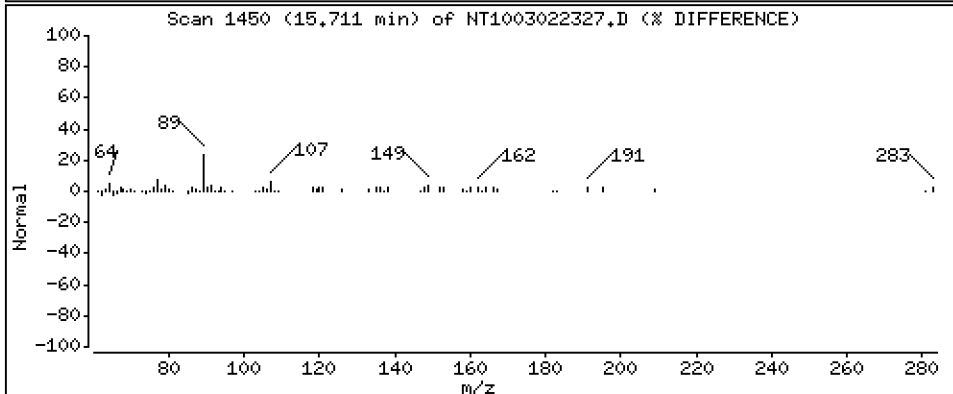
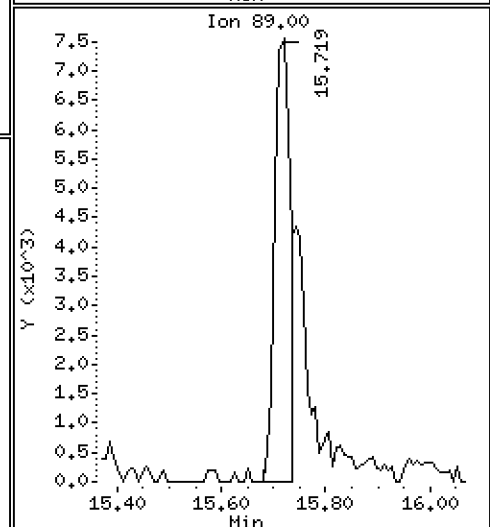
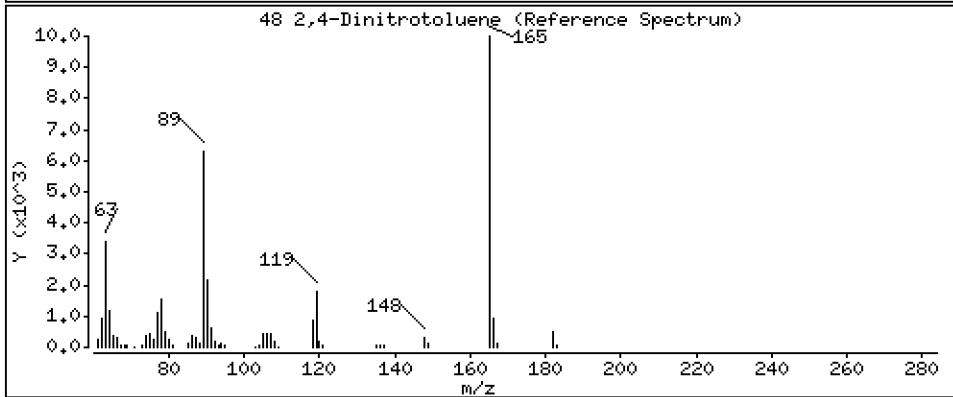
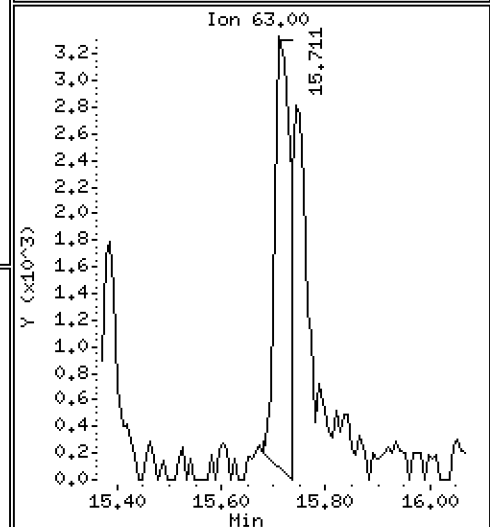
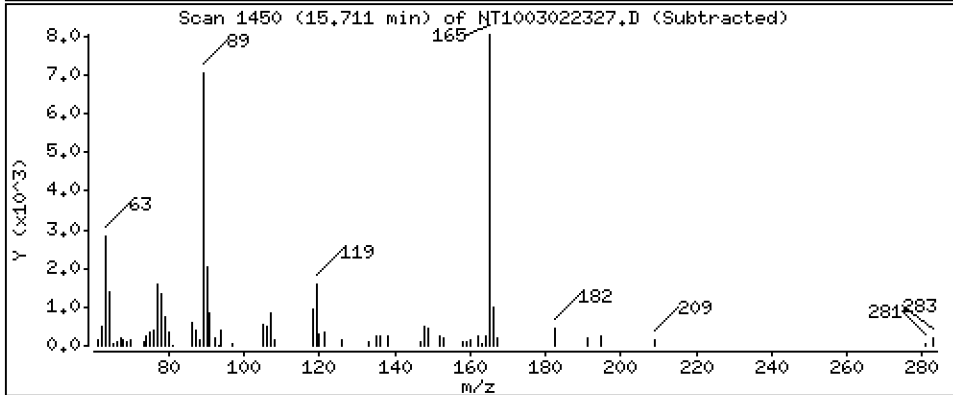
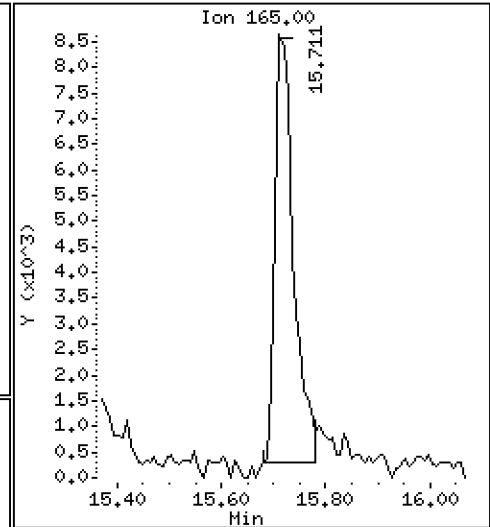
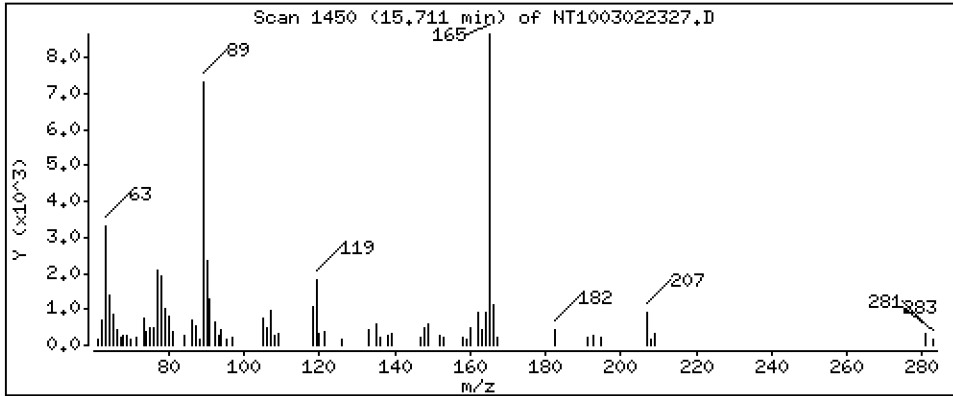
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

48 2,4-Dinitrotoluene

Concentration: 0,1778 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

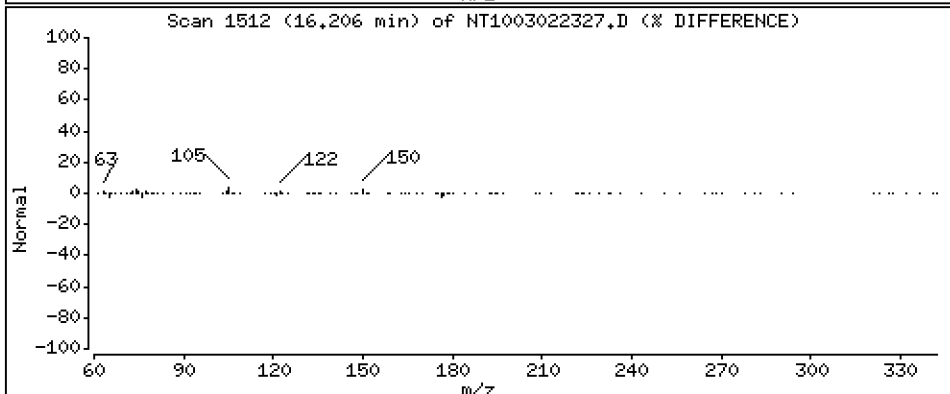
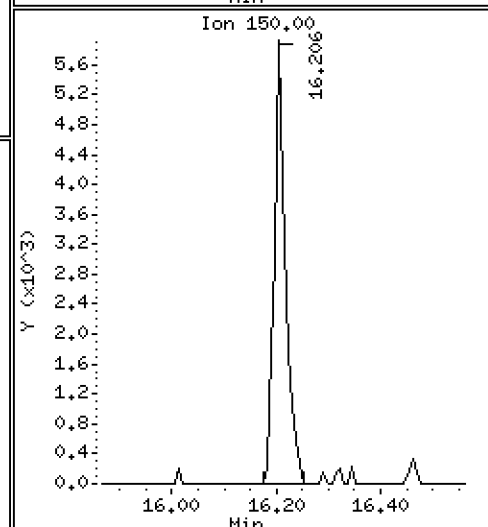
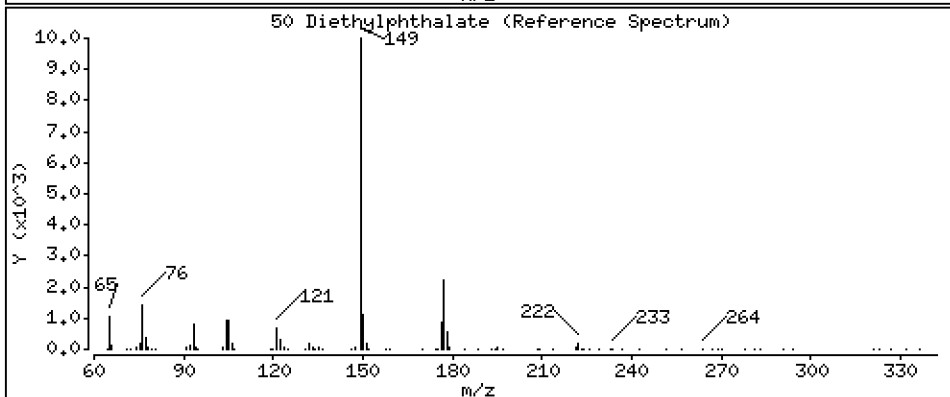
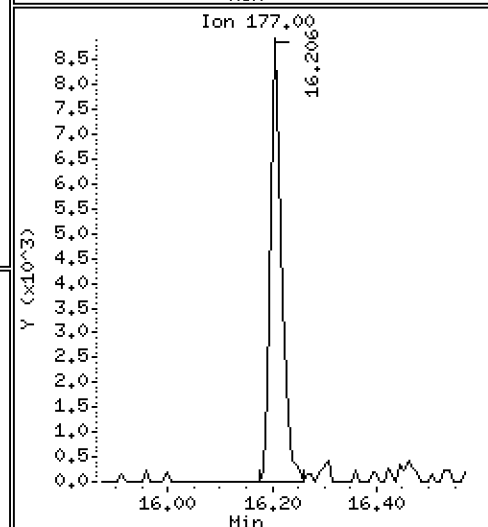
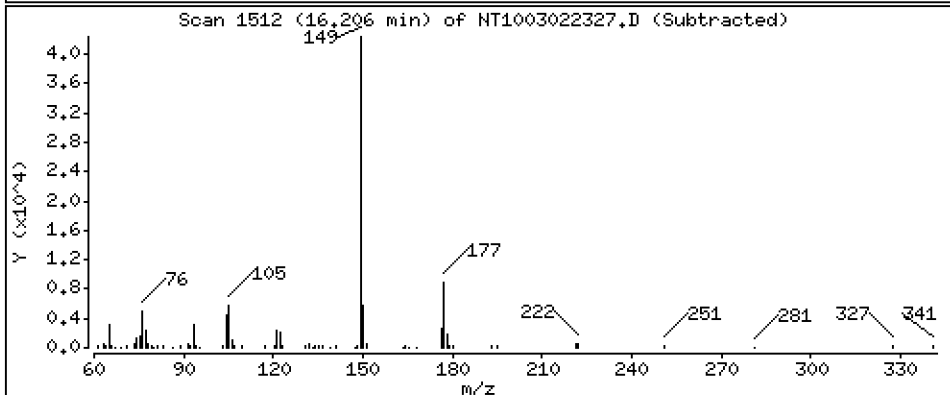
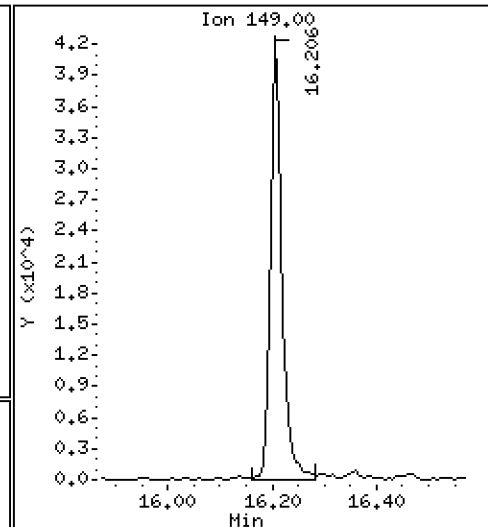
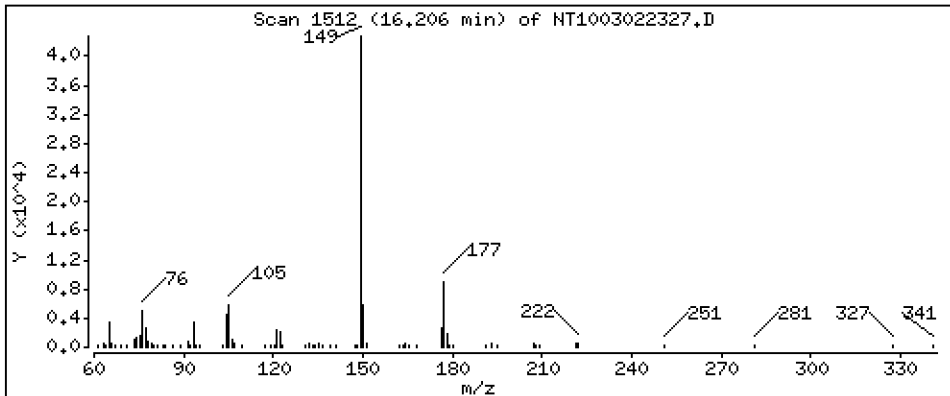
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,1741 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

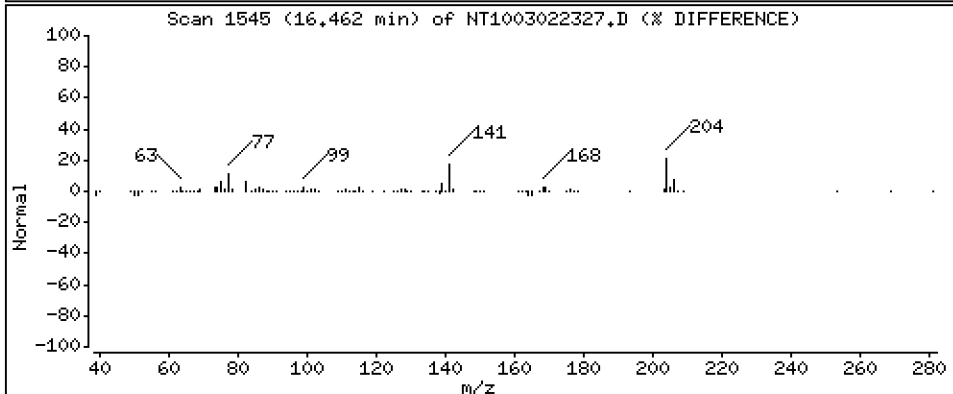
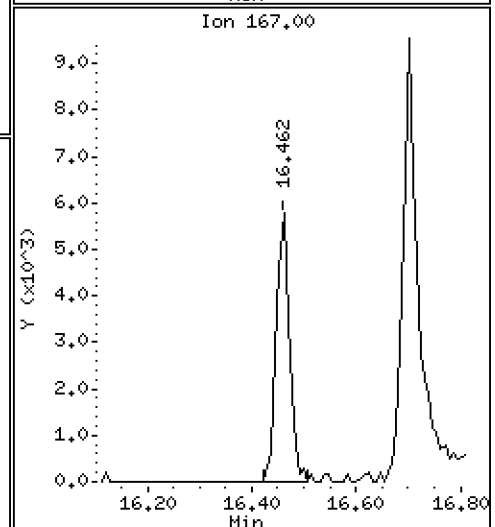
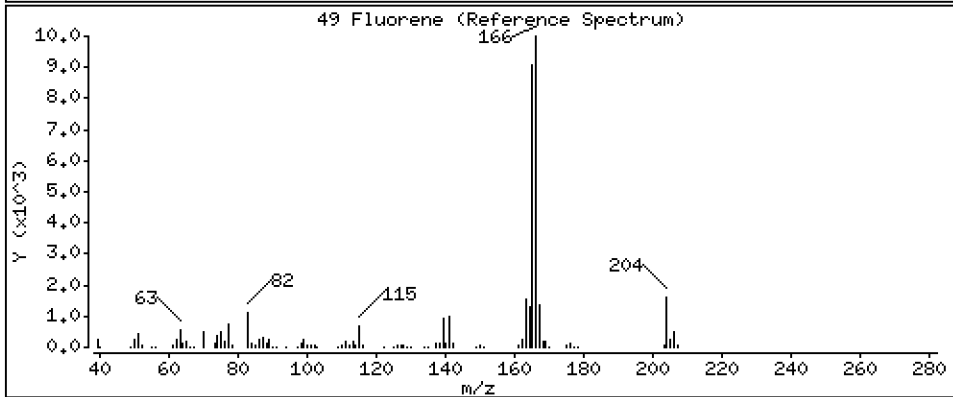
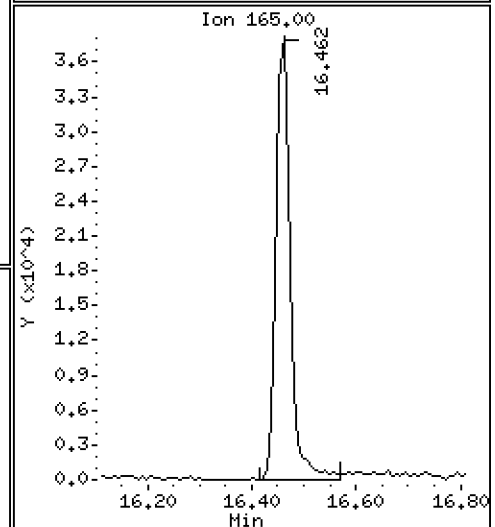
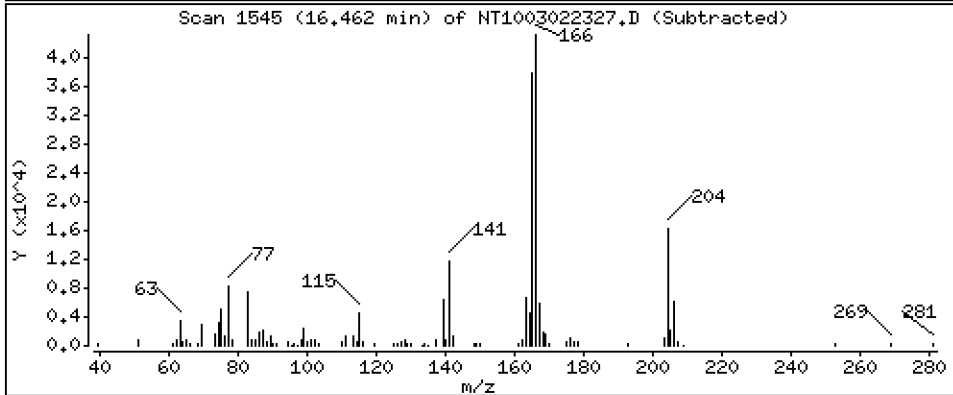
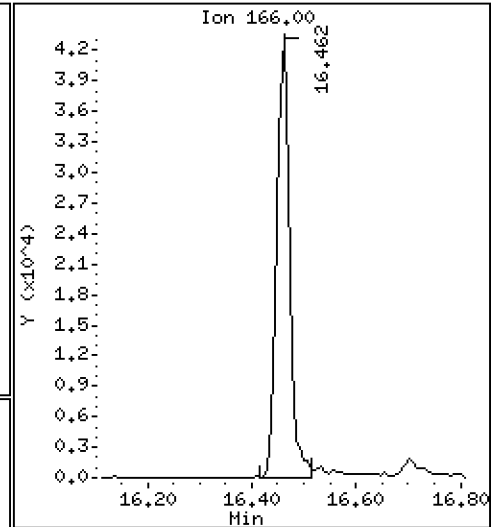
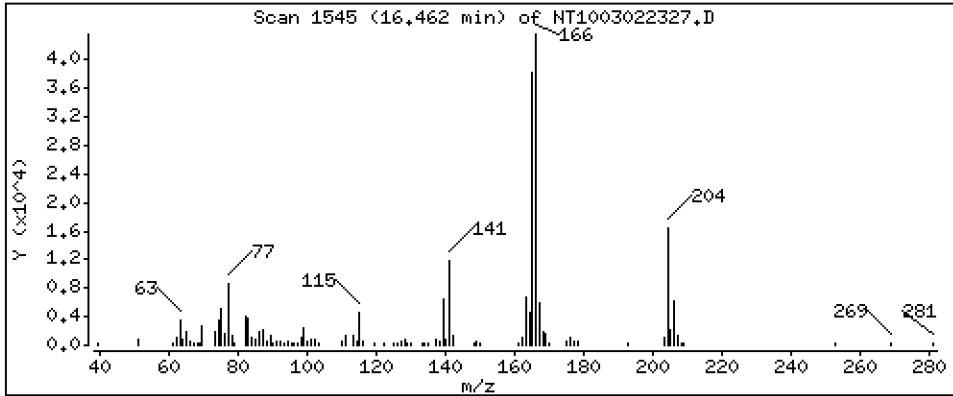
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

49 Fluorene

Concentration: 0,1771 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

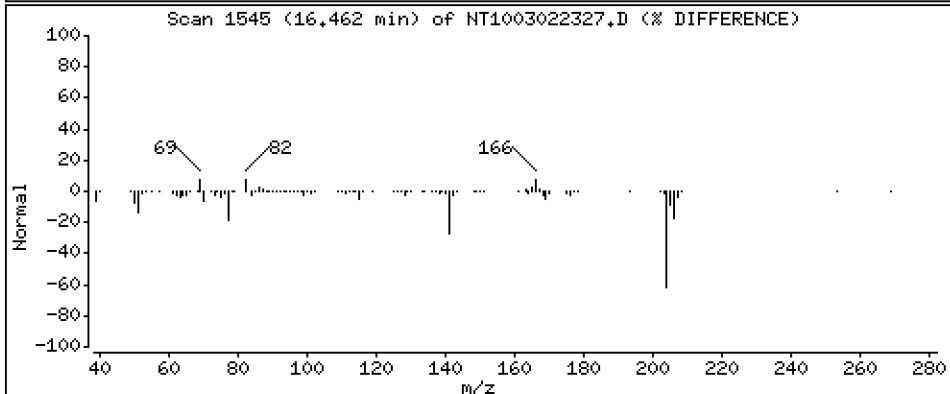
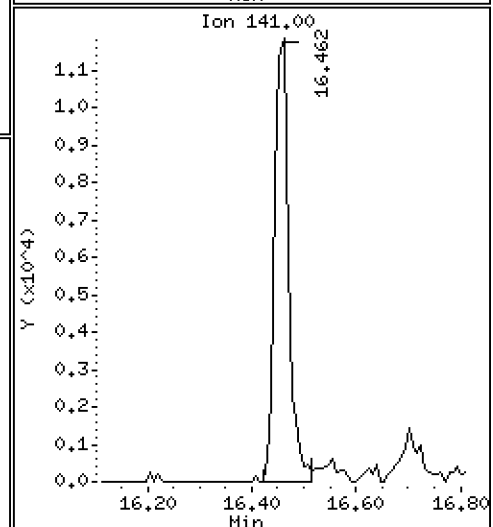
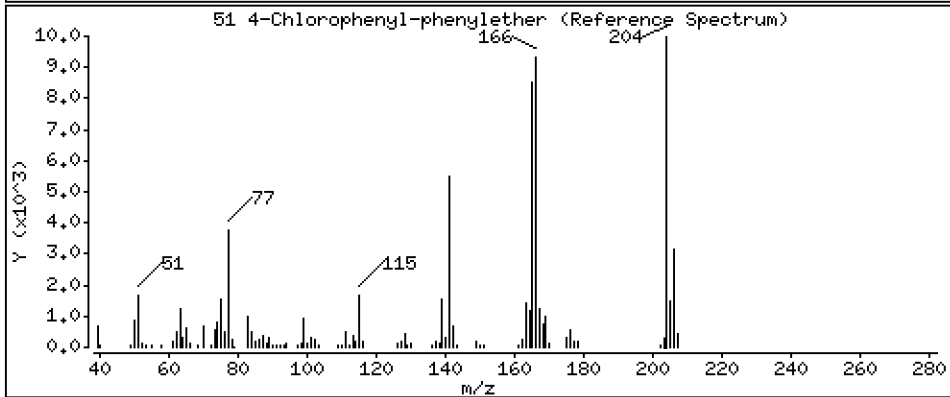
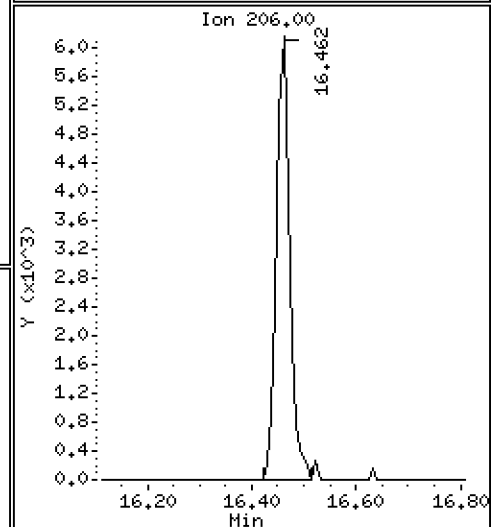
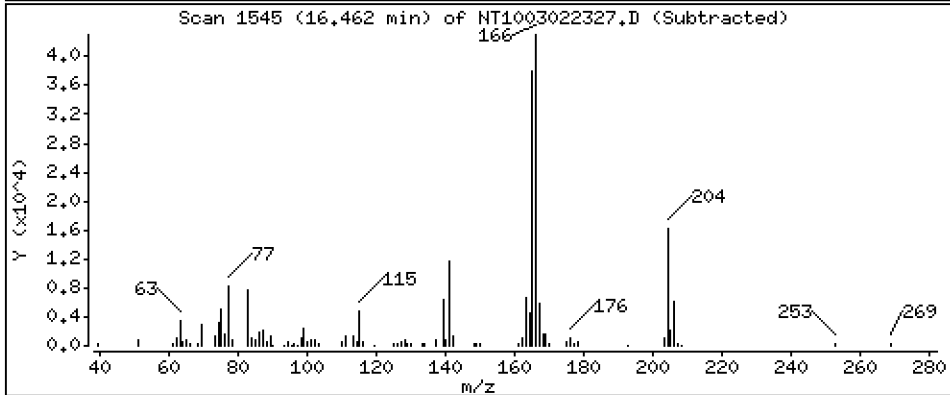
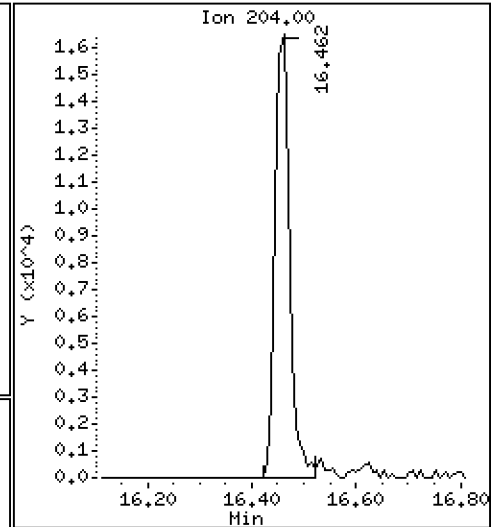
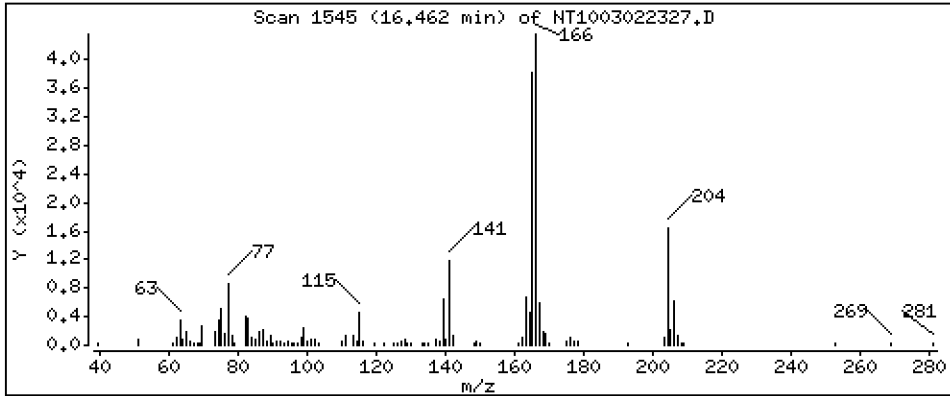
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

51 4-Chlorophenyl-phenylether

Concentration: 0,1791 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

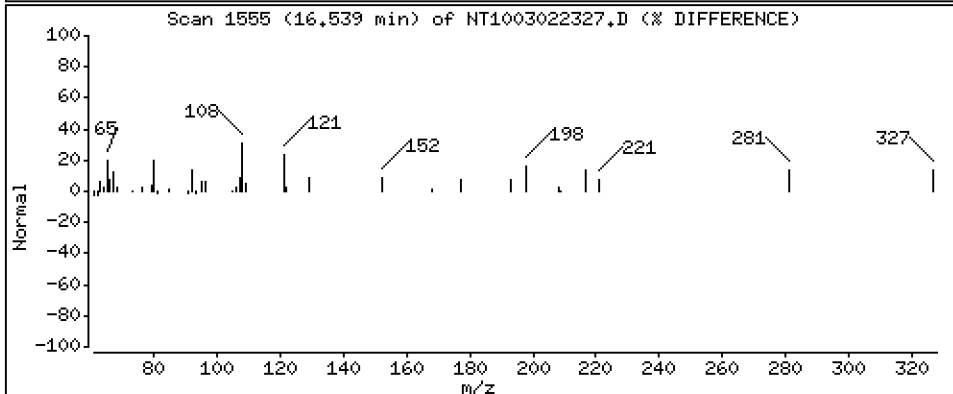
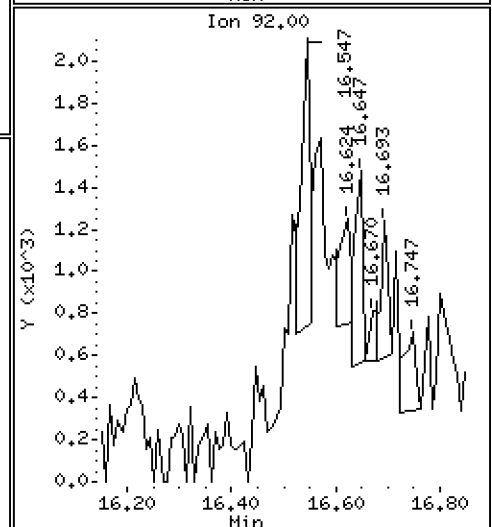
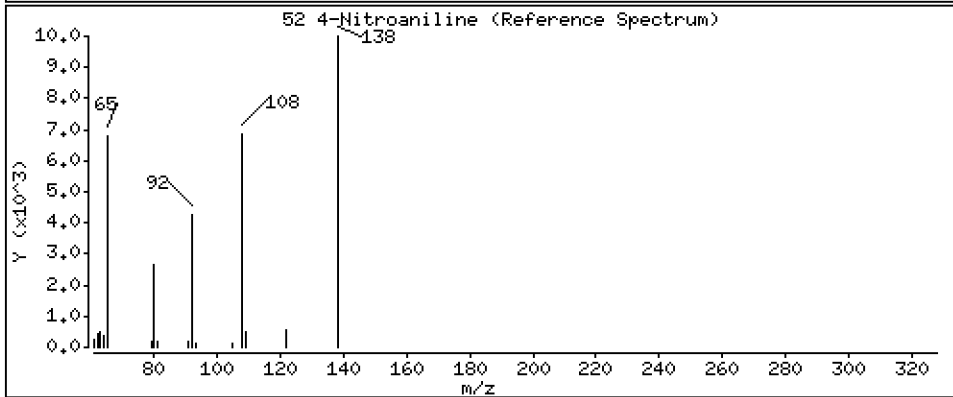
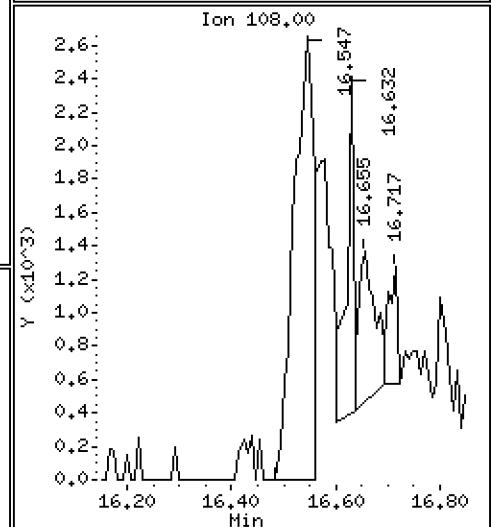
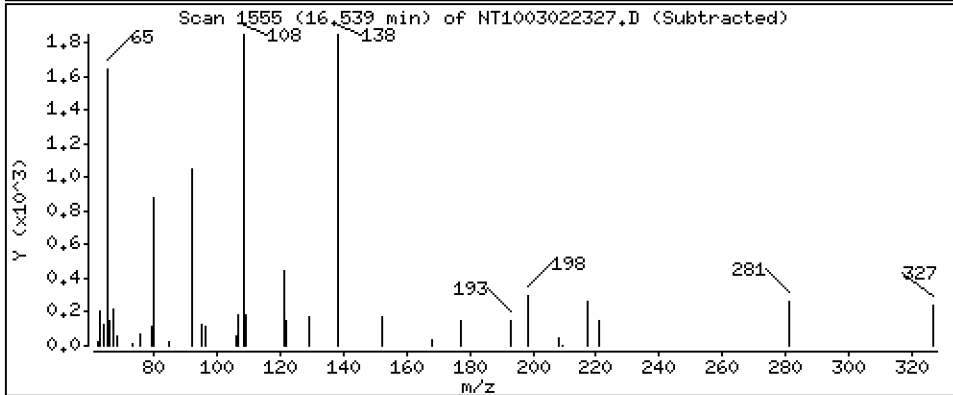
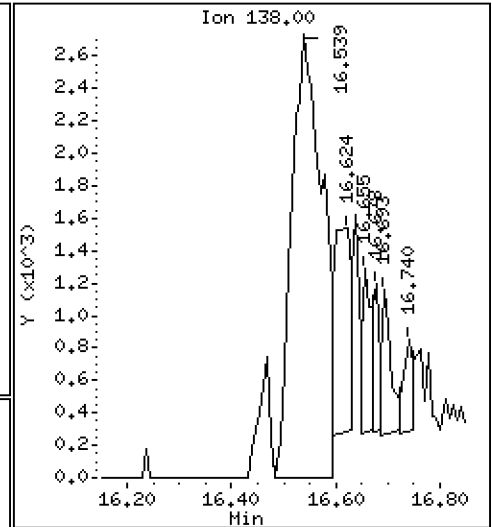
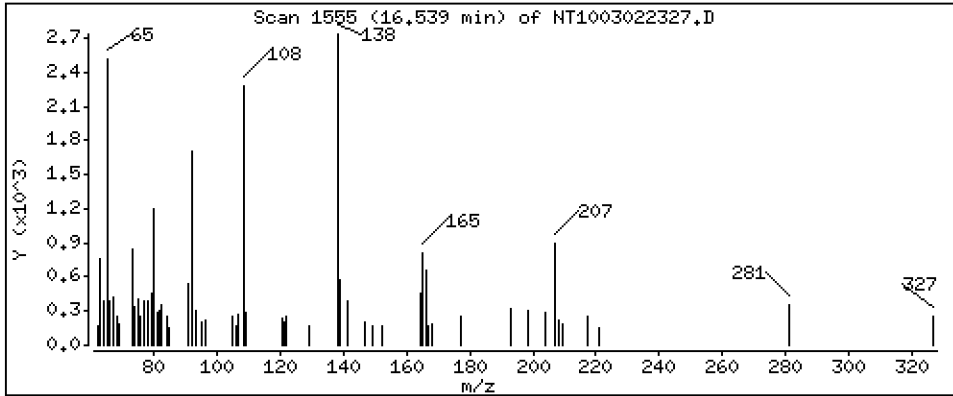
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

52 4-Nitroaniline

Concentration: 0.1179 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

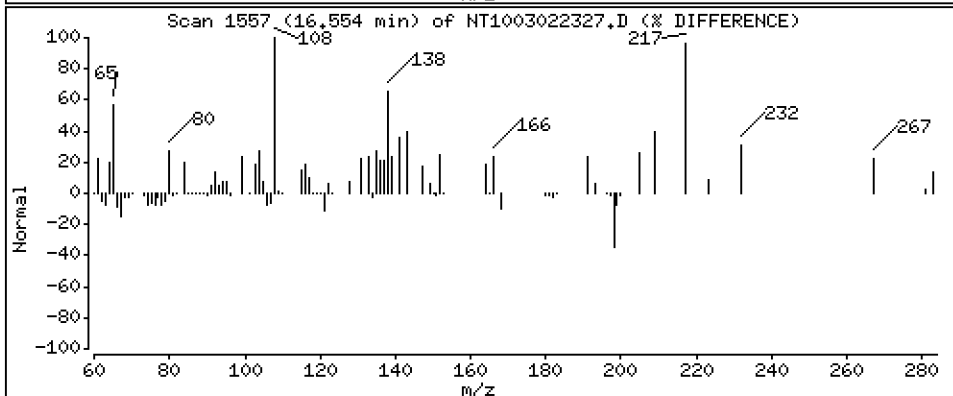
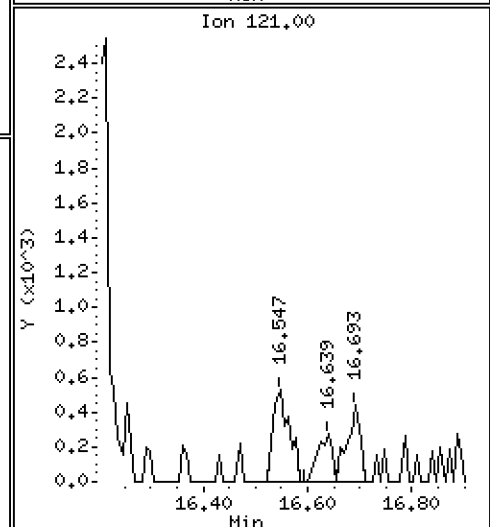
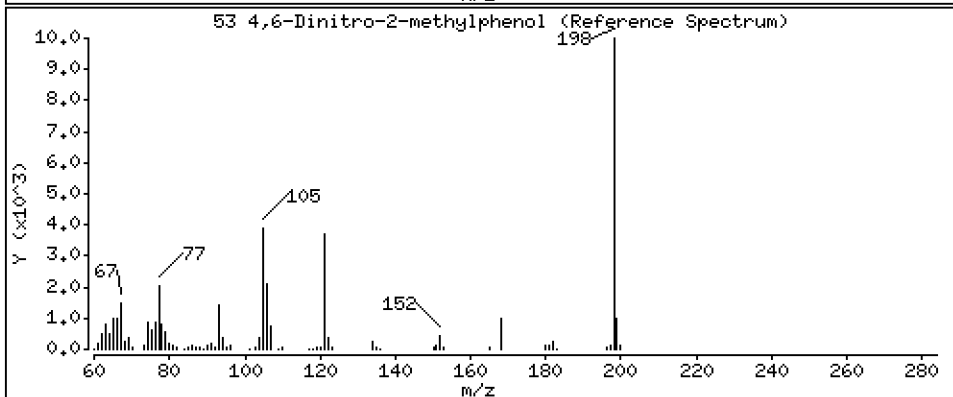
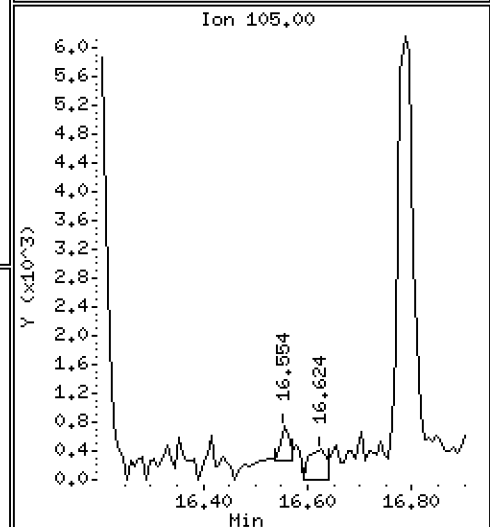
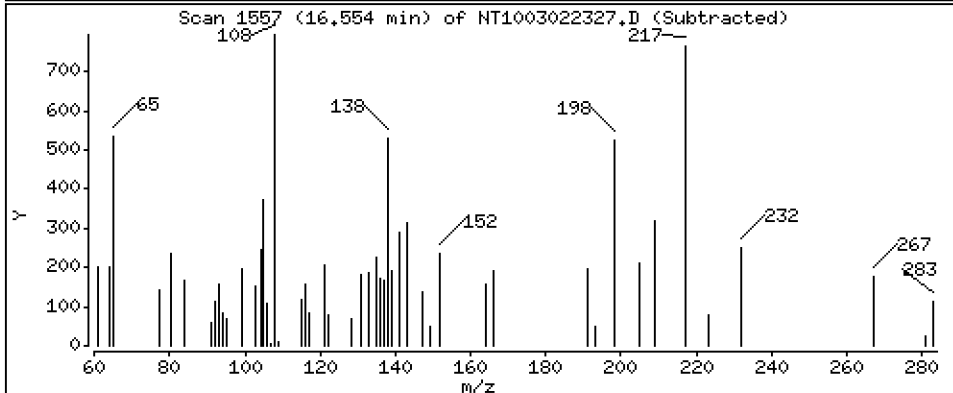
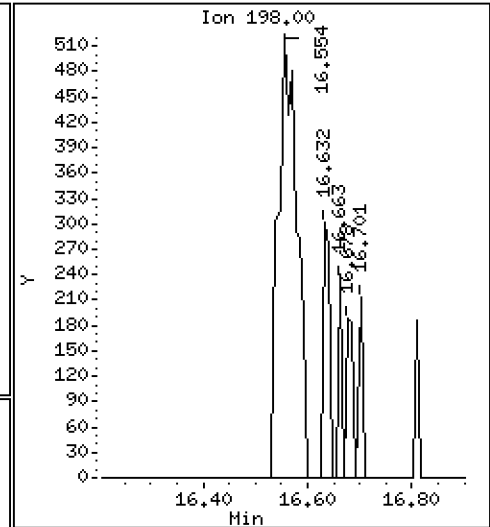
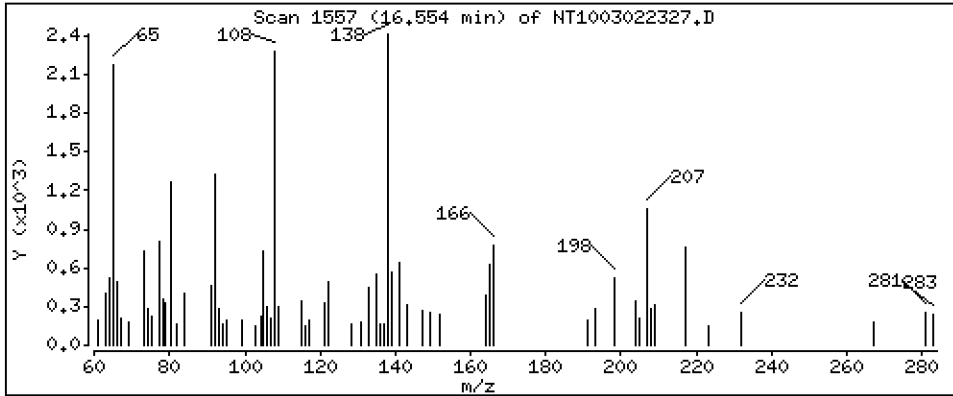
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

53 4,6-Dinitro-2-methylphenol

Concentration: 0,02628 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

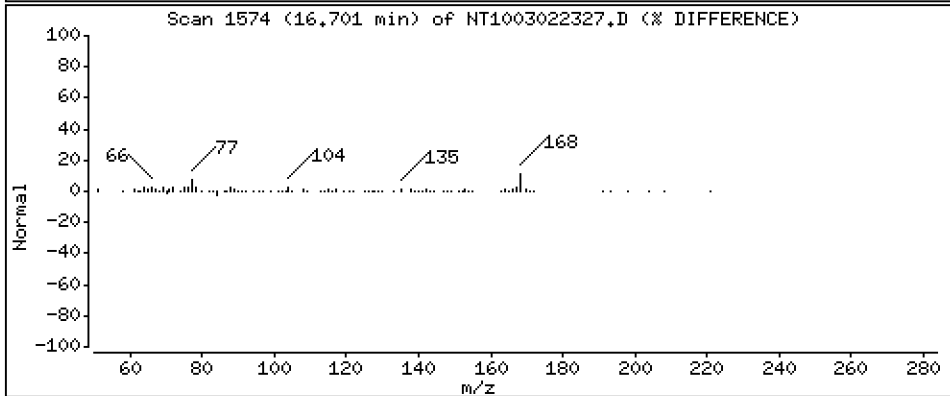
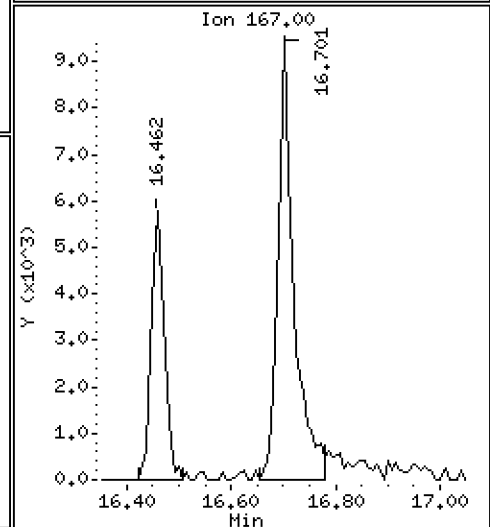
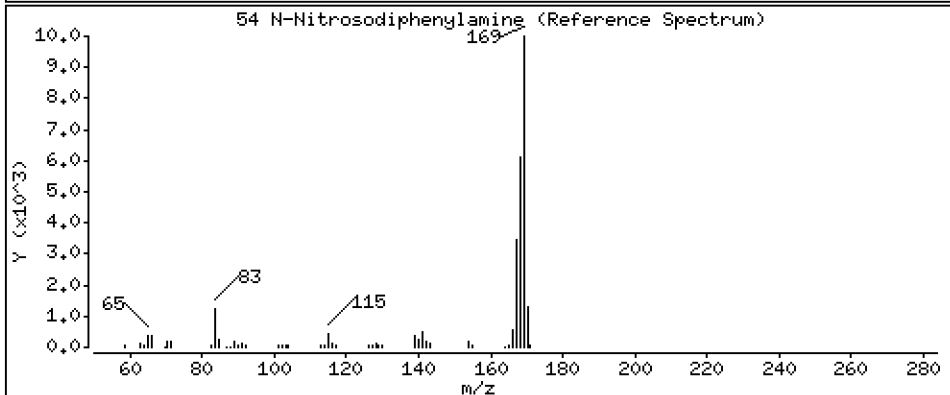
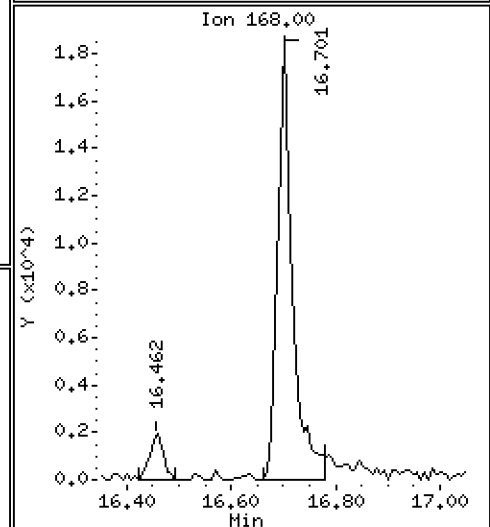
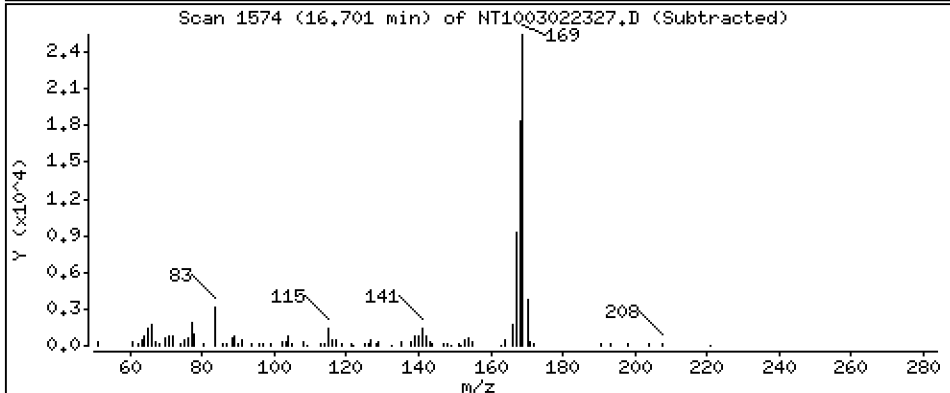
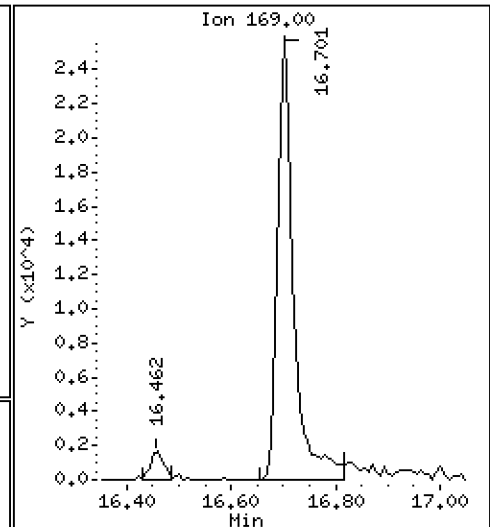
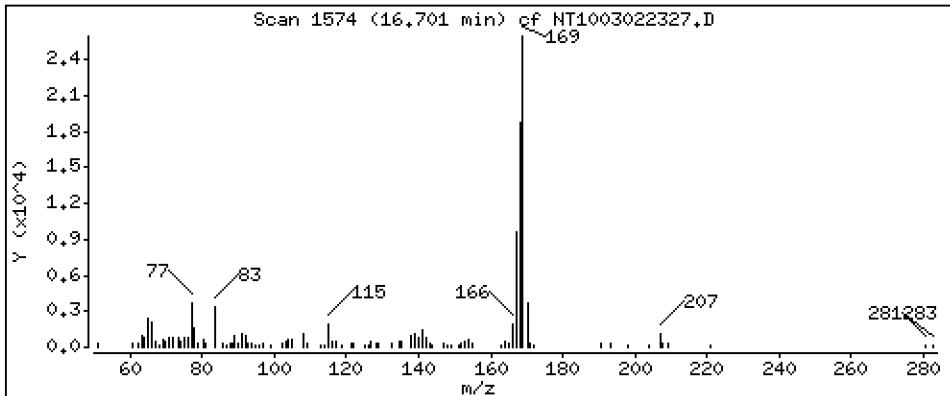
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 0,1742 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

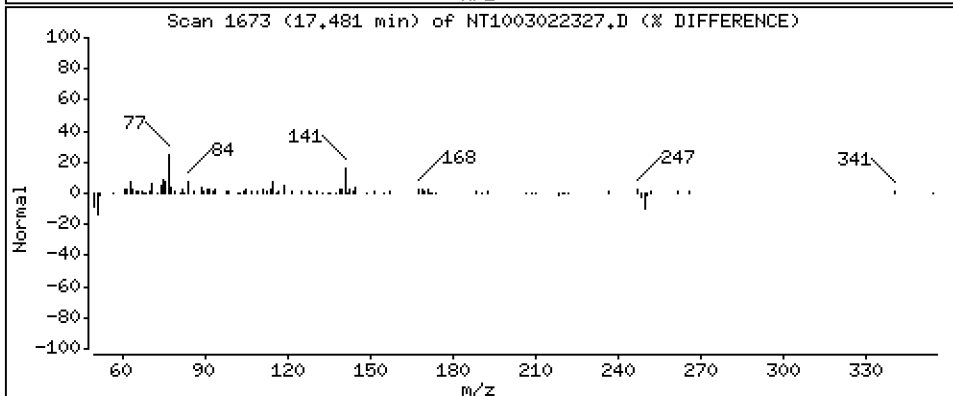
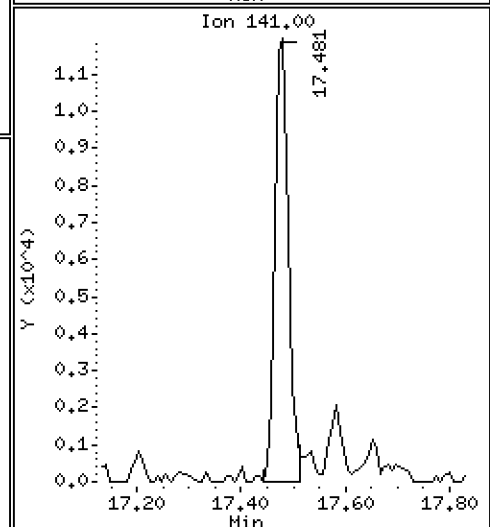
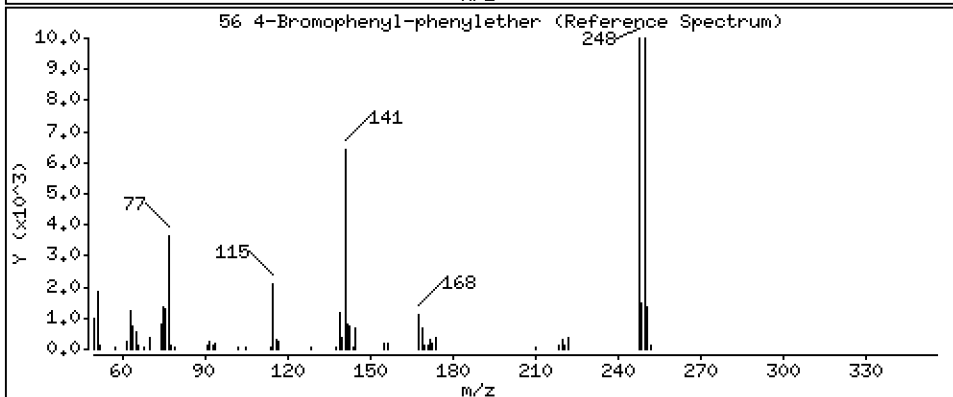
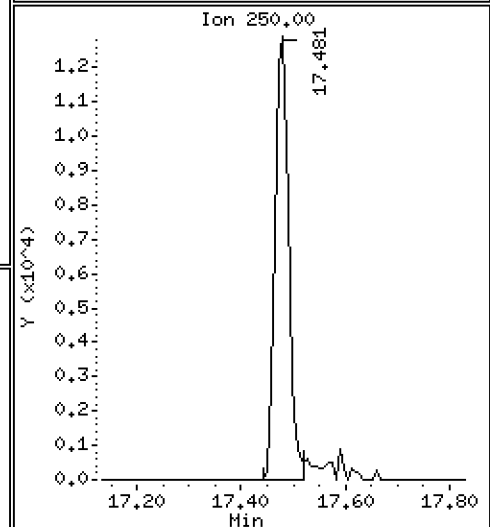
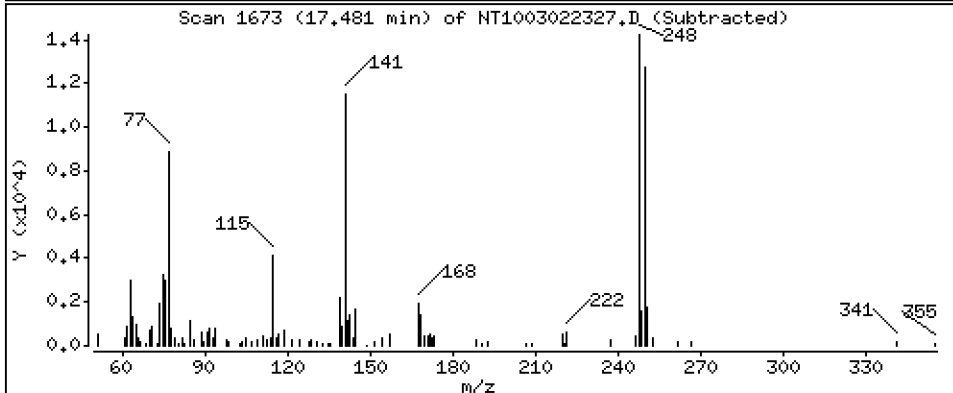
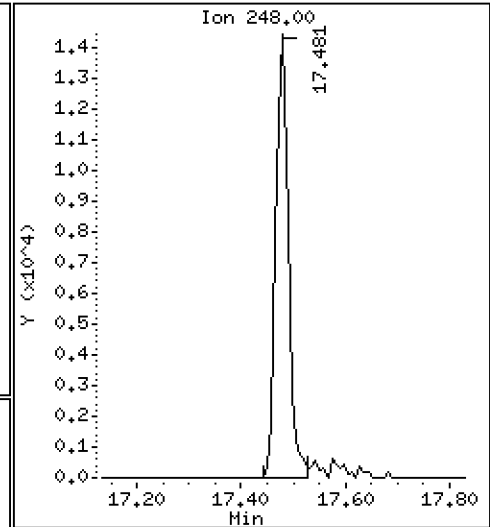
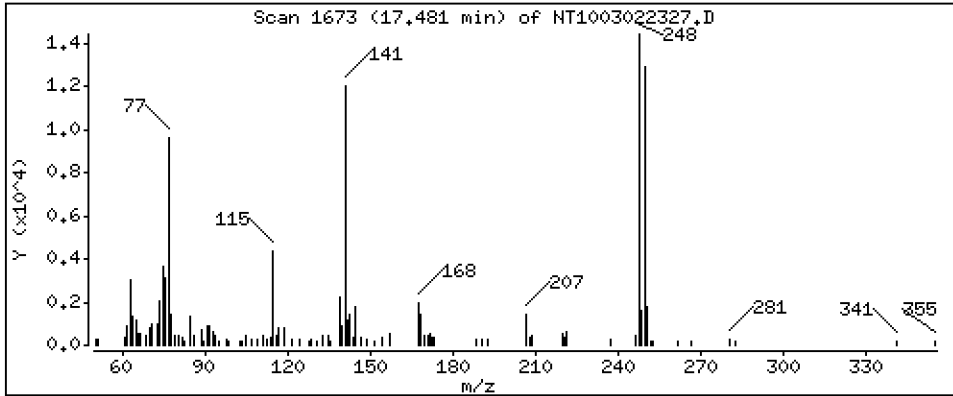
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

56 4-Bromophenyl-phenylether

Concentration: 0,1823 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

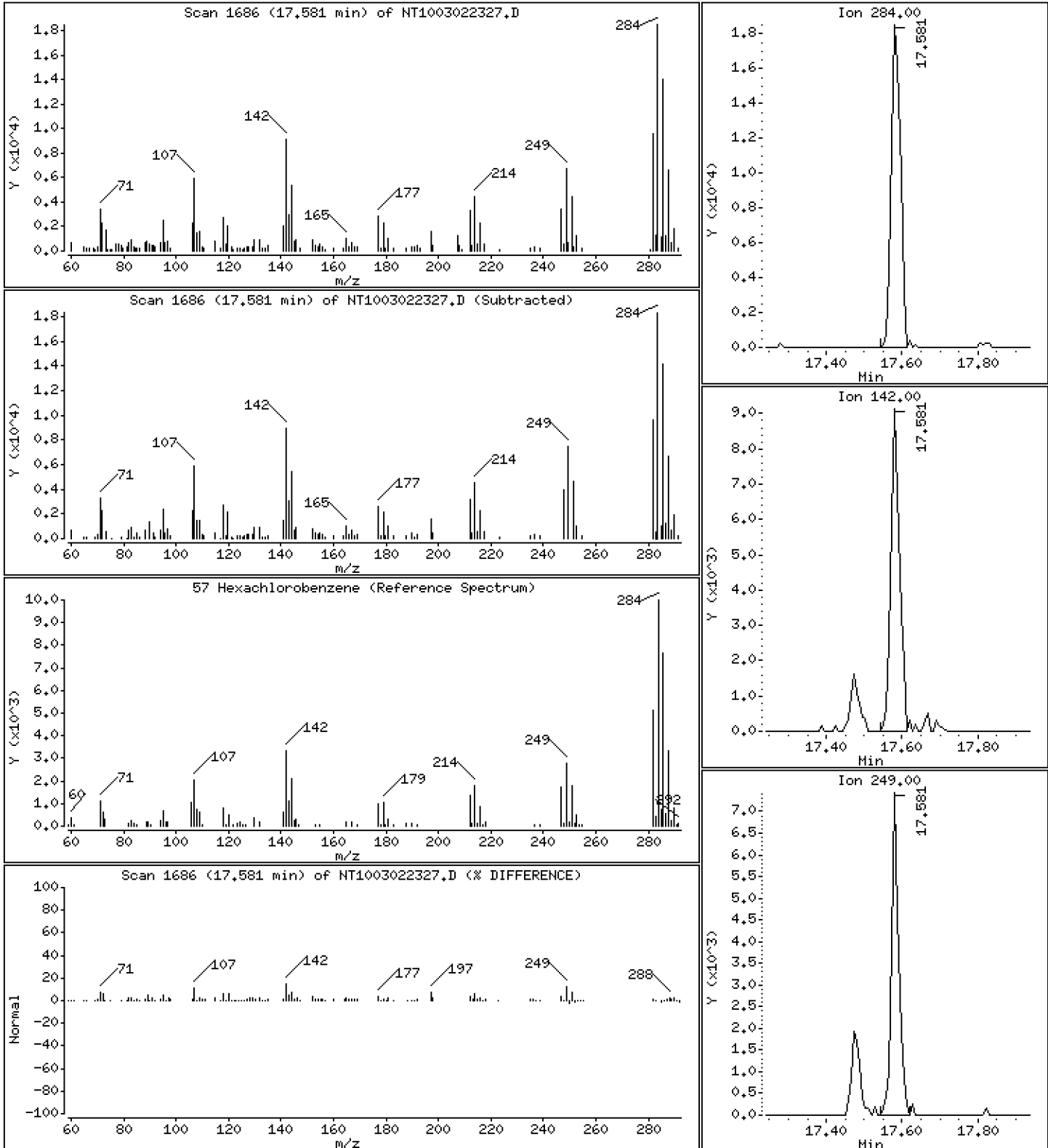
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,2100 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

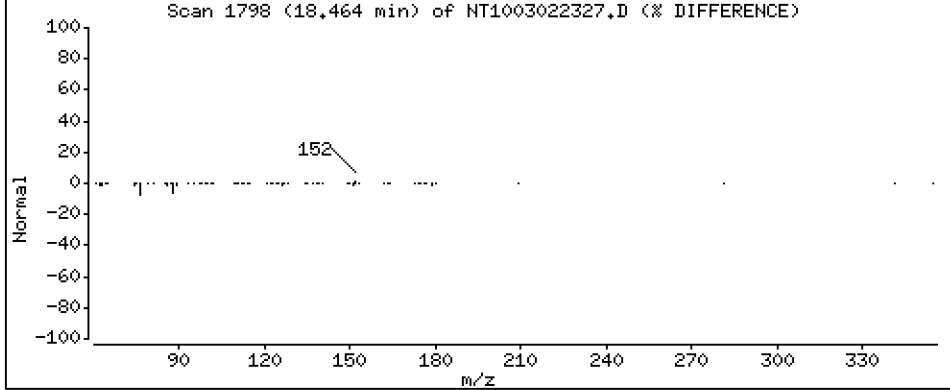
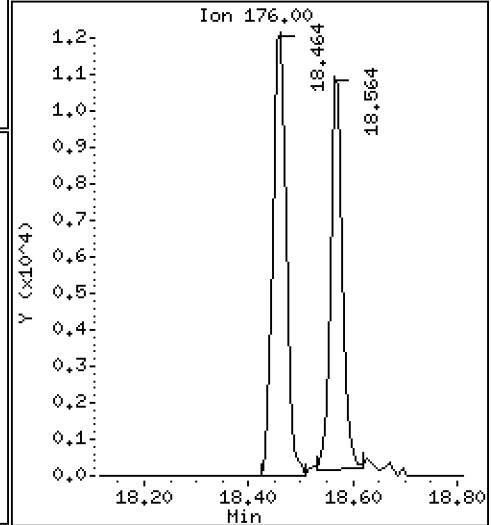
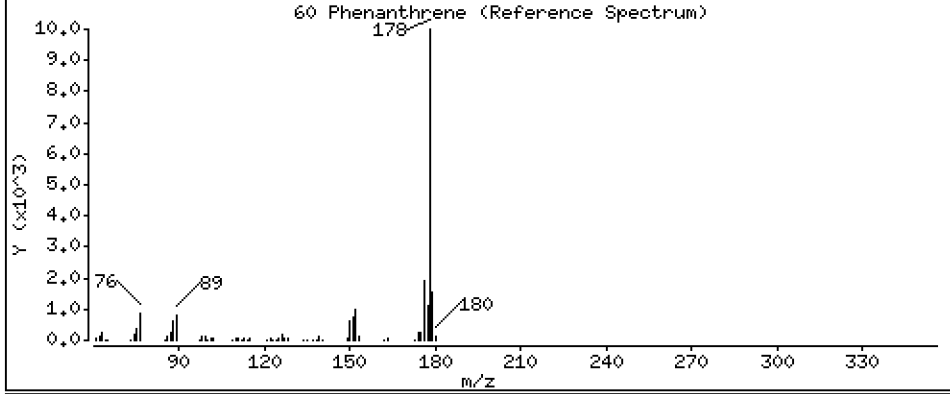
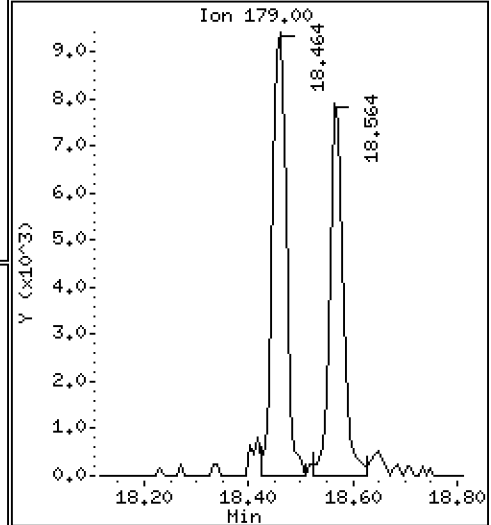
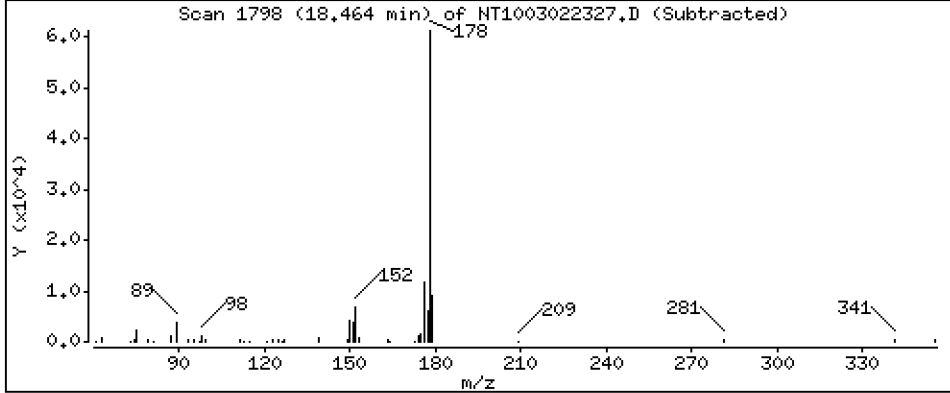
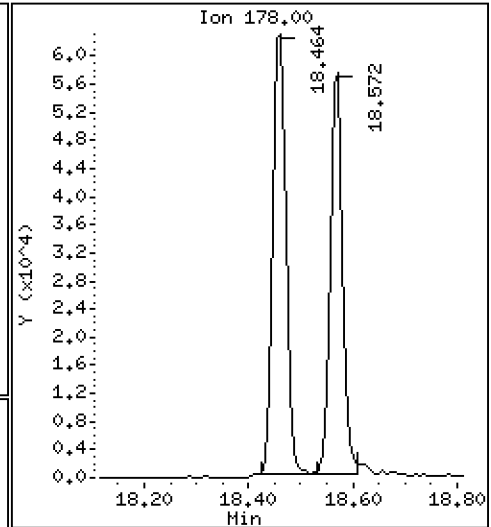
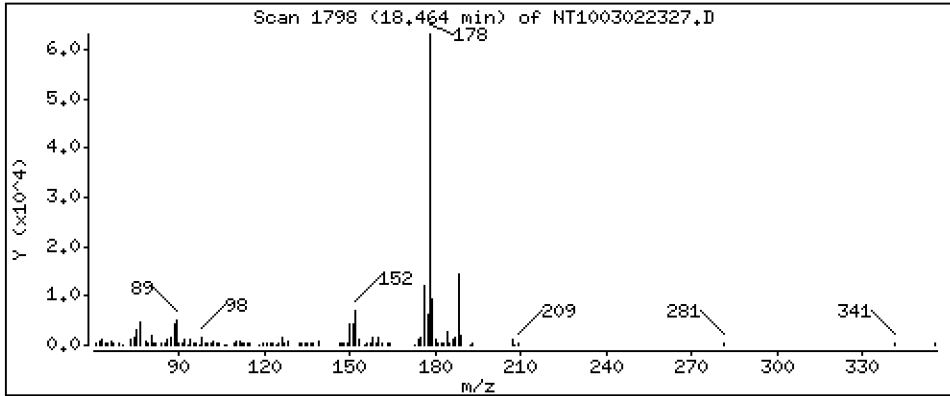
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

60 Phenanthrene

Concentration: 0,1954 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

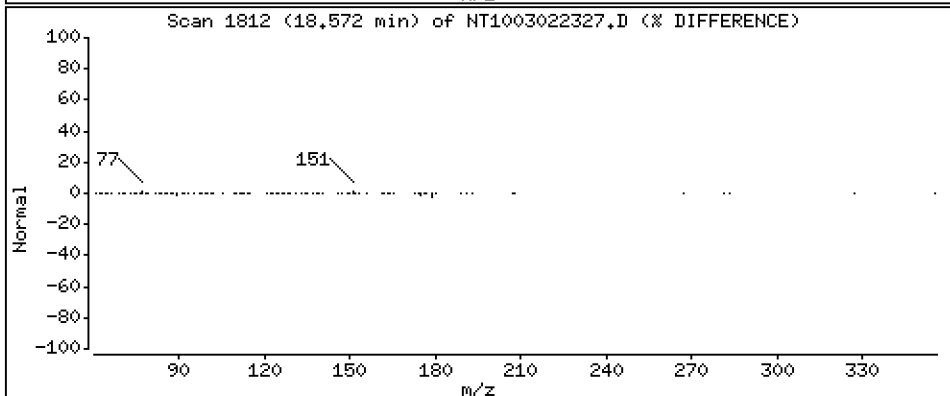
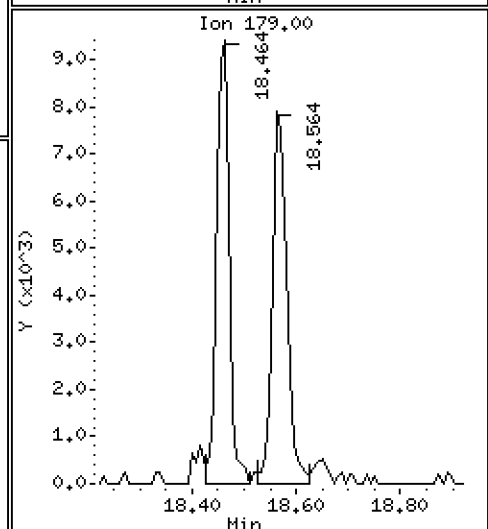
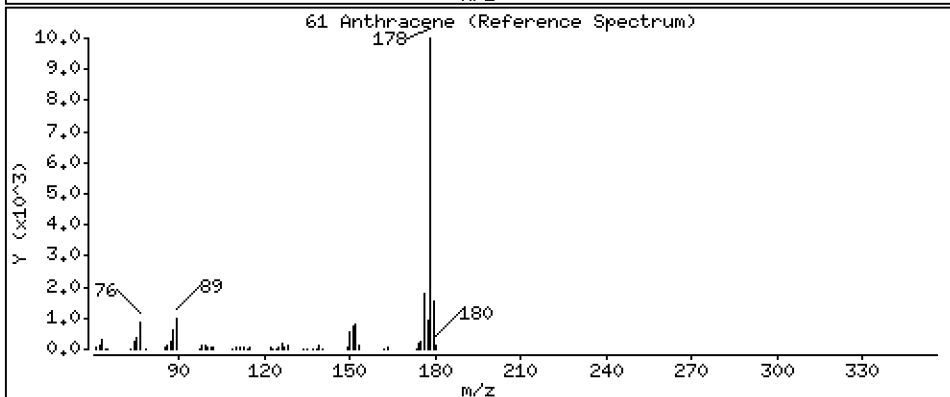
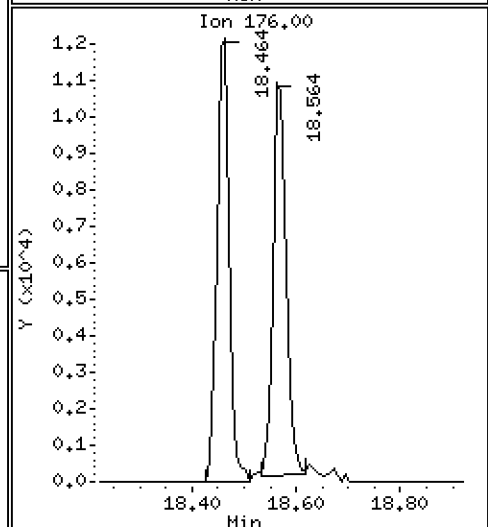
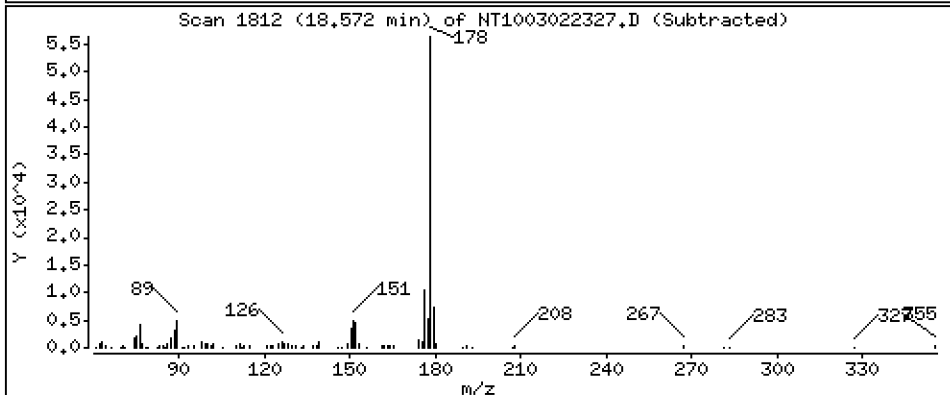
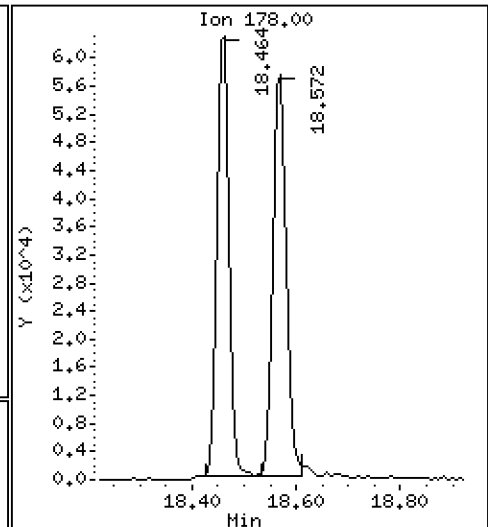
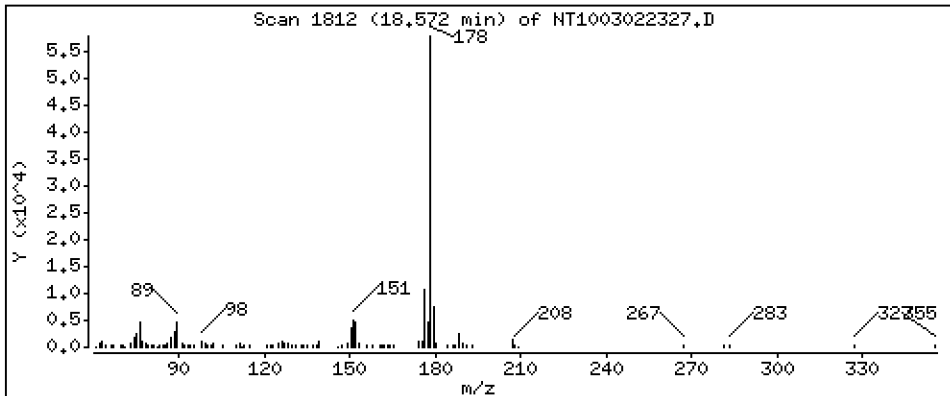
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

61 Anthracene

Concentration: 0,1840 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

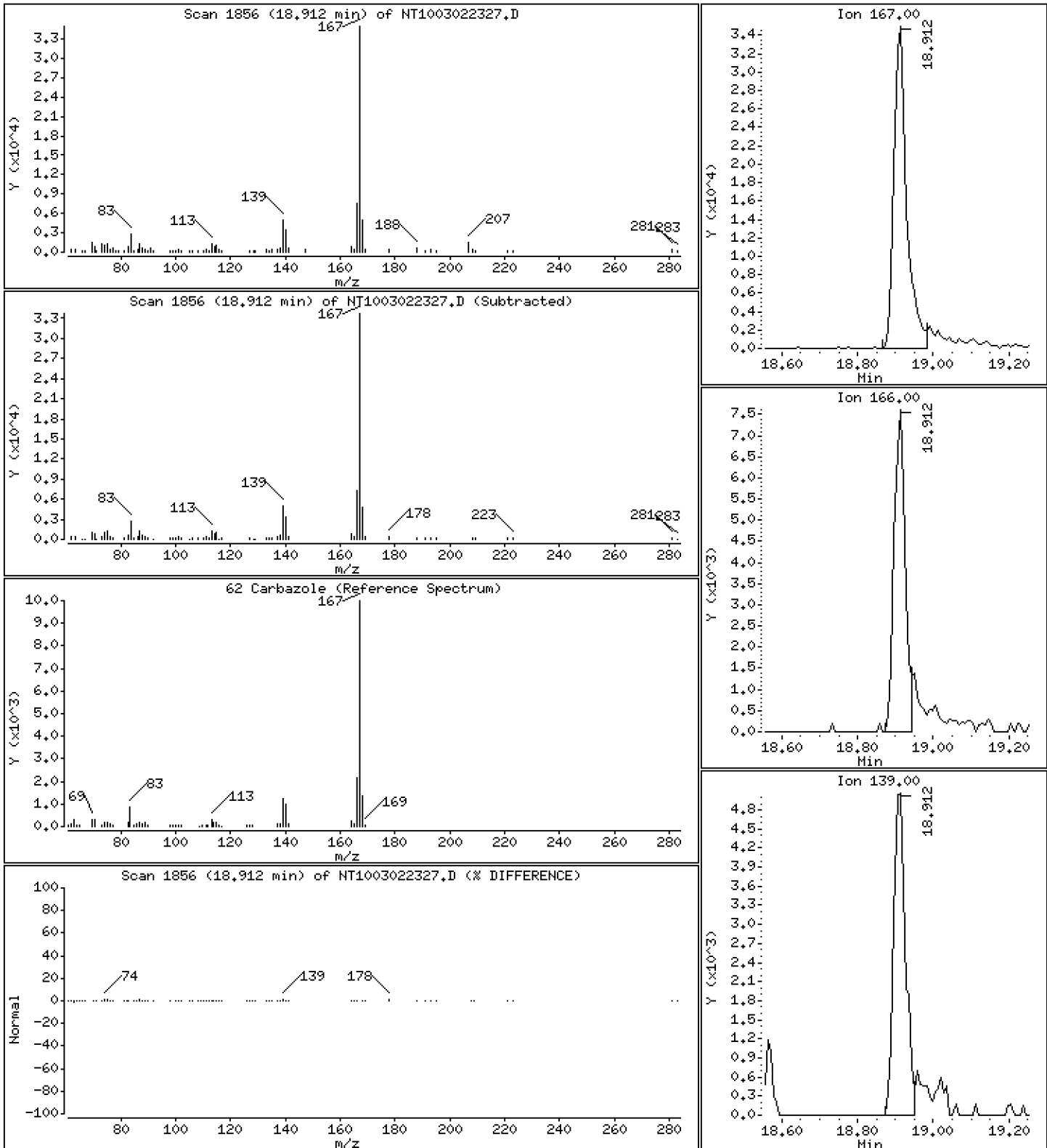
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

62 Carbazole

Concentration: 0,1654 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

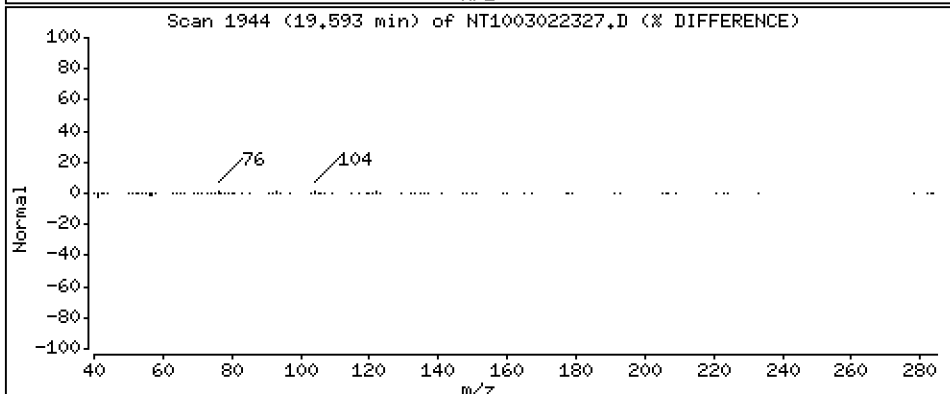
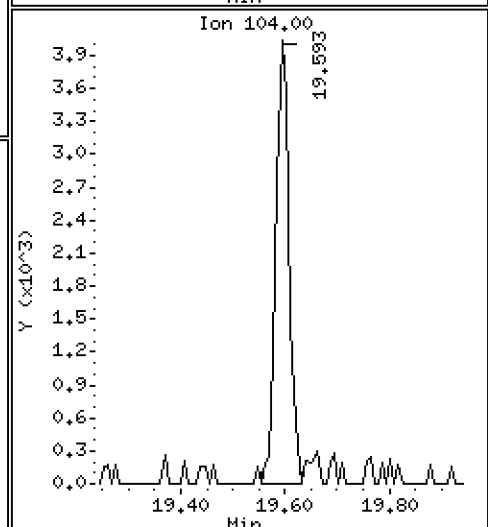
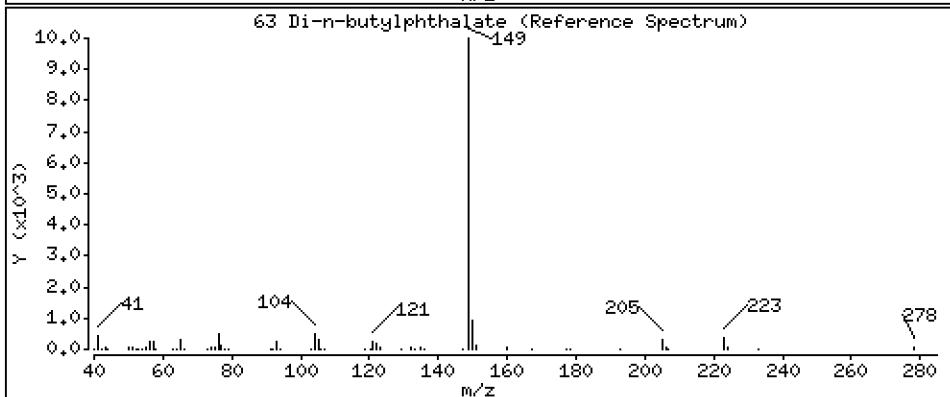
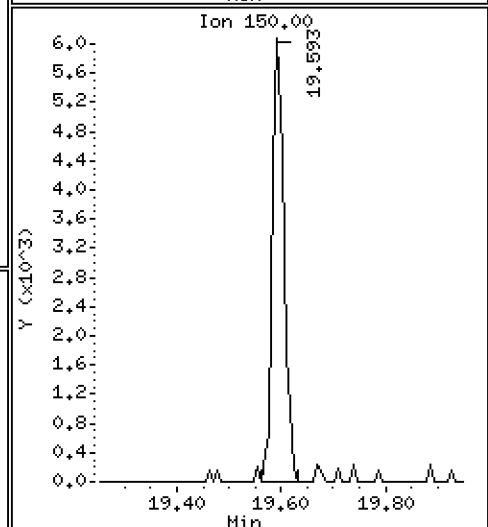
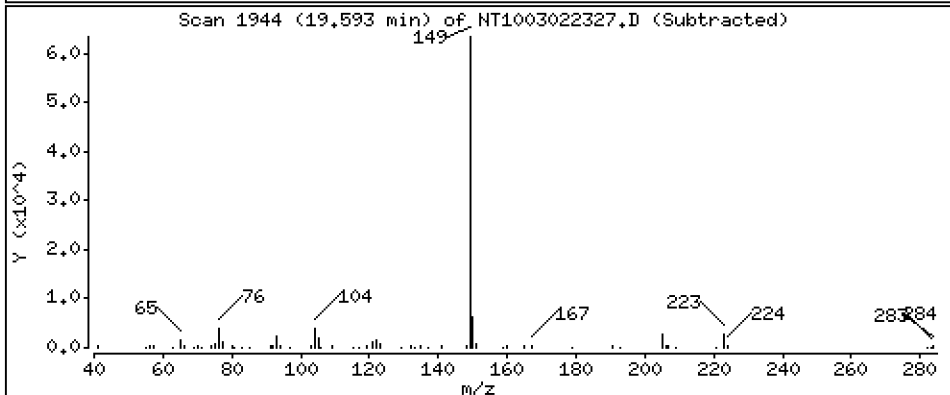
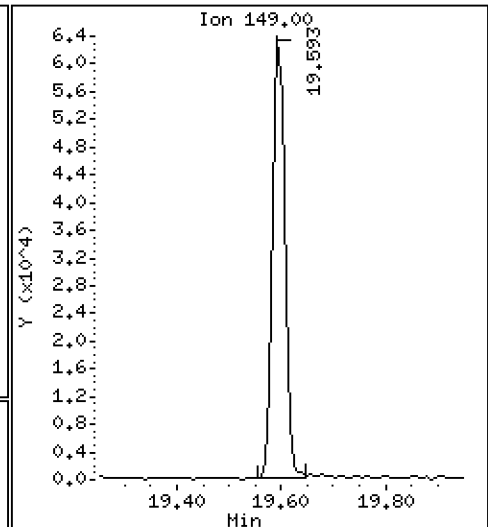
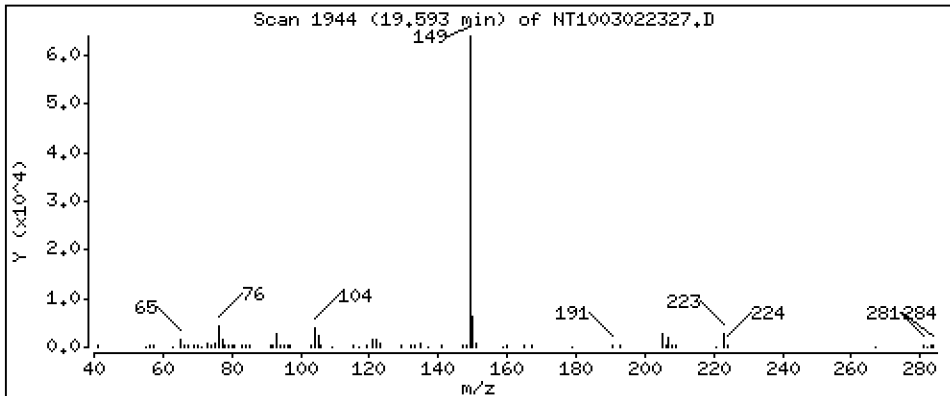
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 0.1493 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

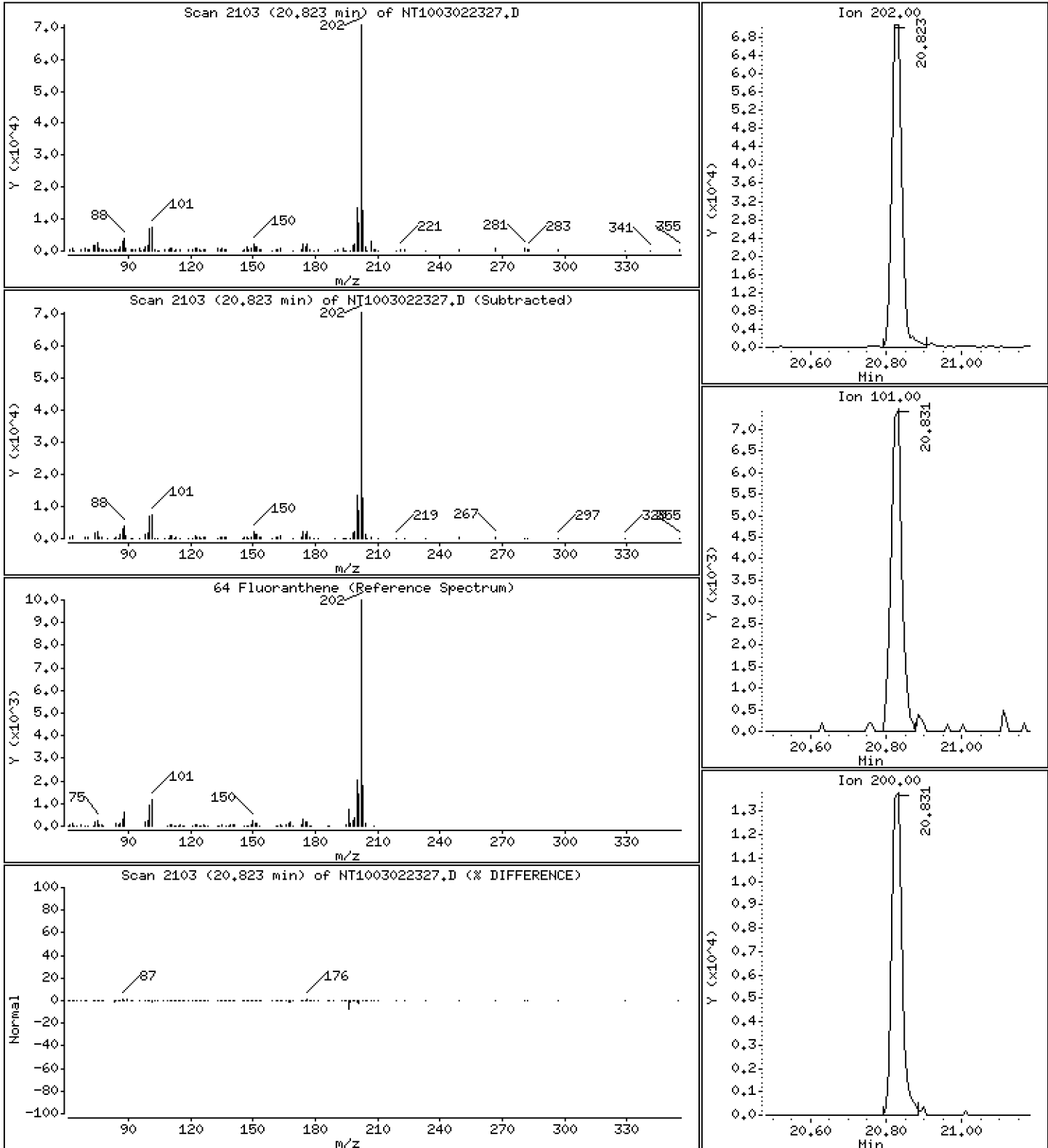
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 0,1680 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

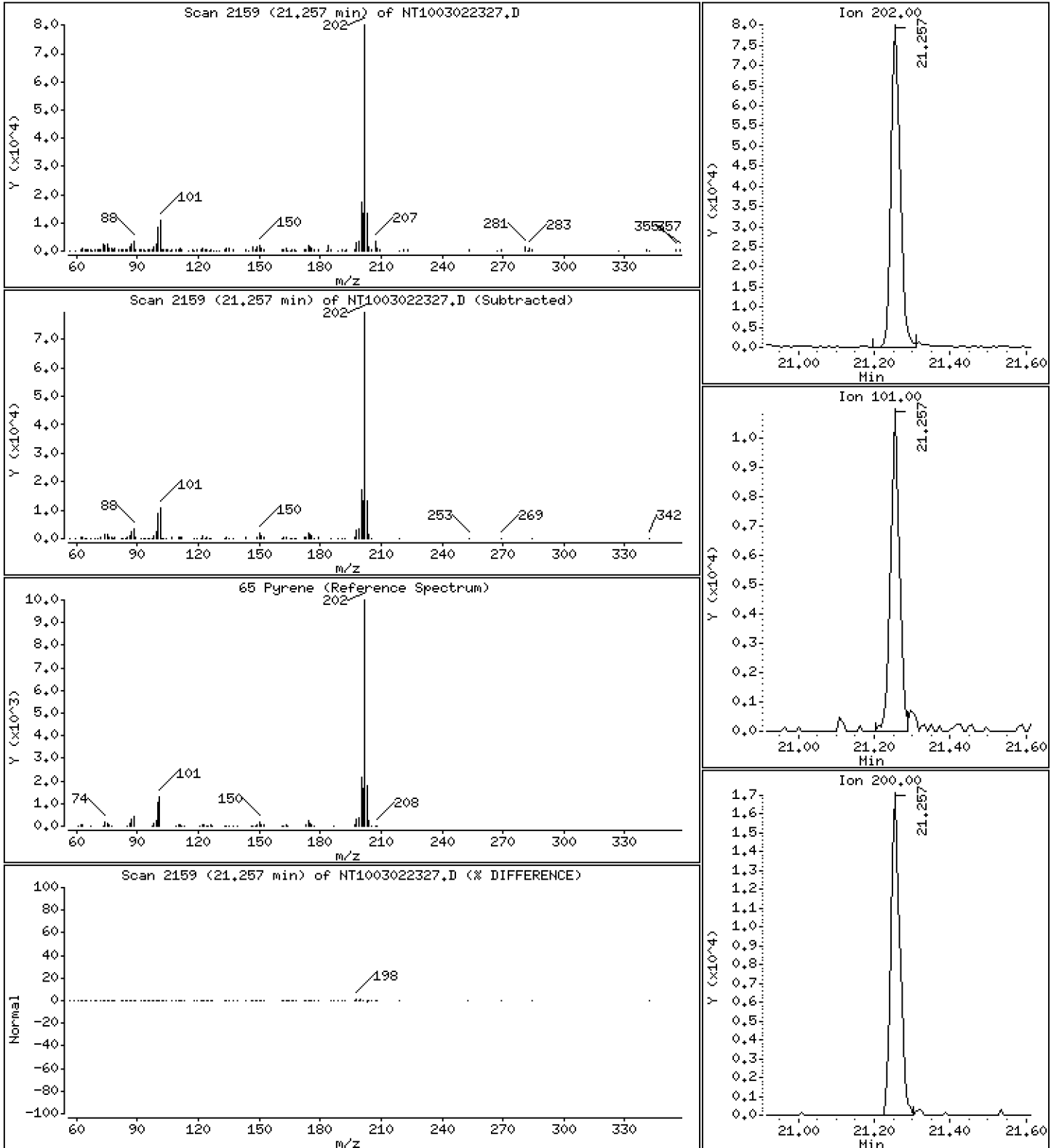
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 0,1736 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

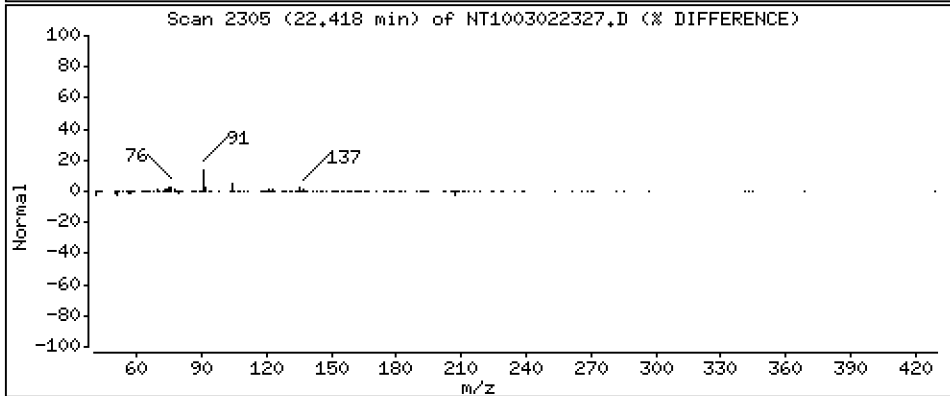
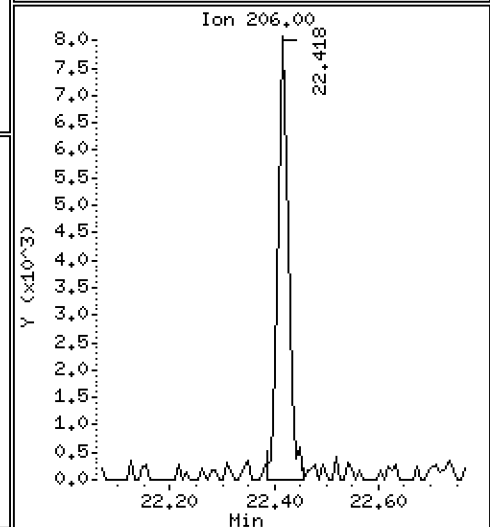
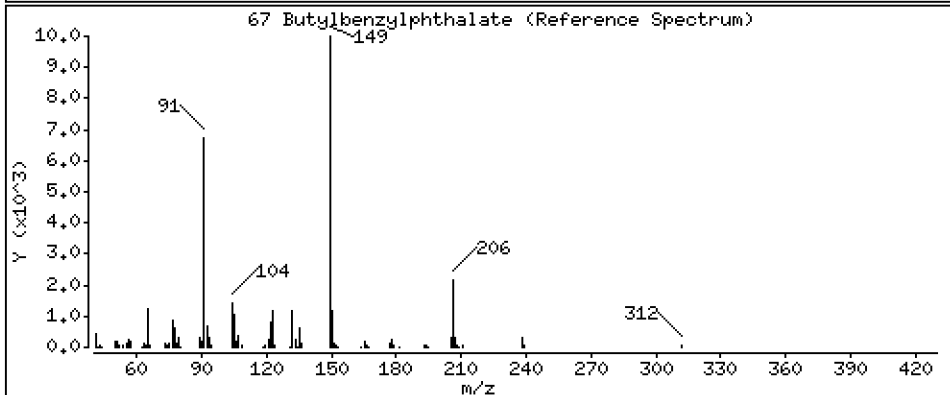
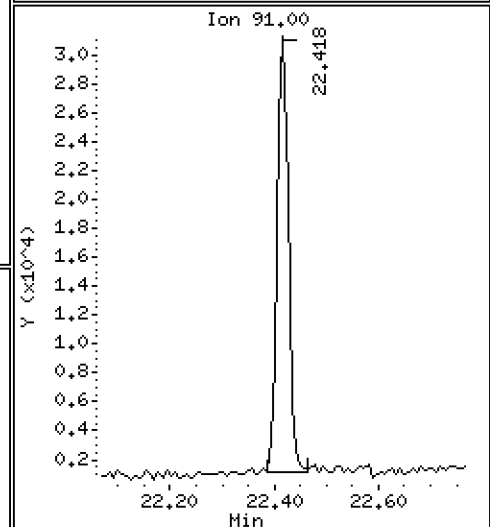
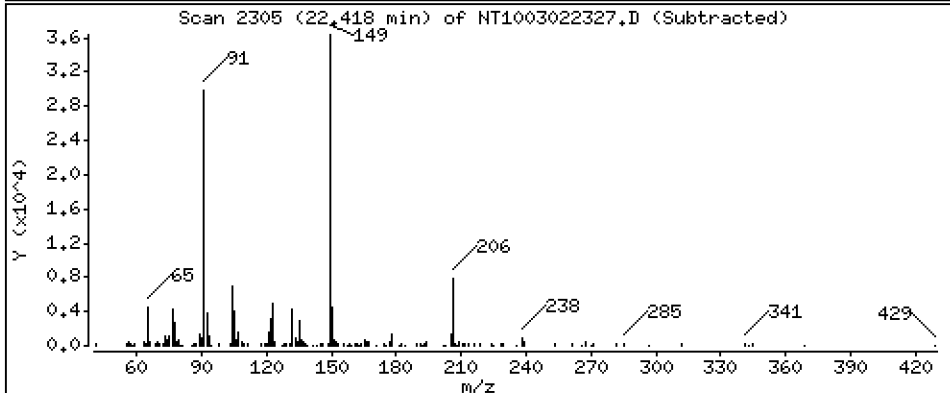
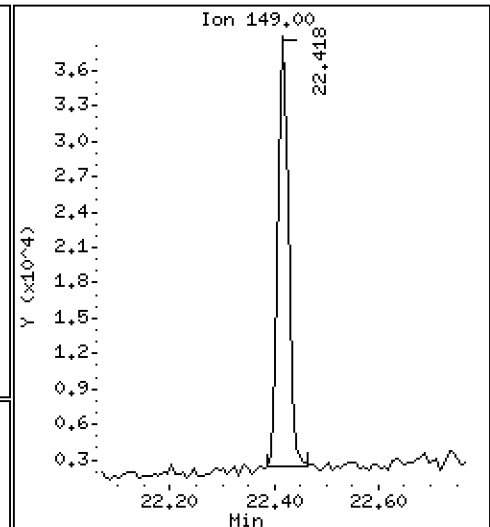
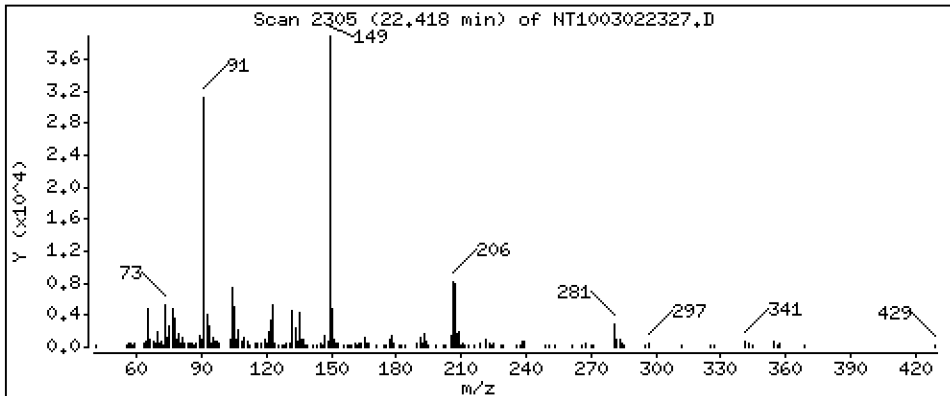
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.1191 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

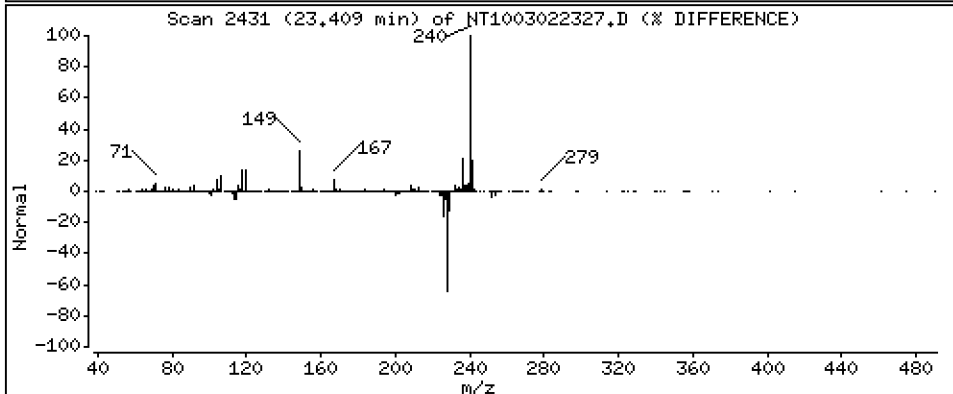
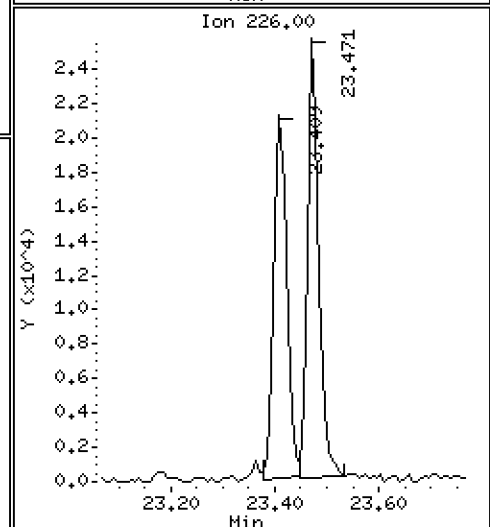
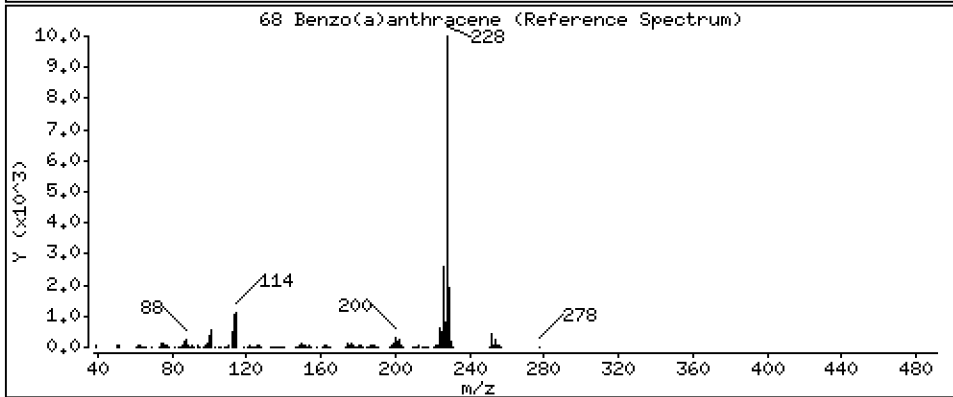
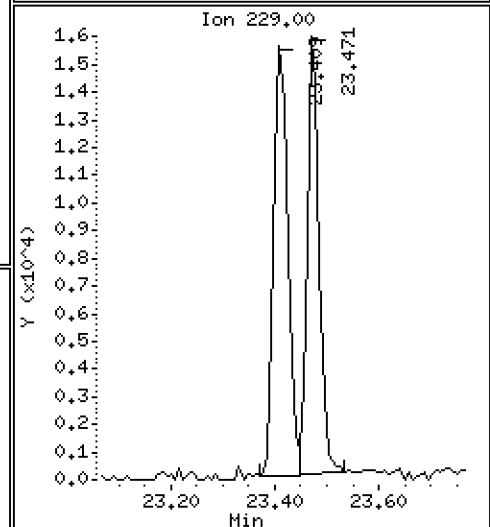
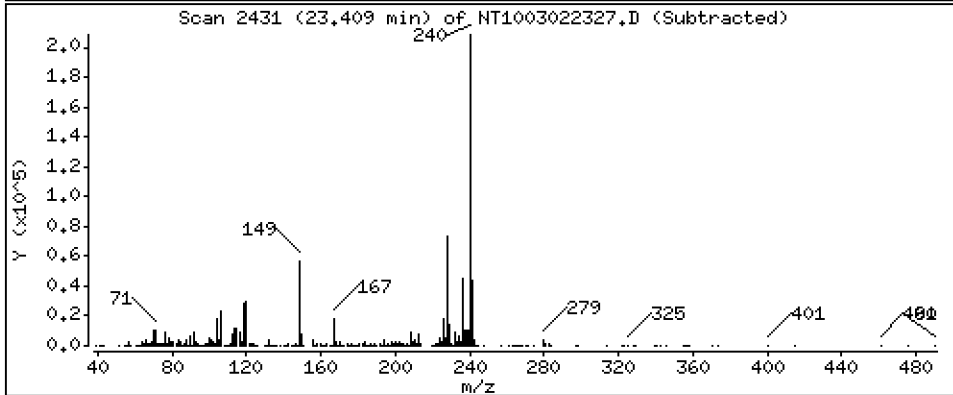
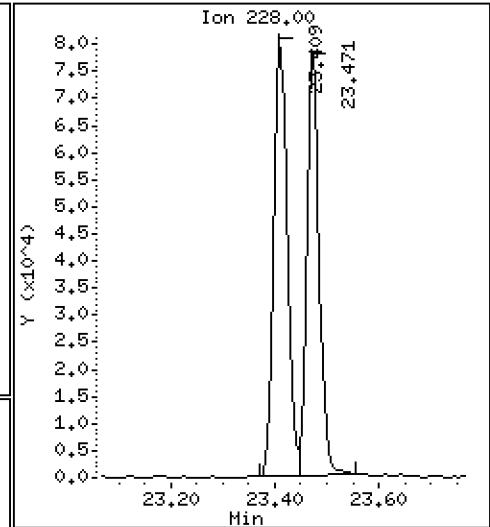
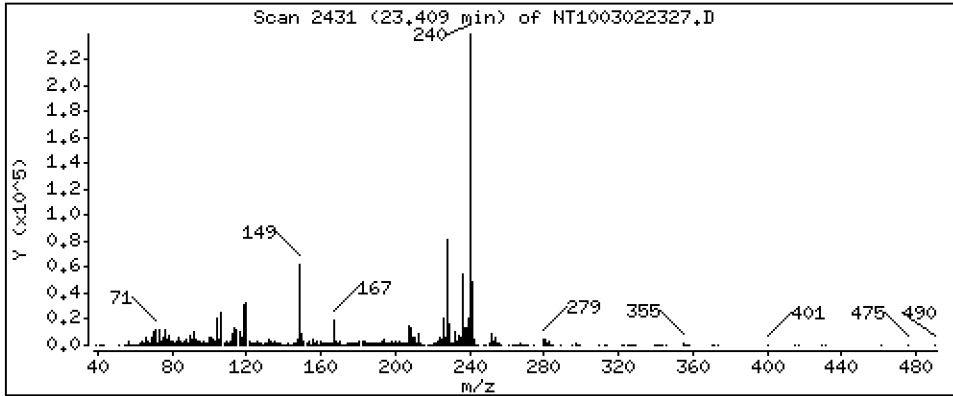
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

68 Benzo(a)anthracene

Concentration: 0,1830 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

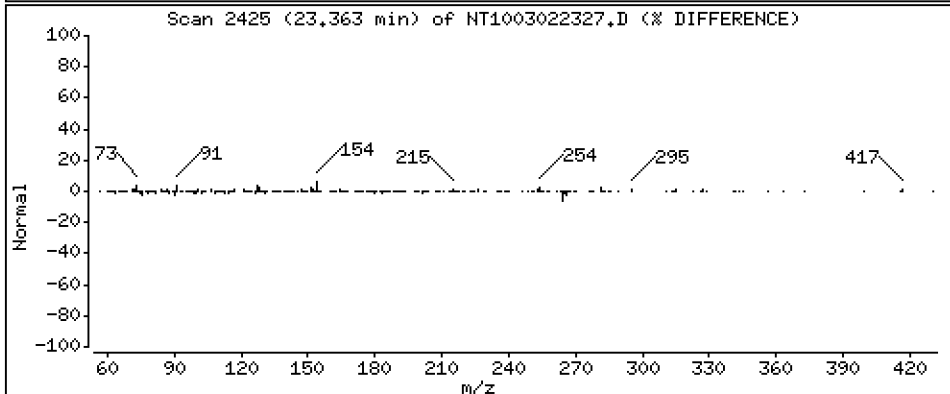
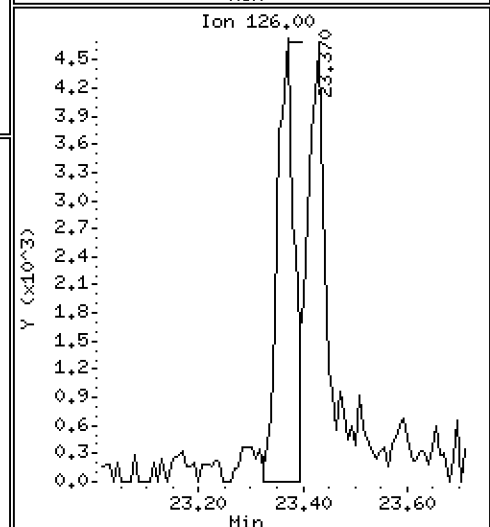
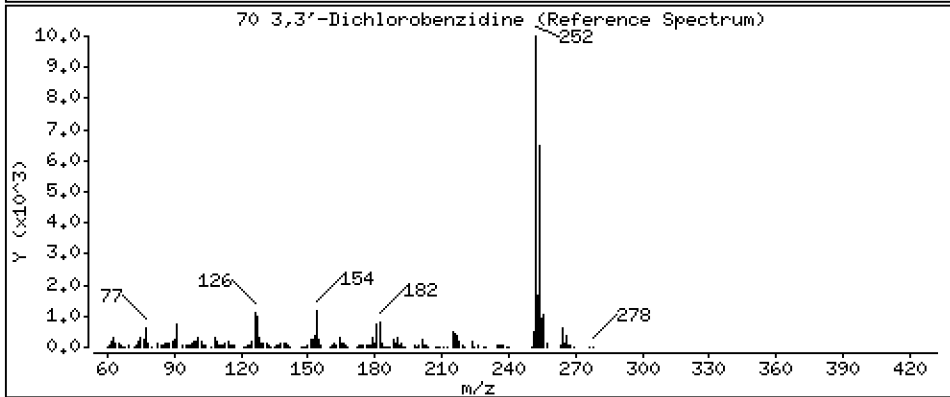
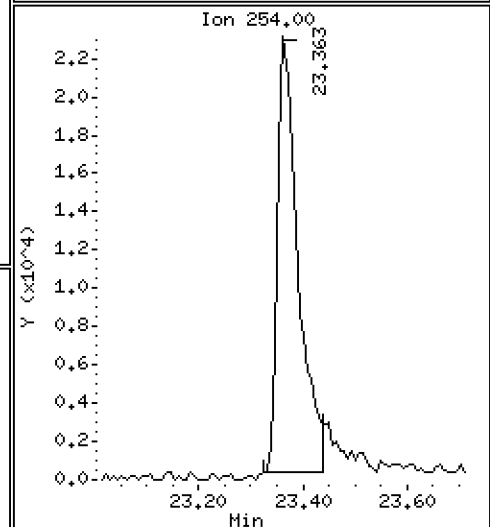
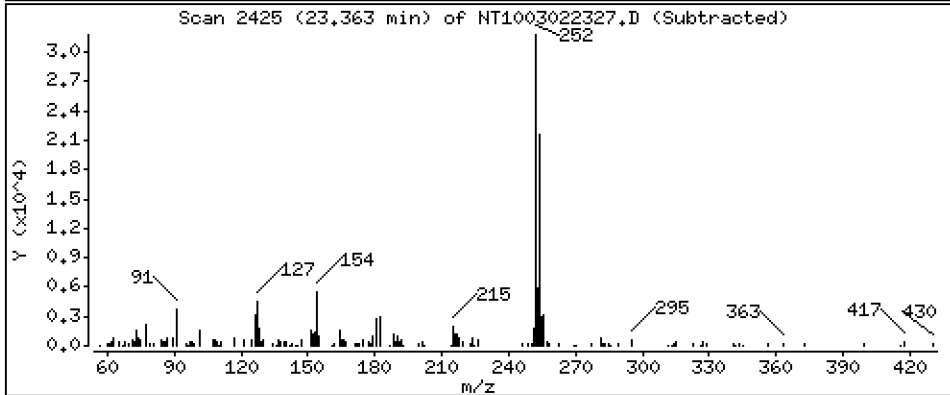
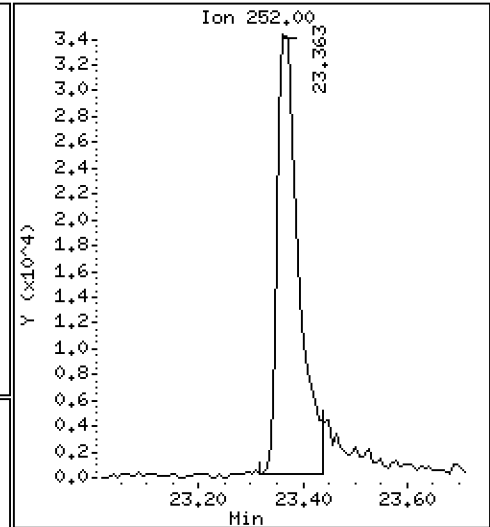
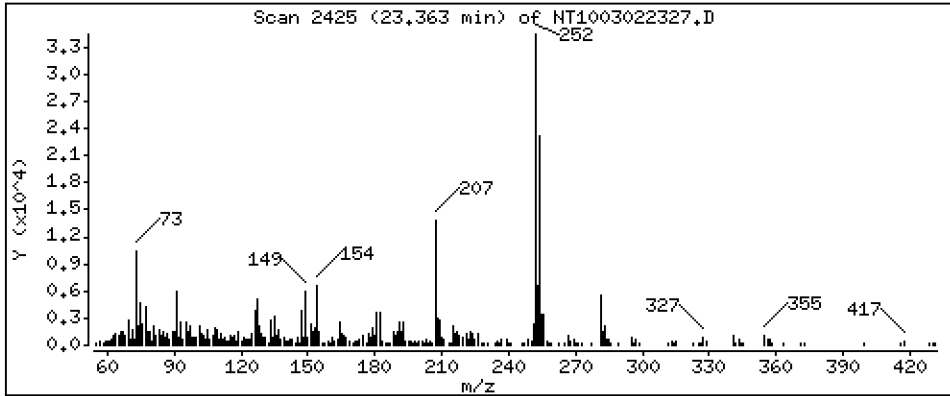
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

70 3,3'-Dichlorobenzidine

Concentration: 0.2858 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

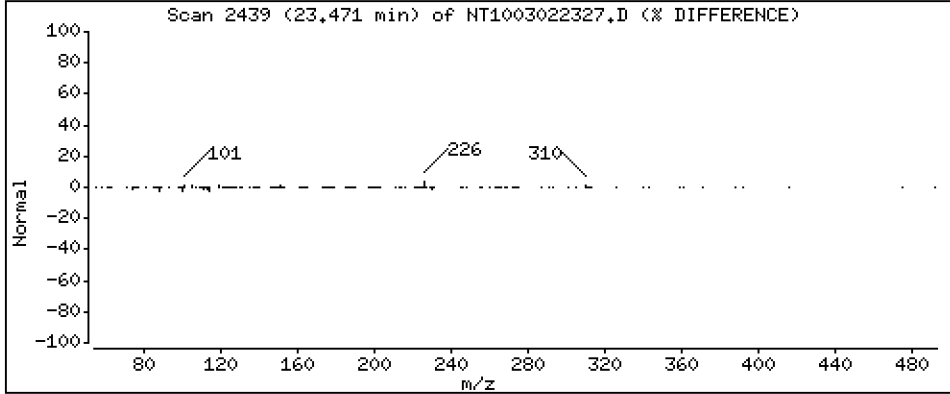
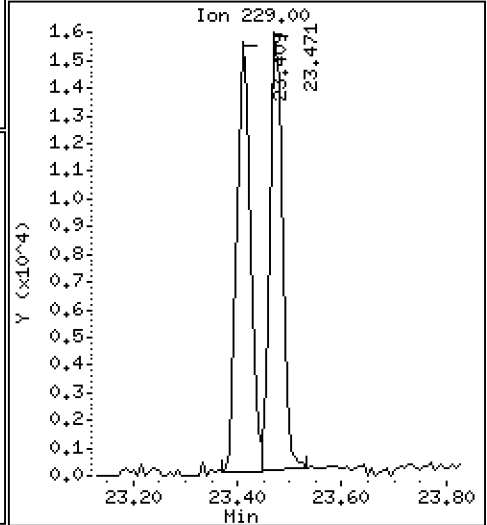
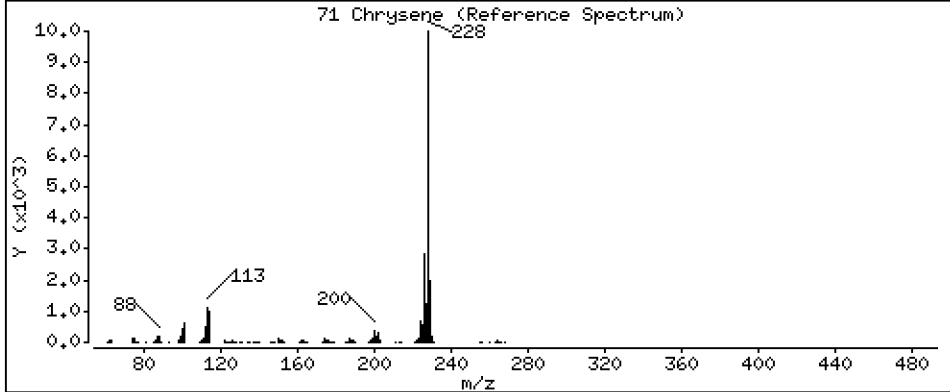
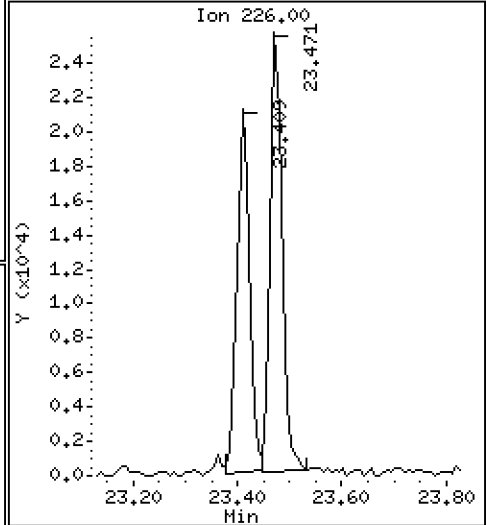
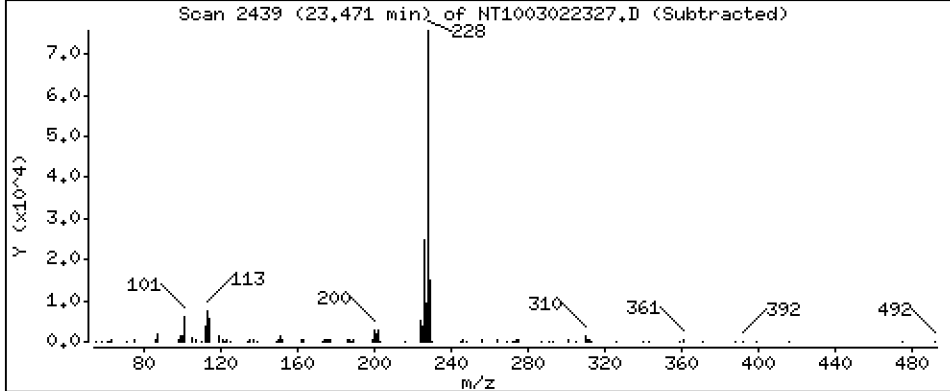
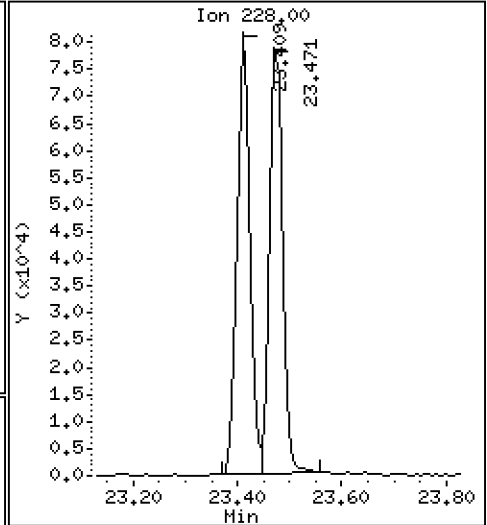
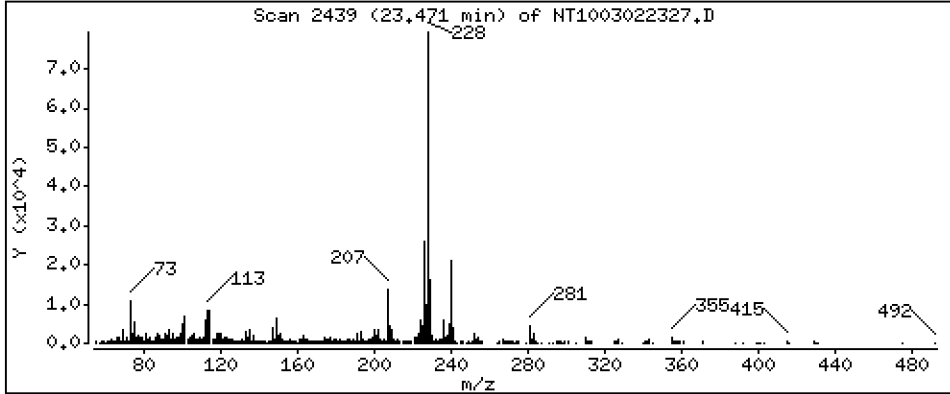
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

71 Chrysene

Concentration: 0,2100 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

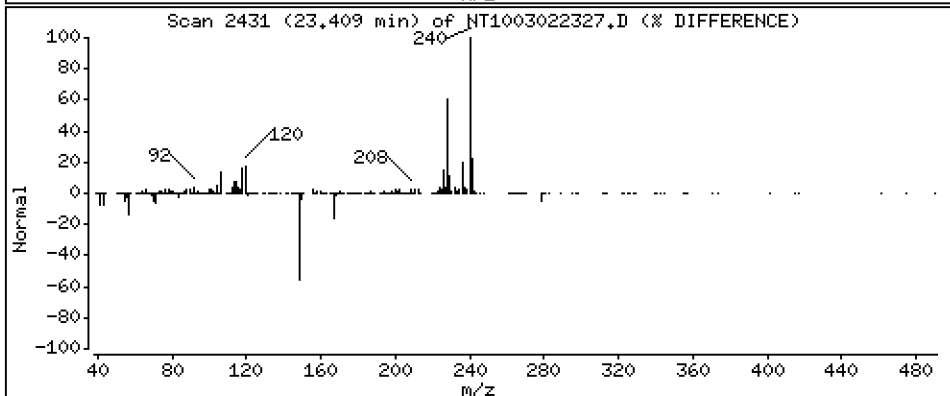
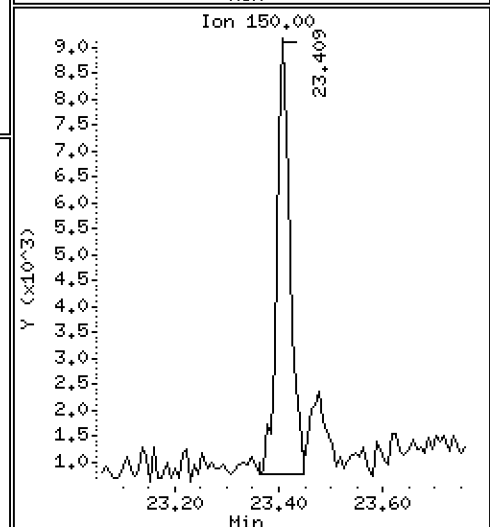
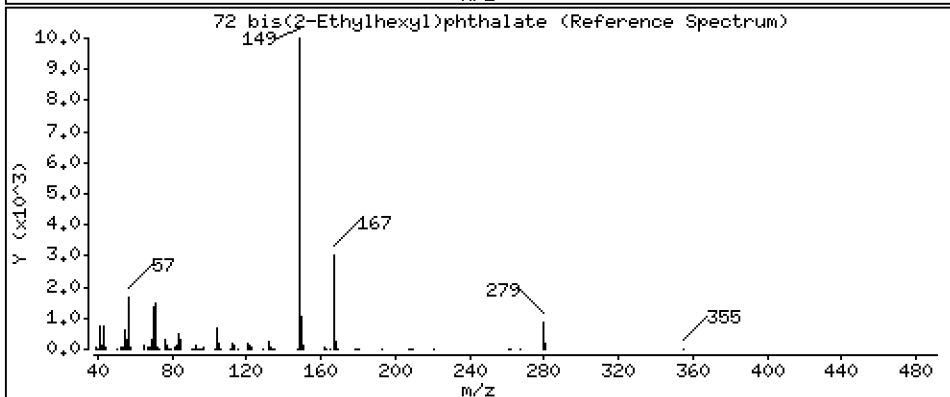
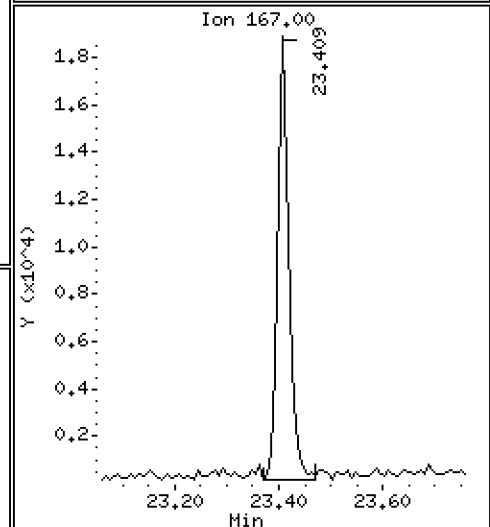
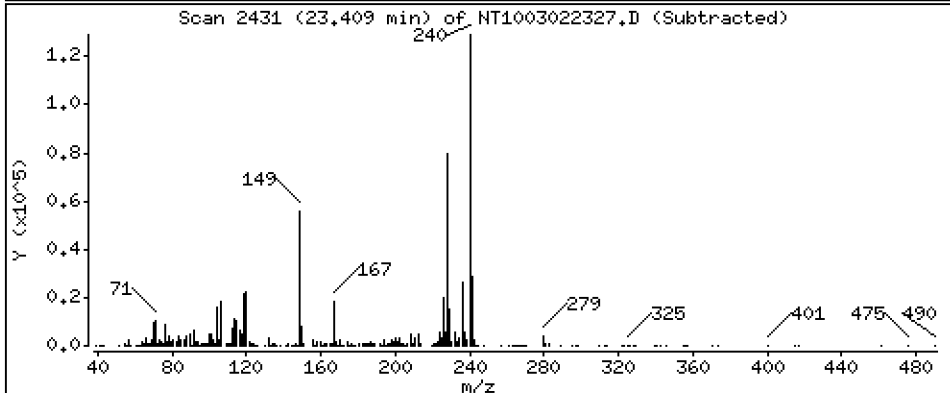
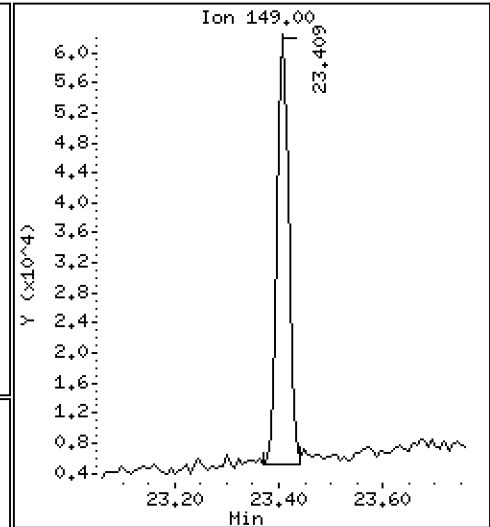
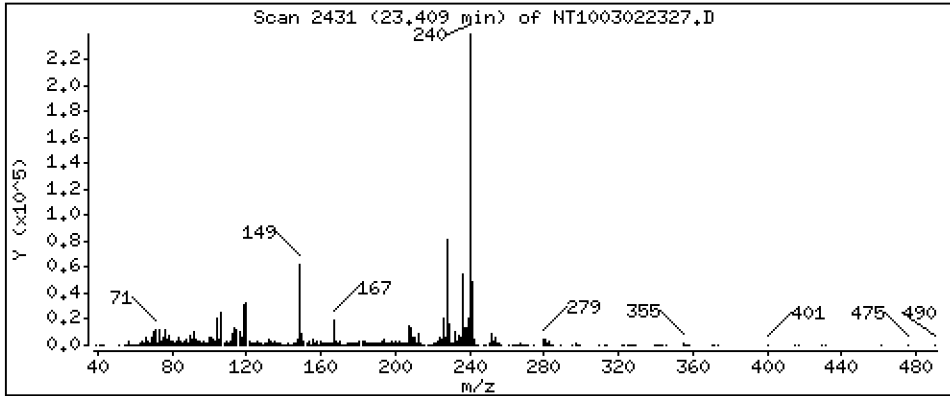
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 0,1564 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

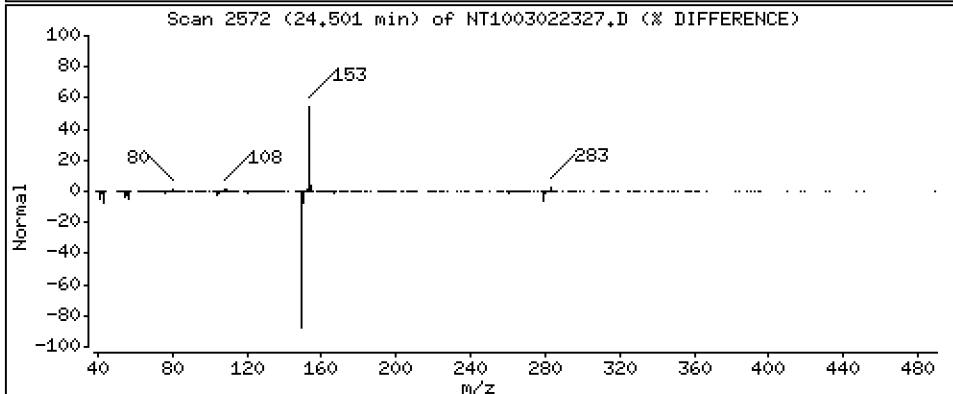
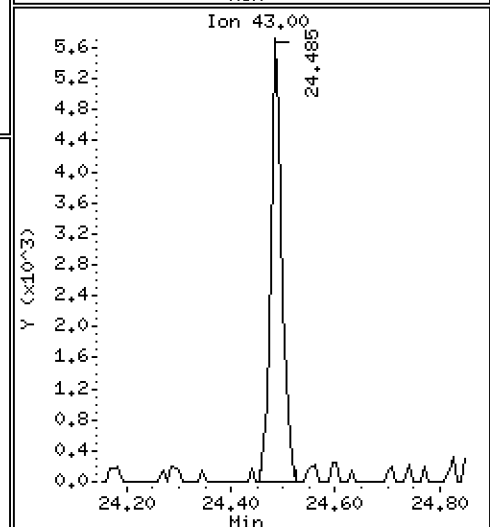
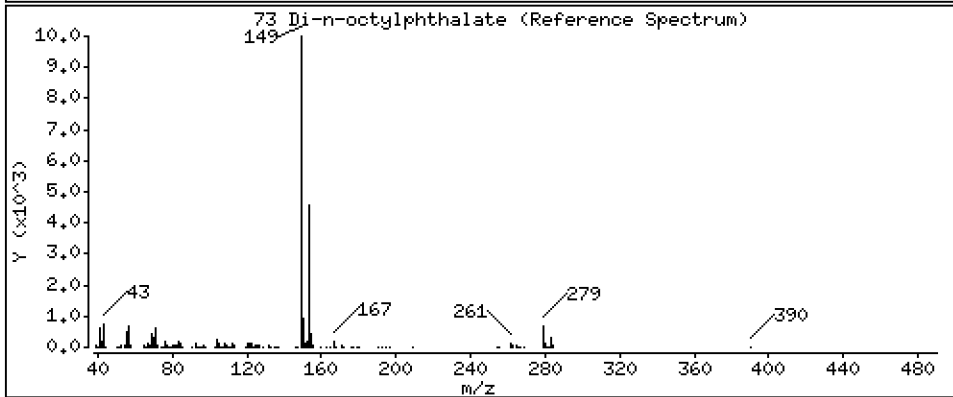
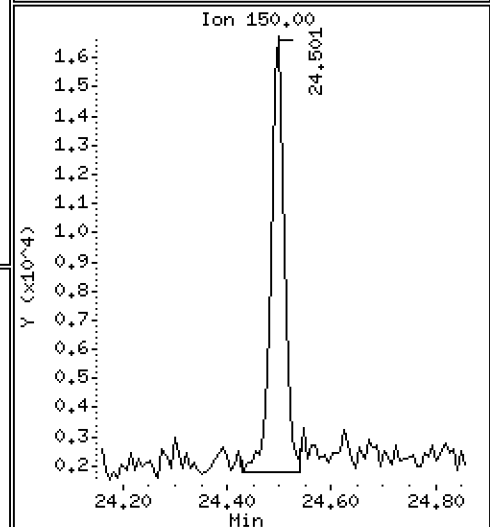
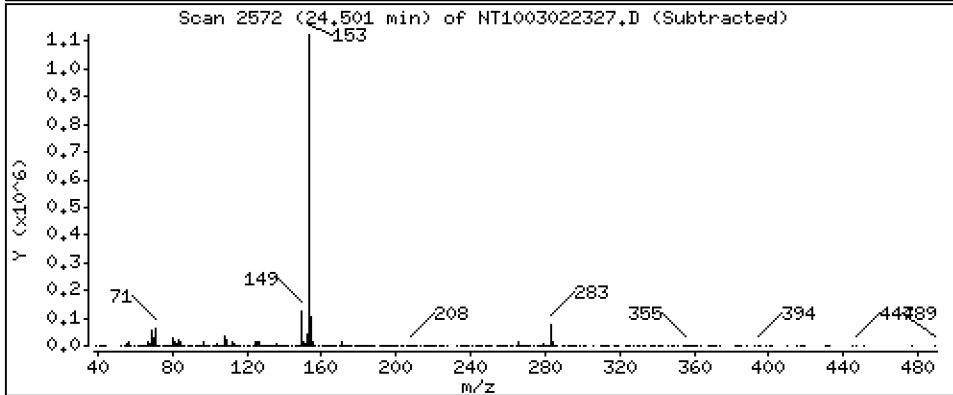
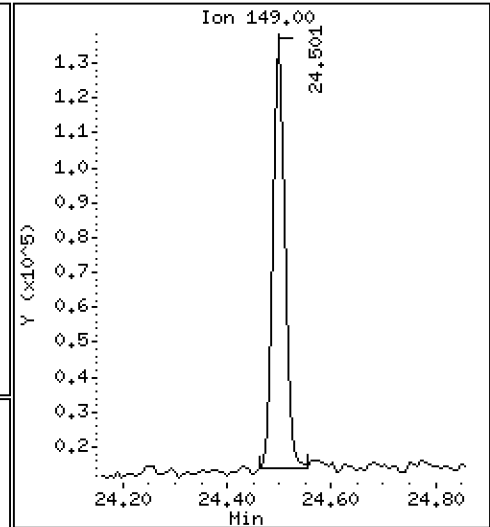
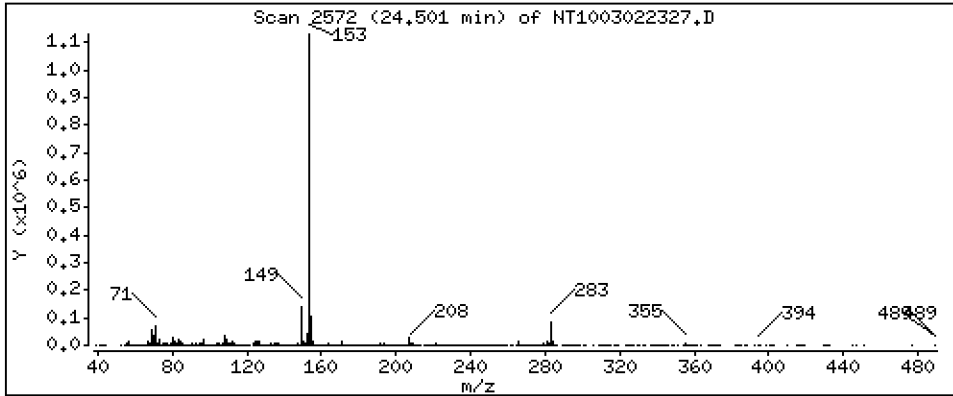
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 0,2173 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

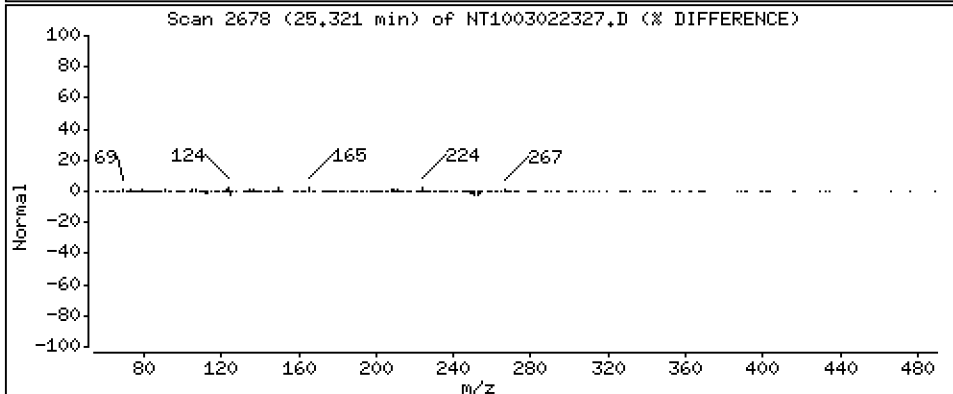
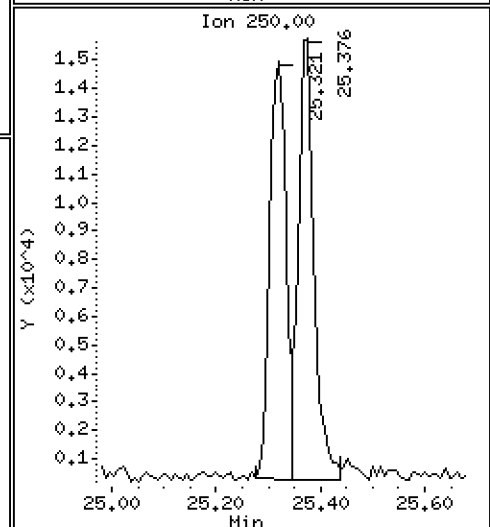
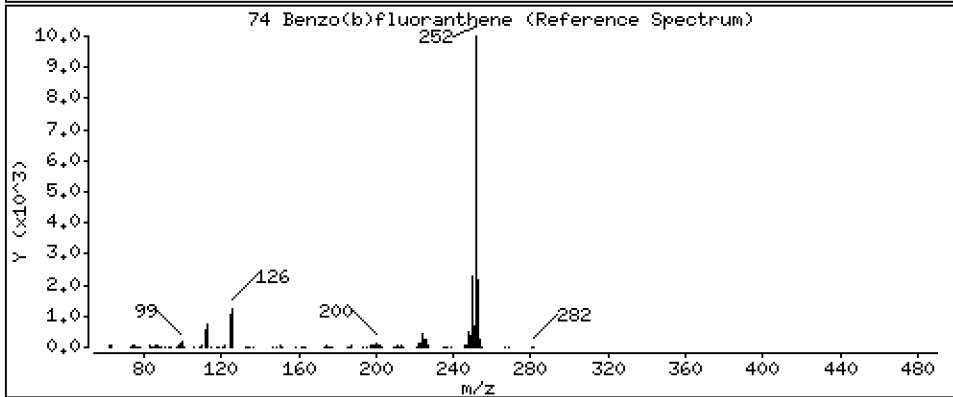
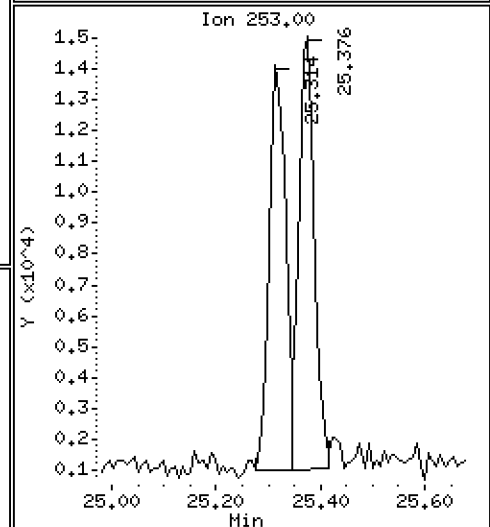
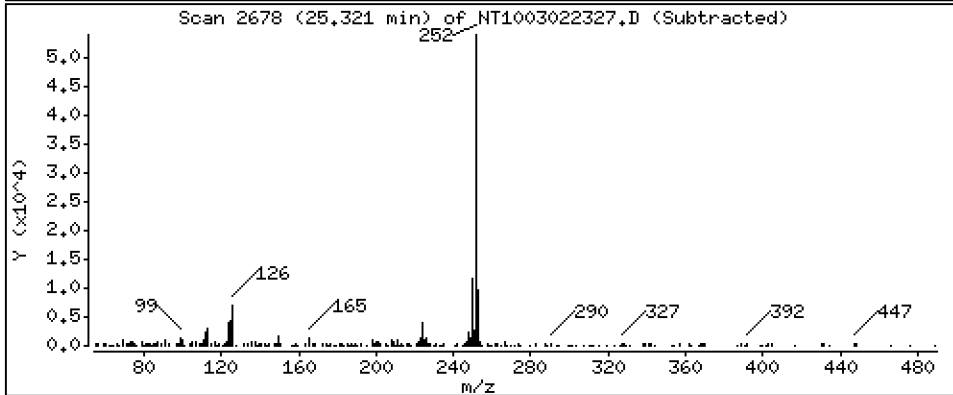
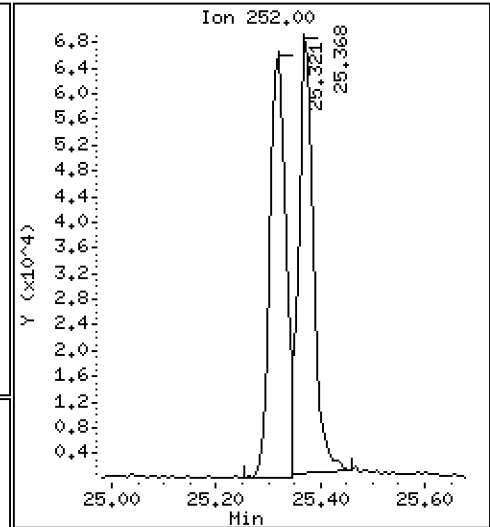
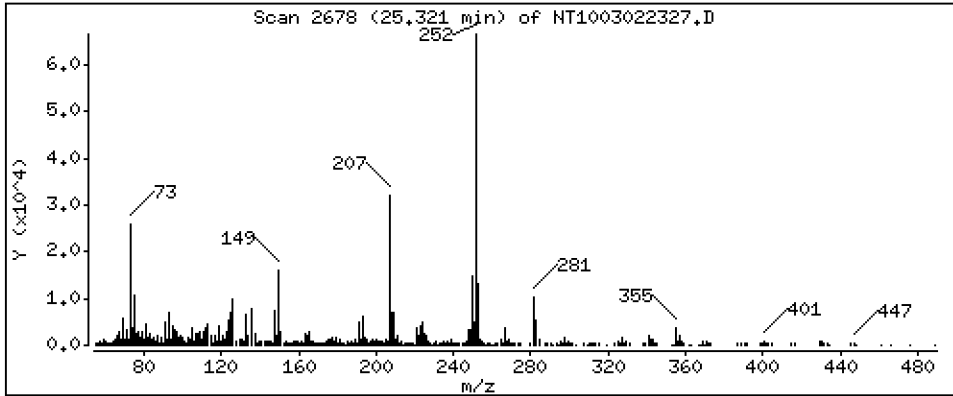
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

74 Benzo(b)fluoranthene

Concentration: 0,1674 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

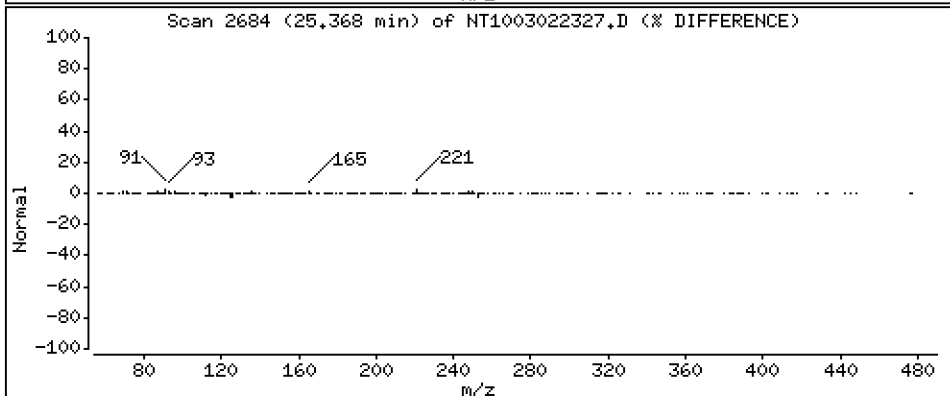
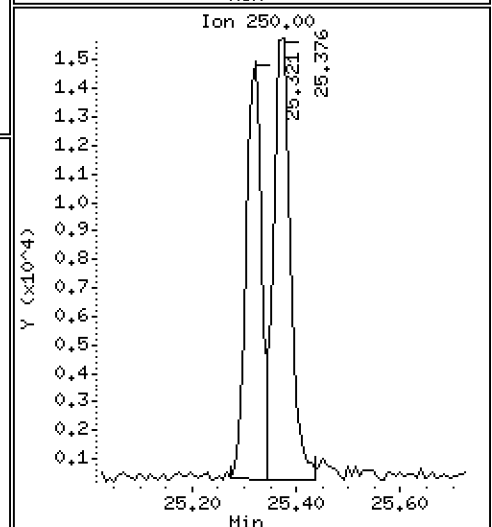
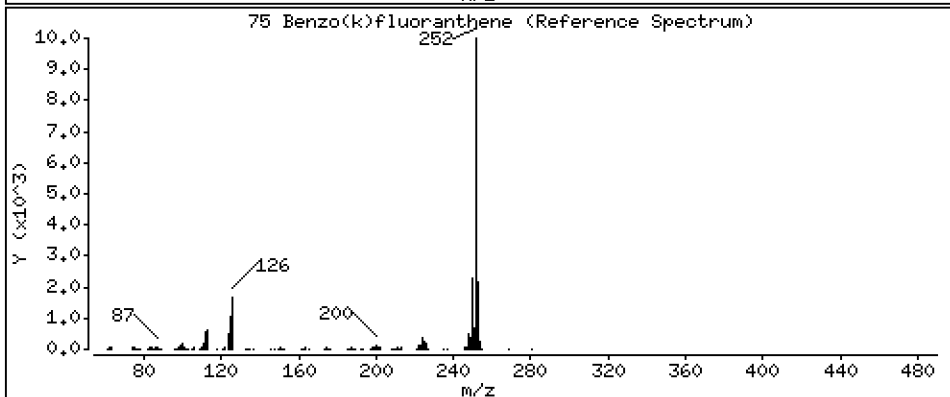
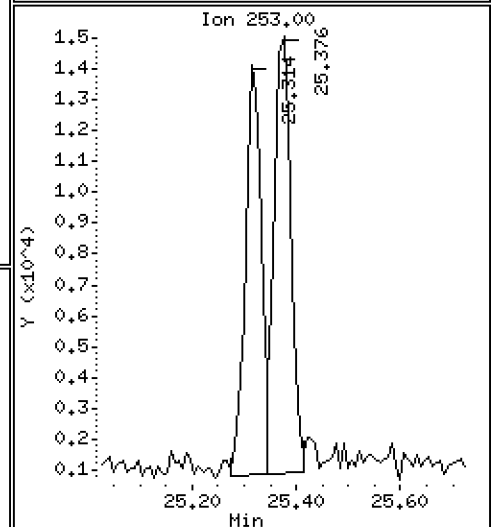
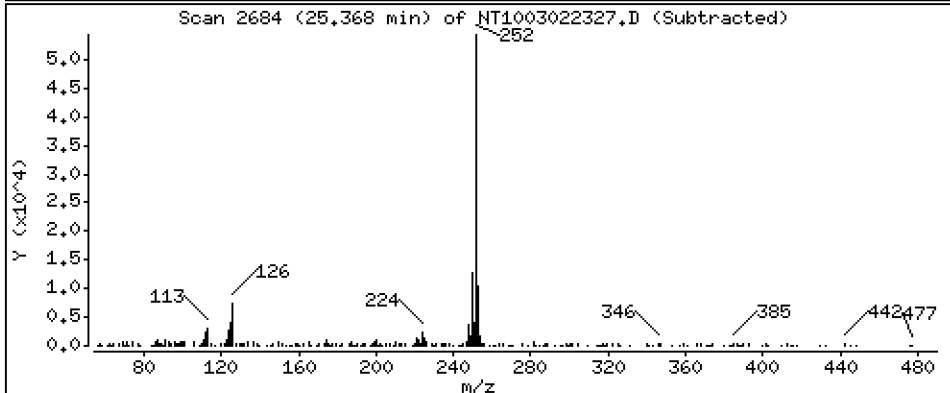
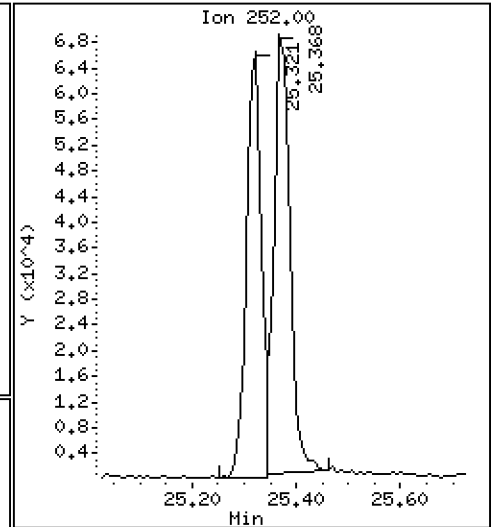
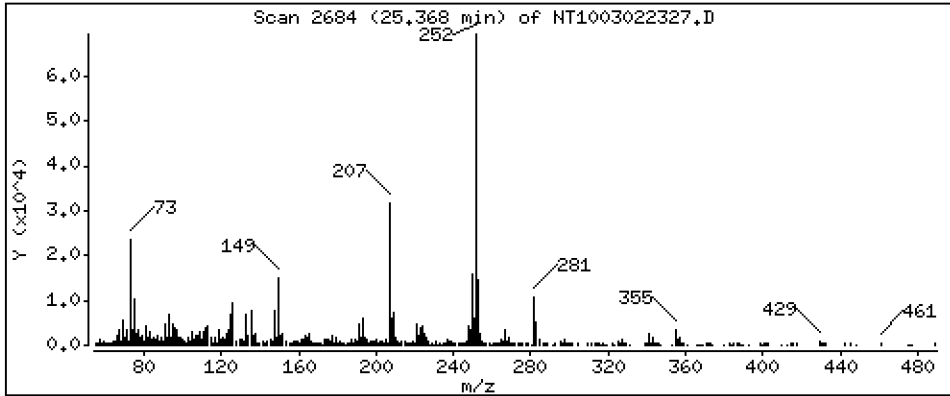
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

75 Benzo(k)fluoranthene

Concentration: 0,1817 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

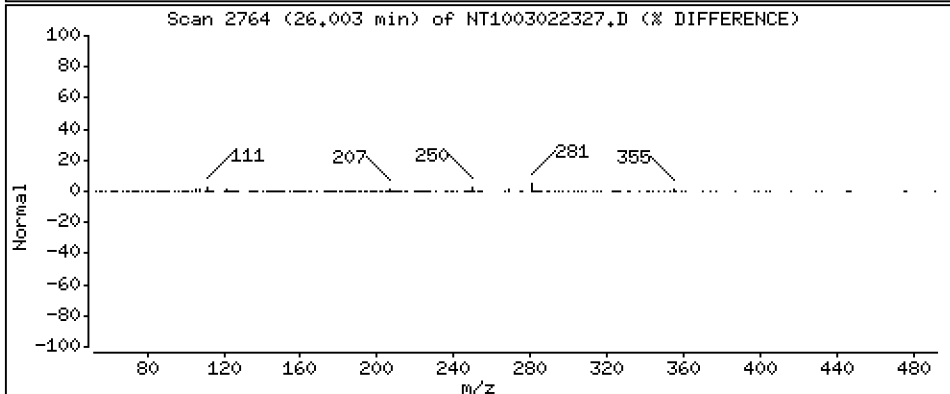
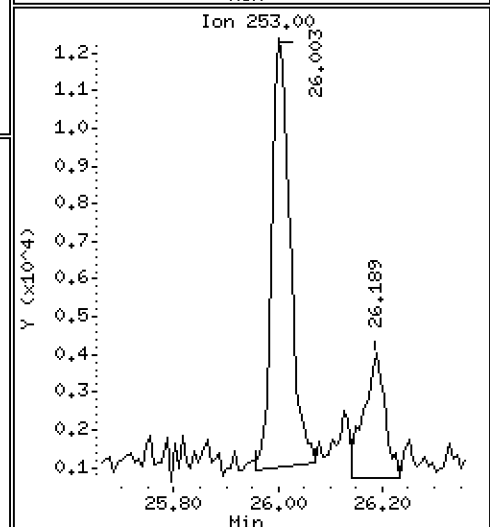
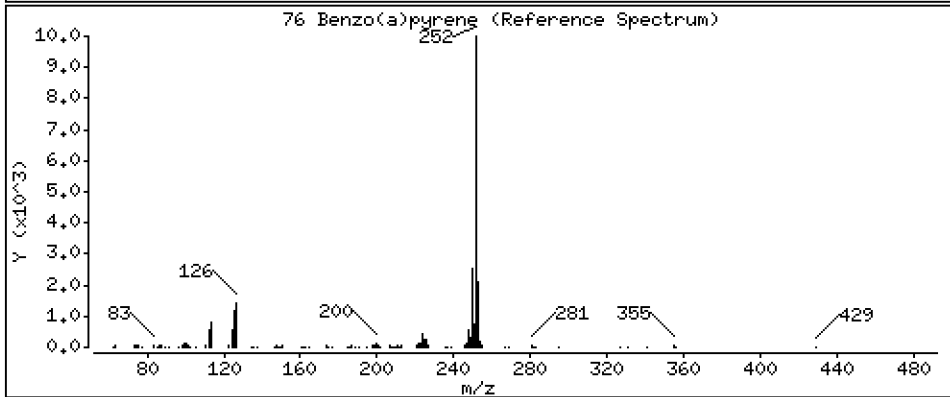
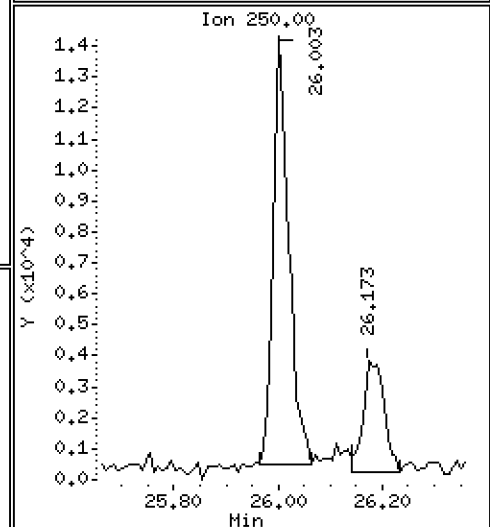
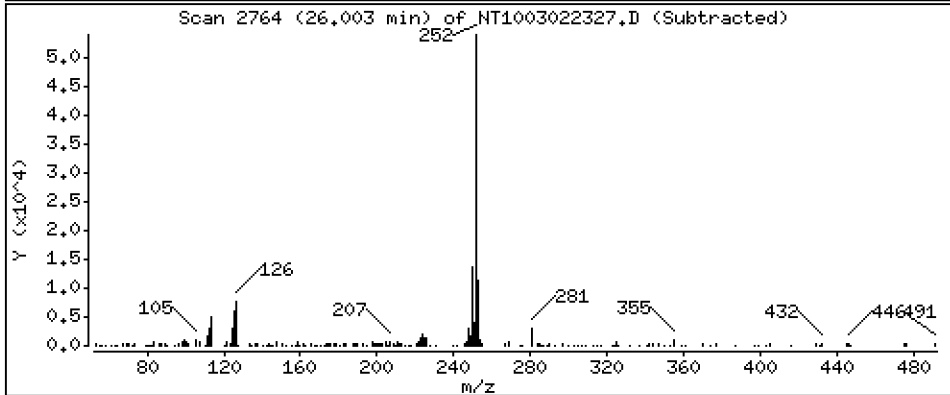
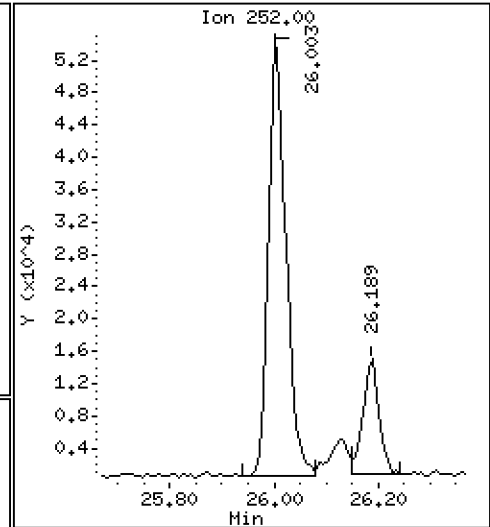
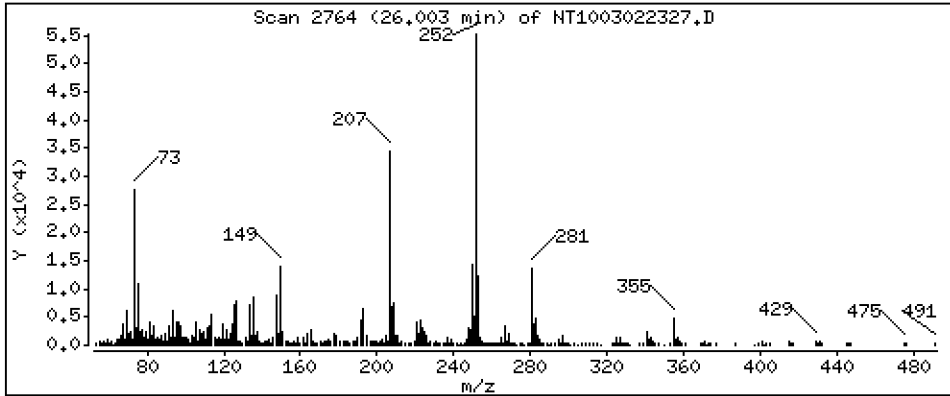
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

76 Benzo(a)pyrene

Concentration: 0,1718 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

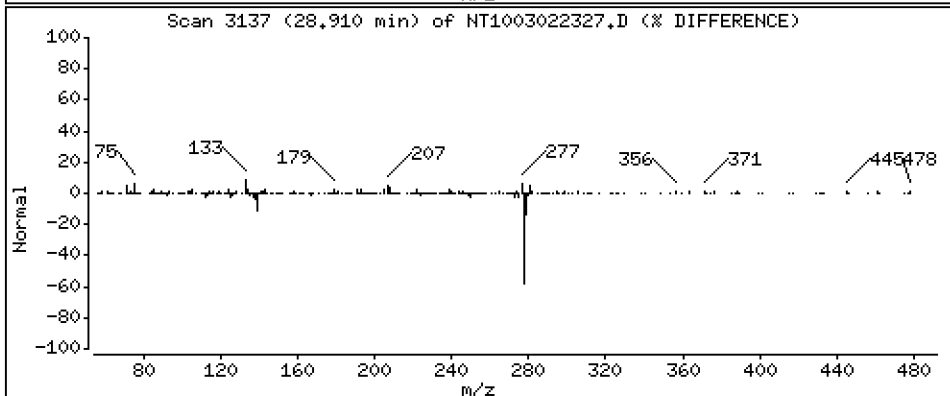
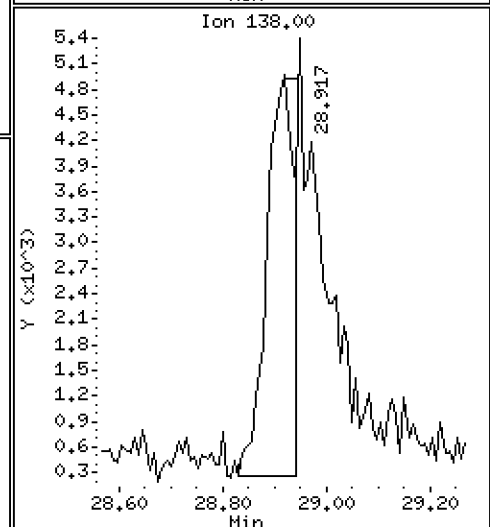
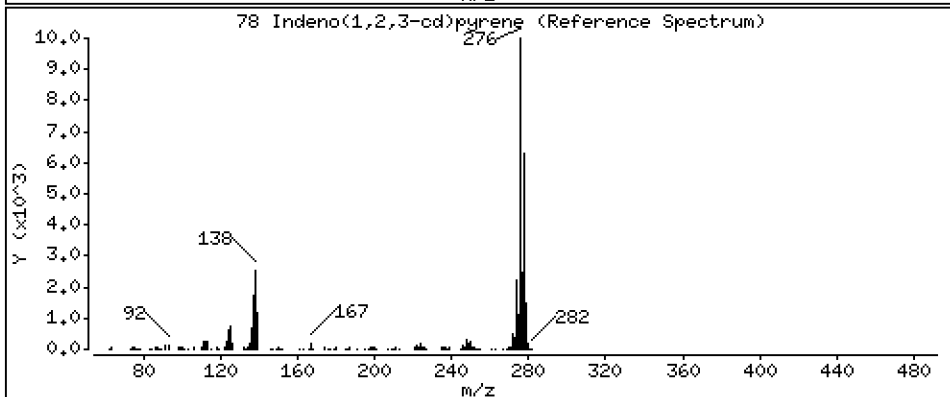
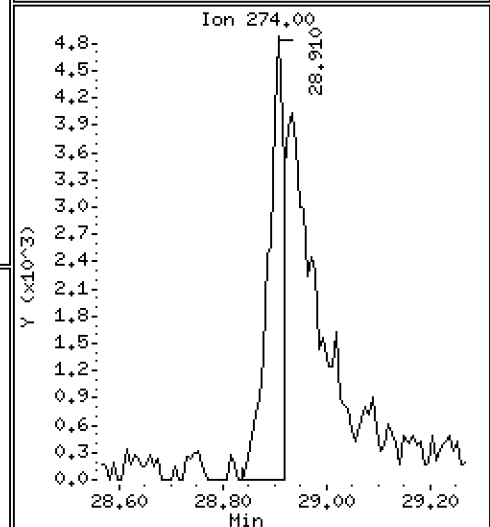
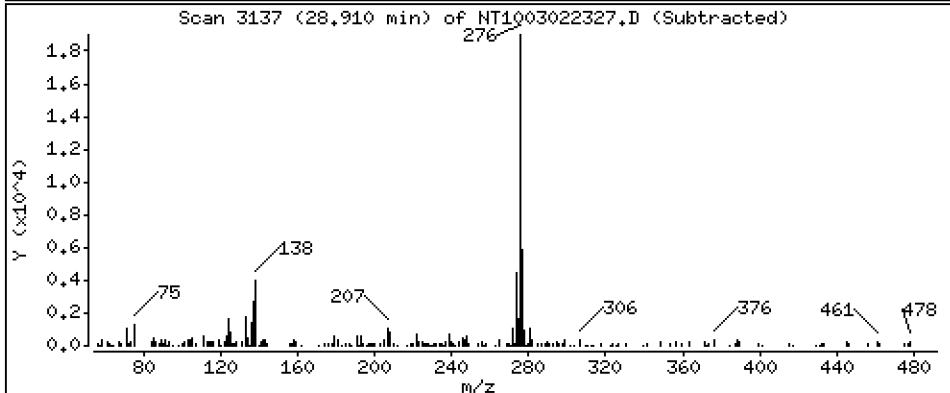
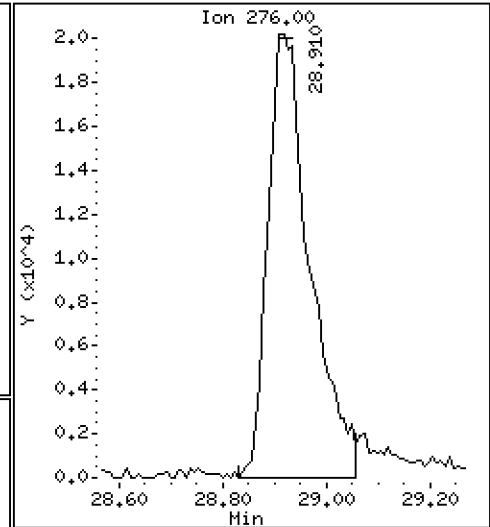
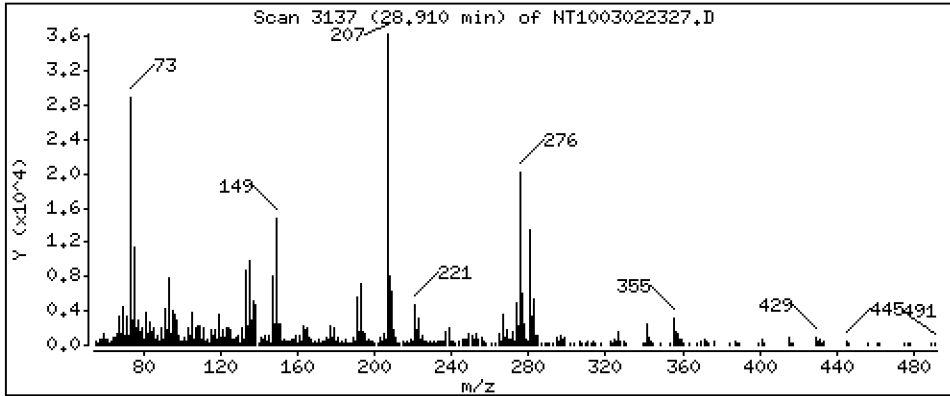
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

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

Concentration: 0,1325 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

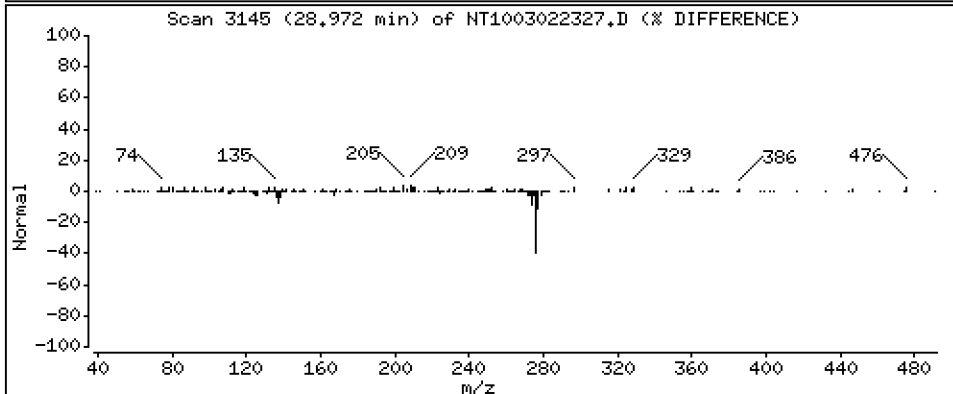
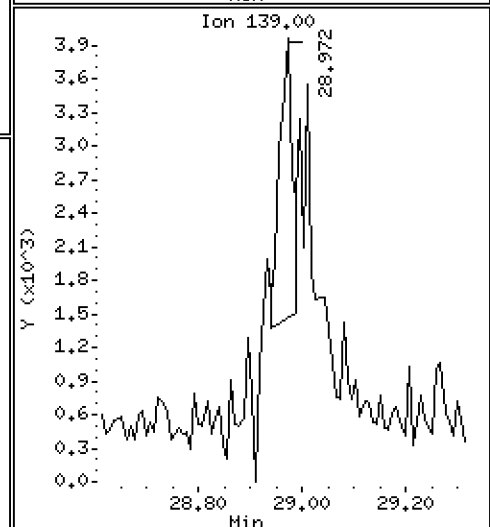
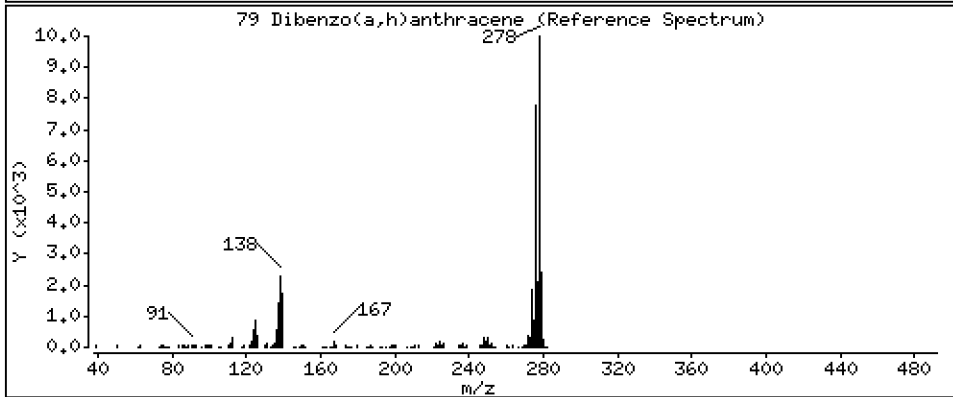
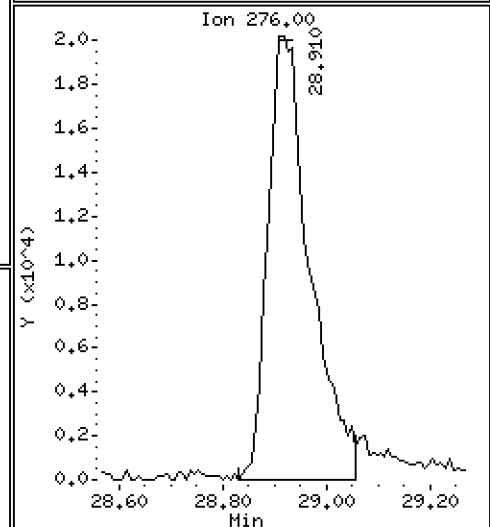
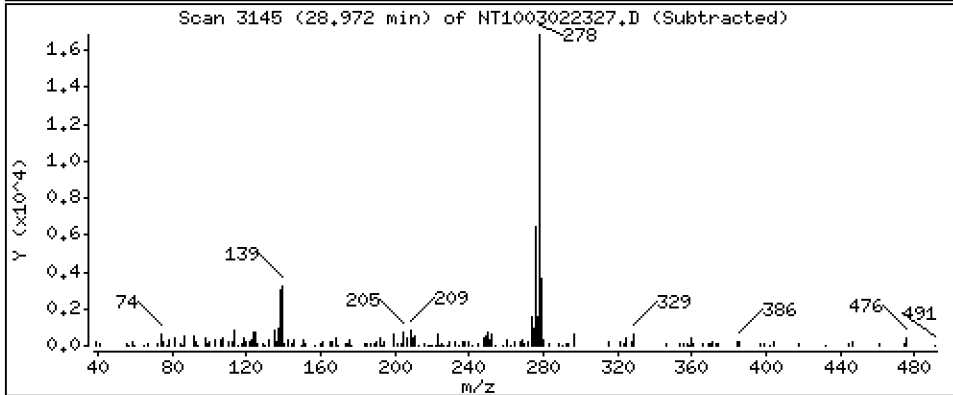
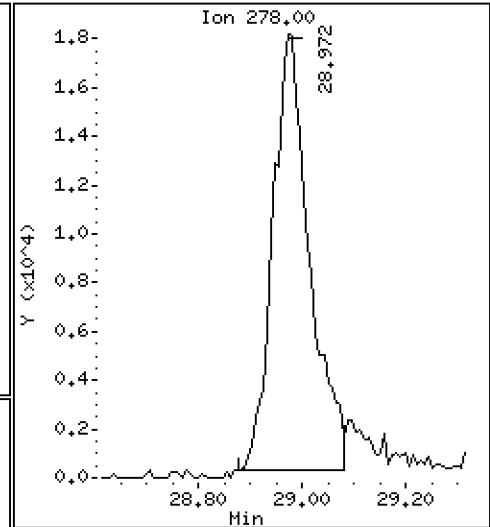
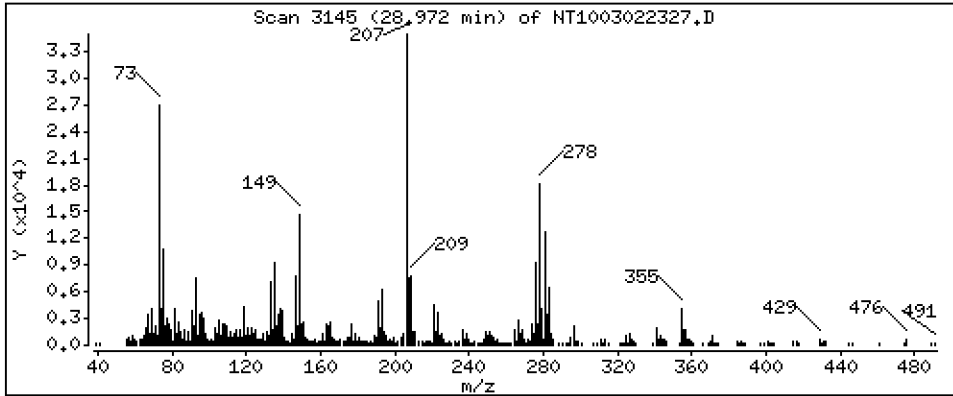
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1349 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

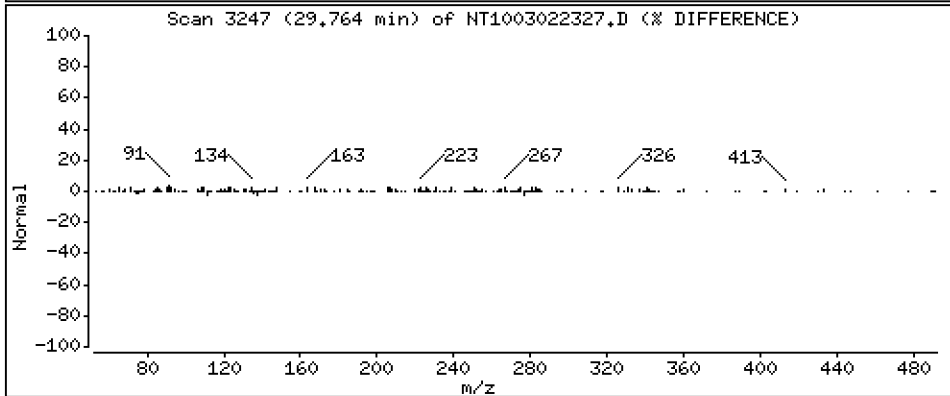
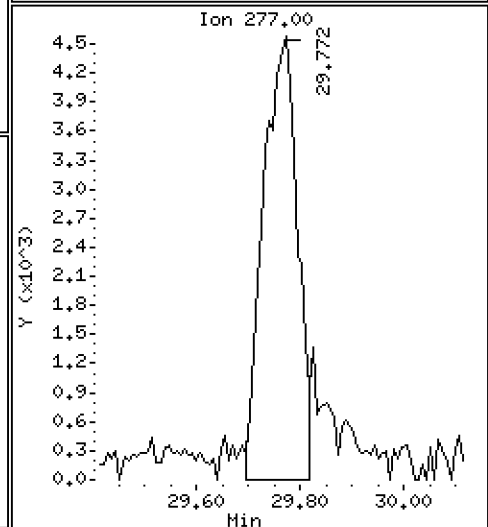
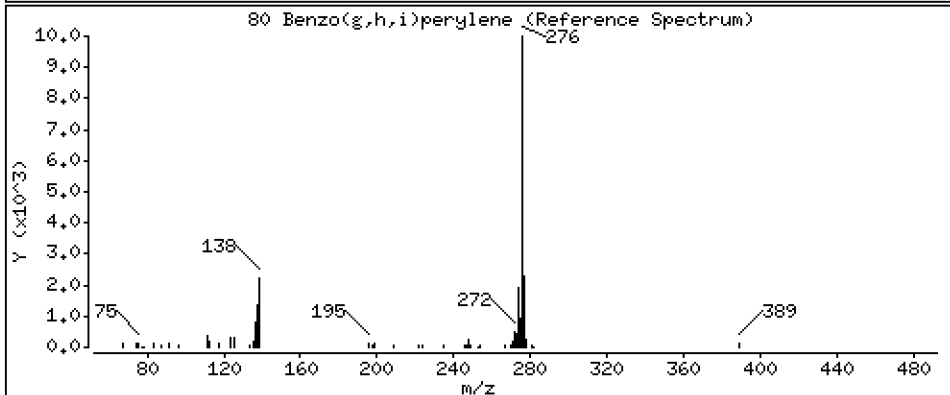
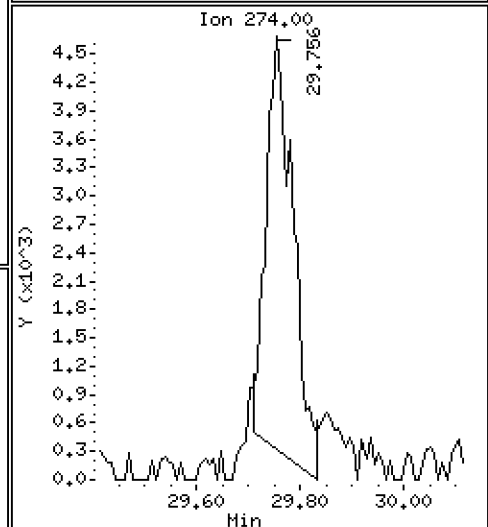
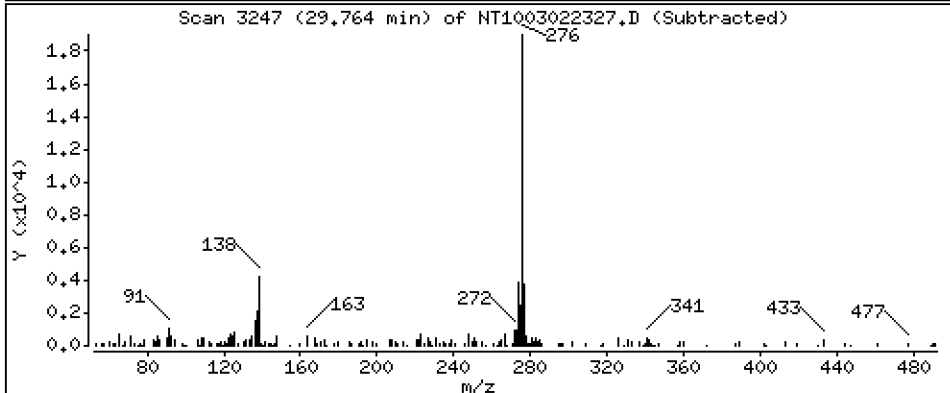
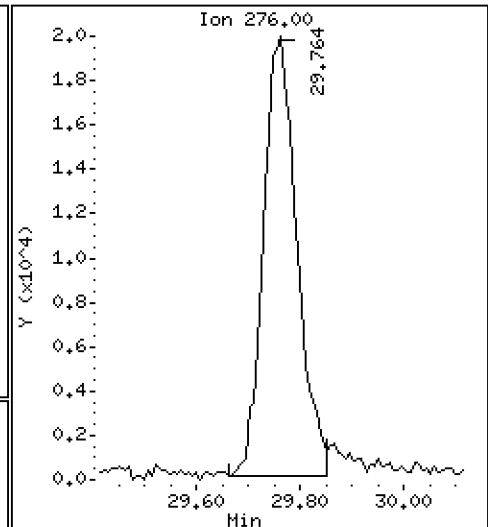
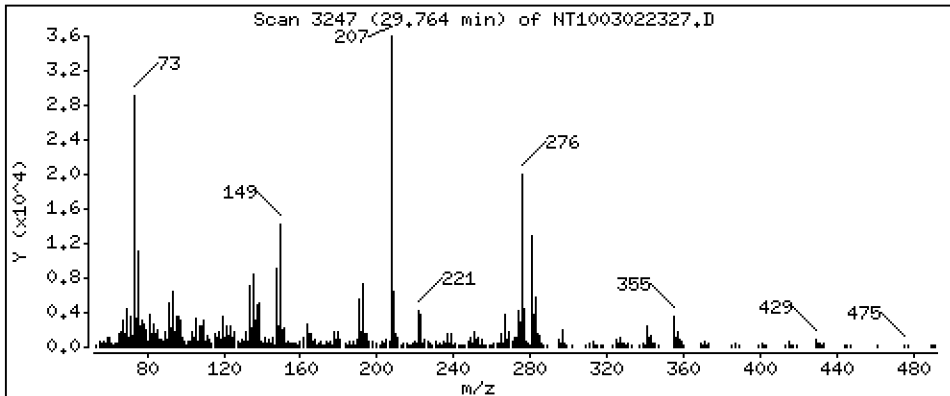
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

80 Benzo(g,h,i)perylene

Concentration: 0,1296 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

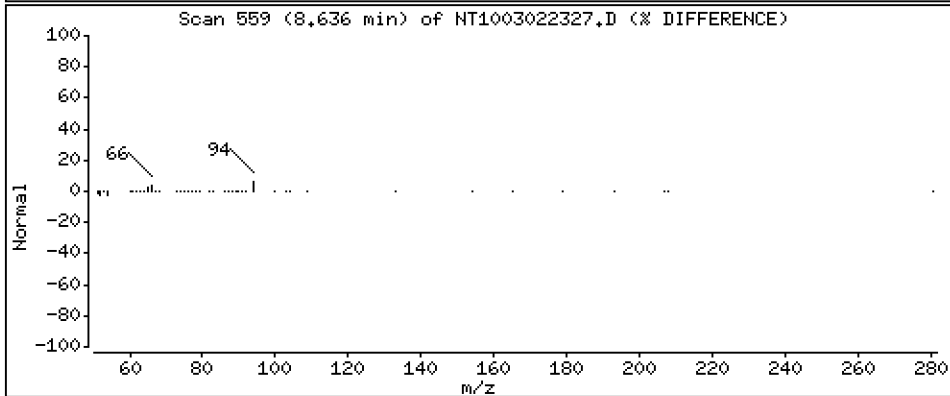
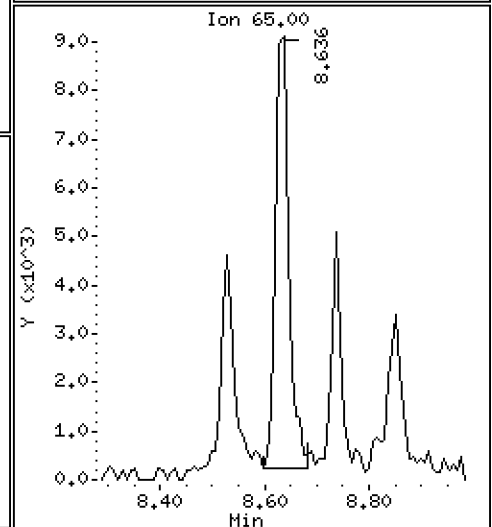
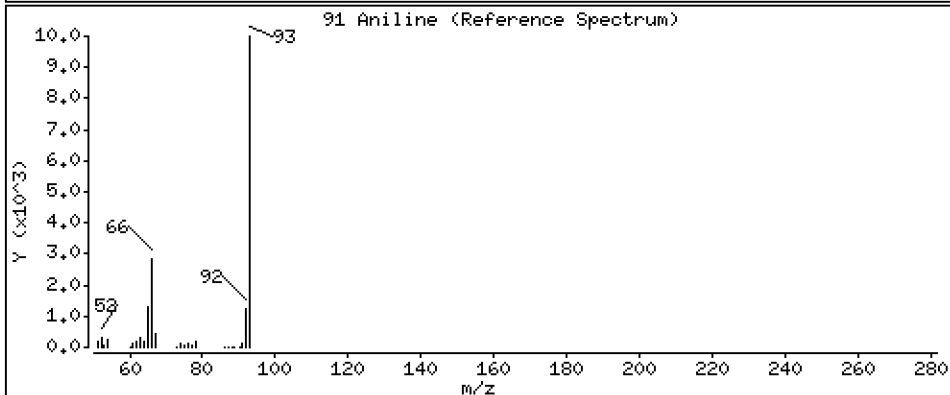
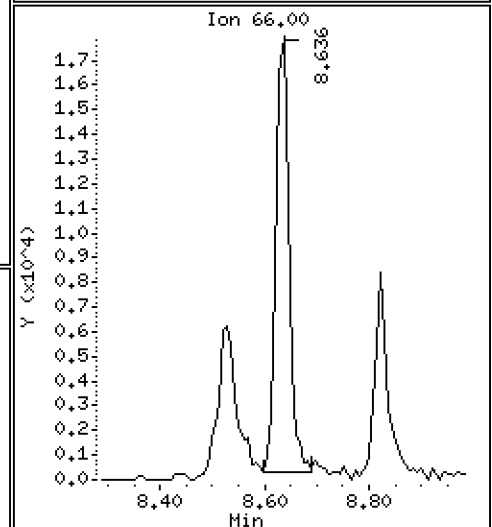
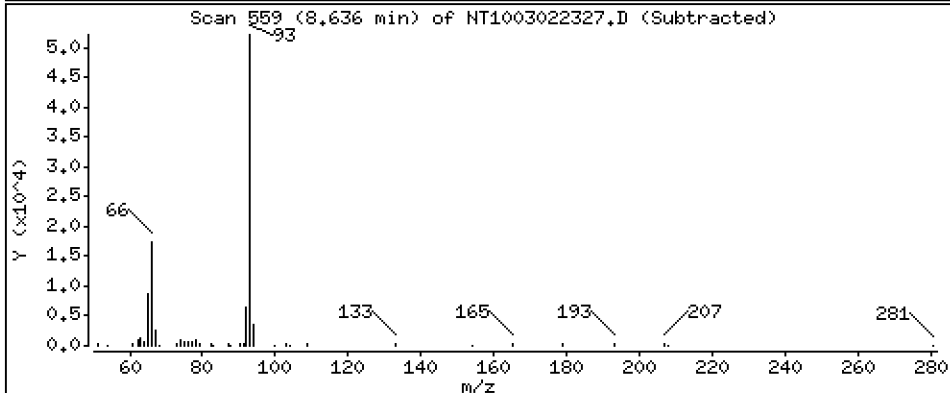
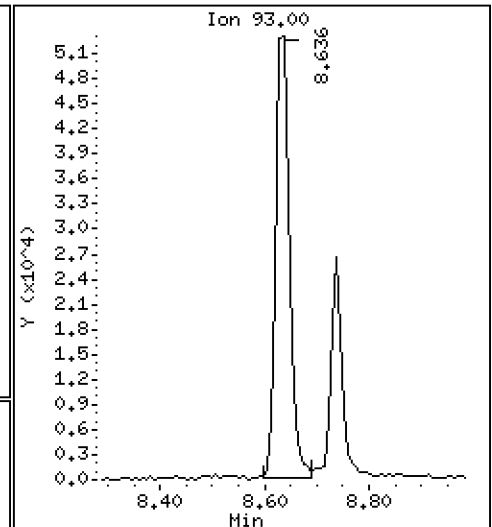
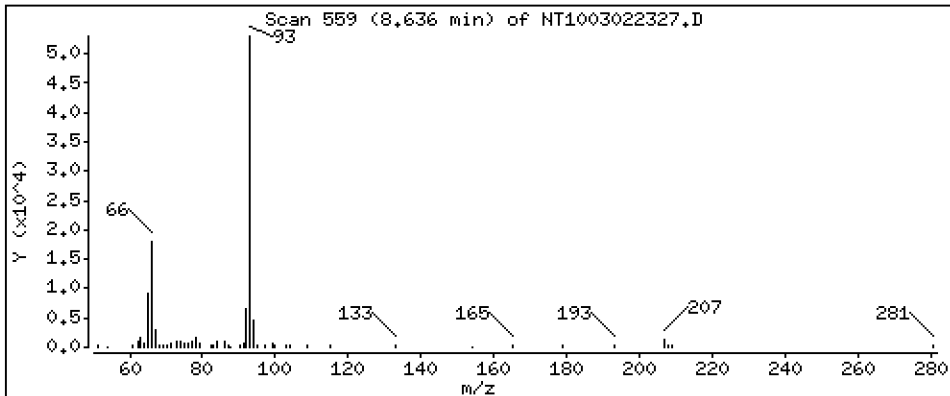
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

91 Aniline

Concentration: 0.3523 ug/mL





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

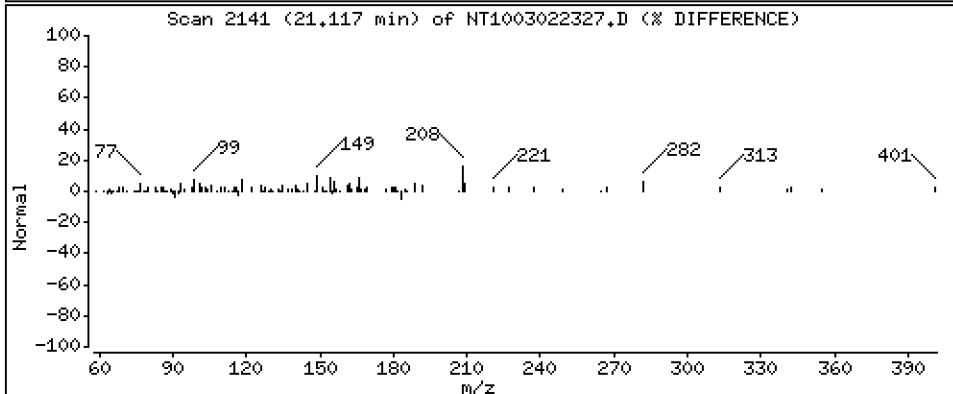
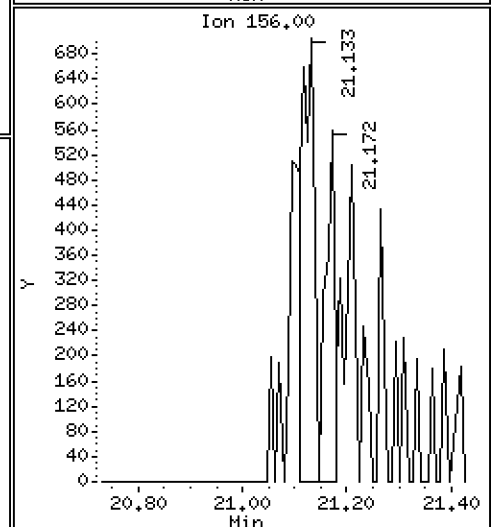
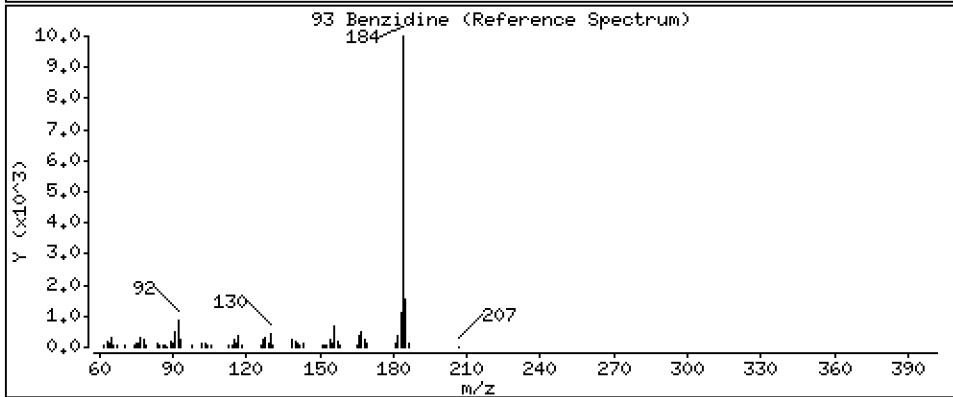
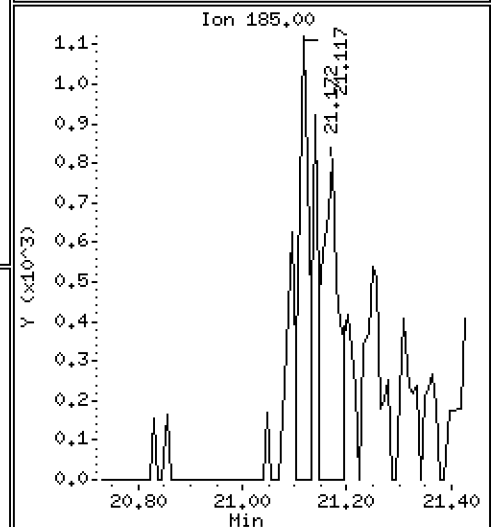
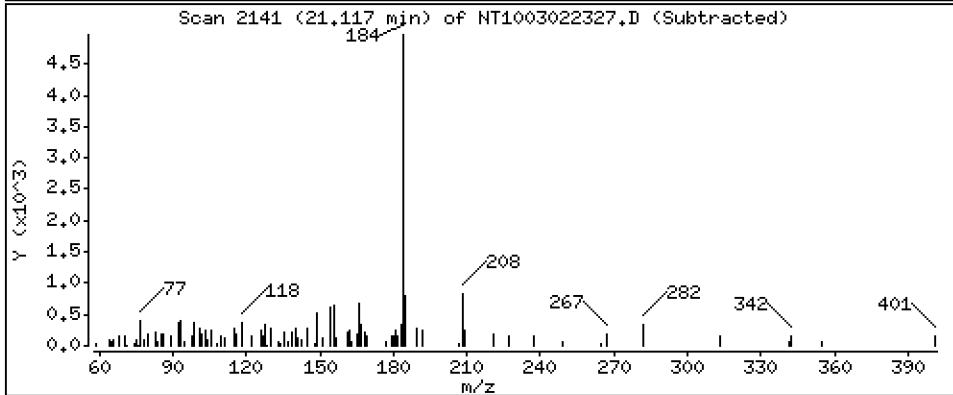
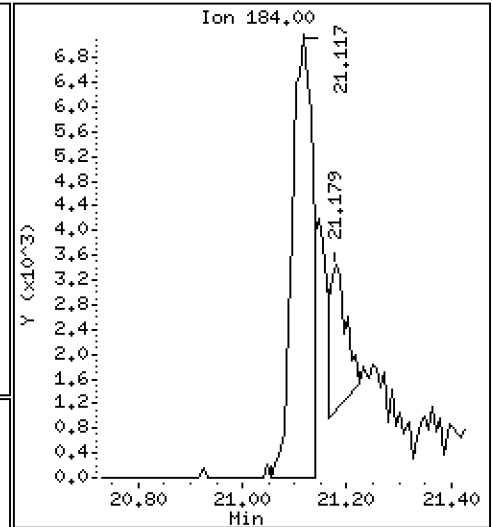
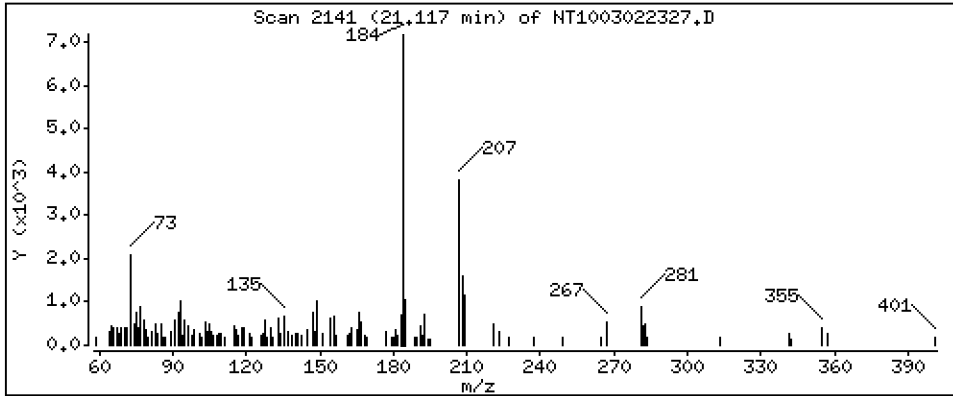
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Concentration: 0,06259 ug/mL

93 Benzidine



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

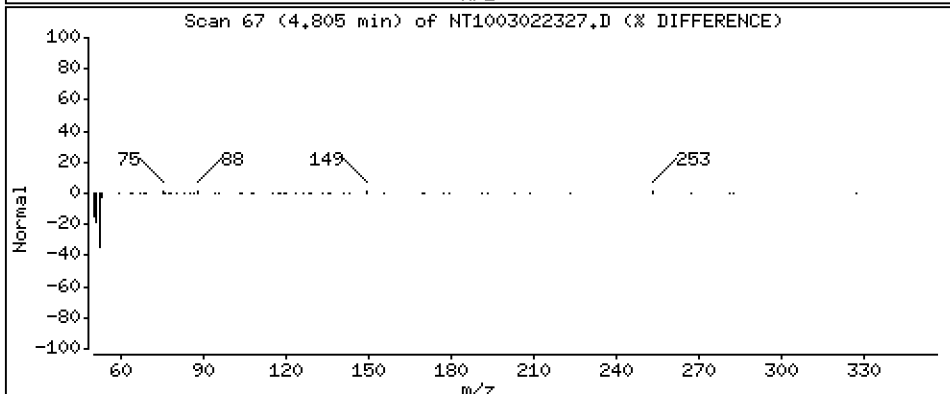
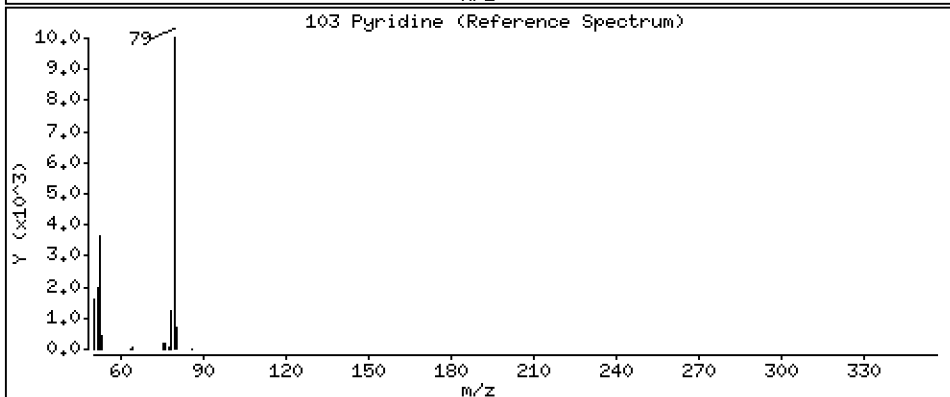
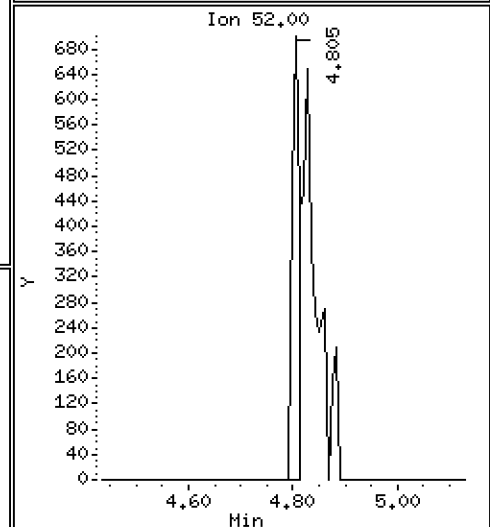
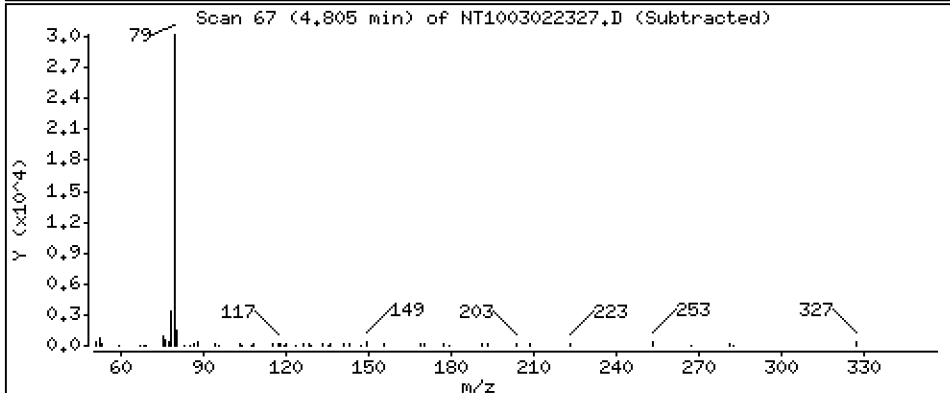
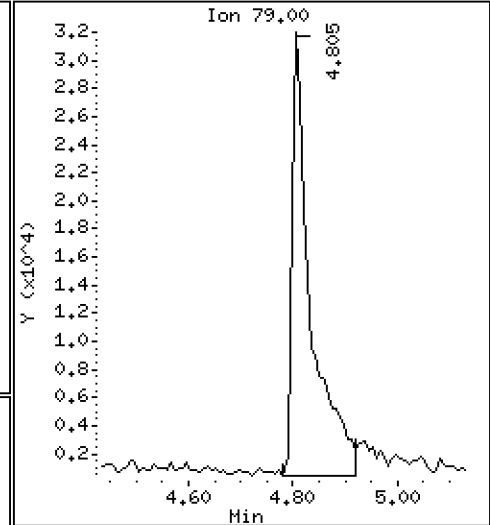
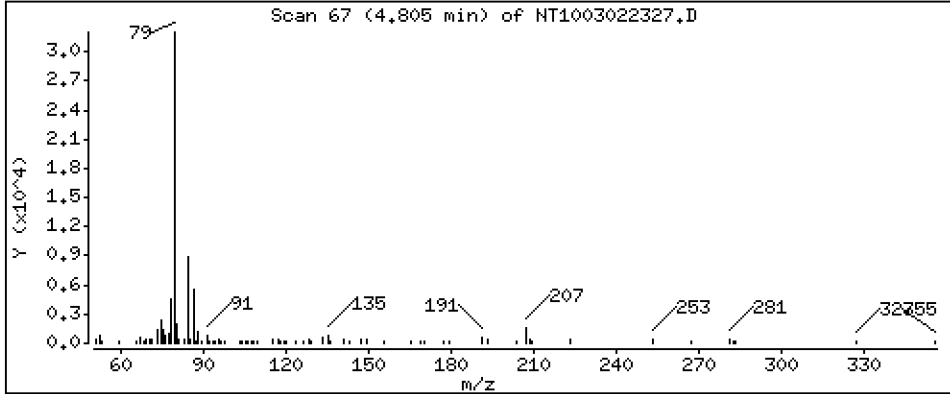
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

103 Pyridine

Concentration: 0,3841 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

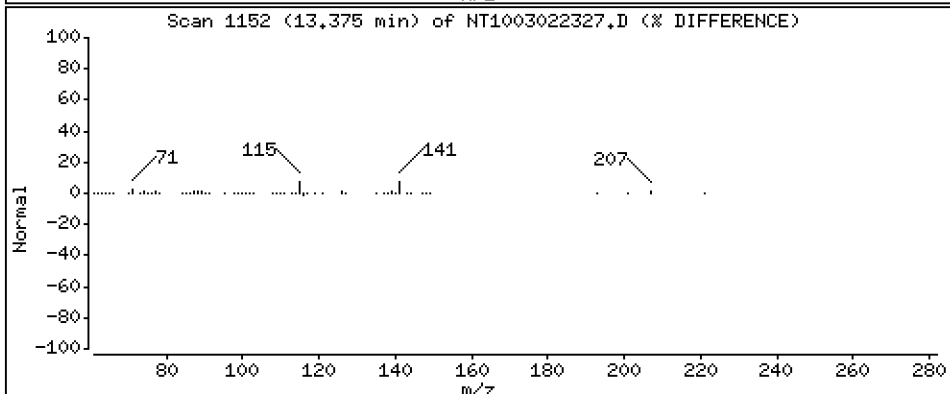
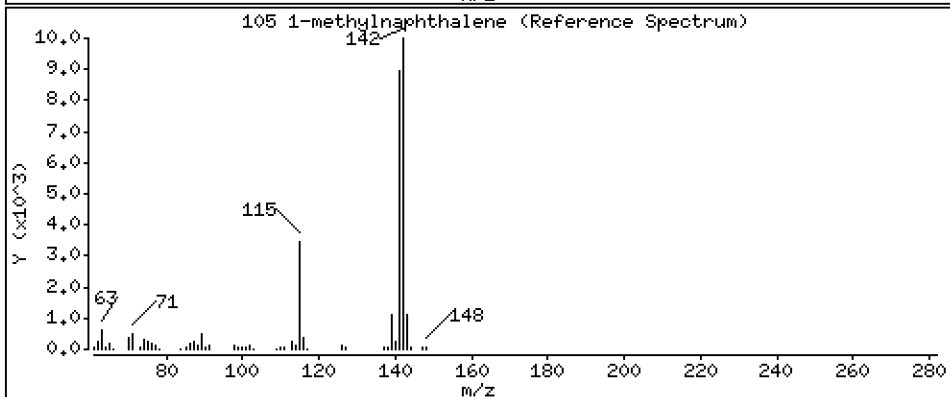
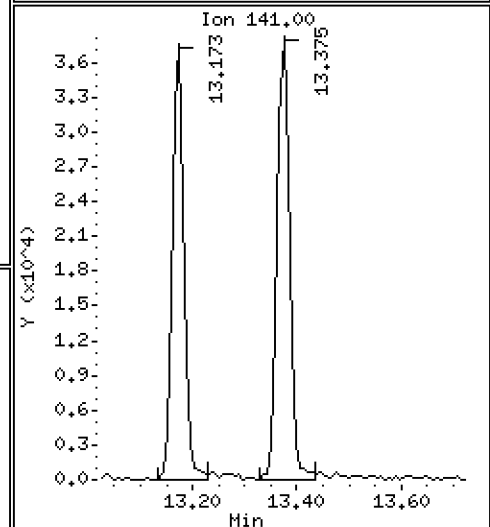
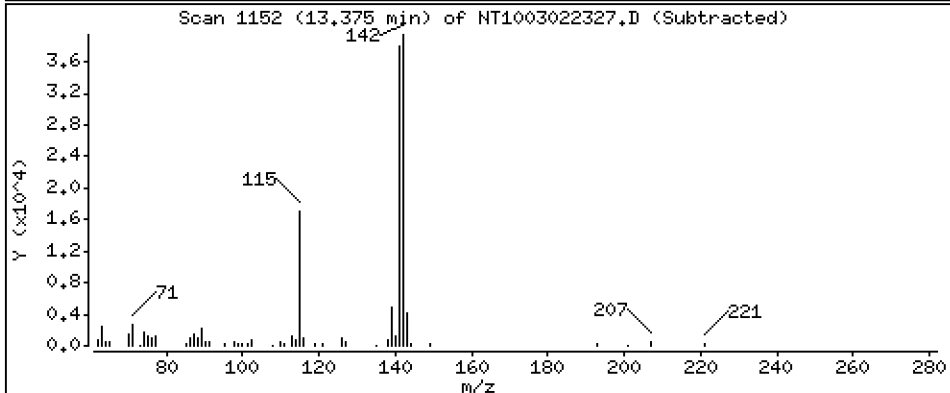
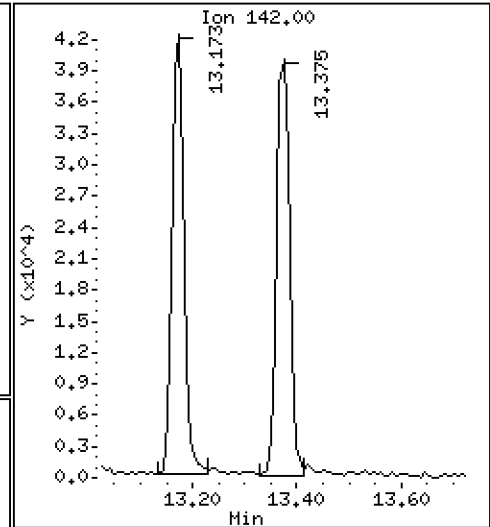
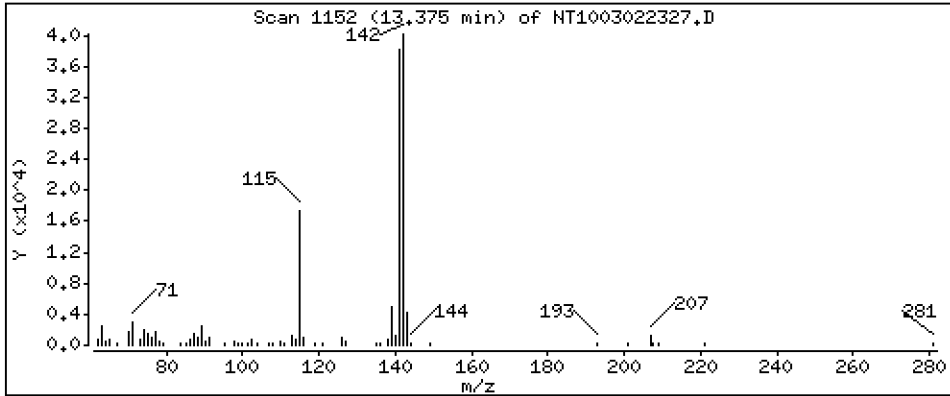
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

105 1-methylnaphthalene

Concentration: 0,1908 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

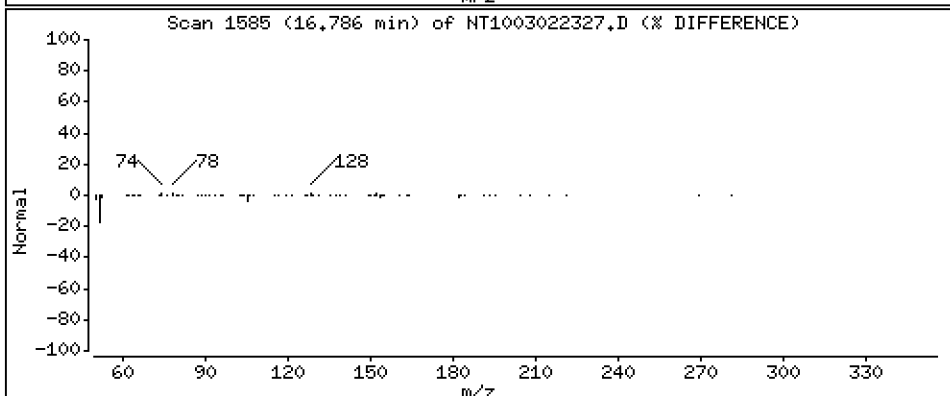
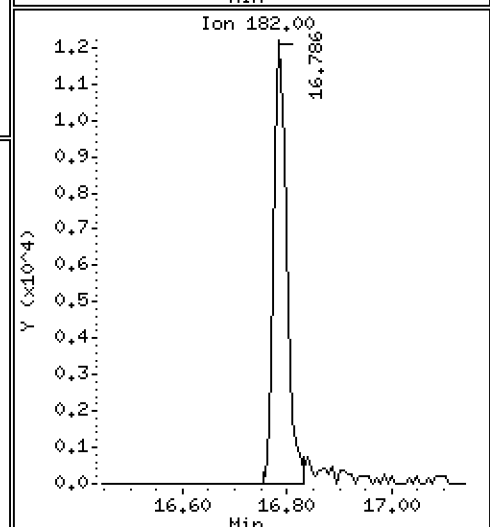
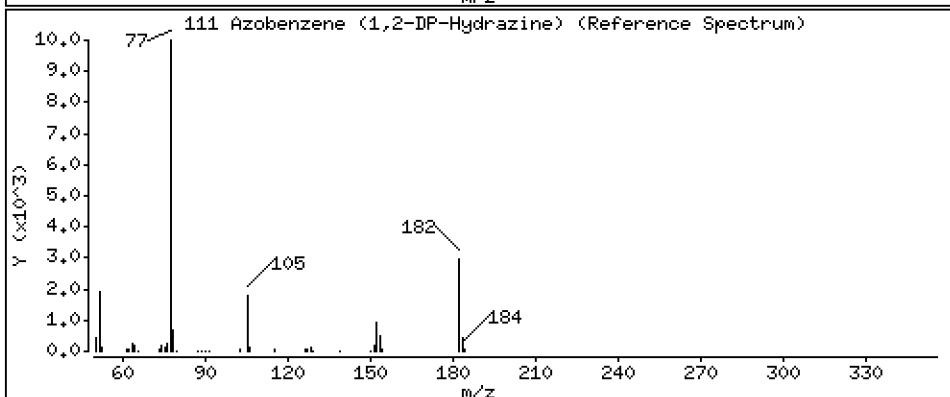
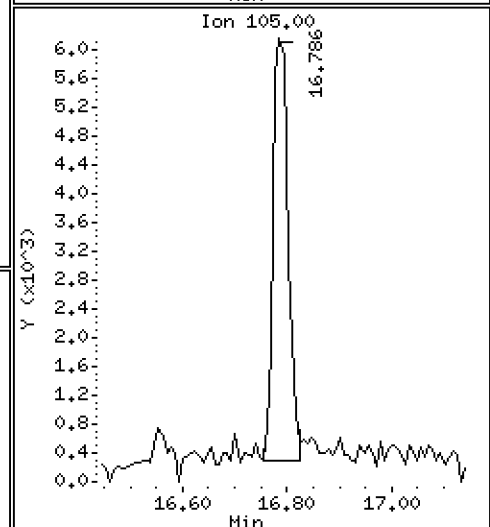
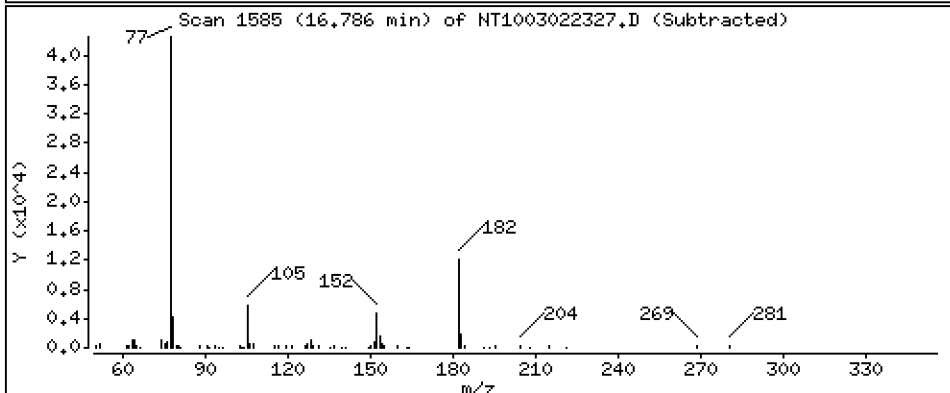
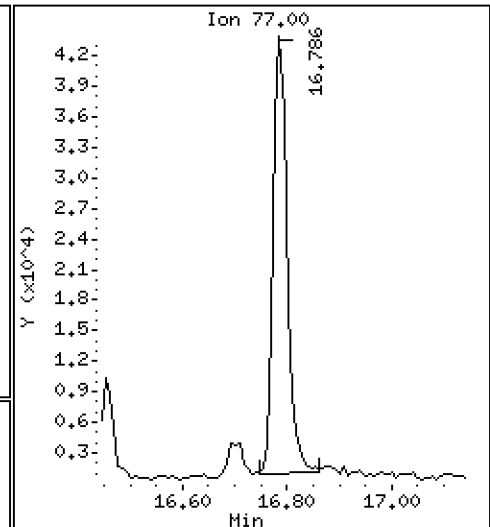
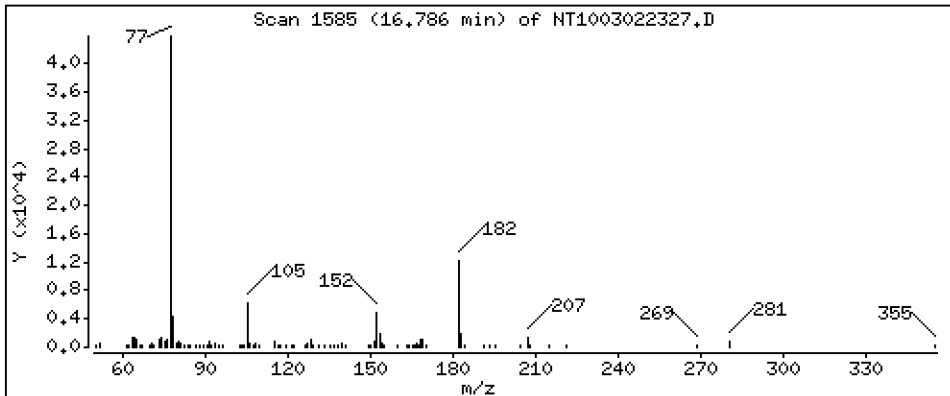
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

111 Azobenzene (1,2-DP-Hydrazine)

Concentration: 0,1346 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

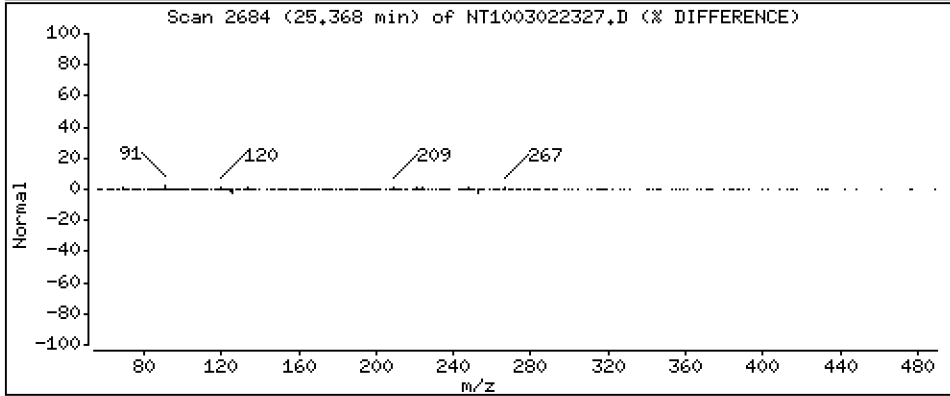
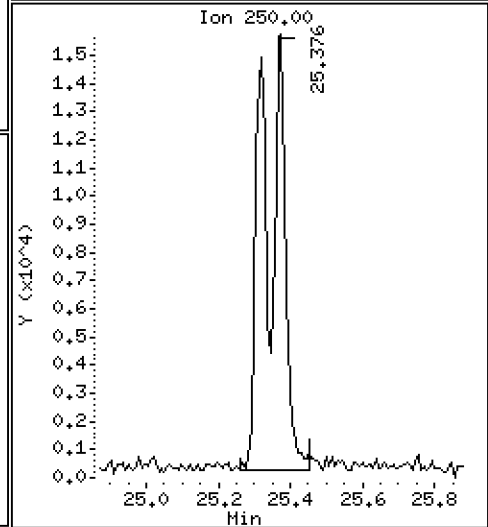
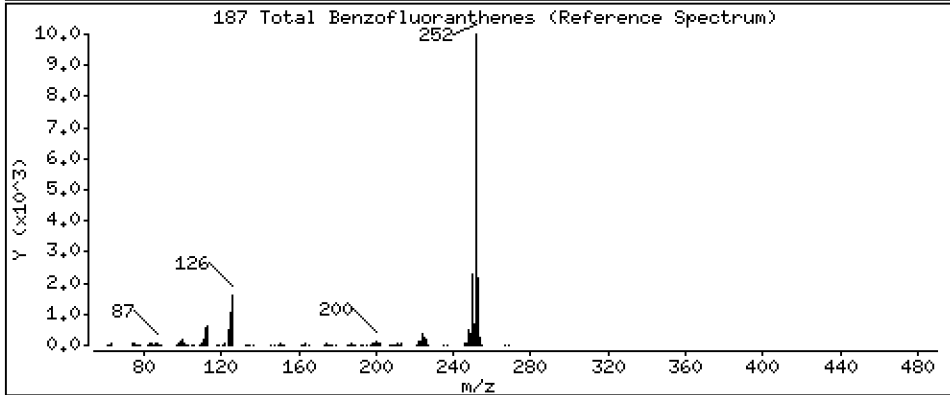
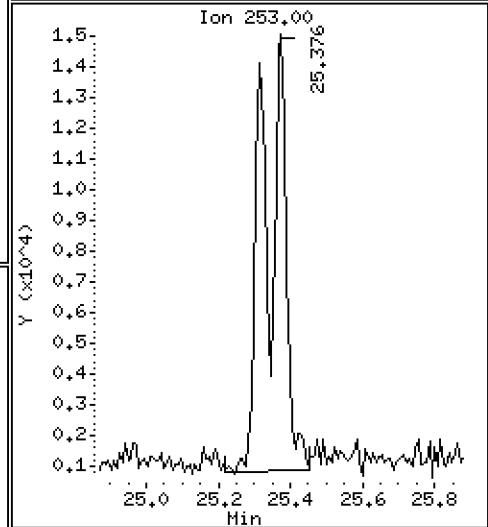
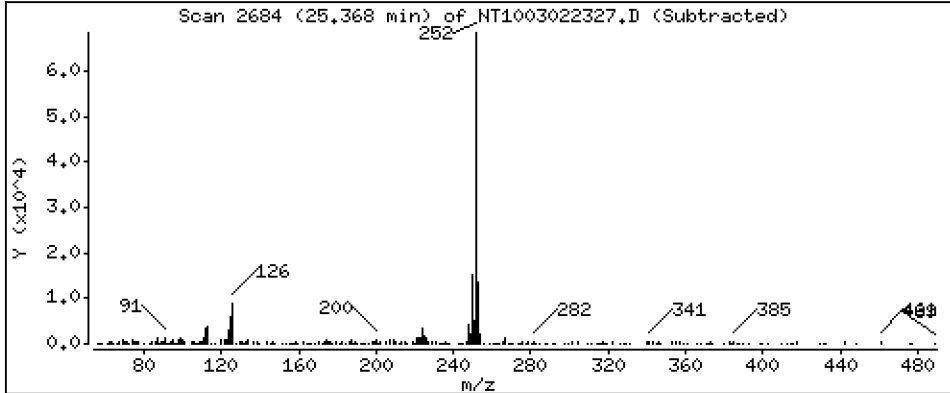
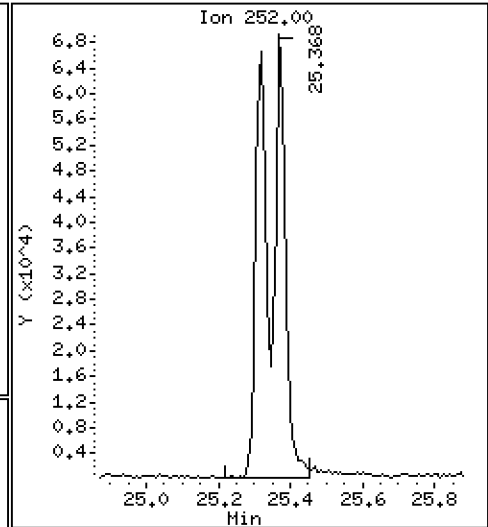
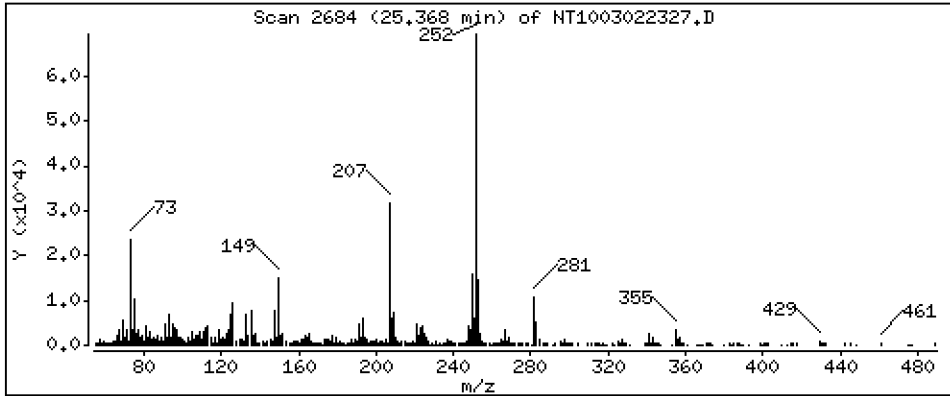
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 0,3526 ug/mL



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

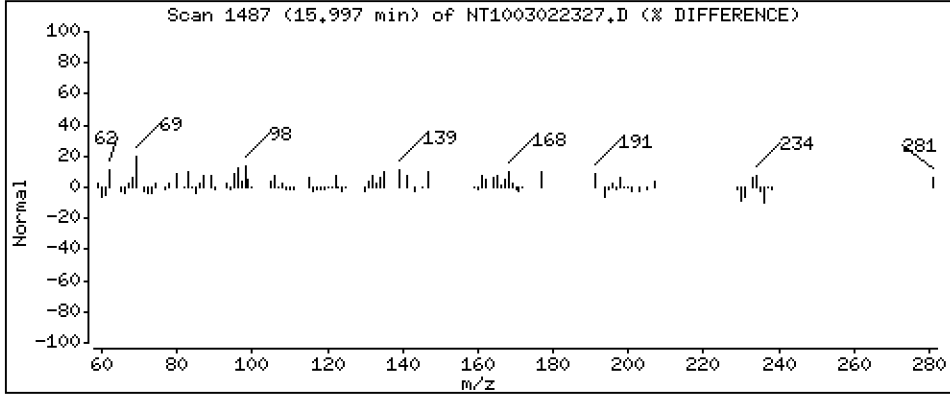
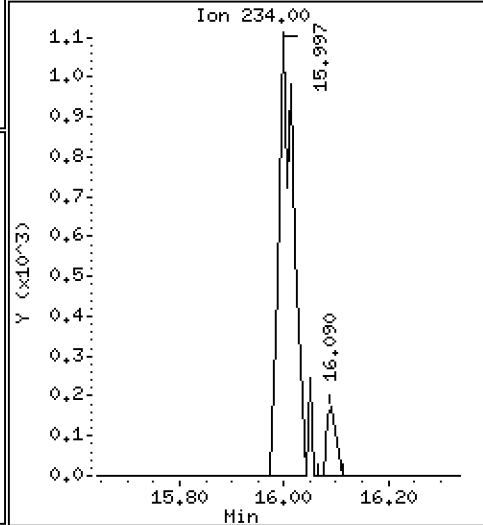
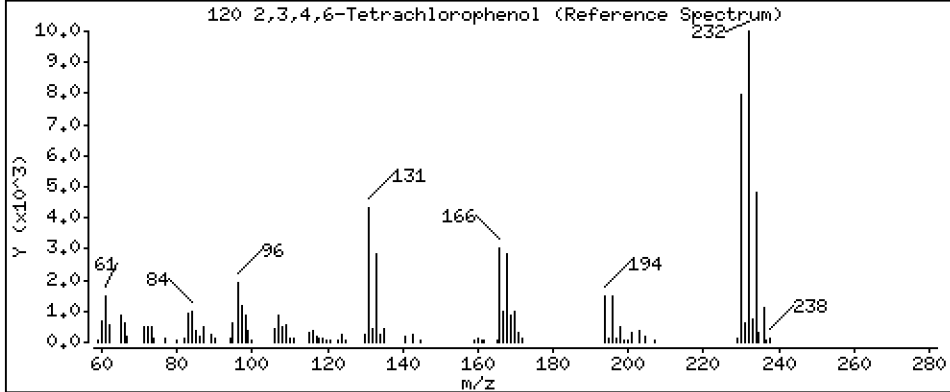
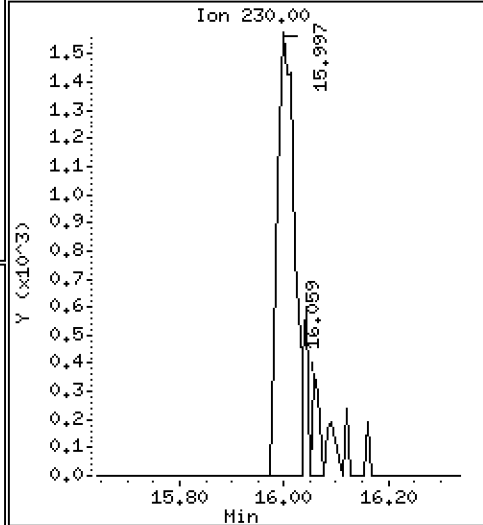
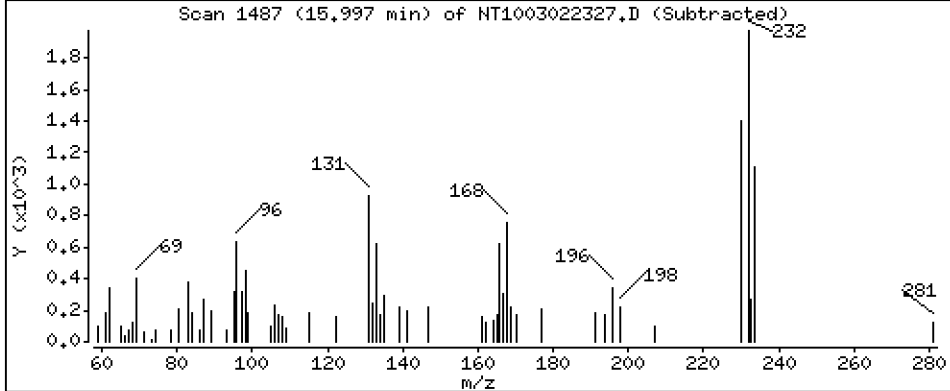
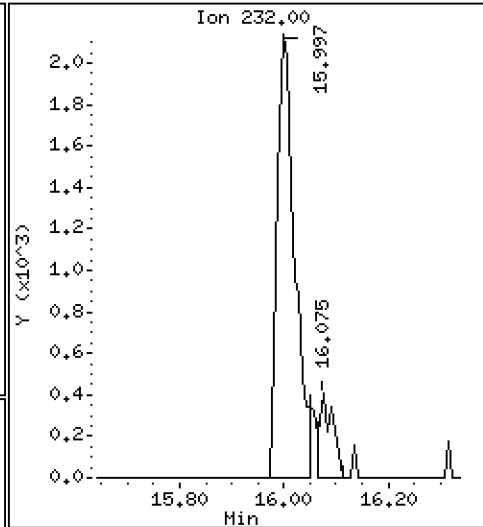
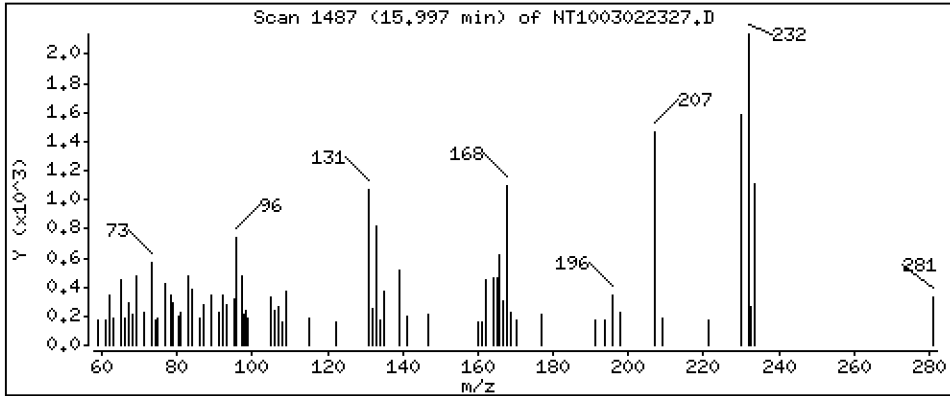
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

120 2,3,4,6-Tetrachlorophenol

Concentration: 0,04759 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230302B.b\NT1003022327.D  
 Lab Smp Id: SLC0136-LCV1  
 Inj Date : 03-MAR-2023 06:52  
 Operator : VTS  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment : 1ul Injection  
 Method : \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Meth Date : 10-Mar-2023 07:33 yev  
 Cal Date : 01-MAR-2023 19:15  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: NT1003012307.D

Compound Sublist: ICAL.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.905	6.905	(0.747)	51442	0.28211	0.2821
\$ 2 Phenol-d5	99		Compound Not Detected.					
3 Phenol	94		8.528	8.527	(0.922)	39128	0.17384	0.1738
\$ 5 2-Chlorophenol-d4	132		8.821	8.821	(0.954)	49945	0.27652	0.2765
4 Bis(2-Chloroethyl)ether	93		8.736	8.736	(0.945)	38974	0.22659	0.2266
6 2-Chlorophenol	128		8.852	8.852	(0.957)	32700	0.17427	0.1743
7 1,3-Dichlorobenzene	146		9.138	9.146	(0.988)	43050	0.20809	0.2081
* 8 1,4-Dichlorobenzene-d4	152		9.247	9.246	(1.000)	579567	4.00000	
9 1,4-Dichlorobenzene	146		9.278	9.285	(1.003)	40686	0.19799	0.1980
\$ 10 1,2-Dichlorobenzene-d4	152		9.247	9.541	(1.000)	579567	4.29482	4.295
12 1,2-Dichlorobenzene	146		9.565	9.565	(1.034)	39055	0.19635	0.1964
11 Benzyl alcohol	108		9.518	9.479	(1.029)	14077	0.12199	0.1220
14 2,2'-oxybis(1-Chloropropane)	121		9.728	9.735	(1.052)	9040	0.15765	0.1576
13 2-Methylphenol	108		9.666	9.658	(1.045)	25943	0.14879	0.1488
17 Hexachloroethane	117		10.209	10.217	(1.104)	12269	0.14546	0.1455
16 N-Nitroso-di-n-propylamine	70		9.976	9.984	(1.079)	24095	0.17740	0.1774 (M)
15 4-Methylphenol	108		9.961	9.953	(1.077)	24619	0.11257	0.1126
\$ 18 Nitrobenzene-d5	82		10.302	10.302	(0.879)	36220	0.15661	0.1566
19 Nitrobenzene	77		10.341	10.341	(0.882)	33643	0.15508	0.1551
20 Isophorone	82		10.791	10.799	(0.920)	44141	0.15939	0.1594
21 2-Nitrophenol	139		10.959	10.958	(0.935)	8404	0.06980	0.06980
22 2,4-Dimethylphenol	107		11.010	11.009	(0.939)	59265	0.28561	0.2856
23 Bis(2-Chloroethoxy)methane	93		11.213	11.213	(0.956)	31056	0.18147	0.1815
24 Benzoic acid	105		Compound Not Detected.					
25 2,4-Dichlorophenol	162		11.442	11.425	(0.976)	22909	0.14014	0.1401
26 1,2,4-Trichlorobenzene	180		11.603	11.603	(0.989)	31638	0.19432	0.1943
* 27 Naphthalene-d8	136		11.726	11.726	(1.000)	2106861	4.00000	
28 Naphthalene	128		11.773	11.772	(1.004)	106621	0.19717	0.1972
29 4-Chloroaniline	127		11.873	11.873	(1.013)	63969	0.27027	0.2703
30 Hexachlorobutadiene	225		11.997	11.996	(1.023)	23630	0.19932	0.1993
31 4-Chloro-3-methylphenol	107		12.832	12.817	(1.094)	30424	0.17690	0.1769
32 2-Methylnaphthalene	142		13.173	13.173	(1.123)	70291	0.18400	0.1840
33 Hexachlorocyclopentadiene	237		Compound Not Detected.					

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
34 2,4,6-Trichlorophenol	196		13.746	13.738	(0.897)	21162	0.20236	0.2024	
35 2,4,5-Trichlorophenol	196		13.846	13.807	(0.904)	19831	0.17767	0.1777	
§ 36 2-Fluorobiphenyl	172		13.916	13.916	(0.909)	78630	0.19928	0.1993	
37 2-Chloronaphthalene	162		14.171	14.179	(0.925)	58024	0.18733	0.1873	
38 2-Nitroaniline	65		14.388	14.380	(0.939)	7932	0.09370	0.09370	
39 Dimethylphthalate	163		14.744	14.751	(0.963)	61576	0.17236	0.1724	
40 Acenaphthylene	152		15.031	15.038	(0.981)	106246	0.19896	0.1990	
41 2,6-Dinitrotoluene	165		14.883	14.883	(0.972)	16382	0.20896	0.2090	
* 42 Acenaphthene-d10	164		15.317	15.324	(1.000)	1106223	4.00000		
43 3-Nitroaniline	138		15.255	15.231	(0.996)	11382	0.12634	0.1263	
44 Acenaphthene	153		15.386	15.394	(1.005)	61453	0.19081	0.1908	
45 2,4-Dinitrophenol	184		Compound Not Detected.						
46 Dibenzofuran	168		15.750	15.749	(1.028)	90223	0.18876	0.1888	
47 4-Nitrophenol	109		15.726	15.548	(1.027)	694	0.01114	0.01114	
48 2,4-Dinitrotoluene	165		15.711	15.718	(1.026)	20210	0.17783	0.1778	
50 Diethylphthalate	149		16.206	16.221	(1.058)	65877	0.17406	0.1741	
49 Fluorene	166		16.461	16.461	(1.075)	70438	0.17712	0.1771	
51 4-Chlorophenyl-phenylether	204		16.461	16.461	(1.075)	31017	0.17913	0.1791	
52 4-Nitroaniline	138		16.538	16.499	(1.080)	11420	0.11792	0.1179	
53 4,6-Dinitro-2-methylphenol	198		16.554	16.554	(0.899)	1305	0.02628	0.02628	
54 N-Nitrosodiphenylamine	169		16.701	16.700	(0.907)	54938	0.17416	0.1742	
§ 55 2,4,6-Tribromophenol	330		16.963	16.962	(1.107)	8004	0.11787	0.1179	
56 4-Bromophenyl-phenylether	248		17.480	17.480	(0.950)	23305	0.18232	0.1823	
57 Hexachlorobenzene	284		17.581	17.588	(0.955)	30228	0.21001	0.2100	
58 Pentachlorophenol	266		Compound Not Detected.						
* 59 Phenanthrene-d10	188		18.409	18.416	(1.000)	2132079	4.00000		
60 Phenanthrene	178		18.463	18.463	(1.003)	106596	0.19536	0.1954	
61 Anthracene	178		18.571	18.571	(1.009)	97378	0.18405	0.1840	
62 Carbazole	167		18.912	18.904	(1.027)	80147	0.16535	0.1654	
63 Di-n-butylphthalate	149		19.593	19.600	(1.064)	98160	0.14925	0.1493	
64 Fluoranthene	202		20.823	20.830	(0.889)	124055	0.16799	0.1680	
65 Pyrene	202		21.256	21.264	(0.907)	130567	0.17364	0.1736	
§ 66 Terphenyl-d14	244		21.535	21.534	(0.919)	104887	0.17239	0.1724	
67 Butylbenzylphthalate	149		22.417	22.417	(0.957)	48215	0.11907	0.1191	
68 Benzo(a)anthracene	228		23.409	23.416	(0.999)	138545	0.18304	0.1830	
* 69 Chrysene-d12	240		23.432	23.431	(1.000)	2146603	4.00000		
70 3,3'-Dichlorobenzidine	252		23.362	23.362	(0.997)	96347	0.28580	0.2858	
71 Chrysene	228		23.471	23.478	(1.002)	129173	0.20999	0.2100	
72 bis(2-Ethylhexyl)phthalate	149		23.409	23.408	(0.956)	84107	0.15640	0.1564	
* 134 Di-n-octylphthalate-d4	153		24.485	24.492	(1.000)	3835755	4.00000		
73 Di-n-octylphthalate	149		24.500	24.508	(1.001)	184805	0.21727	0.2173	
74 Benzo(b)fluoranthene	252		25.321	25.328	(0.969)	137800	0.16736	0.1674	
75 Benzo(k)fluoranthene	252		25.367	25.375	(0.971)	144039	0.18169	0.1817	
76 Benzo(a)pyrene	252		26.002	26.017	(0.995)	126422	0.17177	0.1718	
* 77 Perylene-d12	264		26.126	26.134	(1.000)	2414341	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.909	28.917	(1.107)	113993	0.13249	0.1325	
79 Dibenzo(a,h)anthracene	278		28.971	28.963	(1.109)	88037	0.13495	0.1349	
80 Benzo(g,h,i)perylene	276		29.764	29.763	(1.139)	88826	0.12956	0.1296	
90 N-Nitrosodimethylamine	74		Compound Not Detected.						
91 Aniline	93		8.636	8.635	(0.934)	91935	0.35227	0.3523	
93 Benzidine	184		21.117	21.078	(0.901)	20518	0.06259	0.06259	
103 Pyridine	79		4.804	4.781	(0.520)	80192	0.38412	0.3841	
105 1-methylnaphthalene	142		13.374	13.374	(1.141)	65968	0.19079	0.1908	
111 Azobenzene (1,2-DP-Hydrazine)	77		16.785	16.793	(1.096)	76043	0.13455	0.1346	



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.367	25.375	(0.971)	278901	0.35260	0.3526
120 2,3,4,6-Tetrachlorophenol	232	15.997	15.989	(1.044)	4926	0.04759	0.04759

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i Calibration Date: 03-MAR-2023  
 Lab File ID: NT1003022327.D Calibration Time: 05:36  
 Lab Smp Id: SLC0136-LCV1  
 Analysis Type: SV Level:  
 Quant Type: ISTD Sample Type:  
 Operator: VTS  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\ABN.m  
 Misc Info:

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	673471	336736	1346942	579567	-13.94
27 Naphthalene-d8	2475080	1237540	4950160	2106861	-14.88
42 Acenaphthene-d10	1248864	624432	2497728	1106223	-11.42
59 Phenanthrene-d10	2356836	1178418	4713672	2132079	-9.54
69 Chrysene-d12	2717731	1358866	5435462	2146603	-21.01
134 Di-n-octylphthala	4948440	2474220	9896880	3835755	-22.49
77 Perylene-d12	2801934	1400967	5603868	2414341	-13.83

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.41	-0.04
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
134 Di-n-octylphthala	24.49	23.99	24.99	24.49	-0.03
77 Perylene-d12	26.13	25.63	26.63	26.13	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022327.D

Lab ID: SLC0136-LCV1  
nt10.i, 20230302B.b\ABN.m, 03-MAR-2023 06:52

RT CO-ELUTION COMPOUNDS

-----  
23.409 bis(2-Ethylhexyl)phthalate and Benzo(a)anthracene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.027	1.015	0.0121	4-Nitrophenol
1.000	1.032	-0.0319	1,2-Dichlorobenzene-d4

RRT check based on Ccal File: NT1003022325ICV.D

On Column LOD for nt10.i, 20230302B.b\ABN.m, ICAL.sub = 0.0000

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

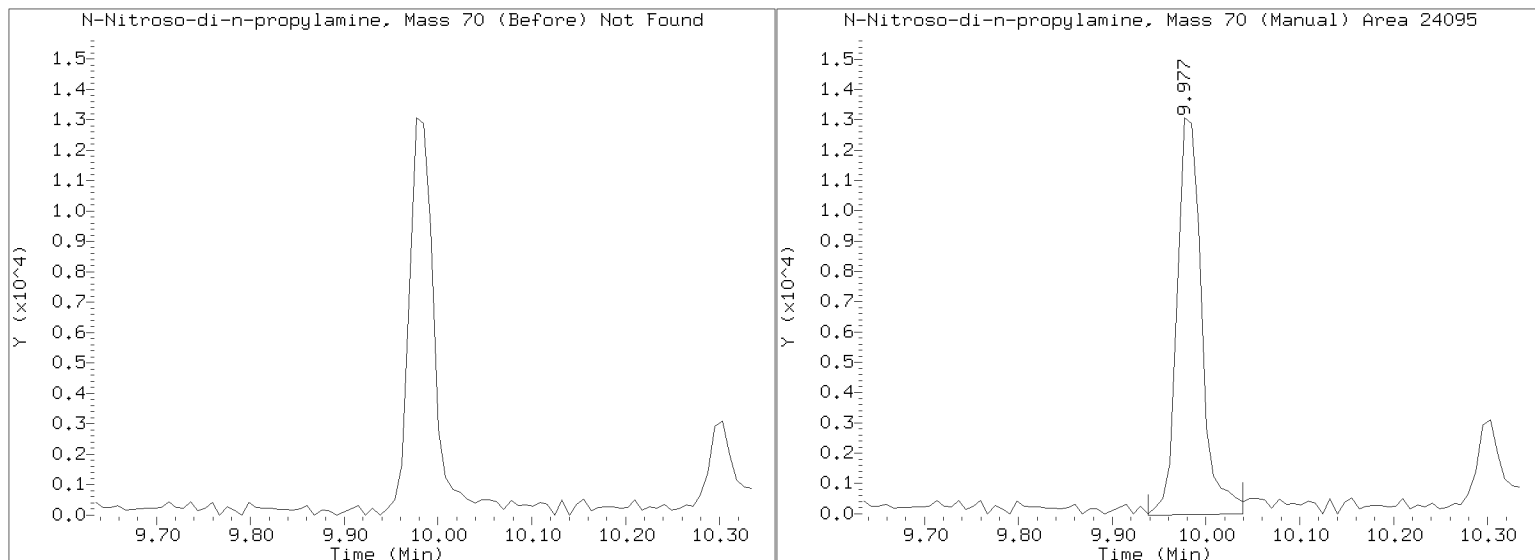
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/NT1003022327.D

Injection Date: 03-MAR-2023 06:52

Lab ID: SLC0136-LCV1 Client ID:

Report Date: 03/10/2023 07:34





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0084

Instrument: NT10

Calibration: GC00019

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0084-TUN1	NT1003012301.D	NA	03/01/23 15:49
CAL 20	SLC0084-CAL7	NT1003012302.D	NA	03/01/23 16:04
CAL 10	SLC0084-CAL6	NT1003012303.D	NA	03/01/23 16:42
CAL 5	SLC0084-CAL5	NT1003012304.D	NA	03/01/23 17:21
CAL 2.5	SLC0084-CAL4	NT1003012305.D	NA	03/01/23 17:59
CAL 1.0	SLC0084-CAL3	NT1003012306.D	NA	03/01/23 18:37
CAL 0.5	SLC0084-CAL2	NT1003012307.D	NA	03/01/23 19:15
CAL 0.2	SLC0084-CAL1	NT1003012308.D	NA	03/01/23 19:53
SCV 5.0	SLC0084-SCV1	NT1003012311.D	NA	03/01/23 21:46
Initial Cal Blank	SLC0084-ICB1	NT1003012312.D	NA	03/01/23 22:24



**ANALYSIS SEQUENCE**

**SLC0084**

Instrument: NT10  
Calibration ID: UNASSIGNED

**Printed: 3/7/2023 1:01:11PM**

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0084-TUN1	QC		1		K004775			
SLC0084-CAL1	QC		2		K011105	K010831		
SLC0084-CAL2	QC		3		K011106	K010831		
SLC0084-CAL3	QC		4		K011107	K010831		
SLC0084-CAL4	QC		5		K011108	K010831		
SLC0084-CAL5	QC		6		K011109	K010831		
SLC0084-CAL6	QC		7		K011110	K010831		
SLC0084-CAL7	QC		8		K011111	K010831		
SLC0084-SCV1	QC		9		K010066	K010831		
SLC0084-ICB1	QC		10		K005156	K010831		

\_\_\_\_\_  
Samples Loaded By    Date

\_\_\_\_\_  
Data Processed By    Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b

Time	Filename	LabID	ClientId	DF																														
1	1549	NT1003012301.D	SLC0084-TUN1		1		NO ISTDS FOUND																											
2	1604	NT1003012302.D	SLC0084-CAL7		1		9.25		350339		11.73		1337321		15.32		721926		18.41		1389567		23.42		1382735		26.11		1052577		24.49		2772507	
3	1642	NT1003012303.D	SLC0084-CAL6		1		9.25		343229		11.72		1283371		15.32		697310		18.40		1340795		23.42		1088479		26.11		973894		24.48		2152692	
4	1721	NT1003012304.D	SLC0084-CAL5		1		9.25		337641		11.72		1265187		15.31		692385		18.40		1376777		23.42		1019524		26.10		1027409		24.48		2027111	
5	1759	NT1003012305.D	SLC0084-CAL4		1		9.25		320922		11.72		1174958		15.31		642002		18.40		1218560		23.42		904733		26.10		947785		24.48		1785837	
6	1837	NT1003012306.D	SLC0084-CAL3		1		9.25		301377		11.72		1117281		15.31		611509		18.40		1193129		23.42		938680		26.10		995239		24.49		1744984	
7	1915	NT1003012307.D	SLC0084-CAL2		1		9.25		309085		11.72		1141293		15.31		610034		18.40		1173527		23.42		1001661		26.10		1066145		24.49		1783007	
8	1953	NT1003012308.D	SLC0084-CAL1		1		9.25		295317		11.72		1075084		15.32		525641		18.40		1064230		23.42		908515		26.10		969731		24.48		1659419	
9	2030	NT1003012309.D	SEQ-SIM2		1		9.25		285326		11.72		1006391		15.31		485266		18.40		993728		23.42		888551		26.10		1001314		24.49		1646702	
10	2109	NT1003012310.D	SEQ-SIM1		1		9.25		350039		11.72		1219070		15.31		587402		18.40		1179509		23.42		1044485		26.10		1189301		24.48		1916581	
11	2146	NT1003012311.D	SLC0084-SCV1		1		9.25		283537		11.72		1089120		15.32		607772		18.40		1205858		23.42		1219436		26.10		1289108		24.49		2317357	
12	2224	NT1003012312.D	SLC0084-ICB1		1		9.25		480761		11.72		1681746		15.31		836849		18.40		1648281		23.42		1391477		26.10		1542419		24.48		2481481	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b

ARI Job No.: SLC0 Method: DFTPP8270E.m Instrument: nt10.i Date: 01-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1549	NT1003012301.D	SLC0084-TUN1		1	NO MANUAL INTEGRATION
1604	NT1003012302.D	SLC0084-CAL7		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1642	NT1003012303.D	SLC0084-CAL6		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1721	NT1003012304.D	SLC0084-CAL5		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol,
1759	NT1003012305.D	SLC0084-CAL4		1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol, 4-Nitrophenol,
1837	NT1003012306.D	SLC0084-CAL3		1	2,2'-oxybis(1-Chloropropane), Benzoic acid, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol,
1915	NT1003012307.D	SLC0084-CAL2		1	2,2'-oxybis(1-Chloropropane), Benzoic acid, 4-Chloro-3-methylphenol, 2,4,5-Trichlorophenol, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline, N-Nitrosodimethylamine, Benzidine,
1953	NT1003012308.D	SLC0084-CAL1		1	2,2'-oxybis(1-Chloropropane), N-Nitroso-di-n-propylamine, 4-Methylphenol, Isophorone, 2,4-Dichlorophenol, Benzoic acid, 4-Chloroaniline, 4-Chloro-3-methylphenol, 2,4,5-Trichlorophenol, 2-Nitroaniline, 3-Nitroaniline, 4-Nitroaniline, Pentachlorophenol, Carbazole, Chrysene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, N-Nitrosodimethylami
2030	NT1003012309.D	SEQ-SIM2		1	NO MANUAL INTEGRATION
2109	NT1003012310.D	SEQ-SIM1		1	NO MANUAL INTEGRATION
2146	NT1003012311.D	SLC0084-SCV1		1	Bis(2-Chloroethyl)ether, 2,4,5-Trichlorophenol, 4-Nitrophenol,
2224	NT1003012312.D	SLC0084-ICB1		1	NO MANUAL INTEGRATION



Security Status Report

Date: 07-Mar-2023 12:54

NT1003012301.D	Data Locked	yev, 07-
NT1003012302.D	Data Locked	yev, 07-
NT1003012303.D	Data Locked	yev, 07-
NT1003012304.D	Data Locked	yev, 07-
NT1003012305.D	Data Locked	yev, 07-
NT1003012306.D	Data Locked	yev, 07-
NT1003012307.D	Data Locked	yev, 07-
NT1003012308.D	Data Locked	yev, 07-
NT1003012309.D	Data Locked	yev, 07-
NT1003012310.D	Data Locked	yev, 07-
NT1003012311.D	Data Locked	yev, 07-
NT1003012312.D	Data Locked	yev, 07-



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0120

Instrument: NT10

Calibration: GC00019

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0120-TUN1	NT1003022301.D	NA	03/02/23 13:19
ABN 5	SLC0120-ICV1	NT1003022302.D	NA	03/02/23 13:34
Blank	BLA0624-BLK1	NT1003022306.D	Solid	03/02/23 17:34
LCS	BLA0624-BS1	NT1003022307.D	Solid	03/02/23 18:12
LCS Dup	BLA0624-BSD1	NT1003022308.D	Solid	03/02/23 18:50
LDW23-SS1066	BLA0624-MS1	NT1003022309.D	Solid	03/02/23 19:28
LDW23-SS1066	BLA0624-MSD1	NT1003022310.D	Solid	03/02/23 20:06
Reference	BLA0624-SRM1	NT1003022311.D	Solid	03/02/23 20:44
LDW23-SS1021	23A0206-01	NT1003022312.D	Solid	03/02/23 21:22
LDW23-SS1015	23A0206-02	NT1003022313.D	Solid	03/02/23 22:00
ABN 5	SLC0120-CCV1	NT1003022314.D	NA	03/02/23 22:38



ANALYSIS SEQUENCE

SLC0120

Instrument: NT10  
Calibration ID: GC00019

Printed: 3/9/2023 11:22:09AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0120-TUN1	QC		1		K004775			
SLC0120-ICV1	QC		2		K011109	K010831		
BLA0624-BLK1	QC		3			K010831		
BLA0624-BS1	QC		4			K010831		
BLA0624-BSD1	QC		5			K010831		
BLA0624-SRM1	QC		6			K010831		
BLA0624-MS1	QC		7			K010831		
BLA0624-MSD1	QC		8			K010831		
23A0206-01	(20ug/kg solid or 0.2ug/L lo	B 04	9			K010831	Anchor QEA, LLC	
23A0206-02	(20ug/kg solid or 0.2ug/L lo	B 04	10			K010831	Anchor QEA, LLC	
SLC0120-CCV1	QC		11		K011109	K010831		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b

Time	Filename	LabID	ClientId	DF														
1	1319	NT1003022301.D	SLC0120-TUN1	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00			
2	1334	NT1003022302.D	SLC0120-ICV1	1	9.25	430971	11.73	1609461	15.32	853113	18.40	1556648	23.42	1539062	26.12	1634059	24.49	2949571
3	1413	NT1003022303.D	SEQ-ICVSIM	1	9.25	457513	11.72	1704514	15.32	905308	18.40	1669290	23.42	1553898	26.11	1748533	24.49	2756205
4	1617	NT1003022304.D	SEQ-LCV200	1	9.25	438573	11.73	1633955	15.32	877813	18.40	1660925	23.42	1527377	26.11	1719550	24.48	2737644
5	1656	NT1003022305.D	SEQ-LCV100	1	9.25	420727	11.72	1522768	15.32	759522	18.40	1477696	23.42	1368928	26.11	1554045	24.49	2429195
6	1734	NT1003022306.D	BLA0624-BLK1	1	9.25	508828	11.72	1861629	15.32	980442	18.40	1866785	23.42	1690423	26.11	1765137	24.49	3025357
7	1812	NT1003022307.D	BLA0624-BS1	1	9.25	415927	11.72	1650394	15.32	916729	18.40	1754820	23.42	1787466	26.12	1751658	24.49	3153255
8	1850	NT1003022308.D	BLA0624-BSD1	1	9.25	516875	11.72	1986258	15.32	1084042	18.40	2011504	23.42	2006849	26.11	1974070	24.49	3510242
9	1928	NT1003022309.D	BLA0624-MS1	1	9.25	585102	11.72	2217084	15.32	1224450	18.41	2696226	23.44	3938003	26.15	3348167	24.50	6236602
10	2006	NT1003022310.D	BLA0624-MSD1	1	9.25	601832	11.73	2248229	15.32	1273098	18.41	2690572	23.44	3690616	26.15	3245250	24.50	5895207
11	2044	NT1003022311.D	BLA0624-SRM1	1	9.25	690353	11.73	2516830	15.32	1336820	18.41	2408027	23.42	2666866	26.12	2745651	24.49	4915230
12	2122	NT1003022312.D	23A0206-01	1	9.25	653777	11.72	2364652	15.32	1200880	18.41	2204094	23.43	2522283	26.13	2683214	24.49	4928999
13	2200	NT1003022313.D	23A0206-02	1	9.25	698814	11.73	2488374	15.32	1272566	18.41	2361043	23.43	2779959	26.13	2896502	24.49	5293891
14	2238	NT1003022314.D	SLC0120-CCV1	1	9.25	599166	11.73	2200781	15.32	1135136	18.41	2128944	23.42	2449624	26.13	2593218	24.49	4694735

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b

ARI Job No.: SLC0 Method: ABN.m Instrument: nt10.i Date: 02-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1319	NT1003022301.D	SLC0120-TUN1		1	NO MANUAL INTEGRATION
1334	NT1003022302.D	SLC0120-ICV1		1	NO MANUAL INTEGRATION
1413	NT1003022303.D	SEQ-ICVSIM		1	NO MANUAL INTEGRATION
1617	NT1003022304.D	SEQ-LCV200		1	NO MANUAL INTEGRATION
1656	NT1003022305.D	SEQ-LCV100		1	NO MANUAL INTEGRATION
1734	NT1003022306.D	BLA0624-BLK1		1	NO MANUAL INTEGRATION
1812	NT1003022307.D	BLA0624-BS1		1	NO MANUAL INTEGRATION
1850	NT1003022308.D	BLA0624-BSD1		1	NO MANUAL INTEGRATION
1928	NT1003022309.D	BLA0624-MS1		1	NO MANUAL INTEGRATION
2006	NT1003022310.D	BLA0624-MSD1		1	NO MANUAL INTEGRATION
2044	NT1003022311.D	BLA0624-SRM1		1	NO MANUAL INTEGRATION
2122	NT1003022312.D	23A0206-01		1	4-Methylphenol, Benzo(k)fluoranthene,
2200	NT1003022313.D	23A0206-02		1	4-Methylphenol,
2238	NT1003022314.D	SLC0120-CCV1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 09-Mar-2023 11:39

NT1003022301.D	Data Locked	yev, 09-
NT1003022302.D	Data Locked	yev, 09-
NT1003022303.D	Data Locked	yev, 09-
NT1003022304.D	Data Locked	yev, 09-
NT1003022305.D	Data Locked	yev, 09-
NT1003022306.D	Data Locked	yev, 09-
NT1003022307.D	Data Locked	yev, 09-
NT1003022308.D	Data Locked	yev, 09-
NT1003022309.D	Data Locked	yev, 09-
NT1003022310.D	Data Locked	yev, 09-
NT1003022311.D	Data Locked	yev, 09-
NT1003022312.D	Data Locked	yev, 09-
NT1003022313.D	Data Locked	yev, 09-
NT1003022314.D	Data Locked	yev, 09-



**ANALYSIS BATCH (SEQUENCE) SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0132

Instrument: NT10

Calibration: GC00019

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ABN 5	SLC0132-ICV1	NT1003022314ICV.D	NA	03/02/23 22:38
LDW23-SS1164	23A0206-03	NT1003022318.D	Solid	03/03/23 01:10
LDW23-SS1158	23A0206-04	NT1003022319.D	Solid	03/03/23 01:47
LDW23-SS1151	23A0206-05	NT1003022320.D	Solid	03/03/23 02:25
LDW23-SS1145	23A0206-06	NT1003022321.D	Solid	03/03/23 03:03
LDW23-SS1139	23A0206-07	NT1003022322.D	Solid	03/03/23 03:41
LDW23-SS1117	23A0206-08	NT1003022323.D	Solid	03/03/23 04:19
LDW23-SS1103	23A0206-09	NT1003022324.D	Solid	03/03/23 04:58
ABN 5	SLC0132-CCV1	NT1003022325.D	NA	03/03/23 05:36



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0136

Instrument: NT10

Calibration: GC00019

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ABN 5	SLC0136-ICV1	NT1003022325ICV.D	NA	03/03/23 05:36
ABN 0.2	SLC0136-LCV1	NT1003022327.D	NA	03/03/23 06:52
LDW23-SS1100	23A0206-10	NT1003022329.D	Solid	03/03/23 08:08
LDW23-SS1096	23A0206-11	NT1003022330.D	Solid	03/03/23 08:46
LDW23-SS1094	23A0206-12	NT1003022331.D	Solid	03/03/23 09:24
LDW23-SS1066	23A0206-13	NT1003022332.D	Solid	03/03/23 10:02
LDW23-SS1061	23A0206-14	NT1003022333.D	Solid	03/03/23 10:40
ABN 5	SLC0136-CCV1	NT1003022334.D	NA	03/03/23 11:18



INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b

Time	Filename	LabID	ClientId	DF																	
1	0536	NT1003022325ICV.D	SLC0136-ICV1		1	9.25	673471	11.73	2475080	15.32	1248864	18.42	2356836	23.43	2717731	26.13	2801934	24.49	4948440		
2	0614	NT1003022326.D	SEQ-CCVSIM		1	9.25	559349	11.73	2005960	15.32	1057873	18.41	2033581	23.43	2081770	26.13	2316418	24.49	3889154		
3	0652	NT1003022327.D	SLC0136-LCV1		1	9.25	579567	11.73	2106861	15.32	1106223	18.41	2132079	23.43	2146603	26.13	2414341	24.49	3835755		
4	0730	NT1003022328.D	SEQ-LCV100		1	9.25	632756	11.73	2257882	15.32	1141540	18.41	2154081	23.43	2107877	26.13	2378256	24.48	3770904		
5	0808	NT1003022329.D	23A0206-10		1	9.25	494384	11.73	1833766	15.32	961004	18.41	1847254	23.43	2036818	26.13	2251982	24.49	3726906		
6	0846	NT1003022330.D	23A0206-11		1	9.25	503496	11.73	1806678	15.32	935187	18.41	1808982	23.43	2087313	26.14	2227344	24.49	3805907		
7	0924	NT1003022331.D	23A0206-12		1	9.25	469864	11.73	1698409	15.32	889640	18.42	1734623	23.44	2059646	26.15	2186509	24.50	3710575		
8	1002	NT1003022332.D	23A0206-13		1	9.25	475261	11.73	1755750	15.32	957224	18.42	1999034	23.45	2472766	26.17	2482313	24.51	4297033		
9	1040	NT1003022333.D	23A0206-14		1	9.25	439299	11.73	1637095	15.32	884440	18.42	1749820	23.46	2060453	26.16	2072216	24.50	3751655		
10	1118	NT1003022334.D	SLC0136-CCV1		1	9.25	639766	11.73	2320061	15.32	1211400	18.42	2339560	23.44	2771645	26.14	2740459	24.49	4959061		

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b

ARI Job No.: SLC0 Method: ABN.m Instrument: nt10.i Date: 03-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0536	NT1003022325	ICV.D	SLC0136-ICV1	1	Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene,
0614	NT1003022326	.D	SEQ-CCVSIM	1	NO MANUAL INTEGRATION
0652	NT1003022327	.D	SLC0136-LCV1	1	N-Nitroso-di-n-propylamine,
0730	NT1003022328	.D	SEQ-LCV100	1	NO MANUAL INTEGRATION
0808	NT1003022329	.D	23A0206-10	1	Benzoic acid, Benzo(k)fluoranthene,
0846	NT1003022330	.D	23A0206-11	1	Benzoic acid, Benzo(k)fluoranthene,
0924	NT1003022331	.D	23A0206-12	1	Benzo(k)fluoranthene,
1002	NT1003022332	.D	23A0206-13	1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
1040	NT1003022333	.D	23A0206-14	1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
1118	NT1003022334	.D	SLC0136-CCV1	1	2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 10-Mar-2023 07:38

NT1003022325ICV.D	Data Locked	yev, 10-
NT1003022326.D	Data Locked	yev, 10-
NT1003022327.D	Data Locked	yev, 10-
NT1003022328.D	Data Locked	yev, 10-
NT1003022329.D	Data Locked	yev, 10-
NT1003022330.D	Data Locked	yev, 10-
NT1003022331.D	Data Locked	yev, 10-
NT1003022332.D	Data Locked	yev, 10-
NT1003022333.D	Data Locked	yev, 10-
NT1003022334.D	Data Locked	yev, 10-



ANALYSIS SEQUENCE

SLC0136

Instrument: NT10  
Calibration ID: GC00019

Printed: 3/9/2023 5:53:08PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0136-ICV1	QC		1		K011109	K010831		
SLC0136-LCV1	QC		2		K011106	K010831		
23A0206-10	(20ug/kg solid or 0.2ug/L lo	B 04	3			K010831	Anchor QEA, LLC	
23A0206-11	(20ug/kg solid or 0.2ug/L lo	B 04	4			K010831	Anchor QEA, LLC	
23A0206-12	(20ug/kg solid or 0.2ug/L lo	B 04	5			K010831	Anchor QEA, LLC	
23A0206-13	(20ug/kg solid or 0.2ug/L lo	B 04	6			K010831	Anchor QEA, LLC	
23A0206-14	(20ug/kg solid or 0.2ug/L lo	B 04	7			K010831	Anchor QEA, LLC	
SLC0136-CCV1	QC		8		K011109	K010831		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Sequence: SLC0084  
 Calibration: GC00019

SDG/WO: 23A0206  
 Project: AOC5 MR Phase 1  
 Instrument: NT10  
 Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0084-SCV1 (Water)</b>		Lab File ID: NT1003012311.D			Analyzed: 03/01/23 21:46			
2-Fluorophenol	7.5000		80 - 120		6.898143	-6.8981	N/A	*
Phenol-d5	7.5000		80 - 120		8.491857	-8.4919	N/A	*
2-Chlorophenol-d4	7.5000		80 - 120		8.814143	-8.8141	N/A	*
1,2-Dichlorobenzene-d4	5.0000	85.9	80 - 120	9.247	9.534572	-0.2876	N/A	
Nitrobenzene-d5	5.0000		80 - 120		10.29314	-10.2931	N/A	*
2-Fluorobiphenyl	5.0000		80 - 120		13.91014	-13.9101	N/A	*
2,4,6-Tribromophenol	7.5000		80 - 120		16.947	-16.9470	N/A	*
p-Terphenyl-d14	5.0000	0.392	80 - 120	21.519	21.52357	-0.0046	N/A	*
<b>SLC0084-ICB1 (Water)</b>		Lab File ID: NT1003012312.D			Analyzed: 03/01/23 22:24			
2-Fluorophenol	7.5000	100	30 - 160	6.897	6.898143	-0.0011	N/A	
Phenol-d5	7.5000	95.7	30 - 160	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	7.5000	98.9	30 - 160	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	5.0000	94.9	30 - 160	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	5.0000	100	30 - 160	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	5.0000	98.2	30 - 160	13.908	13.91014	-0.0021	N/A	
2,4,6-Tribromophenol	7.5000	74.9	30 - 160	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	5.0000	96.4	30 - 160	21.527	21.52357	0.0034	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0120  
Calibration: GC00019

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0120-ICV1 (Water)</b> Lab File ID: NT1003022302.D Analyzed: 03/02/23 13:34								
2-Fluorophenol	7.5000	103	80 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	7.5000	113	80 - 120	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	7.5000	105	80 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	5.0000	96.3	80 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	5.0000	107	80 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	5.0000	102	80 - 120	13.908	13.91014	-0.0021	N/A	
2,4,6-Tribromophenol	7.5000	89.2	80 - 120	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	5.0000	87.6	80 - 120	21.527	21.52357	0.0034	N/A	
<b>BLA0624-BLK1 (Solid)</b> Lab File ID: NT1003022306.D Analyzed: 03/02/23 17:34								
2-Fluorophenol	750.00	70.2	27 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	750.00	78.6	29 - 120	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	750.00	79.2	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	500.00	76.5	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	500.00	80.7	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	500.00	81.4	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	750.00	55.2	24 - 134	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	500.00	94.1	37 - 120	21.527	21.52357	0.0034	N/A	
<b>BLA0624-BS1 (Solid)</b> Lab File ID: NT1003022307.D Analyzed: 03/02/23 18:12								
2-Fluorophenol	750.00	84.7	27 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	750.00	103	29 - 120	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	750.00	95.1	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	500.00	80.5	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	500.00	88.4	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	500.00	87.5	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	750.00	91.8	24 - 134	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	500.00	90.3	37 - 120	21.527	21.52357	0.0034	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0120

Instrument: NT10

Calibration: GC00019

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>BLA0624-BSD1 (Solid)</b>		Lab File ID: NT1003022308.D			Analyzed: 03/02/23 18:50			
2-Fluorophenol	750.00	84.6	27 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	750.00	100	29 - 120	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	750.00	94.5	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	500.00	82.0	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	500.00	86.0	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	500.00	89.6	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	750.00	91.2	24 - 134	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	500.00	89.3	37 - 120	21.527	21.52357	0.0034	N/A	
<b>BLA0624-MS1 (Solid)</b>		Lab File ID: NT1003022309.D			Analyzed: 03/02/23 19:28			
2-Fluorophenol	749.58	83.6	27 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	749.58	99.1	29 - 120	8.489	8.491857	-0.0029	N/A	
2-Chlorophenol-d4	749.58	96.5	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	499.72	80.6	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.72	93.0	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	499.72	94.0	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	749.58	107	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.72	80.2	37 - 120	21.55	21.52357	0.0264	N/A	
<b>BLA0624-MSD1 (Solid)</b>		Lab File ID: NT1003022310.D			Analyzed: 03/02/23 20:06			
2-Fluorophenol	749.58	83.3	27 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	749.58	99.6	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	749.58	93.4	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	499.72	76.5	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.72	89.8	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	499.72	88.1	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	749.58	95.5	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.72	79.0	37 - 120	21.55	21.52357	0.0264	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0120  
Calibration: GC00019

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>BLA0624-SRM1 (Solid)</b> Lab File ID: NT1003022311.D Analyzed: 03/02/23 20:44								
2-Fluorophenol	7500.0	88.2	27 - 120	6.904	6.898143	0.0059	N/A	
Phenol-d5	7500.0	100	29 - 120	8.496	8.491857	0.0041	N/A	
2-Chlorophenol-d4	7500.0	96.5	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	5000.0	82.4	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	5000.0	92.5	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	5000.0	95.2	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	7500.0	87.4	24 - 134	16.947	16.947	0.0000	N/A	
p-Terphenyl-d14	5000.0	88.8	37 - 120	21.534	21.52357	0.0104	N/A	
<b>23A0206-01 (Solid)</b> Lab File ID: NT1003022312.D Analyzed: 03/02/23 21:22								
2-Fluorophenol	749.17	83.6	27 - 120	6.904	6.898143	0.0059	N/A	
Phenol-d5	749.17	96.4	29 - 120	8.496	8.491857	0.0041	N/A	
2-Chlorophenol-d4	749.17	93.7	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	499.44	79.4	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.44	90.0	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	499.44	96.6	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	749.17	84.5	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.44	86.1	37 - 120	21.534	21.52357	0.0104	N/A	
<b>23A0206-02 (Solid)</b> Lab File ID: NT1003022313.D Analyzed: 03/02/23 22:00								
2-Fluorophenol	748.13	79.8	27 - 120	6.904	6.898143	0.0059	N/A	
Phenol-d5	748.13	91.6	29 - 120	8.496	8.491857	0.0041	N/A	
2-Chlorophenol-d4	748.13	91.5	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.75	78.9	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.75	88.2	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	498.75	96.3	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.13	85.7	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.75	88.1	37 - 120	21.534	21.52357	0.0104	N/A	





**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0120

Instrument: NT10

Calibration: GC00019

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0120-CCV1 (Water)</b>		Lab File ID: NT1003022314.D			Analyzed: 03/02/23 22:38			
2-Fluorophenol	7.5000	102	50 - 150	6.897	6.898143	-0.0011	N/A	
Phenol-d5	7.5000	117	50 - 150	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	7.5000	108	50 - 150	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.4	50 - 150	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	5.0000	107	50 - 150	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	5.0000	106	50 - 150	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	7.5000	95.1	50 - 150	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	5.0000	83.5	50 - 150	21.535	21.52357	0.0114	N/A	



## SURROGATE RECOVERY AND RT SUMMARY EPA 8270E

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0132

Instrument: NT10

Calibration: GC00019

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0132-ICV1 (Solid)</b> <span style="float: right;">Lab File ID: NT1003022314ICV.D</span> <span style="float: right;">Analyzed: 03/02/23 22:38</span>								
2-Fluorophenol	7.5000	102	80 - 120	6.897	6.898143	-0.0011	N/A	
Phenol-d5	7.5000	117	80 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	7.5000	108	80 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.4	80 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	5.0000	107	80 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	5.0000	106	80 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	7.5000	95.1	80 - 120	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	5.0000	83.5	80 - 120	21.535	21.52357	0.0114	N/A	
<b>23A0206-03 (Solid)</b> <span style="float: right;">Lab File ID: NT1003022318.D</span> <span style="float: right;">Analyzed: 03/03/23 01:10</span>								
2-Fluorophenol	748.80	83.2	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	748.80	95.3	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	748.80	93.7	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	499.20	79.7	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.20	91.3	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	499.20	98.8	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.80	90.4	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.20	92.0	37 - 120	21.542	21.52357	0.0184	N/A	
<b>23A0206-04 (Solid)</b> <span style="float: right;">Lab File ID: NT1003022319.D</span> <span style="float: right;">Analyzed: 03/03/23 01:47</span>								
2-Fluorophenol	748.80	77.6	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	748.80	90.5	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	748.80	88.3	31 - 120	8.813	8.814143	-0.0011	N/A	
1,2-Dichlorobenzene-d4	499.20	75.5	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.20	83.8	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	499.20	90.0	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.80	83.5	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.20	89.9	37 - 120	21.535	21.52357	0.0114	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0132  
Calibration: GC00019

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-05 (Solid)</b> Lab File ID: NT1003022320.D Analyzed: 03/03/23 02:25								
2-Fluorophenol	749.97	80.7	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	749.97	93.8	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	749.97	92.1	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	499.98	77.8	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.98	88.8	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	499.98	93.3	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	749.97	89.0	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.98	86.4	37 - 120	21.543	21.52357	0.0194	N/A	
<b>23A0206-06 (Solid)</b> Lab File ID: NT1003022321.D Analyzed: 03/03/23 03:03								
2-Fluorophenol	744.22	76.5	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	744.22	90.6	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	744.22	86.0	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	496.14	70.8	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	496.14	83.1	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	496.14	87.5	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	744.22	80.0	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	496.14	85.7	37 - 120	21.542	21.52357	0.0184	N/A	
<b>23A0206-07 (Solid)</b> Lab File ID: NT1003022322.D Analyzed: 03/03/23 03:41								
2-Fluorophenol	748.18	83.3	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	748.18	93.2	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	748.18	92.1	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.79	80.2	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.79	90.2	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	498.79	95.0	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.18	88.1	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.79	91.7	37 - 120	21.542	21.52357	0.0184	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0132  
Calibration: GC00019

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-08 (Solid)</b>		Lab File ID: NT1003022323.D			Analyzed: 03/03/23 04:19			
2-Fluorophenol	747.35	79.4	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	747.35	91.3	29 - 120	8.497	8.491857	0.0051	N/A	
2-Chlorophenol-d4	747.35	89.0	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.24	76.0	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.24	86.3	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	498.24	90.6	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	747.35	82.0	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.24	86.9	37 - 120	21.543	21.52357	0.0194	N/A	
<b>23A0206-09 (Solid)</b>		Lab File ID: NT1003022324.D			Analyzed: 03/03/23 04:58			
2-Fluorophenol	748.99	80.7	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	748.99	94.0	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	748.99	91.5	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	499.33	76.8	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.33	88.5	30 - 120	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	499.33	93.1	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.99	83.3	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.33	89.6	37 - 120	21.534	21.52357	0.0104	N/A	
<b>SLC0132-CCV1 (Solid)</b>		Lab File ID: NT1003022325.D			Analyzed: 03/03/23 05:36			
2-Fluorophenol	7.5000	102	50 - 150	6.905	6.898143	0.0069	N/A	
Phenol-d5	7.5000	116	50 - 150	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	7.5000	109	50 - 150	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	5.0000	100	50 - 150	9.541	9.534572	0.0064	N/A	
Nitrobenzene-d5	5.0000	103	50 - 150	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	5.0000	109	50 - 150	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	7.5000	94.5	50 - 150	16.962	16.947	0.0150	N/A	
p-Terphenyl-d14	5.0000	84.6	50 - 150	21.534	21.52357	0.0104	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0136  
Calibration: GC00019

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0136-ICV1 (Solid)</b> Lab File ID: NT1003022325ICV.D Analyzed: 03/03/23 05:36								
2-Fluorophenol	7.5000	102	80 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	7.5000	116	80 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	7.5000	109	80 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	5.0000	100	80 - 120	9.541	9.534572	0.0064	N/A	
Nitrobenzene-d5	5.0000	103	80 - 120	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	5.0000	109	80 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	7.5000	94.5	80 - 120	16.962	16.947	0.0150	N/A	
p-Terphenyl-d14	5.0000	84.6	80 - 120	21.534	21.52357	0.0104	N/A	
<b>SLC0136-LCV1 (Solid)</b> Lab File ID: NT1003022327.D Analyzed: 03/03/23 06:52								
2-Fluorophenol	0.30000	94.0	50 - 150	6.905	6.898143	0.0069	N/A	
Phenol-d5	0.30000		50 - 150		8.491857	-8.4919	N/A	*
2-Chlorophenol-d4	0.30000	92.2	50 - 150	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	0.20000	2150	50 - 150	9.247	9.534572	-0.2876	N/A	*
Nitrobenzene-d5	0.20000	78.3	50 - 150	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	0.20000	99.6	50 - 150	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	0.30000	39.3	50 - 150	16.963	16.947	0.0160	N/A	*
p-Terphenyl-d14	0.20000	86.2	50 - 150	21.535	21.52357	0.0114	N/A	
<b>23A0206-10 (Solid)</b> Lab File ID: NT1003022329.D Analyzed: 03/03/23 08:08								
2-Fluorophenol	747.41	77.5	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	747.41	90.5	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	747.41	89.1	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.27	76.3	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.27	84.8	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	498.27	93.9	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	747.41	88.2	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.27	91.2	37 - 120	21.534	21.52357	0.0104	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0136

Instrument: NT10

Calibration: GC00019

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-11 (Solid)</b> Lab File ID: NT1003022330.D Analyzed: 03/03/23 08:46								
2-Fluorophenol	747.84	79.5	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	747.84	92.0	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	747.84	91.0	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.56	76.1	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.56	86.5	30 - 120	10.294	10.29314	0.0009	N/A	
2-Fluorobiphenyl	498.56	94.1	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	747.84	91.4	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.56	93.8	37 - 120	21.542	21.52357	0.0184	N/A	
<b>23A0206-12 (Solid)</b> Lab File ID: NT1003022331.D Analyzed: 03/03/23 09:24								
2-Fluorophenol	747.55	82.0	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	747.55	94.7	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	747.55	94.2	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	498.36	81.3	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	498.36	91.7	30 - 120	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	498.36	98.5	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	747.55	91.8	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	498.36	92.6	37 - 120	21.543	21.52357	0.0194	N/A	
<b>23A0206-13 (Solid)</b> Lab File ID: NT1003022332.D Analyzed: 03/03/23 10:02								
2-Fluorophenol	748.68	82.8	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	748.68	97.7	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	748.68	95.1	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	499.12	81.6	32 - 120	9.534	9.534572	-0.0006	N/A	
Nitrobenzene-d5	499.12	86.9	30 - 120	10.295	10.29314	0.0019	N/A	
2-Fluorobiphenyl	499.12	94.2	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	748.68	92.9	24 - 134	16.955	16.947	0.0080	N/A	
p-Terphenyl-d14	499.12	88.1	37 - 120	21.55	21.52357	0.0264	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0136

Instrument: NT10

Calibration: GC00019

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-14 (Solid)</b>		Lab File ID: NT1003022333.D			Analyzed: 03/03/23 10:40			
2-Fluorophenol	734.54	76.8	27 - 120	6.905	6.898143	0.0069	N/A	
Phenol-d5	734.54	89.6	29 - 120	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	734.54	86.6	31 - 120	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	489.70	72.2	32 - 120	9.542	9.534572	0.0074	N/A	
Nitrobenzene-d5	489.70	80.4	30 - 120	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	489.70	84.1	35 - 120	13.916	13.91014	0.0059	N/A	
2,4,6-Tribromophenol	734.54	82.0	24 - 134	16.963	16.947	0.0160	N/A	
p-Terphenyl-d14	489.70	77.3	37 - 120	21.558	21.52357	0.0344	N/A	
<b>SLC0136-CCV1 (Solid)</b>		Lab File ID: NT1003022334.D			Analyzed: 03/03/23 11:18			
2-Fluorophenol	7.5000	103	50 - 150	6.904	6.898143	0.0059	N/A	
Phenol-d5	7.5000	114	50 - 150	8.504	8.491857	0.0121	N/A	
2-Chlorophenol-d4	7.5000	110	50 - 150	8.821	8.814143	0.0069	N/A	
1,2-Dichlorobenzene-d4	5.0000	100	50 - 150	9.541	9.534572	0.0064	N/A	
Nitrobenzene-d5	5.0000	103	50 - 150	10.302	10.29314	0.0089	N/A	
2-Fluorobiphenyl	5.0000	106	50 - 150	13.923	13.91014	0.0129	N/A	
2,4,6-Tribromophenol	7.5000	90.6	50 - 150	16.962	16.947	0.0150	N/A	
p-Terphenyl-d14	5.0000	84.1	50 - 150	21.534	21.52357	0.0104	N/A	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0084

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Secondary Cal Check (SLC0084-SCV1)</b>		(Water)	Lab File ID: NT1003012311.D			Analyzed: 03/01/23 21:46			
1,4-Dichlorobenzene-d4	283537	9.247	337641	9.246	84	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1089120	11.719	1265187	11.718	86	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	607772	15.317	692385	15.308	88	50 - 200	0.009	+/-0.50	
Phenanthrene-d10	1205858	18.401	1376777	18.401	88	50 - 200	0.000	+/-0.50	
Chrysene-d12	1219436	23.416	1019524	23.416	120	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	2317357	24.485	2027111	24.484	114	50 - 200	0.001	+/-0.50	
Perylene-d12	1289108	26.103	1027409	26.102	125	50 - 200	0.001	+/-0.50	
<b>Initial Cal Blank (SLC0084-ICB1)</b>		(Water)	Lab File ID: NT1003012312.D			Analyzed: 03/01/23 22:24			
1,4-Dichlorobenzene-d4	480761	9.246	337641	9.246	142	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1681746	11.718	1265187	11.718	133	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	836849	15.308	692385	15.308	121	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1648281	18.401	1376777	18.401	120	50 - 200	0.000	+/-0.50	
Chrysene-d12	1391477	23.416	1019524	23.416	136	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	2481481	24.484	2027111	24.484	122	50 - 200	0.000	+/-0.50	
Perylene-d12	1542419	26.102	1027409	26.102	150	50 - 200	0.000	+/-0.50	





**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0120

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0120-ICV1)</b>		(Water)	Lab File ID: NT1003022302.D			Analyzed: 03/02/23 13:34			
1,4-Dichlorobenzene-d4	430971	9.247	430971	9.247	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1609461	11.726	1609461	11.726	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	853113	15.317	853113	15.317	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1556648	18.401	1556648	18.401	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	1539062	23.424	1539062	23.424	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	2949571	24.492	2949571	24.492	100	50 - 200	0.000	+/-0.50	
Perylene-d12	1634059	26.118	1634059	26.118	100	50 - 200	0.000	+/-0.50	
<b>Blank (BLA0624-BLK1)</b>		(Solid)	Lab File ID: NT1003022306.D			Analyzed: 03/02/23 17:34			
1,4-Dichlorobenzene-d4	508828	9.247	430971	9.247	118	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1861629	11.719	1609461	11.726	116	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	980442	15.317	853113	15.317	115	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1866785	18.401	1556648	18.401	120	50 - 200	0.000	+/-0.50	
Chrysene-d12	1690423	23.416	1539062	23.424	110	50 - 200	-0.008	+/-0.50	
Di-n-Octylphthalate-d4	3025357	24.485	2949571	24.492	103	50 - 200	-0.007	+/-0.50	
Perylene-d12	1765137	26.111	1634059	26.118	108	50 - 200	-0.007	+/-0.50	
<b>LCS (BLA0624-BS1)</b>		(Solid)	Lab File ID: NT1003022307.D			Analyzed: 03/02/23 18:12			
1,4-Dichlorobenzene-d4	415927	9.247	430971	9.247	97	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1650394	11.719	1609461	11.726	103	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	916729	15.317	853113	15.317	107	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1754820	18.401	1556648	18.401	113	50 - 200	0.000	+/-0.50	
Chrysene-d12	1787466	23.416	1539062	23.424	116	50 - 200	-0.008	+/-0.50	
Di-n-Octylphthalate-d4	3153255	24.485	2949571	24.492	107	50 - 200	-0.007	+/-0.50	
Perylene-d12	1751658	26.118	1634059	26.118	107	50 - 200	0.000	+/-0.50	
<b>LCS Dup (BLA0624-BSD1)</b>		(Solid)	Lab File ID: NT1003022308.D			Analyzed: 03/02/23 18:50			
1,4-Dichlorobenzene-d4	516875	9.247	430971	9.247	120	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1986258	11.718	1609461	11.726	123	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	1084042	15.316	853113	15.317	127	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	2011504	18.401	1556648	18.401	129	50 - 200	0.000	+/-0.50	
Chrysene-d12	2006849	23.424	1539062	23.424	130	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	3510242	24.492	2949571	24.492	119	50 - 200	0.000	+/-0.50	
Perylene-d12	1974070	26.11	1634059	26.118	121	50 - 200	-0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0120

Instrument: NT10

Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Matrix Spike (BLA0624-MS1)</b>		(Solid)	Lab File ID: NT1003022309.D			Analyzed: 03/02/23 19:28			
1,4-Dichlorobenzene-d4	585102	9.246	430971	9.247	136	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	2217084	11.718	1609461	11.726	138	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	1224450	15.316	853113	15.317	144	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	2696226	18.409	1556648	18.401	173	50 - 200	0.008	+/-0.50	
Chrysene-d12	3938003	23.439	1539062	23.424	256	50 - 200	0.015	+/-0.50	*
Di-n-Octylphthalate-d4	6236602	24.5	2949571	24.492	211	50 - 200	0.008	+/-0.50	*
Perylene-d12	3348167	26.149	1634059	26.118	205	50 - 200	0.031	+/-0.50	*
<b>Matrix Spike Dup (BLA0624-MSD1)</b>		(Solid)	Lab File ID: NT1003022310.D			Analyzed: 03/02/23 20:06			
1,4-Dichlorobenzene-d4	601832	9.247	430971	9.247	140	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2248229	11.726	1609461	11.726	140	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1273098	15.317	853113	15.317	149	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2690572	18.409	1556648	18.401	173	50 - 200	0.008	+/-0.50	
Chrysene-d12	3690616	23.44	1539062	23.424	240	50 - 200	0.016	+/-0.50	*
Di-n-Octylphthalate-d4	5895207	24.5	2949571	24.492	200	50 - 200	0.008	+/-0.50	
Perylene-d12	3245250	26.149	1634059	26.118	199	50 - 200	0.031	+/-0.50	
<b>Reference (BLA0624-SRM1)</b>		(Solid)	Lab File ID: NT1003022311.D			Analyzed: 03/02/23 20:44			
1,4-Dichlorobenzene-d4	690353	9.246	430971	9.247	160	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	2516830	11.726	1609461	11.726	156	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1336820	15.316	853113	15.317	157	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	2408027	18.409	1556648	18.401	155	50 - 200	0.008	+/-0.50	
Chrysene-d12	2666866	23.424	1539062	23.424	173	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	4915230	24.492	2949571	24.492	167	50 - 200	0.000	+/-0.50	
Perylene-d12	2745651	26.118	1634059	26.118	168	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1021 (23A0206-01)</b>		(Solid)	Lab File ID: NT1003022312.D			Analyzed: 03/02/23 21:22			
1,4-Dichlorobenzene-d4	653777	9.246	430971	9.247	152	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	2364652	11.718	1609461	11.726	147	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	1200880	15.316	853113	15.317	141	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	2204094	18.409	1556648	18.401	142	50 - 200	0.008	+/-0.50	
Chrysene-d12	2522283	23.431	1539062	23.424	164	50 - 200	0.007	+/-0.50	
Di-n-Octylphthalate-d4	4928999	24.492	2949571	24.492	167	50 - 200	0.000	+/-0.50	
Perylene-d12	2683214	26.133	1634059	26.118	164	50 - 200	0.015	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0120

Instrument: NT10

Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1015 (23A0206-02 )</b>		(Solid)	Lab File ID: NT1003022313.D			Analyzed: 03/02/23 22:00			
1,4-Dichlorobenzene-d4	698814	9.246	430971	9.247	162	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	2488374	11.726	1609461	11.726	155	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1272566	15.316	853113	15.317	149	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	2361043	18.409	1556648	18.401	152	50 - 200	0.008	+/-0.50	
Chrysene-d12	2779959	23.431	1539062	23.424	181	50 - 200	0.007	+/-0.50	
Di-n-Octylphthalate-d4	5293891	24.492	2949571	24.492	179	50 - 200	0.000	+/-0.50	
Perylene-d12	2896502	26.133	1634059	26.118	177	50 - 200	0.015	+/-0.50	
<b>Calibration Check (SLC0120-CCV1 )</b>		(Water)	Lab File ID: NT1003022314.D			Analyzed: 03/02/23 22:38			
1,4-Dichlorobenzene-d4	599166	9.247	430971	9.247	139	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2200781	11.726	1609461	11.726	137	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1135136	15.317	853113	15.317	133	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2128944	18.409	1556648	18.401	137	50 - 200	0.008	+/-0.50	
Chrysene-d12	2449624	23.424	1539062	23.424	159	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	4694735	24.493	2949571	24.492	159	50 - 200	0.001	+/-0.50	
Perylene-d12	2593218	26.126	1634059	26.118	159	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0132

Instrument: NT10

Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0132-ICV1)</b>		(Solid)	Lab File ID: NT1003022314ICV.D			Analyzed: 03/02/23 22:38			
1,4-Dichlorobenzene-d4	599166	9.247	599166	9.247	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2200781	11.726	2200781	11.726	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1135136	15.317	1135136	15.317	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2128944	18.409	2128944	18.409	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	2449624	23.424	2449624	23.424	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	4694735	24.493	4694735	24.493	100	50 - 200	0.000	+/-0.50	
Perylene-d12	2593218	26.126	2593218	26.126	100	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1164 (23A0206-03)</b>		(Solid)	Lab File ID: NT1003022318.D			Analyzed: 03/03/23 01:10			
1,4-Dichlorobenzene-d4	580169	9.247	599166	9.247	97	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2120045	11.726	2200781	11.726	96	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1093991	15.317	1135136	15.317	96	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1991133	18.409	2128944	18.409	94	50 - 200	0.000	+/-0.50	
Chrysene-d12	2274047	23.432	2449624	23.424	93	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	4368092	24.492	4694735	24.493	93	50 - 200	-0.001	+/-0.50	
Perylene-d12	2479450	26.134	2593218	26.126	96	50 - 200	0.008	+/-0.50	
<b>LDW23-SS1158 (23A0206-04)</b>		(Solid)	Lab File ID: NT1003022319.D			Analyzed: 03/03/23 01:47			
1,4-Dichlorobenzene-d4	520385	9.247	599166	9.247	87	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1907516	11.726	2200781	11.726	87	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1000802	15.316	1135136	15.317	88	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1853824	18.409	2128944	18.409	87	50 - 200	0.000	+/-0.50	
Chrysene-d12	2067702	23.432	2449624	23.424	84	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	3923428	24.492	4694735	24.493	84	50 - 200	-0.001	+/-0.50	
Perylene-d12	2241000	26.134	2593218	26.126	86	50 - 200	0.008	+/-0.50	
<b>LDW23-SS1151 (23A0206-05)</b>		(Solid)	Lab File ID: NT1003022320.D			Analyzed: 03/03/23 02:25			
1,4-Dichlorobenzene-d4	531934	9.247	599166	9.247	89	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1950925	11.726	2200781	11.726	89	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1026247	15.317	1135136	15.317	90	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1932962	18.409	2128944	18.409	91	50 - 200	0.000	+/-0.50	
Chrysene-d12	2224244	23.432	2449624	23.424	91	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	4061145	24.493	4694735	24.493	87	50 - 200	0.000	+/-0.50	
Perylene-d12	2353903	26.134	2593218	26.126	91	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor OEA, LLC  
Sequence: SLC0132

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1145 (23A0206-06)</b>		(Solid)	Lab File ID: NT1003022321.D			Analyzed: 03/03/23 03:03			
1,4-Dichlorobenzene-d4	490080	9.247	599166	9.247	82	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1818406	11.726	2200781	11.726	83	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	967193	15.317	1135136	15.317	85	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1799966	18.409	2128944	18.409	85	50 - 200	0.000	+/-0.50	
Chrysene-d12	2044703	23.432	2449624	23.424	83	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	3958249	24.492	4694735	24.493	84	50 - 200	-0.001	+/-0.50	
Perylene-d12	2192585	26.134	2593218	26.126	85	50 - 200	0.008	+/-0.50	
<b>LDW23-SS1139 (23A0206-07)</b>		(Solid)	Lab File ID: NT1003022322.D			Analyzed: 03/03/23 03:41			
1,4-Dichlorobenzene-d4	503783	9.247	599166	9.247	84	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1836337	11.726	2200781	11.726	83	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	953830	15.324	1135136	15.317	84	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1793518	18.409	2128944	18.409	84	50 - 200	0.000	+/-0.50	
Chrysene-d12	2025243	23.432	2449624	23.424	83	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	3836077	24.492	4694735	24.493	82	50 - 200	-0.001	+/-0.50	
Perylene-d12	2170434	26.142	2593218	26.126	84	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1117 (23A0206-08)</b>		(Solid)	Lab File ID: NT1003022323.D			Analyzed: 03/03/23 04:19			
1,4-Dichlorobenzene-d4	507169	9.247	599166	9.247	85	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1841794	11.726	2200781	11.726	84	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	953549	15.317	1135136	15.317	84	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1808356	18.409	2128944	18.409	85	50 - 200	0.000	+/-0.50	
Chrysene-d12	2054537	23.432	2449624	23.424	84	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	3897768	24.492	4694735	24.493	83	50 - 200	-0.001	+/-0.50	
Perylene-d12	2188130	26.142	2593218	26.126	84	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1103 (23A0206-09)</b>		(Solid)	Lab File ID: NT1003022324.D			Analyzed: 03/03/23 04:58			
1,4-Dichlorobenzene-d4	497252	9.247	599166	9.247	83	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1823135	11.726	2200781	11.726	83	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	945613	15.324	1135136	15.317	83	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1770879	18.409	2128944	18.409	83	50 - 200	0.000	+/-0.50	
Chrysene-d12	1948351	23.432	2449624	23.424	80	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	3755148	24.5	4694735	24.493	80	50 - 200	0.007	+/-0.50	
Perylene-d12	2108390	26.141	2593218	26.126	81	50 - 200	0.015	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0132

Instrument: NT10

Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Calibration Check (SLC0132-CCV1)</b>		(Water)	Lab File ID: NT1003022325.D			Analyzed: 03/03/23 05:36			
1,4-Dichlorobenzene-d4	673471	9.246	599166	9.247	112	50 - 200	-0.001	+/-0.50	
Naphthalene-d8	2475080	11.726	2200781	11.726	112	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1248864	15.324	1135136	15.317	110	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2356836	18.416	2128944	18.409	111	50 - 200	0.007	+/-0.50	
Chrysene-d12	2717731	23.431	2449624	23.424	111	50 - 200	0.007	+/-0.50	
Di-n-Octylphthalate-d4	4948440	24.492	4694735	24.493	105	50 - 200	-0.001	+/-0.50	
Perylene-d12	2801934	26.134	2593218	26.126	108	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLC0136

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: NT10  
Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0136-ICV1)</b>		(Solid)	Lab File ID: NT1003022325ICV.D			Analyzed: 03/03/23 05:36			
1,4-Dichlorobenzene-d4	673471	9.246	673471	9.246	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2475080	11.726	2475080	11.726	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1248864	15.324	1248864	15.324	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2356836	18.416	2356836	18.416	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	2717731	23.431	2717731	23.431	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	4948440	24.492	4948440	24.492	100	50 - 200	0.000	+/-0.50	
Perylene-d12	2801934	26.134	2801934	26.134	100	50 - 200	0.000	+/-0.50	
<b>Low Cal Check (SLC0136-LCV1)</b>		(Solid)	Lab File ID: NT1003022327.D			Analyzed: 03/03/23 06:52			
1,4-Dichlorobenzene-d4	579567	9.247	673471	9.246	86	50 - 200	0.001	+/-0.50	
Naphthalene-d8	2106861	11.726	2475080	11.726	85	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1106223	15.317	1248864	15.324	89	50 - 200	-0.007	+/-0.50	
Phenanthrene-d10	2132079	18.409	2356836	18.416	90	50 - 200	-0.007	+/-0.50	
Chrysene-d12	2146603	23.432	2717731	23.431	79	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	3835755	24.485	4948440	24.492	78	50 - 200	-0.007	+/-0.50	
Perylene-d12	2414341	26.126	2801934	26.134	86	50 - 200	-0.008	+/-0.50	
<b>LDW23-SS1100 (23A0206-10)</b>		(Solid)	Lab File ID: NT1003022329.D			Analyzed: 03/03/23 08:08			
1,4-Dichlorobenzene-d4	494384	9.247	673471	9.246	73	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1833766	11.726	2475080	11.726	74	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	961004	15.316	1248864	15.324	77	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1847254	18.409	2356836	18.416	78	50 - 200	-0.007	+/-0.50	
Chrysene-d12	2036818	23.432	2717731	23.431	75	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	3726906	24.492	4948440	24.492	75	50 - 200	0.000	+/-0.50	
Perylene-d12	2251982	26.134	2801934	26.134	80	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1096 (23A0206-11)</b>		(Solid)	Lab File ID: NT1003022330.D			Analyzed: 03/03/23 08:46			
1,4-Dichlorobenzene-d4	503496	9.247	673471	9.246	75	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1806678	11.726	2475080	11.726	73	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	935187	15.316	1248864	15.324	75	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	1808982	18.409	2356836	18.416	77	50 - 200	-0.007	+/-0.50	
Chrysene-d12	2087313	23.432	2717731	23.431	77	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	3805907	24.492	4948440	24.492	77	50 - 200	0.000	+/-0.50	
Perylene-d12	2227344	26.141	2801934	26.134	79	50 - 200	0.007	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0136

Instrument: NT10

Calibration: GC00019

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1094 (23A0206-12 )</b>		(Solid)	Lab File ID: NT1003022331.D			Analyzed: 03/03/23 09:24			
1,4-Dichlorobenzene-d4	469864	9.247	673471	9.246	70	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1698409	11.726	2475080	11.726	69	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	889640	15.324	1248864	15.324	71	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1734623	18.417	2356836	18.416	74	50 - 200	0.001	+/-0.50	
Chrysene-d12	2059646	23.44	2717731	23.431	76	50 - 200	0.009	+/-0.50	
Di-n-Octylphthalate-d4	3710575	24.5	4948440	24.492	75	50 - 200	0.008	+/-0.50	
Perylene-d12	2186509	26.149	2801934	26.134	78	50 - 200	0.015	+/-0.50	
<b>LDW23-SS1066 (23A0206-13 )</b>		(Solid)	Lab File ID: NT1003022332.D			Analyzed: 03/03/23 10:02			
1,4-Dichlorobenzene-d4	475261	9.247	673471	9.246	71	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1755750	11.726	2475080	11.726	71	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	957224	15.324	1248864	15.324	77	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1999034	18.417	2356836	18.416	85	50 - 200	0.001	+/-0.50	
Chrysene-d12	2472766	23.447	2717731	23.431	91	50 - 200	0.016	+/-0.50	
Di-n-Octylphthalate-d4	4297033	24.508	4948440	24.492	87	50 - 200	0.016	+/-0.50	
Perylene-d12	2482313	26.165	2801934	26.134	89	50 - 200	0.031	+/-0.50	
<b>LDW23-SS1061 (23A0206-14 )</b>		(Solid)	Lab File ID: NT1003022333.D			Analyzed: 03/03/23 10:40			
1,4-Dichlorobenzene-d4	439299	9.247	673471	9.246	65	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1637095	11.726	2475080	11.726	66	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	884440	15.324	1248864	15.324	71	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1749820	18.417	2356836	18.416	74	50 - 200	0.001	+/-0.50	
Chrysene-d12	2060453	23.455	2717731	23.431	76	50 - 200	0.024	+/-0.50	
Di-n-Octylphthalate-d4	3751655	24.5	4948440	24.492	76	50 - 200	0.008	+/-0.50	
Perylene-d12	2072216	26.157	2801934	26.134	74	50 - 200	0.023	+/-0.50	
<b>Calibration Check (SLC0136-CCV1 )</b>		(Water)	Lab File ID: NT1003022334.D			Analyzed: 03/03/23 11:18			
1,4-Dichlorobenzene-d4	639766	9.254	673471	9.246	95	50 - 200	0.008	+/-0.50	
Naphthalene-d8	2320061	11.734	2475080	11.726	94	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	1211400	15.324	1248864	15.324	97	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2339560	18.416	2356836	18.416	99	50 - 200	0.000	+/-0.50	
Chrysene-d12	2771645	23.439	2717731	23.431	102	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	4959061	24.492	4948440	24.492	100	50 - 200	0.000	+/-0.50	
Perylene-d12	2740459	26.141	2801934	26.134	98	50 - 200	0.007	+/-0.50	





## HOLDING TIME SUMMARY

**Analysis: EPA 8270E**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 21:22	34	40	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 22:00	34	40	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 01:10	34	40	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 01:47	34	40	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 02:25	34	40	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 03:03	35	40	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 03:41	35	40	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 04:19	35	40	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 04:58	35	40	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 08:08	35	40	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 08:46	35	40	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 09:24	35	40	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 10:02	35	40	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 10:40	35	40	
Matrix Spike BLA0624-MS1	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 19:28	34	40	
Matrix Spike Dup BLA0624-MSD1	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 20:06	34	40	

\* Indicates hold time exceedance.



## METHOD DETECTION AND REPORTING LIMITS

### EPA 8270E

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: NT10

Analyte	MDL	RL	Units
Phenol	4.4	20.0	ug/kg
4-Methylphenol	7.4	20.0	ug/kg
Naphthalene	4.2	20.0	ug/kg
2-Methylnaphthalene	4.5	20.0	ug/kg
Acenaphthylene	6.2	20.0	ug/kg
Dimethylphthalate	4.4	20.0	ug/kg
Acenaphthene	5.2	20.0	ug/kg
Dibenzofuran	14.1	20.0	ug/kg
Fluorene	14.6	20.0	ug/kg
Phenanthrene	8.7	20.0	ug/kg
Anthracene	7.2	20.0	ug/kg
Fluoranthene	6.1	20.0	ug/kg
Pyrene	5.7	20.0	ug/kg
Butylbenzylphthalate	9.4	20.0	ug/kg
Benzo(a)anthracene	6.0	20.0	ug/kg
Chrysene	6.1	20.0	ug/kg
bis(2-Ethylhexyl)phthalate	14.1	50.0	ug/kg
Benzo(a)fluoranthene, Total	21.0	40.0	ug/kg
Benzo(a)pyrene	4.2	20.0	ug/kg
Indeno(1,2,3-cd)pyrene	14.7	20.0	ug/kg
Dibenzo(a,h)anthracene	17.2	20.0	ug/kg
Benzo(g,h,i)perylene	13.6	20.0	ug/kg



Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

**Comments**

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

**B001941**

SVOA 2,4-Dinitrophenol  
Expires 12/31/2029  
*Prepared By Jianqing Zhou 9/25/2013*



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: \_\_\_\_\_

Lot #: 644 5021

Purity: 90.29%

Analyst: AB



Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

**Comments**

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

**B001945**

SVOC Benzoic Acid  
Expires 12/31/2029

*Prepared By Jianqing Zhou 12/31/2012*

Reviewed By

Date



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: \_\_\_\_\_

Lot #: A0224339

Purity: 98%

Analyst: AB



Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

**Comments**

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

**B001948**

SVOA 4,6-Dinitro-2-Methylphenol  
Expires 12/31/2029  
*Prepared By Jianqing Zhou 9/25/2013*



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: \_\_\_\_\_

Lot #: 179-31A

Purity: 99%

Analyst: RB





Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

**Comments**

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL



**B002054**  
SVOA 1-Methylnaphthalene  
Solvent / Lot: NA  
Prep: 12/13/2012 by JZ  
Exp: 12/31/2029  
Location:



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 62-53

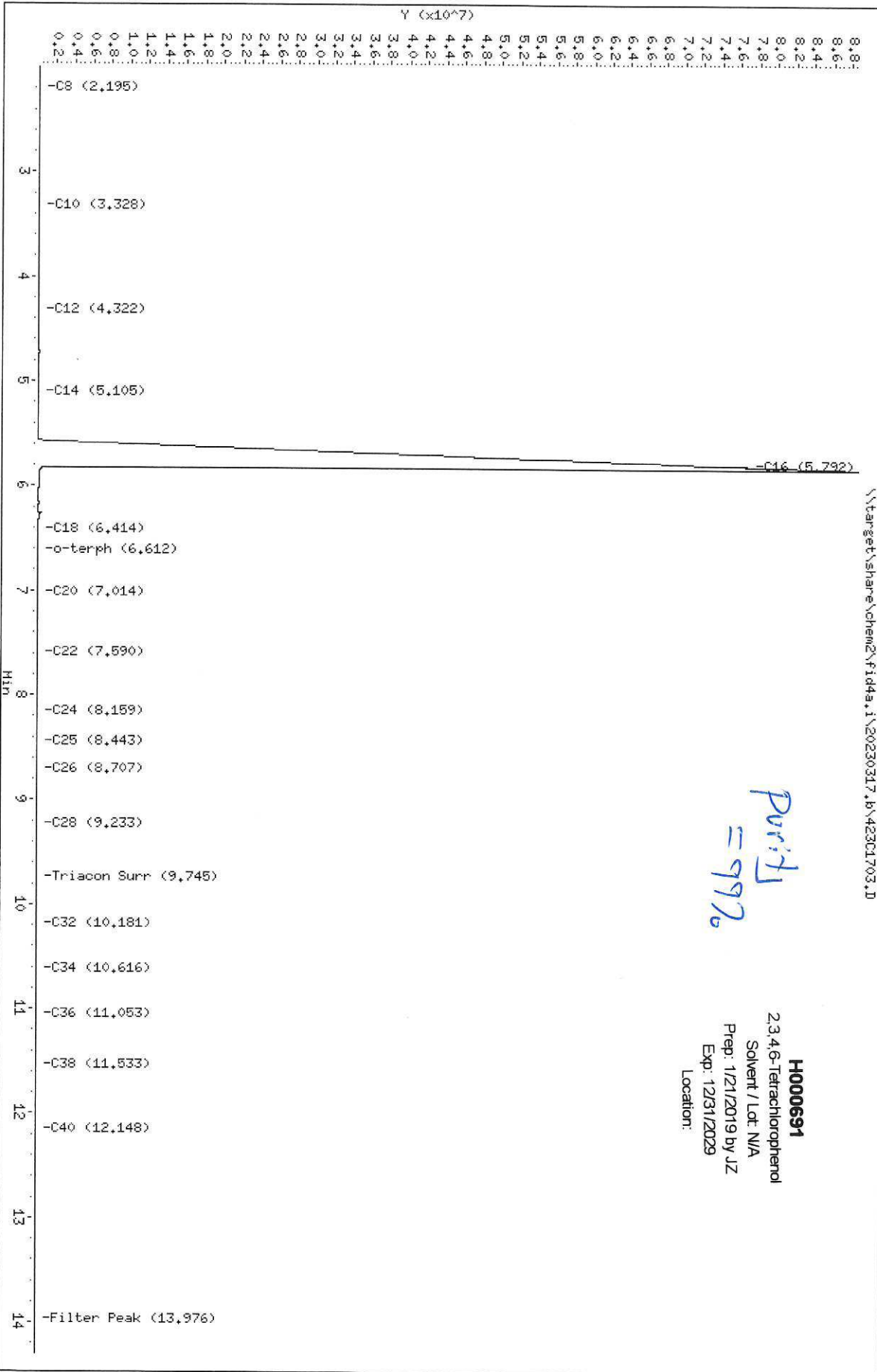
Purity: 99%

Analyst: AB

Data File: \\target\share\chem2\fid4a,1\20230317,1\42301703.D  
Date: 17-MAR-2023 10:46  
Client ID:  
Sample Info: K007226

Column phase: RTX-1

Instrument: fid4a.i  
Operator: AA  
Column diameter: 0.25



Purity = 99%

**H000691**  
2,3,4,6-Tetrachlorophenol  
Solvent / Lot: N/A  
Prep: 1/21/2019 by JZ  
Exp: 12/31/2029  
Location:

H000691

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D  
 Lab Smp Id: K007226  
 Inj Date : 17-MAR-2023 10:46  
 Operator : AA Inst ID: fid4a.i  
 Smp Info : K007226  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m  
 Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%  
 Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: Falcon+ Compound Sublist: tph.sub  
 Target Version: 4.14  
 Processing Host: ALFONSO-201901

Concentration Formula: Amt \* DF \* CpndVariable  
 Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	\$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	



RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	\$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	



RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
===== 677340272	===== 268782821	===== 100.000			

Total unknown % area = 25.478

# Certificate of Composition - Analytical Standard

## BASE STOCK

**Product no.:** 22523051  
**Lot no.:** LRAC9813  
**Expiry Date:** May 2023  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** Dichloromethane  
**Certificate version:** LRAC9813.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)

**J005199**

SVOA-ABN BASE STOCK-200-800ug/ml  
 Expires 5/31/2023  
 Prepared By Jiangqing Zhou 5/18/2021

Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.



**Health and safety information:**

All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Certificate issue date:**

12-May-2021



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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## Certificate of Composition - Analytical Standard

## ACID STOCK

**Product no.:** 22523046  
**Lot no.:** LRAC9812  
**Expiry Date:** May 2023  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** Dichloromethane  
**Certificate version:** LRAC9812.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)

**J005200**  
 SVOA-ABN ACID STOCK-200-800ug/ml  
 Solvent / Lot: DCM  
 Prep: 5/18/2021 by JZ  
 Exp: 5/31/2023  
 Location:



Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.



# Certificate of Analysis

**J008074**

 SVOA PAH STD 2000ug/ml  
 Expires 6/30/2023  
 Prepared By Joshua Rains 8/5/2021

**Product Name:** PAH Standard

**Product Number:** US-106N-1

**Lot Issue Date:** 11-Jun-2020

**Lot Number:** 0006540449

**Expiration Date:** 30-Jun-2023

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

**Matrix:** methylene chloride/benzene (1:1)

 ISO 17034 Cert No.  
 AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)

 ISO 17025 Cert  
 No. AT-1937

# Certificate of Analysis

**Product Number:** US-106N-1

**Lot Number:** 0006540449

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Hazards:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this RM.

**Expiration of Certification:**

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

**Sample lot approver:**



Monica Bourgeois  
QMS Representative



ISO 17034 Cert No.  
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 2 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)



ISO 17025 Cert  
No. AT-1937



# Certificate of Analysis

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101244

**Lot Number:** CL16062

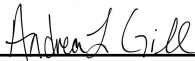
**Description:** Benzidines Standard

**Certification Date:** November 19, 2020

**Storage:** 4 °C

**Expiration Date:** November 30, 2030

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

**J008310**

Benzidines std @2000ug/ml  
Expires 11/30/2030  
*Prepared By Van Spohn 8/12/2021*



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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. Quality Standards: Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.

<sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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Certificate No. 2427.02



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Chemical Testing Laboratory  
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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101246

**Lot Number:** CL16693

**Description:** Benzoic Acid

**Certification Date:** May 6, 2021

**Storage:** 4 °C

**Expiration Date:** April 30, 2031

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238



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3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).  
$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101443

**Lot Number:** CL17696

**Description:** Aniline

**Certification Date:** December 14, 2021

**Storage:** 4 °C

**Expiration Date:** December 31, 2029

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 3239



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5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = k \sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

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Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

Product ID CRM143-50G  
Lot LRAC8918  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

### Certified Values

Analyte	Units	Certified <sup>1,4</sup> Value
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380



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## Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

## Informational Values



# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

**Product ID** CRM143-50G  
**Lot** LRAC8918  
**Expiration Date** January 2024  
**Manufacturing Date** January 2021  
**Storage Conditions** Refrigerate  
**Solvent/Matrix** SOIL

<i>Analyte</i>	<i>Units</i>	<i>Suggested Acceptance Windows</i>	<i>Standard Deviation</i>
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307



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## Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

### Additional Information:

#### DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4°C.

The sample has been intentionally prepared with an apparent headspace.

#### STORAGE

The sample should be stored at 4°C. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4°C.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

**Product ID** CRM143-50G  
**Lot** LRAC8918  
**Expiration Date** January 2024  
**Manufacturing Date** January 2021  
**Storage Conditions** Refrigerate  
**Solvent/Matrix** SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

### SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

### SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.



**SIGMA-ALDRICH®**

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA  
800-325-5832  
TechService@milliporesigma.com www.sigma-aldrich.com

# Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

**1 Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.  
**4 Ucrm - Uncertainty** values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**k:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

**6 Analytical Value-** For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

**Traceability:** The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Homogeneity:** Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

**THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).**



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

**Certification Date** January 05, 2021  
**Version** 0-152021



# Certificate of Analysis



Phenova Certified Reference Materials are sold by Phenomenex.

411 Madrid Ave., Torrance, CA 90501 USA ■ Tel: 310-212-0555 ■ Fax: 310-328-7768 ■ info@phenomenex.com

Access your MSDS and digital C of A at [www.phenomenex.com/mysupport](http://www.phenomenex.com/mysupport). Re-order at [www.phenomenex.com/standards](http://www.phenomenex.com/standards)

## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101291

**Lot Number:** CL11000

**Description:** GC/MS Tuning Mix

**Certification Date:** May 9, 2014

**Storage:** 4 °C

**Expiration Date:** December 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in Methylene chloride

**Revision Date:** August 5, 2015

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

### K003891

GC/MS Tune solution-1000ug/ml

Solvent / Lot: CL11000

Prep: 4/22/2022 by VS

Exp: 12/31/2023

Location:



Reference Material Producer  
Certificate No. 2427.02



Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC-MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

IL11110612\_us



Reference Materials Producer  
Cert #2495.01



## Certificate of Analysis



Chemical Testing  
Cert #2495.02

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

This SPEXOrganics® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

### Certified Compounds:

<u>Compound</u>	<u>CAS #</u>	<u>Labeled</u>	<u>Purity</u>	<u>Certified†</u>	<u>Uncertainty</u>
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

*Certificate of Reference Material*

<b>Catalog Number:</b>	ECS-A-030	<b>Lot No.</b>	AA210126005
<b>Description:</b>	Base/Neutrals Mix 1	<b>Manufactured Date:</b>	1-26-2021
<b>Matrix:</b>	Methylene Chloride	<b>Expiration Date:</b>	1-26-2024

**Final Solution Verification:**

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Mave

# Report of Certification

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

**This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:**

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

## **Storage Requirements:**

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

## **Instructions for Use:**

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25 µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

## **Material Source:**

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

## **Method of Preparation:**

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

## **Homogeneity:**

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

## **Statistical Estimator and Confidence Limits:**

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$  where X=certified value, U=expanded uncertainty, x=property value
- $U = k u_c$  where k=2 is the coverage factor at the 95% confidence level
- $u_c =$  combined standard uncertainty obtained by combining the individual compound standard uncertainty components  $u_i$ , where  $u_c = \sqrt{\sum u_i^2}$

## **Legal Notice:**

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Reference Materials Producer  
Cert #2495.01



## Certificate of Analysis



Chemical Testing  
Cert #2495.02

**Catalog Number:** ECS-A-030

**Lot No.** AA210126005

**Description:** Base/Neutrals Mix 1

**Matrix:** Methylene Chloride

**Manufactured Date:** 1-26-2021

**Expiration Date:** 1-26-2024

This SPEXOrganics® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

### Certified Compounds:

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N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542



## Certificate of Reference Material

**Catalog Number:** ECS-A-030

**Lot No.** AA210126005

**Description:** Base/Neutrals Mix 1

**Matrix:** Methylene Chloride

**Manufactured Date:** 1-26-2021

**Expiration Date:** 1-26-2024

### **Final Solution Verification:**

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon More

## Report of Certification

<b>Catalog Number:</b>	ECS-A-030	<b>Lot No.</b>	AA210126005
<b>Description:</b>	Base/Neutrals Mix 1	<b>Manufactured Date:</b>	1-26-2021
<b>Matrix:</b>	Methylene Chloride	<b>Expiration Date:</b>	1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

### Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

### Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25 µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

### Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

### Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

### Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

### Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$  where X=certified value, U=expanded uncertainty, x=property value
- $U = k u_c$  where k=2 is the coverage factor at the 95% confidence level
- $u_c$  = combined standard uncertainty obtained by combining the individual compound standard uncertainty components  $u_i$ , where  $u_c = \sqrt{\sum u_i^2}$

### Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Your Science is Our Passion.<sup>®</sup>

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Phone: 1-732-549-7144 • Fax 1-732-603-9647





# Certificate of Analysis

**Product Name:** Toxic Substances Standard

**Product Number:** US-104N-1

**Lot Issue Date:** 02-Jul-2021

**Lot Number:** 0006620643

**Expiration Date:** 31-Jul-2023

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

**Matrix:** methylene chloride (dichloromethane)

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**K004544**

toxic sub mix#2

Solvent / Lot: methylene chloride

Prep: 5/11/2022 by JZ

Exp: 7/31/2023

Location:

*JZ* 05/11/22



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31493 Lot No.: A0181243
Description: CLP 04.1 BNA Surrogate Mix
CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: October 31, 2025 Storage: 10°C or colder
Handling: Sonicate prior to use. Ship: Ambient

Handwritten signature and date: 05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Table with 7 columns: Elution Order, Compound, CAS #, Purity, Weight, Concentration, and Method. Contains 7 rows of data for various compounds like 2-Fluorophenol, Phenol-d6, 2-Chlorophenol-d4, 1,2-Dichlorobenzene-d4, Nitrobenzene-d5, 2-Fluorobiphenyl, and 2,4,6-Tribromophenol.



# Certificate of Analysis

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101246

**Lot Number:** CL17953

**Description:** Benzoic Acid

**Certification Date:** January 31, 2022

**Storage:** 4 °C

**Expiration Date:** January 31, 2032

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

**K004603**

Benzoic Acid @2000ug/ml

Solvent / Lot: N/A

Prep: 5/13/2022 by JZ

Exp: 1/31/2032

Location: GC



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101244

**Lot Number:** CL17662

**Description:** Benzidines Standard

**Certification Date:** December 2, 2021

**Storage:** 4 °C

**Expiration Date:** November 30, 2031

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

**K004604**

Benzidines std @2000ug/ml  
Solvent / Lot: Mecl2  
Prep: 5/13/2022 by JZ  
Exp: 11/30/2031  
Location: GC

*JZ 5/13/22*



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

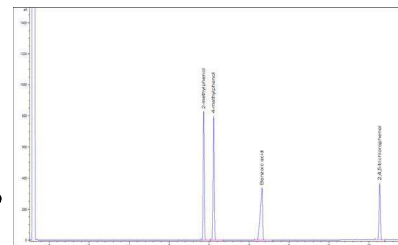


Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis - Certified Reference Material

## EPA TCL Hazardous Substances Mix 1

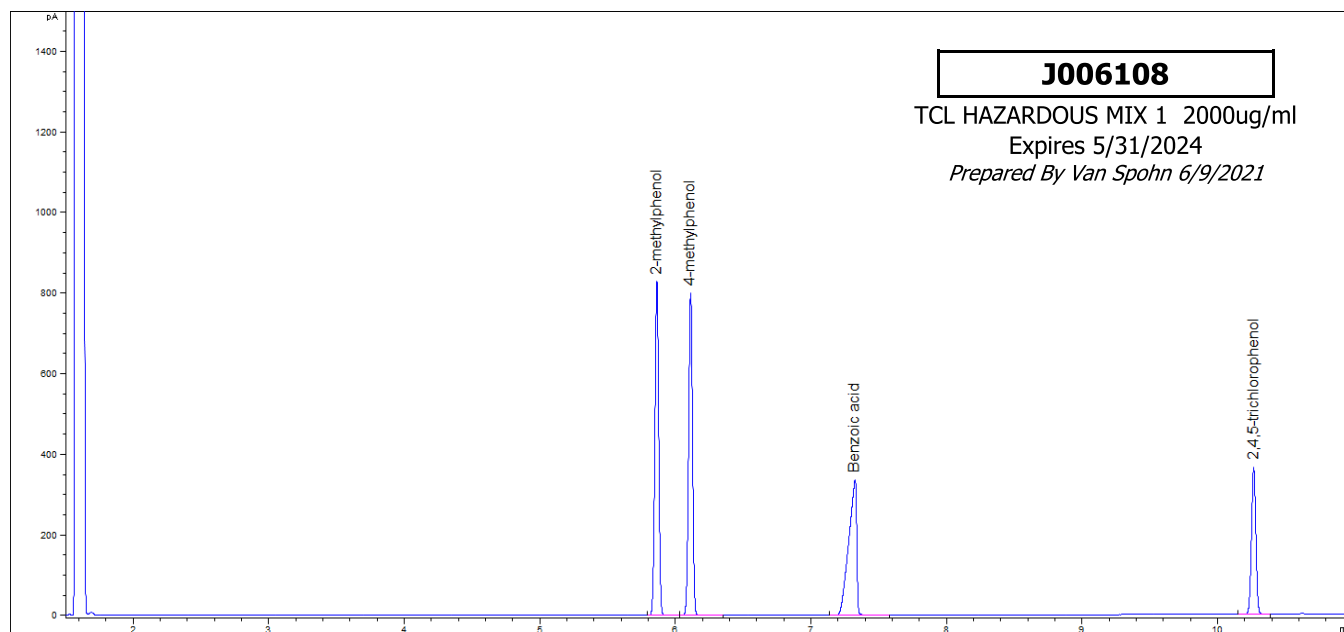
**Product no.:** 48907  
**Lot no.:** LRAC9610  
**Expiry Date:** May 2024  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAC9610.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)



### Certified Values:

Analyte	Certified Value	Units	Raw Material Purity, %	Elution order	Raw Material Lot
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

### Informational Values:



### Additional Information:

**Analytical Method Parameters:**  
 Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)  
 Carrier Gas: H<sub>2</sub>, Flow: 4.5 mL/min  
 Inlet Temperature: 170 °C, Injection Volume: 1 µL  
 Injection Mode: Split, Split Ratio: 20:1



Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)  
Detector: FID  
Detector Temperature: 310 °C

**Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Accreditation:** Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

**Certificate issue date:** 20-May-2021



Handwritten signature of Andy Ommen in black ink.

Andy Ommen - QC Manager

Handwritten signature of Mark Pooler in black ink.

Mark Pooler - QA Supervisor

**Details on metrological traceability:** This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

**Associated uncertainty:** Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**Homogeneity assessment:** Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.



**Stability assessment:**

Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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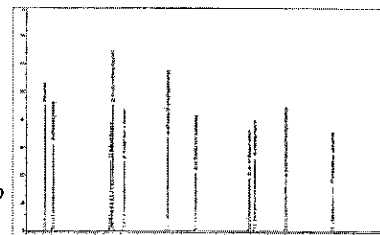
The life science business of Merck KGaA, Darmstadt, Germany  
operates as MilliporeSigma in the US and Canada.



# Certificate of Analysis - Certified Reference Material

## EPA TCL Phenols Mix

**Product no.:** 48904  
**Lot no.:** LRAD0139  
**Expiry Date:** July 2024  
**Manufacturing Date:** July 2021  
**Storage:** REFRIGERATE  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAD0139.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)



### Certified Values:

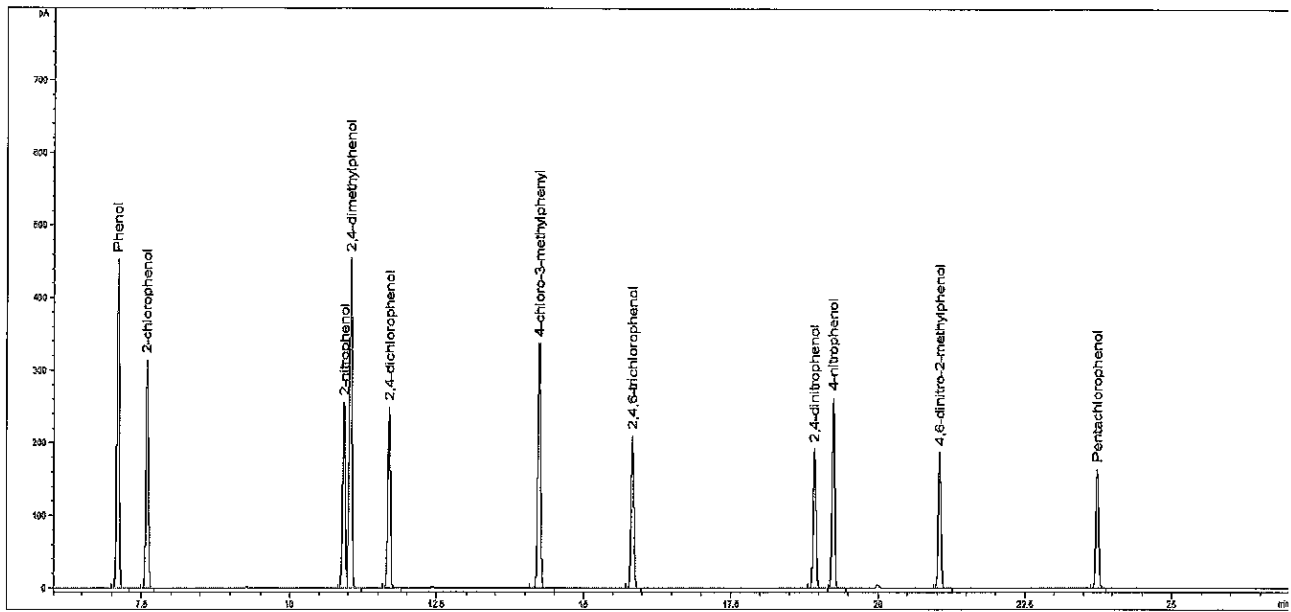
Analyte	Certified Value	Units	Raw Material Purity, %	Raw Material Lot
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

### ASSAY Method

#### J013597

TCL Phenols Mix 2000ug/ml  
 Solvent / Lot: LRAD0139  
 Prep: 12/30/2021 by VS  
 Exp: 7/31/2024  
 Location:





**METHOD: GC (Bellefonte Method )**

Column: SPB-5, 30 m x 0.53 mm I.D., 1.5 µm film thickness

Carrier Gas: H<sub>2</sub> Flow Rate: 4.5 mL/min

Inlet Temperature: 200 °C Injection Volume: 1.0 µL

Injection Mode: 25:1

Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)

Detector: FID Temperature: 310 °C

**Elution details:**

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorophenol
6	14.242	4-chloro-3-methylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

**Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Accreditation:** Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

**Certificate issue date:** 12-Jul-2021



*Andy Ommen*

*Mark Pooler*

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

**Details on metrological traceability:**

This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

**Associated uncertainty:**

Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**Homogeneity assessment:**

Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

**Stability assessment:**

Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

**Certificate of analysis revision history:**

<b>Certificate version</b>	<b>Date</b>	<b>Reason for version</b>
LRAD0139.01	12-Jul-2021	Original Release Date

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.



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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101444

**Lot Number:** CL18355

**Description:** 8270 Calibration Standard

**Certification Date:** July 25, 2022

**Storage:** -18 °C

**Expiration Date:** August 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

**K007995**

SVOA-8270 LCS MIX 1000ug/ml

Solvent / Lot: N/A

Prep: 8/29/2022 by JZ

Exp: 8/31/2023

Location: FREEZER 44



Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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**Catalog No.:** AL0-101444

**Lot Number:** CL18355

**Description:** 8270 Calibration Standard

**Certification Date:** July 25, 2022

**Storage:** -18 °C

**Expiration Date:** August 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%



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**Catalog No.:** AL0-101444      **Lot Number:** CL18355  
**Description:** 8270 Calibration Standard      **Certification Date:** July 25, 2022  
**Storage:** -18 °C      **Expiration Date:** August 31, 2023  
**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

**Notes:** The proper chemical name for Bis(2-Chloroisopropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. Quality Standards: Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = \sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Composition - Analytical Standard

## BASE STOCK

**Product no.:** 22523051  
**Lot no.:** LRAD2751  
**Expiry Date:** June 2024  
**Manufacturing Date:** June 2022  
**Storage:** REFRIGERATE  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAD2751.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)

Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.



**Health and safety information:**

All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Certificate issue date:**

03 JUN 2022



Andy Ommen - QC Manager



Scott Stetler - QA Manager

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

**Disclaimer:** The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-01 B

SDG: 23A0206

Sampled: 01/11/23 08:25

Prepared: 01/27/23 14:44

File ID: NT1003022312S.D

% Solids: 48.20

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 21:22

Batch: BLA0624

Sequence: SLC0157

Initial/Final: 20.77 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

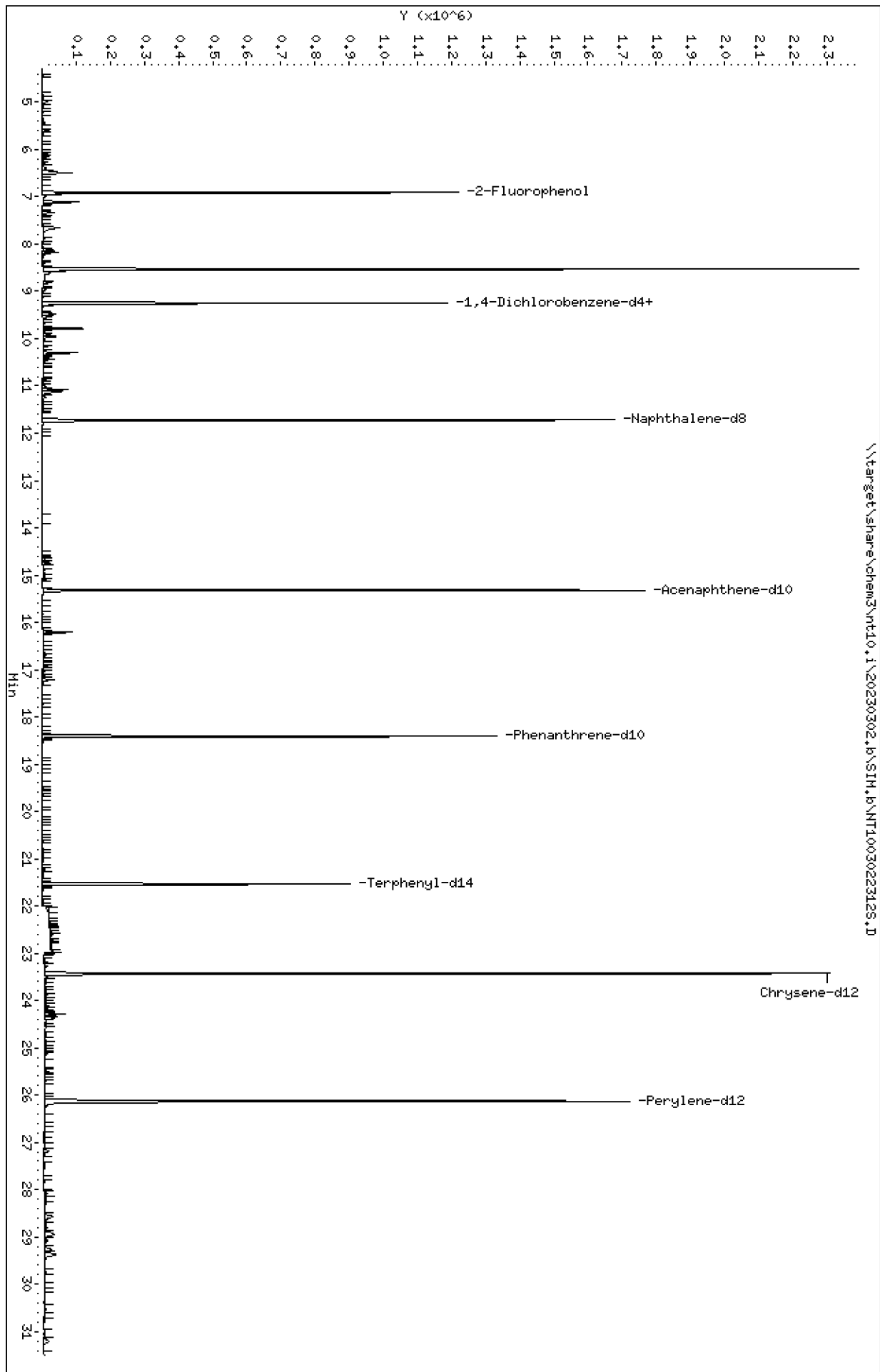
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.0	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	27.3		2.5	20.0
65-85-0	Benzoic acid	1	63.0	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	5.7	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	3.1	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.17	685	91.4	27 - 120	
p-Terphenyl-d14	499.44	489	97.8	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230302.B\SIH.B\NT1003022312S.D  
Date : 02-MAR-2023 21:22  
Client ID:  
Sample Info: 23A0206-01  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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

\\target\share\chem3\nt10.i\20230302.B\SIH.B\NT1003022312S.D



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

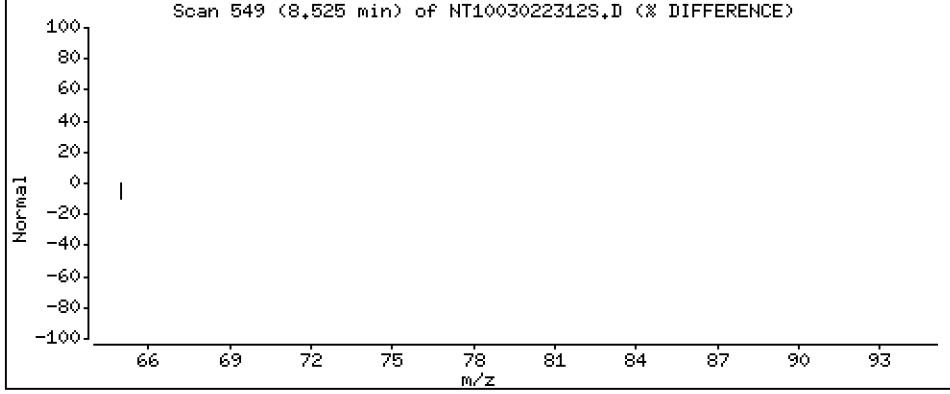
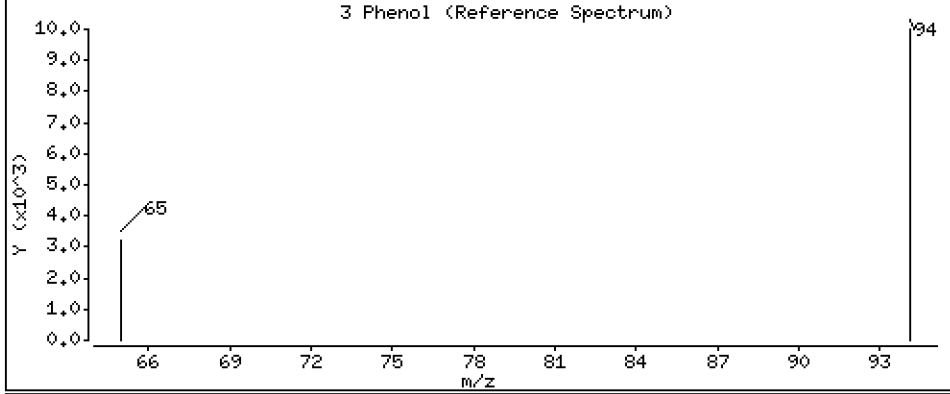
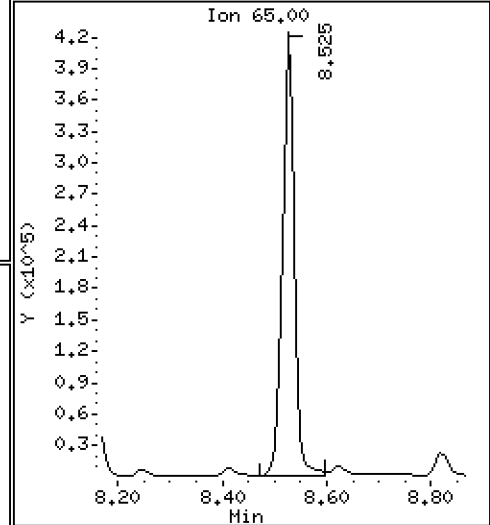
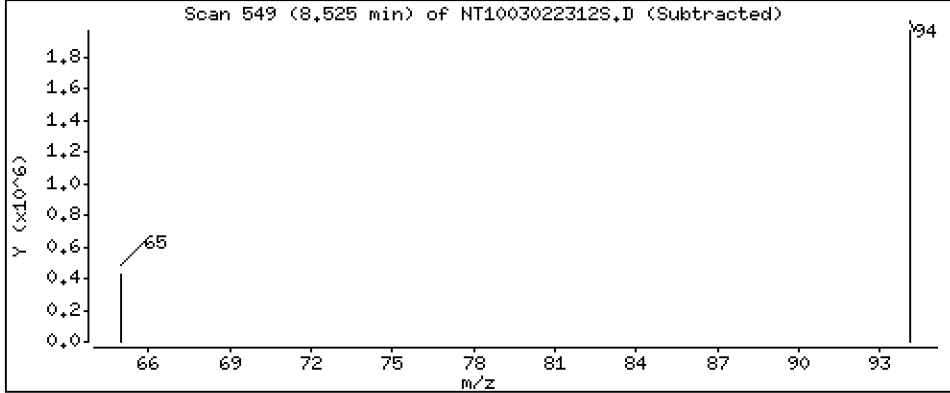
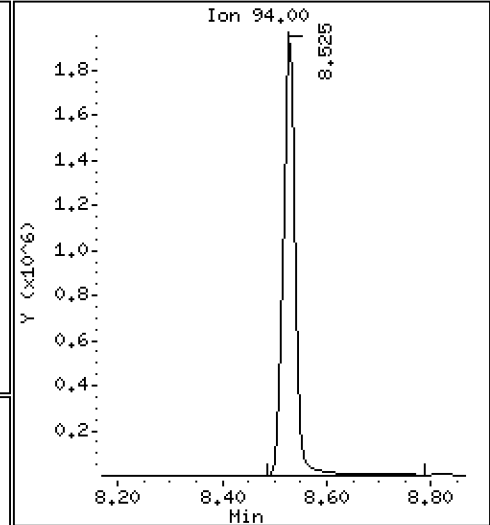
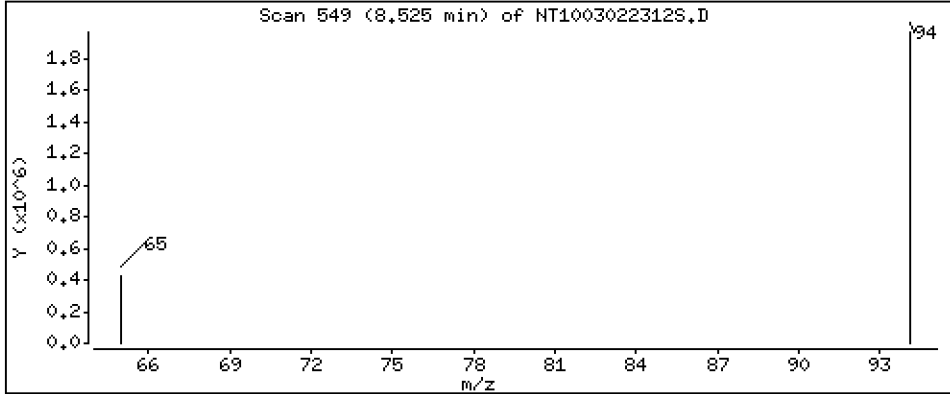
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 9,783 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

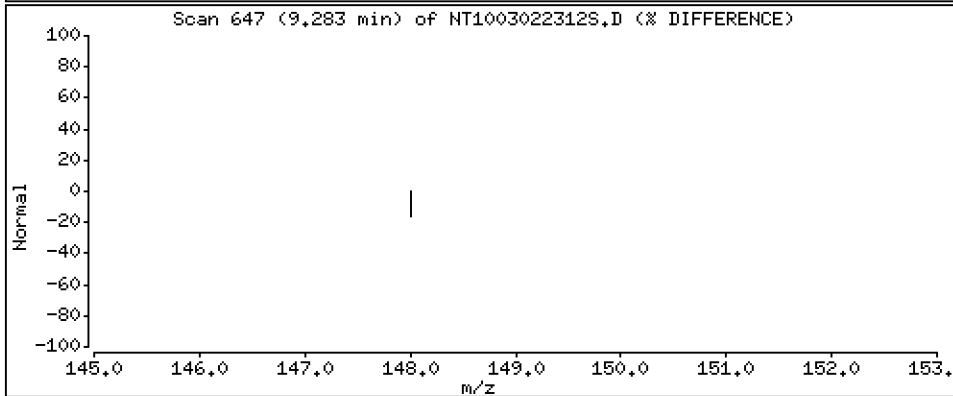
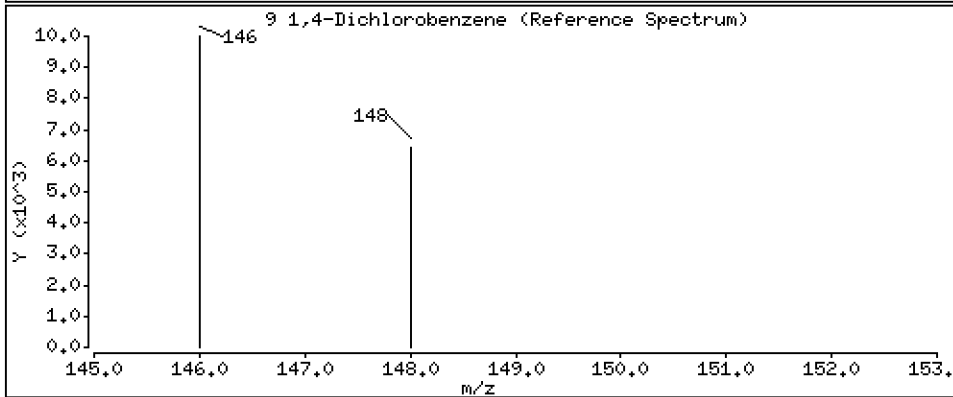
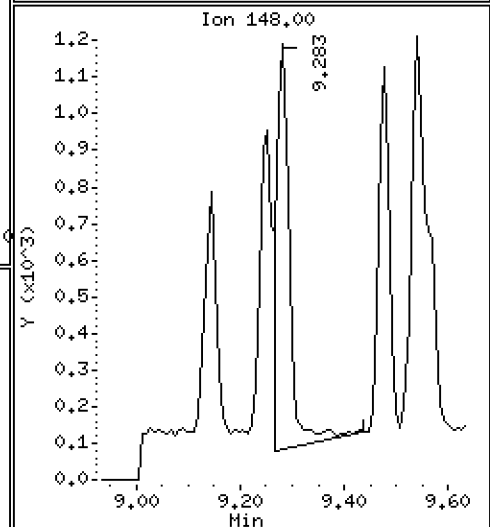
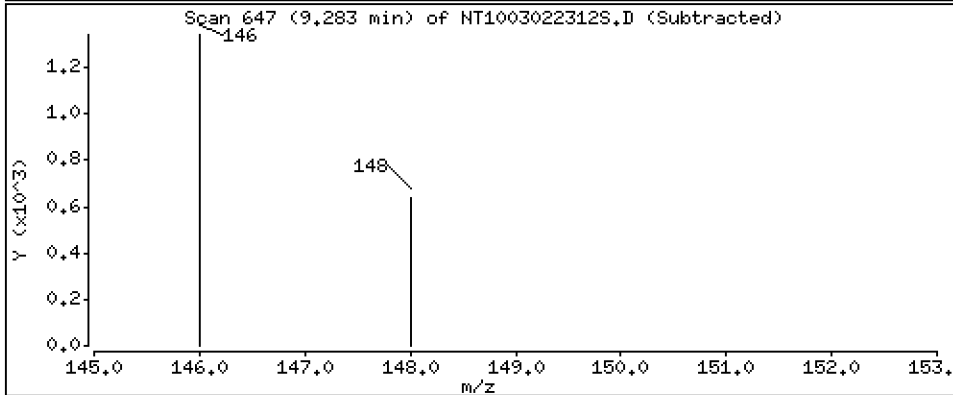
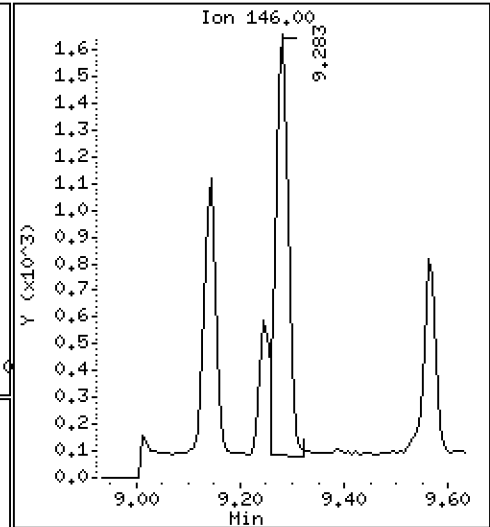
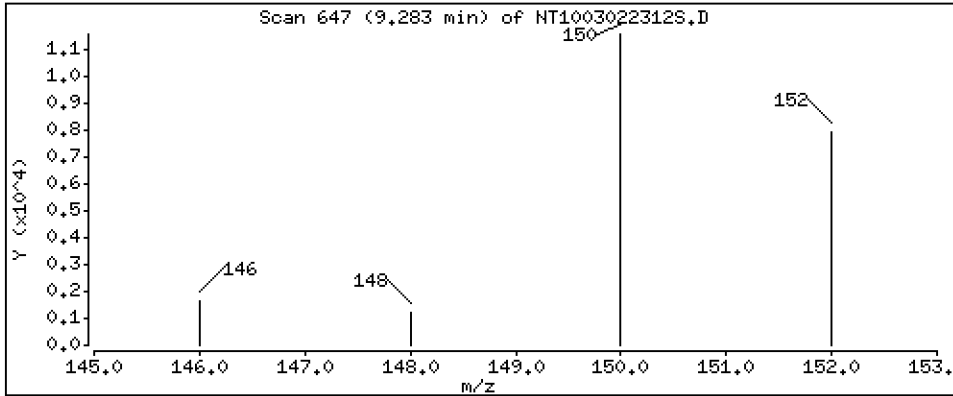
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.009737 ug/L





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

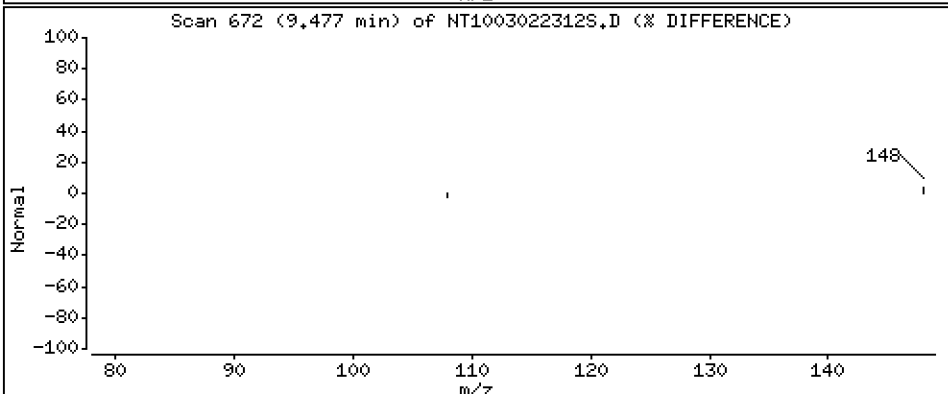
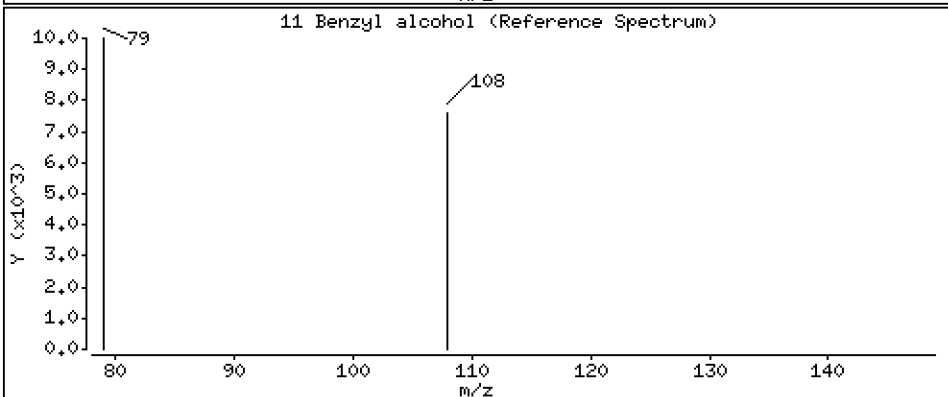
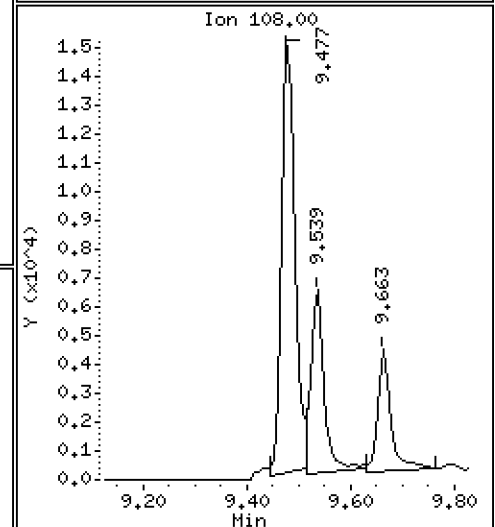
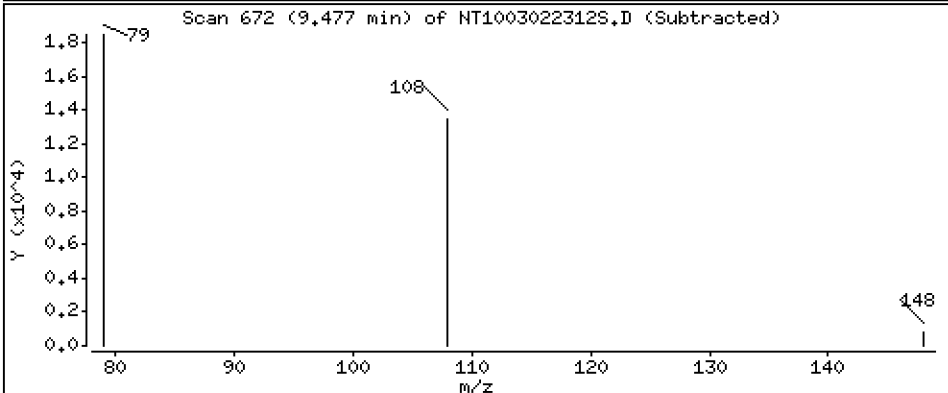
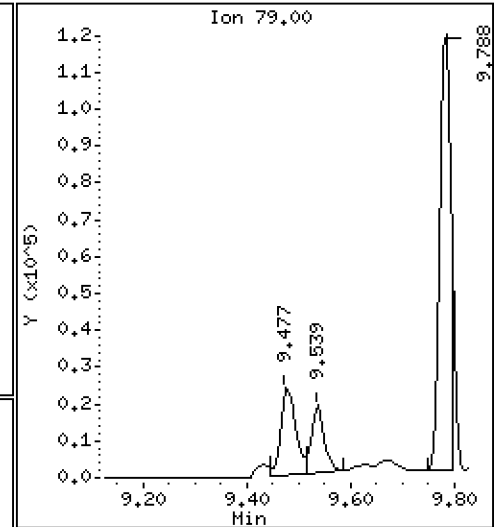
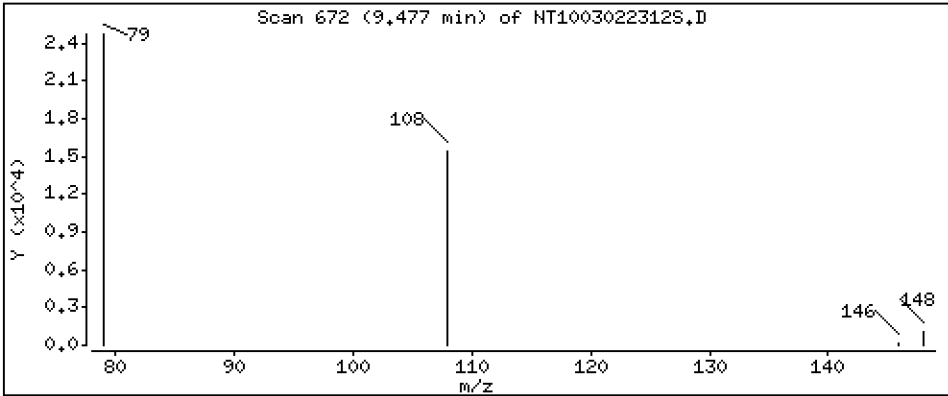
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2733 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

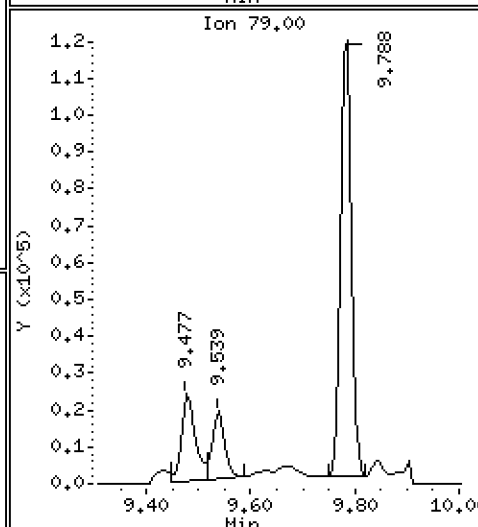
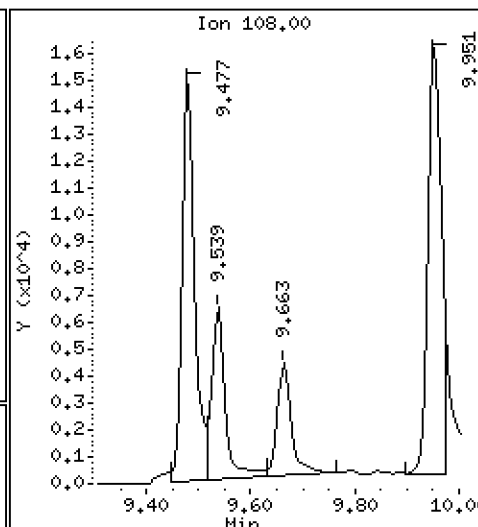
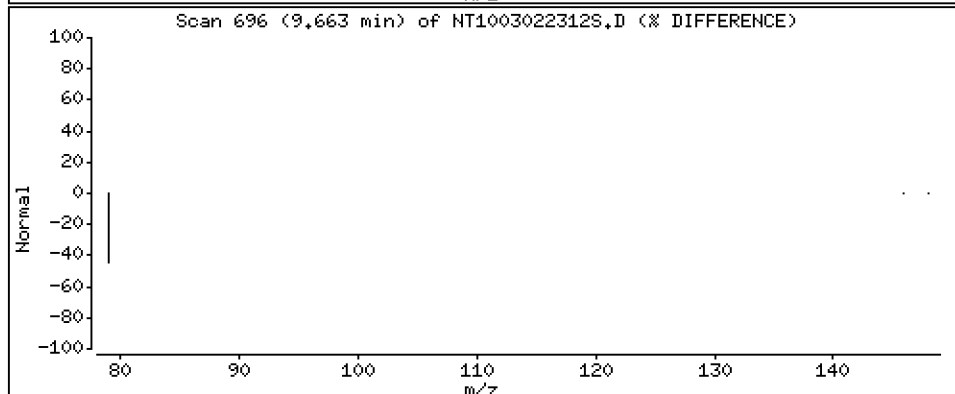
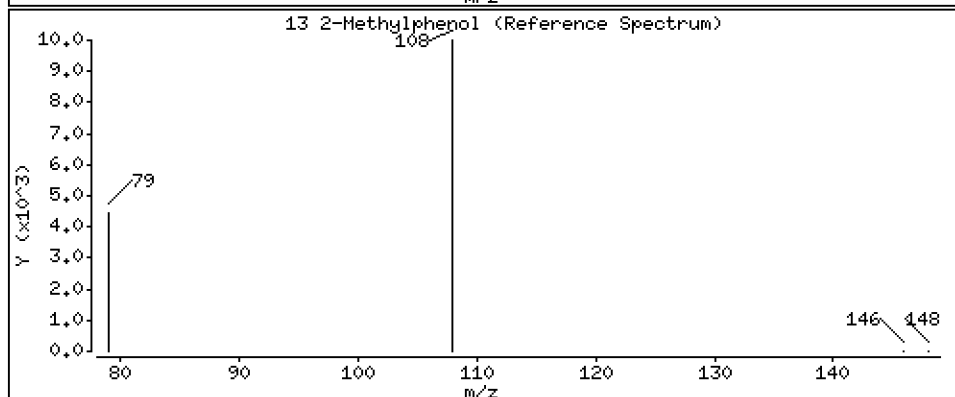
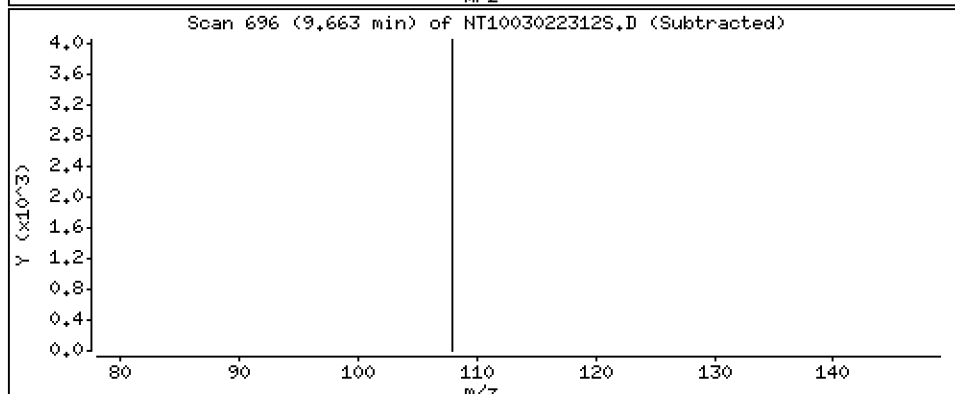
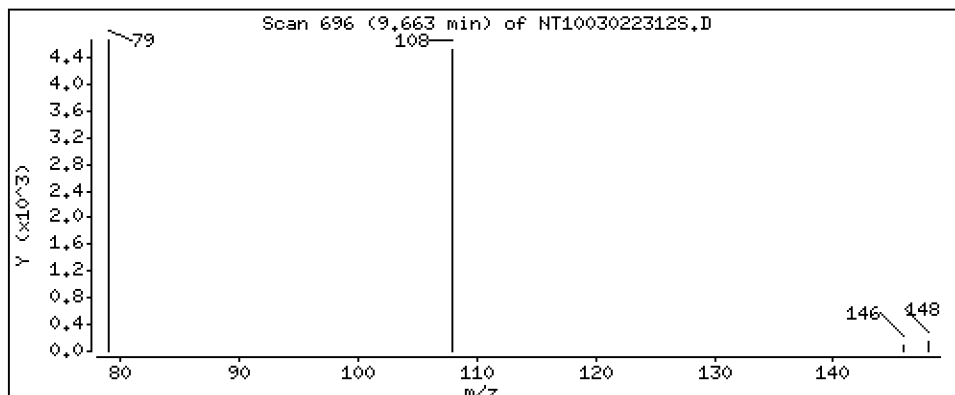
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.04254 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

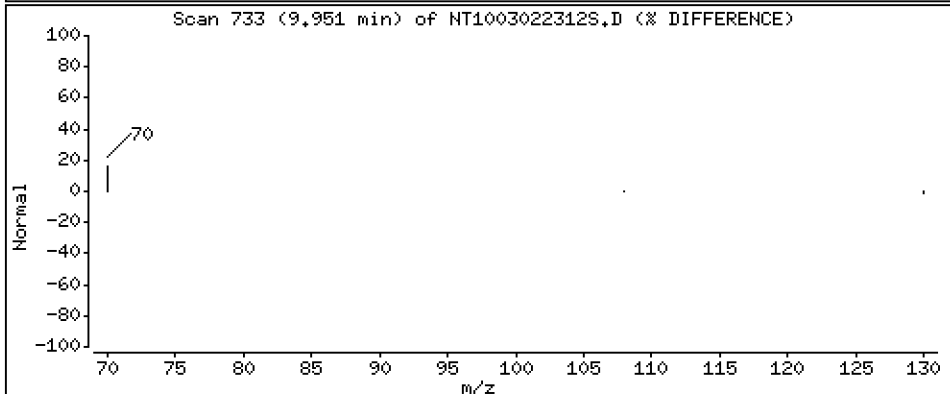
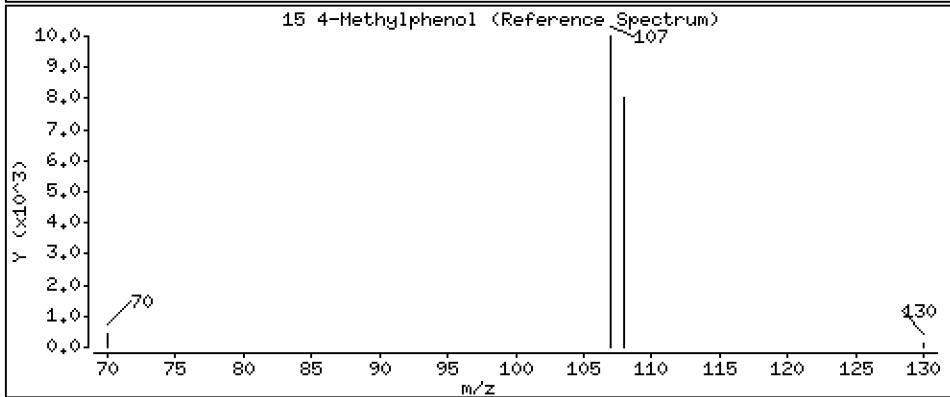
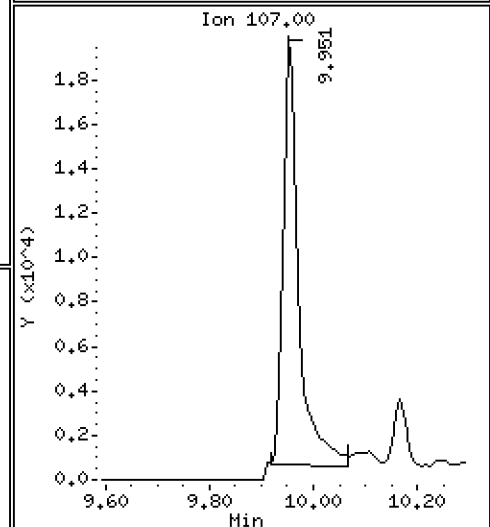
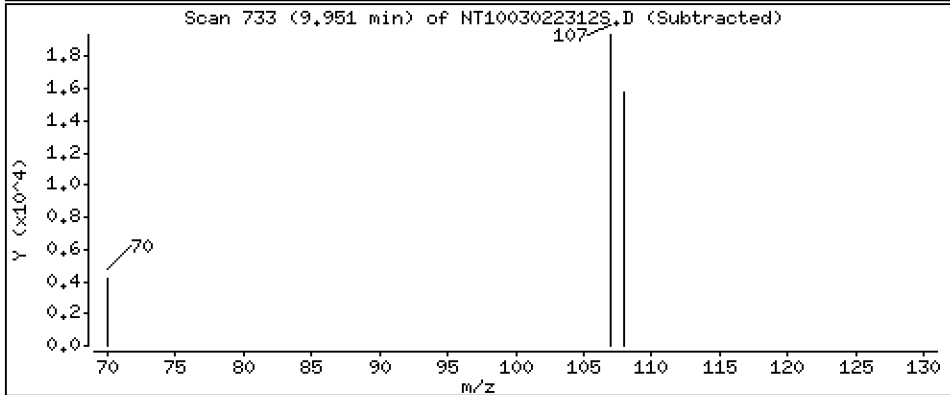
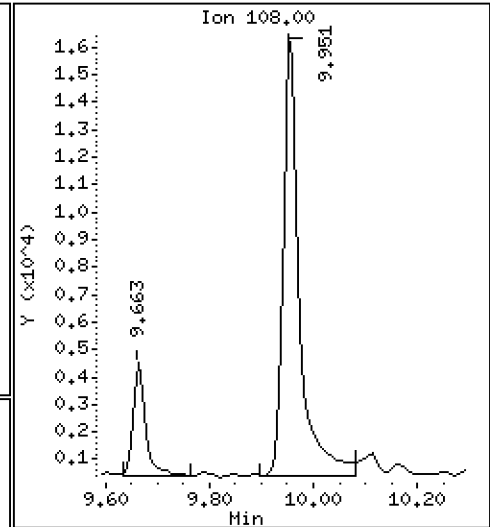
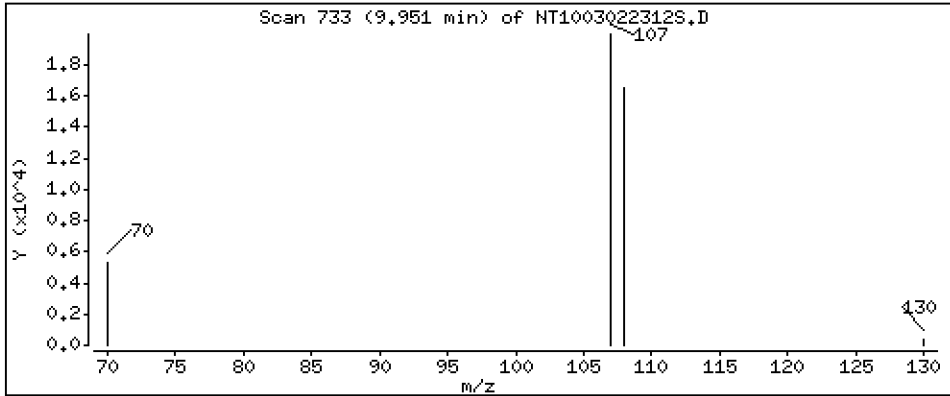
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1843 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

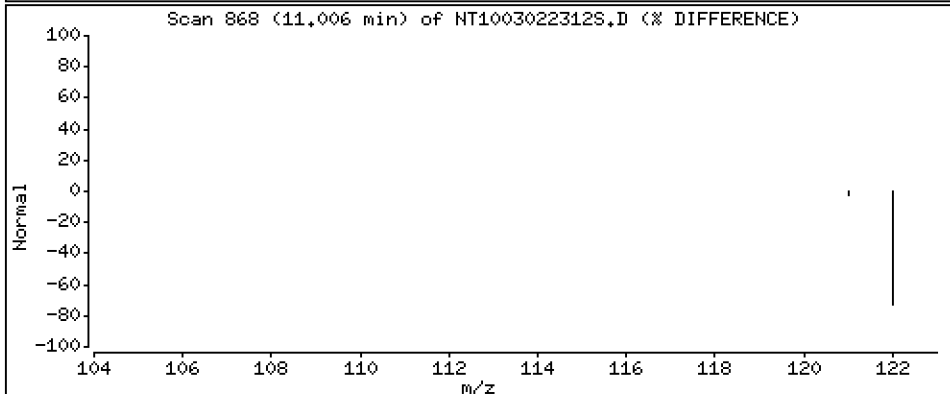
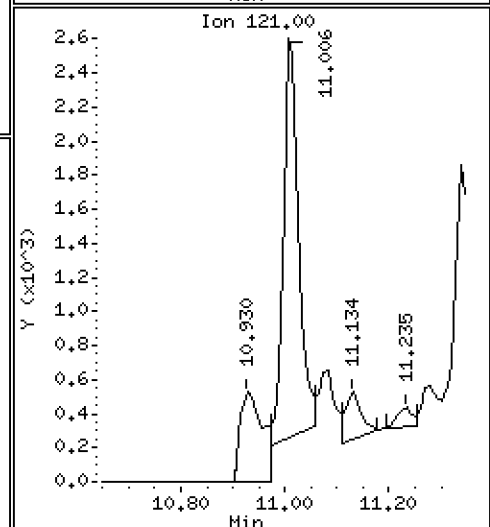
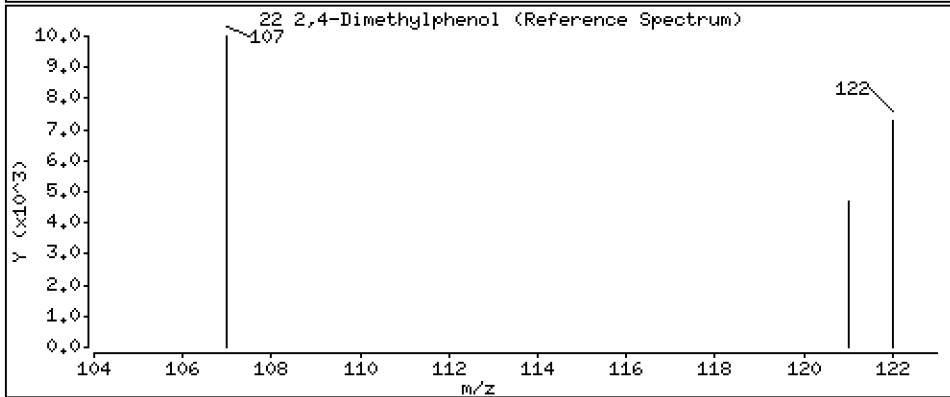
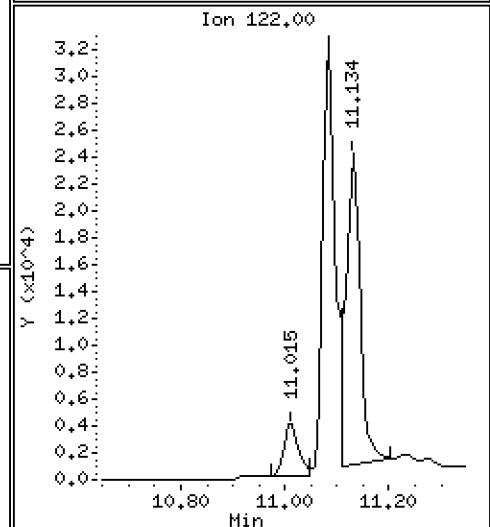
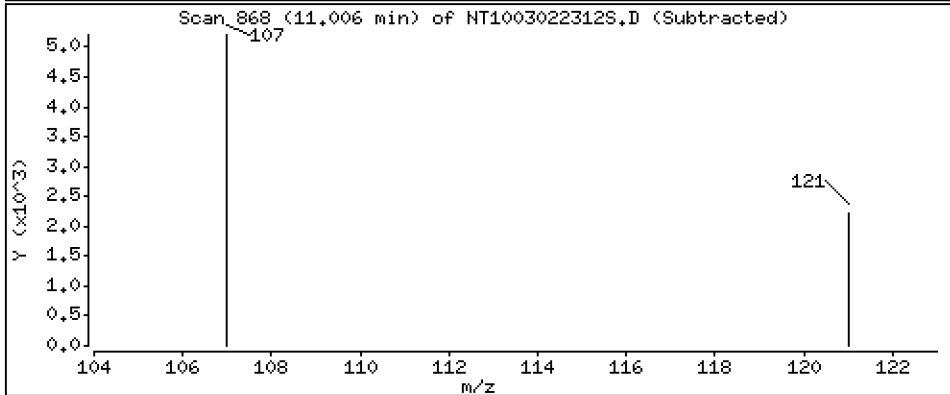
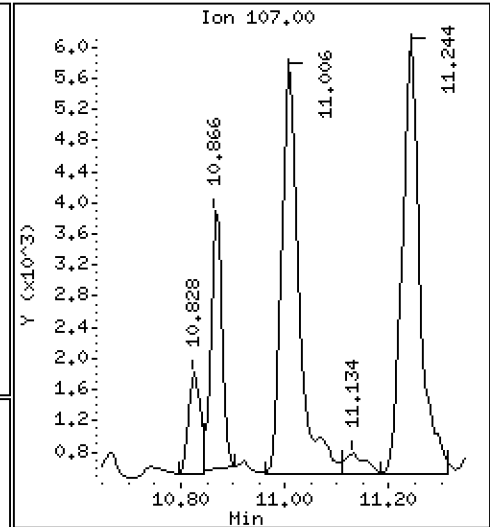
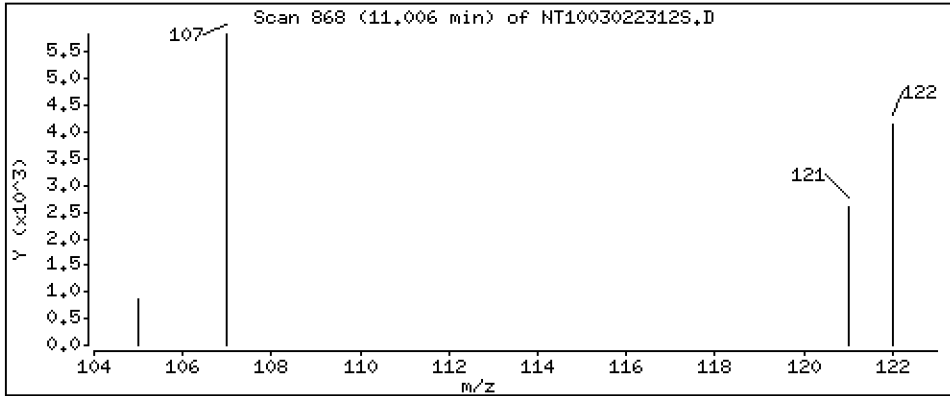
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.05672 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

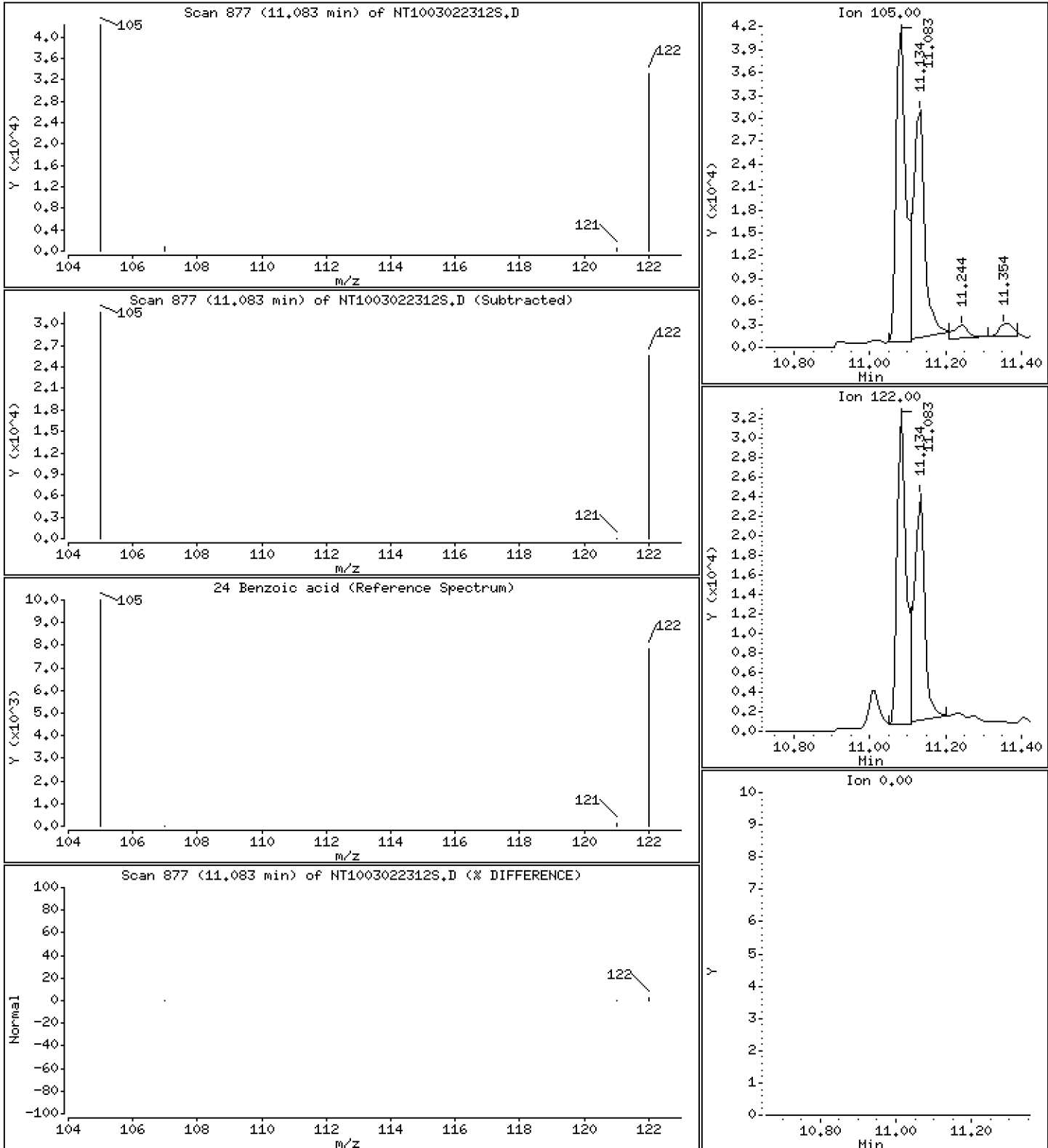
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.6311 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

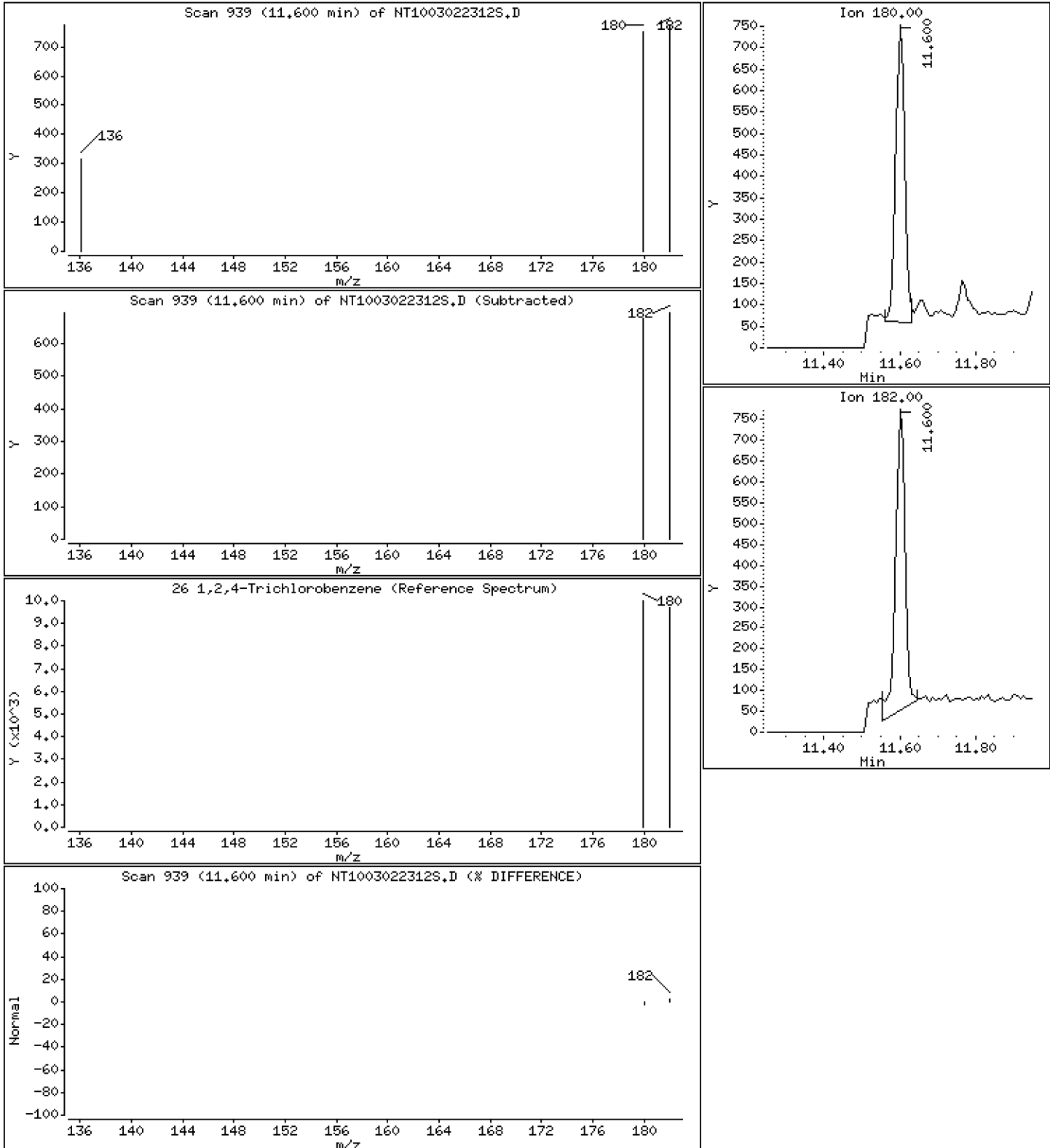
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,005897 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

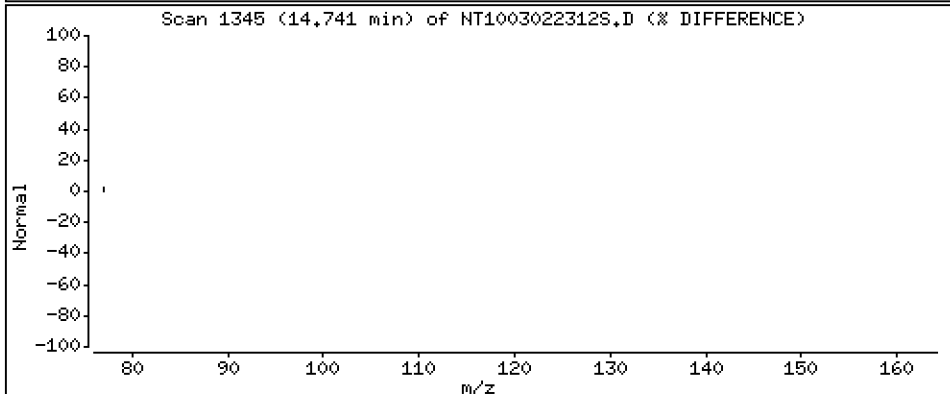
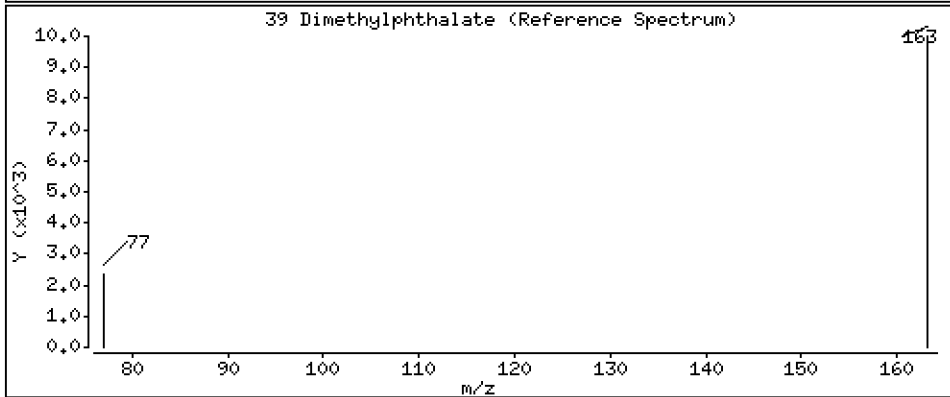
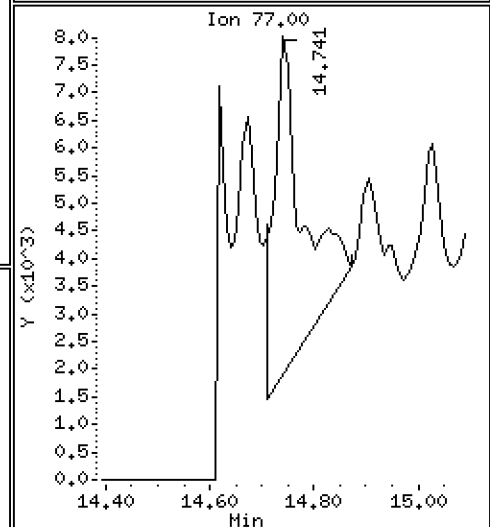
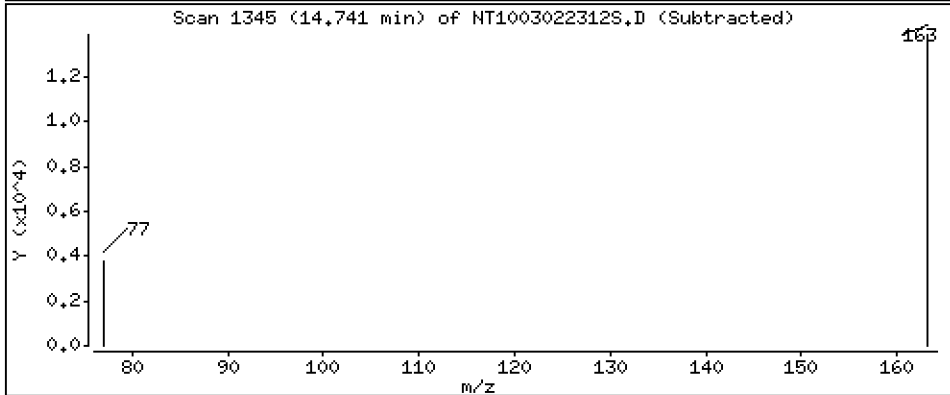
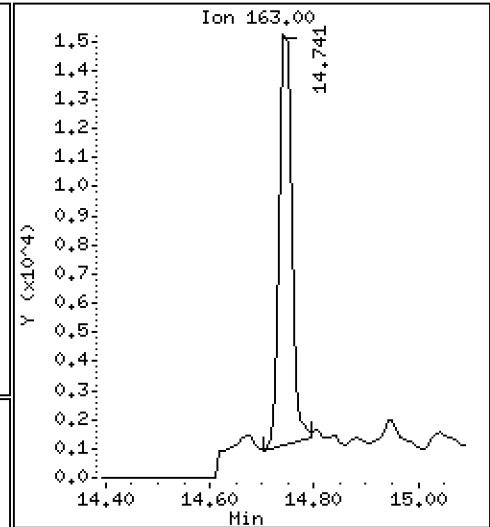
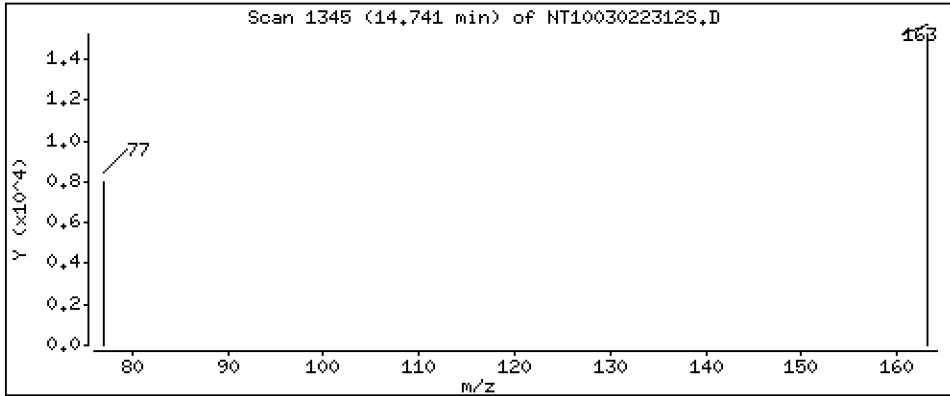
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.05672 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

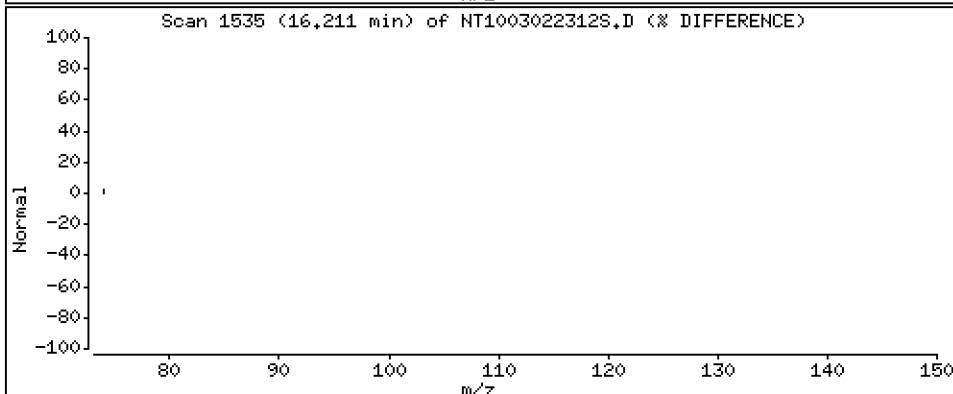
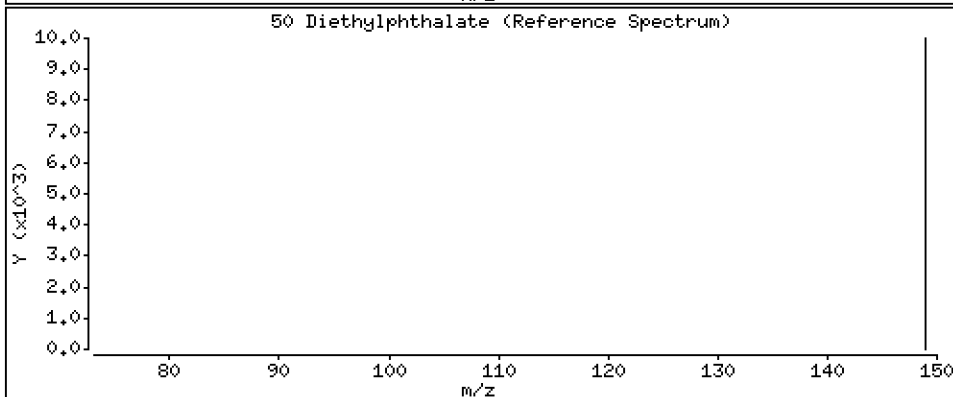
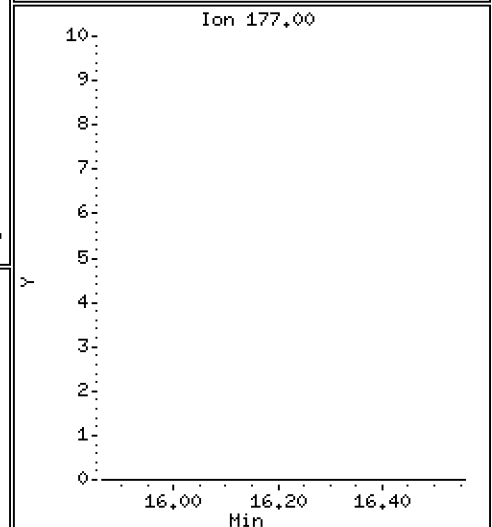
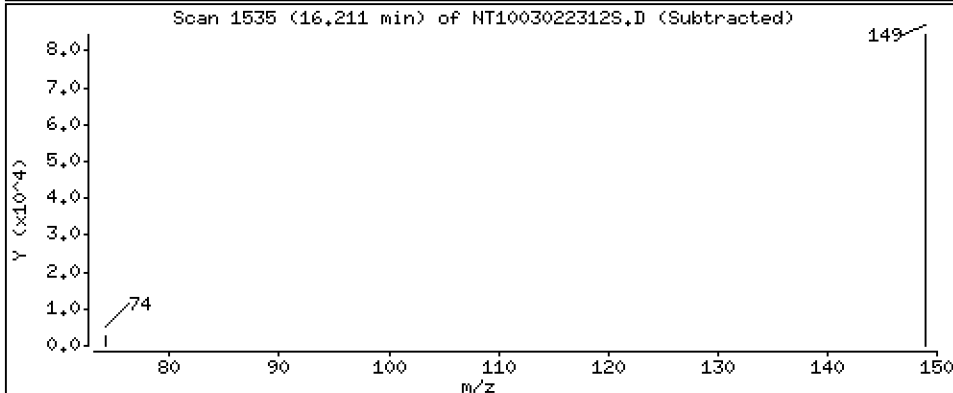
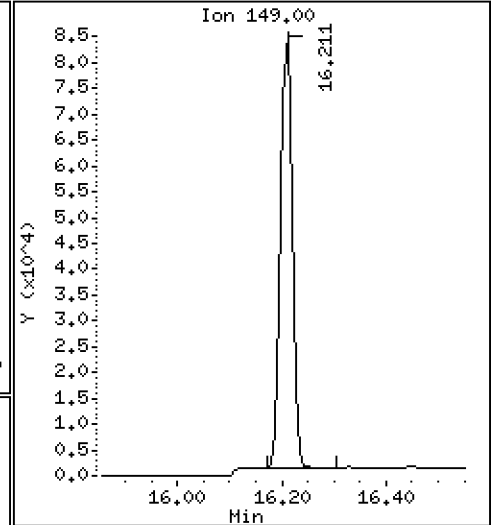
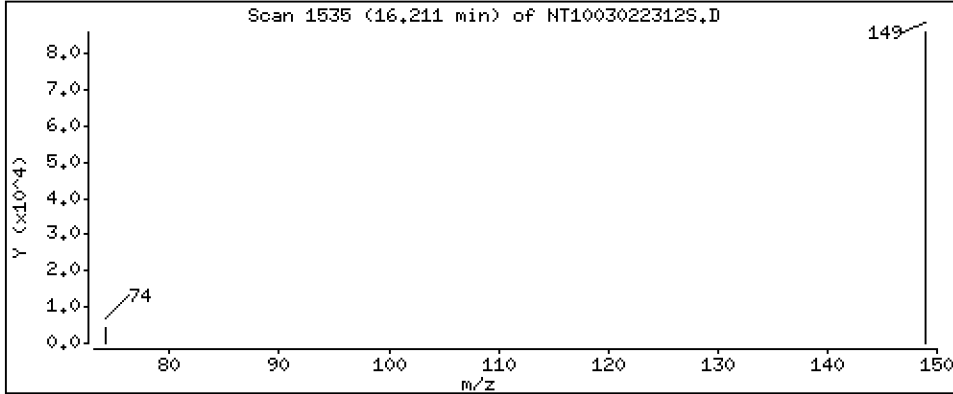
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,3326 ug/L





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

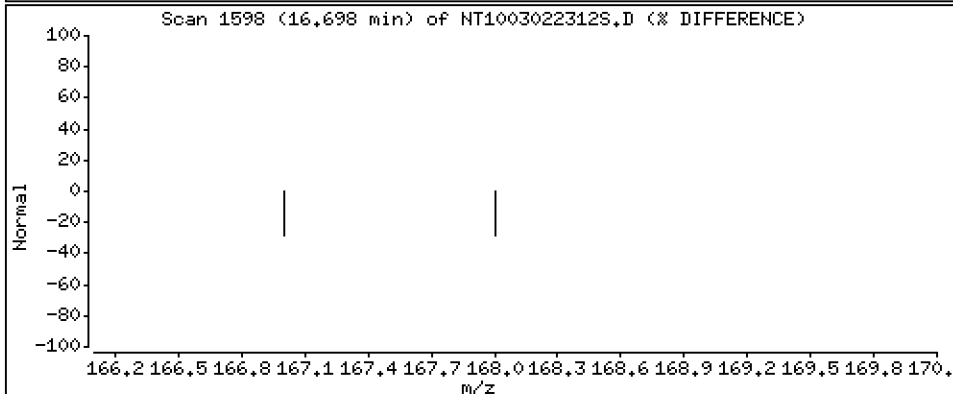
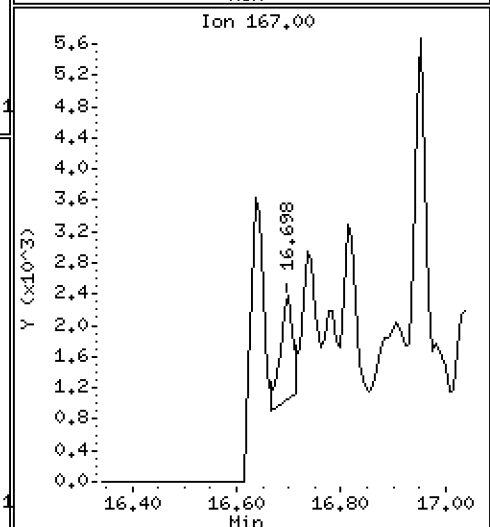
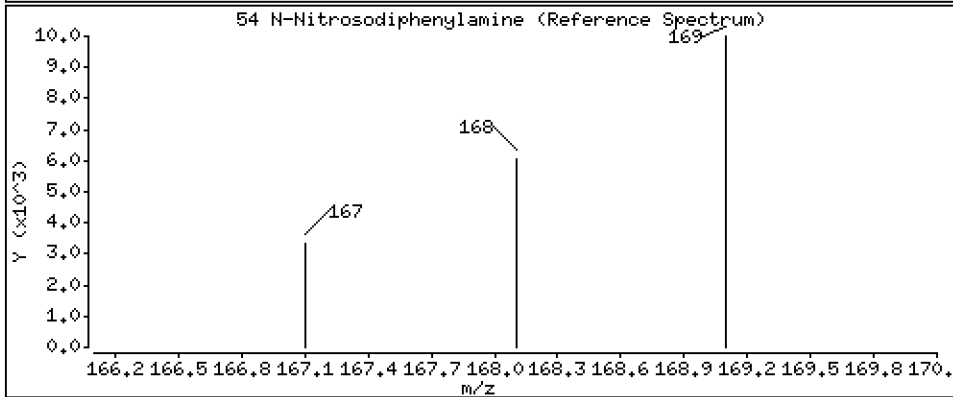
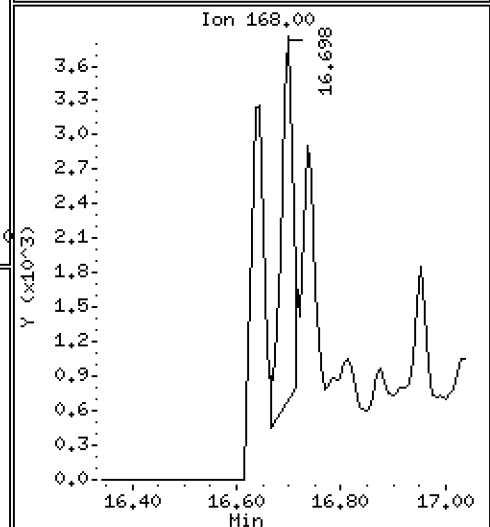
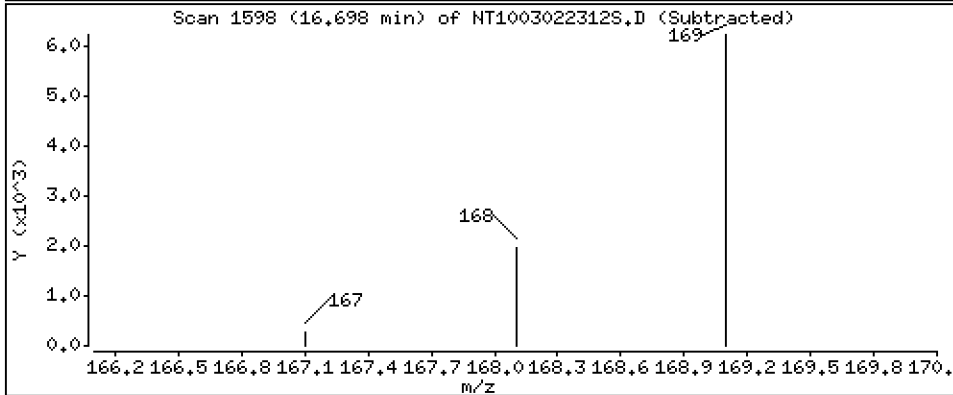
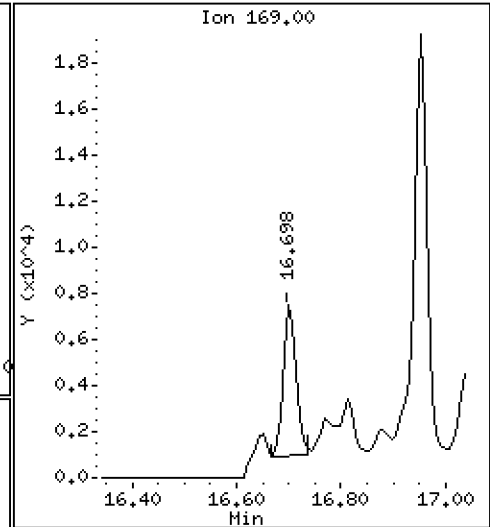
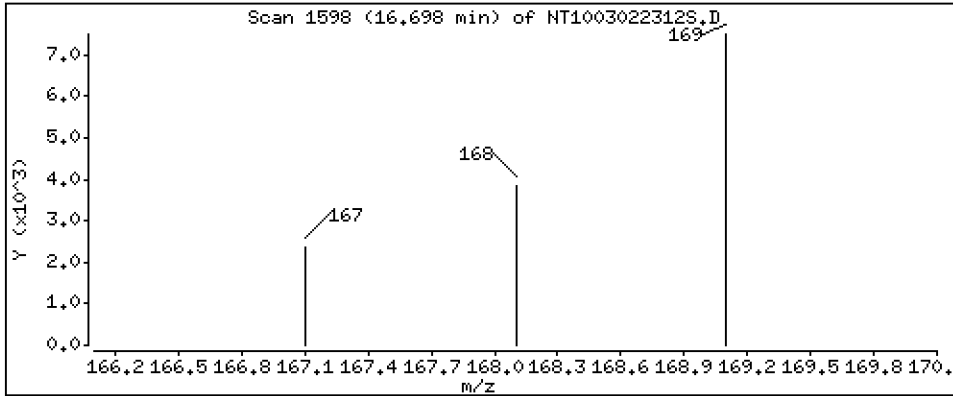
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.03139 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

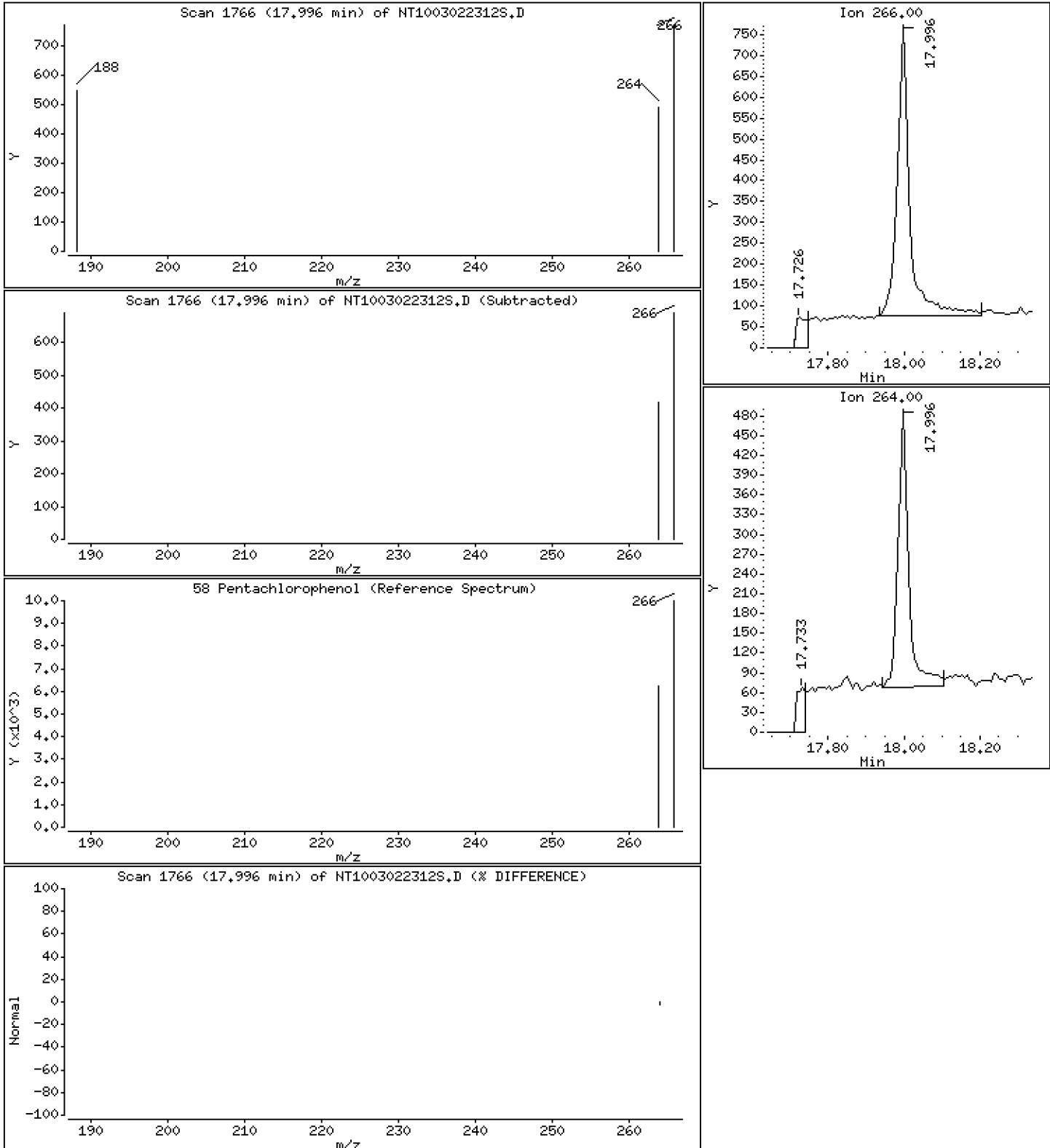
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,02110 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

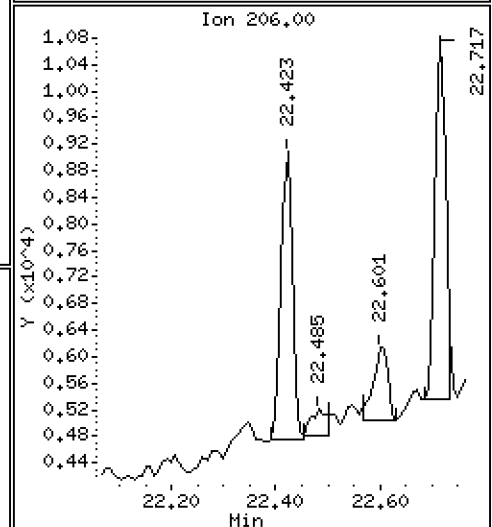
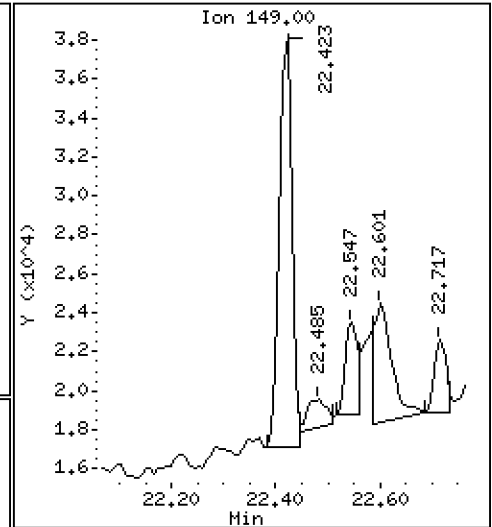
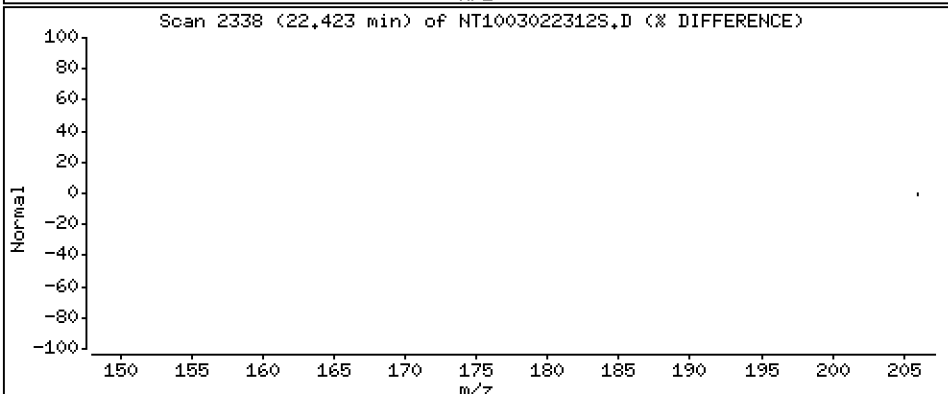
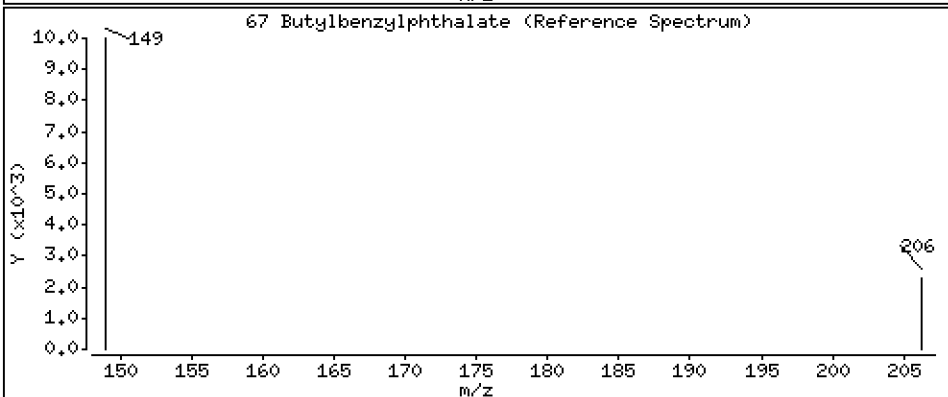
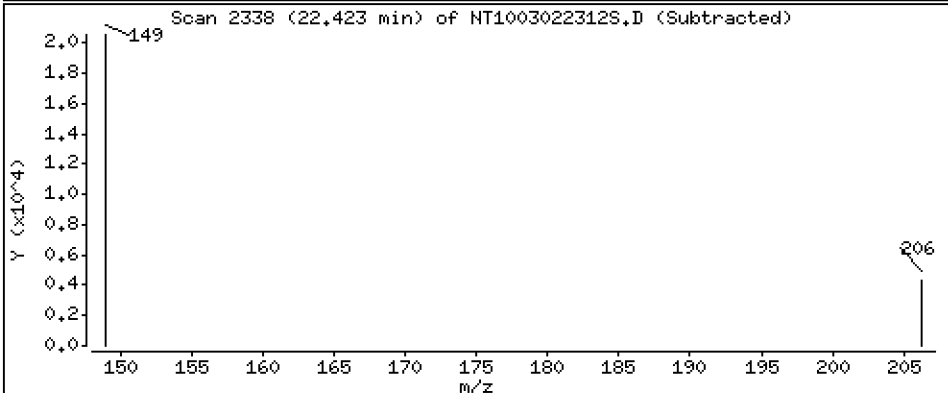
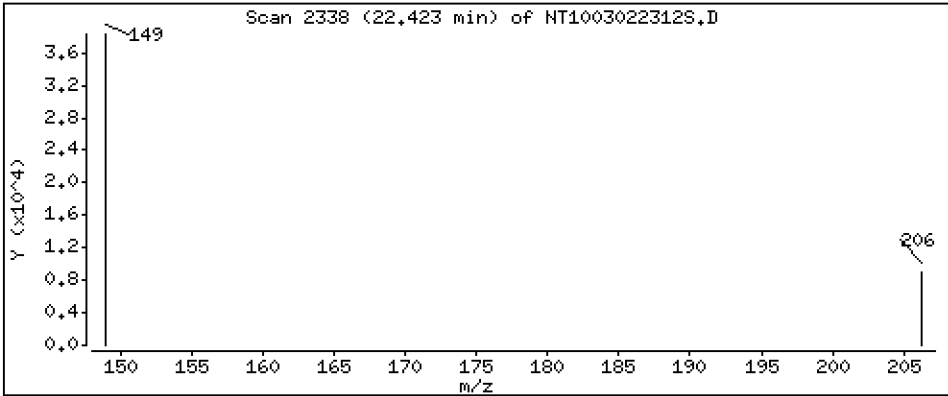
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07165 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

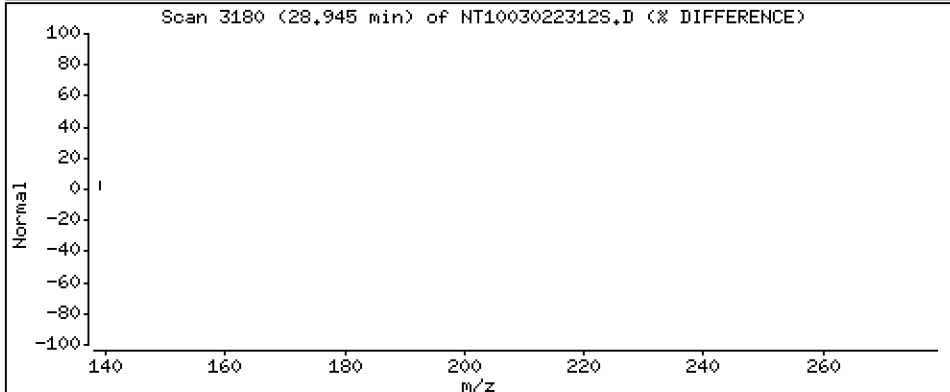
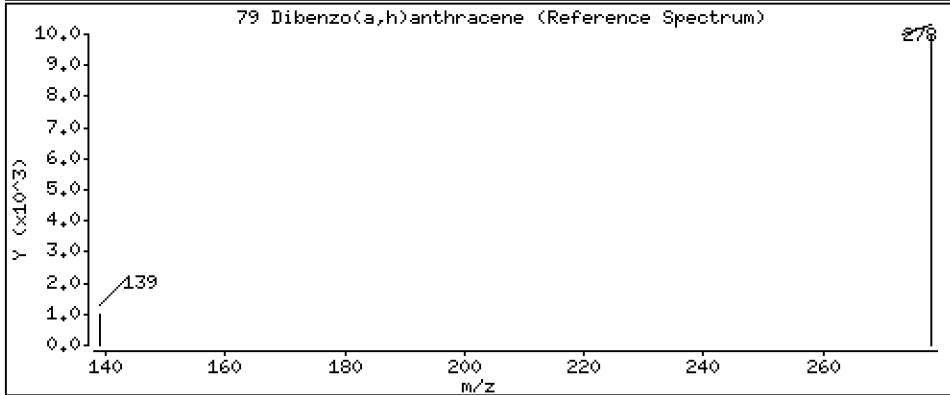
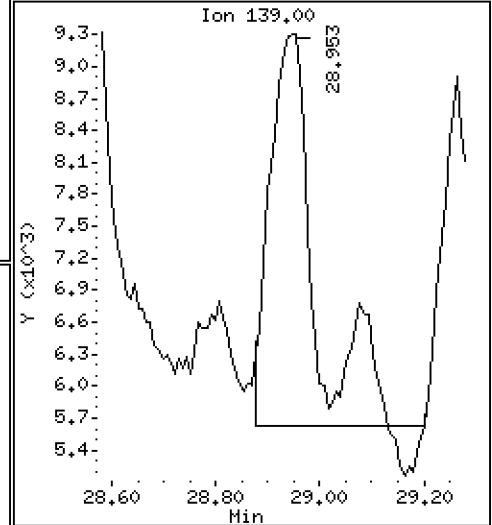
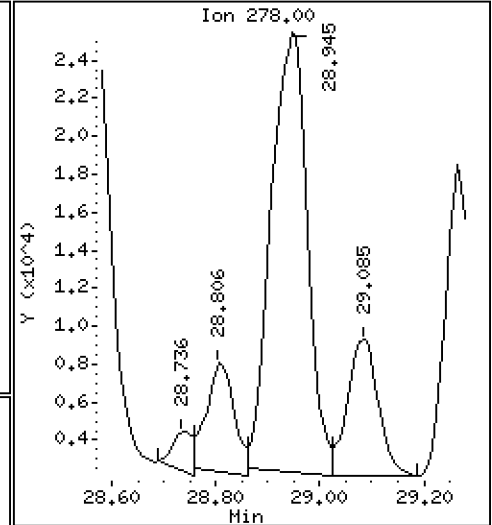
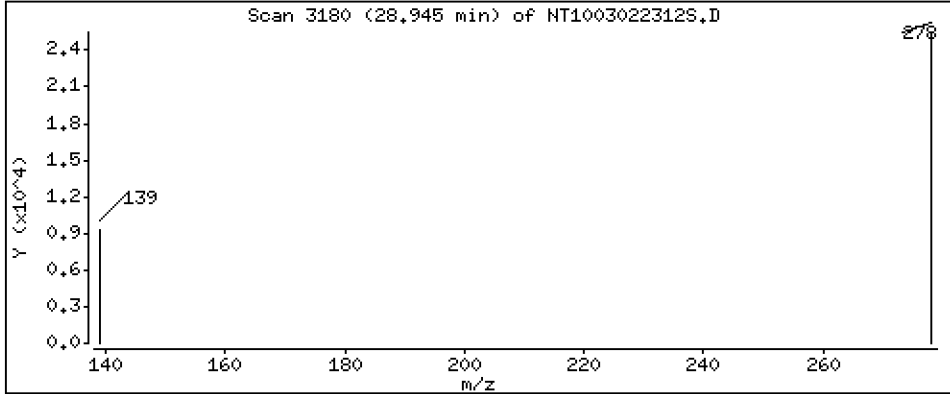
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1597 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022312S.D  
 Lab Smp Id: 23A0206-01  
 Inj Date : 02-MAR-2023 21:22 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-01  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1411998	6.85580	6.856(R)
3 Phenol	94		8.524	8.517 (0.921)		3134940	9.78296	9.783
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251 (1.000)		721403	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282 (1.003)		2531	0.00974	0.009737 (M)
11 Benzyl alcohol	79		9.476	9.476 (1.024)		46173	0.27334	0.2733
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.663	9.655 (1.044)		7769	0.04254	0.04254
15 4-Methylphenol	108		9.950	9.942 (1.076)		35061	0.18430	0.1843
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		12257	0.05672	0.05672
24 Benzoic acid	105		11.082	11.074 (0.945)		74985	0.63106	0.6311
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		1081	0.00590	0.005897 (M)
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2546921	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.741	14.741 (0.962)		22315	0.05672	0.05672 (M)
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1239070	4.00000	
50 Diethylphthalate	149		16.210	16.203 (1.058)		123384	0.33255	0.3326
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		11511	0.03139	0.03139 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.996	17.988	(0.977)	1584	0.02110	0.02110
* 59 Phenanthrene-d10	188		18.414	18.406	(1.000)	2265720	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	1103320	4.89149	4.891(R)
67 Butylbenzylphthalate	149		22.422	22.414	(0.957)	33739	0.07165	0.07165
* 69 Chrysene-d12	240		23.429	23.421	(1.000)	2789268	4.00000	
* 77 Perylene-d12	264		26.131	26.115	(1.000)	3057877	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.929	(1.108)	113304	0.15967	0.1597
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022312S.D  
 Lab Smp Id: 23A0206-01  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	721403	46.21
27 Naphthalene-d8	1779056	889528	3558112	2546921	43.16
42 Acenaphthene-d10	954569	477285	1909138	1239070	29.80
59 Phenanthrene-d10	1596290	798145	3192580	2265720	41.94
69 Chrysene-d12	1649110	824555	3298220	2789268	69.14
77 Perylene-d12	1901958	950979	3803916	3057877	60.78

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022312S.D

Lab ID: 23A0206-01

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 21:22

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

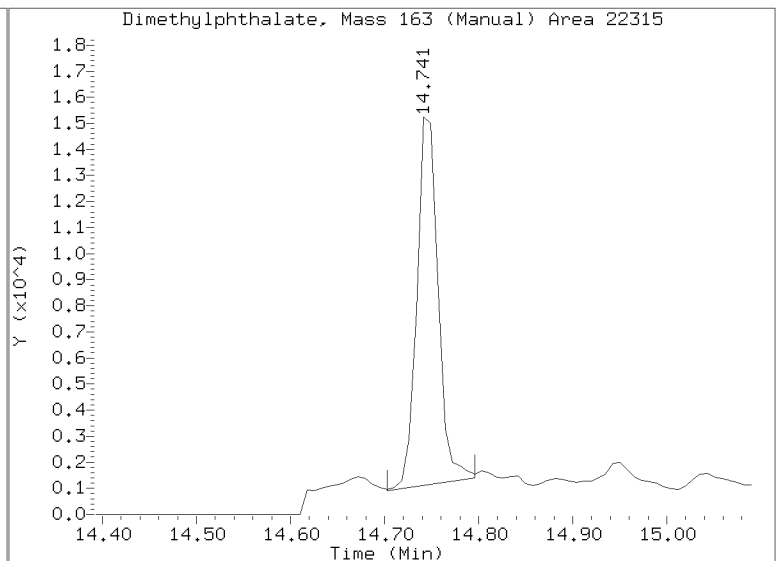
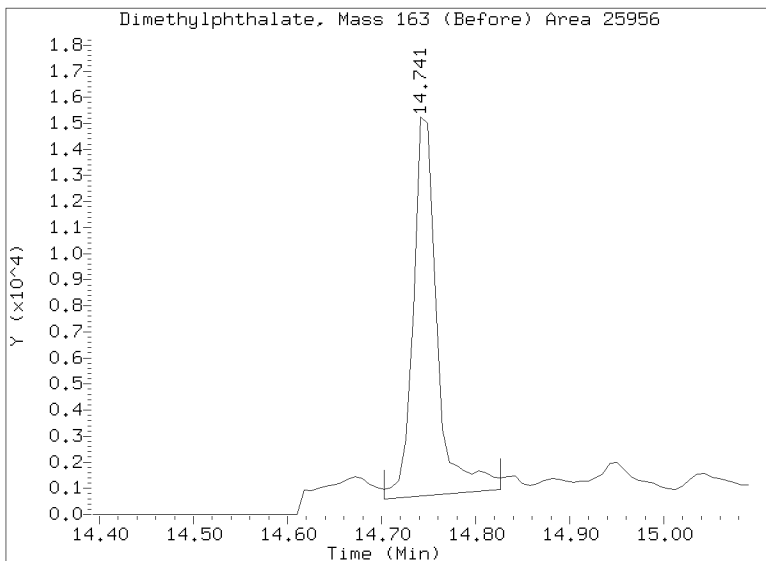
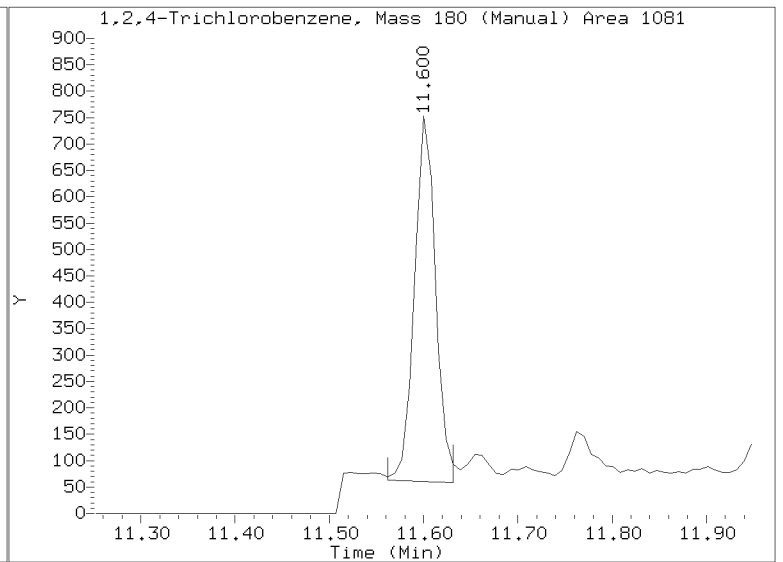
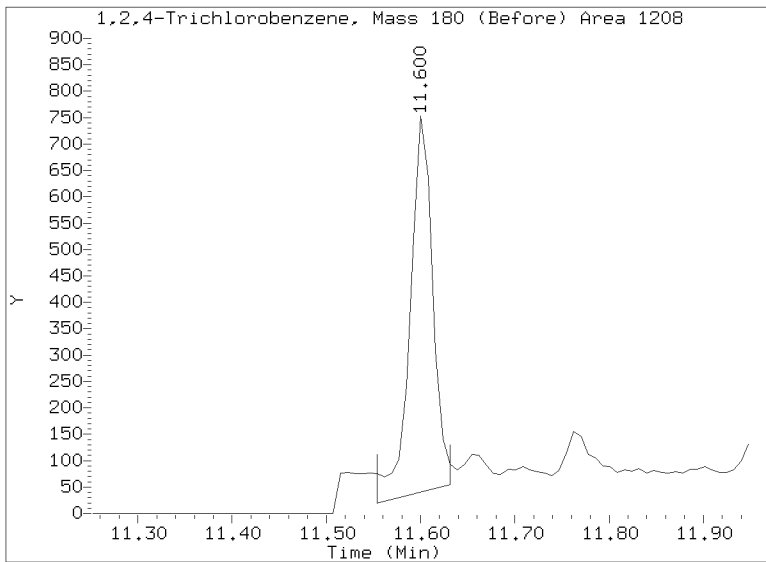
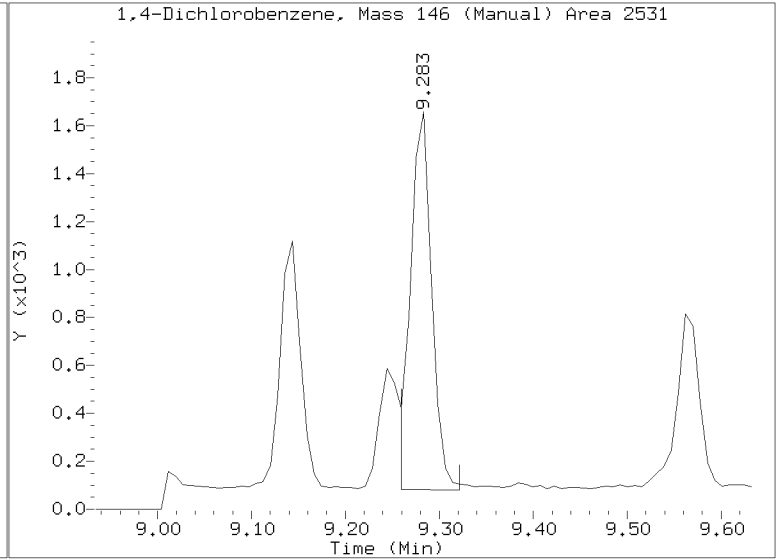
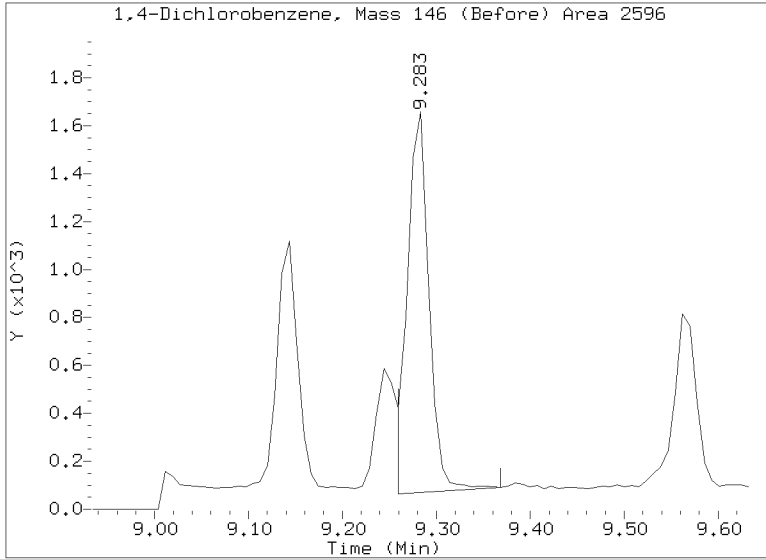
Exception: 1,2,4-Trichlorobenzene 0.0010

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



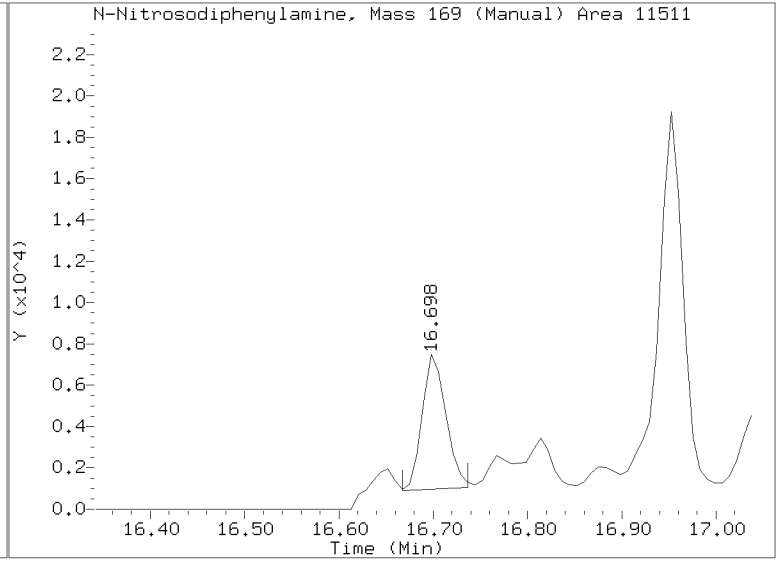
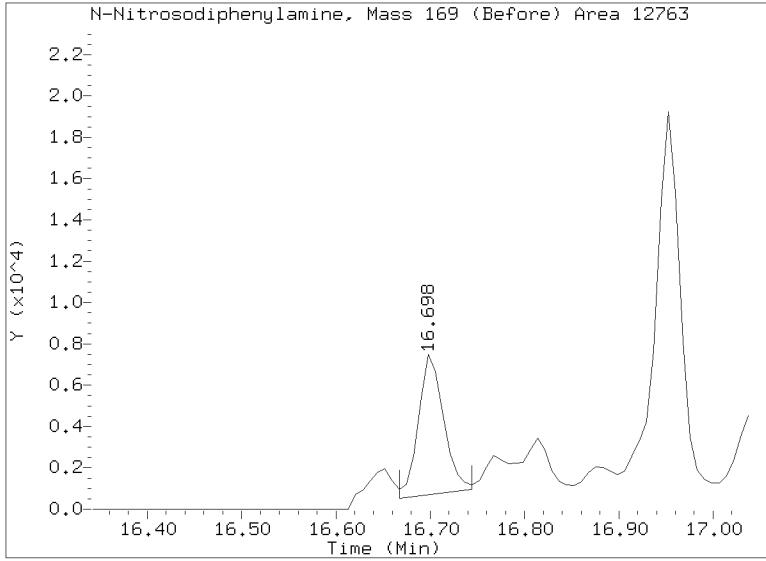
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/SIM.b/NT1003022312S.D  
Injection Date: 02-MAR-2023 21:22  
Lab ID:23A0206-01 Client ID:  
Report Date: 03/11/2023 06:03



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/SIM.b/NT1003022312S.D  
Injection Date: 02-MAR-2023 21:22  
Lab ID:23A0206-01 Client ID:  
Report Date: 03/11/2023 06:03





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-02 B

SDG: 23A0206

Sampled: 01/11/23 08:37

Prepared: 01/27/23 14:44

File ID: NT1003022313S.D

% Solids: 47.11

Preparation: EPA 3546 (Microwave)

Analyzed: 03/02/23 22:00

Batch: BLA0624

Sequence: SLC0157

Initial/Final: 21.28 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

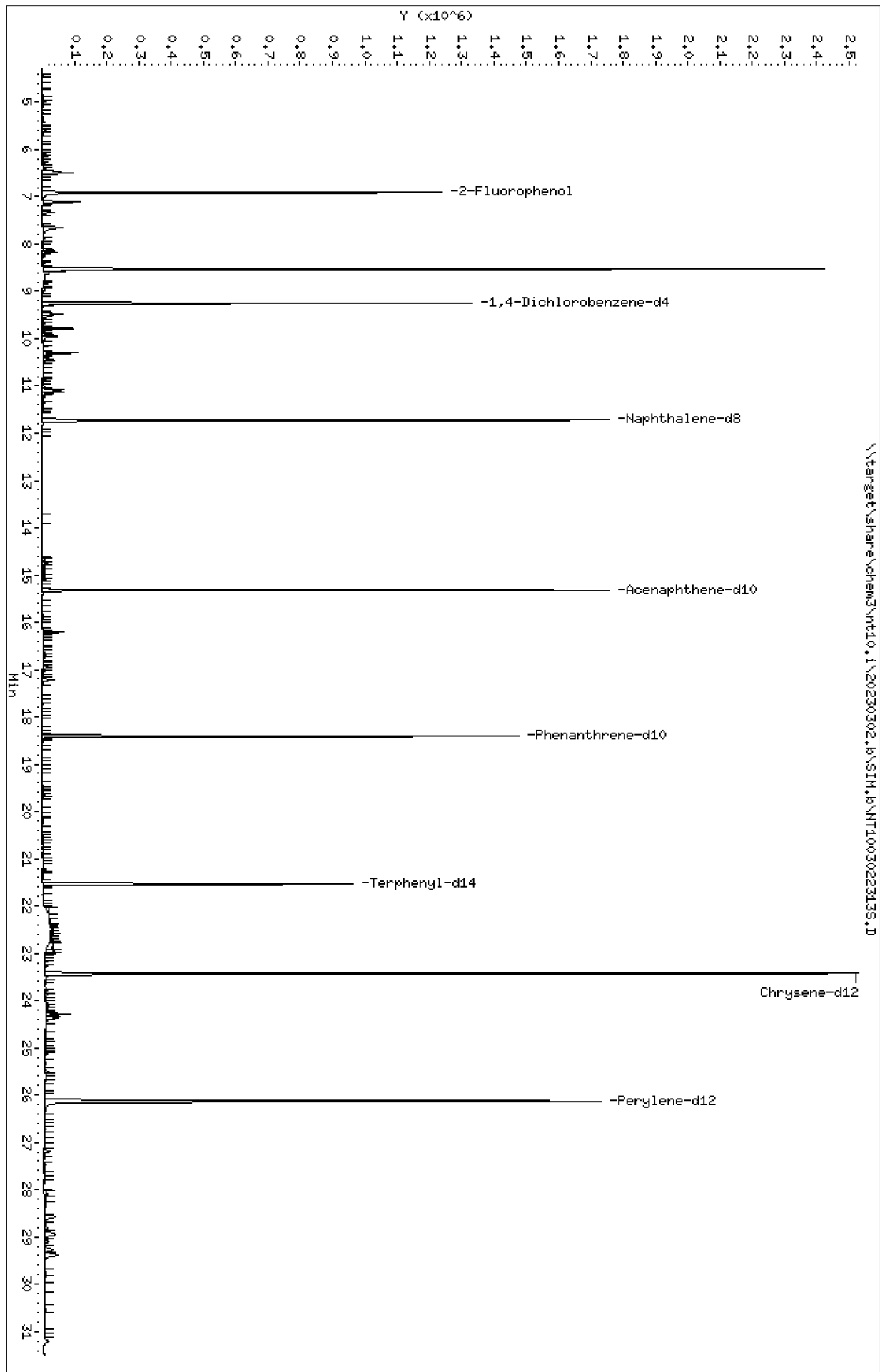
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	32.8		2.5	20.0
65-85-0	Benzoic acid	1	109	Q	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	3.2	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	3.1	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.13	646	86.3	27 - 120	
p-Terphenyl-d14	498.75	498	99.9	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.6\NT1003022313S.D  
Date : 02-MAR-2023 22:00  
Client ID:  
Sample Info: 23A0206-02  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.6\NT1003022313S.D



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

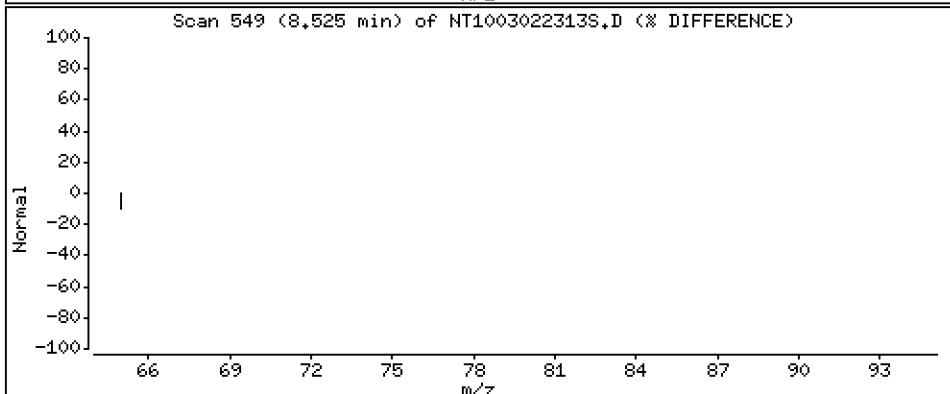
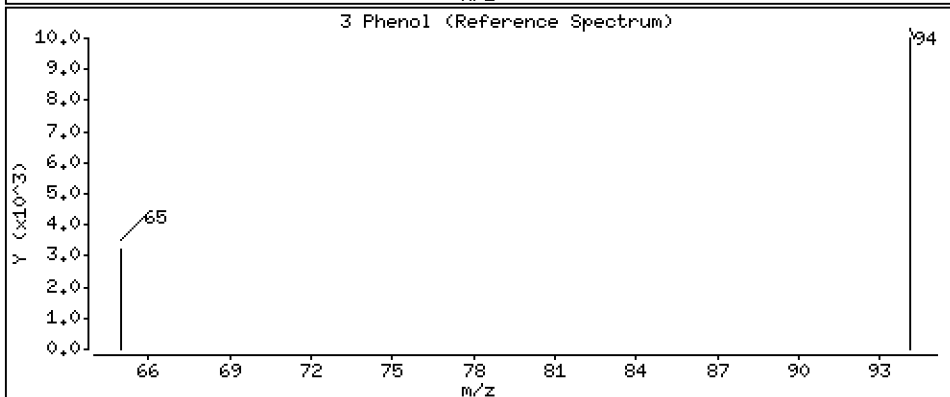
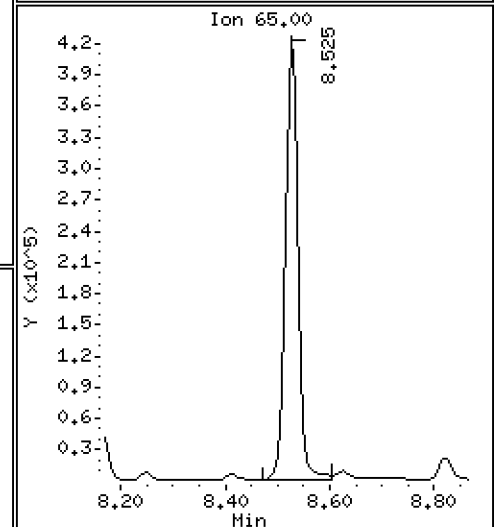
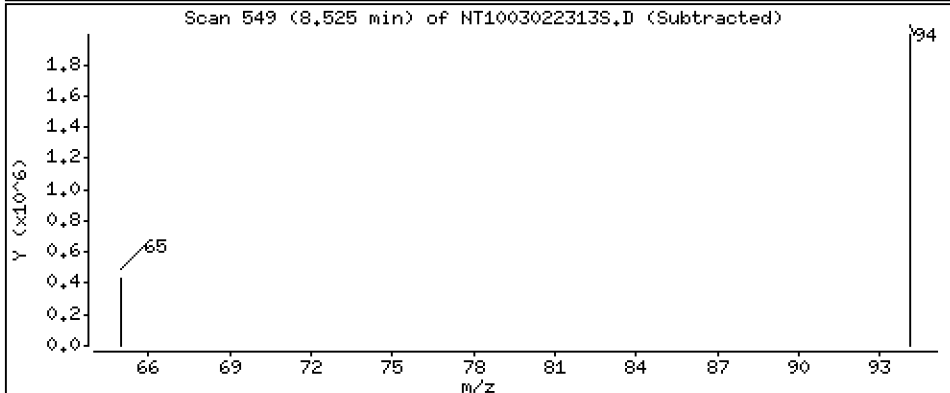
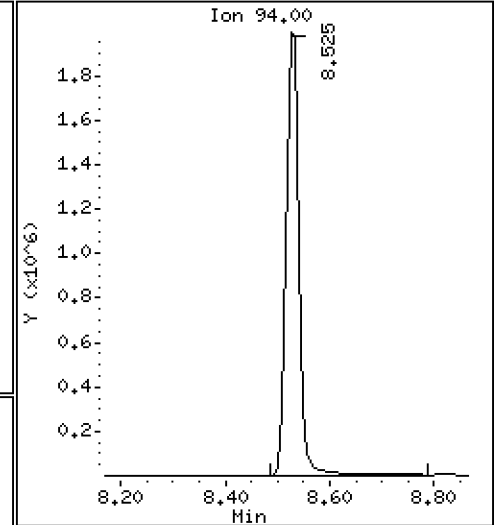
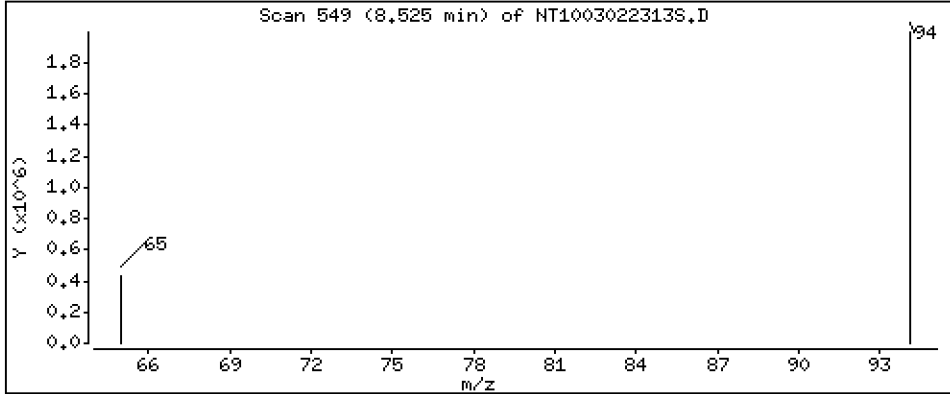
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 9.499 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

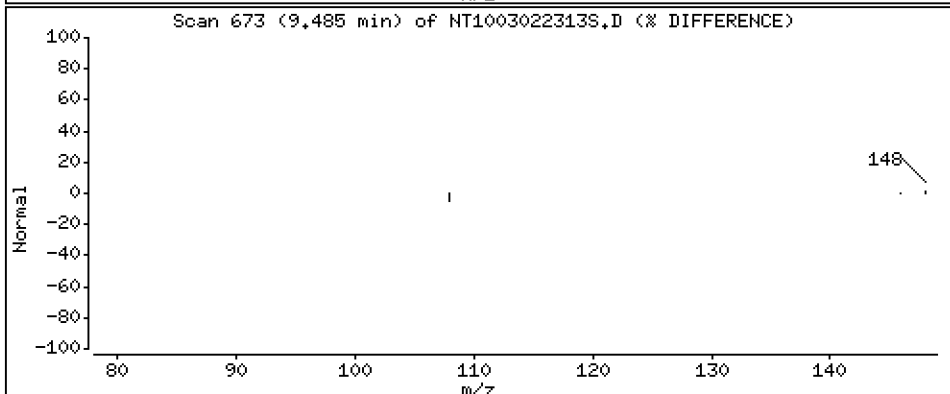
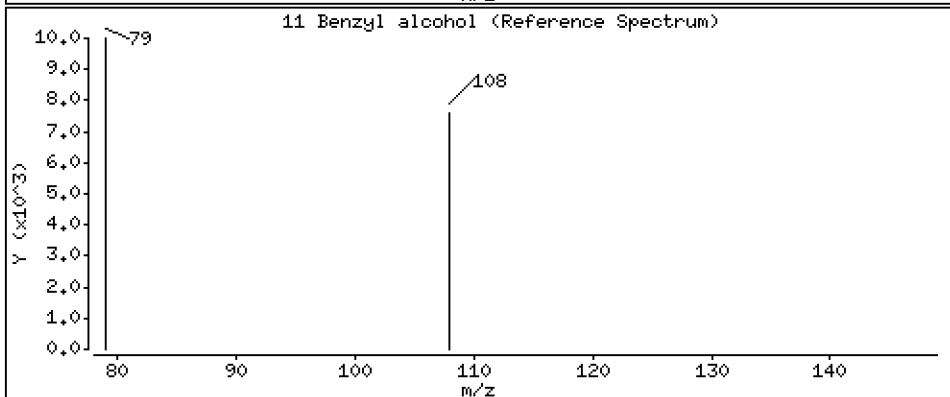
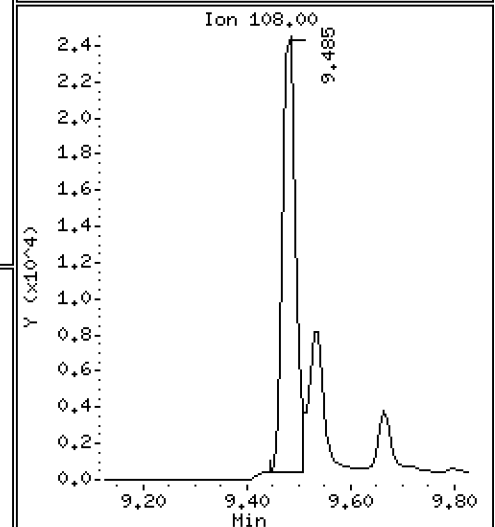
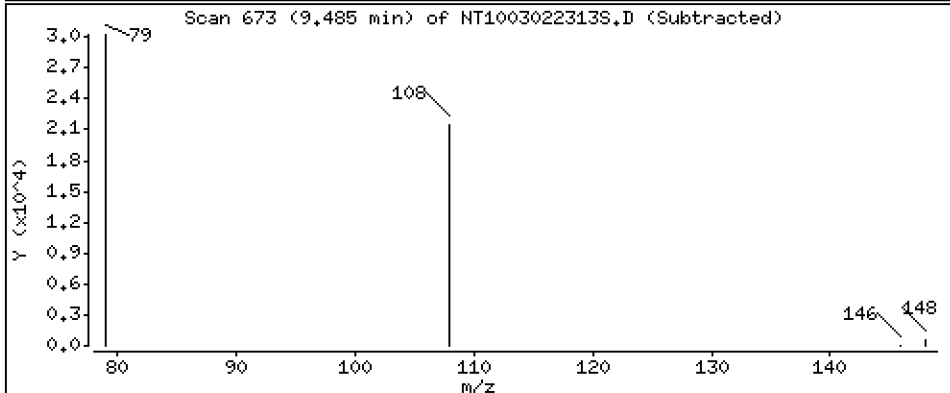
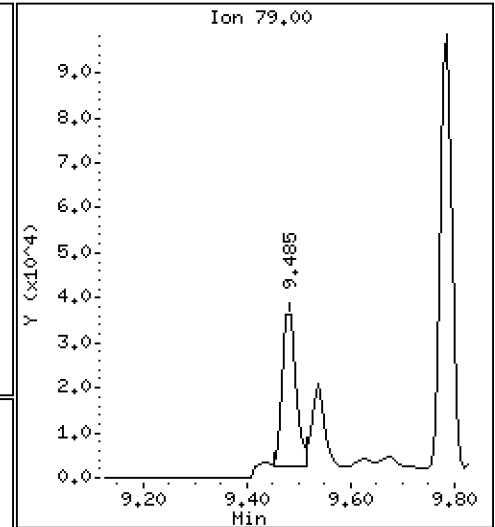
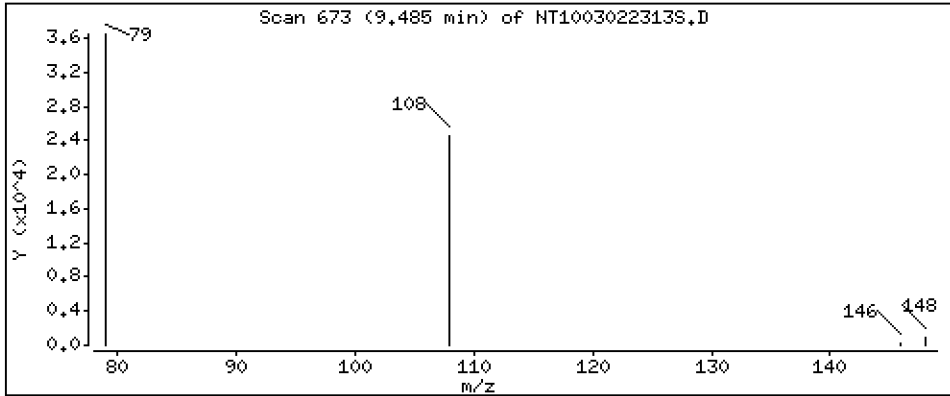
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.3291 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

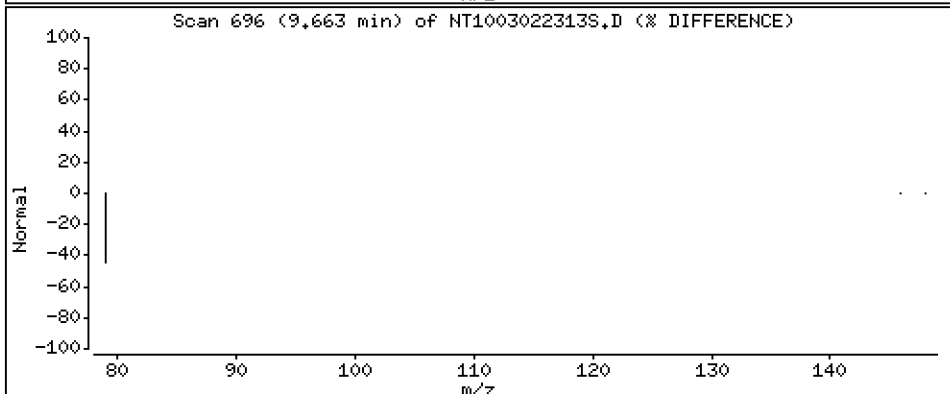
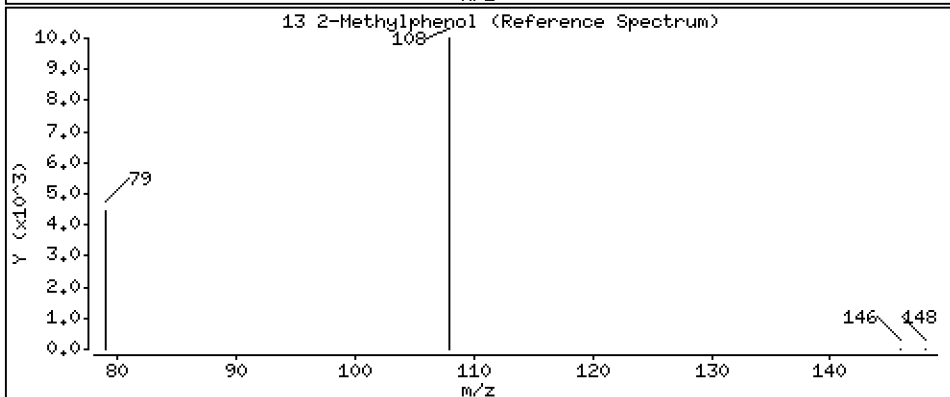
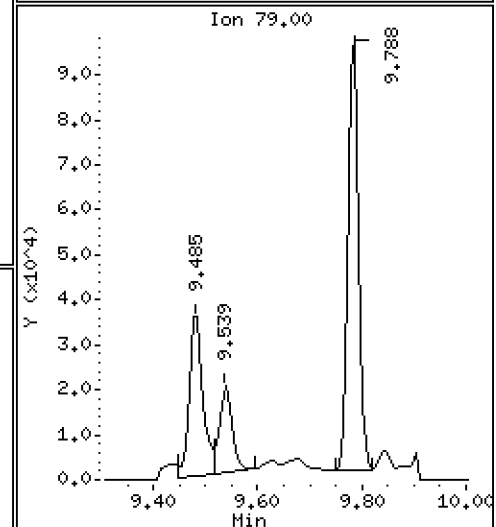
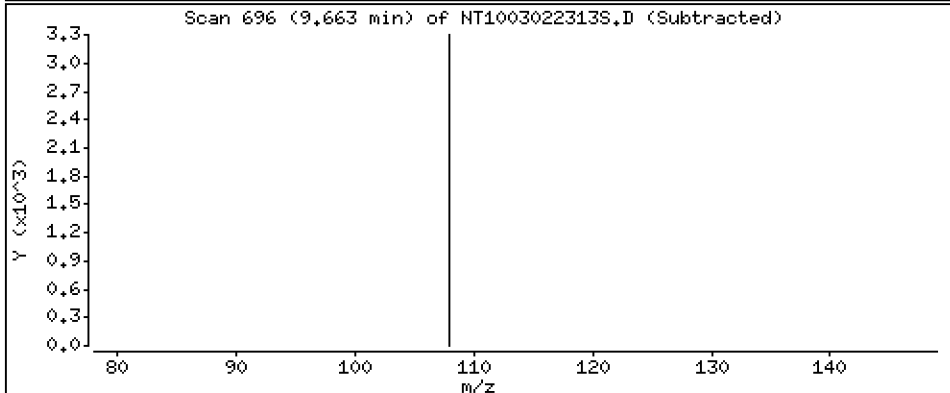
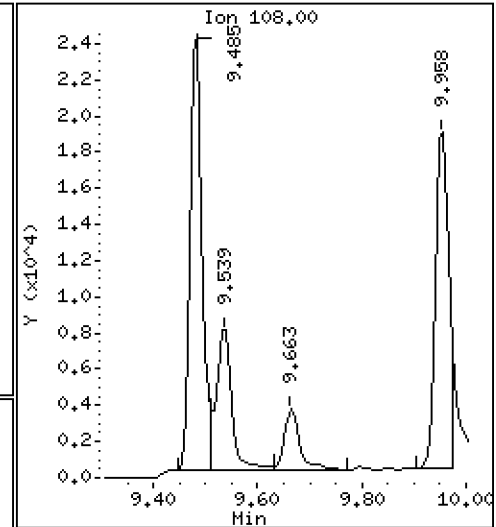
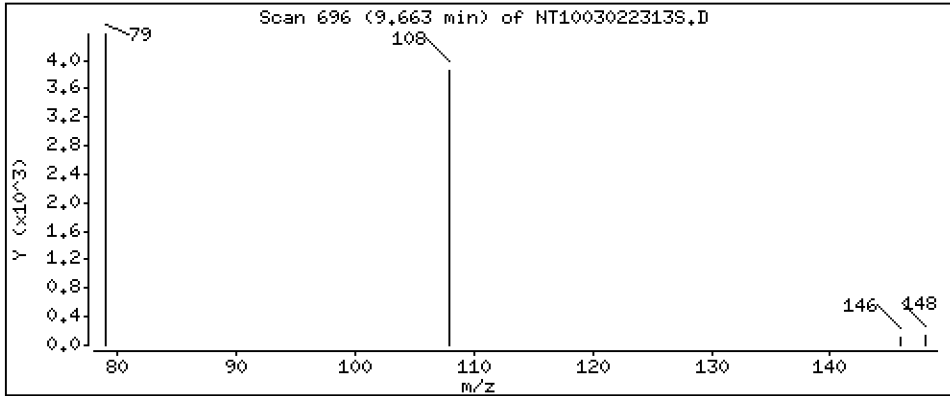
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03346 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

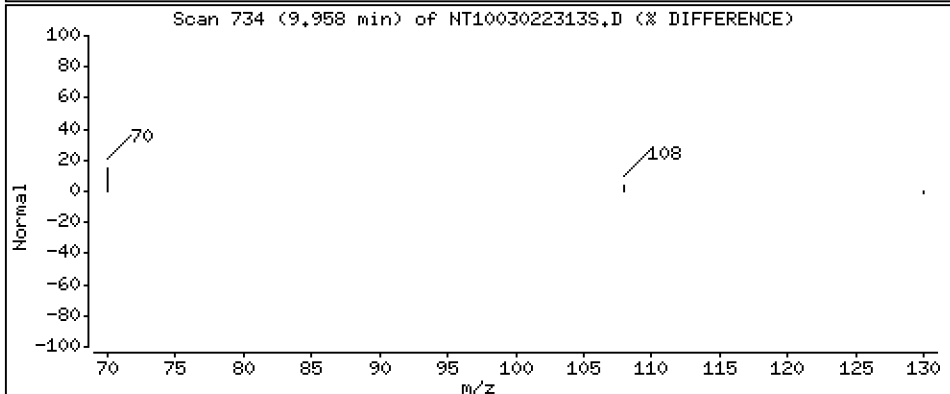
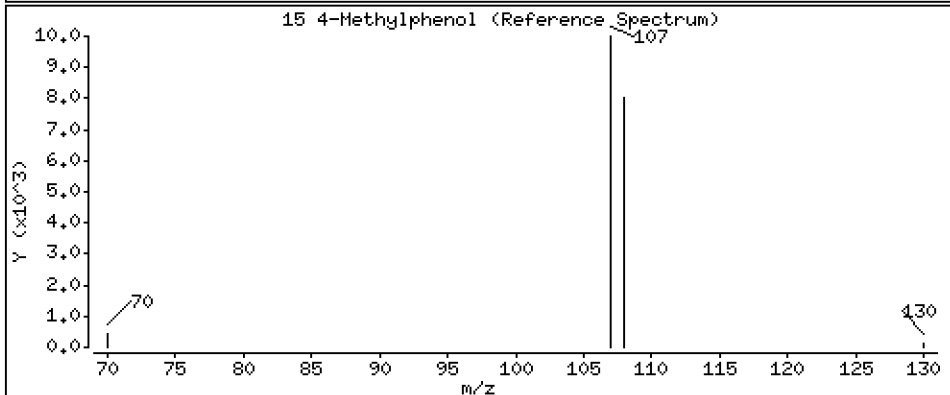
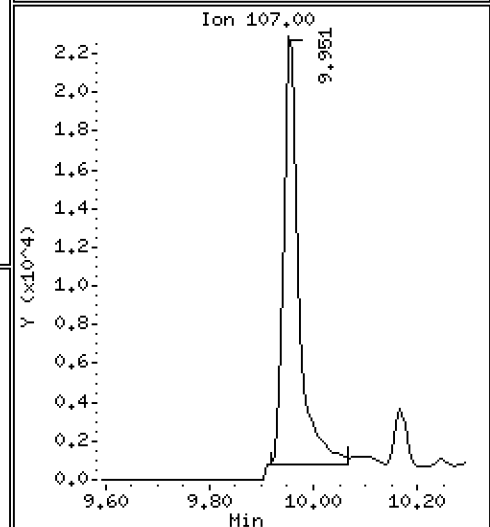
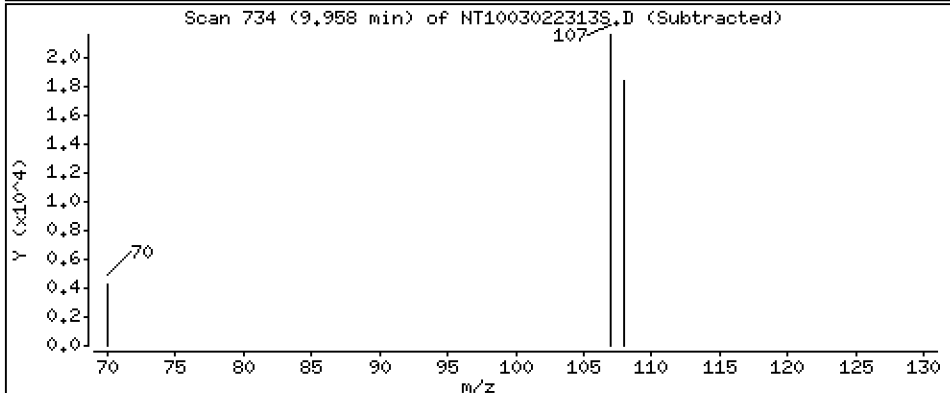
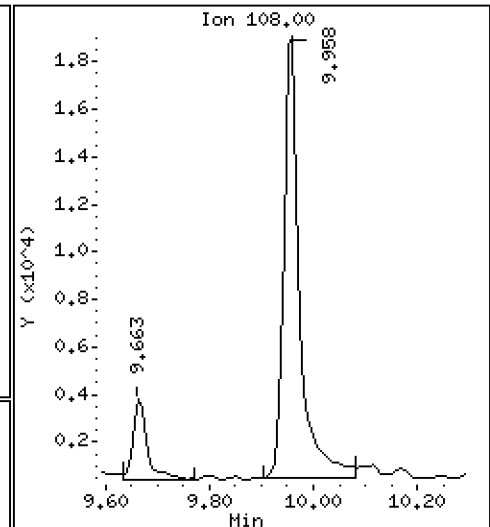
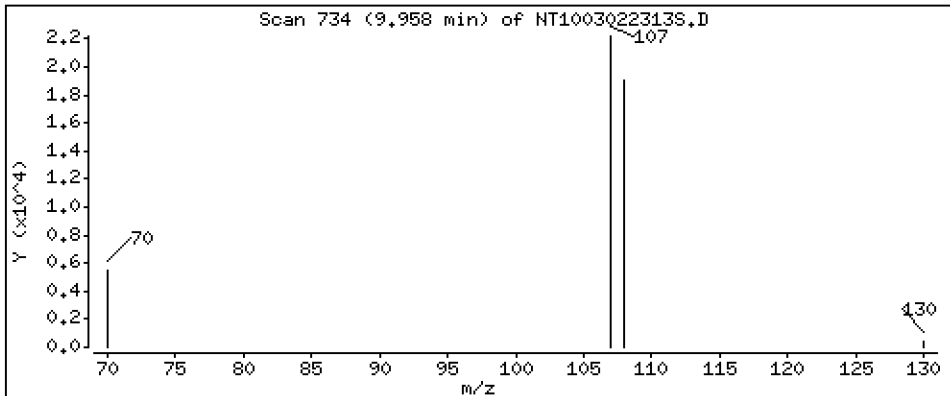
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1943 ug/L





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

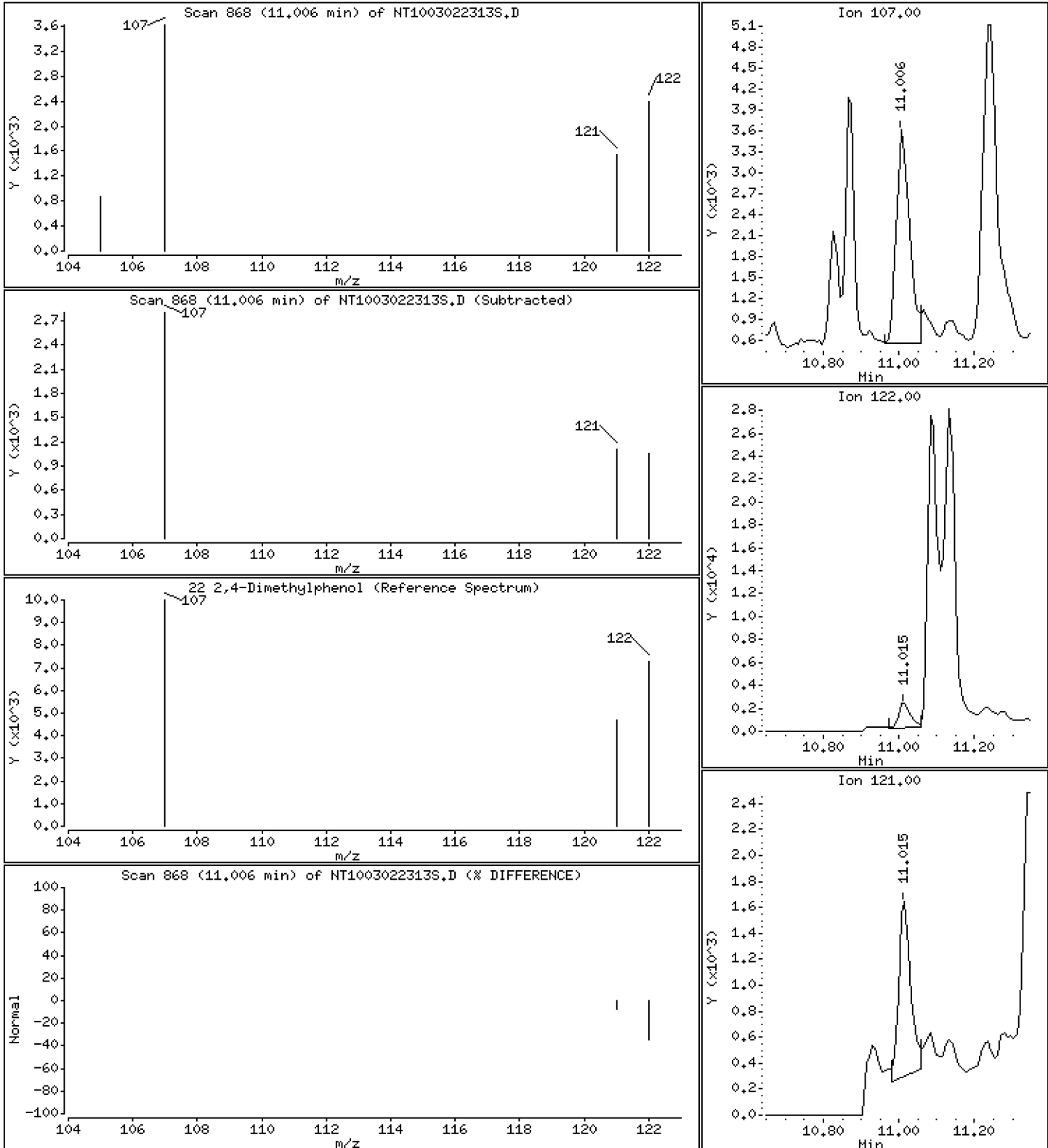
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.03231 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

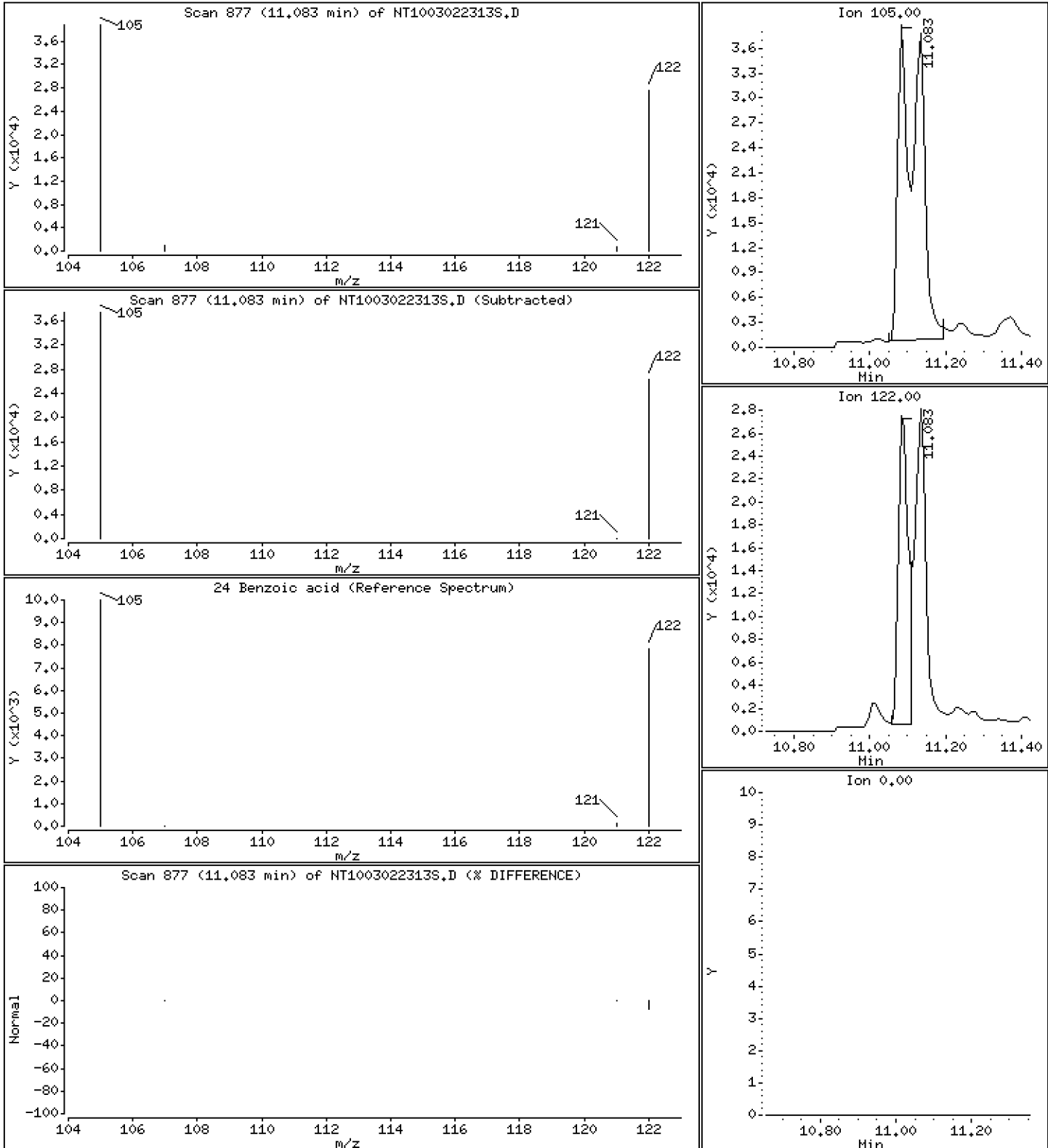
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1.095 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

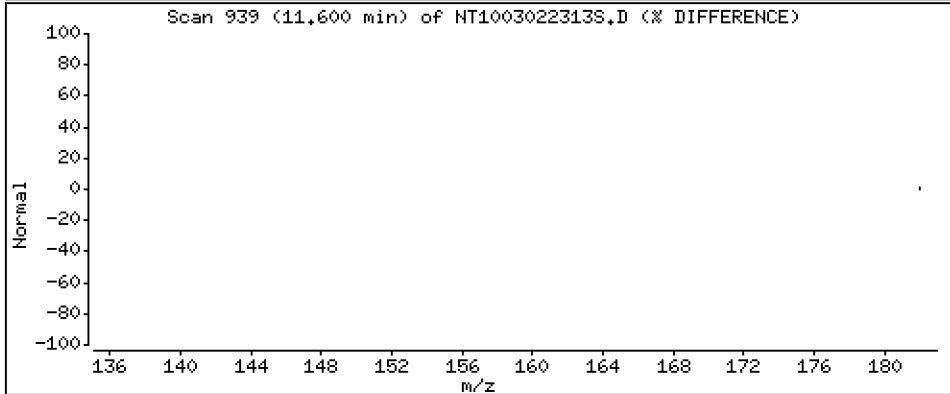
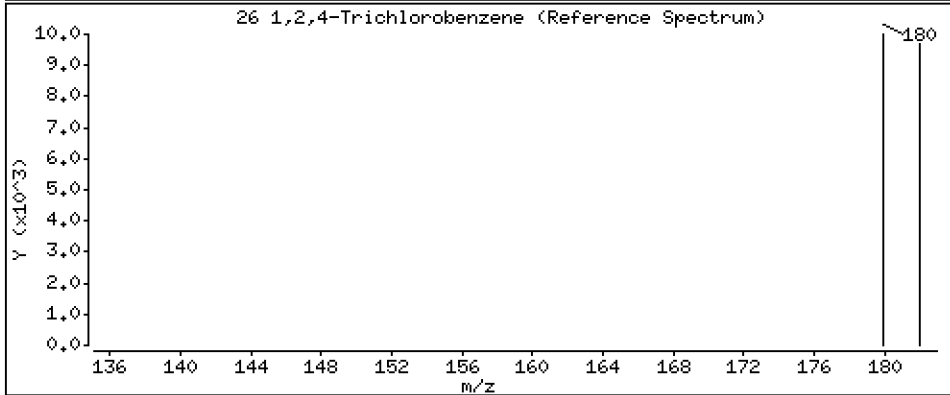
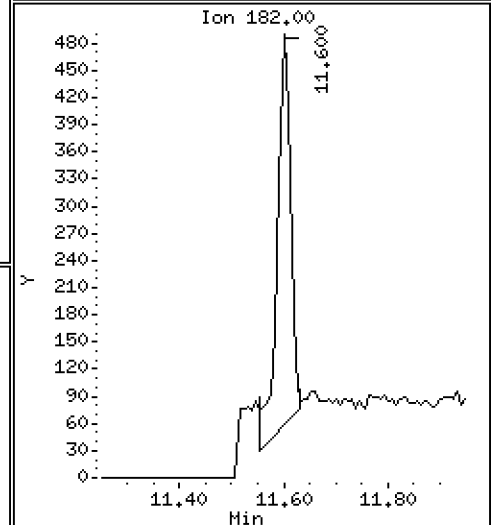
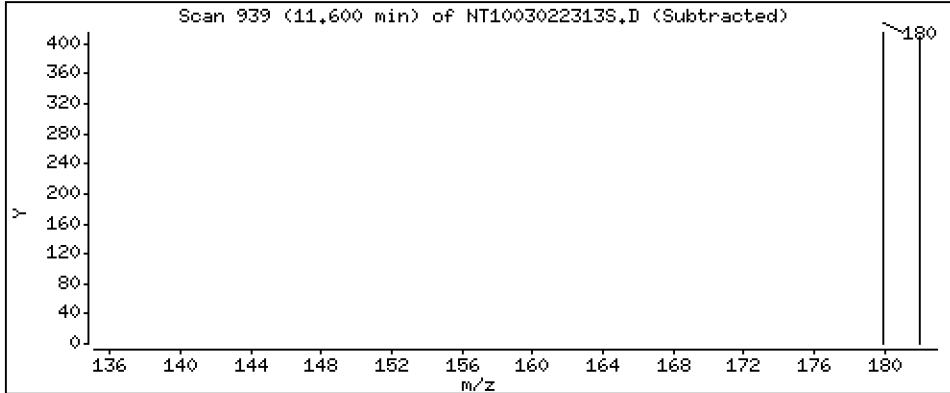
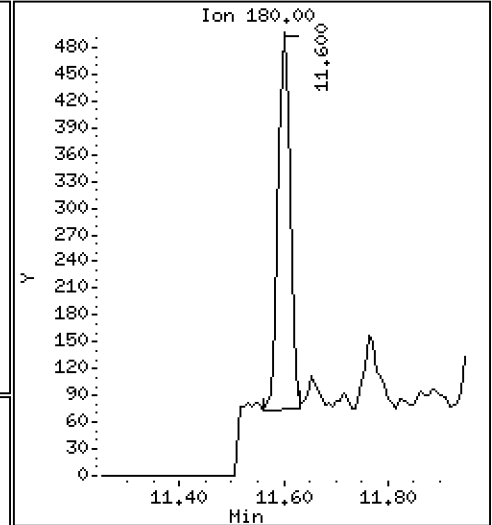
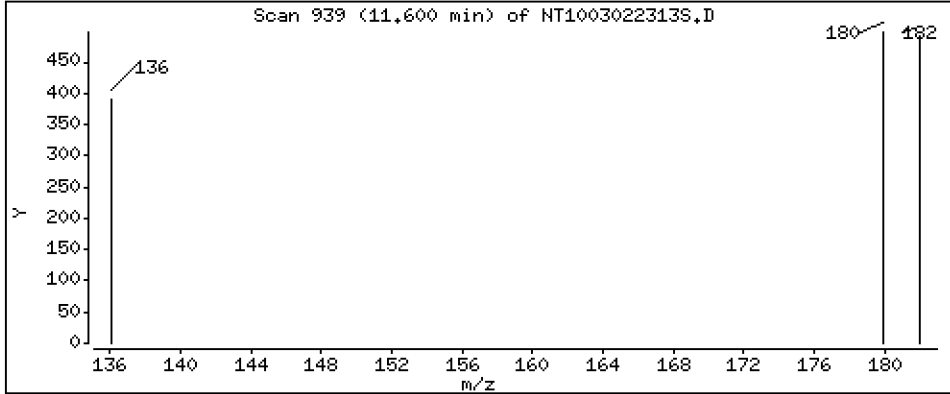
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,003214 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

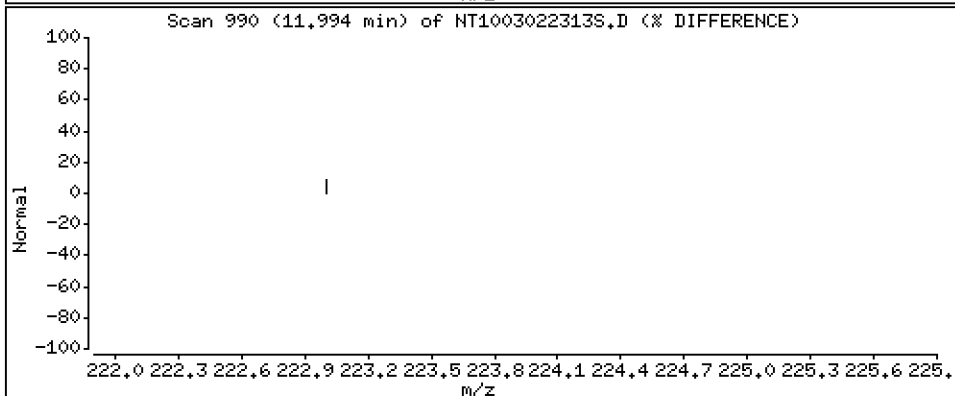
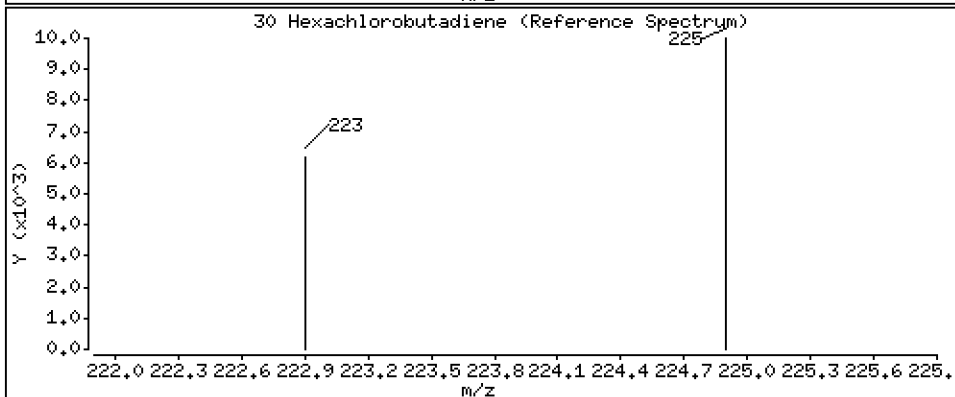
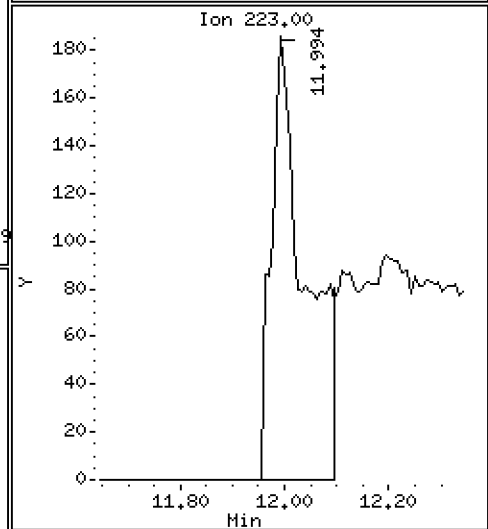
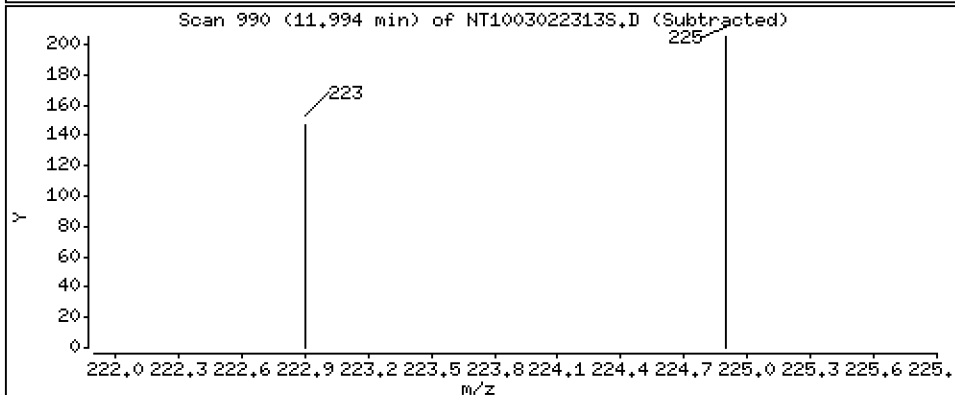
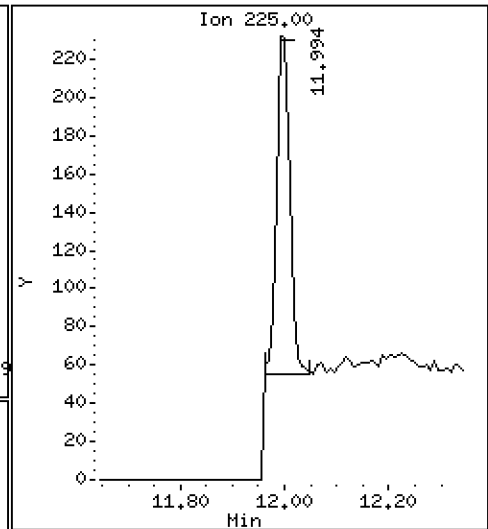
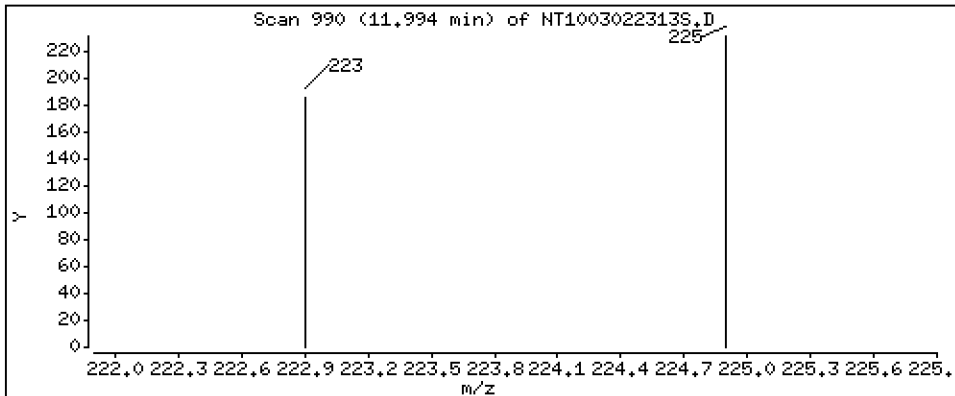
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,002122 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

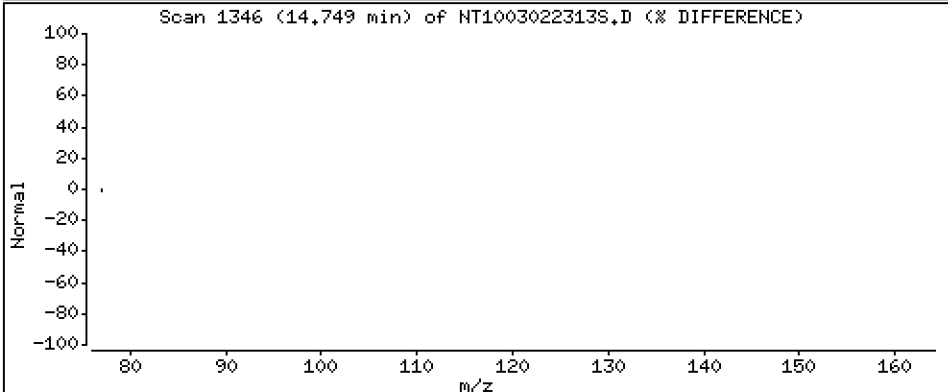
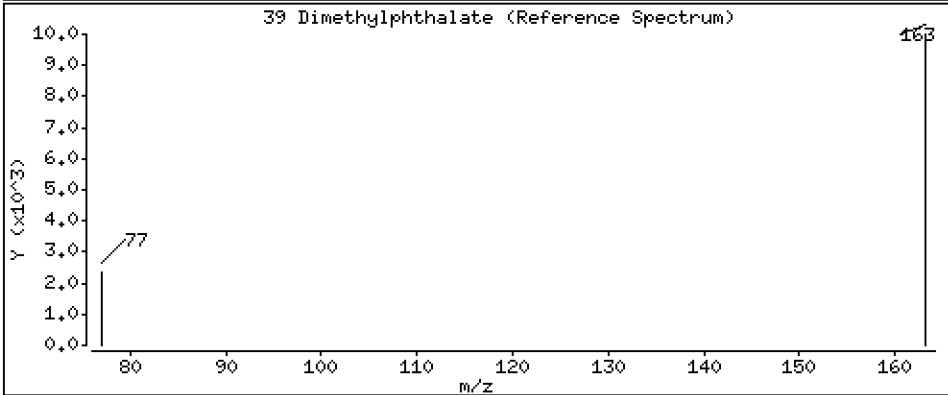
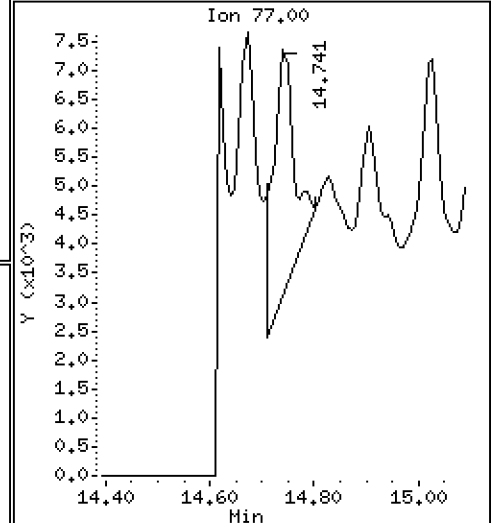
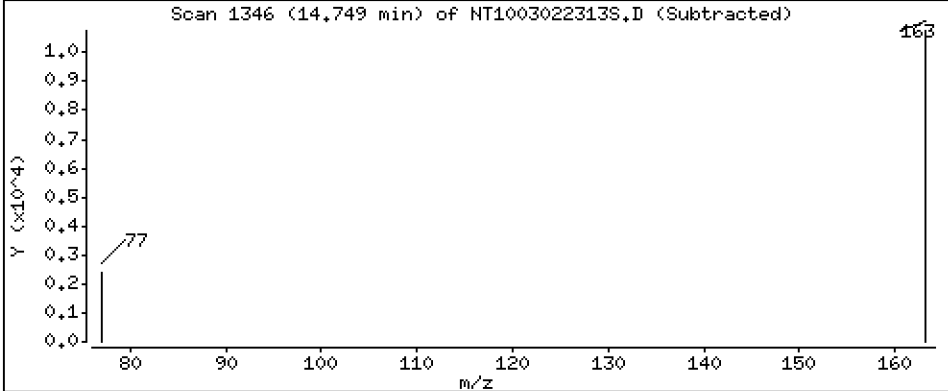
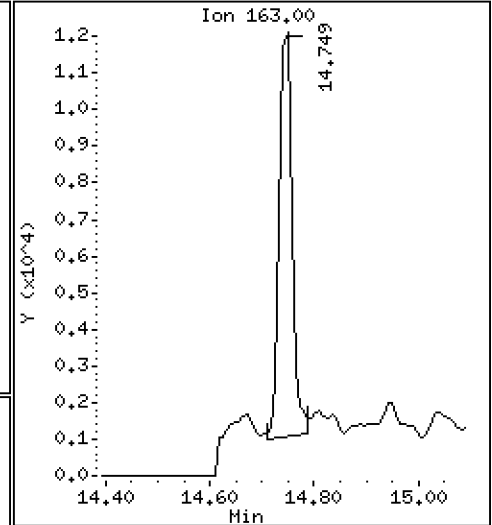
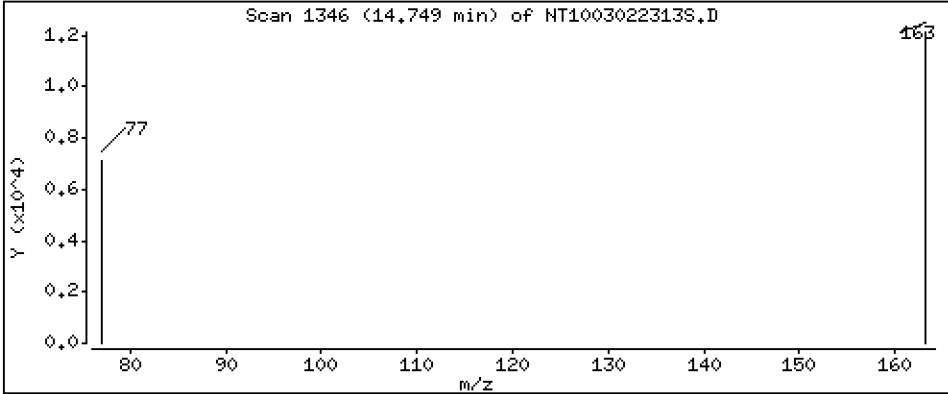
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.04326 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

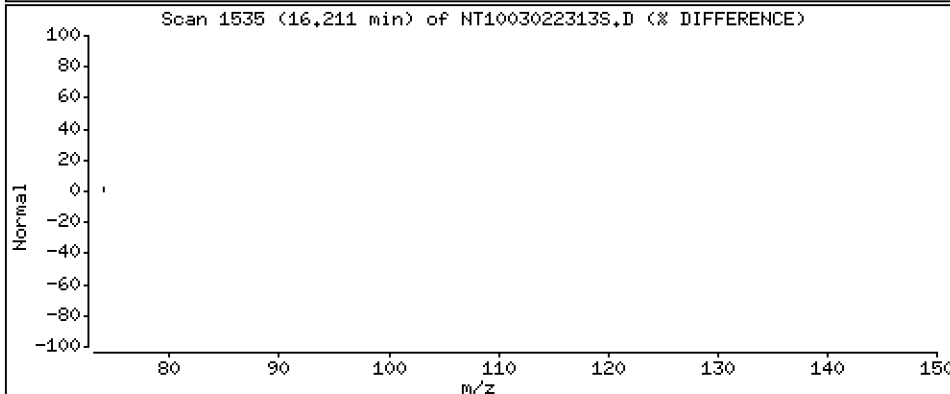
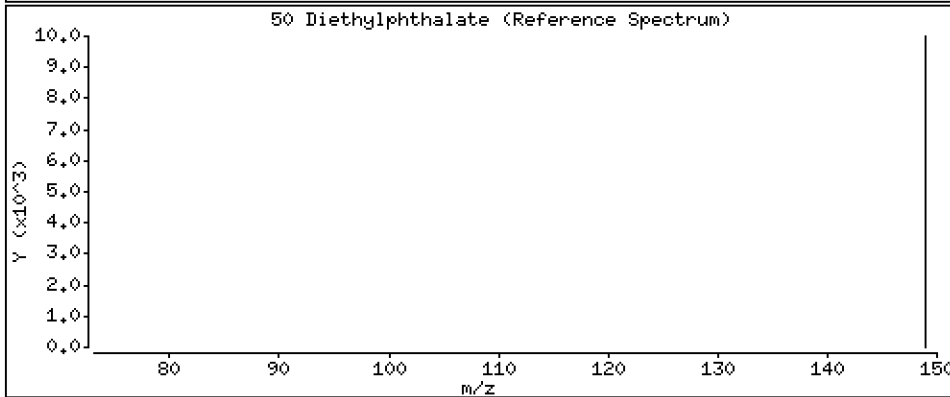
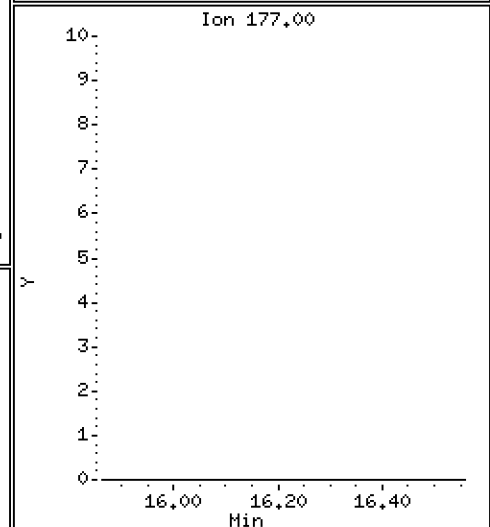
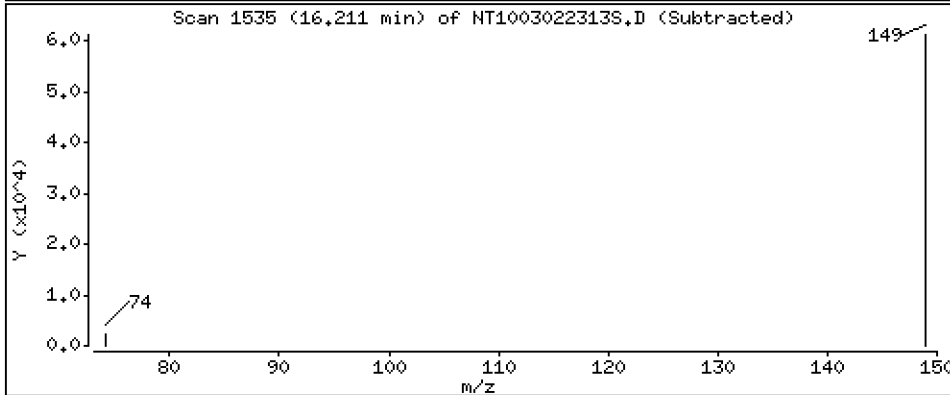
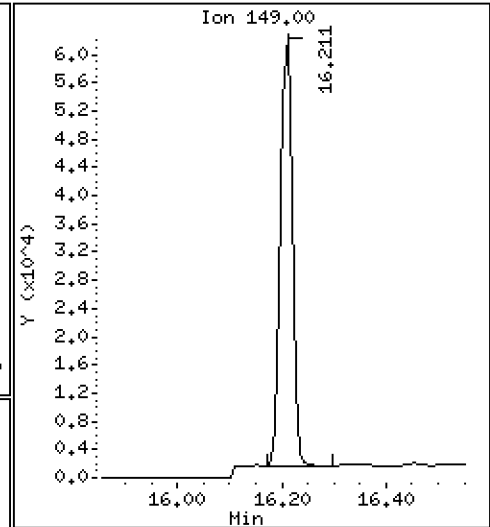
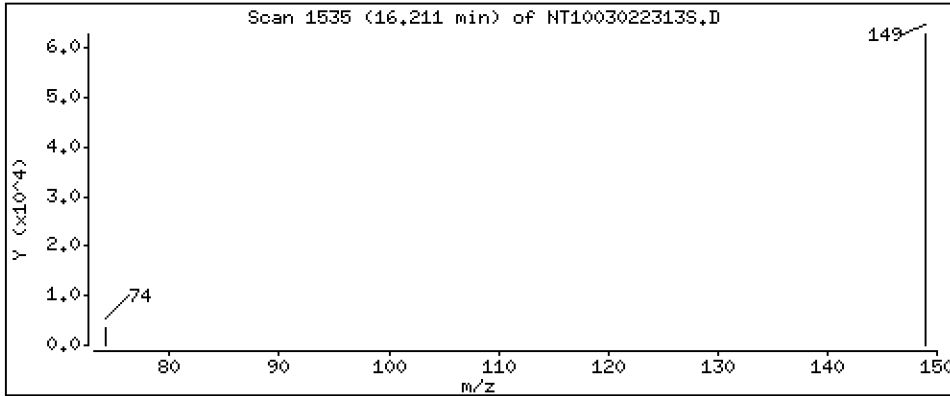
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2290 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

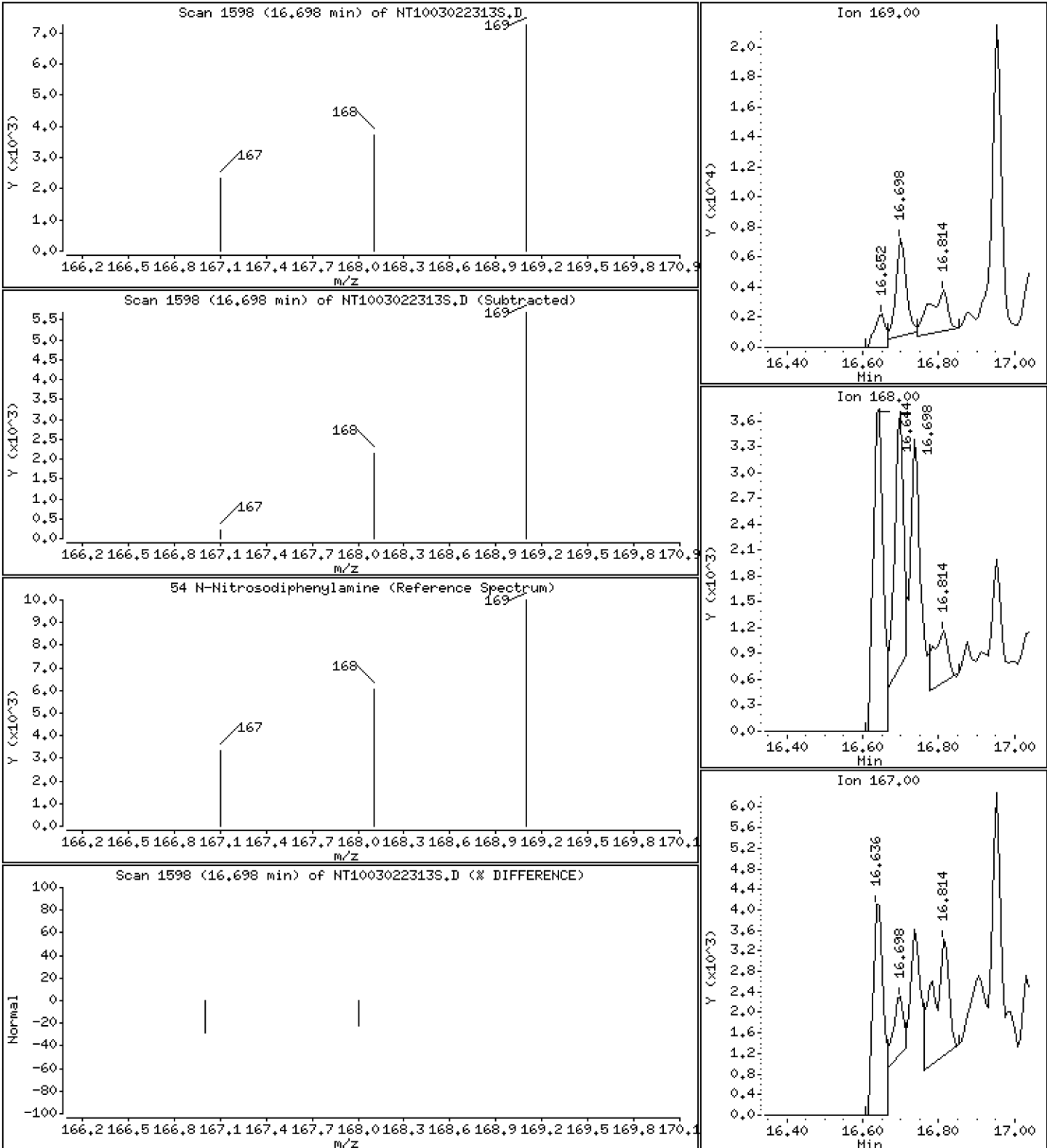
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.03138 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

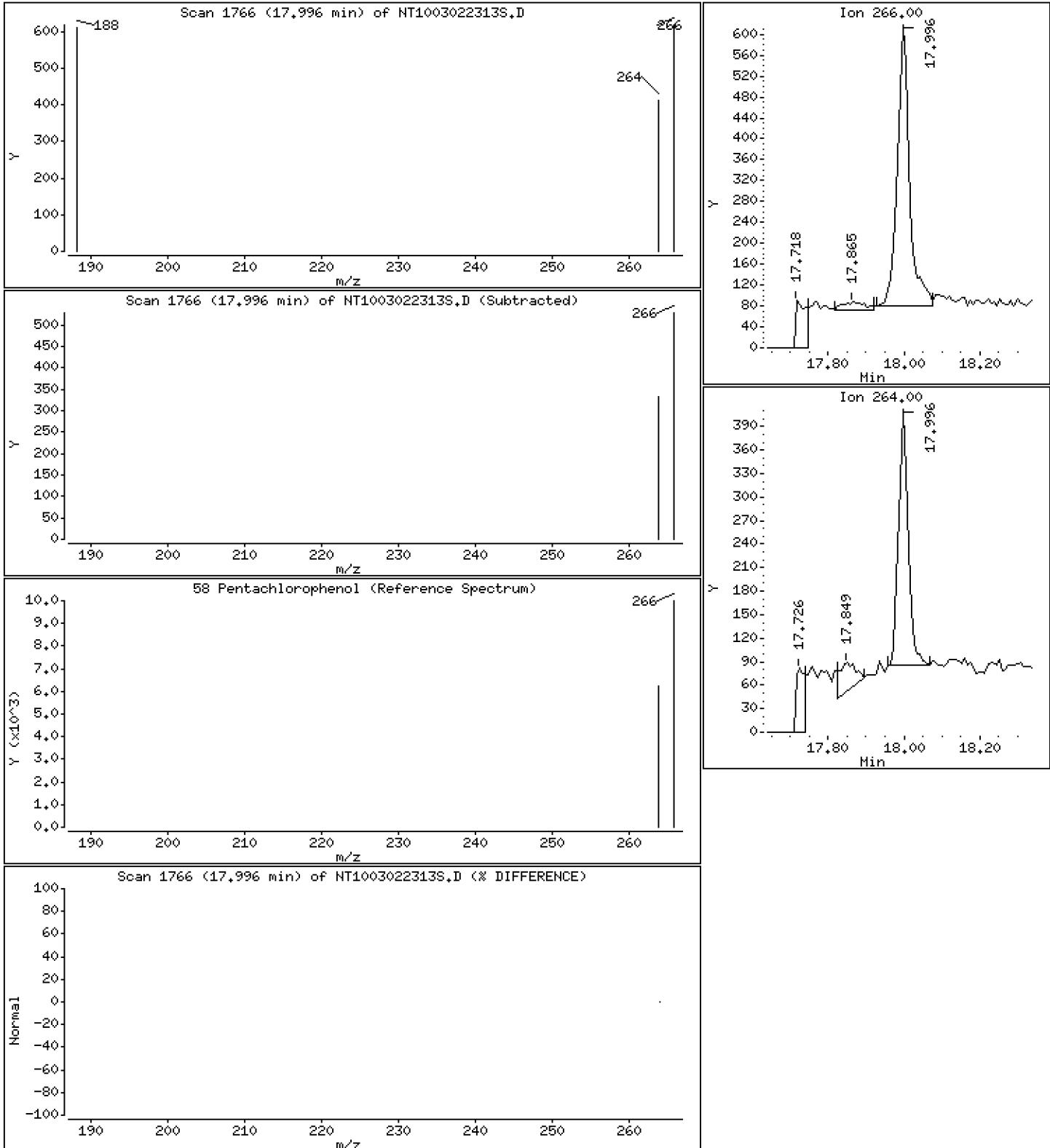
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,01442 ug/L





Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

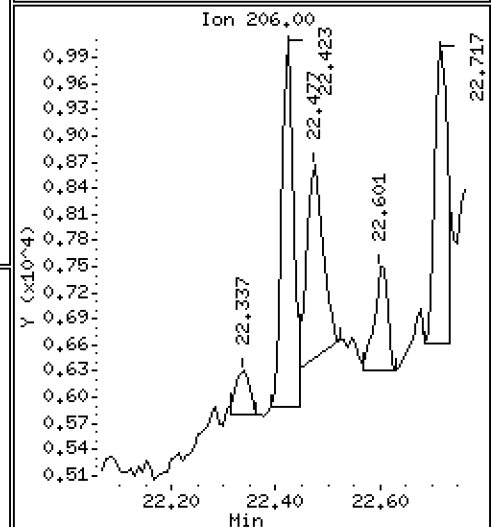
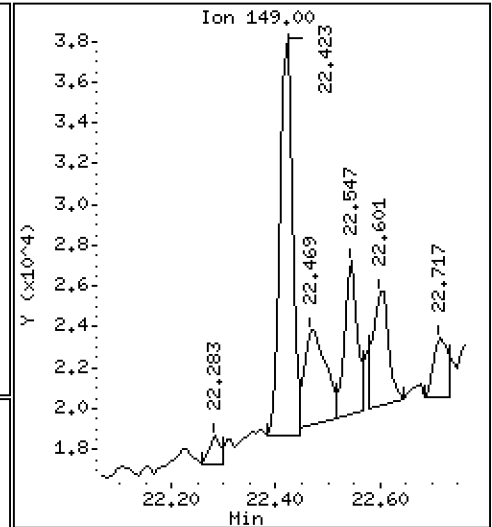
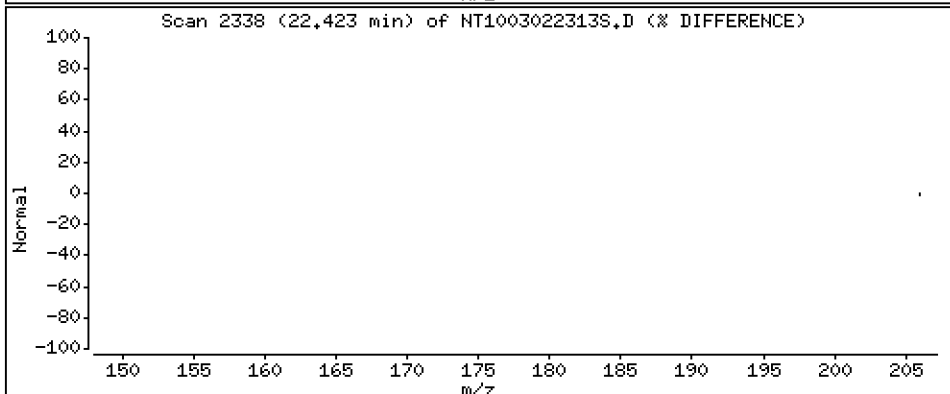
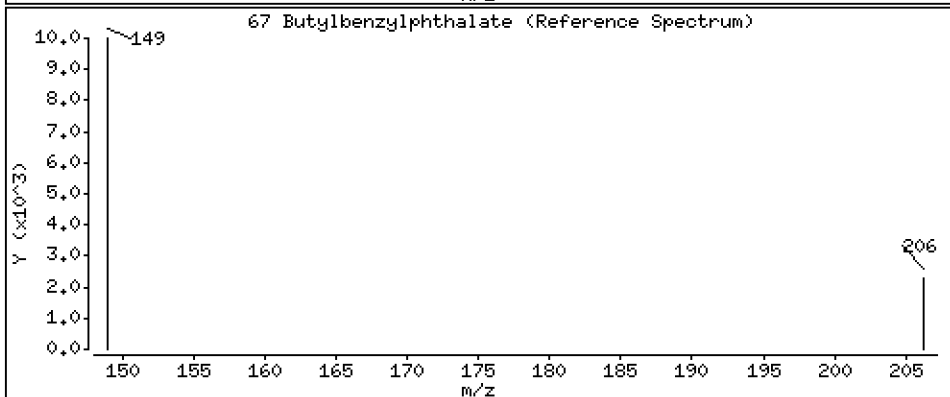
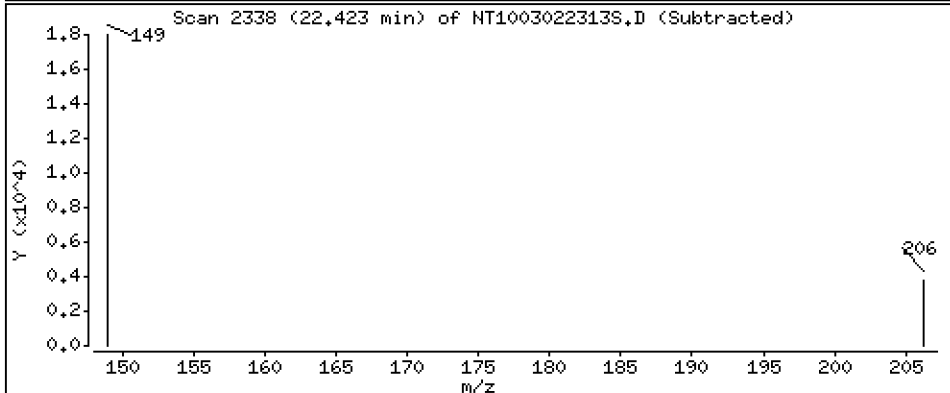
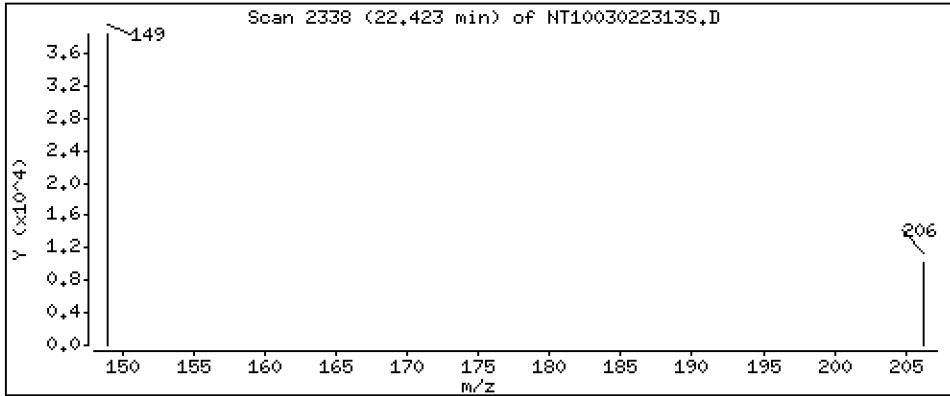
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.05989 ug/L



Date : 02-MAR-2023 22:00

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-02

Volume Injected (uL): 1.0

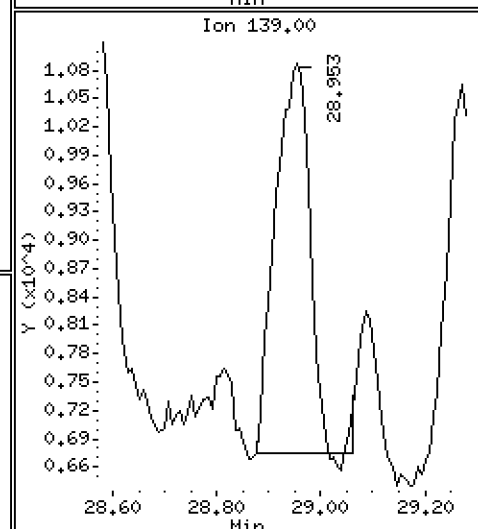
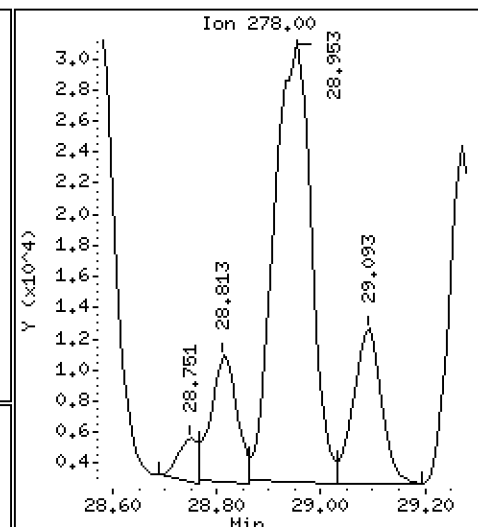
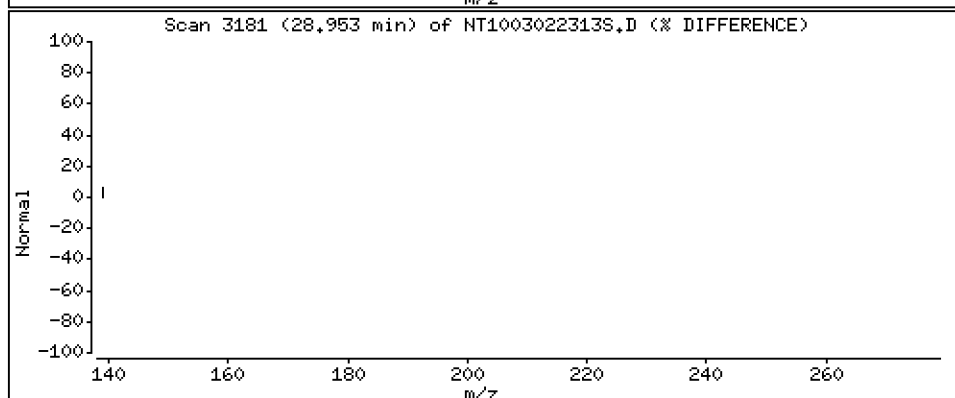
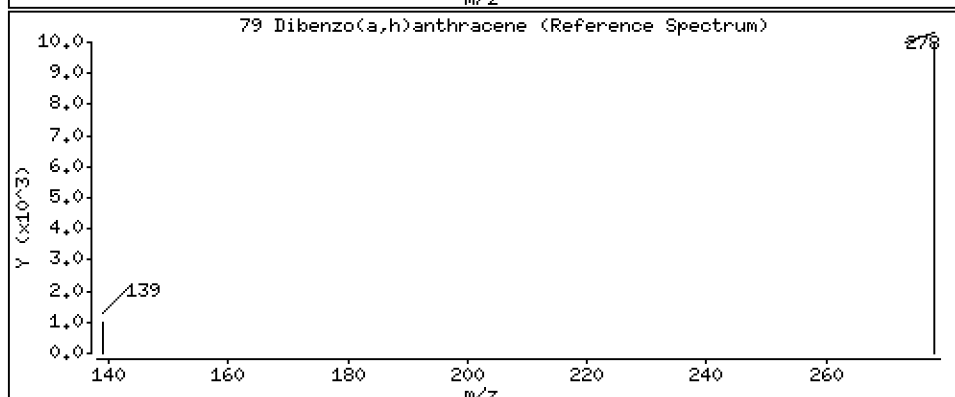
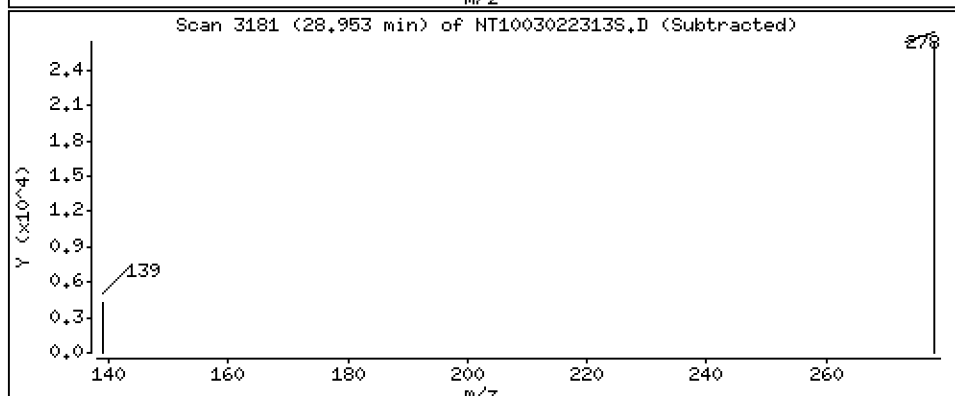
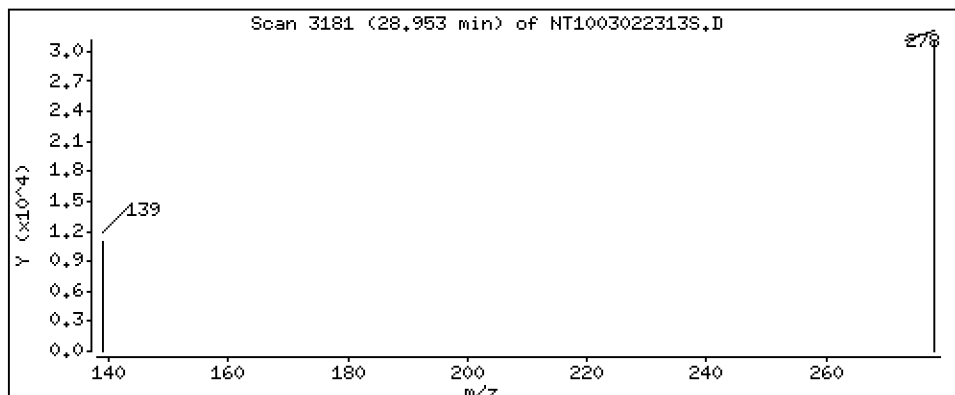
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1825 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022313S.D  
 Lab Smp Id: 23A0206-02  
 Inj Date : 02-MAR-2023 22:00 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-02  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 13  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.909	6.902 (0.747)		1434485	6.47493	6.475 (R)
3 Phenol	94		8.524	8.517 (0.921)		3268688	9.49868	9.499
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251 (1.000)		776003	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	79		9.484	9.476 (1.025)		59850	0.32914	0.3291 (M)
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.663	9.655 (1.044)		6574	0.03346	0.03346
15 4-Methylphenol	108		9.958	9.942 (1.076)		39768	0.19431	0.1943
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		7536	0.03231	0.03231 (M)
24 Benzoic acid	105		11.082	11.074 (0.945)		140751	1.09472	1.095 (M)
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		636	0.00321	0.003214 (M)
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2749439	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994 (1.023)		298	0.00212	0.002122 (M)
39 Dimethylphthalate	163		14.749	14.741 (0.963)		18169	0.04326	0.04326 (M)
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1322569	4.00000	
50 Diethylphthalate	149		16.210	16.203 (1.058)		90695	0.22901	0.2290
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		12640	0.03138	0.03138
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.996	17.988	(0.977)	1189	0.01442	0.01442
* 59 Phenanthrene-d10	188		18.414	18.406	(1.000)	2488804	4.00000	
\$ 66 Terphenyl-d14	244		21.539	21.532	(0.919)	1237034	4.99735	4.997(R)
67 Butylbenzylphthalate	149		22.422	22.414	(0.957)	30951	0.05989	0.05989
* 69 Chrysene-d12	240		23.429	23.421	(1.000)	3061061	4.00000	
* 77 Perylene-d12	264		26.131	26.115	(1.000)	3330660	4.00000	
79 Dibenzo(a,h)anthracene	278		28.953	28.929	(1.108)	141108	0.18251	0.1825
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022313S.D  
 Lab Smp Id: 23A0206-02  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	776003	57.27
27 Naphthalene-d8	1779056	889528	3558112	2749439	54.54
42 Acenaphthene-d10	954569	477285	1909138	1322569	38.55
59 Phenanthrene-d10	1596290	798145	3192580	2488804	55.91
69 Chrysene-d12	1649110	824555	3298220	3061061	85.62
77 Perylene-d12	1901958	950979	3803916	3330660	75.12

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022313S.D

Lab ID: 23A0206-02

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 22:00

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

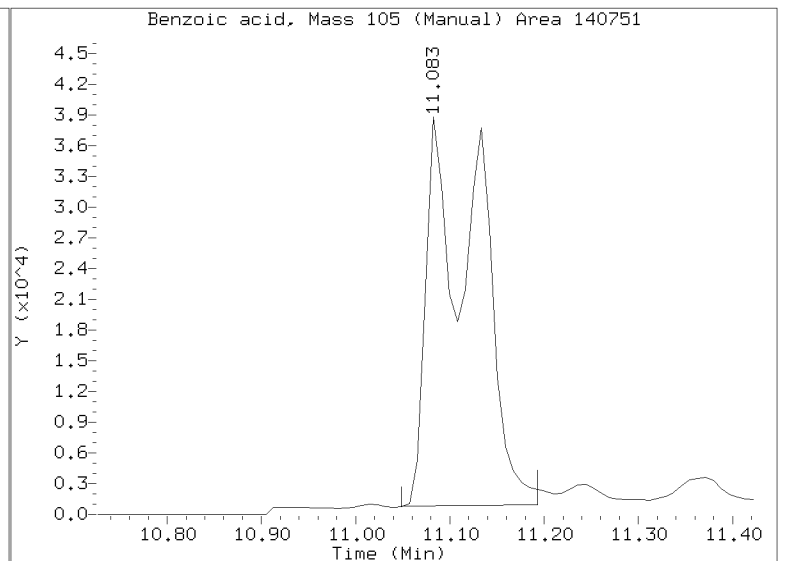
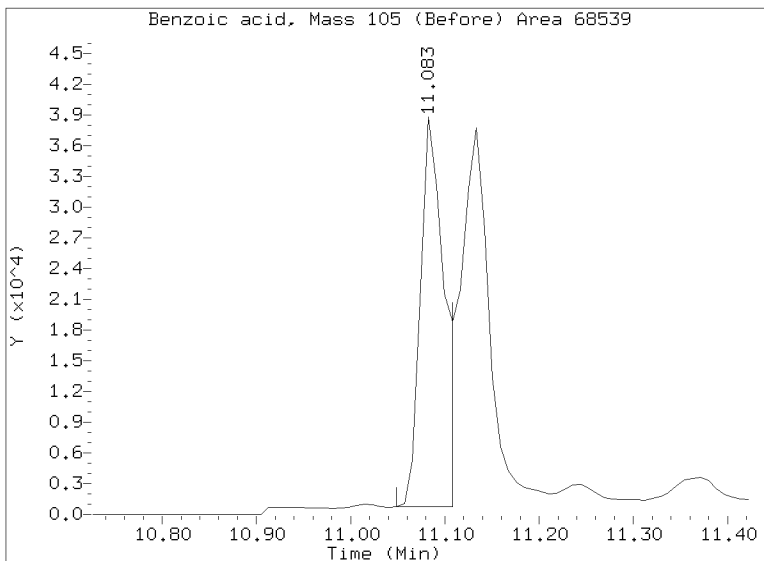
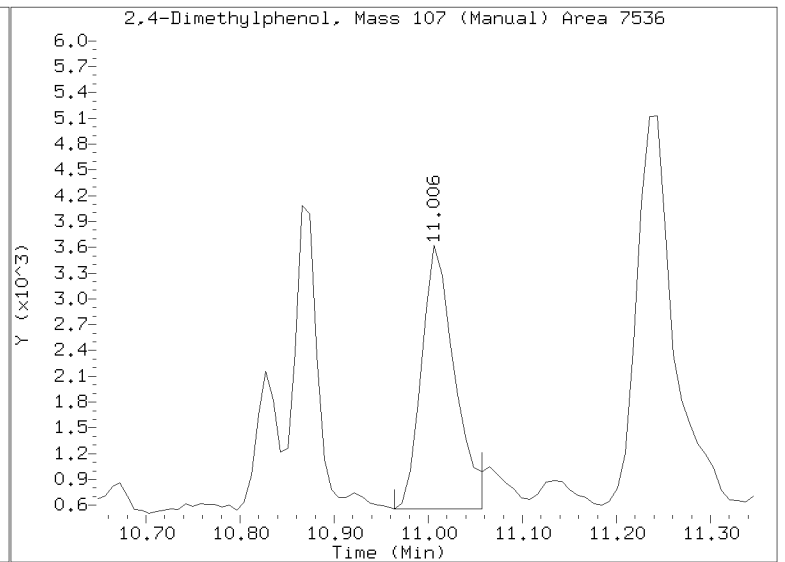
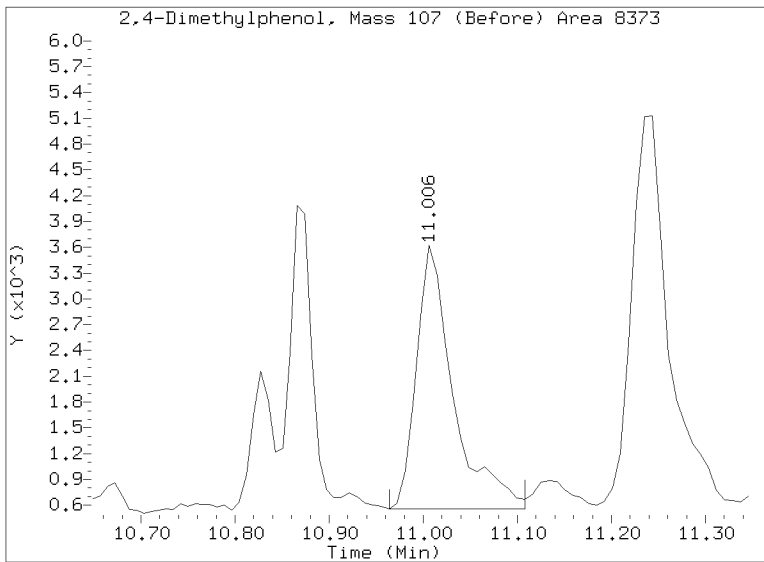
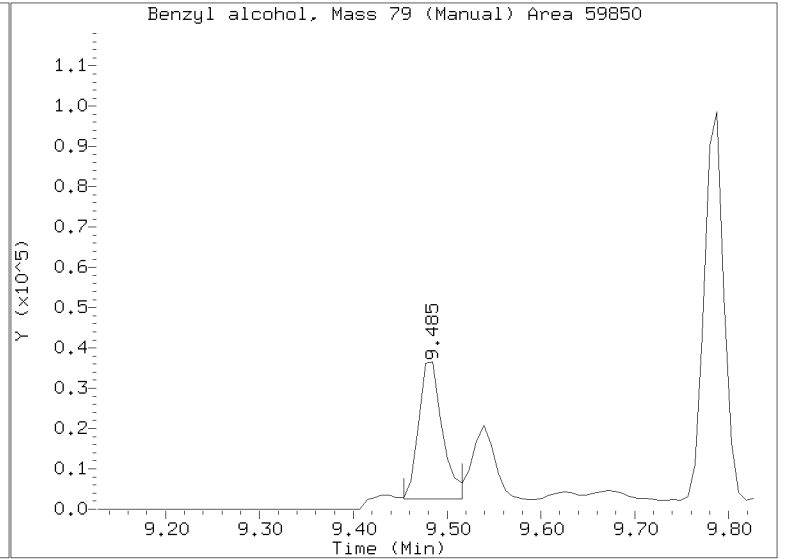
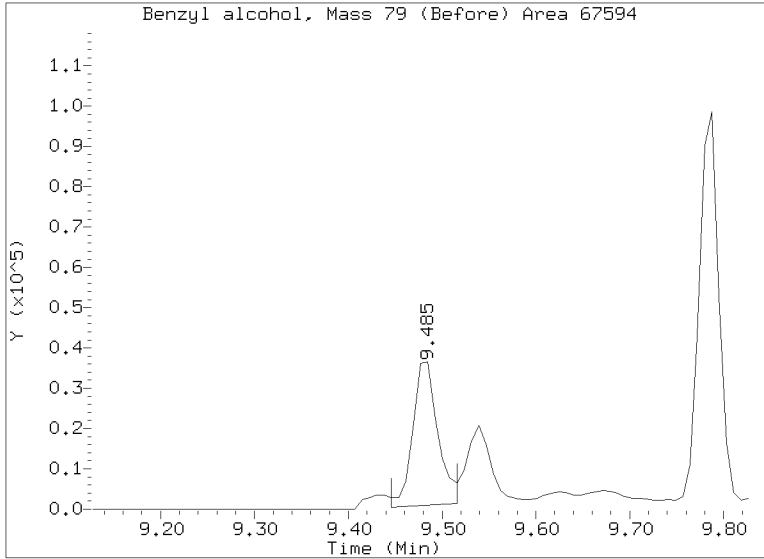
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

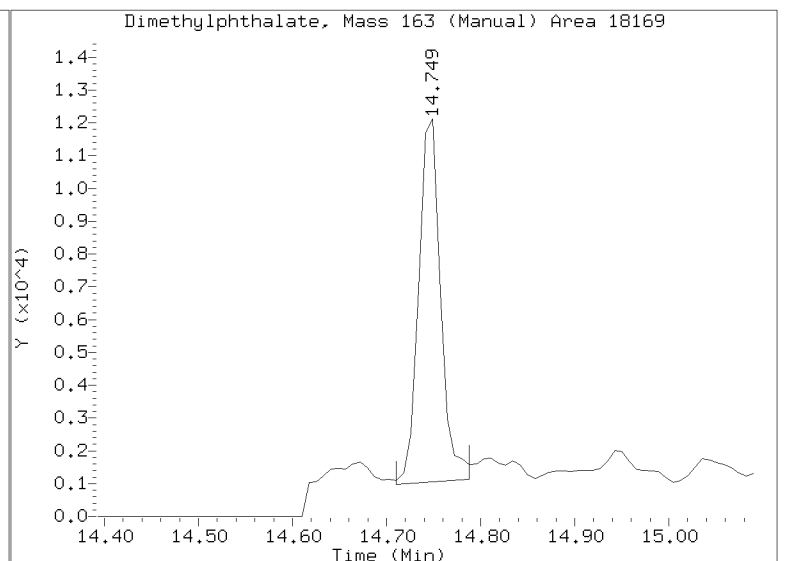
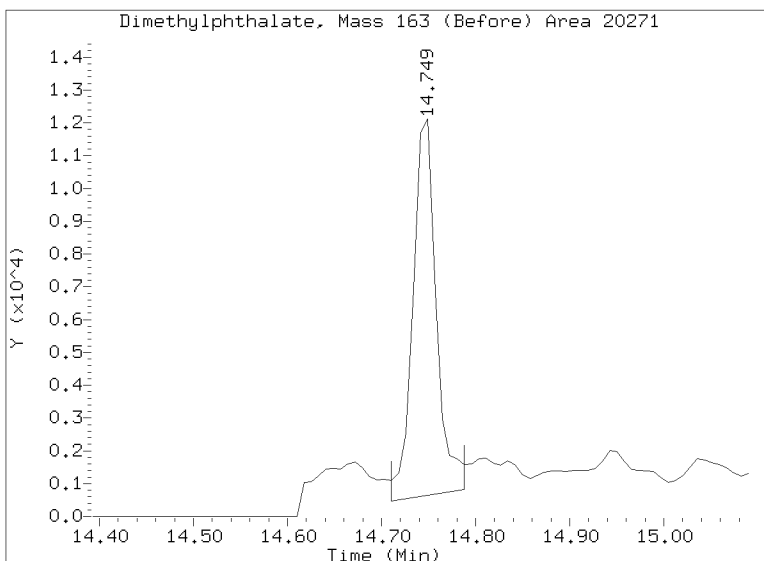
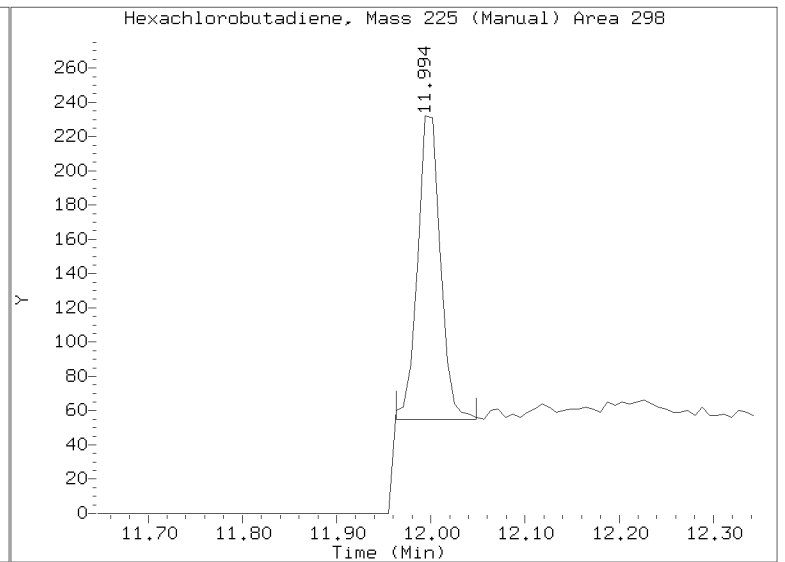
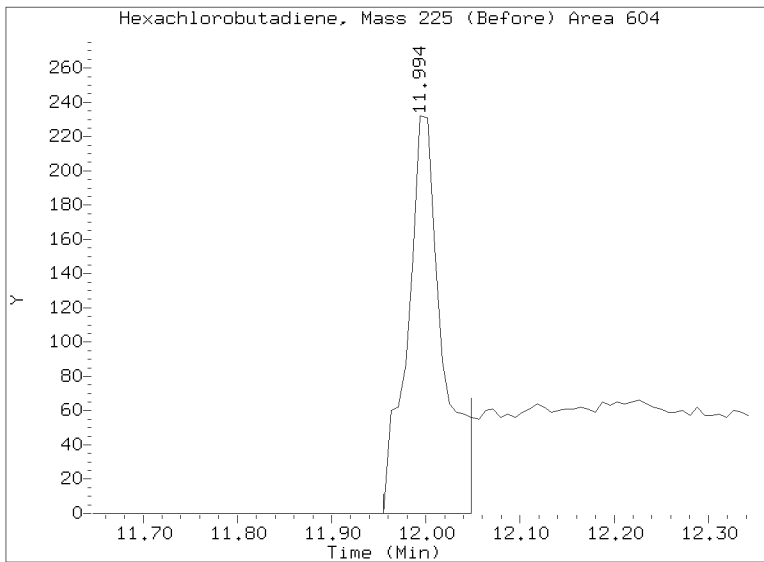
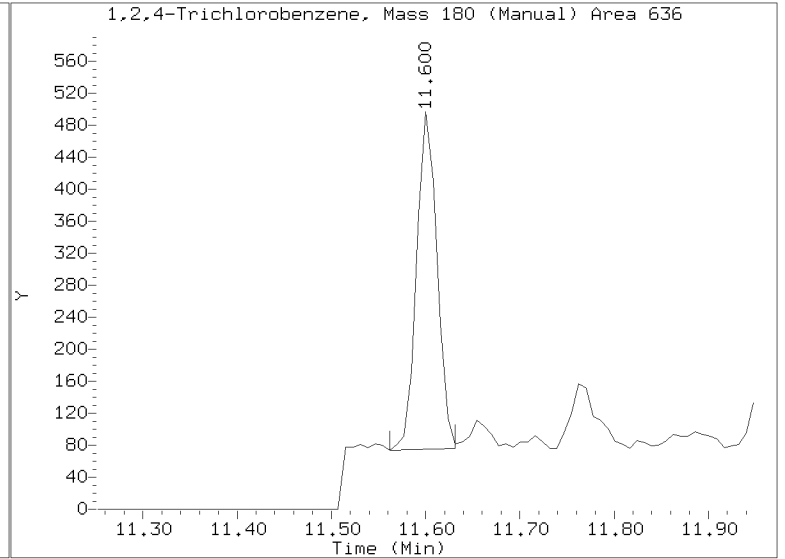
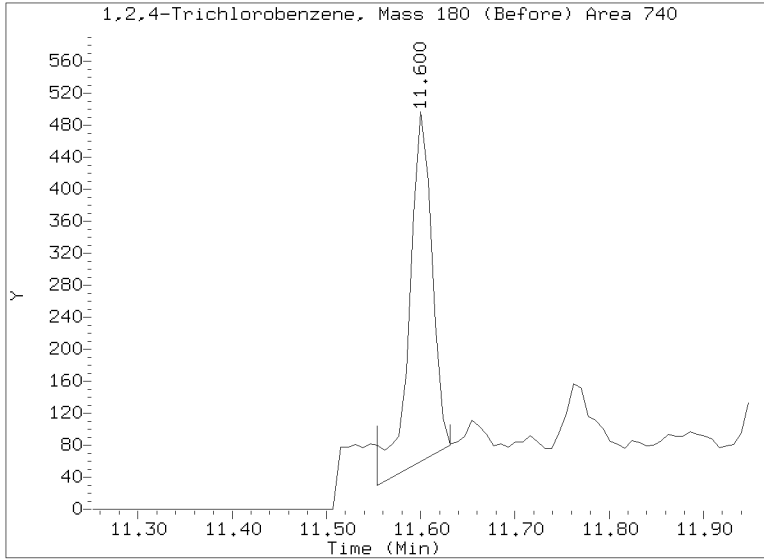
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/SIM.b/NT1003022313S.D  
Injection Date: 02-MAR-2023 22:00  
Lab ID:23A0206-02 Client ID:  
Report Date: 03/11/2023 06:03



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/SIM.b/NT1003022313S.D  
Injection Date: 02-MAR-2023 22:00  
Lab ID:23A0206-02 Client ID:  
Report Date: 03/11/2023 06:03







**Form I**  
**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8270E-SIM**  
**SIM SVOC Organics (Dual scan list)**

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-03 B

SDG: 23A0206

Sampled: 01/11/23 09:18

Prepared: 01/27/23 14:44

File ID: NT1003022318S.D

% Solids: 48.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:10

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 20.72 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

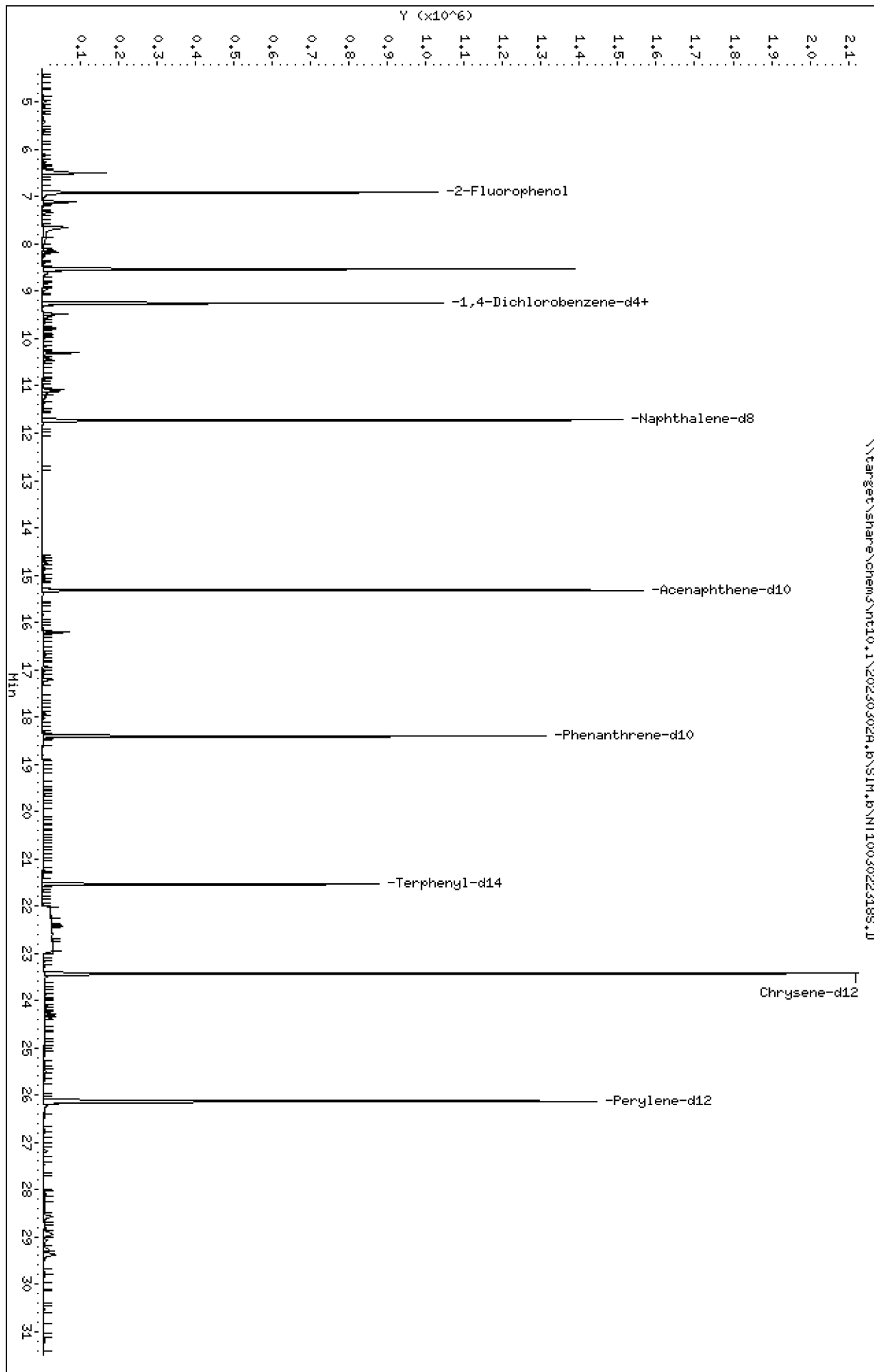
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.0	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	44.8		2.5	20.0
65-85-0	Benzoic acid	1	94.4	J	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	2.5	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	2.3	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.80	659	88.0	27 - 120	
p-Terphenyl-d14	499.20	484	97.0	37 - 120	

Data File: \\target\share\chem3\nt10.1\202303028,b\SIM,b\NT10030223189.D  
Date : 03-MAR-2023 01:10  
Client ID:  
Sample Info: 23A0206-03  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028,b\SIM,b\NT10030223189.D



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

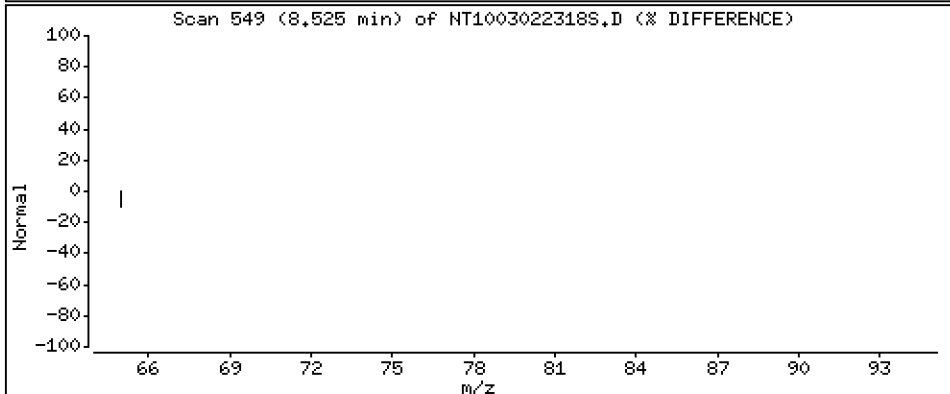
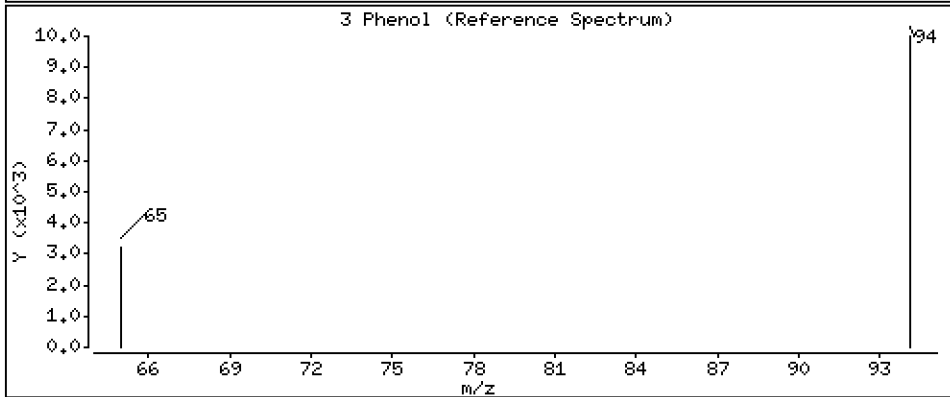
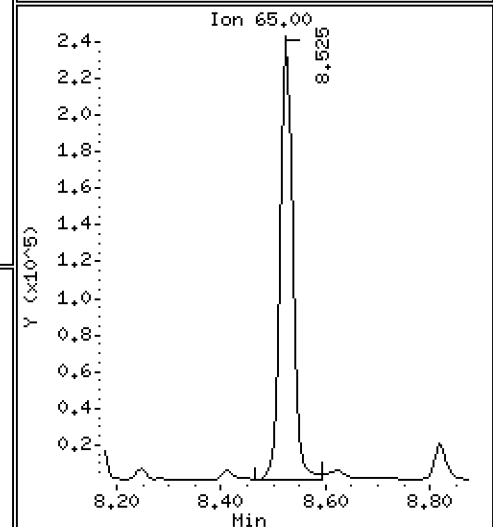
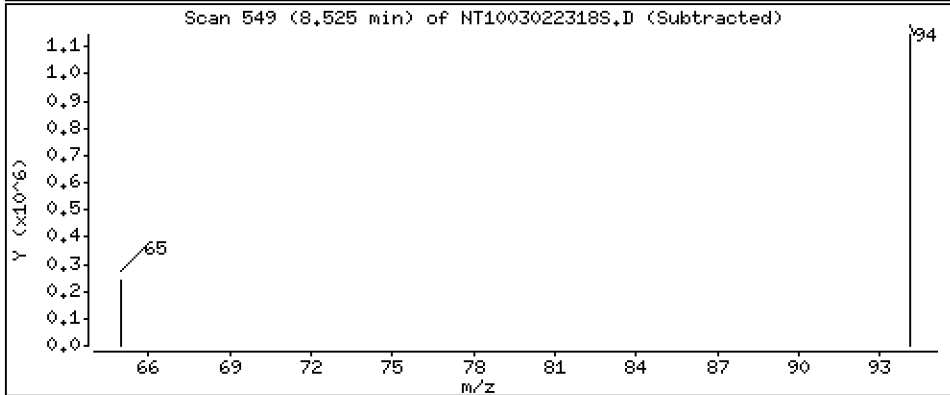
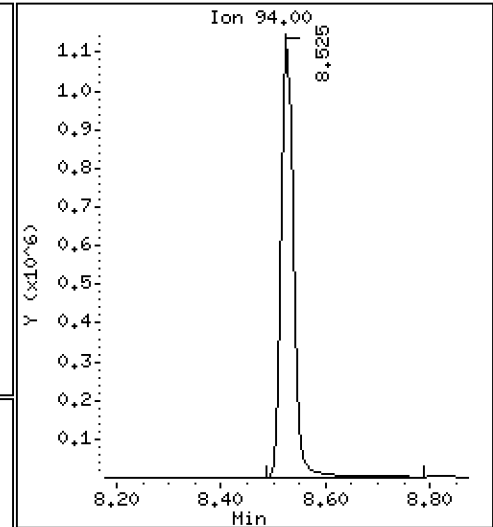
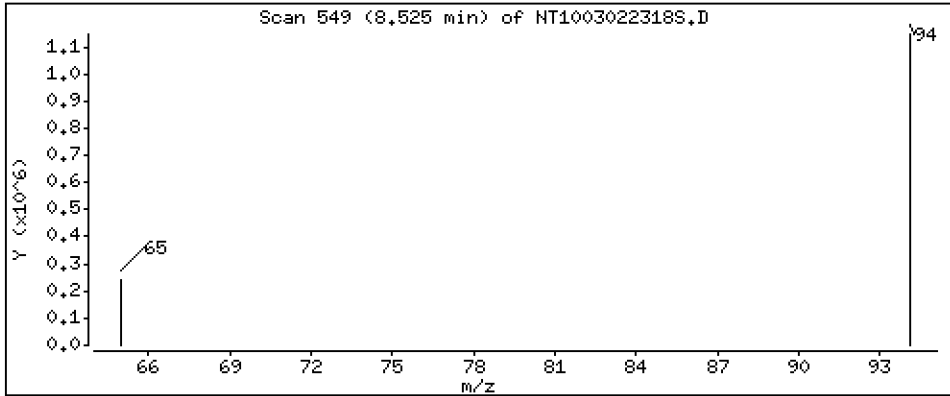
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 6.376 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

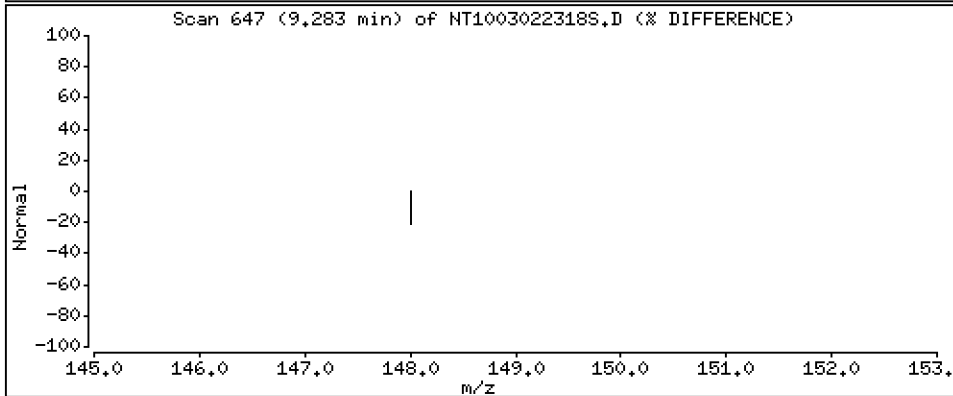
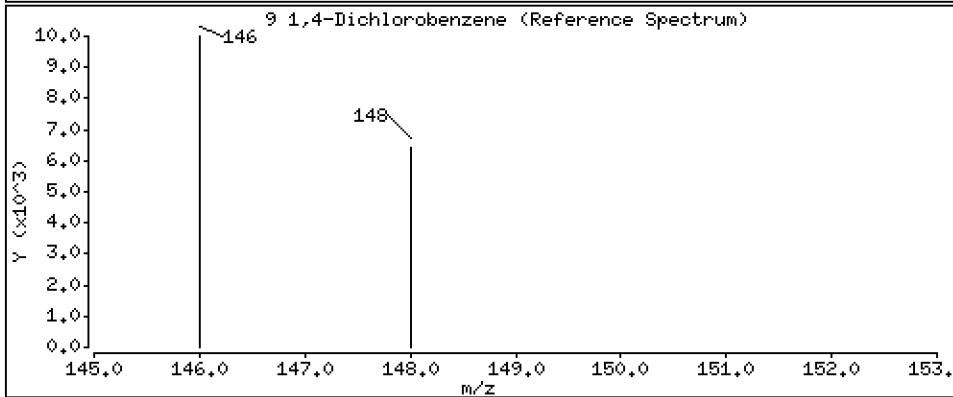
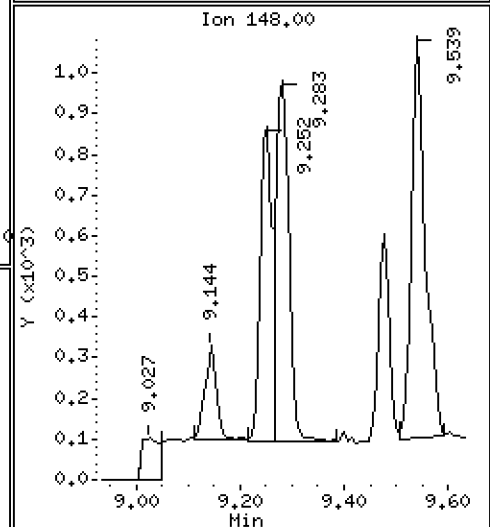
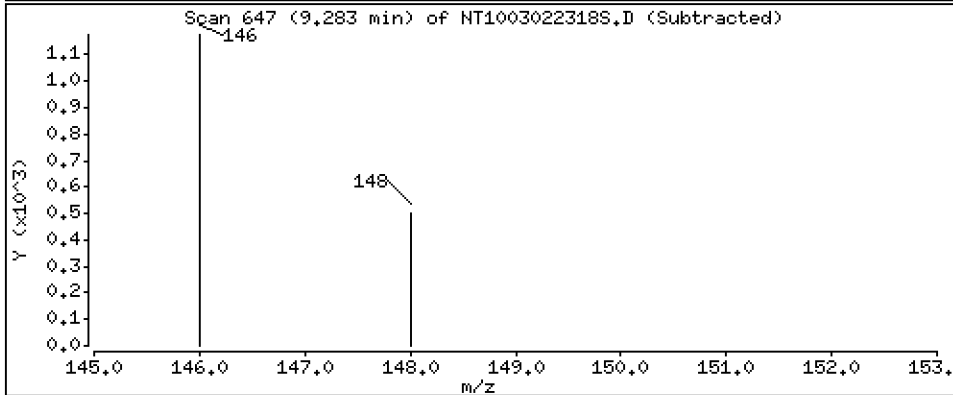
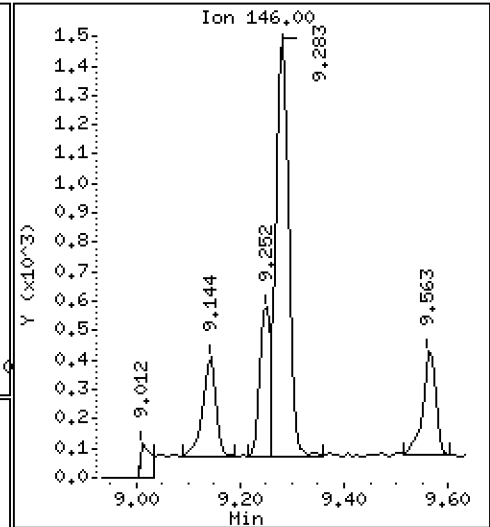
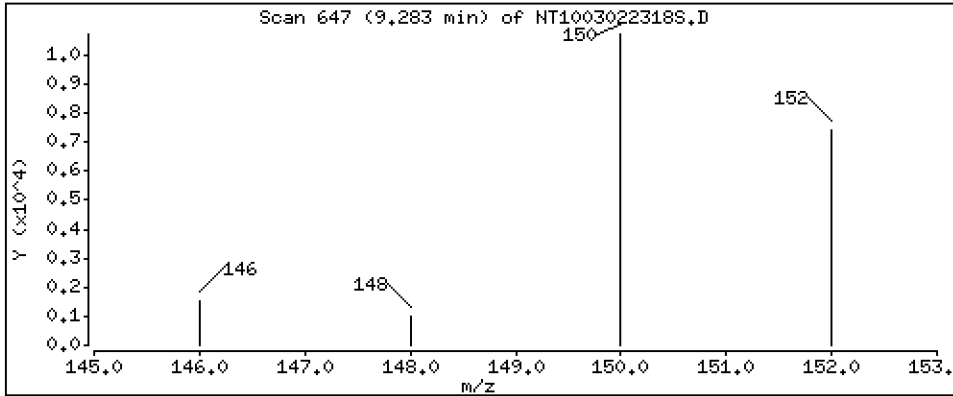
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9,1,4-Dichlorobenzene

Concentration: 0.01035 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

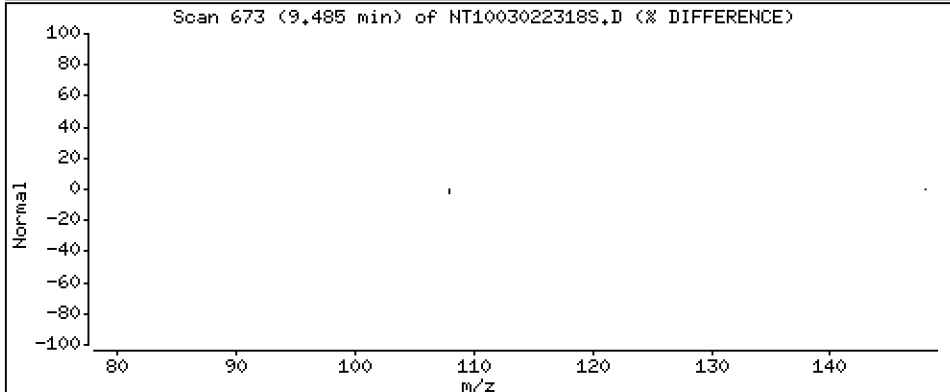
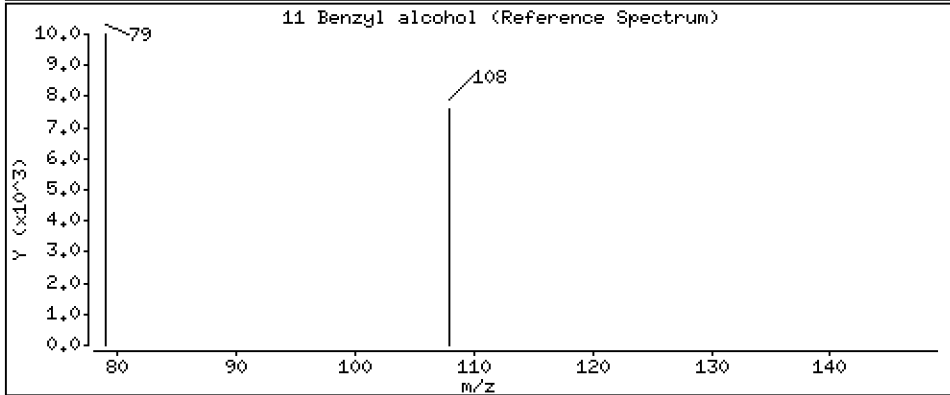
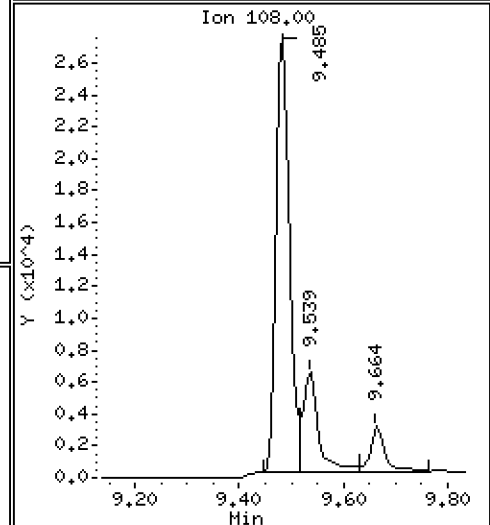
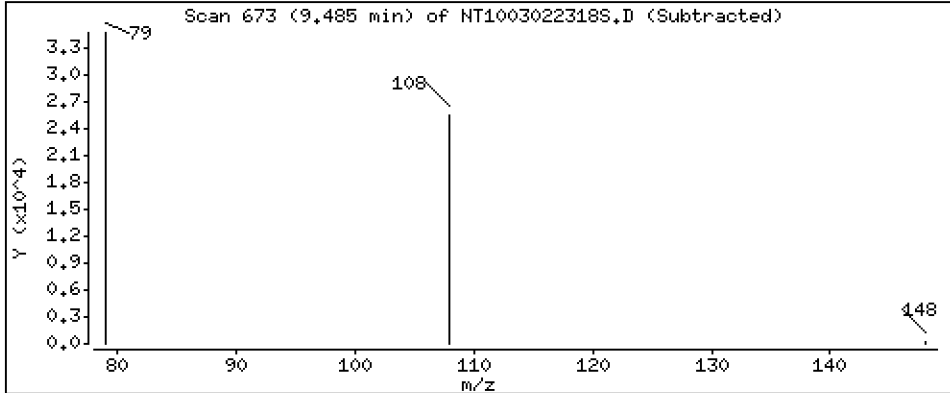
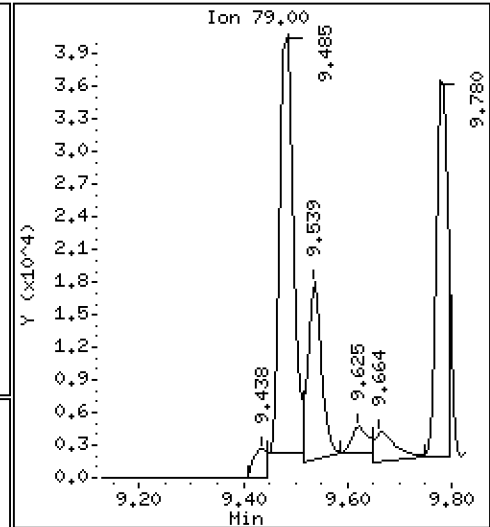
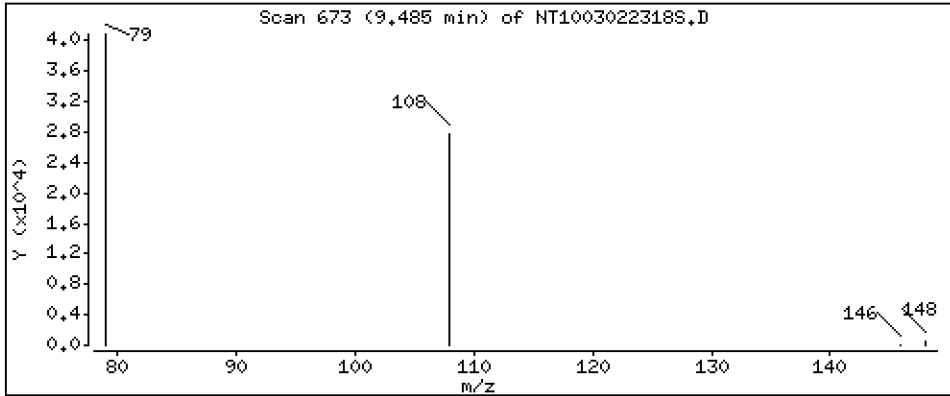
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.4488 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

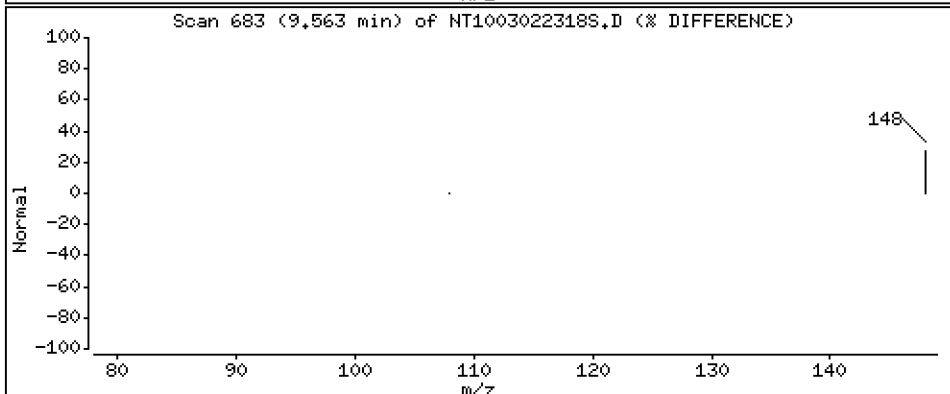
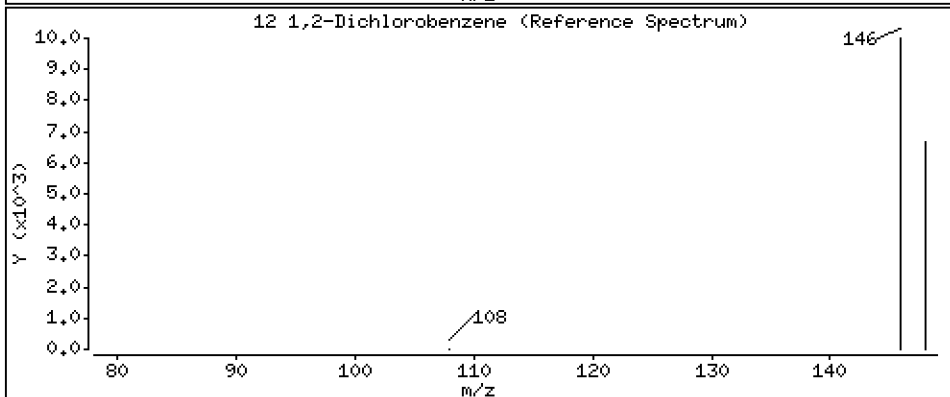
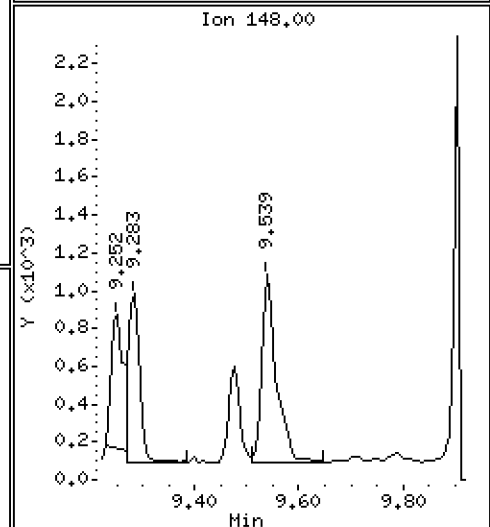
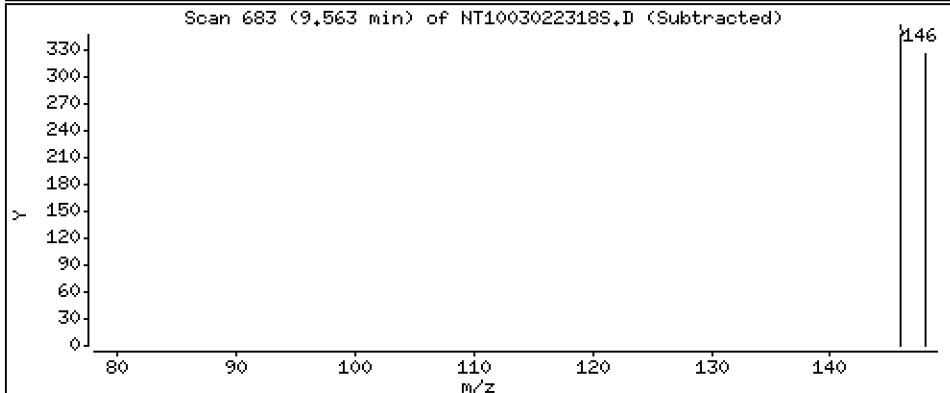
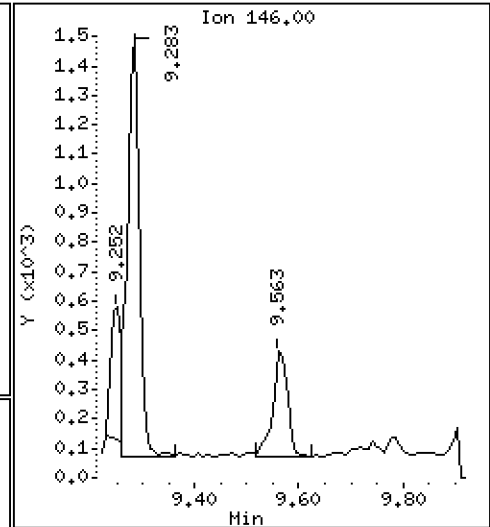
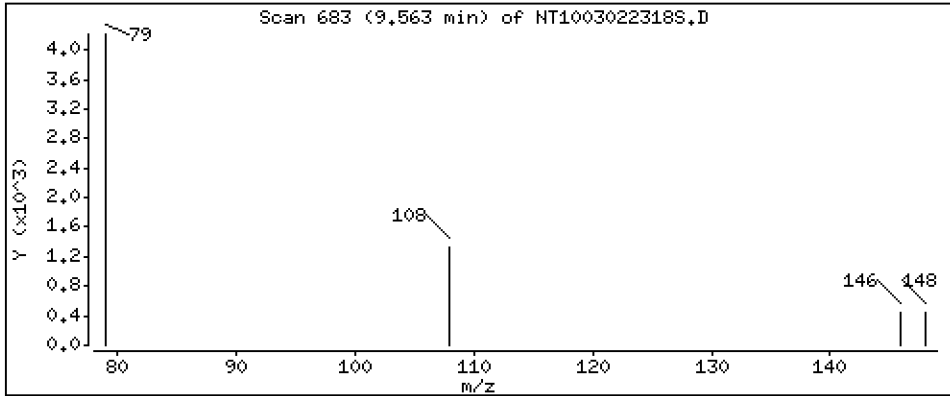
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.003010 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

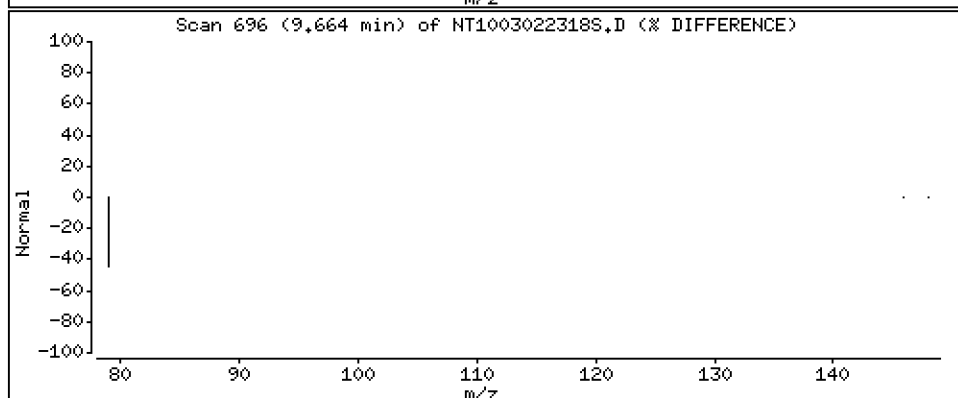
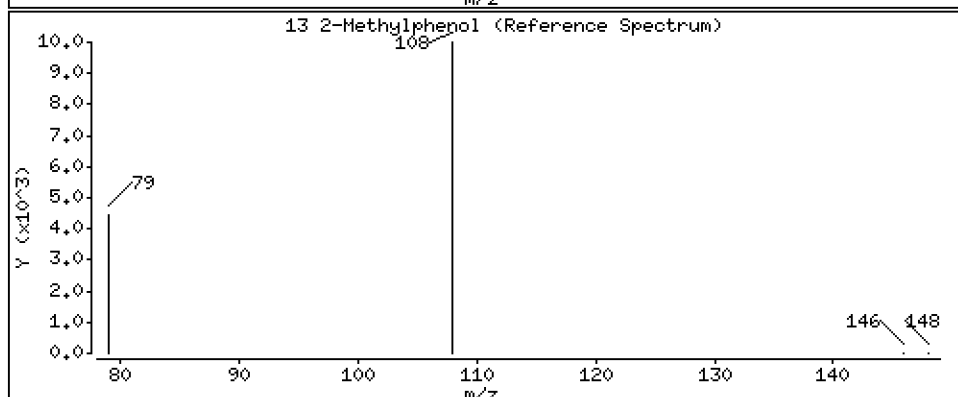
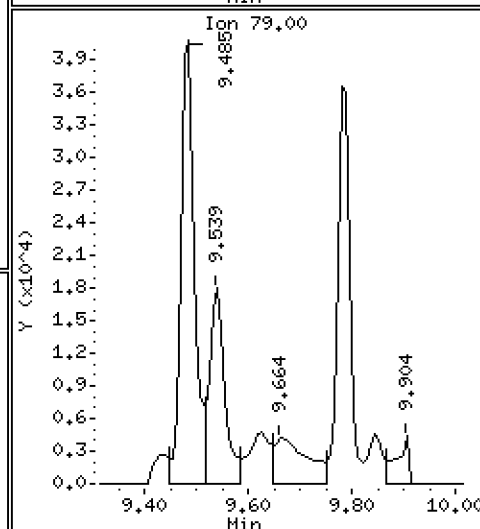
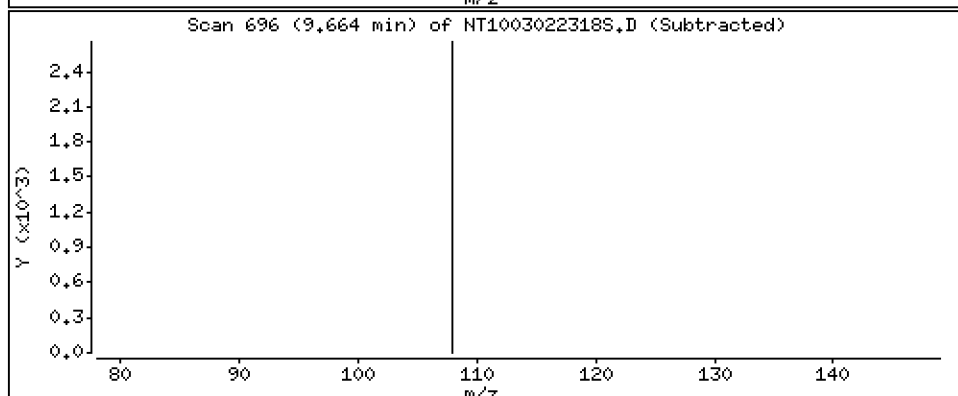
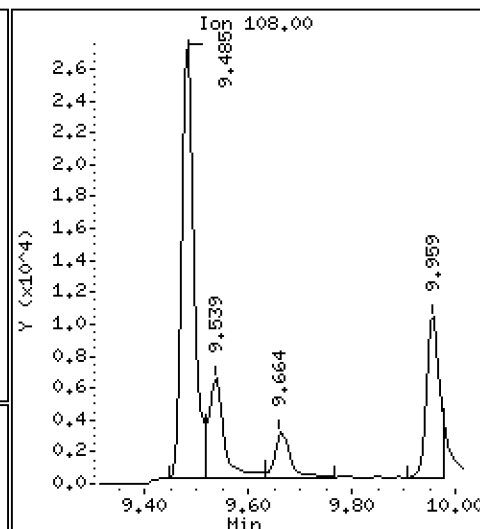
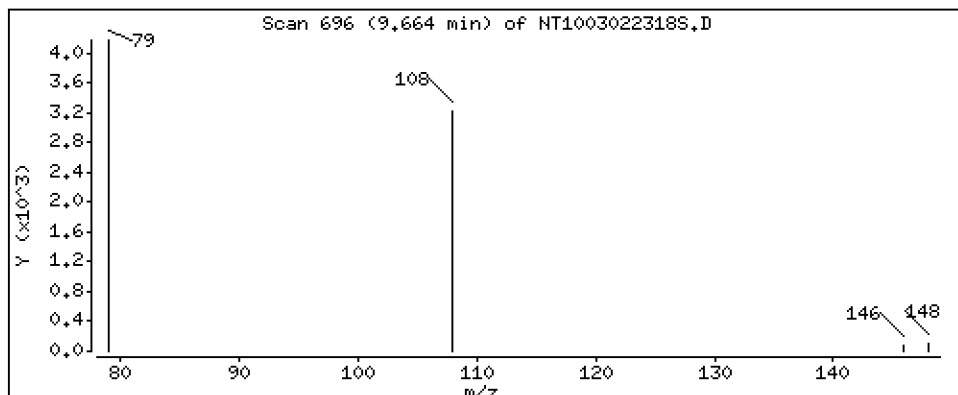
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03489 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

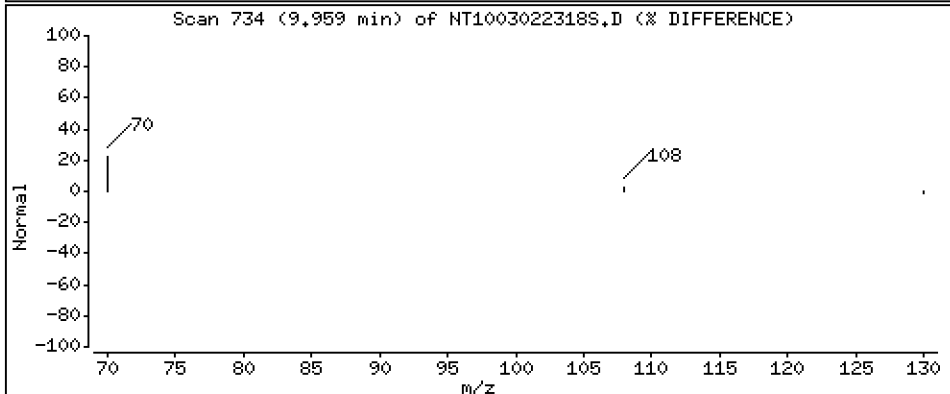
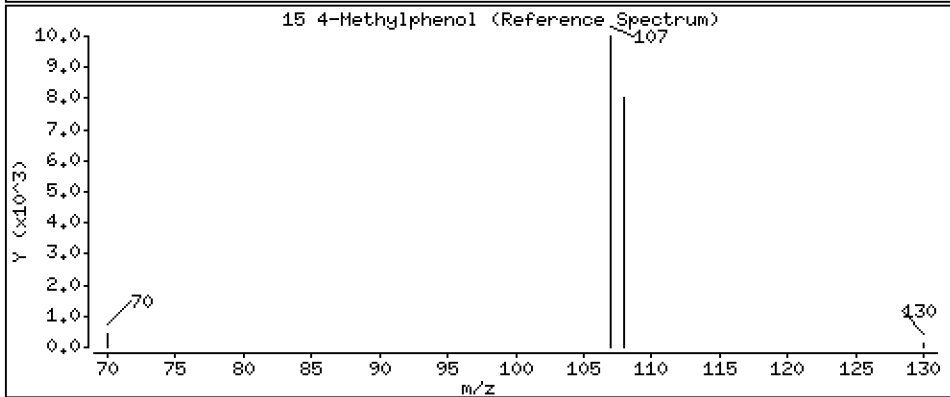
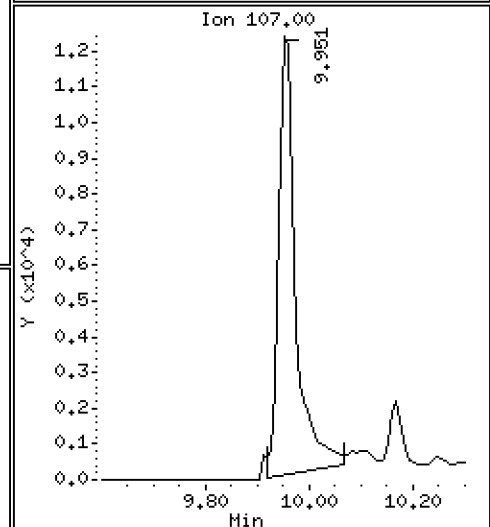
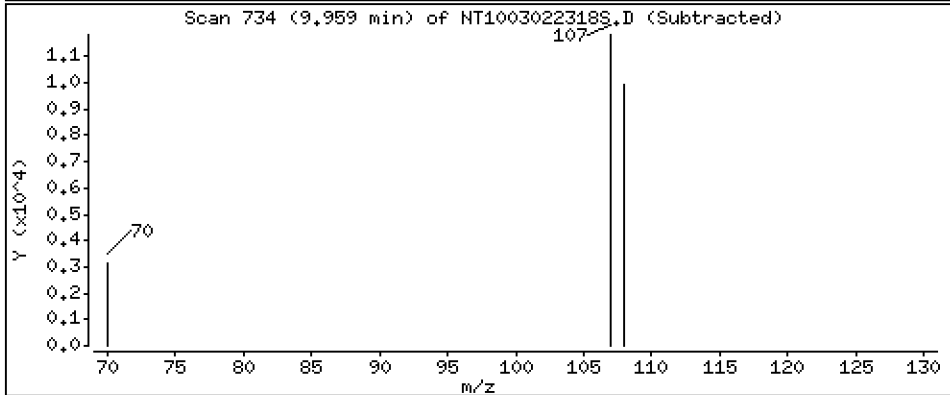
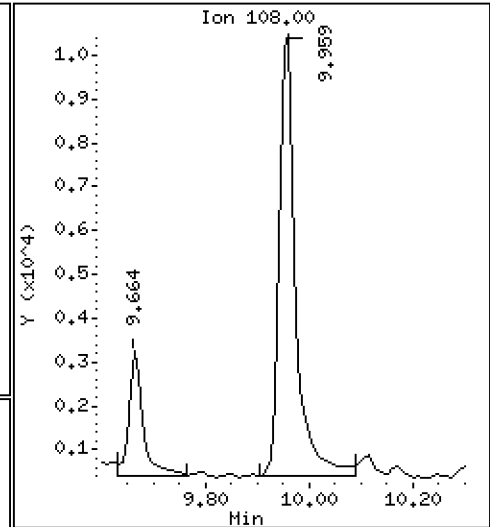
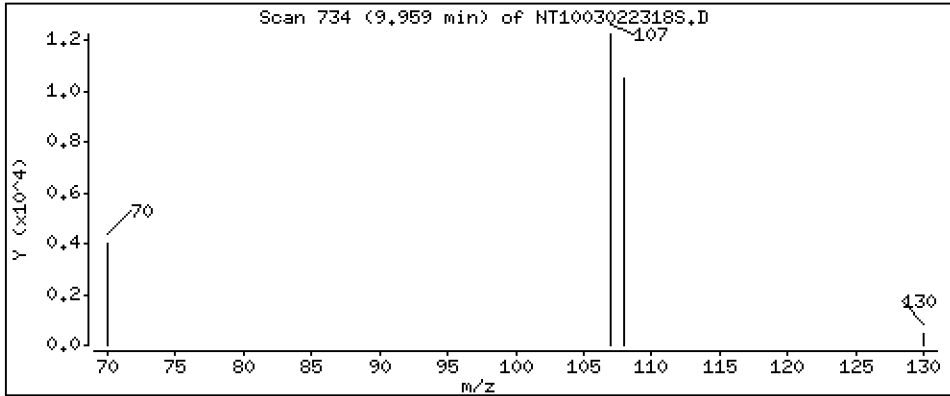
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1276 ug/L





Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

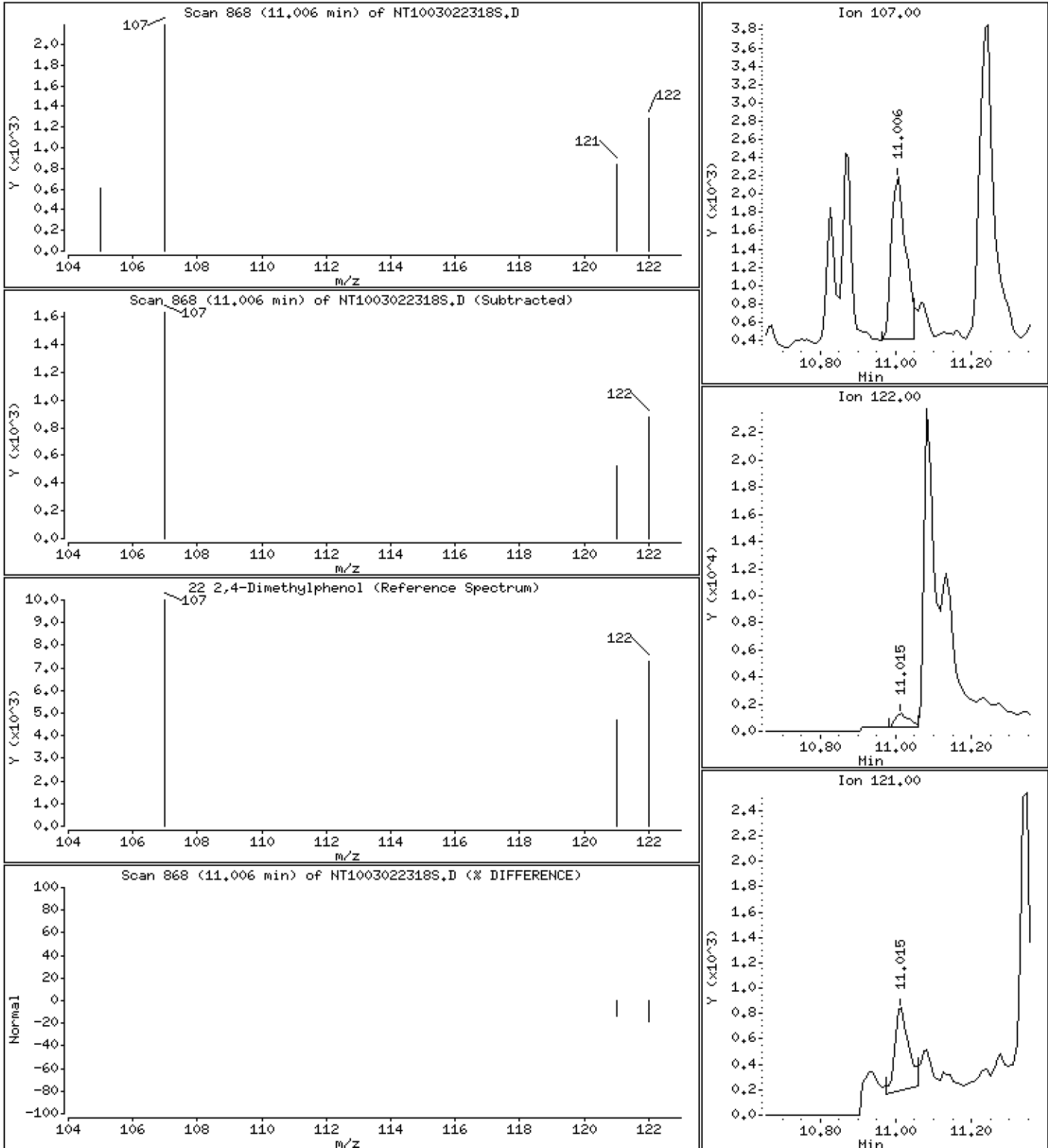
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02458 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

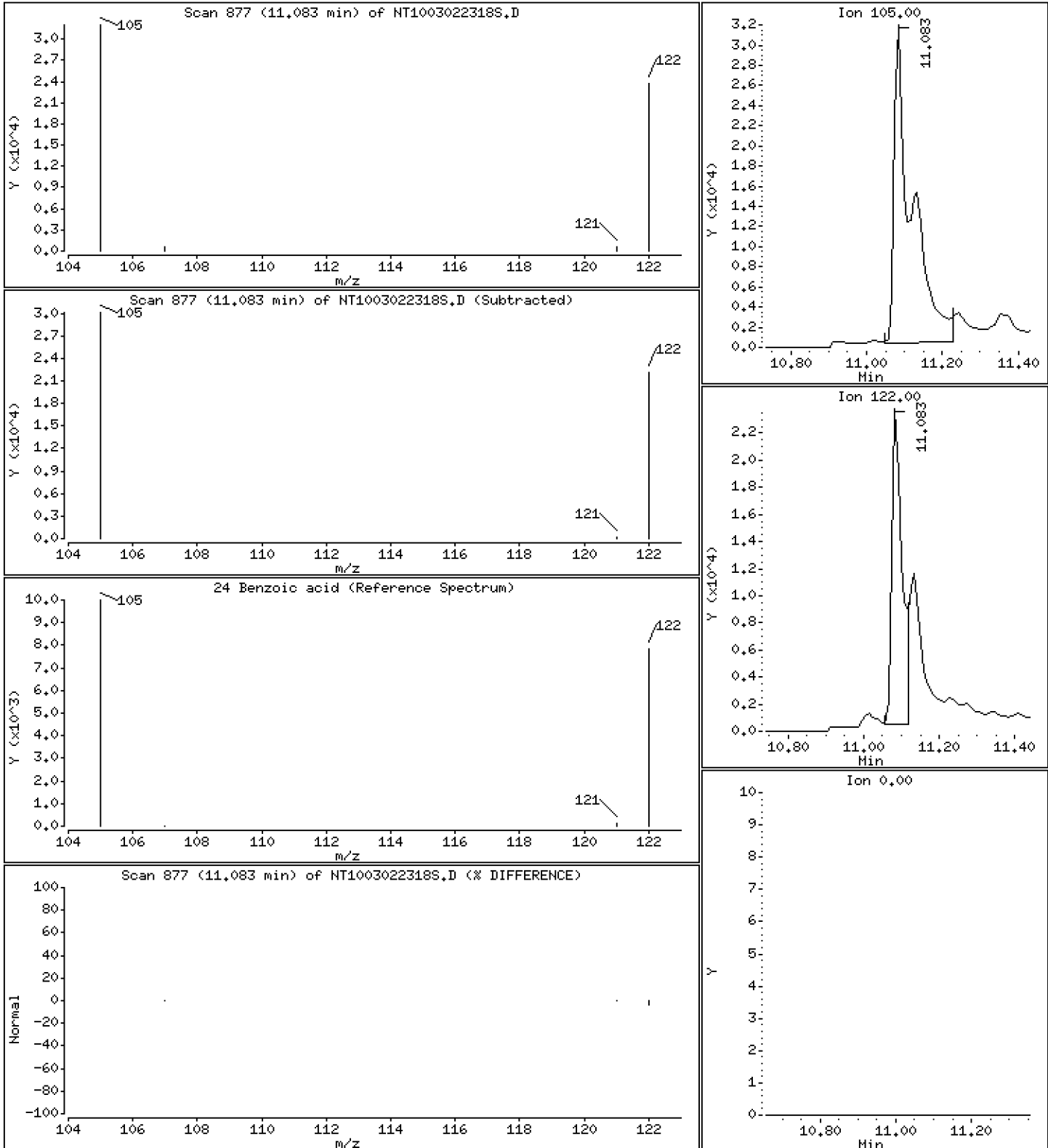
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.9458 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

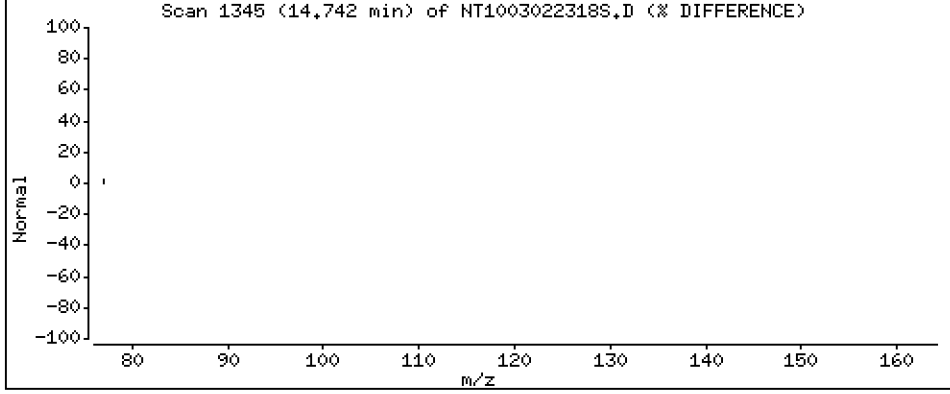
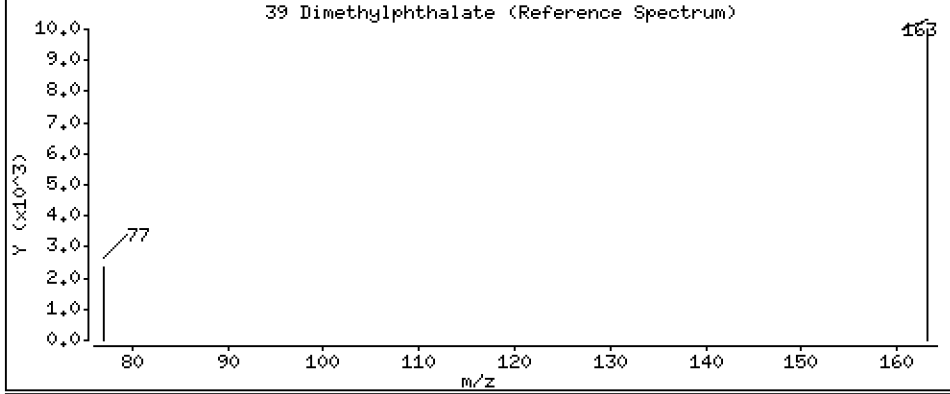
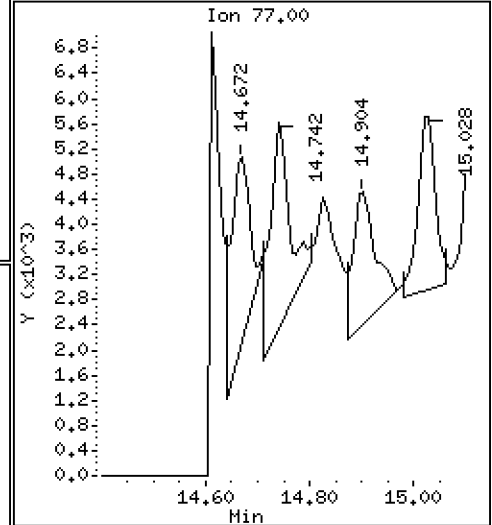
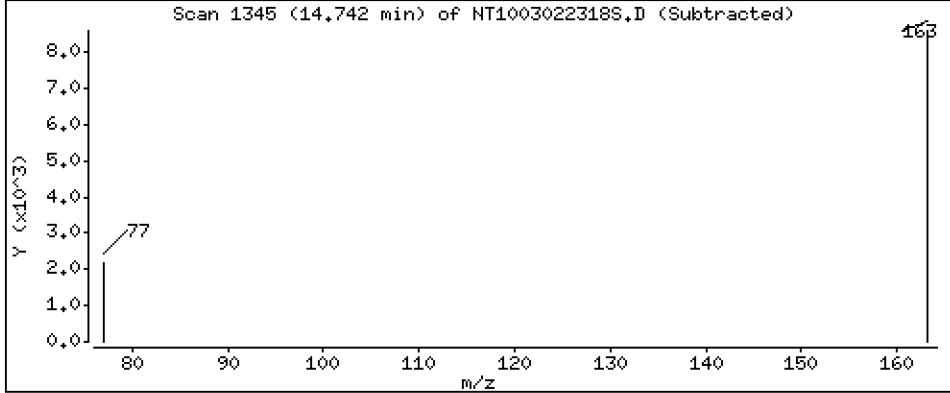
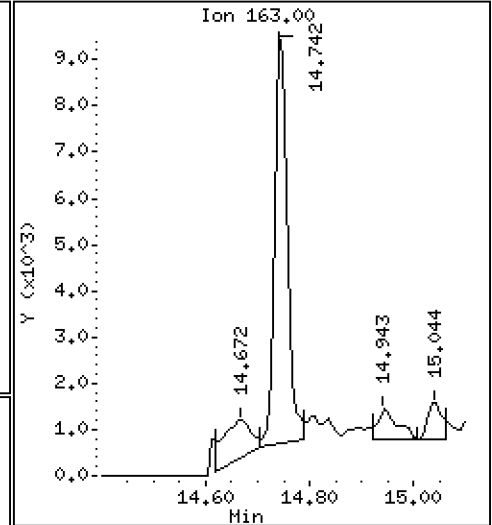
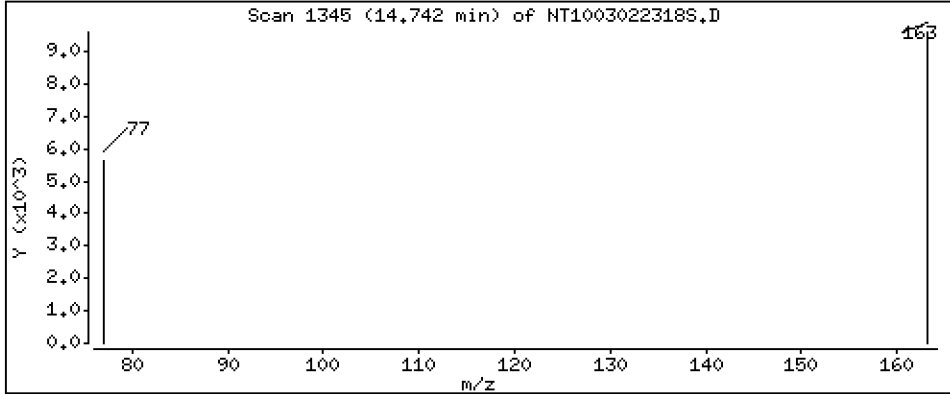
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,04004 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

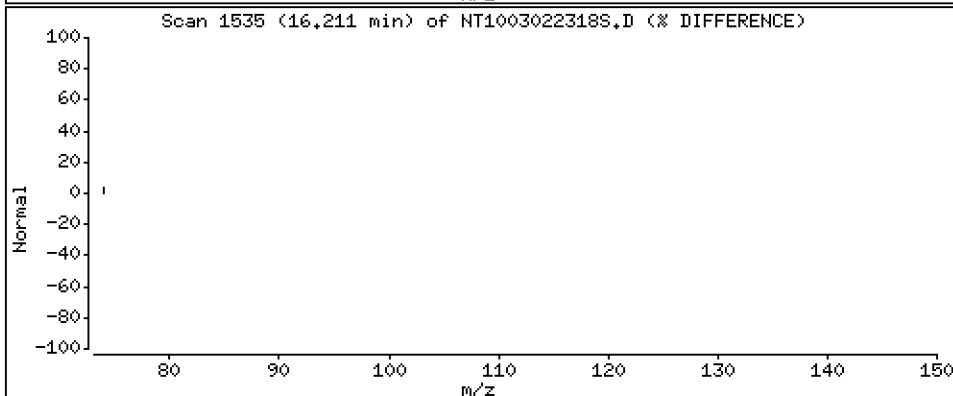
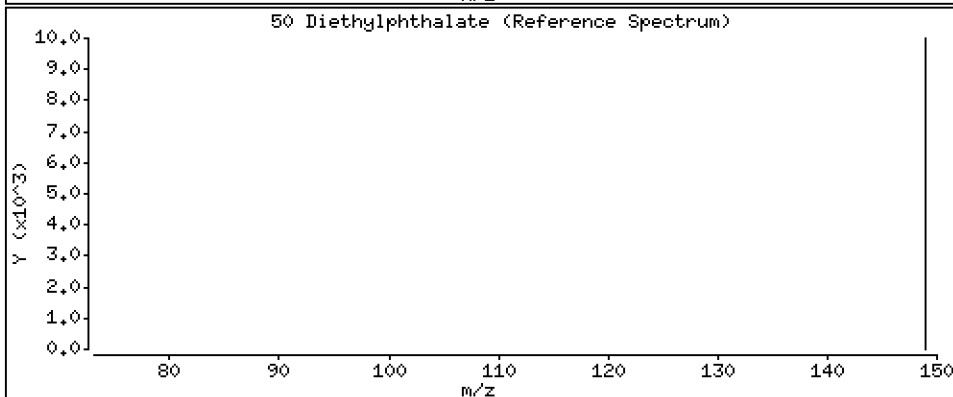
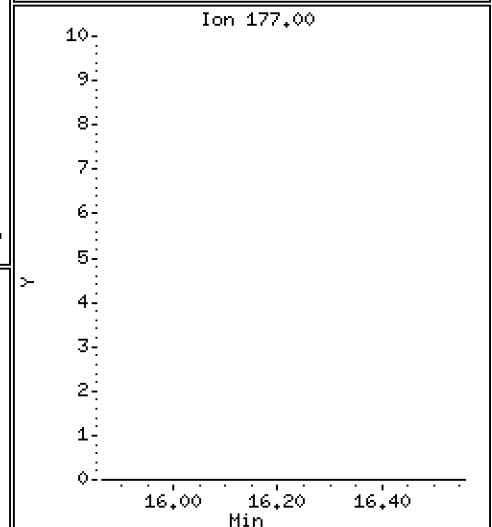
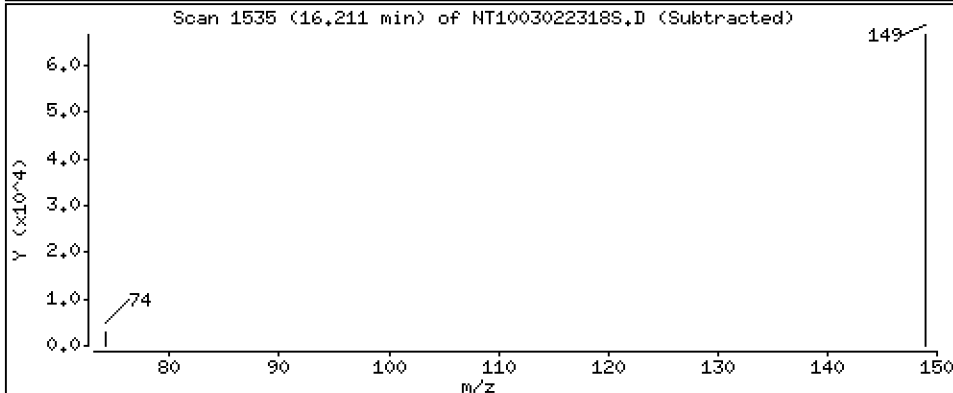
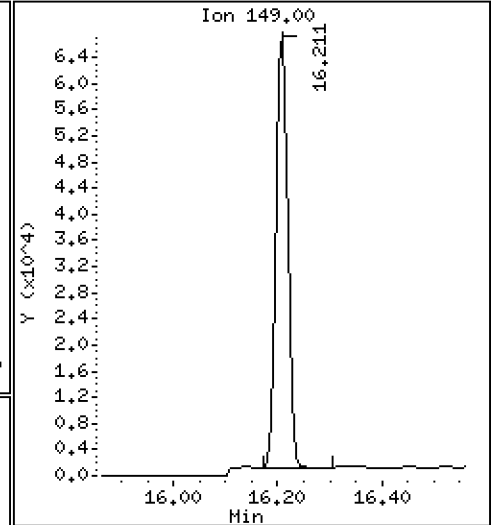
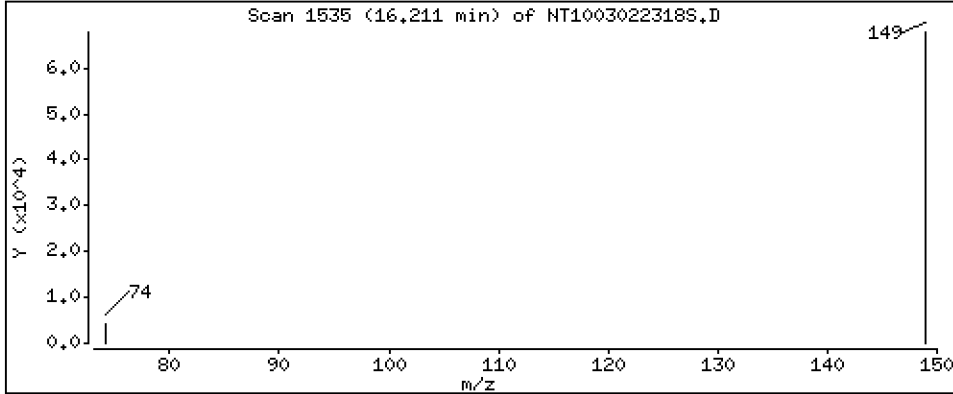
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2896 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

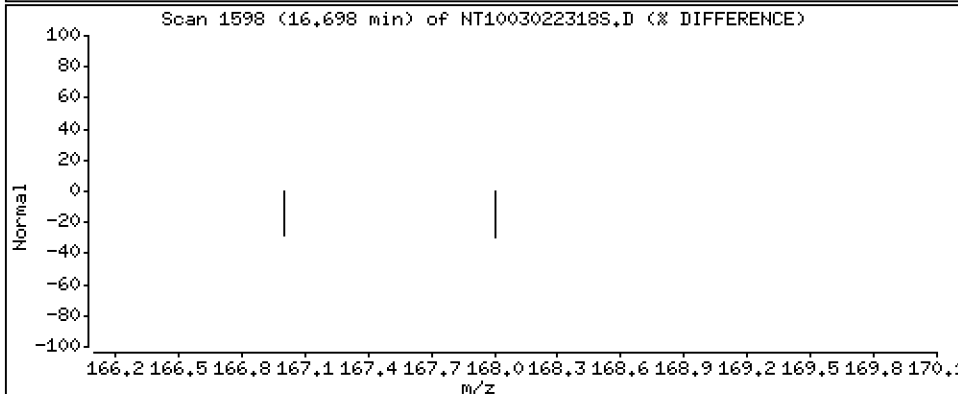
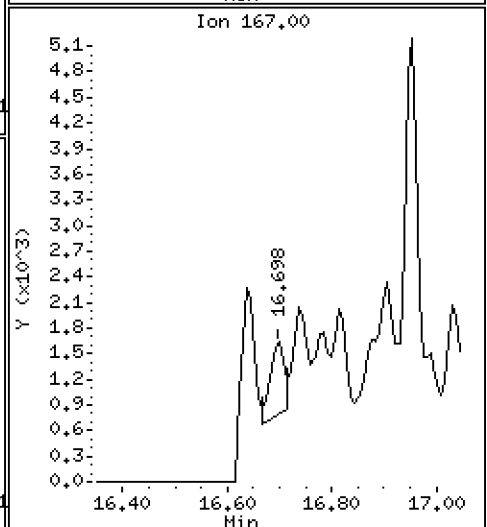
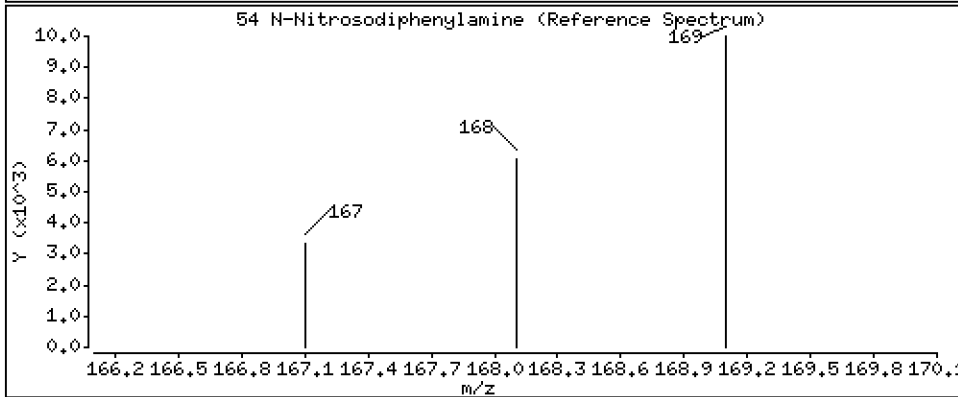
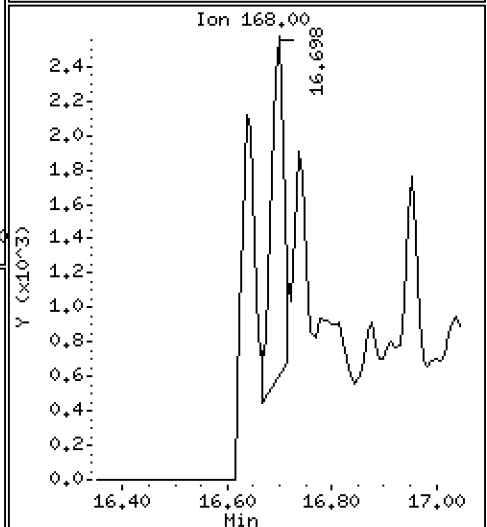
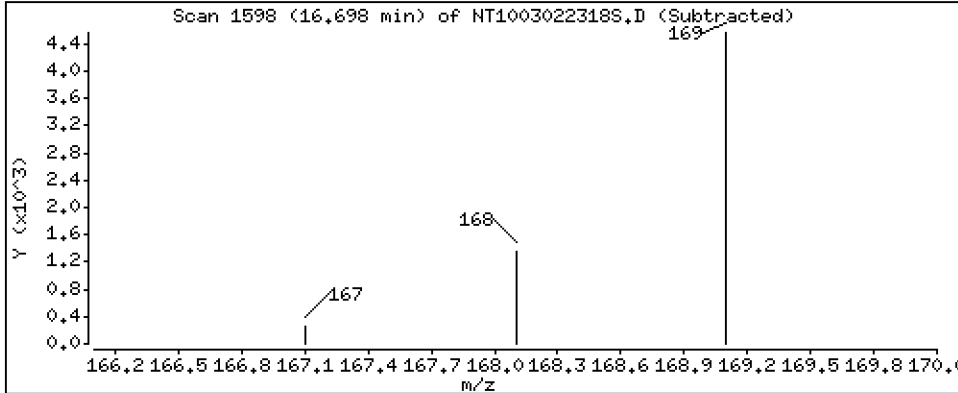
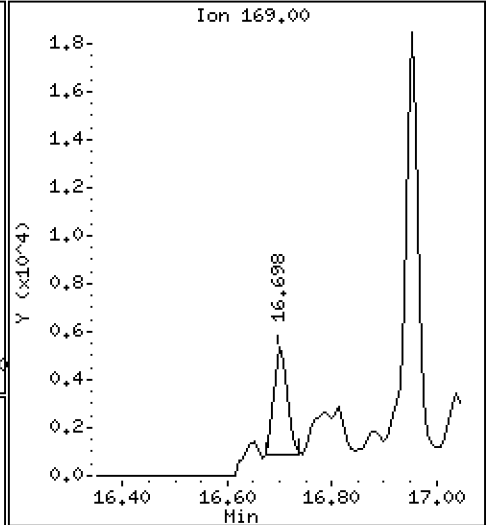
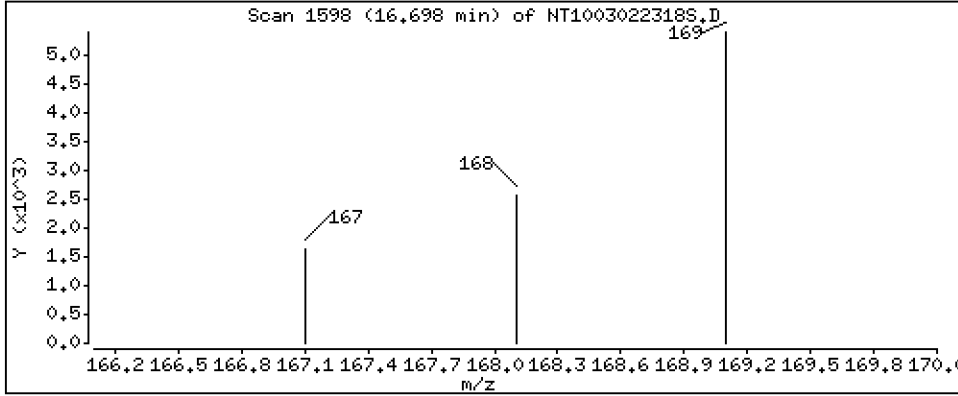
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.02312 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

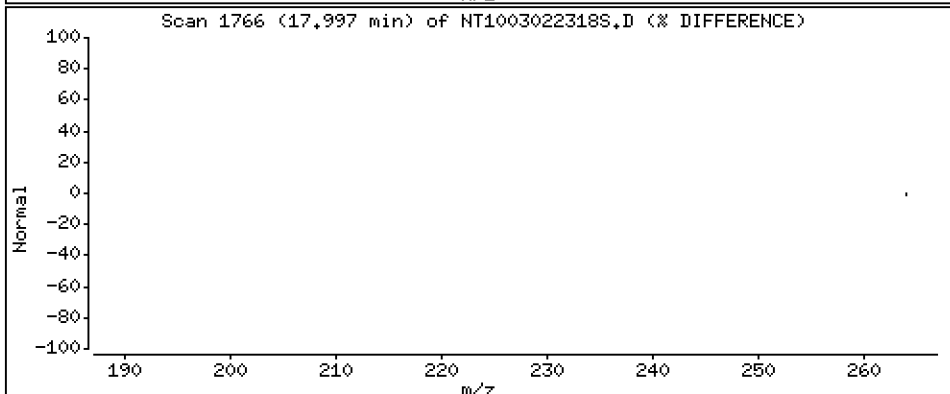
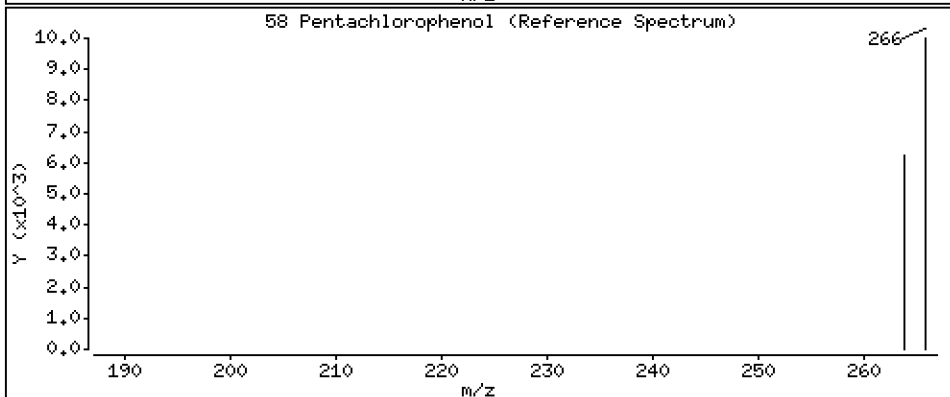
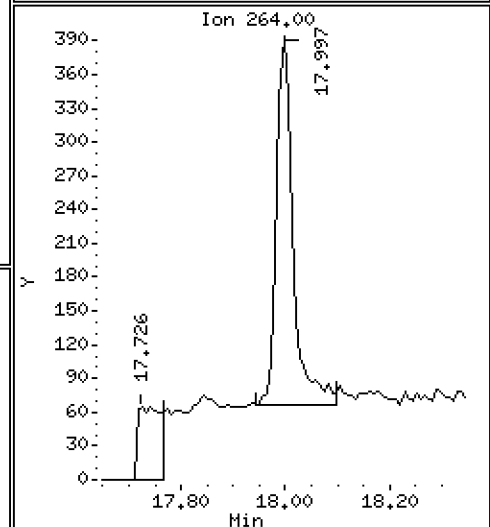
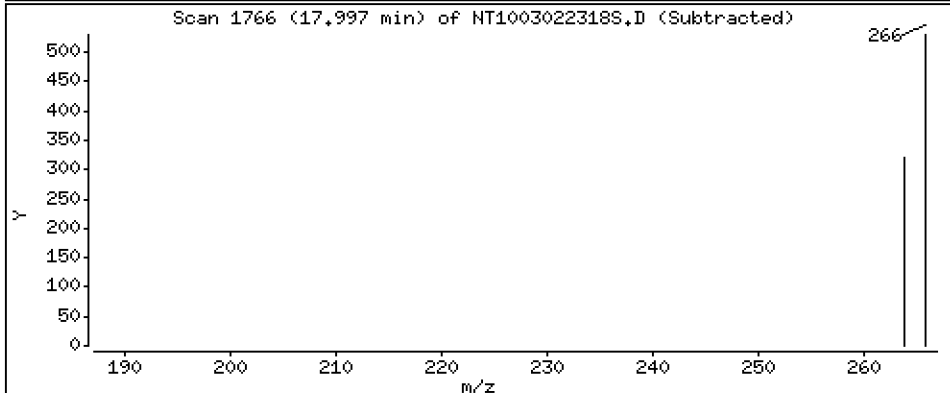
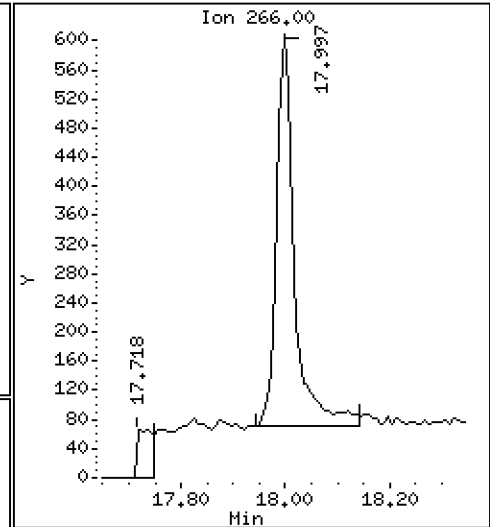
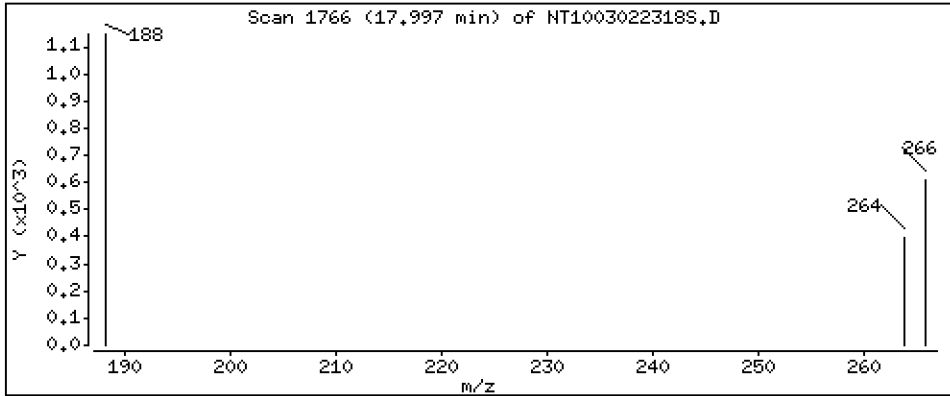
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,01778 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

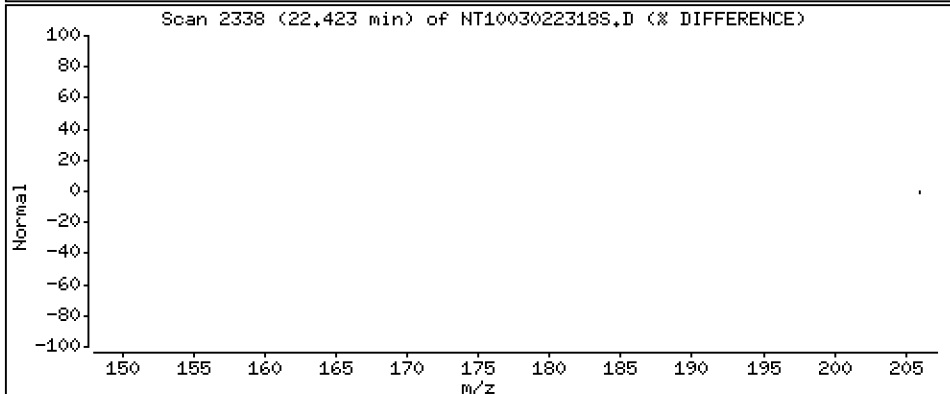
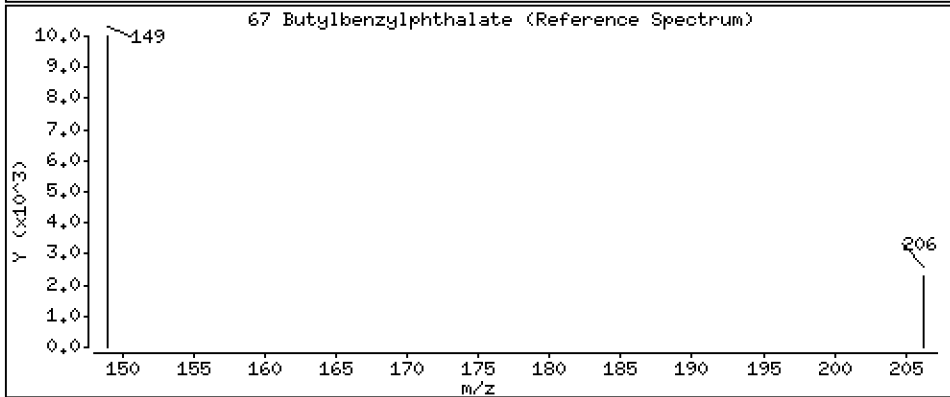
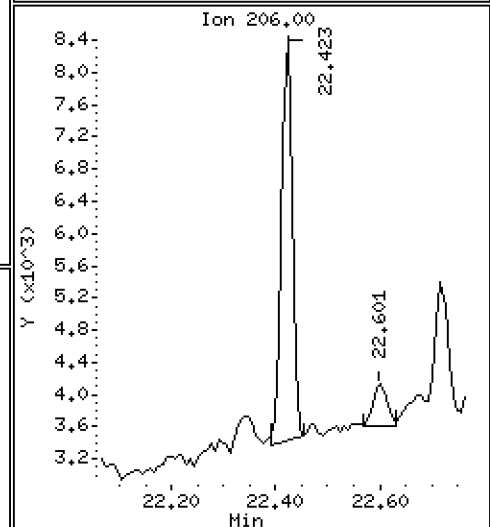
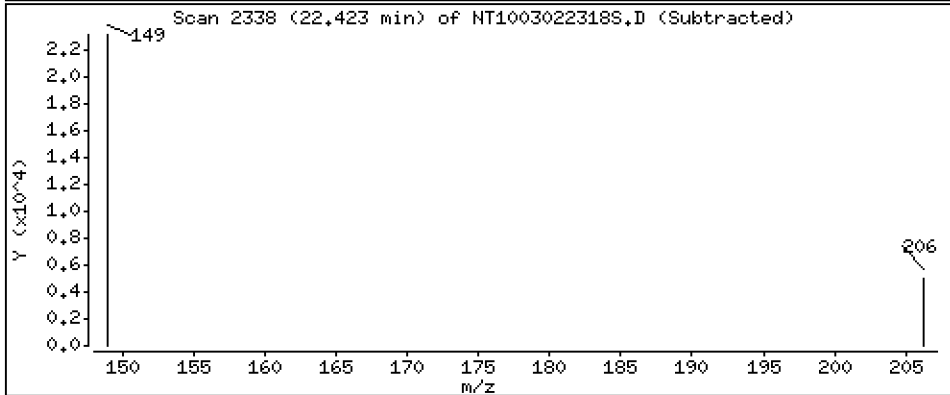
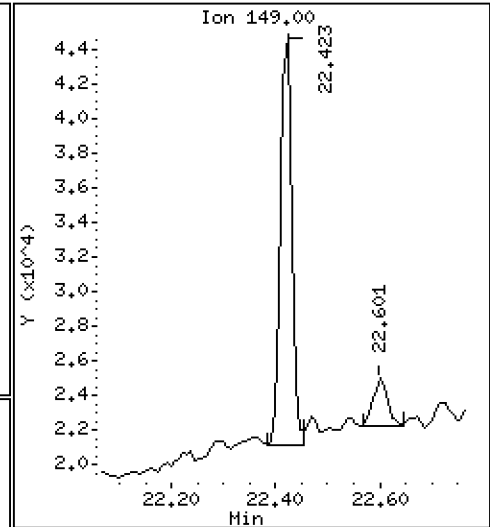
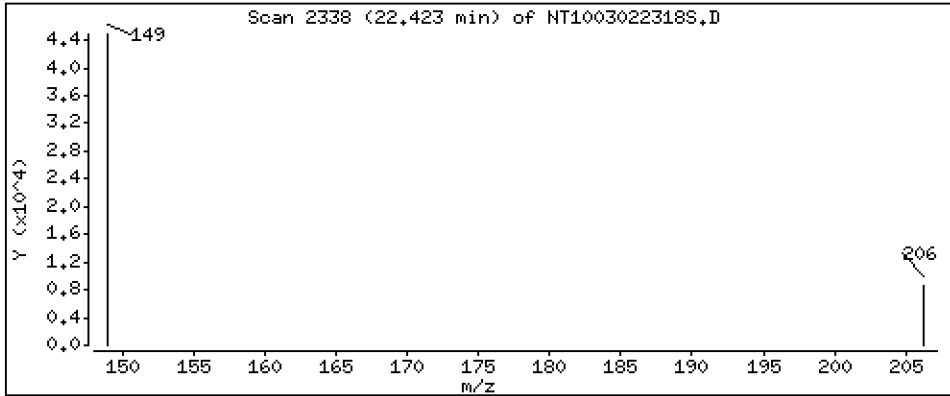
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07827 ug/L



Date : 03-MAR-2023 01:10

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-03

Volume Injected (uL): 1.0

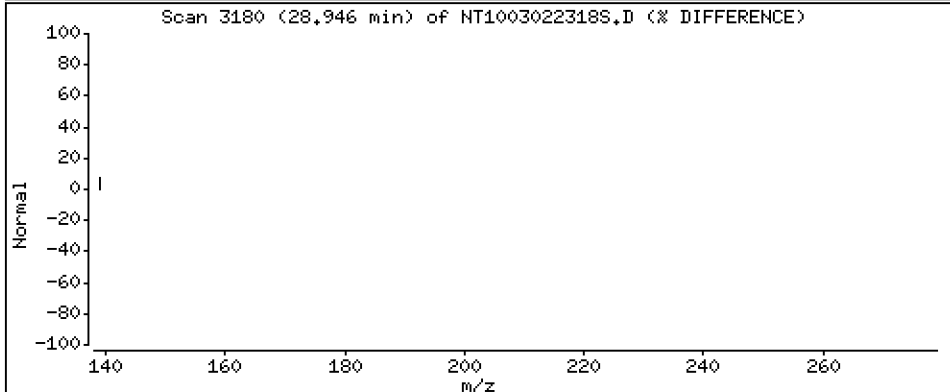
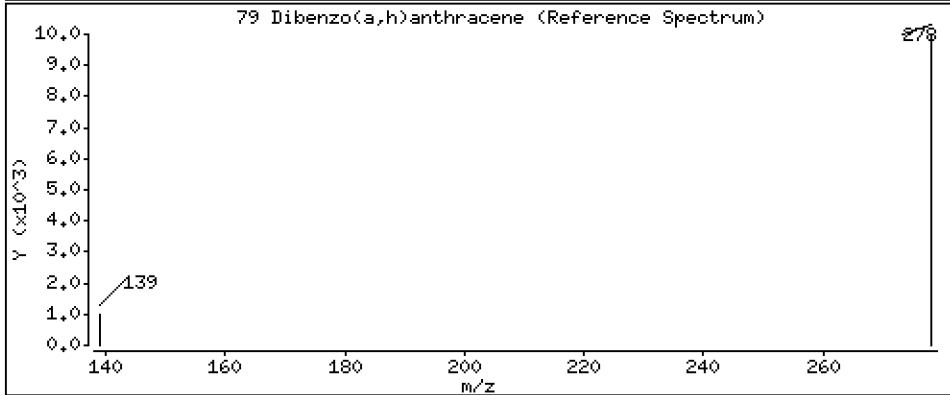
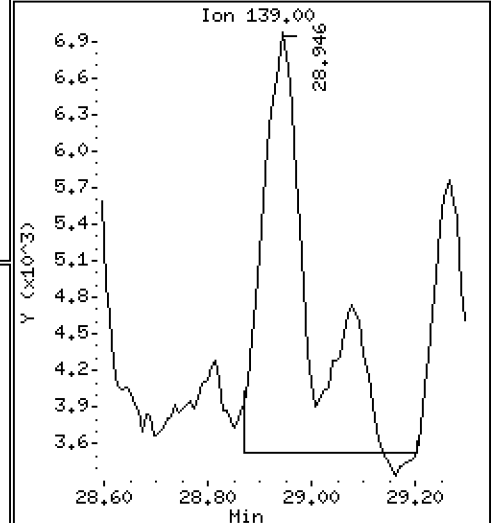
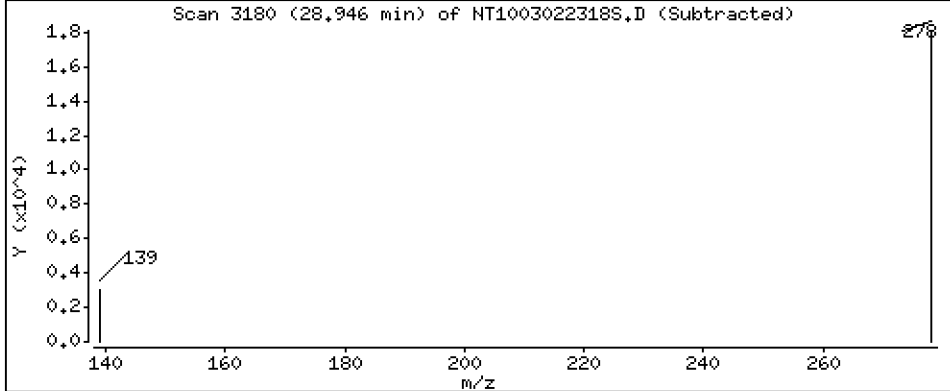
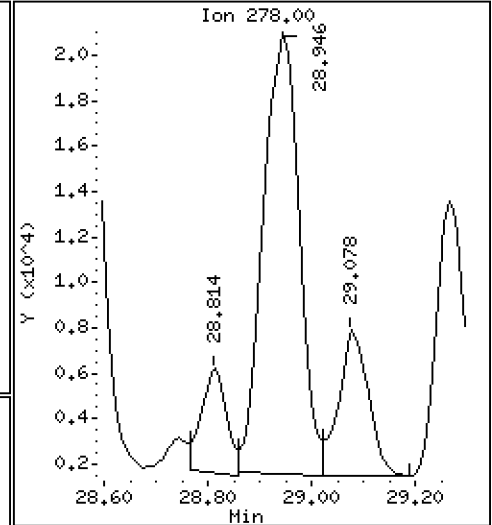
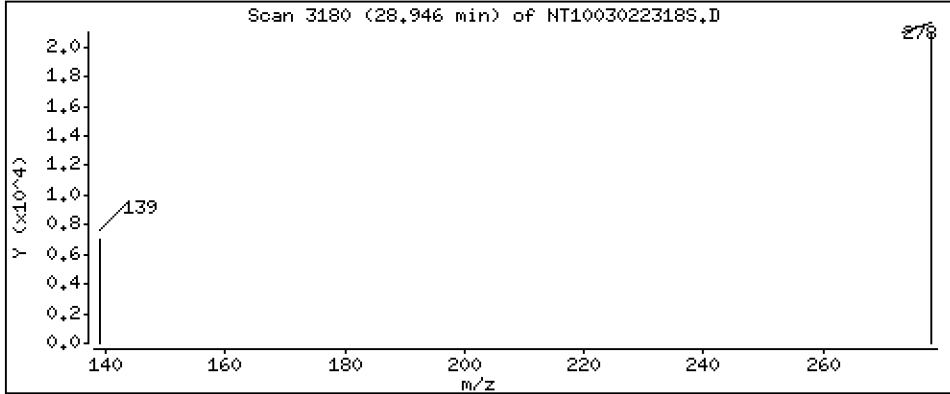
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1416 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022318S.D  
 Lab Smp Id: 23A0206-03  
 Inj Date : 03-MAR-2023 01:10 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-03  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 14  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1211015	6.59977	6.600 (R)
3 Phenol	94		8.525	8.525 (0.921)		1784694	6.37552	6.376
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		642722	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		2398	0.01035	0.01035
11 Benzyl alcohol	79		9.485	9.477 (1.025)		67689	0.44876	0.4488
12 1,2-Dichlorobenzene	146		9.562	9.570 (1.034)		670	0.00301	0.003010
13 2-Methylphenol	108		9.663	9.663 (1.044)		5677	0.03489	0.03489
15 4-Methylphenol	108		9.958	9.950 (1.076)		21607	0.12756	0.1276
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006 (0.939)		4800	0.02458	0.02458 (M)
24 Benzoic acid	105		11.082	11.082 (0.945)		101731	0.94577	0.9458 (M)
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.724	11.723 (1.000)		2301930	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.741	14.749 (0.962)		14449	0.04004	0.04004
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		1136623	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		98569	0.28961	0.2896
54 N-Nitrosodiphenylamine	169		16.698	16.698 (0.907)		7890	0.02312	0.02312 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.996	(0.978)	1242	0.01778	0.01778
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2108607	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	996314	4.84852	4.849(R)
67 Butylbenzylphthalate	149	22.422	22.414	(0.957)	33578	0.07827	0.07827
* 69 Chrysene-d12	240	23.429	23.429	(1.000)	2541069	4.00000	
* 77 Perylene-d12	264	26.139	26.123	(1.000)	2868605	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.945	(1.107)	94233	0.14159	0.1416
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022318S.D  
 Lab Smp Id: 23A0206-03  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	642722	-1.49
27 Naphthalene-d8	2339966	1169983	4679932	2301930	-1.63
42 Acenaphthene-d10	1186988	593494	2373976	1136623	-4.24
59 Phenanthrene-d10	2193485	1096743	4386970	2108607	-3.87
69 Chrysene-d12	2444828	1222414	4889656	2541069	3.94
77 Perylene-d12	2842248	1421124	5684496	2868605	0.93

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022318S.D

Lab ID: 23A0206-03

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 01:10

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

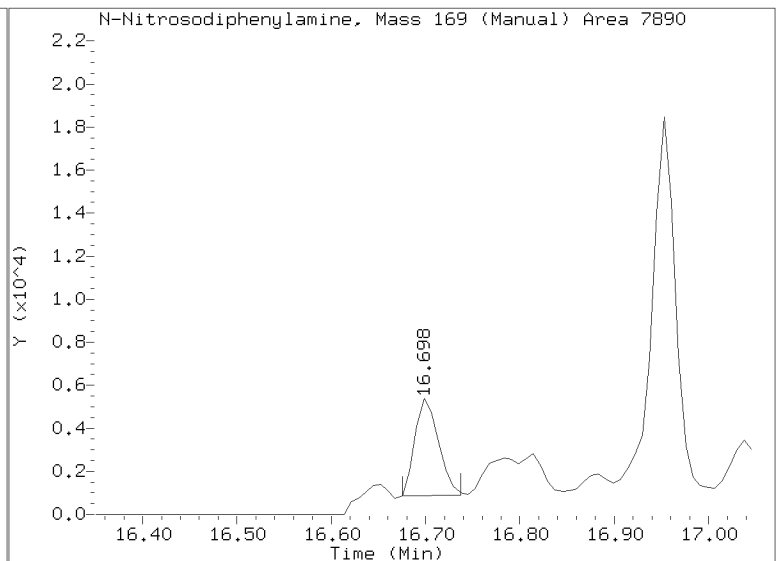
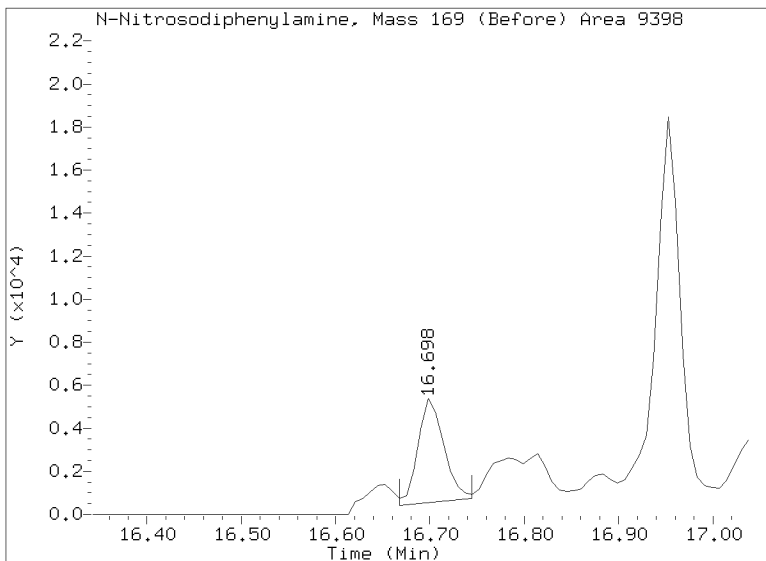
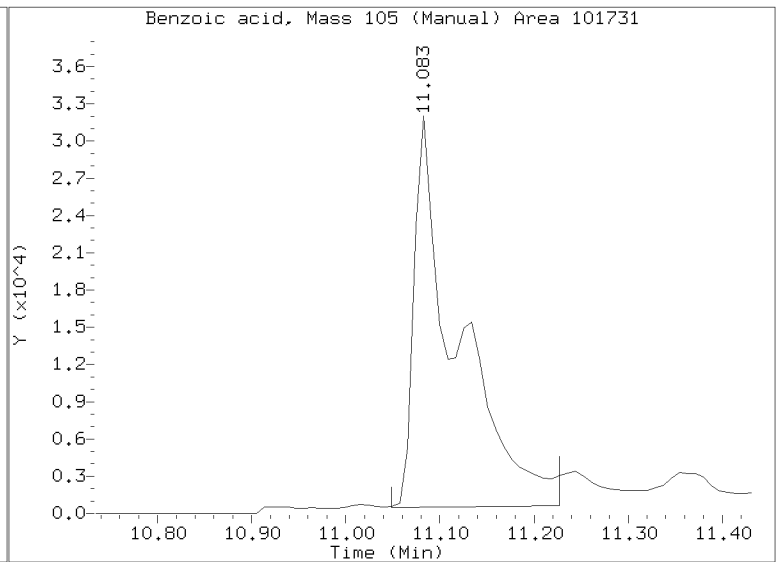
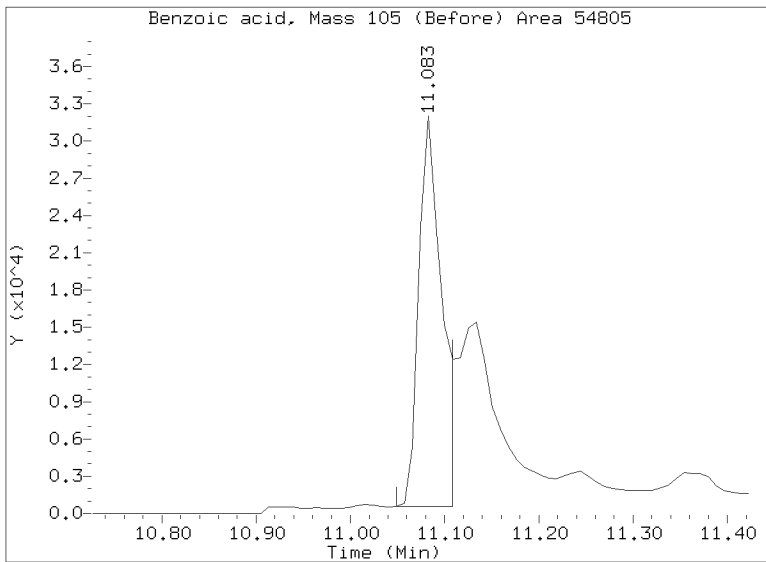
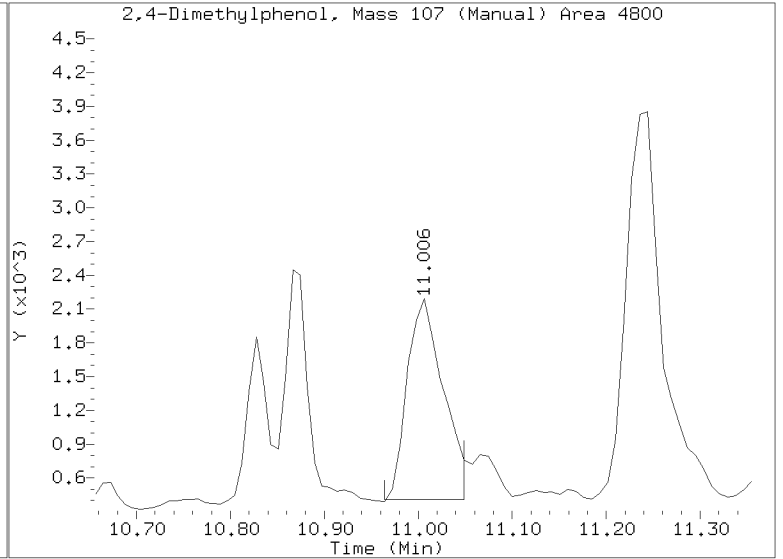
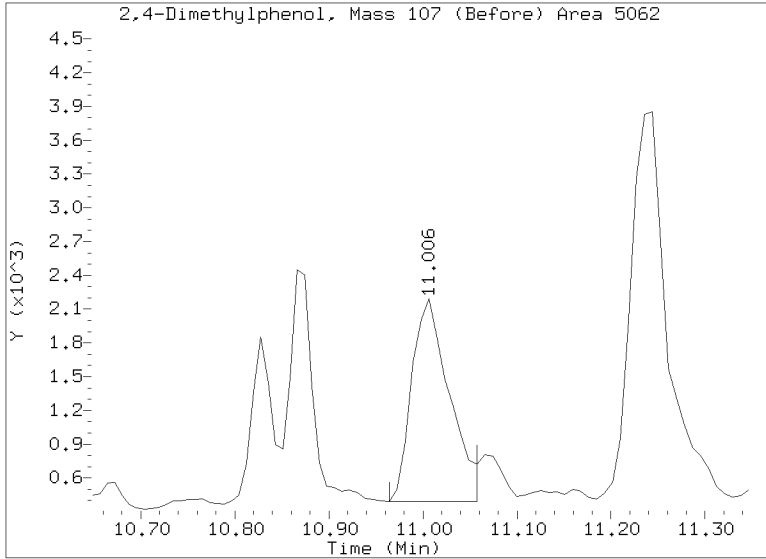
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022318S.D  
Injection Date: 03-MAR-2023 01:10  
Lab ID:23A0206-03 Client ID:  
Report Date: 03/11/2023 06:37





**Form I**  
**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8270E-SIM**  
**SIM SVOC Organics (Dual scan list)**

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-04 B

SDG: 23A0206

Sampled: 01/11/23 09:35

Prepared: 01/27/23 14:44

File ID: NT1003022319S.D

% Solids: 49.34

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 01:47

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 20.3 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

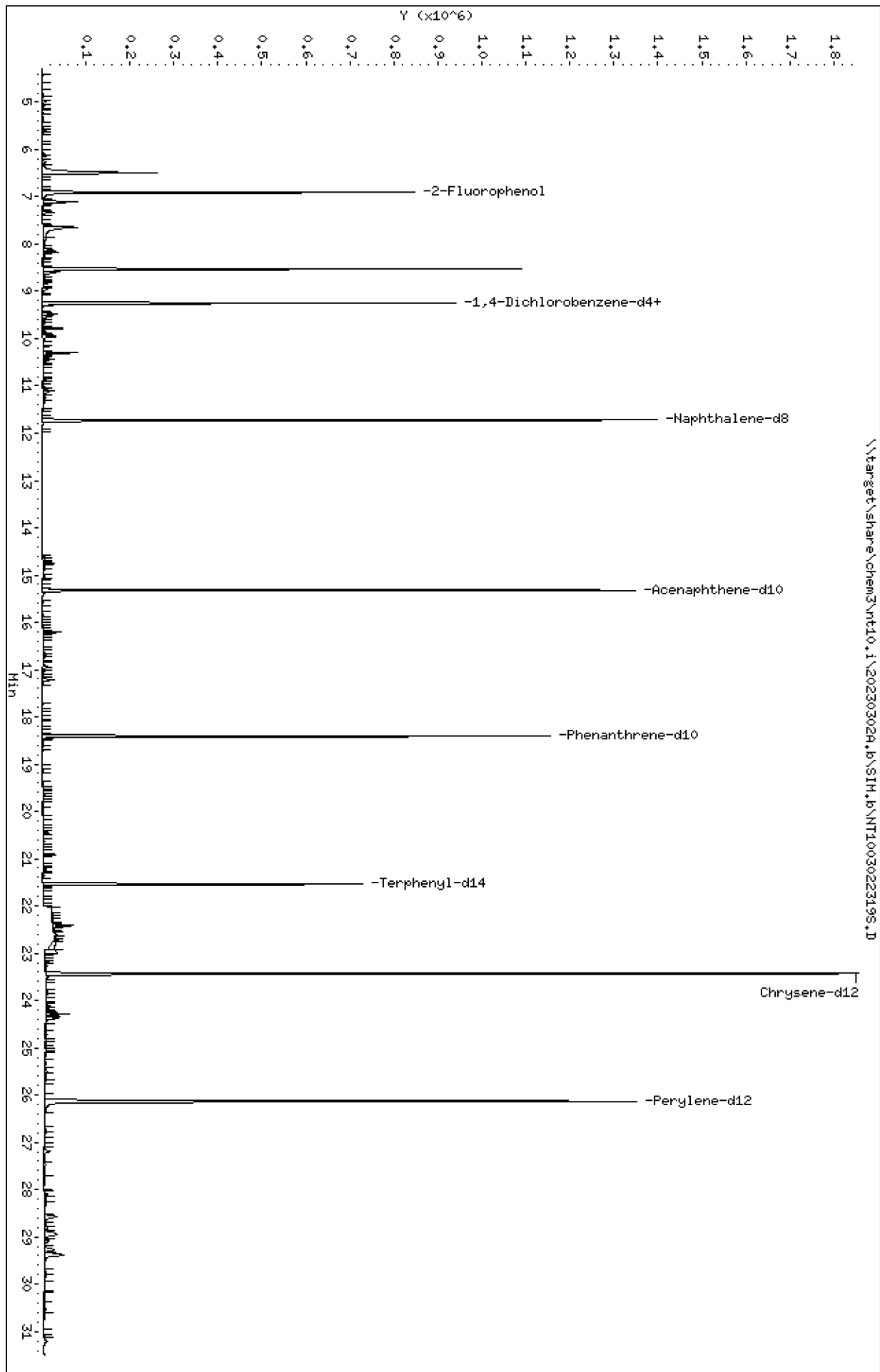
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	0.8	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	19.6	J	2.5	20.0
65-85-0	Benzoic acid	1	42.0	J	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	2.5	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	2.5	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.80	632	84.4	27 - 120	
p-Terphenyl-d14	499.20	477	95.5	37 - 120	

Data File: \\target\share\chem3\nt10.1\202303028.b\SIM.b\NT1003022319S.D  
Date : 03-MAR-2023 01:47  
Client ID:  
Sample Info: 23A0206-04  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028.b\SIM.b\NT1003022319S.D



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

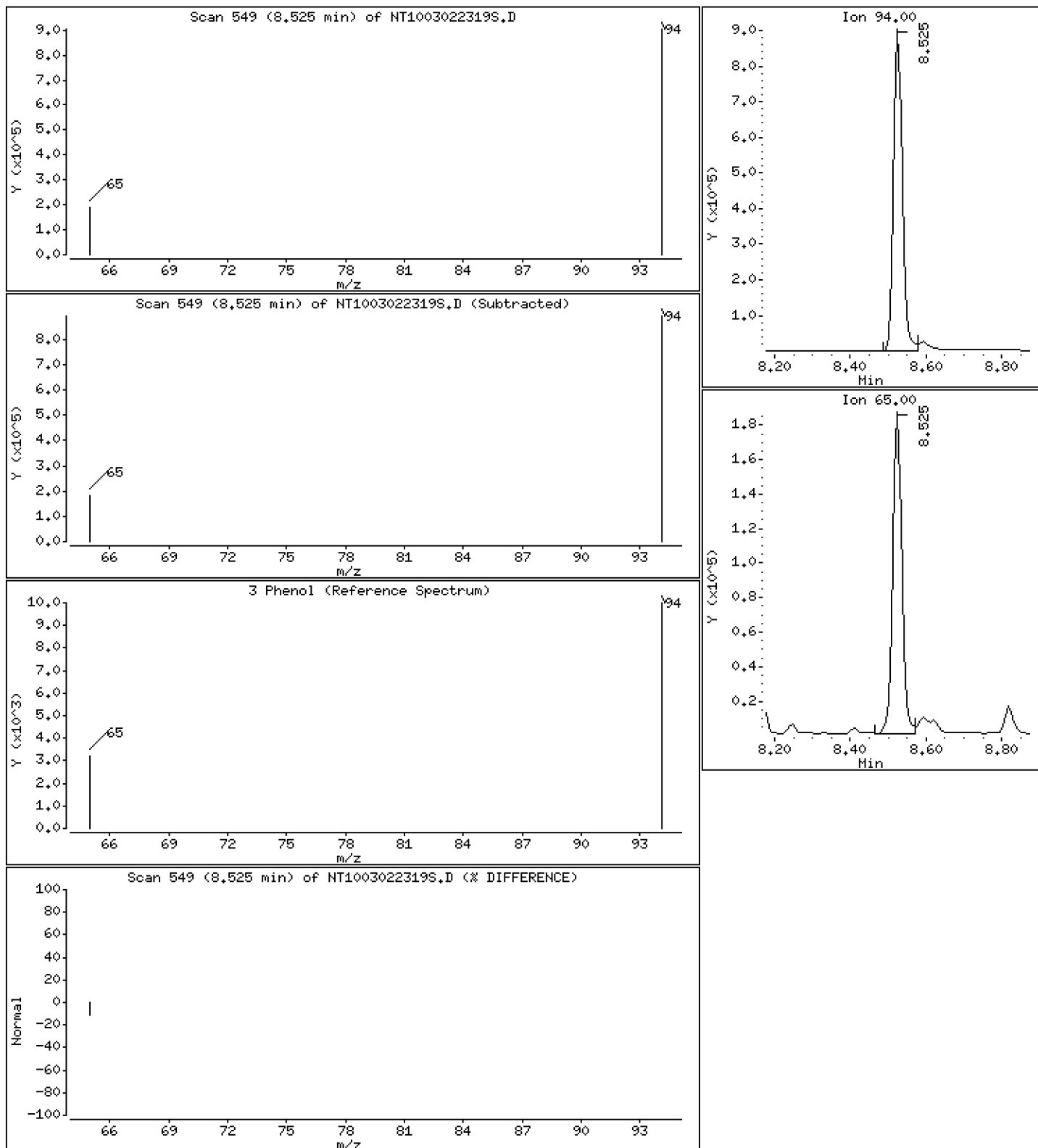
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 5.512 ug/L





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

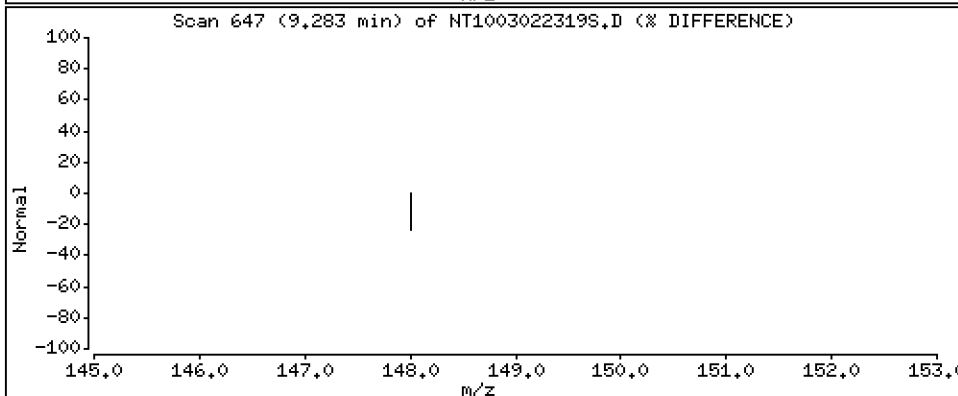
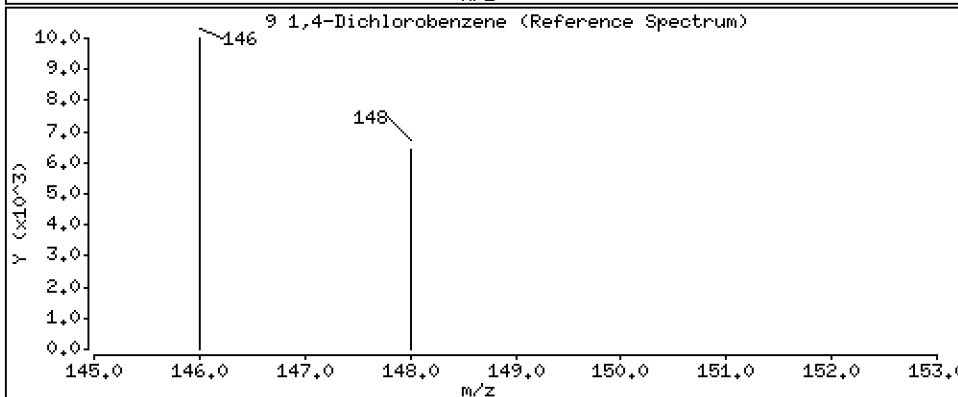
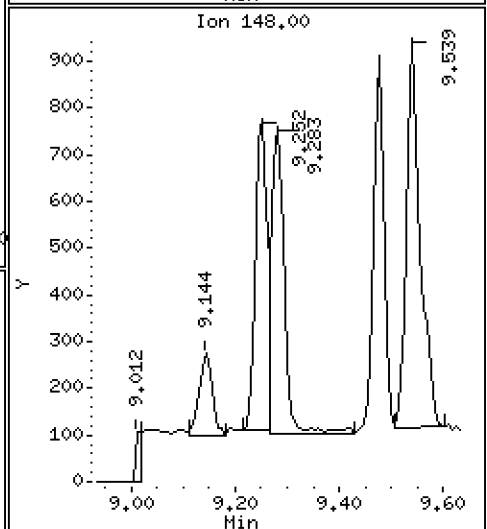
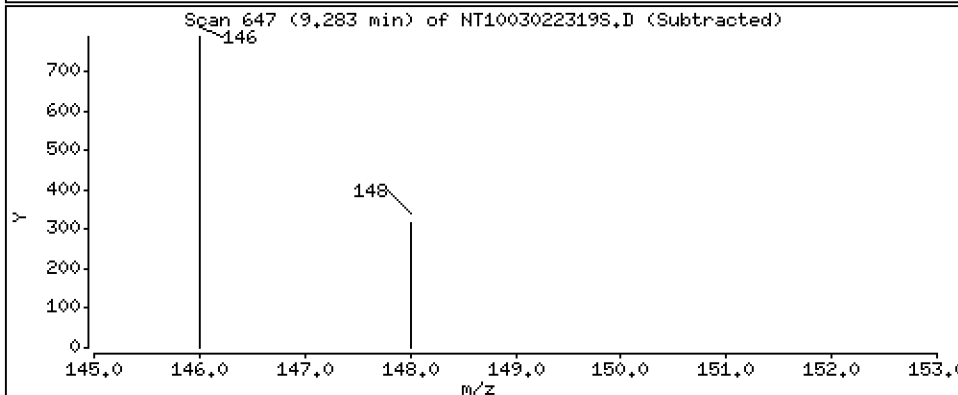
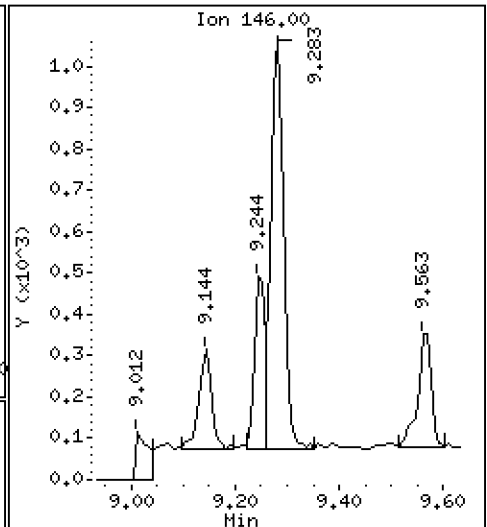
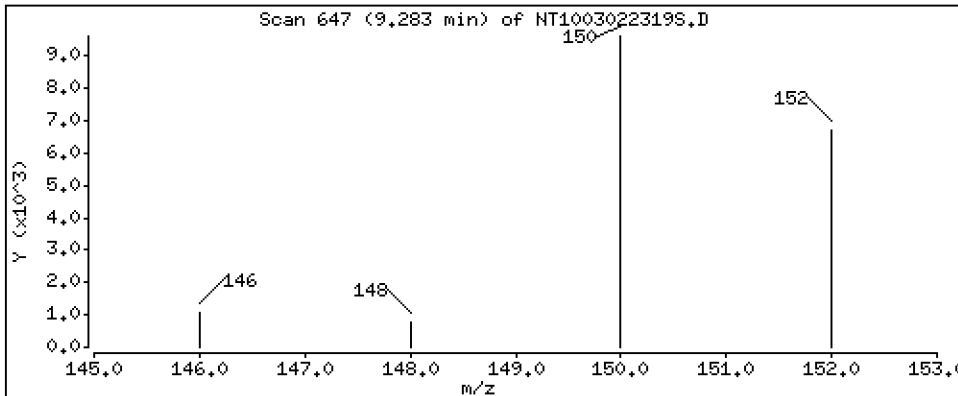
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.007962 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

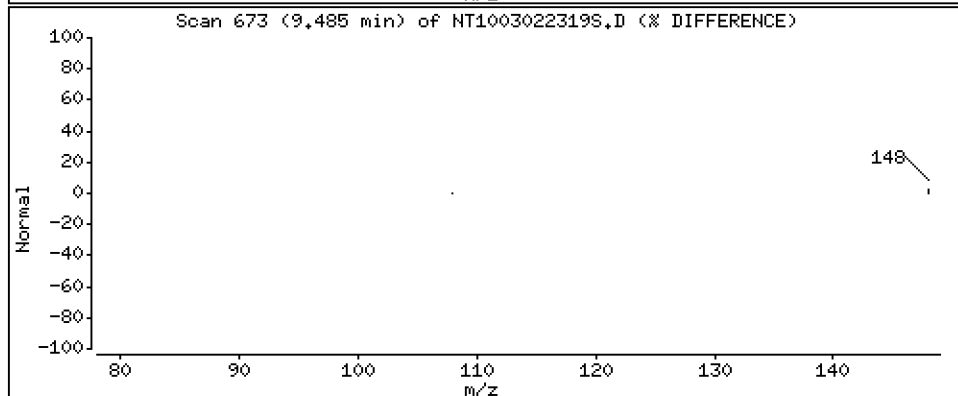
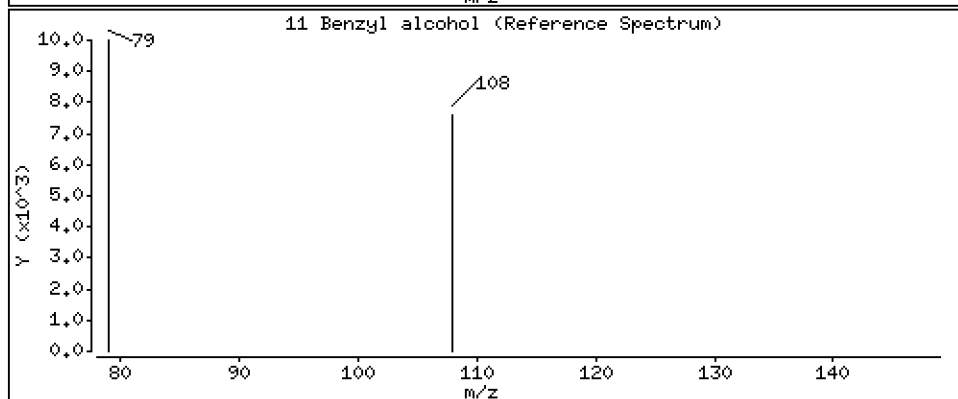
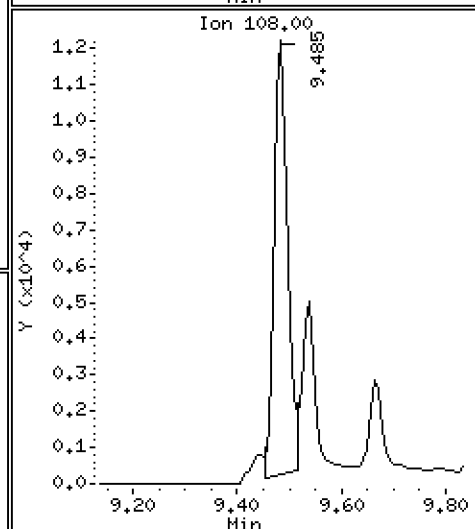
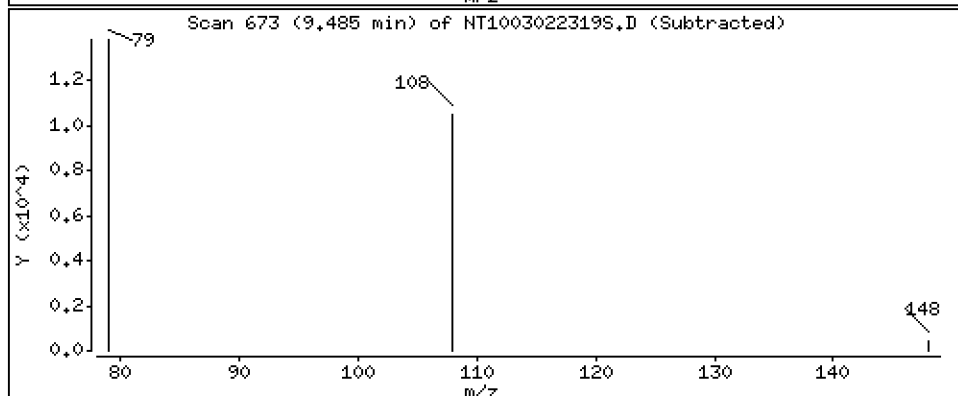
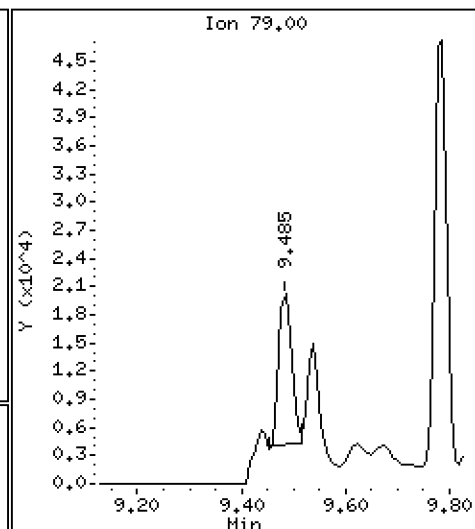
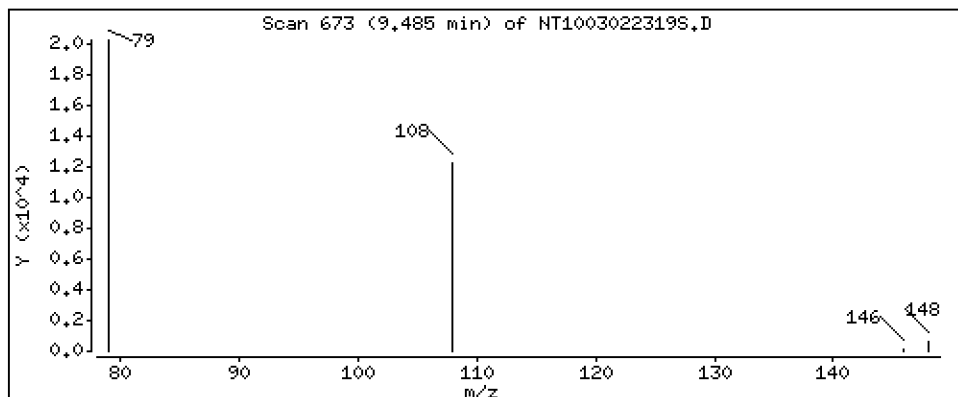
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1964 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

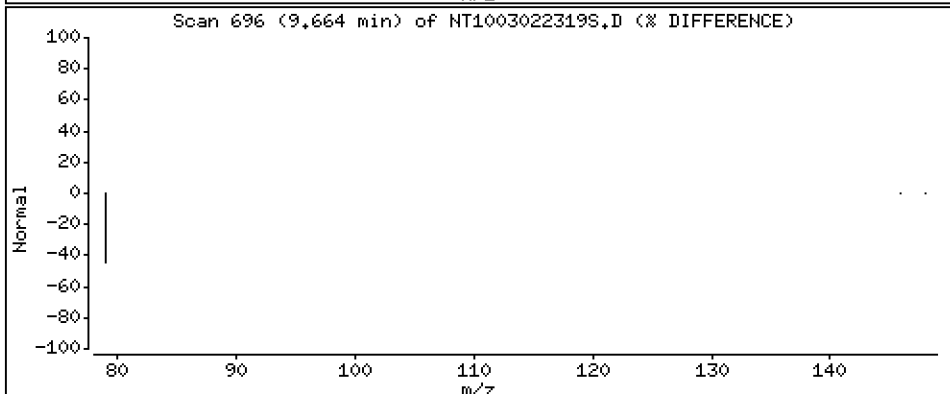
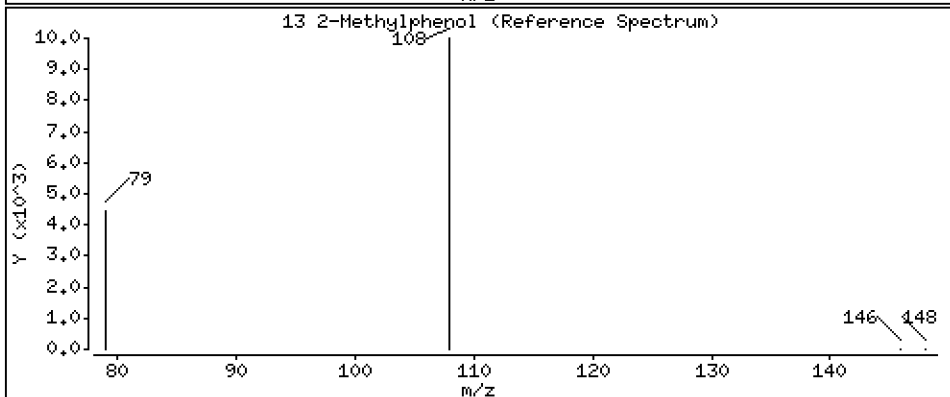
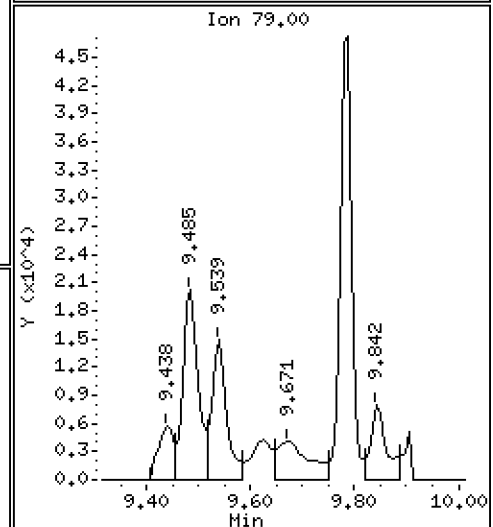
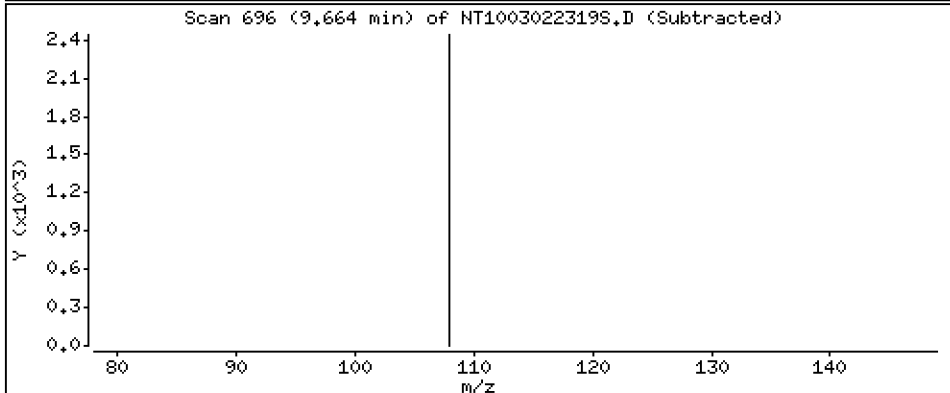
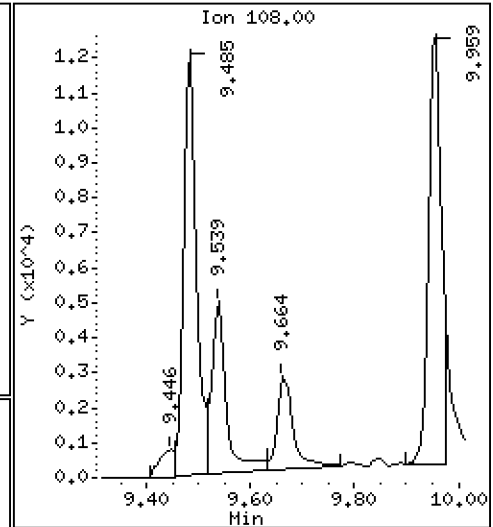
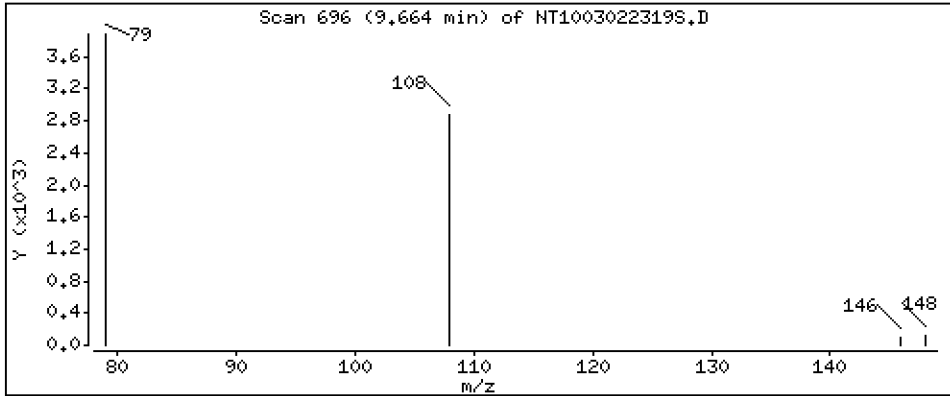
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03731 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

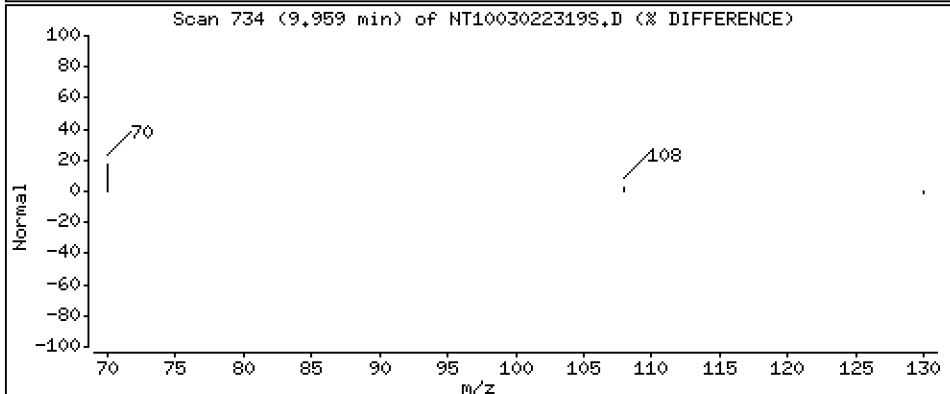
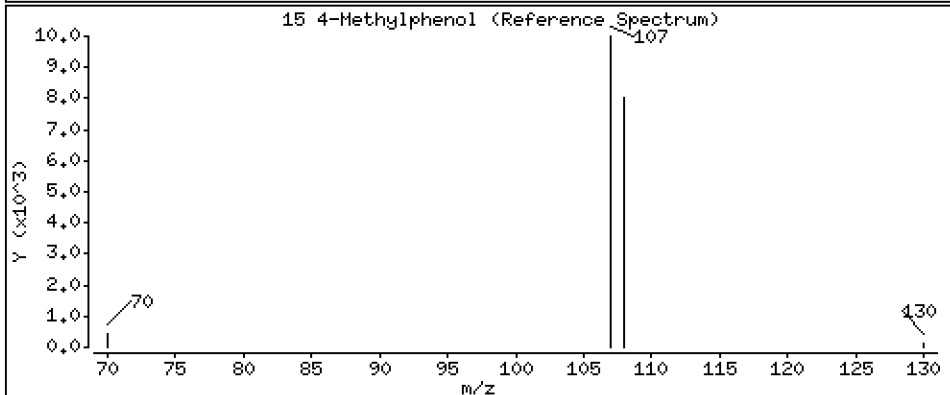
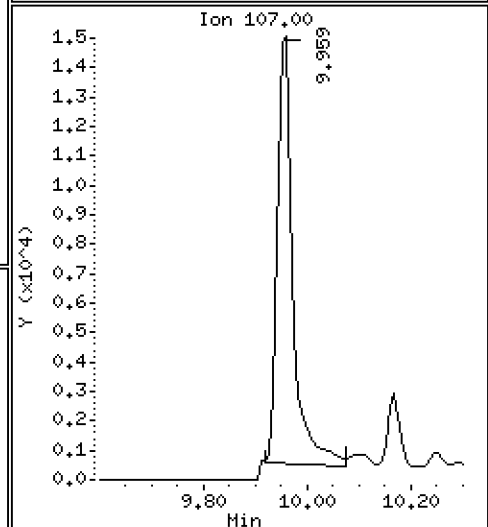
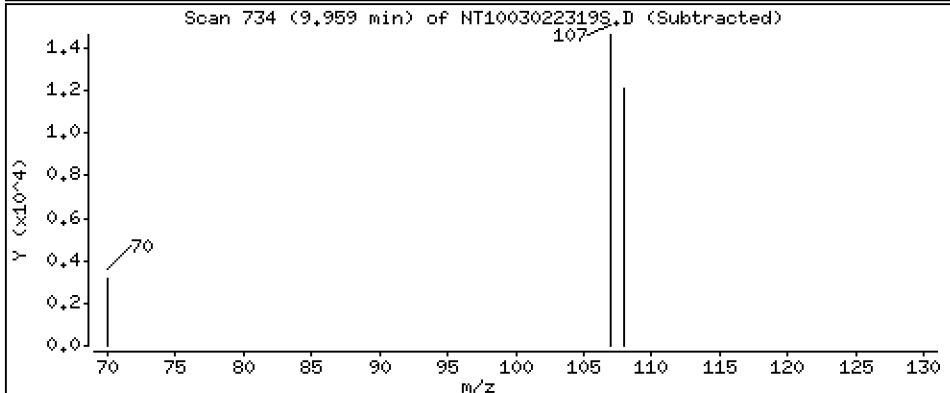
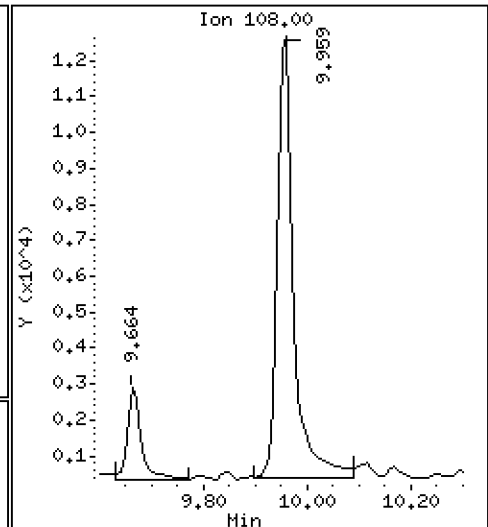
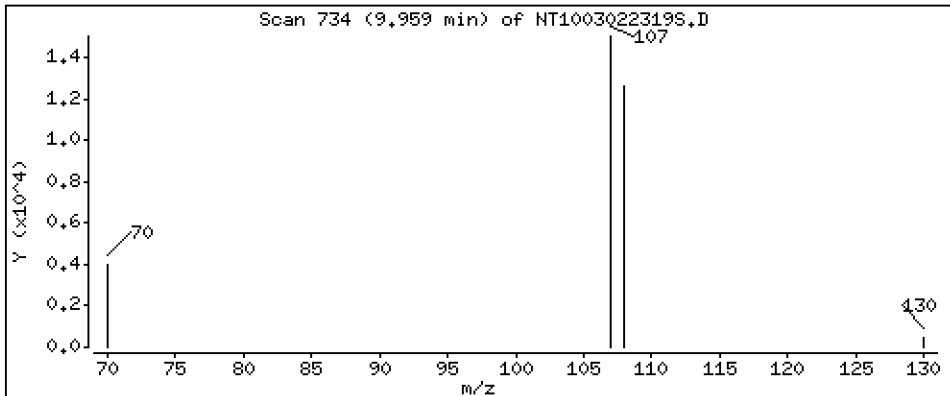
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1709 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

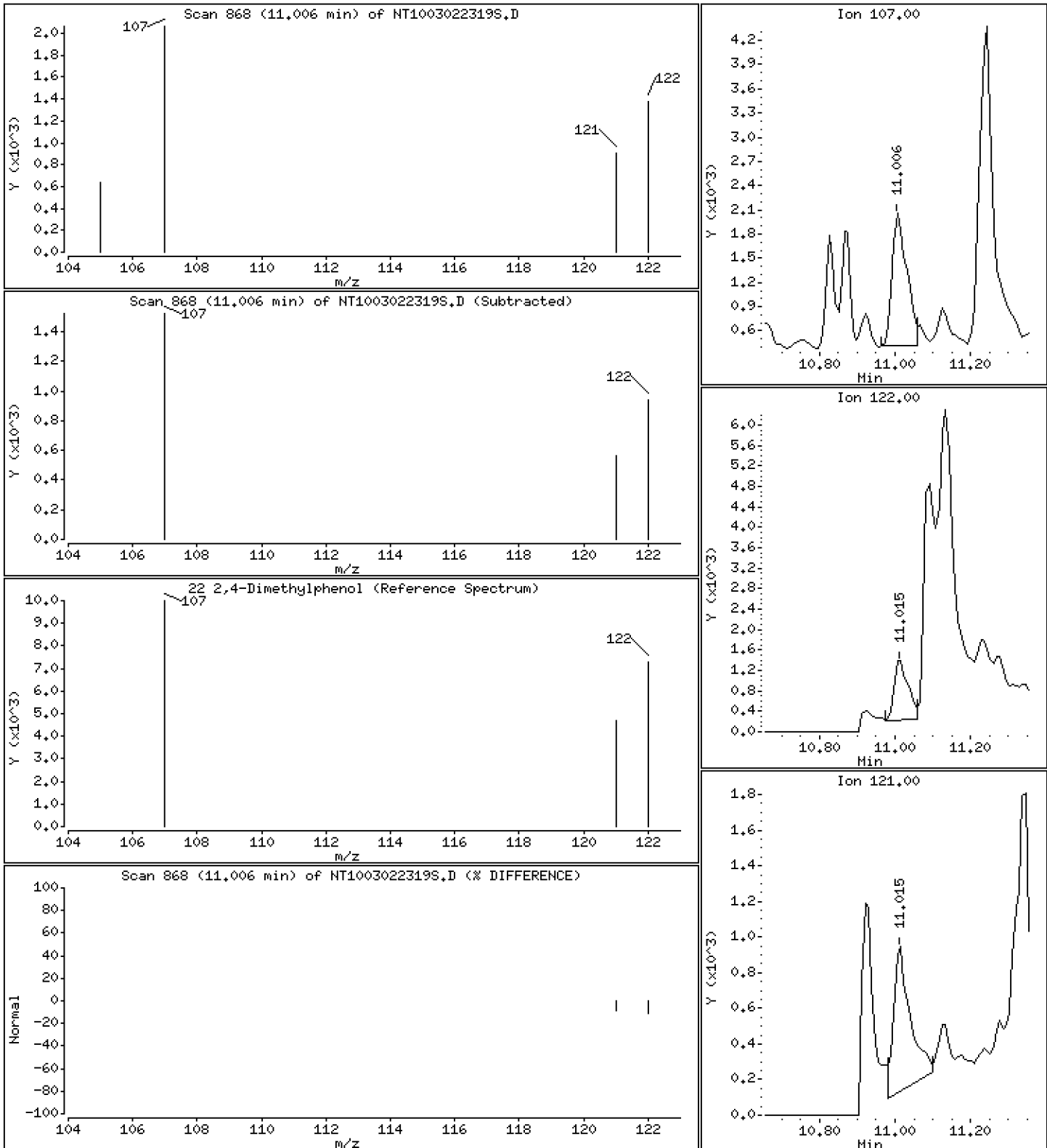
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02552 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

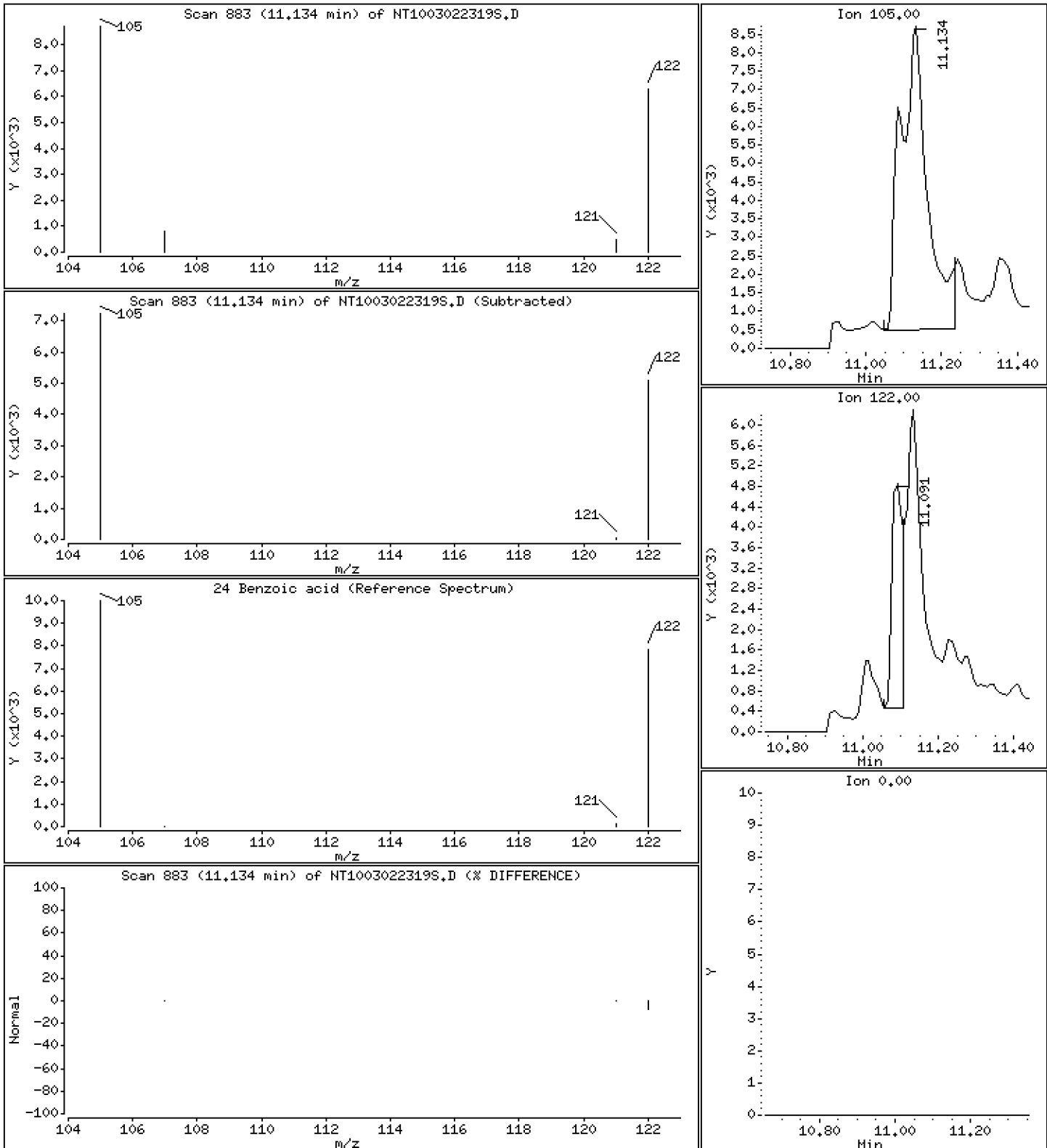
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.4205 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

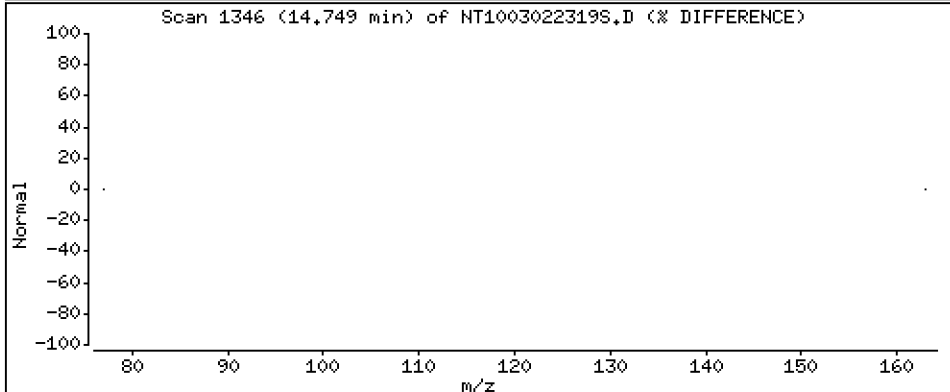
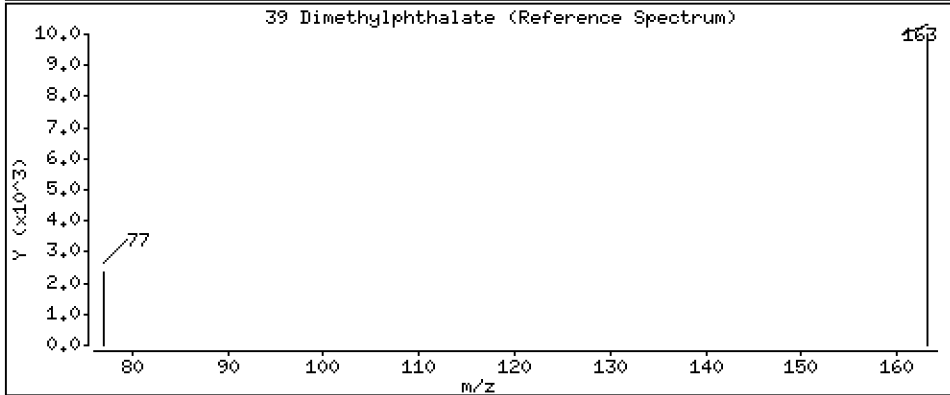
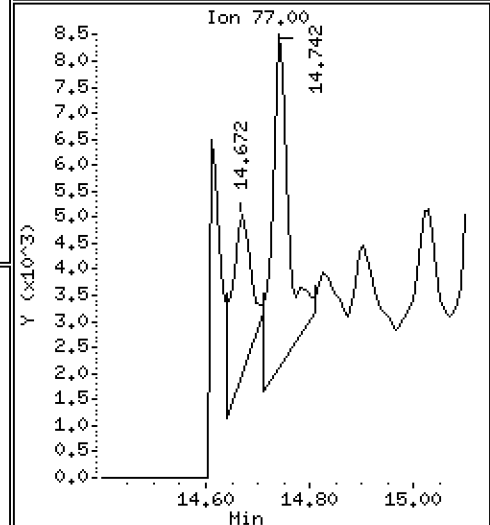
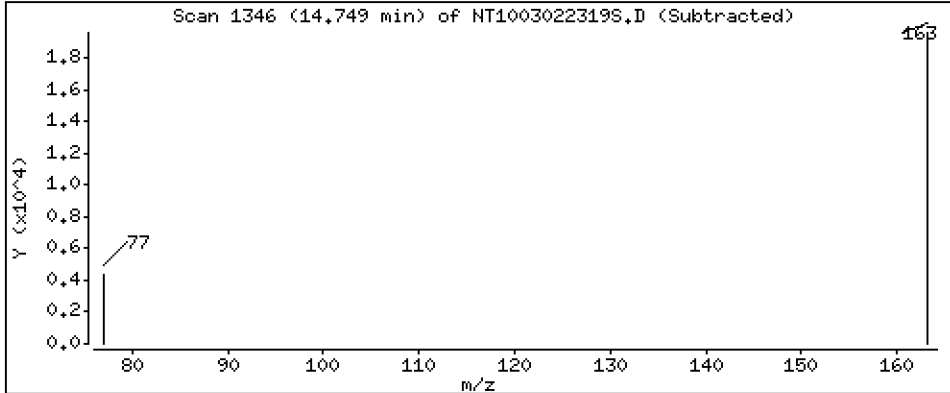
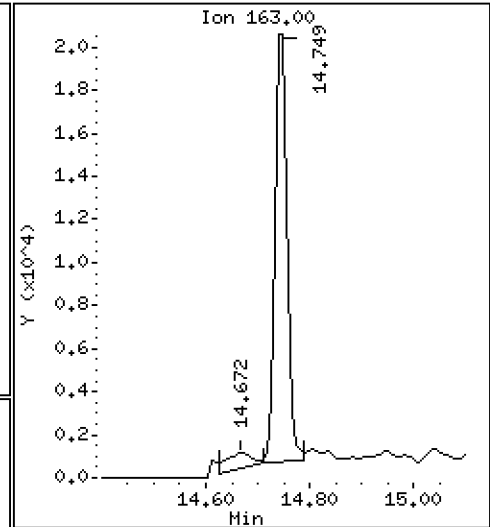
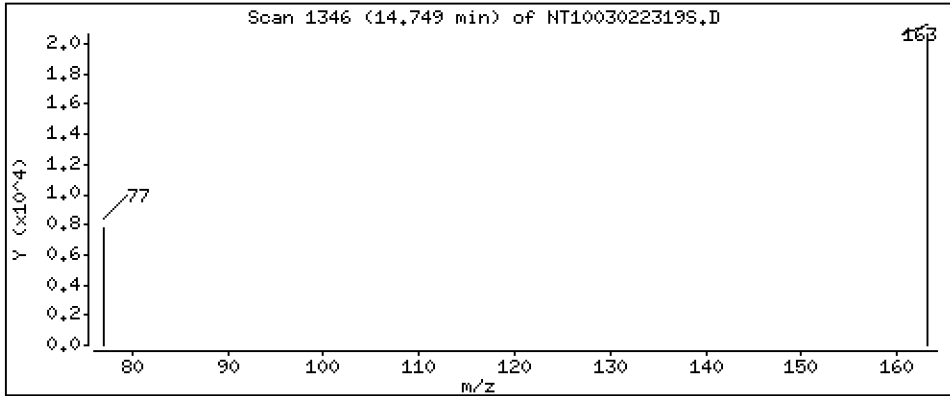
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.09364 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

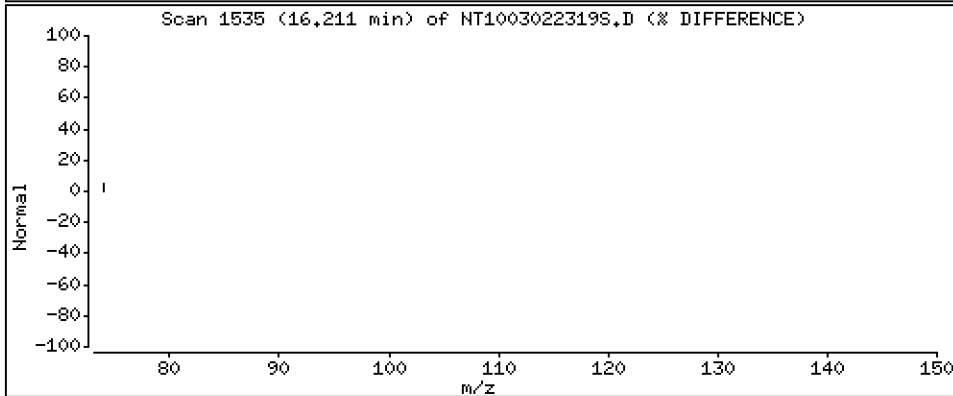
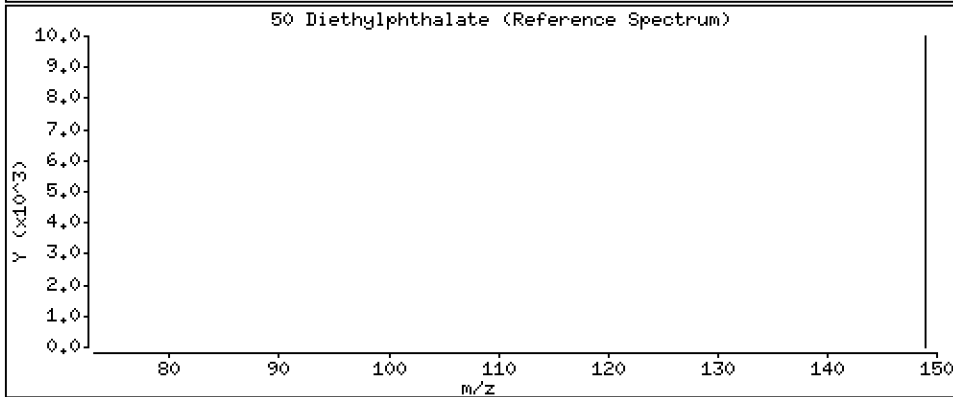
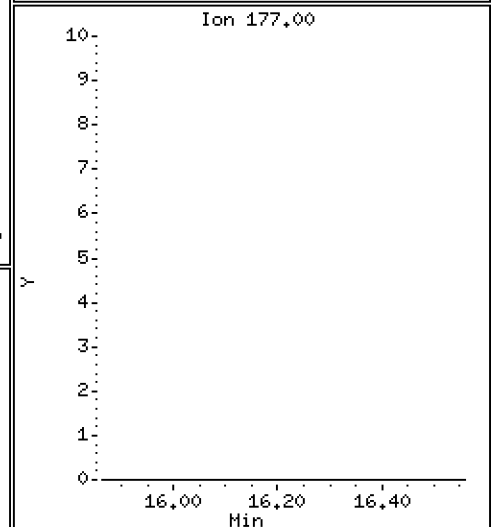
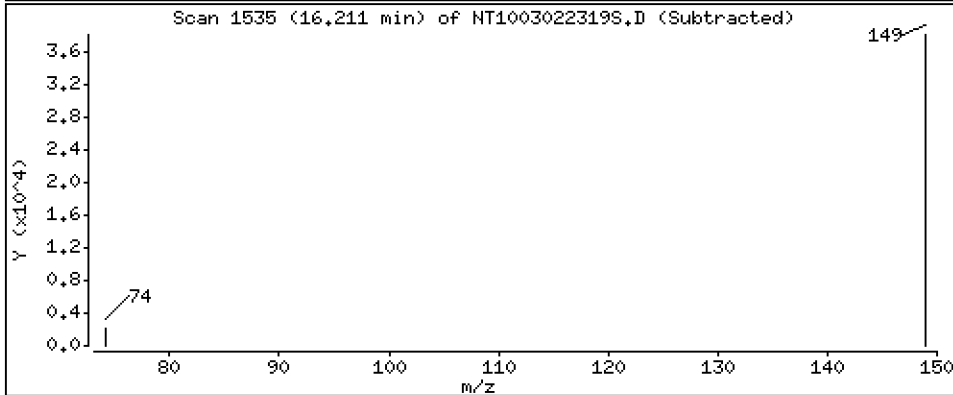
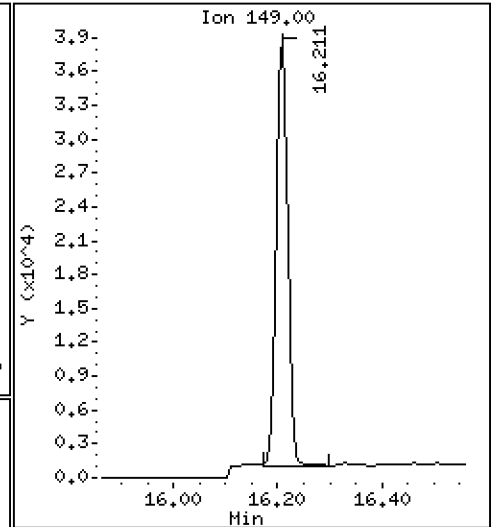
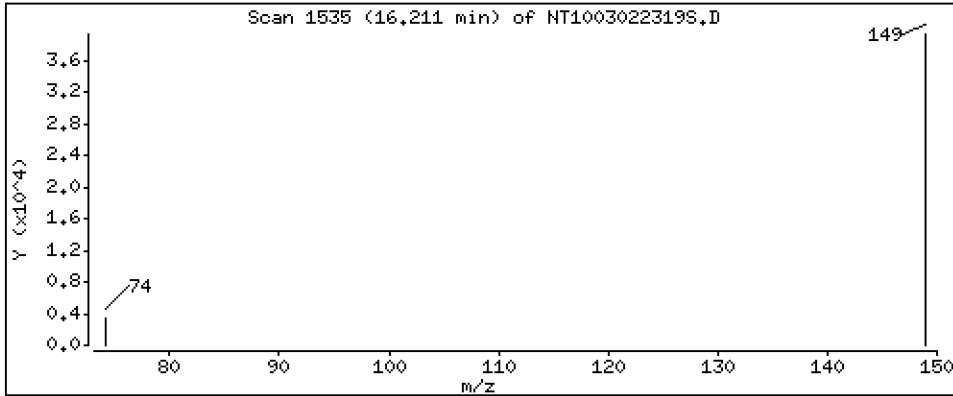
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,1777 ug/L





Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

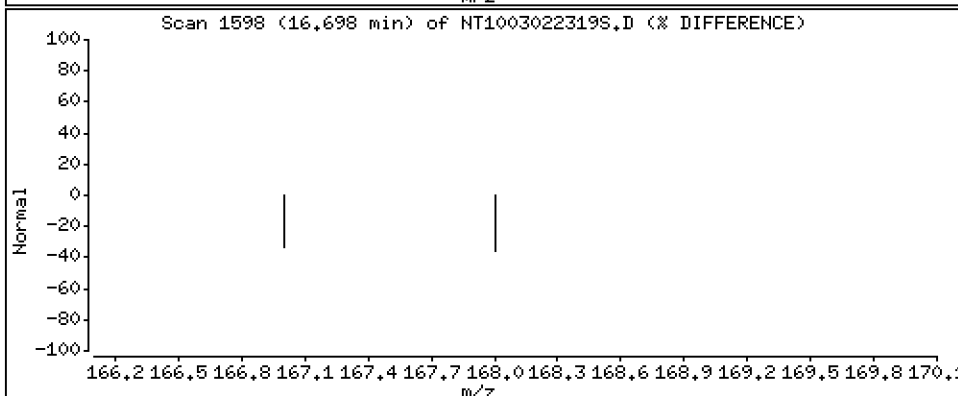
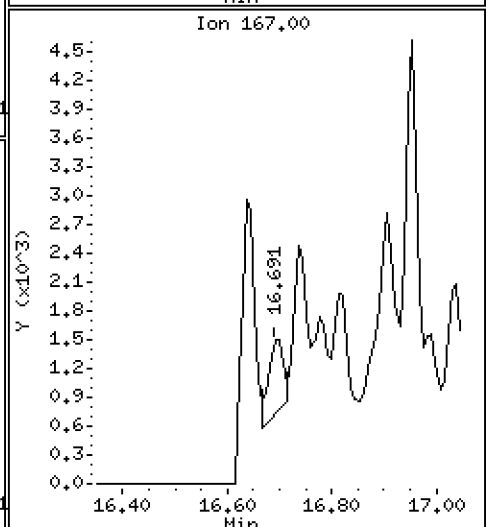
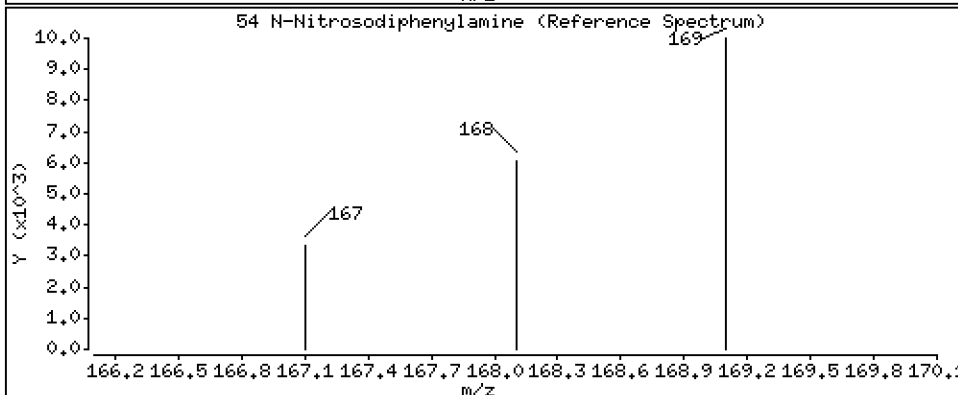
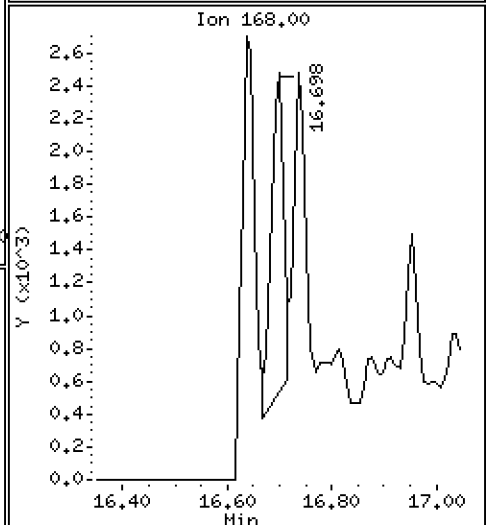
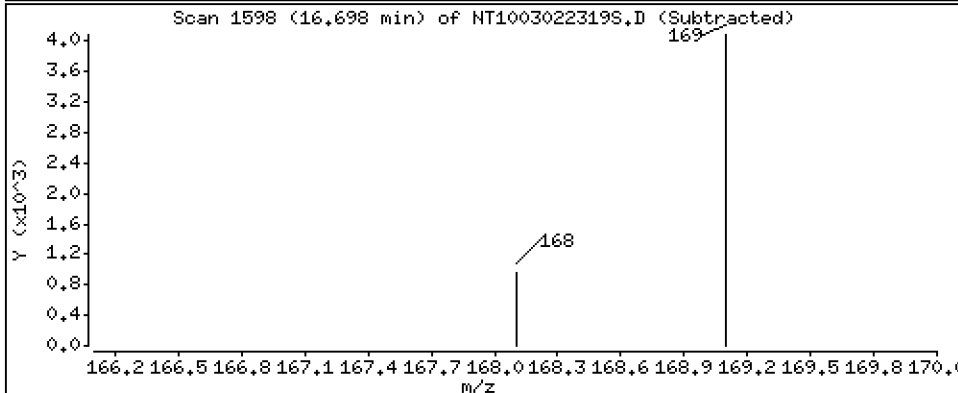
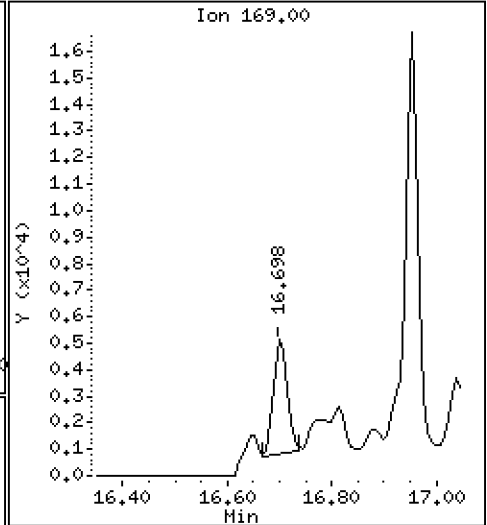
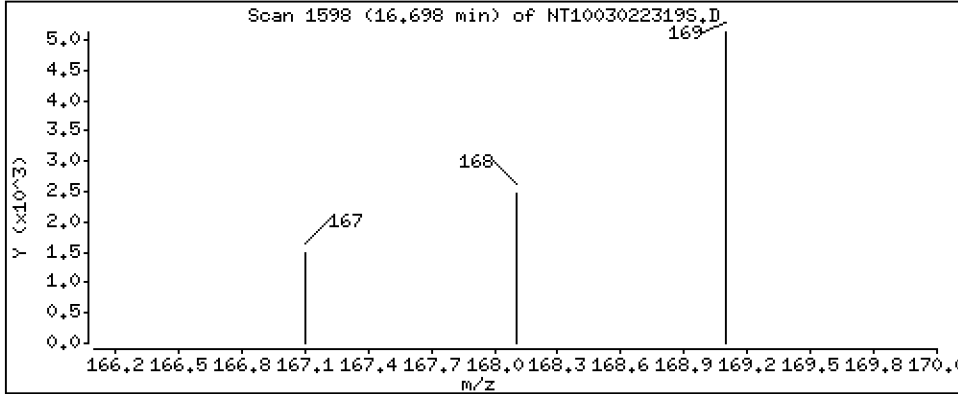
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.02499 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

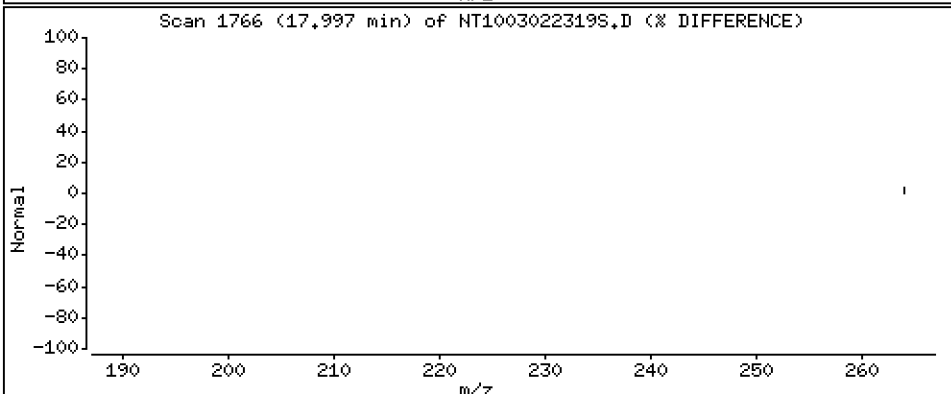
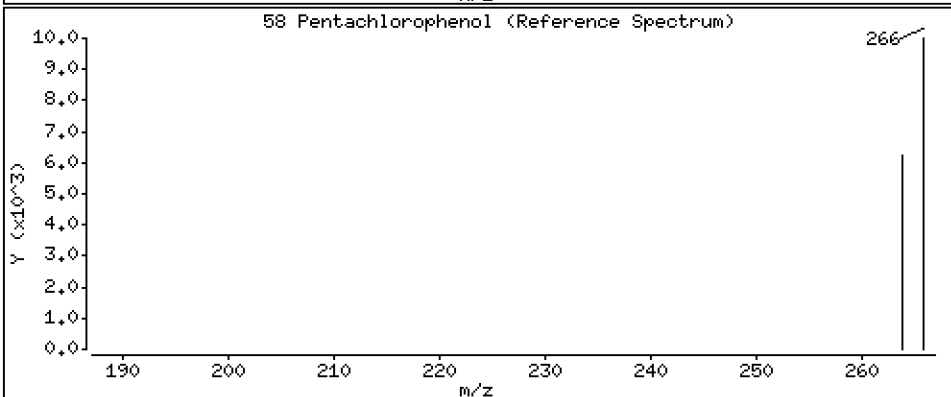
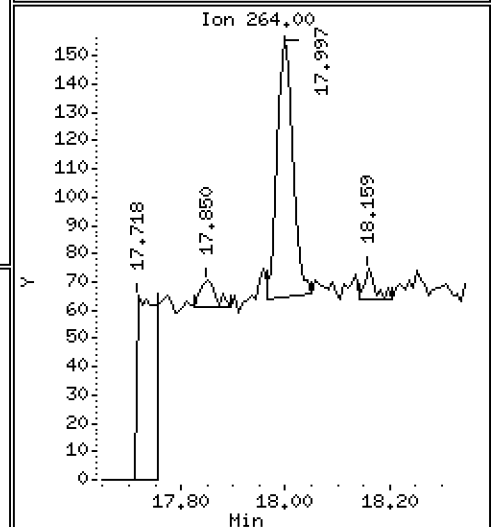
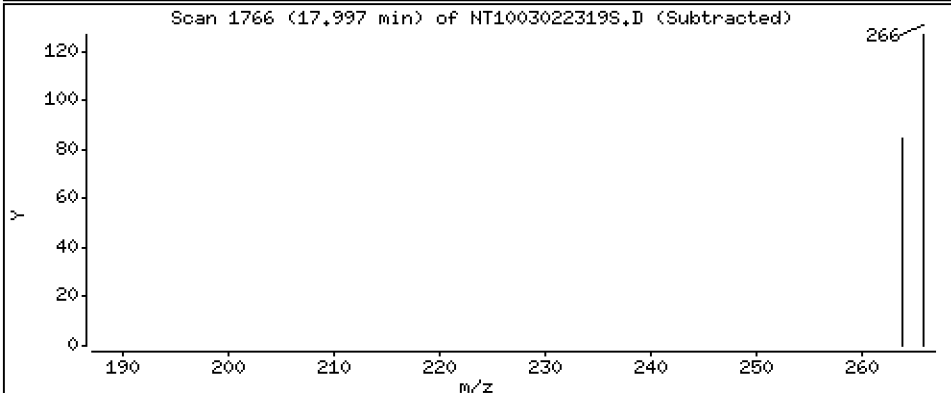
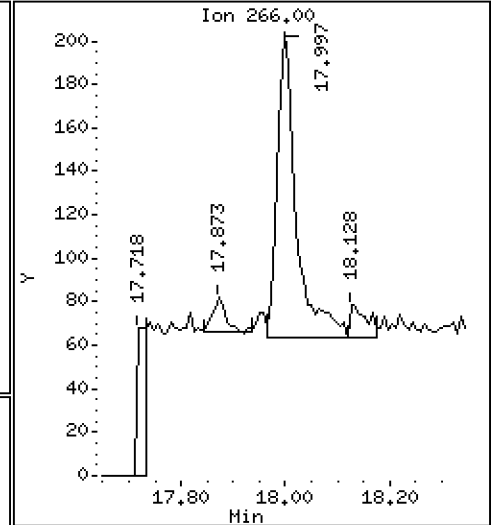
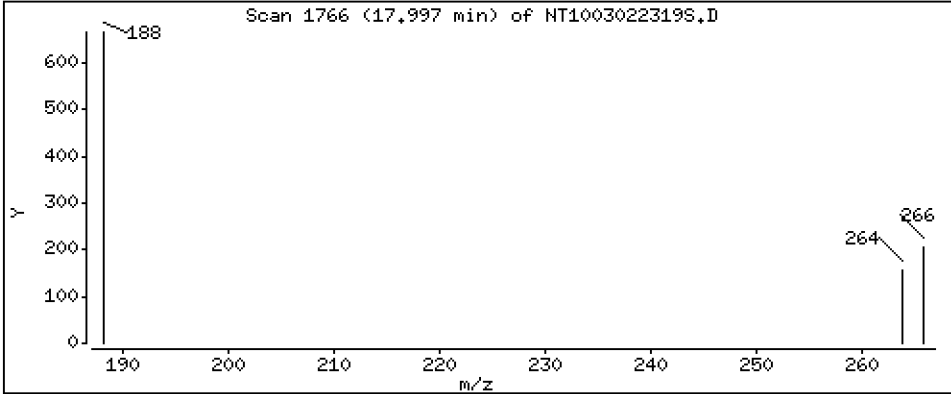
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,005275 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

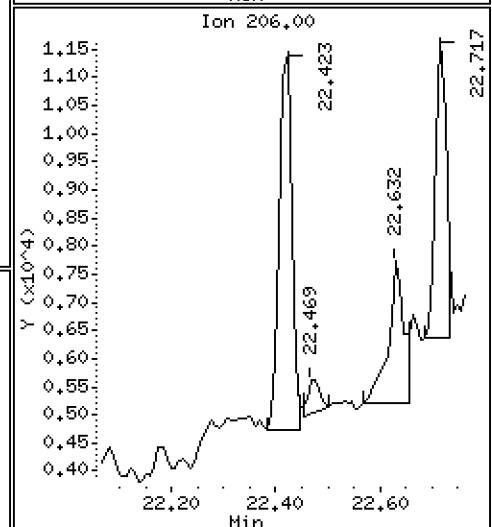
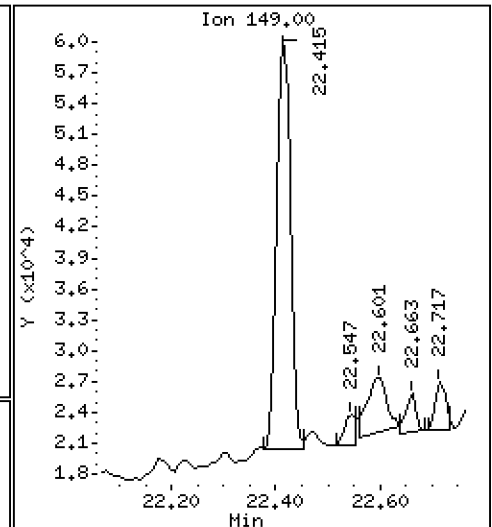
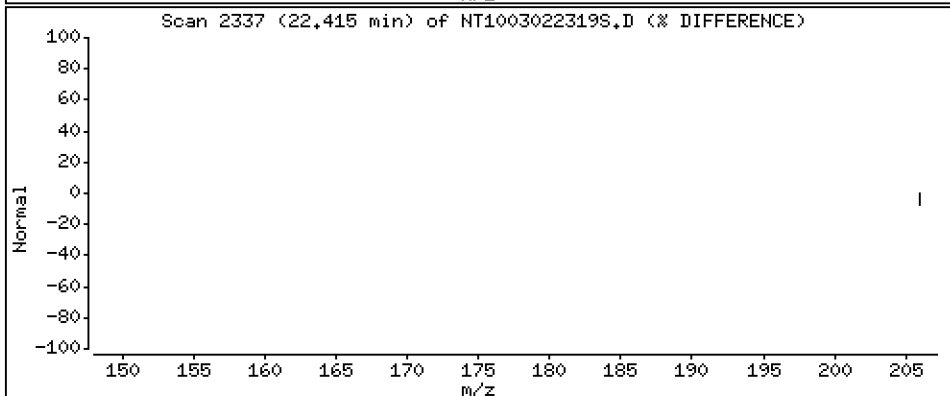
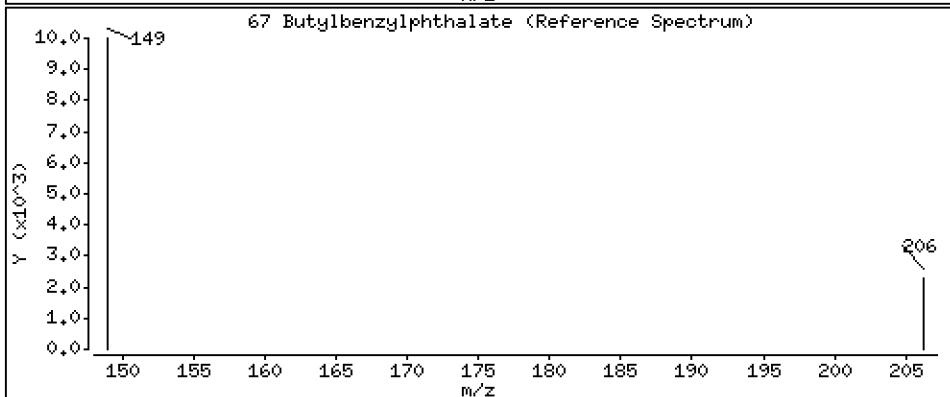
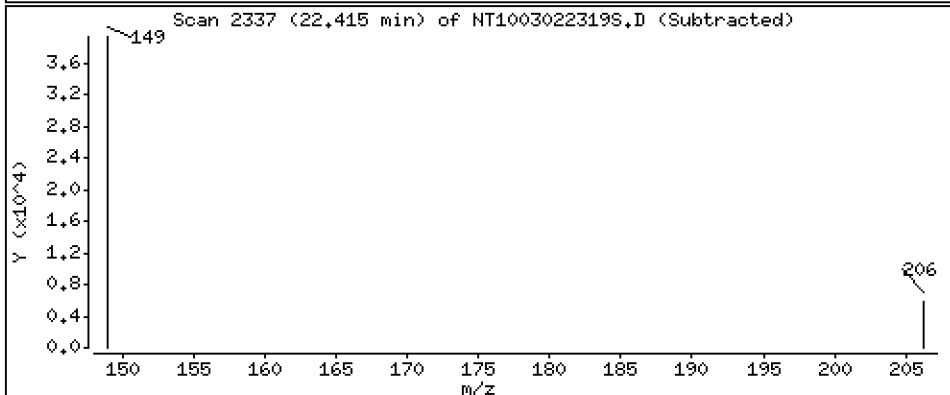
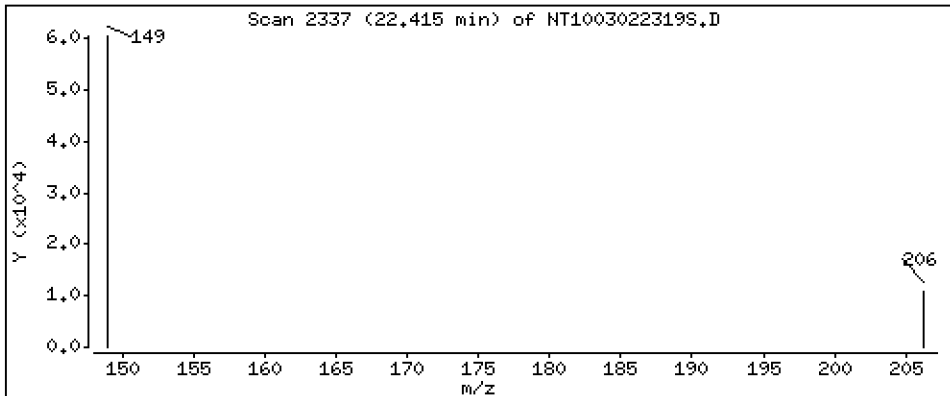
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.1777 ug/L



Date : 03-MAR-2023 01:47

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-04

Volume Injected (uL): 1.0

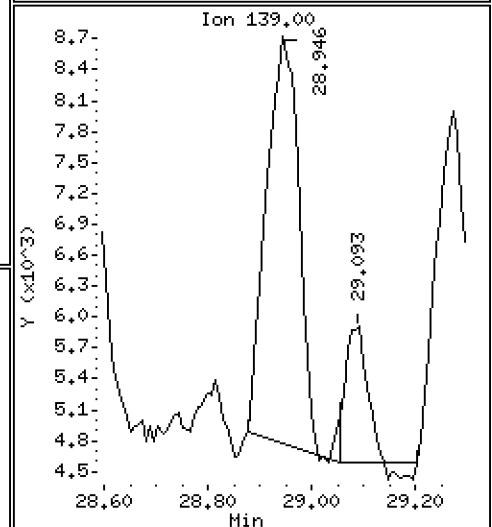
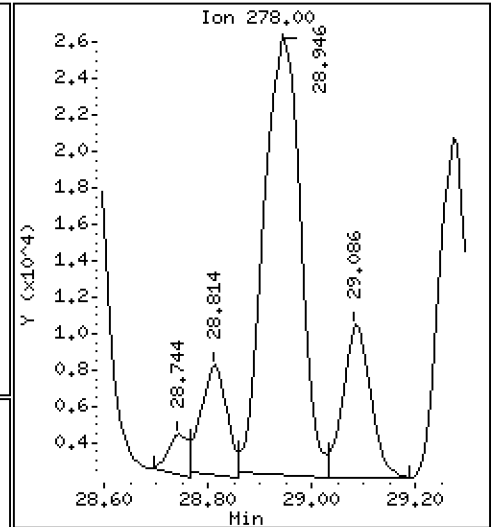
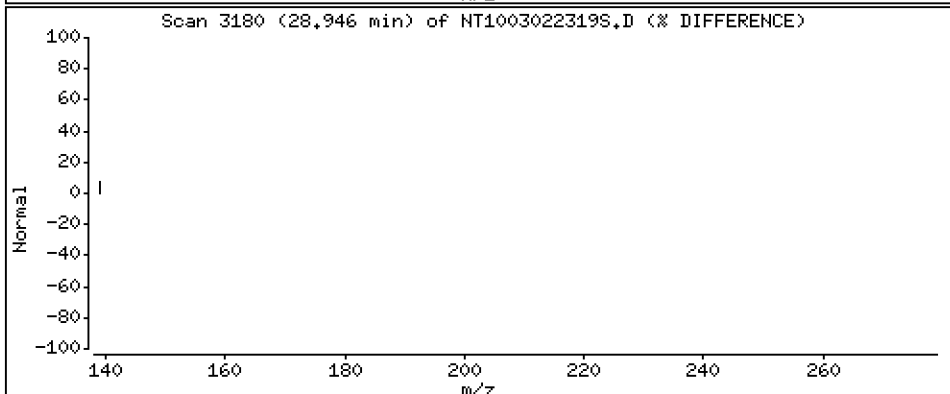
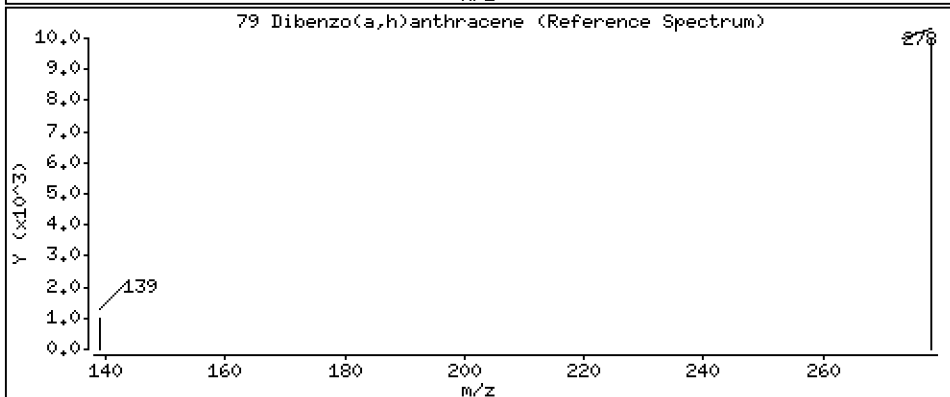
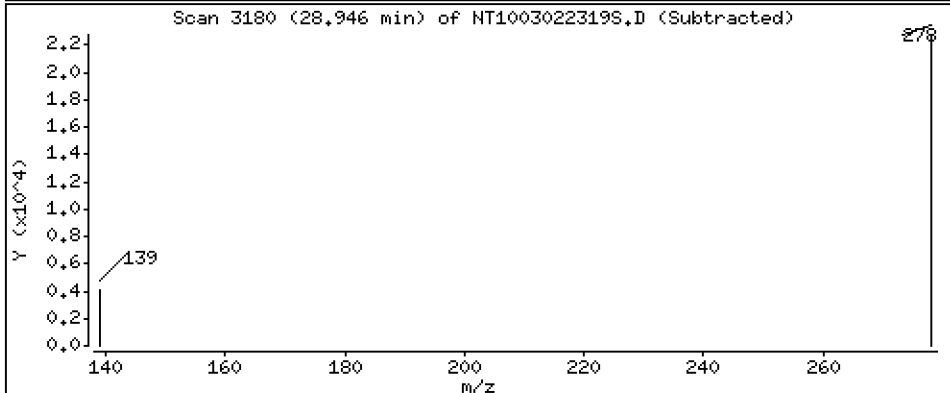
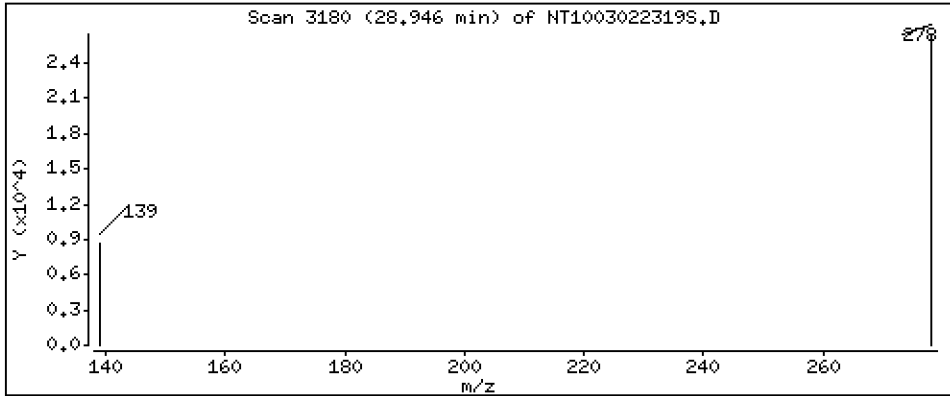
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1996 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022319S.D  
 Lab Smp Id: 23A0206-04  
 Inj Date : 03-MAR-2023 01:47 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-04  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 15  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1035756	6.33099	6.331 (R)
3 Phenol	94		8.525	8.525	(0.921)	1369007	5.51165	5.512
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	573044	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	1644	0.00796	0.007962
11 Benzyl alcohol	79		9.484	9.477	(1.025)	26330	0.19642	0.1964 (M)
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.663	9.663	(1.044)	5412	0.03731	0.03731
15 4-Methylphenol	108		9.958	9.950	(1.076)	25824	0.17091	0.1709
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	4516	0.02552	0.02552 (M)
24 Benzoic acid	105		11.133	11.082	(0.950)	40872	0.42045	0.4205 (M)
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	2085809	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749	(0.963)	30514	0.09364	0.09364
* 42 Acenaphthene-d10	162		15.322	15.321	(1.000)	1026228	4.00000	
50 Diethylphthalate	149		16.211	16.210	(1.058)	54609	0.17771	0.1777
54 N-Nitrosodiphenylamine	169		16.698	16.698	(0.907)	7797	0.02499	0.02499 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.996	17.996	(0.978)	337	0.00528	0.005275
* 59 Phenanthrene-d10	188		18.406	18.406	(1.000)	1928257	4.00000	
\$ 66 Terphenyl-d14	244		21.540	21.532	(0.919)	904899	4.77642	4.776(R)
67 Butylbenzylphthalate	149		22.415	22.414	(0.957)	70240	0.17766	0.1777
* 69 Chrysene-d12	240		23.429	23.429	(1.000)	2342758	4.00000	
* 77 Perylene-d12	264		26.139	26.123	(1.000)	2571363	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.945	(1.107)	119146	0.19956	0.1996
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022319S.D  
 Lab Smp Id: 23A0206-04  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	573044	-12.17
27 Naphthalene-d8	2339966	1169983	4679932	2085809	-10.86
42 Acenaphthene-d10	1186988	593494	2373976	1026228	-13.54
59 Phenanthrene-d10	2193485	1096743	4386970	1928257	-12.09
69 Chrysene-d12	2444828	1222414	4889656	2342758	-4.17
77 Perylene-d12	2842248	1421124	5684496	2571363	-9.53

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022319S.D

Lab ID: 23A0206-04

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 01:47

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

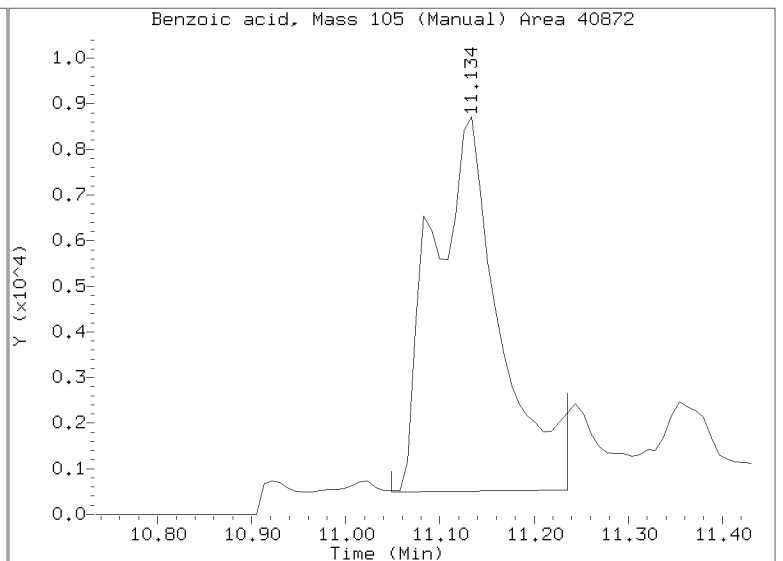
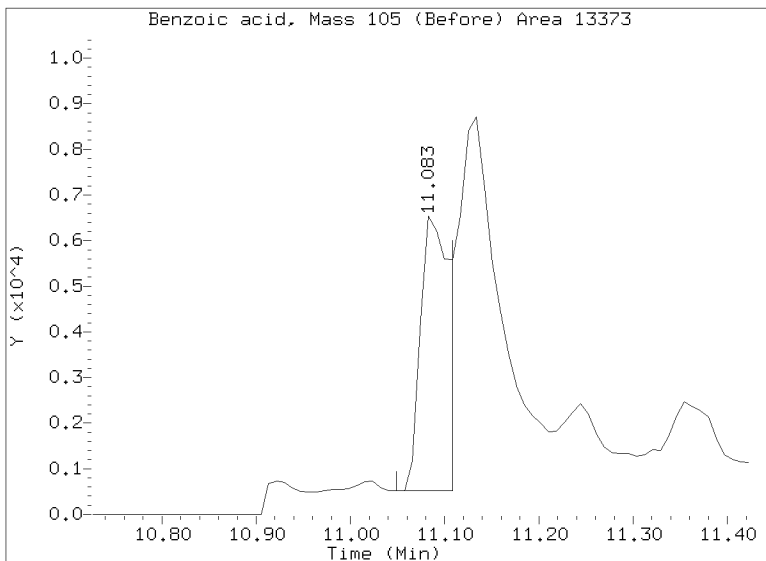
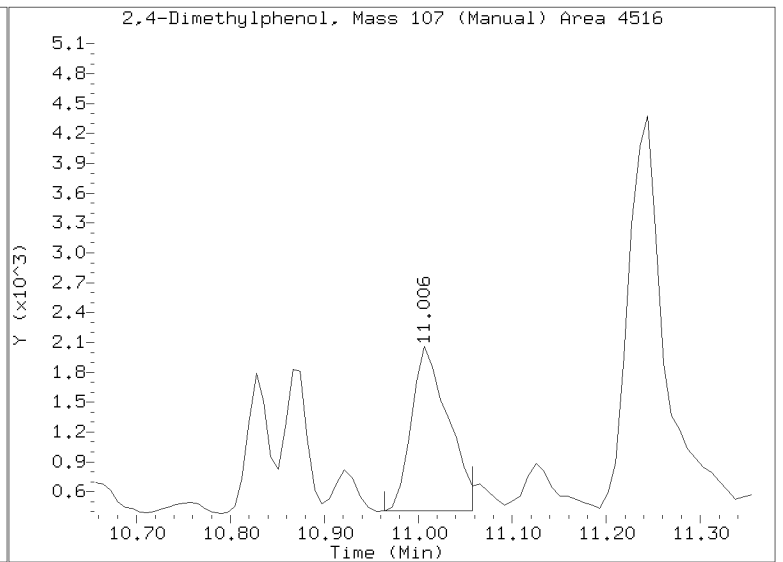
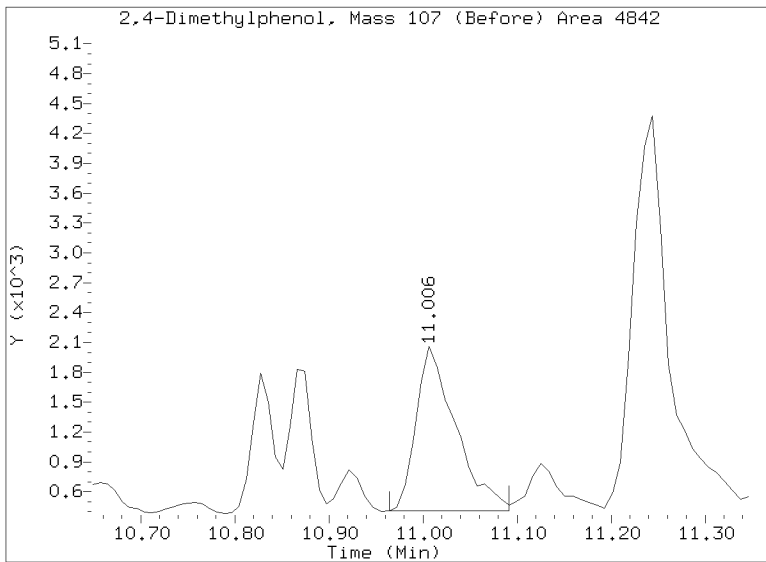
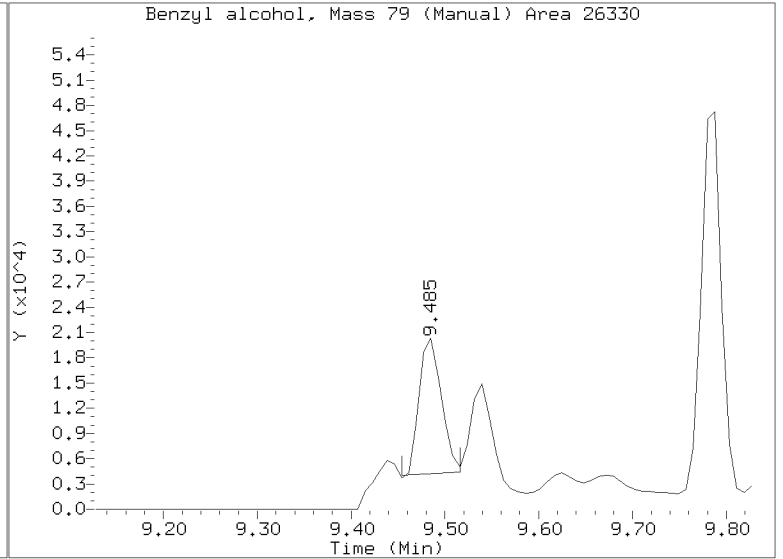
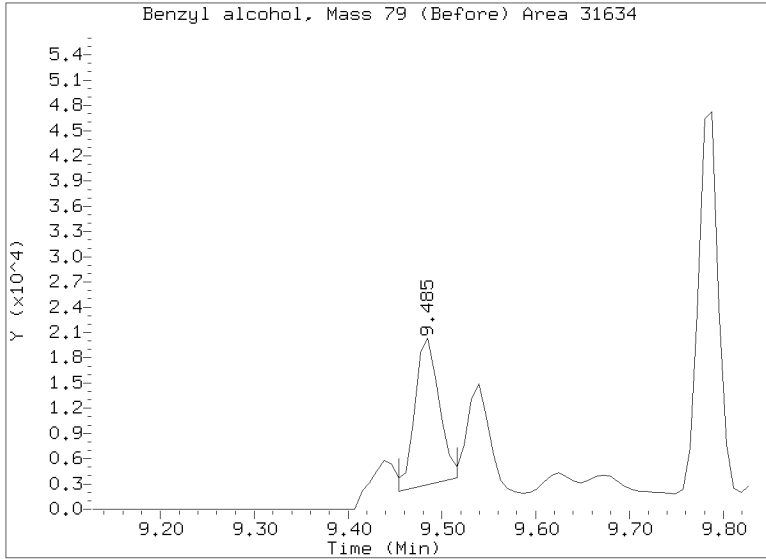
Exception: 1,2,4-Trichlorobenzene 0.0010

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



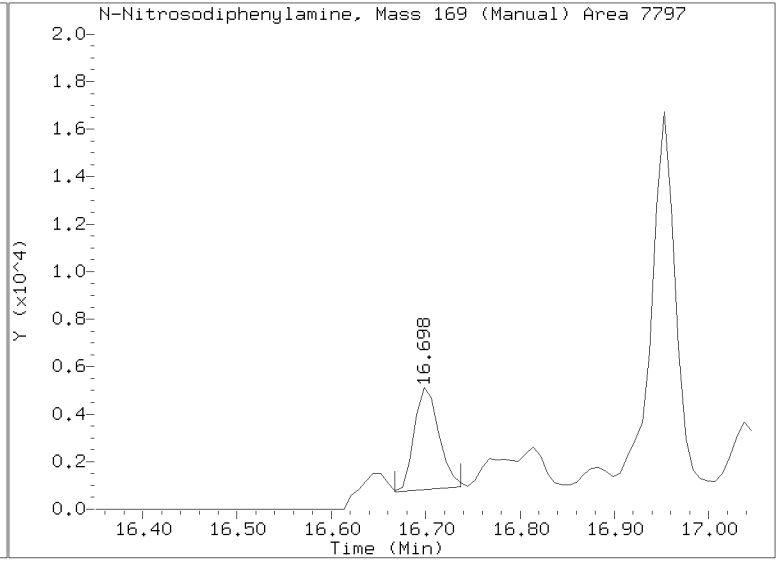
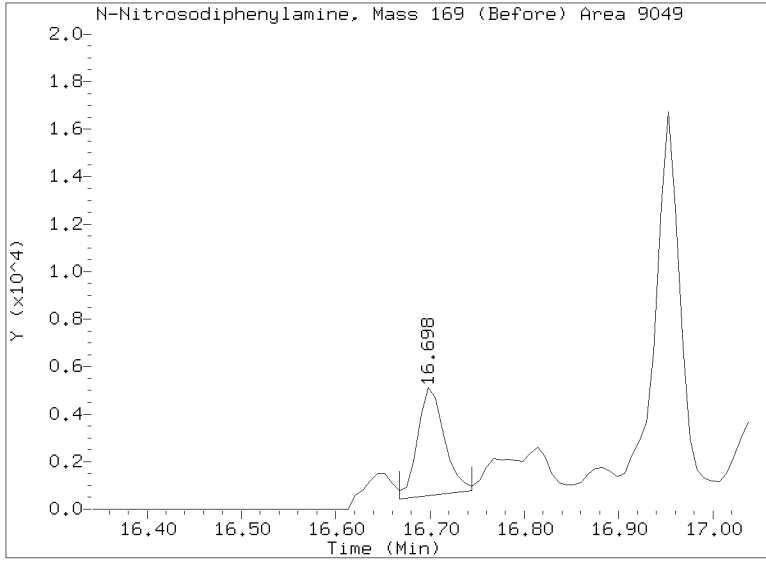
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022319S.D  
Injection Date: 03-MAR-2023 01:47  
Lab ID:23A0206-04 Client ID:  
Report Date: 03/11/2023 06:37



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022319S.D  
Injection Date: 03-MAR-2023 01:47  
Lab ID:23A0206-04 Client ID:  
Report Date: 03/11/2023 06:37





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-05 B

SDG: 23A0206

Sampled: 01/11/23 09:50

Prepared: 01/27/23 14:44

File ID: NT1003022320S.D

% Solids: 52.94

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 02:25

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 18.89 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

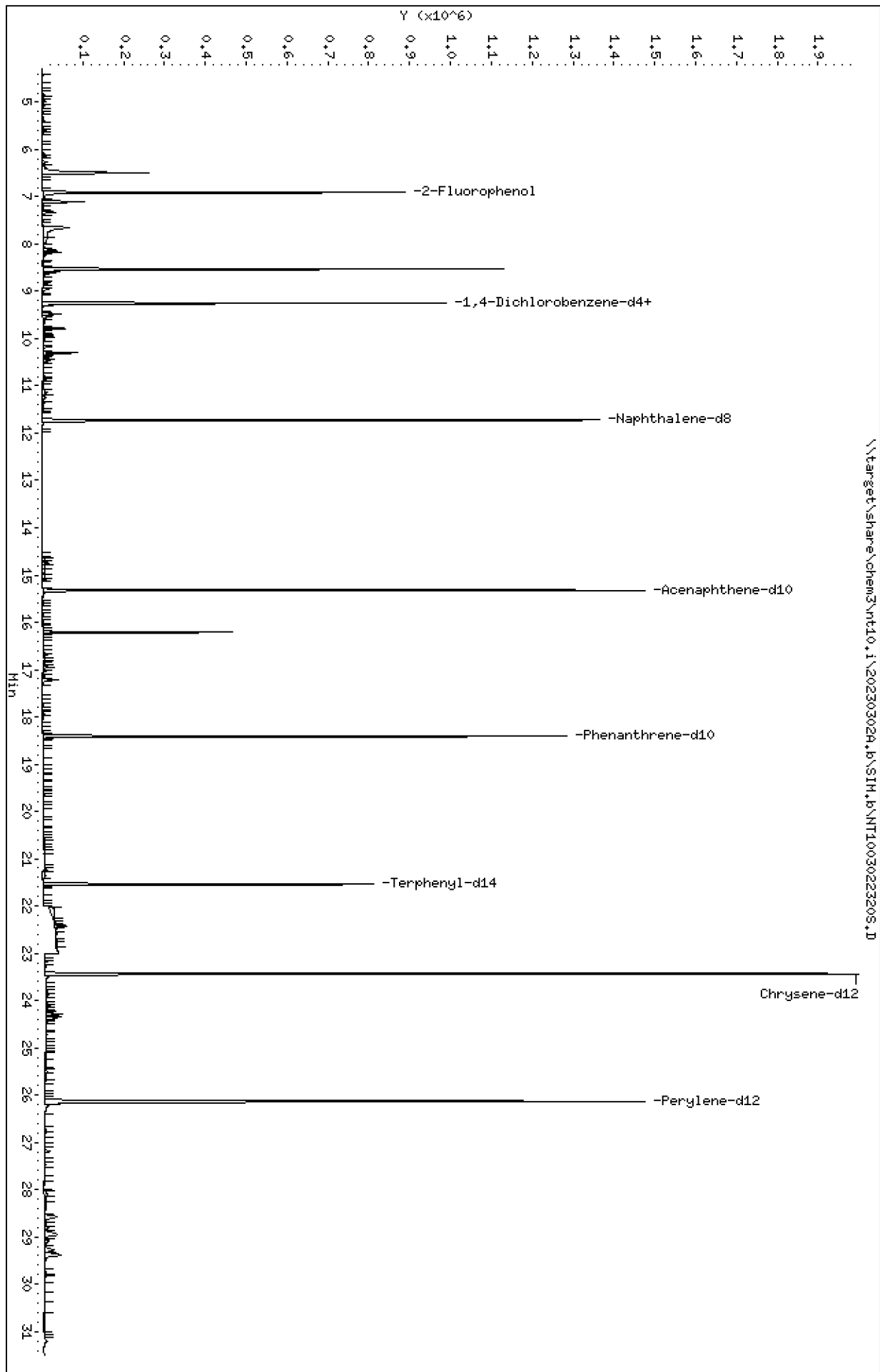
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	31.2		2.5	20.0
65-85-0	Benzoic acid	1	30.2	J	13.4	100
105-67-9	2,4-Dimethylphenol	1	2.6	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	3.9	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.97	651	86.9	27 - 120	
p-Terphenyl-d14	499.98	510	102	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302a,b\SIM,b\NT1003022320S.D  
Date: 03-MAR-2023 02:25  
Client ID:  
Sample Info: 23A0206-05  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302a,b\SIM,b\NT1003022320S.D



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

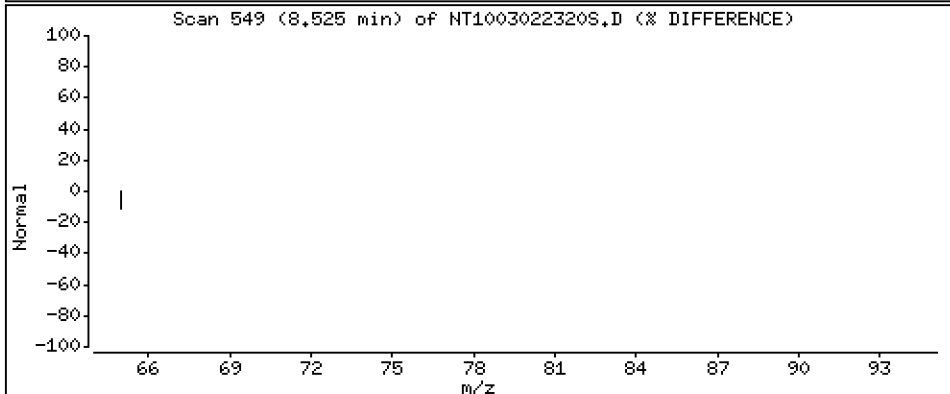
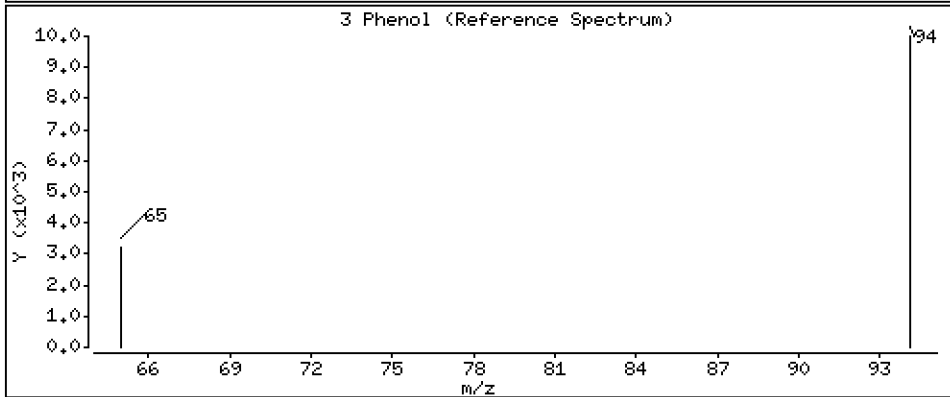
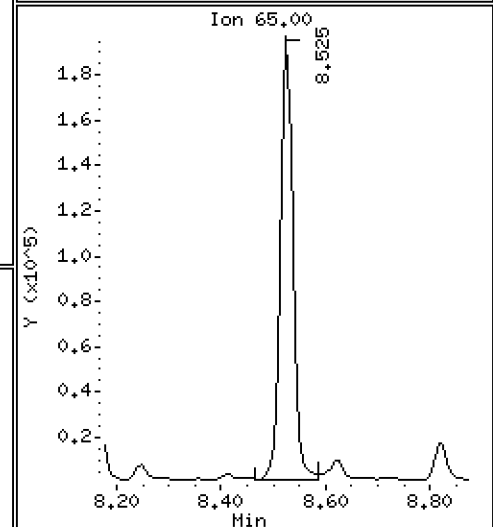
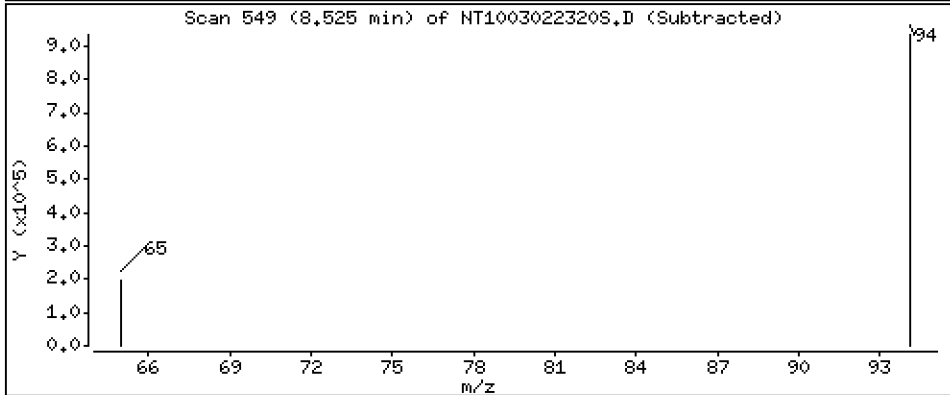
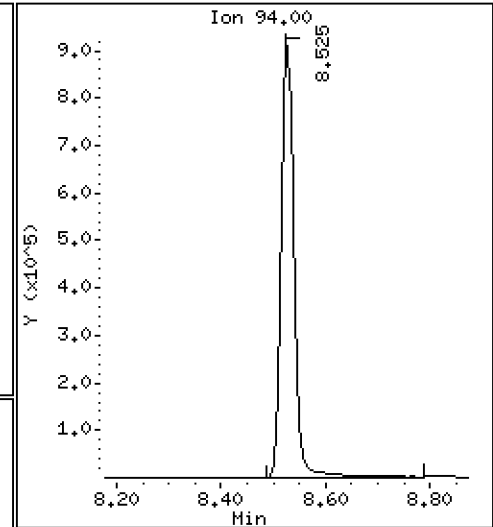
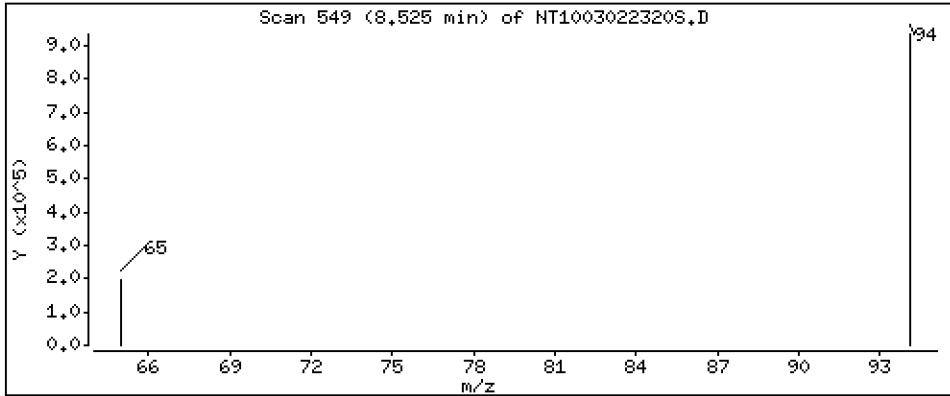
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 5,702 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

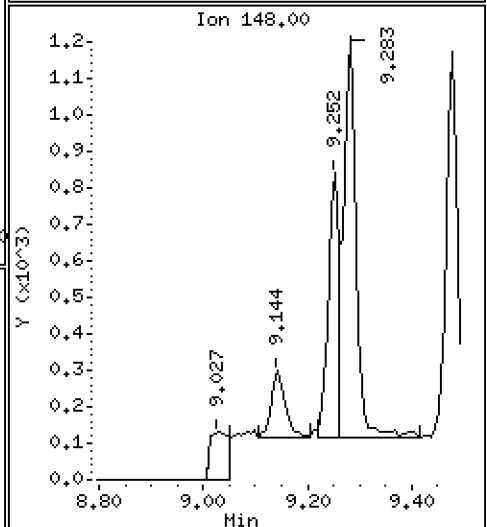
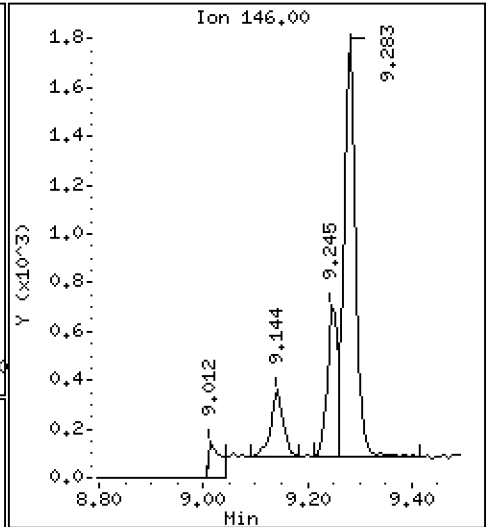
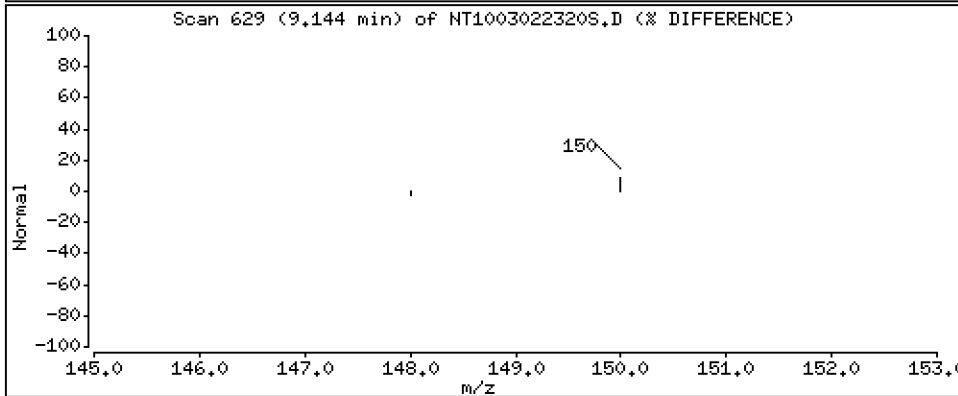
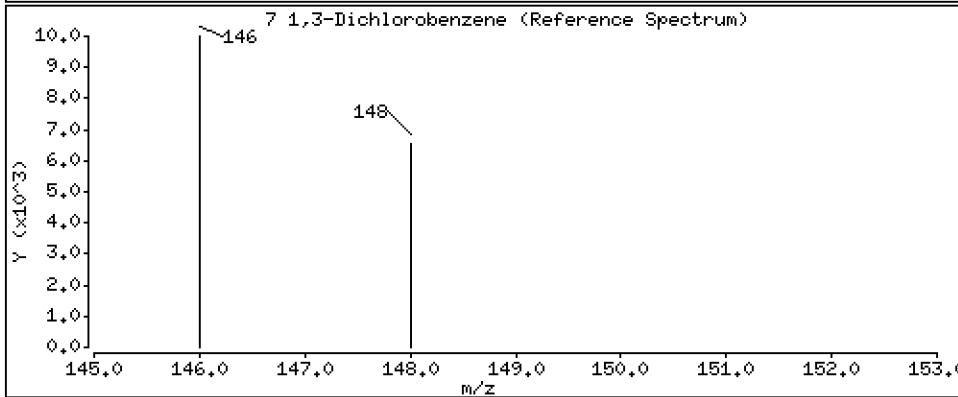
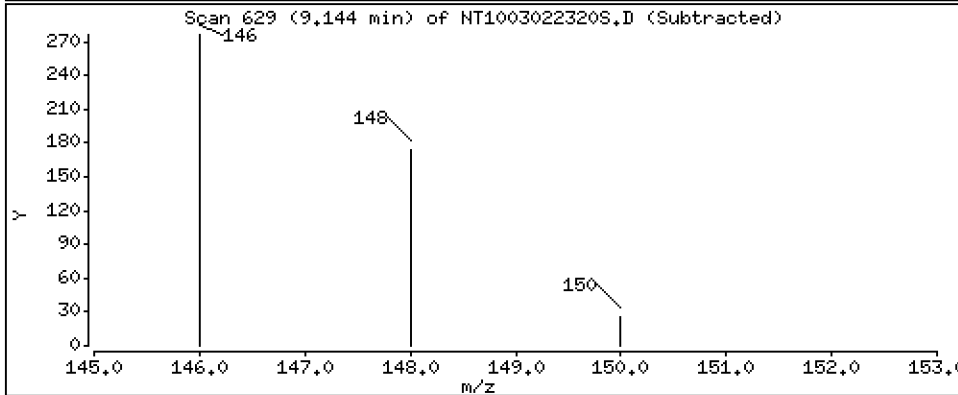
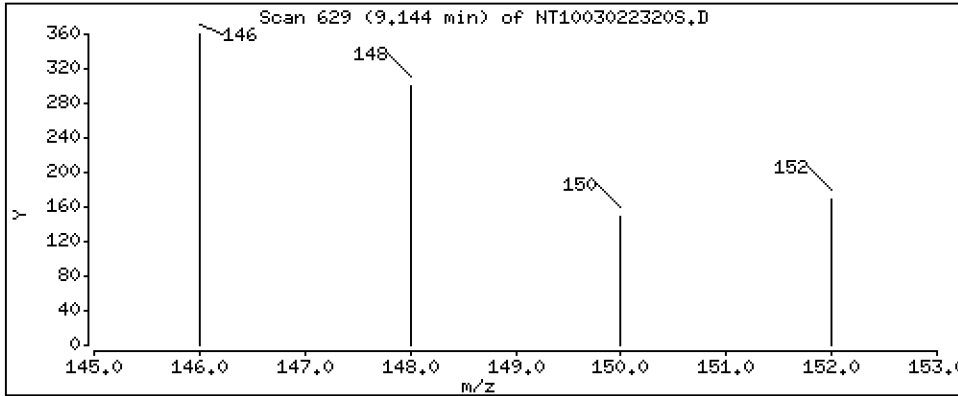
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.002140 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

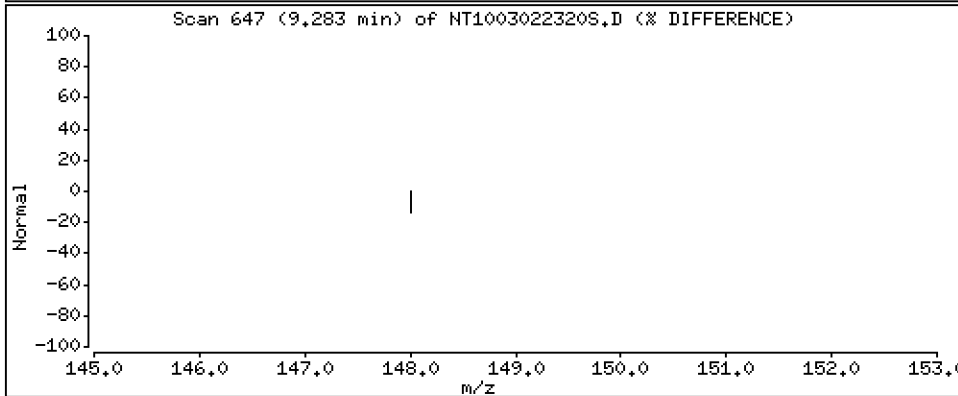
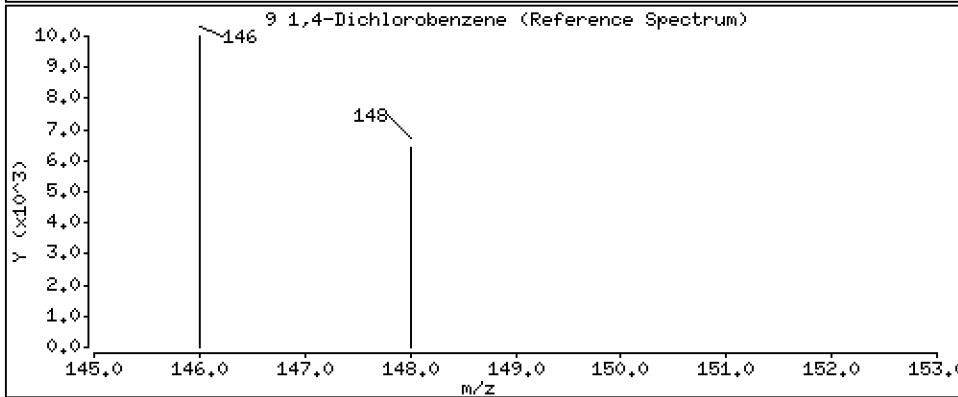
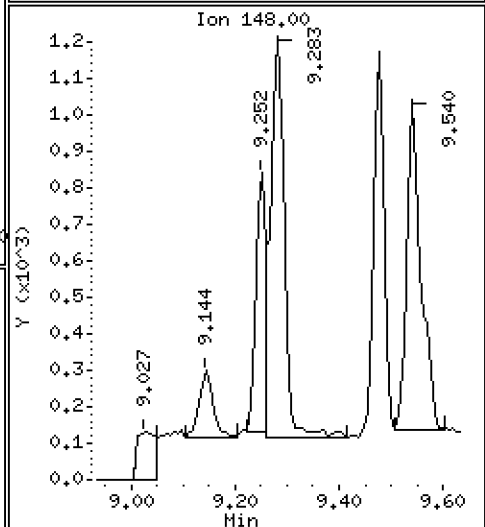
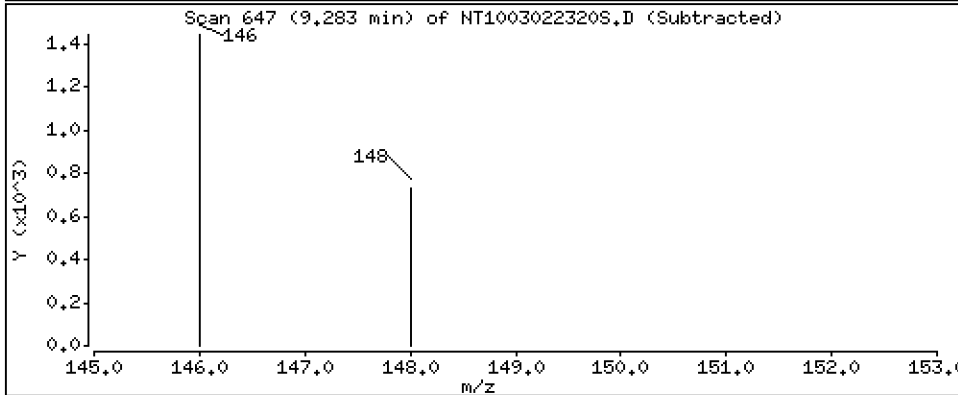
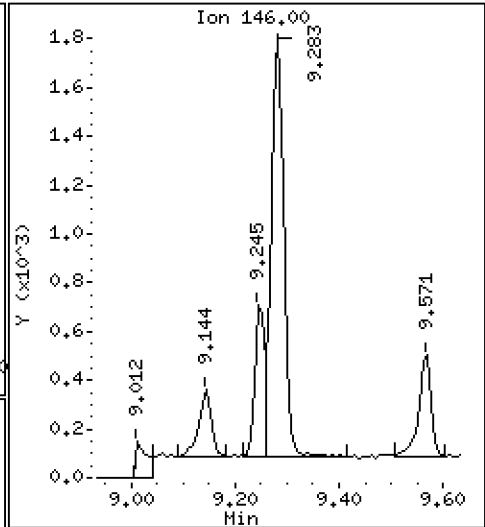
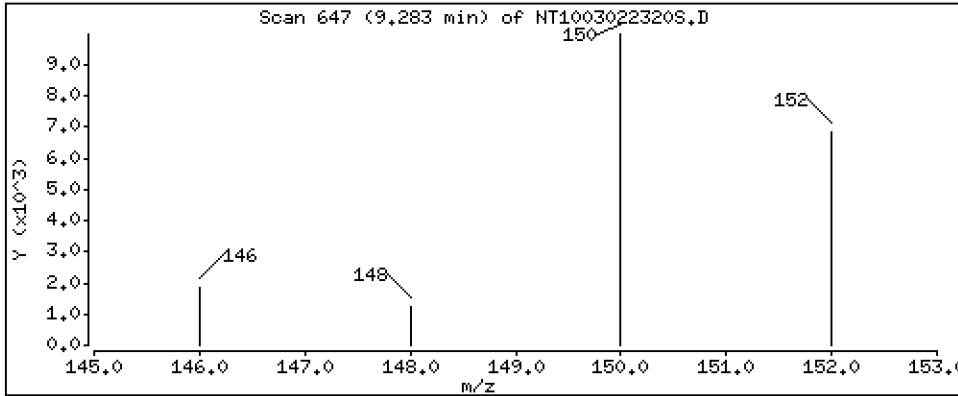
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.01318 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

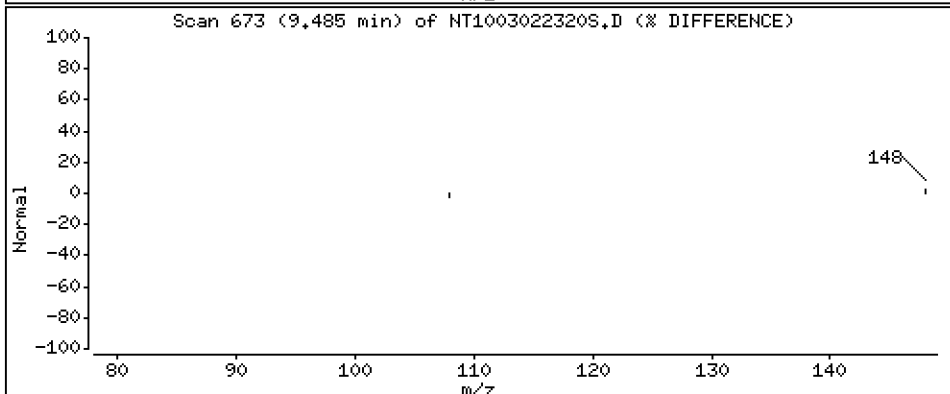
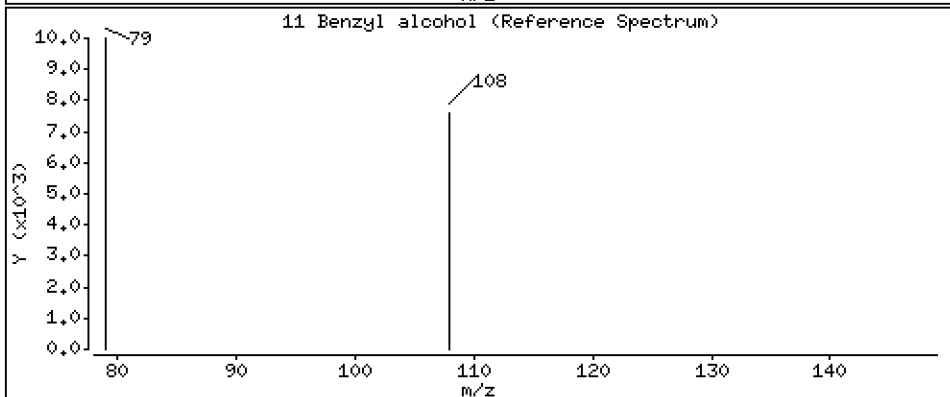
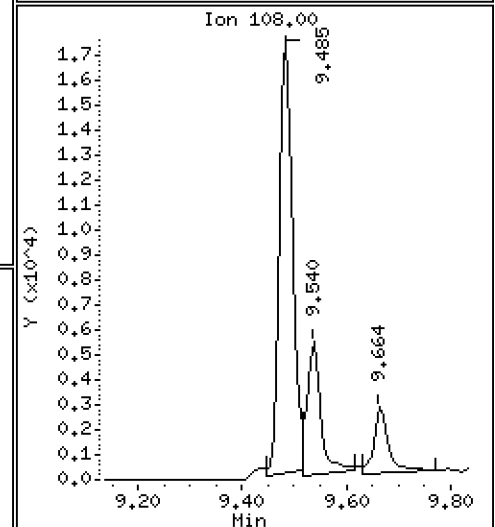
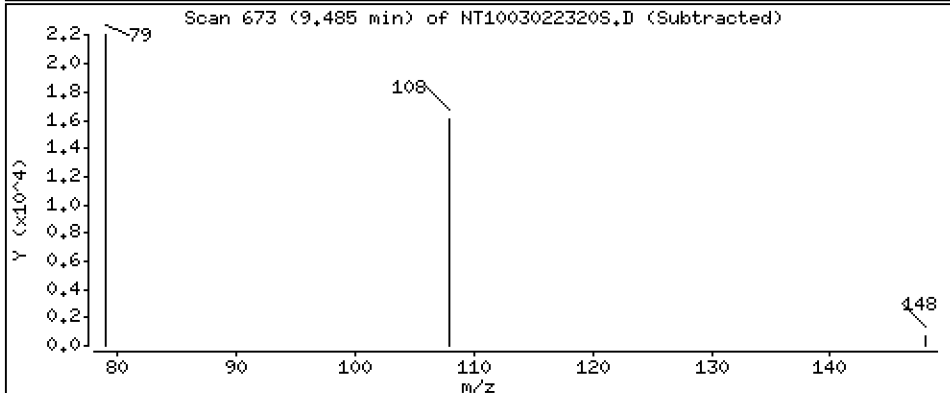
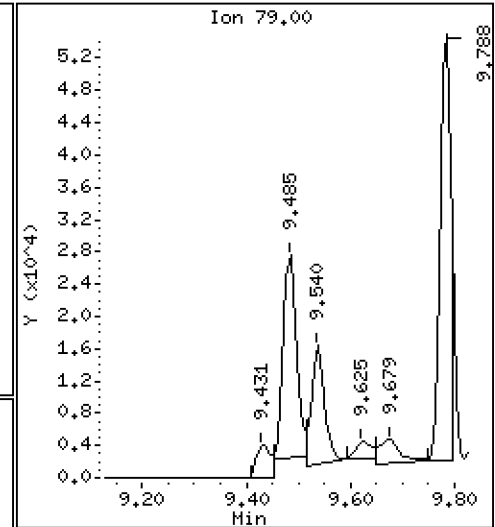
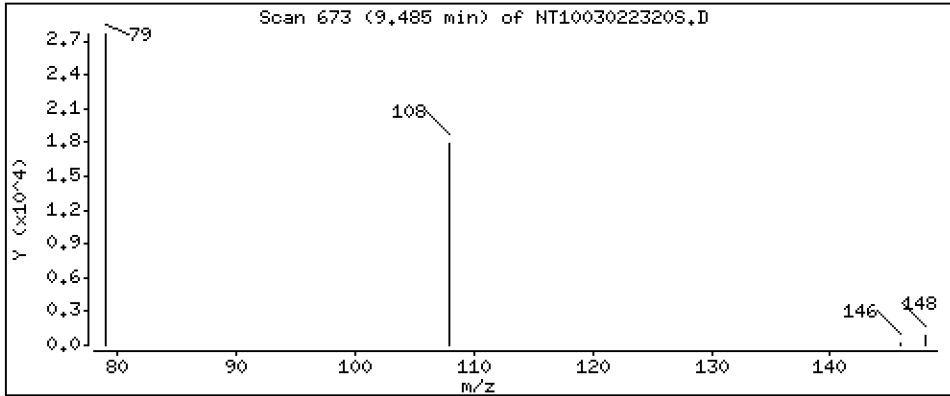
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.3120 ug/L





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

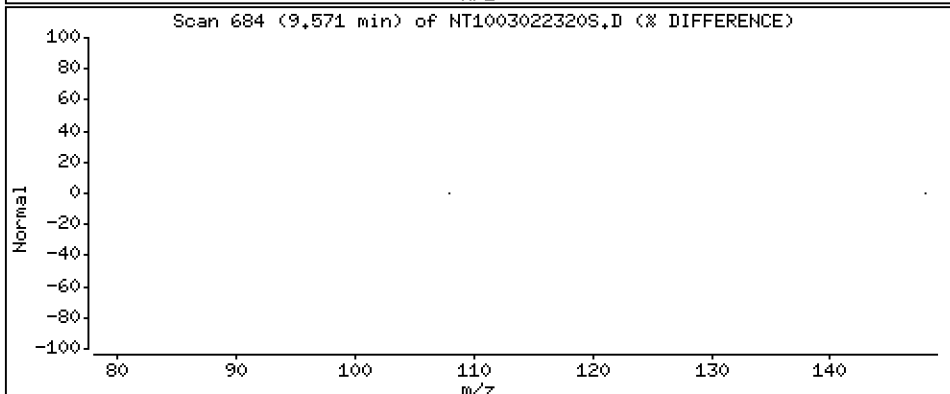
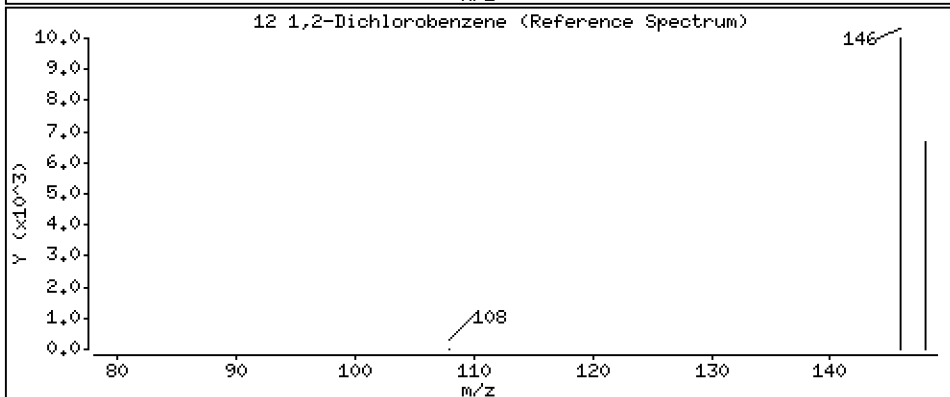
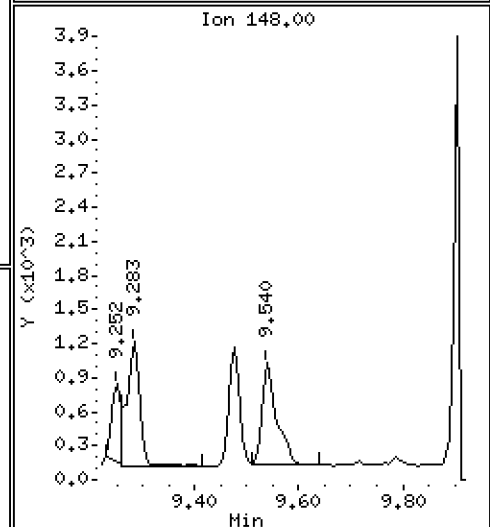
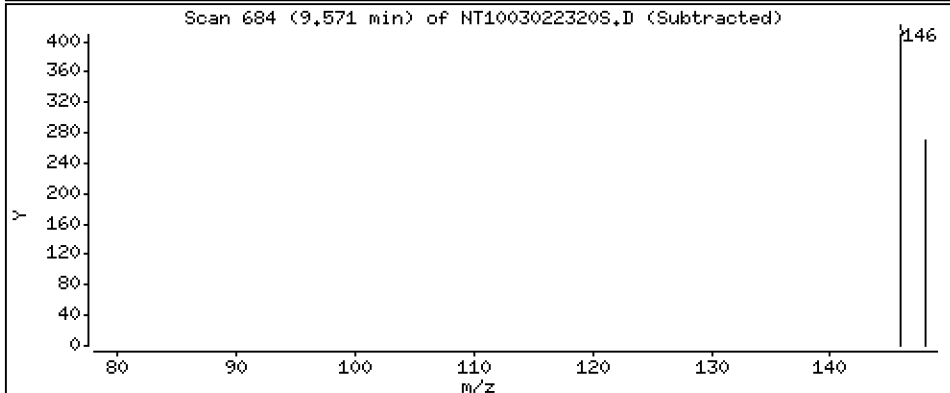
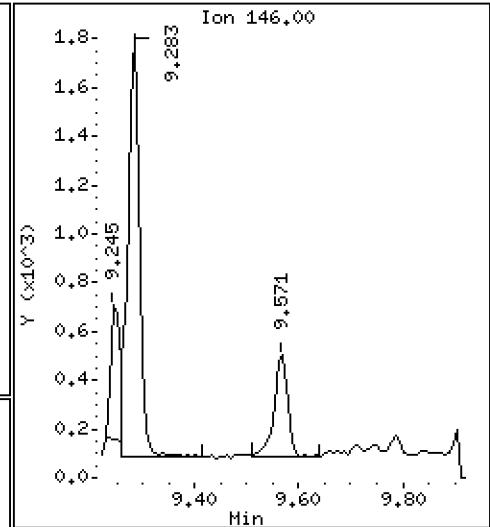
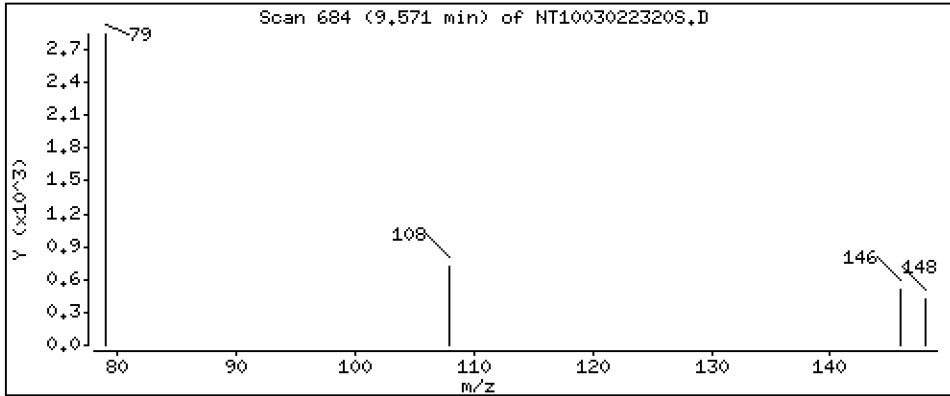
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.003528 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

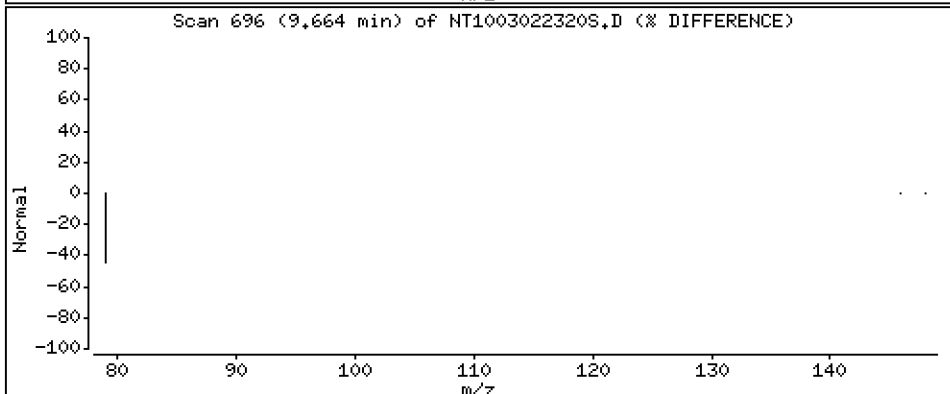
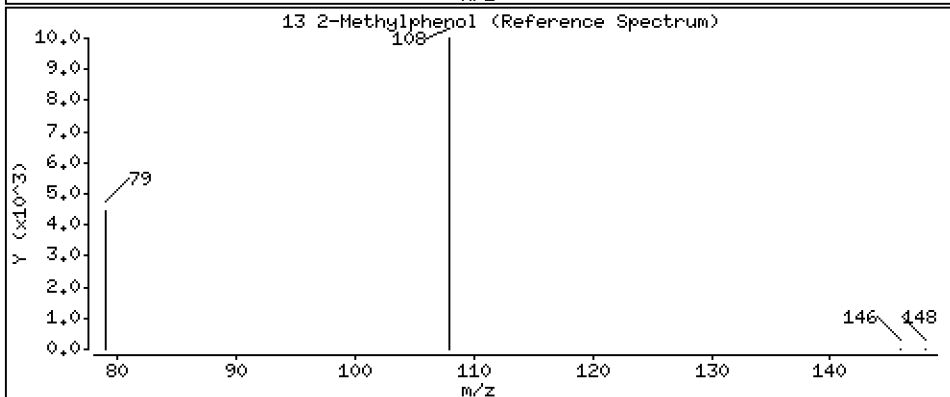
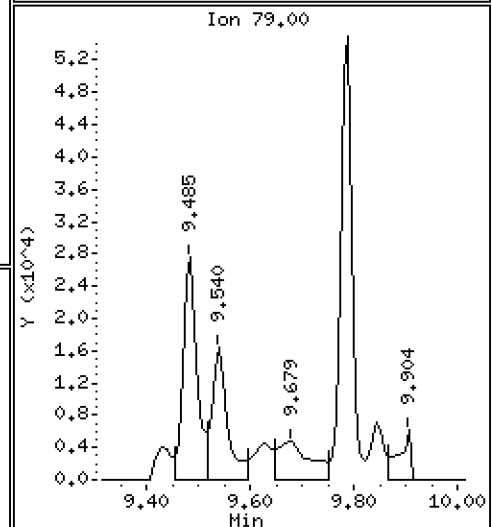
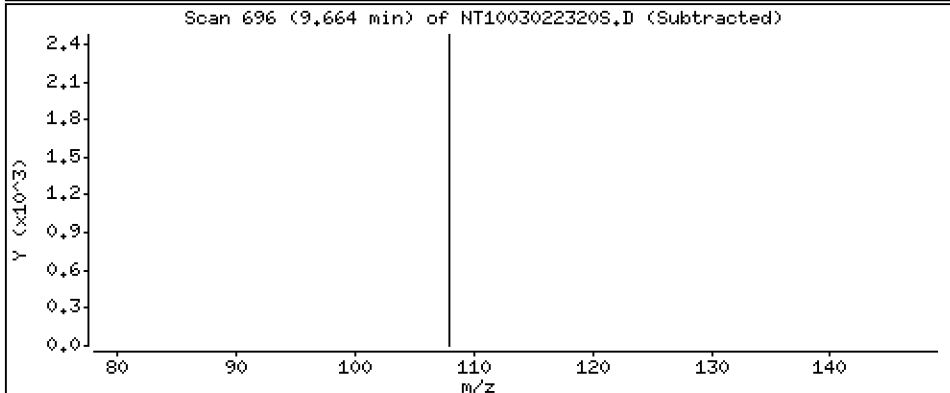
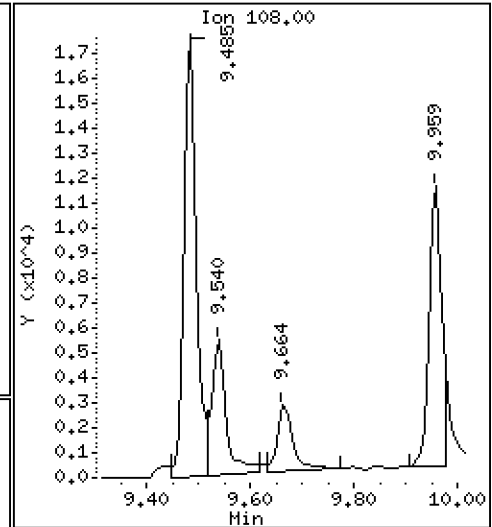
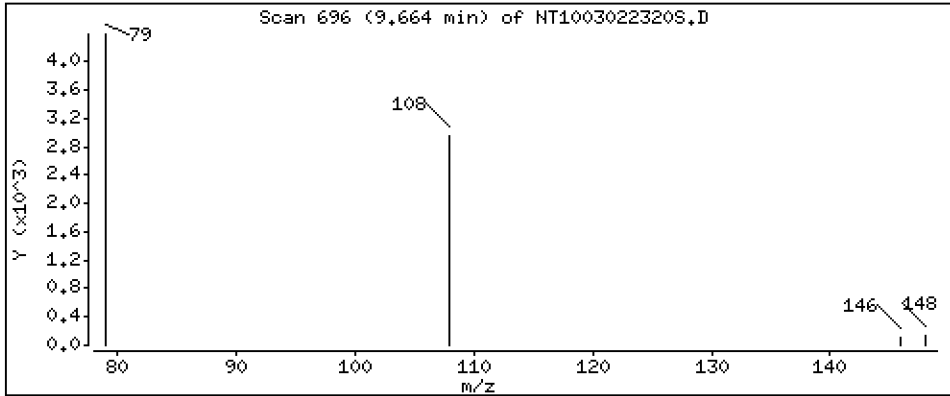
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03613 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

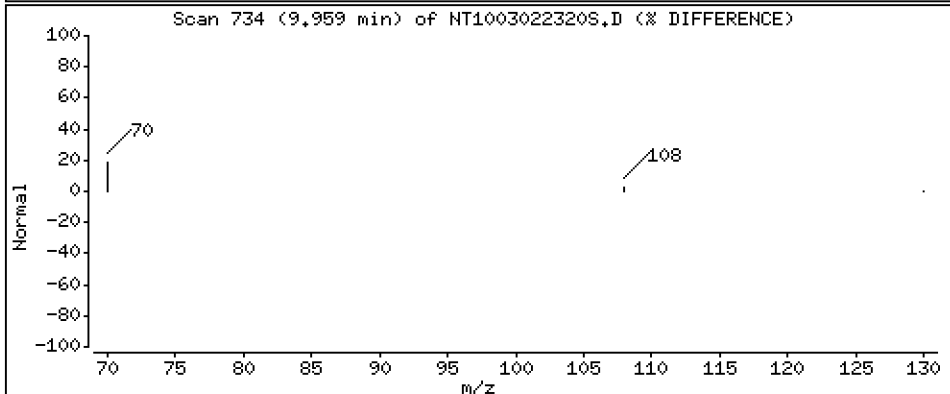
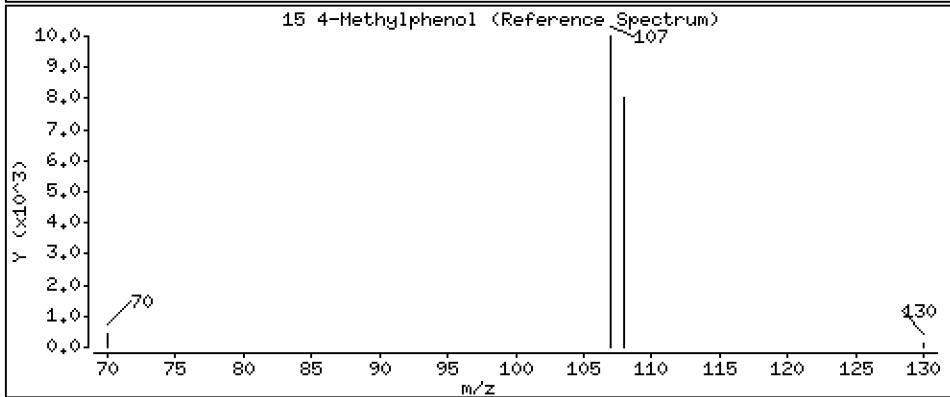
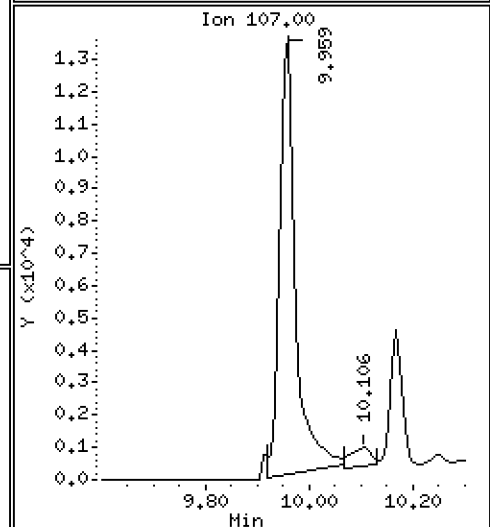
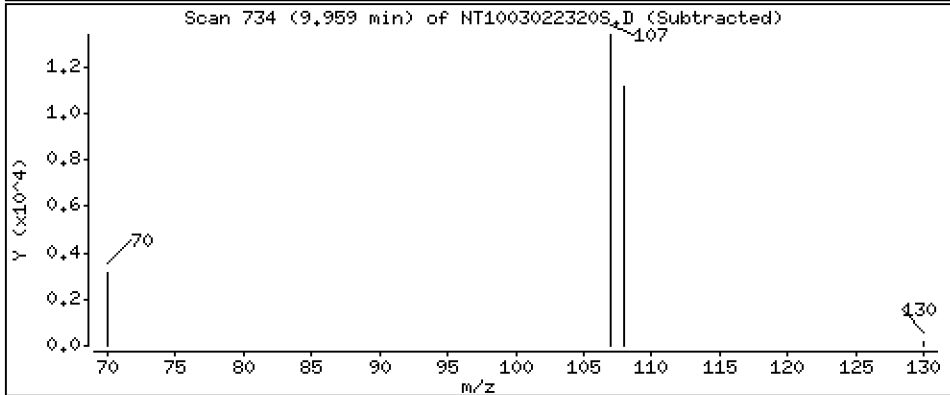
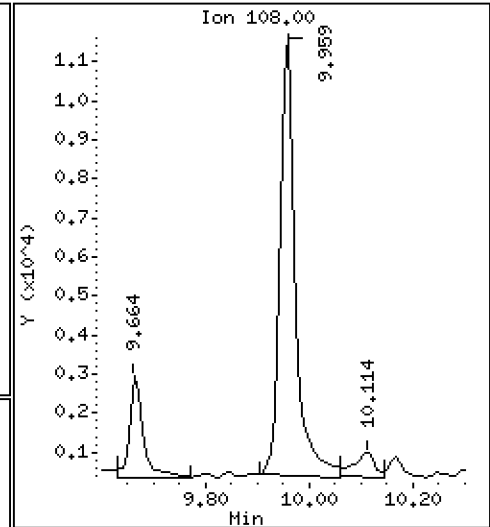
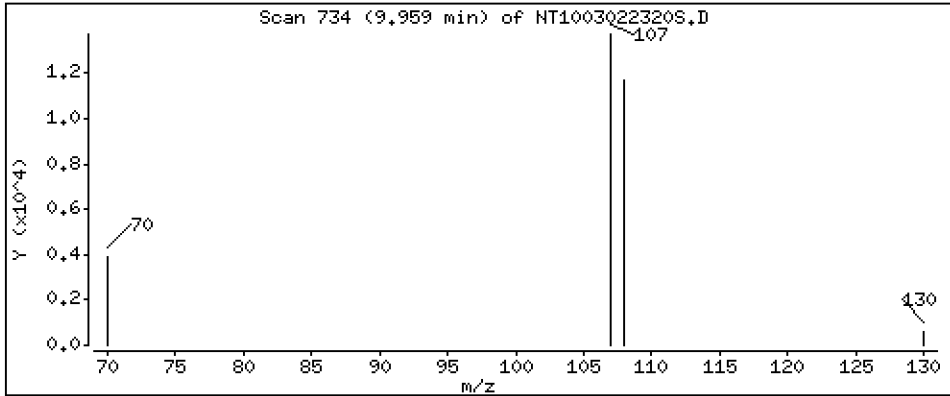
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1433 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

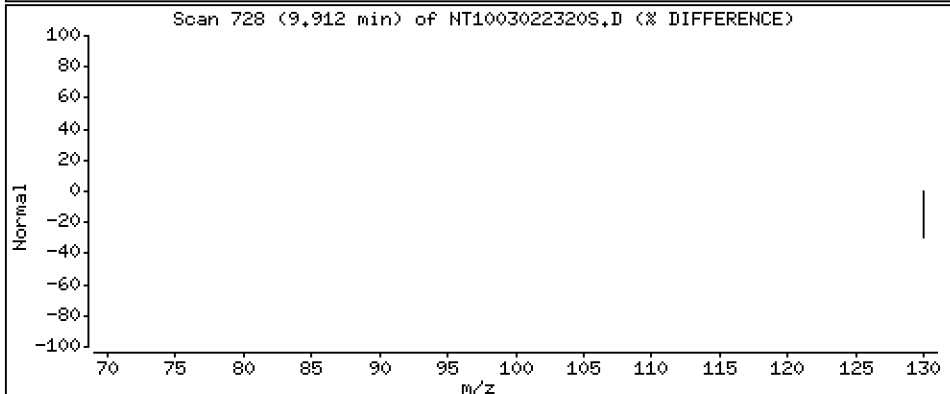
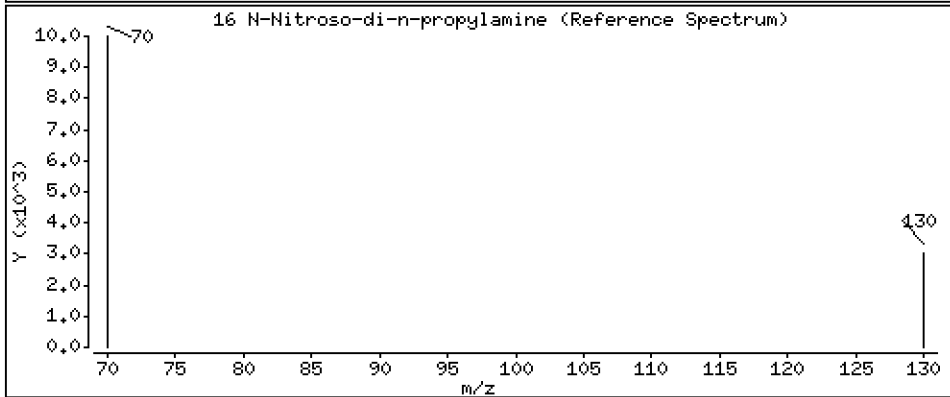
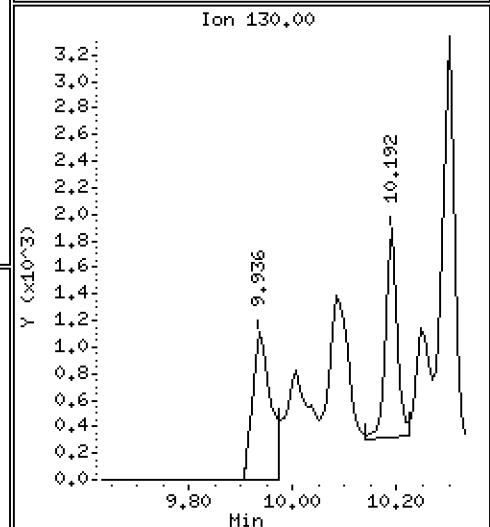
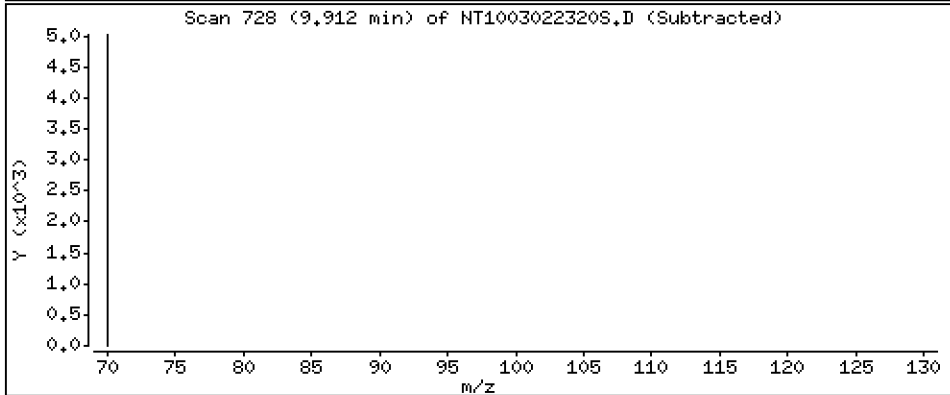
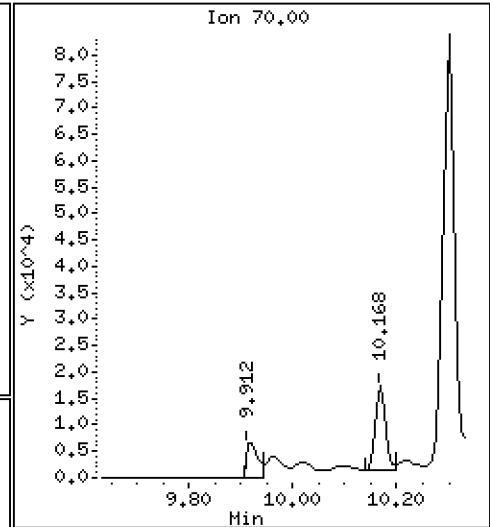
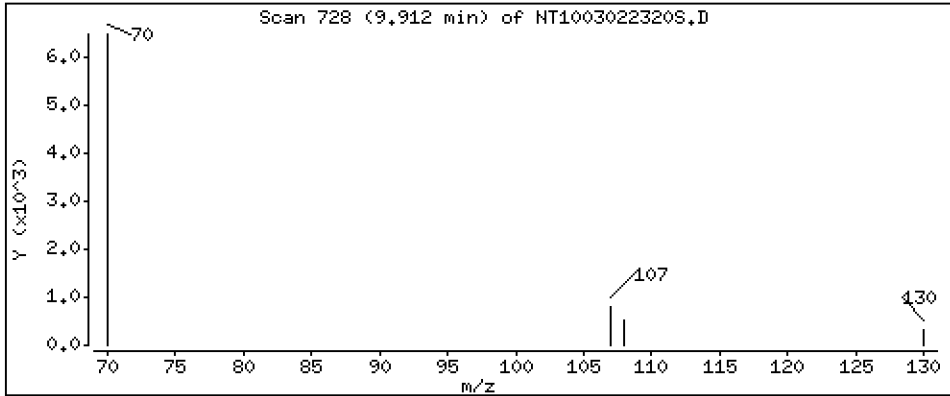
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.09816 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

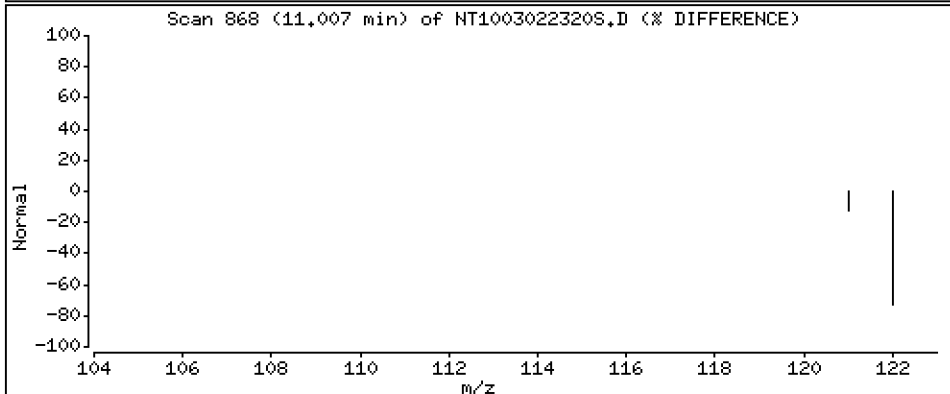
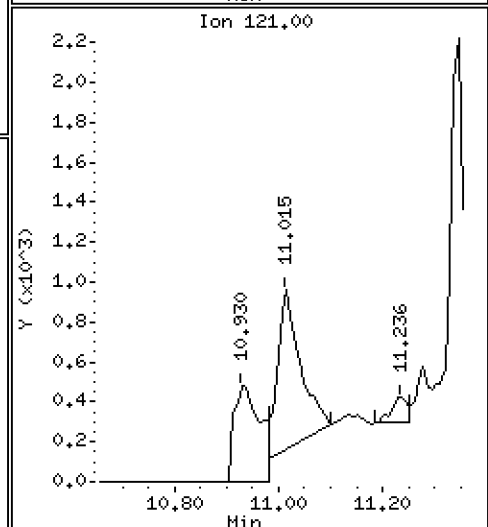
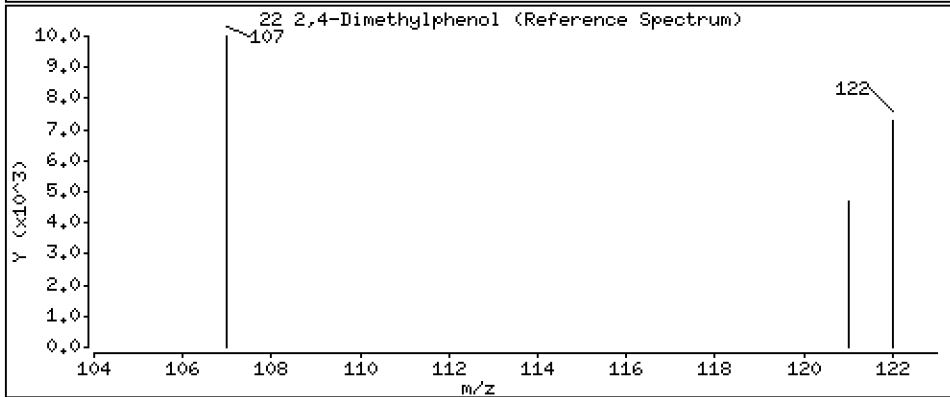
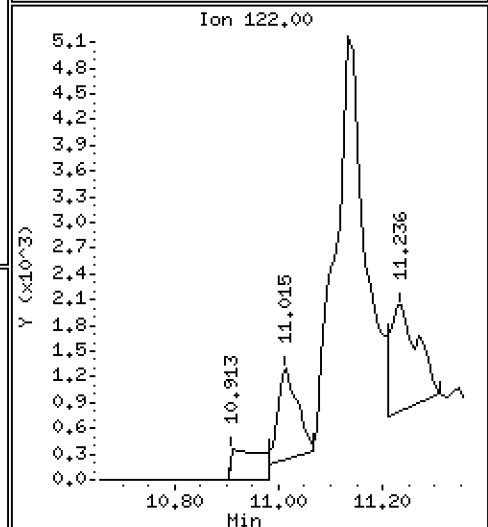
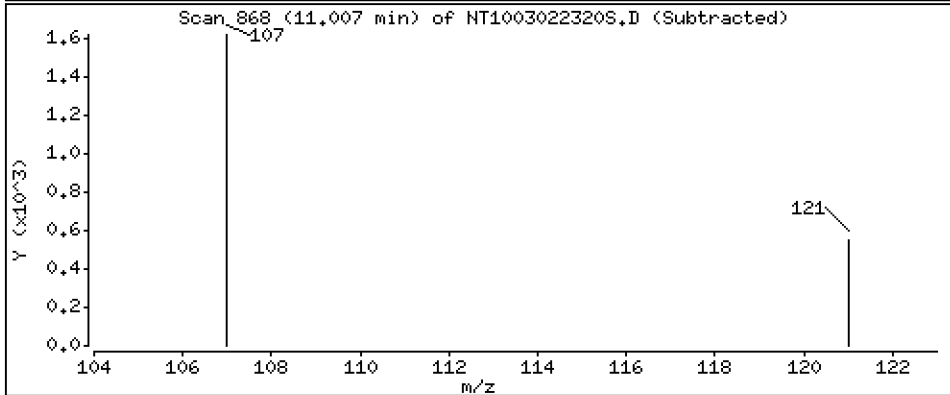
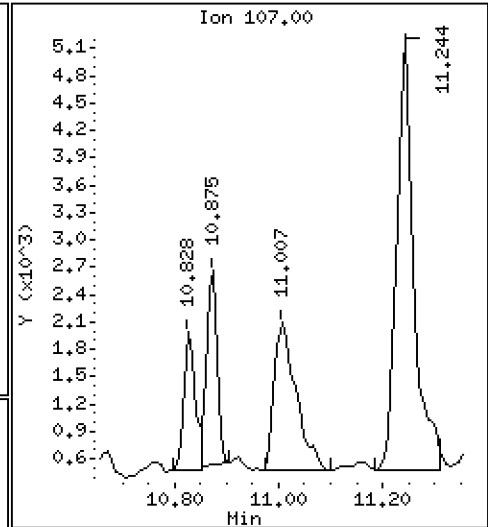
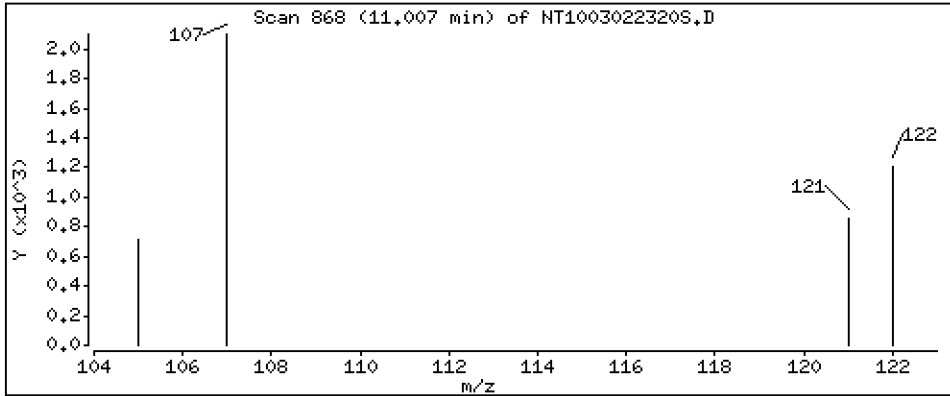
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02649 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

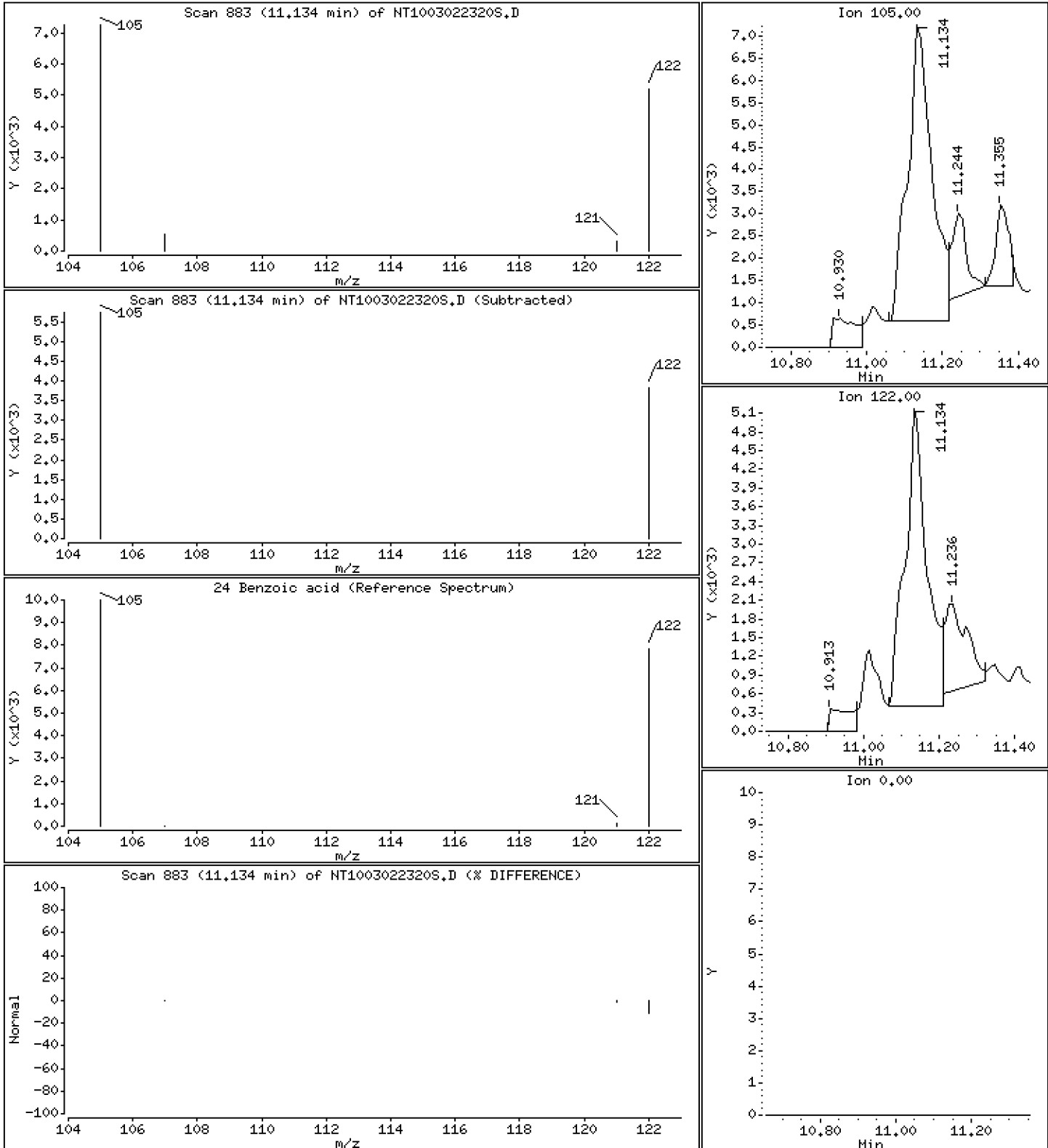
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3022 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

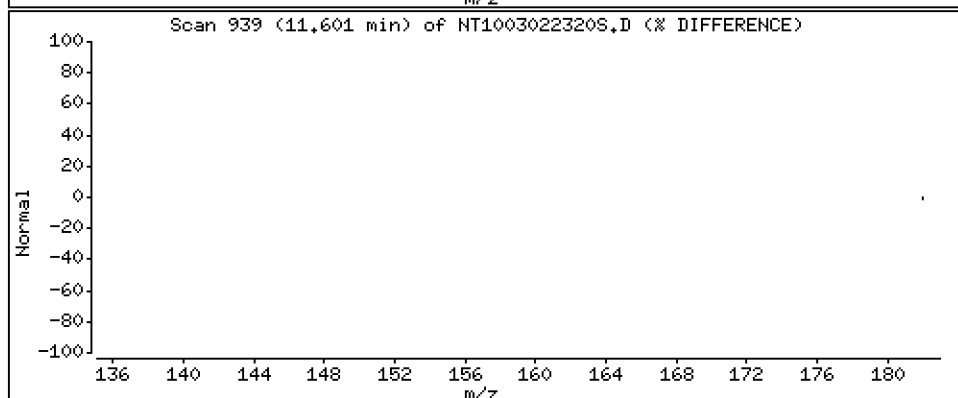
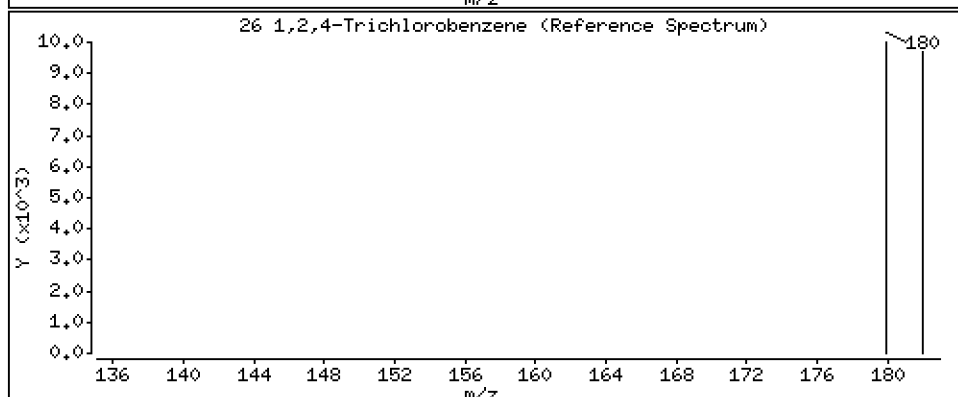
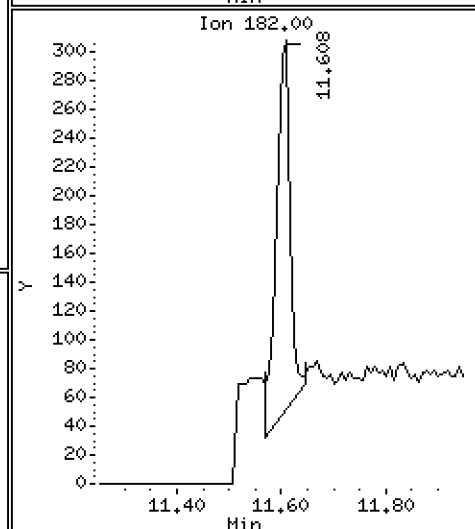
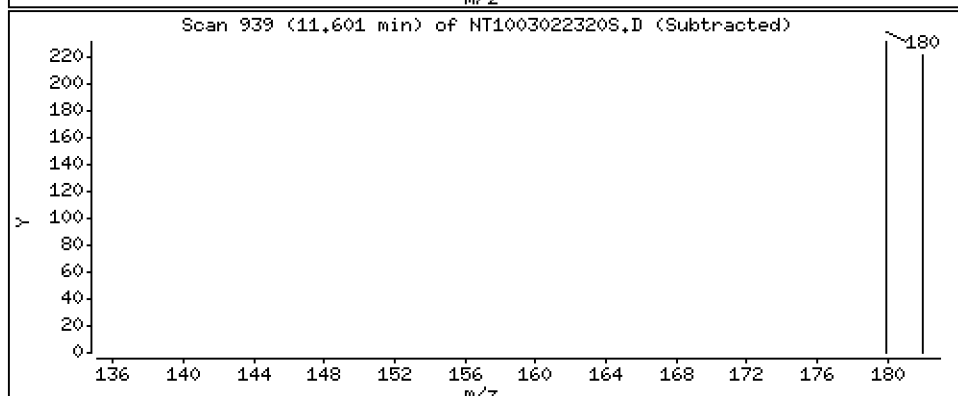
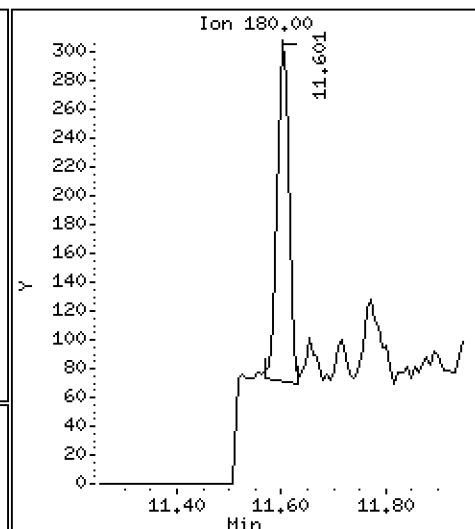
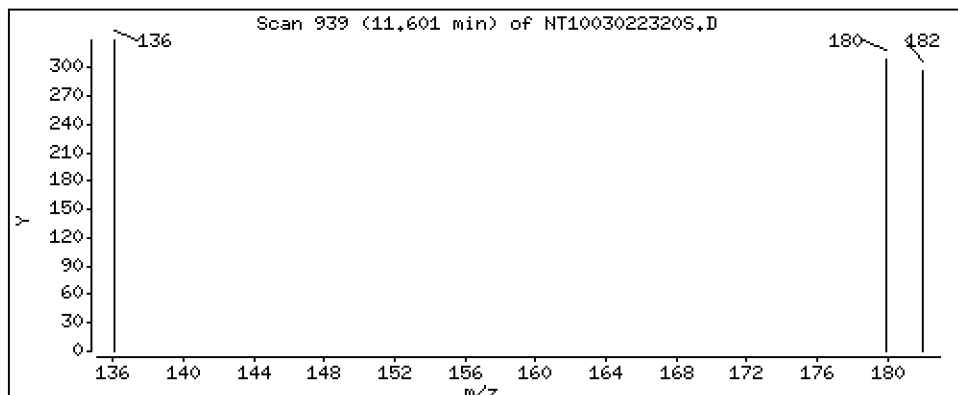
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,002258 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

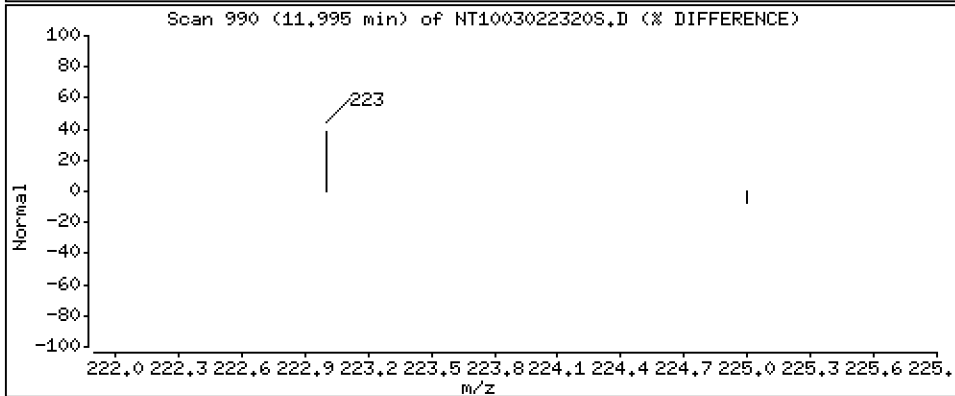
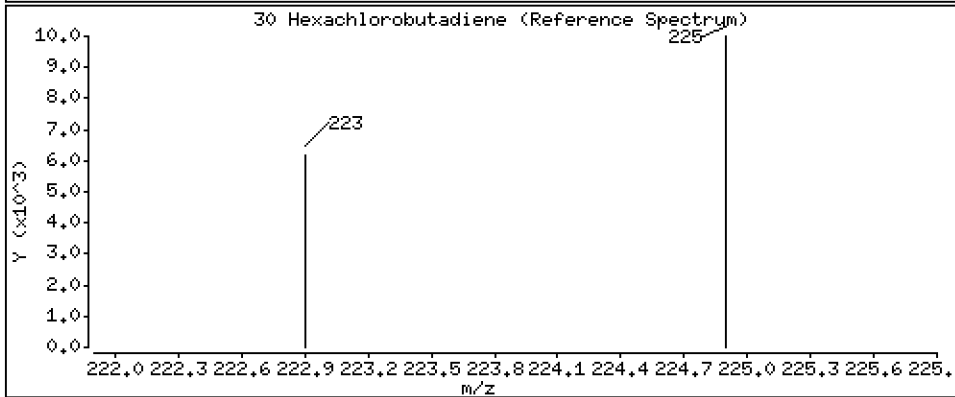
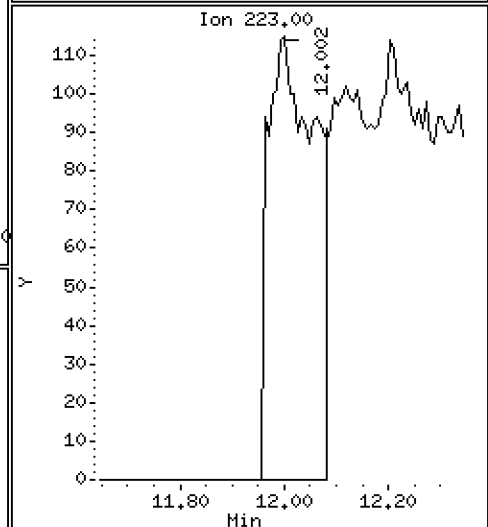
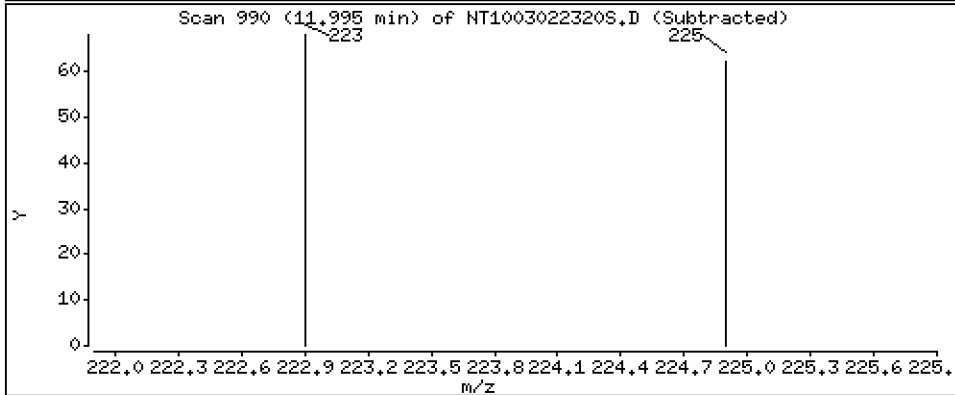
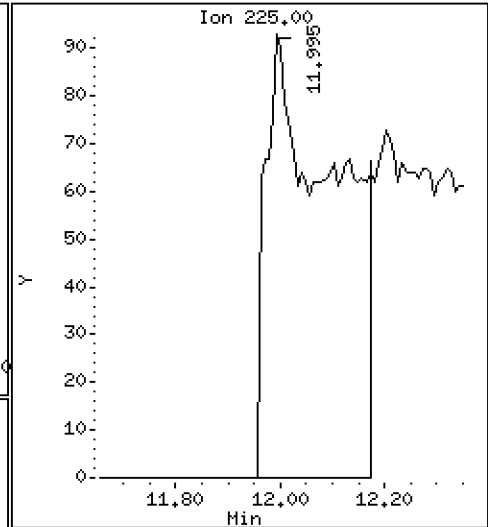
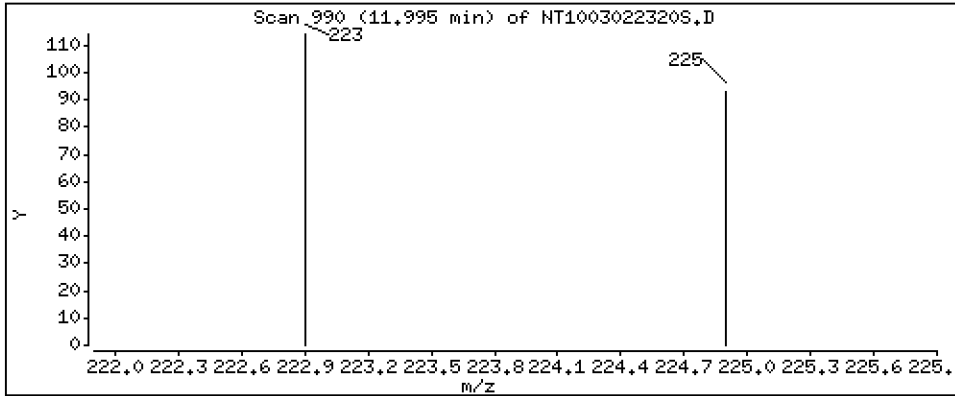
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,007945 ug/L





Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

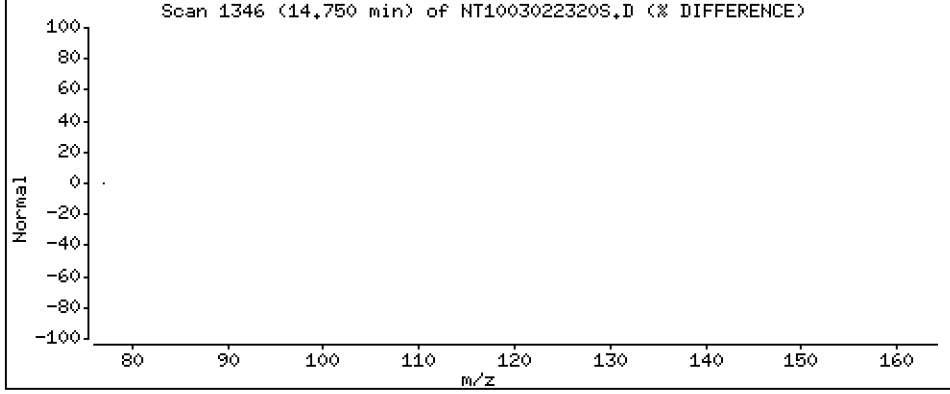
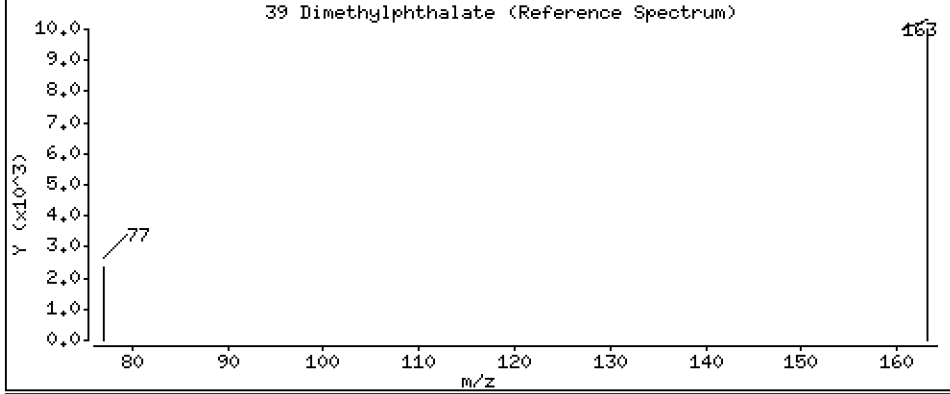
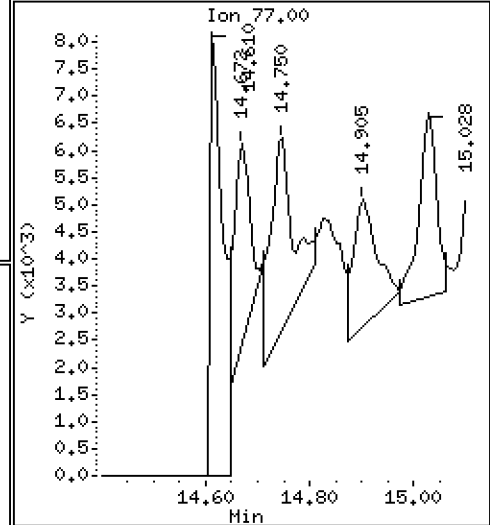
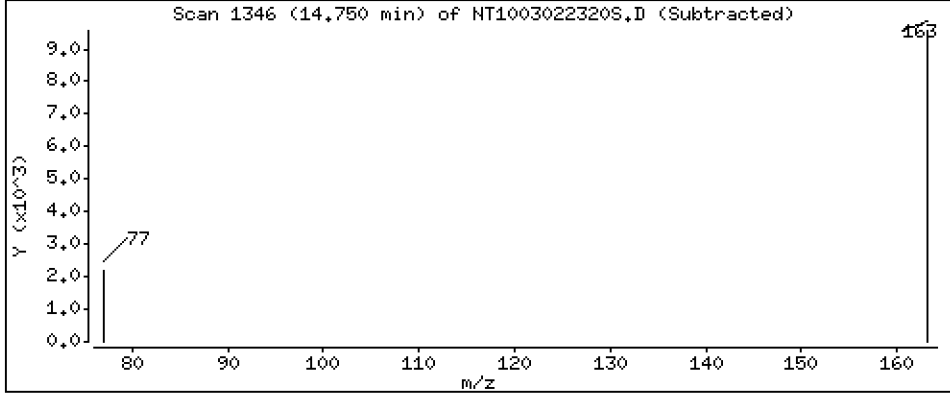
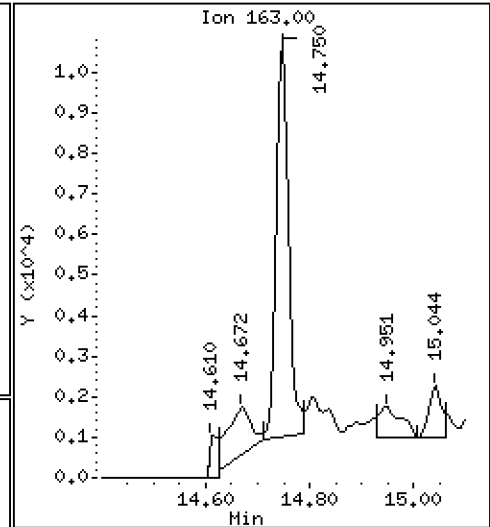
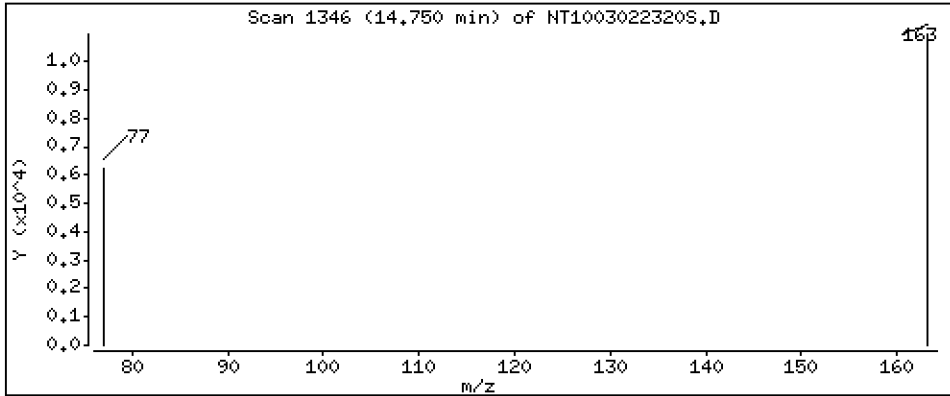
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.04482 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

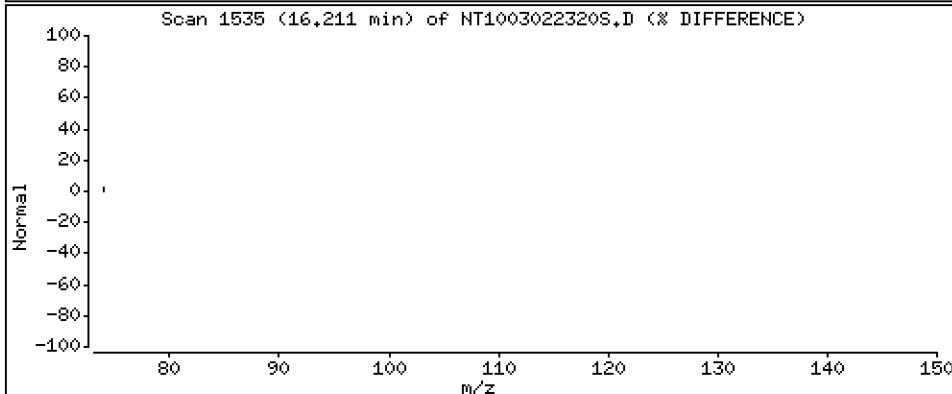
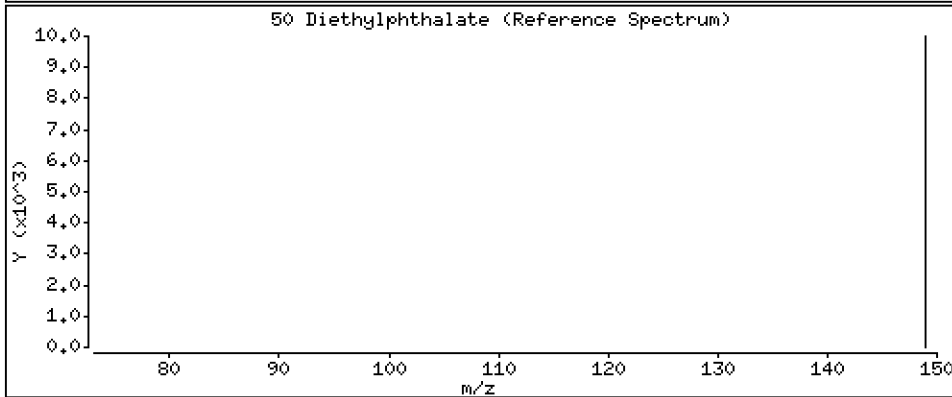
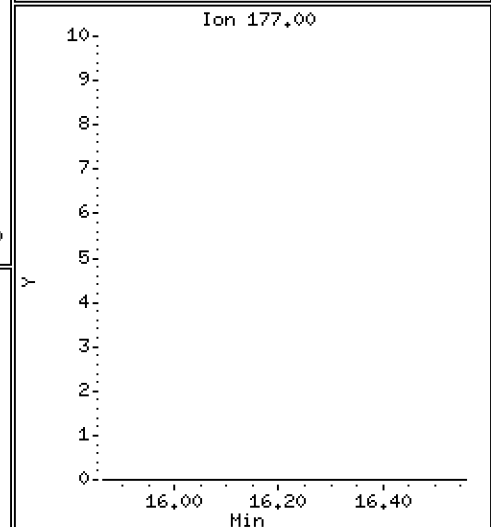
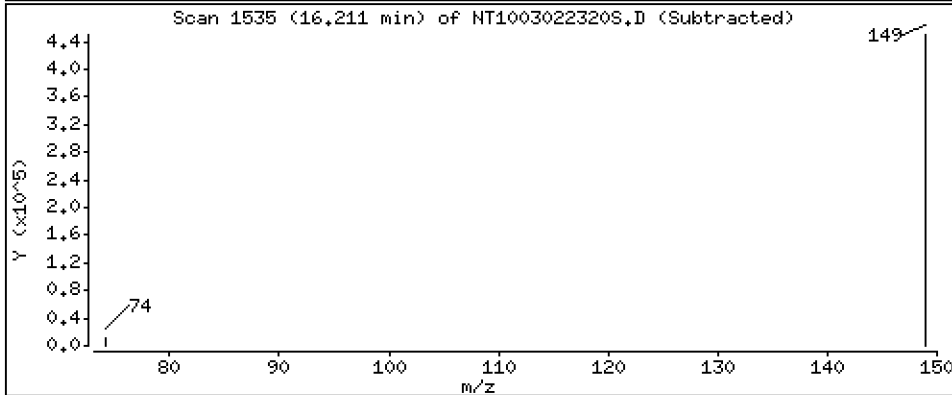
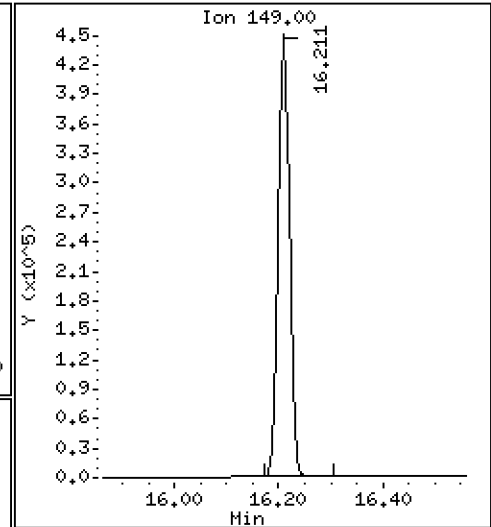
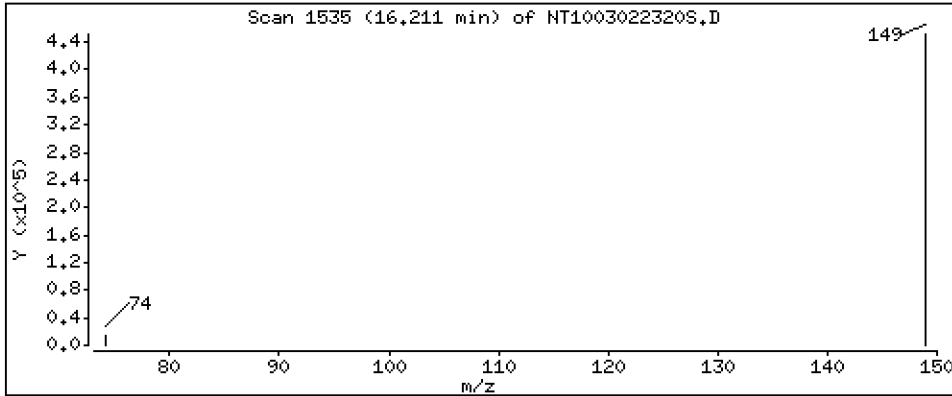
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 1,955 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

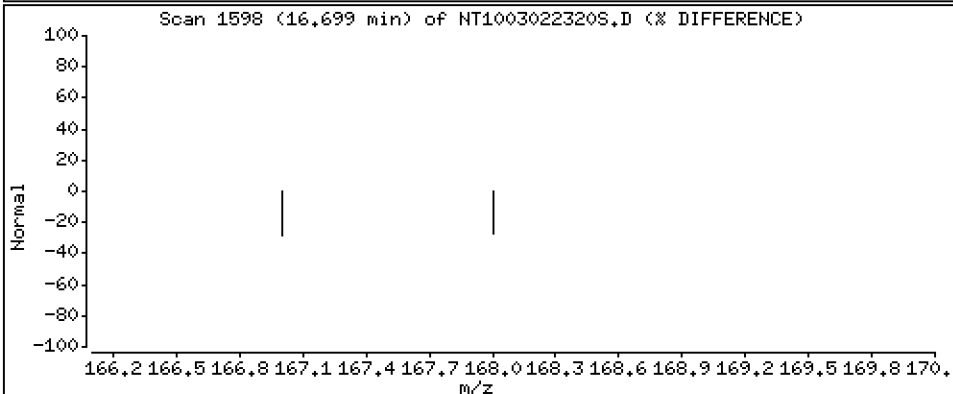
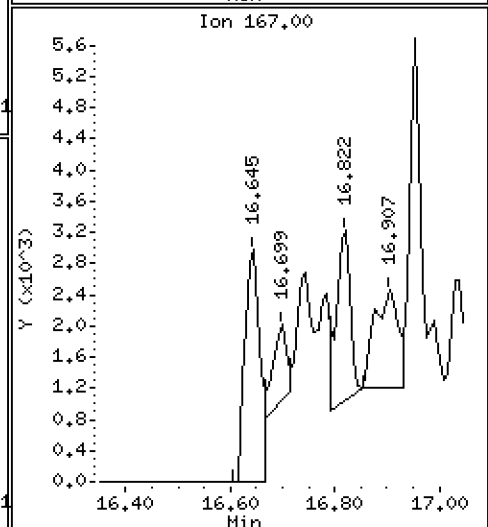
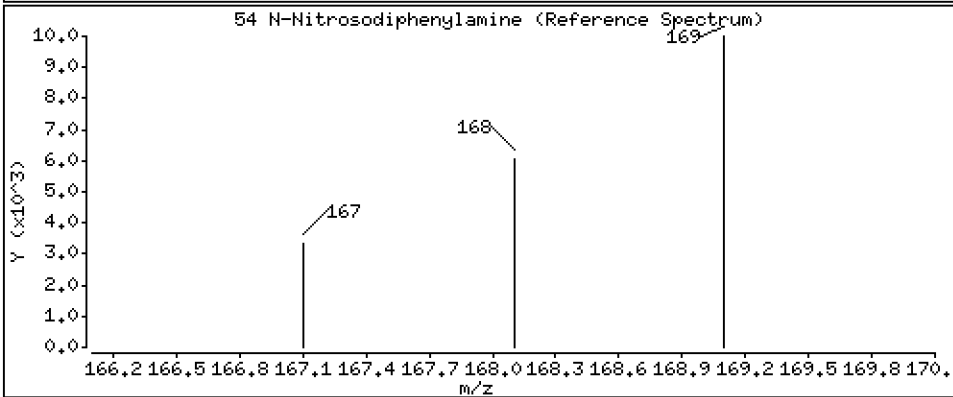
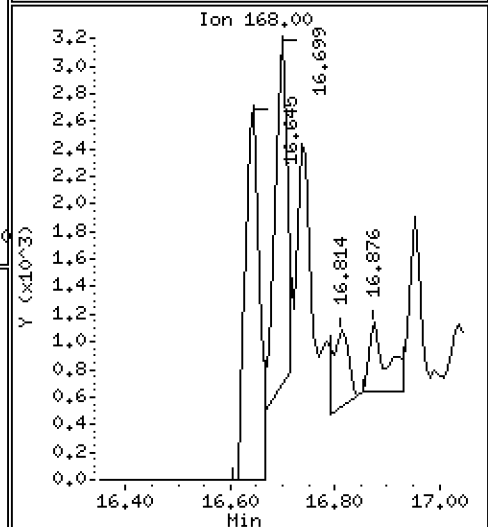
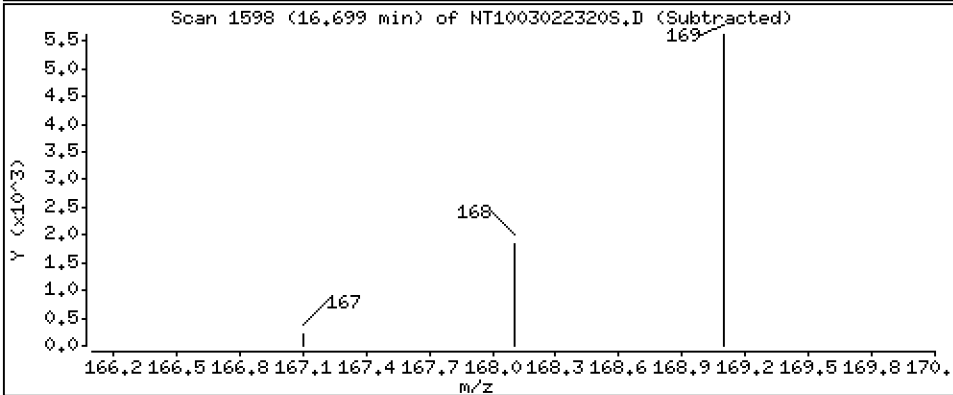
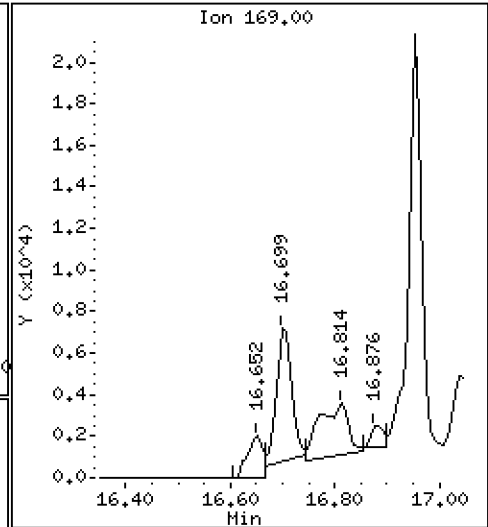
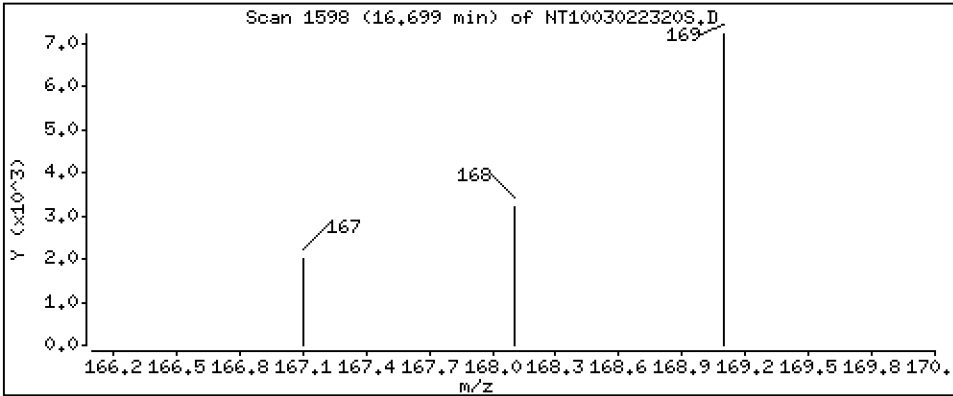
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.03899 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

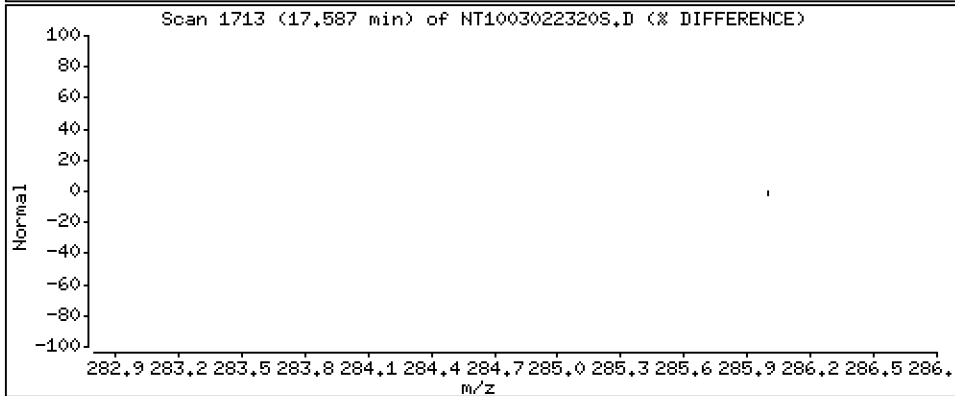
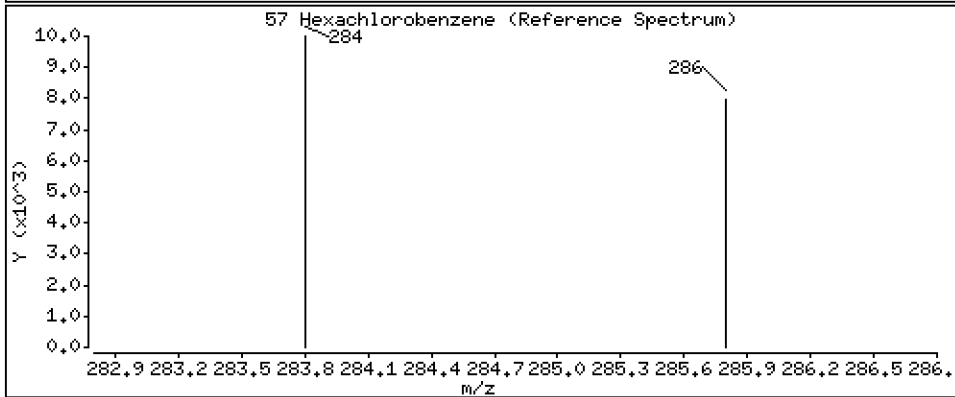
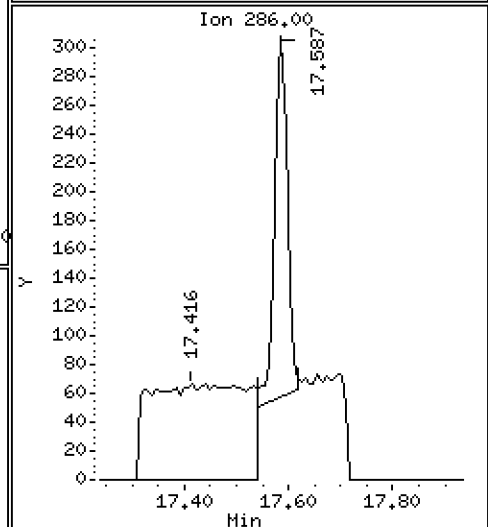
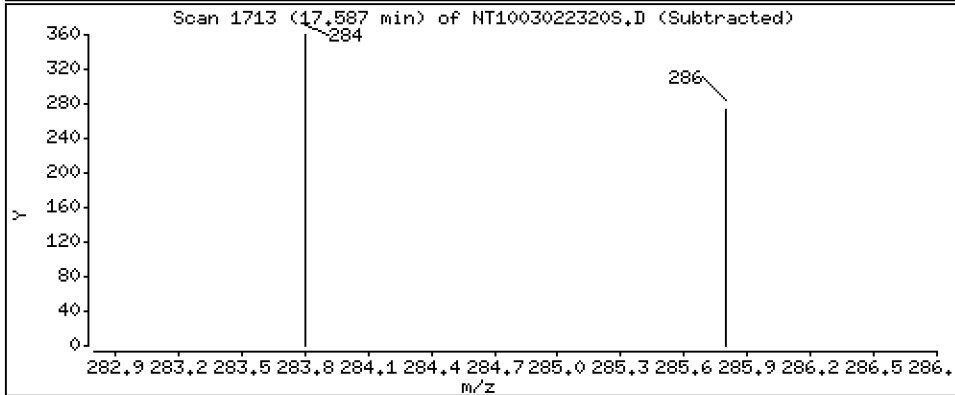
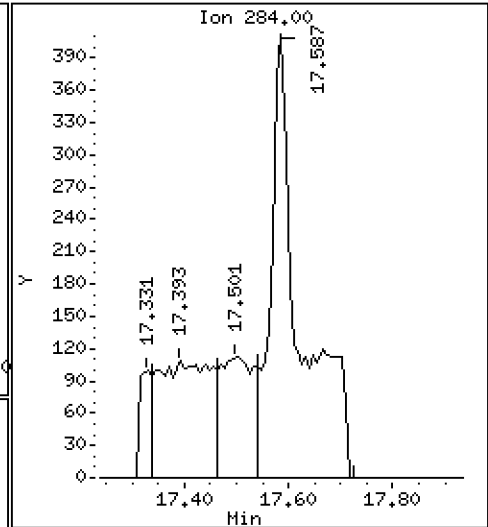
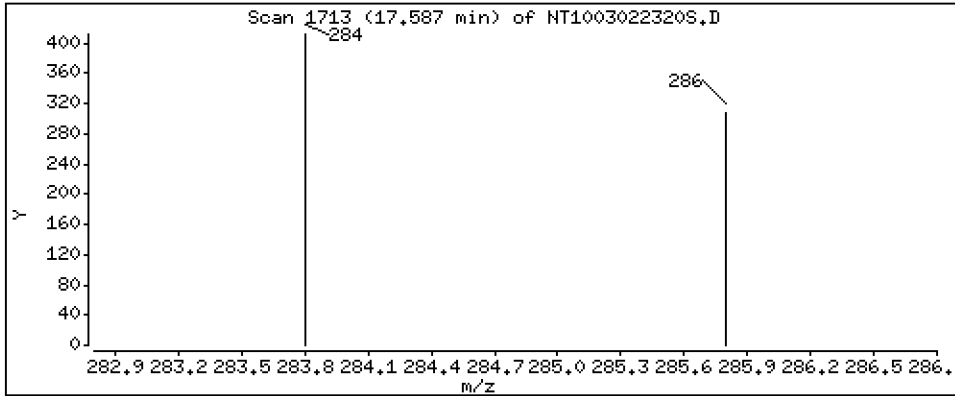
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,01019 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

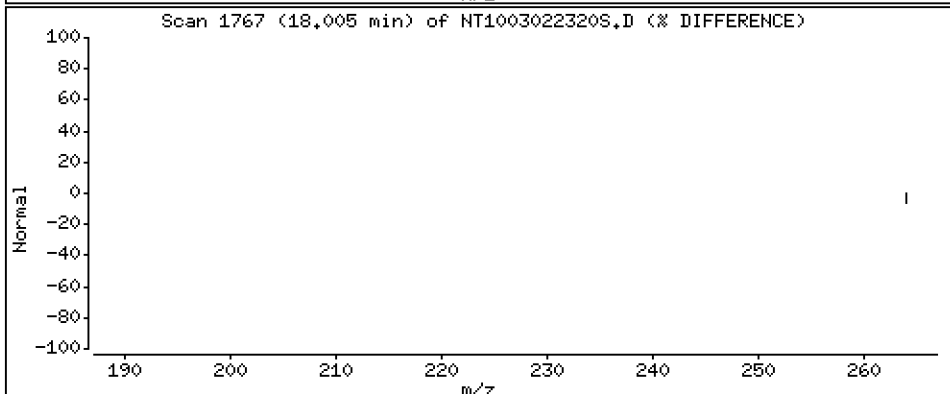
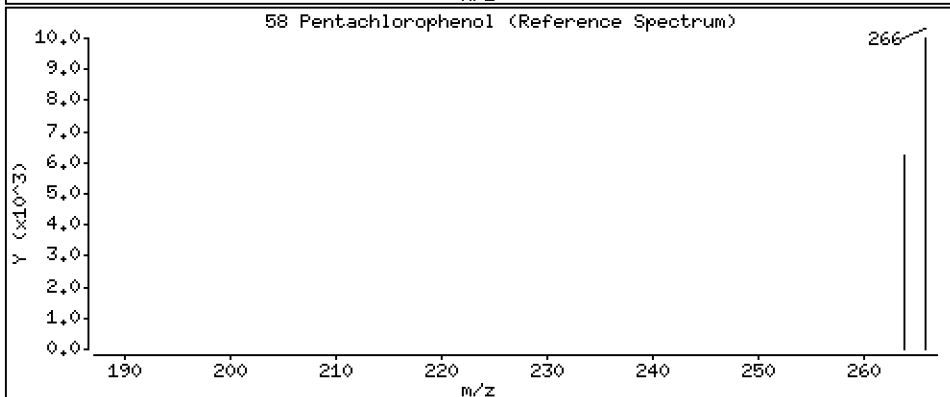
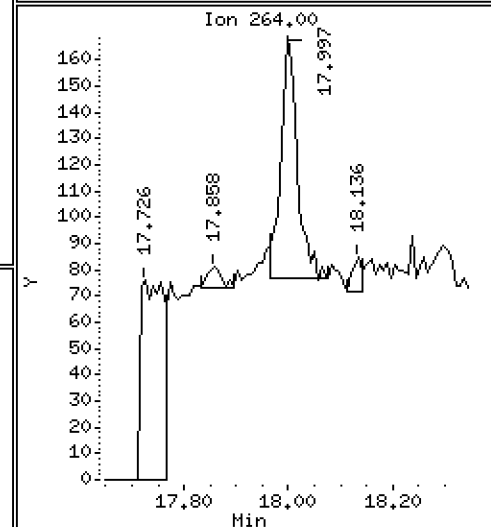
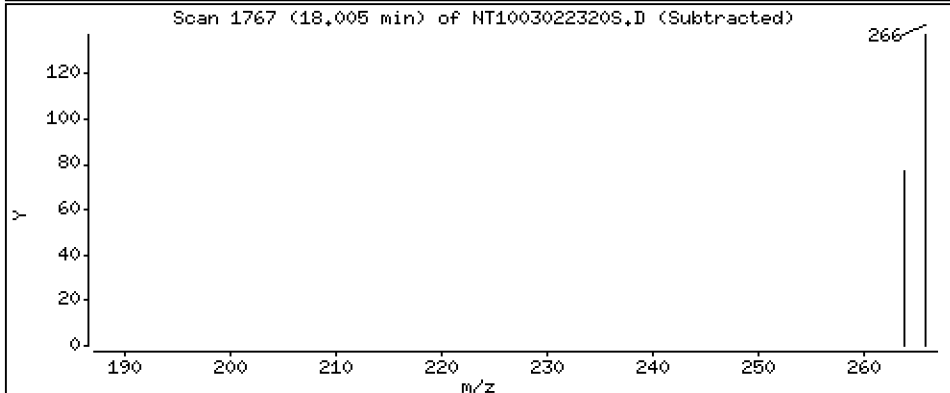
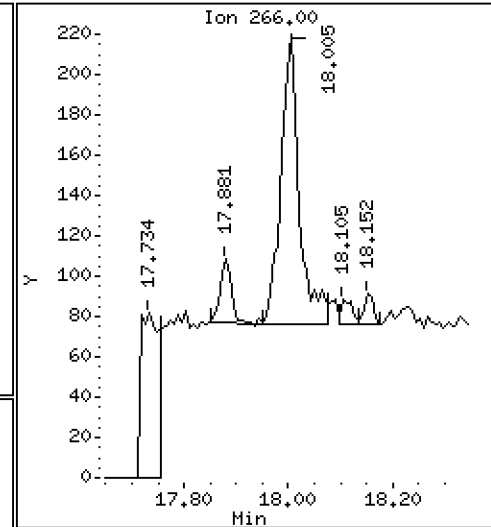
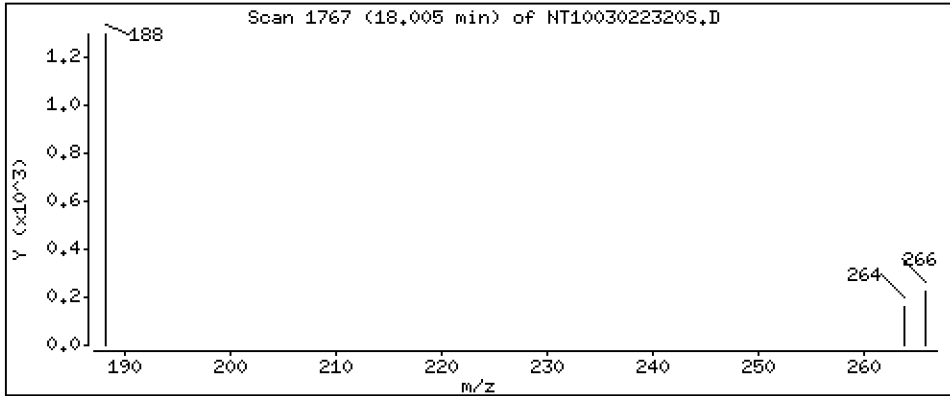
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,004953 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

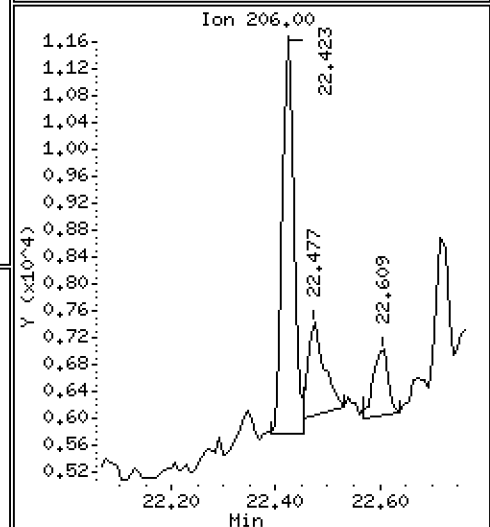
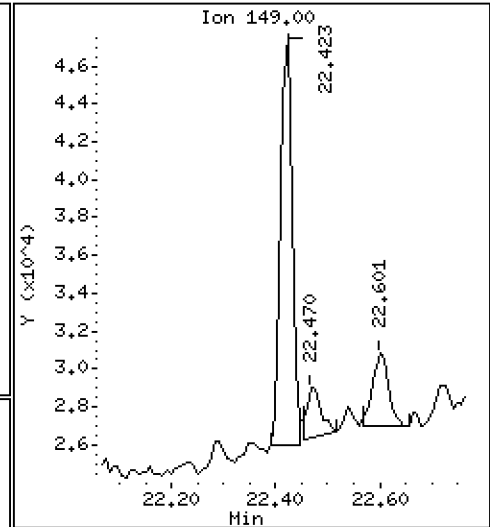
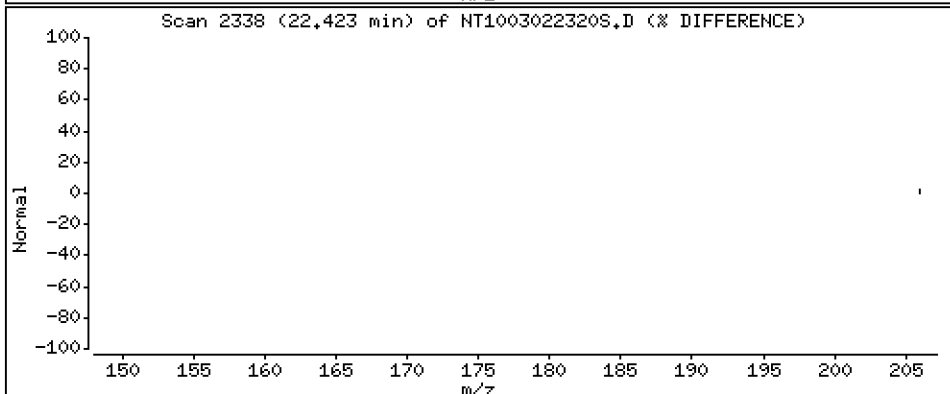
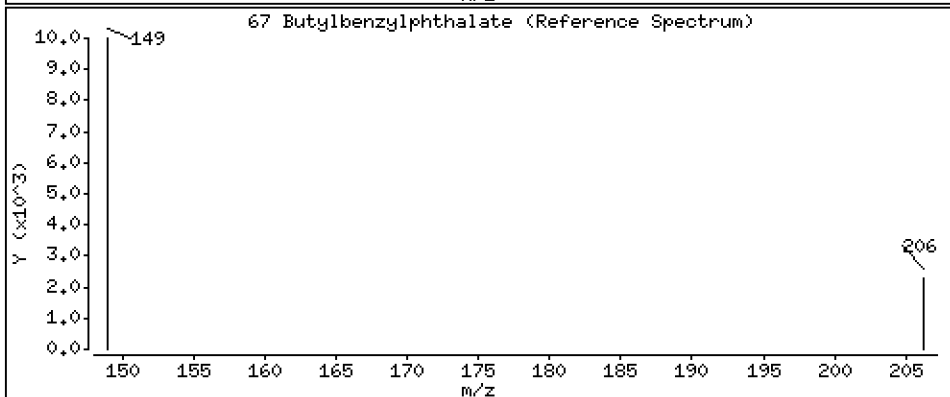
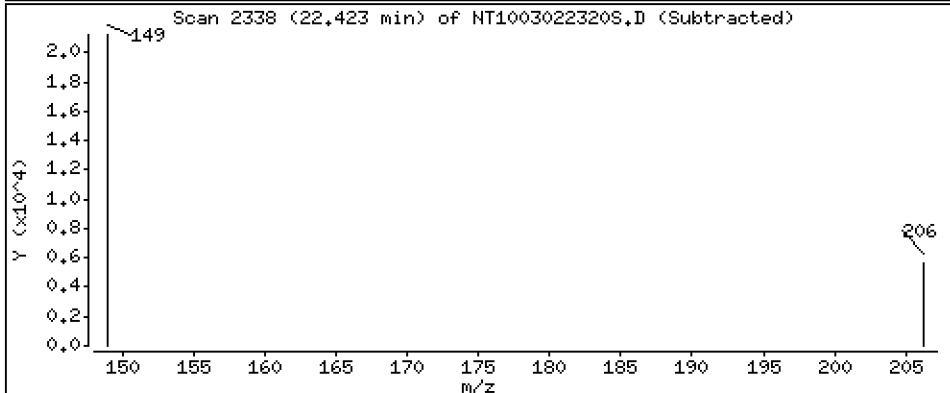
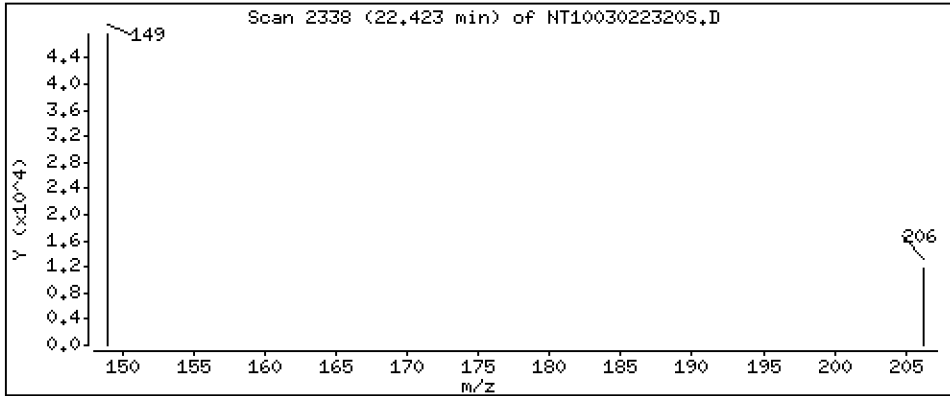
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.07637 ug/L



Date : 03-MAR-2023 02:25

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-05

Volume Injected (uL): 1.0

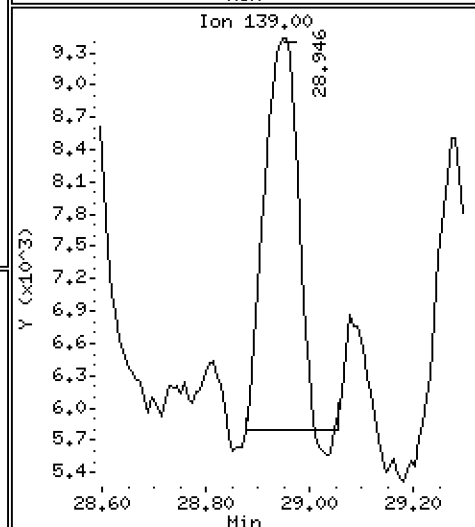
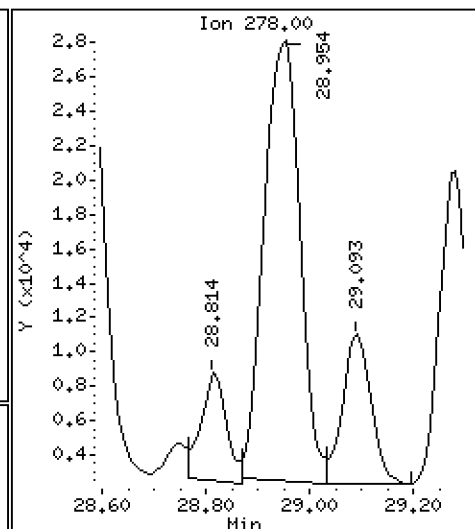
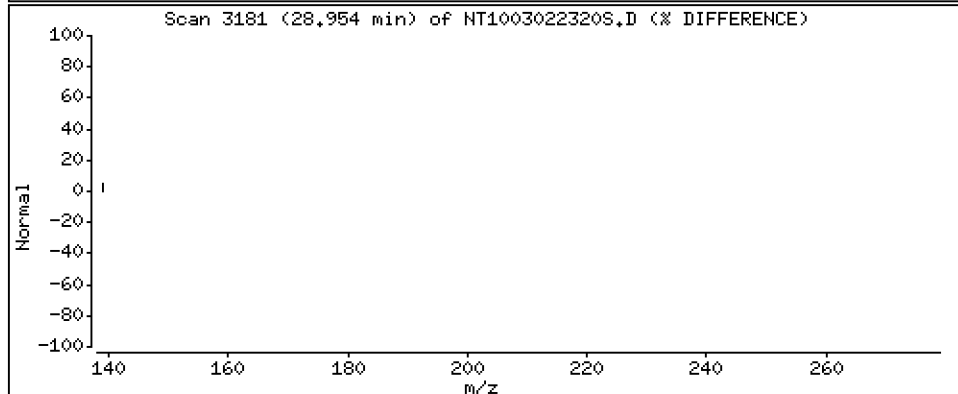
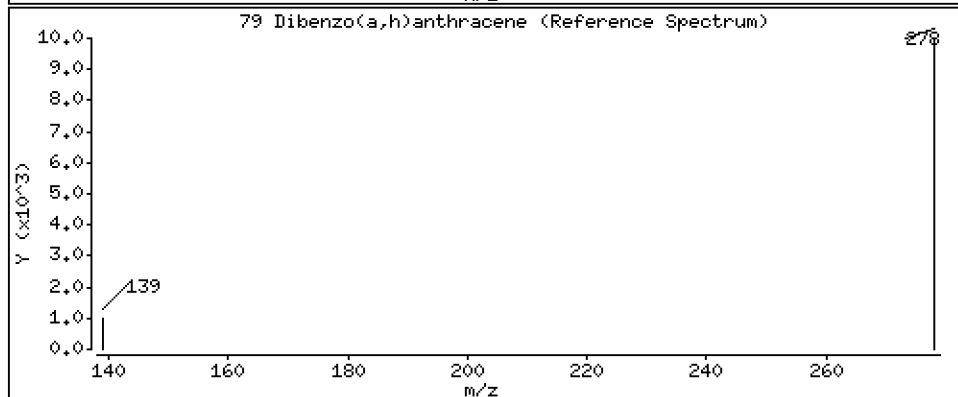
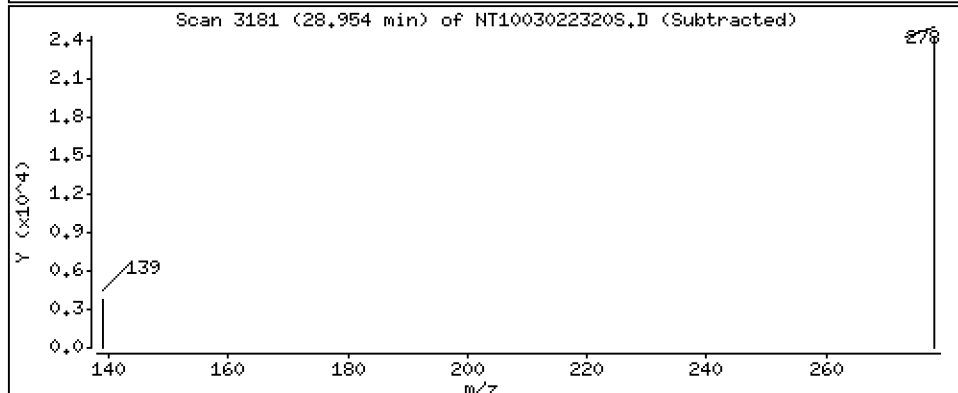
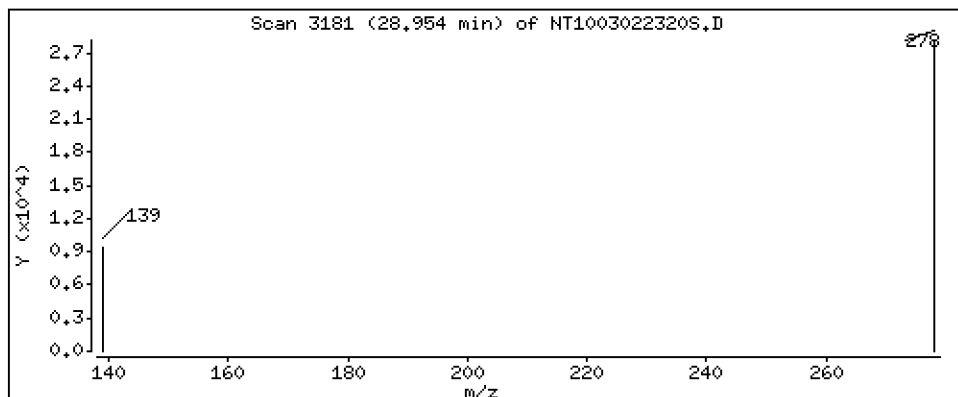
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1992 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022320S.D  
 Lab Smp Id: 23A0206-05  
 Inj Date : 03-MAR-2023 02:25 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-05  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 16  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1102276	6.51516	6.515(R)
3 Phenol	94		8.525	8.525 (0.921)		1466083	5.70162	5.702
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		470	0.00214	0.002140
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		592608	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		2814	0.01318	0.01318
11 Benzyl alcohol	79		9.485	9.477 (1.025)		43316	0.31200	0.3120
12 1,2-Dichlorobenzene	146		9.570	9.570 (1.034)		724	0.00353	0.003528
13 2-Methylphenol	108		9.663	9.663 (1.044)		5420	0.03613	0.03613
15 4-Methylphenol	108		9.958	9.950 (1.076)		22391	0.14334	0.1433
16 N-Nitroso-di-n-propylamine	70		9.912	9.981 (1.071)		10909	0.09816	0.09816
22 2,4-Dimethylphenol	107		11.006	11.006 (0.939)		4812	0.02649	0.02649
24 Benzoic acid	105		11.133	11.082 (0.950)		30144	0.30221	0.3022
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		348	0.00226	0.002258
* 27 Naphthalene-d8	136		11.724	11.723 (1.000)		2141508	4.00000	
30 Hexachlorobutadiene	225		11.994	12.001 (1.023)		869	0.00794	0.007945
39 Dimethylphthalate	163		14.749	14.749 (0.963)		15393	0.04482	0.04482
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		1081523	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		632991	1.95460	1.955
54 N-Nitrosodiphenylamine	169		16.698	16.698 (0.907)		13152	0.03899	0.03899
57 Hexachlorobenzene	284		17.586	17.586 (0.955)		1609	0.01019	0.01019



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.004	17.996	(0.978)	342	0.00495	0.004953
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2084209	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	1011969	5.10089	5.101(R)
67 Butylbenzylphthalate	149	22.423	22.414	(0.957)	31630	0.07637	0.07637
* 69 Chrysene-d12	240	23.437	23.429	(1.000)	2453304	4.00000	
* 77 Perylene-d12	264	26.139	26.123	(1.000)	2689474	4.00000	
79 Dibenzo(a,h)anthracene	278	28.953	28.945	(1.108)	124368	0.19916	0.1992
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022320S.D  
 Lab Smp Id: 23A0206-05  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	592608	-9.17
27 Naphthalene-d8	2339966	1169983	4679932	2141508	-8.48
42 Acenaphthene-d10	1186988	593494	2373976	1081523	-8.89
59 Phenanthrene-d10	2193485	1096743	4386970	2084209	-4.98
69 Chrysene-d12	2444828	1222414	4889656	2453304	0.35
77 Perylene-d12	2842248	1421124	5684496	2689474	-5.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022320S.D

Lab ID: 23A0206-05

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 02:25

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.071	1.079	-0.0076	N-Nitroso-di-n-propylamine

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-06 B

SDG: 23A0206

Sampled: 01/11/23 10:07

Prepared: 01/27/23 14:44

File ID: NT1003022321S.D

% Solids: 55.16

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:03

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 18.27 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

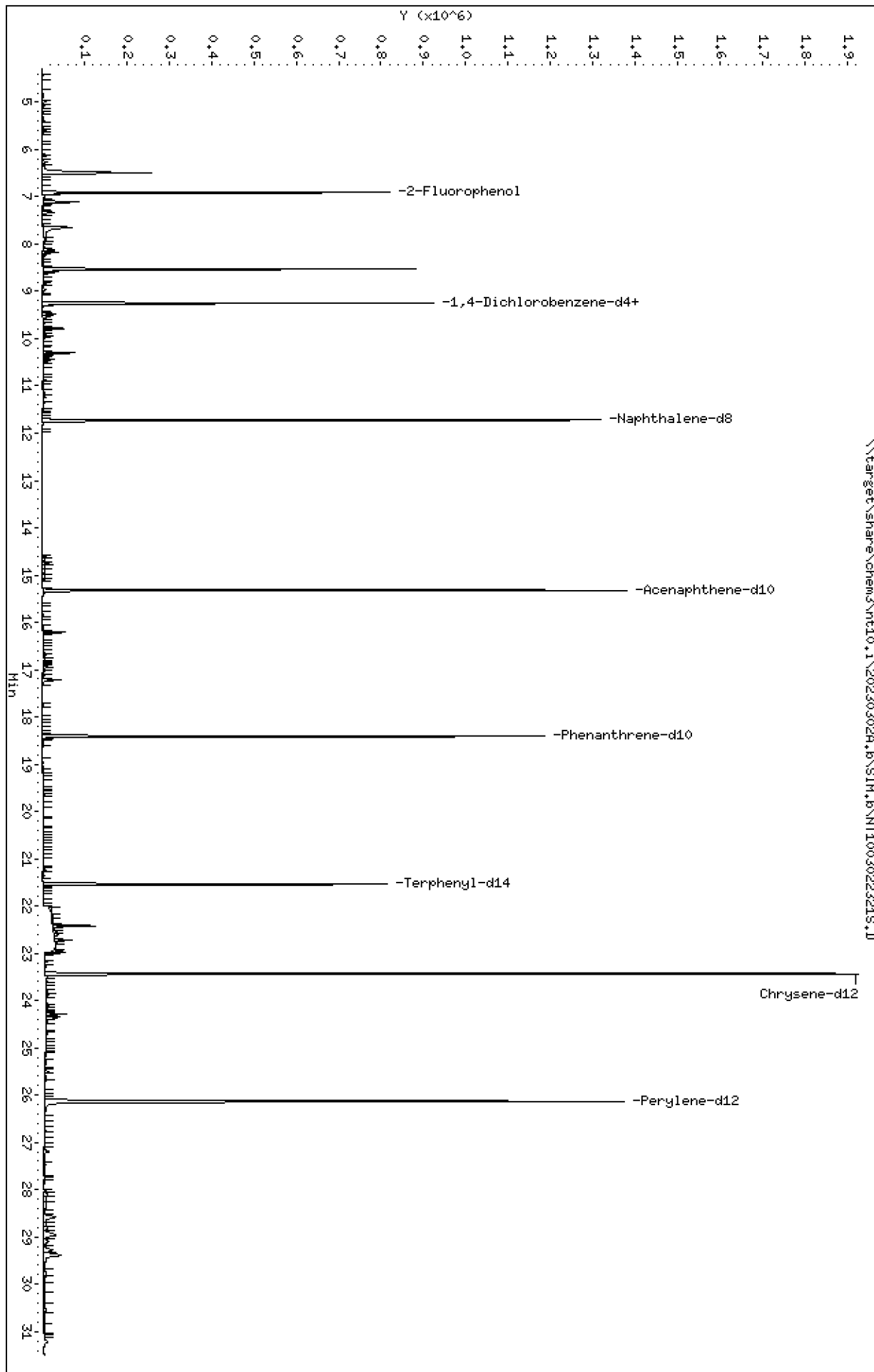
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.1	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	23.2		2.5	19.8
65-85-0	Benzoic acid	1	17.1	J	13.3	99.2
105-67-9	2,4-Dimethylphenol	1	2.7	J	2.2	19.8
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.8	U	2.1	19.8

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	744.22	615	82.7	27 - 120	
p-Terphenyl-d14	496.14	487	98.1	37 - 120	

Data File: \\target\share\chem3\nt10.1\202303028.b\SIM.b\NT1003022321S.D  
Date: 03-MAR-2023 03:03  
Client ID:  
Sample Info: 23A0206-06  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028.b\SIM.b\NT1003022321S.D



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

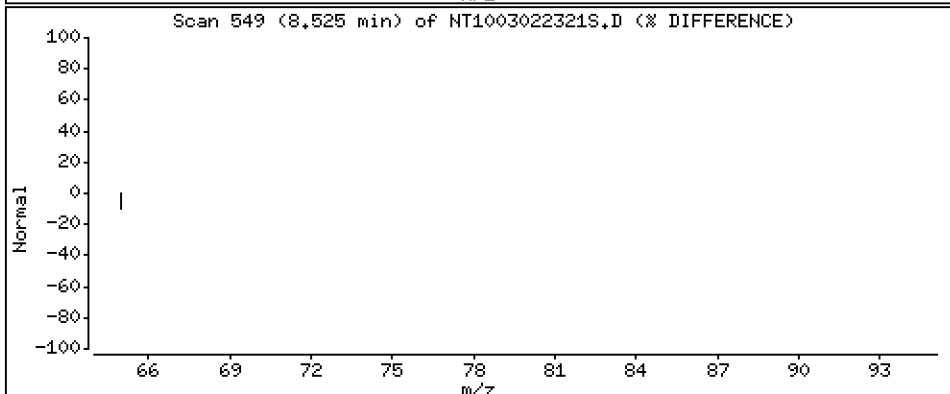
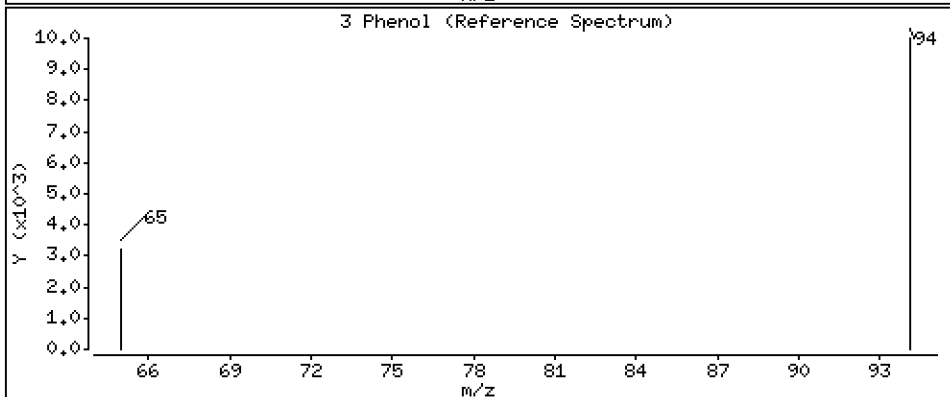
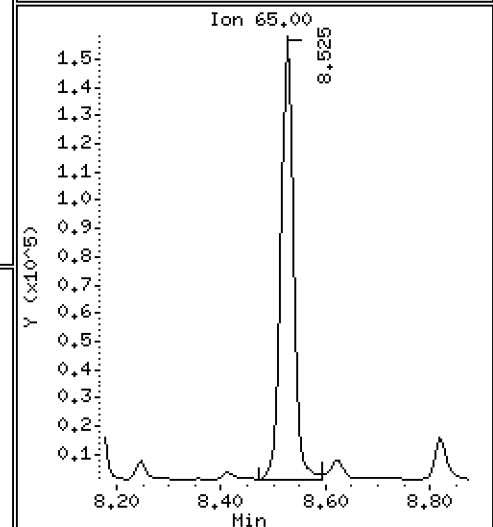
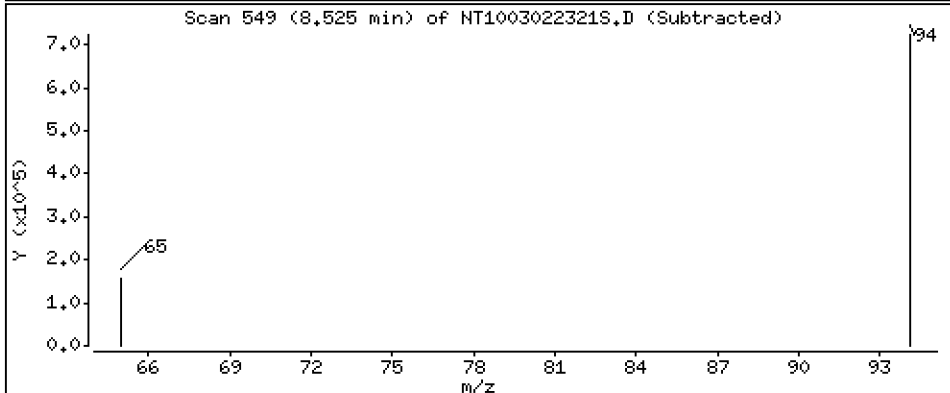
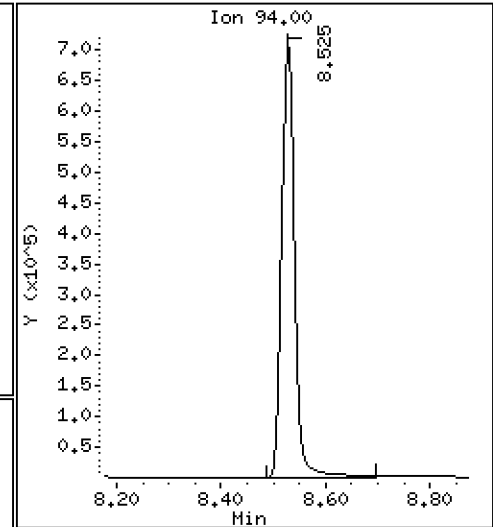
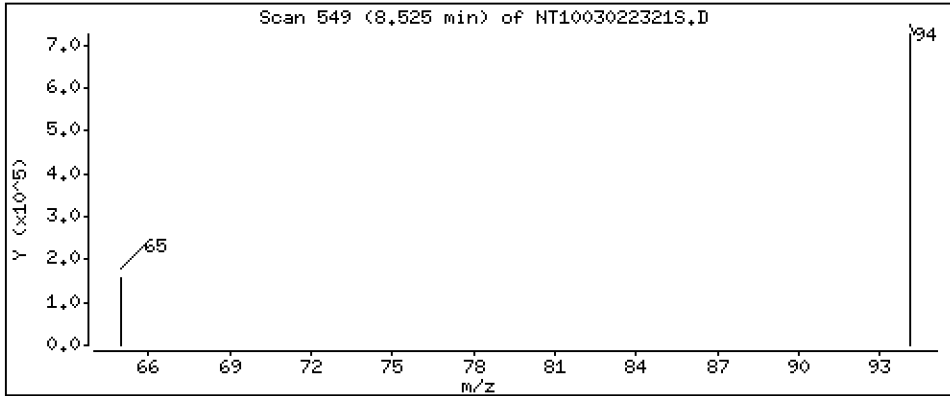
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4,940 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

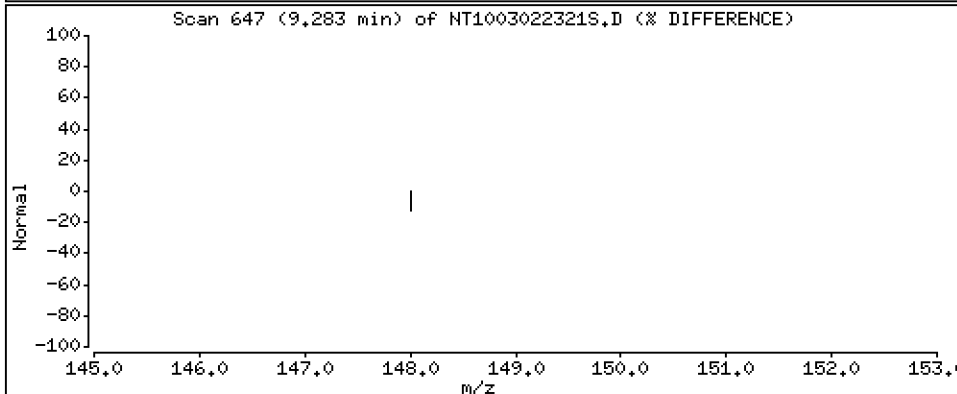
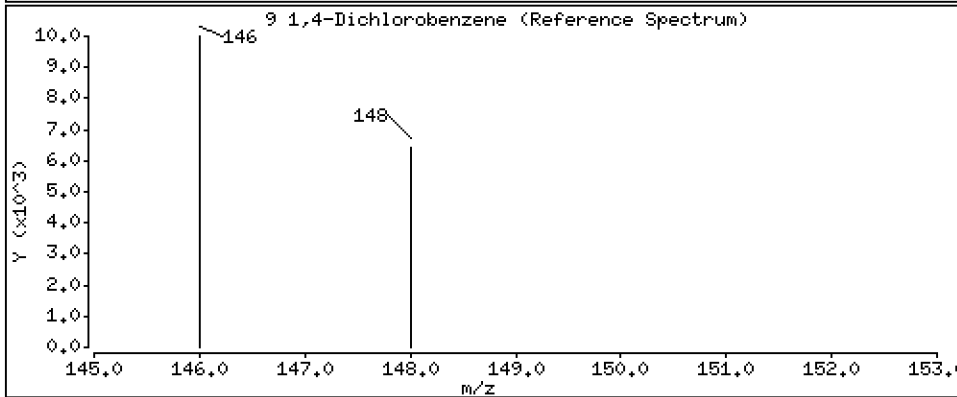
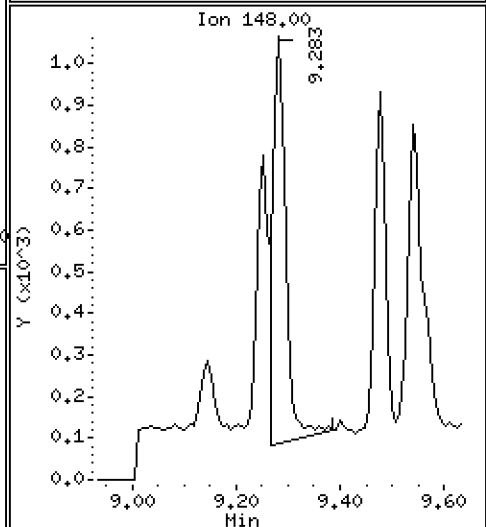
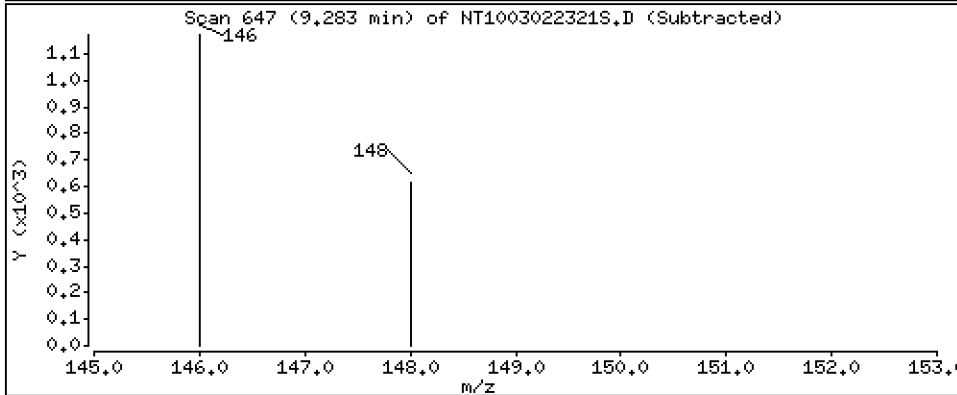
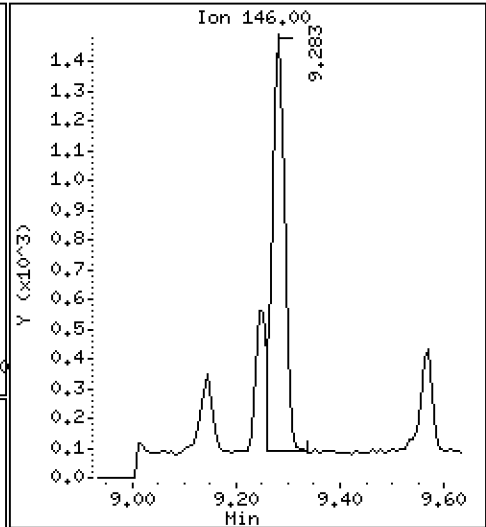
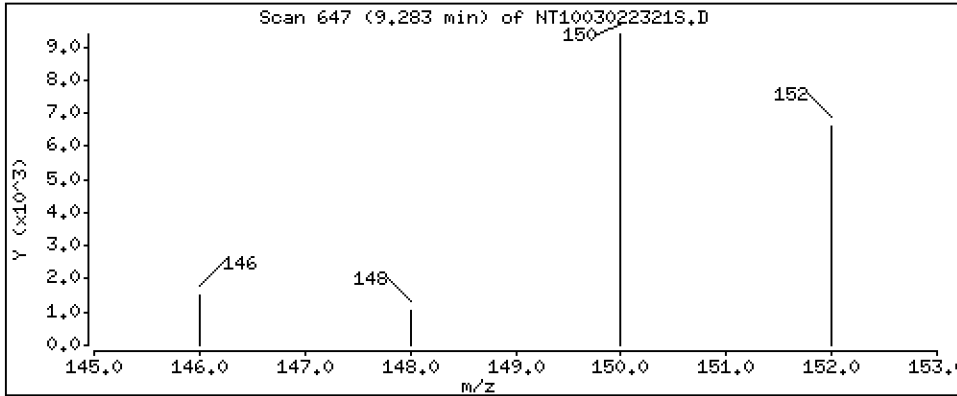
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.01137 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

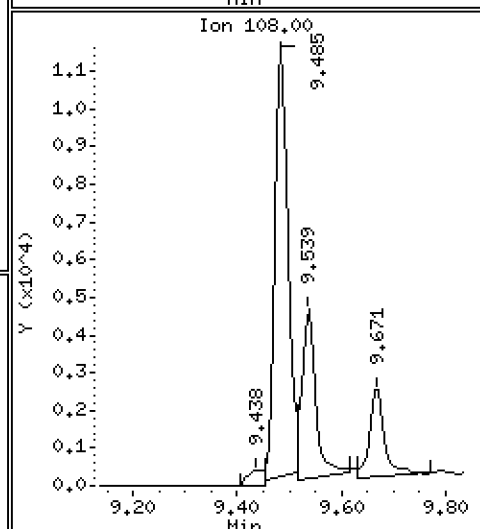
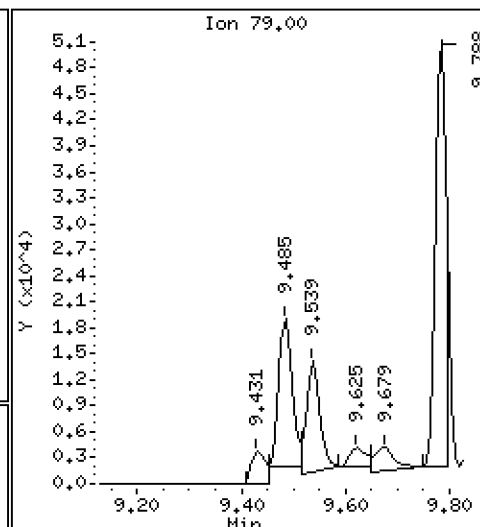
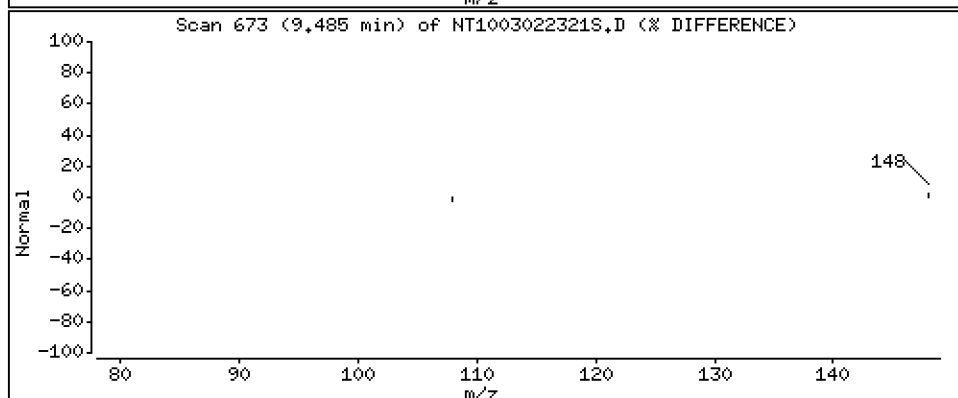
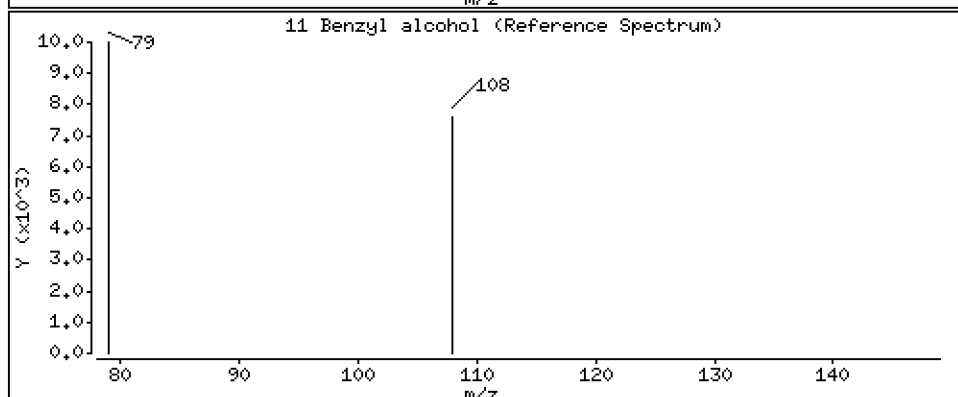
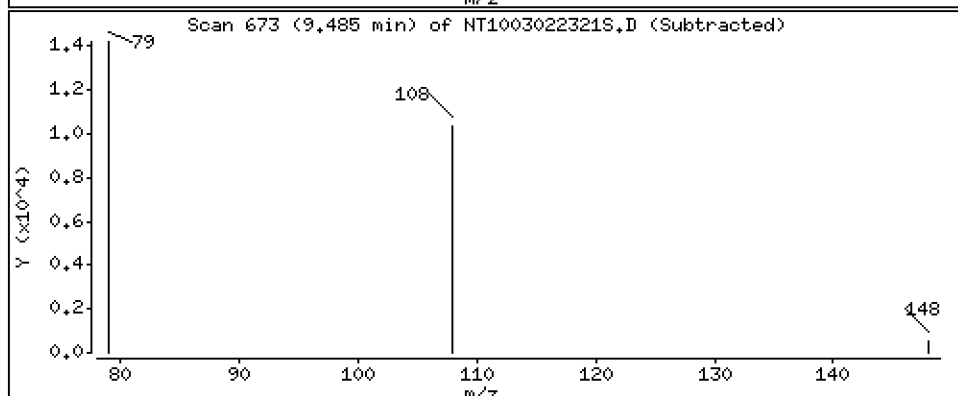
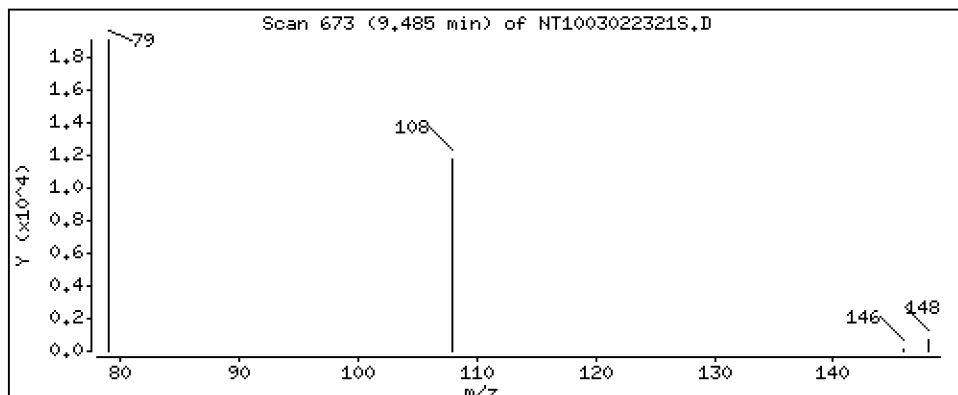
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2335 ug/L





Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

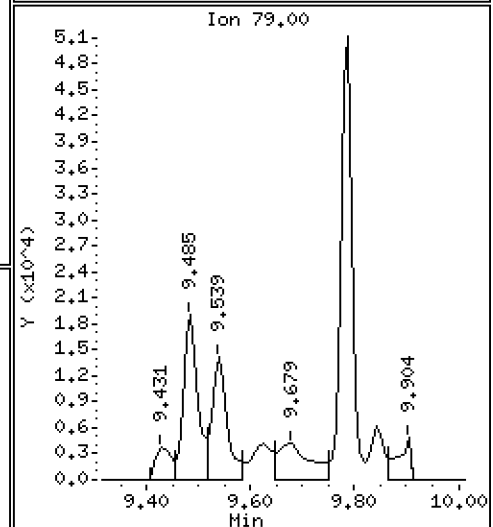
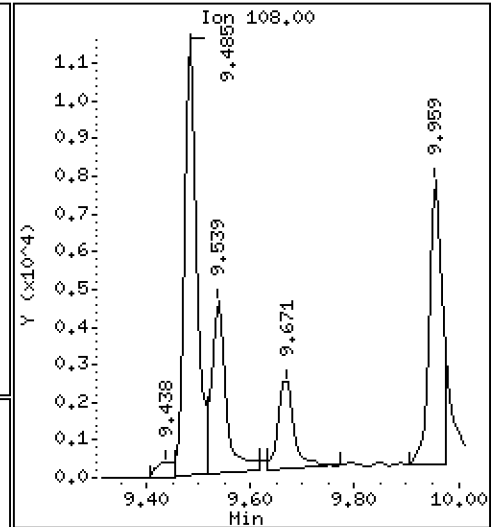
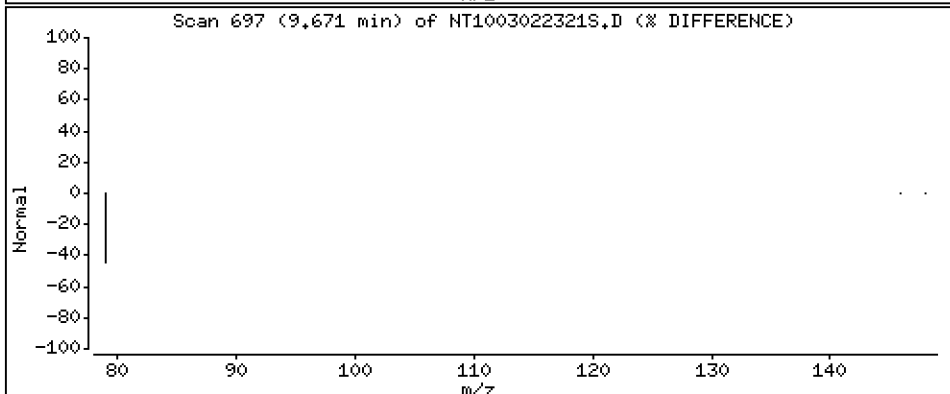
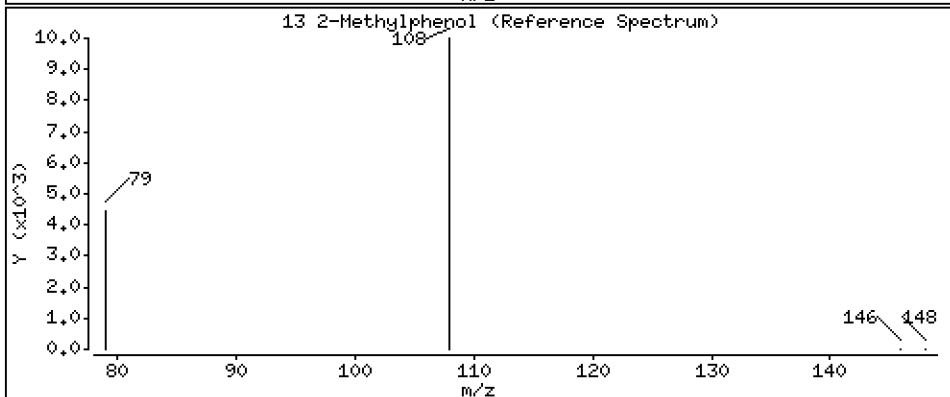
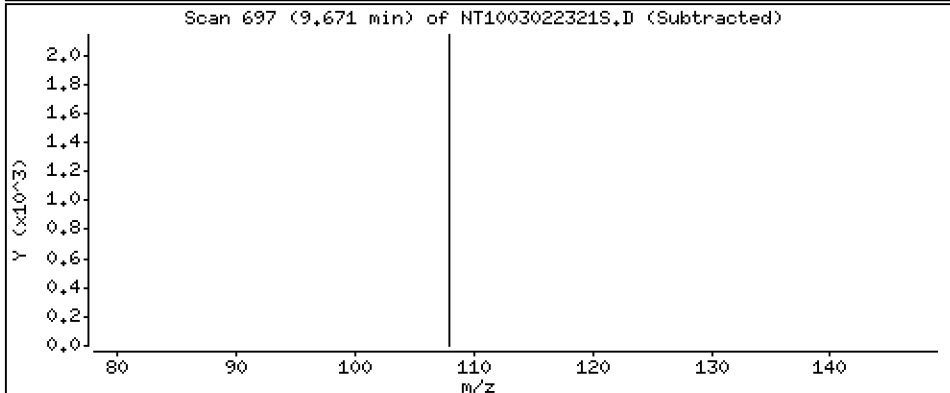
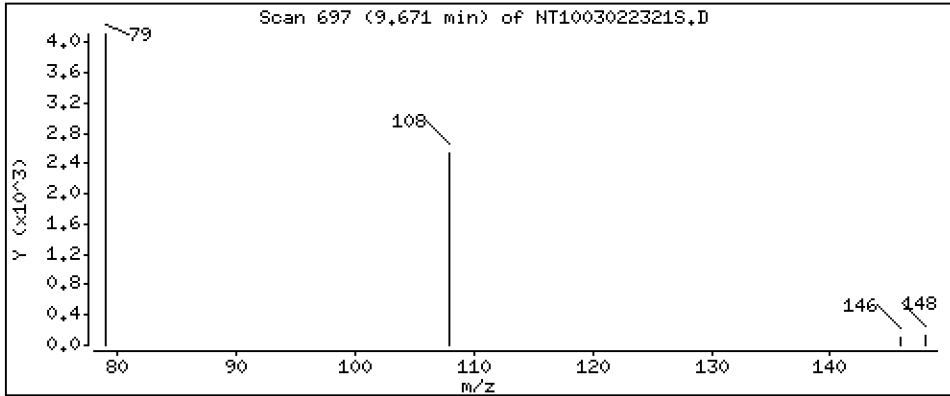
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03539 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

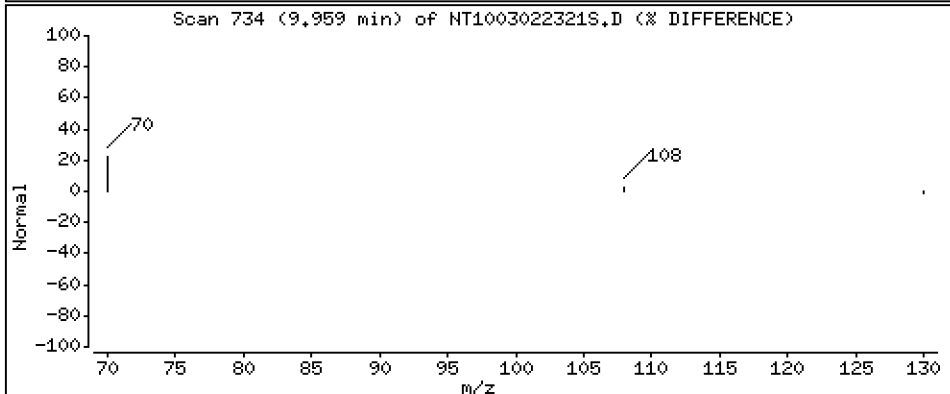
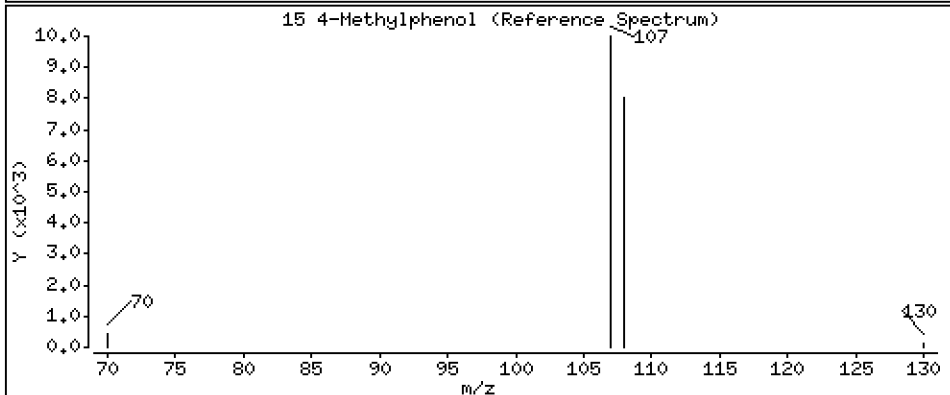
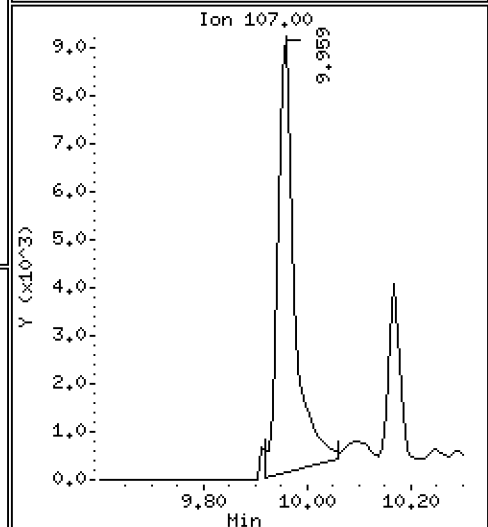
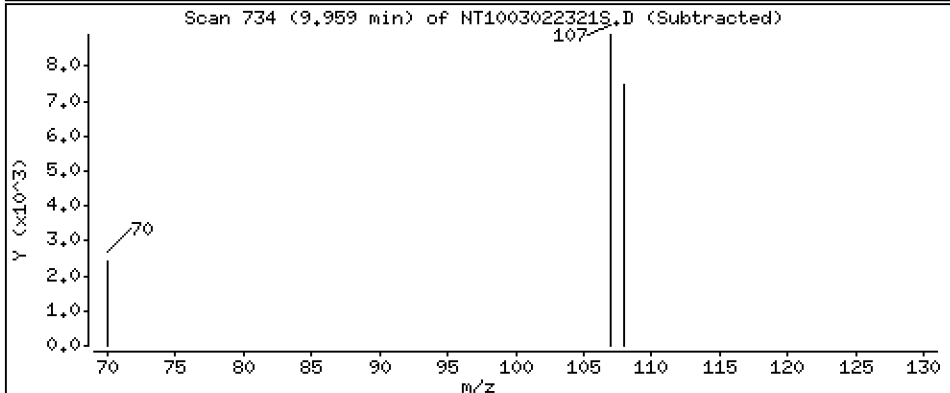
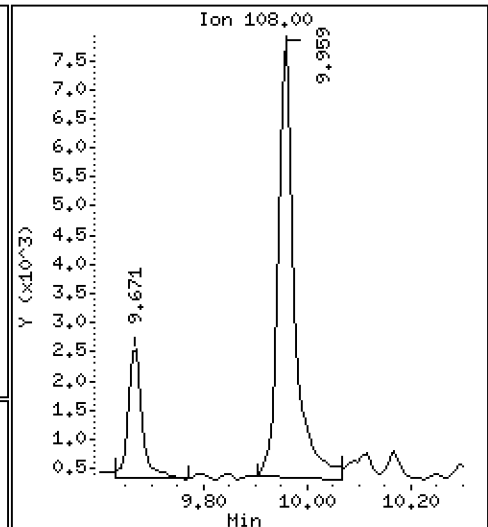
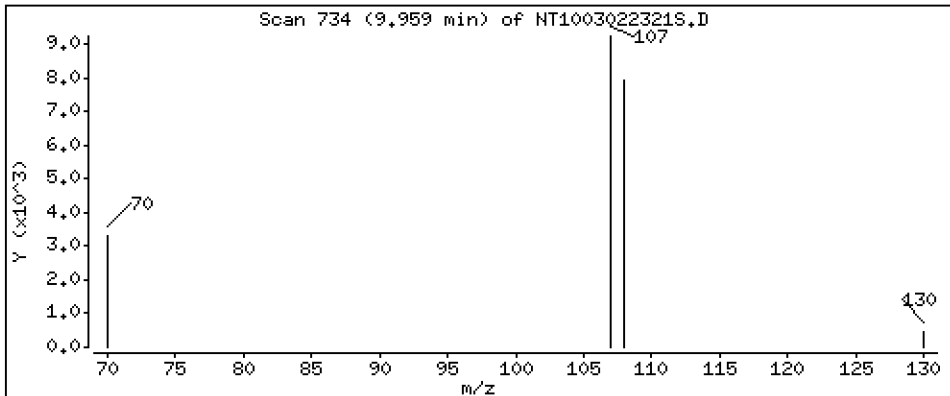
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1117 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

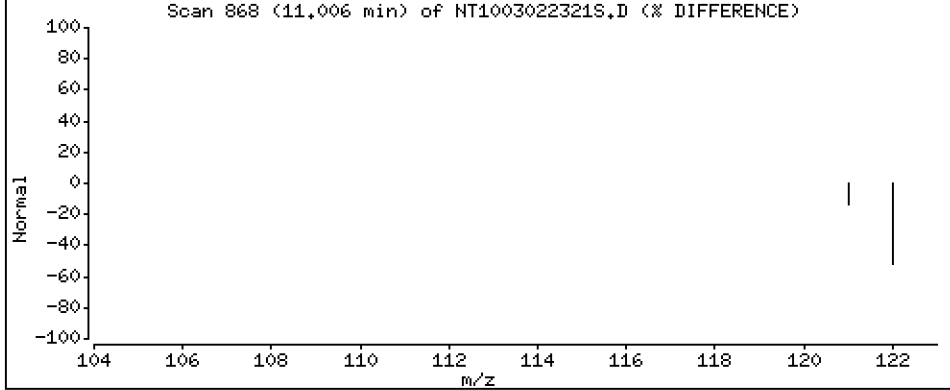
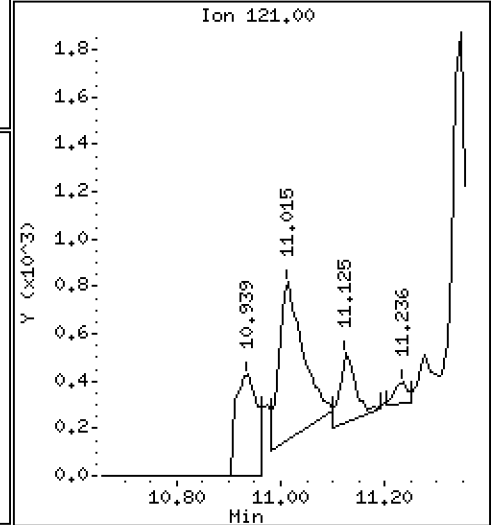
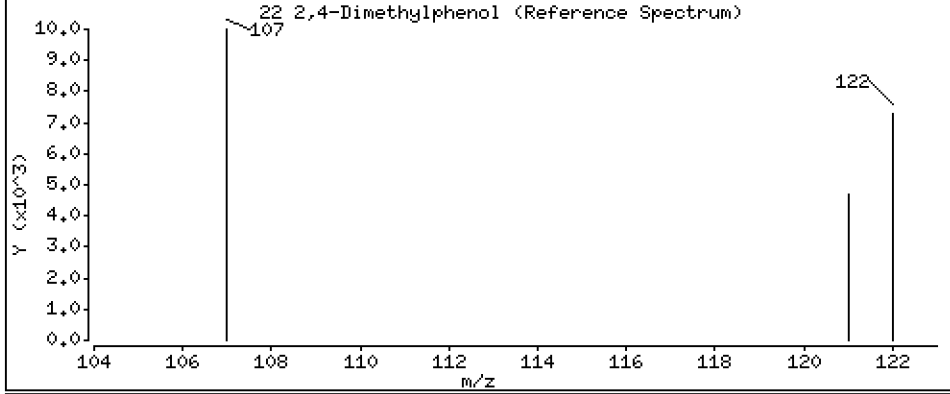
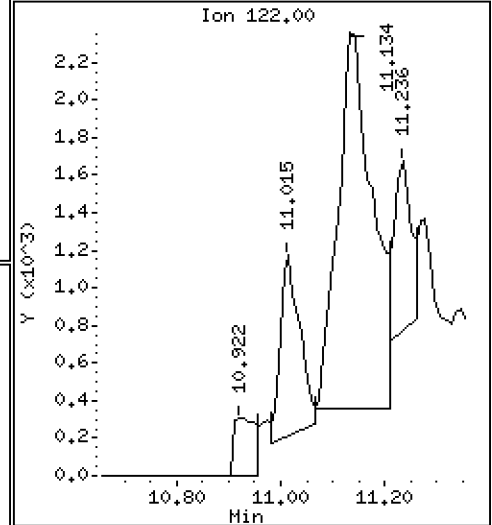
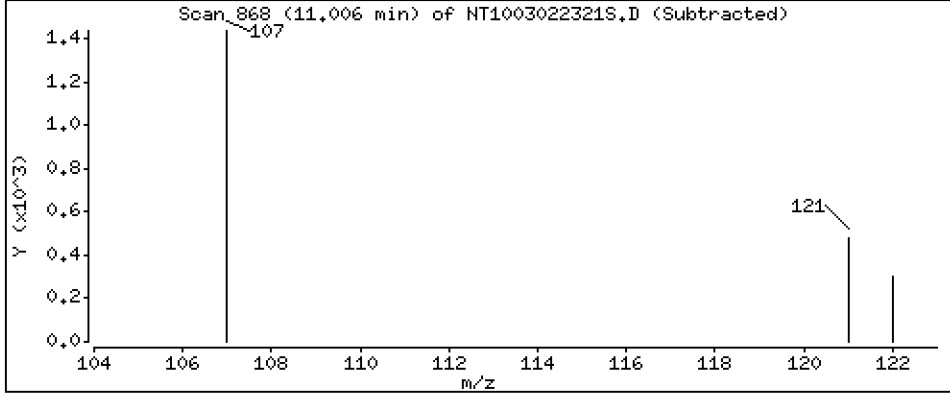
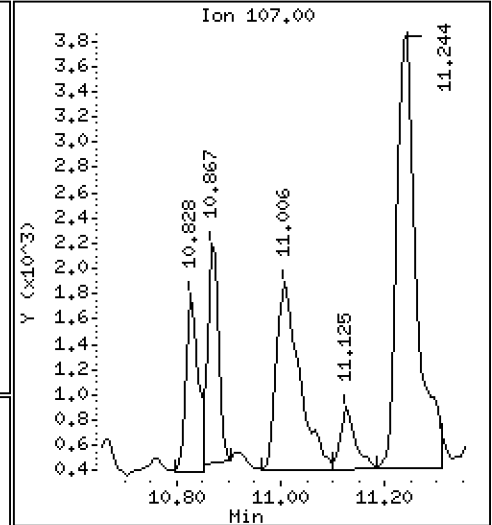
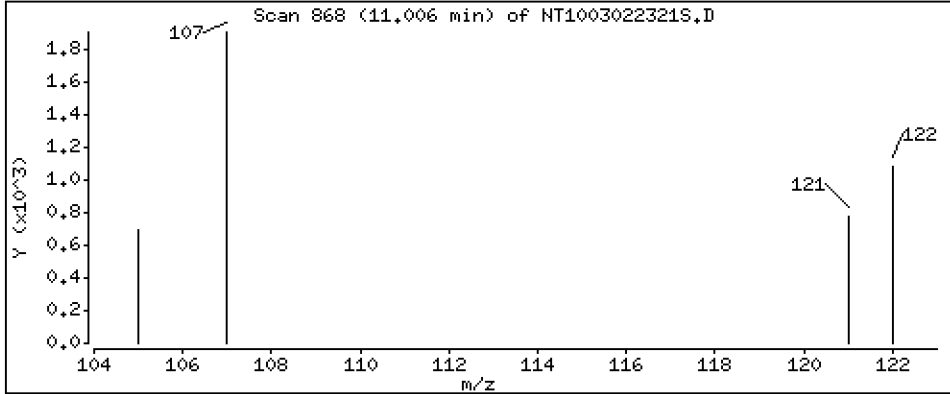
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02757 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

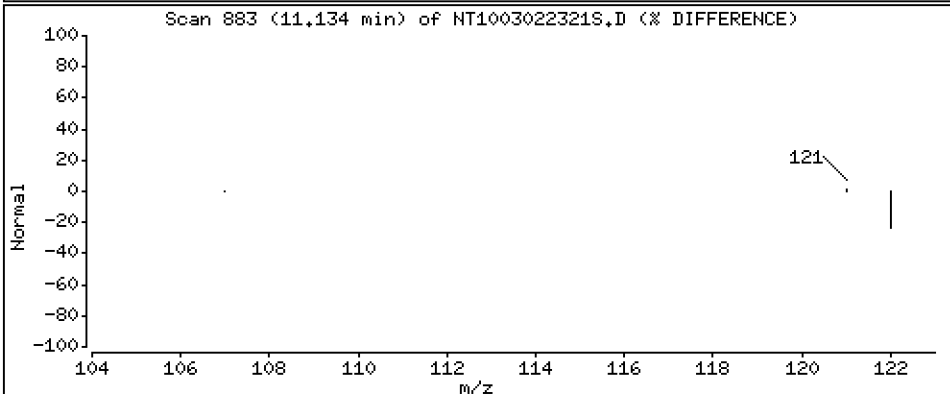
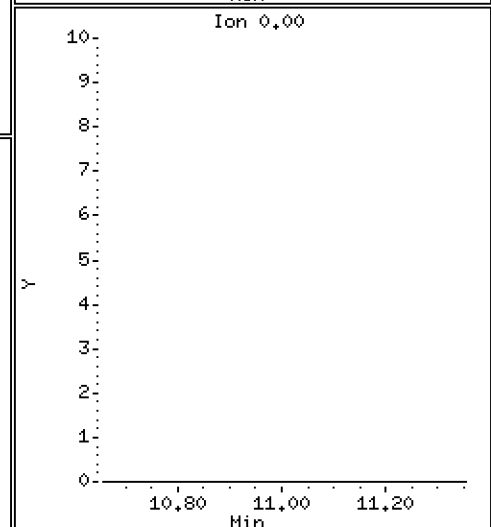
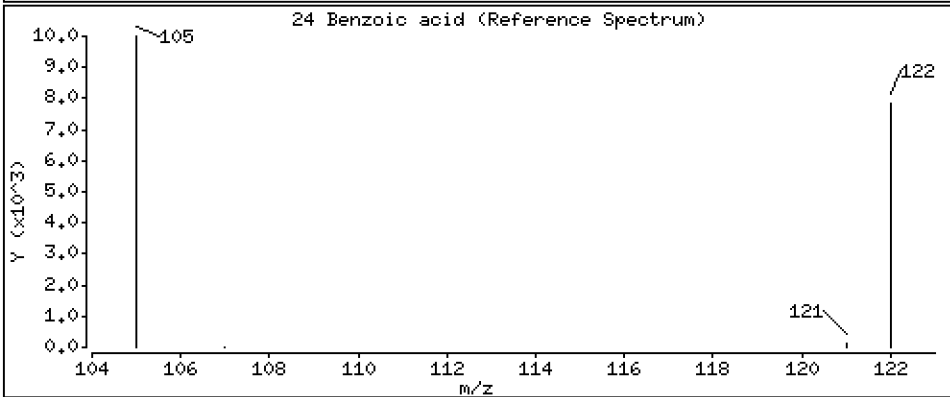
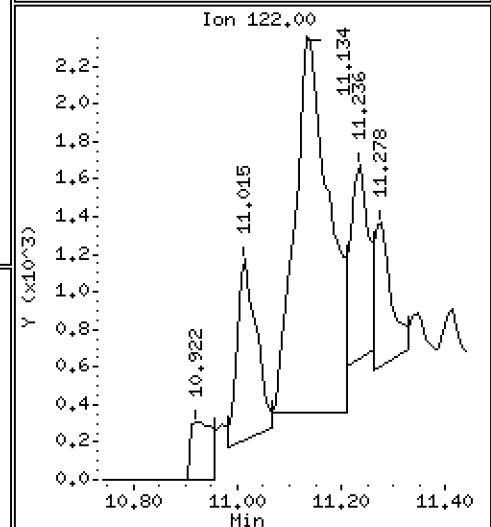
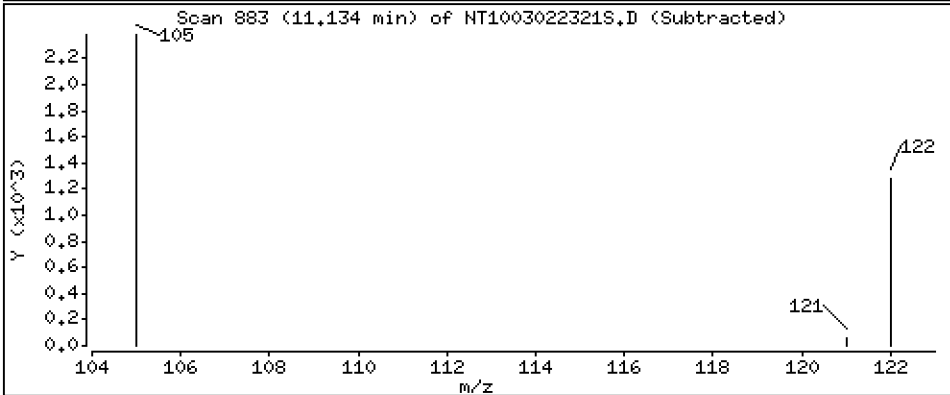
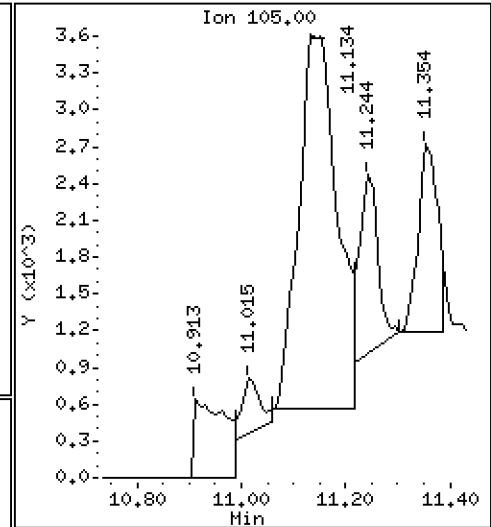
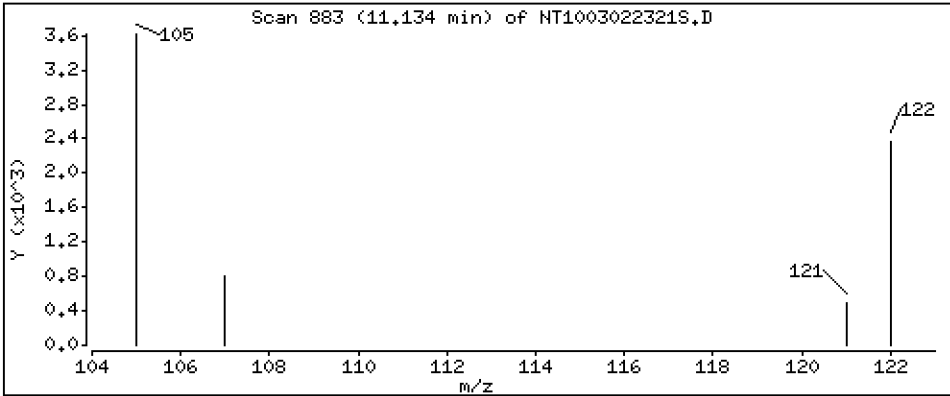
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.1720 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

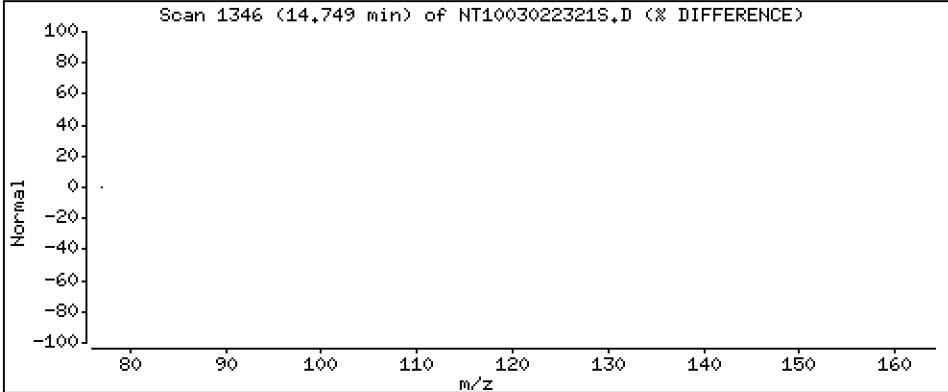
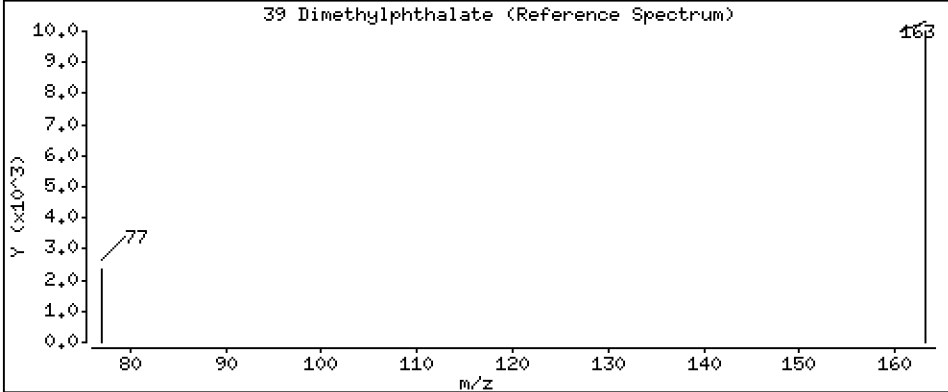
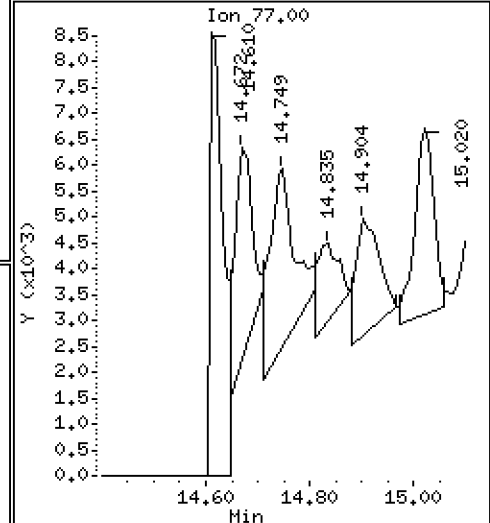
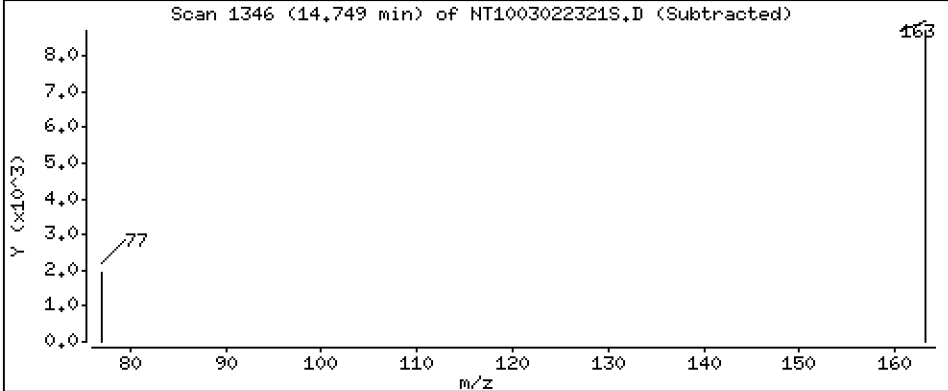
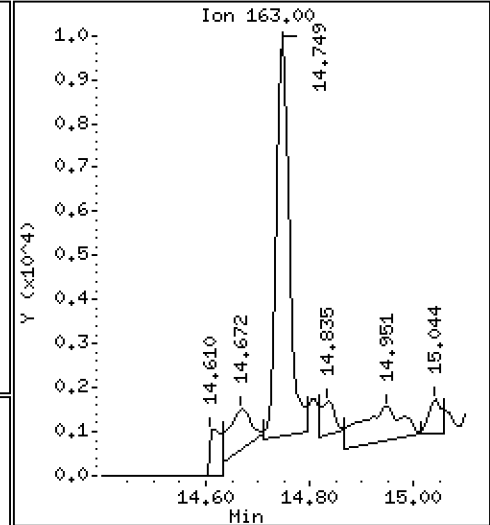
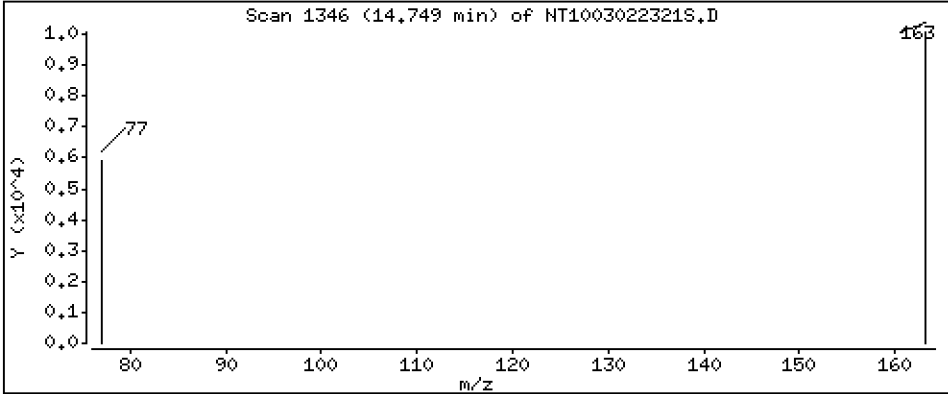
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.04738 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

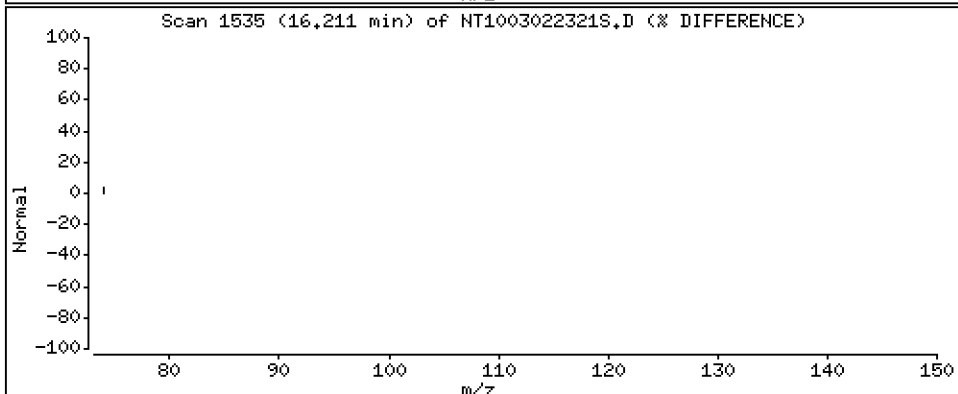
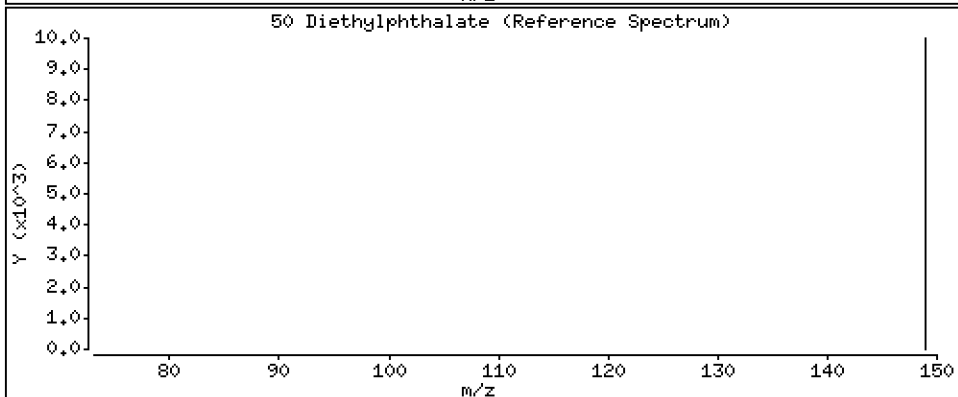
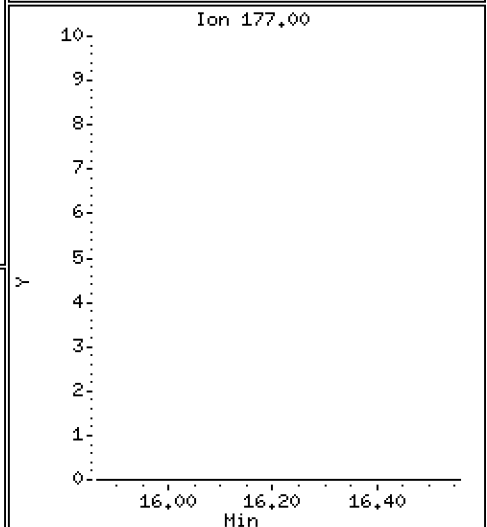
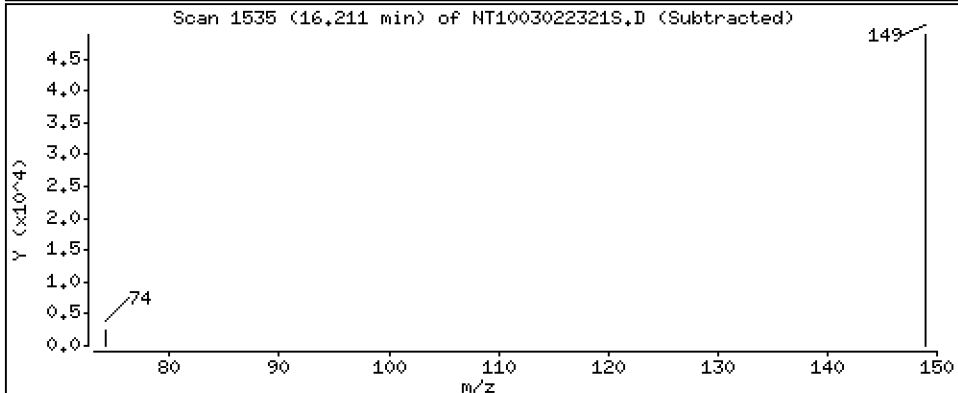
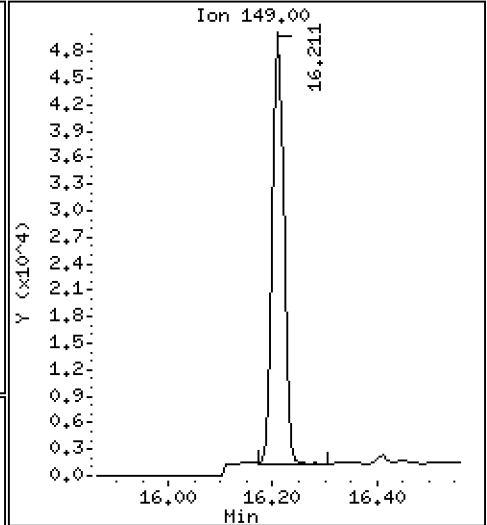
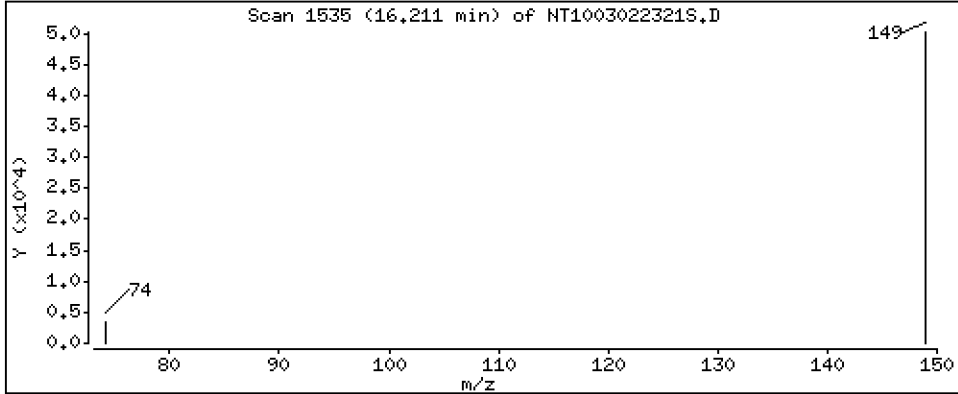
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2335 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

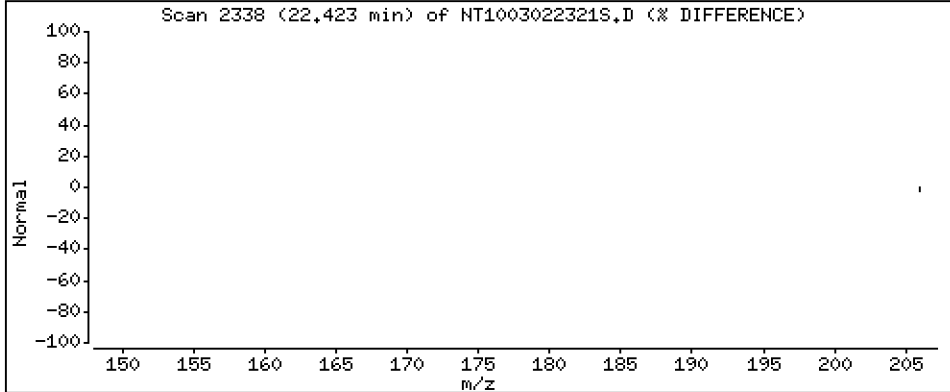
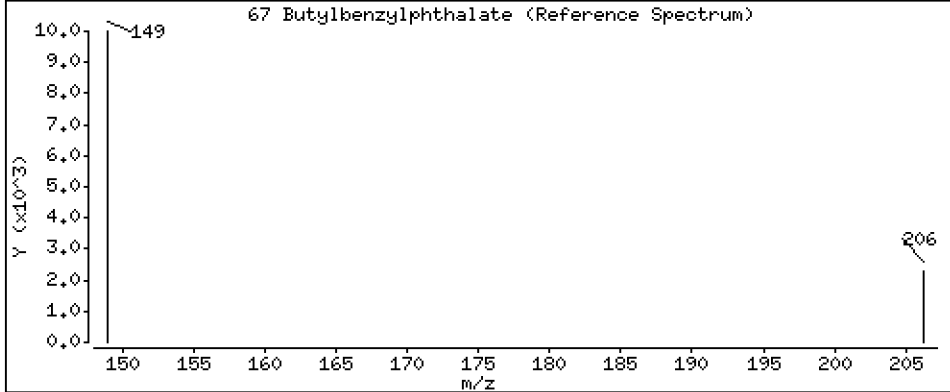
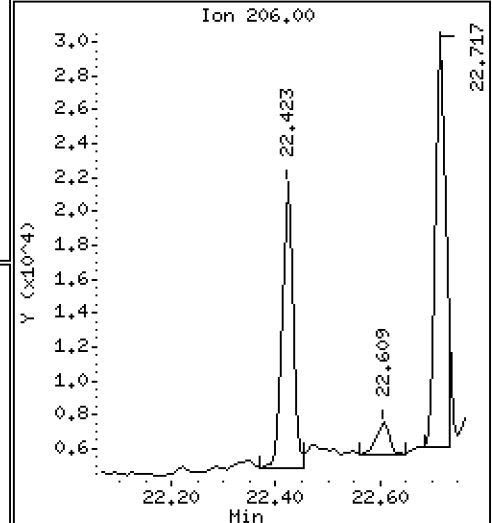
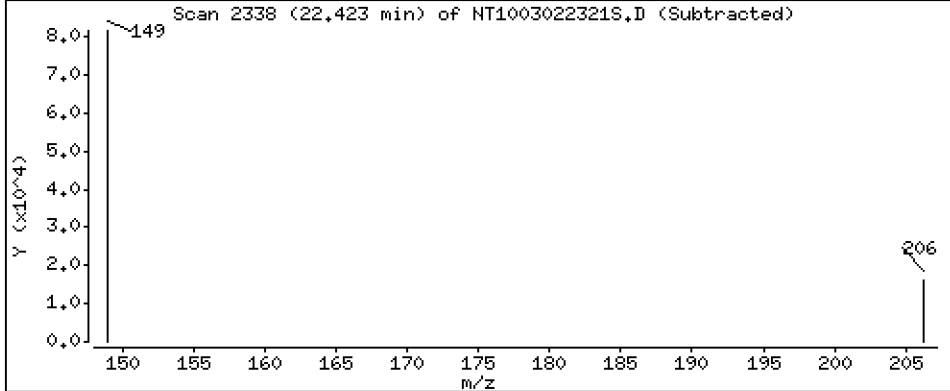
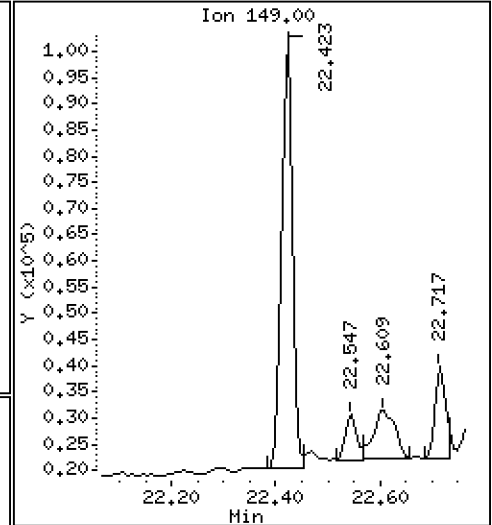
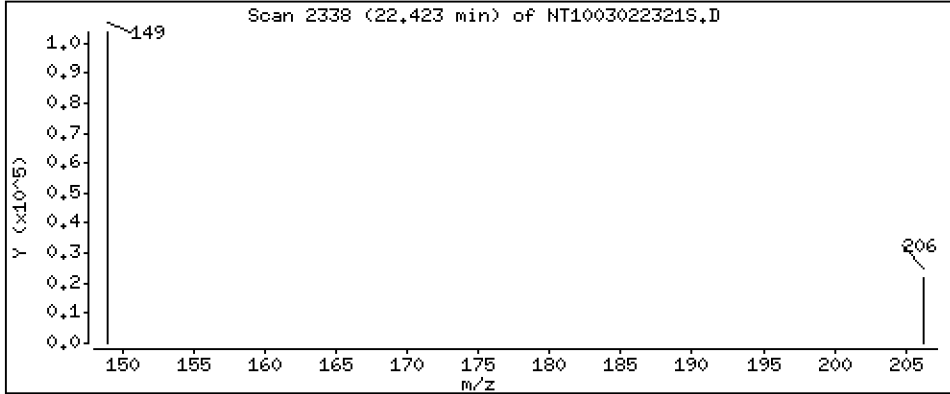
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.2943 ug/L



Date : 03-MAR-2023 03:03

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-06

Volume Injected (uL): 1.0

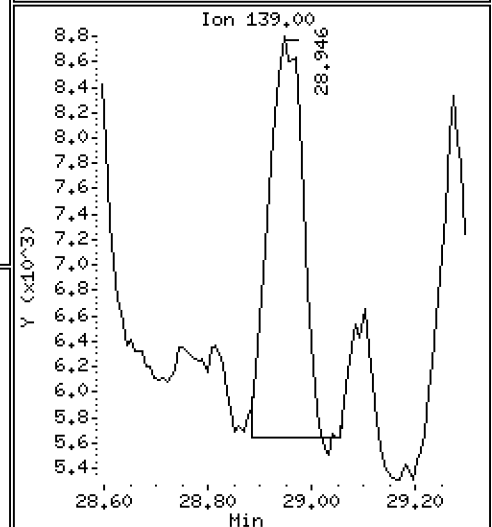
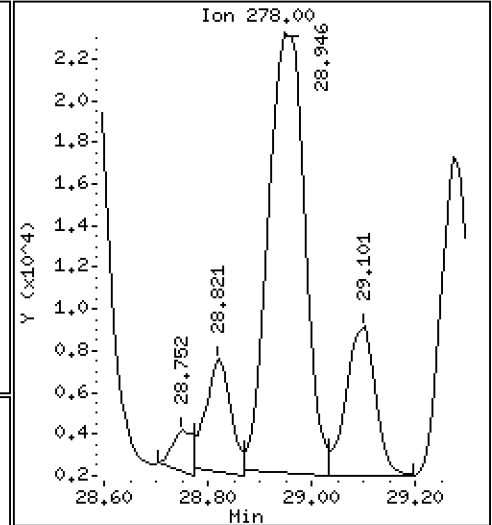
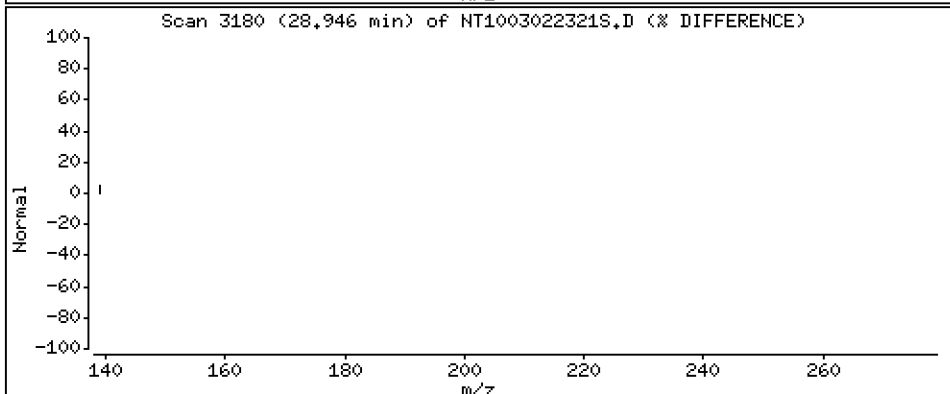
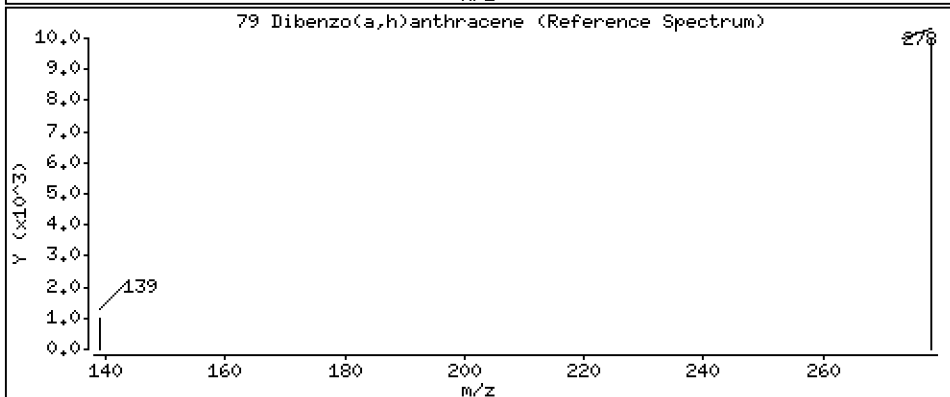
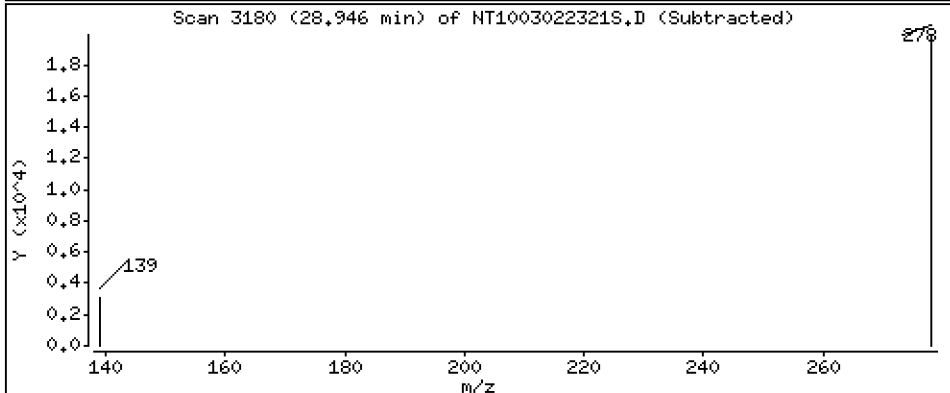
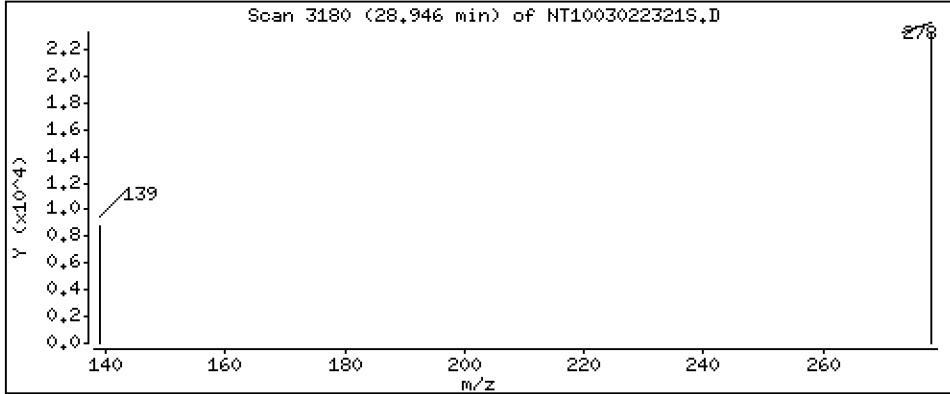
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1777 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022321S.D  
 Lab Smp Id: 23A0206-06  
 Inj Date : 03-MAR-2023 03:03 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-06  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 17  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		962635	6.20230	6.202 (R)
3 Phenol	94		8.525	8.525 (0.921)		1160420	4.94007	4.940
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		543640	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		2227	0.01137	0.01137 (M)
11 Benzyl alcohol	79		9.485	9.477 (1.025)		29704	0.23346	0.2335
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.671	9.663 (1.045)		4870	0.03539	0.03539
15 4-Methylphenol	108		9.958	9.950 (1.076)		15994	0.11165	0.1117
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006 (0.939)		4675	0.02757	0.02757
24 Benzoic acid	105		11.133	11.082 (0.950)		16003	0.17203	0.1720 (H)
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.724	11.723 (1.000)		1998493	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		15017	0.04738	0.04738
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		998232	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		69801	0.23352	0.2335
54 N-Nitrosodiphenylamine	169		Compound Not Detected.					
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT MASS	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266		Compound Not Detected.					
* 59 Phenanthrene-d10	188		18.414	18.406	(1.000)	1941569	4.00000	
\$ 66 Terphenyl-d14	244		21.540	21.532	(0.919)	926533	4.90425	4.904 (R)
67 Butylbenzylphthalate	149		22.422	22.414	(0.957)	115988	0.29432	0.2943
* 69 Chrysene-d12	240		23.437	23.429	(1.000)	2336243	4.00000	
* 77 Perylene-d12	264		26.139	26.123	(1.000)	2517750	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.945	(1.107)	103853	0.17770	0.1777
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.
- H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022321S.D  
 Lab Smp Id: 23A0206-06  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	543640	-16.67
27 Naphthalene-d8	2339966	1169983	4679932	1998493	-14.59
42 Acenaphthene-d10	1186988	593494	2373976	998232	-15.90
59 Phenanthrene-d10	2193485	1096743	4386970	1941569	-11.48
69 Chrysene-d12	2444828	1222414	4889656	2336243	-4.44
77 Perylene-d12	2842248	1421124	5684496	2517750	-11.42

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022321S.D

Lab ID: 23A0206-06

nt10.i, 20230302A.b\SIM.b\SIMABN2.m,

03-MAR-2023 03:03

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

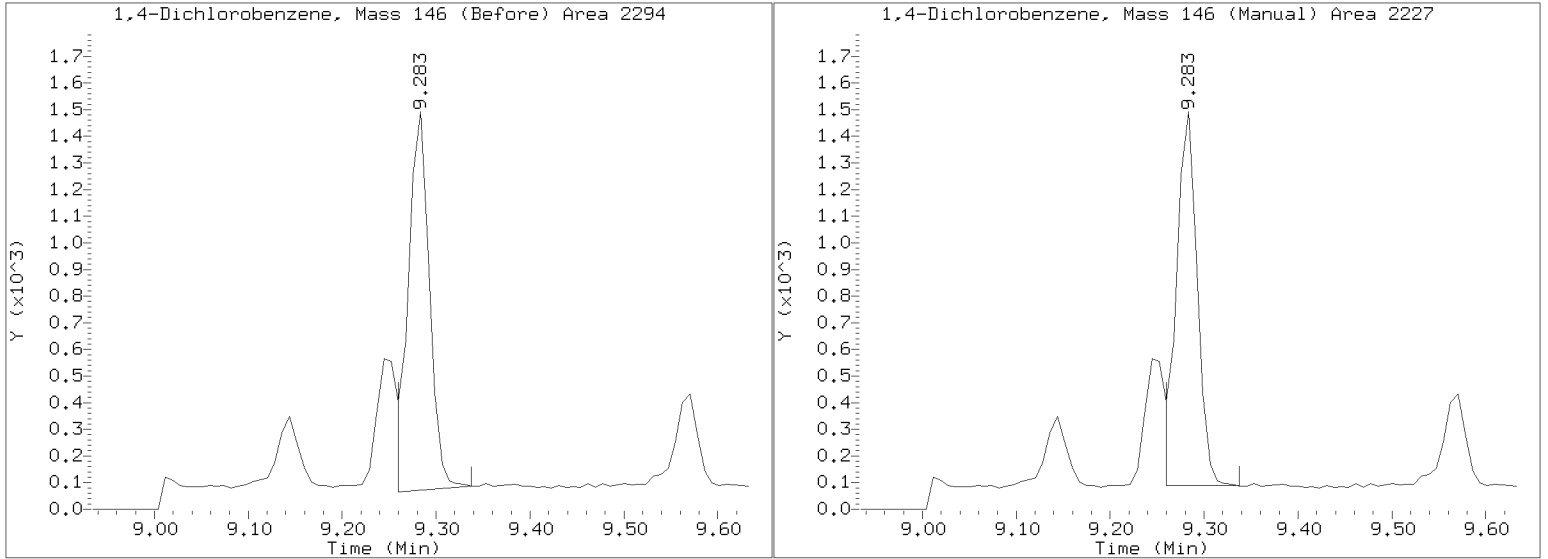
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022321S.D  
Injection Date: 03-MAR-2023 03:03  
Lab ID:23A0206-06 Client ID:  
Report Date: 03/11/2023 06:37





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-07 B

SDG: 23A0206

Sampled: 01/11/23 10:20

Prepared: 01/27/23 14:44

File ID: NT1003022322S.D

% Solids: 60.17

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 03:41

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

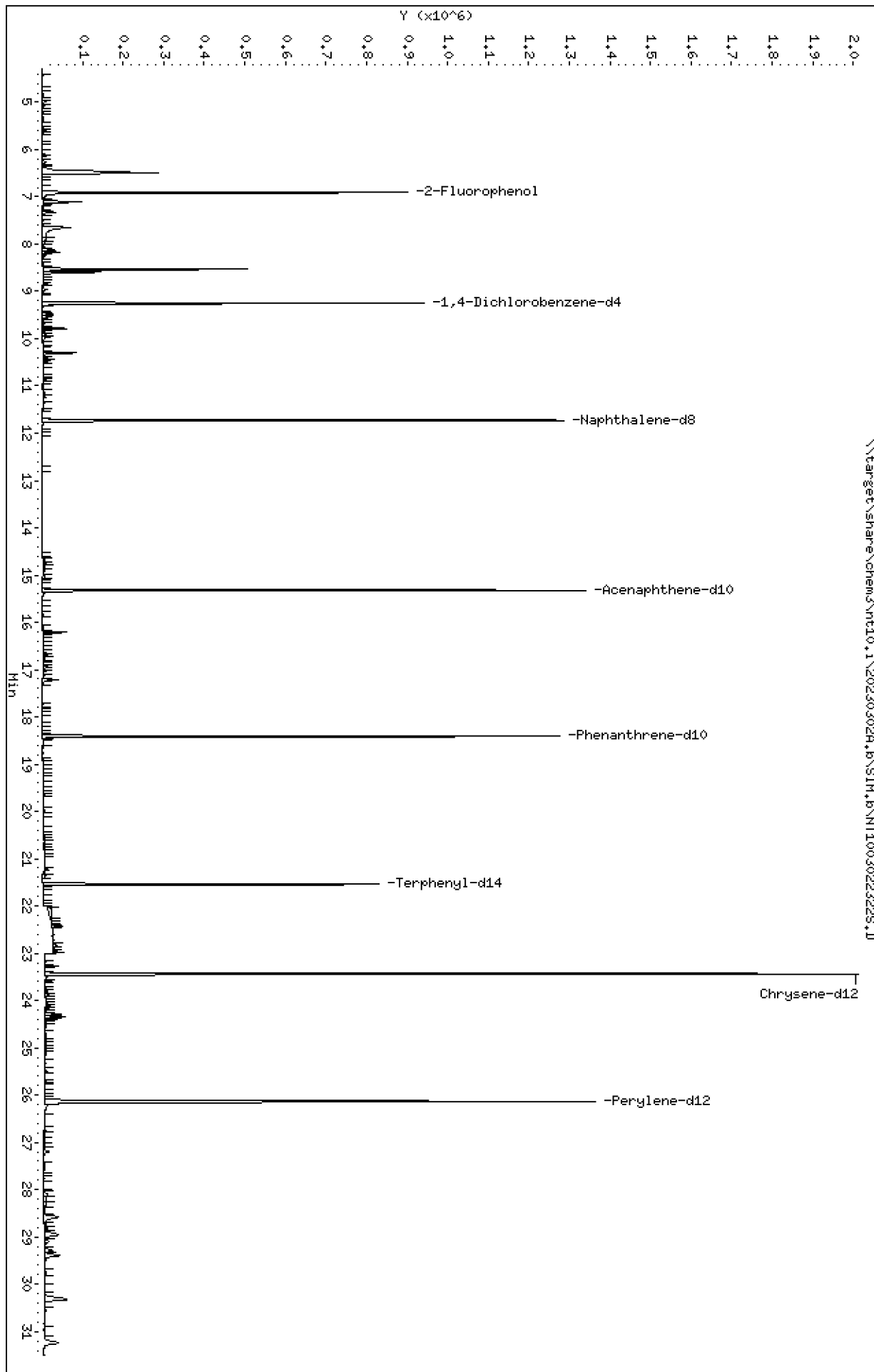
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	21.0		2.5	20.0
65-85-0	Benzoic acid	1	99.8	U	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	2.9	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	3.8	J	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.18	679	90.7	27 - 120	
p-Terphenyl-d14	498.79	544	109	37 - 120	

Data File: \\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223228.D  
Date: 03-MAR-2023 03:41  
Client ID:  
Sample Info: 23A0206-07  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223228.D



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

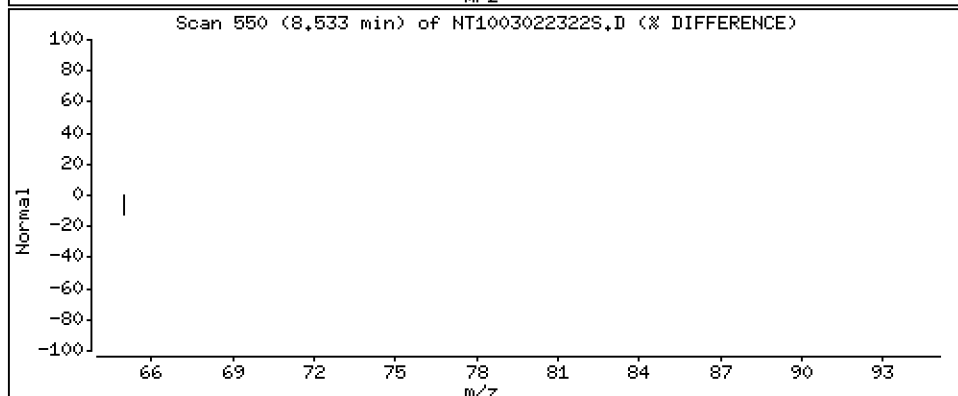
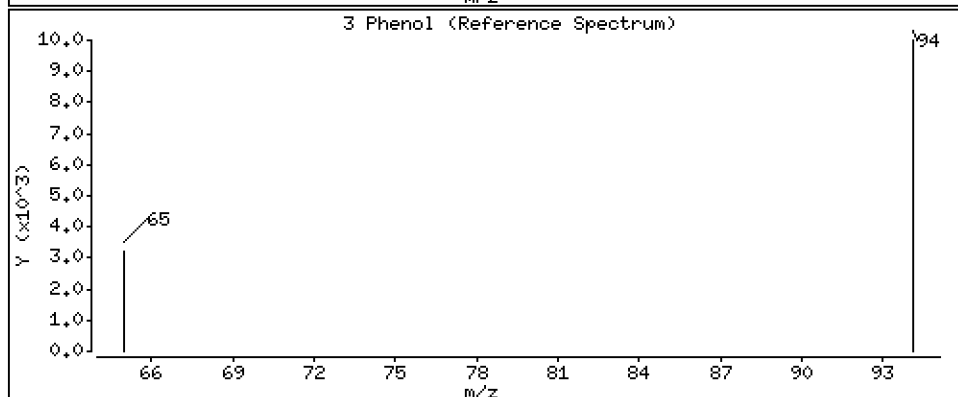
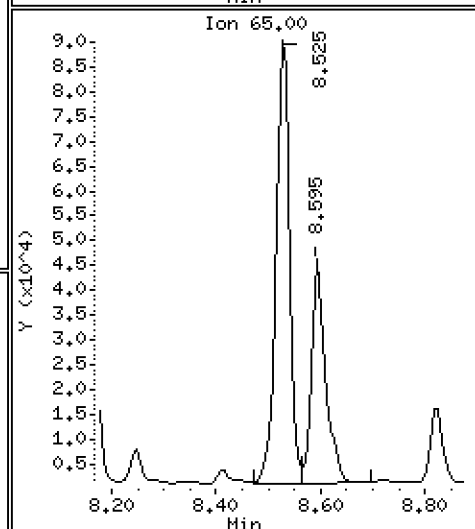
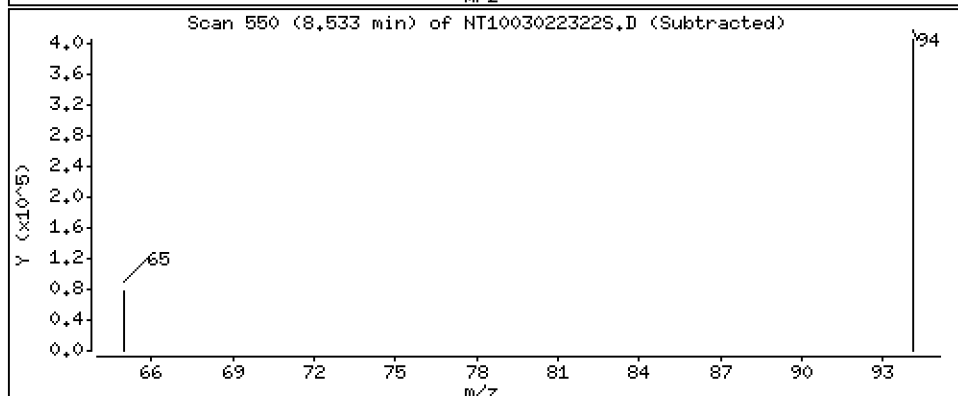
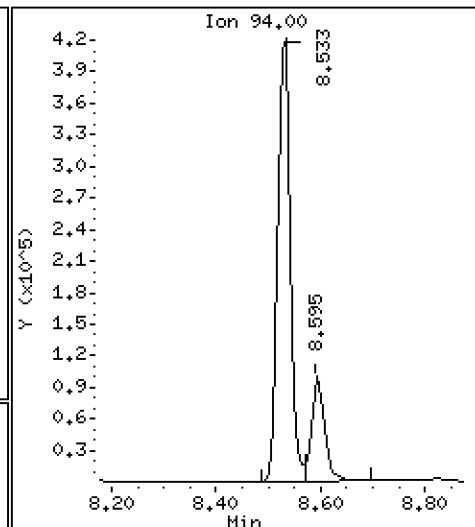
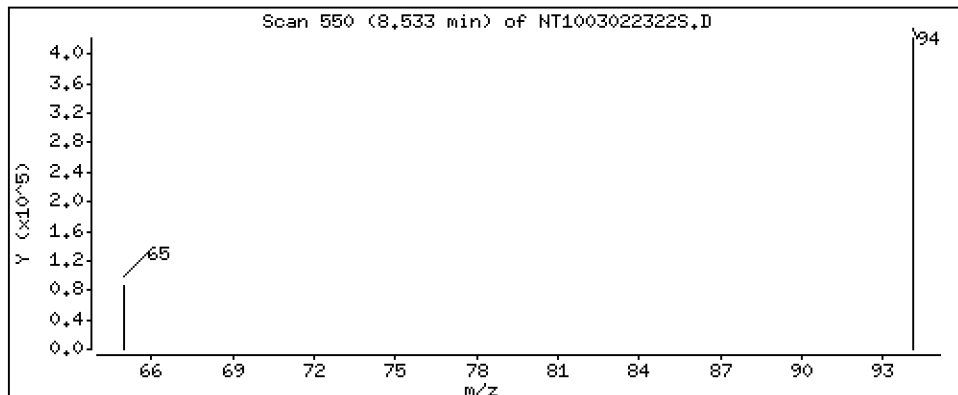
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 2,860 ug/L





Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

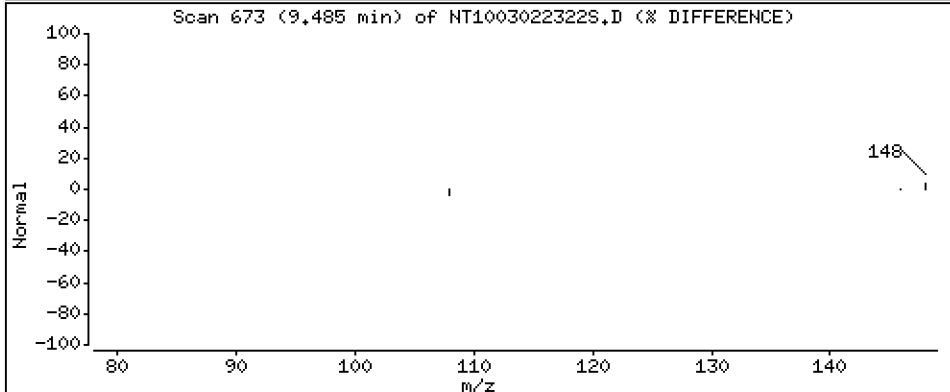
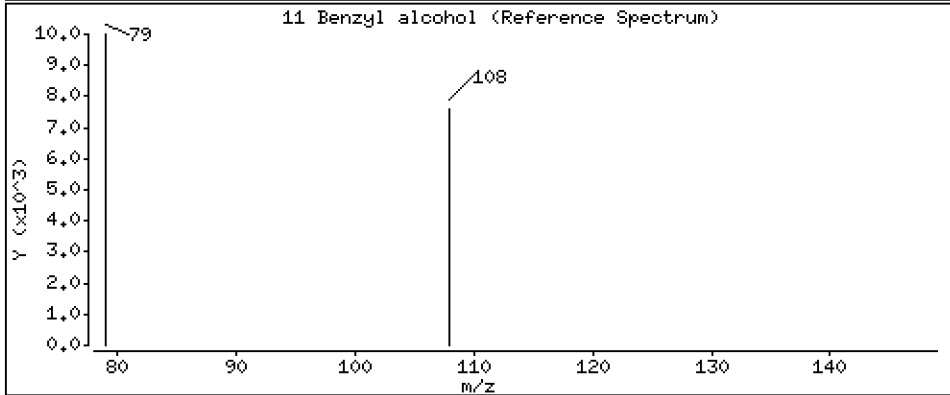
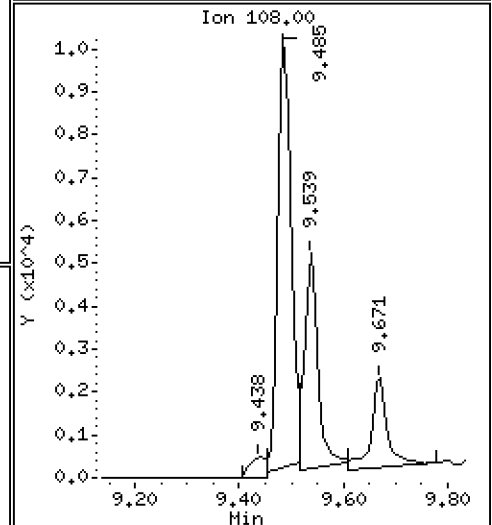
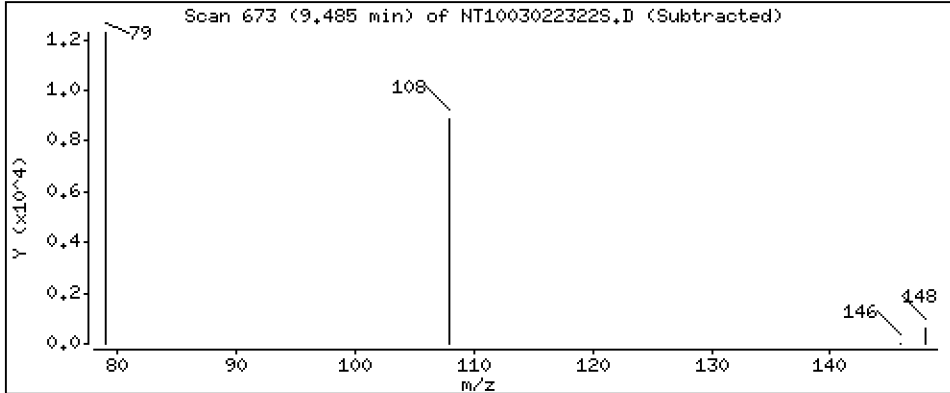
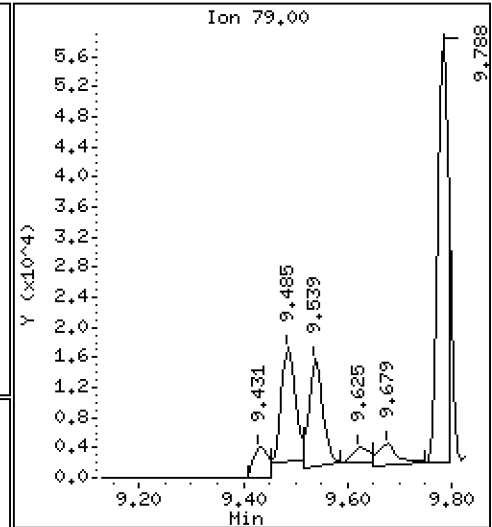
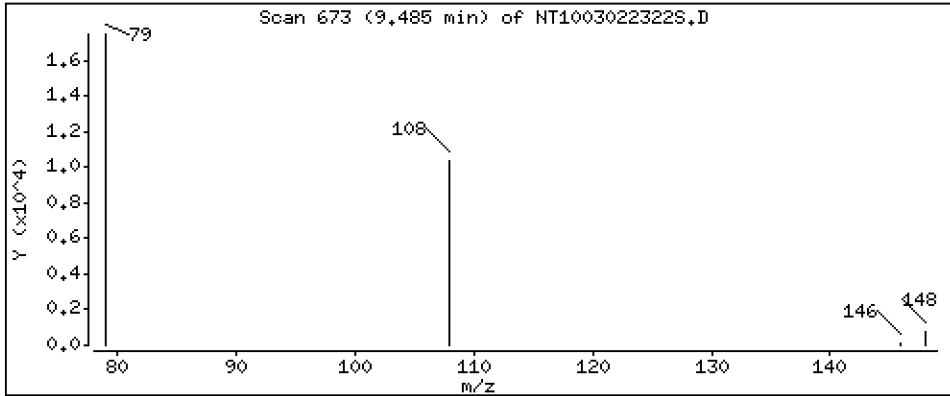
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2100 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

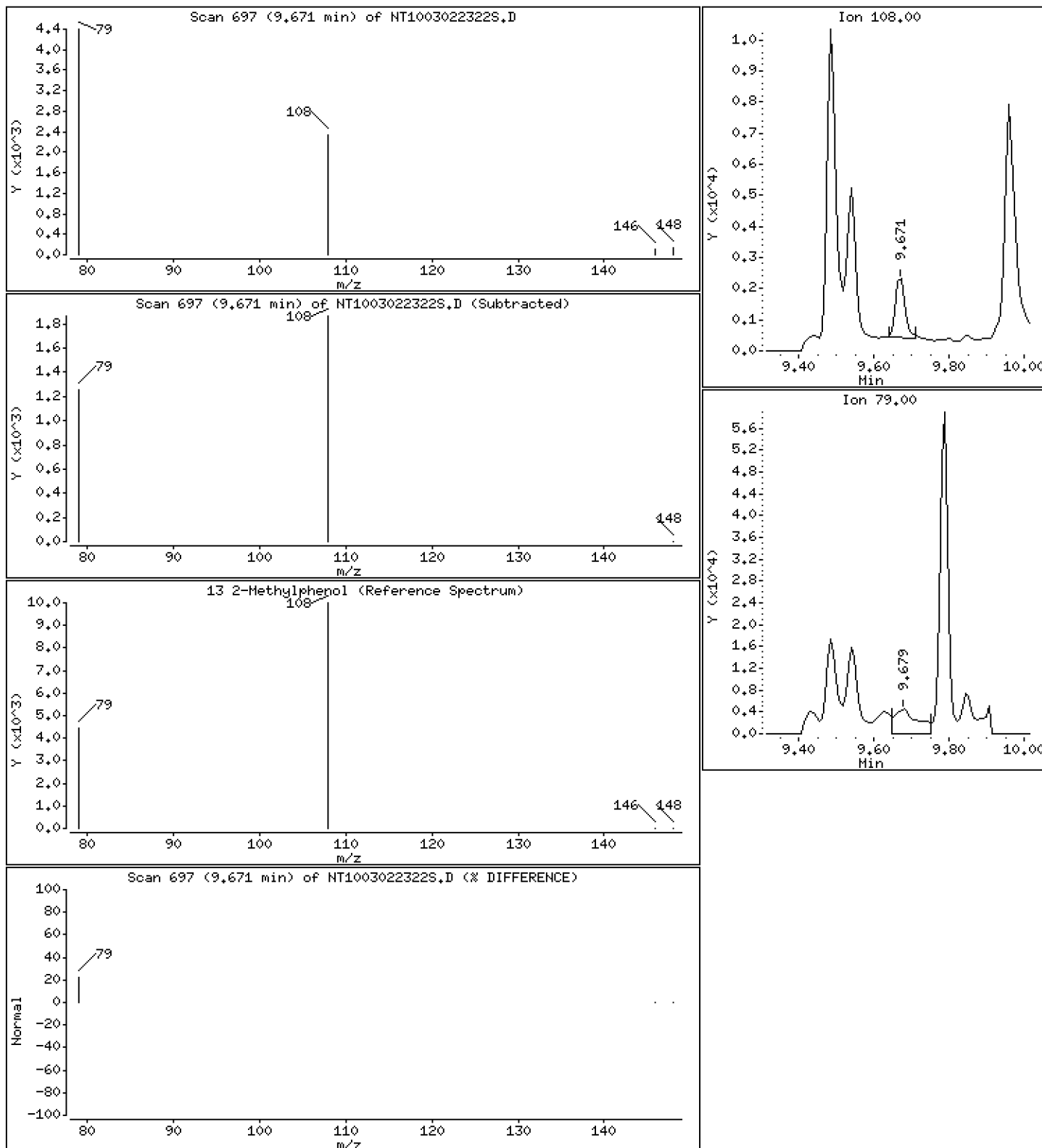
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.02222 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

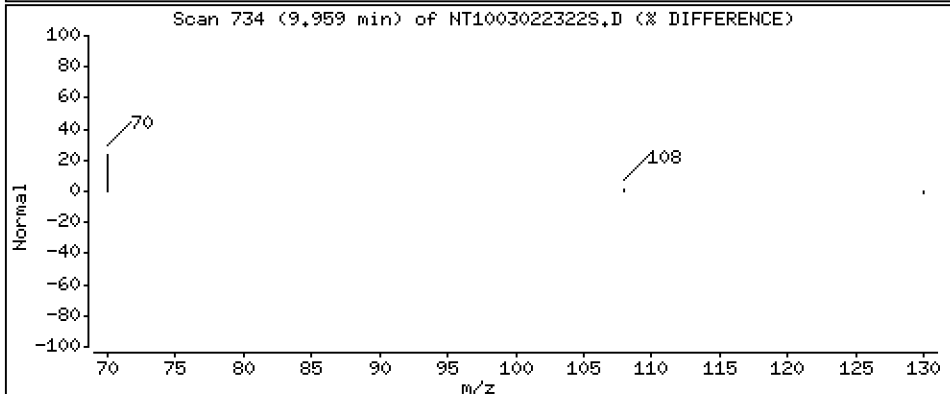
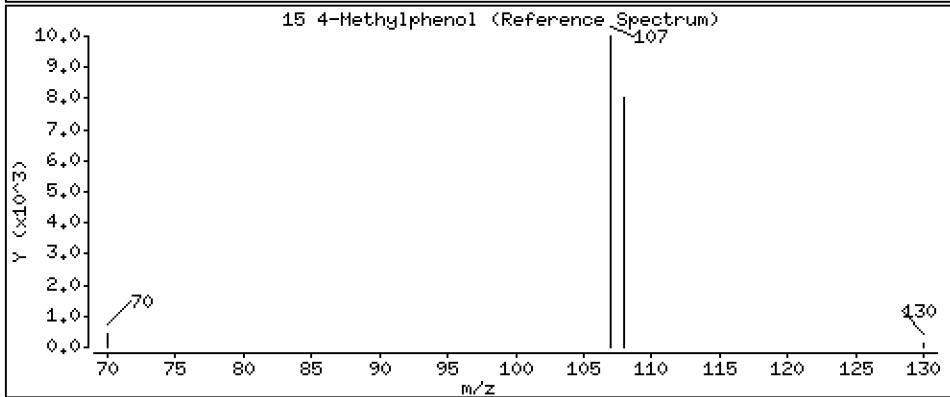
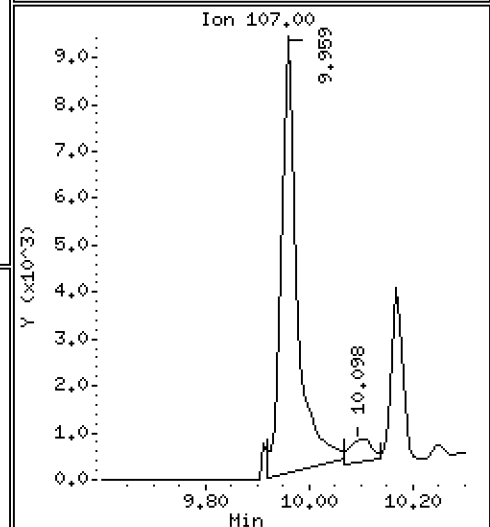
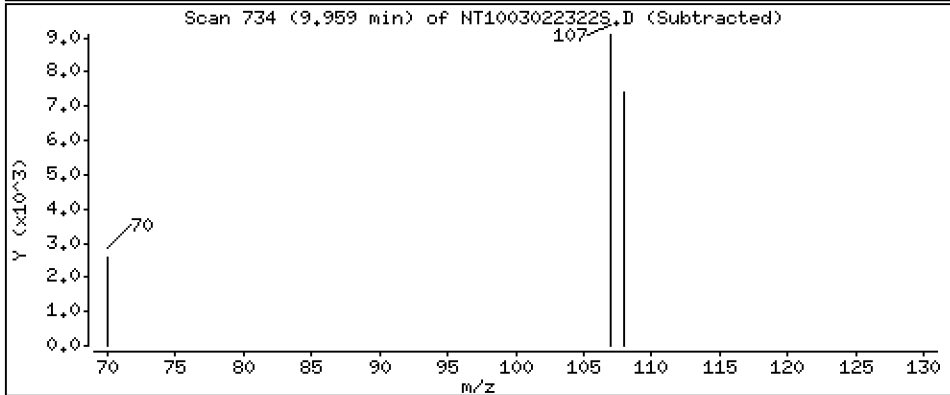
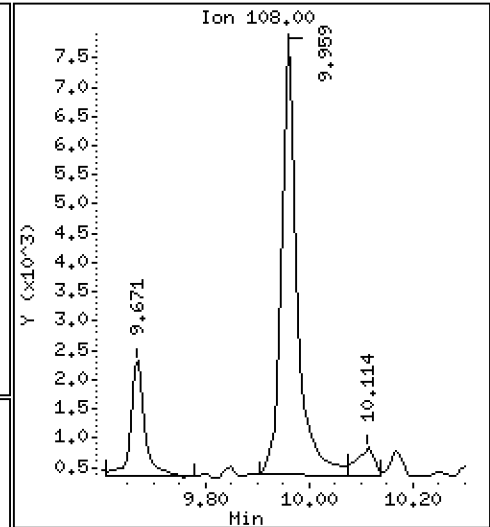
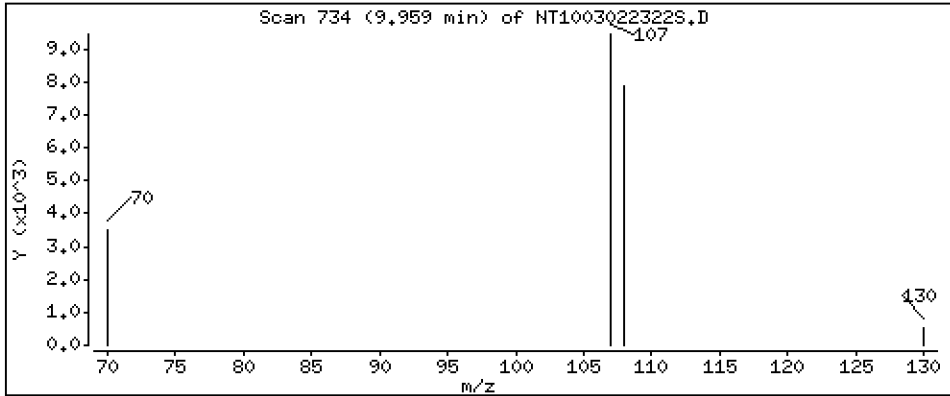
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1060 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

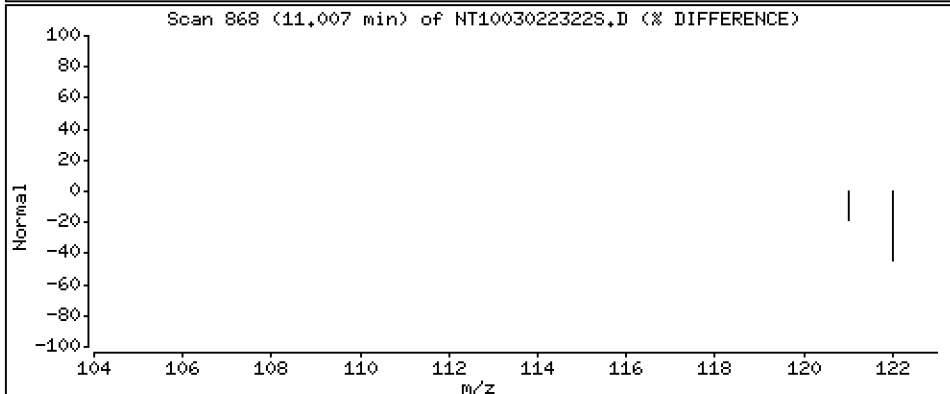
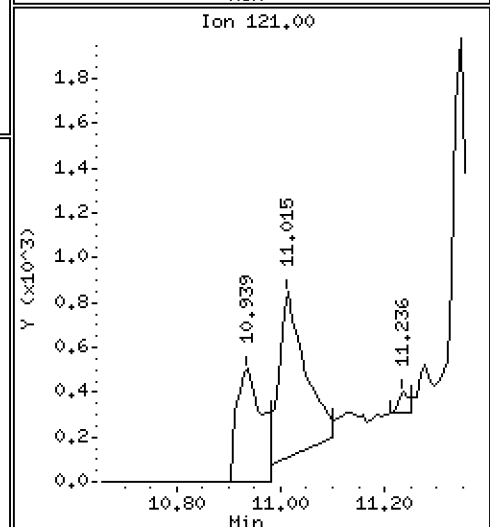
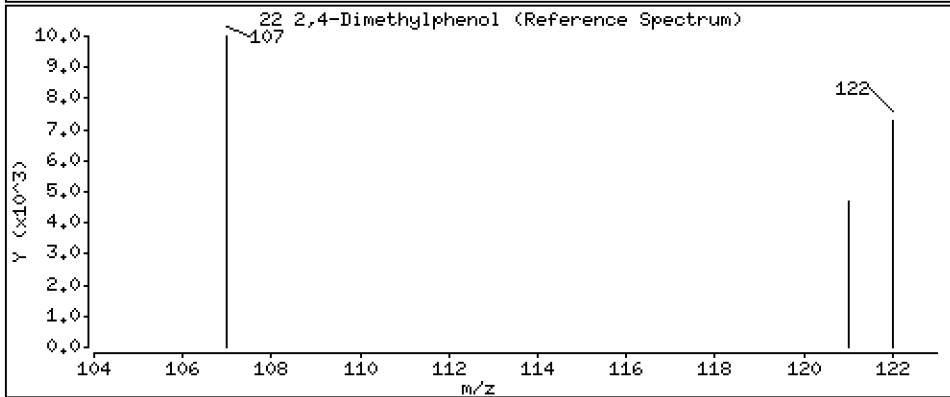
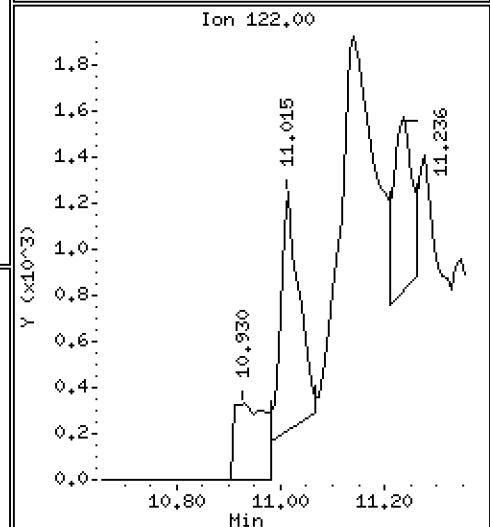
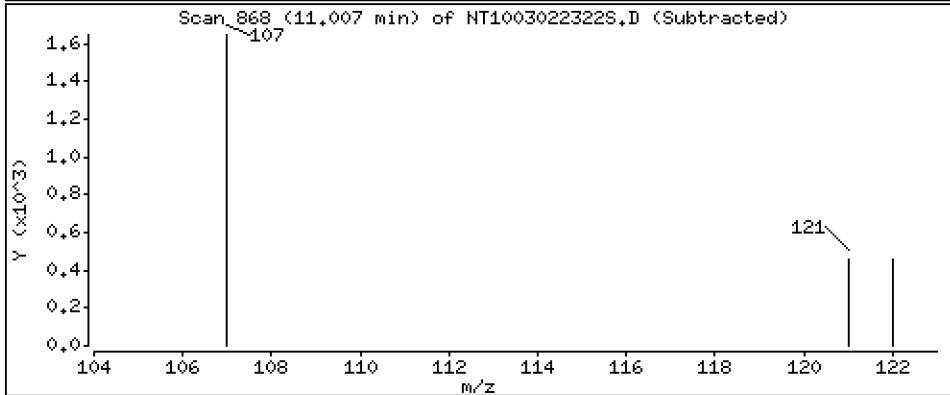
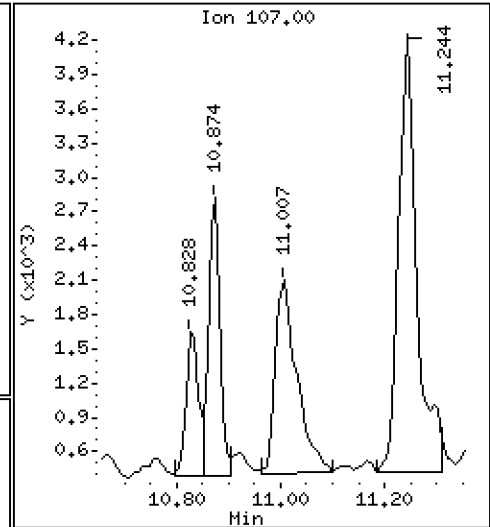
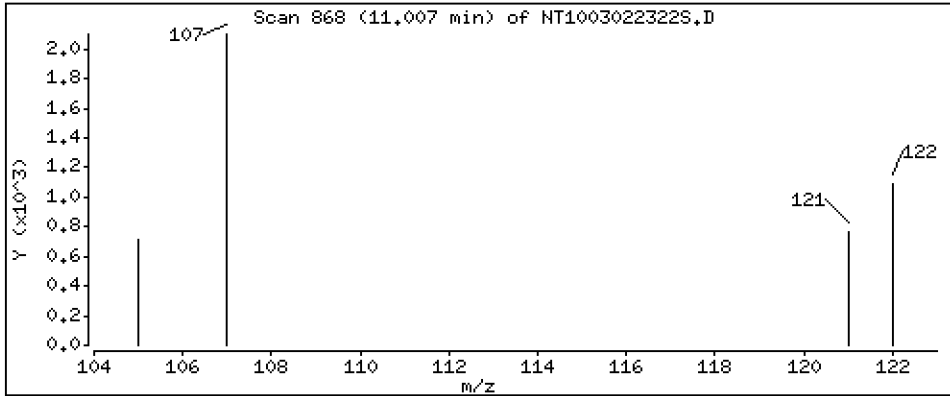
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02895 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

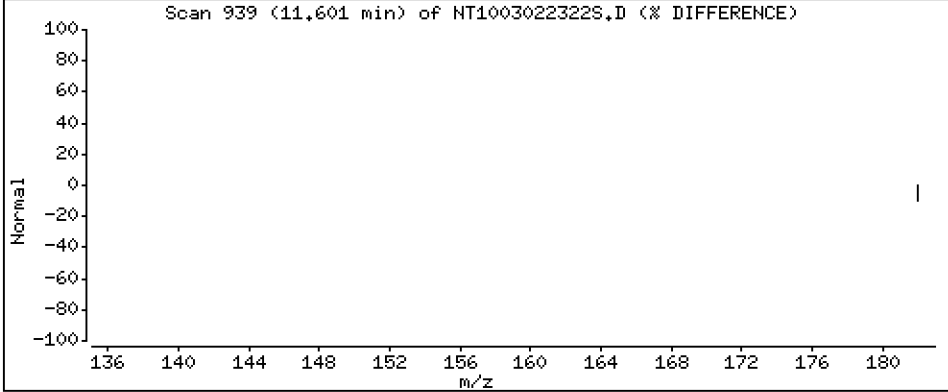
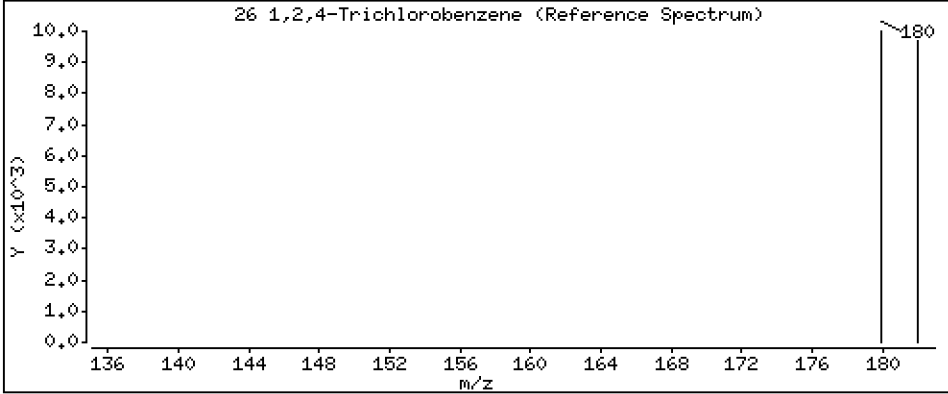
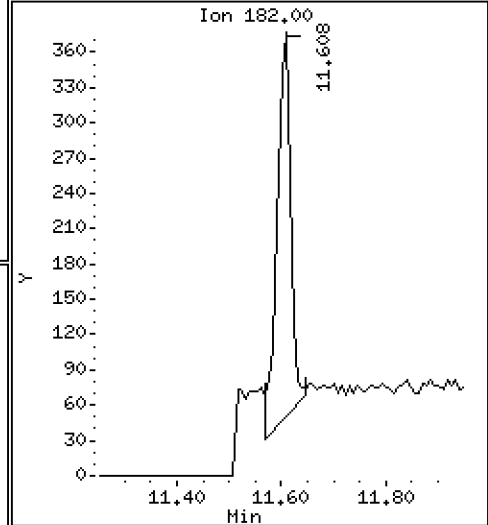
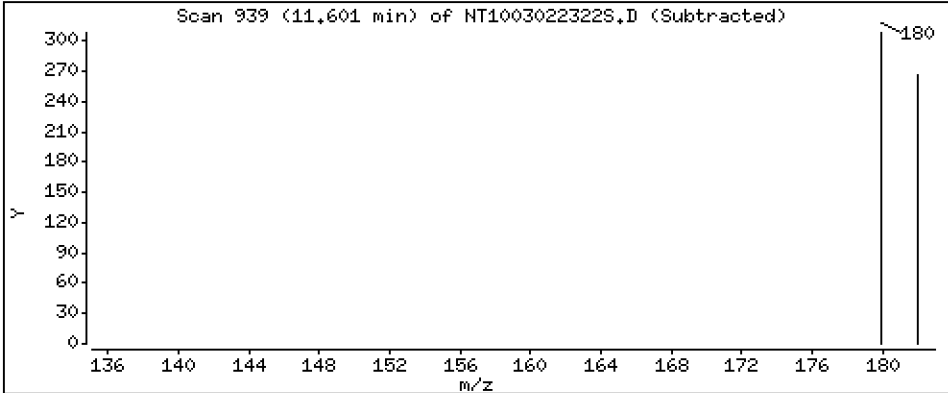
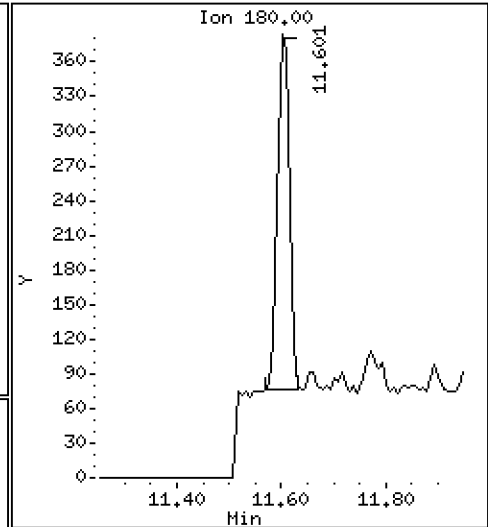
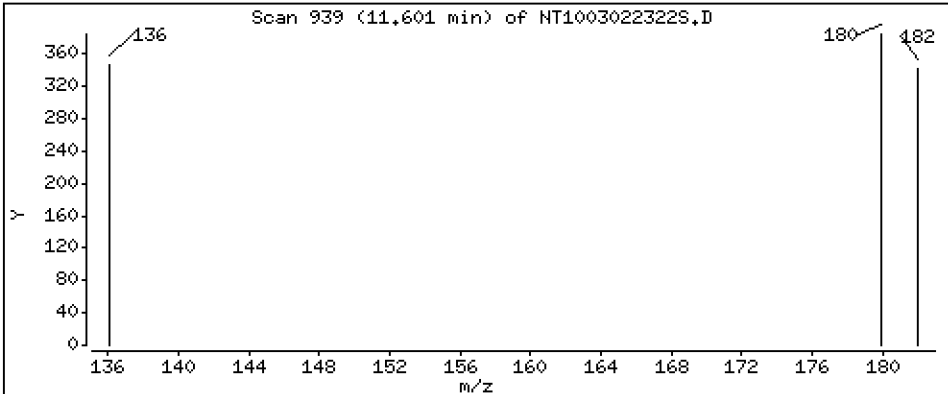
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.003218 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

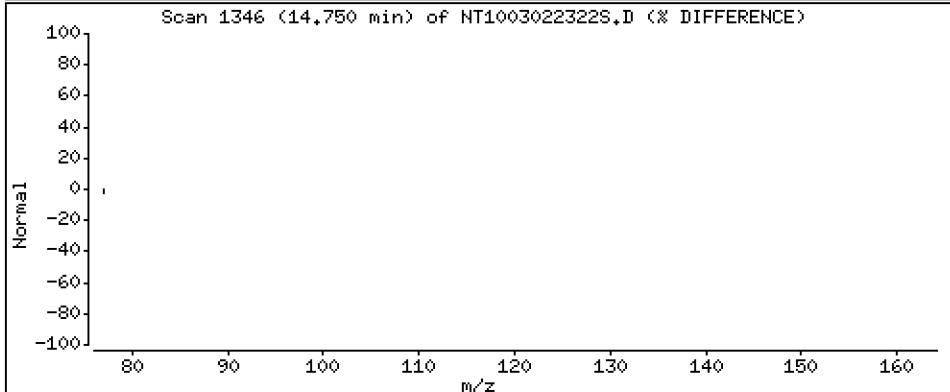
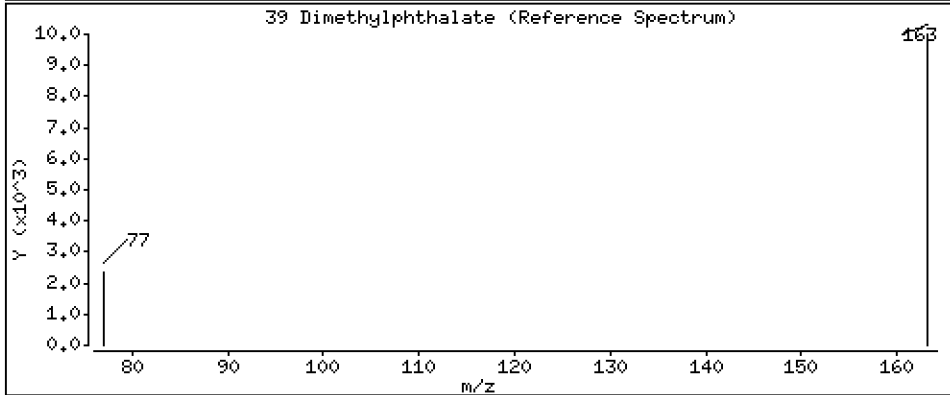
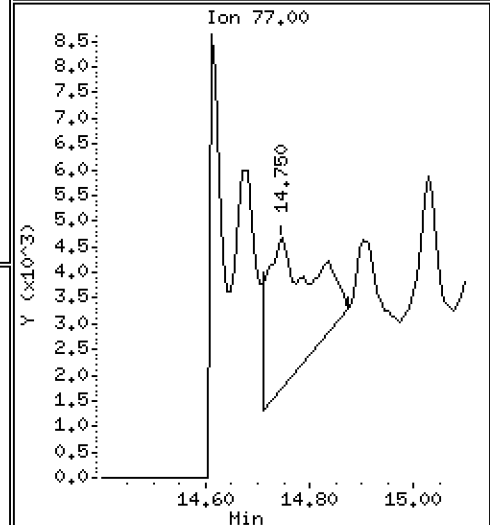
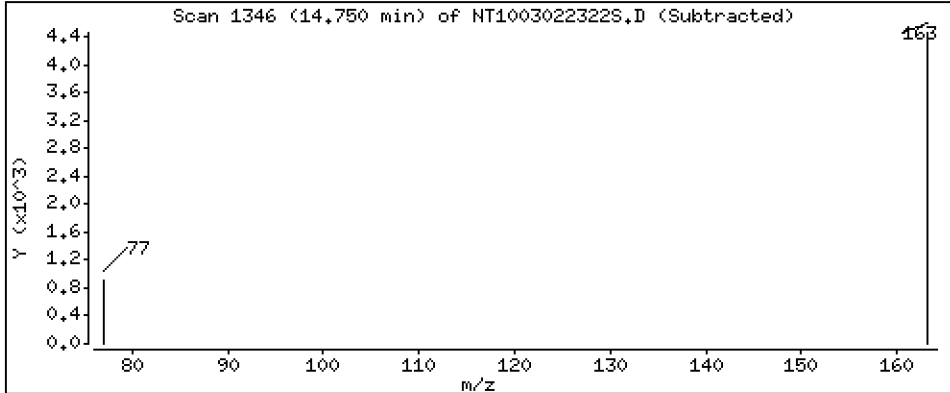
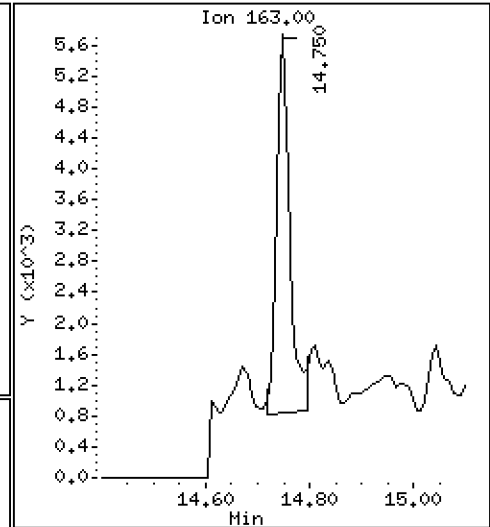
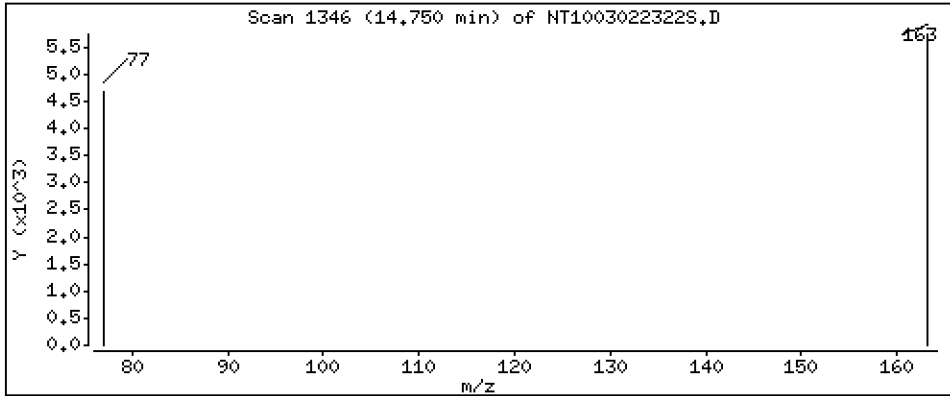
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.02628 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

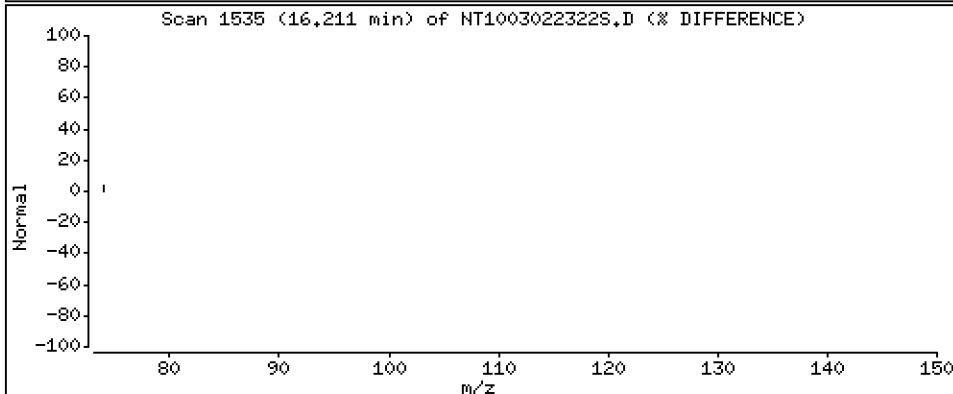
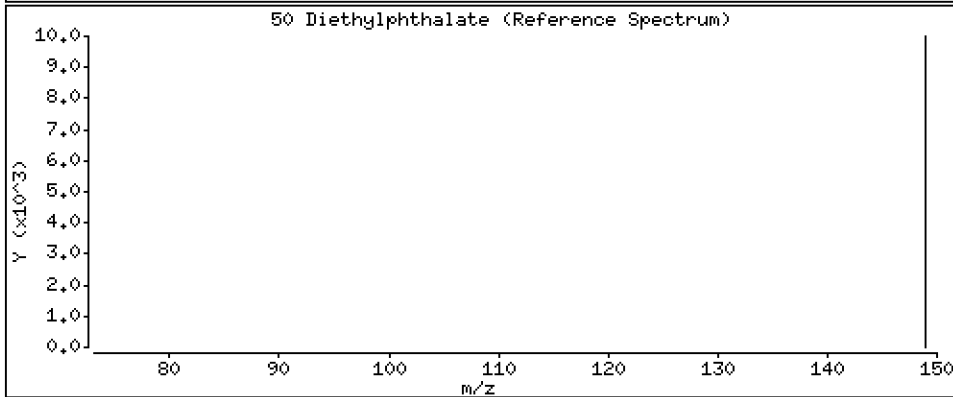
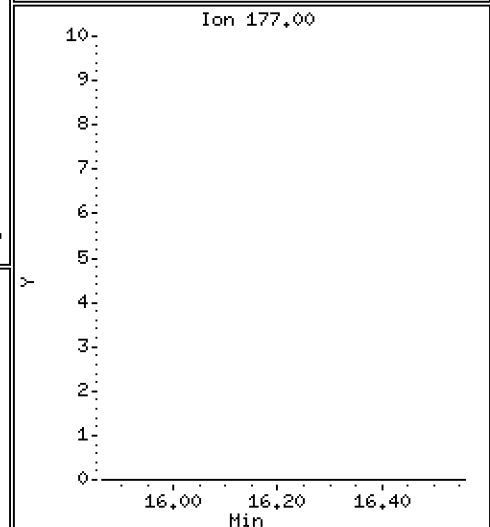
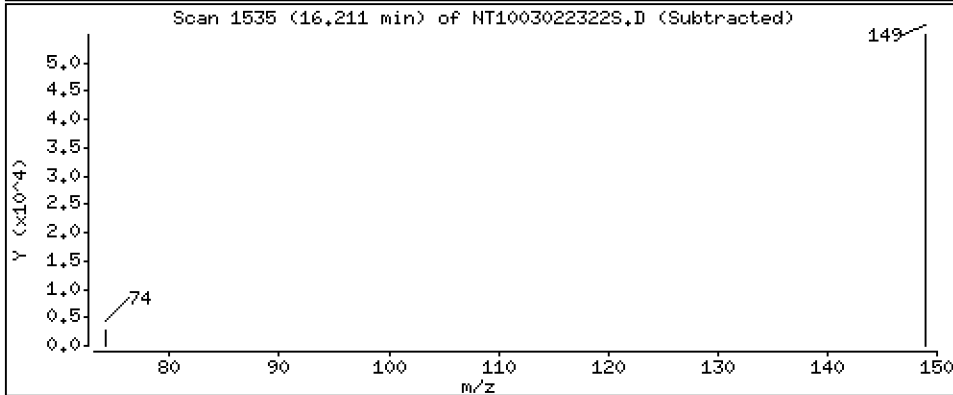
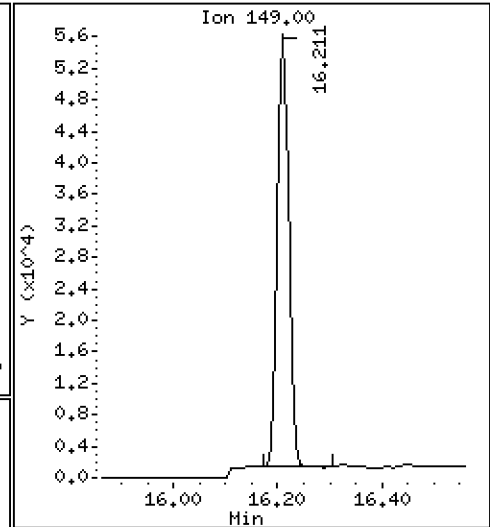
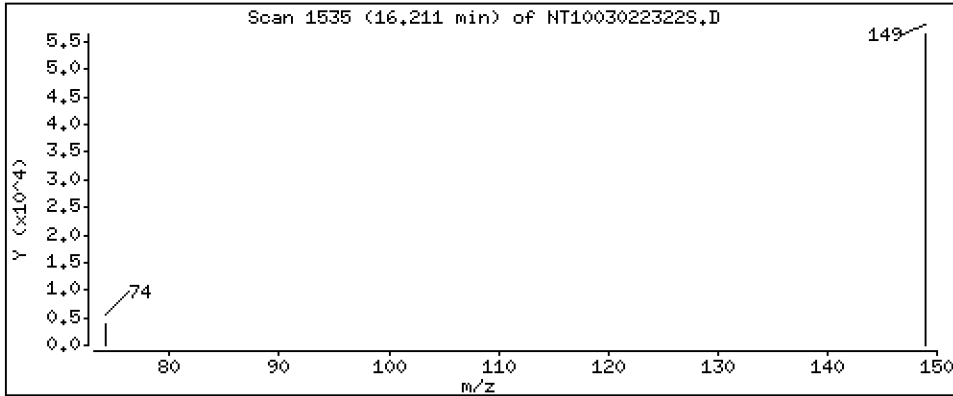
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2655 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

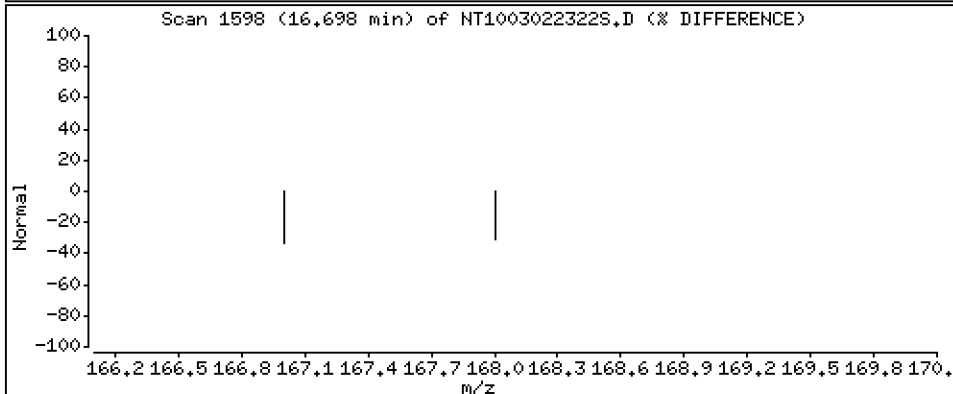
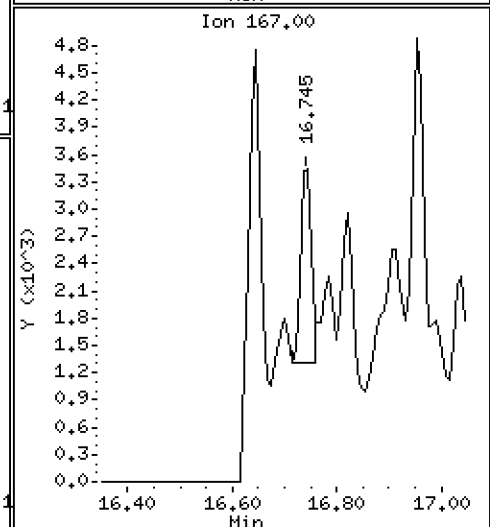
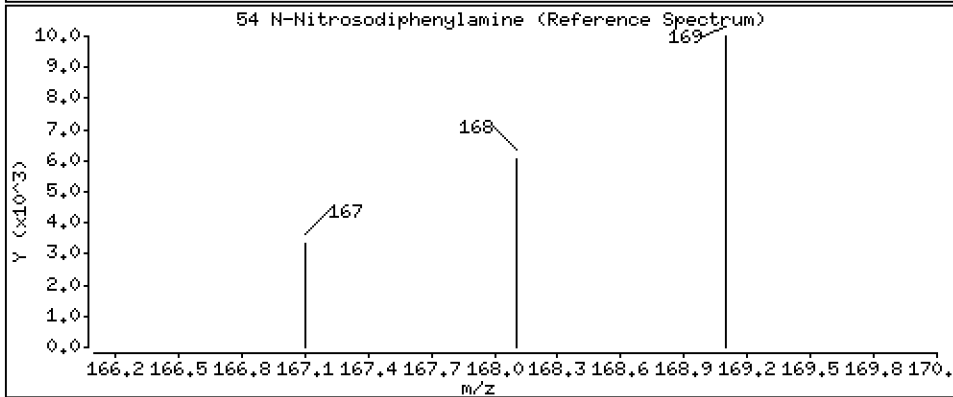
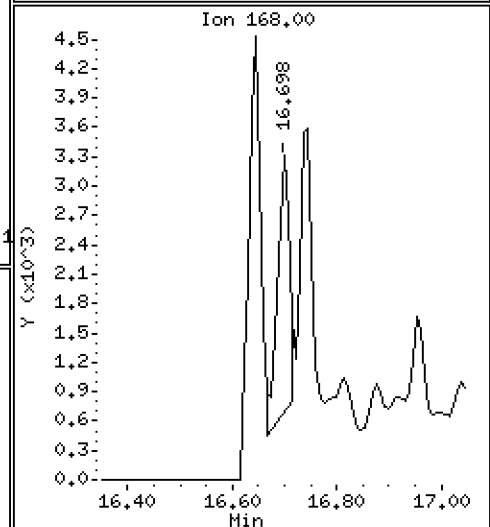
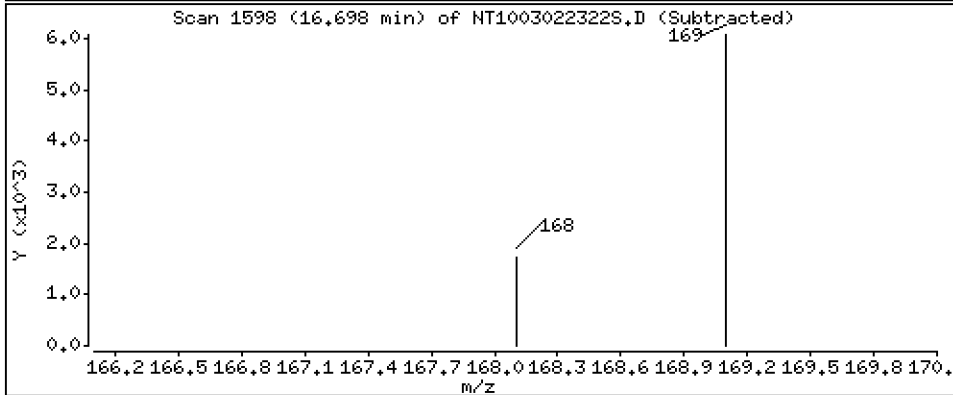
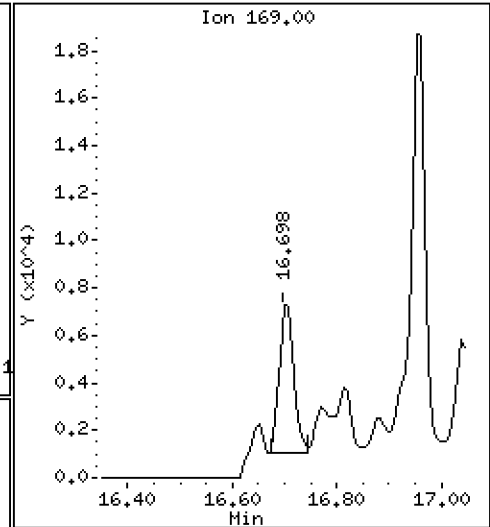
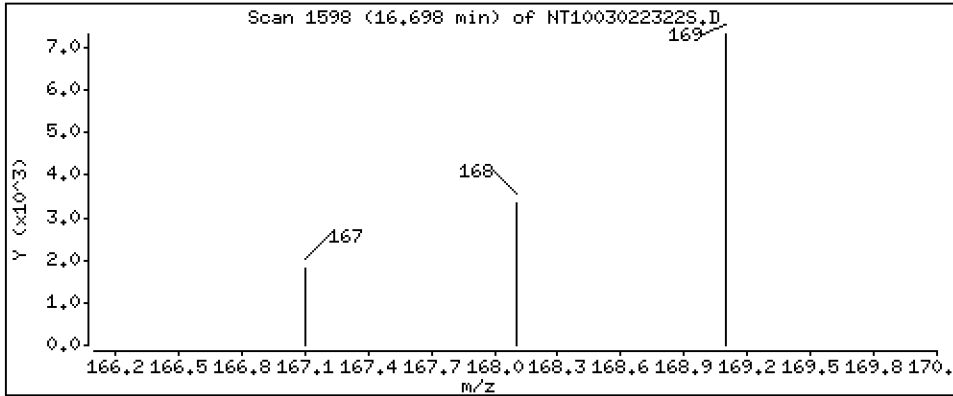
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.03858 ug/L





Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

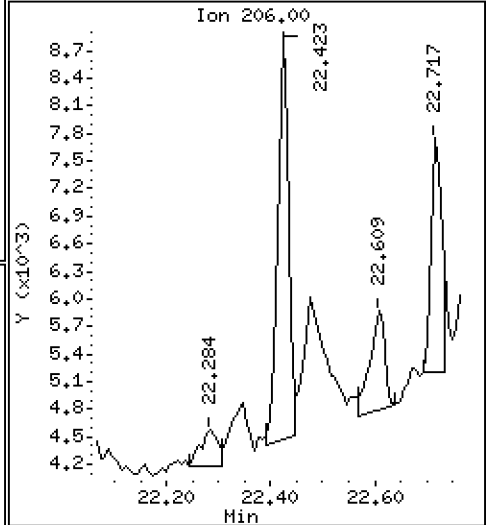
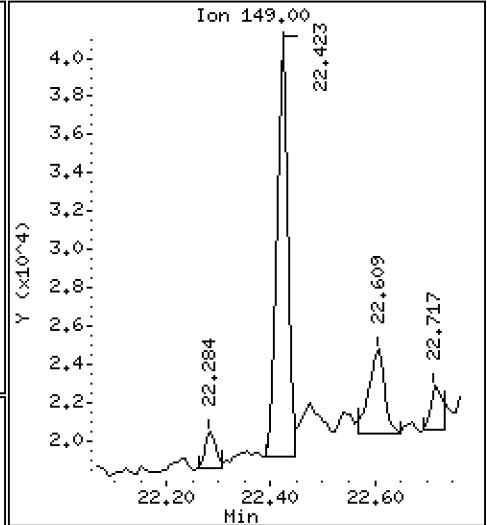
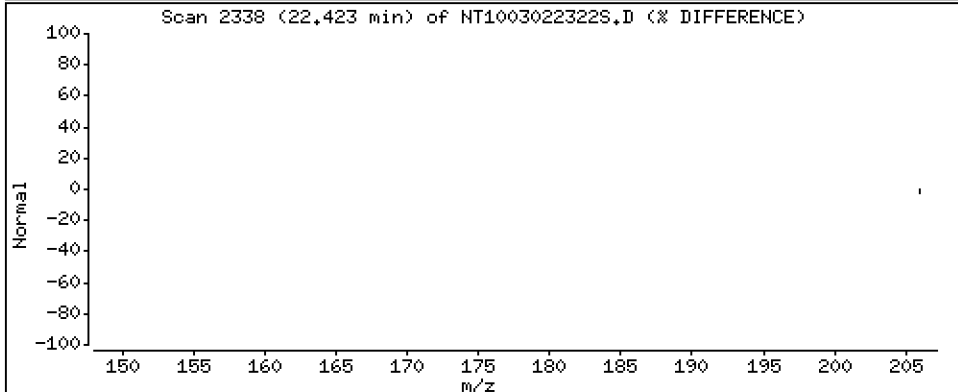
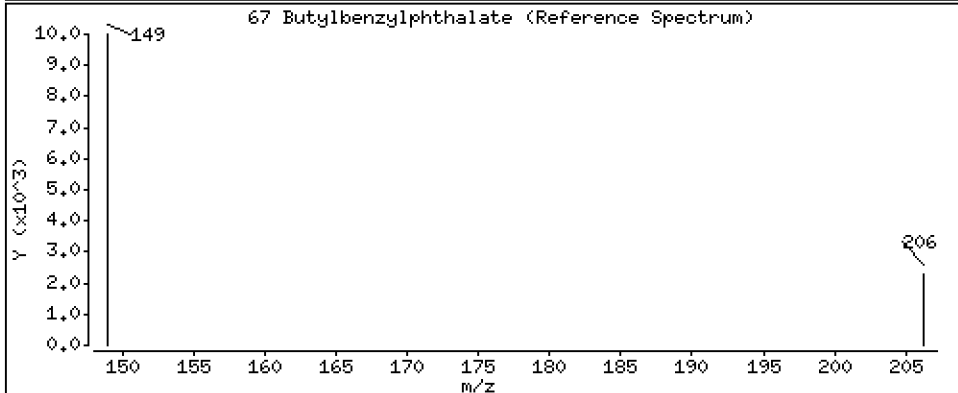
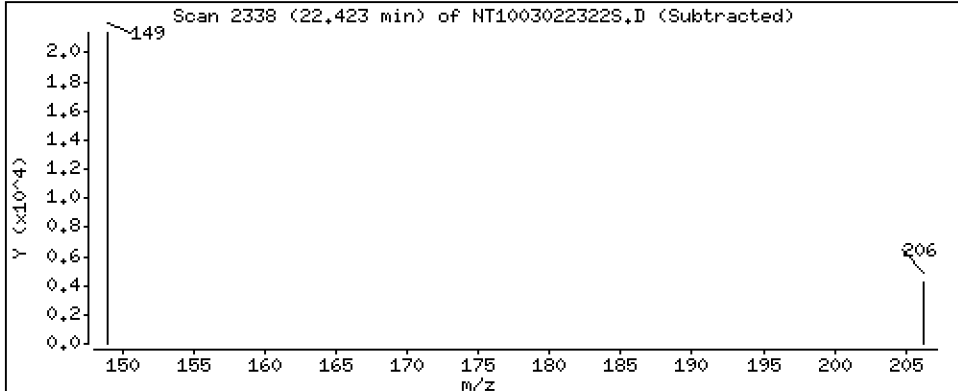
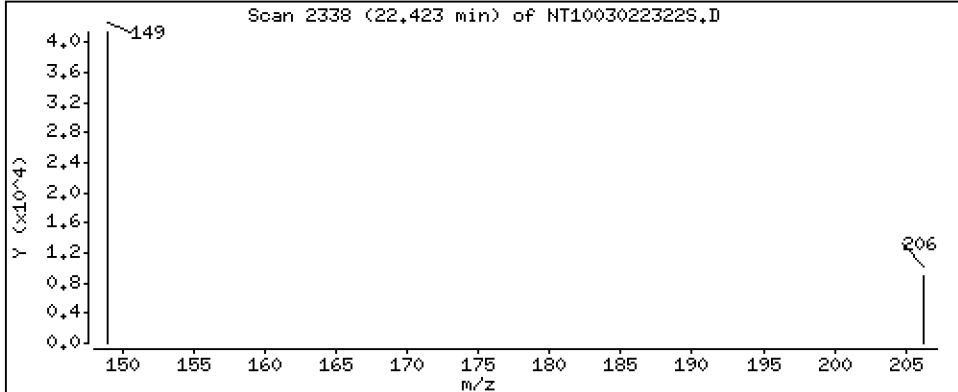
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.08030 ug/L



Date : 03-MAR-2023 03:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-07

Volume Injected (uL): 1.0

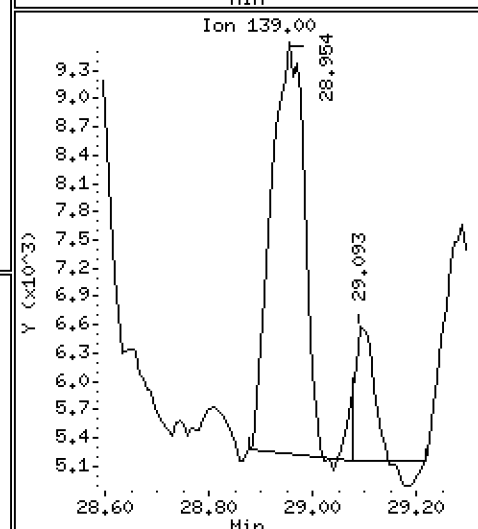
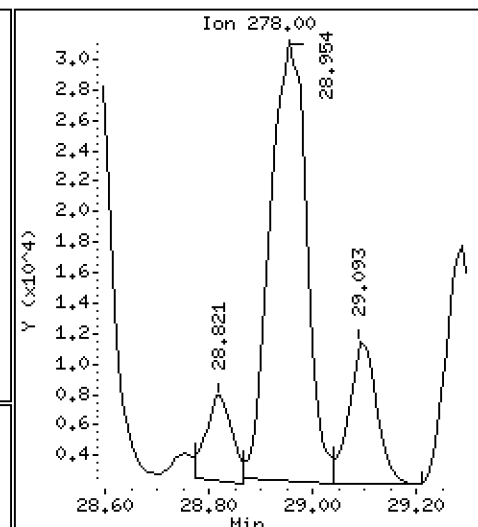
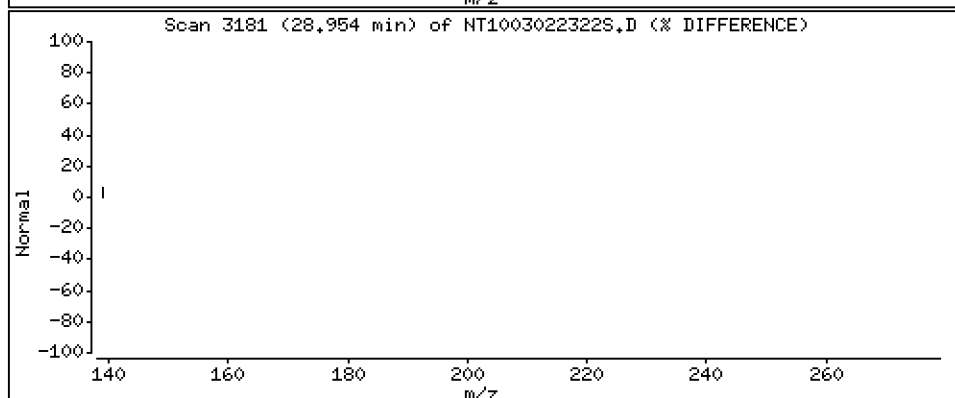
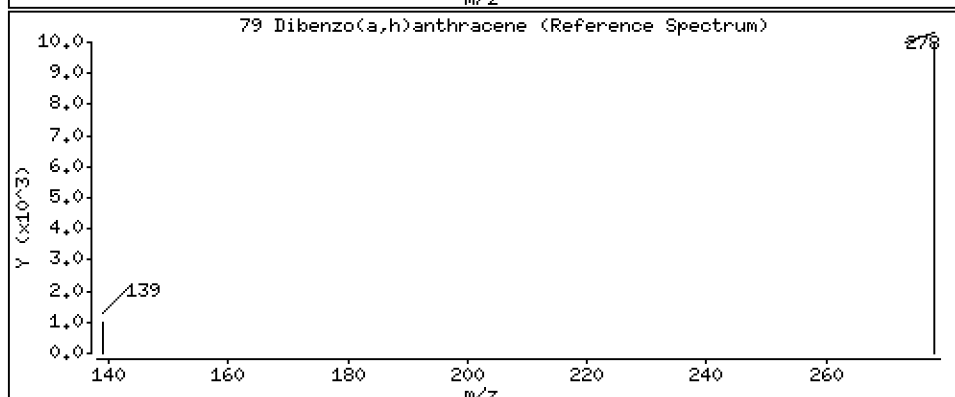
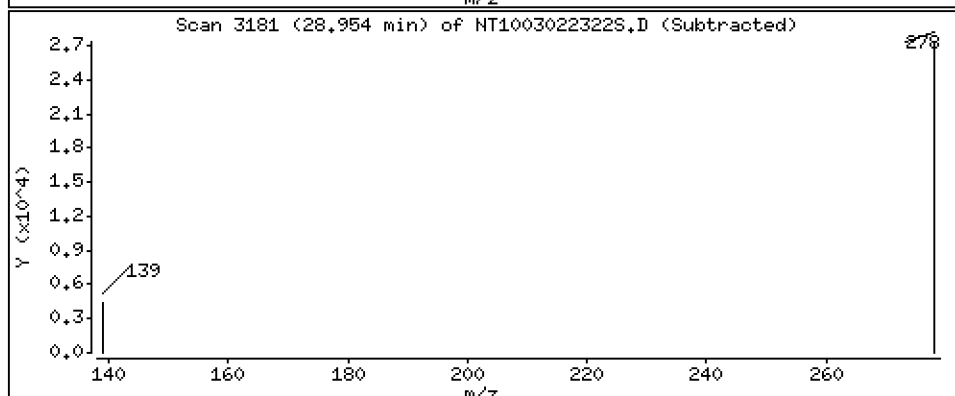
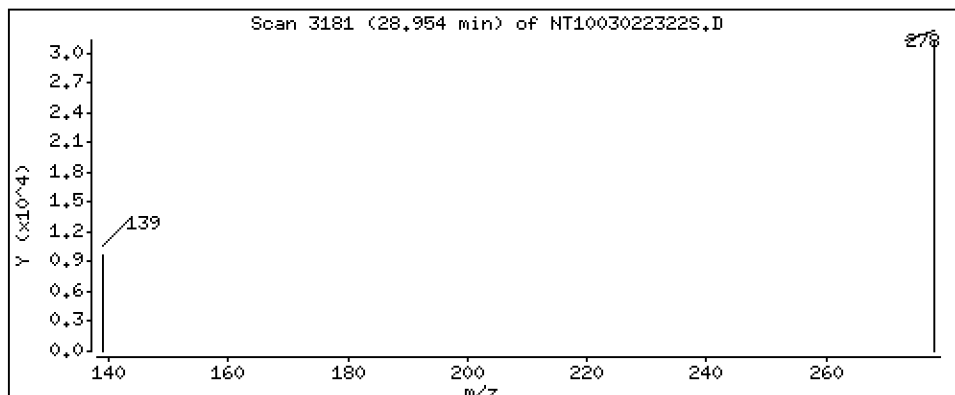
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.2446 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022322S.D  
 Lab Smp Id: 23A0206-07  
 Inj Date : 03-MAR-2023 03:41 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-07  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 18  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902	(0.747)	1077494	6.80243	6.802 (R)
3 Phenol	94		8.533	8.525	(0.922)	677990	2.85997	2.860
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	554821	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	79		9.485	9.477	(1.025)	27265	0.21003	0.2100
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.671	9.663	(1.045)	3121	0.02222	0.02222 (M)
15 4-Methylphenol	108		9.958	9.950	(1.076)	15492	0.10597	0.1060
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006	(0.938)	4963	0.02895	0.02895
24 Benzoic acid	105		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	468	0.00322	0.003218
* 27 Naphthalene-d8	136		11.731	11.723	(1.000)	2020427	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749	(0.963)	8291	0.02628	0.02628 (M)
* 42 Acenaphthene-d10	162		15.322	15.321	(1.000)	993652	4.00000	
50 Diethylphthalate	149		16.211	16.210	(1.058)	78998	0.26551	0.2655
54 N-Nitrosodiphenylamine	169		16.698	16.698	(0.907)	12058	0.03858	0.03858 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	1931236	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	1002385	5.45241	5.452 (R)
67 Butylbenzylphthalate	149	22.422	22.414	(0.957)	30819	0.08030	0.08030
* 69 Chrysene-d12	240	23.437	23.429	(1.000)	2273401	4.00000	
* 77 Perylene-d12	264	26.139	26.123	(1.000)	2500835	4.00000	
79 Dibenzo(a,h)anthracene	278	28.953	28.945	(1.108)	142150	0.24464	0.2446
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022322S.D  
 Lab Smp Id: 23A0206-07  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	554821	-14.96
27 Naphthalene-d8	2339966	1169983	4679932	2020427	-13.66
42 Acenaphthene-d10	1186988	593494	2373976	993652	-16.29
59 Phenanthrene-d10	2193485	1096743	4386970	1931236	-11.96
69 Chrysene-d12	2444828	1222414	4889656	2273401	-7.01
77 Perylene-d12	2842248	1421124	5684496	2500835	-12.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022322S.D

Lab ID: 23A0206-07

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 03:41

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

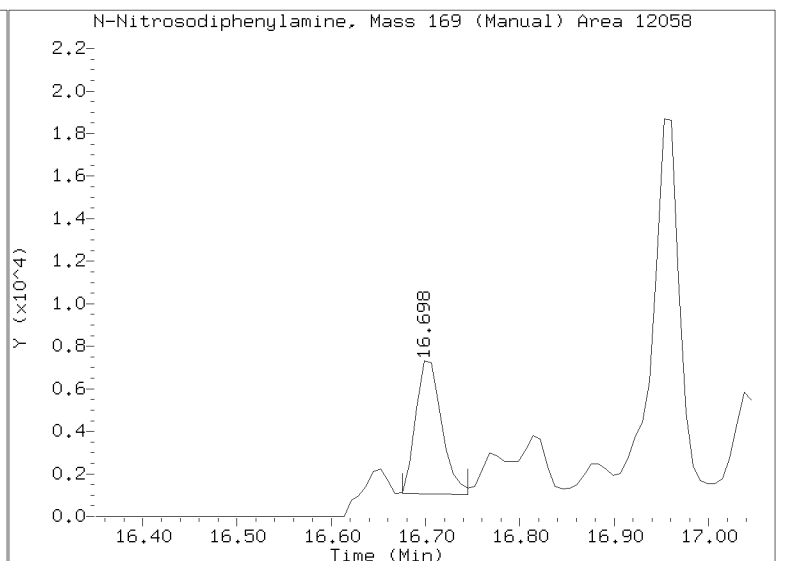
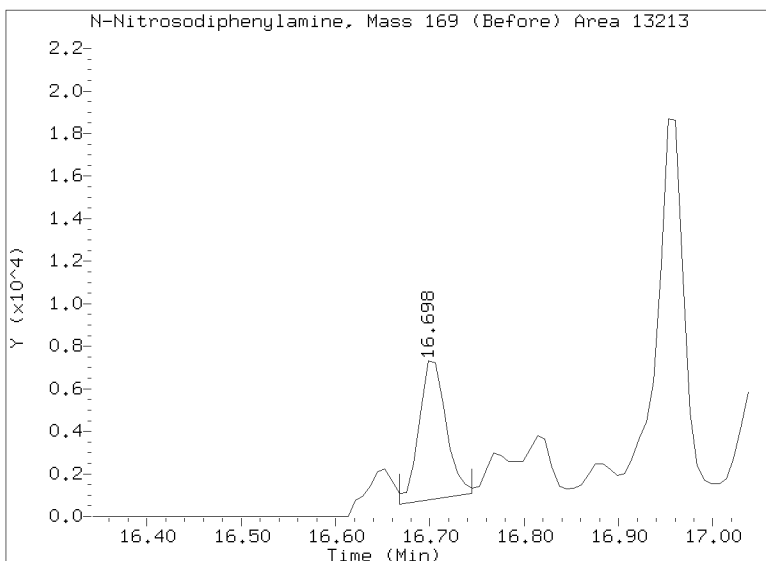
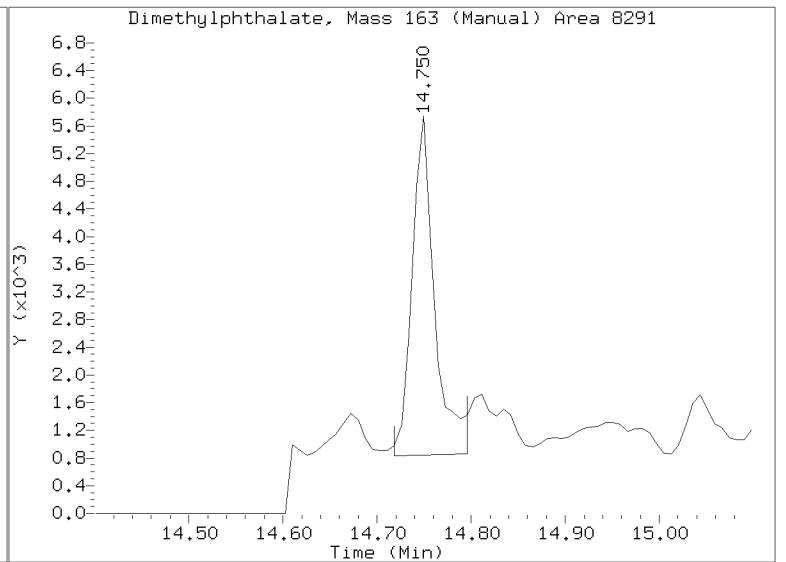
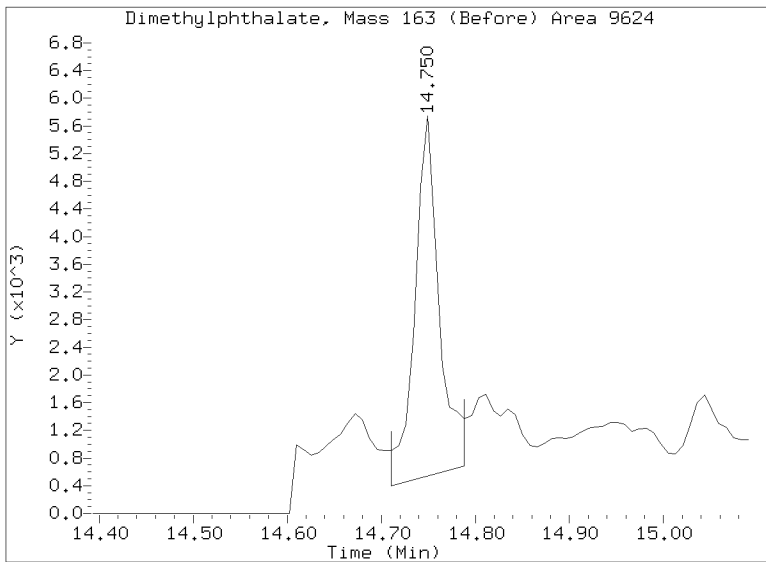
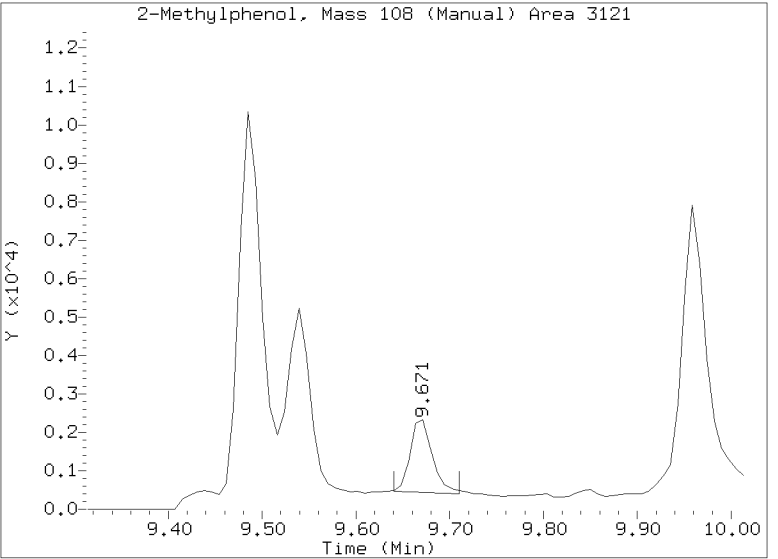
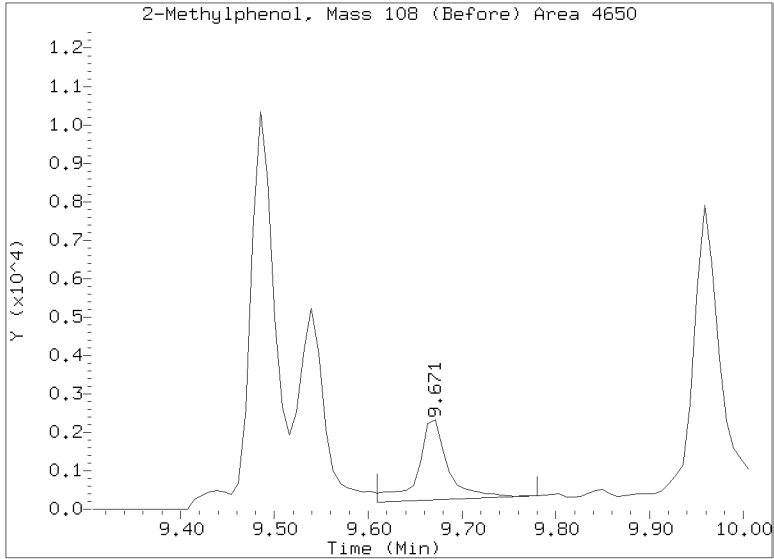
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022322S.D  
Injection Date: 03-MAR-2023 03:41  
Lab ID:23A0206-07 Client ID:  
Report Date: 03/11/2023 06:37





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-08 B

SDG: 23A0206

Sampled: 01/11/23 10:40

Prepared: 01/27/23 14:44

File ID: NT1003022323S.D

% Solids: 51.97

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:19

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 19.31 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	38.0		2.5	19.9
65-85-0	Benzoic acid	1	49.0	J	13.4	99.6
105-67-9	2,4-Dimethylphenol	1	2.7	J	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.9	U	2.1	19.9

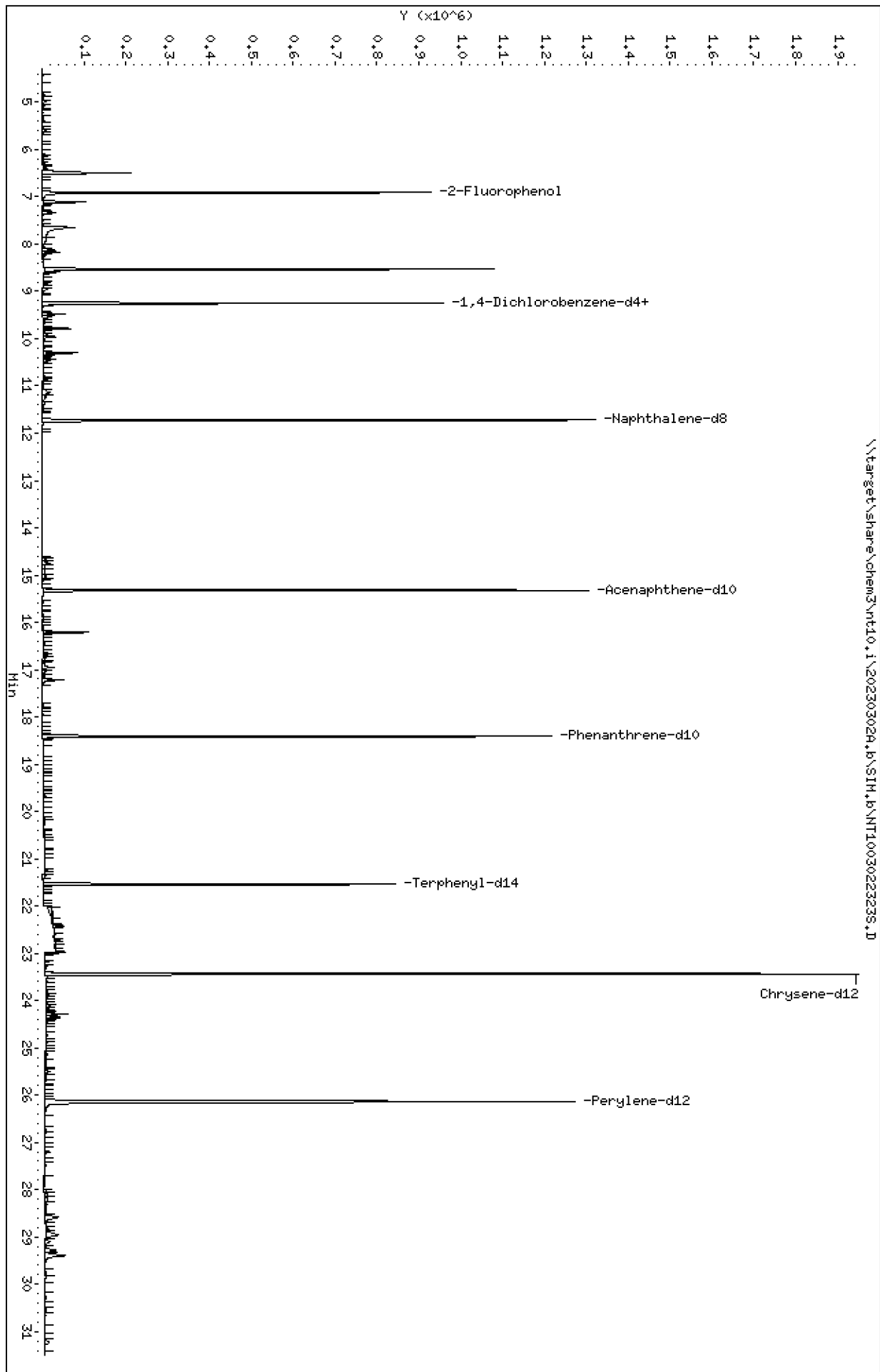
SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.35	653	87.4	27 - 120	
p-Terphenyl-d14	498.24	535	107	37 - 120	



Data File: \\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223238.D  
Date: 03-MAR-2023 04:19  
Client ID:  
Sample Info: 23A0206-08  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223238.D



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

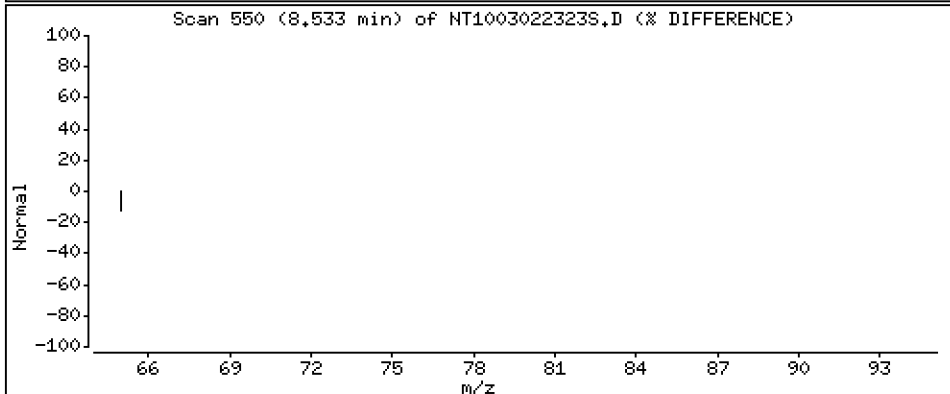
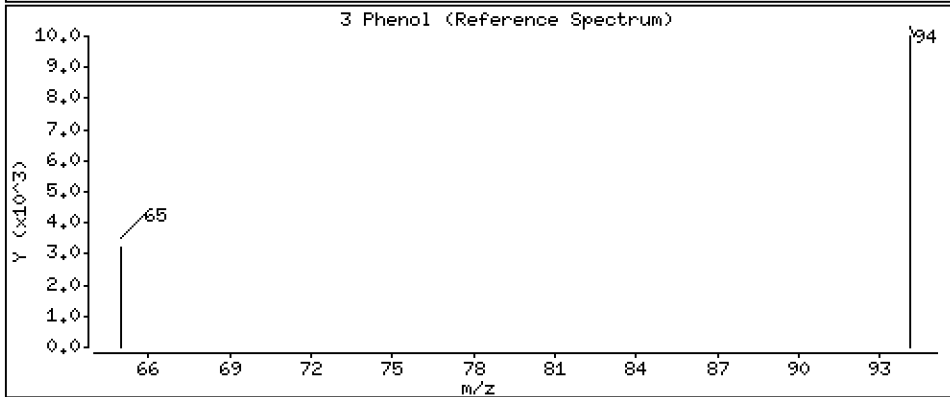
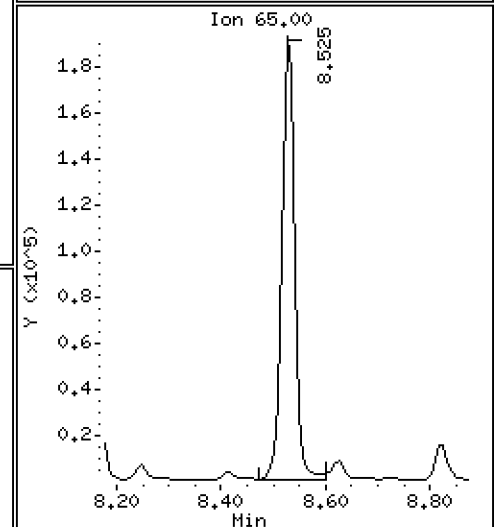
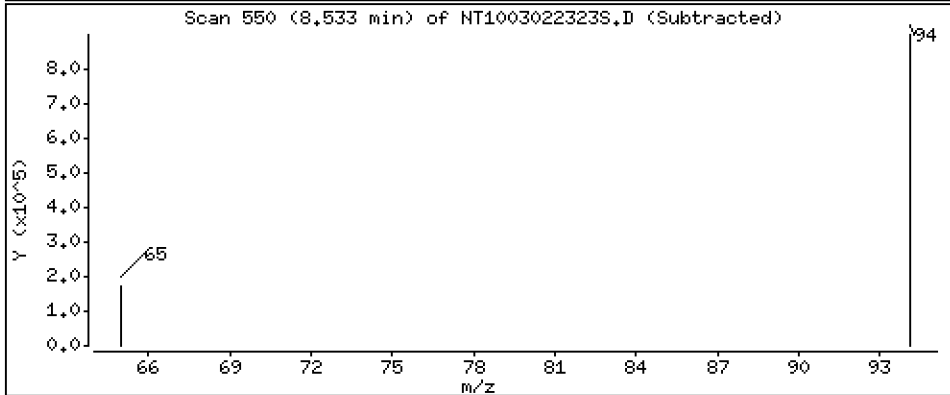
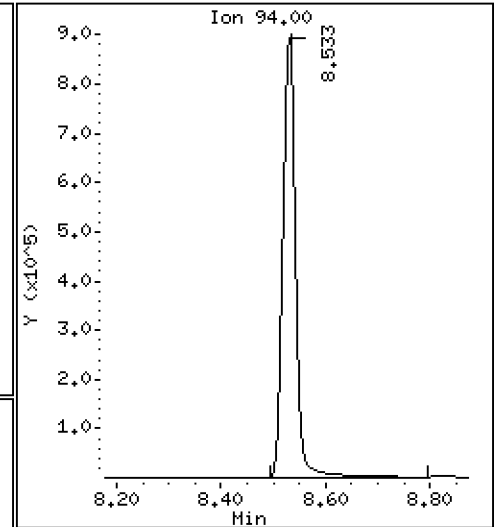
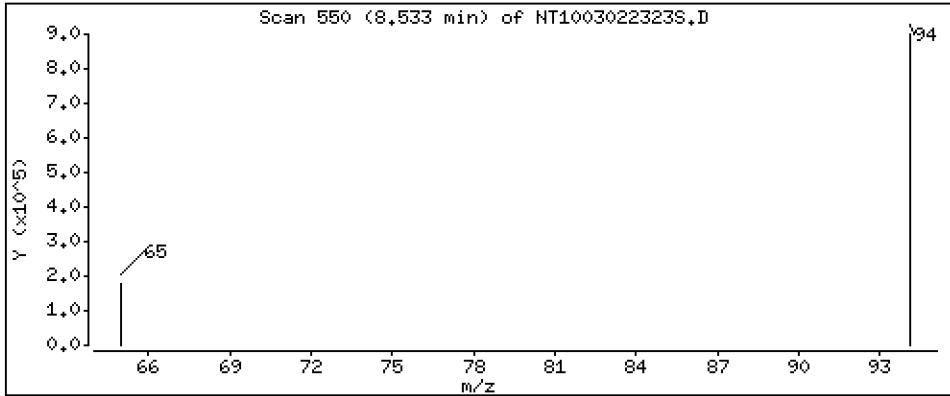
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 5.957 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

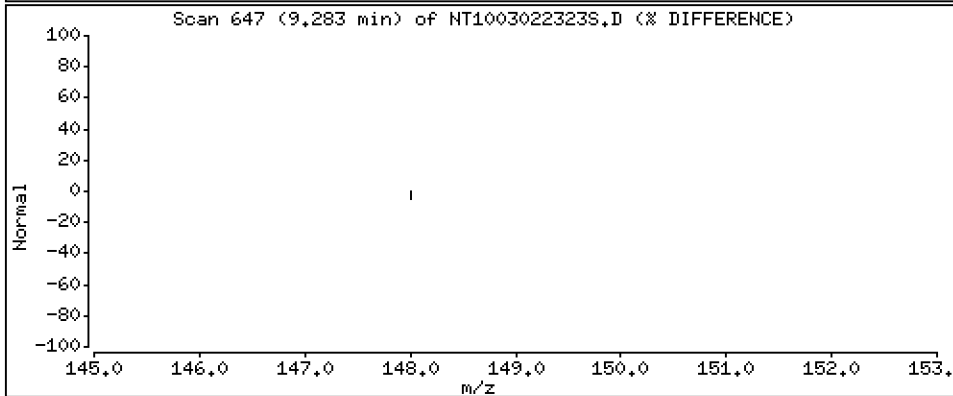
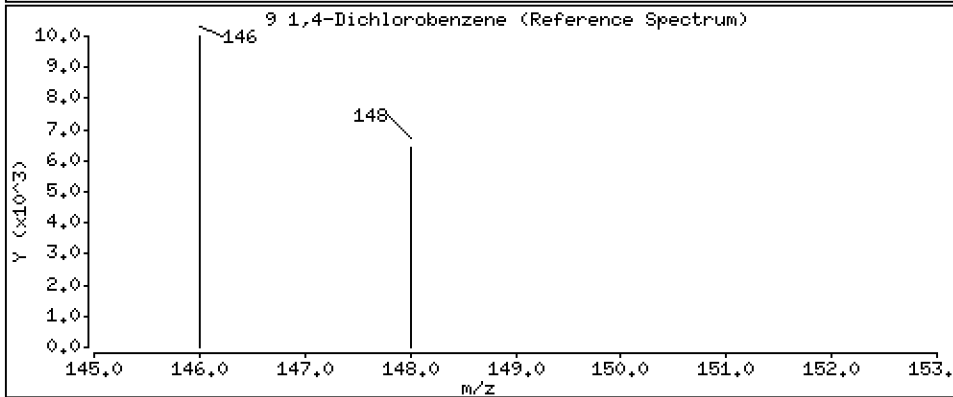
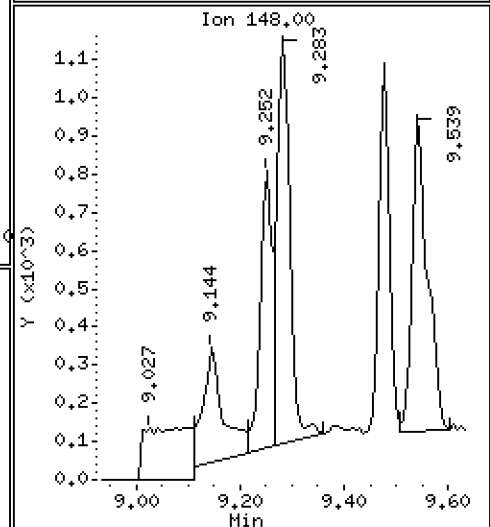
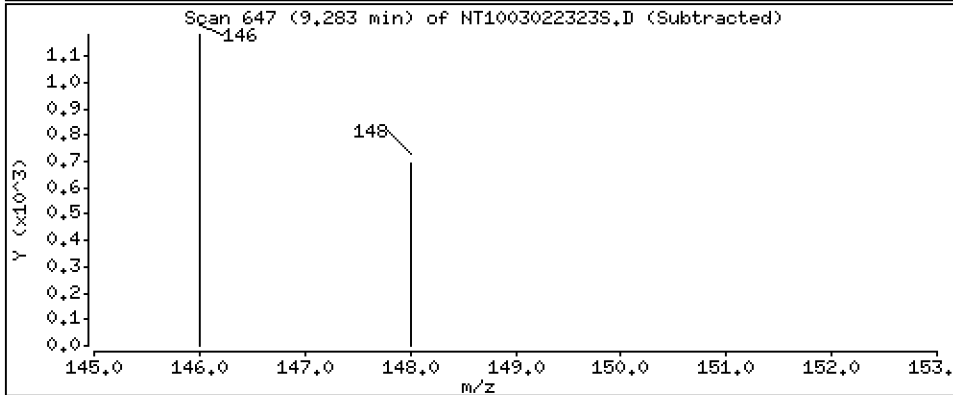
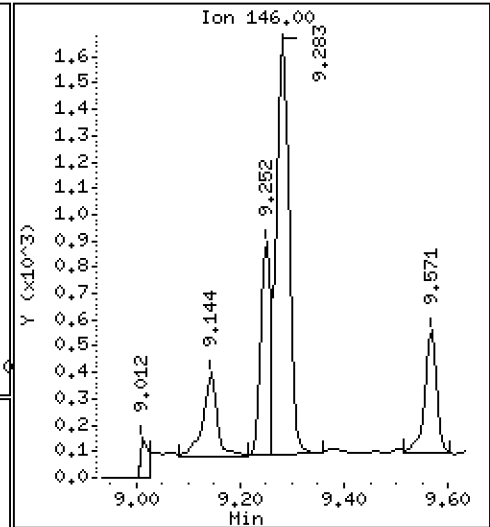
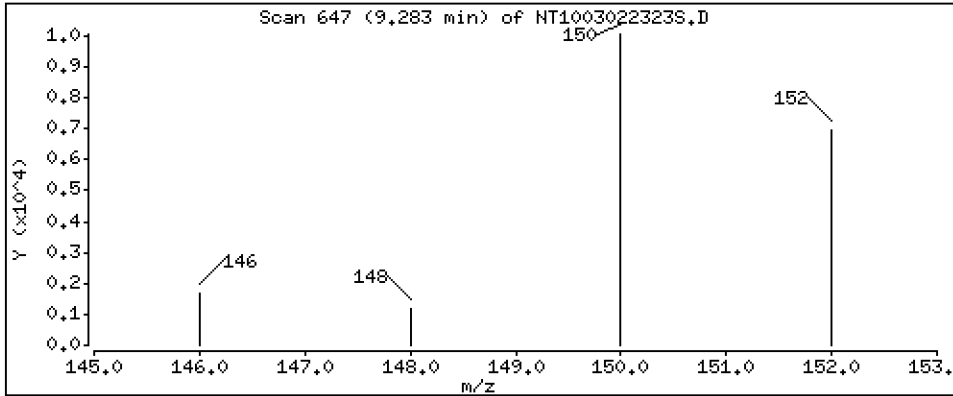
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9,1,4-Dichlorobenzene

Concentration: 0.01340 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

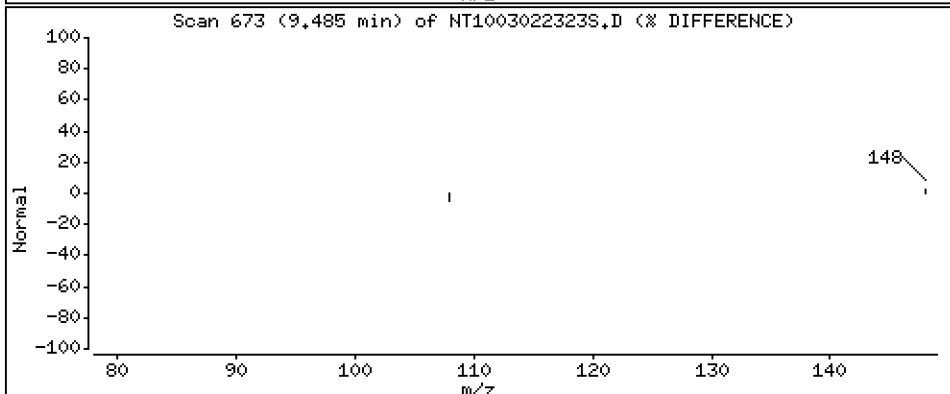
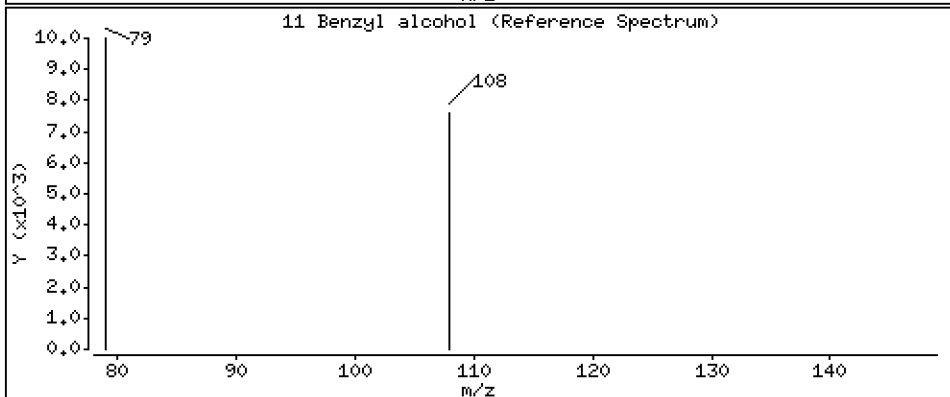
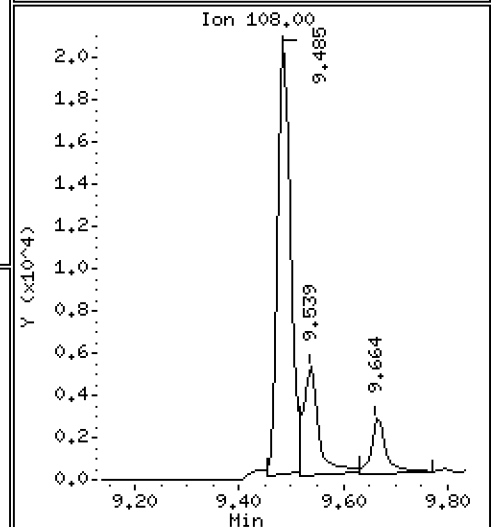
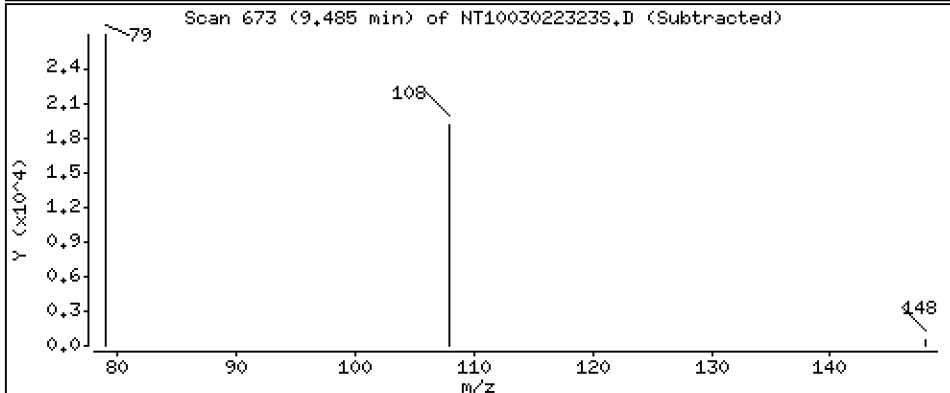
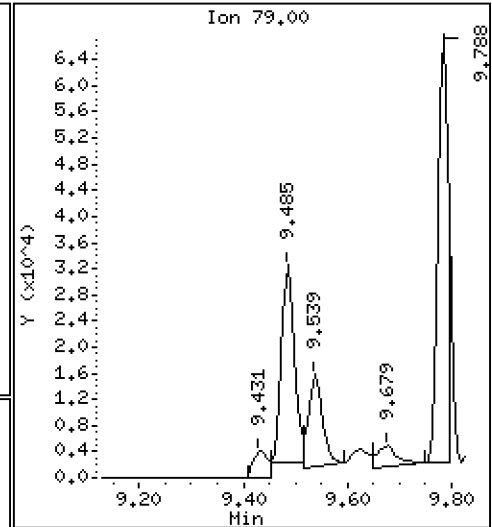
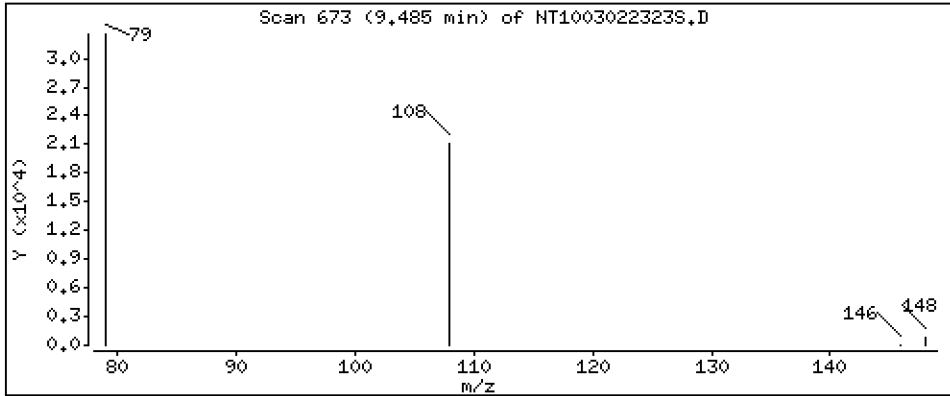
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.3817 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

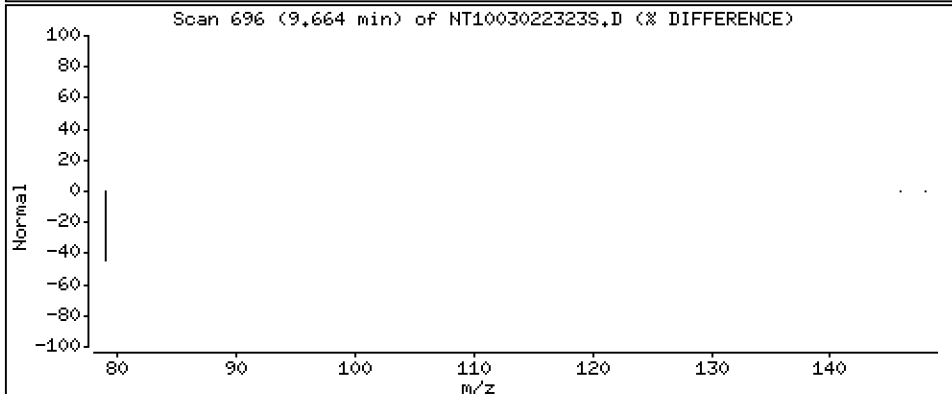
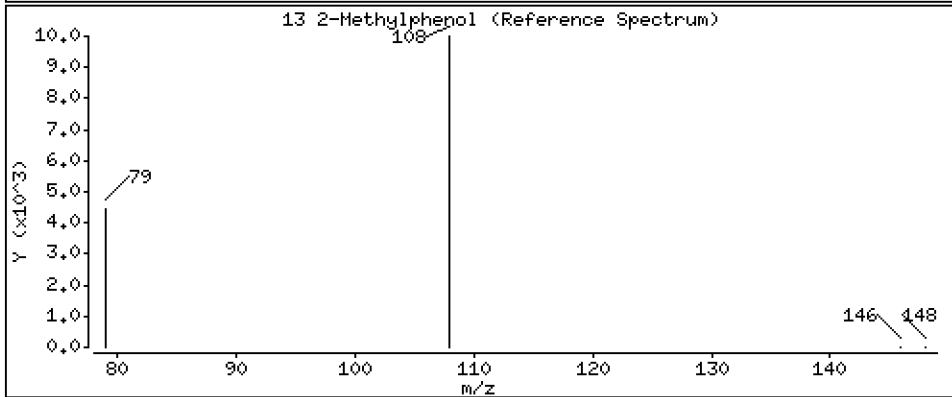
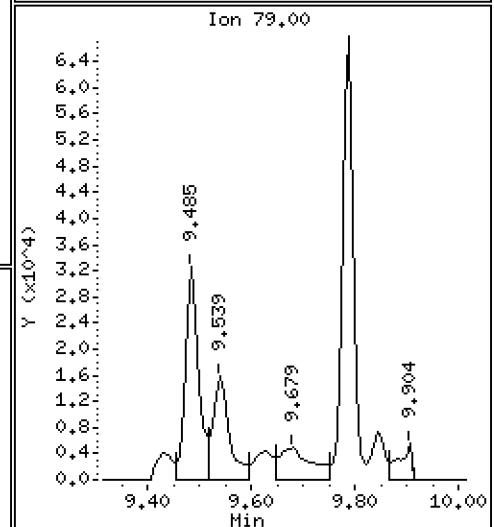
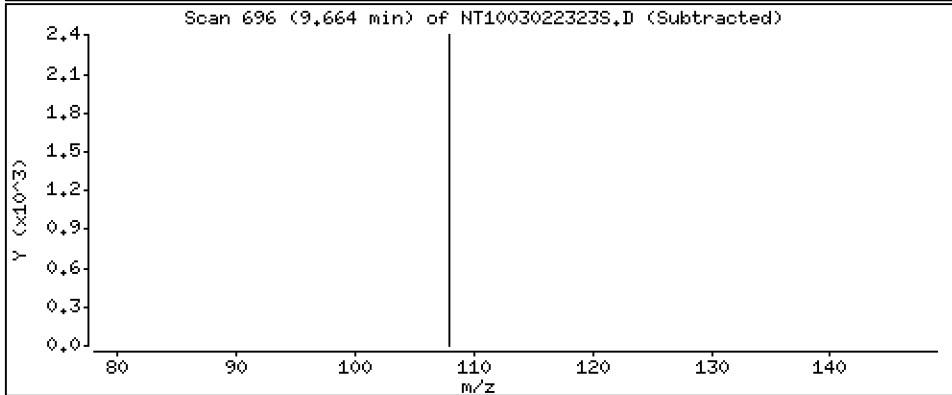
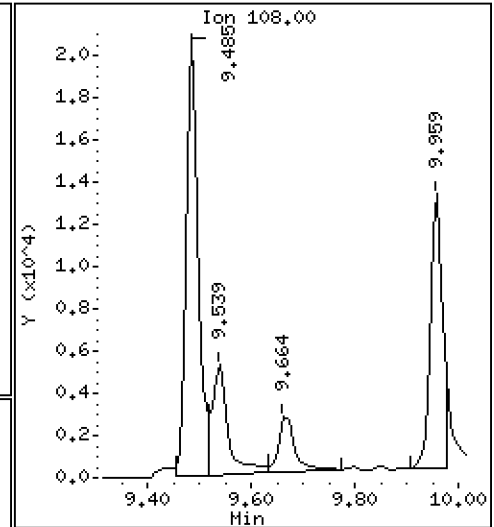
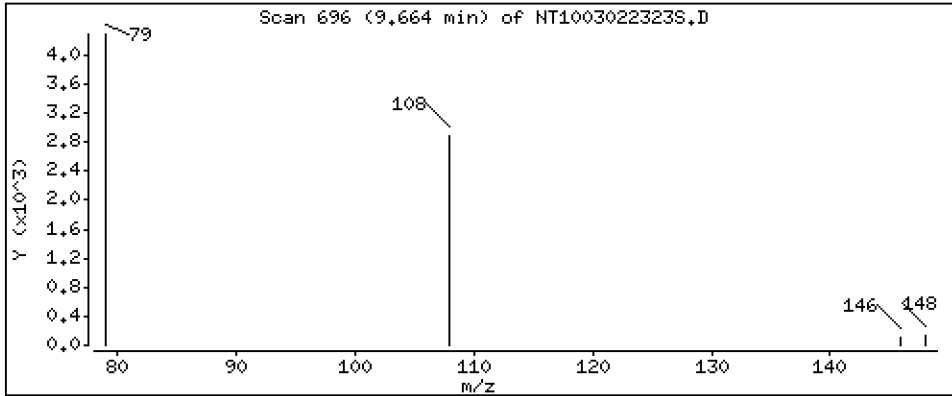
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03911 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

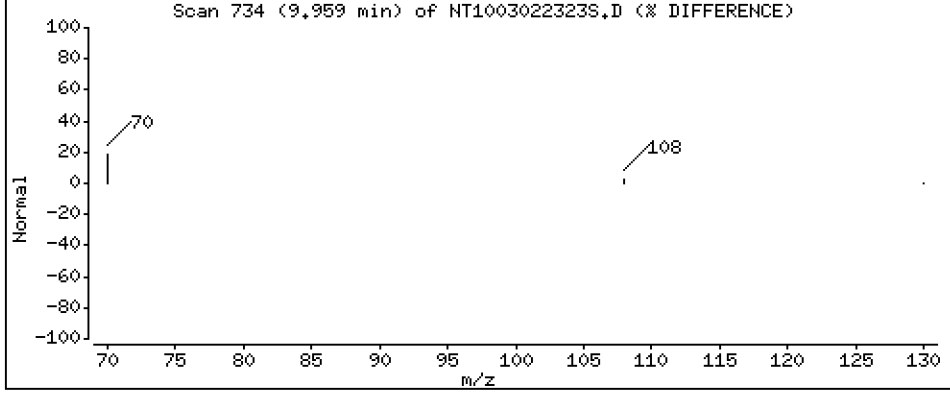
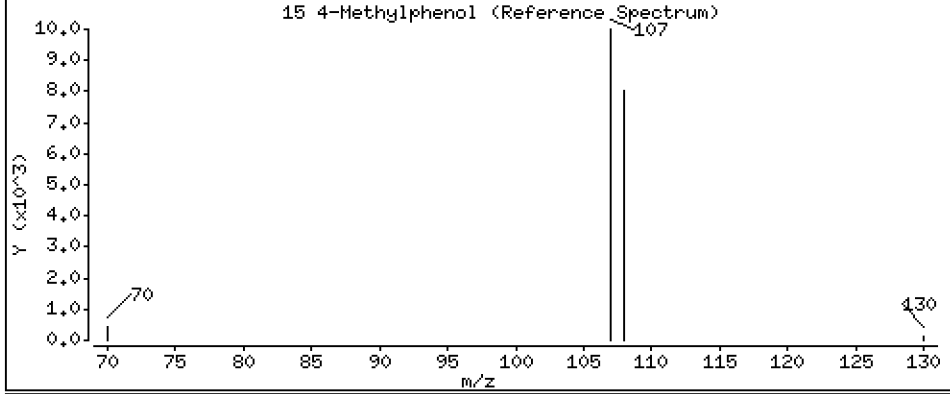
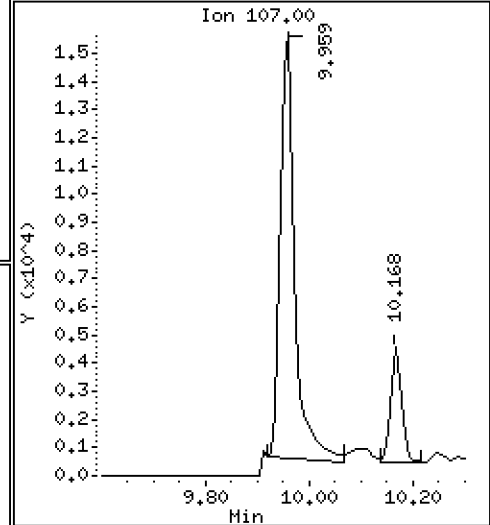
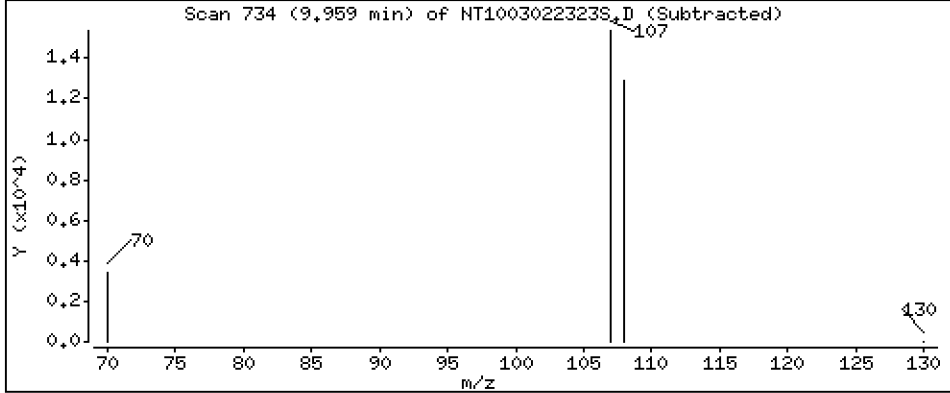
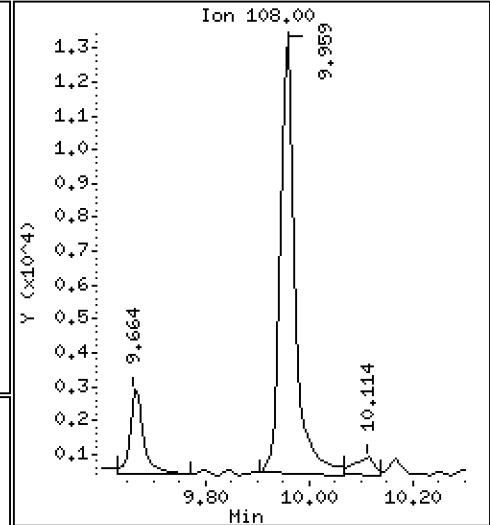
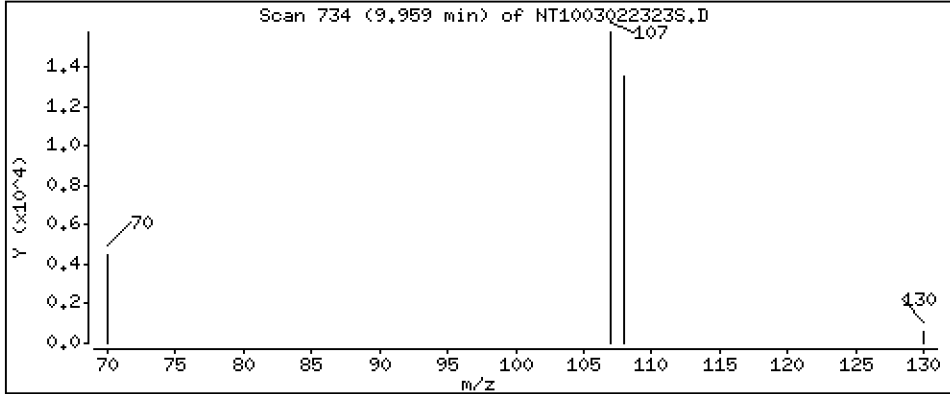
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1697 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

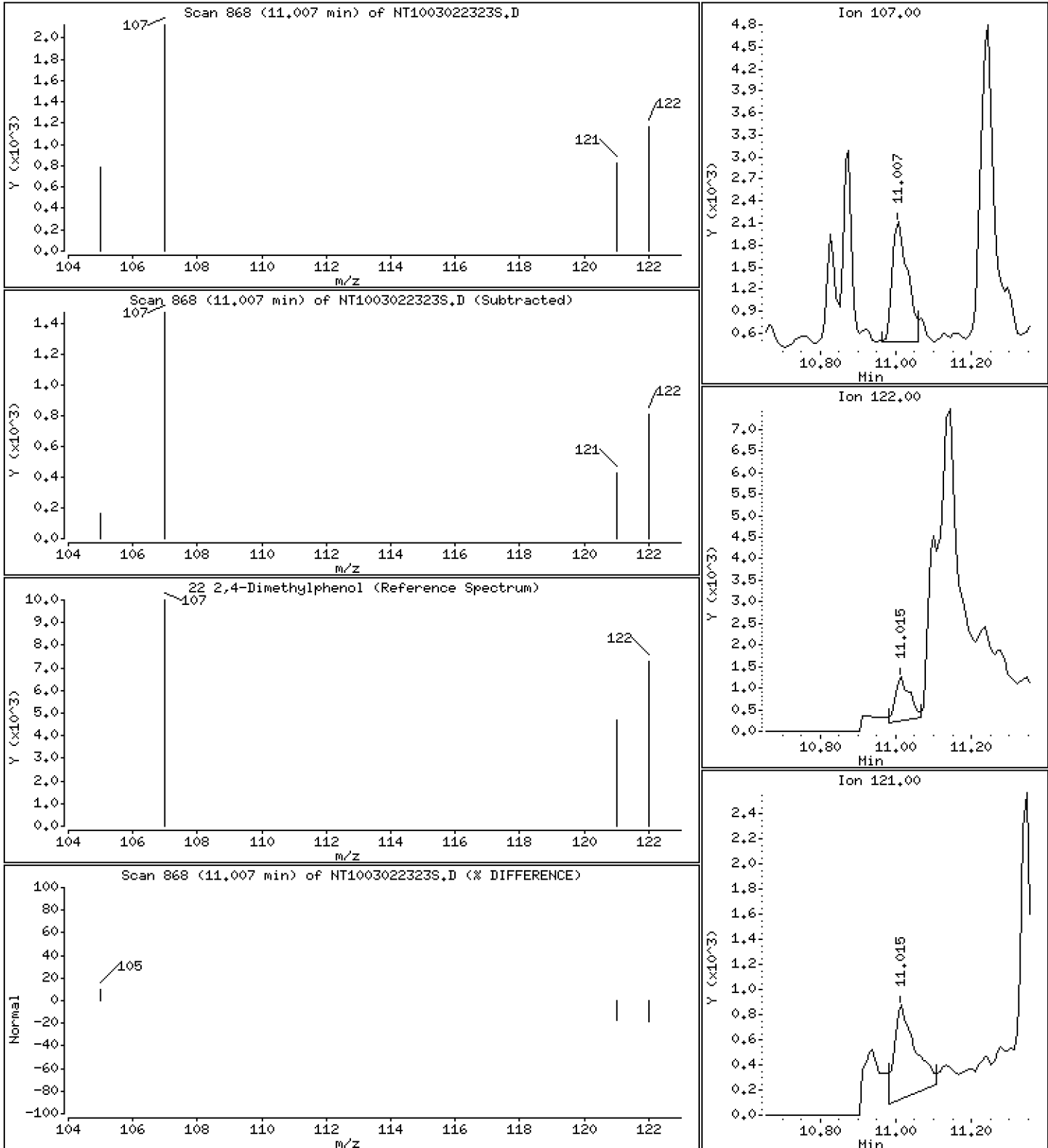
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02727 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

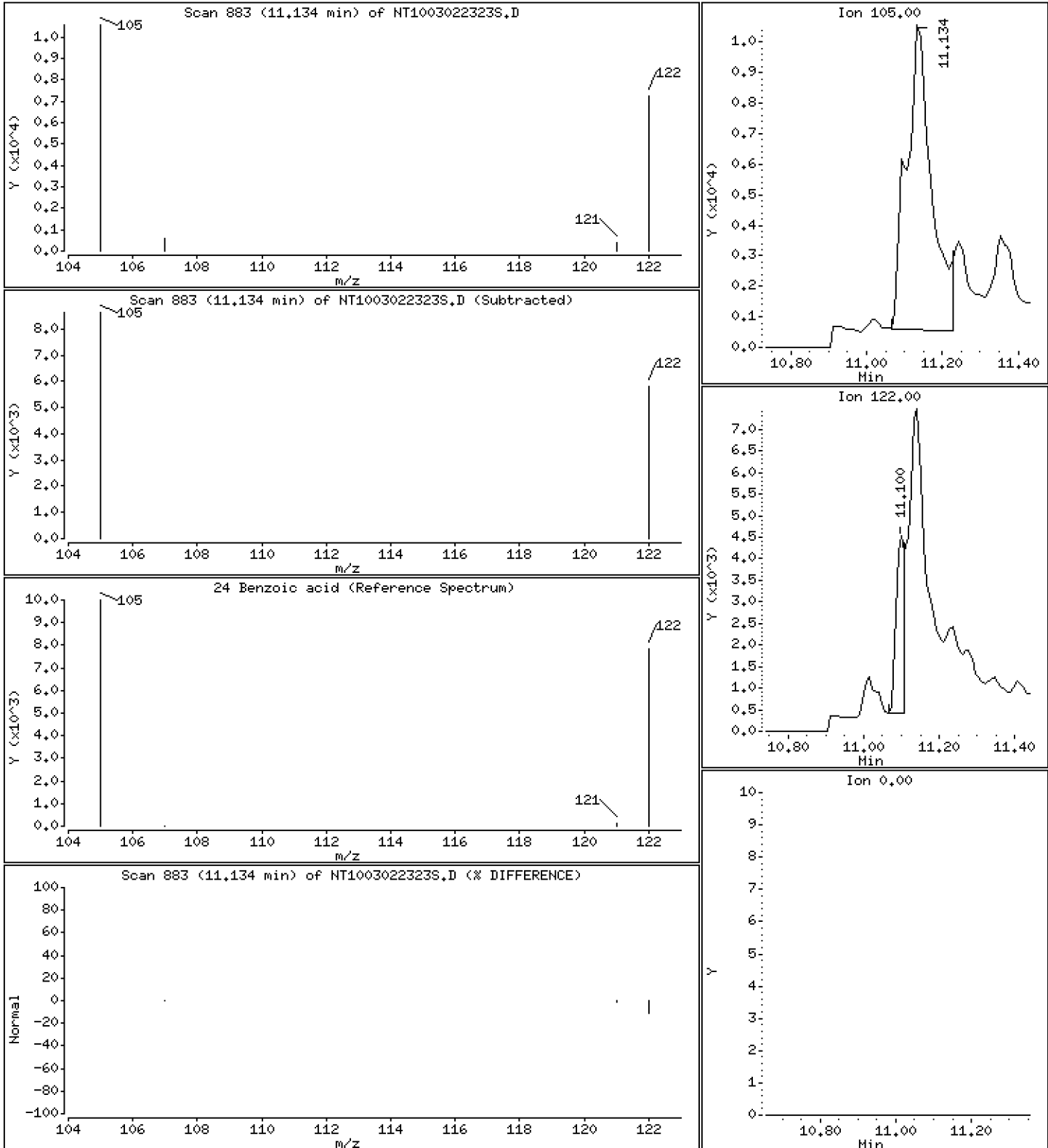
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.4921 ug/L





Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

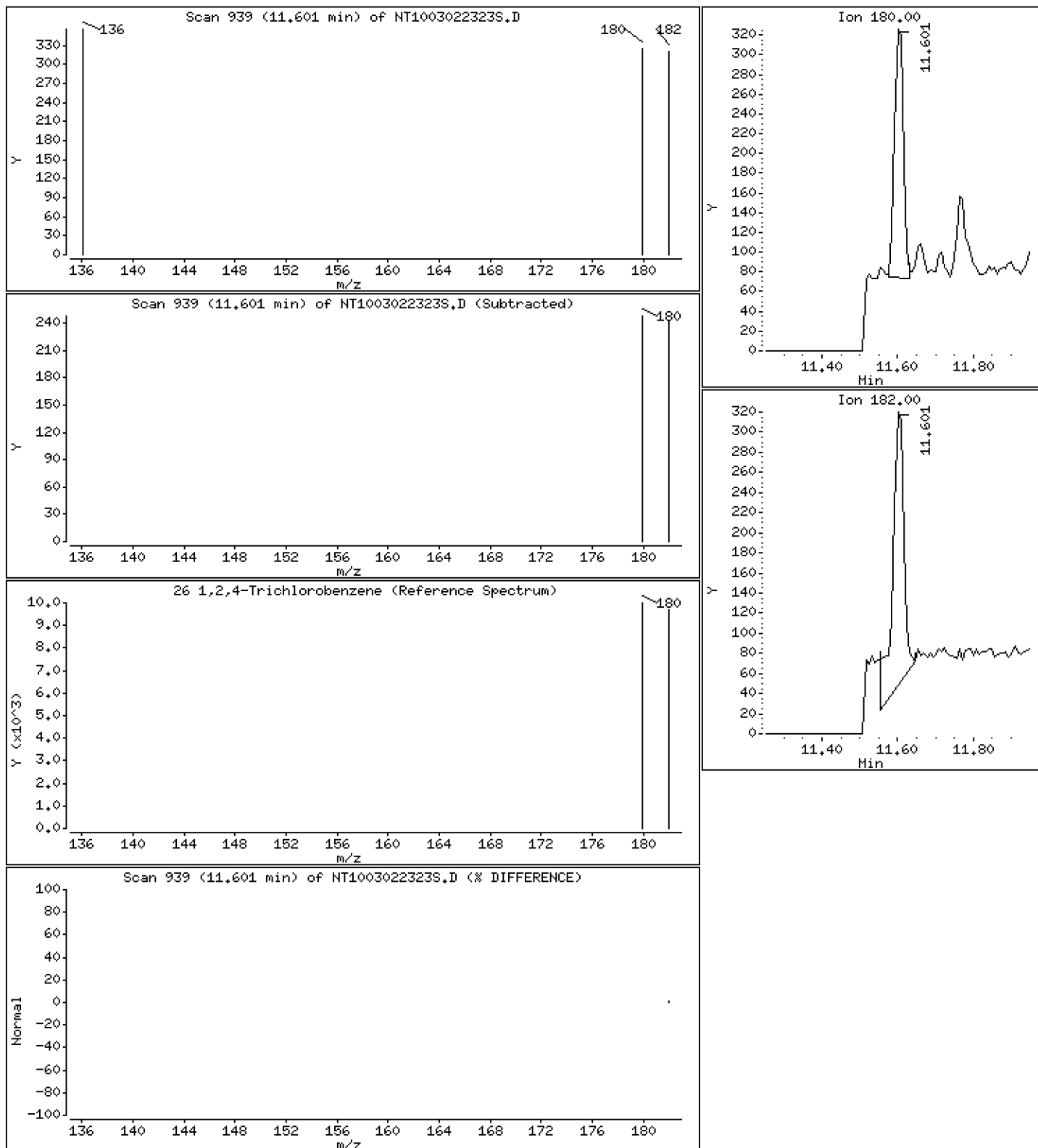
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,002701 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

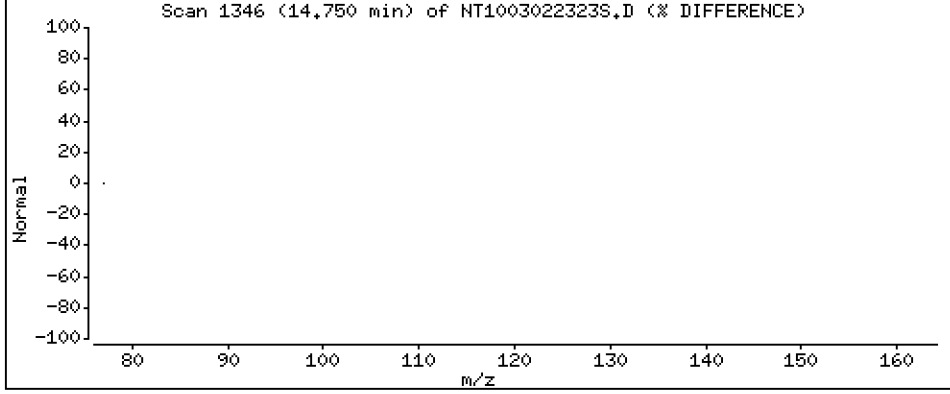
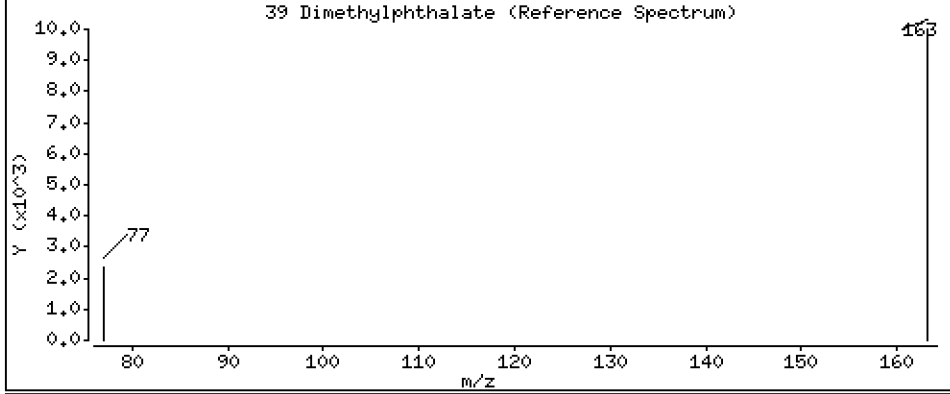
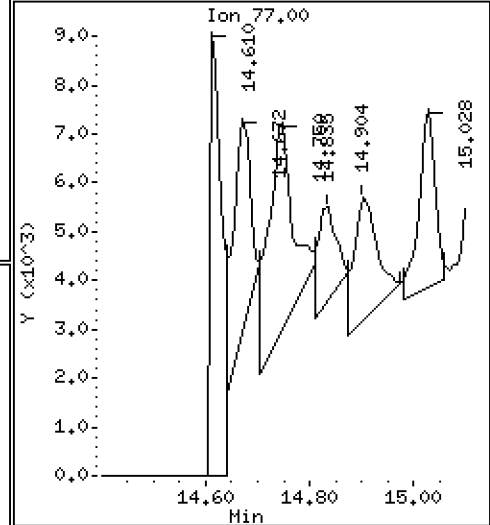
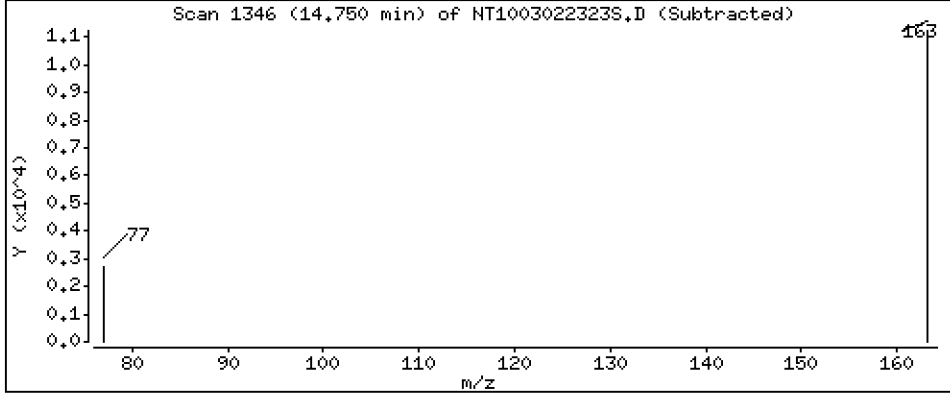
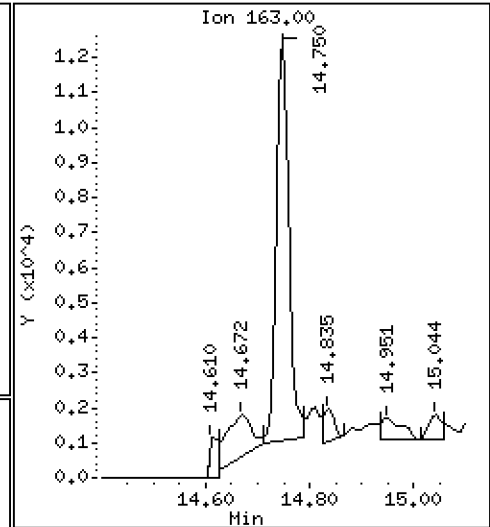
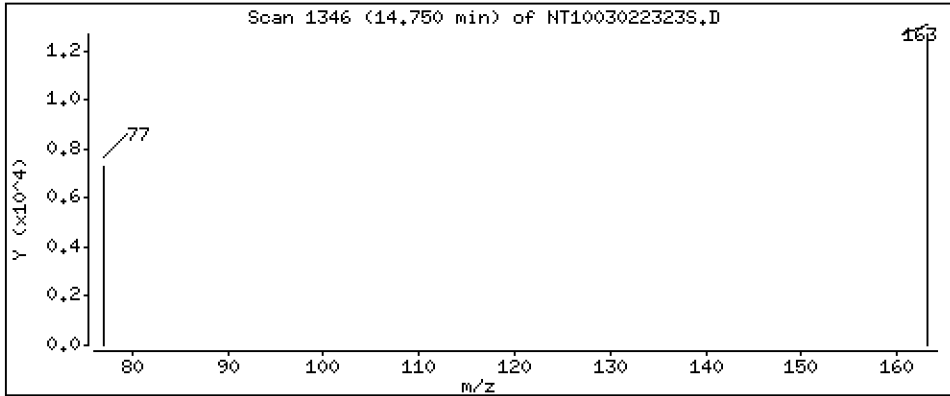
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.05803 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

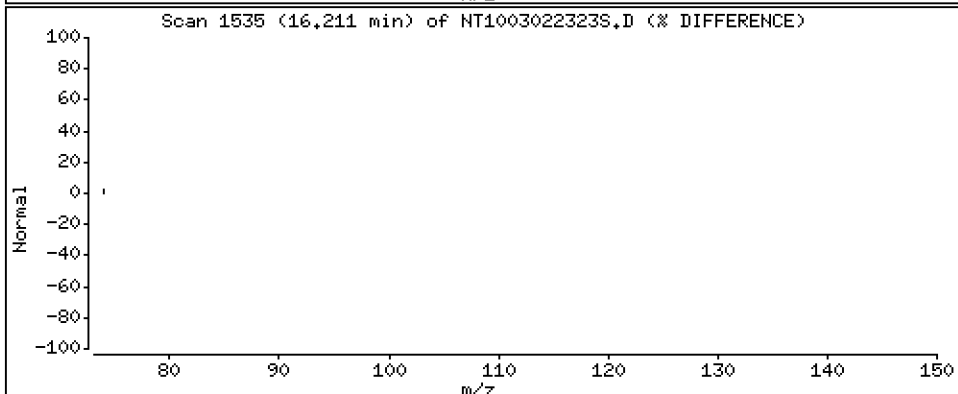
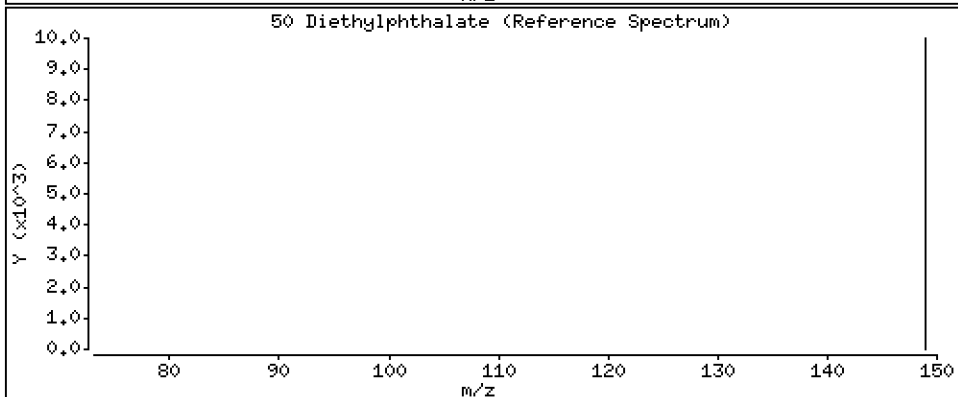
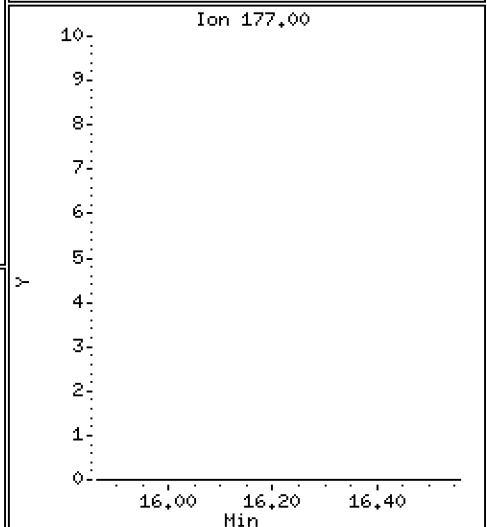
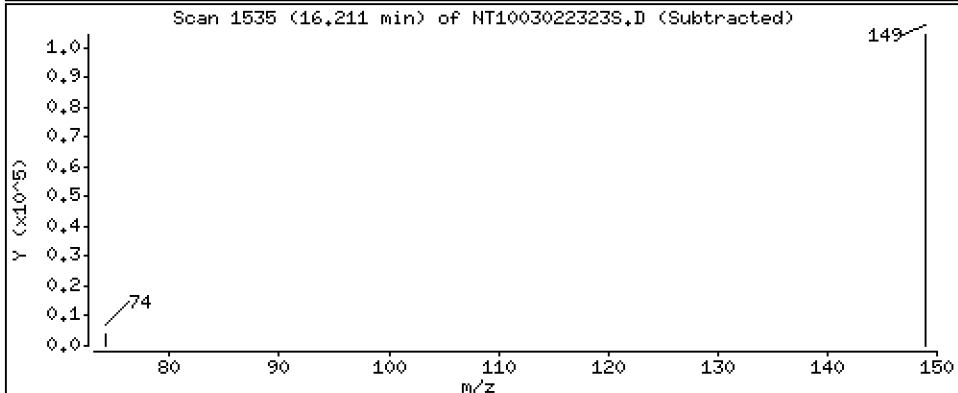
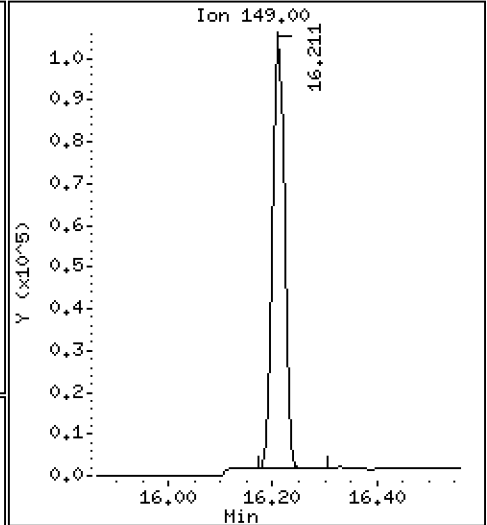
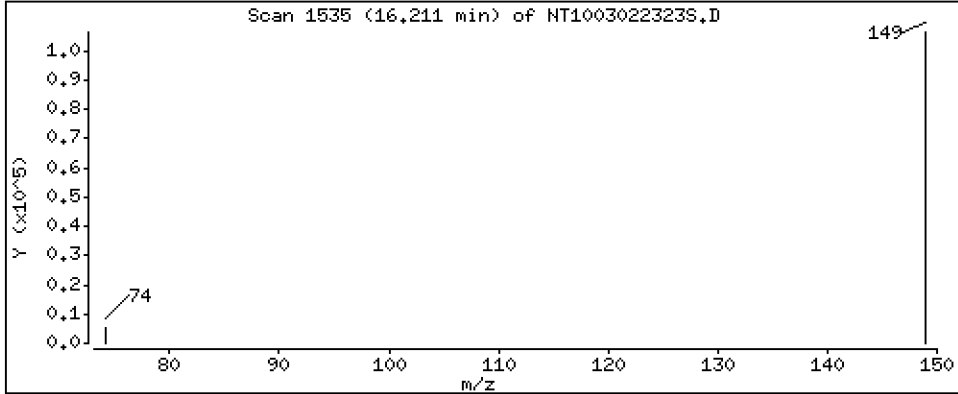
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,5236 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

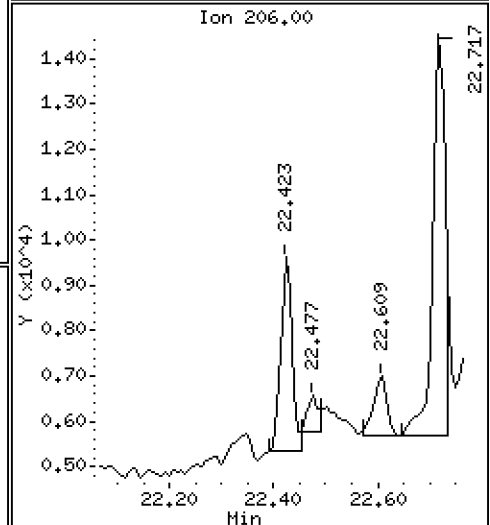
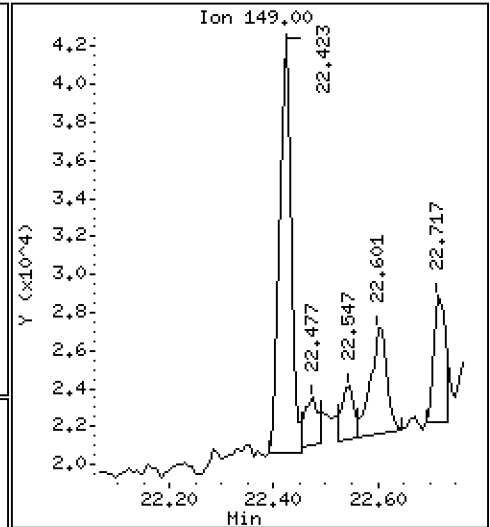
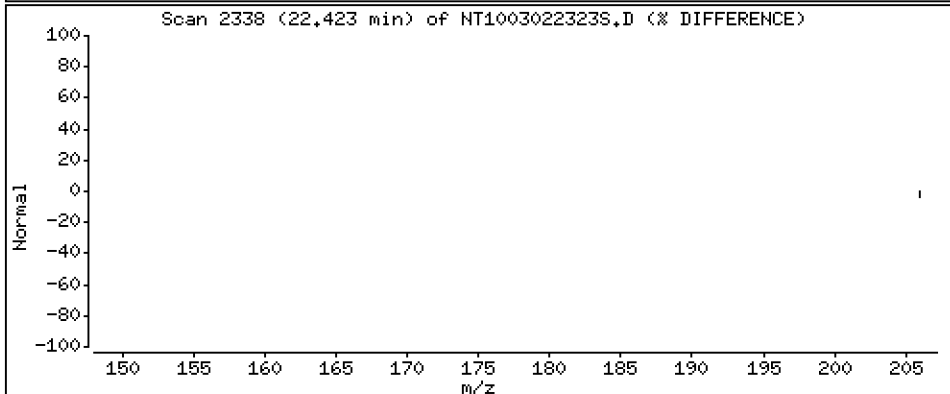
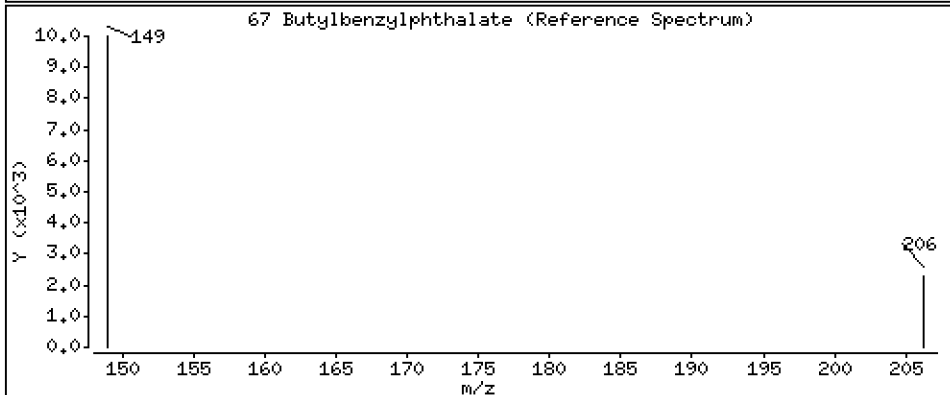
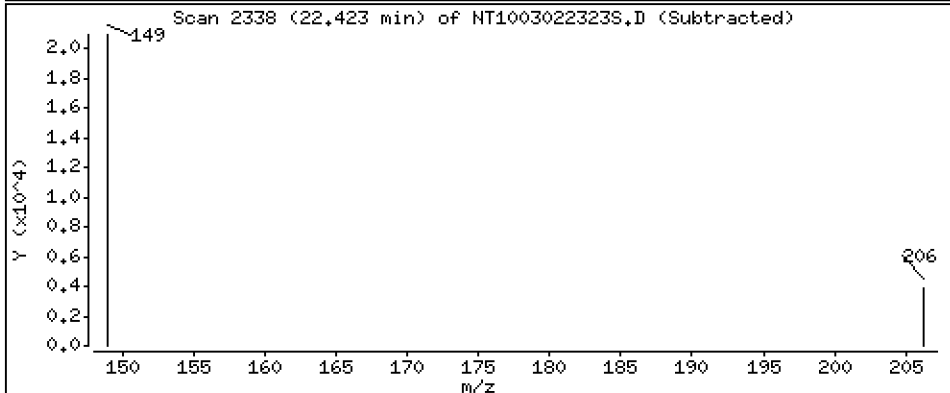
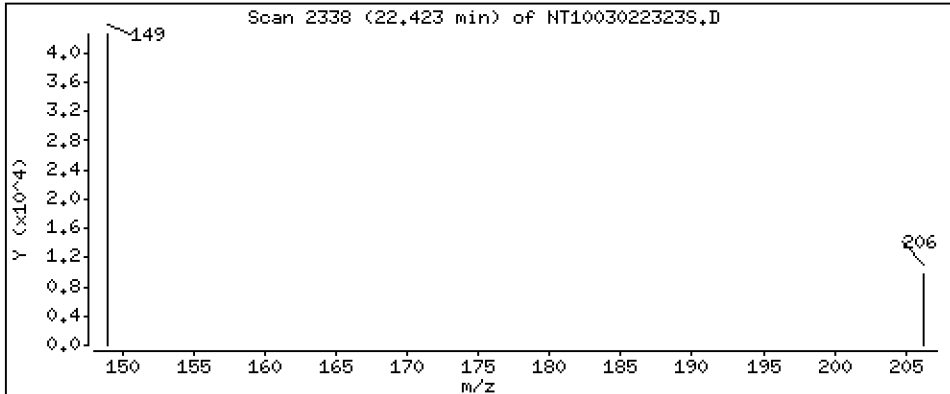
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.08393 ug/L



Date : 03-MAR-2023 04:19

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-08

Volume Injected (uL): 1.0

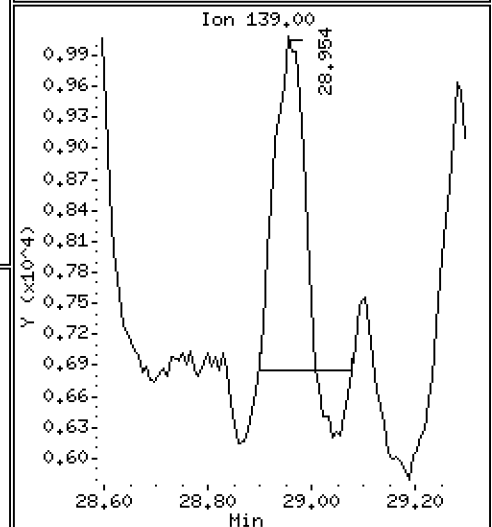
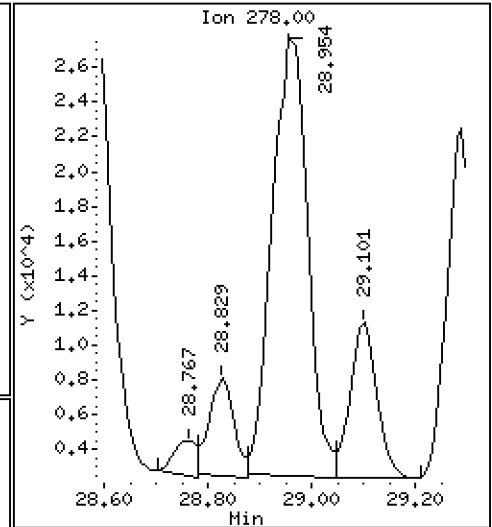
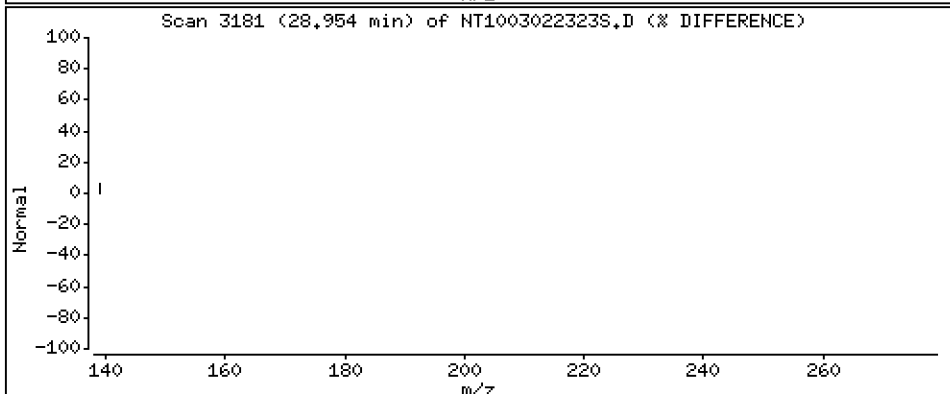
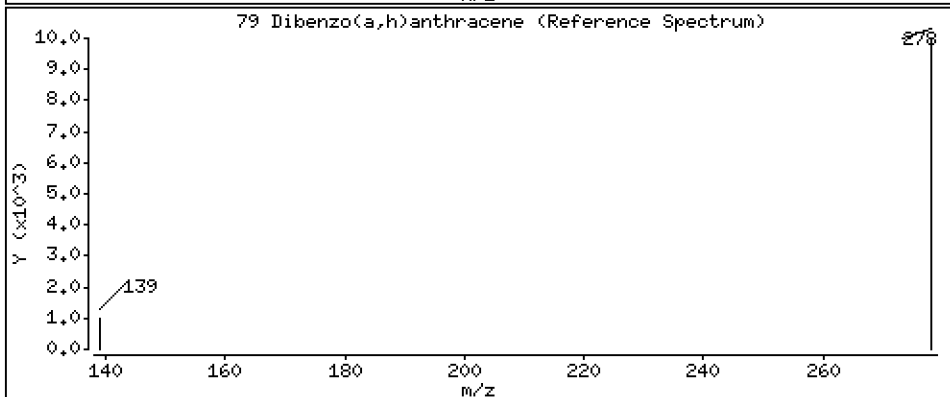
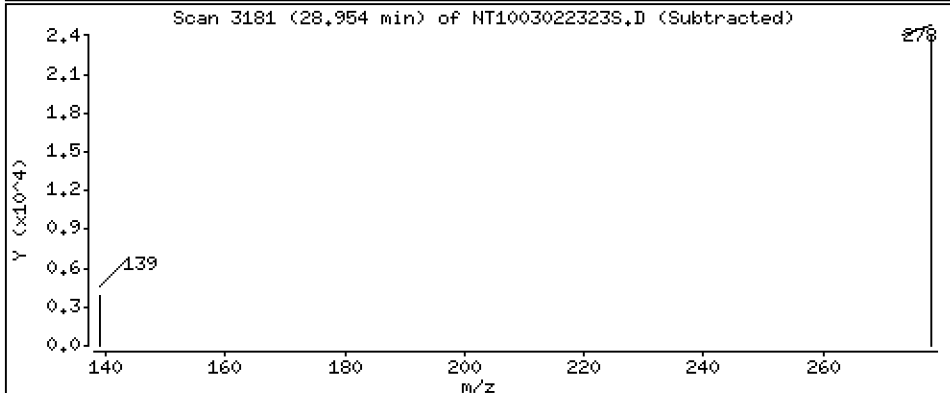
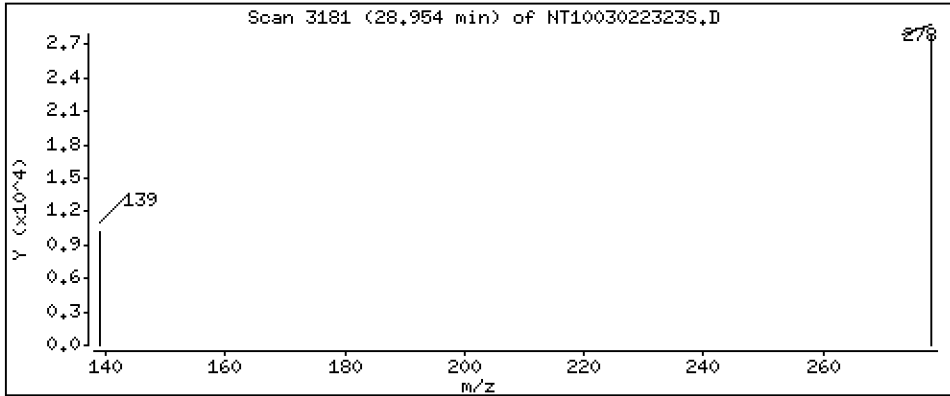
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.2088 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022323S.D  
 Lab Smp Id: 23A0206-08  
 Inj Date : 03-MAR-2023 04:19 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-08  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 19  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1046702	6.55654	6.557 (R)
3 Phenol	94		8.533	8.525 (0.922)		1447514	5.95746	5.957
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		559179	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		2699	0.01340	0.01340
11 Benzyl alcohol	79		9.485	9.477 (1.025)		50053	0.38174	0.3817
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		9.663	9.663 (1.044)		5536	0.03911	0.03911
15 4-Methylphenol	108		9.958	9.950 (1.076)		25013	0.16965	0.1697
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006 (0.939)		4690	0.02727	0.02727 (M)
24 Benzoic acid	105		11.133	11.082 (0.950)		46503	0.49211	0.4921 (M)
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		394	0.00270	0.002701 (M)
* 27 Naphthalene-d8	136		11.724	11.723 (1.000)		2026902	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		18187	0.05803	0.05803
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		987073	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		154755	0.52359	0.5236
54 N-Nitrosodiphenylamine	169		Compound Not Detected.					
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		Compound Not Detected.					
* 59 Phenanthrene-d10	188		18.414	18.406	(1.000)	1935025	4.00000	
\$ 66 Terphenyl-d14	244		21.540	21.532	(0.919)	1007310	5.36515	5.365(R)
67 Butylbenzylphthalate	149		22.423	22.414	(0.957)	32895	0.08393	0.08393
* 69 Chrysene-d12	240		23.437	23.429	(1.000)	2321727	4.00000	
* 77 Perylene-d12	264		26.147	26.123	(1.000)	2504209	4.00000	
79 Dibenzo(a,h)anthracene	278		28.953	28.945	(1.107)	121421	0.20879	0.2088
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022323S.D  
 Lab Smp Id: 23A0206-08  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	559179	-14.29
27 Naphthalene-d8	2339966	1169983	4679932	2026902	-13.38
42 Acenaphthene-d10	1186988	593494	2373976	987073	-16.84
59 Phenanthrene-d10	2193485	1096743	4386970	1935025	-11.78
69 Chrysene-d12	2444828	1222414	4889656	2321727	-5.04
77 Perylene-d12	2842248	1421124	5684496	2504209	-11.89

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.12	25.62	26.62	26.15	0.09

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



REVIEW SUMMARY FOR FILE - NT1003022323S.D

Lab ID: 23A0206-08

nt10.i, 20230302A.b\SIM.b\SIMABN2.m,

03-MAR-2023 04:19

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

---

NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

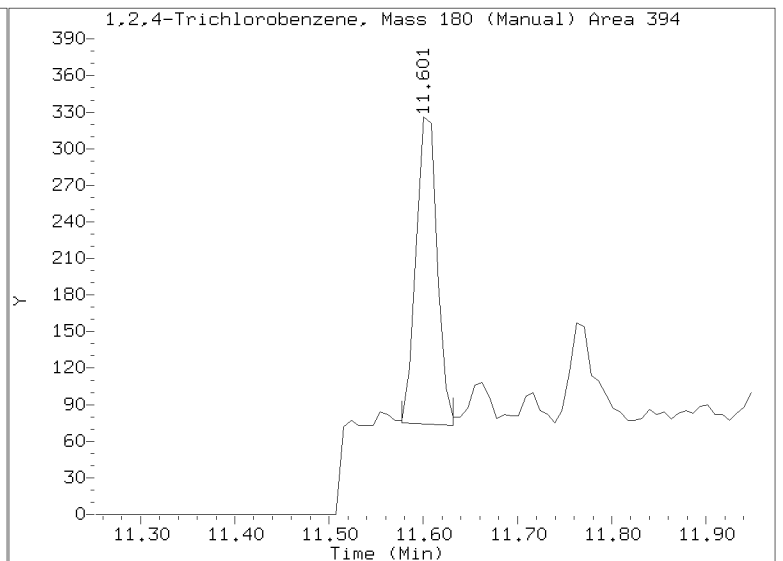
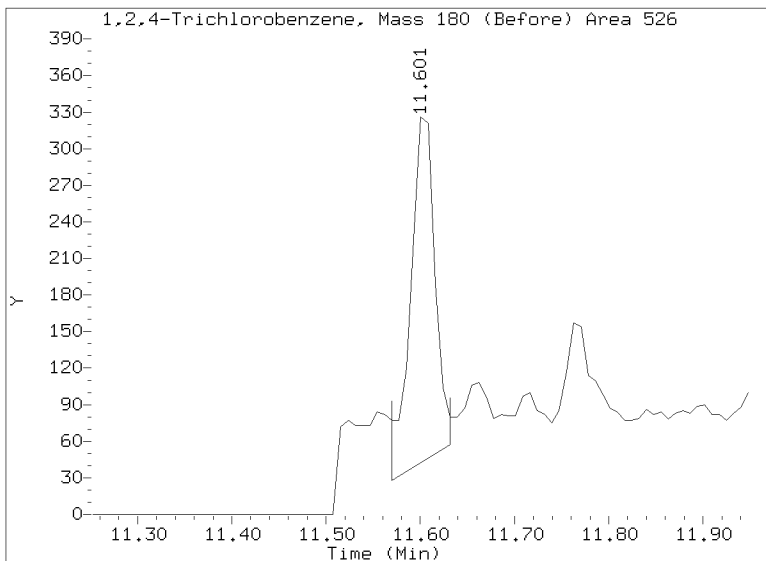
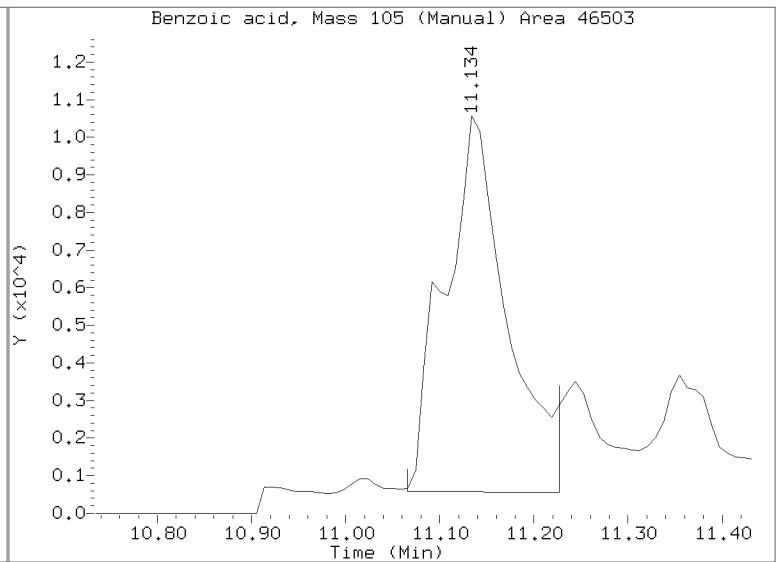
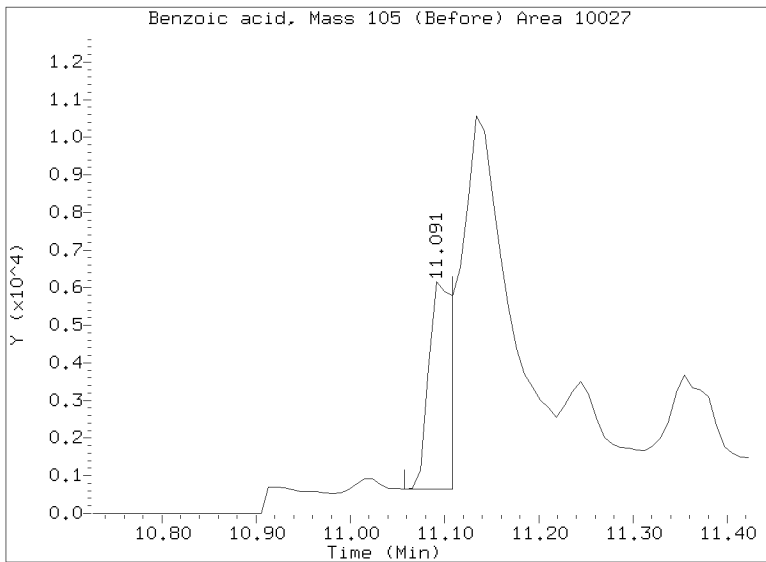
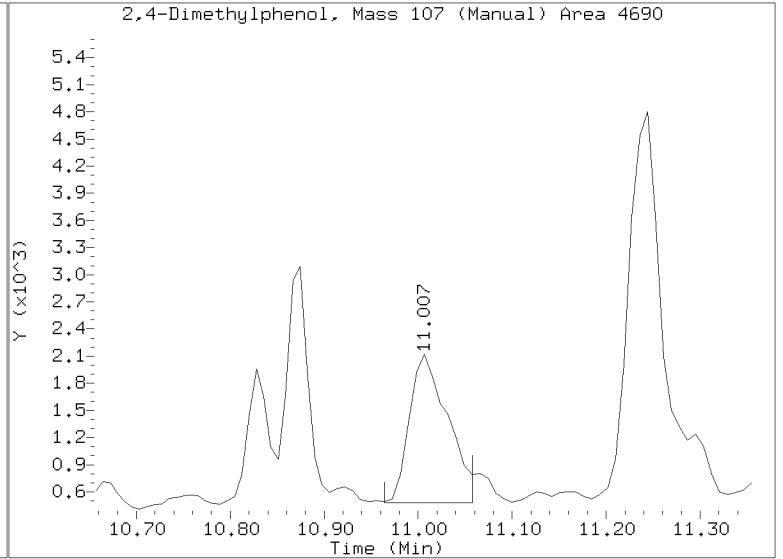
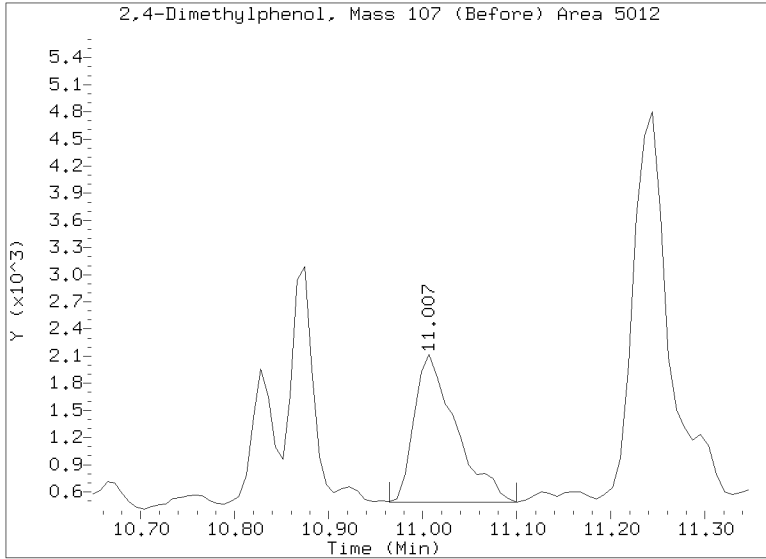
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022323S.D  
Injection Date: 03-MAR-2023 04:19  
Lab ID:23A0206-08 Client ID:  
Report Date: 03/11/2023 06:37





**Form I**  
**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8270E-SIM**  
**SIM SVOC Organics (Dual scan list)**

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-09 B

SDG: 23A0206

Sampled: 01/11/23 11:15

Prepared: 01/27/23 14:44

File ID: NT1003022324S.D

% Solids: 41.88

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 04:58

Batch: BLA0624

Sequence: SLC0158

Initial/Final: 23.91 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

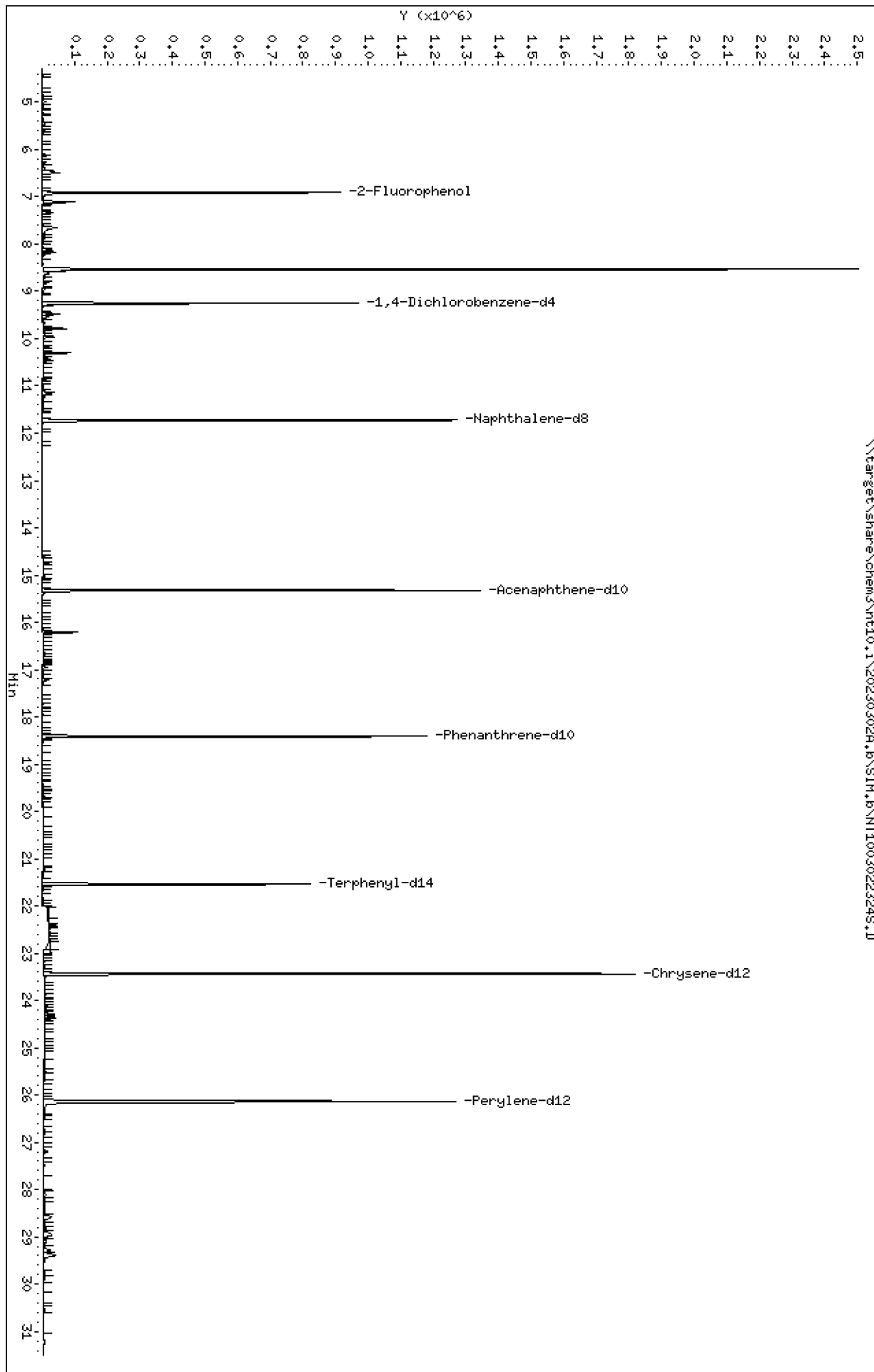
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	43.8		2.5	20.0
65-85-0	Benzoic acid	1	55.0	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.99	667	89.1	27 - 120	
p-Terphenyl-d14	499.33	549	110	37 - 120	

Data File: \\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223248.D  
Date: 03-MAR-2023 04:58  
Client ID:  
Sample Info: 23A0206-09  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028.b\SIM.b\NT10030223248.D



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

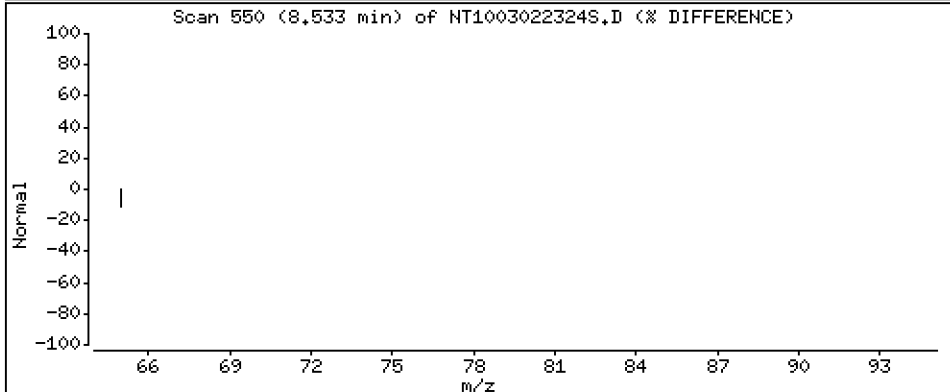
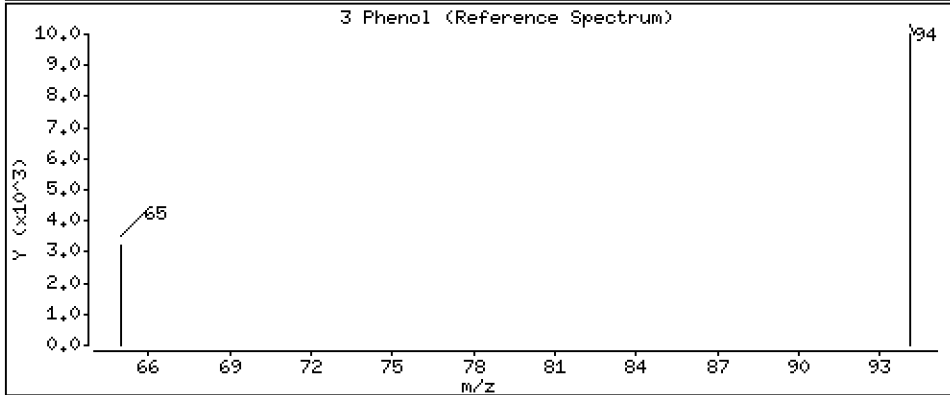
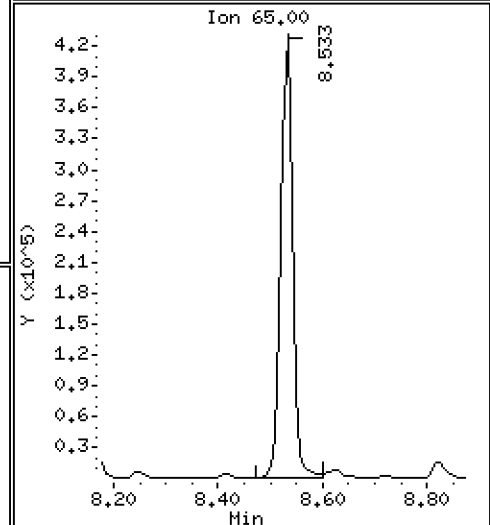
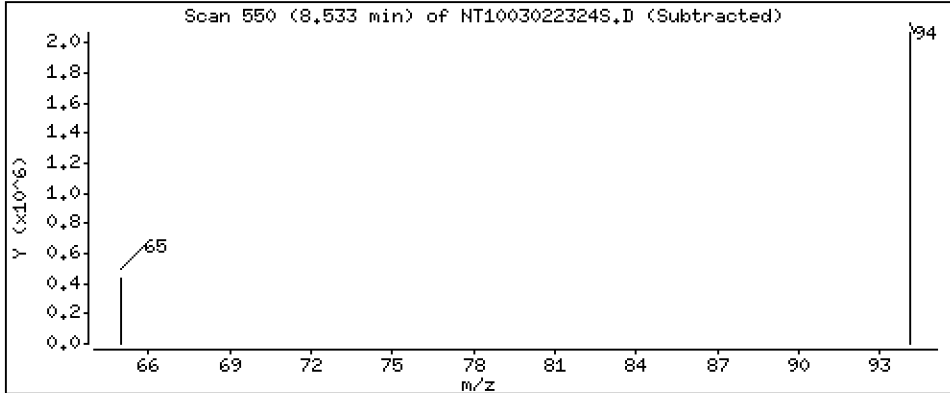
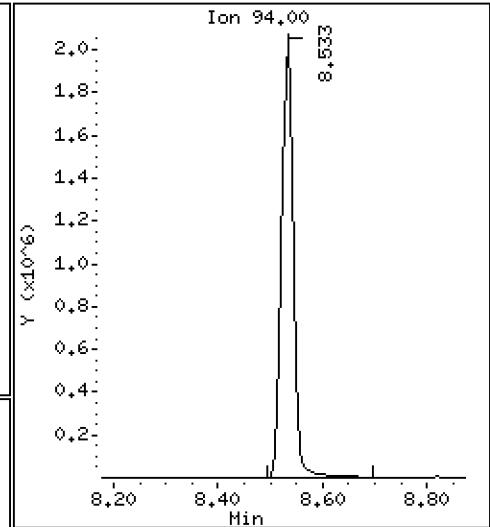
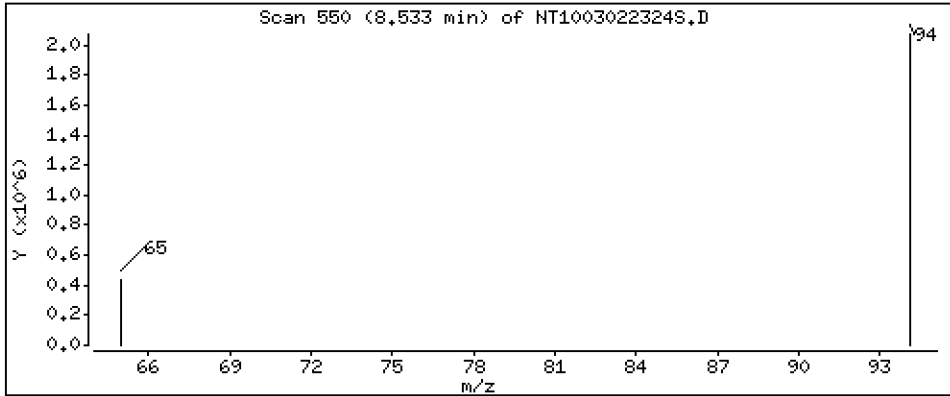
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 12,16 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

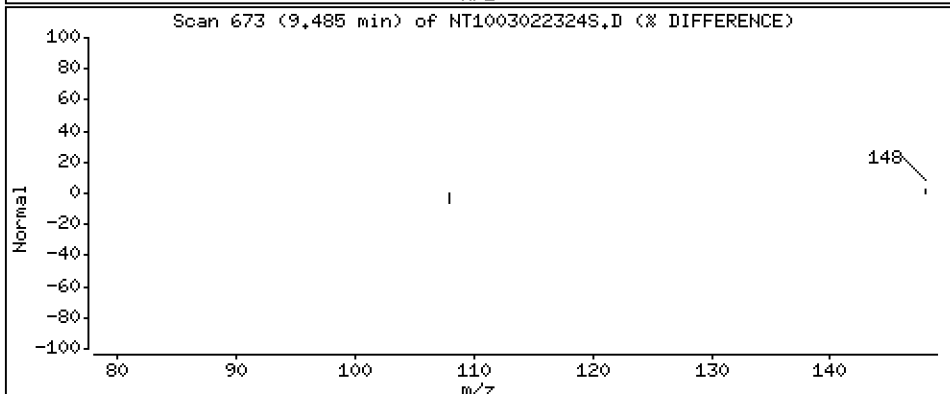
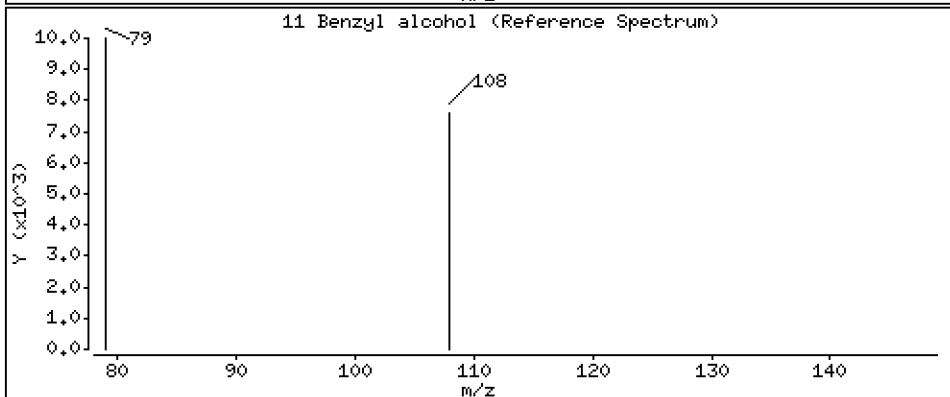
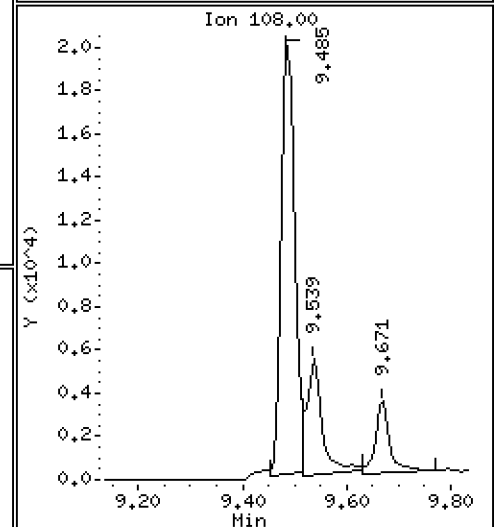
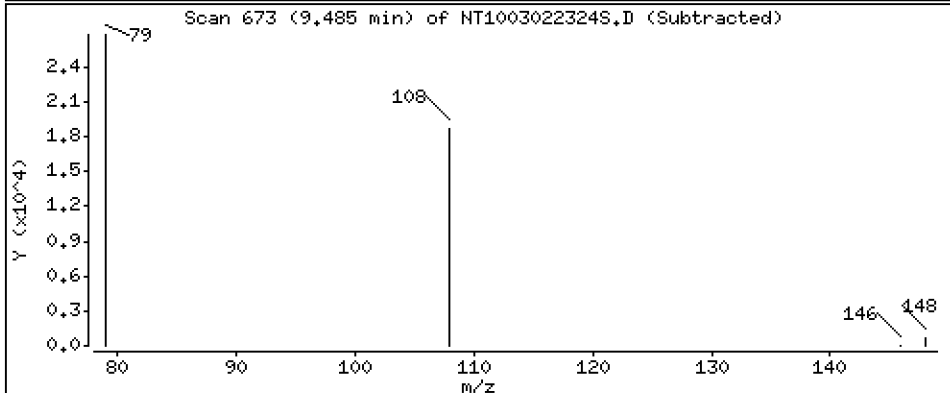
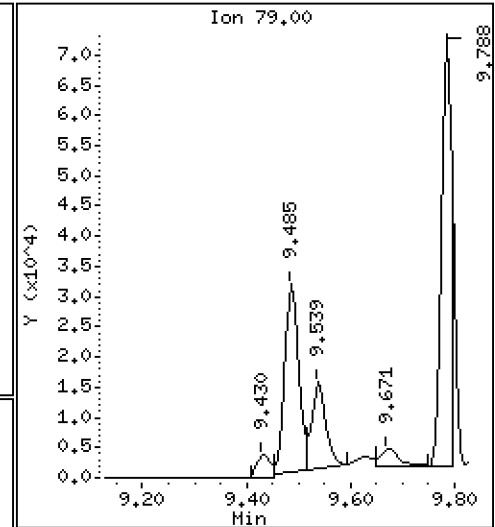
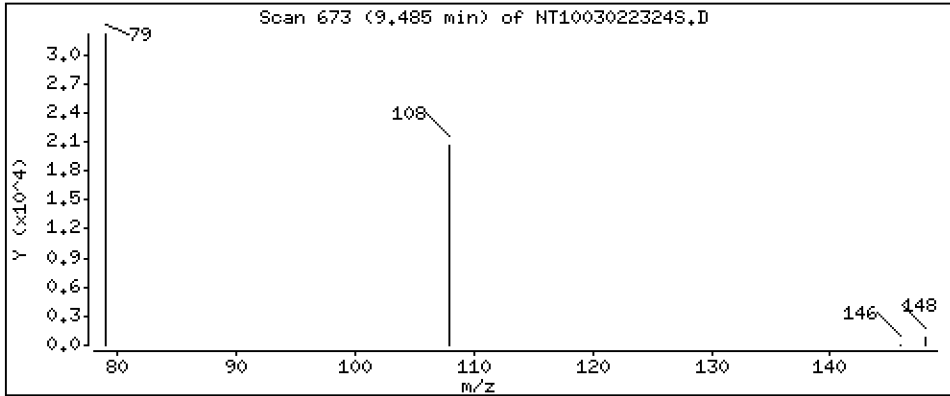
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.4384 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

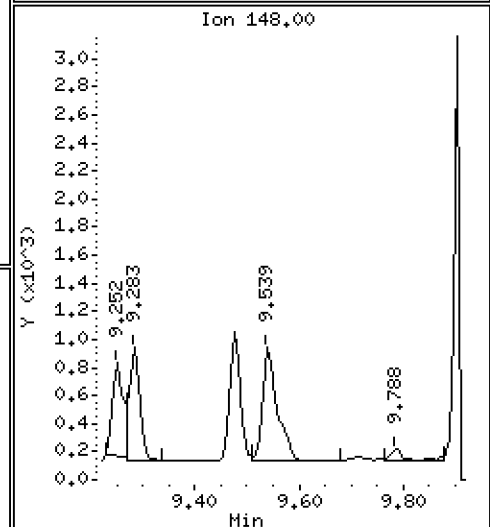
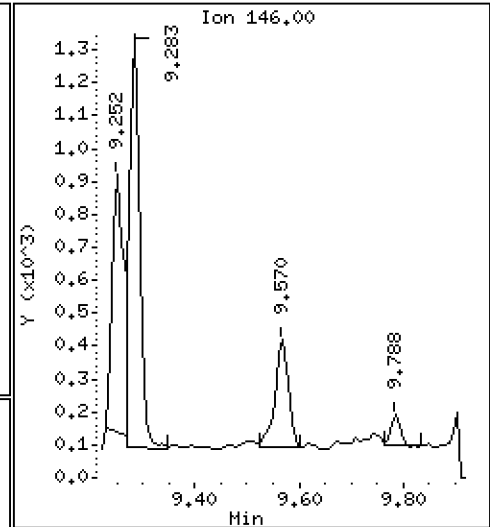
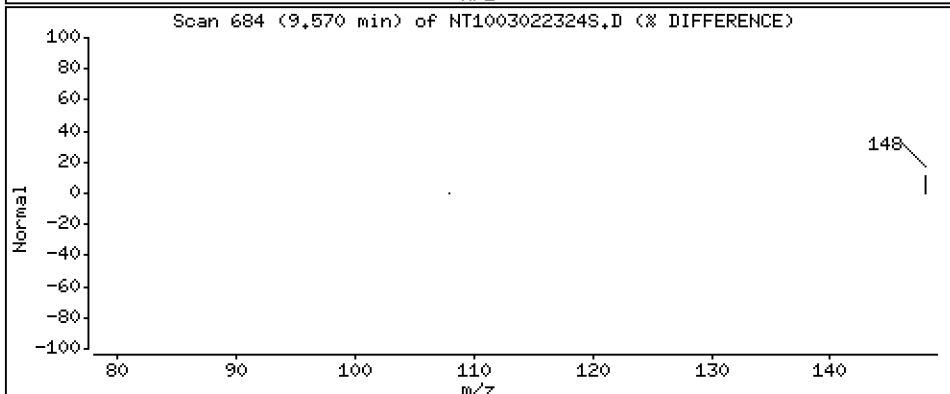
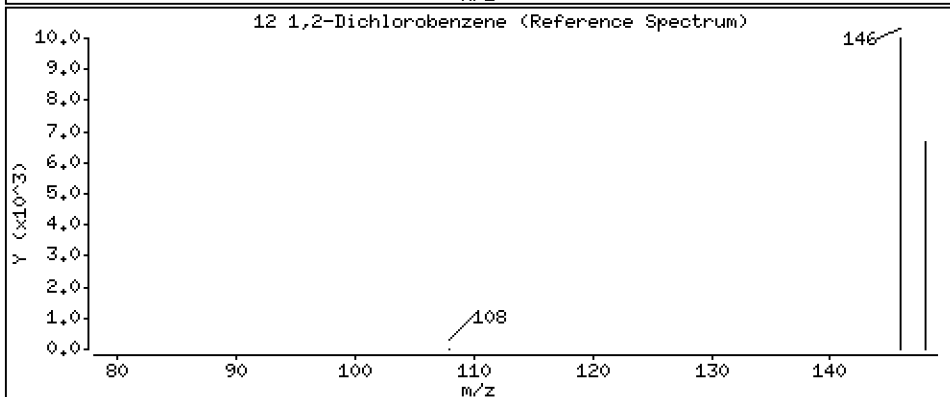
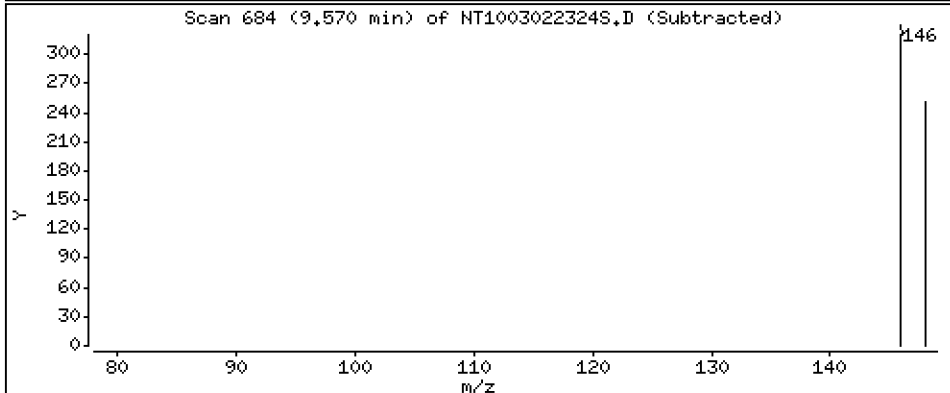
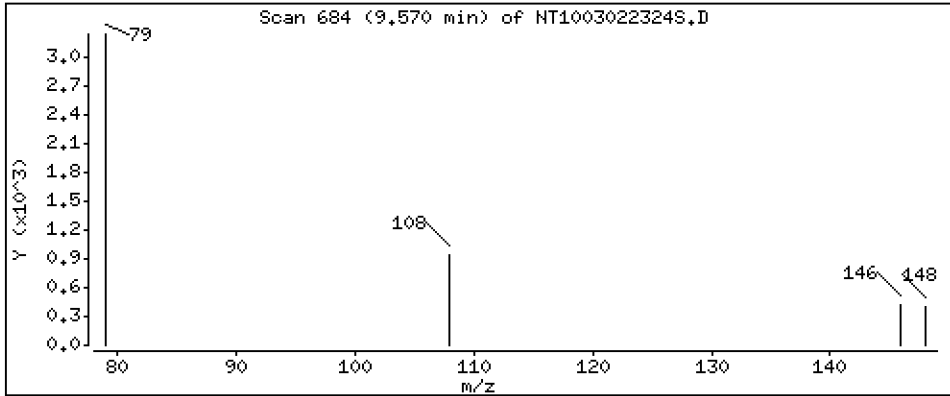
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.002880 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

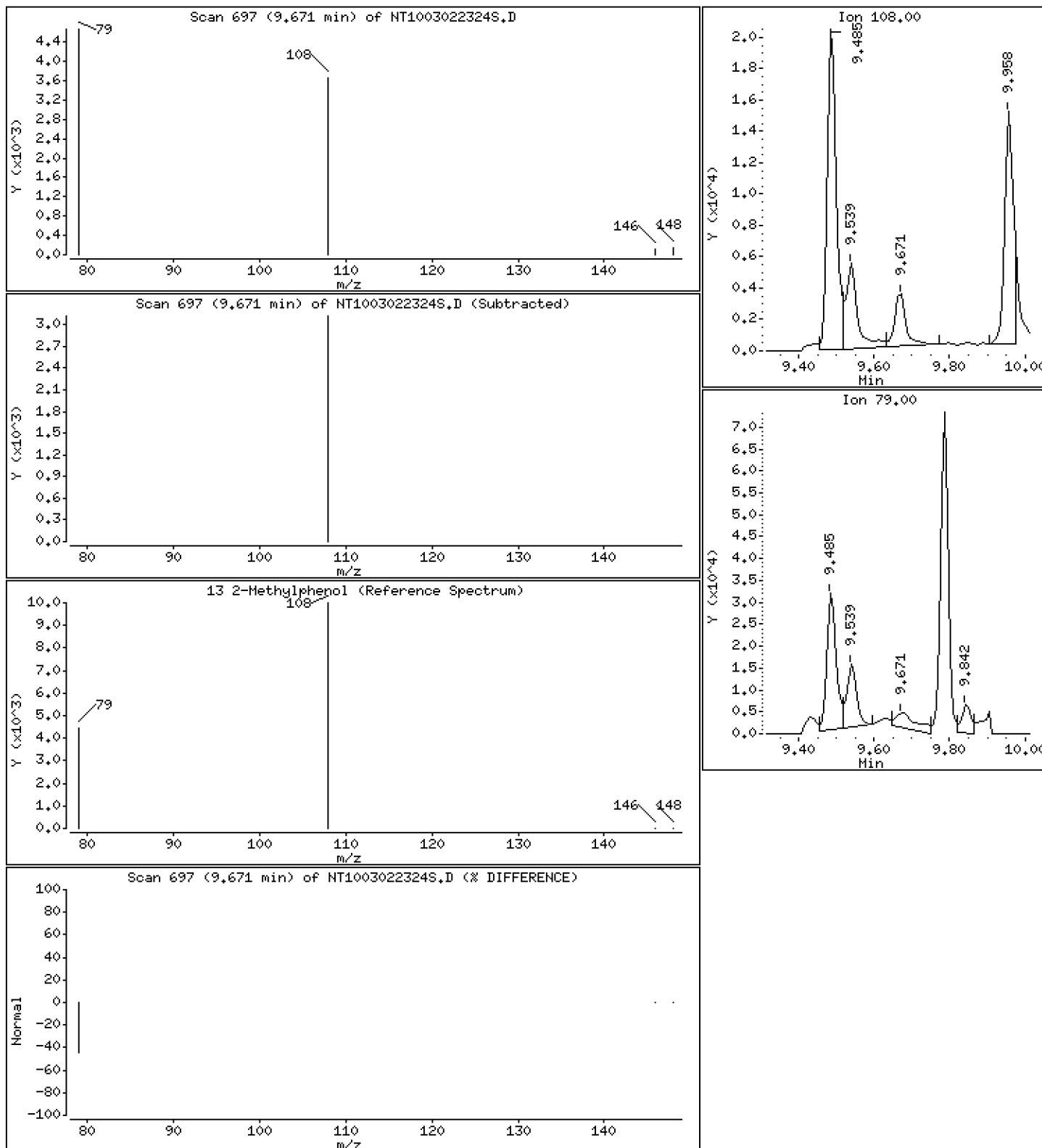
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.04907 ug/L





Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

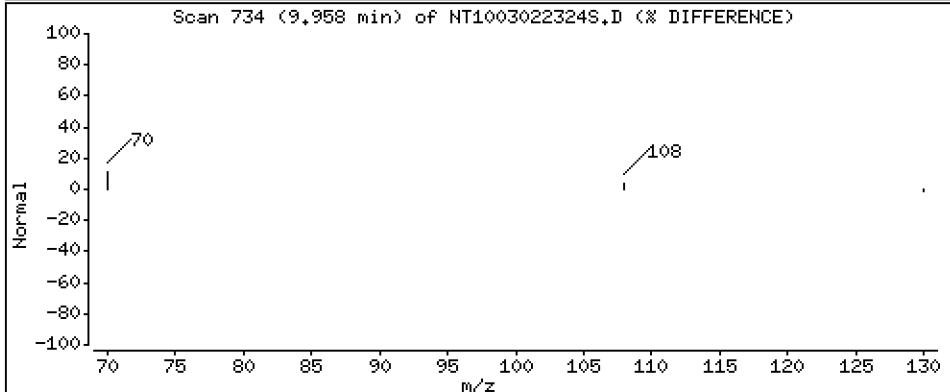
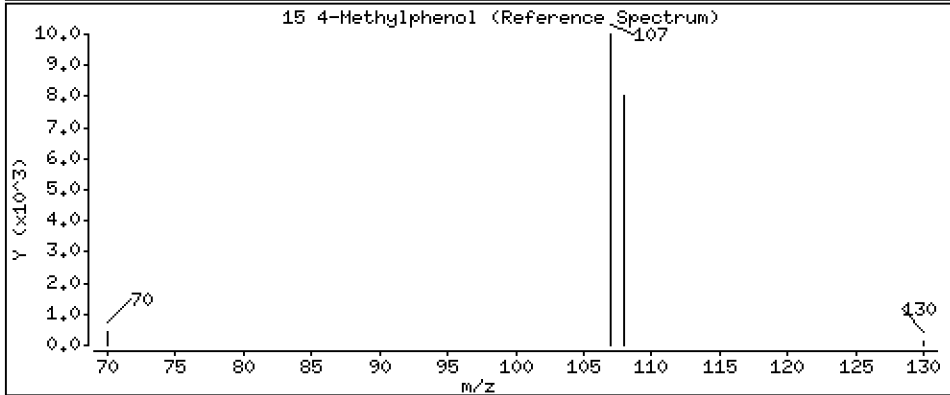
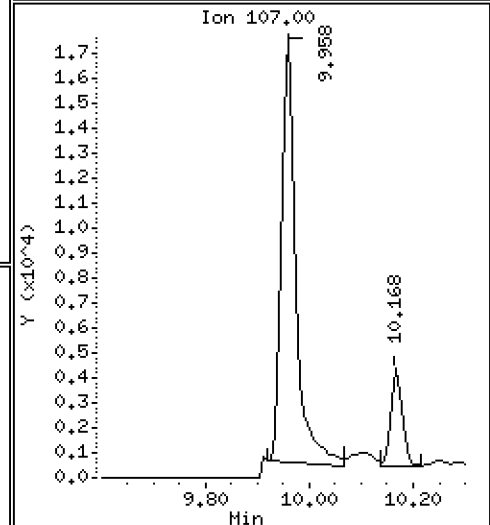
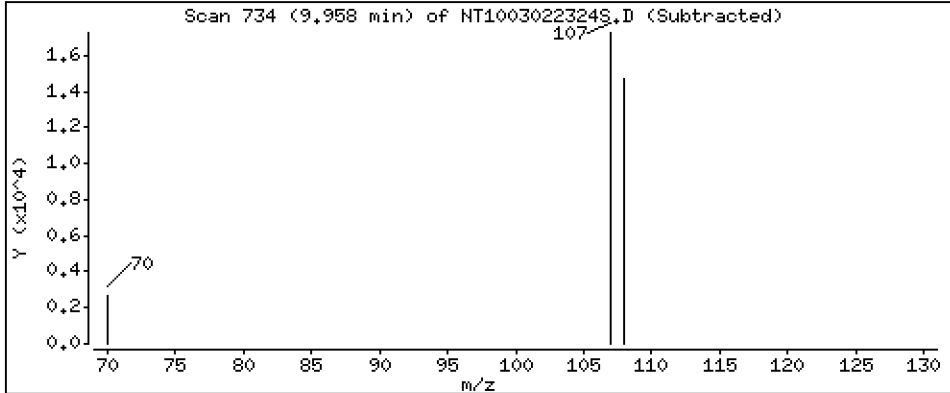
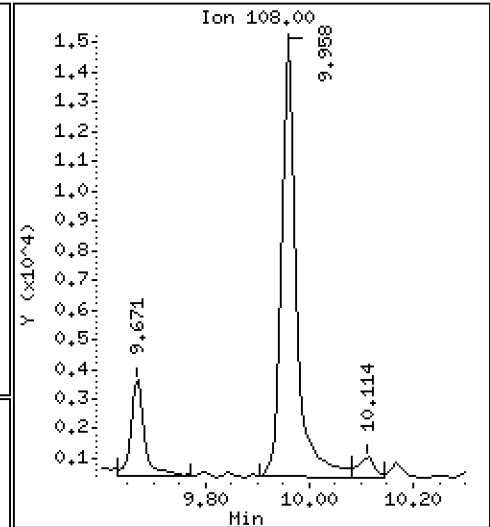
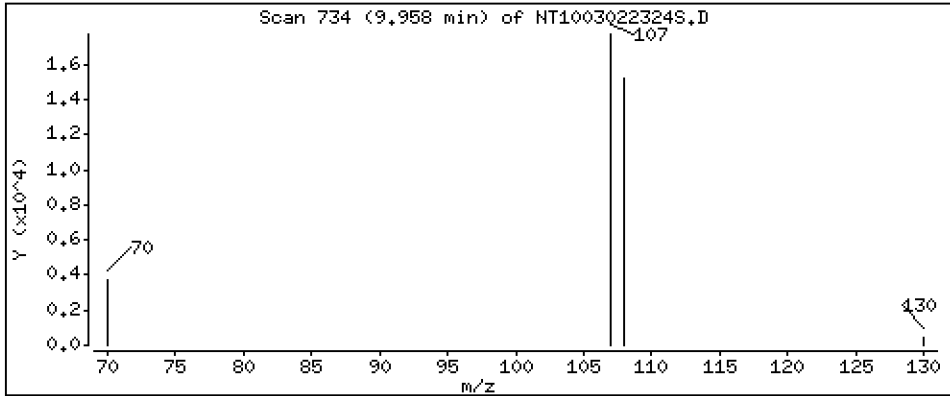
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.2000 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

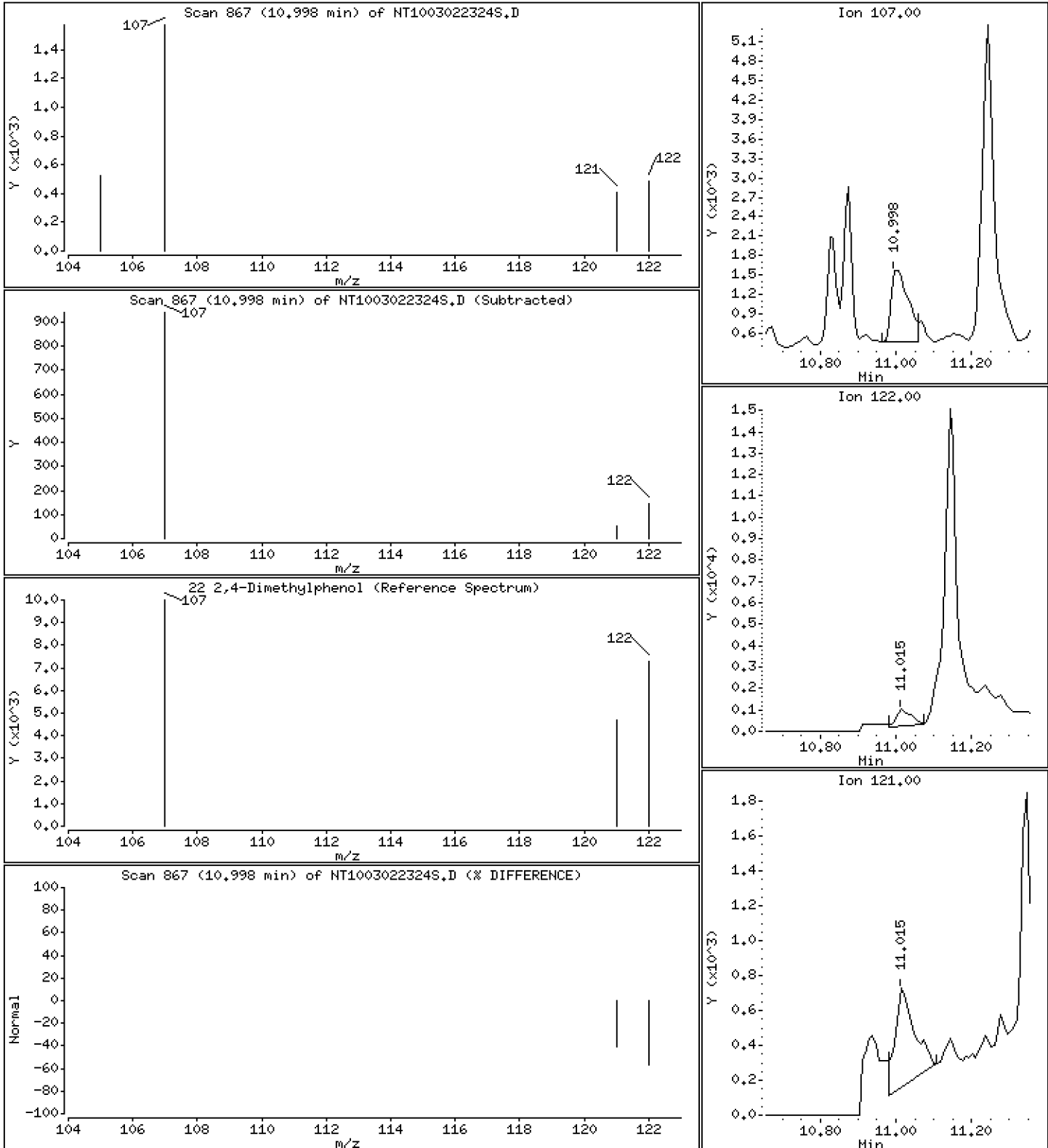
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02127 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

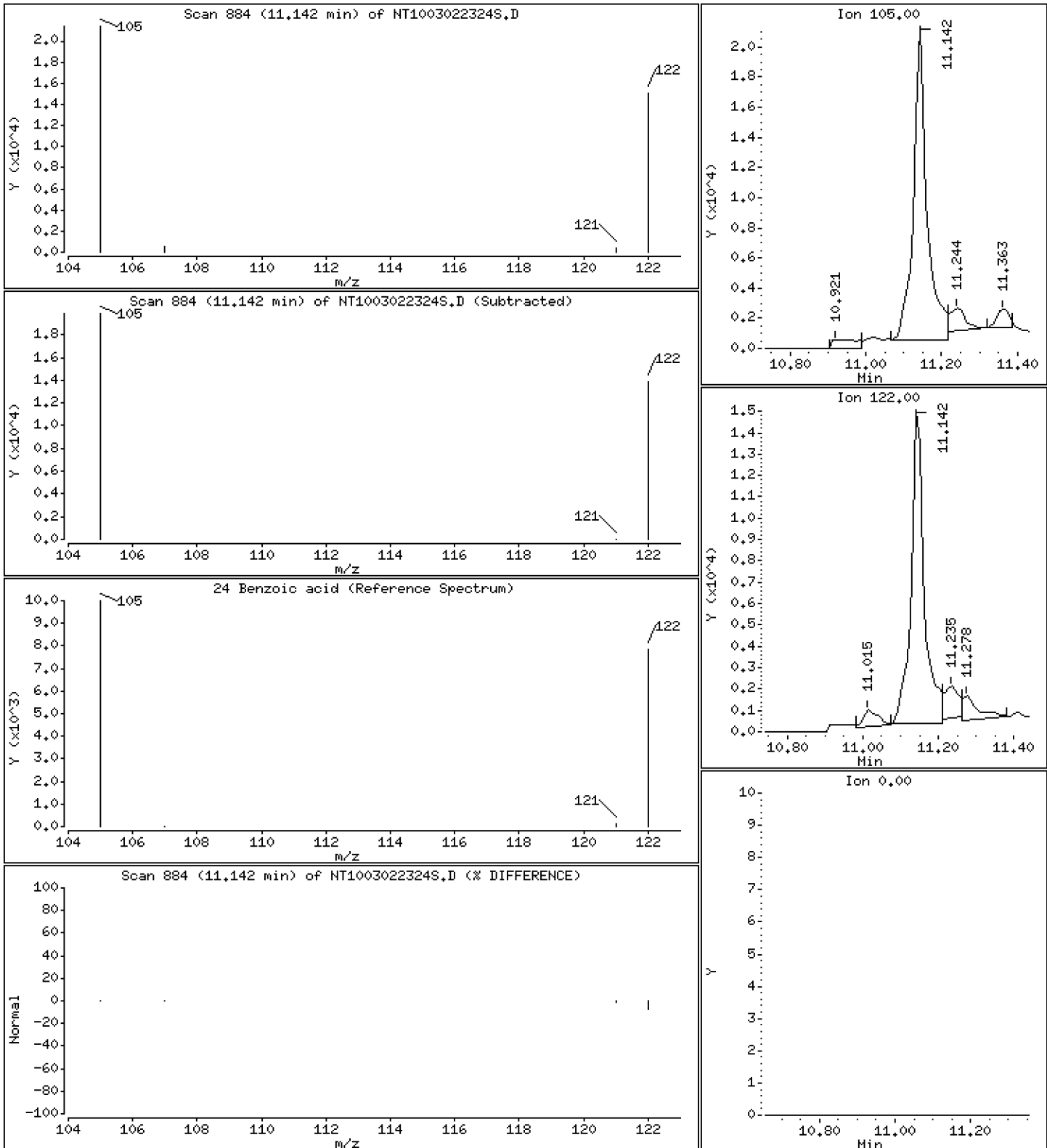
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.5503 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

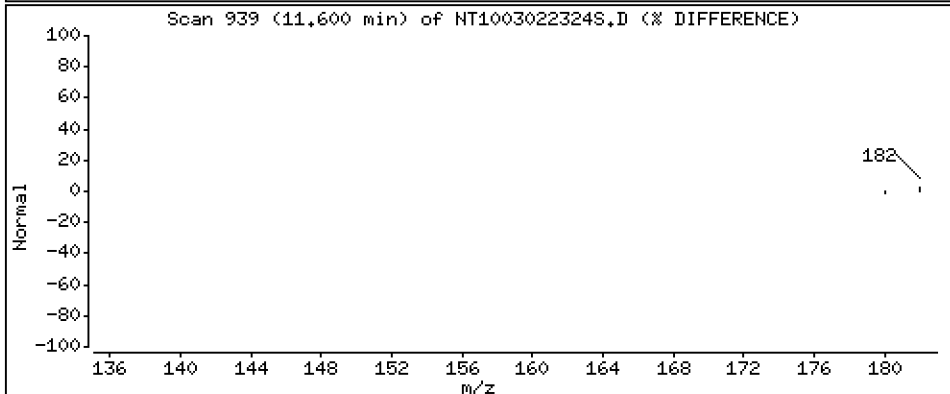
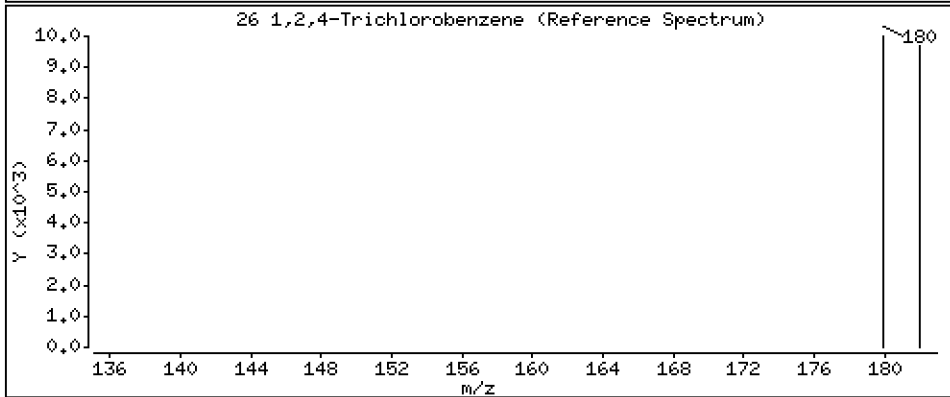
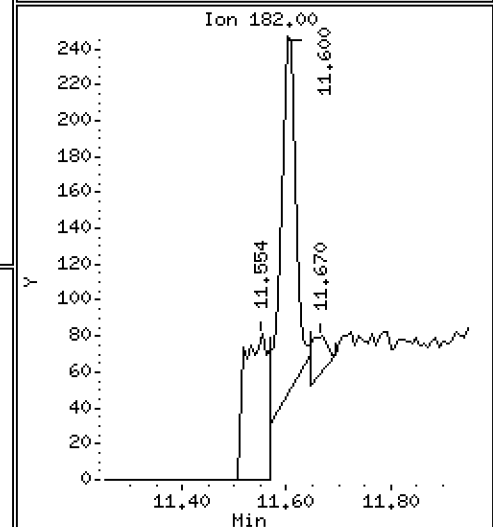
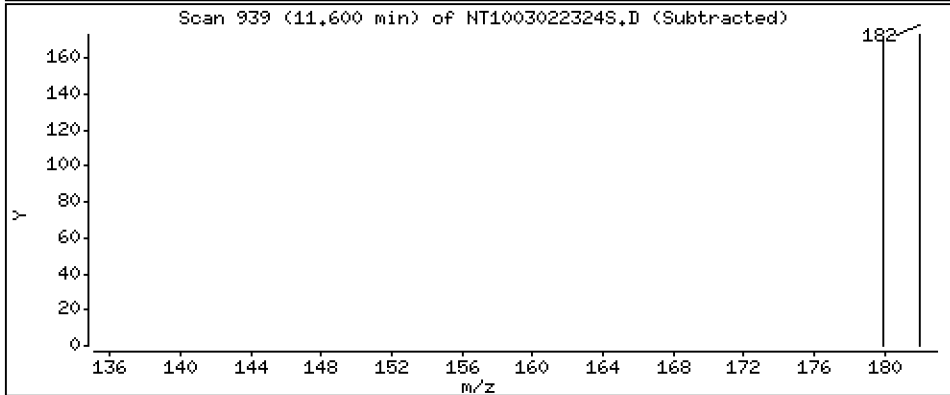
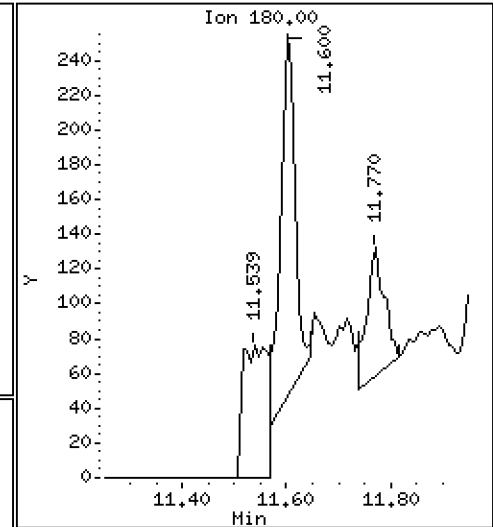
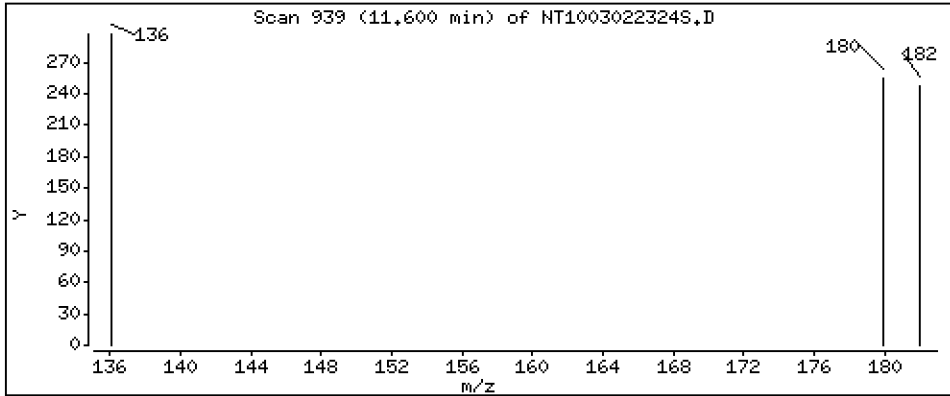
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,002746 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

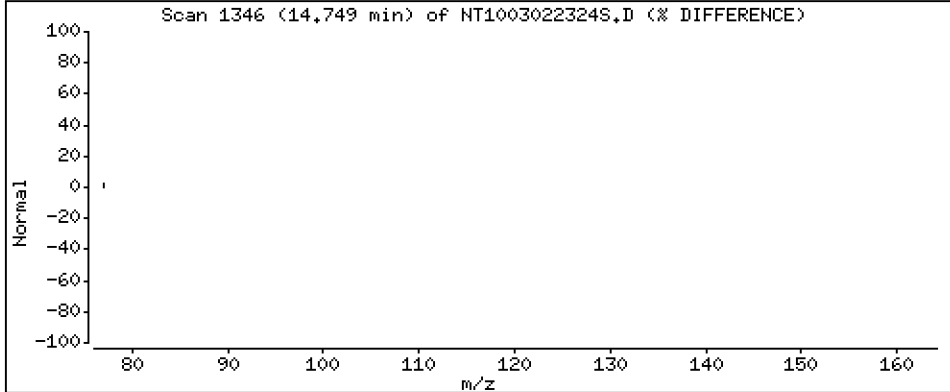
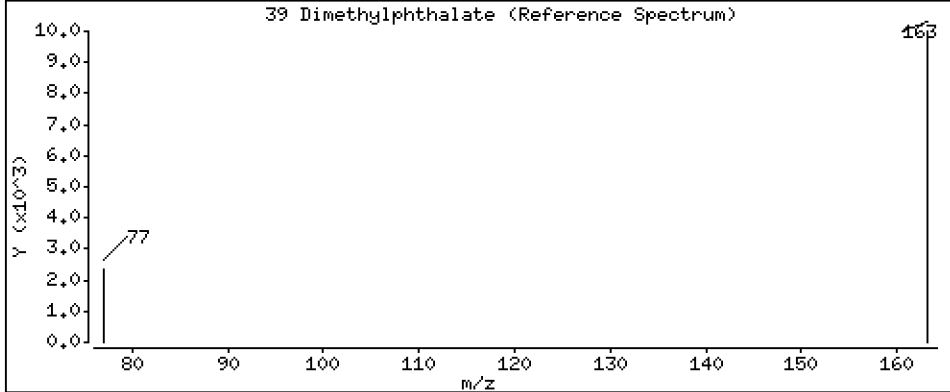
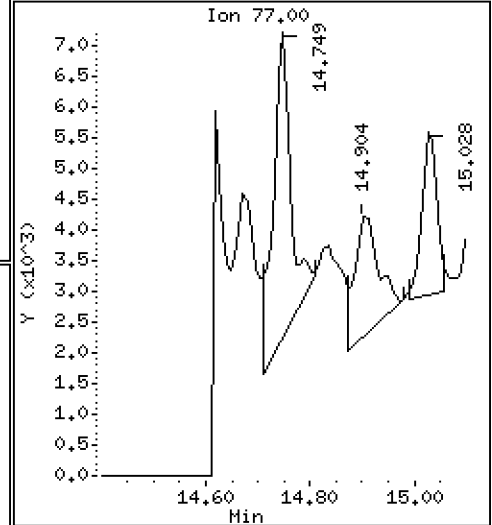
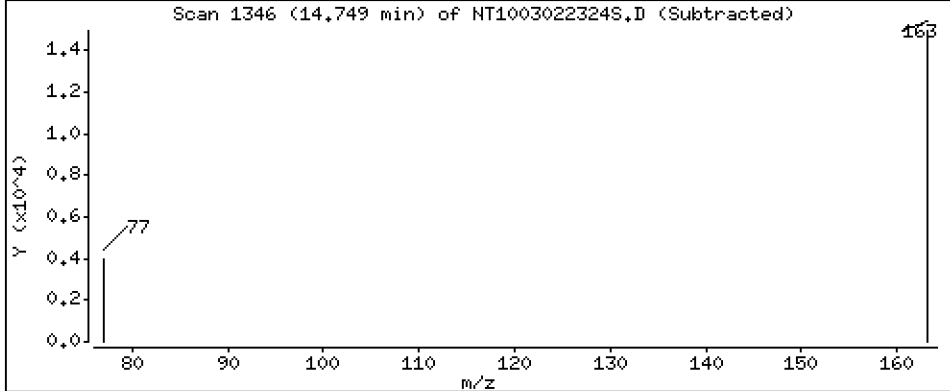
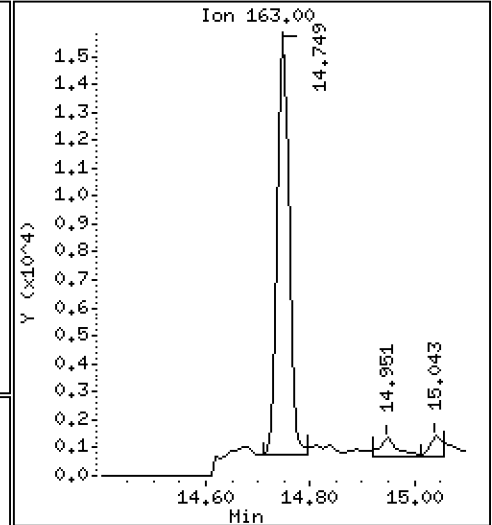
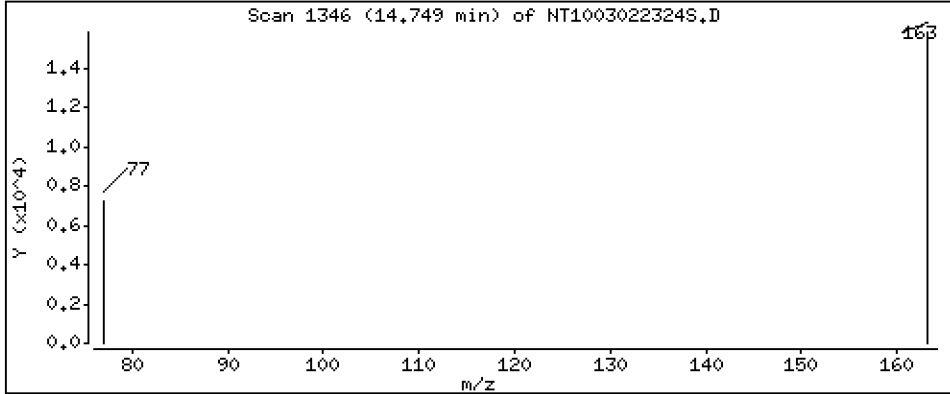
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.07184 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

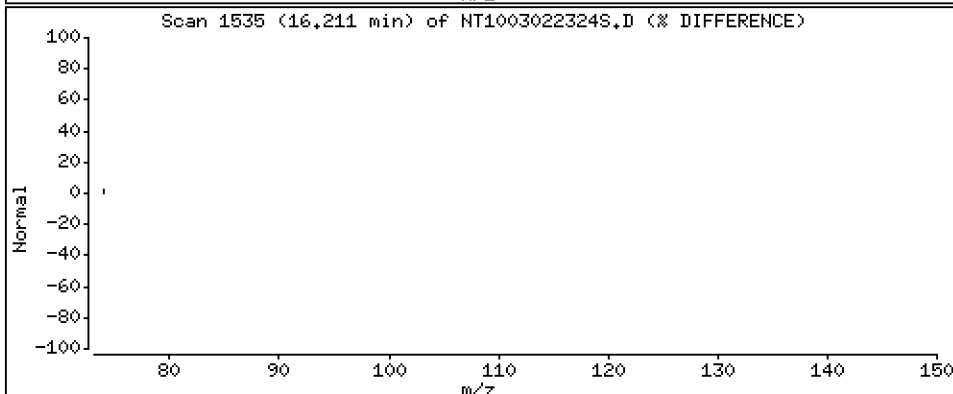
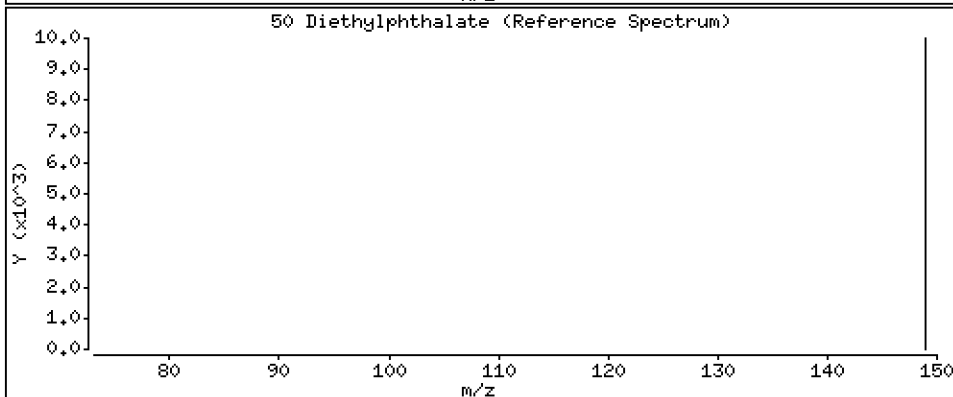
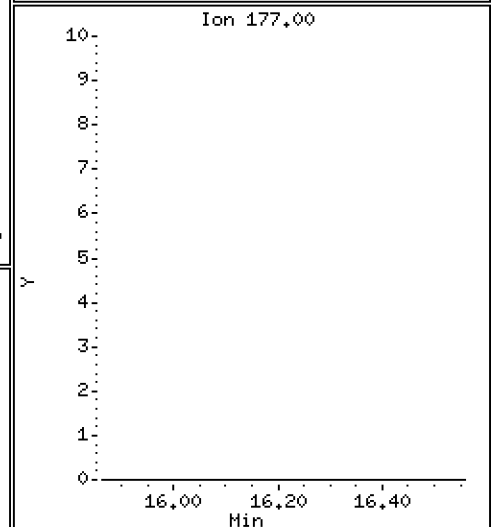
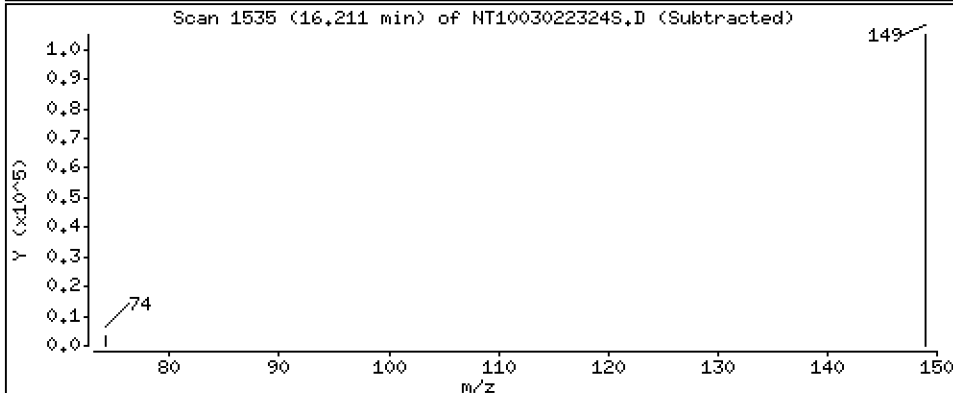
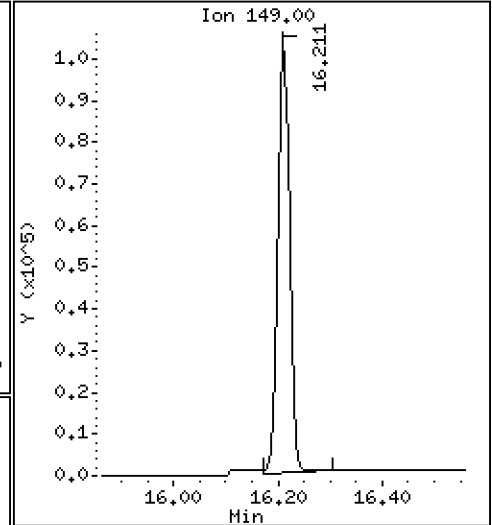
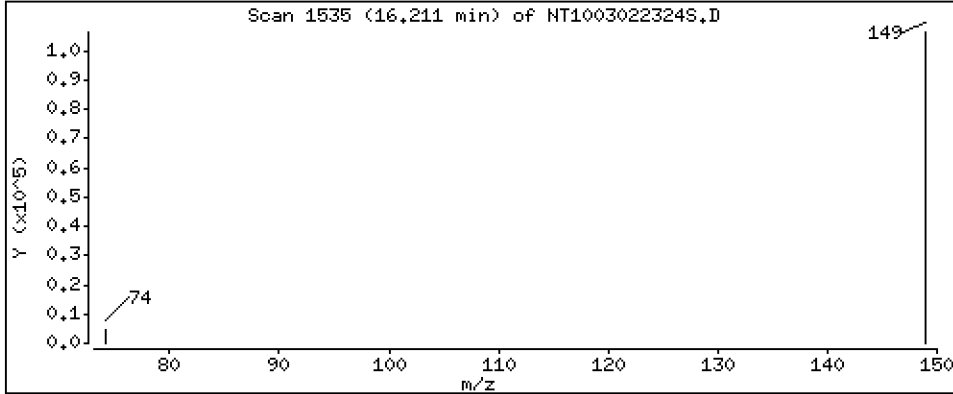
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,5130 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

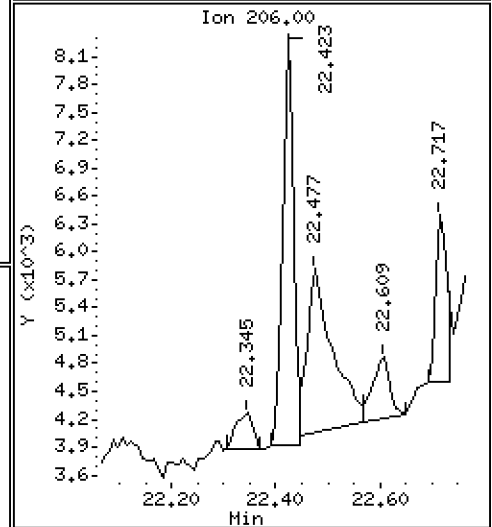
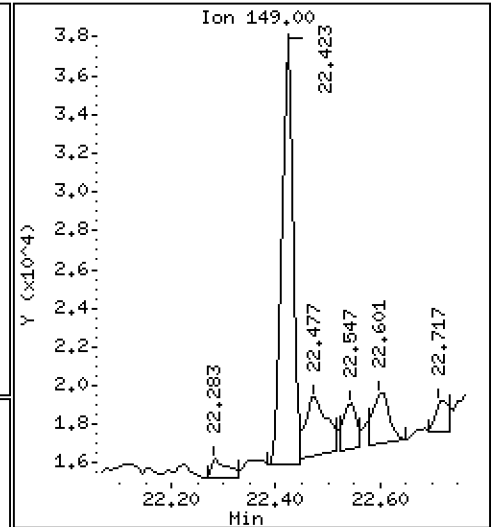
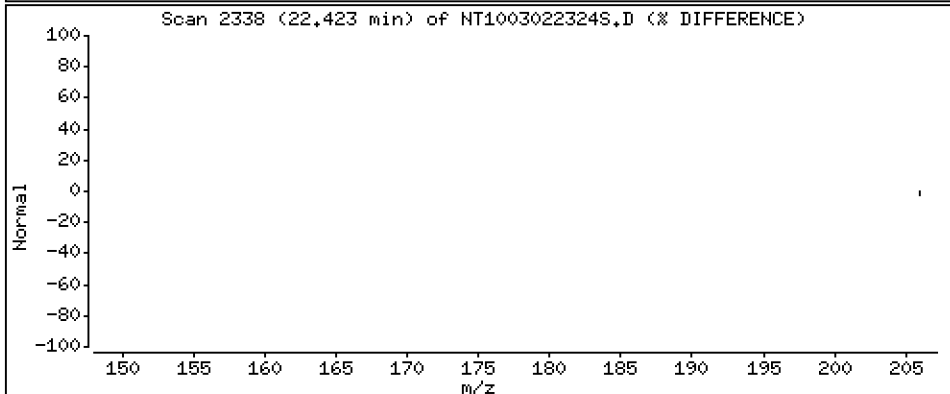
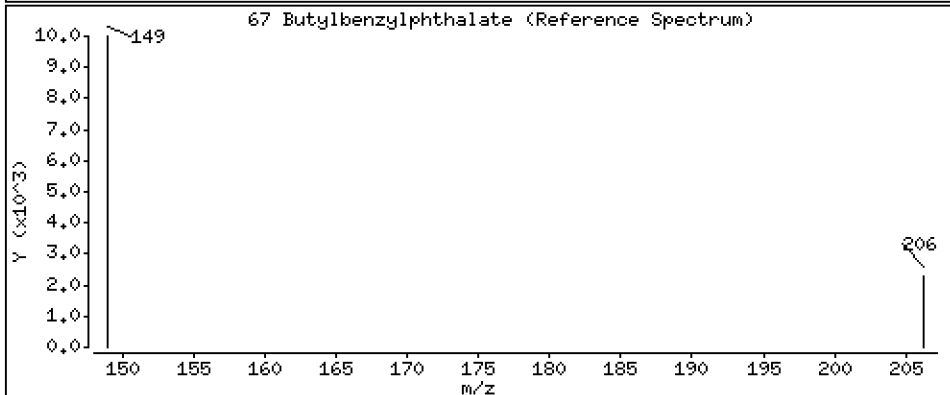
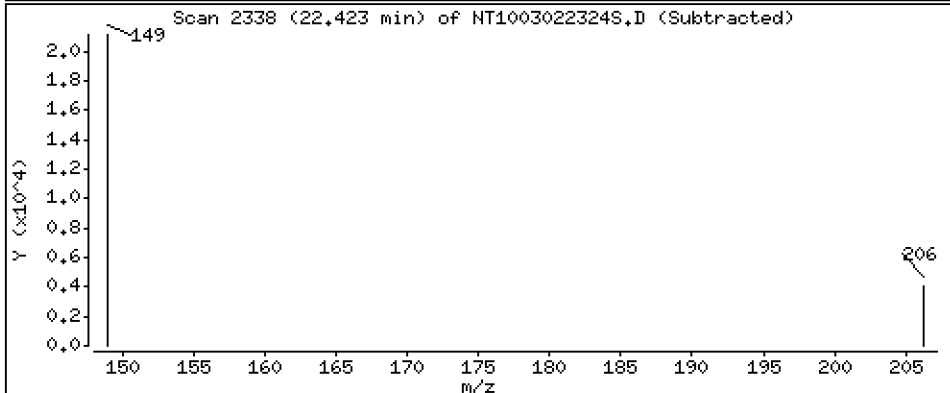
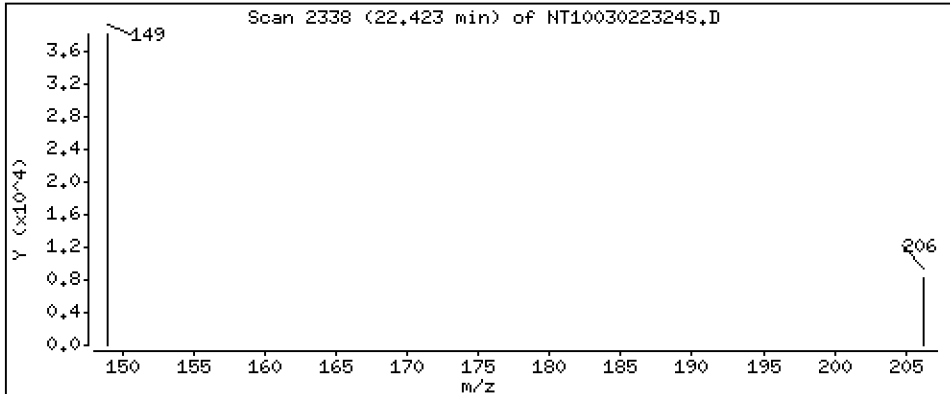
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.08622 ug/L



Date : 03-MAR-2023 04:58

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-09

Volume Injected (uL): 1.0

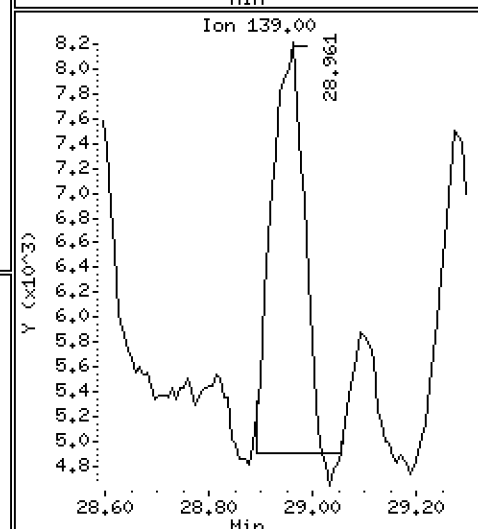
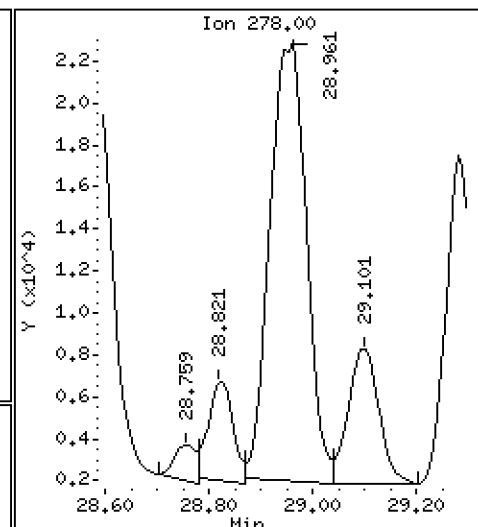
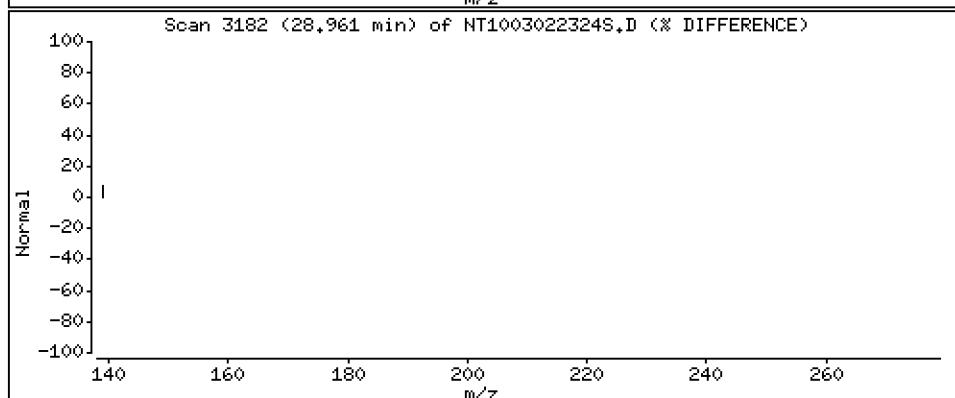
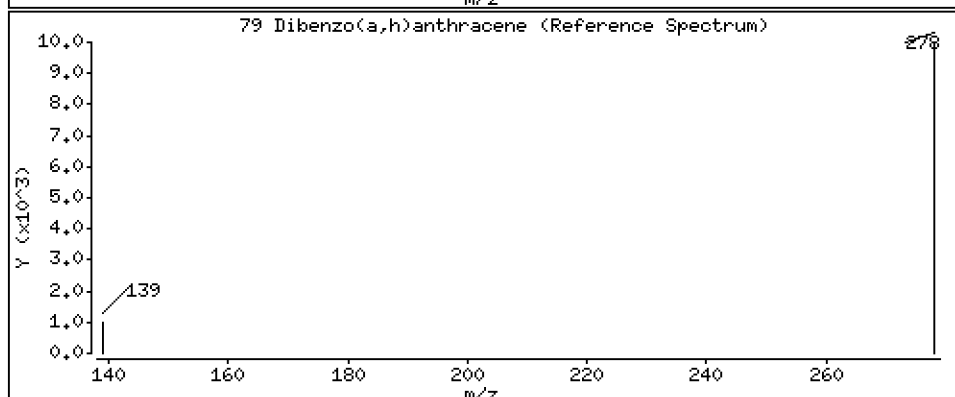
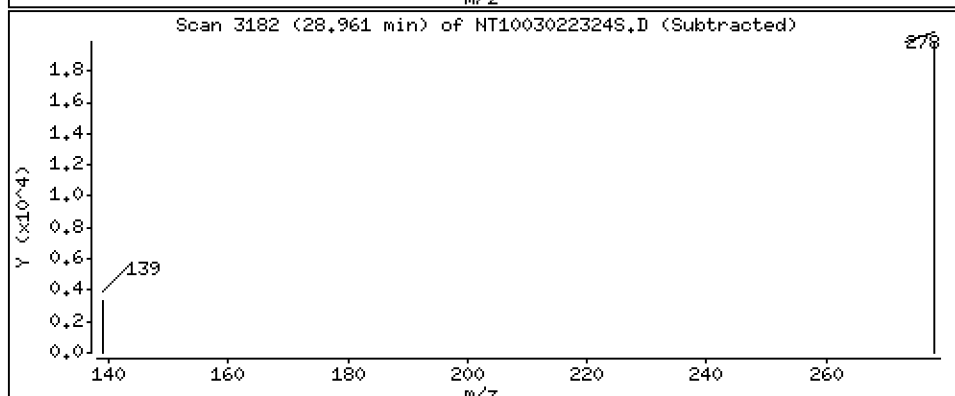
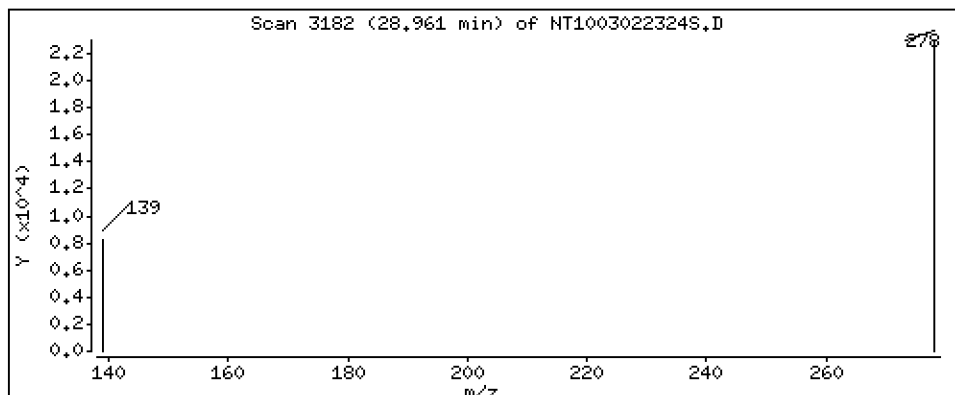
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1850 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022324S.D  
 Lab Smp Id: 23A0206-09  
 Inj Date : 03-MAR-2023 04:58 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-09  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 20  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1047935	6.68030	6.680 (R)
3 Phenol	94		8.532	8.525 (0.922)		3010812	12.1583	12.16
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		549466	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	79		9.484	9.477 (1.025)		56522	0.43838	0.4384
12 1,2-Dichlorobenzene	146		9.570	9.570 (1.034)		548	0.00288	0.002880
13 2-Methylphenol	108		9.671	9.663 (1.045)		6827	0.04907	0.04907
15 4-Methylphenol	108		9.958	9.950 (1.076)		28980	0.19997	0.2000
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		10.997	11.006 (0.938)		3607	0.02127	0.02127 (M)
24 Benzoic acid	105		11.142	11.082 (0.950)		51290	0.55030	0.5503
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		395	0.00275	0.002746
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		1998569	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		22376	0.07184	0.07184
* 42 Acenaphthene-d10	162		15.321	15.321 (1.000)		980914	4.00000	
50 Diethylphthalate	149		16.210	16.210 (1.058)		150687	0.51303	0.5130
54 N-Nitrosodiphenylamine	169		Compound Not Detected.					
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	1908297	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	979443	5.49282	5.493(R)
67 Butylbenzylphthalate	149	22.422	22.414	(0.957)	32093	0.08622	0.08622
* 69 Chrysene-d12	240	23.437	23.429	(1.000)	2205026	4.00000	
* 77 Perylene-d12	264	26.139	26.123	(1.000)	2392354	4.00000	
79 Dibenzo(a,h)anthracene	278	28.961	28.945	(1.108)	102770	0.18505	0.1850
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022324S.D  
 Lab Smp Id: 23A0206-09  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	549466	-15.78
27 Naphthalene-d8	2339966	1169983	4679932	1998569	-14.59
42 Acenaphthene-d10	1186988	593494	2373976	980914	-17.36
59 Phenanthrene-d10	2193485	1096743	4386970	1908297	-13.00
69 Chrysene-d12	2444828	1222414	4889656	2205026	-9.81
77 Perylene-d12	2842248	1421124	5684496	2392354	-15.83

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.12	25.62	26.62	26.14	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022324S.D

Lab ID: 23A0206-09

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 04:58

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.945	0.0051	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

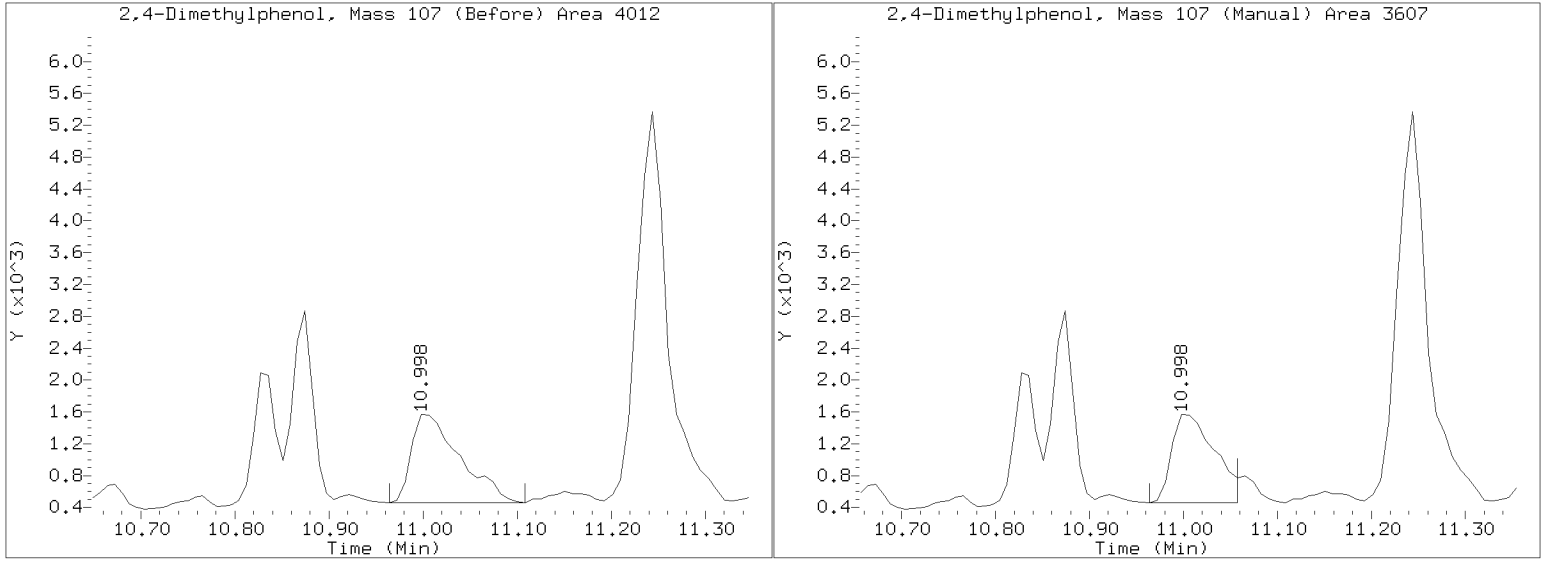
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022324S.D  
Injection Date: 03-MAR-2023 04:58  
Lab ID:23A0206-09 Client ID:  
Report Date: 03/11/2023 06:37





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-10 B

SDG: 23A0206

Sampled: 01/11/23 11:28

Prepared: 01/27/23 14:44

File ID: NT1003022329S.D

% Solids: 42.92

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:08

Batch: BLA0624

Sequence: SLC0159

Initial/Final: 23.38 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

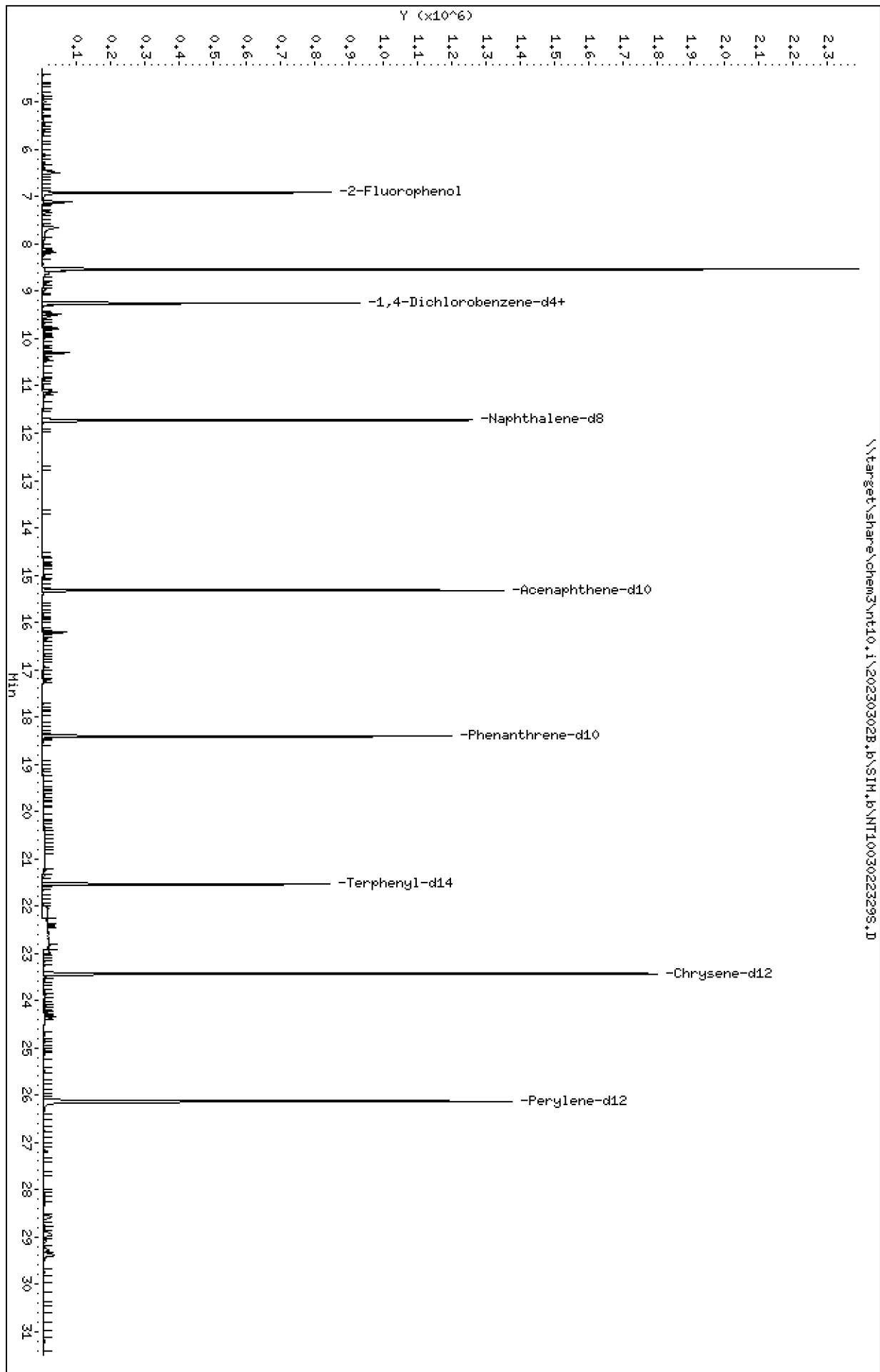
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	42.4		2.5	19.9
65-85-0	Benzoic acid	1	86.6	J	13.4	99.7
105-67-9	2,4-Dimethylphenol	1	19.9	U	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.9	U	2.1	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.41	628	84.0	27 - 120	
p-Terphenyl-d14	498.27	529	106	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022329S.D  
Date: 03-MAR-2023 08:08  
Client ID:  
Sample Info: 23A0206-10  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022329S.D



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

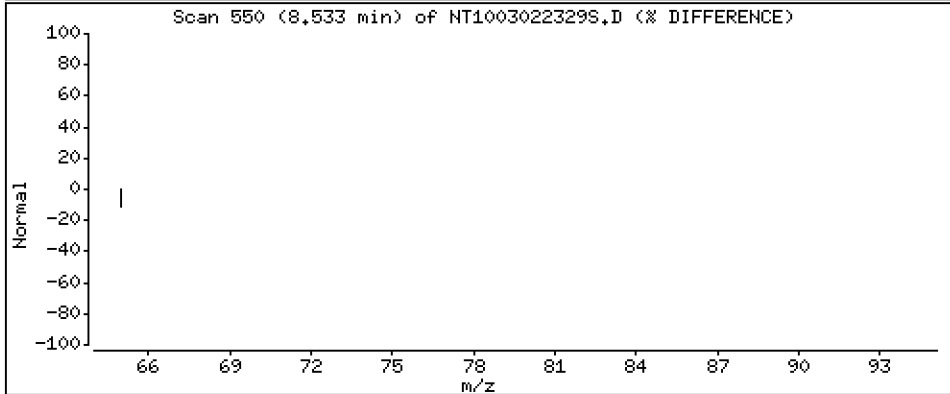
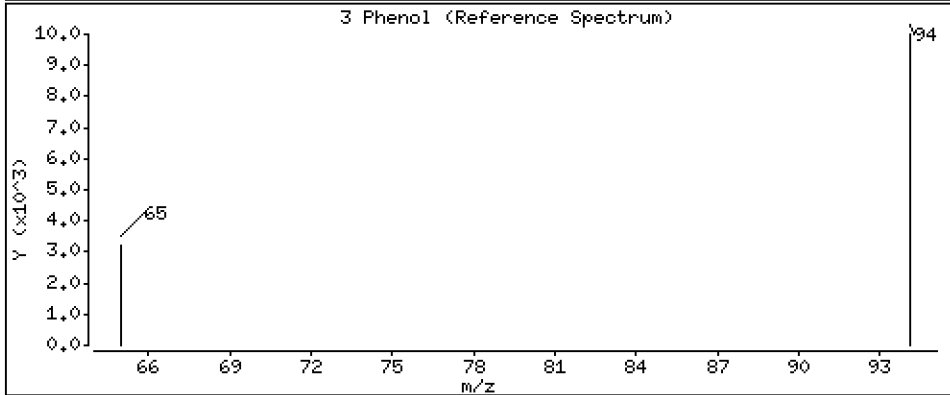
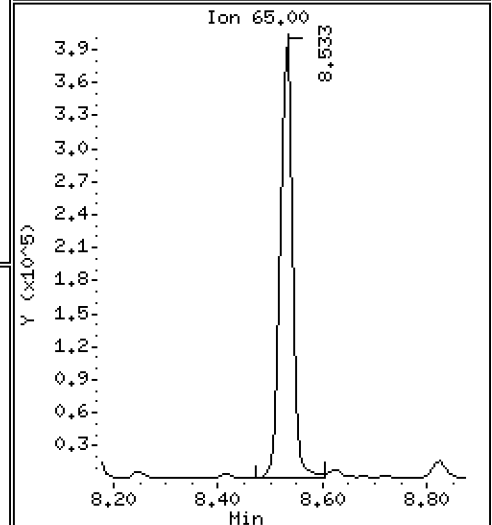
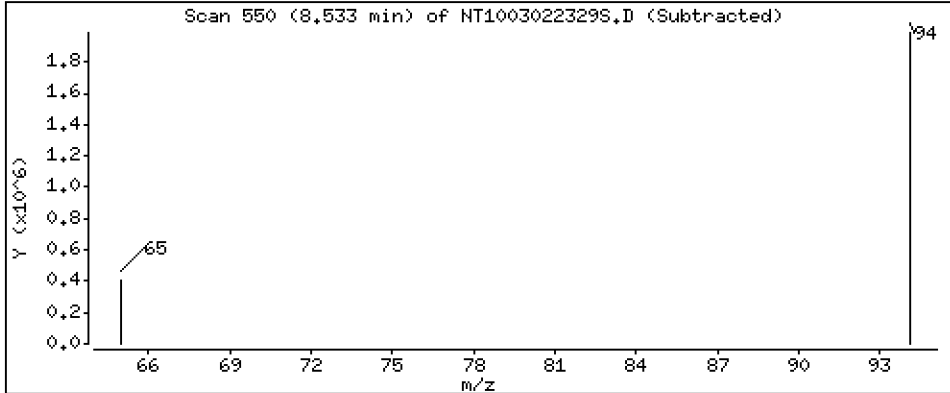
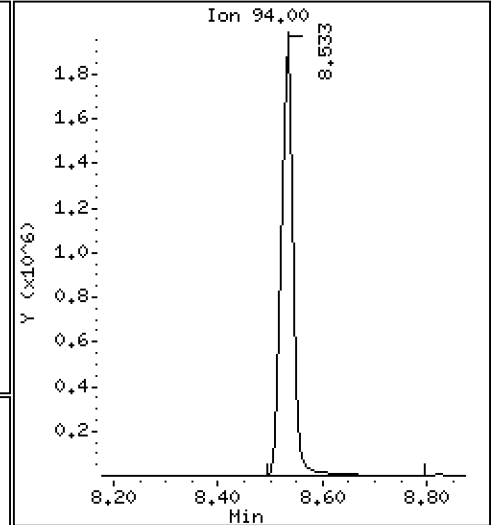
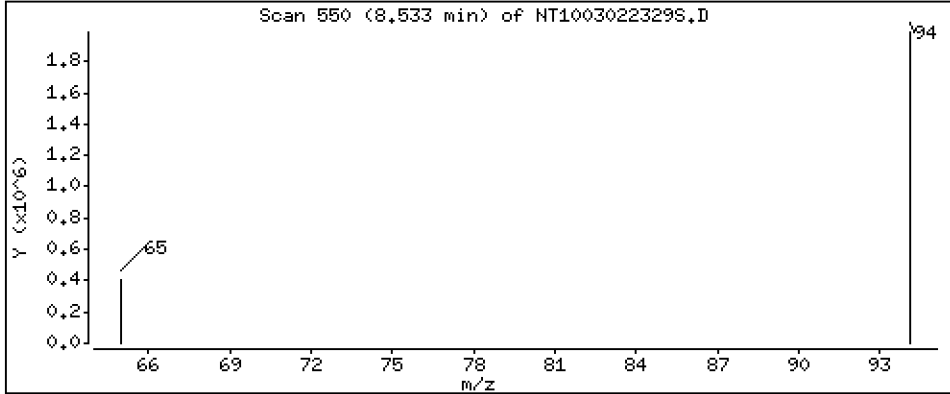
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 12.01 ug/L





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

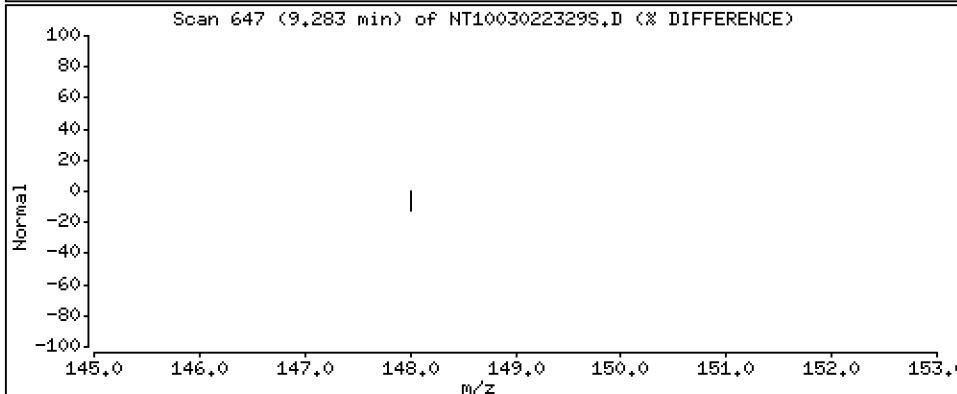
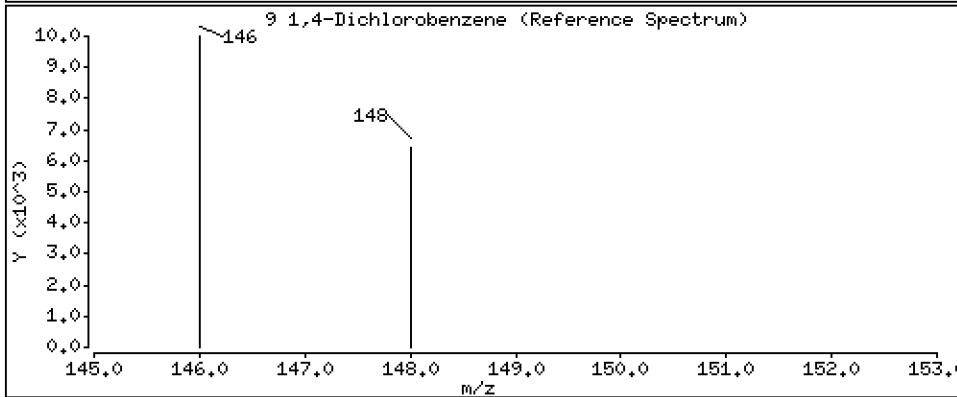
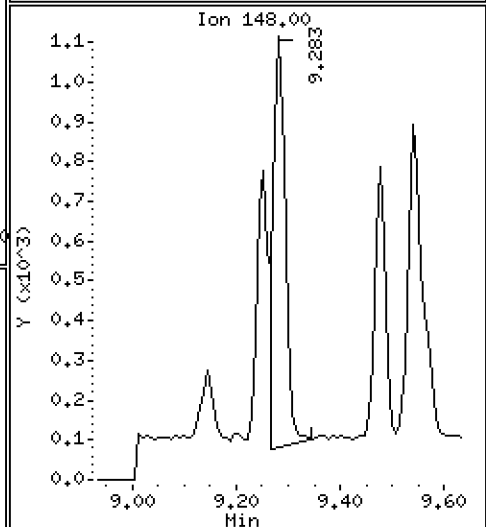
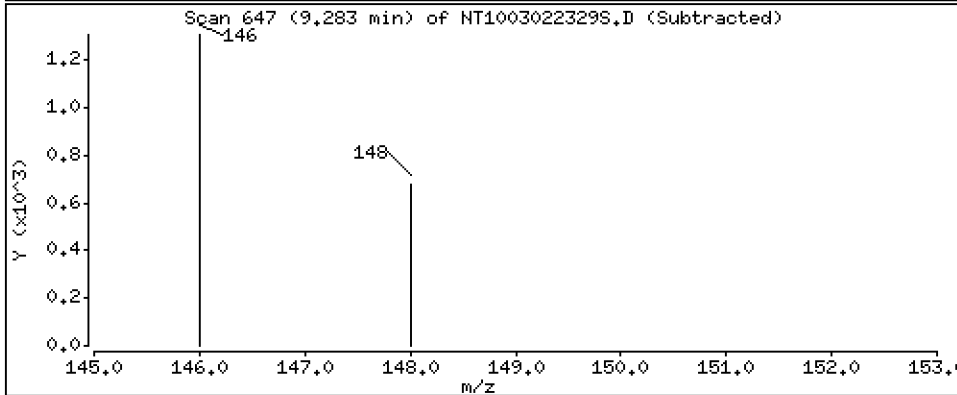
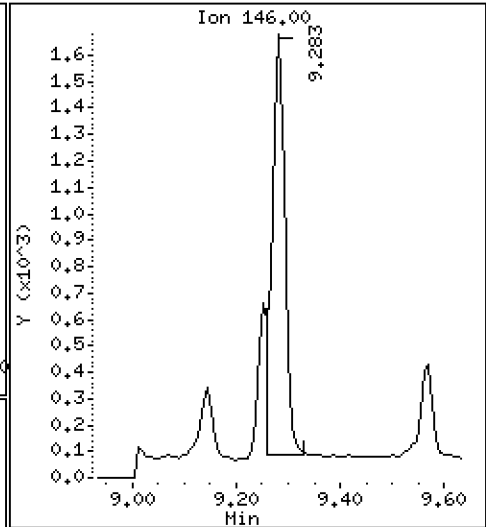
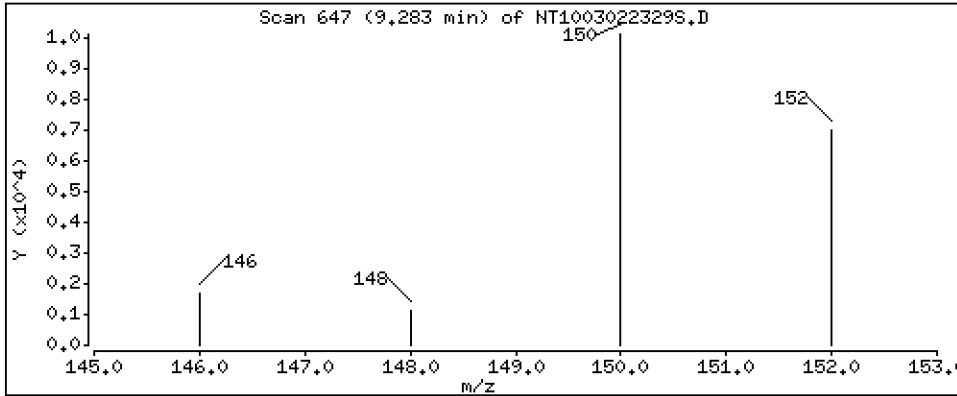
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.01320 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

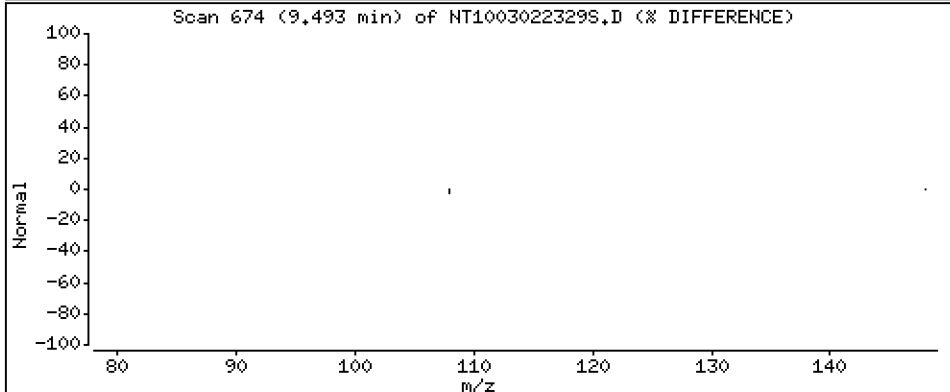
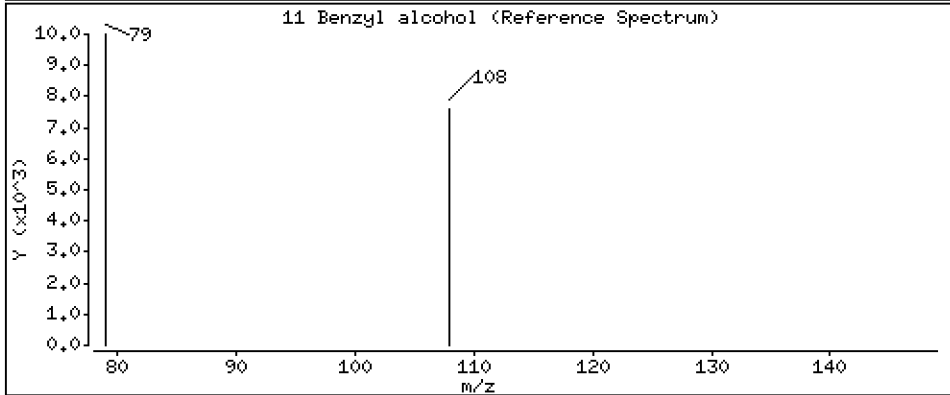
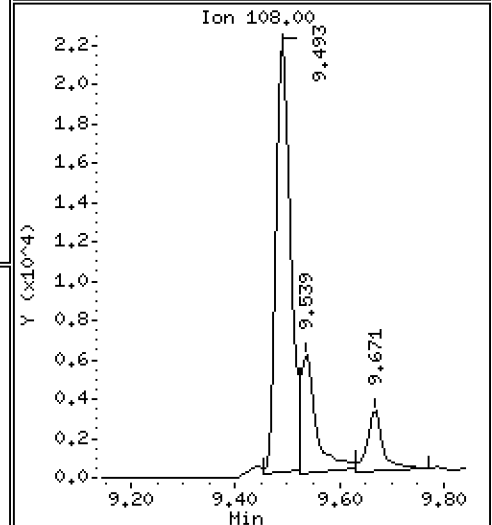
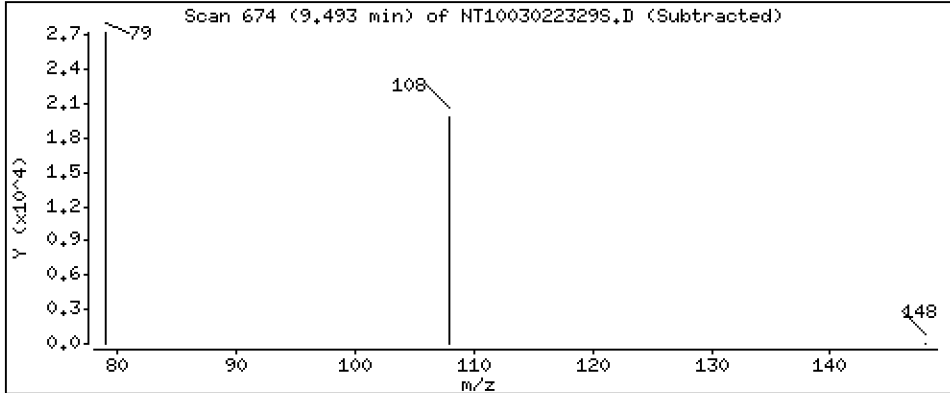
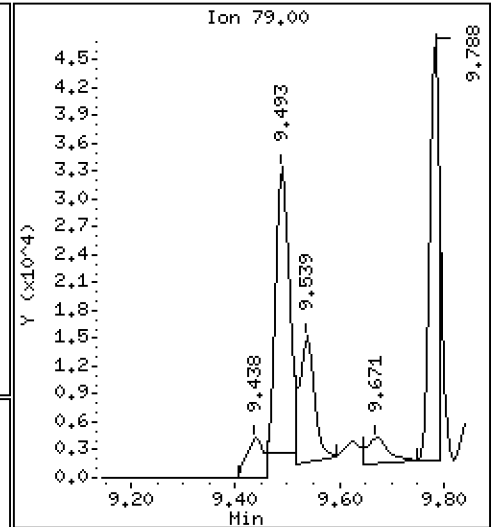
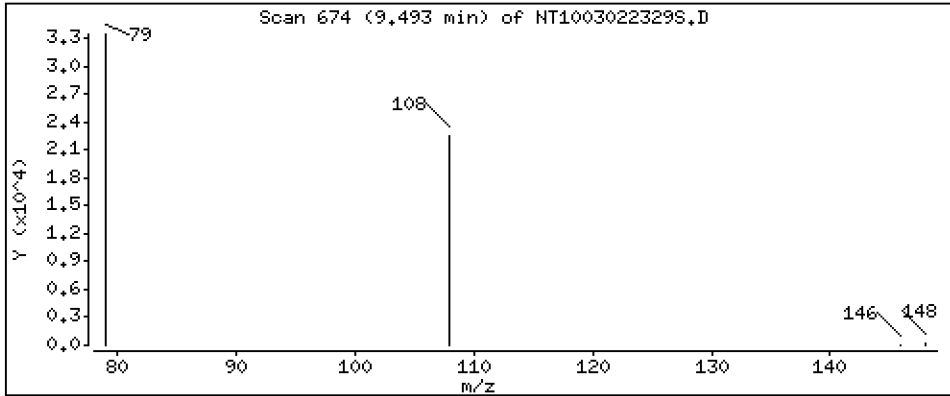
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.4255 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

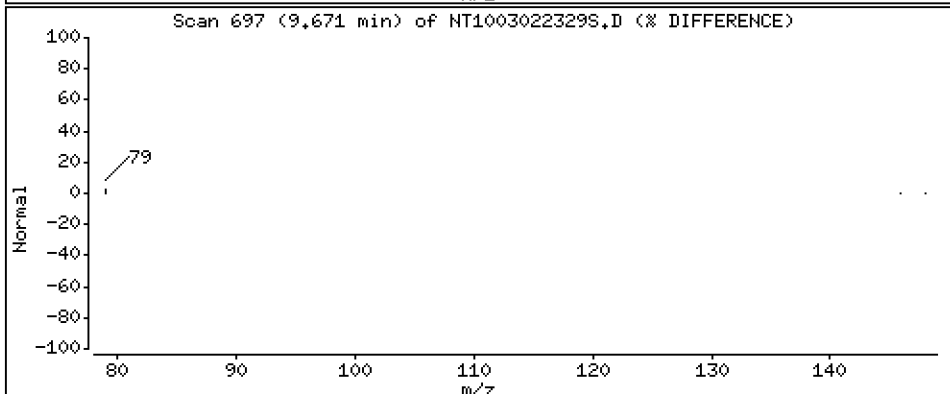
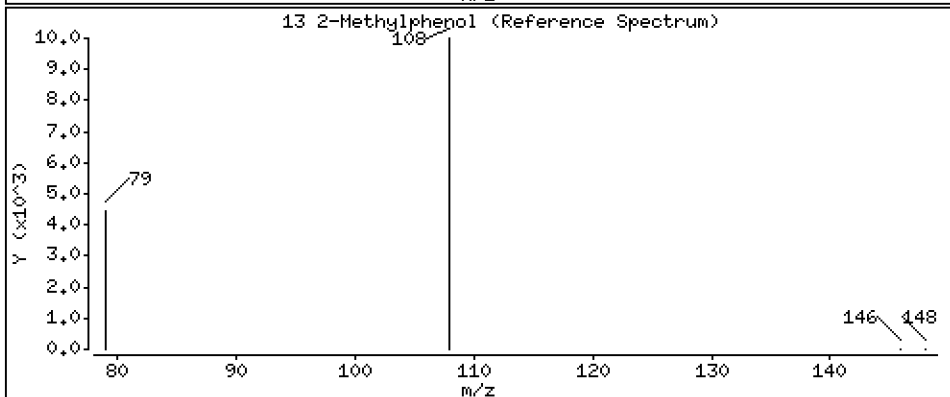
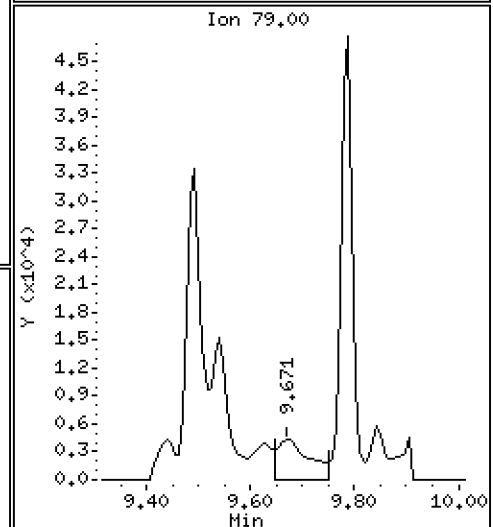
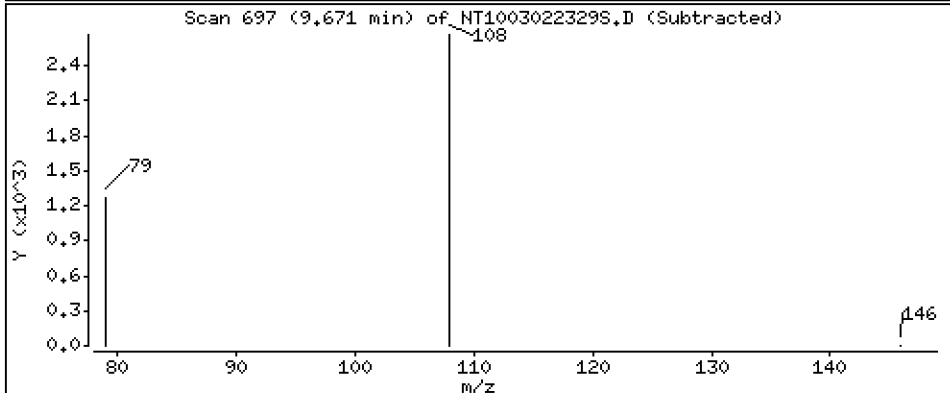
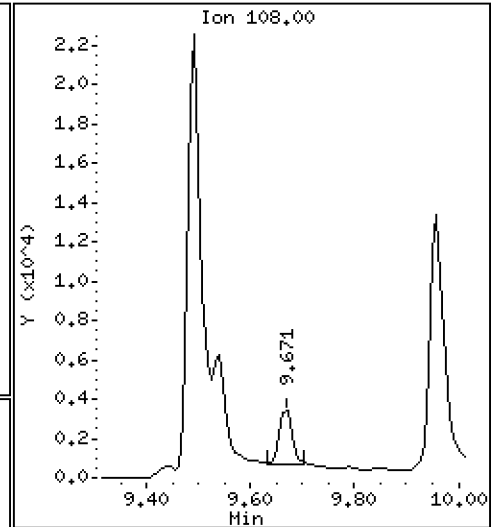
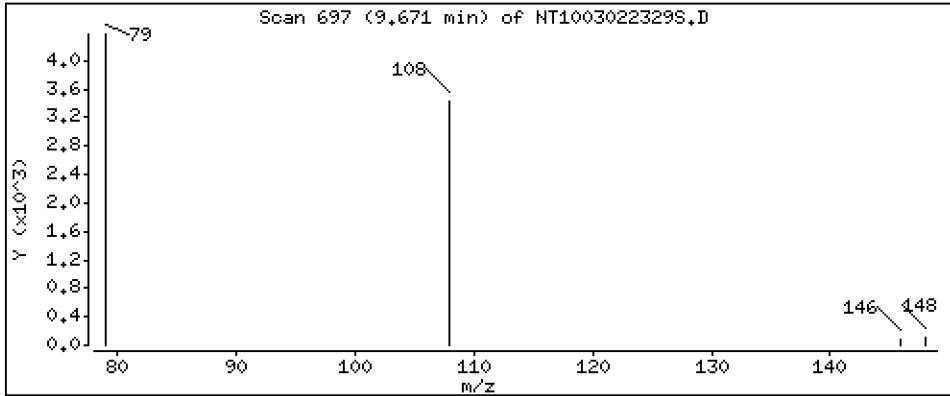
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.03322 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

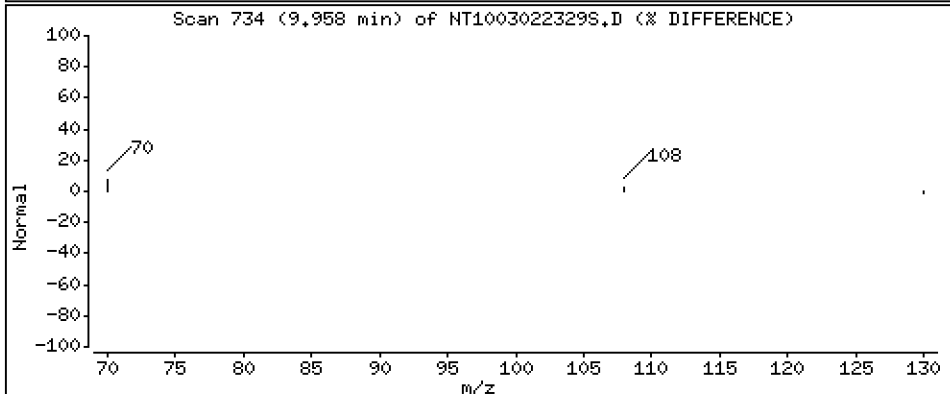
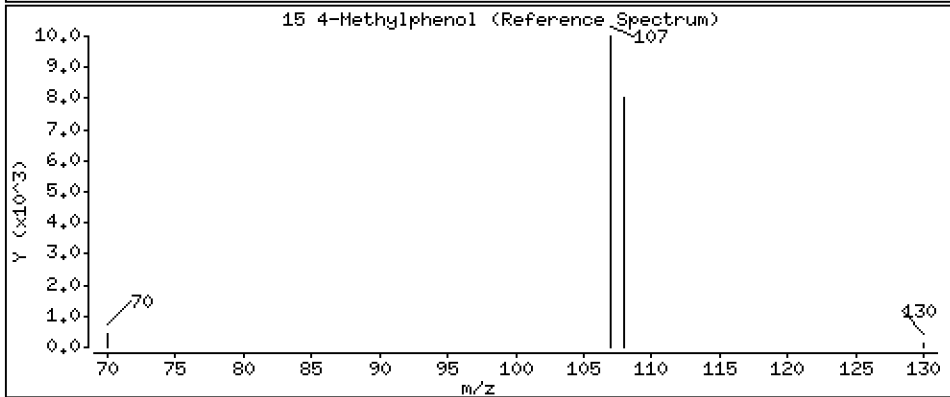
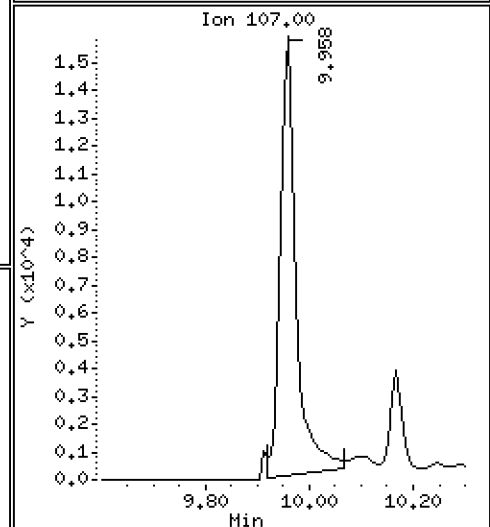
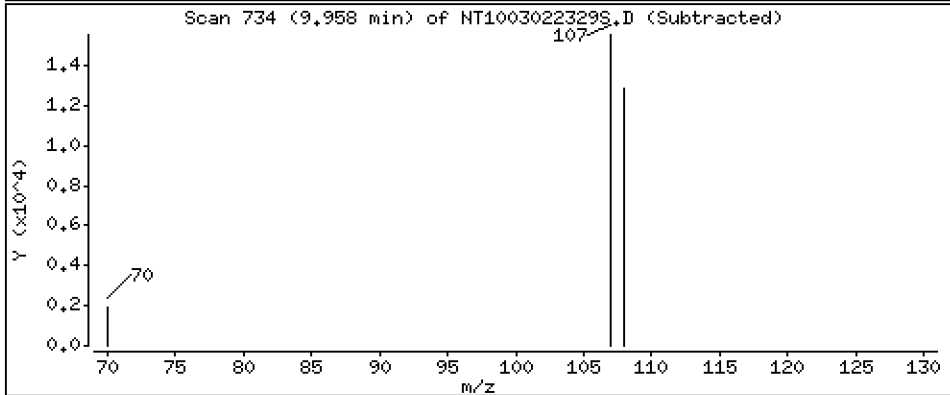
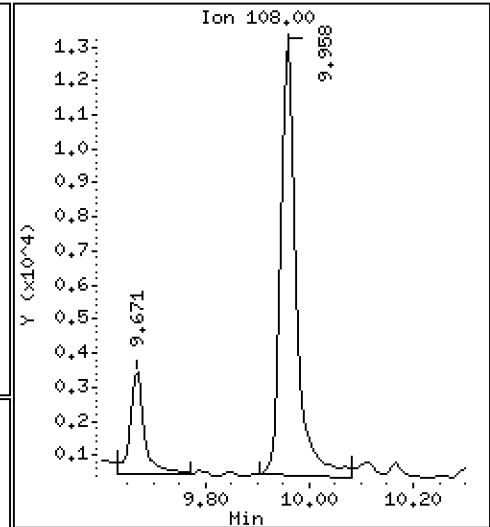
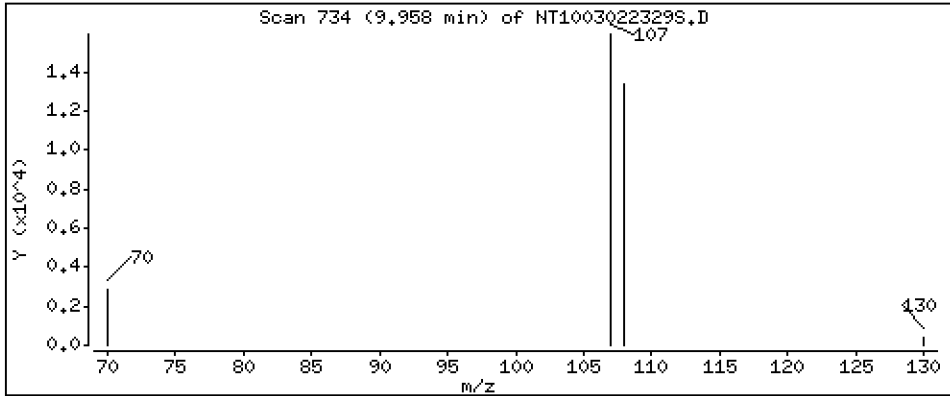
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1820 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

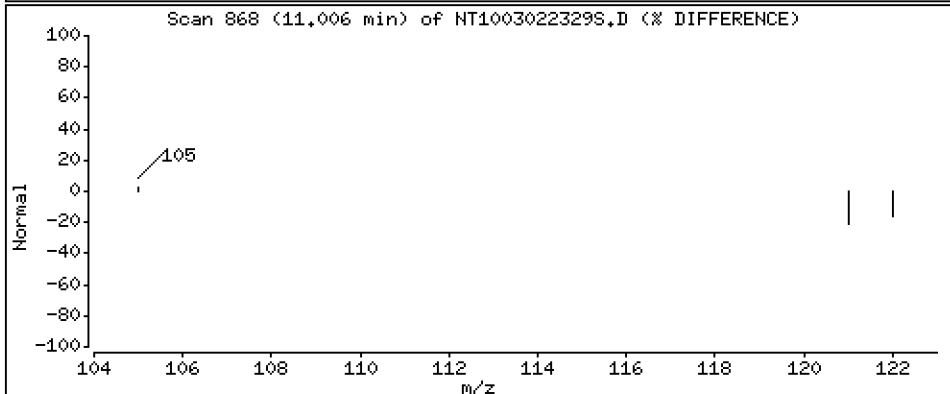
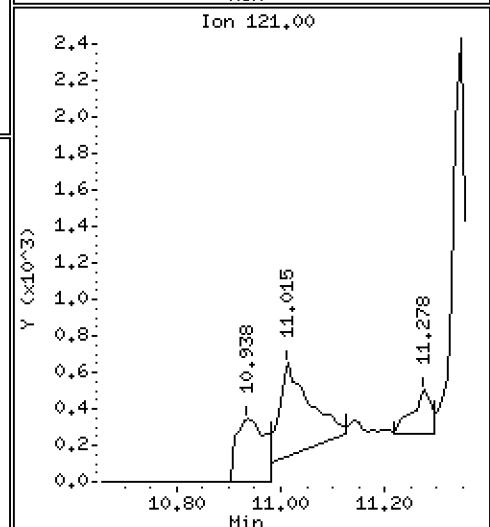
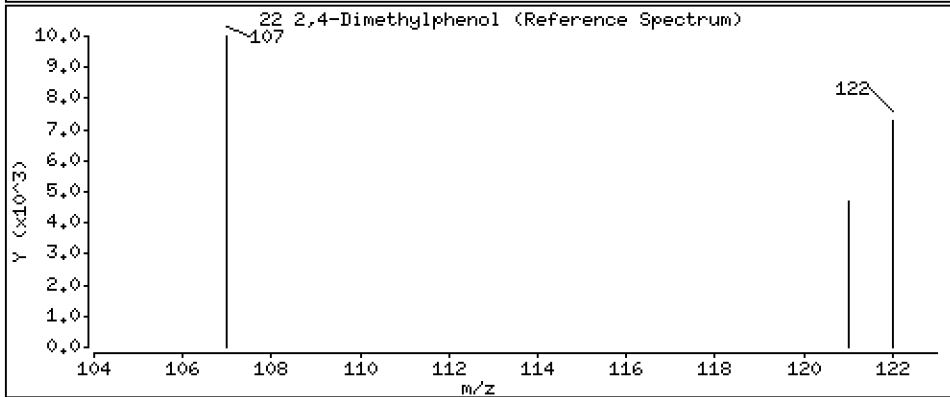
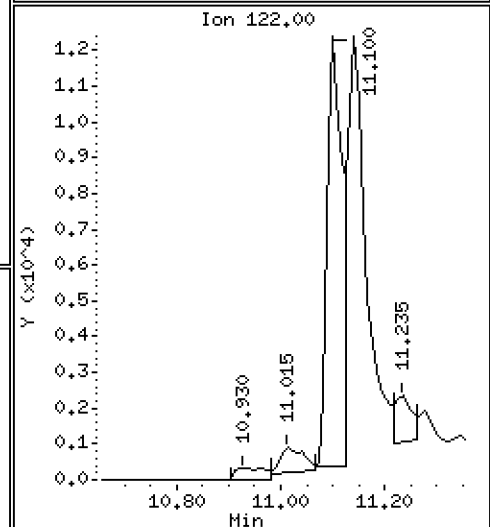
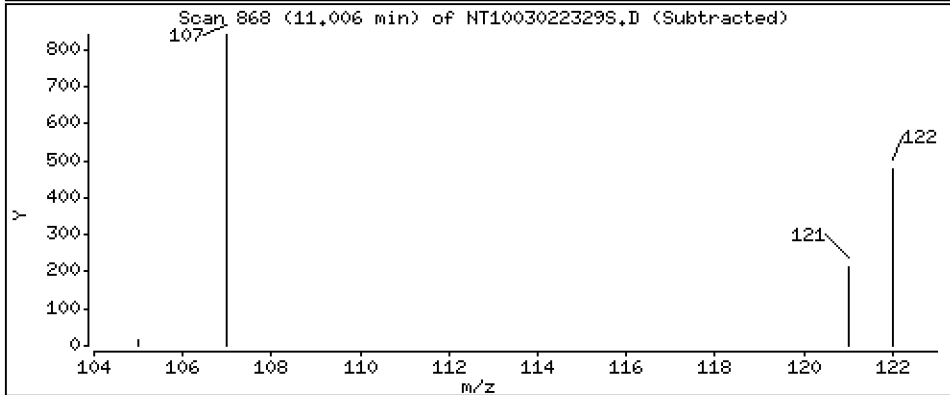
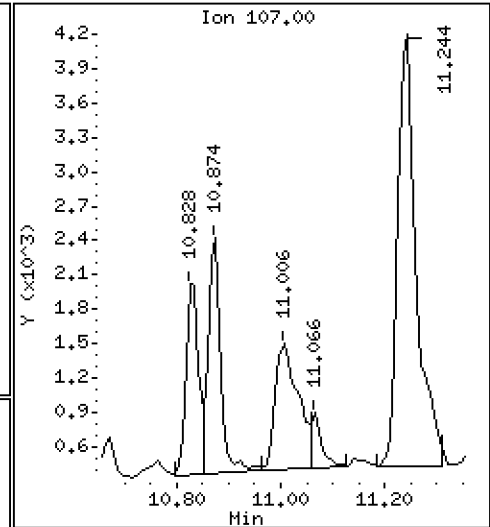
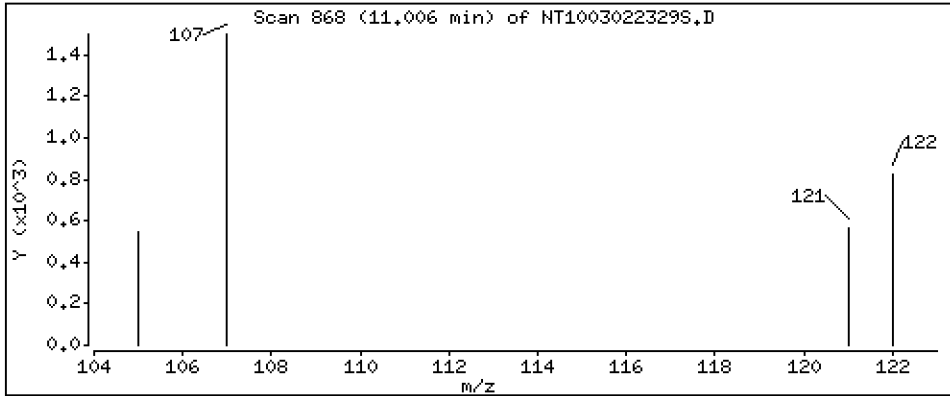
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.02086 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

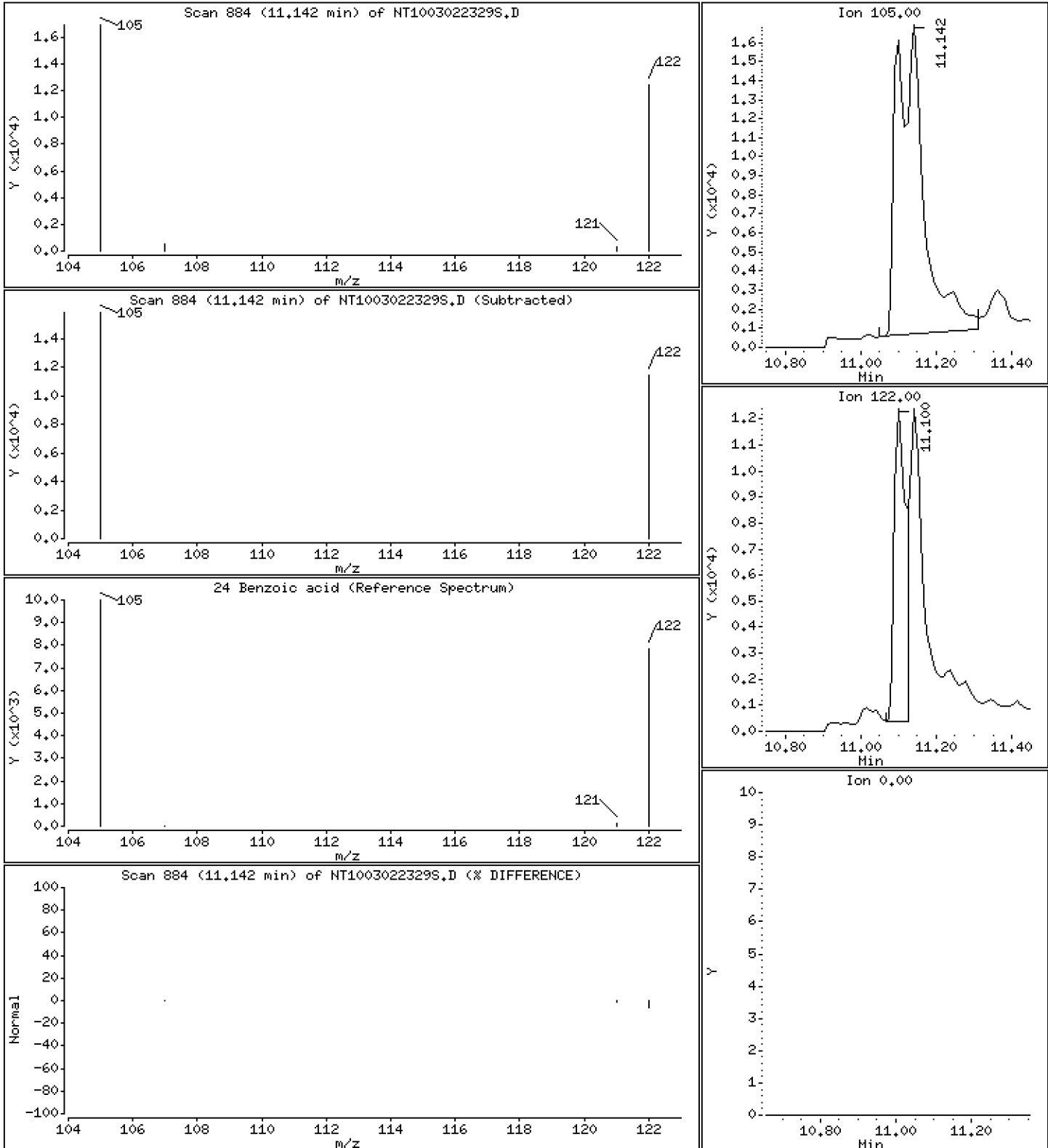
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.8689 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

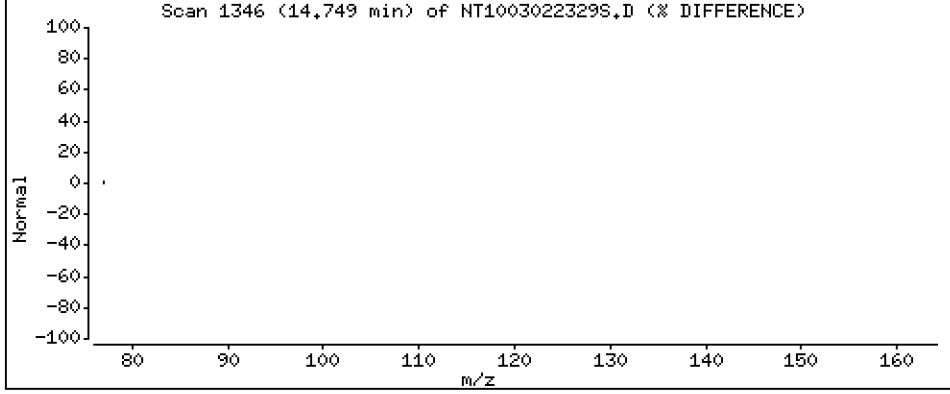
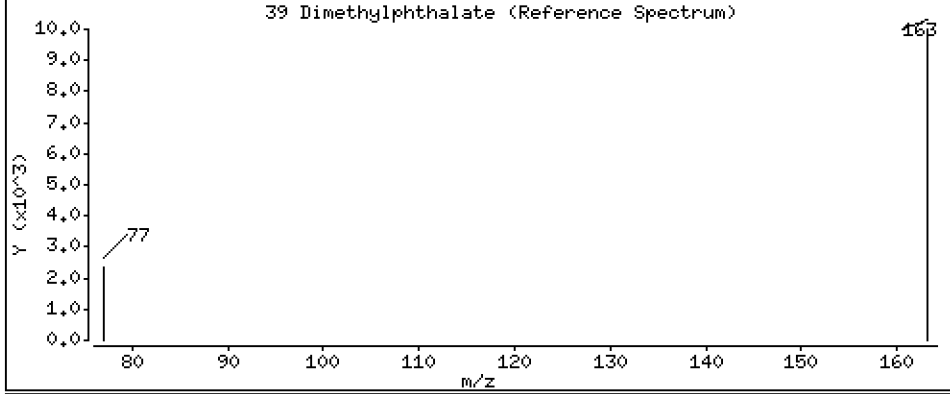
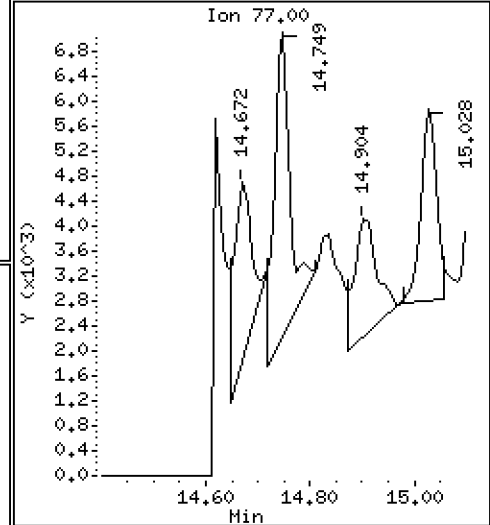
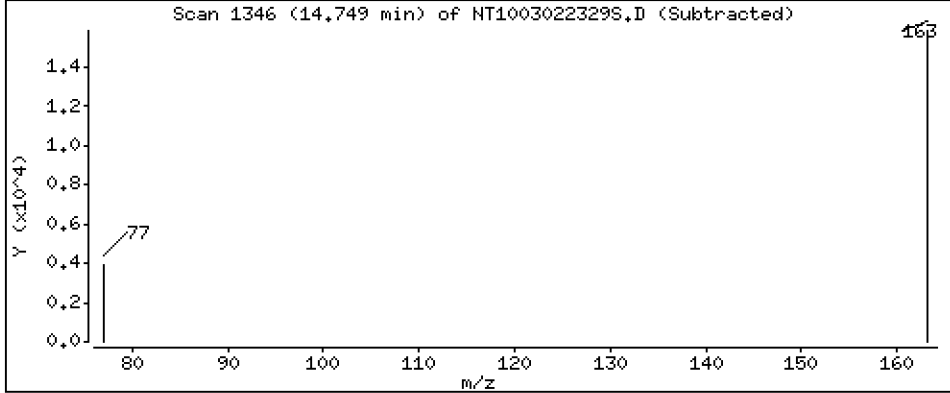
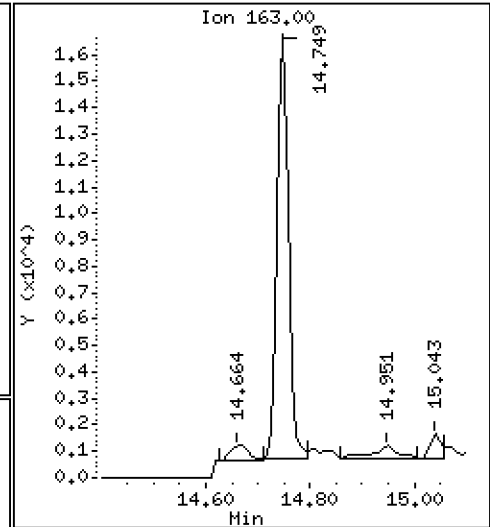
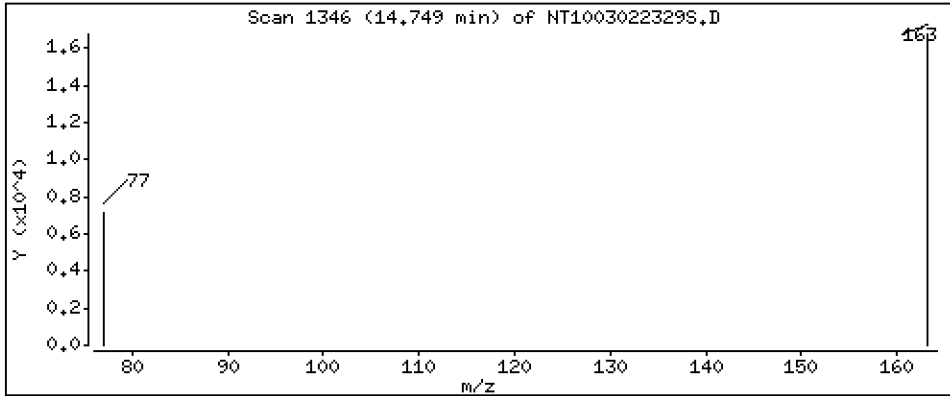
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,07263 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

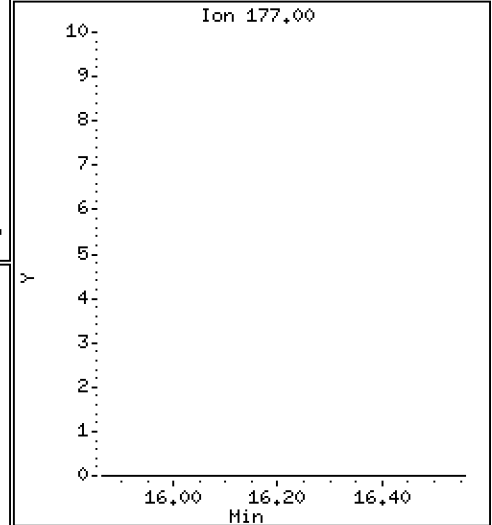
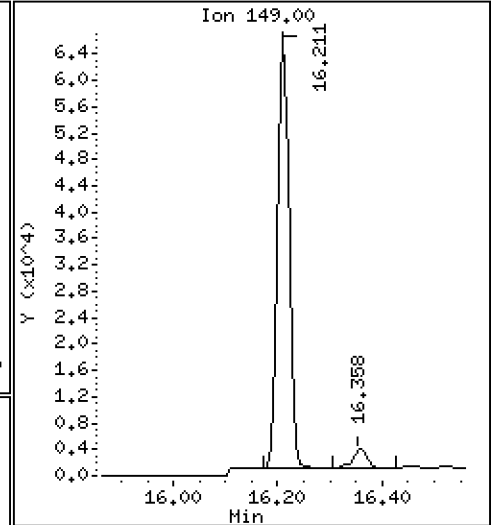
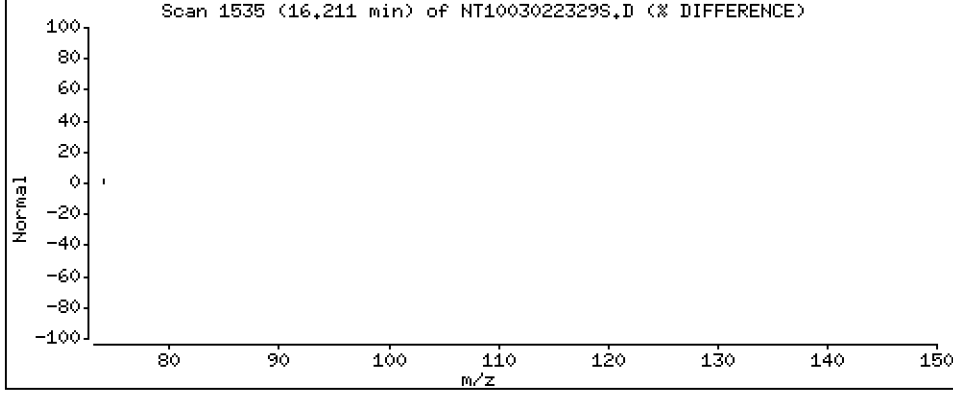
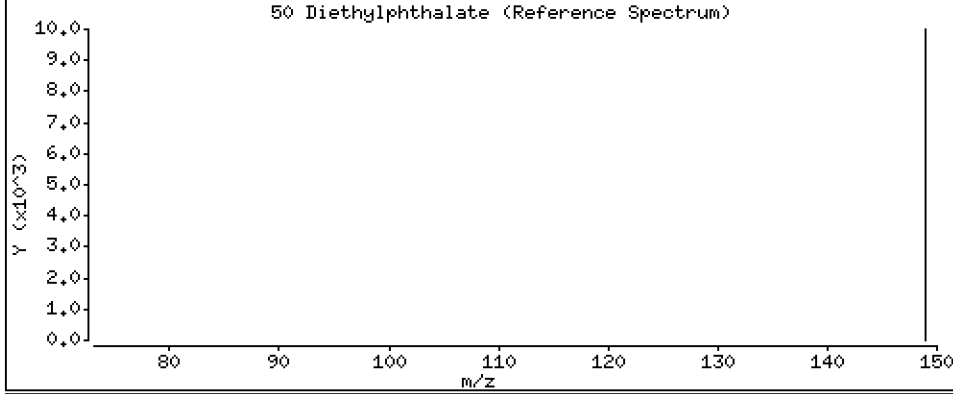
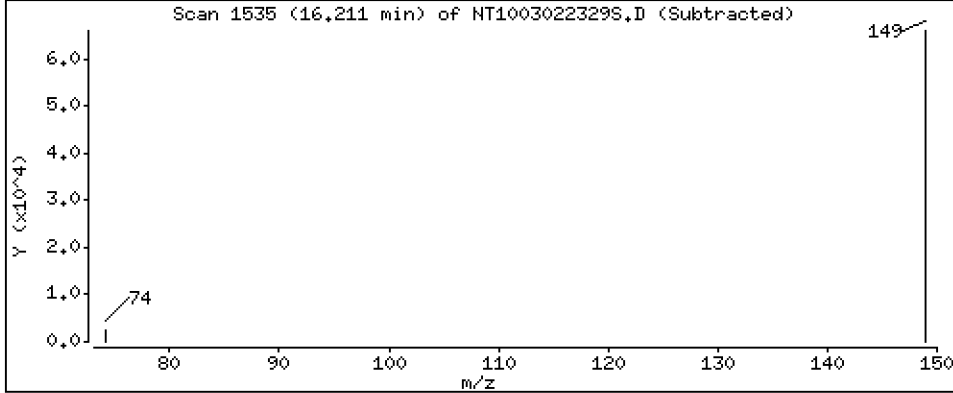
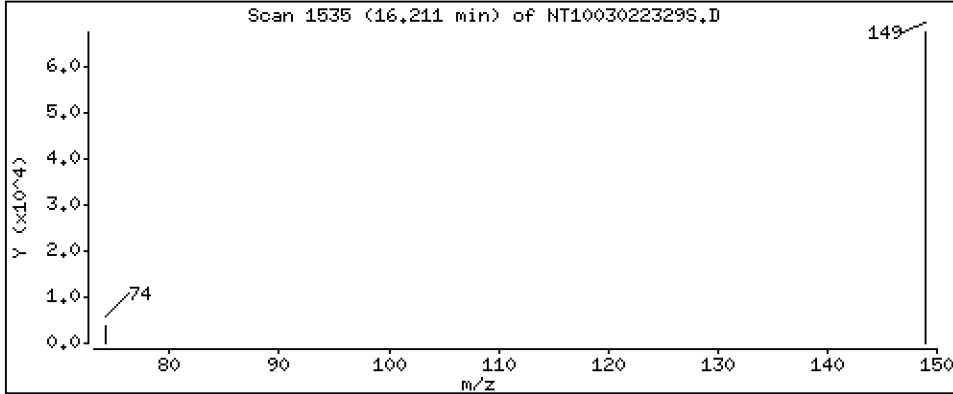
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,3157 ug/L





Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

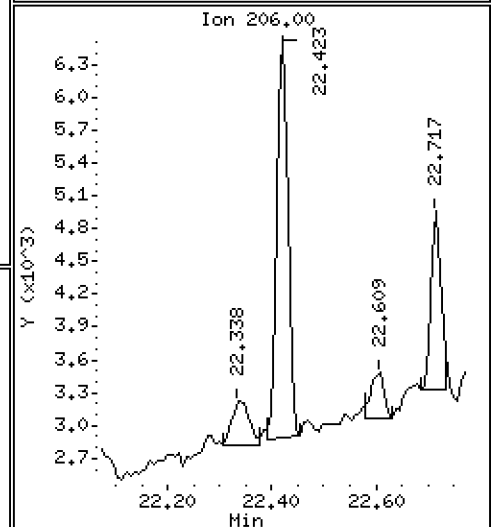
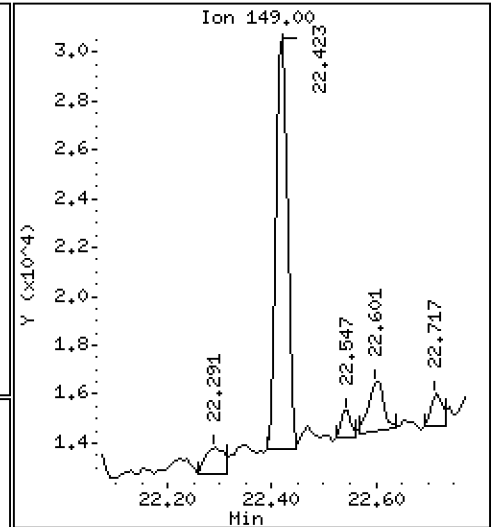
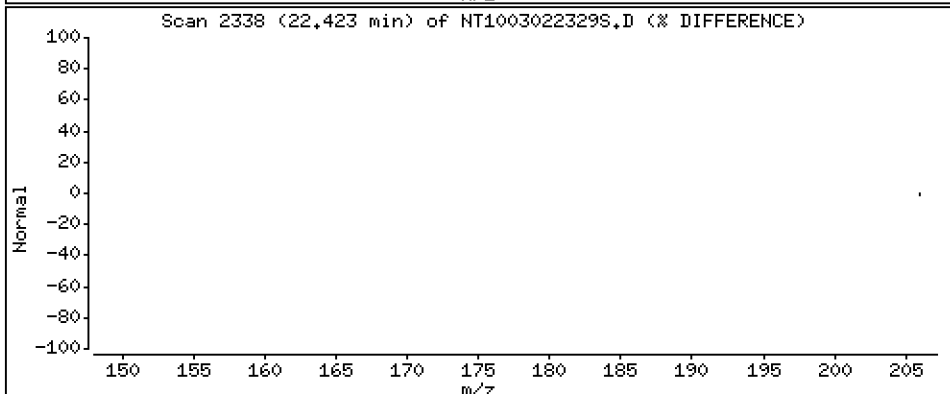
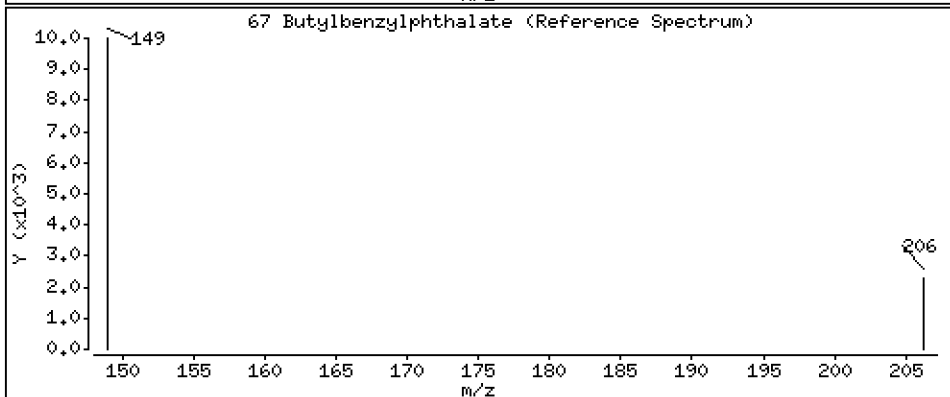
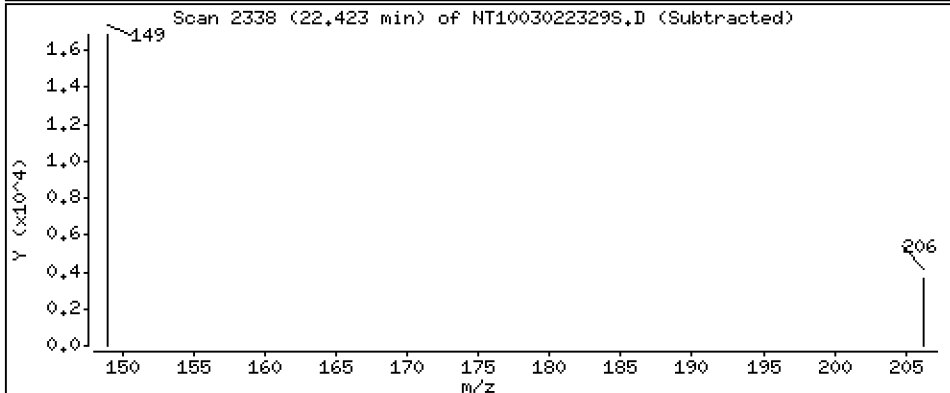
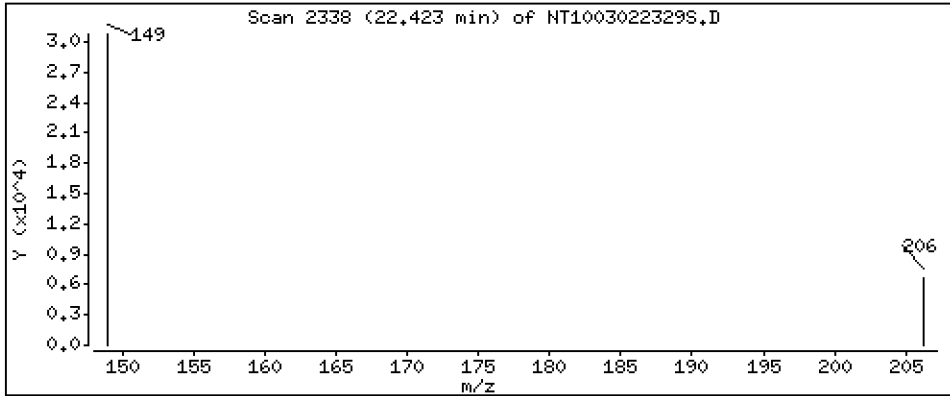
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.06387 ug/L



Date : 03-MAR-2023 08:08

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-10

Volume Injected (uL): 1.0

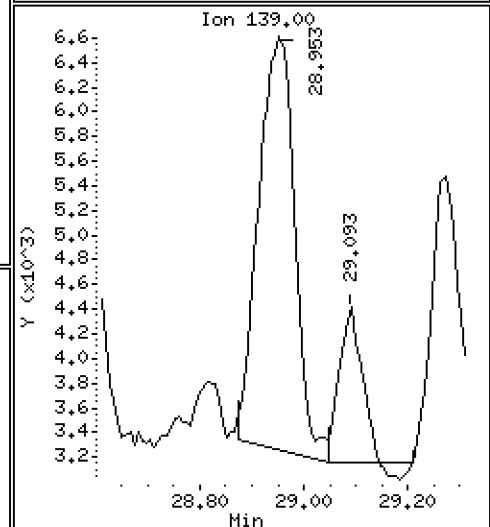
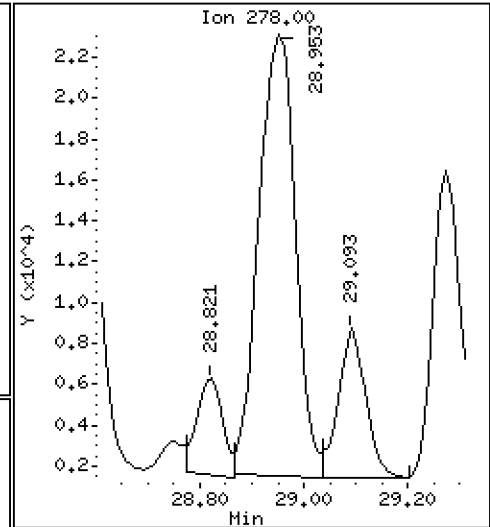
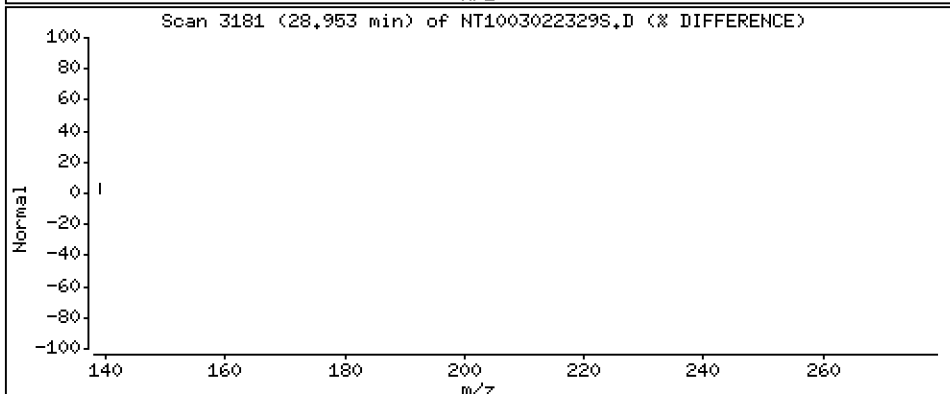
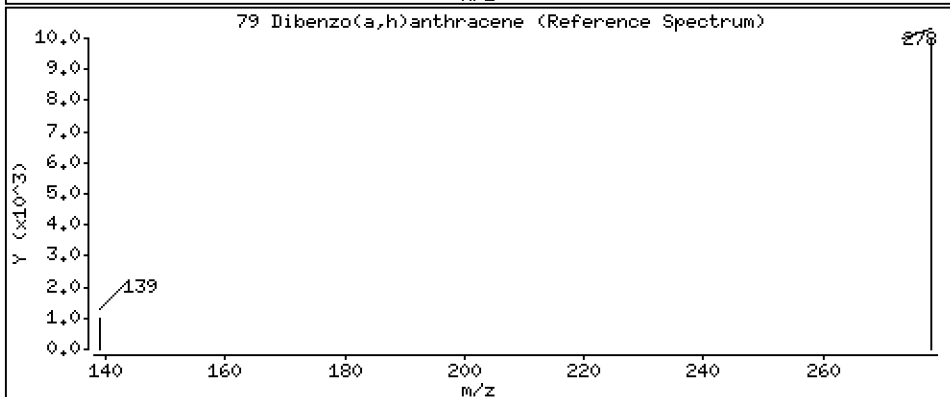
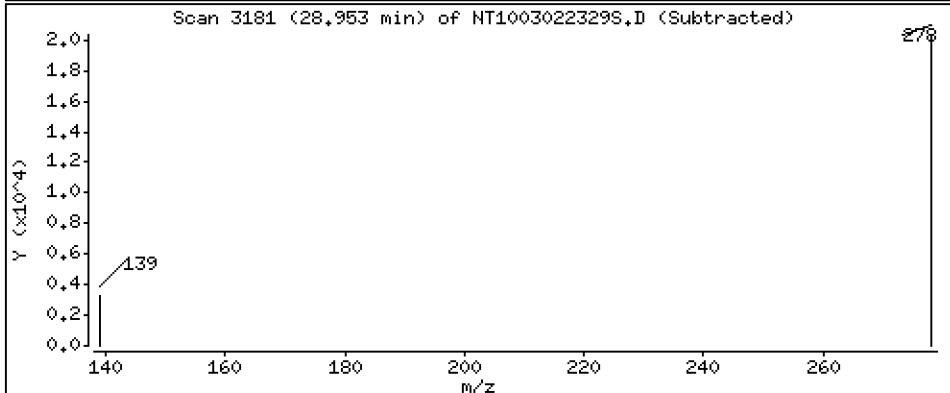
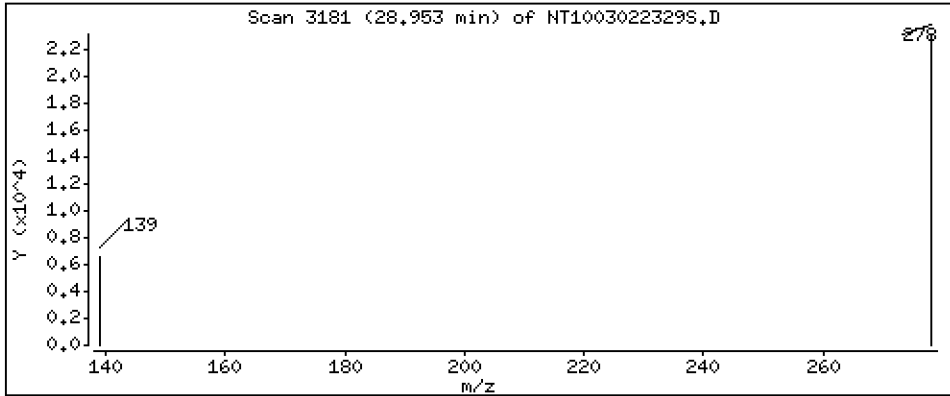
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1762 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022329S.D  
 Lab Smp Id: 23A0206-10  
 Inj Date : 03-MAR-2023 08:08 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-10  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 21  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902	(0.747)	991949	6.30111	6.301 (R)	
3 Phenol	94		8.532	8.525	(0.922)	2981611	12.0091	12.01	
7 1,3-Dichlorobenzene	146					Compound Not Detected.			
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	551410	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	2623	0.01320	0.01320 (M)	
11 Benzyl alcohol	79		9.492	9.492	(1.026)	55045	0.42549	0.4255	
12 1,2-Dichlorobenzene	146					Compound Not Detected.			
13 2-Methylphenol	108		9.671	9.663	(1.045)	4637	0.03322	0.03322 (M)	
15 4-Methylphenol	108		9.958	9.950	(1.076)	26459	0.18197	0.1820	
16 N-Nitroso-di-n-propylamine	70					Compound Not Detected.			
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	3523	0.02086	0.02086	
24 Benzoic acid	105		11.142	11.099	(0.950)	80793	0.86893	0.8689 (M)	
26 1,2,4-Trichlorobenzene	180					Compound Not Detected.			
* 27 Naphthalene-d8	136		11.723	11.731	(1.000)	1990578	4.00000		
30 Hexachlorobutadiene	225					Compound Not Detected.			
39 Dimethylphthalate	163		14.749	14.749	(0.963)	22927	0.07263	0.07263	
* 42 Acenaphthene-d10	162		15.321	15.321	(1.000)	994141	4.00000		
50 Diethylphthalate	149		16.210	16.210	(1.058)	93965	0.31566	0.3157	
54 N-Nitrosodiphenylamine	169					Compound Not Detected.			
57 Hexachlorobenzene	284					Compound Not Detected.			

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		Compound Not Detected.					
* 59 Phenanthrene-d10	188		18.414	18.414	(1.000)	1957092	4.00000	
\$ 66 Terphenyl-d14	244		21.540	21.532	(0.919)	979587	5.31021	5.310(R)
67 Butylbenzylphthalate	149		22.422	22.422	(0.957)	24599	0.06387	0.06387
* 69 Chrysene-d12	240		23.437	23.429	(1.000)	2281189	4.00000	
* 77 Perylene-d12	264		26.139	26.131	(1.000)	2594335	4.00000	
79 Dibenzo(a,h)anthracene	278		28.953	28.961	(1.108)	106129	0.17624	0.1762
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022329S.D  
 Lab Smp Id: 23A0206-10  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	551410	-11.15
27 Naphthalene-d8	2213509	1106755	4427018	1990578	-10.07
42 Acenaphthene-d10	1093970	546985	2187940	994141	-9.13
59 Phenanthrene-d10	2129840	1064920	4259680	1957092	-8.11
69 Chrysene-d12	2347260	1173630	4694520	2281189	-2.81
77 Perylene-d12	2638390	1319195	5276780	2594335	-1.67

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.13	25.63	26.63	26.14	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022329S.D

Lab ID: 23A0206-10

nt10.i, 20230302B.b\SIM.b\SIMABN2.m,

03-MAR-2023 08:08

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

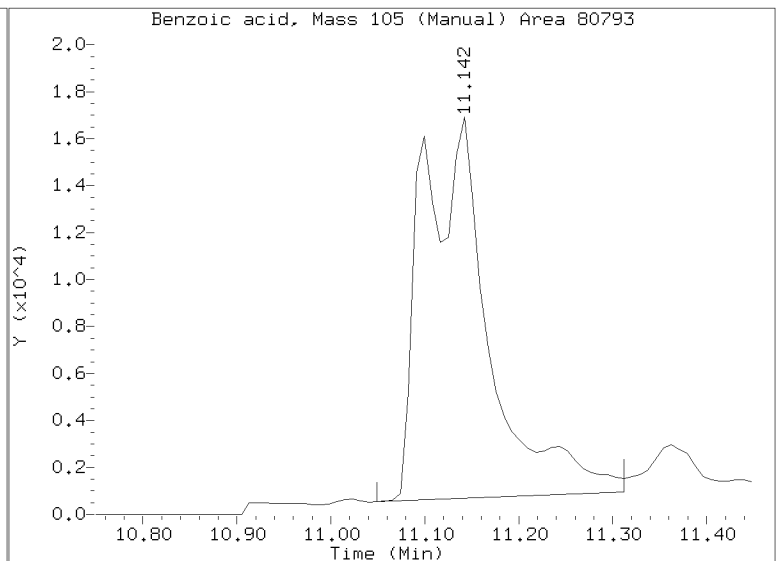
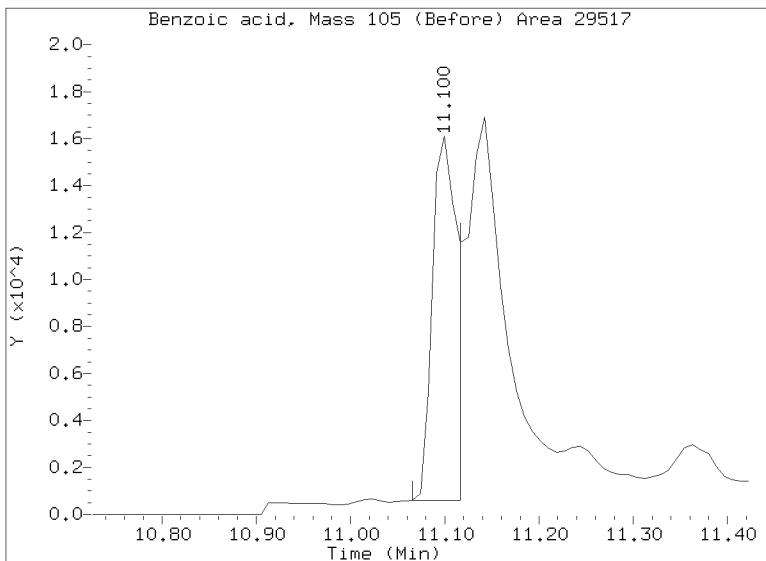
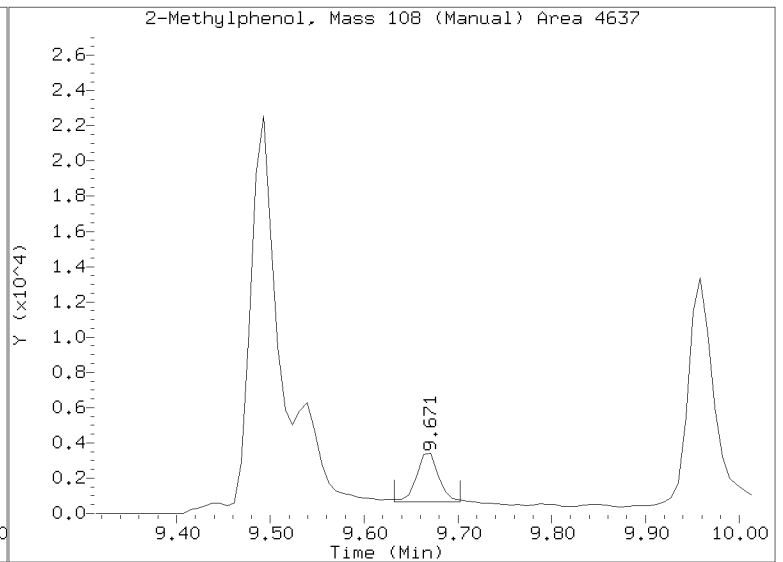
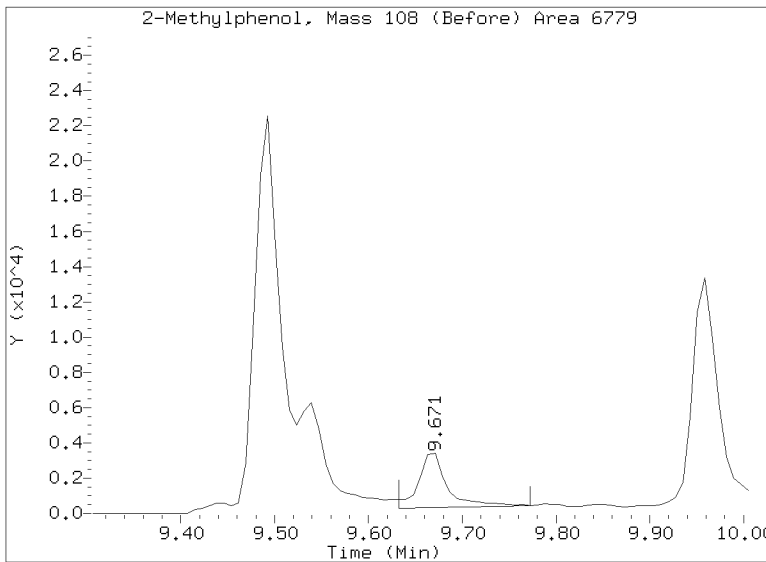
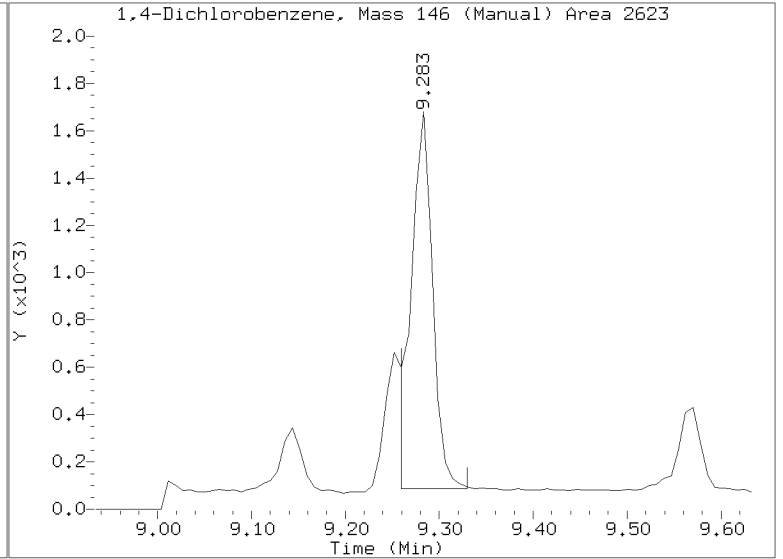
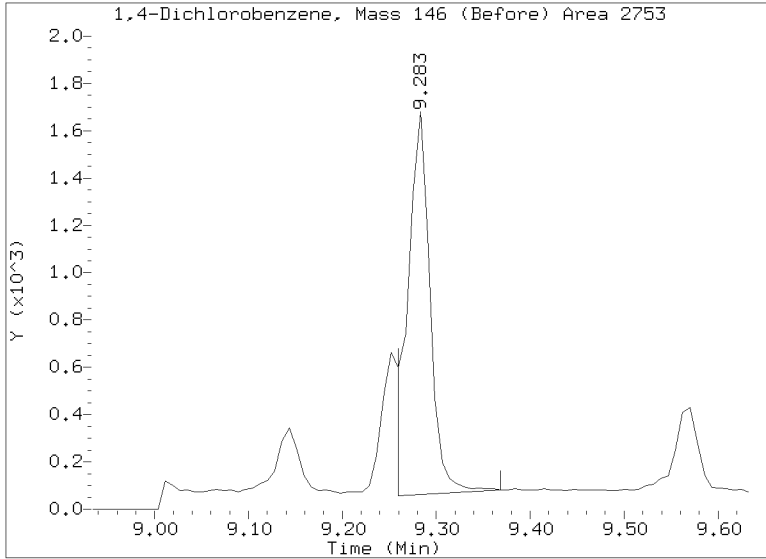
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022329S.D  
Injection Date: 03-MAR-2023 08:08  
Lab ID:23A0206-10 Client ID:  
Report Date: 03/11/2023 07:04





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-11 B

SDG: 23A0206

Sampled: 01/11/23 11:43

Prepared: 01/27/23 14:44

File ID: NT1003022330S.D

% Solids: 42.95

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 08:46

Batch: BLA0624

Sequence: SLC0159

Initial/Final: 23.35 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.8	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	69.6		2.5	19.9
65-85-0	Benzoic acid	1	99.2	J	13.4	99.7
105-67-9	2,4-Dimethylphenol	1	3.1	J	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.9	U	2.1	19.9

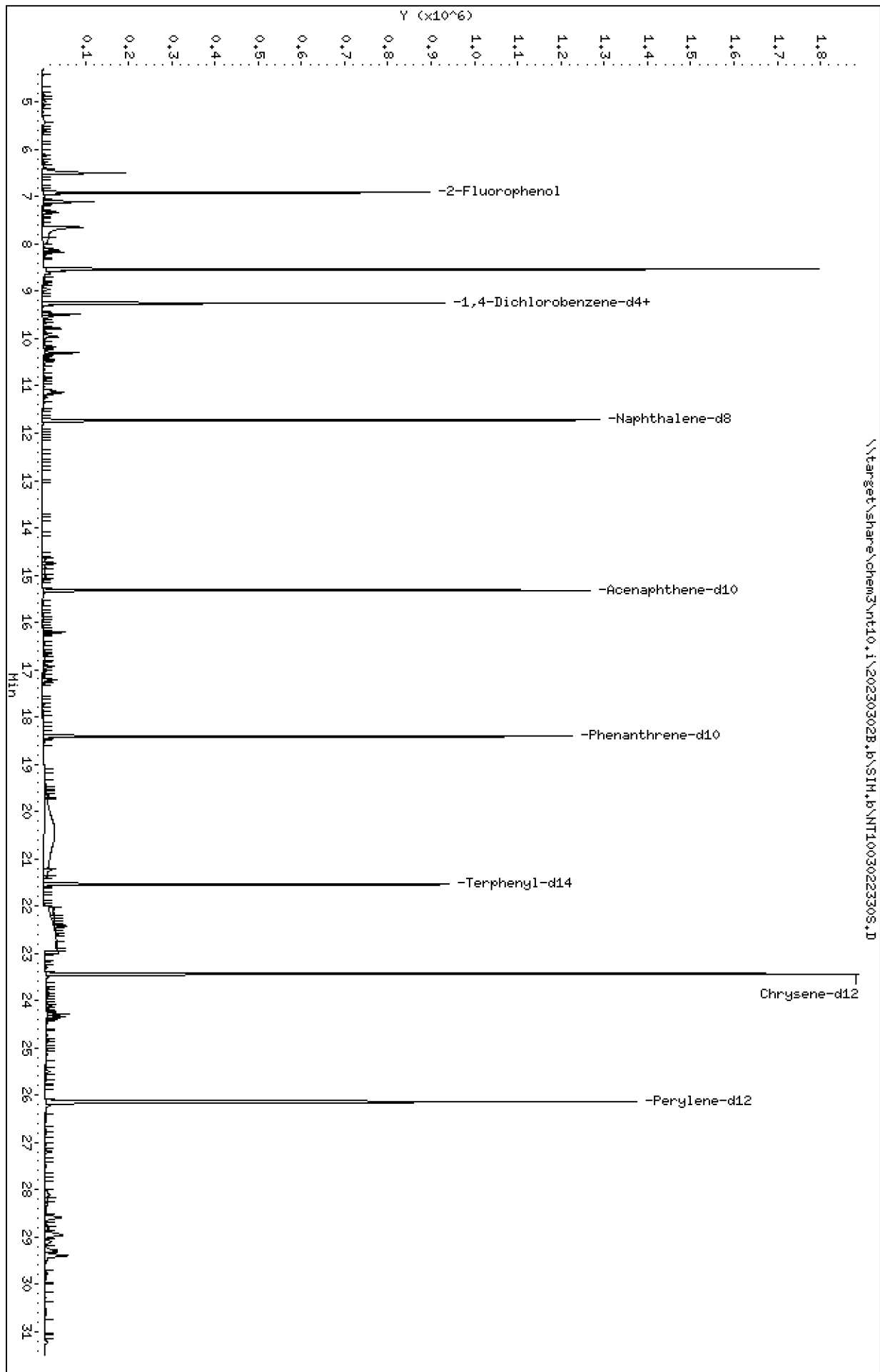
SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.84	654	87.4	27 - 120	
p-Terphenyl-d14	498.56	639	128	37 - 120	*



Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT10030223305.D  
Date: 03-MAR-2023 08:46  
Client ID:  
Sample Info: 23A0206-11  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT10030223305.D



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

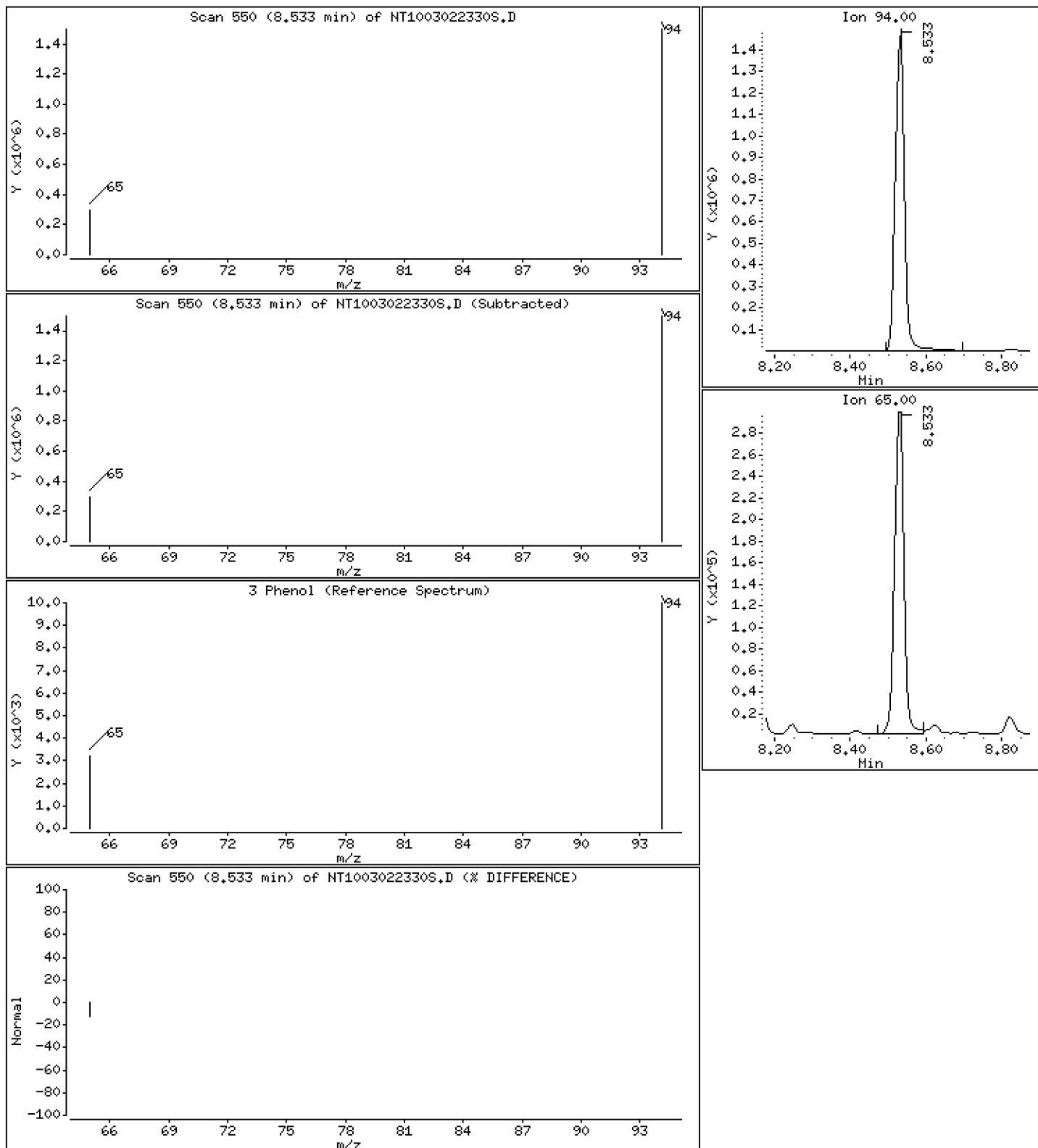
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 9.464 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

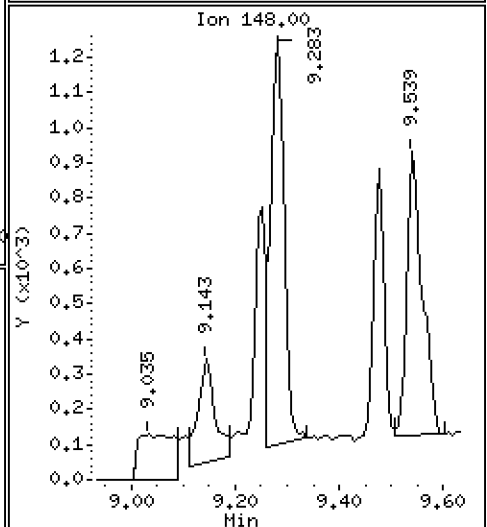
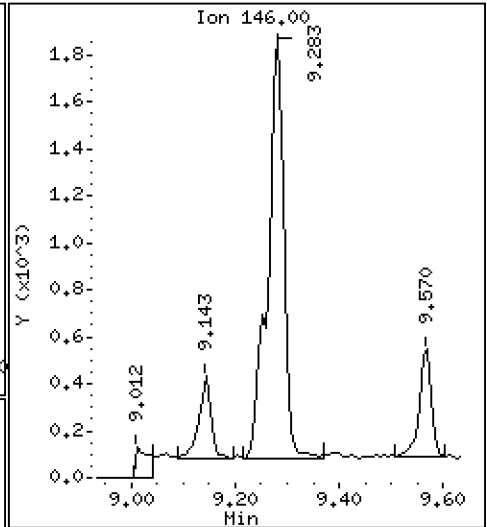
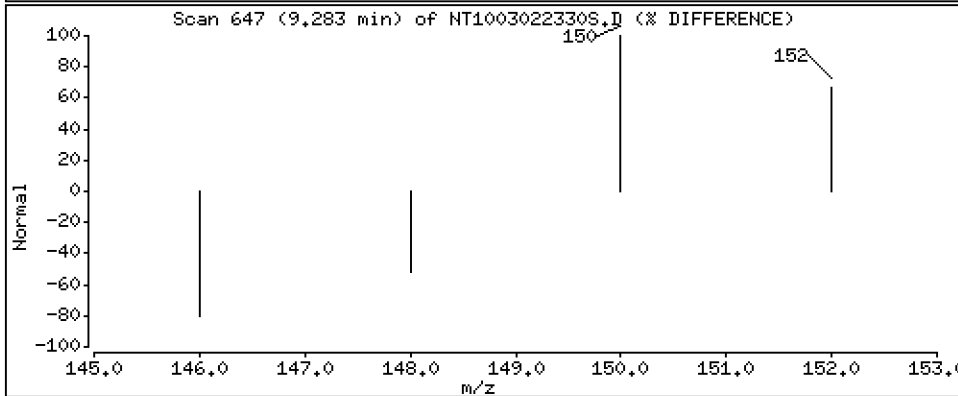
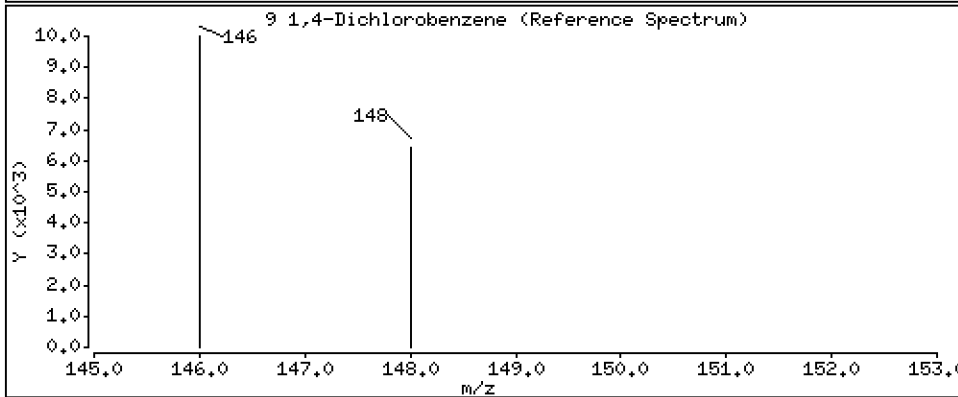
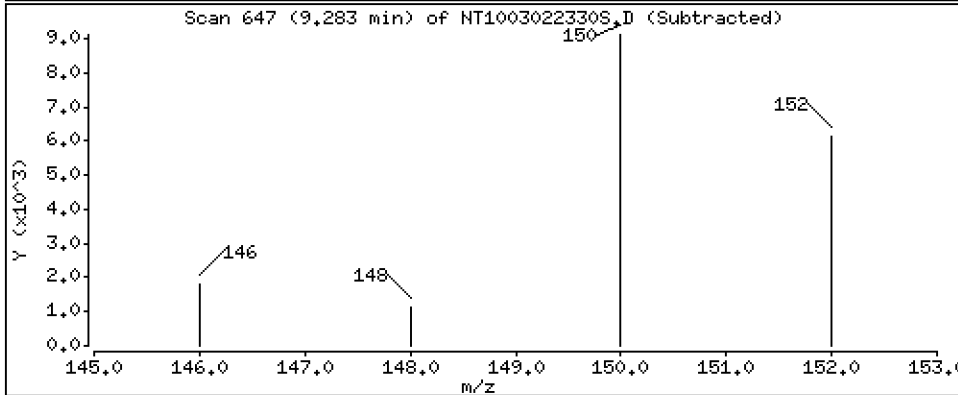
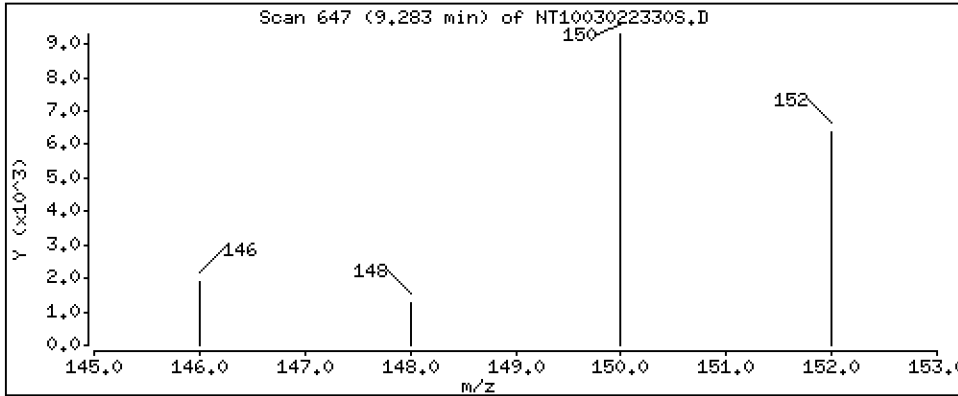
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.01848 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

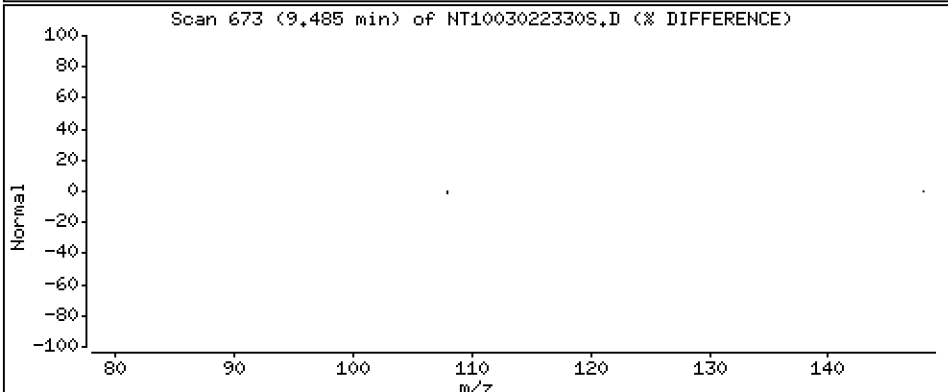
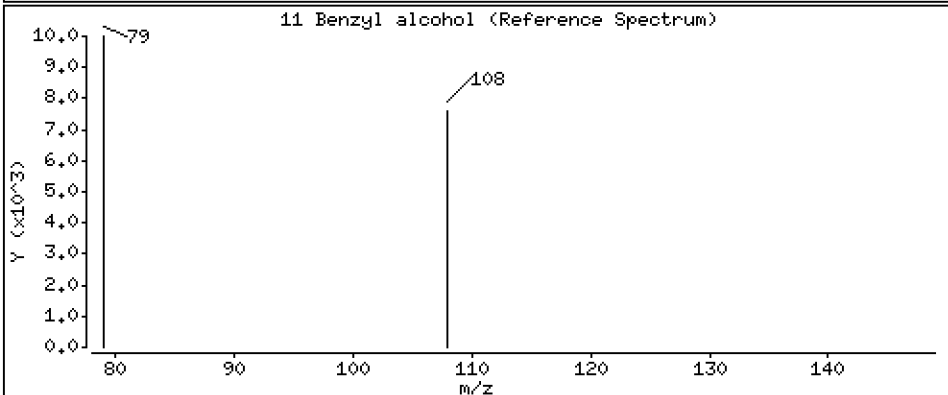
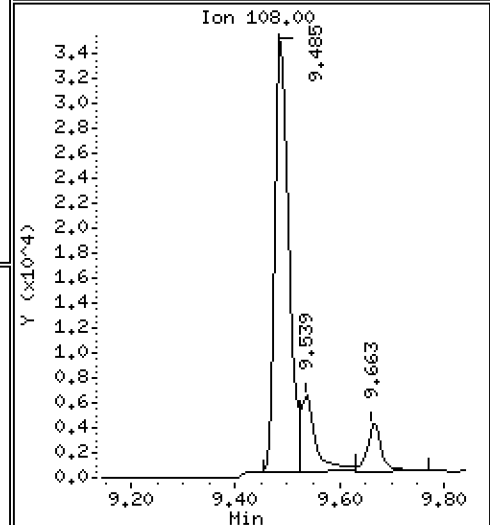
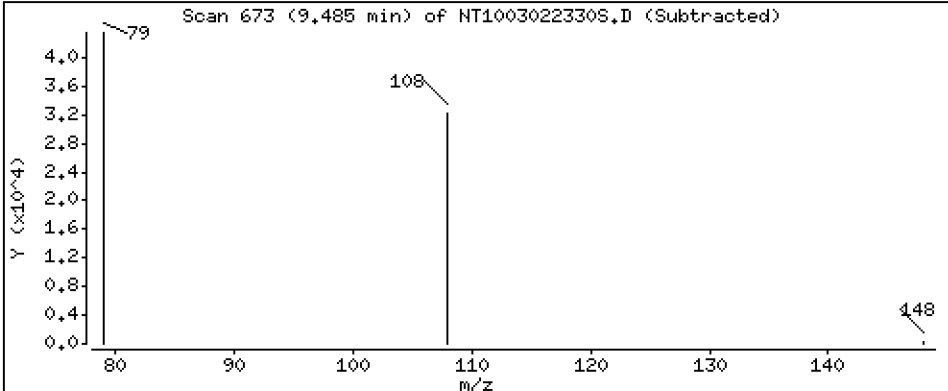
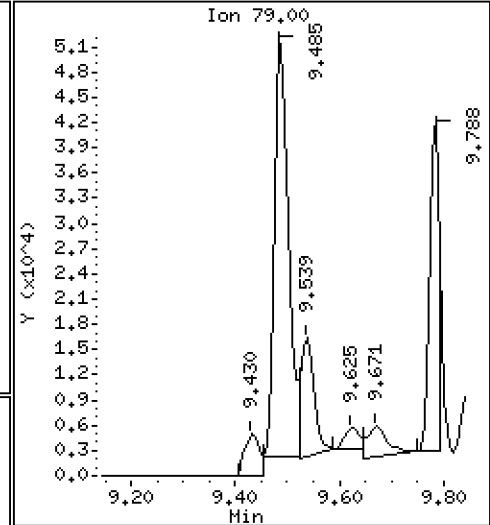
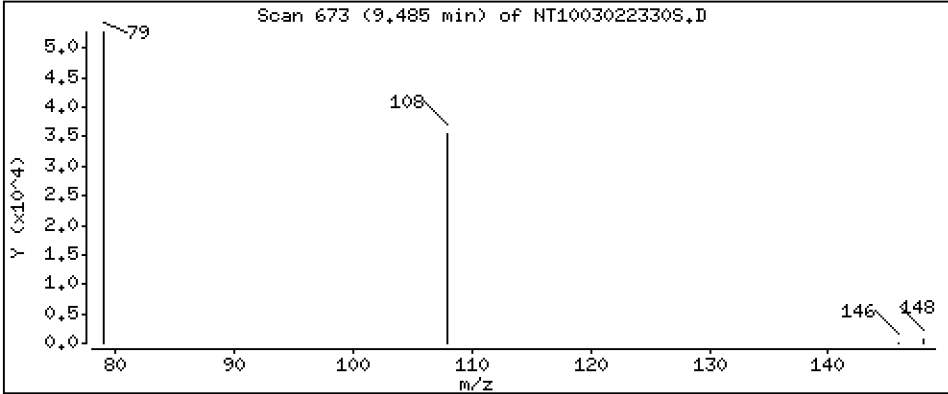
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.6975 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

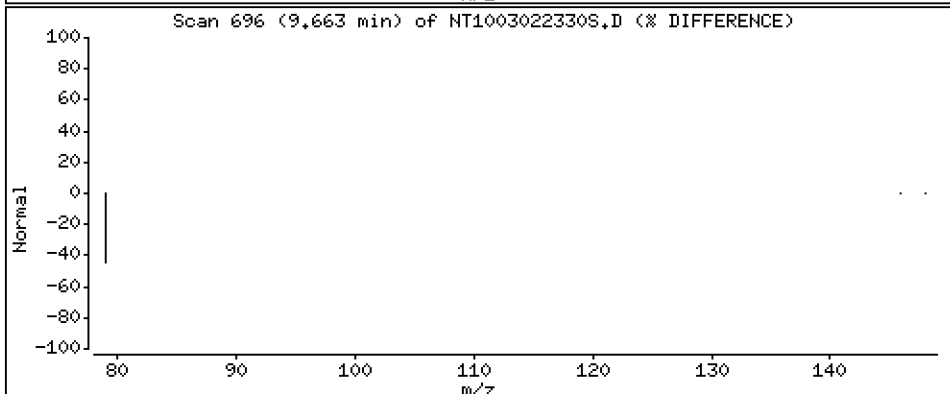
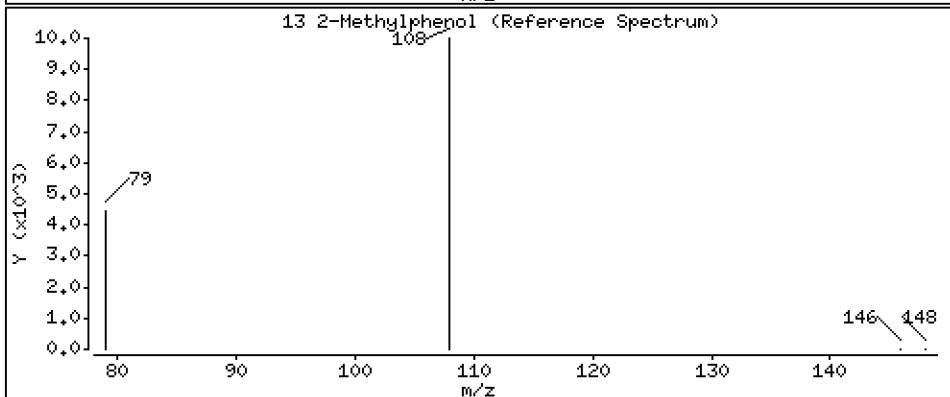
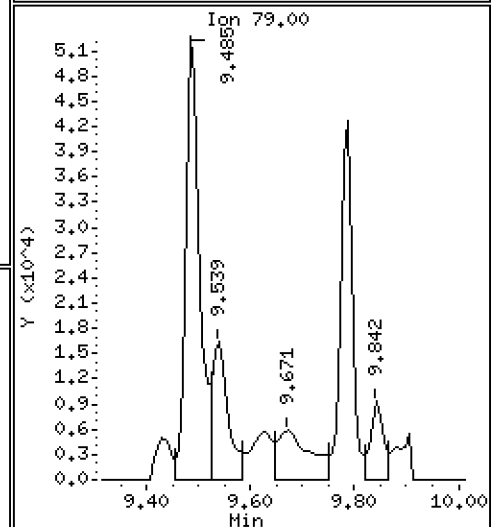
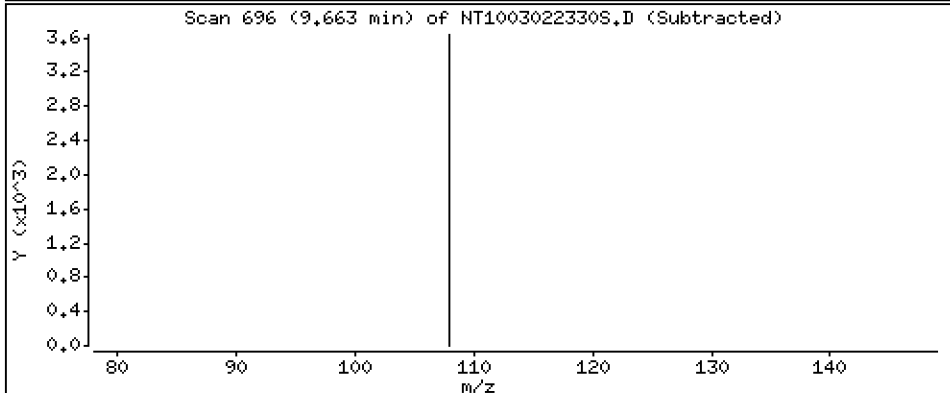
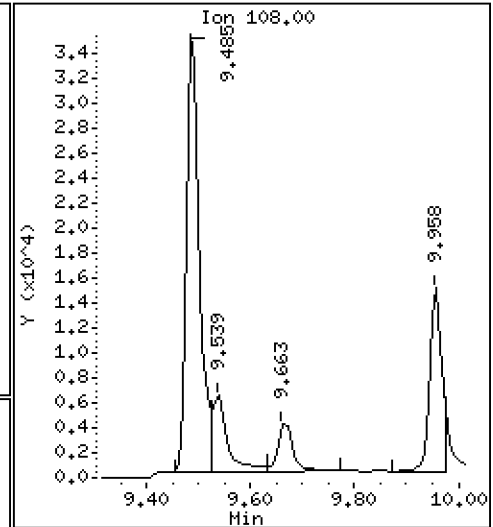
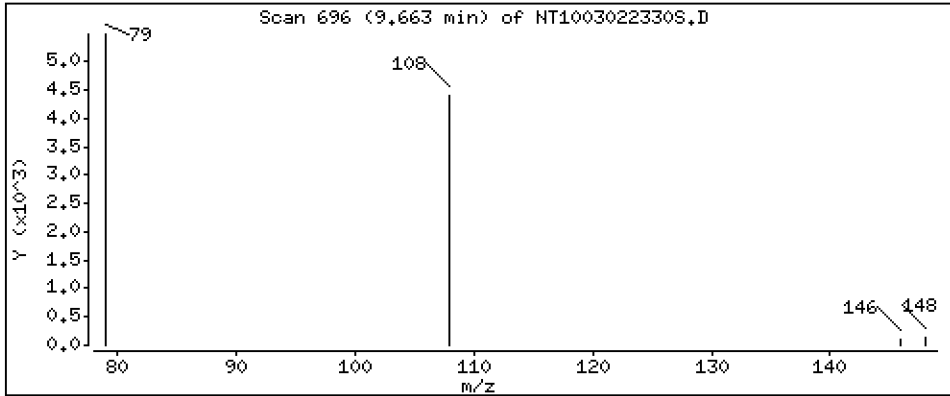
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.05346 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

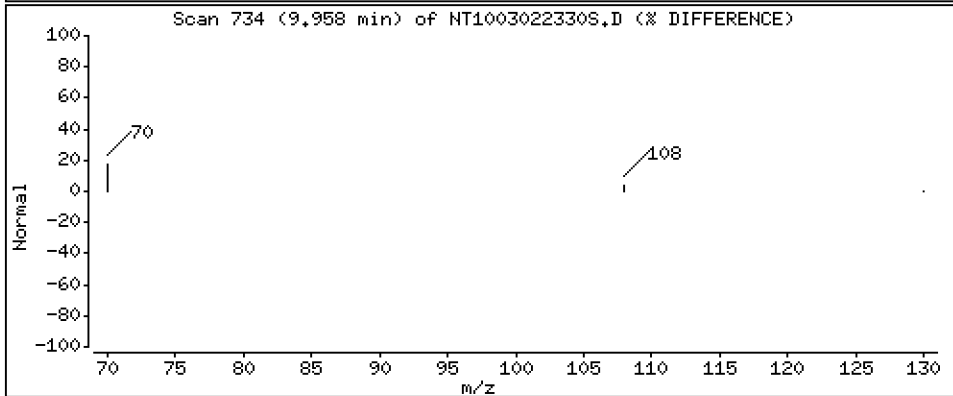
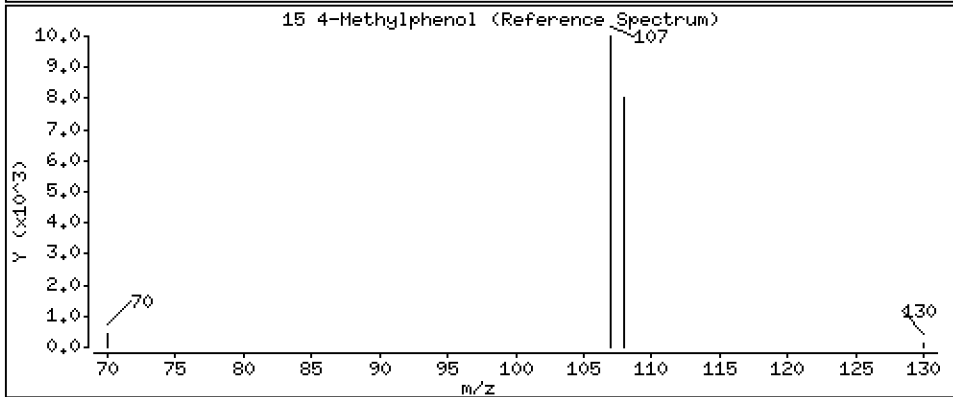
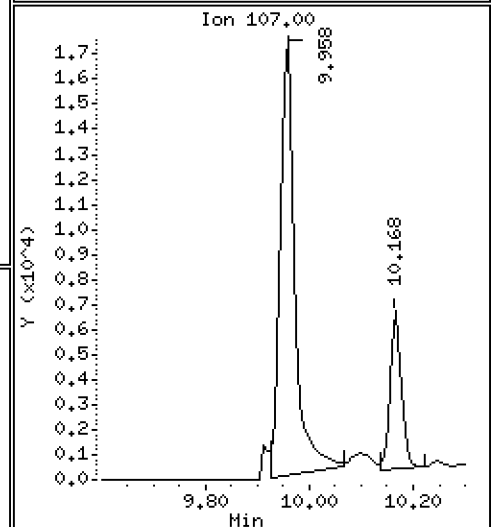
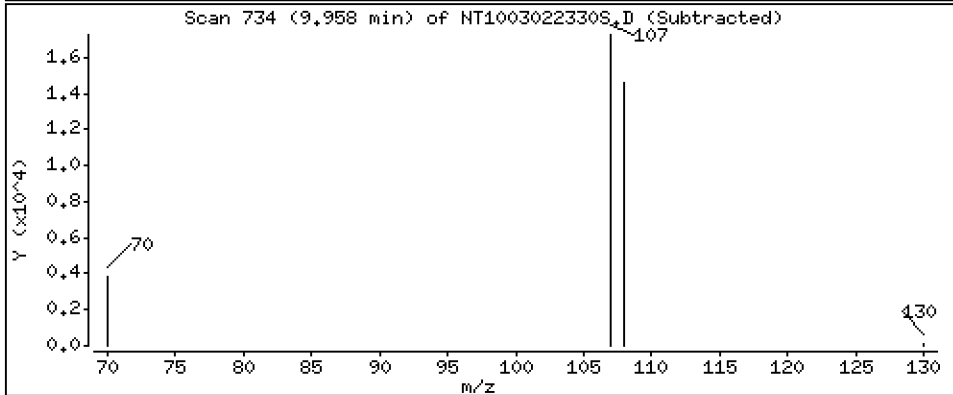
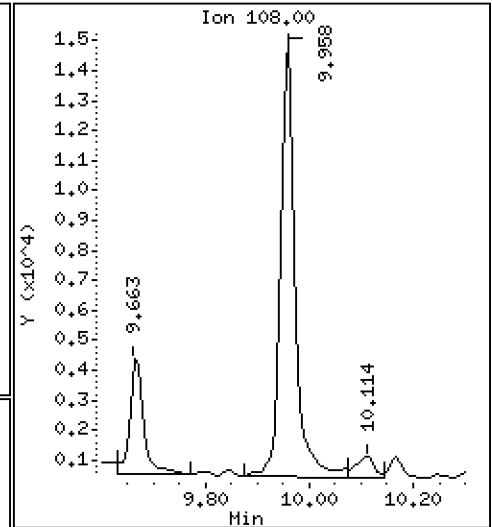
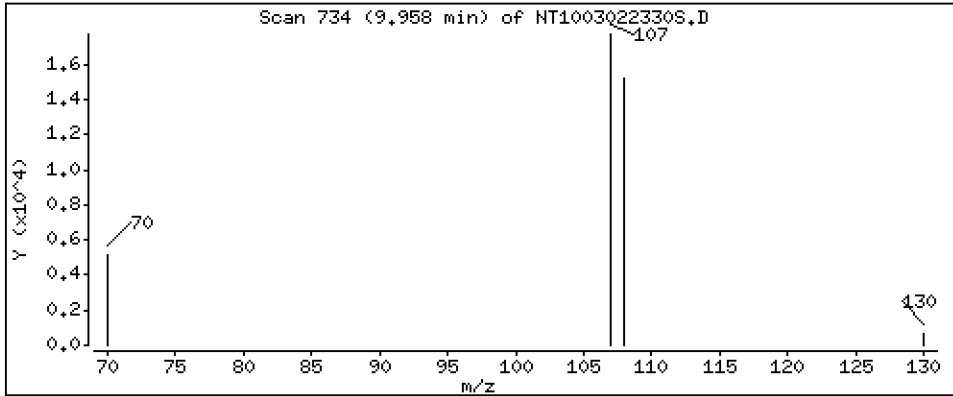
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1885 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

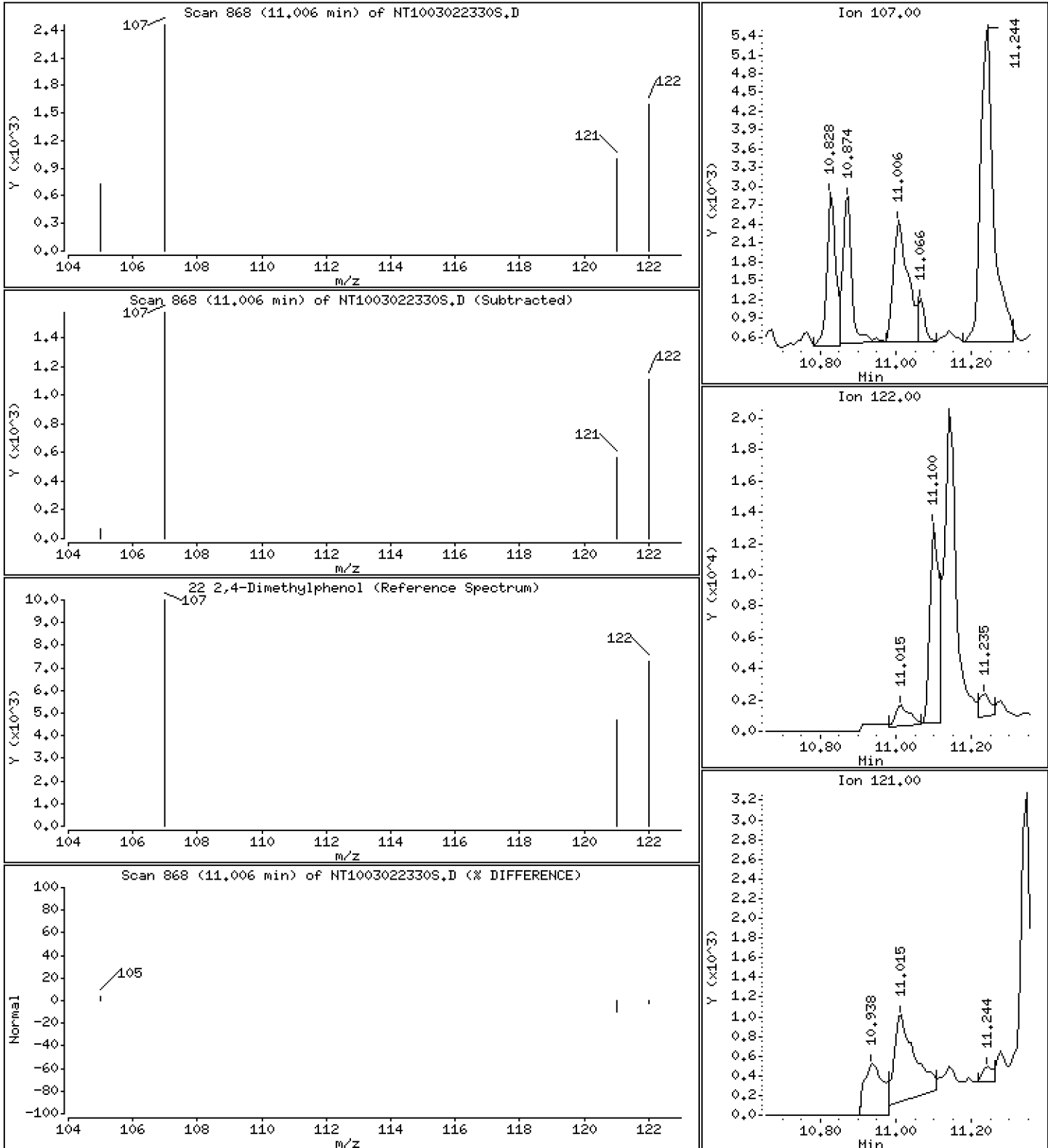
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.03130 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

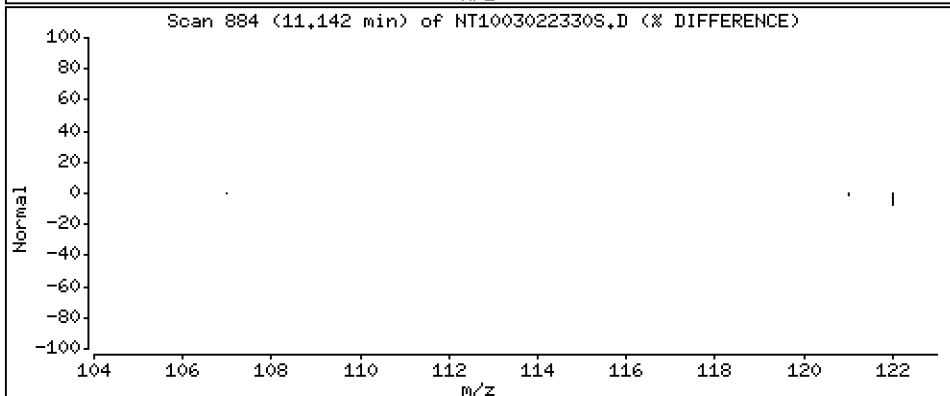
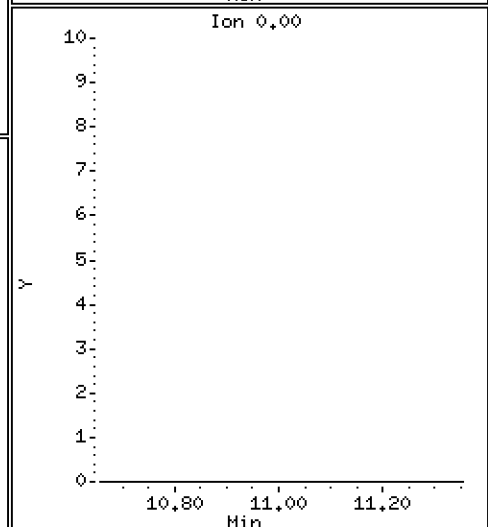
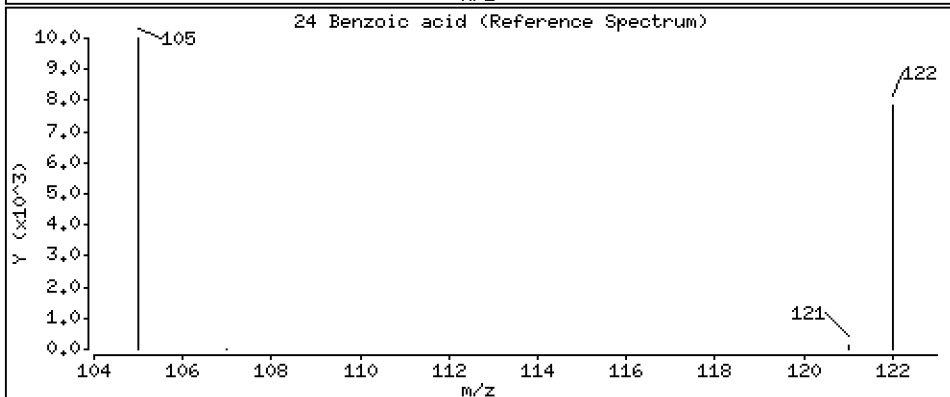
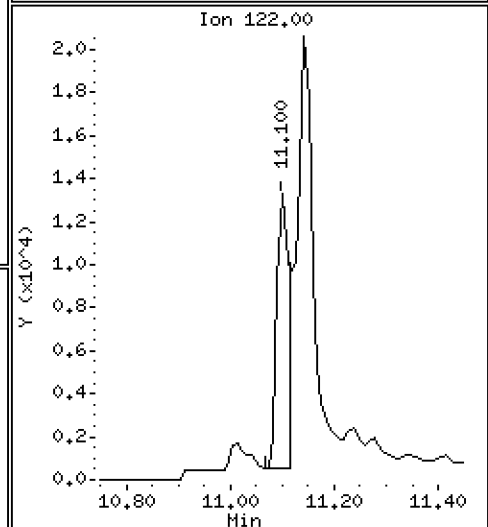
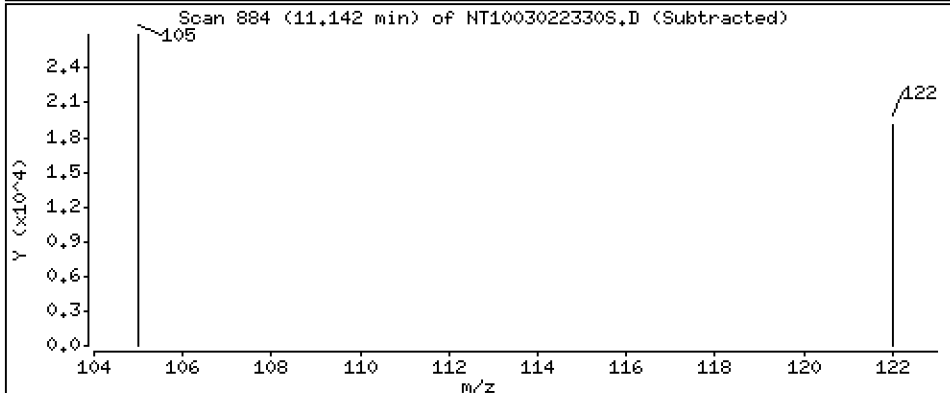
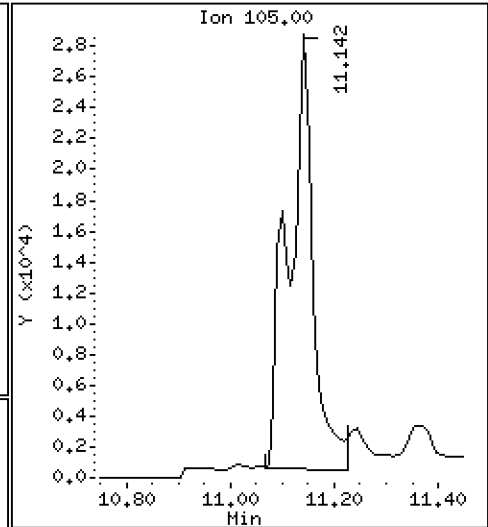
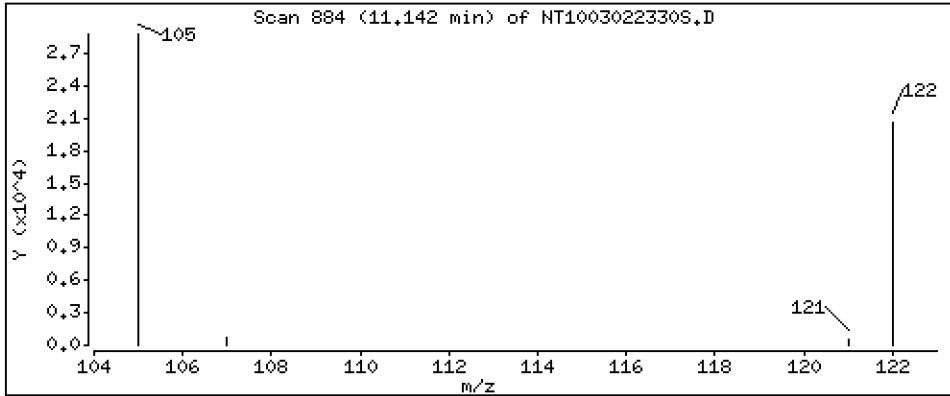
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.9945 ug/L





Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

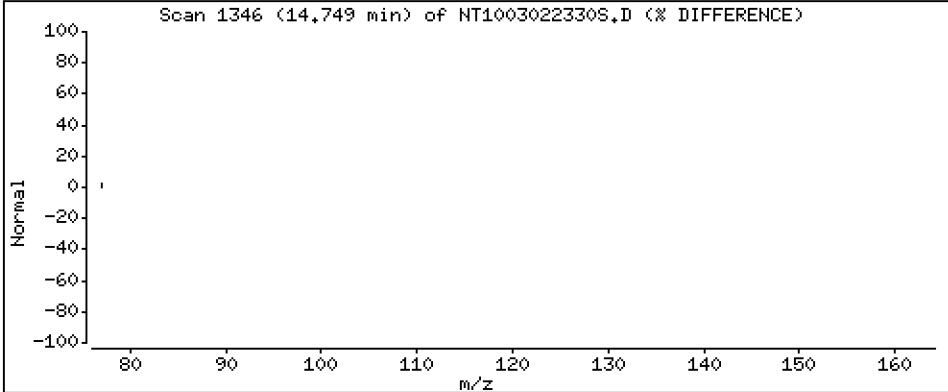
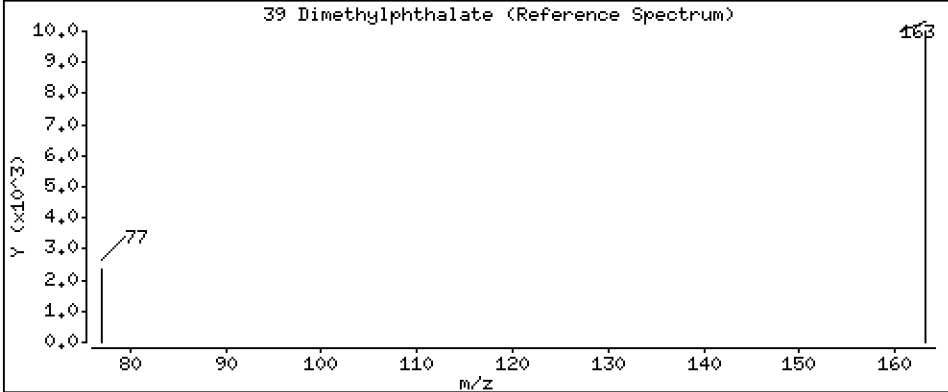
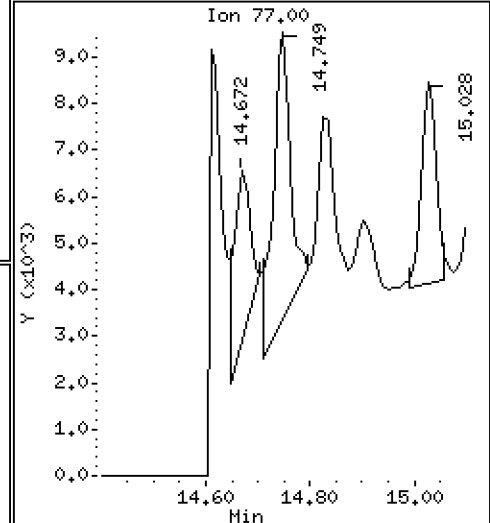
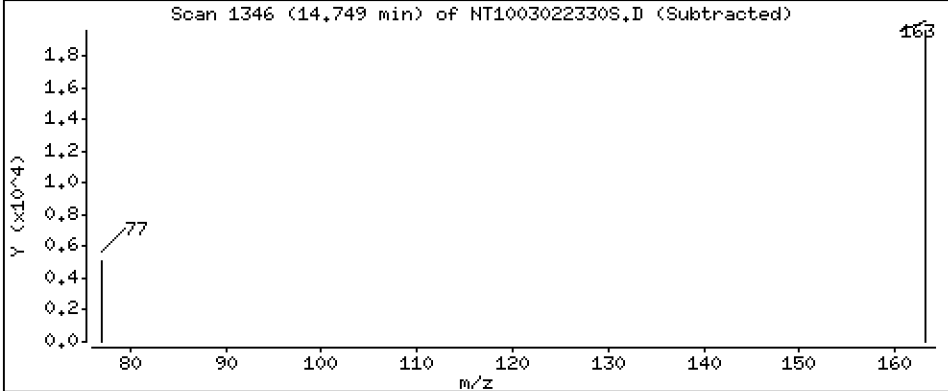
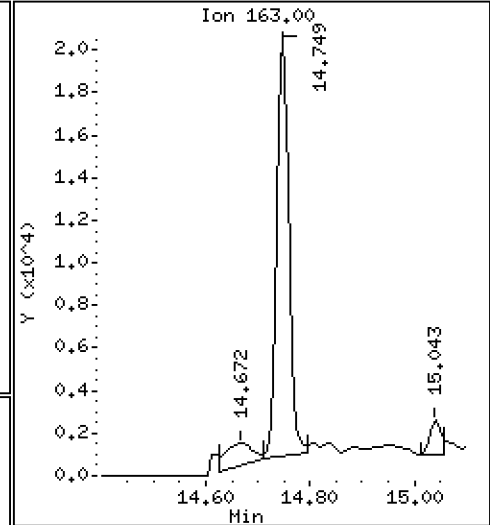
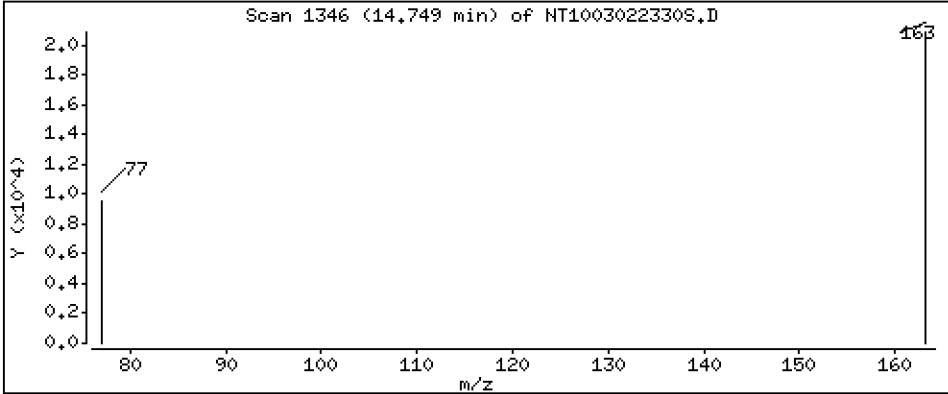
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.09704 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

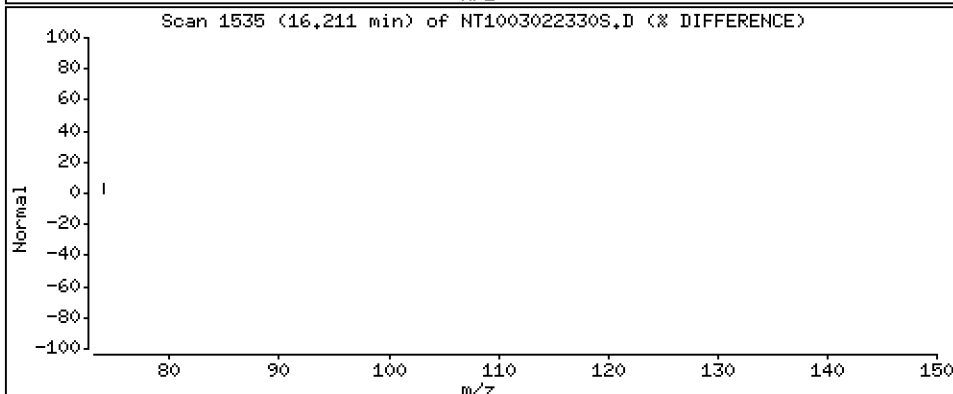
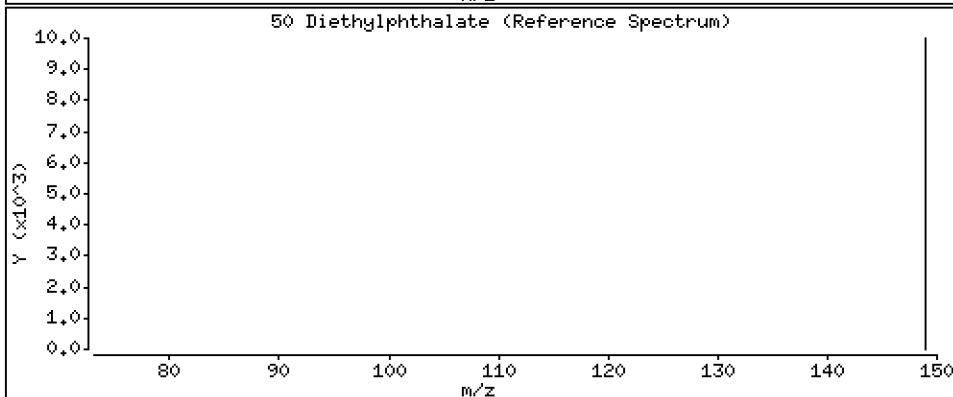
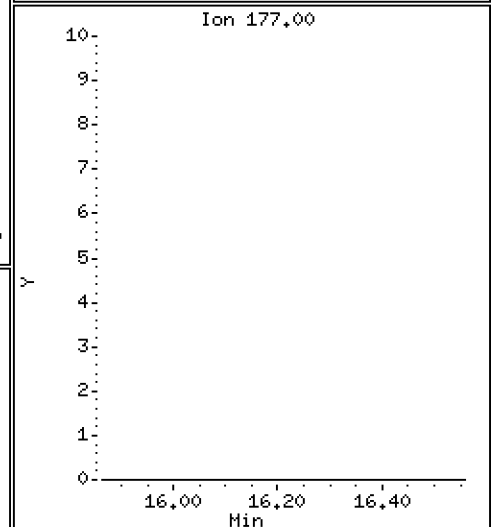
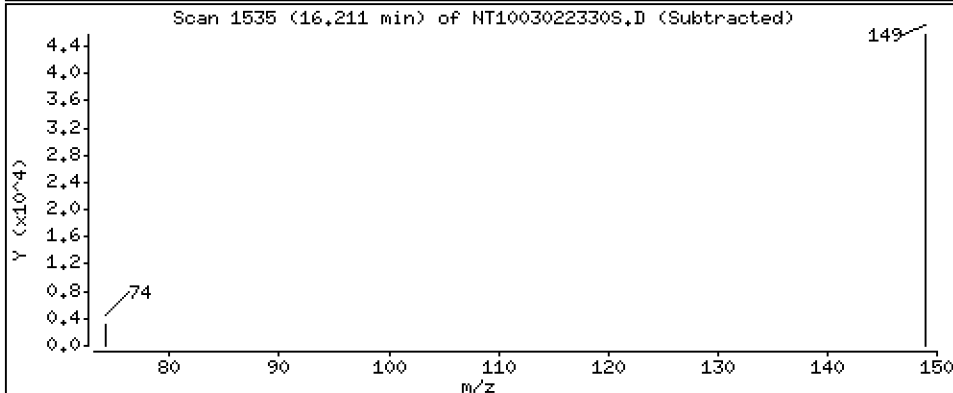
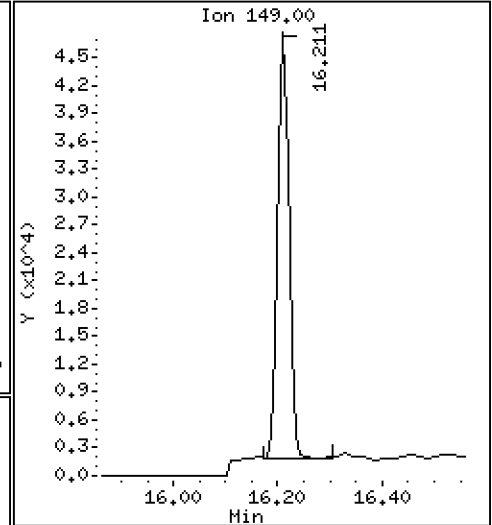
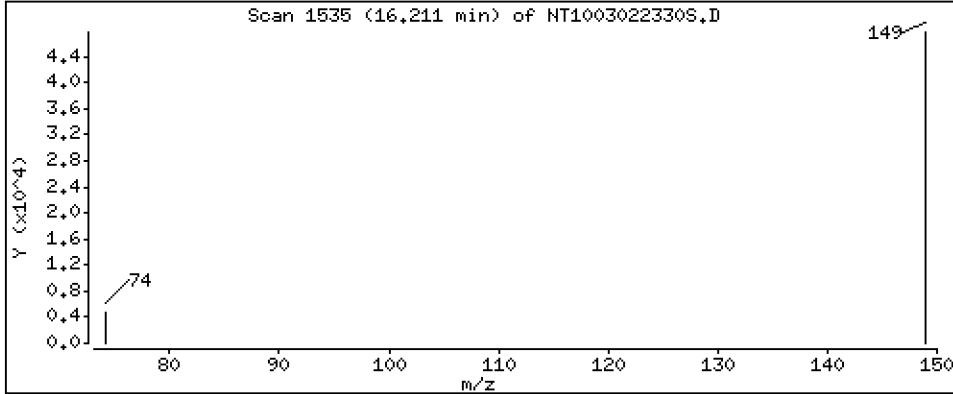
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2209 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

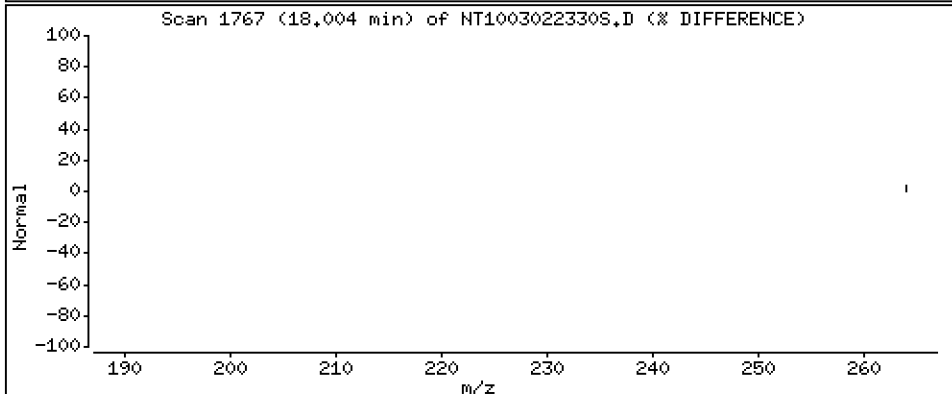
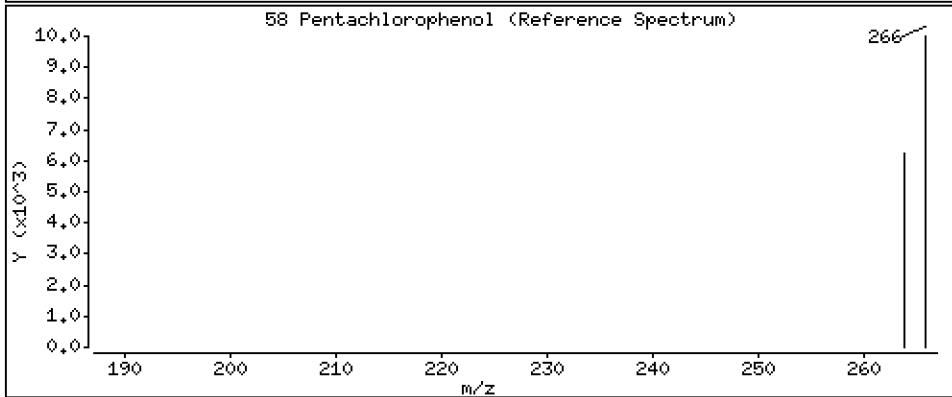
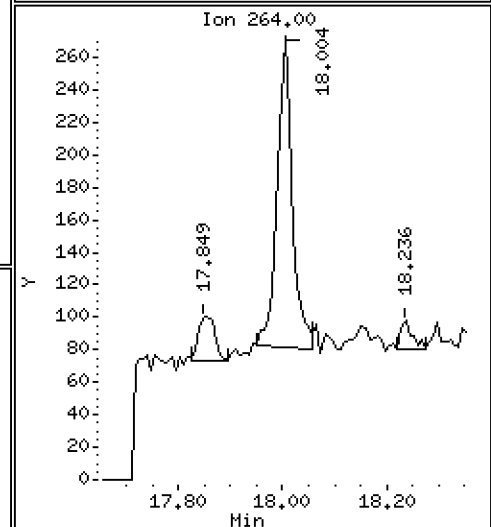
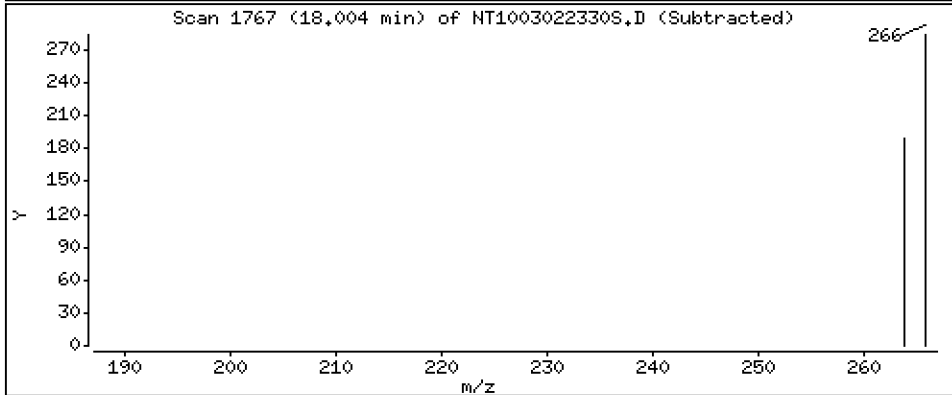
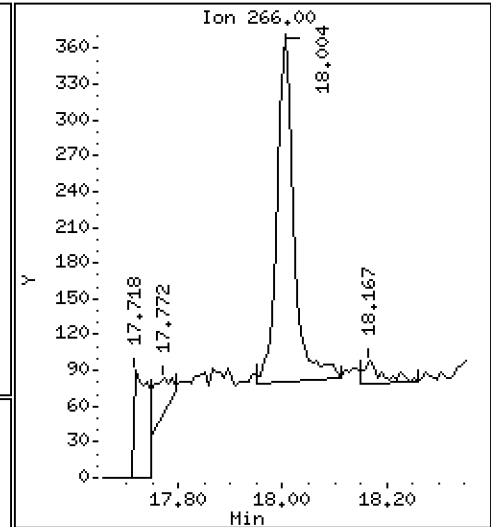
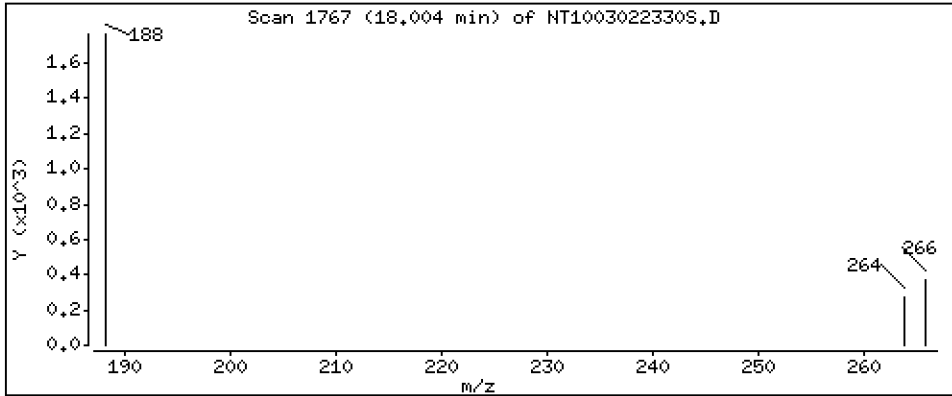
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,009607 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

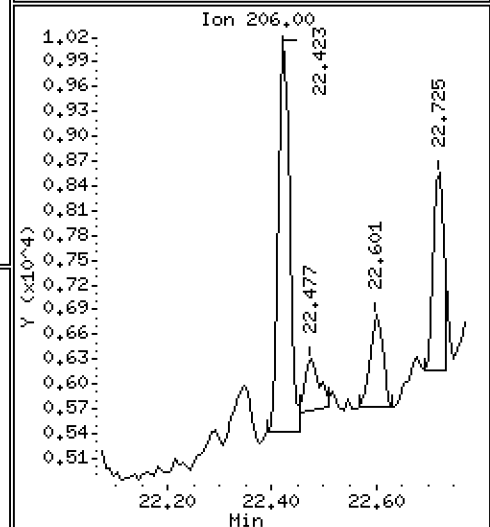
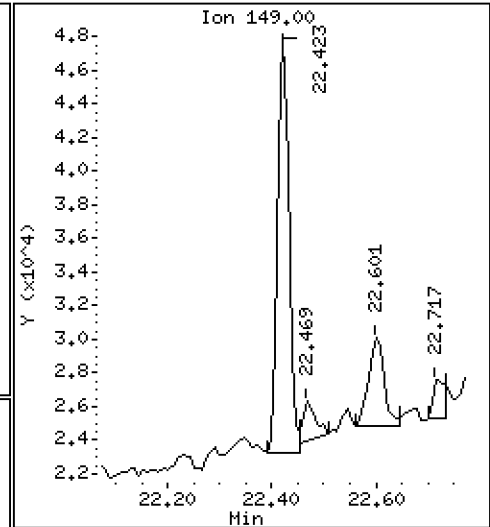
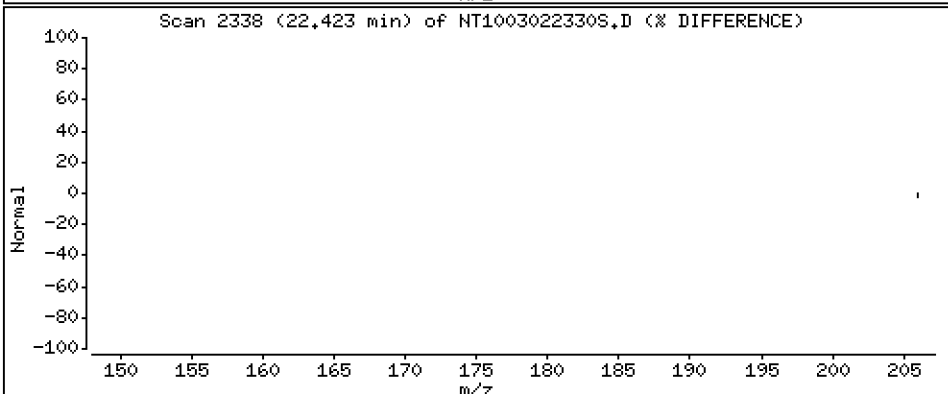
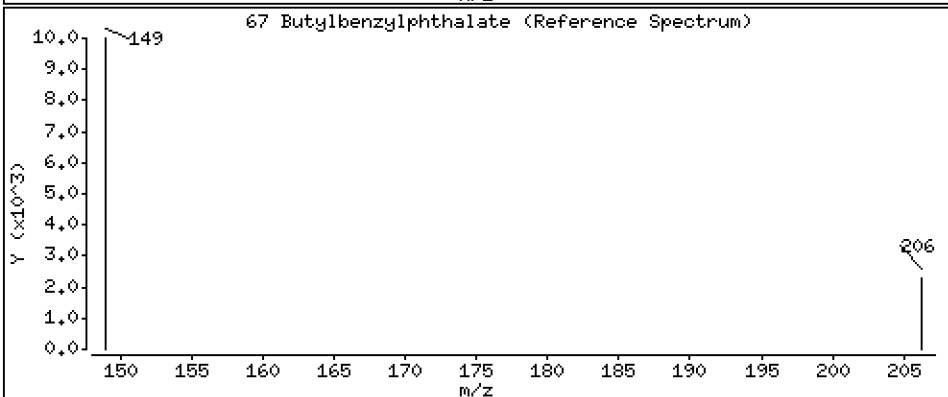
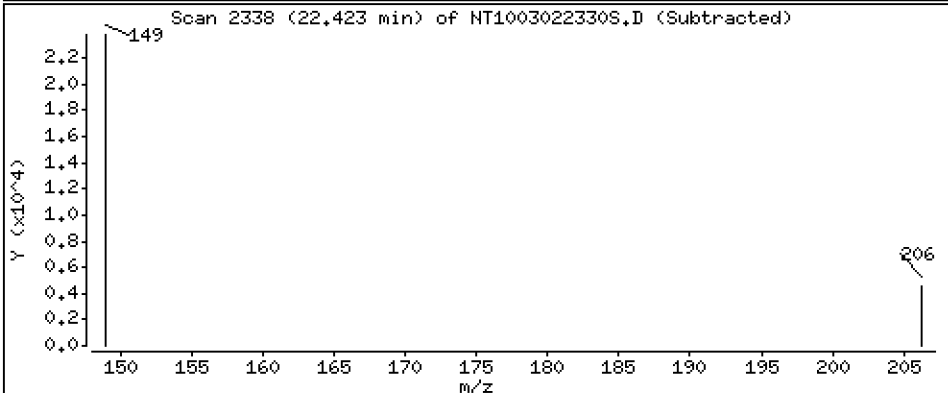
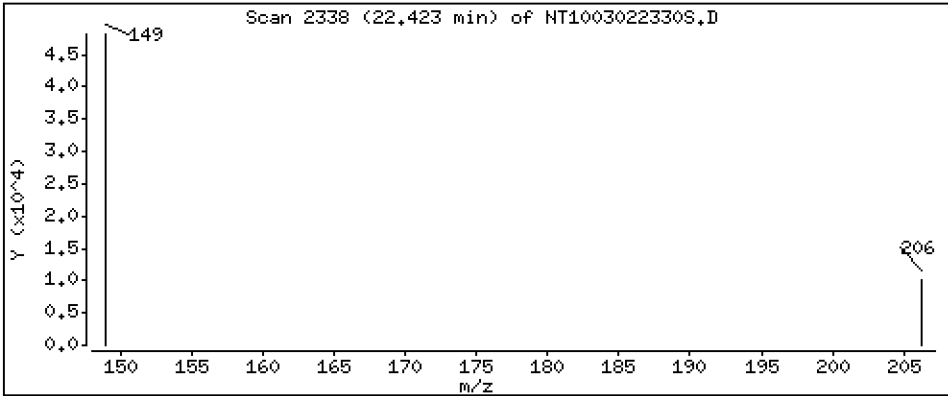
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.08960 ug/L



Date : 03-MAR-2023 08:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-11

Volume Injected (uL): 1.0

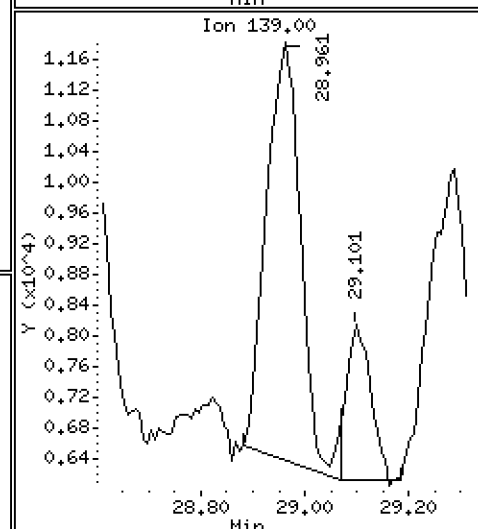
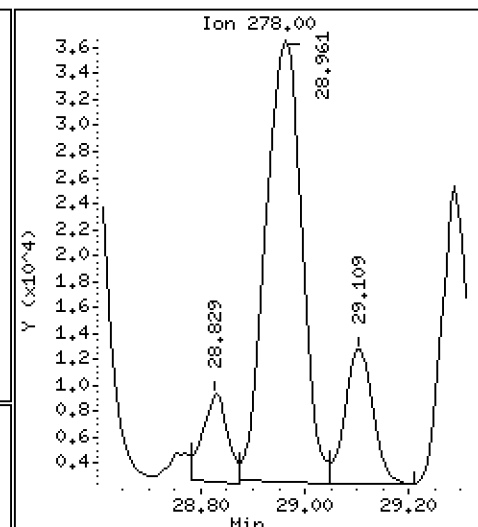
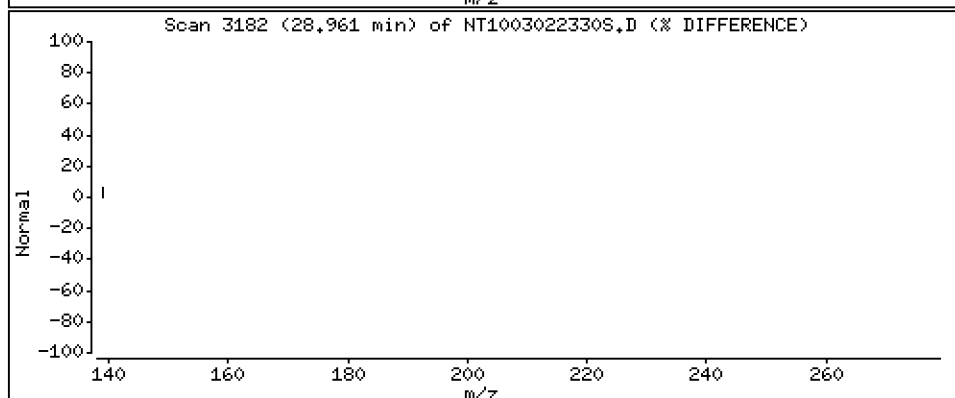
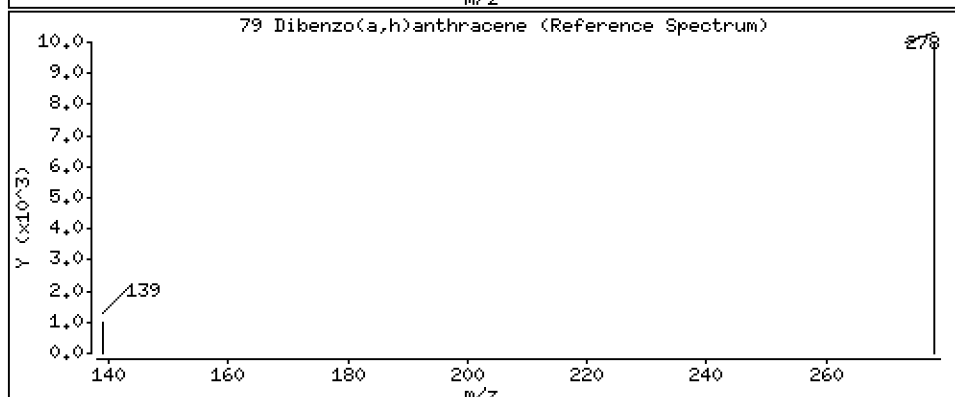
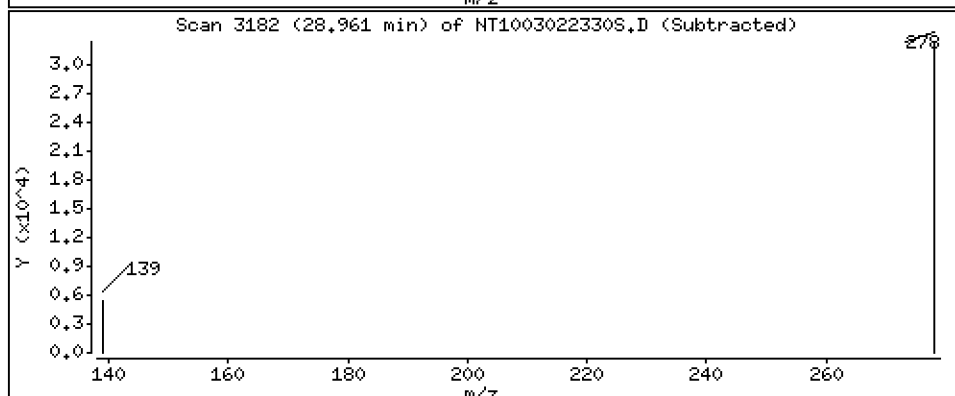
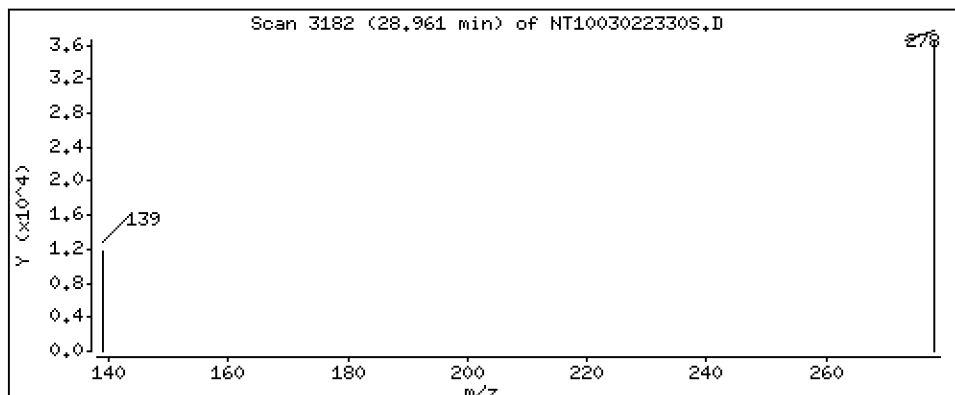
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.2758 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022330S.D  
 Lab Smp Id: 23A0206-11  
 Inj Date : 03-MAR-2023 08:46 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-11  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 22  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902	(0.747)	1043809	6.55476	6.555(R)	
3 Phenol	94		8.532	8.525	(0.922)	2340523	9.46429	9.464	
7 1,3-Dichlorobenzene	146					Compound Not Detected.			
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	557785	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	3714	0.01848	0.01848	
11 Benzyl alcohol	79		9.484	9.492	(1.025)	91601	0.69752	0.6975	
12 1,2-Dichlorobenzene	146					Compound Not Detected.			
13 2-Methylphenol	108		9.663	9.663	(1.044)	7550	0.05346	0.05346	
15 4-Methylphenol	108		9.958	9.950	(1.076)	27734	0.18854	0.1885	
16 N-Nitroso-di-n-propylamine	70					Compound Not Detected.			
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	5288	0.03130	0.03130	
24 Benzoic acid	105		11.142	11.099	(0.950)	92571	0.99454	0.9945 (M)	
26 1,2,4-Trichlorobenzene	180					Compound Not Detected.			
* 27 Naphthalene-d8	136		11.723	11.731	(1.000)	1991455	4.00000		
30 Hexachlorobutadiene	225					Compound Not Detected.			
39 Dimethylphthalate	163		14.749	14.749	(0.963)	30257	0.09704	0.09704	
* 42 Acenaphthene-d10	162		15.321	15.321	(1.000)	981978	4.00000		
50 Diethylphthalate	149		16.210	16.210	(1.058)	64965	0.22094	0.2209	
54 N-Nitrosodiphenylamine	169					Compound Not Detected.			
57 Hexachlorobenzene	284					Compound Not Detected.			

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		18.004	18.004	(0.978)	628	0.00961	0.009607
* 59 Phenanthrene-d10	188		18.414	18.414	(1.000)	1972895	4.00000	
\$ 66 Terphenyl-d14	244		21.540	21.532	(0.919)	1212415	6.40968	6.410(R)
67 Butylbenzylphthalate	149		22.422	22.422	(0.957)	35382	0.08960	0.08960
* 69 Chrysene-d12	240		23.437	23.429	(1.000)	2339078	4.00000	
* 77 Perylene-d12	264		26.146	26.131	(1.000)	2570041	4.00000	
79 Dibenzo(a,h)anthracene	278		28.961	28.961	(1.108)	164774	0.27582	0.2758
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022330S.D  
 Lab Smp Id: 23A0206-11  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	557785	-10.12
27 Naphthalene-d8	2213509	1106755	4427018	1991455	-10.03
42 Acenaphthene-d10	1093970	546985	2187940	981978	-10.24
59 Phenanthrene-d10	2129840	1064920	4259680	1972895	-7.37
69 Chrysene-d12	2347260	1173630	4694520	2339078	-0.35
77 Perylene-d12	2638390	1319195	5276780	2570041	-2.59

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.13	25.63	26.63	26.15	0.06

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



REVIEW SUMMARY FOR FILE - NT1003022330S.D

Lab ID: 23A0206-11

nt10.i, 20230302B.b\SIM.b\SIMABN2.m, 03-MAR-2023 08:46

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

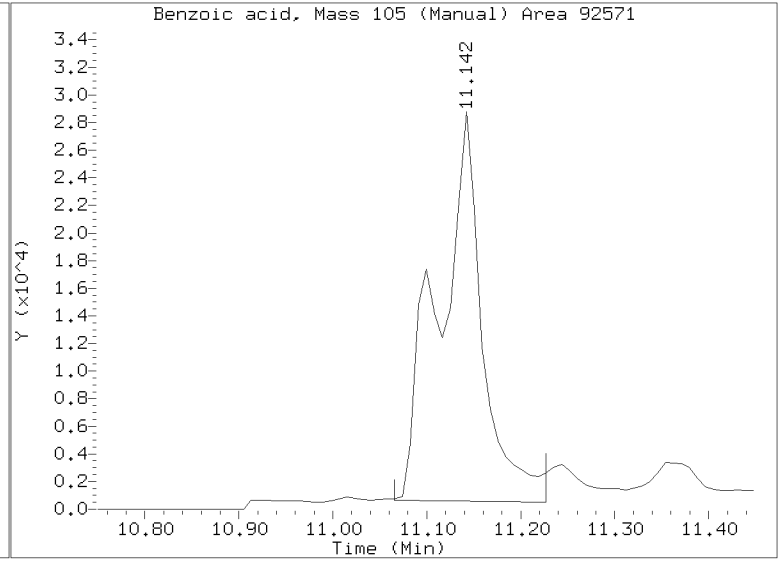
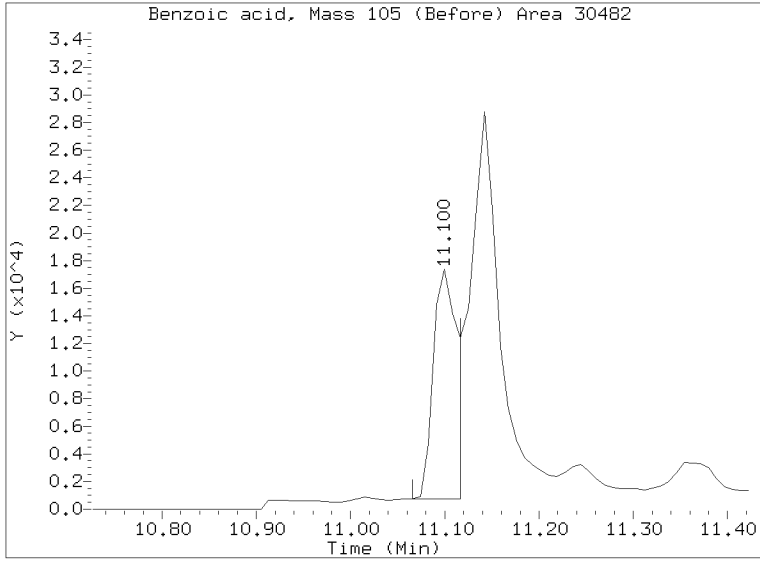
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022330S.D  
Injection Date: 03-MAR-2023 08:46  
Lab ID:23A0206-11 Client ID:  
Report Date: 03/11/2023 07:04





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-12 B

SDG: 23A0206

Sampled: 01/11/23 12:19

Prepared: 01/27/23 14:44

File ID: NT1003022331S.D

% Solids: 48.05

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 09:24

Batch: BLA0624

Sequence: SLC0159

Initial/Final: 20.88 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

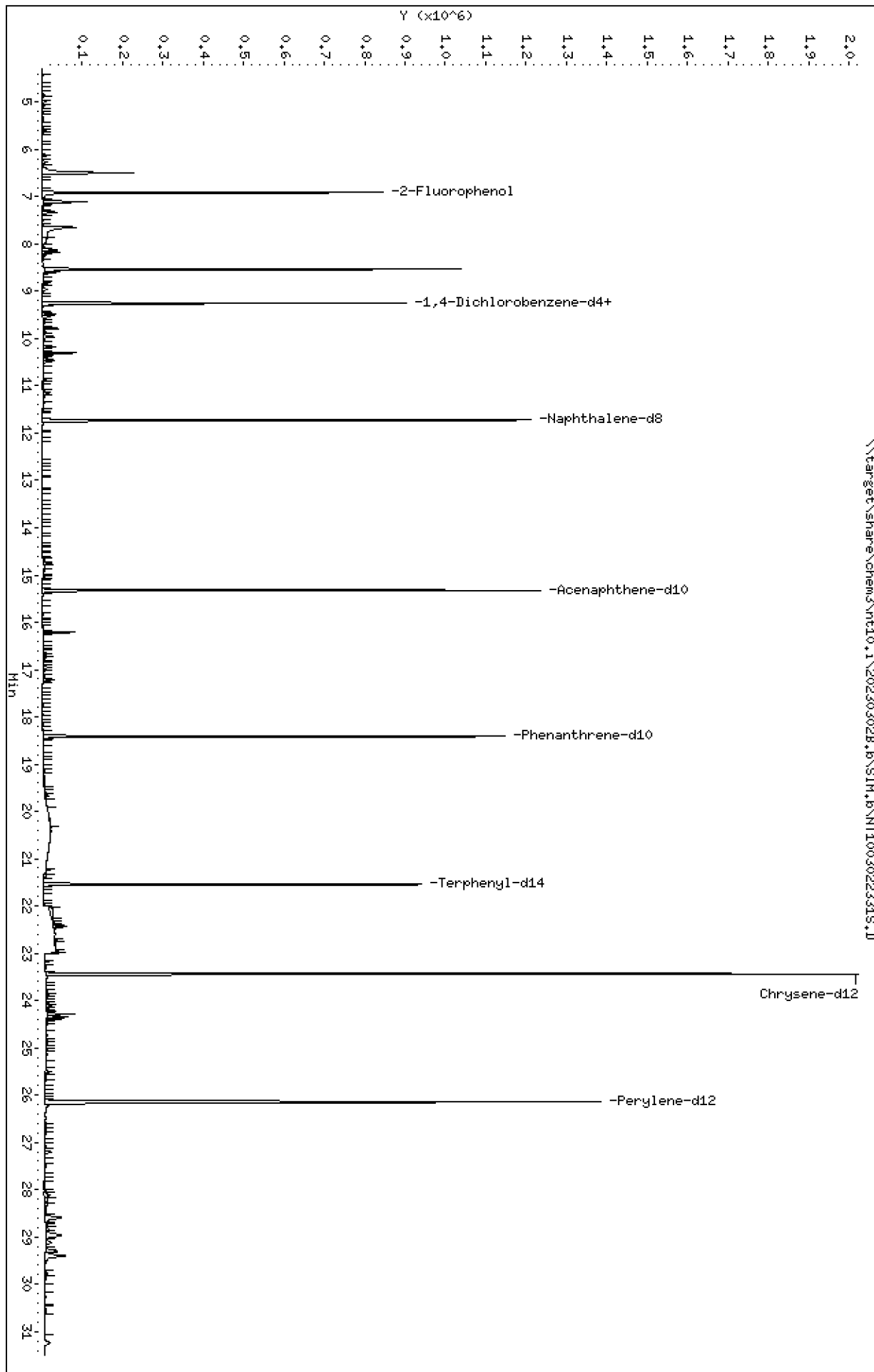
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	27.2		2.5	19.9
65-85-0	Benzoic acid	1	34.9	J	13.4	99.7
105-67-9	2,4-Dimethylphenol	1	19.9	U	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	19.9	U	2.1	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.55	678	90.6	27 - 120	
p-Terphenyl-d14	498.36	654	131	37 - 120	*

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022331S.D  
Date: 03-MAR-2023 09:24  
Client ID:  
Sample Info: 23A0206-12  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022331S.D



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

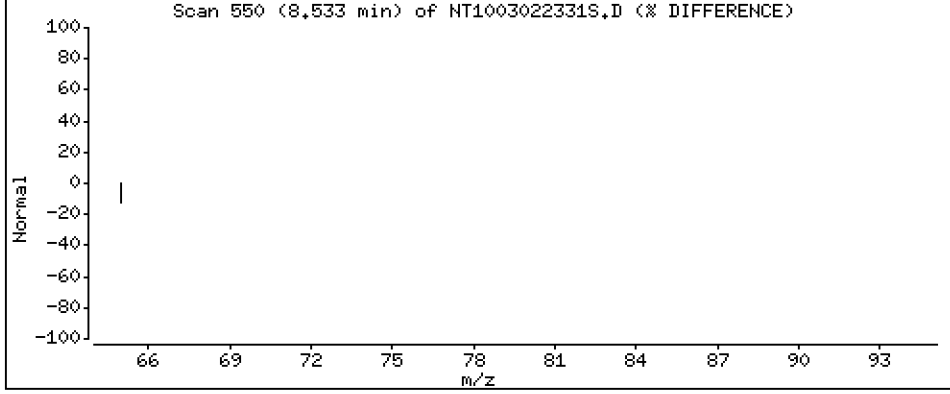
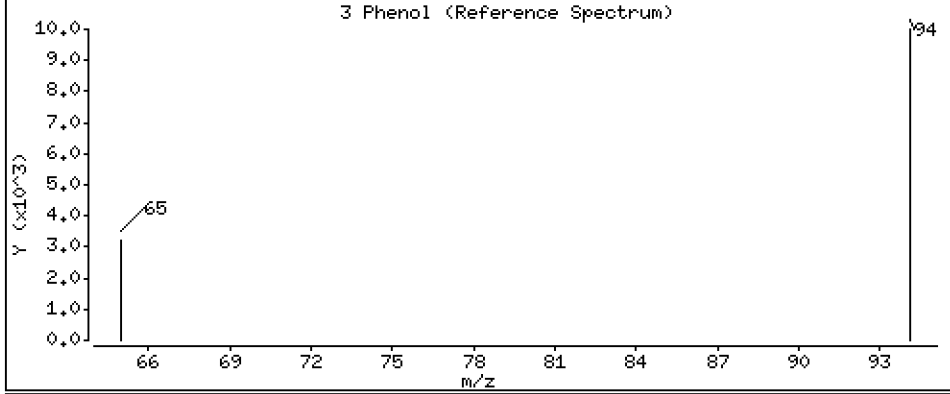
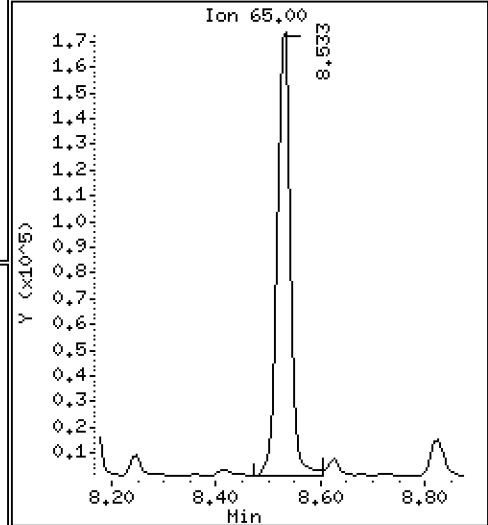
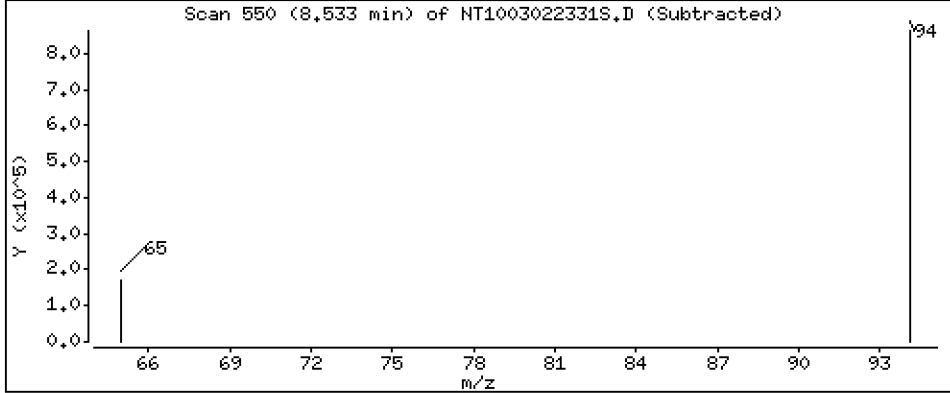
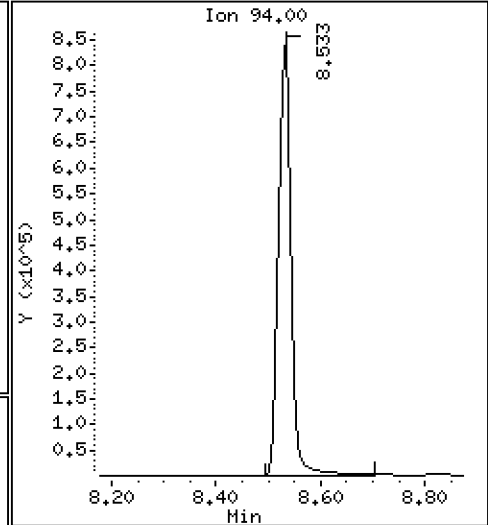
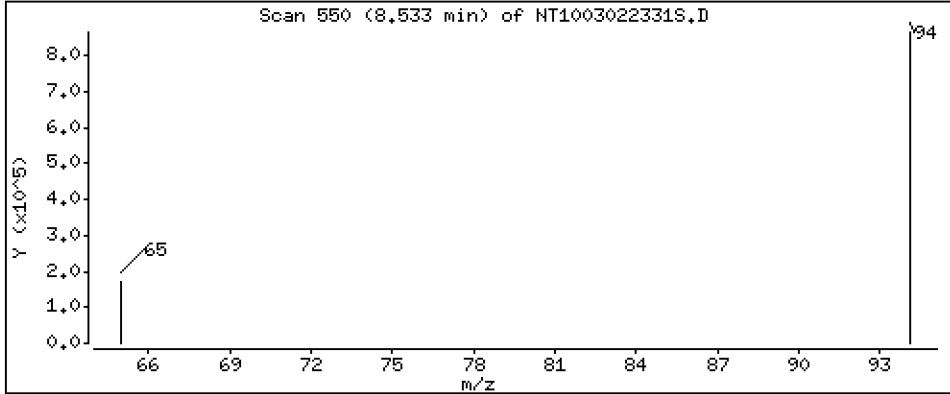
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 6.005 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

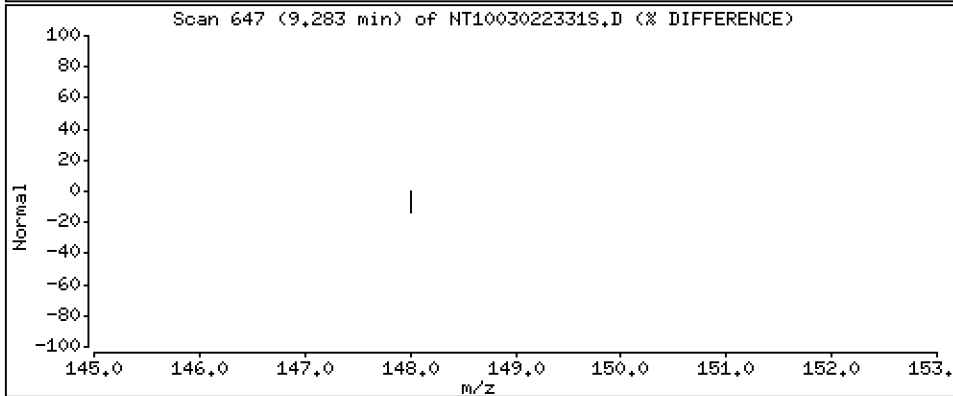
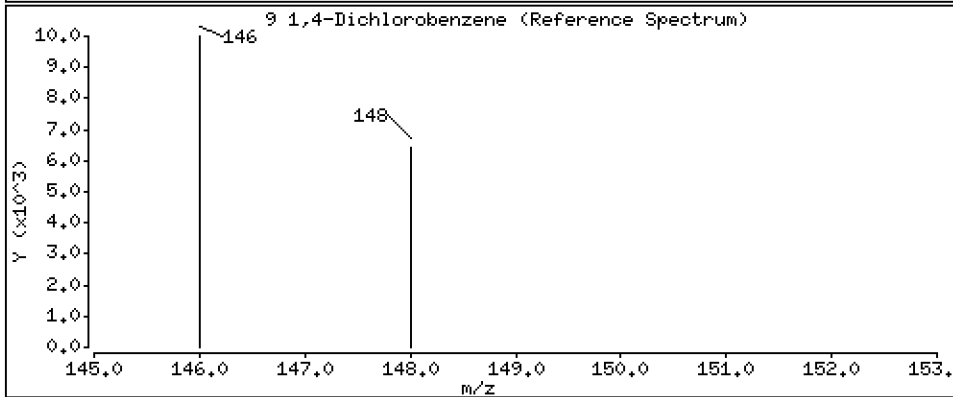
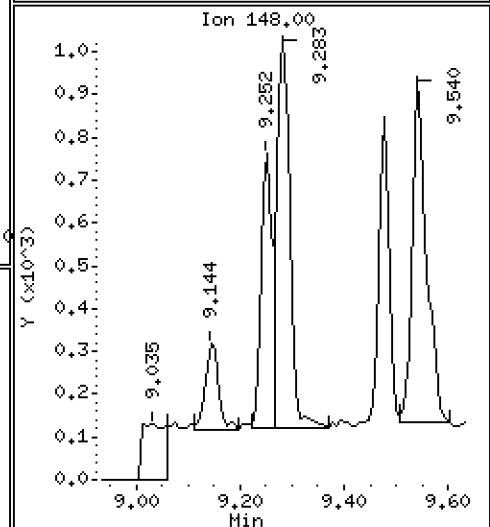
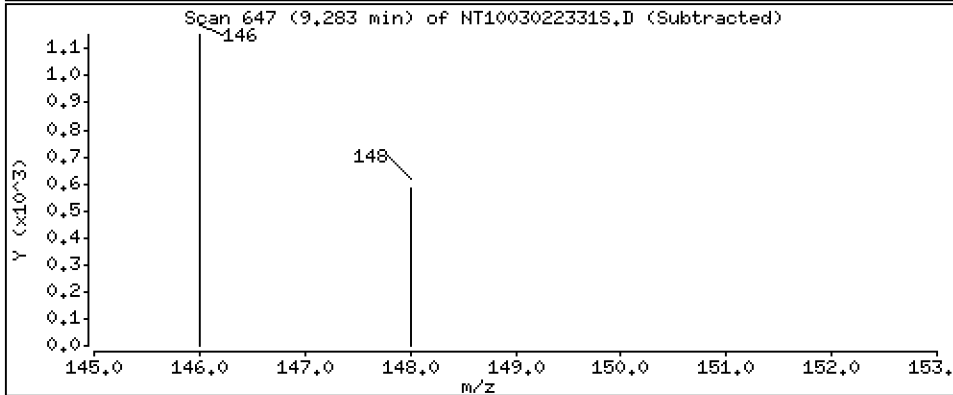
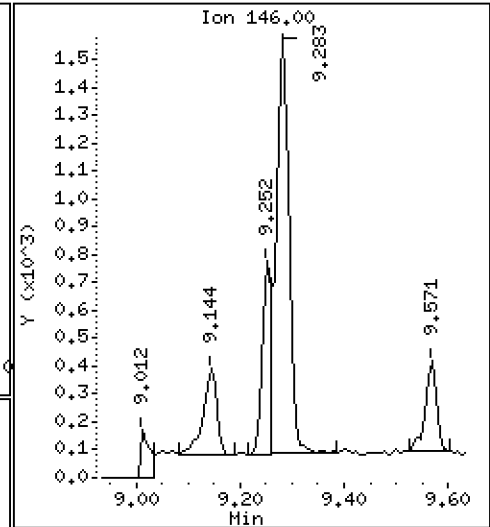
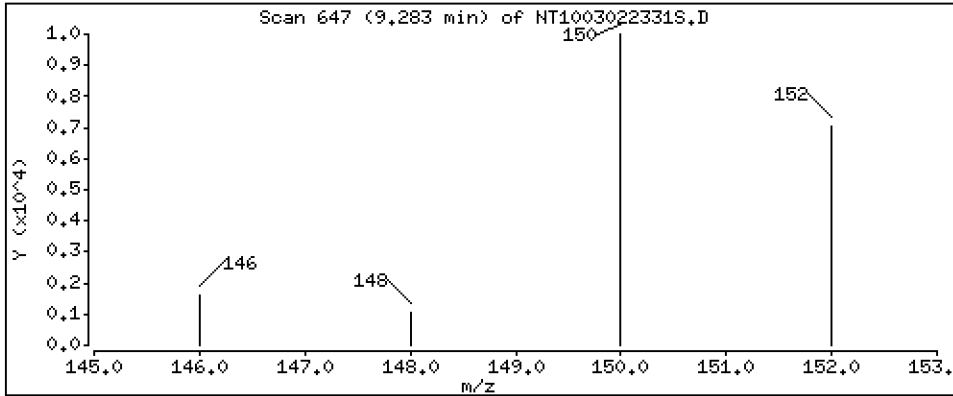
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.01345 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

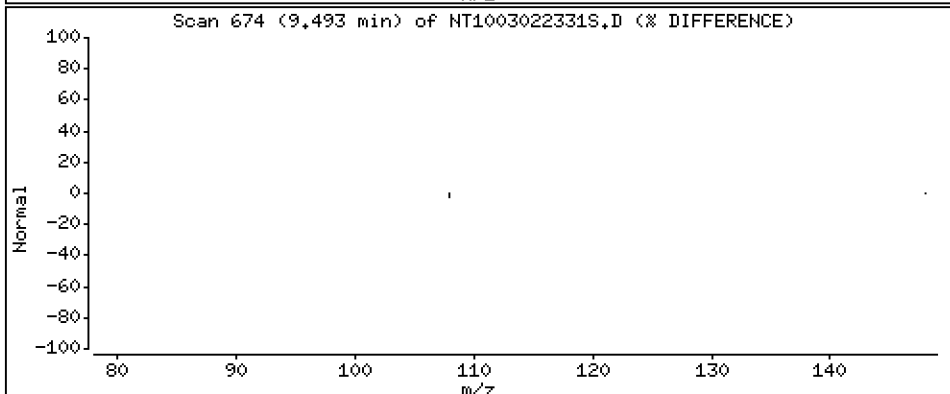
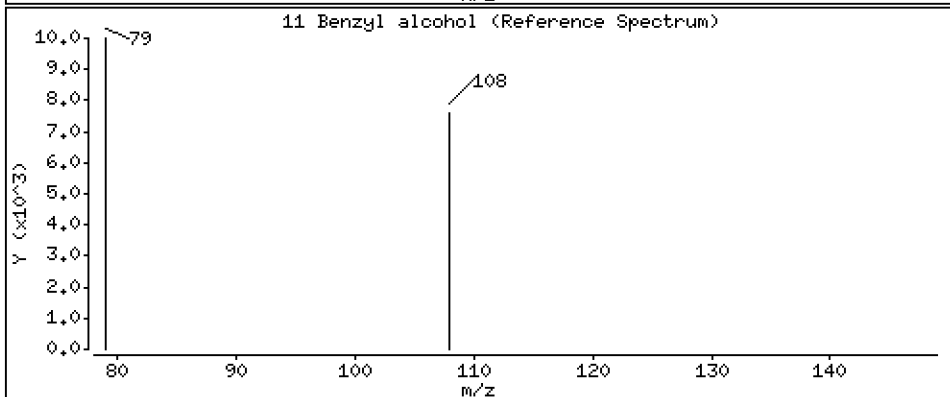
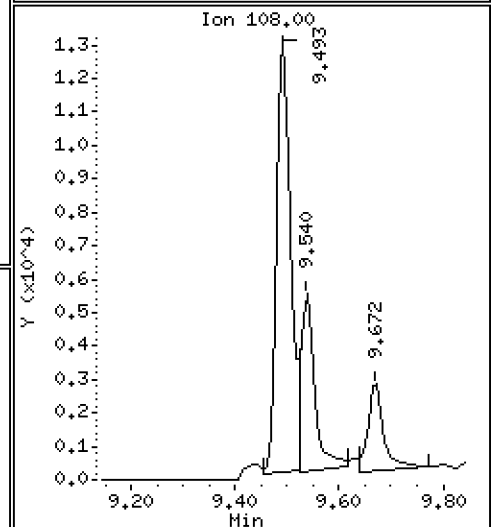
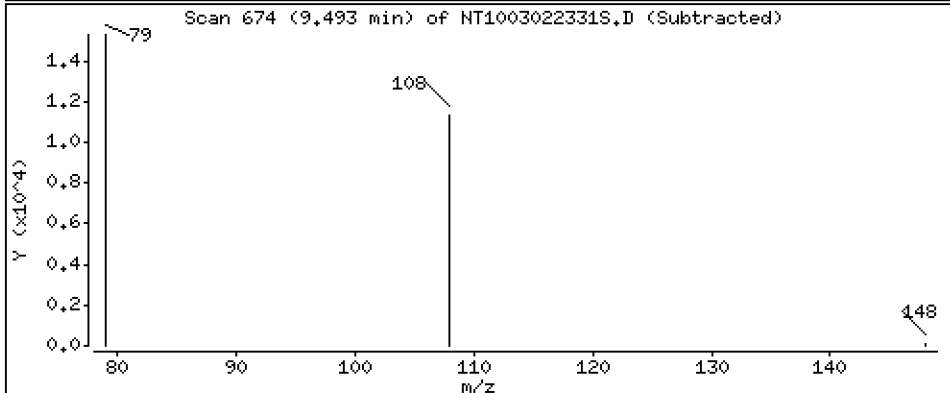
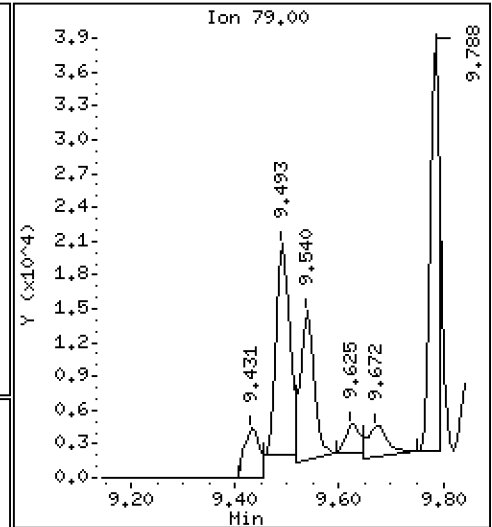
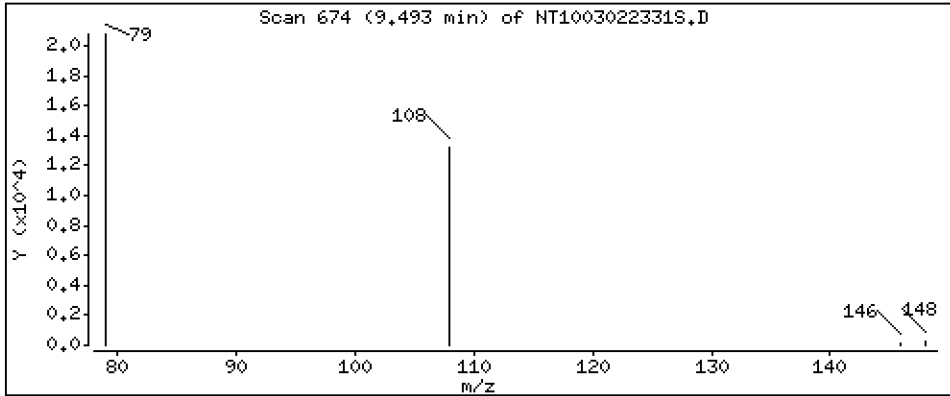
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2728 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

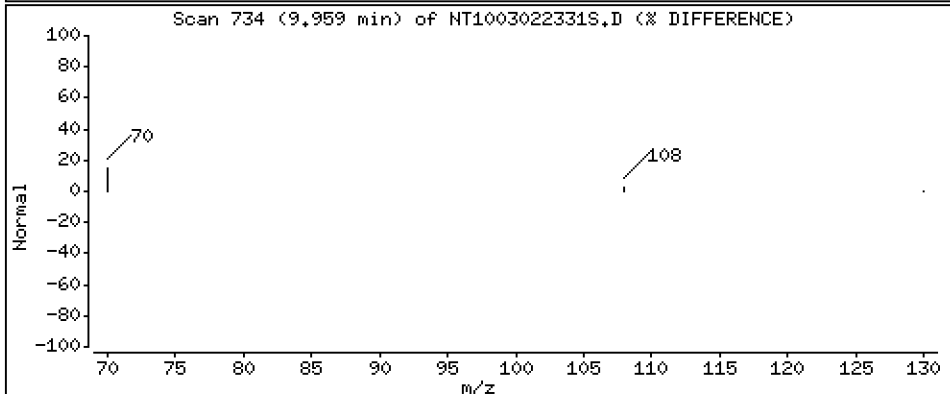
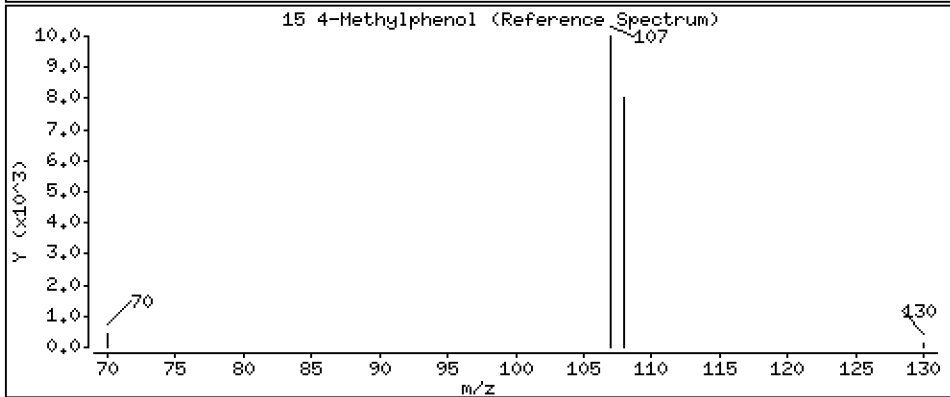
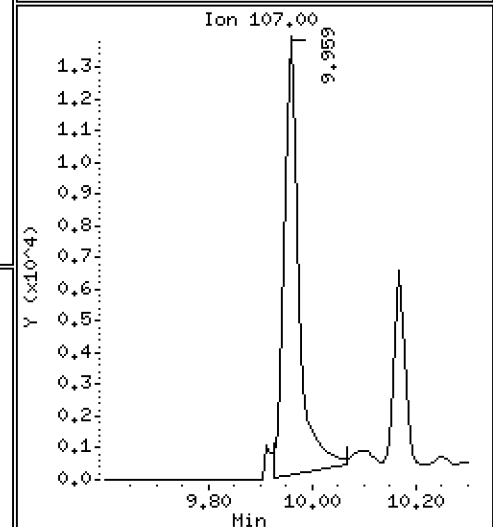
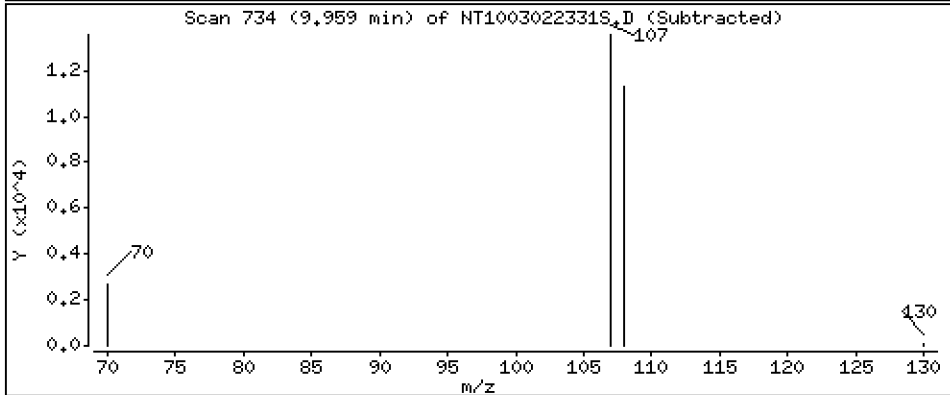
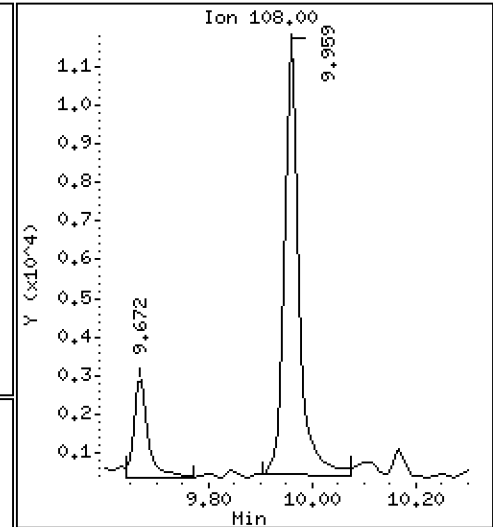
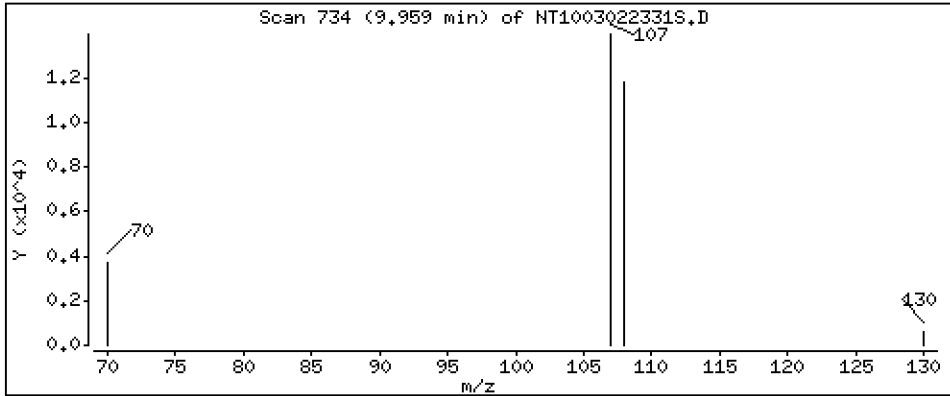
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1581 ug/L





Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

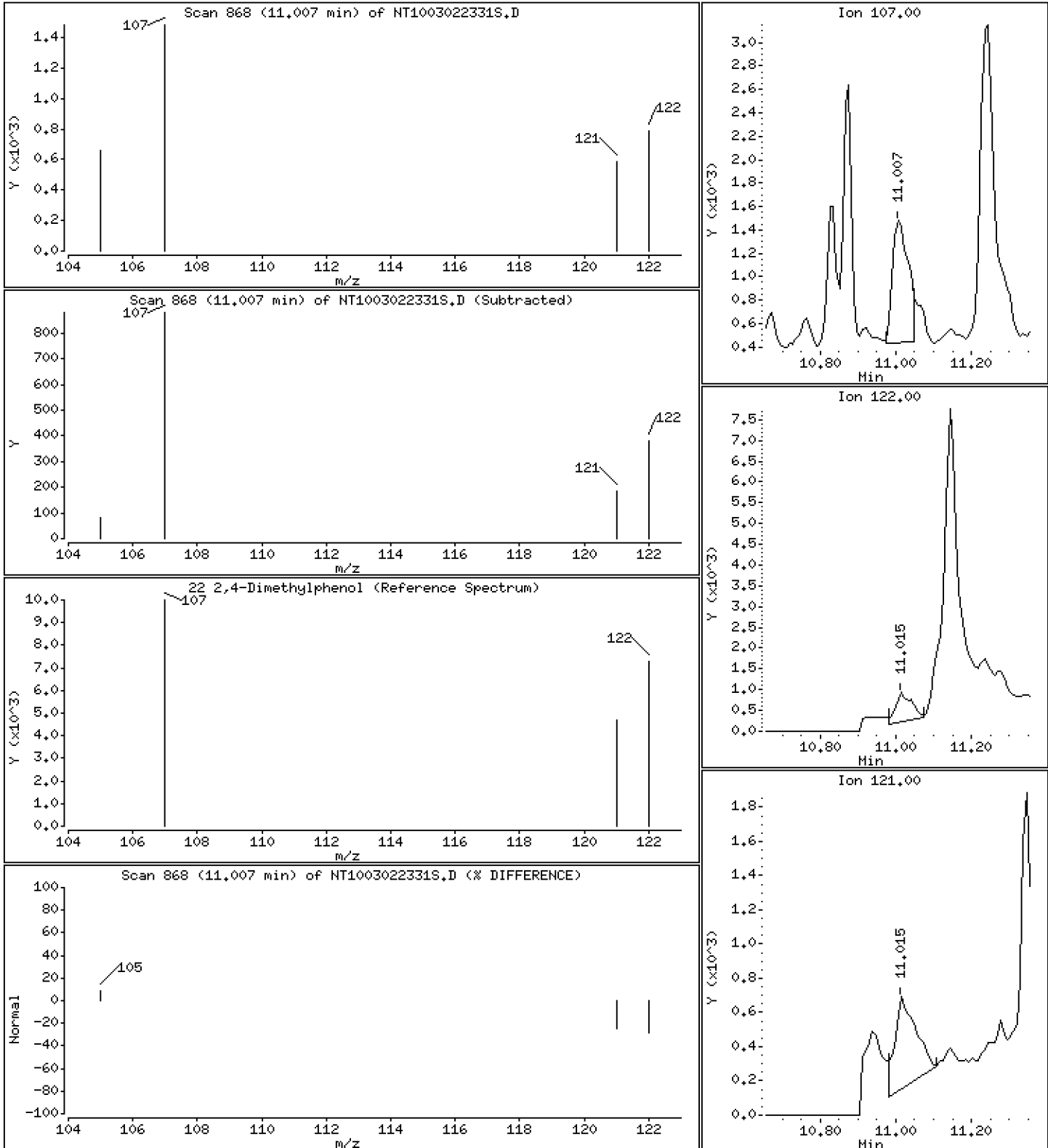
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.01941 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

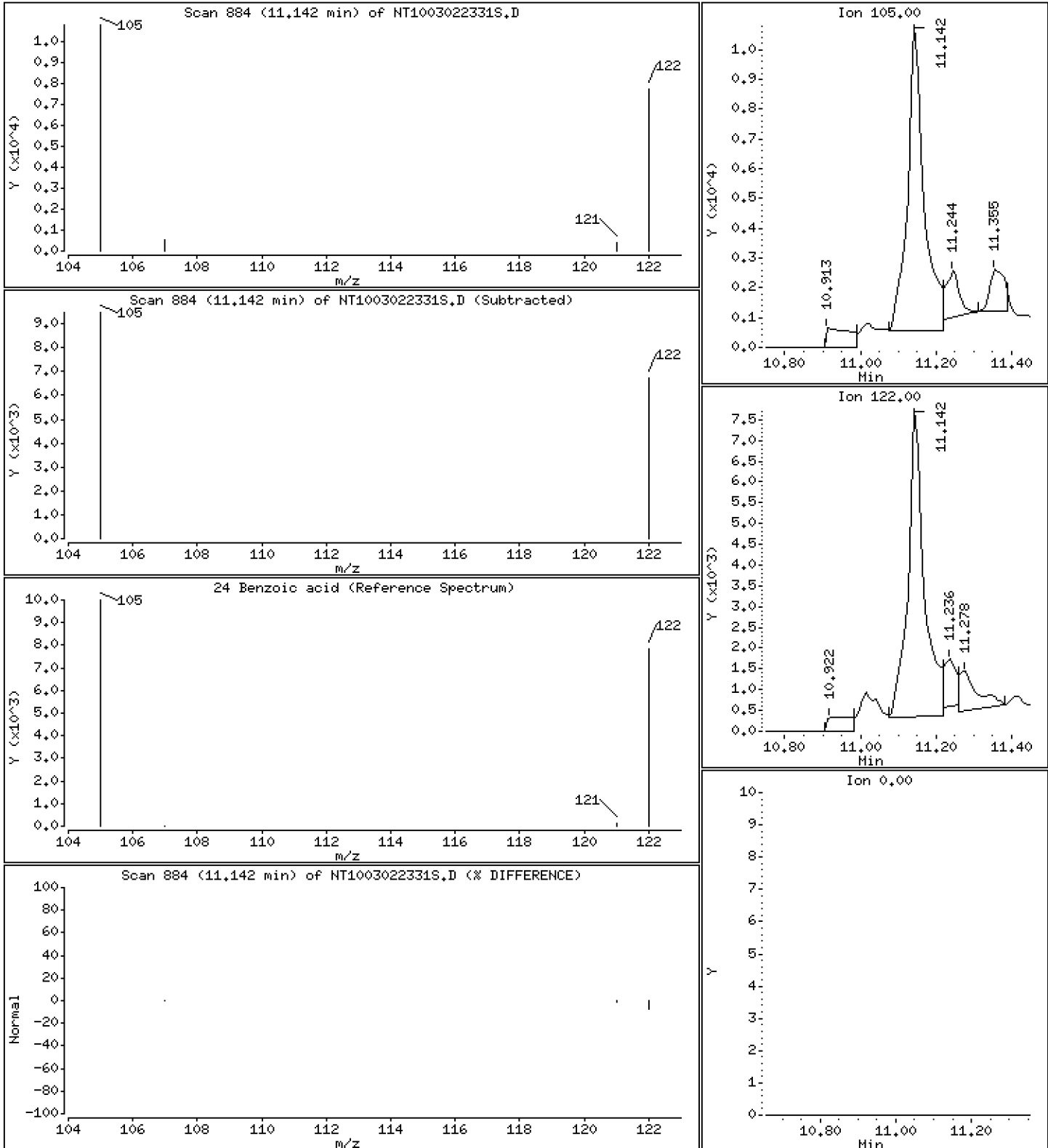
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3502 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

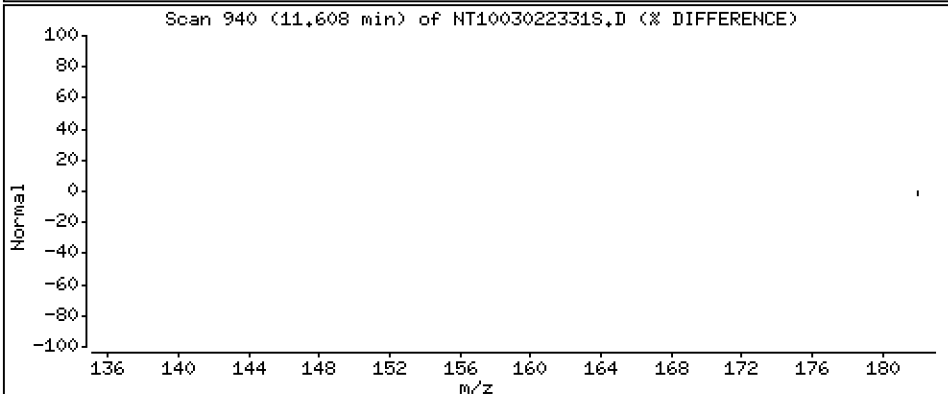
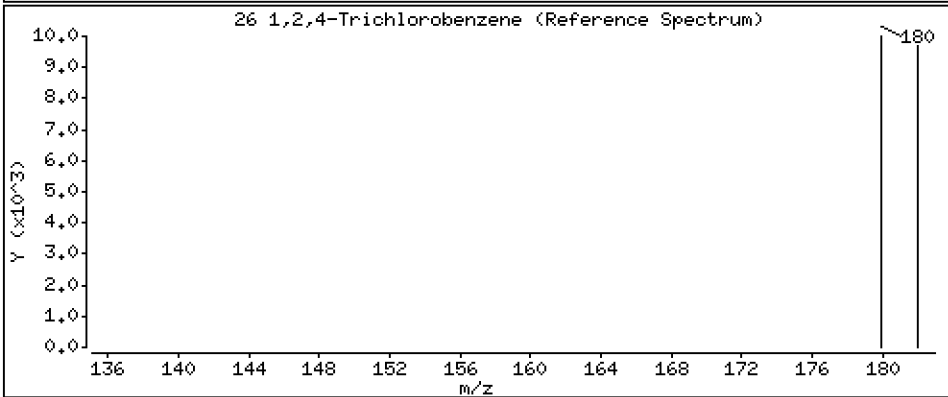
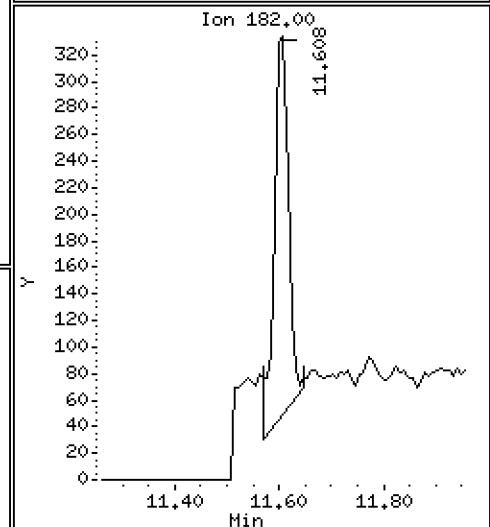
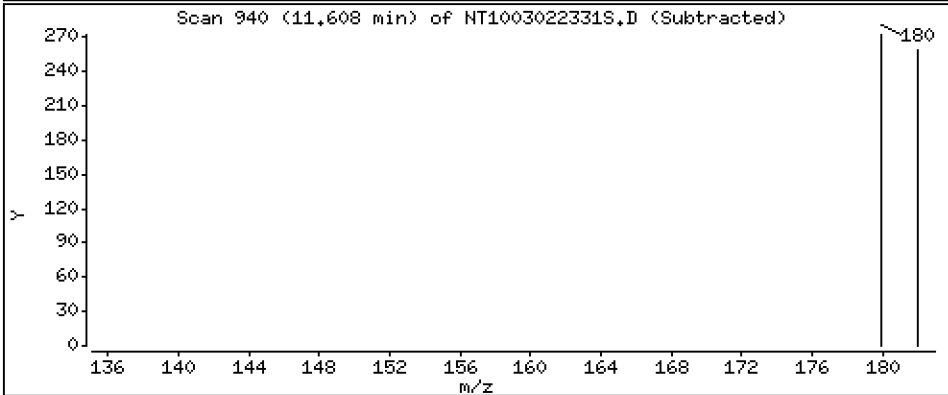
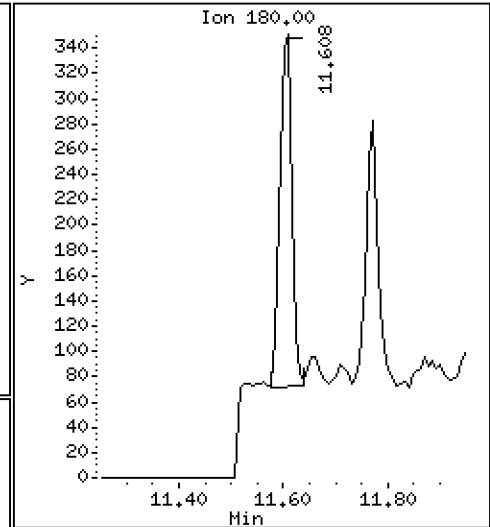
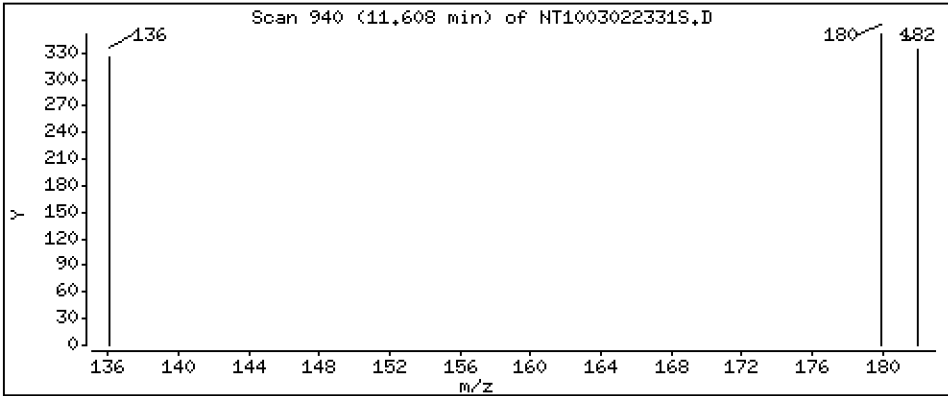
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,003112 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

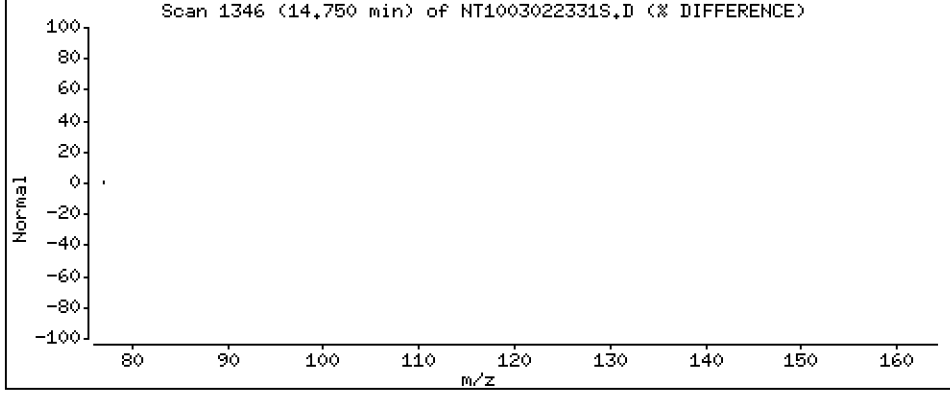
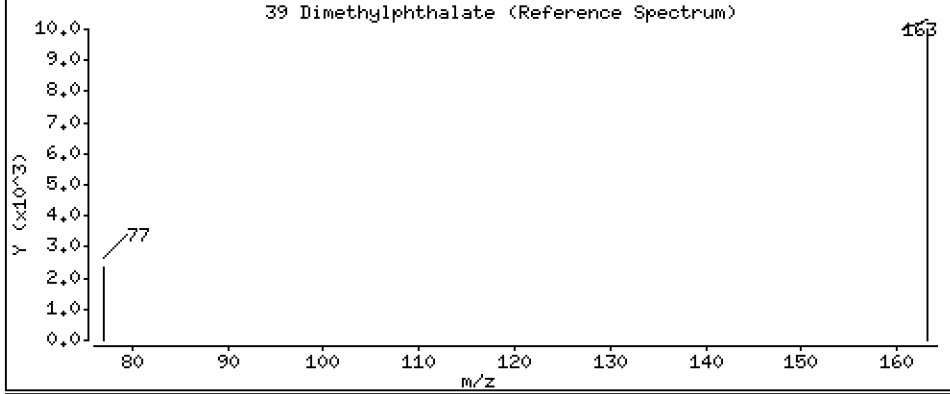
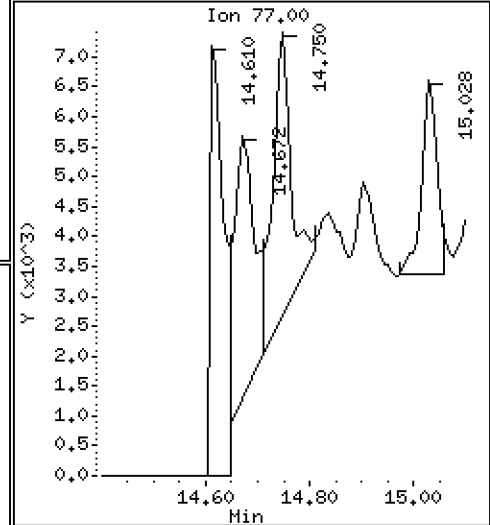
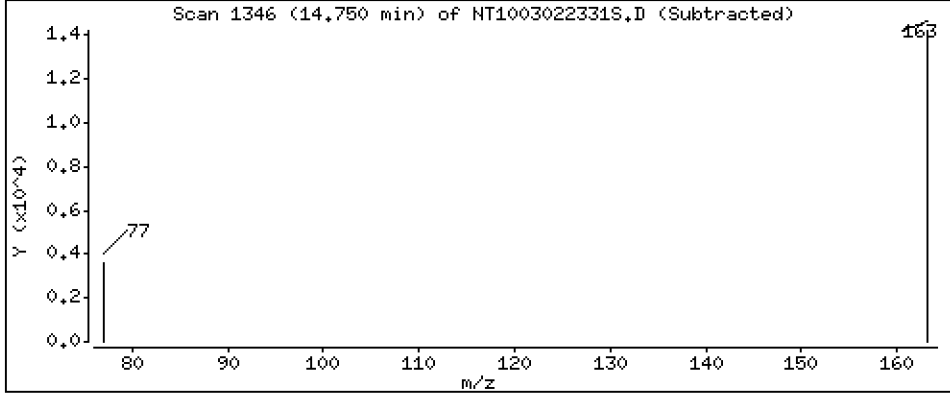
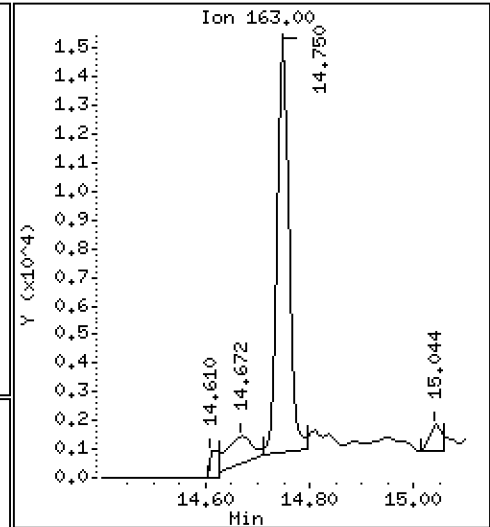
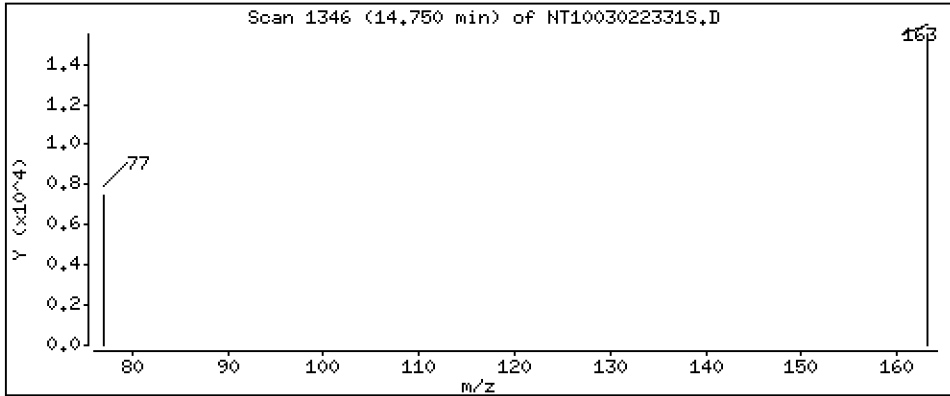
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.07263 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

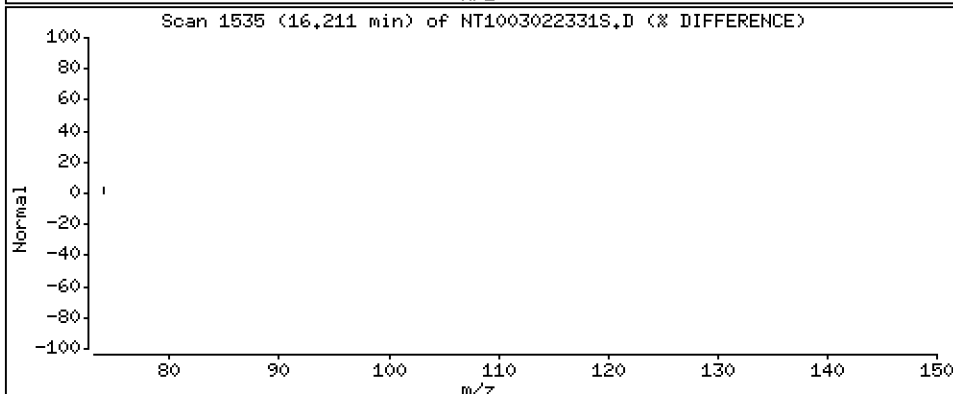
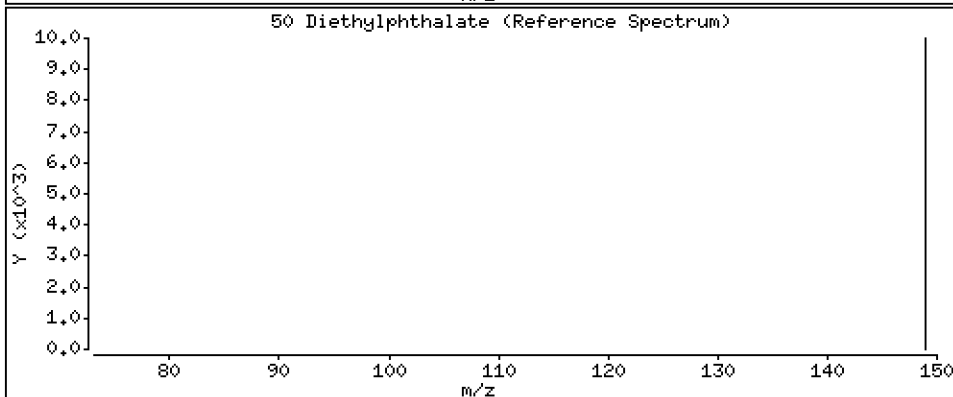
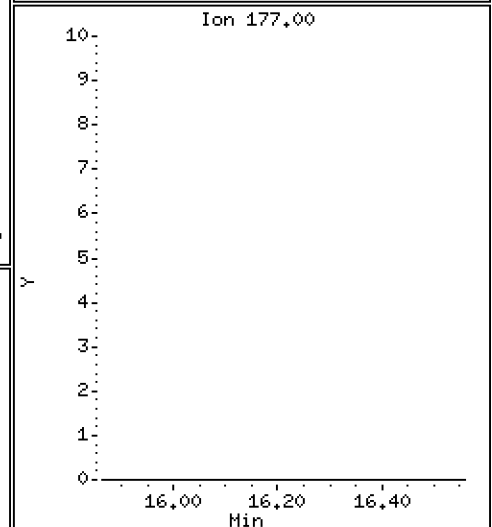
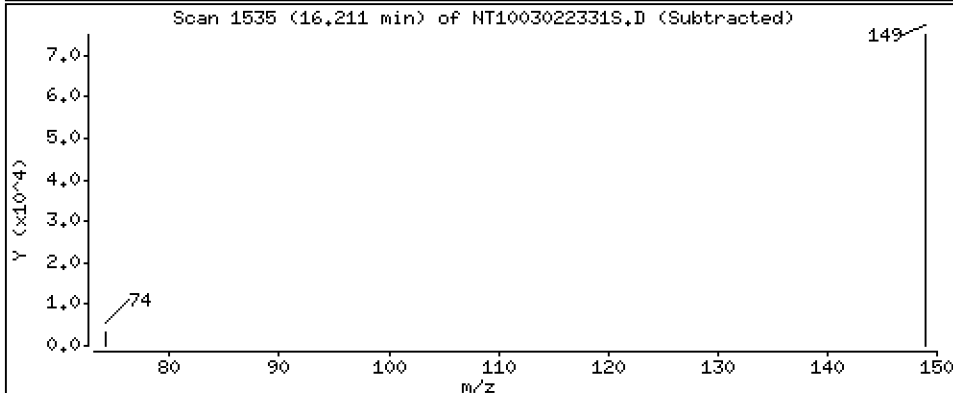
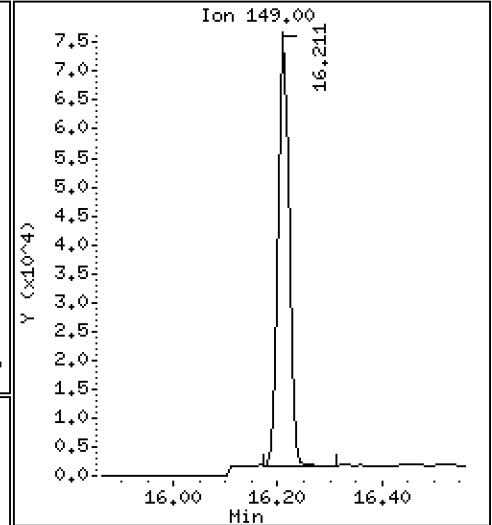
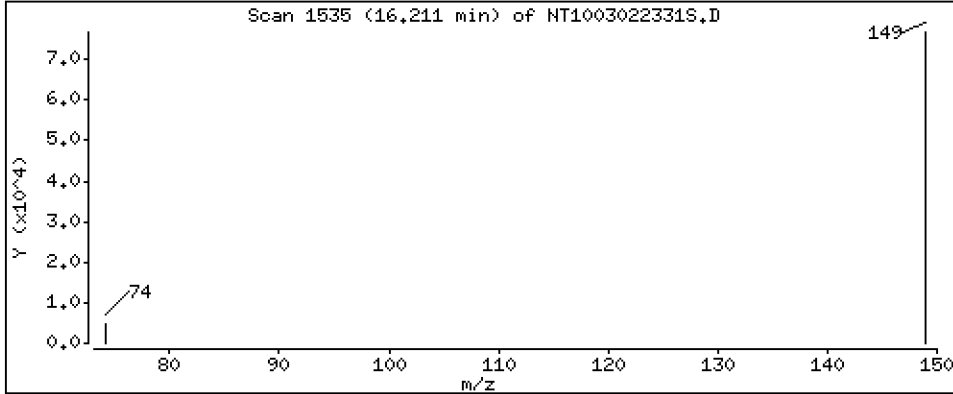
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,3631 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

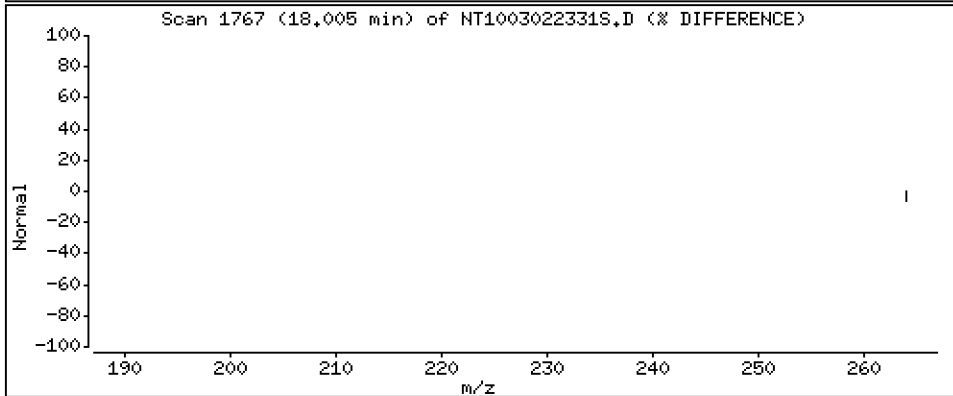
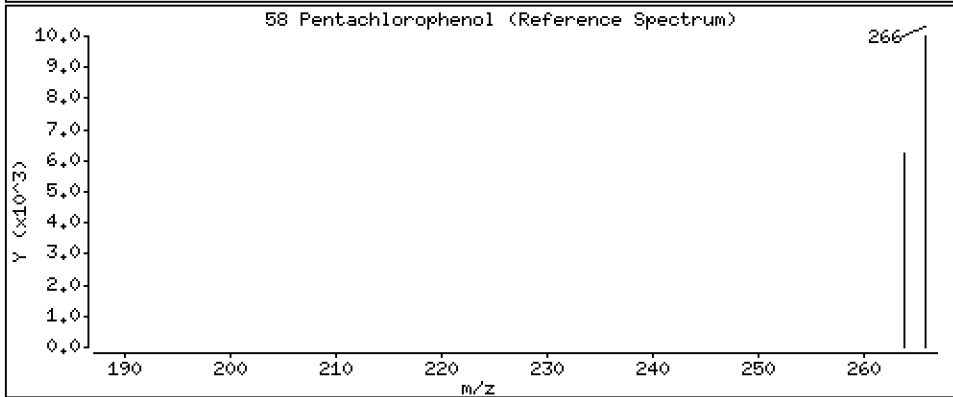
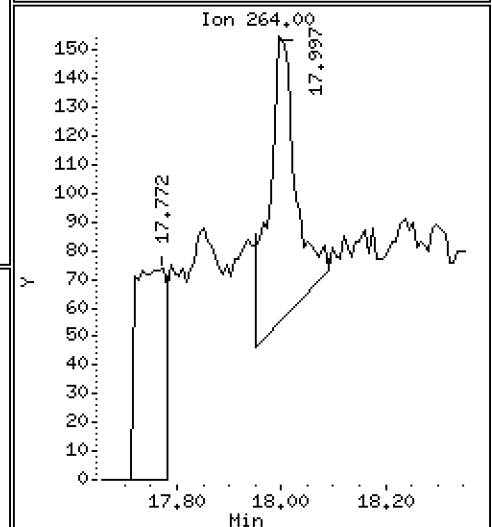
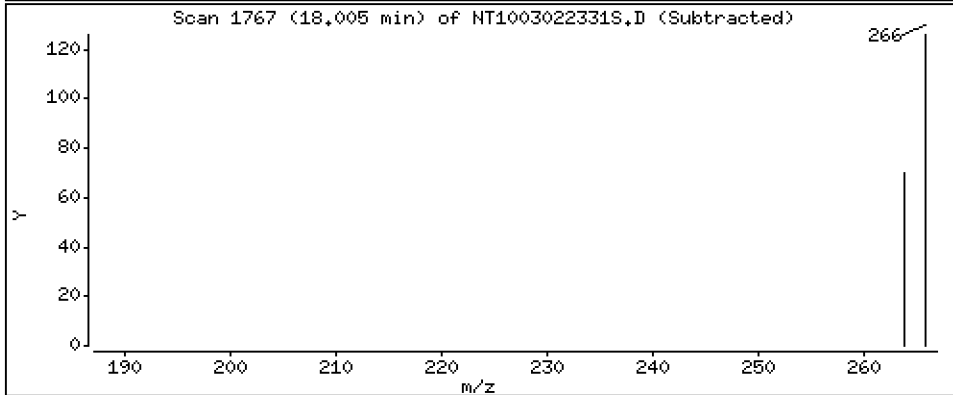
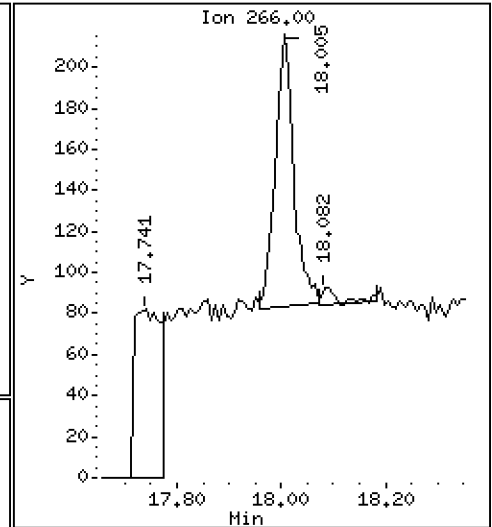
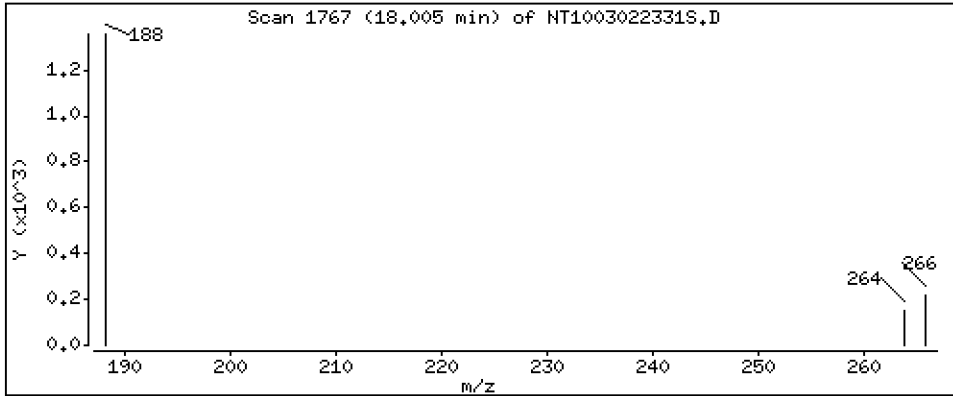
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,005030 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

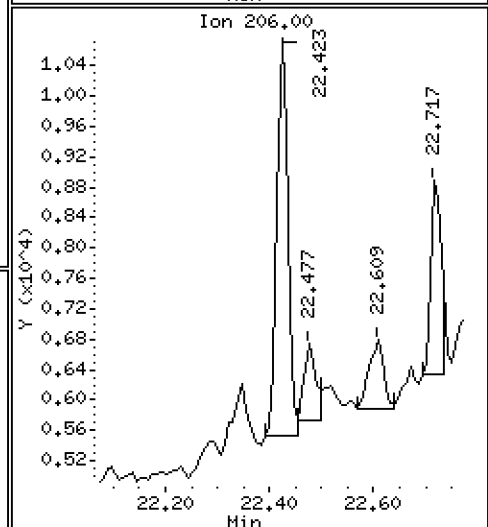
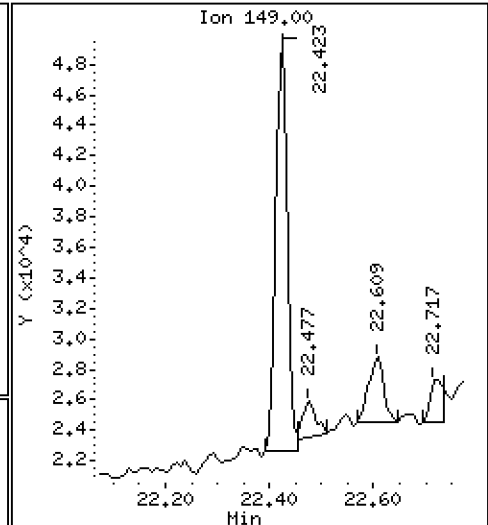
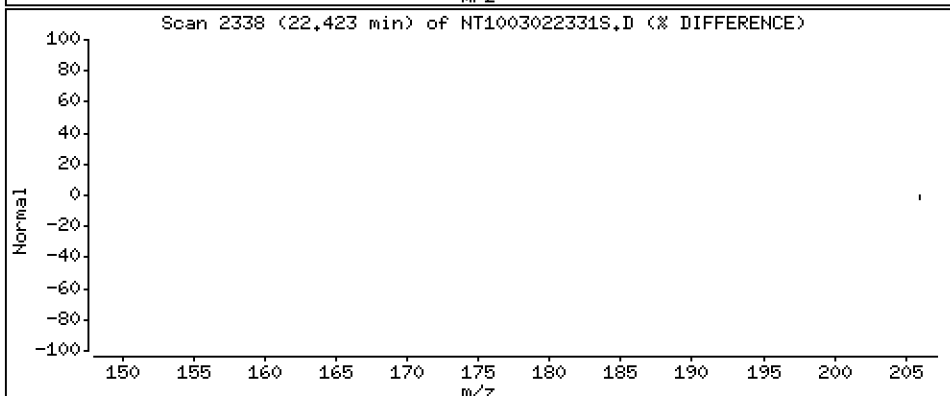
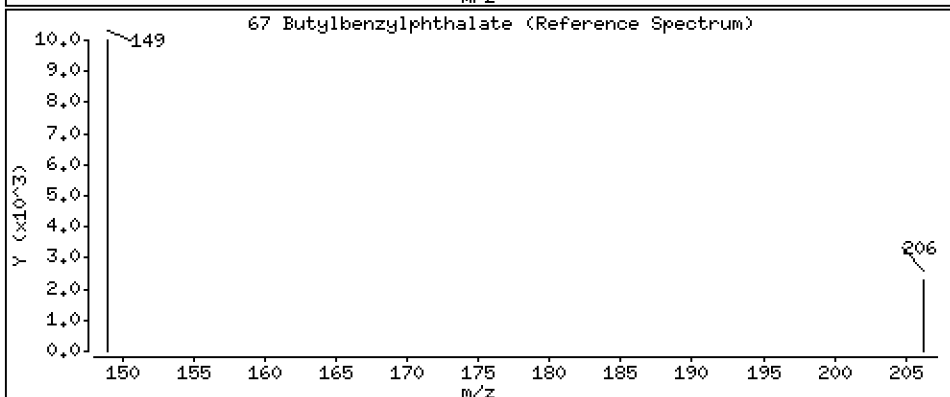
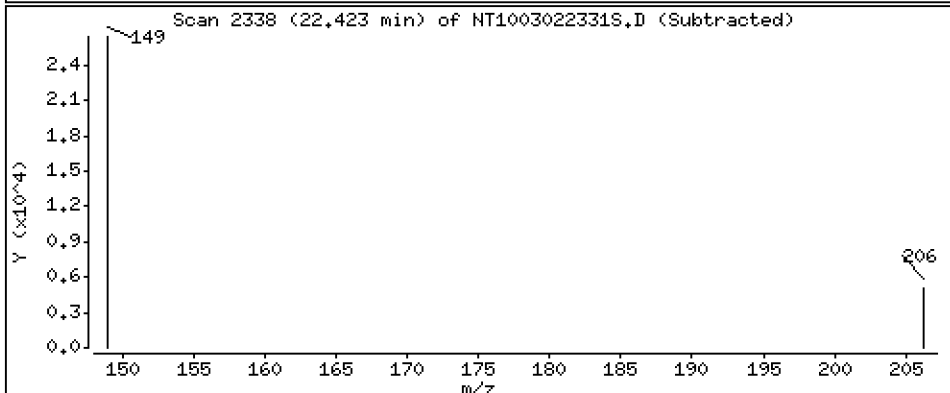
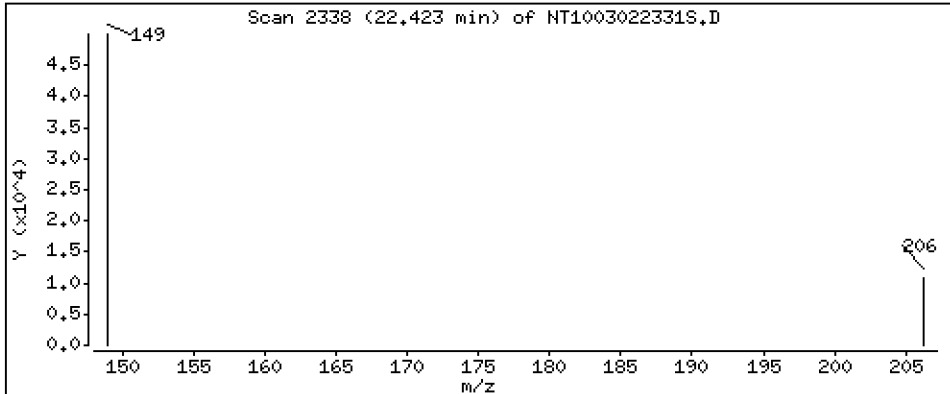
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.09777 ug/L



Date : 03-MAR-2023 09:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-12

Volume Injected (uL): 1.0

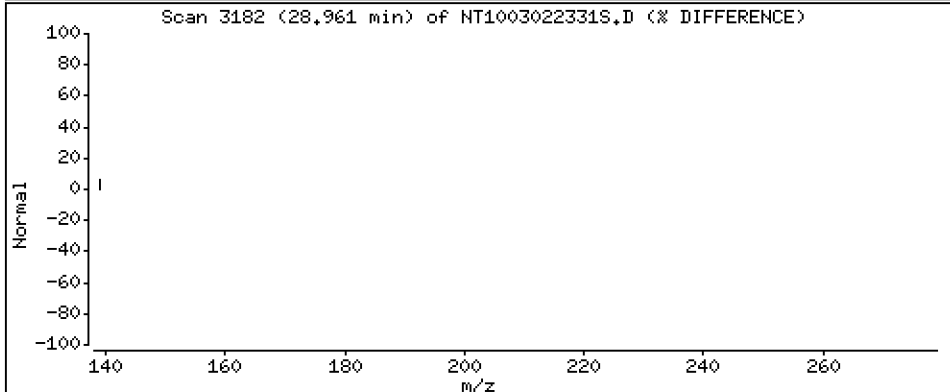
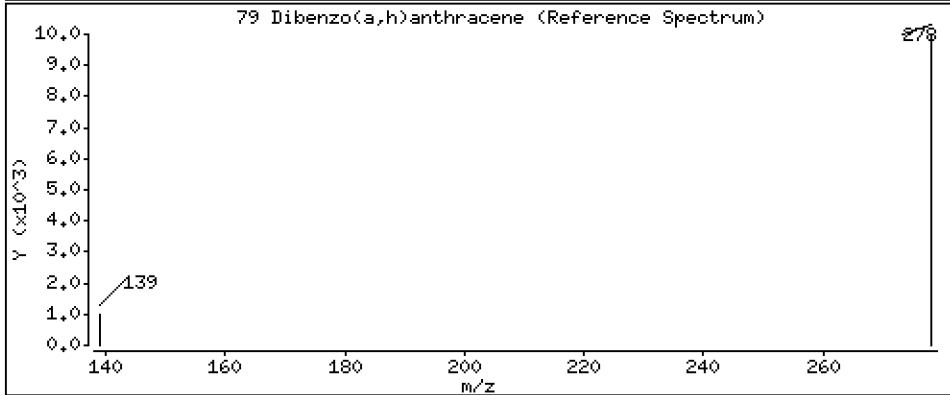
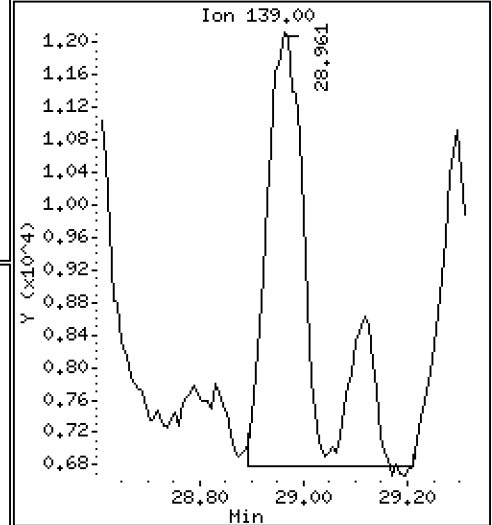
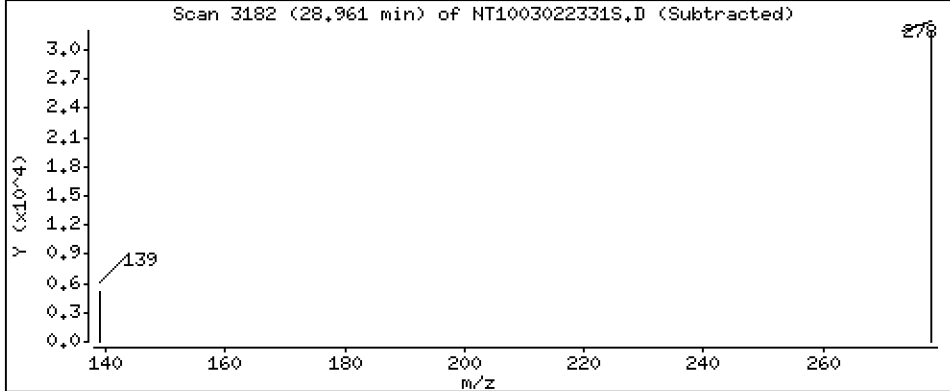
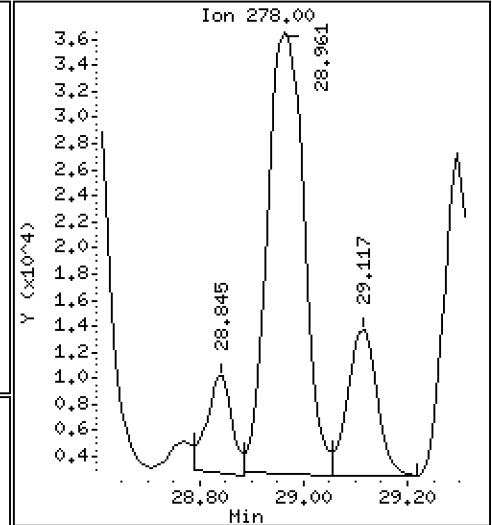
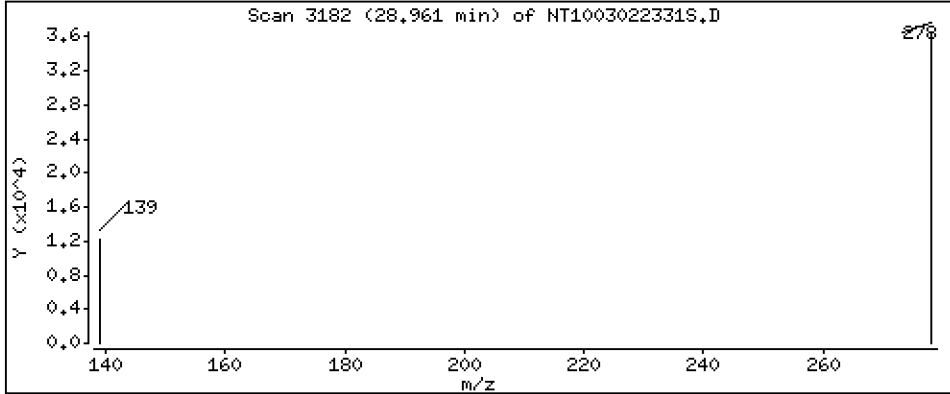
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,2875 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022331S.D  
 Lab Smp Id: 23A0206-12  
 Inj Date : 03-MAR-2023 09:24 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-12  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 23  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1015899	6.79815	6.798 (R)
3 Phenol	94		8.533	8.525 (0.922)		1366149	6.00497	6.005
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		523434	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		2536	0.01345	0.01345
11 Benzyl alcohol	79		9.492	9.492 (1.026)		33442	0.27285	0.2728
12 1,2-Dichlorobenzene	146		Compound Not Detected.					
13 2-Methylphenol	108		Compound Not Detected.					
15 4-Methylphenol	108		9.958	9.950 (1.076)		21819	0.15812	0.1581
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.006	11.006 (0.939)		3146	0.01941	0.01941 (M)
24 Benzoic acid	105		11.142	11.099 (0.950)		31177	0.35024	0.3502
26 1,2,4-Trichlorobenzene	180		11.608	11.600 (0.990)		428	0.00311	0.003112 (M)
* 27 Naphthalene-d8	136		11.724	11.731 (1.000)		1910677	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		21434	0.07263	0.07263
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		929452	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		101043	0.36306	0.3631
54 N-Nitrosodiphenylamine	169		Compound Not Detected.					
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.004	18.004	(0.978)	318	0.00503	0.005030
* 59 Phenanthrene-d10	188	18.414	18.414	(1.000)	1908204	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	1234196	6.56282	6.563(R)
67 Butylbenzylphthalate	149	22.423	22.422	(0.957)	38381	0.09777	0.09777
* 69 Chrysene-d12	240	23.437	23.429	(1.000)	2325537	4.00000	
* 77 Perylene-d12	264	26.147	26.131	(1.000)	2495427	4.00000	
79 Dibenzo(a,h)anthracene	278	28.961	28.961	(1.108)	166784	0.28749	0.2875
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022331S.D  
 Lab Smp Id: 23A0206-12  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	523434	-15.66
27 Naphthalene-d8	2213509	1106755	4427018	1910677	-13.68
42 Acenaphthene-d10	1093970	546985	2187940	929452	-15.04
59 Phenanthrene-d10	2129840	1064920	4259680	1908204	-10.41
69 Chrysene-d12	2347260	1173630	4694520	2325537	-0.93
77 Perylene-d12	2638390	1319195	5276780	2495427	-5.42

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.72	-0.06
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.13	25.63	26.63	26.15	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022331S.D

Lab ID: 23A0206-12

nt10.i, 20230302B.b\SIM.b\SIMABN2.m, 03-MAR-2023 09:24

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

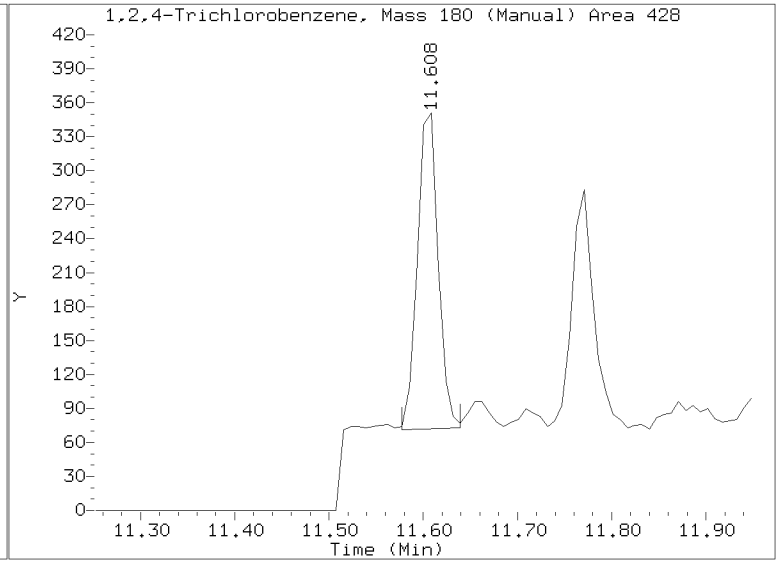
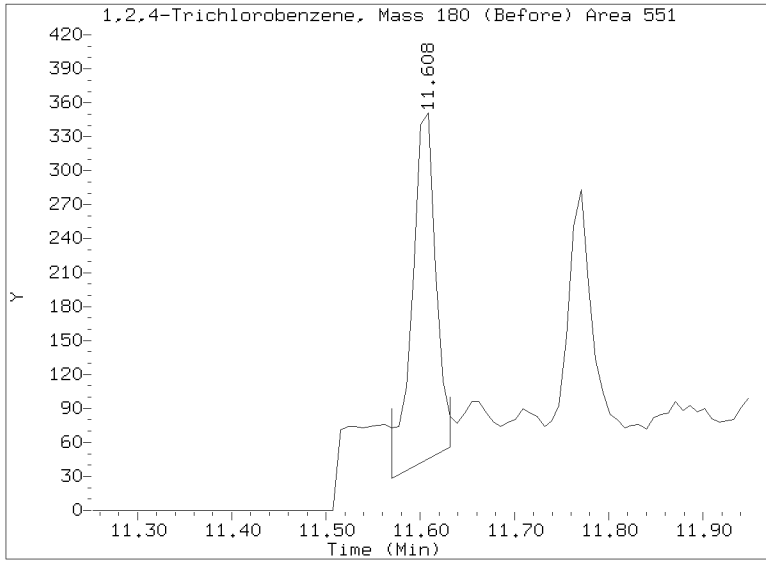
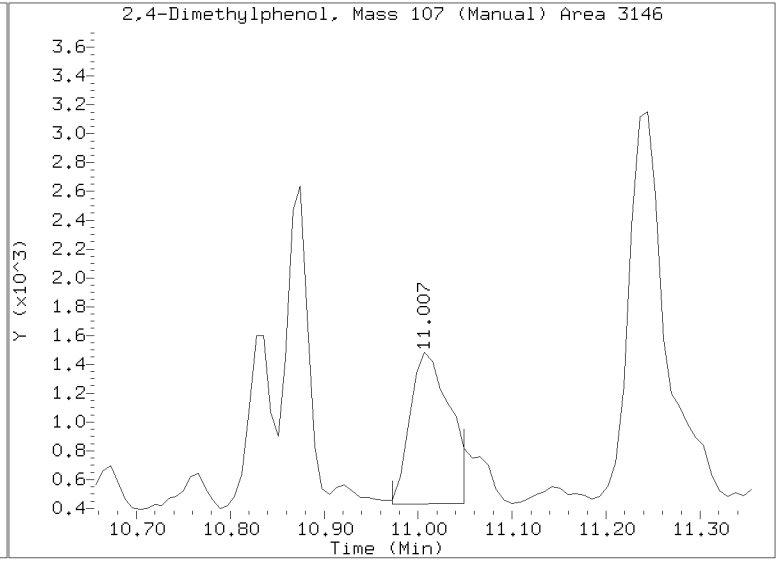
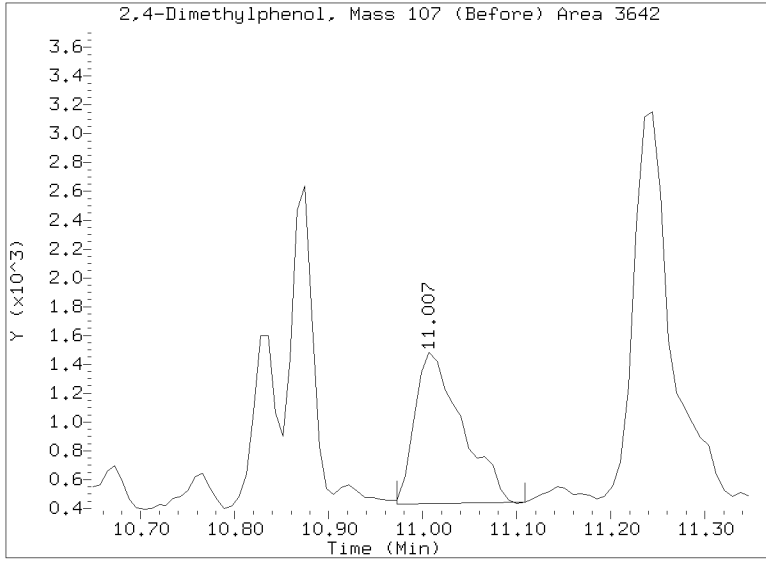
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022331S.D  
Injection Date: 03-MAR-2023 09:24  
Lab ID:23A0206-12 Client ID:  
Report Date: 03/11/2023 07:04





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-13 B

SDG: 23A0206

Sampled: 01/11/23 12:40

Prepared: 01/27/23 14:44

File ID: NT1003022332S.D

% Solids: 60.13

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:02

Batch: BLA0624

Sequence: SLC0159

Initial/Final: 16.66 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

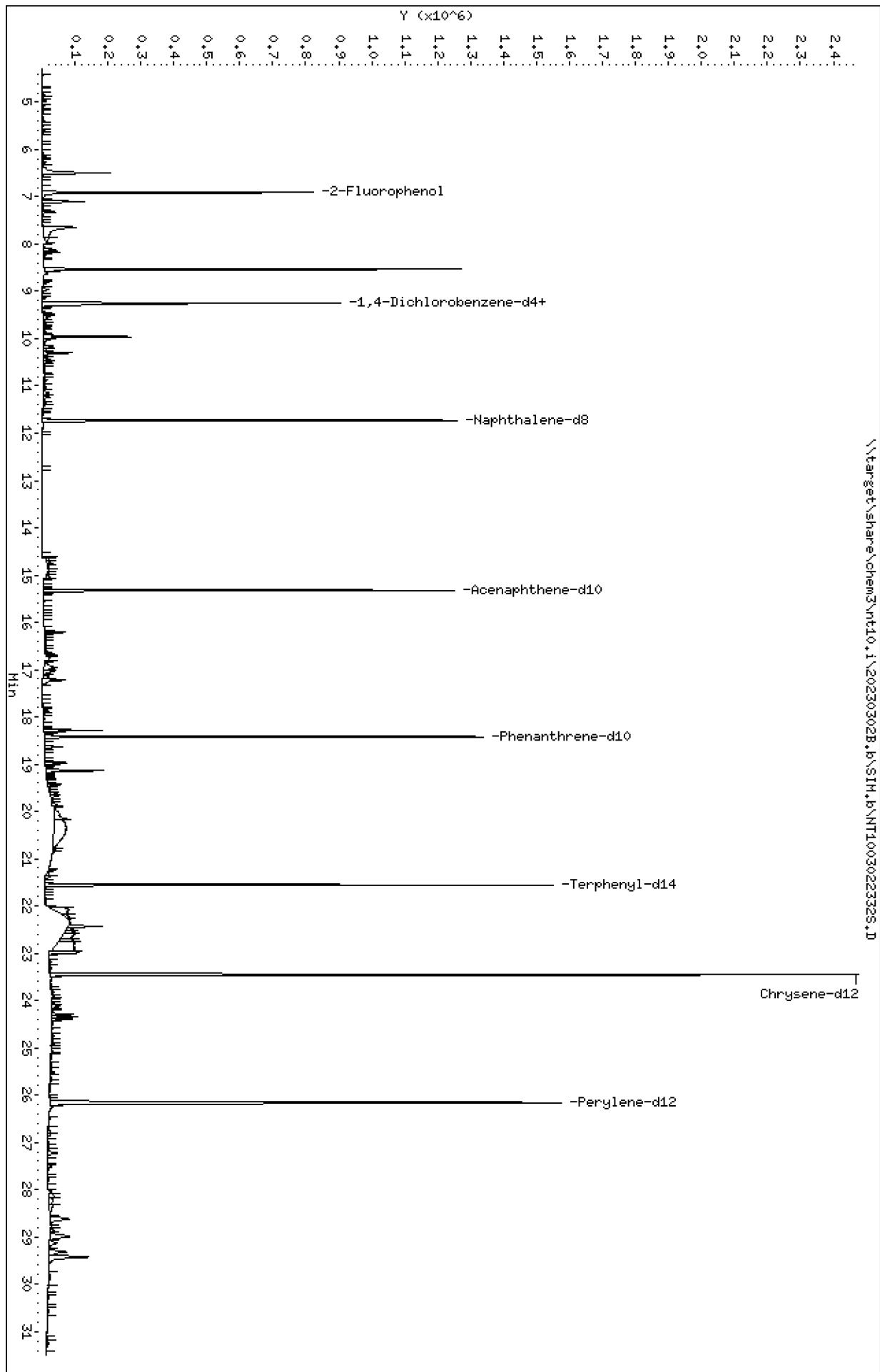
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	53.6		0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	6.0		0.7	5.0
100-51-6	Benzyl Alcohol	1	25.3		2.5	20.0
65-85-0	Benzoic acid	1	48.5	J	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	10.5	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	2.7	J	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	11.7		1.3	5.0
87-86-5	Pentachlorophenol	1	3.2	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.68	668	89.3	27 - 120	
p-Terphenyl-d14	499.12	809	162	37 - 120	*

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022332S.D  
Date: 03-MAR-2023 10:02  
Client ID:  
Sample Info: 23A0206-13  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022332S.D



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

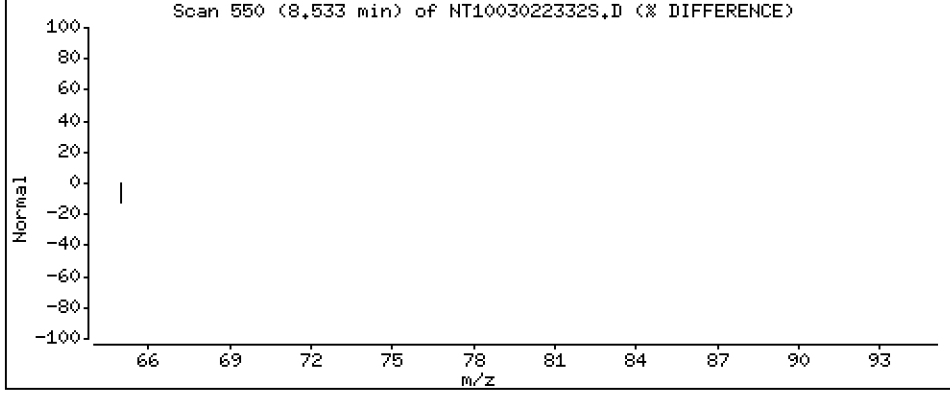
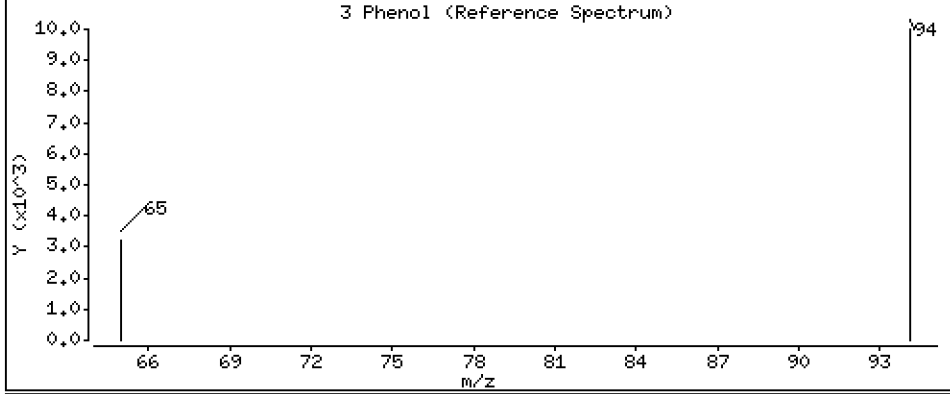
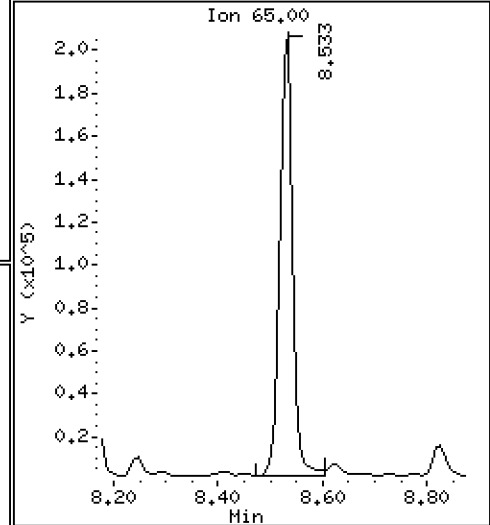
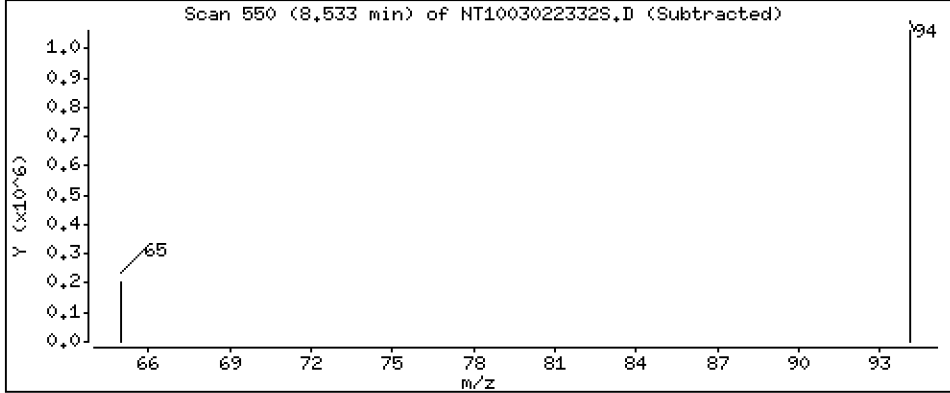
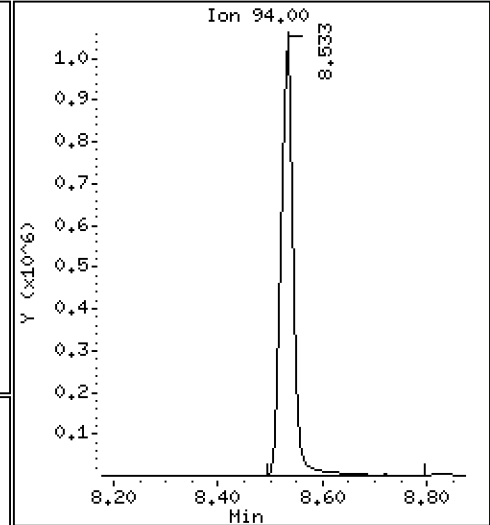
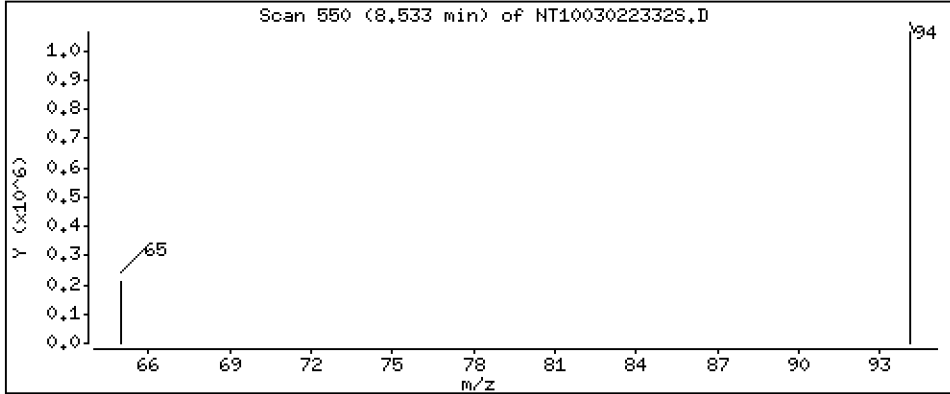
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 6.953 ug/L





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

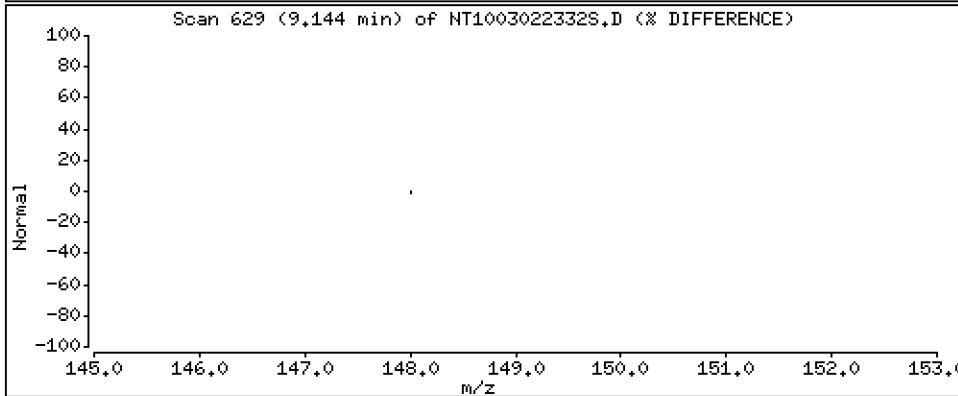
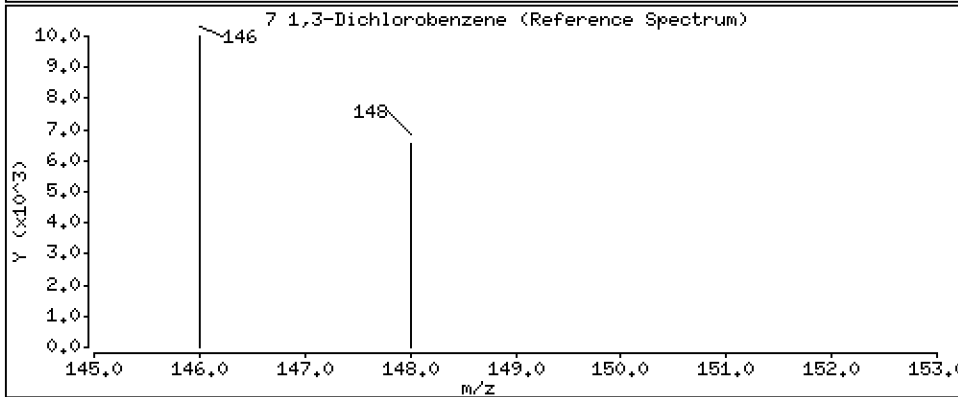
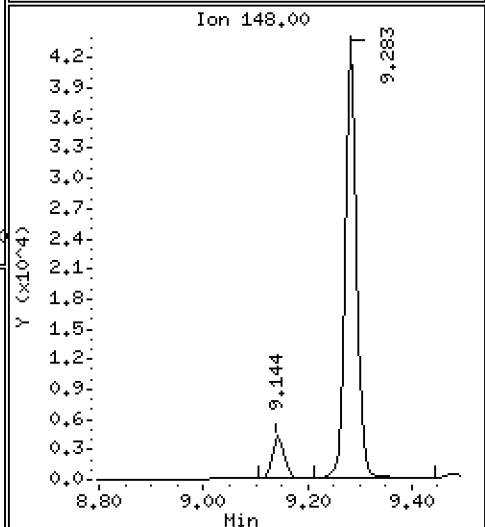
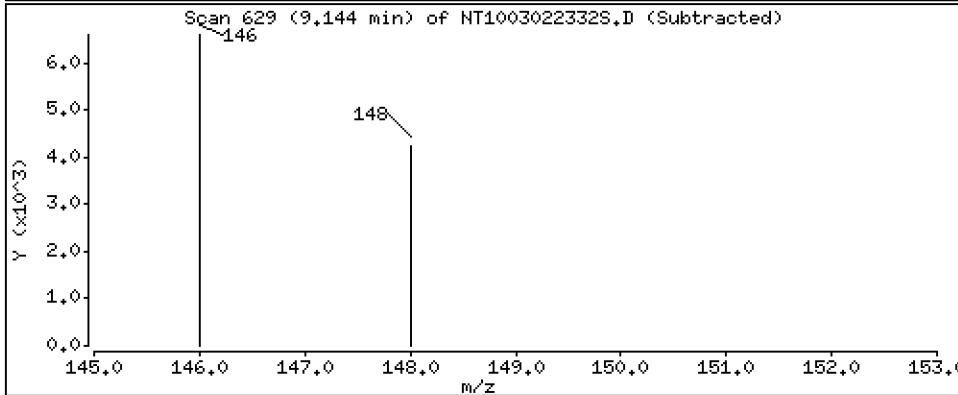
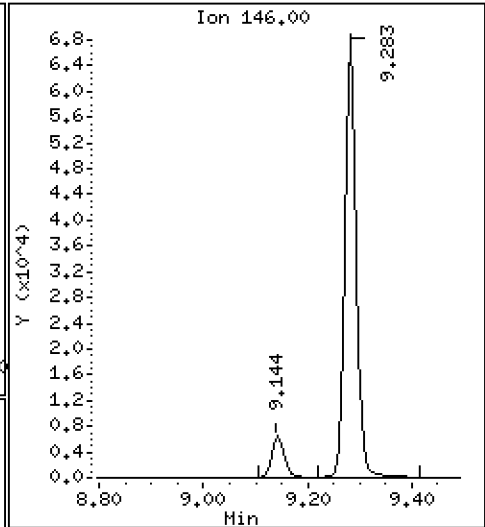
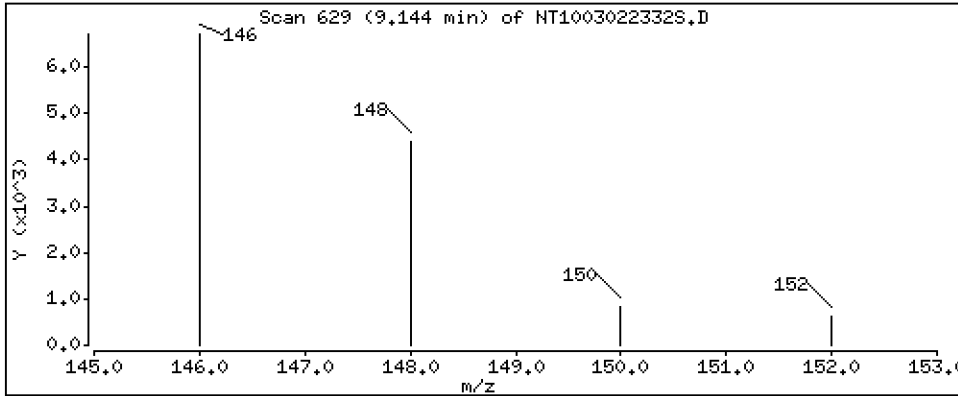
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.05091 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

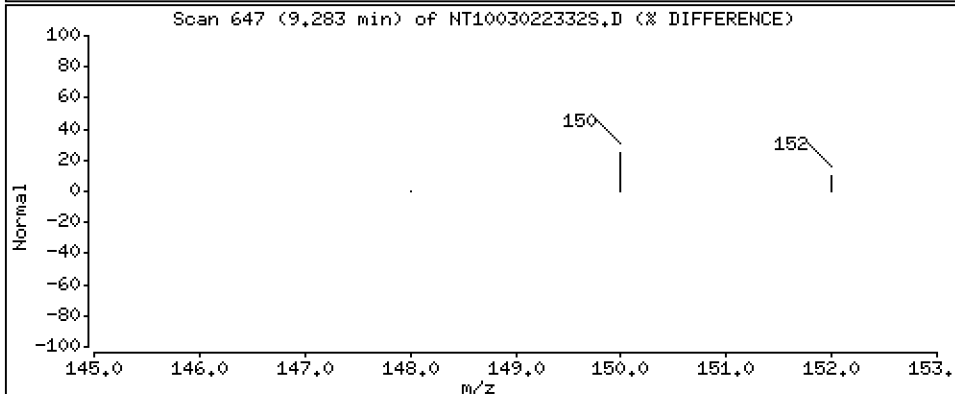
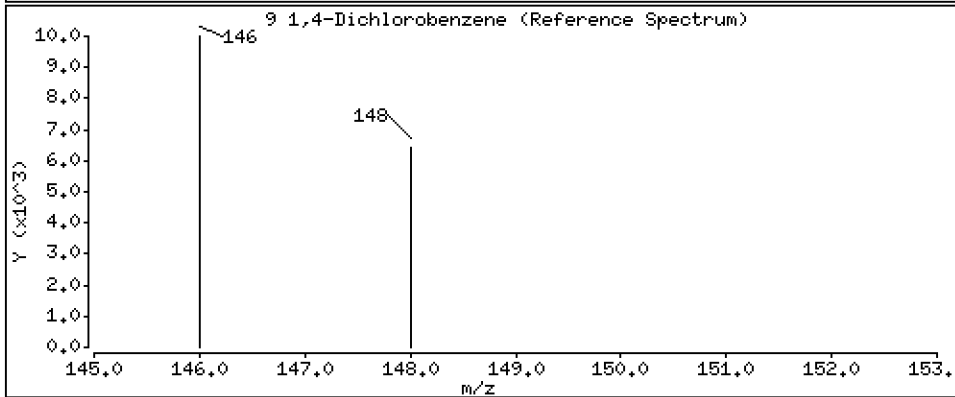
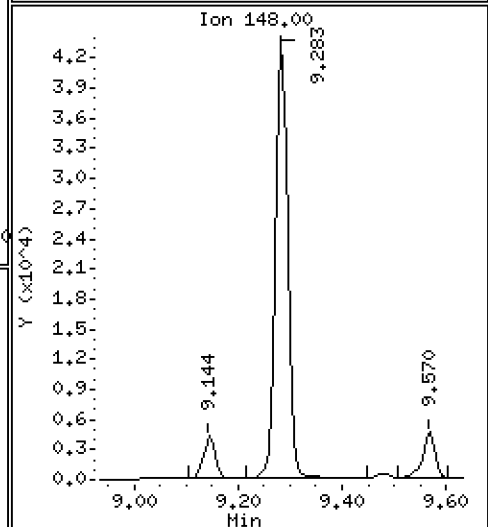
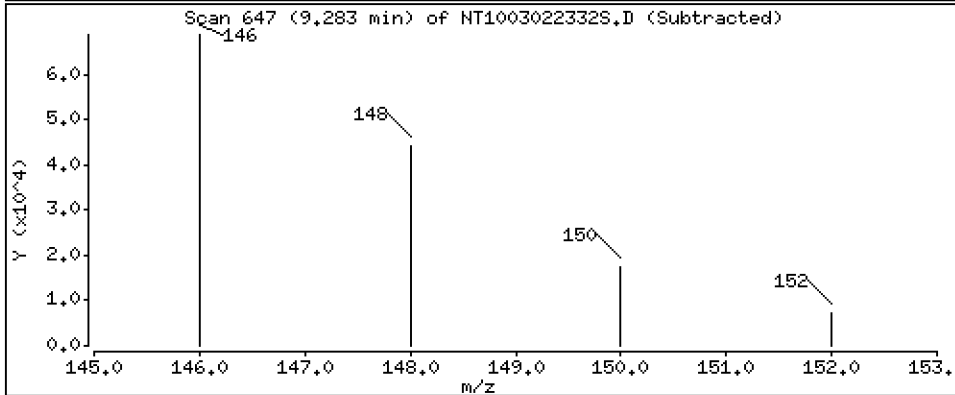
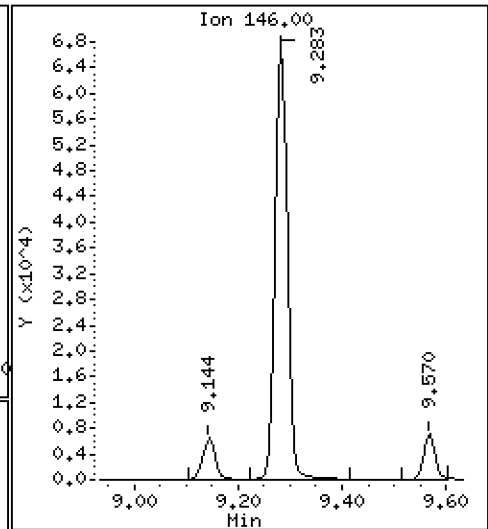
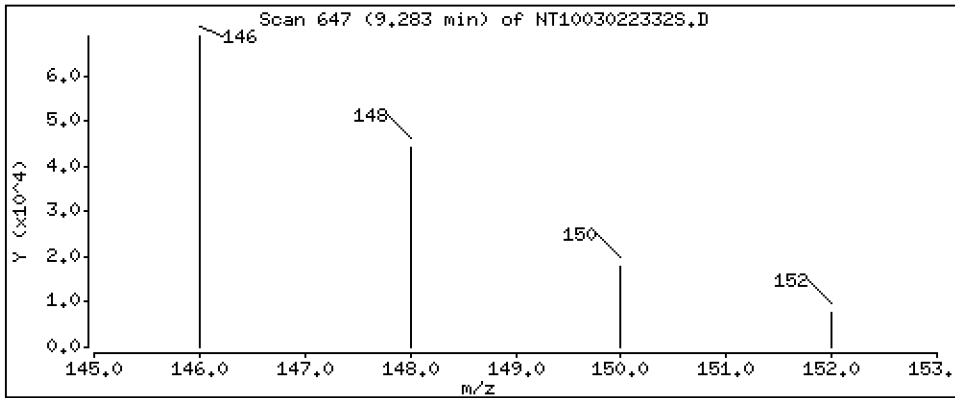
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.5366 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

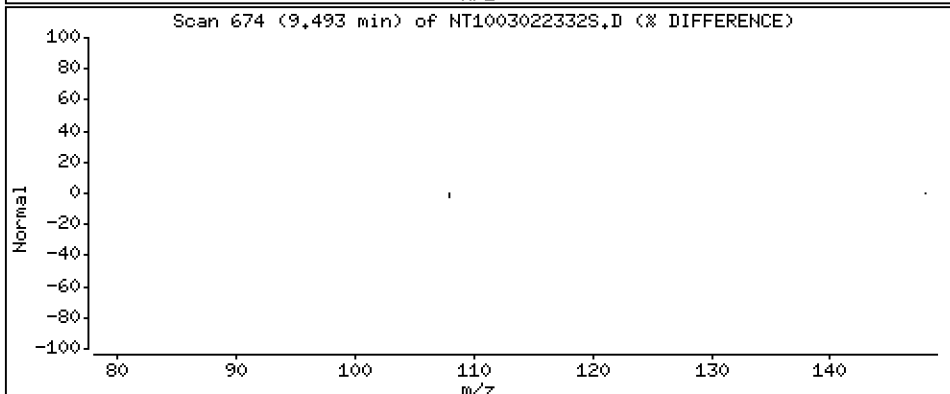
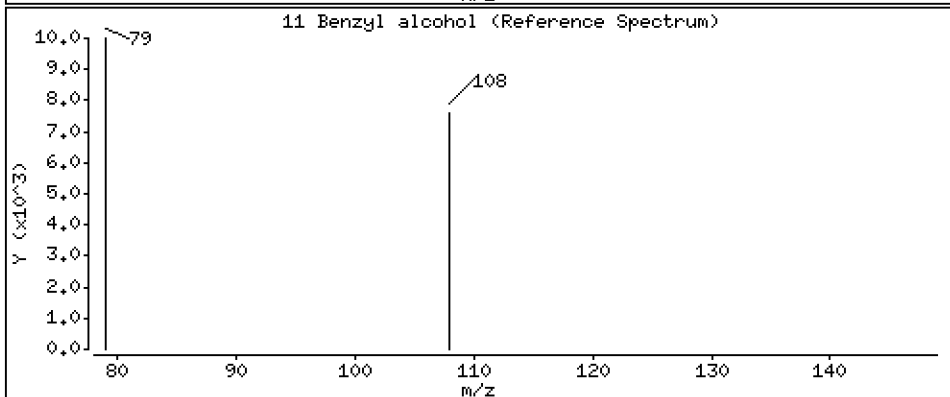
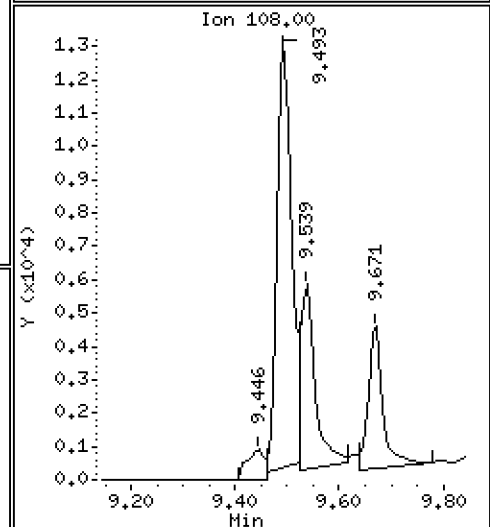
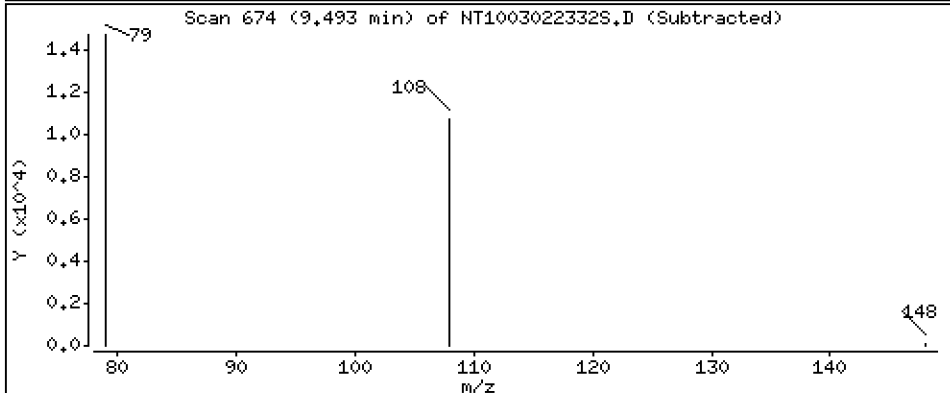
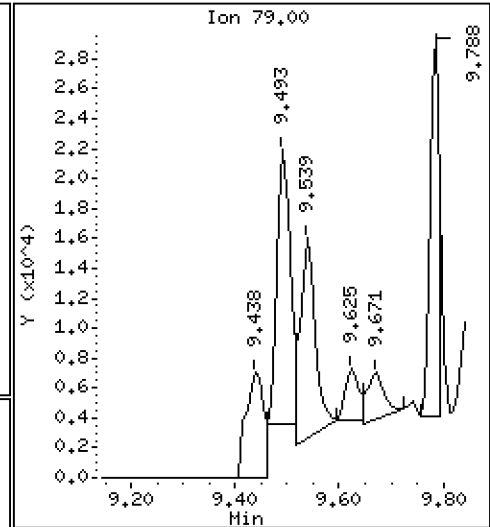
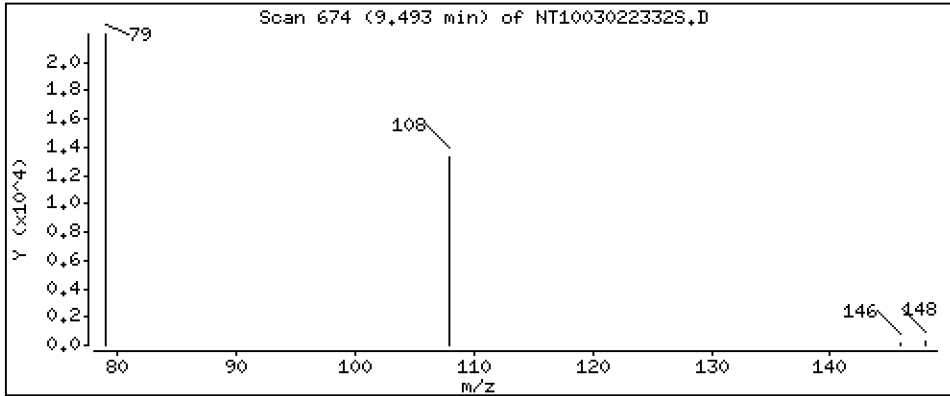
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2539 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

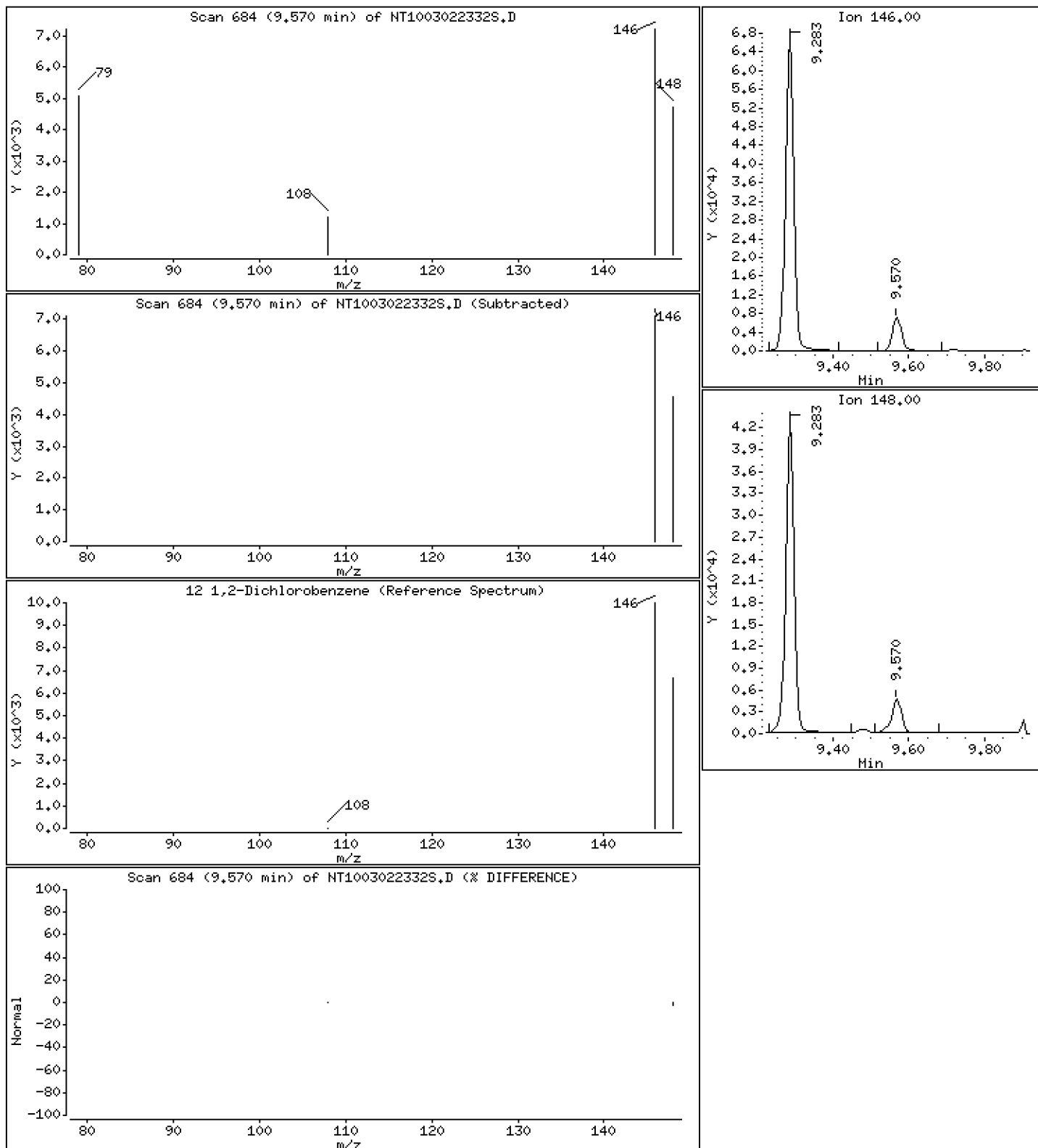
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.05976 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

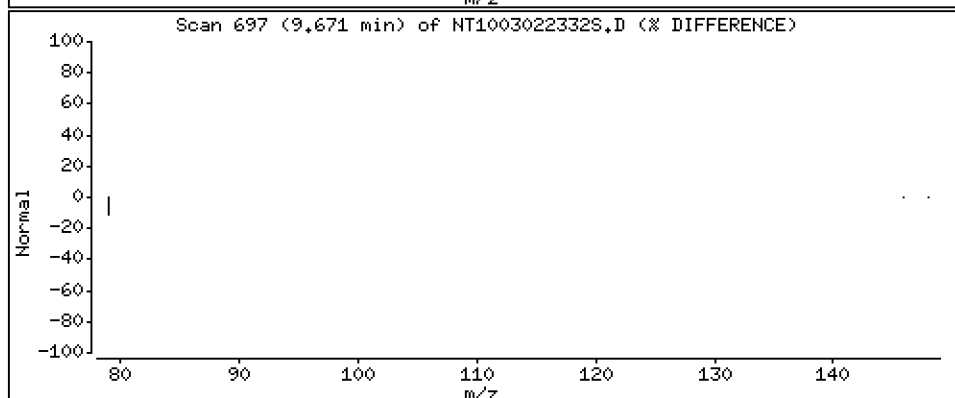
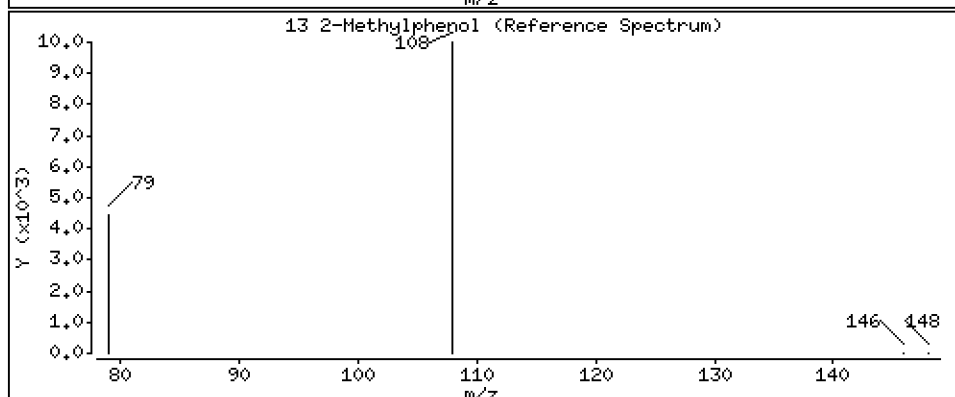
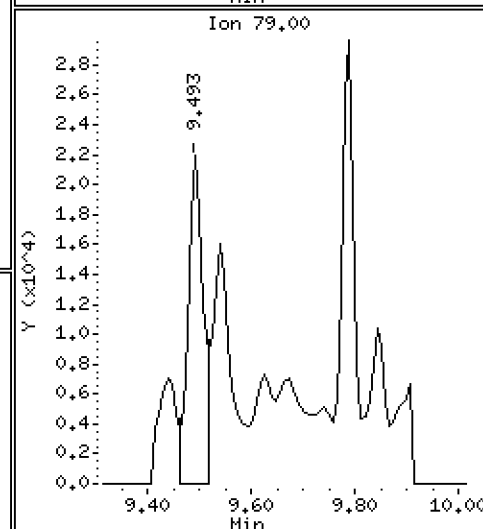
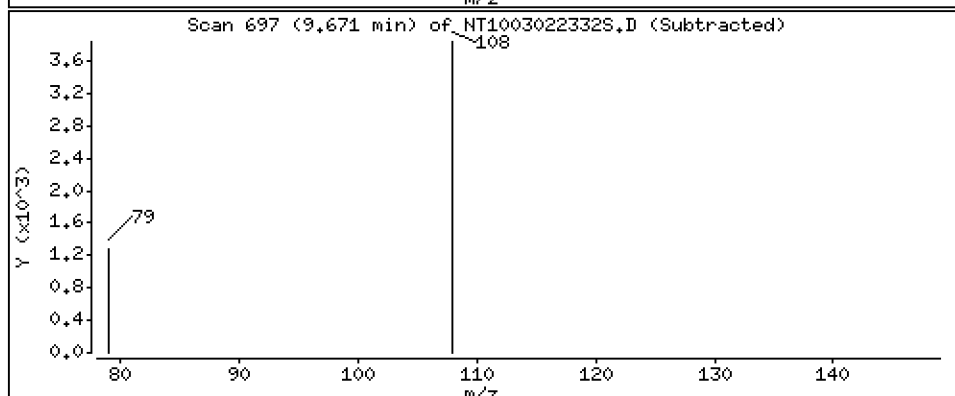
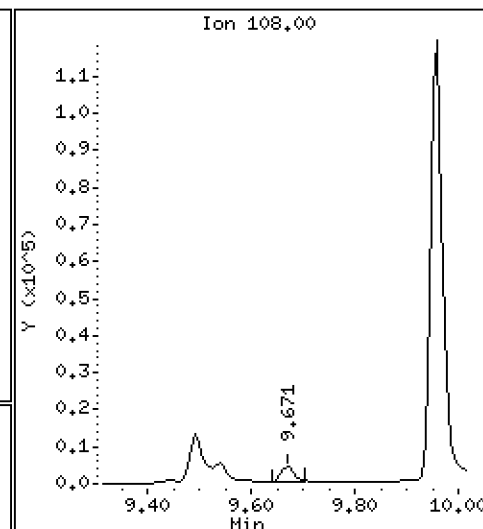
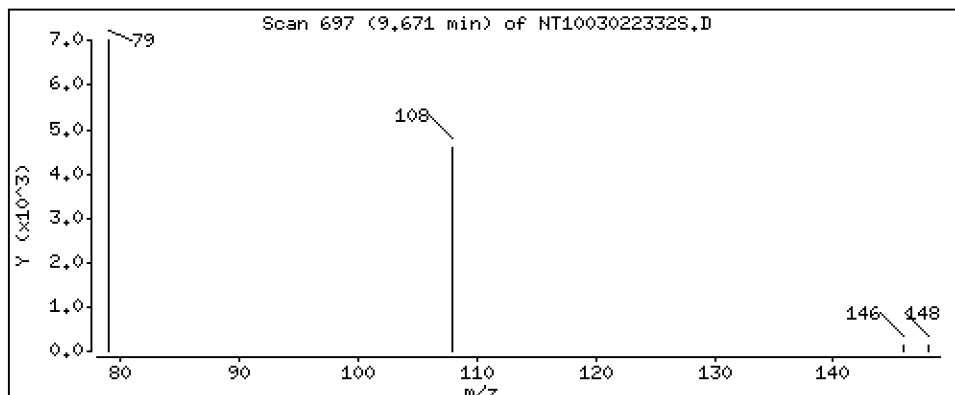
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.04570 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

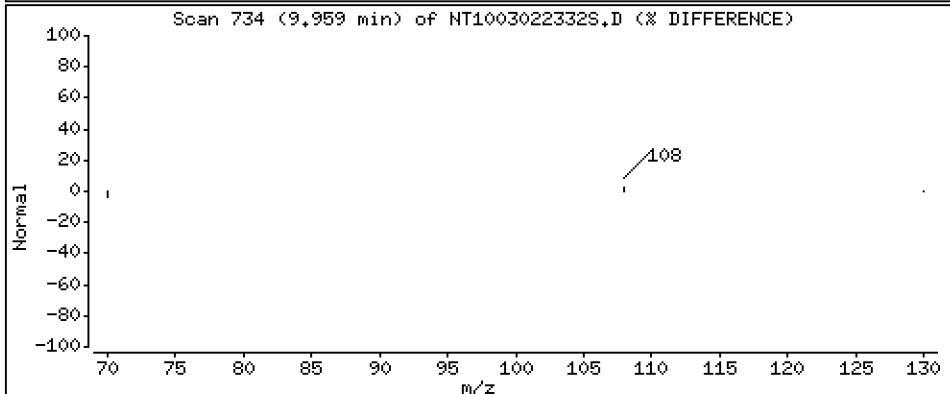
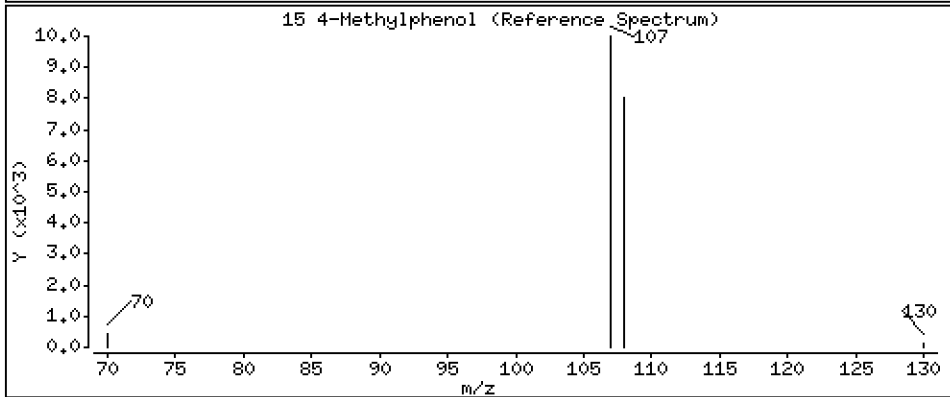
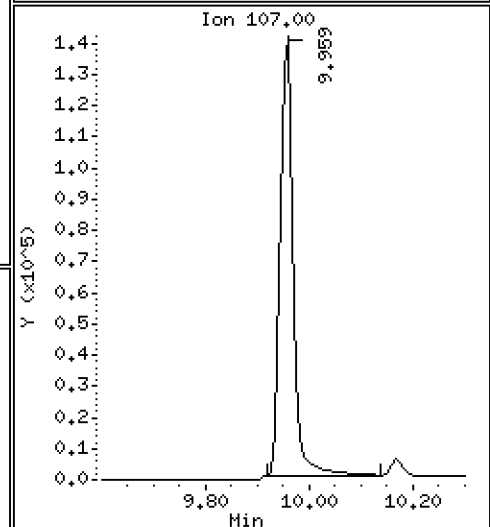
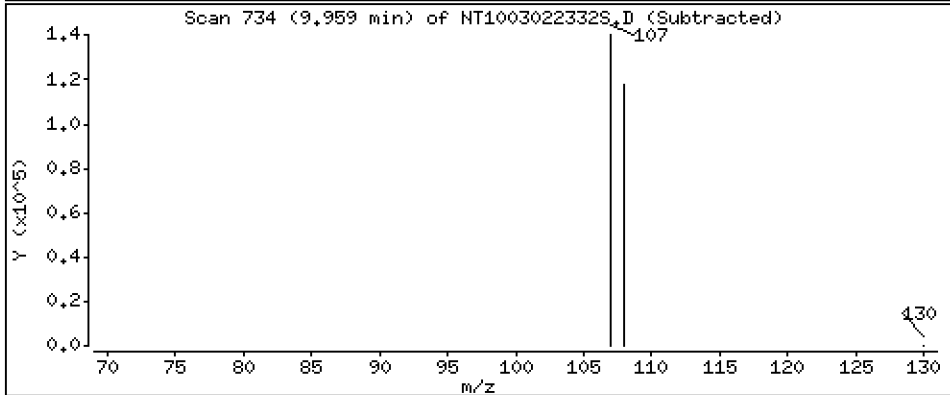
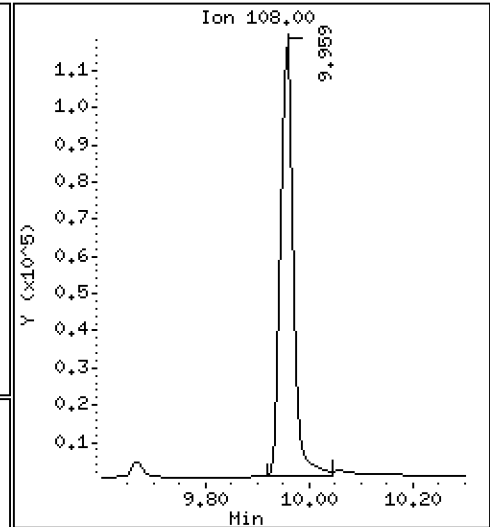
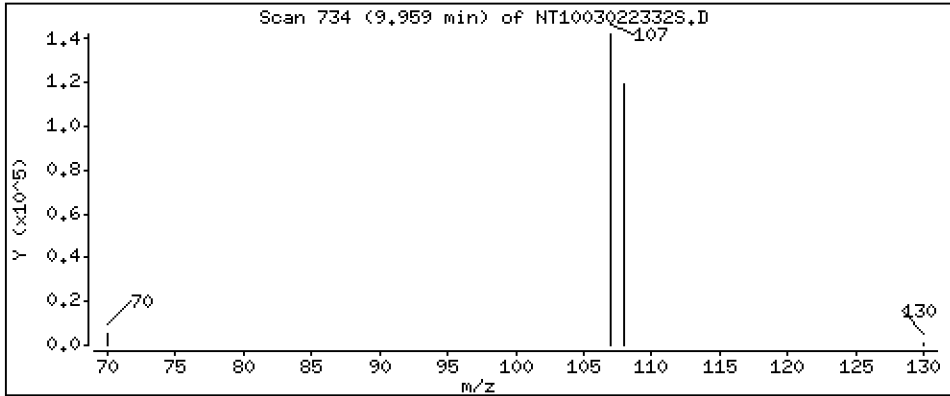
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 1.348 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

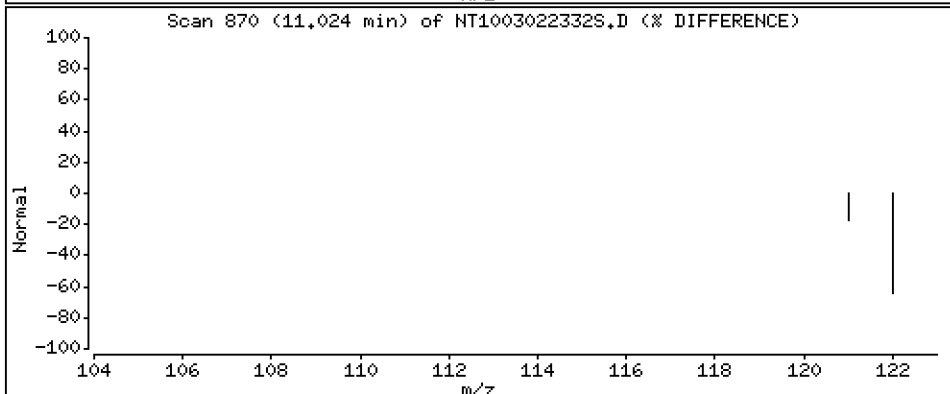
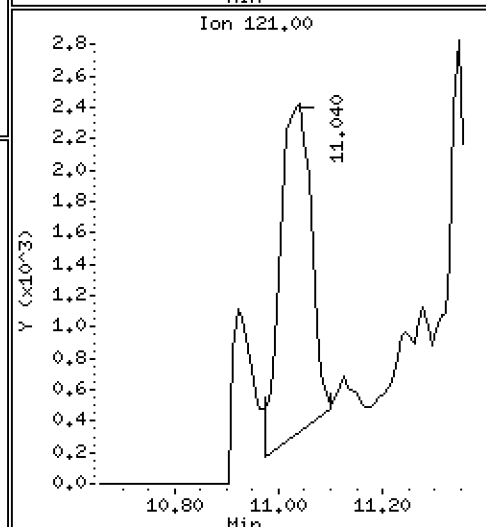
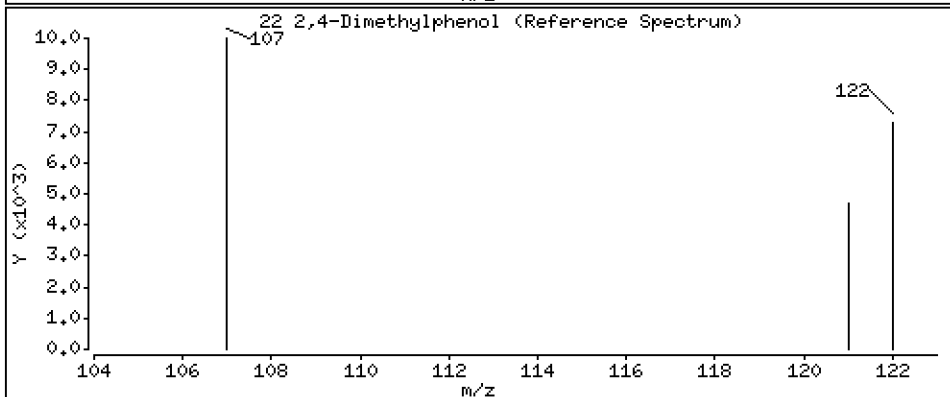
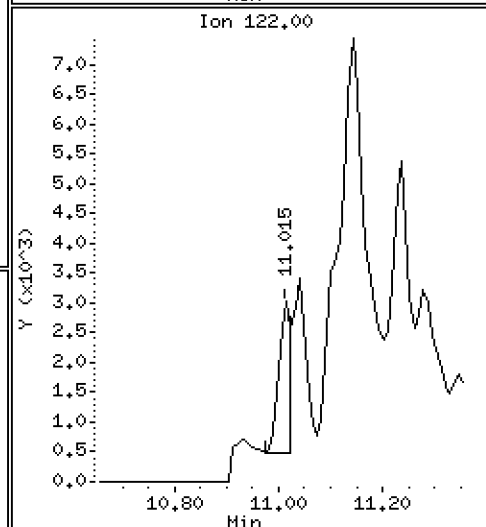
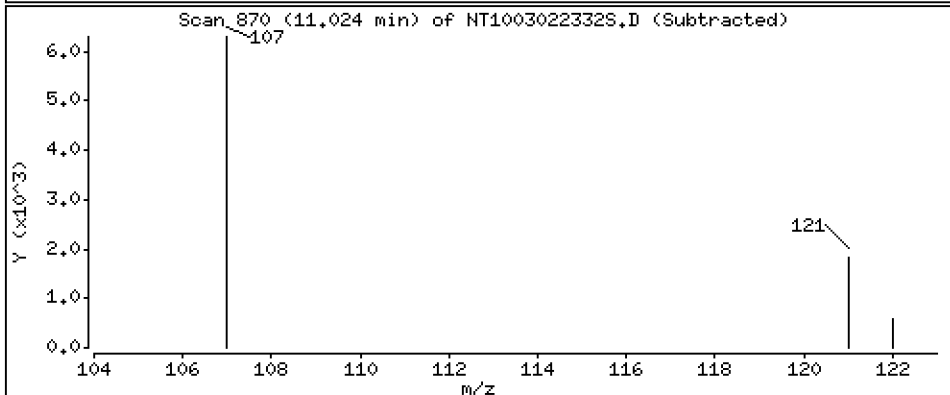
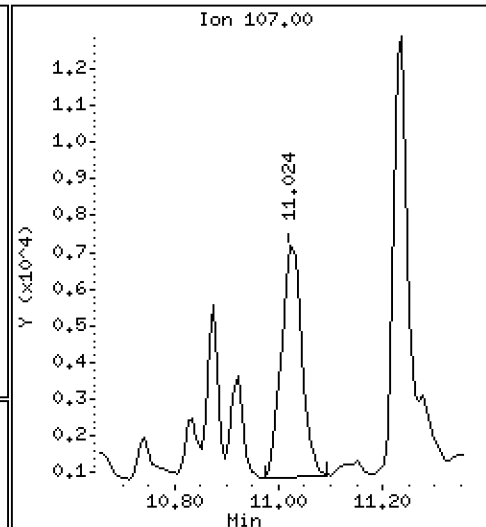
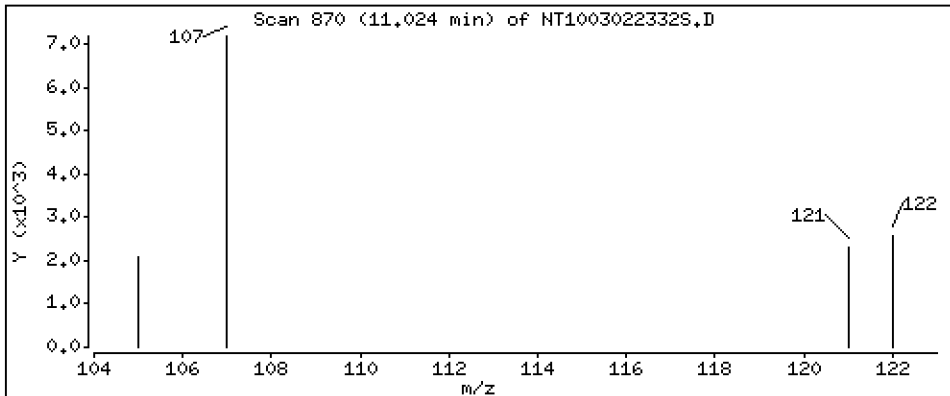
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.1050 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

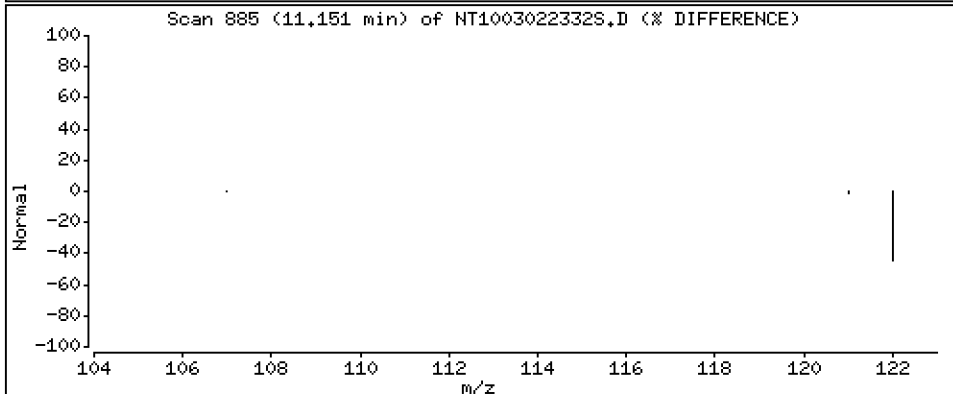
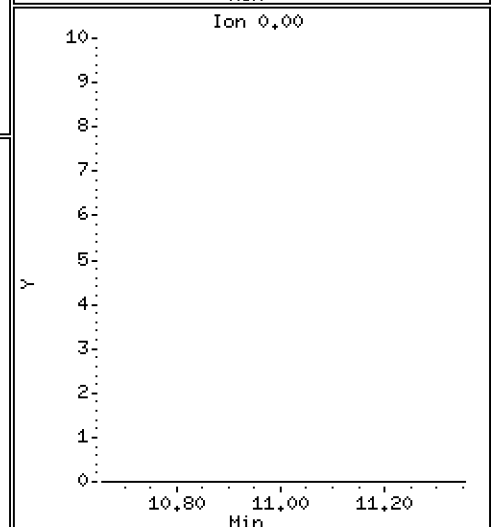
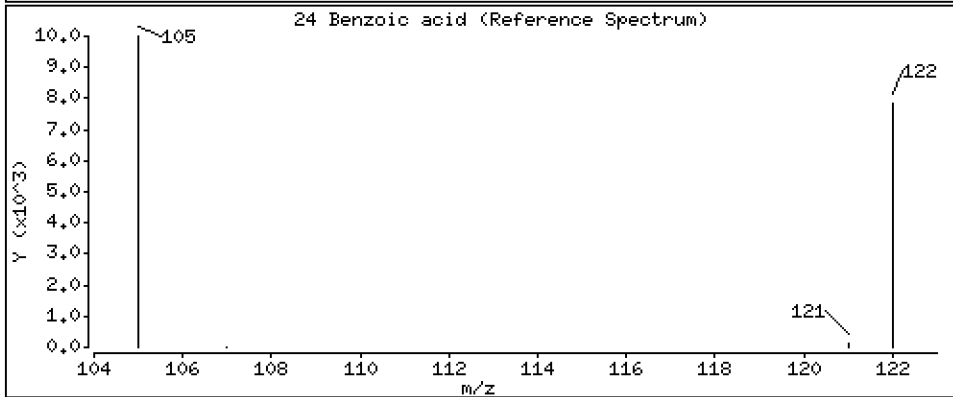
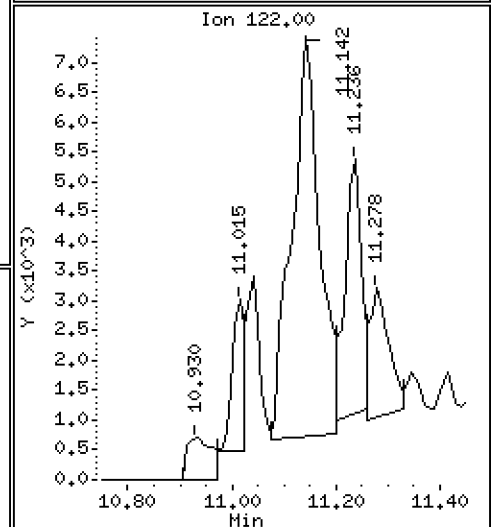
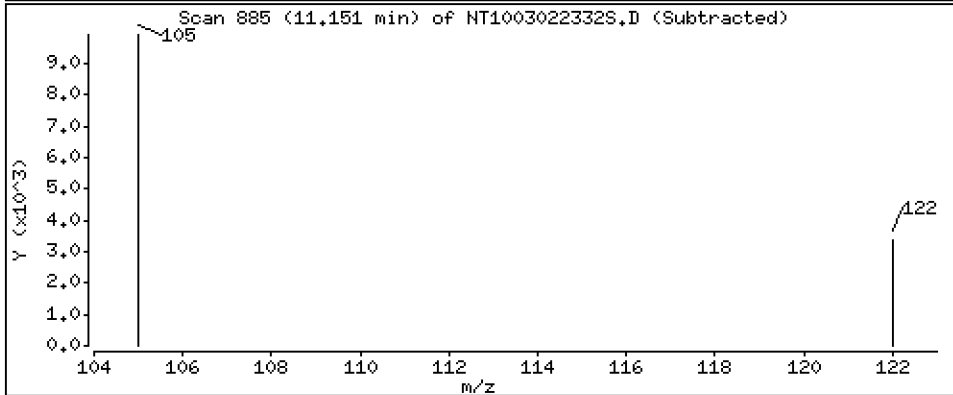
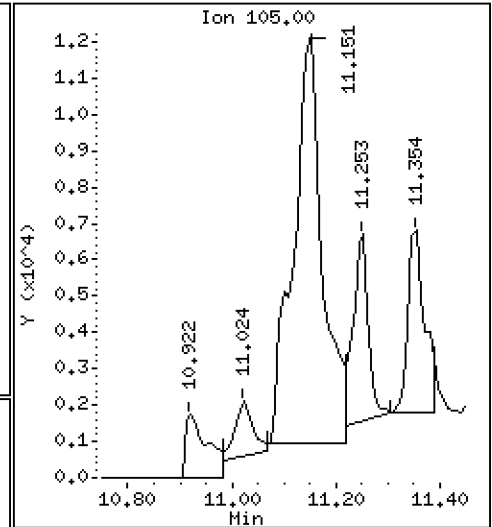
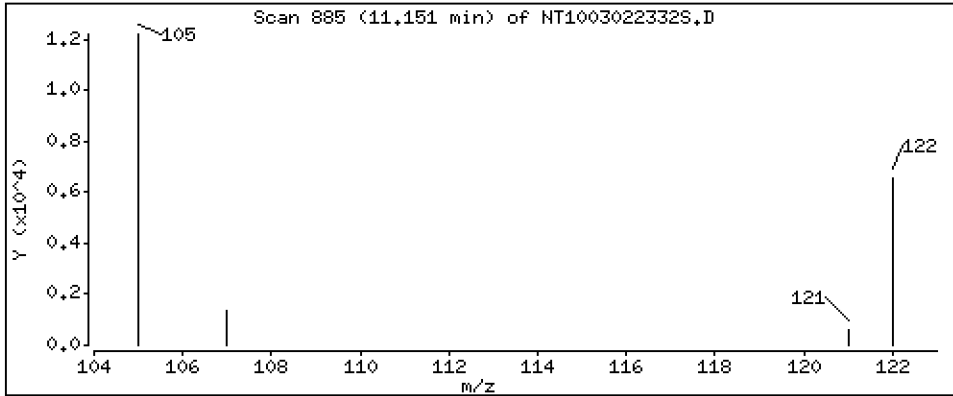
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.4854 ug/L





Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

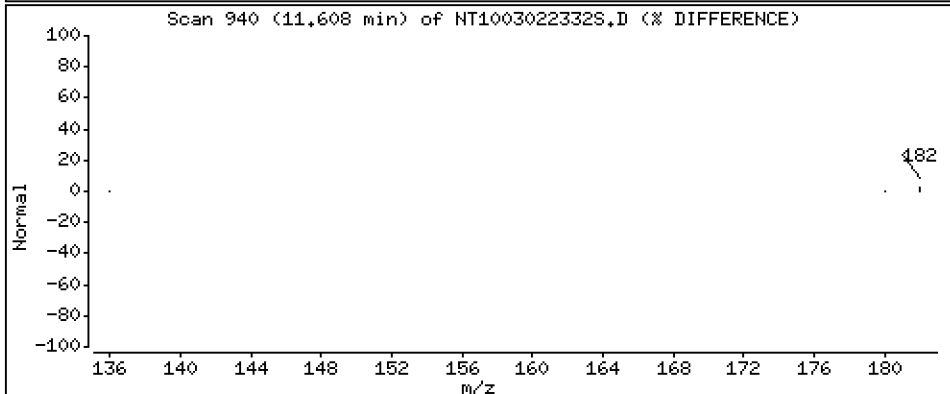
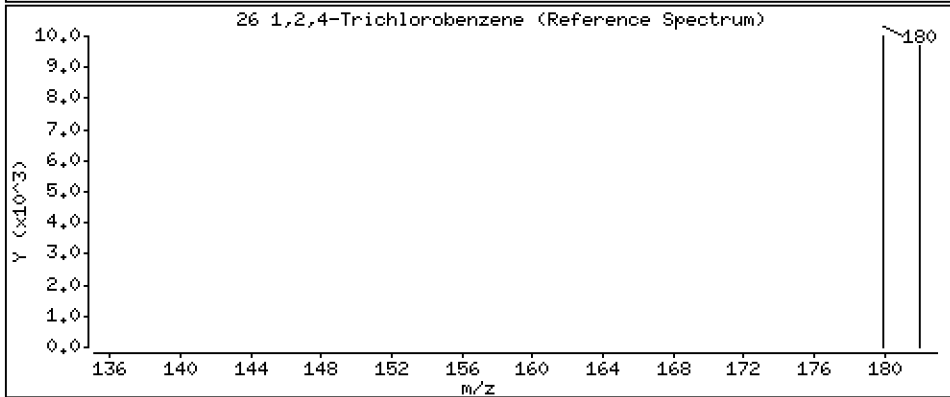
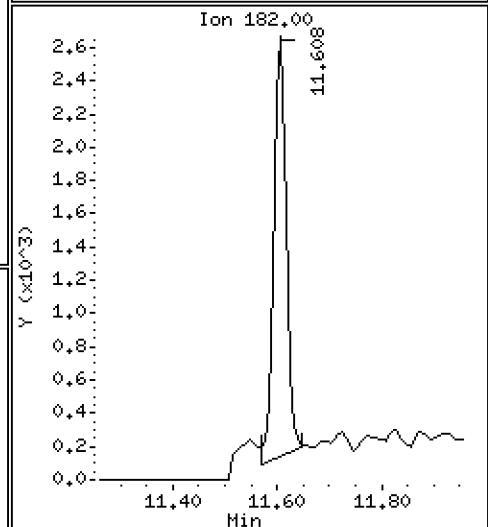
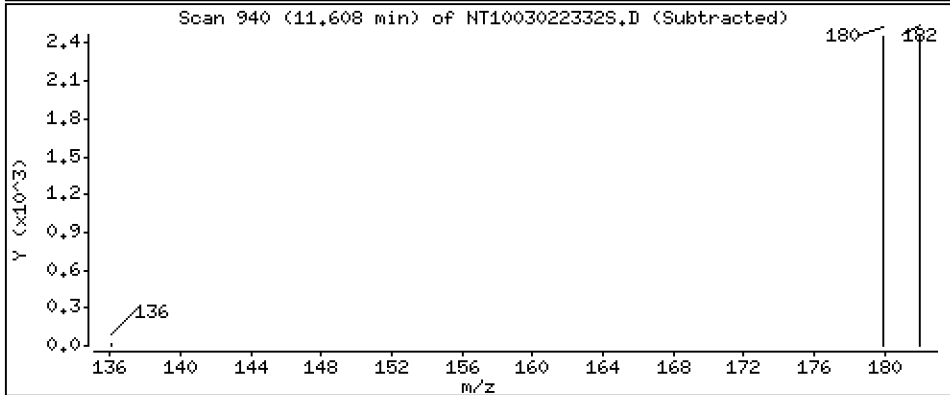
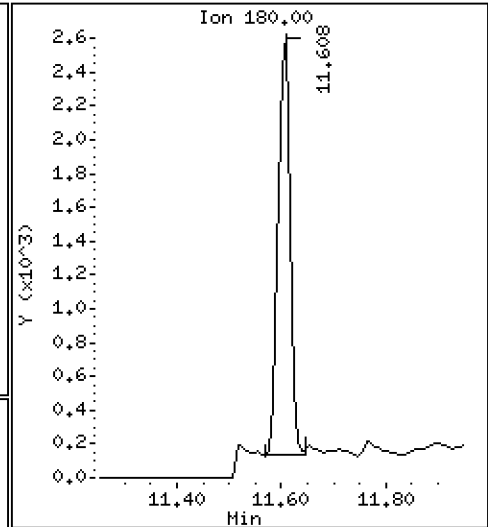
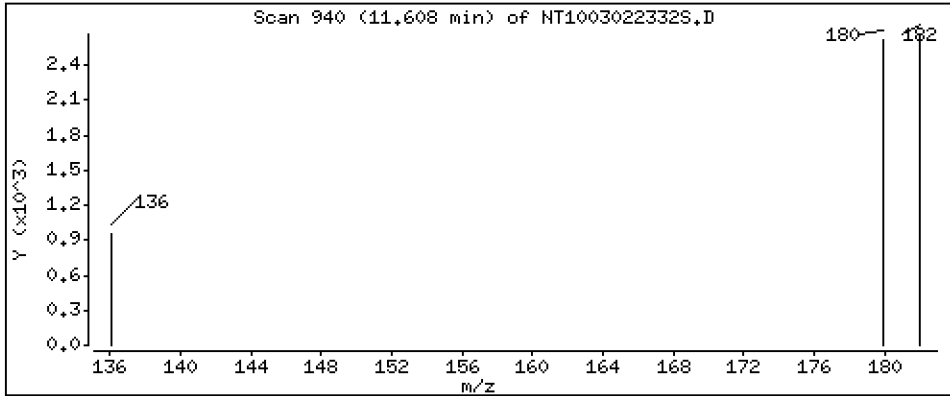
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.02710 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

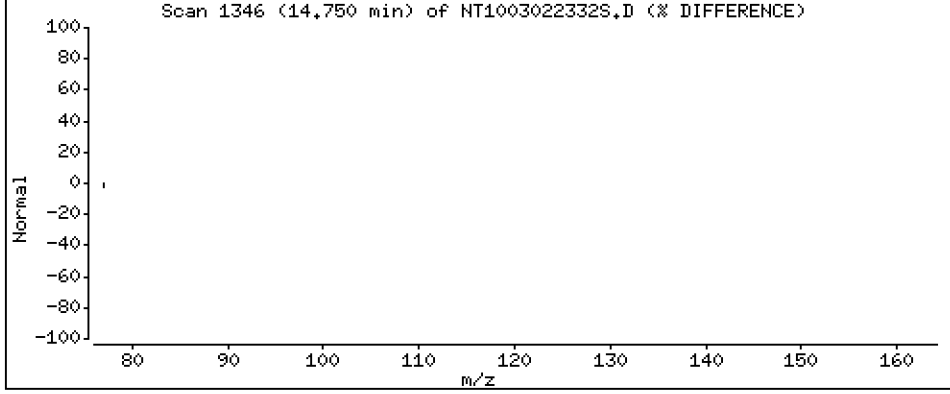
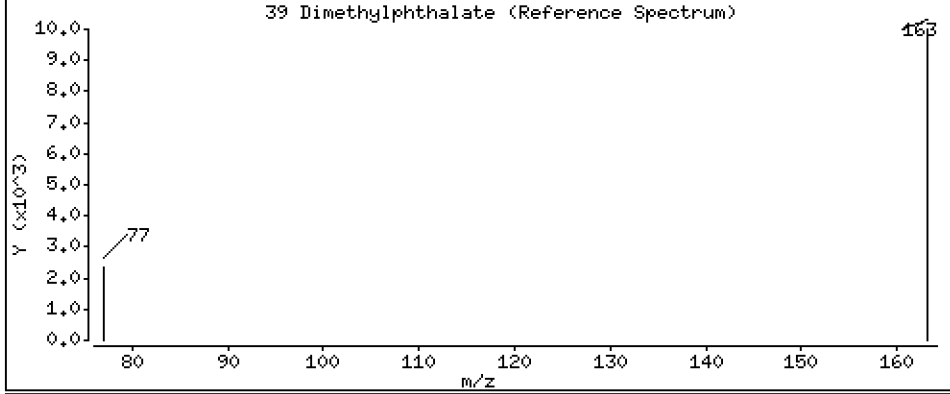
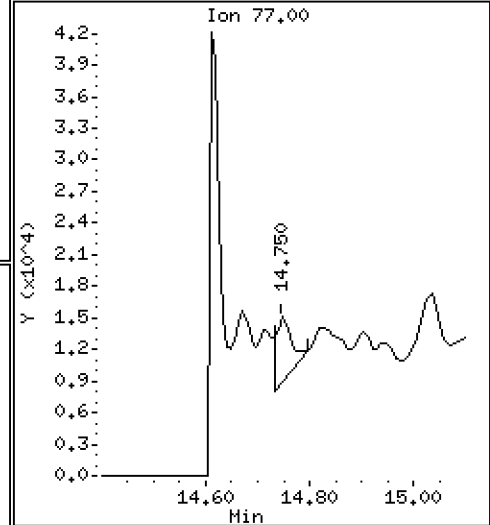
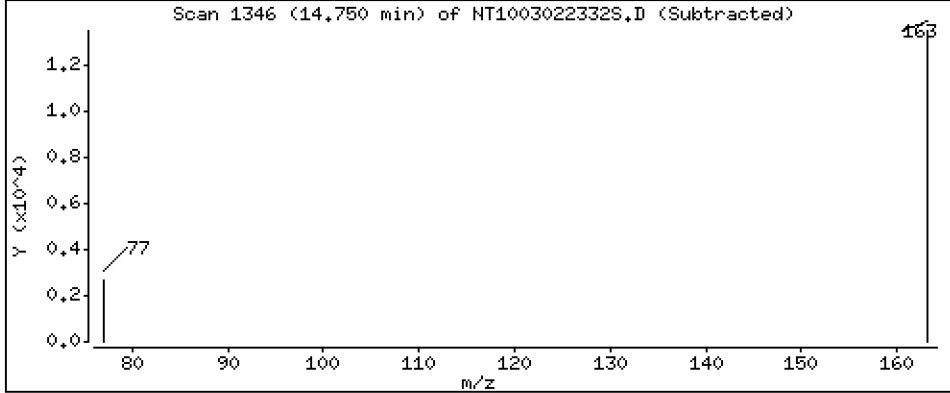
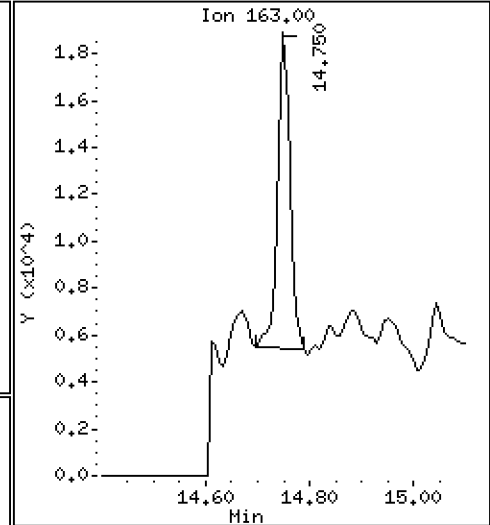
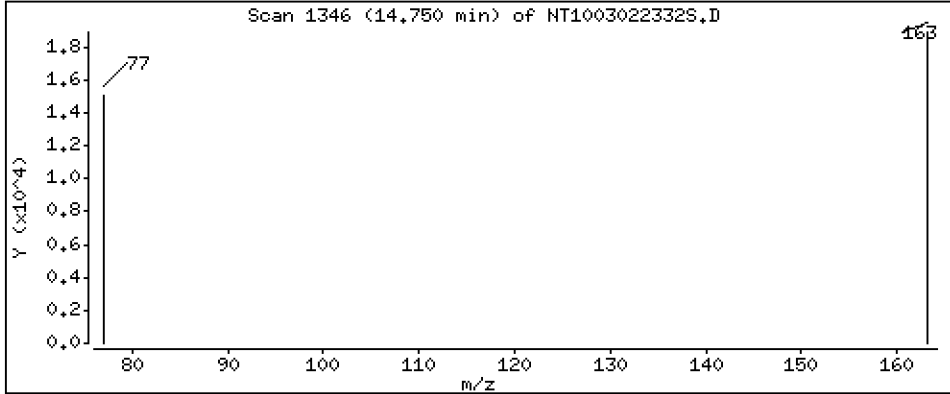
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,06673 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

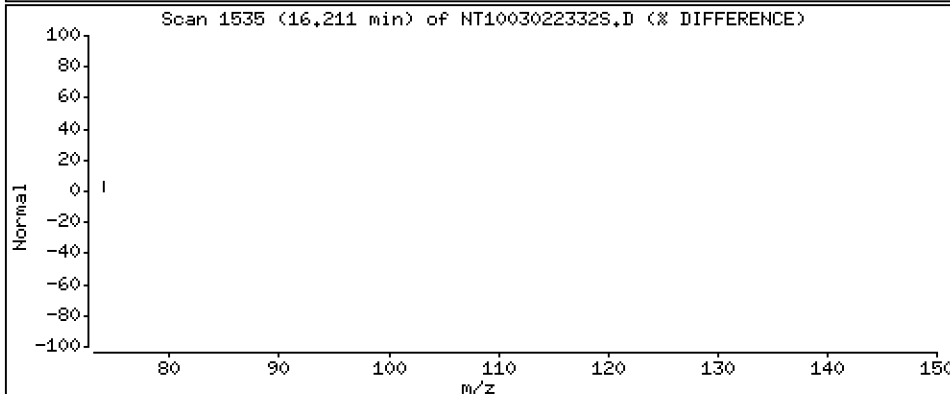
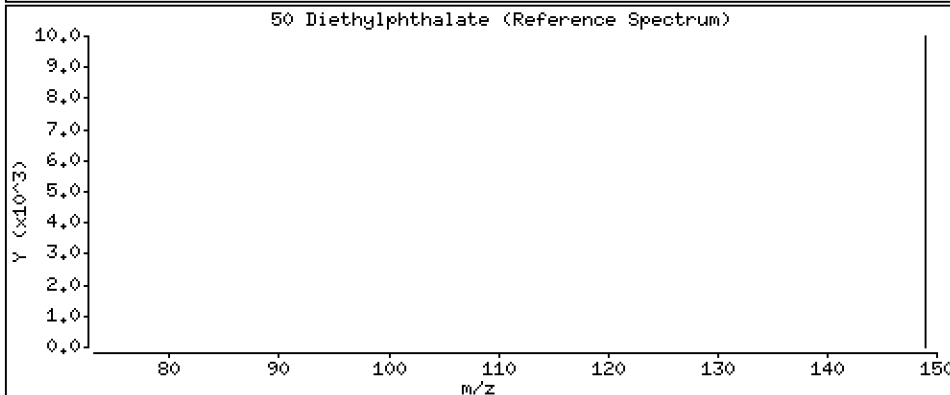
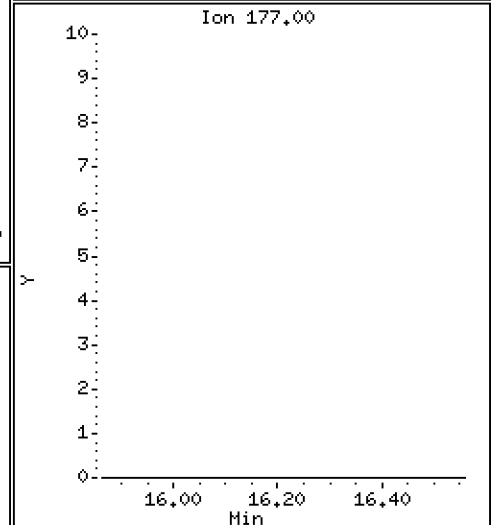
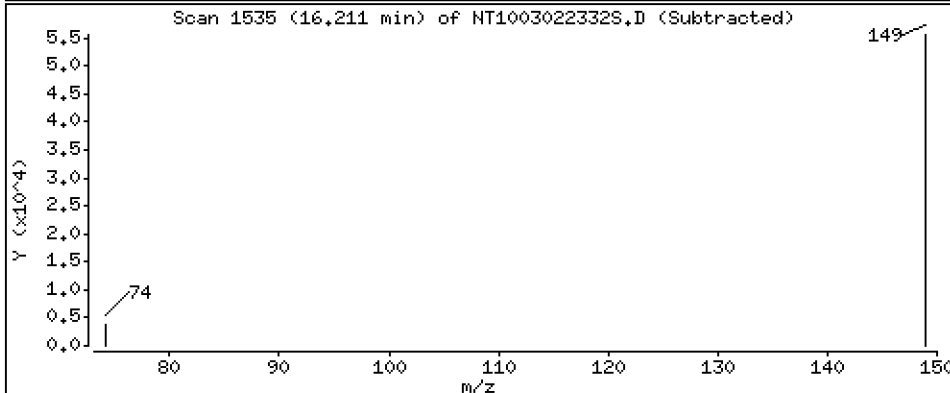
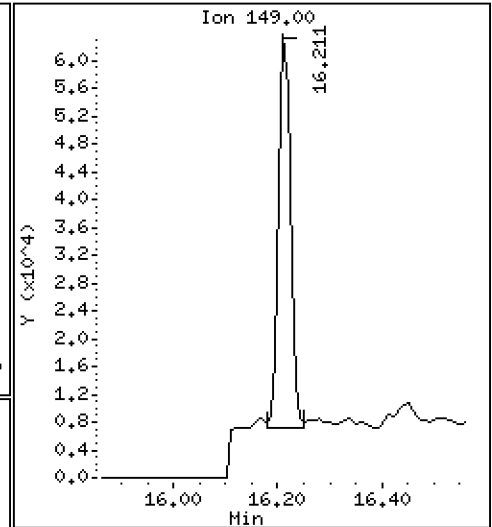
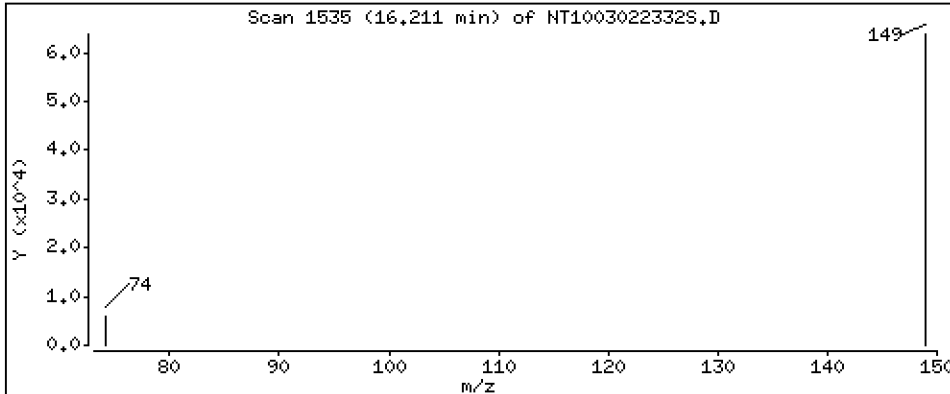
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2919 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

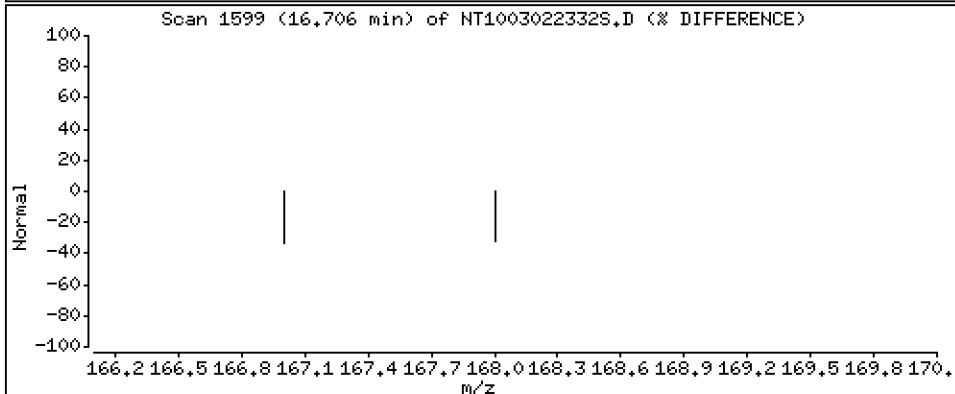
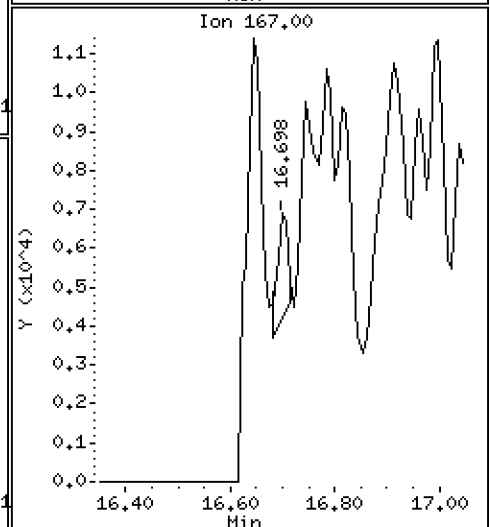
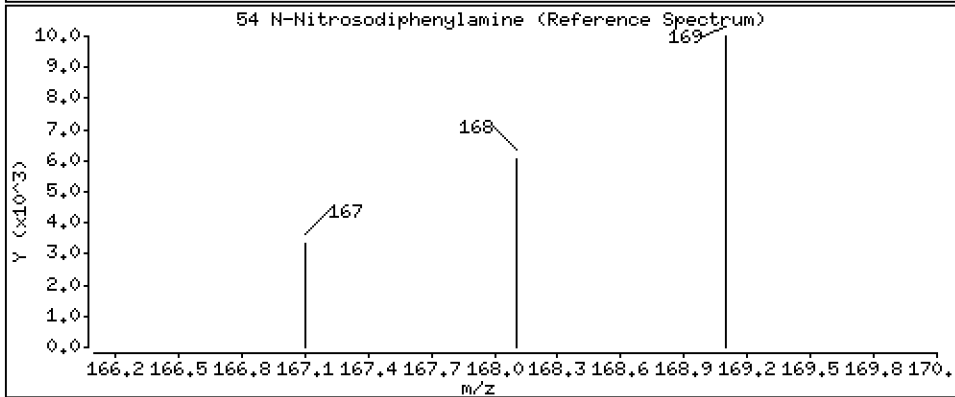
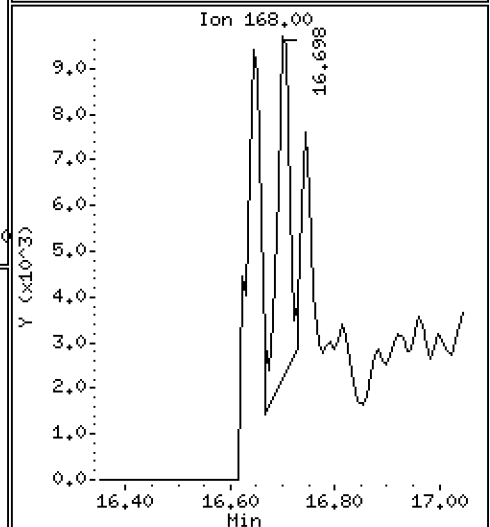
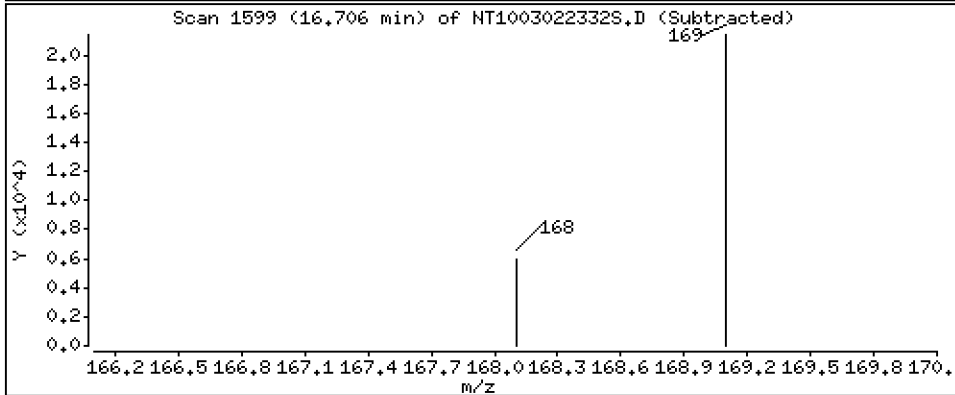
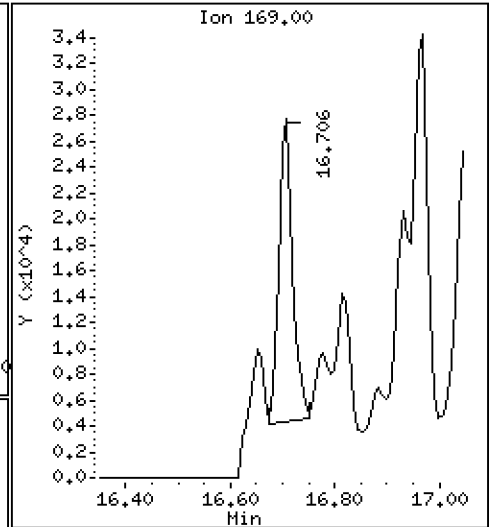
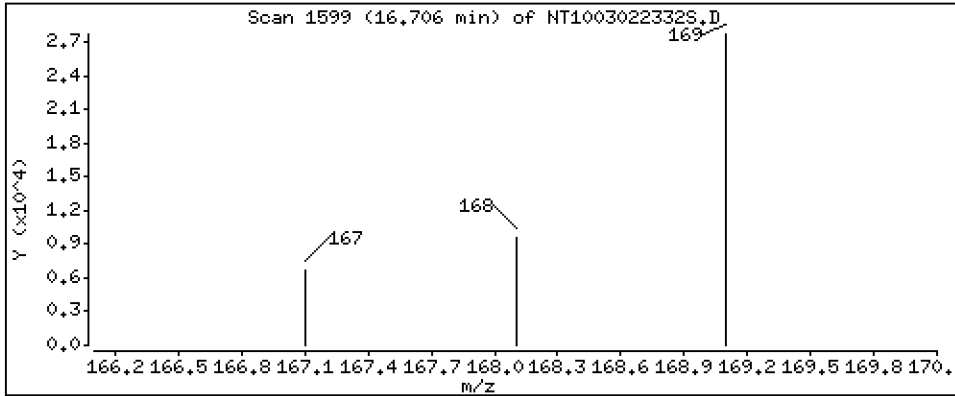
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.1172 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

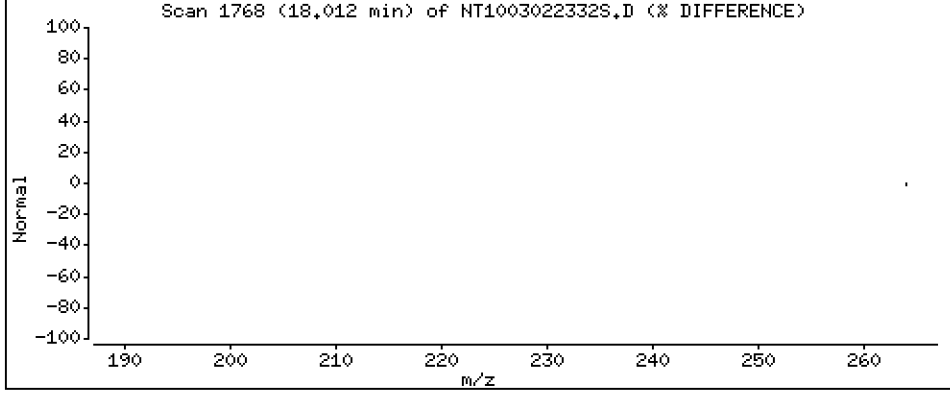
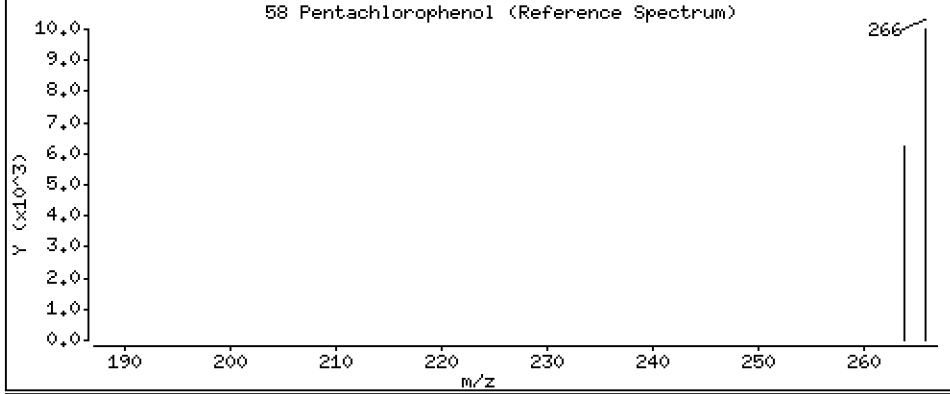
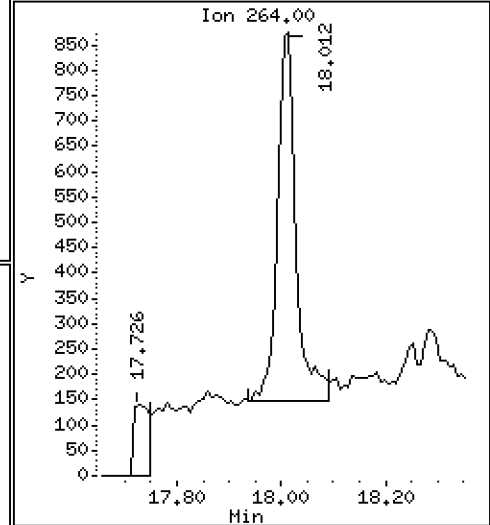
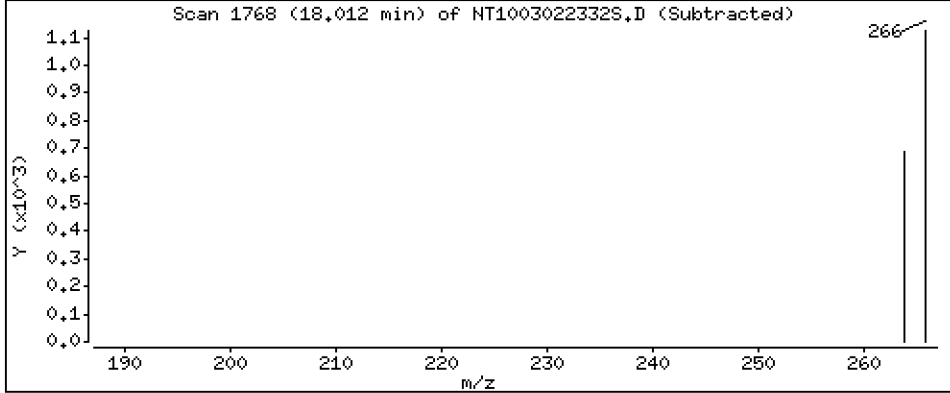
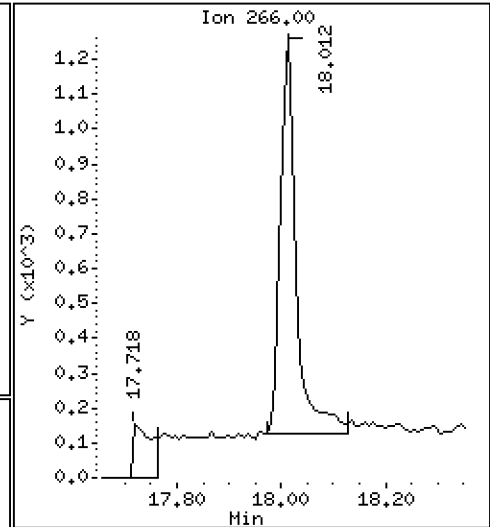
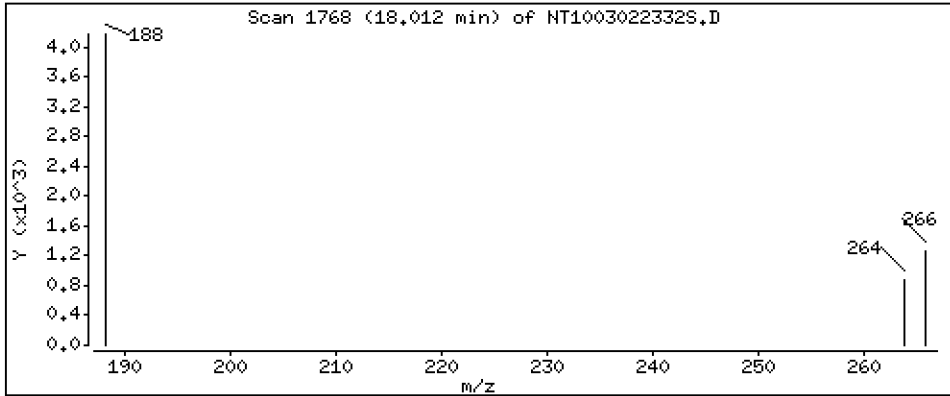
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 0.03181 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

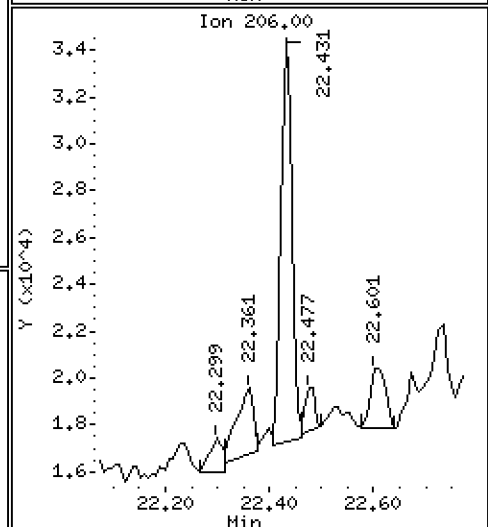
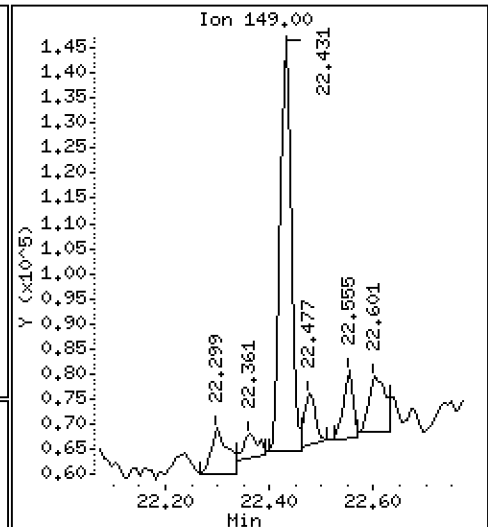
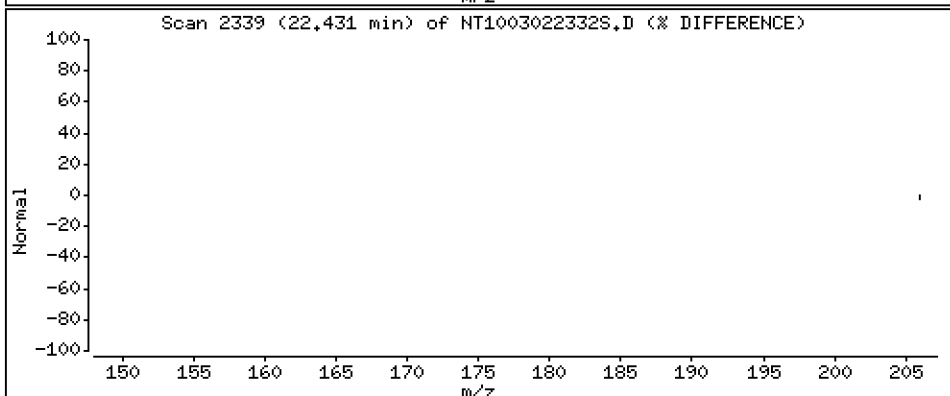
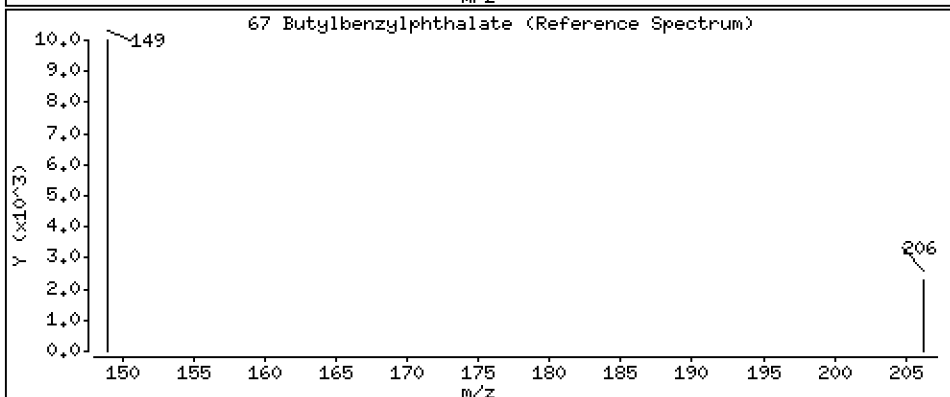
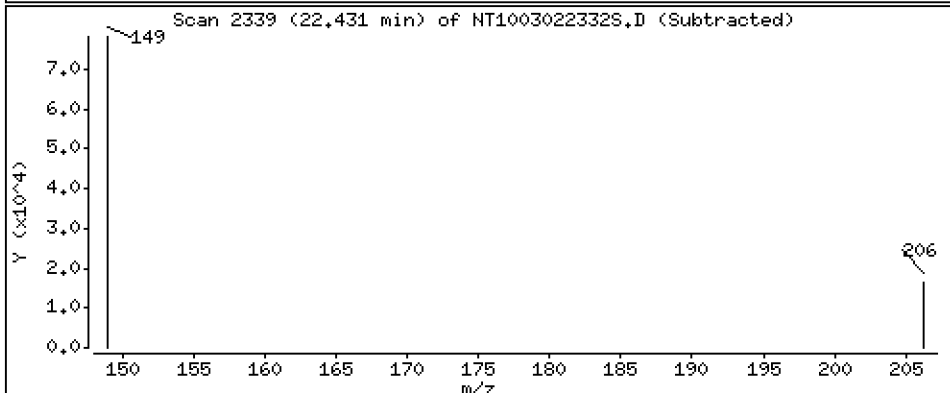
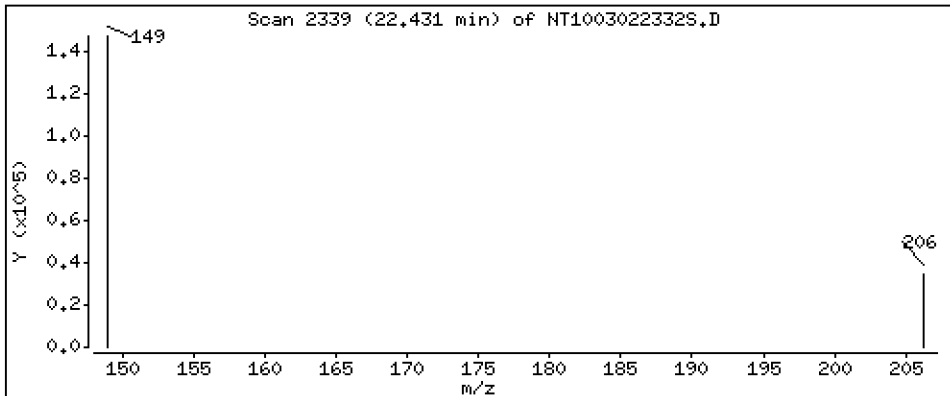
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.2391 ug/L



Date : 03-MAR-2023 10:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-13

Volume Injected (uL): 1.0

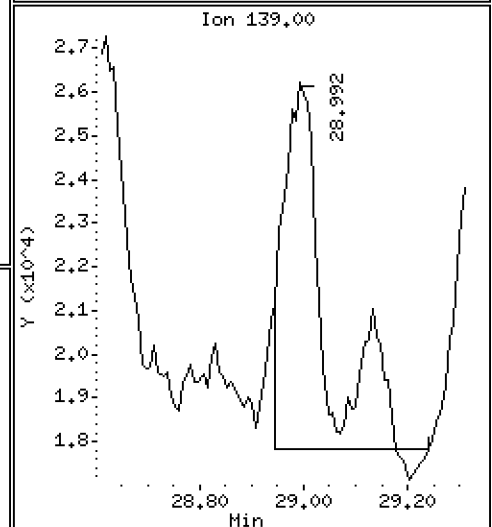
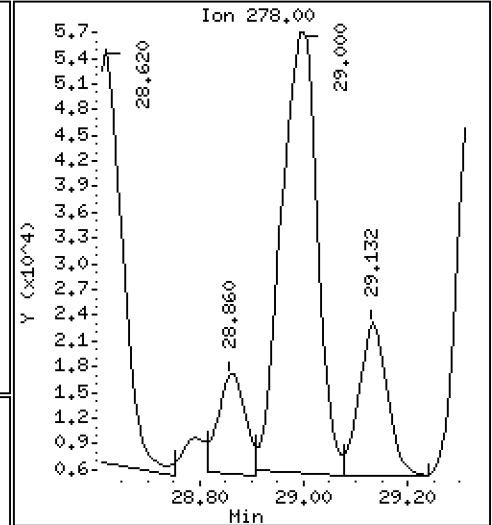
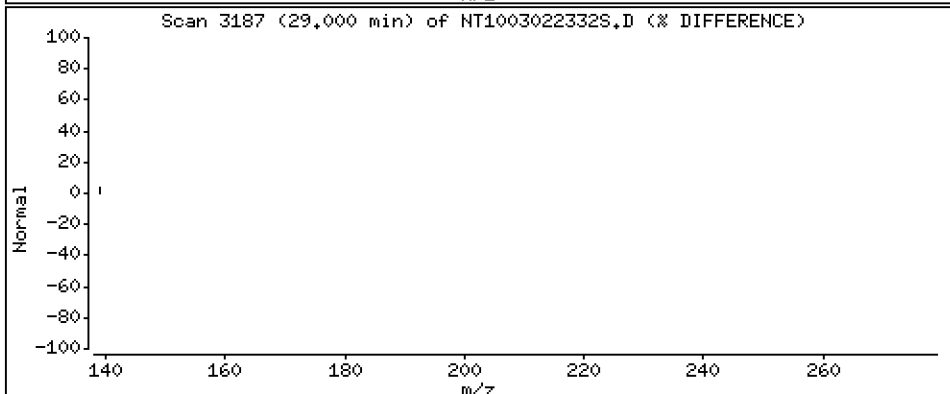
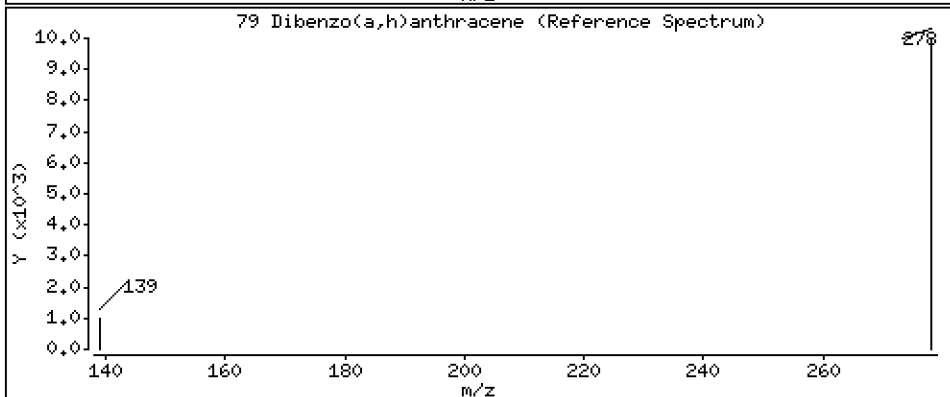
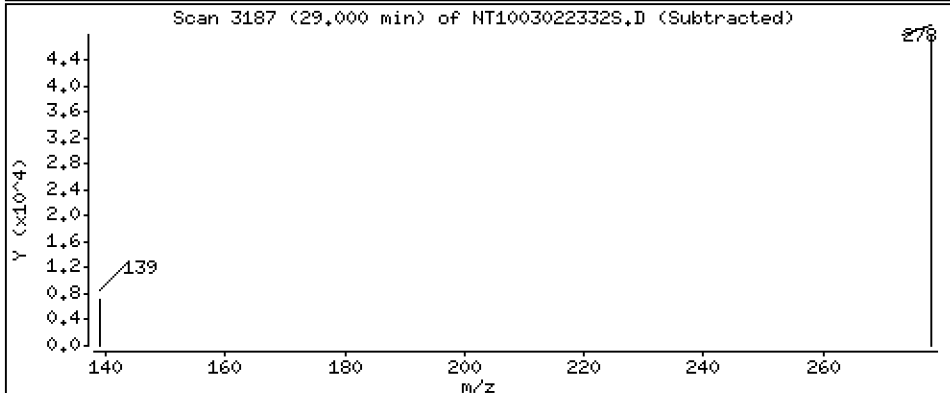
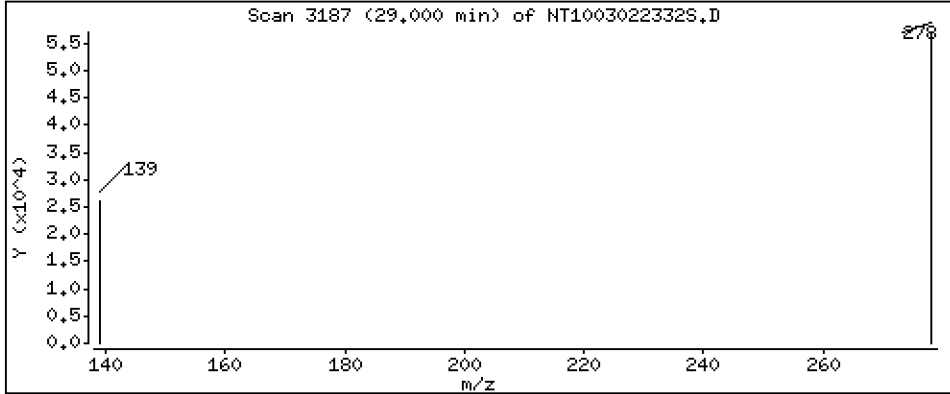
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,3821 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022332S.D  
 Lab Smp Id: 23A0206-13  
 Inj Date : 03-MAR-2023 10:02 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-13  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 24  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1030397	6.69638	6.696 (R)
3 Phenol	94		8.533	8.525 (0.922)		1637483	6.95298	6.953
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		10170	0.05091	0.05091
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		538973	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		104216	0.53662	0.5366
11 Benzyl alcohol	79		9.492	9.492 (1.026)		32040	0.25393	0.2539
12 1,2-Dichlorobenzene	146		9.570	9.570 (1.034)		11155	0.05976	0.05976
13 2-Methylphenol	108		9.671	9.663 (1.045)		6236	0.04570	0.04570 (M)
15 4-Methylphenol	108		9.958	9.950 (1.076)		194050	1.34808	1.348
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.023	11.006 (0.940)		17304	0.10495	0.1050 (M)
24 Benzoic acid	105		11.150	11.099 (0.950)		43972	0.48544	0.4854 (H)
26 1,2,4-Trichlorobenzene	180		11.608	11.600 (0.989)		3790	0.02710	0.02710 (M)
* 27 Naphthalene-d8	136		11.731	11.731 (1.000)		1942956	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		20739	0.06673	0.06673 (M)
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		978826	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		85563	0.29193	0.2919 (M)
54 N-Nitrosodiphenylamine	169		16.706	16.698 (0.907)		42837	0.11725	0.1172 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					



Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		18.012	18.004	(0.978)	2380	0.03181	0.03181
* 59 Phenanthrene-d10	188		18.422	18.414	(1.000)	2257510	4.00000	
\$ 66 Terphenyl-d14	244		21.555	21.532	(0.919)	1828254	8.10393	8.104 (R)
67 Butylbenzylphthalate	149		22.430	22.422	(0.956)	112521	0.23906	0.2391
* 69 Chrysene-d12	240		23.452	23.429	(1.000)	2789786	4.00000	
* 77 Perylene-d12	264		26.162	26.131	(1.000)	2837247	4.00000	
79 Dibenzo(a,h)anthracene	278		29.000	28.961	(1.108)	252356	0.38207	0.3821 (H)
90 N-Nitrosodimethylamine	74		Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.
- H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022332S.D  
 Lab Smp Id: 23A0206-13  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	538973	-13.15
27 Naphthalene-d8	2213509	1106755	4427018	1942956	-12.22
42 Acenaphthene-d10	1093970	546985	2187940	978826	-10.53
59 Phenanthrene-d10	2129840	1064920	4259680	2257510	5.99
69 Chrysene-d12	2347260	1173630	4694520	2789786	18.85
77 Perylene-d12	2638390	1319195	5276780	2837247	7.54

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.42	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.45	0.10
77 Perylene-d12	26.13	25.63	26.63	26.16	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022332S.D

Lab ID: 23A0206-13

nt10.i, 20230302B.b\SIM.b\SIMABN2.m,

03-MAR-2023 10:02

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

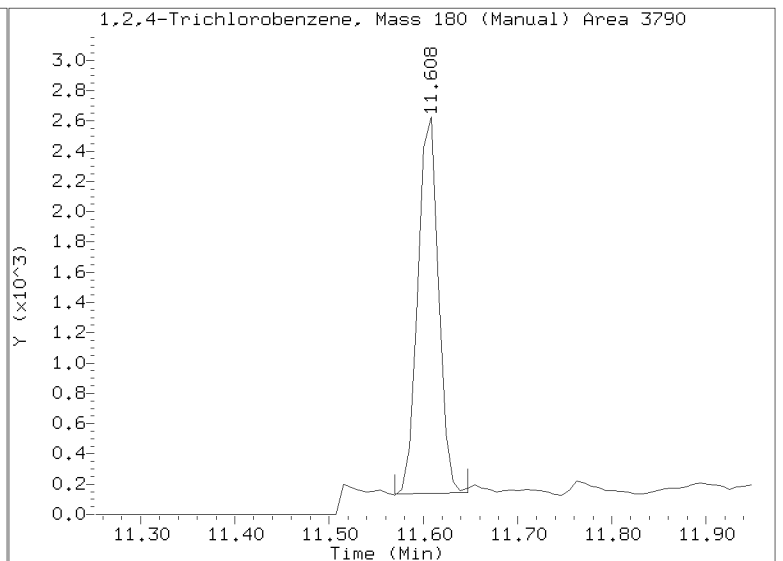
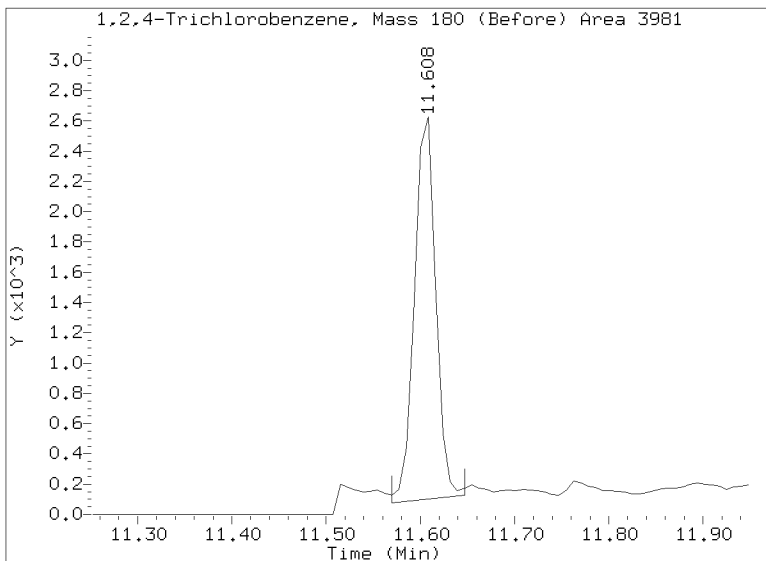
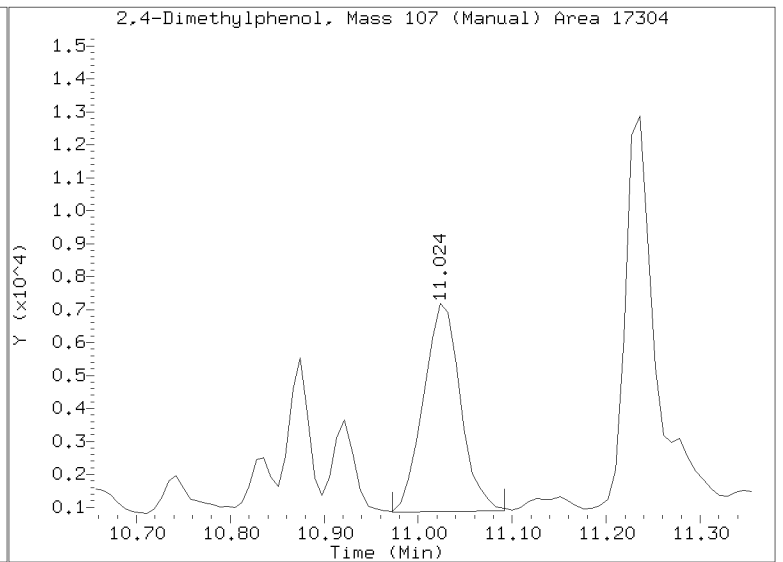
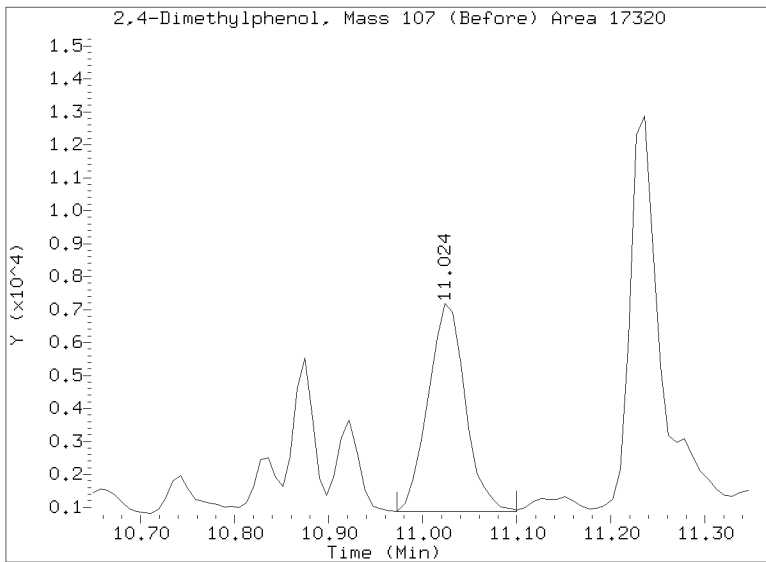
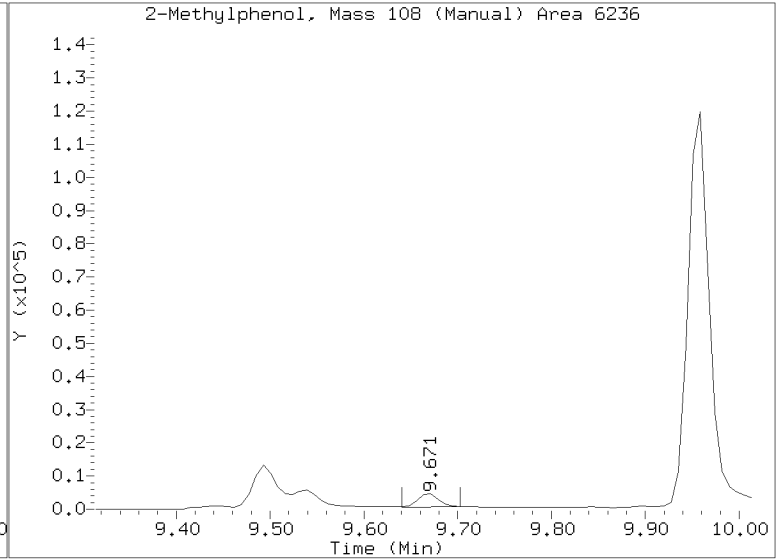
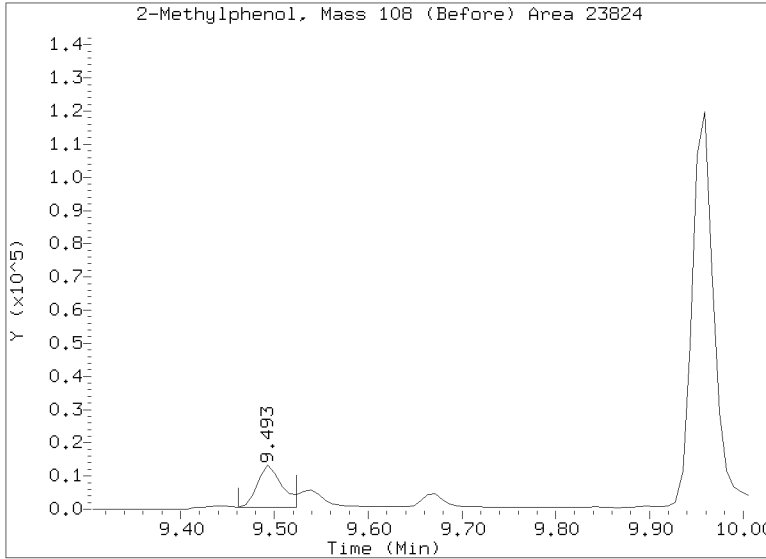
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

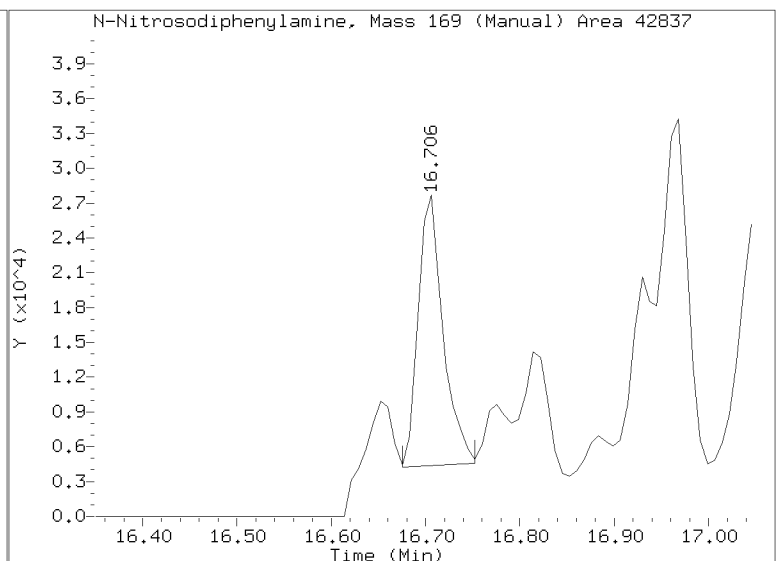
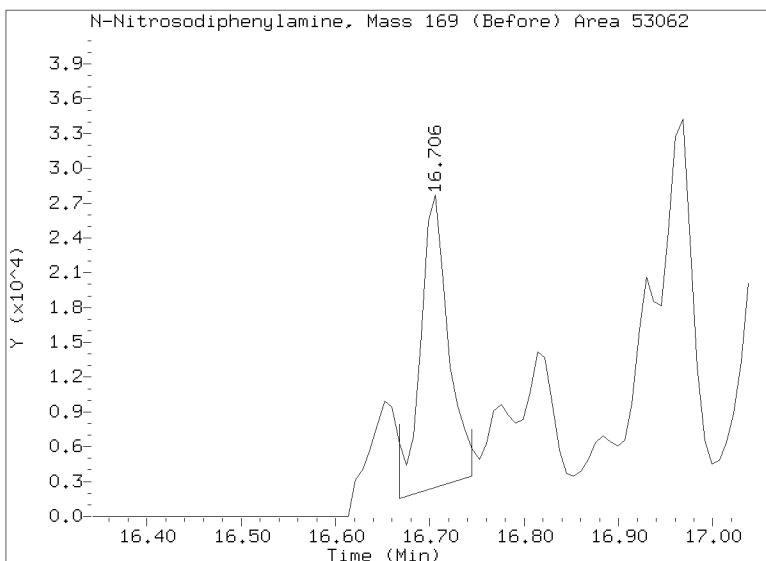
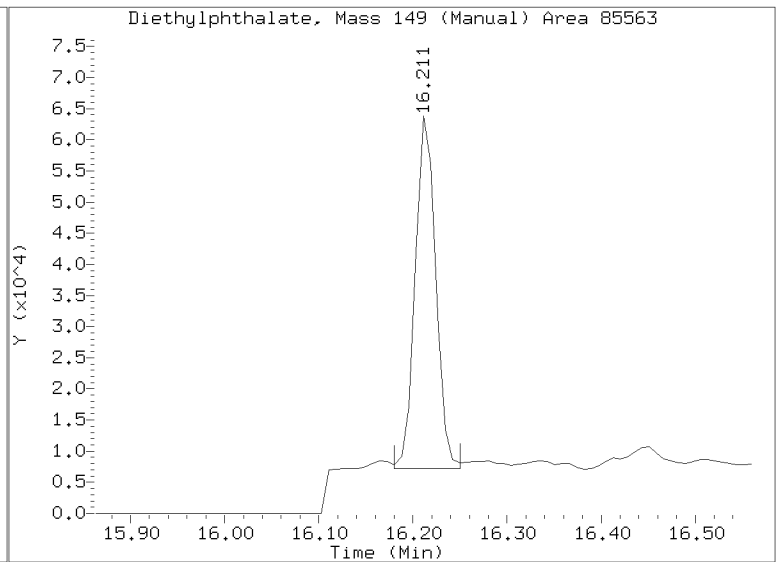
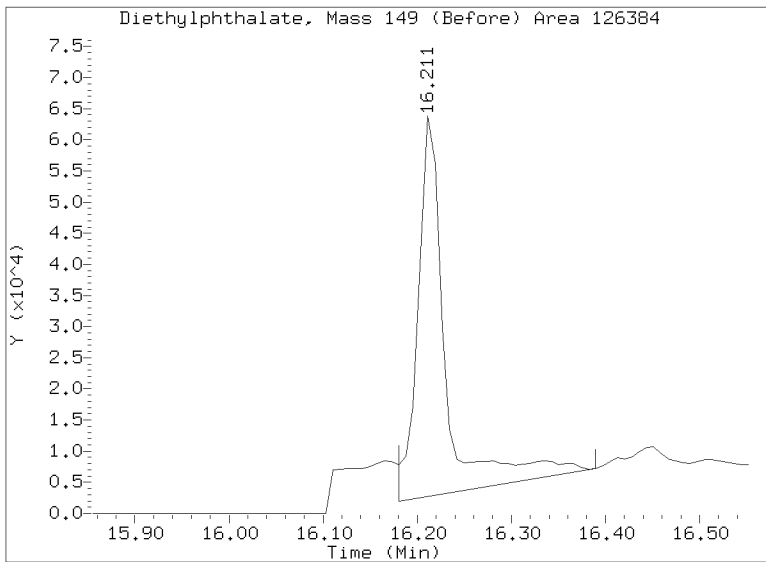
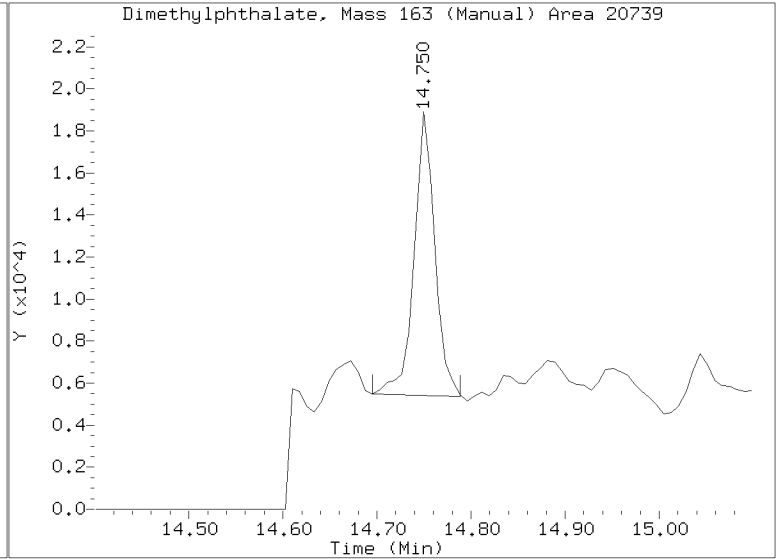
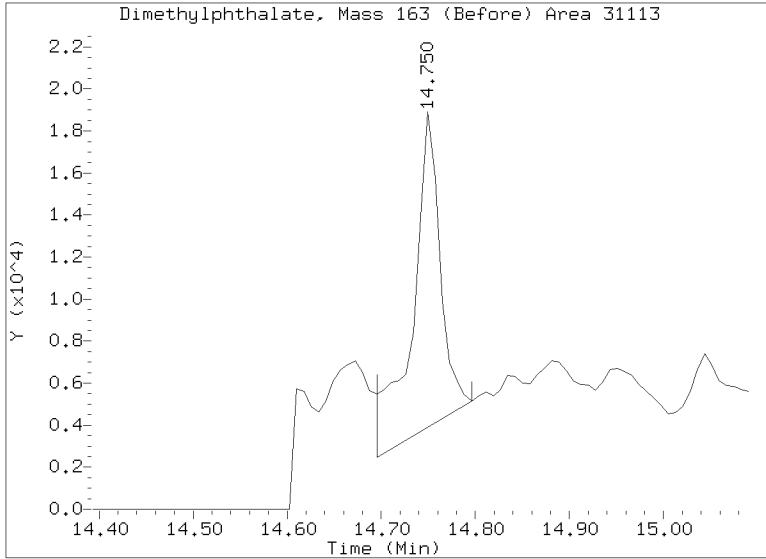
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022332S.D  
Injection Date: 03-MAR-2023 10:02  
Lab ID:23A0206-13 Client ID:  
Report Date: 03/11/2023 07:04



# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022332S.D  
Injection Date: 03-MAR-2023 10:02  
Lab ID:23A0206-13 Client ID:  
Report Date: 03/11/2023 07:04





Form I  
ORGANIC ANALYSIS DATA SHEET  
EPA 8270E-SIM  
SIM SVOC Organics (Dual scan list)

Laboratory: Analytical Resources, LLC

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-14 B

SDG: 23A0206

Sampled: 01/11/23 13:03

Prepared: 01/27/23 14:44

File ID: NT1003022333S.D

% Solids: 51.18

Preparation: EPA 3546 (Microwave)

Analyzed: 03/03/23 10:40

Batch: BLA0624

Sequence: SLC0159

Initial/Final: 19.95 g Wet / 1 mL

Instrument: NT10

Column: ZB-5MSi

Calibration: GC00032

Cleanups: GPC

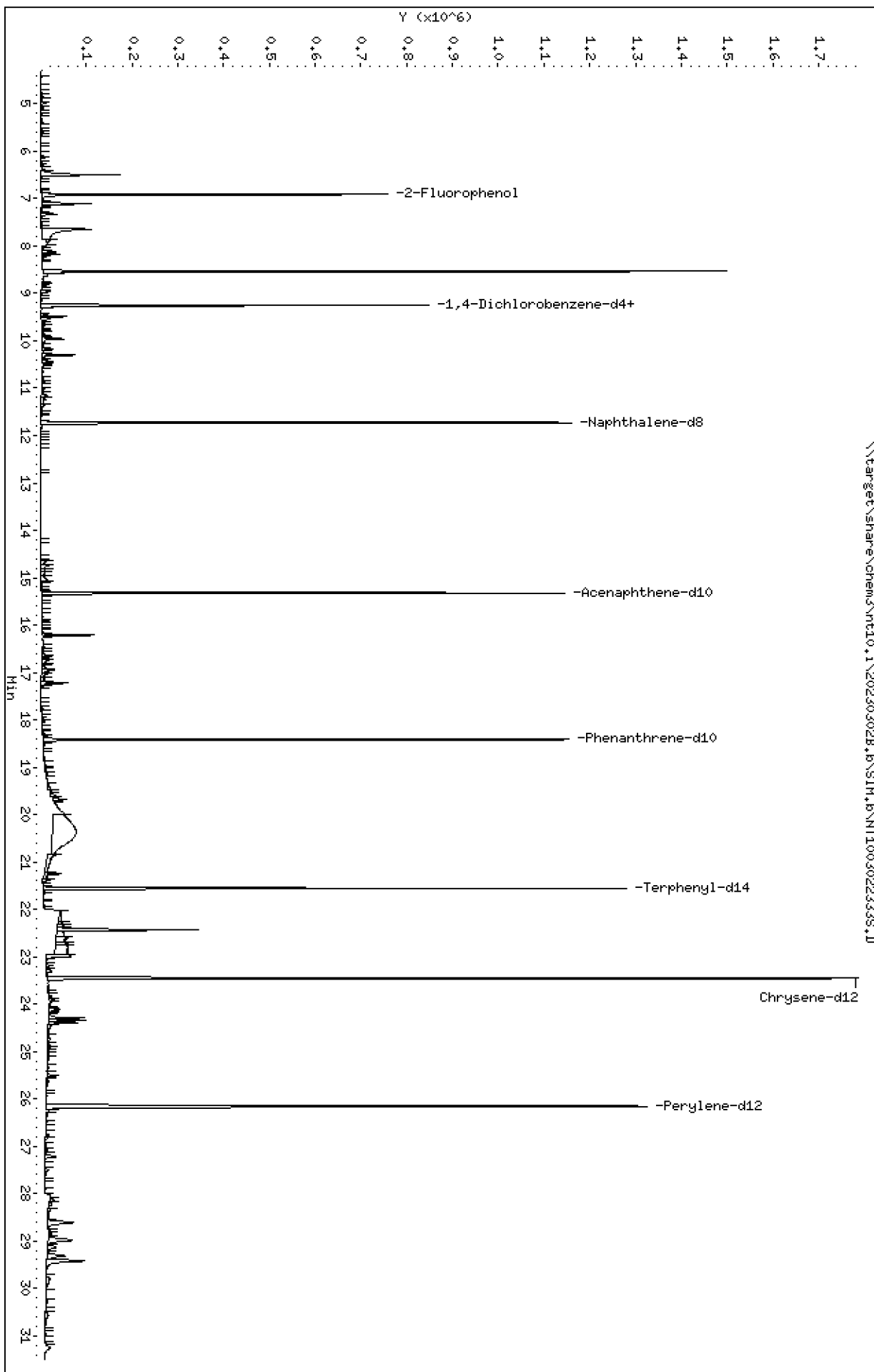
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.5		0.6	4.9
95-50-1	1,2-Dichlorobenzene	1	1.0	J	0.7	4.9
100-51-6	Benzyl Alcohol	1	42.3		2.4	19.6
65-85-0	Benzoic acid	1	35.1	J	13.1	97.9
105-67-9	2,4-Dimethylphenol	1	4.5	J	2.1	19.6
120-82-1	1,2,4-Trichlorobenzene	1	4.9	U	2.6	4.9
86-30-6	N-Nitrosodiphenylamine	1	4.9	J	1.3	4.9
87-86-5	Pentachlorophenol	1	19.6	U	2.1	19.6

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	734.54	618	84.1	27 - 120	
p-Terphenyl-d14	489.70	796	163	37 - 120	*

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022333S.D  
Date : 03-MAR-2023 10:40  
Client ID:  
Sample Info: 23A0206-14  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022333S.D



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

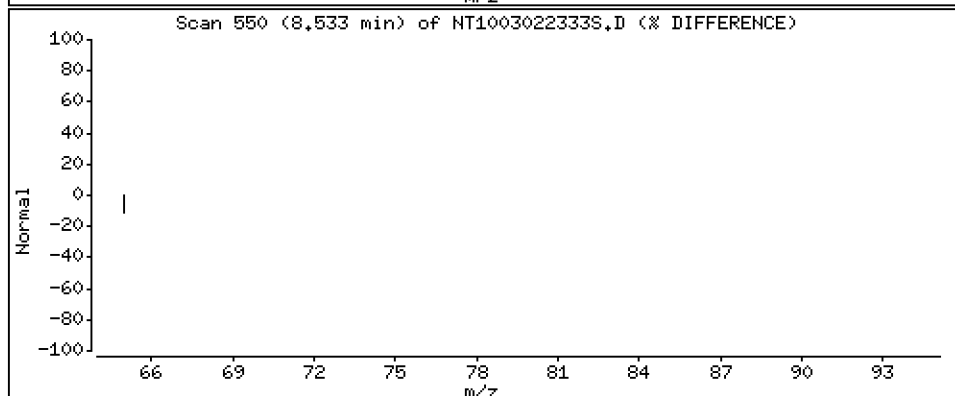
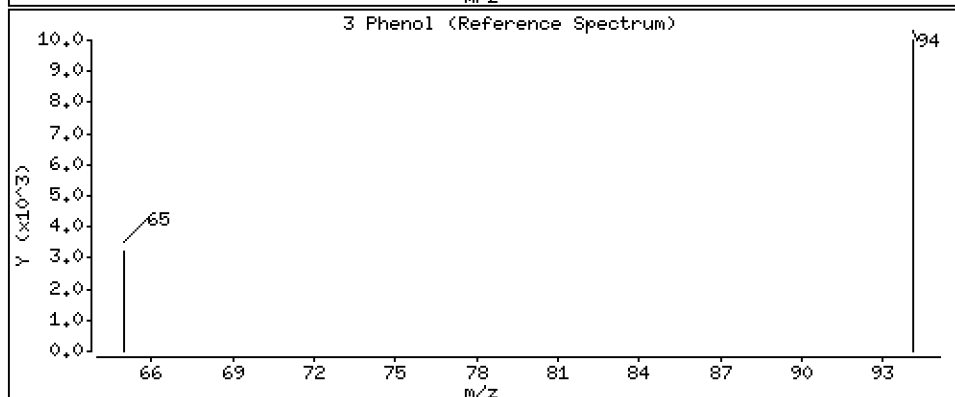
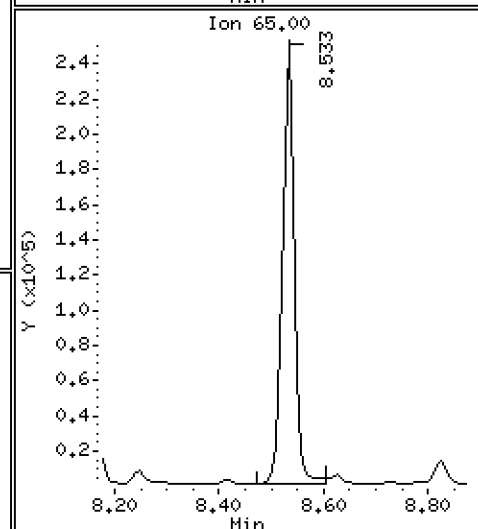
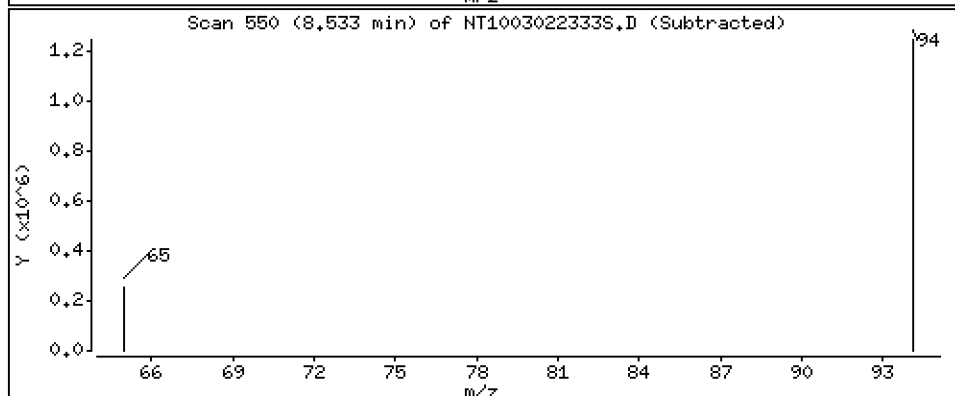
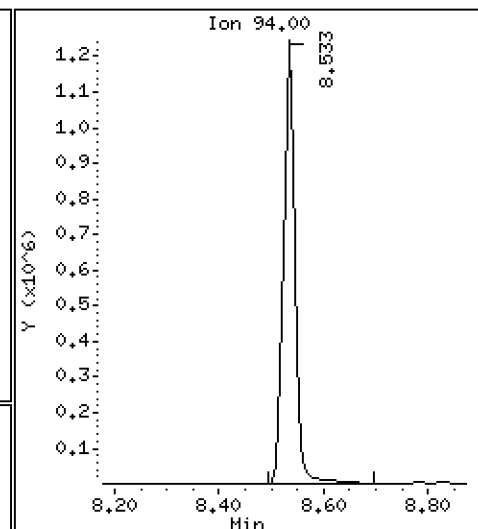
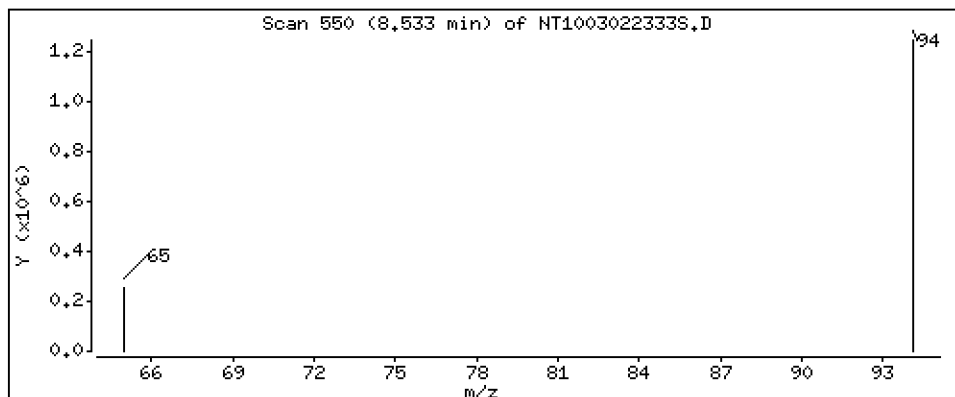
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 8,499 ug/L





Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

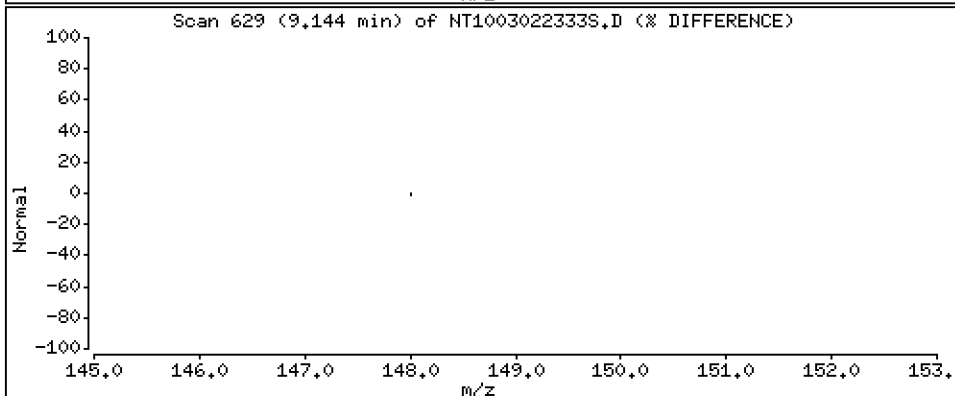
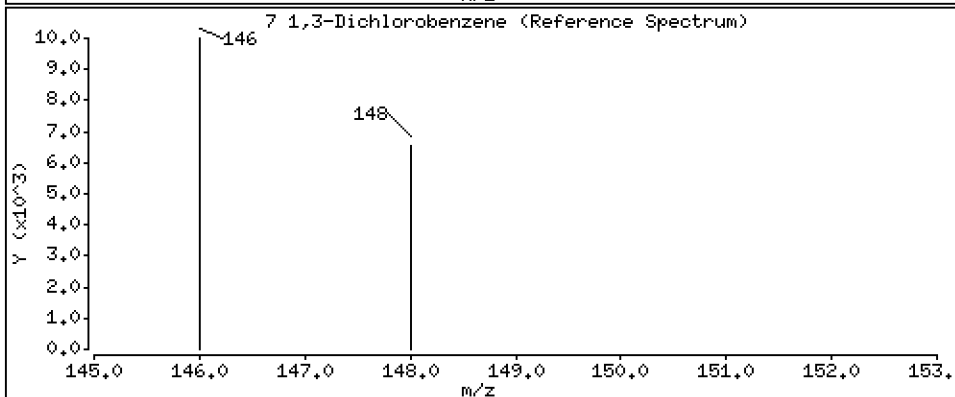
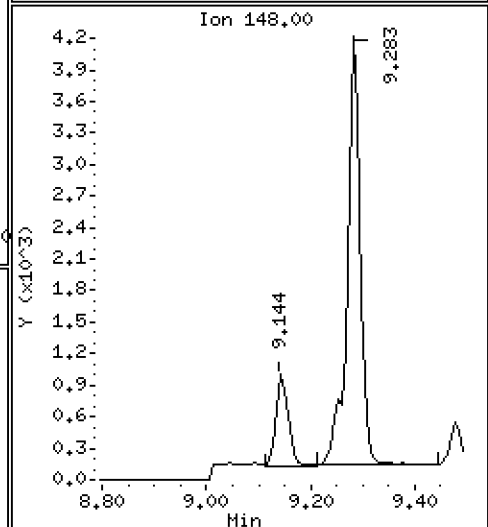
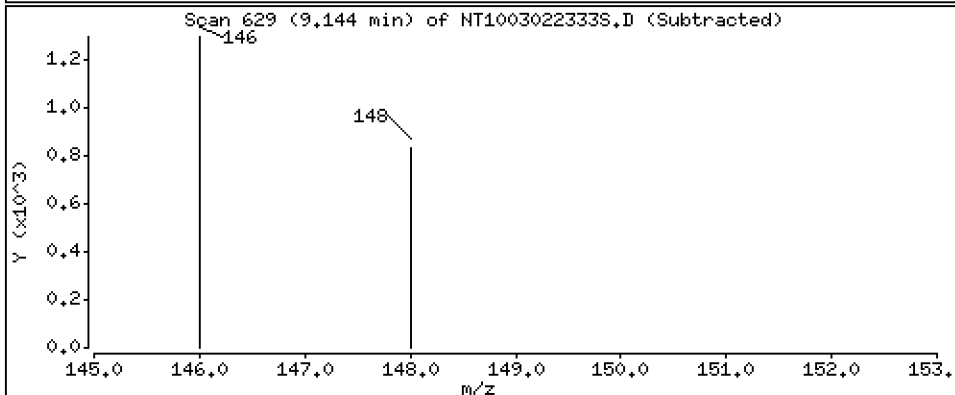
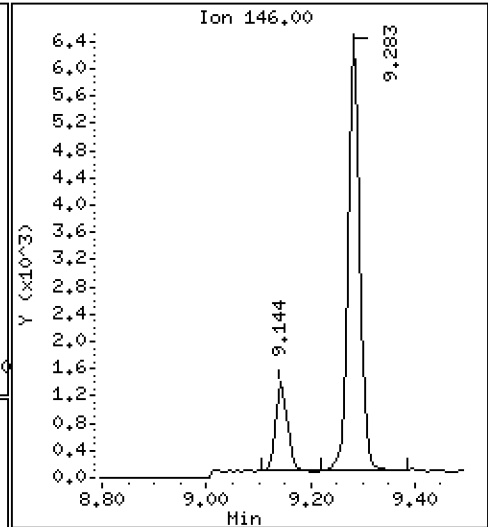
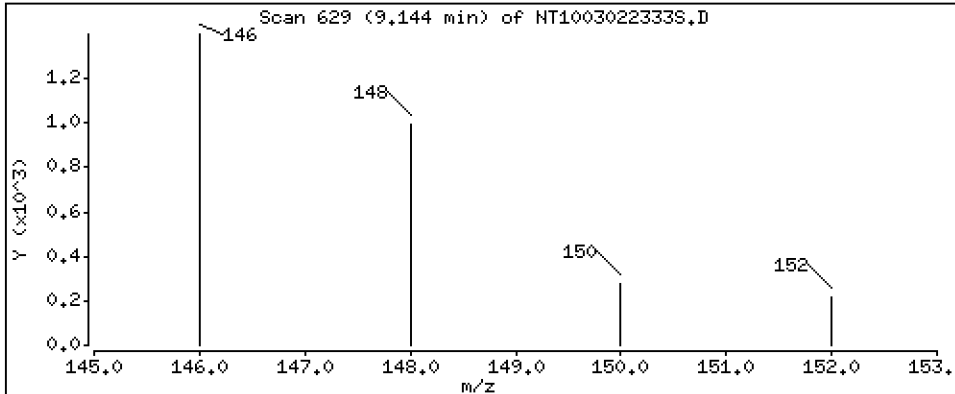
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.01074 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

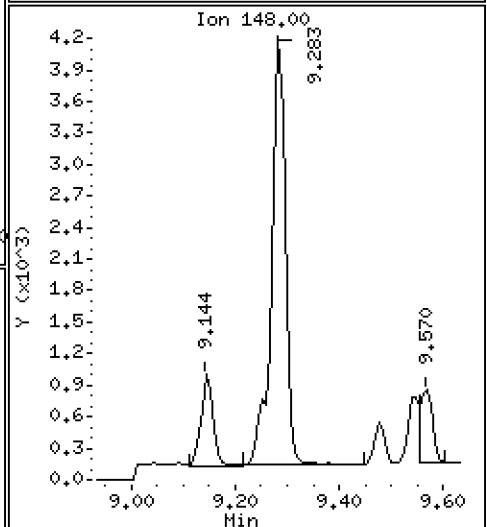
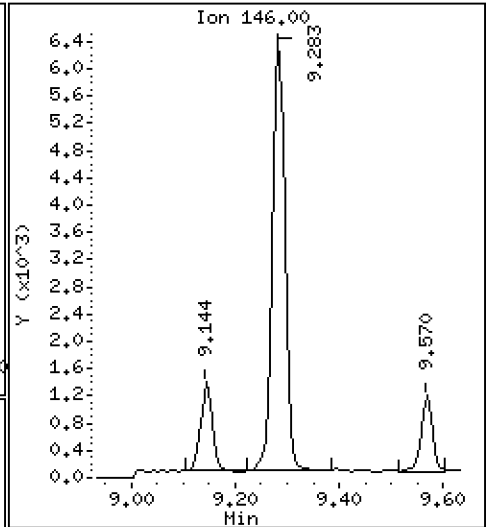
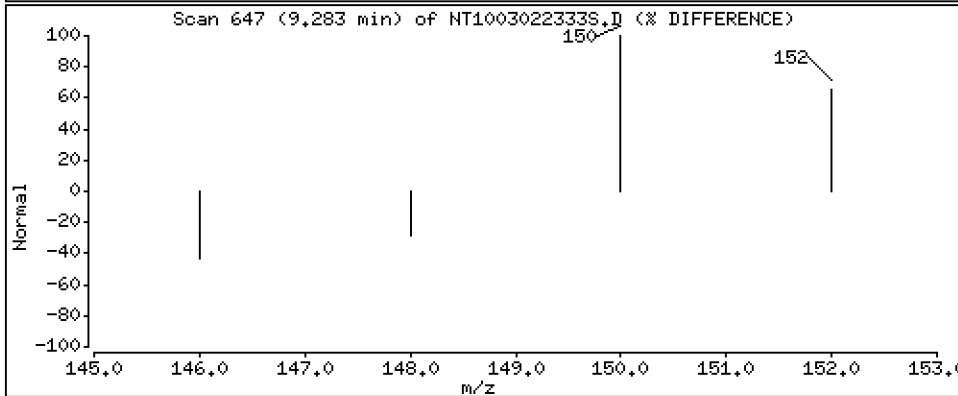
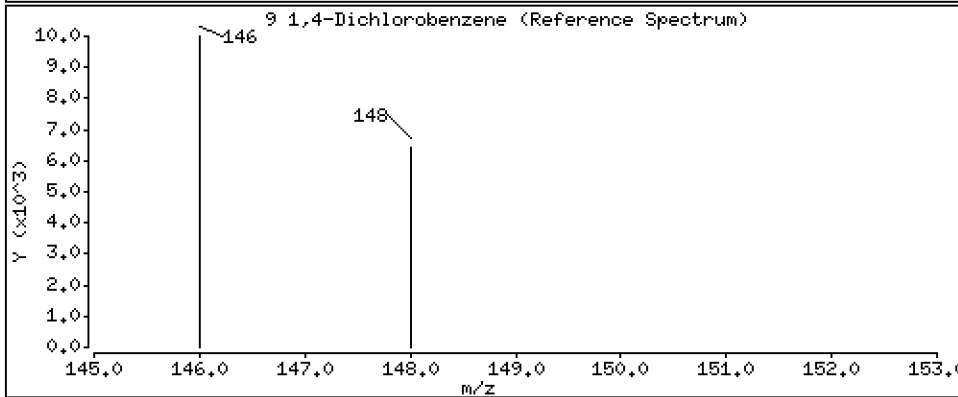
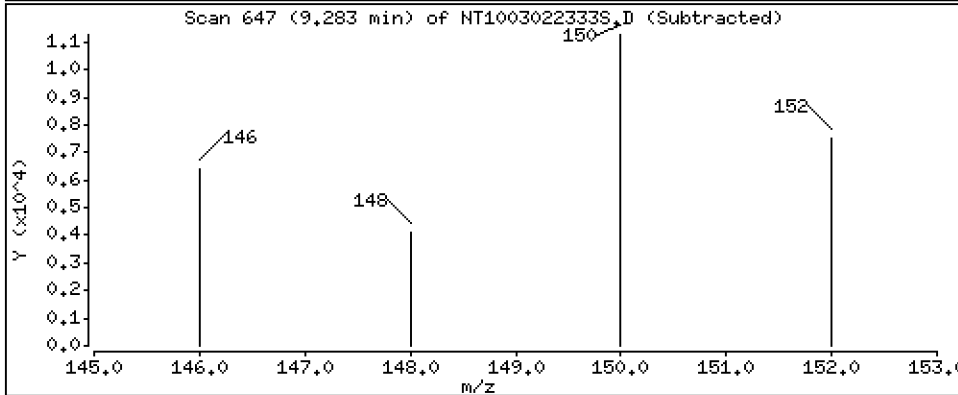
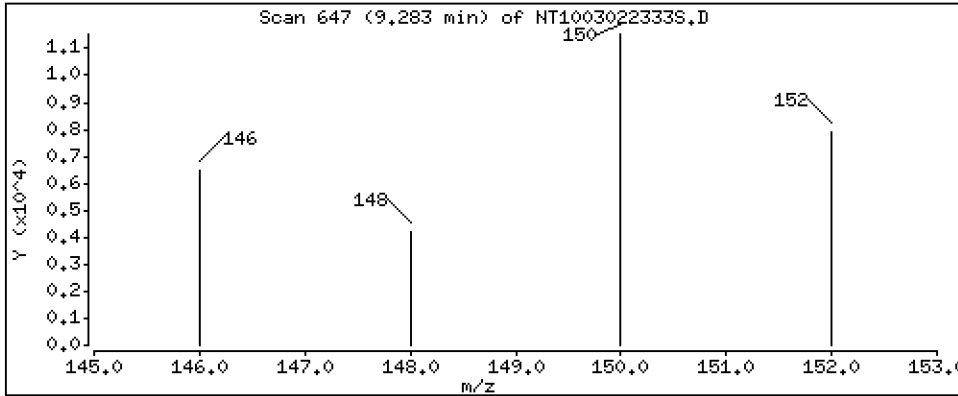
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9,1,4-Dichlorobenzene

Concentration: 0.05632 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

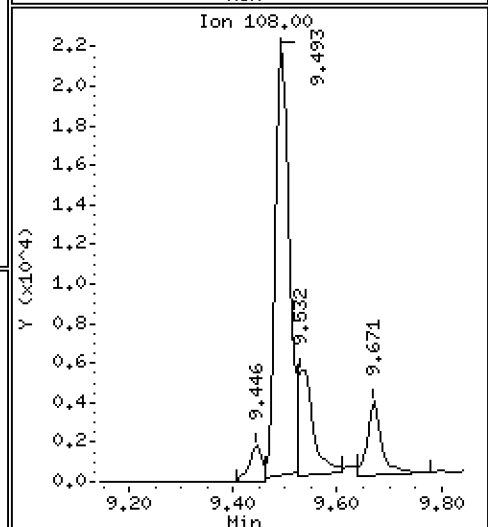
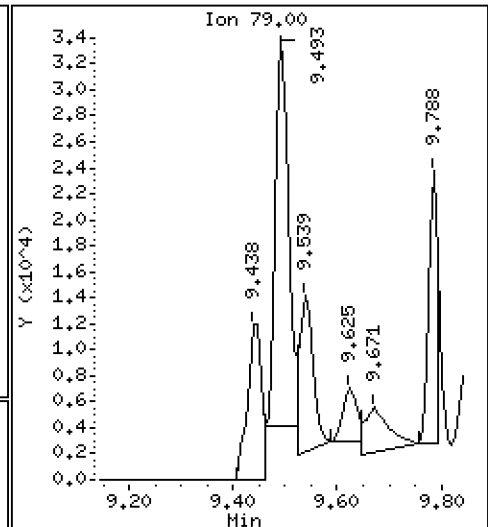
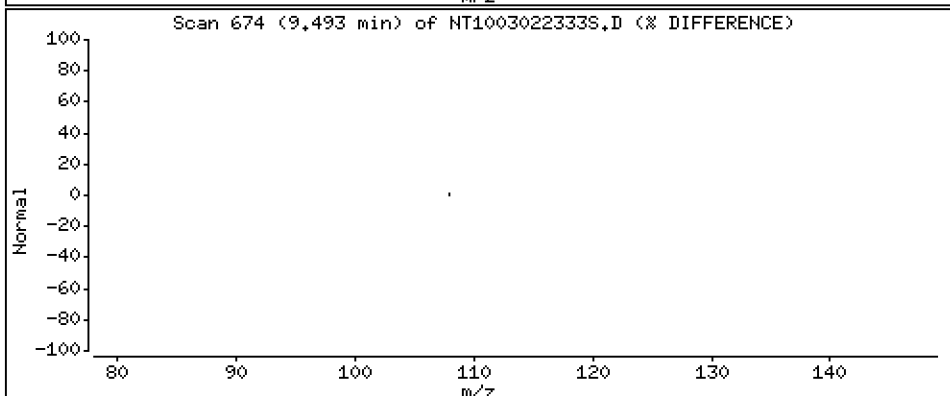
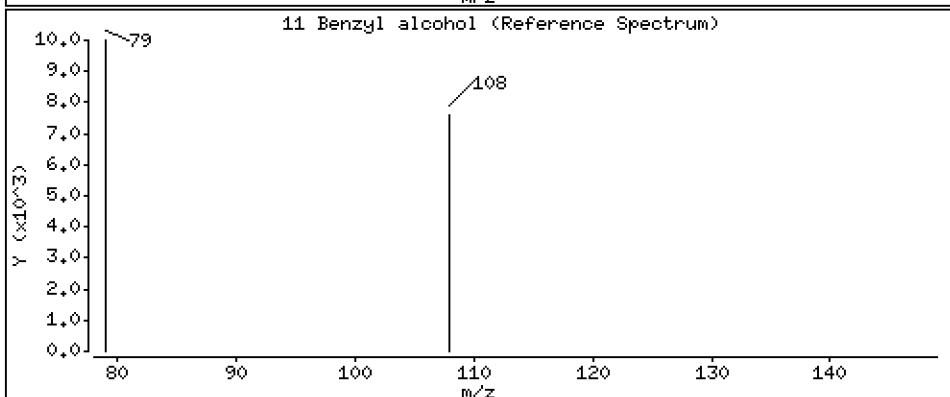
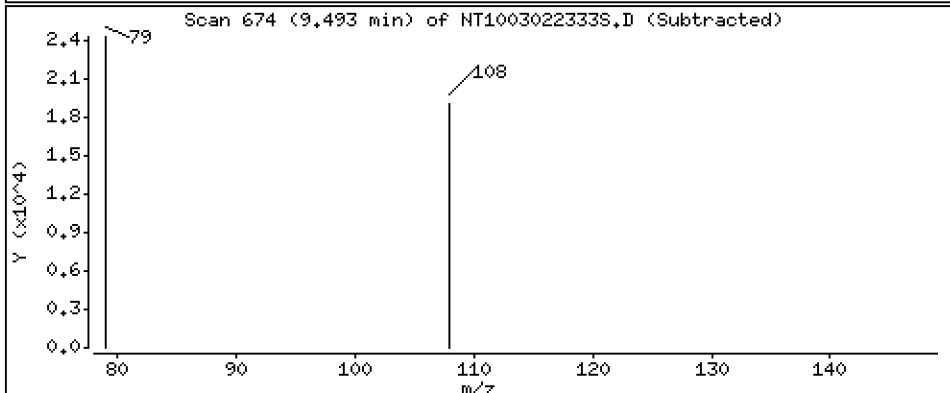
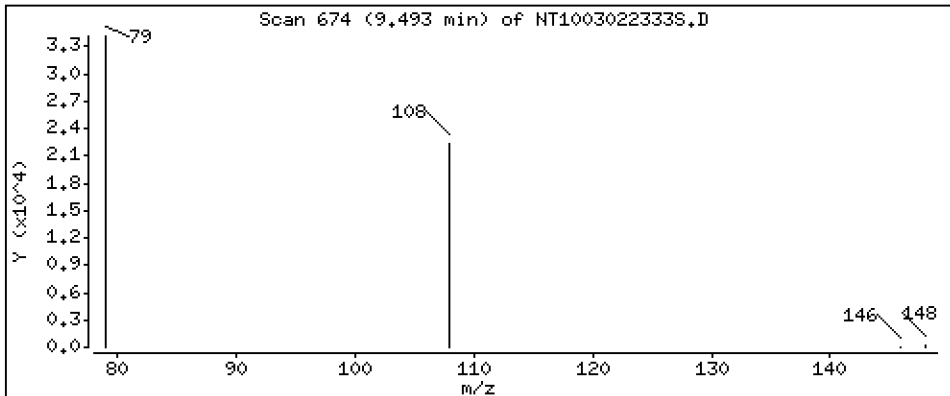
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.4321 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

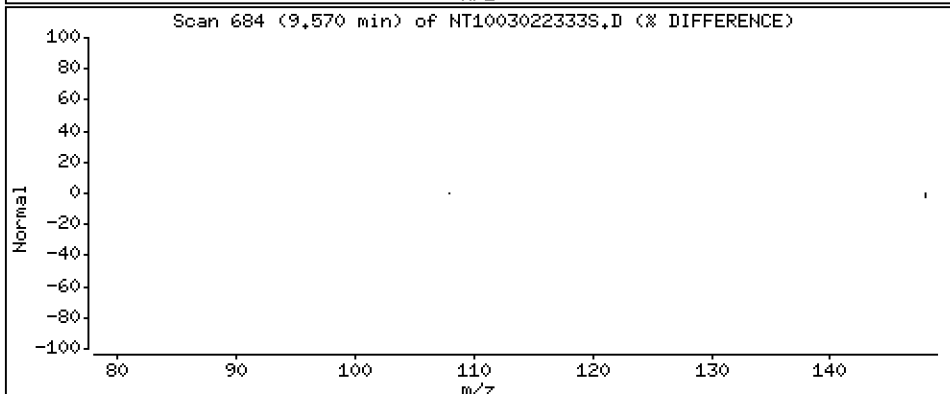
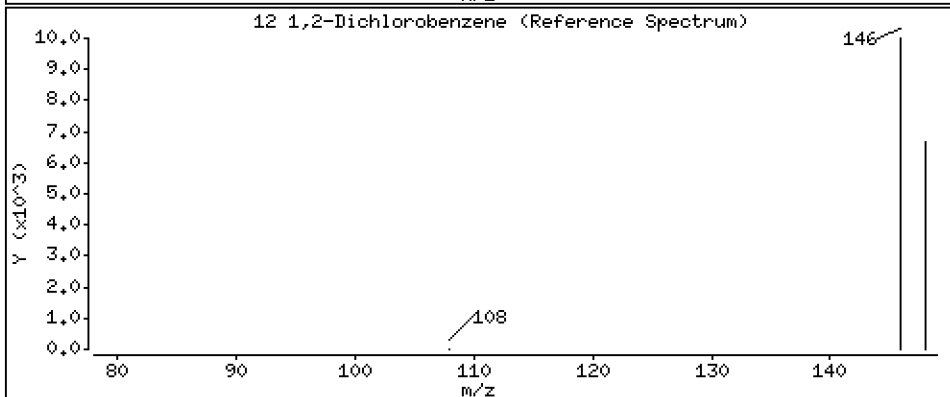
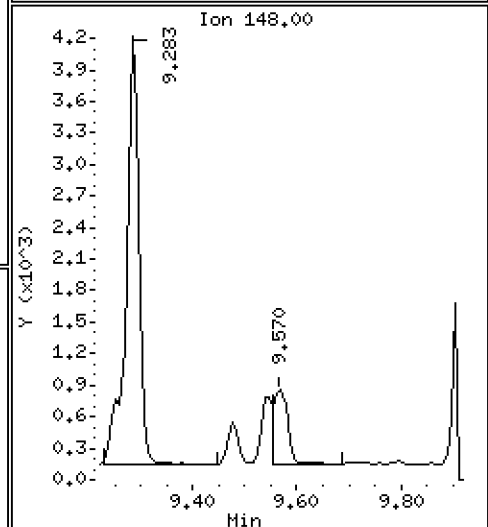
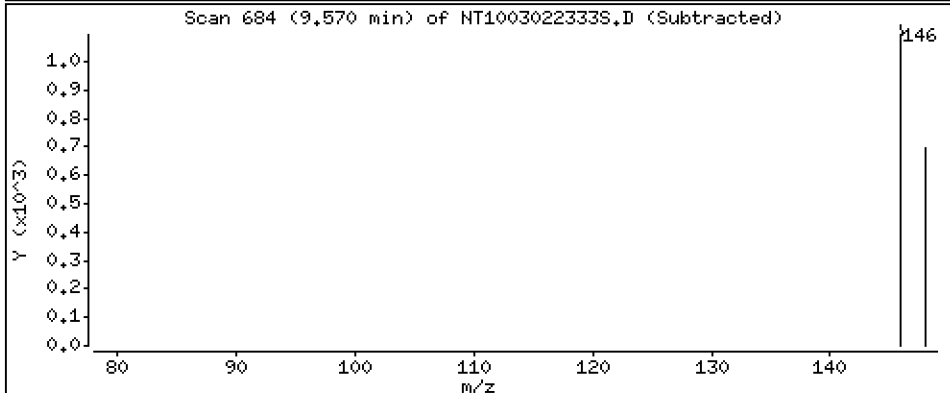
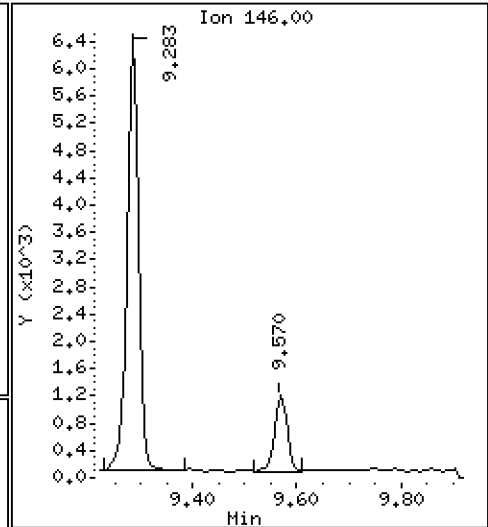
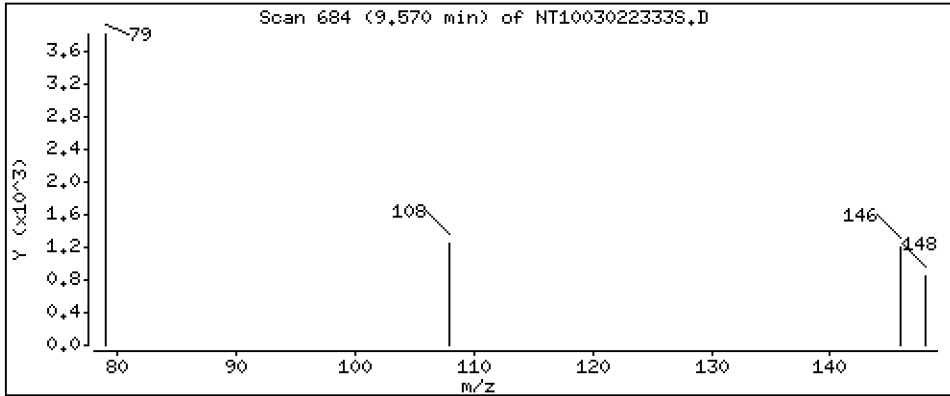
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.01012 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

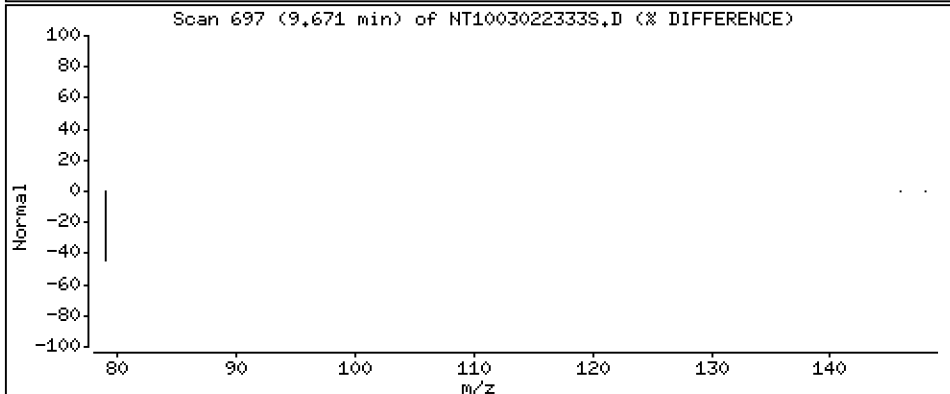
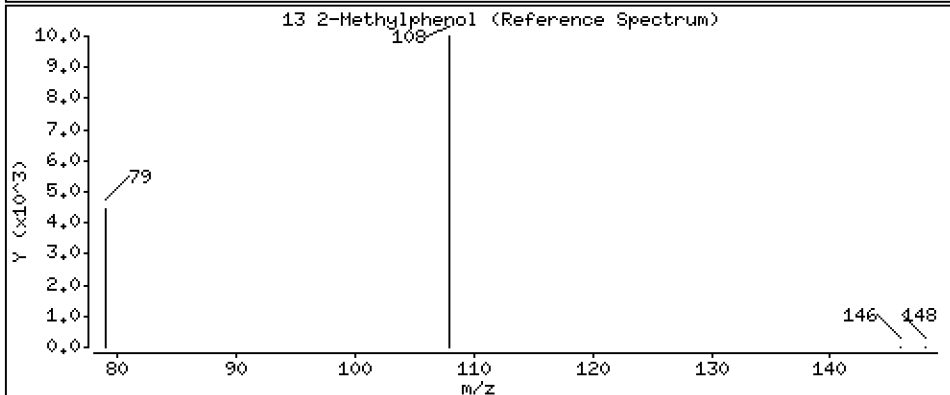
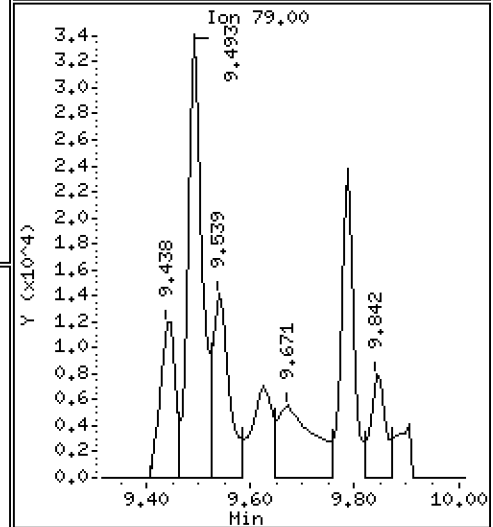
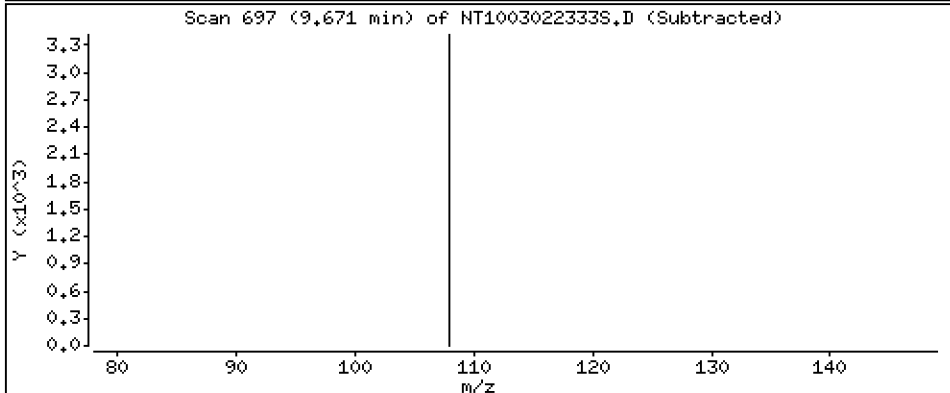
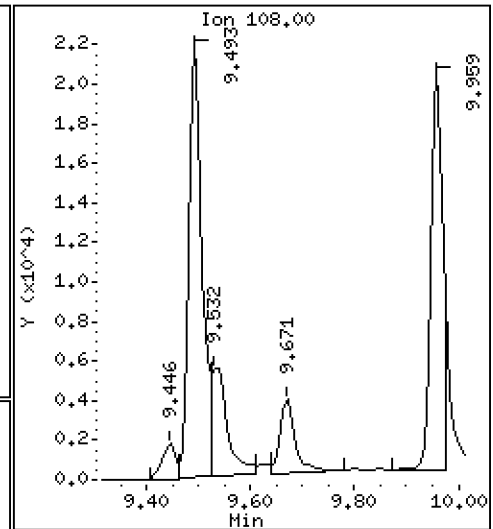
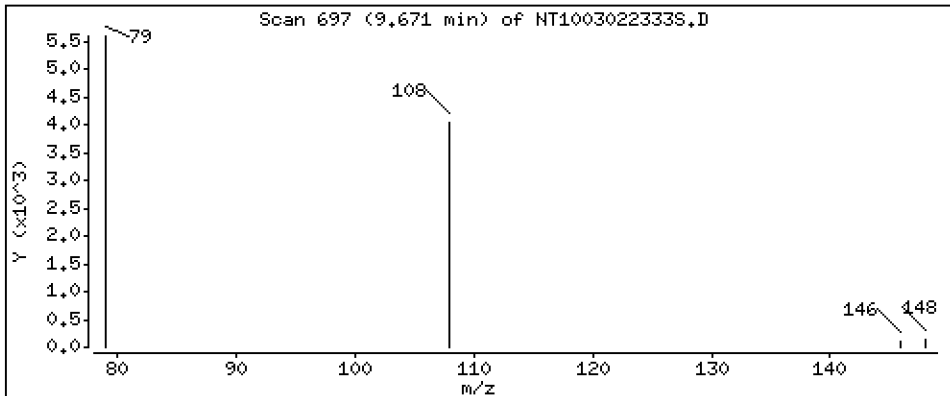
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.05846 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

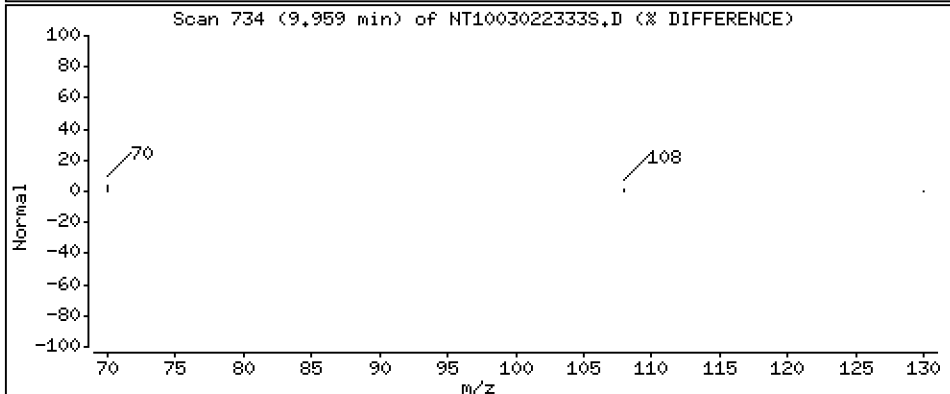
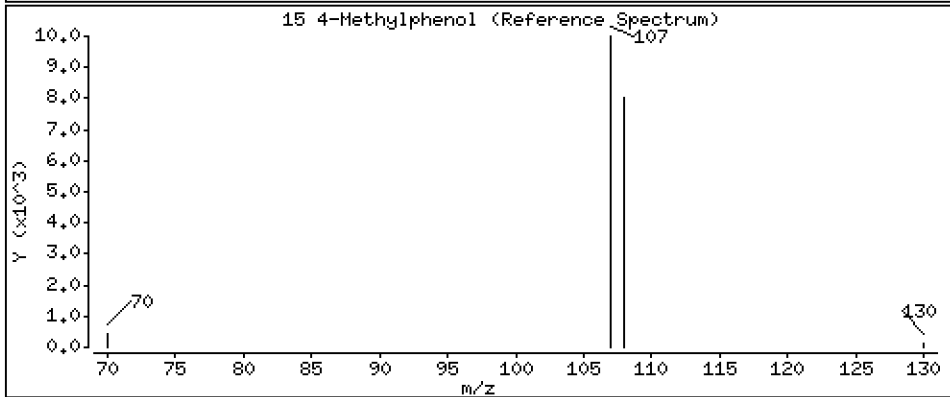
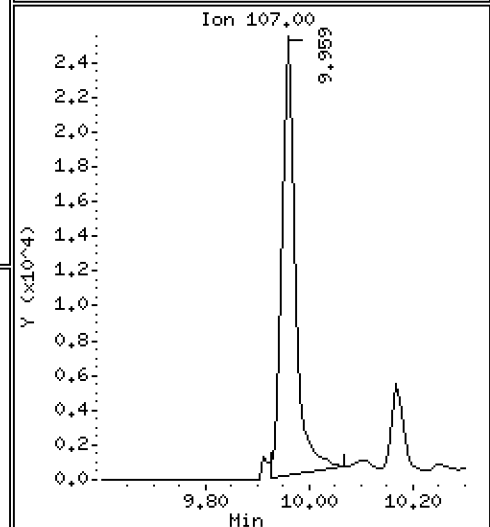
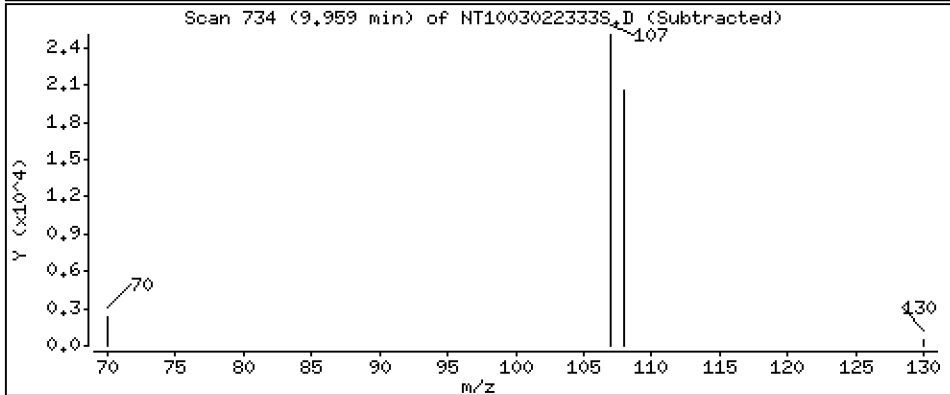
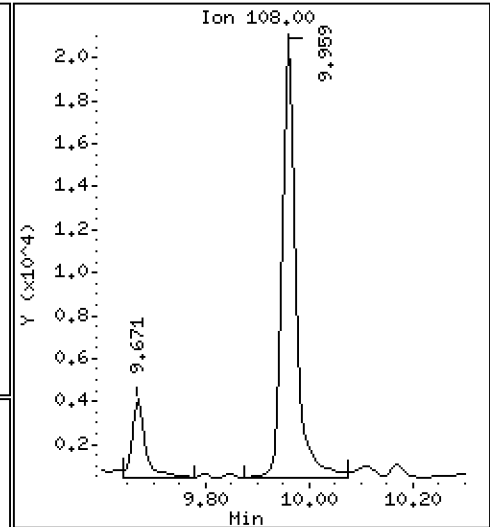
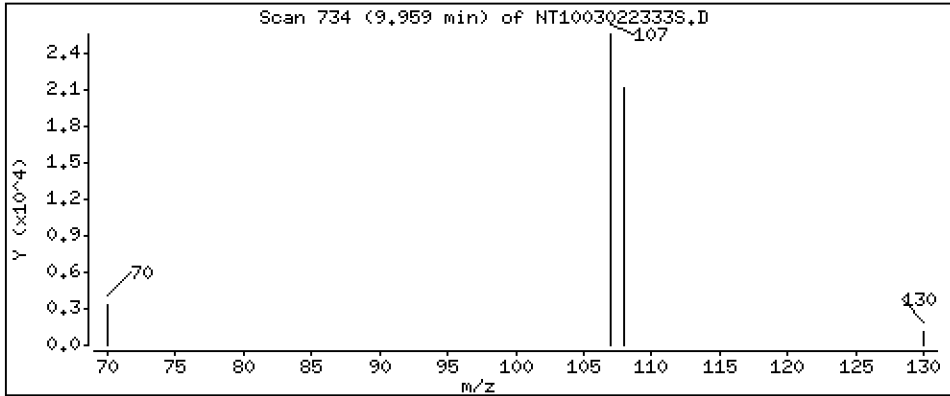
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.2885 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

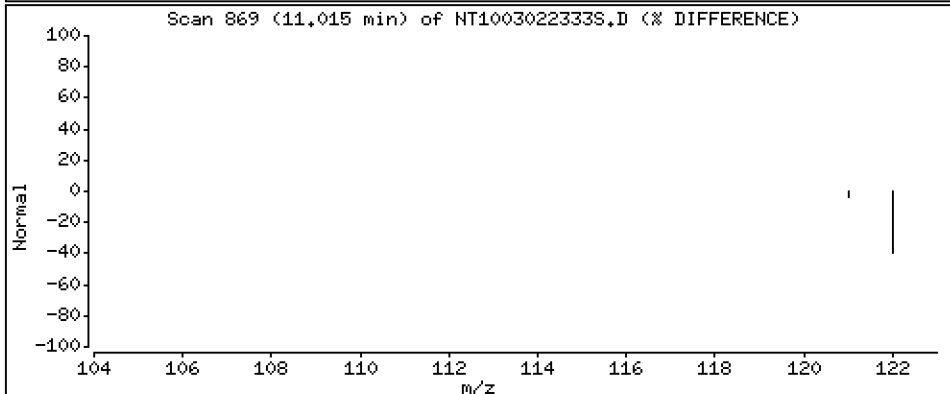
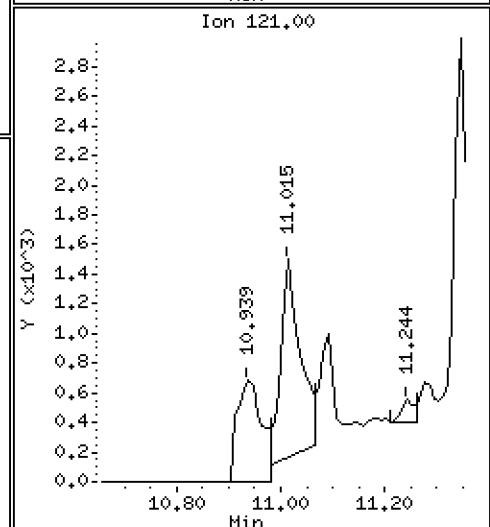
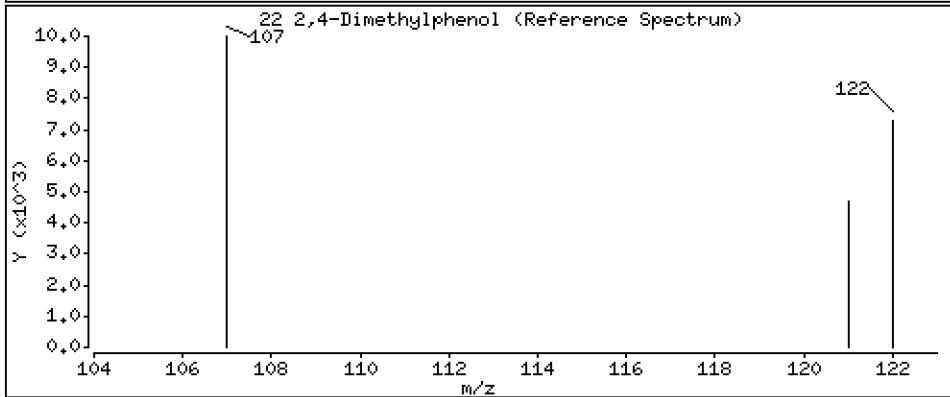
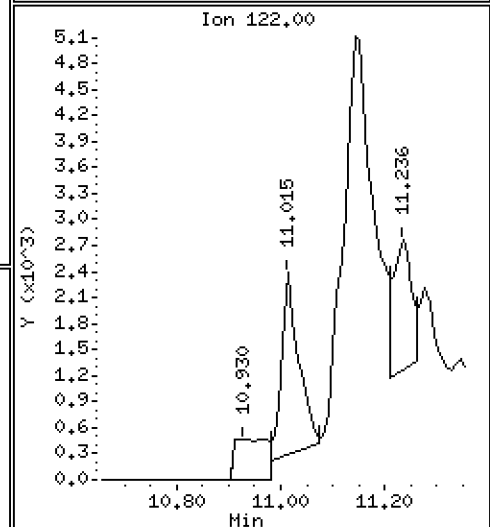
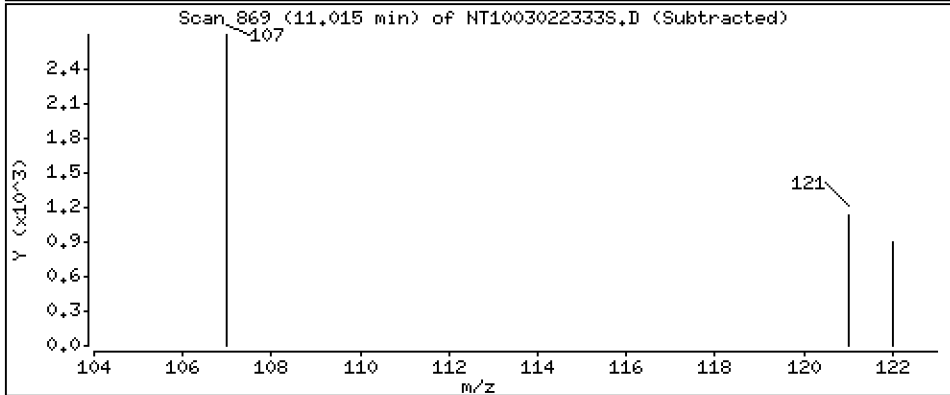
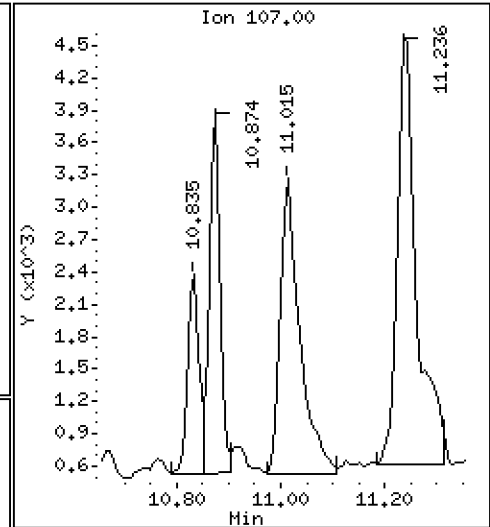
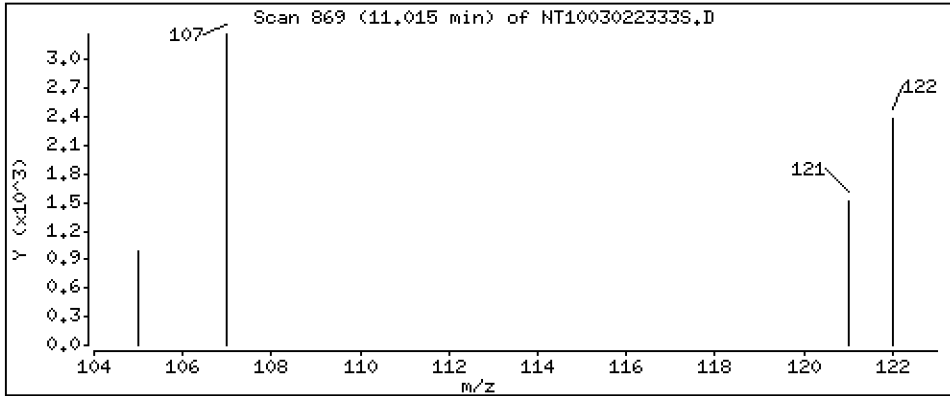
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.04619 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

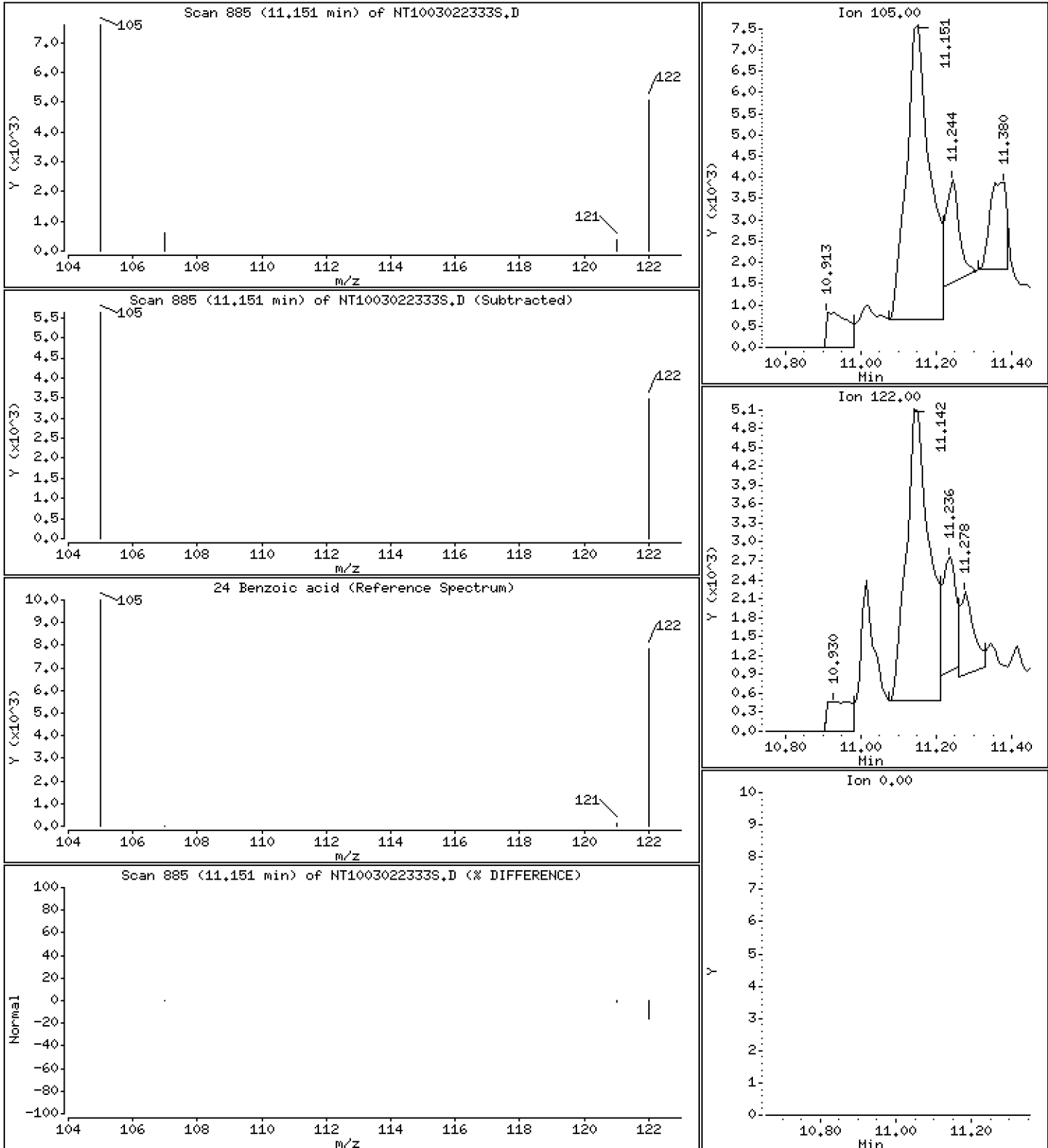
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3586 ug/L





Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

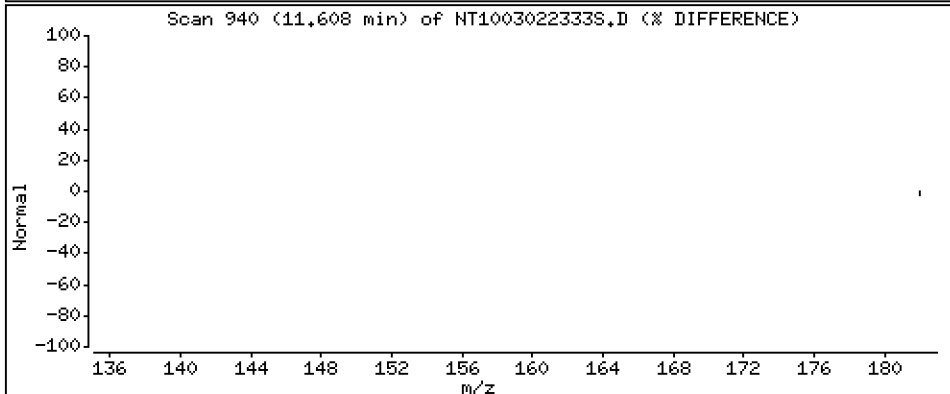
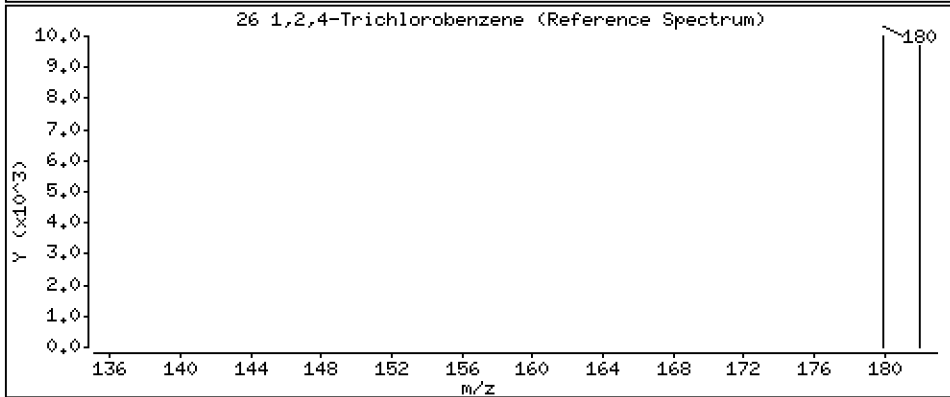
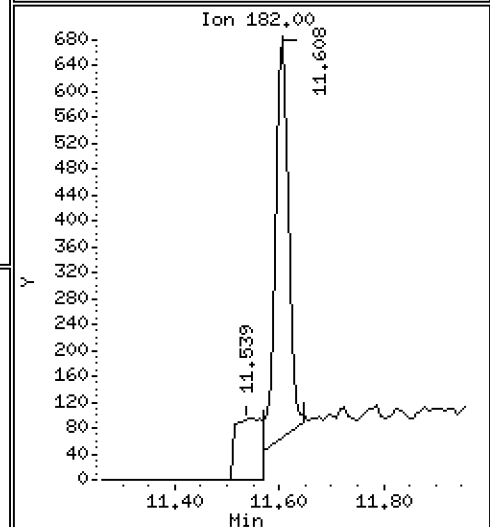
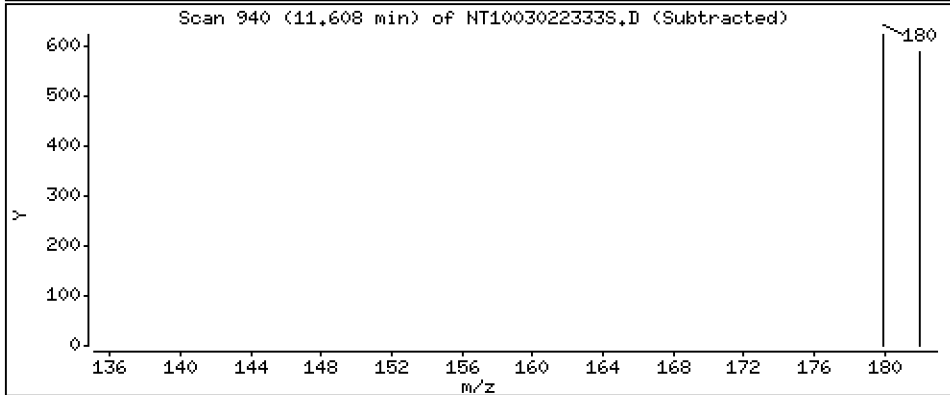
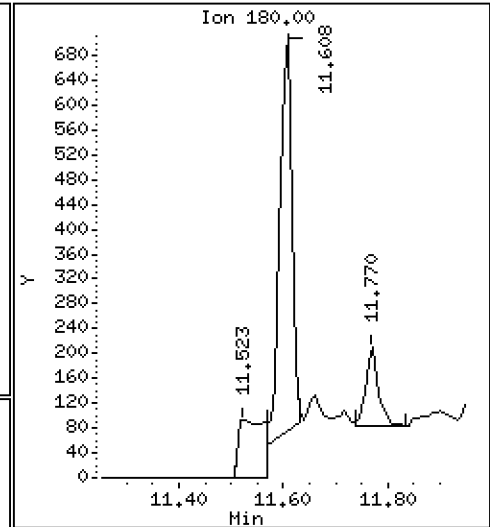
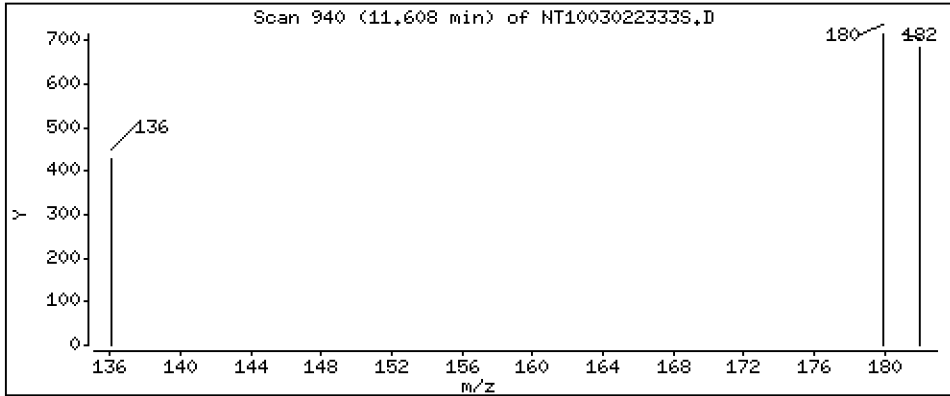
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,007663 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

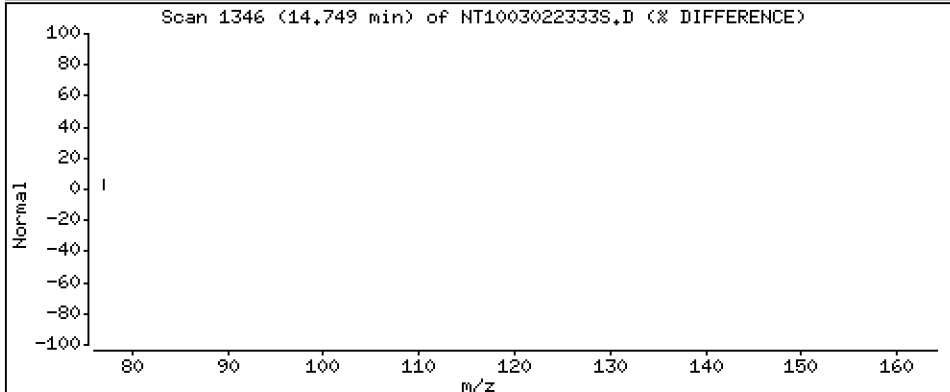
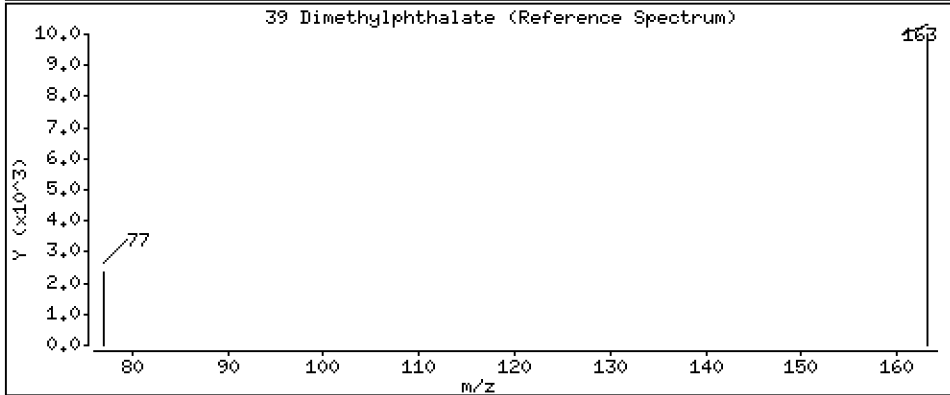
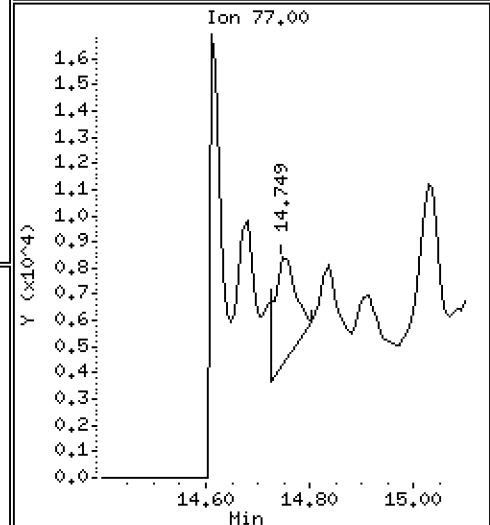
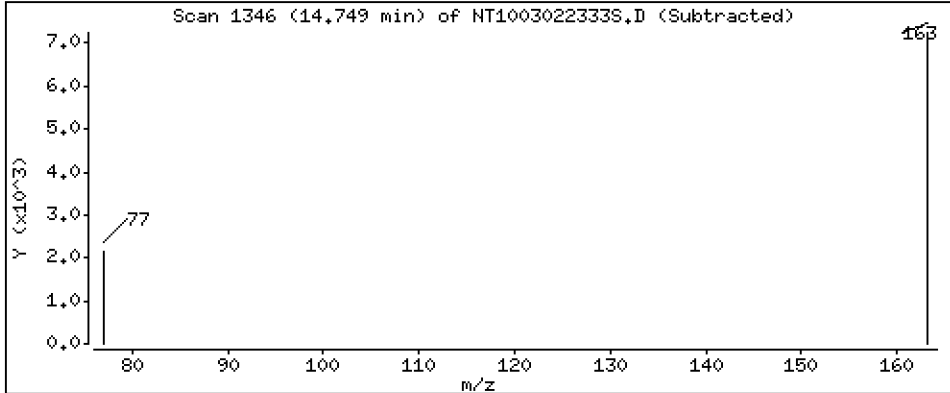
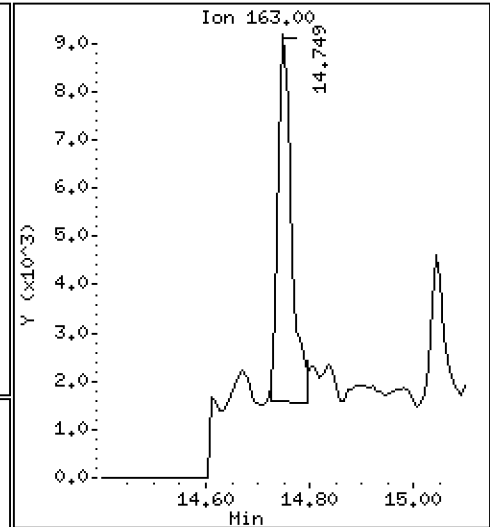
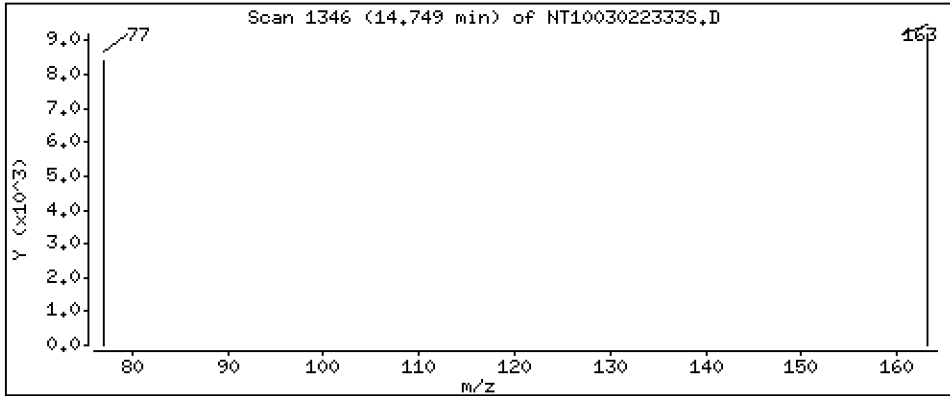
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,04682 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

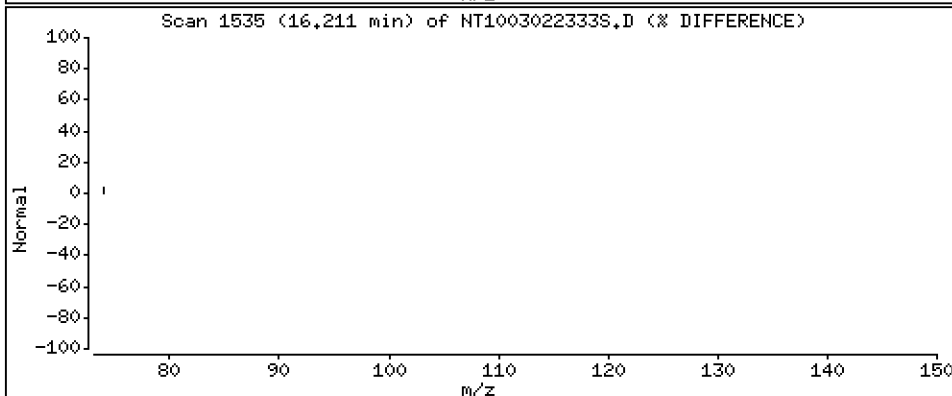
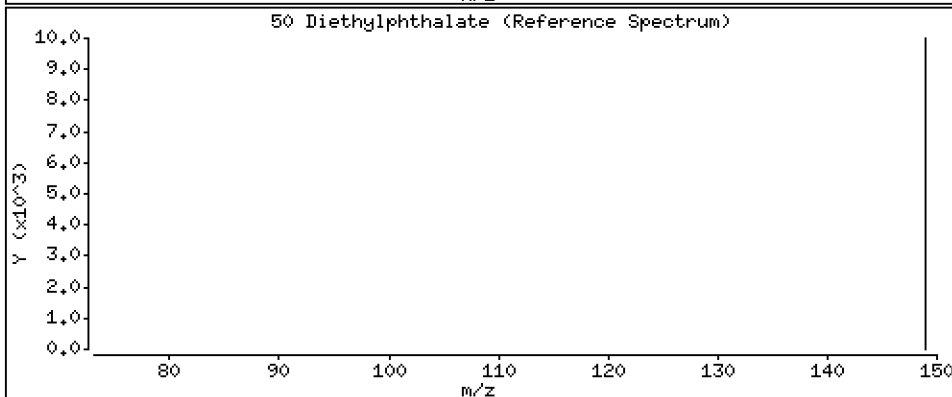
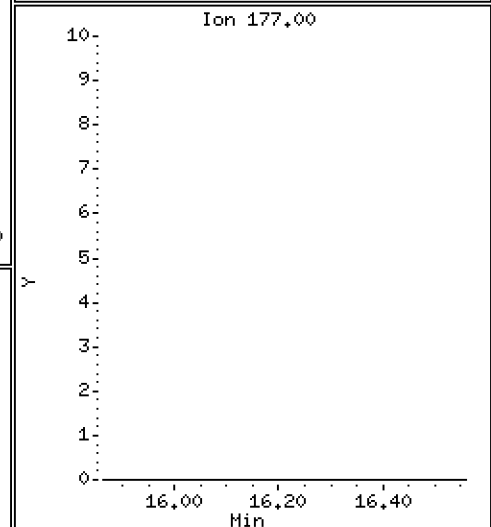
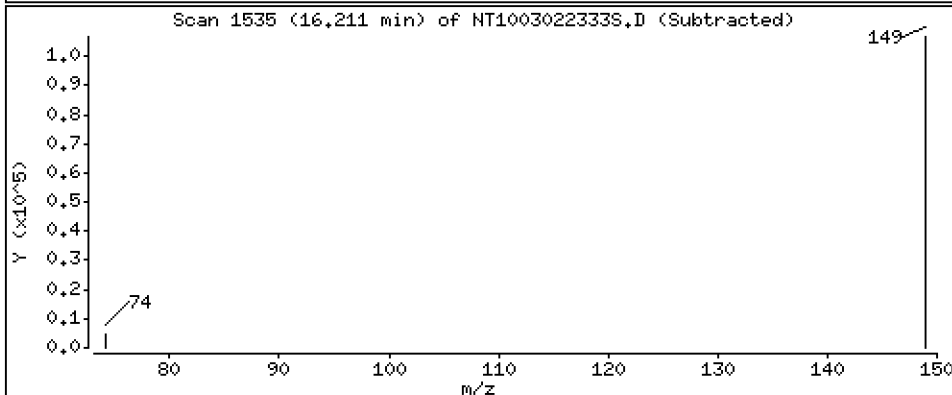
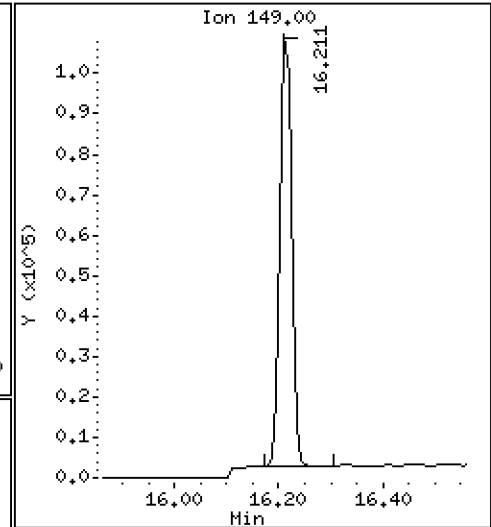
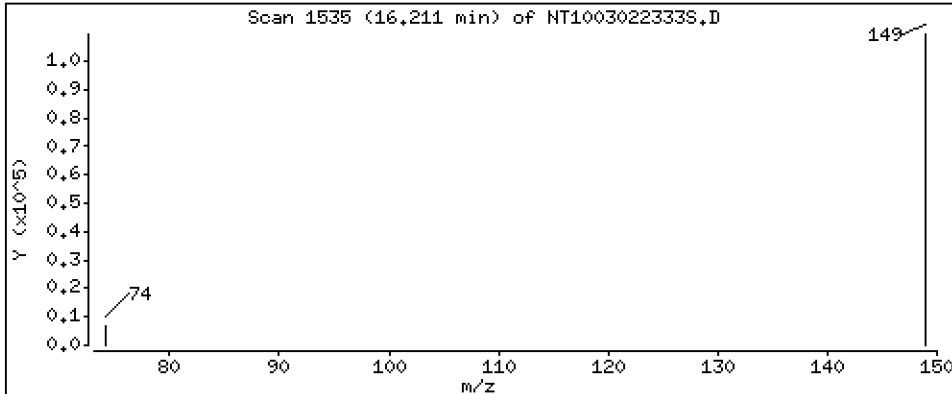
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,5862 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

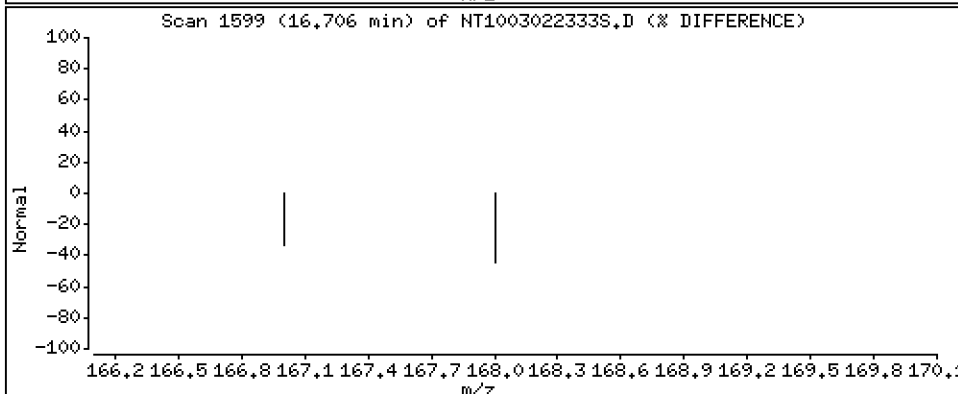
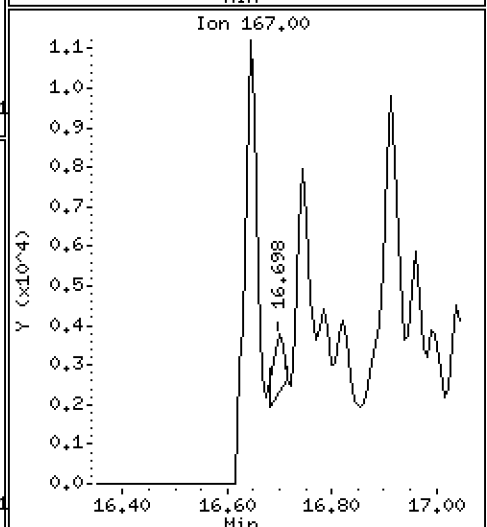
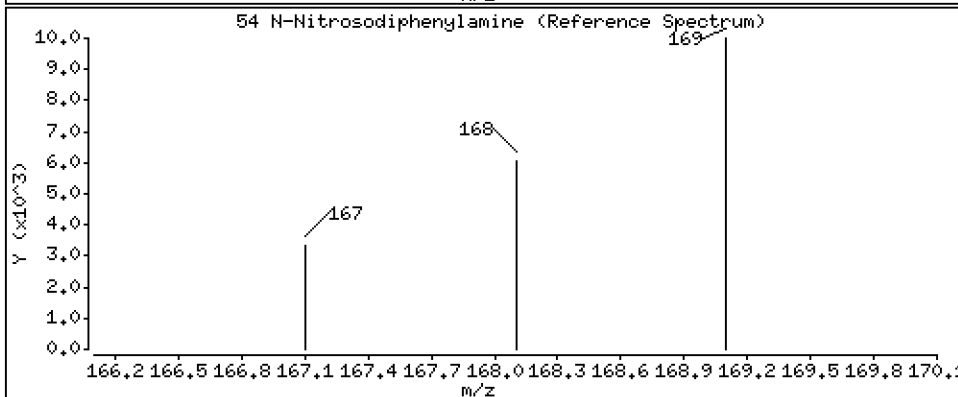
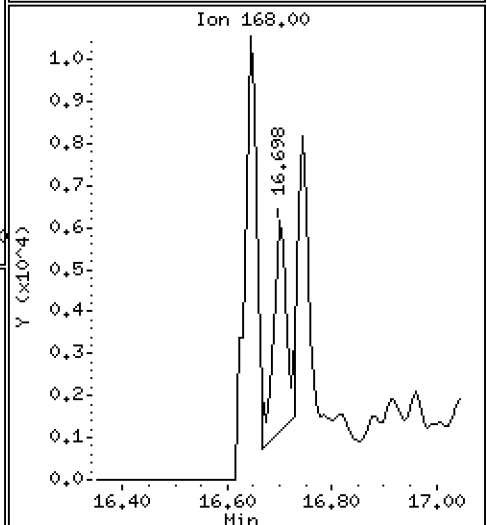
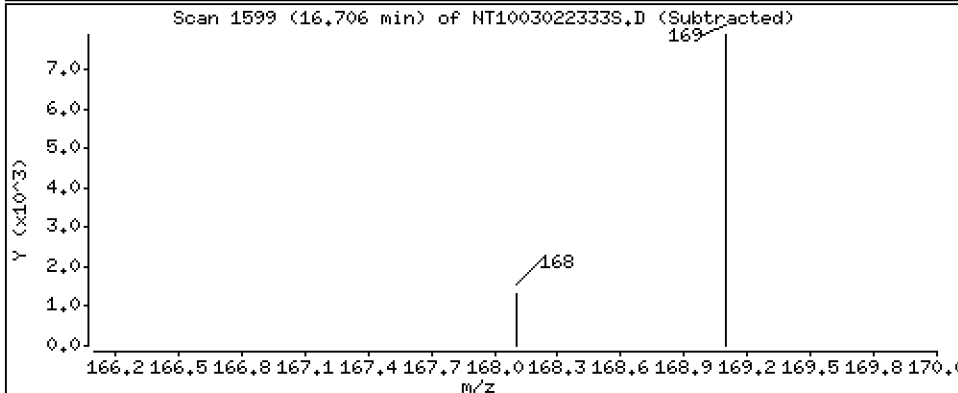
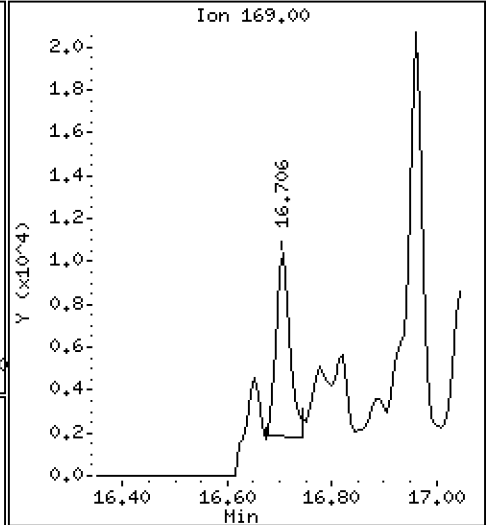
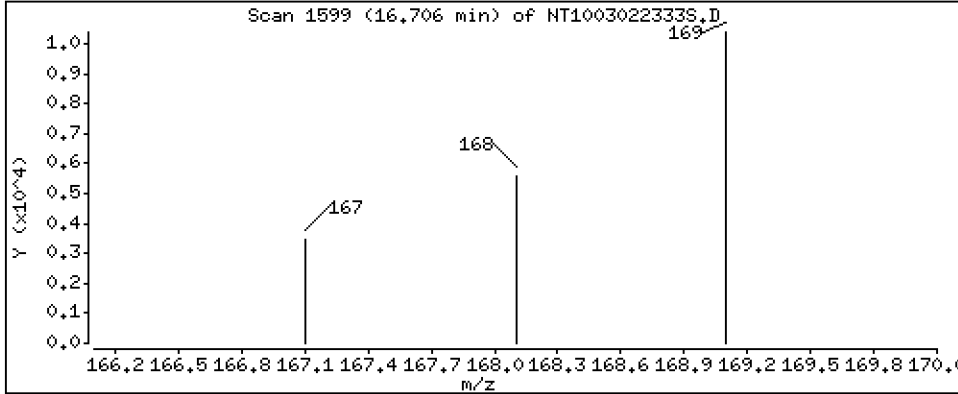
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.04954 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

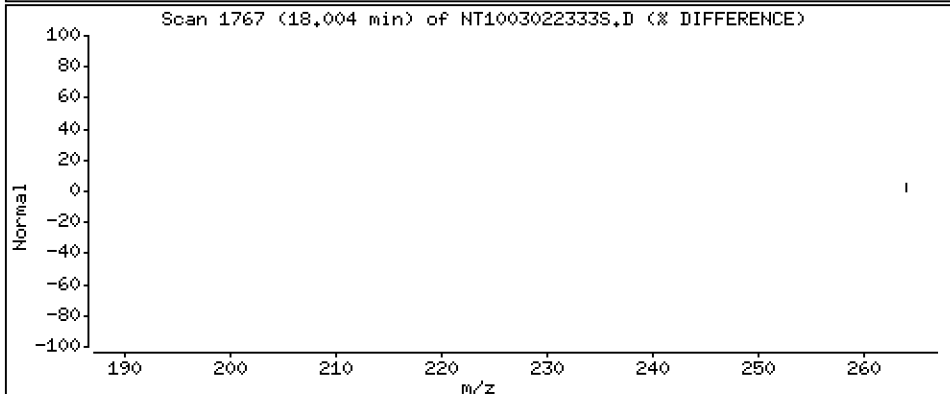
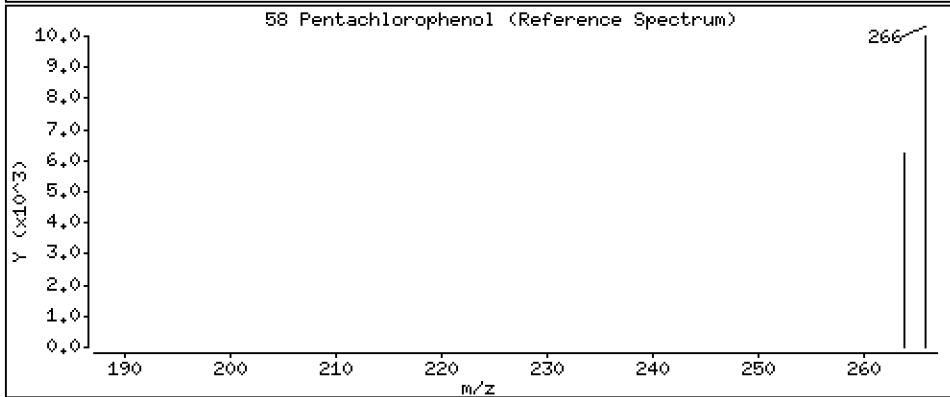
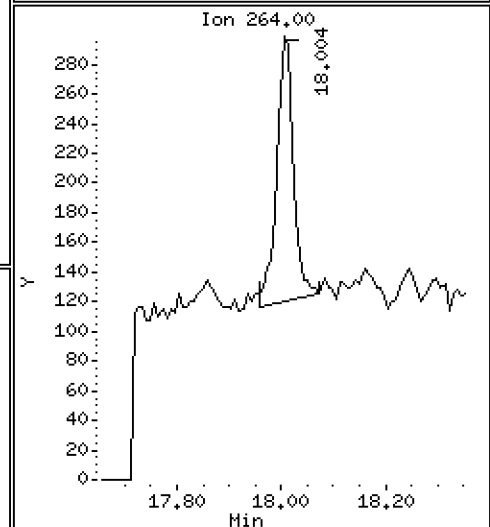
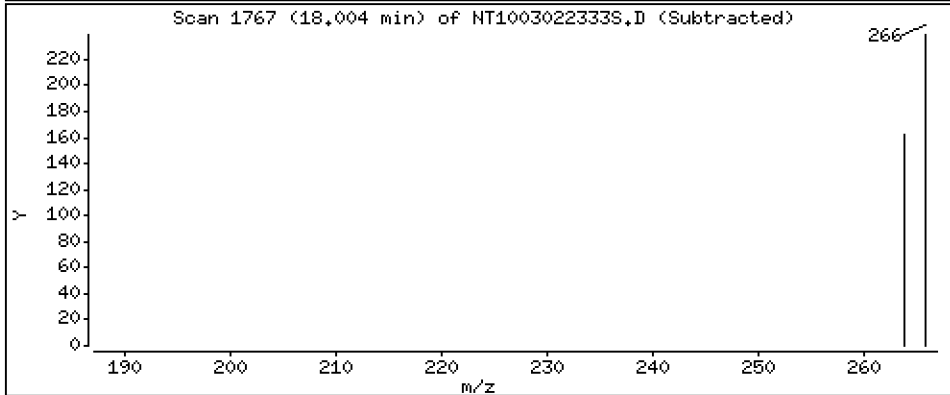
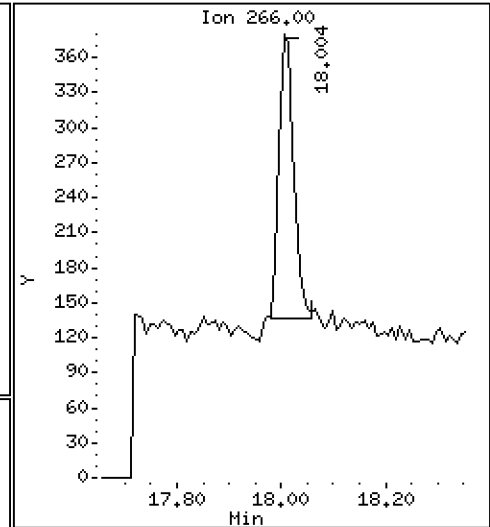
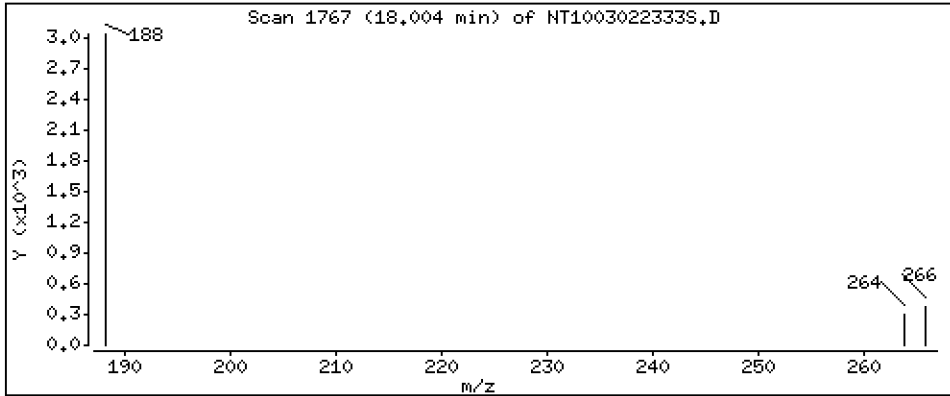
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,007002 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

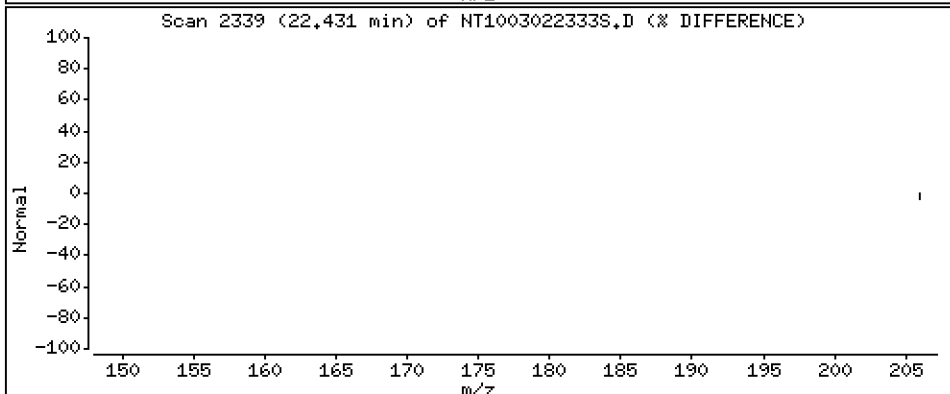
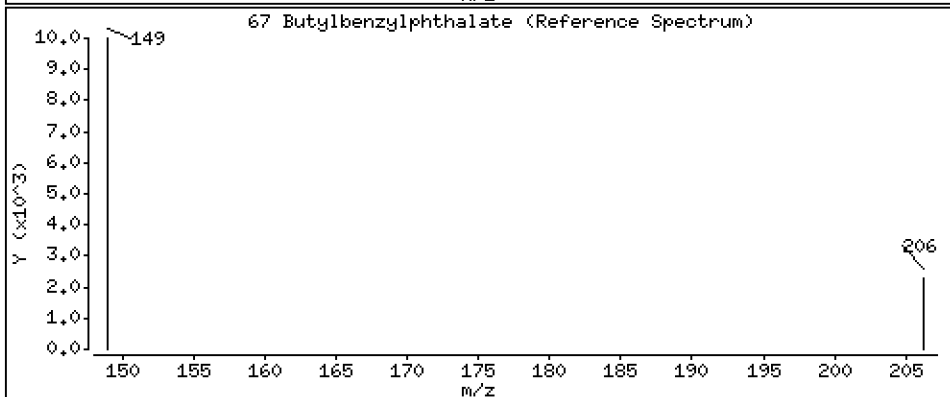
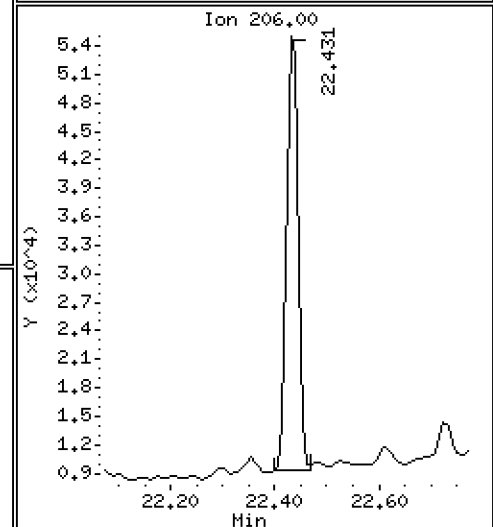
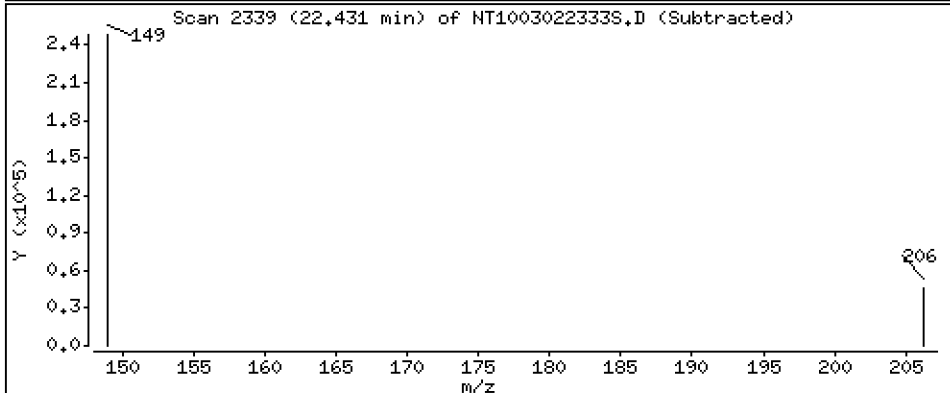
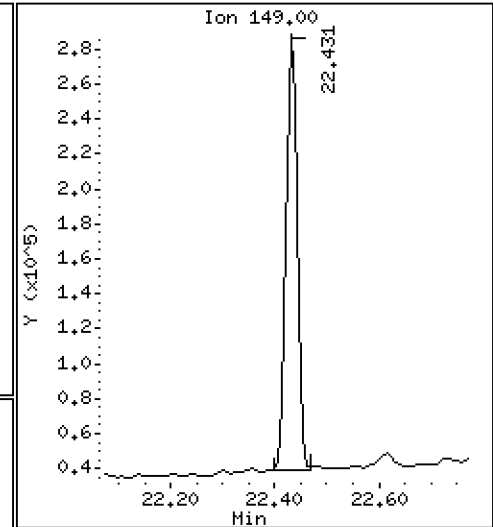
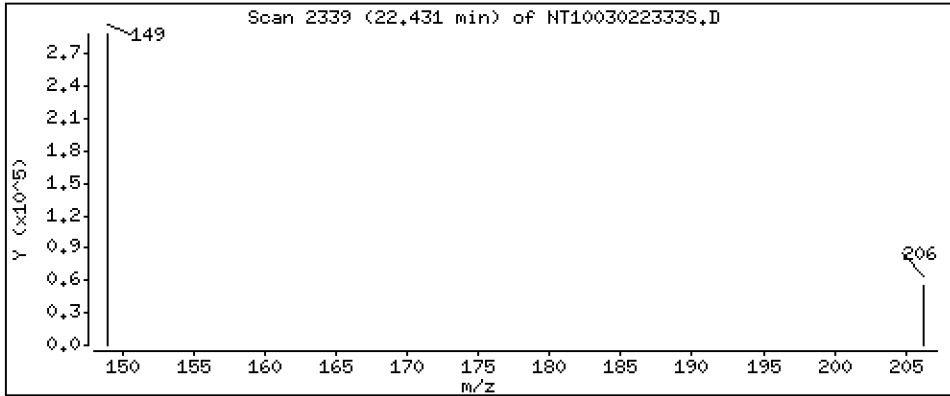
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,9071 ug/L



Date : 03-MAR-2023 10:40

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-14

Volume Injected (uL): 1.0

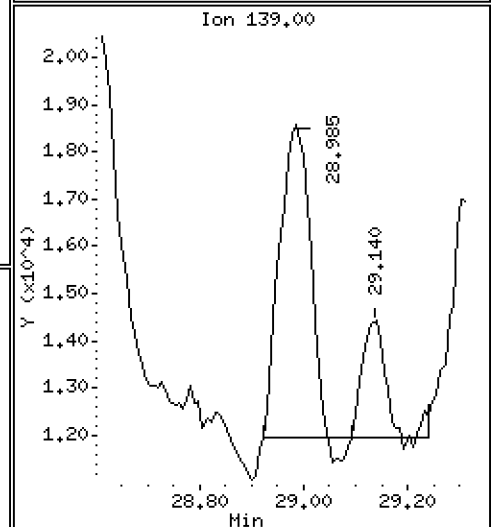
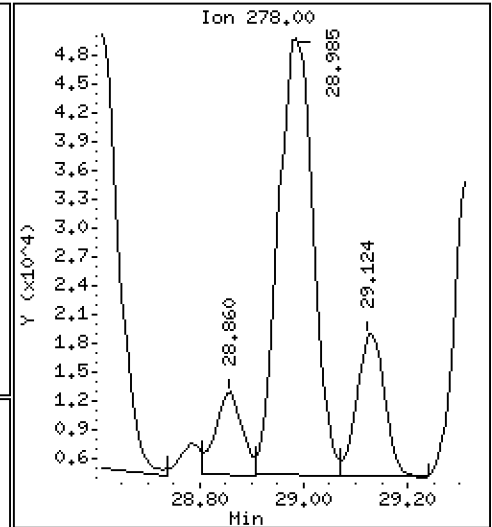
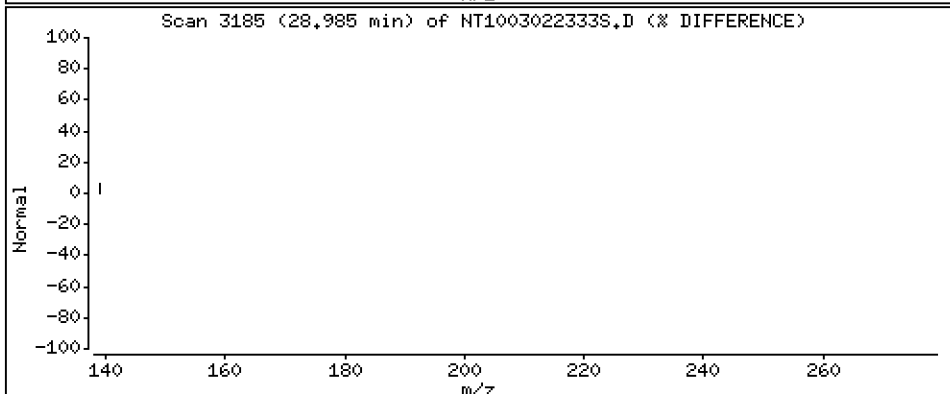
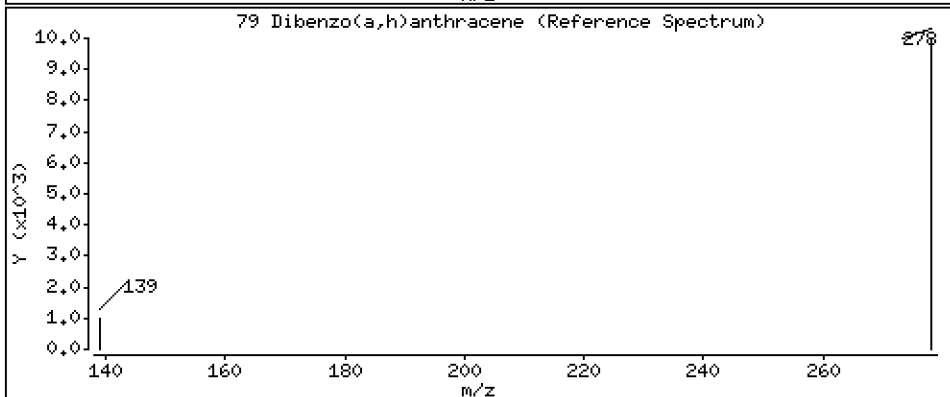
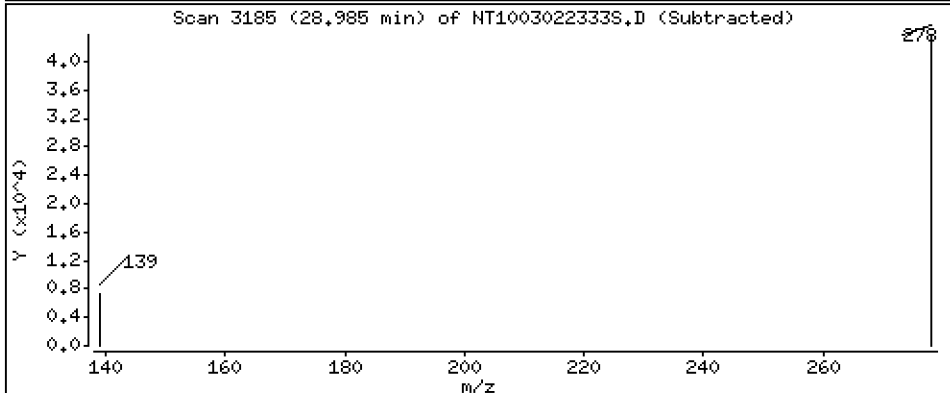
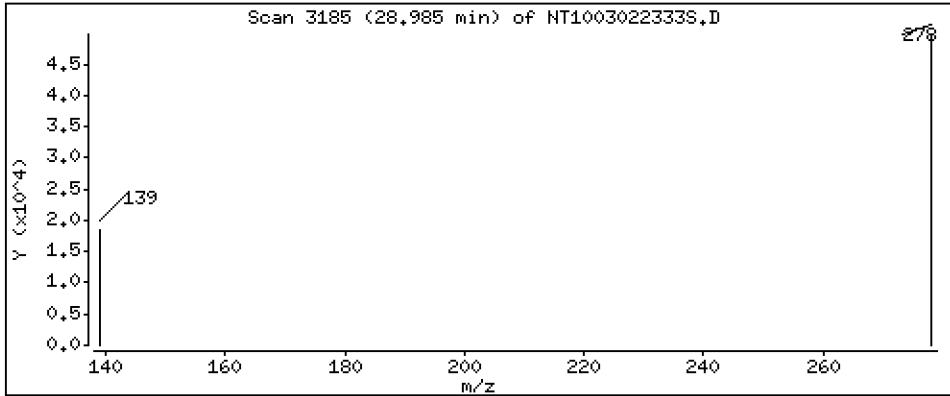
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.3919 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022333S.D  
 Lab Smp Id: 23A0206-14  
 Inj Date : 03-MAR-2023 10:40 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-14  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 25  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		889400	6.30904	6.309 (R)
3 Phenol	94		8.532	8.525 (0.922)		1850025	8.49859	8.499
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		1966	0.01074	0.01074
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		493783	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		10020	0.05632	0.05632
11 Benzyl alcohol	79		9.492	9.492 (1.026)		50060	0.43208	0.4321
12 1,2-Dichlorobenzene	146		9.570	9.570 (1.034)		1730	0.01012	0.01012
13 2-Methylphenol	108		9.671	9.663 (1.045)		7309	0.05846	0.05846
15 4-Methylphenol	108		9.958	9.950 (1.076)		37612	0.28853	0.2885
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		11.014	11.006 (0.939)		7076	0.04619	0.04619
24 Benzoic acid	105		11.150	11.099 (0.950)		30169	0.35860	0.3586
26 1,2,4-Trichlorobenzene	180		11.608	11.600 (0.989)		996	0.00766	0.007663
* 27 Naphthalene-d8	136		11.731	11.731 (1.000)		1805737	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		14.749	14.749 (0.963)		13179	0.04682	0.04682 (M)
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		886447	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		155598	0.58620	0.5862
54 N-Nitrosodiphenylamine	169		16.706	16.698 (0.907)		15862	0.04954	0.04954 (M)
57 Hexachlorobenzene	284		Compound Not Detected.					



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.004	18.004	(0.978)	459	0.00700	0.007002 (M)
* 59 Phenanthrene-d10	188	18.414	18.414	(1.000)	1978572	4.00000	
\$ 66 Terphenyl-d14	244	21.555	21.532	(0.919)	1512871	8.13022	8.130 (R)
67 Butylbenzylphthalate	149	22.430	22.422	(0.956)	351273	0.90705	0.9071
* 69 Chrysene-d12	240	23.452	23.429	(1.000)	2301069	4.00000	
* 77 Perylene-d12	264	26.162	26.131	(1.000)	2368742	4.00000	
79 Dibenzo(a,h)anthracene	278	28.984	28.961	(1.108)	216143	0.39191	0.3919
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022333S.D  
 Lab Smp Id: 23A0206-14  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	493783	-20.43
27 Naphthalene-d8	2213509	1106755	4427018	1805737	-18.42
42 Acenaphthene-d10	1093970	546985	2187940	886447	-18.97
59 Phenanthrene-d10	2129840	1064920	4259680	1978572	-7.10
69 Chrysene-d12	2347260	1173630	4694520	2301069	-1.97
77 Perylene-d12	2638390	1319195	5276780	2368742	-10.22

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.45	0.10
77 Perylene-d12	26.13	25.63	26.63	26.16	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022333S.D

Lab ID: 23A0206-14

nt10.i, 20230302B.b\SIM.b\SIMABN2.m,

03-MAR-2023 10:40

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

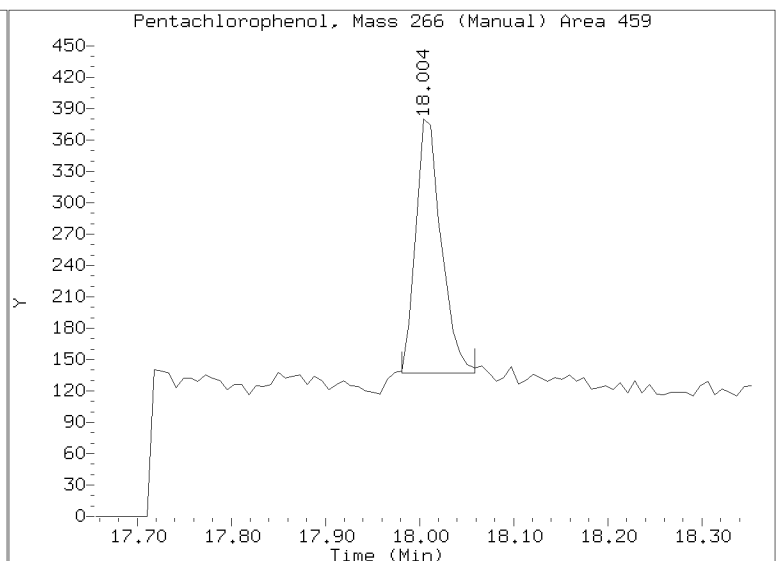
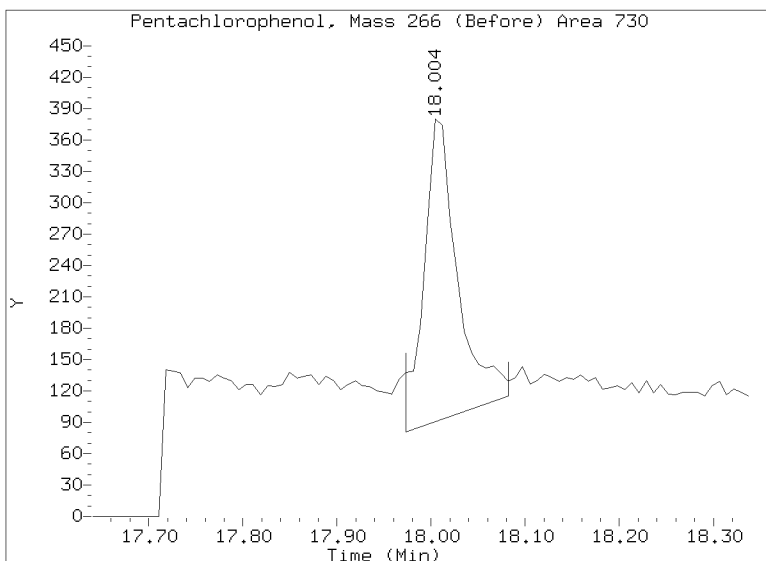
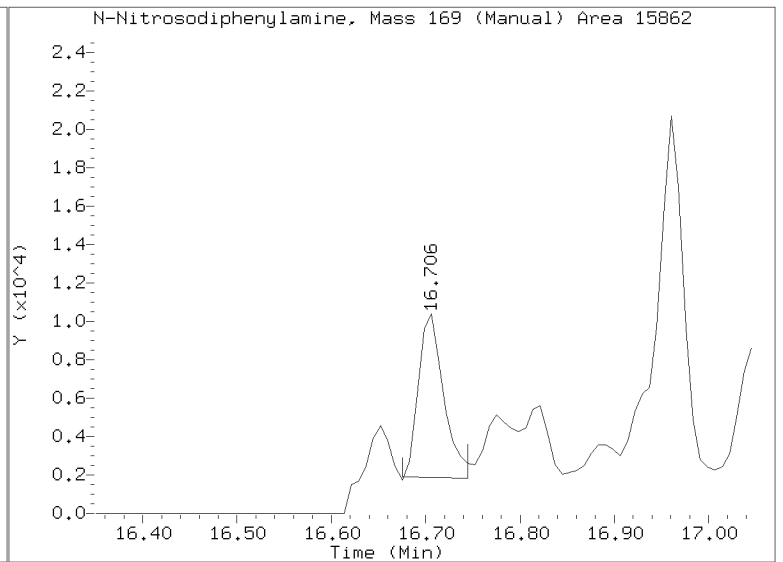
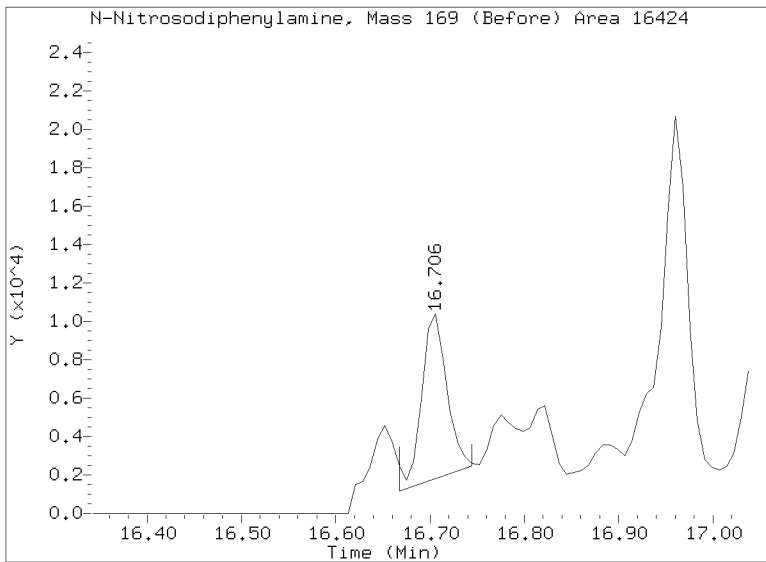
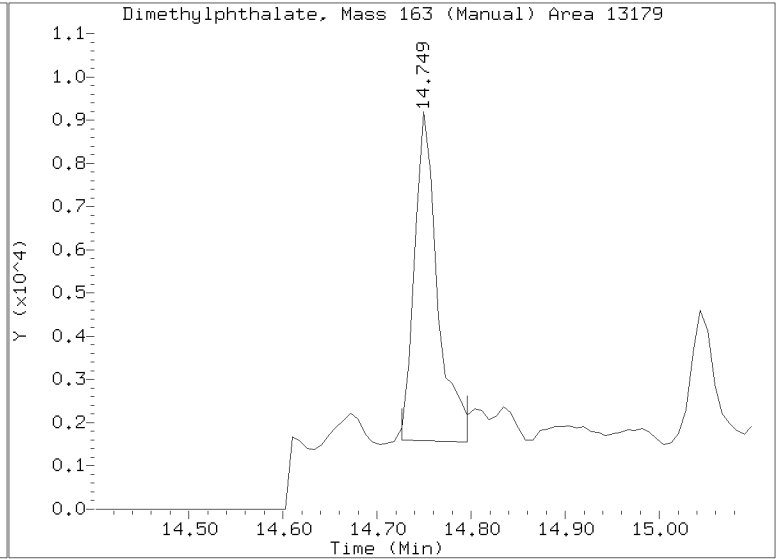
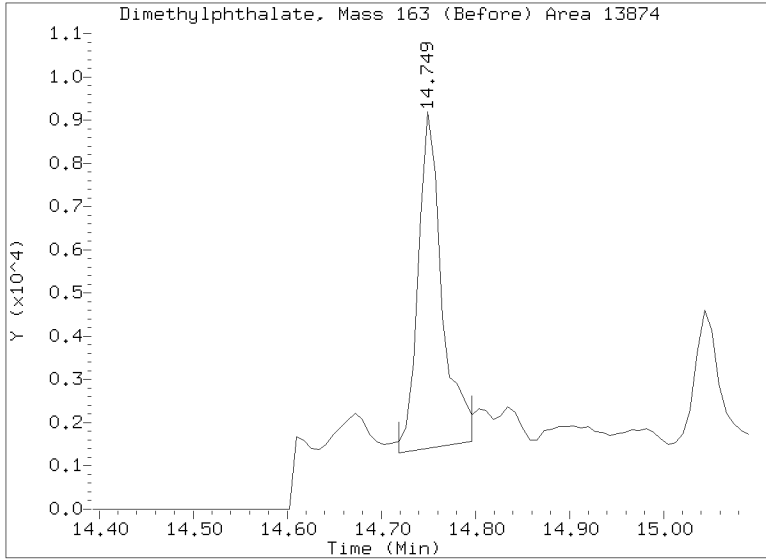
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022333S.D  
Injection Date: 03-MAR-2023 10:40  
Lab ID:23A0206-14 Client ID:  
Report Date: 03/11/2023 07:04





**PREPARATION BATCH SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
 Batch: BLA0624 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	NT1003022312S.D	01/27/23 14:44	
LDW23-SS1015	23A0206-02	NT1003022313S.D	01/27/23 14:44	
LDW23-SS1164	23A0206-03	NT1003022318S.D	01/27/23 14:44	
LDW23-SS1158	23A0206-04	NT1003022319S.D	01/27/23 14:44	
LDW23-SS1151	23A0206-05	NT1003022320S.D	01/27/23 14:44	
LDW23-SS1145	23A0206-06	NT1003022321S.D	01/27/23 14:44	
LDW23-SS1139	23A0206-07	NT1003022322S.D	01/27/23 14:44	
LDW23-SS1117	23A0206-08	NT1003022323S.D	01/27/23 14:44	
LDW23-SS1103	23A0206-09	NT1003022324S.D	01/27/23 14:44	
LDW23-SS1100	23A0206-10	NT1003022329S.D	01/27/23 14:44	
LDW23-SS1096	23A0206-11	NT1003022330S.D	01/27/23 14:44	
LDW23-SS1094	23A0206-12	NT1003022331S.D	01/27/23 14:44	
LDW23-SS1066	23A0206-13	NT1003022332S.D	01/27/23 14:44	
LDW23-SS1061	23A0206-14	NT1003022333S.D	01/27/23 14:44	
Blank	BLA0624-BLK2	NT1003022306S.D	01/27/23 14:44	
LCS	BLA0624-BS2	NT1003022307S.D	01/27/23 14:44	
LCS Dup	BLA0624-BSD2	NT1003022308S.D	01/27/23 14:44	
LDW23-SS1066	BLA0624-MS2	NT1003022309S.D	01/27/23 14:44	
LDW23-SS1066	BLA0624-MSD2	NT1003022310S.D	01/27/23 14:44	
Reference	BLA0624-SRM2	NT1003022311S.D	01/27/23 14:44	



Analytical Resources, LLC  
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:A0C4 List)

Matrix: Solid

Date Prepared: 01/27/23

Balance ID: BL46462614

Set Up By: ESD/1/2/23

WO Comments  
23A0206: <C>BPR SRM: MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43, 7935-36, K011477-79, MS/MSD </E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ) GPC C/U (1:1)	Water Wash (mL)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0206-01 B	48.2	(20.75)	<u>20.77</u>	(1:1)	1mL	1	0.5	
23A0206-02 B	47.1	(21.23)	<u>21.28</u>	(1:1)	1mL	1	0.5	
23A0206-03 B	48.3	(20.69)	<u>20.72</u>	(1:1)	1mL	1	0.5	
23A0206-04 B	49.3	(20.27)	<u>20.30</u>	(1:1)	1mL	1	0.5	
23A0206-05 B	52.9	(18.89)	<u>18.89</u>	(1:1)	1mL	1	0.5	
23A0206-06 B	55.2	(18.13)	<u>18.27</u>	(1:1)	1mL	1	0.5	
23A0206-07 B	60.2	(16.62)	<u>16.66</u>	(1:1)	1mL	1	0.5	
23A0206-08 B	52.0	(19.24)	<u>19.31</u>	(1:1)	1mL	1	0.5	
23A0206-09 B	41.9	(23.88)	<u>23.91</u>	(1:1)	1mL	1	0.5	
23A0206-10 B	42.9	(23.30)	<u>23.38</u>	(1:1)	1mL	1	0.5	
23A0206-11 B	43.0	(23.28)	<u>23.35</u>	(1:1)	1mL	1	0.5	
23A0206-12 B	48.1	(20.81)	<u>20.88</u>	(1:1)	1mL	1	0.5	
23A0206-13 B	60.1	(16.63)	<u>16.66</u>	(1:1)	1mL	1	0.5	
23A0206-14 B	51.2	(19.54)	<u>19.95</u>	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ) GPC C/U (1:1)	Water Wash (mL)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0624-BLK1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-BS1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-BSD1	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLA0624-MS1	60.1	(16.63)	<u>16.64</u>	(1:1)	1mL	1	0.5	Use 23A0206-13
BLA0624-MSD1	60.1	(16.63)	<u>16.64</u>	(1:1)	1mL	1	0.5	Use 23A0206-13
BLA0624-SRMI	100.0	(10.00)	<u>10.00</u>	(1:1)	1mL	1	0.5	Use K003477

+1g DI WATER

Client: AP Verified By: W

Date: 01/27/23

Preparation Reviewed By: LS

Date: 2/18/23

Extraction Date and Time: 01/27/23

14:44





Analytical Resources, LLC  
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

8270E SVOC (20ug/kg solid or 0.2ug/L low H2O Sepf) in Solid (Version:A0C4 List)

WO Comments  
23A0206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <N> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43,  
7935-36,K011477-79, MS/MSD <E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup <H> Store in freezer (except GS)

Prep Steps

Microwave	Station/Reagent	Standard ID
2 3 11/23/23 Analysis/Date	Microwave Analyst: <i>GT/ML</i> Date: 2/1/23/23	
	Anhydrous Sodium Sulfate	L0000759
	1:1 Methylene Chloride/Acetone	L0000281
	Methylene Chloride	L0000848
	Pre-Deactivated Glass Wool	L0000752
Pre-GPC KD 100°C Exchange to Hexane (add 10 mL to KD)	Pre-GPC KD Analyst: <i>SH</i> Date: 2/23/23	
	Pre-Deactivated Glass Wool	N/A
Turbo Vap Pre-GPC	Anhydrous Sodium Sulfate	L0000844
	Methylene Chloride	L0000848
	Hexane	L011373

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate	A K010466 Exp Date: 5/19/2023	50uL	GT	ML
Full List Spike (Freezer)	7 K011369 (V) Exp Date: 8/31/2023	50uL	GT	ML
Base Spike	56 K011369 (V) Exp Date: 4/19/2023	50uL	GT	ML
Acid Spike	38 K011369 (V) Exp Date: 4/19/2023	50uL	GT	ML

MANUALLY ENTER EXPIRATION DATES!

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

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

1 2 3 4 5 15 2/5/23 Analysis/Date	GPC Filter Prep Analyst: <i>LT</i> Date: 2/5/23	
Post GPC KD 80-85°C 0 2 4 5 6 Analysis/Date	Methylene Chloride Analyst: <i>SR</i> Date: 2/6/23	L0000808
Turbo Vap	Methylene Chloride	L0000808
	GPC Calibration File	CA00006
	Post GPC KD Analyst: <i>ML/ML</i> Date: 2/10/23	
	Methylene Chloride	L0000809
	Vialing Analyst: <i>LT</i> Date: 2/8/23	
	Water Wash Analyst/Date	L0000808



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**ORGANICS PREPARATION BENCH SHEET**

Batch: BLA0624

Prepared using: EPA 3546 (Microwave)

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

**WO Comments**

23A0206: <>BPR SRM, MS, DUP <> <M>BPR PS, MSMSD <M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM 1006840-43, 7935-36 K.011477-79, MS/MSD <B> <H>BPR 1006840-43, 7935-36, K.011477-79, Dup <H> Store in Freezer (except GS)

**Prep Instructions**

**SPECIAL INSTRUCTIONS:**

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

A. Need Total Solids Y  N

B. Archive/Freeze  N





Extraction Parameter: SUDA Extraction Batch BLA0624

Total Solids Batch: BLA0562 Work Order(s): 23A0206

Screens:	Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=		
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= 206-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14		DP 1/25/23
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=		
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=		
<input type="checkbox"/> Rocks (%+size)?		
<input type="checkbox"/> Organics (Leaves/sticks/grass)=		
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=		
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=		
<input checked="" type="checkbox"/> Previously Frozen = <u>All samples</u>		<u>WOB 1/26/23</u>
<input type="checkbox"/> Other (Details)=		
<b>Aqueous:</b>		
<input type="checkbox"/> No Anomalies		
<input type="checkbox"/> Turbid/Color=		
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)		
<input type="checkbox"/> Emulsions (%)=		
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=		
<input type="checkbox"/> Other (Details)=		
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=		
<input checked="" type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).		
<u>Vol of 206-10 CWA open white vorking for water work,</u>		<u>WJ 2/6/23</u>
<input type="checkbox"/> Share Samples Y / N		
<input type="checkbox"/> Multiple Jars Y / N		
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=		
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=		



### CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0074

Cleanup Type: GPC

Cleanup Method: EPA 3640A GPC Cleanup 1:1

Analysis: EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1061	23A0206-14	NT1003022333S.D	02/08/2023	
LCS	BLA0624-BS2	NT1003022307S.D	02/08/2023	
LCS Dup	BLA0624-BSD2	NT1003022308S.D	02/08/2023	
Matrix Spike	BLA0624-MS2	NT1003022309S.D	02/08/2023	
Matrix Spike Dup	BLA0624-MSD2	NT1003022310S.D	02/08/2023	
Reference	BLA0624-SRM2	NT1003022311S.D	02/08/2023	
LDW23-SS1103	23A0206-09	NT1003022324S.D	02/08/2023	
LDW23-SS1066	23A0206-13	NT1003022332S.D	02/08/2023	
Blank	BLA0624-BLK2	NT1003022306S.D	02/08/2023	
LDW23-SS1139	23A0206-07	NT1003022322S.D	02/08/2023	
LDW23-SS1117	23A0206-08	NT1003022323S.D	02/08/2023	
LDW23-SS1094	23A0206-12	NT1003022331S.D	02/08/2023	
LDW23-SS1096	23A0206-11	NT1003022330S.D	02/08/2023	
LDW23-SS1100	23A0206-10	NT1003022329S.D	02/08/2023	
LDW23-SS1145	23A0206-06	NT1003022321S.D	02/08/2023	
LDW23-SS1151	23A0206-05	NT1003022320S.D	02/08/2023	
LDW23-SS1158	23A0206-04	NT1003022319S.D	02/08/2023	
LDW23-SS1164	23A0206-03	NT1003022318S.D	02/08/2023	
LDW23-SS1021	23A0206-01	NT1003022312S.D	02/08/2023	
LDW23-SS1015	23A0206-02	NT1003022313S.D	02/08/2023	



**CLEANUP BENCH SHEET**

CLB0074

Matrix: Solid      Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1      Check Standard: CLA0086-GPC1      Printed: 2/8/2023 6:18:42PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-01	B	LDW23-SS1021	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	



**CLEANUP BENCH SHEET**

CLB0074

Matrix: Solid      Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1      Check Standard: CLA0086-GPC1      Printed: 2/8/2023 6:18:42PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-12	B	LDW23-SS1094	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-12	B	LDW23-SS1094	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 04	1	1	8270E-SIM Dual Scan SVOC	2/8/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 02	1	1	VOC (20ug/kg solid or 0.2ug/L low H <sub>2</sub>	2/8/2023	LMJ	
BLA0624-BLK1	-	Blank	-	1	1	-	2/8/2023	LMJ	
BLA0624-BLK2	-	Blank	-	1	1	-	2/8/2023	LMJ	
BLA0624-BS1	-	LCS	-	1	1	-	2/8/2023	LMJ	
BLA0624-BS2	-	LCS	-	1	1	-	2/8/2023	LMJ	
BLA0624-BSD1	-	LCS Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-BSD2	-	LCS Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-MS1	-	Matrix Spike	-	1	1	-	2/8/2023	LMJ	
BLA0624-MS2	-	Matrix Spike	-	1	1	-	2/8/2023	LMJ	
BLA0624-MSD1	-	Matrix Spike Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-MSD2	-	Matrix Spike Dup	-	1	1	-	2/8/2023	LMJ	
BLA0624-SRM1	-	Reference	-	1	1	-	2/8/2023	LMJ	
BLA0624-SRM2	-	Reference	-	1	1	-	2/8/2023	LMJ	



**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 8270E-SIM**

Blank
-------

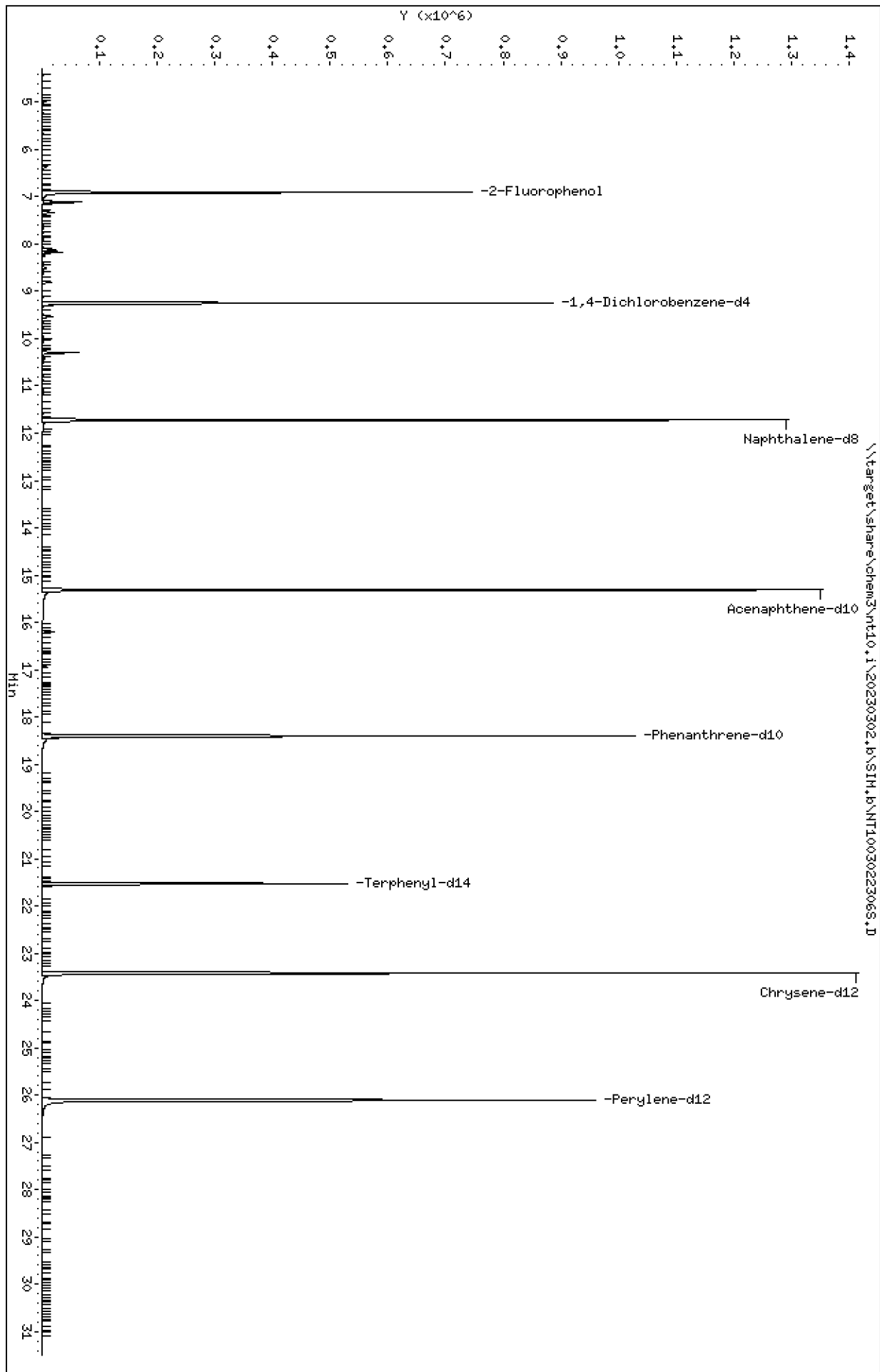
Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BLA0624-BLK2</u>
Sampled:	<u>N/A</u>	Prepared:	<u>01/27/23 14:44</u>
Solids:		Preparation:	<u>EPA 3546 (Microwave)</u>
Batch:	<u>BLA0624</u>	Sequence:	<u>SLC0157</u>
Instrument:	<u>NT10</u>	Column:	<u>ZB-5MSi</u>
		File ID:	<u>NT1003022306S.D</u>
		Analyzed:	<u>03/02/23 17:34</u>
		Initial/Final:	<u>10 g / 1 mL</u>
		Calibration:	<u>GC00032</u>
		Cleanups:	<u>GPC</u>

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	0.8	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	100	U	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	556	74.1	27 - 120	
p-Terphenyl-d14	500.00	458	91.7	37 - 120	

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022306S.D  
Date : 02-MAR-2023 17:34  
Client ID:  
Sample Info: BLR0624-BLK1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

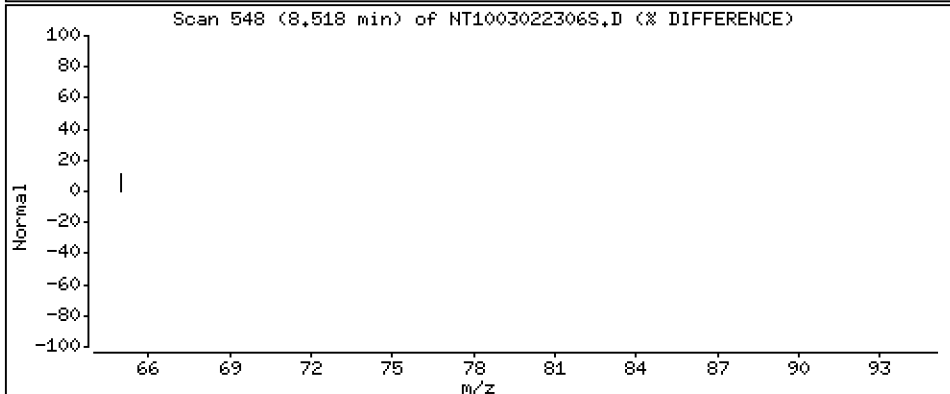
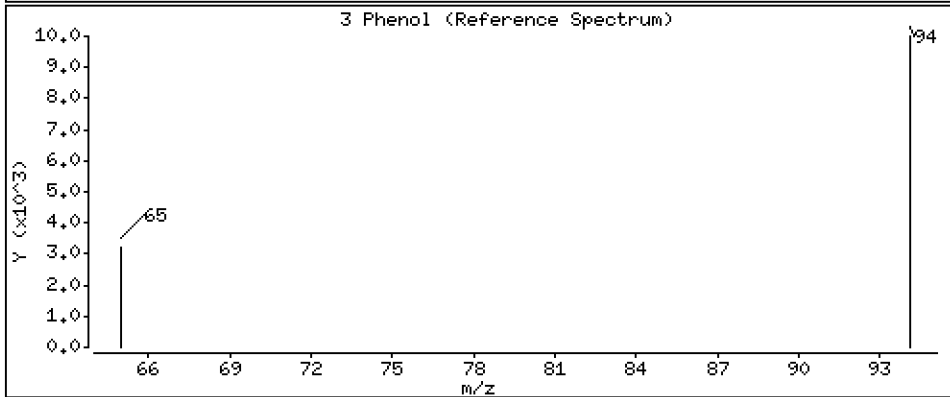
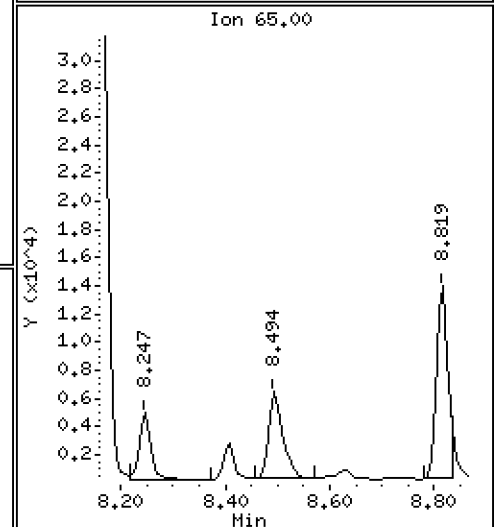
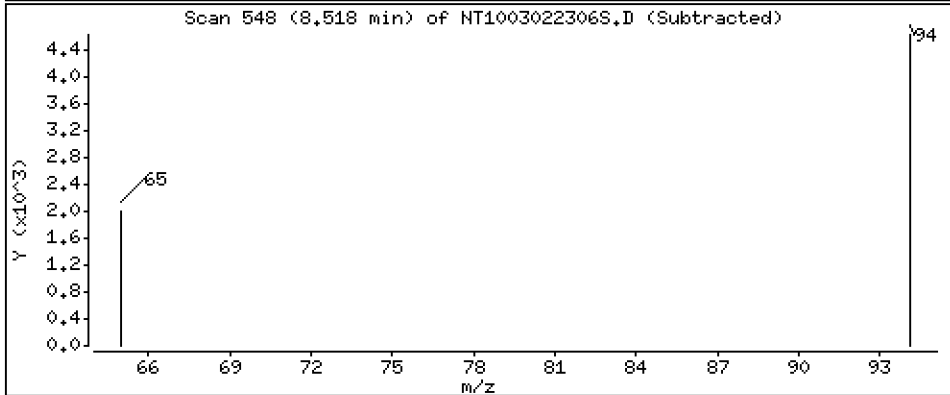
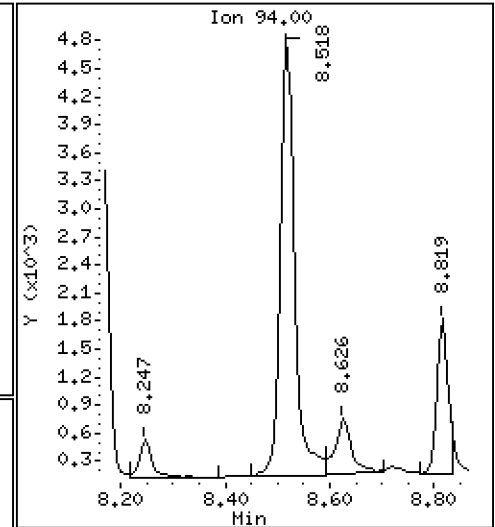
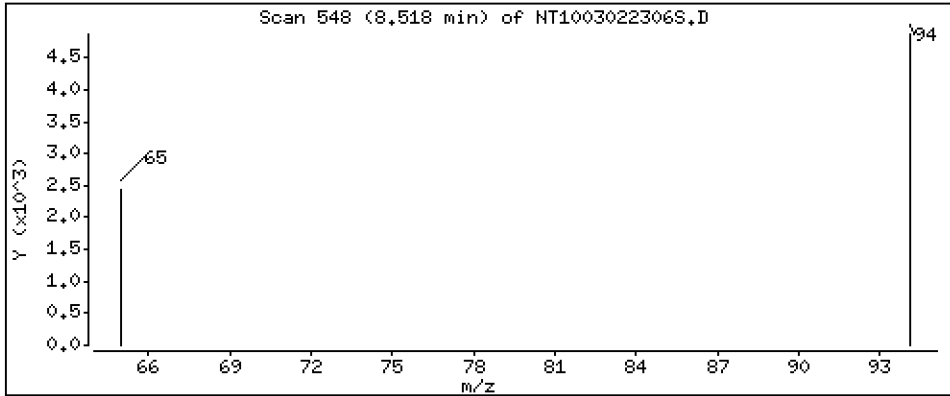
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 0,03723 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

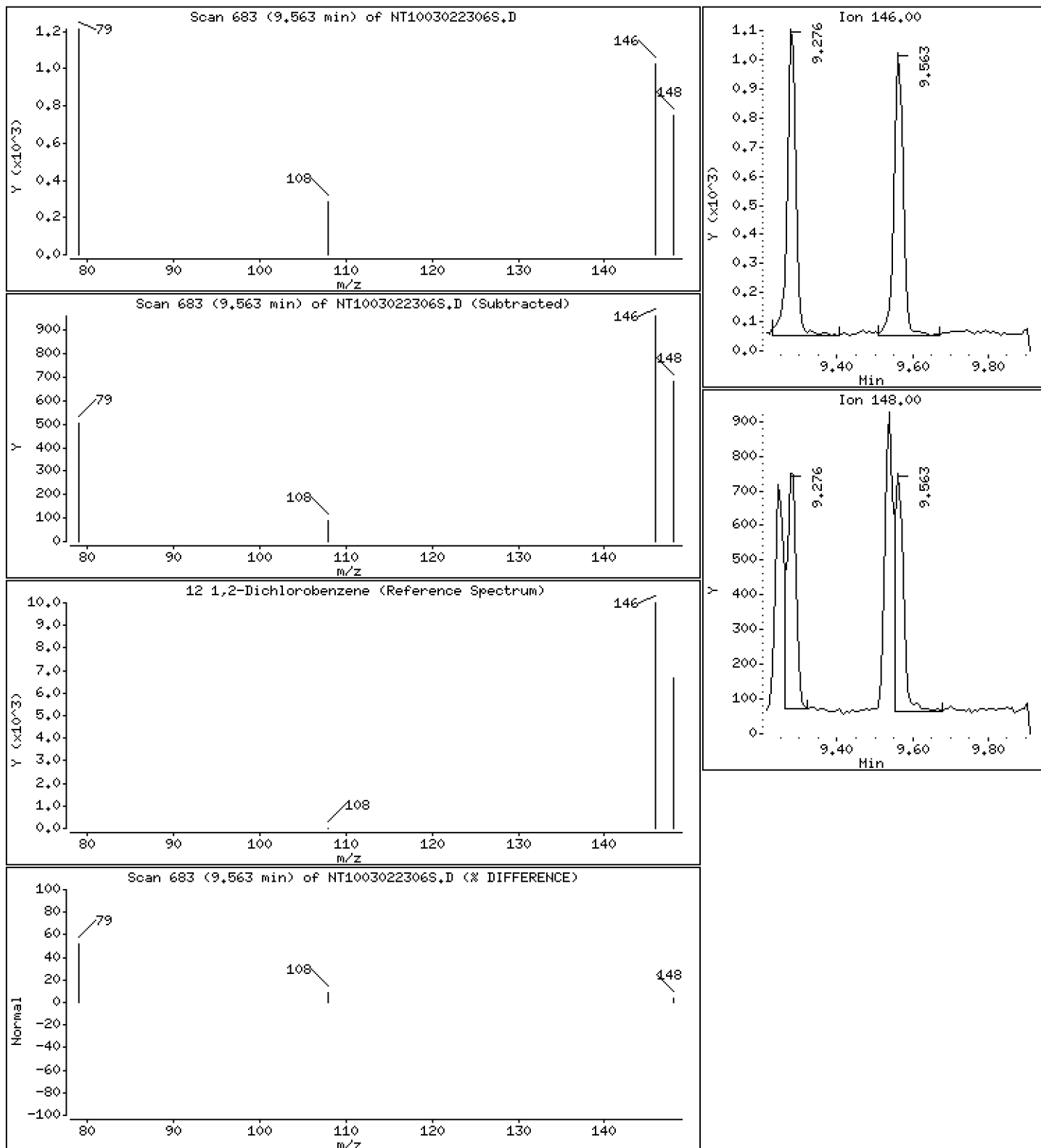
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.008196 ug/L





Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

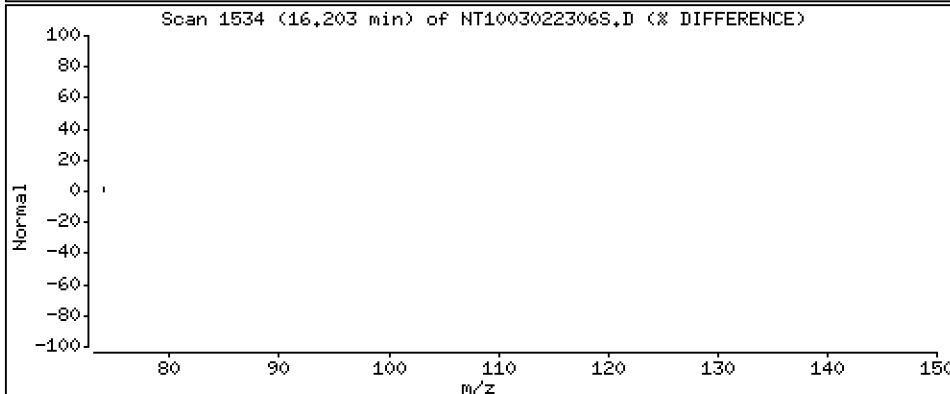
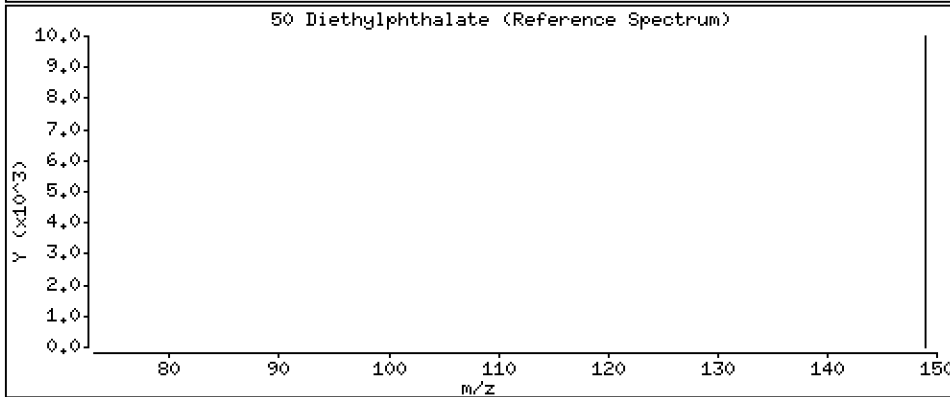
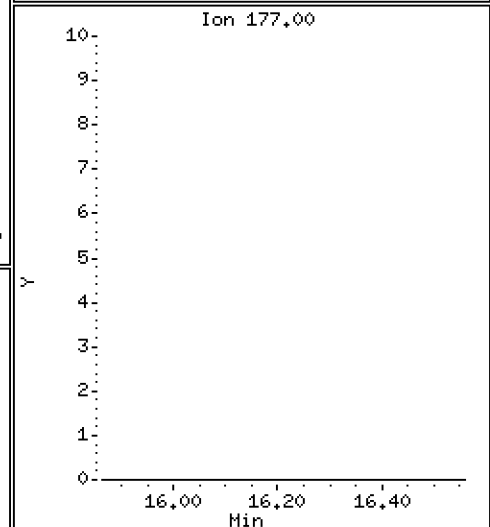
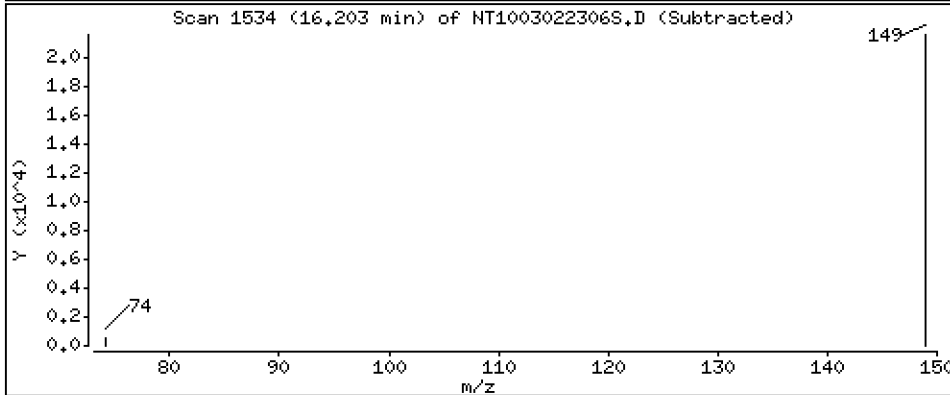
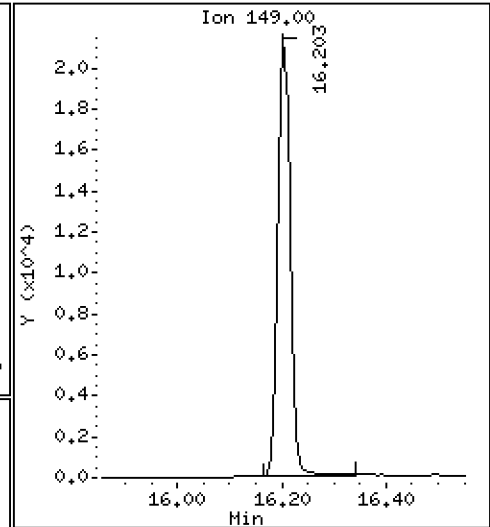
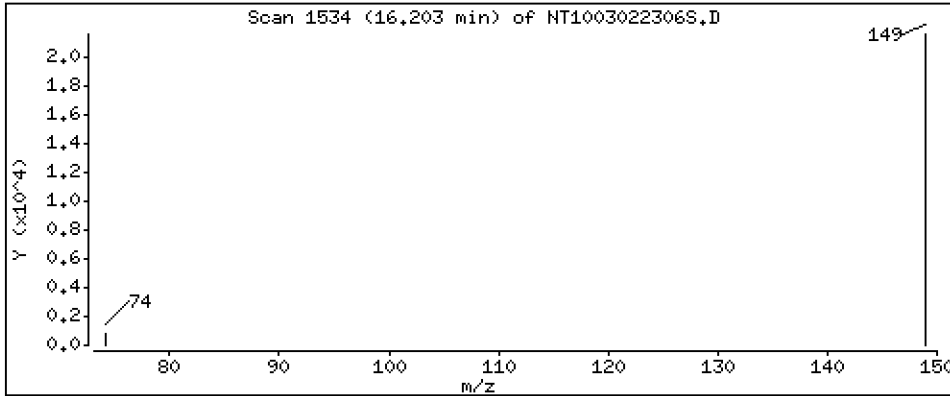
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1080 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

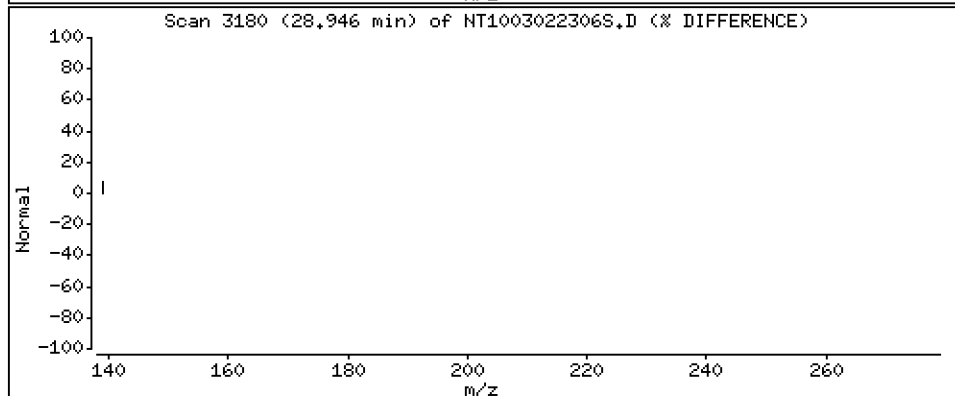
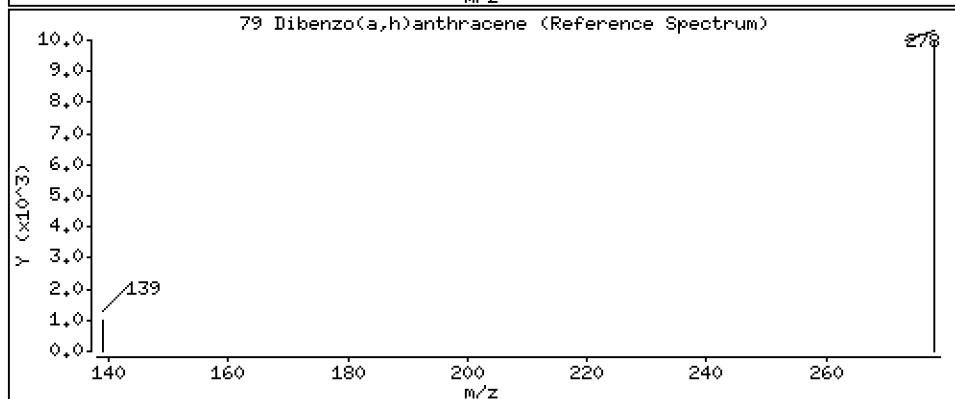
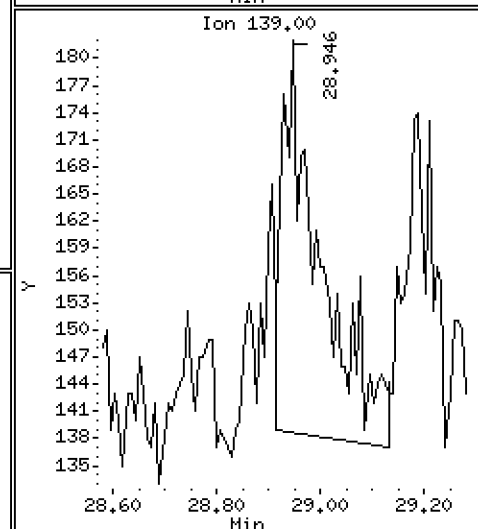
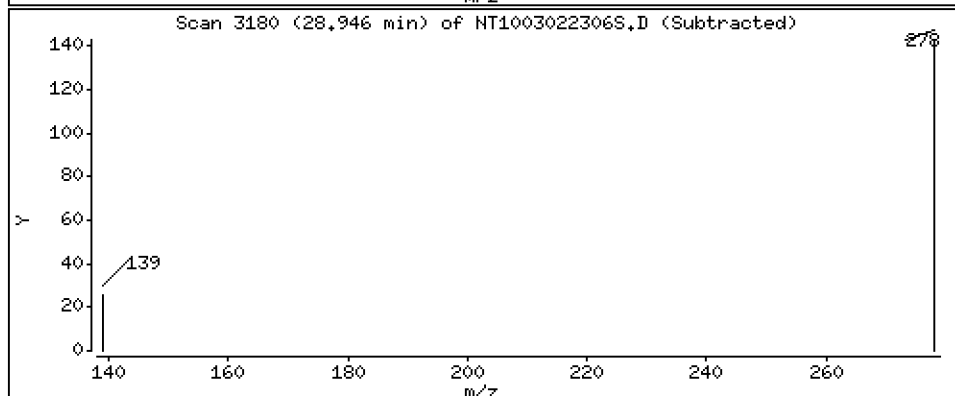
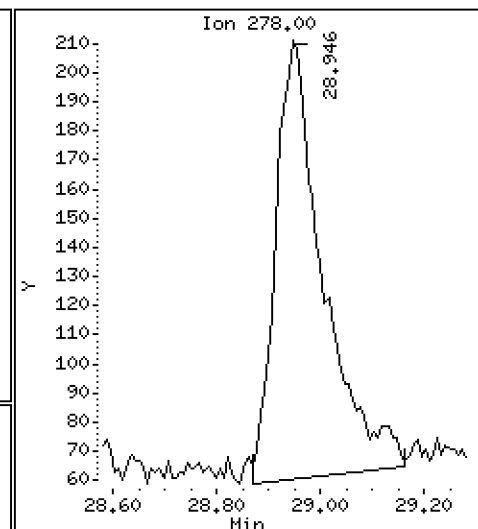
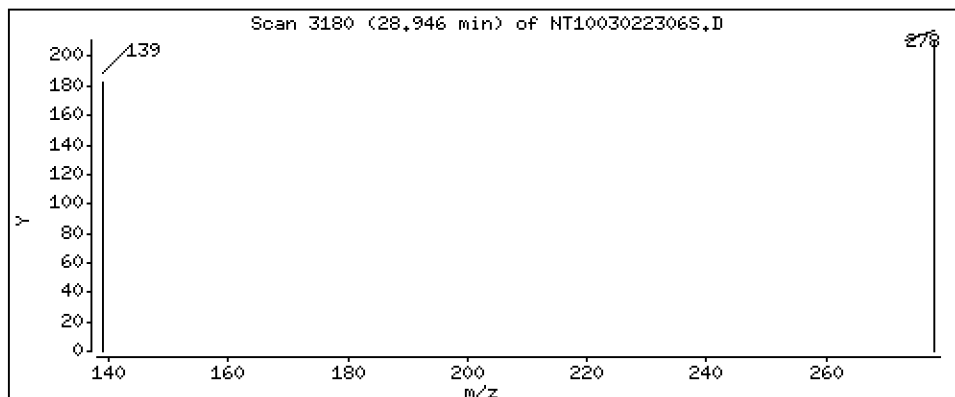
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,002137 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022306S.D  
 Lab Smp Id: BLA0624-BLK2  
 Inj Date : 02-MAR-2023 17:34 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BLK1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.747)	862738	5.55899	5.559(R)
3 Phenol	94		8.517	8.517	(0.921)	8521	0.03723	0.03723
7 1,3-Dichlorobenzene	146		Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.251	(1.000)	543607	4.00000	
9 1,4-Dichlorobenzene	146		Compound Not Detected.					
11 Benzyl alcohol	79		Compound Not Detected.					
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	1543	0.00820	0.008196
13 2-Methylphenol	108		Compound Not Detected.					
15 4-Methylphenol	108		Compound Not Detected.					
16 N-Nitroso-di-n-propylamine	70		Compound Not Detected.					
22 2,4-Dimethylphenol	107		Compound Not Detected.					
24 Benzoic acid	105		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.					
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1966158	4.00000	
30 Hexachlorobutadiene	225		Compound Not Detected.					
39 Dimethylphthalate	163		Compound Not Detected.					
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	1028261	4.00000	
50 Diethylphthalate	149		16.203	16.203	(1.058)	33257	0.10801	0.1080
54 N-Nitrosodiphenylamine	169		Compound Not Detected.					
57 Hexachlorobenzene	284		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1826191	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	684314	4.58447	4.584 (R)
67 Butylbenzylphthalate	149	Compound Not Detected.					
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1845847	4.00000	
* 77 Perylene-d12	264	26.108	26.115	(1.000)	1929666	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.109)	955	0.00214	0.002137
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022306S.D  
 Lab Smp Id: BLA0624-BLK2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	543607	10.17
27 Naphthalene-d8	1779056	889528	3558112	1966158	10.52
42 Acenaphthene-d10	954569	477285	1909138	1028261	7.72
59 Phenanthrene-d10	1596290	798145	3192580	1826191	14.40
69 Chrysene-d12	1649110	824555	3298220	1845847	11.93
77 Perylene-d12	1901958	950979	3803916	1929666	1.46

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.24	-0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.11	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022306S.D

Lab ID: BLA0624-BLK2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 17:34

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**LCS / LCS DUPLICATE RECOVERY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Analyzed: 03/02/23 18:12

Batch: BLA0624

Laboratory ID: BLA0624-BS2

Preparation: EPA 3546 (Microwave)

Sequence Name: LCS

Initial/Final: 10 g / 1 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	440		88.0	36 - 120
1,2-Dichlorobenzene	500	449		89.9	36 - 120
Benzyl Alcohol	500	467		93.3	25 - 123
Benzoic acid	2300	1960	Q	85.4	10 - 160
2,4-Dimethylphenol	1300	1010		77.7	10 - 120
1,2,4-Trichlorobenzene	500	435		87.0	35 - 120
N-Nitrosodiphenylamine	500	495		98.9	27 - 120
Pentachlorophenol	1300	1600	*, Q	123 *	26 - 120

\* Indicates values outside of QC limits

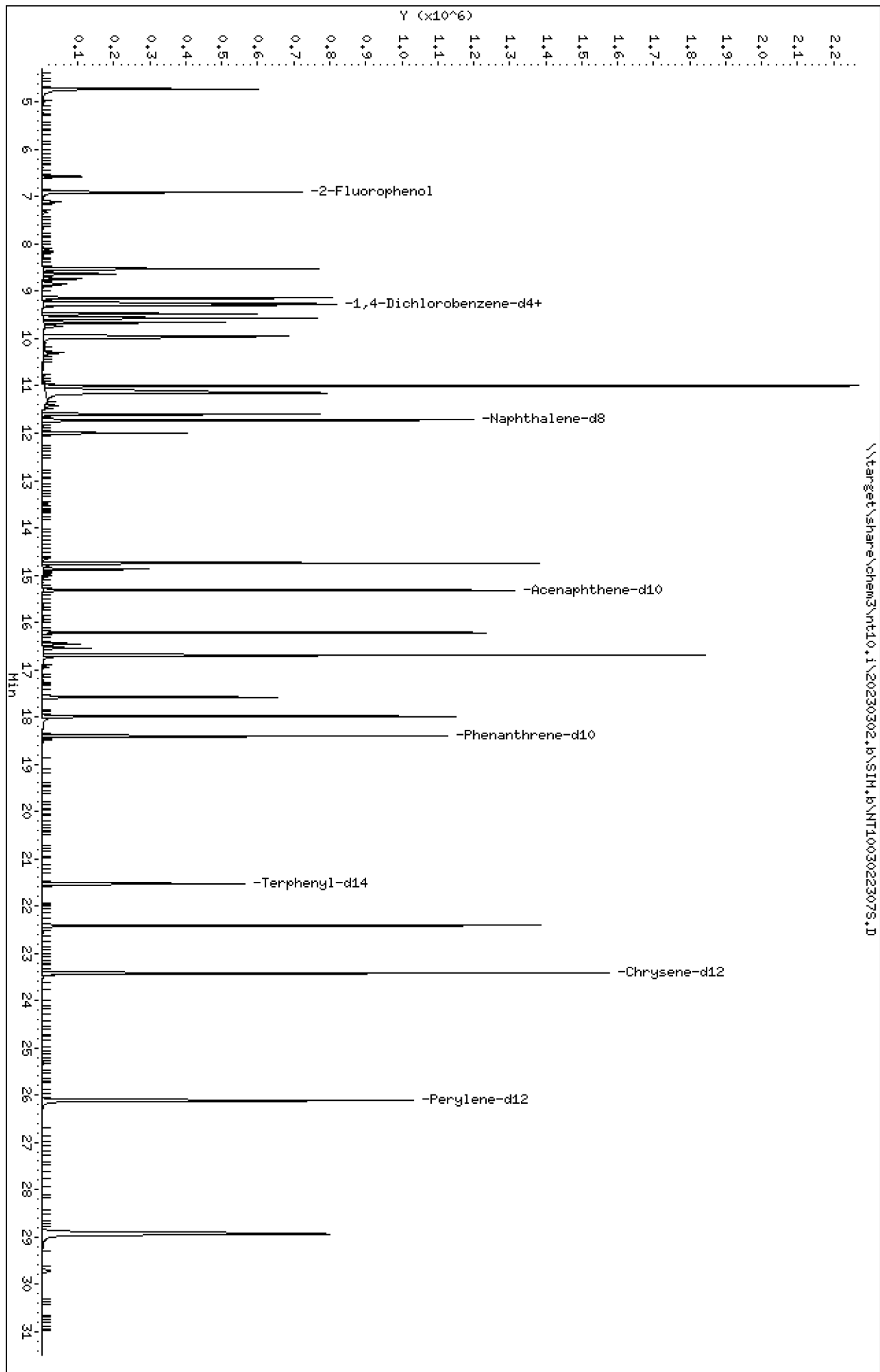
COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
1,4-Dichlorobenzene	500	426		85.3	3.11	30	36 - 120
1,2-Dichlorobenzene	500	433		86.5	3.84	30	36 - 120
Benzyl Alcohol	500	434		86.9	7.13	30	25 - 123
Benzoic acid	2300	2350	Q	102	17.7	30	10 - 160
2,4-Dimethylphenol	1300	798		61.4	23.5	30	10 - 120
1,2,4-Trichlorobenzene	500	434		86.7	0.268	30	35 - 120
N-Nitrosodiphenylamine	500	476		95.2	3.82	30	27 - 120
Pentachlorophenol	1300	1650	*, Q	127 *	3.16	30	26 - 120

\* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022307S.D  
Date: 02-MAR-2023 18:12  
Client ID:  
Sample Info: BLR0624-BS1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022307S.D





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

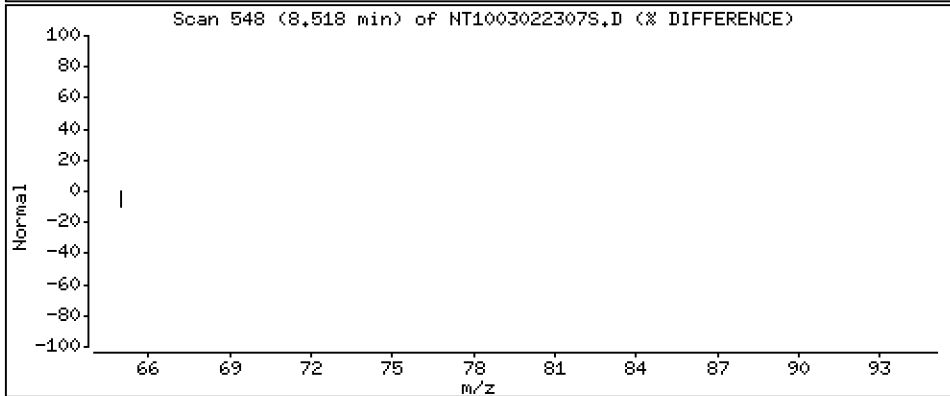
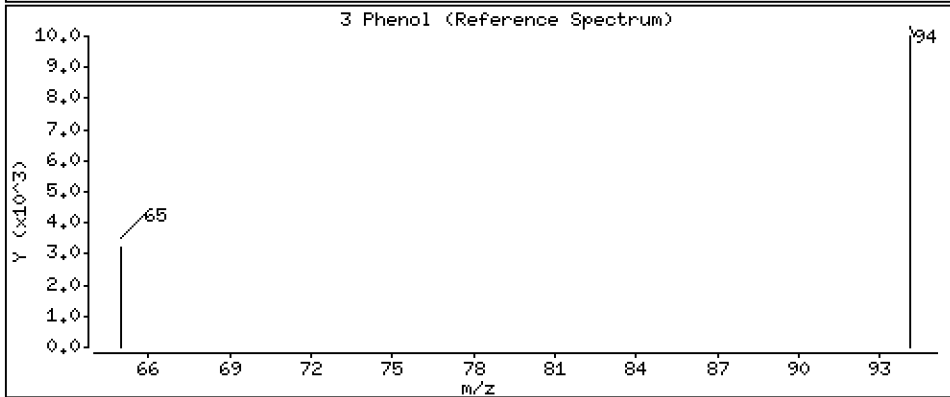
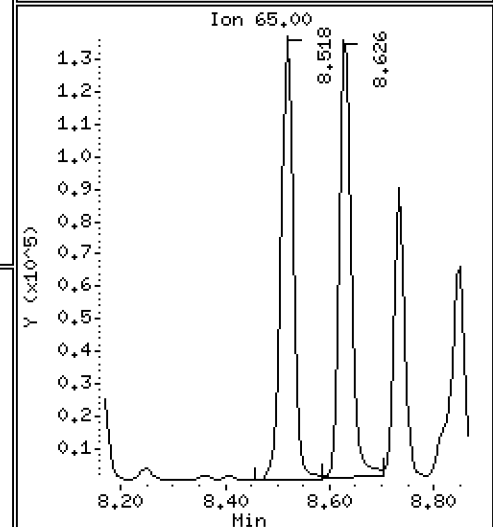
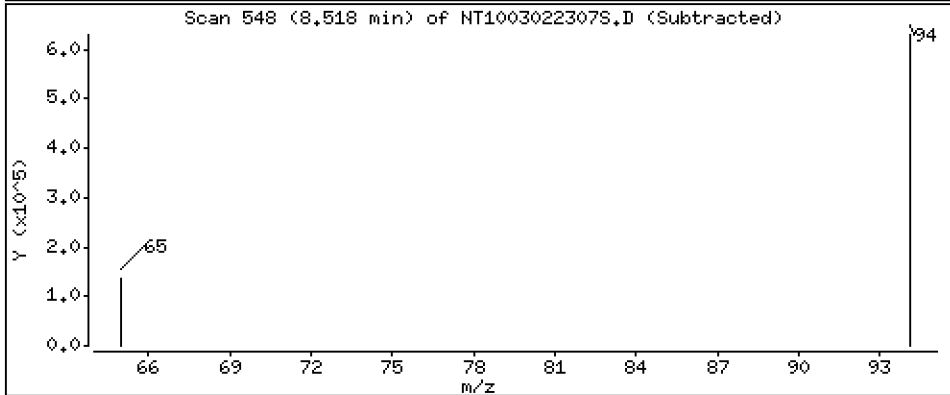
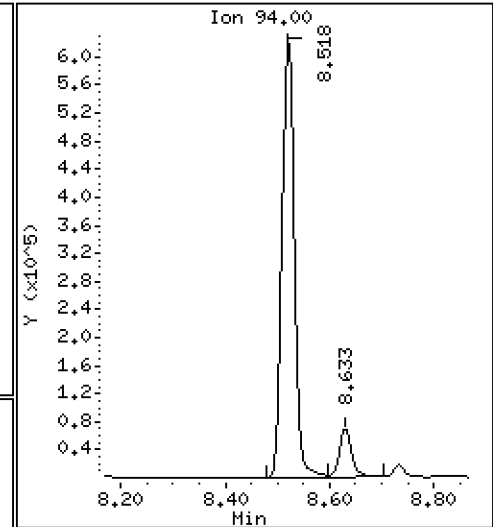
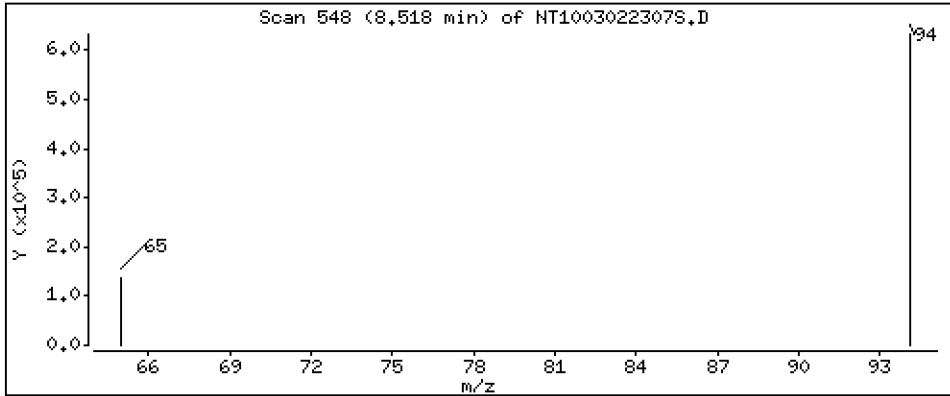
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.985 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

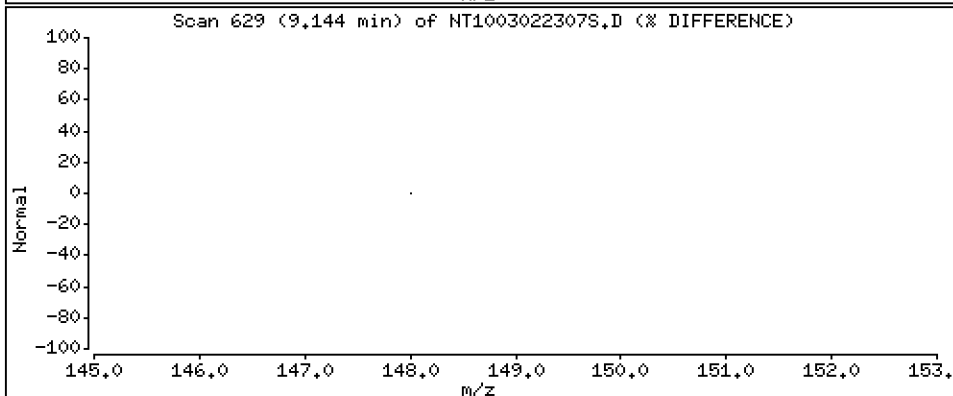
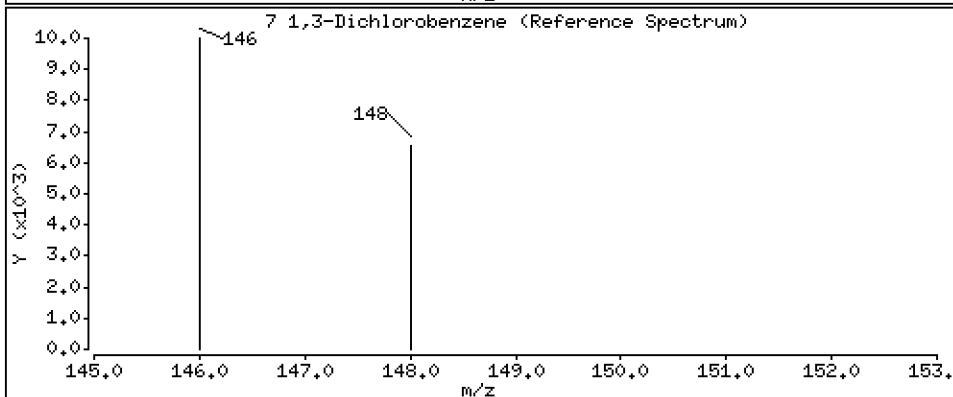
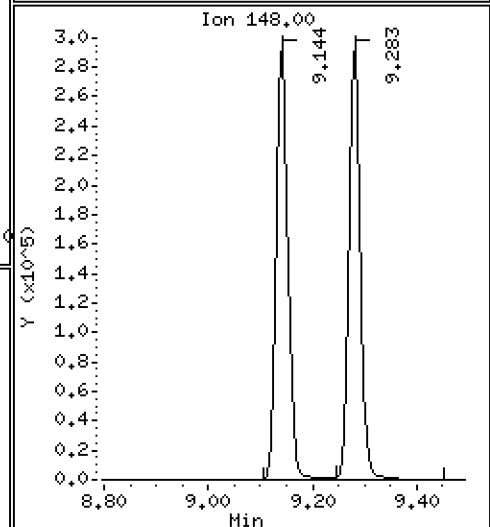
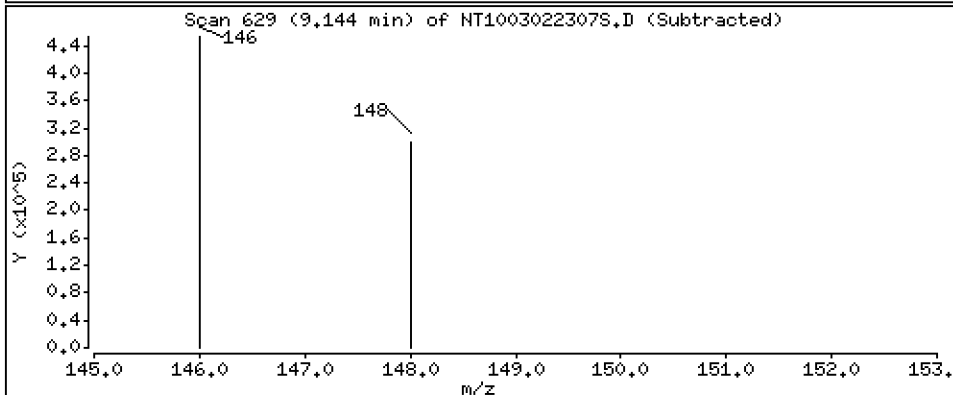
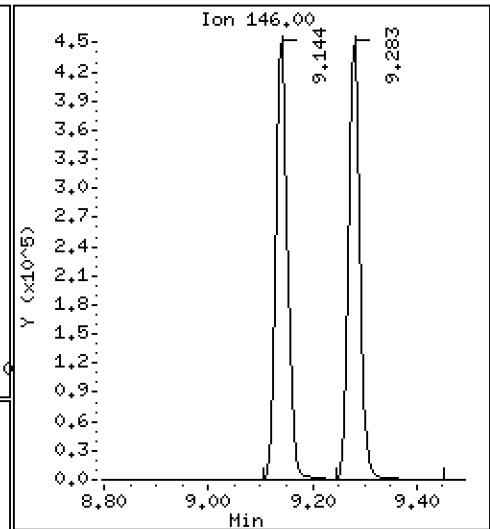
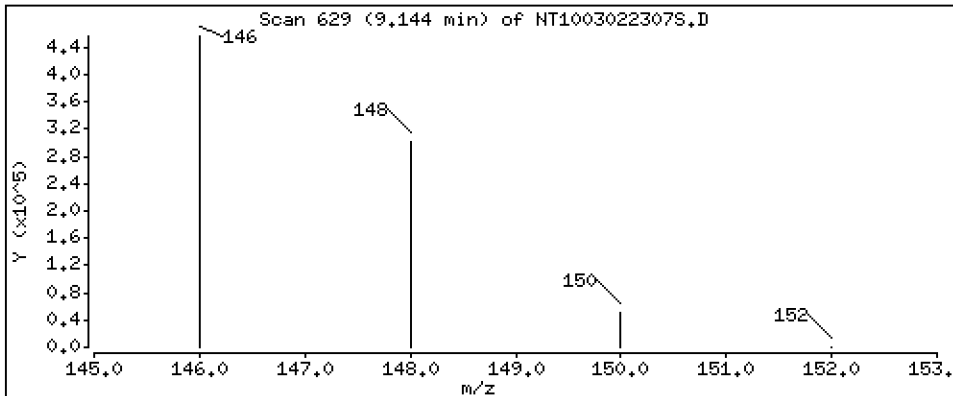
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4.235 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

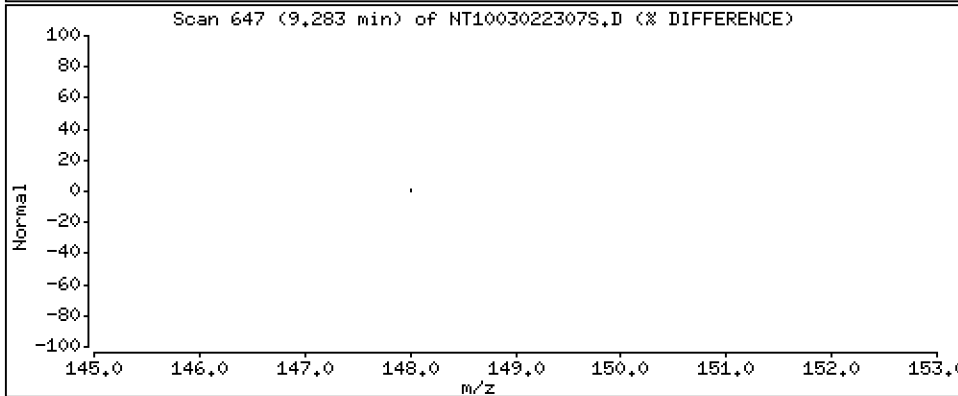
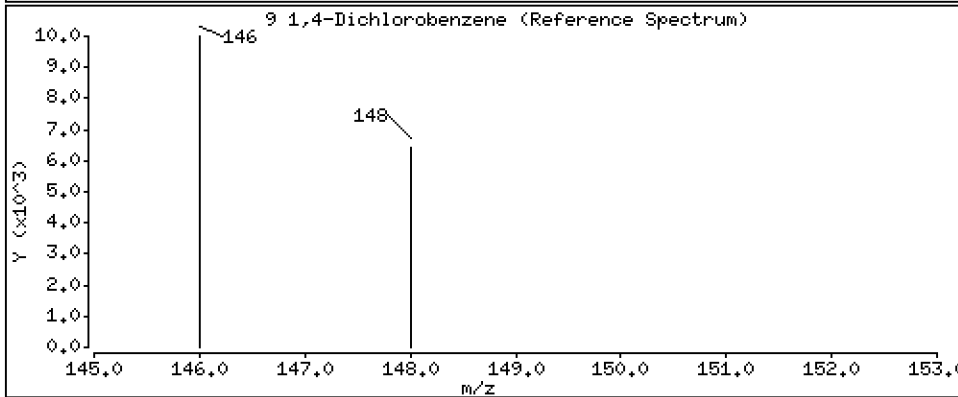
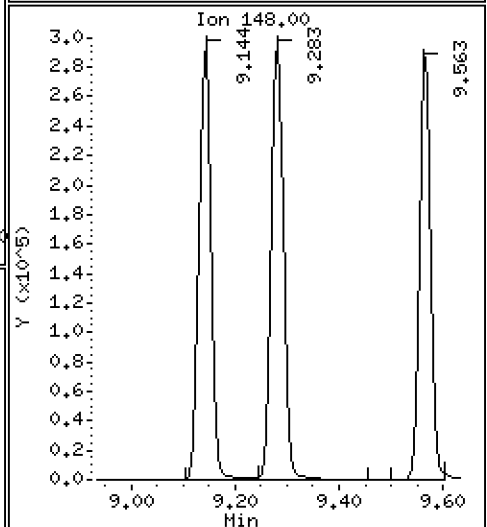
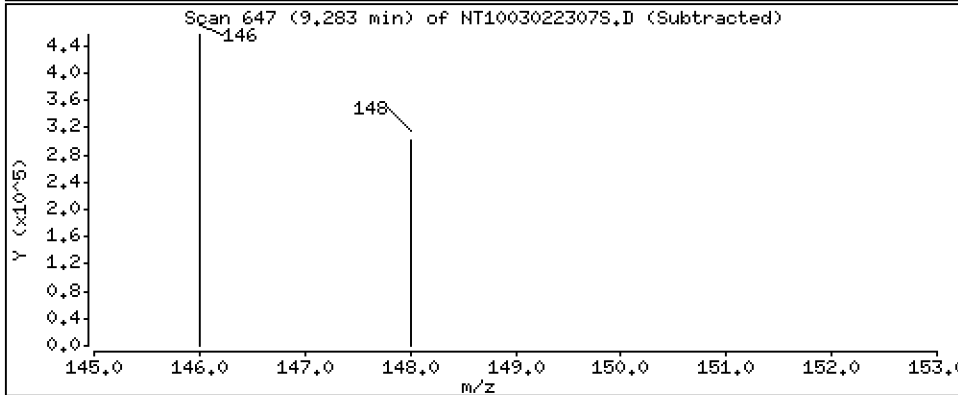
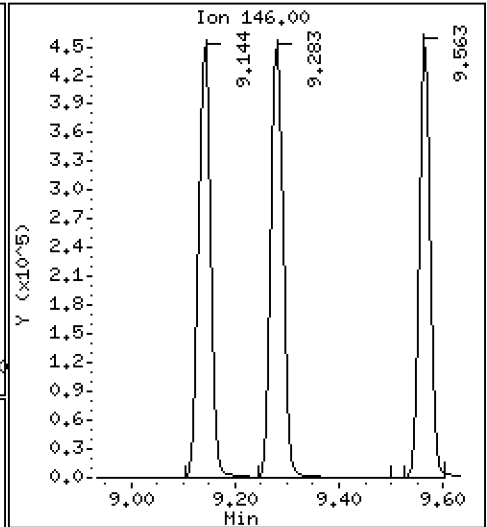
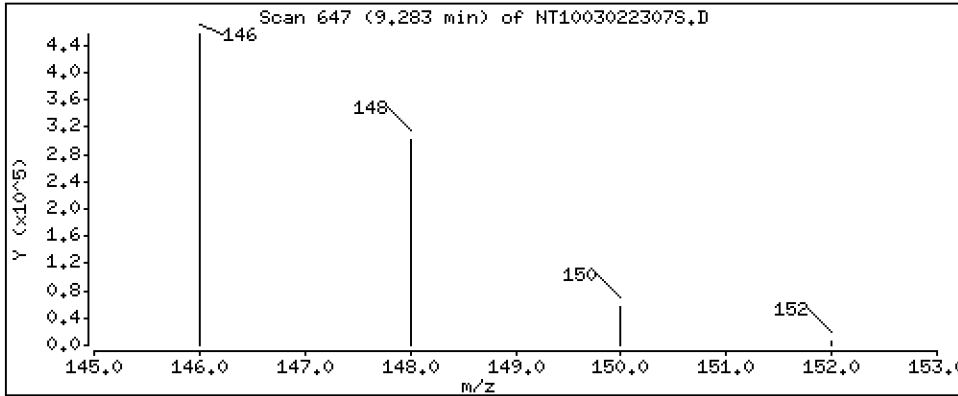
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4.398 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

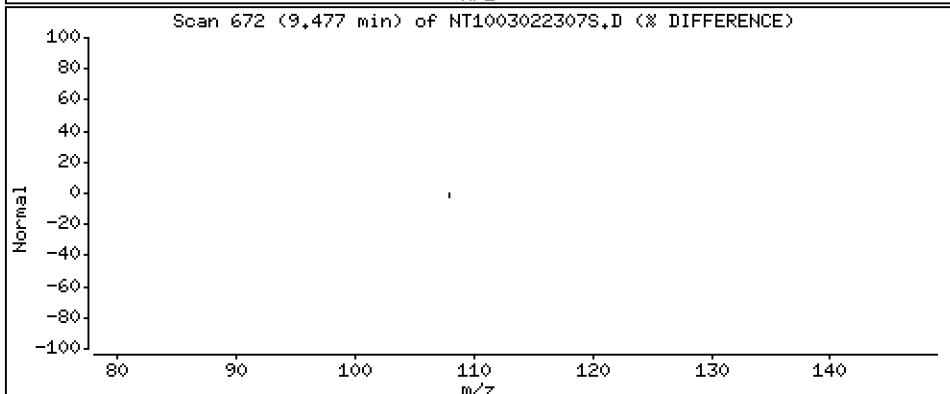
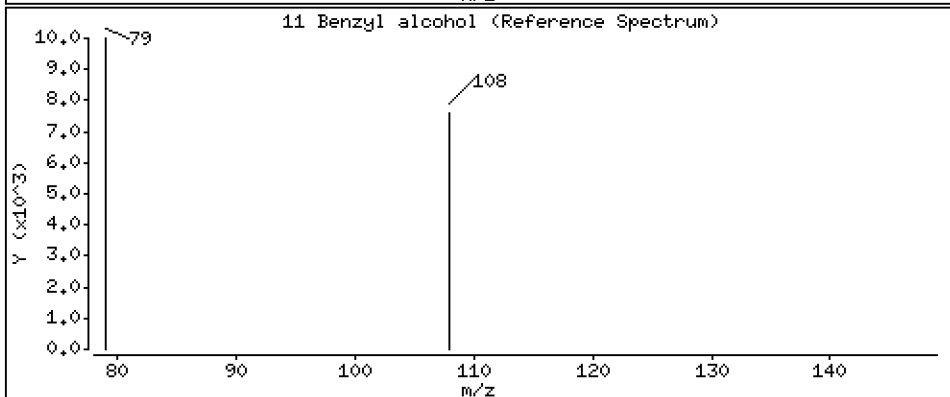
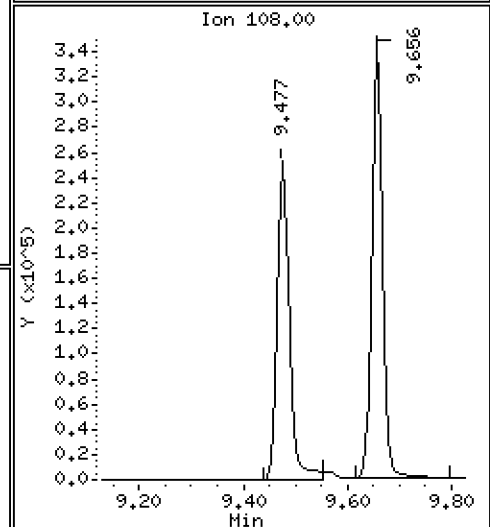
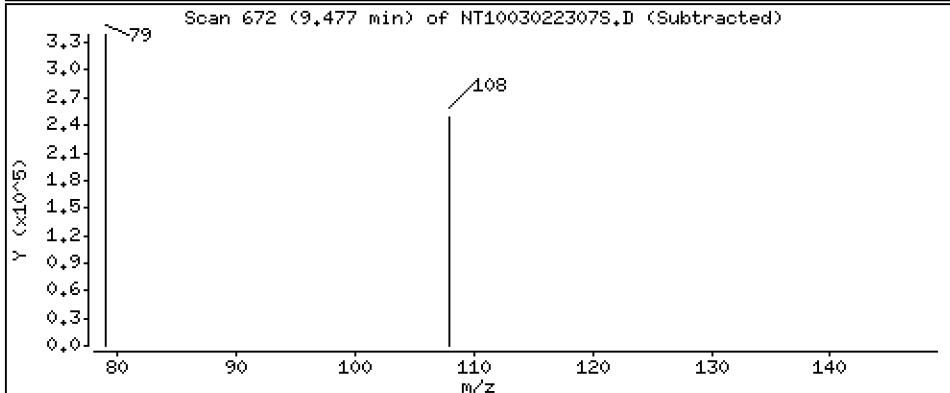
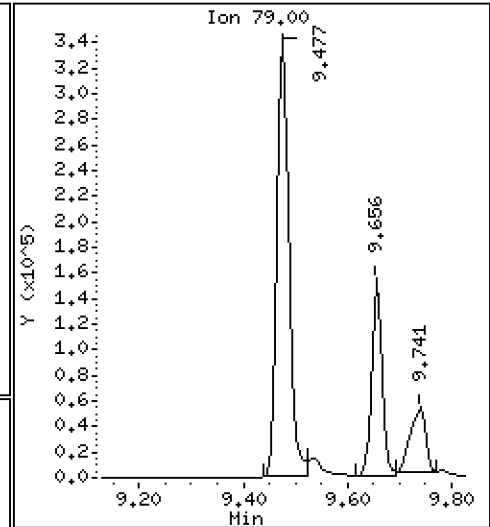
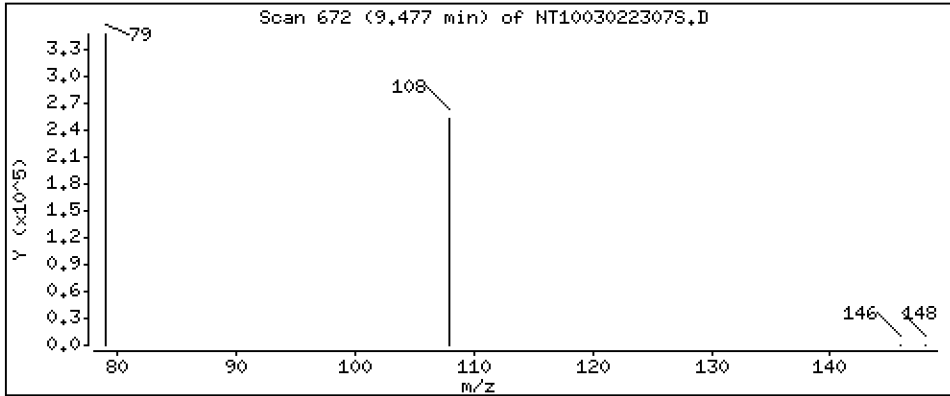
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.665 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

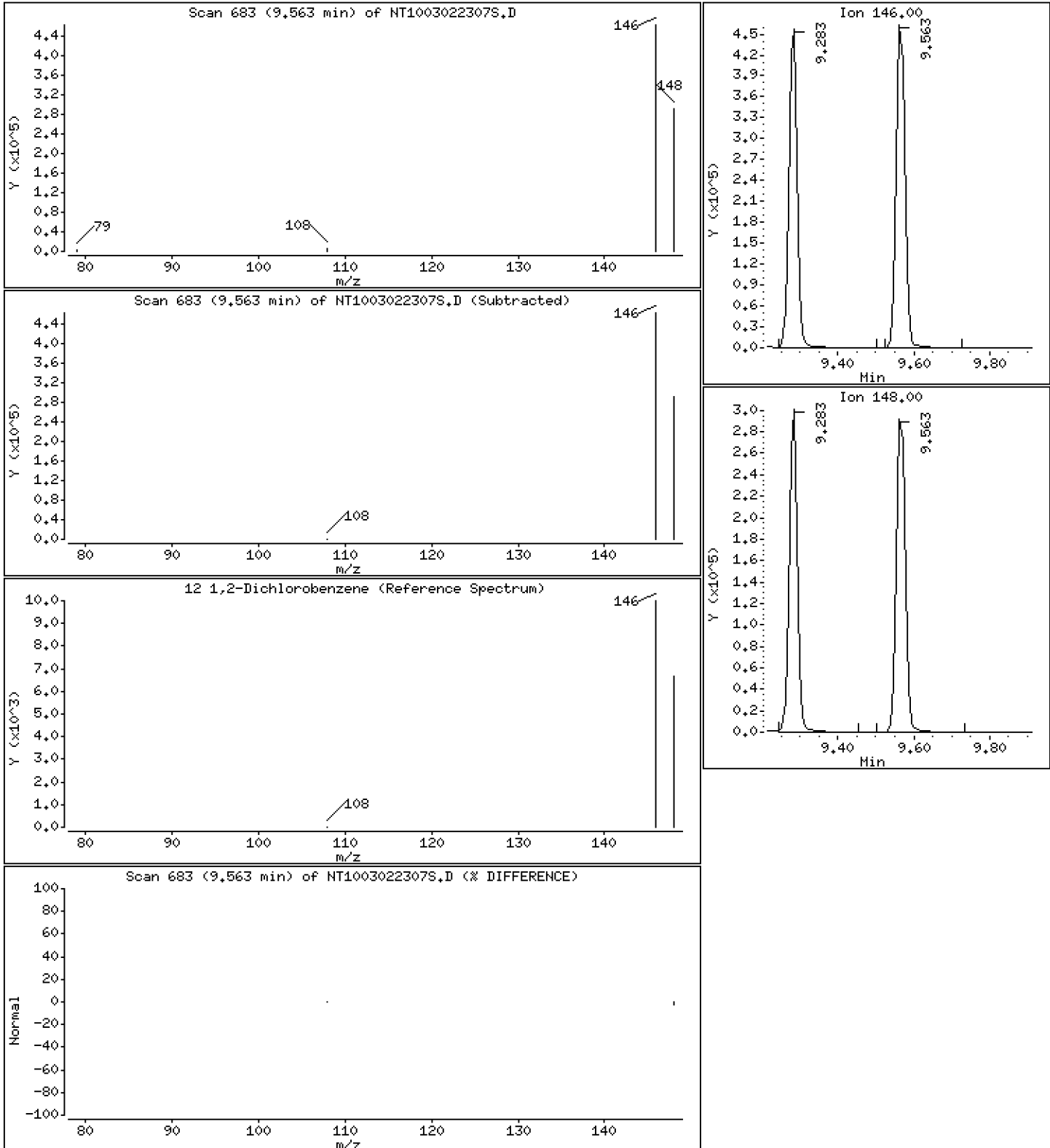
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.495 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

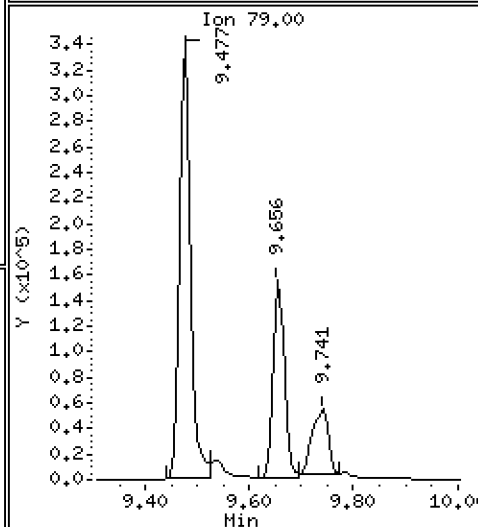
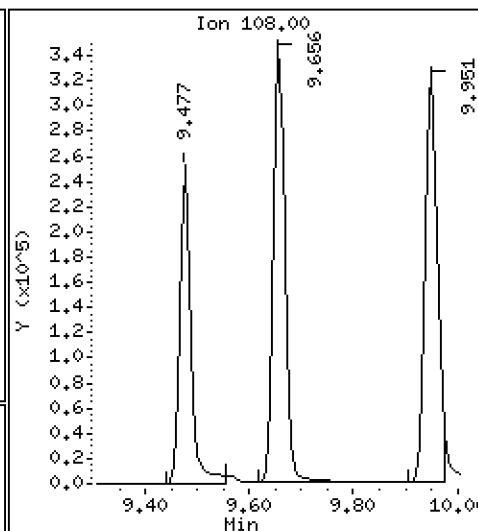
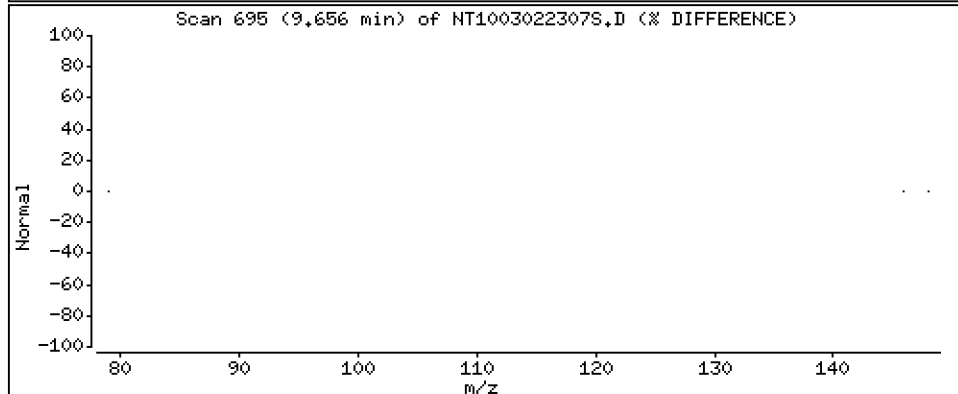
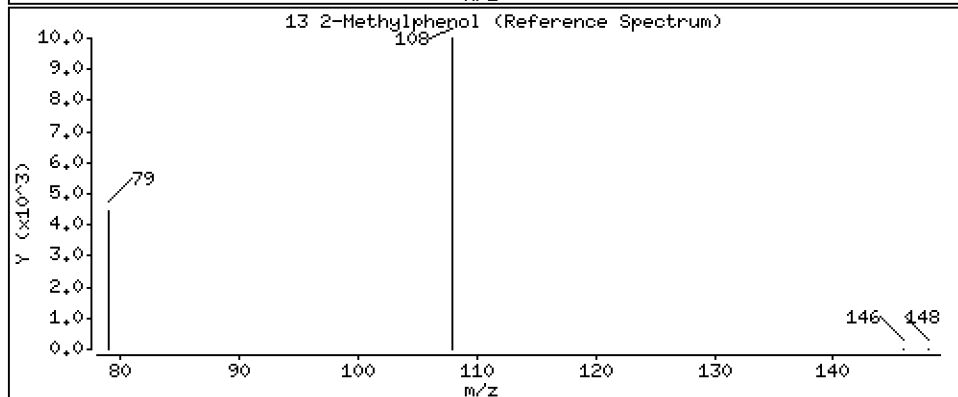
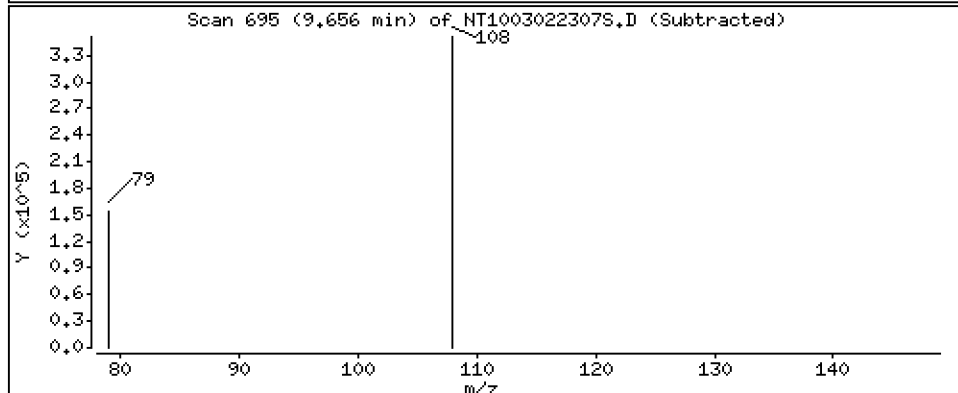
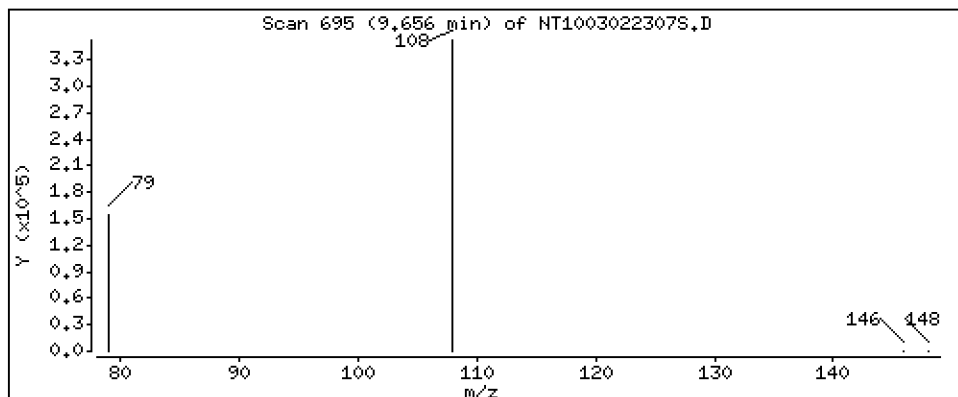
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.274 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

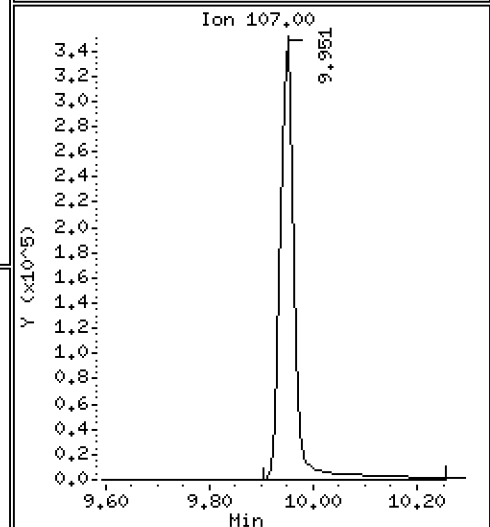
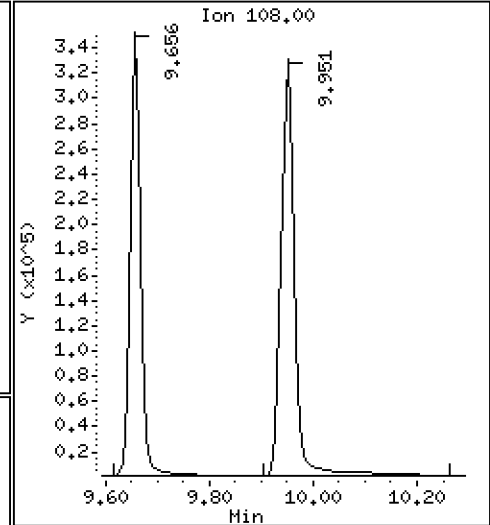
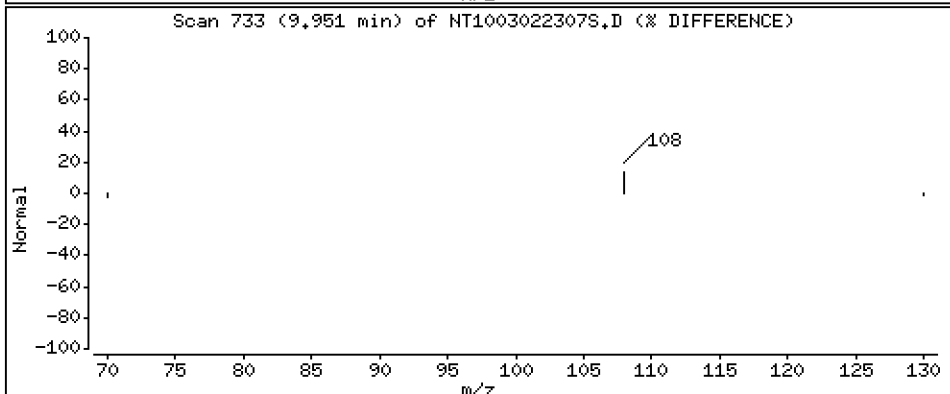
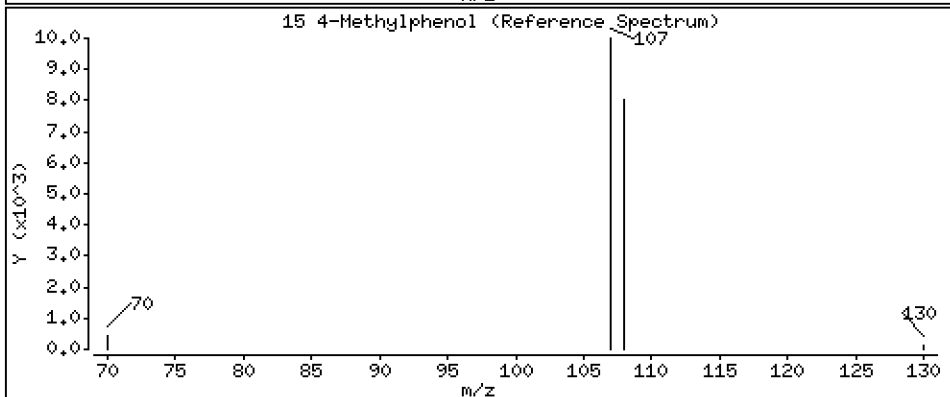
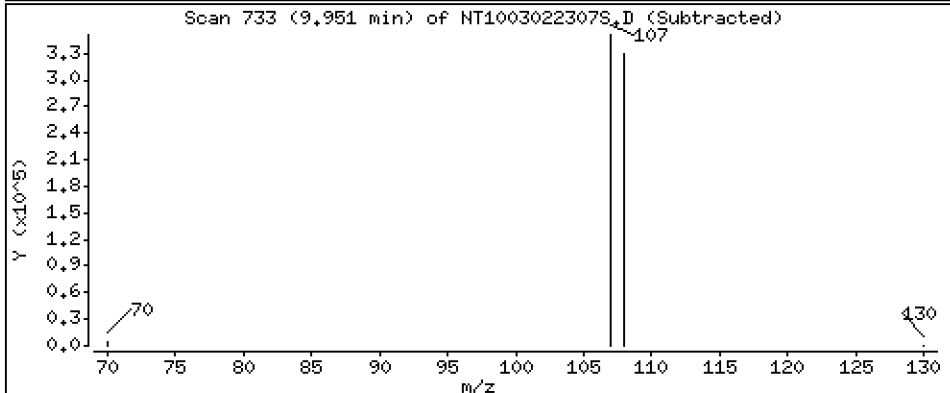
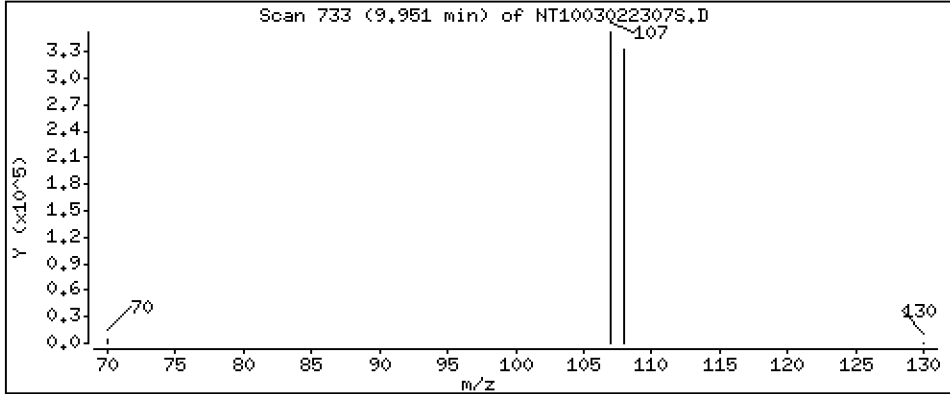
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.613 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

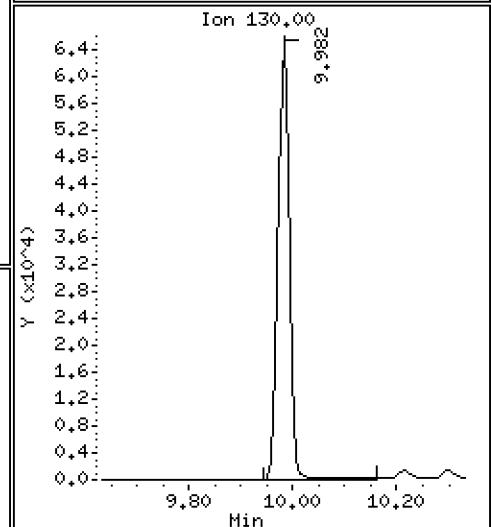
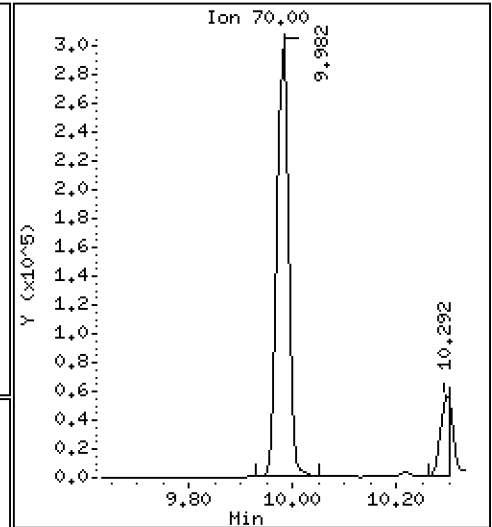
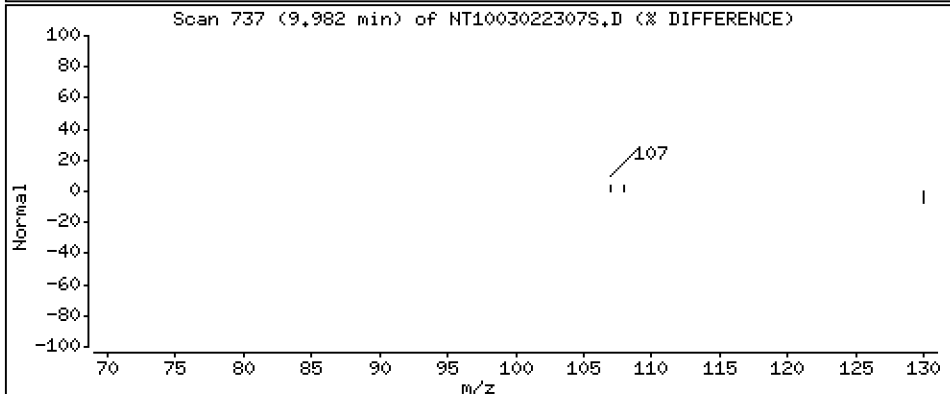
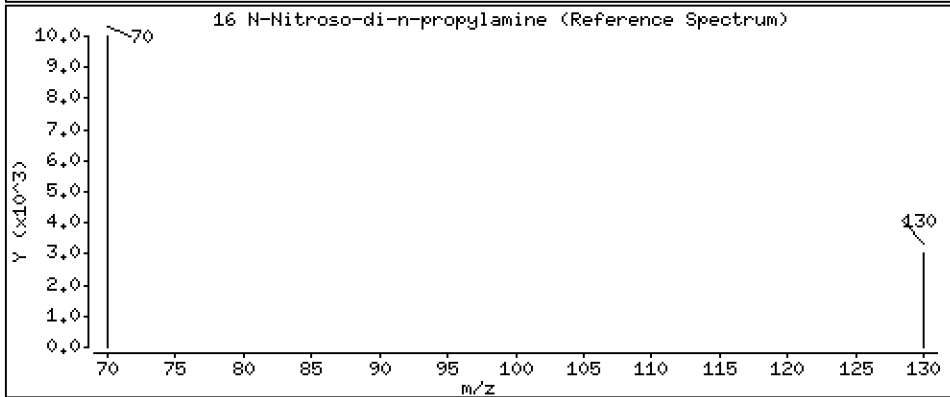
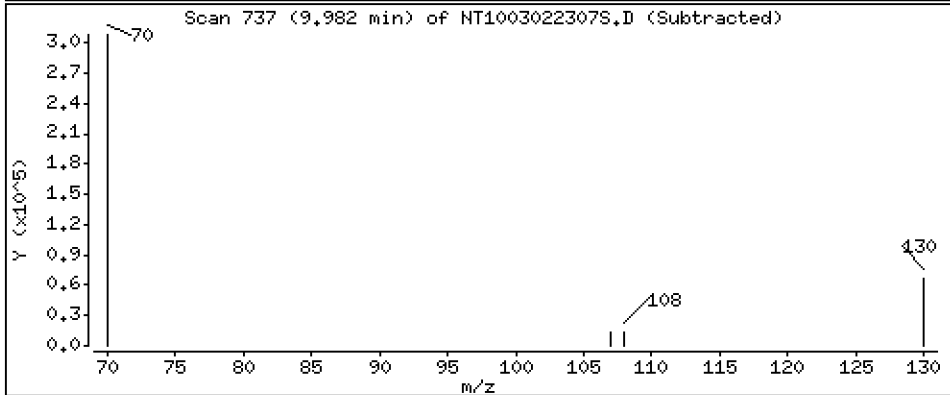
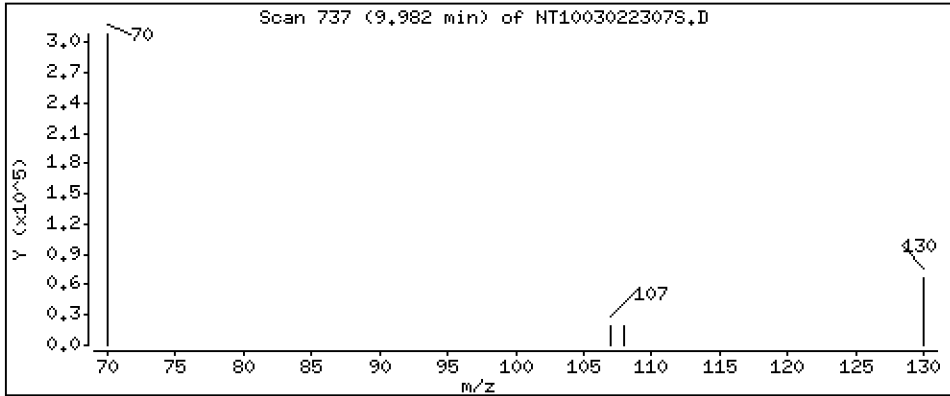
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 5.077 ug/L





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

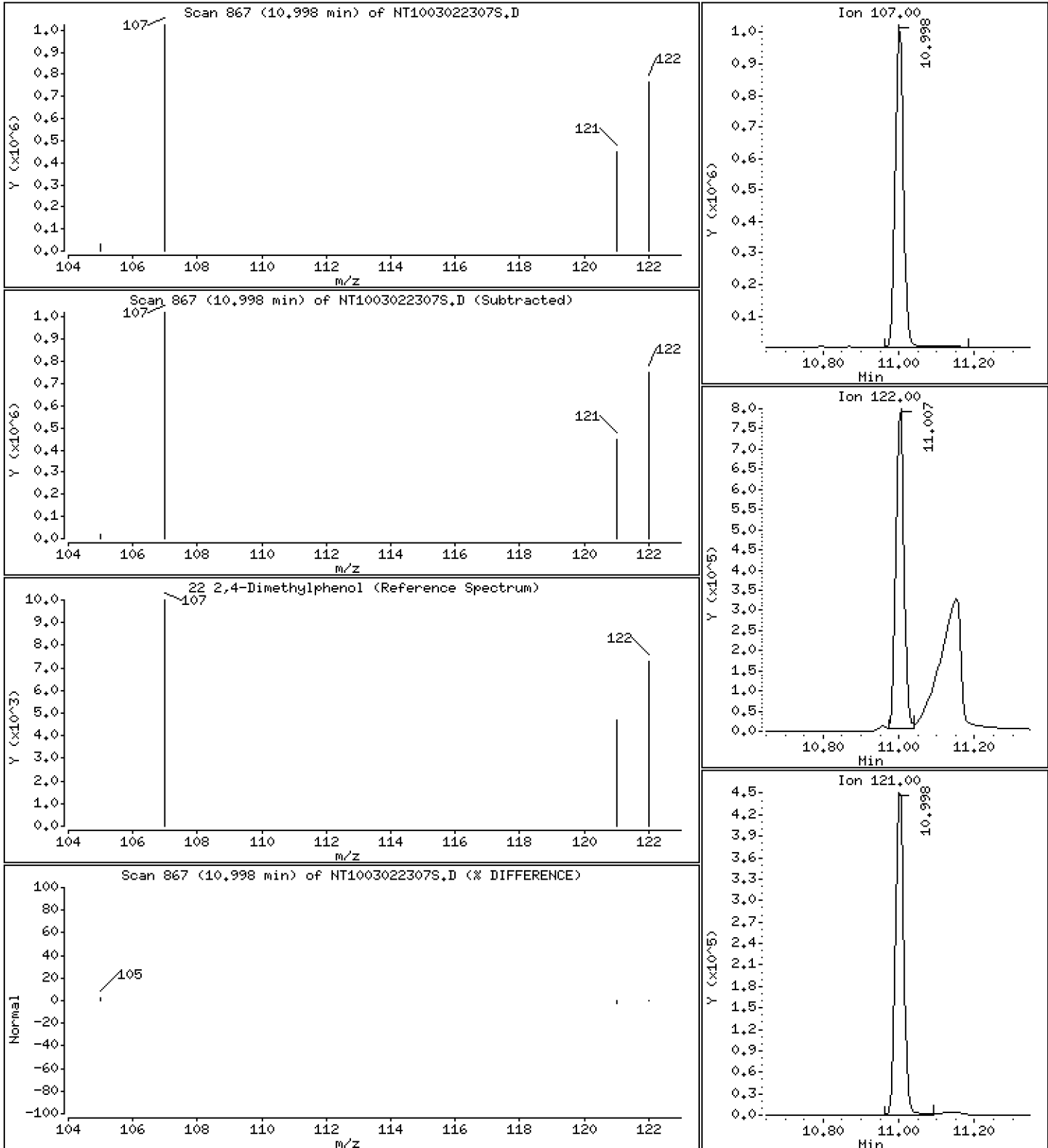
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 10,10 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

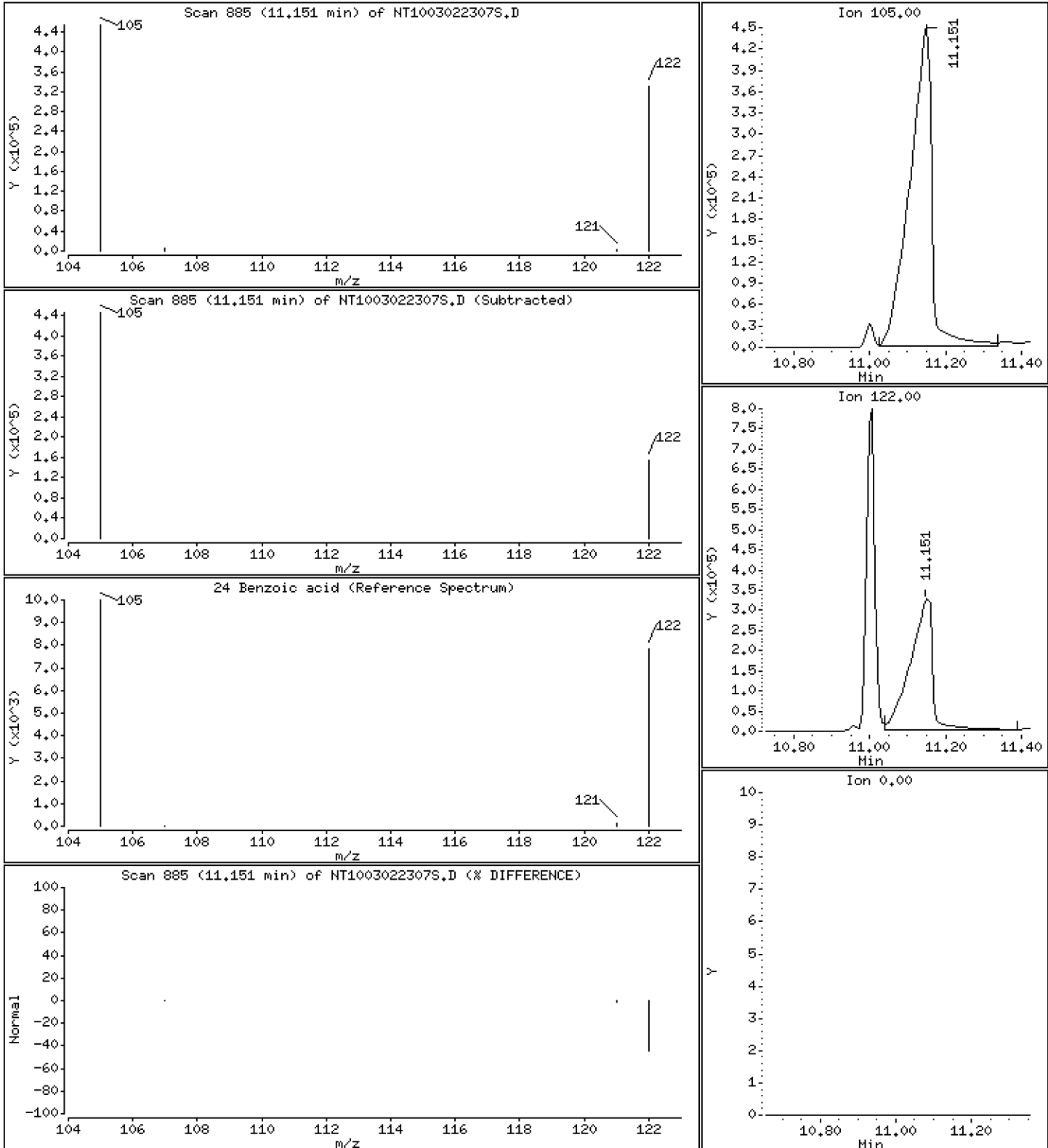
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 19.64 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

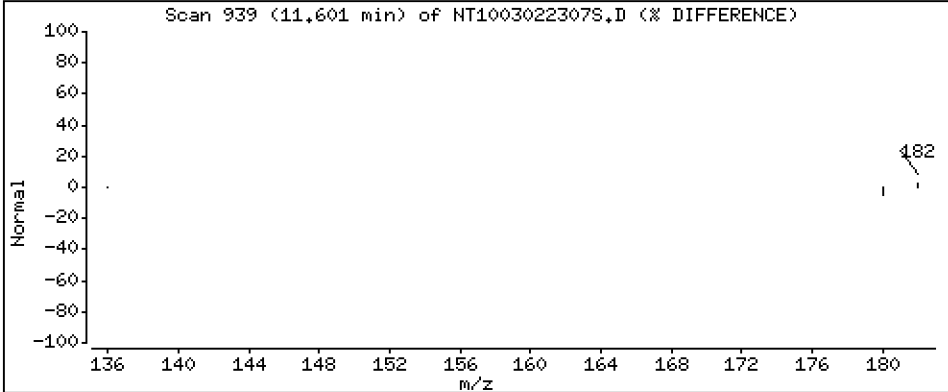
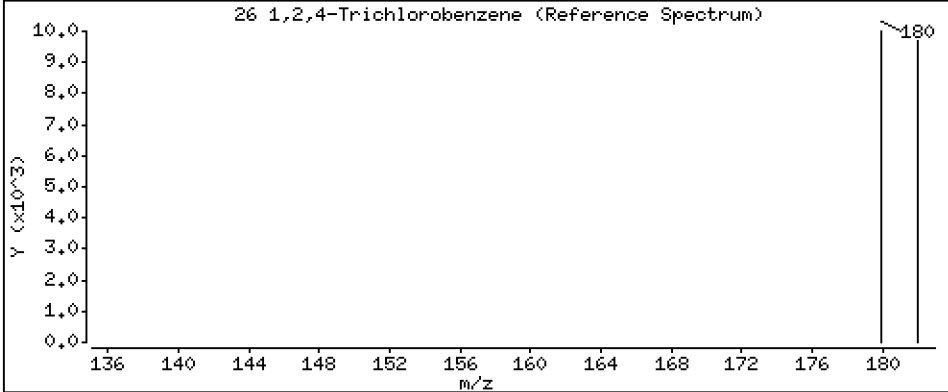
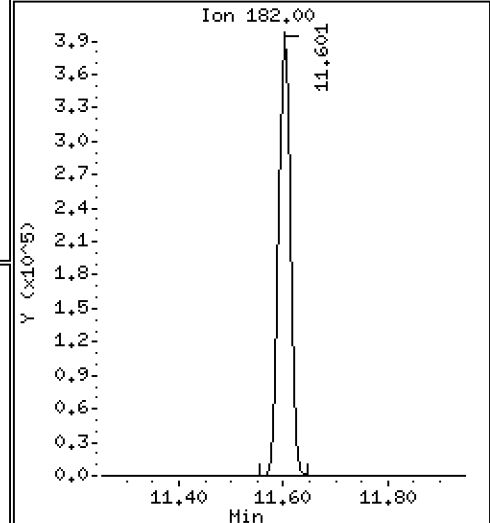
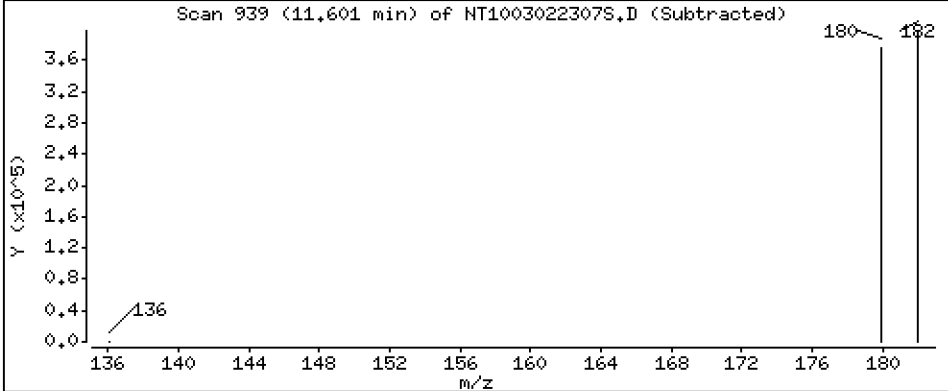
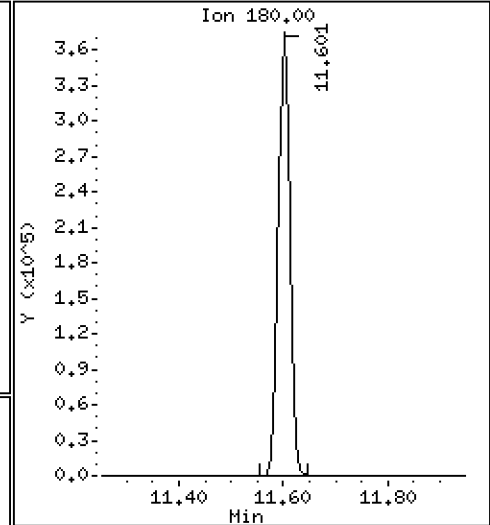
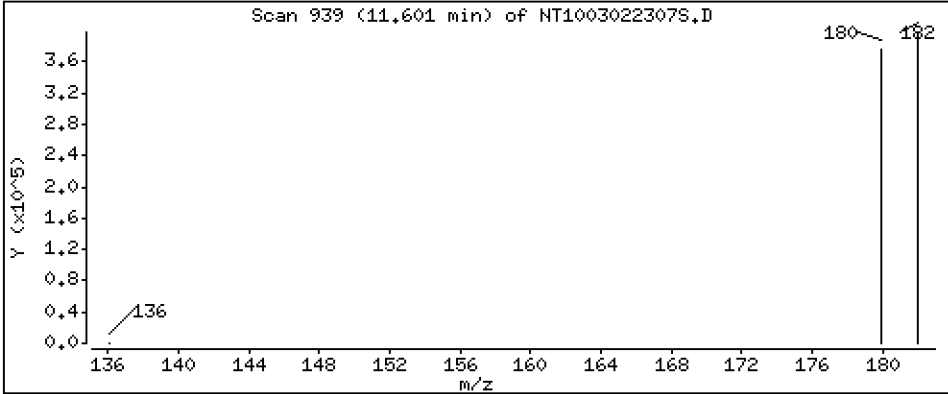
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.348 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

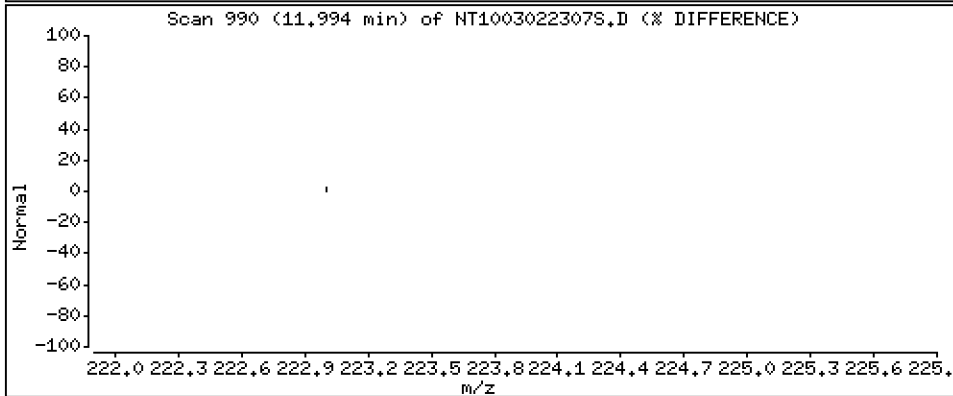
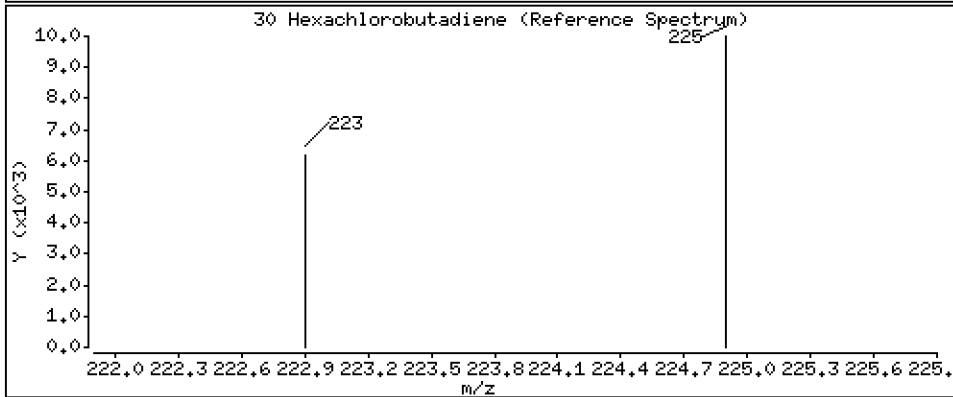
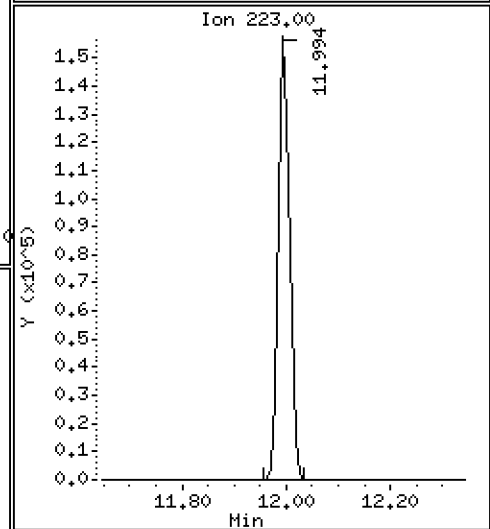
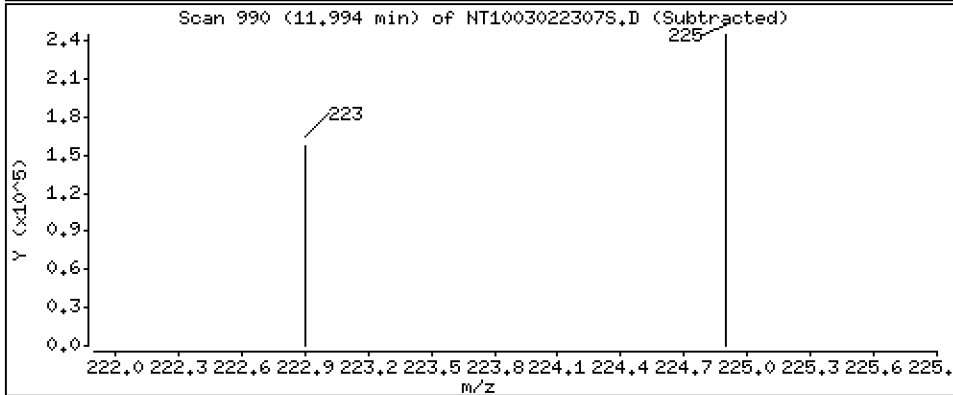
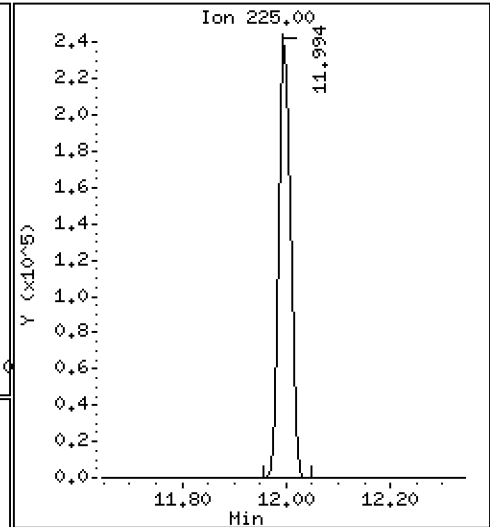
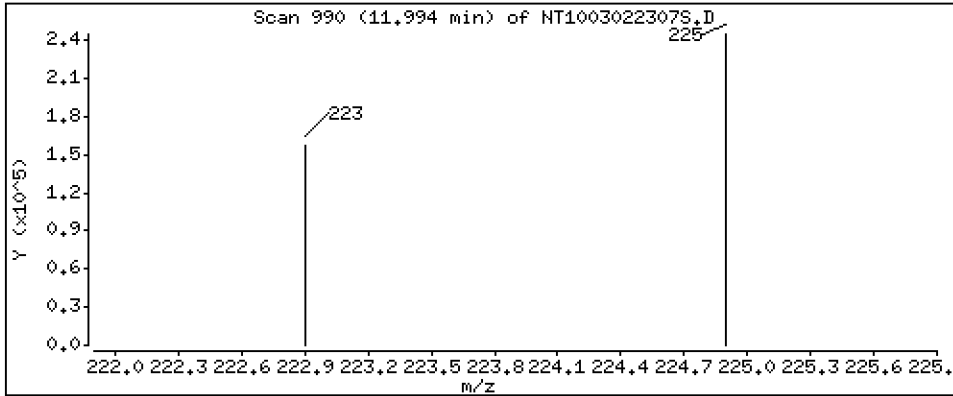
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,117 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

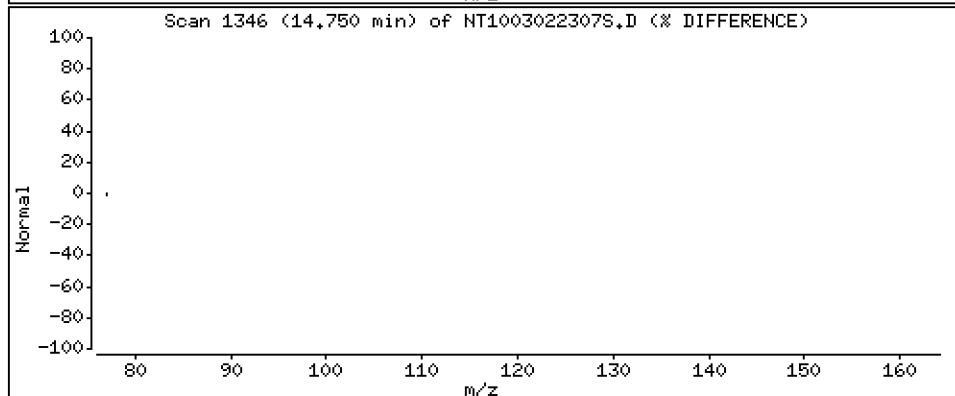
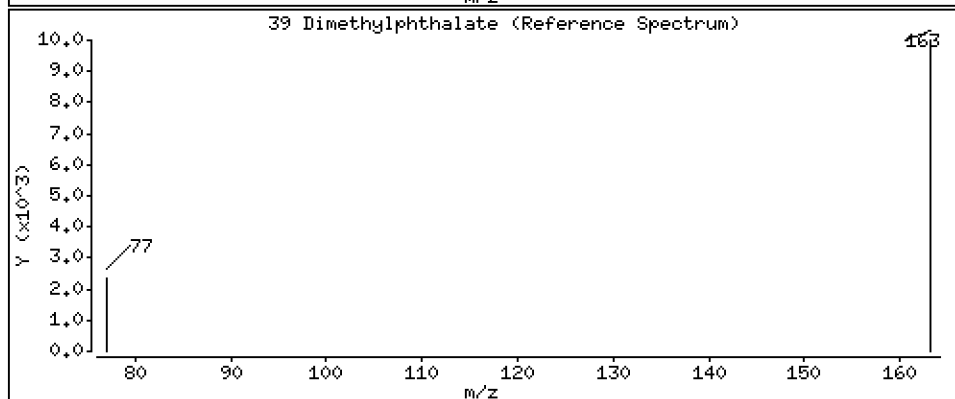
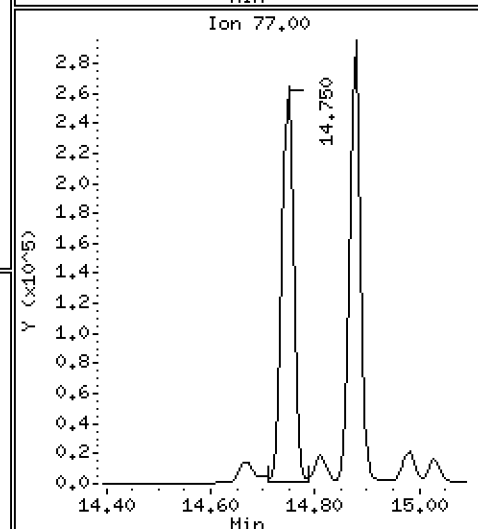
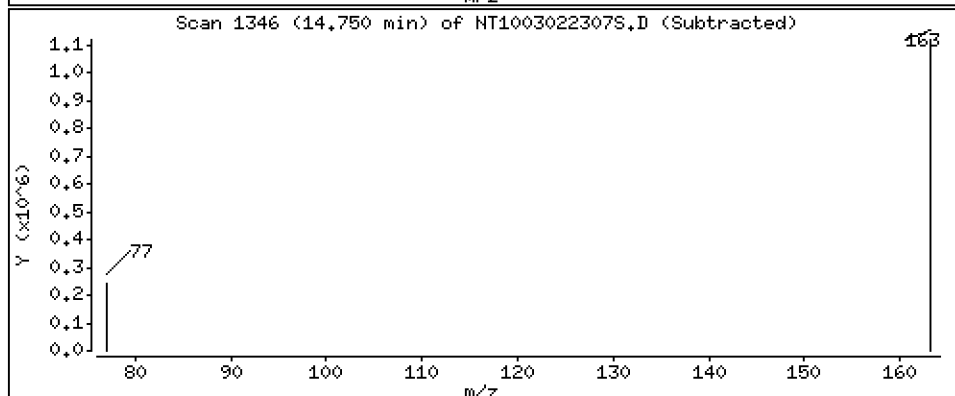
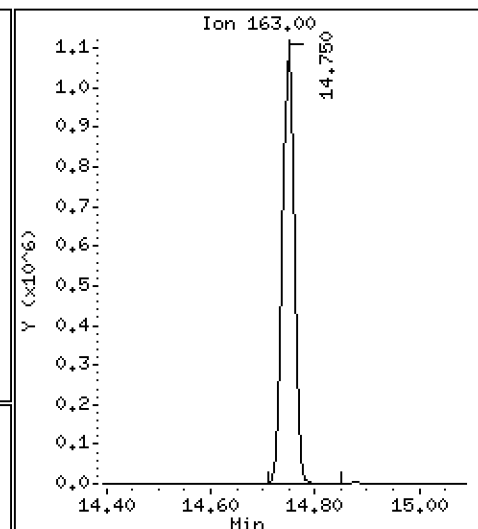
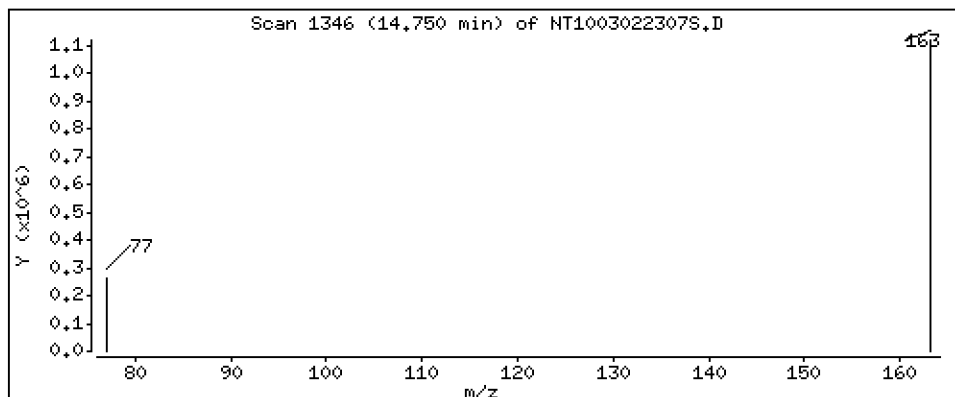
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,444 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

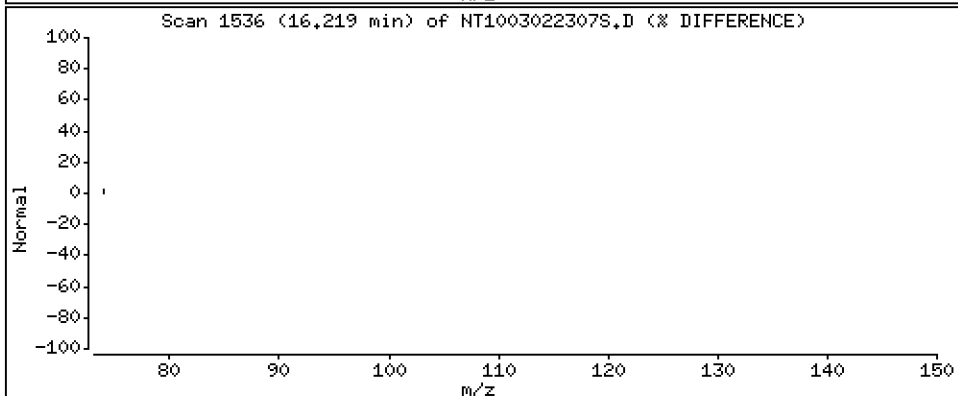
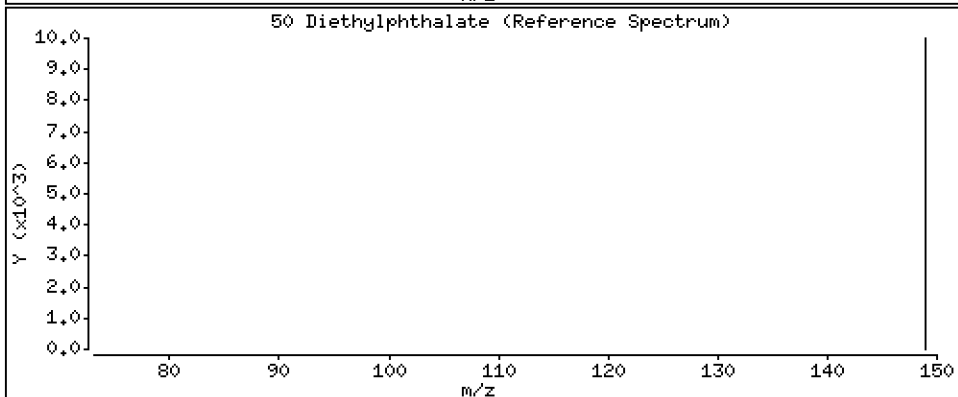
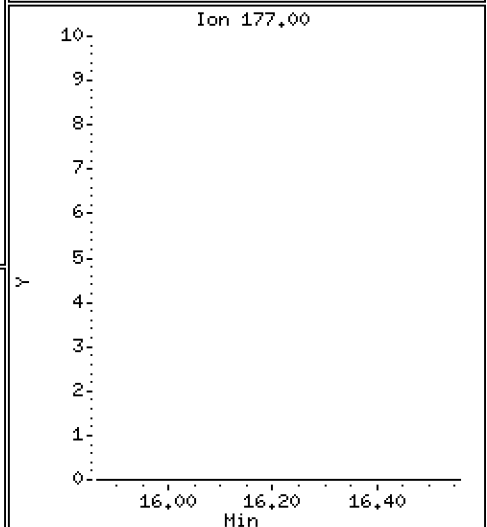
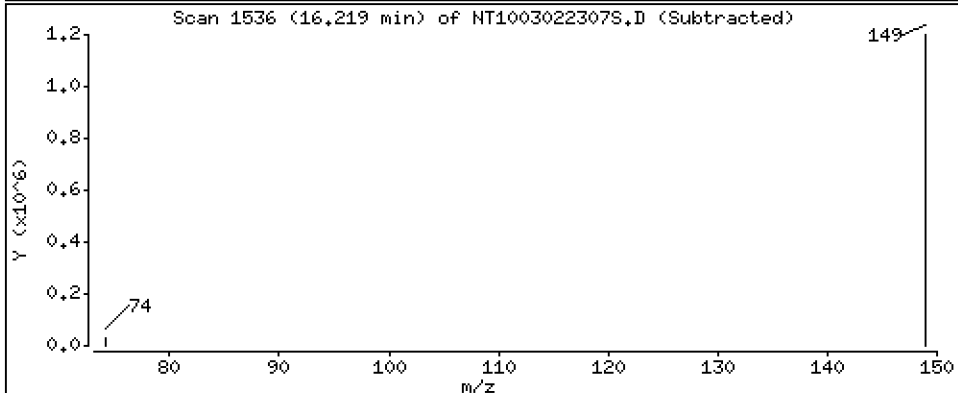
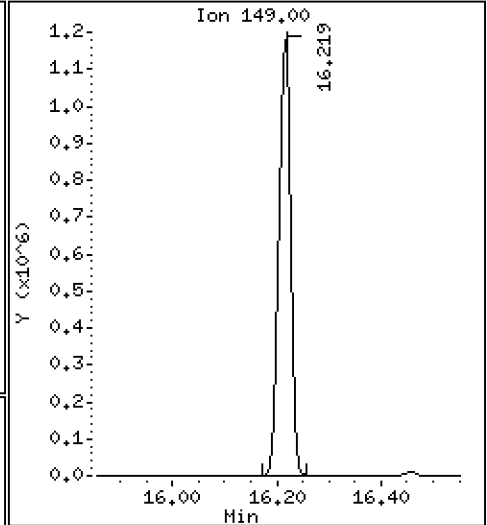
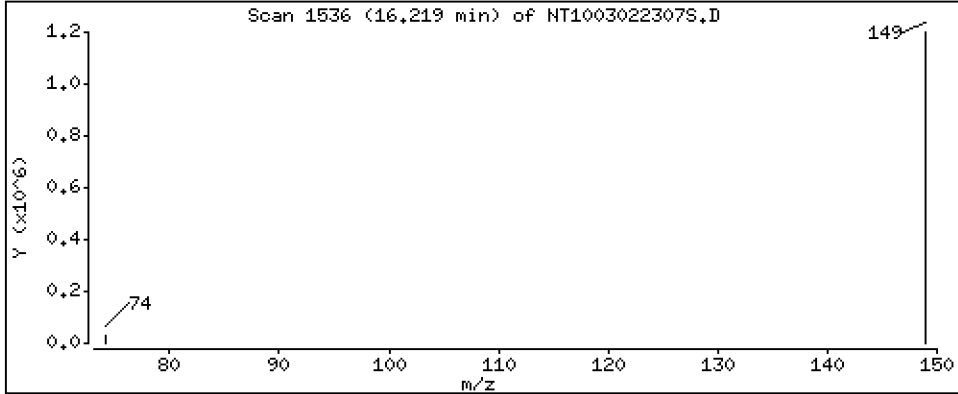
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,291 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

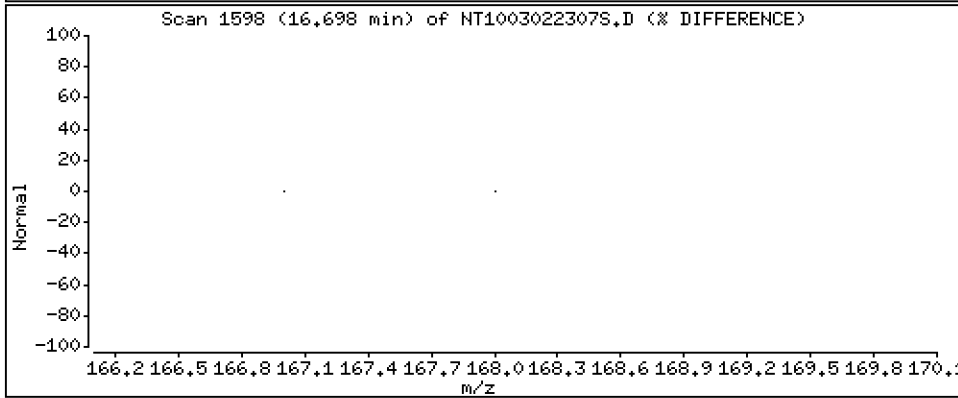
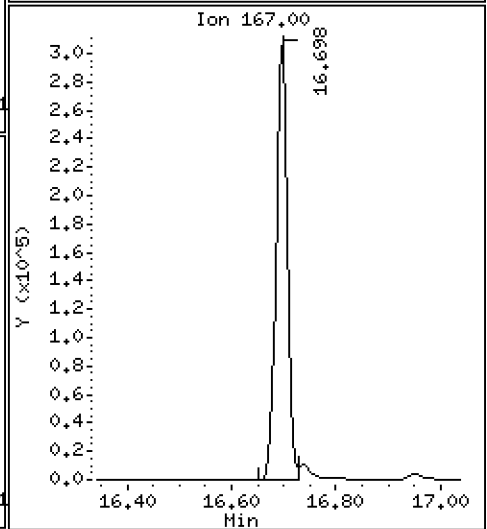
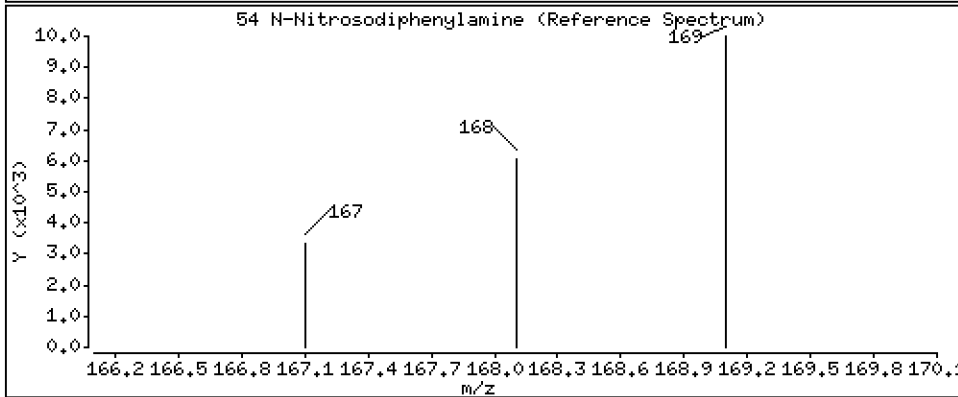
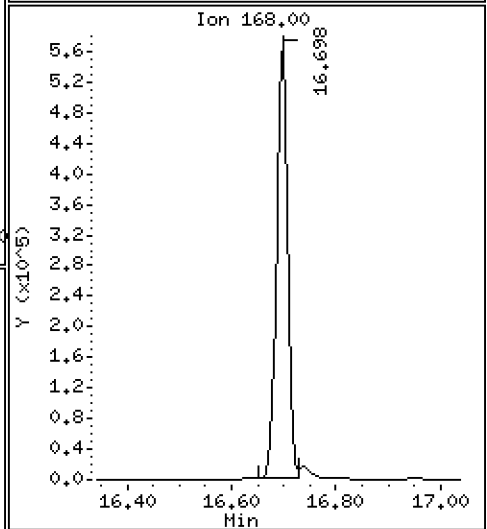
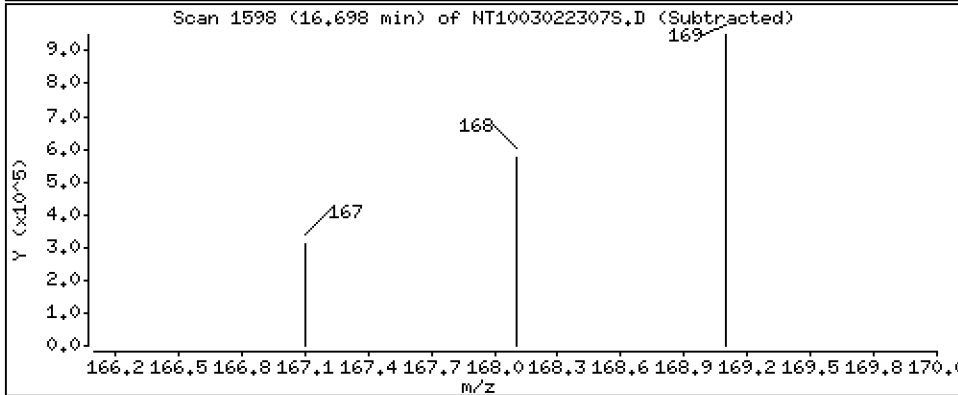
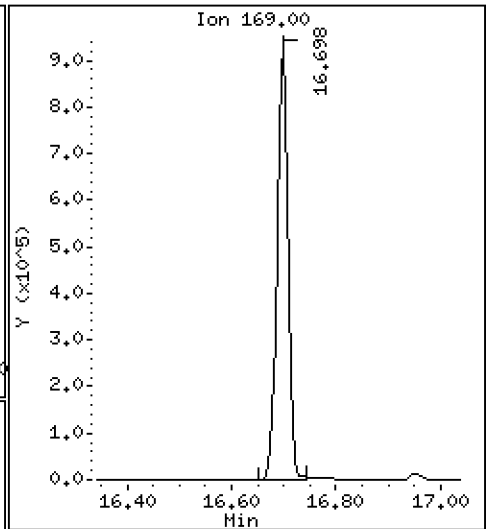
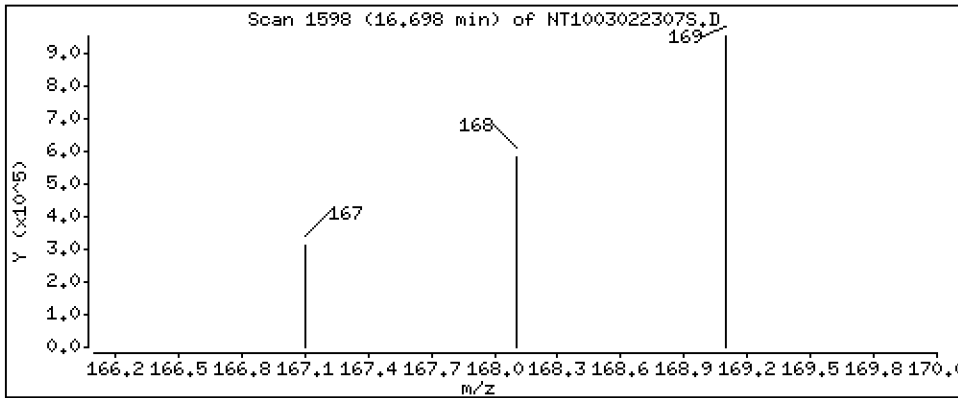
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 4.947 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

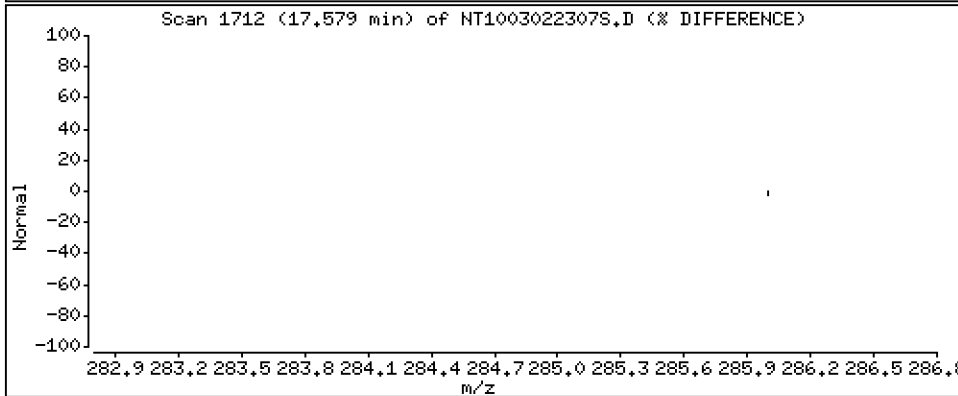
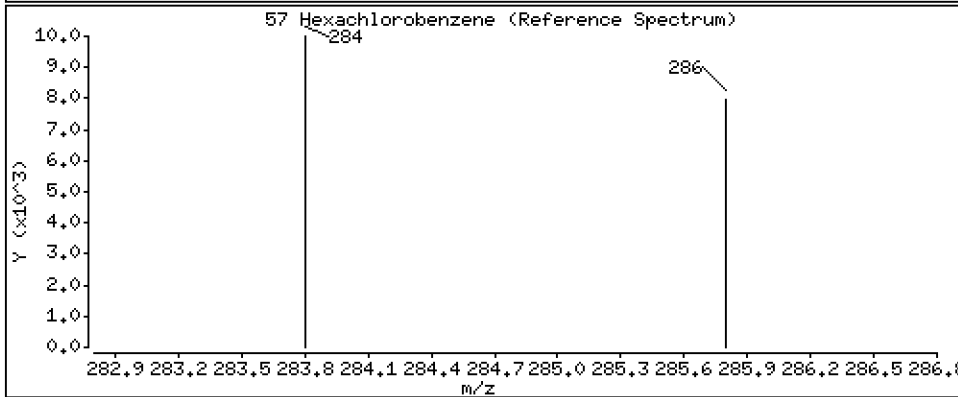
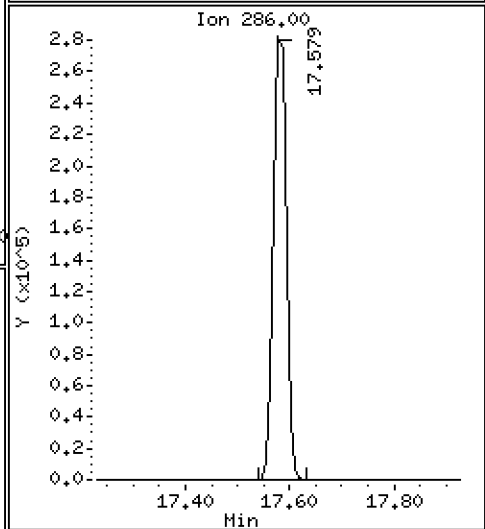
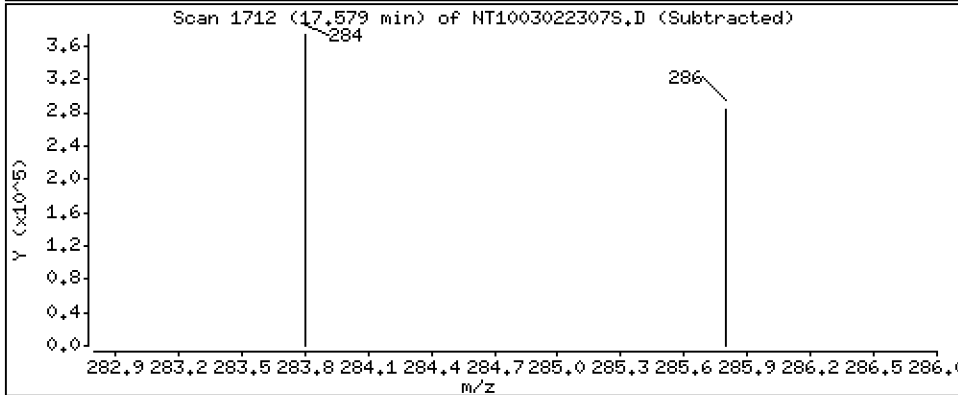
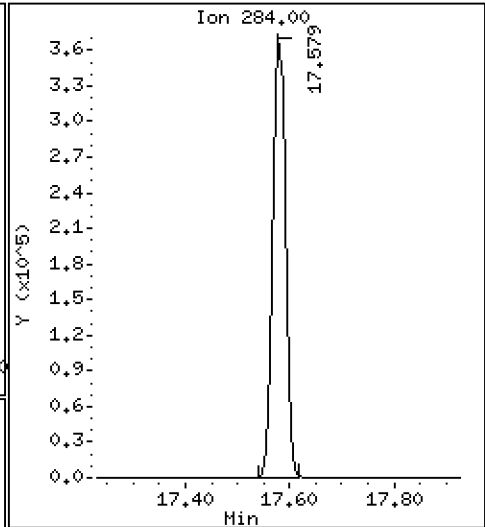
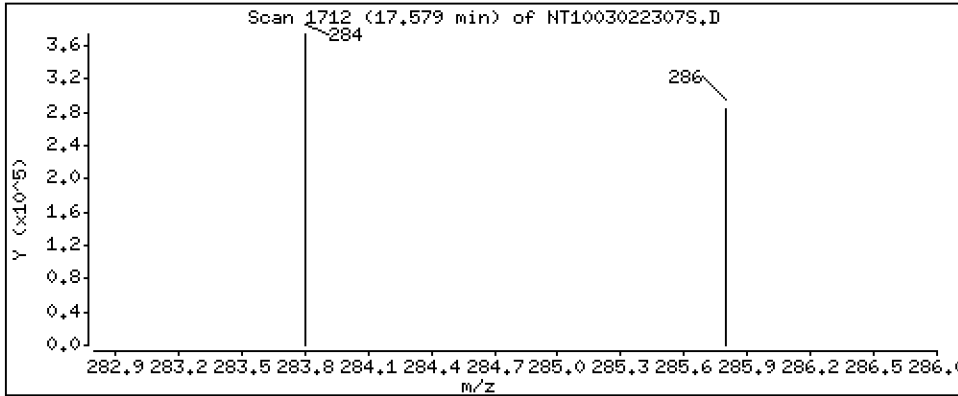
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.546 ug/L





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

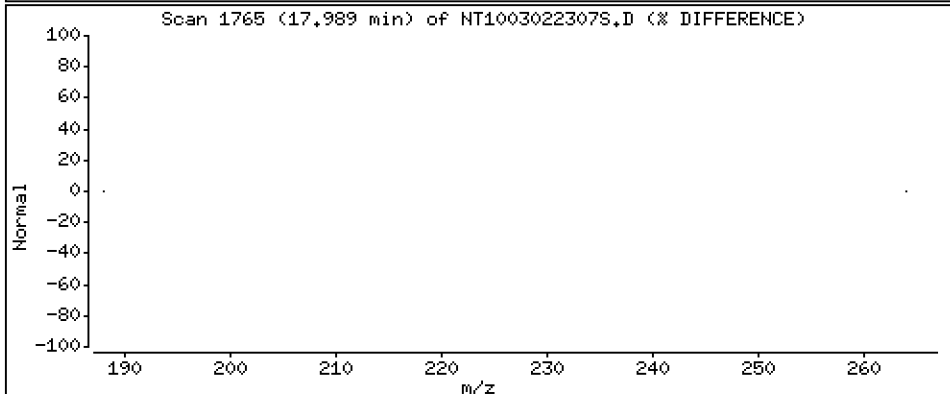
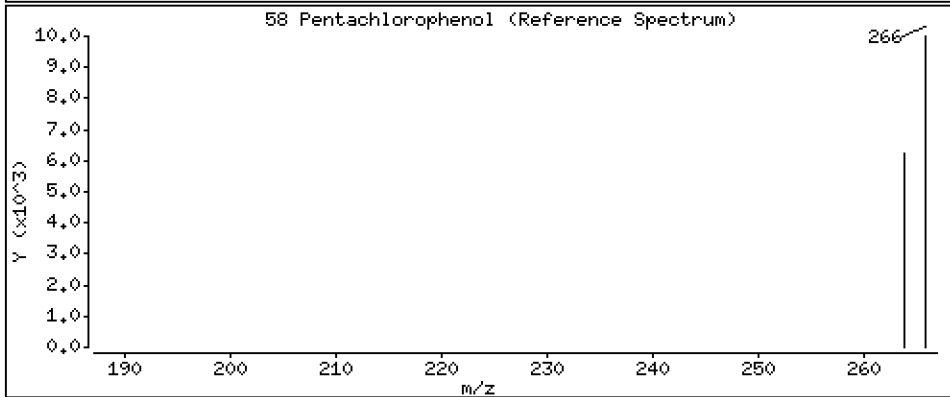
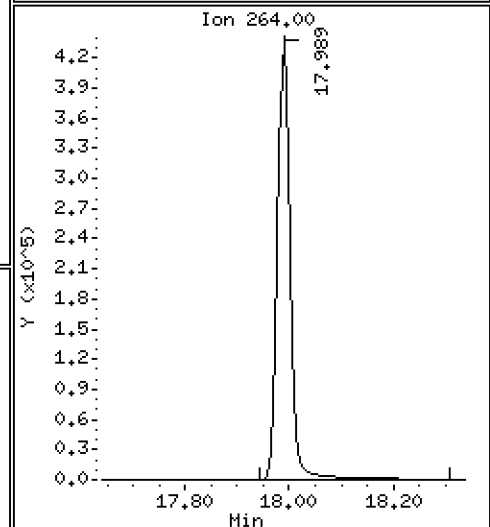
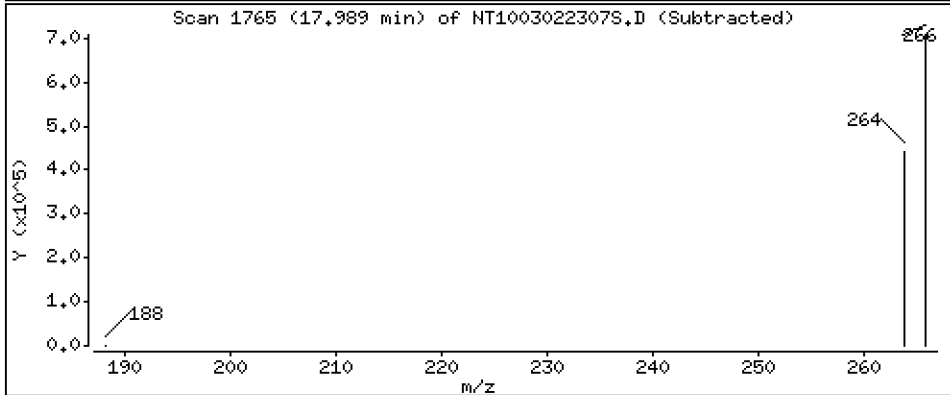
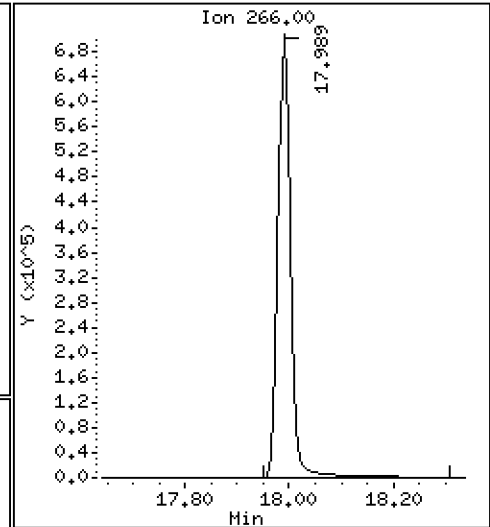
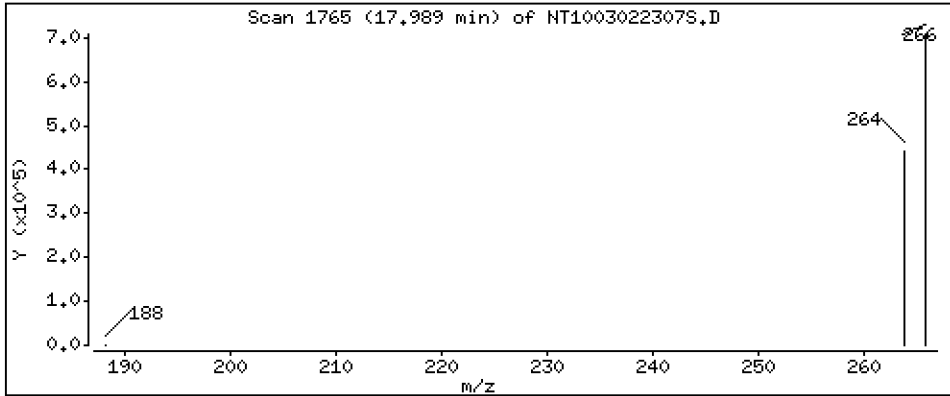
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 16,03 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

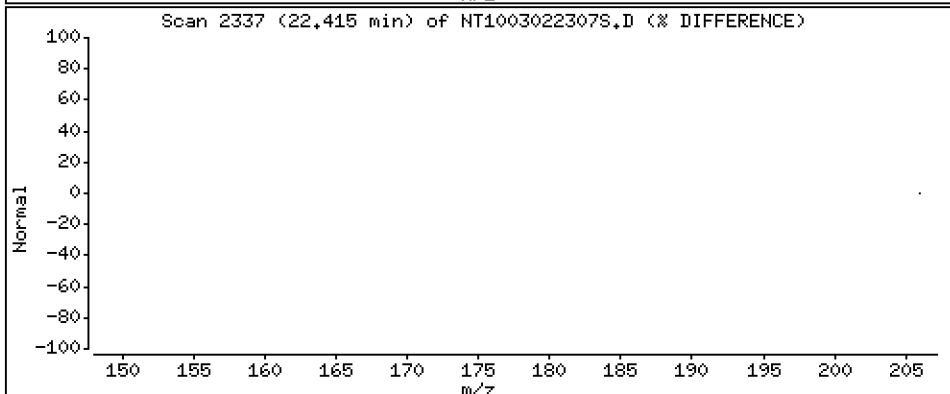
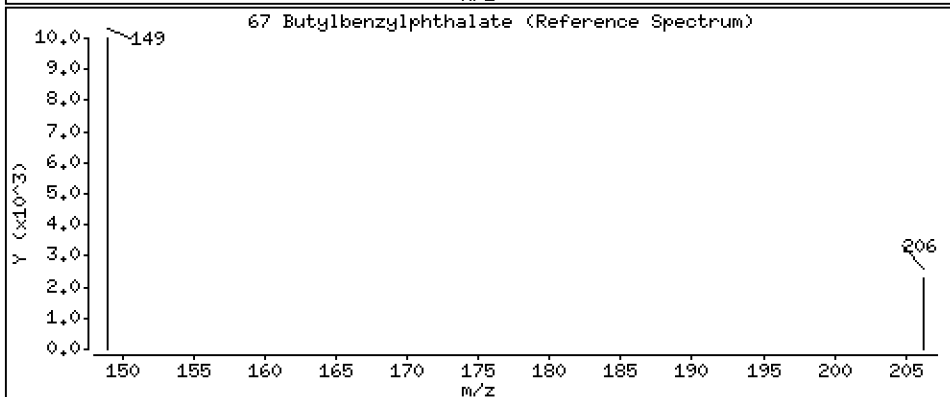
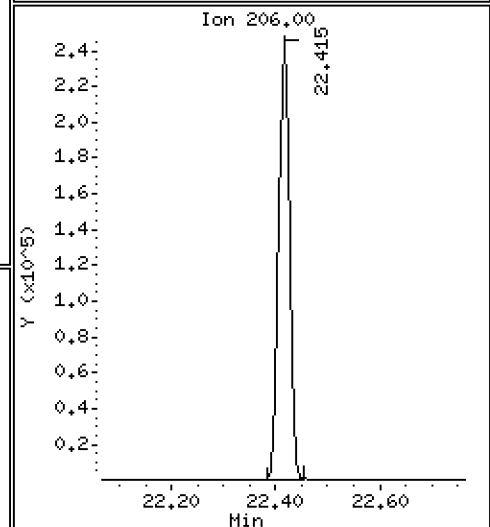
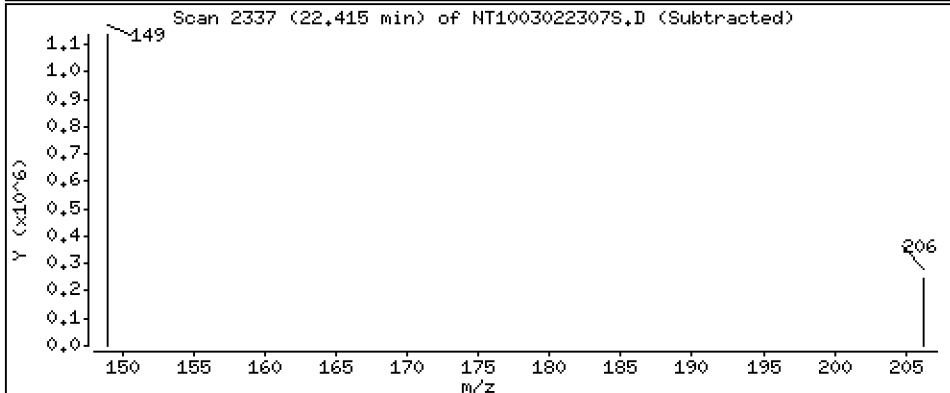
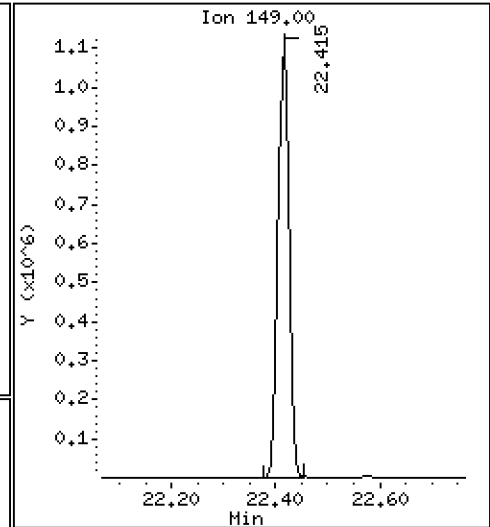
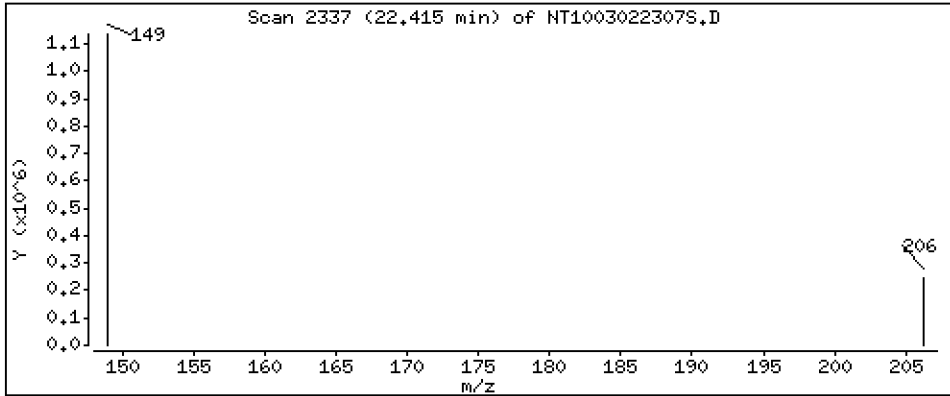
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 4.813 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

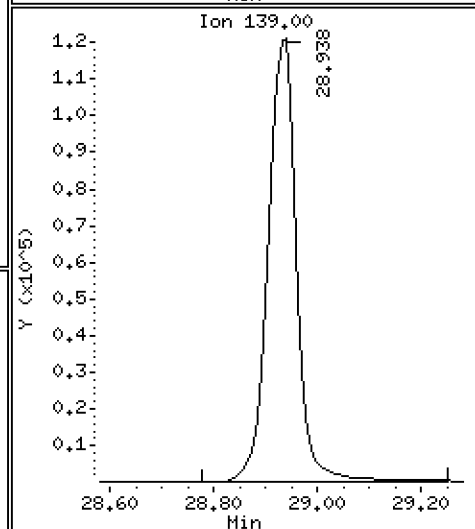
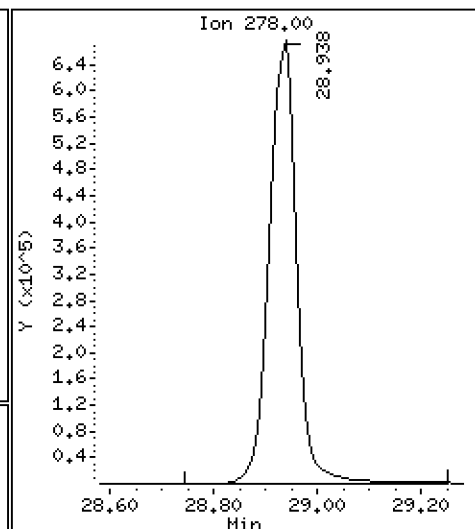
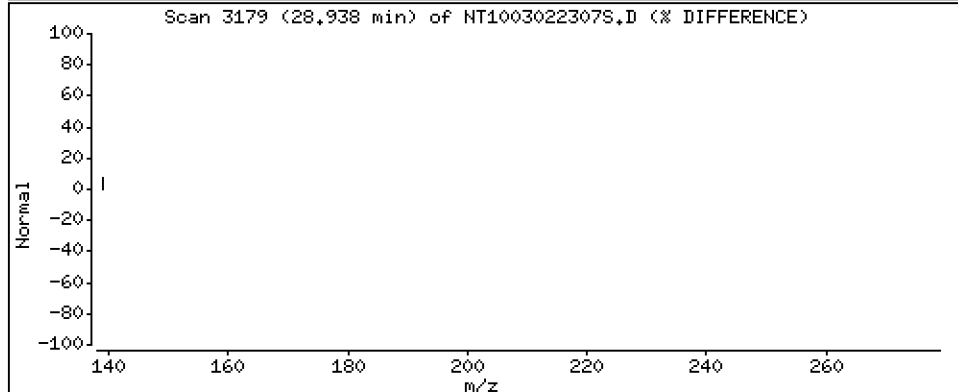
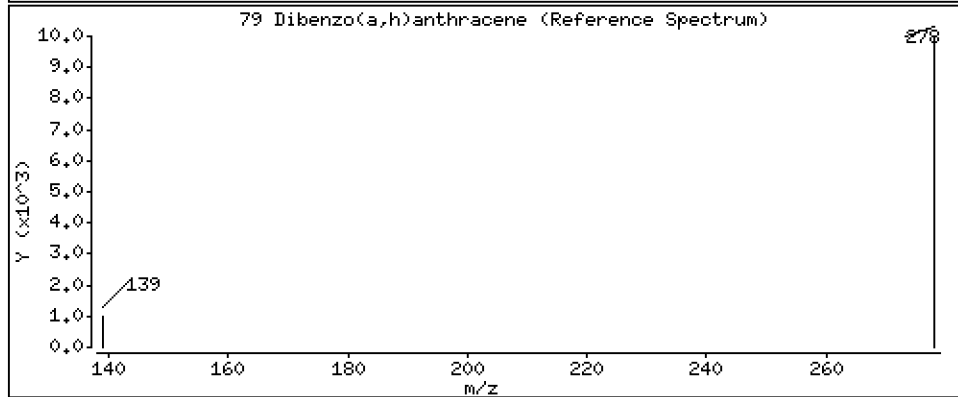
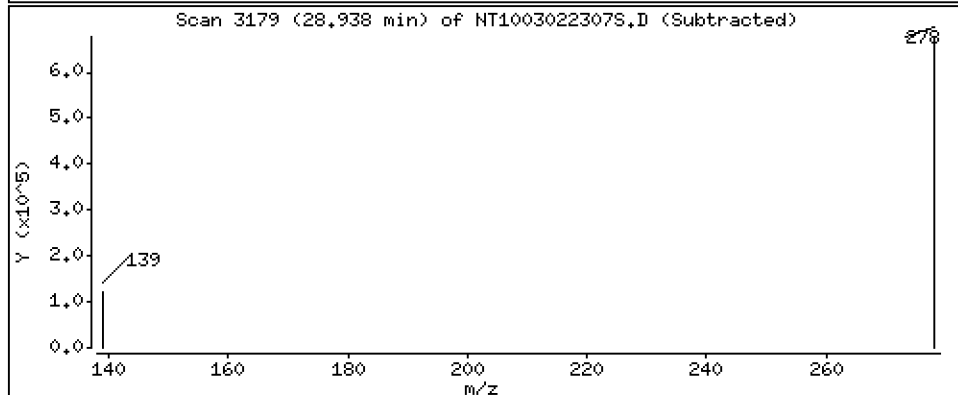
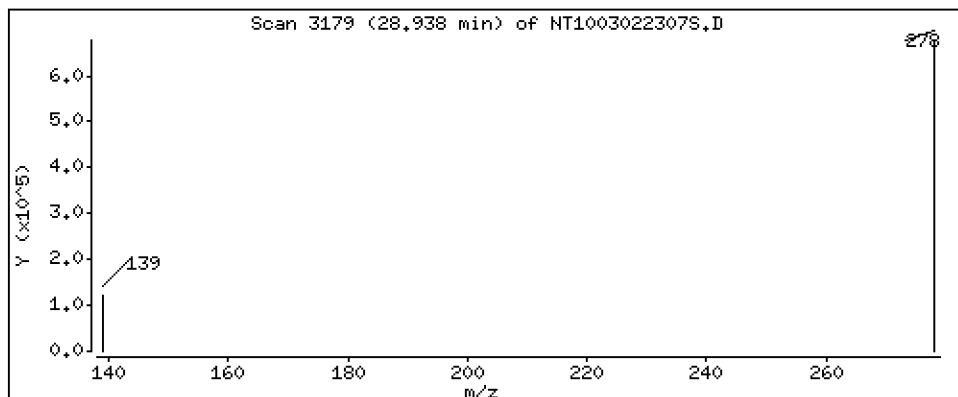
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,147 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

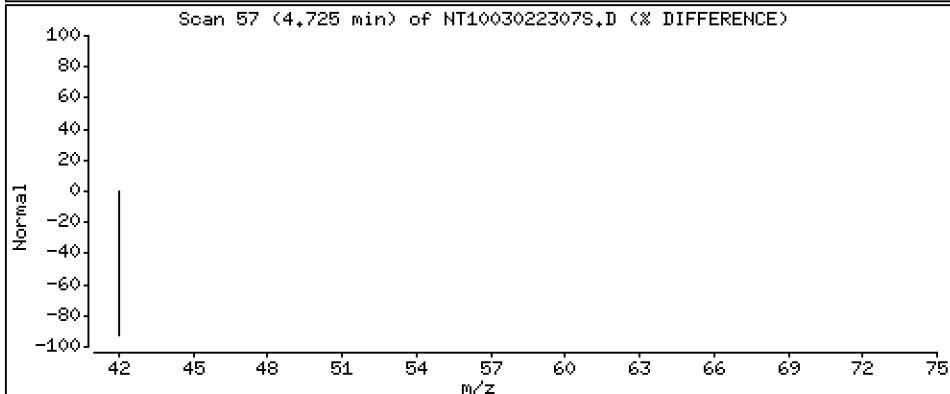
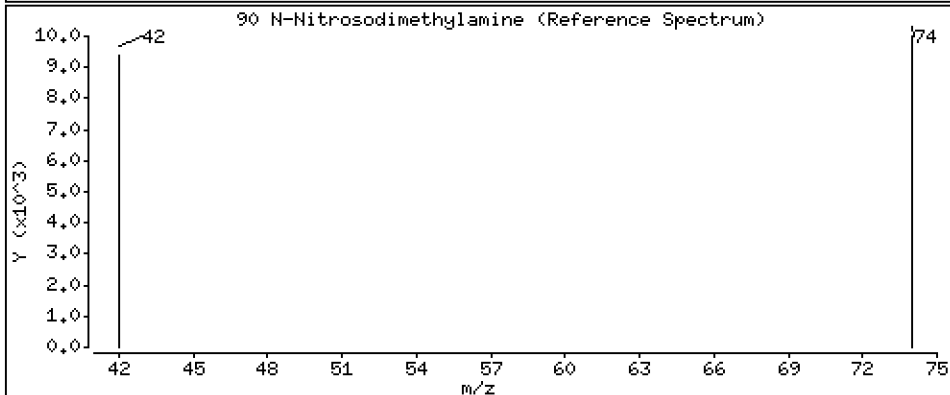
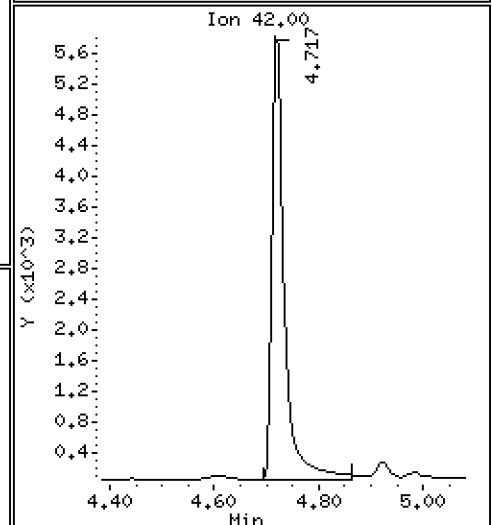
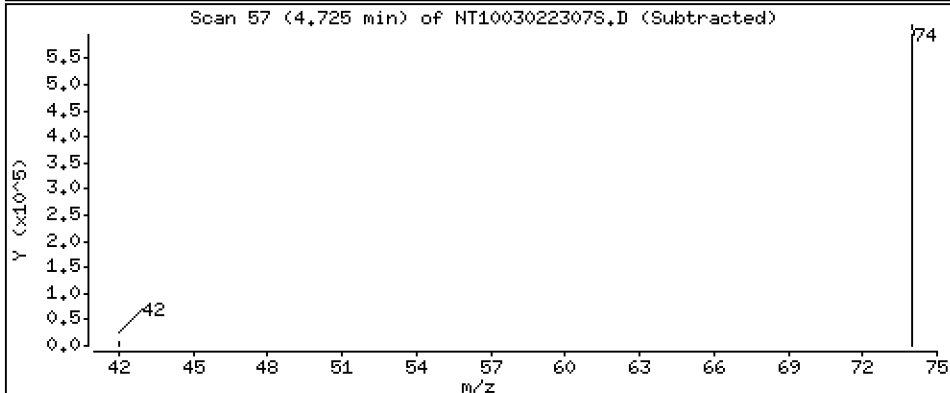
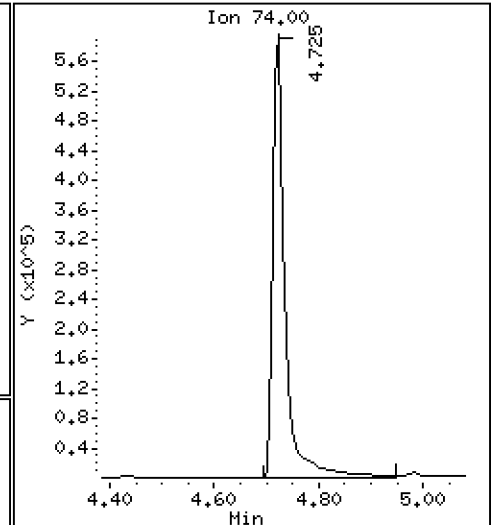
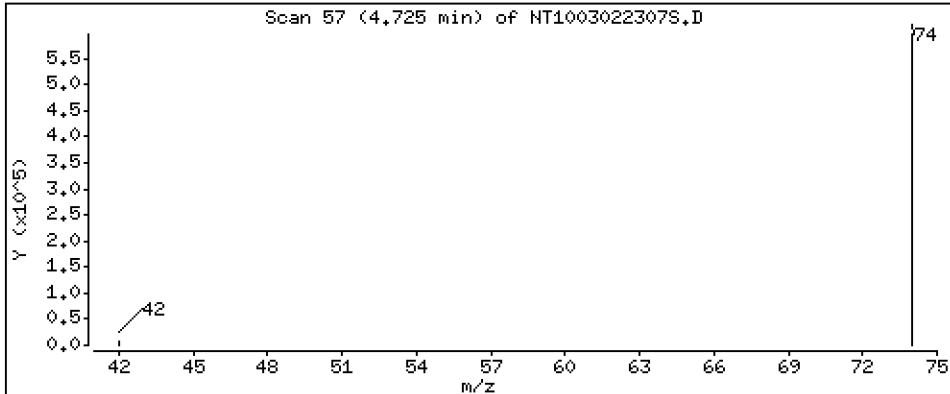
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.80 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022307S.D  
 Lab Smp Id: BLA0624-BS2  
 Inj Date : 02-MAR-2023 18:12 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BS1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	841468	6.52398	6.524 (R)
3 Phenol	94		8.517	8.517	(0.921)	973358	4.98503	4.985
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	709028	4.23468	4.235
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	451780	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	715977	4.39820	4.398
11 Benzyl alcohol	79		9.477	9.476	(1.024)	524736	4.66536	4.665
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	703267	4.49464	4.495
13 2-Methylphenol	108		9.655	9.655	(1.044)	506956	4.27355	4.274
15 4-Methylphenol	108		9.950	9.942	(1.076)	578416	4.61288	4.613
16 N-Nitroso-di-n-propylamine	70		9.982	9.981	(1.079)	438478	5.07702	5.077
22 2,4-Dimethylphenol	107		10.998	10.997	(0.938)	1539522	10.1032	10.10
24 Benzoic acid	105		11.150	11.074	(0.951)	1789304	19.6444	19.64
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	545737	4.34752	4.348
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1744036	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	366703	4.11657	4.117
39 Dimethylphthalate	163		14.749	14.741	(0.963)	1632680	5.44413	5.444
* 42 Acenaphthene-d10	162		15.322	15.314	(1.000)	944486	4.00000	
50 Diethylphthalate	149		16.218	16.203	(1.059)	1779087	6.29067	6.291
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1377595	4.94651	4.947
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	592498	4.54603	4.546

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	17.988	(0.977)	1137031	16.0277	16.03
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1720859	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	698523	4.50842	4.508 (R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	1529993	4.81256	4.813
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1915960	4.00000	
* 77 Perylene-d12	264	26.116	26.115	(1.000)	1919174	4.00000	
79 Dibenzo(a,h)anthracene	278	28.938	28.929	(1.108)	2482091	5.14660	5.147
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	977355	12.7989	12.80

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022307S.D  
 Lab Smp Id: BLA0624-BS2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	451780	-8.44
27 Naphthalene-d8	1779056	889528	3558112	1744036	-1.97
42 Acenaphthene-d10	954569	477285	1909138	944486	-1.06
59 Phenanthrene-d10	1596290	798145	3192580	1720859	7.80
69 Chrysene-d12	1649110	824555	3298220	1915960	16.18
77 Perylene-d12	1901958	950979	3803916	1919174	0.91

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022307S.D

Lab ID: BLA0624-BS2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 18:12

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.945	0.0065	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

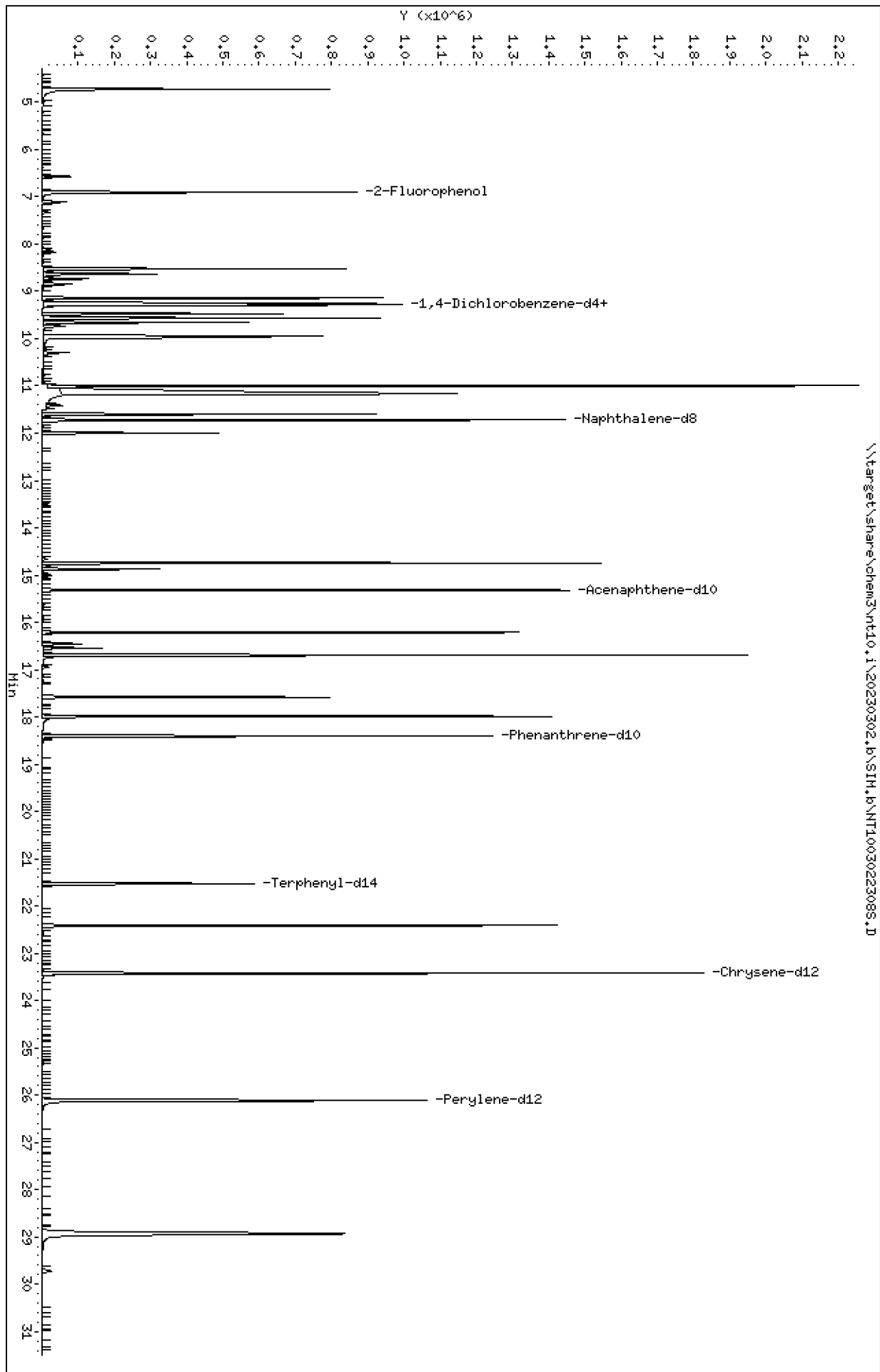
\* Only compounds listed in the work order have been verified by the analyst \*



Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.6\NT1003022308S.D  
Date: 02-MAR-2023 18:50  
Client ID:  
Sample Info: BLR0624-BSM1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.6\NT1003022308S.D



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

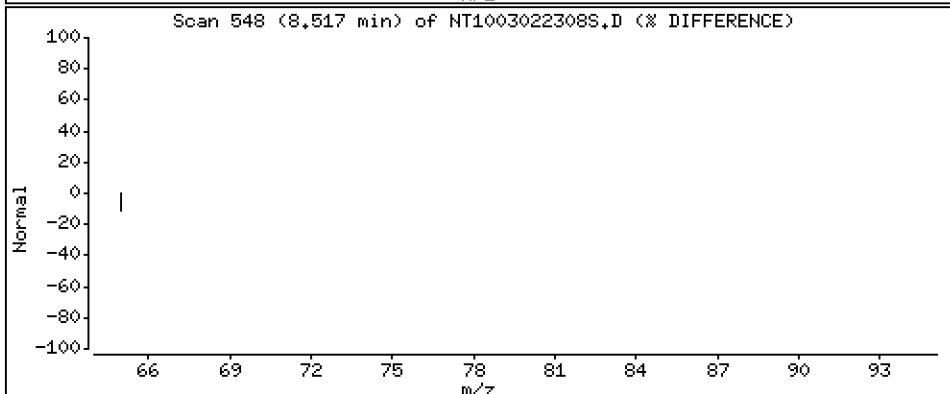
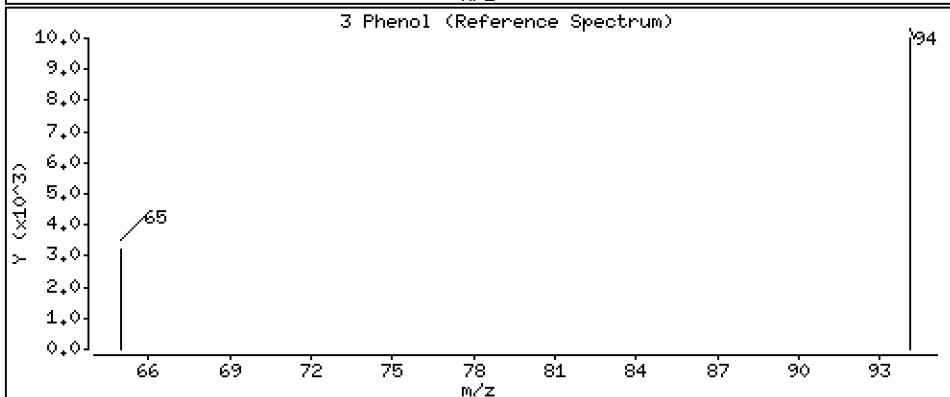
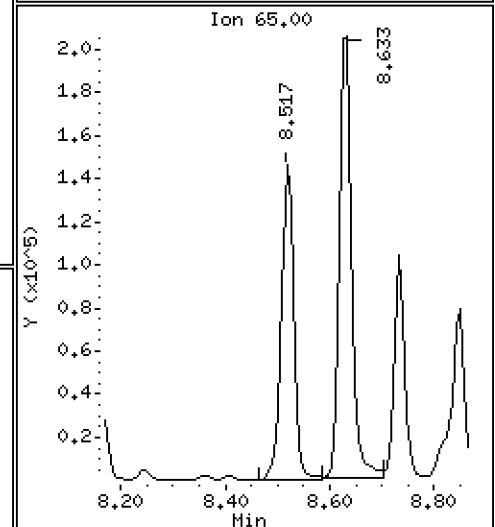
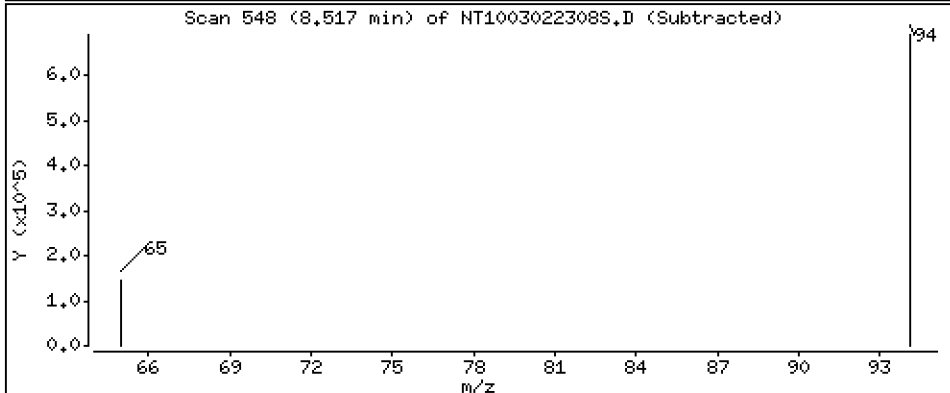
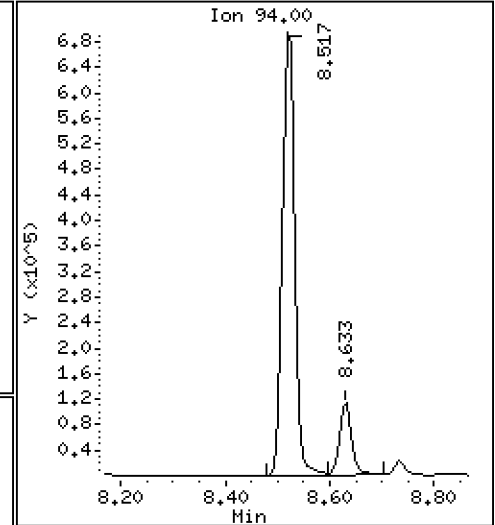
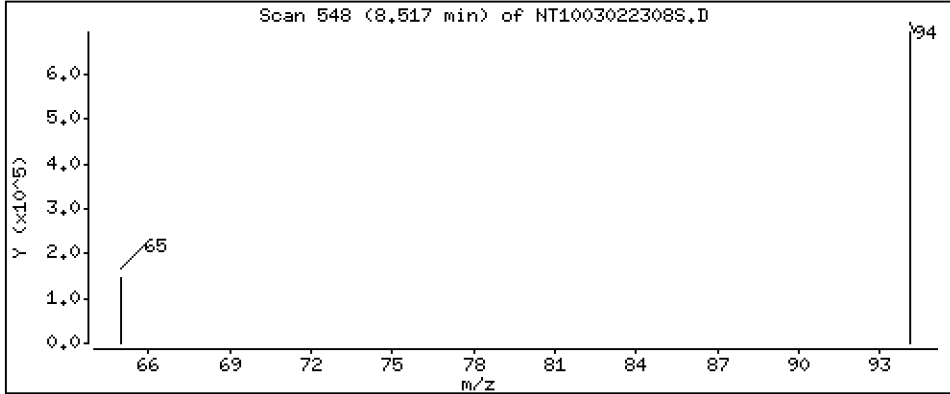
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.489 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

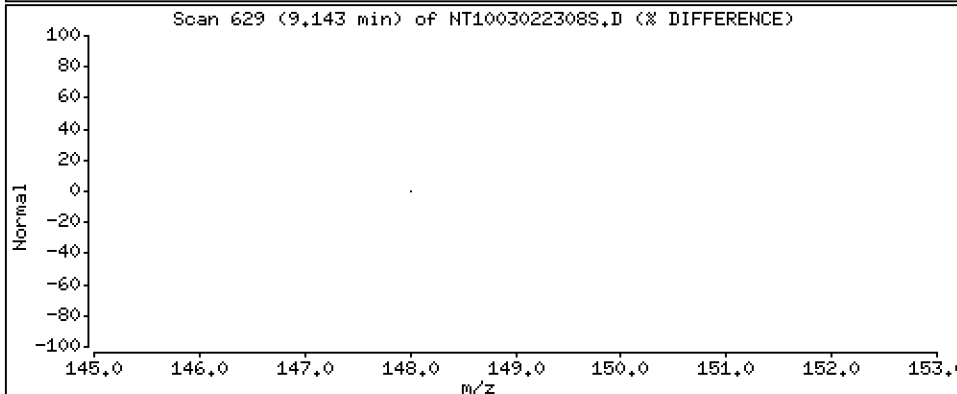
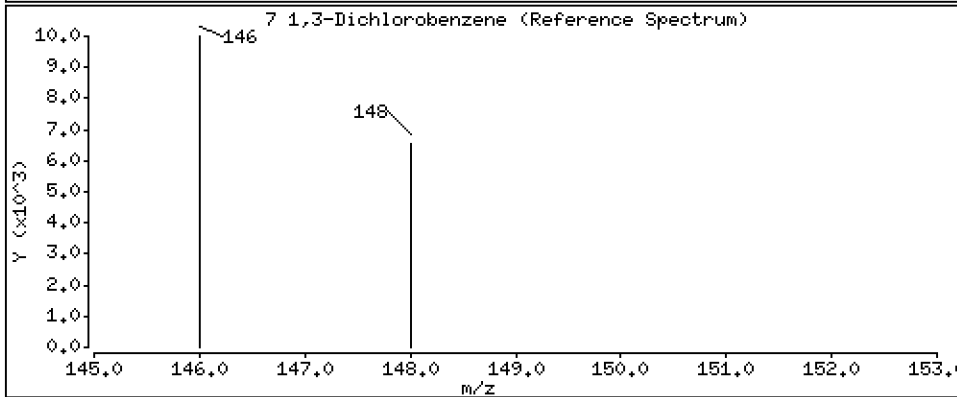
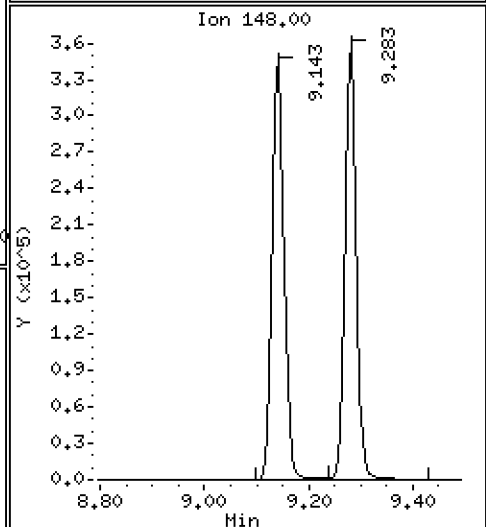
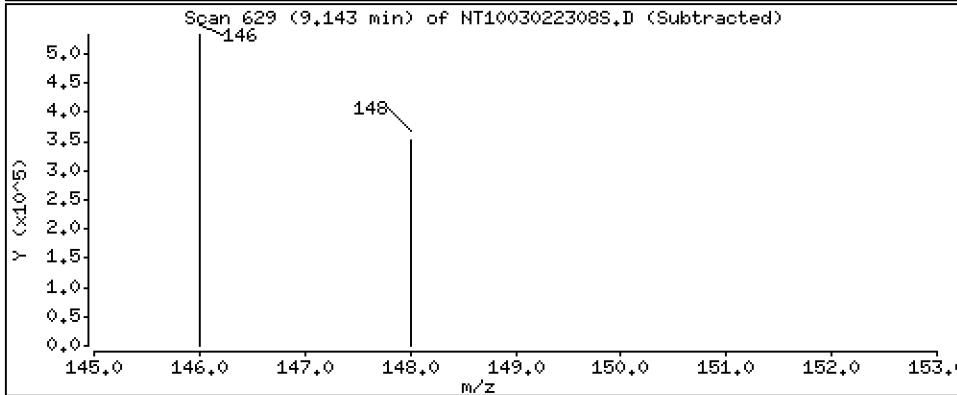
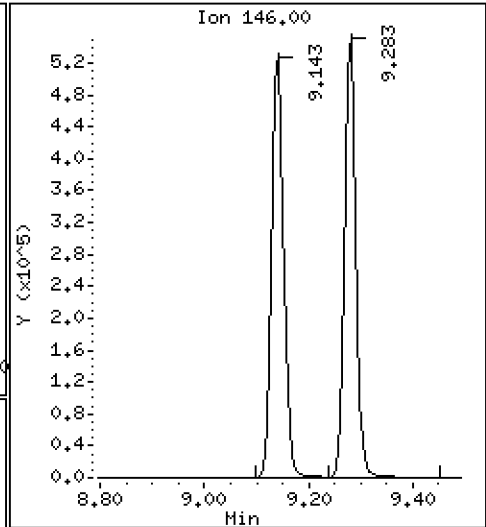
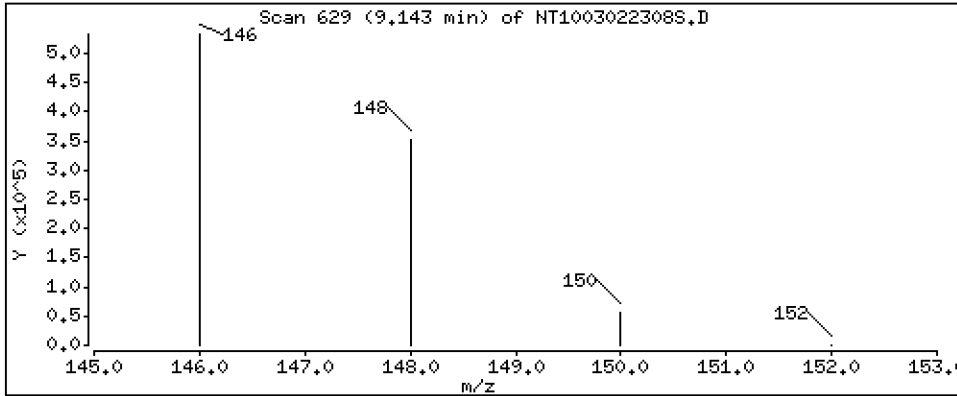
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4,111 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

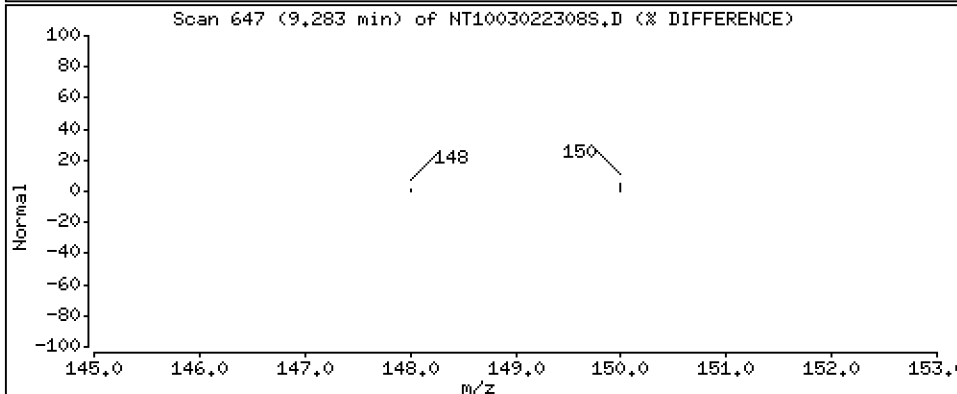
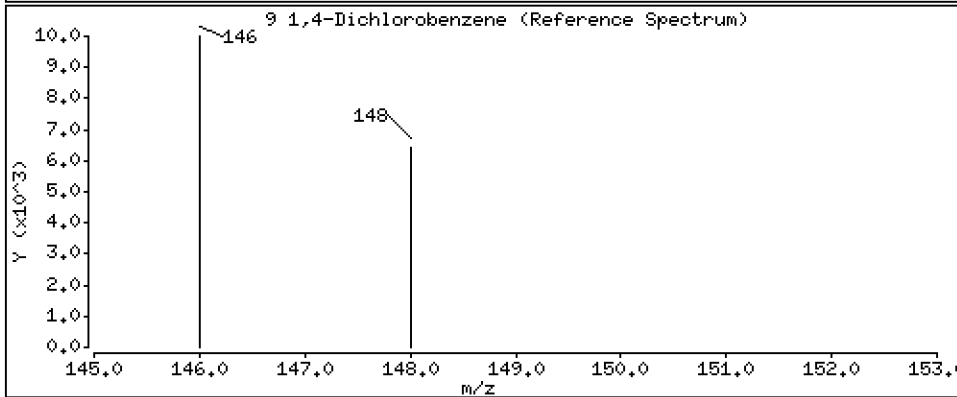
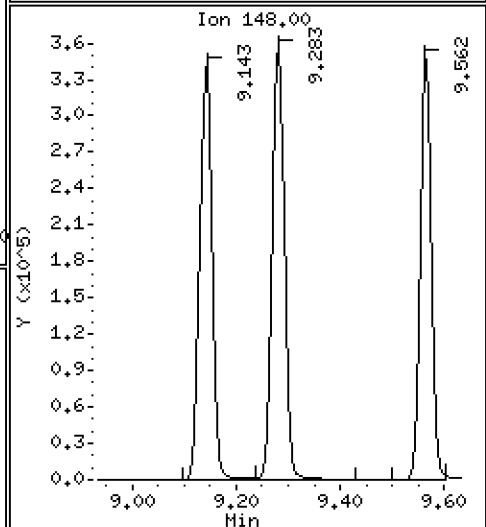
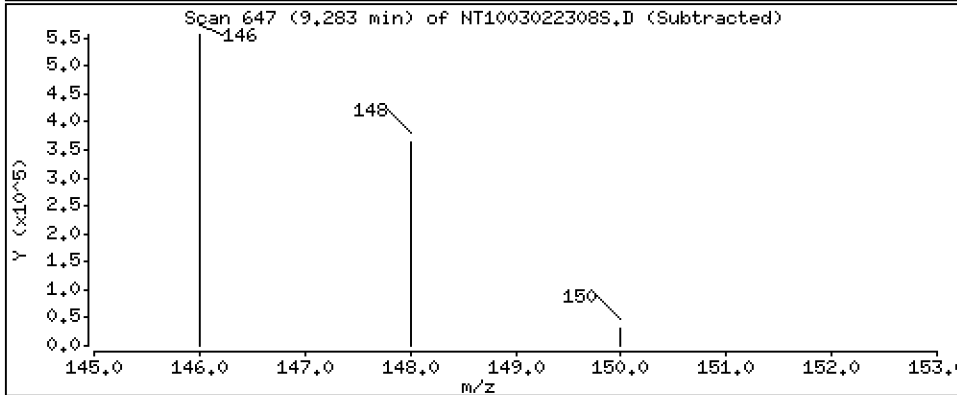
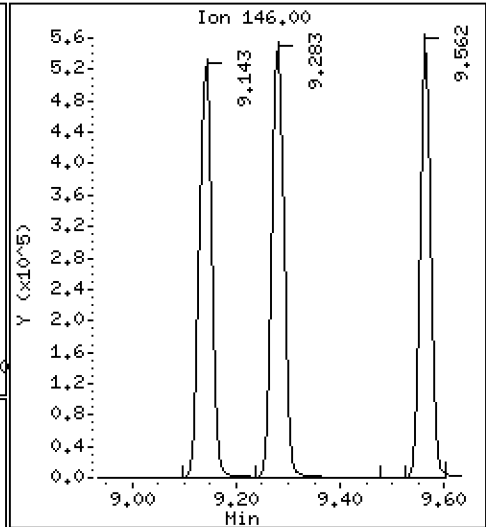
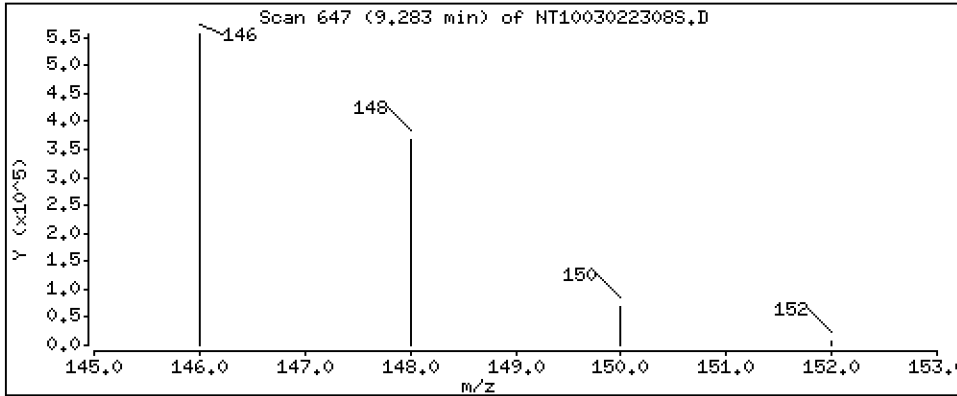
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4.264 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

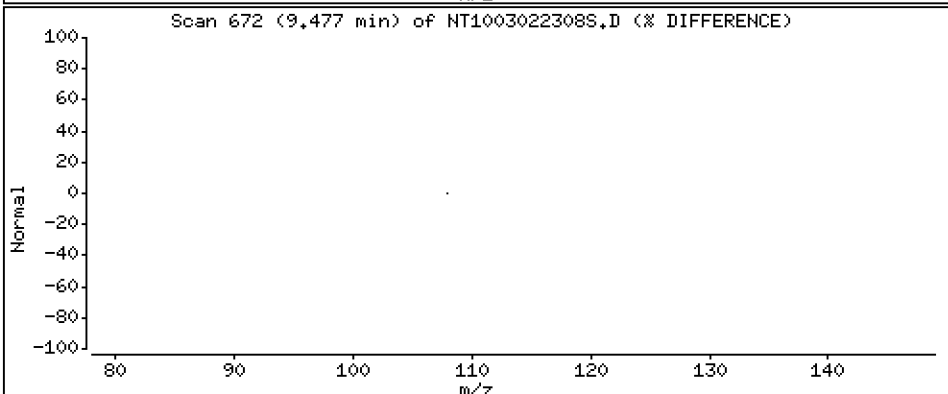
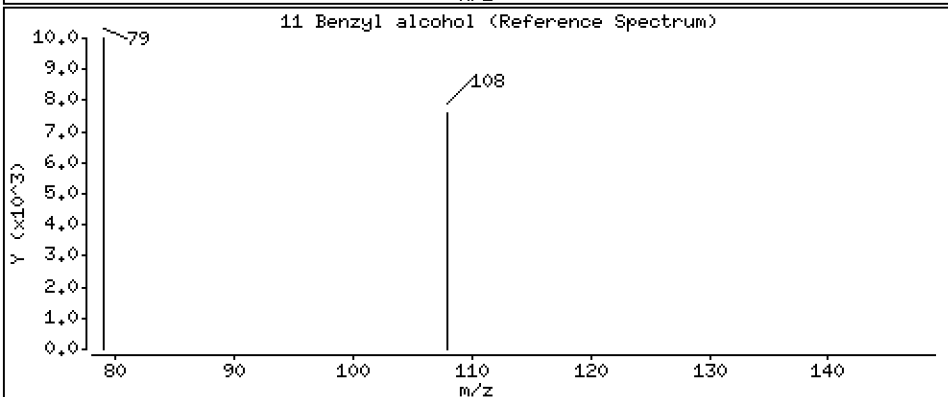
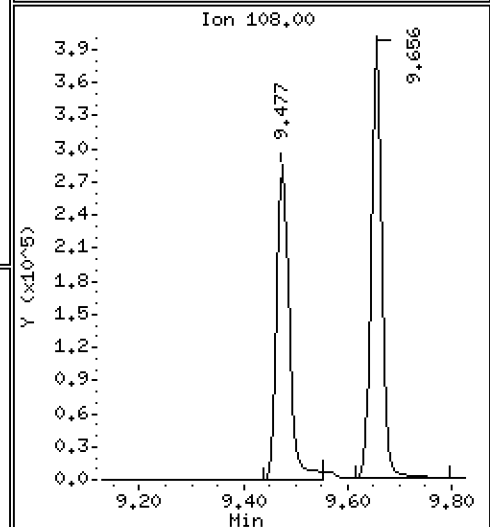
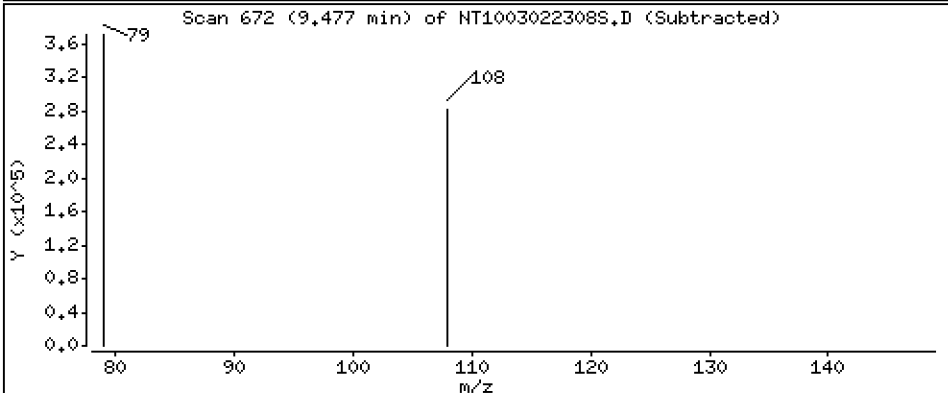
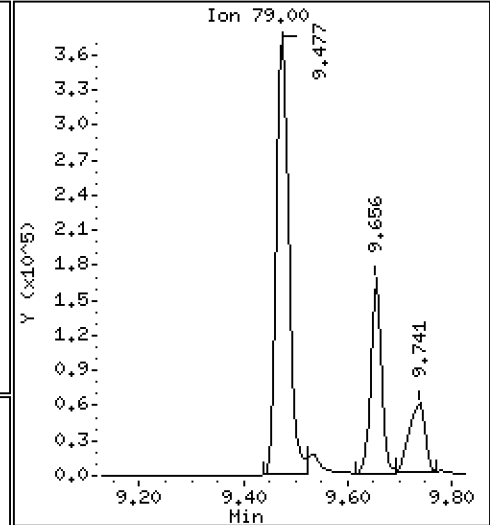
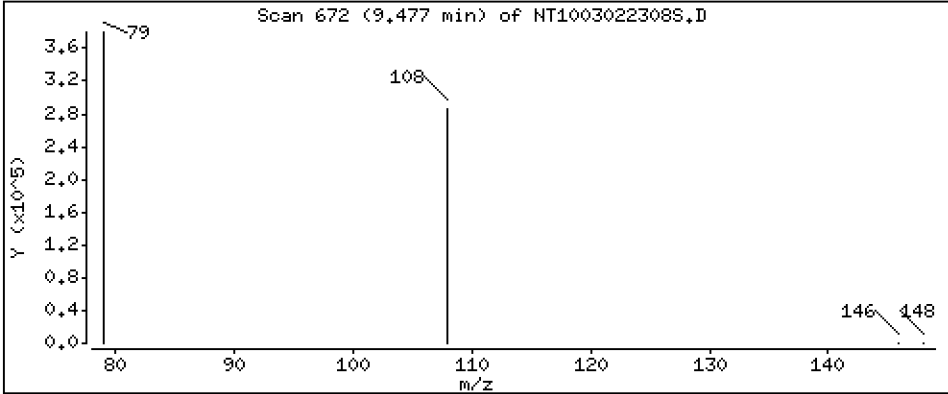
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4,344 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

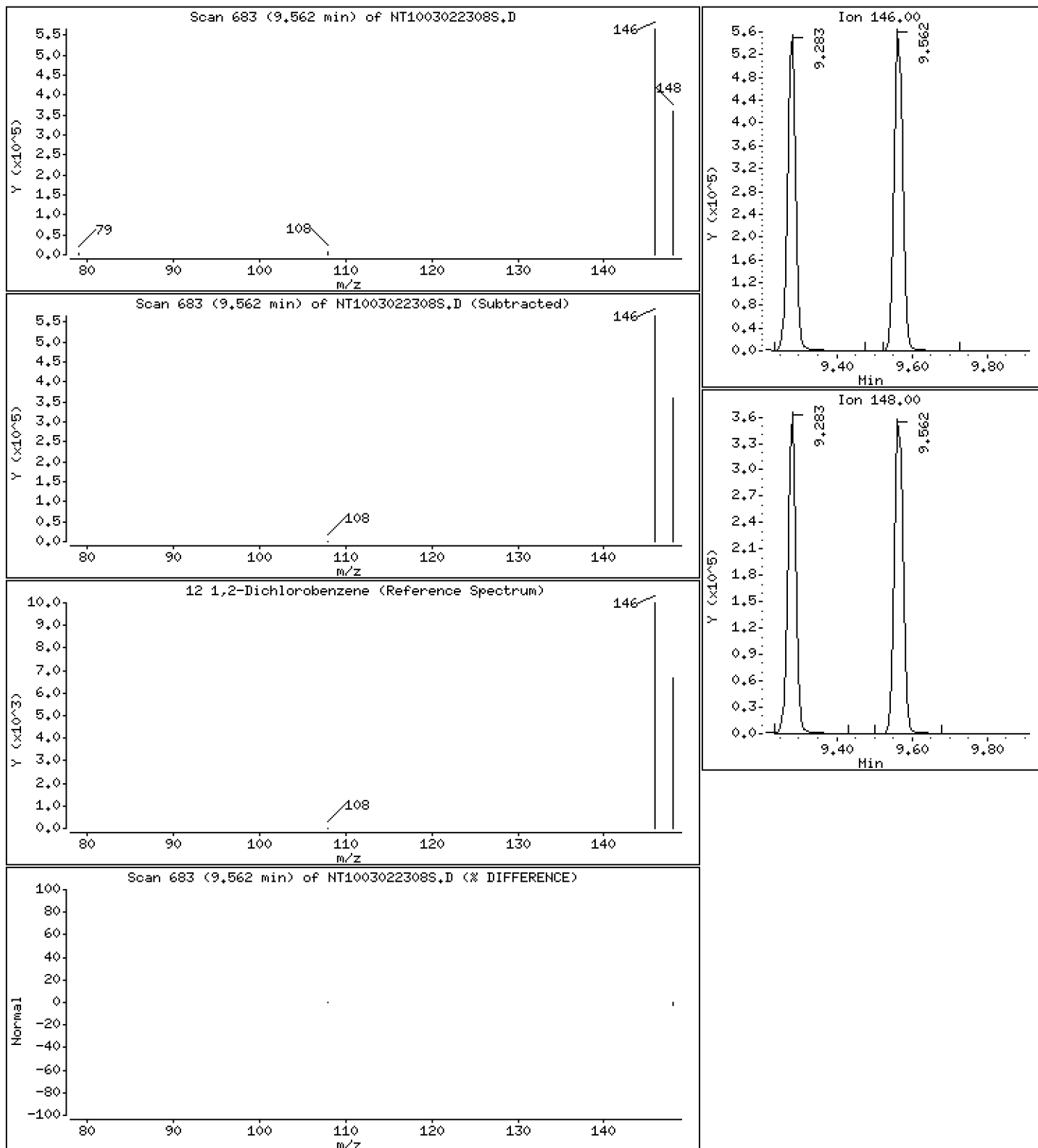
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.325 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

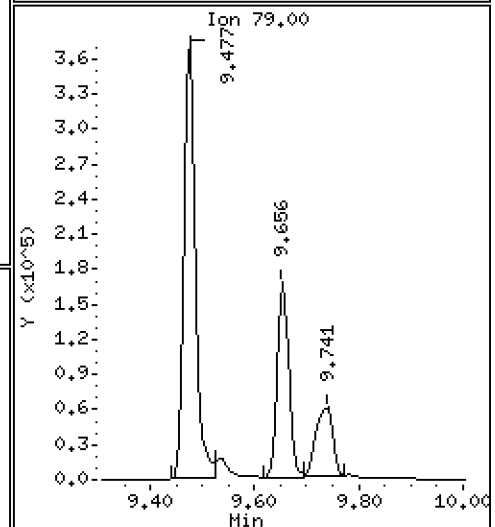
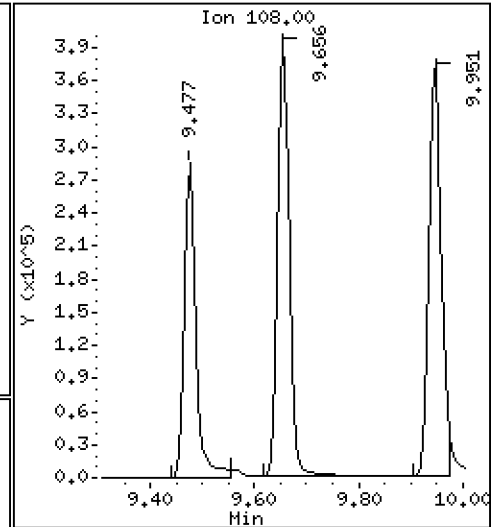
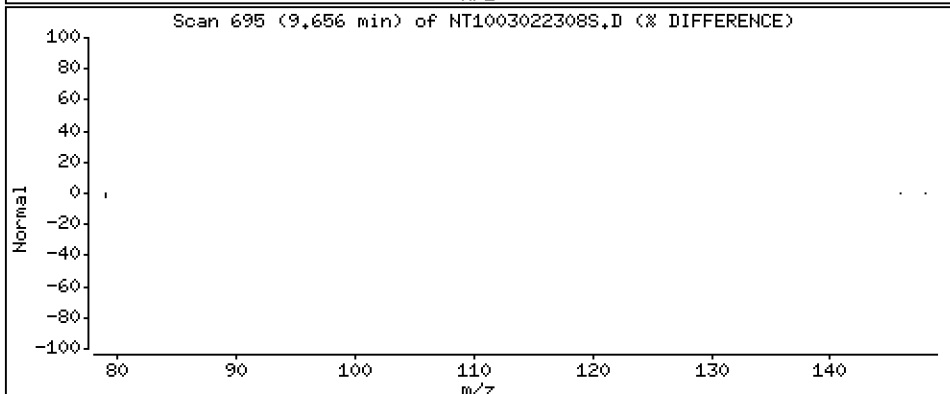
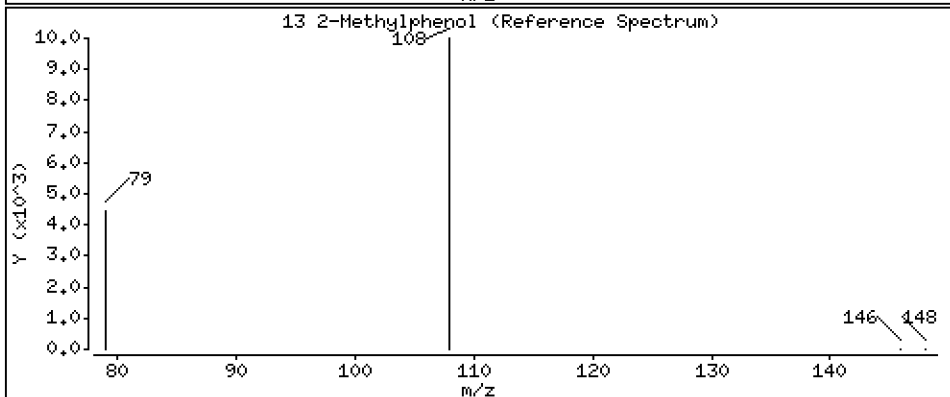
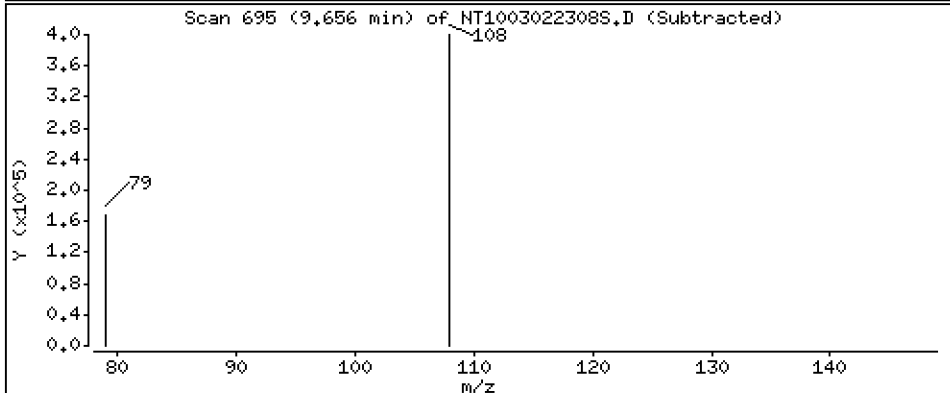
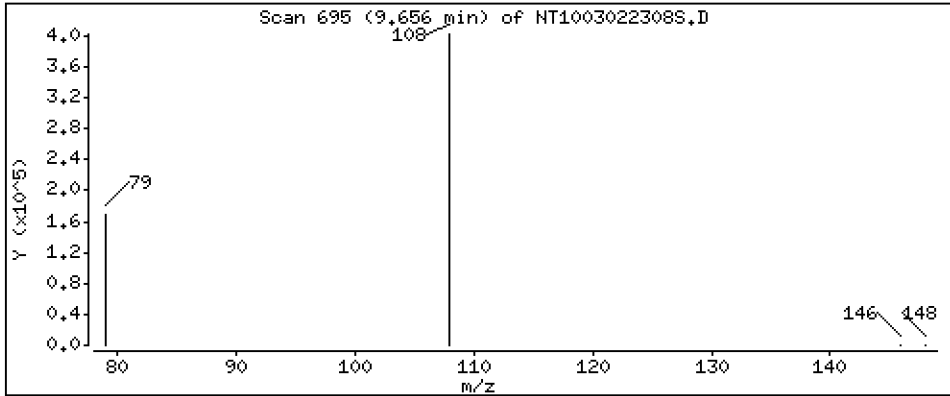
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 3.955 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

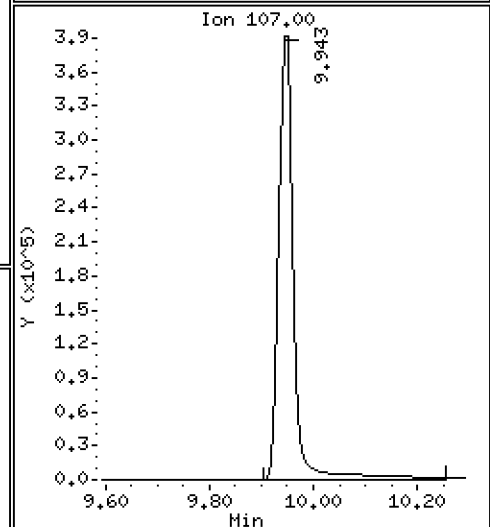
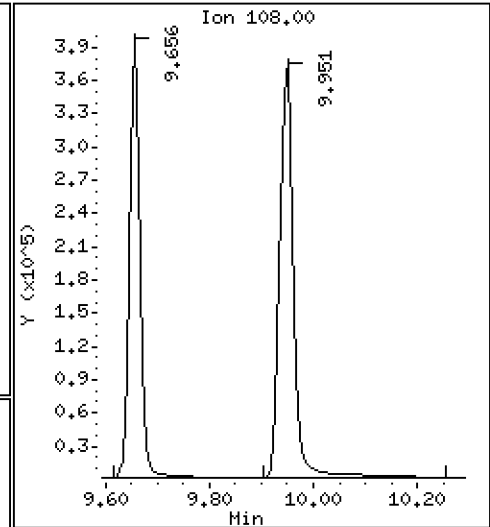
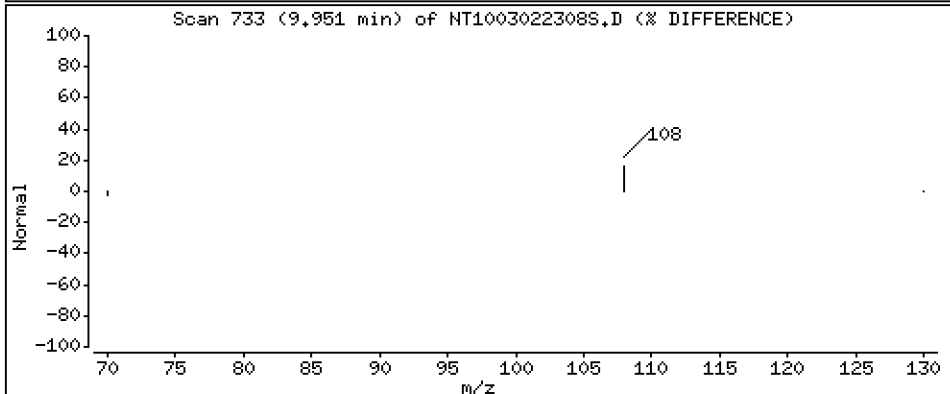
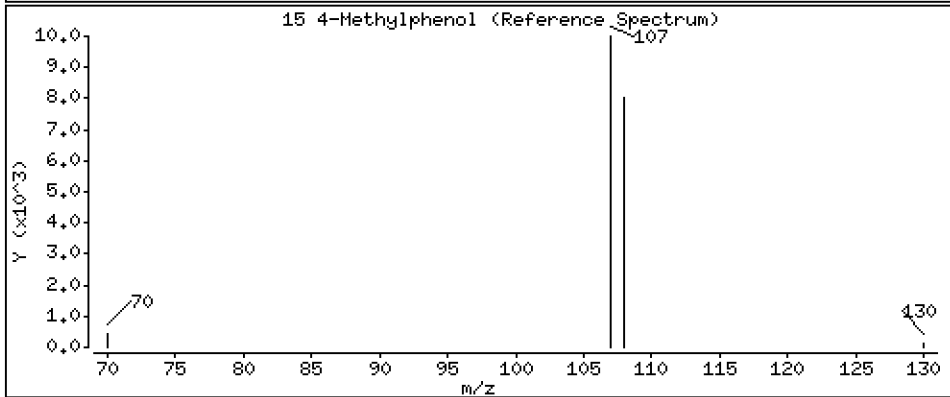
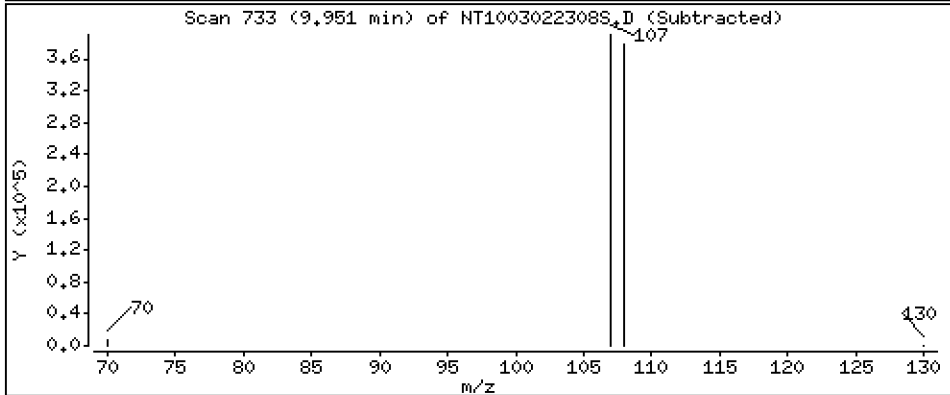
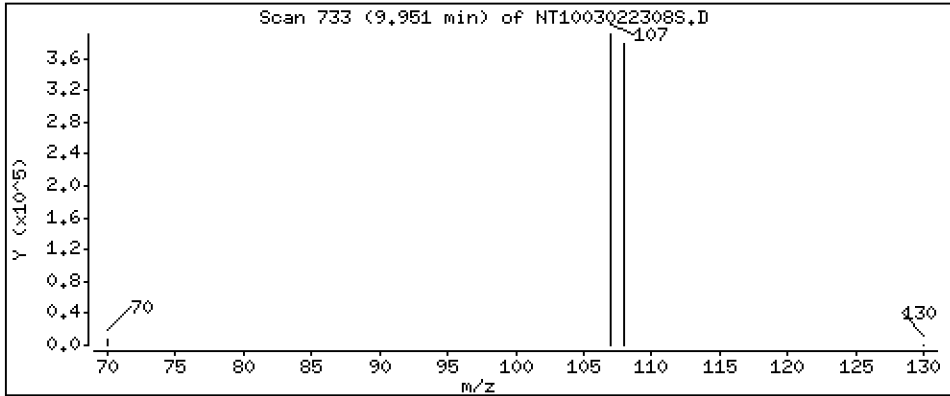
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.325 ug/L





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

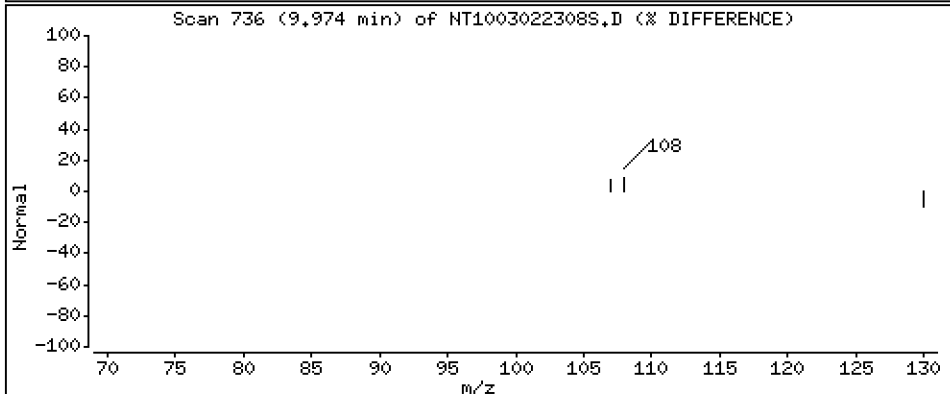
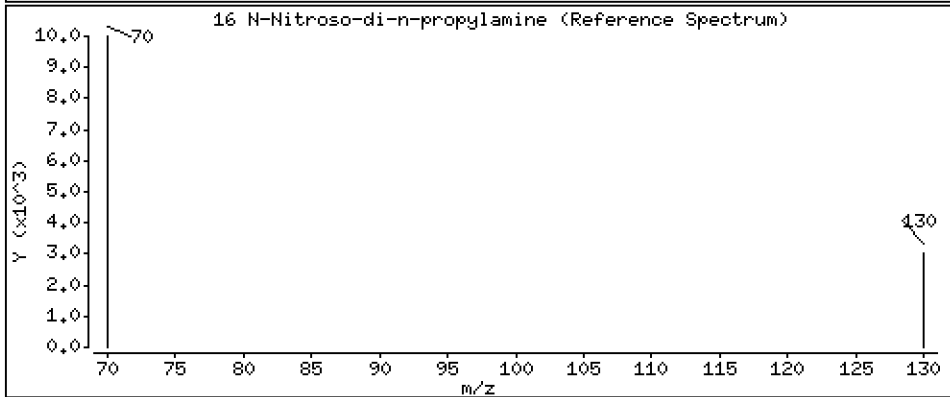
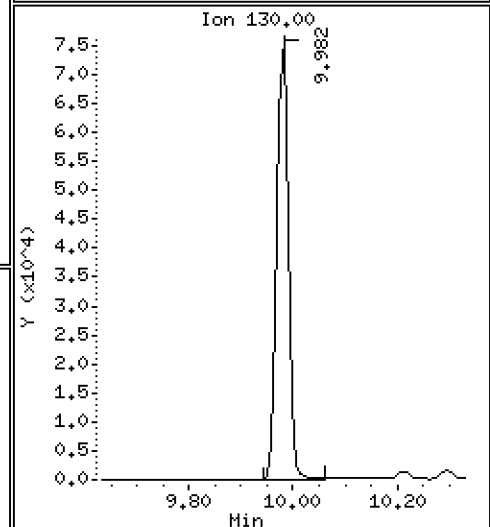
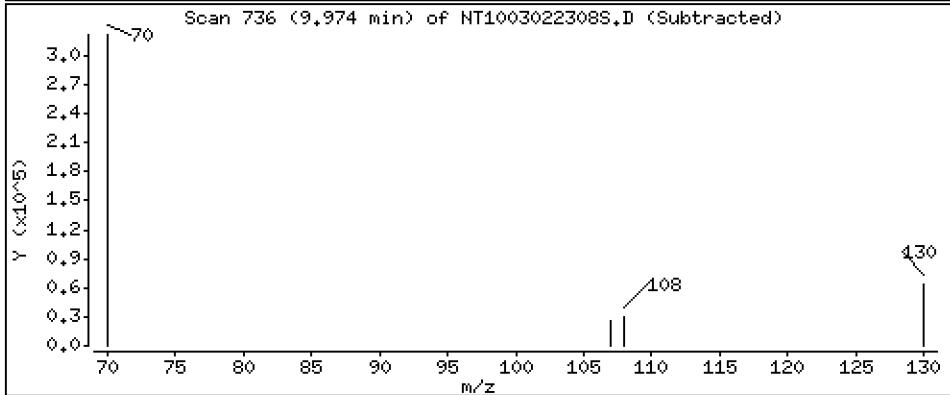
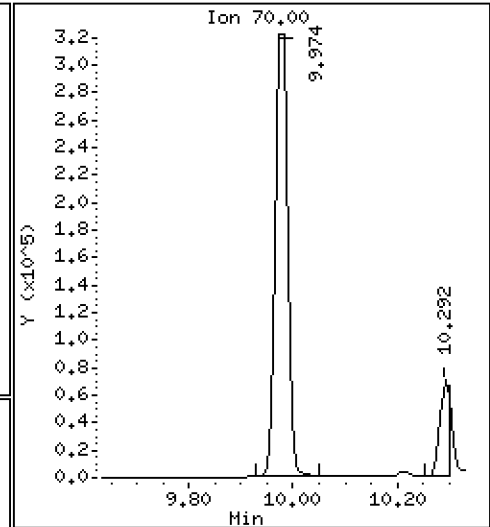
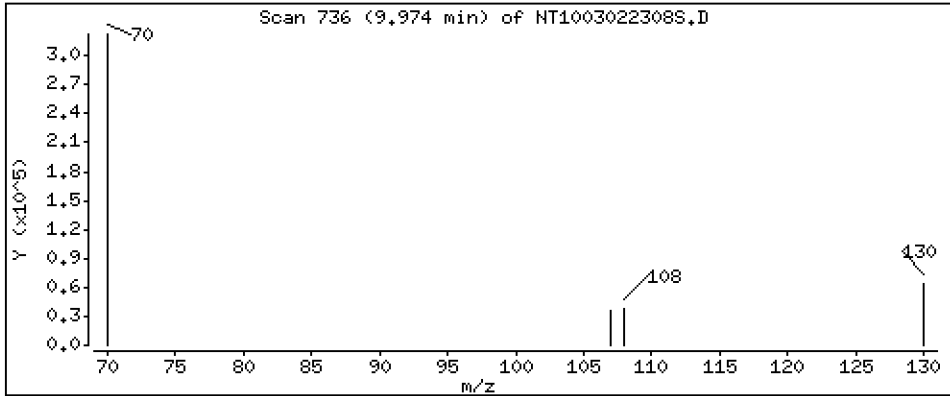
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 4.657 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

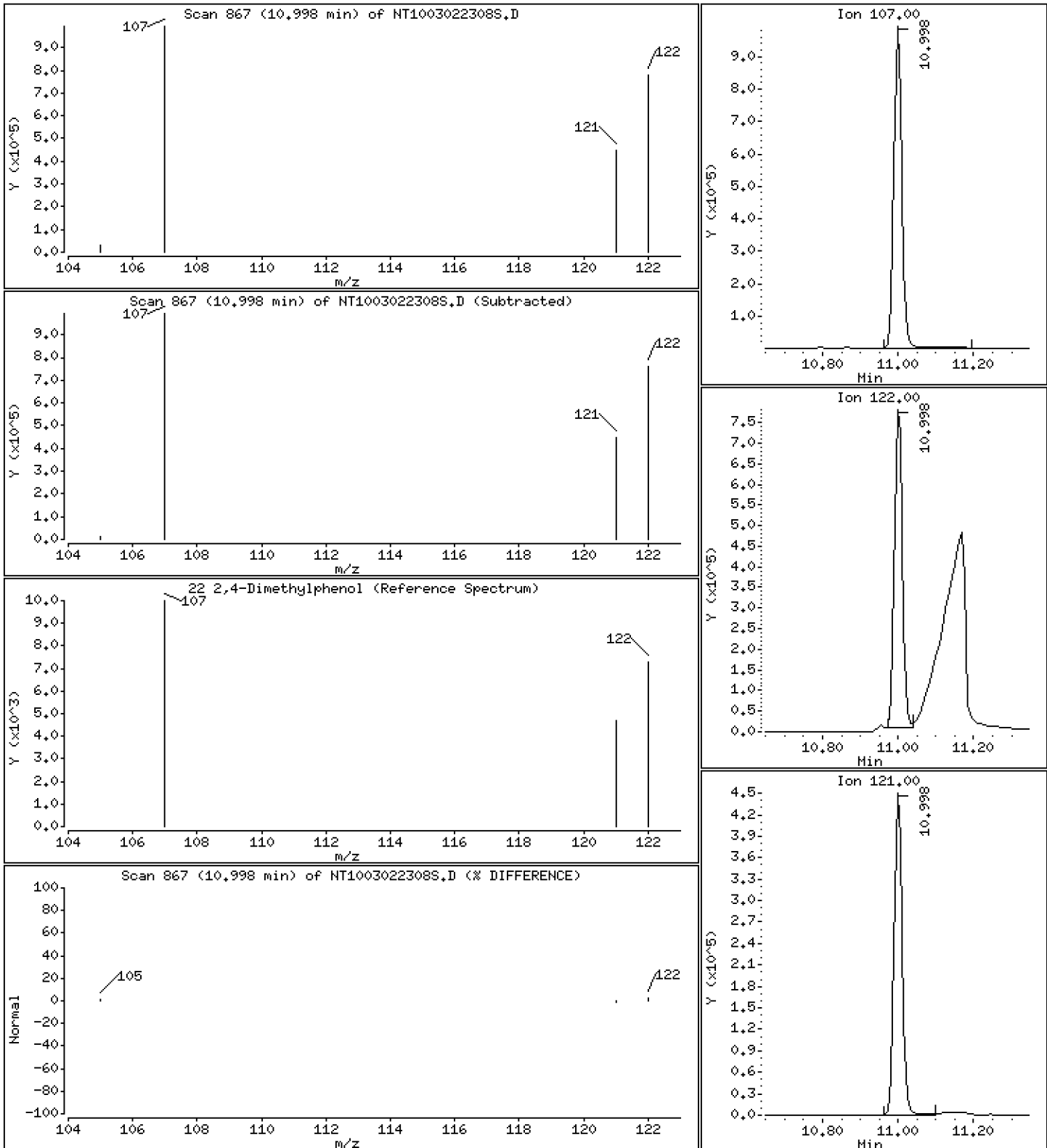
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 7,978 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

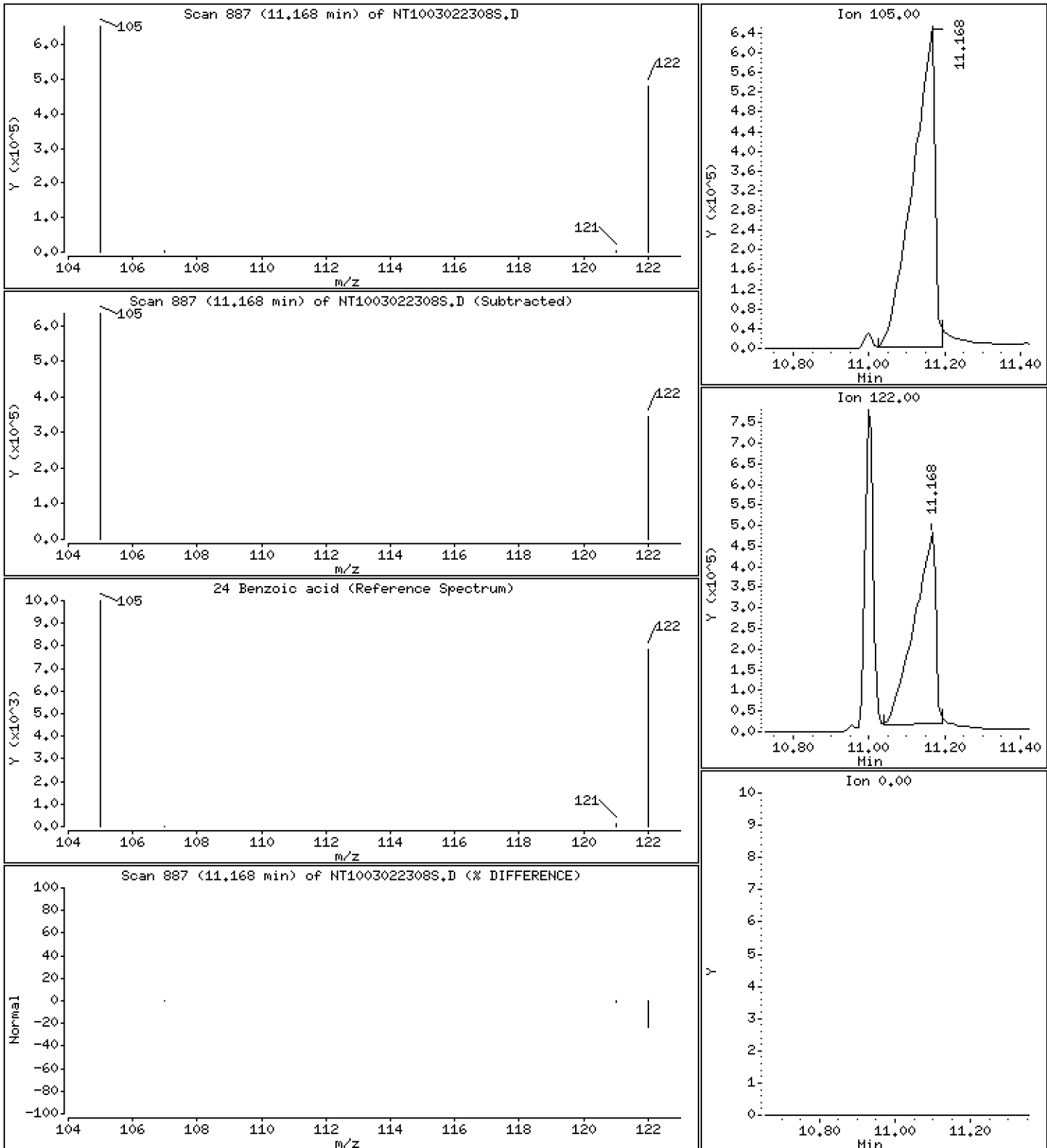
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 23.46 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

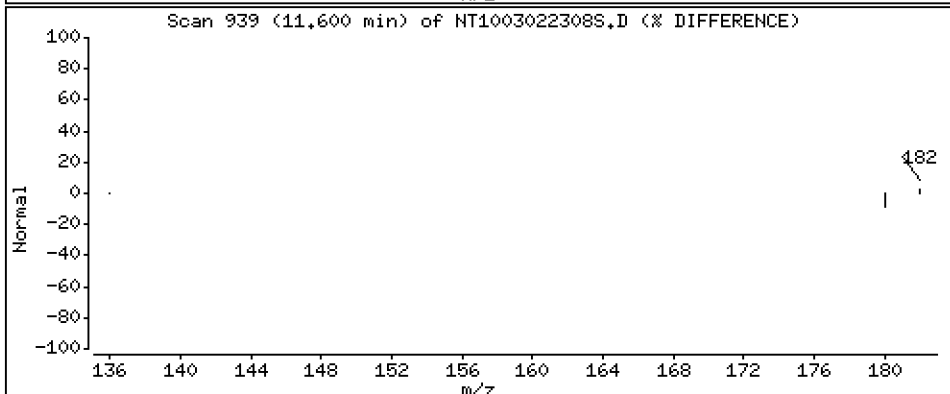
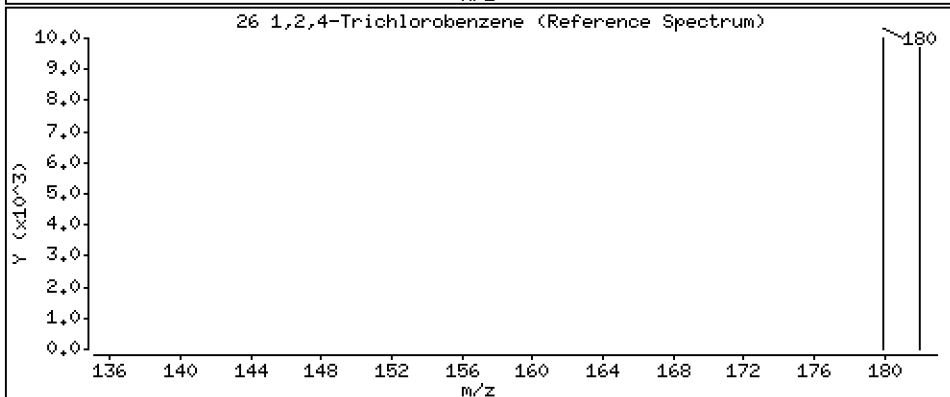
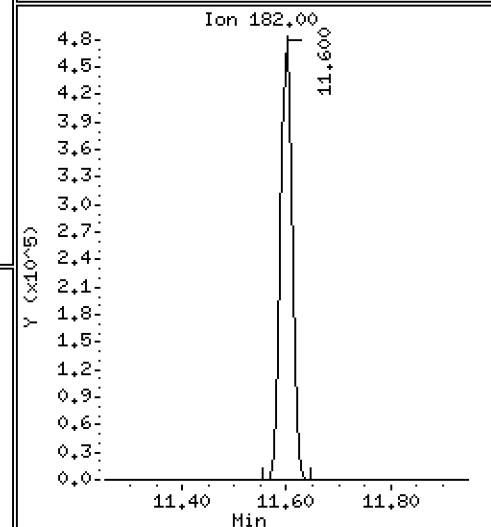
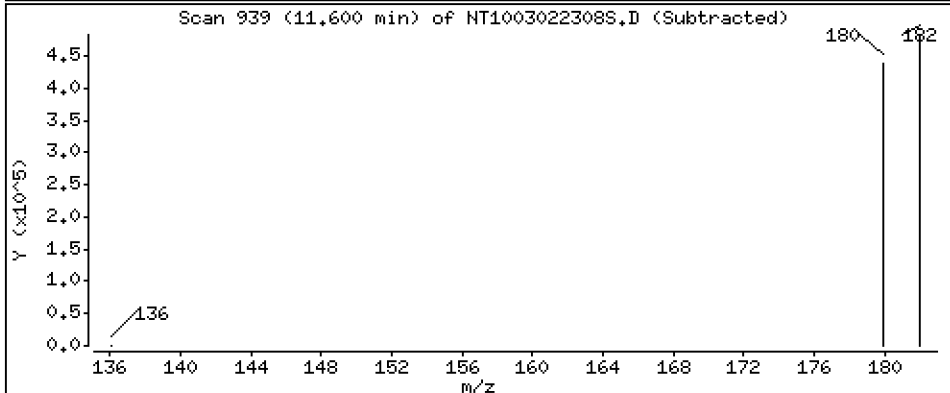
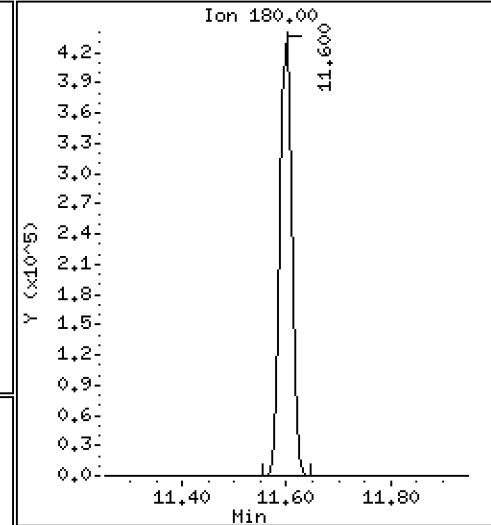
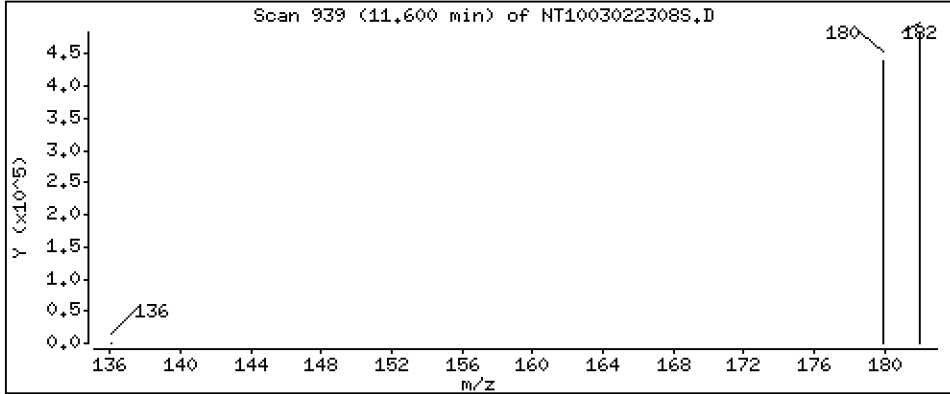
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,336 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

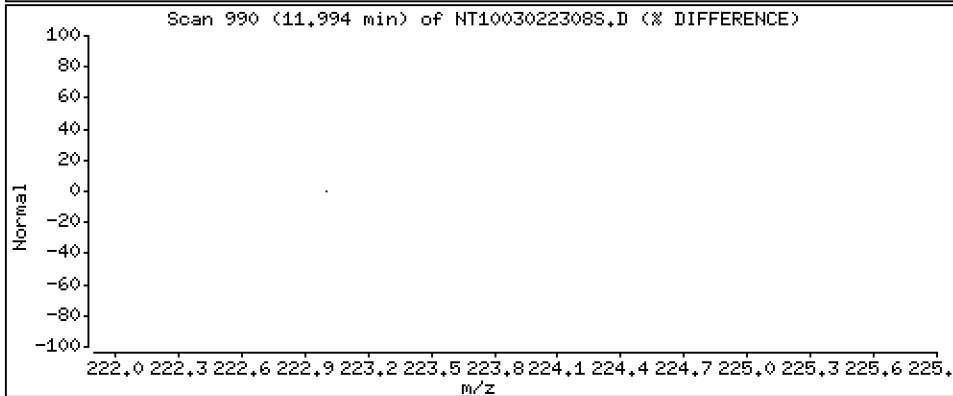
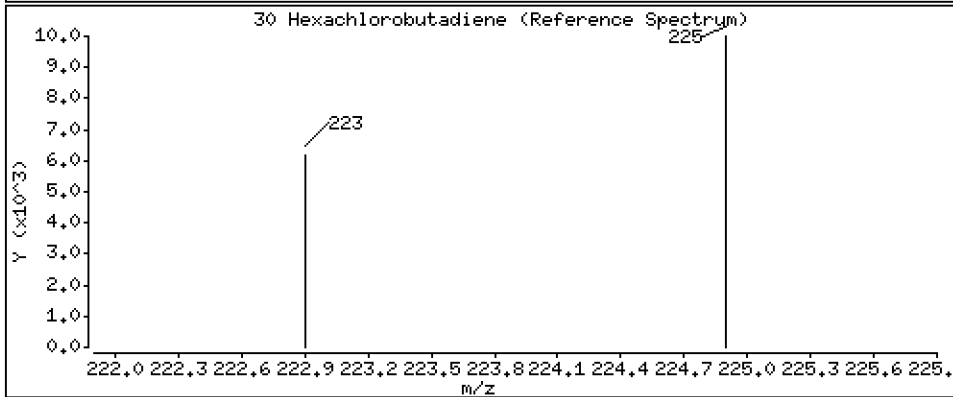
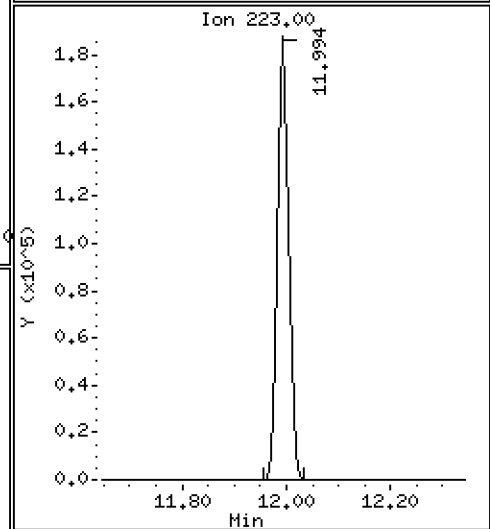
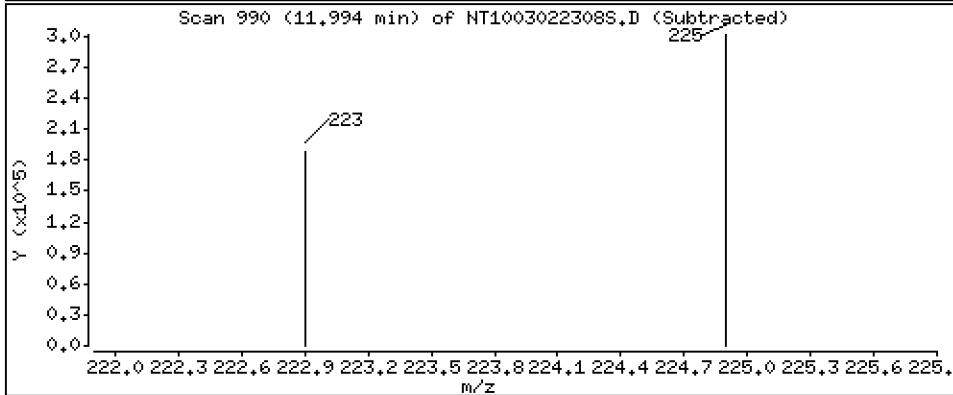
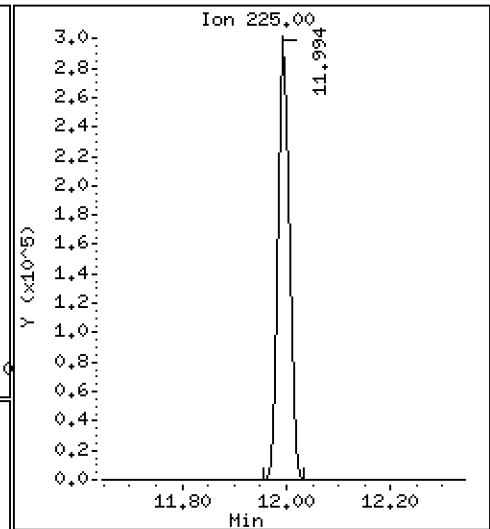
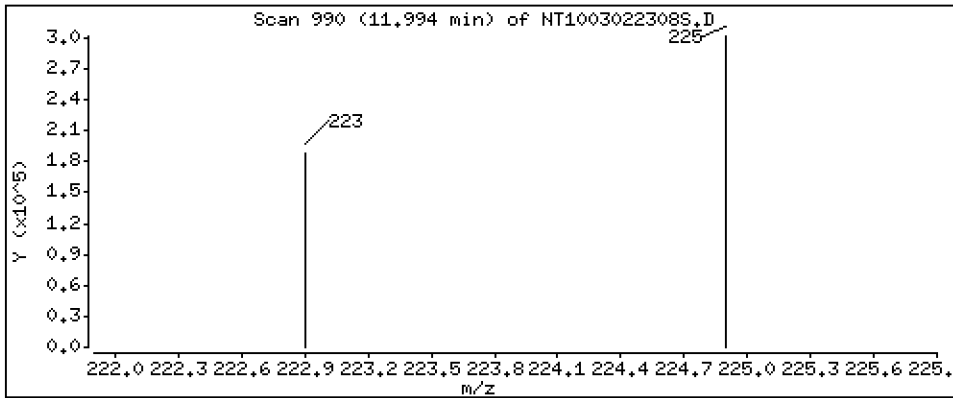
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,139 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

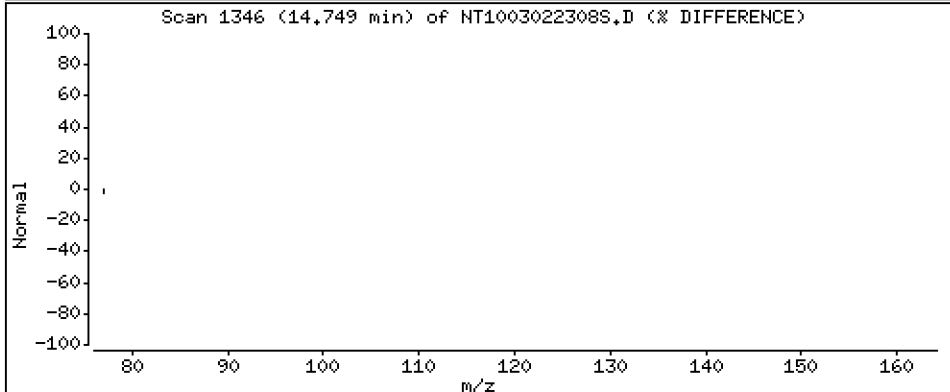
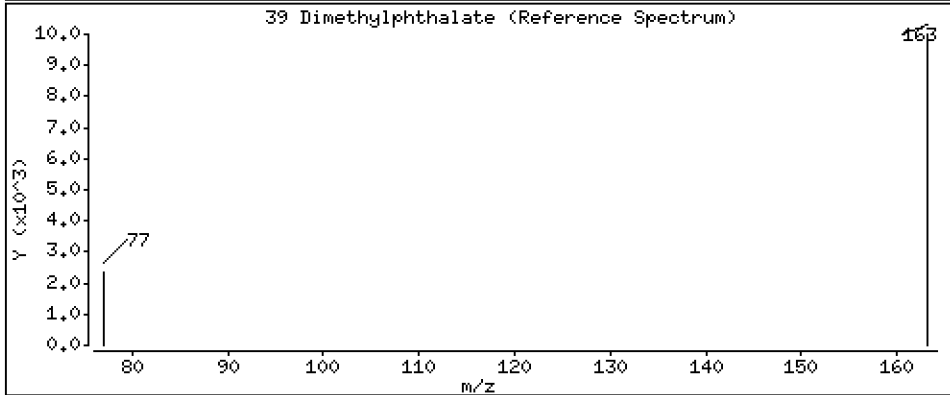
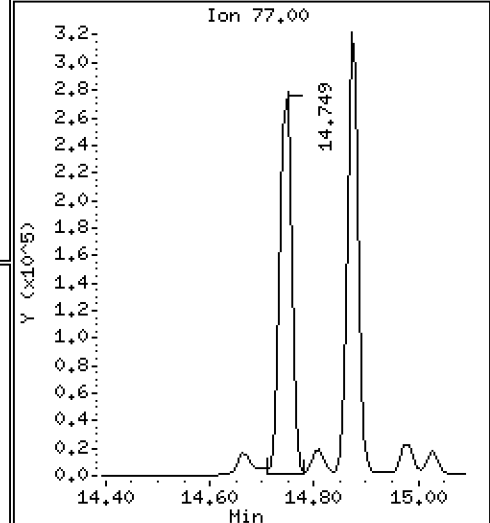
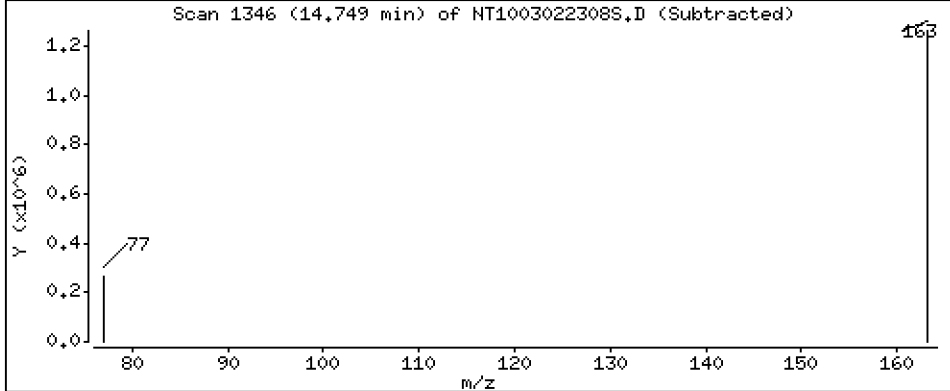
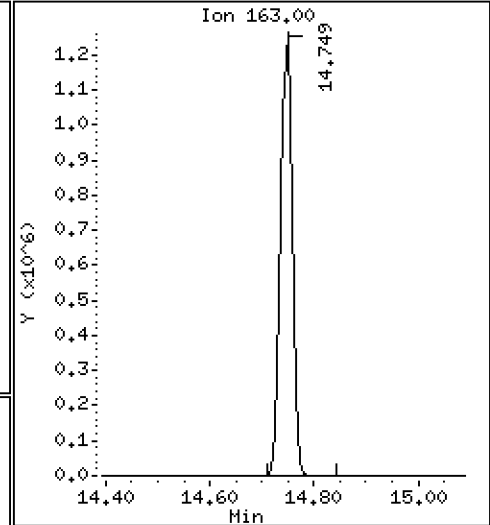
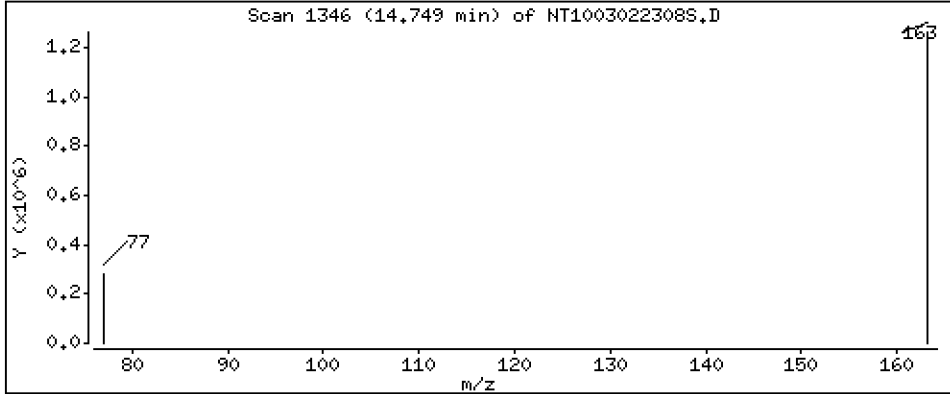
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,228 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

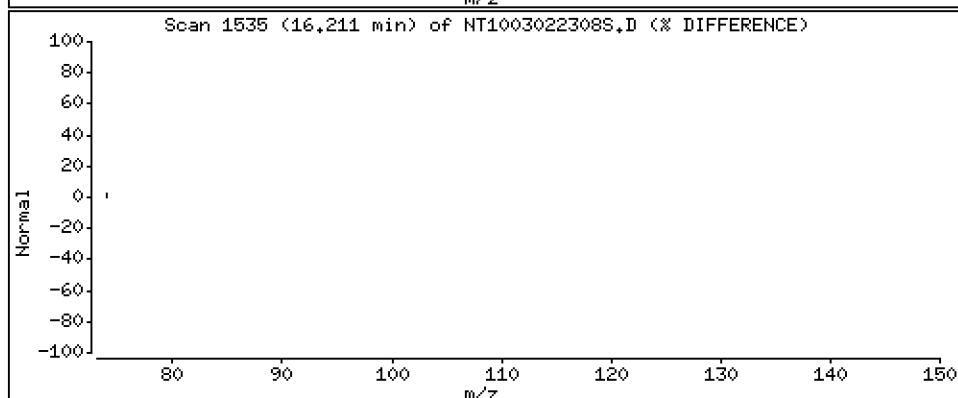
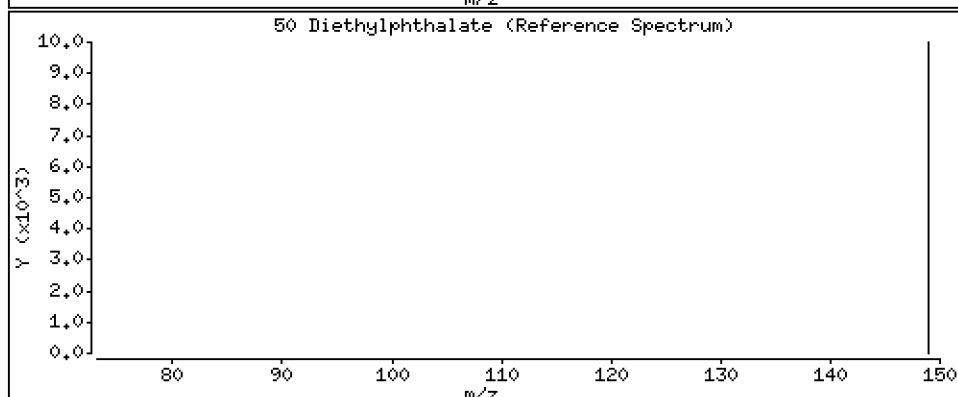
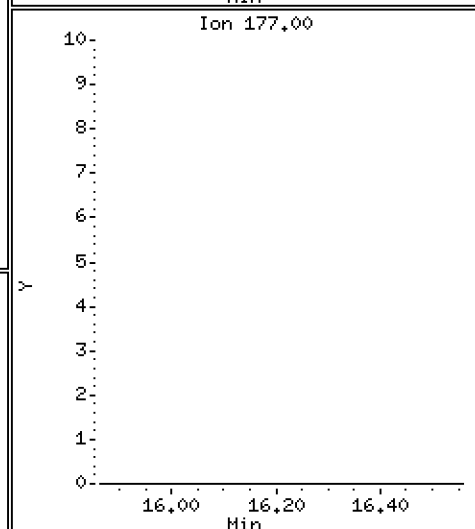
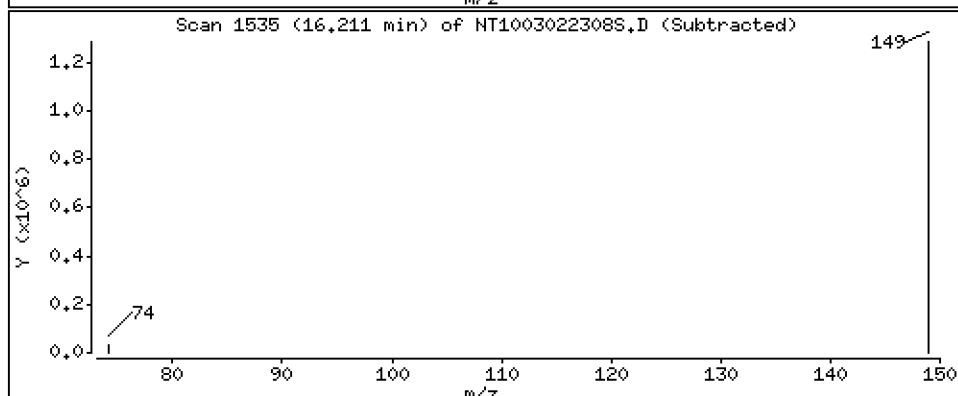
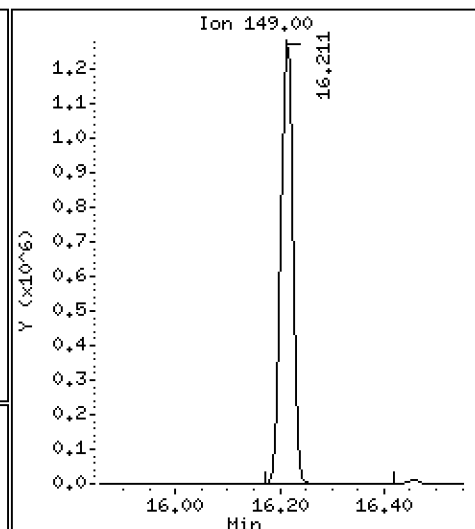
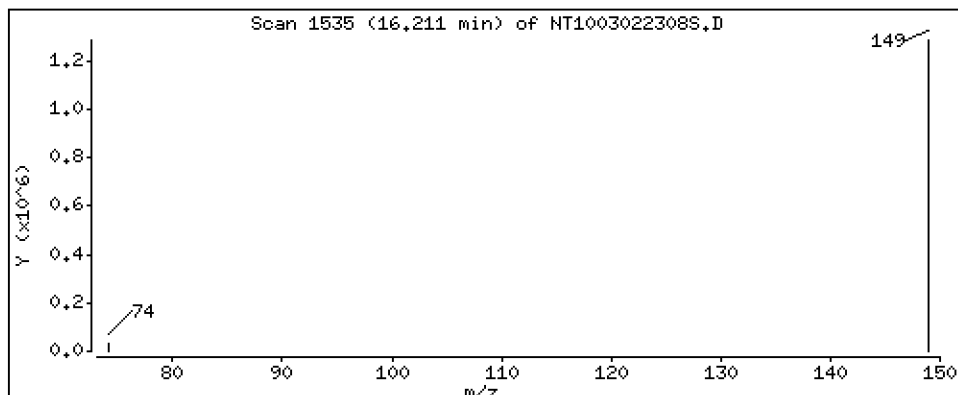
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,823 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

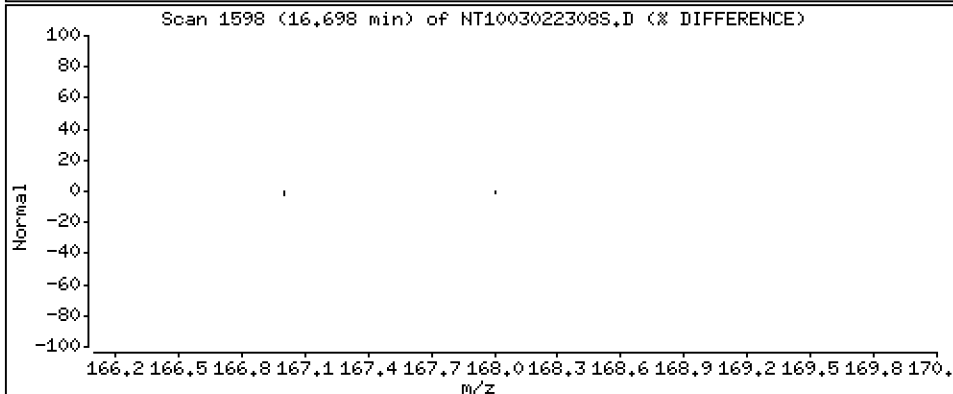
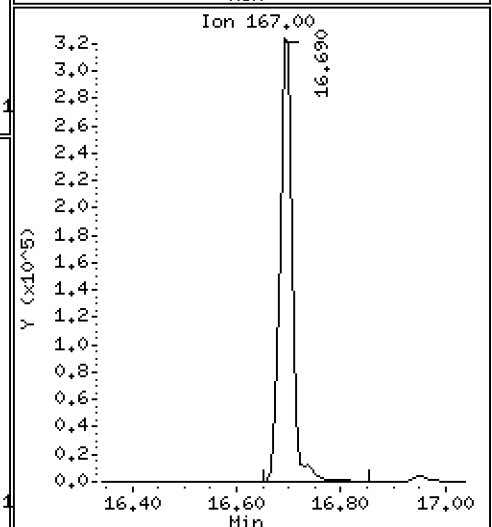
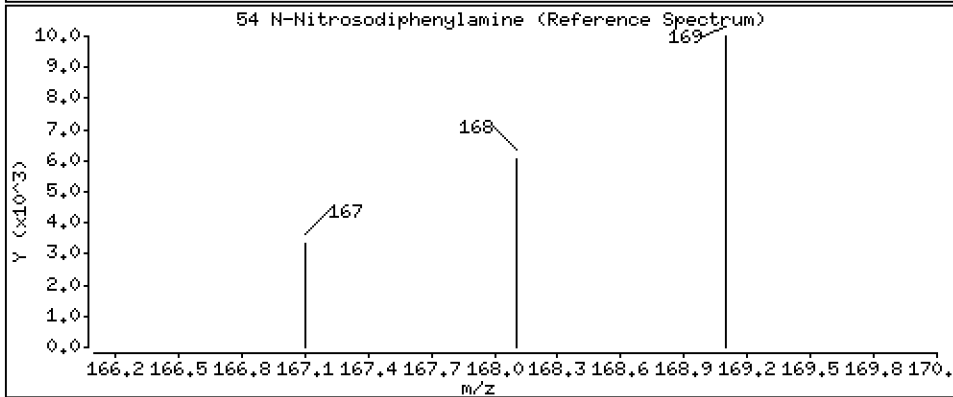
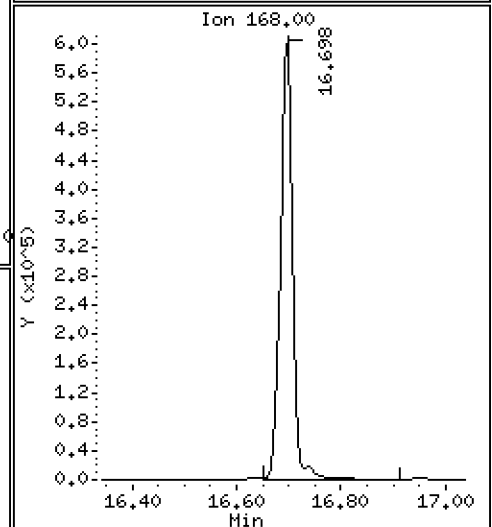
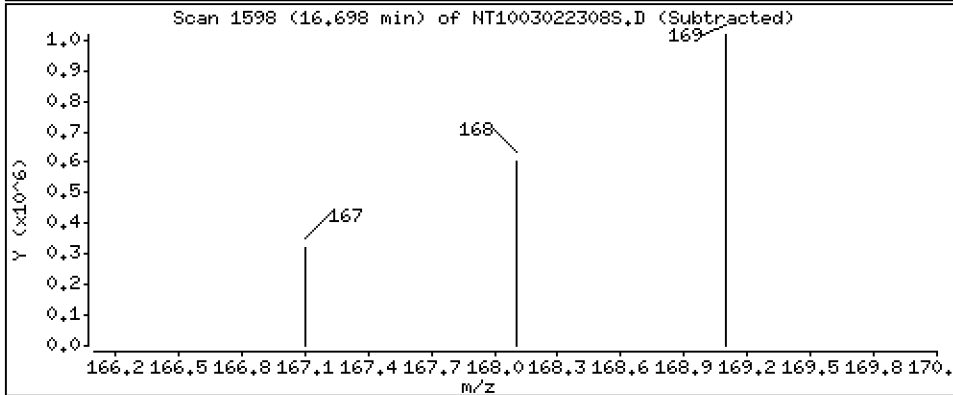
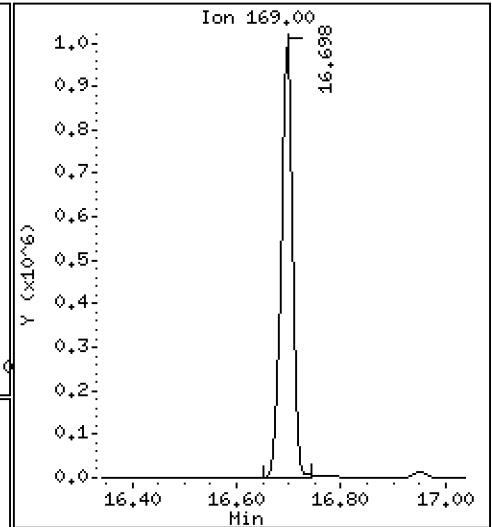
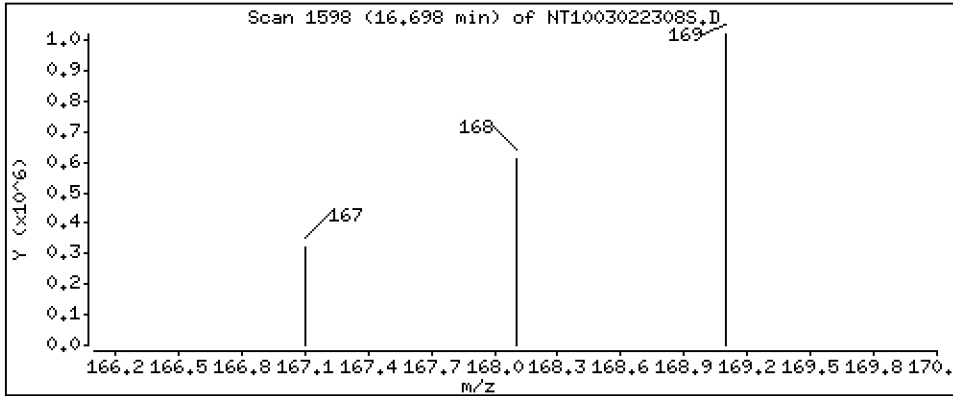
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,761 ug/L





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

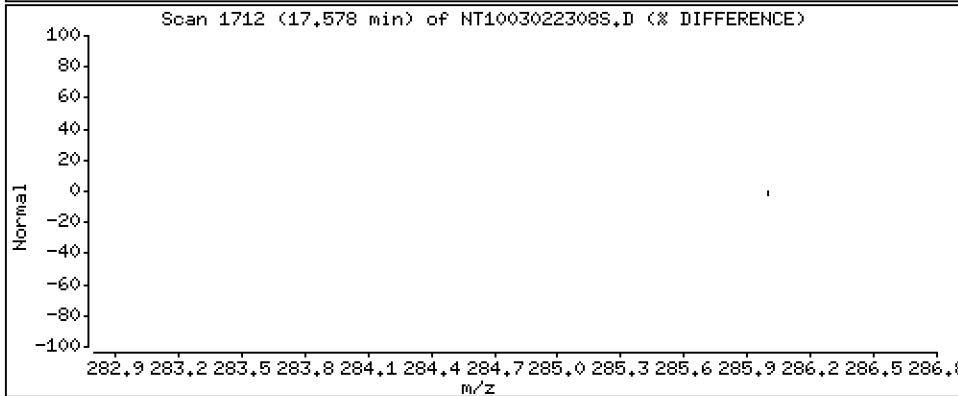
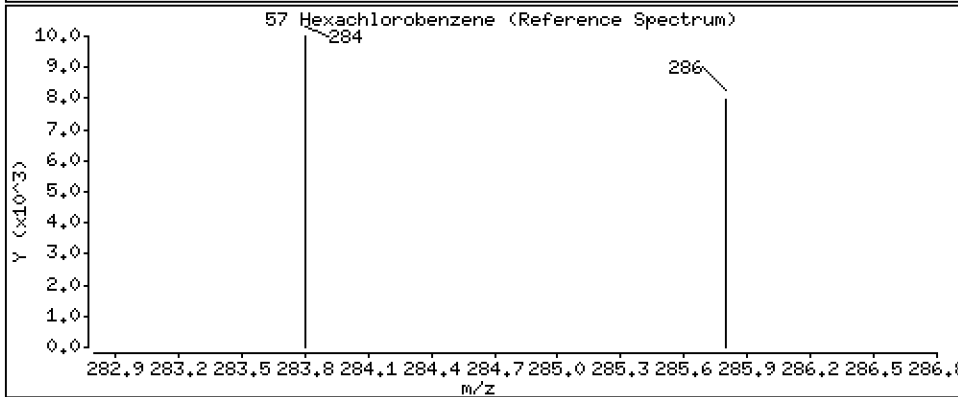
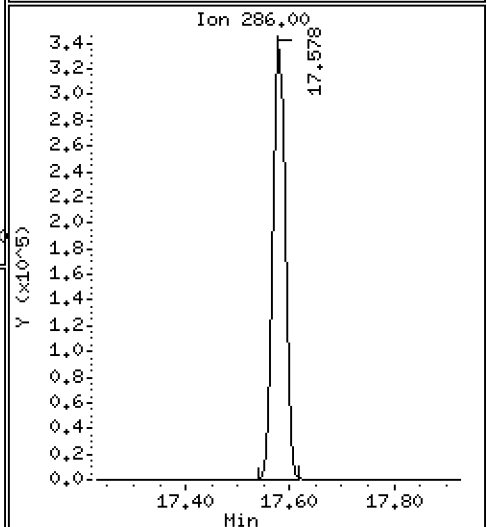
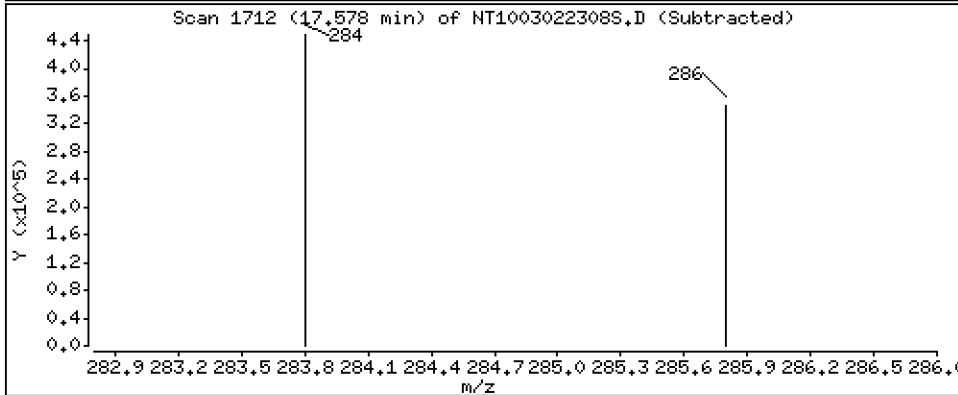
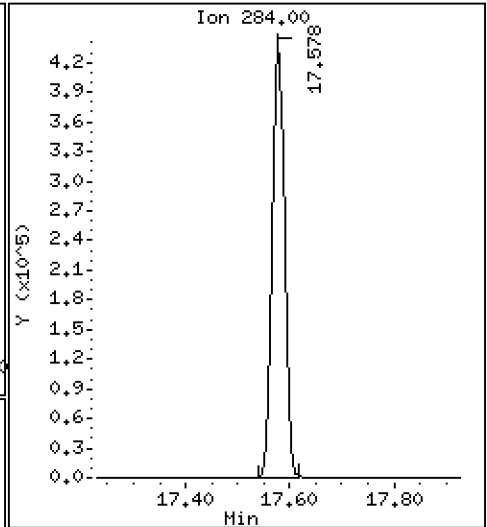
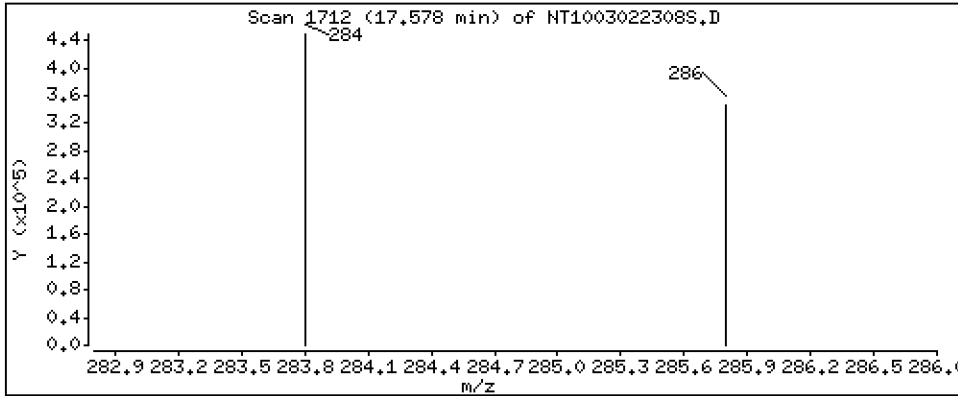
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.467 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

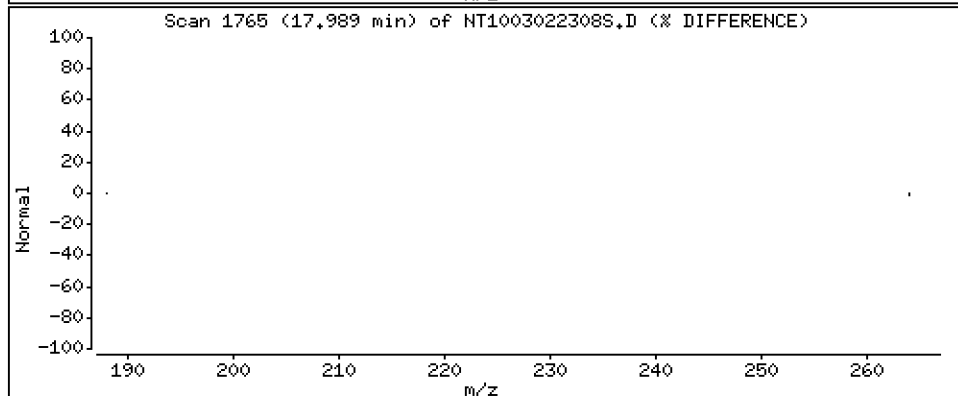
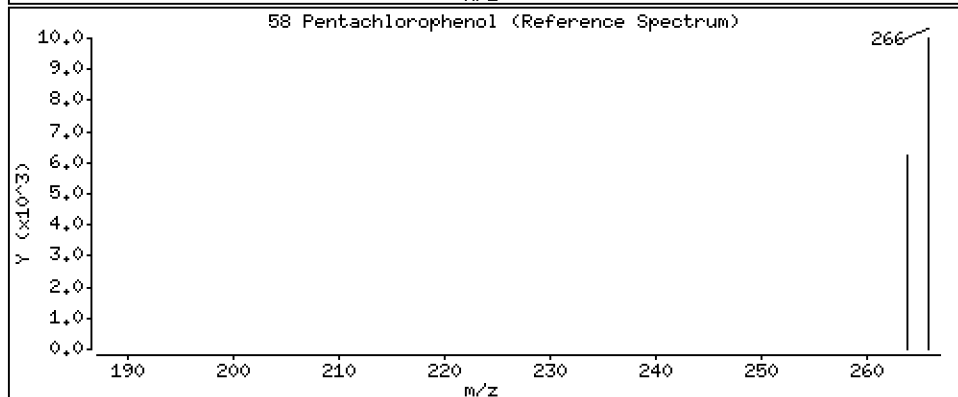
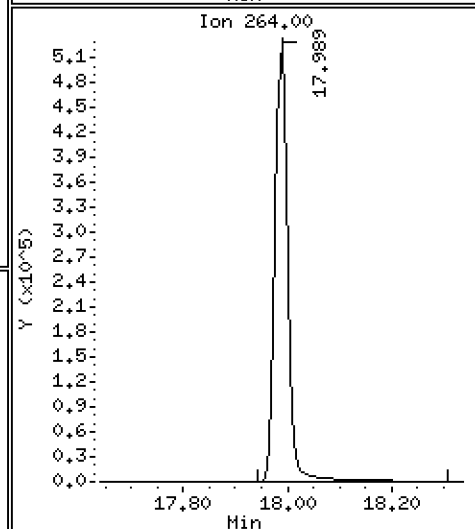
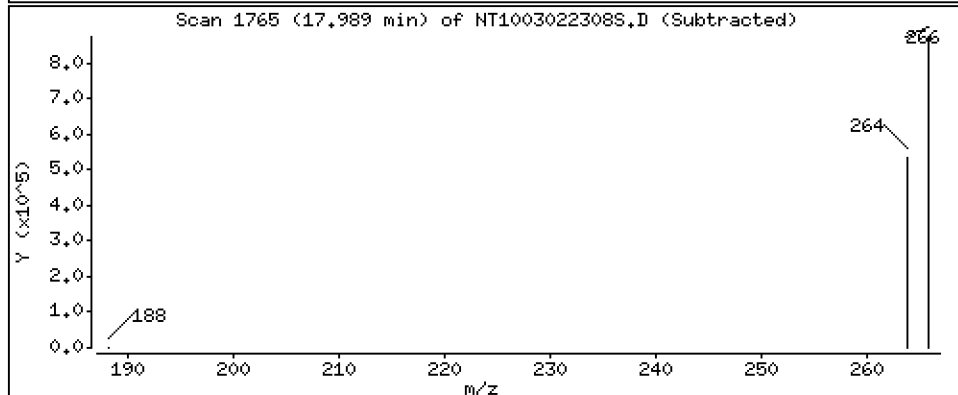
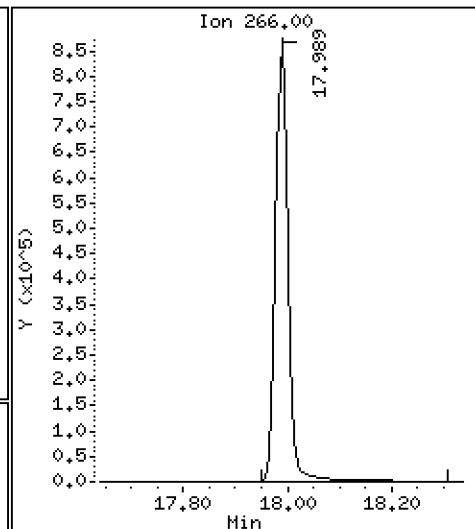
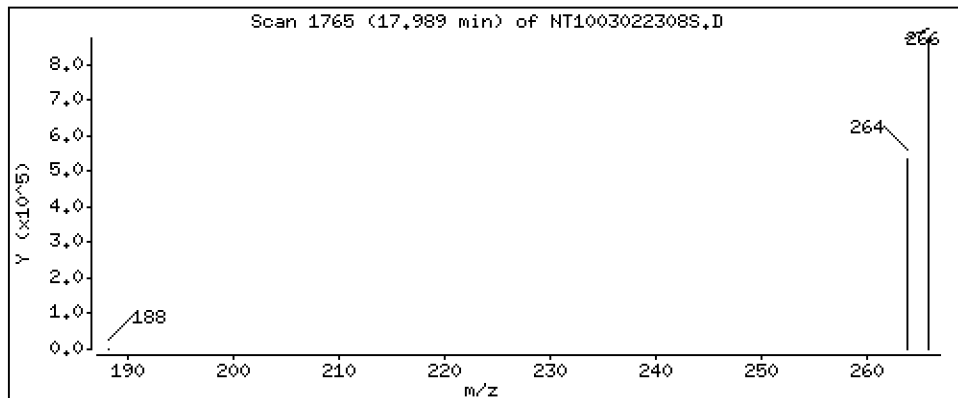
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 16,54 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

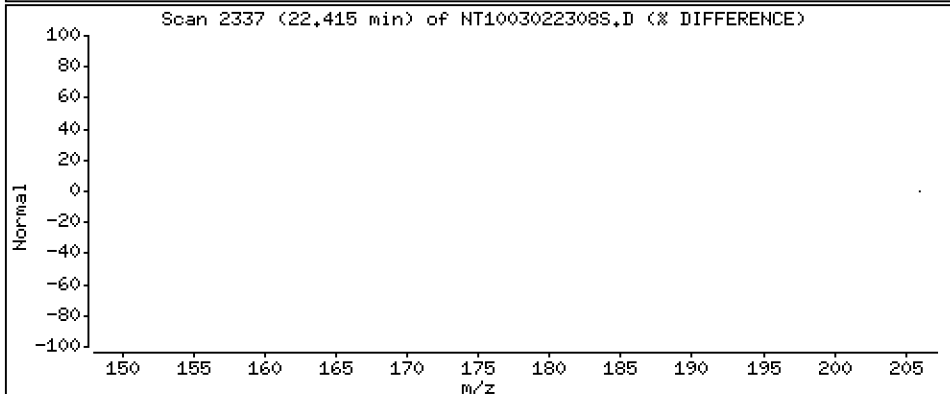
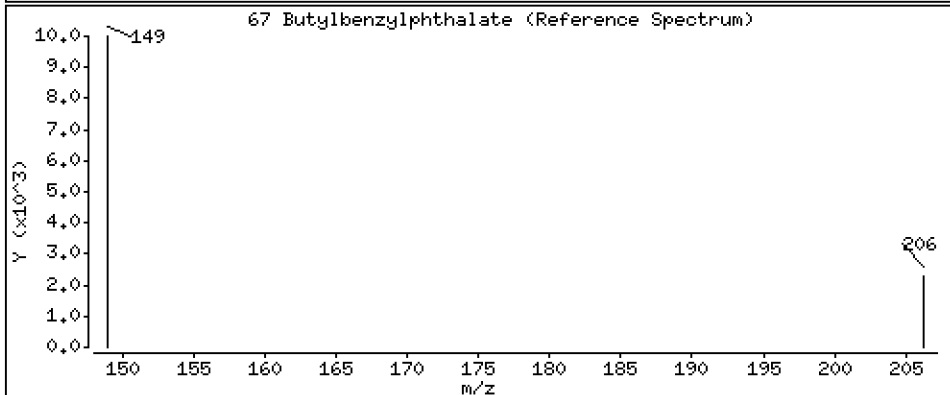
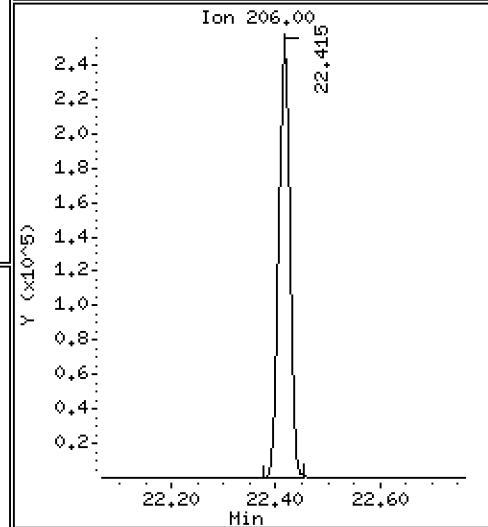
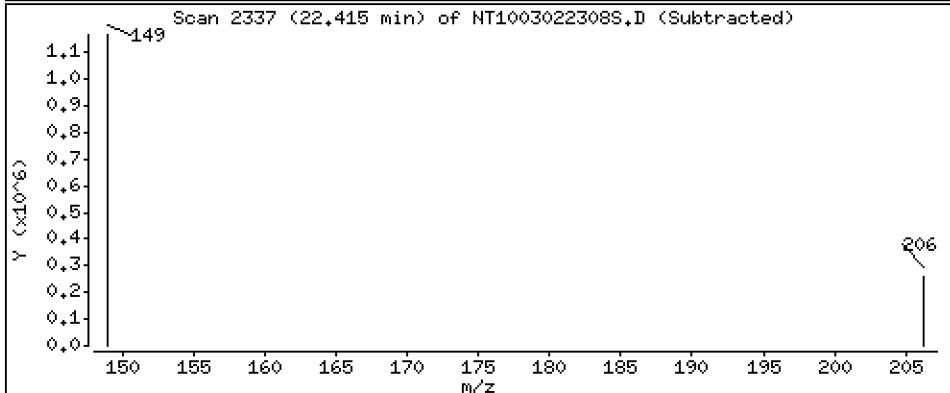
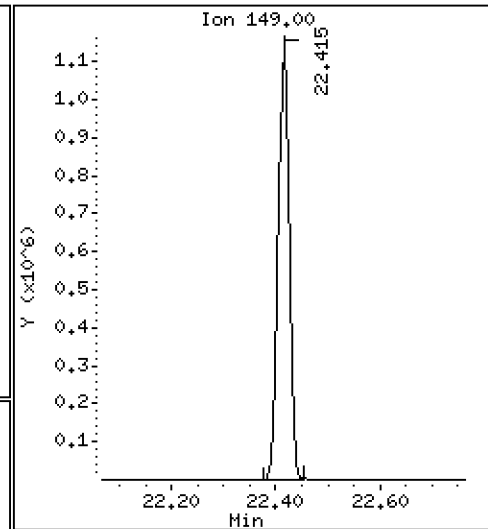
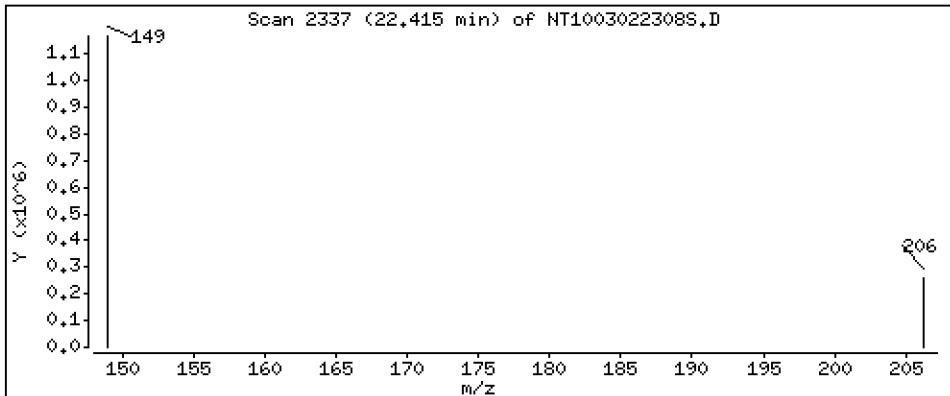
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 4.368 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

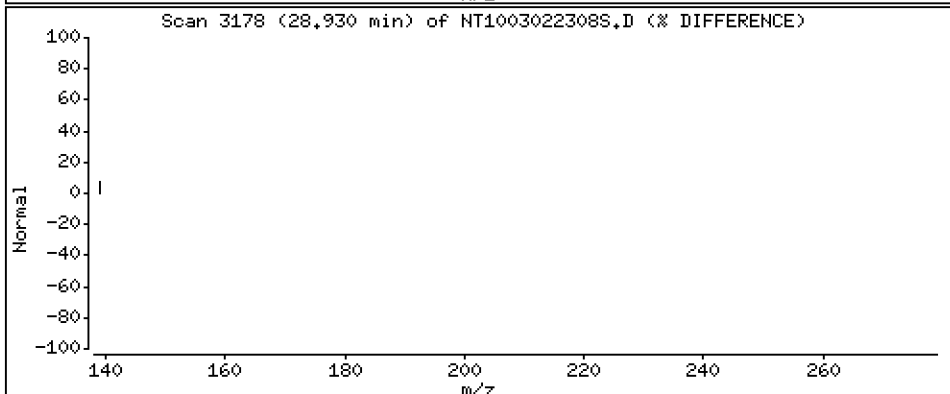
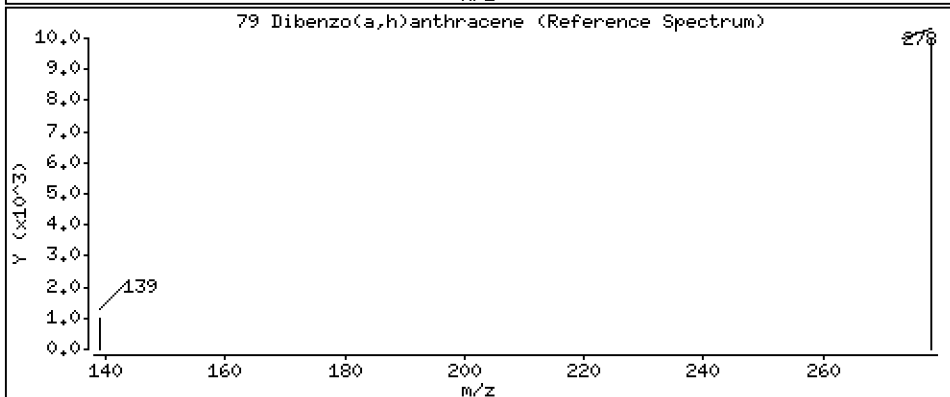
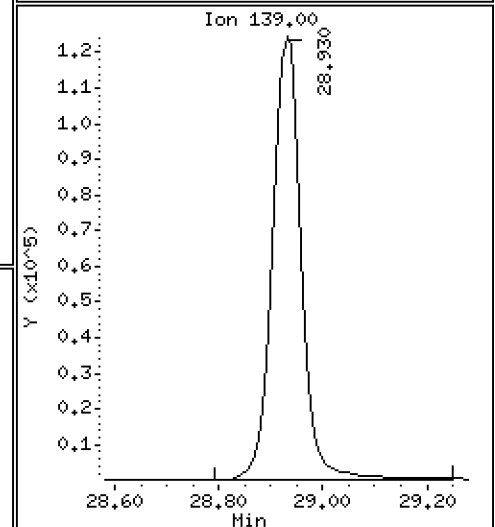
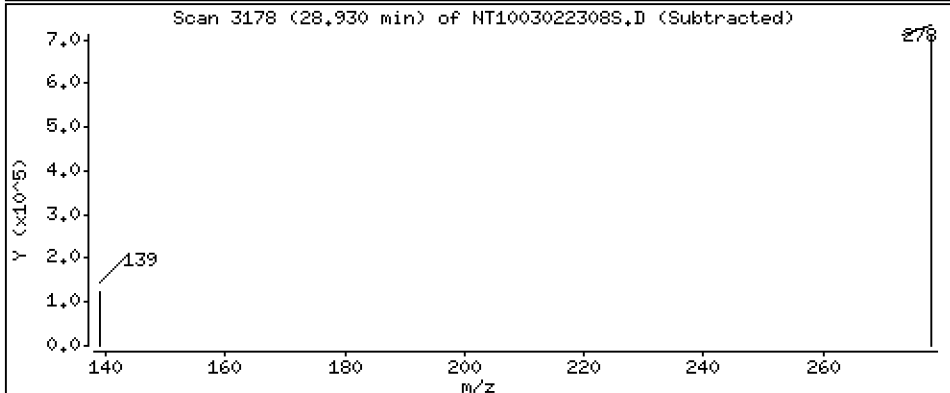
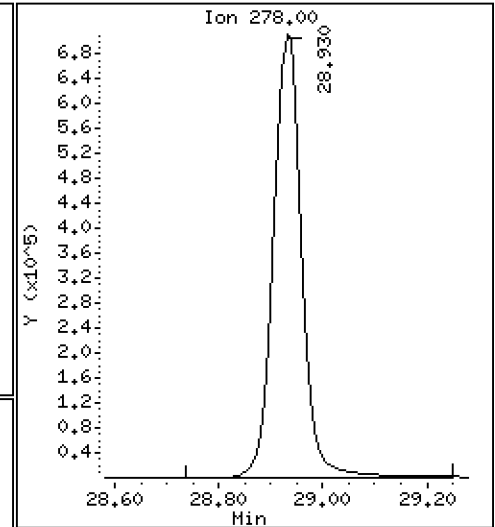
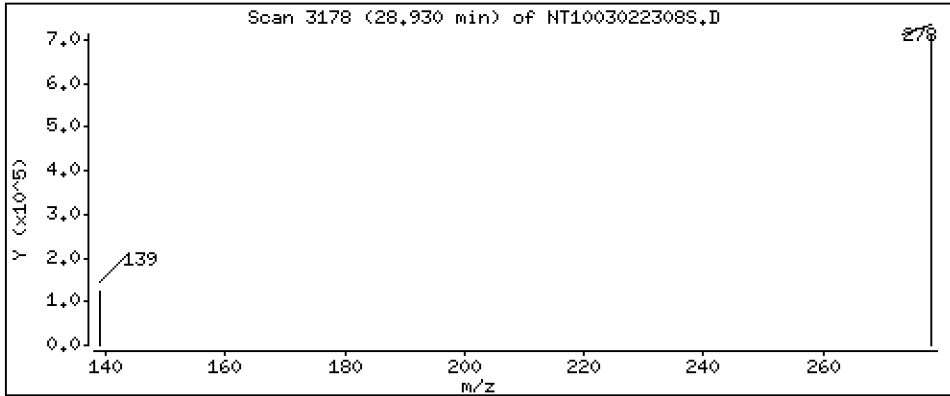
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 4.962 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

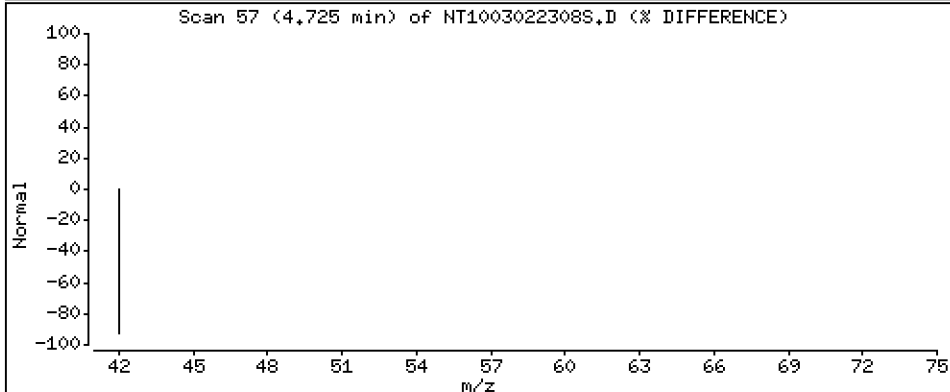
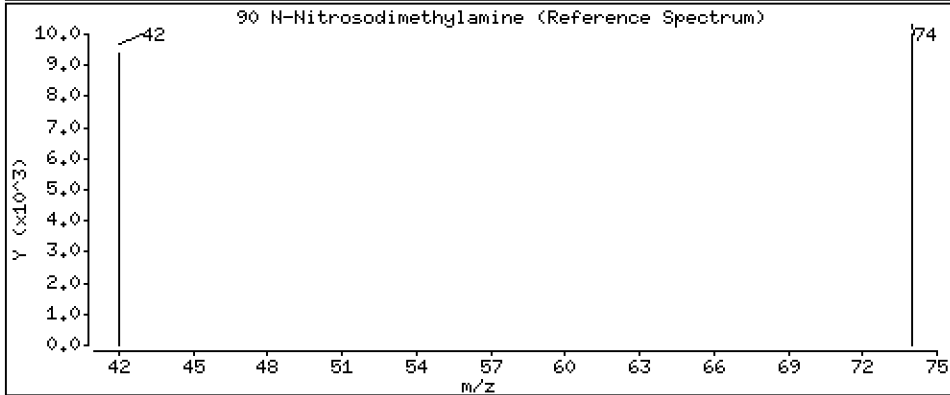
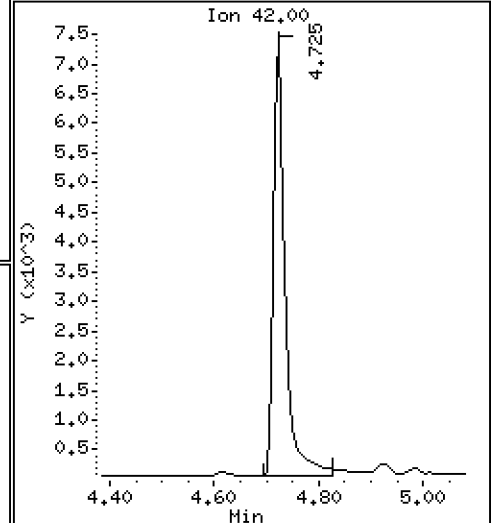
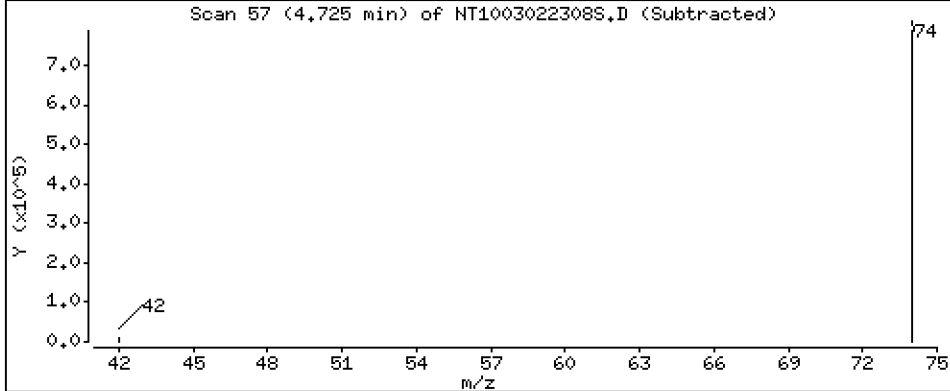
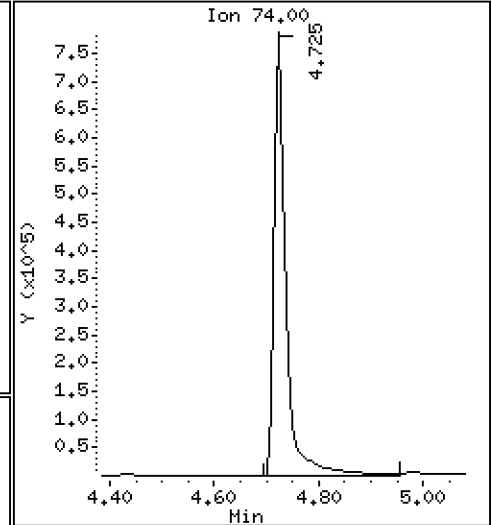
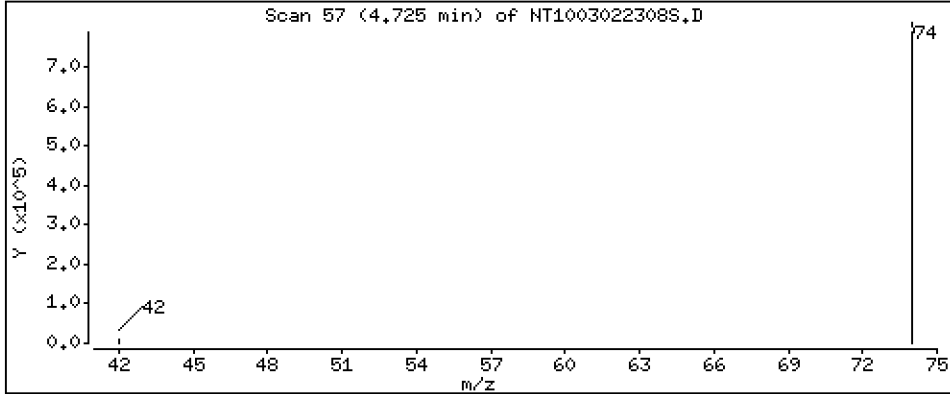
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.83 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022308S.D  
 Lab Smp Id: BLA0624-BSD2  
 Inj Date : 02-MAR-2023 18:50 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BSD1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1057332	6.60791	6.608 (R)
3 Phenol	94		8.517	8.517	(0.921)	1084422	4.48897	4.489
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	853967	4.11127	4.111
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	560466	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	861054	4.26368	4.264
11 Benzyl alcohol	79		9.477	9.476	(1.024)	603180	4.34406	4.344
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	839585	4.32531	4.325
13 2-Methylphenol	108		9.655	9.655	(1.044)	580325	3.95480	3.955
15 4-Methylphenol	108		9.950	9.942	(1.076)	670458	4.32548	4.325
16 N-Nitroso-di-n-propylamine	70		9.973	9.981	(1.078)	498084	4.65653	4.657
22 2,4-Dimethylphenol	107		10.997	10.997	(0.938)	1444074	7.97792	7.978
24 Benzoic acid	105		11.167	11.074	(0.953)	2629143	23.4639	23.46
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	650704	4.33589	4.336
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	2085063	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	440778	4.13883	4.139
39 Dimethylphthalate	163		14.749	14.741	(0.963)	1848286	5.22825	5.228
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	1113362	4.00000	
50 Diethylphthalate	149		16.210	16.203	(1.059)	1941262	5.82295	5.823
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1541071	4.76088	4.761
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	676633	4.46668	4.467

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.988	17.988	(0.977)	1378551	16.5427	16.54
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2000131	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	763988	4.35620	4.356(R)
67 Butylbenzylphthalate	149	22.414	22.414	(0.957)	1574214	4.36757	4.368
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	2168746	4.00000	
* 77 Perylene-d12	264	26.115	26.115	(1.000)	2165910	4.00000	
79 Dibenzo(a,h)anthracene	278	28.929	28.929	(1.108)	2691548	4.96165	4.962
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	1215136	12.8270	12.83

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022308S.D  
 Lab Smp Id: BLA0624-BSD2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	560466	13.59
27 Naphthalene-d8	1779056	889528	3558112	2085063	17.20
42 Acenaphthene-d10	954569	477285	1909138	1113362	16.64
59 Phenanthrene-d10	1596290	798145	3192580	2000131	25.30
69 Chrysene-d12	1649110	824555	3298220	2168746	31.51
77 Perylene-d12	1901958	950979	3803916	2165910	13.88

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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



REVIEW SUMMARY FOR FILE - NT1003022308S.D

Lab ID: BLA0624-BSD2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 18:50

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.945	0.0080	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**MS / MS DUPLICATE RECOVERY**  
**EPA 8270E-SIM**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor OEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Matrix: <u>Solid</u>	Analyzed: <u>03/02/23 19:28</u>
Batch: <u>BLA0624</u>	Laboratory ID: <u>BLA0624-MS2</u>
Preparation: <u>EPA 3546 (Microwave)</u>	Sequence Name: <u>Matrix Spike</u>
Initial/Final: <u>16.64 g / 1 mL</u>	Source Sample: <u>LDW23-SS1066</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	53.6		454		80.2	36 - 120
1,2-Dichlorobenzene	500	6.0		428		84.5	36 - 120
Benzyl Alcohol	500	25.3		433		81.7	25 - 123
Benzoic acid	2300	48.5	J	2290	Q	97.4	10 - 160
2,4-Dimethylphenol	1300	10.5	J	1370		104	10 - 120
1,2,4-Trichlorobenzene	500	2.7	J	451		89.7	35 - 120
N-Nitrosodiphenylamine	500	11.7		451		88.0	27 - 120
Pentachlorophenol	1300	3.2	J	1790	Q	137 *	26 - 120

\* Values outside of QC limits



**MS / MS DUPLICATE RECOVERY**  
**EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>03/02/23 20:06</u>
Batch:	<u>BLA0624</u>	Laboratory ID:	<u>BLA0624-MSD2</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>Matrix Spike Dup</u>
Initial/Final:	<u>16.64 g / 1 mL</u>	Source Sample:	<u>LDW23-SS1066</u>

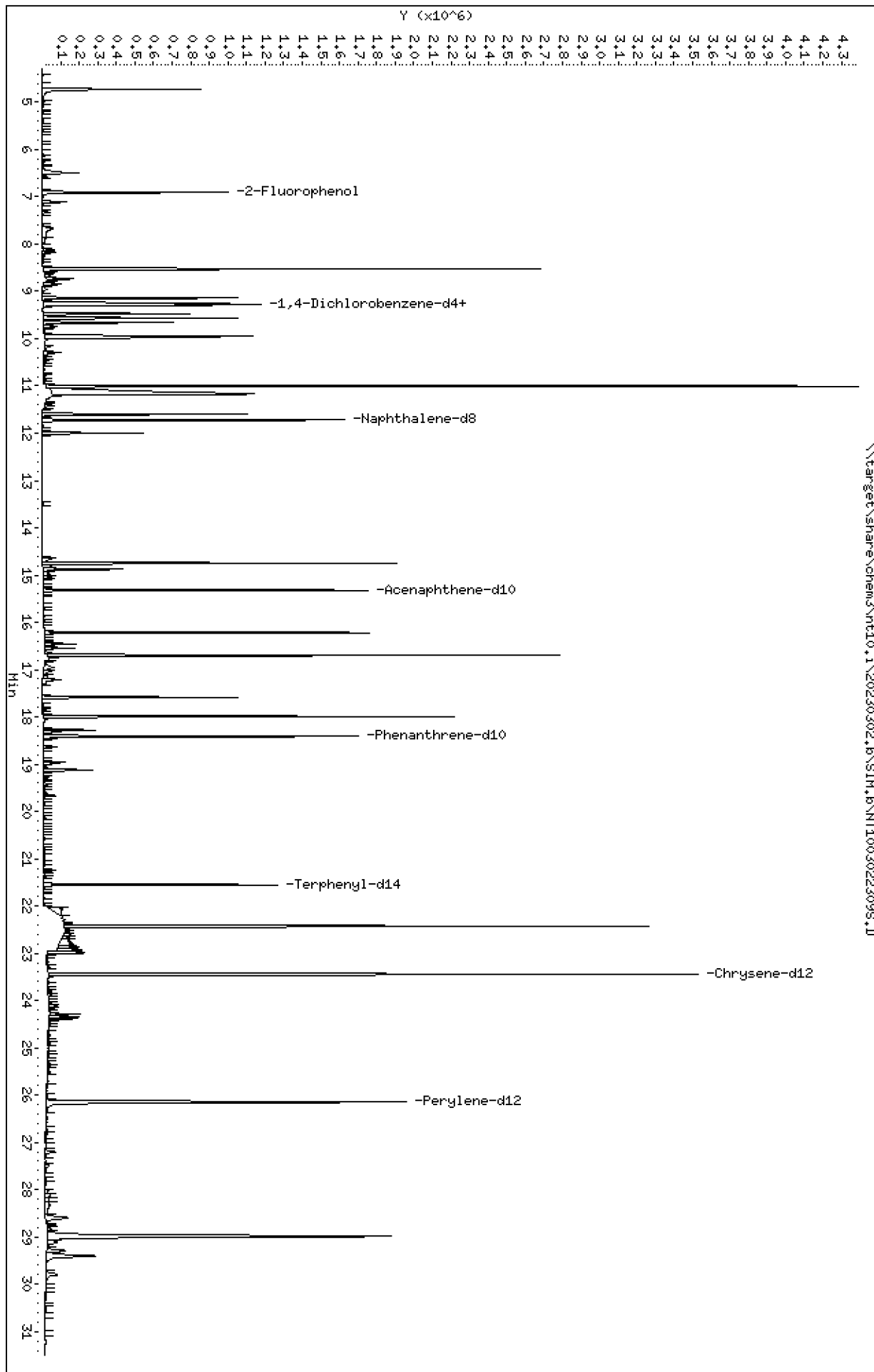
COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
1,4-Dichlorobenzene	500	547		98.7	18.5	30	36 - 120
1,2-Dichlorobenzene	500	422		83.2	1.51	30	36 - 120
Benzyl Alcohol	500	512		97.4	16.7	30	25 - 123
Benzoic acid	2300	1740	Q	73.8	26.9	30	10 - 160
2,4-Dimethylphenol	1300	1400		107	2.64	30	10 - 120
1,2,4-Trichlorobenzene	500	471		93.8	4.44	30	35 - 120
N-Nitrosodiphenylamine	500	421		81.8	7.01	30	27 - 120
Pentachlorophenol	1300	1330	Q	102	29.5	30	26 - 120

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022309S.D  
 Date: 02-MAR-2023 19:28  
 Client ID:  
 Sample Info: BLR0624-HSI  
 Volume Injected (uL): 1.0  
 Column phase: ZB-5msi

Instrument: nt10.1  
 Operator: JGR  
 Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022309S.D



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

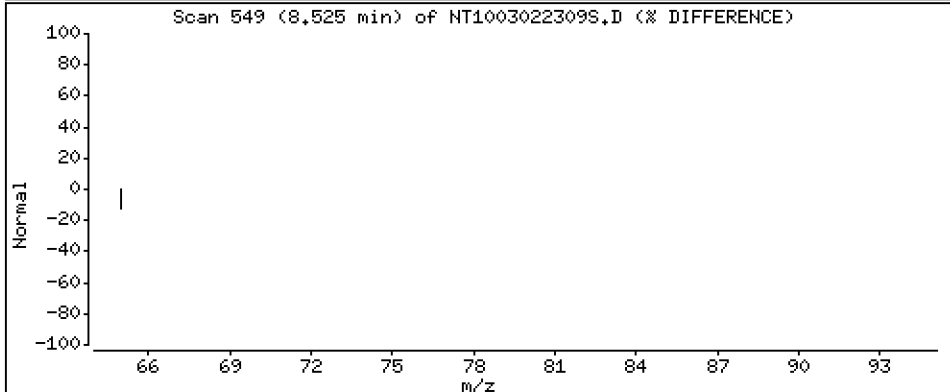
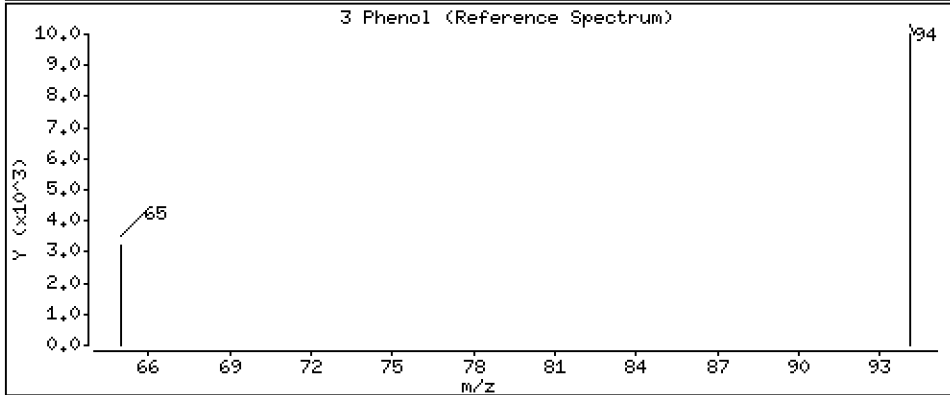
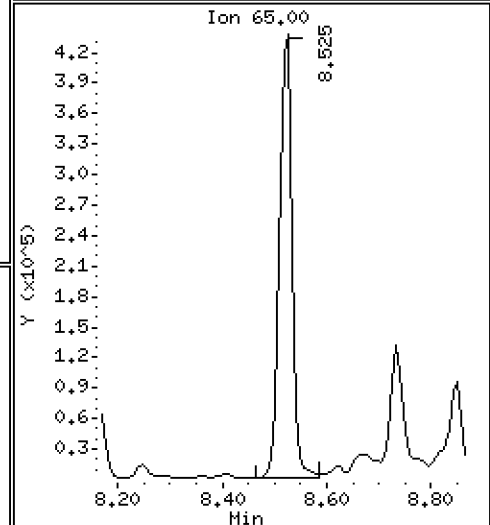
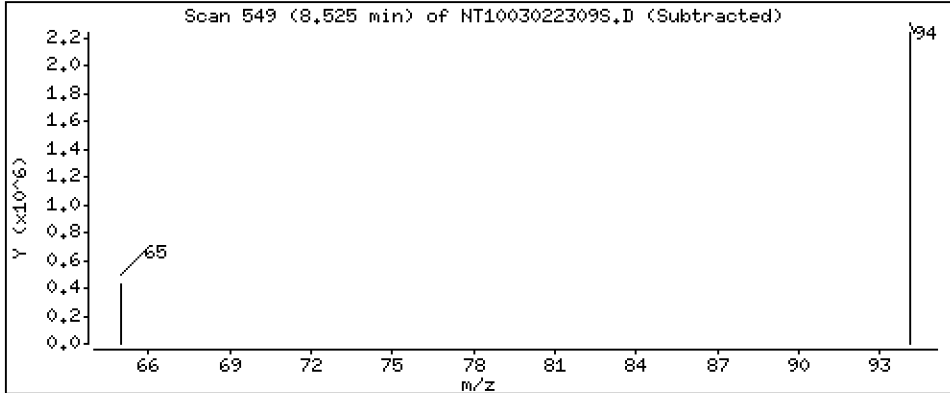
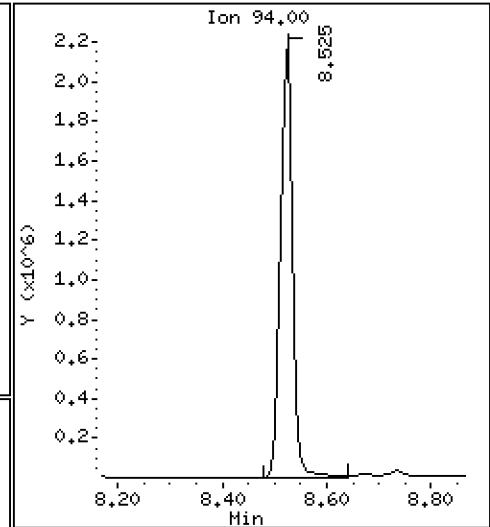
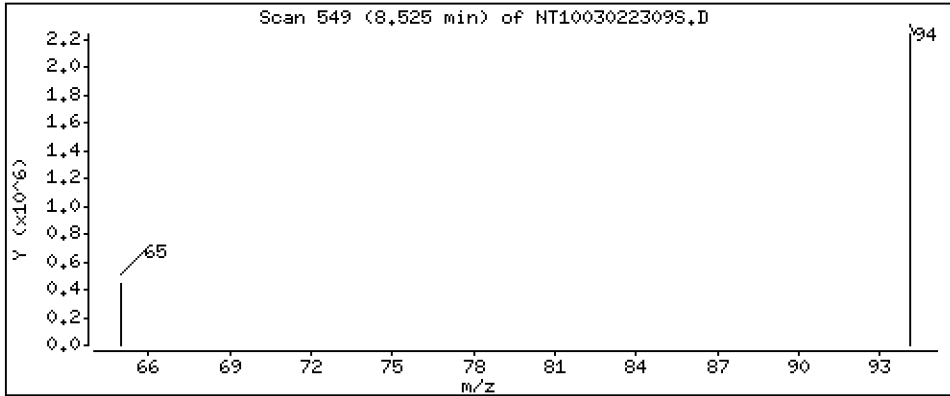
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 11.73 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

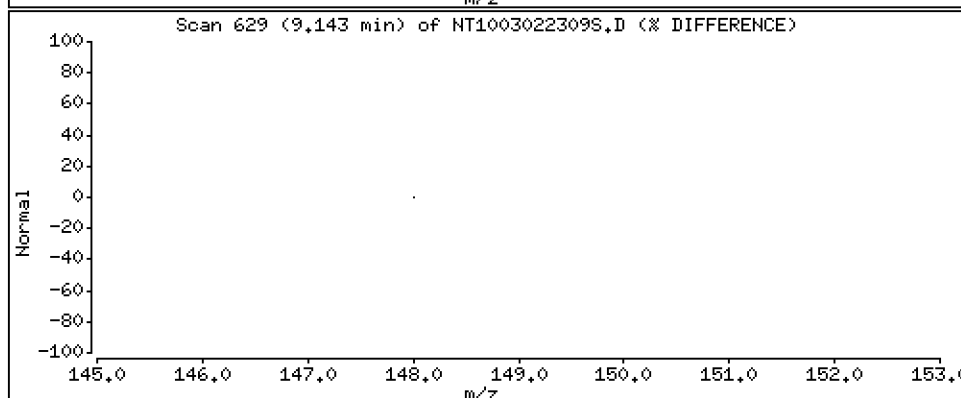
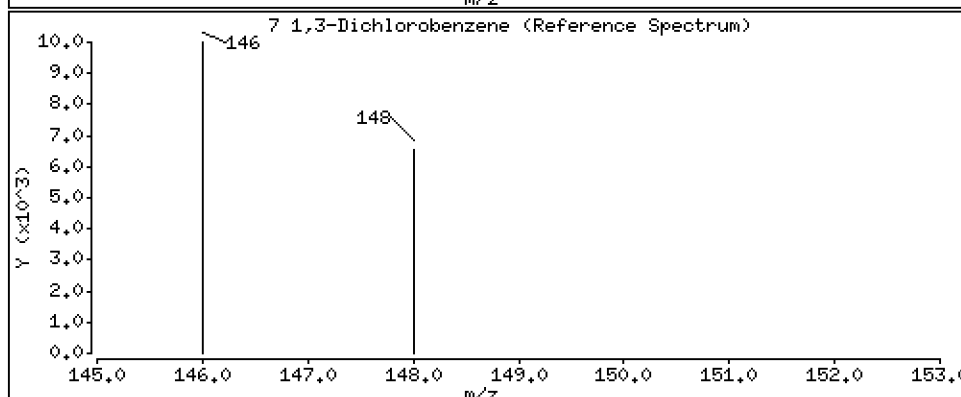
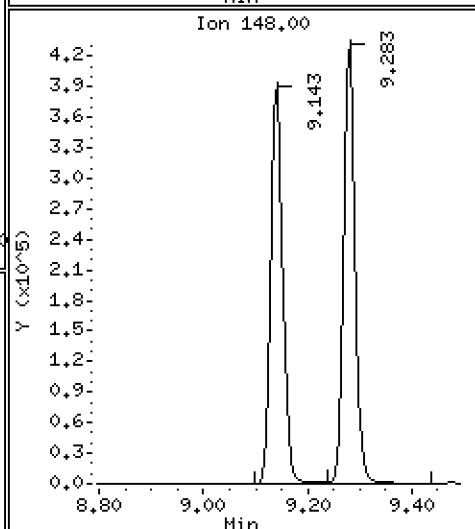
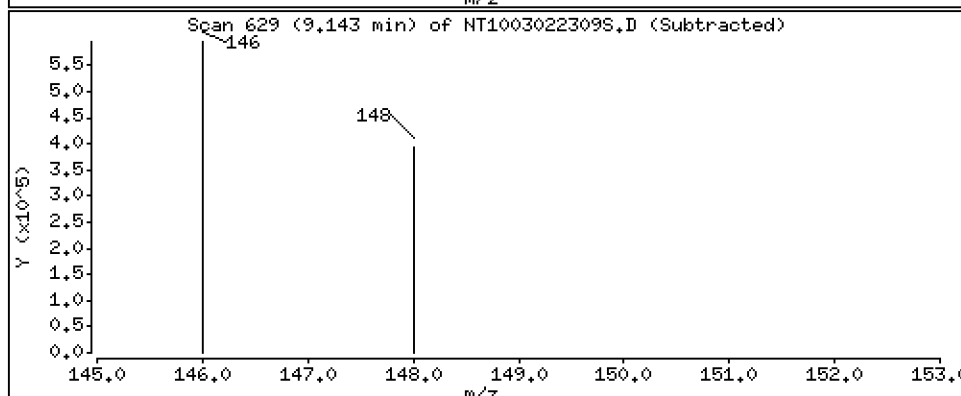
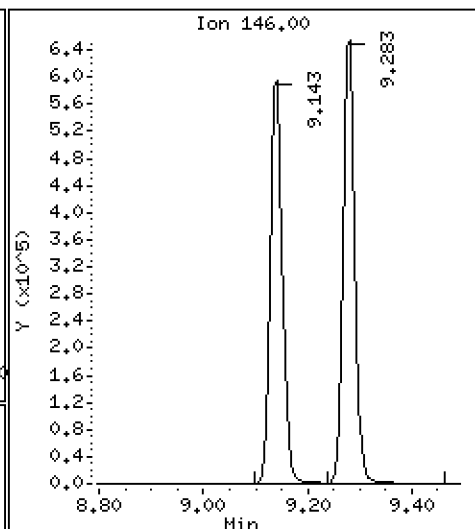
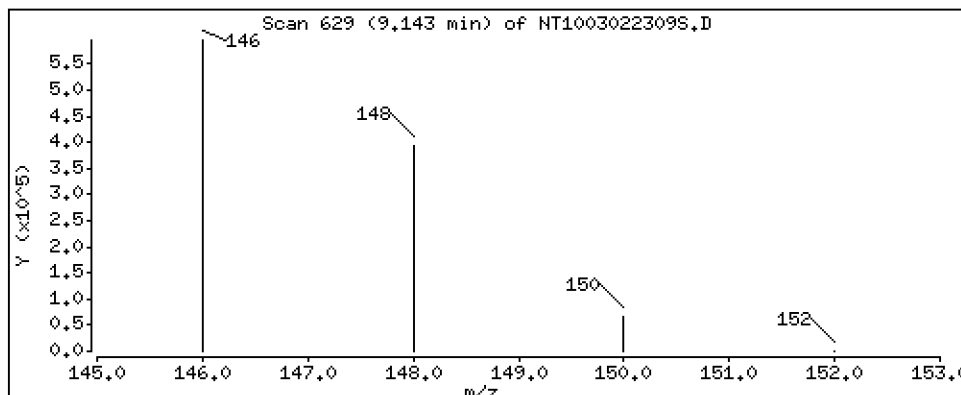
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4.069 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

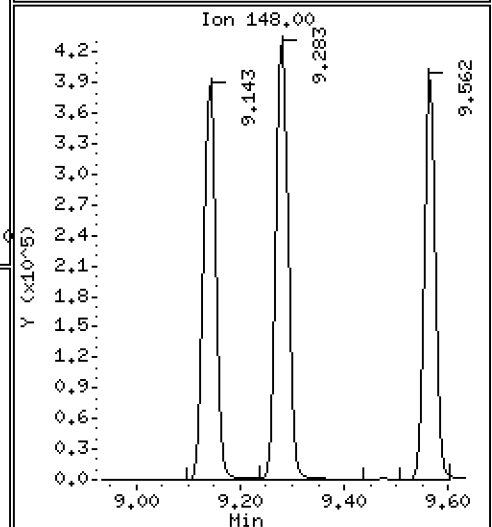
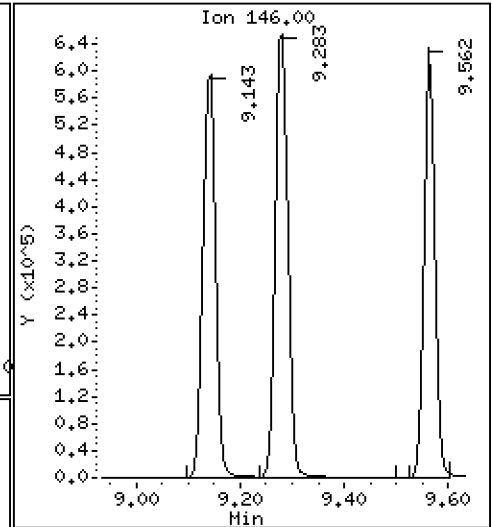
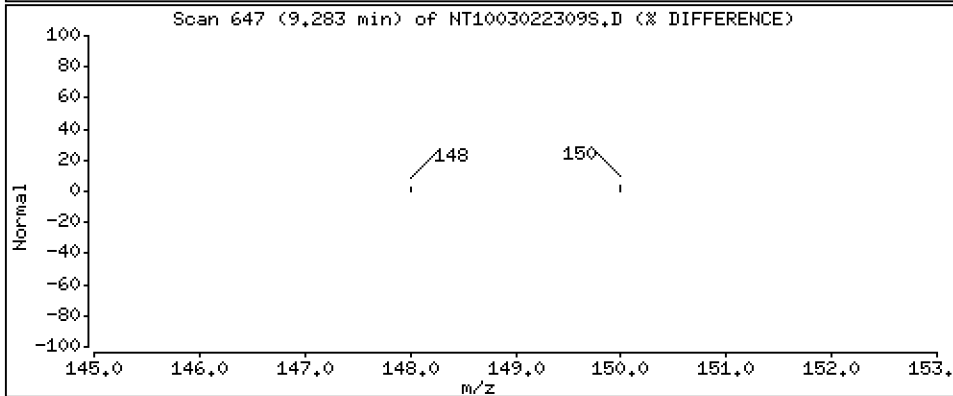
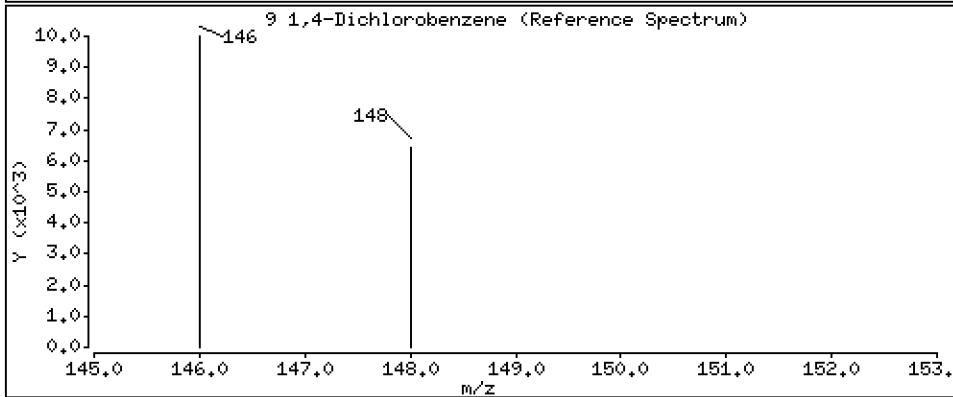
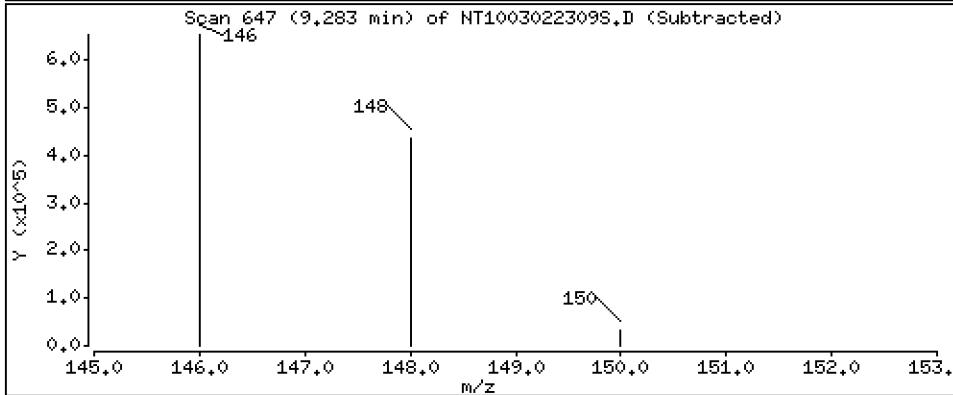
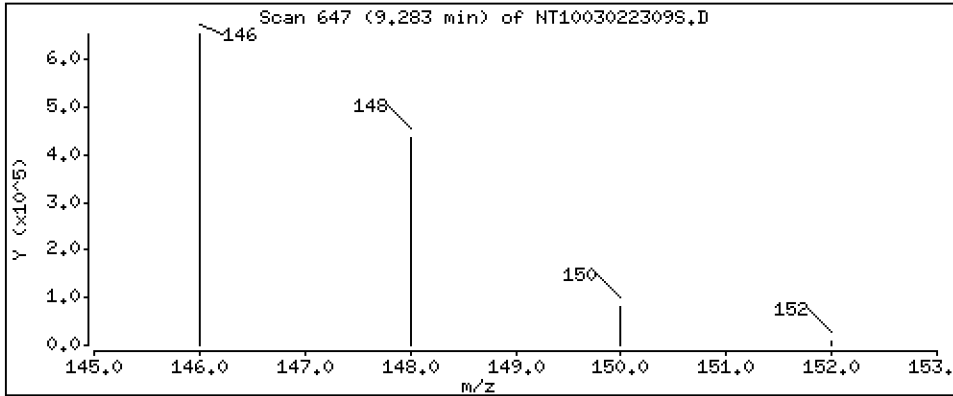
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4,544 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

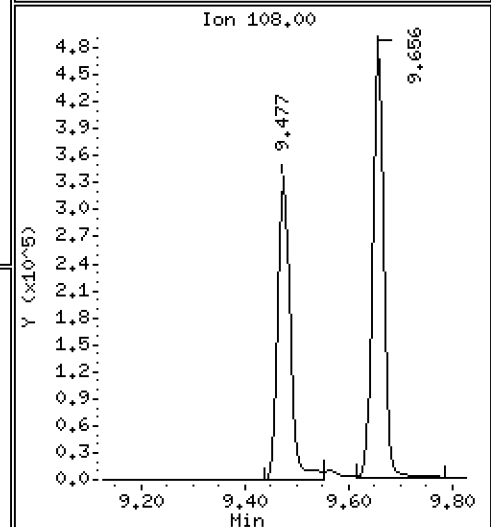
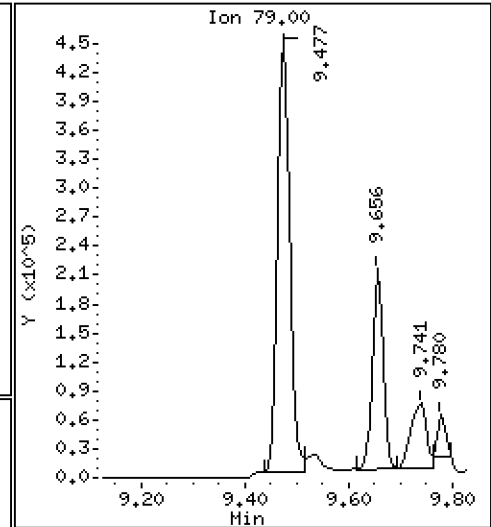
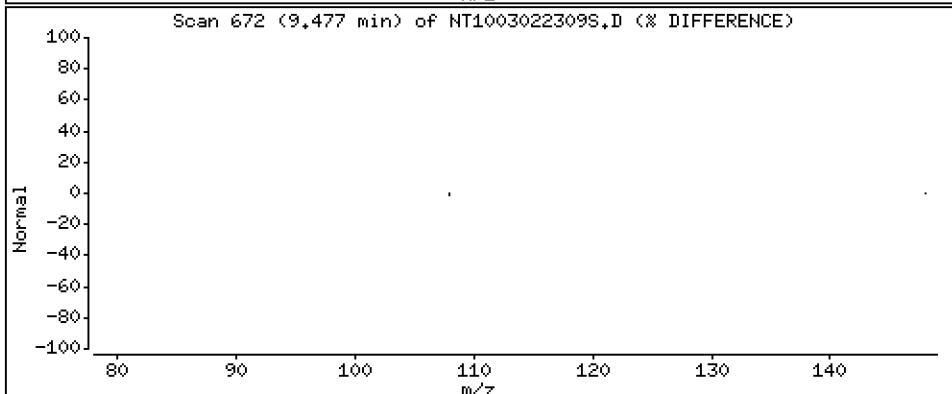
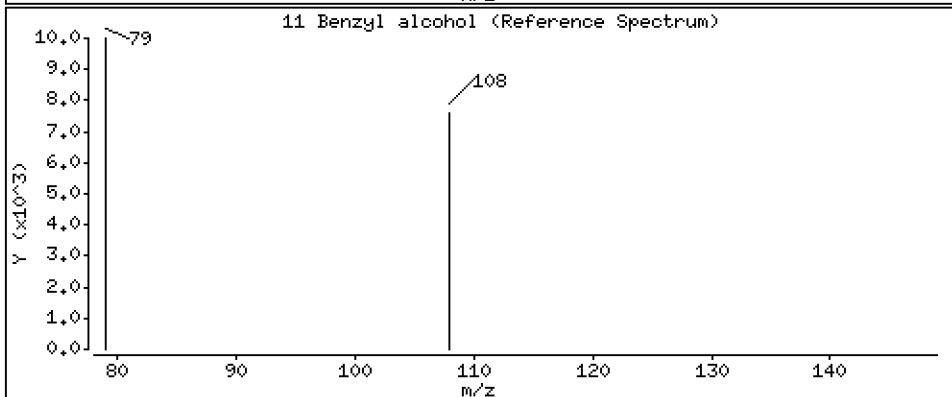
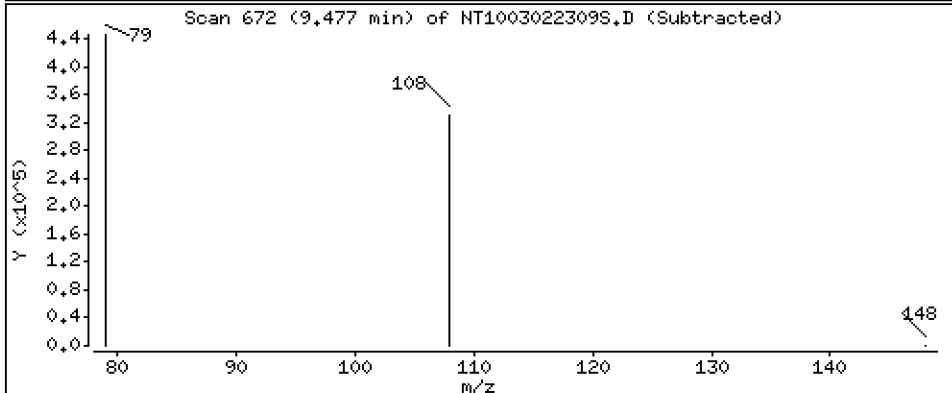
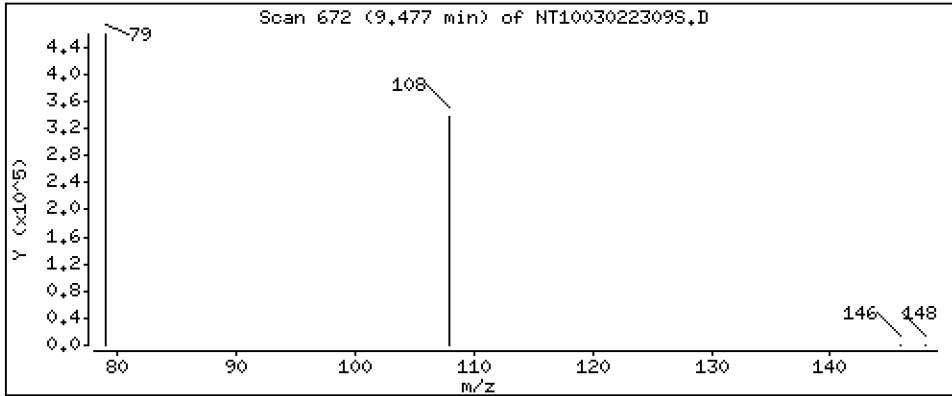
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.336 ug/L





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

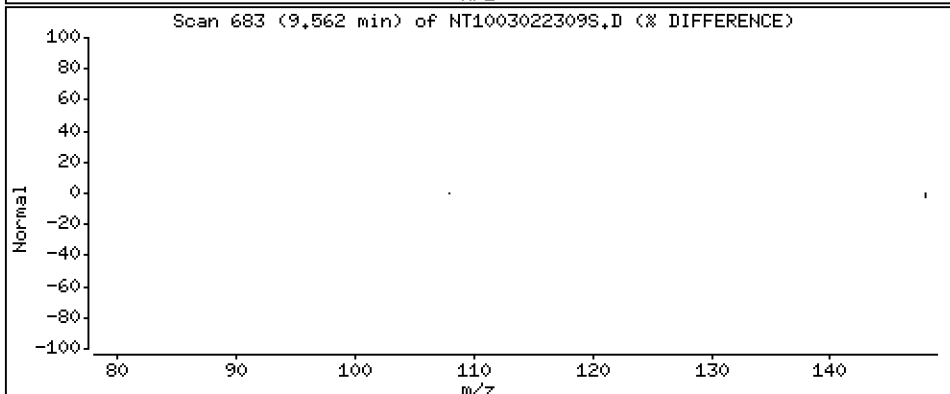
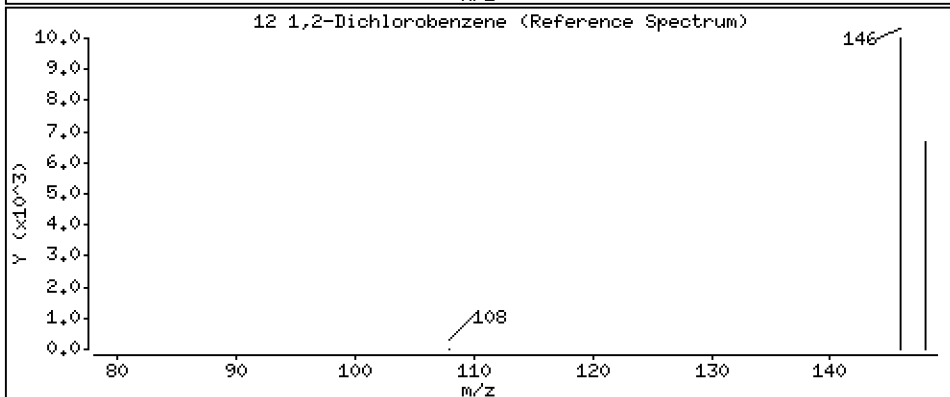
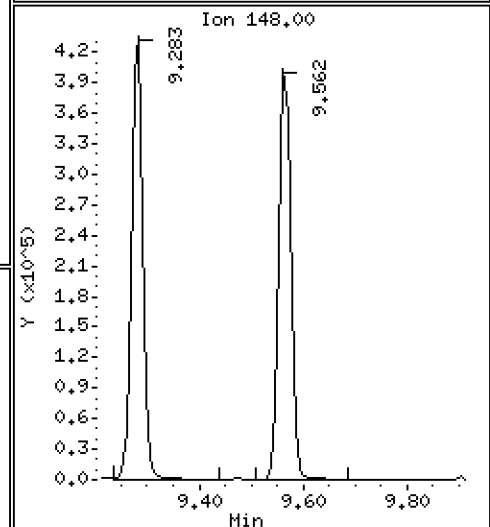
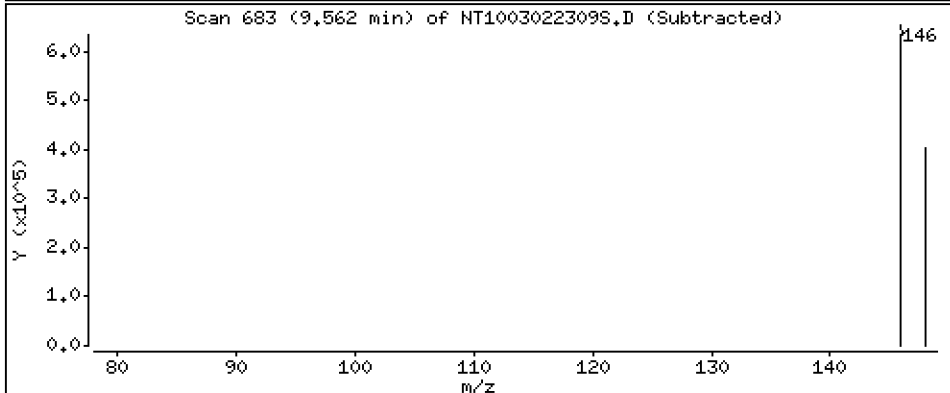
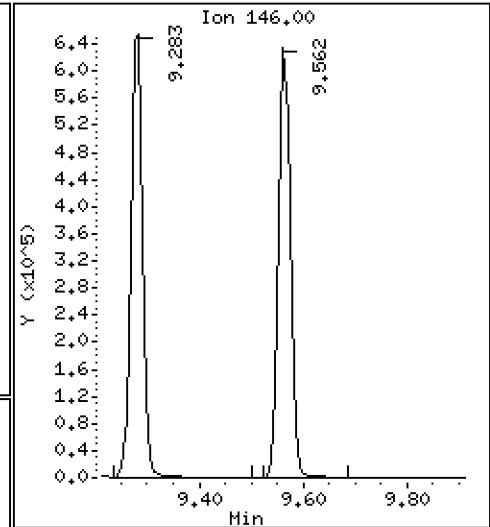
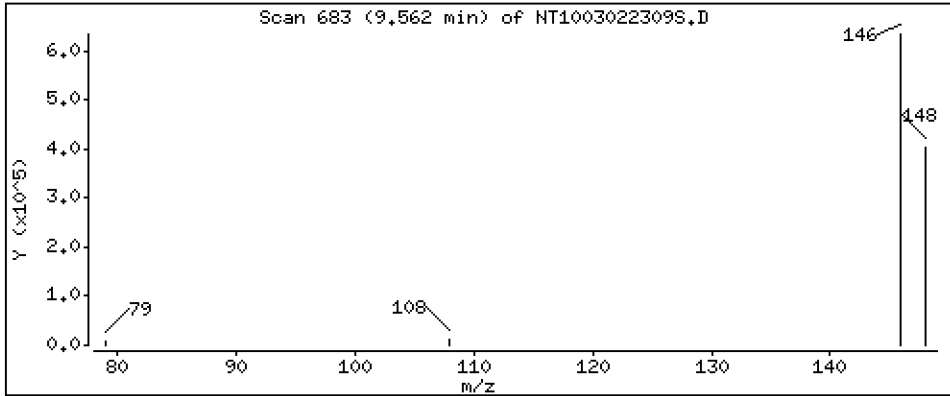
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.285 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

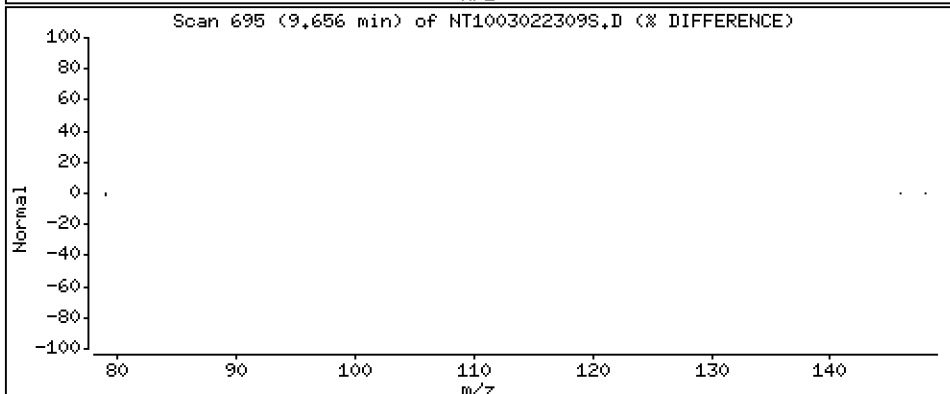
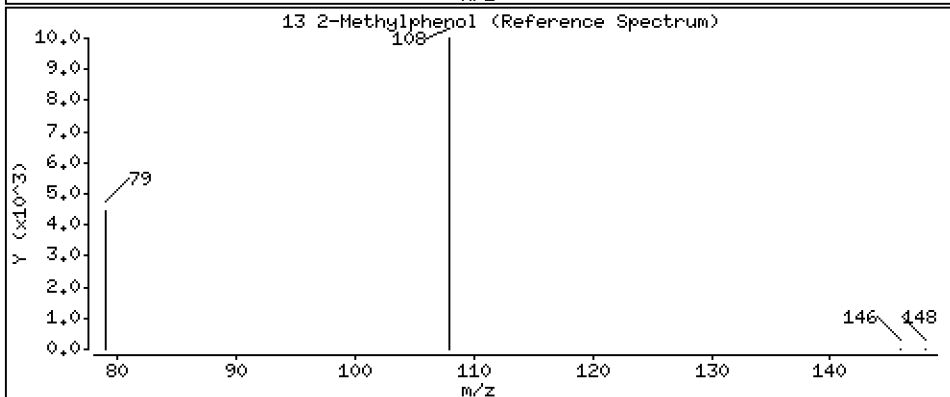
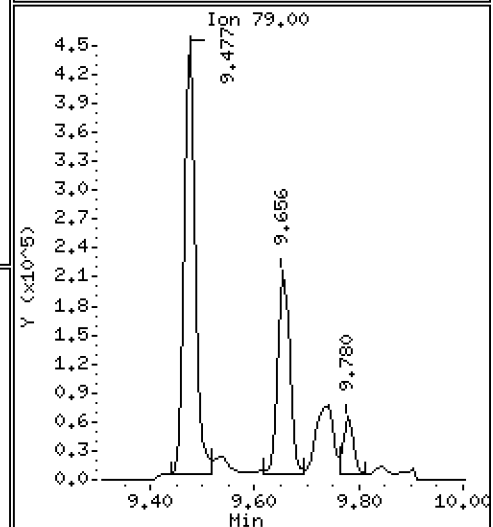
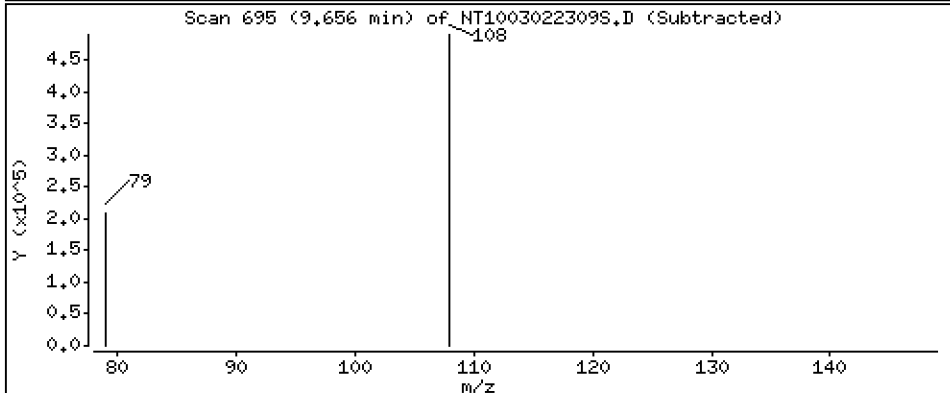
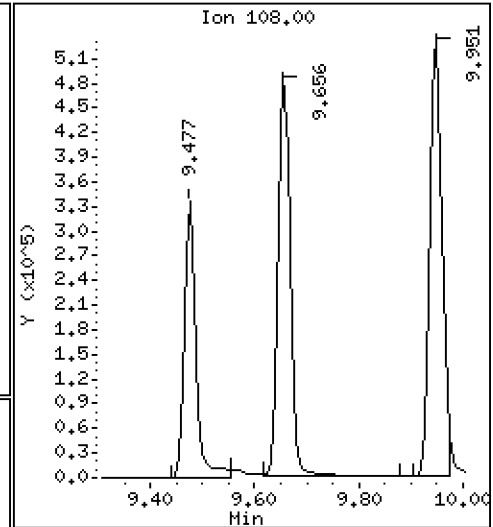
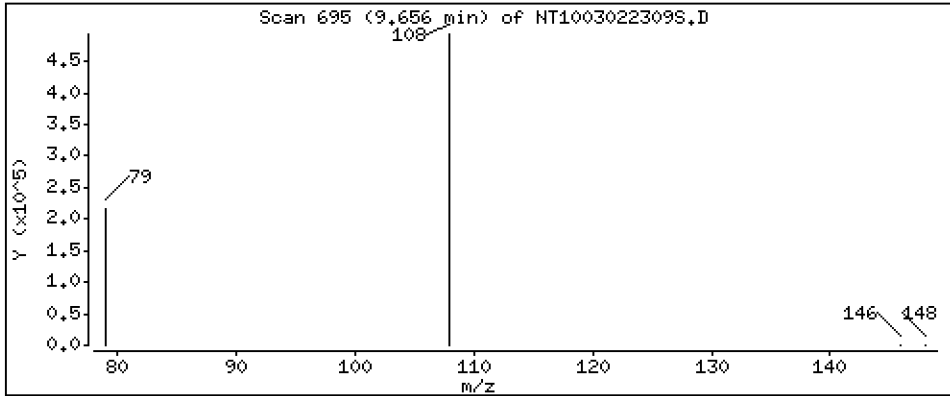
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.357 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

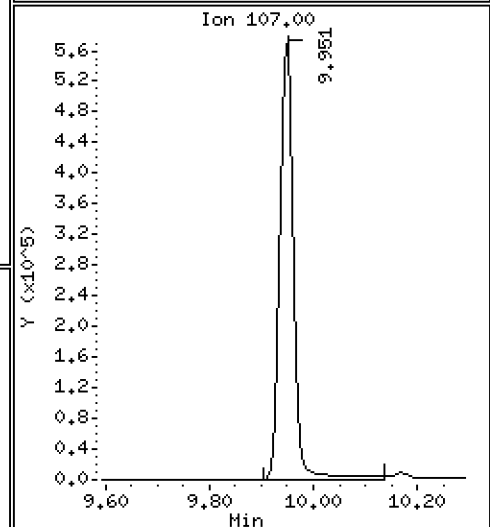
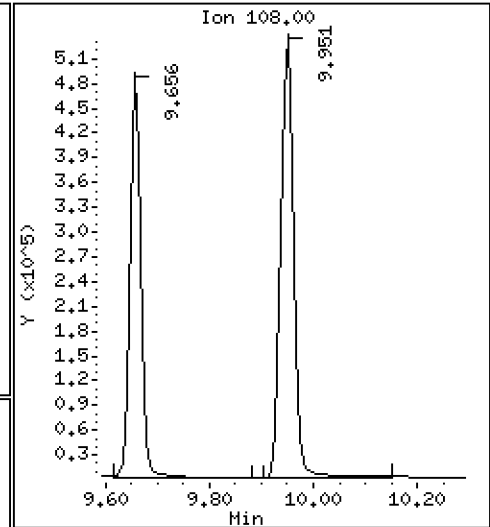
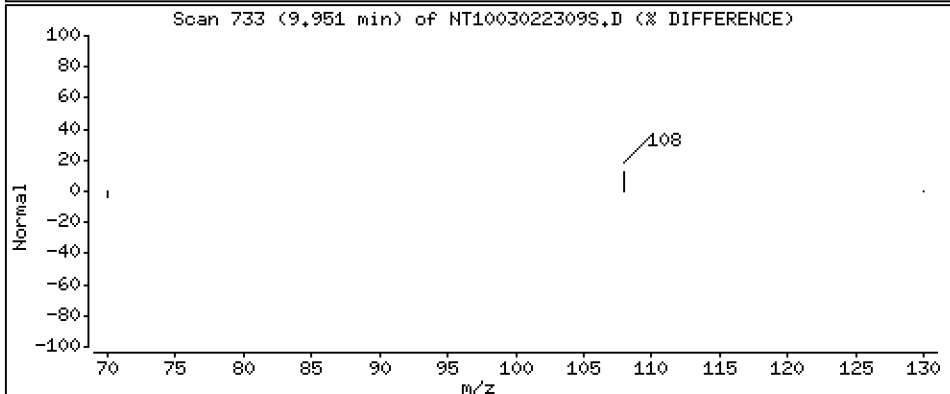
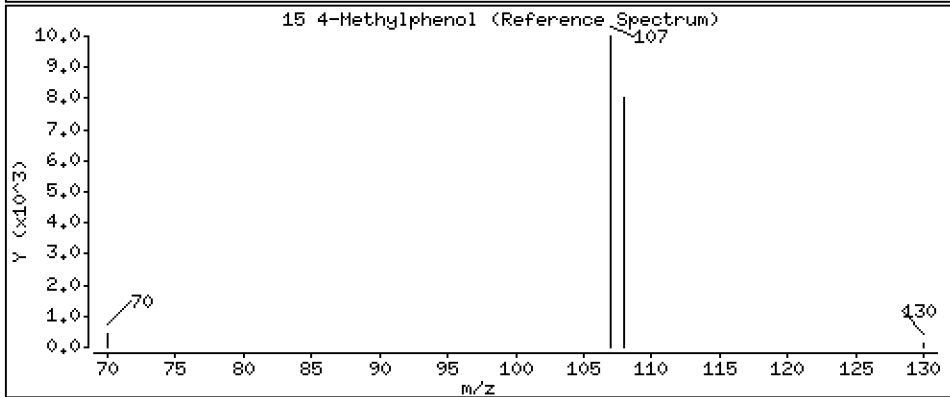
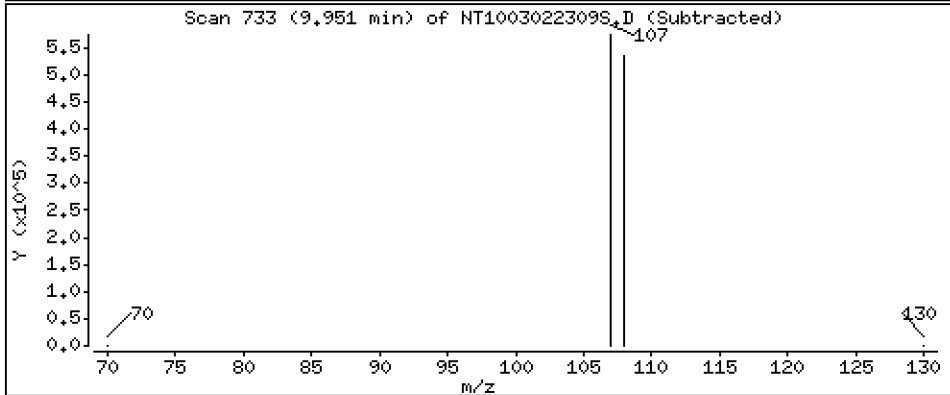
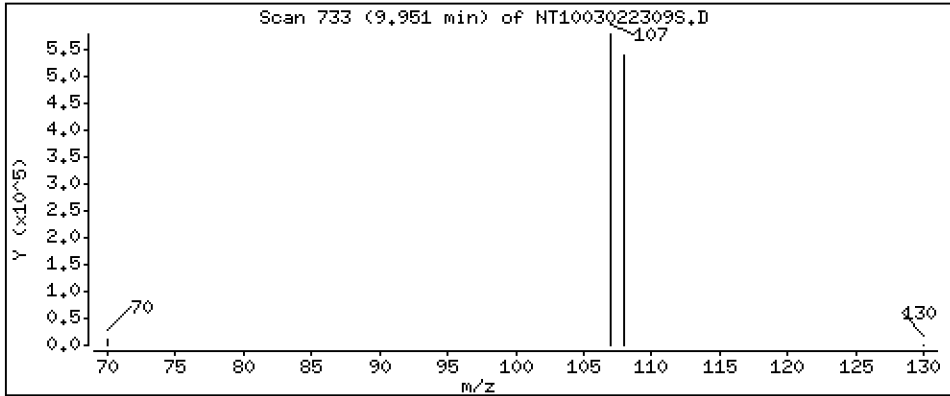
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 5.039 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

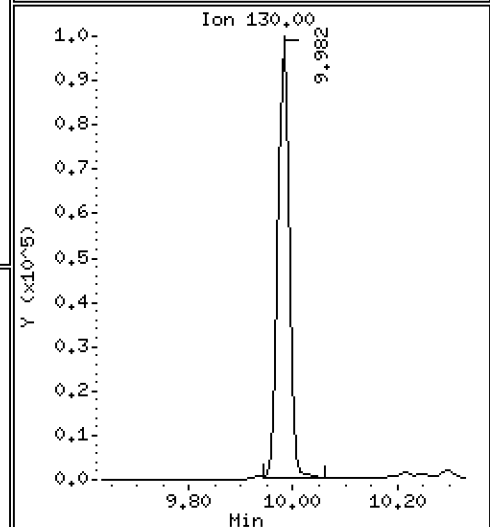
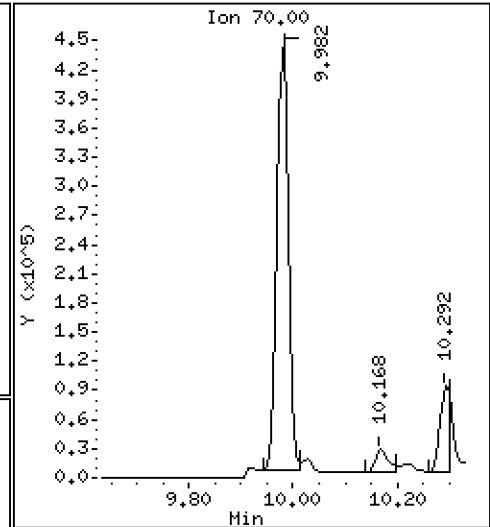
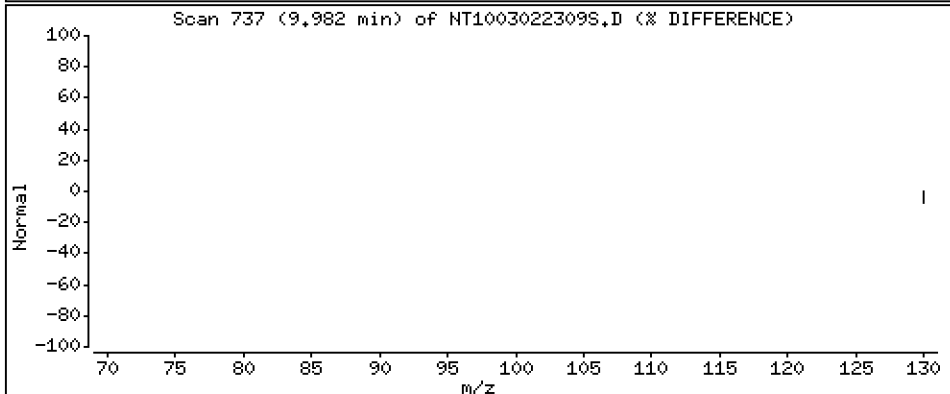
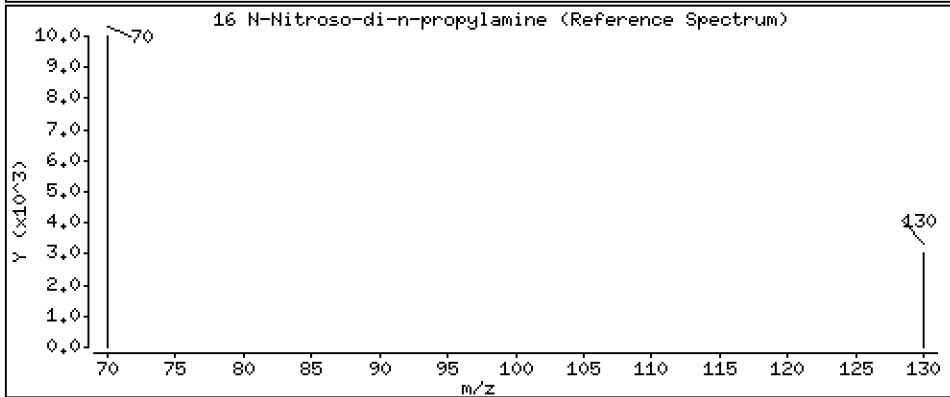
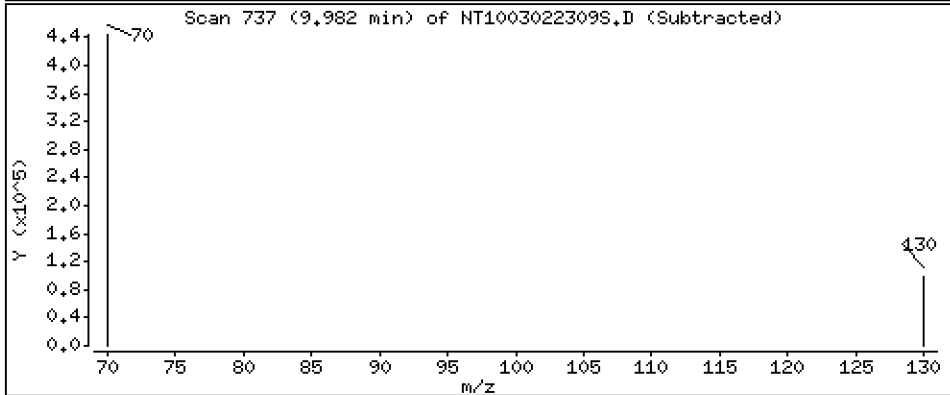
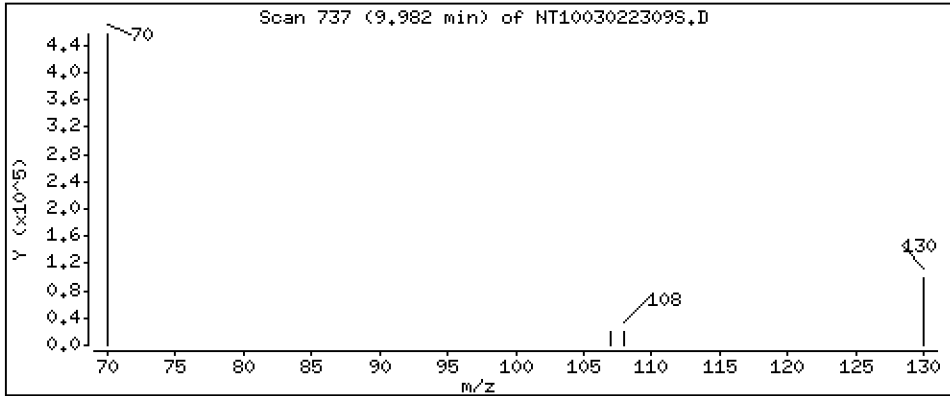
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 5,166 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

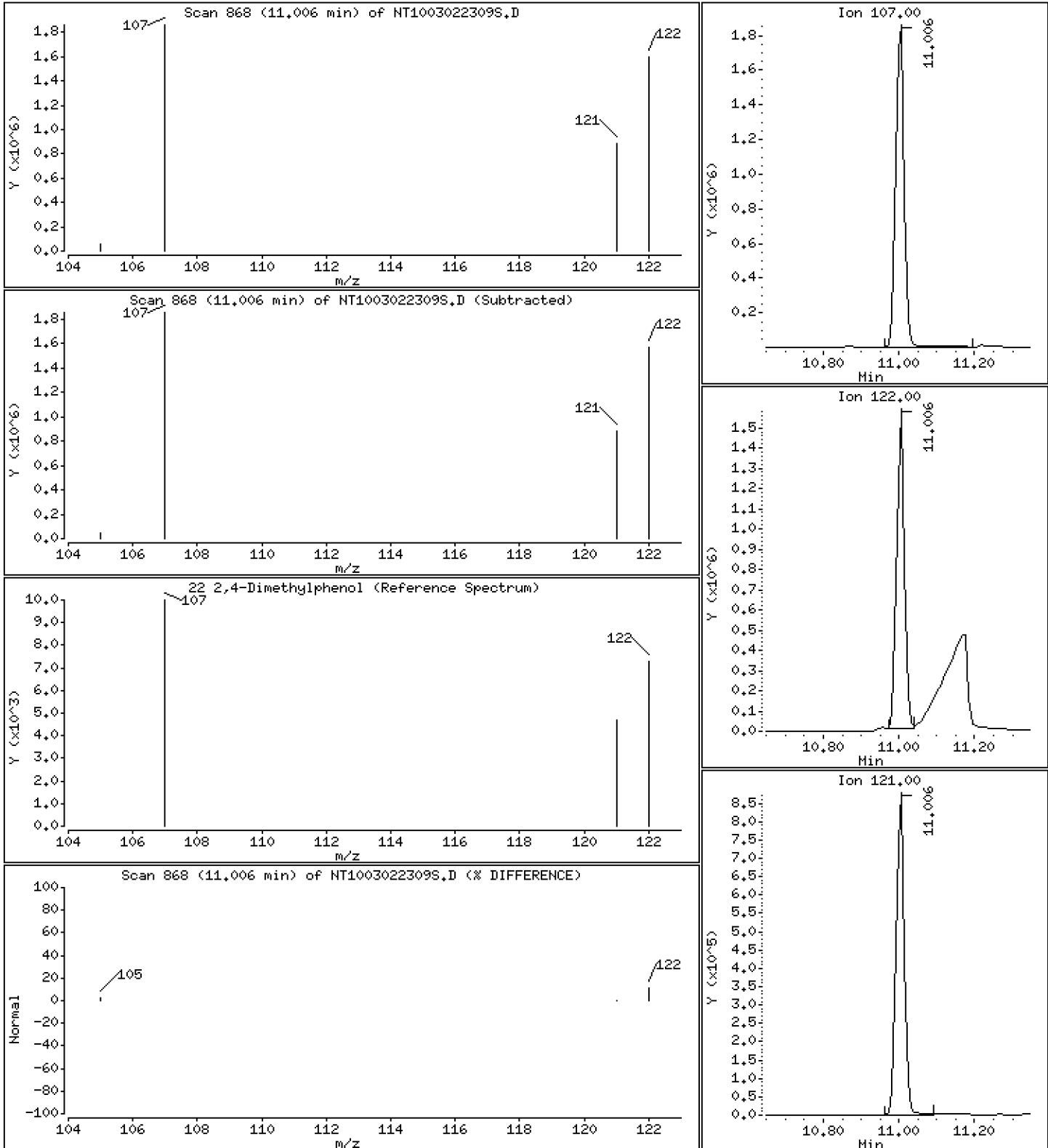
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 13.69 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

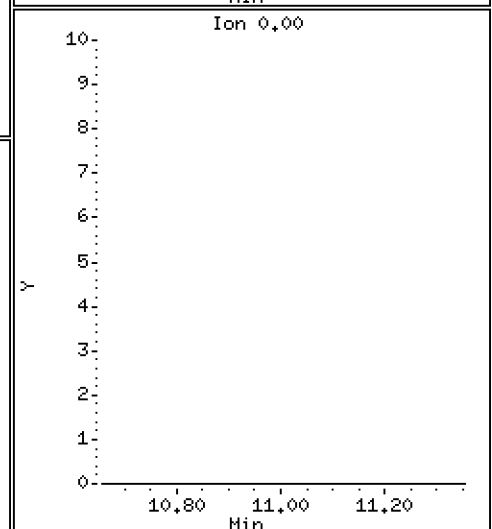
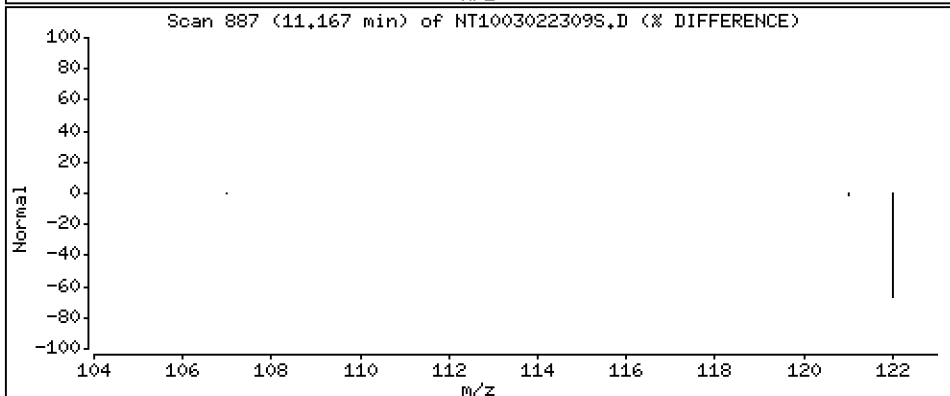
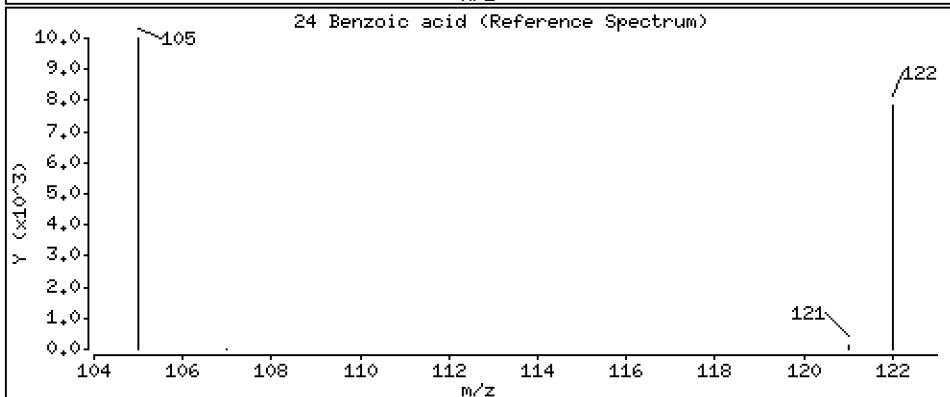
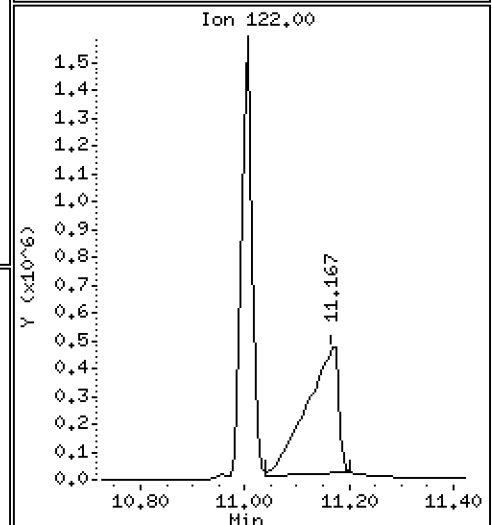
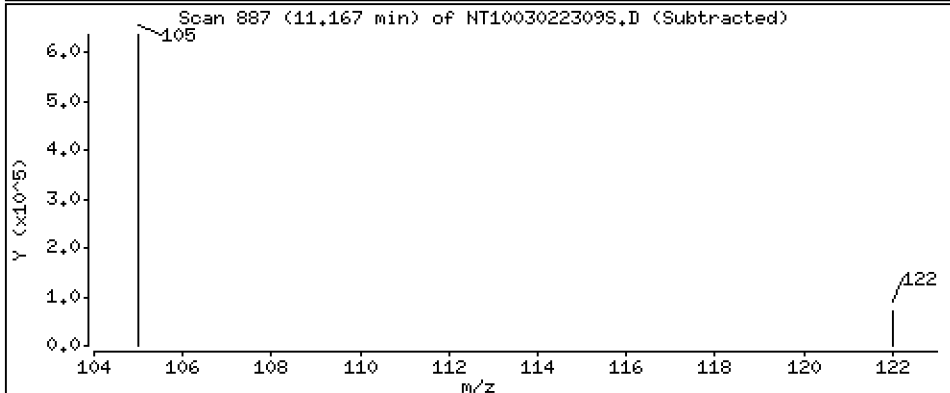
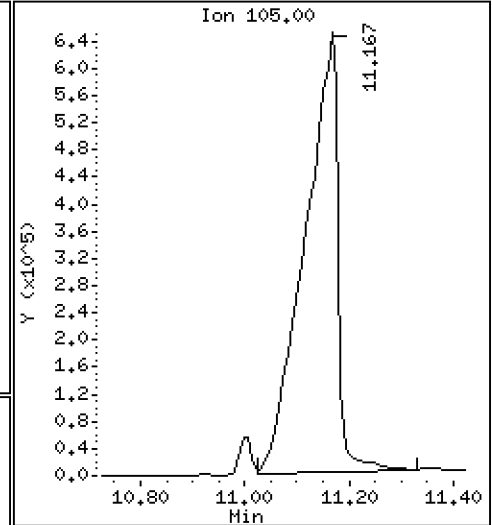
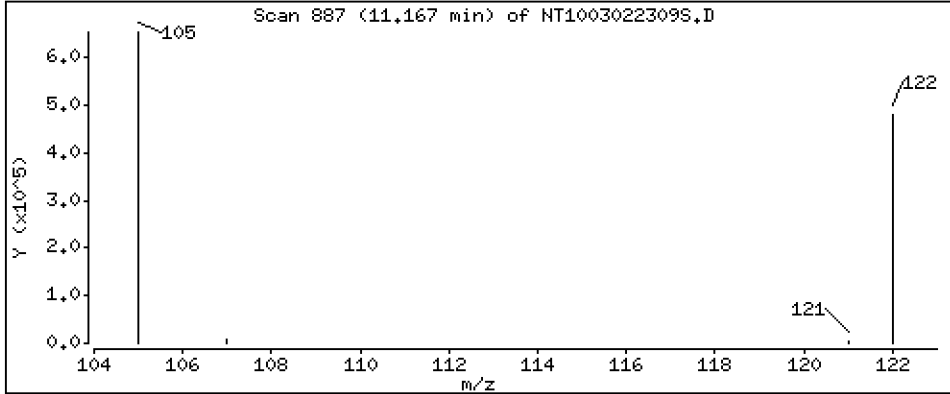
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 22.88 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

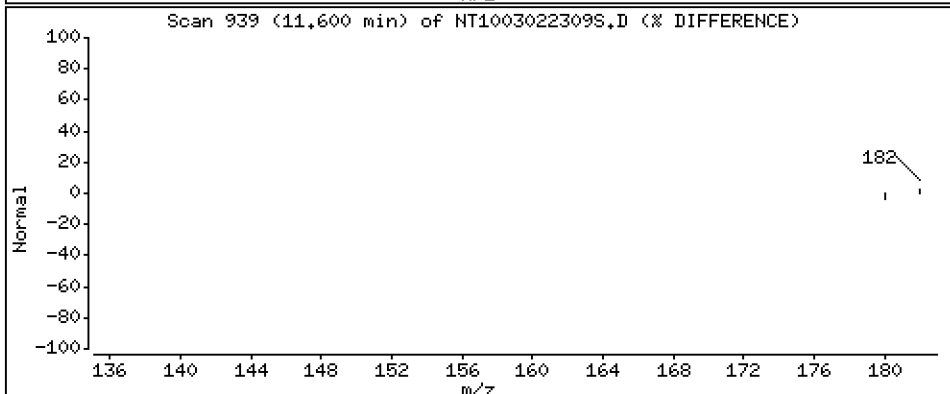
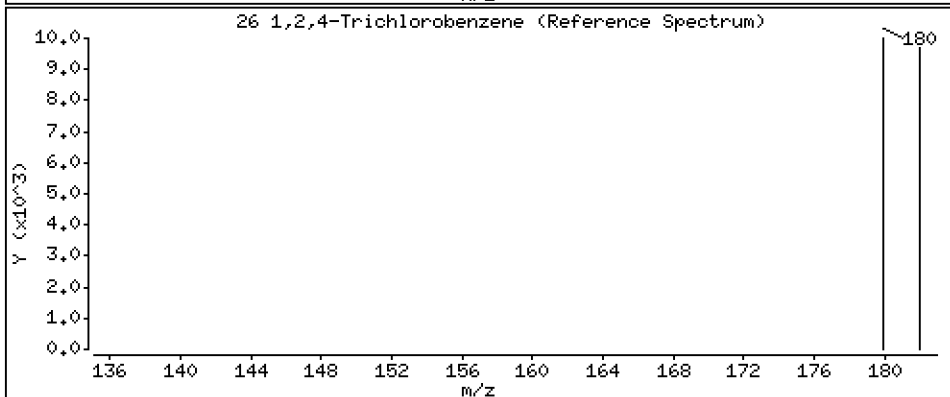
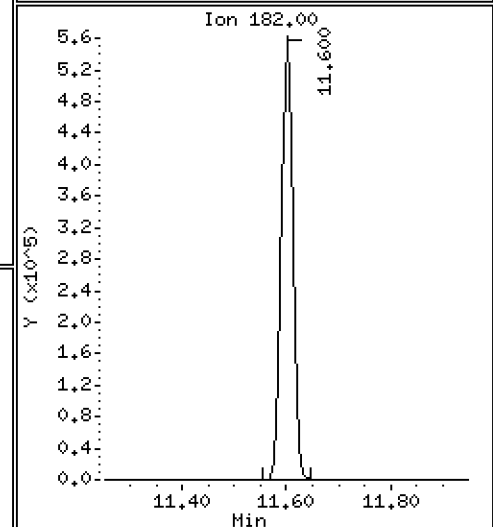
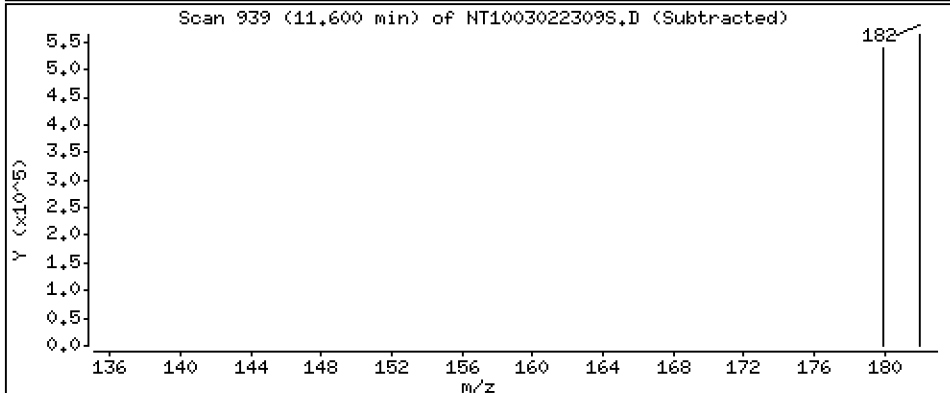
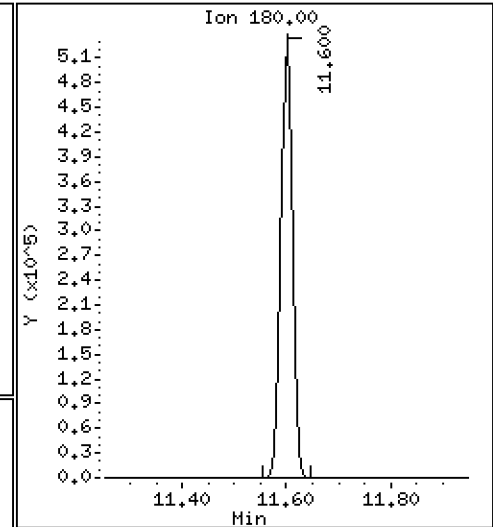
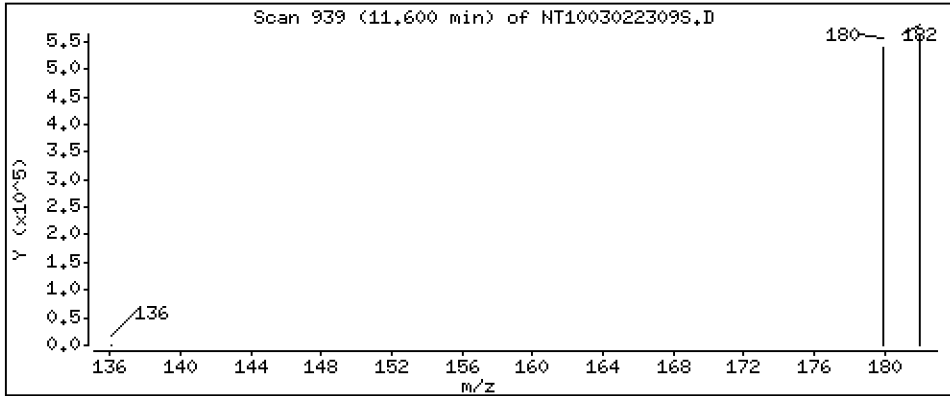
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.511 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

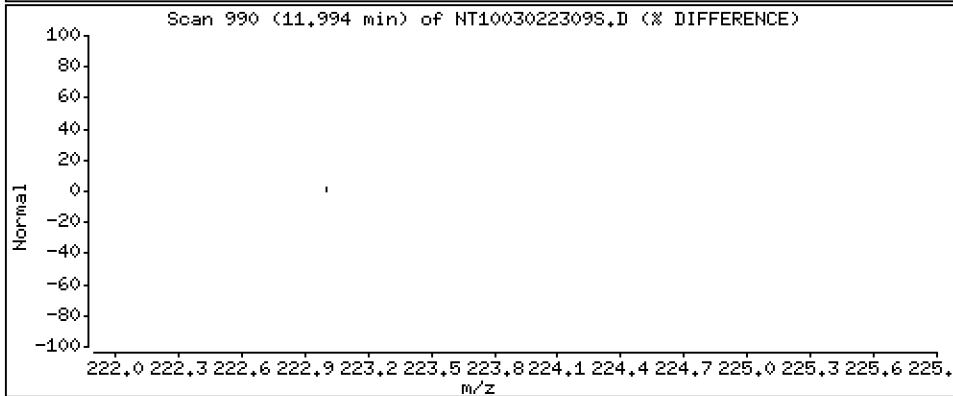
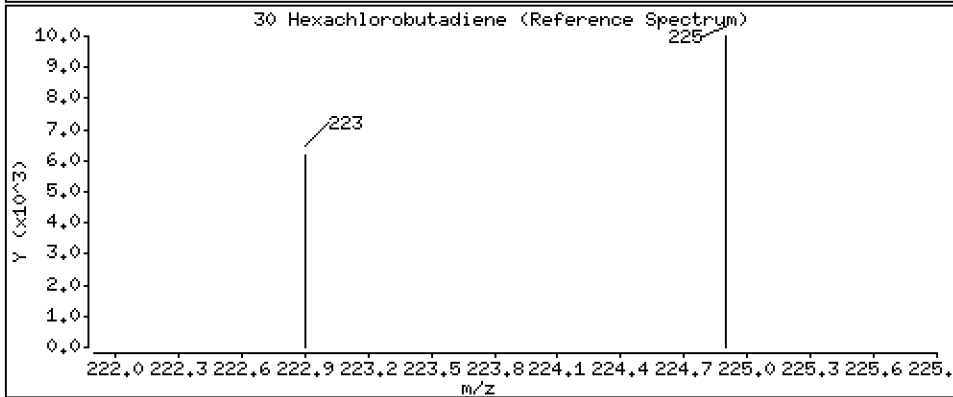
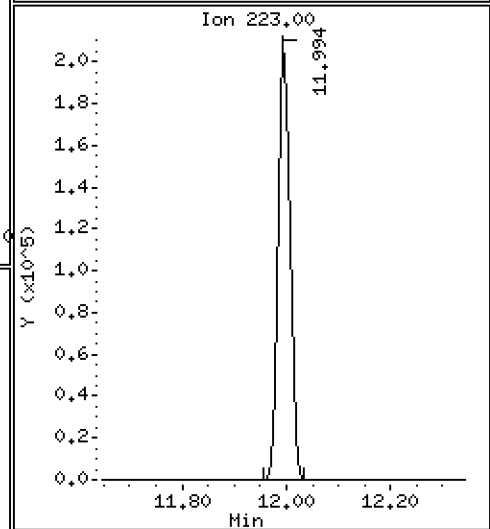
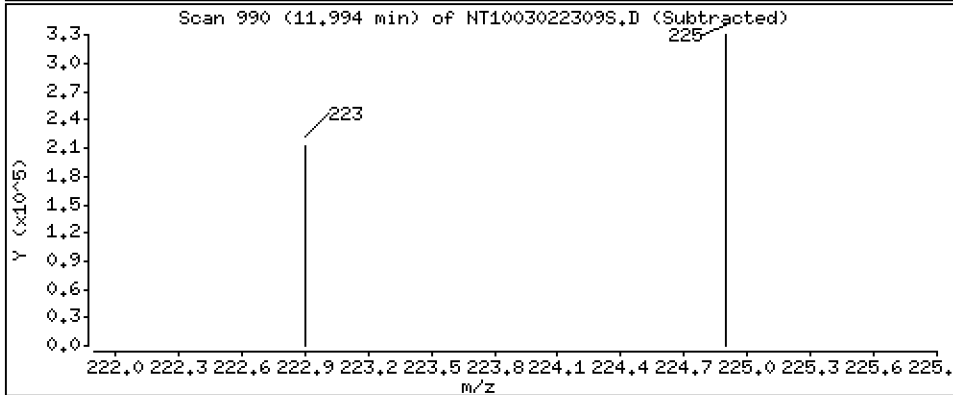
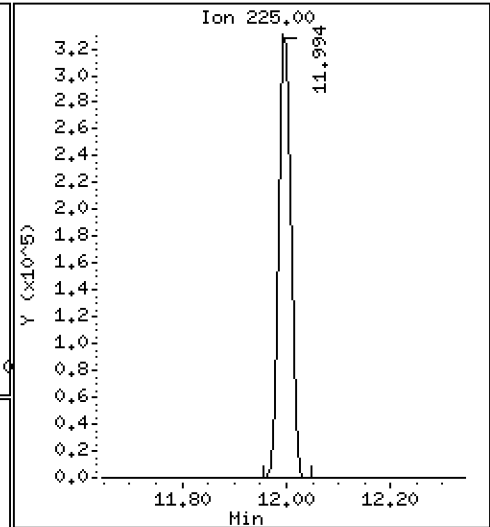
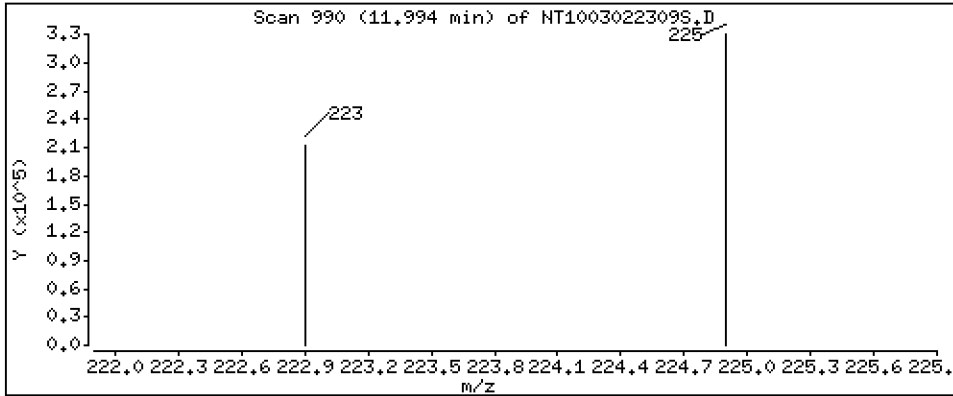
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,276 ug/L





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

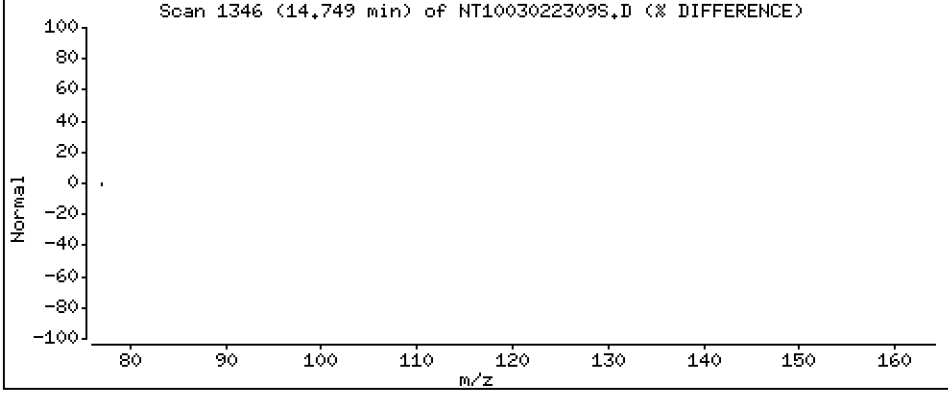
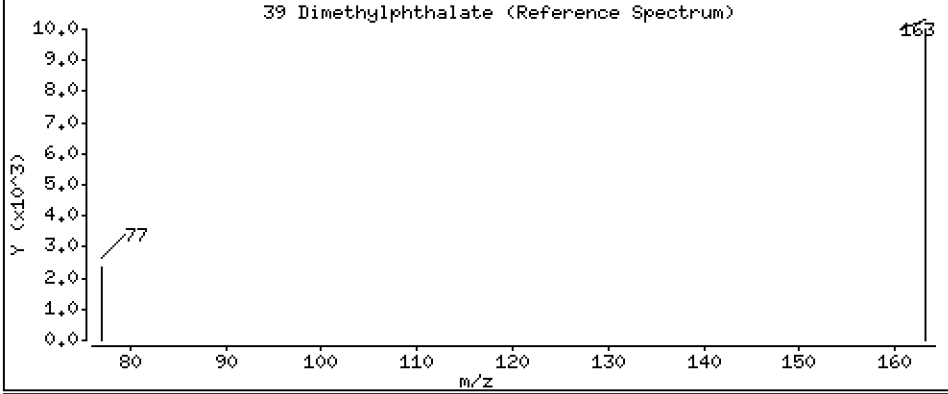
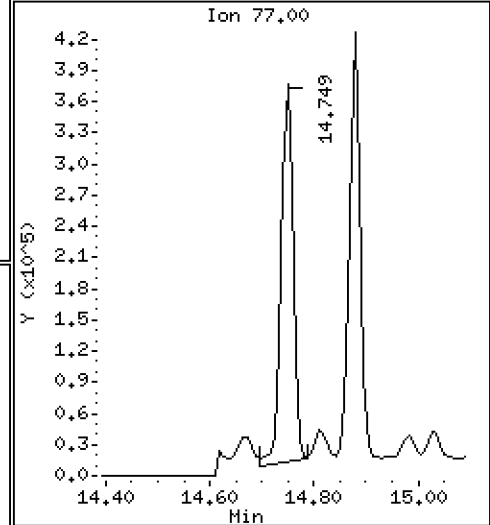
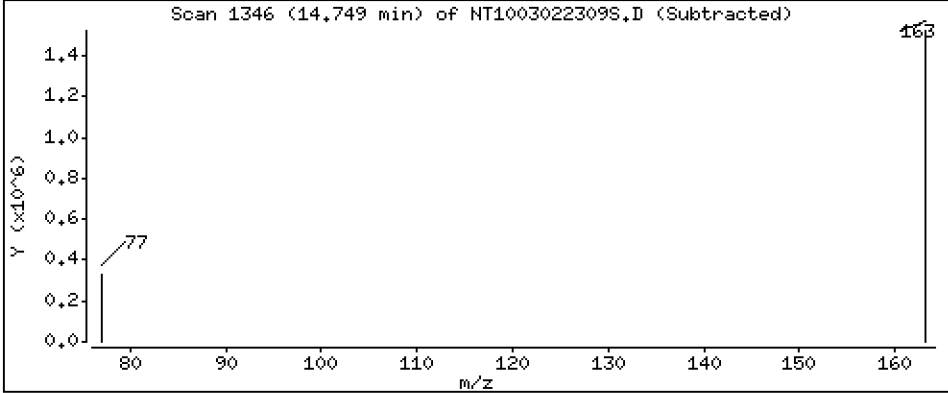
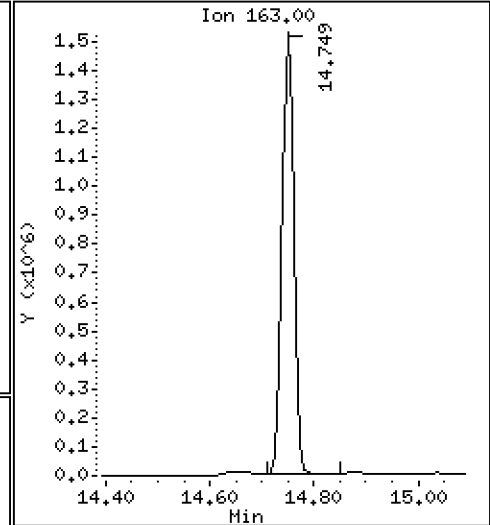
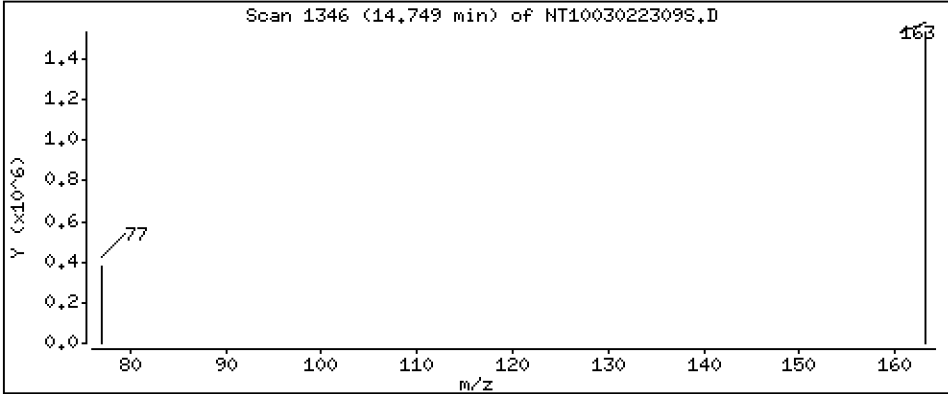
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,604 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

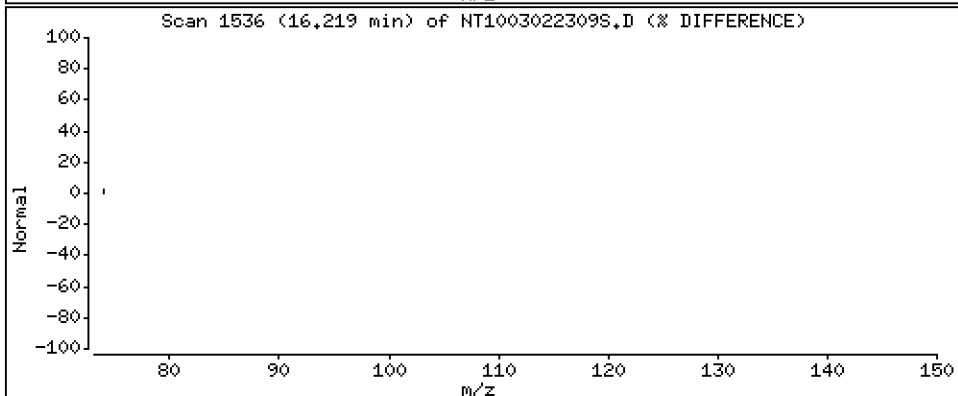
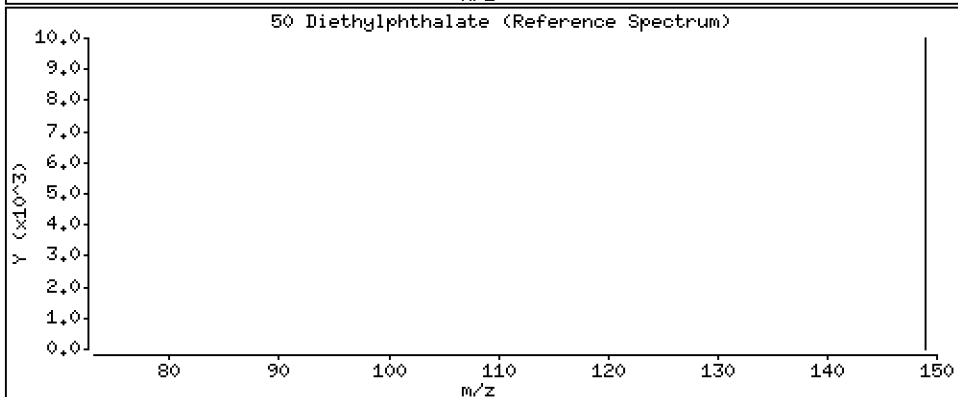
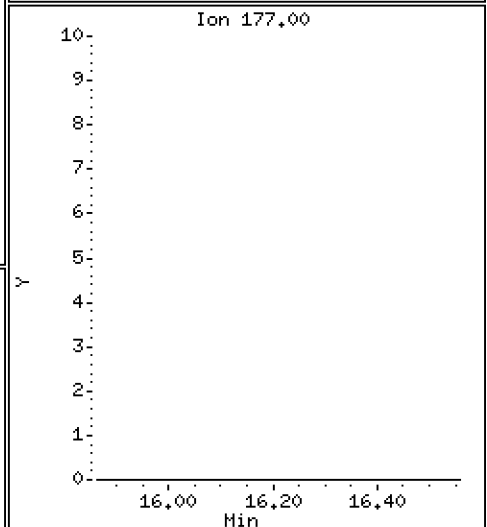
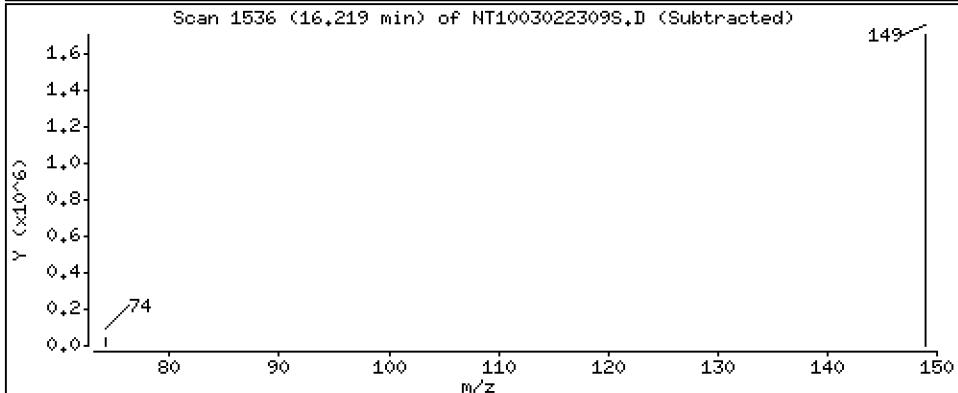
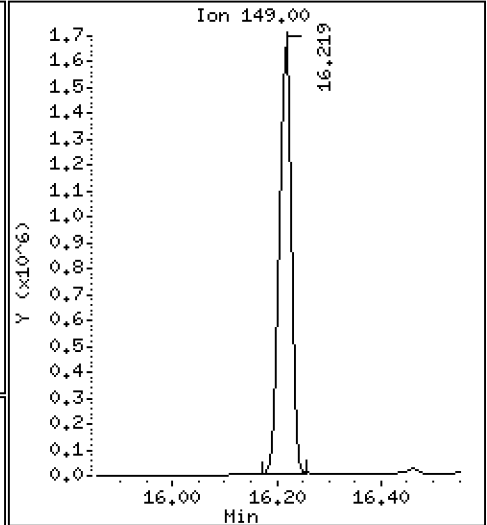
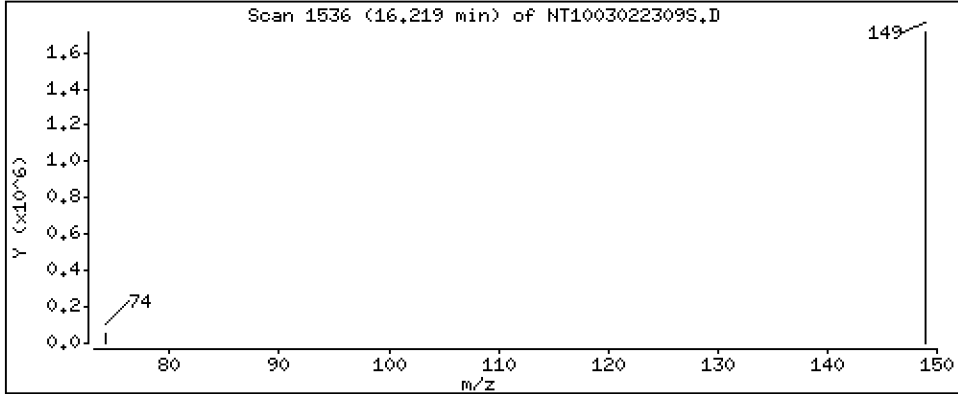
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,811 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

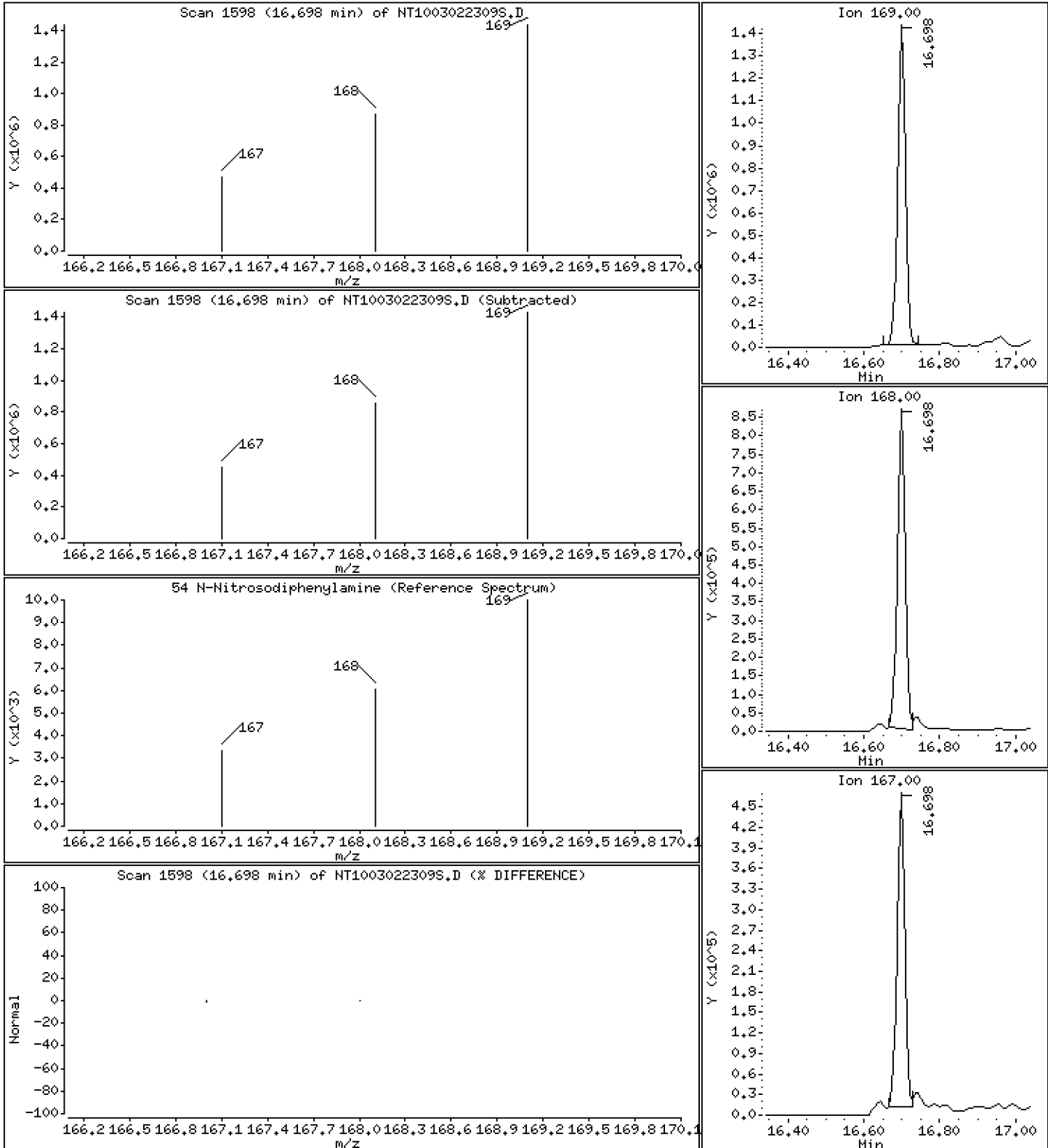
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,515 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

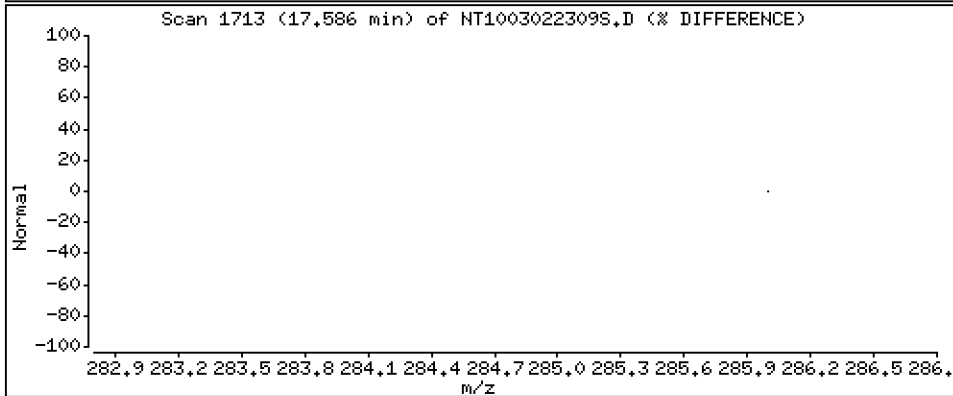
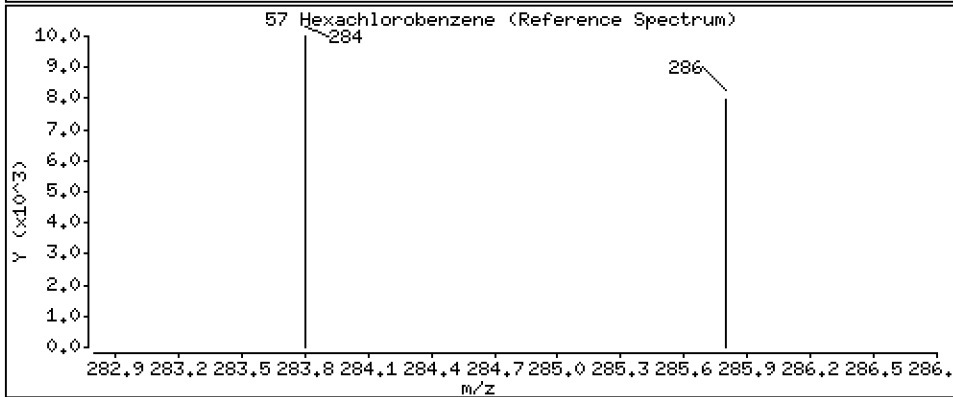
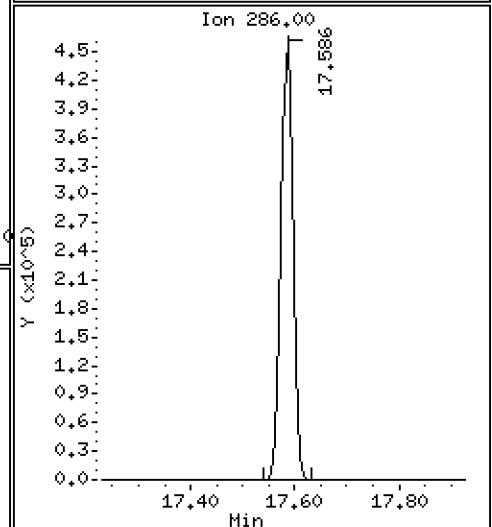
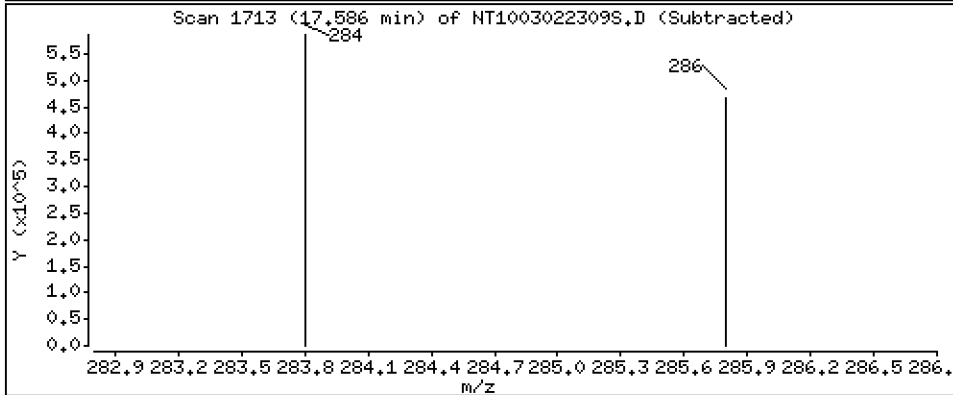
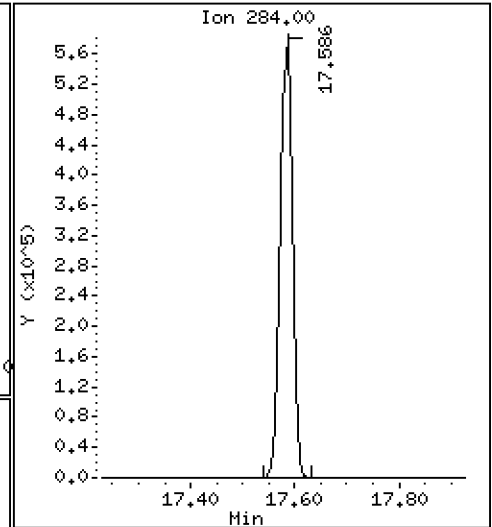
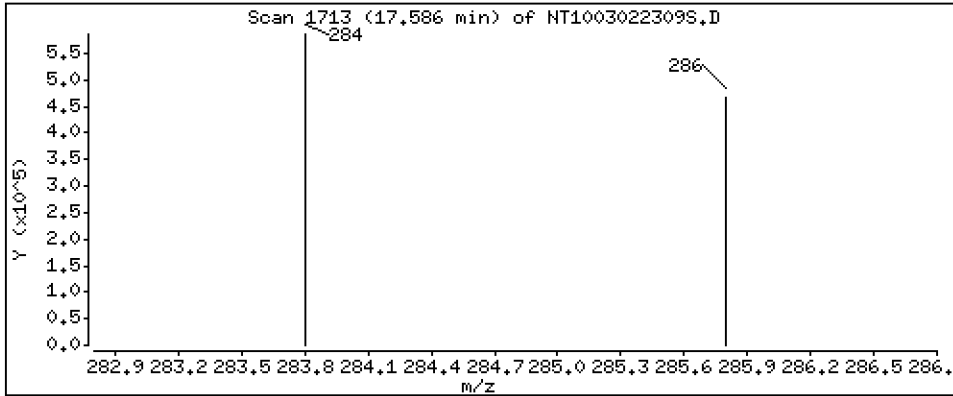
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.208 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

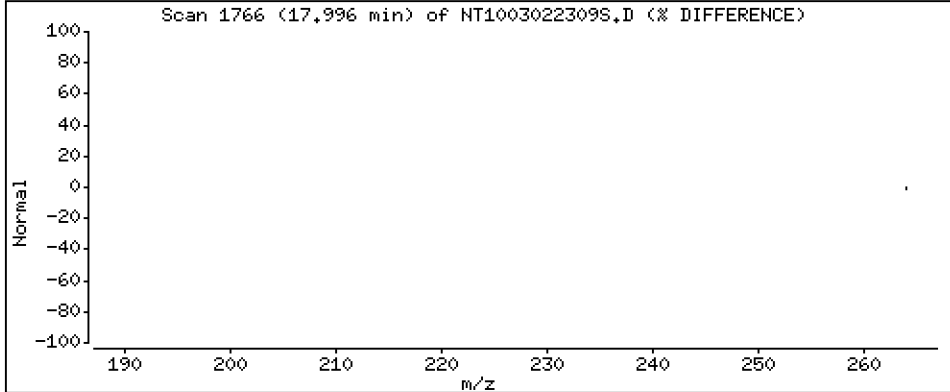
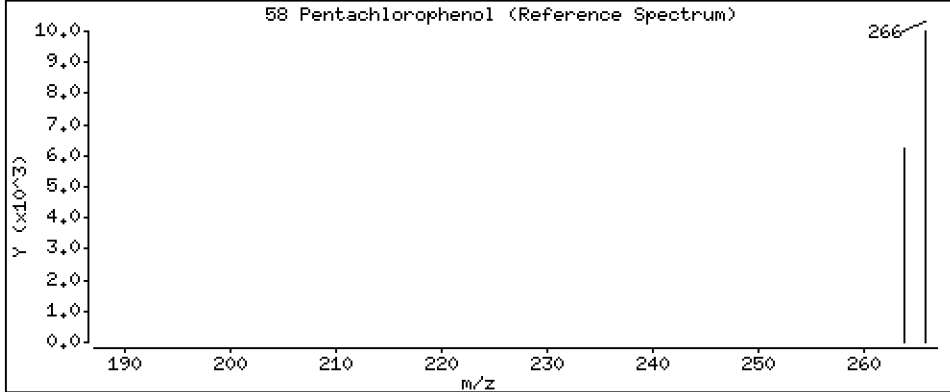
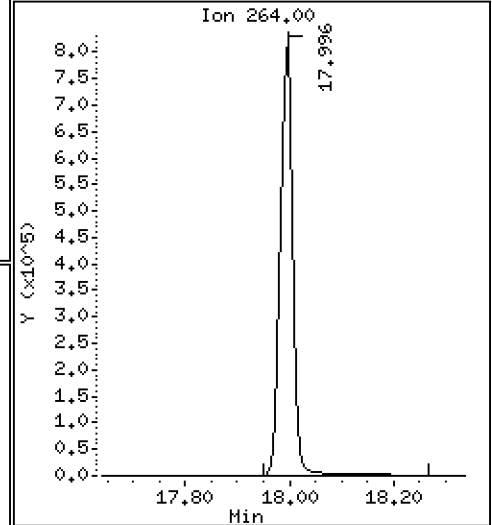
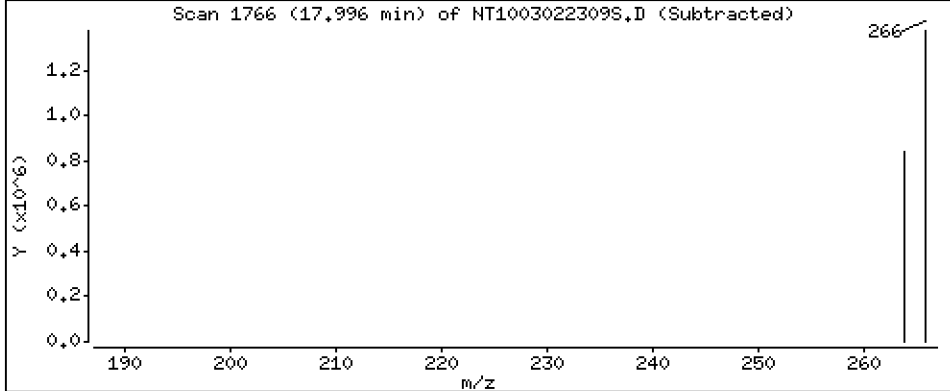
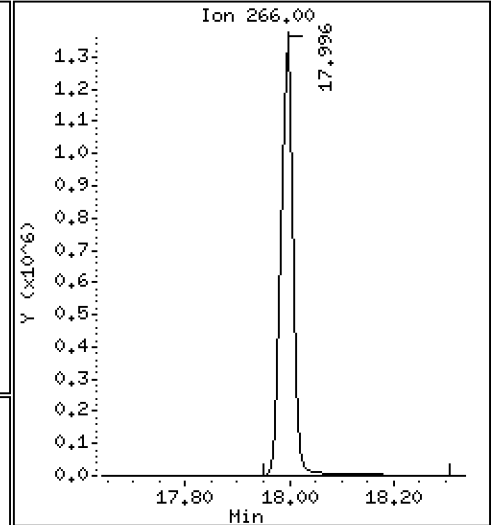
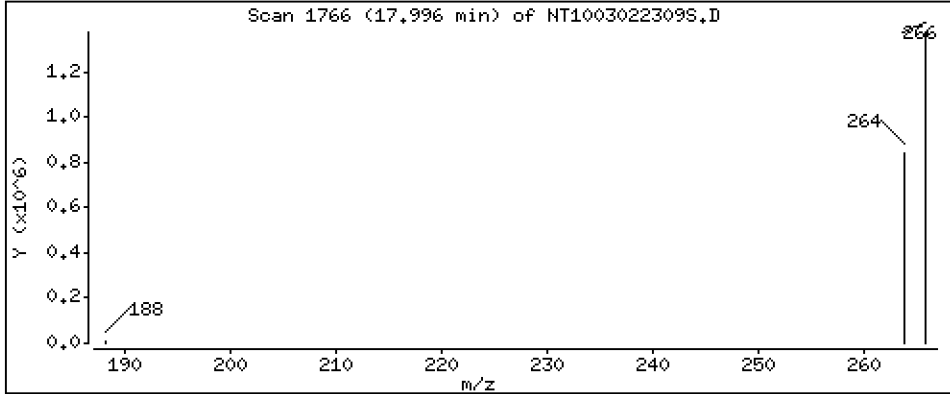
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 17,86 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

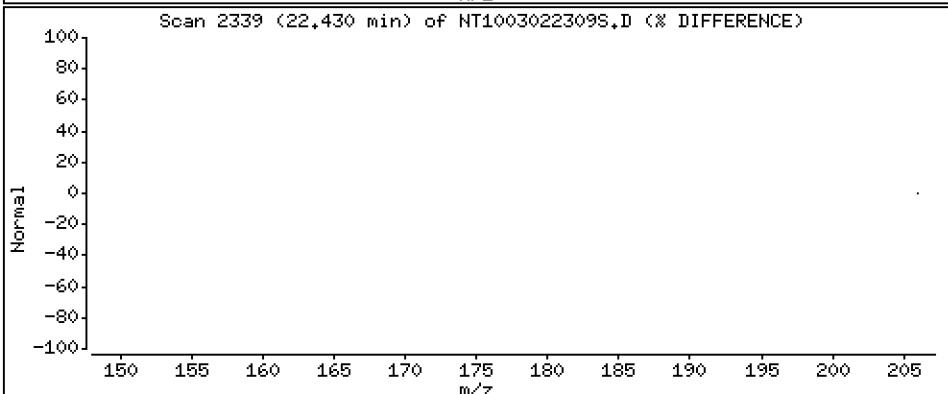
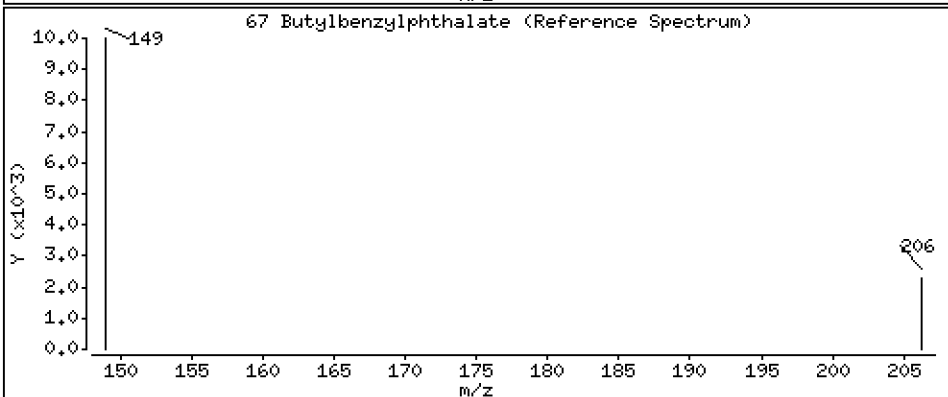
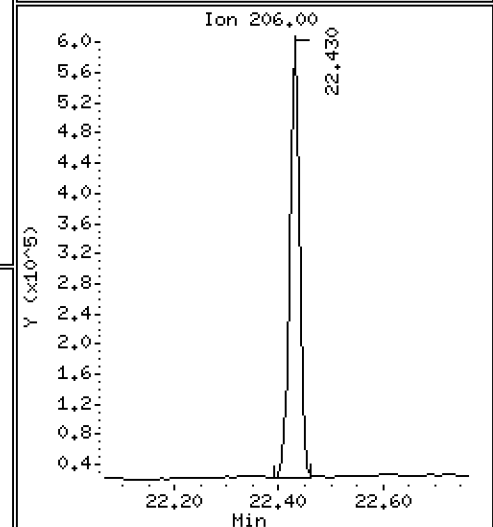
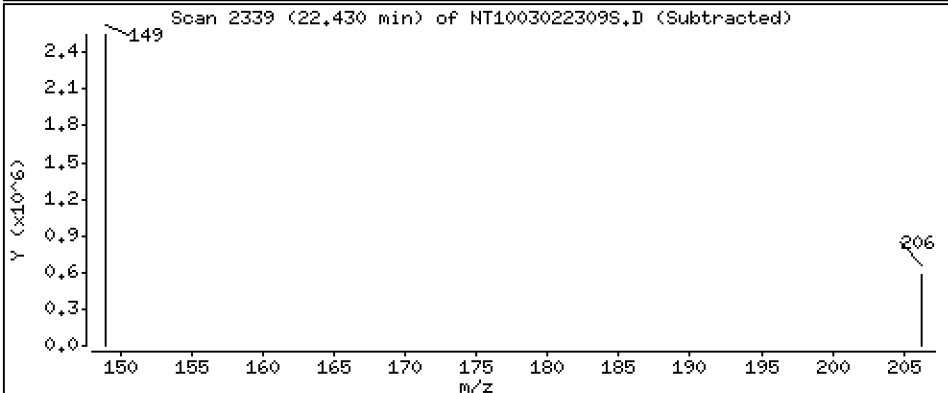
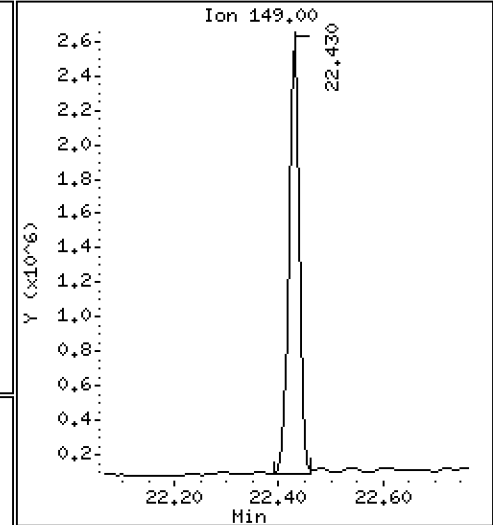
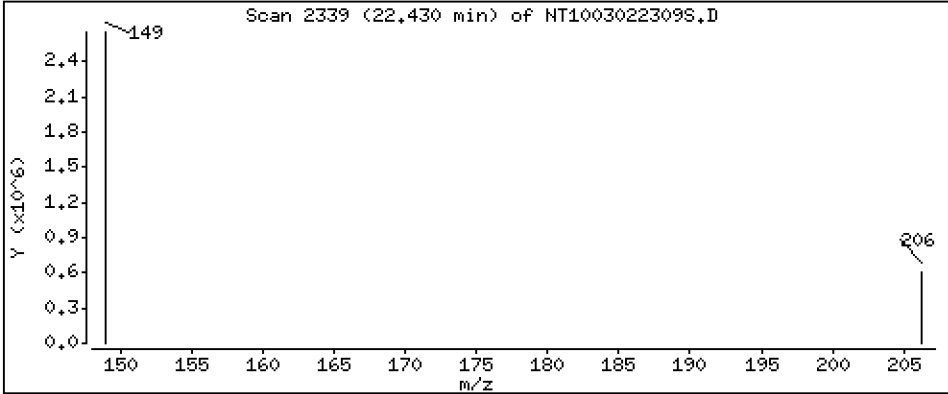
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 5,046 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

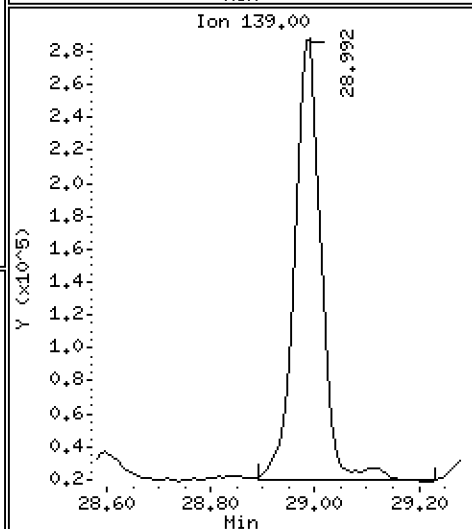
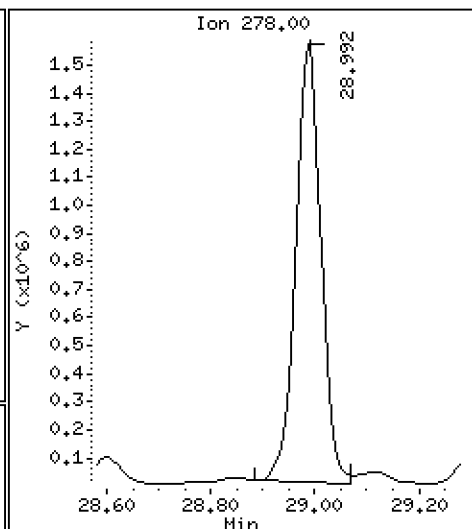
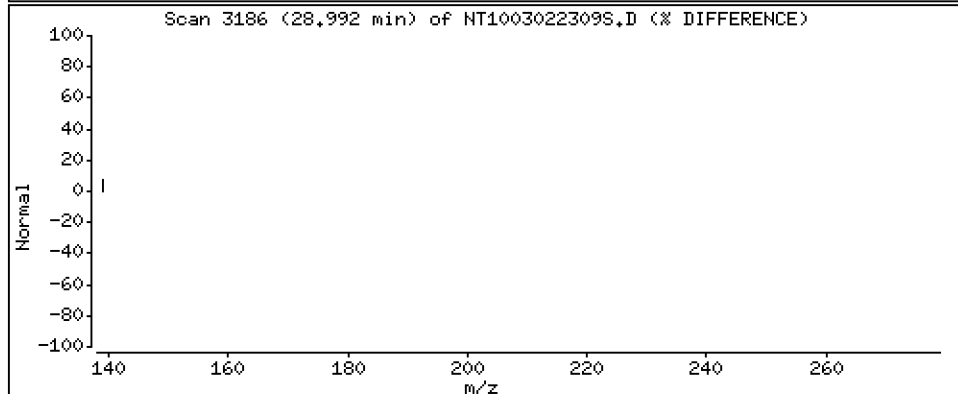
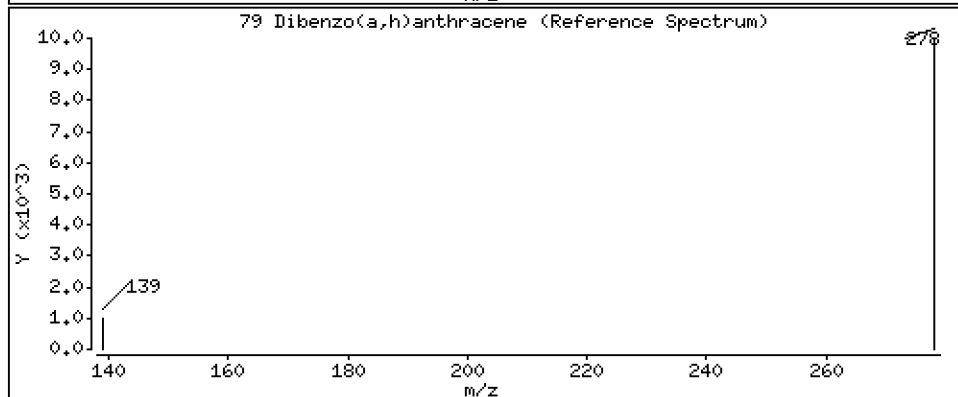
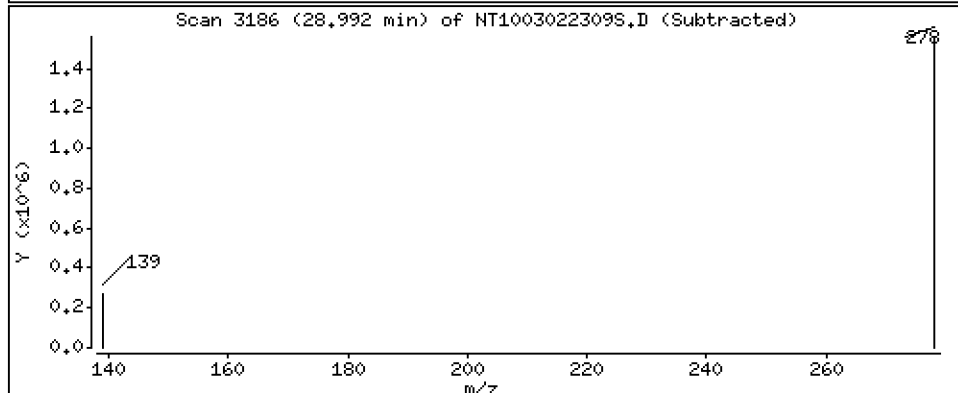
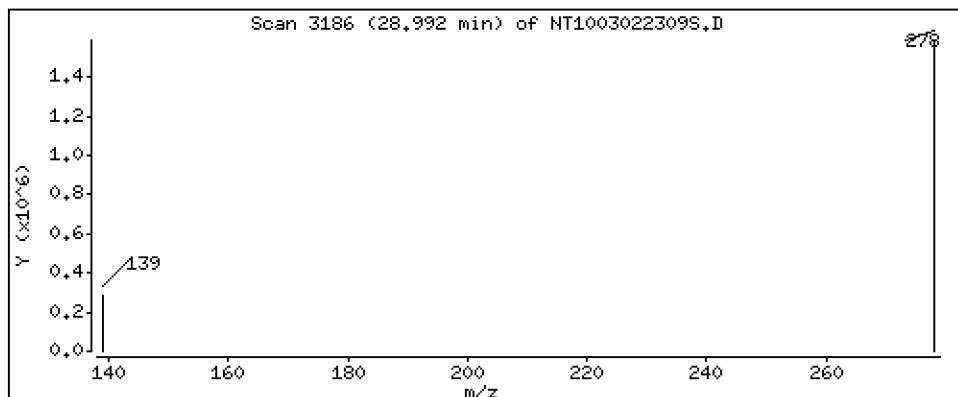
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,564 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

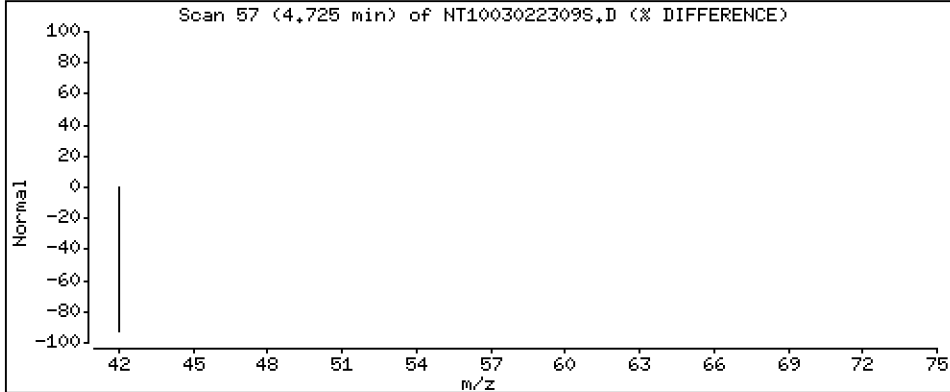
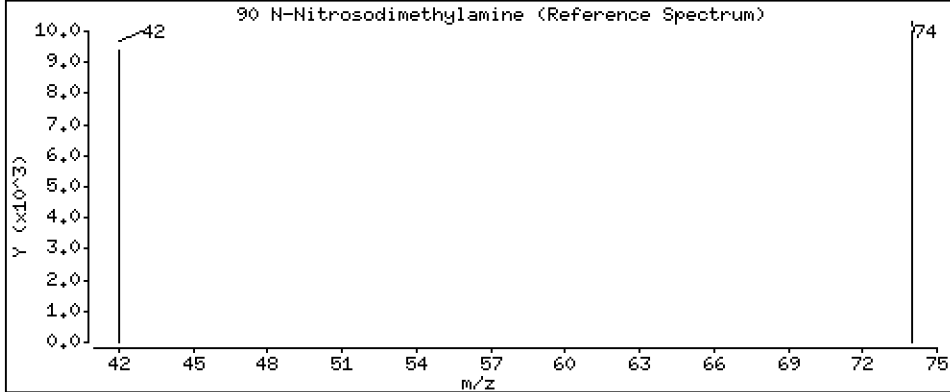
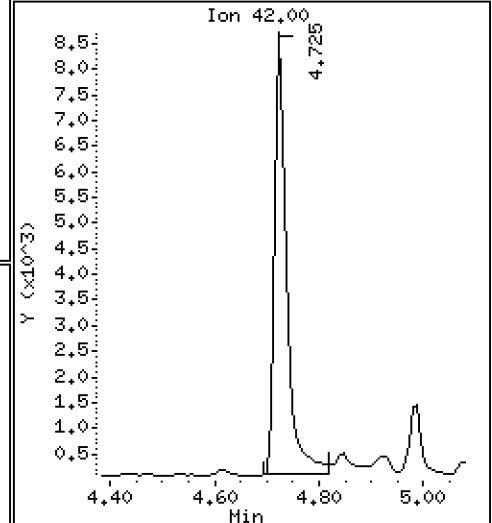
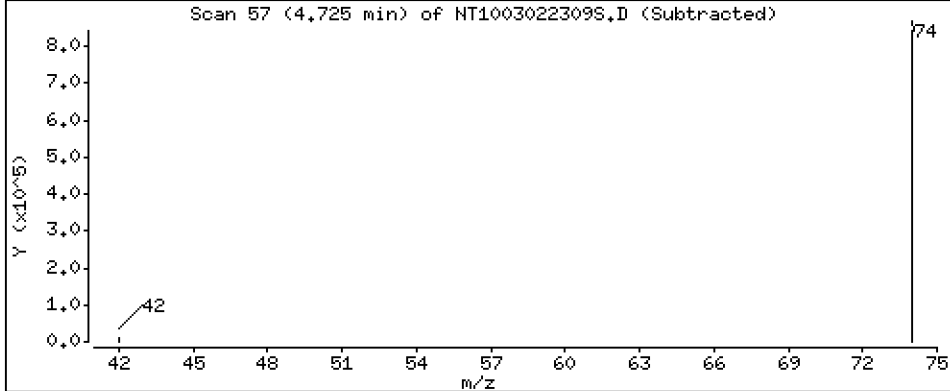
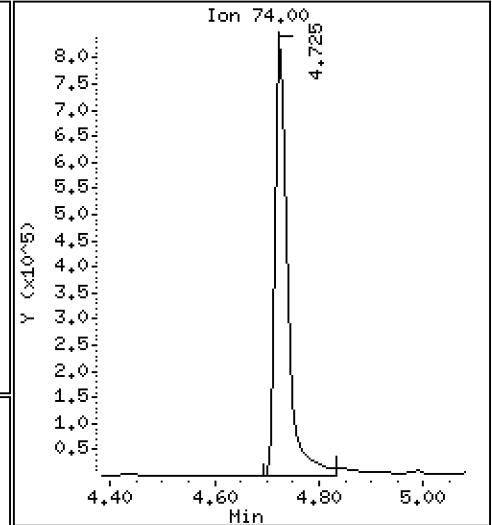
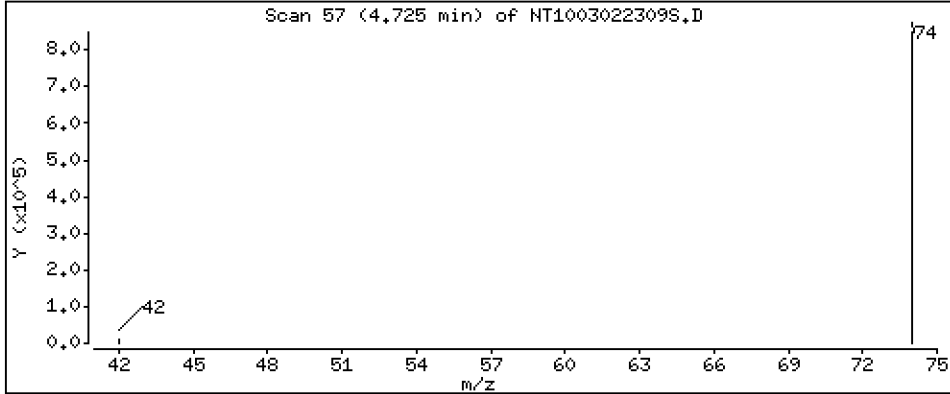
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.55 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022309S.D  
 Lab Smp Id: BLA0624-MS2  
 Inj Date : 02-MAR-2023 19:28 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-MS1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1194756	6.49831	6.498 (R)
3 Phenol	94		8.524	8.517	(0.921)	3395493	11.7302	11.73
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	971170	4.06910	4.069
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251	(1.000)	643993	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	1054529	4.54444	4.544
11 Benzyl alcohol	79		9.476	9.476	(1.024)	691784	4.33648	4.336
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	955792	4.28533	4.285
13 2-Methylphenol	108		9.655	9.655	(1.044)	737264	4.35670	4.357
15 4-Methylphenol	108		9.950	9.942	(1.076)	905455	5.03862	5.039
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	636272	5.16650	5.166
22 2,4-Dimethylphenol	107		11.006	10.997	(0.939)	2870668	13.6862	13.69
24 Benzoic acid	105		11.167	11.074	(0.953)	2905227	22.8756	22.88
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	770771	4.51064	4.511
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	2374110	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	518561	4.27638	4.276
39 Dimethylphthalate	163		14.749	14.741	(0.963)	2238742	5.60374	5.604
* 42 Acenaphthene-d10	162		15.321	15.314	(1.000)	1258198	4.00000	
50 Diethylphthalate	149		16.218	16.203	(1.059)	2566058	6.81103	6.811
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	2048541	4.51502	4.515
57 Hexachlorobenzene	284		17.586	17.578	(0.955)	893428	4.20768	4.208

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.977)	2148596	17.8641	17.86
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2803544	4.00000	
\$ 66 Terphenyl-d14	244	21.547	21.532	(0.919)	1562782	4.56601	4.566(R)
67 Butylbenzylphthalate	149	22.430	22.414	(0.957)	3541090	5.04637	5.046
* 69 Chrysene-d12	240	23.444	23.421	(1.000)	4232445	4.00000	
* 77 Perylene-d12	264	26.146	26.115	(1.000)	3782979	4.00000	
79 Dibenzo(a,h)anthracene	278	28.992	28.929	(1.109)	5329678	5.56366	5.564
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	1366021	12.5494	12.55

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022309S.D  
 Lab Smp Id: BLA0624-MS2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	643993	30.52
27 Naphthalene-d8	1779056	889528	3558112	2374110	33.45
42 Acenaphthene-d10	954569	477285	1909138	1258198	31.81
59 Phenanthrene-d10	1596290	798145	3192580	2803544	75.63
69 Chrysene-d12	1649110	824555	3298220	4232445	156.65
77 Perylene-d12	1901958	950979	3803916	3782979	98.90

<-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.44	0.10
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022309S.D

Lab ID: BLA0624-MS2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 19:28

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.945	0.0080	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

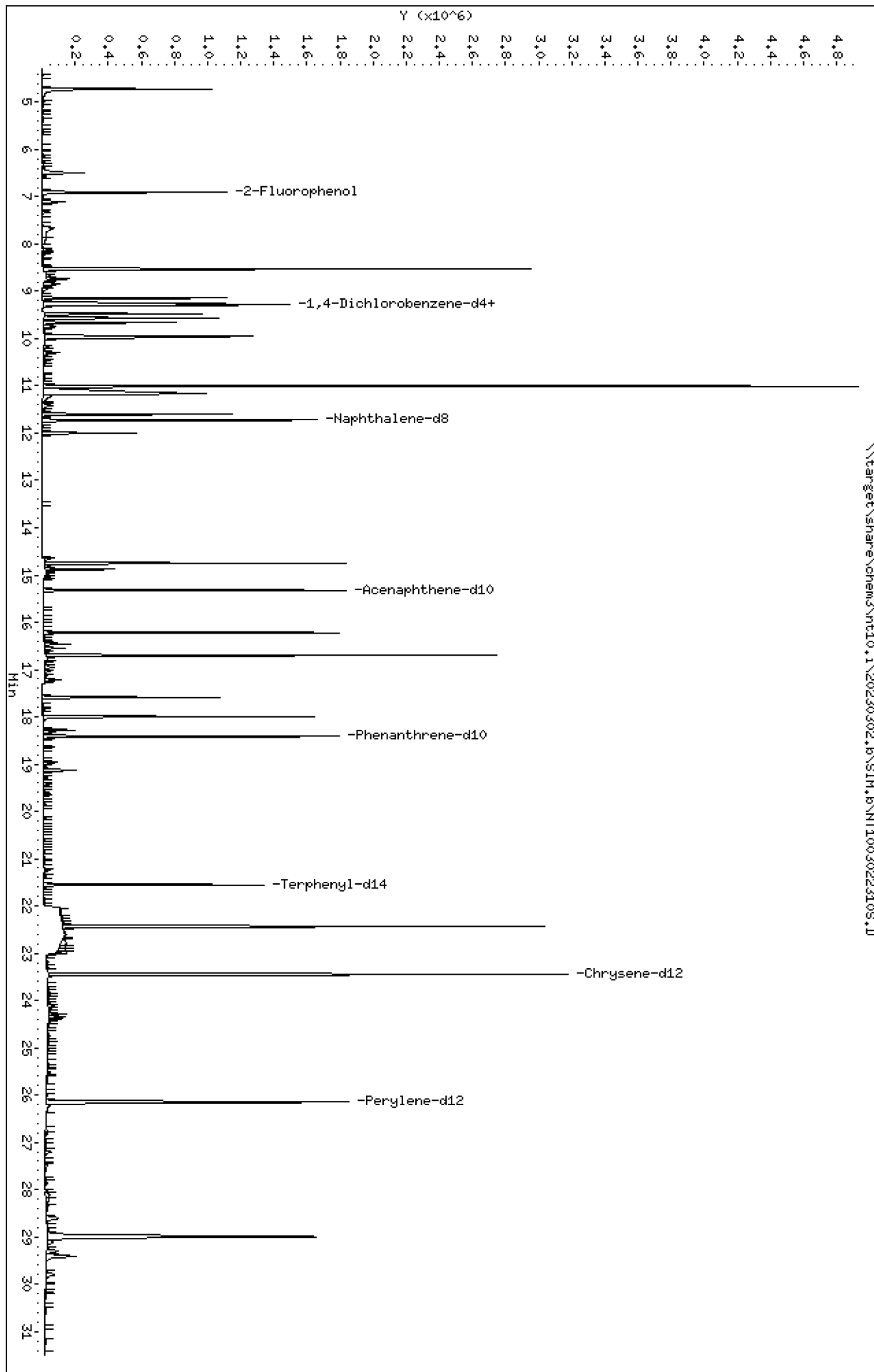
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022310S.D  
Date: 02-MAR-2023 20:06  
Client ID:  
Sample Info: BLR0624-HSD1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022310S.D



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

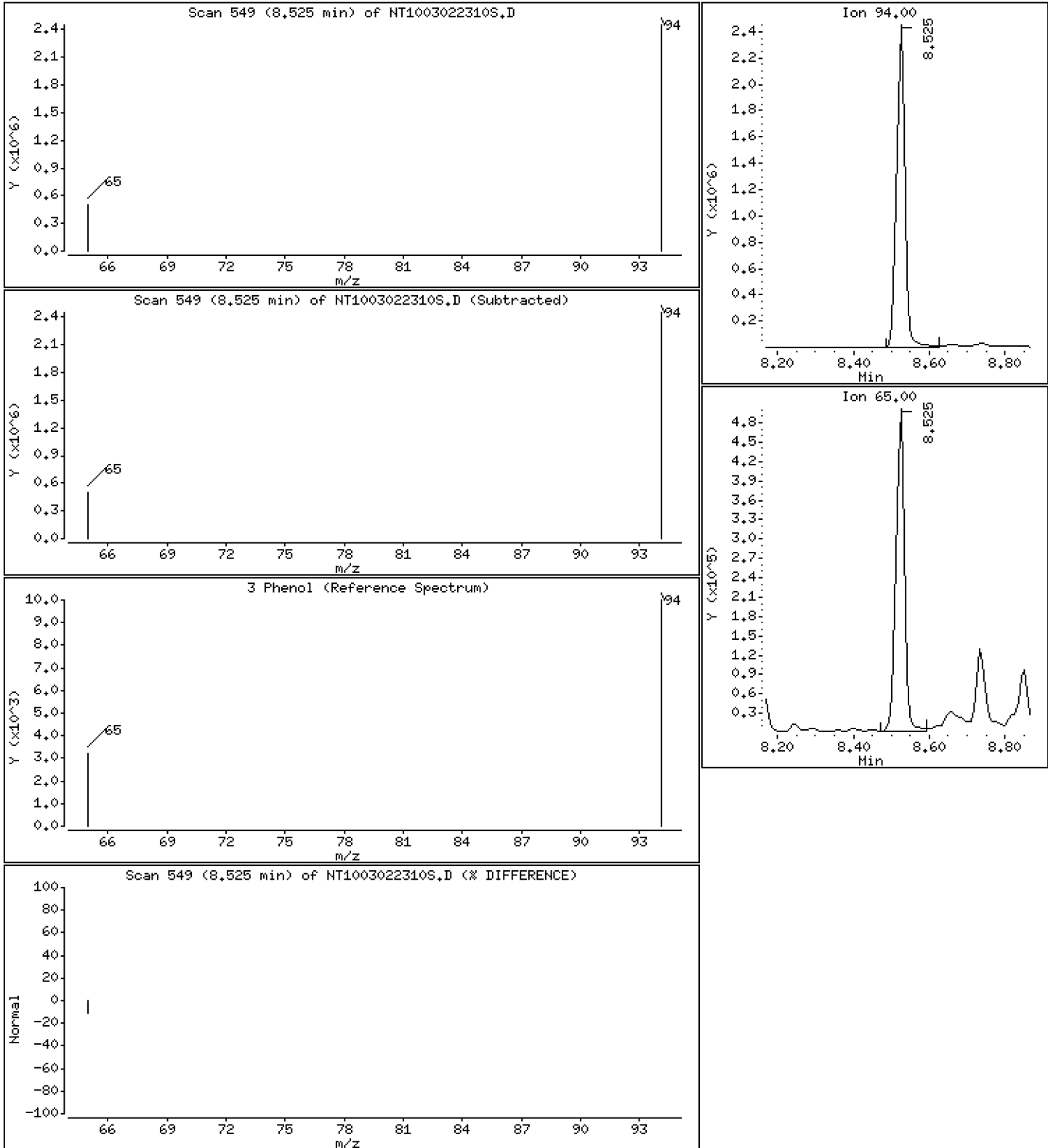
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 11.96 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

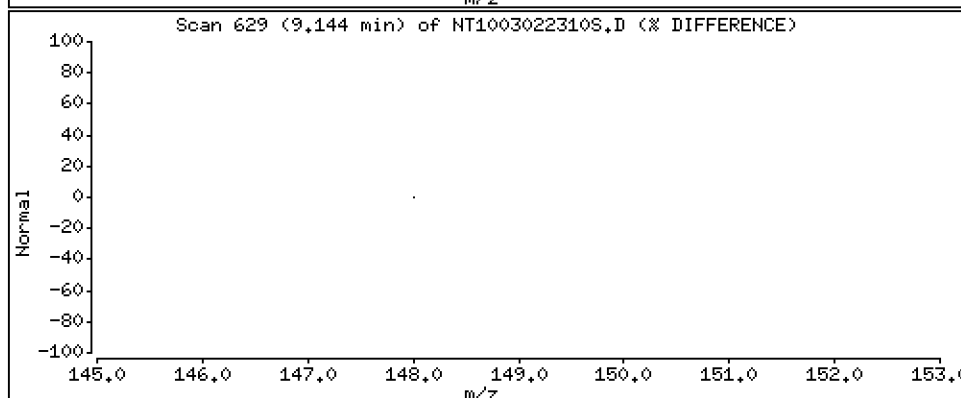
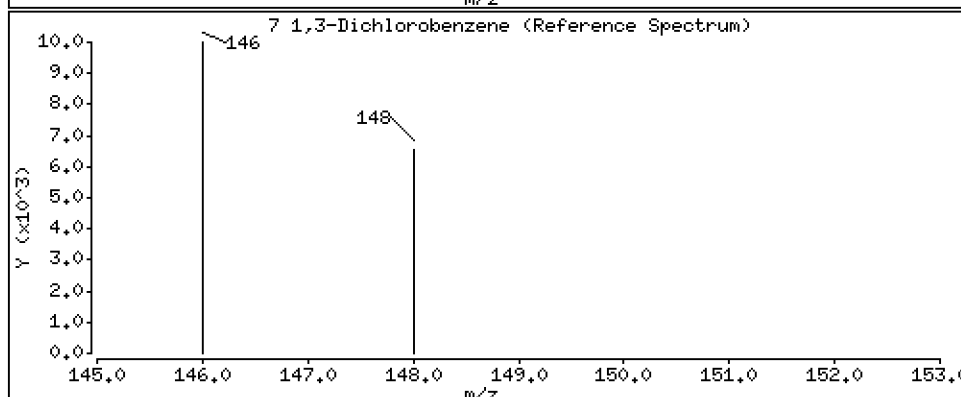
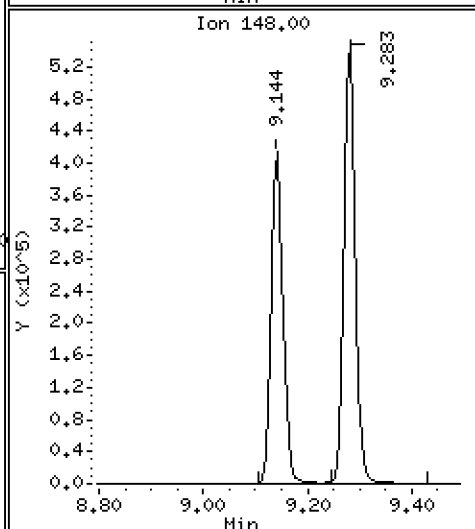
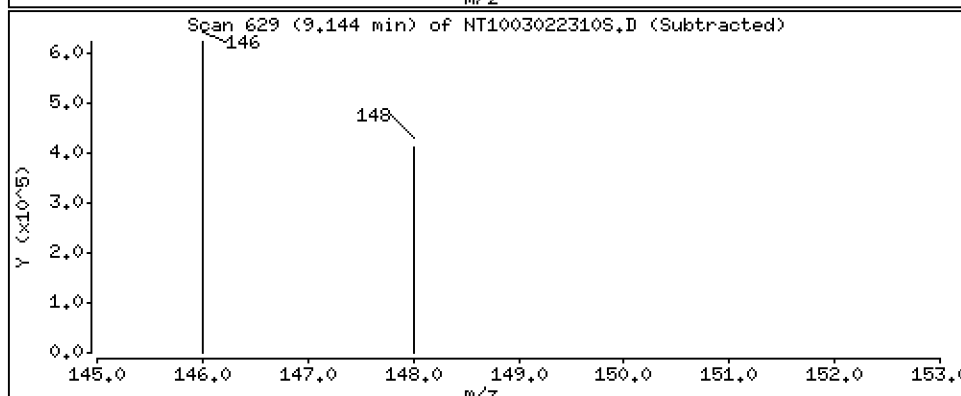
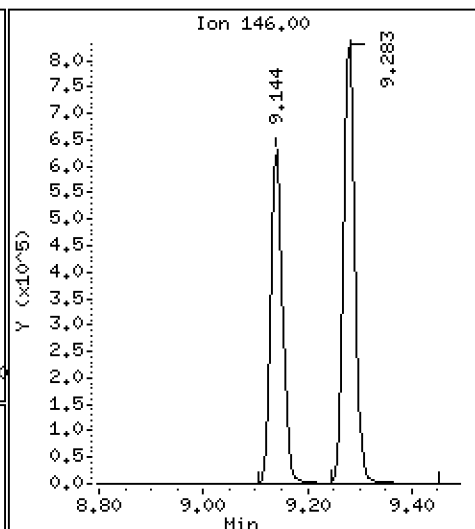
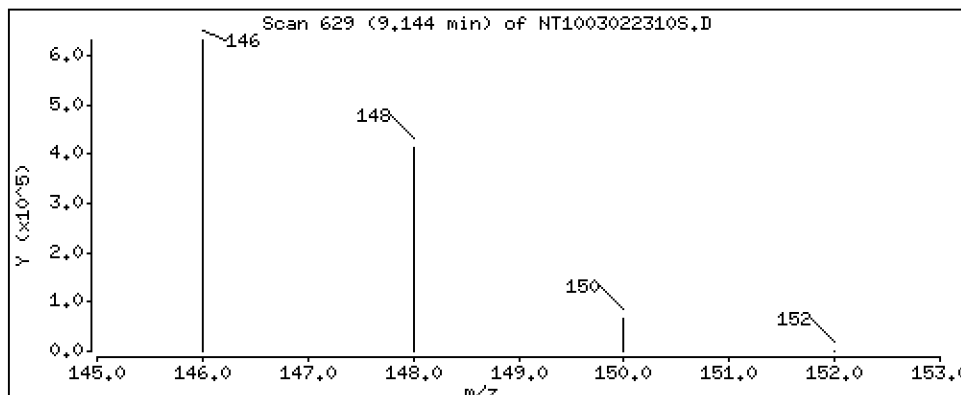
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,012 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

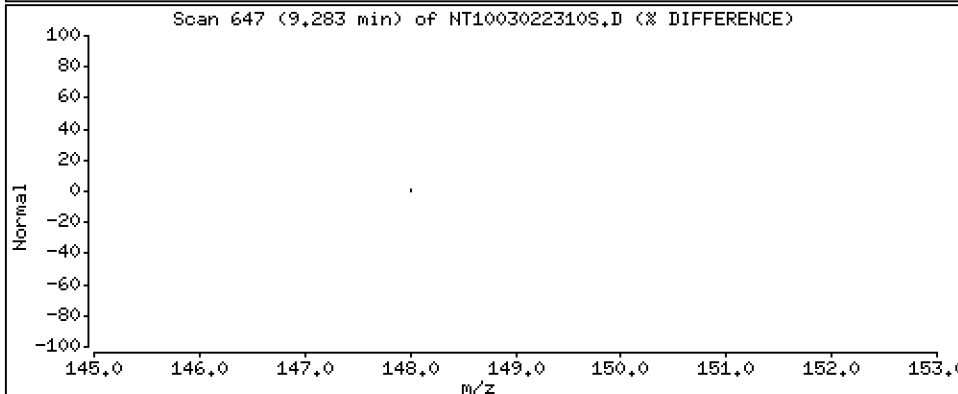
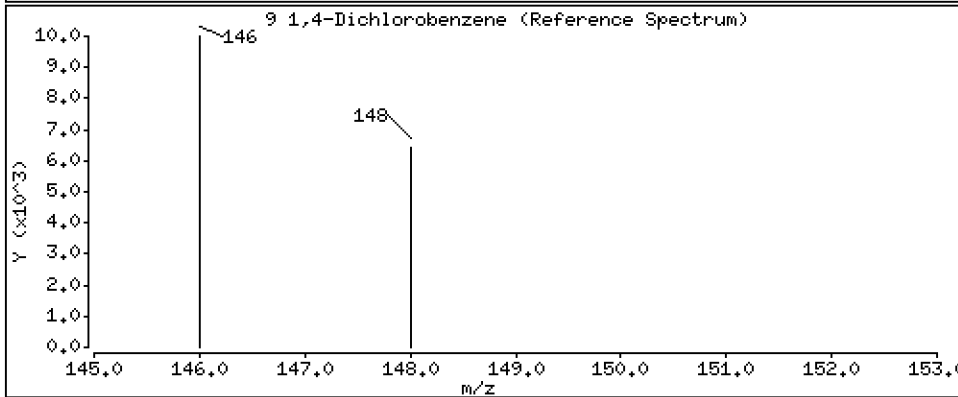
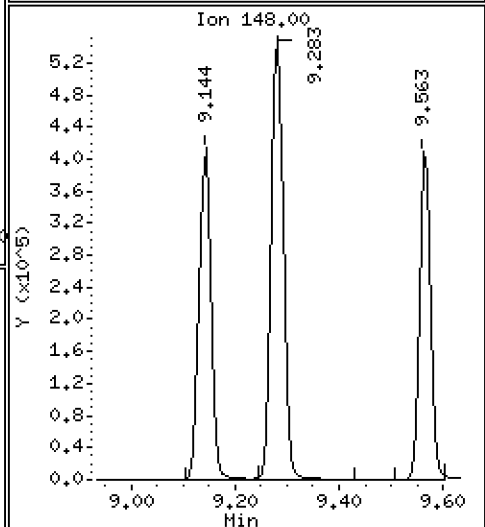
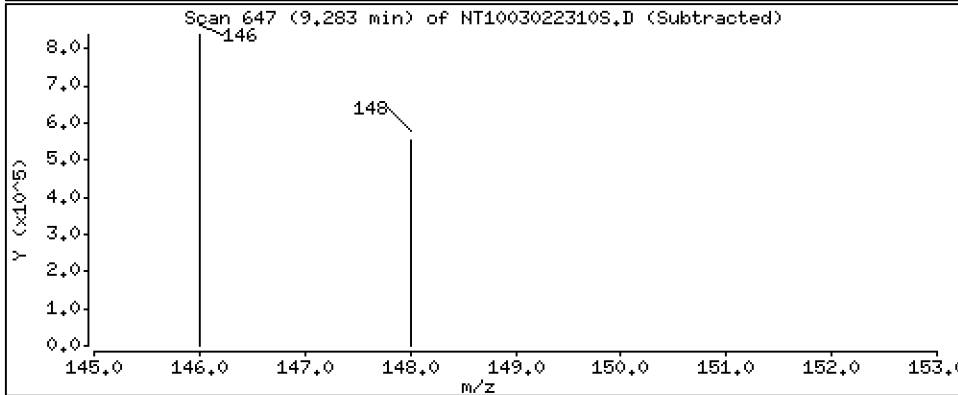
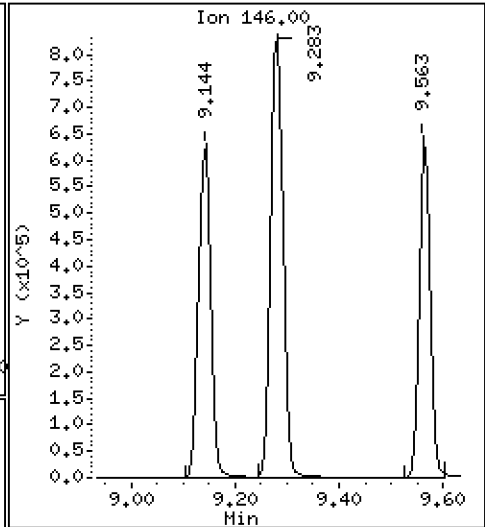
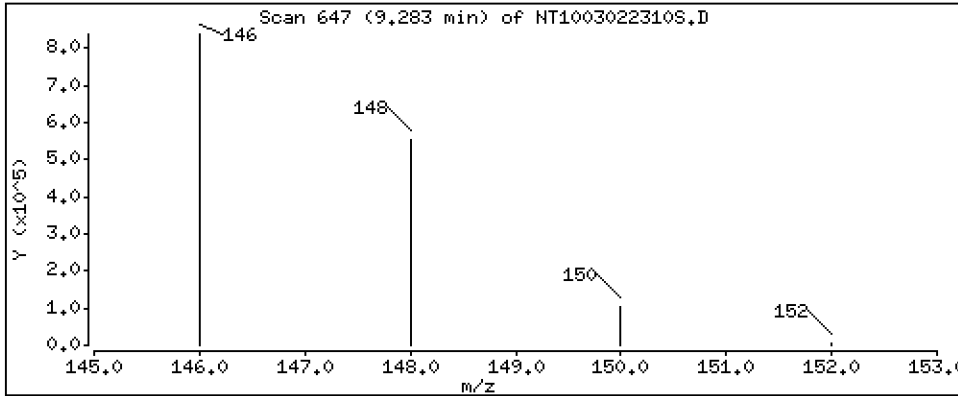
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,473 ug/L





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

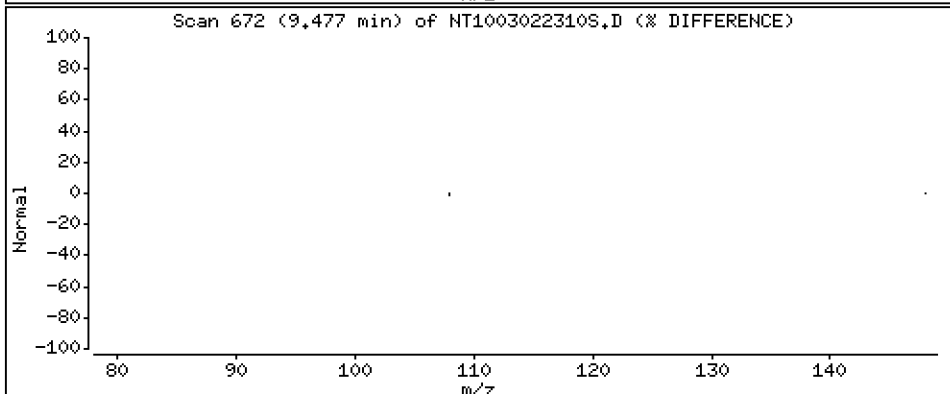
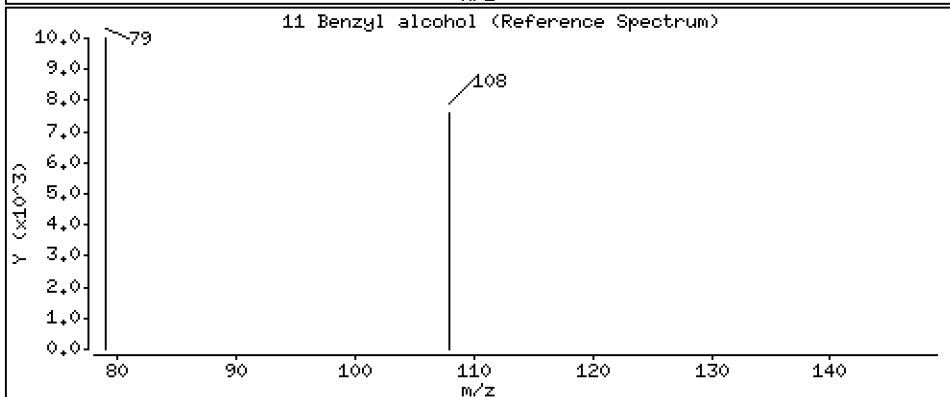
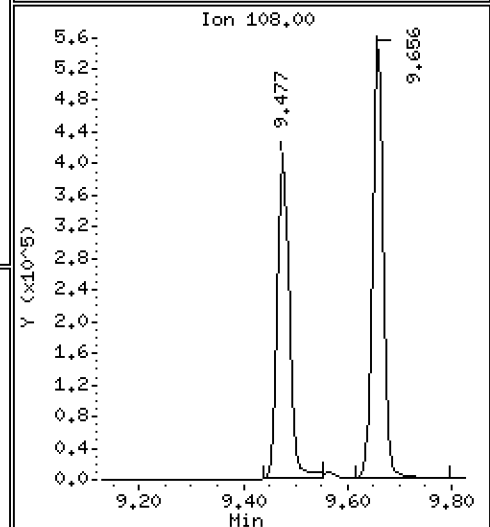
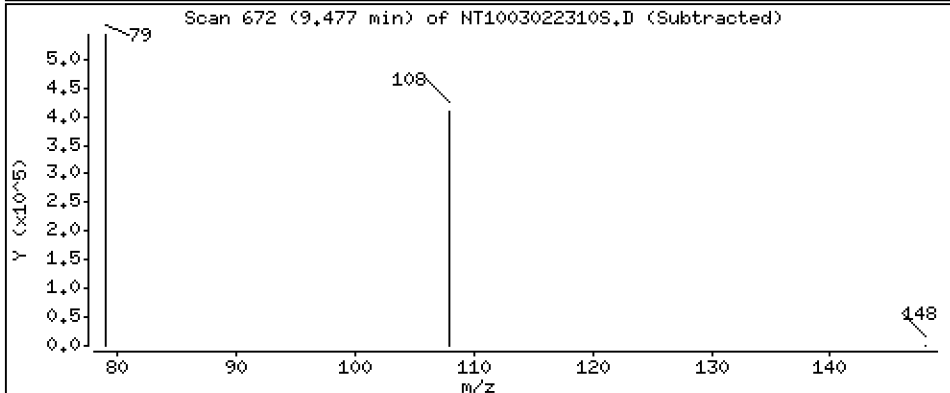
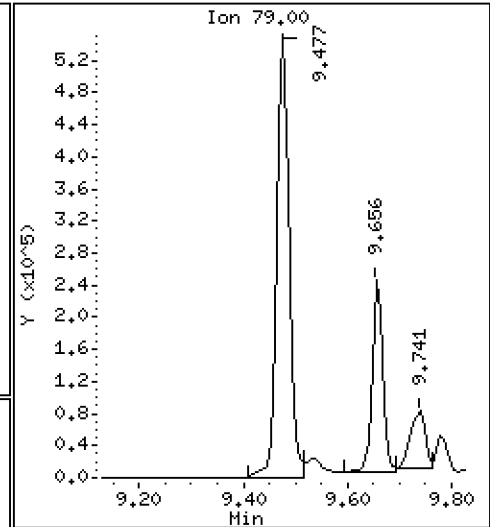
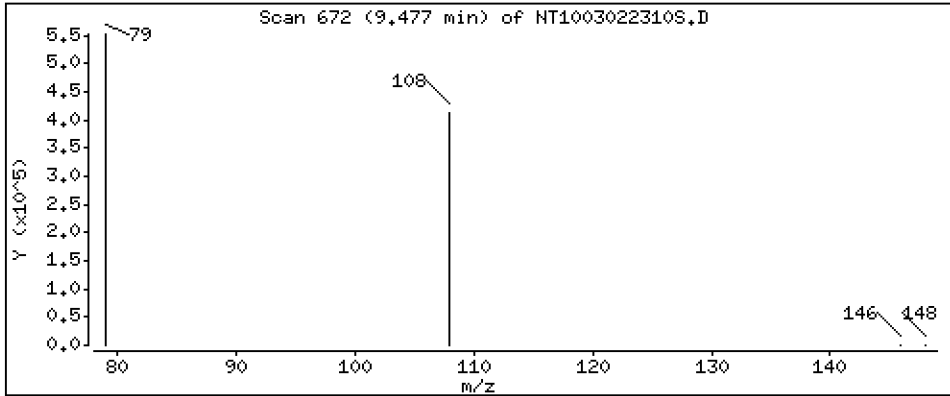
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5.125 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

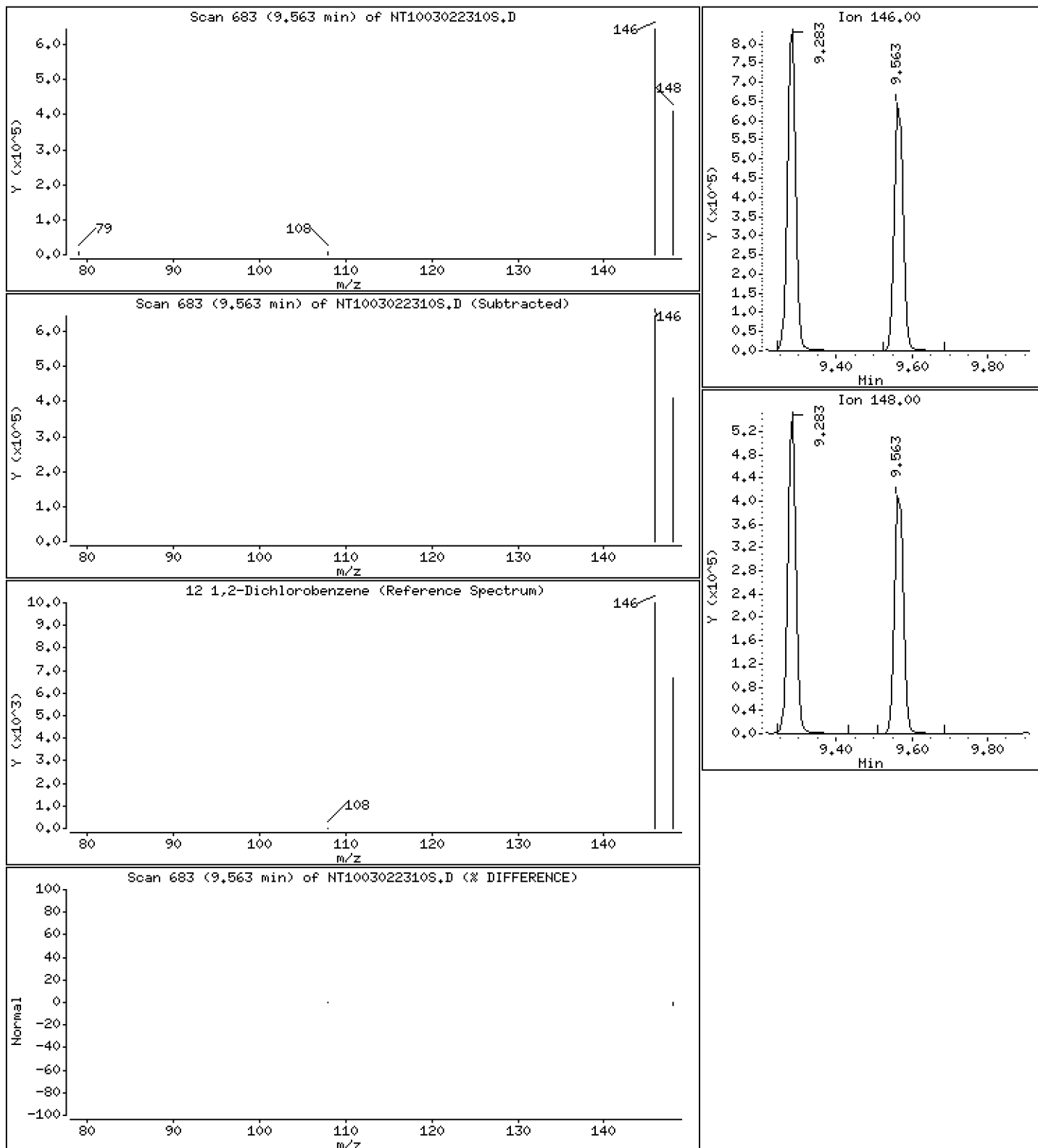
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4,221 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

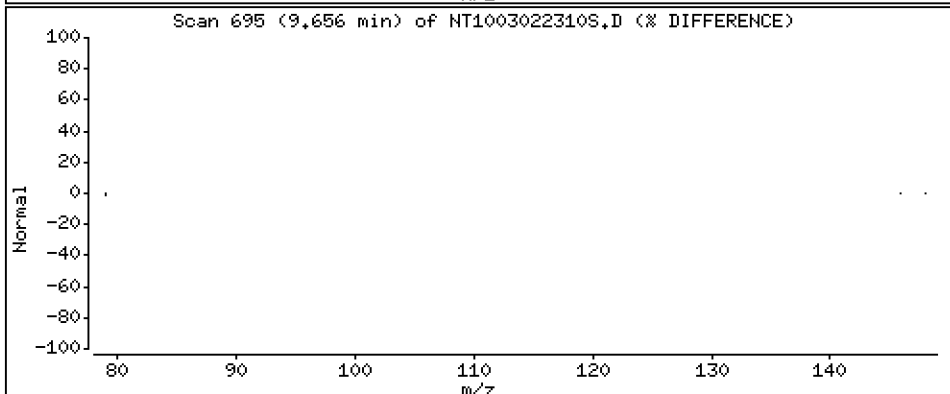
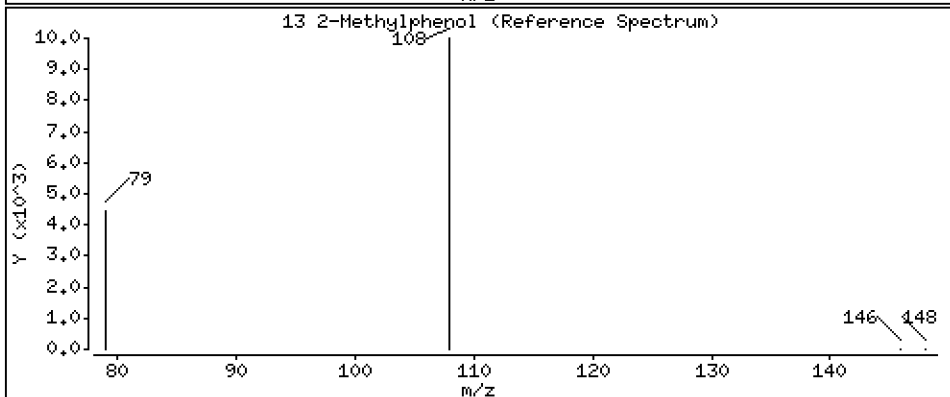
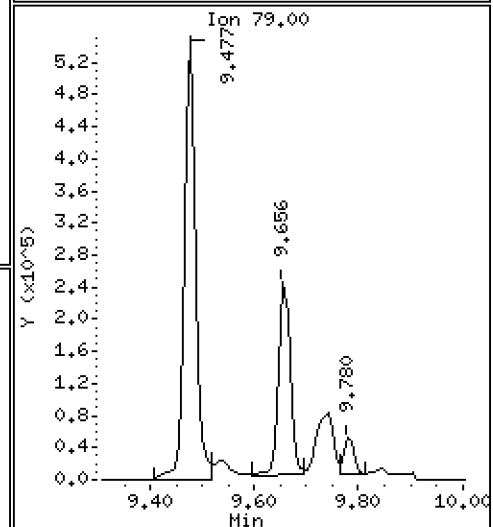
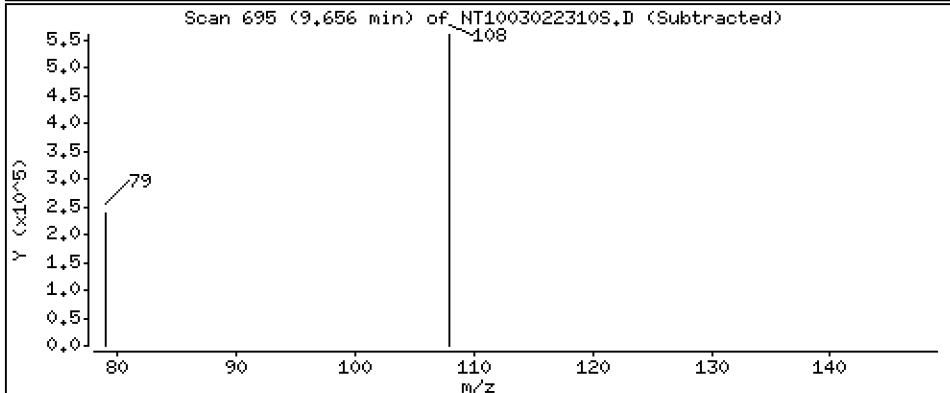
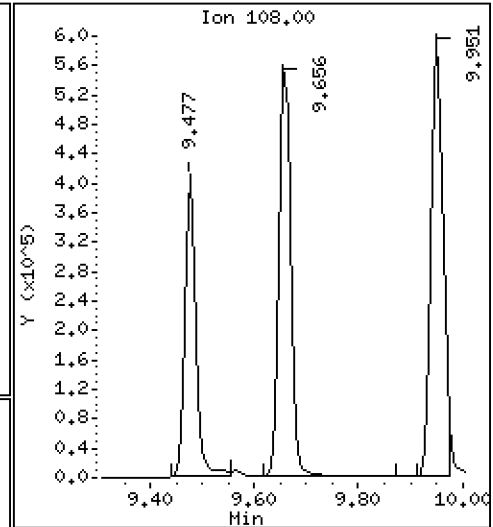
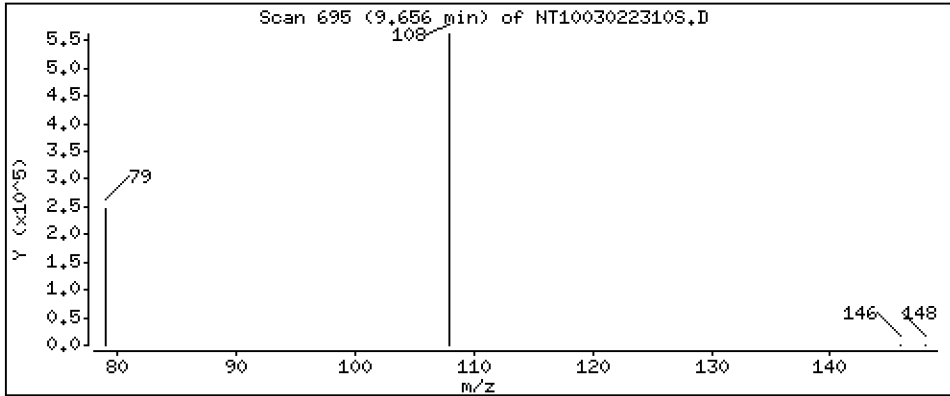
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.648 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

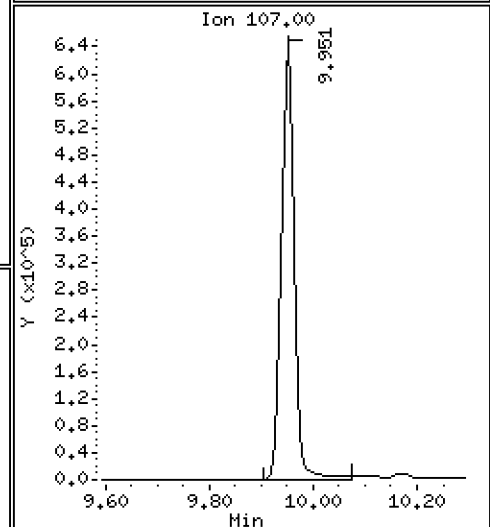
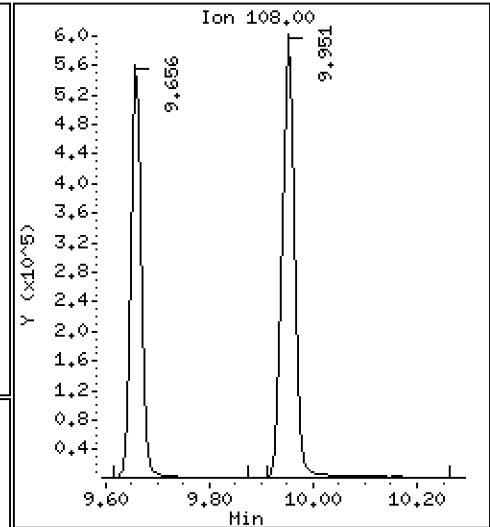
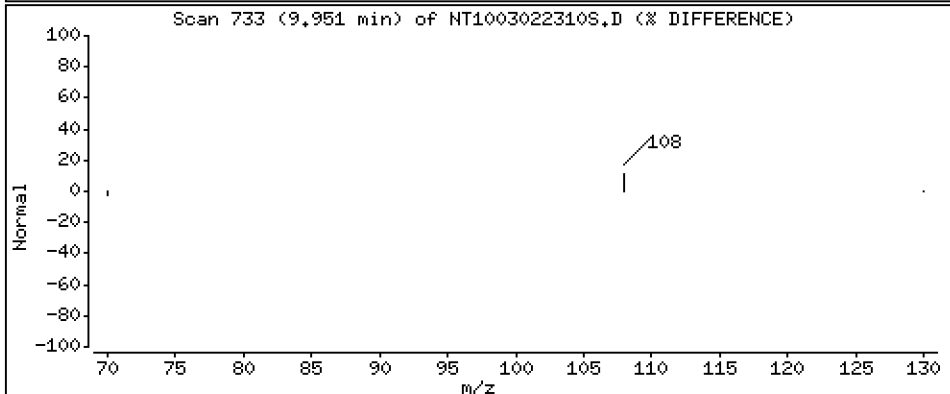
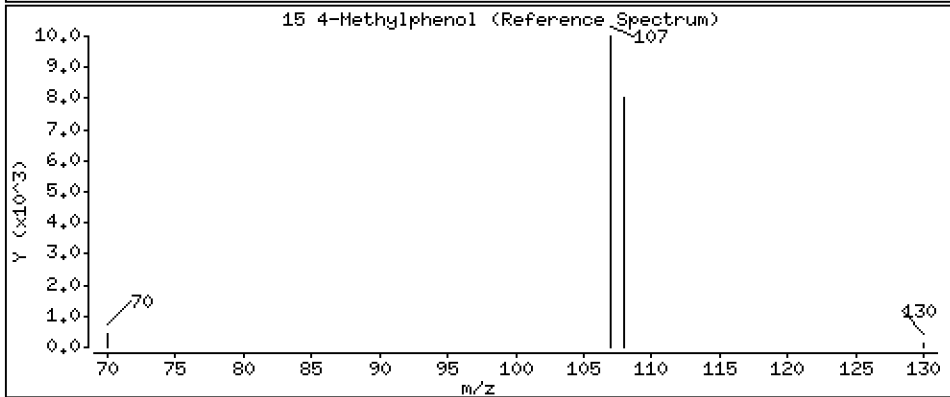
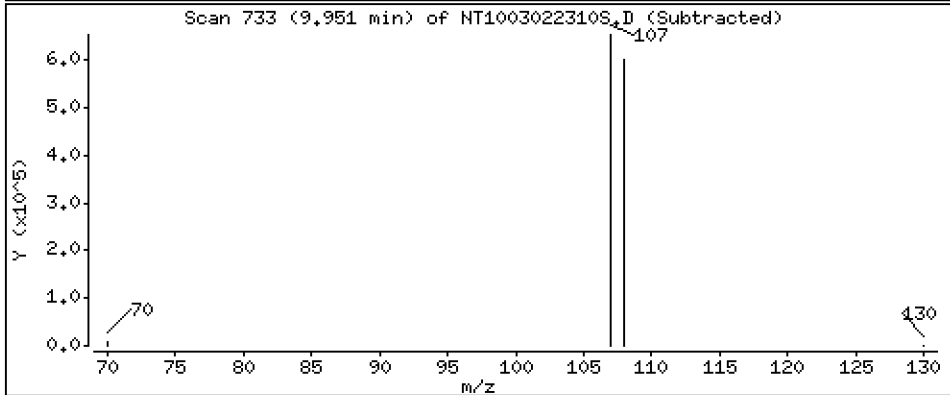
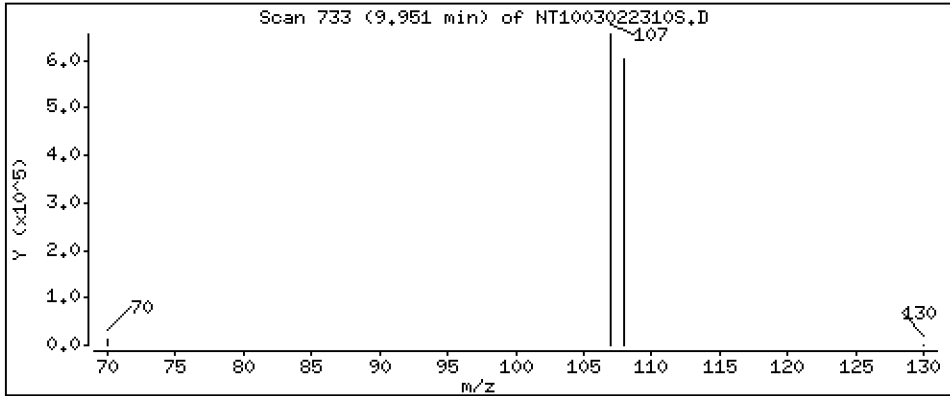
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 5,249 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

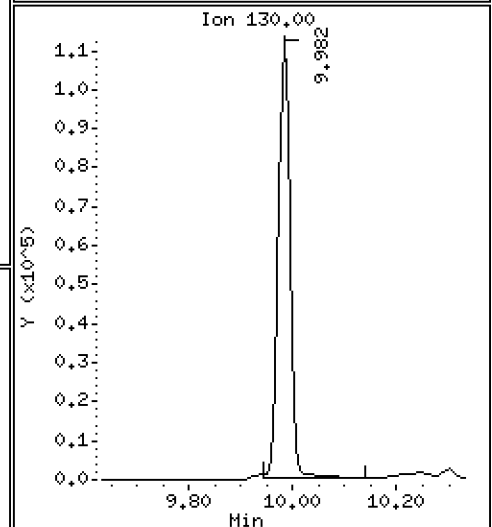
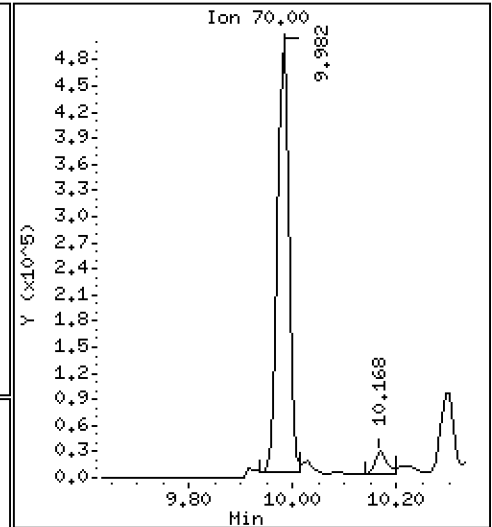
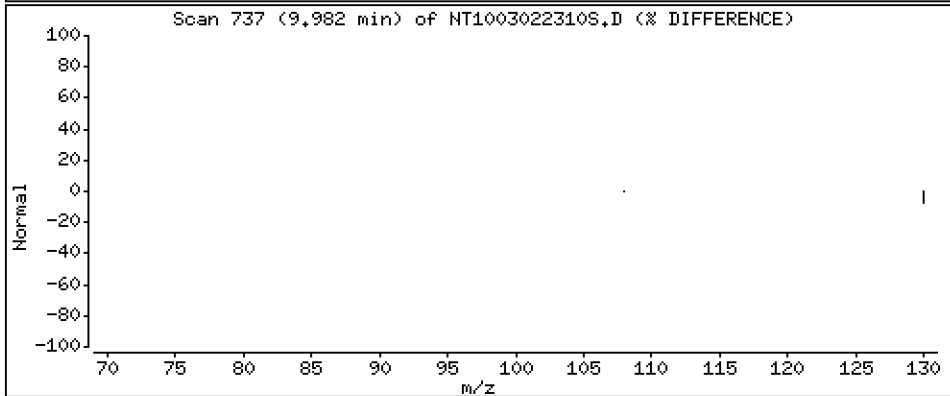
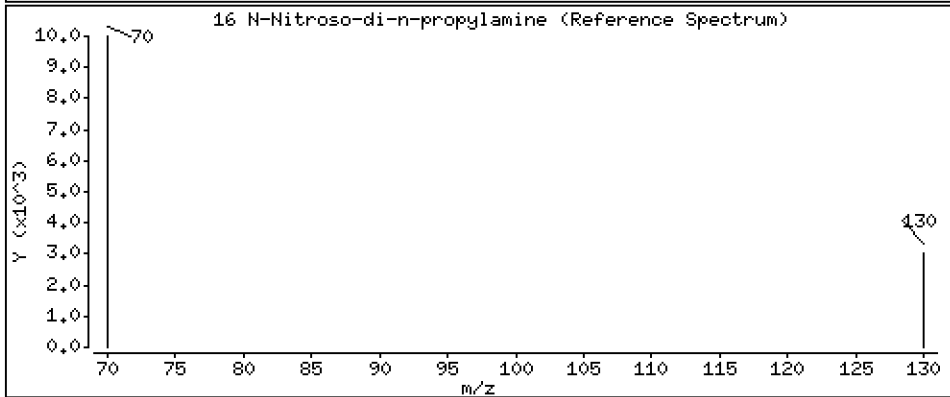
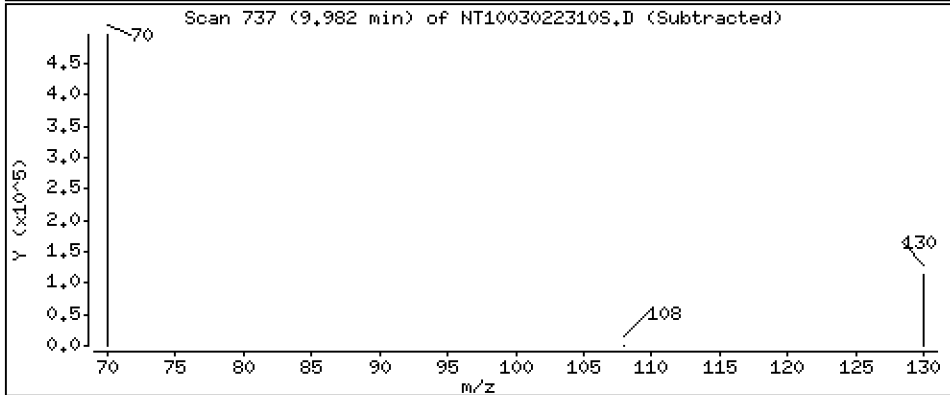
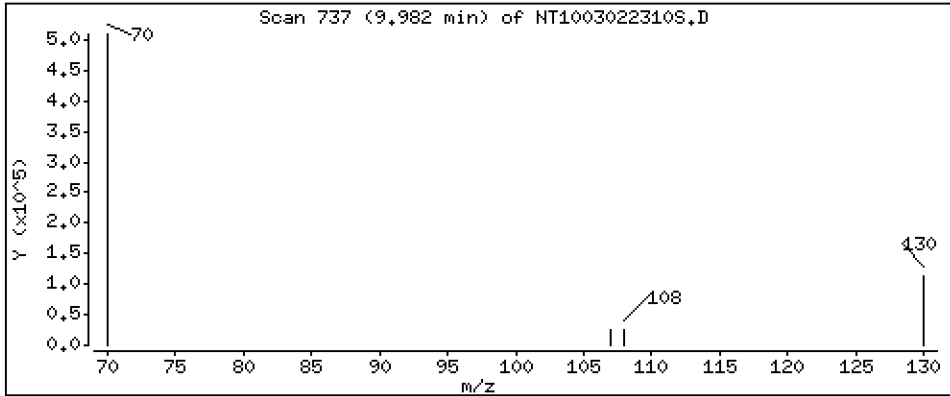
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,488 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

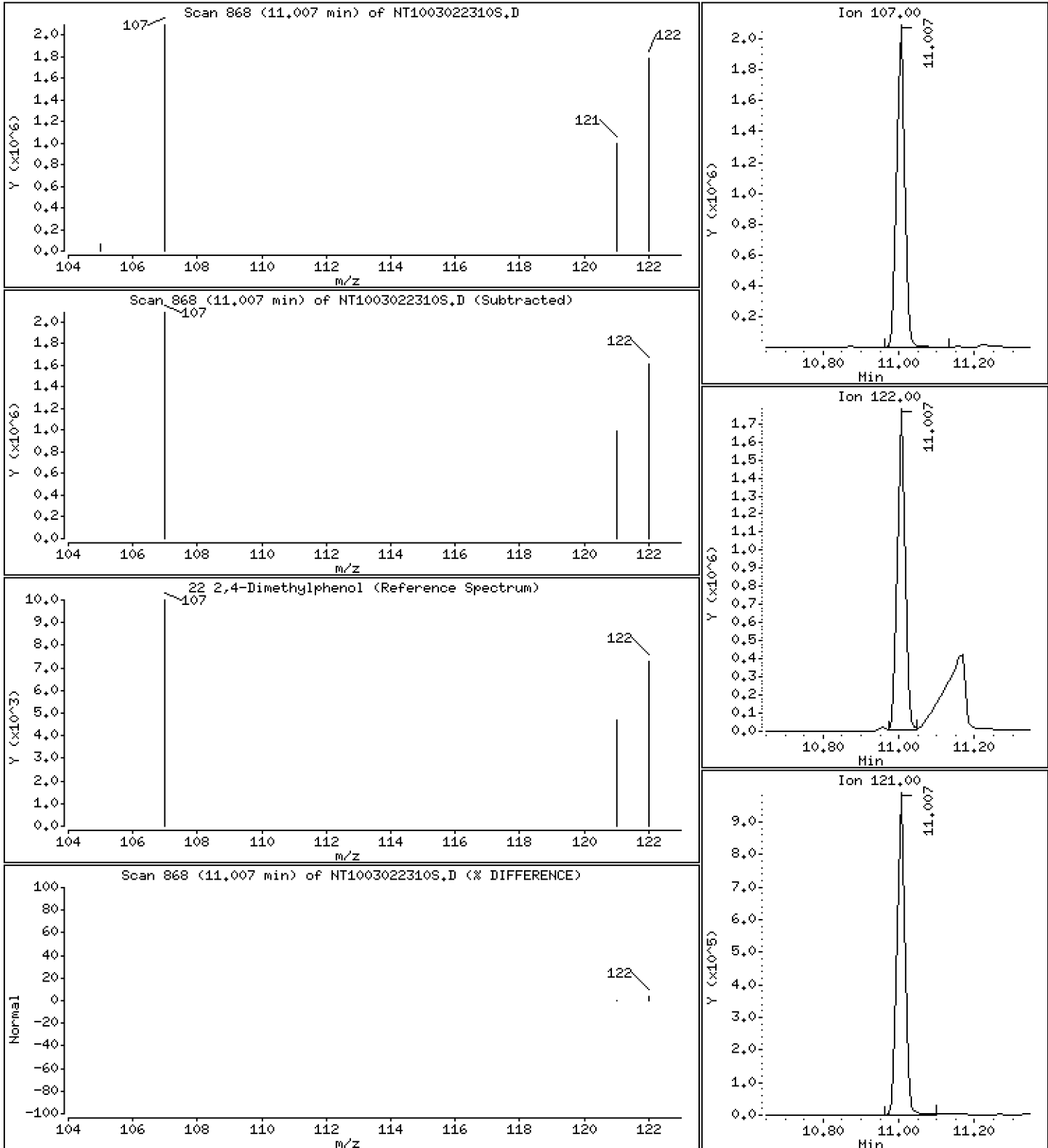
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 14,05 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

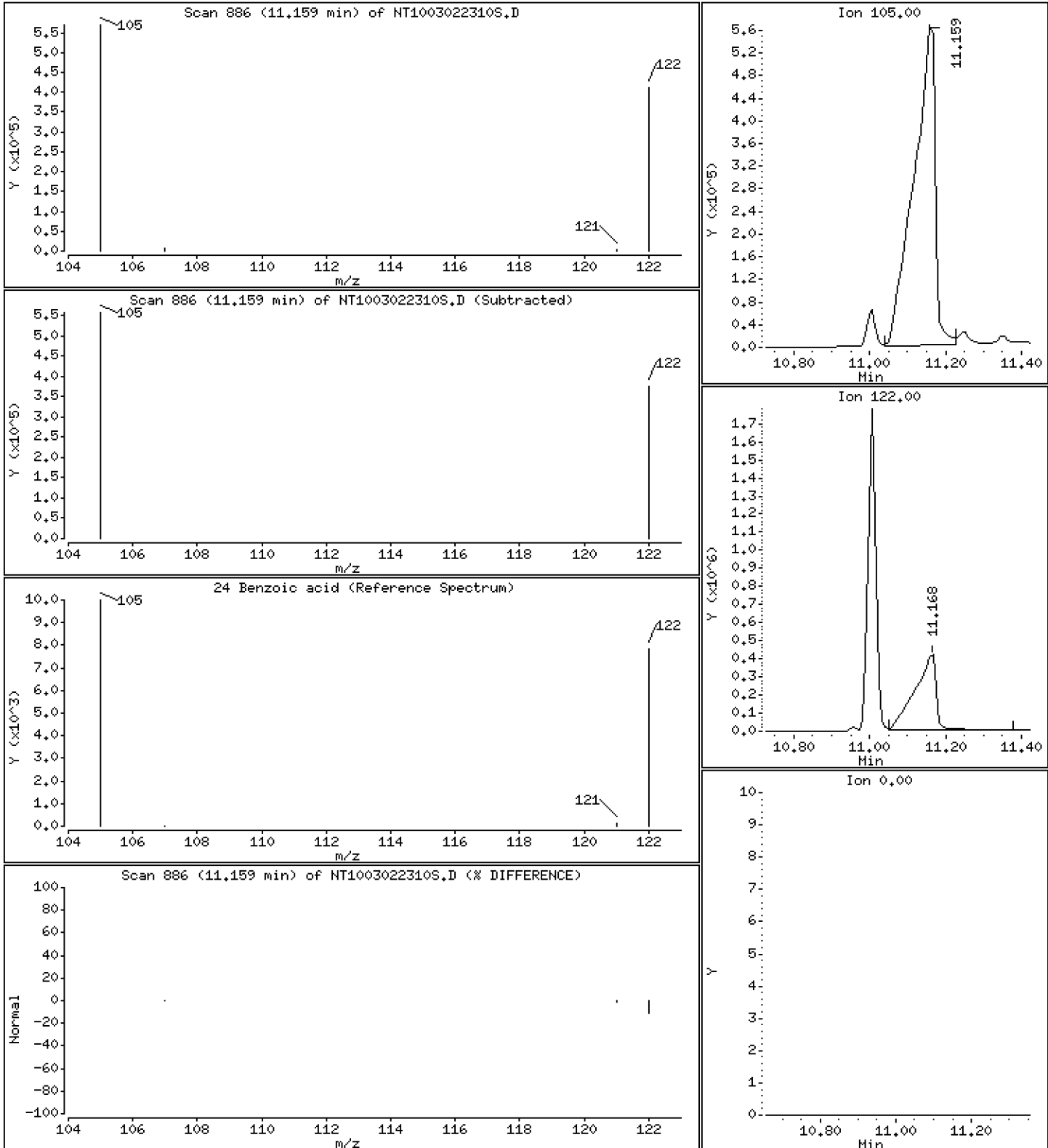
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 17.46 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

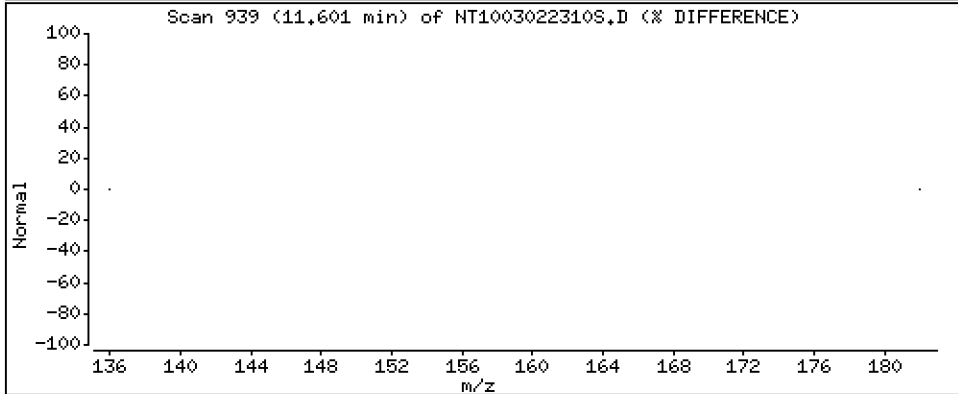
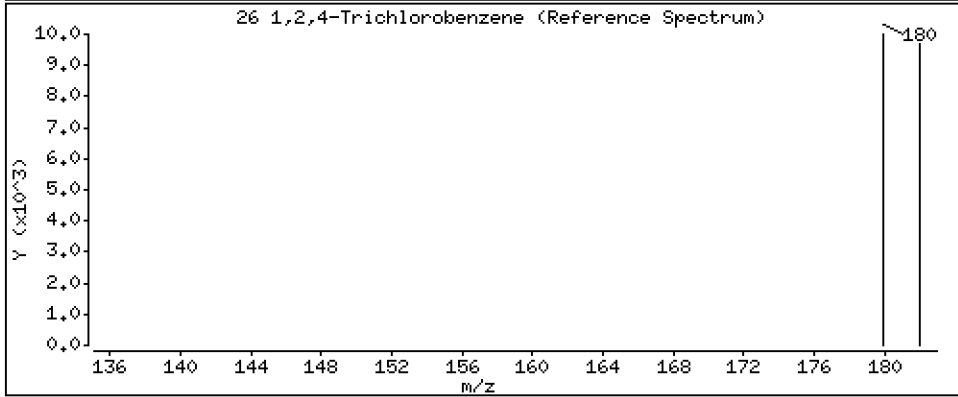
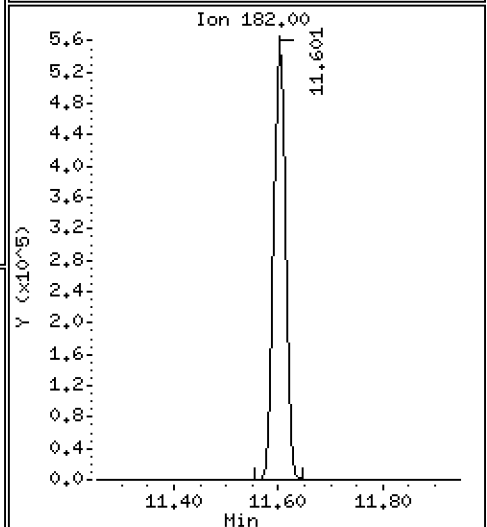
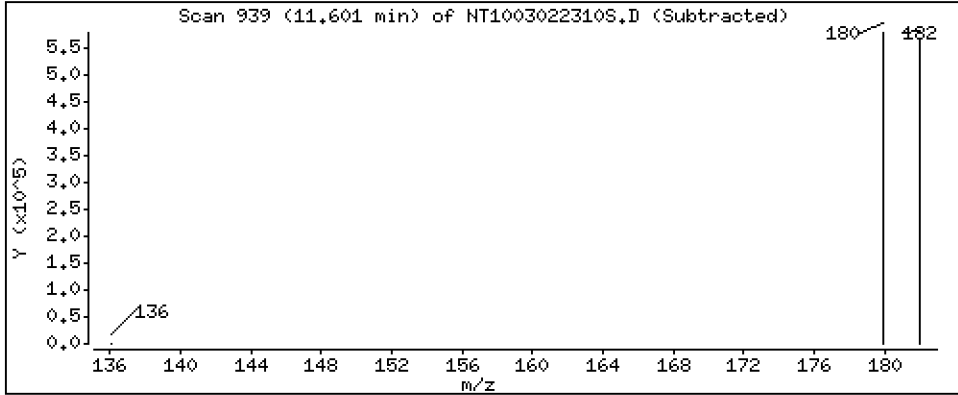
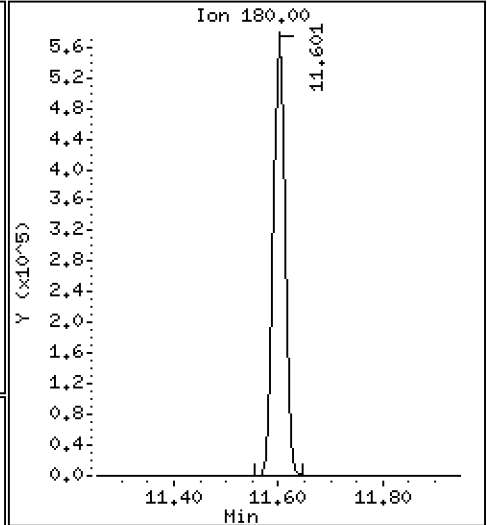
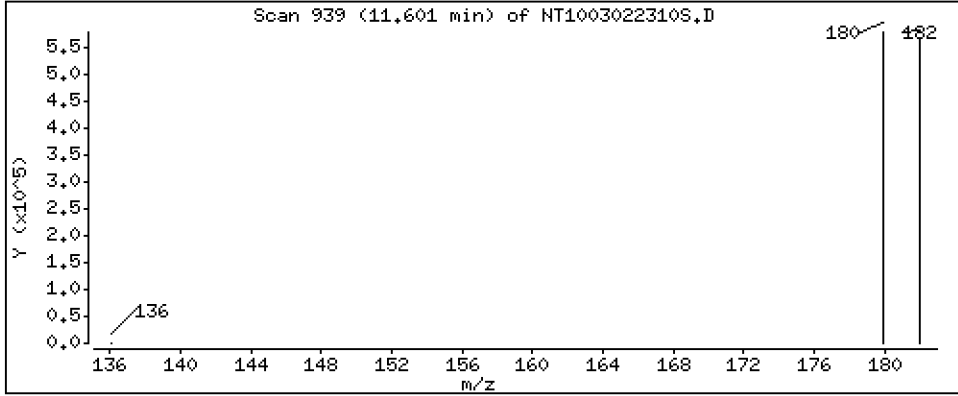
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,715 ug/L





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

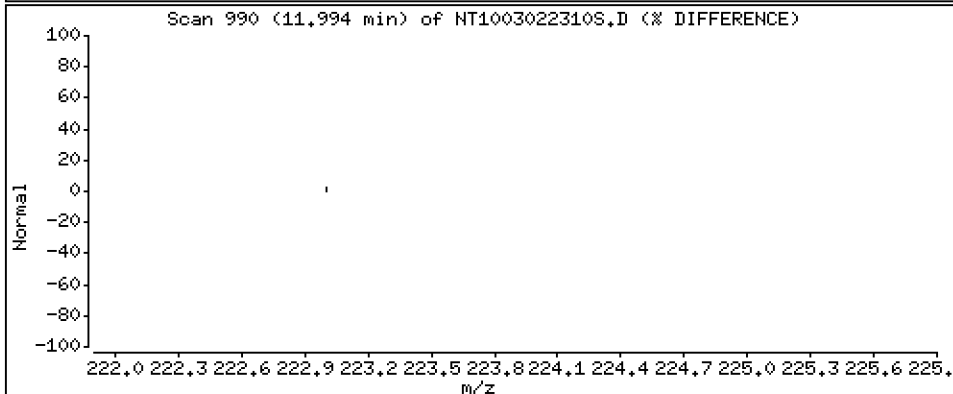
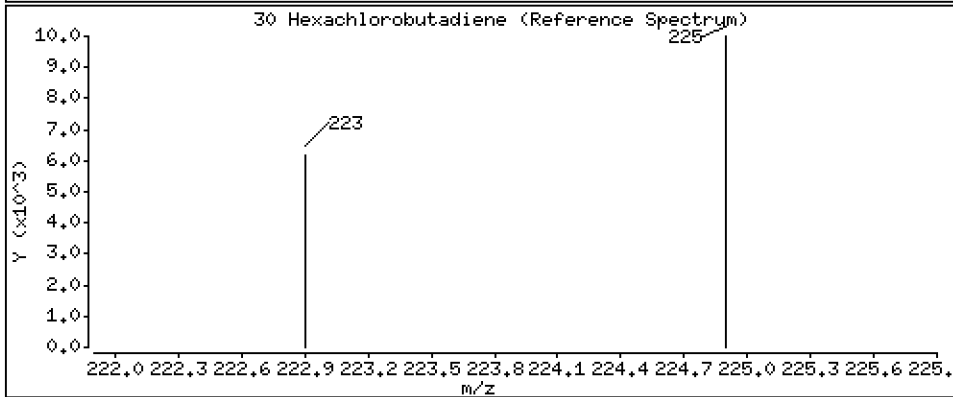
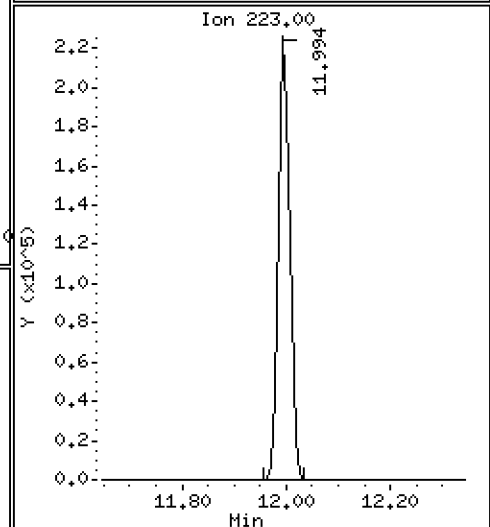
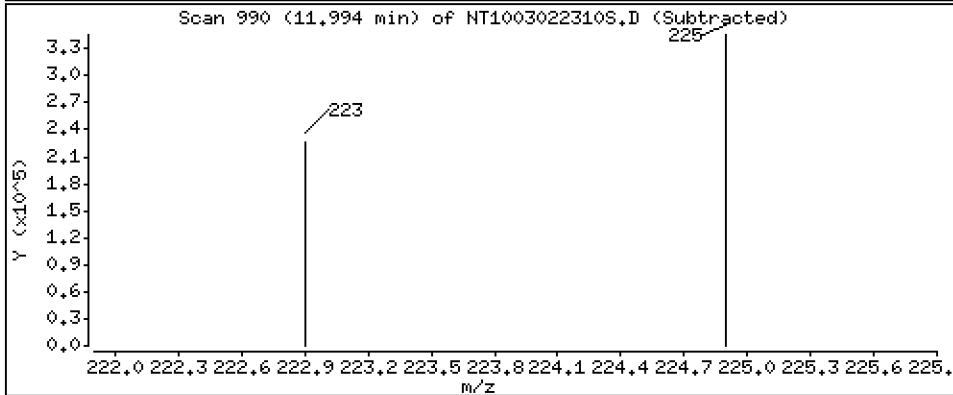
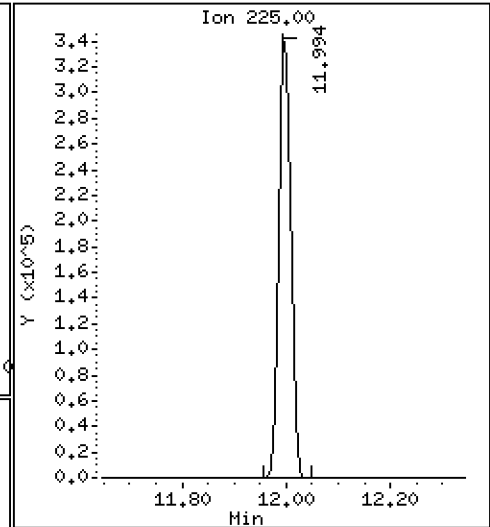
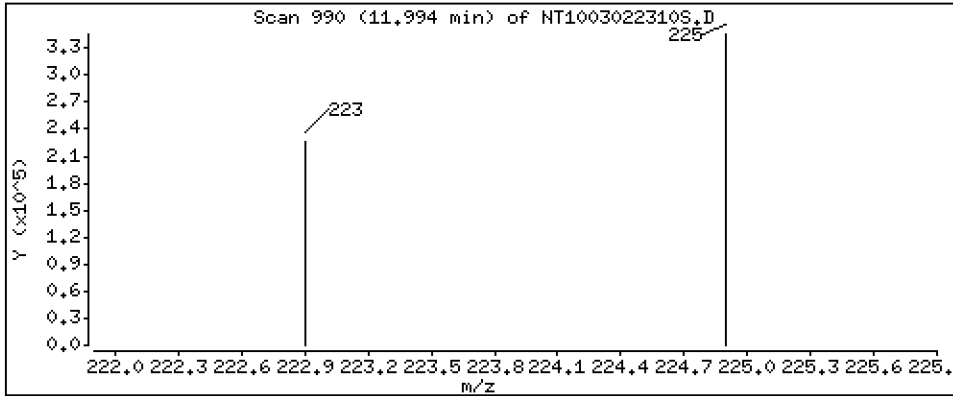
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,167 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

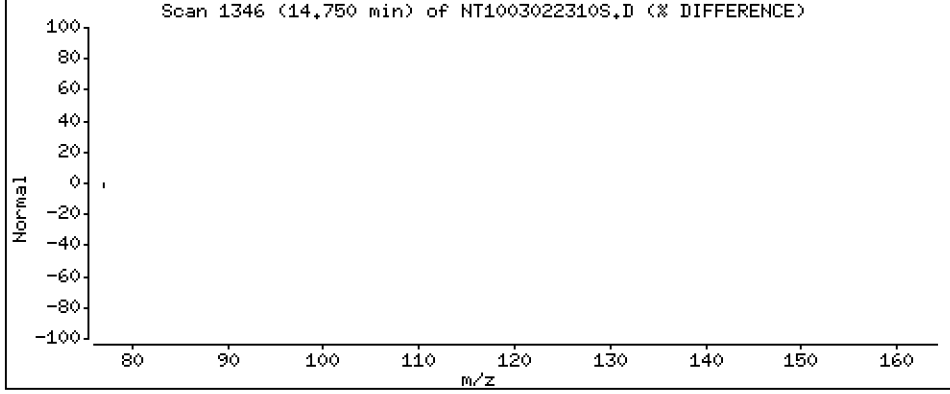
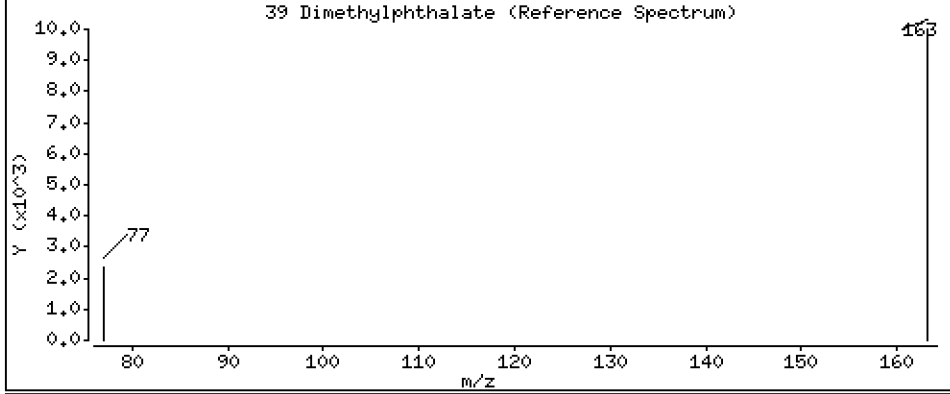
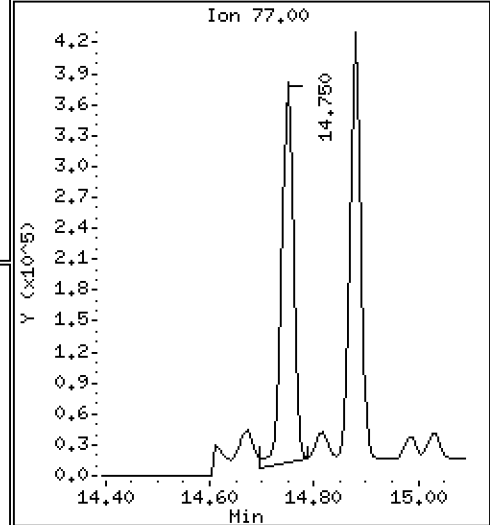
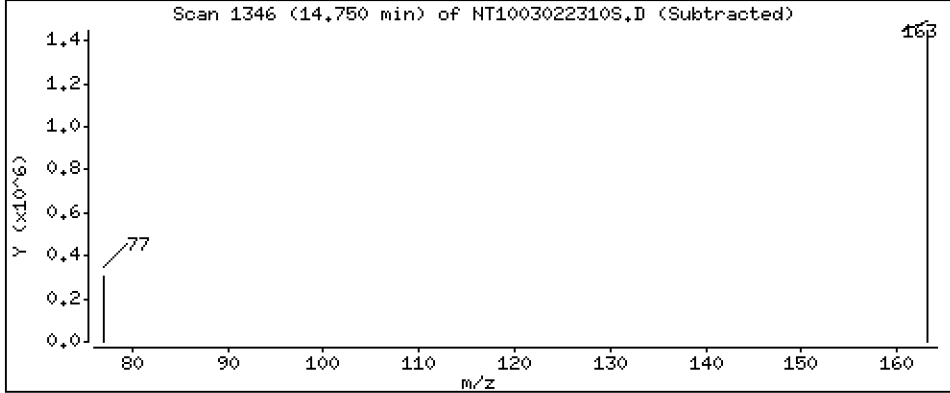
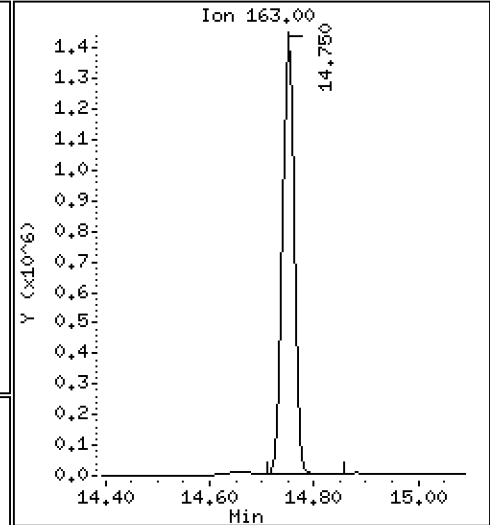
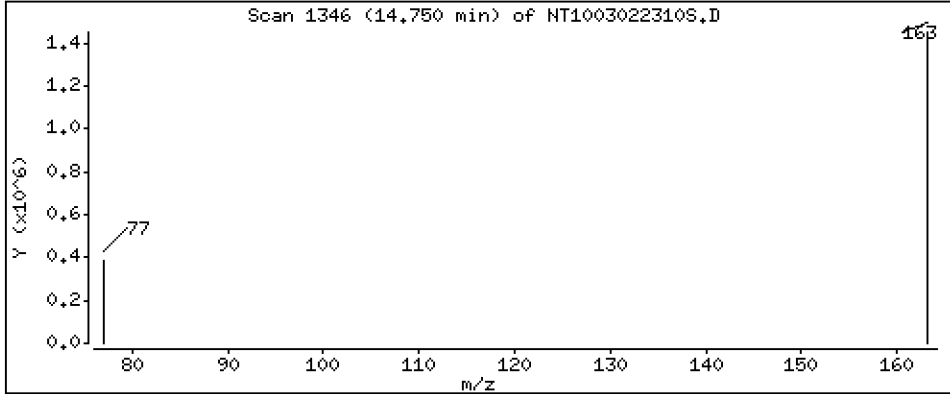
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,158 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

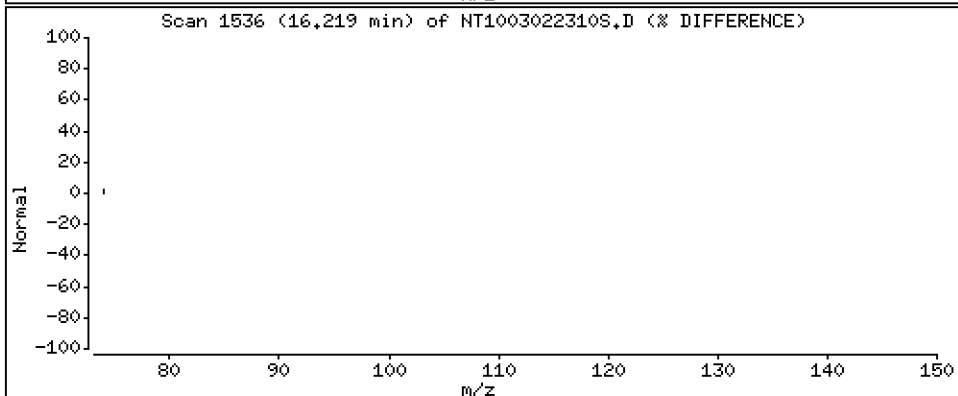
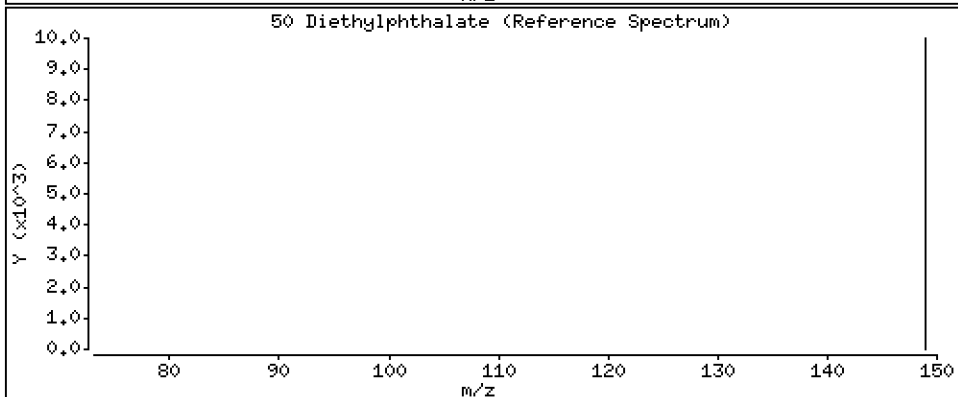
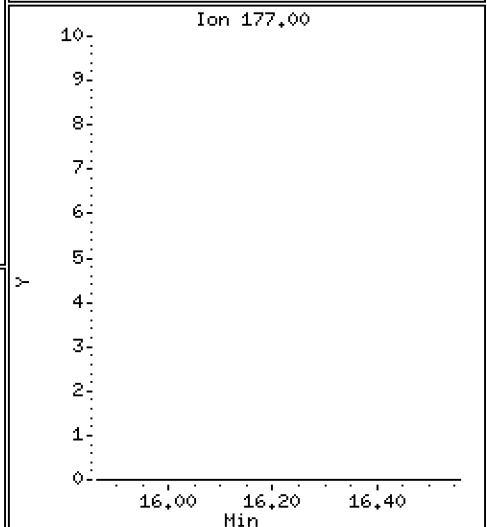
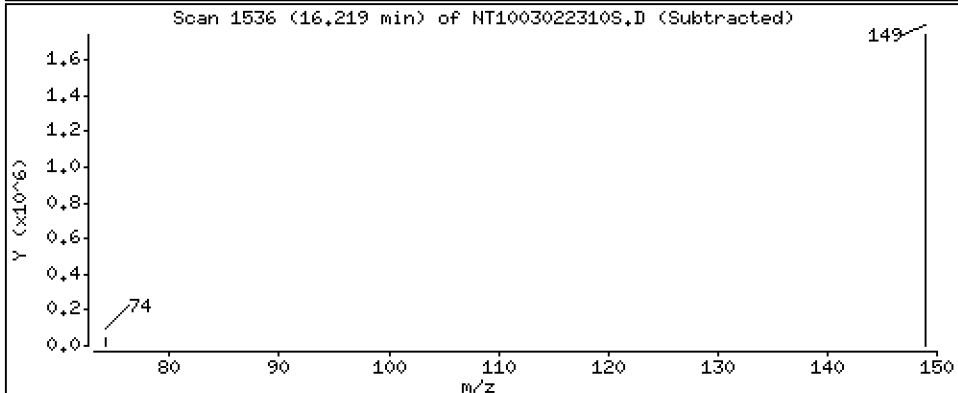
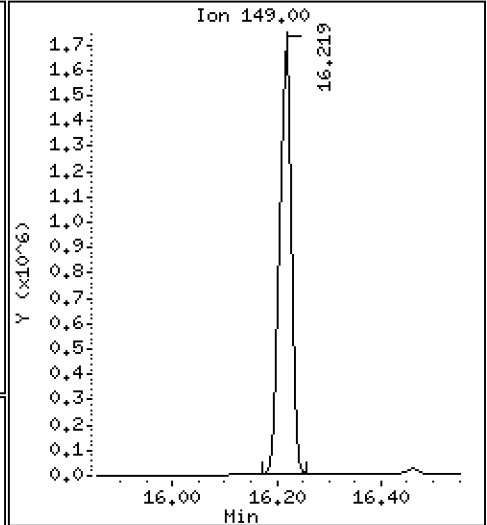
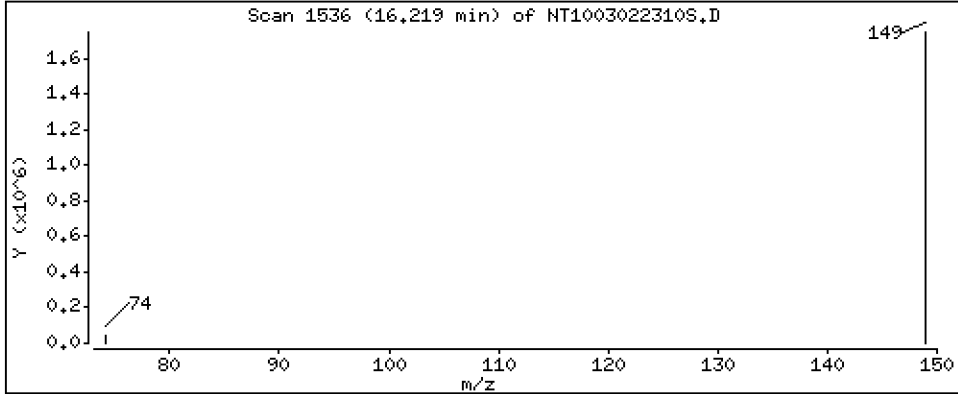
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,664 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

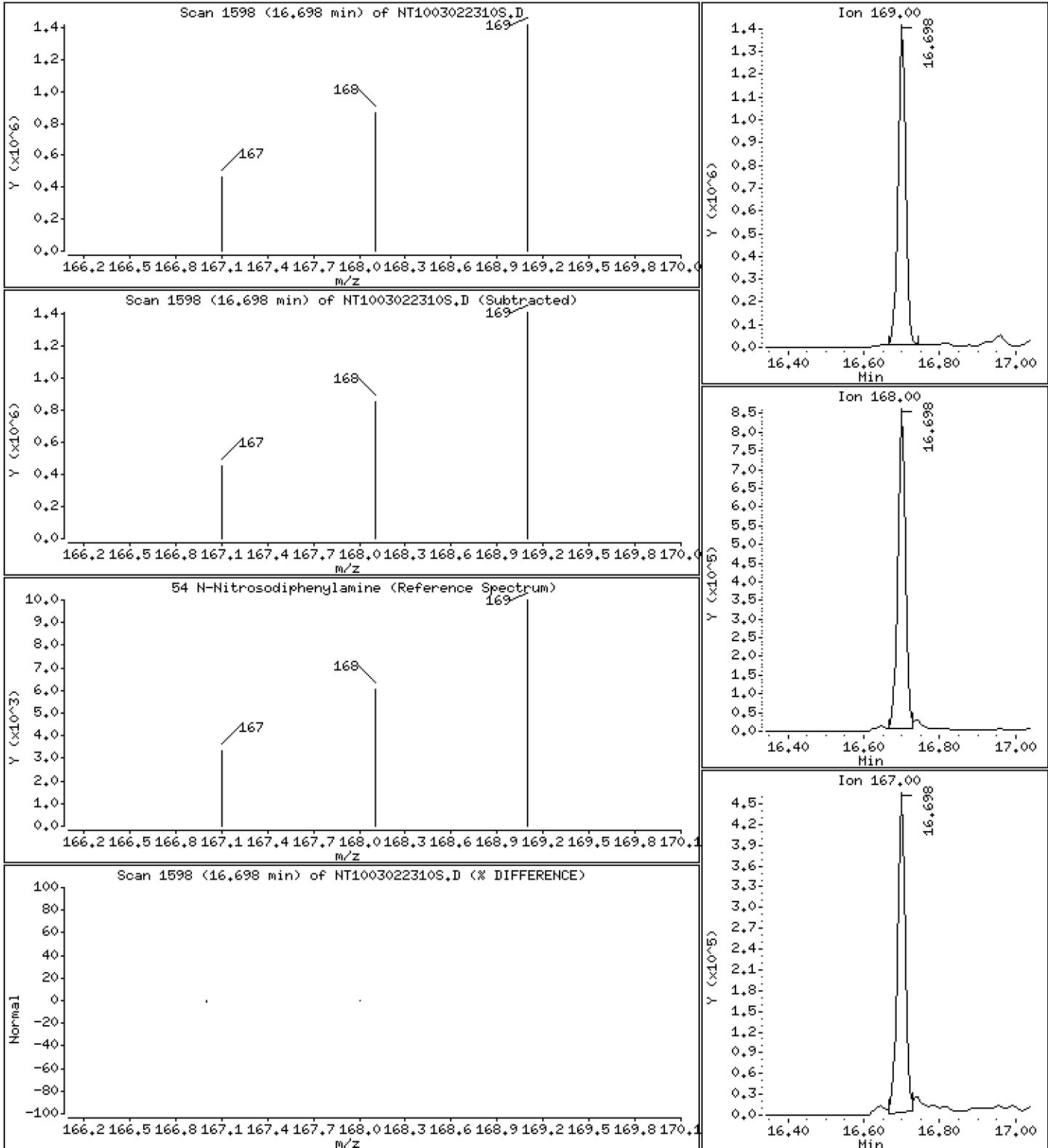
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,209 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

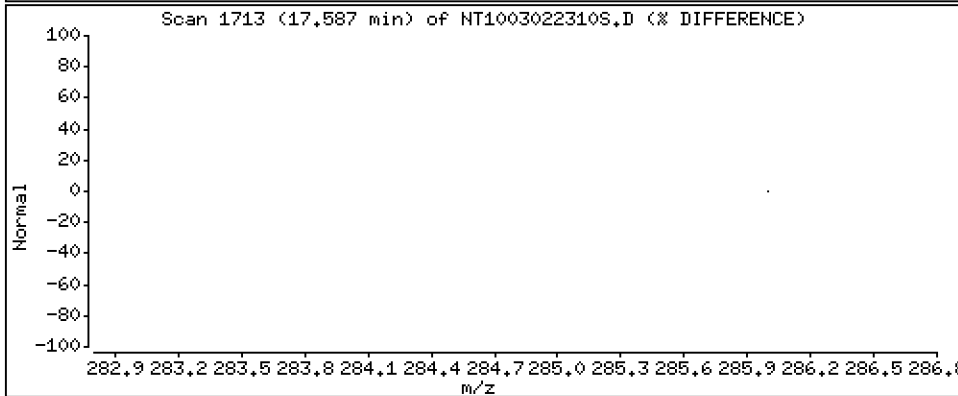
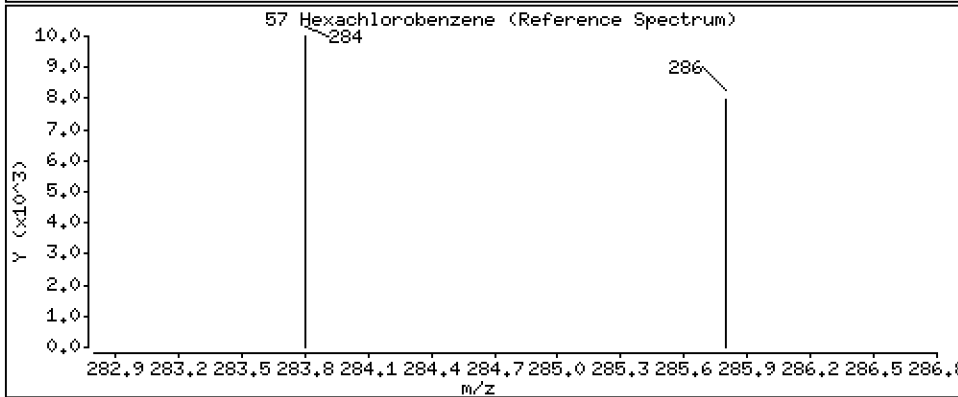
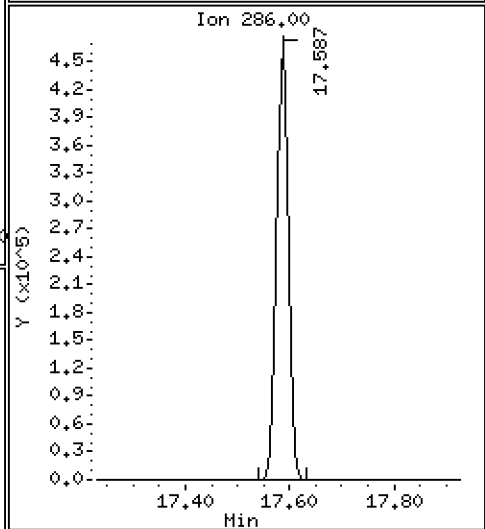
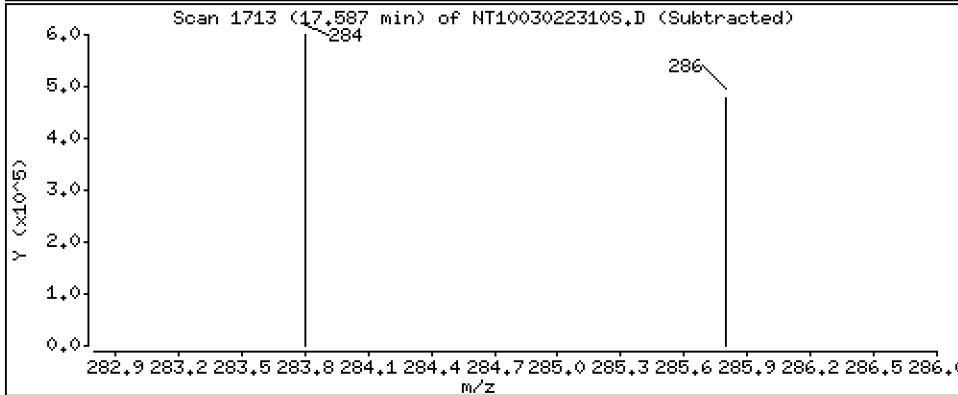
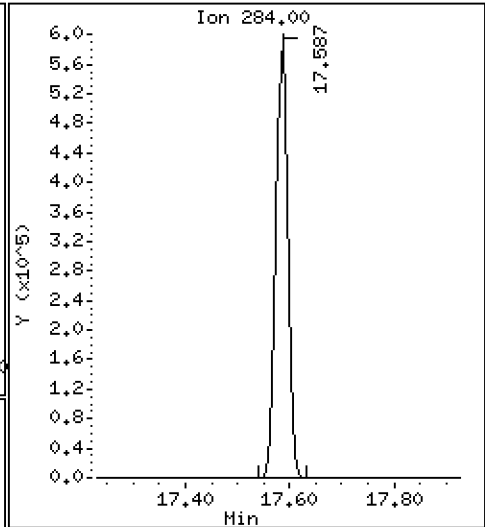
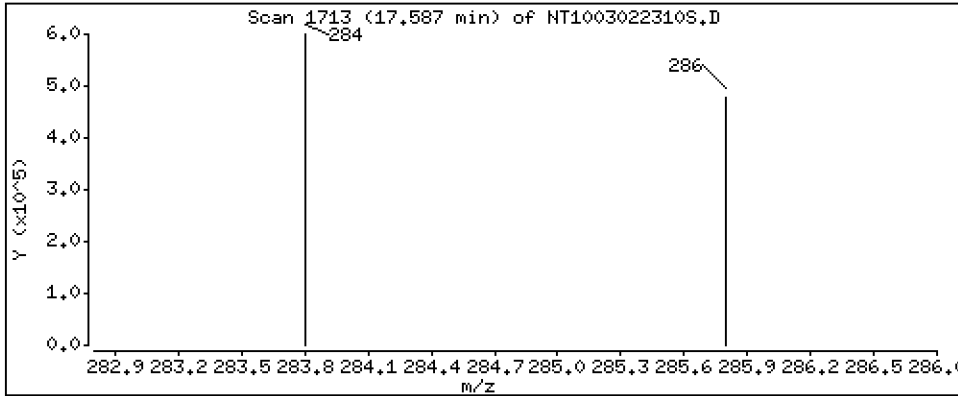
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,007 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

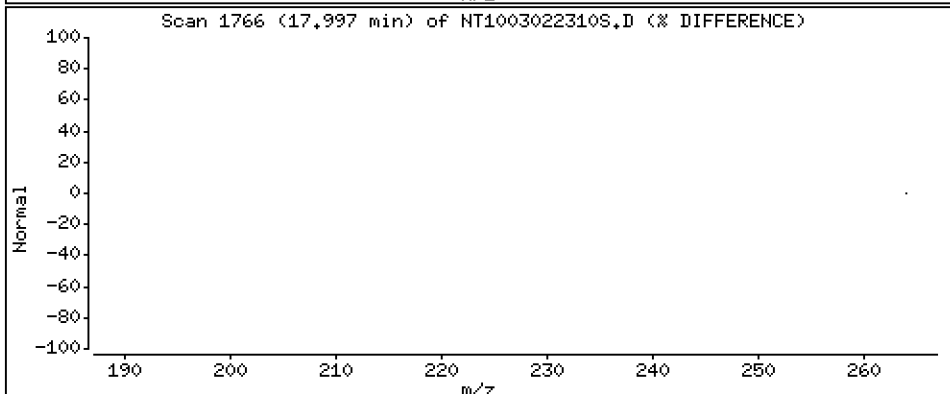
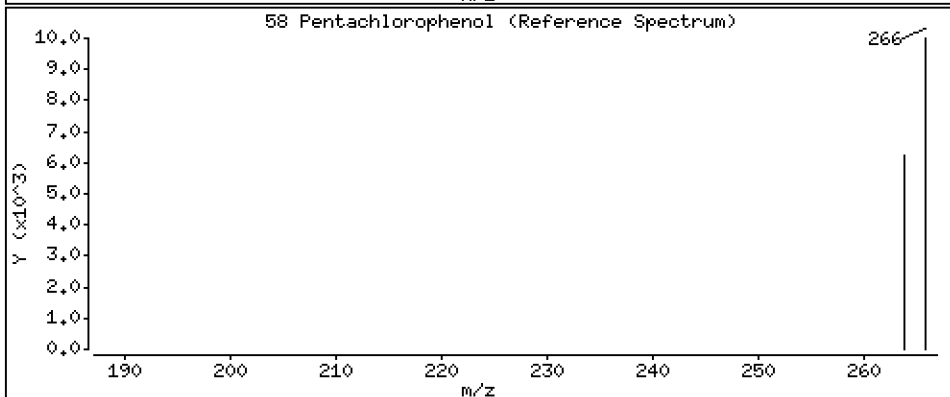
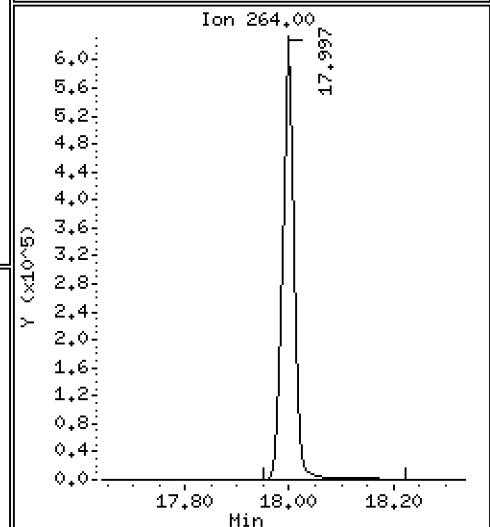
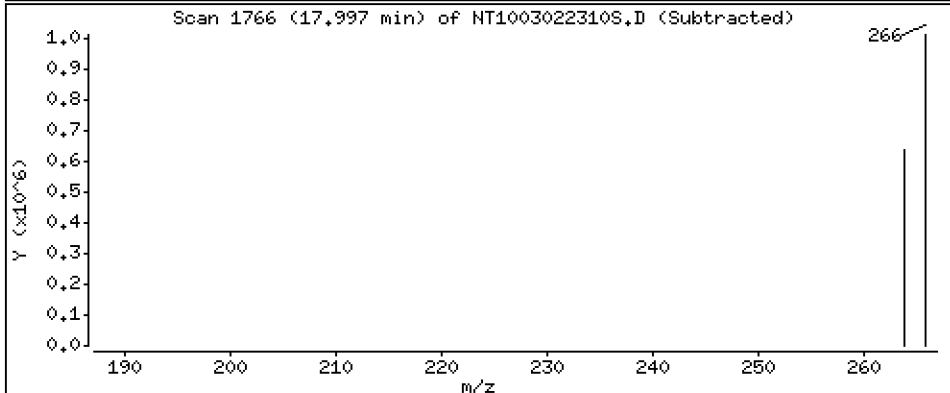
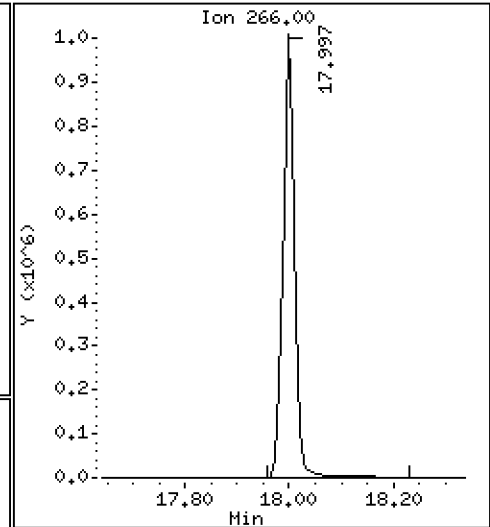
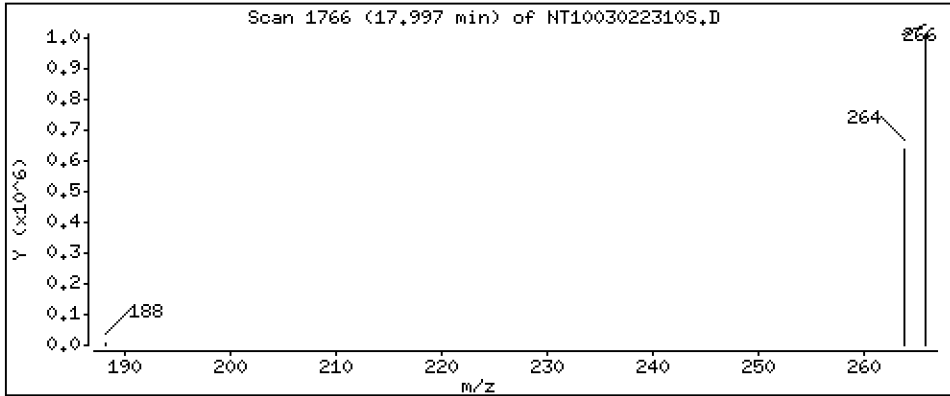
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 13,27 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

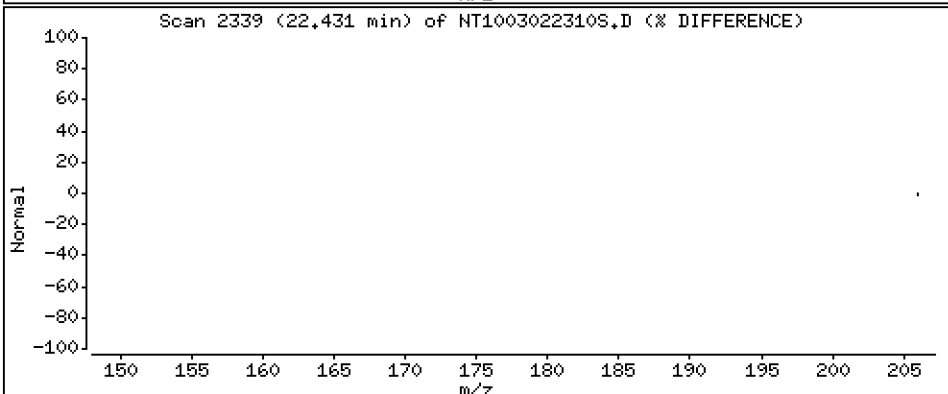
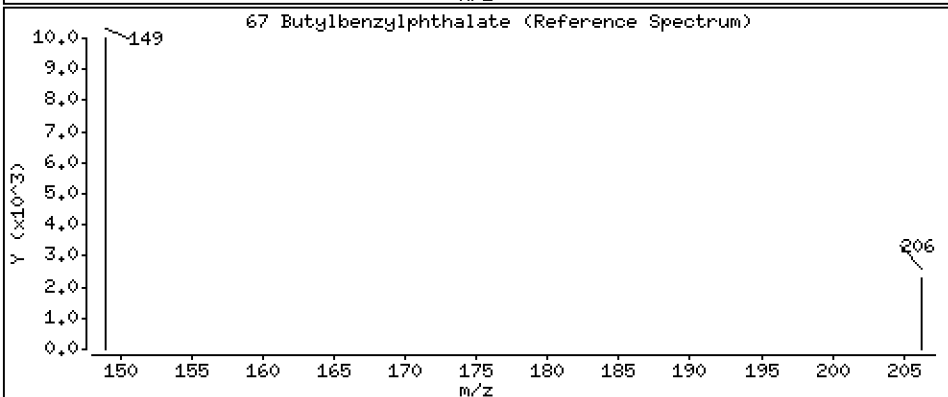
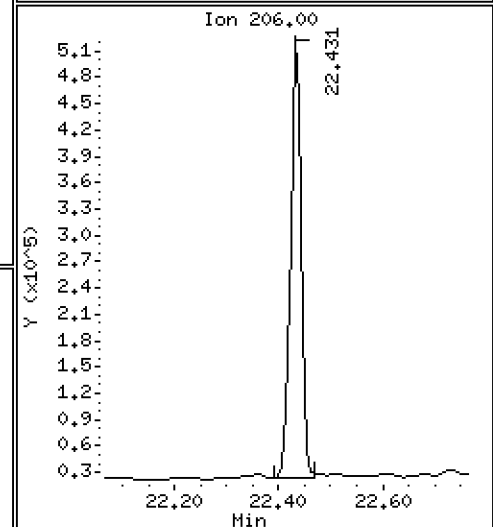
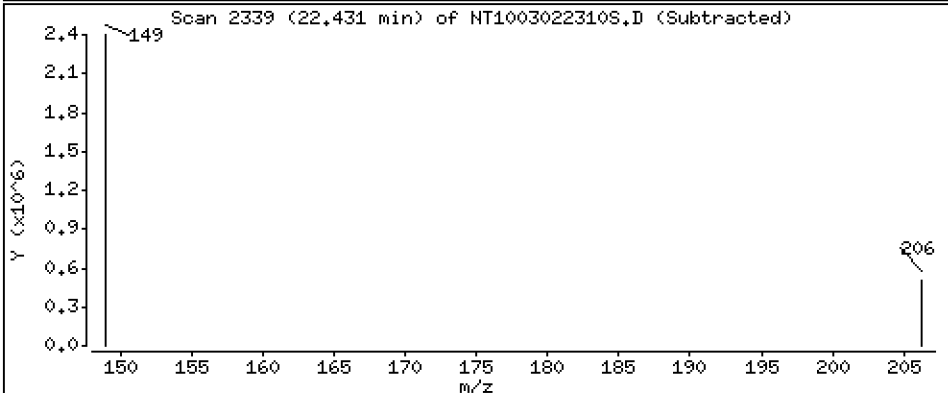
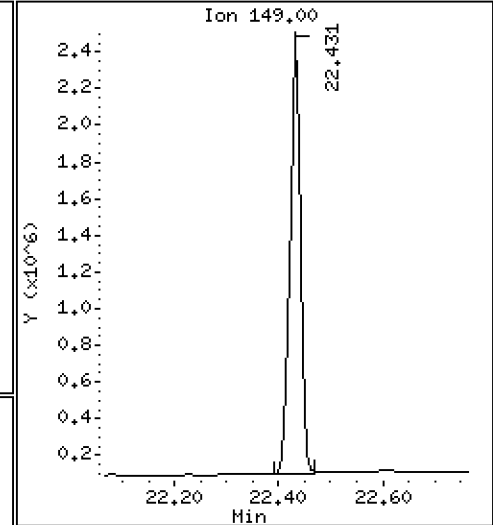
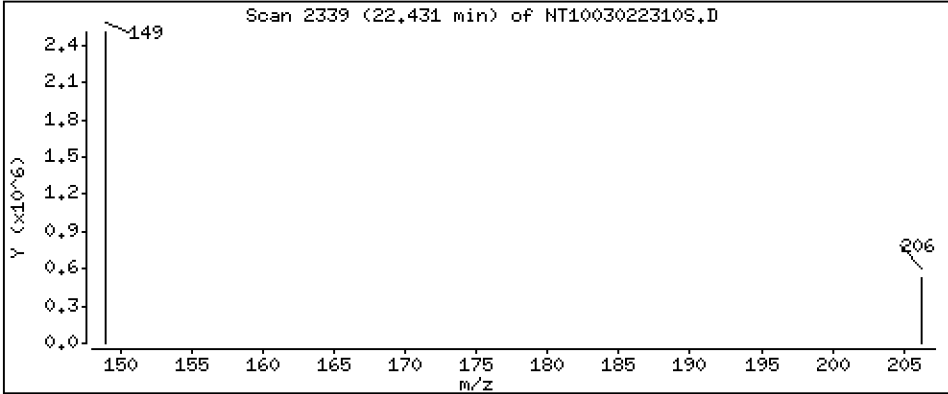
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 4.838 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

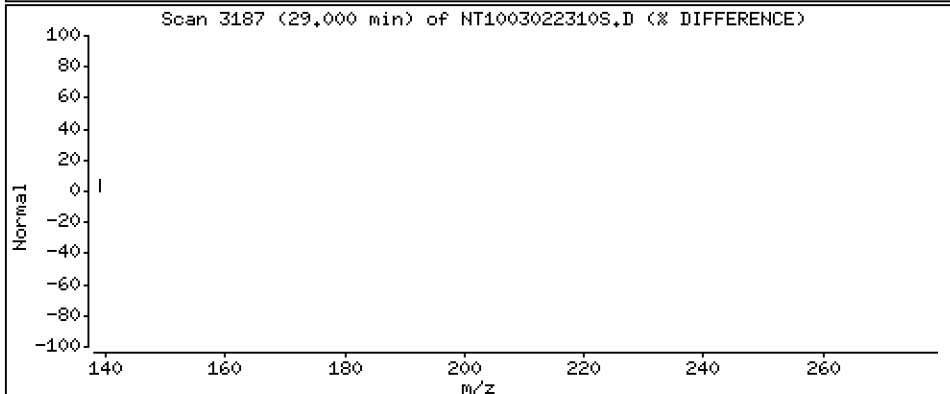
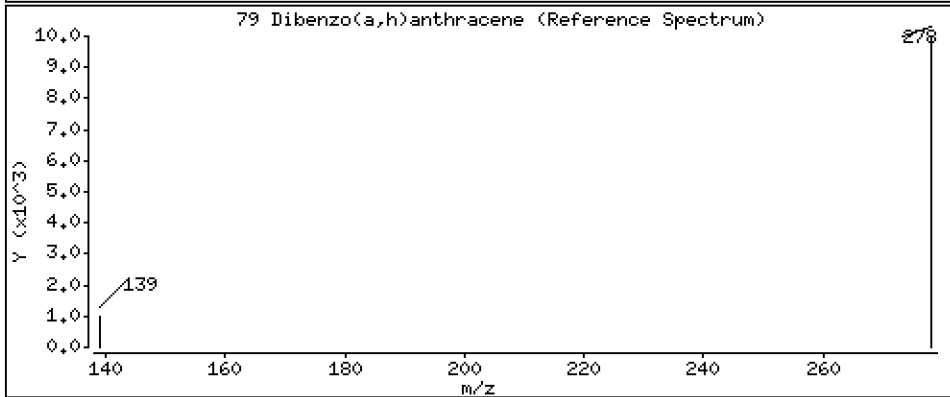
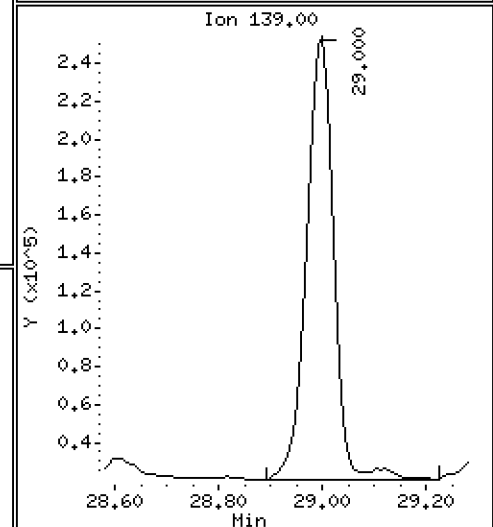
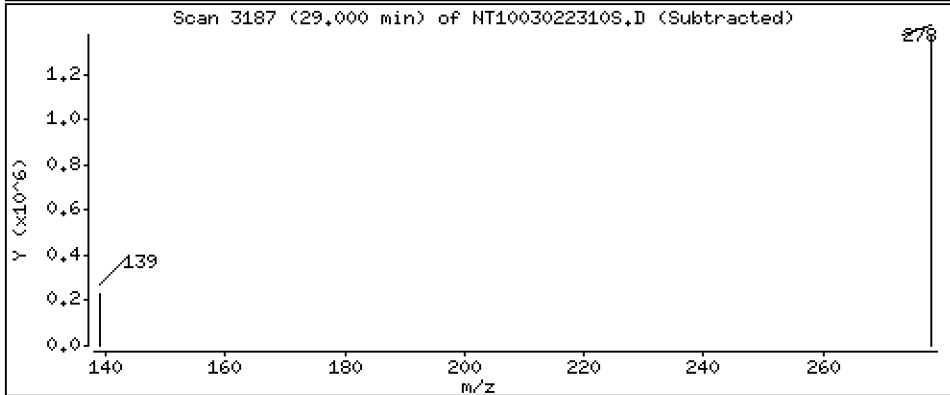
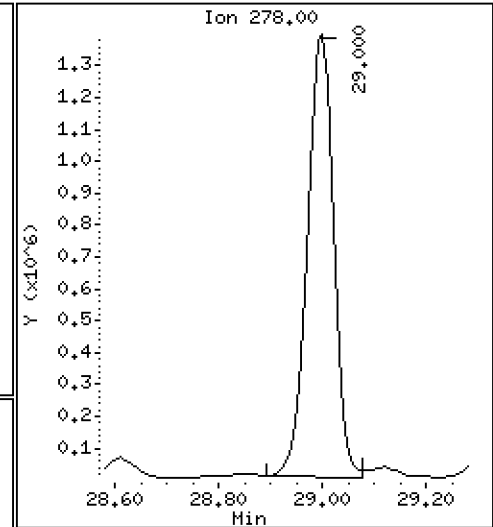
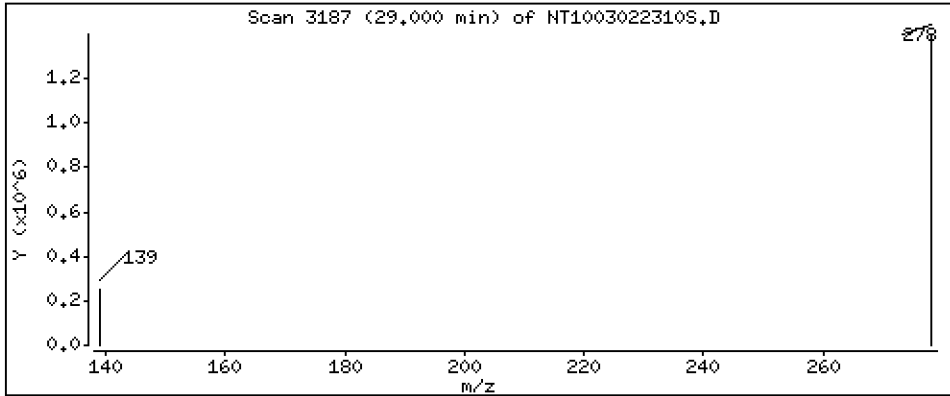
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,293 ug/L





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

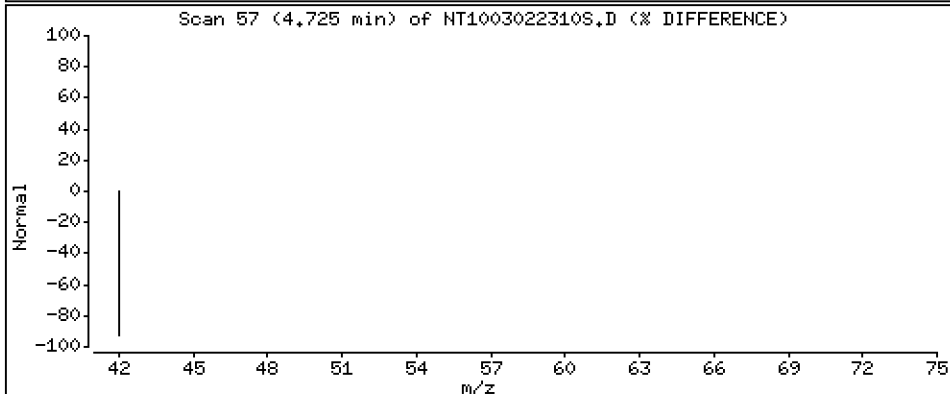
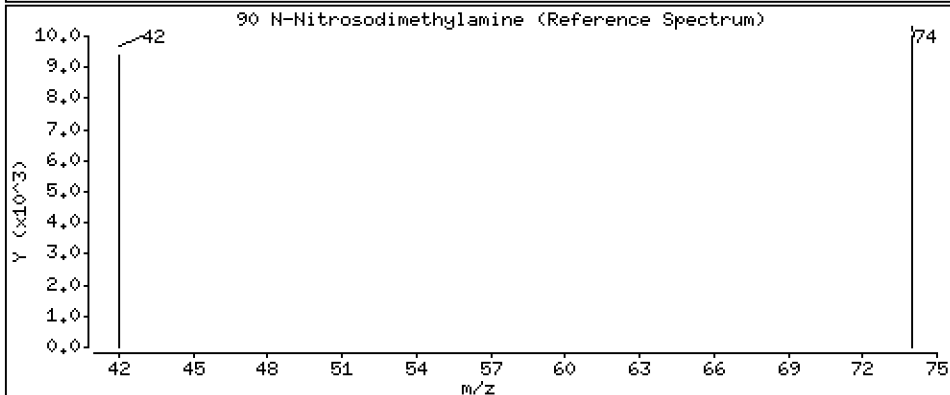
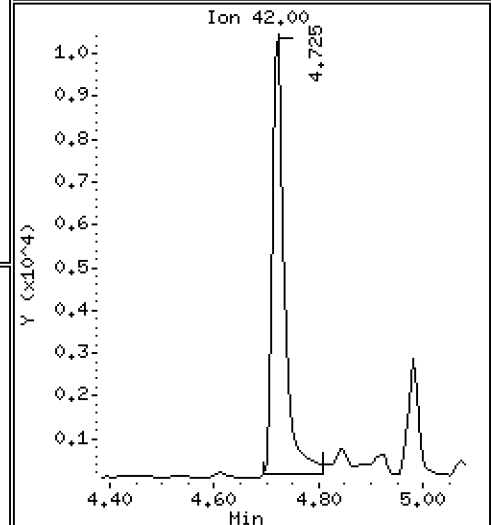
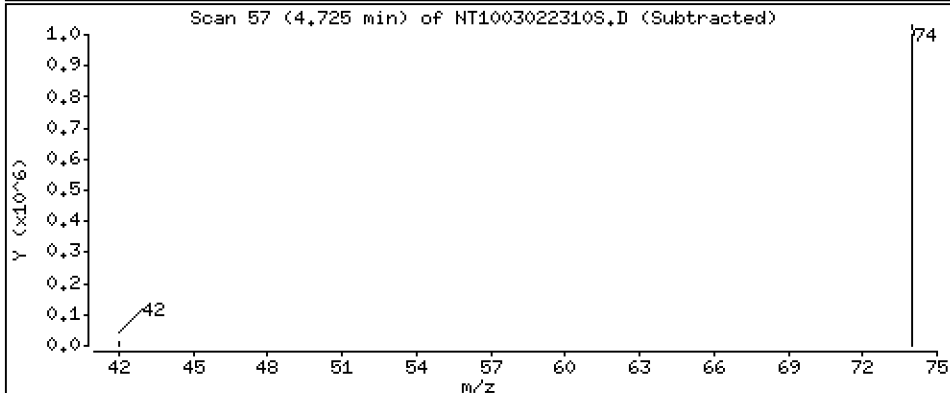
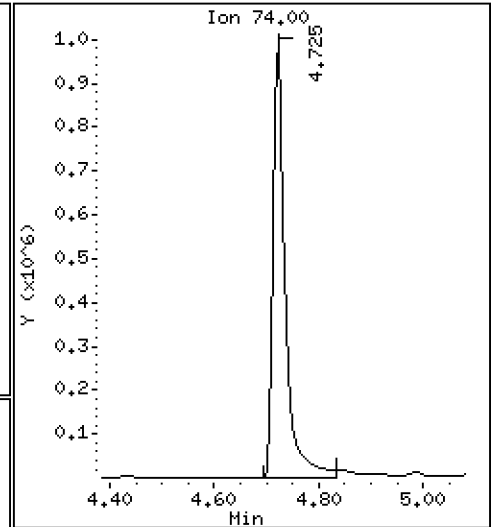
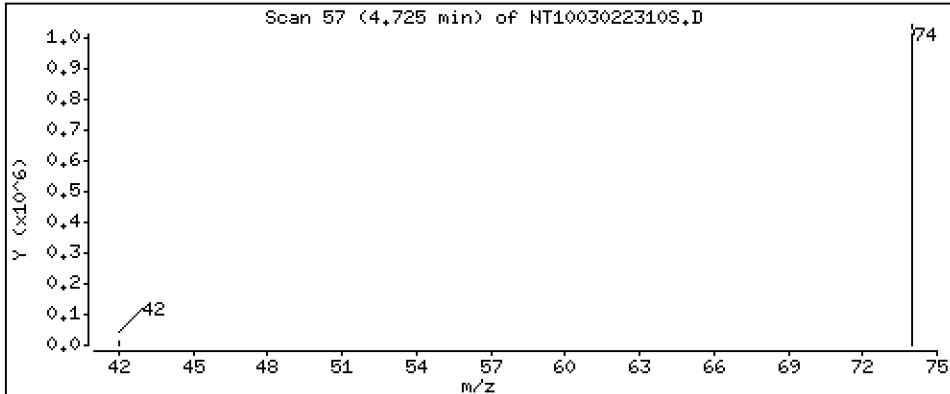
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 14.17 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022310S.D  
 Lab Smp Id: BLA0624-MSD2  
 Inj Date : 02-MAR-2023 20:06 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-MSD1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1303007	6.78798	6.788 (R)
3 Phenol	94		8.525	8.517	(0.921)	3620864	11.9635	11.96
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	999770	4.01213	4.012
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	672370	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	1326016	5.47323	5.473
11 Benzyl alcohol	79		9.477	9.476	(1.024)	864065	5.12515	5.125
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	982974	4.22119	4.221
13 2-Methylphenol	108		9.655	9.655	(1.044)	823389	4.64786	4.648
15 4-Methylphenol	108		9.950	9.942	(1.076)	987540	5.24932	5.249
16 N-Nitroso-di-n-propylamine	70		9.982	9.981	(1.079)	706552	5.48803	5.488
22 2,4-Dimethylphenol	107		11.006	10.997	(0.939)	3078888	14.0520	14.05
24 Benzoic acid	105		11.159	11.074	(0.952)	2224613	17.4589	17.46
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	840738	4.71541	4.715
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	2477168	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	527257	4.16719	4.167
39 Dimethylphthalate	163		14.749	14.741	(0.963)	2110389	5.15817	5.158
* 42 Acenaphthene-d10	162		15.322	15.314	(1.000)	1288517	4.00000	
50 Diethylphthalate	149		16.218	16.203	(1.059)	2571336	6.66444	6.664
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1987335	4.20939	4.209
57 Hexachlorobenzene	284		17.586	17.578	(0.955)	885306	4.00690	4.007

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.977)	1516520	13.2670	13.27
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2917258	4.00000	
\$ 66 Terphenyl-d14	244	21.548	21.532	(0.919)	1626926	4.94335	4.943(R)
67 Butylbenzylphthalate	149	22.430	22.414	(0.957)	3266796	4.83792	4.838
* 69 Chrysene-d12	240	23.445	23.421	(1.000)	4069829	4.00000	
* 77 Perylene-d12	264	26.147	26.115	(1.000)	3624176	4.00000	
79 Dibenzo(a,h)anthracene	278	29.000	28.929	(1.109)	4833039	5.29265	5.293
90 N-Nitrosodimethylamine	74	4.725	4.732	(0.511)	1610808	14.1737	14.17

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022310S.D  
 Lab Smp Id: BLA0624-MSD2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	672370	36.27
27 Naphthalene-d8	1779056	889528	3558112	2477168	39.24
42 Acenaphthene-d10	954569	477285	1909138	1288517	34.98
59 Phenanthrene-d10	1596290	798145	3192580	2917258	82.75
69 Chrysene-d12	1649110	824555	3298220	4069829	146.79
77 Perylene-d12	1901958	950979	3803916	3624176	90.55

<-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.45	0.10
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022310S.D

Lab ID: BLA0624-MSD2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 20:06

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.945	0.0072	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



## STANDARD REFERENCE MATERIAL RECOVERY

### EPA 8270E-SIM

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Matrix:** Solid

**Laboratory ID:** BLA0624-SRM2

**Batch:** BLA0624

**Initial/Final:** 1 g / 1 mL

**Preparation:** EPA 3546 (Microwave)

**Analyzed:** 03/02/2023 20:44

**Standard ID:** K003477

**Expires:** 01/31/2024

**Standard Lot#:** CRM 143 (LRAC8918)

**Description:** CRM 143 BNAs - Sandy Loam

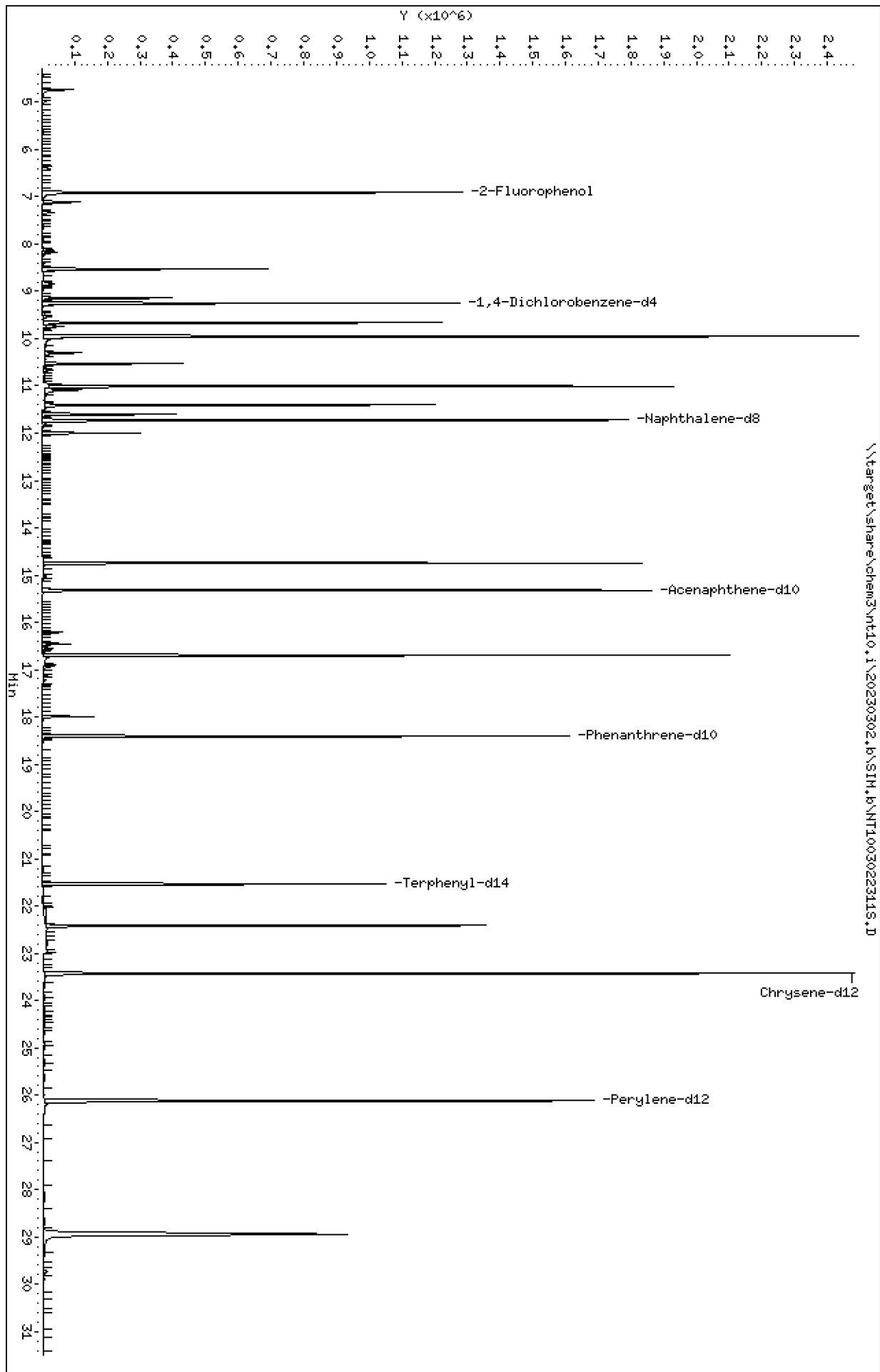
ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,4-Dimethylphenol	6357.0	4850	21.7	200		76.2	0 - 220
1,2,4-Trichlorobenzene	1477.0	1550	26.8	50.0		105	10 - 193
N-Nitrosodiphenylamine	2854.0	3760	13.1	50.0		132	40 - 160
Pentachlorophenol	3411.0	1700	21.3	200	Q	49.8	10 - 206

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.6\N10030223115.D  
Date : 02-MAR-2023 20:44  
Client ID:  
Sample Info: BLR0624-SRM1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.6\N10030223115.D



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

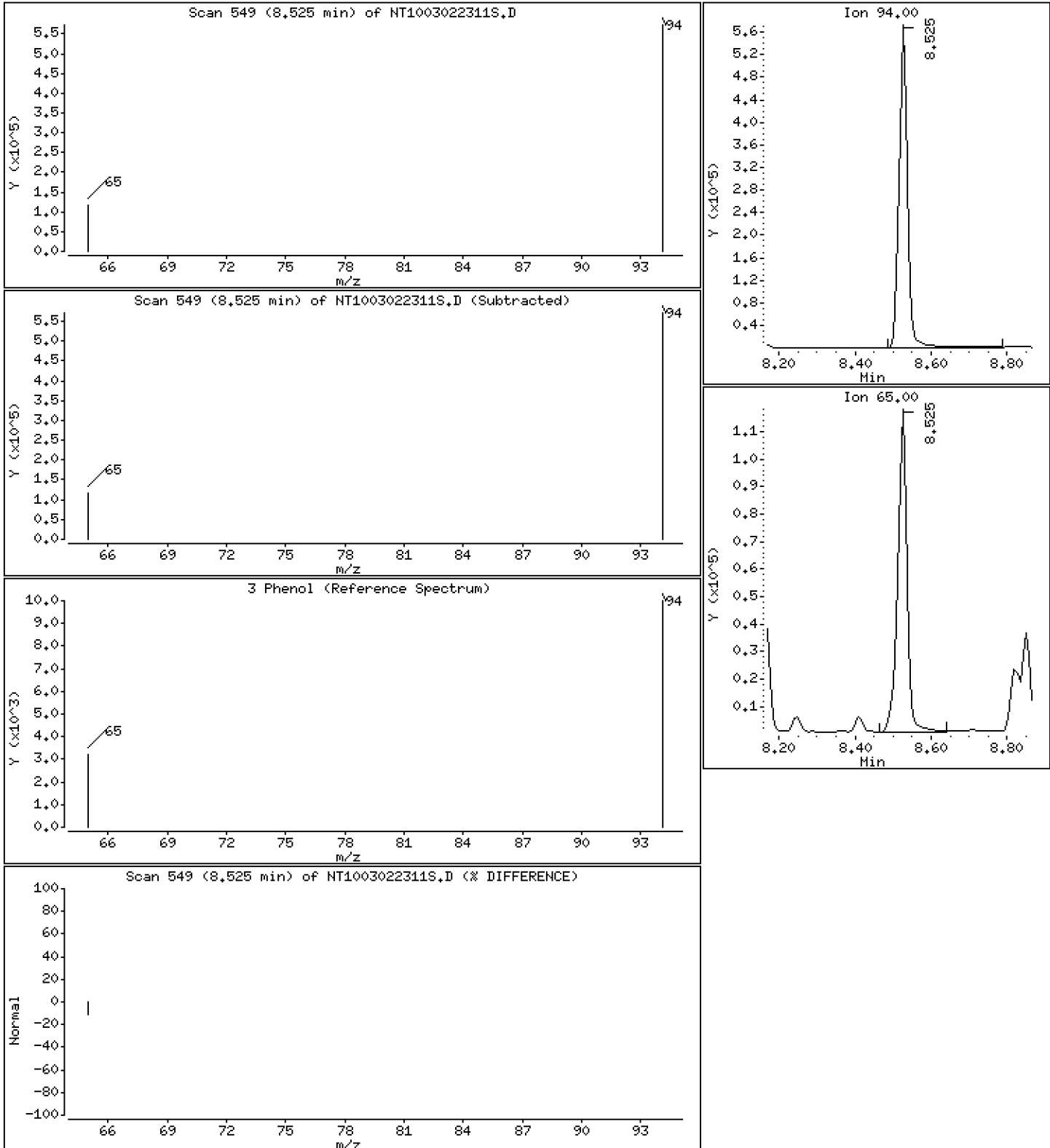
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 2,644 ug/L





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

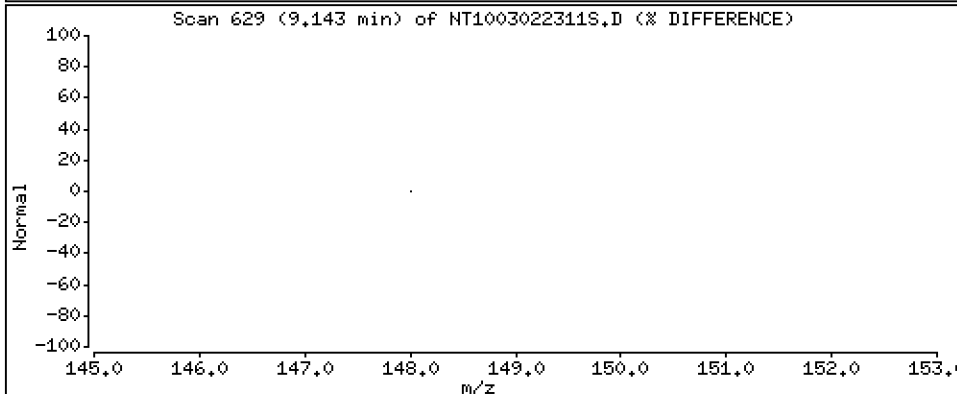
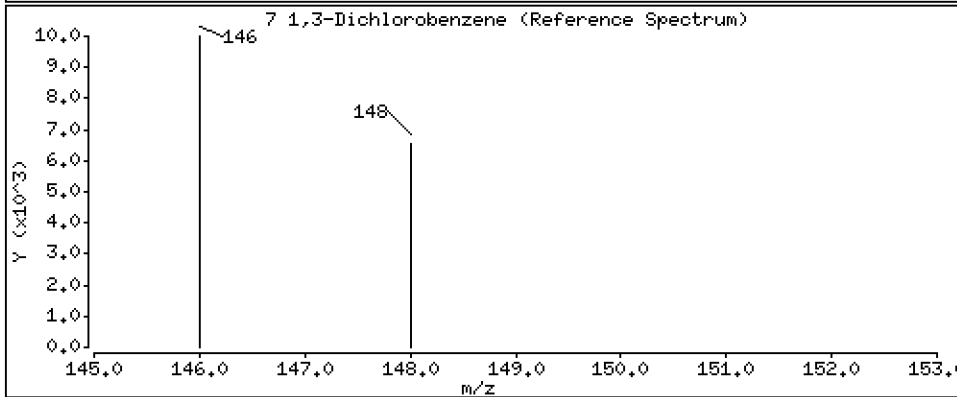
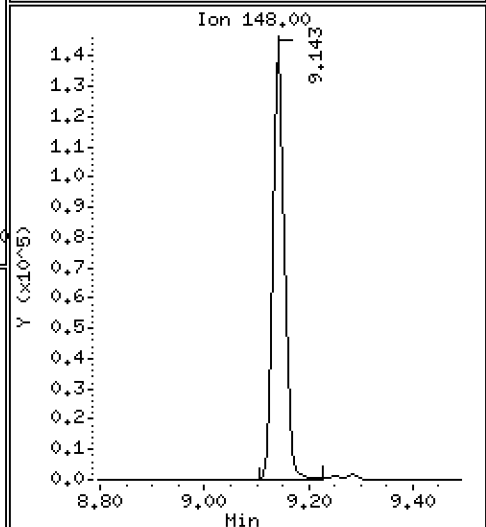
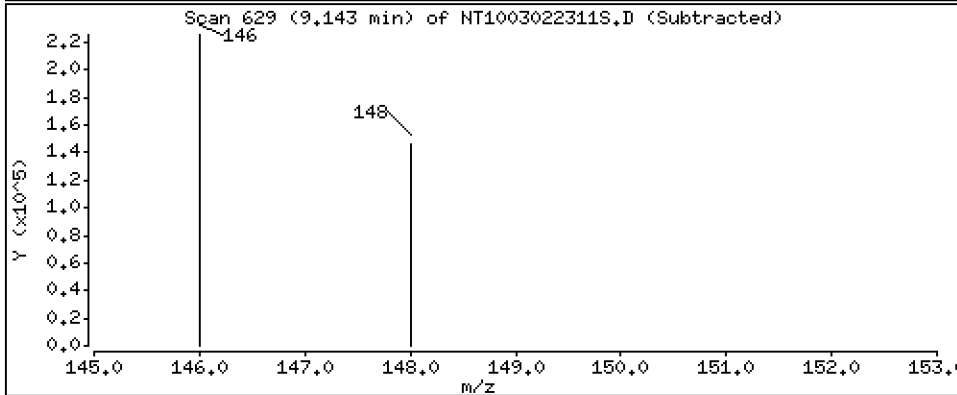
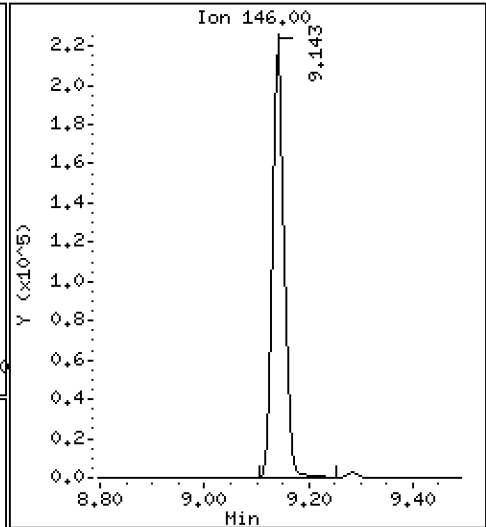
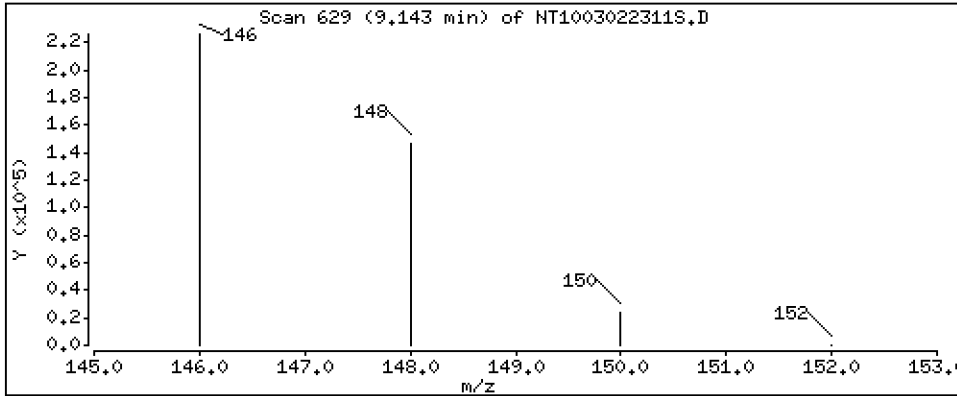
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 1.193 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

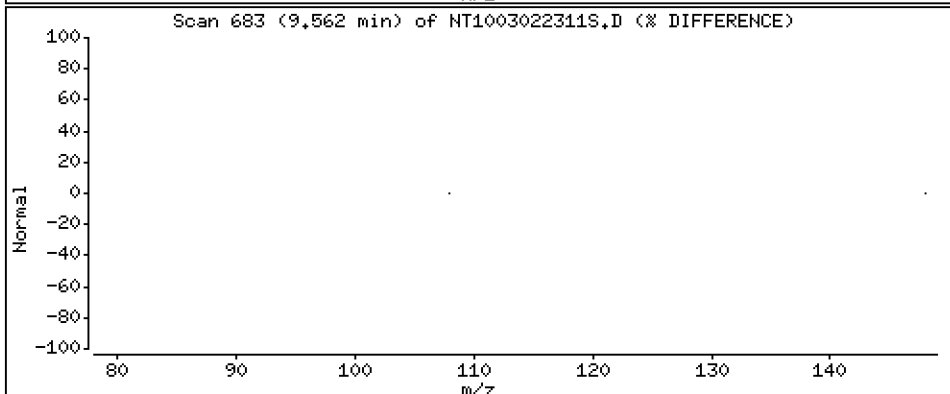
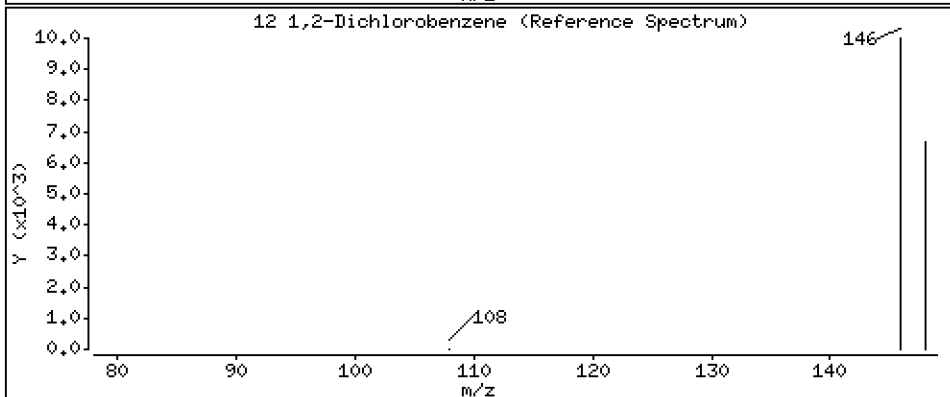
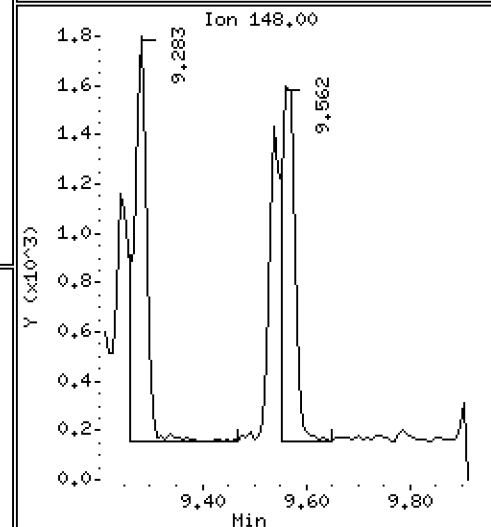
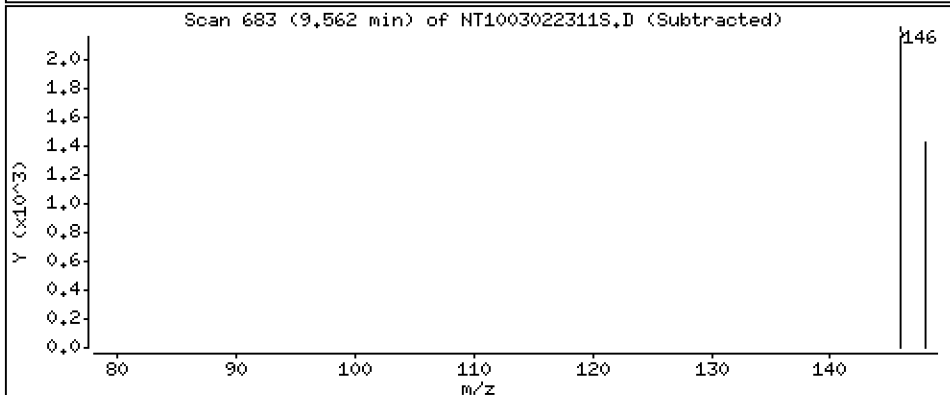
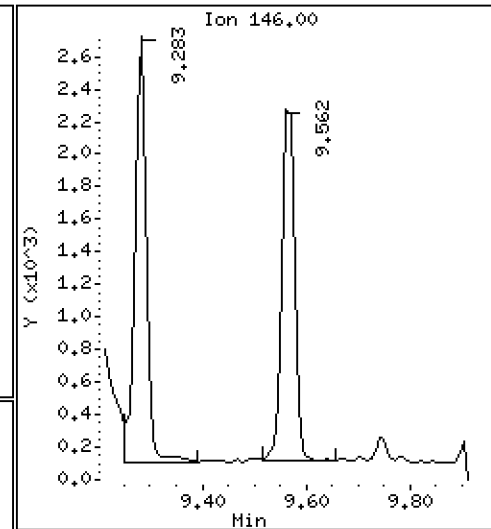
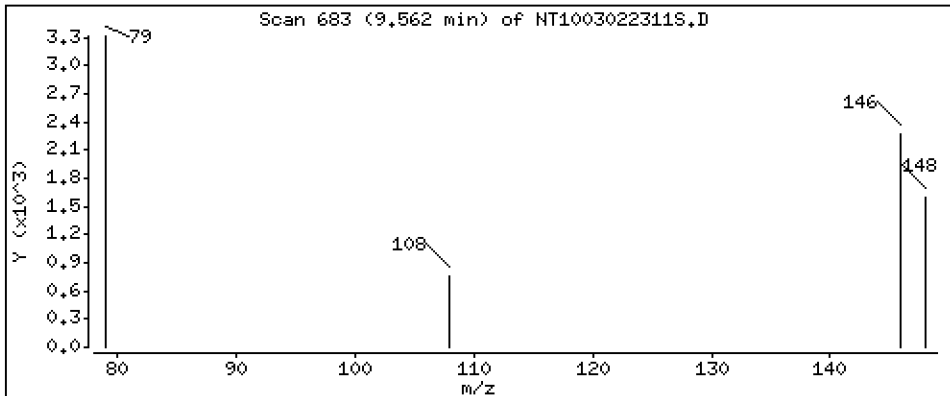
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.01329 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

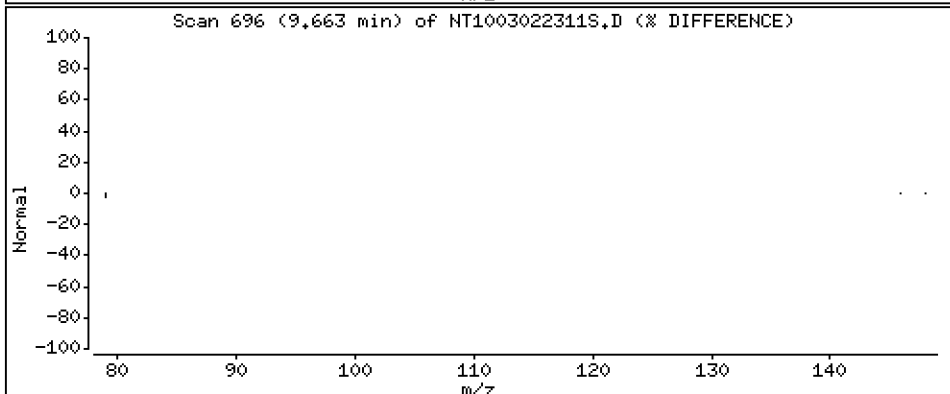
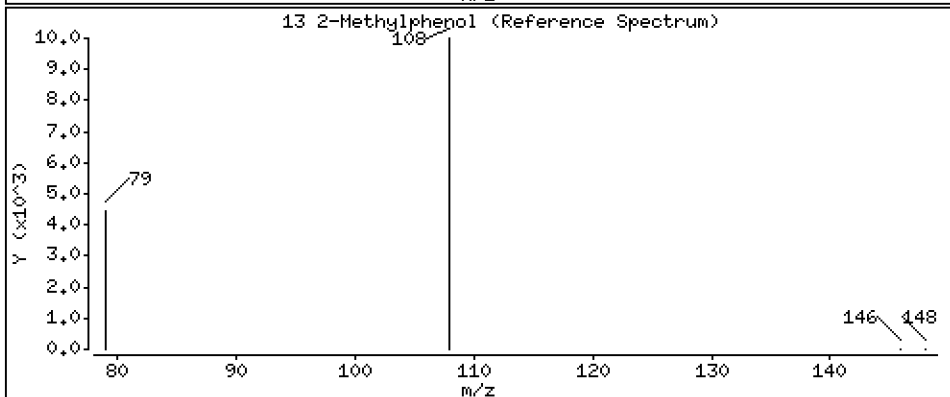
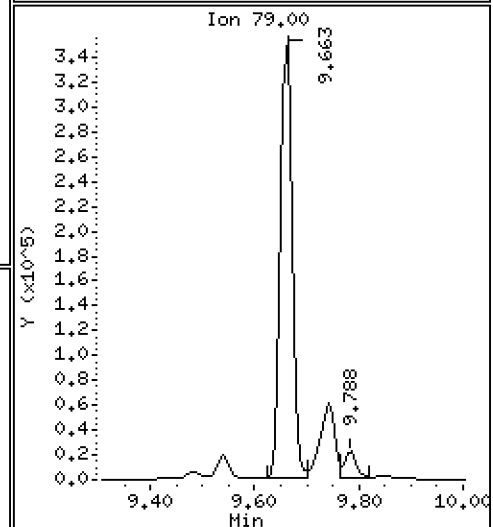
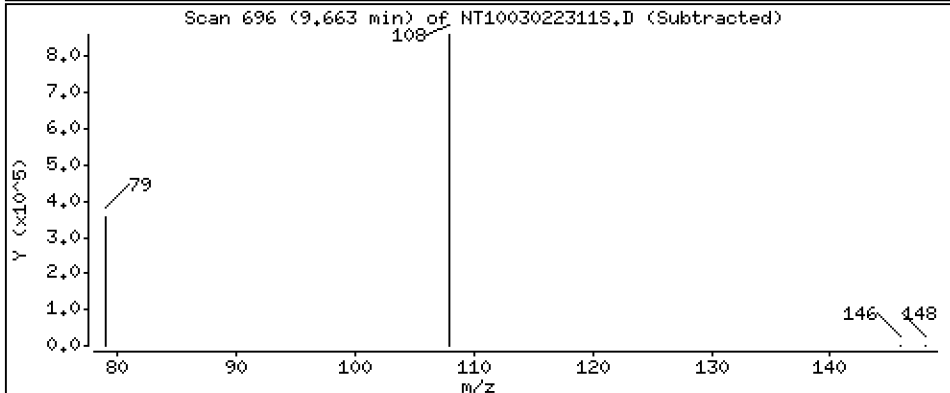
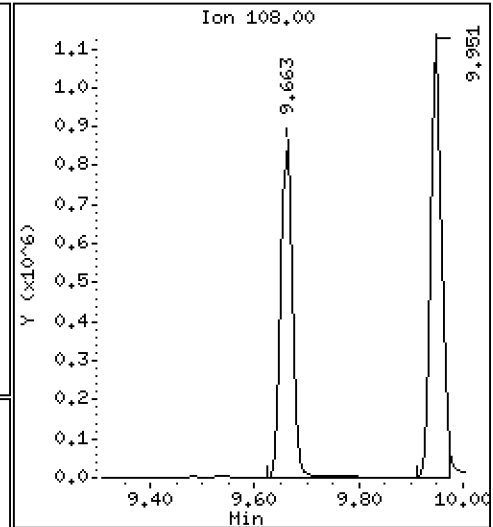
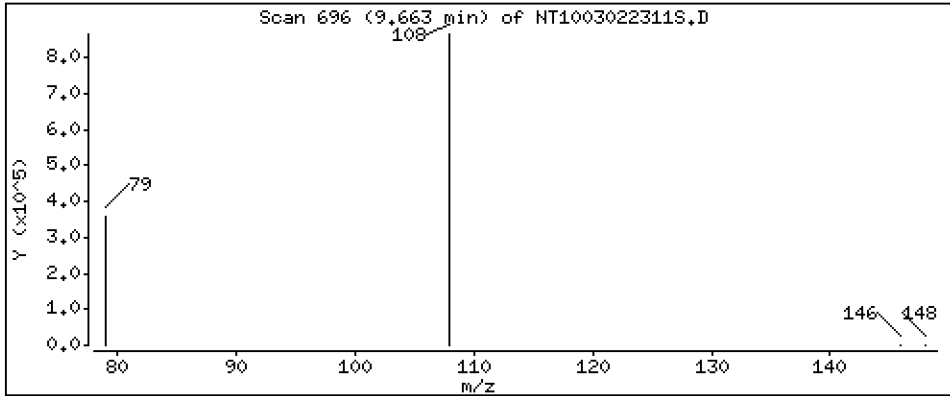
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 6.239 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

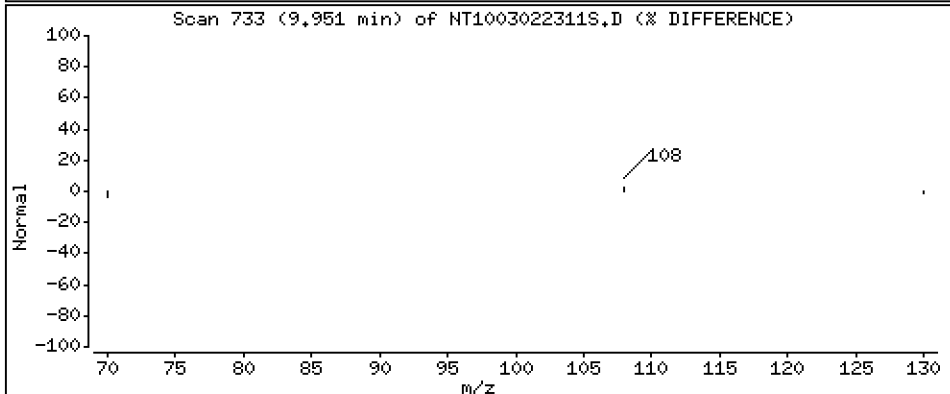
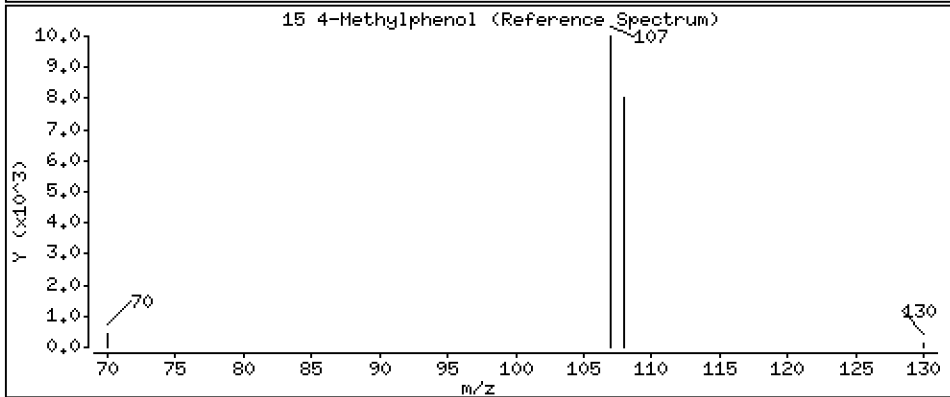
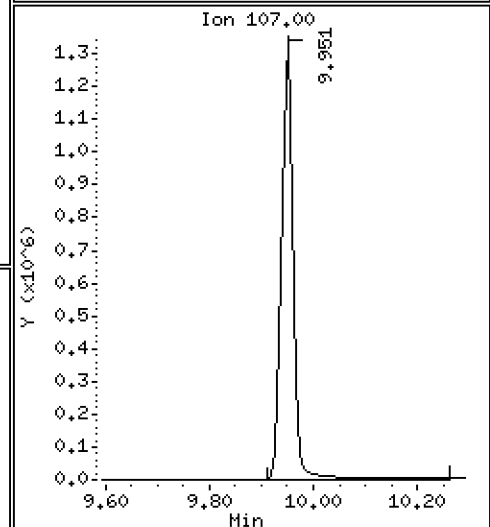
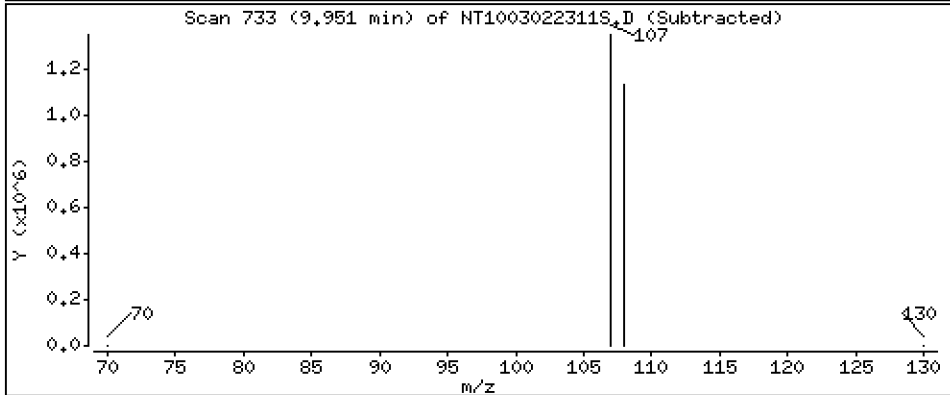
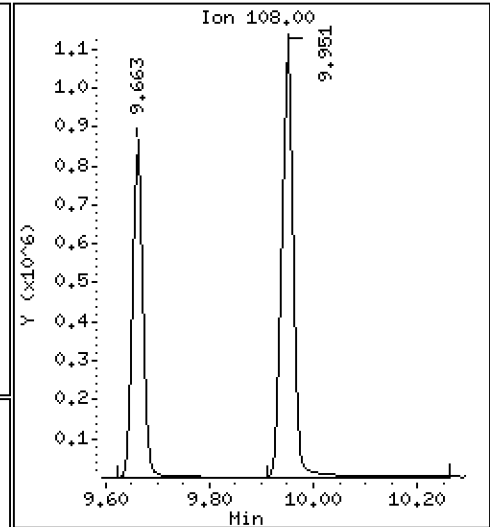
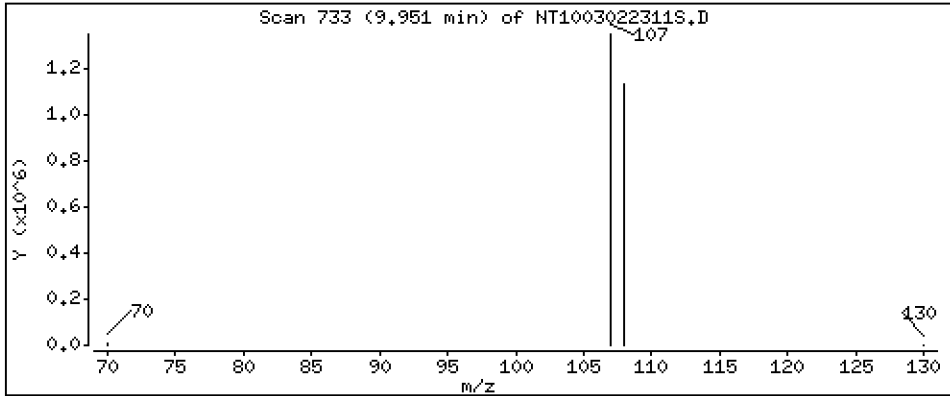
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 7.586 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

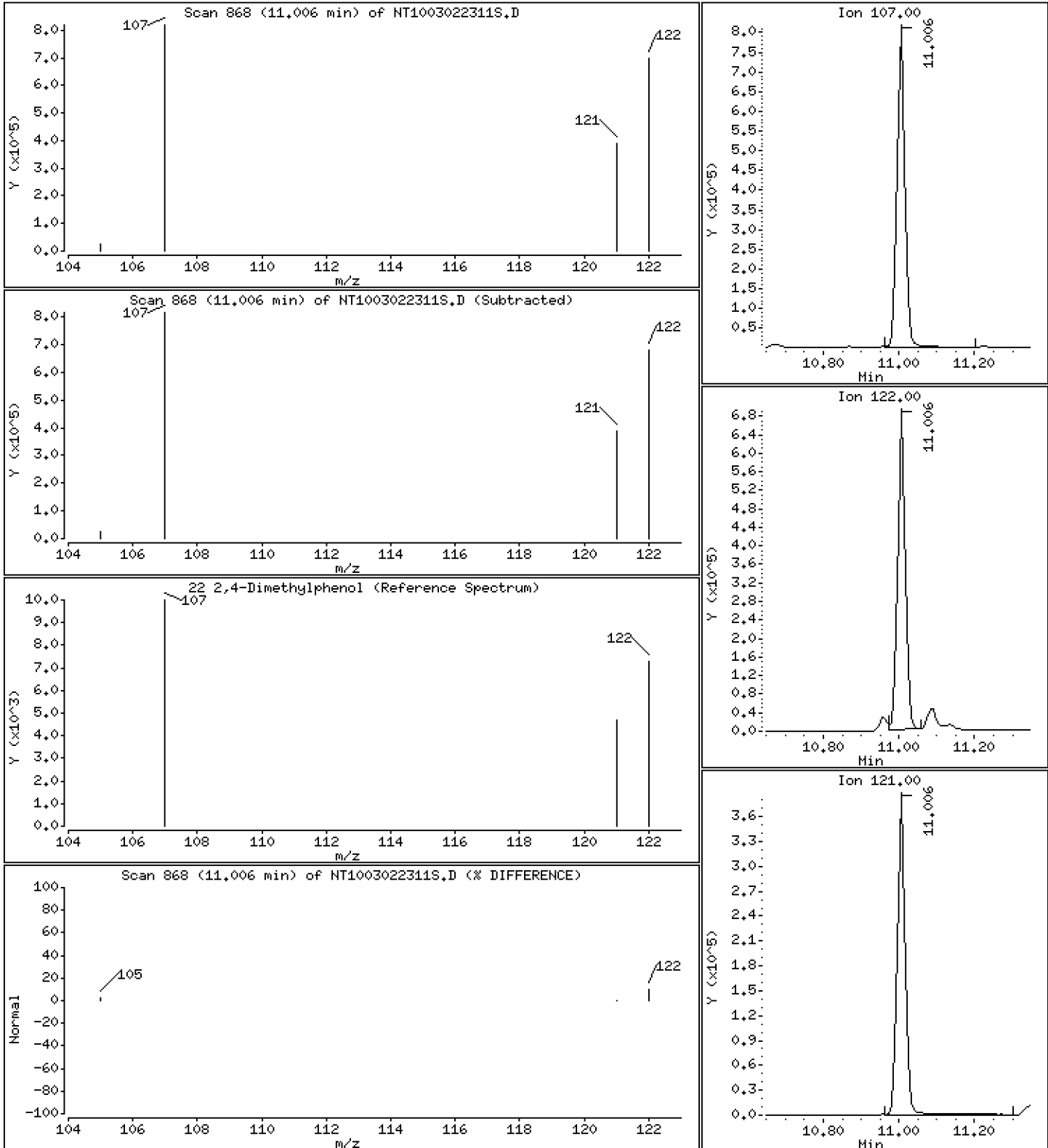
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 4.847 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

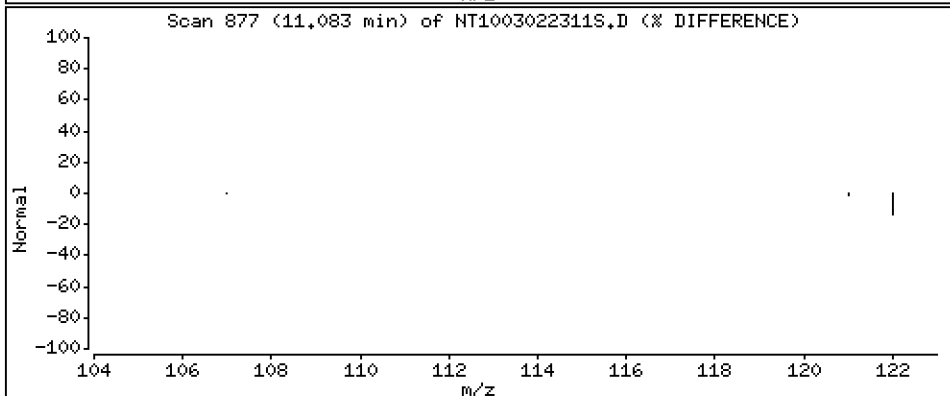
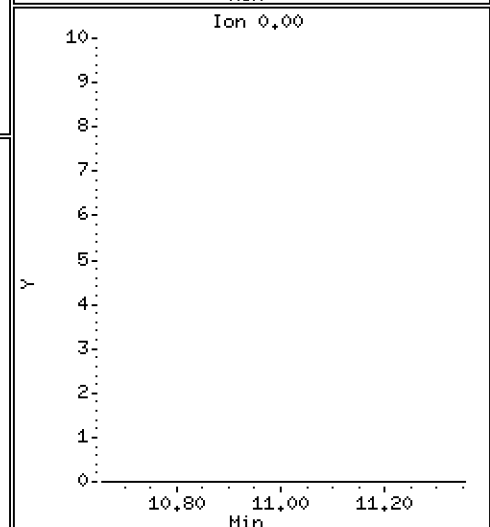
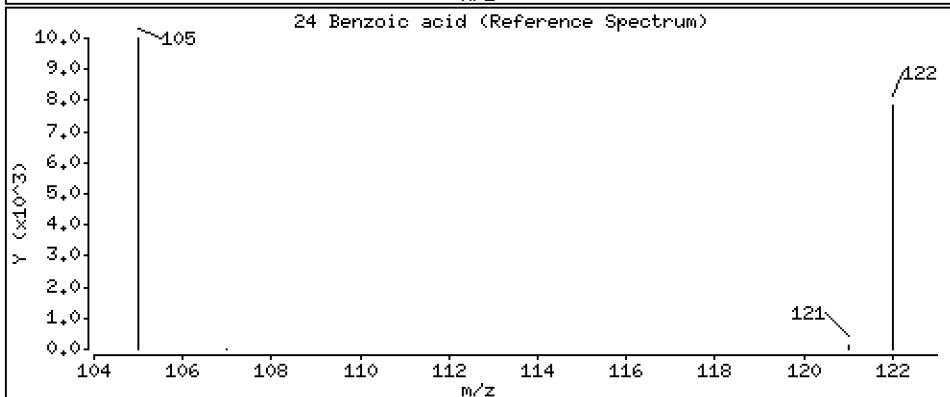
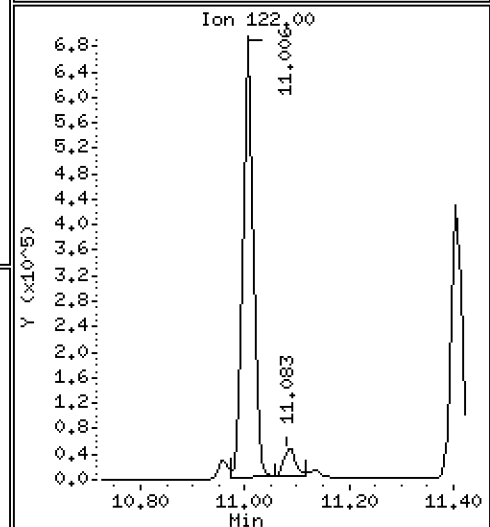
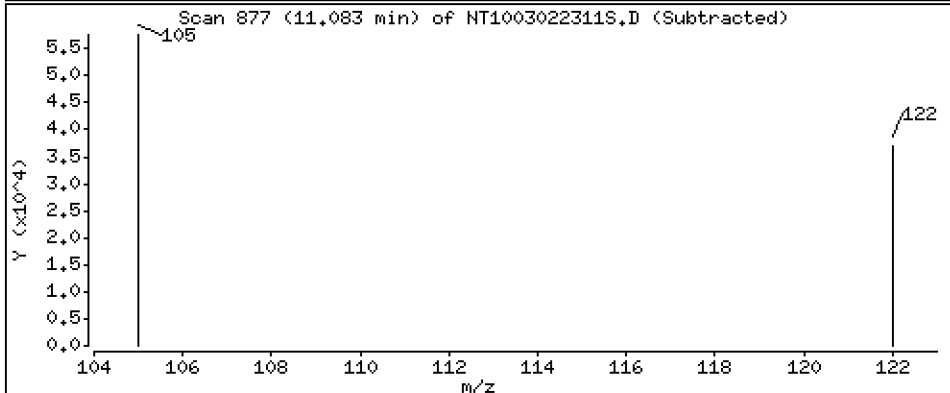
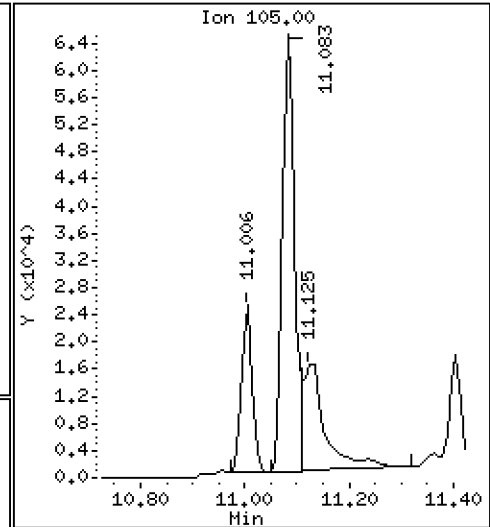
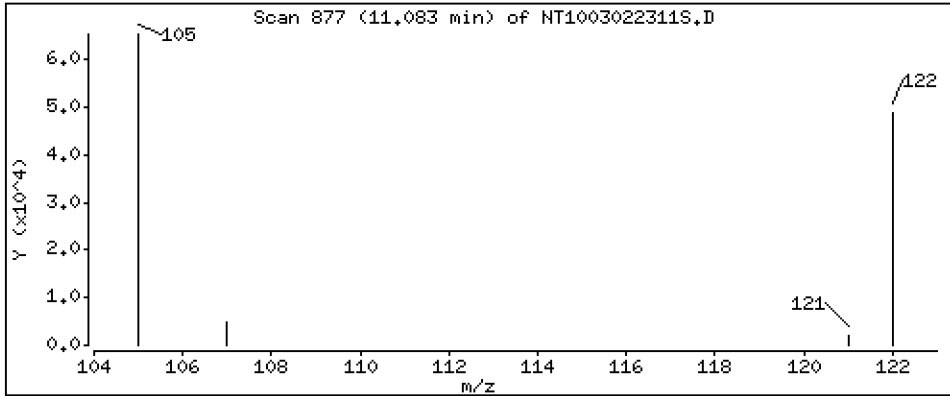
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.8166 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

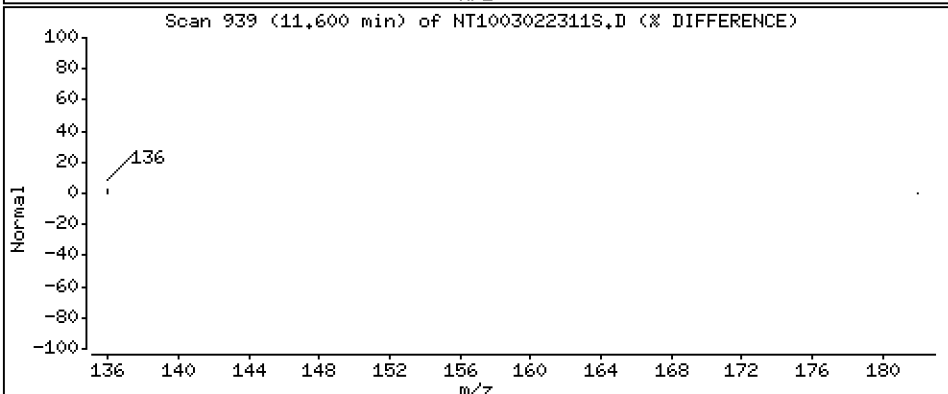
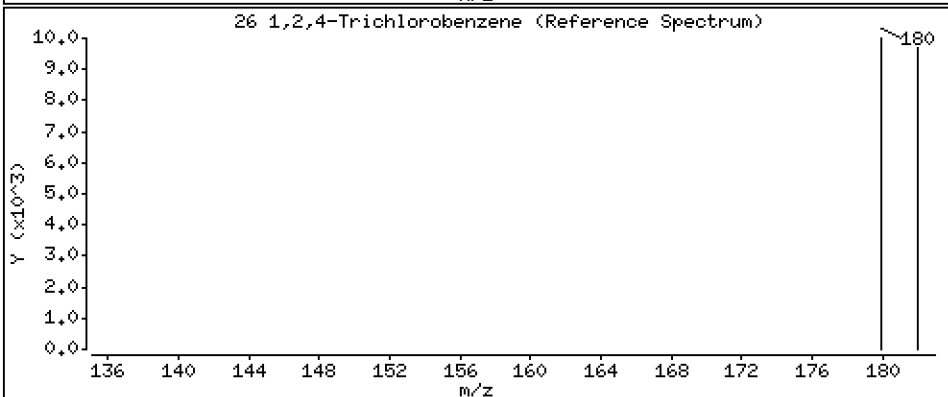
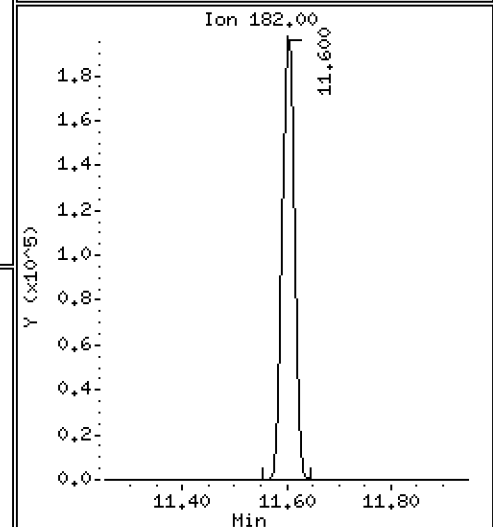
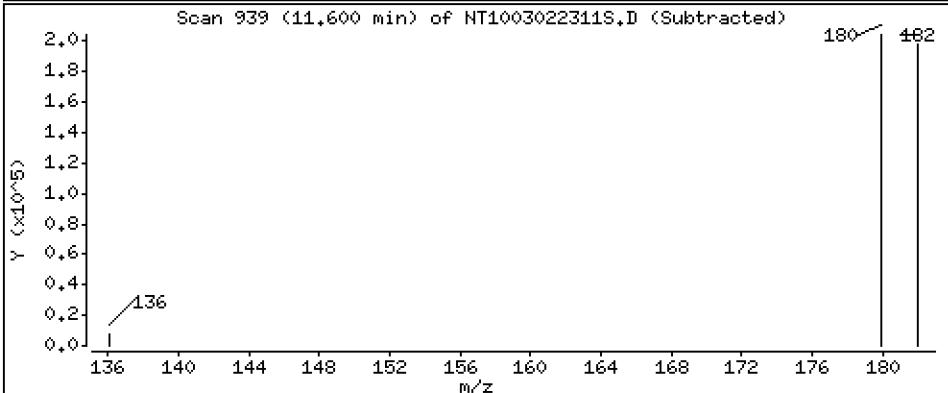
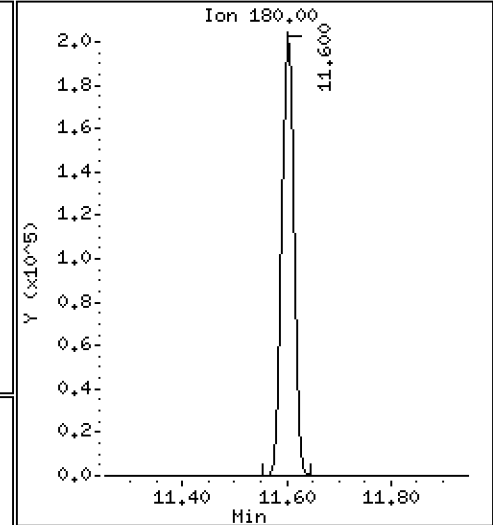
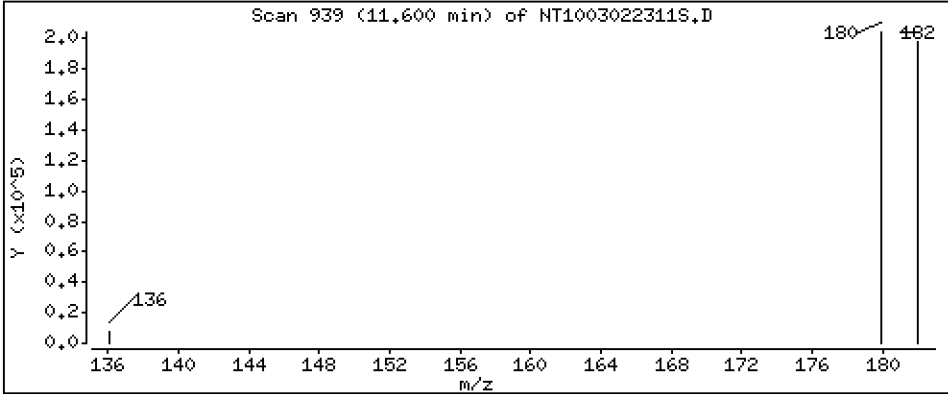
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 1,552 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

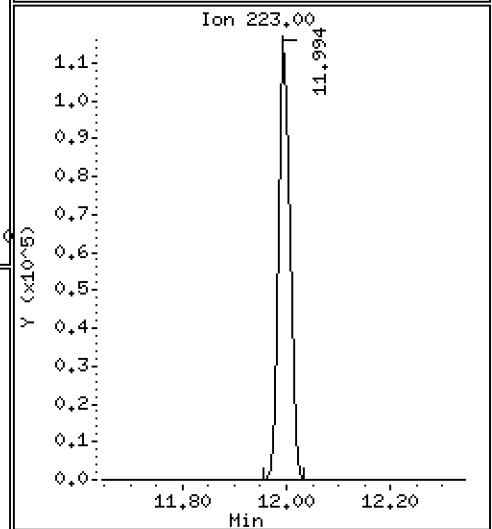
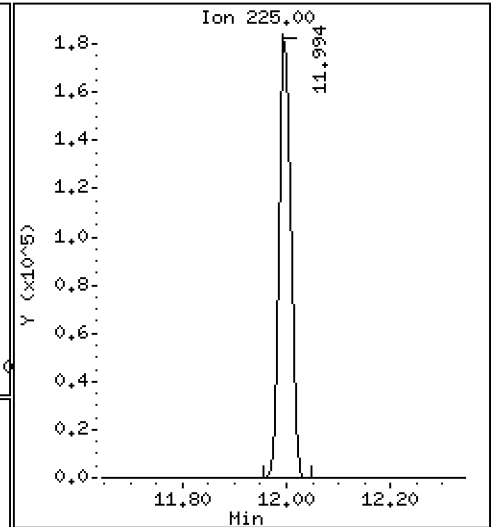
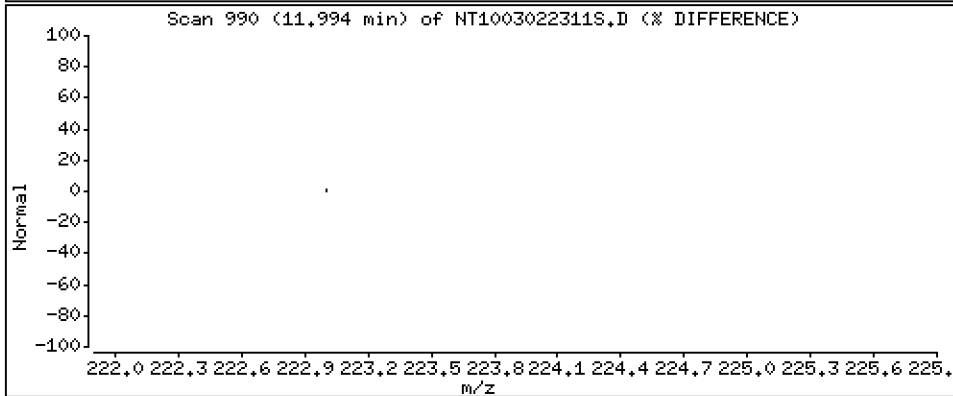
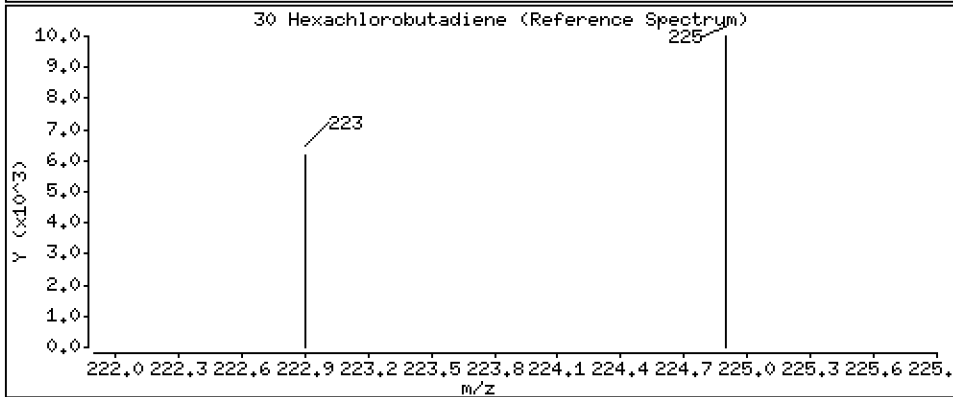
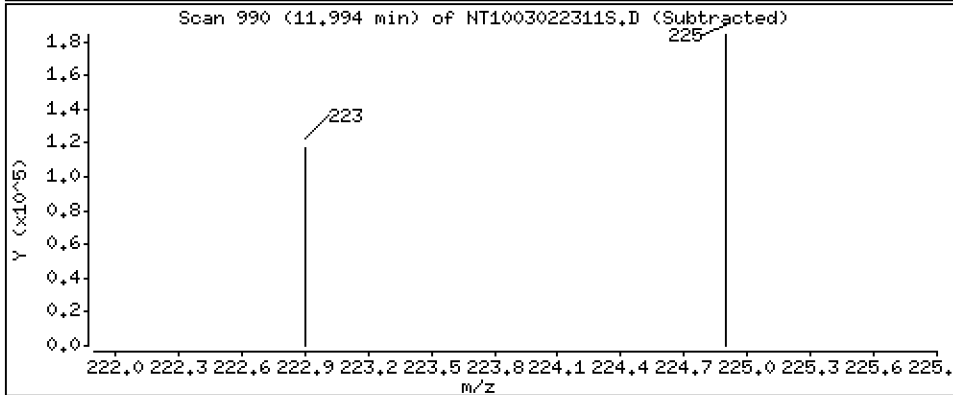
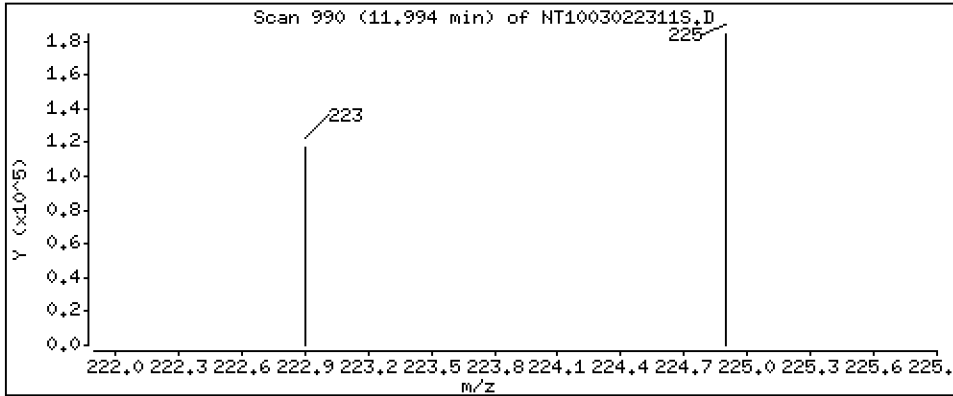
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 1,926 ug/L





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

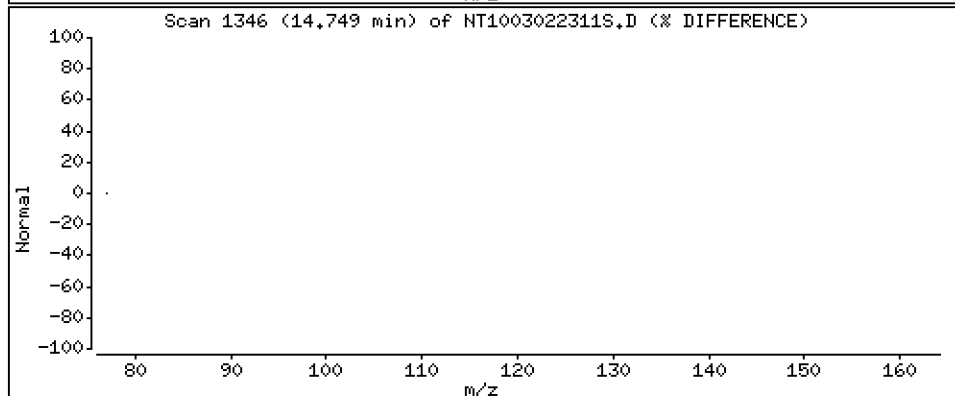
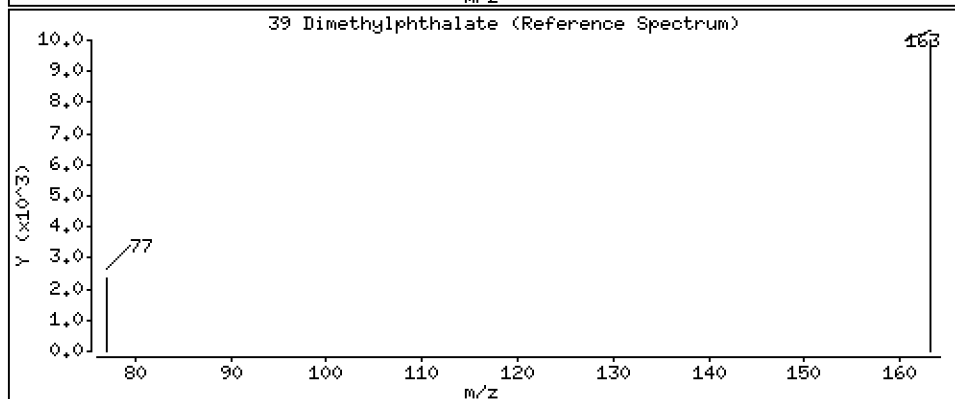
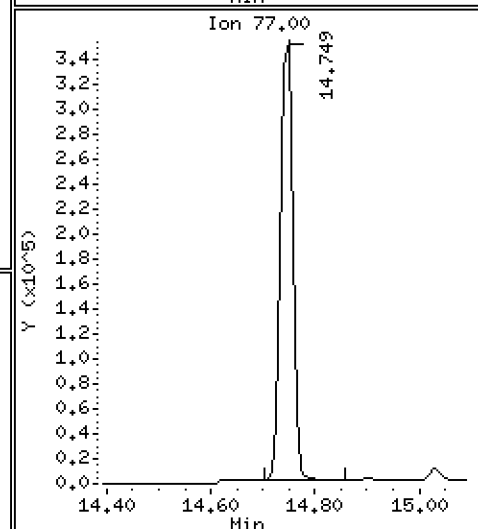
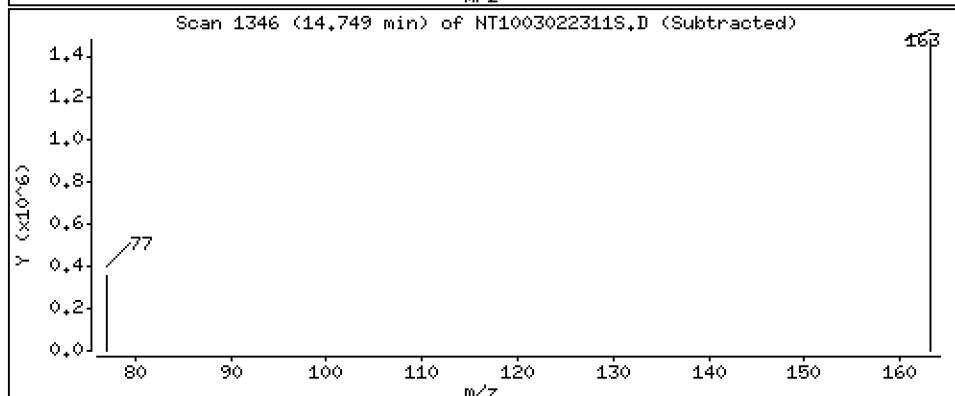
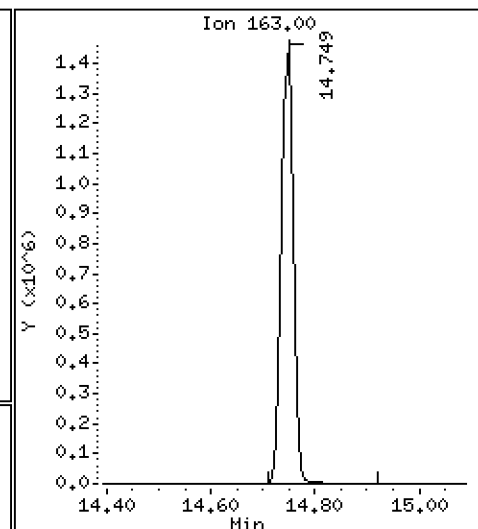
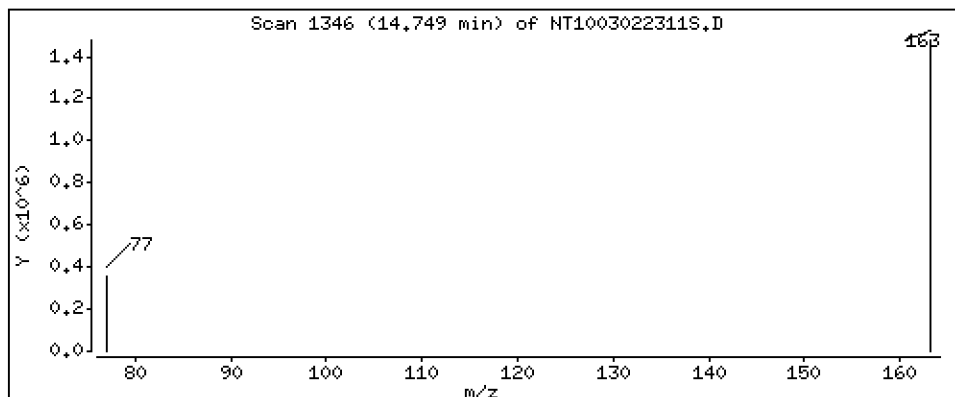
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,992 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

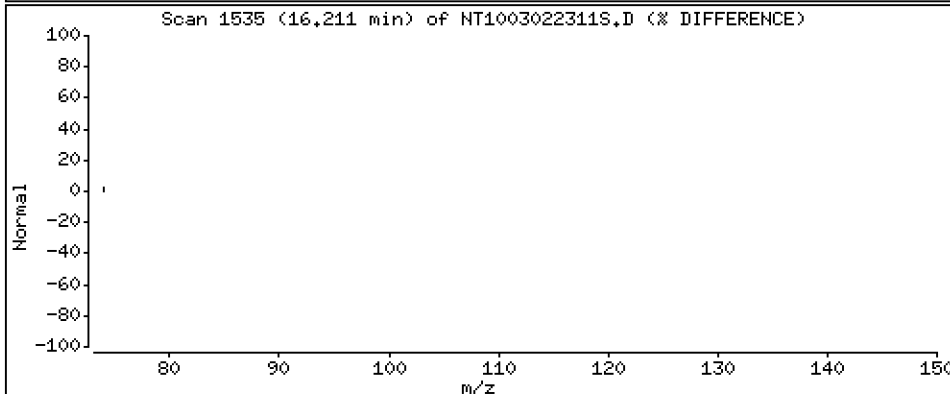
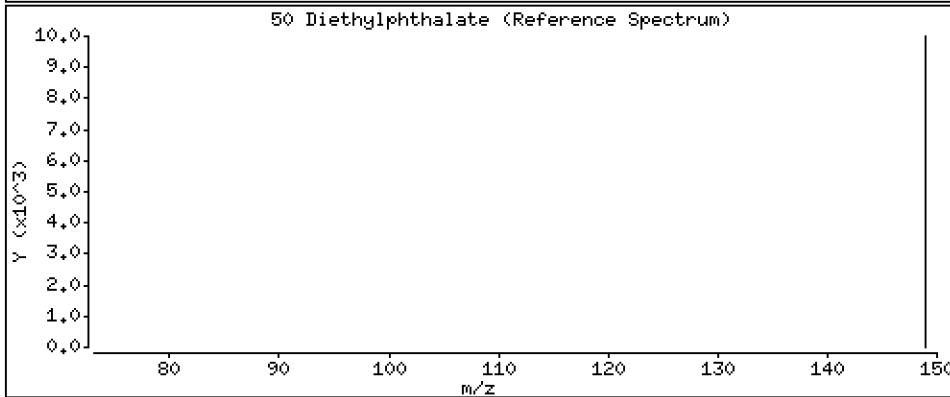
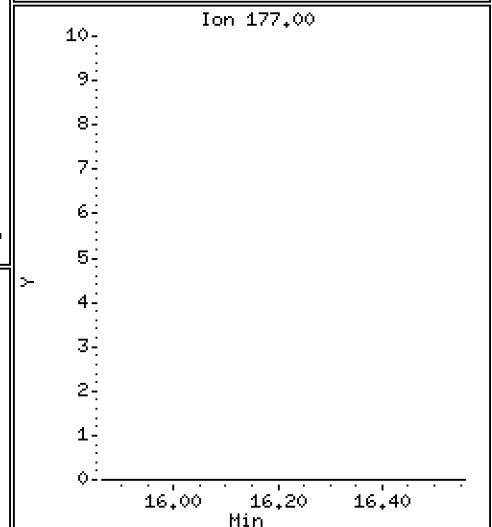
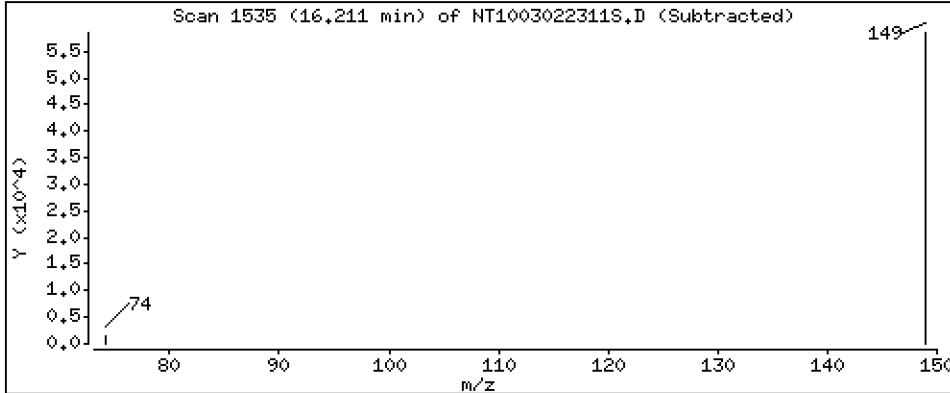
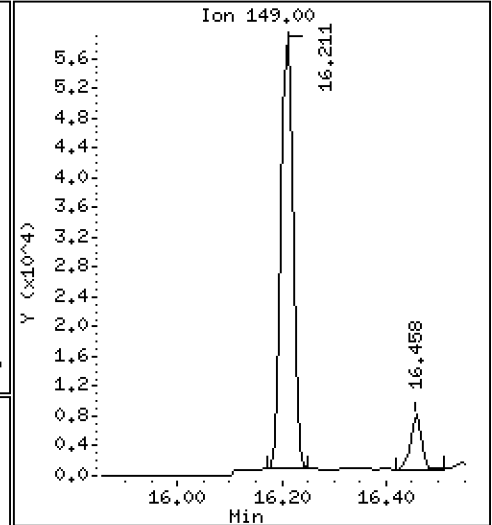
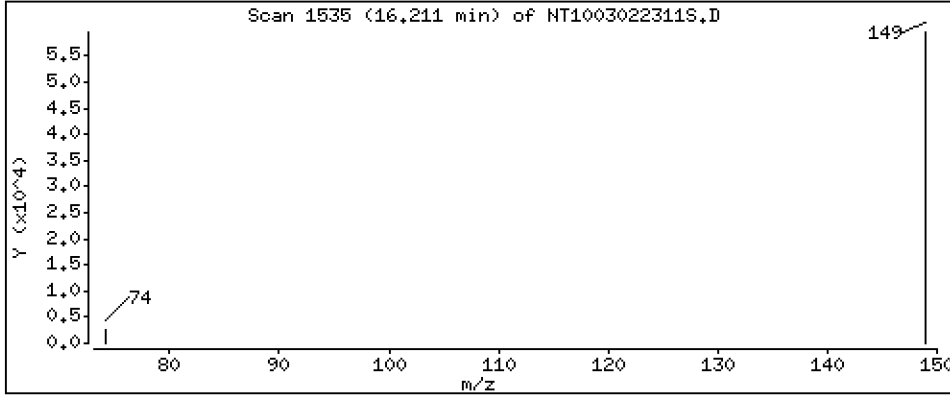
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.2121 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

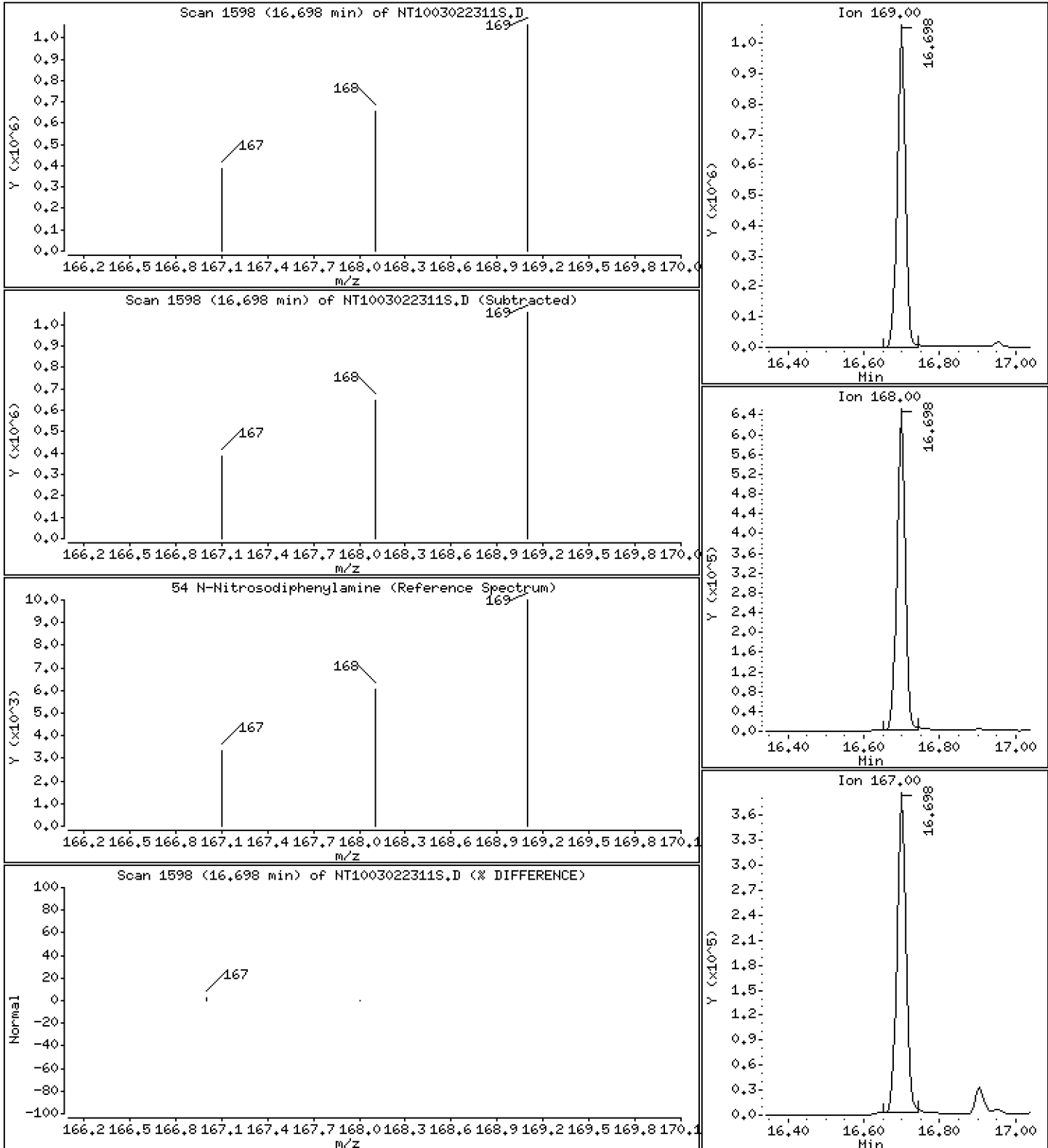
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 3.756 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

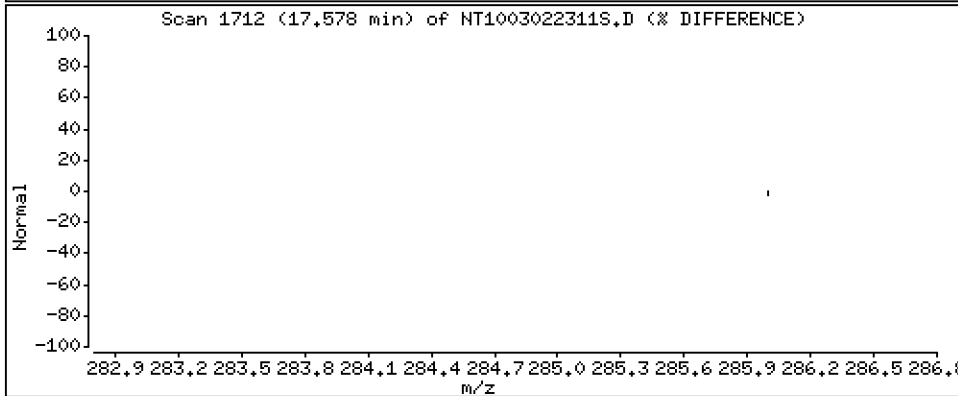
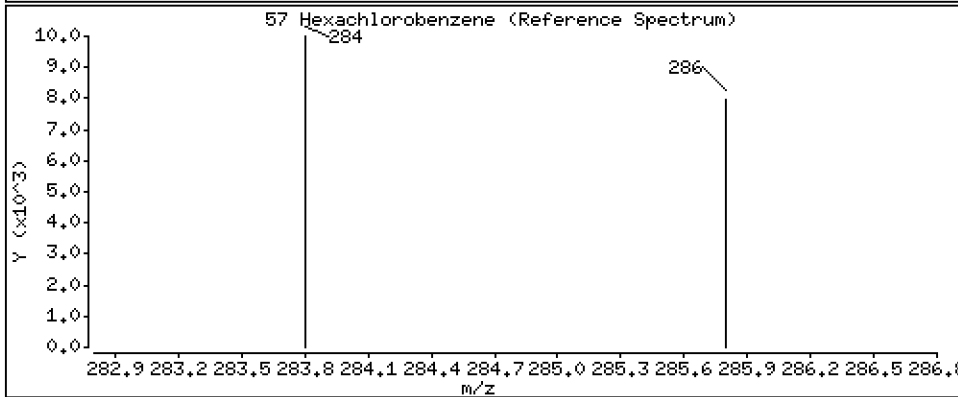
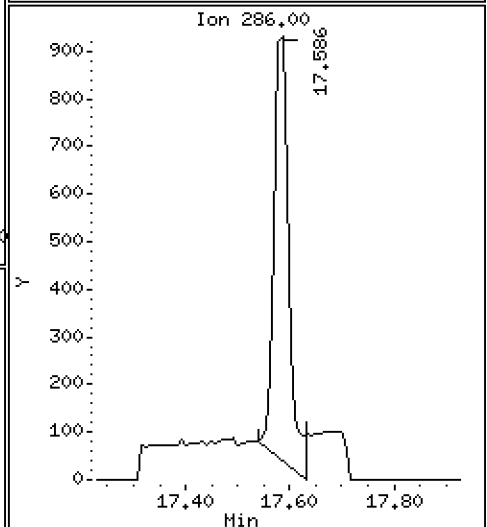
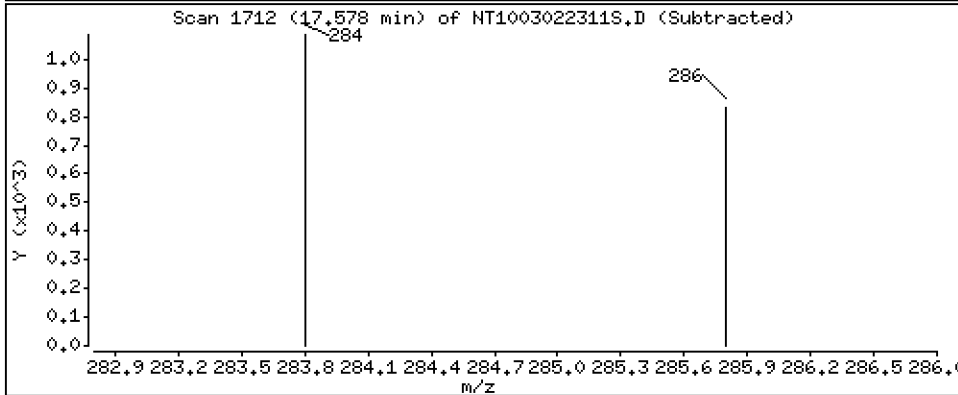
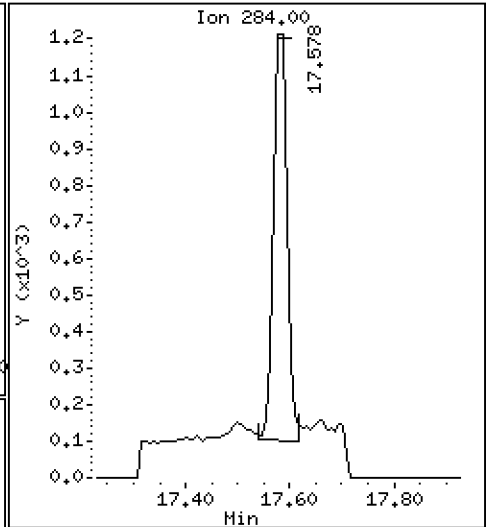
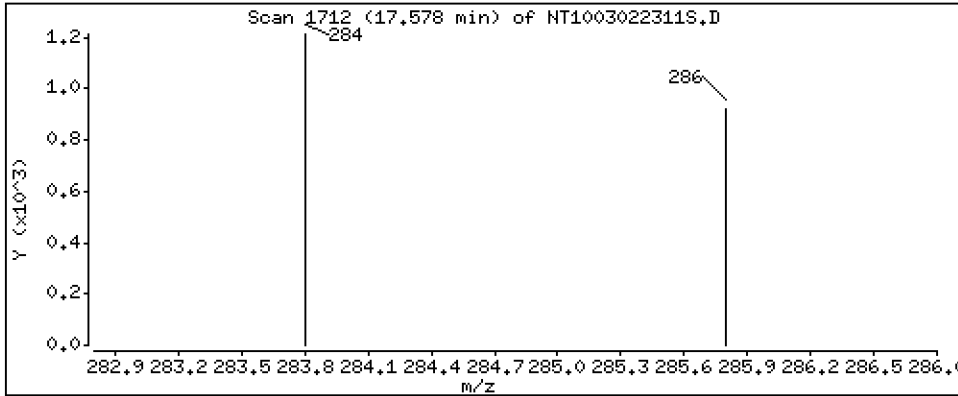
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,009776 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

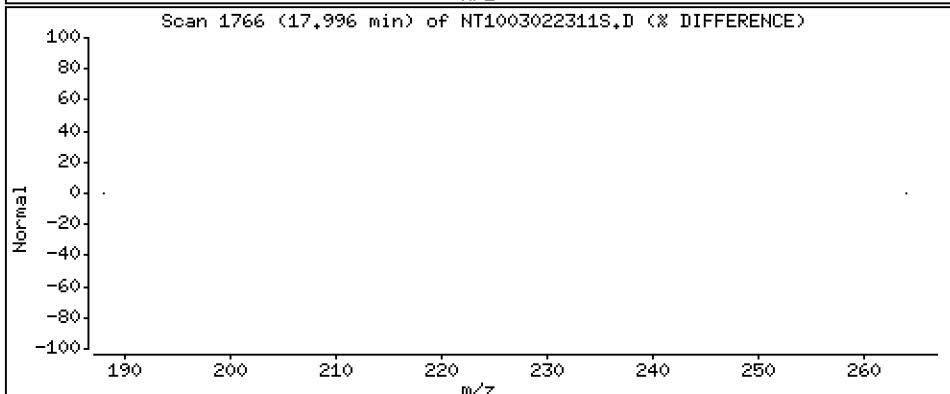
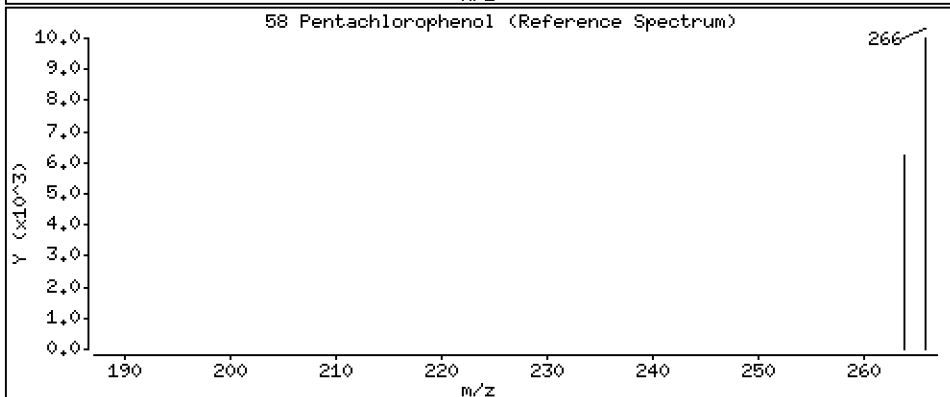
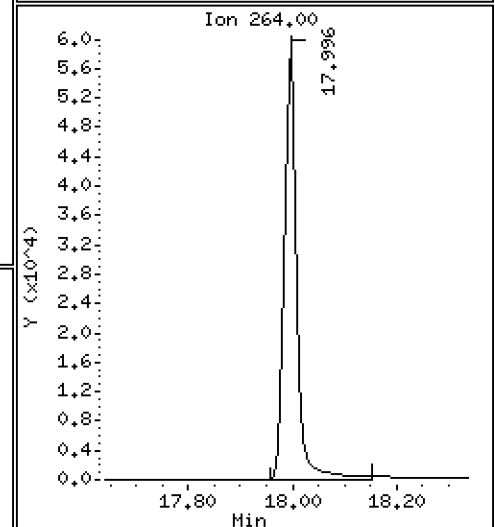
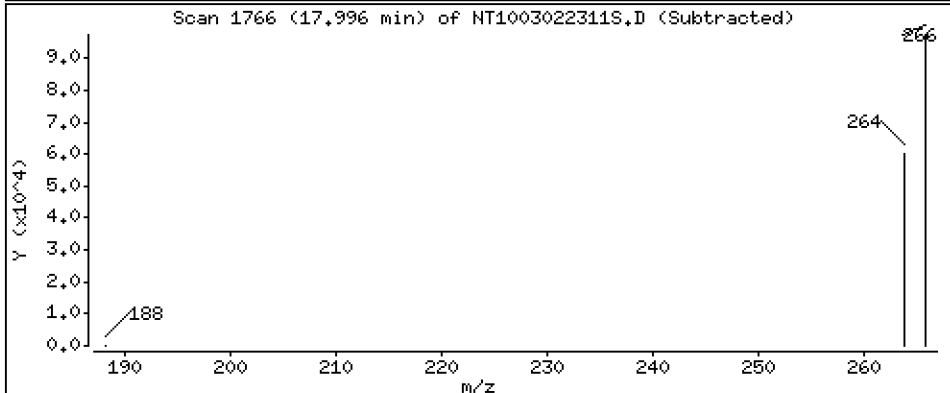
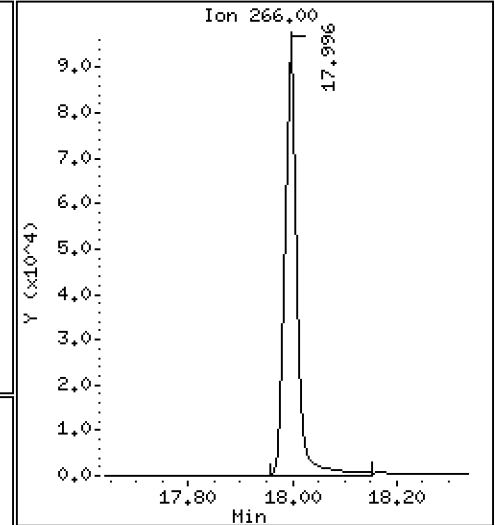
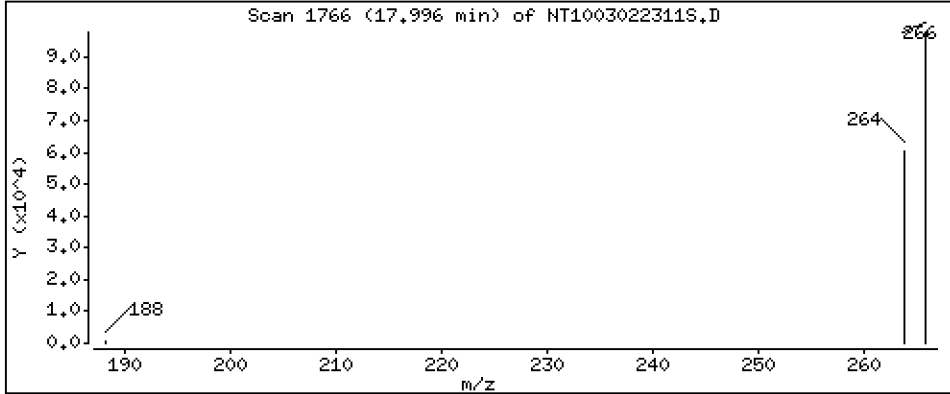
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 1,698 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

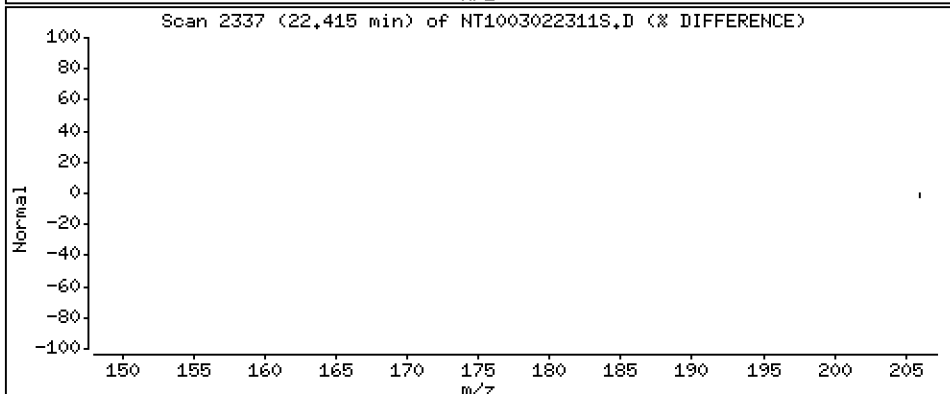
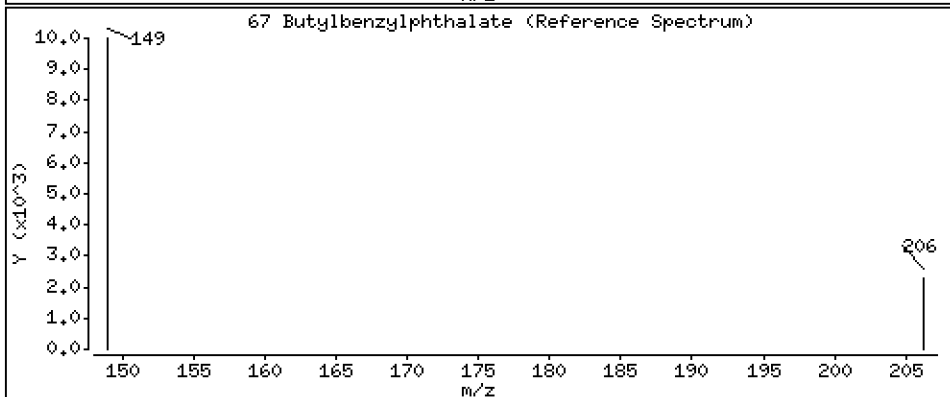
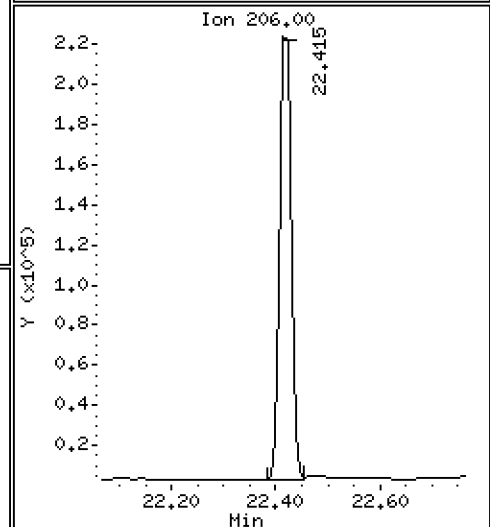
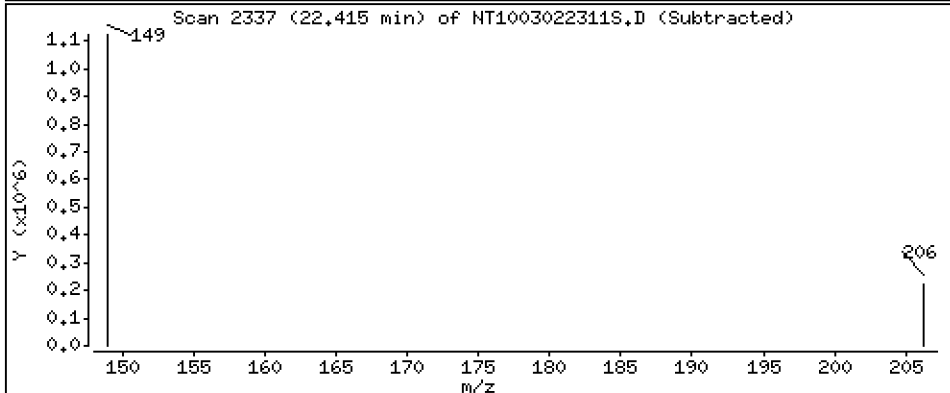
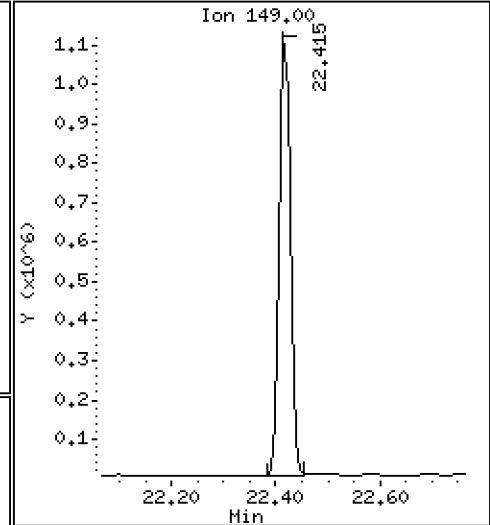
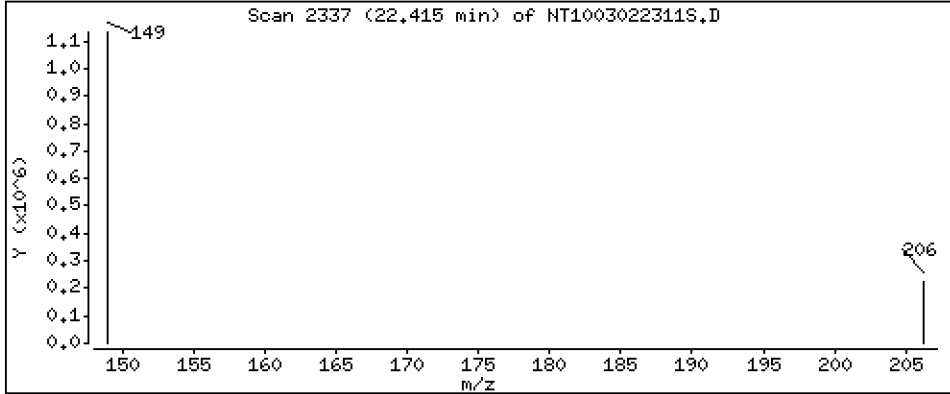
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 3,112 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

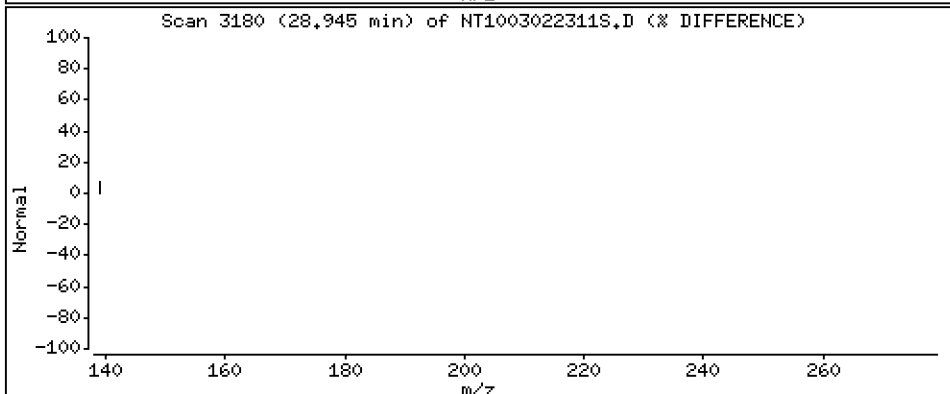
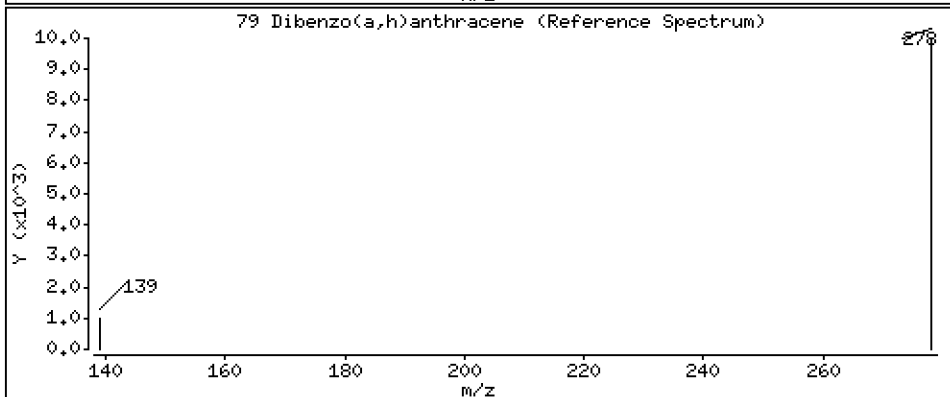
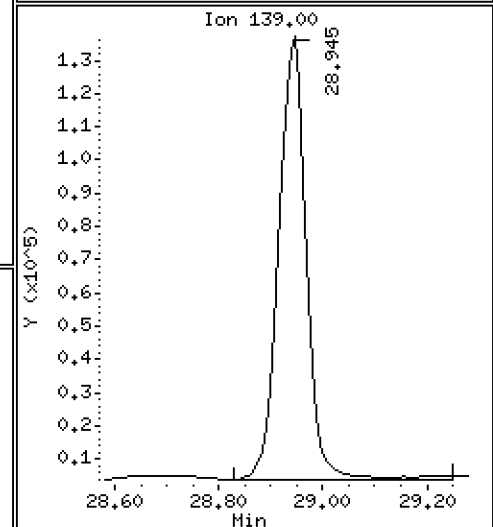
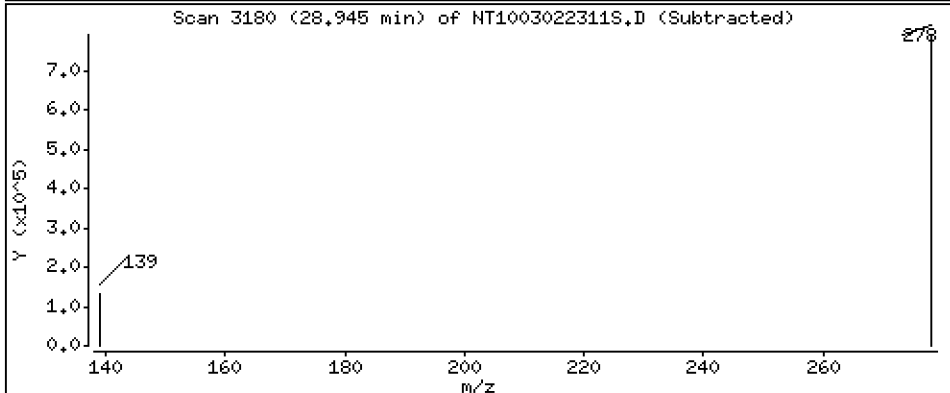
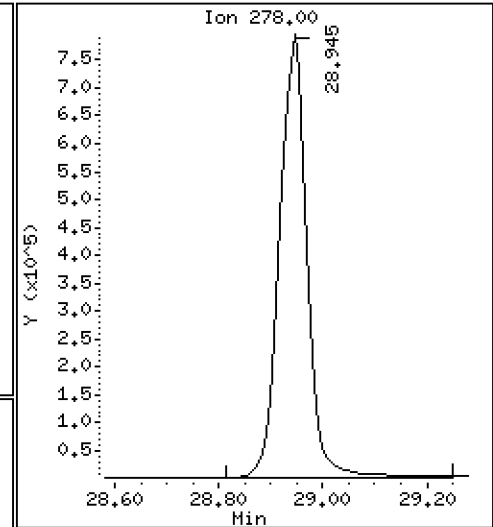
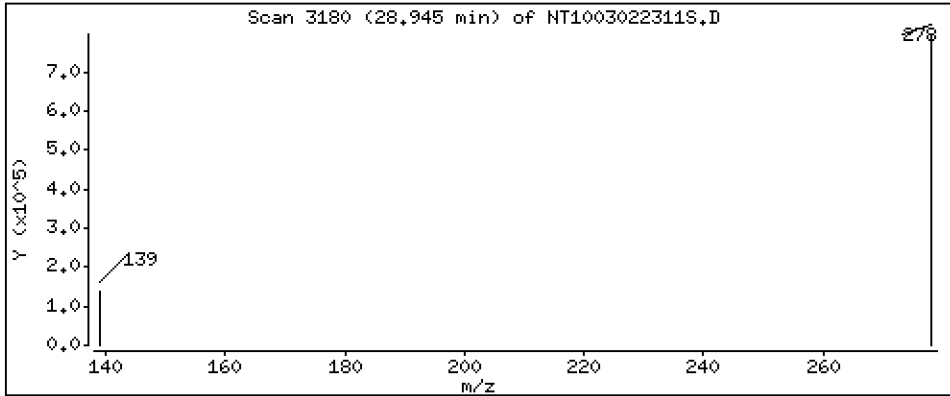
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 3,753 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

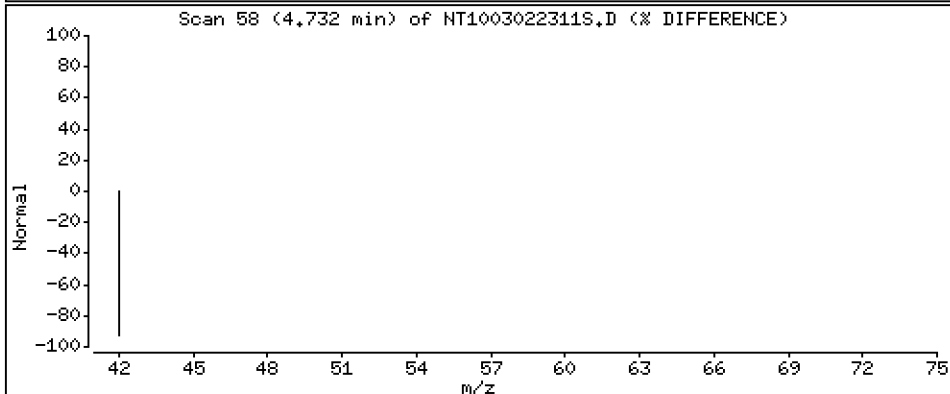
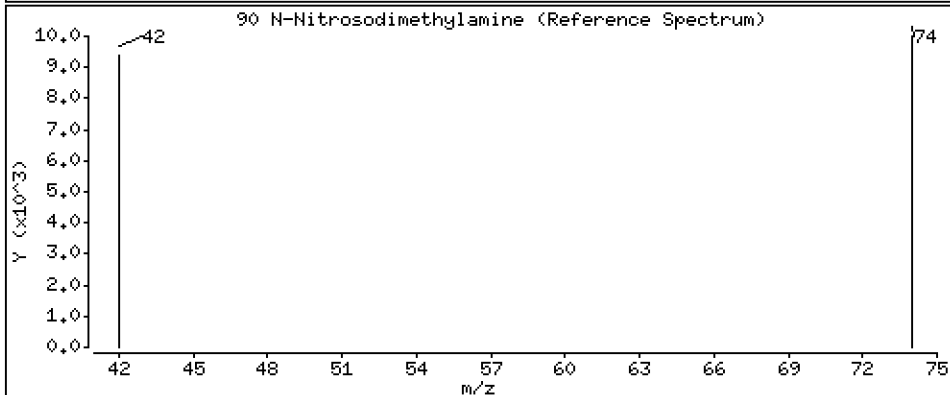
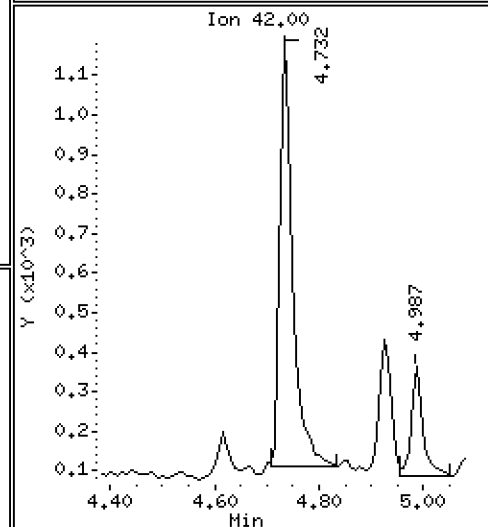
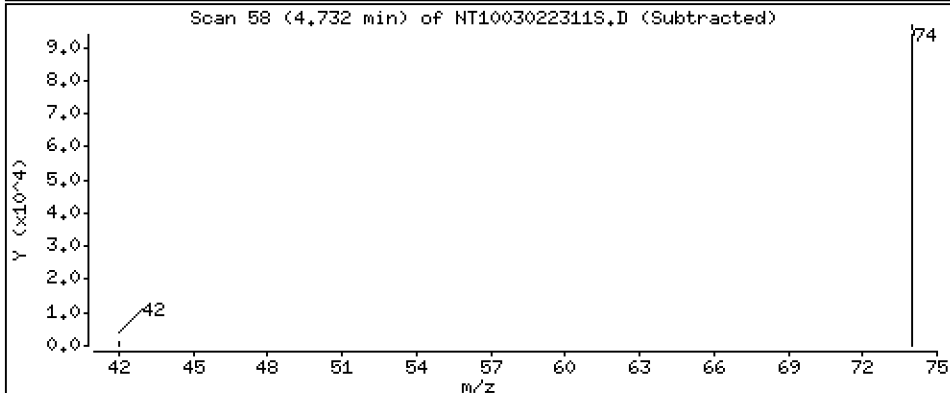
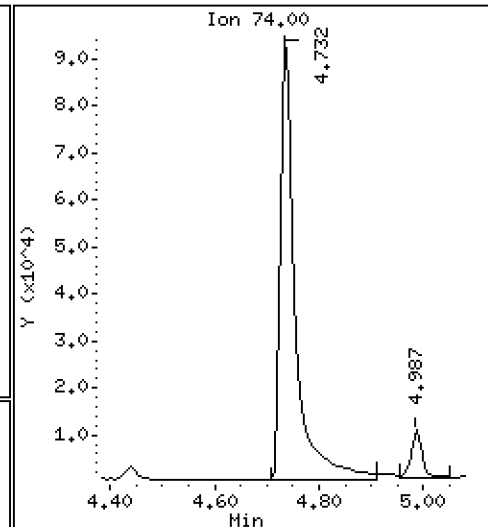
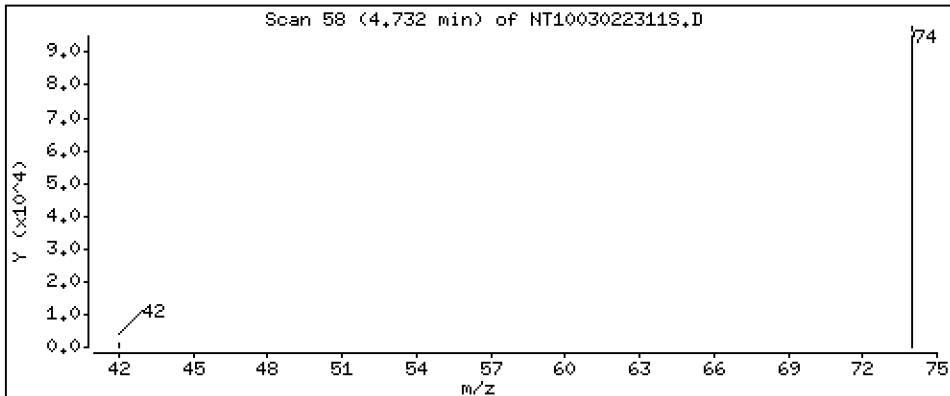
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 1.399 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022311S.D  
 Lab Smp Id: BLA0624-SRM2  
 Inj Date : 02-MAR-2023 20:44 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-SRM1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:02 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1575203	7.19270	7.193 (R)
3 Phenol	94		8.524	8.517 (0.921)		865603	2.64398	2.644
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		339074	1.19270	1.193
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251 (1.000)		767091	4.00000	
9 1,4-Dichlorobenzene	146					Compound Not Detected.		
11 Benzyl alcohol	79					Compound Not Detected.		
12 1,2-Dichlorobenzene	146		9.562	9.562 (1.034)		3530	0.01329	0.01329
13 2-Methylphenol	108		9.663	9.655 (1.044)		1279955	6.23865	6.239
15 4-Methylphenol	108		9.950	9.942 (1.076)		1680277	7.58593	7.586
16 N-Nitroso-di-n-propylamine	70					Compound Not Detected.		
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		1162291	4.84672	4.847
24 Benzoic acid	105		11.082	11.074 (0.945)		106321	0.81663	0.8166
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		311359	1.55159	1.552
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2788036	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994 (1.023)		274250	1.92586	1.926
39 Dimethylphthalate	163		14.749	14.741 (0.963)		2190768	4.99232	4.992
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1382029	4.00000	
50 Diethylphthalate	149		16.210	16.203 (1.058)		87777	0.21211	0.2121
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		1584342	3.75576	3.756
57 Hexachlorobenzene	284		17.578	17.578 (0.955)		1930	0.00978	0.009776 (M)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	149186	1.69819	1.698
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2606597	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	1234616	5.14744	5.147 (R)
67 Butylbenzylphthalate	149	22.414	22.414	(0.957)	1540899	3.11192	3.112
* 69 Chrysene-d12	240	23.429	23.421	(1.000)	2965995	4.00000	
* 77 Perylene-d12	264	26.123	26.115	(1.000)	3162675	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.108)	2910766	3.75254	3.753
90 N-Nitrosodimethylamine	74	4.732	4.732	(0.511)	181438	1.39936	1.399

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022311S.D  
 Lab Smp Id: BLA0624-SRM2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	767091	55.47
27 Naphthalene-d8	1779056	889528	3558112	2788036	56.71
42 Acenaphthene-d10	954569	477285	1909138	1382029	44.78
59 Phenanthrene-d10	1596290	798145	3192580	2606597	63.29
69 Chrysene-d12	1649110	824555	3298220	2965995	79.85
77 Perylene-d12	1901958	950979	3803916	3162675	66.29

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.12	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022311S.D

Lab ID: BLA0624-SRM2

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 20:44

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

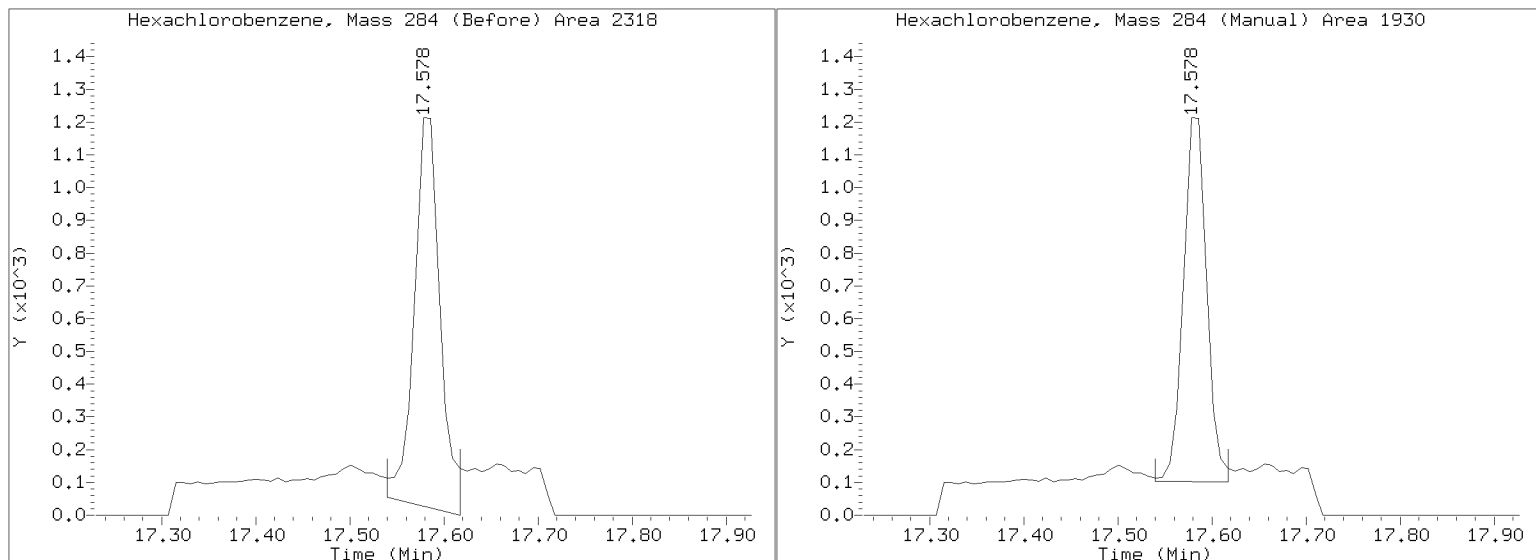
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302.b/SIM.b/NT1003022311S.D

Injection Date: 02-MAR-2023 20:44

Lab ID:BLA0624-SRM2 Client ID:

Report Date: 03/11/2023 06:03





**MASS SPECTROMETER  
INSTRUMENT PERFORMANCE CHECK  
EPA 8270E-SIM**

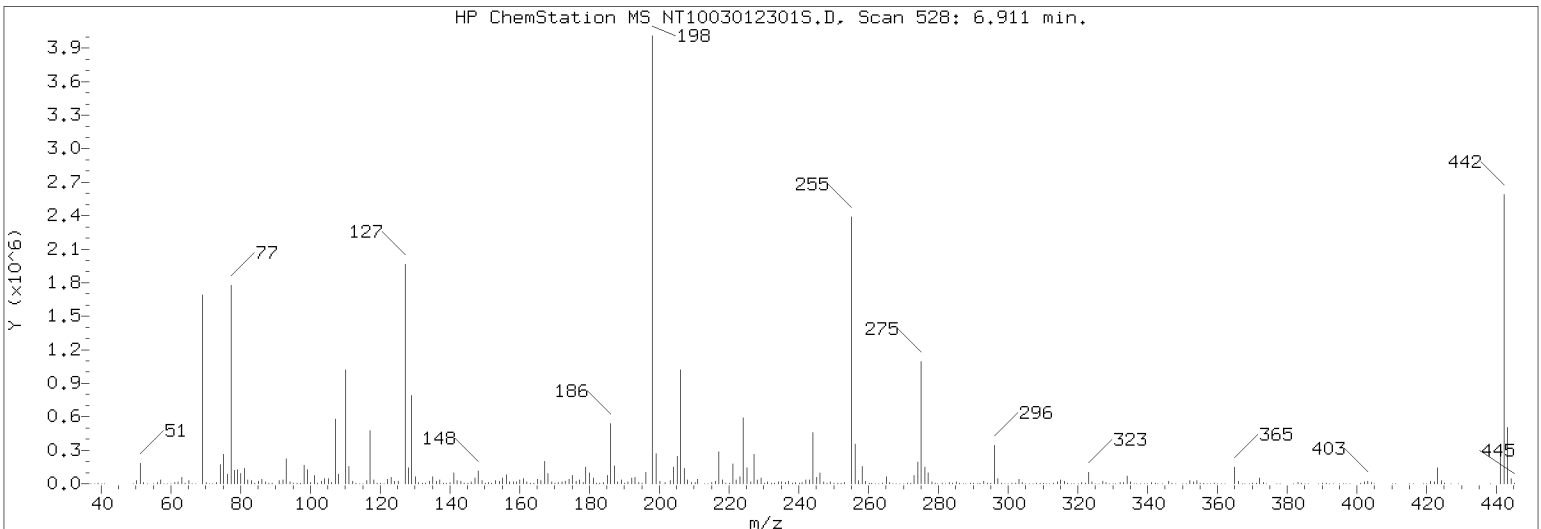
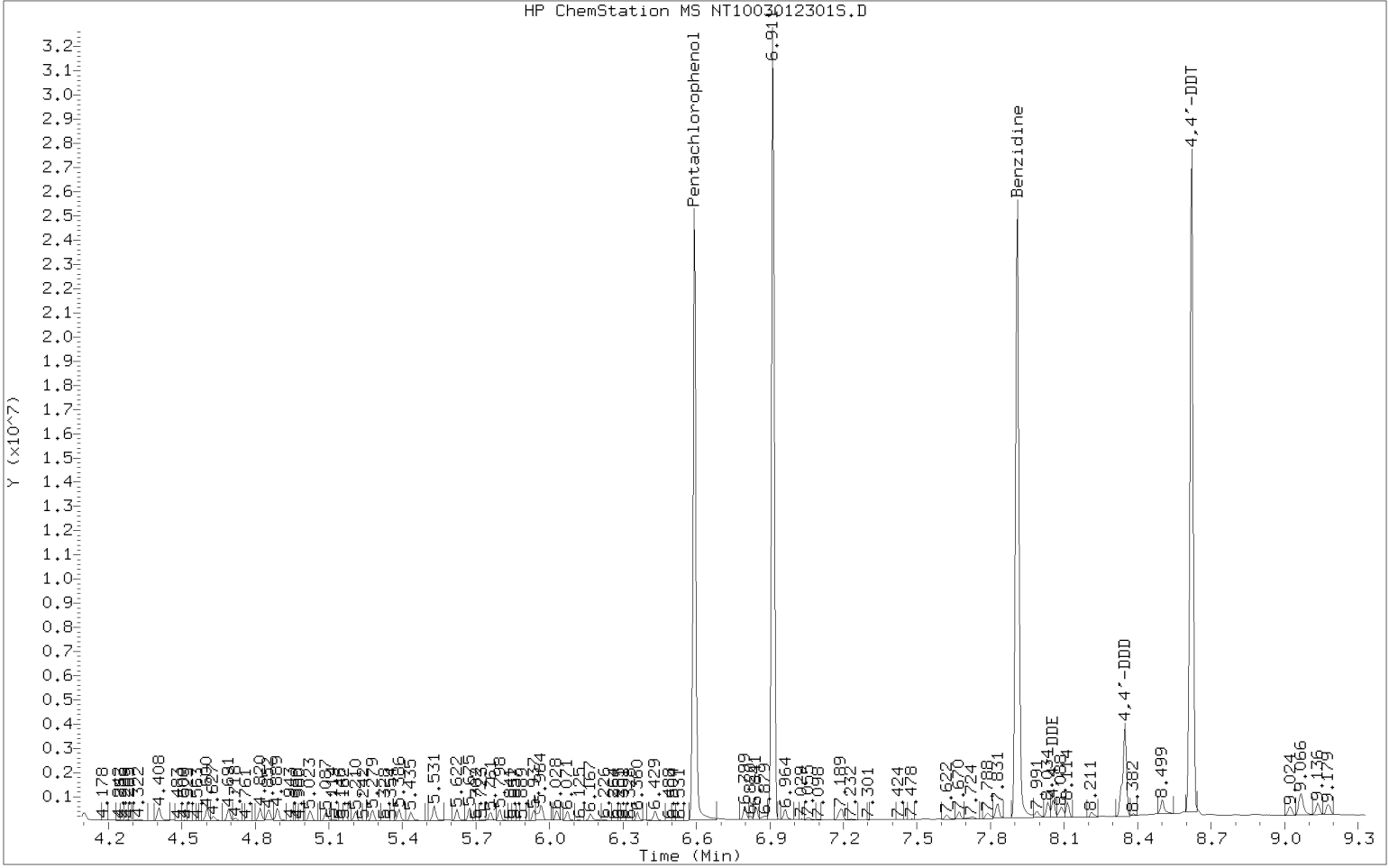
Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Lab File ID:	<u>NT1003012301S.D</u>	Injection Date:	<u>03/01/23</u>
Instrument ID:	<u>NT10</u>	Injection Time:	<u>15:49</u>
Sequence:	<u>SLC0143</u>	Lab Sample ID:	<u>SLC0143-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.793	PASS
69	Less than 100% of 198	41.1	PASS
70	Less than 2% of 69	0.366	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.67	PASS
365	1 - 100% of 198	4.33	PASS
441	Less than 150% of 443	73.4	PASS
442	1 - 200% of 198	80.1	PASS
443	15 - 24% of 442	19.1	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of		
4,4'-DDT	Less than 200% of		

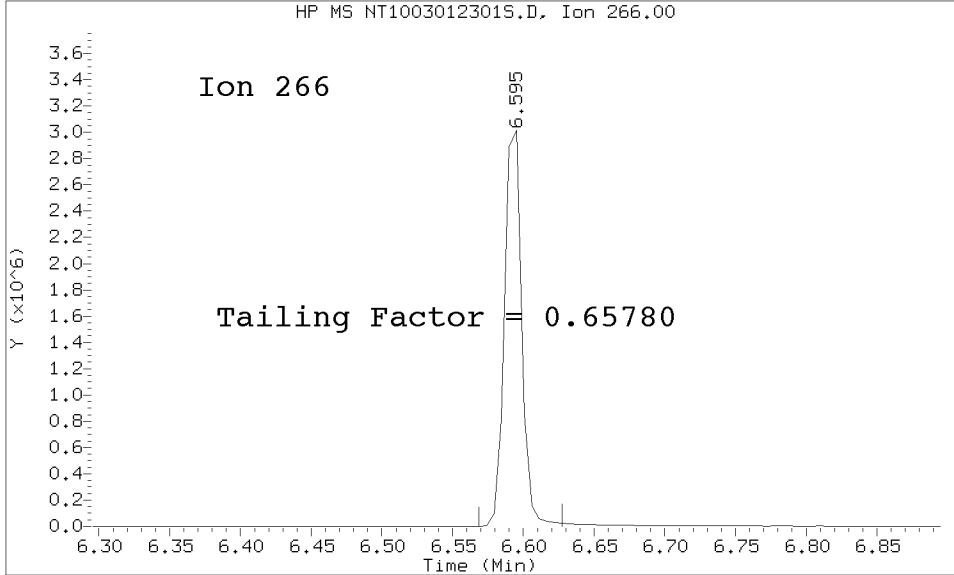
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0143-TUN1	NT1003012301S.D	03/01/2023	15:49
Cal Standard	SLC0143-CAL8	NT1003012303S.D	03/01/2023	16:42
Cal Standard	SLC0143-CAL7	NT1003012304S.D	03/01/2023	17:21
Cal Standard	SLC0143-CAL6	NT1003012305S.D	03/01/2023	17:59
Cal Standard	SLC0143-CAL5	NT1003012306S.D	03/01/2023	18:37
Cal Standard	SLC0143-CAL4	NT1003012307S.D	03/01/2023	19:15
Cal Standard	SLC0143-CAL3	NT1003012308S.D	03/01/2023	19:53
Cal Standard	SLC0143-CAL2	NT1003012309S.D	03/01/2023	20:30
Cal Standard	SLC0143-CAL1	NT1003012310S.D	03/01/2023	21:09
Secondary Cal Check	SLC0143-SCV1	NT1003012311S.D	03/01/2023	21:46
Initial Cal Blank	SLC0143-ICB1	NT1003012312S.D	03/01/2023	22:24

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230301.b/SIM.b/NT1003012301S.D/NT1003012301S.D  
 Method Used: \20230301.b\SIM.b\DFTPP8270E.m Inst: nt10  
 Injection Date: 01-MAR-2023 15:49 Operator: JGR  
 Sample Info: SLC0143-TUN1 SLC0143-TUN1  
 Report Date: 07/05/2023 09:35



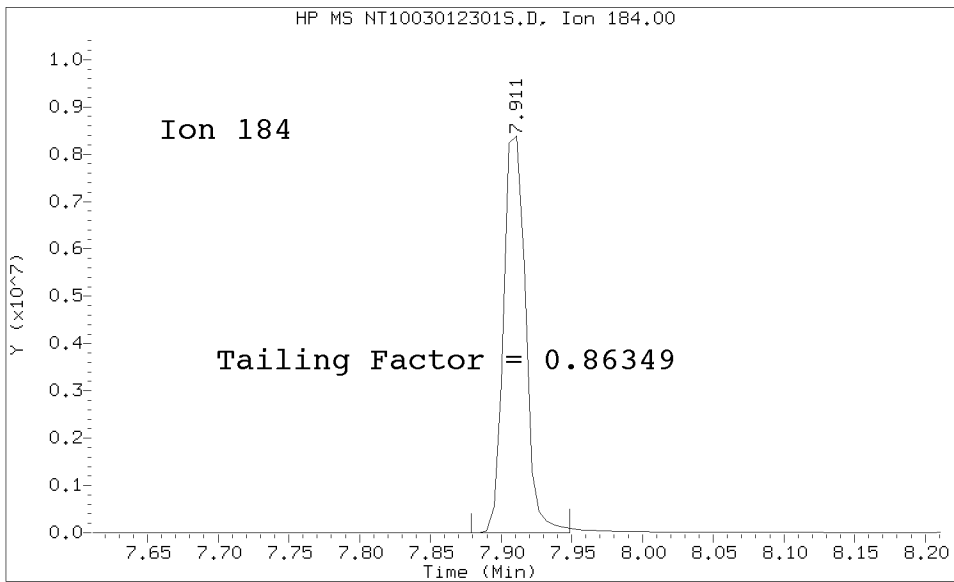
Datafile Analyzed: /20230301.b/SIM.b/NT1003012301S.D/NT1003012301S.D  
Method Used: \20230301.b\DFTPP8270E.m\sw846ddt.m Inst: nt10  
Injection Date: 01-MAR-2023 15:49 Operator: JGR  
Sample Info: SEQ-TUN1  
Report Date: 07/05/2023 09:35



Pentachlorophenol

=====  
Exp. RT = 6.590  
Found RT = 6.595

Tail Factor = 0.658 Maximum Allowed = 2.0



Benzidine

=====  
Exp. RT = 7.911  
Found RT = 7.911

Tail Factor = 0.863 Maximum Allowed = 2.0



8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.6578035	2.000	PASS
Benzidine	0.8634886	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	4780124			N/A
4,4-DDE	47256	1.0	20.0	PASS
4,4-DDD	542360	10.2	20.0	PASS
4,4-DDD + DDE	589616	11.0	20.0	PASS

Tuning Sample, nt10.i/20230301.b/SIM.b/NT1003012301S.D, \*\*\* PASSED \*\*\*

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.33 ( 0.79)
69	Mass 69 relative abundance	41.10
70	Less than 2.00% of mass 69	0.15 ( 0.37)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
365	1.00 - 100.00% of mass 198	4.33
441	Less than 150.00% of mass 443	11.23 ( 73.44)
442	Less than 200.00% of mass 198	80.08
443	15.00 - 24.00% of mass 442	15.30 ( 19.10)

Data File: NT1003012301S.D  
Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522  
Location of Maximum: 198.00  
Number of points: 369

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	462	140.00	7430	237.00	14976	332.00	6725
38.00	1113	141.00	70248	238.00	2080	333.00	7901
39.00	4743	142.00	22264	239.00	7687	334.00	53800
40.00	108	143.00	15456	240.00	6126	335.00	13827
45.00	84	144.00	4558	241.00	9927	336.00	1422
49.00	890	145.00	3575	242.00	22800	337.00	158
50.00	20560	146.00	12885	243.00	23656	338.00	111
51.00	115400	147.00	37000	244.00	334528	339.00	1435
52.00	5980	148.00	83184	245.00	44200	340.00	1368
53.00	270	151.00	6891	246.00	75208	341.00	9189
55.00	1004	152.00	4801	247.00	14506	342.00	2530
56.00	6893	153.00	21920	248.00	2995	343.00	476
57.00	20032	154.00	16872	249.00	12012	344.00	229
58.00	1173	155.00	39720	250.00	2462	346.00	19040
59.00	381	156.00	58960	251.00	2978	347.00	3868
60.00	603	157.00	10415	252.00	3463	348.00	369
61.00	8555	158.00	12758	253.00	7543	350.00	680
62.00	12181	159.00	10289	254.00	2201	351.00	1509
63.00	36888	160.00	23104	255.00	1779712	352.00	24280
64.00	5850	161.00	32336	256.00	261248	353.00	16313
65.00	19656	162.00	10036	257.00	19960	354.00	23616
66.00	1277	163.00	2211	258.00	115664	355.00	4277
67.00	218	164.00	3370	259.00	18720	356.00	395
68.00	9335	165.00	26672	260.00	3097	357.00	288
69.00	1177088	166.00	21880	261.00	2983	358.00	496
70.00	4303	167.00	140736	262.00	311	359.00	2088
72.00	118	168.00	67144	263.00	1088	360.00	426
73.00	8187	169.00	12299	264.00	2758	361.00	287
74.00	117944	170.00	4307	265.00	46872	362.00	66
75.00	186240	171.00	6152	266.00	6551	363.00	78
76.00	58584	172.00	12323	267.00	641	364.00	312
77.00	1243648	173.00	16696	268.00	1031	365.00	124024
78.00	82568	174.00	30816	269.00	334	366.00	17240
79.00	86720	175.00	56392	270.00	1777	367.00	1640
80.00	67968	176.00	14808	271.00	3758	368.00	51
81.00	95752	177.00	24968	272.00	4667	369.00	81
82.00	22136	178.00	8414	273.00	54184	370.00	2231
83.00	20016	179.00	108176	274.00	145920	371.00	6578
84.00	1703	180.00	69200	275.00	822080	372.00	39896
85.00	15260	181.00	35088	276.00	108424	373.00	10420
86.00	27208	182.00	5707	277.00	76856	374.00	902
87.00	12947	183.00	2410	278.00	12879	377.00	1108
88.00	4317	184.00	9057	281.00	1271	378.00	190
89.00	1969	185.00	53272	282.00	1654	379.00	112
90.00	227	186.00	390848	283.00	8058	382.00	88
91.00	20144	187.00	115736	284.00	6096	383.00	11296
92.00	22872	188.00	12489	285.00	13310	384.00	3498
93.00	159616	189.00	26224	286.00	2664	385.00	1140
94.00	9906	190.00	3820	287.00	301	386.00	187

95.00	2189	191.00	11505	288.00	1049	388.00	81
96.00	5767	192.00	34688	289.00	3146	389.00	105
97.00	2485	193.00	41016	290.00	2684	390.00	4929
98.00	117552	194.00	9131	291.00	1791	391.00	3340
99.00	90792	195.00	3653	292.00	3510	392.00	2390
100.00	7885	196.00	74504	293.00	16520	393.00	475
101.00	52896	198.00	2863616	294.00	4295	395.00	216
102.00	3052	199.00	190976	295.00	4987	396.00	208
103.00	16416	200.00	14335	296.00	267904	397.00	274
104.00	30568	201.00	9948	297.00	37320	398.00	254
105.00	30136	203.00	20560	298.00	2786	401.00	2284
106.00	9766	204.00	107568	299.00	508	402.00	15386
107.00	410176	205.00	182464	300.00	217	403.00	21456
108.00	62280	206.00	743232	301.00	3180	404.00	8460
109.00	6029	207.00	96144	302.00	4702	405.00	1217
110.00	711808	208.00	26352	303.00	29528	408.00	105
111.00	108280	209.00	9347	304.00	7967	410.00	539
112.00	13160	210.00	10562	305.00	1122	411.00	56
113.00	4333	211.00	27120	306.00	358	415.00	1010
114.00	392	212.00	2578	307.00	530	416.00	312
115.00	1356	213.00	2139	308.00	3845	419.00	166
116.00	22112	214.00	764	309.00	2265	420.00	193
117.00	350208	215.00	8027	310.00	3023	421.00	17744
118.00	25424	216.00	16051	311.00	1030	422.00	15463
119.00	2716	217.00	211072	312.00	626	423.00	129392
120.00	4884	218.00	26304	313.00	2222	424.00	25976
121.00	587	219.00	2900	314.00	12766	425.00	2691
122.00	25416	220.00	3351	315.00	29288	426.00	96
123.00	40488	221.00	123968	316.00	15518	427.00	197
124.00	17936	222.00	24608	317.00	2892	429.00	55
125.00	15919	223.00	46856	318.00	260	437.00	78
127.00	1391616	224.00	432000	319.00	629	438.00	106
128.00	102568	225.00	107056	320.00	924	439.00	148
129.00	561152	226.00	10788	321.00	8267	440.00	550
130.00	46696	227.00	195904	322.00	3948	441.00	321664
131.00	8637	228.00	27456	323.00	81096	442.00	2293248
132.00	4190	229.00	39984	324.00	14693	443.00	438016
133.00	1654	230.00	5777	325.00	1371	444.00	39248
134.00	15899	231.00	15009	326.00	1762	445.00	2356
135.00	44024	232.00	3043	327.00	15694	446.00	82
136.00	18272	233.00	3542	328.00	7475	489.00	54
137.00	22936	234.00	12458	329.00	1733		
138.00	5085	235.00	13429	330.00	352		
139.00	2552	236.00	8601	331.00	463		



**INITIAL CALIBRATION DATA**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC                                      SDG: 23A0206  
Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
Calibration: GC00032     Instrument: NT10  
Calibration Date: 03/01/2023    Column (1): ZB-5MSi

Calibration Comments: DS  
    VTS: added third PDF for raw tune data 07/05/23

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
1,4-Dichlorobenzene	0.05	1.509234	0.1	1.475802	0.2	1.433728	0.5	1.463954	1	1.407538	2.5	1.403914
1,2-Dichlorobenzene	0.05	1.433632	0.1	1.404559	0.2	1.361924	0.5	1.41	1	1.363267	2.5	1.366655
Benzyl Alcohol	0.05	0.2980883	0.1	0.4078131	0.2	0.6563487	0.5	0.7516883	1	0.8131324	2.5	0.9577245
Benzoic acid					0.8	3.369162E-02	2	6.431557E-02	4	0.1113925	10	0.1735407
2,4-Dimethylphenol	0.1	0.1951669	0.2	0.2260486	0.4	0.2540649	1	0.3054349	2	0.3273273	5	0.3475379
1,2,4-Trichlorobenzene	0.05	0.2888686	0.1	0.2867934	0.2	0.282521	0.5	0.2946068	1	0.2833685	2.5	0.2832806
N-Nitrosodiphenylamine	0.05	0.524197	0.1	0.5824673	0.2	0.622888	0.5	0.6812778	1	0.6451821	2.5	0.6870282
Pentachlorophenol			0.2	2.689676E-02	0.4	3.579405E-02	1	0.0582107	2	8.194985E-02	5	0.1253843
2-Fluorophenol	0.075	1.021853	0.15	1.055547	0.3	1.088445	0.75	1.178357	1.5	1.175199	3.75	1.215826
p-Terphenyl-d14	0.05	0.2668155	0.1	0.2858166	0.2	0.2844553	0.5	0.3178566	1	0.3330721	2.5	0.3637872



**INITIAL CALIBRATION DATA**  
**EPA 8270E-SIM**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00032	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi

Calibration Comments: DS  
VTS: added third PDF for raw tune data 07/05/23

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
1,4-Dichlorobenzene	5	1.398394	10	1.437899								
1,2-Dichlorobenzene	5	1.363348	10	1.379386								
Benzyl Alcohol	5	1.015627	10	1.093596								
Benzoic acid	20	0.2213574	40	0.2543998								
2,4-Dimethylphenol	10	0.3499605	20	0.3606322								
1,2,4-Trichlorobenzene	5	0.2885383	10	0.2952467								
N-Nitrosodiphenylamine	5	0.7094703	10	0.726266								
Pentachlorophenol	10	0.1569964	20	0.1804073								
2-Fluorophenol	7.5	1.182888	15	1.217708								
p-Terphenyl-d14	5	0.3763732	10	0.3595608								



**INITIAL CALIBRATION DATA**  
**EPA 8270E-SIM**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00032	Instrument:	NT10
Calibration Date:	03/01/2023	Column (1):	ZB-5MSi
Calibration Comments:	DS VTS: added third PDF for raw tune data 07/05/23		

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
1,4-Dichlorobenzene	1.441308	2.7			RSD (15)	
1,2-Dichlorobenzene	1.385346	2.0			RSD (15)	
Benzyl Alcohol	0.7492523	37.9		0.9995	QCOD (0.99)	
Benzoic acid	0.1431163	61.4		0.9938	QCOD (0.99)	
2,4-Dimethylphenol	0.2957717	21.2		0.9999	QCOD (0.99)	
1,2,4-Trichlorobenzene	0.287903	1.7			RSD (15)	
N-Nitrosodiphenylamine	0.6473471	10.6			RSD (15)	
Pentachlorophenol	9.509134E-02	63.3		0.9953	QCOD (0.99)	
2-Fluorophenol	1.141978	6.6			RSD (15)	
p-Terphenyl-d14	0.3234672	12.8			RSD (15)	



ANALYSIS SEQUENCE

SLC0143

Instrument: NT10  
Calibration ID: UNASSIGNED

Printed: 3/10/2023 10:34:45AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0143-CAL1	QC		1		K011453	K010831		
SLC0143-CAL2	QC		2		K011452	K010831		
SLC0143-CAL3	QC		3		K011105	K010831		
SLC0143-CAL4	QC		4		K011106	K010831		
SLC0143-CAL5	QC		5		K011107	K010831		
SLC0143-CAL6	QC		6		K011108	K010831		
SLC0143-CAL7	QC		7		K011109	K010831		
SLC0143-CAL8	QC		8		K011110	K010831		
SLC0143-ICB1	QC		9		K005156	K010831		
SLC0143-SCV1	QC		10		K010066	K010831		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	1642	NT1003012303S.D	SEQ-CAL8		1		9.25	358478		11.72	1302515		15.31	720687		18.40	1243145		23.42	1161833		26.11	1054384
2	1721	NT1003012304S.D	SEQ-CAL7		1		9.25	354441		11.72	1288295		15.31	739997		18.40	1248235		23.41	1079945		26.11	1086769
3	1759	NT1003012305S.D	SEQ-CAL6		1		9.24	334269		11.72	1202042		15.31	670352		18.40	1124281		23.41	948691		26.11	1004445
4	1837	NT1003012306S.D	SEQ-CAL5		1		9.24	320125		11.72	1136019		15.31	636993		18.40	1093620		23.41	1000300		26.10	1058448
5	1915	NT1003012307S.D	SEQ-CAL4		1		9.24	333617		11.72	1170292		15.31	639612		18.40	1094919		23.42	1048196		26.11	1117593
6	1953	NT1003012308S.D	SEQ-CAL3		1		9.25	314467		11.72	1088698		15.31	568154		18.40	979213		23.42	963807		26.11	1037909
7	2030	NT1003012309S.D	SEQ-CAL2		1		9.24	305434		11.72	1048978		15.31	536796		18.40	924275		23.42	947041		26.11	1060218
8	2109	NT1003012310S.D	SEQ-CAL1		1		9.25	370360		11.72	1262304		15.31	638059		18.40	1124768		23.42	1114478		26.11	1276260
9	2146	NT1003012311S.D	SEQ-SCV1		1		9.25	303734		11.72	1147551		15.31	645730		18.40	1151000		23.42	1297466		26.11	1394899
10	2224	NT1003012312S.D	SEQ-IBL1		1		9.25	515340		11.72	1787704		15.31	879316		18.40	1572306		23.42	1486349		26.11	1674195

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

ARI Job No.: SEQ- Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 01-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1642	NT1003012303S.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
1721	NT1003012304S.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
1759	NT1003012305S.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
1837	NT1003012306S.D	SEQ-CAL5		1	Pentachlorophenol,
1915	NT1003012307S.D	SEQ-CAL4		1	Pentachlorophenol,
1953	NT1003012308S.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2030	NT1003012309S.D	SEQ-CAL2		1	Benzyl alcohol, Berzoic acid,
2109	NT1003012310S.D	SEQ-CAL1		1	Benzyl alcohol, 2-Methylphenol, 4-Methylphenol, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Hexachlorobenzene,
2146	NT1003012311S.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
2224	NT1003012312S.D	SEQ-IBL1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 10-Mar-2023 11:02

NT1003012303S.D	Data Locked	yev, 10-
NT1003012304S.D	Data Locked	yev, 10-
NT1003012305S.D	Data Locked	yev, 10-
NT1003012306S.D	Data Locked	yev, 10-
NT1003012307S.D	Data Locked	yev, 10-
NT1003012308S.D	Data Locked	yev, 10-
NT1003012309S.D	Data Locked	yev, 10-
NT1003012310S.D	Data Locked	yev, 10-
NT1003012311S.D	Data Locked	yev, 10-
NT1003012312S.D	Data Locked	yev, 10-

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b
Inst ID: nt10.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07 RT08
FILENAME: NT1003012303S NT1003012304S NT1003012305S NT1003012306S NT1003012307S NT1003012308S NT1003012309S NT1003012310S
INJ. DATE: 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023
INJ. TIME: 16:42 17:21 17:59 18:37 19:15 19:53 20:30 21:09

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, RT08, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include various chemical compounds like 2-Fluorophenol, Chlorobenzilate, Isodrin, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropyl-naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
\$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.268	15.768-16.768	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.927	12.427-13.427	+++++	+++++
\$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.235	7.735-8.735	+++++	+++++
3 Phenol	8.525	8.517	8.517	8.518	8.518	8.525	8.525	8.533	8.533	8.033-9.033	8.522	0.006
4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.397	7.897-8.897	+++++	+++++
\$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.521	8.021-9.021	+++++	+++++
7 1,3-Dichlorobenzene	9.143	9.143	9.136	9.136	9.136	9.143	9.144	9.136	9.136	8.636-9.636	9.140	0.004
* 8 1,4-Dichlorobenzene-d4	9.252	9.252	9.244	9.245	9.245	9.252	9.245	9.252	9.252	8.752-9.752	9.248	0.004
9 1,4-Dichlorobenzene	9.283	9.283	9.275	9.276	9.276	9.275	9.276	9.275	9.275	8.775-9.775	9.277	0.003
\$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.230	8.730-9.730	+++++	+++++
11 Benzyl alcohol	9.477	9.477	9.469	9.477	9.477	9.485	9.485	9.508	9.508	9.008-10.008	9.482	0.012
12 1,2-Dichlorobenzene	9.562	9.562	9.562	9.563	9.563	9.562	9.563	9.563	9.563	9.063-10.063	9.562	0.000
13 2-Methylphenol	9.656	9.655	9.656	9.656	9.656	9.663	9.664	9.671	9.671	9.171-10.171	9.660	0.006
14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.413	8.913-9.913	+++++	+++++
15 4-Methylphenol	9.943	9.943	9.943	9.943	9.951	9.950	9.959	9.966	9.966	9.466-10.466	9.950	0.009
16 N-Nitroso-di-n-propyla	9.982	9.982	9.974	9.974	9.974	9.974	9.974	9.982	9.982	9.482-10.482	9.977	0.004
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.809	9.309-10.309	+++++	+++++
\$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.917	9.417-10.417	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.948	9.448-10.448	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.399	9.899-10.899	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.575	10.075-11.075	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
22 2,4-Dimethylphenol	11.006	10.998	10.998	10.998	10.998	10.998	11.007	11.006	11.006	10.506-11.506	11.001	0.004
23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.830	10.330-11.330	+++++	+++++
24 Benzoic acid	11.218	11.159	11.108	11.074	11.058	11.074	11.007	+++++	11.007	10.507-11.507	11.100	0.070
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.033	10.533-11.533	+++++	+++++
26 1,2,4-Trichlorobenzene	11.600	11.600	11.600	11.601	11.601	11.600	11.601	11.600	11.600	11.100-12.100	11.600	0.000
* 27 Naphthalene-d8	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.224-12.224	11.724	0.000
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.326	10.826-11.826	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.457	10.957-11.957	+++++	+++++
30 Hexachlorobutadiene	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.494-12.494	11.994	0.000
31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.432	11.932-12.932	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.710	12.210-13.210	+++++	+++++
33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.182	12.682-13.682	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.330	12.830-13.830	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.415	12.915-13.915	+++++	+++++
\$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.484	12.984-13.984	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.686	13.186-14.186	+++++	+++++
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.441-14.441	+++++	+++++
39 Dimethylphthalate	14.749	14.741	14.741	14.742	14.742	14.741	14.742	14.749	14.749	14.249-15.249	14.744	0.004
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.545	14.045-15.045	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.506	14.006-15.006	+++++	+++++
* 42 Acenaphthene-d10	15.314	15.314	15.314	15.314	15.314	15.314	15.314	15.314	15.314	14.814-15.814	15.314	0.000
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.785	14.285-15.285	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.924	14.424-15.424	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.001	14.501-15.501	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.248	14.748-15.748	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.171	14.671-15.671	+++++	+++++
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.302	14.802-15.802	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
50 Diethylphthalate	16.219	16.211	16.203	16.203	16.203	16.203	16.211	16.211	16.211	15.711-16.711	16.208	0.006
51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.037	15.537-16.537	+++++	+++++
53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.145	15.645-16.645	+++++	+++++
54 N-Nitrosodiphenylamine	16.698	16.690	16.690	16.691	16.691	16.698	16.698	16.706	16.706	16.206-17.206	16.695	0.006
55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.477	15.977-16.977	+++++	+++++
56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.939	16.439-17.439	+++++	+++++
57 Hexachlorobenzene	17.578	17.578	17.578	17.579	17.579	17.578	17.579	17.579	17.579	17.079-18.079	17.579	0.000
58 Pentachlorophenol	17.989	17.981	17.989	17.989	17.989	17.996	18.004	18.012	18.012	17.512-18.512	17.994	0.010
59 Phenanthrene-d10	18.399	18.399	18.399	18.399	18.399	18.399	18.399	18.399	18.399	17.899-18.899	18.399	0.000
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.899	17.399-18.399	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.991	17.491-18.491	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.324	17.824-18.824	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.152	18.652-19.652	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.289	19.789-20.789	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.715	20.215-21.215	+++++	+++++
66 Terphenyl-d14	21.524	21.524	21.524	21.525	21.525	21.524	21.525	21.532	21.532	21.032-22.032	21.526	0.003
67 Butylbenzylphthalate	22.407	22.407	22.407	22.407	22.415	22.415	22.407	22.415	22.415	21.915-22.915	22.410	0.004
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.875	22.375-23.375	+++++	+++++



ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

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Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 69 Chrysene-d12	23.421	23.414	23.414	23.414	23.422	23.421	23.422	23.422	23.422	22.922-23.922	23.419	0.004
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.844	22.344-23.344	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.952	22.452-23.452	+++++	+++++
72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.007	22.507-23.507	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.990	23.490-24.490	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.687	24.187-25.187	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.725	24.225-25.225	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.283	24.783-25.783	+++++	+++++
* 77 Perylene-d12	26.108	26.108	26.108	26.101	26.108	26.108	26.108	26.108	26.108	25.608-26.608	26.107	0.003
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.794	27.294-28.294	+++++	+++++
79 Dibenzo(a,h)anthracene	28.930	28.914	28.914	28.915	28.930	28.938	28.946	28.946	28.946	28.446-29.446	28.929	0.013
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.494	27.994-28.994	+++++	+++++
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
\$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
\$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
\$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
90 N-Nitrosodimethylamine	4.732	4.724	4.717	4.725	4.725	4.740	4.740	4.756	4.756	4.256-5.256	4.732	0.012
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.305	7.805-8.805	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.529	20.029-21.029	+++++	+++++
\$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
 Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.535	4.035-5.035	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Calibration File Names:

Level 1: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012310S.D  
 Level 2: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012309S.D  
 Level 3: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012308S.D  
 Level 4: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012307S.D  
 Level 5: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012306S.D  
 Level 6: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012305S.D  
 Level 7: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012304S.D  
 Level 8: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012303S.D

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
140 Diallyate A	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
141 Diallate B	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
127 2-Isopropyl-naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
144 alpha-Terpineol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
125 Safrole	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
123 Acetophenone	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
121 Quinoline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
120 2,3,4,6-Tetrachlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000



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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
3 Phenol	3599	8264	19568	61458	128497	360891					
	767247	1593896					QUAD	0.000e+000	0.59382	-0.00714	0.99994
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.56799	1.52570	1.49198	1.51309	1.44269	1.43612					
	1.43451	1.44742					AVRG		1.48244		3.36989
9 1,4-Dichlorobenzene	1.50923	1.47580	1.43373	1.46395	1.40754	1.40391					
	1.39839	1.43790					AVRG		1.44131		2.72097

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
11 Benzyl alcohol	1380 449975	3114 980075	10320	31347	65076	200086	QUAD	0.000e+000	1.07135	-0.05783	0.99978
12 1,2-Dichlorobenzene	1.43363 1.36335	1.40456 1.37939	1.36192	1.41000	1.36327	1.36665	AVRG		1.38535		1.96993
13 2-Methylphenol	1789 472415	4548 995533	11161	35755	75957	215648	QUAD	0.000e+000	0.98781	-0.03181	0.99992
14 2,2'-oxybis(1-Chloropropane)	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	2062 500092	3746 1071975	9608	34768	75243	225735	QUAD	0.000e+000	0.94989	-0.03839	0.99982
16 N-Nitroso-di-n-propylamine	1965 338518	4218 699099	10242	27908	57866	160503	QUAD	0.000e+000	1.33351	-0.02653	0.99995
17 Hexachloroethane	++++ ++++	++++ ++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
19 Nitrobenzene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
20 Isophorone	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	6159	11856	27660	89362	185925	522194					
	1127131	2348644					QUAD	0.000e+000	2.94692	-0.09695	0.99996
23 Bis(2-Chloroethoxy)methane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
24 Benzoic acid	++++	++++	7336	37634	126544	521508					
	1425868	3313595					QUAD	0.000e+000	5.37547	-0.57371	0.99759
25 2,4-Dichlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
26 1,2,4-Trichlorobenzene	0.28887	0.28679	0.28252	0.29461	0.28337	0.28328					
	0.28854	0.29525					AVRG		0.28790		1.72341
28 Naphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.21833	0.20386	0.19805	0.20413	0.19707	0.19656					
	0.20447	0.21198					AVRG		0.20431		3.73354
31 4-Chloro-3-methylphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	1.17306	1.13674	1.17700	1.32015	1.33033	1.34291					
	1.32177	1.35881					AVRG		1.27010		7.15698
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
43 3-Nitroaniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
44 Acenaphthene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
49 Fluorene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
50 Diethylphthalate	1.10372  1.26512	1.06260  1.31611	1.10882	1.22577	1.23779	1.26204					
							AVRG		1.19775		7.73514
51 4-Chlorophenyl-phenylether	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	0.52420  0.70947	0.58247  0.72627	0.62289	0.68128	0.64518	0.68703					
							AVRG		0.64735		10.57293
56 4-Bromophenyl-phenylether	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.29659  0.31009	0.29809  0.31346	0.29705	0.31056	0.29828	0.29945					
							AVRG		0.30295		2.34116

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>	
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2		
	5.0000	10.0000										
	Level 7	Level 8										
58 Pentachlorophenol	++++ 489921	1243 1121362	3505	15934	44811	176209		QUAD	0.000e+000	7.54611	-2.24262	0.99782
60 Phenanthrene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
61 Anthracene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
62 Carbazole	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
63 Di-n-butylphthalate	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
64 Fluoranthene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
65 Pyrene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000



ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2	
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2		
	5.0000	10.0000										
	Level 7	Level 8										
67 Butylbenzylphthalate	4671 915766	8617 1888709	19744	65574	144786	387221		QUAD	0.000e+000	1.48043	0.03284	0.99960
68 Benzo(a)anthracene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
70 3,3'-Dichlorobenzidine	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
71 Chrysene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
72 bis(2-Ethylhexyl)phthalate	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
73 Di-n-octylphthalate	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000
74 Benzo(b)fluoranthene	++++ ++++	++++ ++++	++++	++++	++++	++++		AVRG	0.000e+000			0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
75 Benzo(k)fluoranthene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	10824	20472	39856	120142	236566	599679					
	1371633	2937326					QUAD	0.000e+000	1.07973	-0.06563	0.99996
80 Benzo(g,h,i)perylene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	0.58127	0.59640	0.65358	0.68722	0.70407	0.73905					
	0.71236	0.73487					AVRG		0.67610		8.92506
91 Aniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 1 2-Fluorophenol	1.02185	1.05555	1.08844	1.17836	1.17520	1.21583					
	1.18289	1.21771					AVRG		1.14198		6.62406
\$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
\$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 66 Terphenyl-d14	0.26682	0.28582	0.28446	0.31786	0.33307	0.36379					
	0.37637	0.35956					AVRG		0.32347		12.80012
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
\$ 87 Fluoranthene-d10	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 88 Dibenz(a,h)anthracene-d14	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 89 Diphenyl-d10	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 95 D10-1-methylnaphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

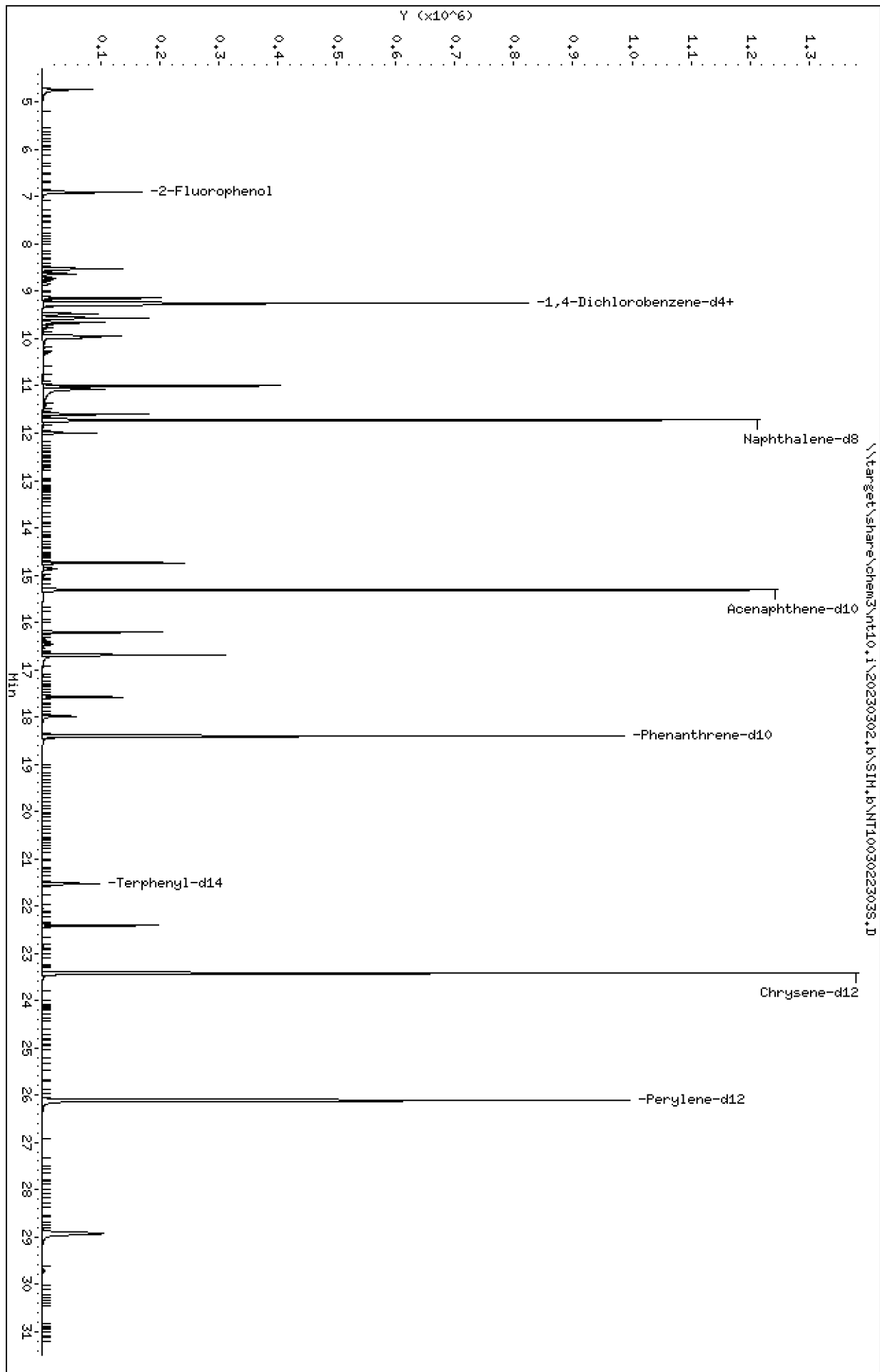
Start Cal Date : 01-MAR-2023 16:42  
End Cal Date : 01-MAR-2023 21:09  
Quant Method : ISTD  
Origin : Force  
Target Version : 4.14  
Integrator : HP RTE  
Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Last Edit : 08-Mar-2023 14:14 yev

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

Data File: \\target\share\chem3\nt10.1\20230302.1\SIH.B\NT1003022303S.D  
Date: 02-MAR-2023 14:13  
Client ID:  
Sample Info: SED-ICVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\SIH.B\NT1003022303S.D





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022303S.D  
 Lab Smp Id: SEQ-ICVSIM  
 Inj Date : 02-MAR-2023 14:13 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-ICVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:01 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	226474	1.50000	1.608
3 Phenol	94		8.517	8.517	(0.921)	198101	1.00000	0.9490
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	182702	1.00000	0.9991
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251	(1.000)	493417	4.00000	
9 1,4-Dichlorobenzene	146		9.282	9.282	(1.003)	176275	1.00000	0.9915
11 Benzyl alcohol	79		9.476	9.476	(1.024)	102049	1.00000	0.8764
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	172200	1.00000	1.008
13 2-Methylphenol	108		9.655	9.655	(1.044)	122736	1.00000	0.9750
15 4-Methylphenol	108		9.942	9.942	(1.075)	121561	1.00000	0.9268
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	89772	1.00000	0.9670
22 2,4-Dimethylphenol	107		10.997	10.997	(0.938)	279299	2.00000	1.841
24 Benzoic acid	105		11.074	11.074	(0.945)	162548	4.00000	1.945
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	127996	1.00000	0.9996
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1779056	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	84635	1.00000	0.9314
39 Dimethylphthalate	163		14.741	14.741	(0.963)	301592	1.00000	0.9950
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	954569	4.00000	
50 Diethylphthalate	149		16.203	16.203	(1.058)	287740	1.00000	1.007
54 N-Nitrosodiphenylamine	169		16.690	16.690	(0.907)	256566	1.00000	0.9931
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	119208	1.00000	0.9860

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.988	17.988	(0.977)	71995	2.00000	1.343
* 59 Phenanthrene-d10	188		18.406	18.406	(1.000)	1596290	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	125655	1.00000	0.9422
67 Butylbenzylphthalate	149		22.414	22.414	(0.957)	198566	1.00000	0.7149
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	1649110	4.00000	
* 77 Perylene-d12	264		26.115	26.115	(1.000)	1901958	4.00000	
79 Dibenzo(a,h)anthracene	278		28.929	28.929	(1.108)	380310	1.00000	0.8531
90 N-Nitrosodimethylamine	74		4.732	4.732	(0.511)	187791	2.00000	2.252

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022303S.D  
 Lab Smp Id: SEQ-ICVSIM  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	493417	0.00
27 Naphthalene-d8	1779056	889528	3558112	1779056	0.00
42 Acenaphthene-d10	954569	477285	1909138	954569	0.00
59 Phenanthrene-d10	1596290	798145	3192580	1596290	0.00
69 Chrysene-d12	1649110	824555	3298220	1649110	0.00
77 Perylene-d12	1901958	950979	3803916	1901958	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022303S.D

Lab ID: SEQ-ICVSIM

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 14:13

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b\SIM.b

Instrument: nt10.i Date: 02-MAR-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 01-MAR-2023

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

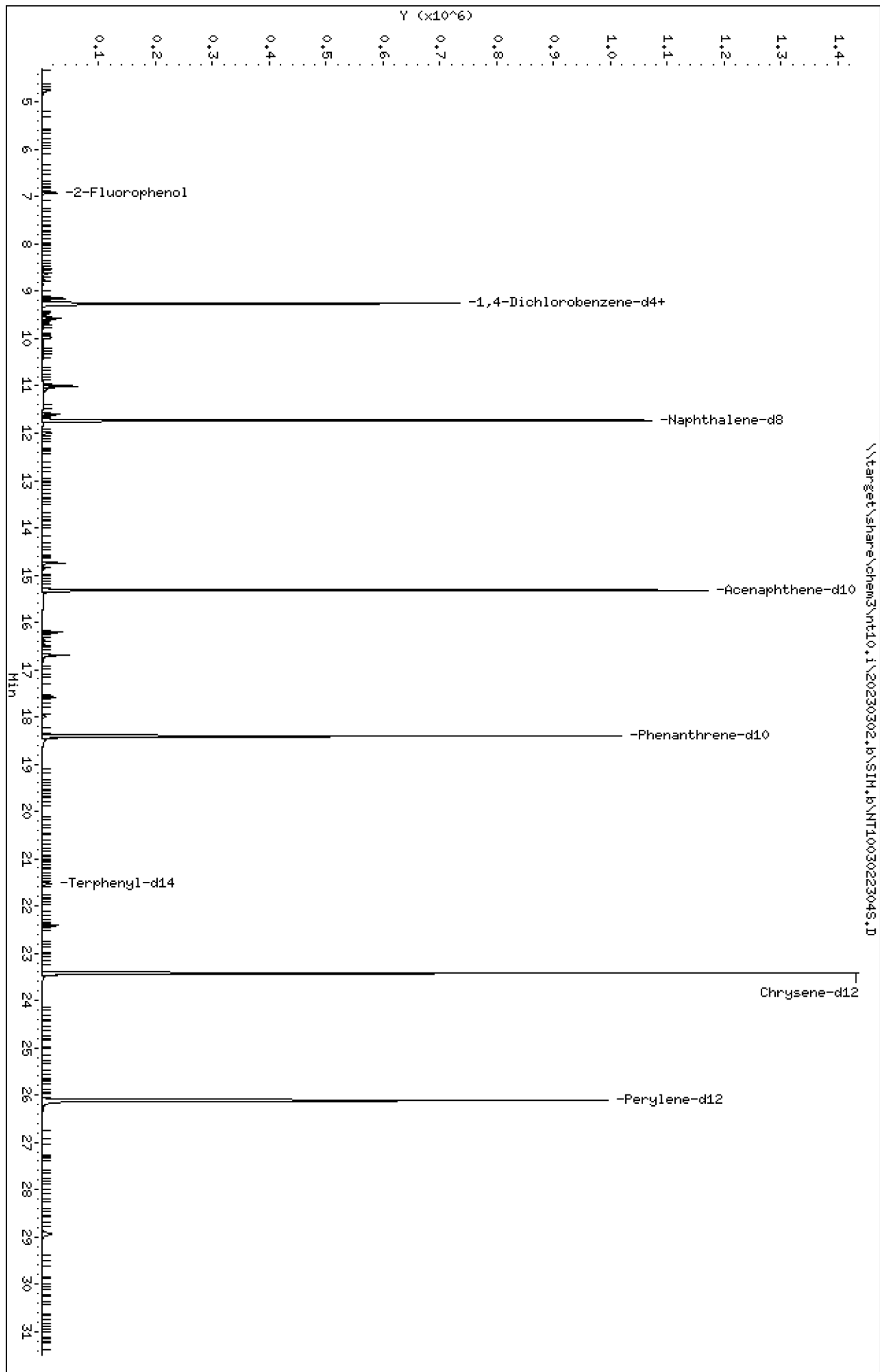
ICV CAL: NT1003022303S.D 02-MAR-2023 14:13

Compound	%D
-----	
Benzoic acid	-51.4
Pentachlorophenol	-32.8
Butylbenzylphthalate	-28.5
-----	

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022304S.D  
Date : 02-MAR-2023 16:17  
Client ID:  
Sample Info: SED-LCV200  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022304S.D



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

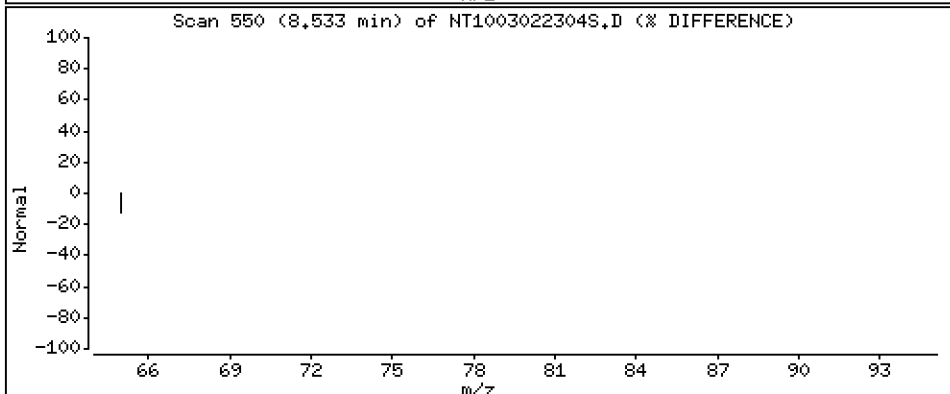
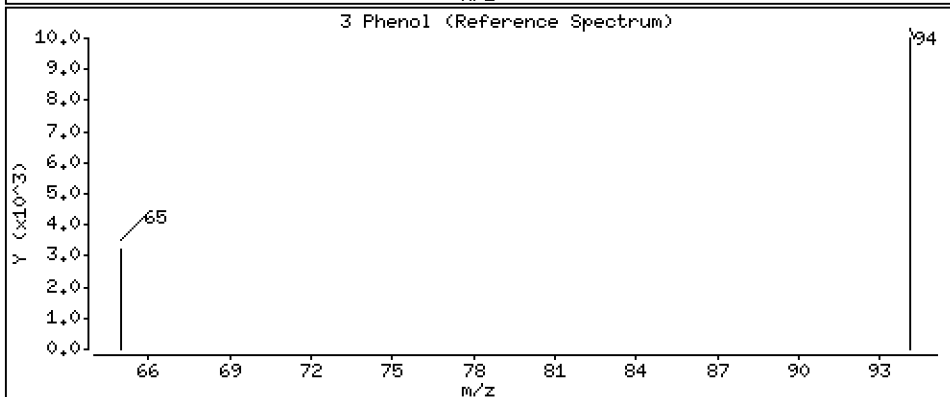
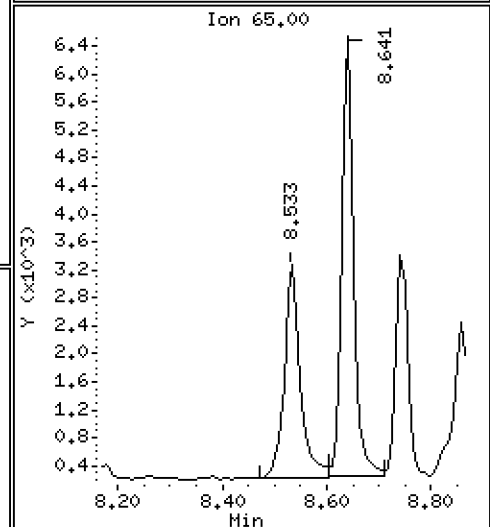
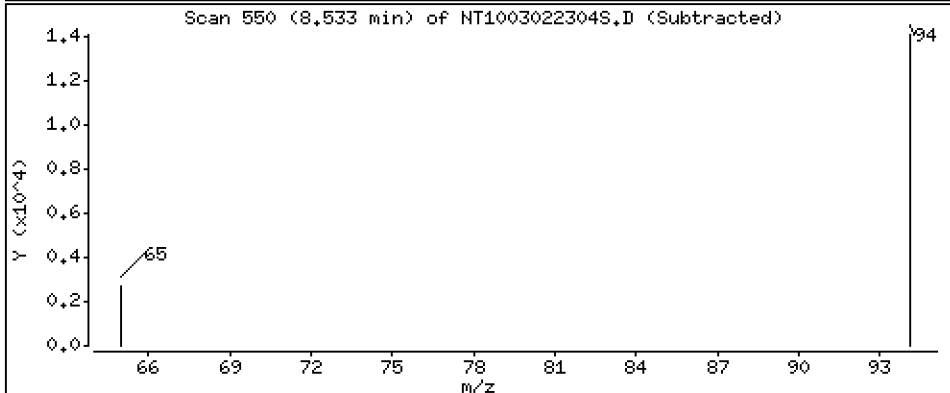
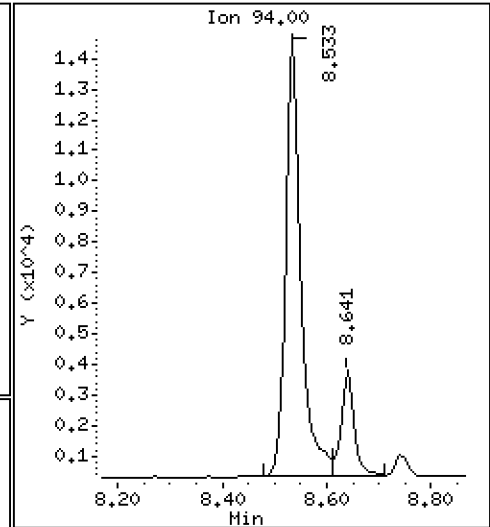
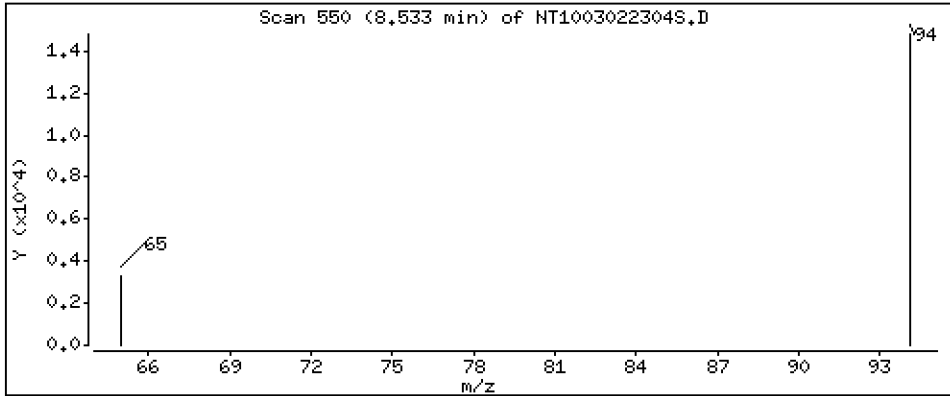
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.1516 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

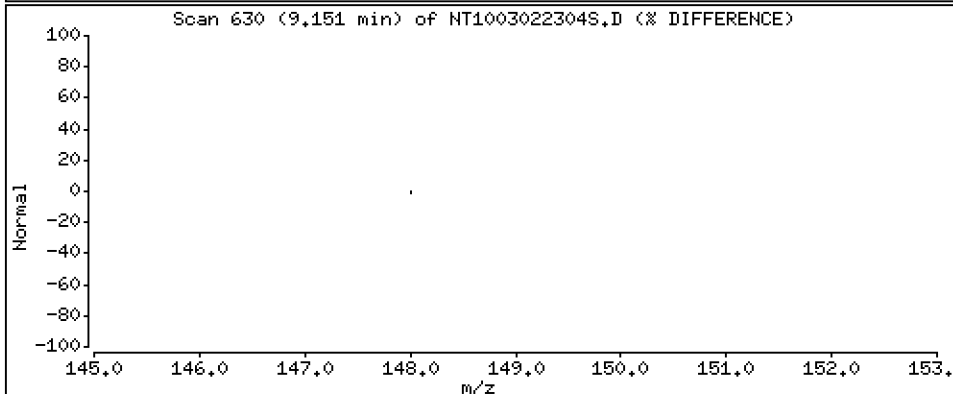
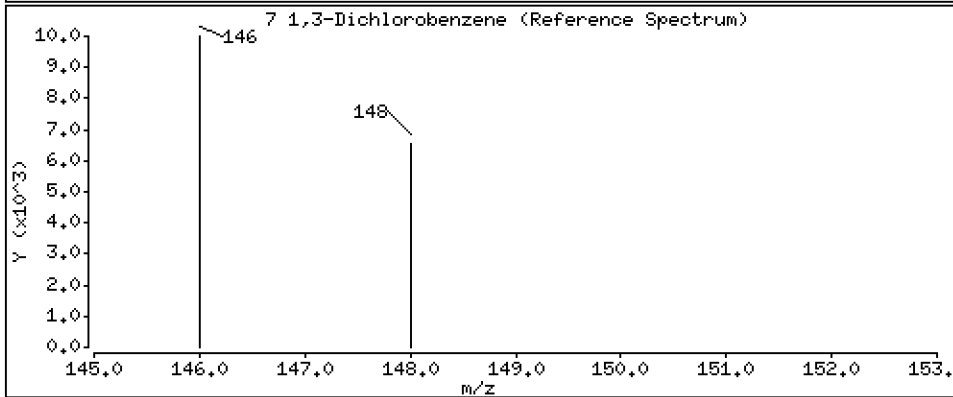
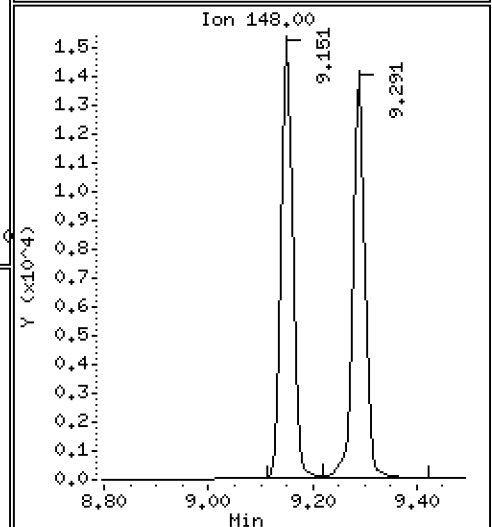
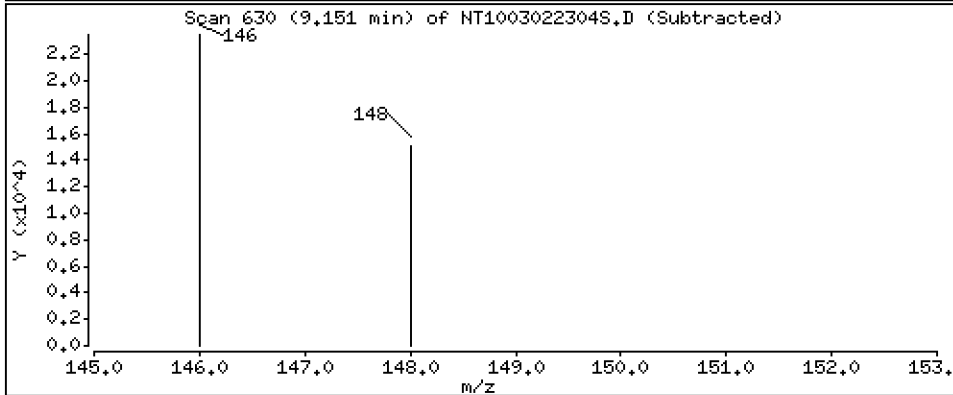
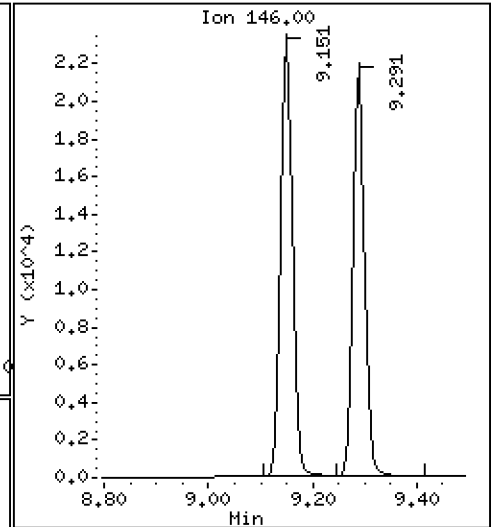
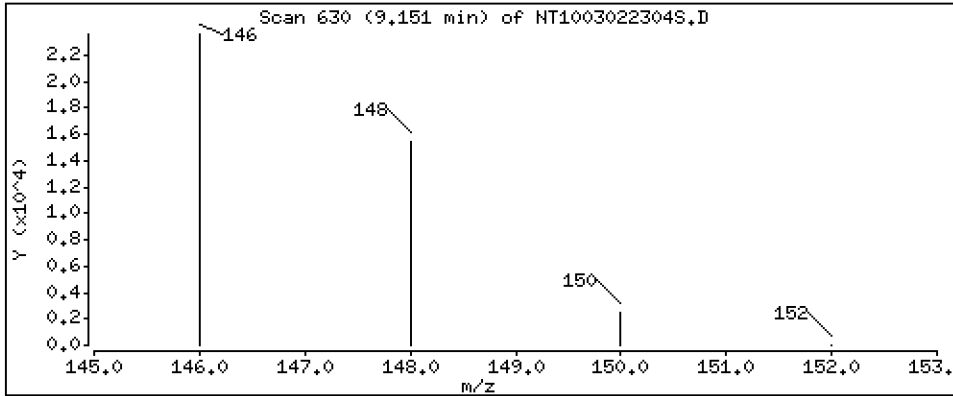
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.2034 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

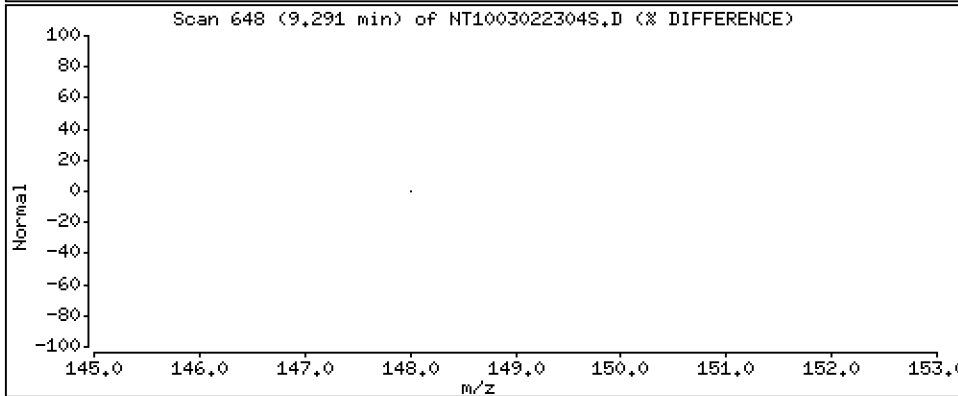
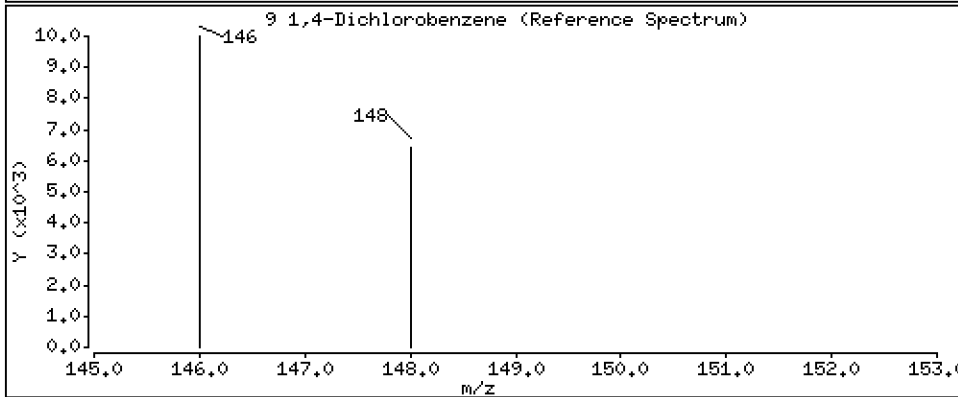
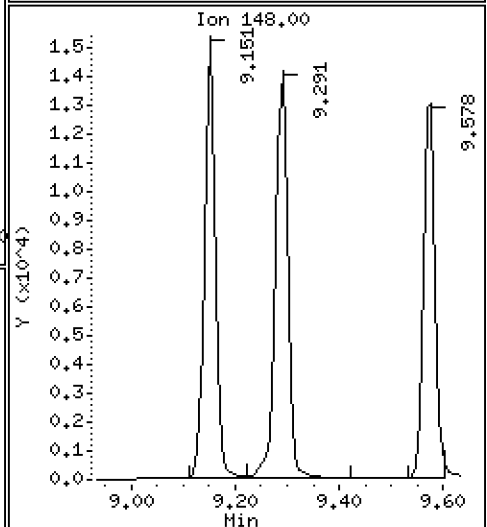
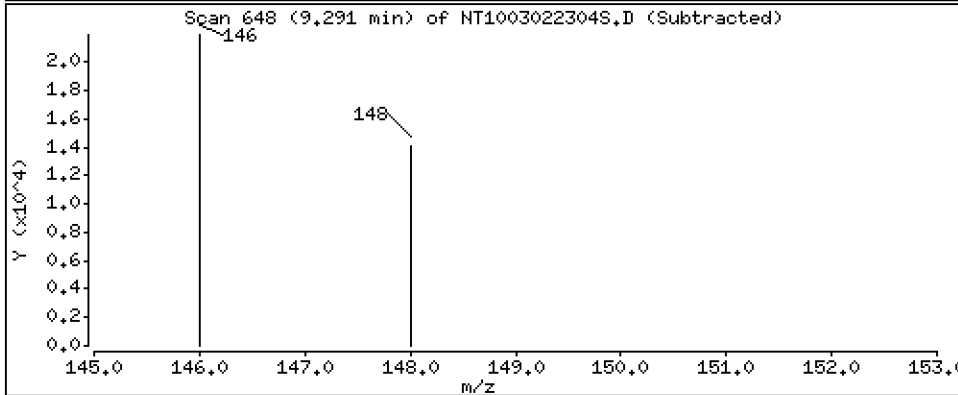
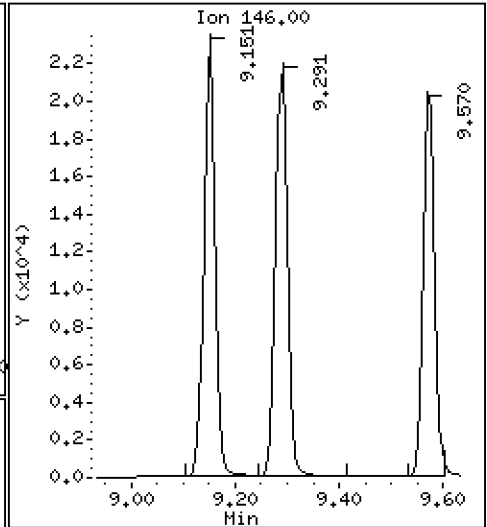
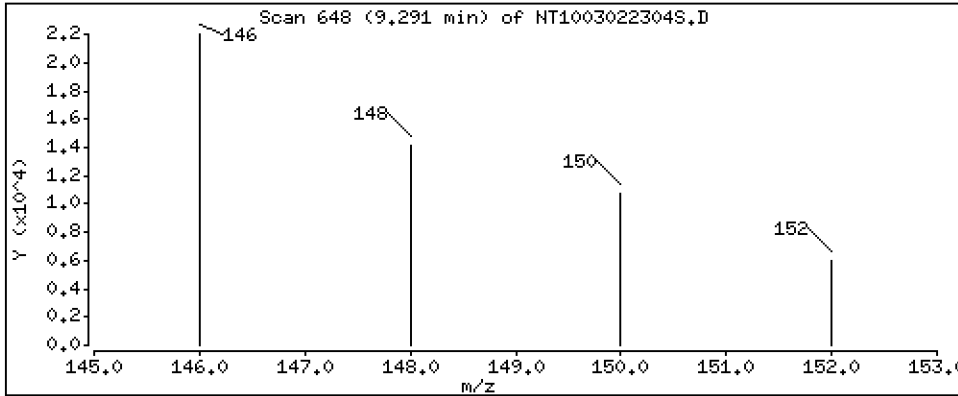
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.1998 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

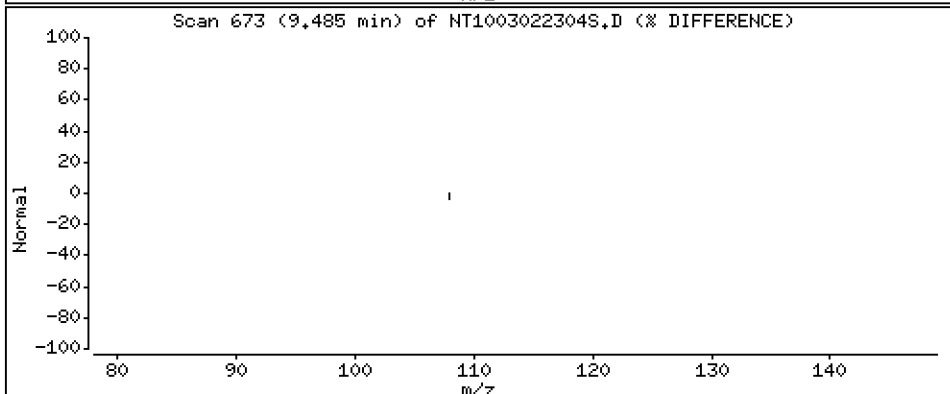
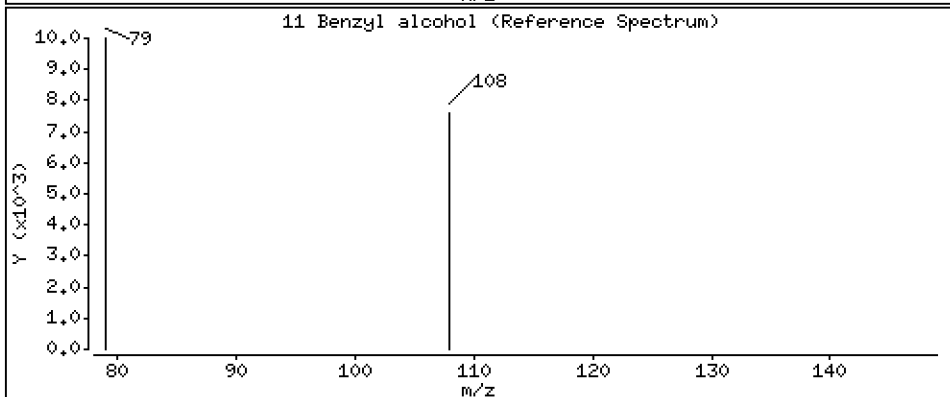
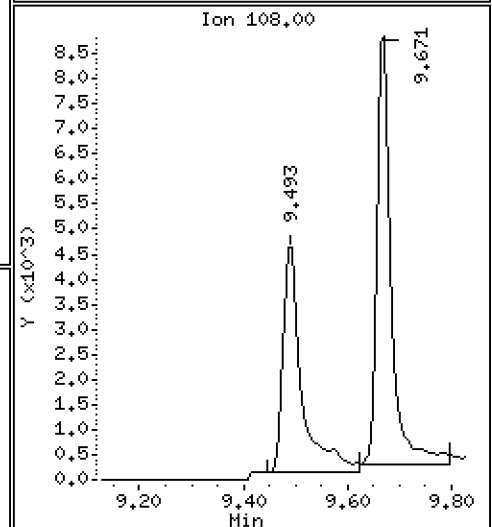
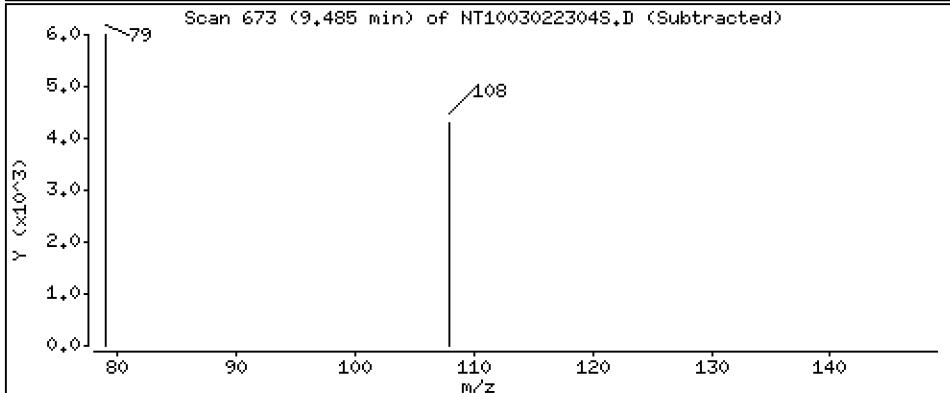
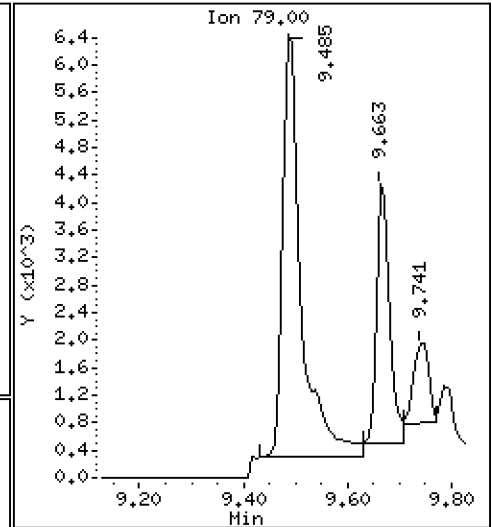
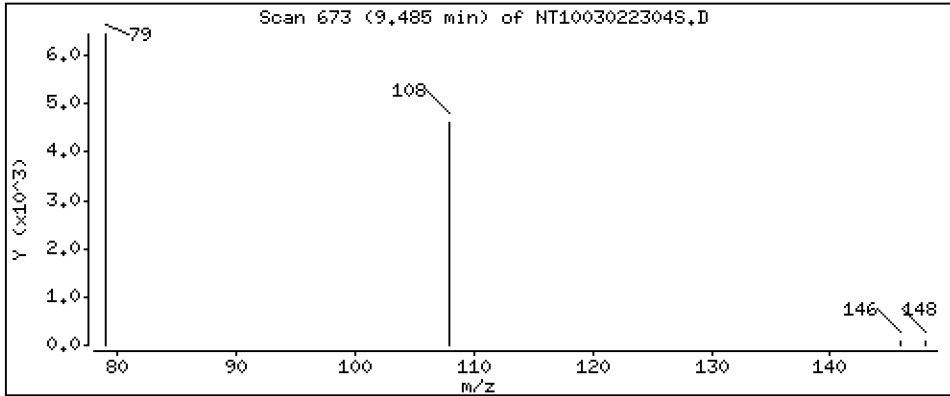
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1392 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

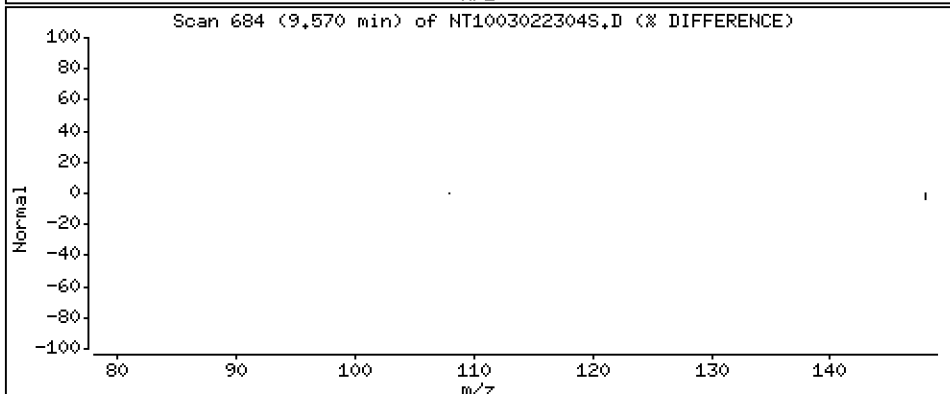
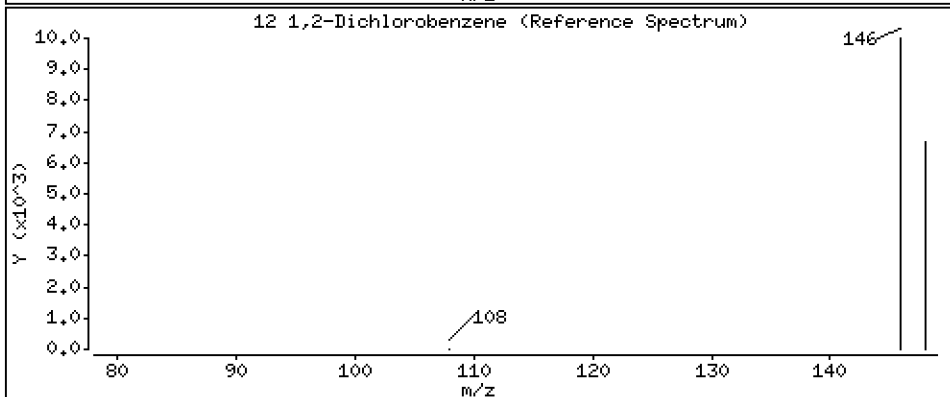
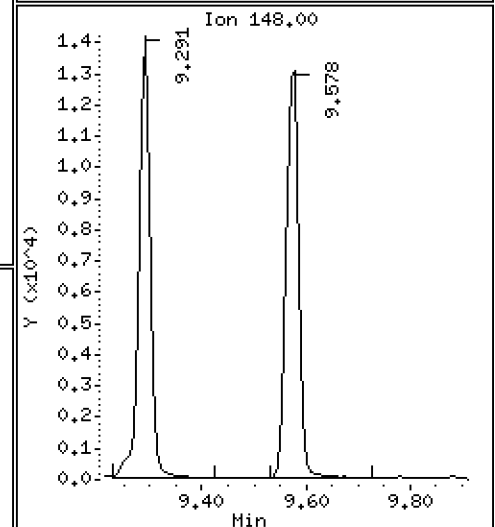
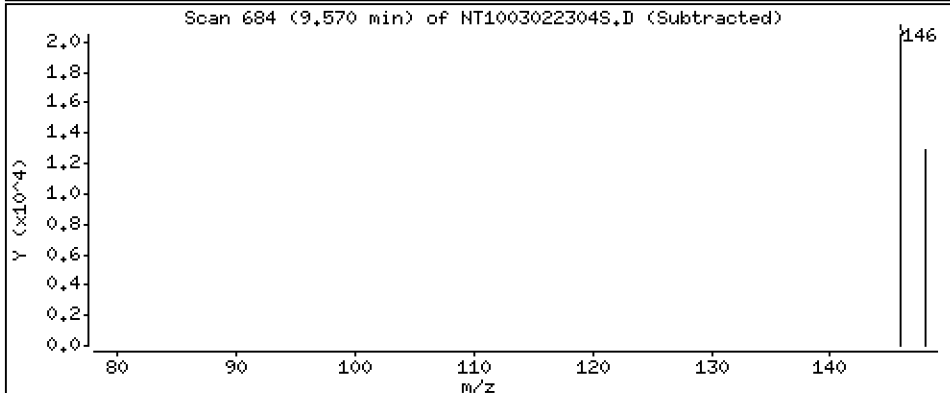
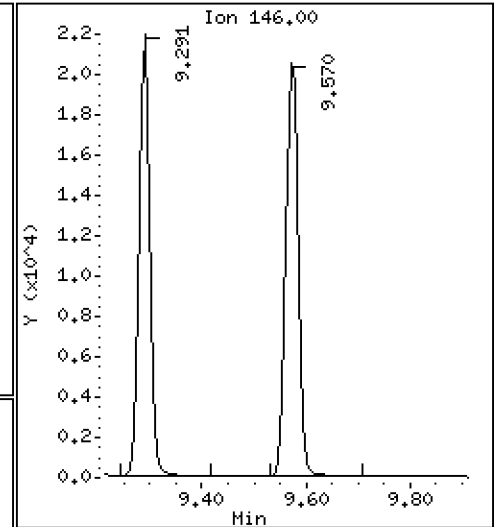
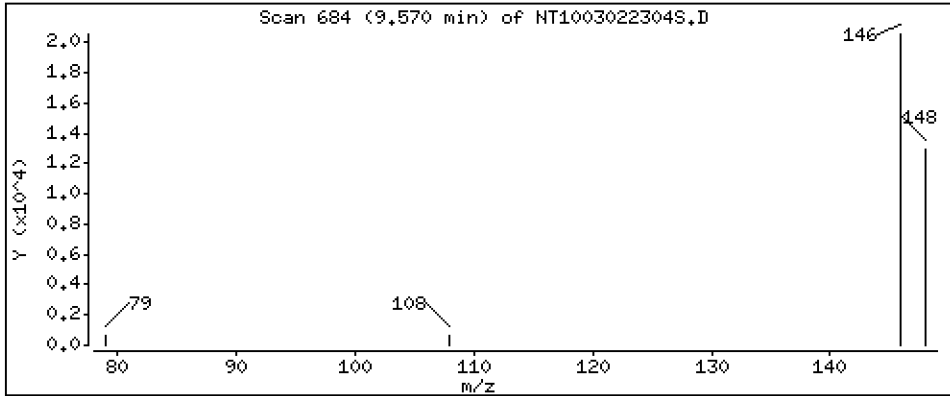
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.2027 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

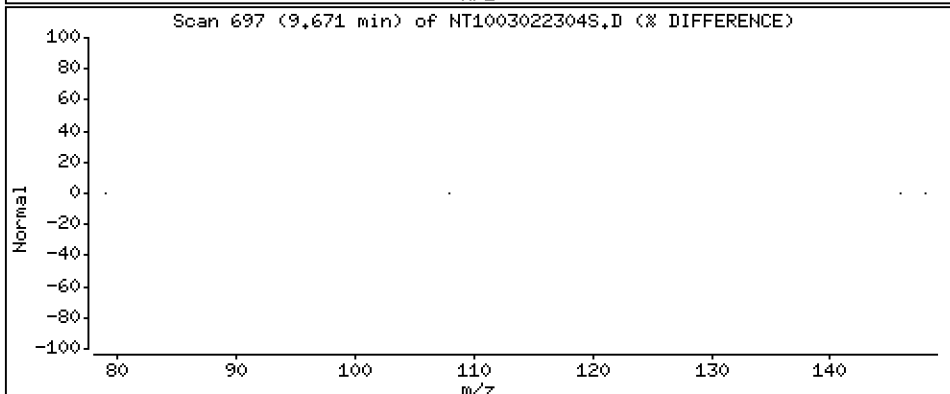
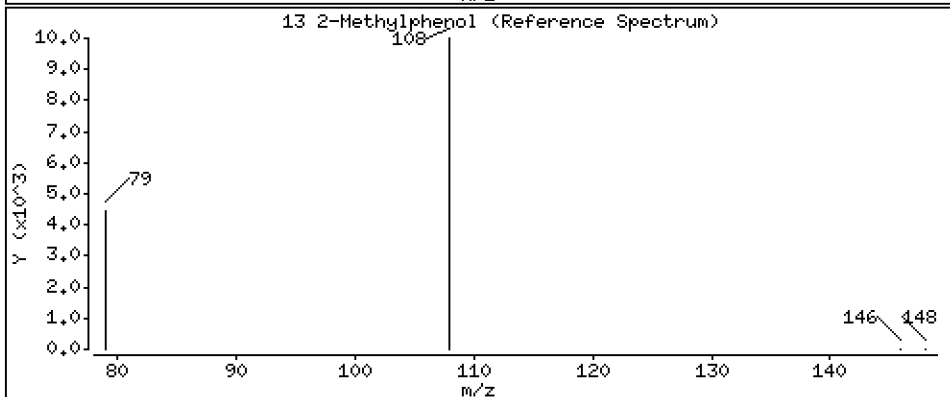
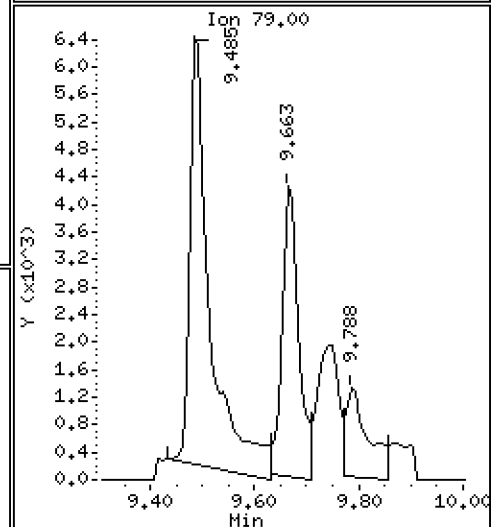
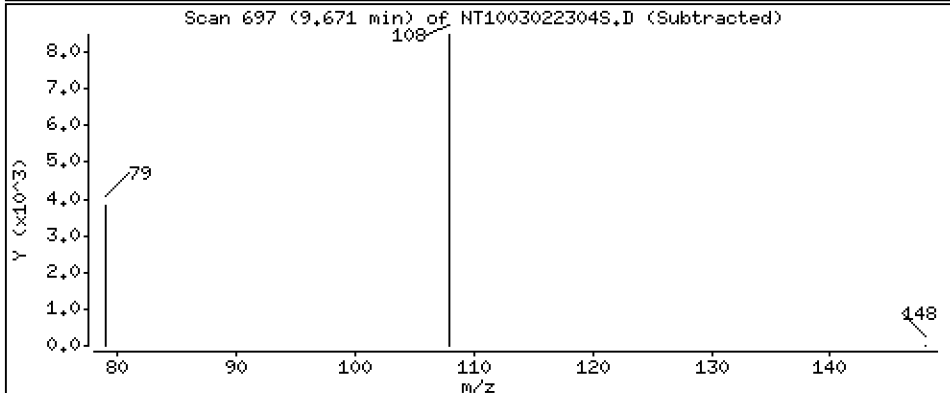
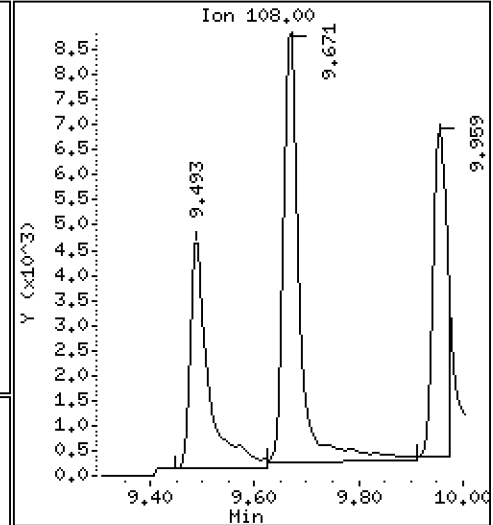
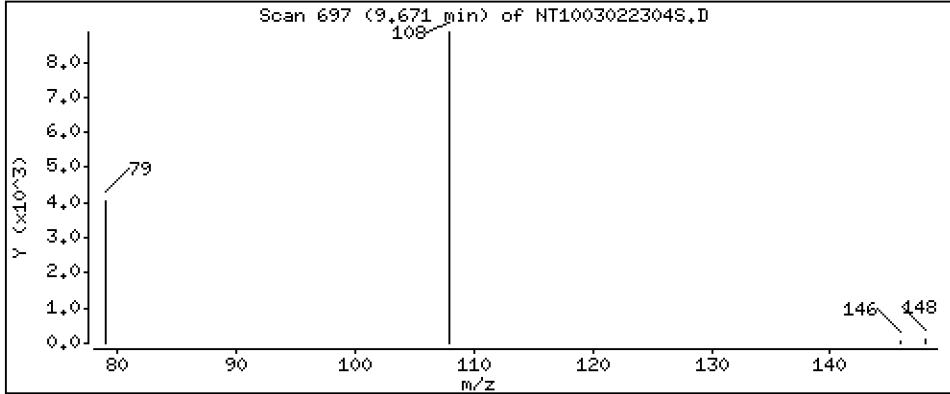
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1561 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

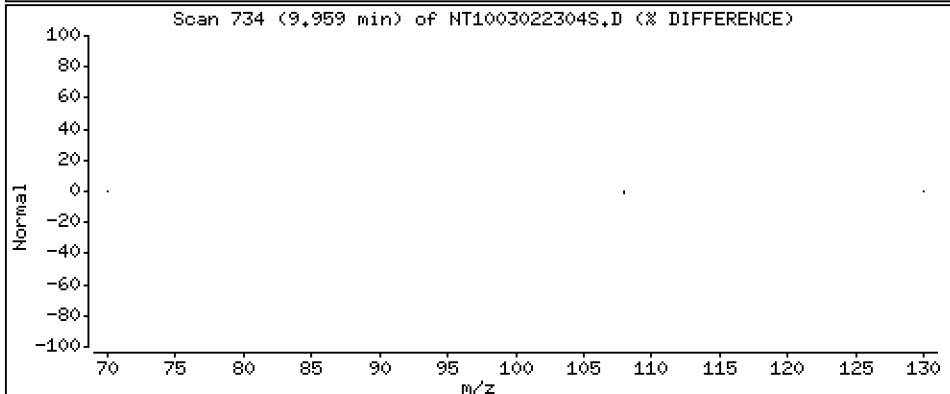
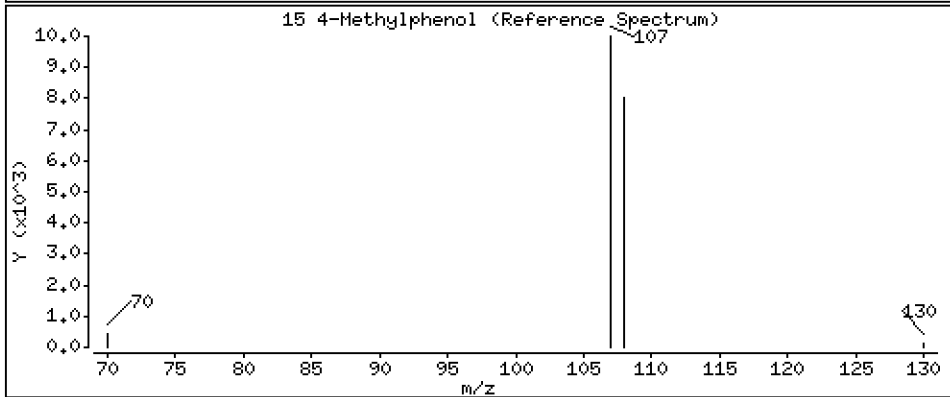
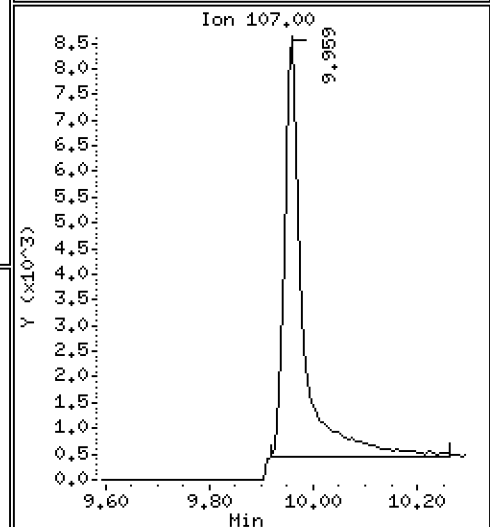
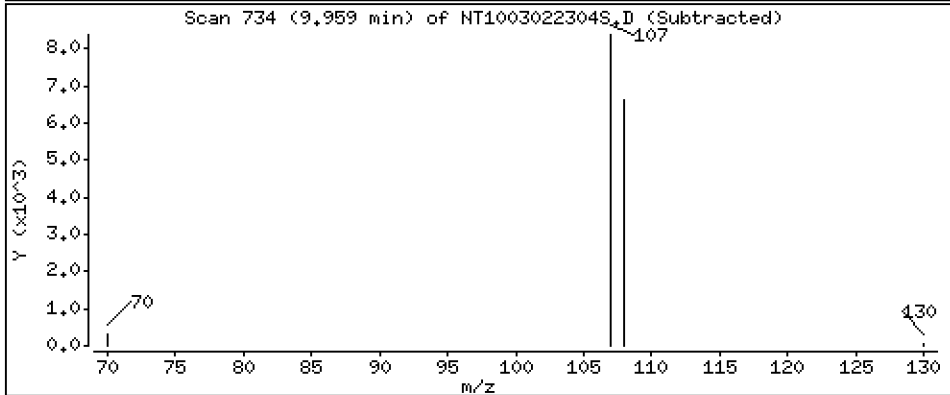
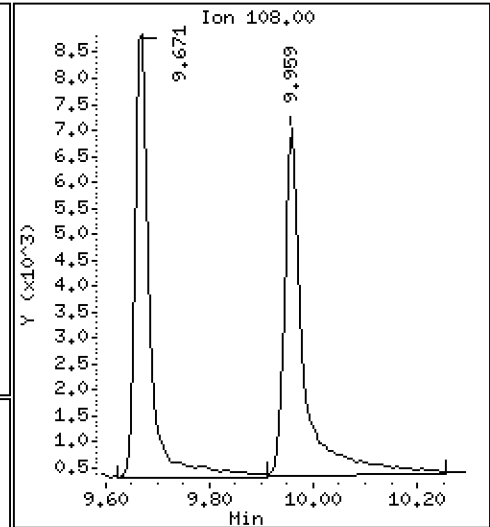
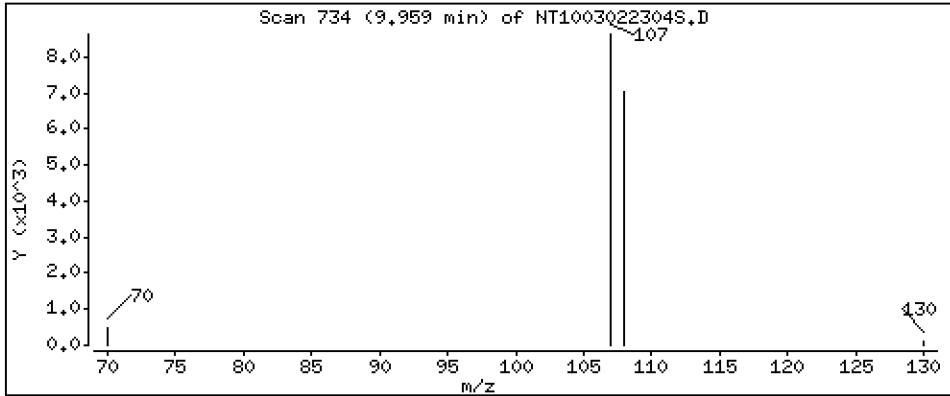
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1404 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

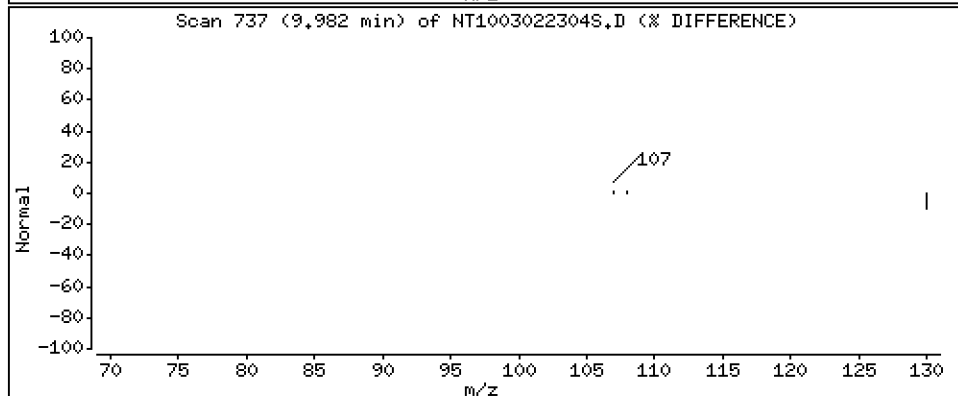
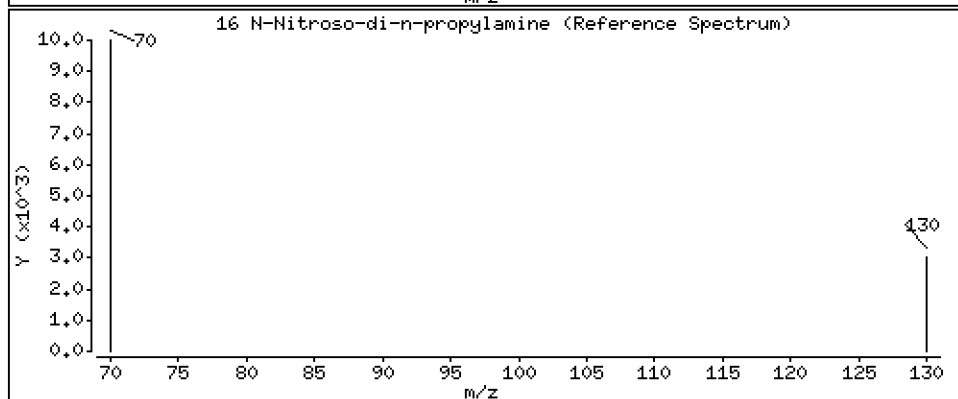
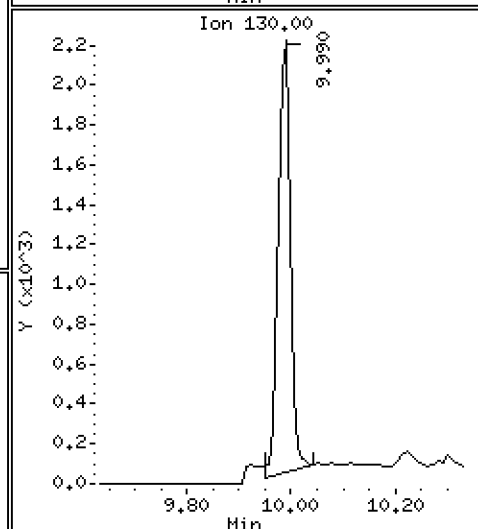
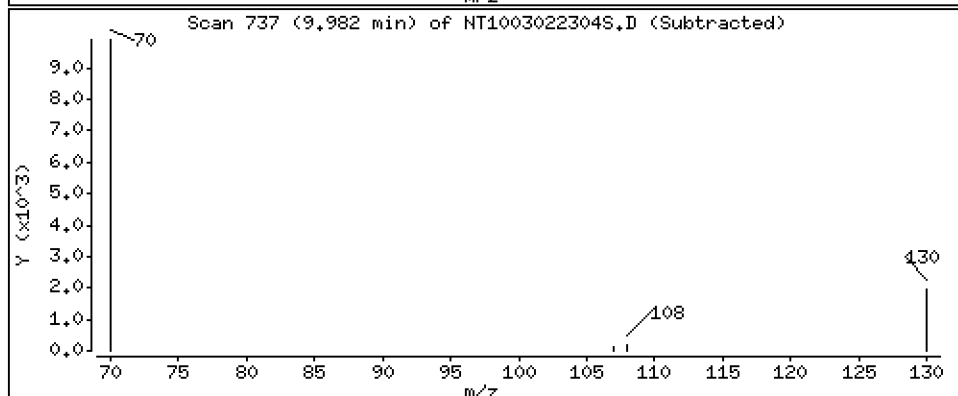
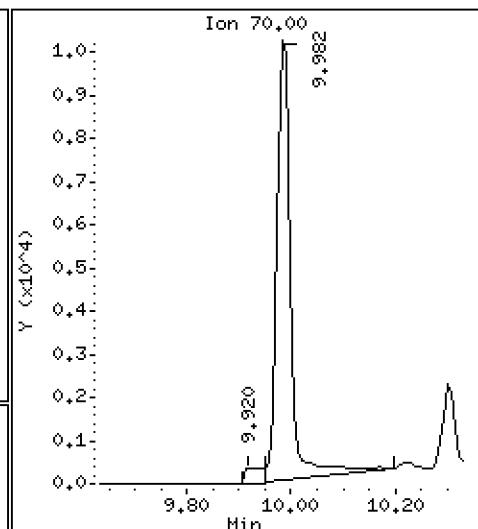
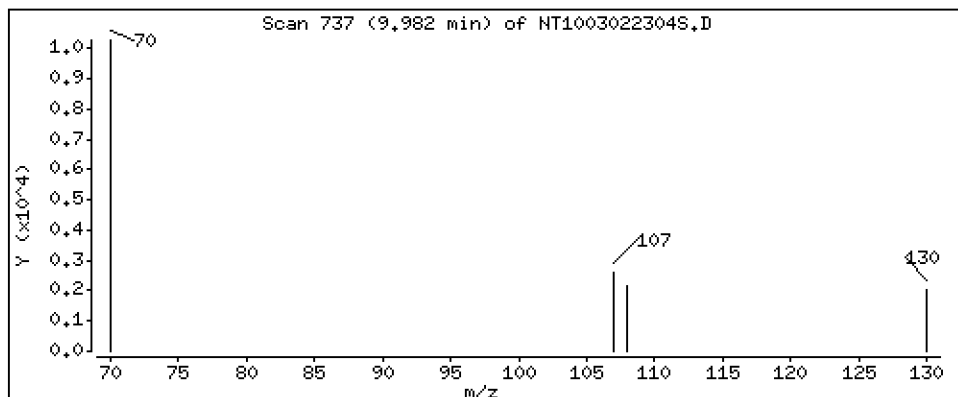
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.2077 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

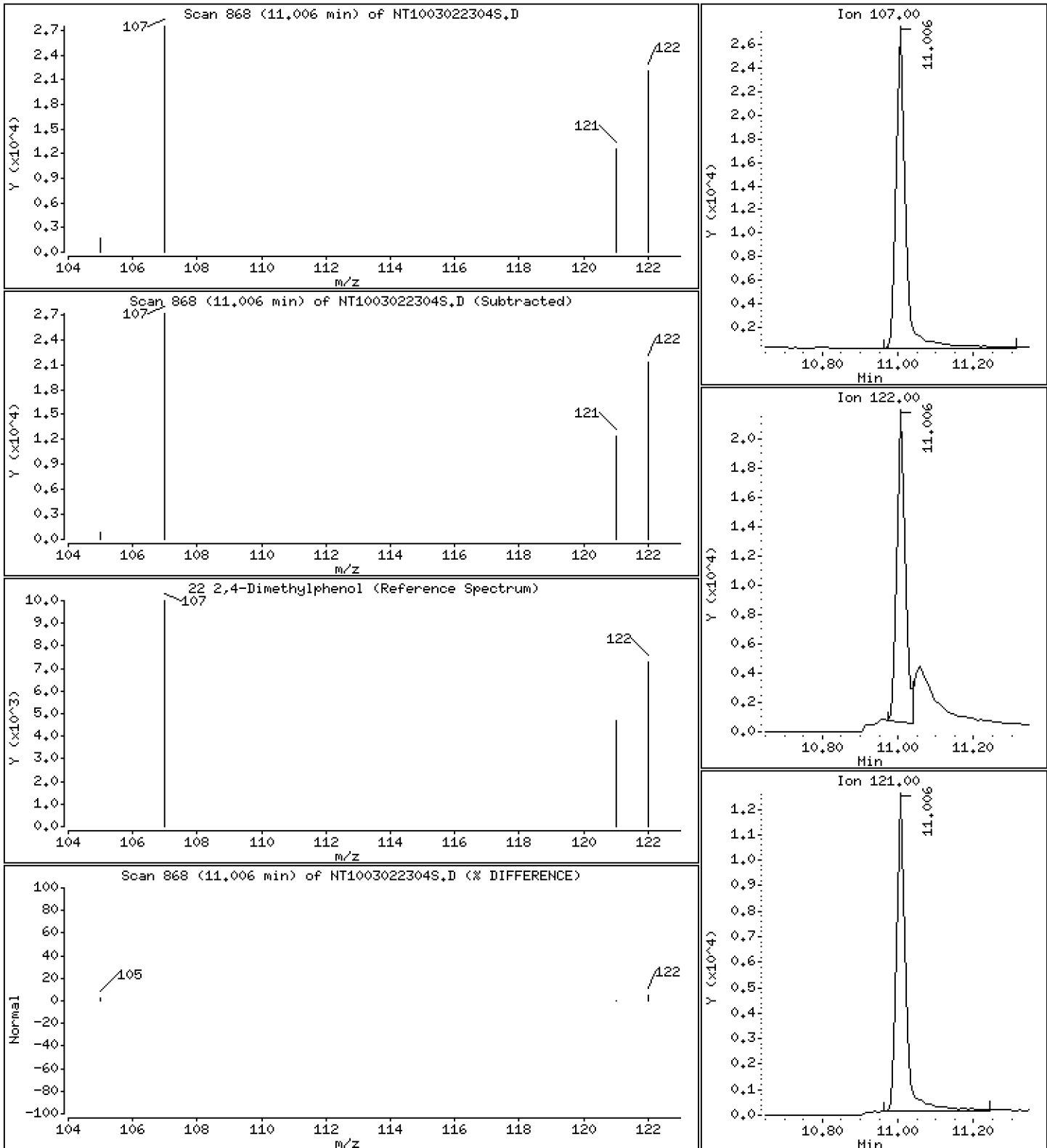
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,3273 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

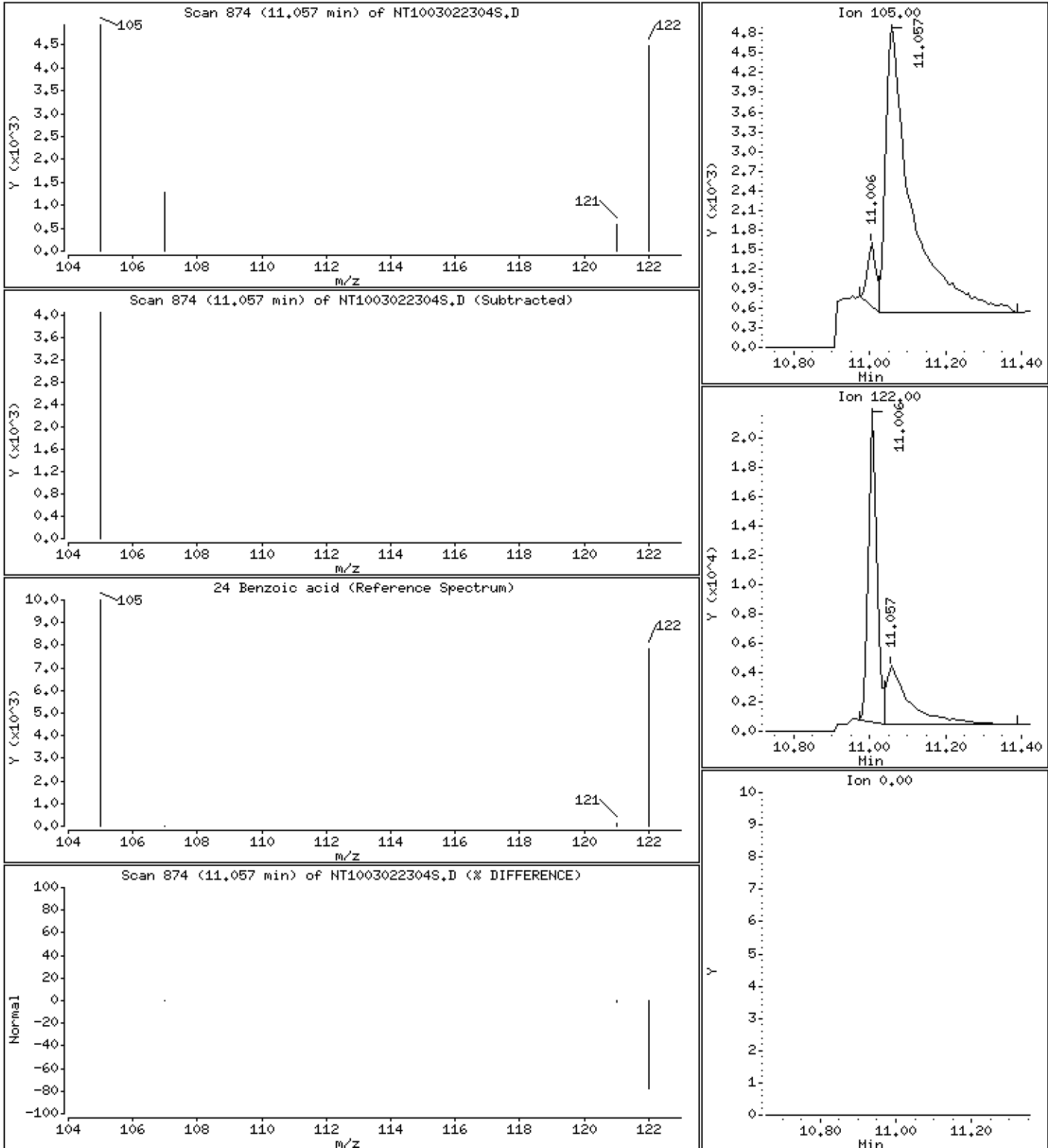
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.2670 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

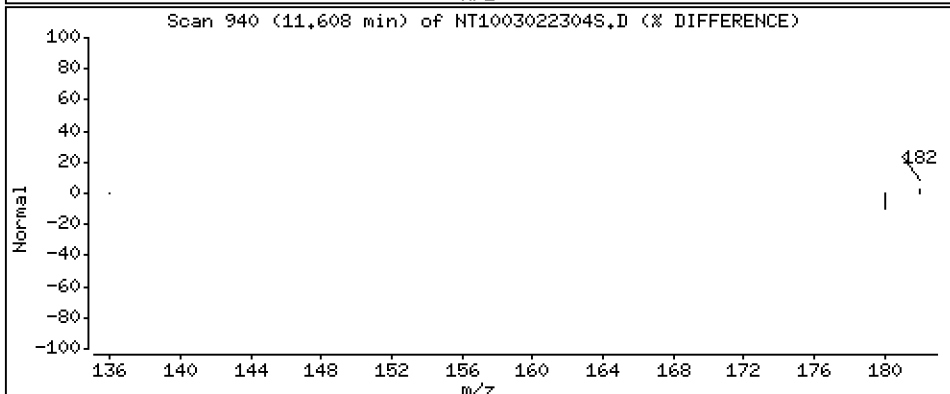
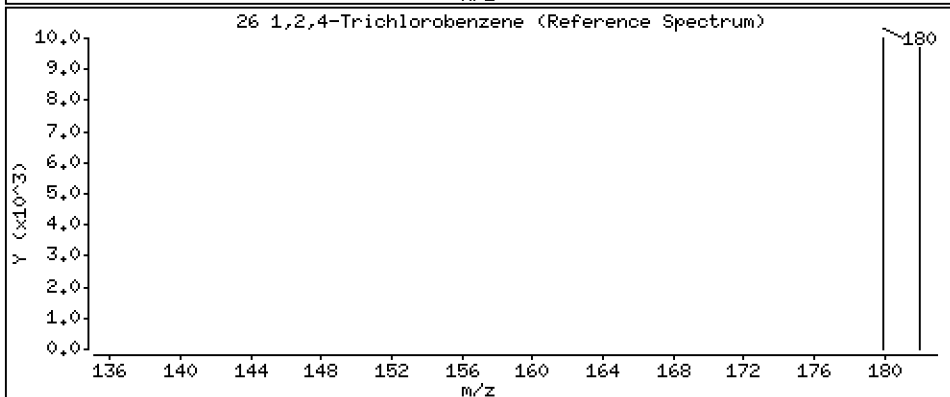
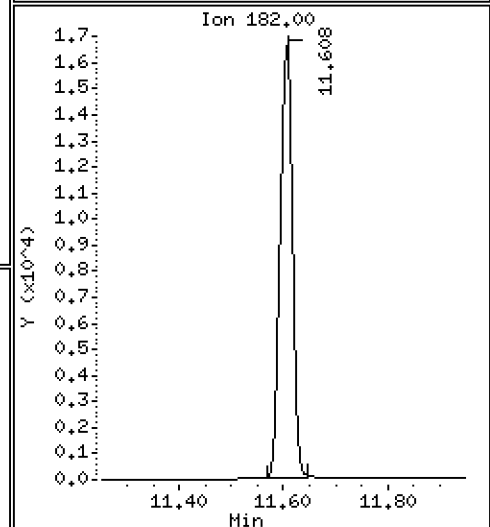
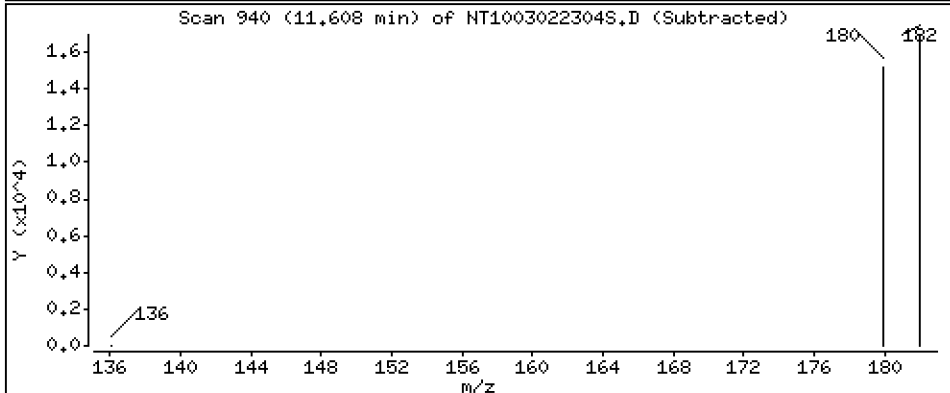
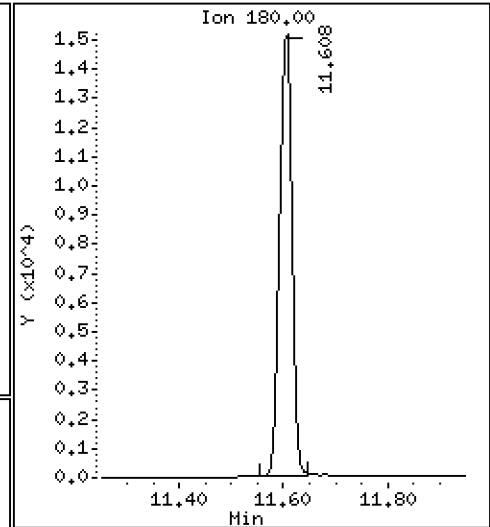
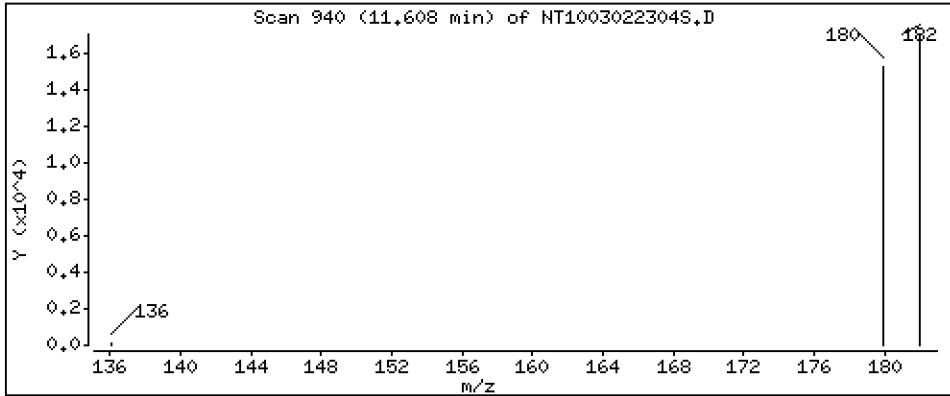
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.1965 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

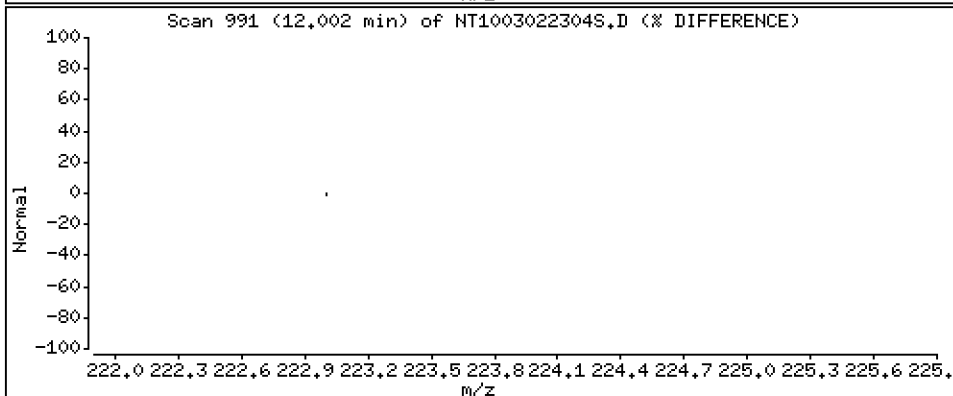
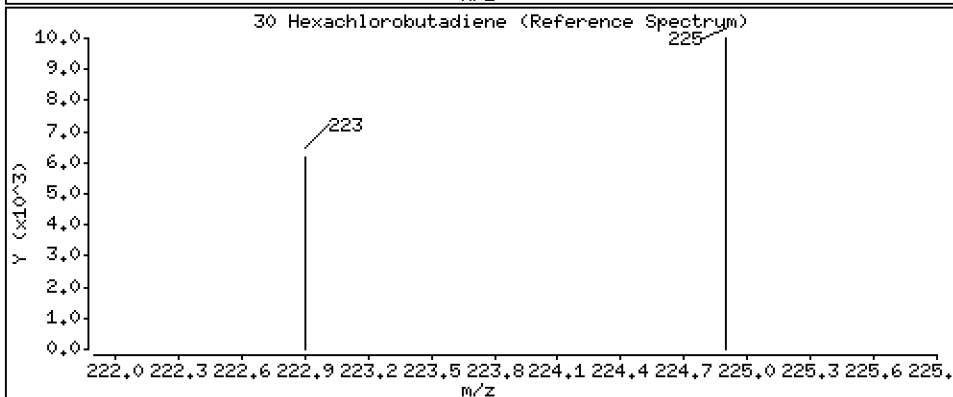
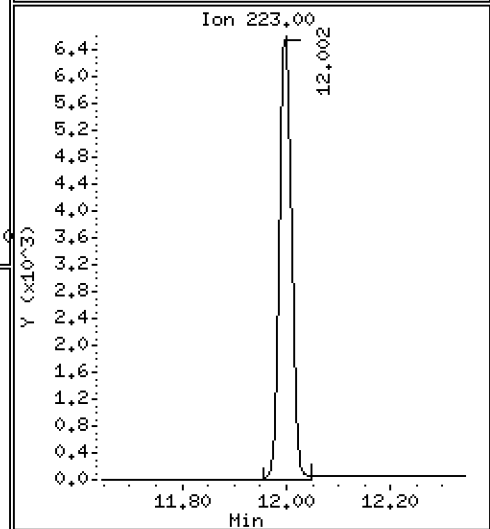
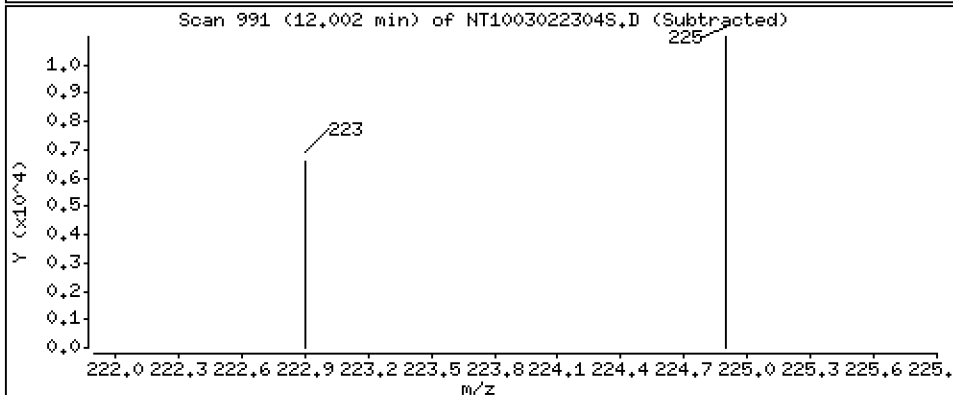
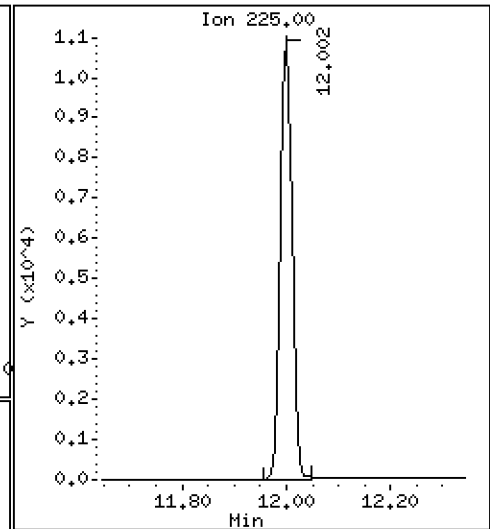
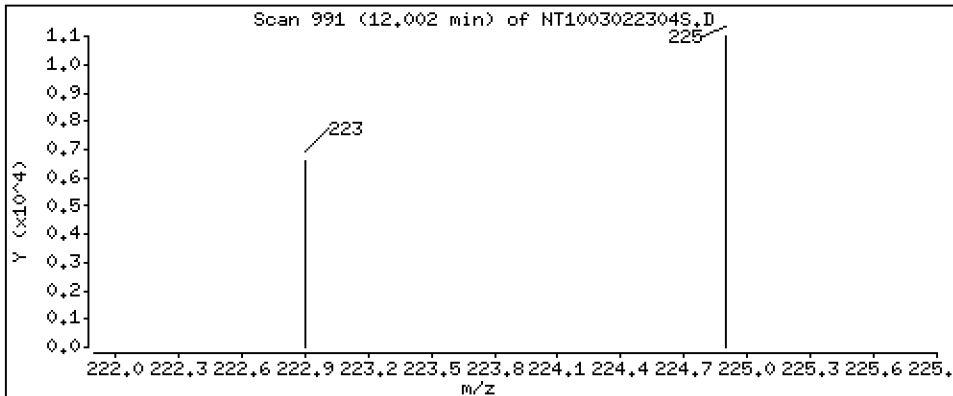
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,1890 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

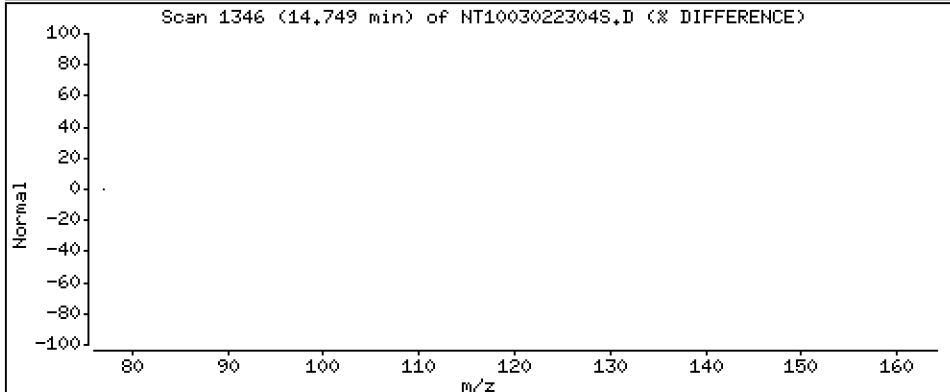
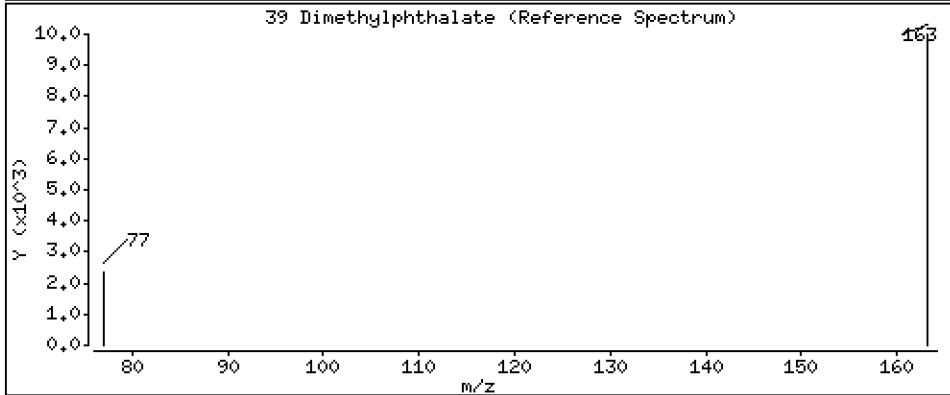
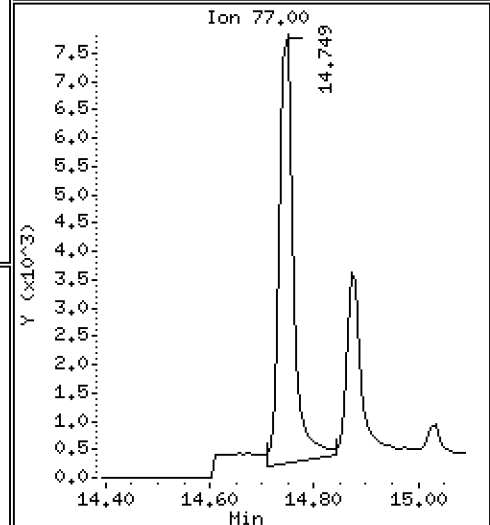
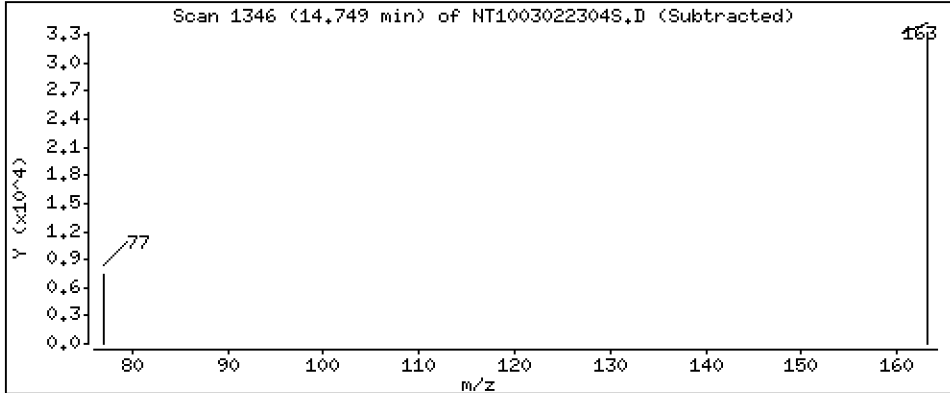
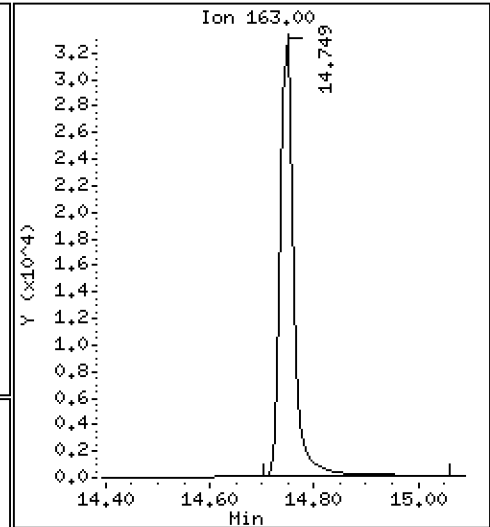
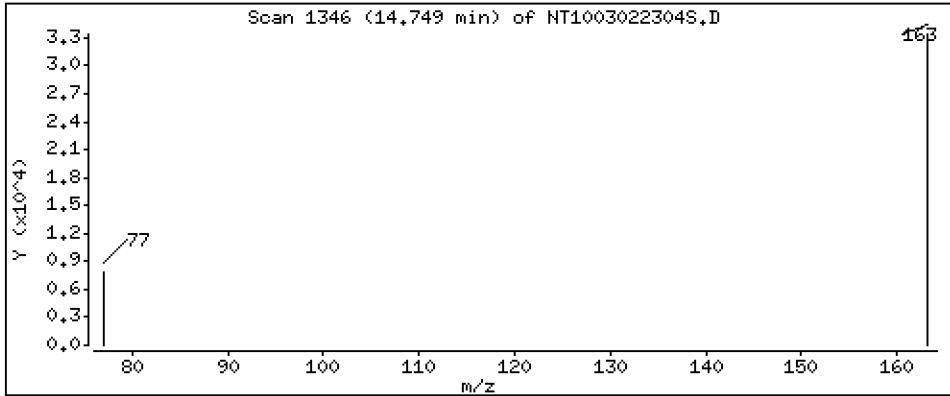
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.1960 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

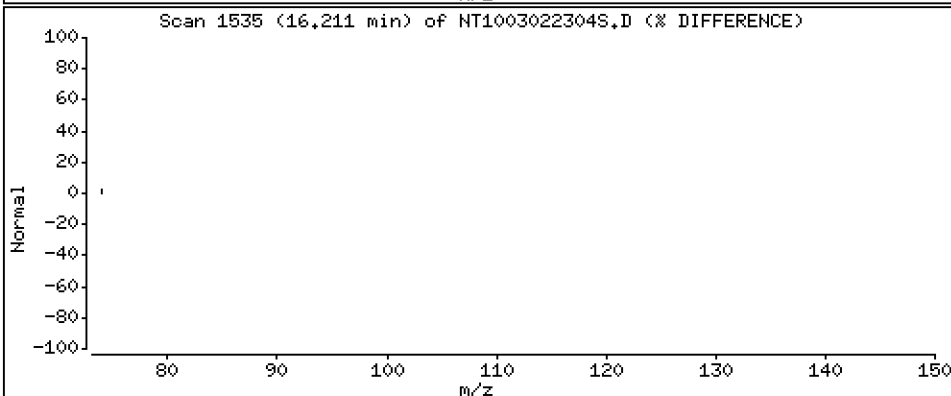
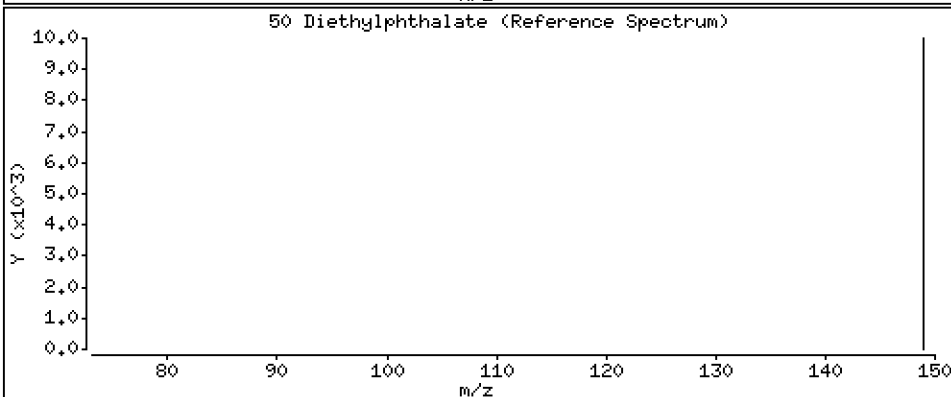
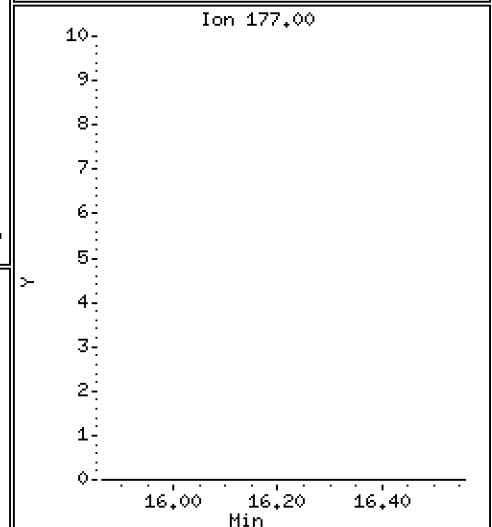
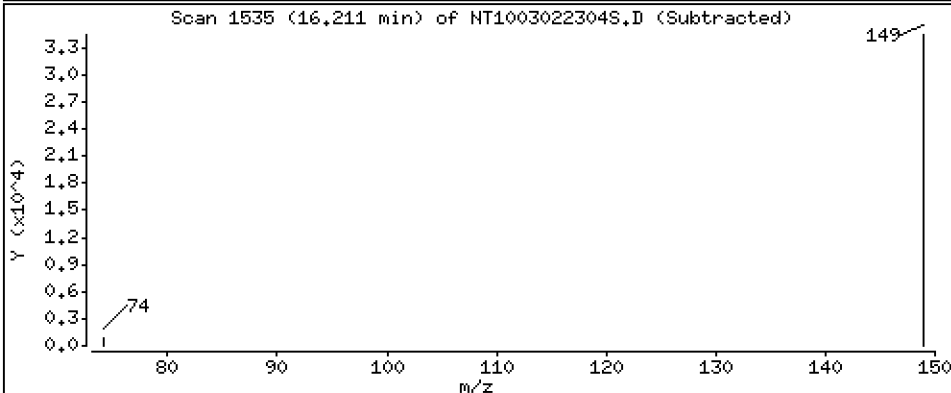
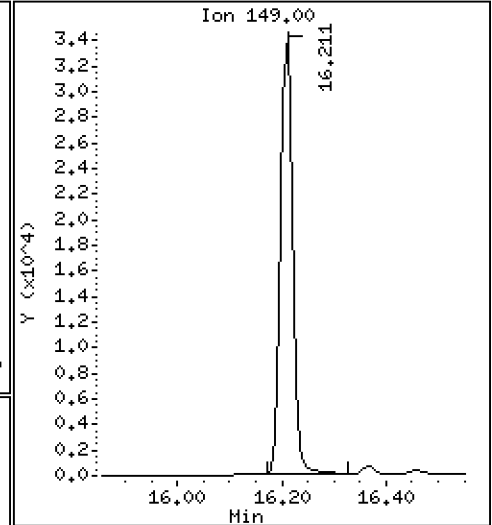
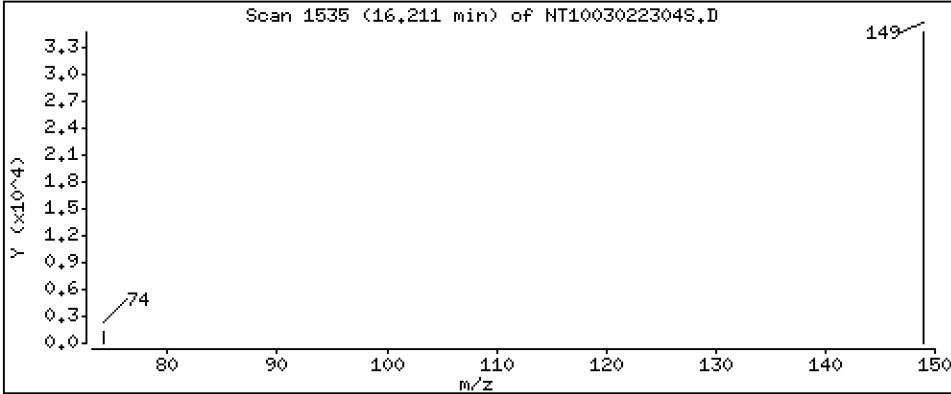
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1894 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

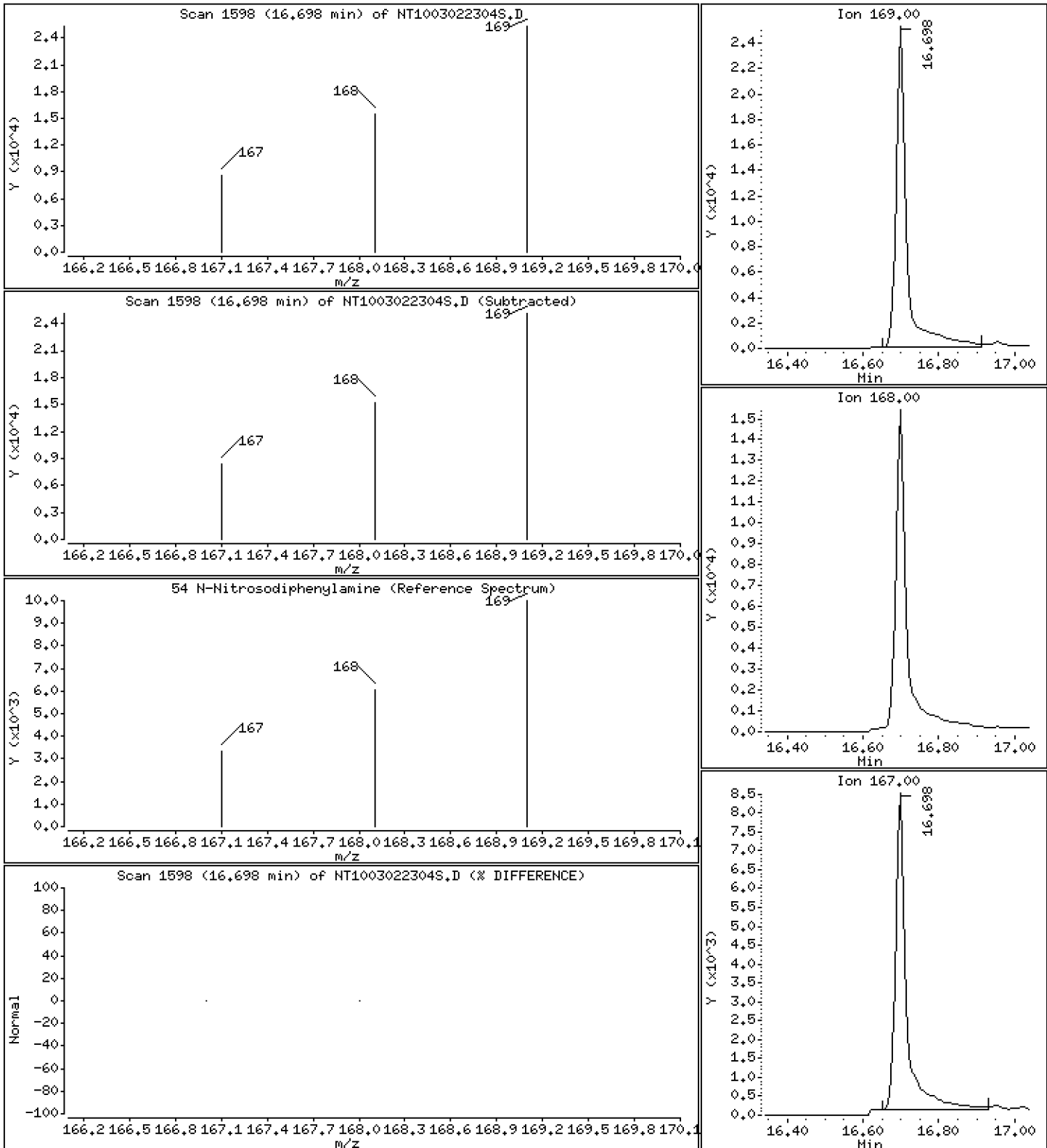
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.1900 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

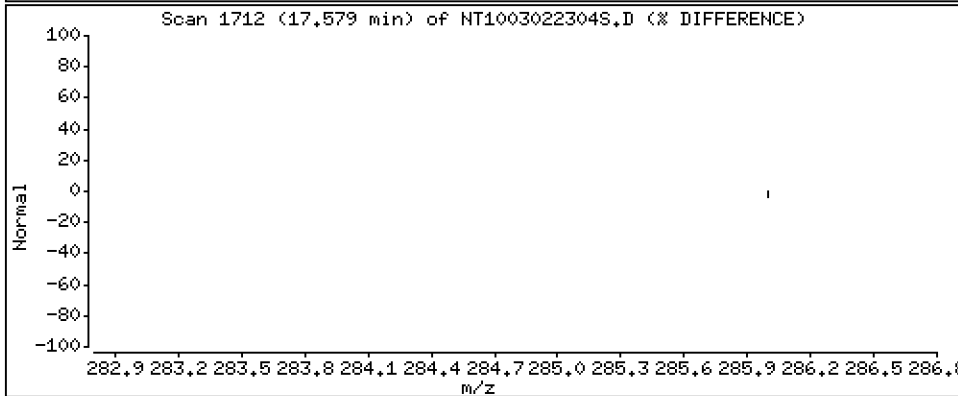
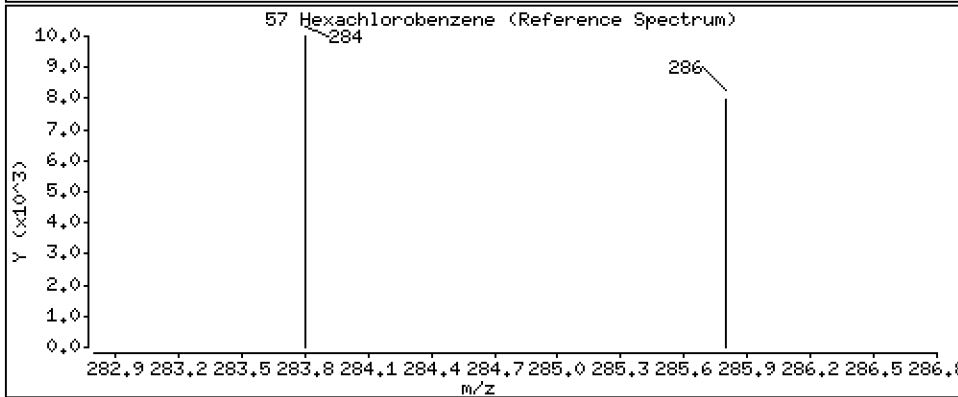
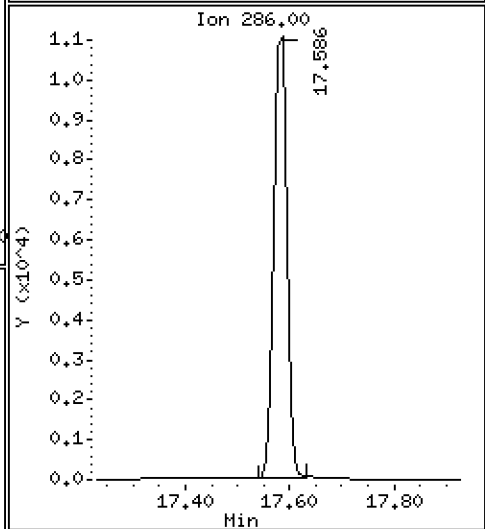
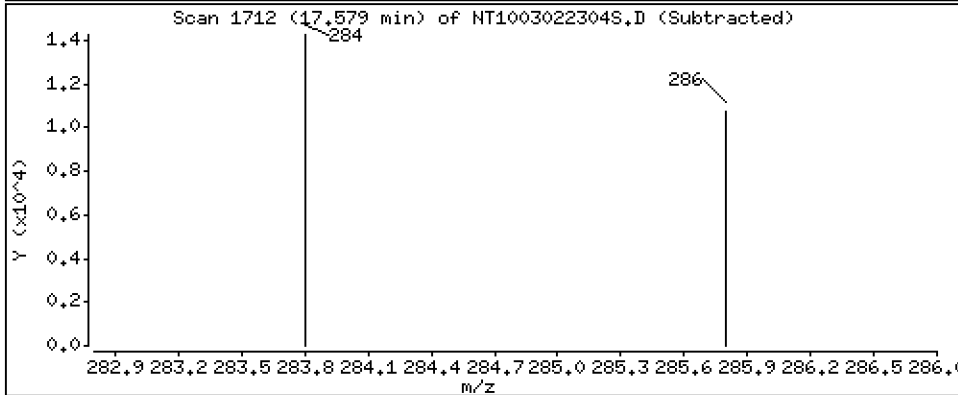
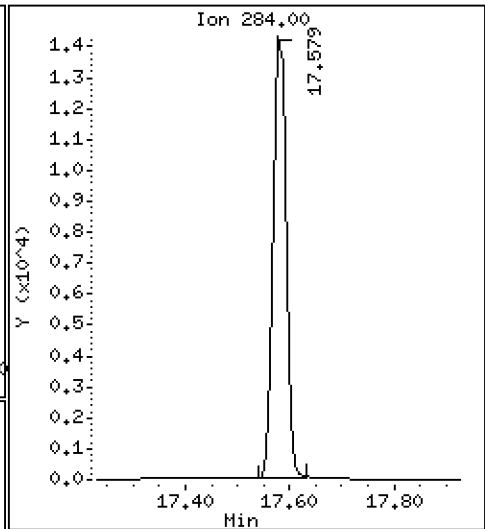
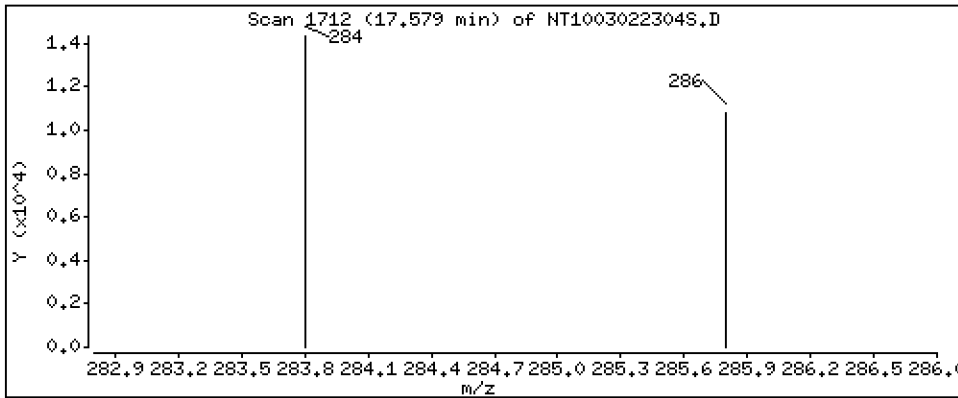
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.1915 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

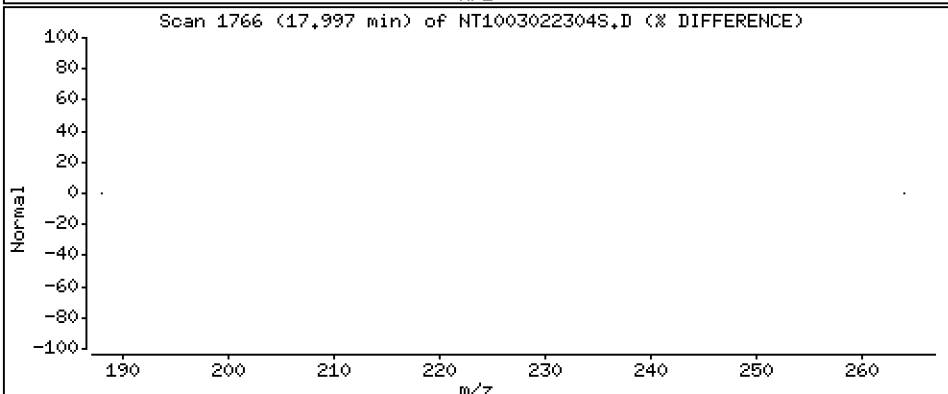
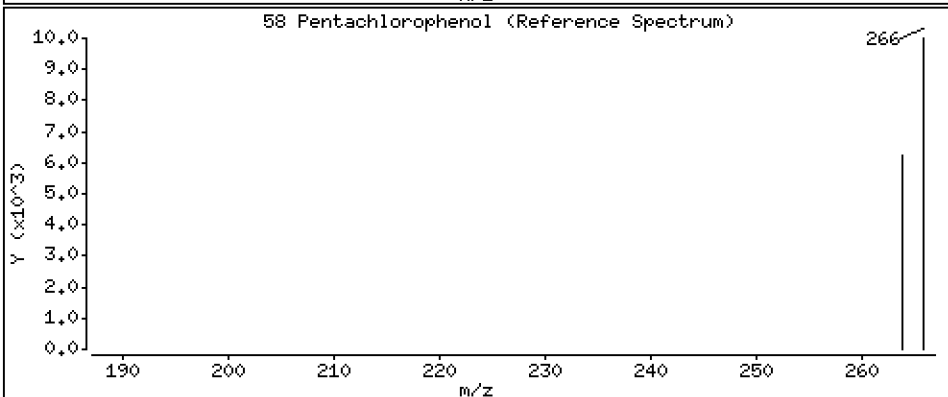
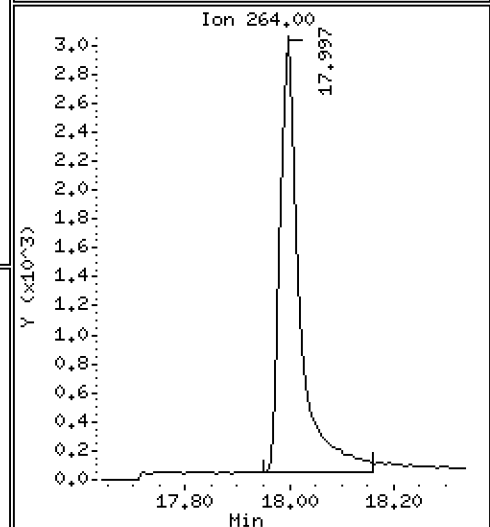
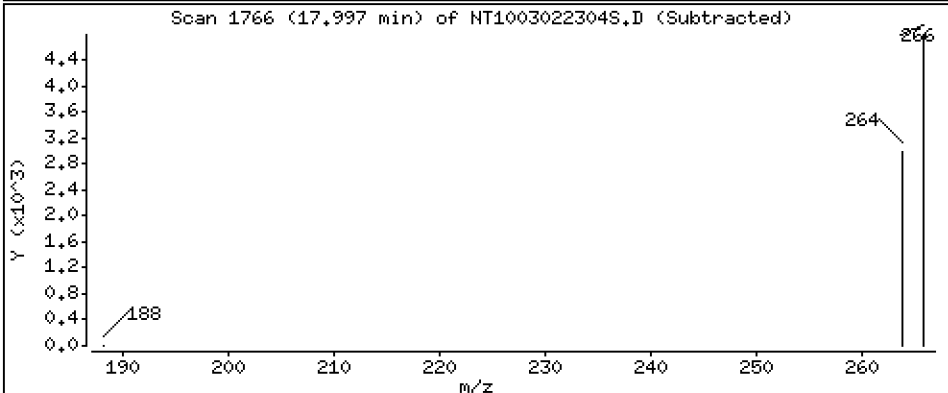
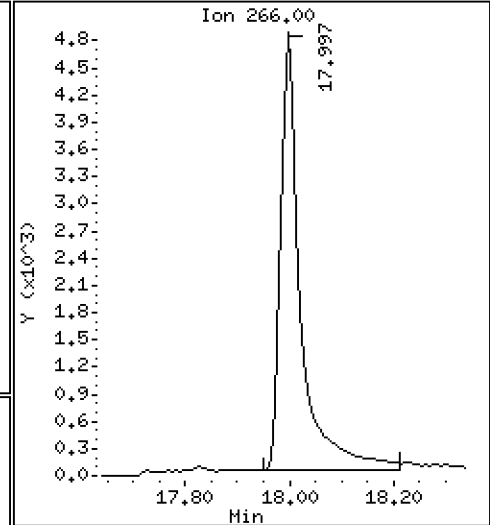
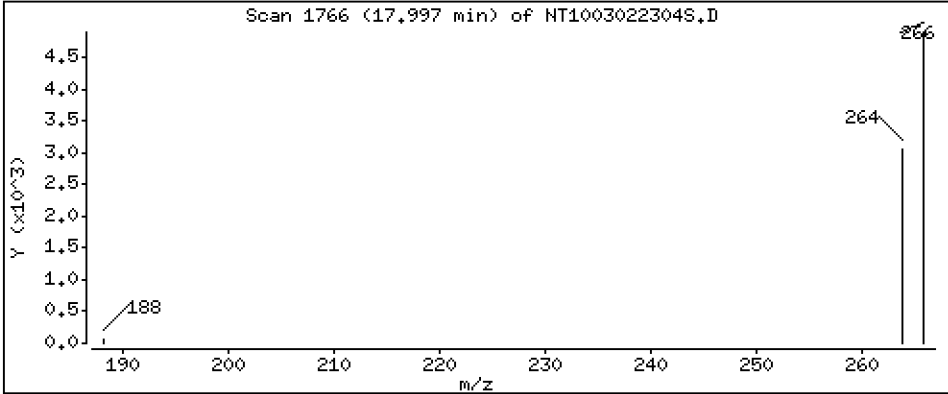
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,2411 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

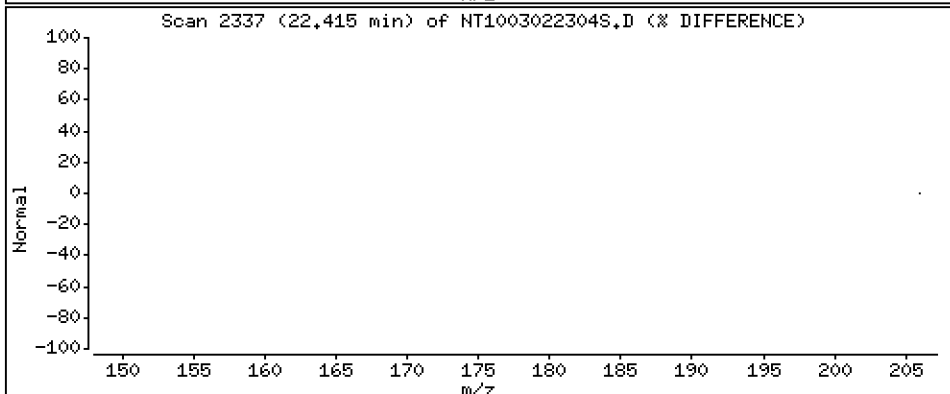
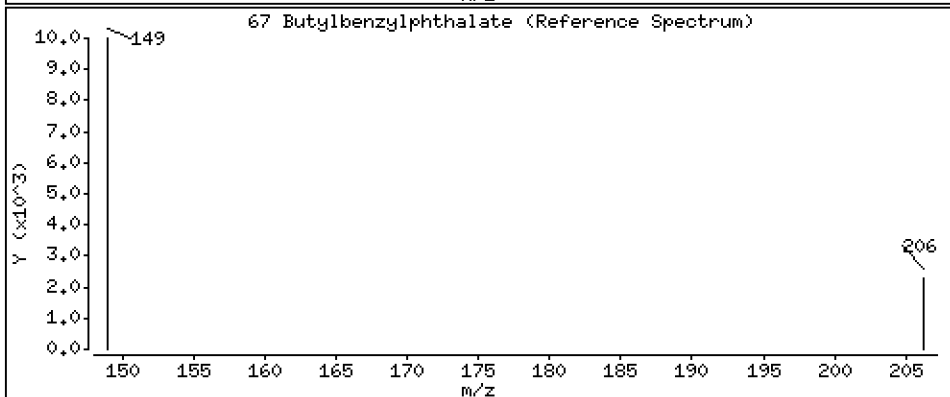
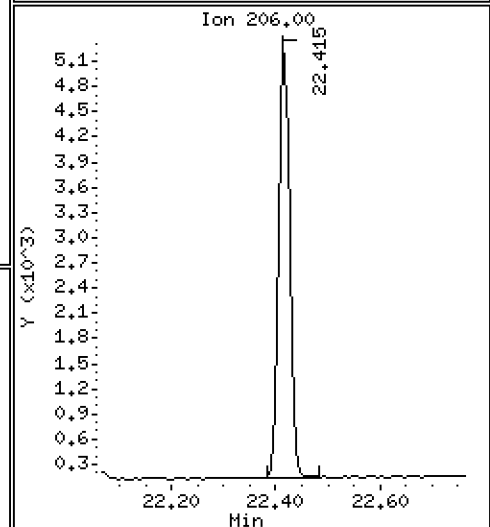
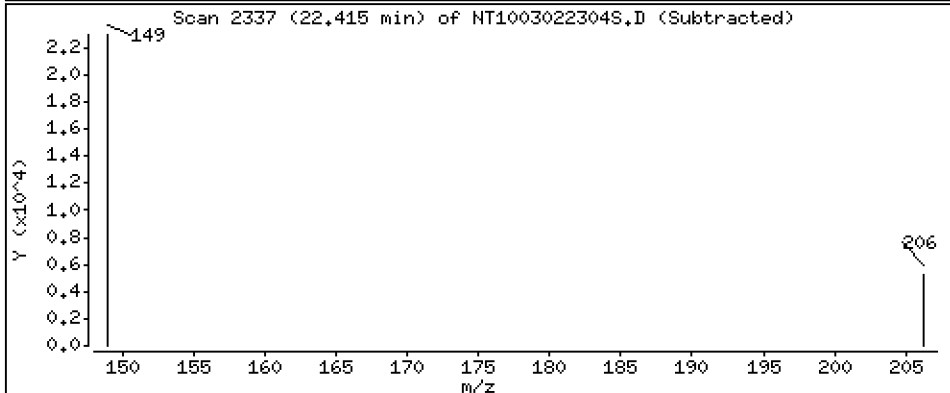
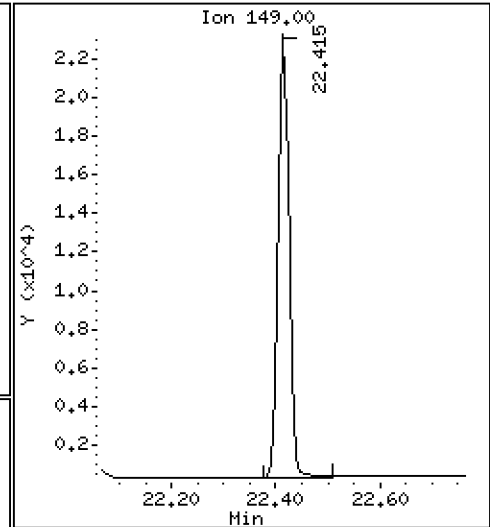
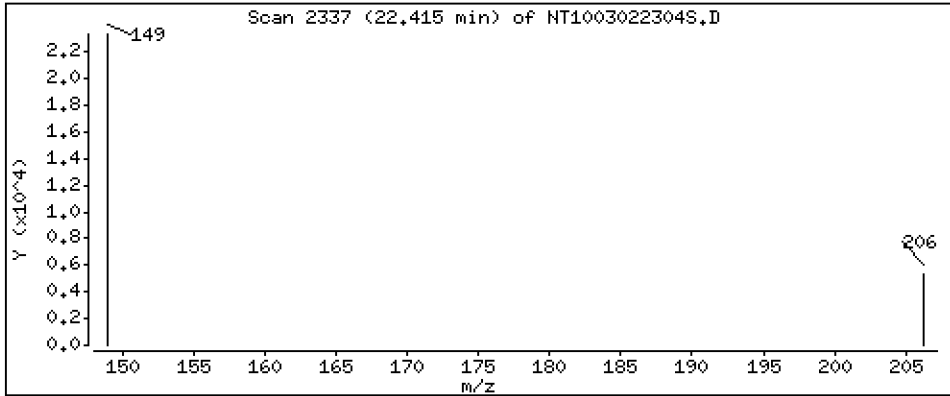
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.1126 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

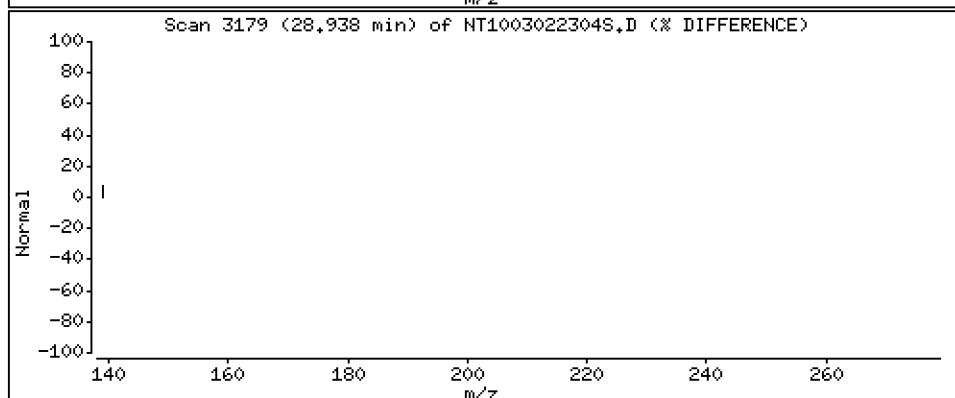
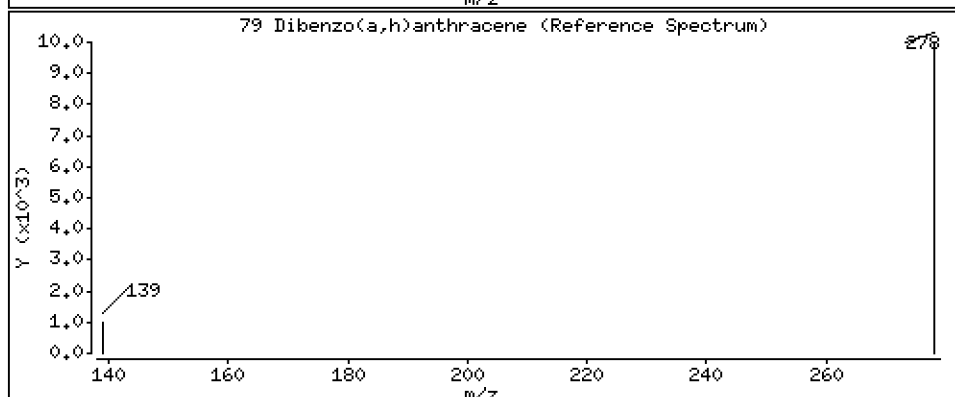
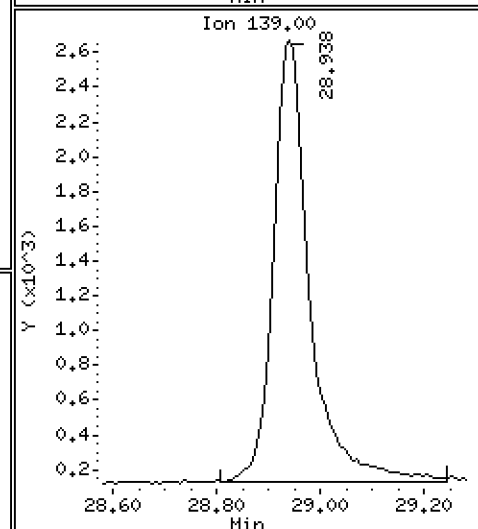
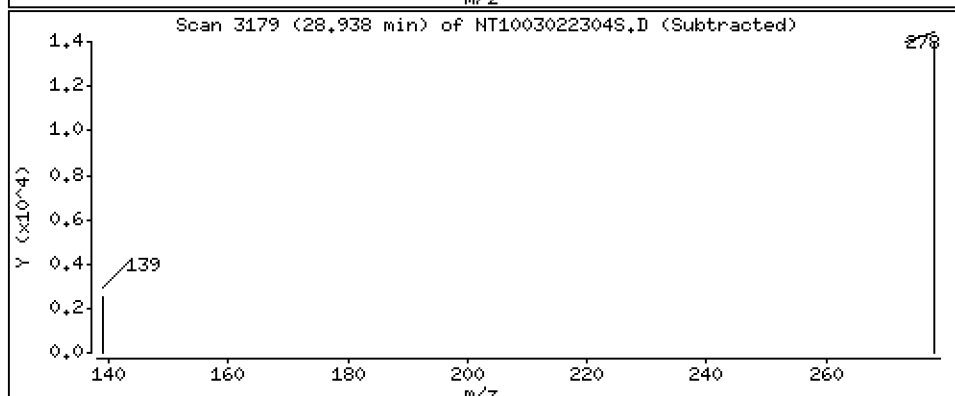
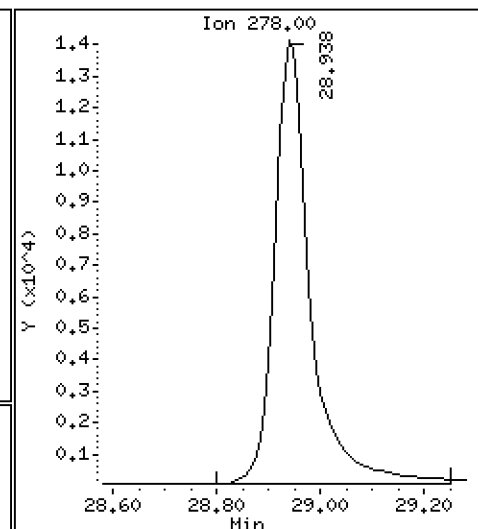
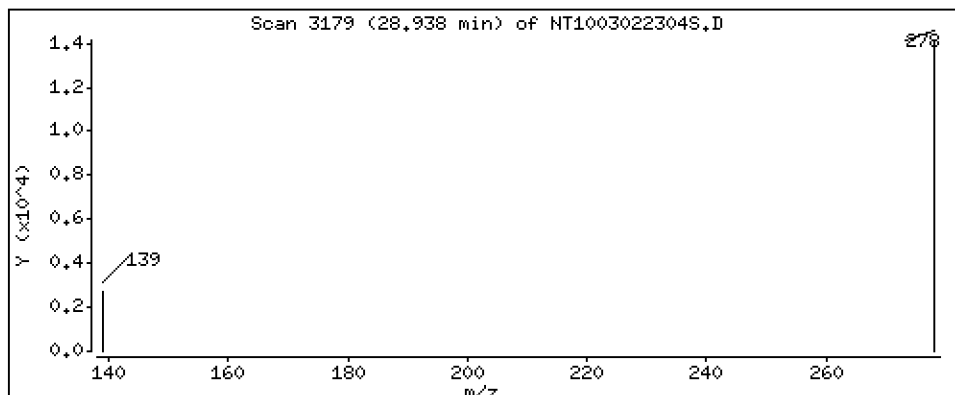
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1592 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

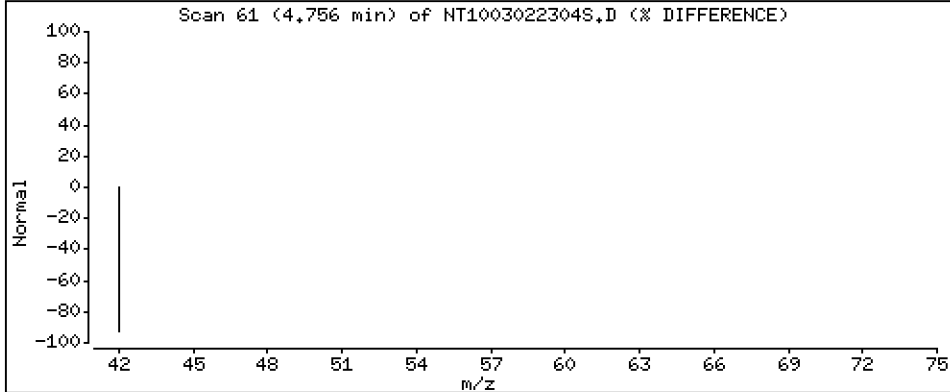
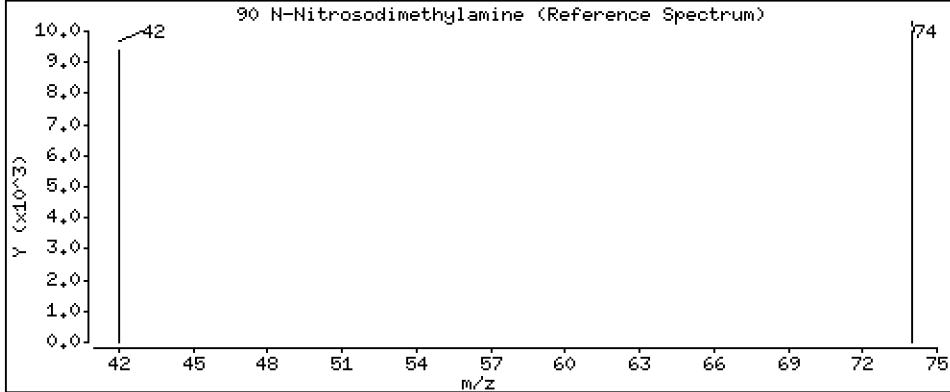
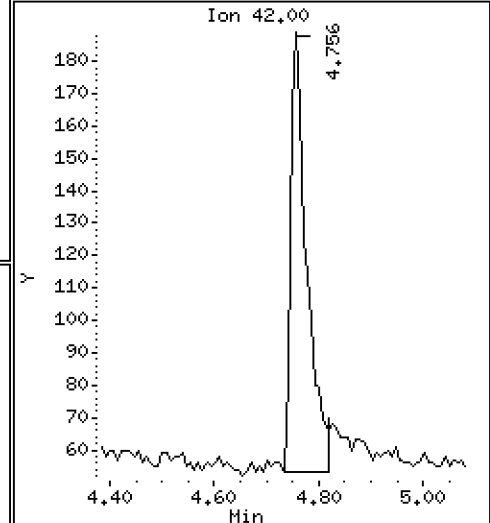
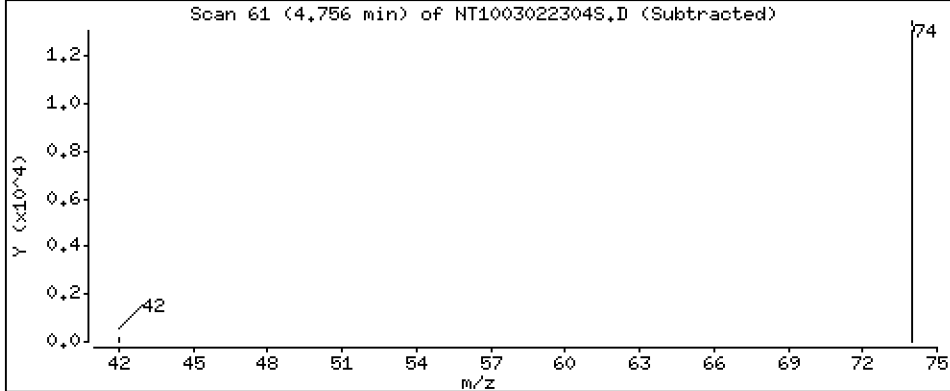
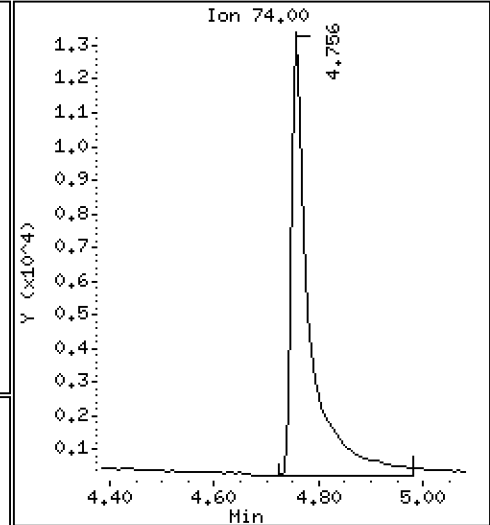
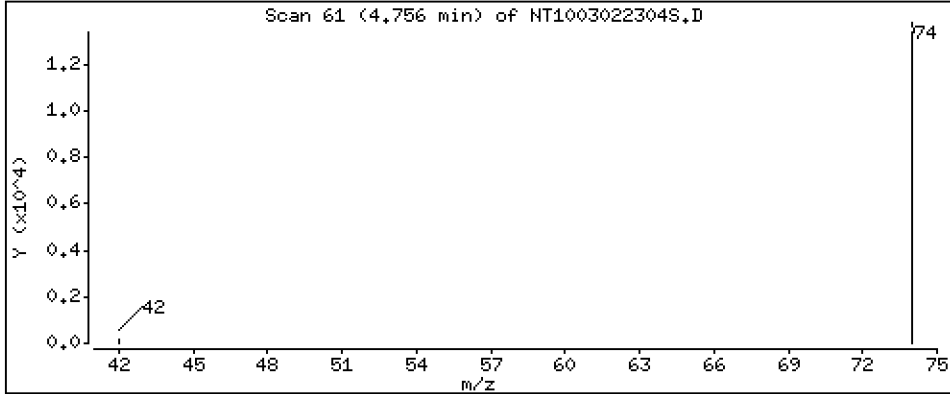
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 0.4218 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022304S.D  
 Lab Smp Id: SEQ-LCV200  
 Inj Date : 02-MAR-2023 16:17 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:01 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.917	6.902	(0.747)	37782	0.28489	0.2849(R)
3 Phenol	94		8.532	8.517	(0.921)	29661	0.15155	0.1516
7 1,3-Dichlorobenzene	146		9.151	9.143	(0.988)	35012	0.20337	0.2034
* 8 1,4-Dichlorobenzene-d4	152		9.259	9.251	(1.000)	464527	4.00000	
9 1,4-Dichlorobenzene	146		9.290	9.282	(1.003)	33436	0.19976	0.1998
11 Benzyl alcohol	79		9.484	9.476	(1.024)	15113	0.13918	0.1392
12 1,2-Dichlorobenzene	146		9.570	9.562	(1.034)	32614	0.20272	0.2027
13 2-Methylphenol	108		9.671	9.655	(1.044)	18381	0.15615	0.1561
15 4-Methylphenol	108		9.958	9.942	(1.075)	17186	0.14036	0.1404
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.078)	18106	0.20774	0.2077
22 2,4-Dimethylphenol	107		11.006	10.997	(0.938)	46903	0.32731	0.3273
24 Benzoic acid	105		11.057	11.074	(0.943)	20985	0.26701	0.2670
26 1,2,4-Trichlorobenzene	180		11.608	11.600	(0.989)	23866	0.19648	0.1965
* 27 Naphthalene-d8	136		11.731	11.723	(1.000)	1687615	4.00000	
30 Hexachlorobutadiene	225		12.001	11.994	(1.023)	16292	0.18901	0.1890
39 Dimethylphthalate	163		14.749	14.741	(0.963)	56888	0.19600	0.1960
* 42 Acenaphthene-d10	162		15.321	15.314	(1.000)	914095	4.00000	
50 Diethylphthalate	149		16.211	16.203	(1.058)	51849	0.18943	0.1894
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	49282	0.19003	0.1900
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	23243	0.19151	0.1915

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	12831	0.24111	0.2411
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1602467	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	23197	0.17600	0.1760 (R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	30986	0.11263	0.1126
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1629844	4.00000	
* 77 Perylene-d12	264	26.115	26.115	(1.000)	1824689	4.00000	
79 Dibenzo(a,h)anthracene	278	28.937	28.929	(1.108)	67394	0.15916	0.1592
90 N-Nitrosodimethylamine	74	4.755	4.732	(0.514)	33119	0.42181	0.4218

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022304S.D  
 Lab Smp Id: SEQ-LCV200  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	464527	-5.86
27 Naphthalene-d8	1779056	889528	3558112	1687615	-5.14
42 Acenaphthene-d10	954569	477285	1909138	914095	-4.24
59 Phenanthrene-d10	1596290	798145	3192580	1602467	0.39
69 Chrysene-d12	1649110	824555	3298220	1629844	-1.17
77 Perylene-d12	1901958	950979	3803916	1824689	-4.06

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.26	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022304S.D

Lab ID: SEQ-LCV200

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 16:17

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

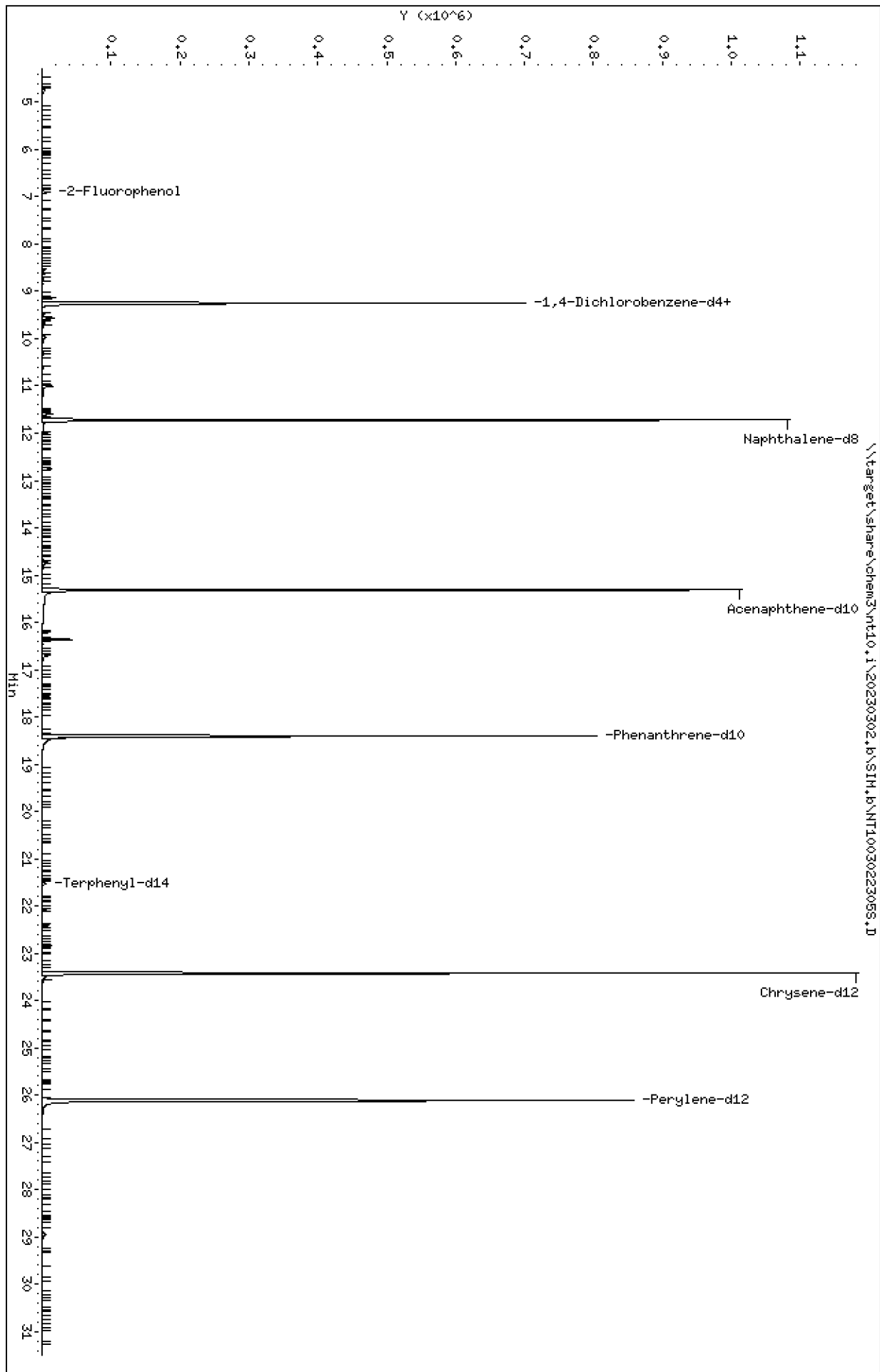
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.6\NT10030223055.D  
Date : 02-MAR-2023 16:56  
Client ID:  
Sample Info: SED-LCV100  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

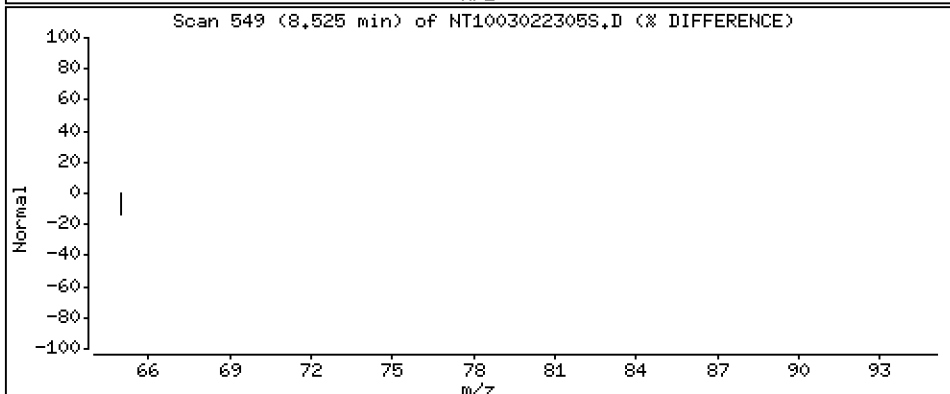
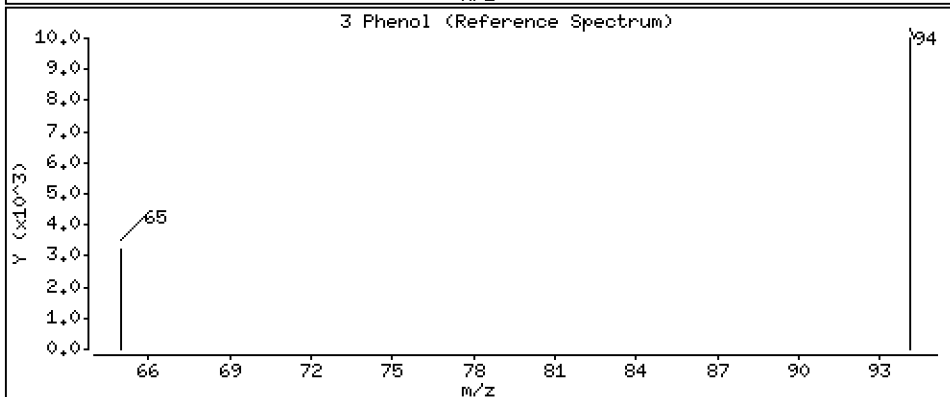
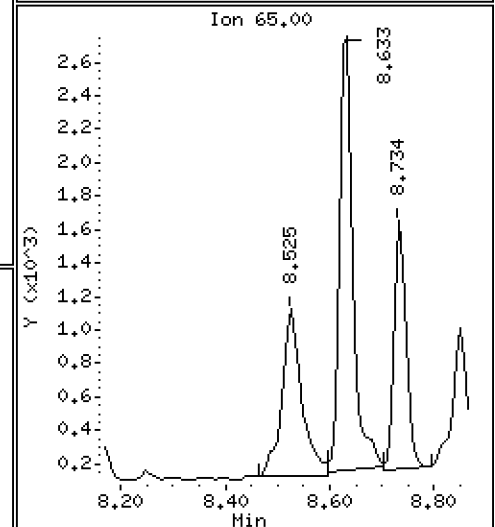
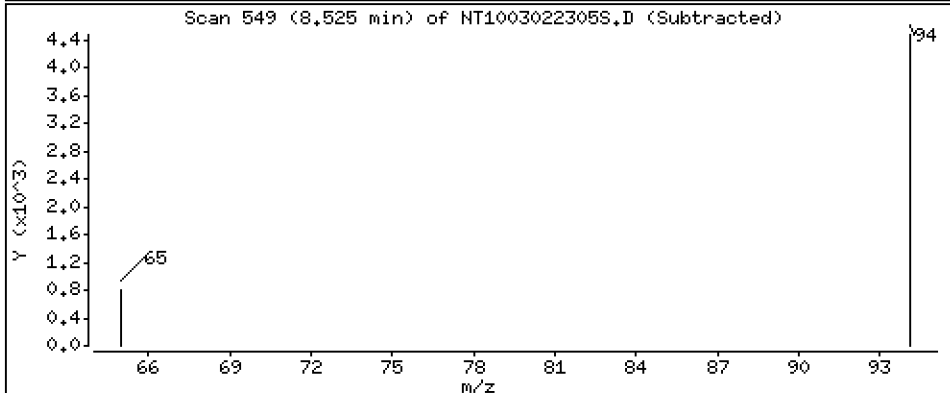
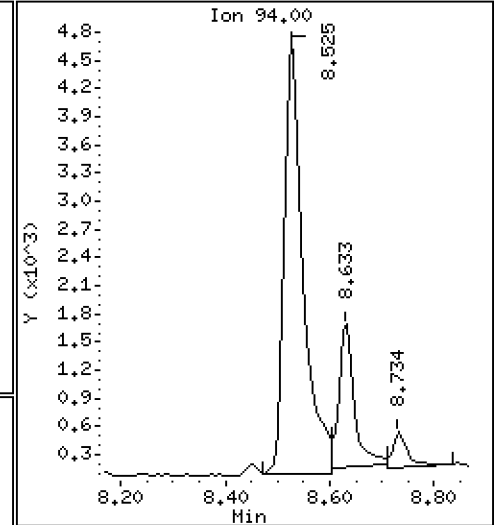
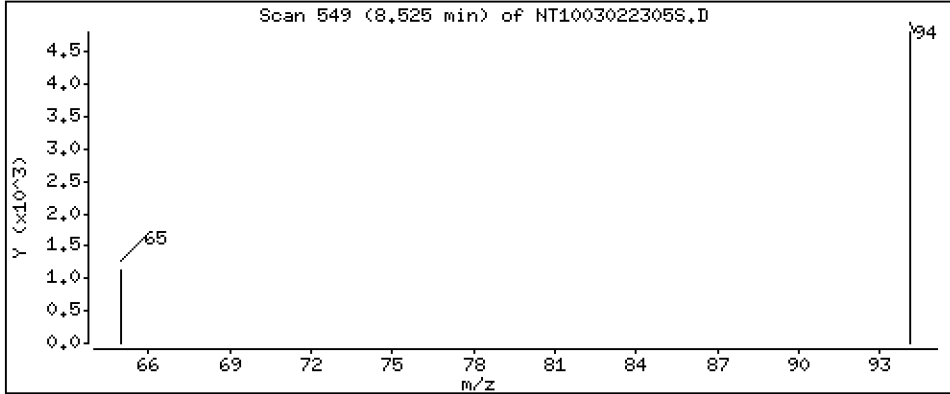
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.06121 ug/L





Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

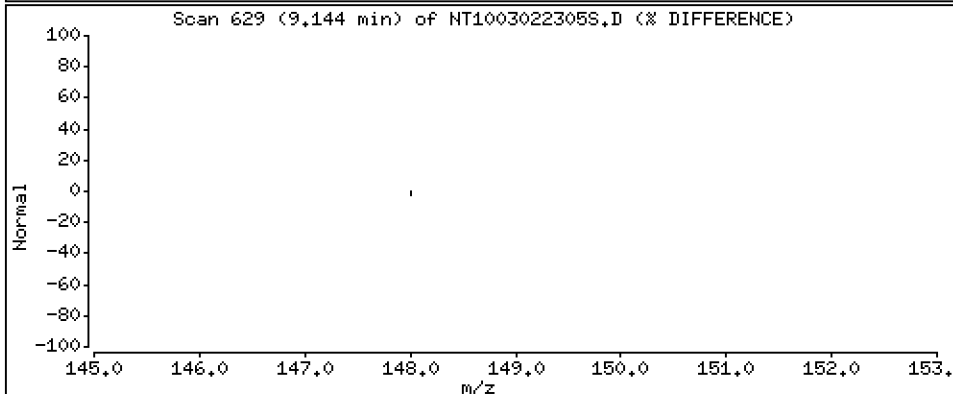
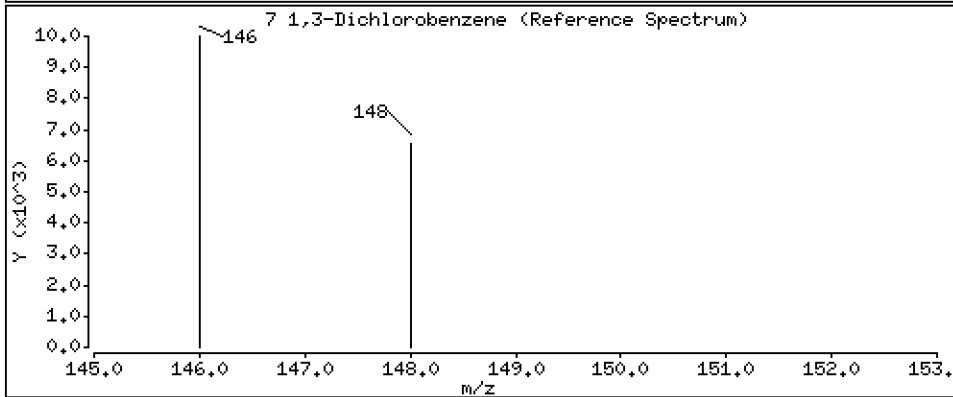
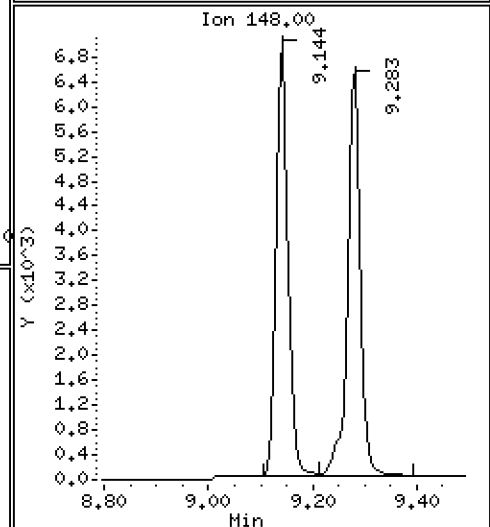
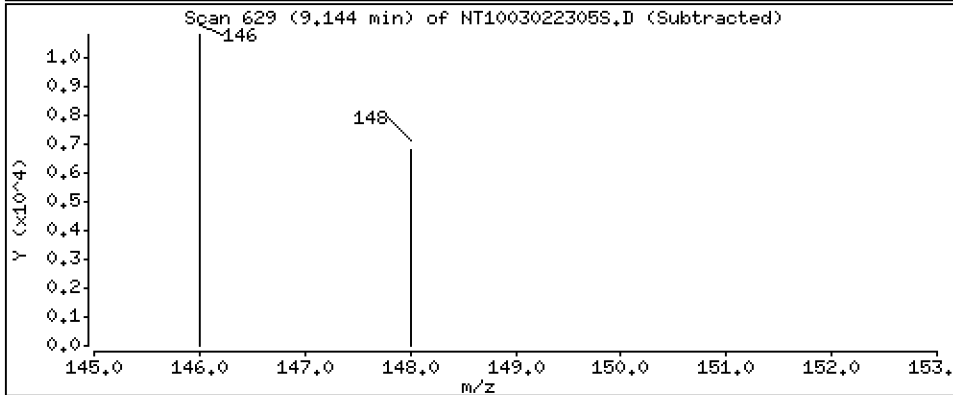
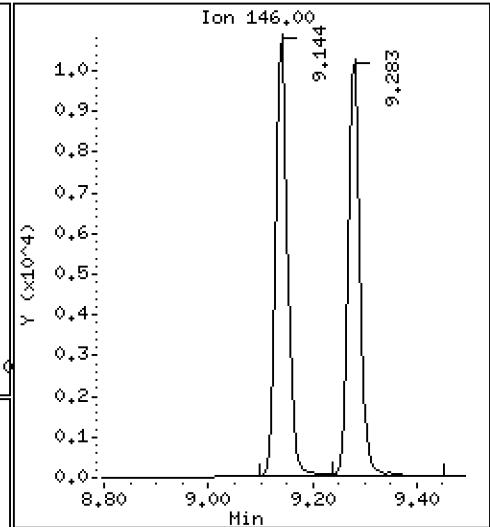
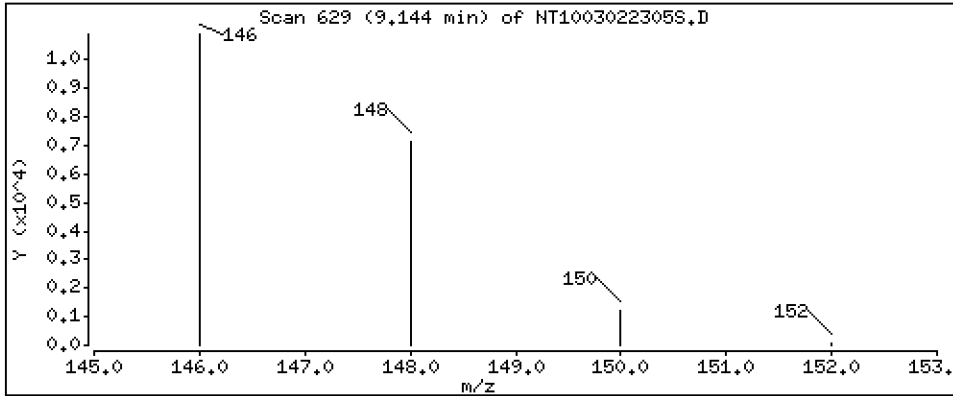
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.1034 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

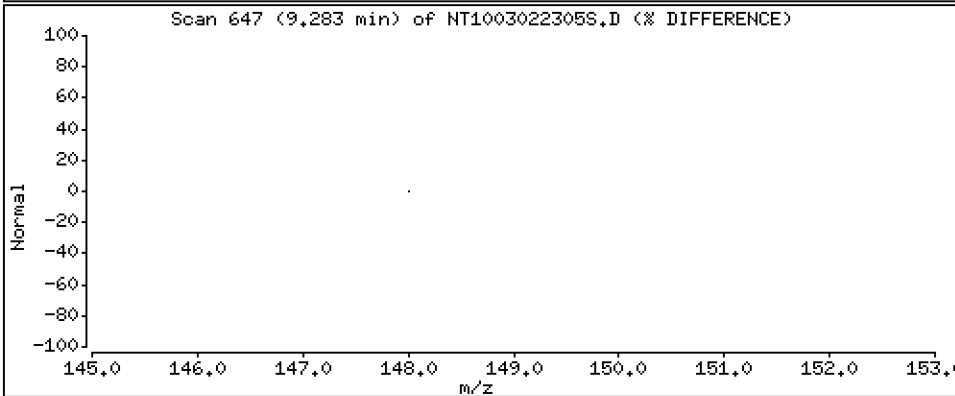
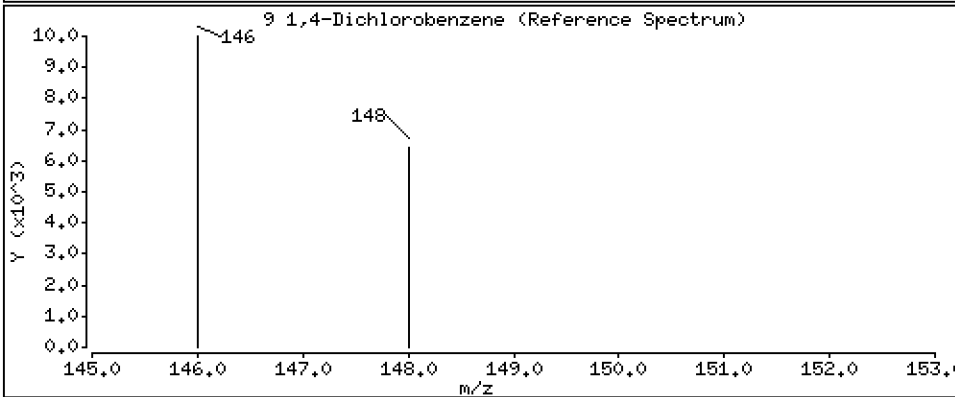
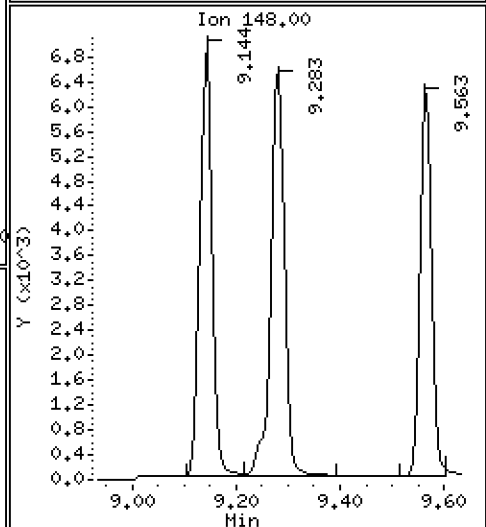
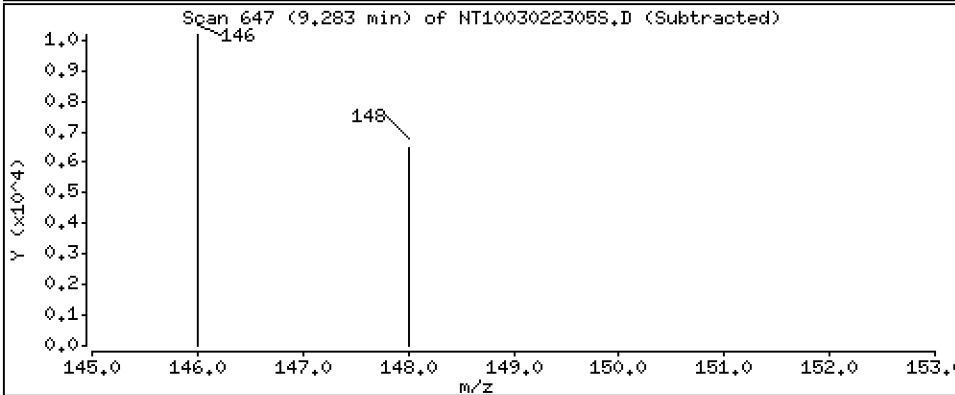
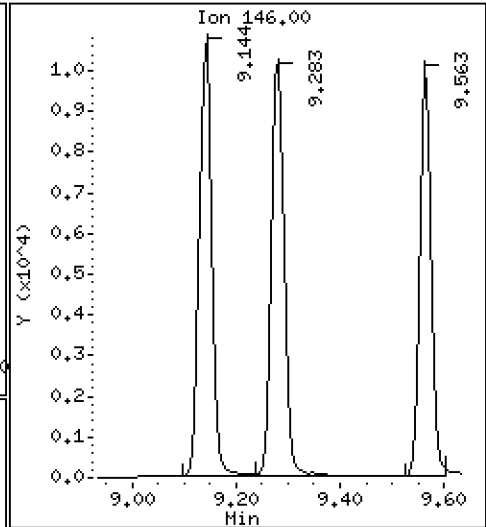
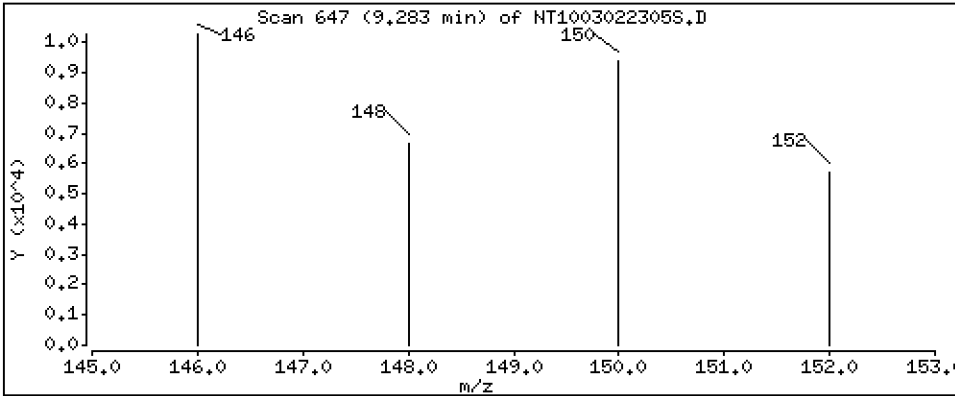
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.1031 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

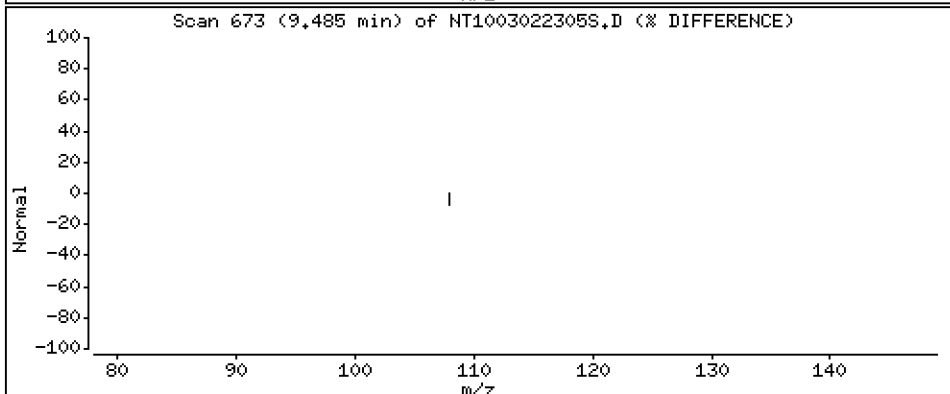
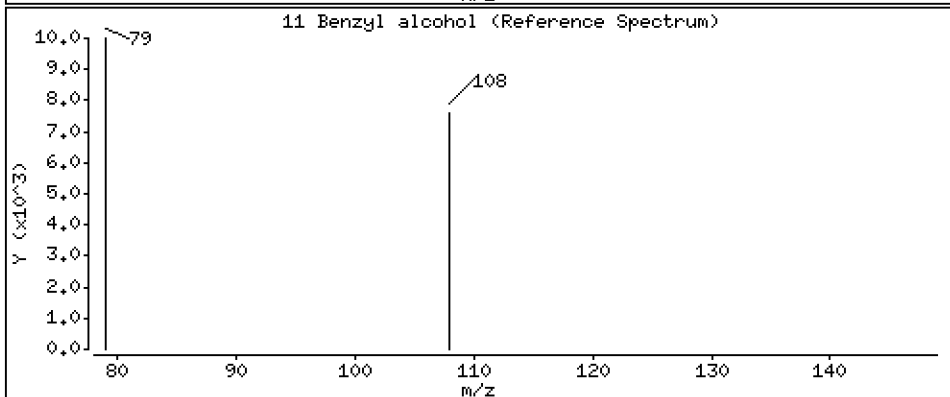
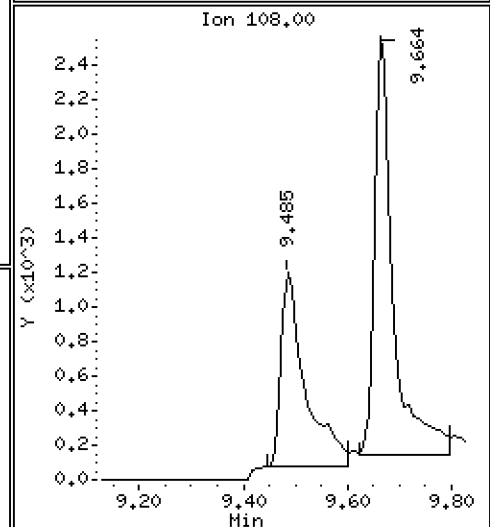
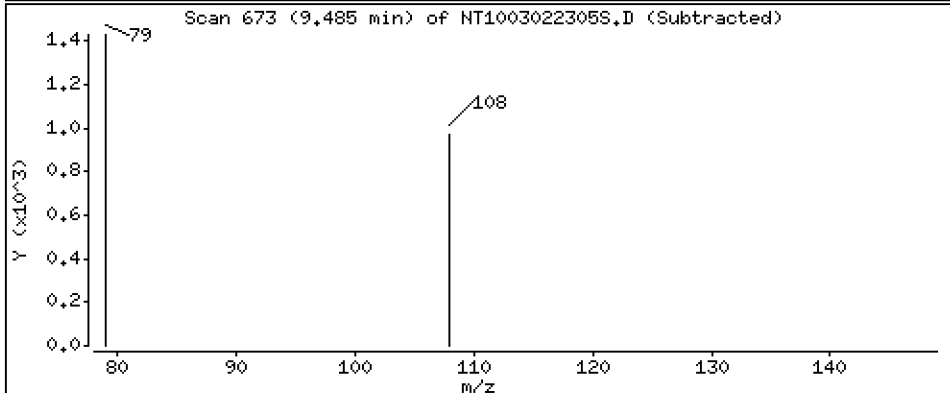
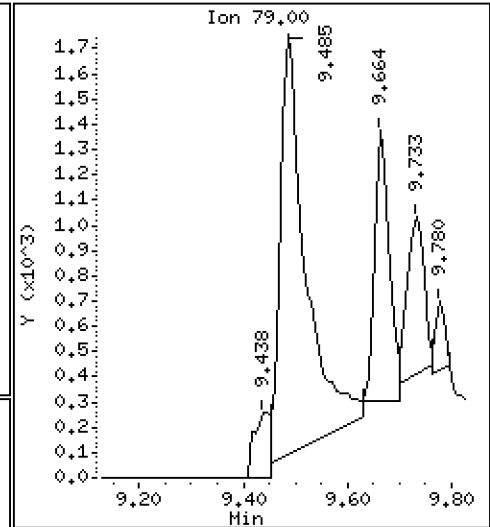
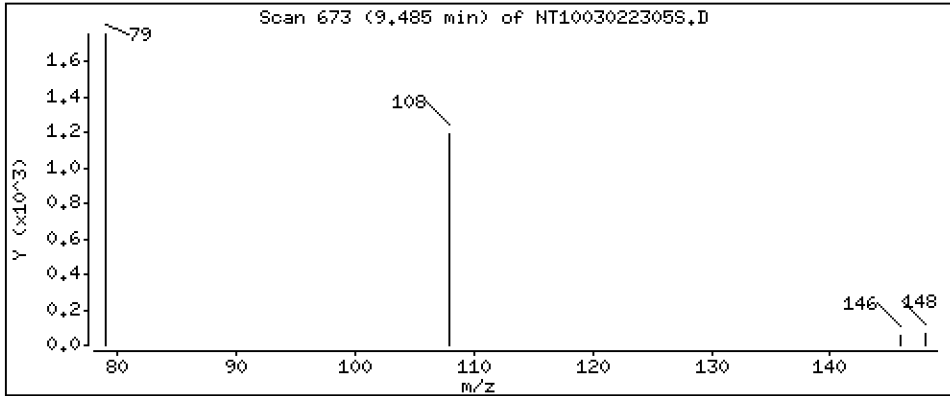
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.05313 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

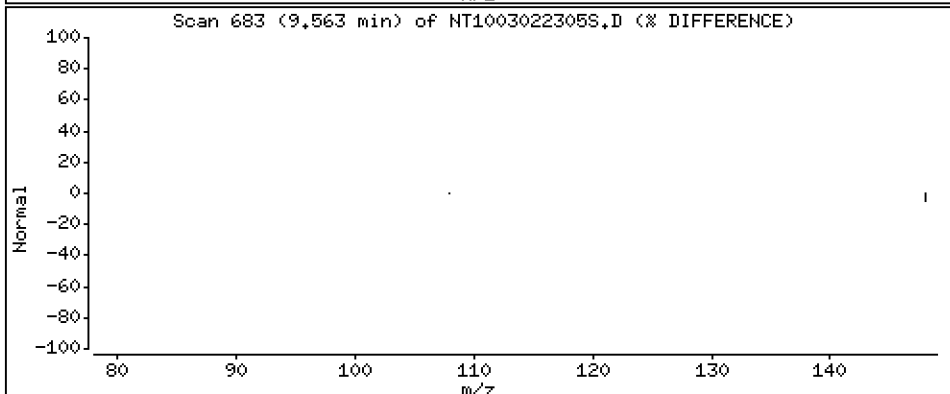
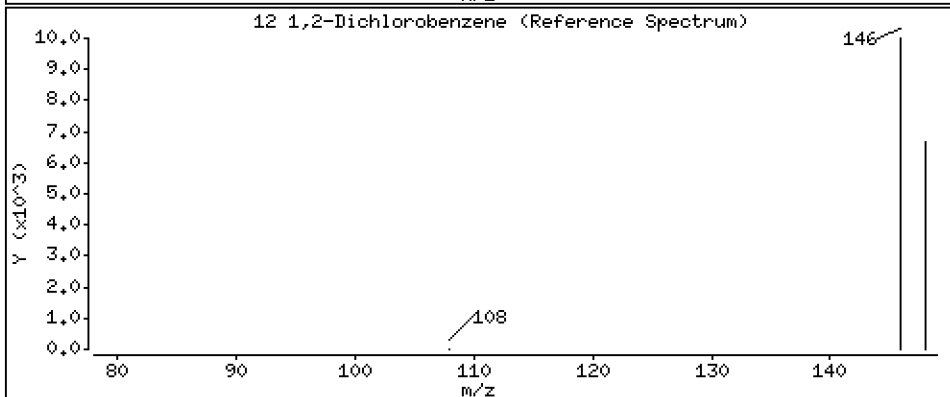
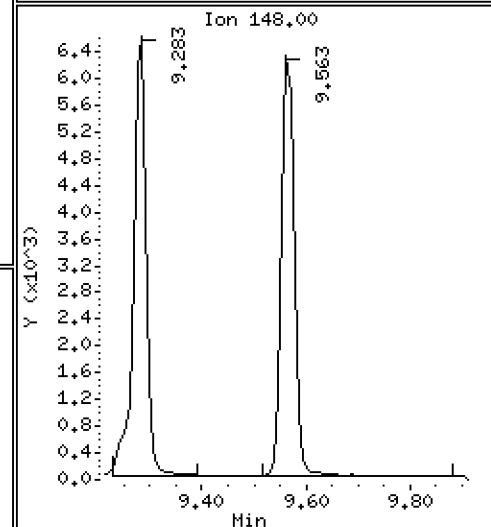
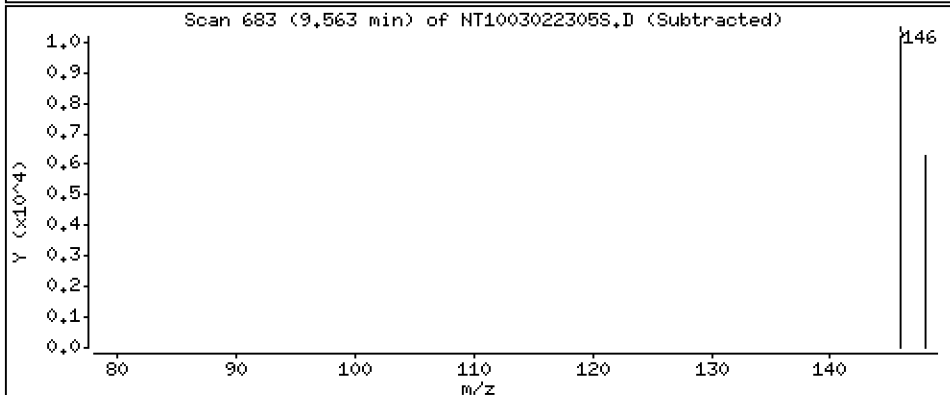
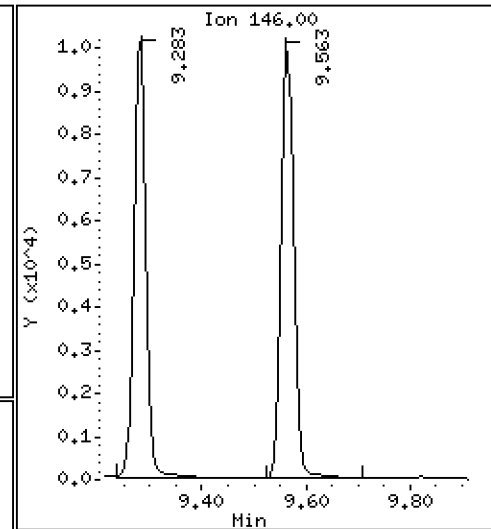
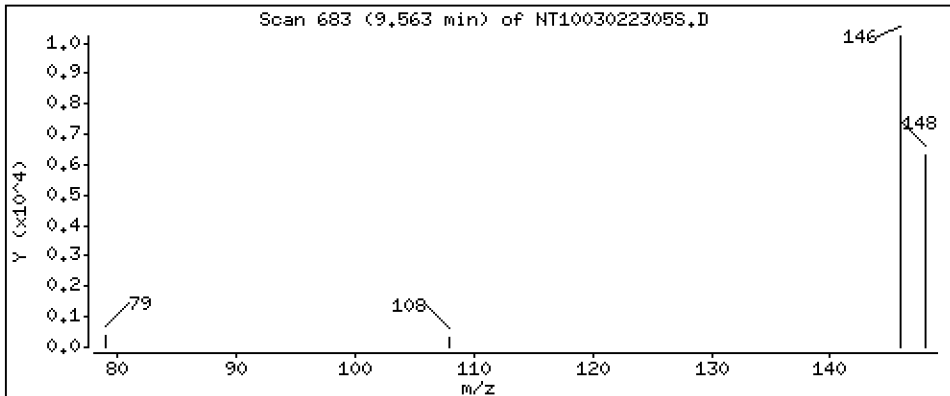
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.1026 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

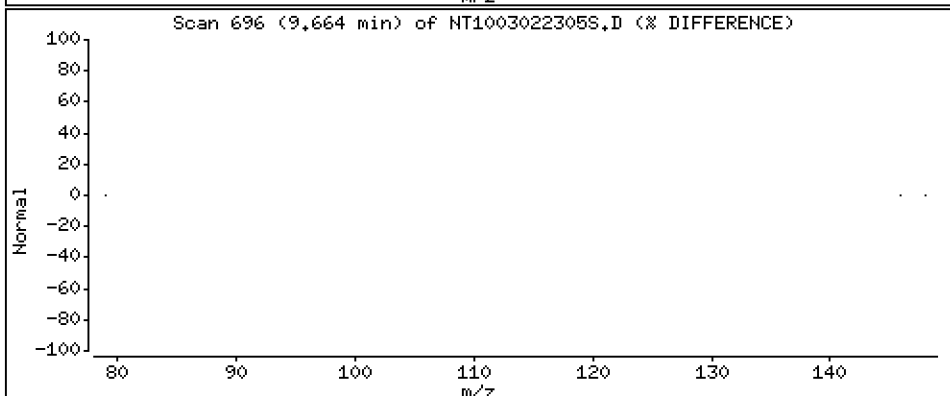
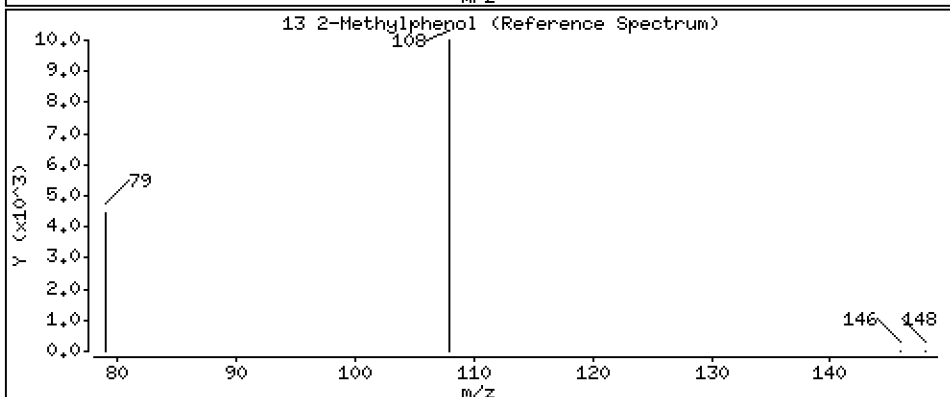
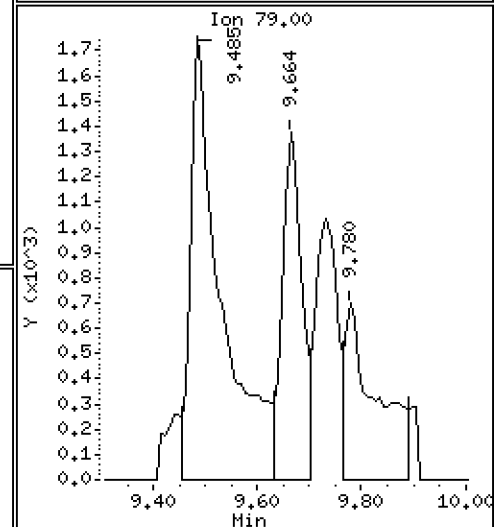
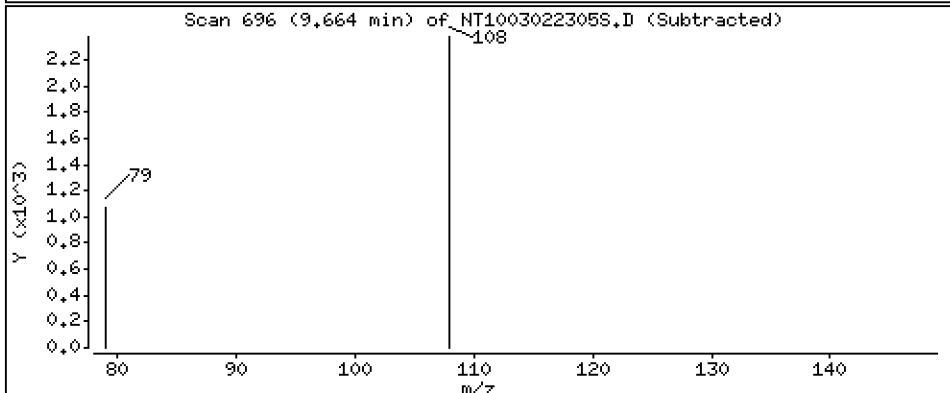
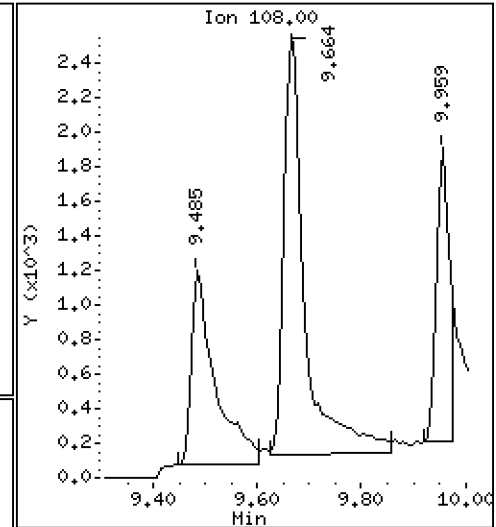
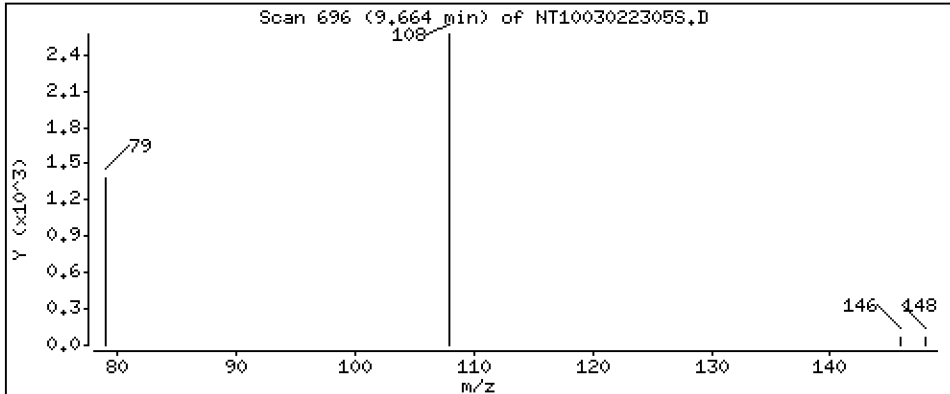
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.05859 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

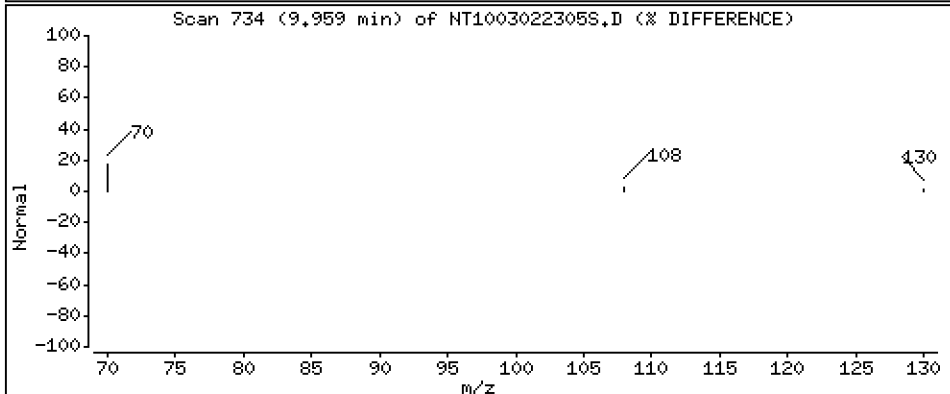
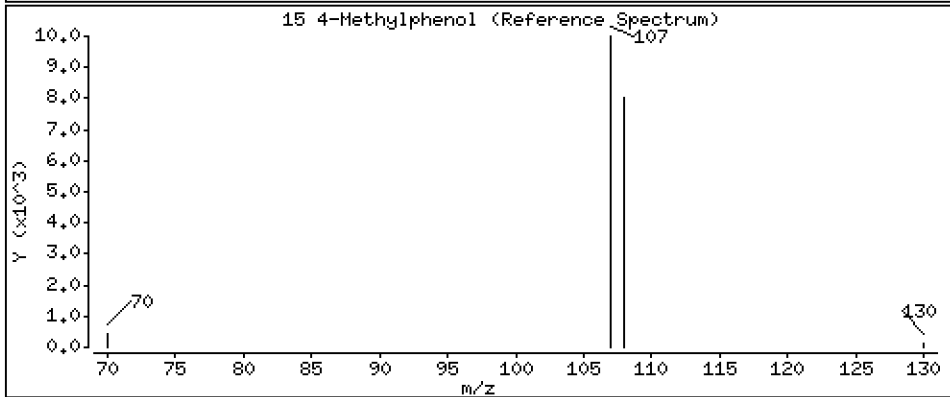
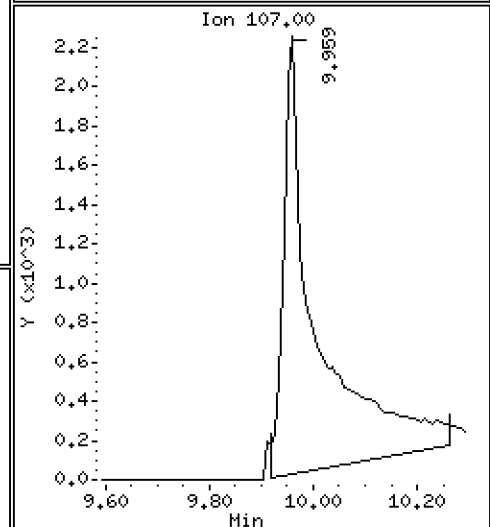
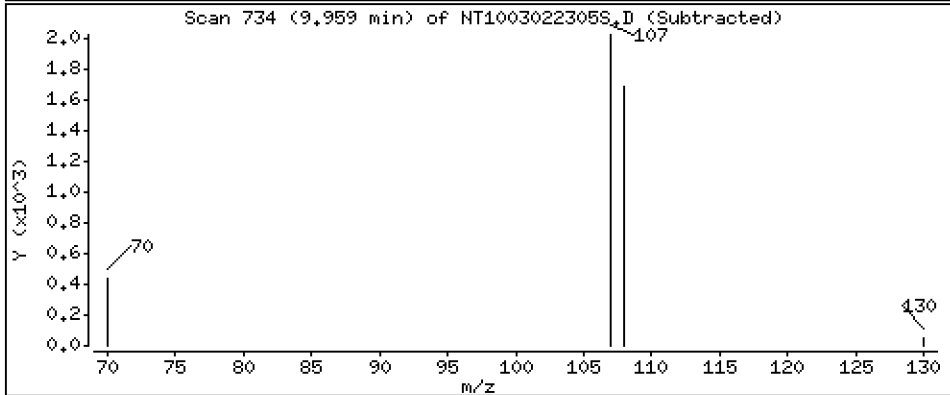
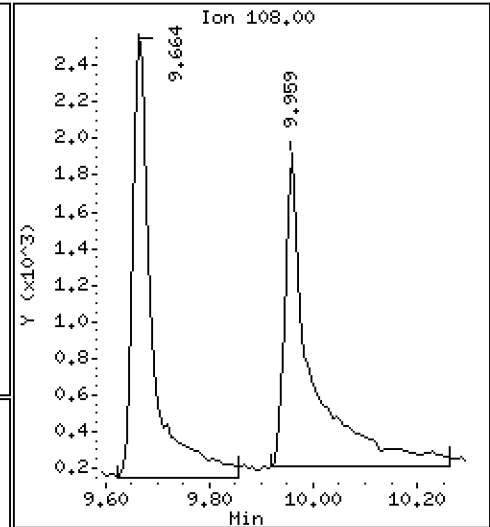
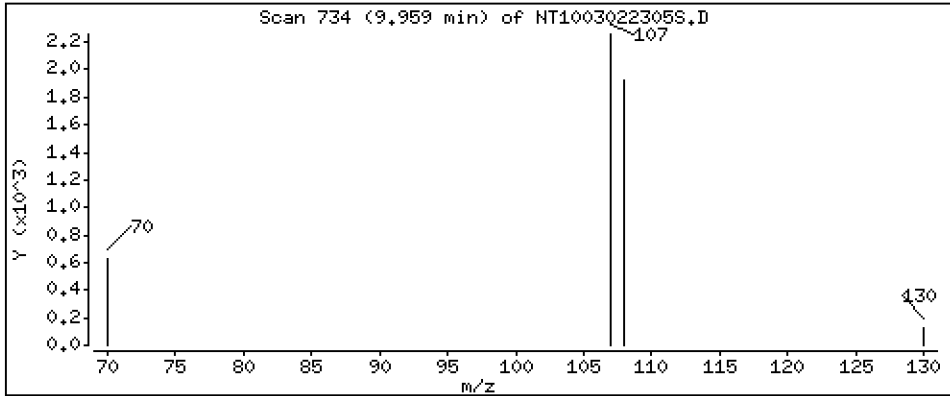
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.05077 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

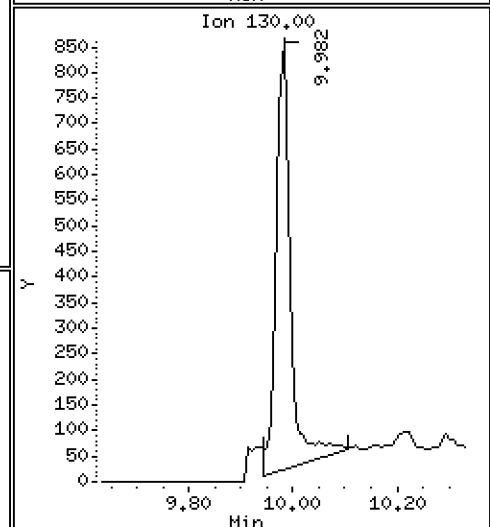
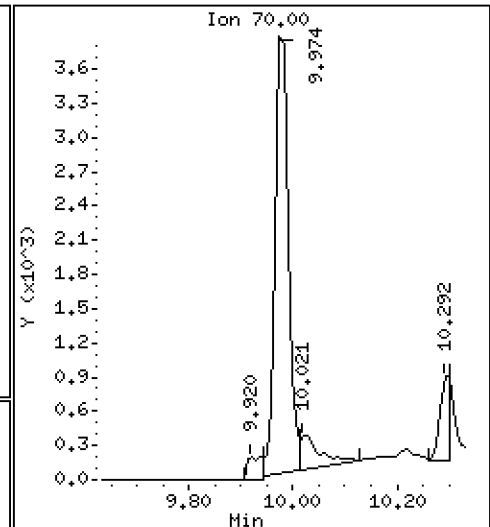
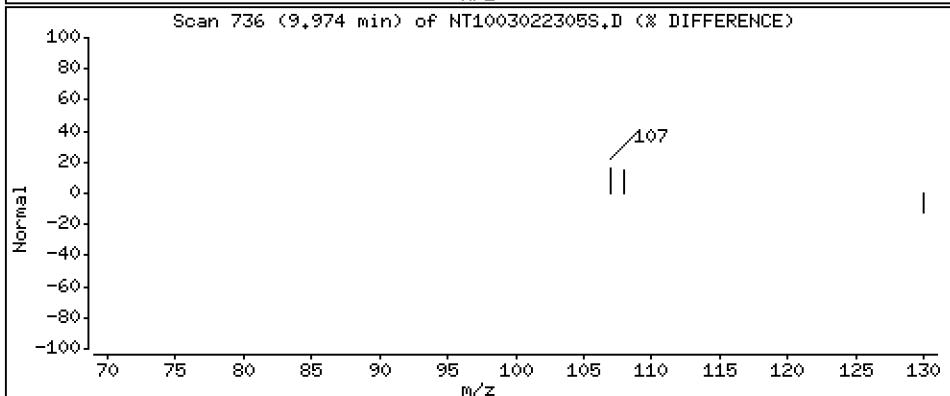
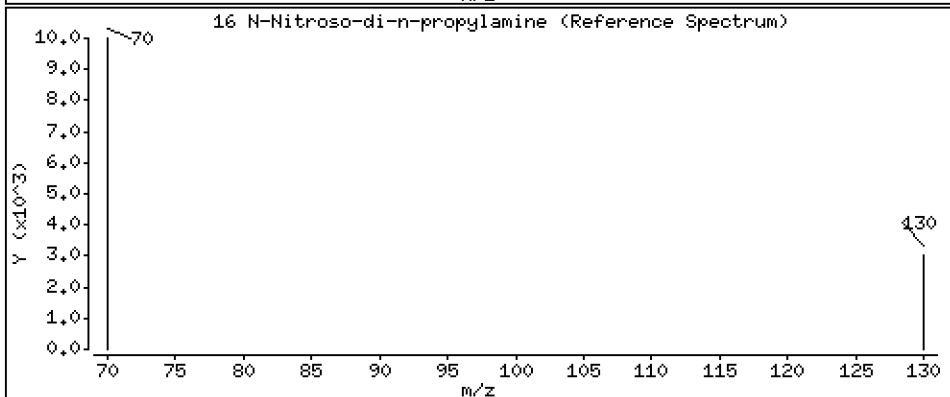
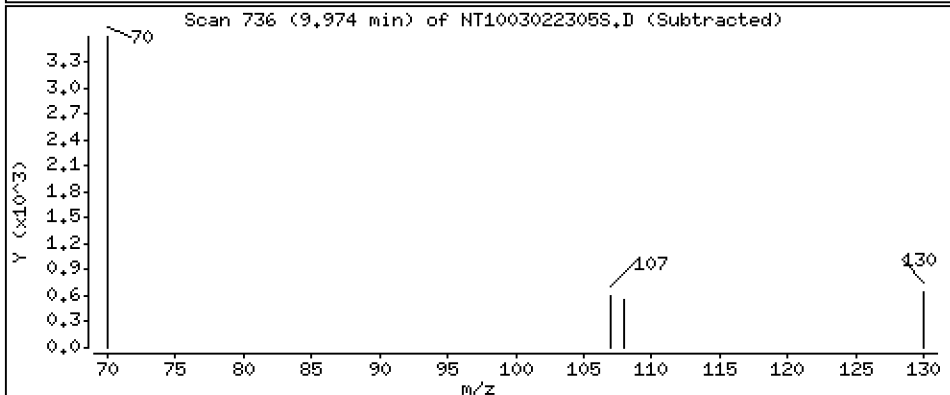
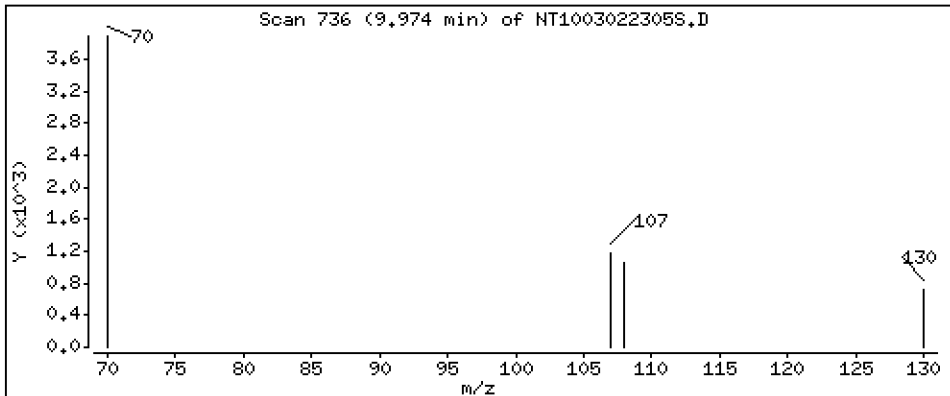
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 0,07785 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

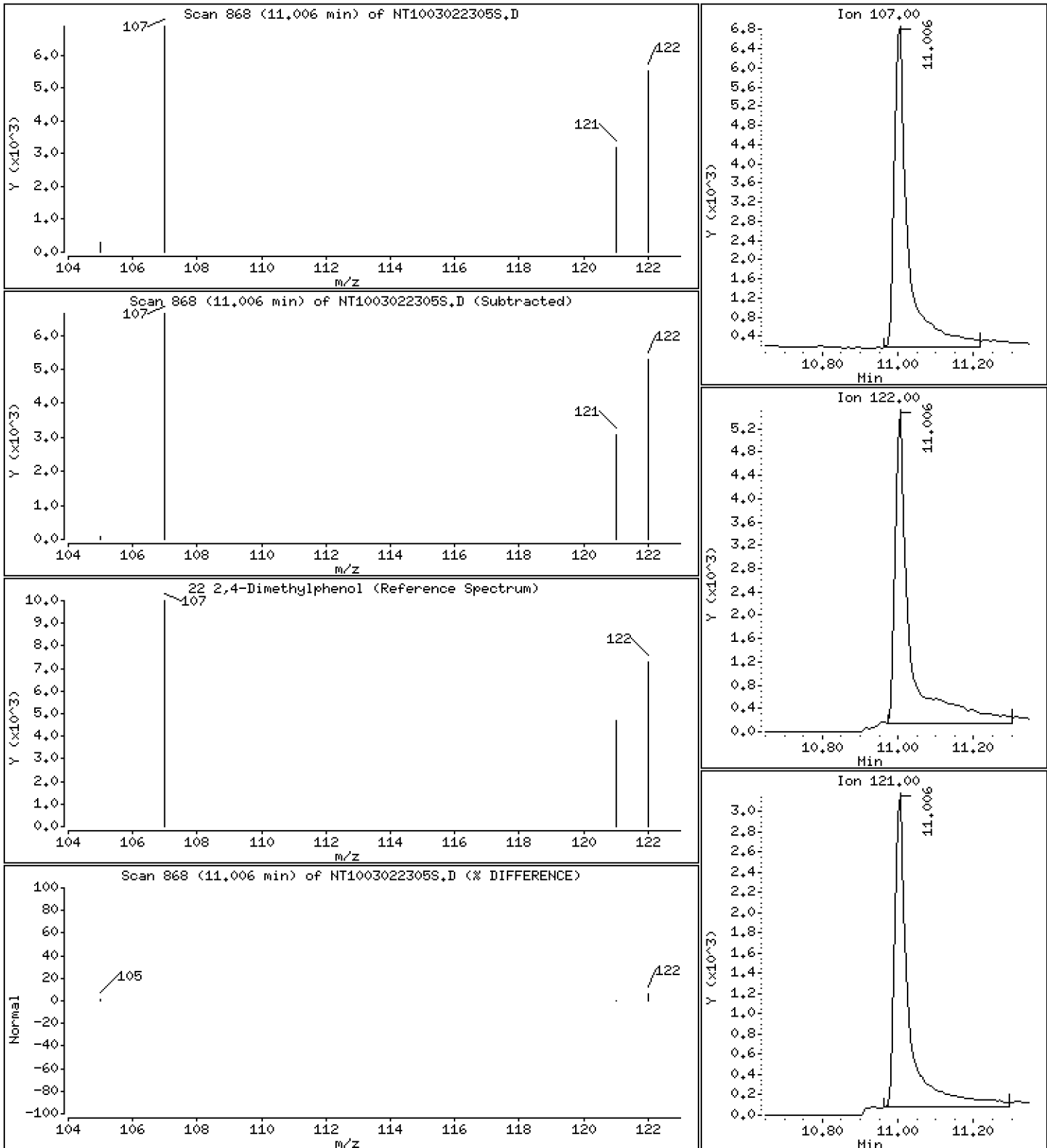
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,1242 ug/L





Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

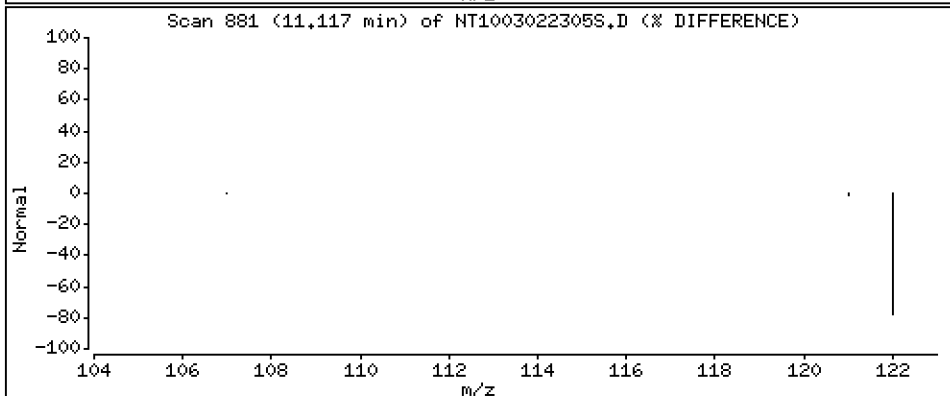
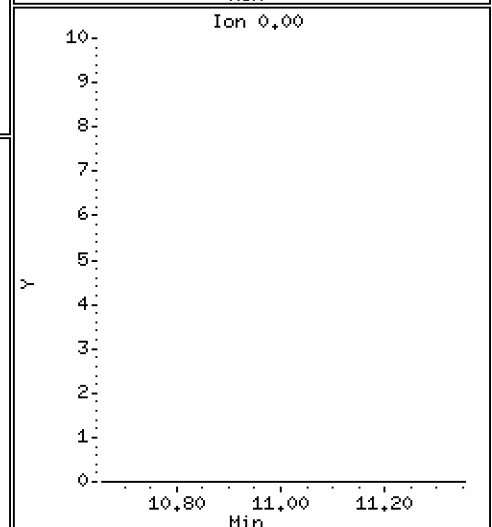
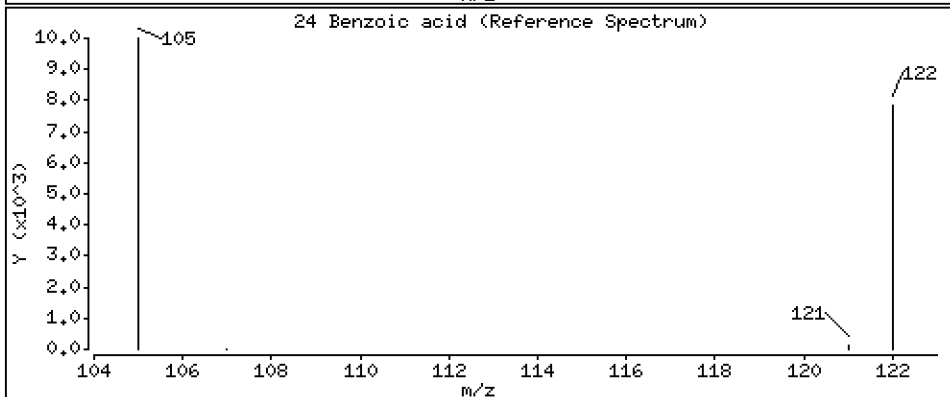
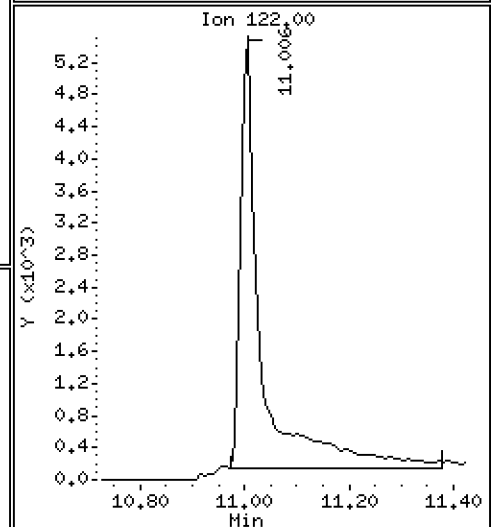
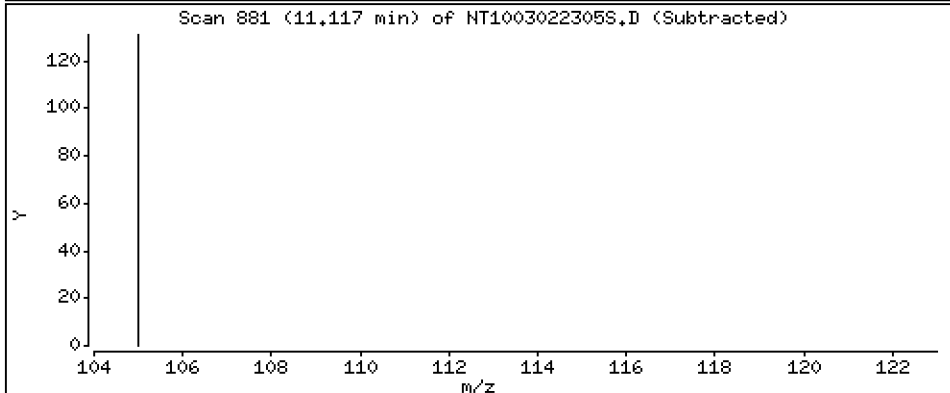
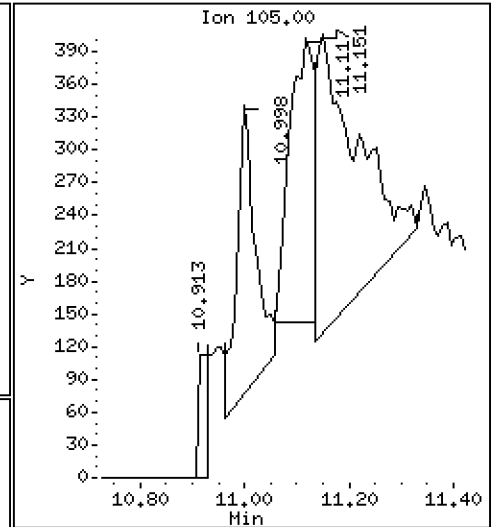
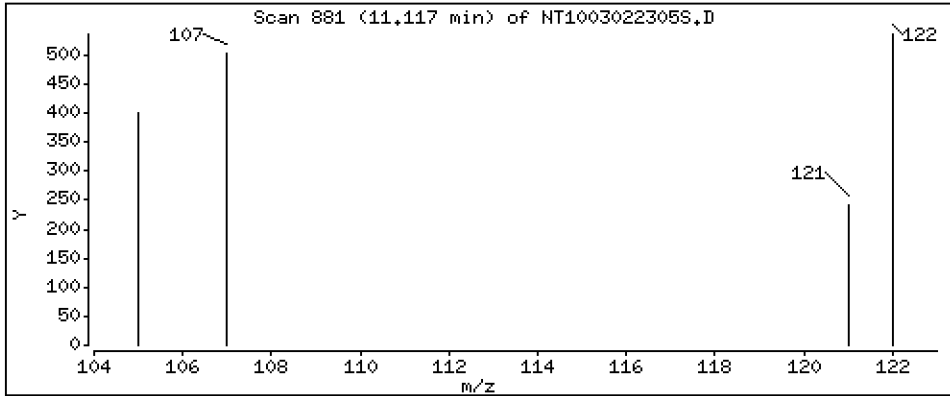
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.01144 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

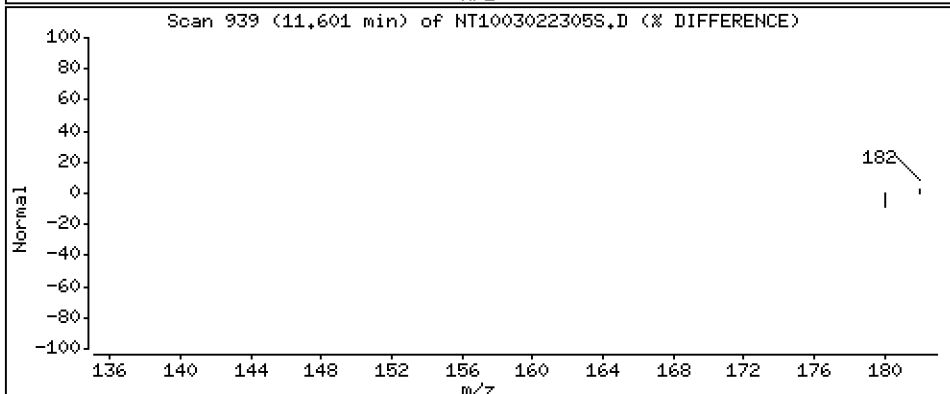
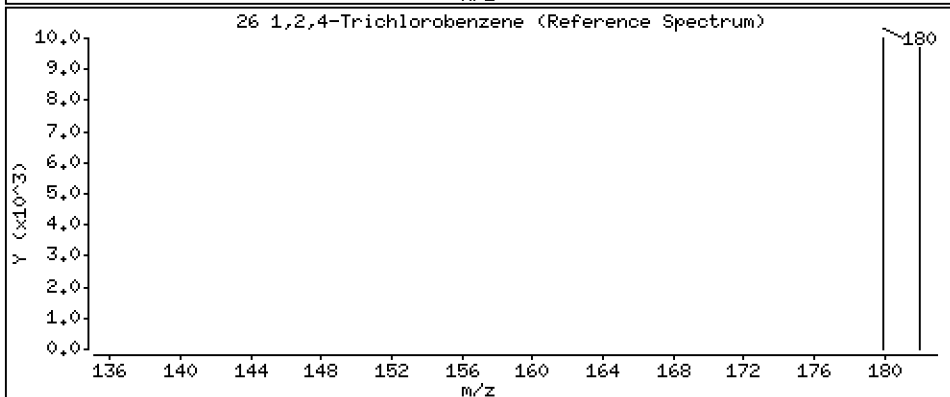
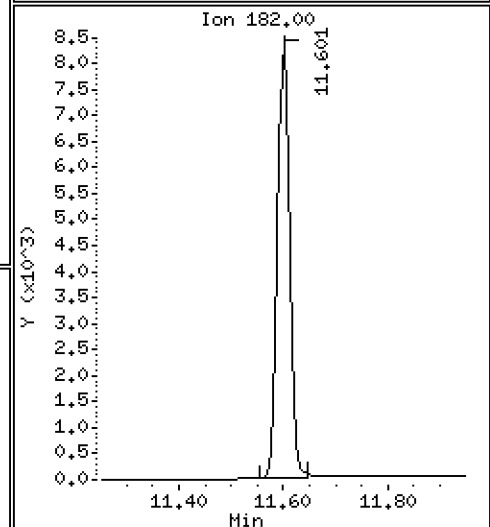
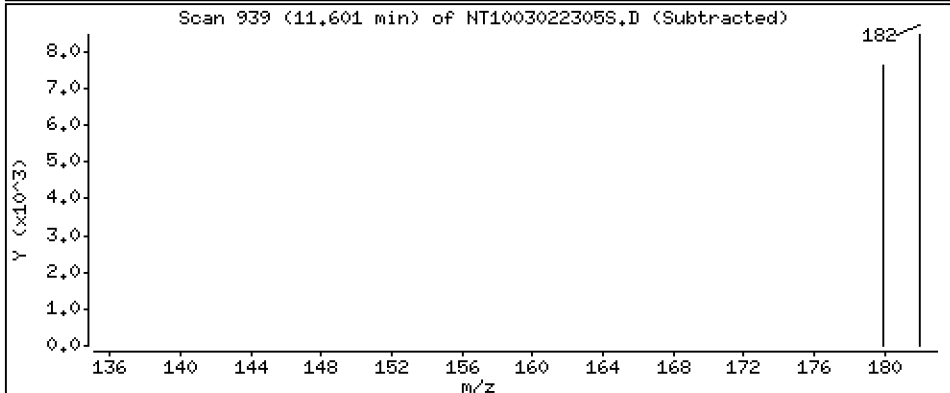
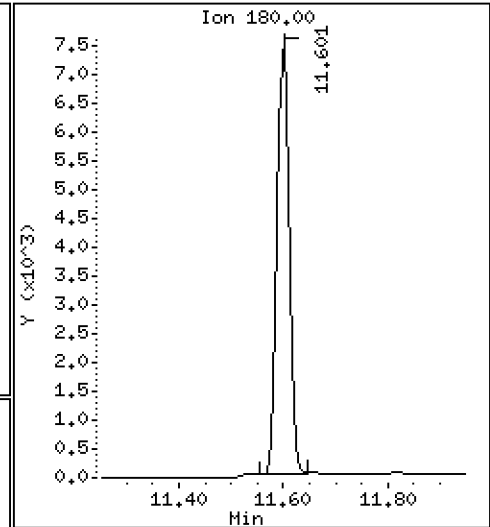
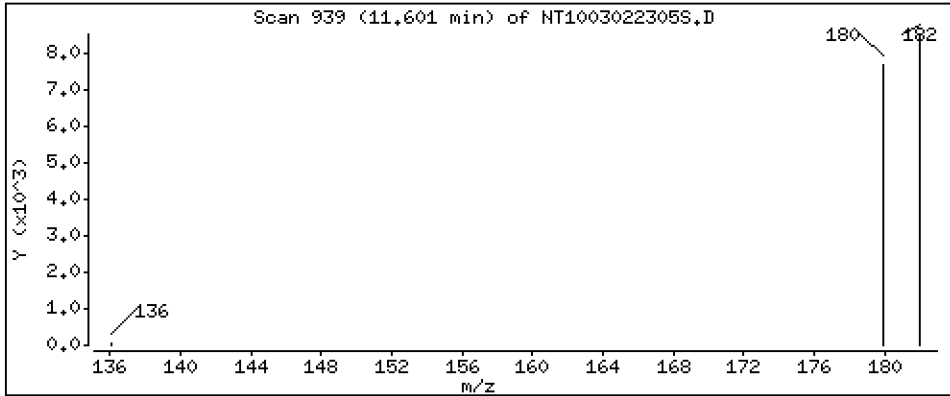
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,09977 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

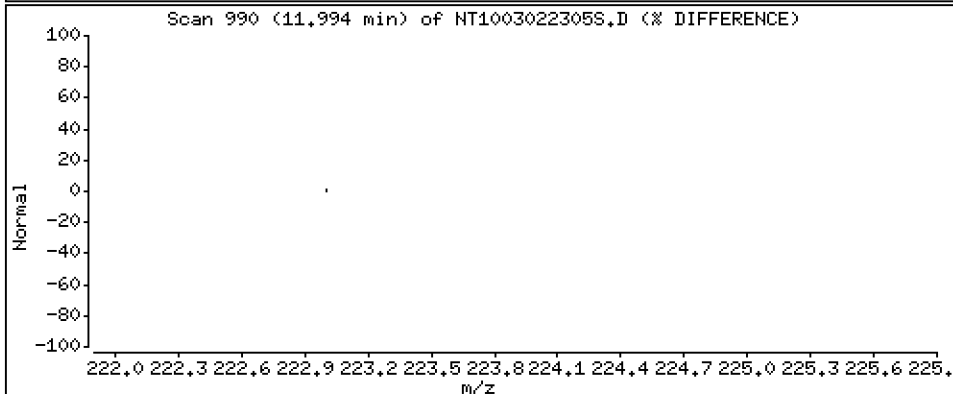
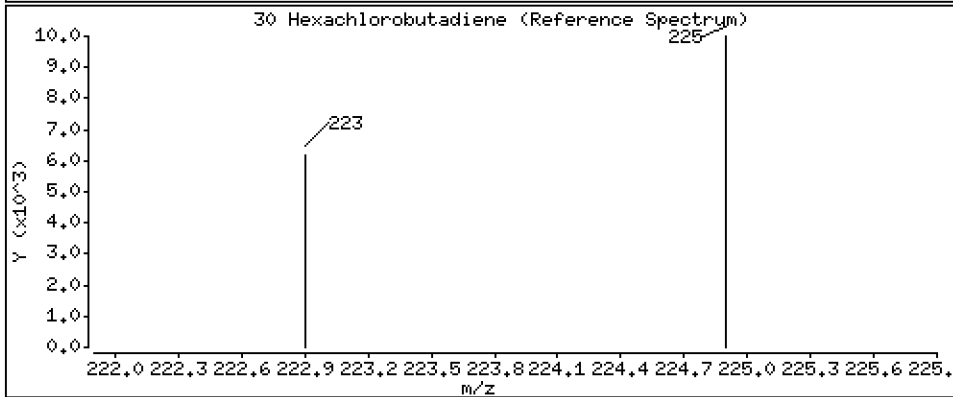
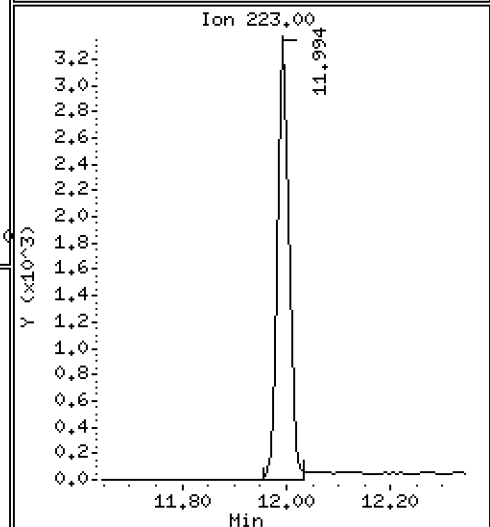
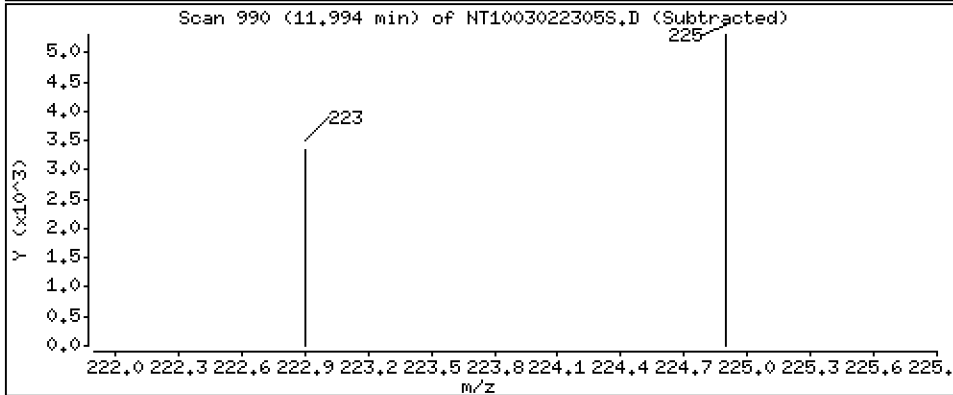
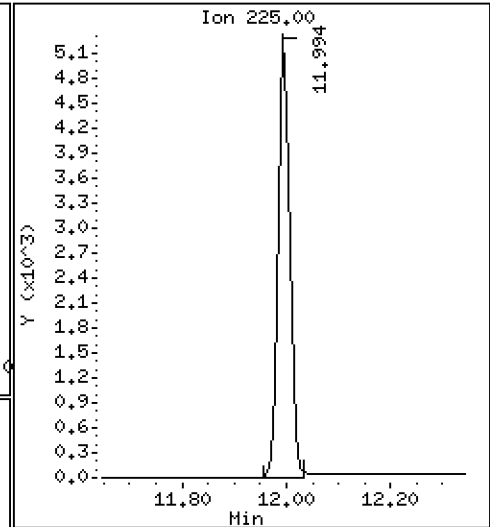
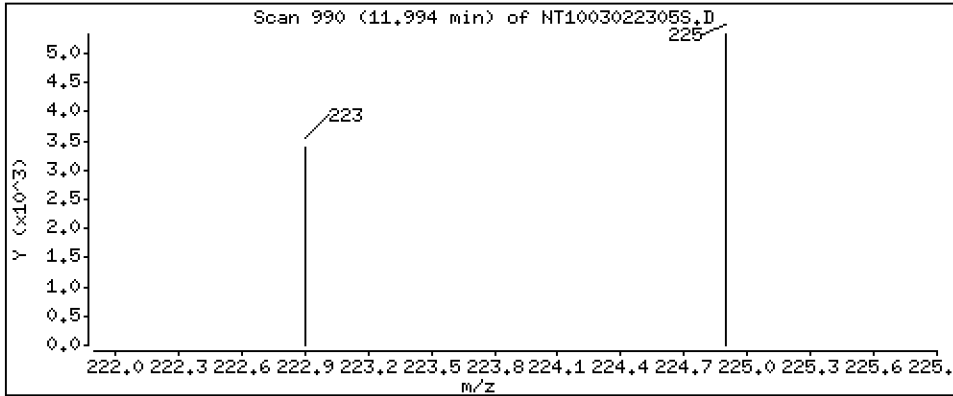
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,09705 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

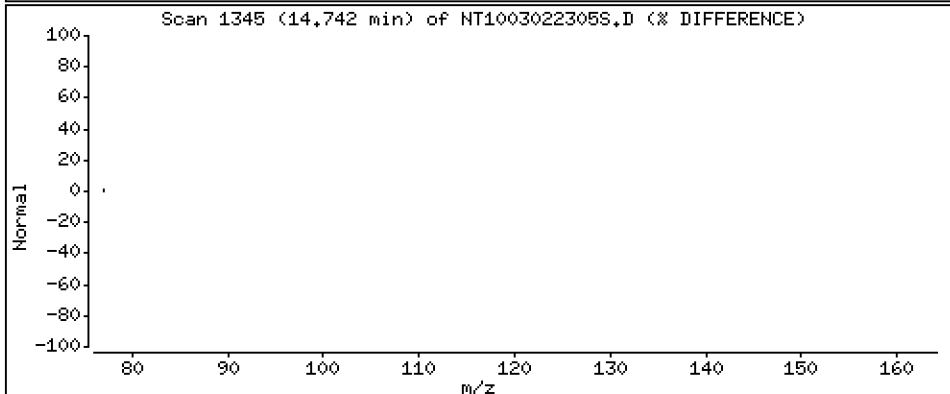
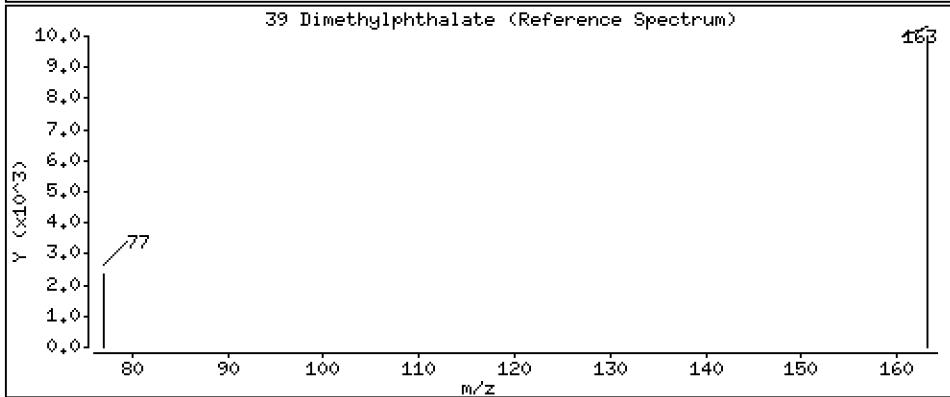
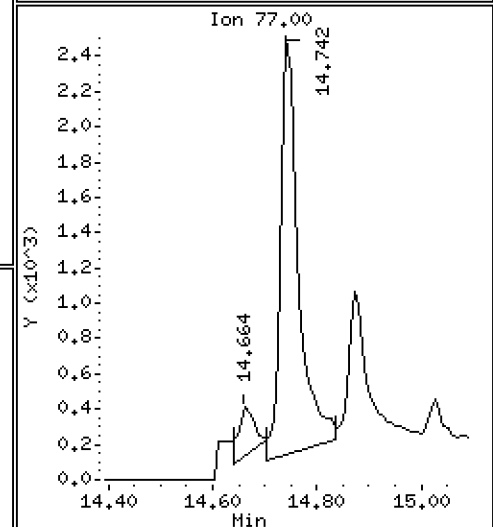
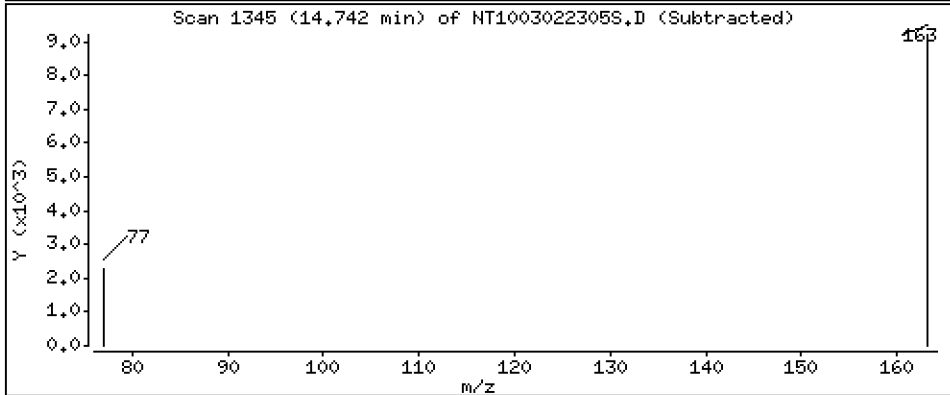
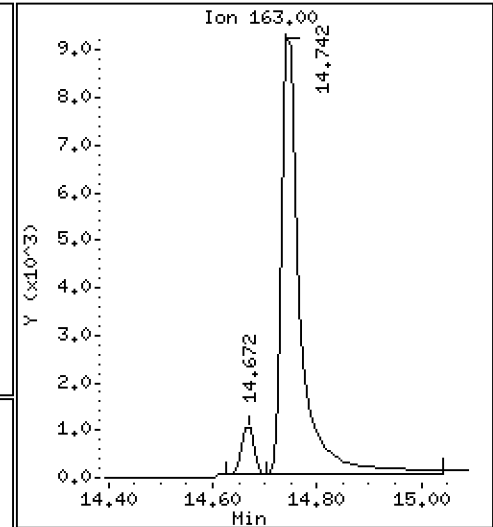
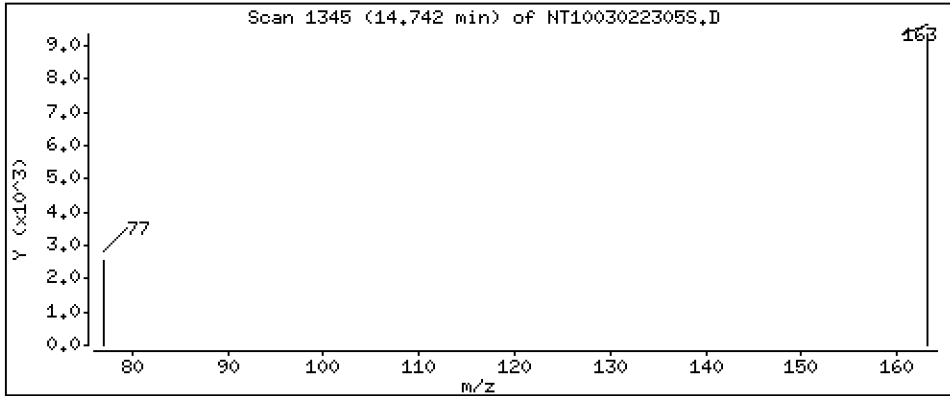
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.08456 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

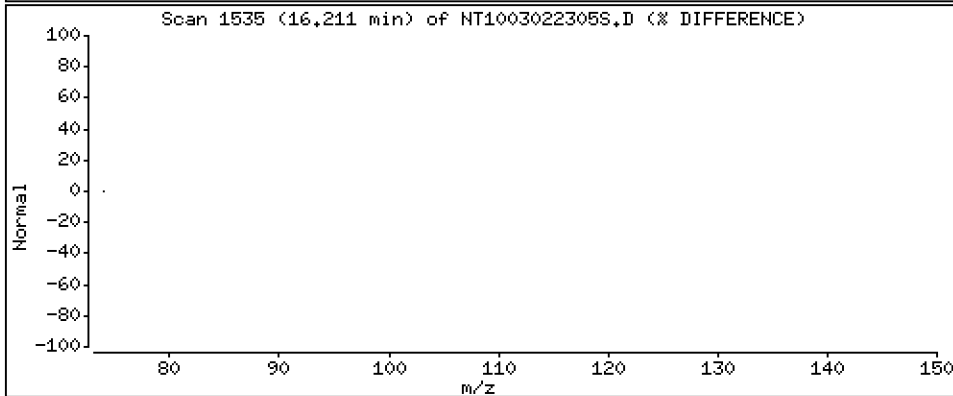
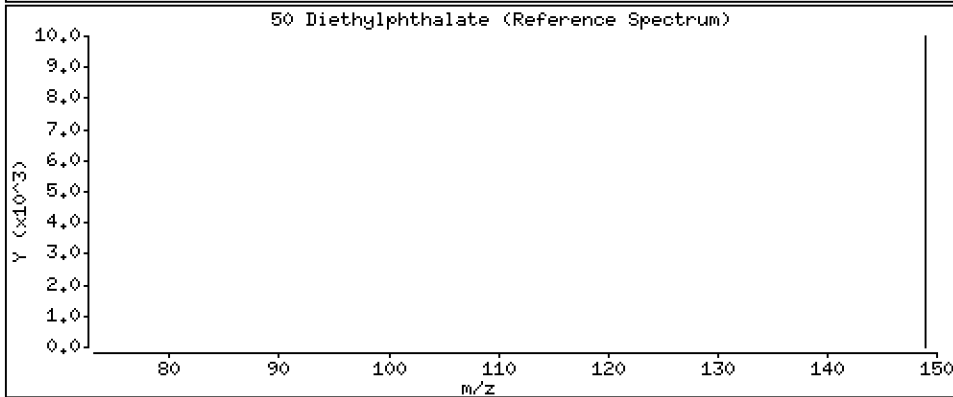
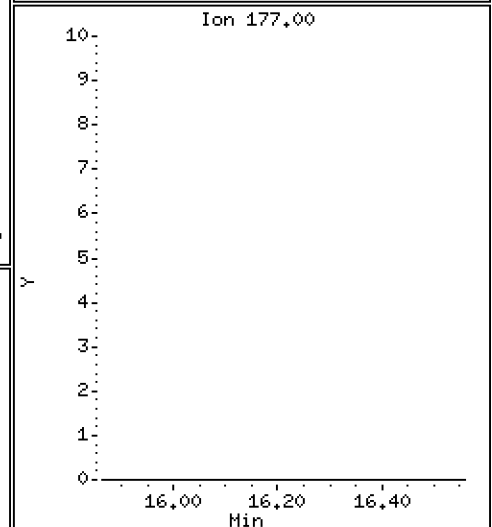
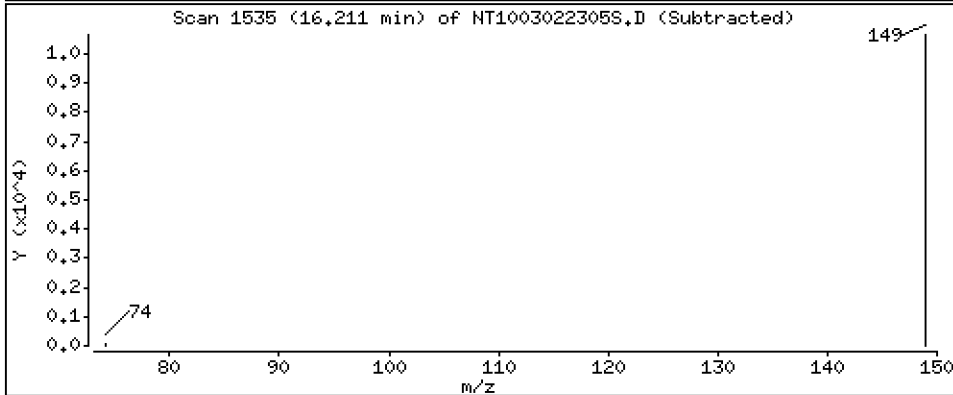
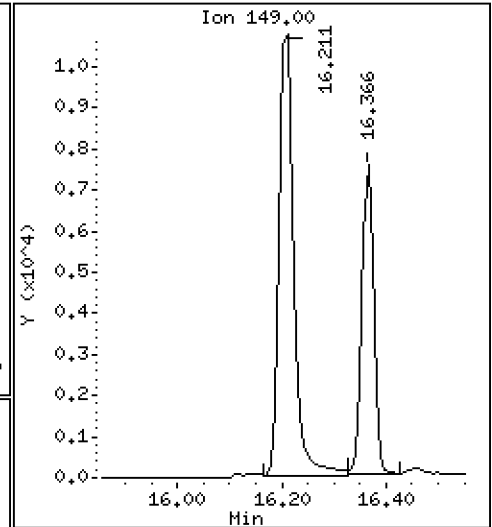
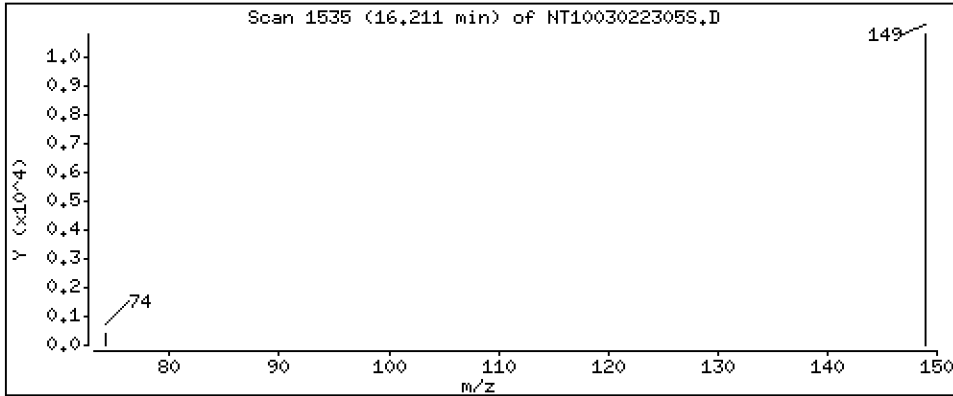
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.08088 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

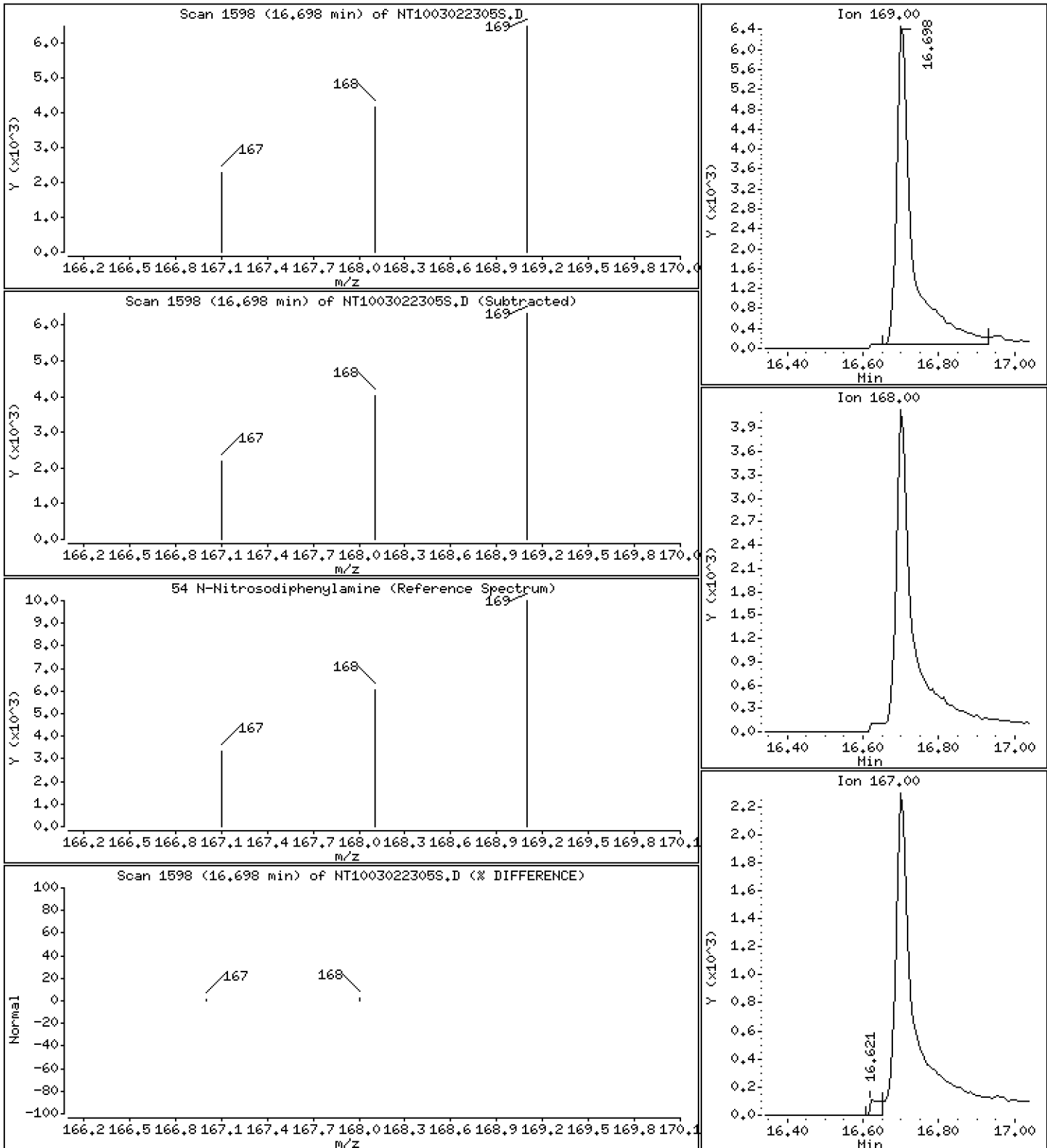
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.08415 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

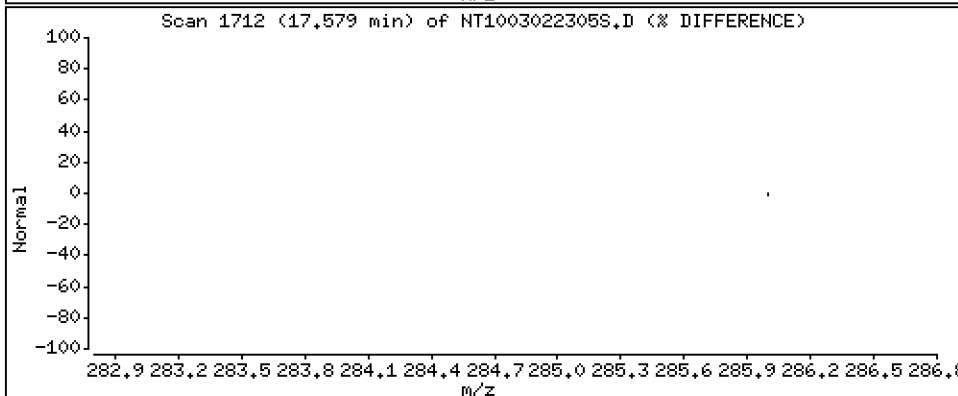
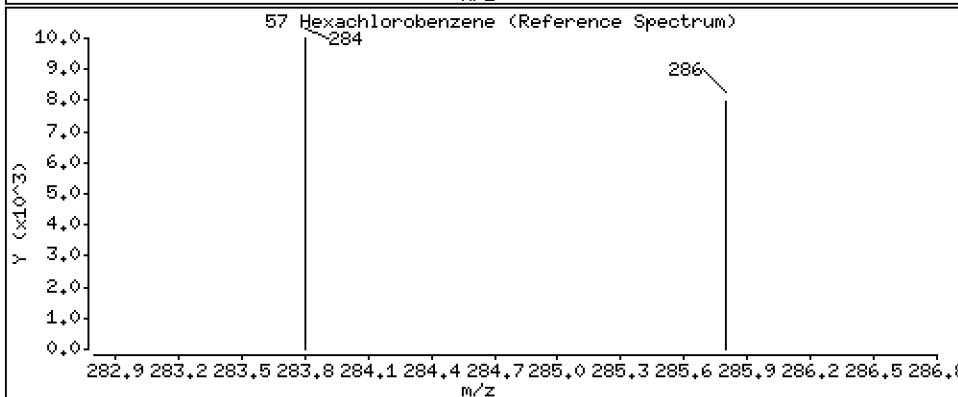
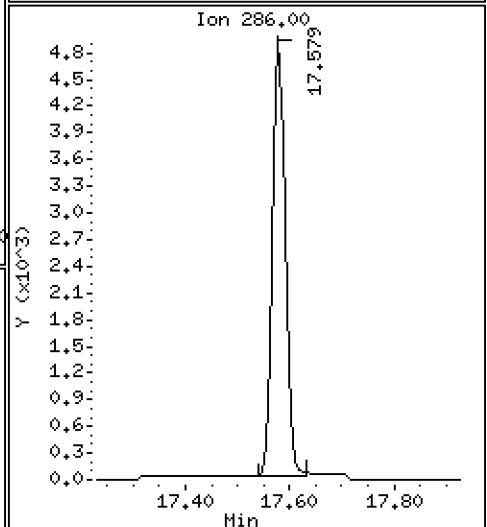
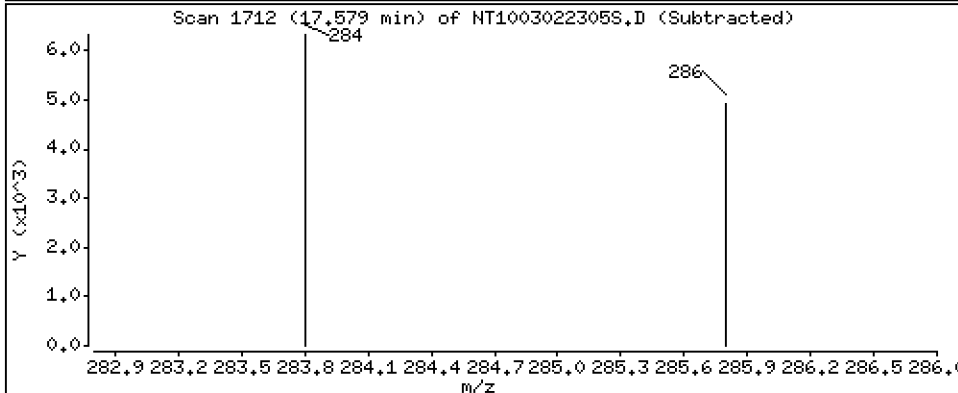
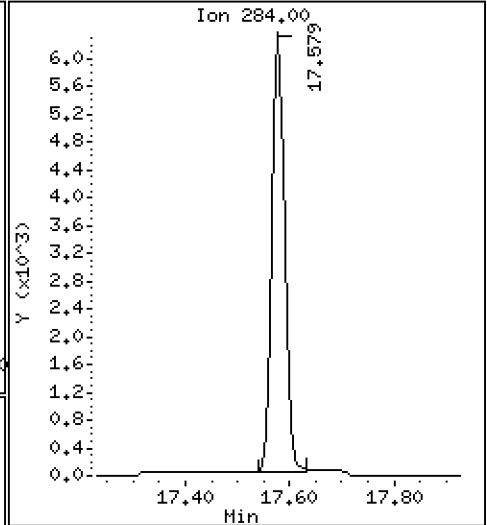
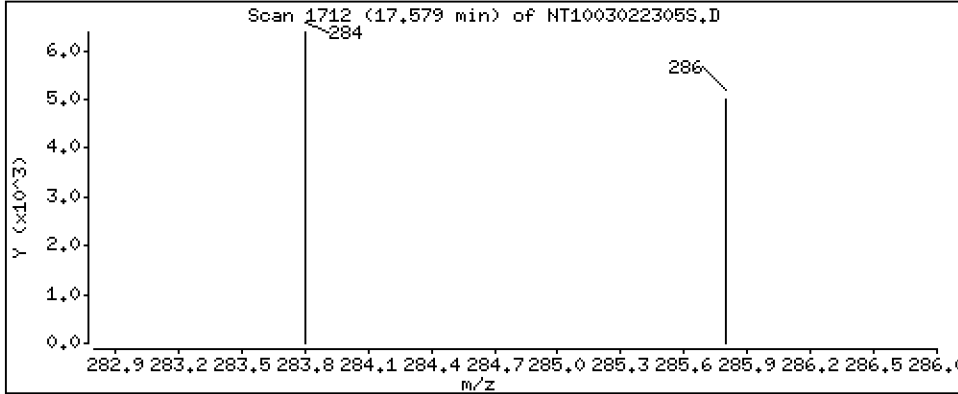
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.09423 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

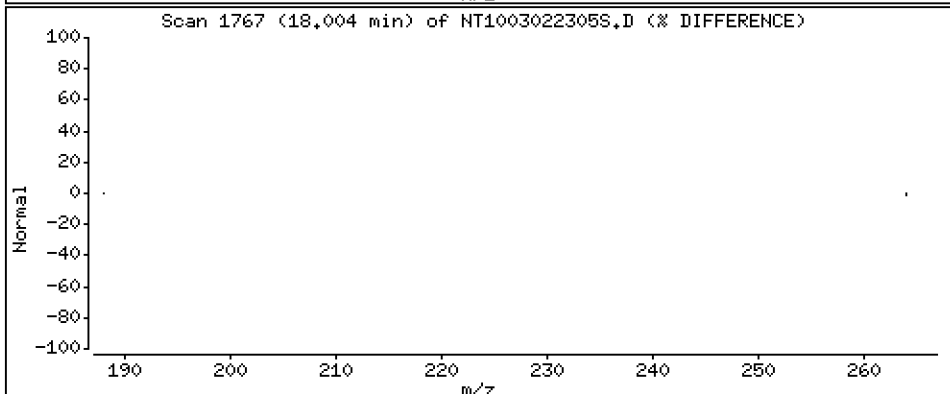
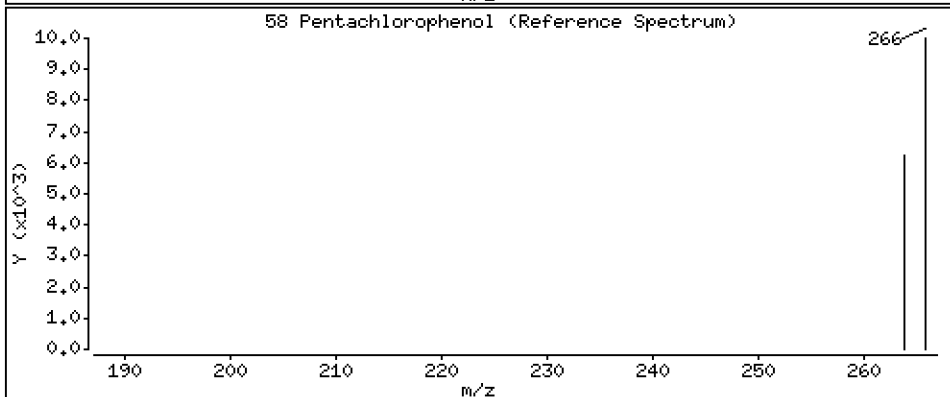
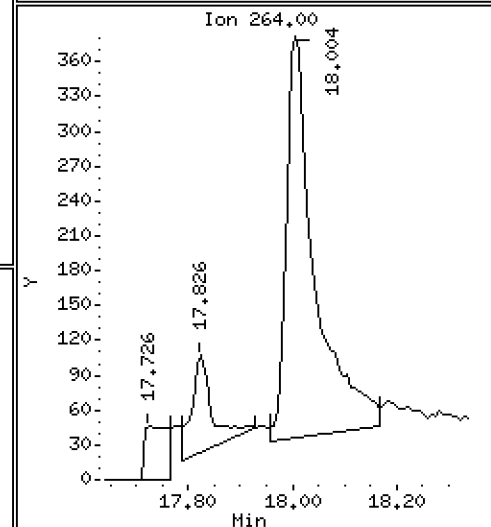
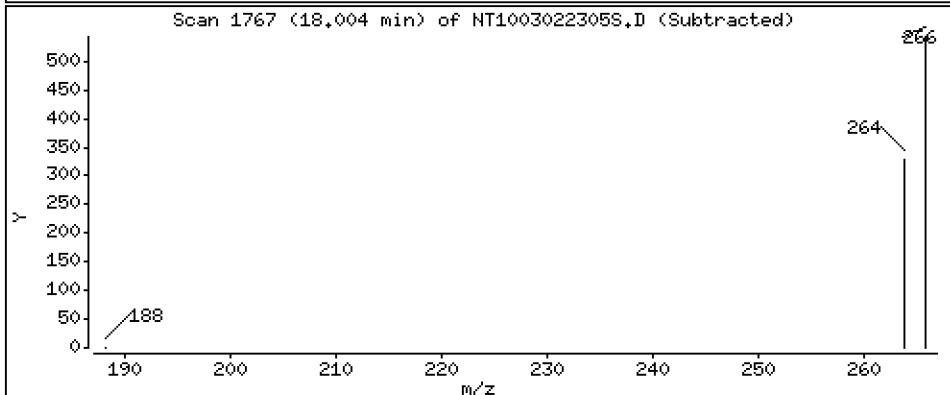
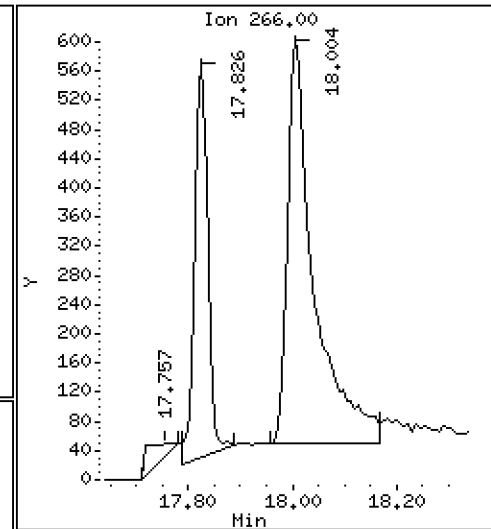
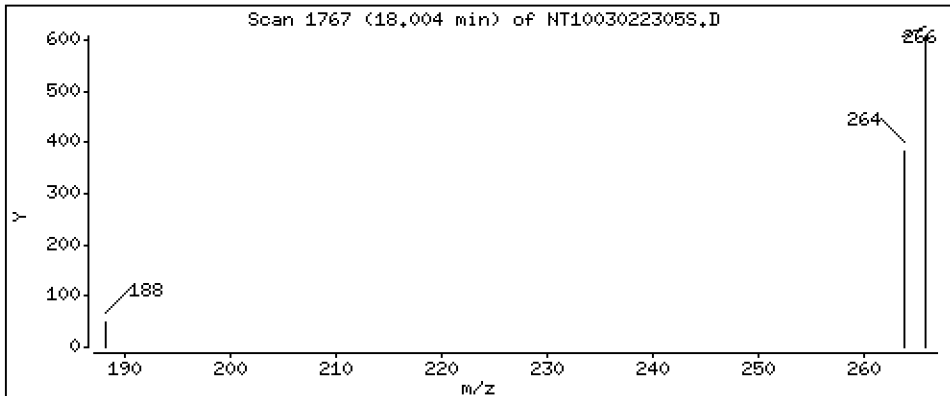
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,04209 ug/L





Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

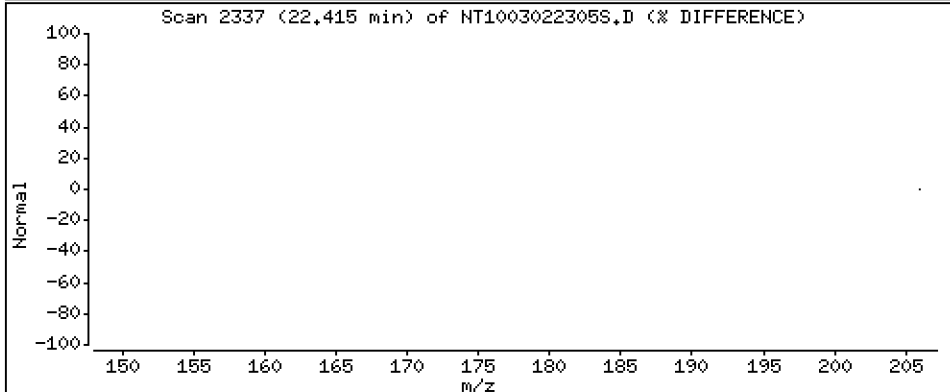
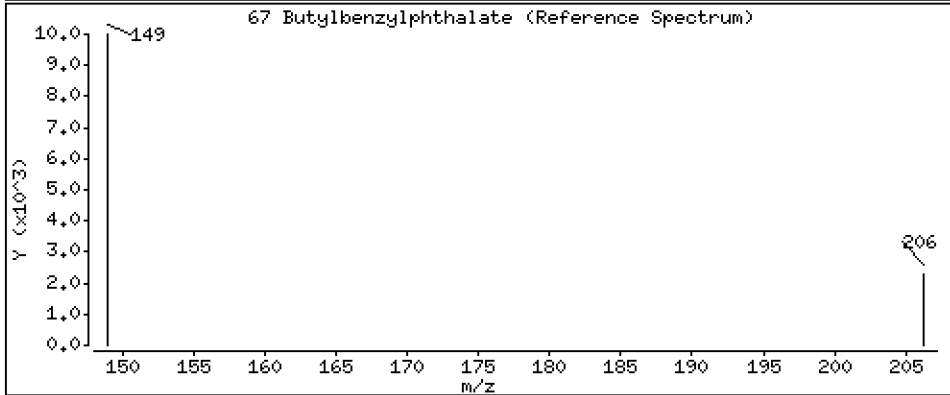
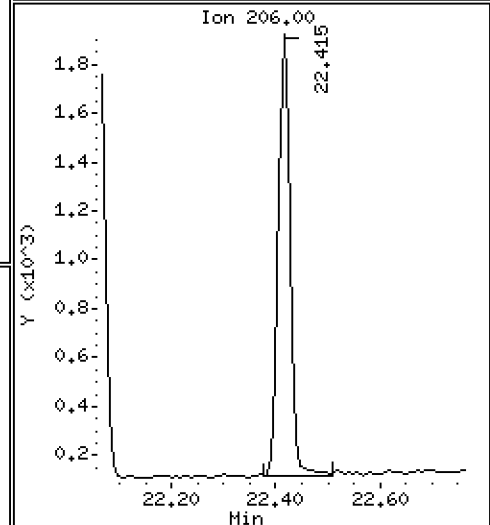
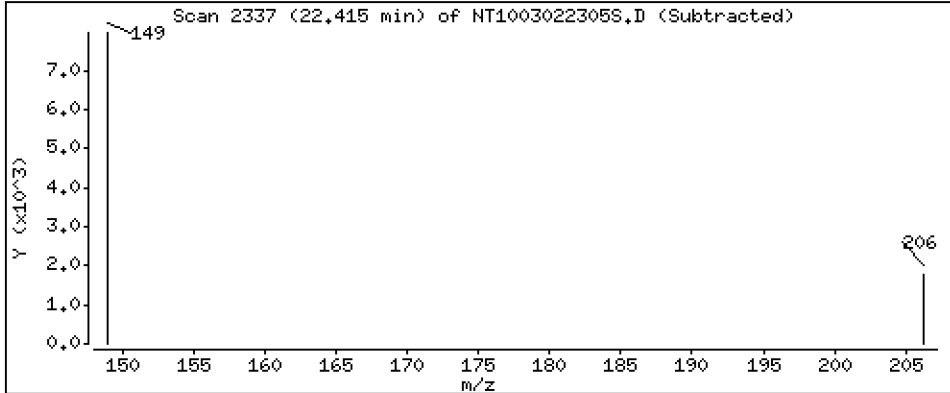
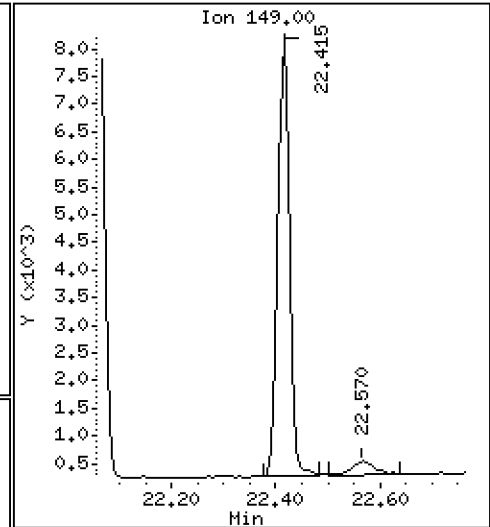
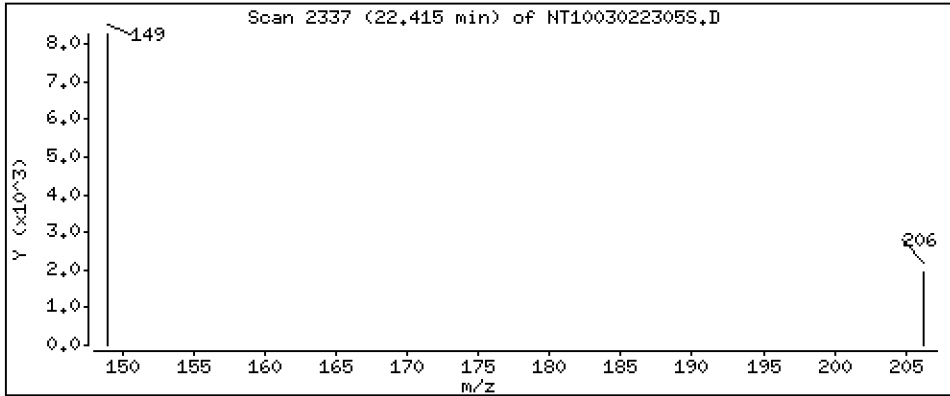
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,04745 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

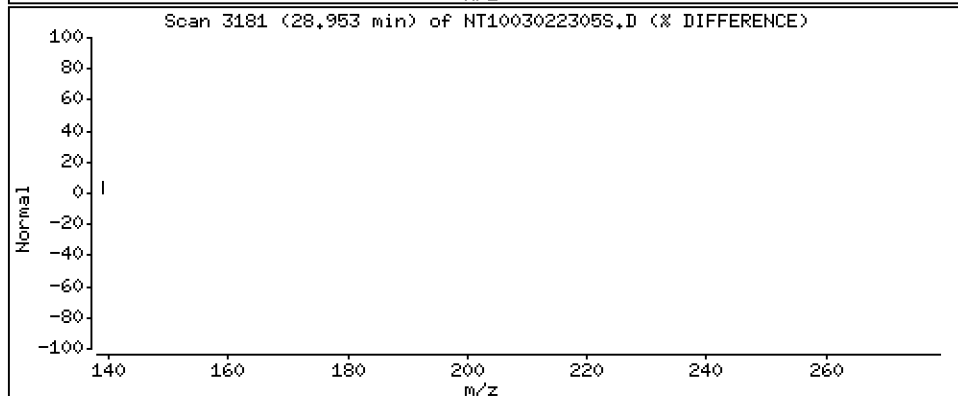
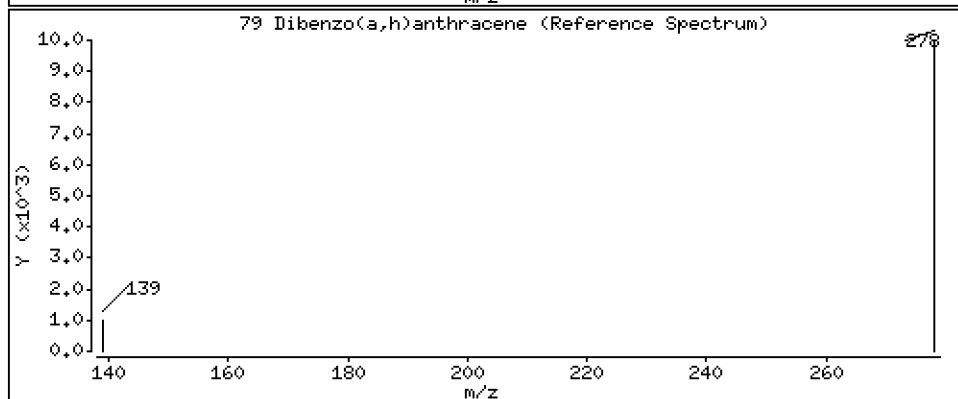
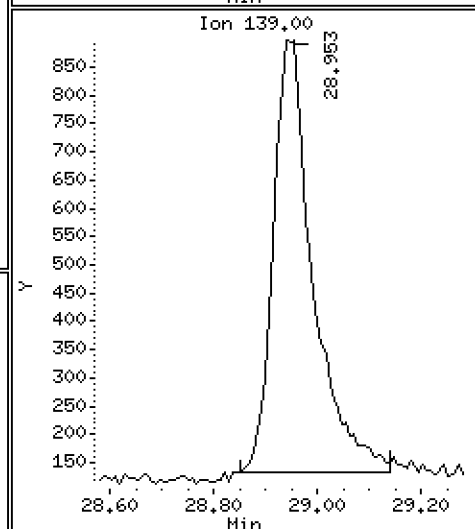
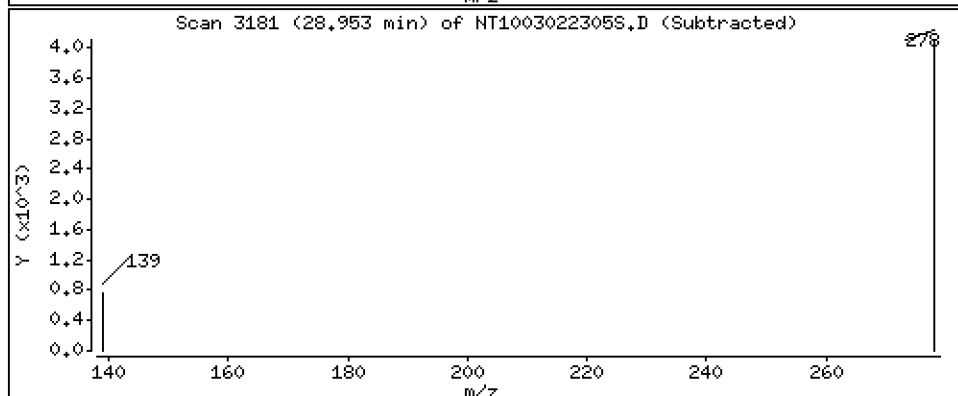
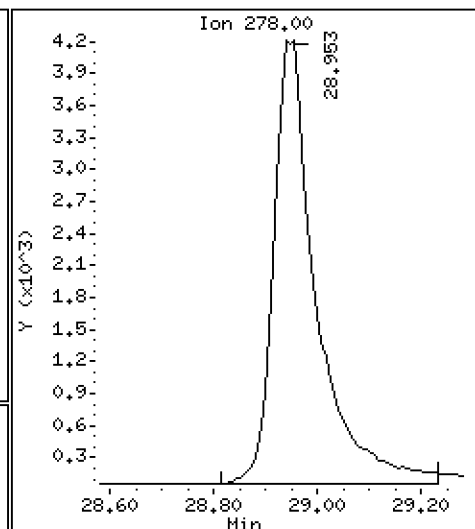
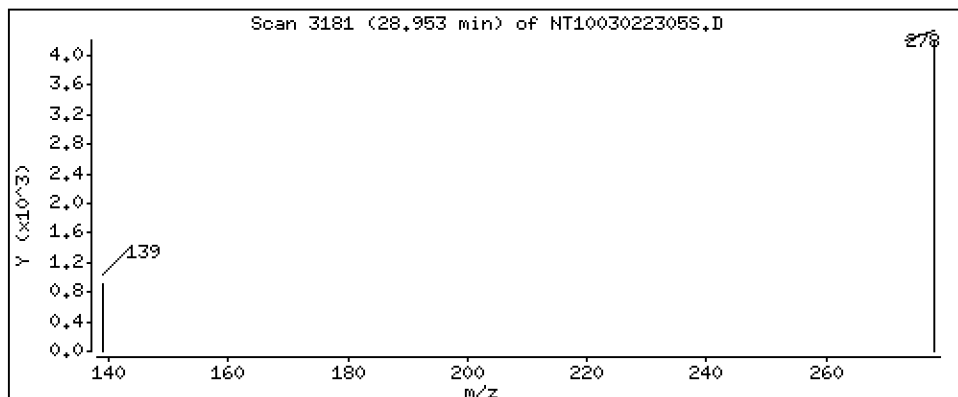
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,05927 ug/L



Date : 02-MAR-2023 16:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV100

Volume Injected (uL): 1.0

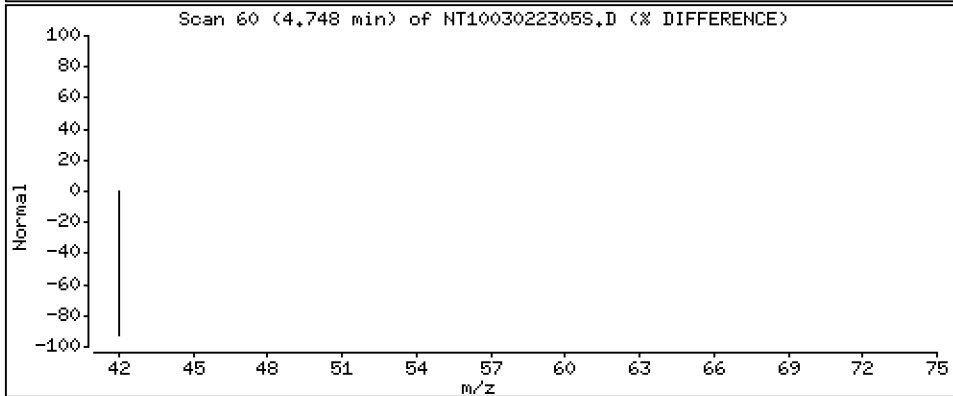
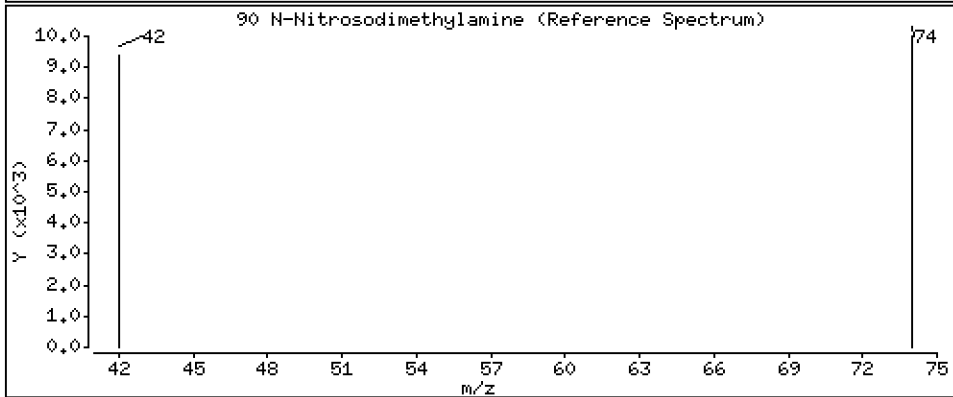
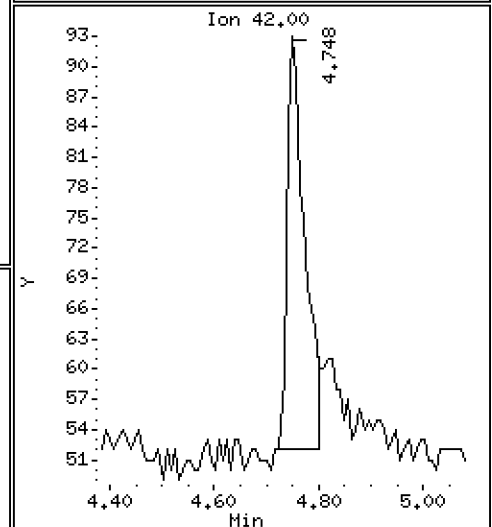
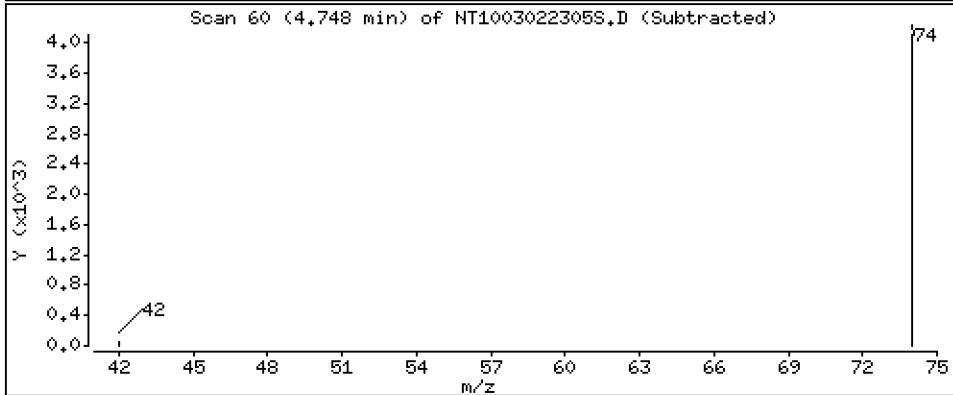
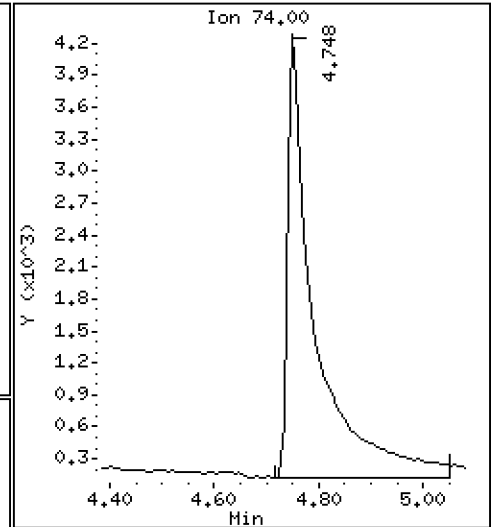
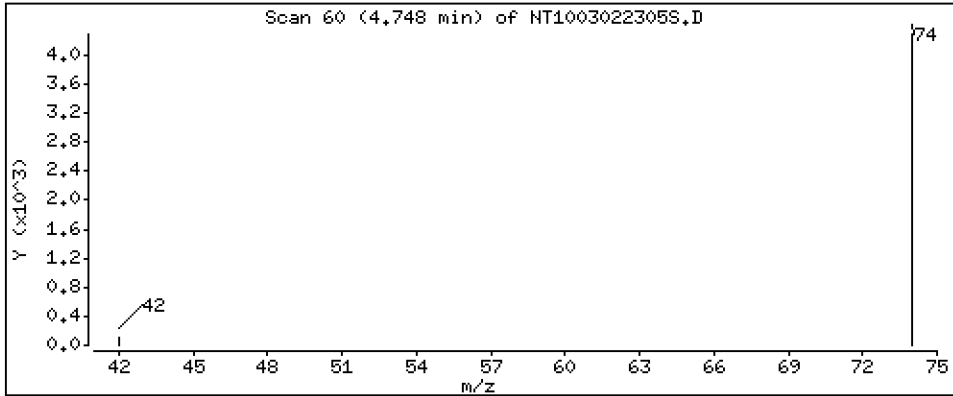
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 0,2020 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022305S.D  
 Lab Smp Id: SEQ-LCV100  
 Inj Date : 02-MAR-2023 16:56 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-LCV100  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:01 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902 (0.746)		16841	0.13125	0.1313 (R)
3 Phenol	94		8.525	8.517 (0.921)		11585	0.06121	0.06121
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		17226	0.10342	0.1034
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251 (1.000)		449433	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282 (1.003)		16689	0.10305	0.1031
11 Benzyl alcohol	79		9.485	9.476 (1.025)		5576	0.05313	0.05313
12 1,2-Dichlorobenzene	146		9.562	9.562 (1.034)		15971	0.10261	0.1026
13 2-Methylphenol	108		9.663	9.655 (1.044)		6667	0.05859	0.05859
15 4-Methylphenol	108		9.958	9.942 (1.076)		6008	0.05077	0.05077
16 N-Nitroso-di-n-propylamine	70		9.974	9.981 (1.078)		6561	0.07785	0.07785
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		16823	0.12421	0.1242
24 Benzoic acid	105		11.116	11.074 (0.948)		849	0.01144	0.01144
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		11460	0.09977	0.09977
* 27 Naphthalene-d8	136		11.724	11.723 (1.000)		1595952	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994 (1.023)		7911	0.09705	0.09705
39 Dimethylphthalate	163		14.741	14.741 (0.963)		22082	0.08456	0.08456
* 42 Acenaphthene-d10	162		15.314	15.314 (1.000)		822385	4.00000	
50 Diethylphthalate	149		16.211	16.203 (1.059)		19916	0.08088	0.08088
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		19183	0.08415	0.08415
57 Hexachlorobenzene	284		17.578	17.578 (0.955)		10053	0.09423	0.09423

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.004	17.988	(0.978)	1965	0.04209	0.04209
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1408565	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	9829	0.08388	0.08388 (R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	11608	0.04745	0.04745
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1449074	4.00000	
* 77 Perylene-d12	264	26.116	26.115	(1.000)	1721904	4.00000	
79 Dibenzo(a,h)anthracene	278	28.953	28.929	(1.109)	23649	0.05927	0.05927
90 N-Nitrosodimethylamine	74	4.748	4.732	(0.513)	15343	0.20197	0.2020

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022305S.D  
 Lab Smp Id: SEQ-LCV100  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	449433	-8.91
27 Naphthalene-d8	1779056	889528	3558112	1595952	-10.29
42 Acenaphthene-d10	954569	477285	1909138	822385	-13.85
59 Phenanthrene-d10	1596290	798145	3192580	1408565	-11.76
69 Chrysene-d12	1649110	824555	3298220	1449074	-12.13
77 Perylene-d12	1901958	950979	3803916	1721904	-9.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022305S.D

Lab ID: SEQ-LCV100

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 16:56

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

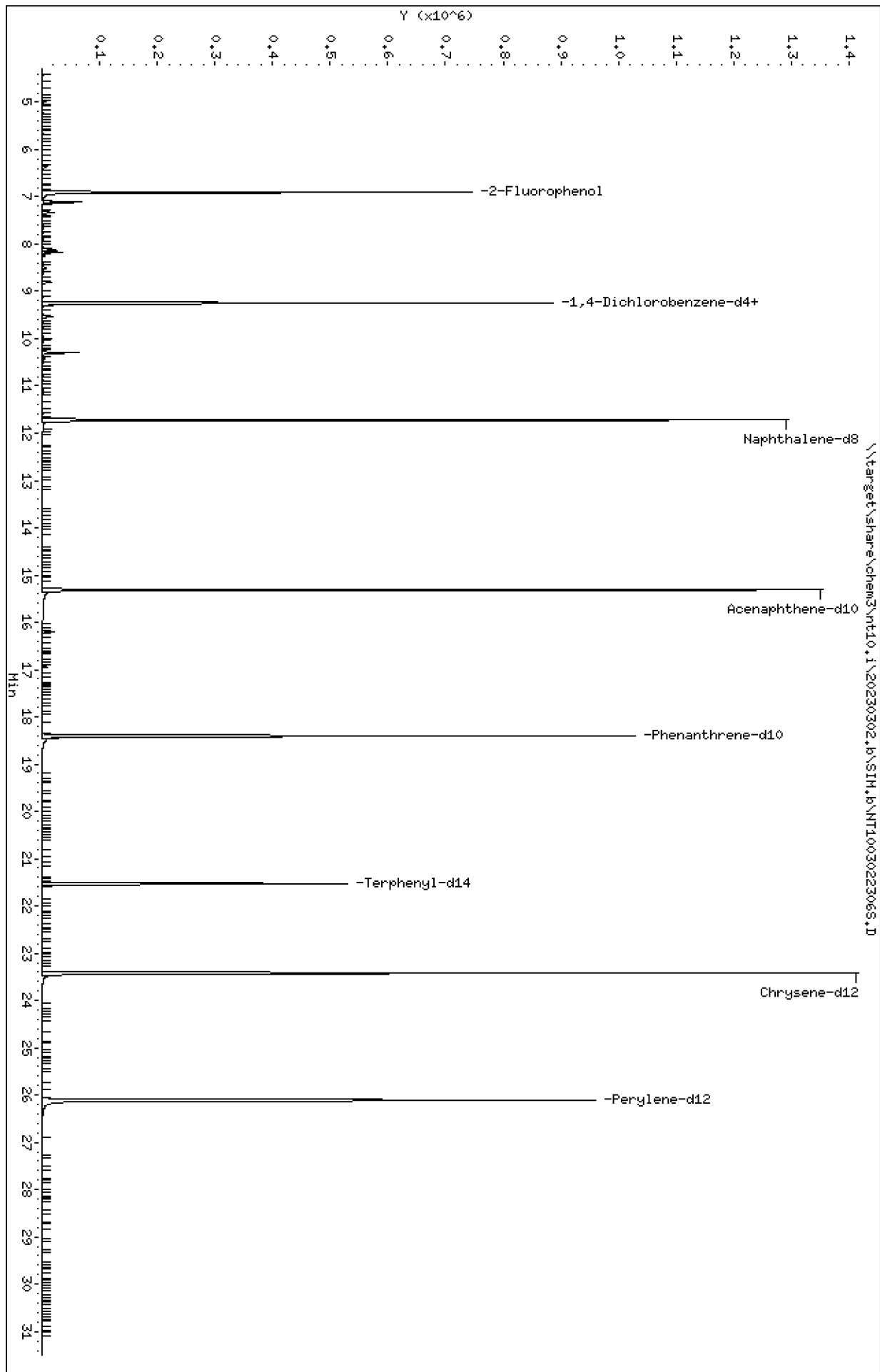
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022306S.D  
Date : 02-MAR-2023 17:34  
Client ID:  
Sample Info: BLR0624-BLK1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25





Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

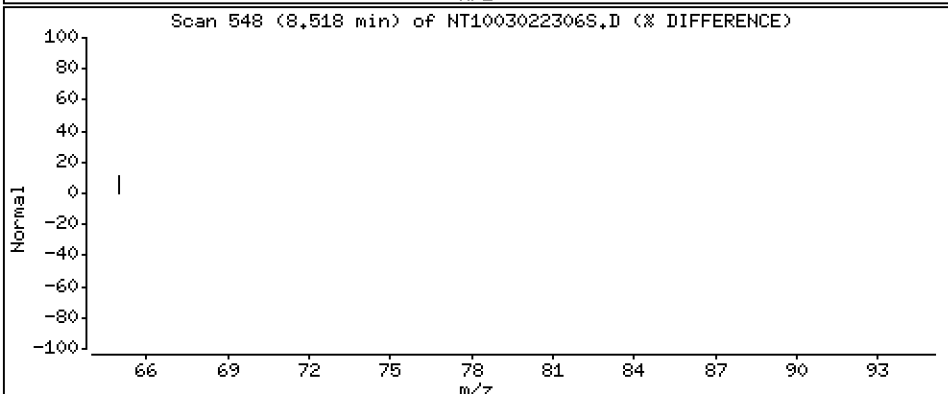
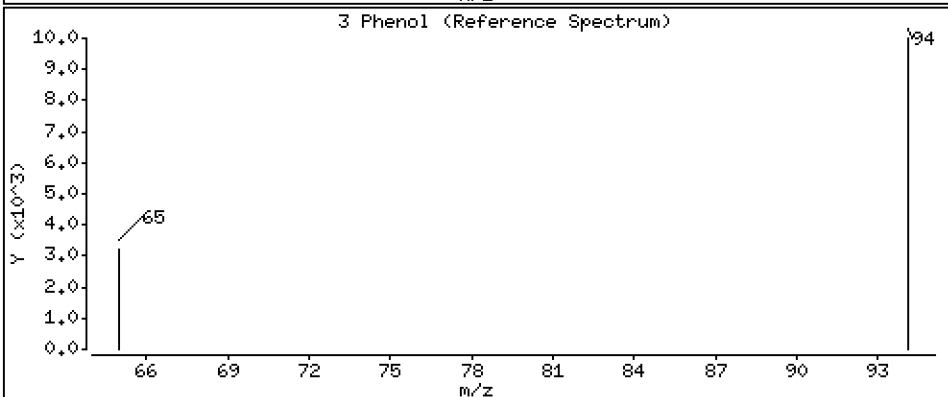
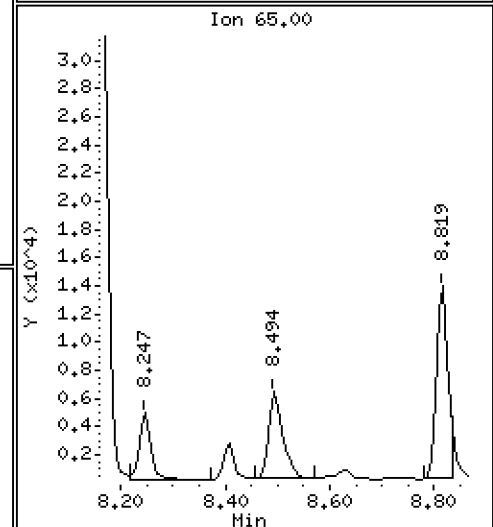
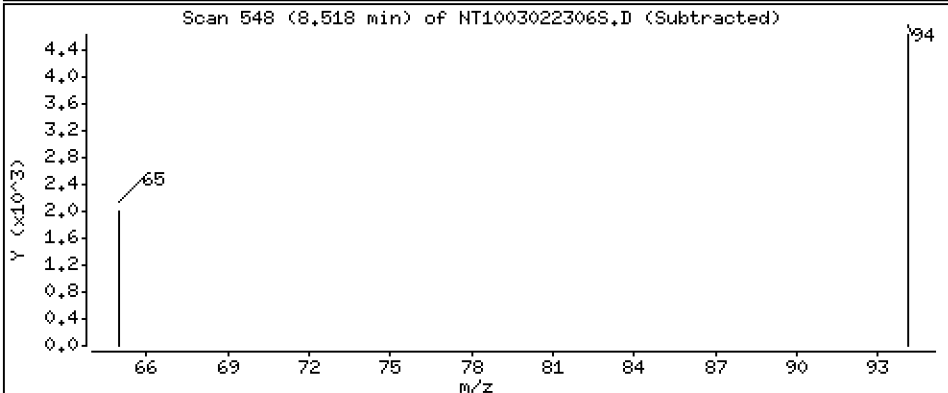
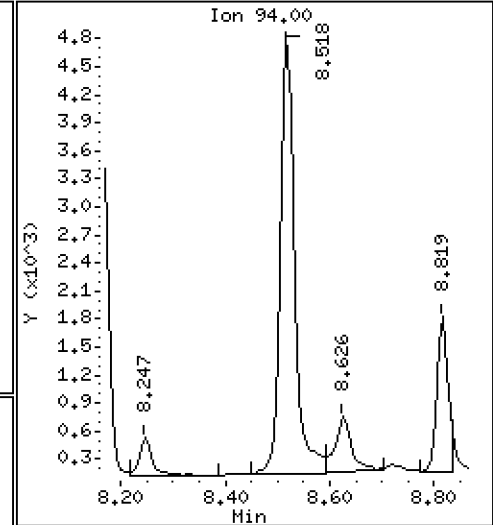
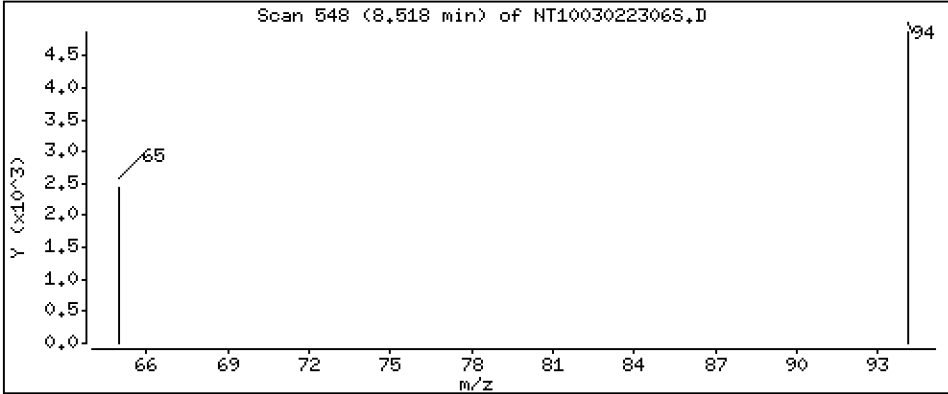
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 0,03723 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

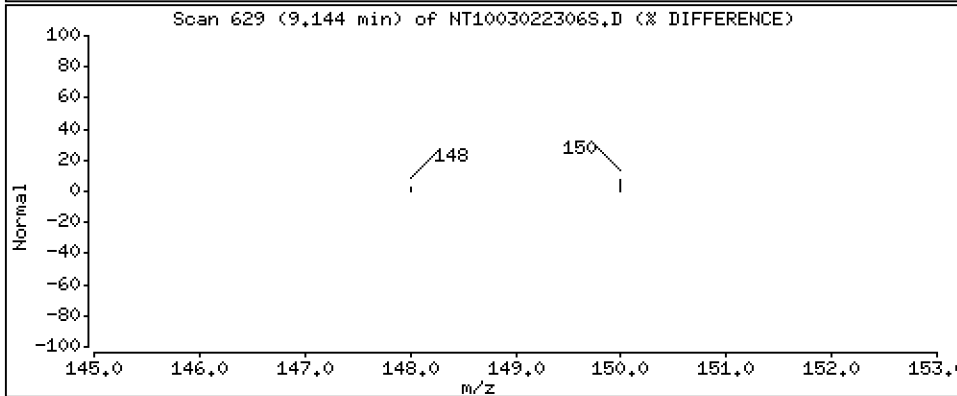
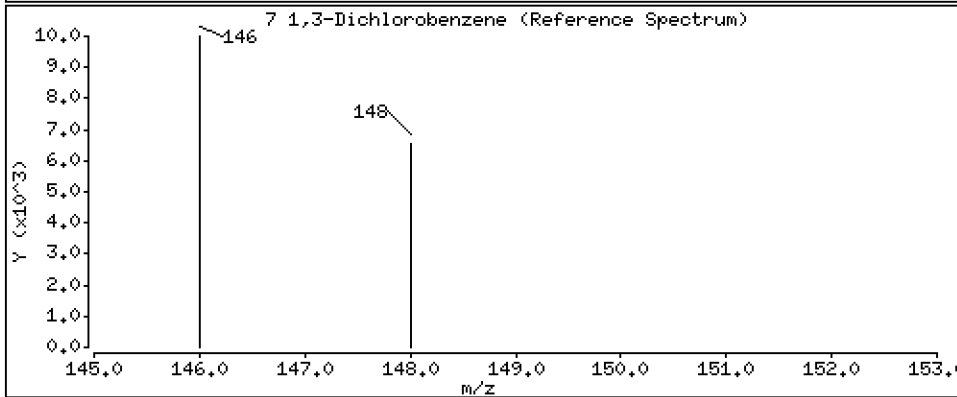
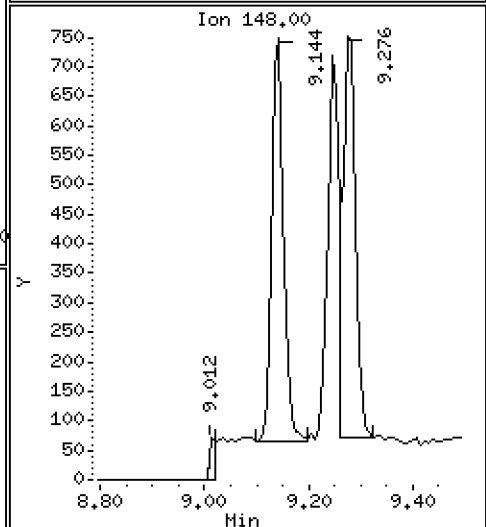
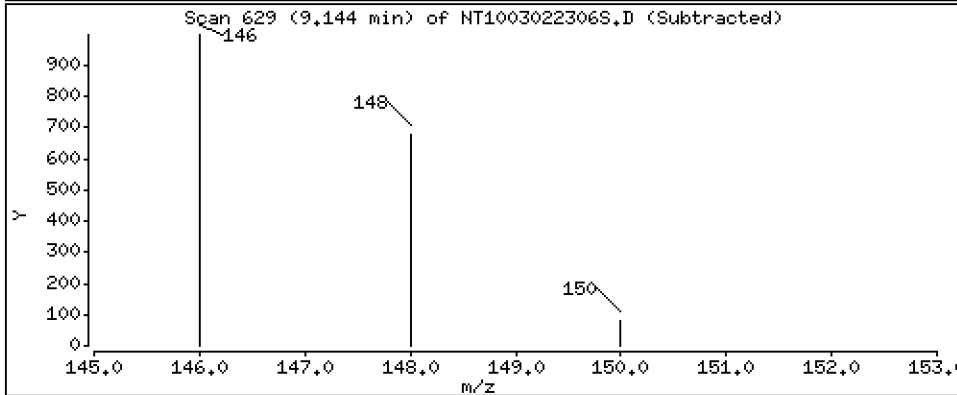
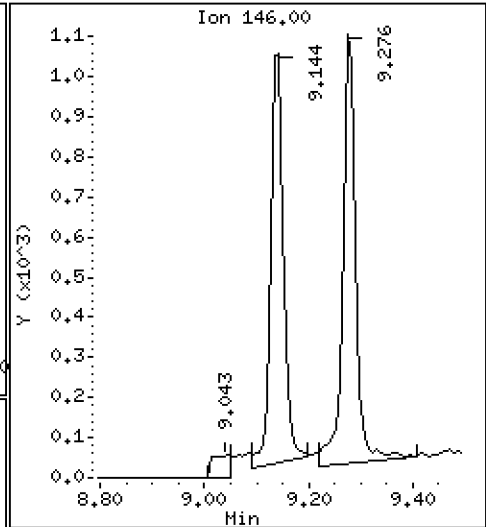
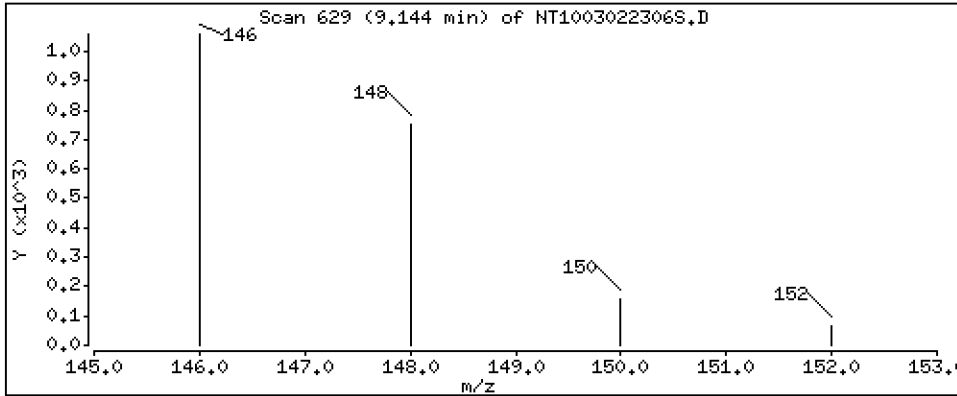
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 0,008781 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

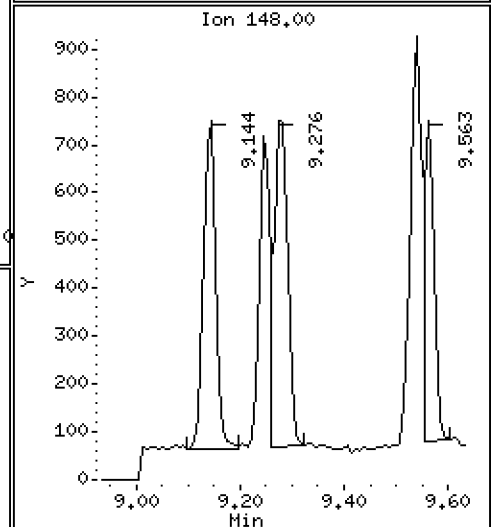
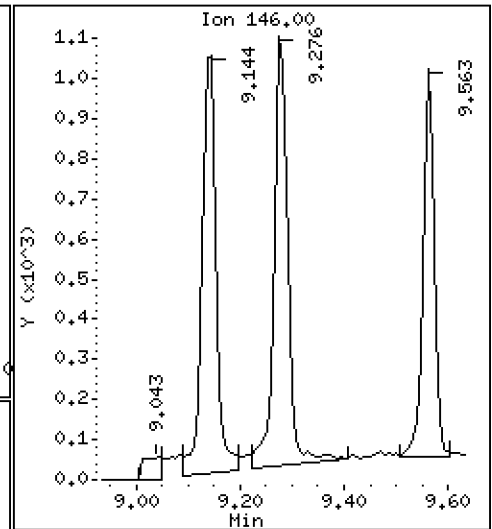
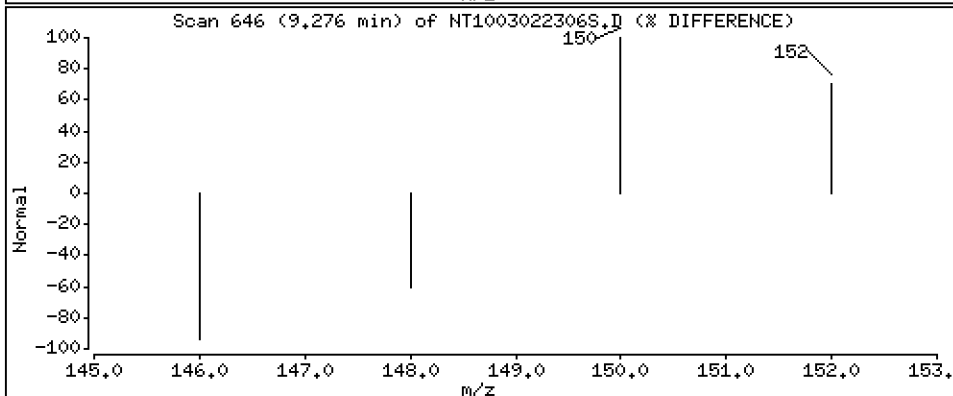
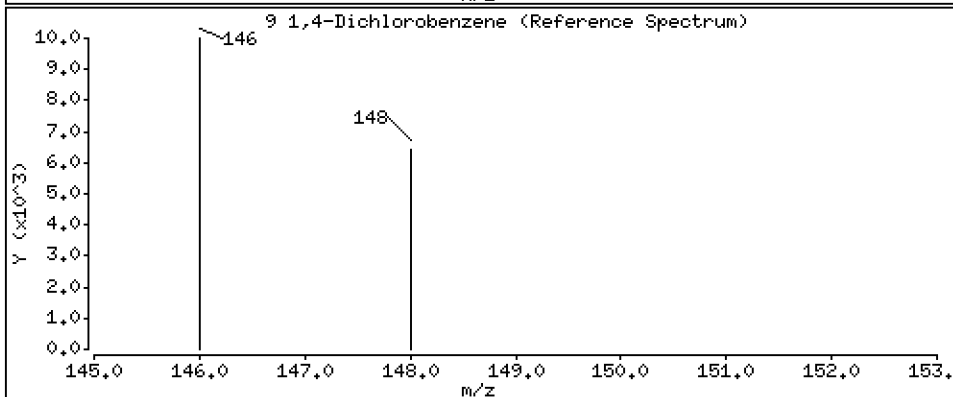
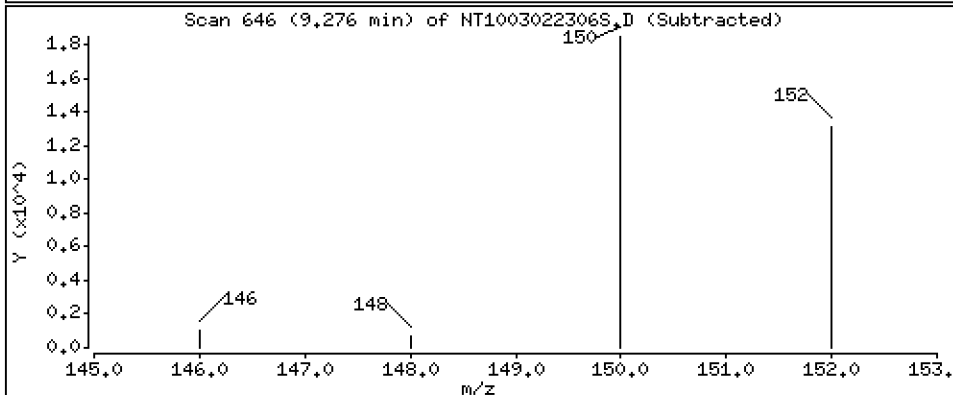
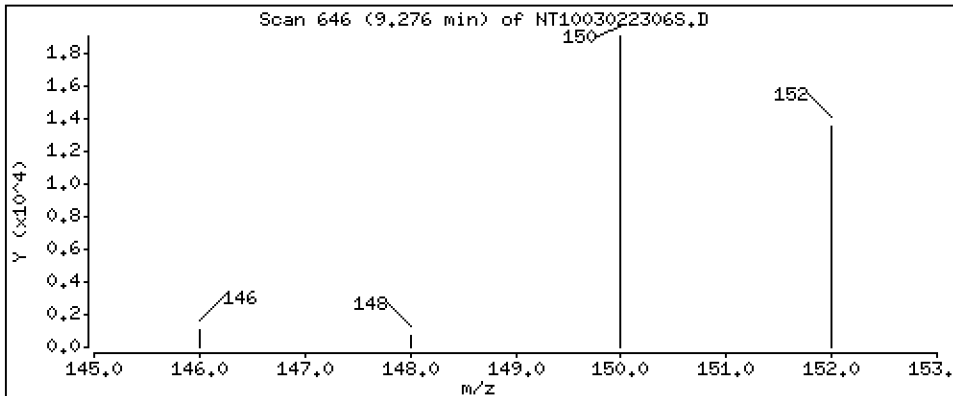
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.009746 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

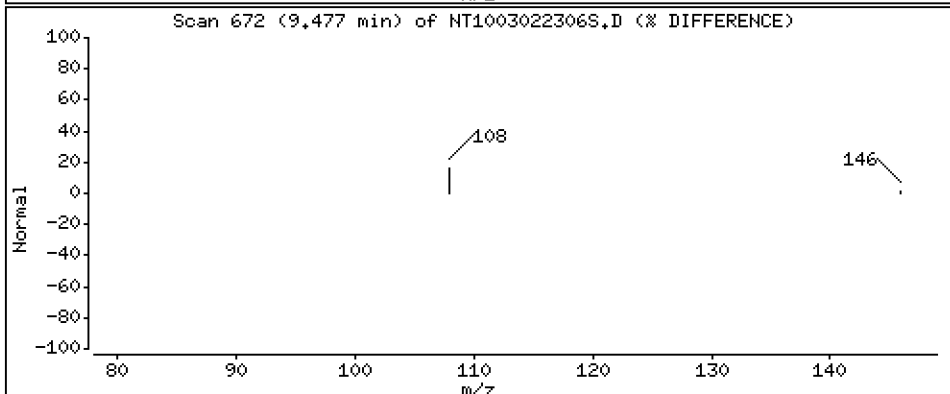
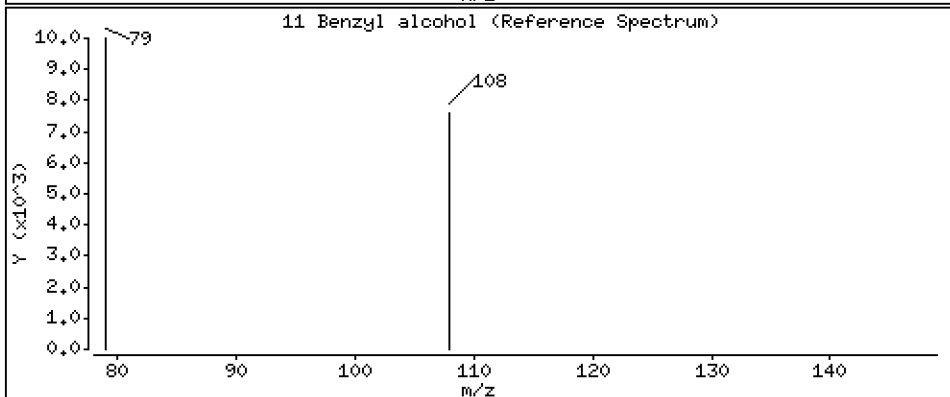
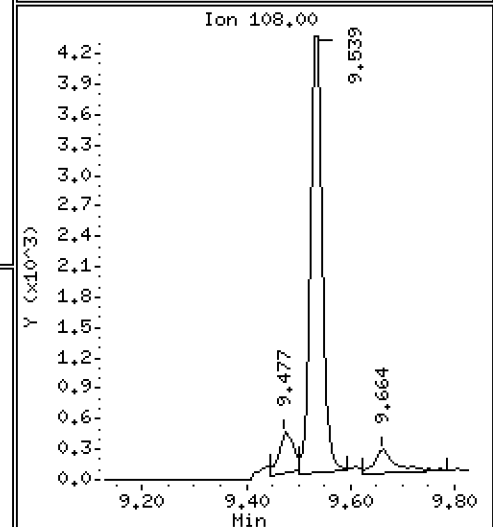
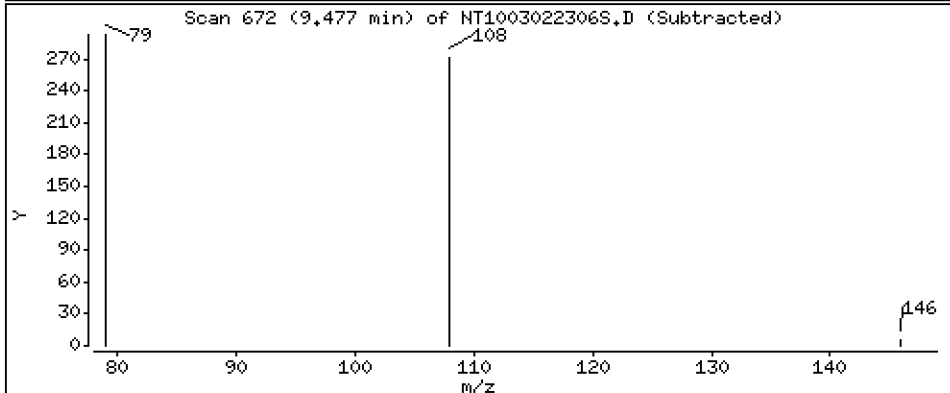
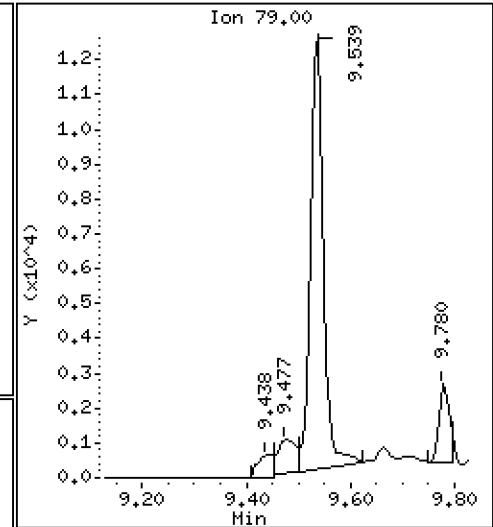
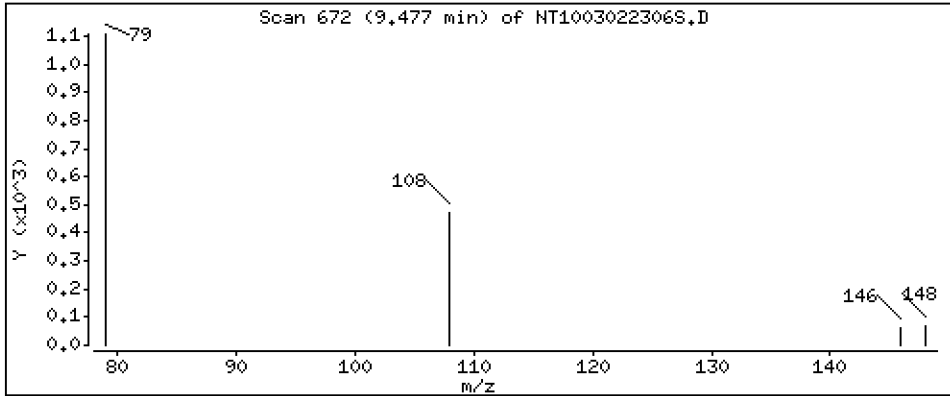
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.01992 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

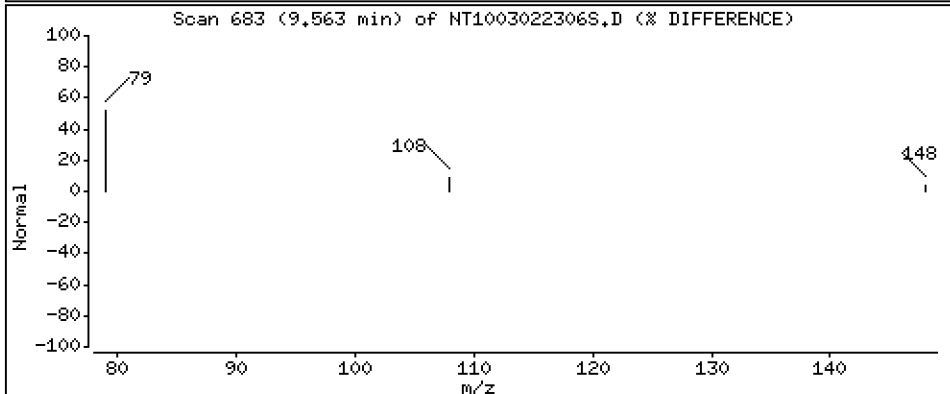
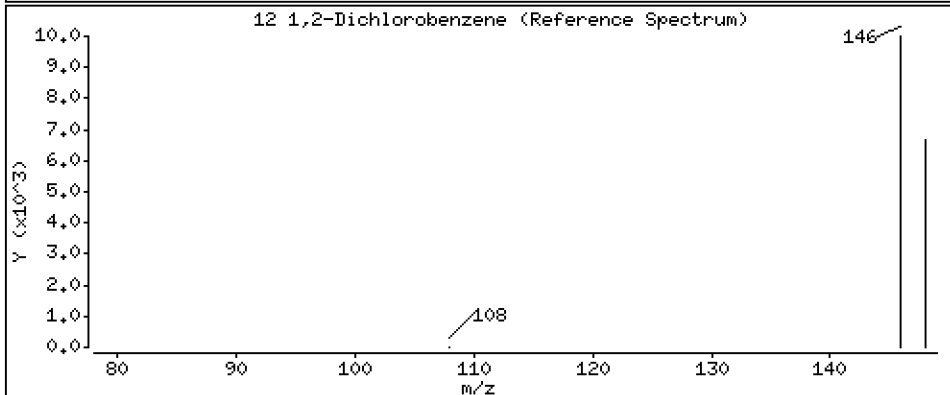
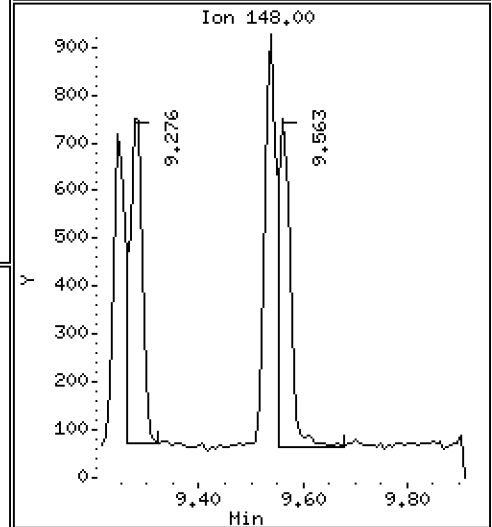
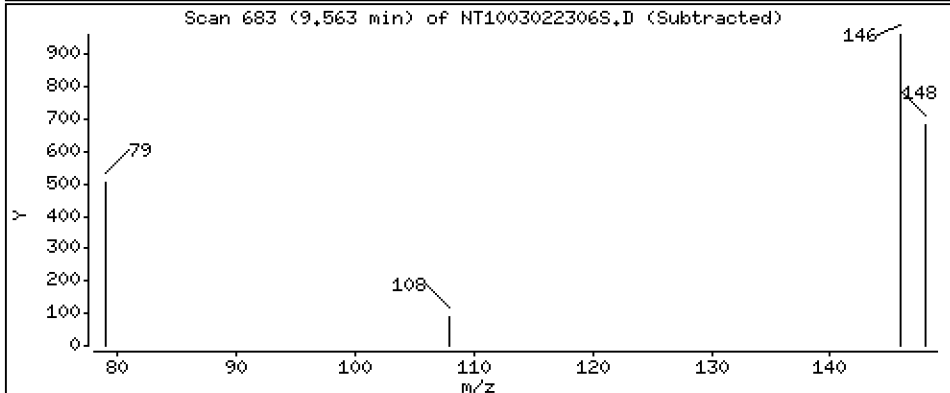
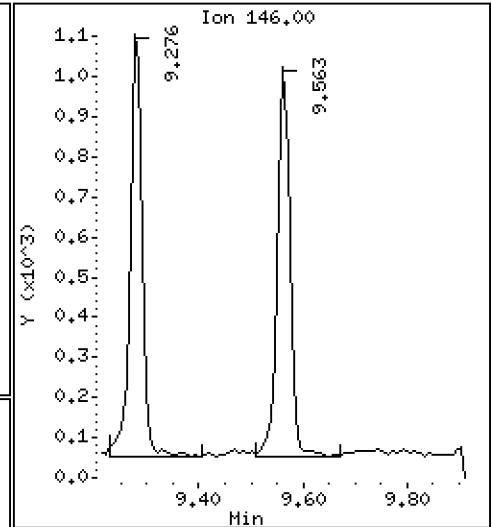
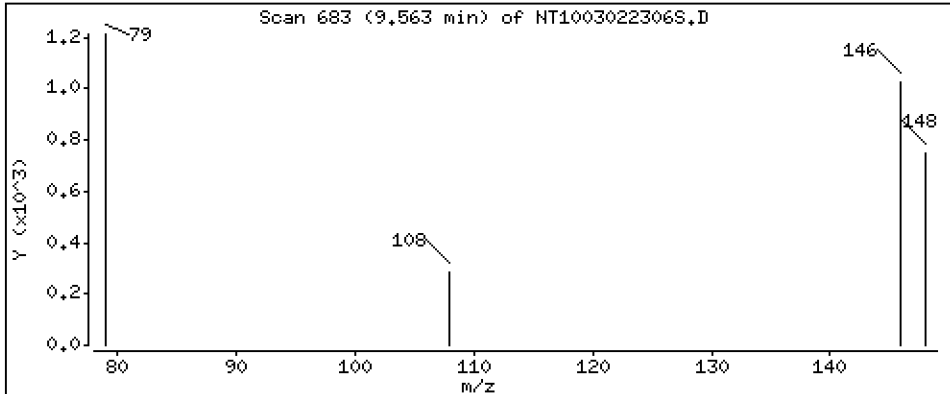
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.008196 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

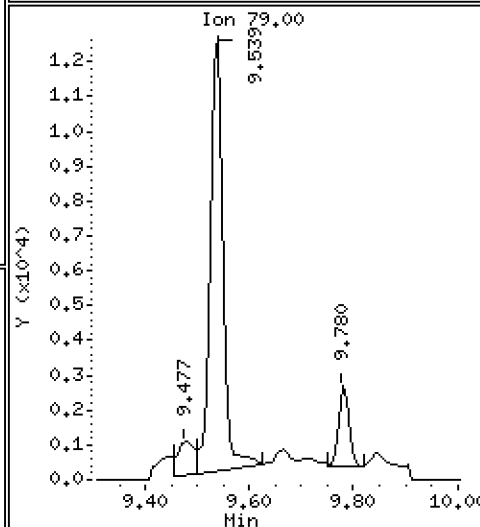
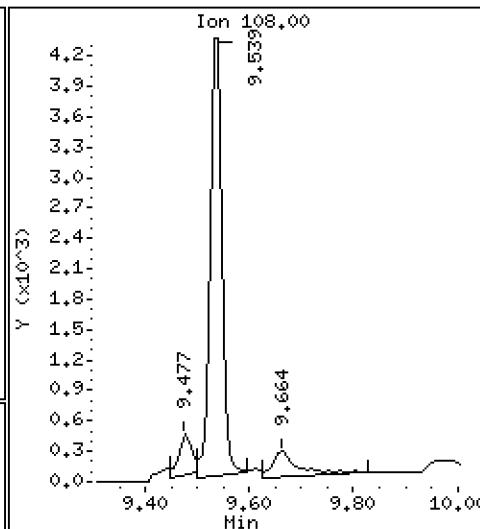
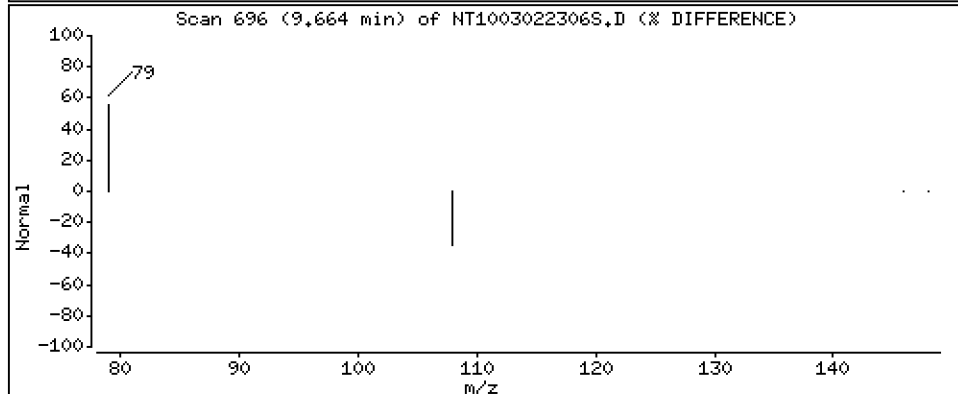
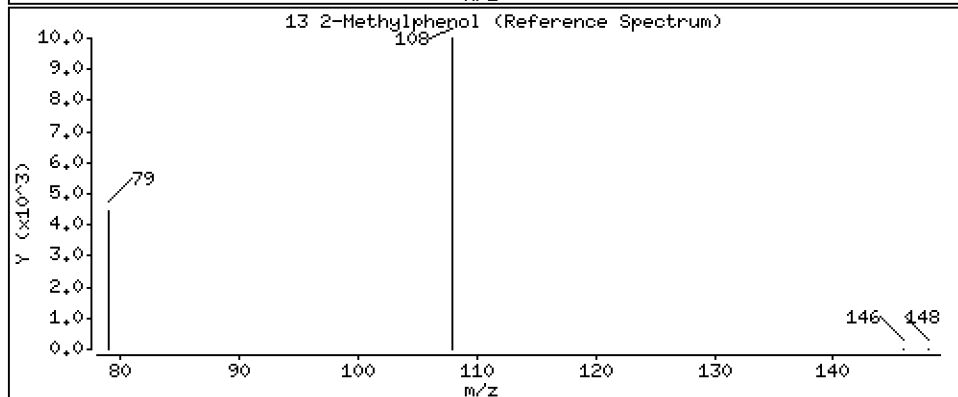
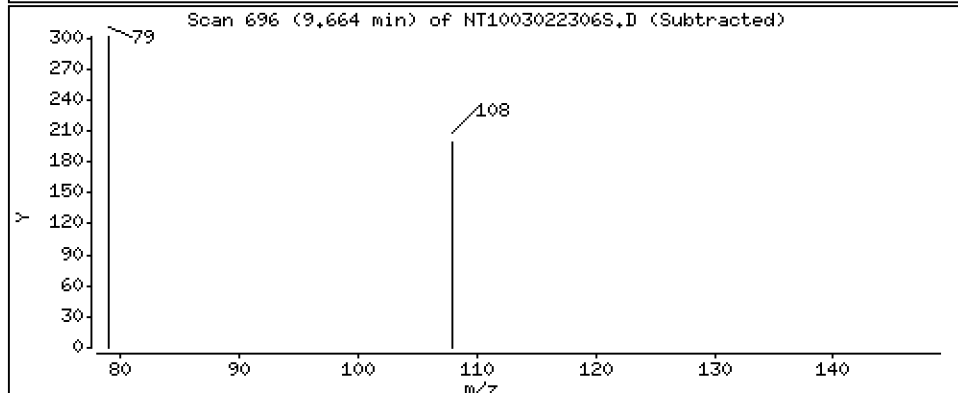
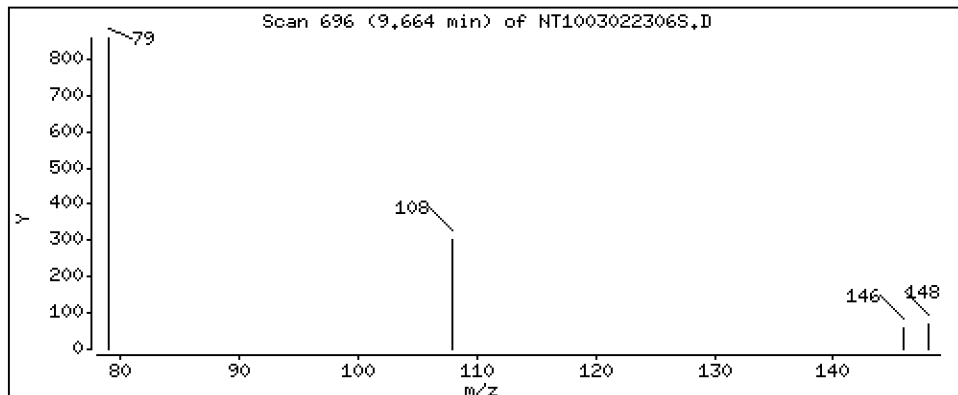
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.005974 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

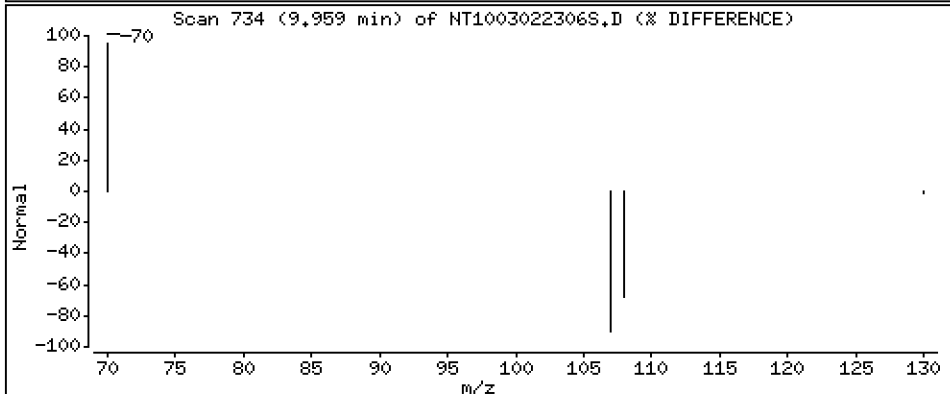
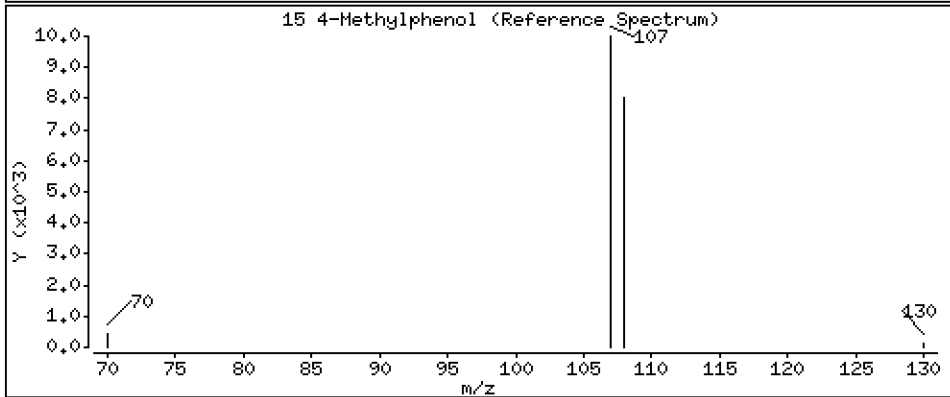
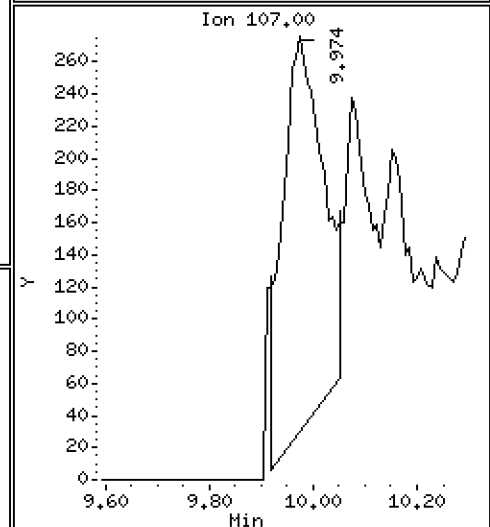
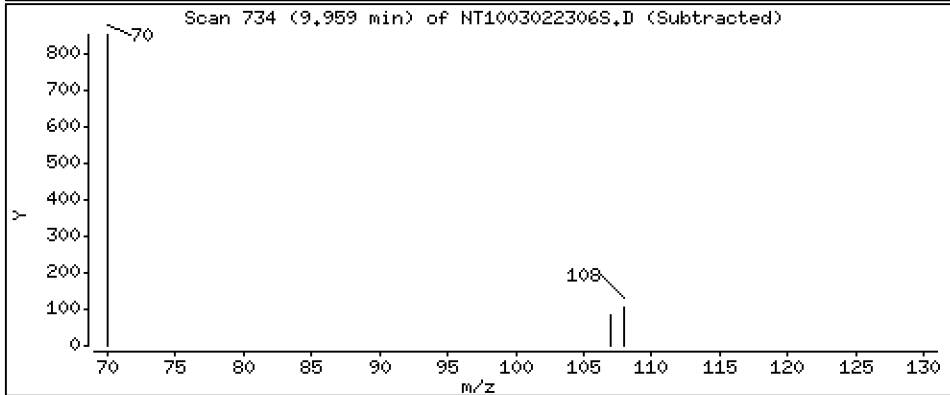
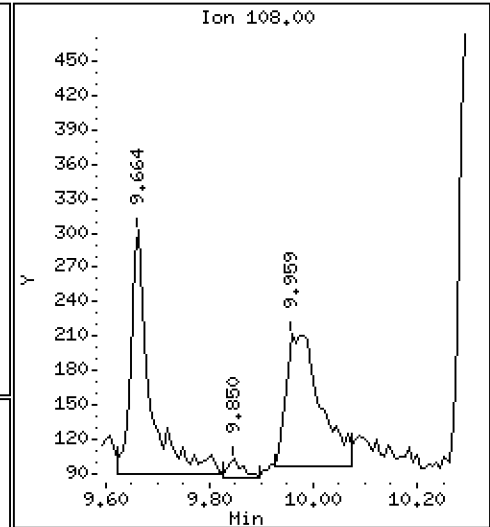
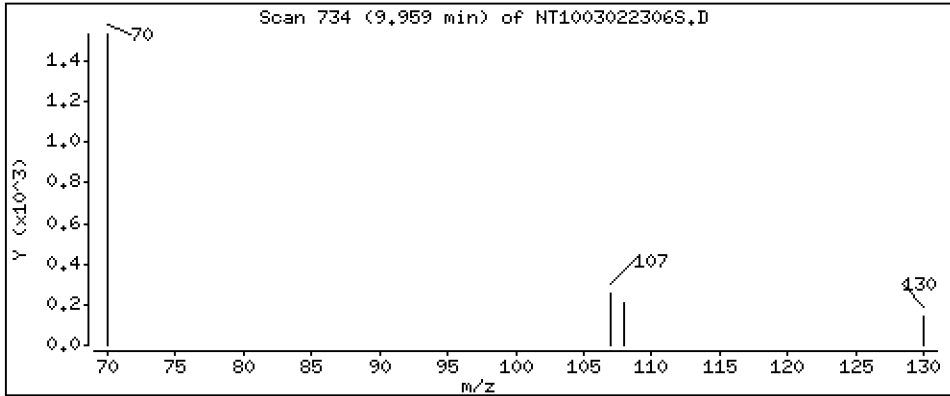
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.003753 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

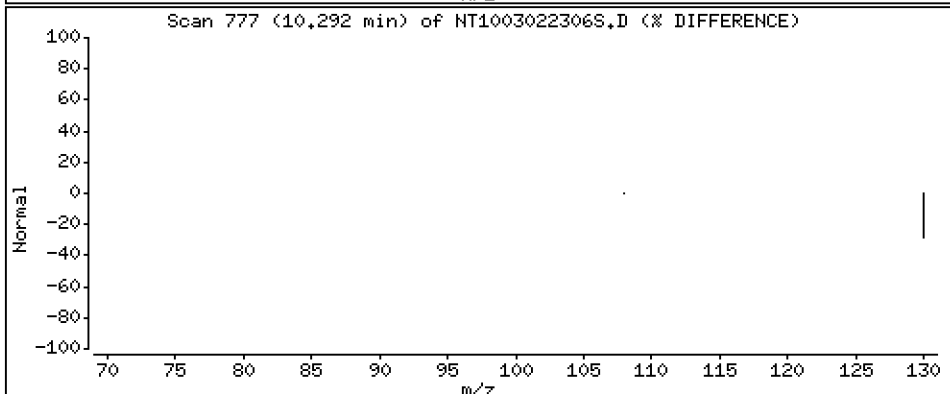
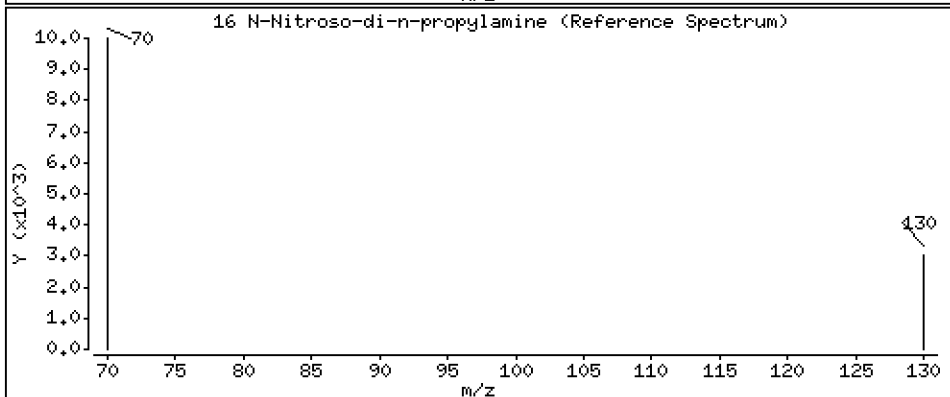
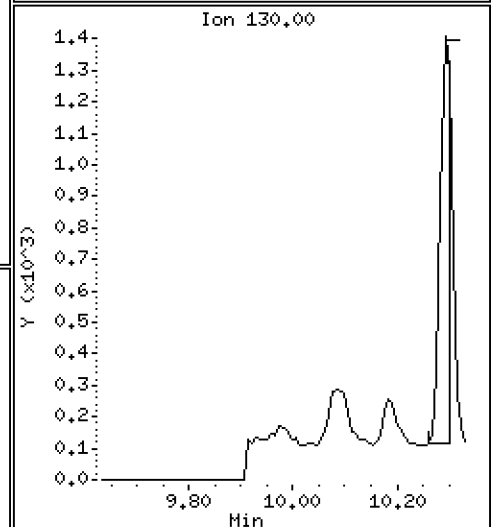
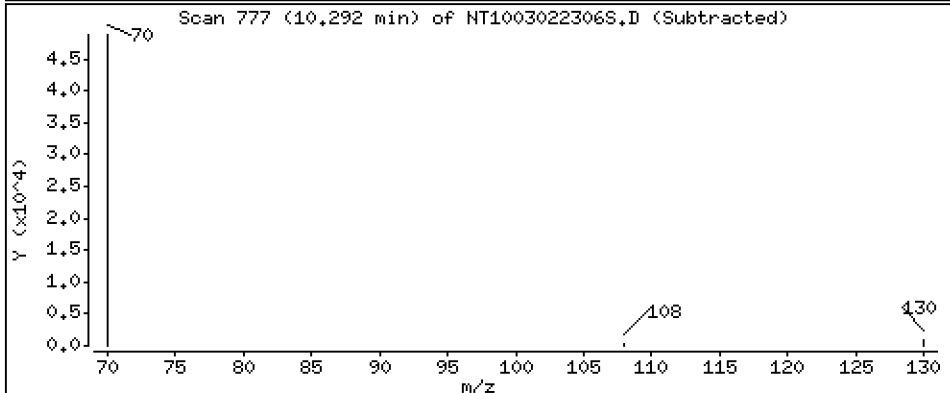
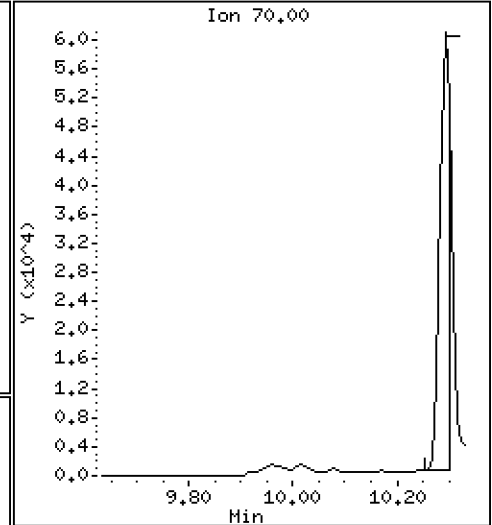
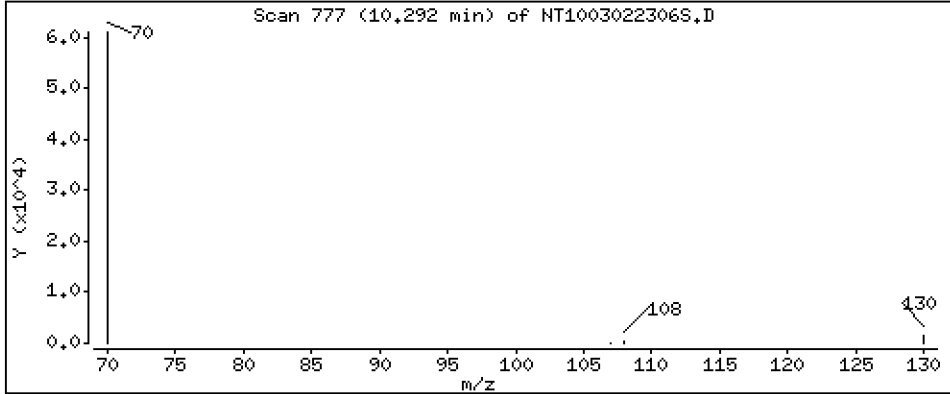
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 0,7468 ug/L





Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

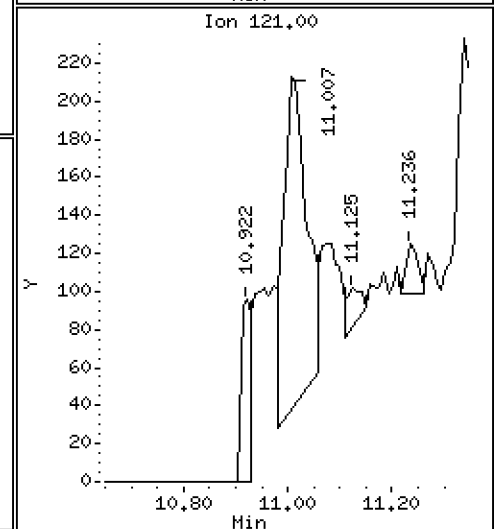
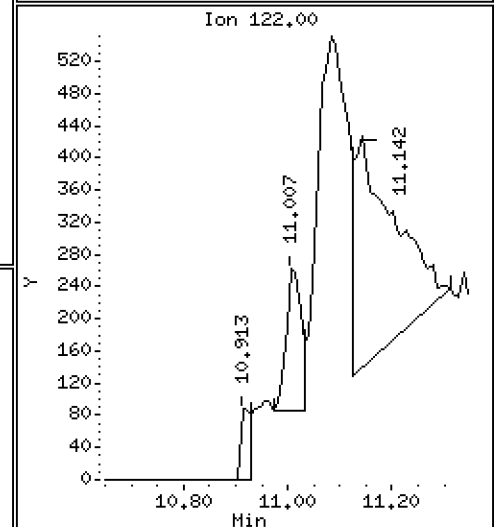
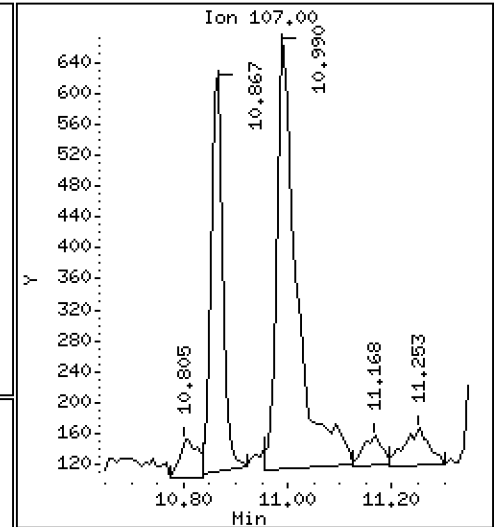
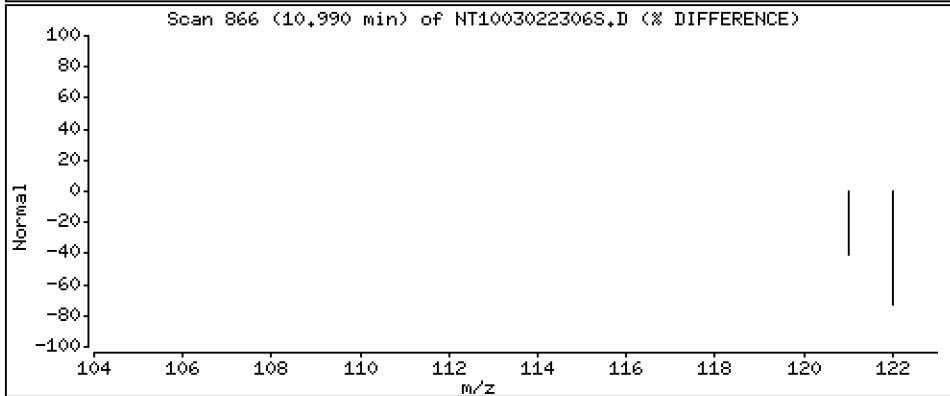
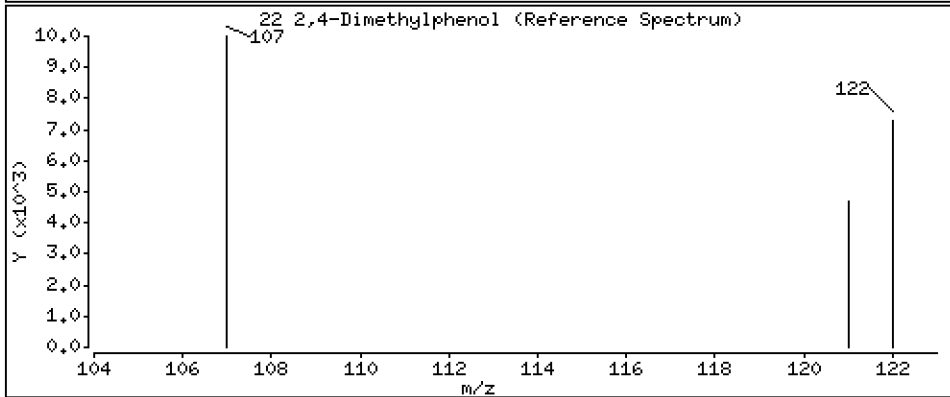
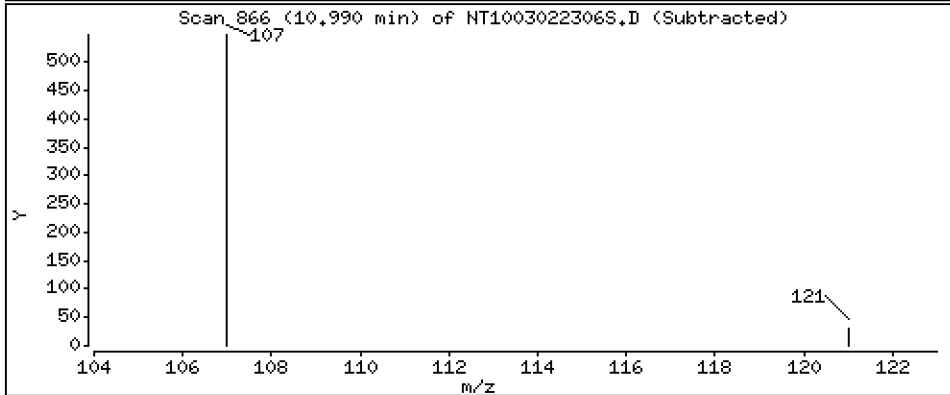
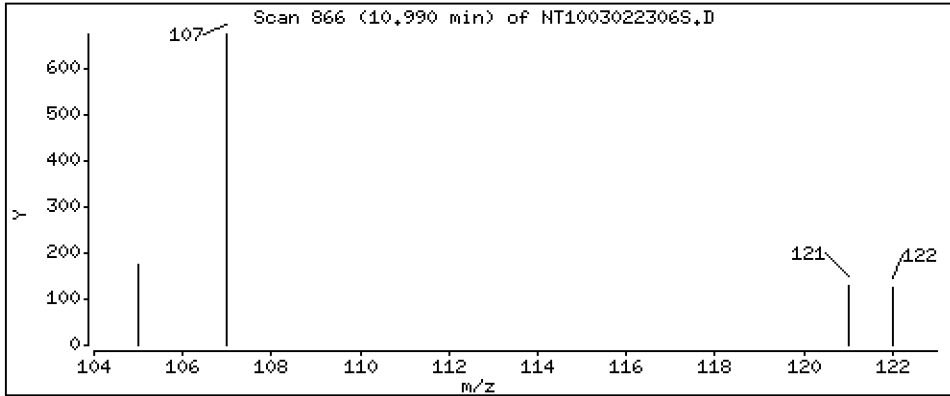
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,008969 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

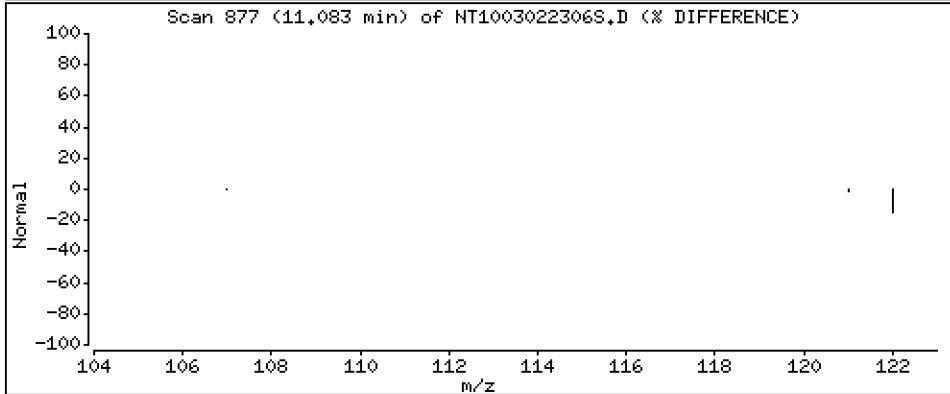
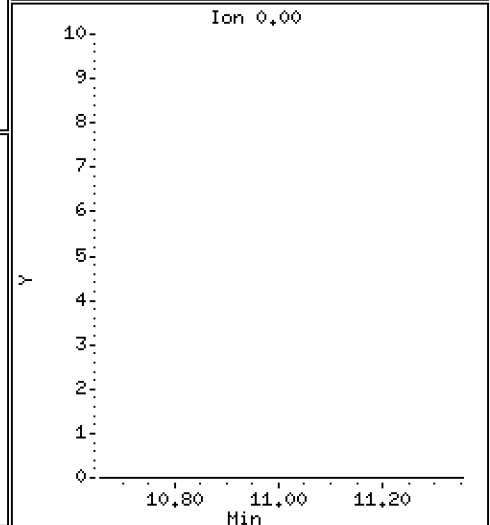
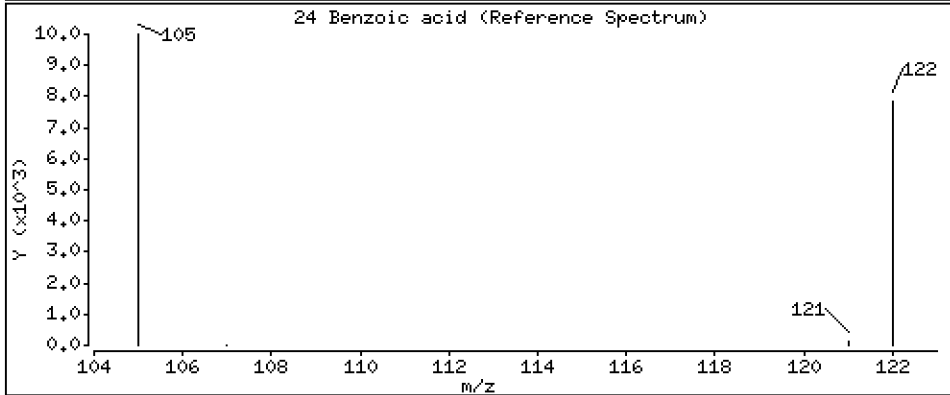
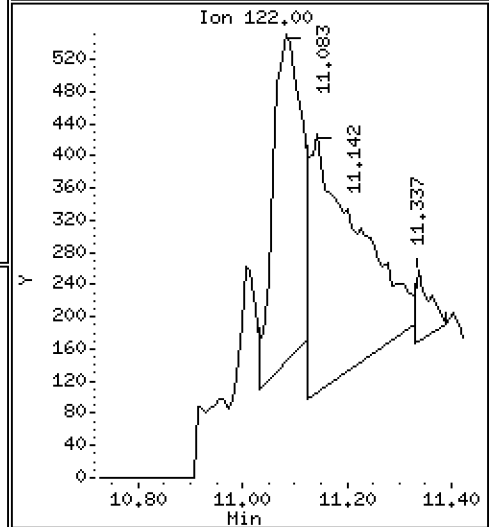
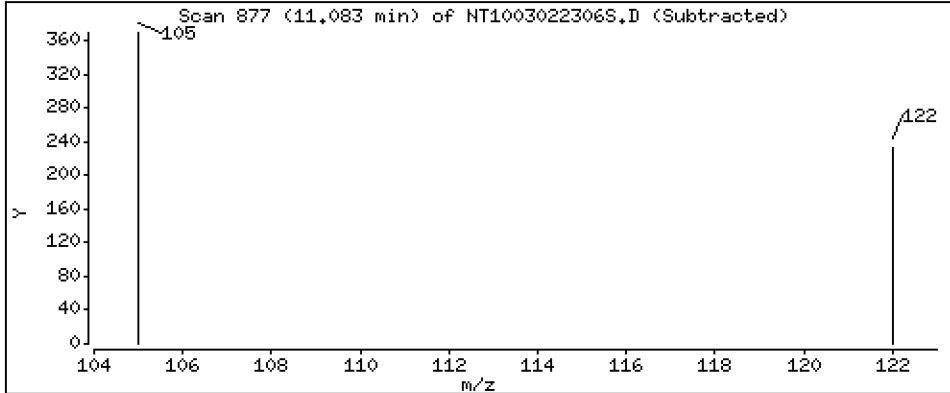
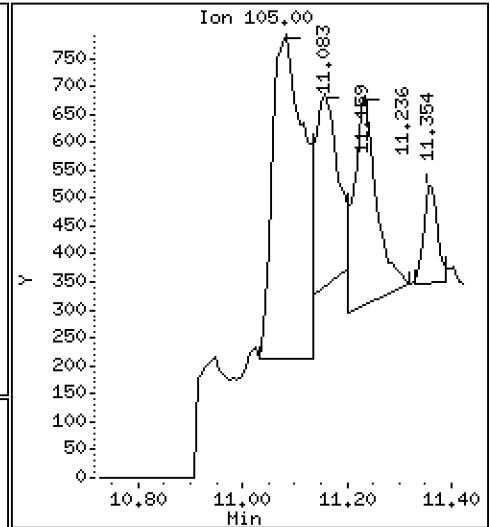
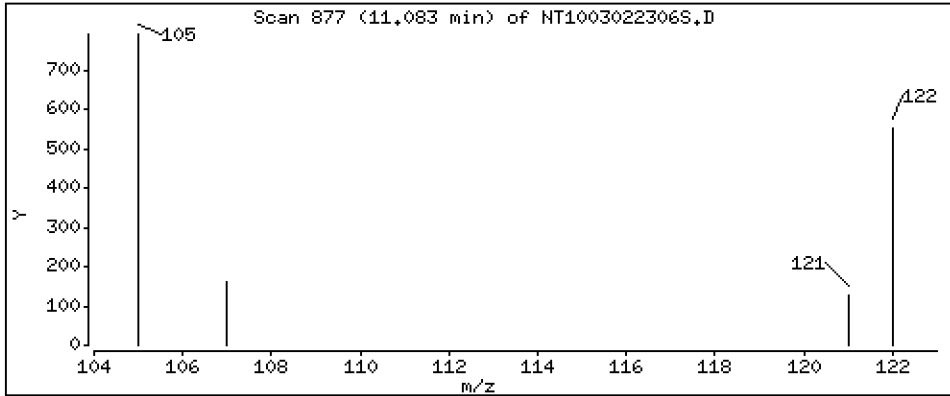
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 0,02740 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

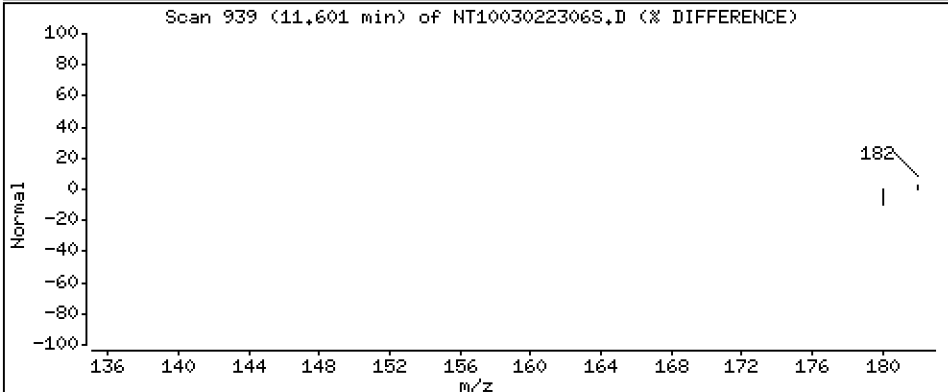
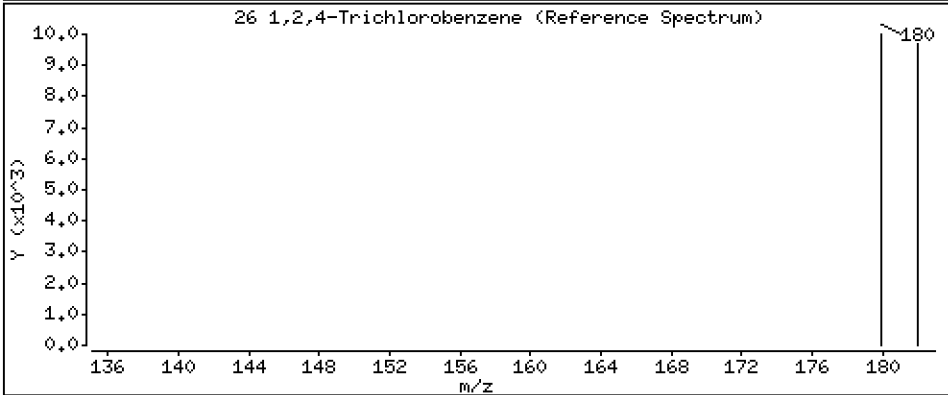
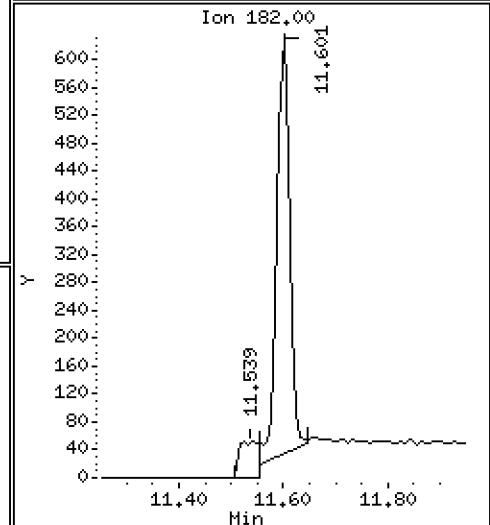
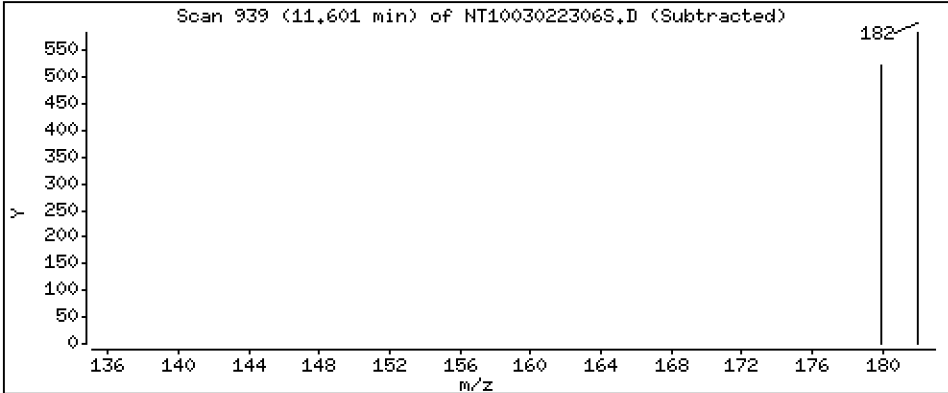
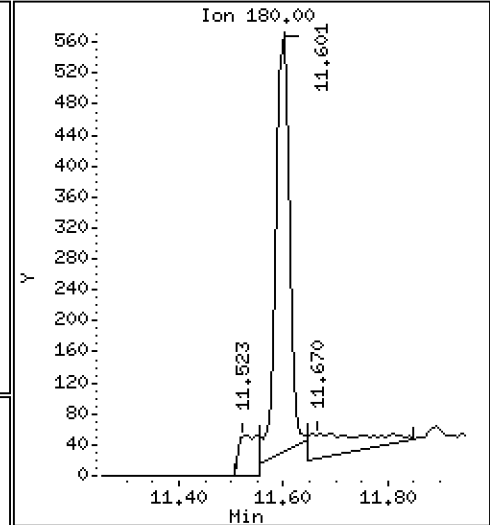
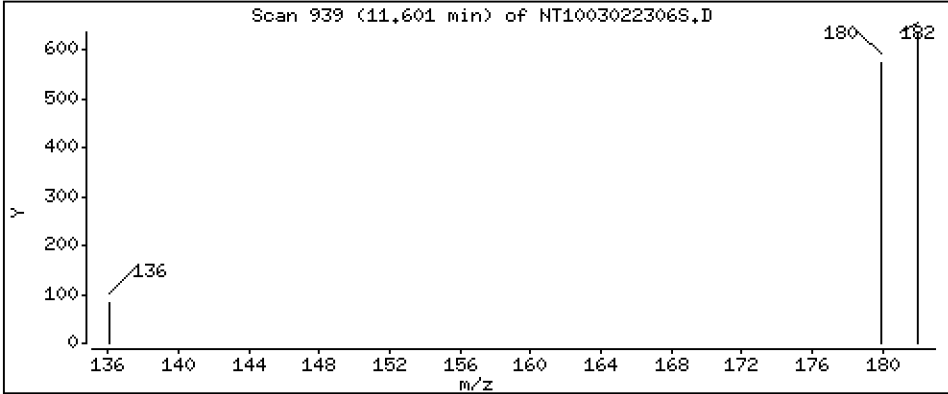
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,006579 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

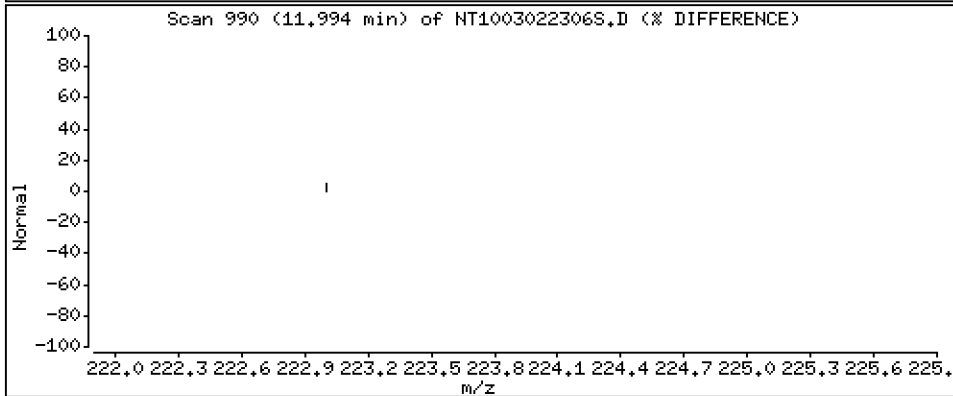
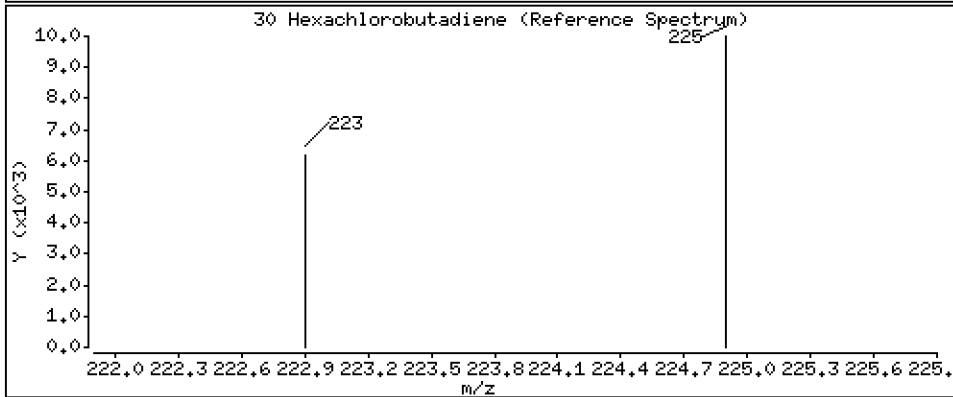
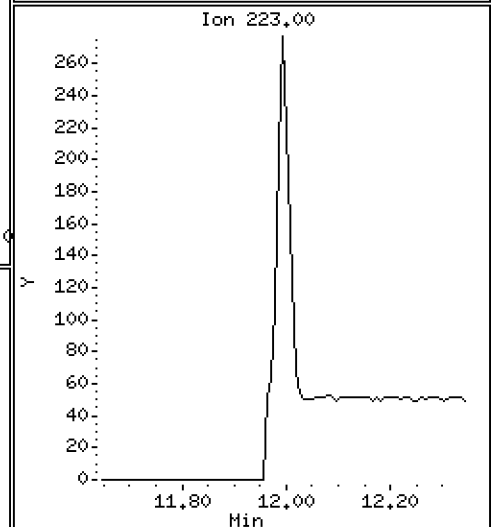
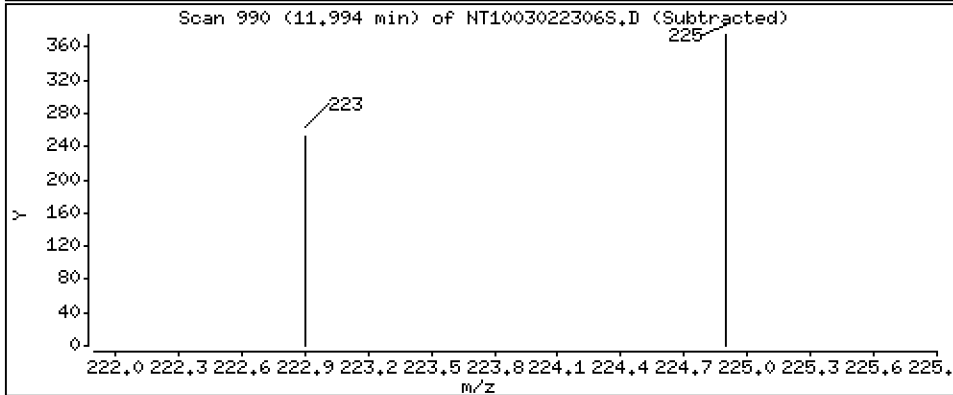
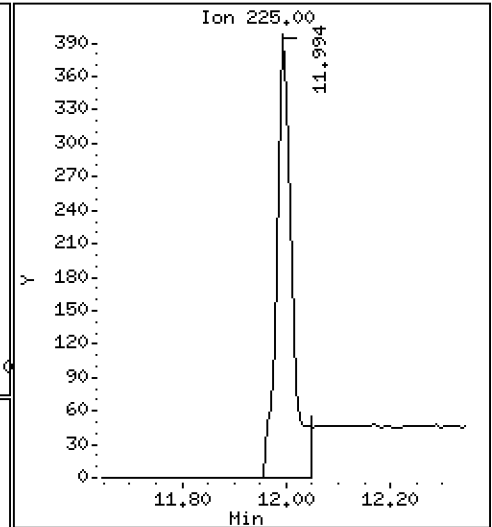
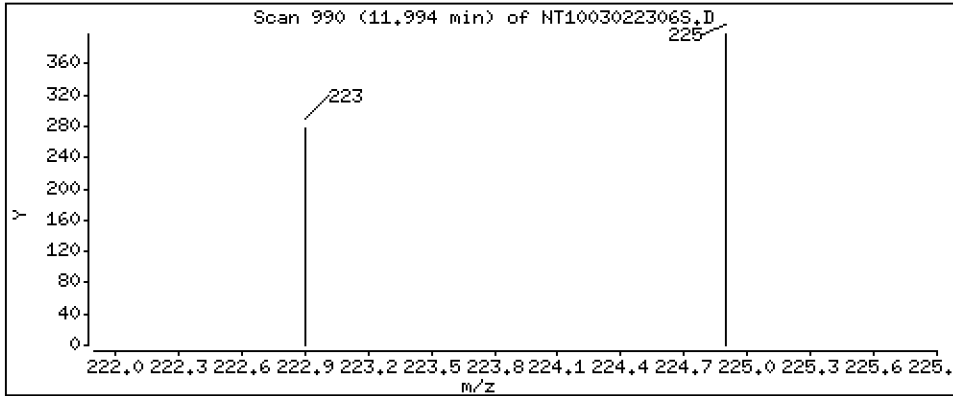
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,007847 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

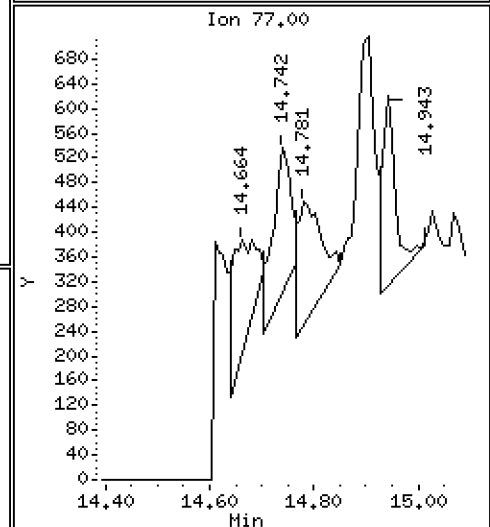
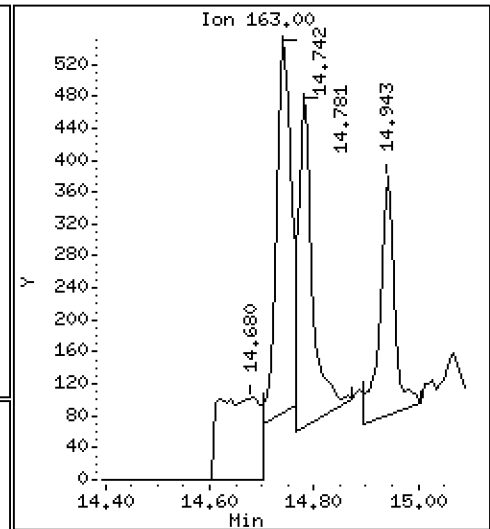
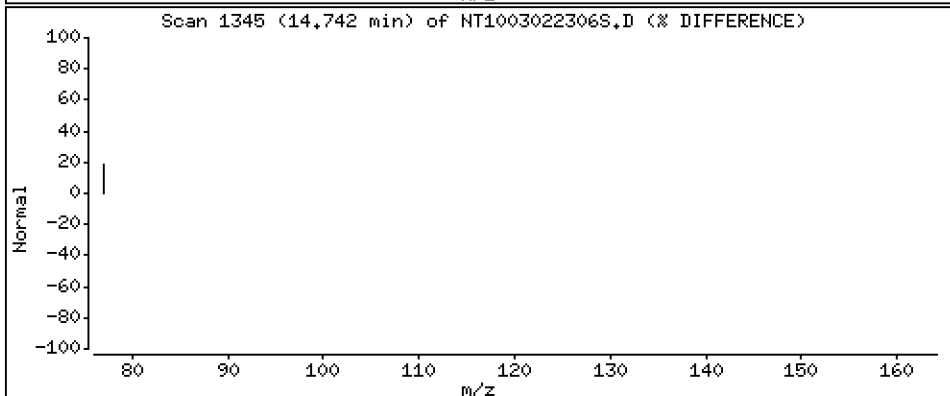
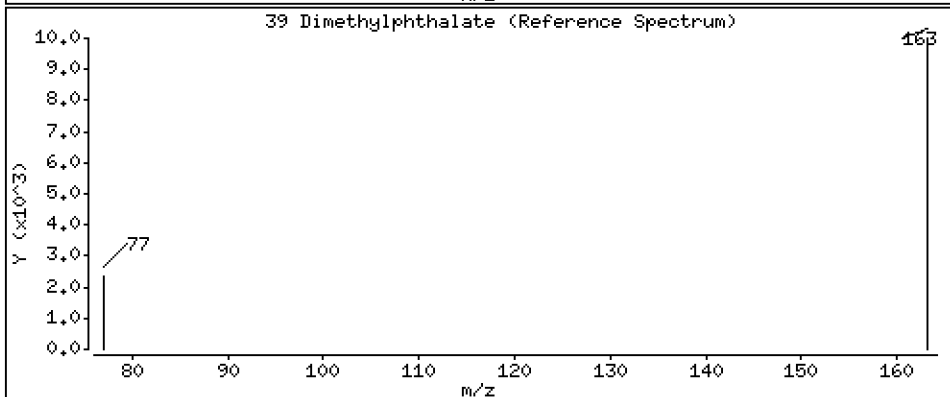
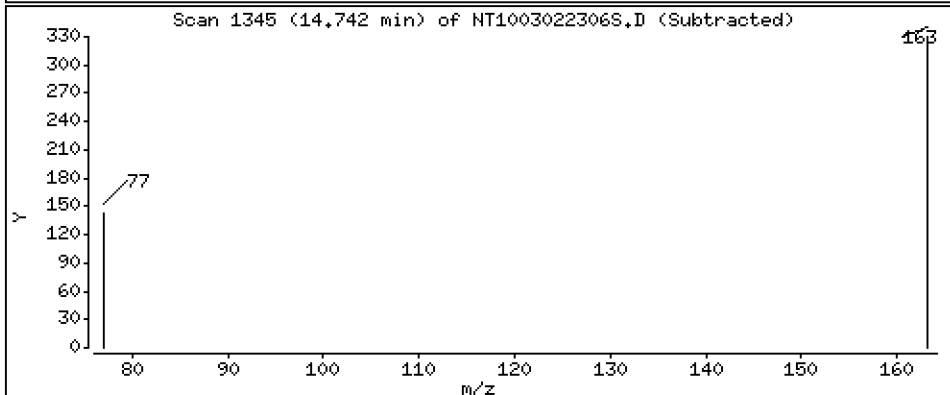
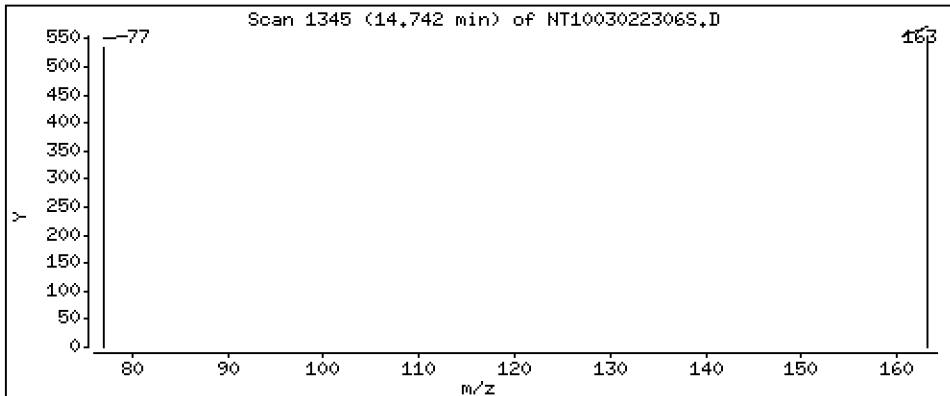
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,002775 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

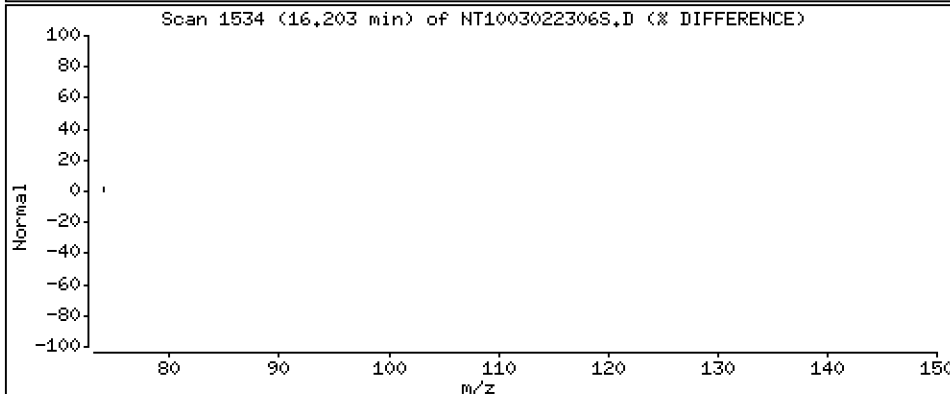
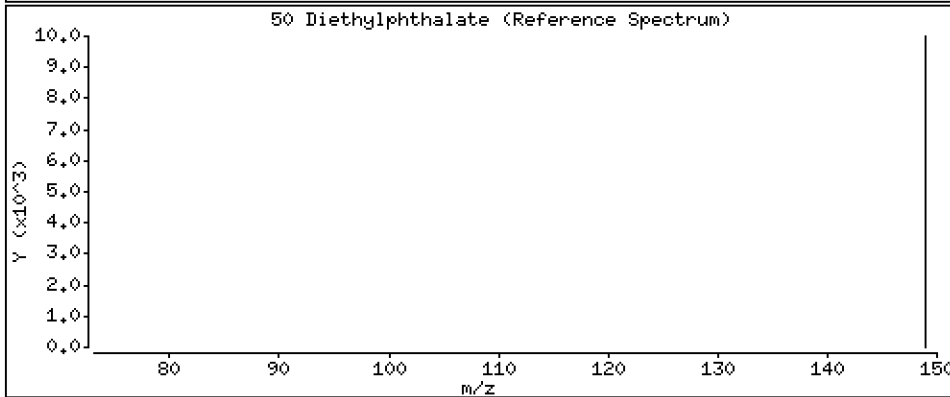
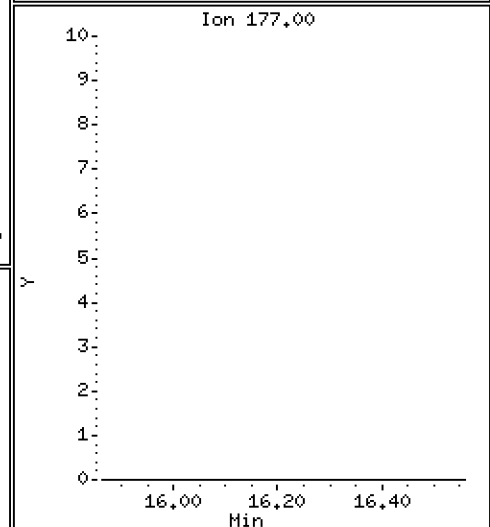
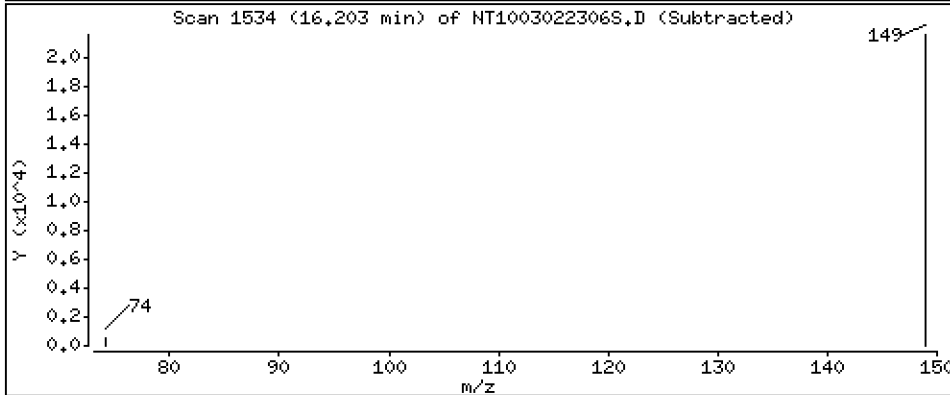
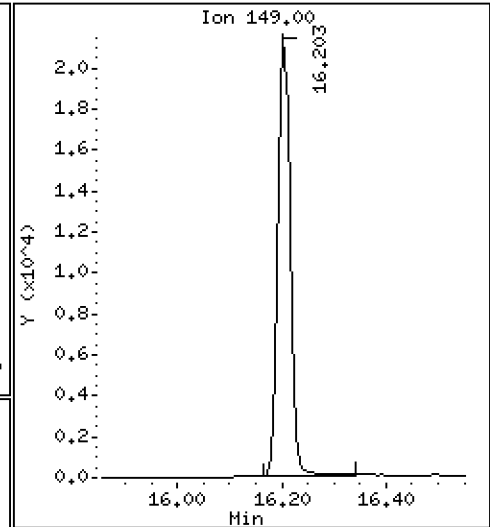
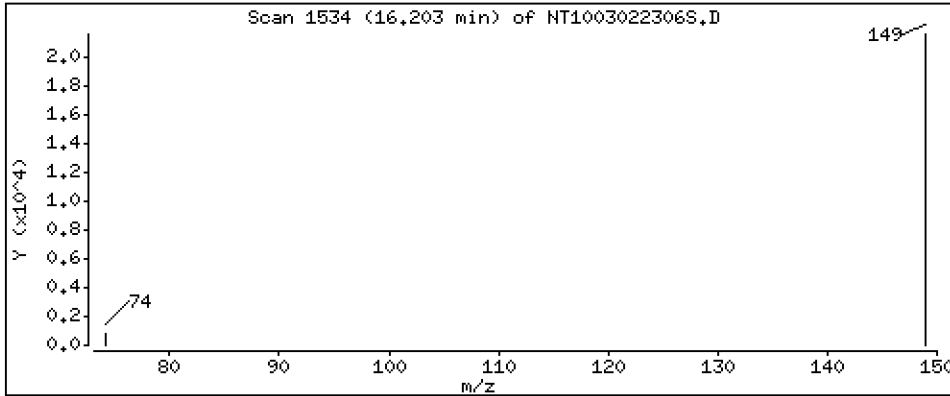
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1080 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

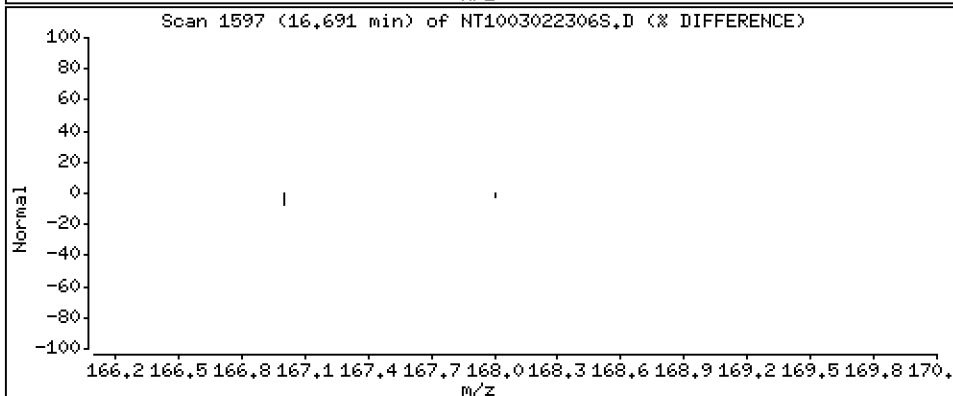
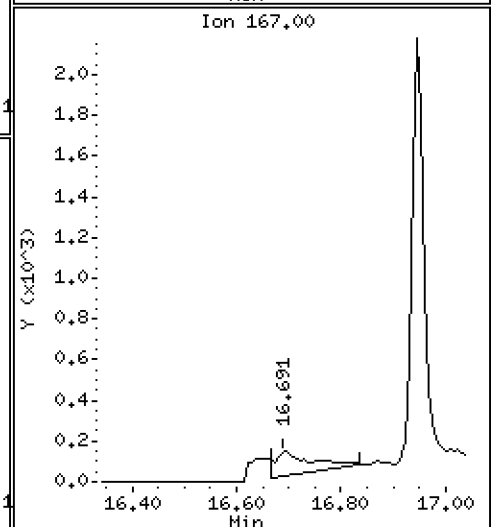
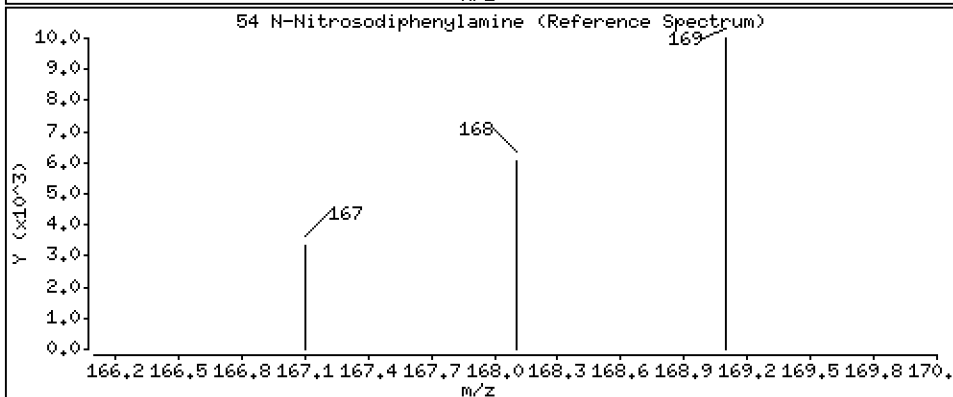
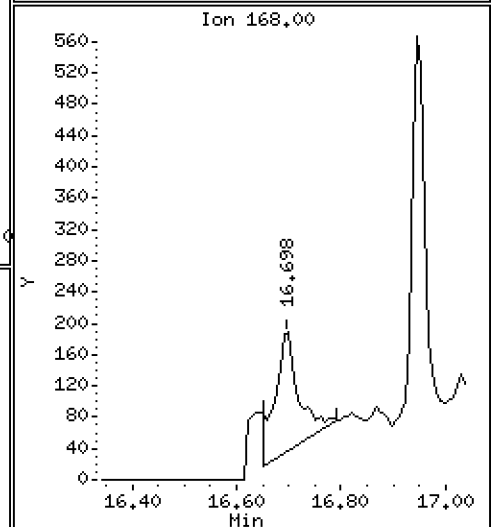
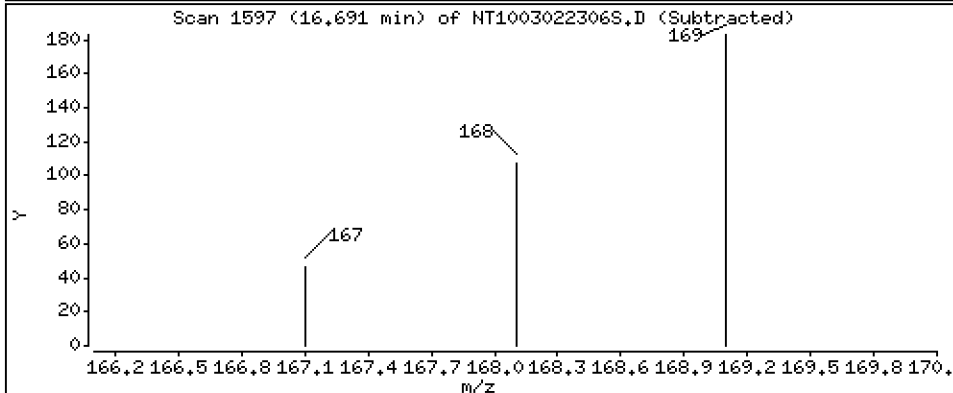
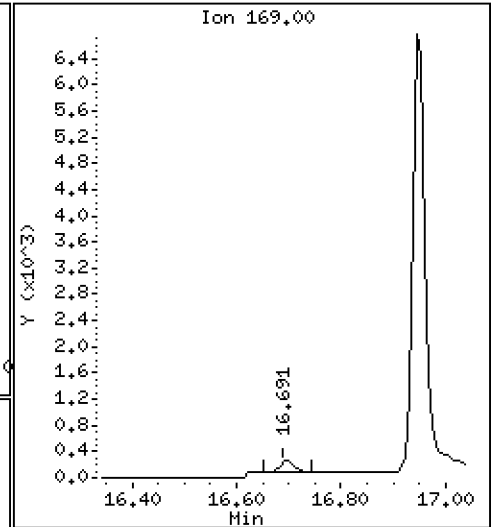
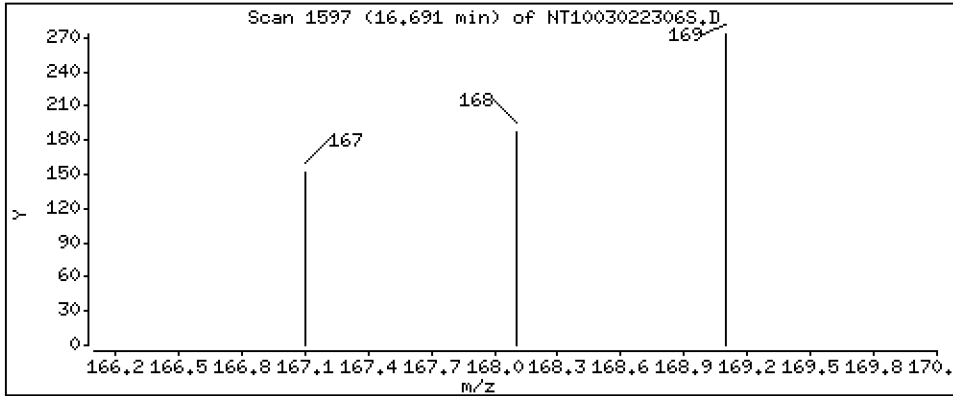
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 0,001198 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

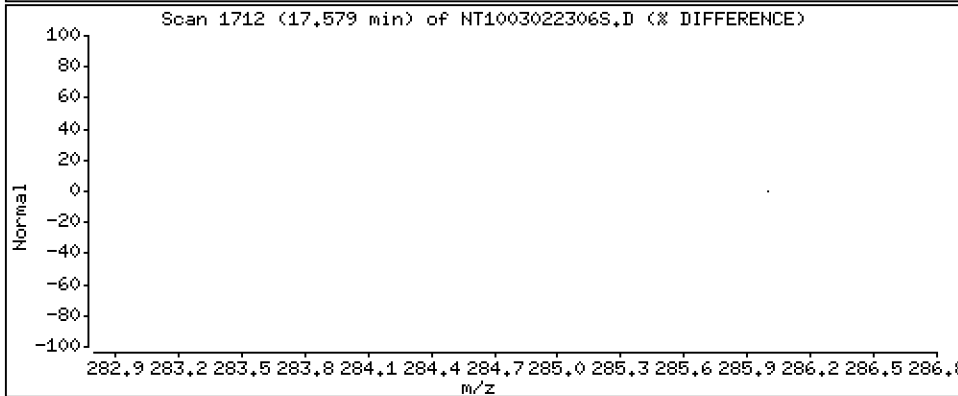
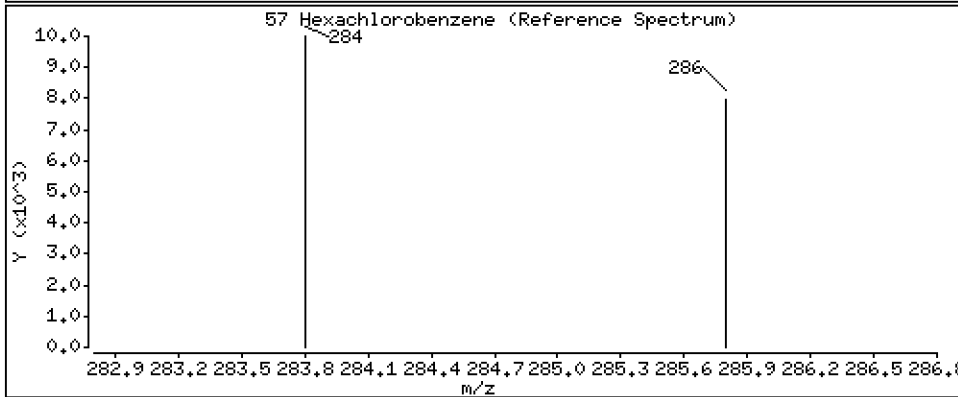
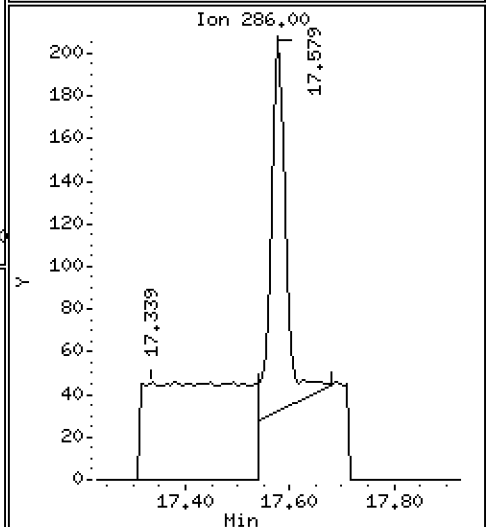
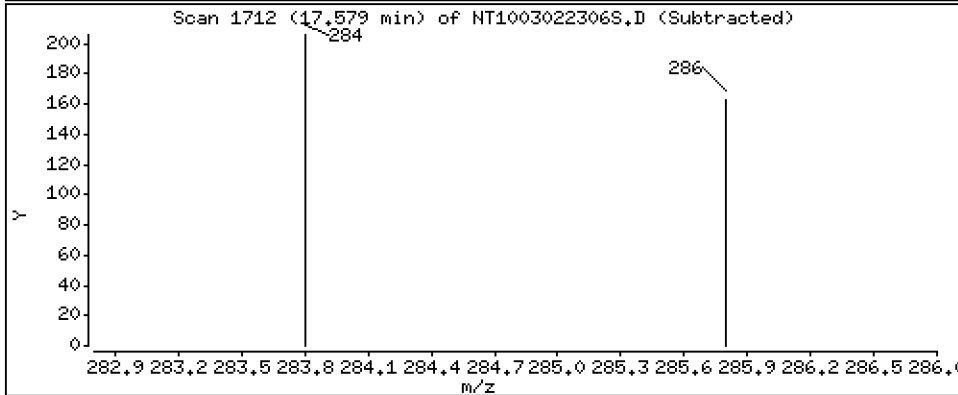
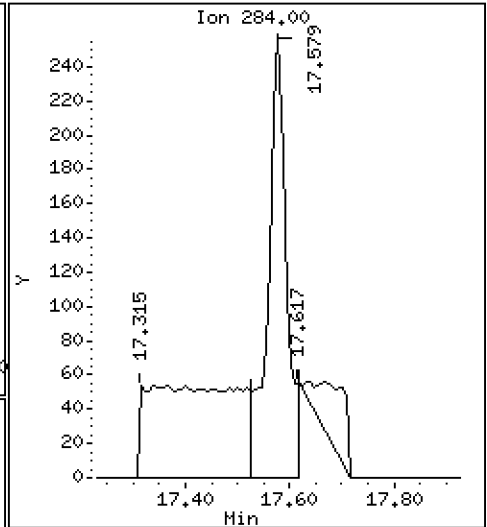
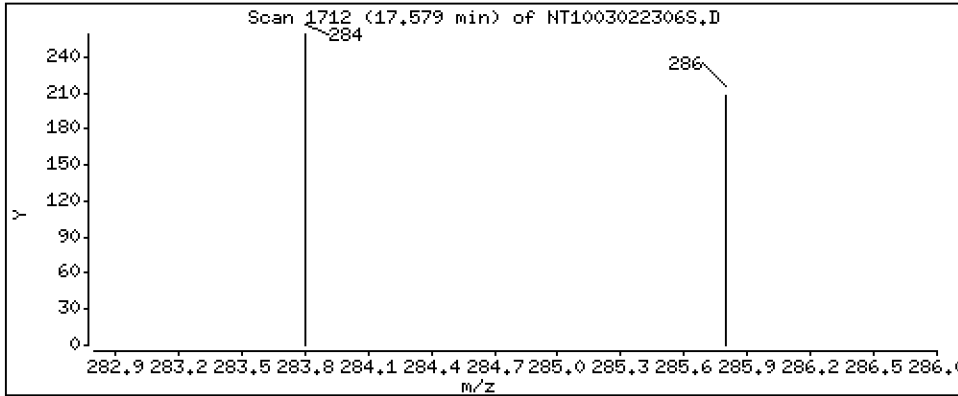
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,004555 ug/L





Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

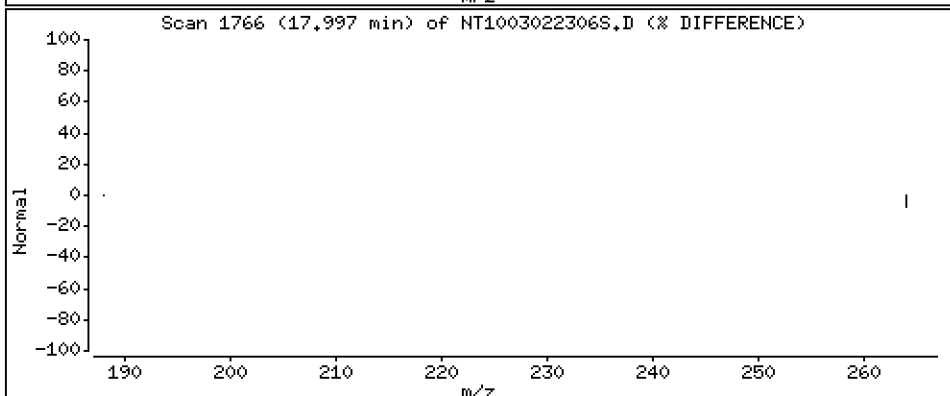
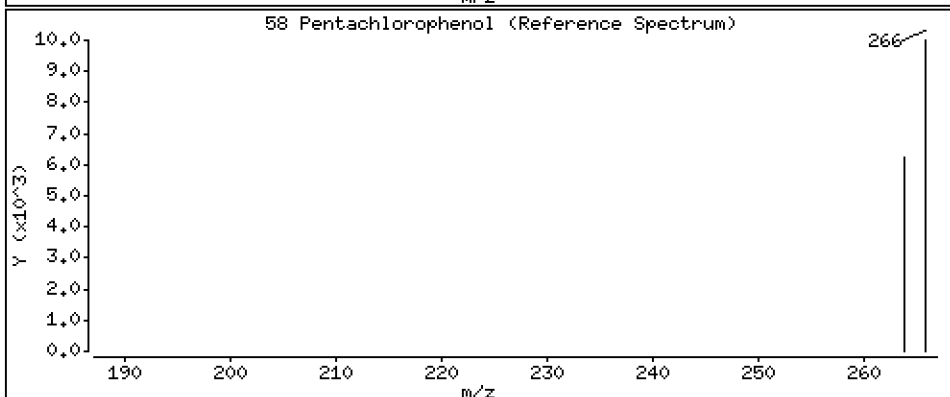
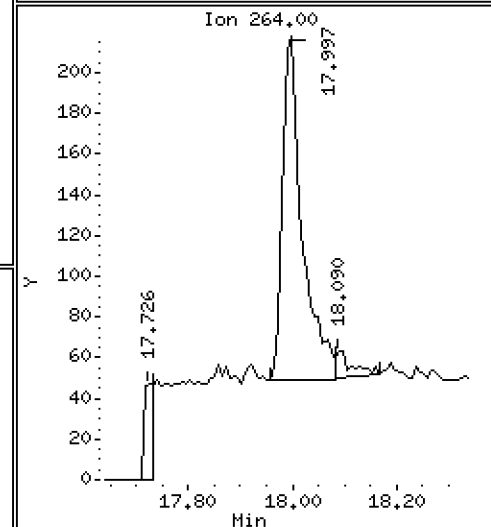
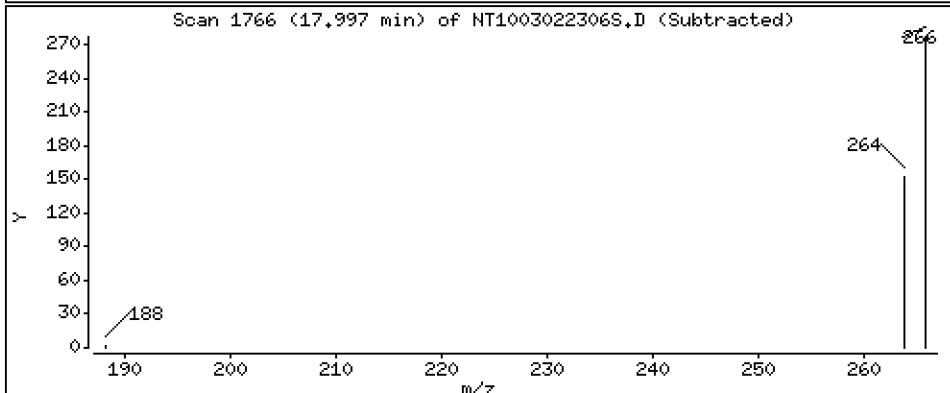
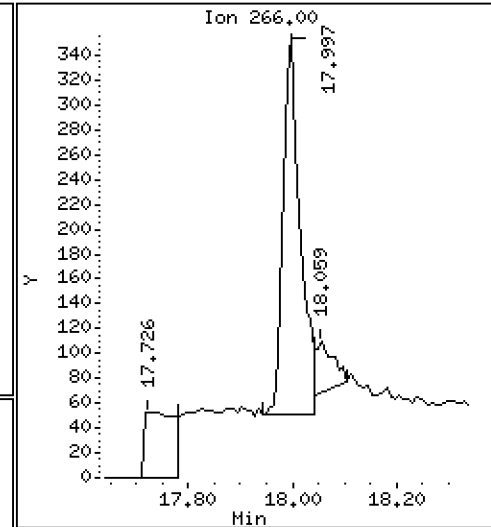
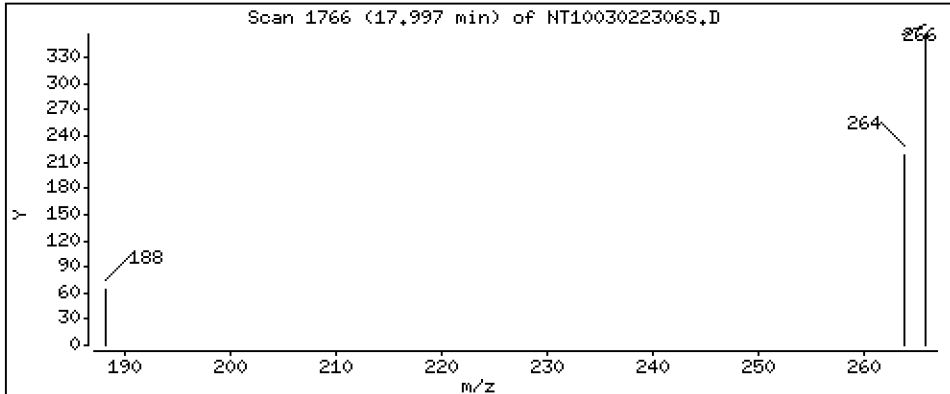
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,01137 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

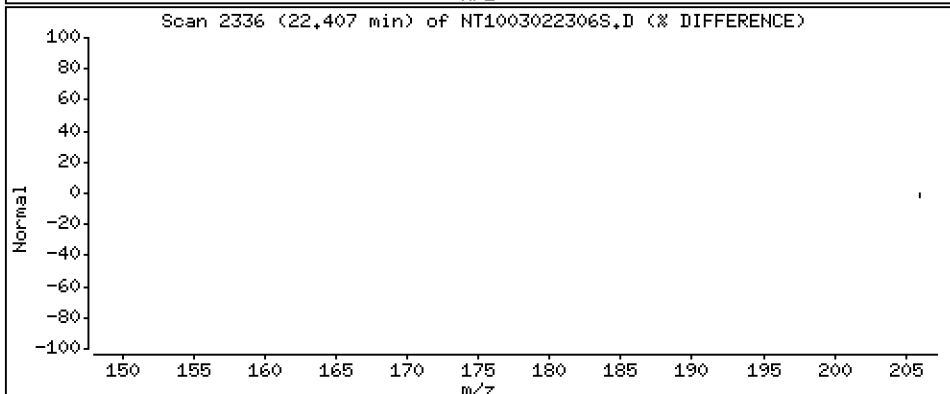
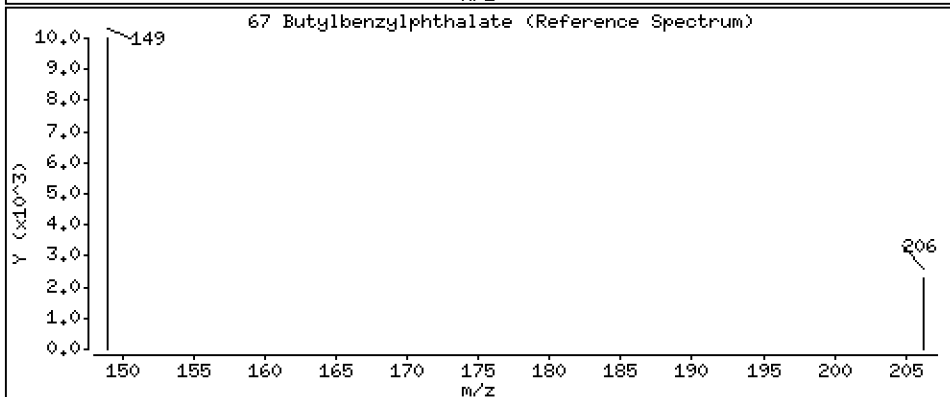
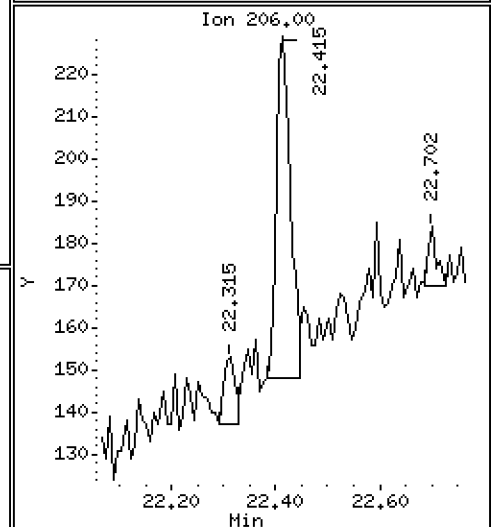
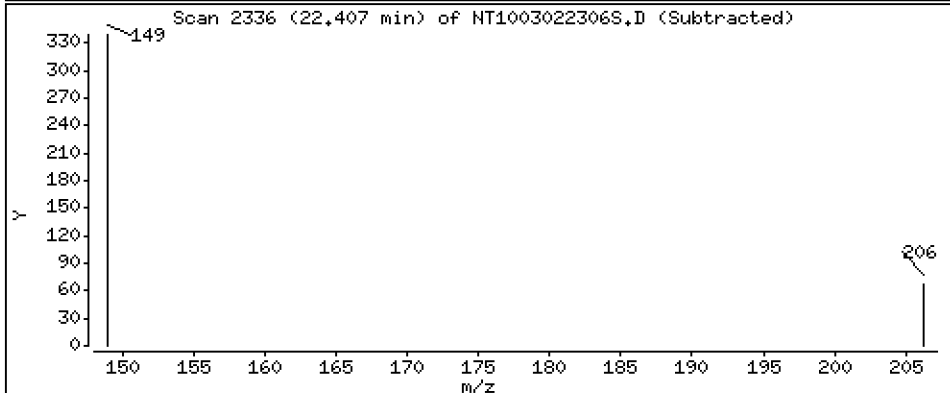
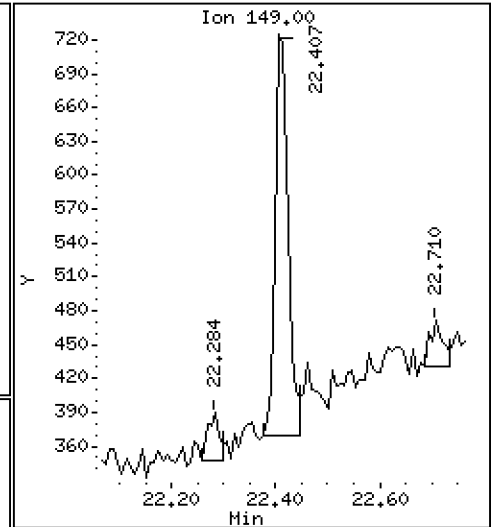
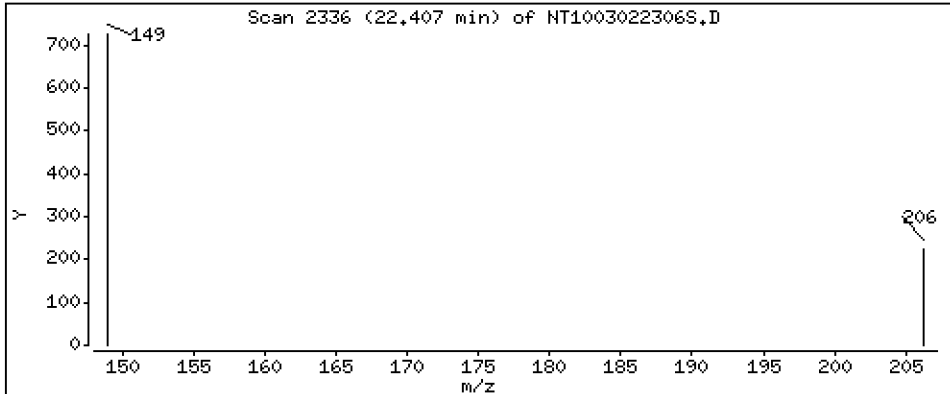
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,001877 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

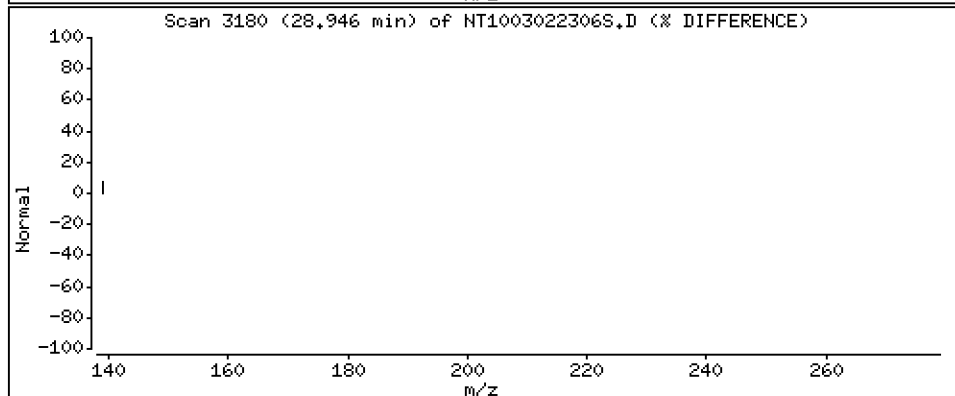
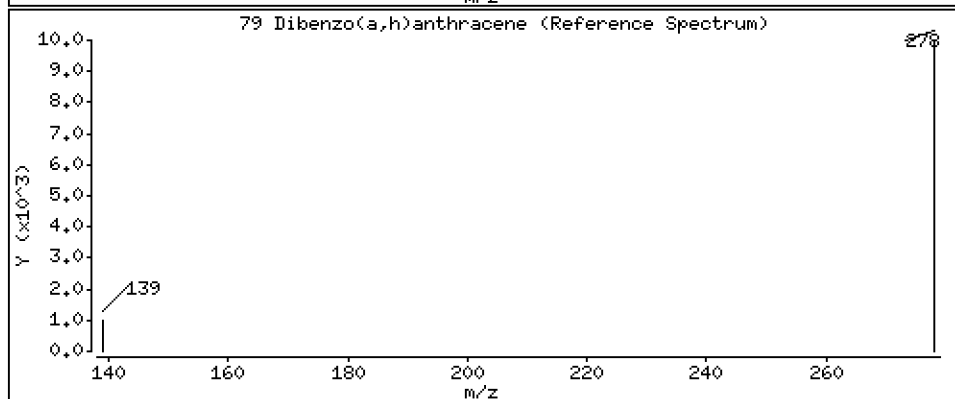
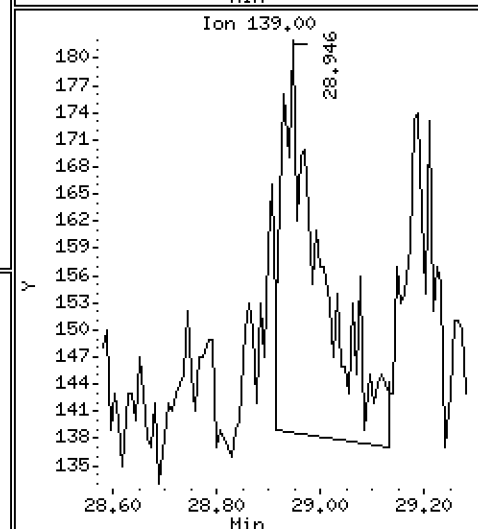
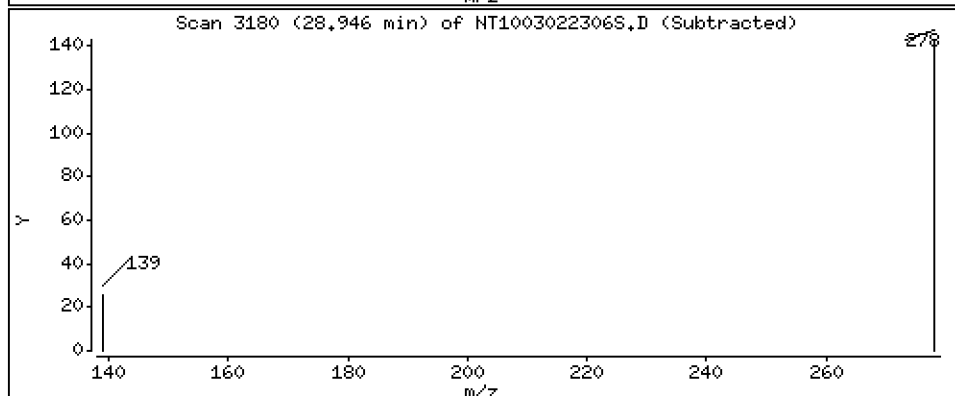
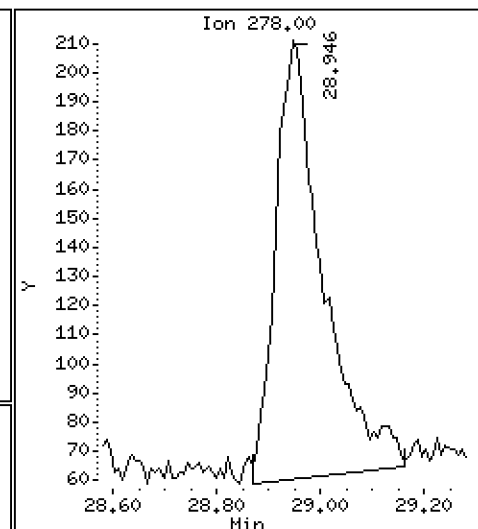
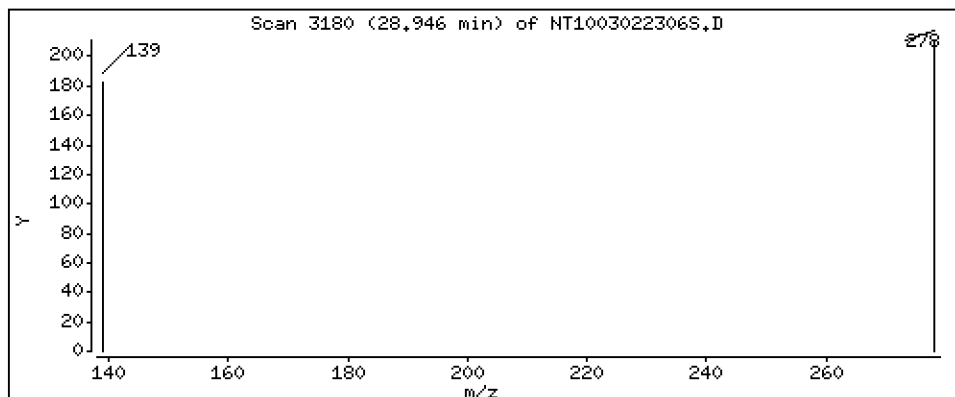
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,002137 ug/L



Date : 02-MAR-2023 17:34

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BLK1

Volume Injected (uL): 1.0

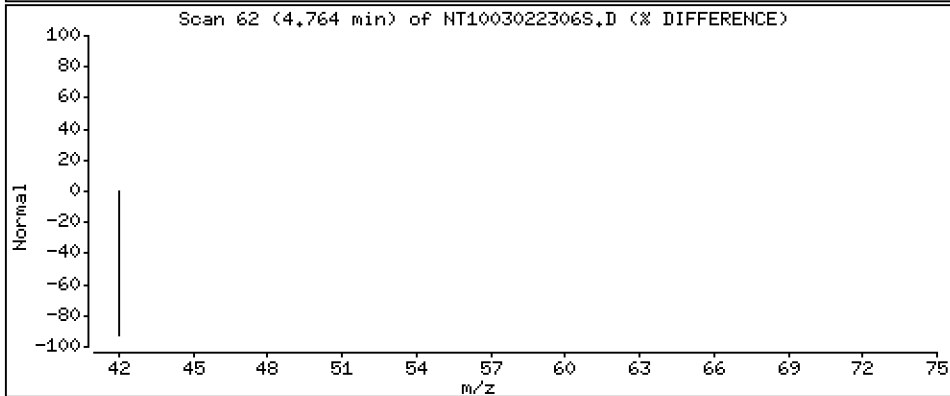
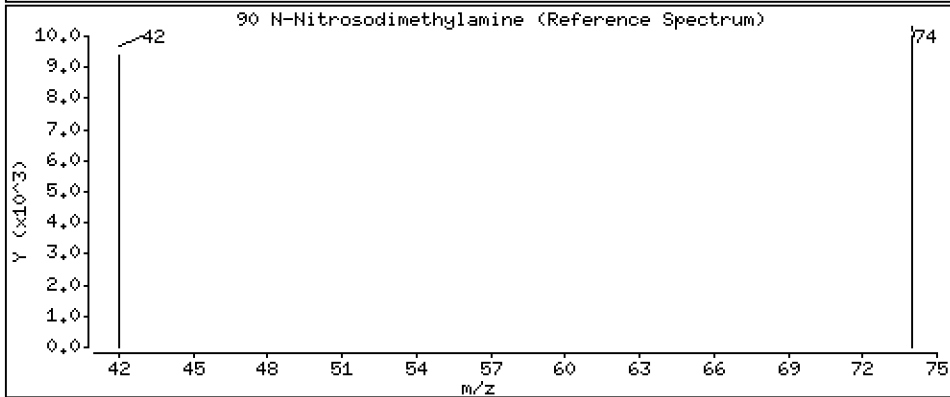
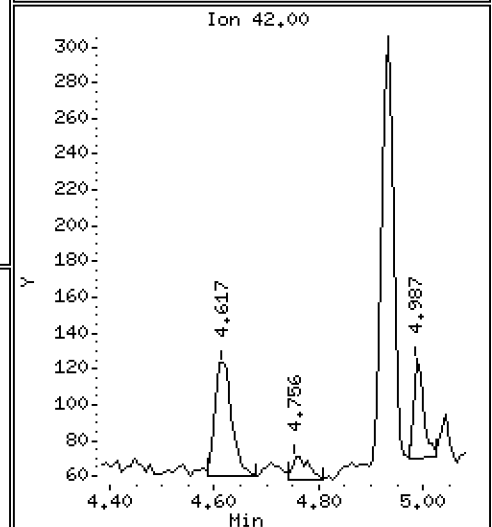
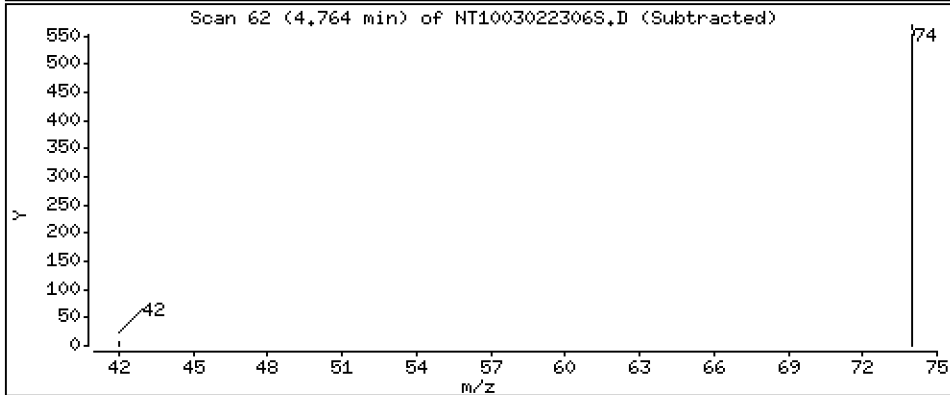
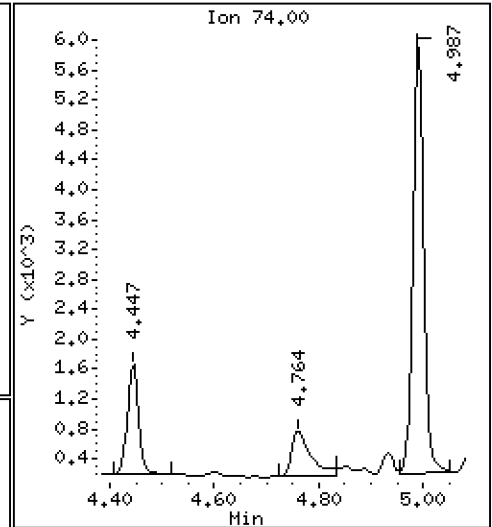
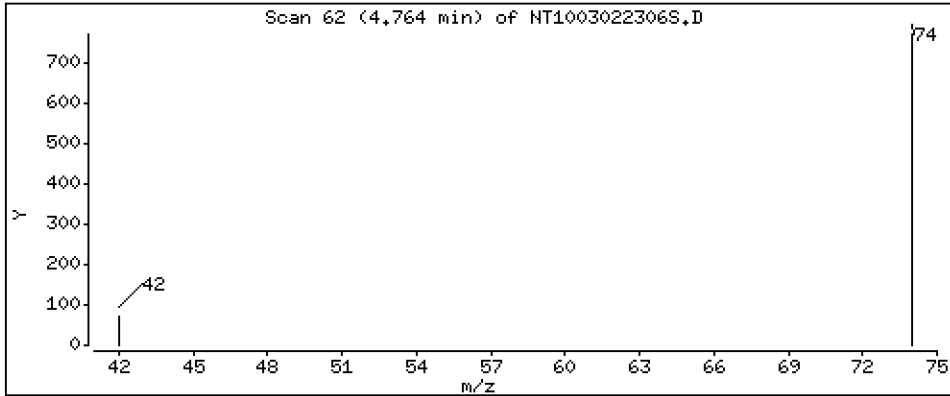
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 0,01729 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022306S.D  
 Lab Smp Id: BLA0624-BLK1  
 Inj Date : 02-MAR-2023 17:34 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BLK1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:01 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.747)	862738	5.55899	5.559(R)
3 Phenol	94		8.517	8.517	(0.921)	8521	0.03723	0.03723
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.989)	1769	0.00878	0.008781
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.251	(1.000)	543607	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.282	(1.003)	1909	0.00975	0.009746
11 Benzyl alcohol	79		9.477	9.476	(1.025)	2528	0.01992	0.01992
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	1543	0.00820	0.008196
13 2-Methylphenol	108		9.663	9.655	(1.045)	822	0.00597	0.005974
15 4-Methylphenol	108		9.958	9.942	(1.077)	537	0.00375	0.003753
16 N-Nitroso-di-n-propylamine	70		10.292	9.981	(1.113)	76325	0.74683	0.7468
22 2,4-Dimethylphenol	107		10.989	10.997	(0.937)	1496	0.00897	0.008969
24 Benzoic acid	105		11.082	11.074	(0.945)	2506	0.02740	0.02740
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	931	0.00658	0.006579
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1966158	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	788	0.00785	0.007847
39 Dimethylphthalate	163		14.741	14.741	(0.963)	906	0.00277	0.002775
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	1028261	4.00000	
50 Diethylphthalate	149		16.203	16.203	(1.058)	33257	0.10801	0.1080
54 N-Nitrosodiphenylamine	169		16.690	16.690	(0.907)	354	0.00120	0.001198
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	630	0.00455	0.004555

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	688	0.01137	0.01137
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1826191	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	684314	4.58447	4.584 (R)
67 Butylbenzylphthalate	149	22.407	22.414	(0.957)	585	0.00188	0.001877
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1845847	4.00000	
* 77 Perylene-d12	264	26.108	26.115	(1.000)	1929666	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.109)	955	0.00214	0.002137
90 N-Nitrosodimethylamine	74	4.763	4.732	(0.515)	1589	0.01729	0.01729

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022306S.D  
 Lab Smp Id: BLA0624-BLK1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	543607	10.17
27 Naphthalene-d8	1779056	889528	3558112	1966158	10.52
42 Acenaphthene-d10	954569	477285	1909138	1028261	7.72
59 Phenanthrene-d10	1596290	798145	3192580	1826191	14.40
69 Chrysene-d12	1649110	824555	3298220	1845847	11.93
77 Perylene-d12	1901958	950979	3803916	1929666	1.46

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.24	-0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.11	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003022306S.D

Lab ID: BLA0624-BLK1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 17:34

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.113	1.079	0.0345	N-Nitroso-di-n-propylamine

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

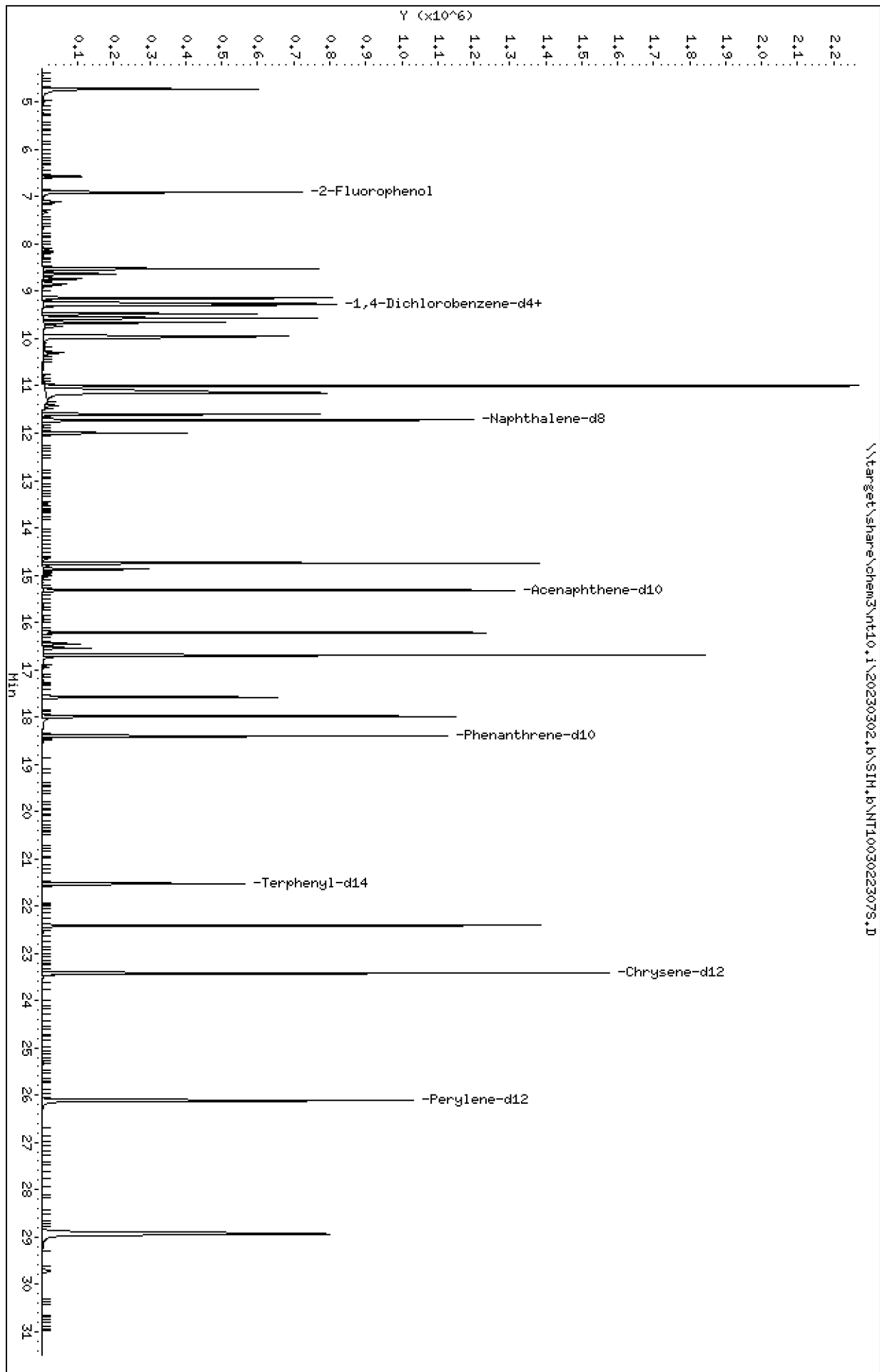
\* Only compounds listed in the work order have been verified by the analyst \*



Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022307S.D  
Date: 02-MAR-2023 18:12  
Client ID:  
Sample Info: BLR0624-BS1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022307S.D



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

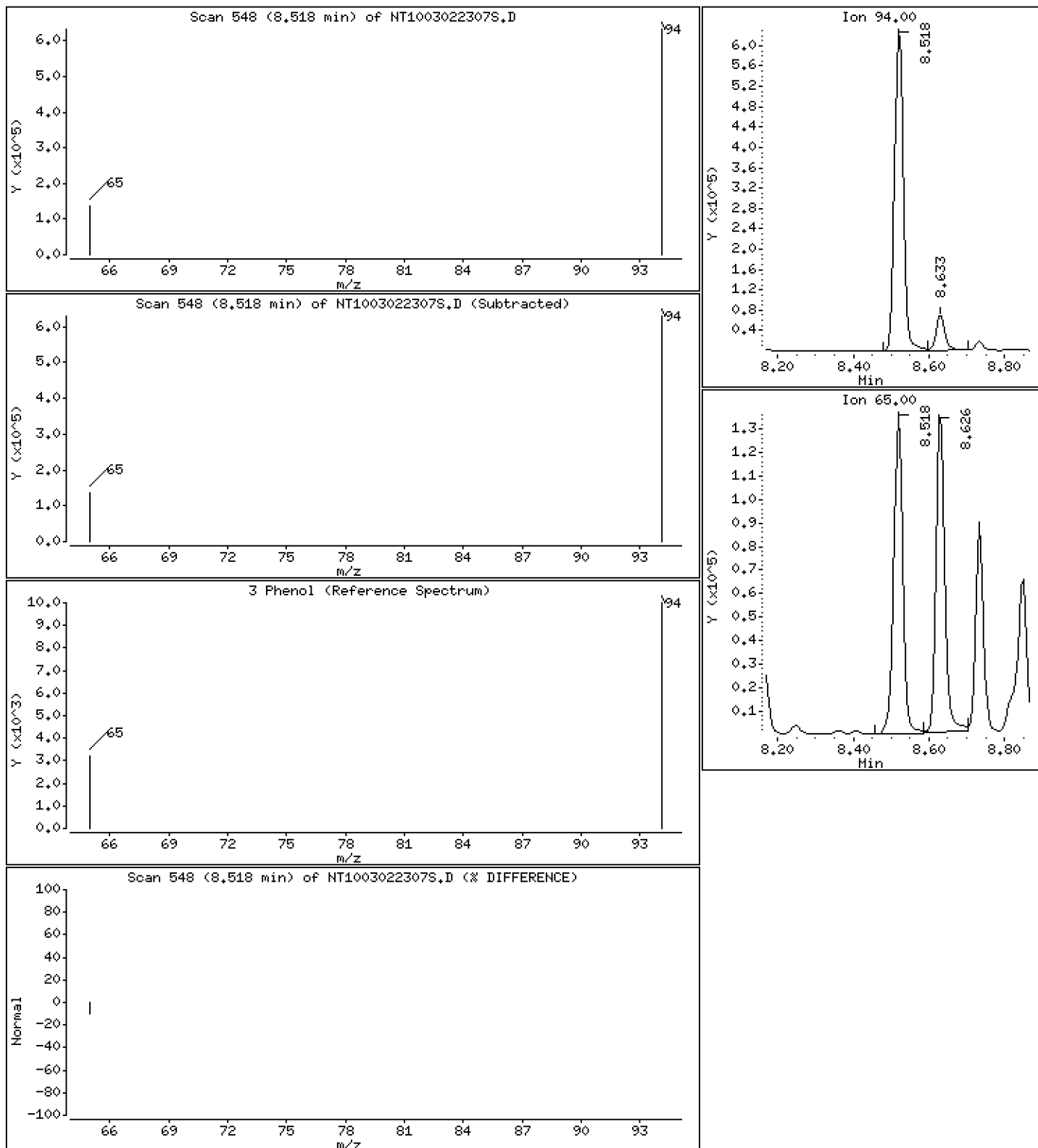
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.985 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

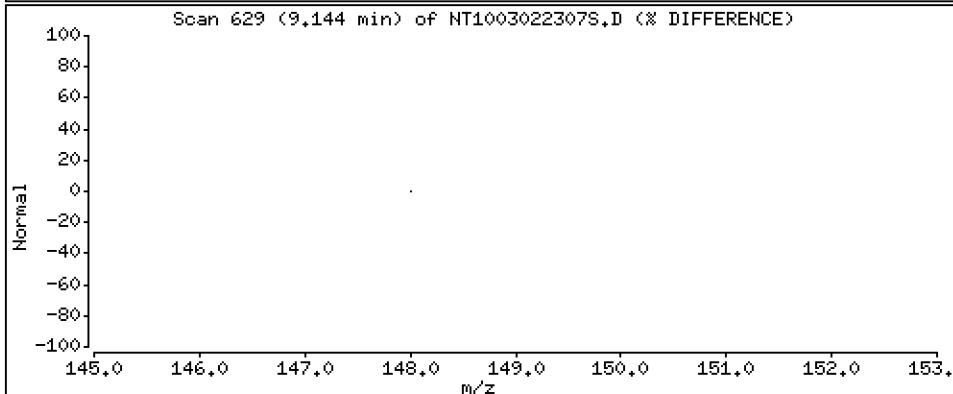
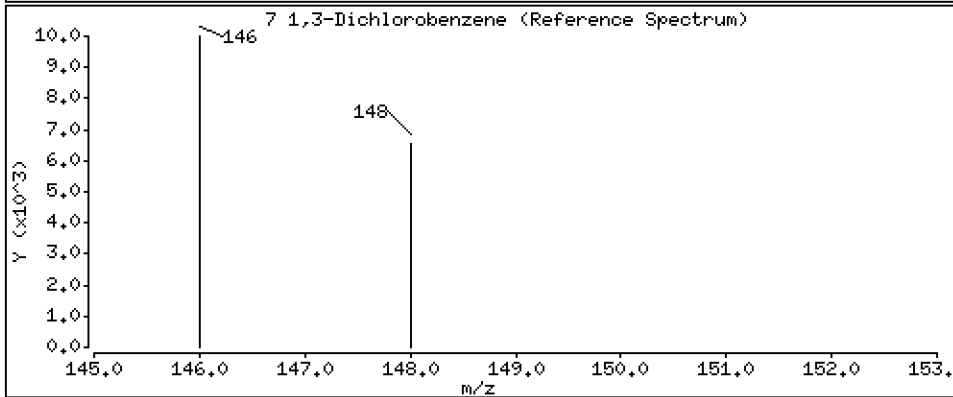
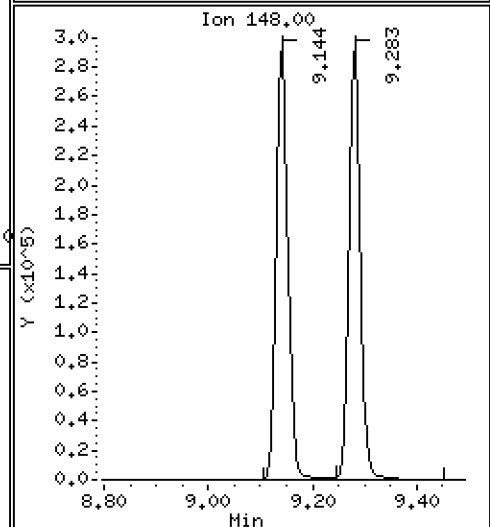
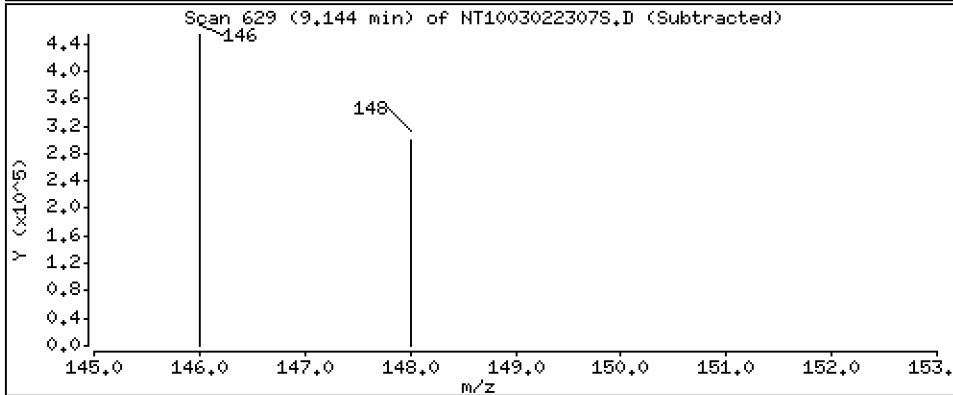
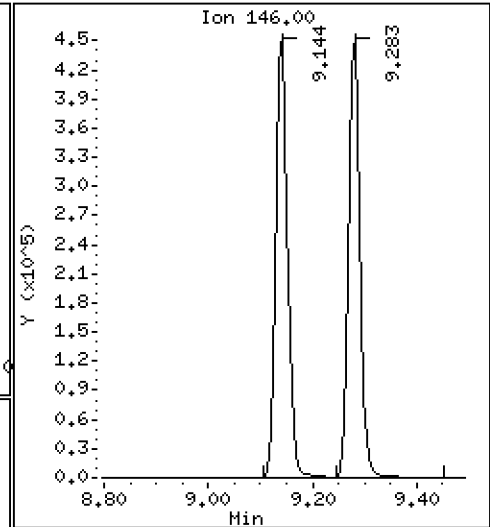
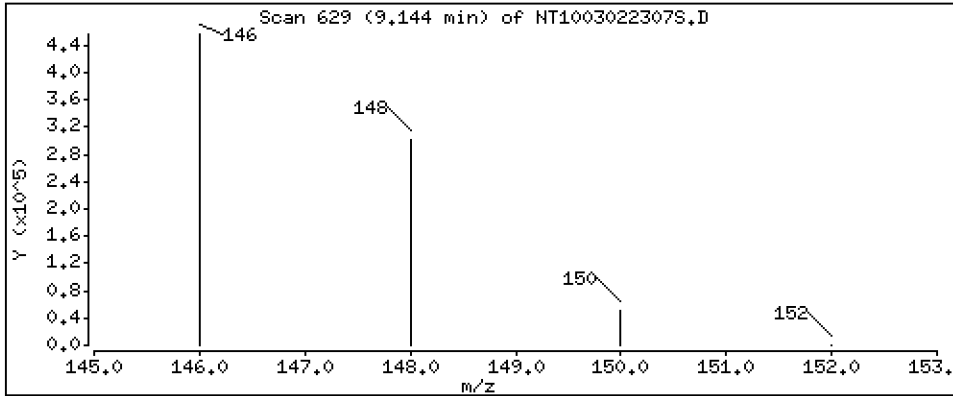
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4.235 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

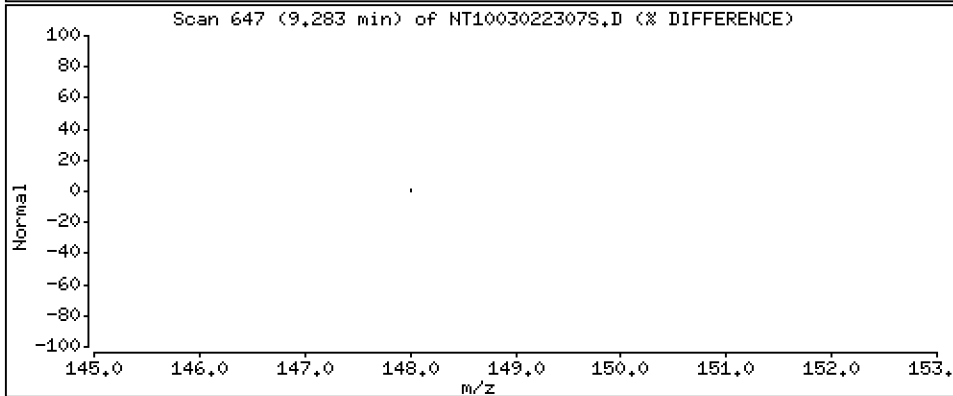
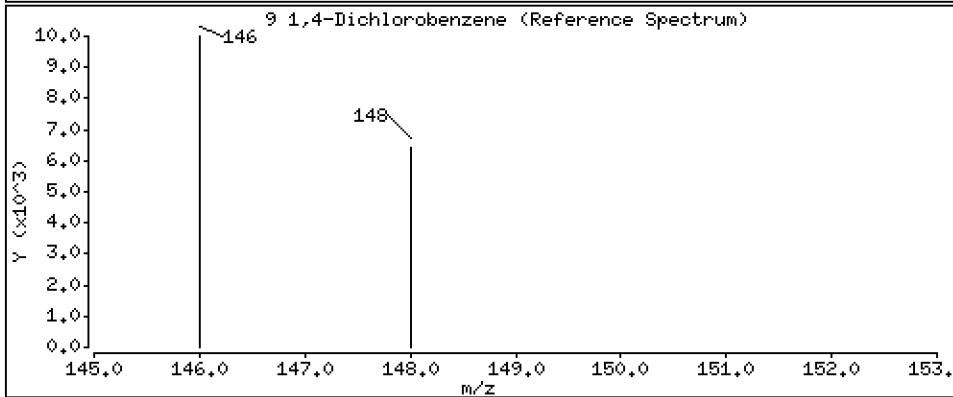
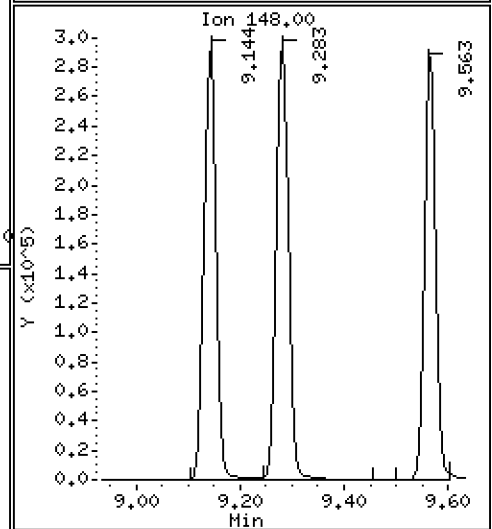
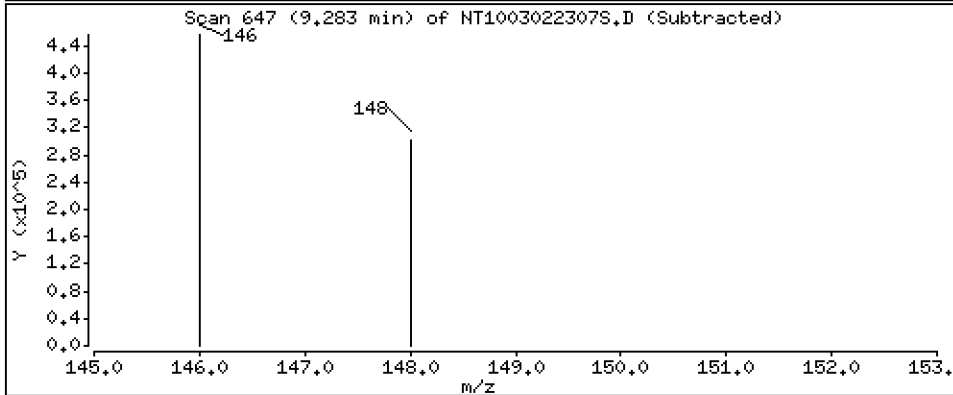
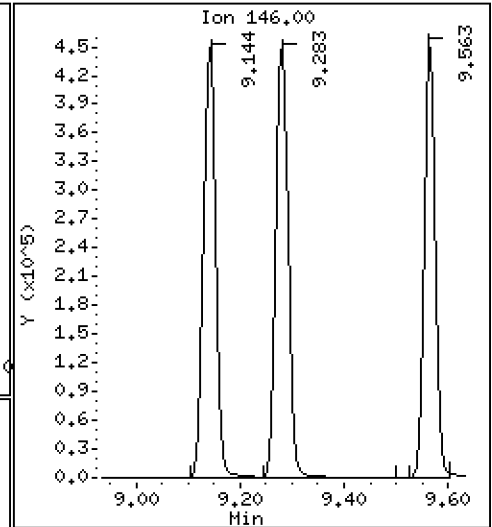
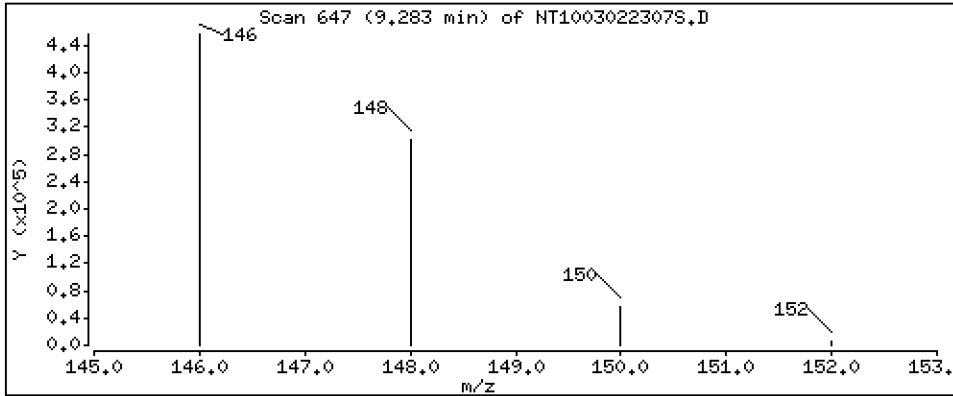
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4.398 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

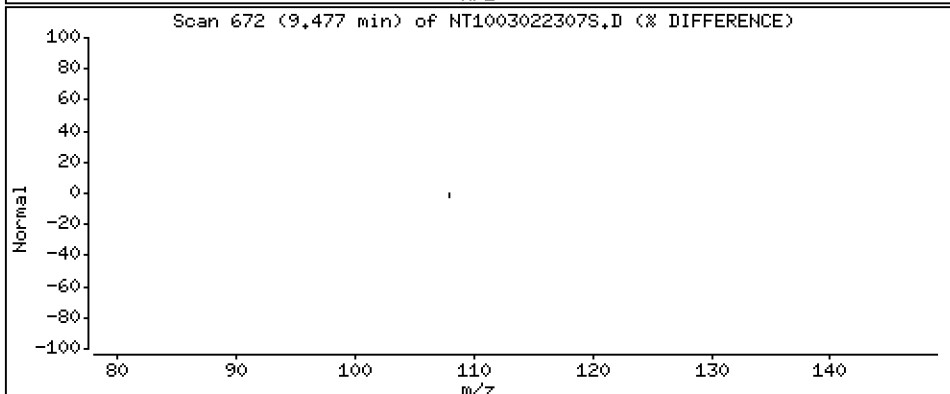
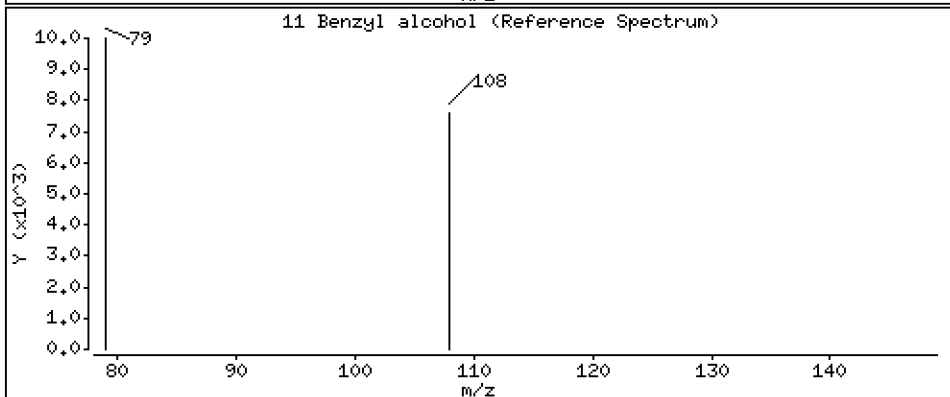
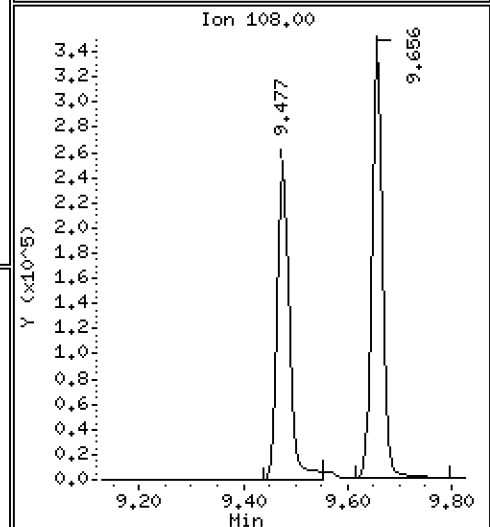
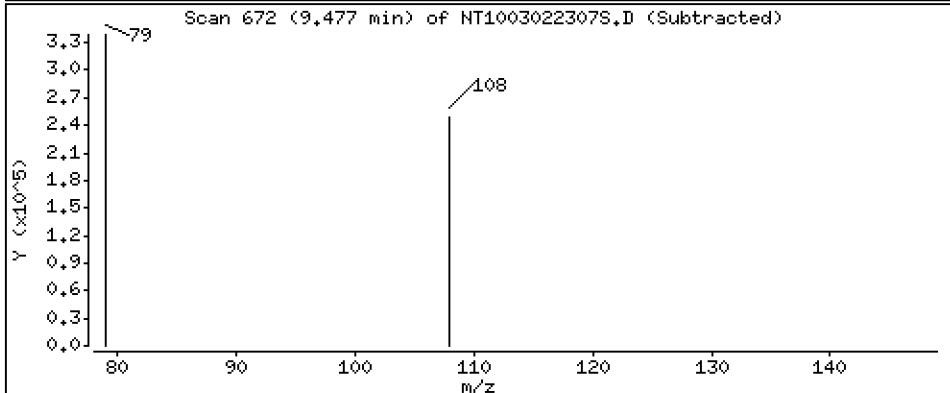
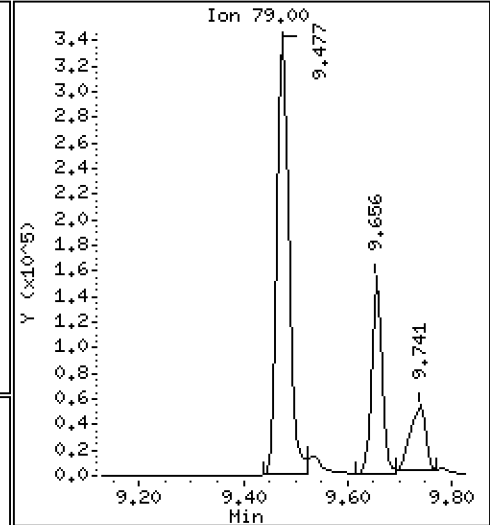
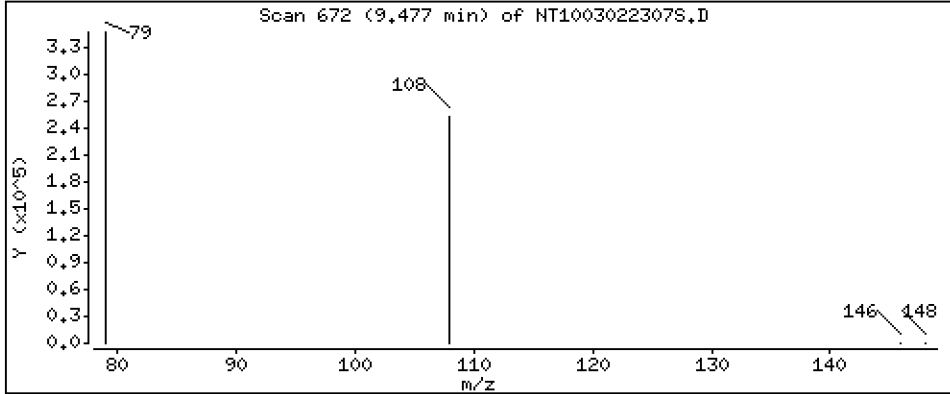
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.665 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

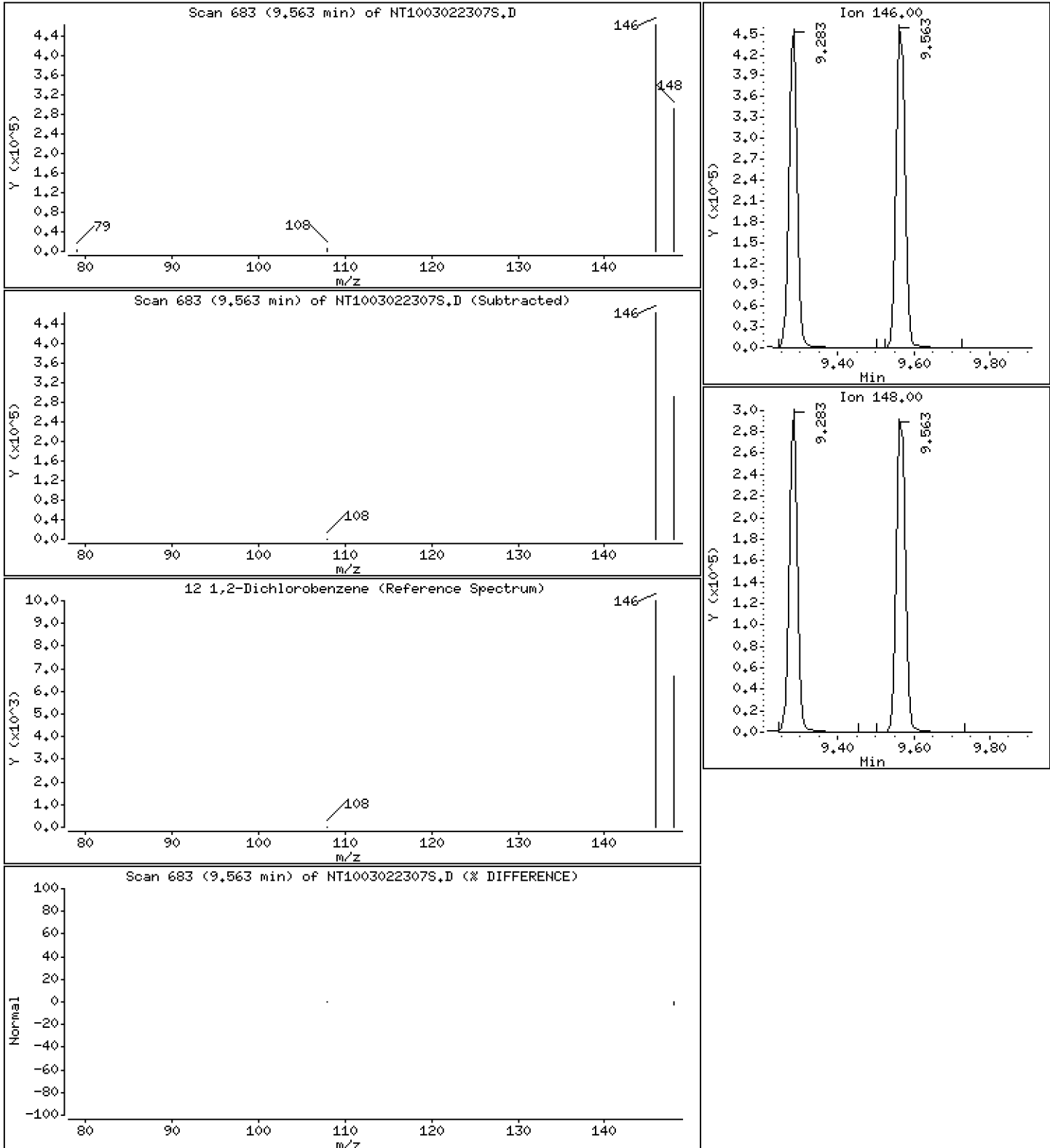
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.495 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

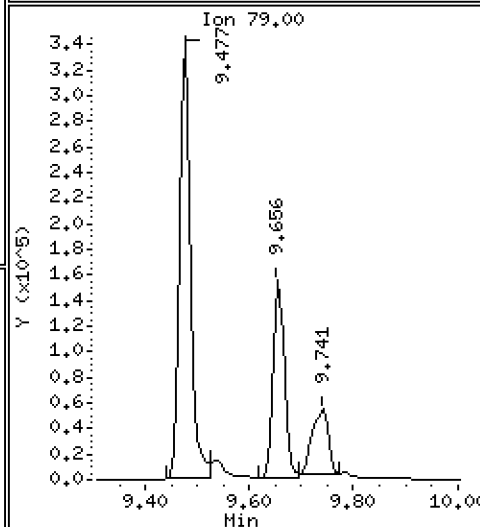
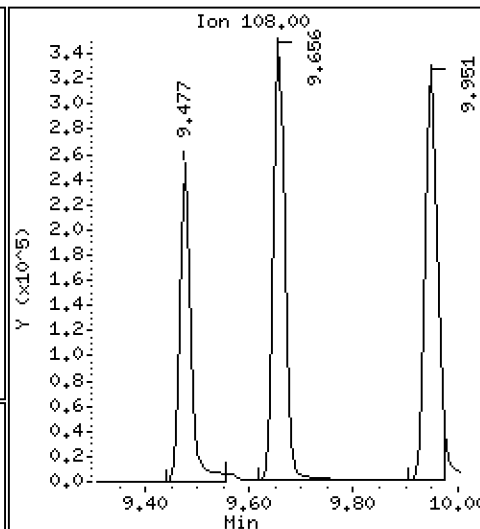
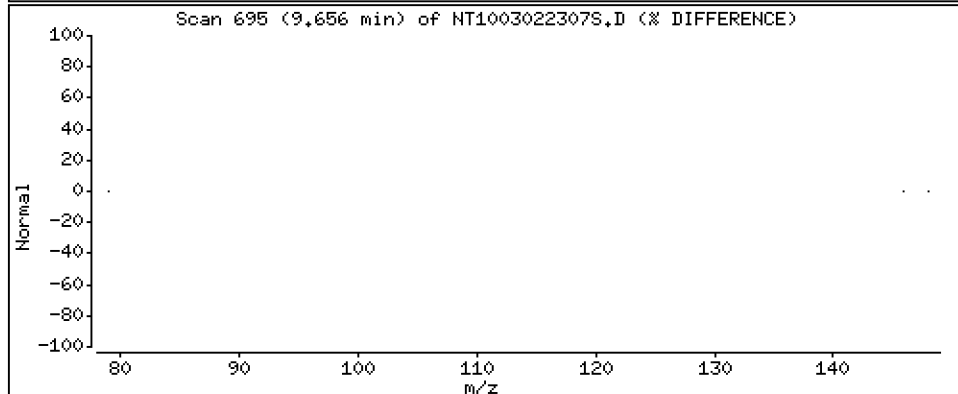
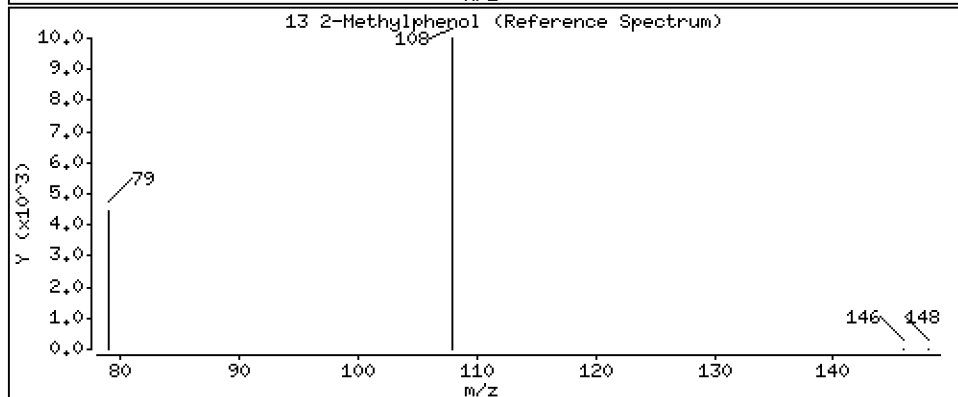
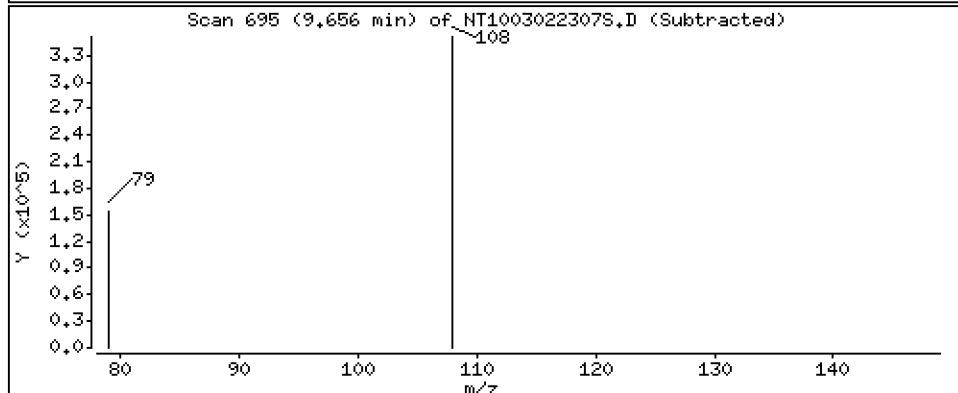
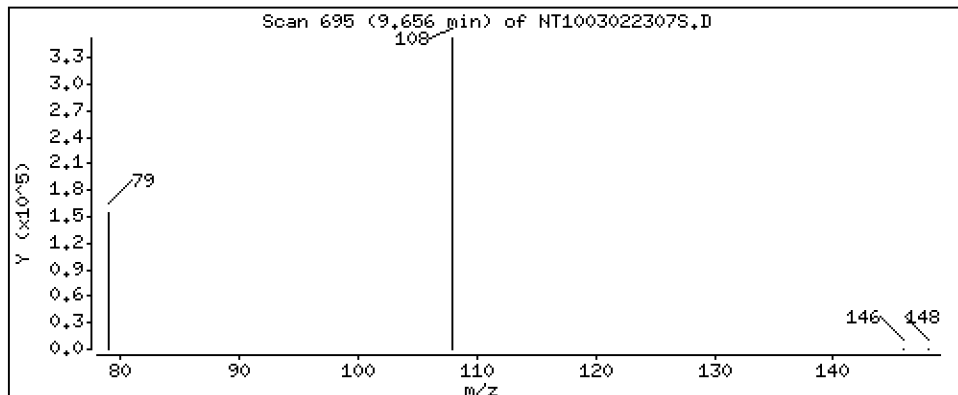
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.274 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

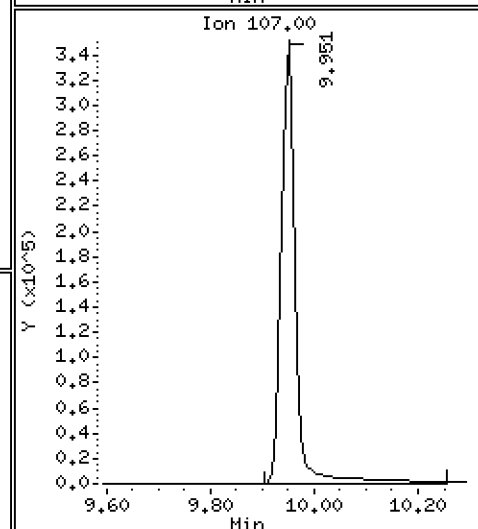
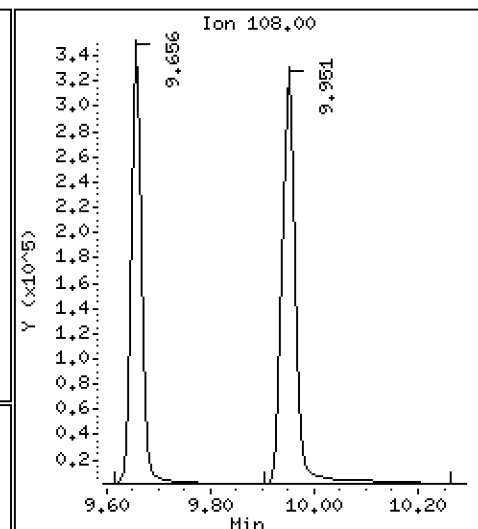
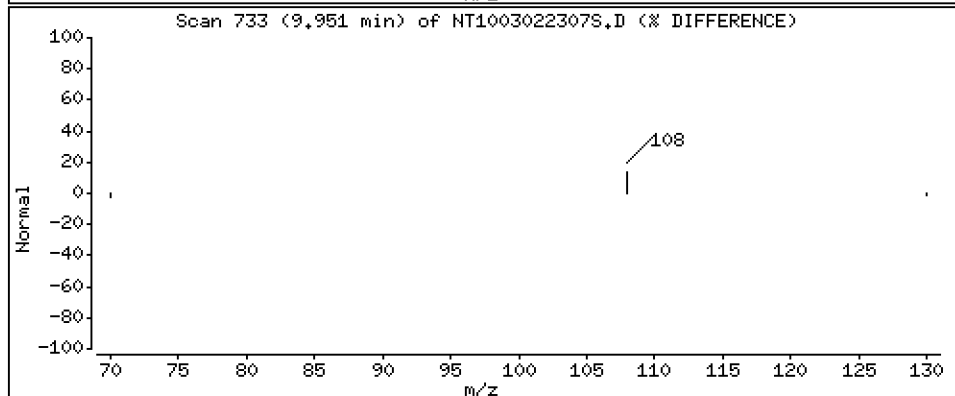
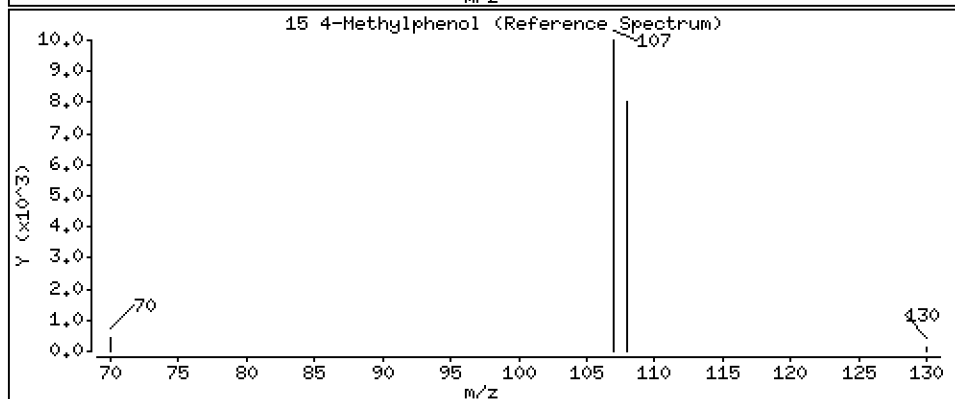
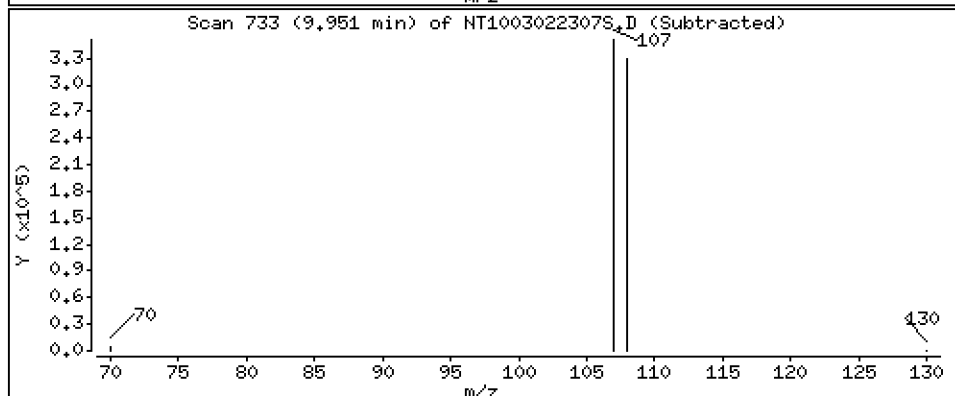
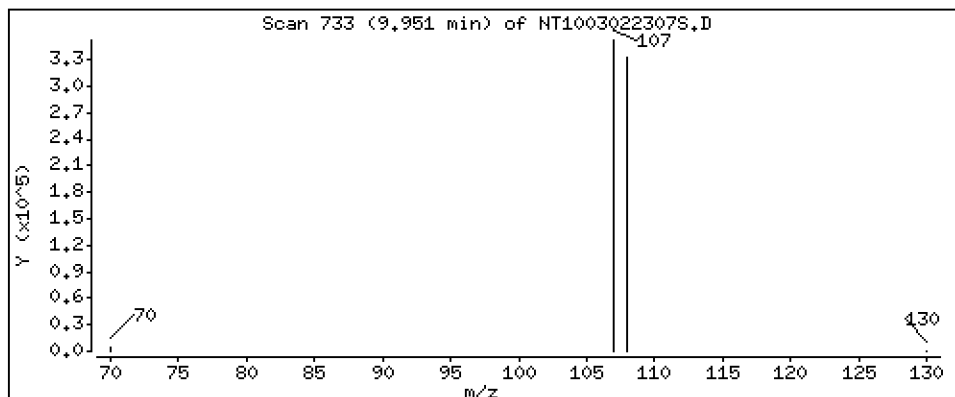
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.613 ug/L





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

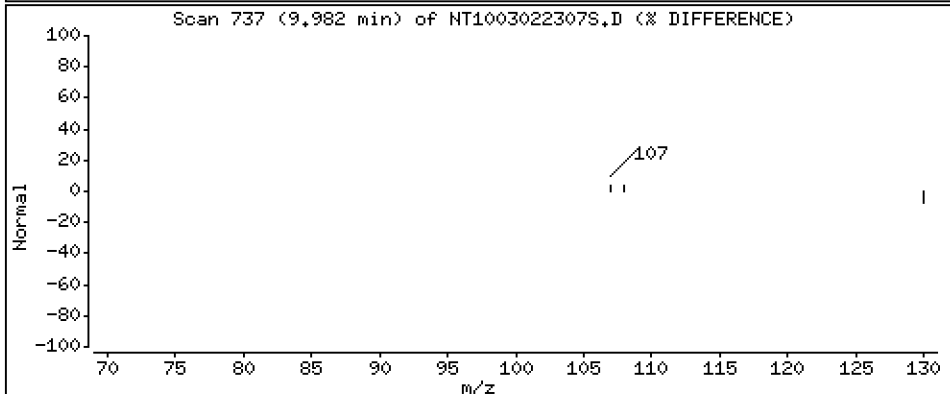
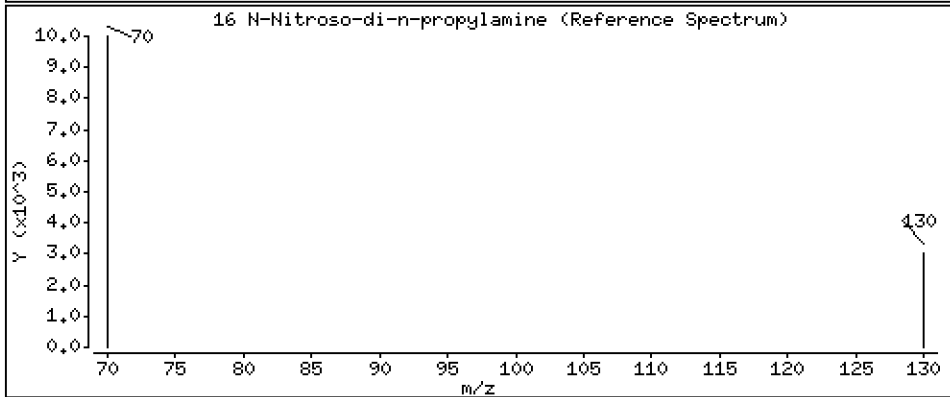
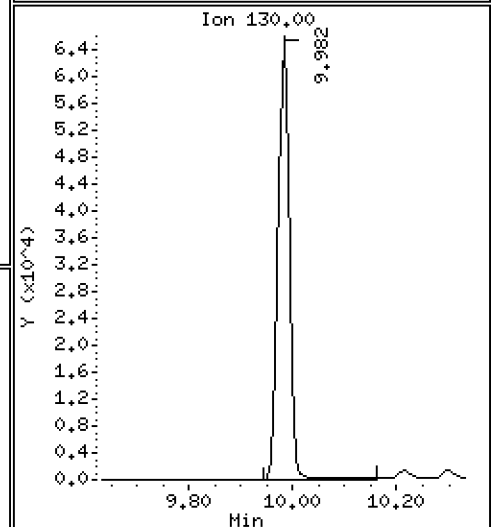
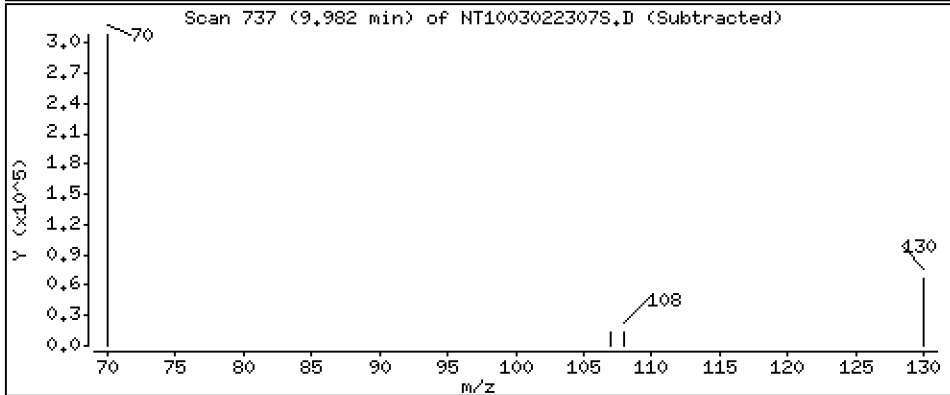
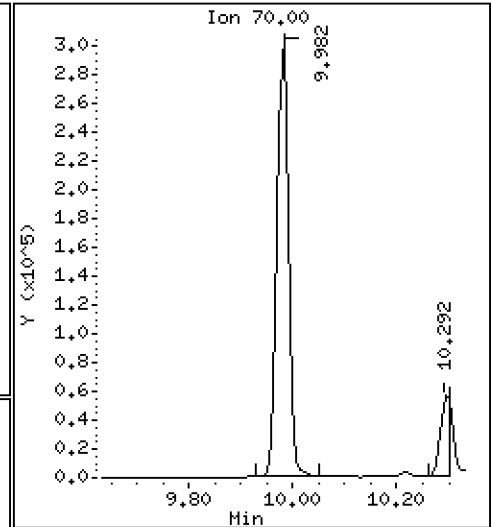
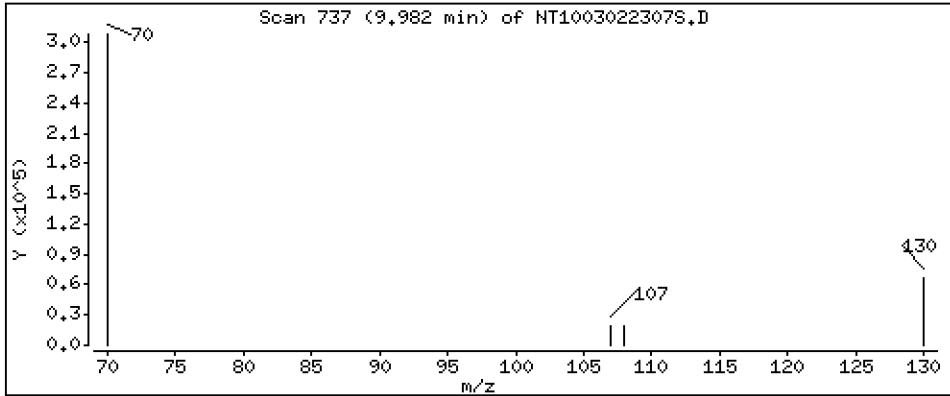
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,077 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

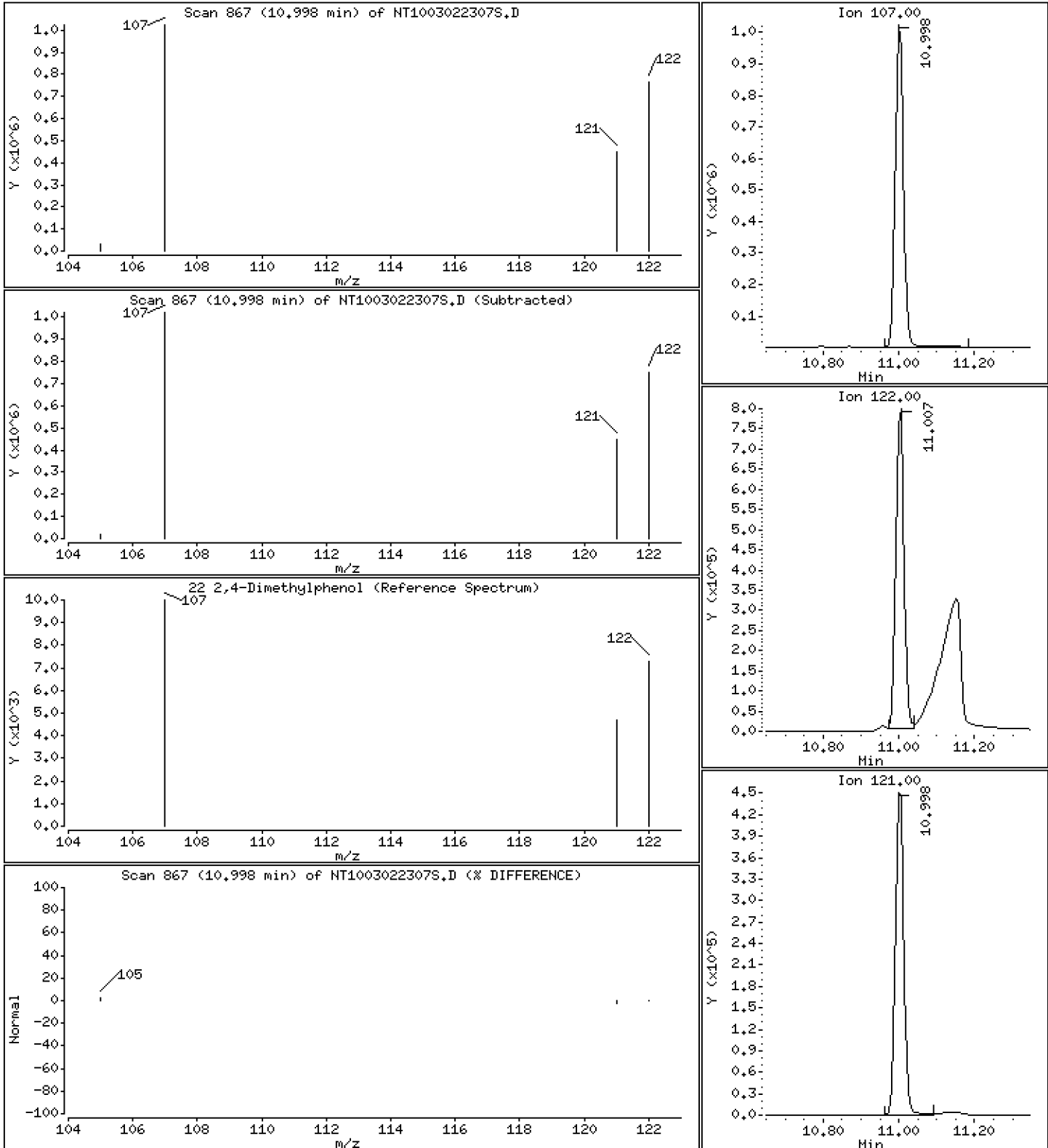
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 10,10 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

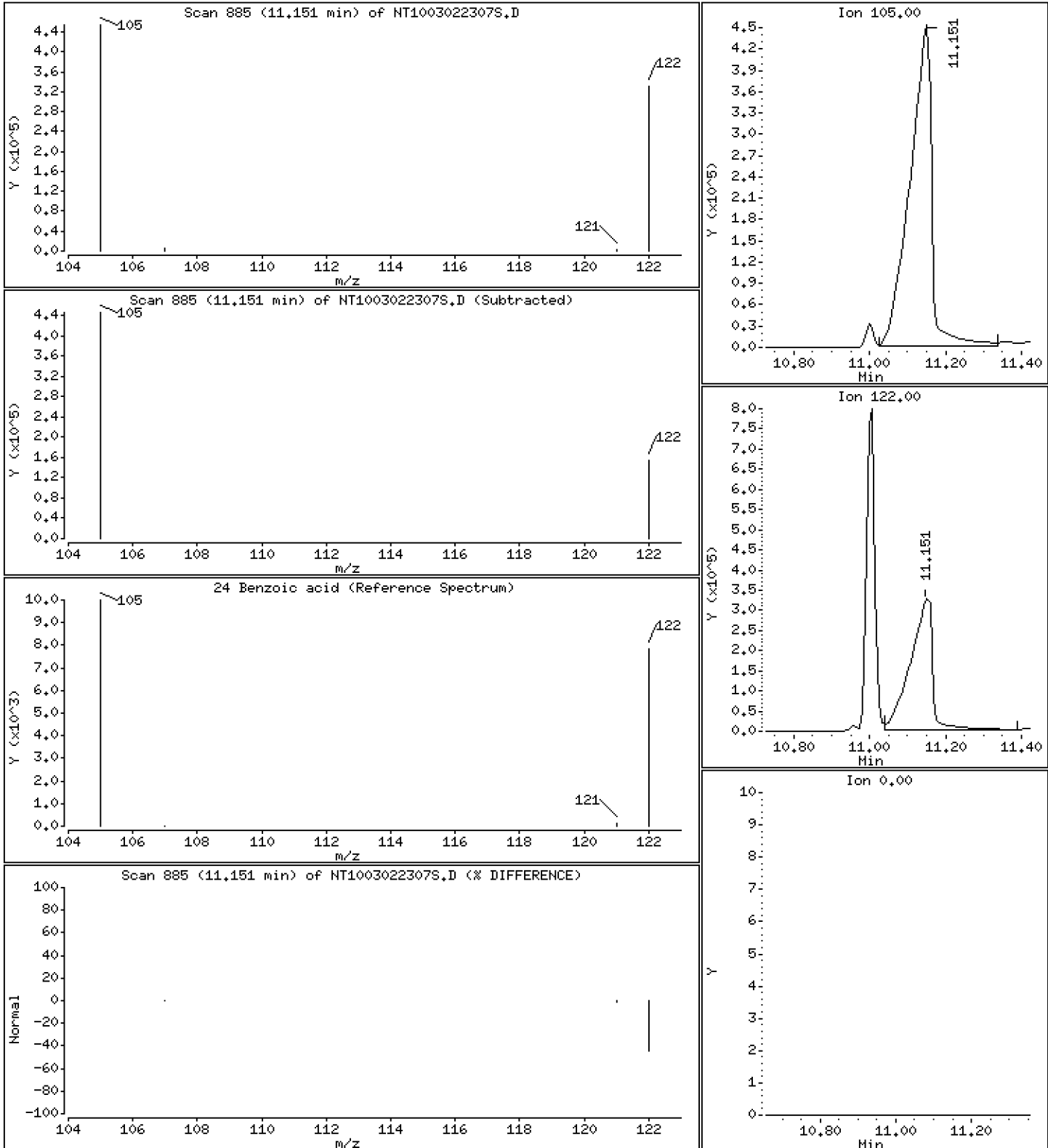
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 19.64 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

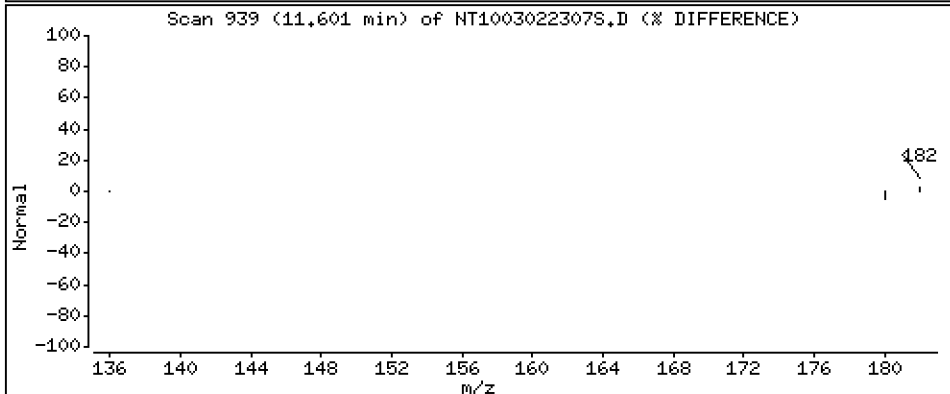
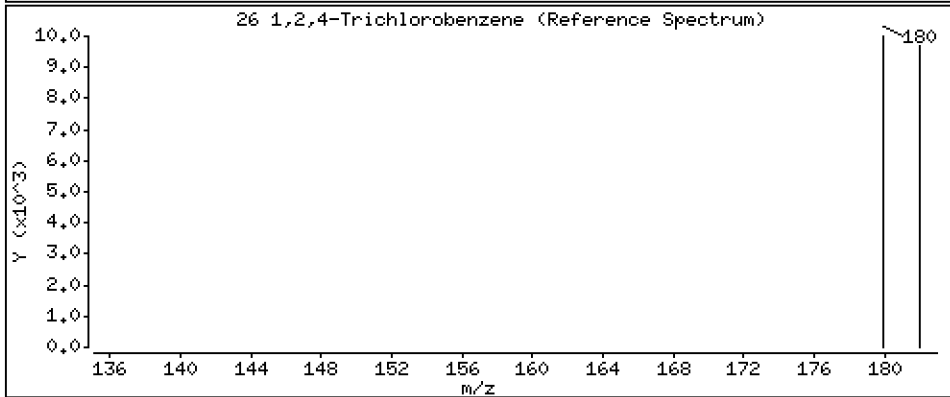
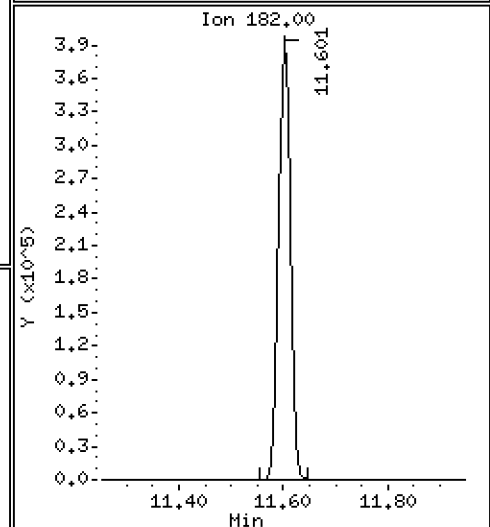
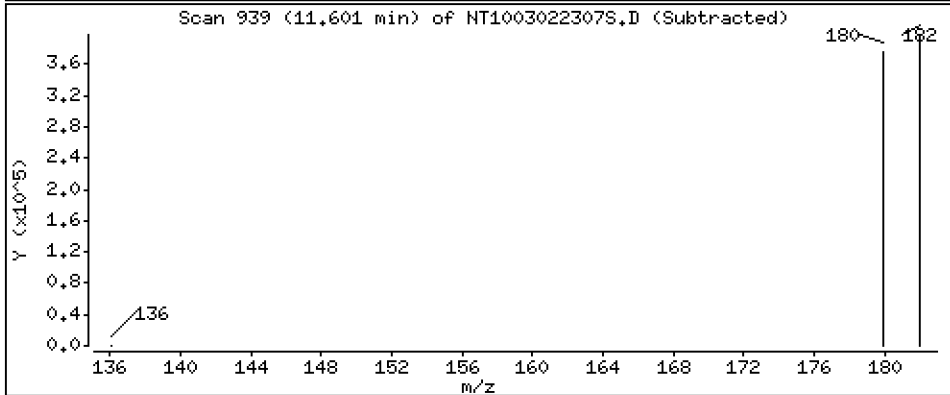
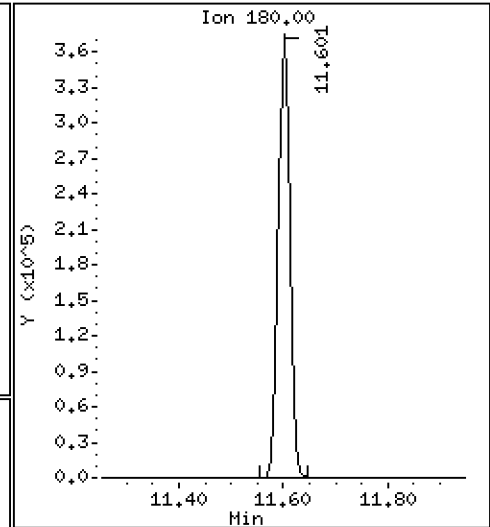
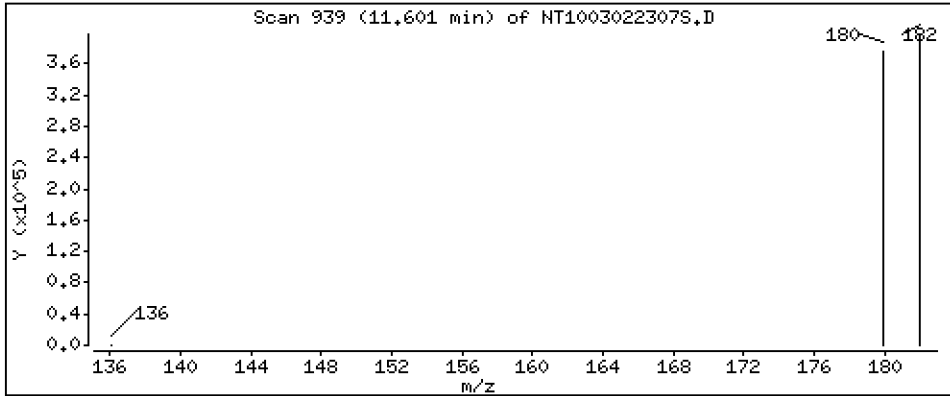
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.348 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

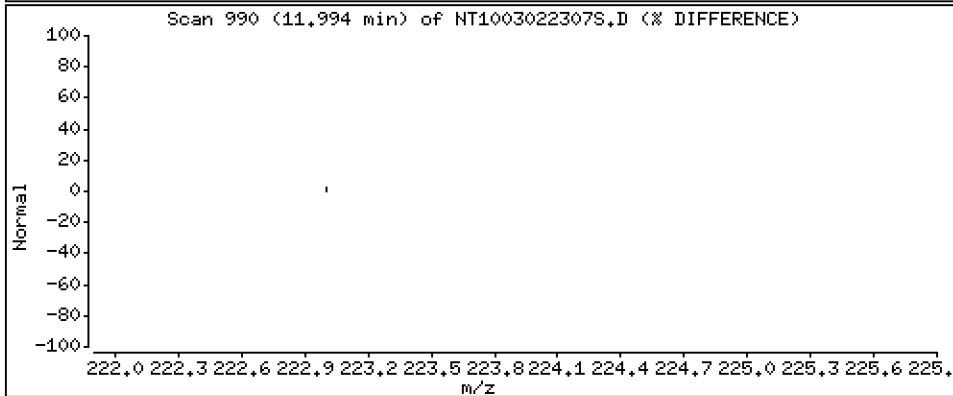
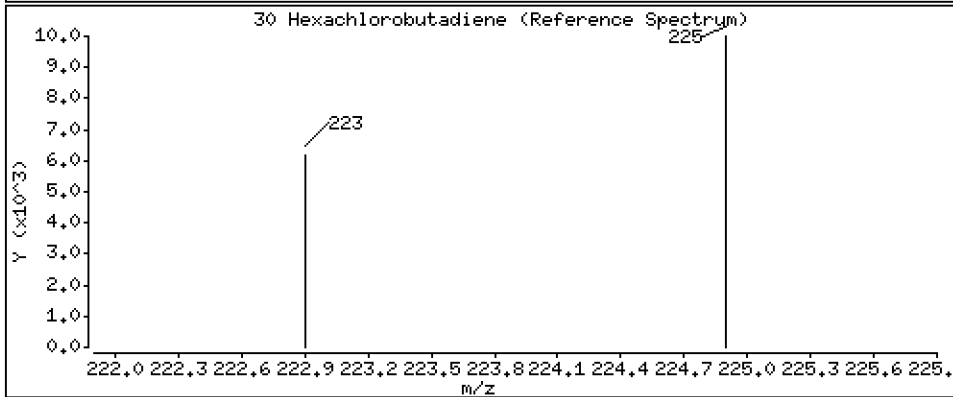
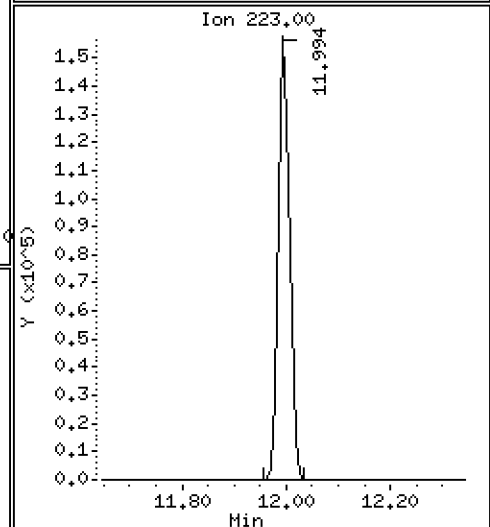
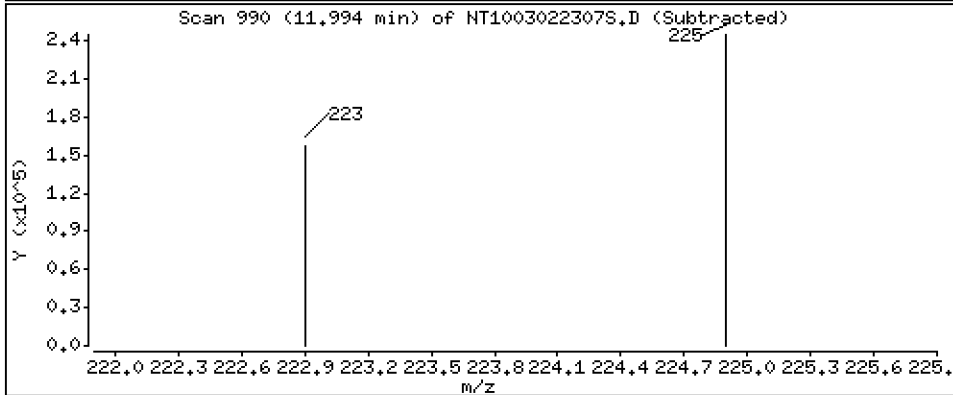
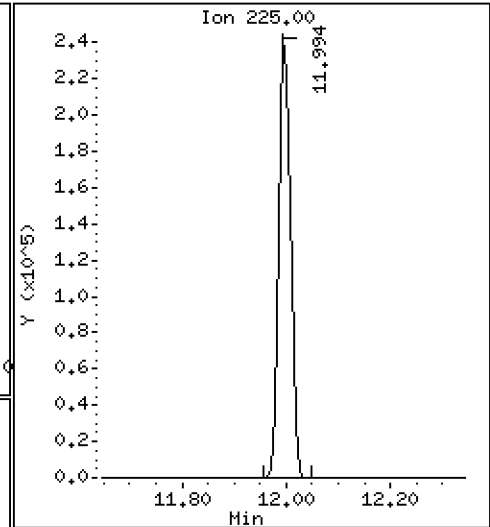
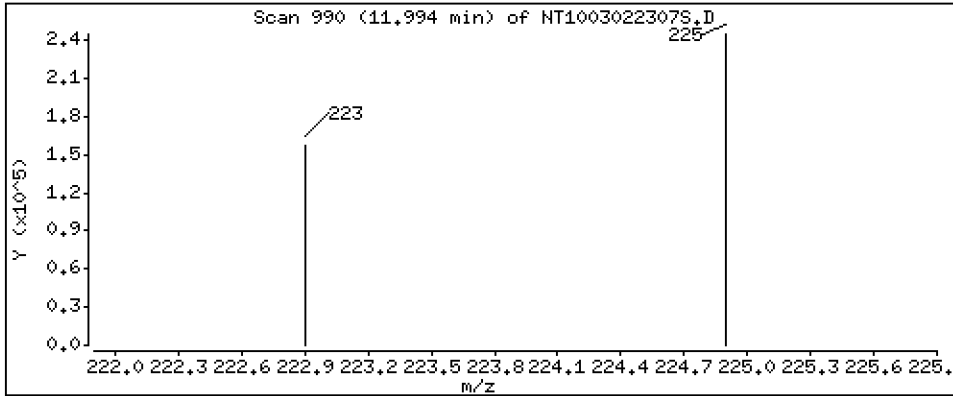
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,117 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

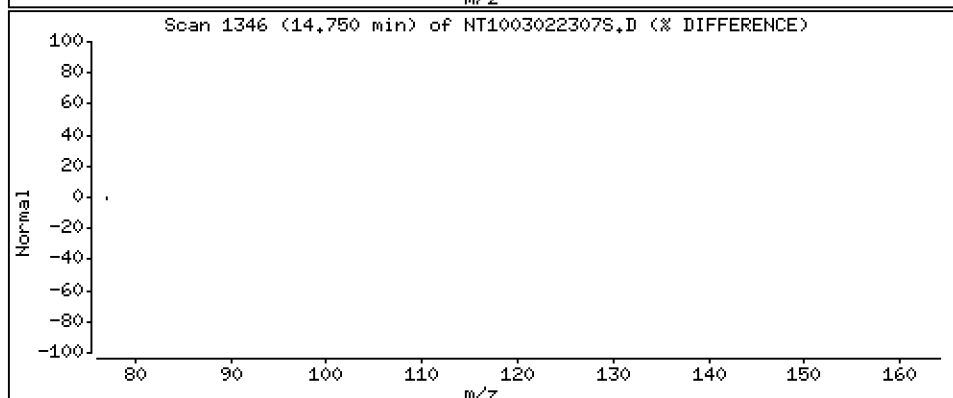
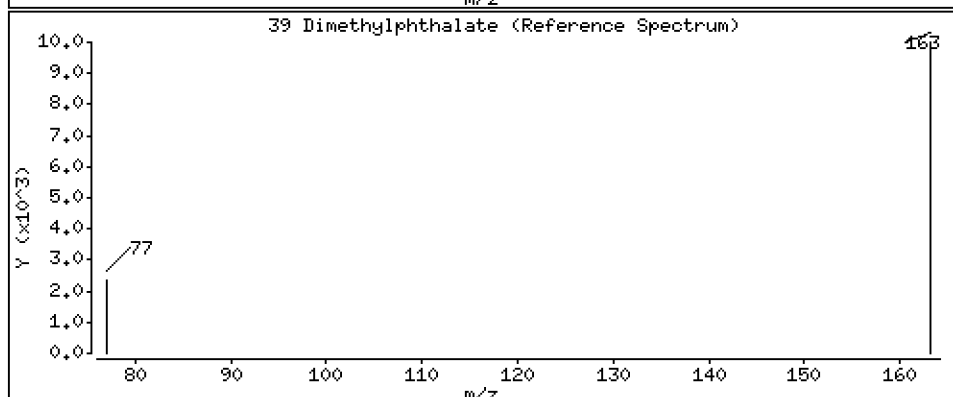
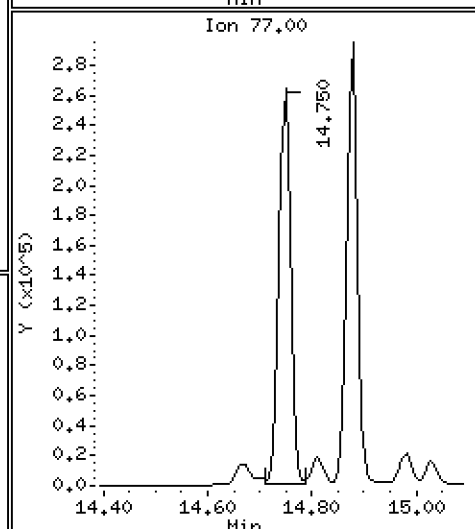
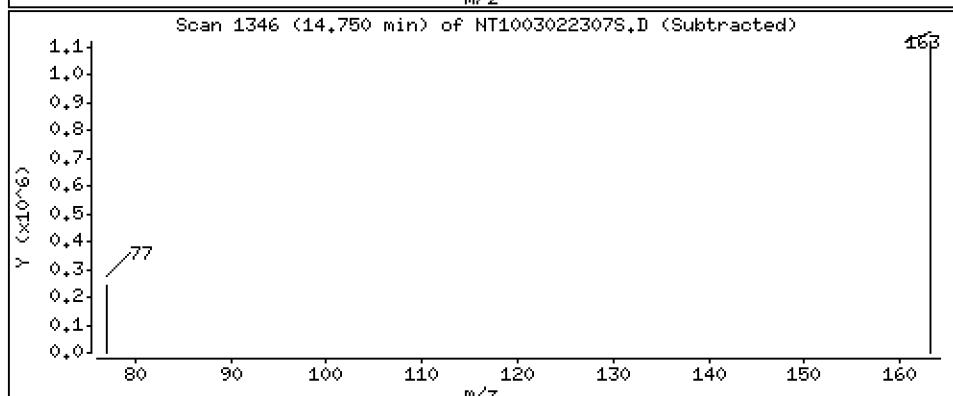
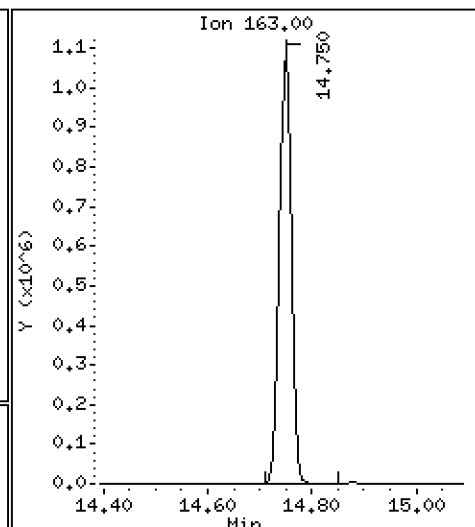
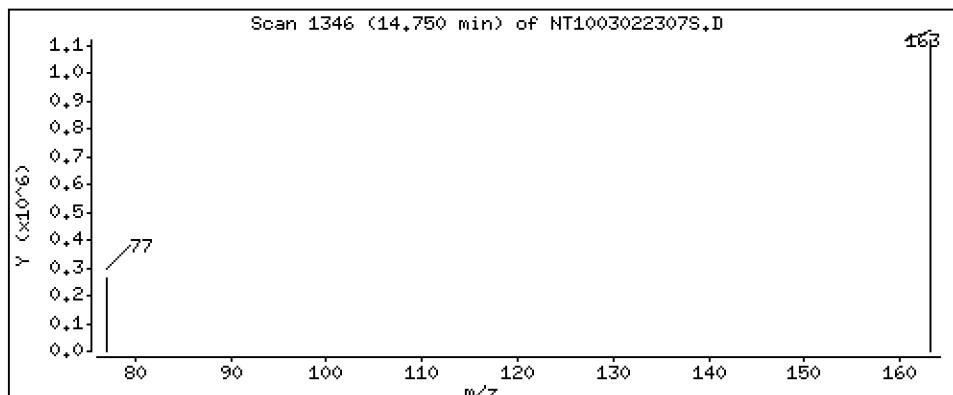
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 5.444 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

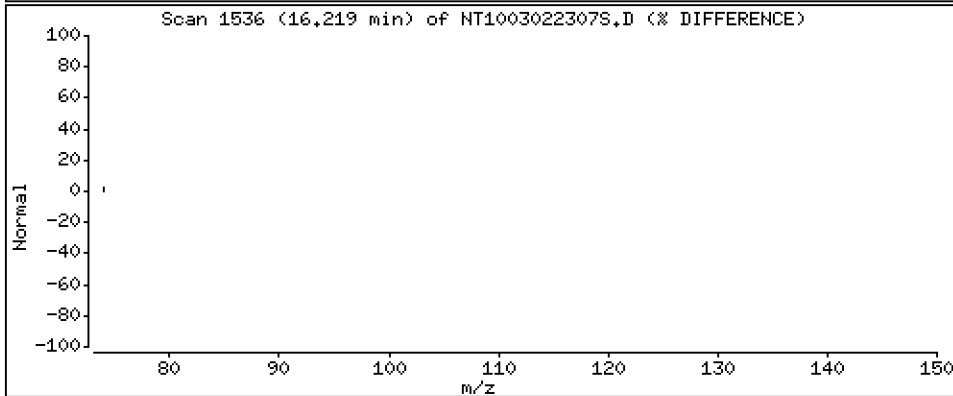
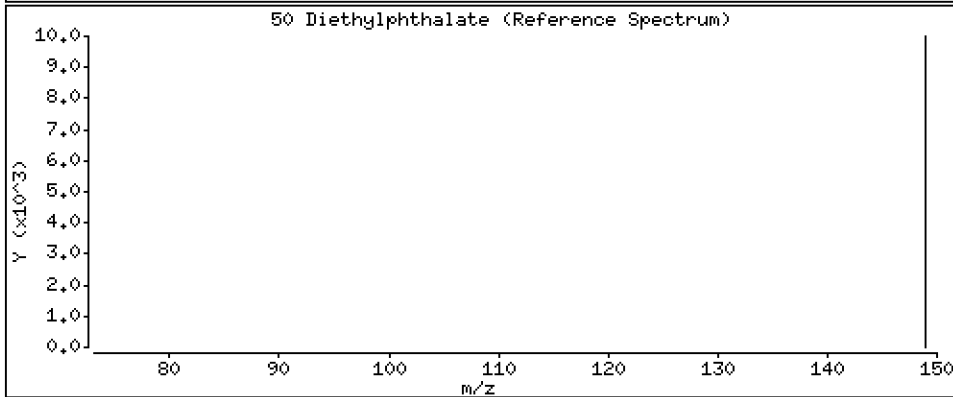
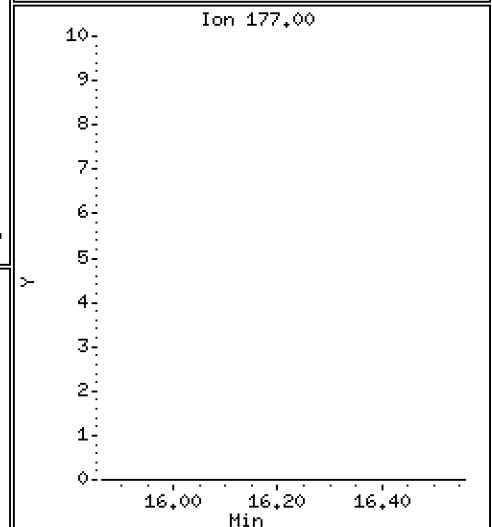
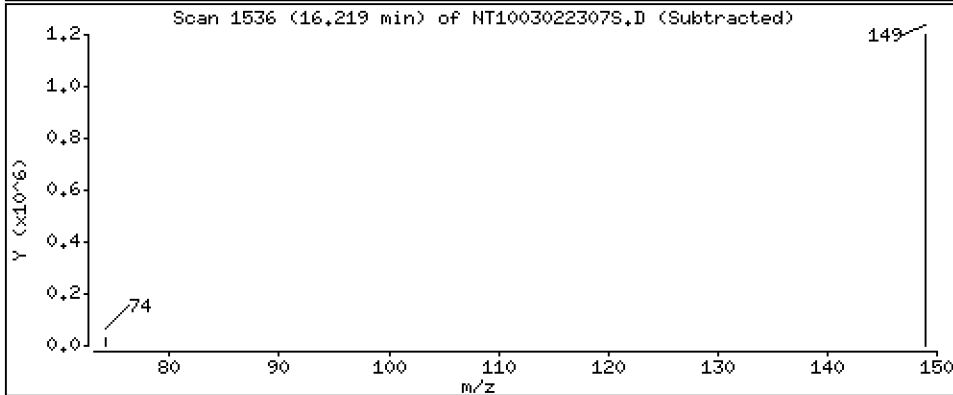
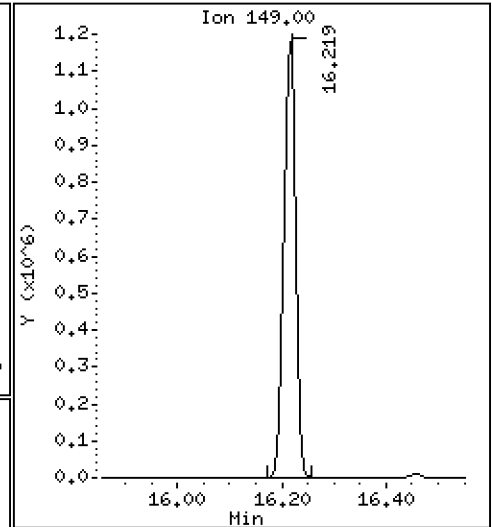
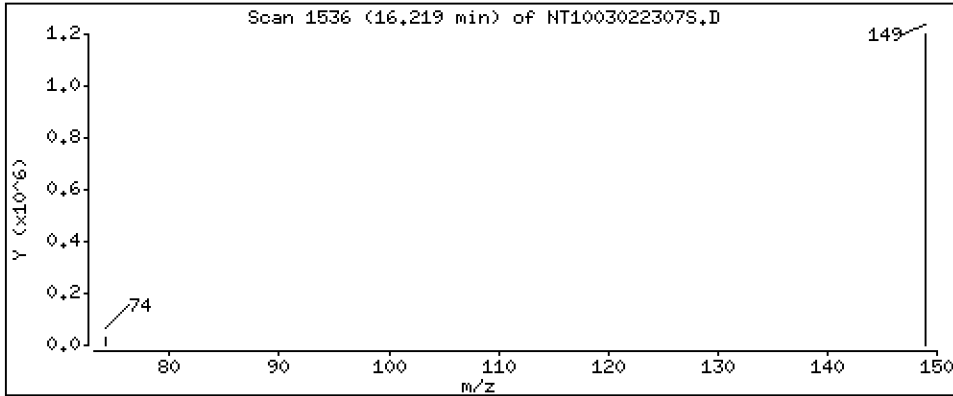
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,291 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

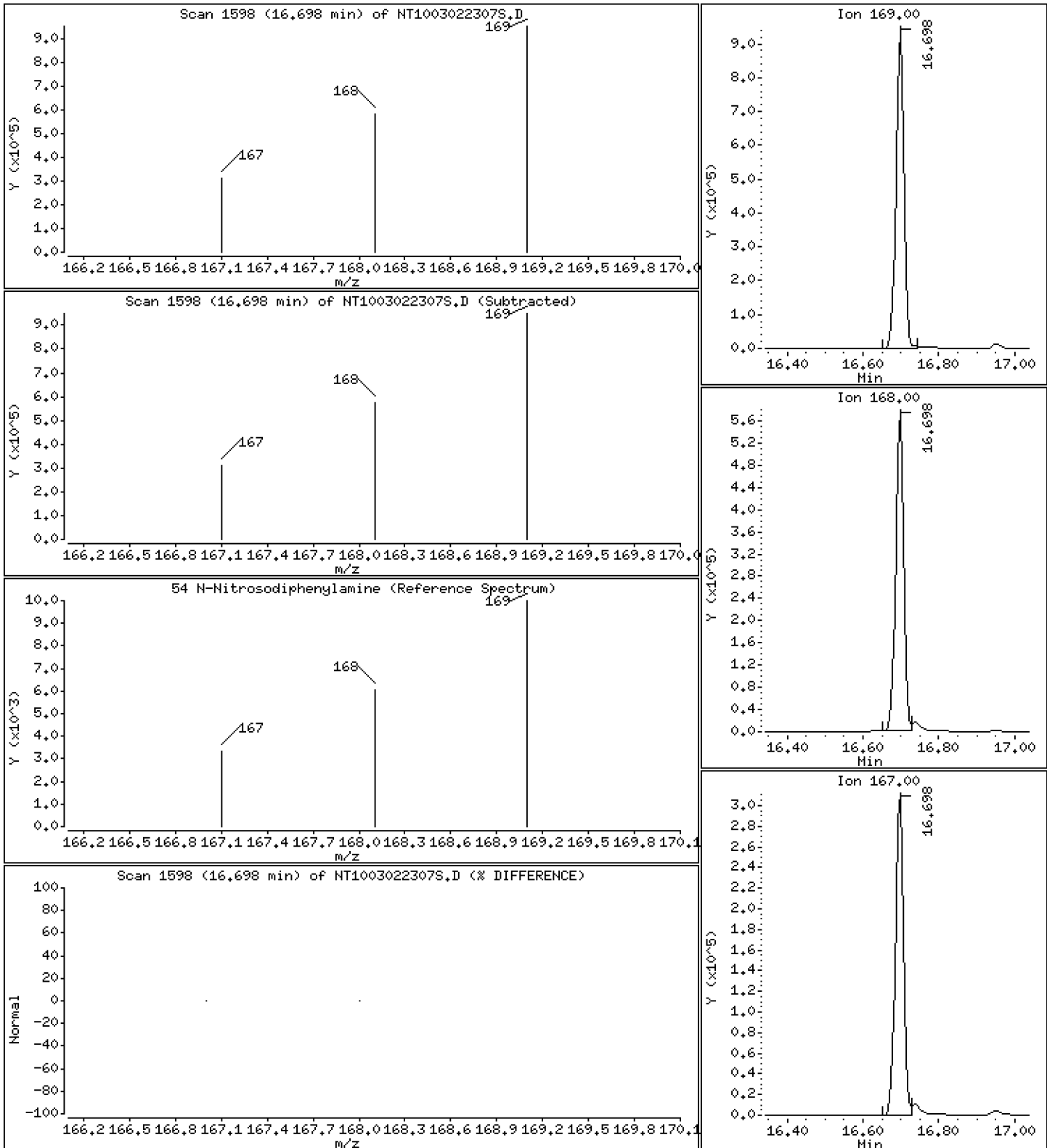
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 4.947 ug/L





Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

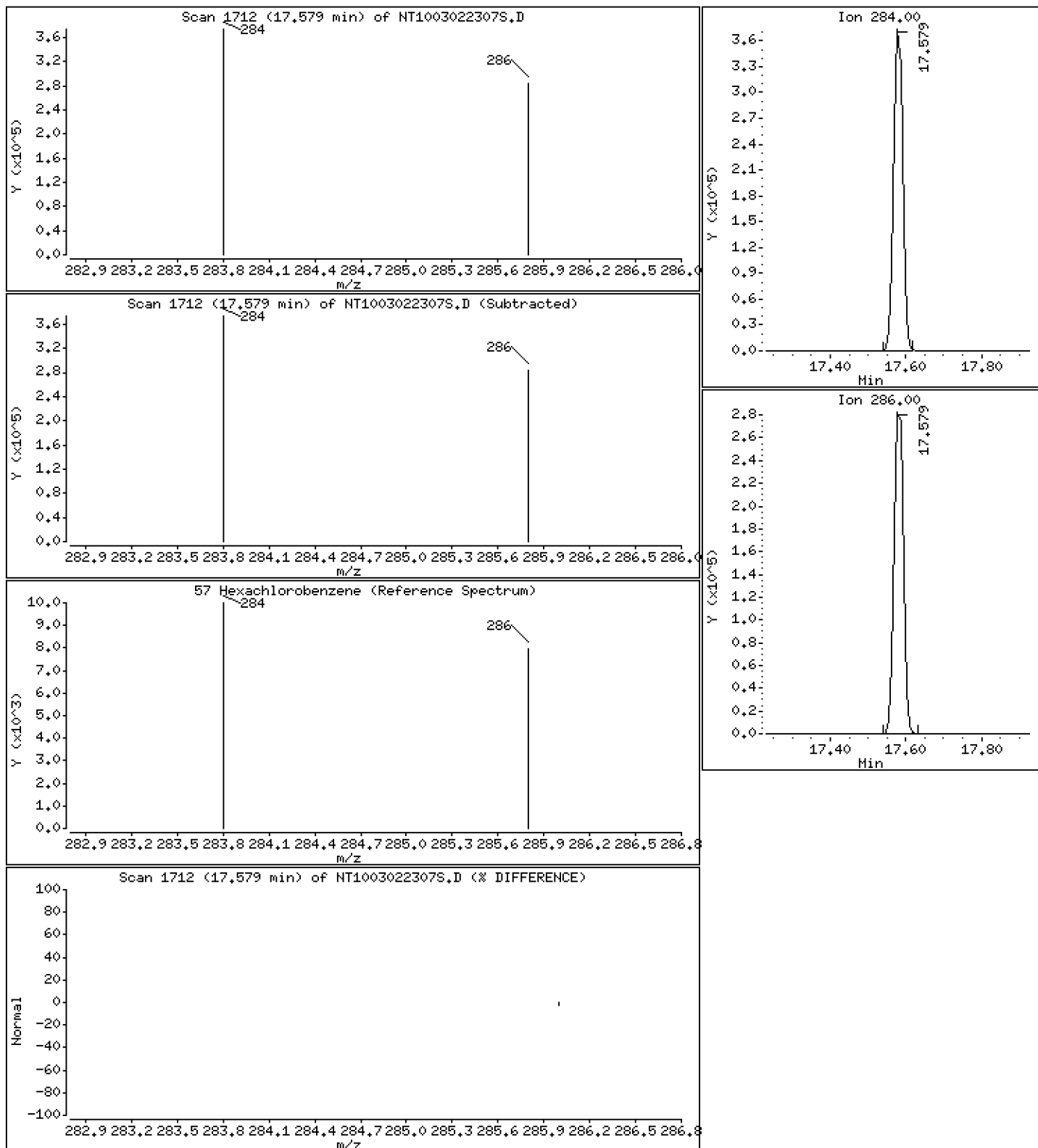
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4,546 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

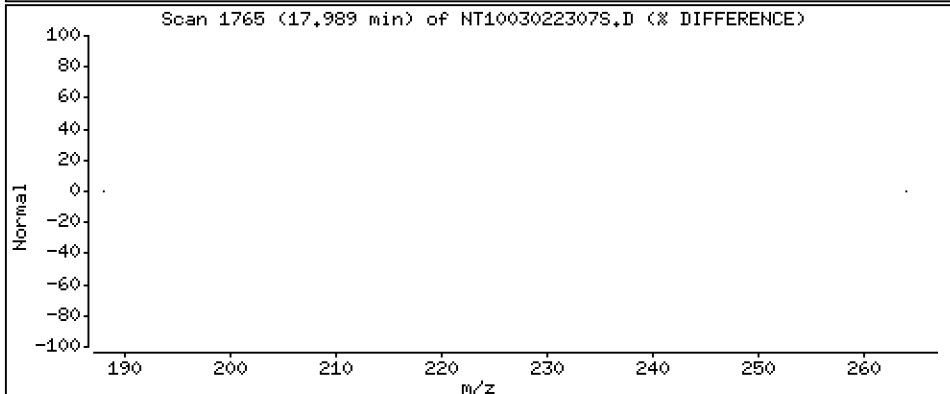
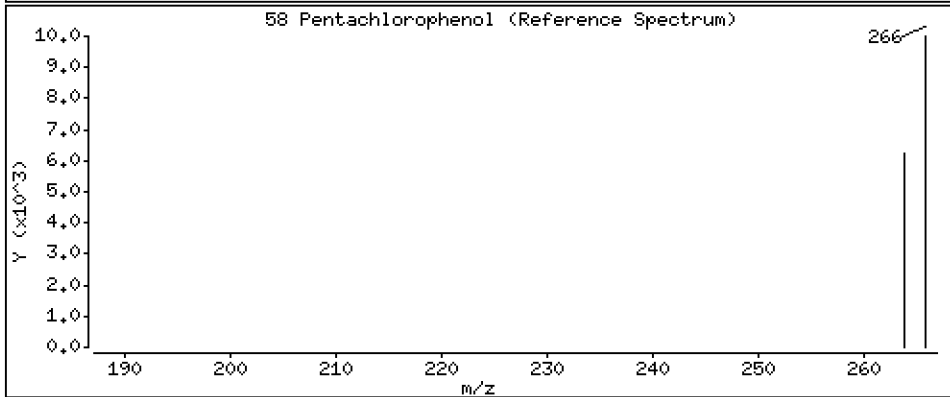
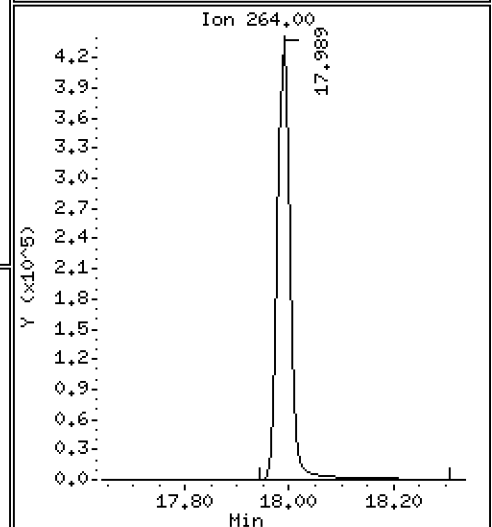
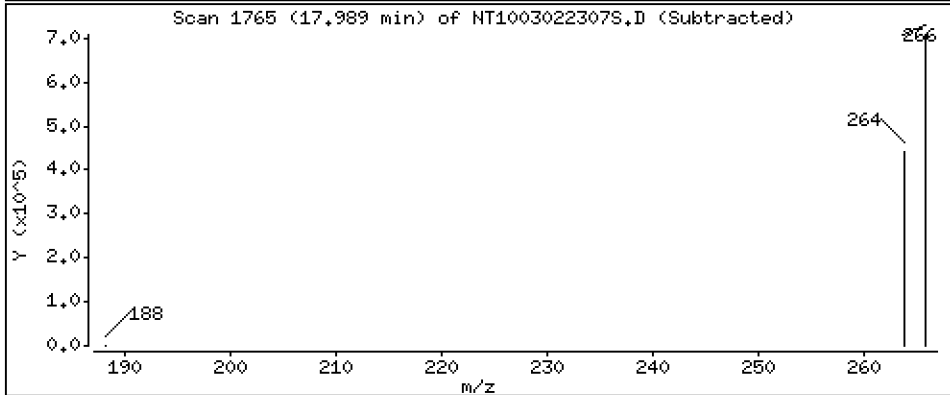
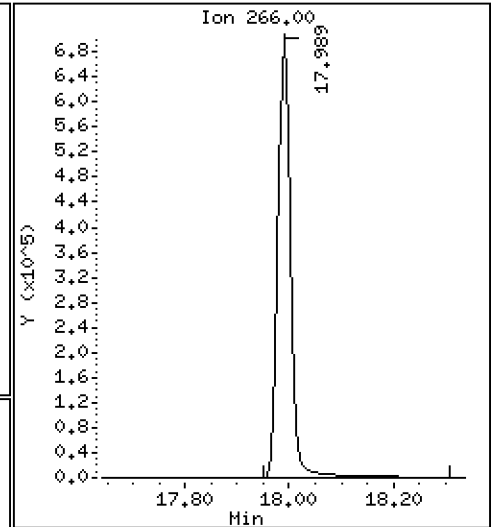
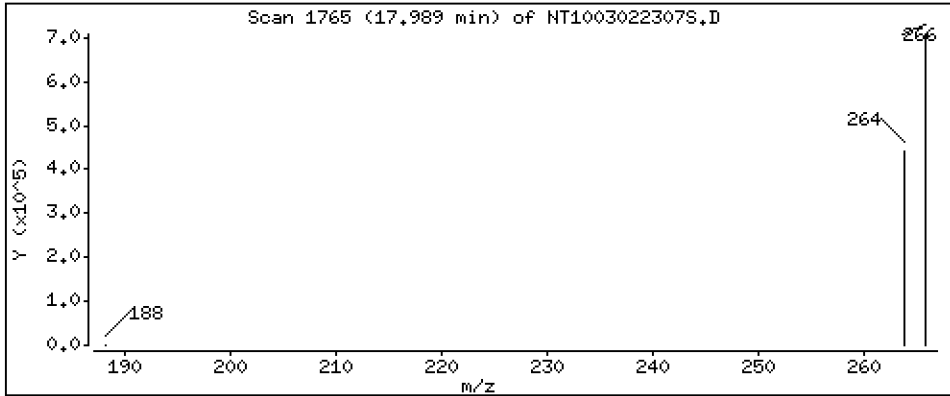
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 16,03 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

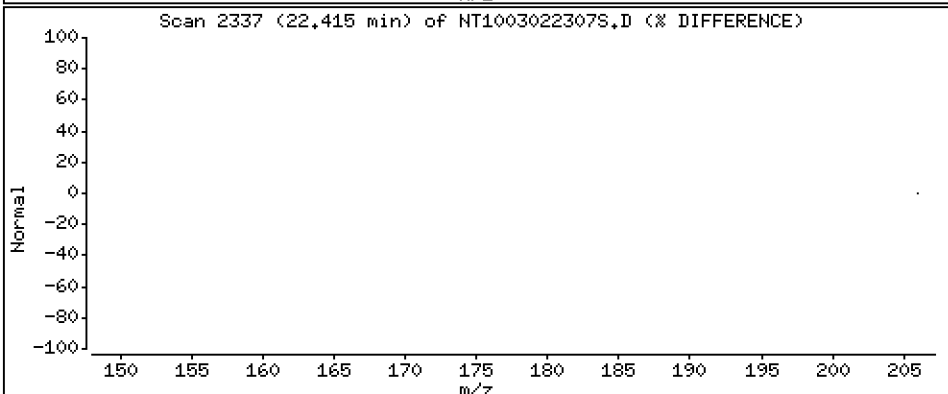
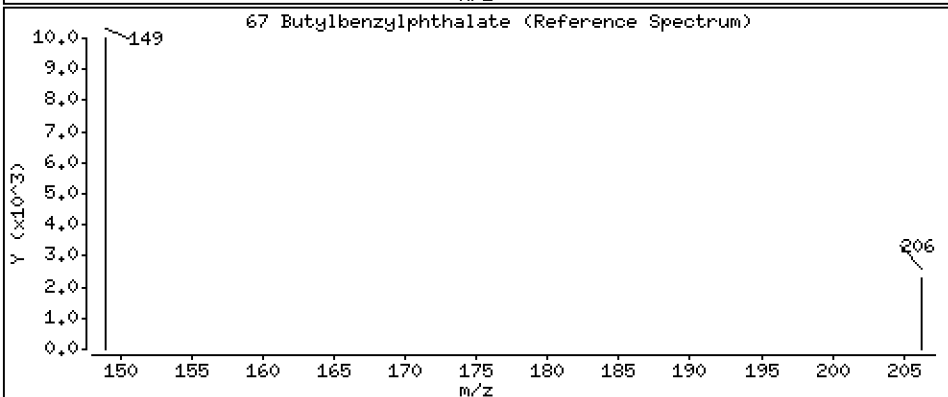
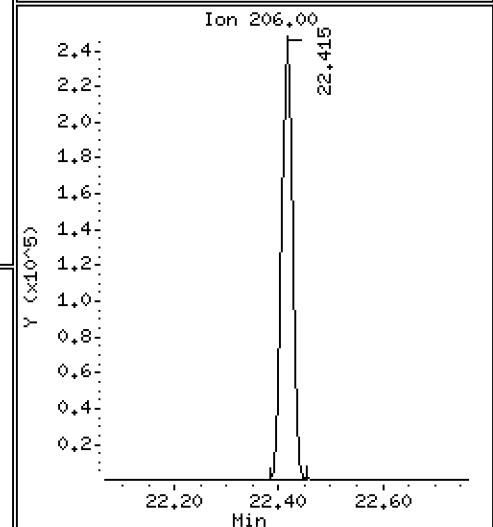
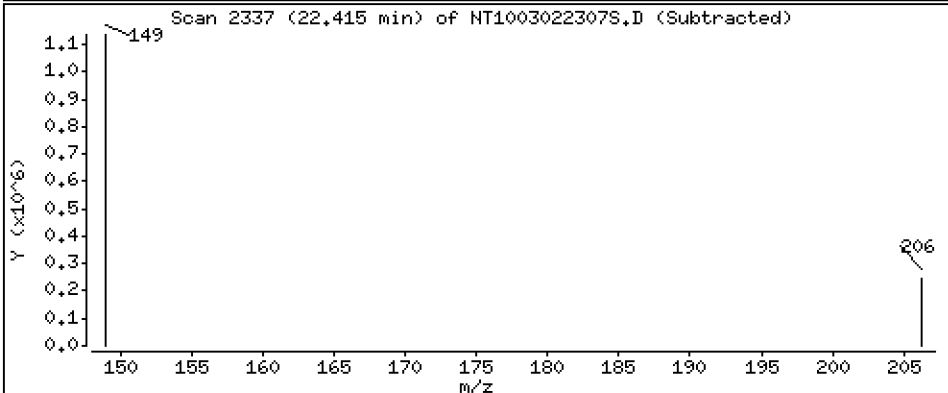
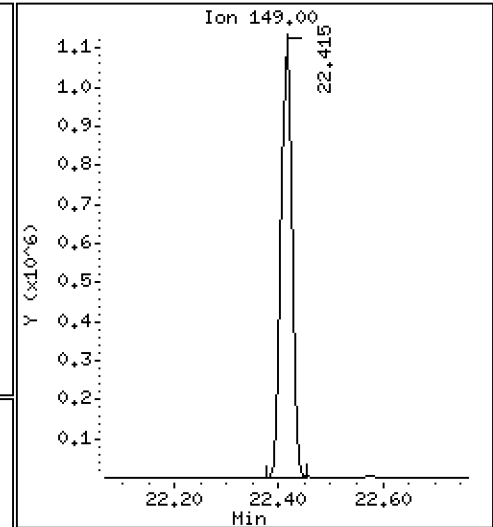
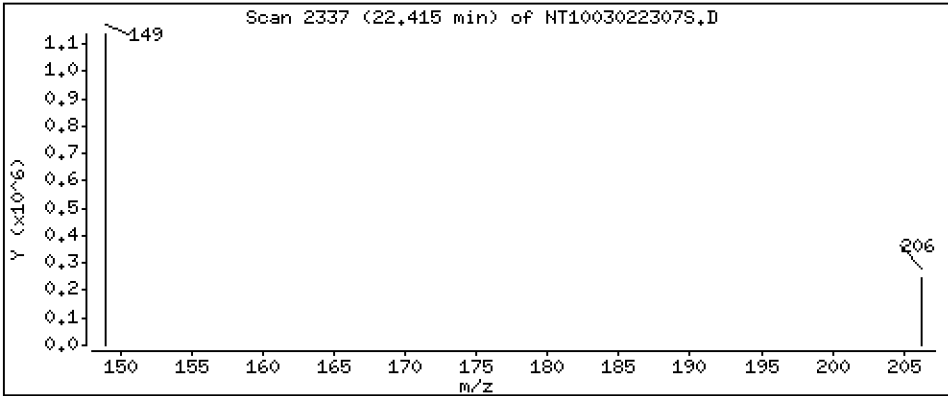
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,813 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

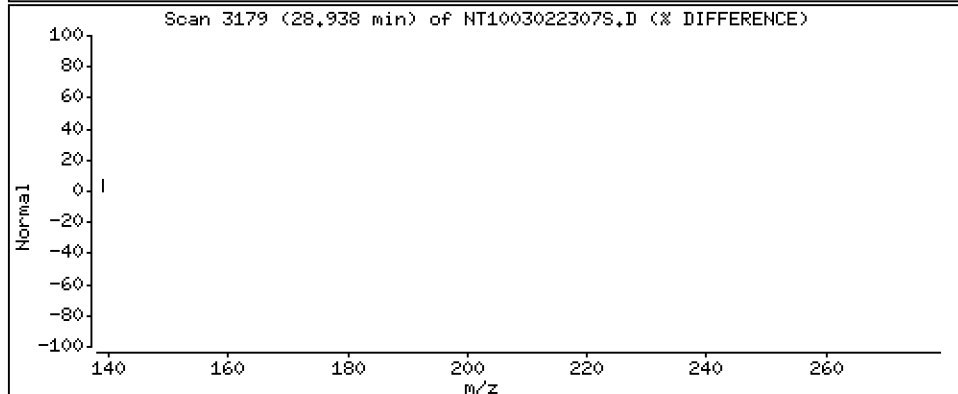
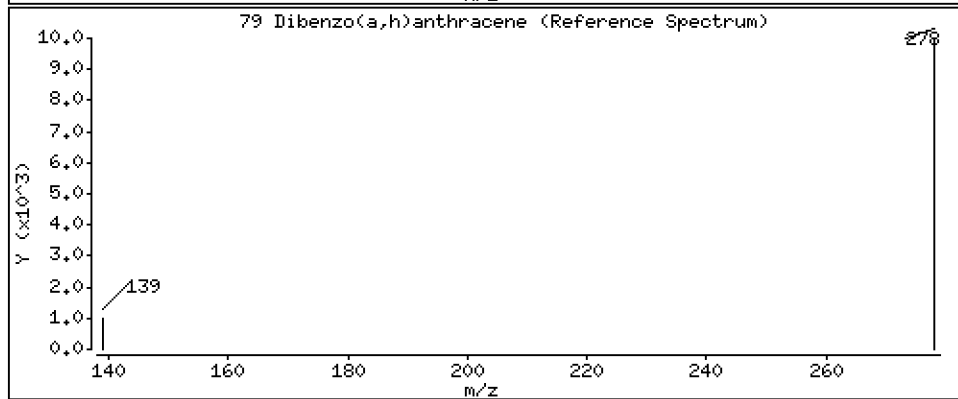
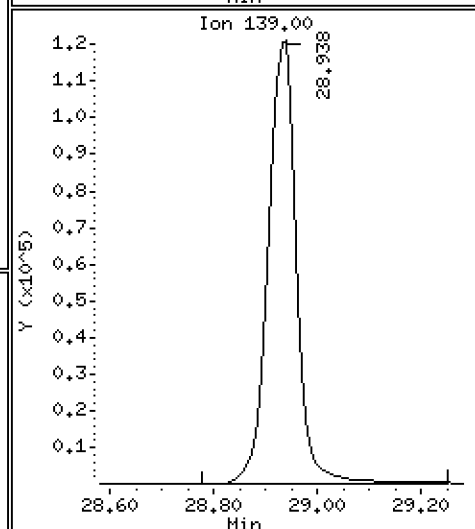
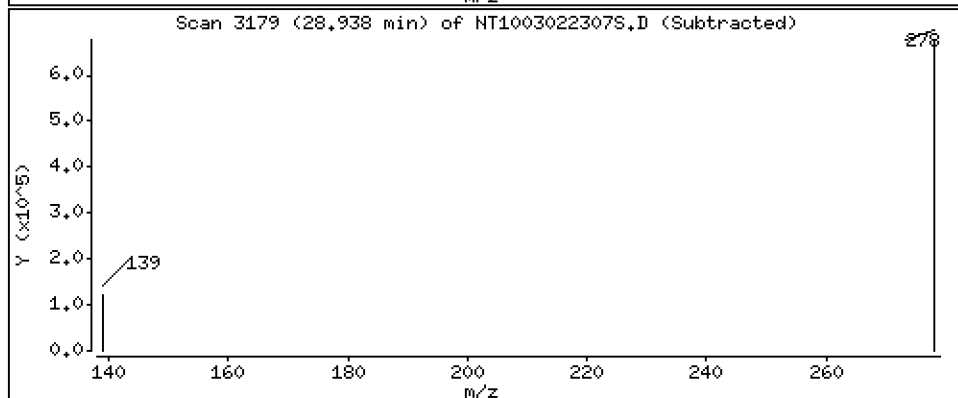
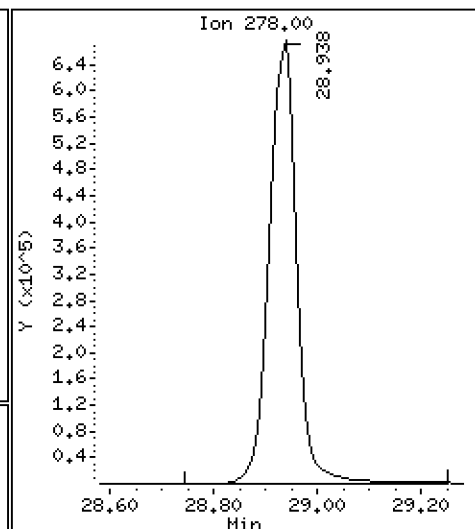
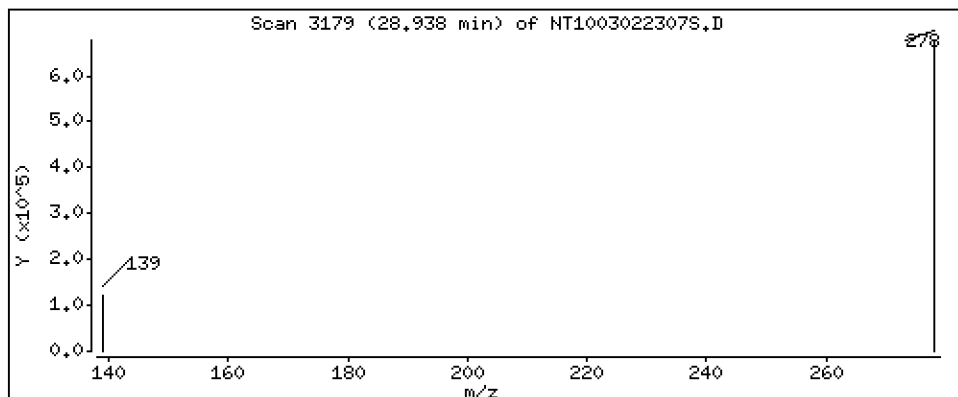
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,147 ug/L



Date : 02-MAR-2023 18:12

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BS1

Volume Injected (uL): 1.0

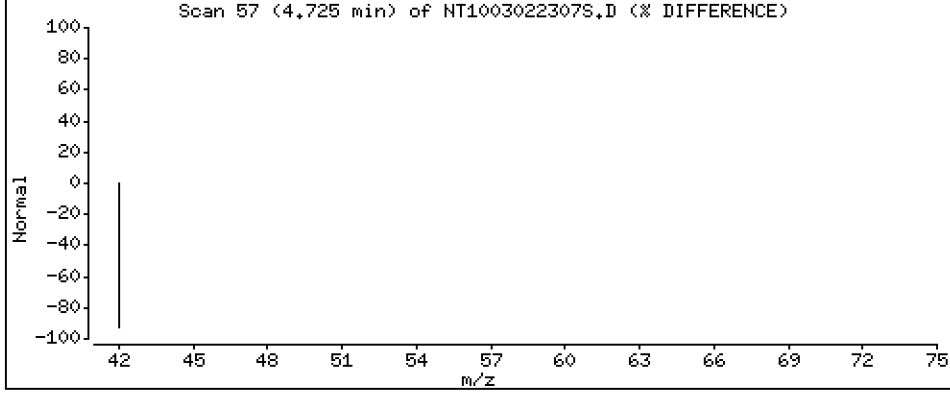
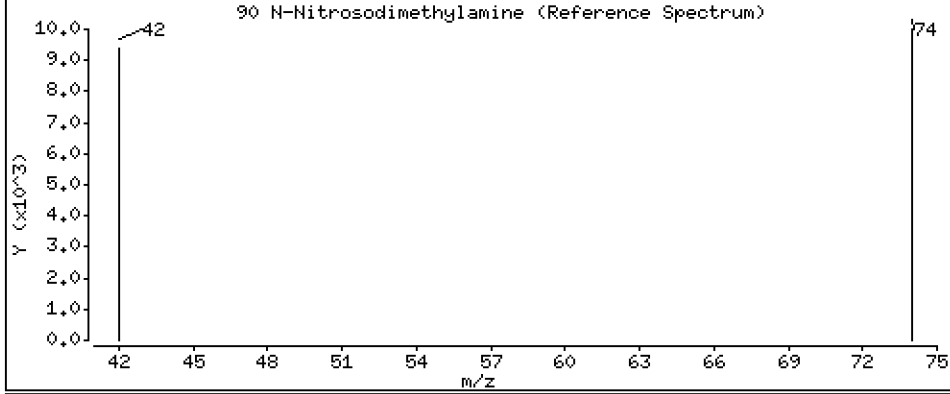
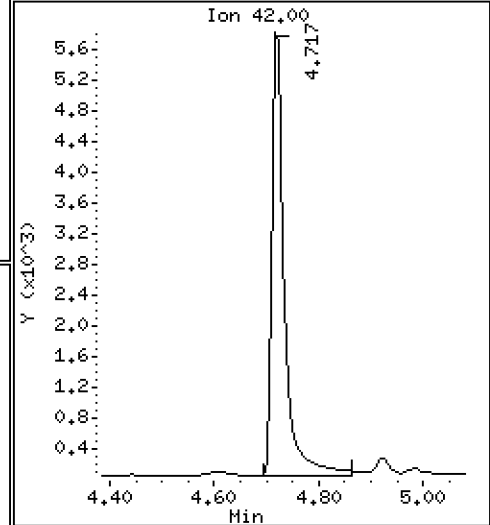
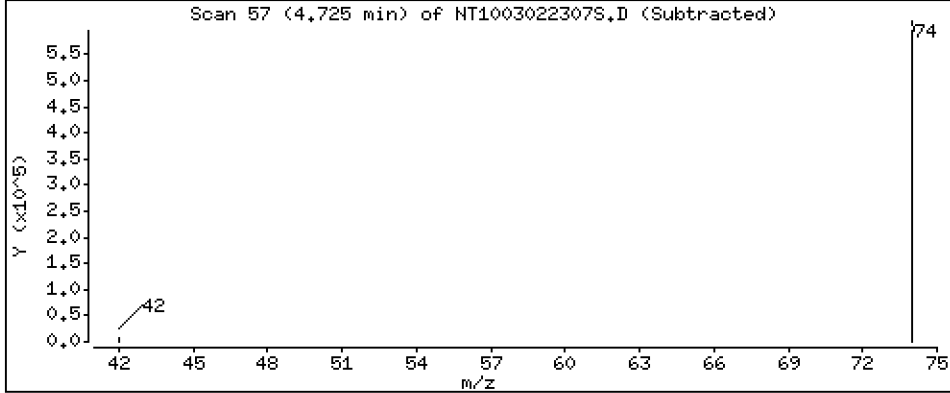
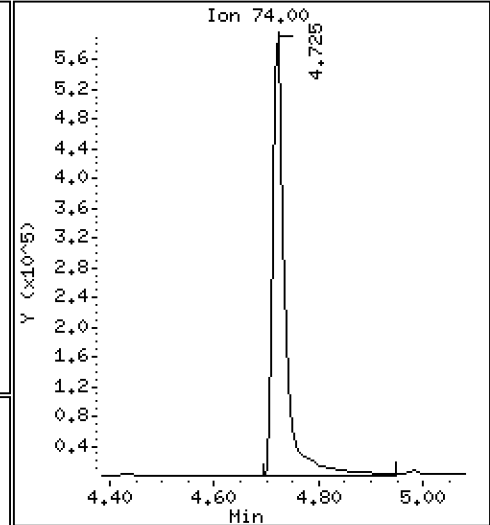
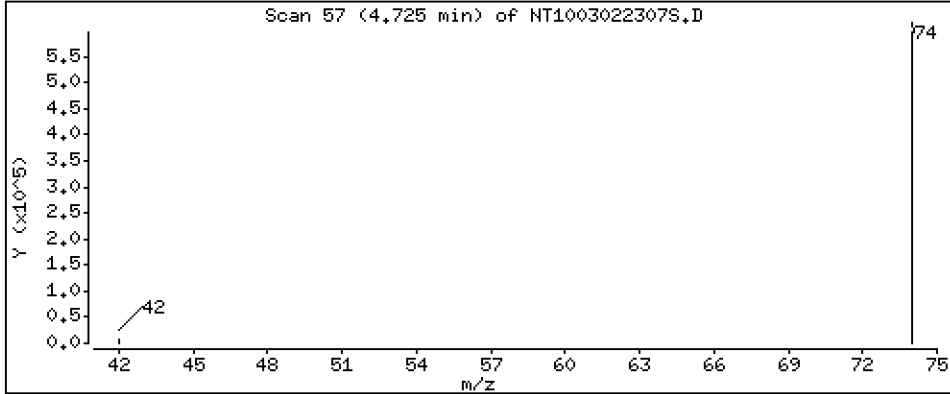
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.80 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022307S.D  
 Lab Smp Id: BLA0624-BS1  
 Inj Date : 02-MAR-2023 18:12 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BS1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	841468	6.52398	6.524 (R)
3 Phenol	94		8.517	8.517	(0.921)	973358	4.98503	4.985
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	709028	4.23468	4.235
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	451780	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	715977	4.39820	4.398
11 Benzyl alcohol	79		9.477	9.476	(1.024)	524736	4.66536	4.665
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	703267	4.49464	4.495
13 2-Methylphenol	108		9.655	9.655	(1.044)	506956	4.27355	4.274
15 4-Methylphenol	108		9.950	9.942	(1.076)	578416	4.61288	4.613
16 N-Nitroso-di-n-propylamine	70		9.982	9.981	(1.079)	438478	5.07702	5.077
22 2,4-Dimethylphenol	107		10.998	10.997	(0.938)	1539522	10.1032	10.10
24 Benzoic acid	105		11.150	11.074	(0.951)	1789304	19.6444	19.64
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	545737	4.34752	4.348
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1744036	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	366703	4.11657	4.117
39 Dimethylphthalate	163		14.749	14.741	(0.963)	1632680	5.44413	5.444
* 42 Acenaphthene-d10	162		15.322	15.314	(1.000)	944486	4.00000	
50 Diethylphthalate	149		16.218	16.203	(1.059)	1779087	6.29067	6.291
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1377595	4.94651	4.947
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	592498	4.54603	4.546

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	17.988	(0.977)	1137031	16.0277	16.03
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1720859	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	698523	4.50842	4.508 (R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	1529993	4.81256	4.813
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1915960	4.00000	
* 77 Perylene-d12	264	26.116	26.115	(1.000)	1919174	4.00000	
79 Dibenzo(a,h)anthracene	278	28.938	28.929	(1.108)	2482091	5.14660	5.147
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	977355	12.7989	12.80

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022307S.D  
 Lab Smp Id: BLA0624-BS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	451780	-8.44
27 Naphthalene-d8	1779056	889528	3558112	1744036	-1.97
42 Acenaphthene-d10	954569	477285	1909138	944486	-1.06
59 Phenanthrene-d10	1596290	798145	3192580	1720859	7.80
69 Chrysene-d12	1649110	824555	3298220	1915960	16.18
77 Perylene-d12	1901958	950979	3803916	1919174	0.91

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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



REVIEW SUMMARY FOR FILE - NT1003022307S.D

Lab ID: BLA0624-BS1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 18:12

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.945	0.0065	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

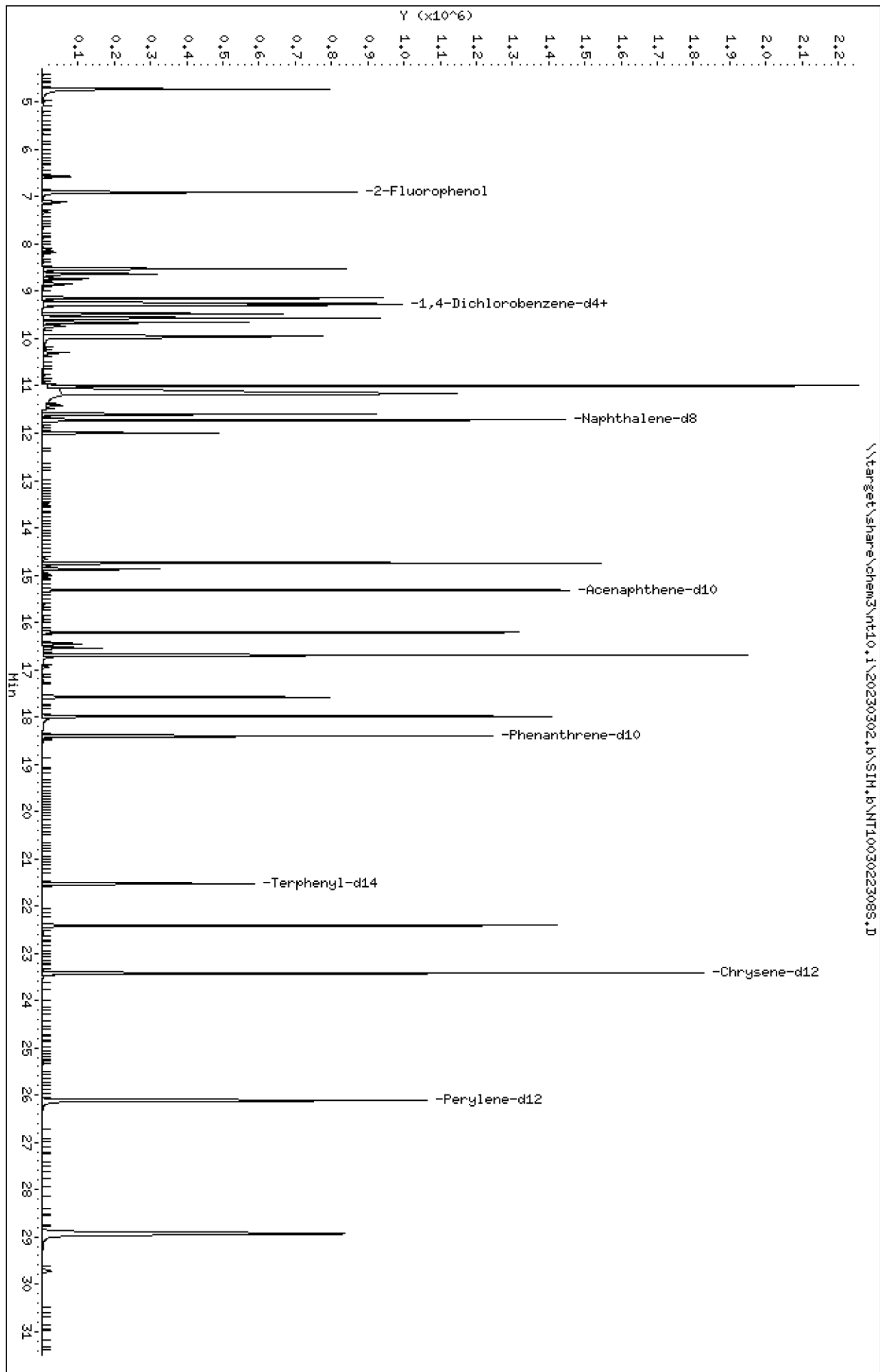
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.6\NT1003022308S.D  
Date: 02-MAR-2023 18:50  
Client ID:  
Sample Info: BLR0624-BSD1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.6\NT1003022308S.D



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

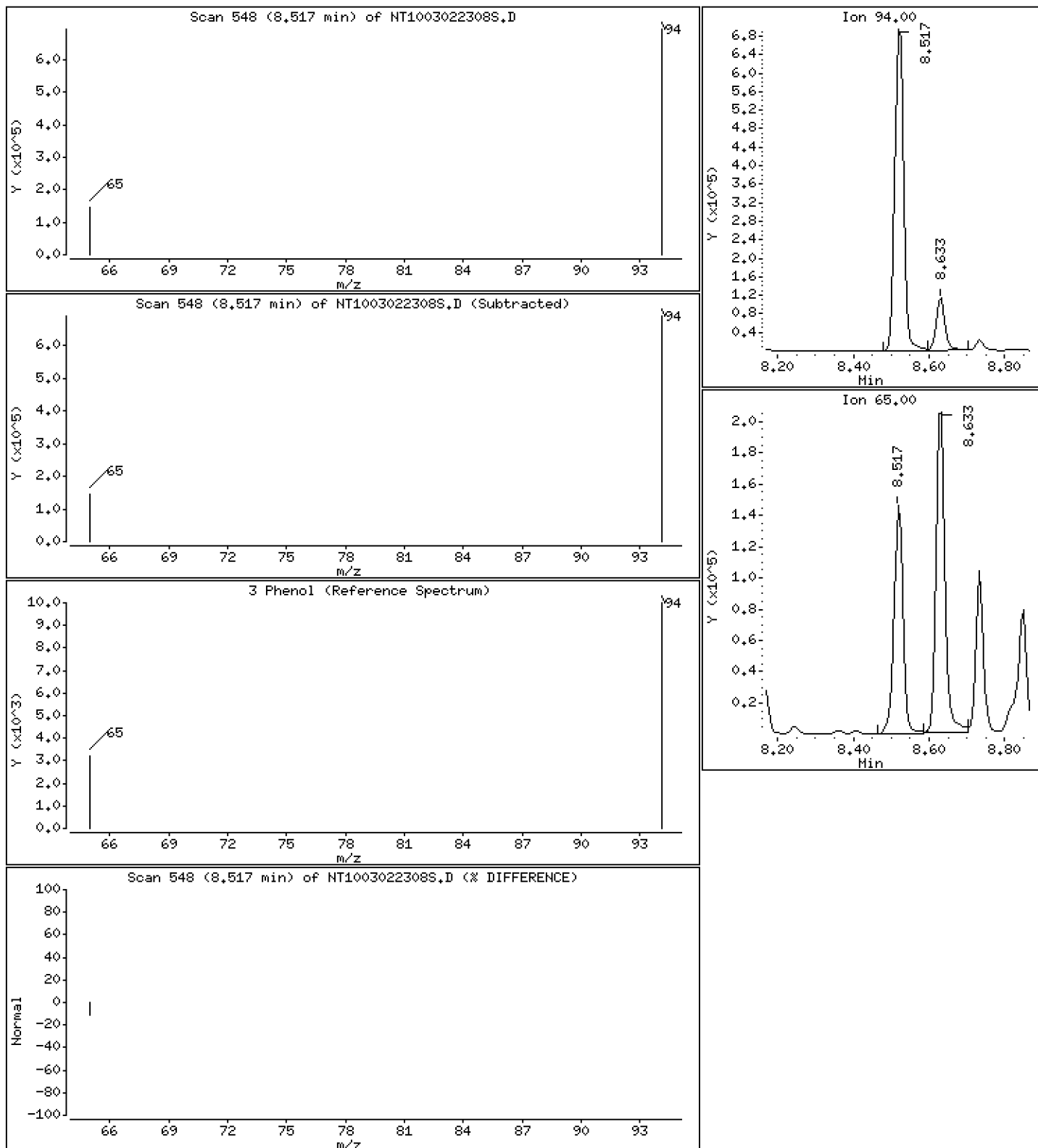
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 4,489 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

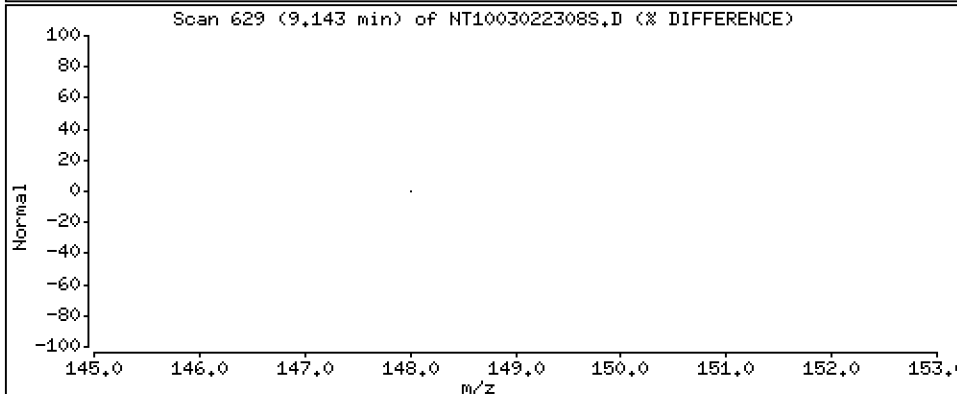
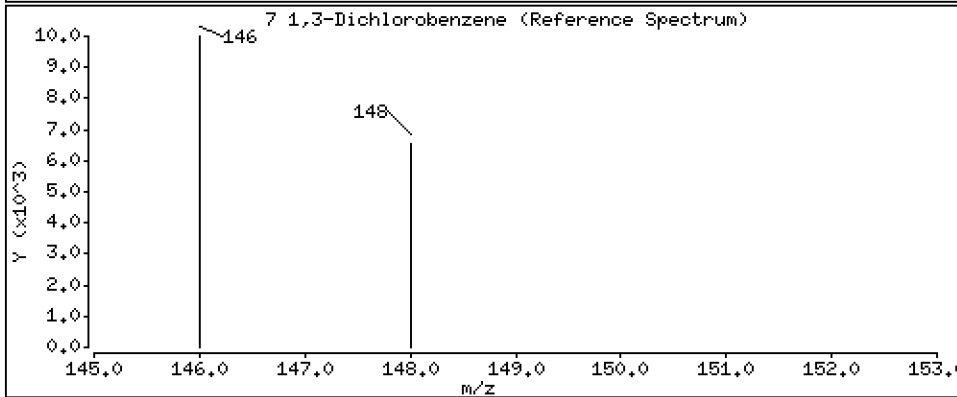
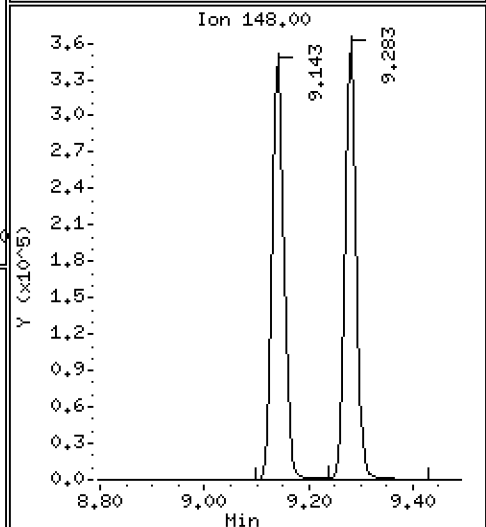
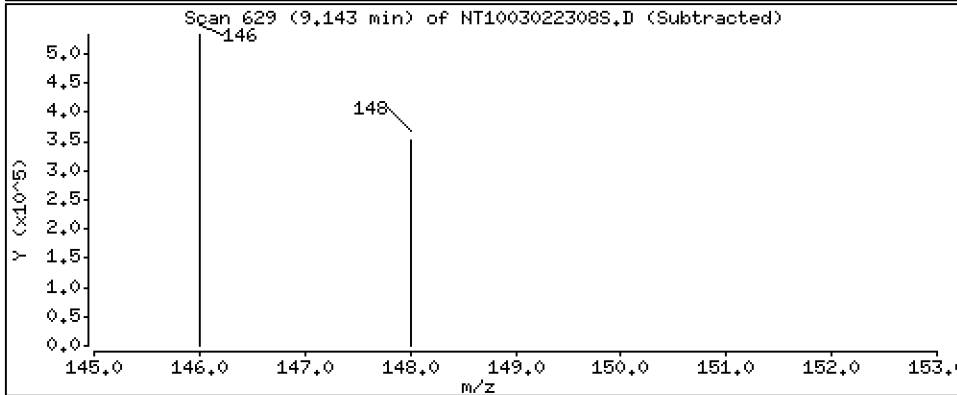
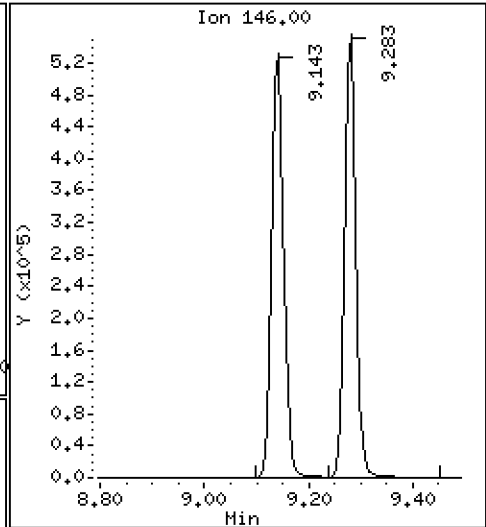
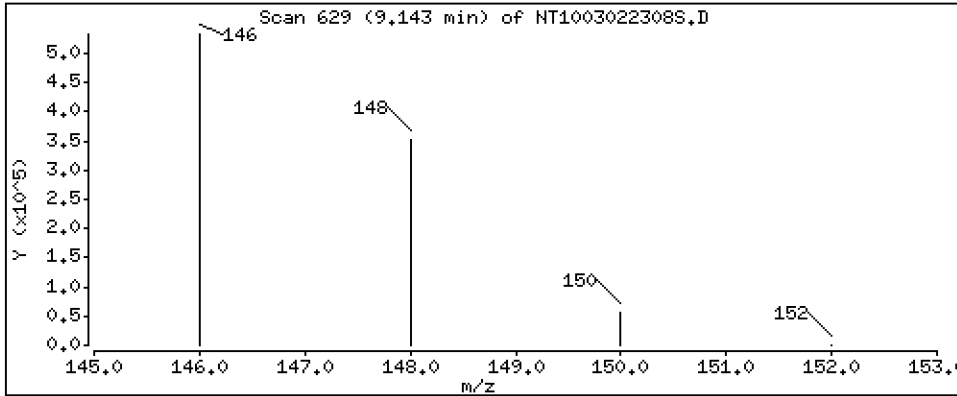
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4.111 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

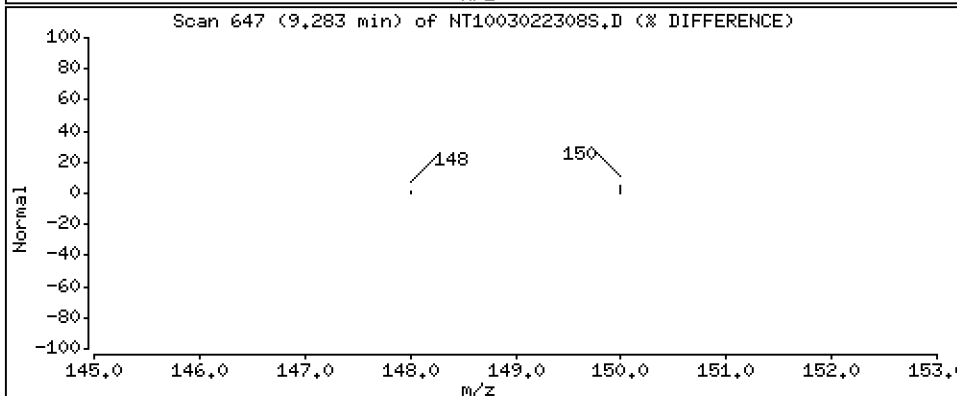
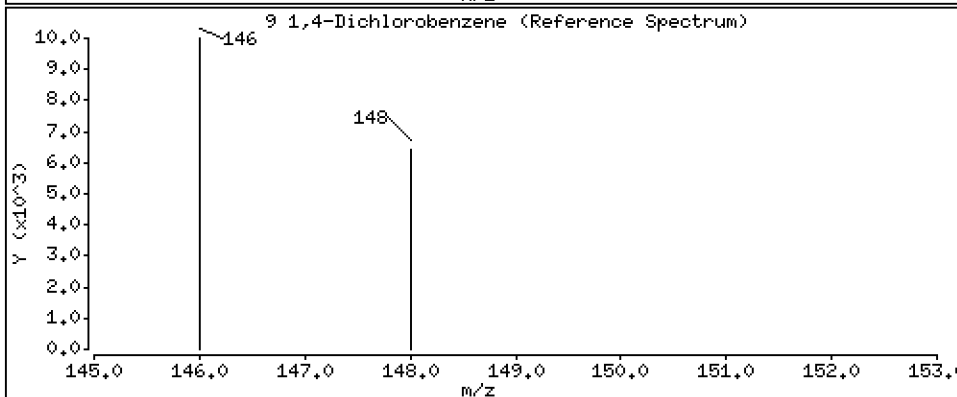
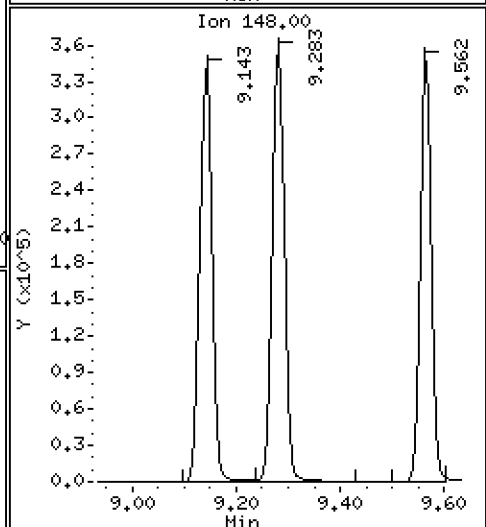
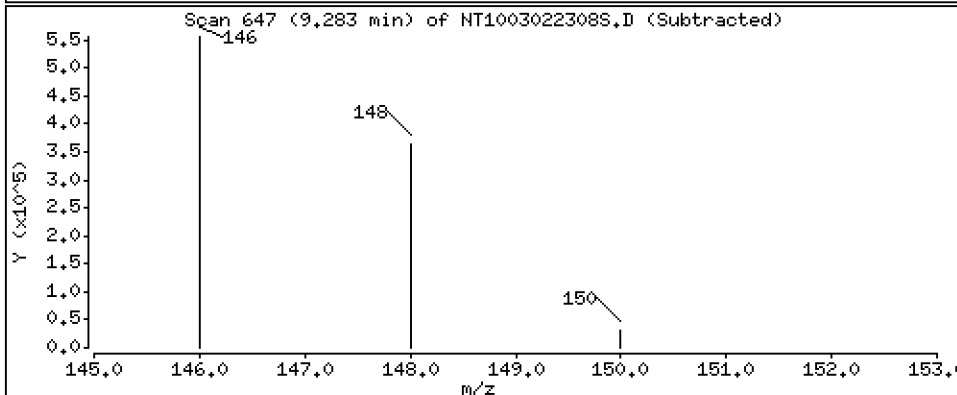
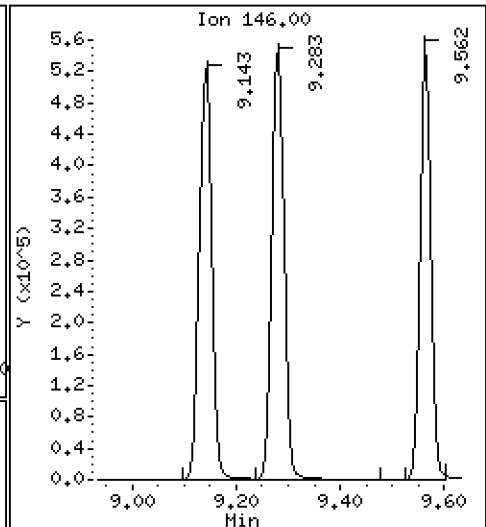
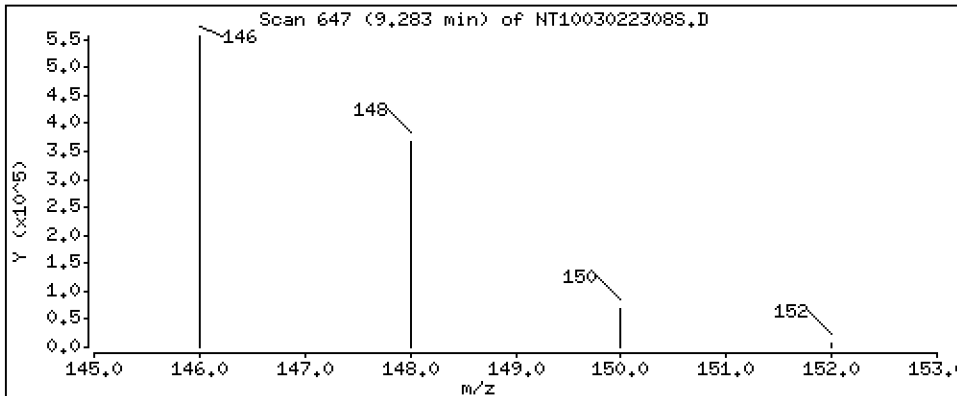
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4.264 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

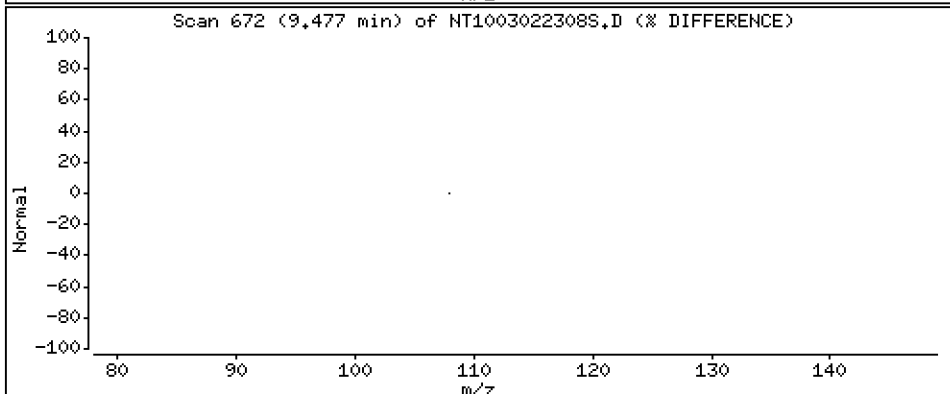
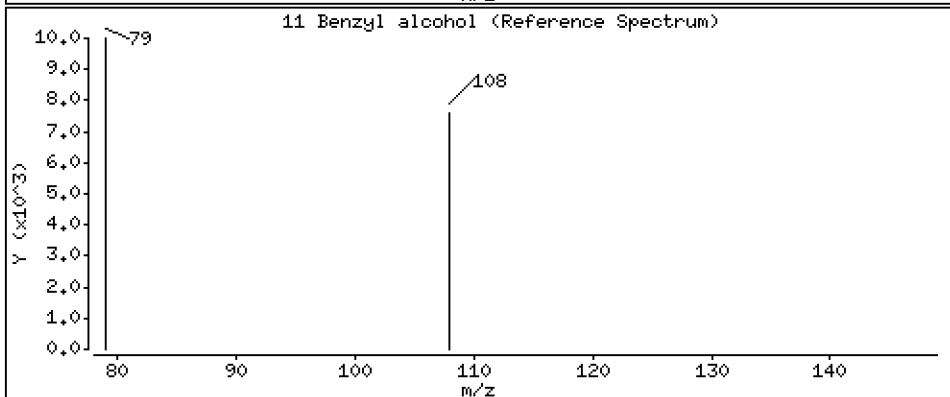
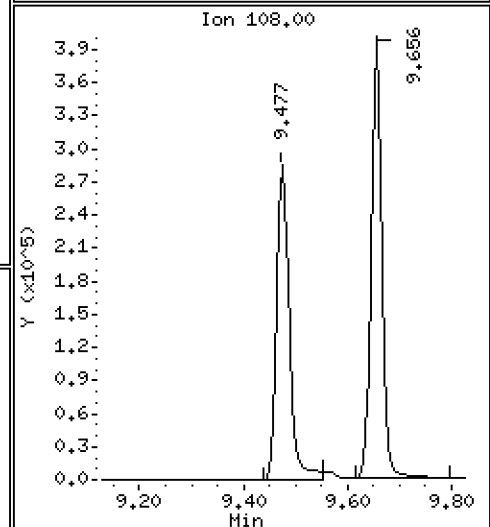
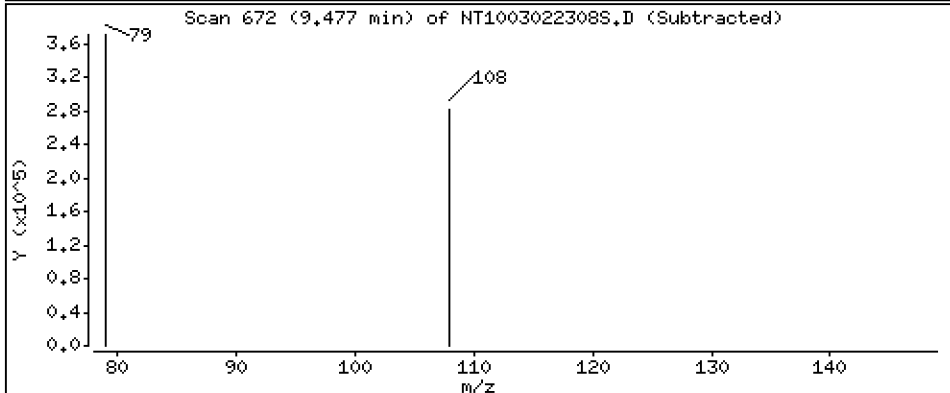
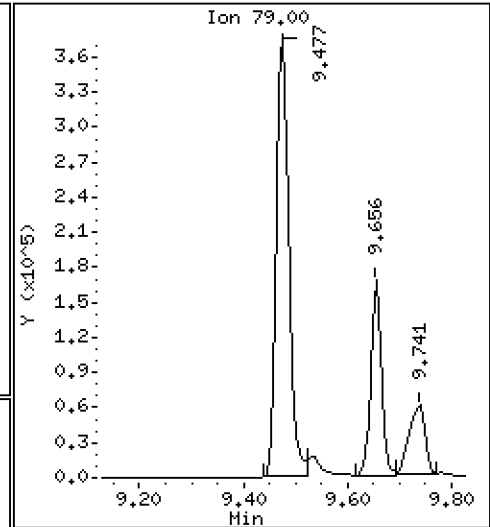
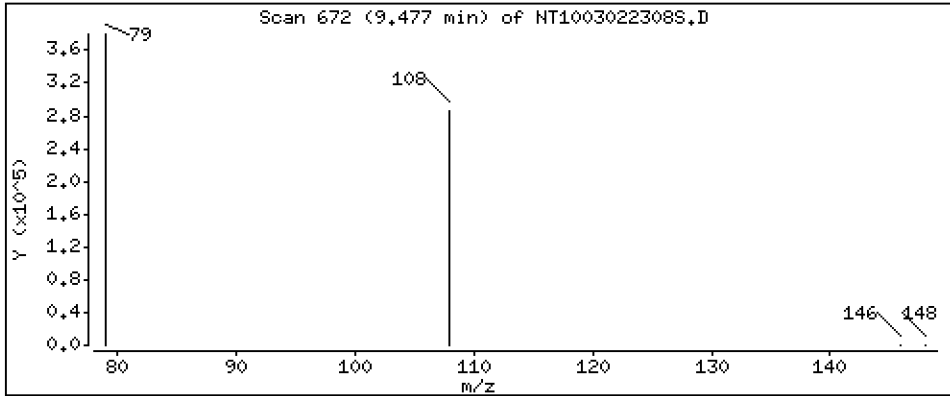
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4,344 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

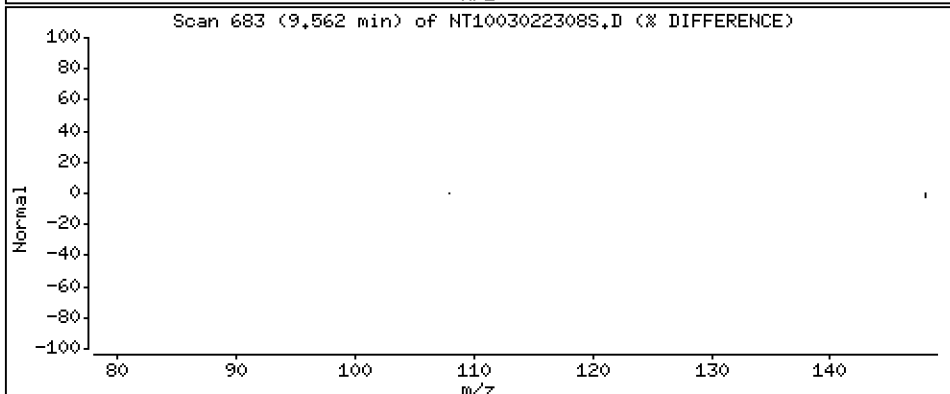
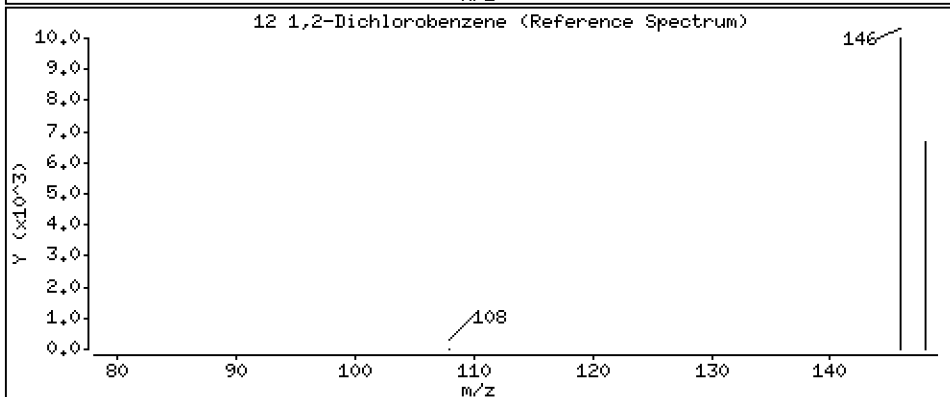
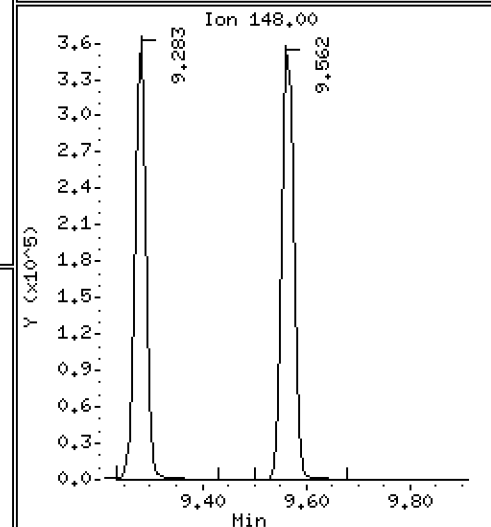
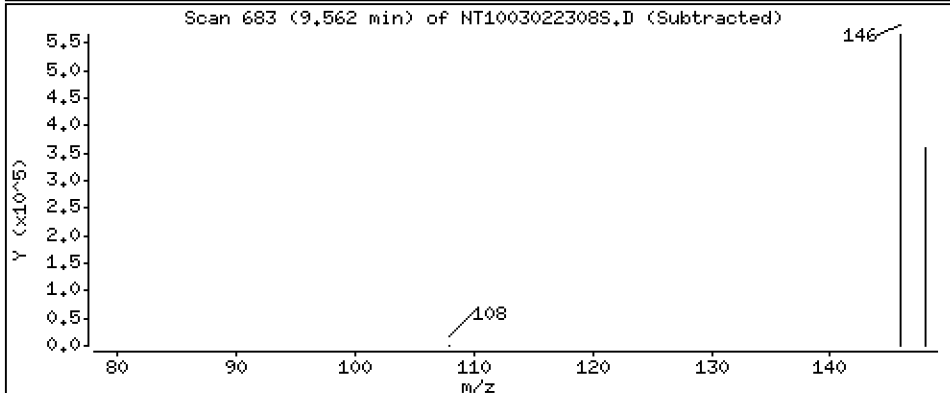
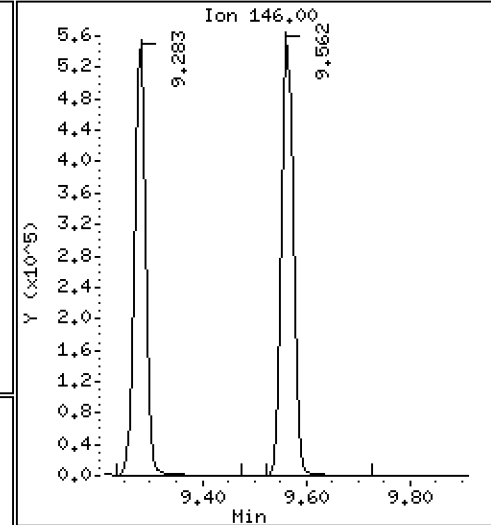
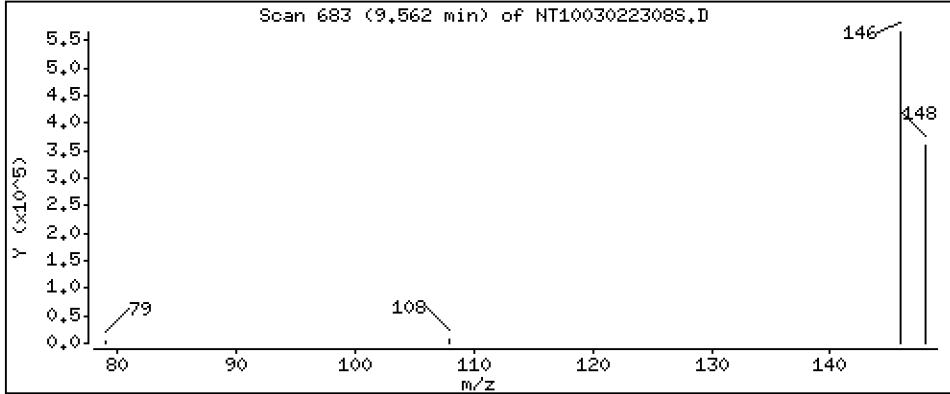
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.325 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

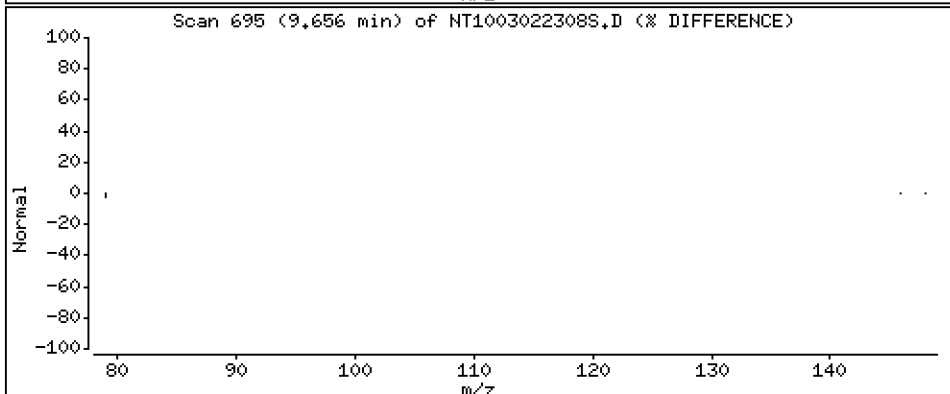
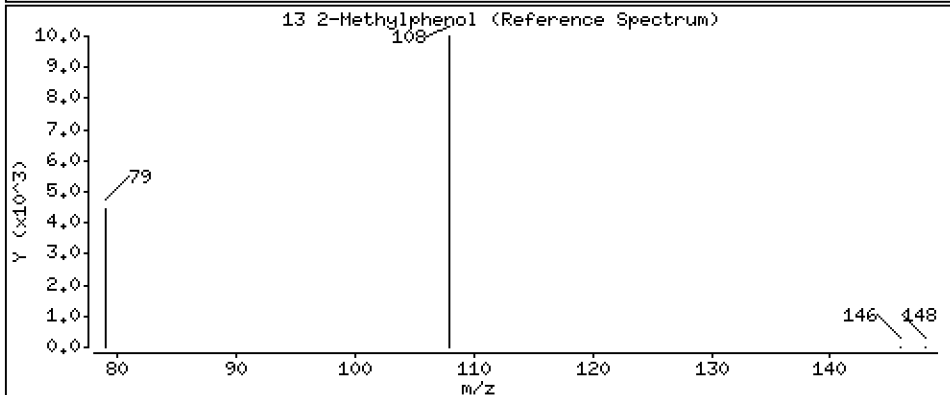
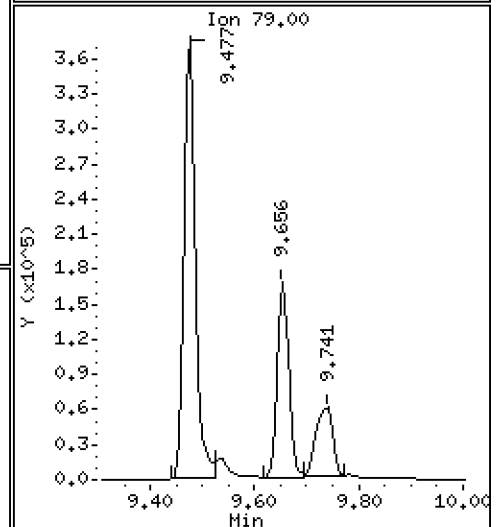
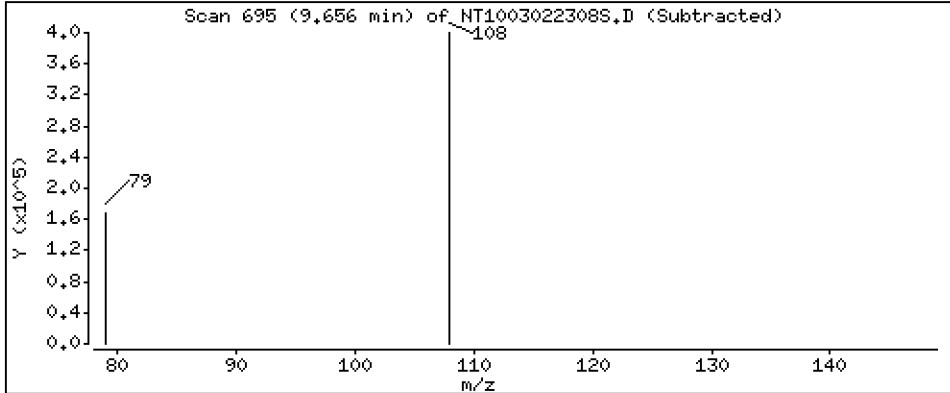
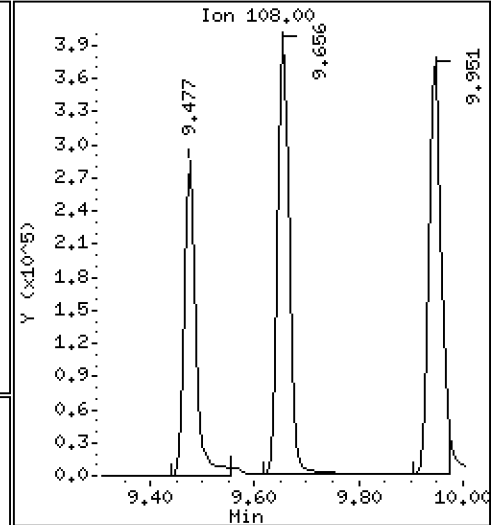
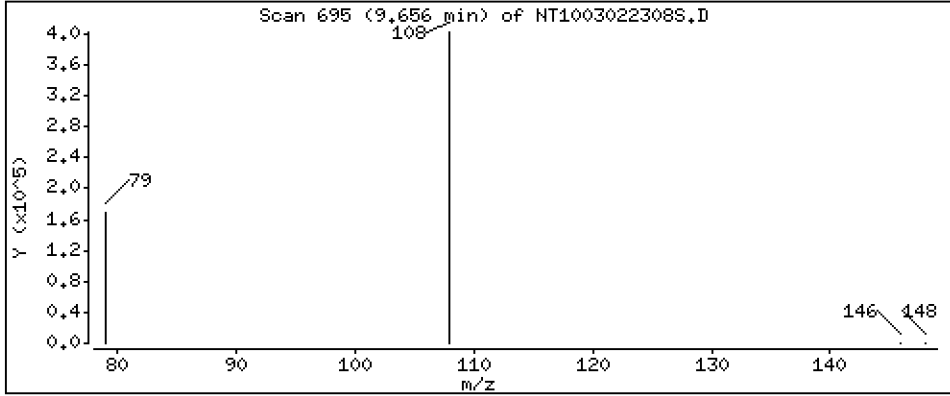
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 3.955 ug/L





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

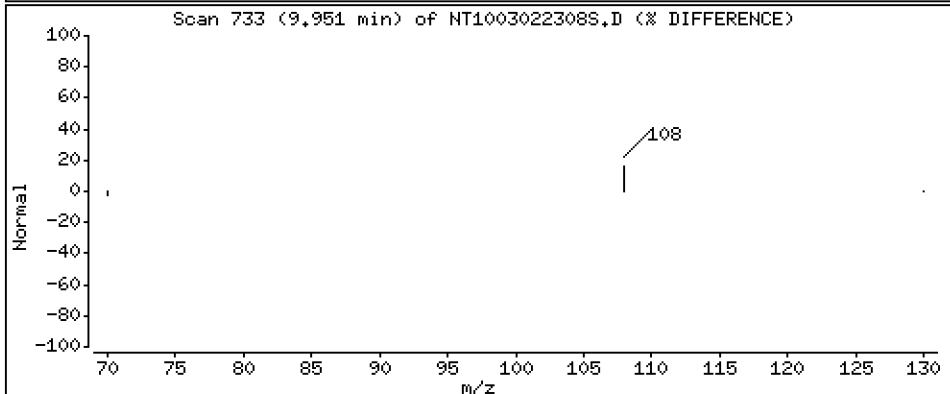
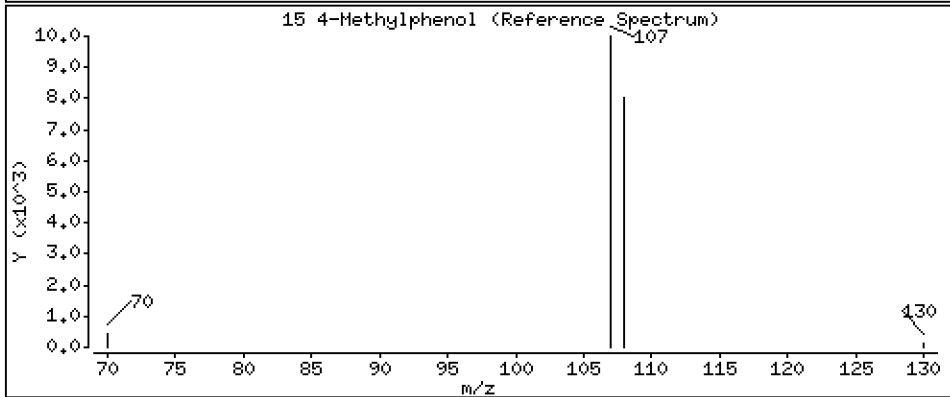
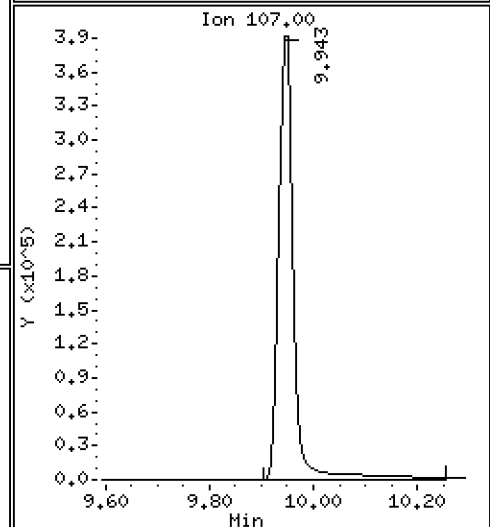
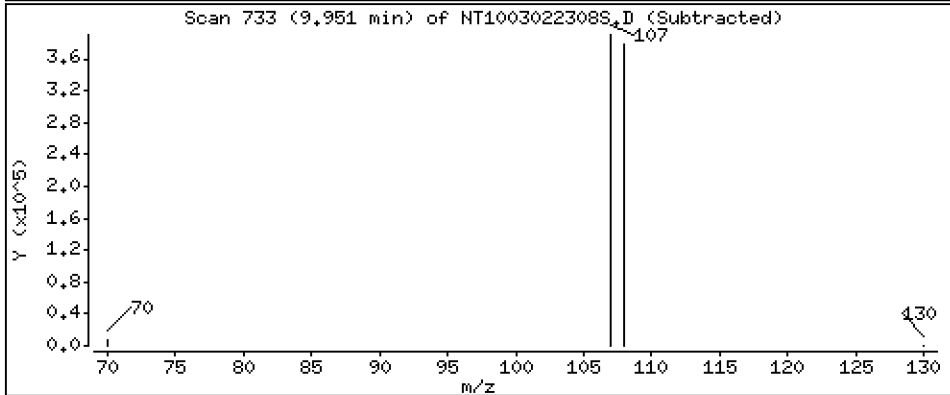
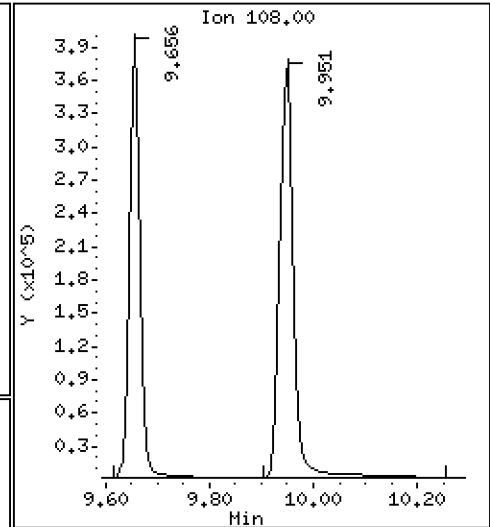
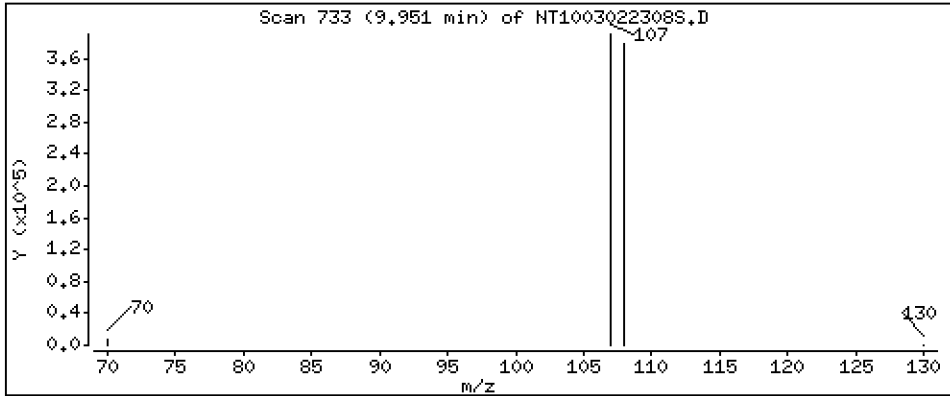
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.325 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

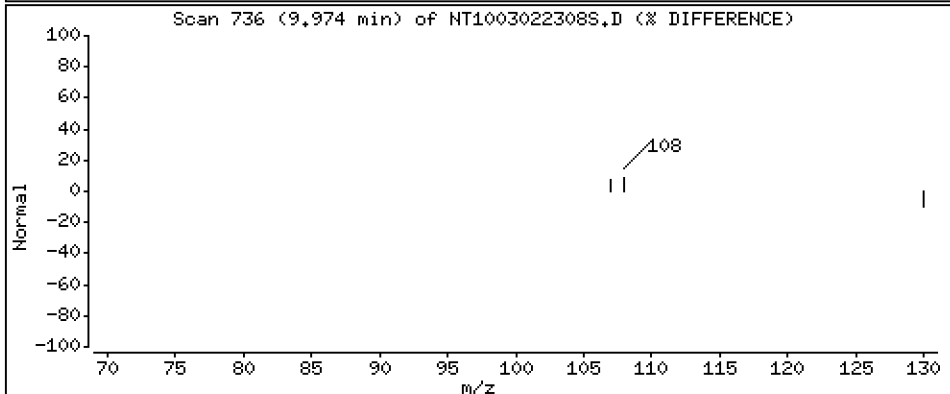
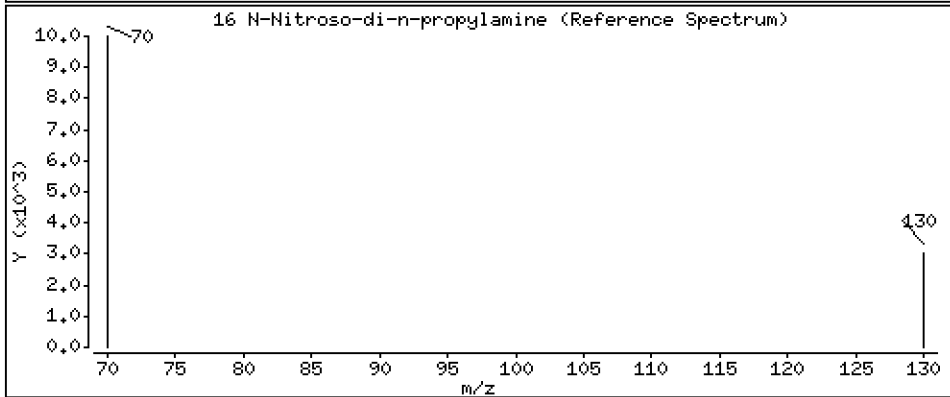
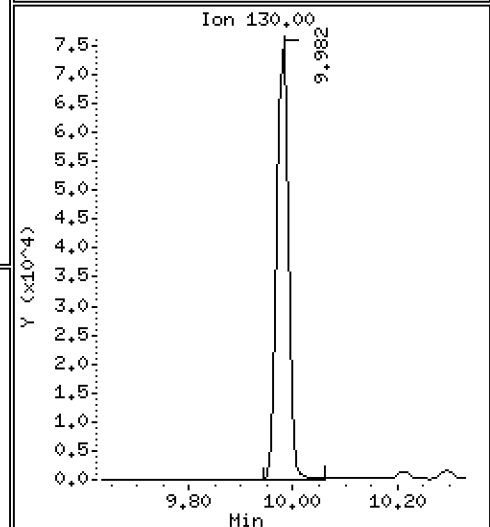
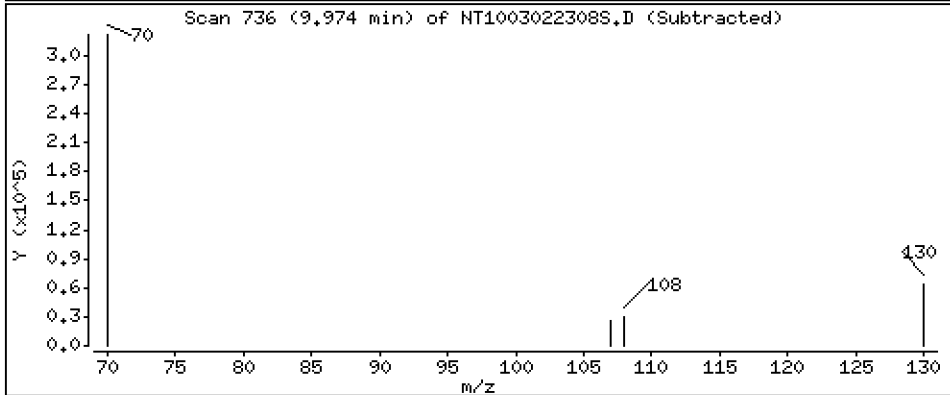
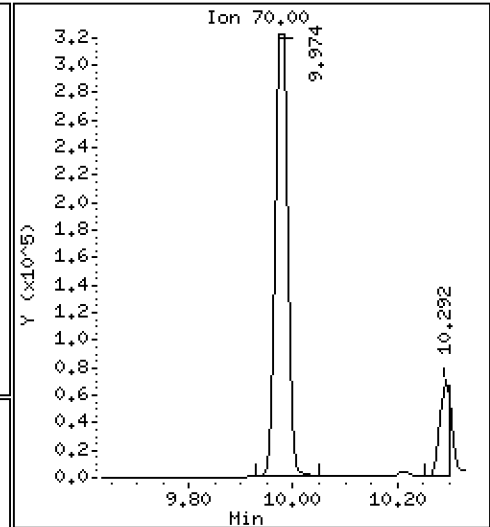
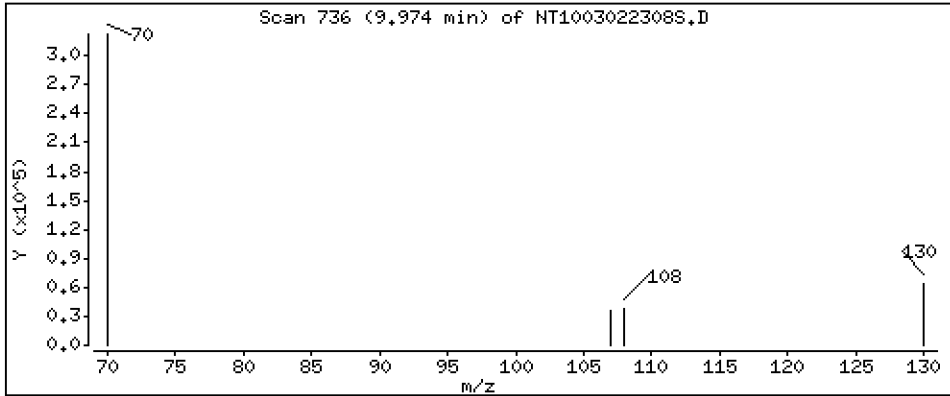
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 4,657 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

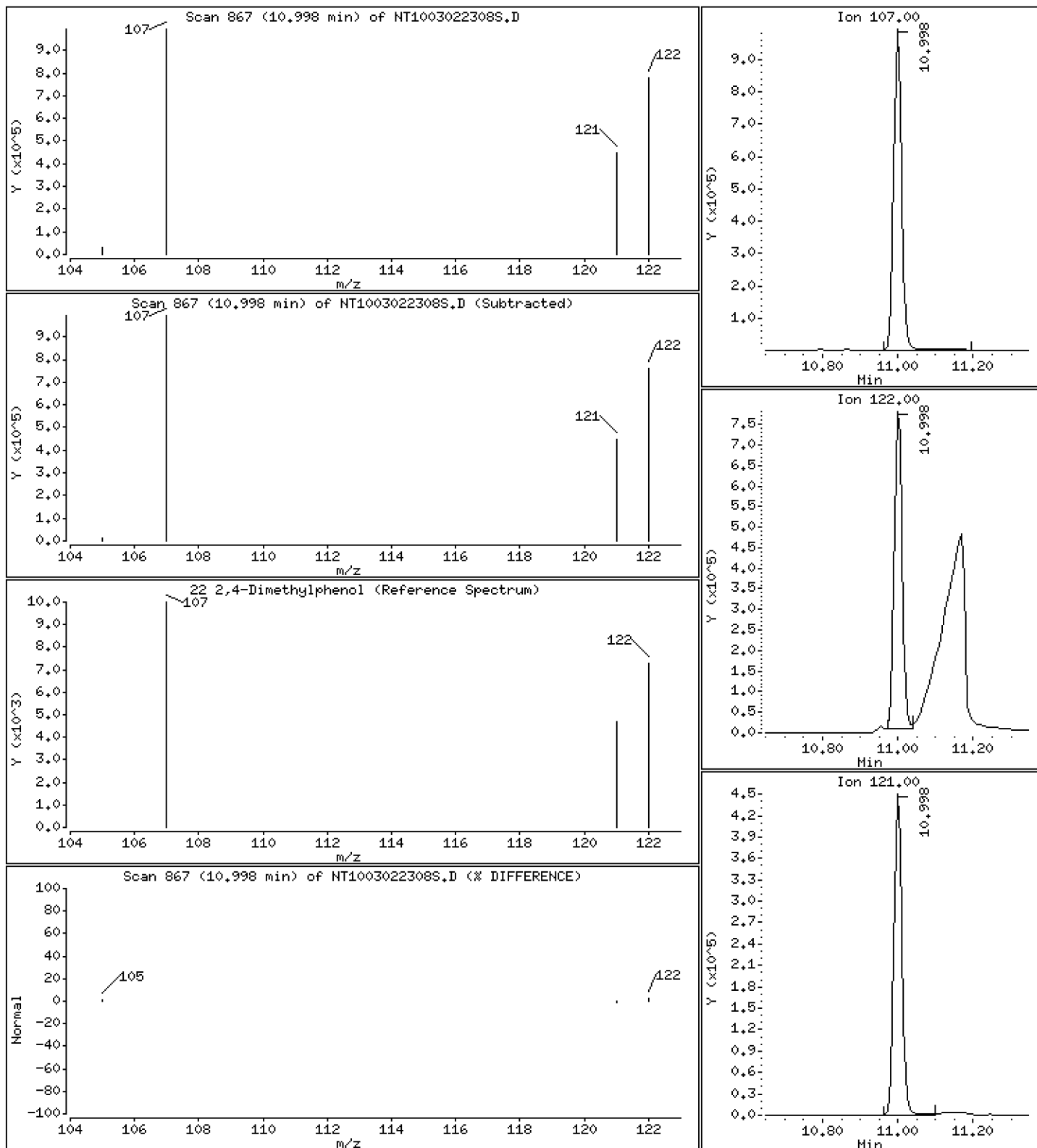
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 7,978 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

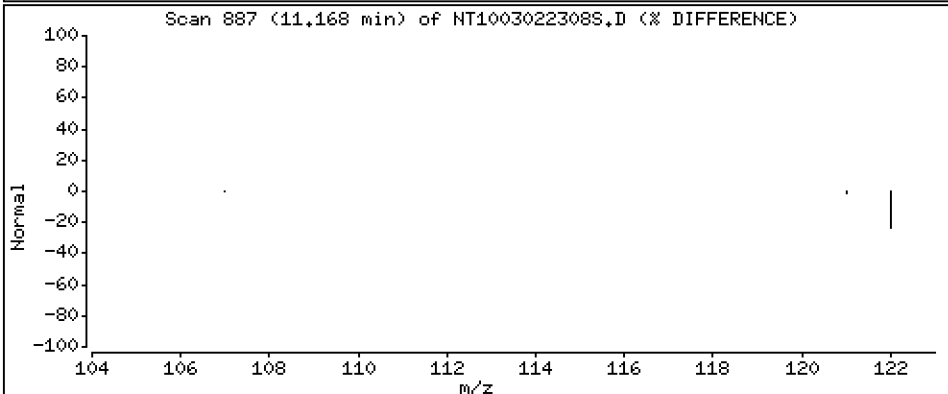
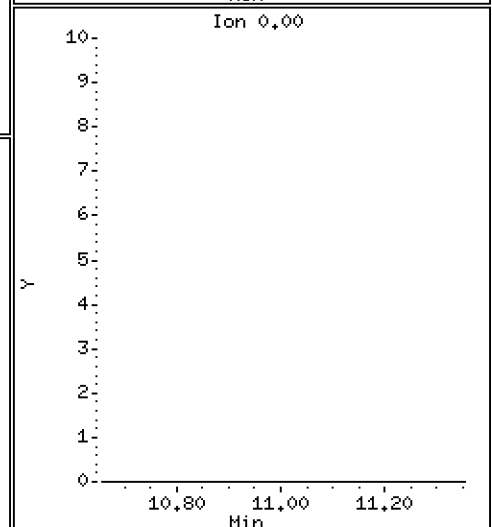
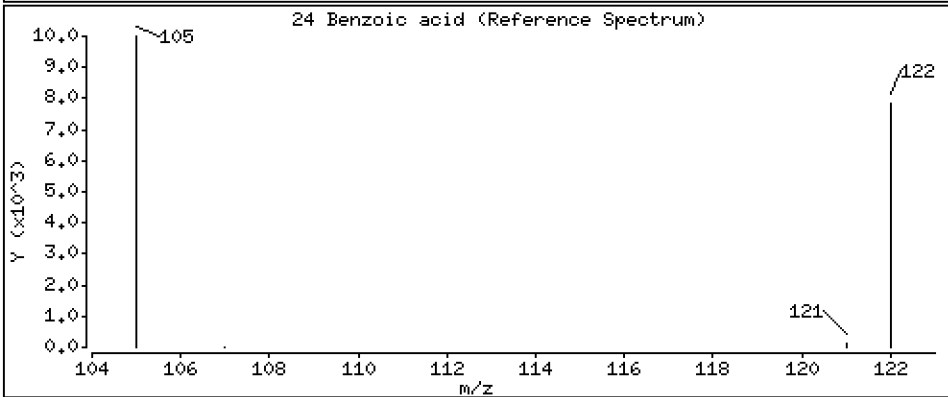
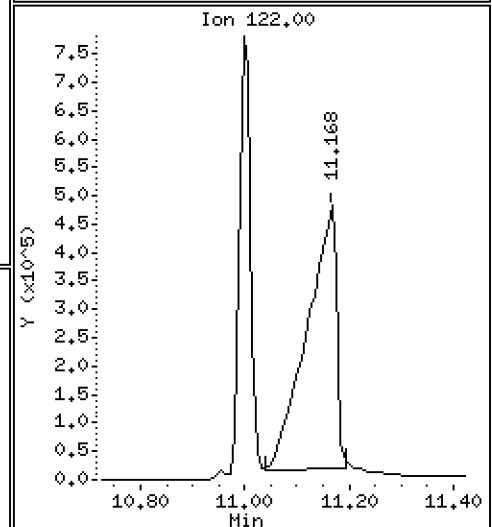
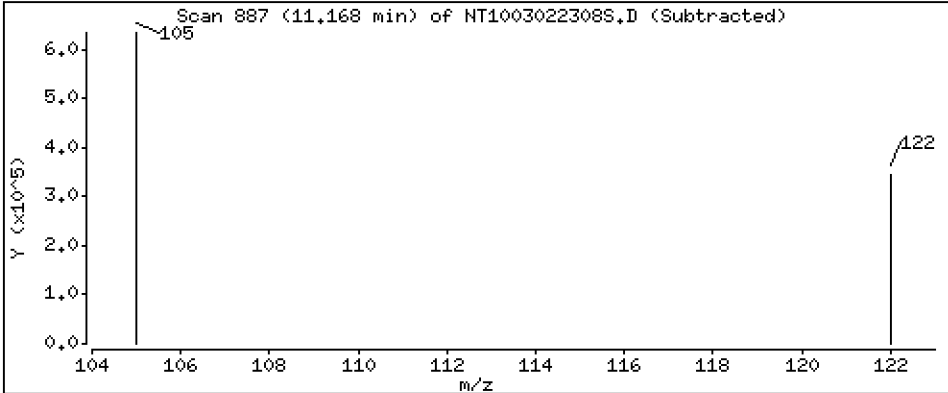
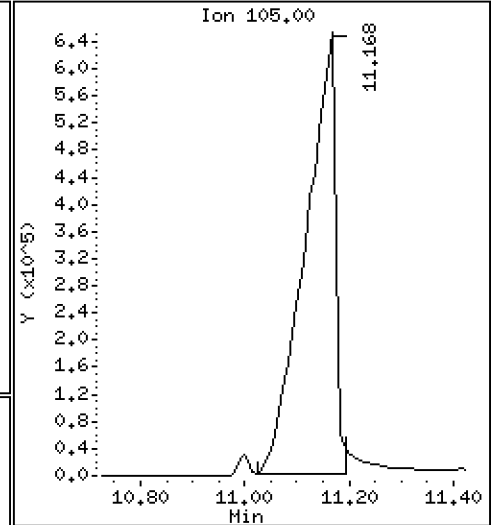
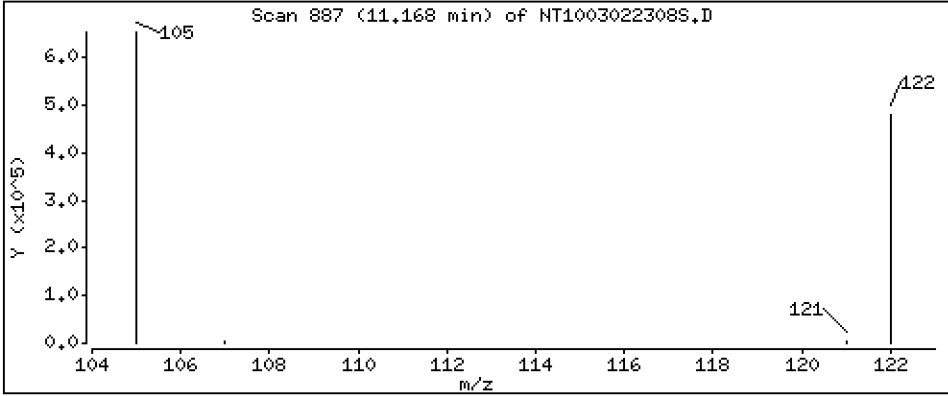
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 23.46 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

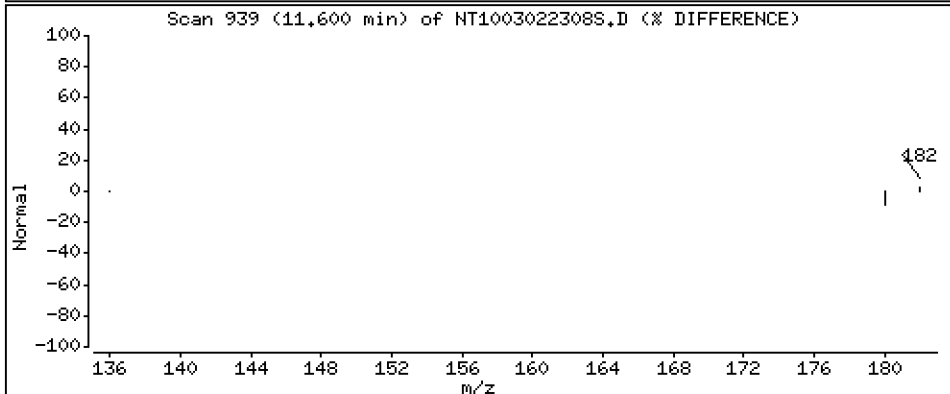
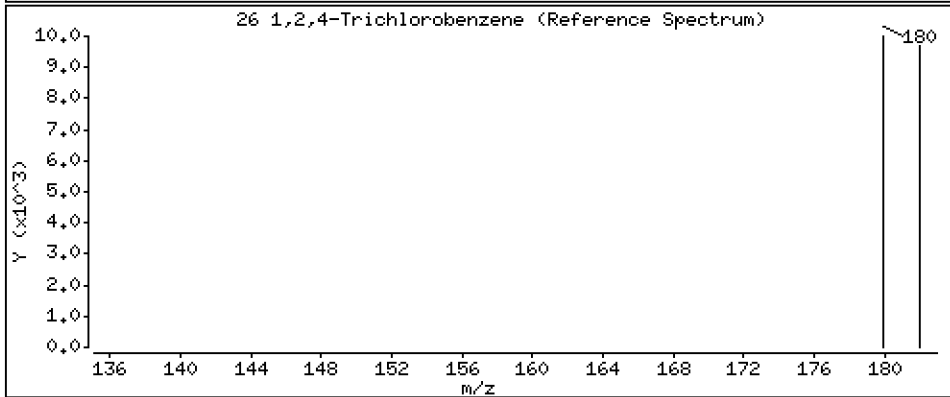
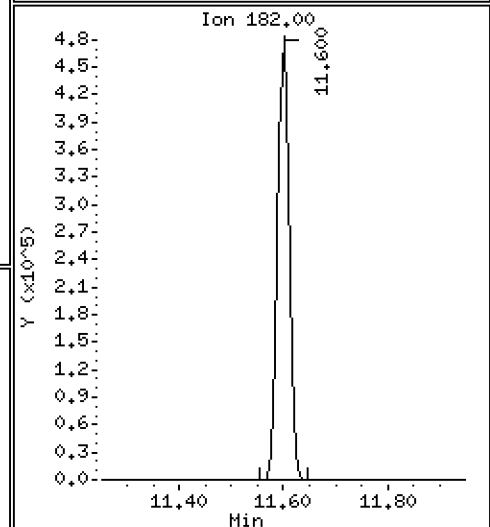
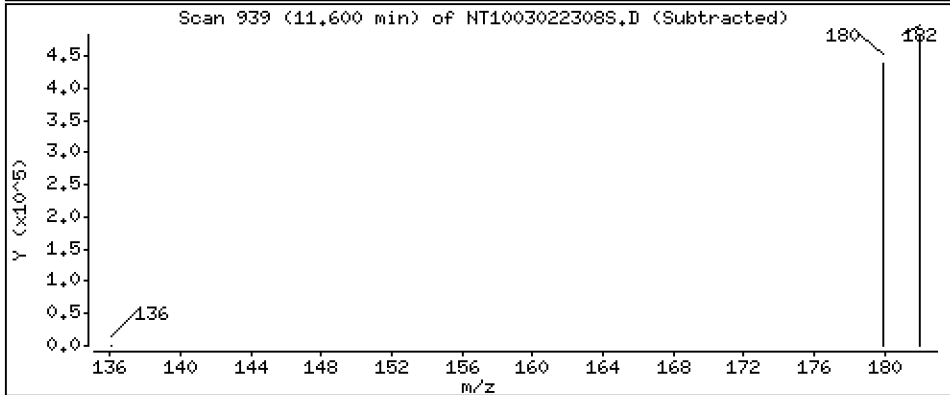
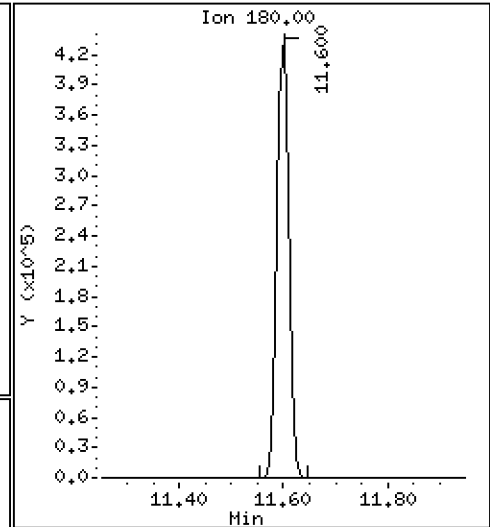
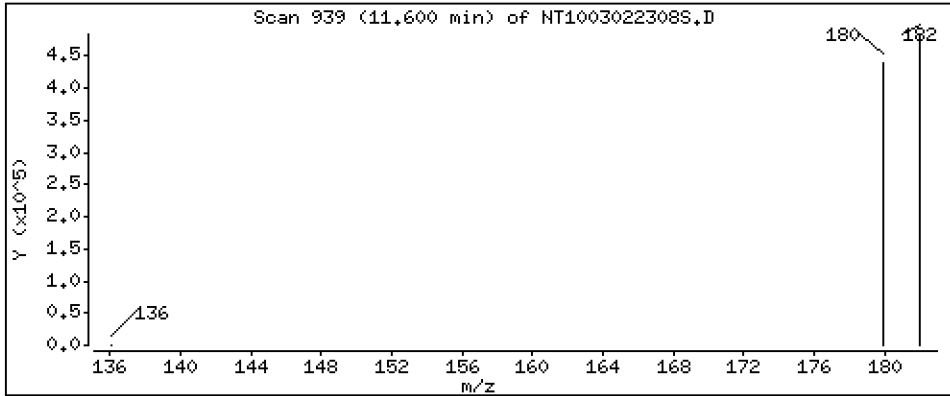
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.336 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

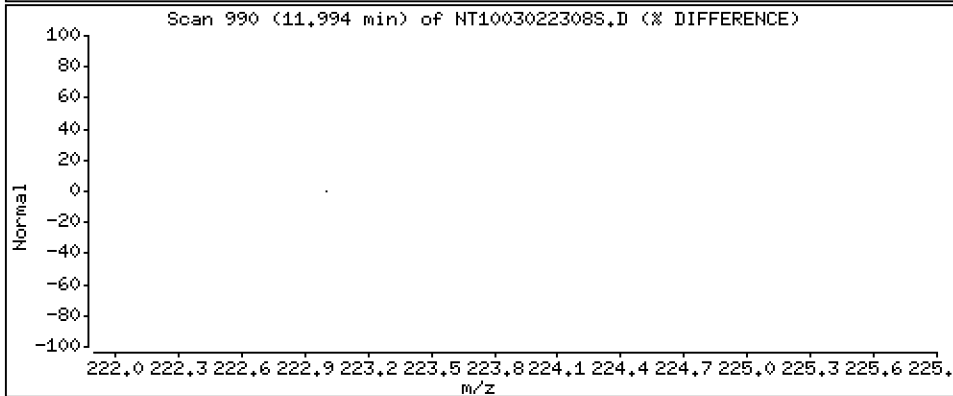
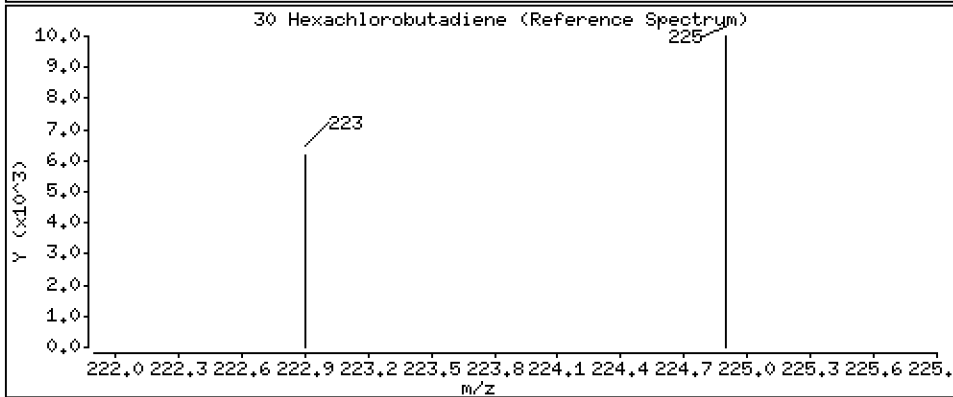
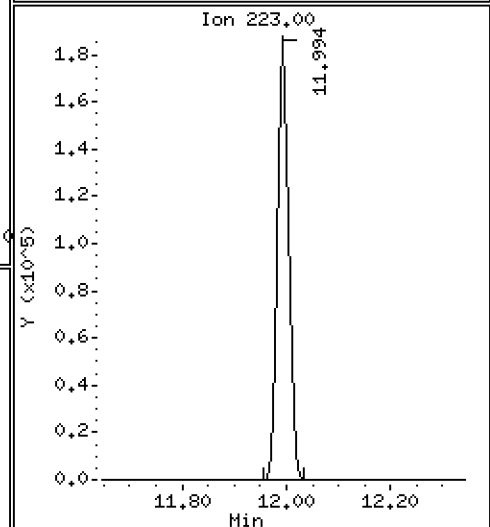
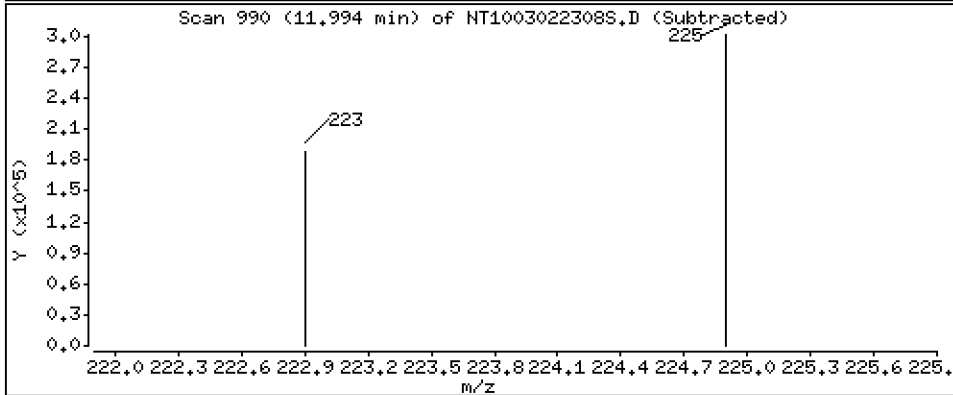
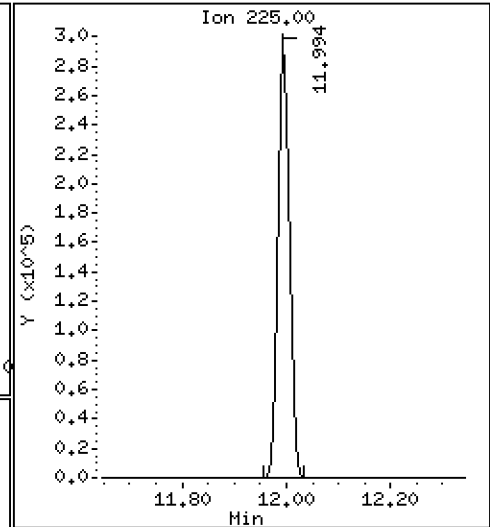
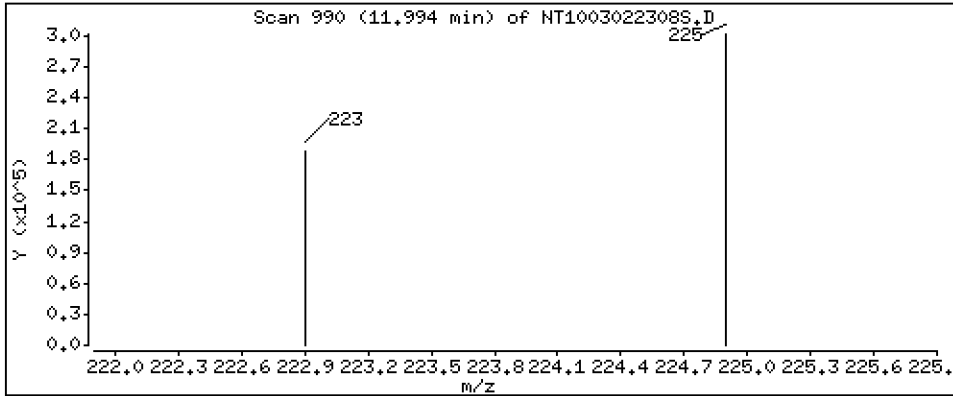
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,139 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

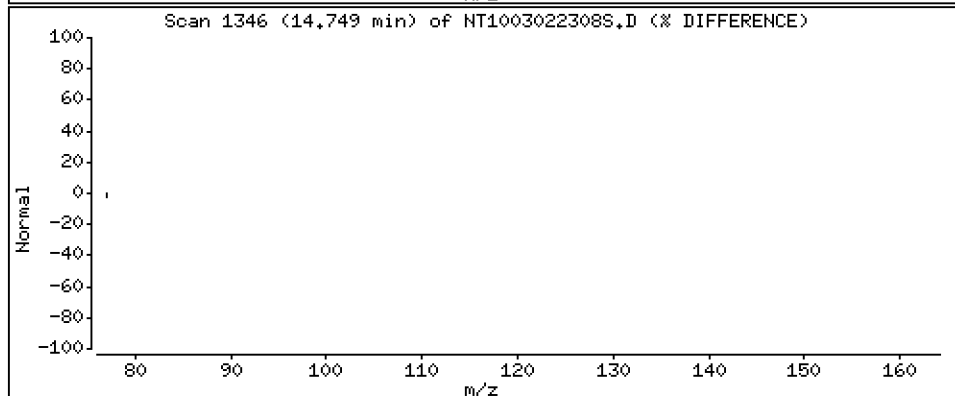
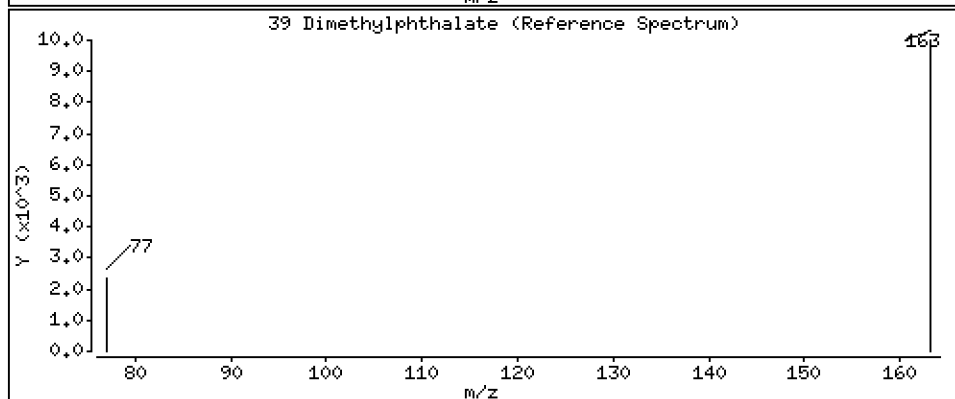
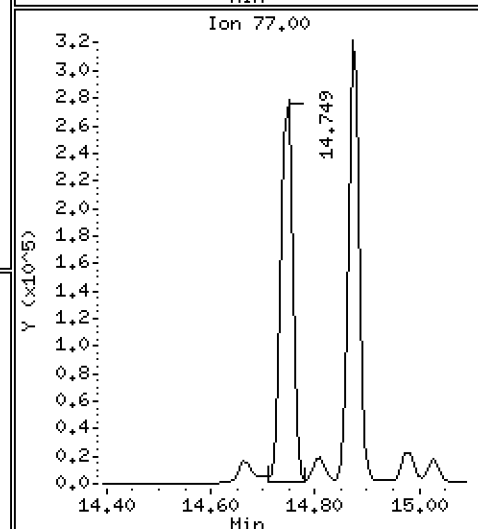
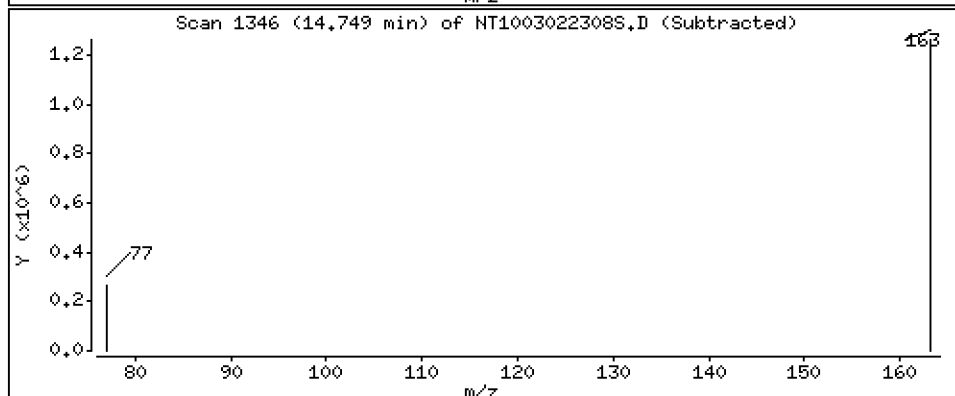
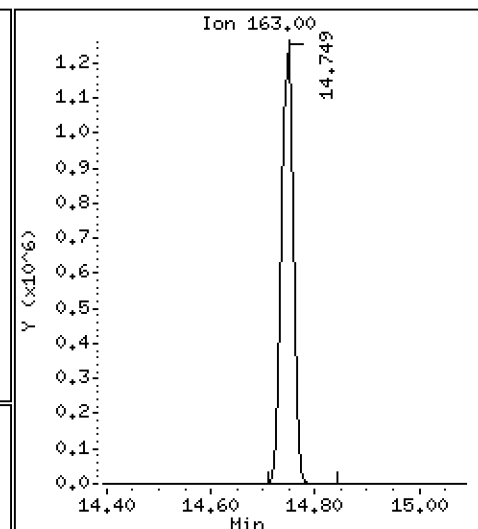
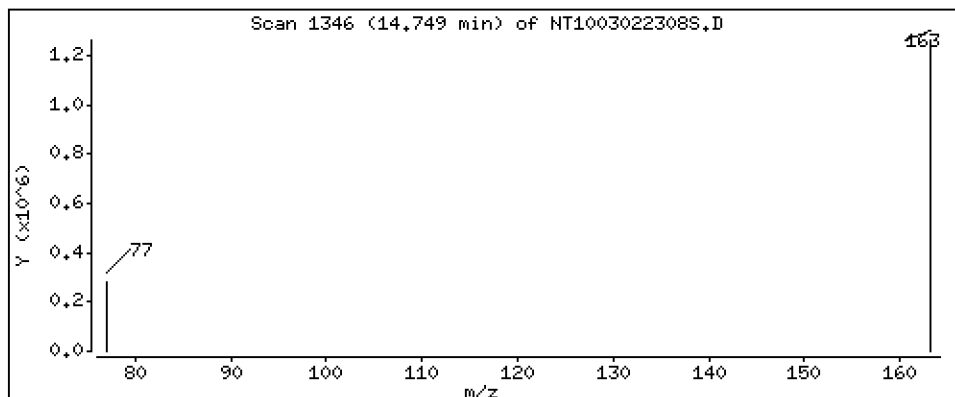
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,228 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

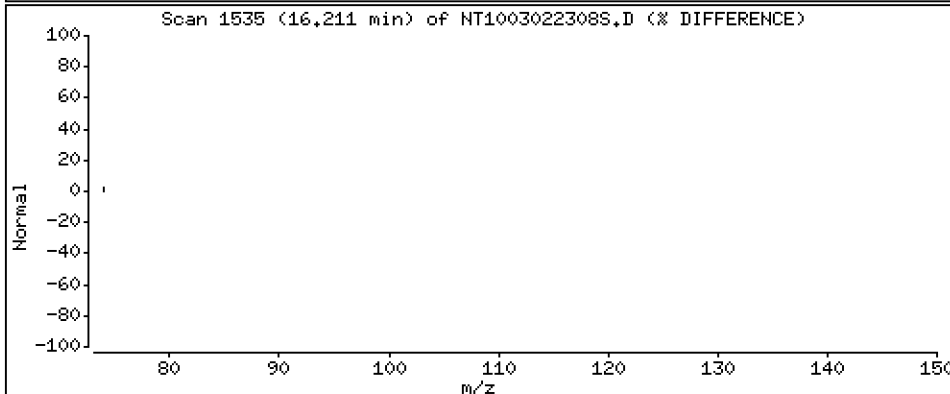
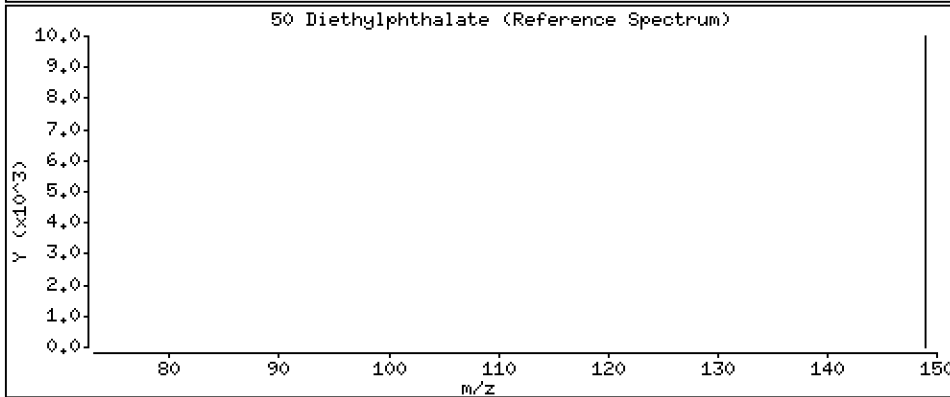
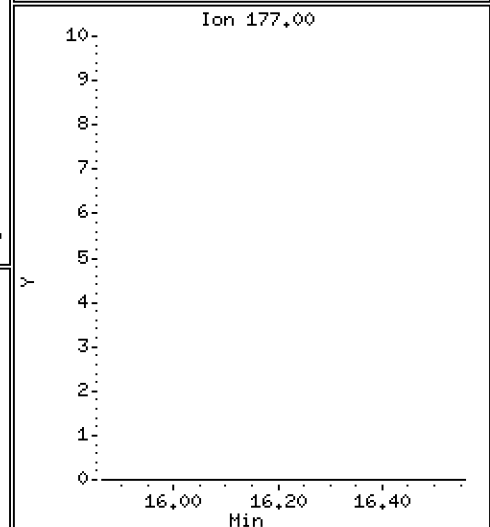
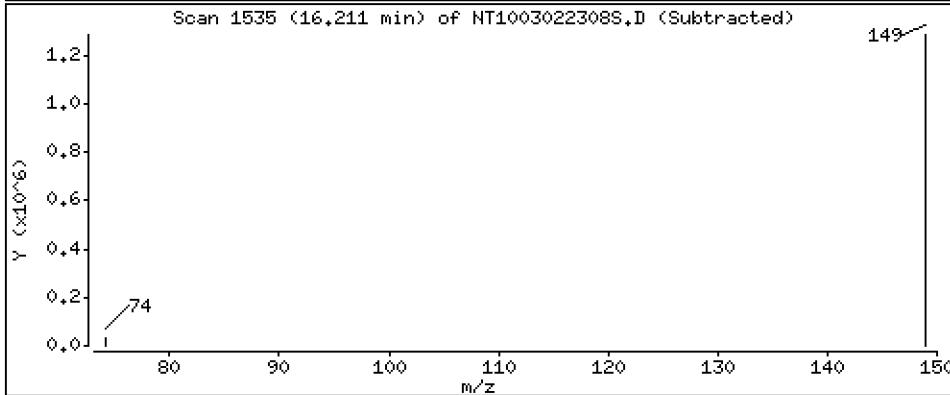
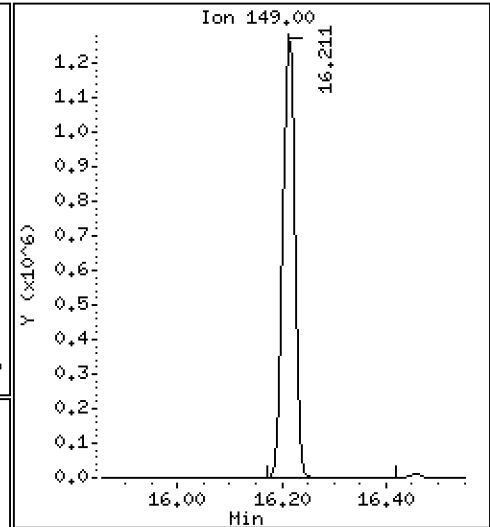
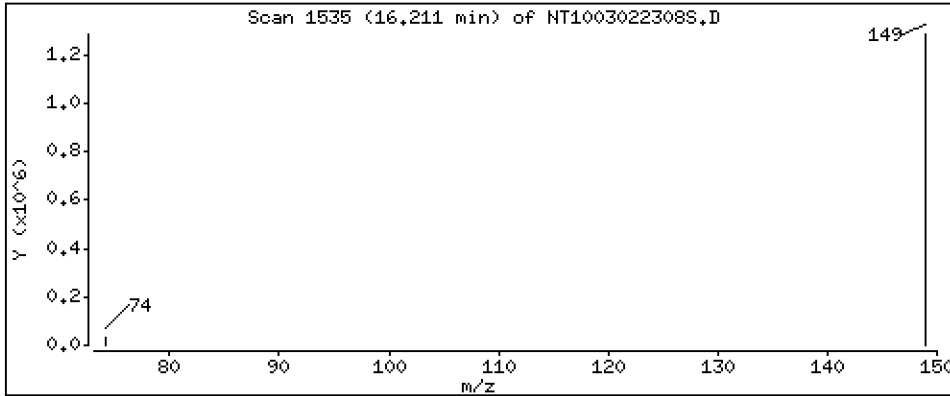
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,823 ug/L





Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

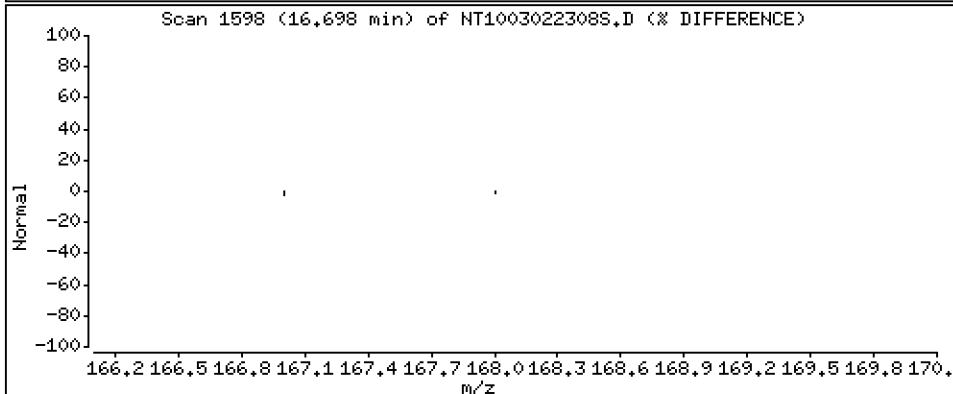
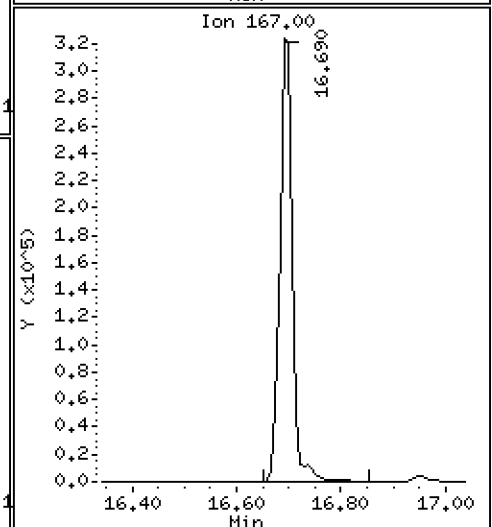
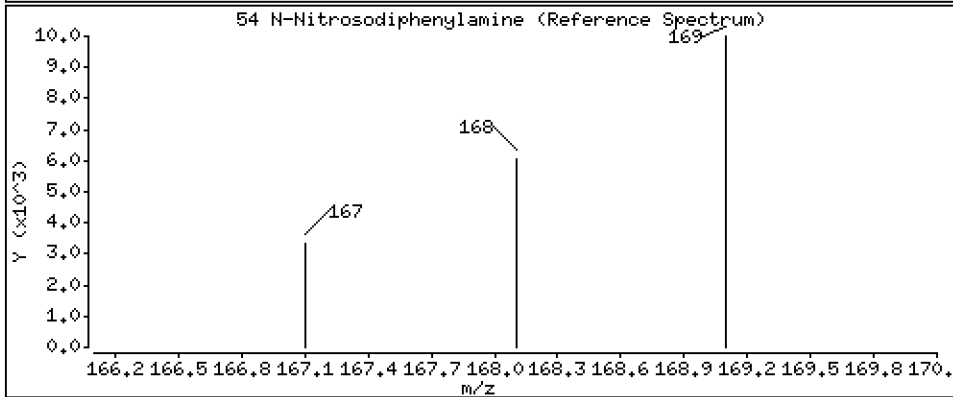
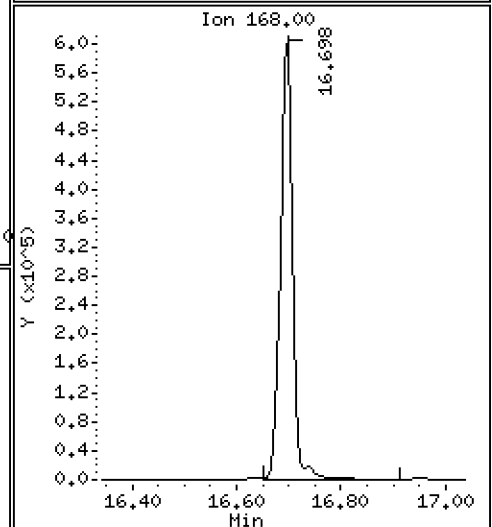
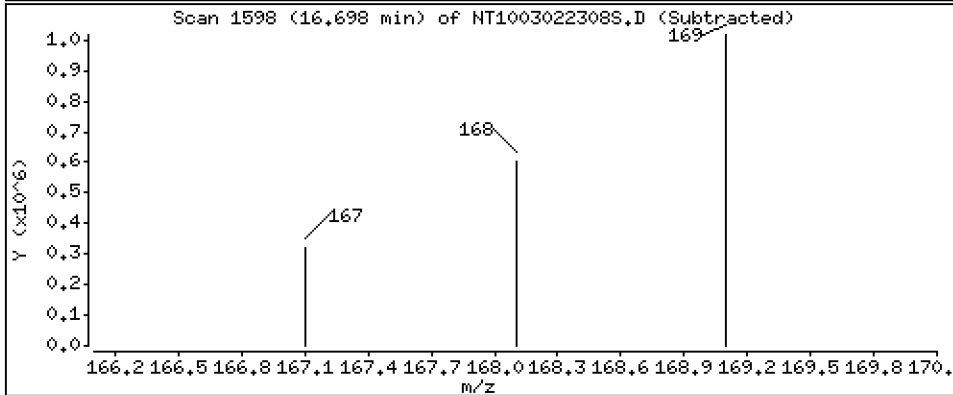
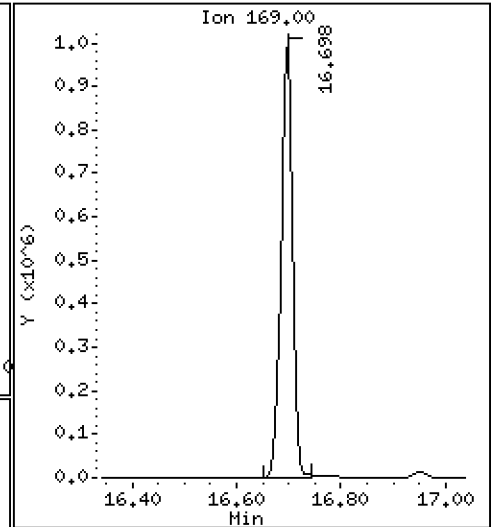
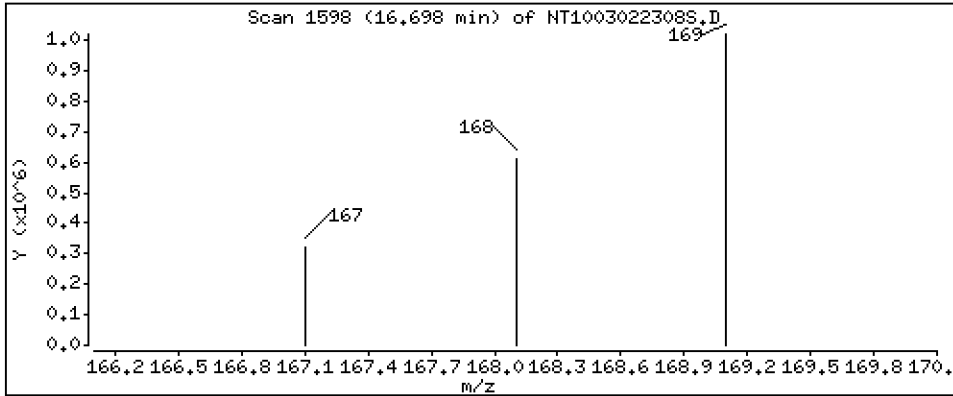
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,761 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

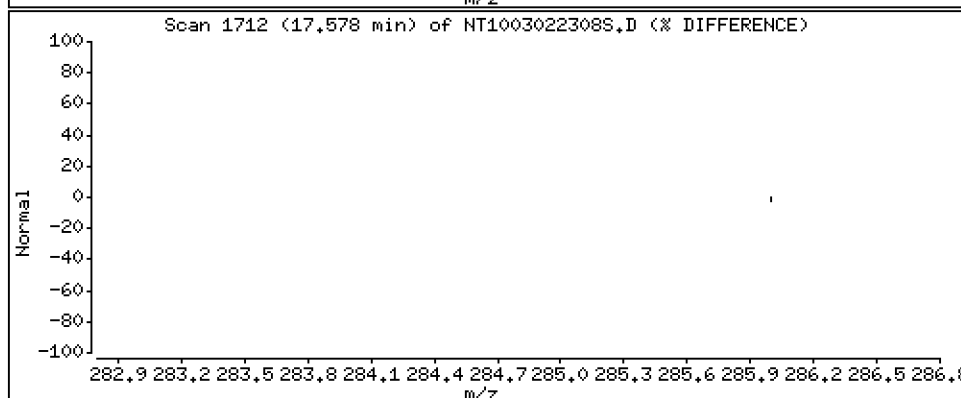
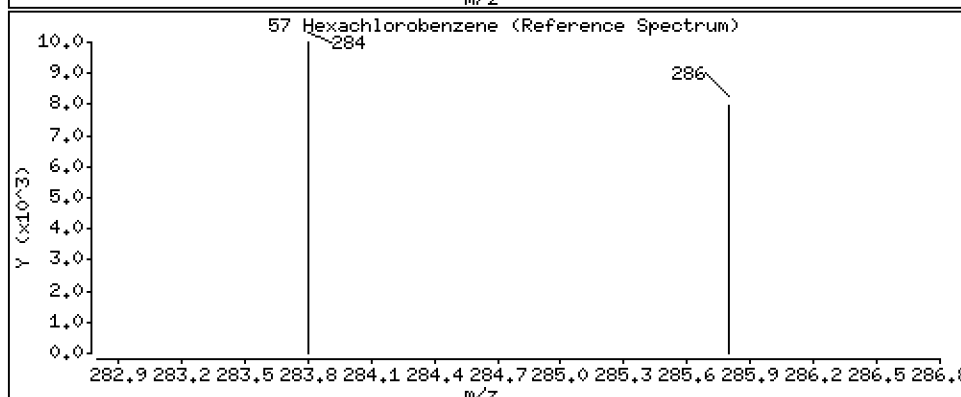
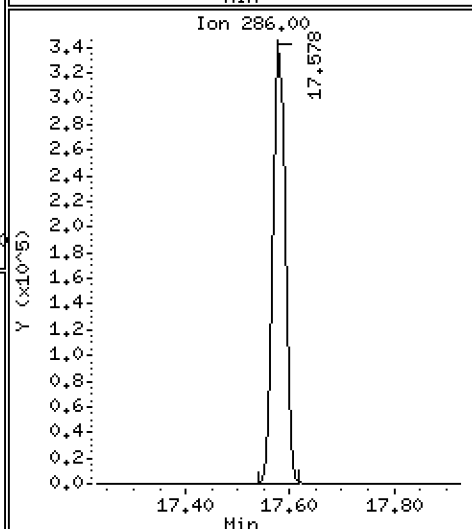
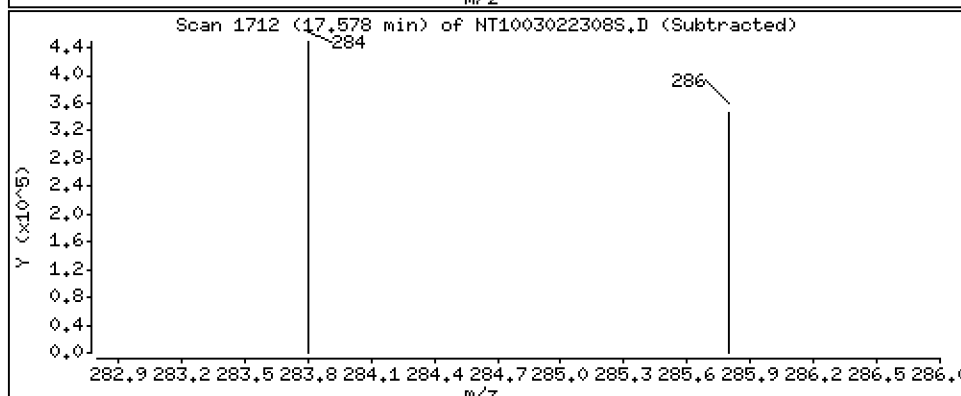
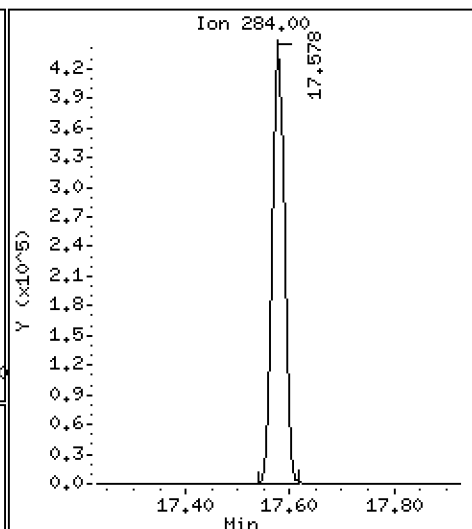
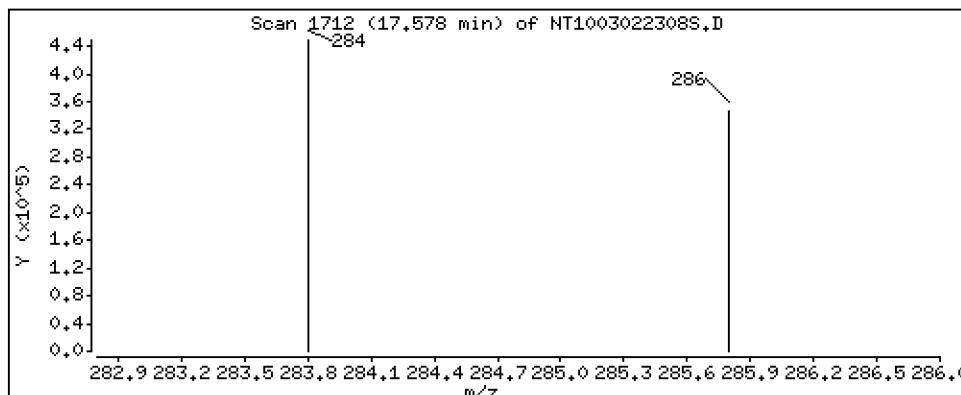
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.467 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

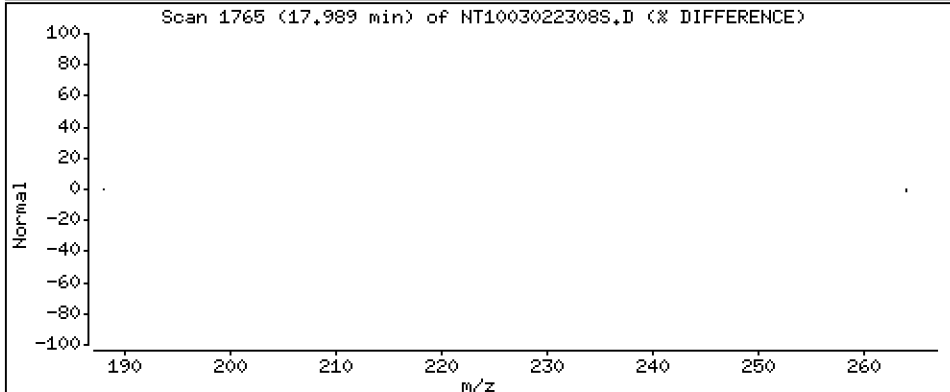
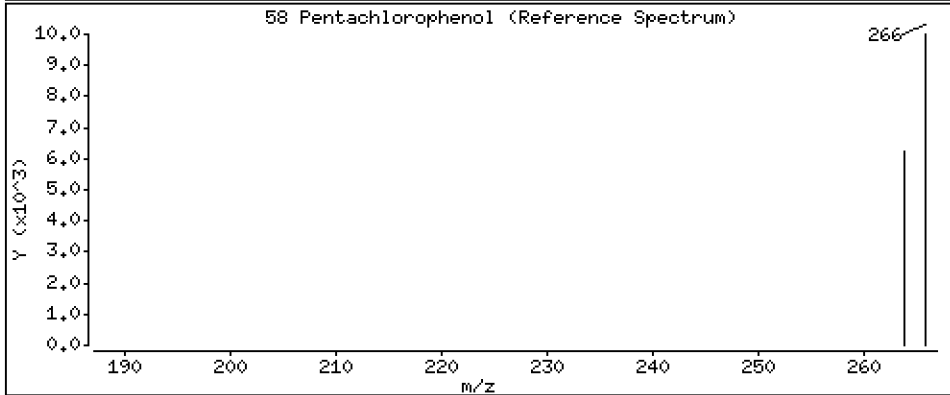
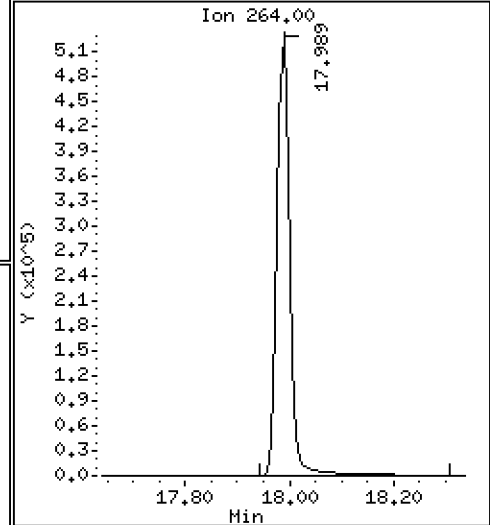
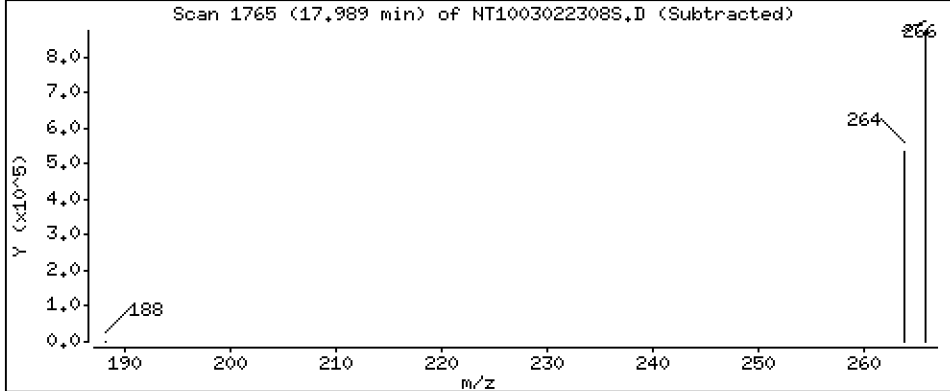
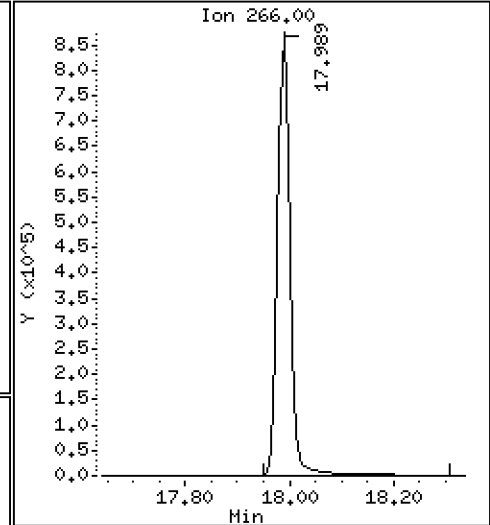
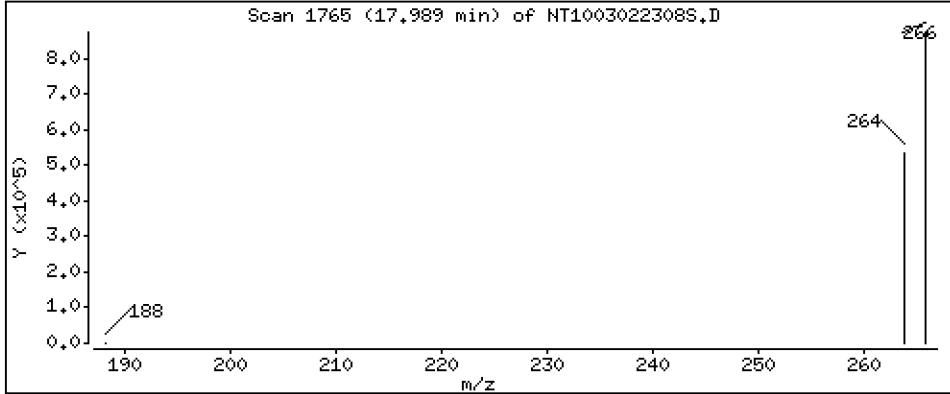
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 16,54 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

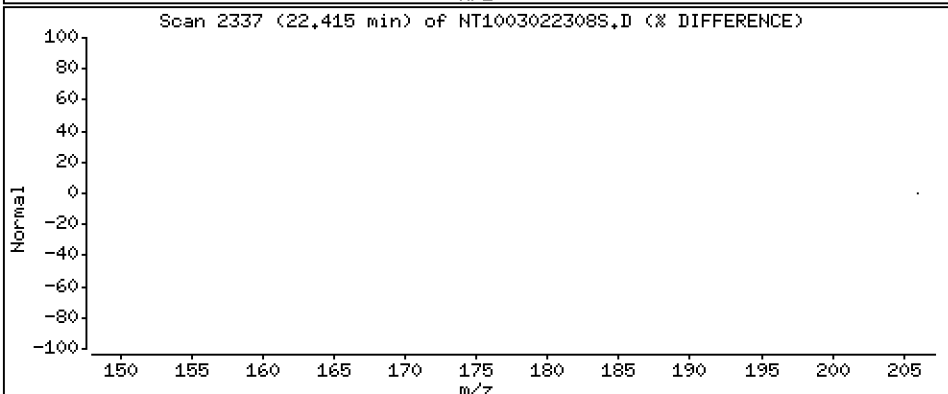
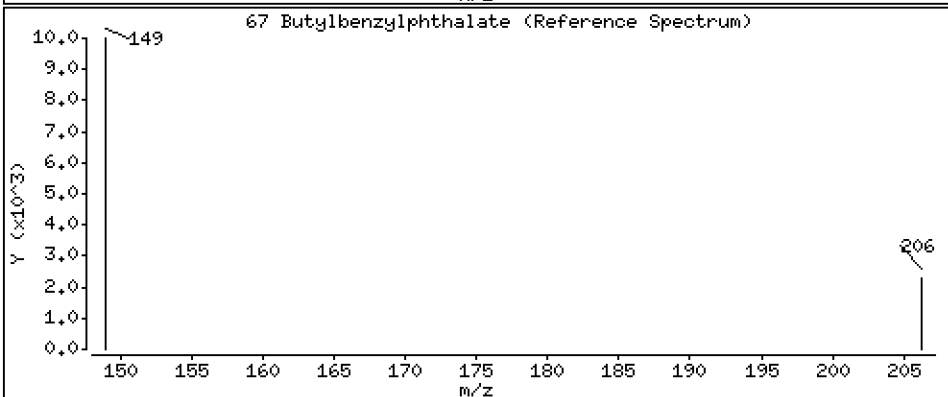
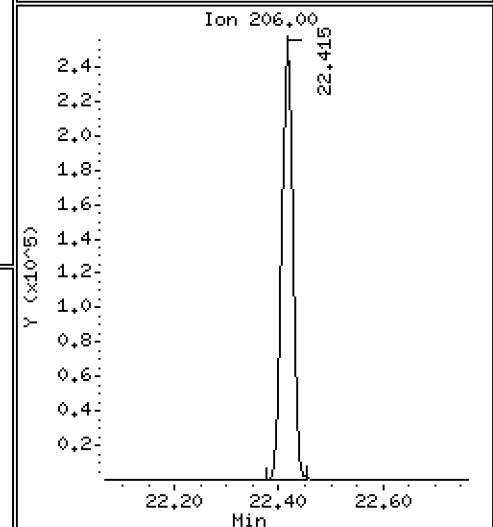
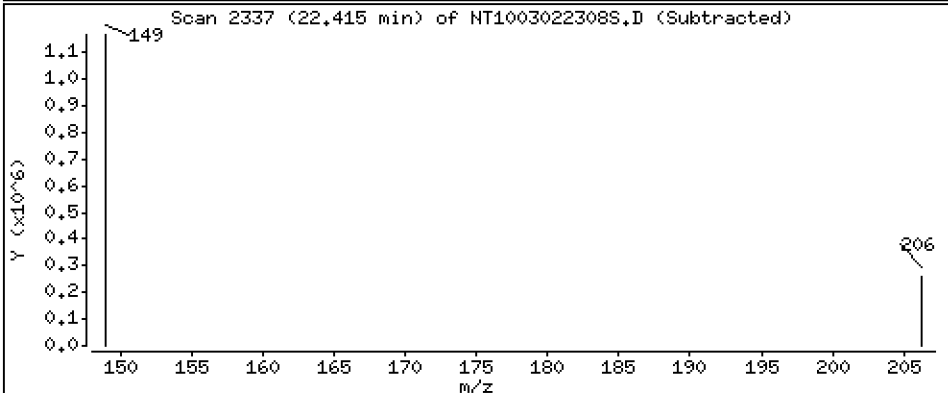
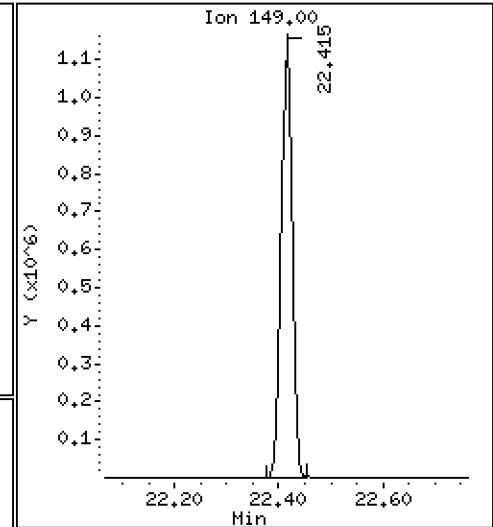
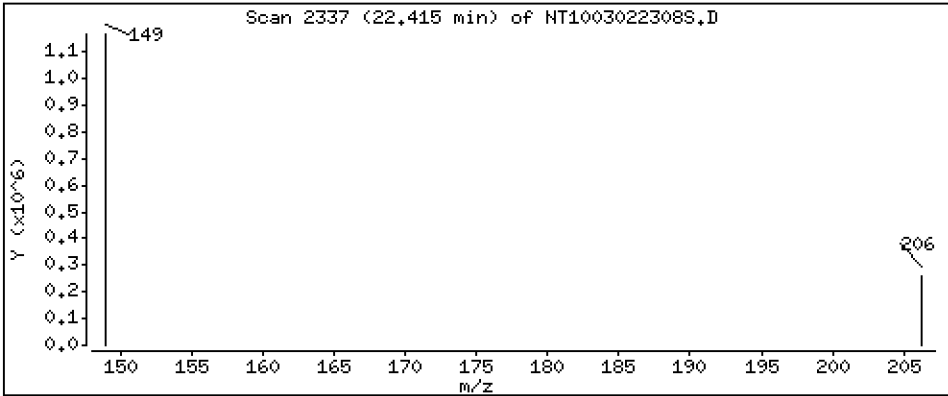
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 4.368 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

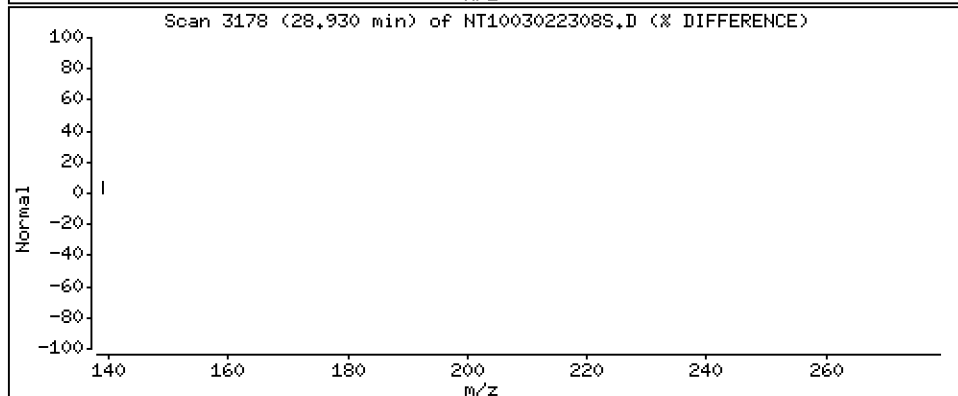
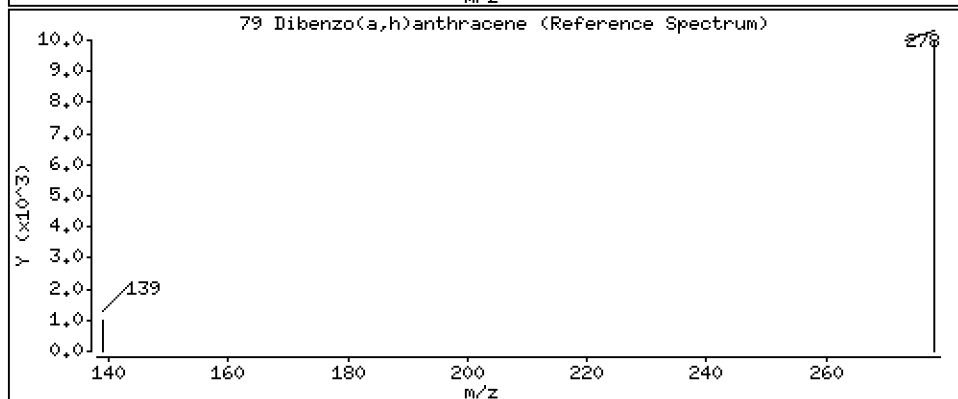
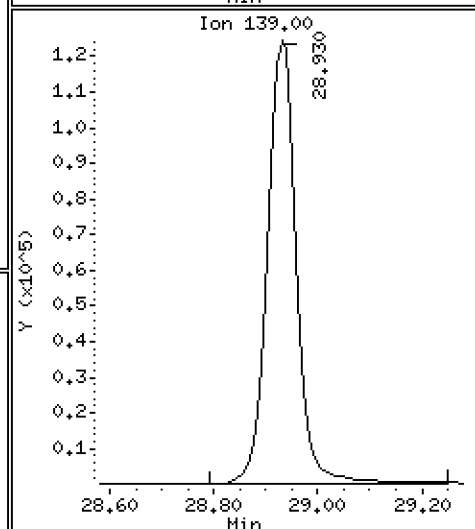
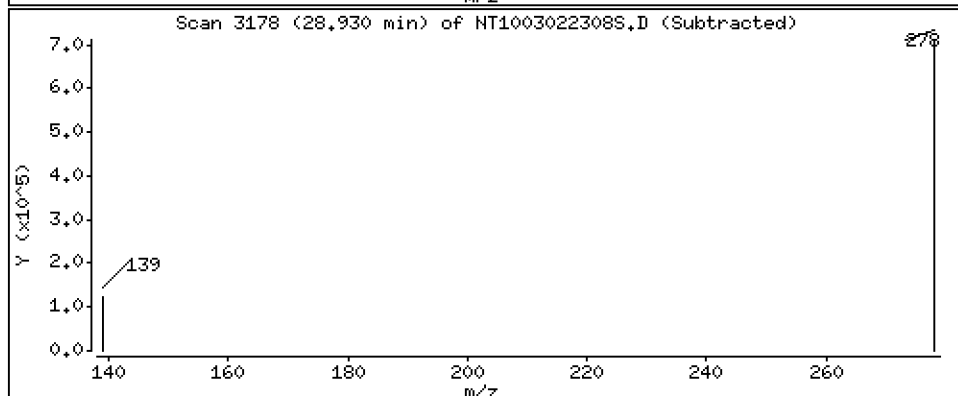
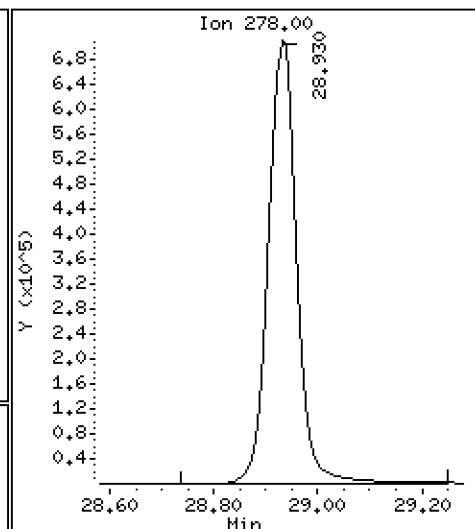
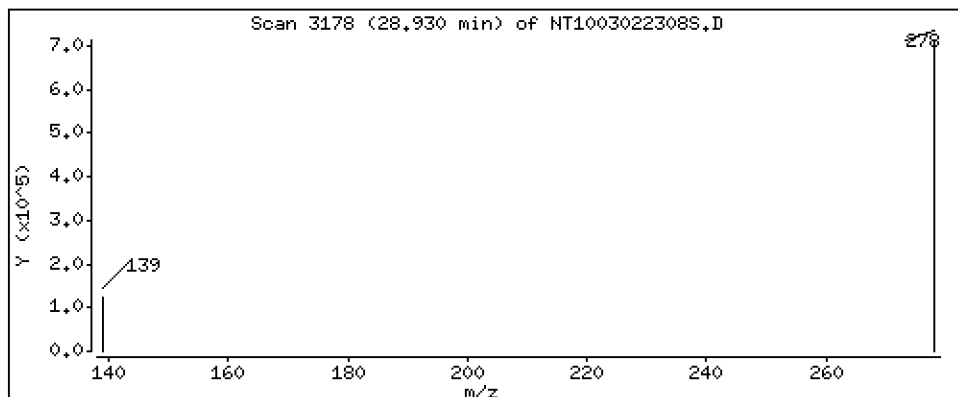
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 4.962 ug/L



Date : 02-MAR-2023 18:50

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-BSD1

Volume Injected (uL): 1.0

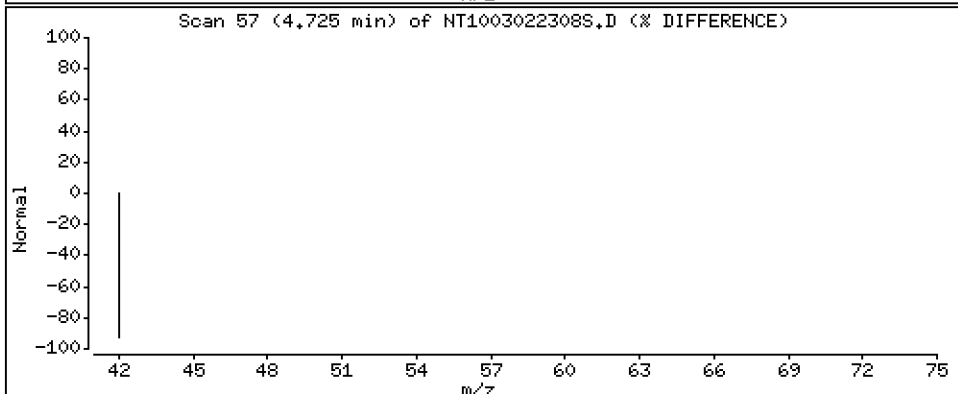
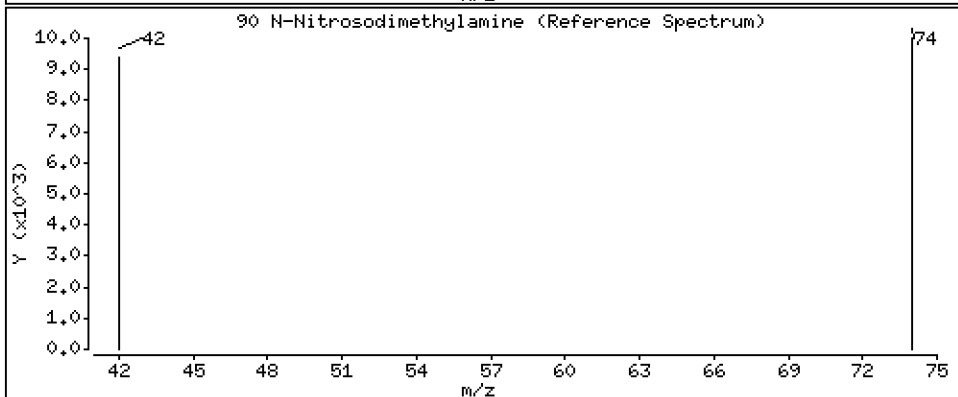
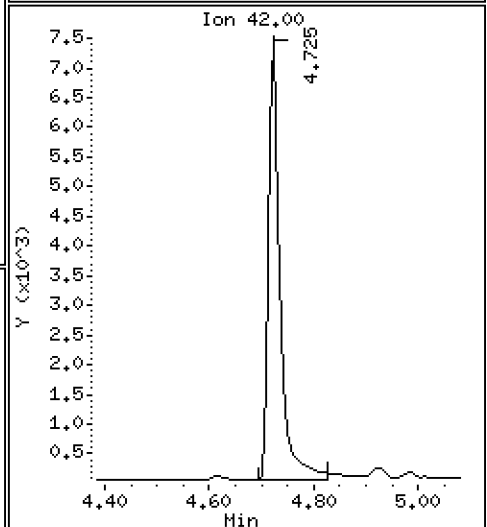
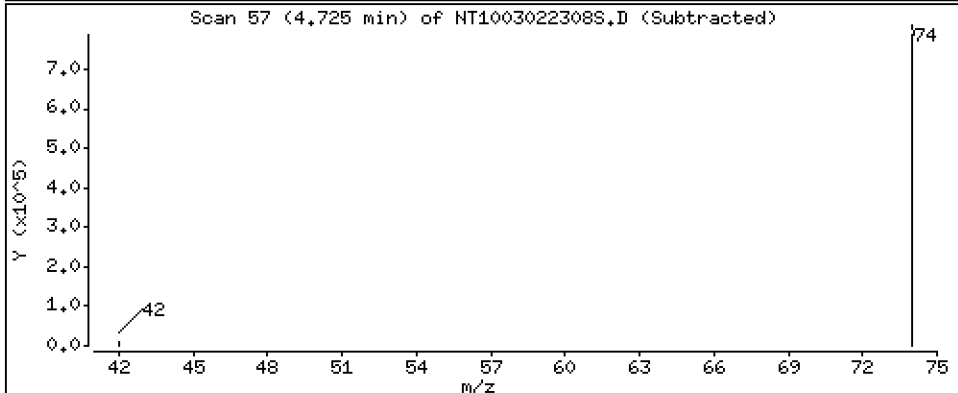
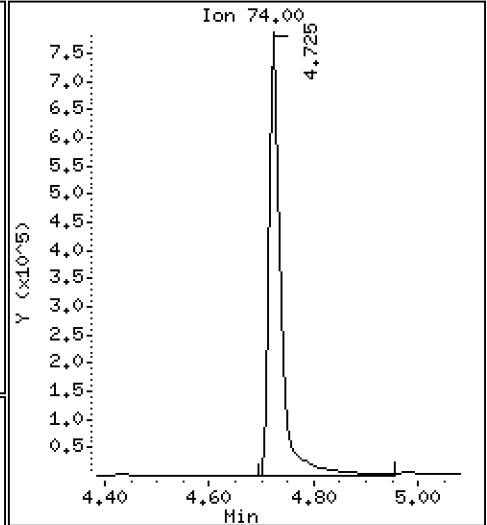
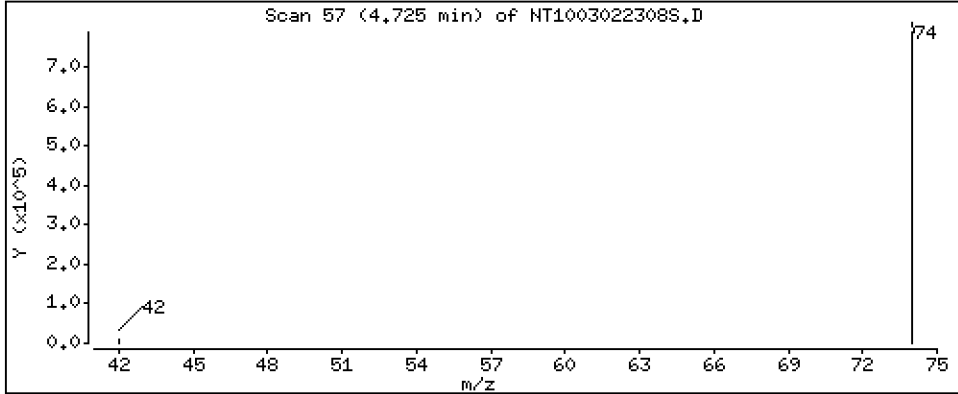
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.83 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022308S.D  
 Lab Smp Id: BLA0624-BSD1  
 Inj Date : 02-MAR-2023 18:50 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-BSD1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1057332	6.60791	6.608 (R)
3 Phenol	94		8.517	8.517	(0.921)	1084422	4.48897	4.489
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	853967	4.11127	4.111
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	560466	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	861054	4.26368	4.264
11 Benzyl alcohol	79		9.477	9.476	(1.024)	603180	4.34406	4.344
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	839585	4.32531	4.325
13 2-Methylphenol	108		9.655	9.655	(1.044)	580325	3.95480	3.955
15 4-Methylphenol	108		9.950	9.942	(1.076)	670458	4.32548	4.325
16 N-Nitroso-di-n-propylamine	70		9.973	9.981	(1.078)	498084	4.65653	4.657
22 2,4-Dimethylphenol	107		10.997	10.997	(0.938)	1444074	7.97792	7.978
24 Benzoic acid	105		11.167	11.074	(0.953)	2629143	23.4639	23.46
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	650704	4.33589	4.336
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	2085063	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	440778	4.13883	4.139
39 Dimethylphthalate	163		14.749	14.741	(0.963)	1848286	5.22825	5.228
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	1113362	4.00000	
50 Diethylphthalate	149		16.210	16.203	(1.059)	1941262	5.82295	5.823
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1541071	4.76088	4.761
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	676633	4.46668	4.467

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.988	17.988	(0.977)	1378551	16.5427	16.54
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2000131	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	763988	4.35620	4.356 (R)
67 Butylbenzylphthalate	149	22.414	22.414	(0.957)	1574214	4.36757	4.368
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	2168746	4.00000	
* 77 Perylene-d12	264	26.115	26.115	(1.000)	2165910	4.00000	
79 Dibenzo(a,h)anthracene	278	28.929	28.929	(1.108)	2691548	4.96165	4.962
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	1215136	12.8270	12.83

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022308S.D  
 Lab Smp Id: BLA0624-BSD1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	560466	13.59
27 Naphthalene-d8	1779056	889528	3558112	2085063	17.20
42 Acenaphthene-d10	954569	477285	1909138	1113362	16.64
59 Phenanthrene-d10	1596290	798145	3192580	2000131	25.30
69 Chrysene-d12	1649110	824555	3298220	2168746	31.51
77 Perylene-d12	1901958	950979	3803916	2165910	13.88

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022308S.D

Lab ID: BLA0624-BSD1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 18:50

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.945	0.0080	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

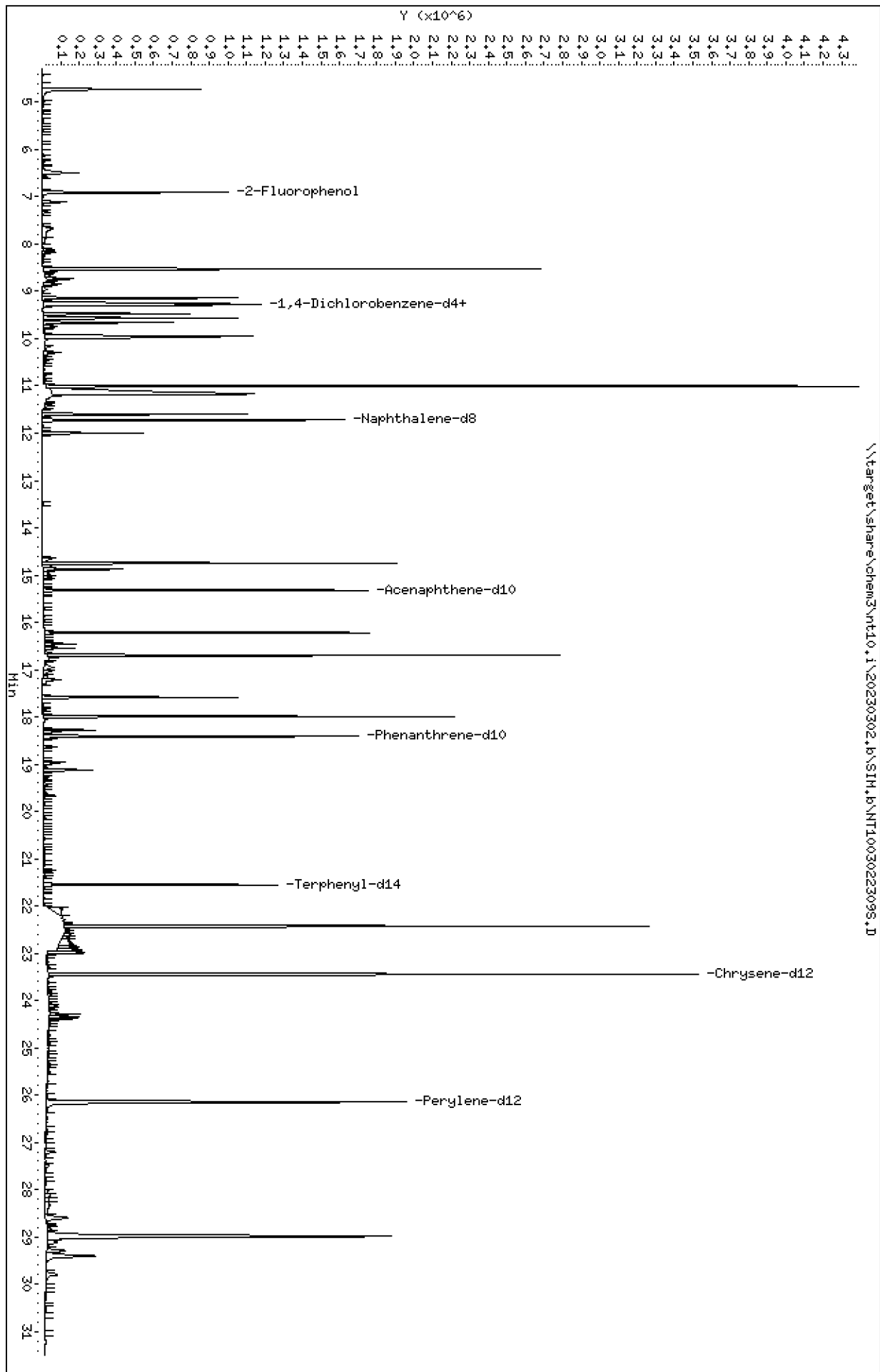
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022309S.D  
Date: 02-MAR-2023 19:28  
Client ID:  
Sample Info: BLR0624-HSI  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022309S.D



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

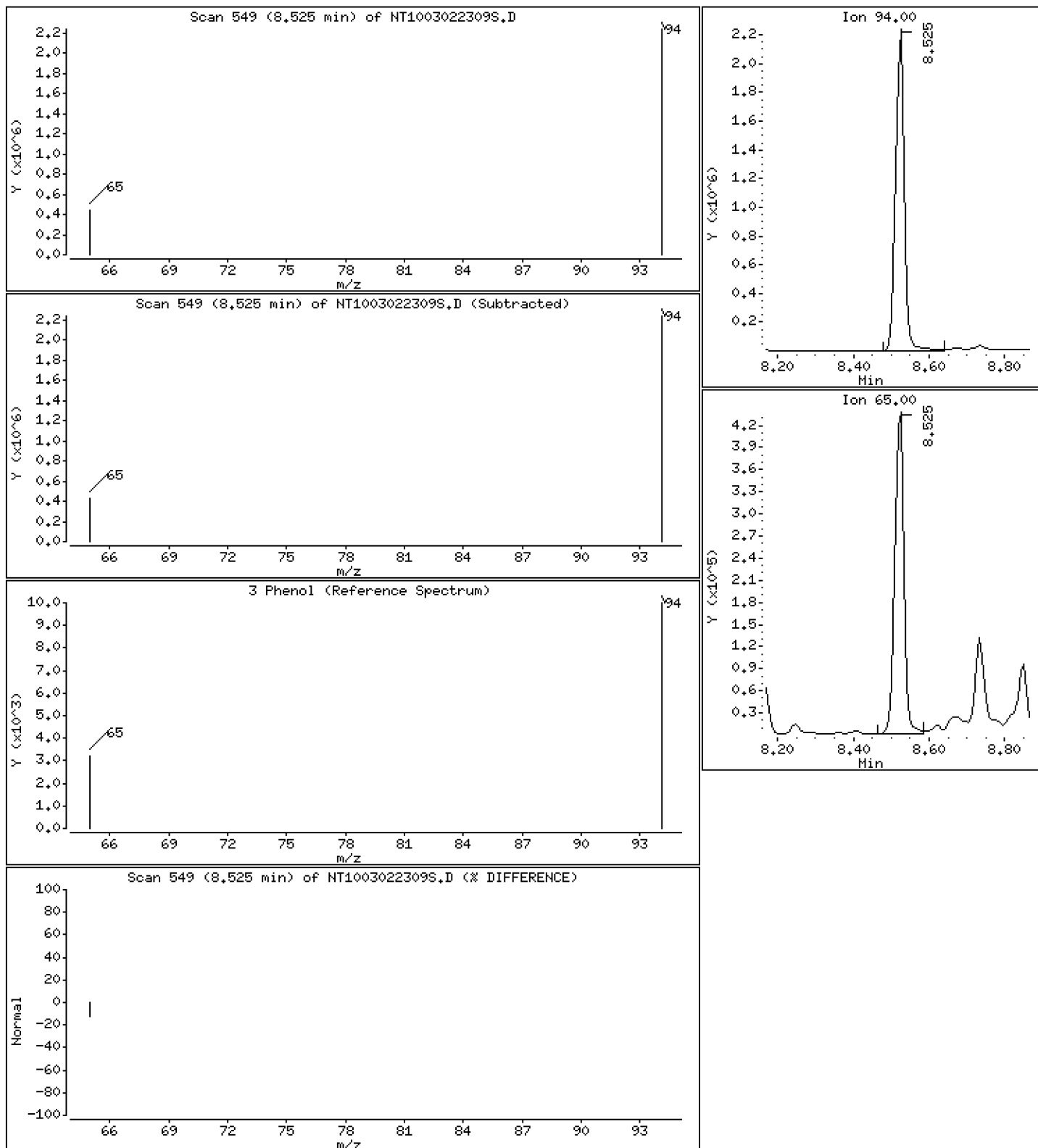
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 11.73 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

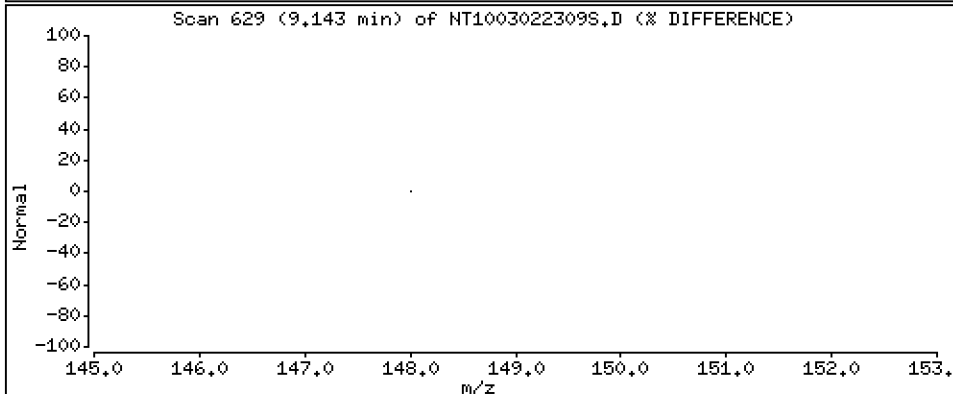
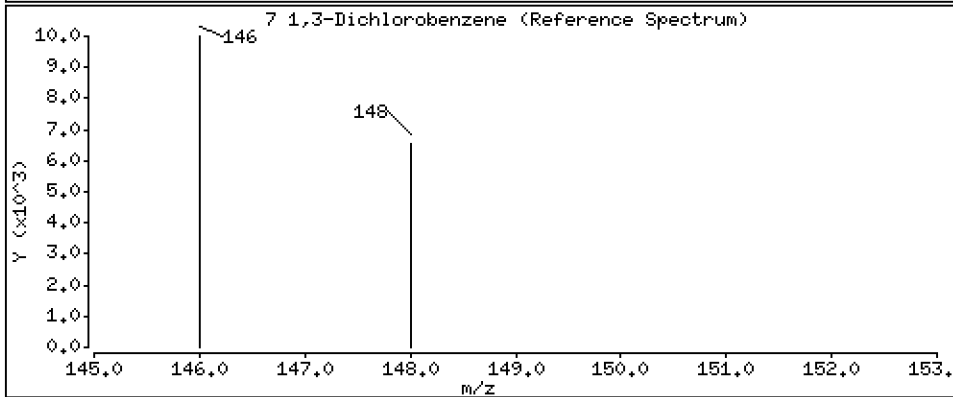
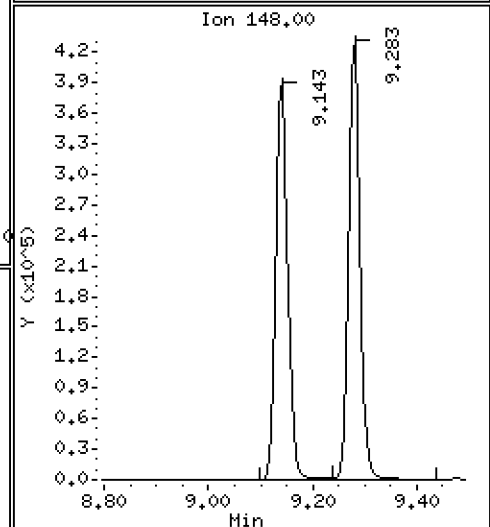
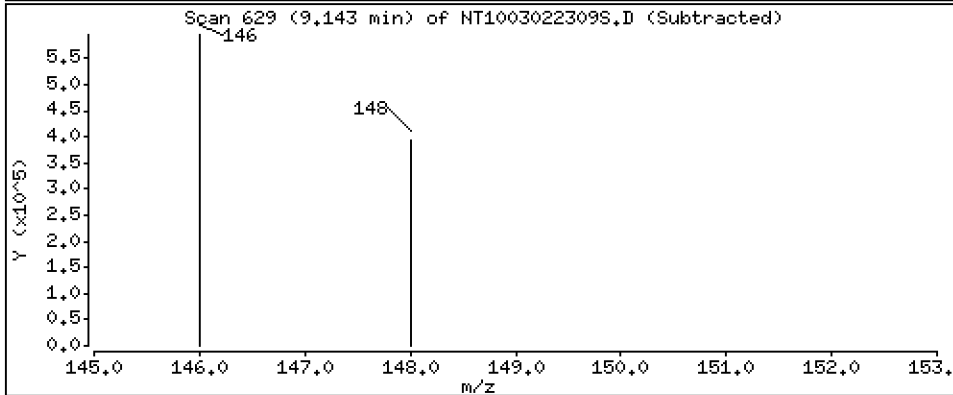
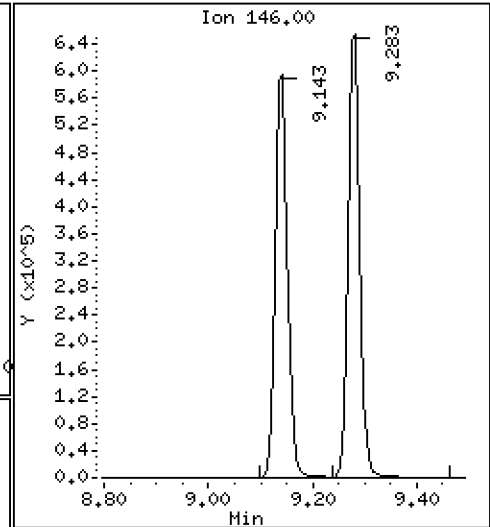
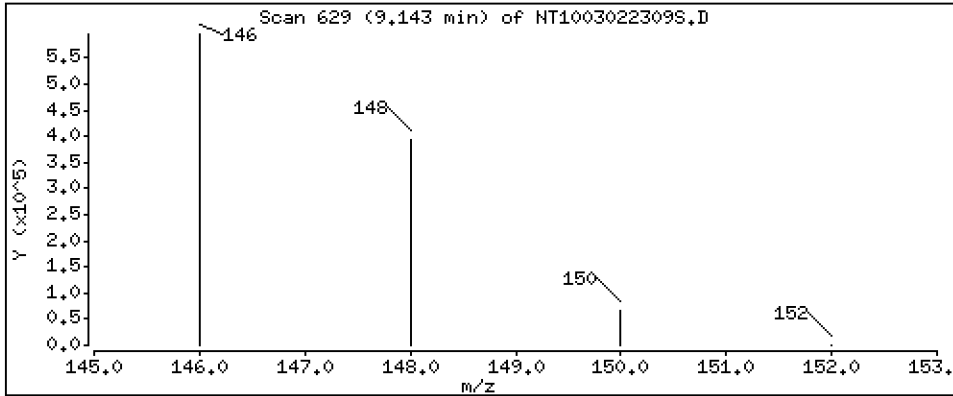
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 4.069 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

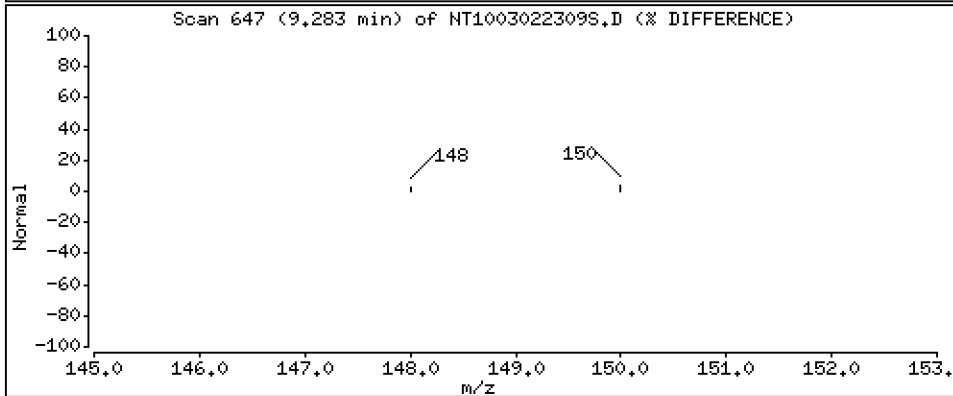
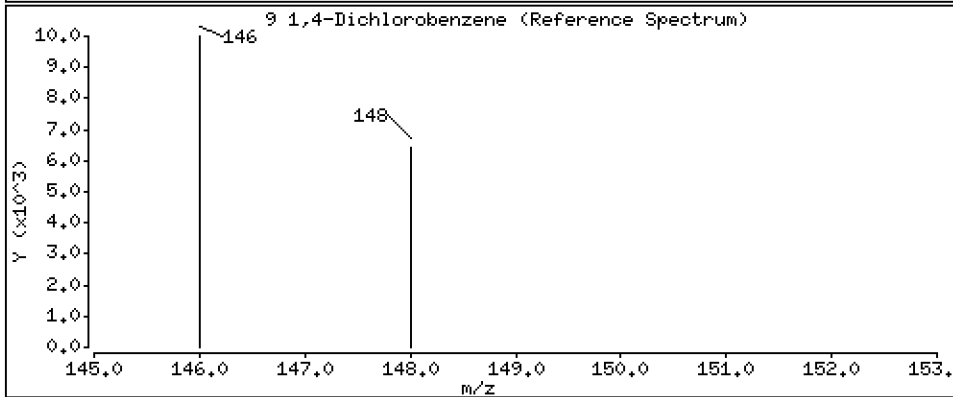
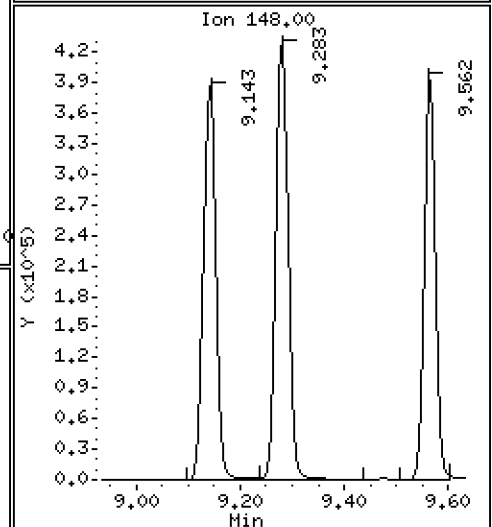
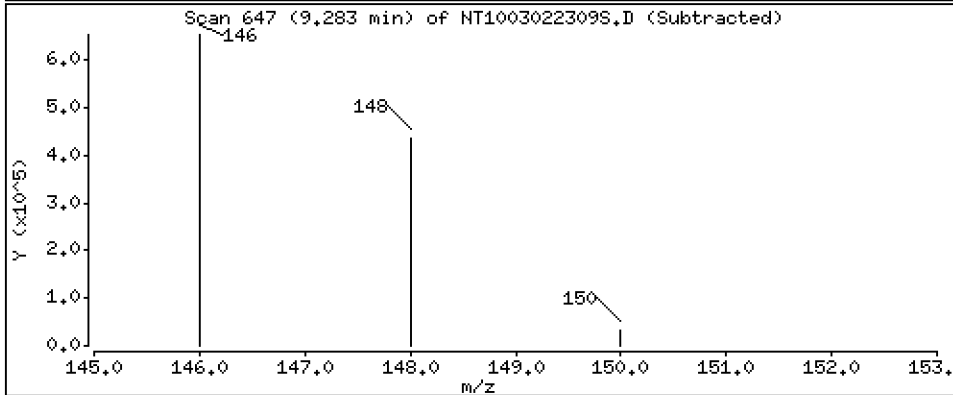
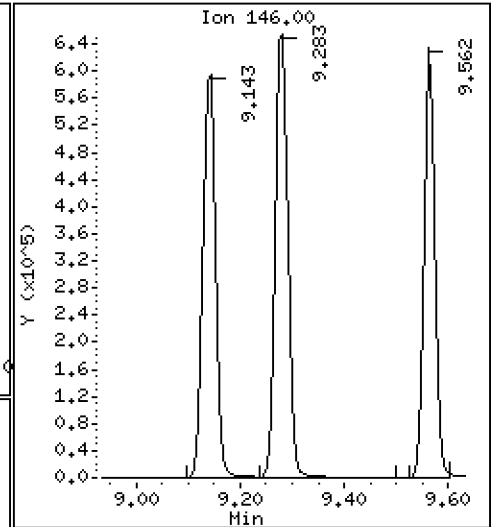
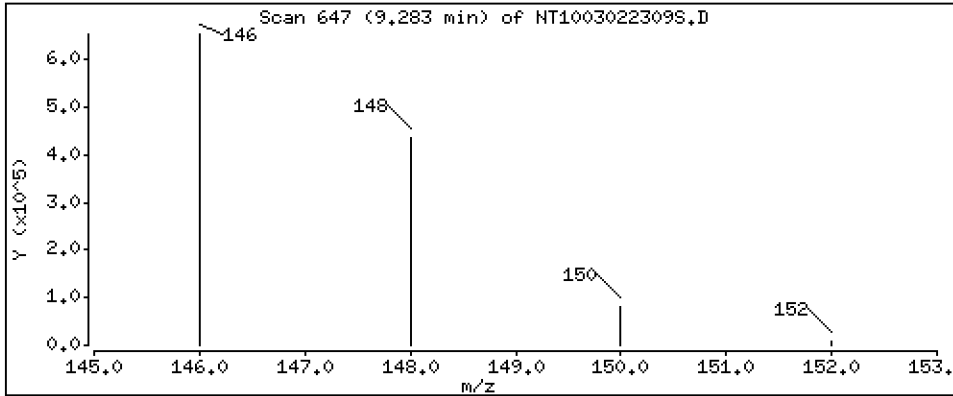
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 4,544 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

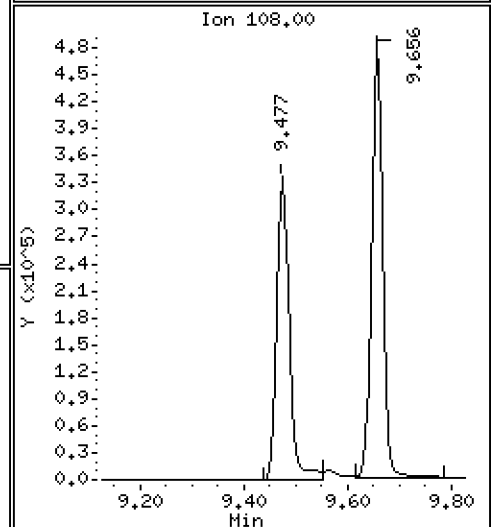
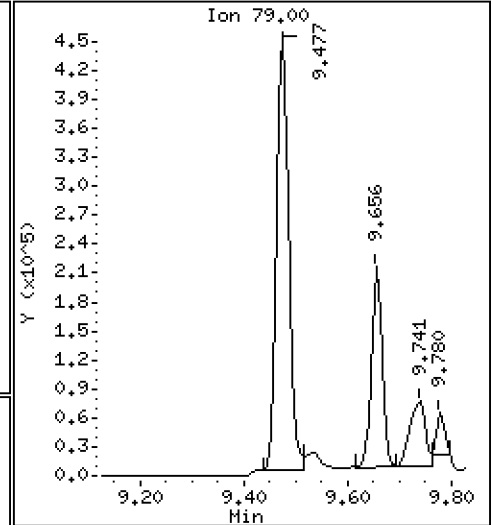
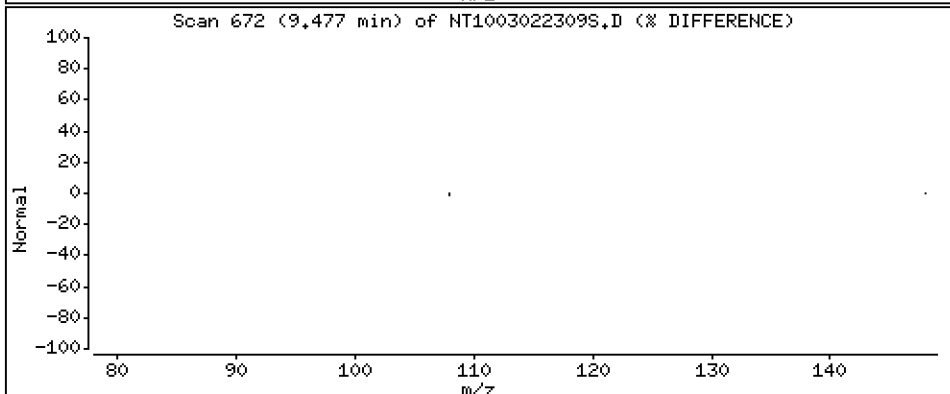
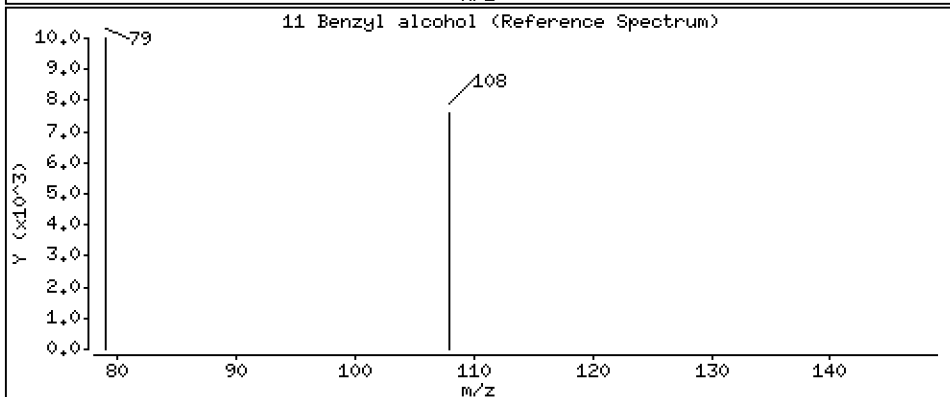
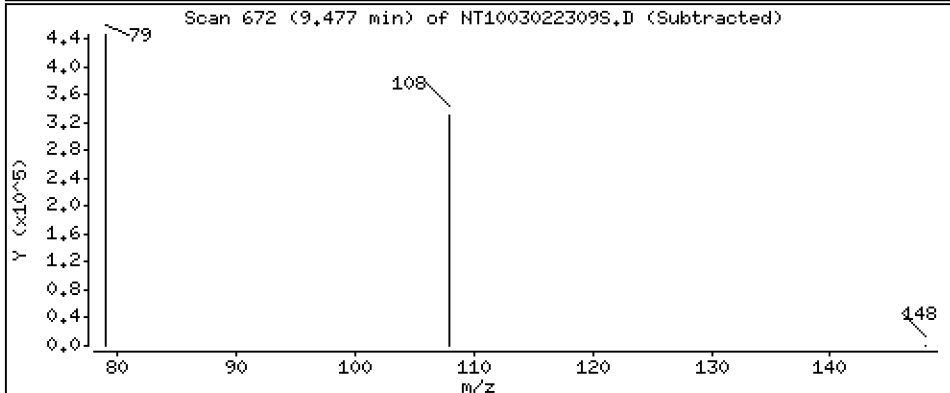
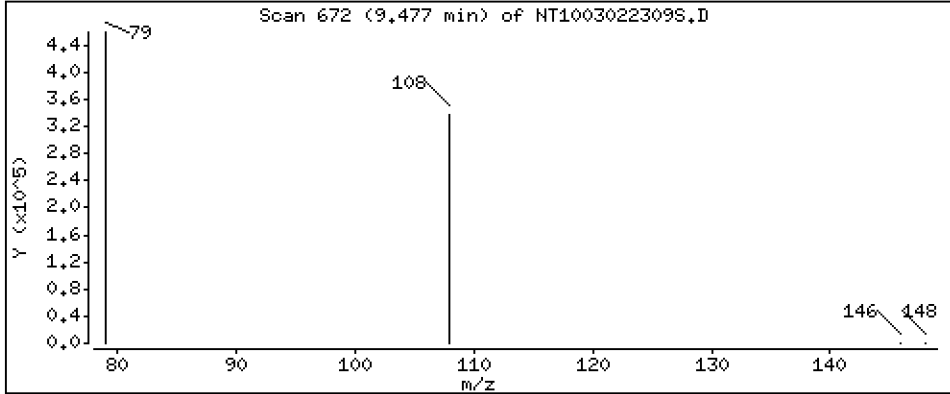
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 4.336 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

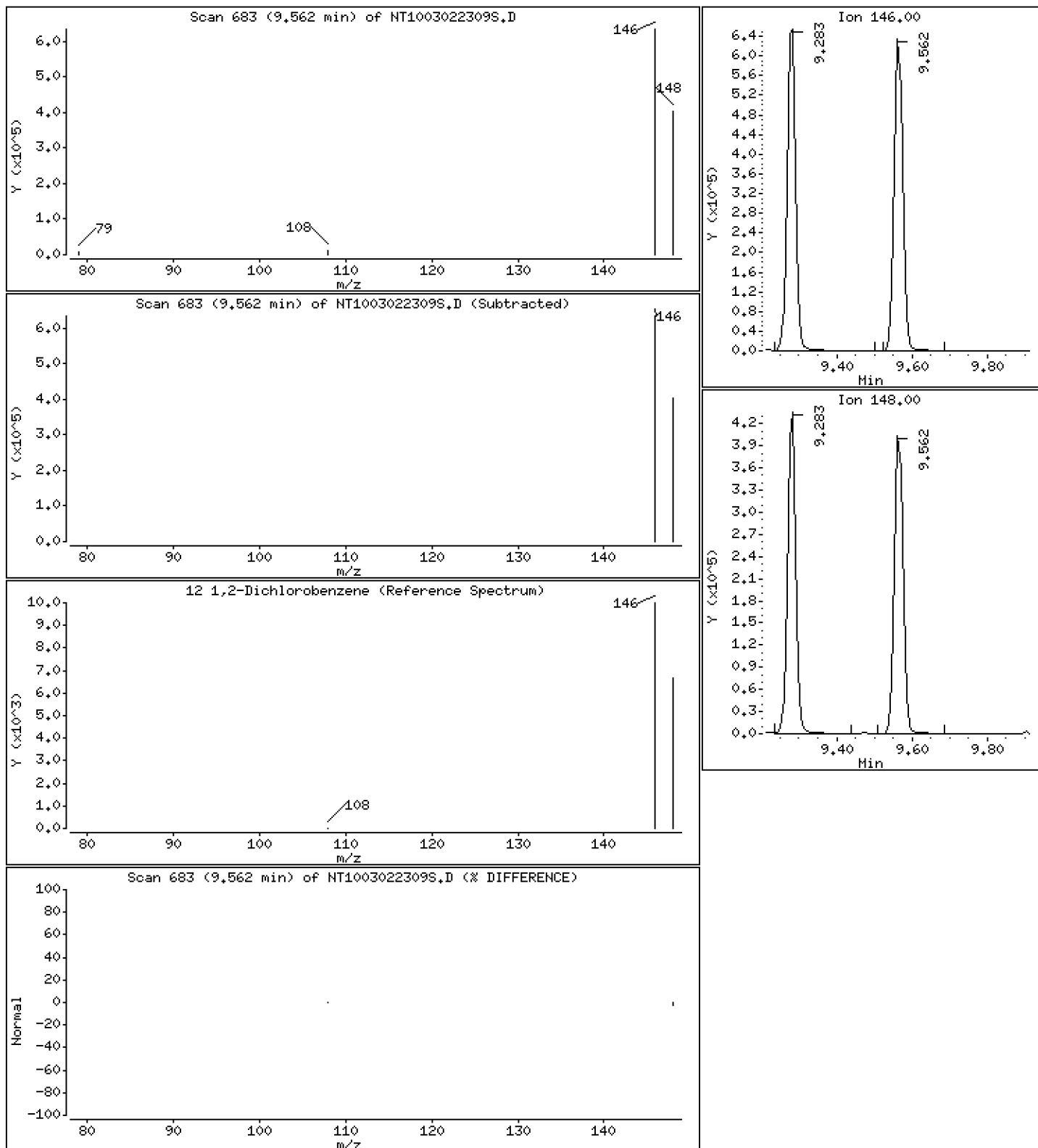
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4.285 ug/L





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

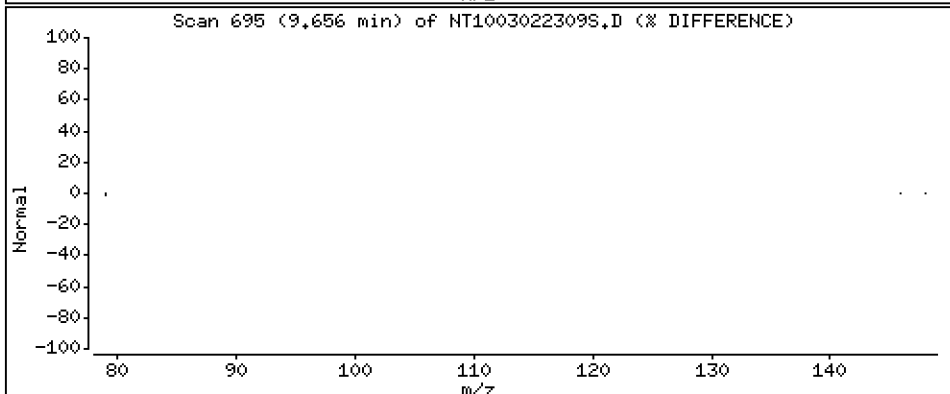
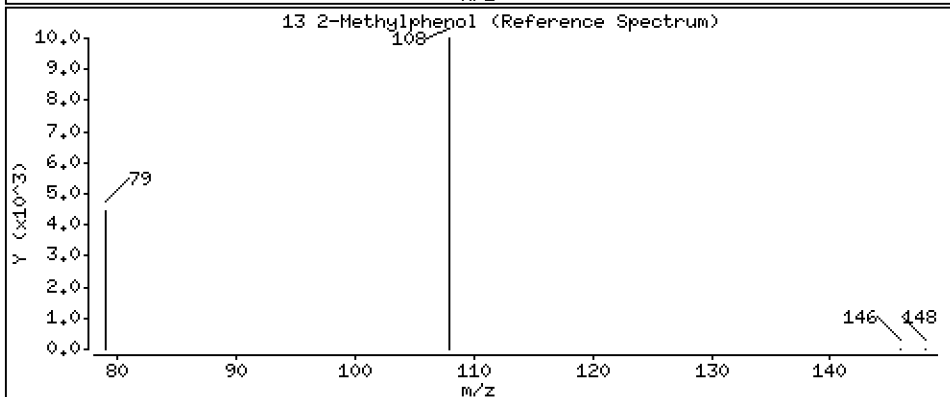
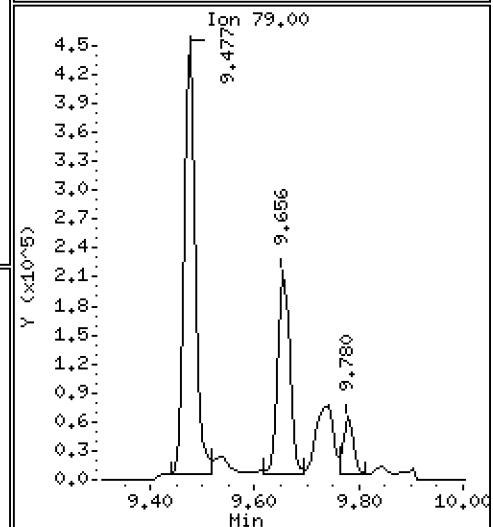
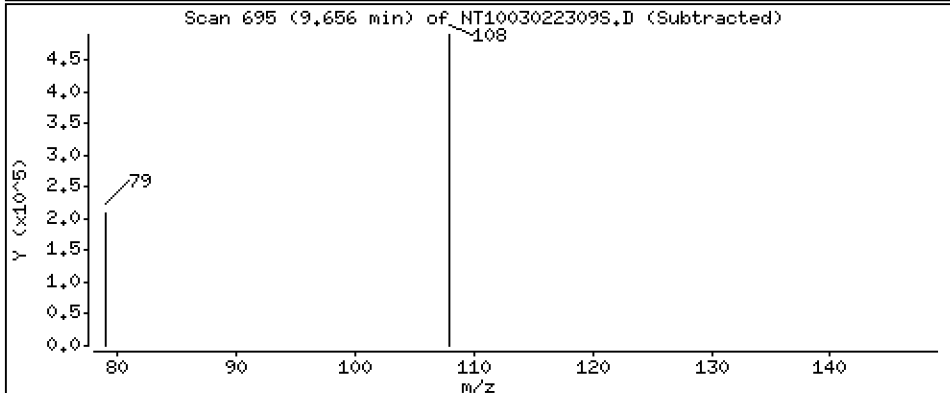
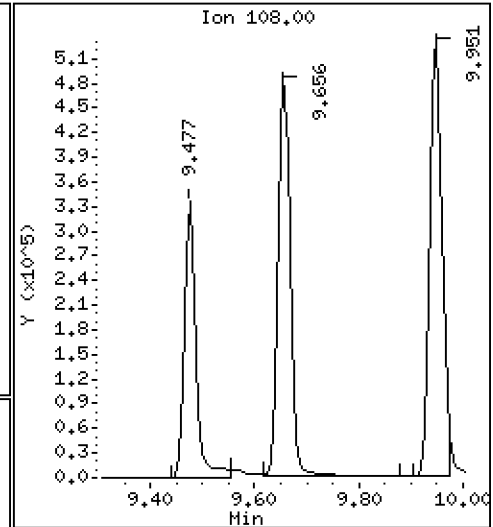
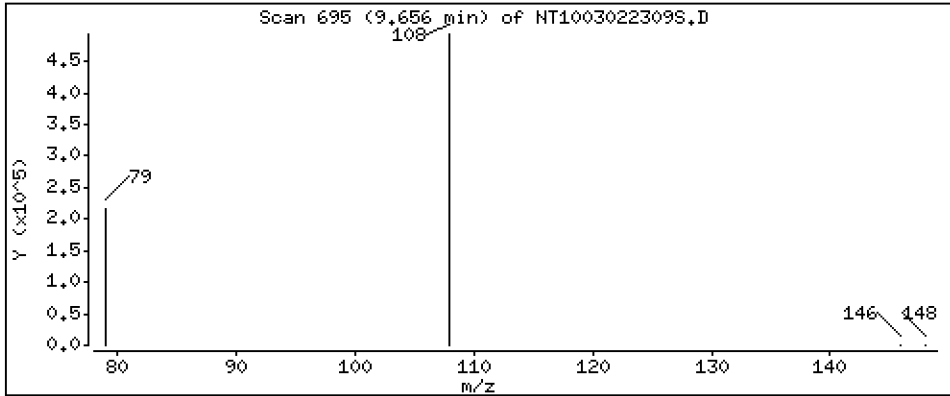
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.357 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

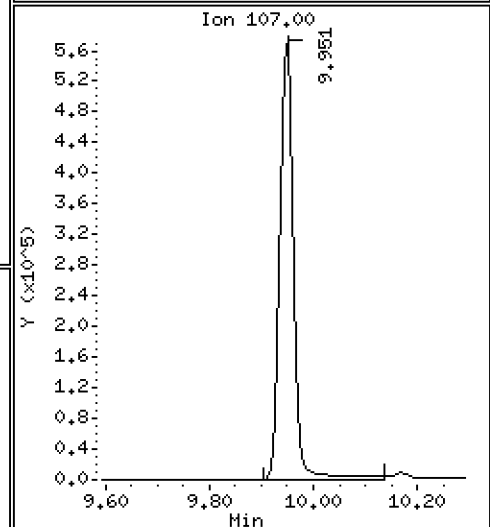
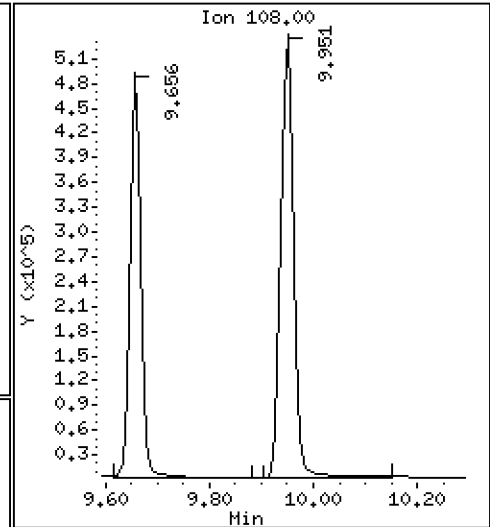
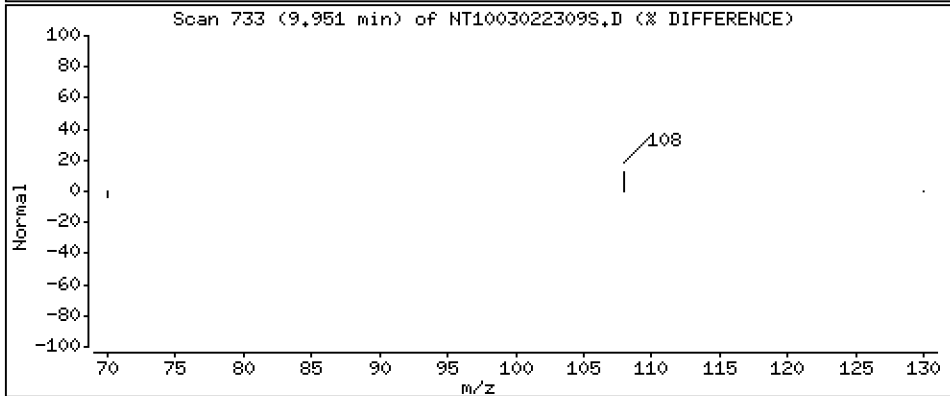
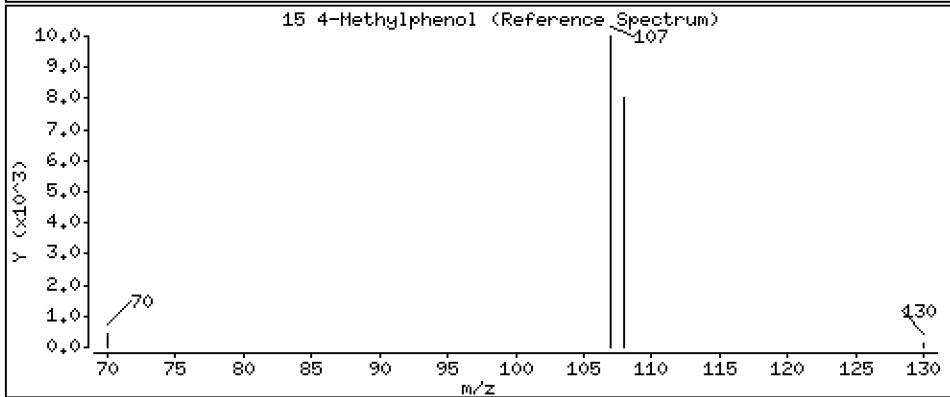
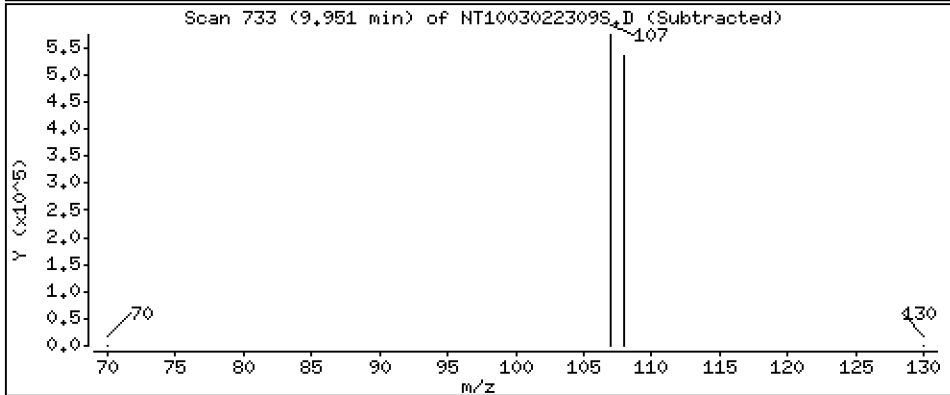
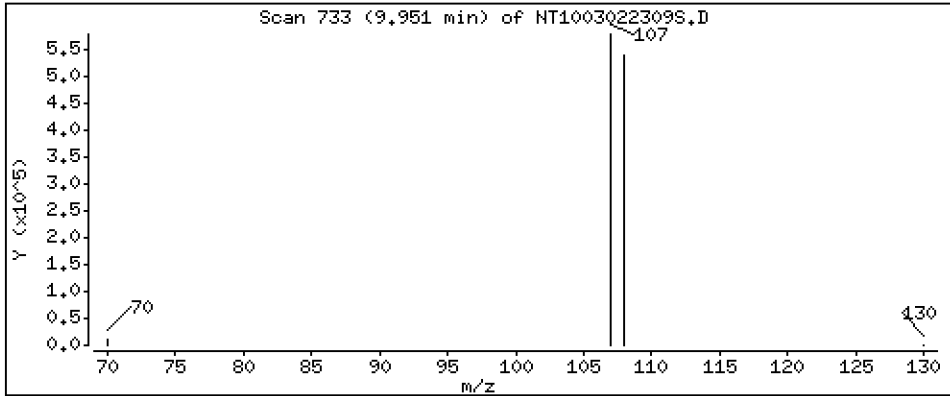
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 5.039 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

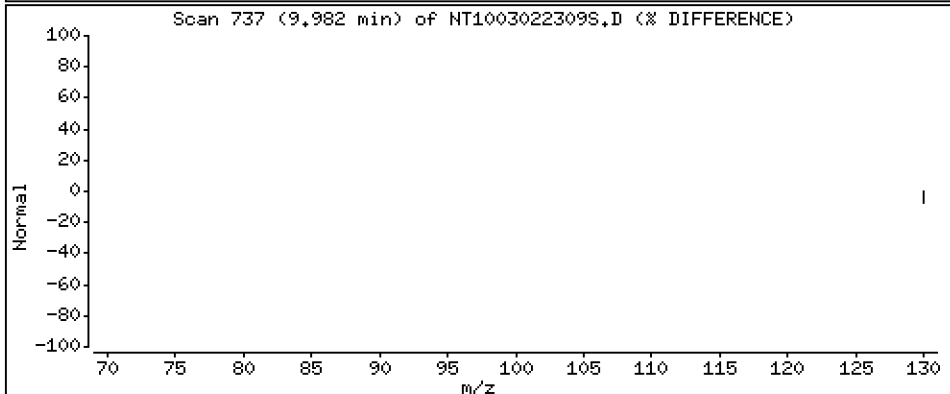
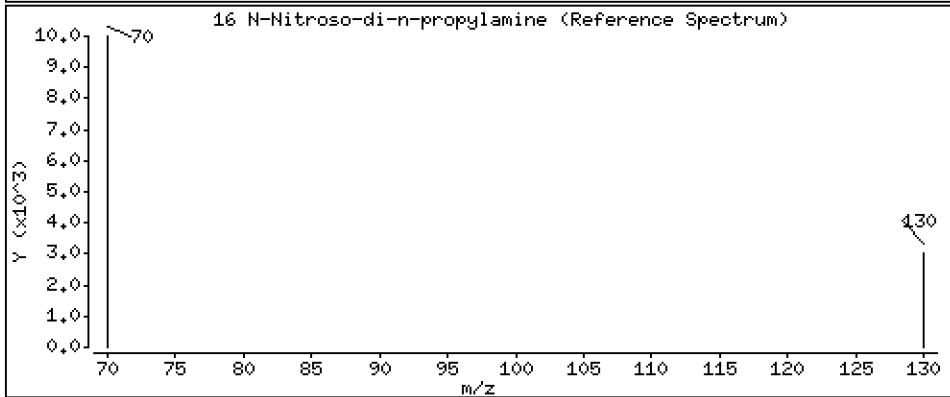
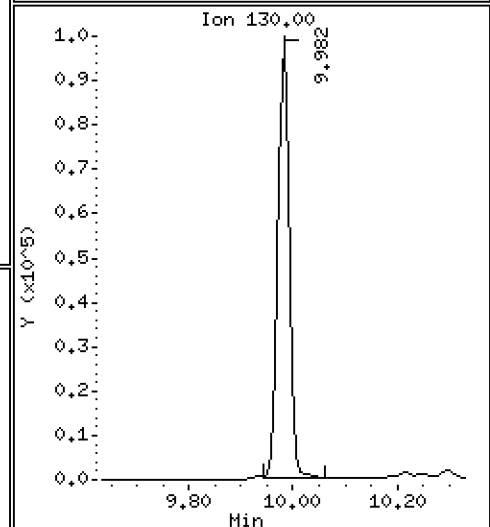
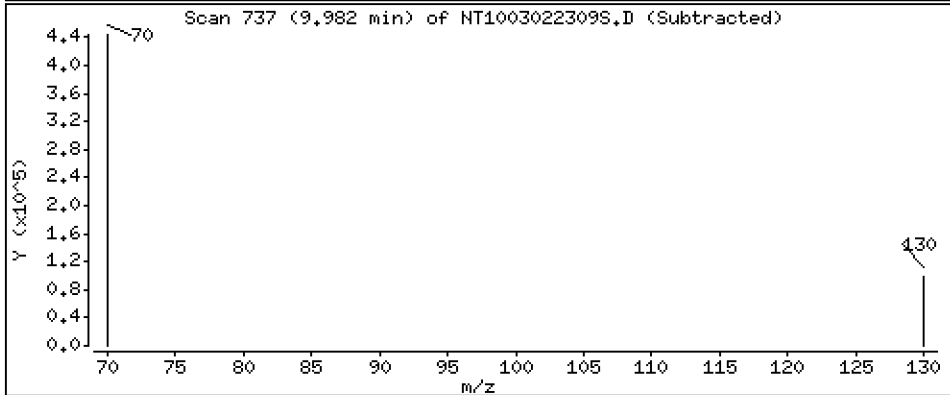
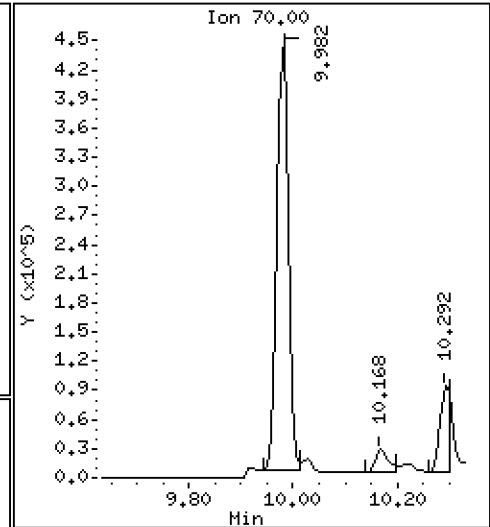
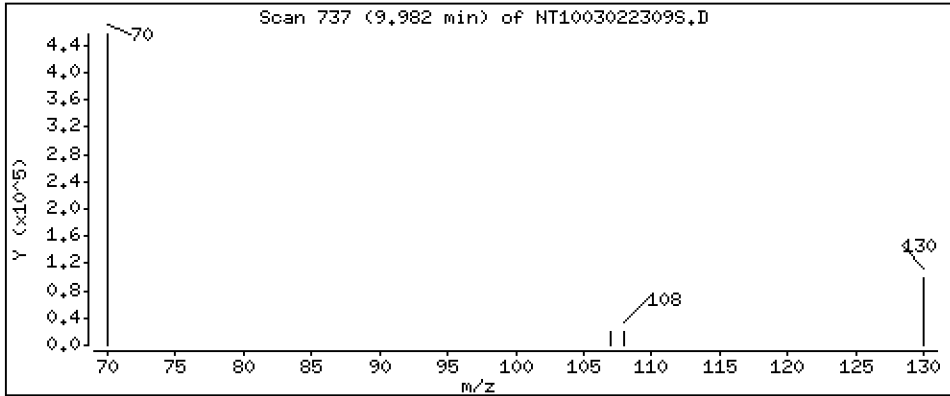
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 5,166 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

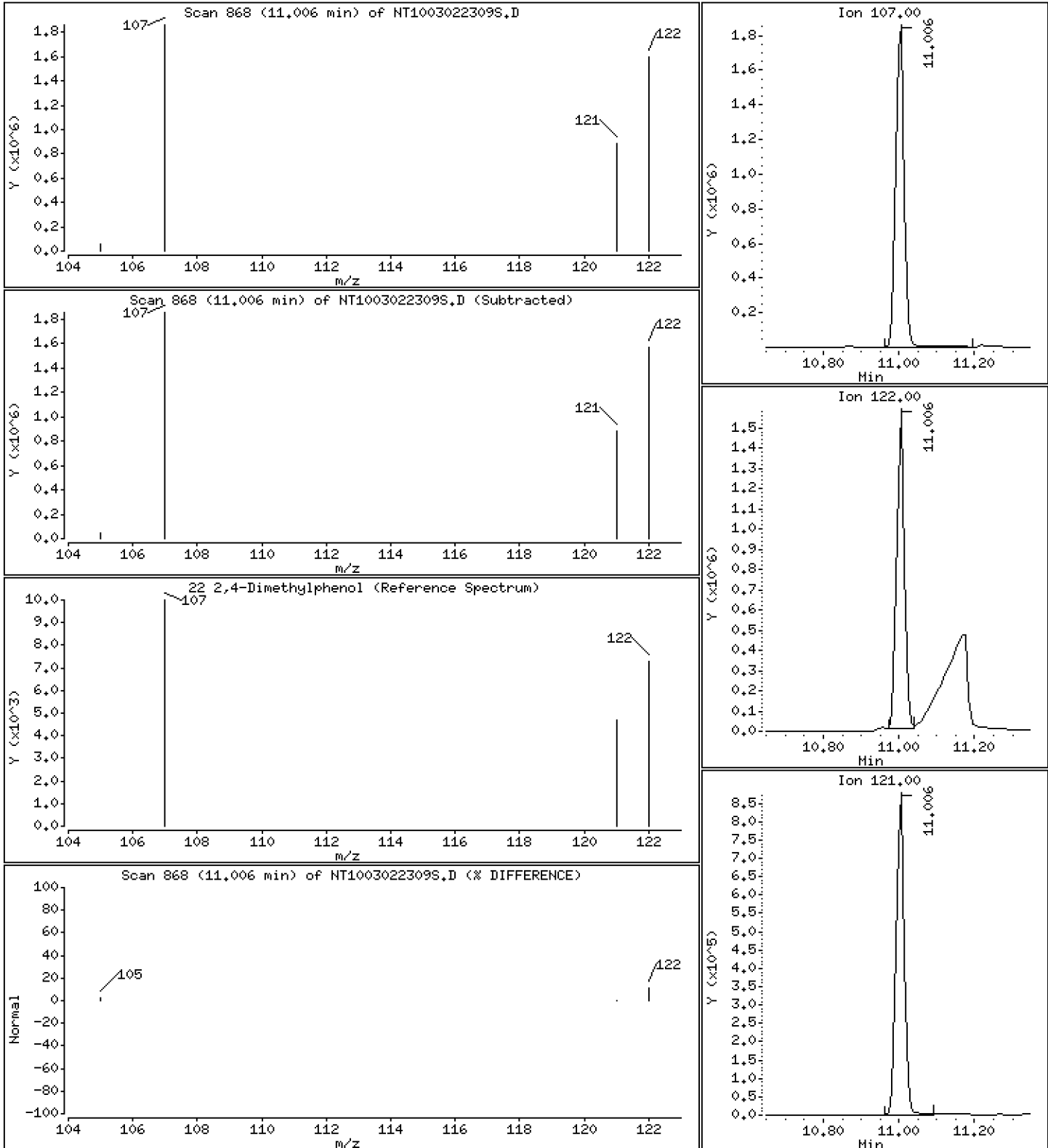
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 13.69 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

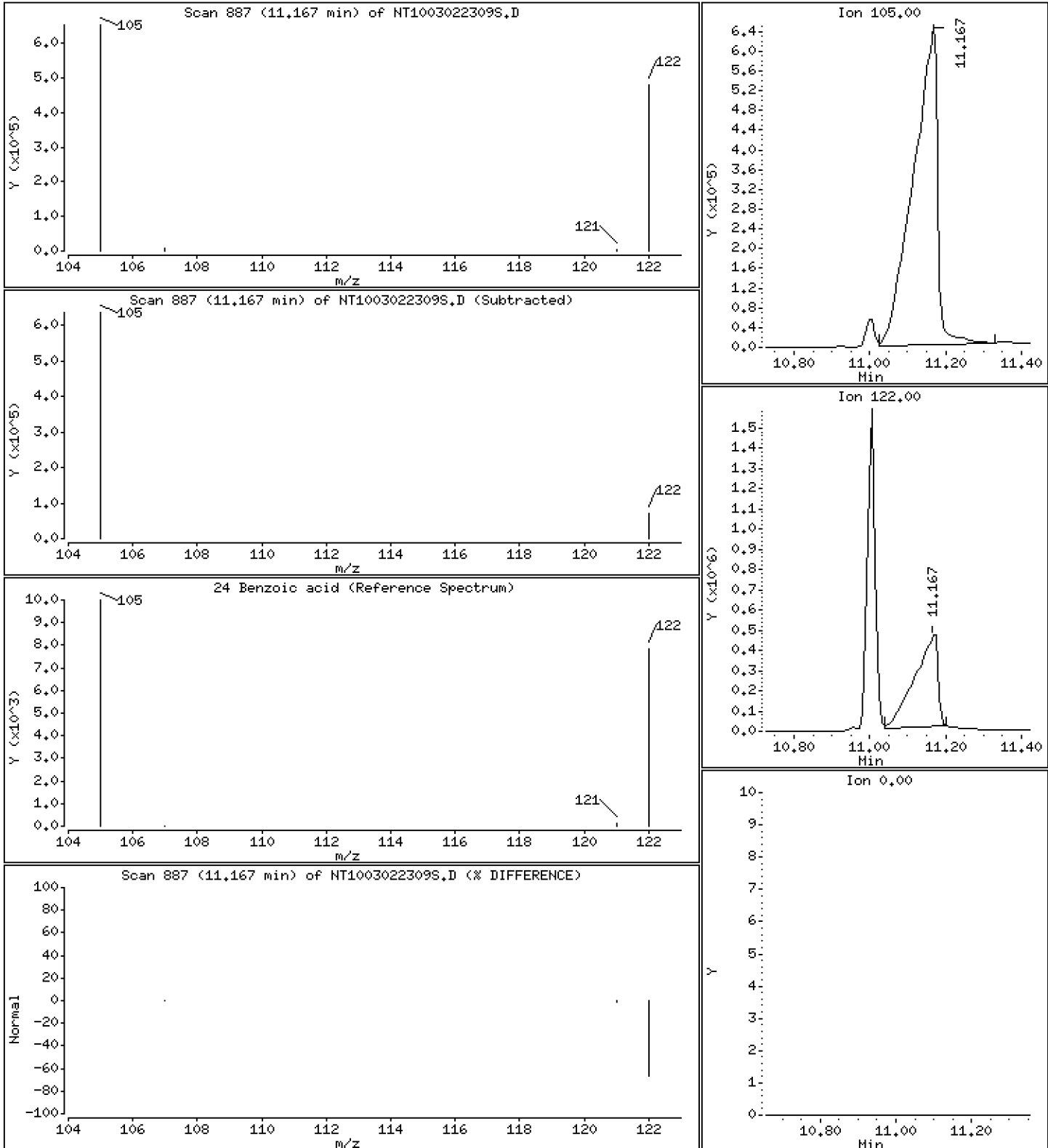
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 22.88 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

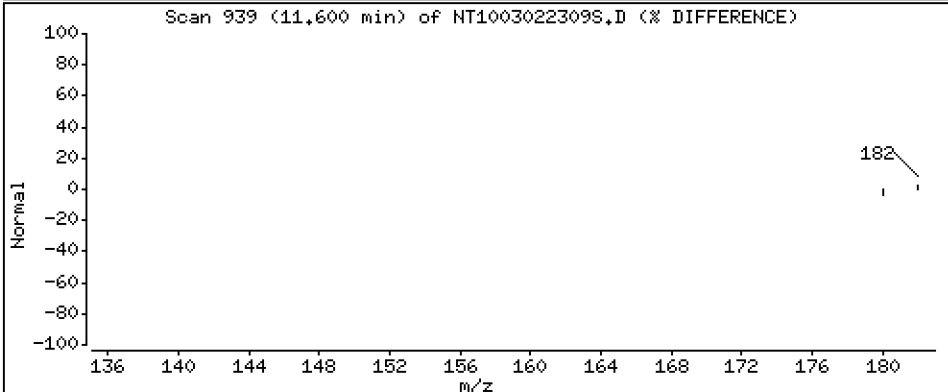
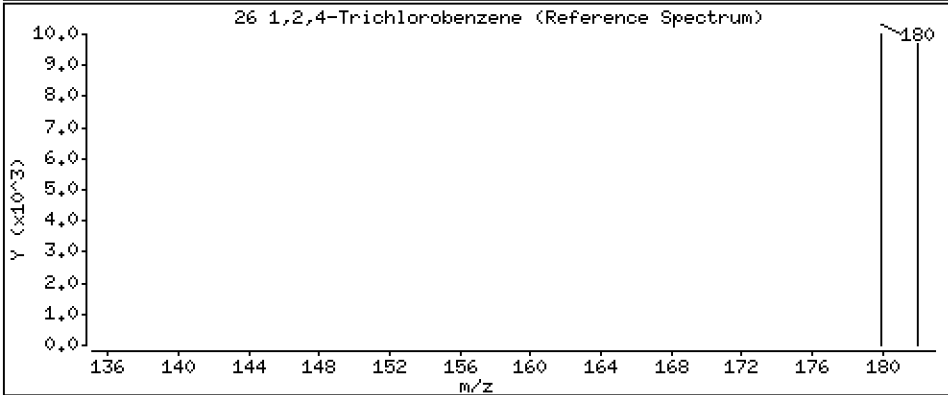
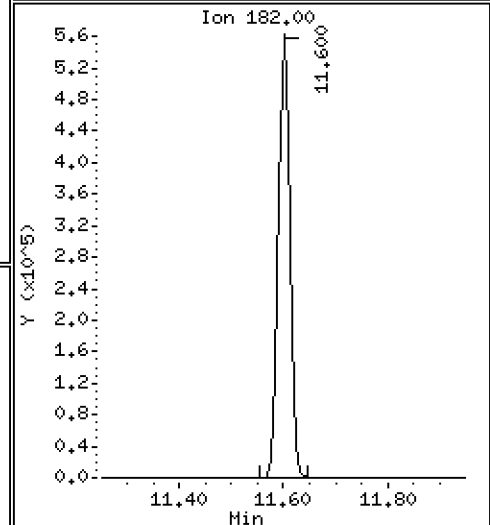
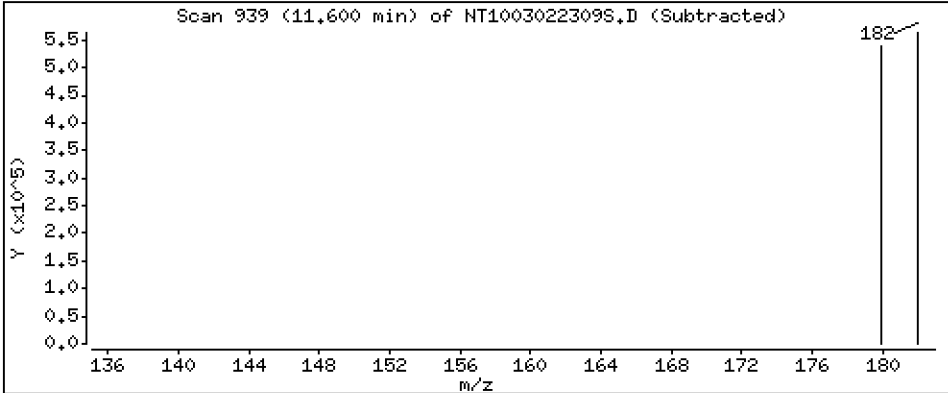
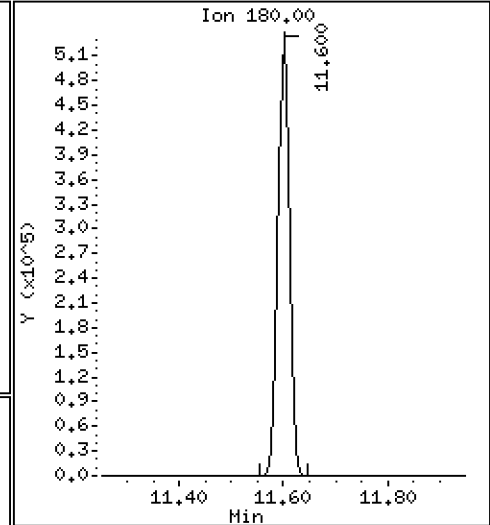
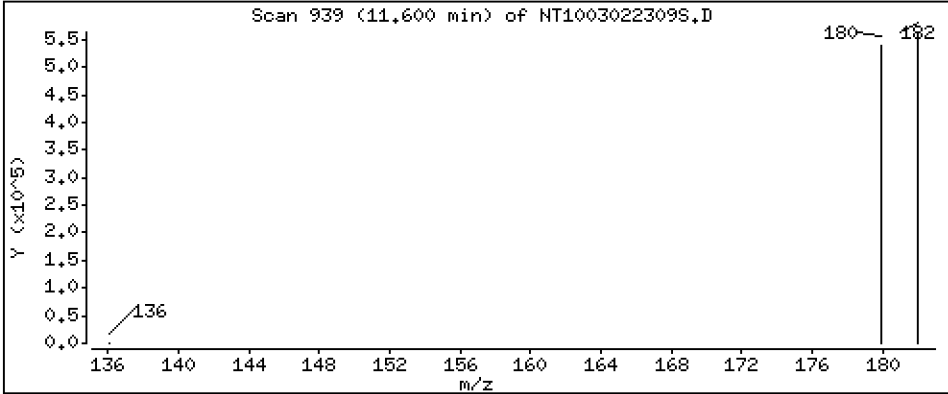
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.511 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

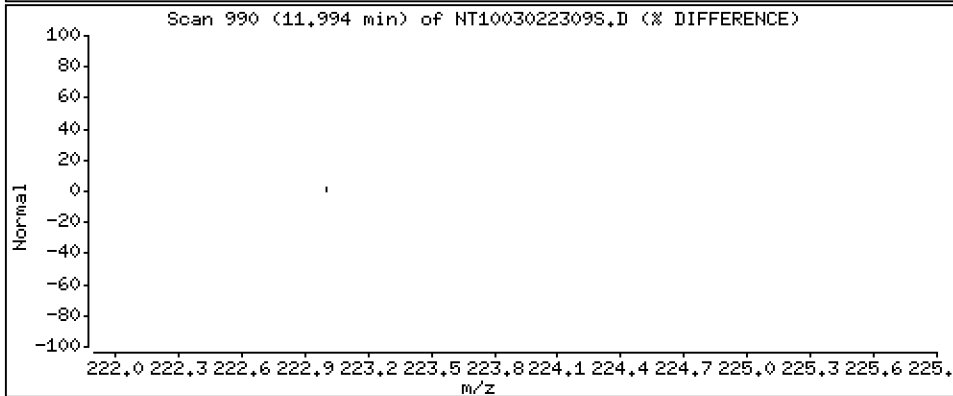
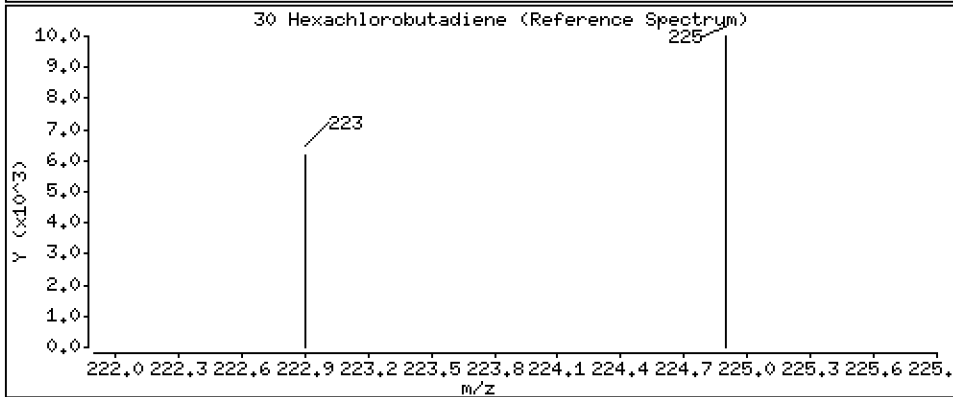
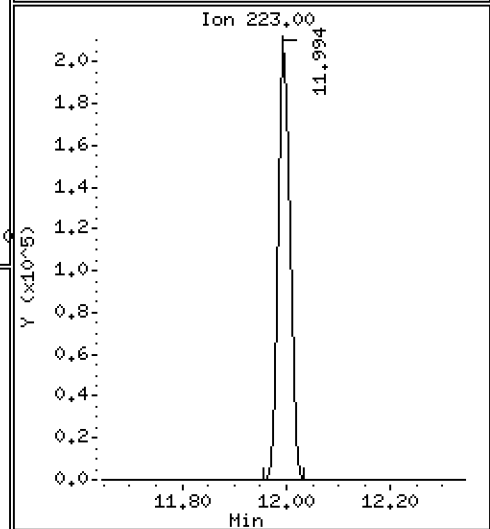
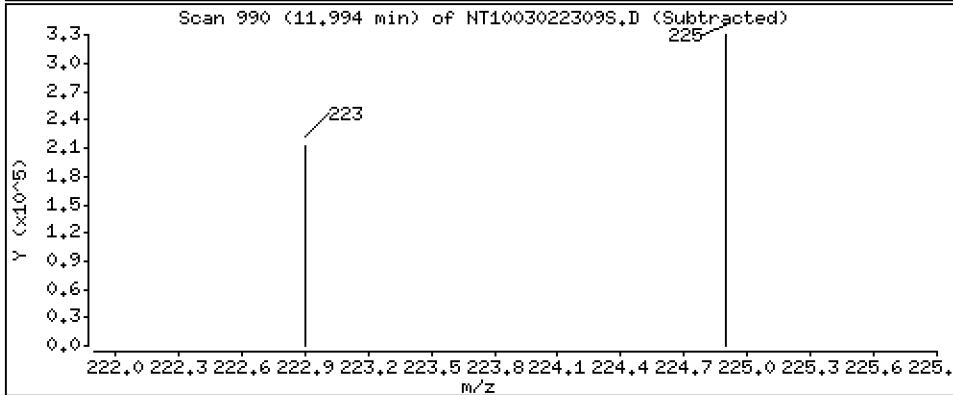
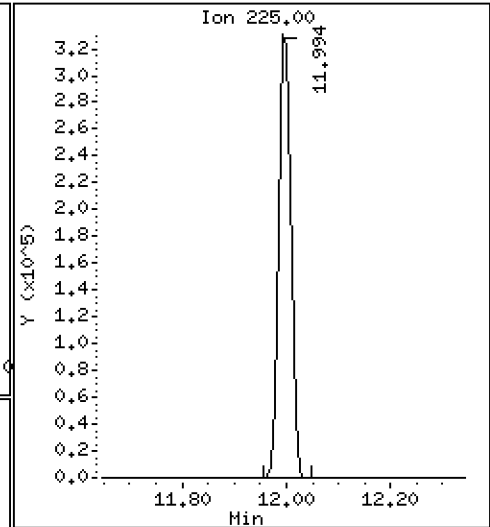
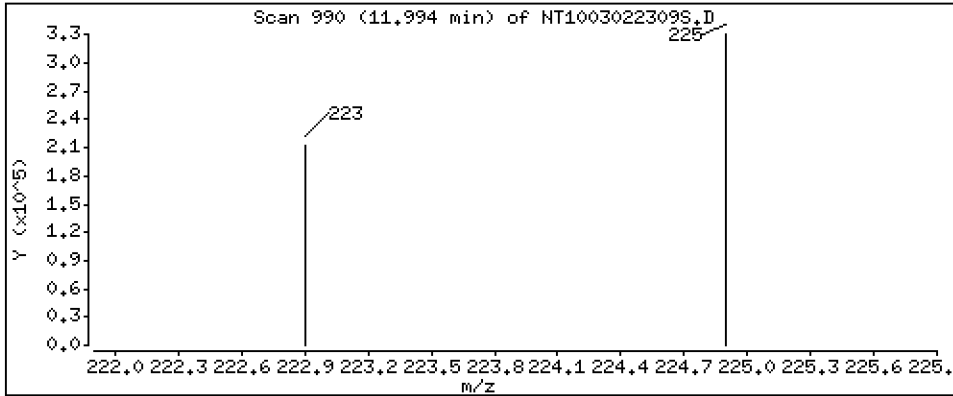
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,276 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

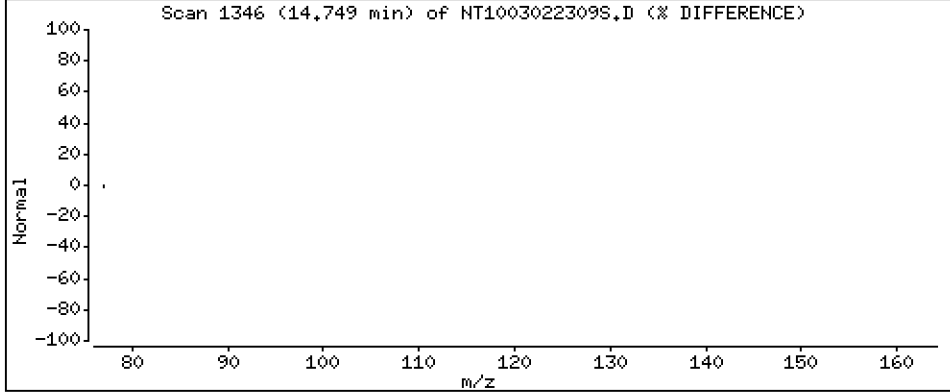
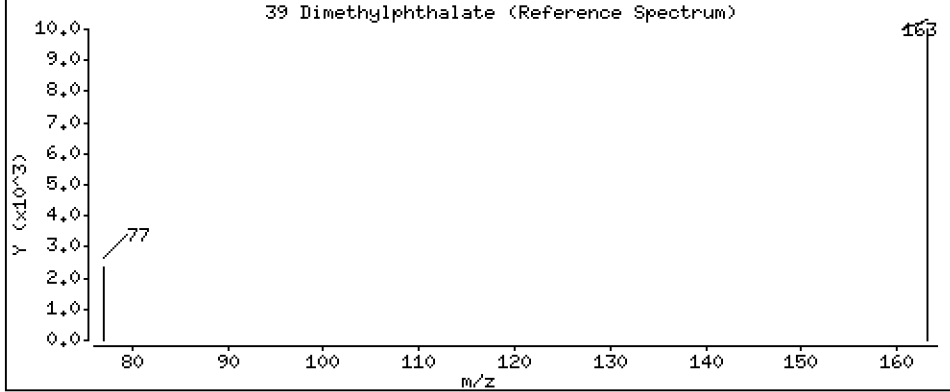
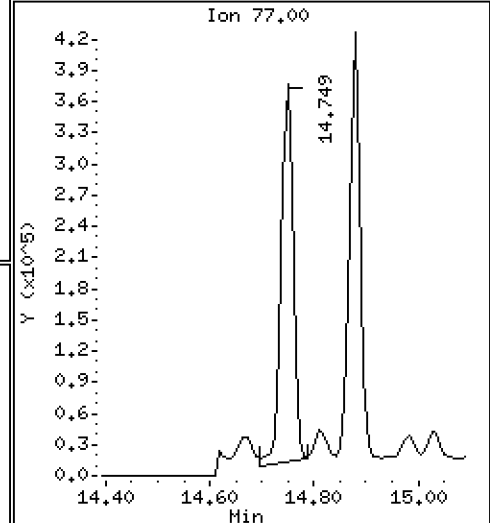
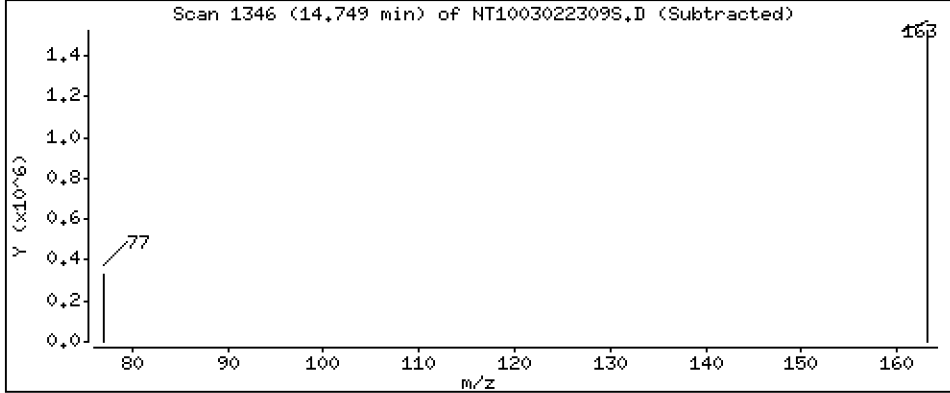
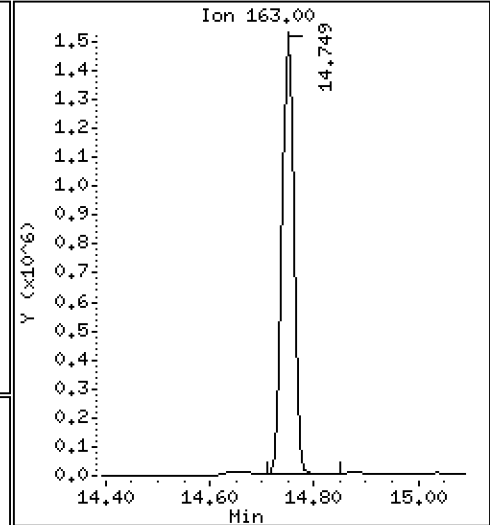
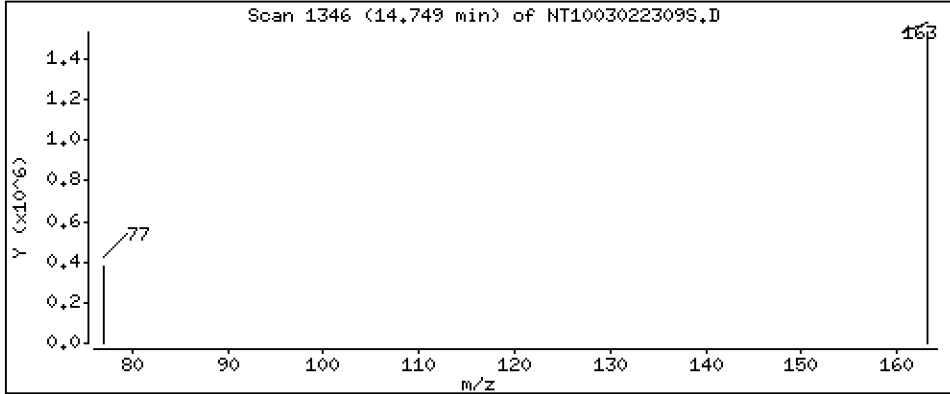
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,604 ug/L





Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

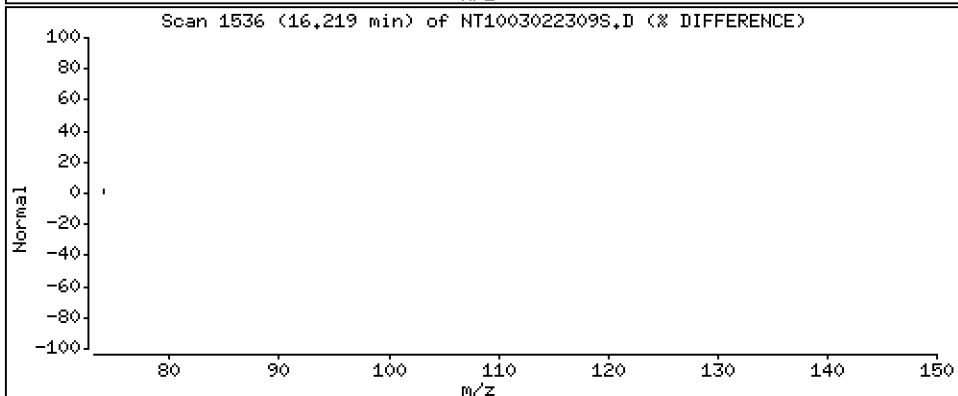
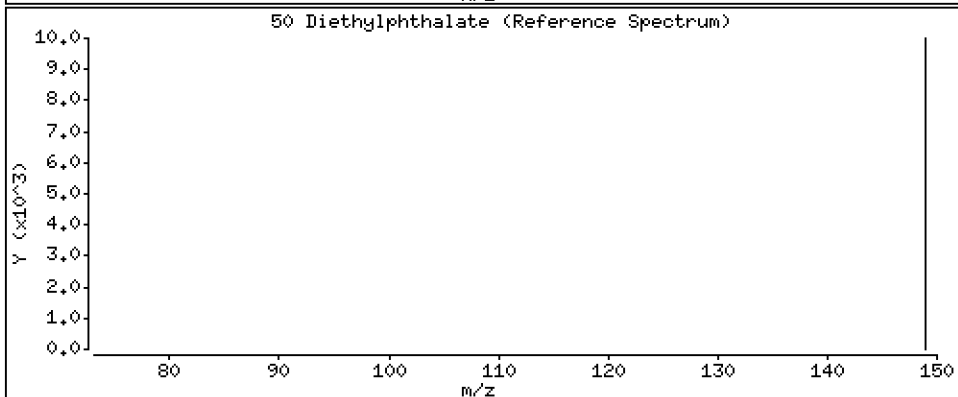
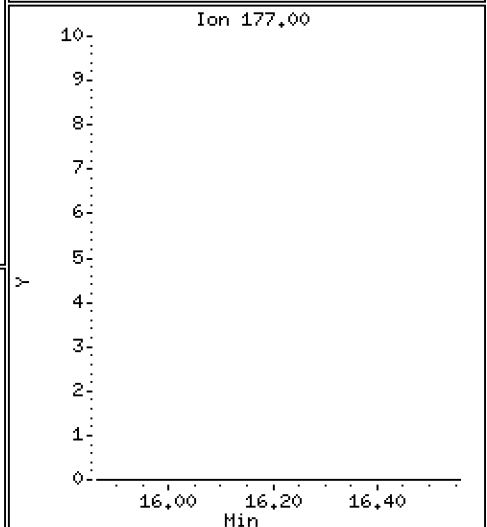
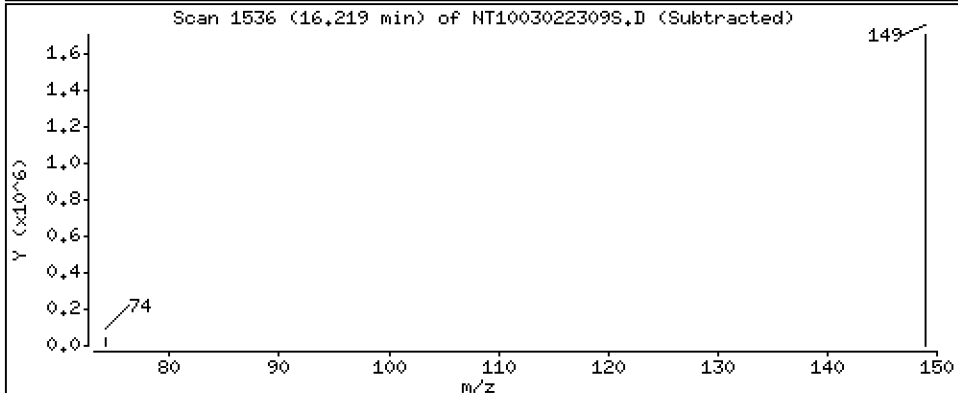
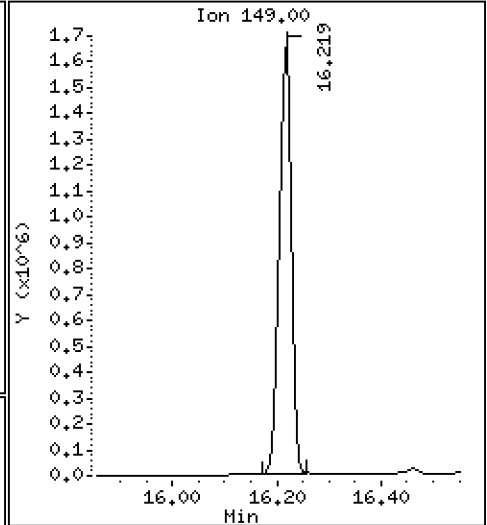
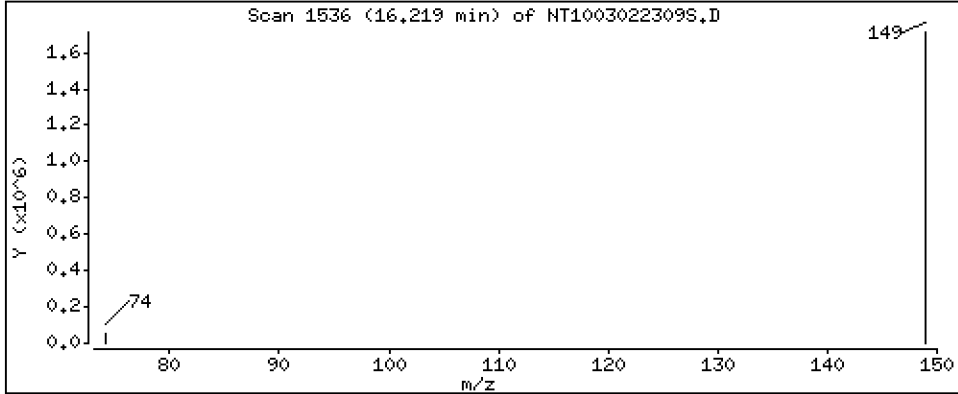
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,811 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

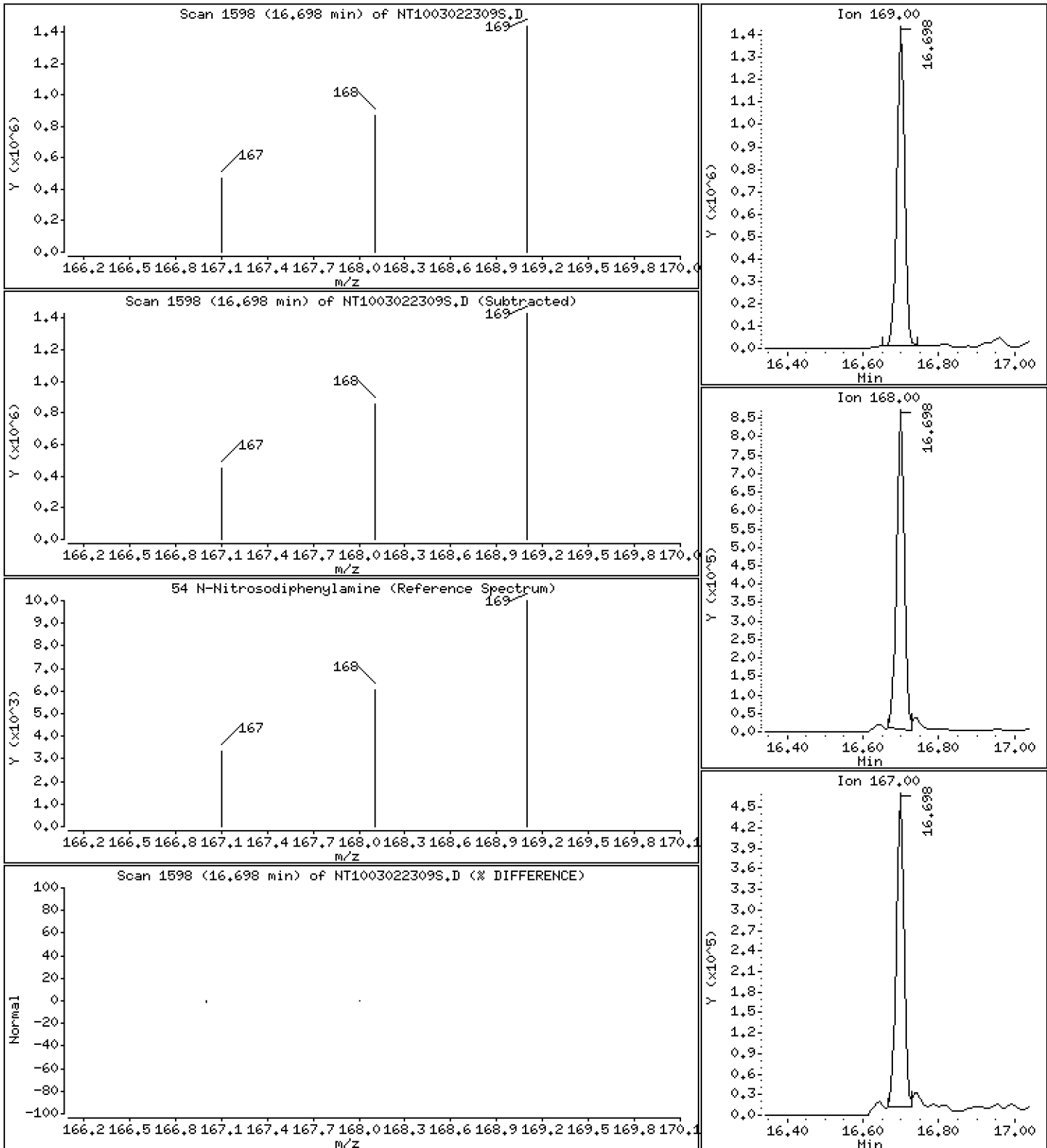
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

54 N-Nitrosodiphenylamine

Concentration: 4,515 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

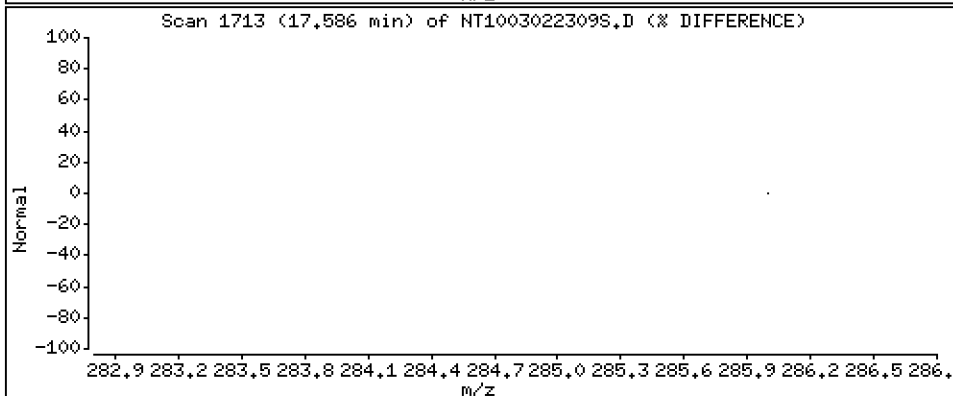
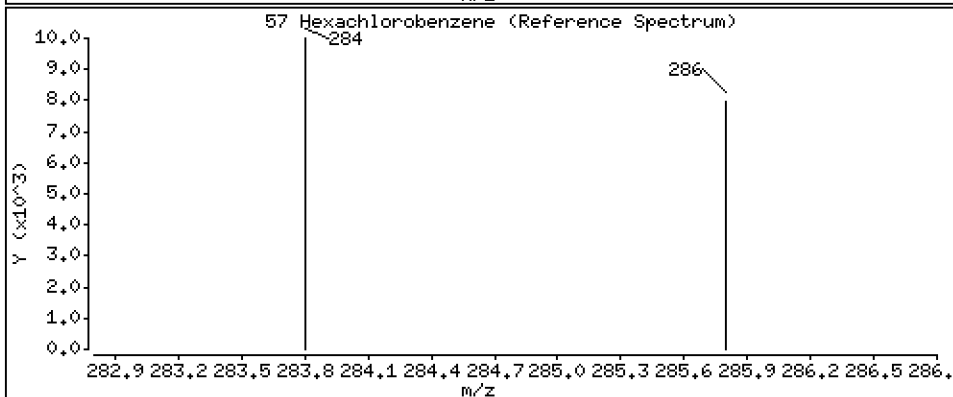
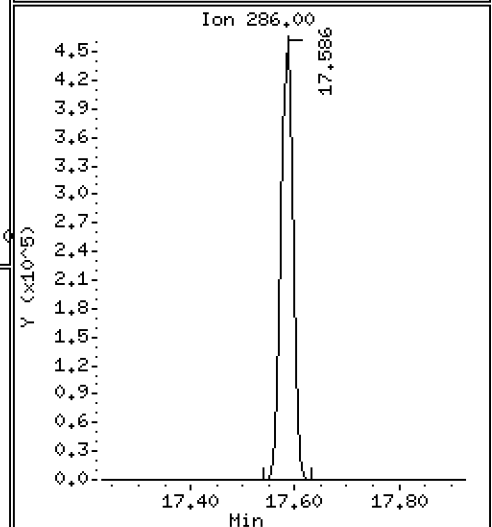
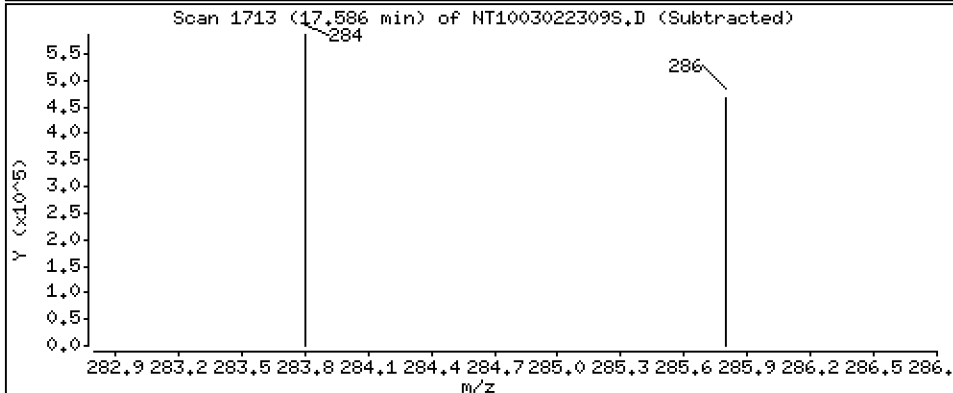
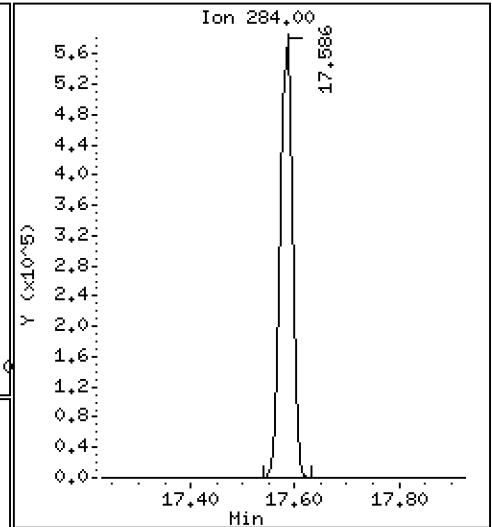
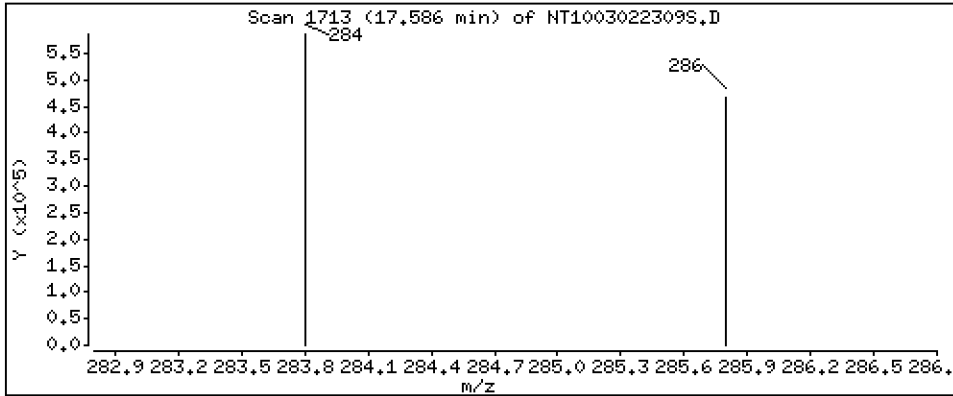
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,208 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

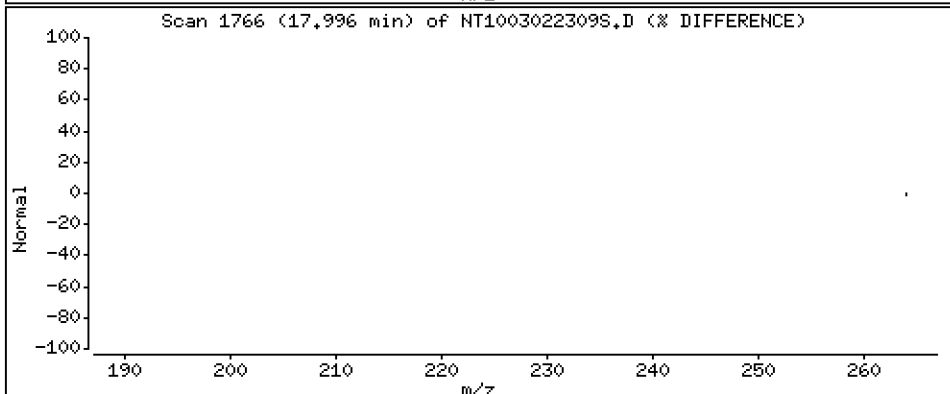
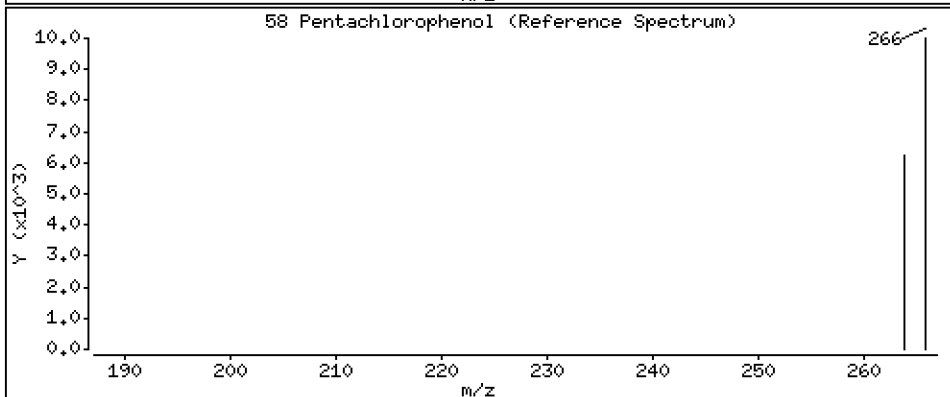
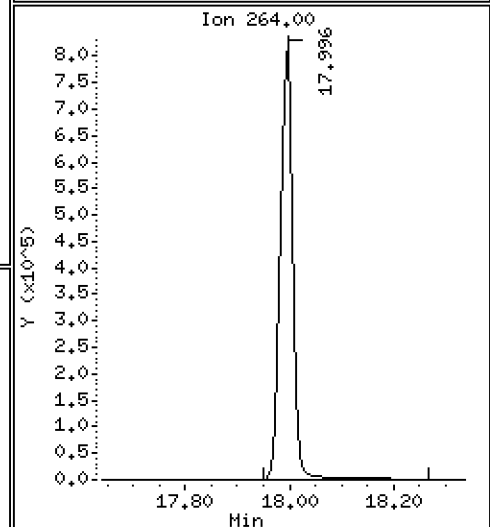
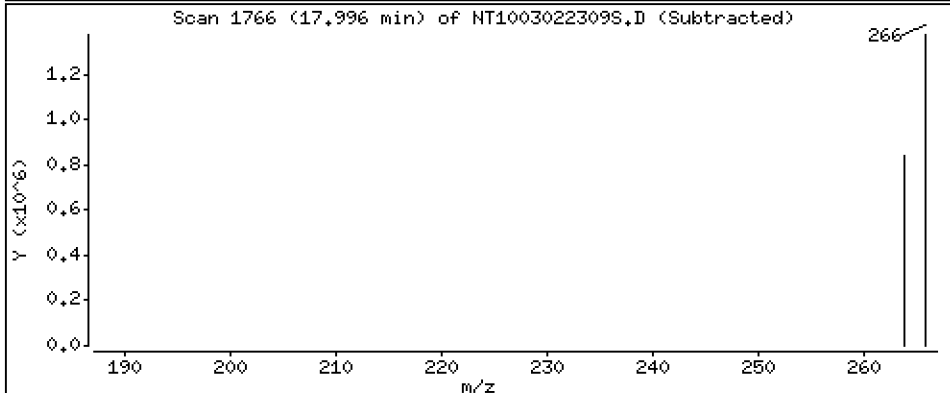
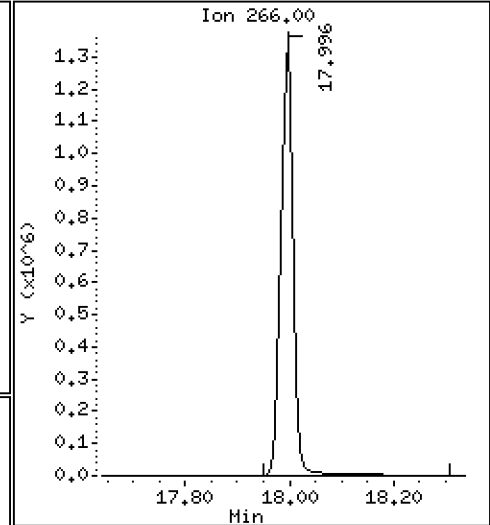
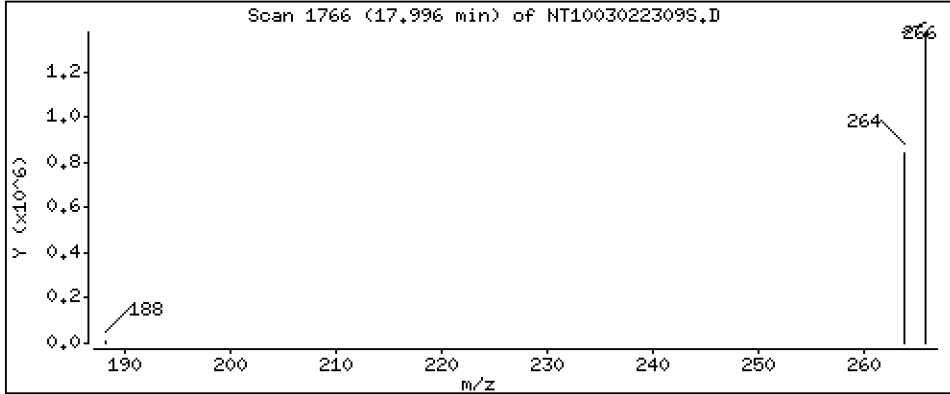
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 17,86 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

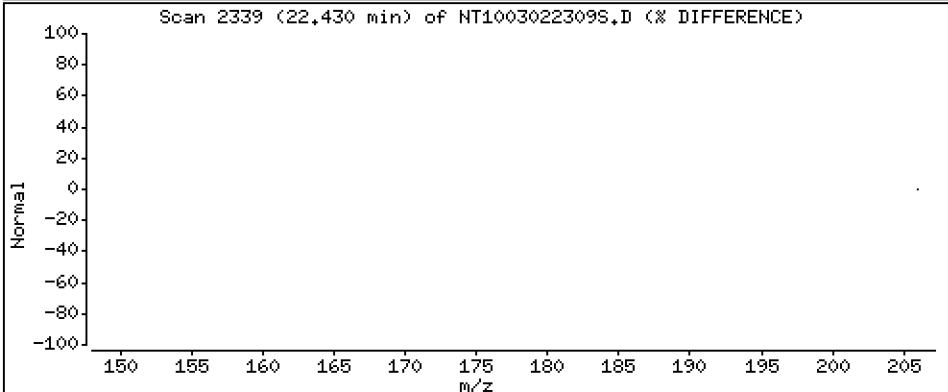
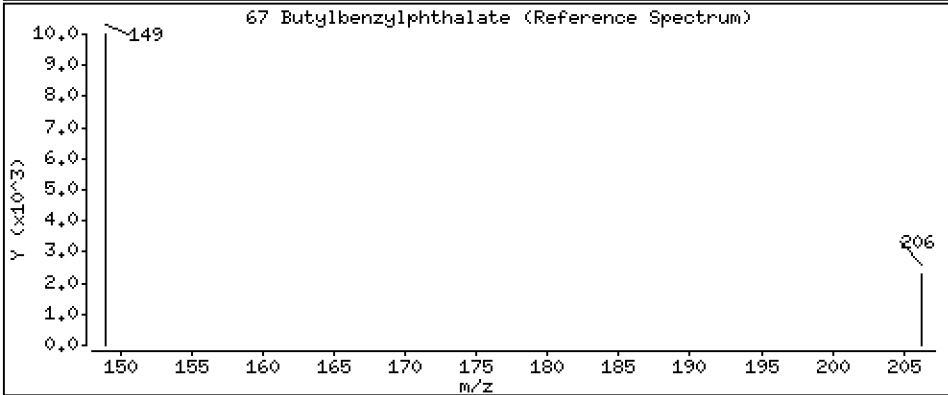
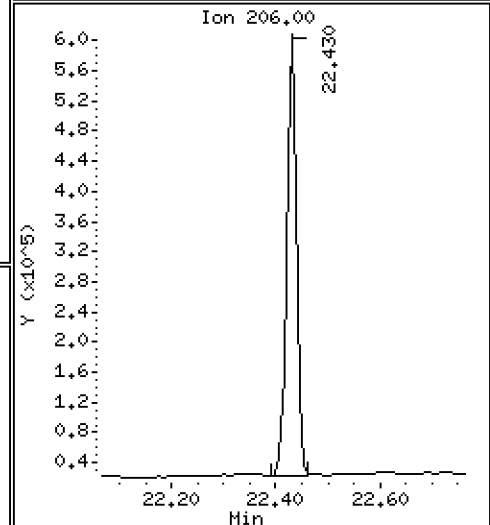
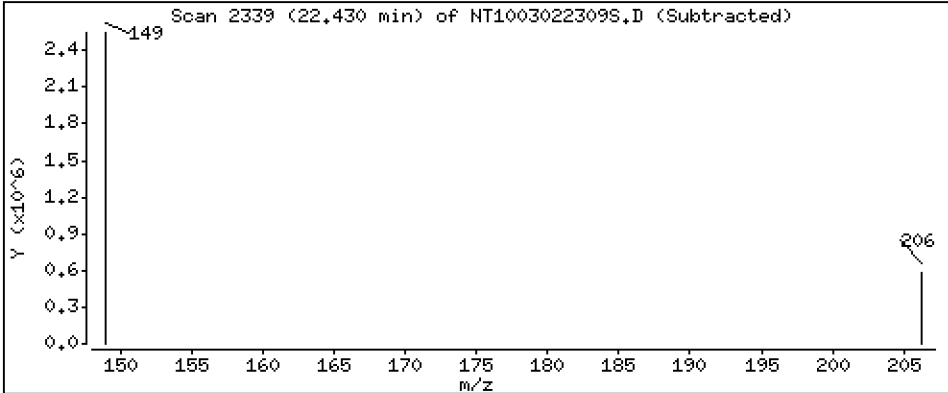
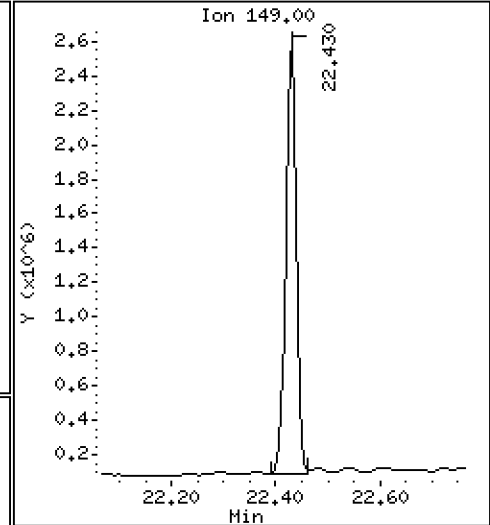
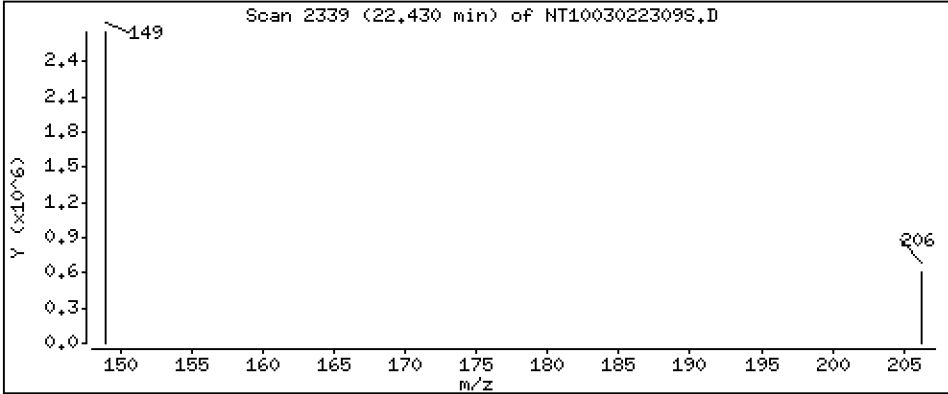
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 5,046 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

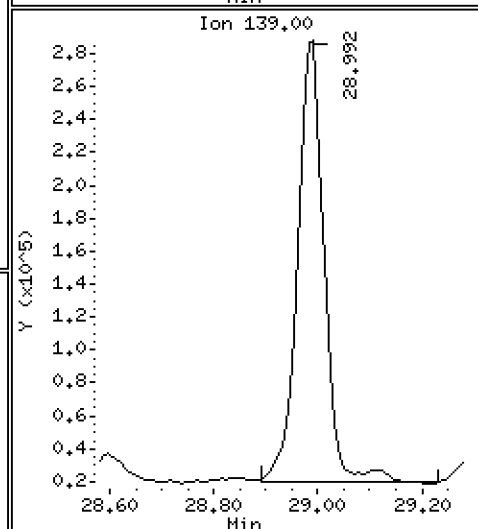
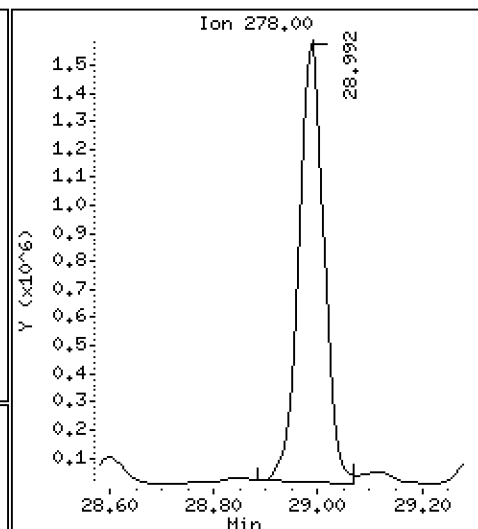
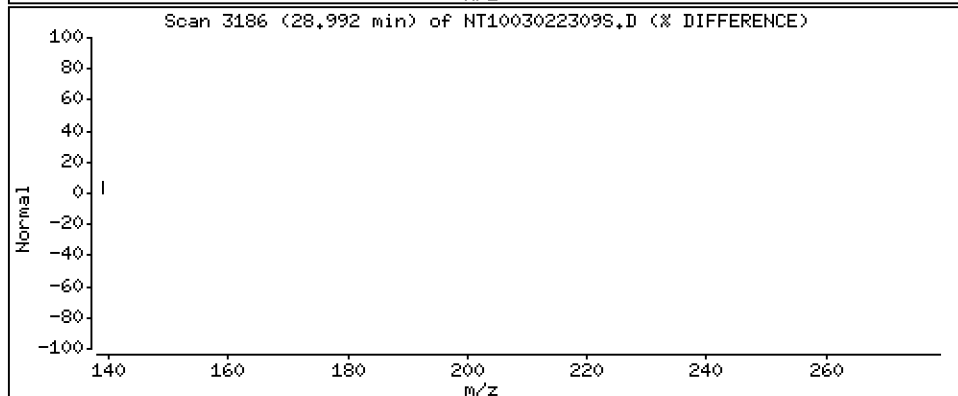
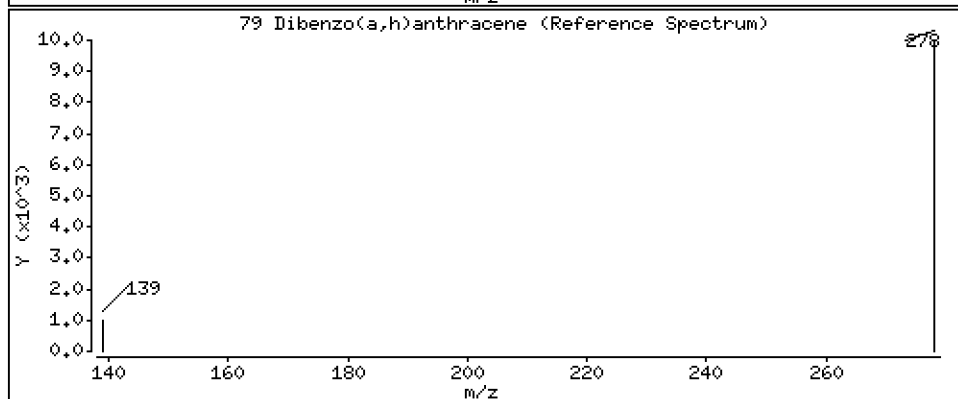
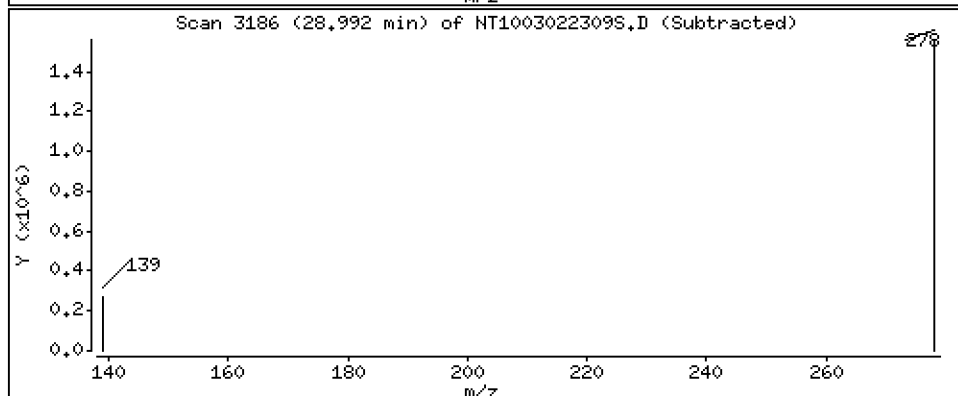
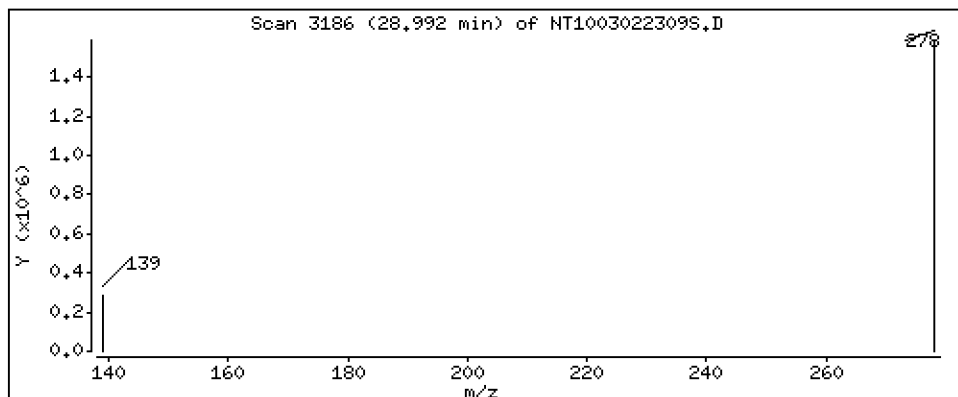
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,564 ug/L



Date : 02-MAR-2023 19:28

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MS1

Volume Injected (uL): 1.0

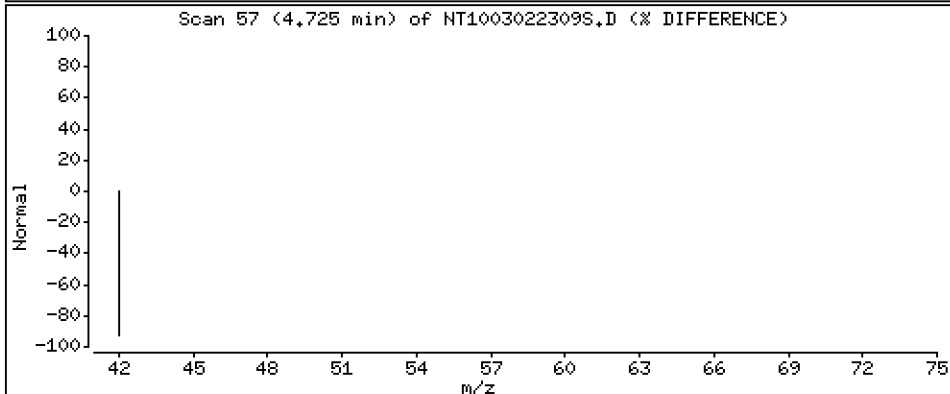
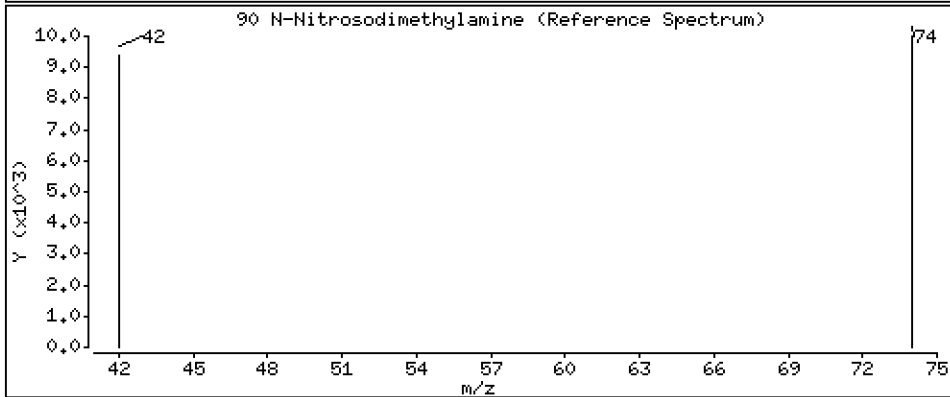
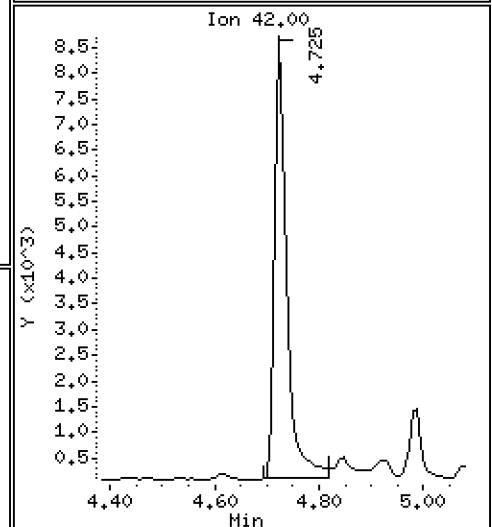
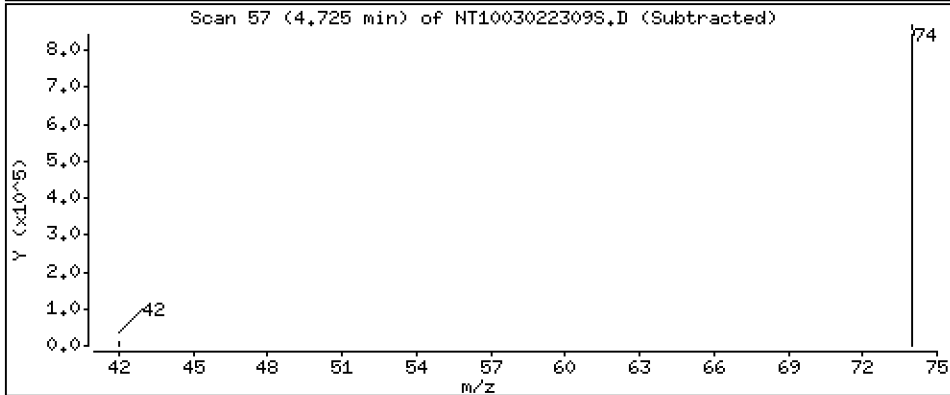
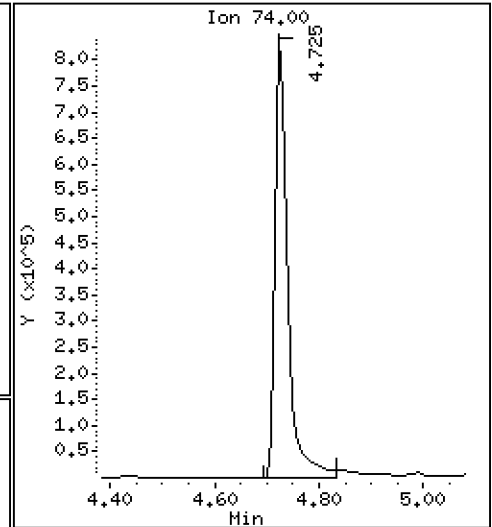
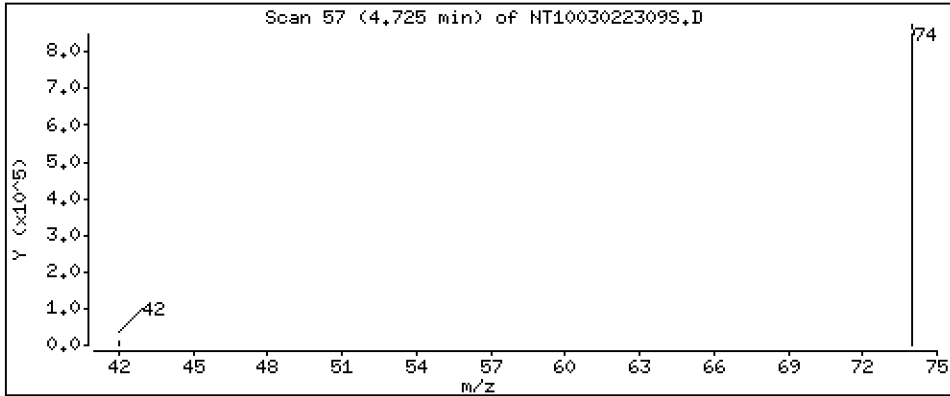
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 12.55 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022309S.D  
 Lab Smp Id: BLA0624-MS1  
 Inj Date : 02-MAR-2023 19:28 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-MS1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902 (0.746)		1194756	6.49831	6.498 (R)
3 Phenol	94		8.524	8.517 (0.921)		3395493	11.7302	11.73
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		971170	4.06910	4.069
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251 (1.000)		643993	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282 (1.003)		1054529	4.54444	4.544
11 Benzyl alcohol	79		9.476	9.476 (1.024)		691784	4.33648	4.336
12 1,2-Dichlorobenzene	146		9.562	9.562 (1.034)		955792	4.28533	4.285
13 2-Methylphenol	108		9.655	9.655 (1.044)		737264	4.35670	4.357
15 4-Methylphenol	108		9.950	9.942 (1.076)		905455	5.03862	5.039
16 N-Nitroso-di-n-propylamine	70		9.981	9.981 (1.079)		636272	5.16650	5.166
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		2870668	13.6862	13.69
24 Benzoic acid	105		11.167	11.074 (0.953)		2905227	22.8756	22.88
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		770771	4.51064	4.511
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2374110	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994 (1.023)		518561	4.27638	4.276
39 Dimethylphthalate	163		14.749	14.741 (0.963)		2238742	5.60374	5.604
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1258198	4.00000	
50 Diethylphthalate	149		16.218	16.203 (1.059)		2566058	6.81103	6.811
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		2048541	4.51502	4.515
57 Hexachlorobenzene	284		17.586	17.578 (0.955)		893428	4.20768	4.208



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.977)	2148596	17.8641	17.86
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2803544	4.00000	
\$ 66 Terphenyl-d14	244	21.547	21.532	(0.919)	1562782	4.56601	4.566(R)
67 Butylbenzylphthalate	149	22.430	22.414	(0.957)	3541090	5.04637	5.046
* 69 Chrysene-d12	240	23.444	23.421	(1.000)	4232445	4.00000	
* 77 Perylene-d12	264	26.146	26.115	(1.000)	3782979	4.00000	
79 Dibenzo(a,h)anthracene	278	28.992	28.929	(1.109)	5329678	5.56366	5.564
90 N-Nitrosodimethylamine	74	4.724	4.732	(0.511)	1366021	12.5494	12.55

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022309S.D  
 Lab Smp Id: BLA0624-MS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	643993	30.52
27 Naphthalene-d8	1779056	889528	3558112	2374110	33.45
42 Acenaphthene-d10	954569	477285	1909138	1258198	31.81
59 Phenanthrene-d10	1596290	798145	3192580	2803544	75.63
69 Chrysene-d12	1649110	824555	3298220	4232445	156.65
77 Perylene-d12	1901958	950979	3803916	3782979	98.90

<-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.44	0.10
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022309S.D

Lab ID: BLA0624-MS1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 19:28

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.945	0.0080	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

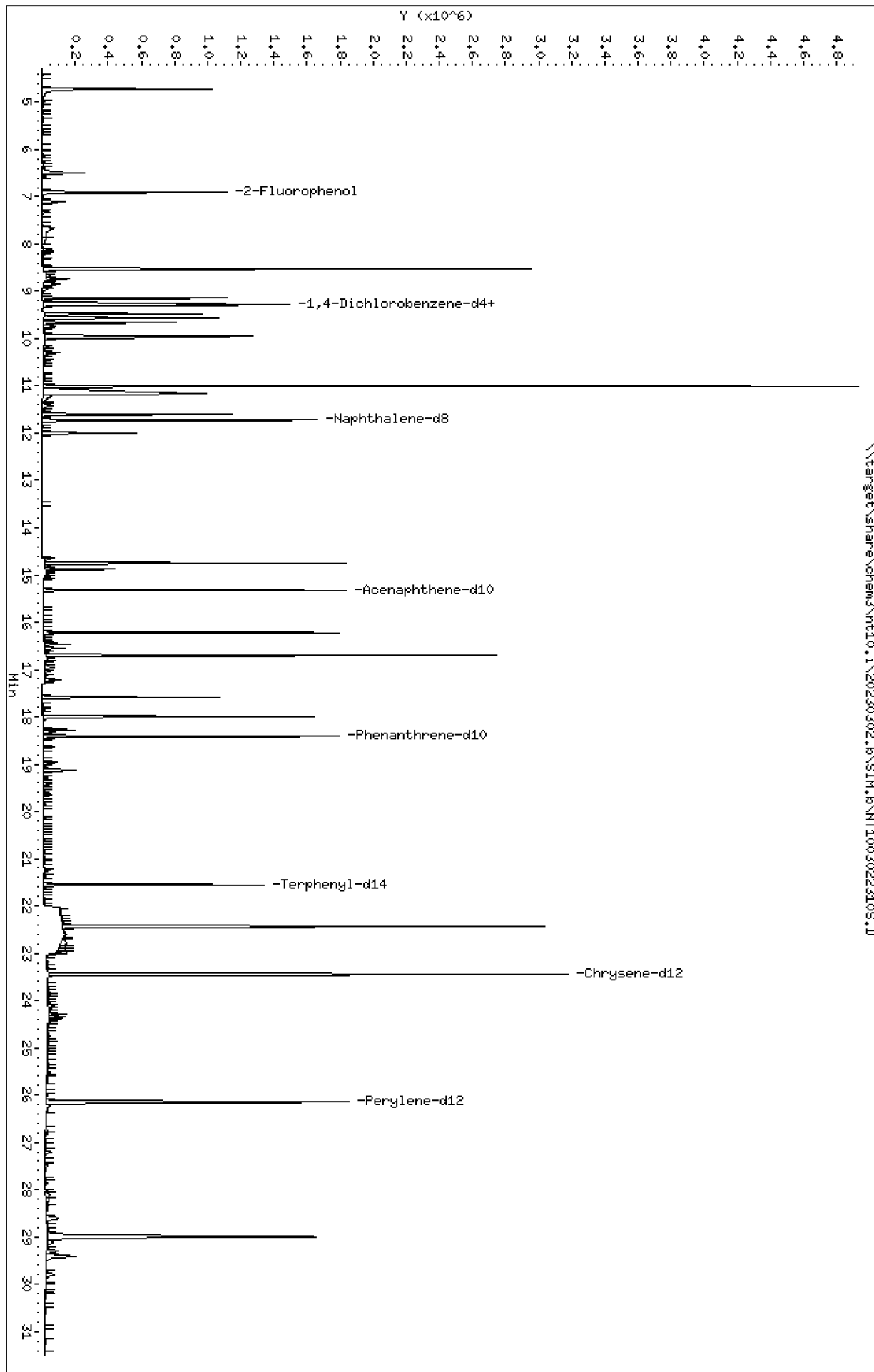
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022310S.D  
Date: 02-MAR-2023 20:06  
Client ID:  
Sample Info: BLR0624-HSD1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.1\NT1003022310S.D



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

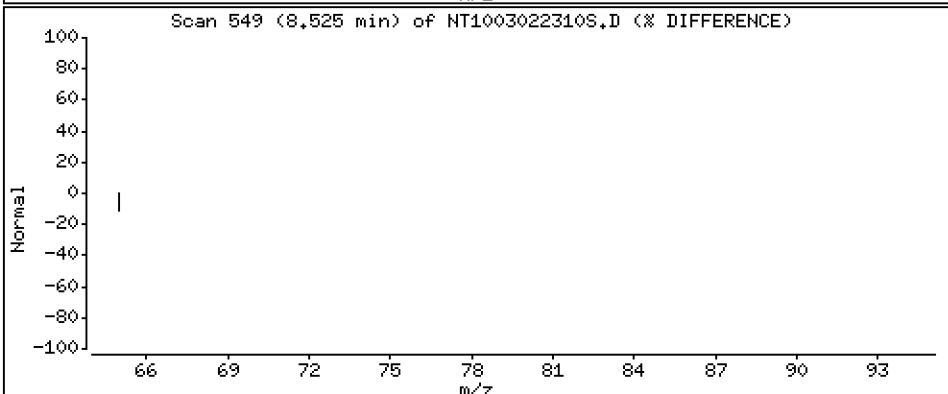
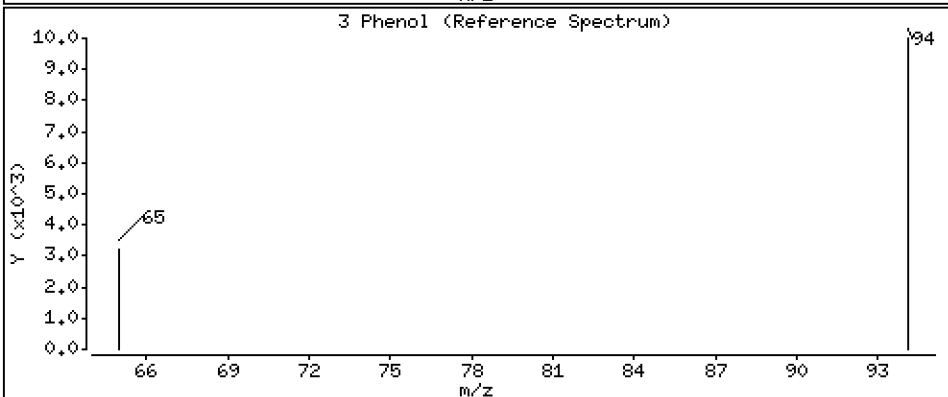
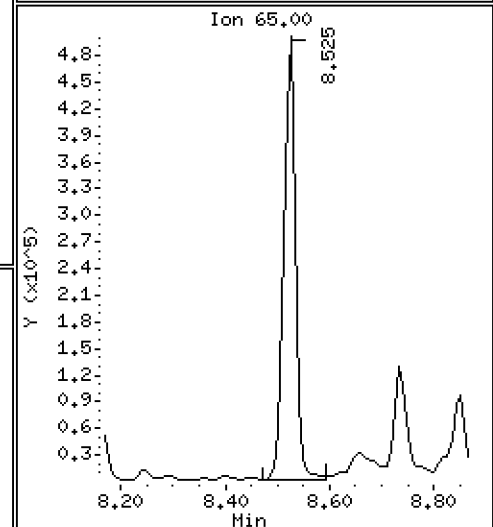
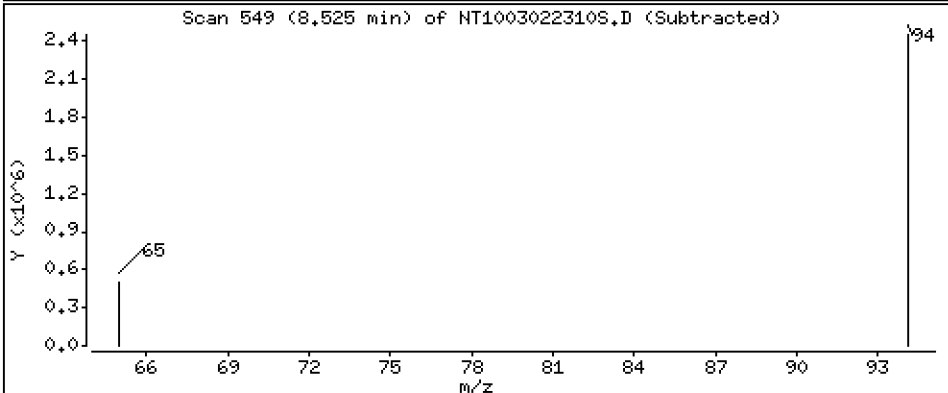
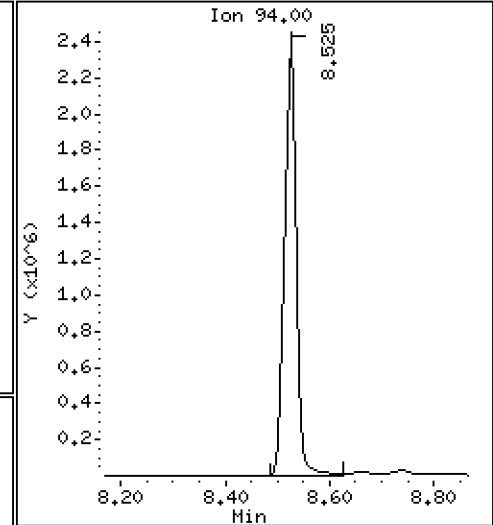
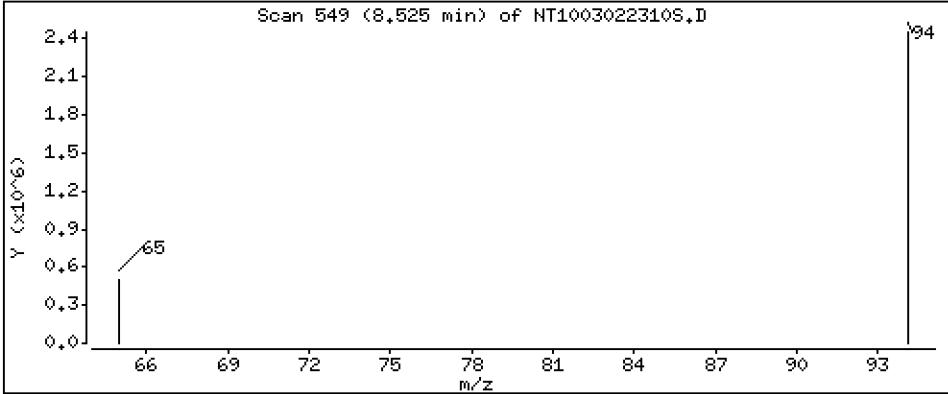
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 11.96 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

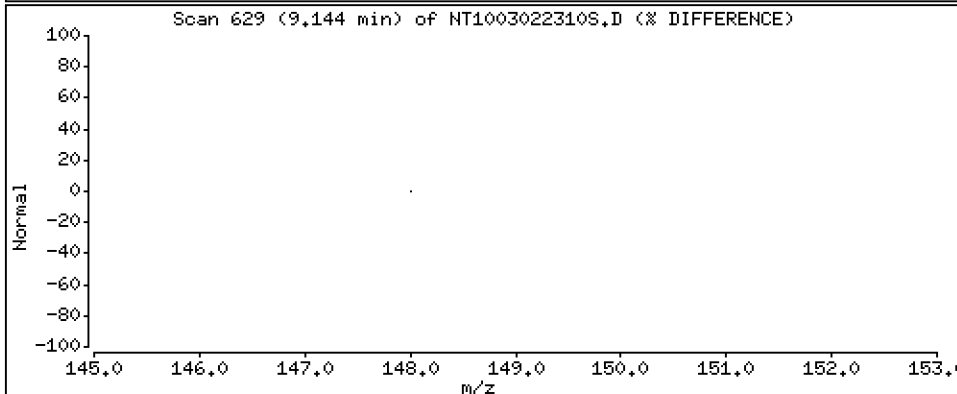
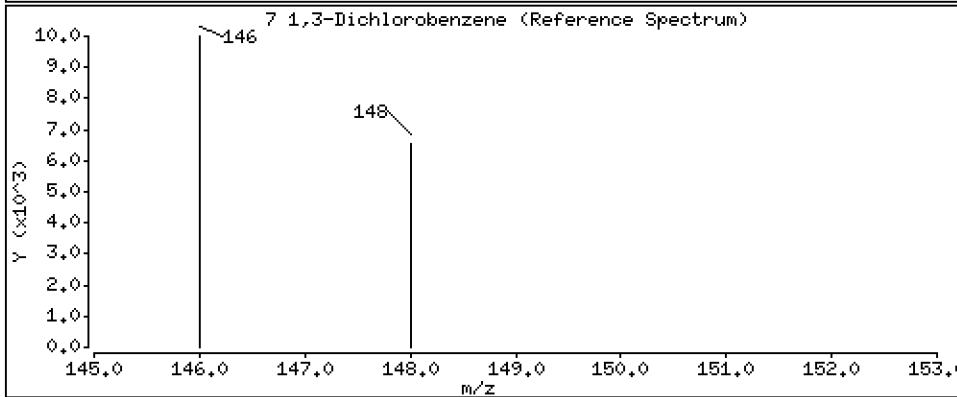
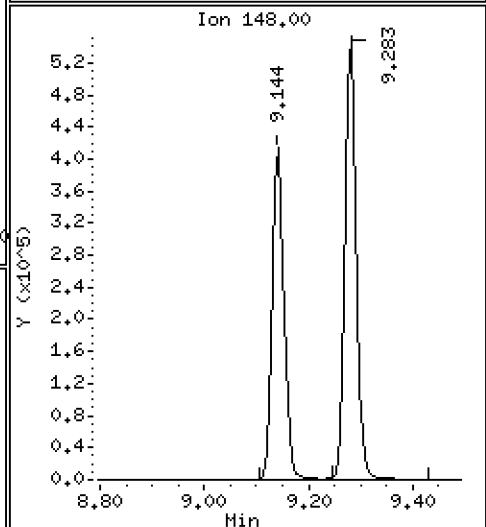
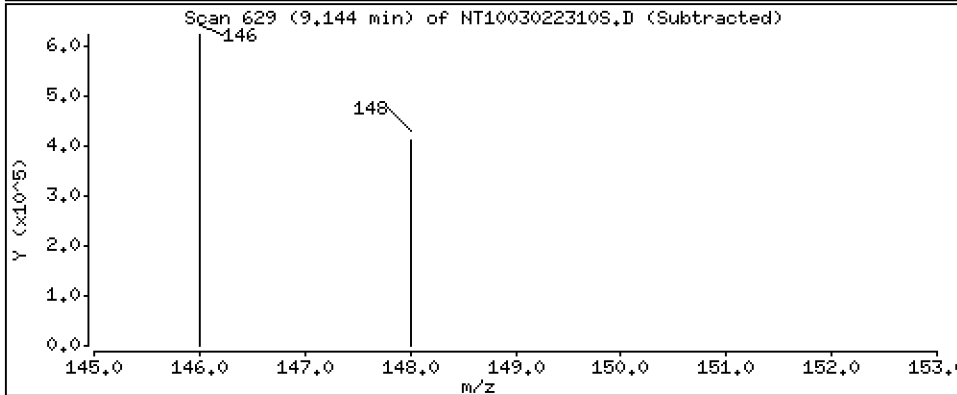
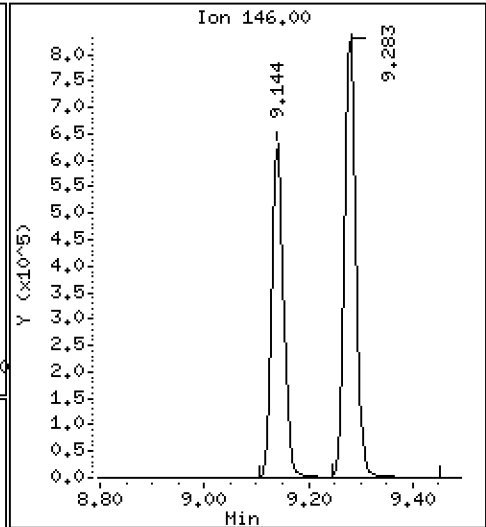
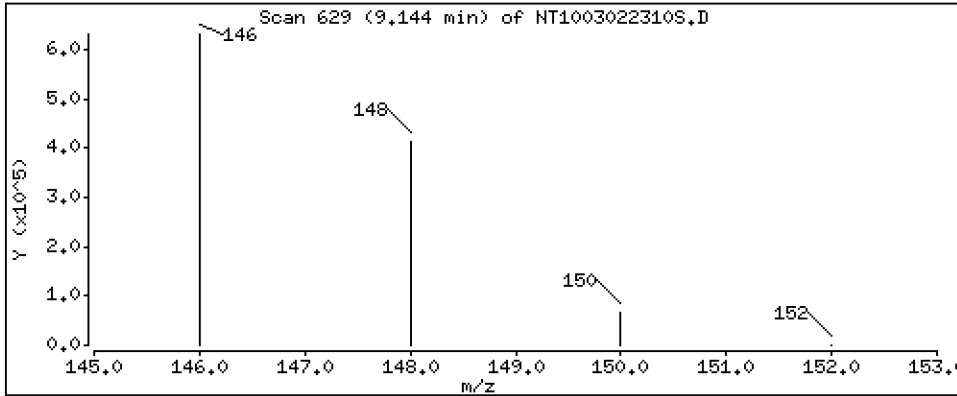
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 4,012 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

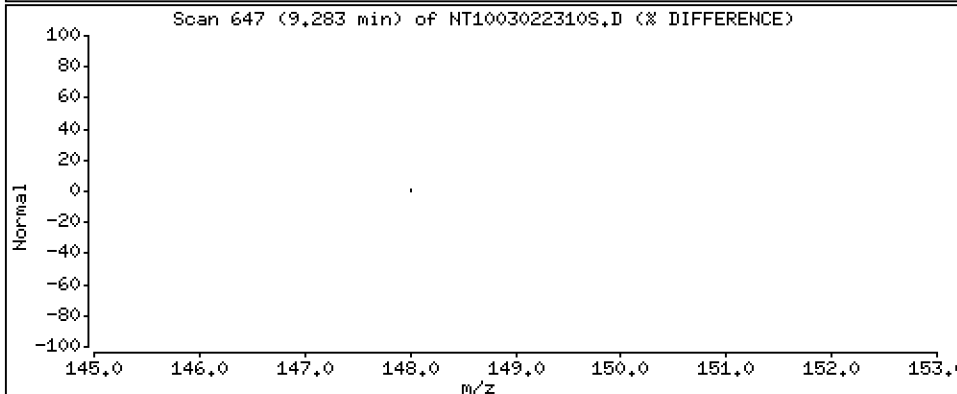
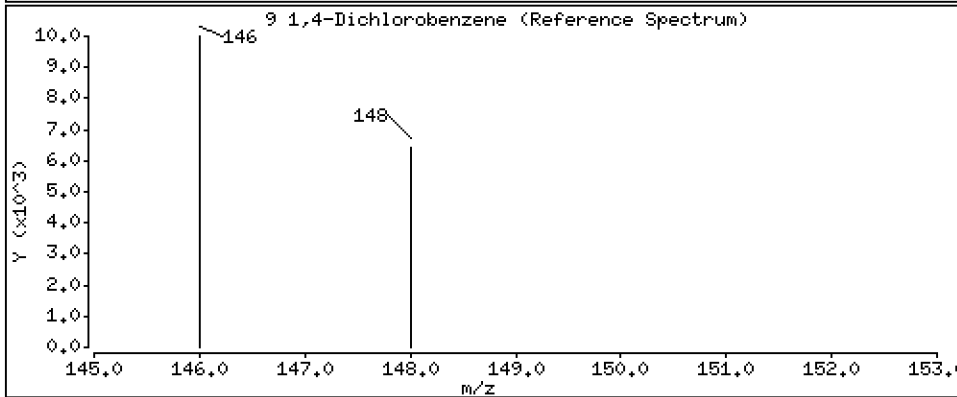
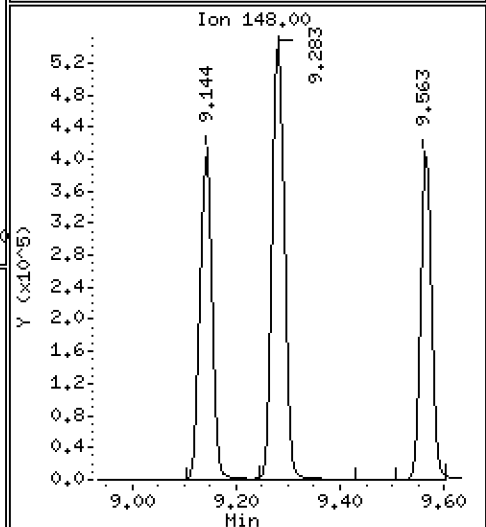
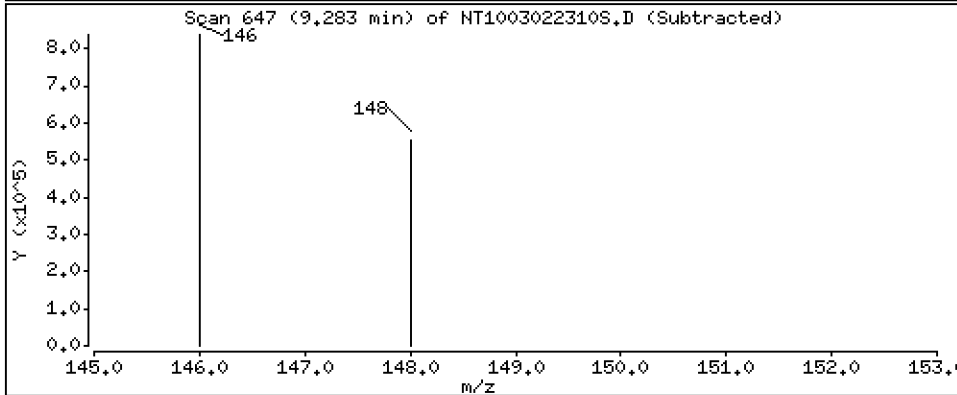
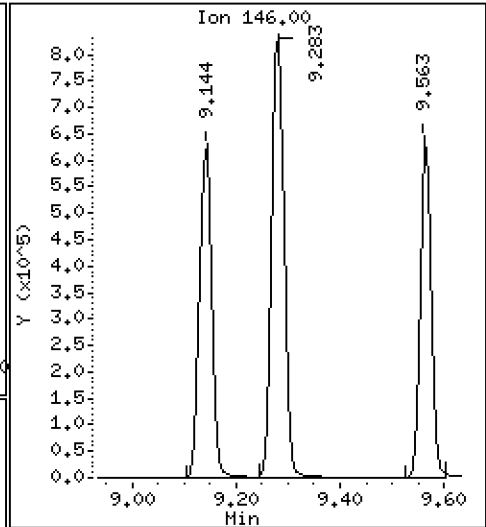
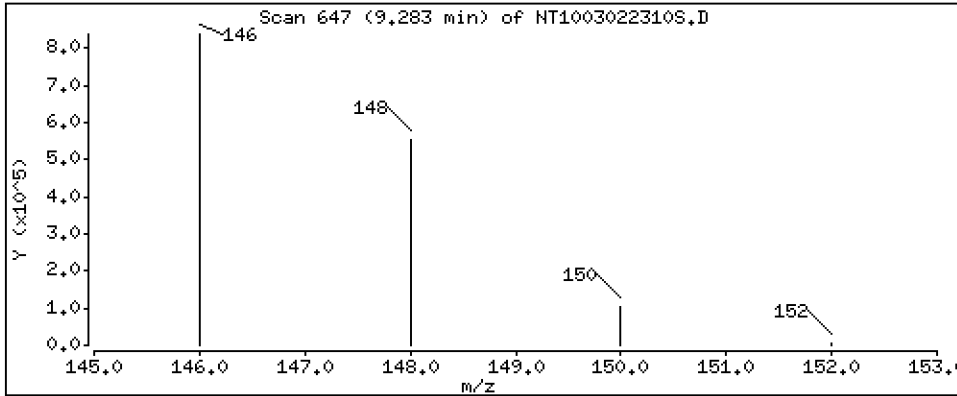
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

9 1,4-Dichlorobenzene

Concentration: 5,473 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

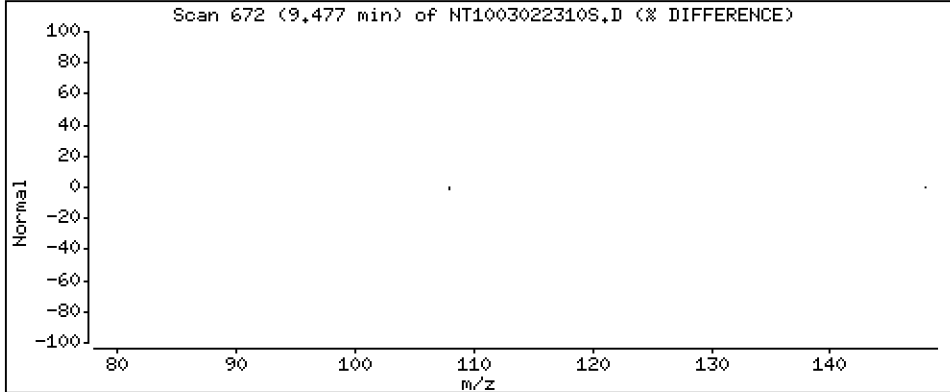
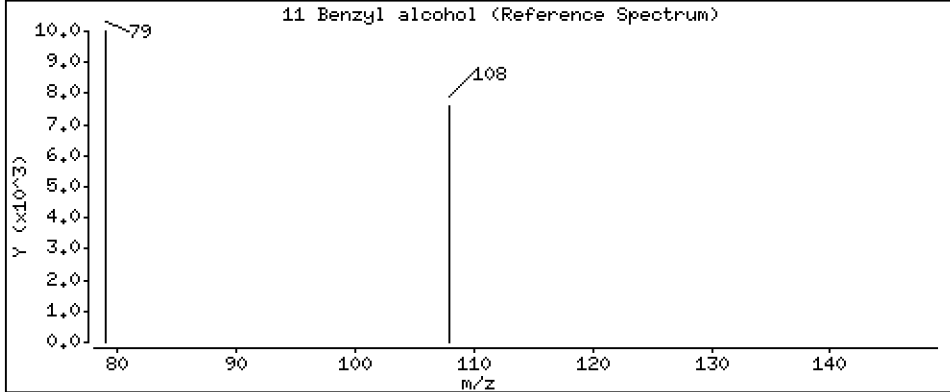
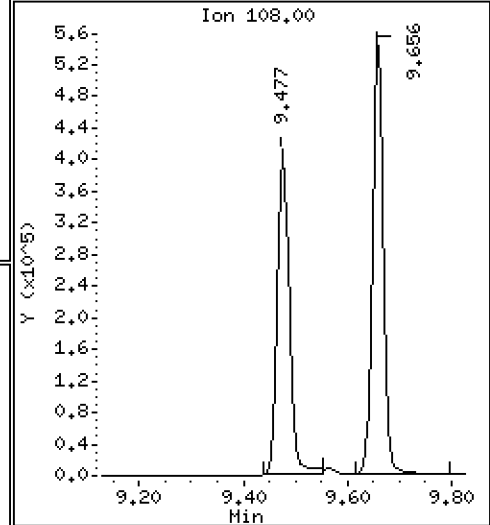
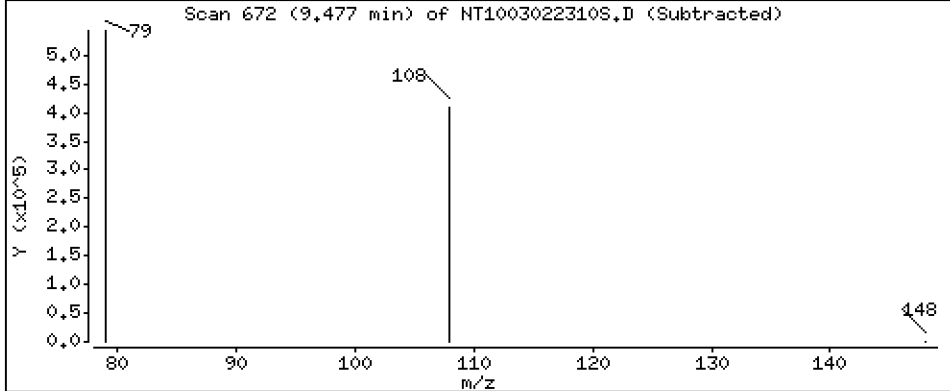
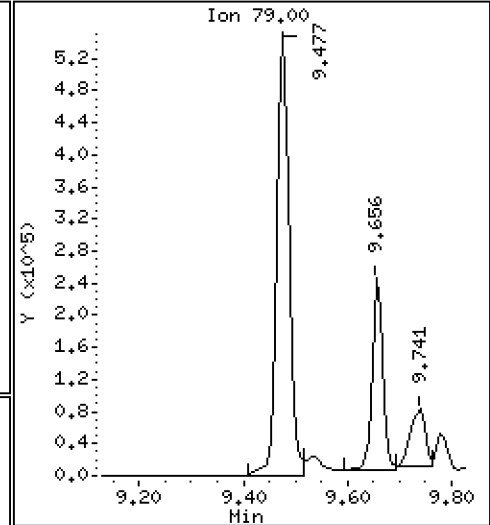
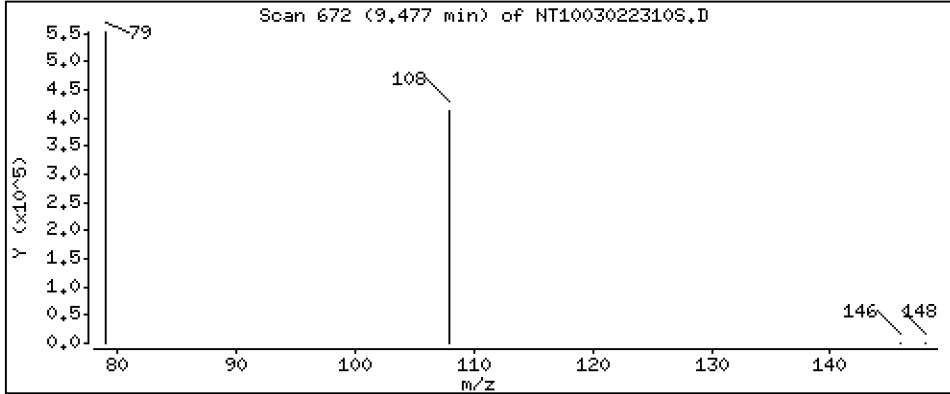
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5.125 ug/L





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

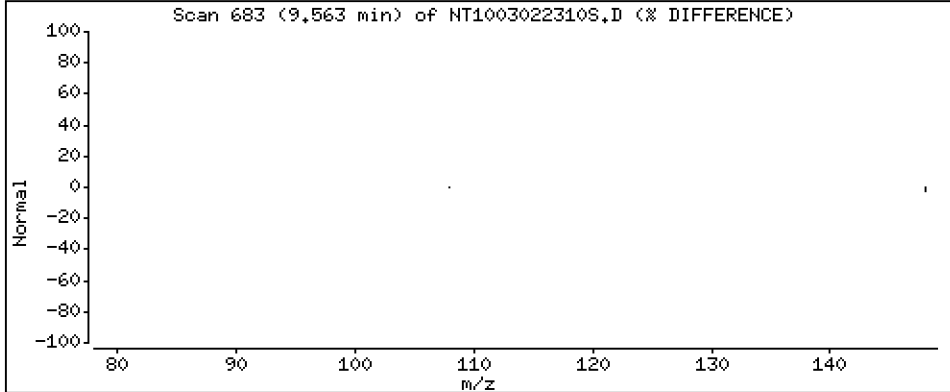
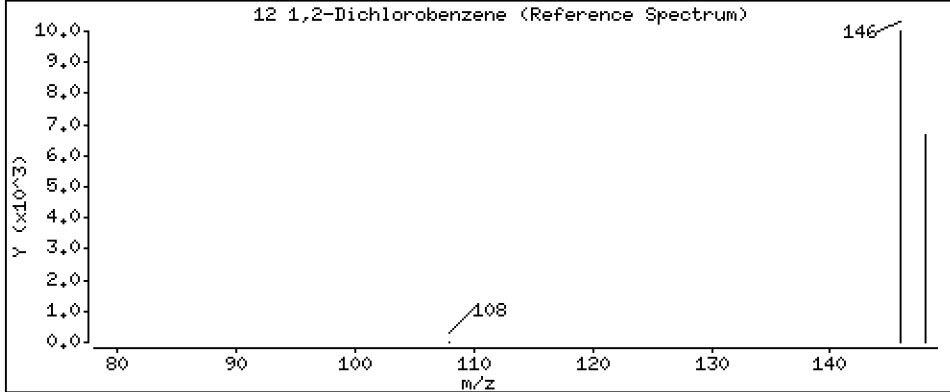
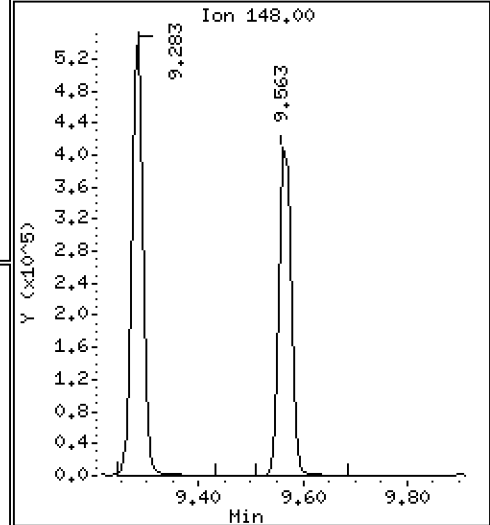
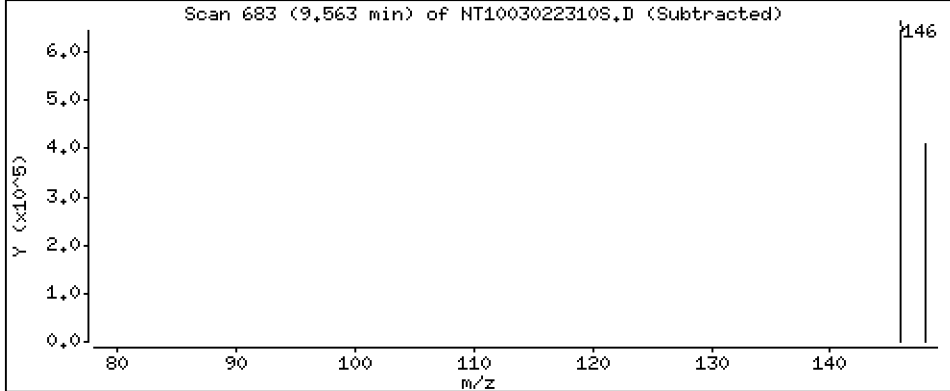
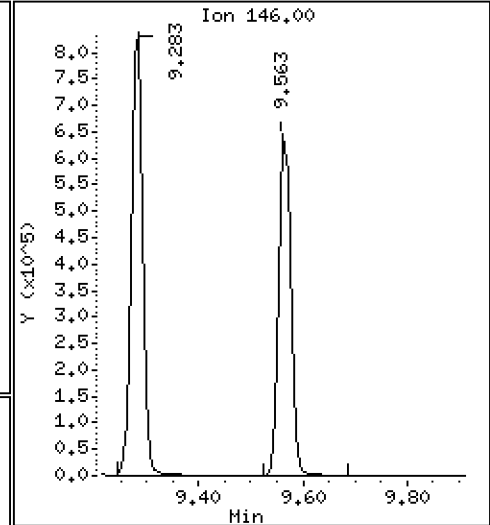
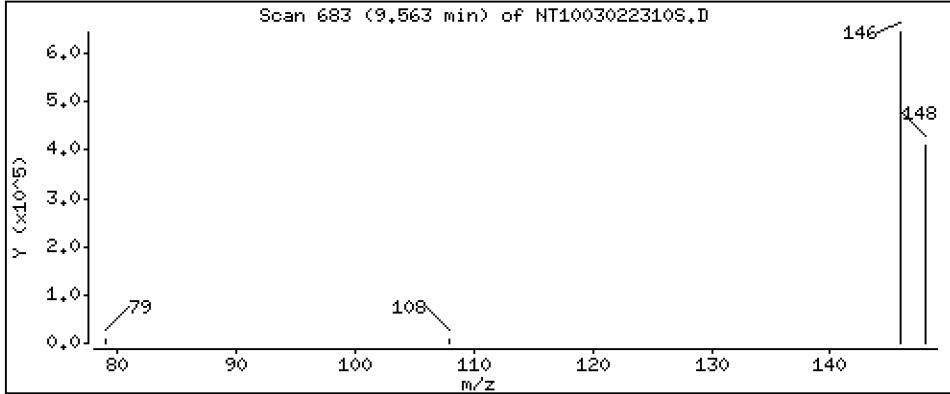
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 4,221 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

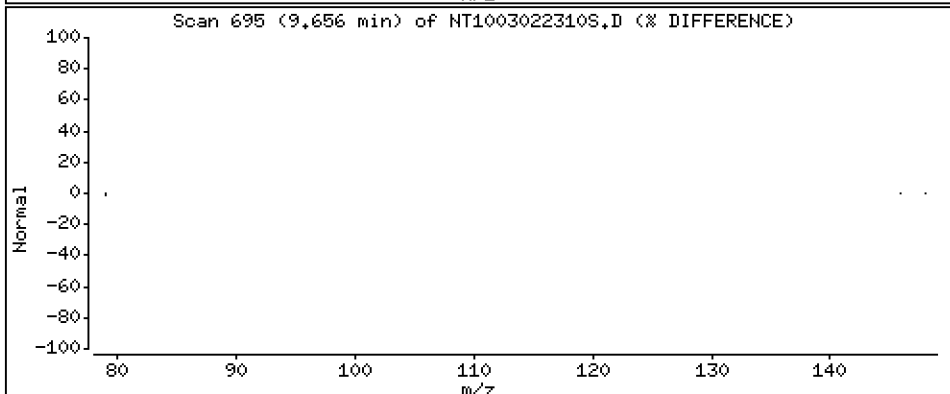
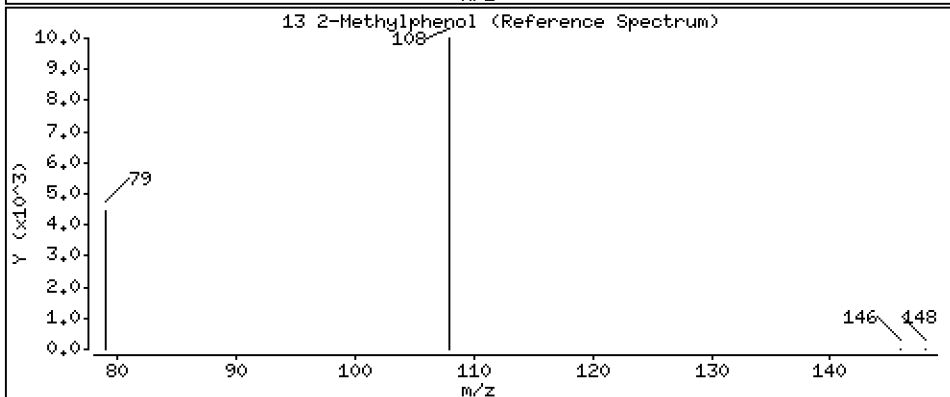
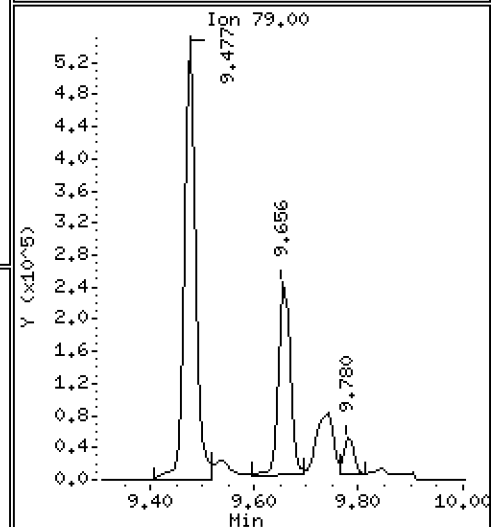
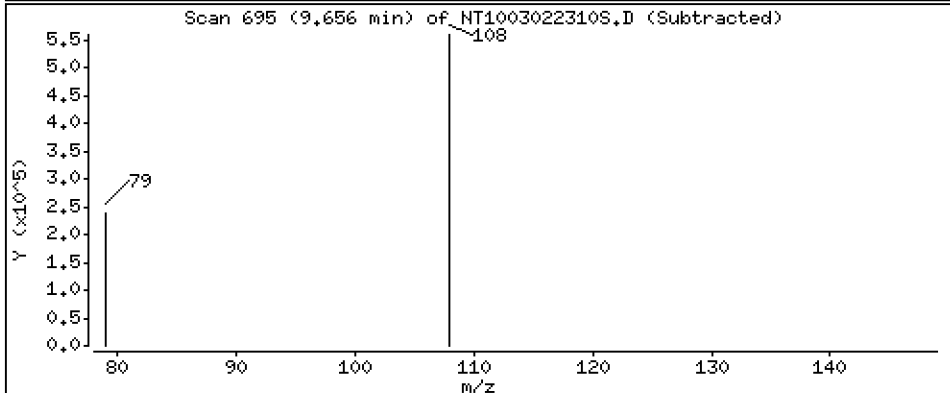
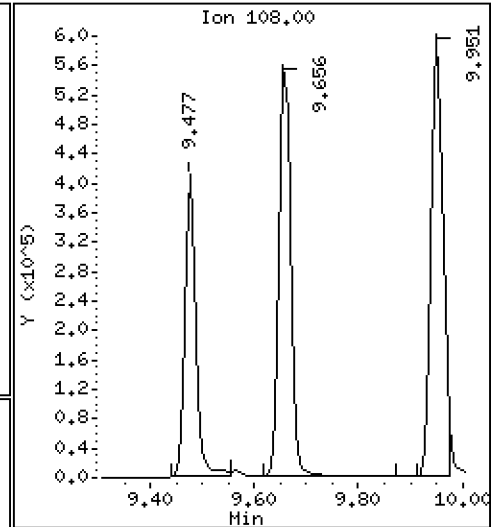
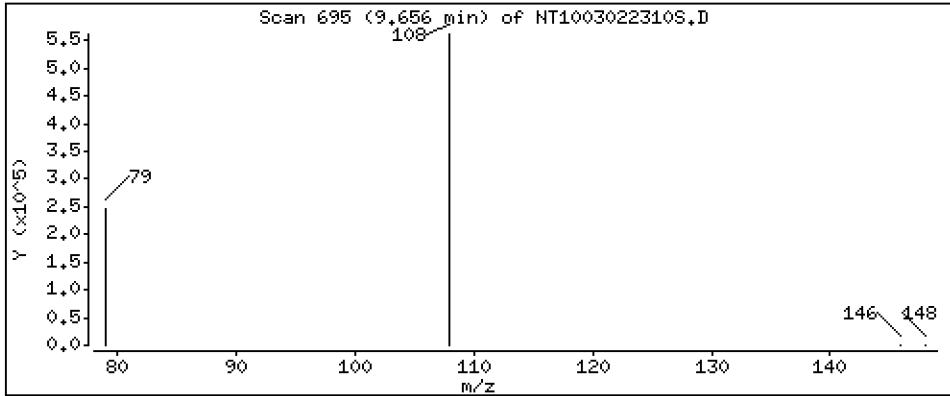
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.648 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

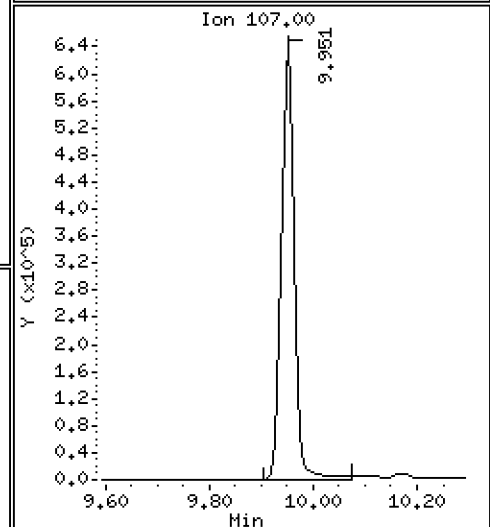
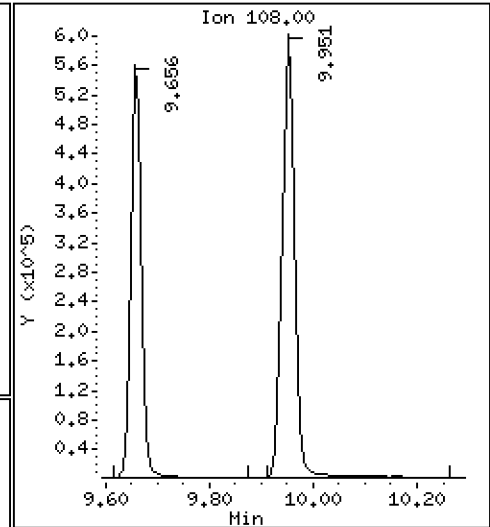
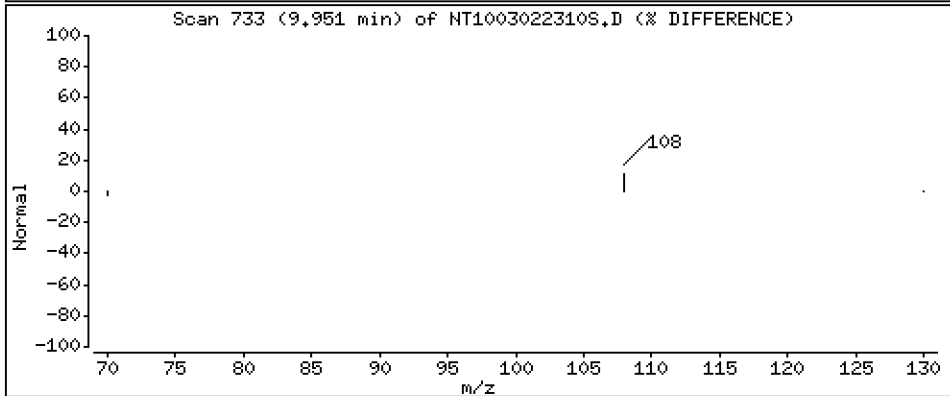
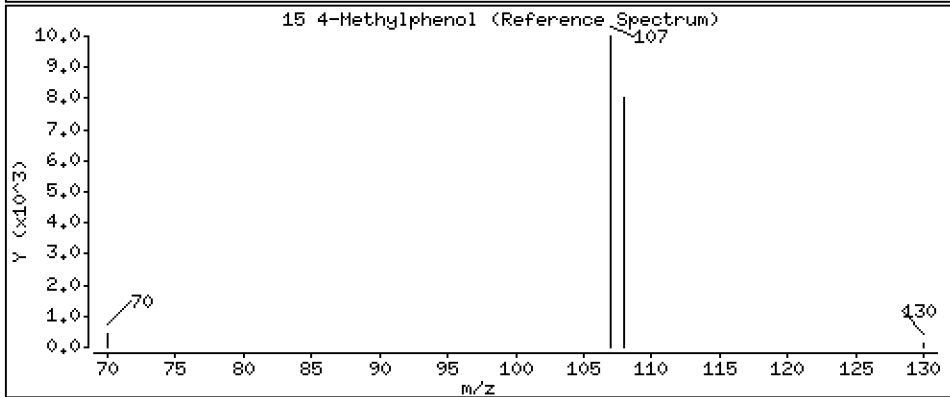
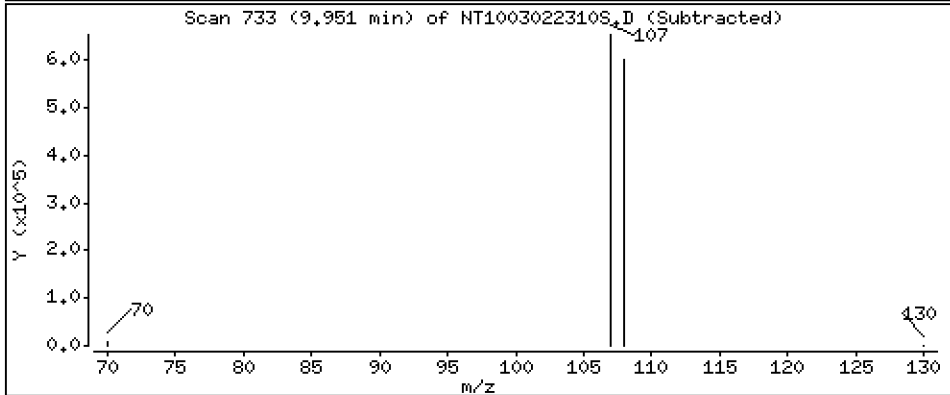
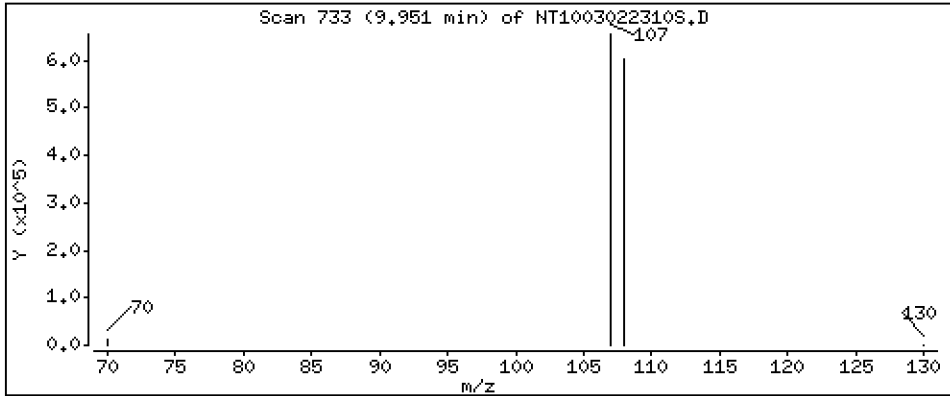
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

15 4-Methylphenol

Concentration: 5,249 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

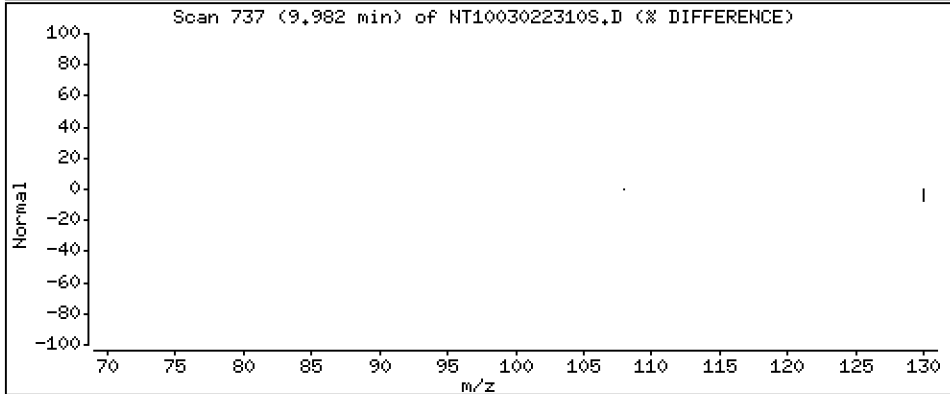
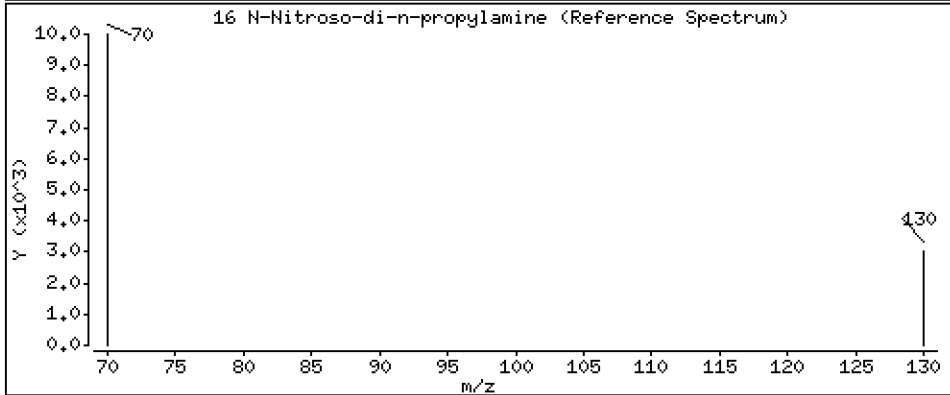
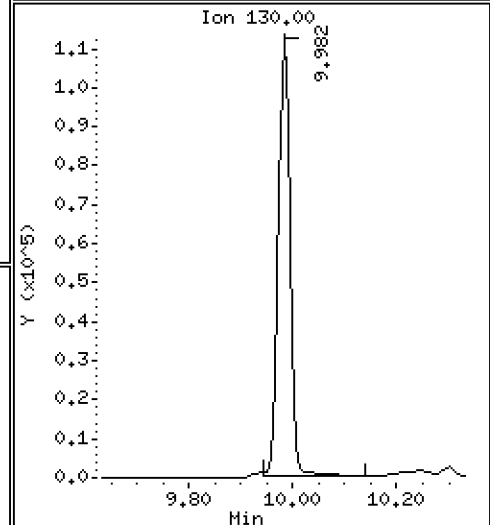
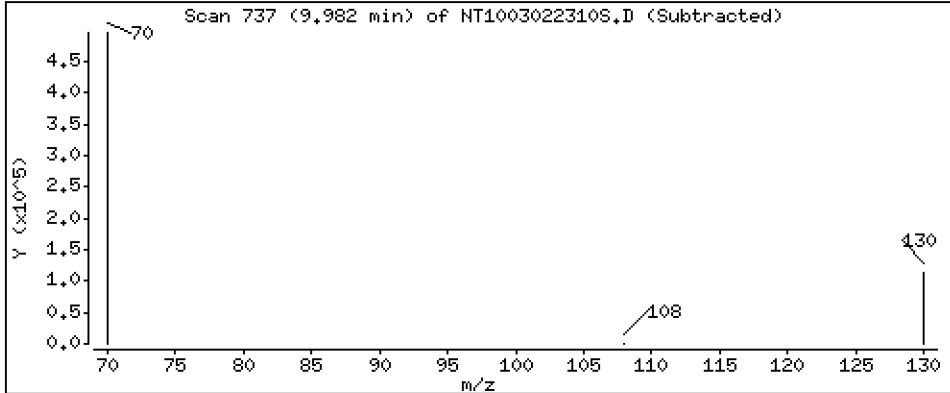
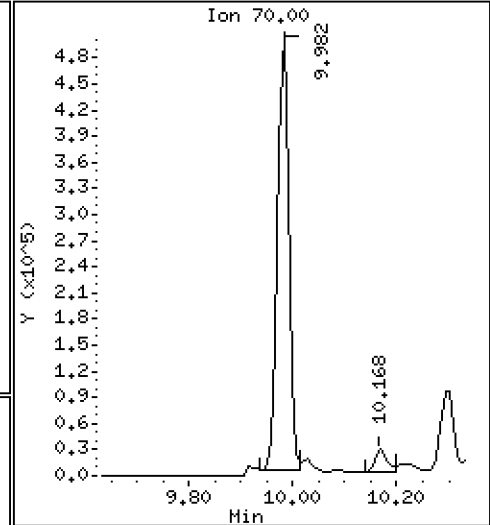
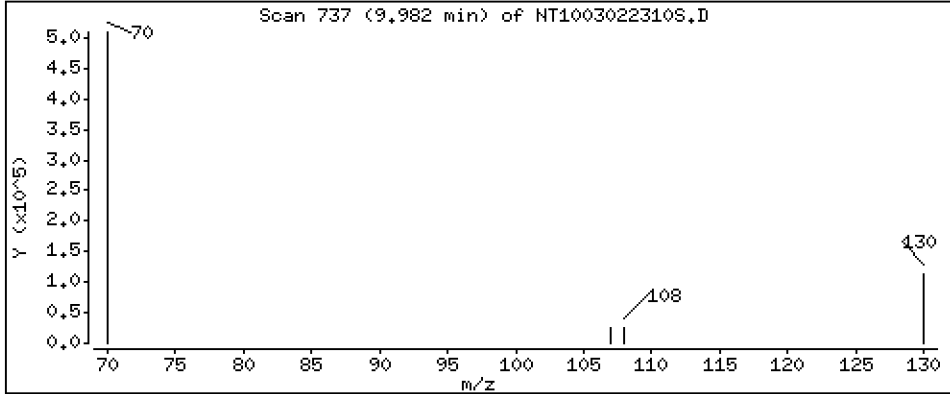
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,488 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

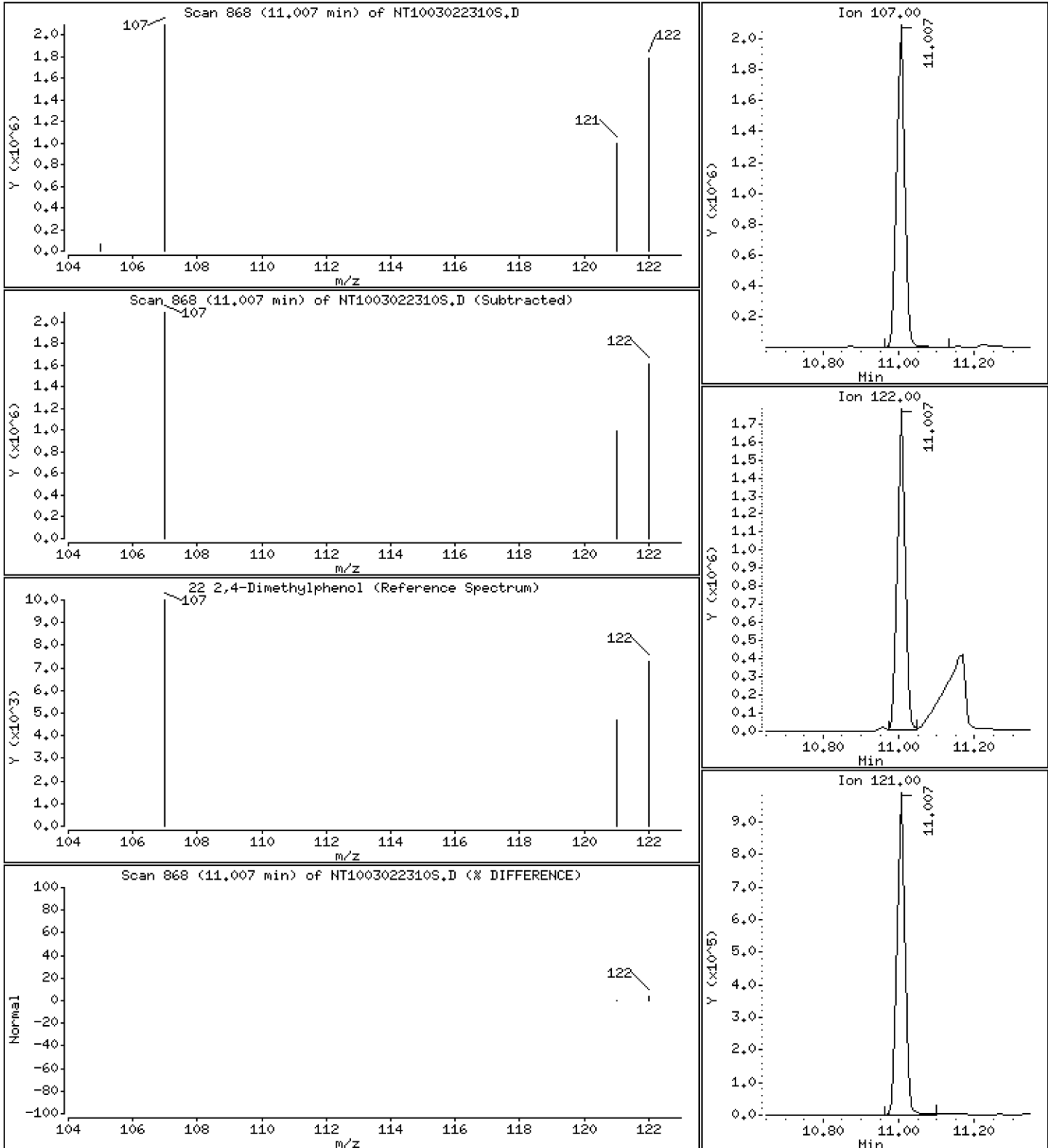
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 14,05 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

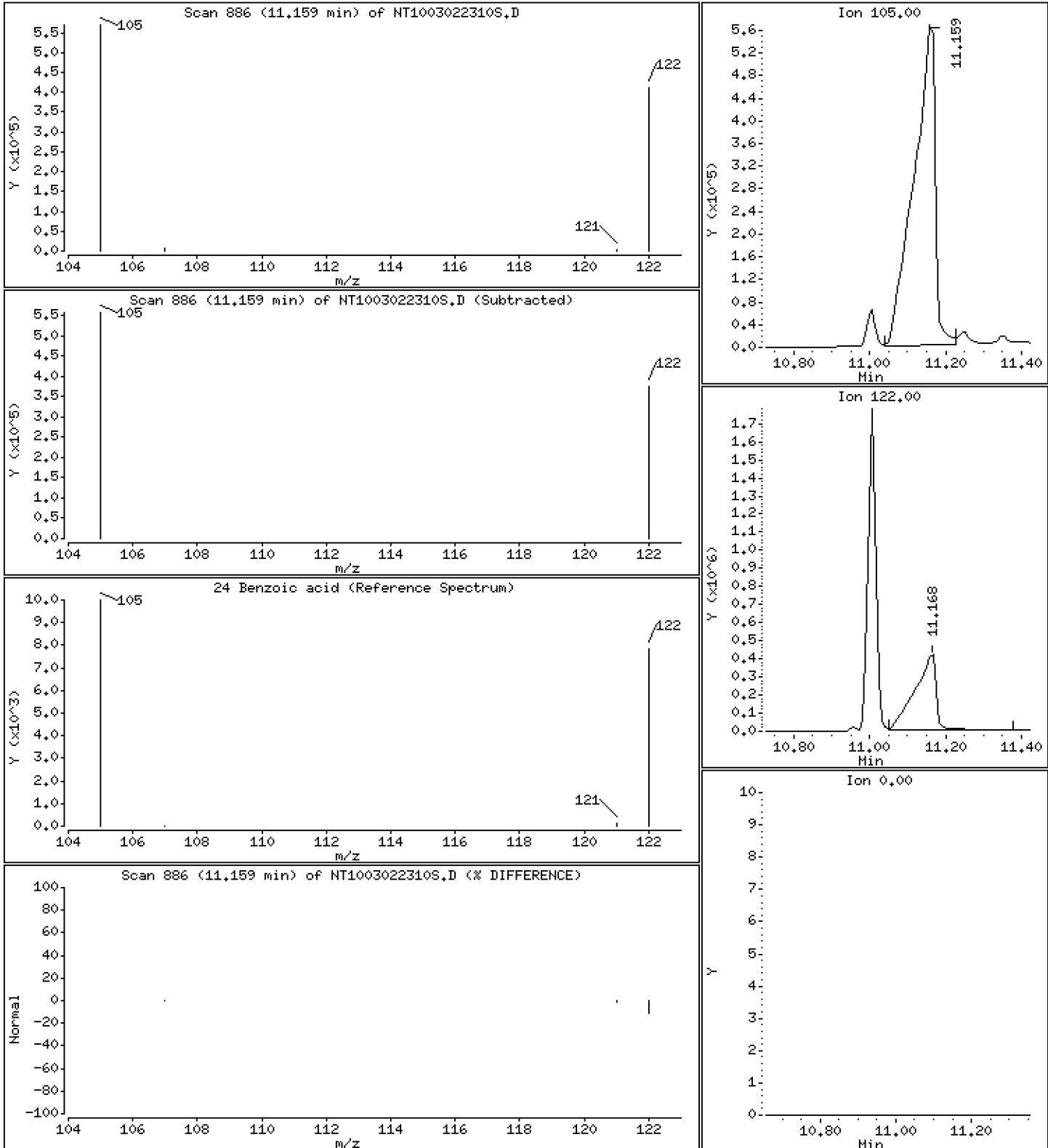
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 17.46 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

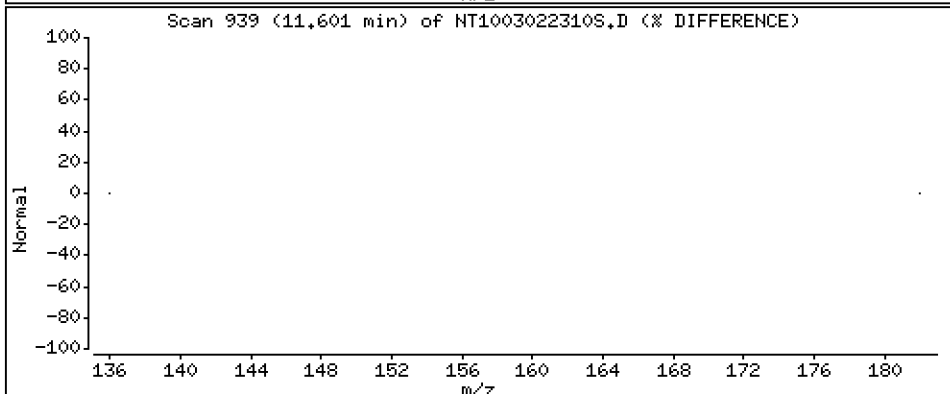
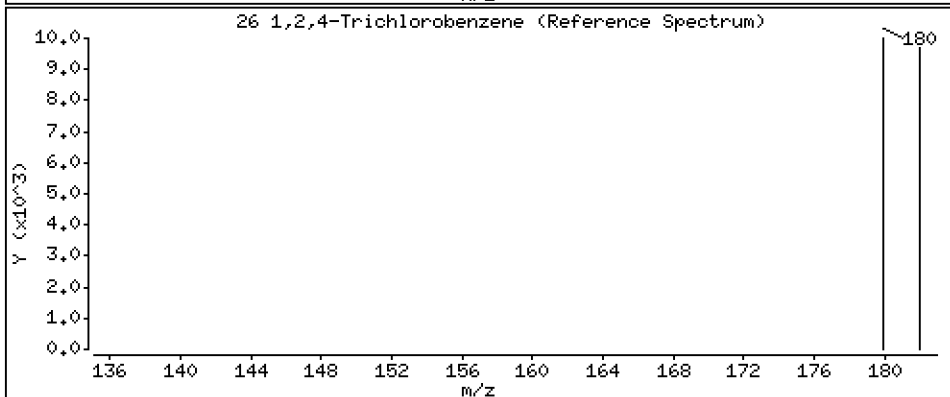
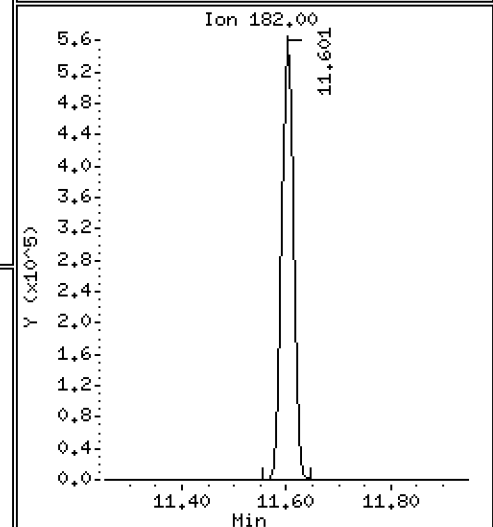
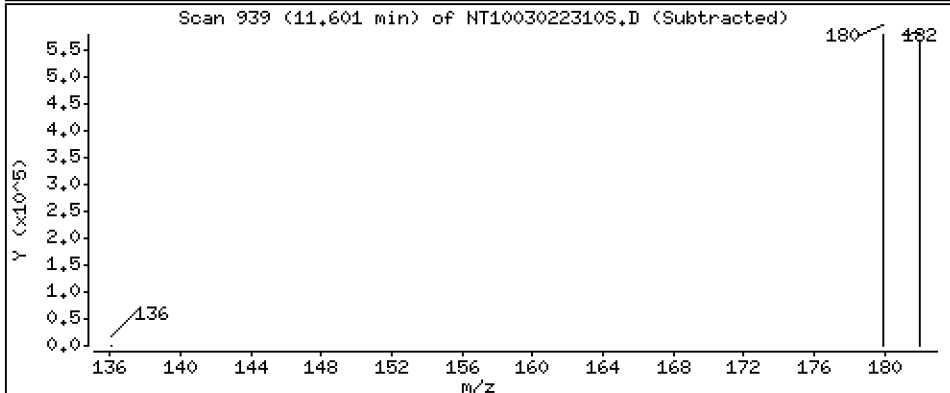
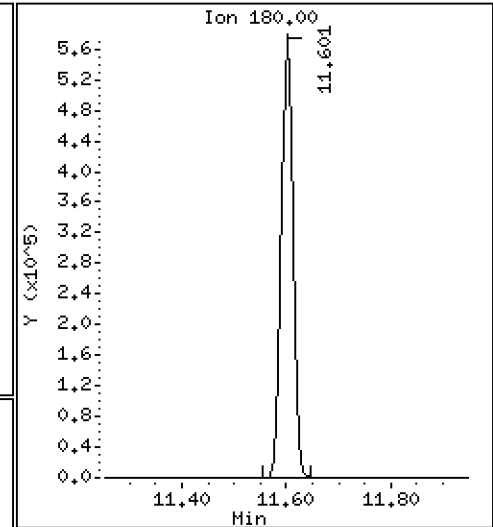
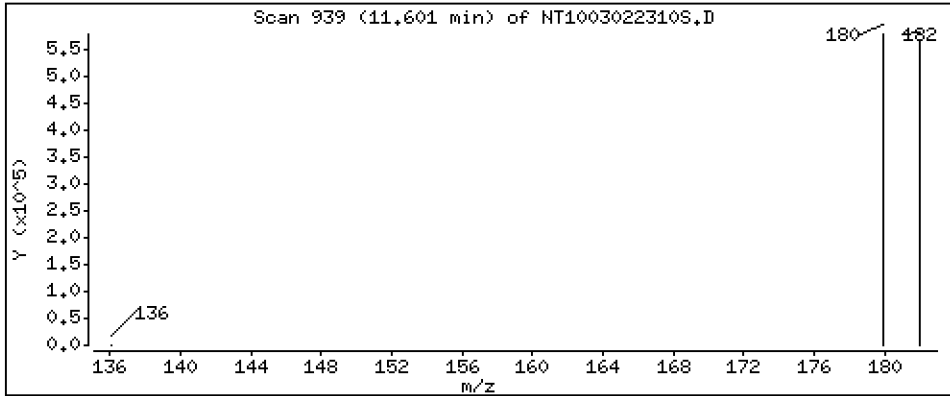
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 4,715 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

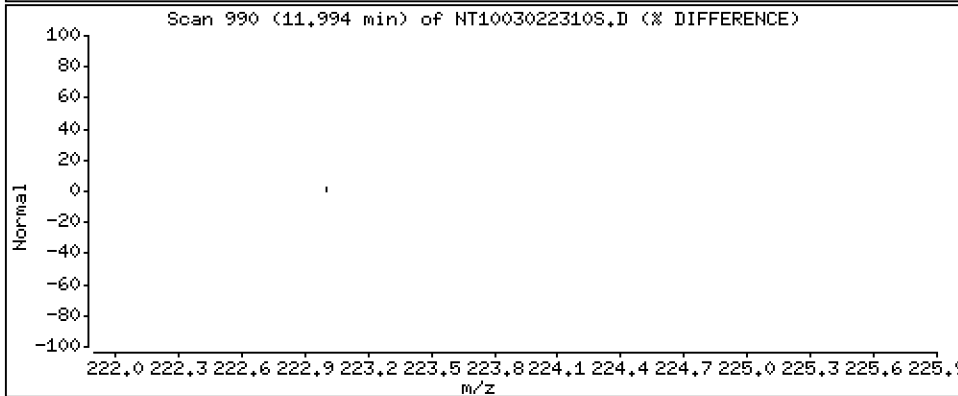
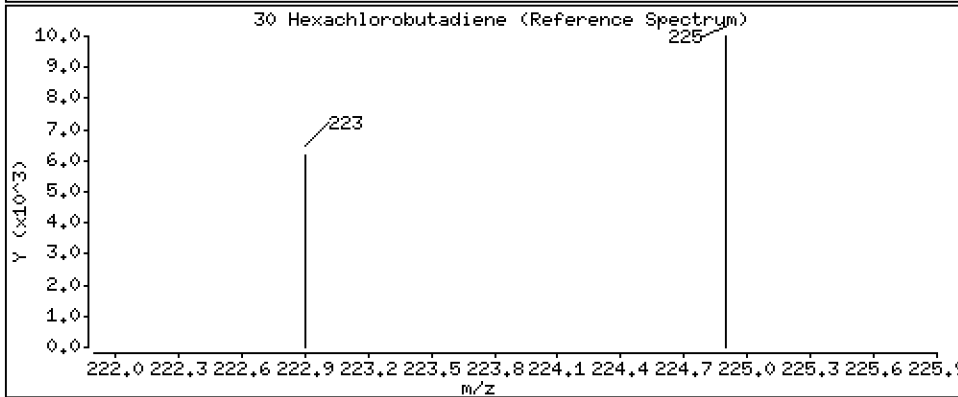
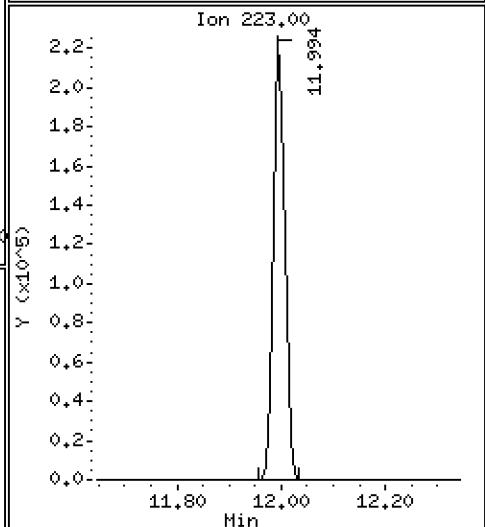
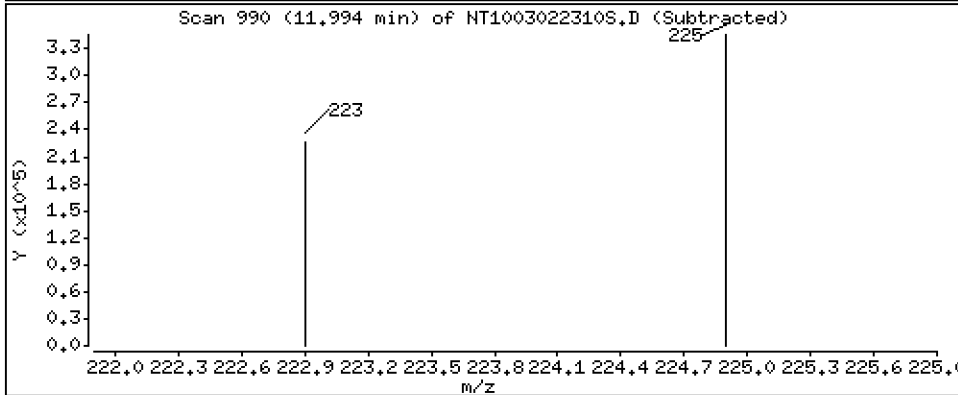
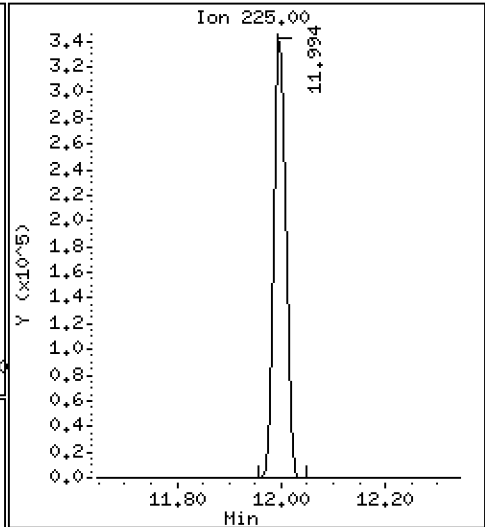
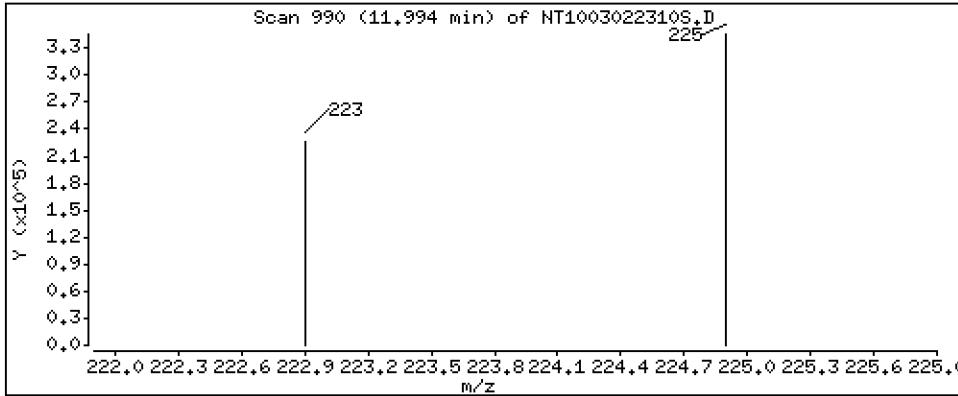
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,167 ug/L





Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

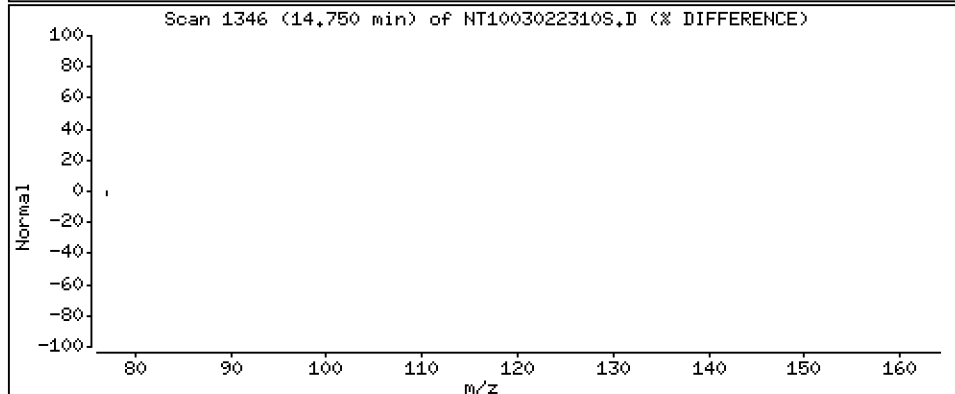
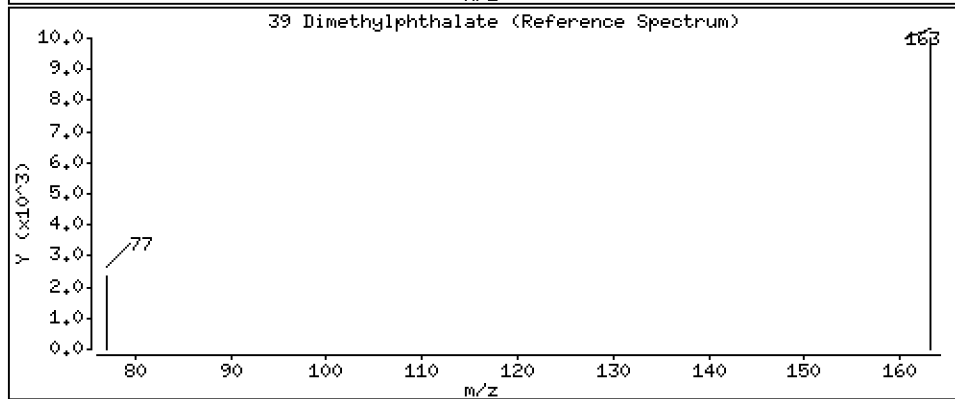
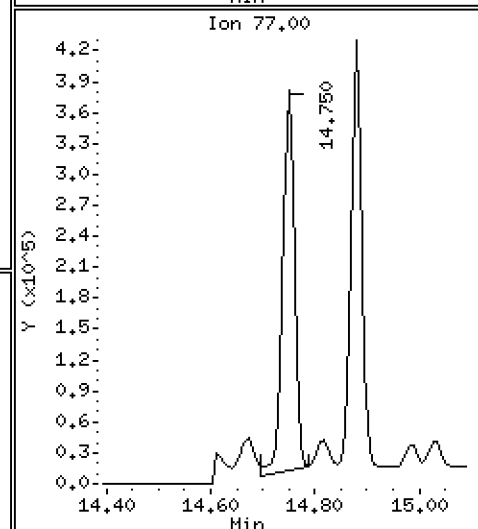
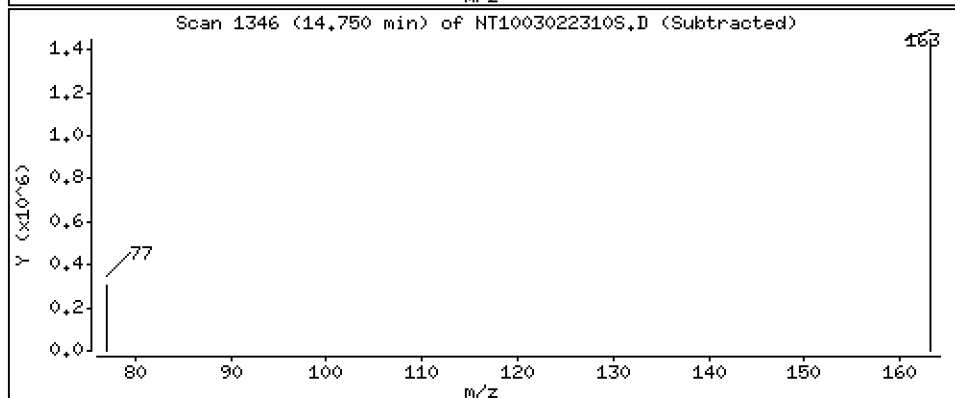
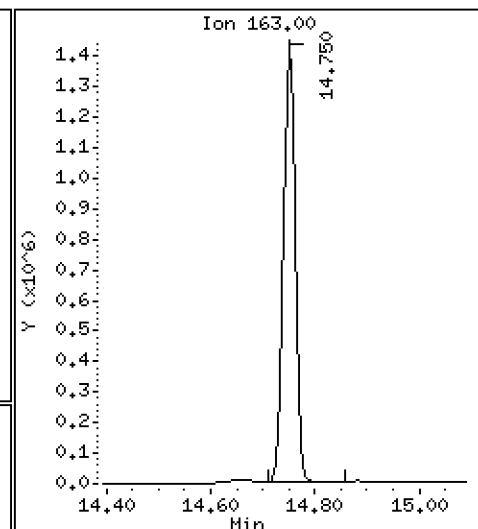
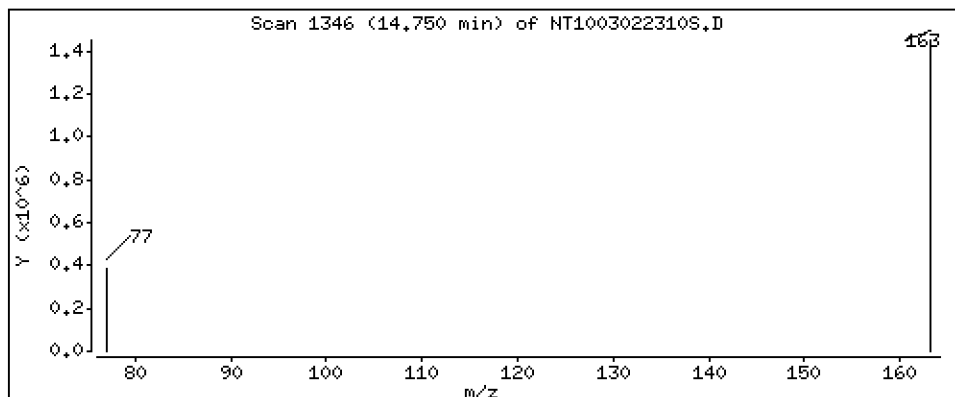
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,158 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

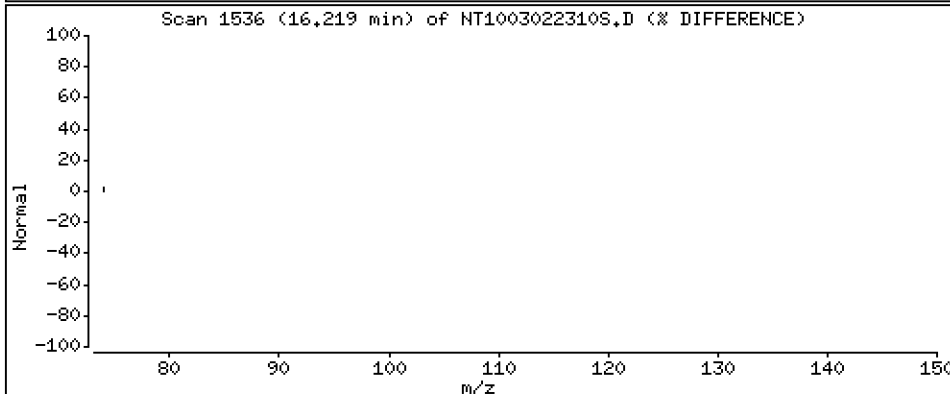
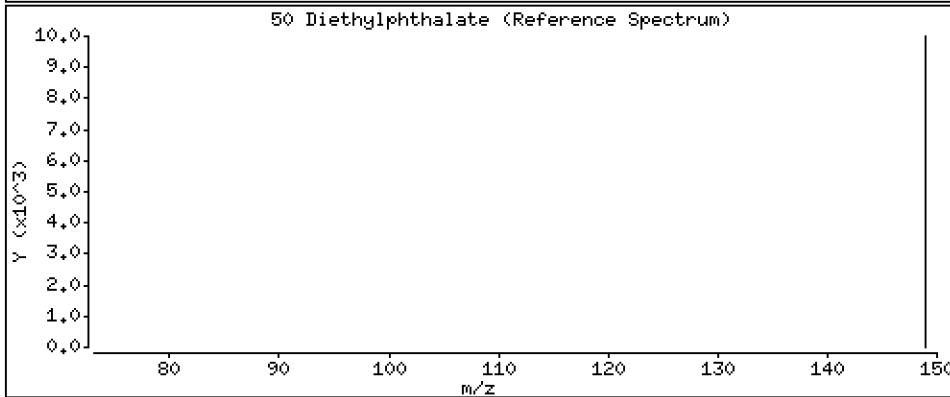
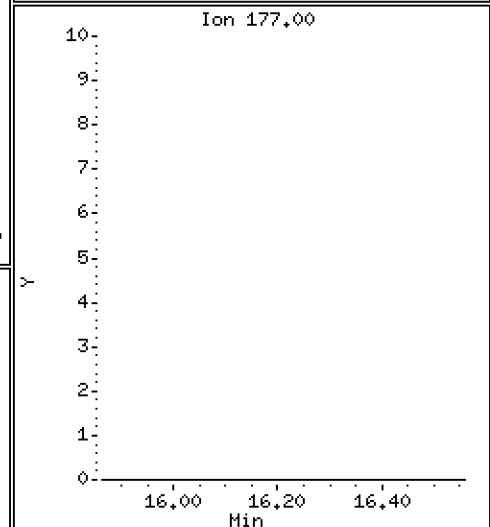
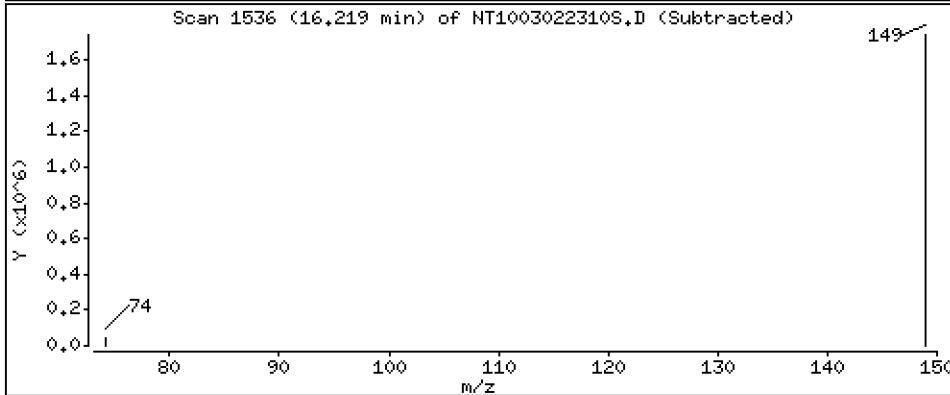
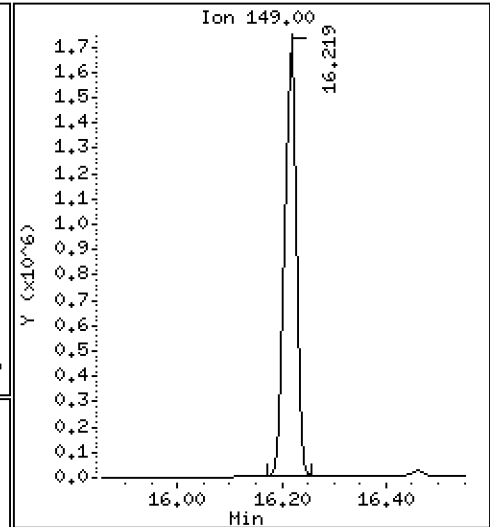
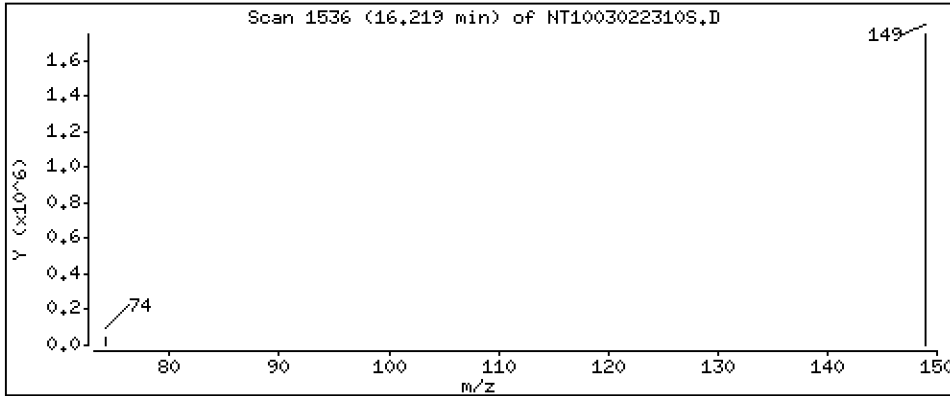
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 6,664 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

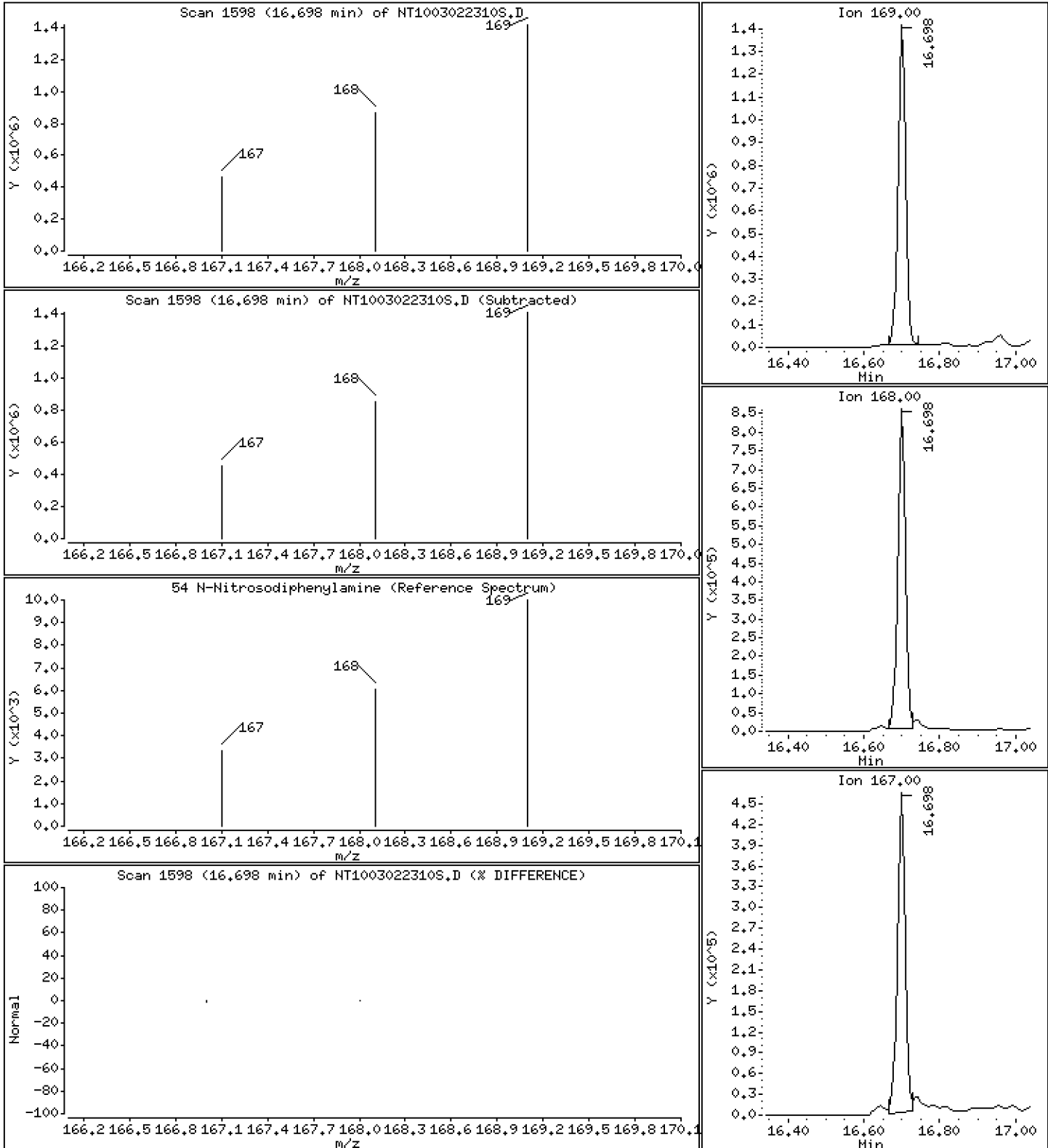
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 4.209 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

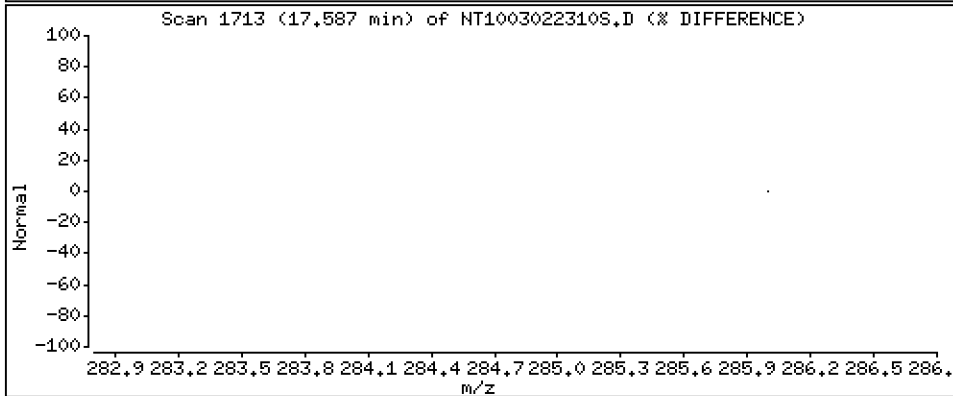
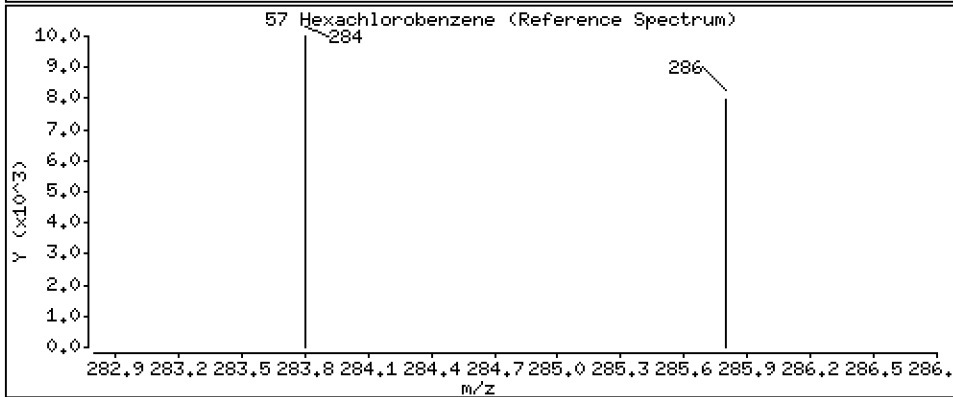
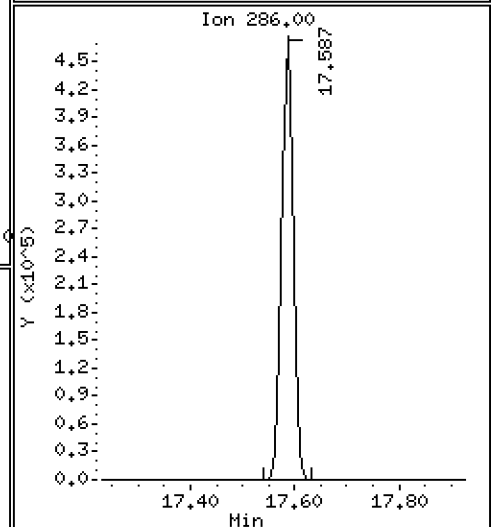
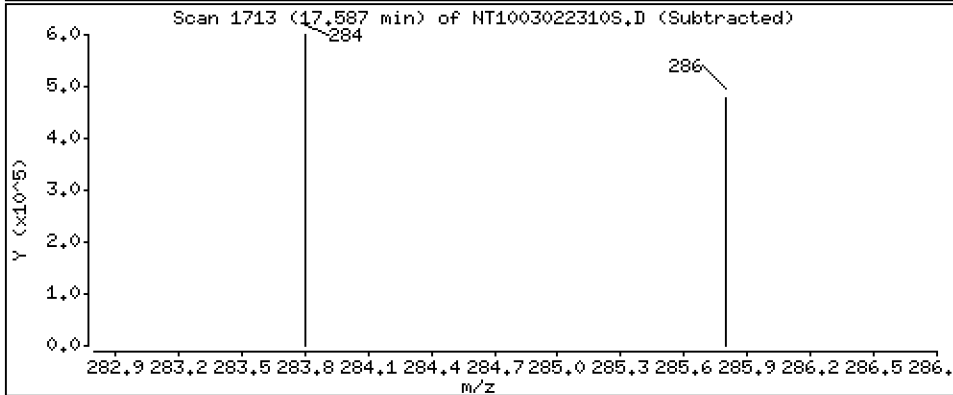
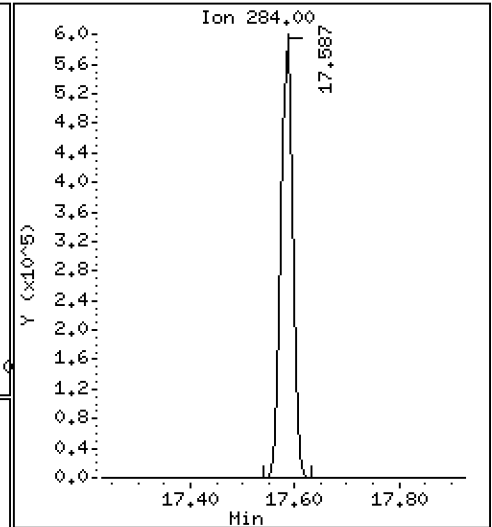
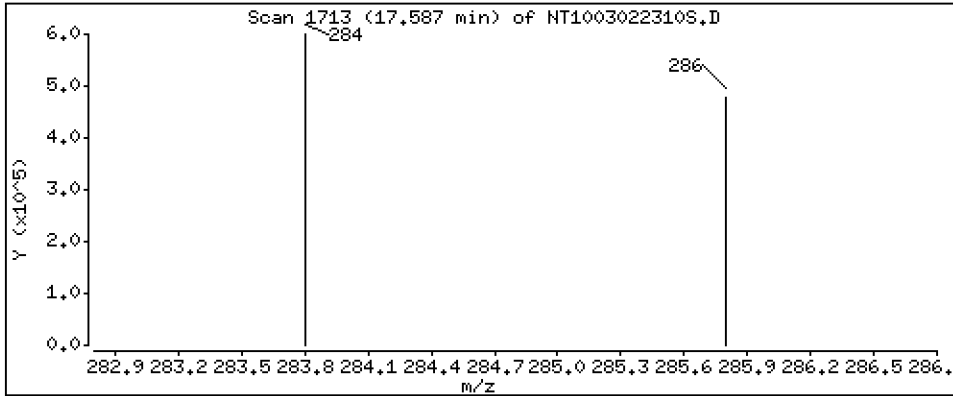
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.007 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

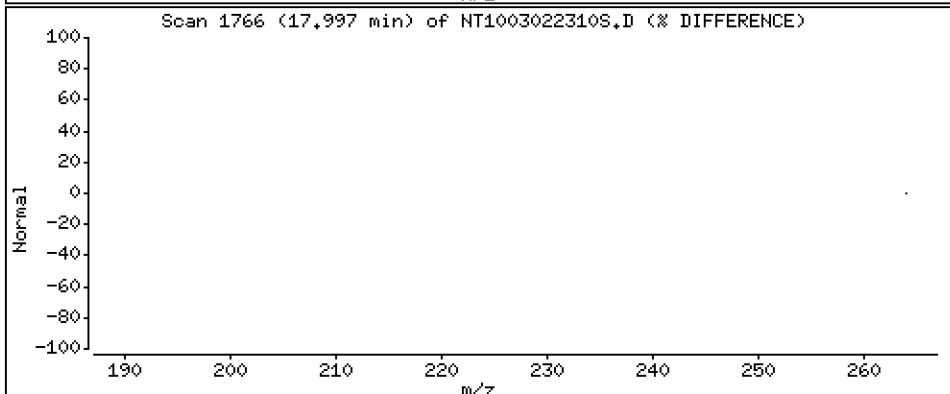
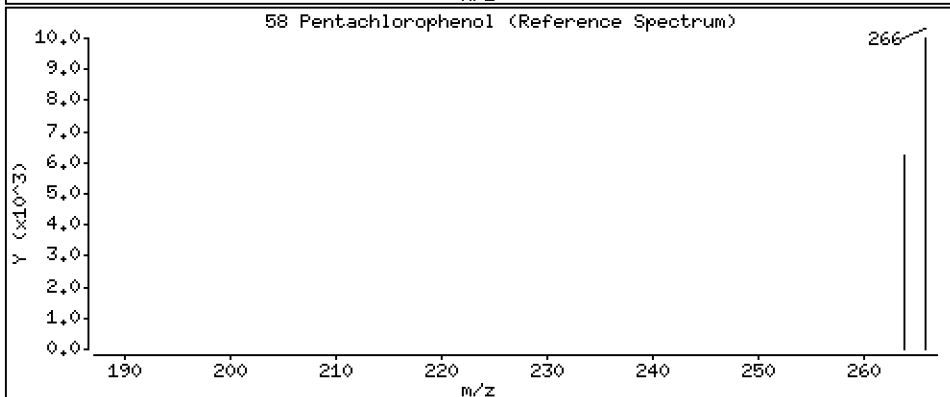
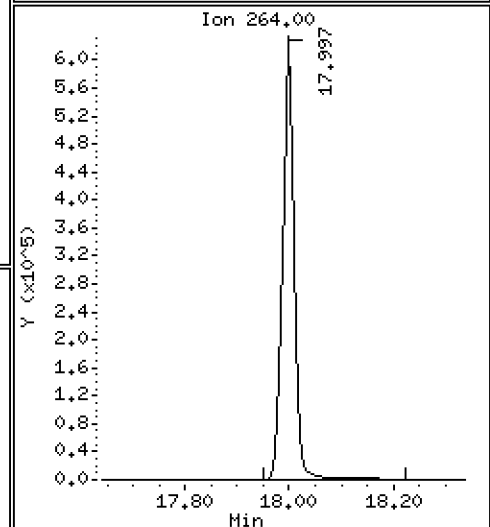
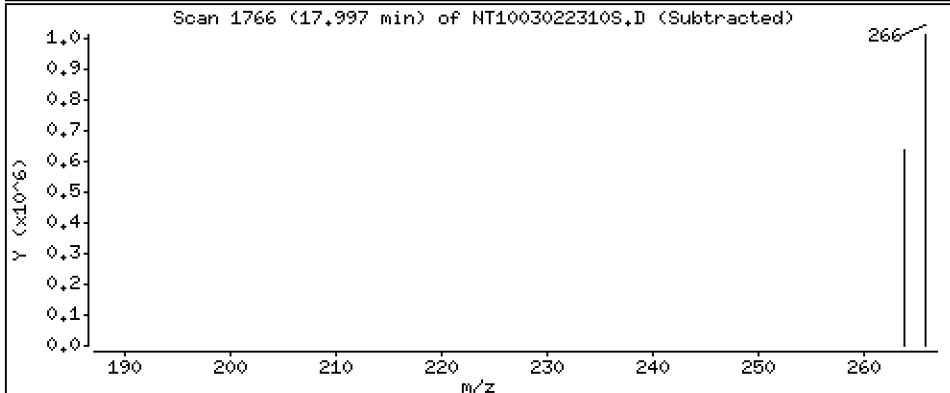
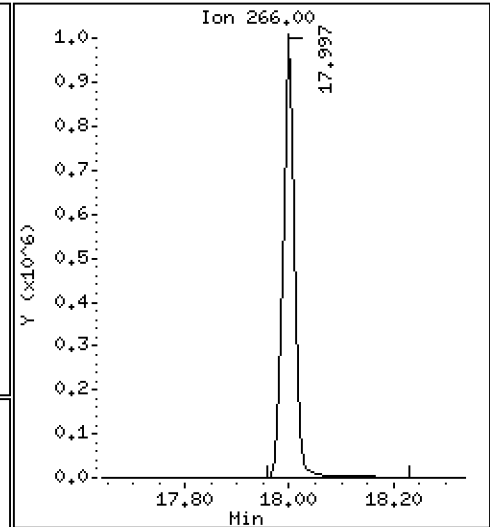
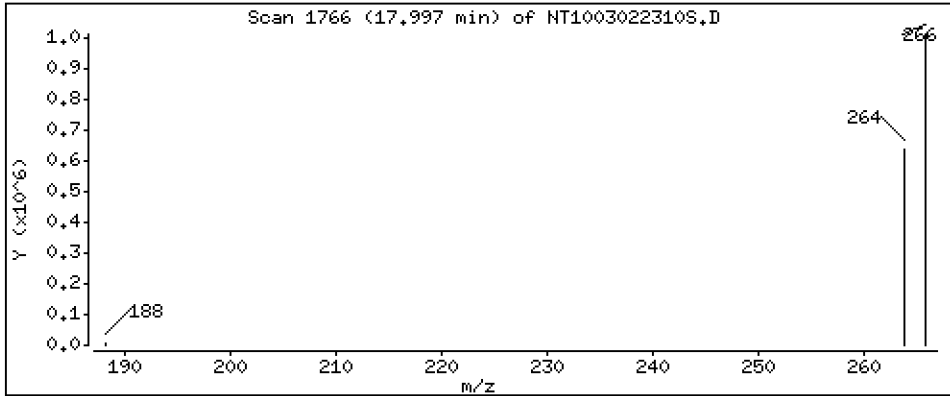
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 13,27 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

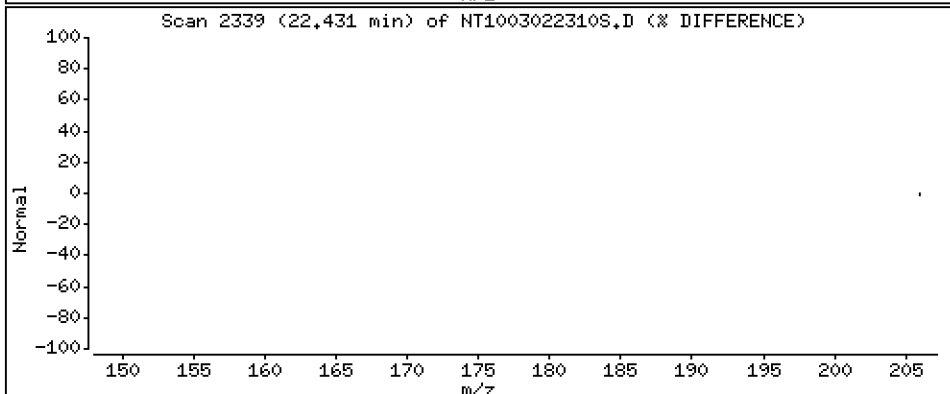
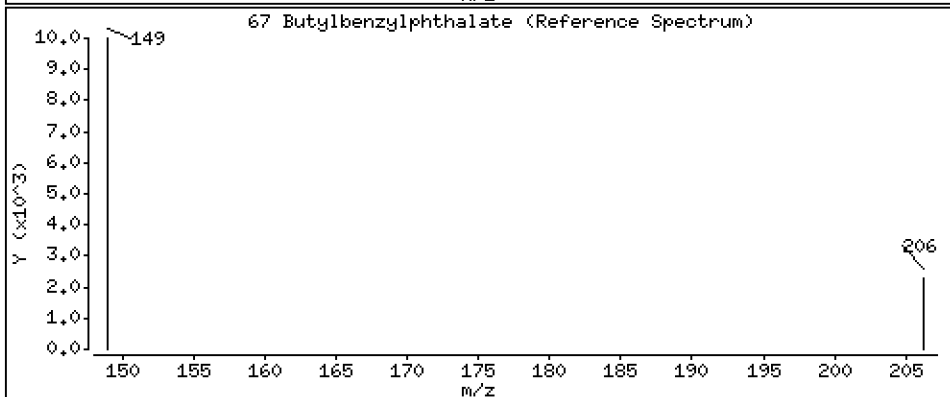
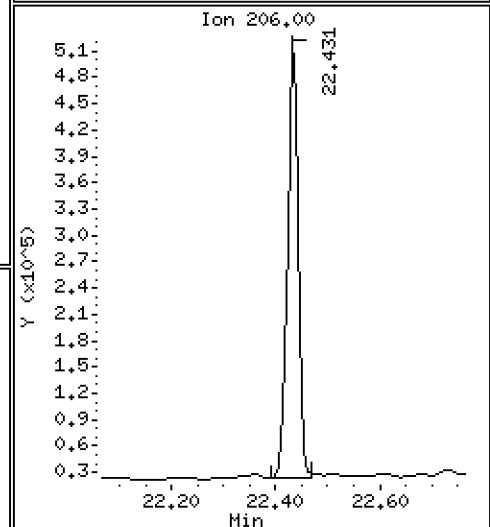
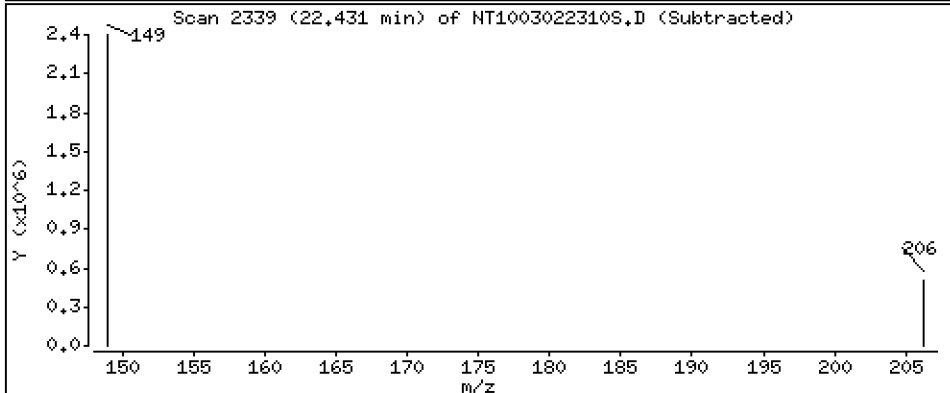
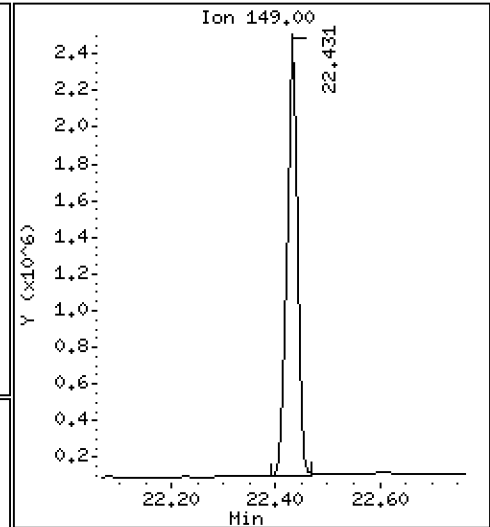
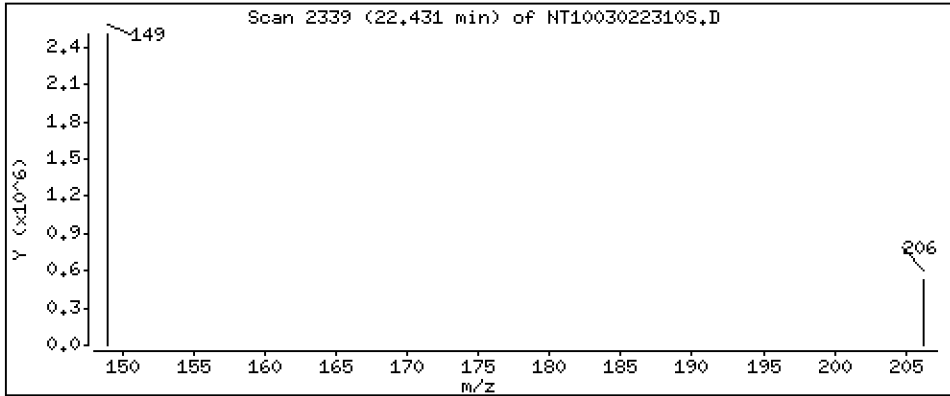
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,838 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

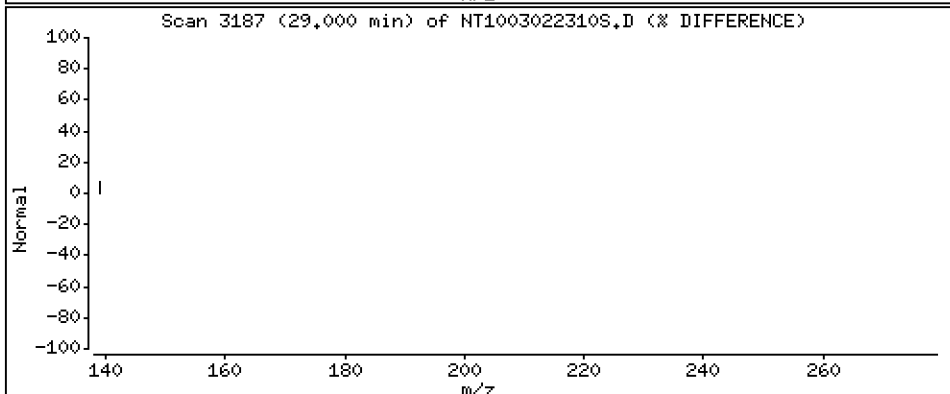
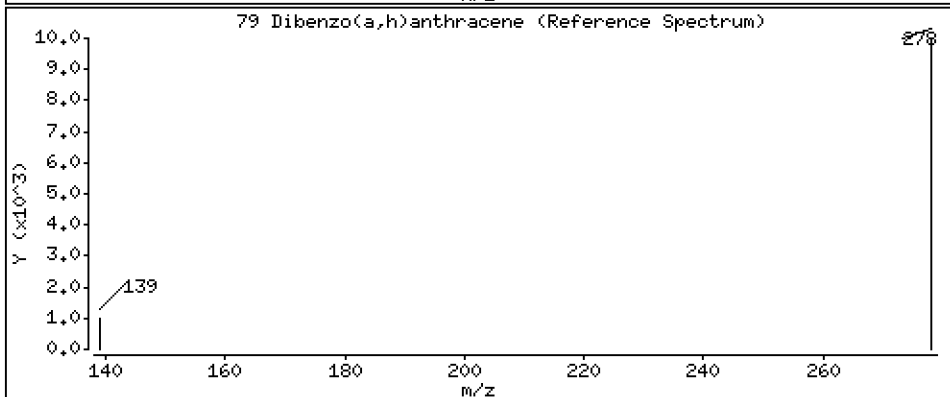
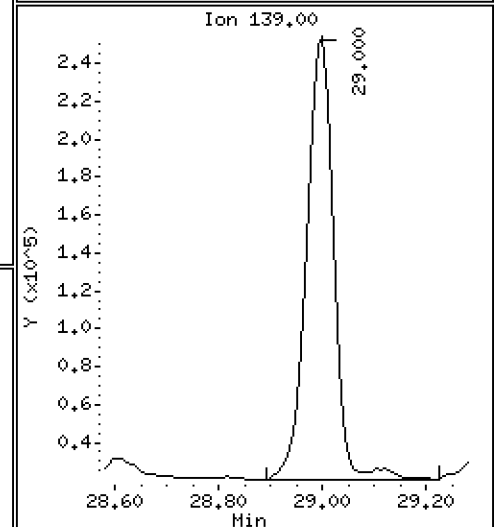
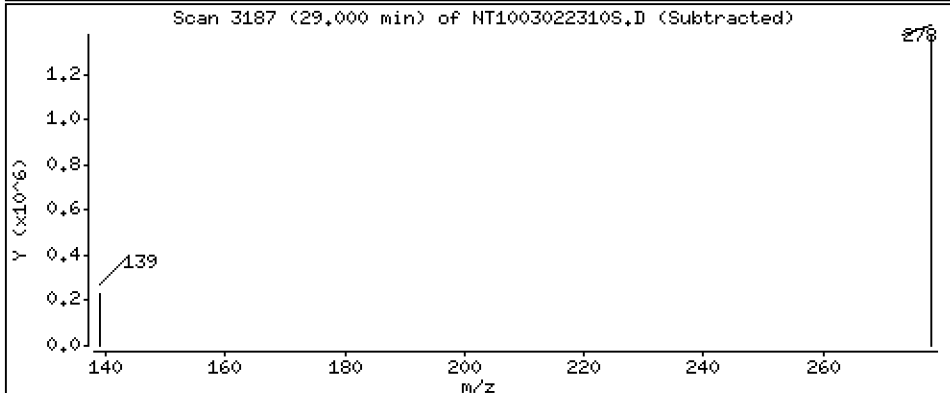
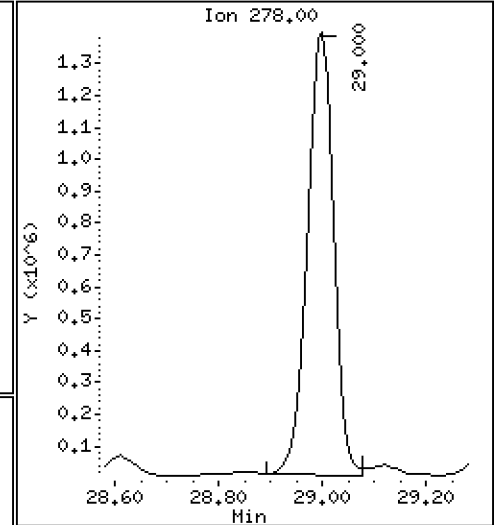
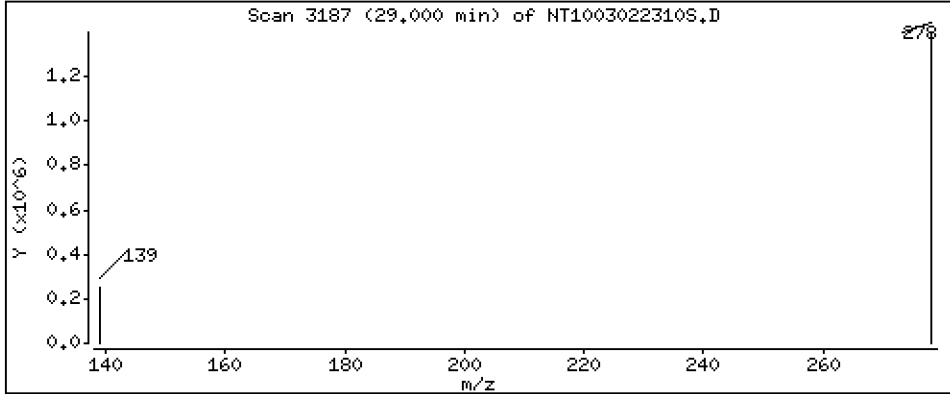
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 5,293 ug/L



Date : 02-MAR-2023 20:06

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-MSD1

Volume Injected (uL): 1.0

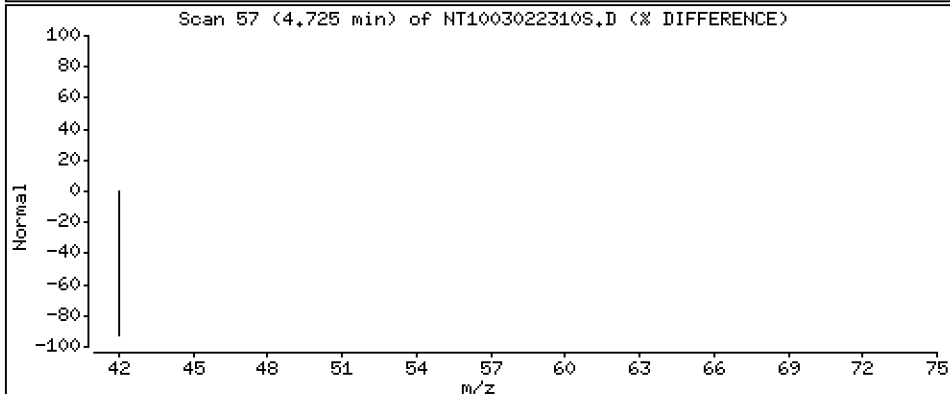
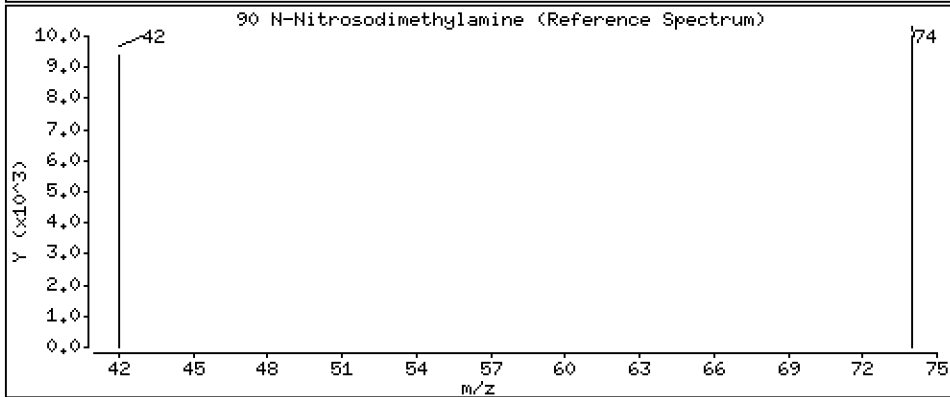
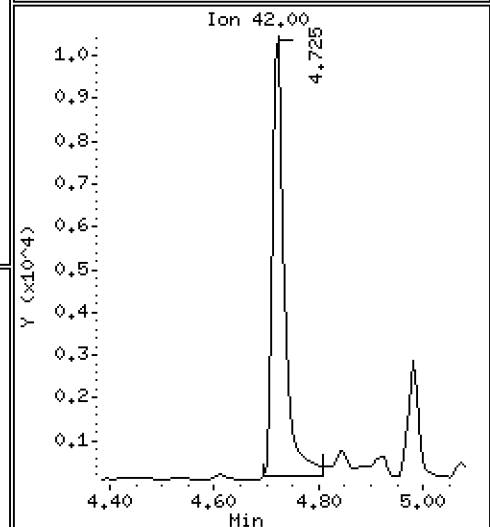
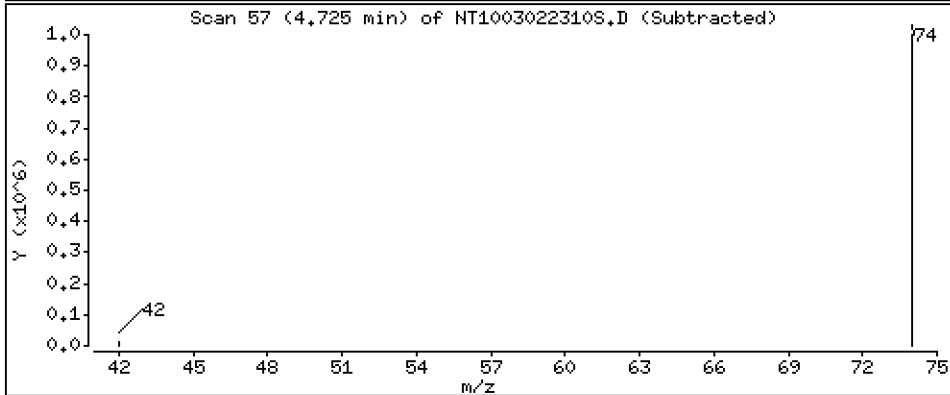
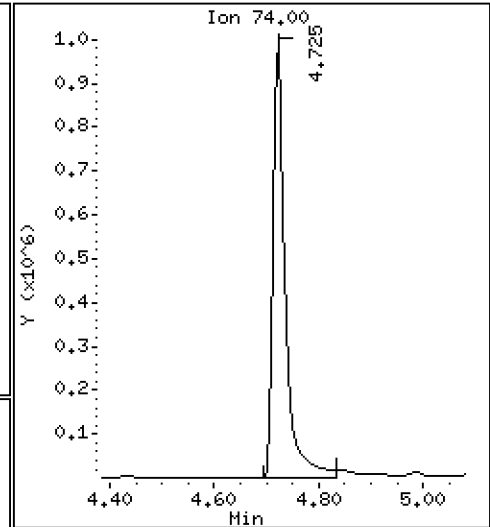
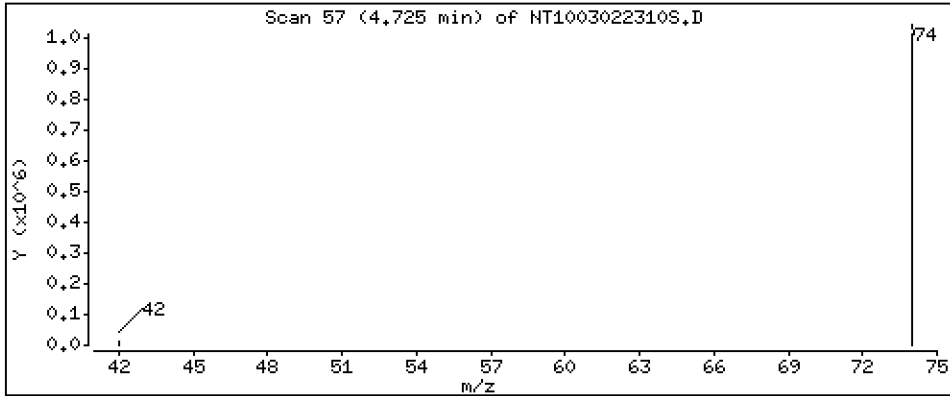
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 14.17 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022310S.D  
 Lab Smp Id: BLA0624-MSD1  
 Inj Date : 02-MAR-2023 20:06 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-MSD1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1303007	6.78798	6.788 (R)
3 Phenol	94		8.525	8.517	(0.921)	3620864	11.9635	11.96
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	999770	4.01213	4.012
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251	(1.000)	672370	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	1326016	5.47323	5.473
11 Benzyl alcohol	79		9.477	9.476	(1.024)	864065	5.12515	5.125
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	982974	4.22119	4.221
13 2-Methylphenol	108		9.655	9.655	(1.044)	823389	4.64786	4.648
15 4-Methylphenol	108		9.950	9.942	(1.076)	987540	5.24932	5.249
16 N-Nitroso-di-n-propylamine	70		9.982	9.981	(1.079)	706552	5.48803	5.488
22 2,4-Dimethylphenol	107		11.006	10.997	(0.939)	3078888	14.0520	14.05
24 Benzoic acid	105		11.159	11.074	(0.952)	2224613	17.4589	17.46
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	840738	4.71541	4.715
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	2477168	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	527257	4.16719	4.167
39 Dimethylphthalate	163		14.749	14.741	(0.963)	2110389	5.15817	5.158
* 42 Acenaphthene-d10	162		15.322	15.314	(1.000)	1288517	4.00000	
50 Diethylphthalate	149		16.218	16.203	(1.059)	2571336	6.66444	6.664
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	1987335	4.20939	4.209
57 Hexachlorobenzene	284		17.586	17.578	(0.955)	885306	4.00690	4.007

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.977)	1516520	13.2670	13.27
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2917258	4.00000	
\$ 66 Terphenyl-d14	244	21.548	21.532	(0.919)	1626926	4.94335	4.943(R)
67 Butylbenzylphthalate	149	22.430	22.414	(0.957)	3266796	4.83792	4.838
* 69 Chrysene-d12	240	23.445	23.421	(1.000)	4069829	4.00000	
* 77 Perylene-d12	264	26.147	26.115	(1.000)	3624176	4.00000	
79 Dibenzo(a,h)anthracene	278	29.000	28.929	(1.109)	4833039	5.29265	5.293
90 N-Nitrosodimethylamine	74	4.725	4.732	(0.511)	1610808	14.1737	14.17

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022310S.D  
 Lab Smp Id: BLA0624-MSD1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	672370	36.27
27 Naphthalene-d8	1779056	889528	3558112	2477168	39.24
42 Acenaphthene-d10	954569	477285	1909138	1288517	34.98
59 Phenanthrene-d10	1596290	798145	3192580	2917258	82.75
69 Chrysene-d12	1649110	824555	3298220	4069829	146.79
77 Perylene-d12	1901958	950979	3803916	3624176	90.55

<-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.45	0.10
77 Perylene-d12	26.12	25.62	26.62	26.15	0.12

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

REVIEW SUMMARY FOR FILE - NT1003022310S.D

Lab ID: BLA0624-MSD1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 20:06

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.945	0.0072	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

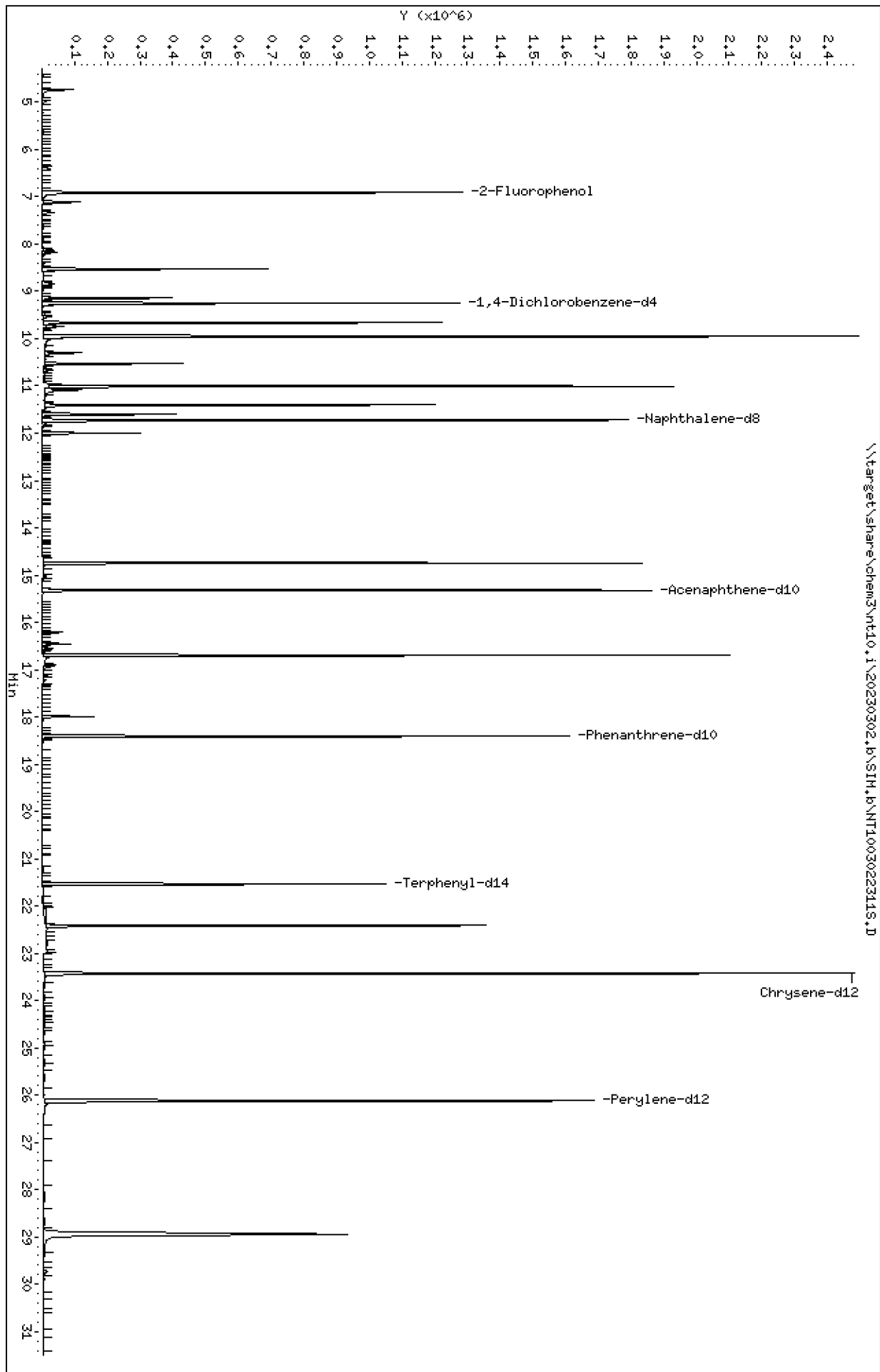
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT10030223115.D  
Date : 02-MAR-2023 20:44  
Client ID:  
Sample Info: BLR0624-SRM1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.B\NT10030223115.D



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

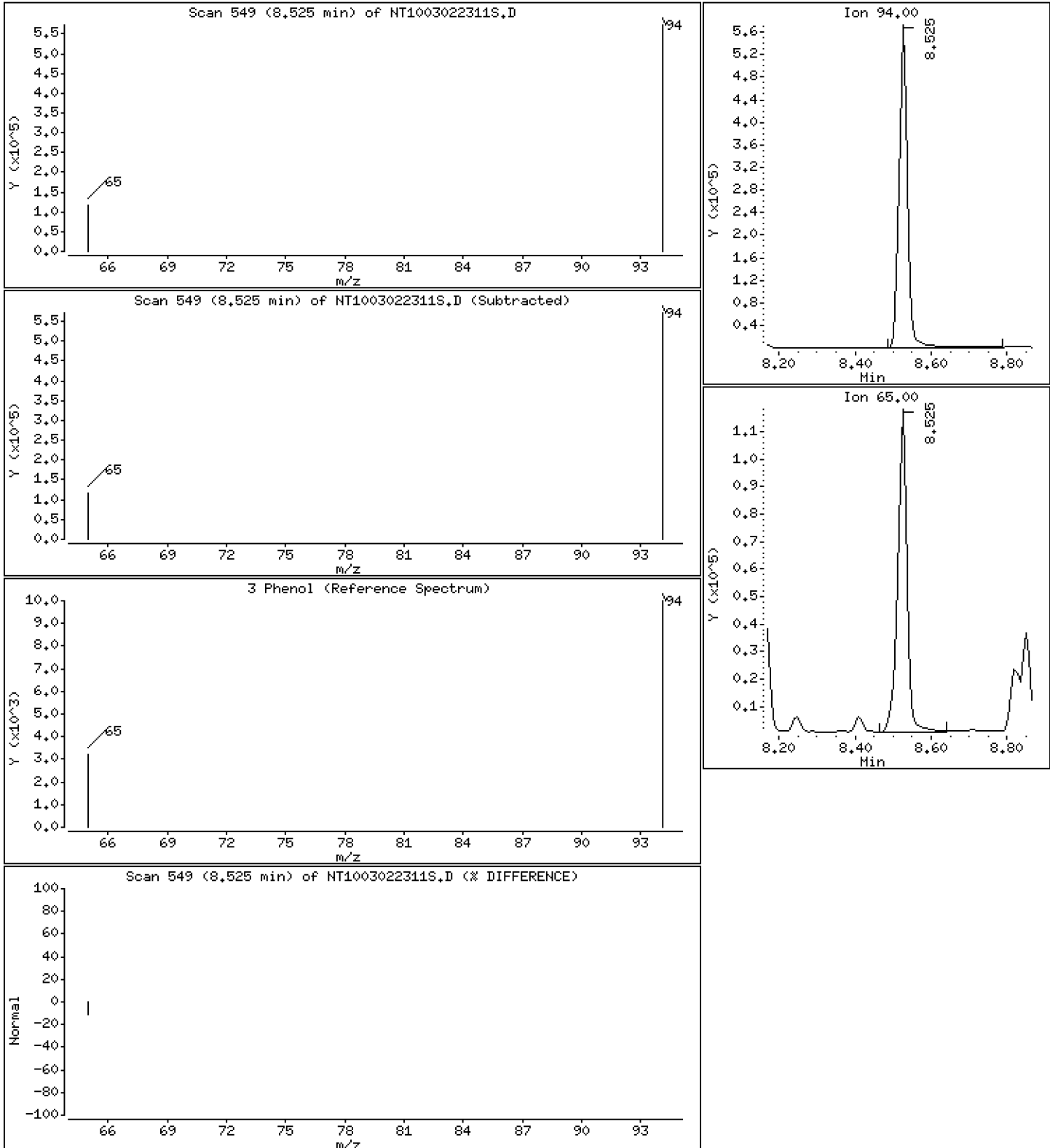
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 2,644 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

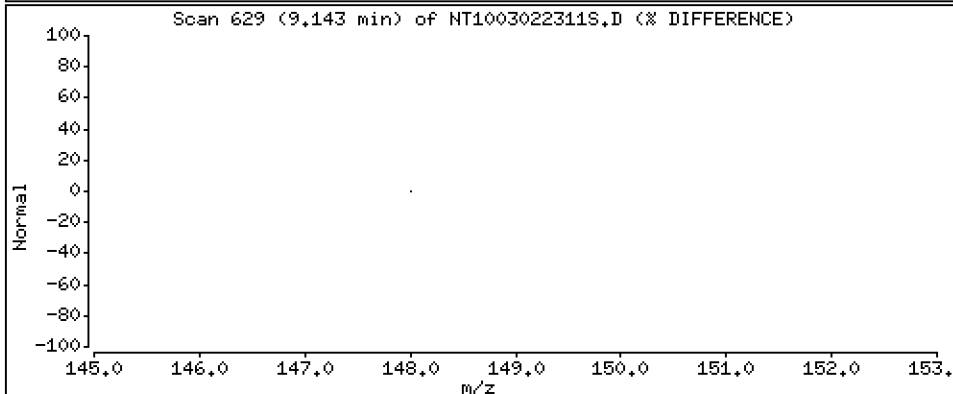
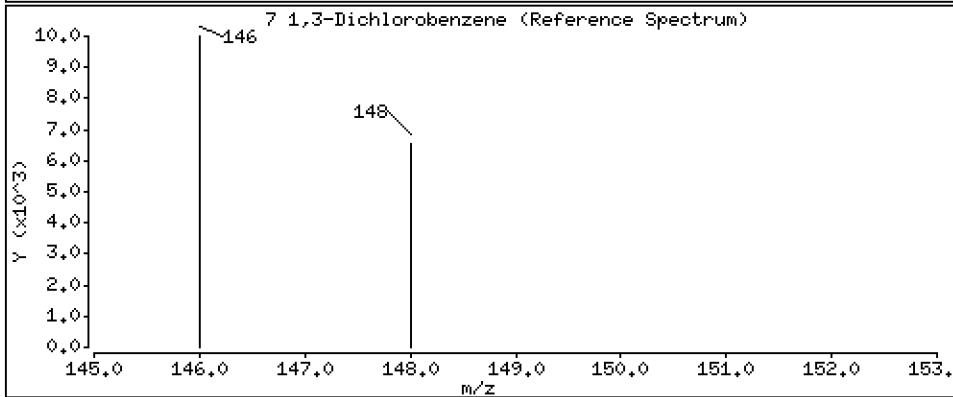
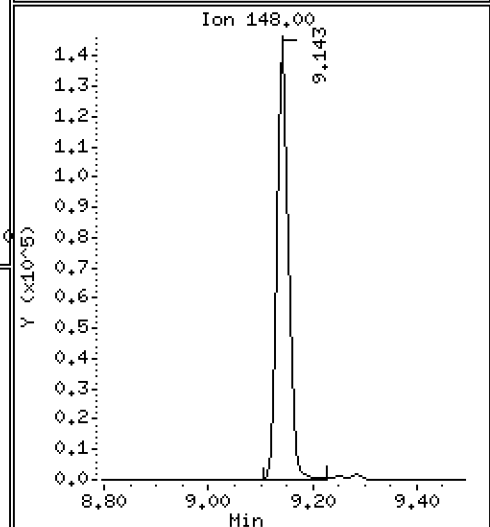
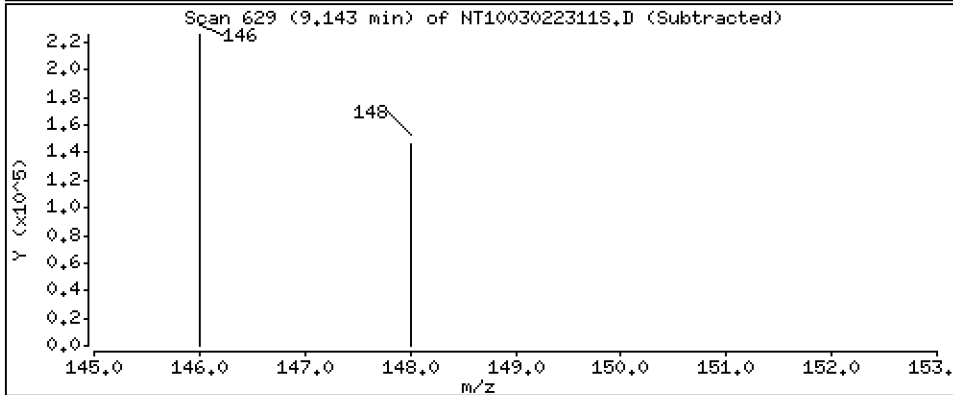
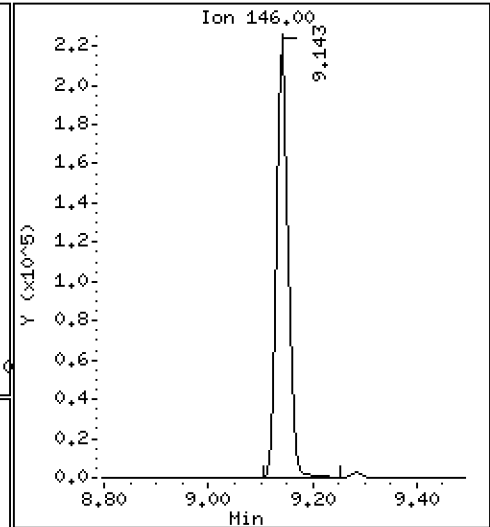
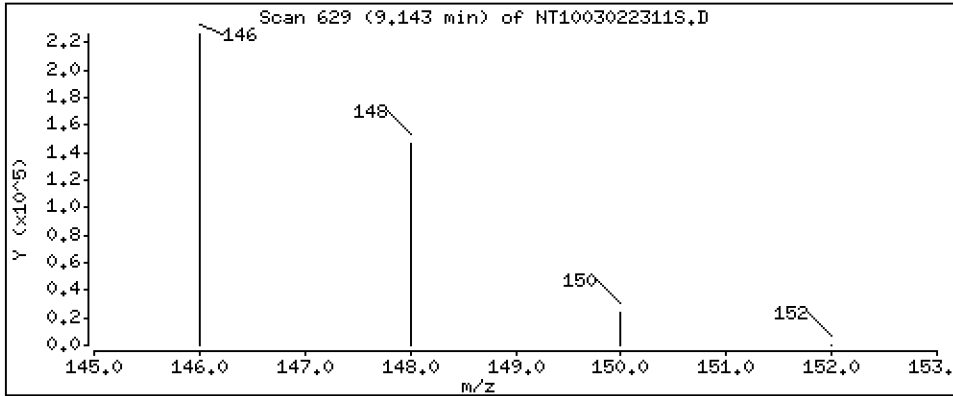
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 1.193 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

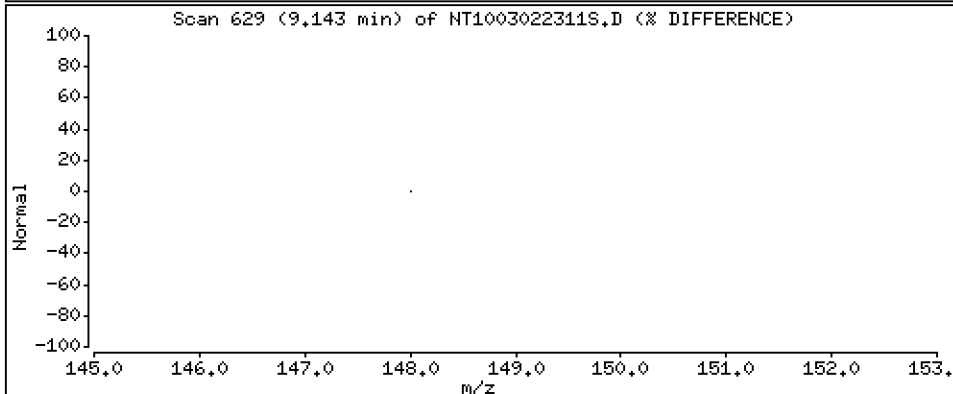
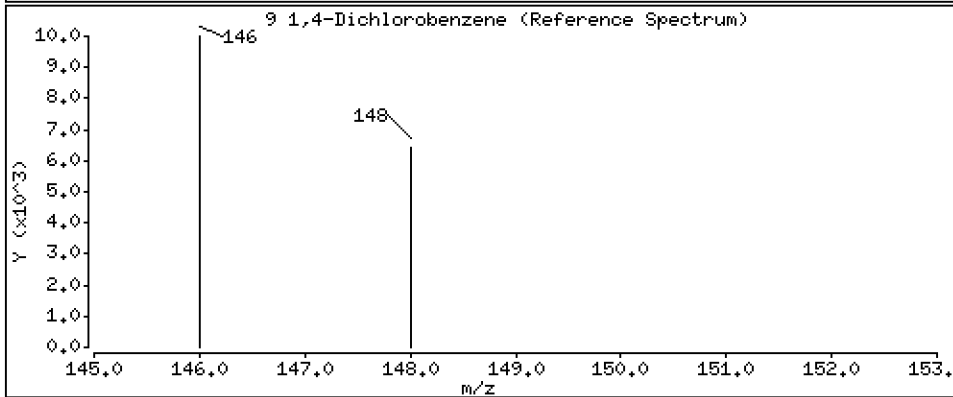
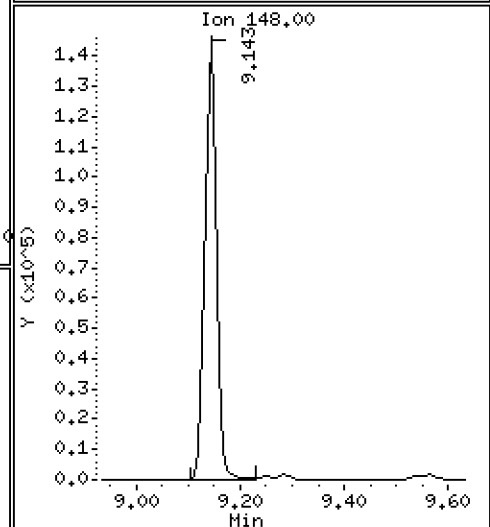
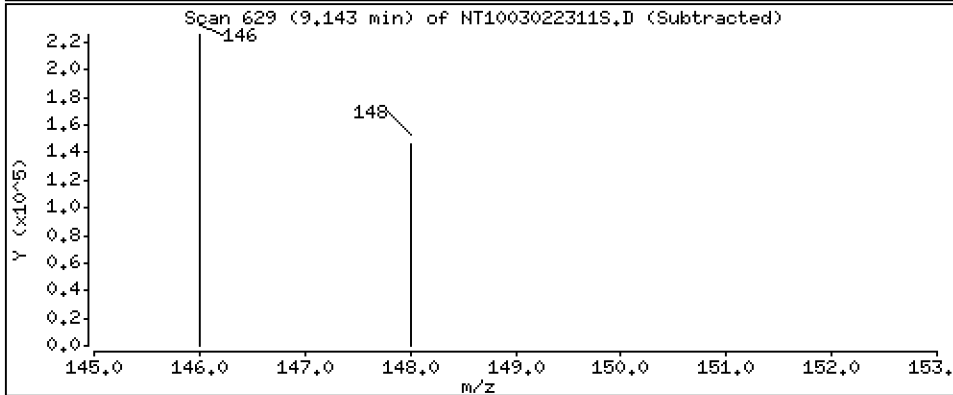
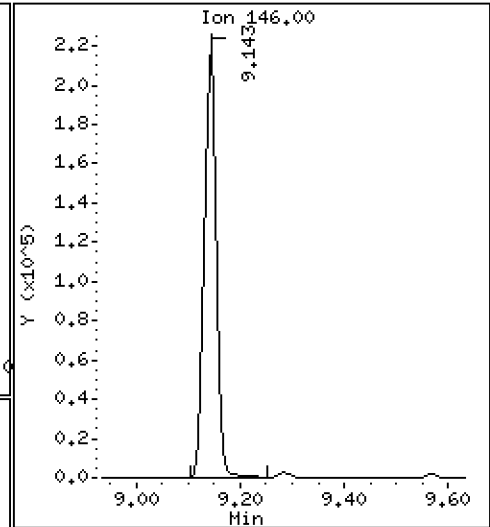
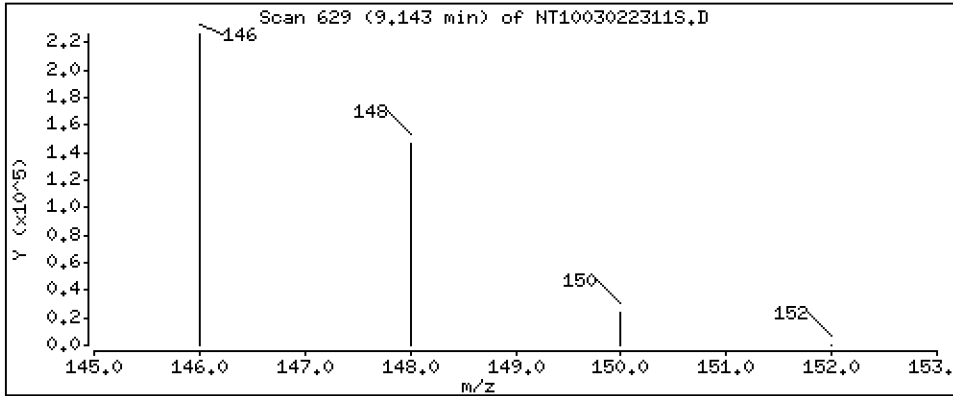
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9,1,4-Dichlorobenzene

Concentration: 1.227 ug/L





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

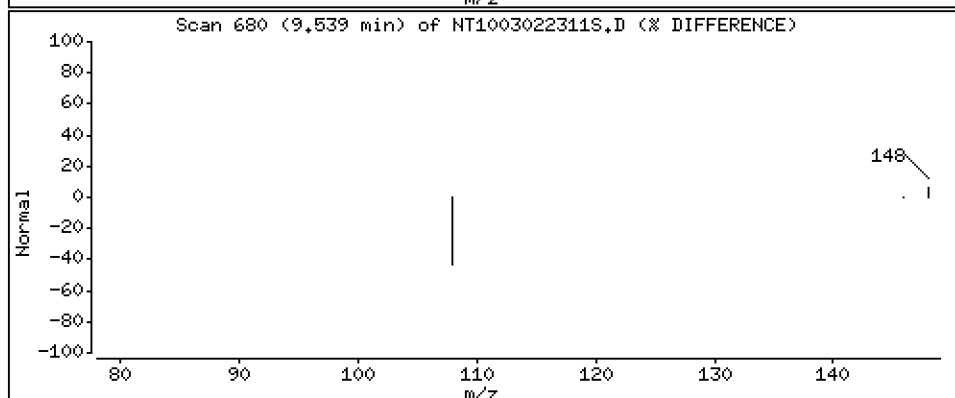
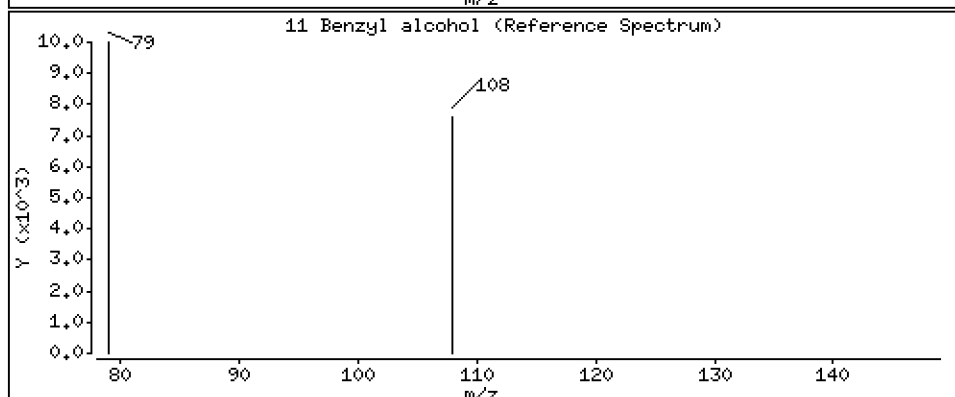
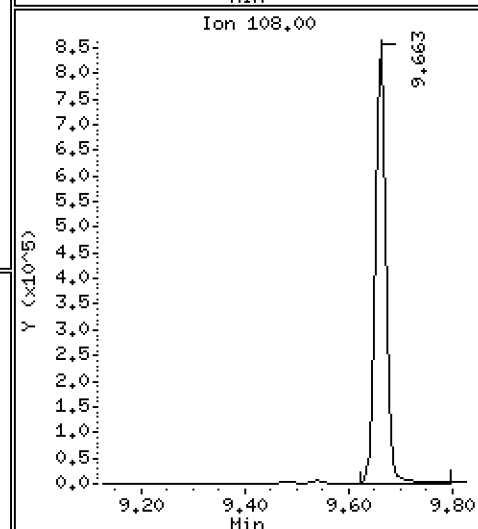
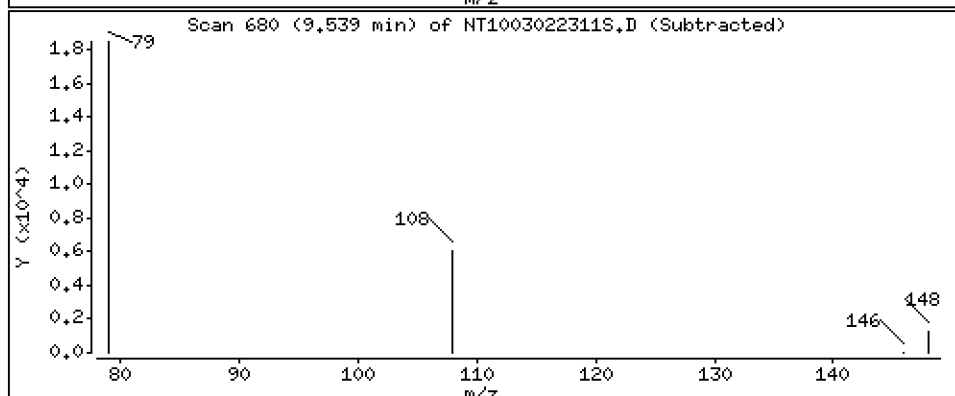
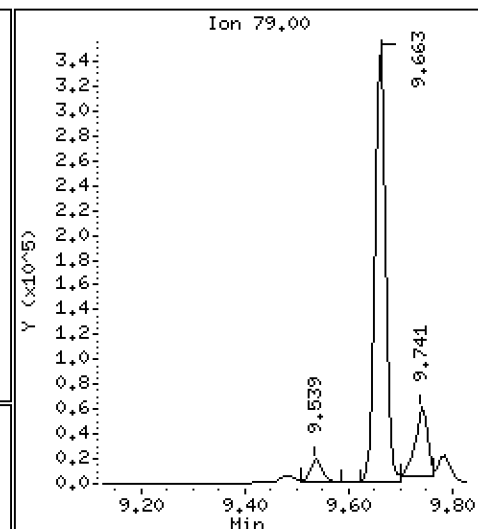
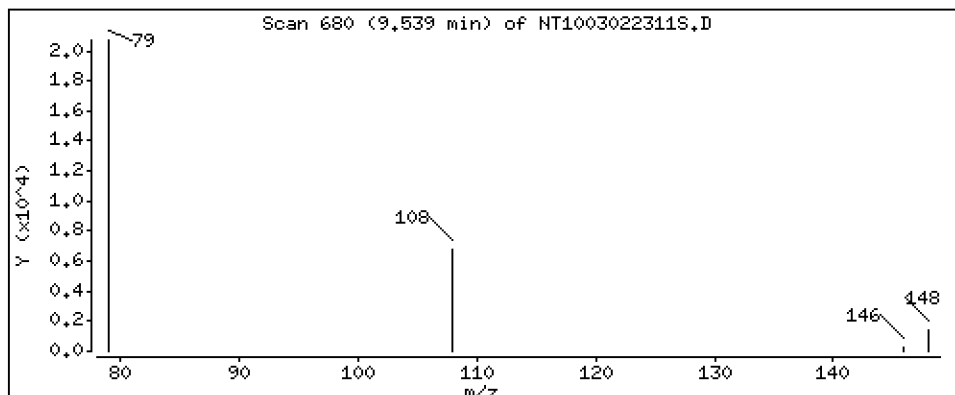
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1750 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

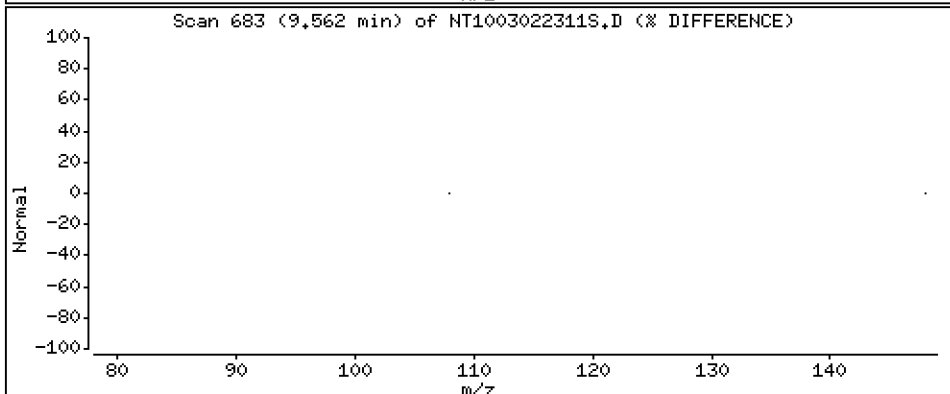
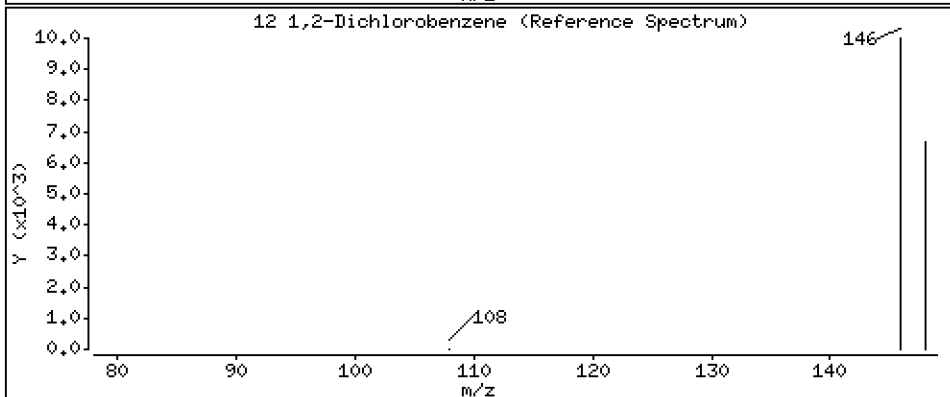
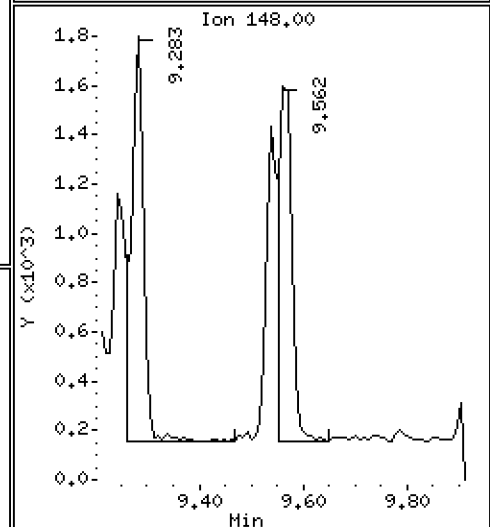
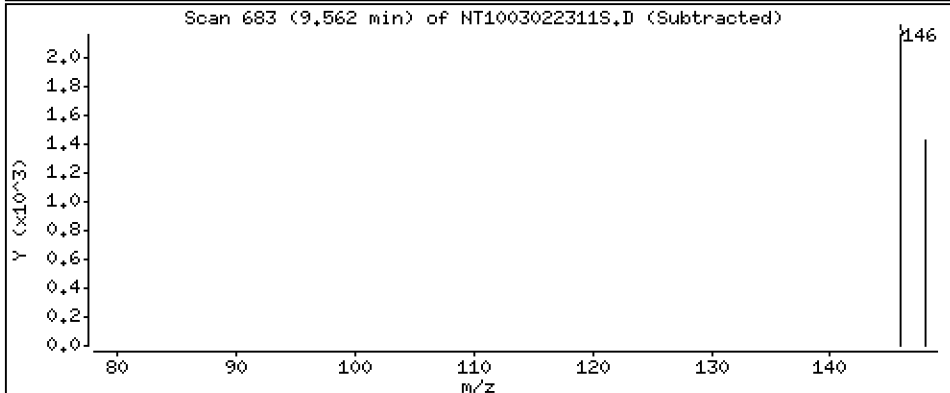
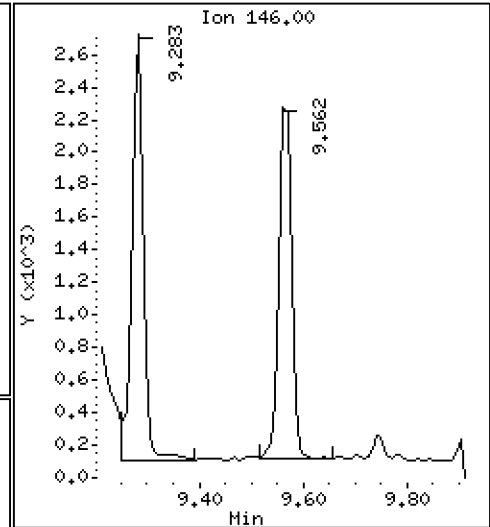
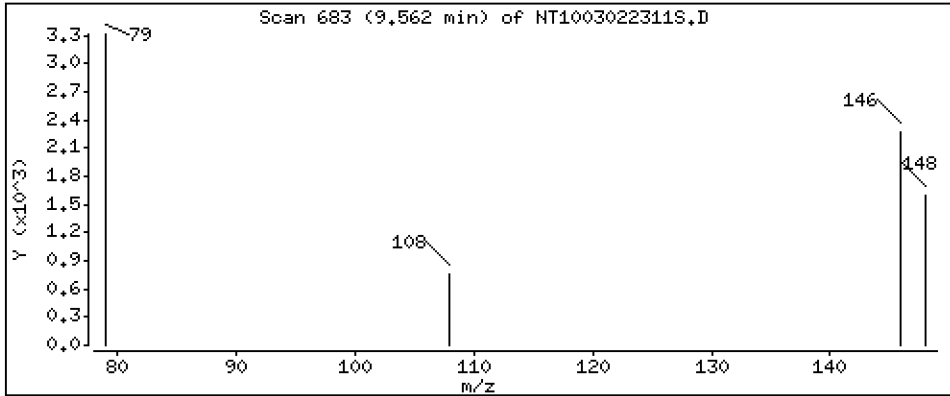
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.01329 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

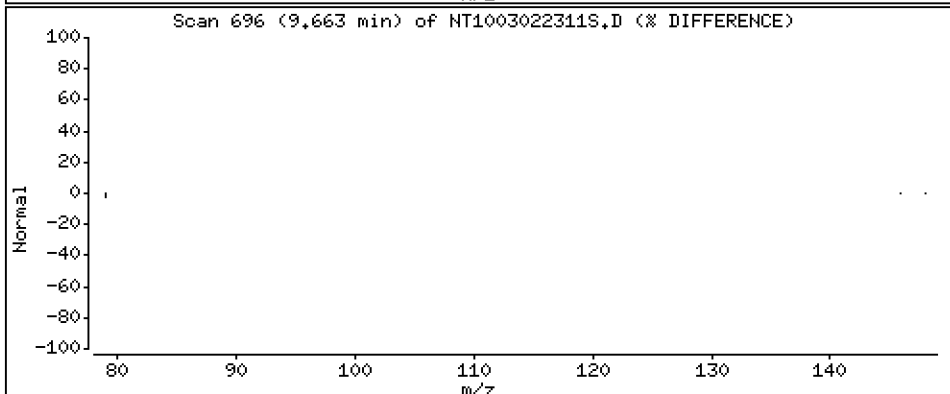
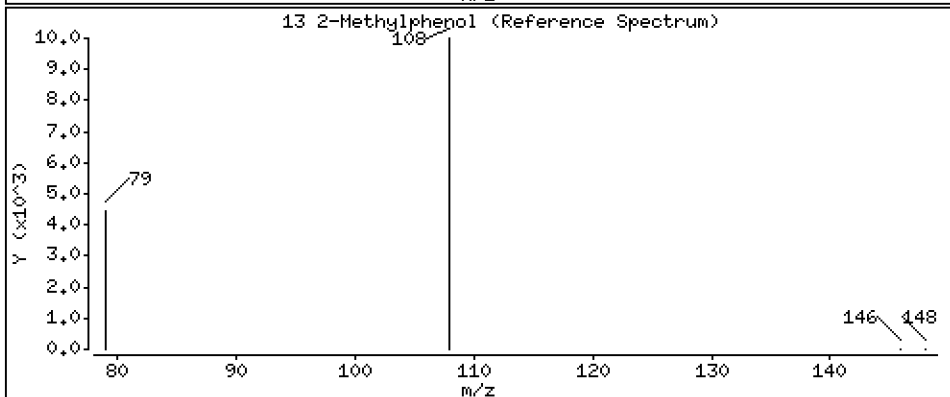
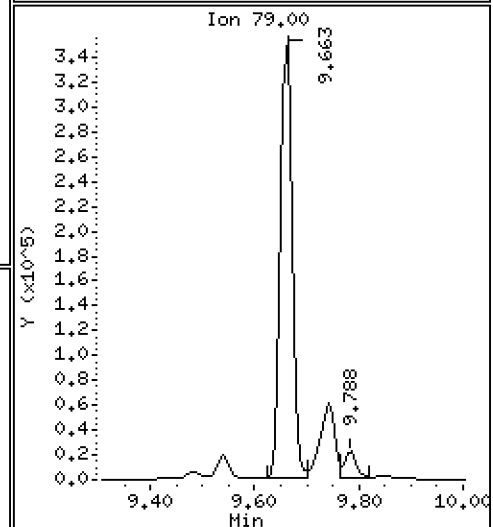
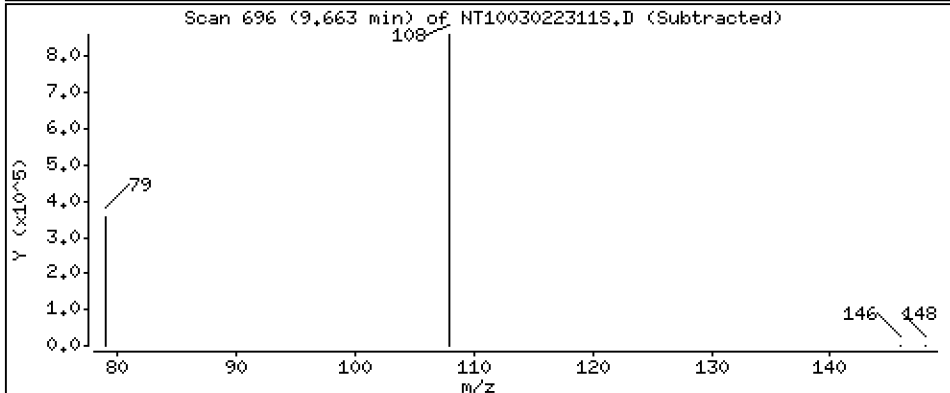
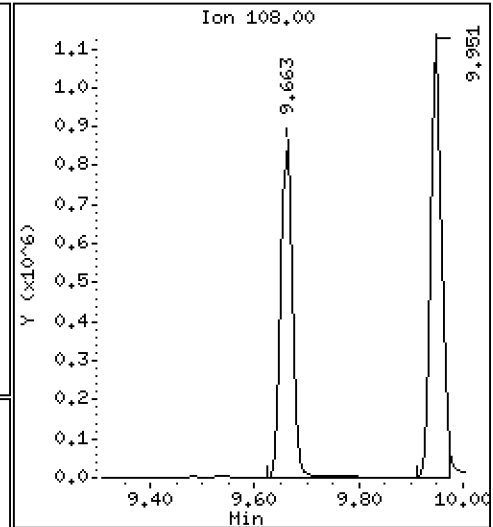
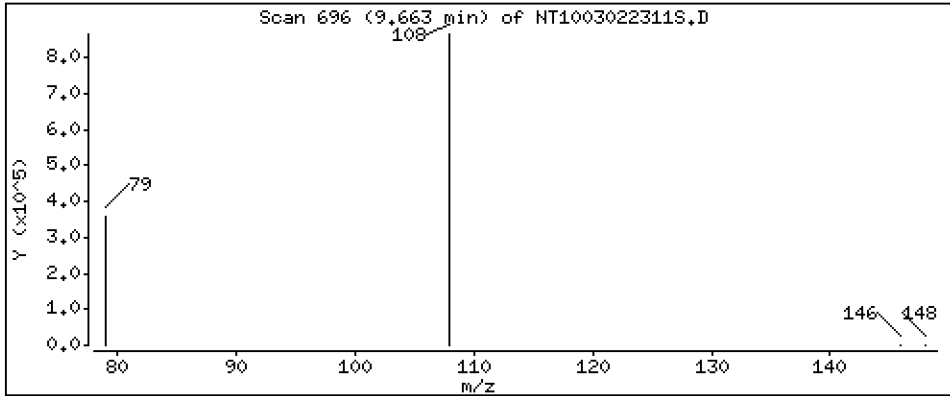
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 6.239 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

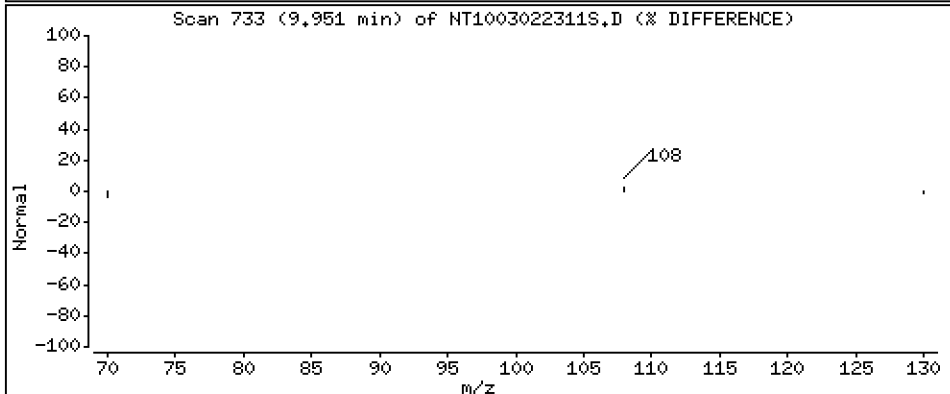
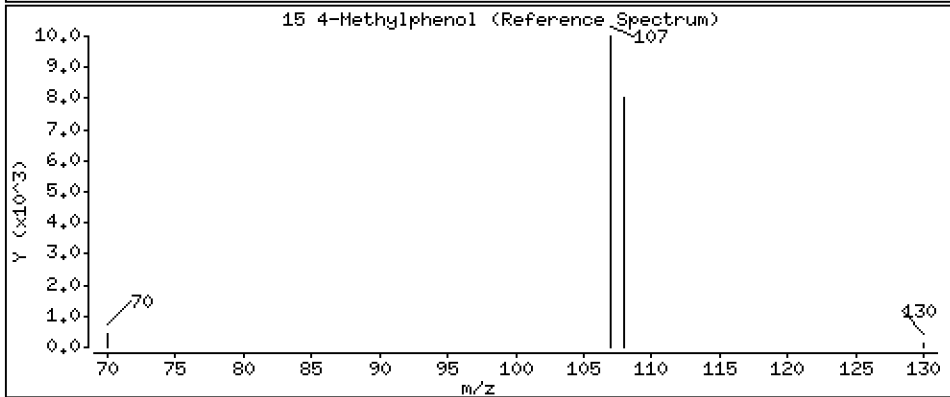
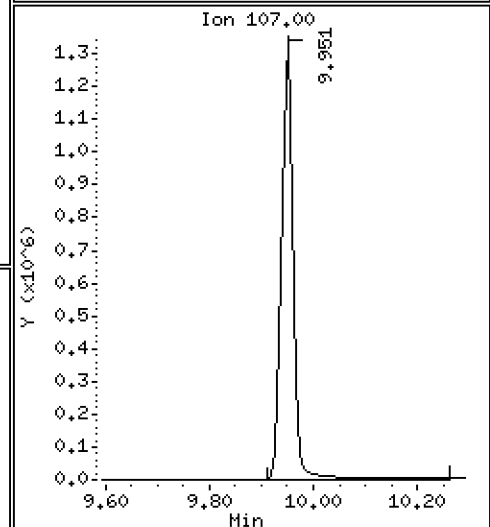
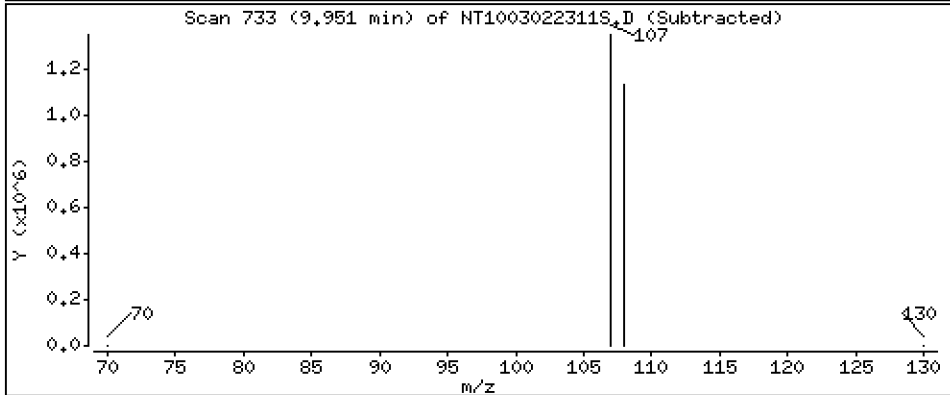
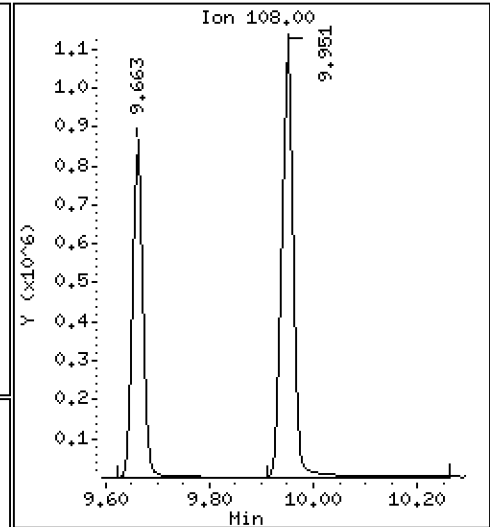
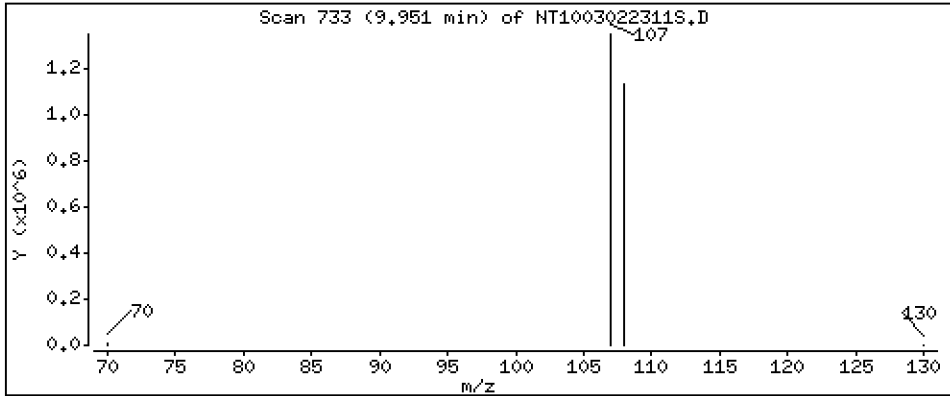
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 7.586 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

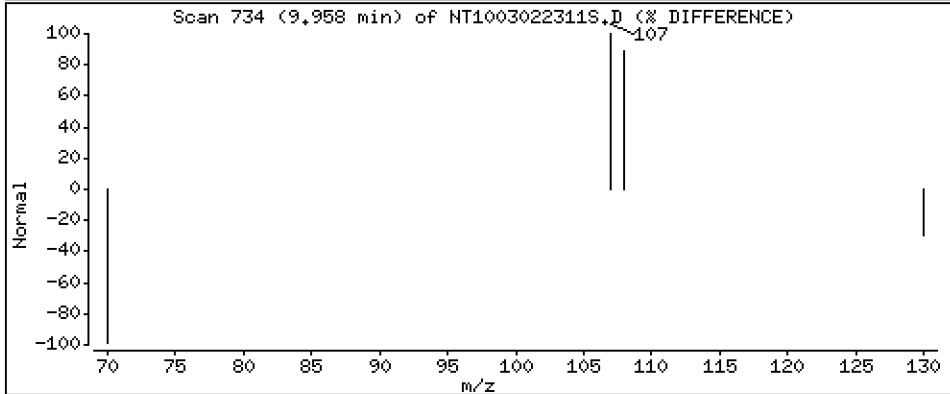
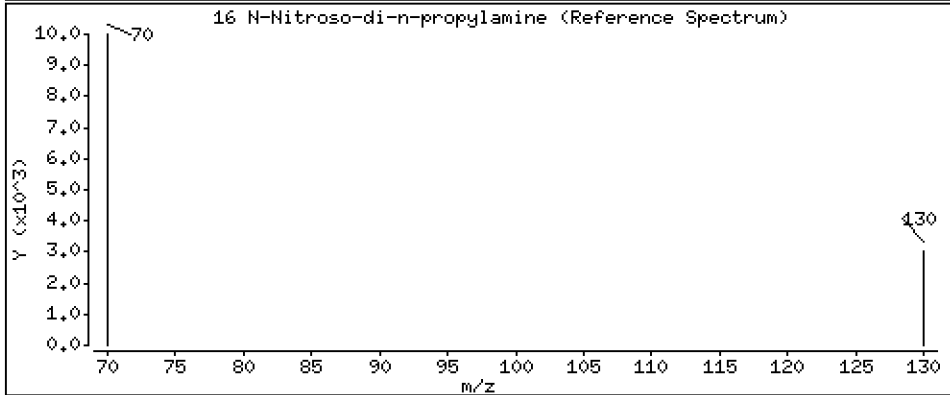
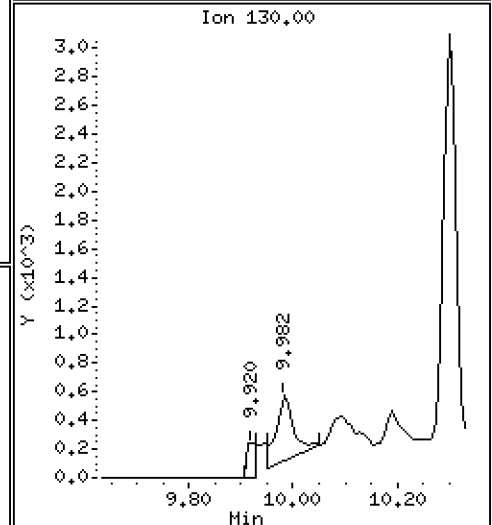
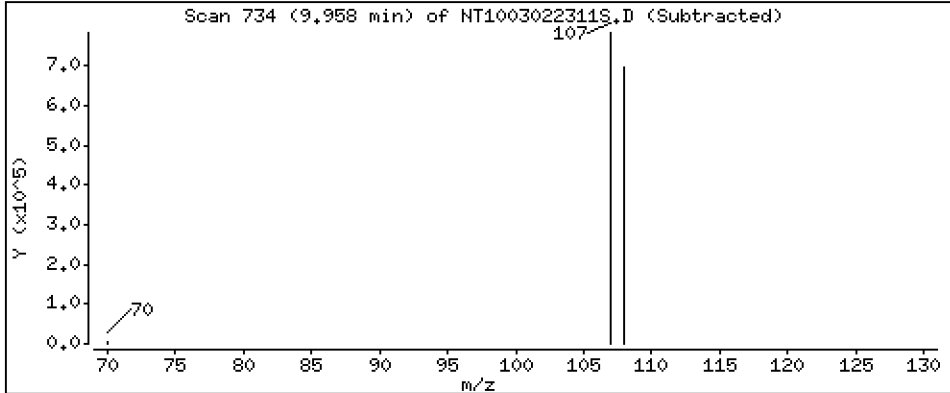
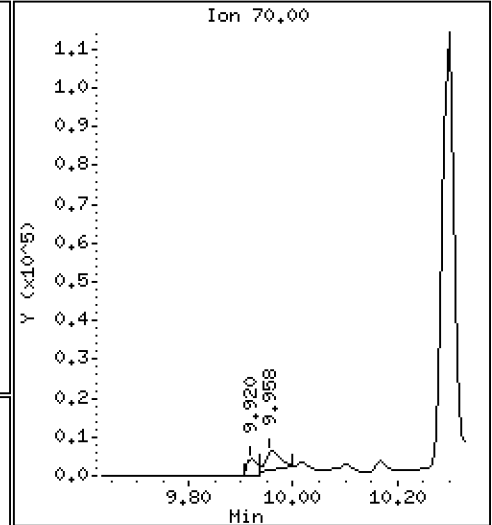
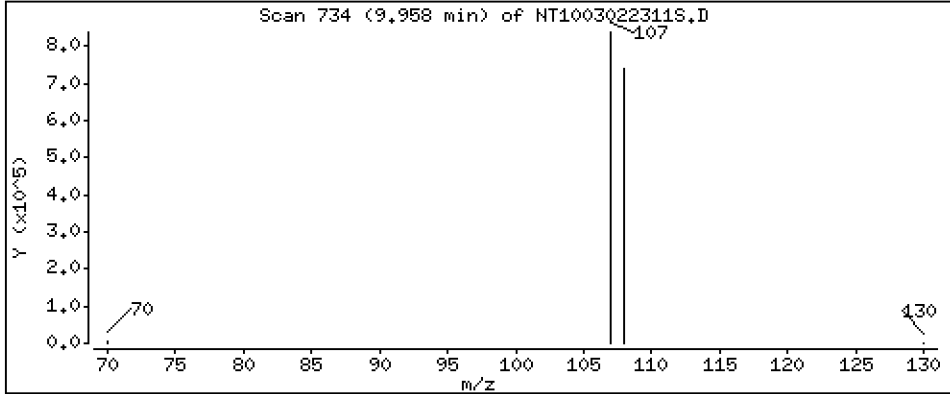
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.07196 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

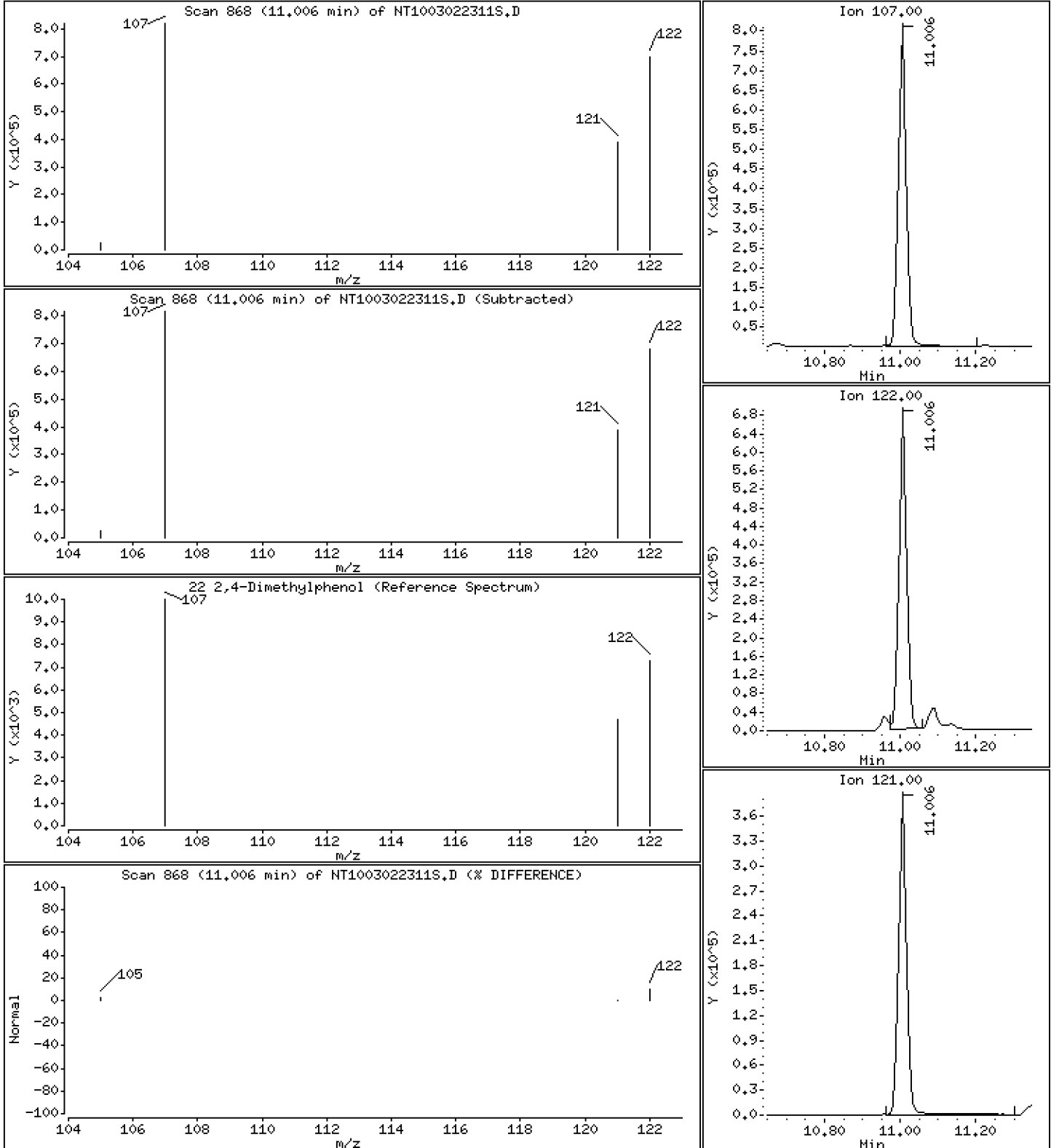
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 4.847 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

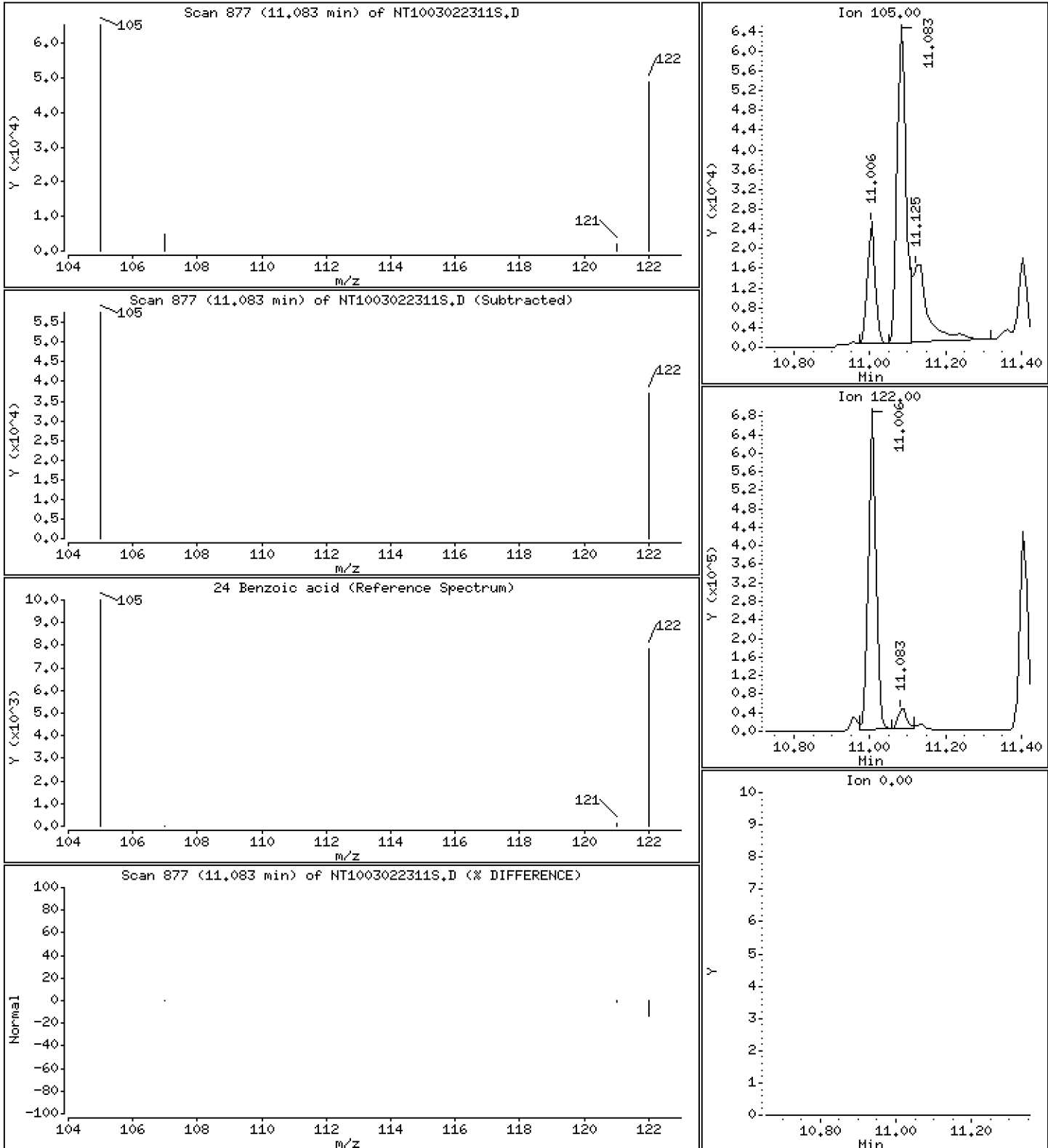
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.8166 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

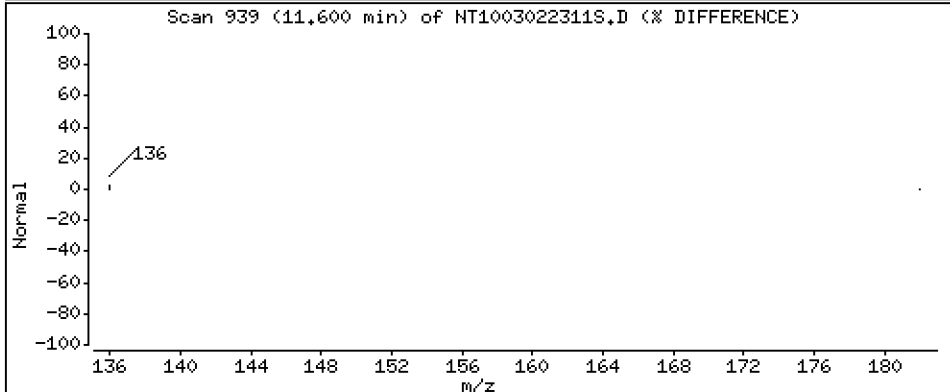
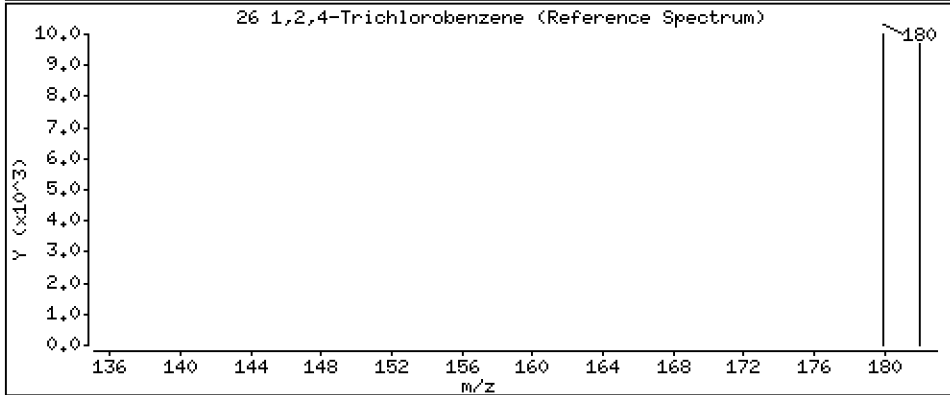
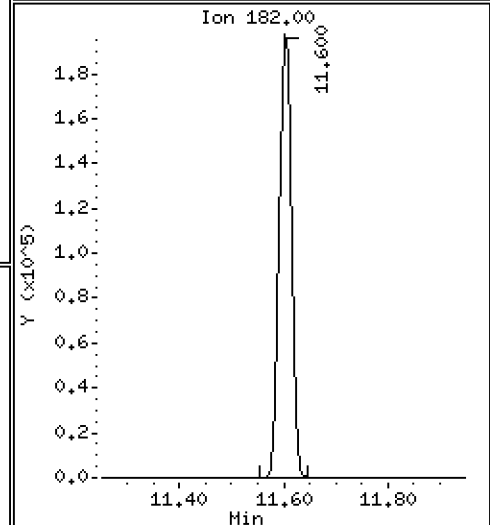
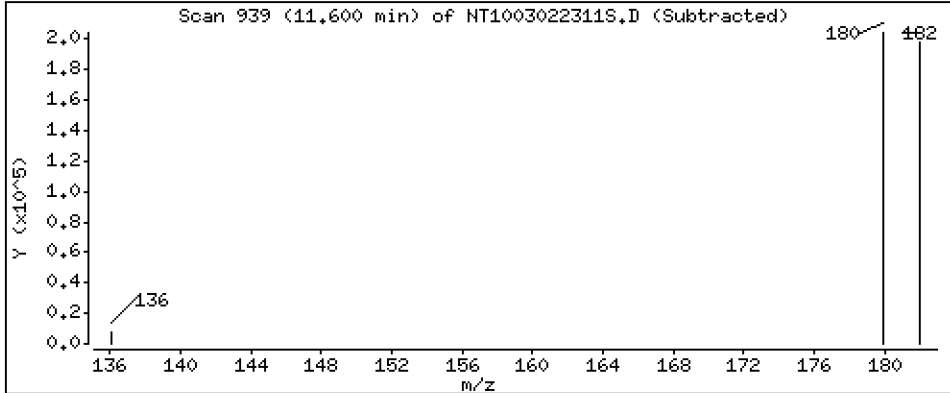
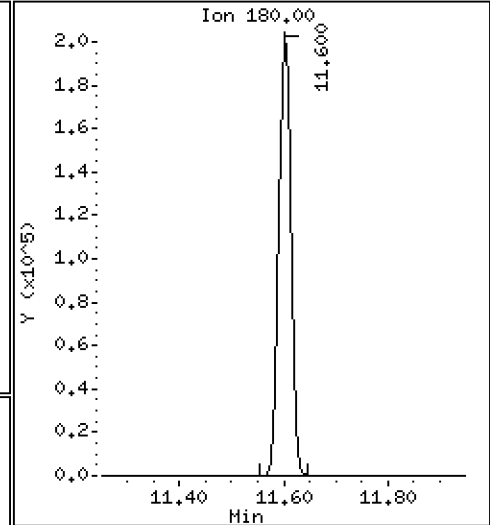
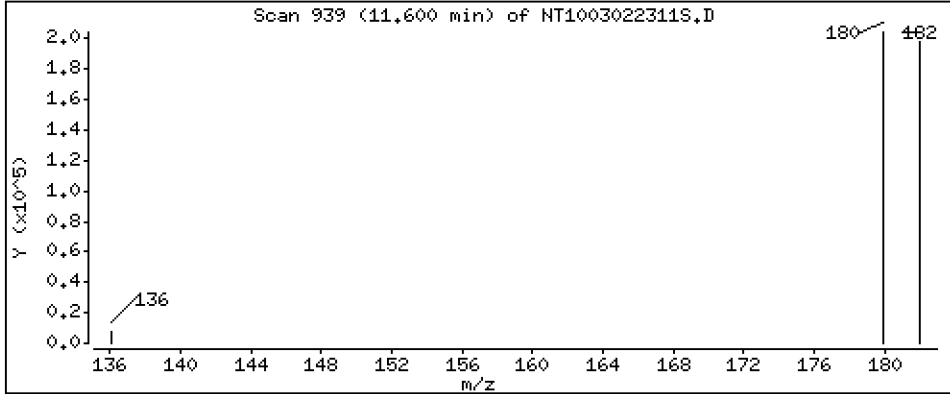
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 1.552 ug/L





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

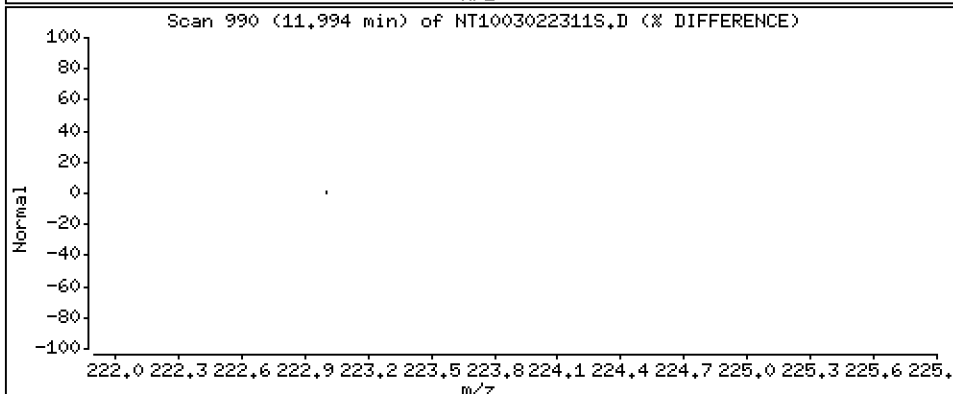
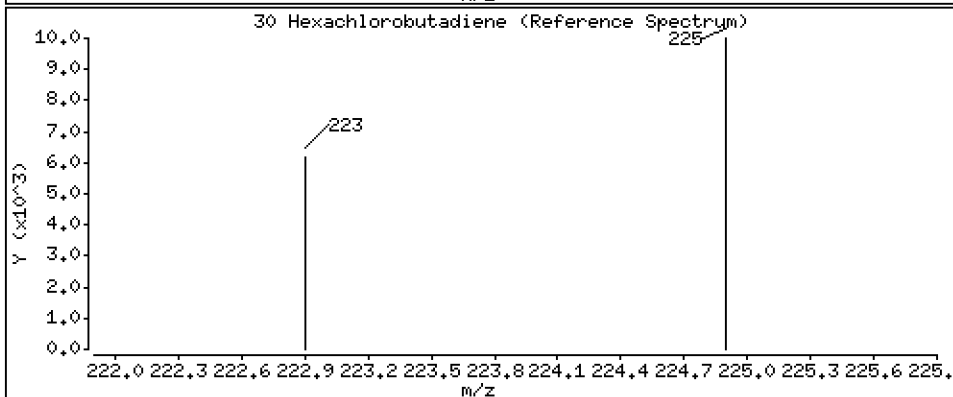
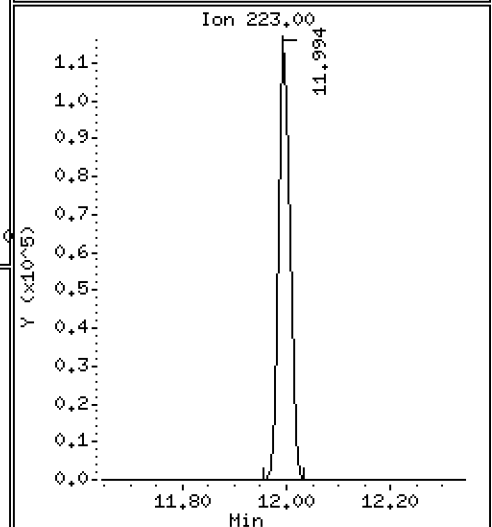
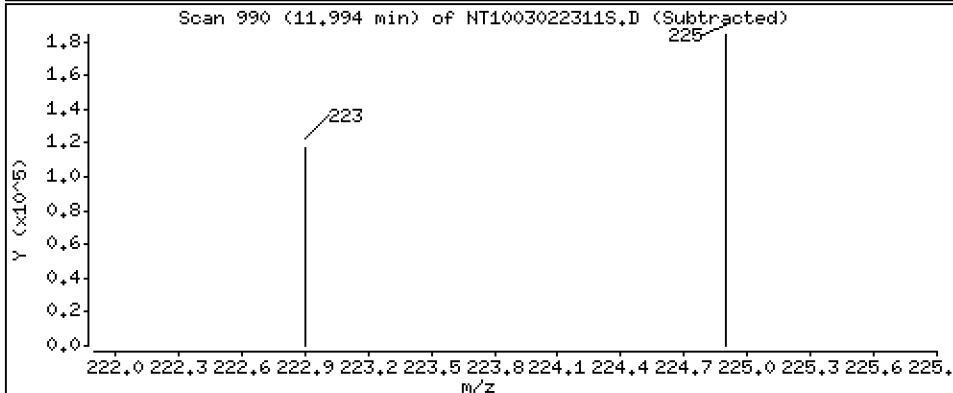
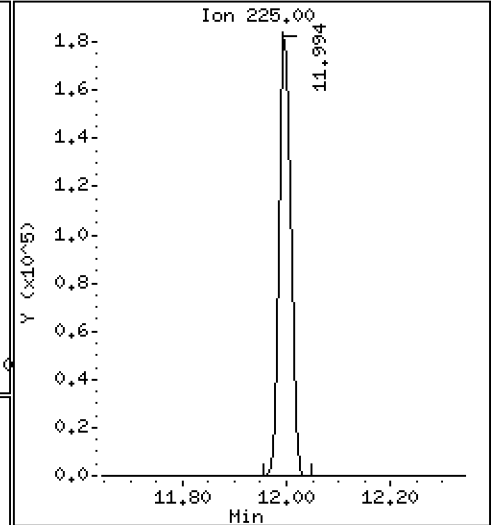
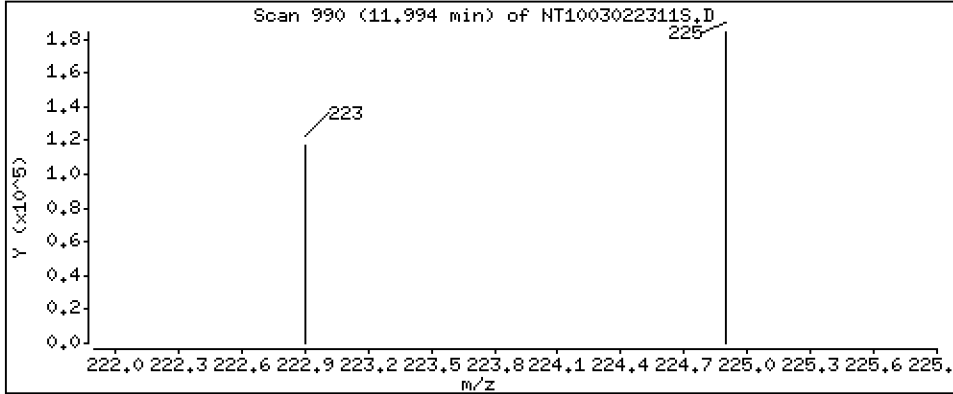
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 1,926 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

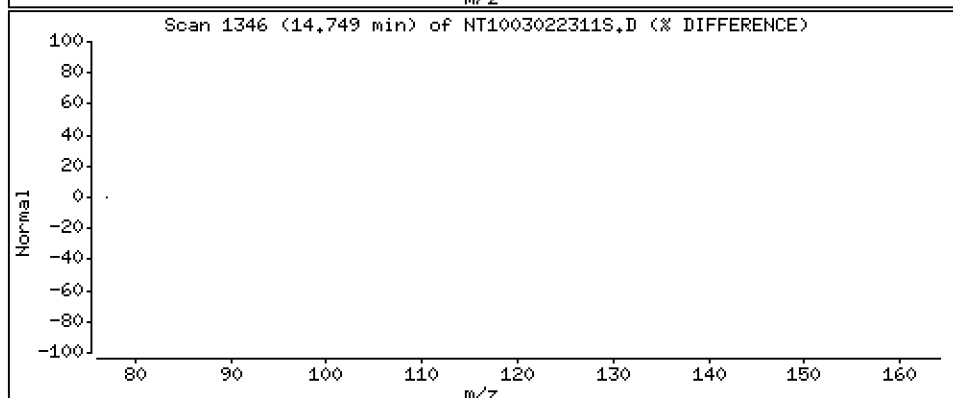
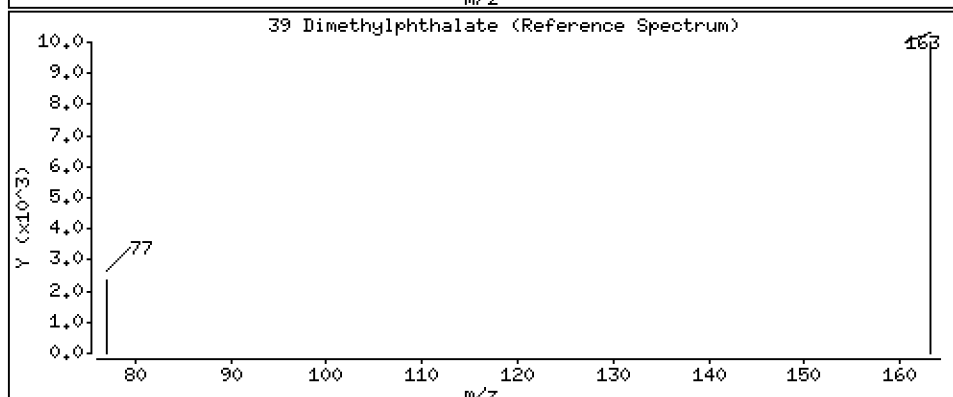
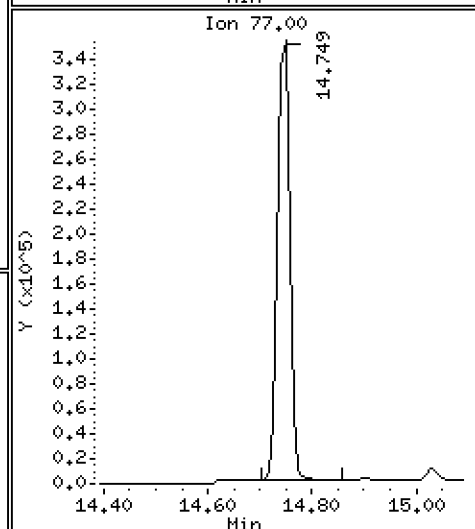
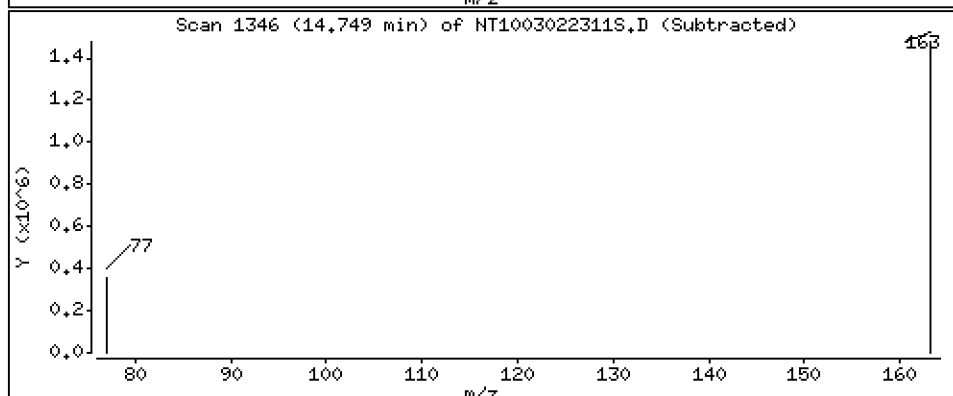
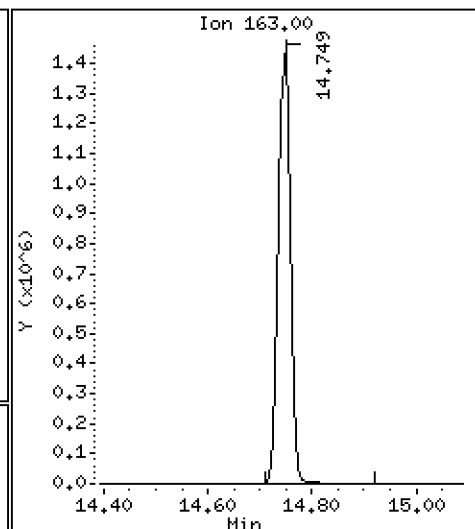
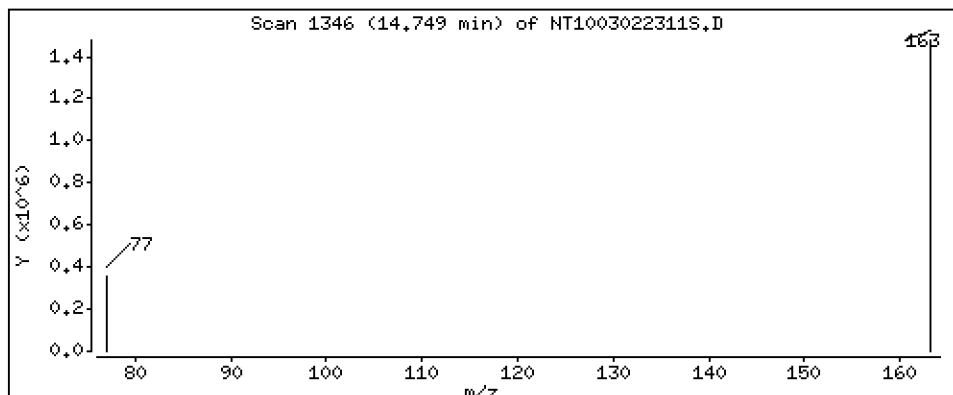
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 4,992 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

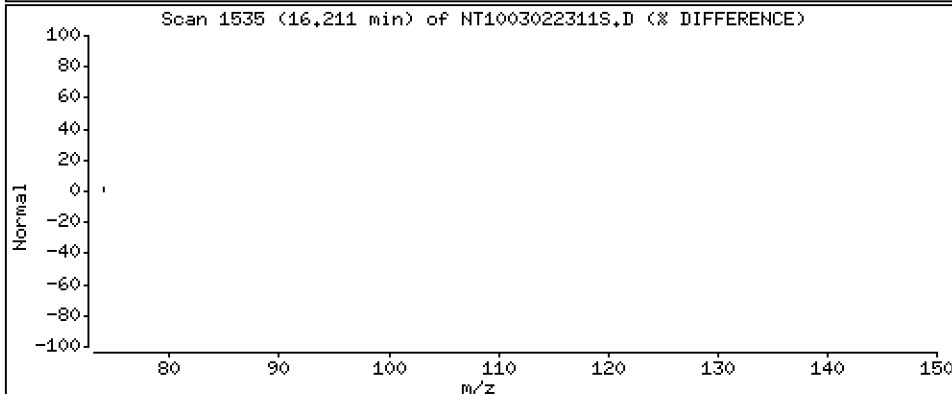
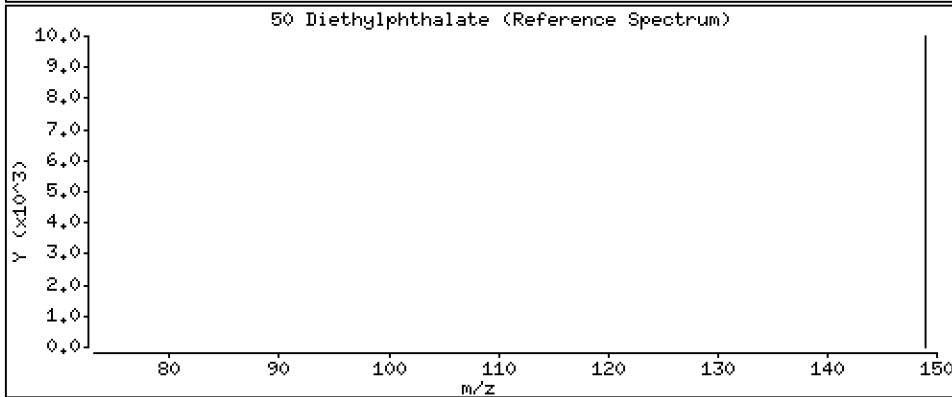
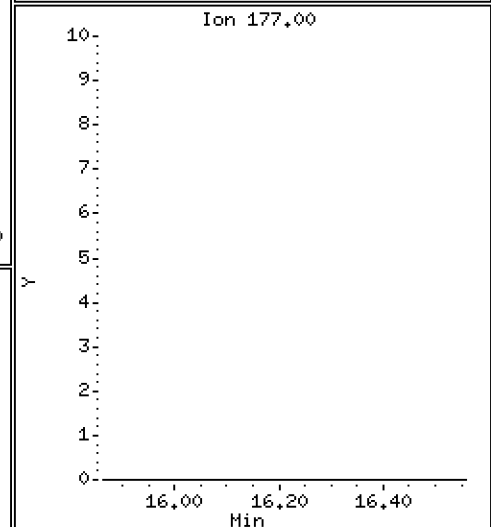
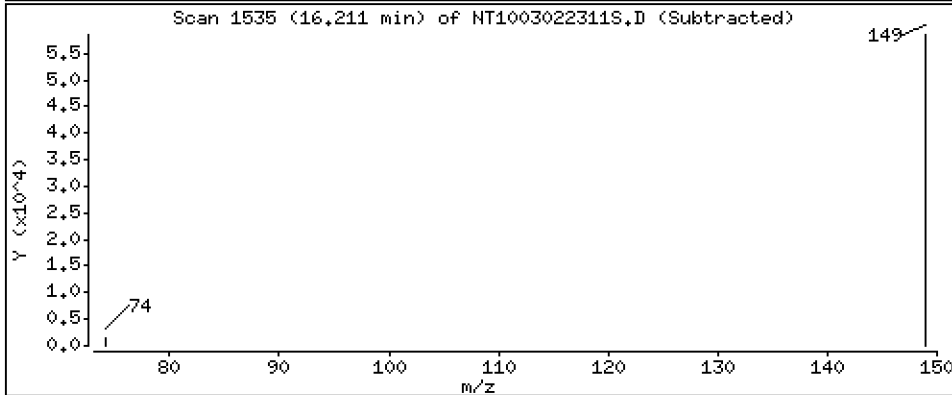
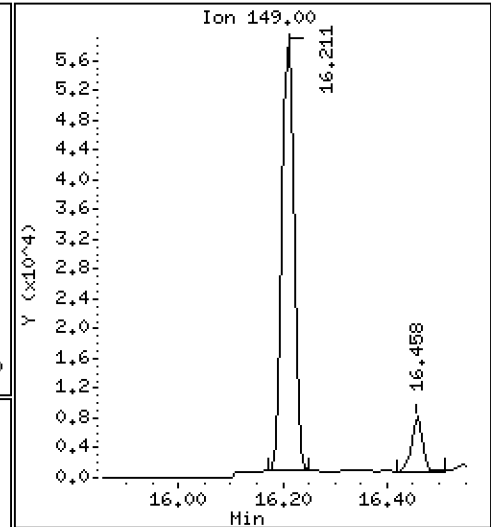
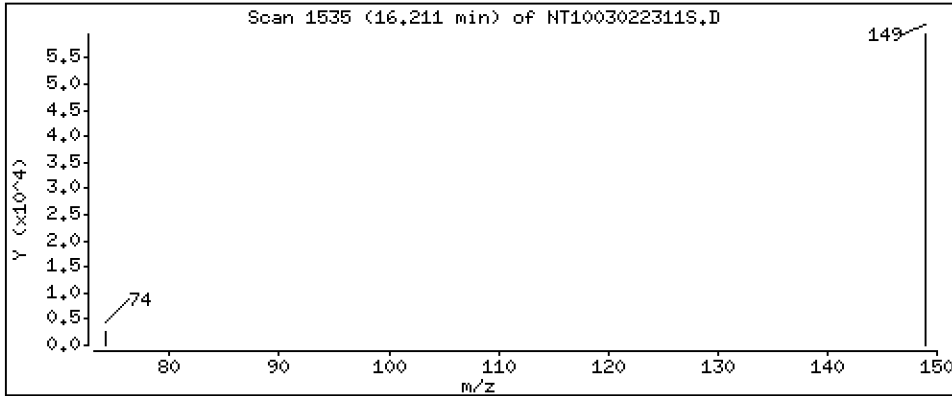
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.2121 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

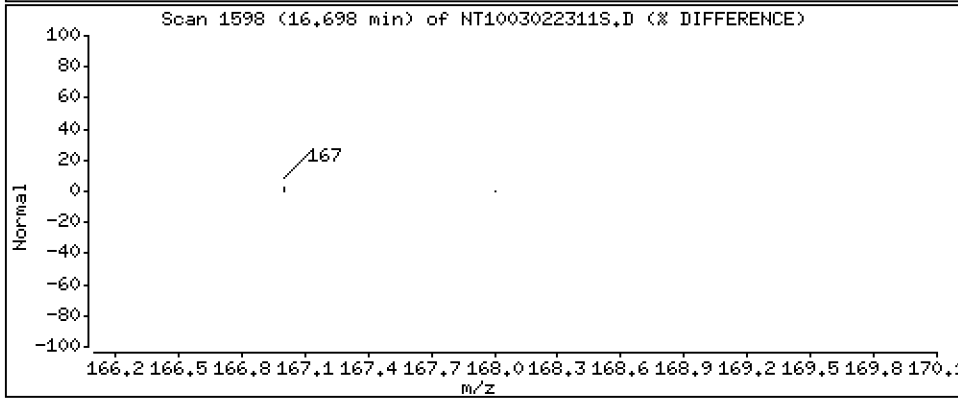
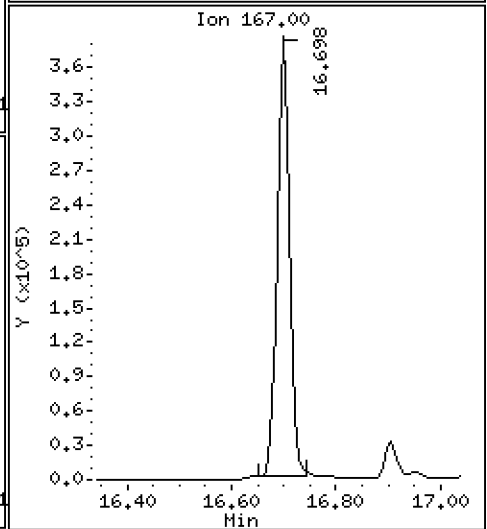
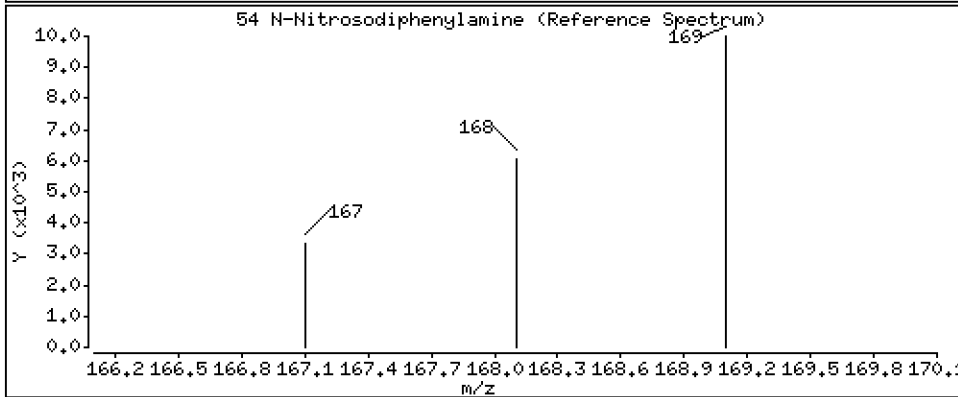
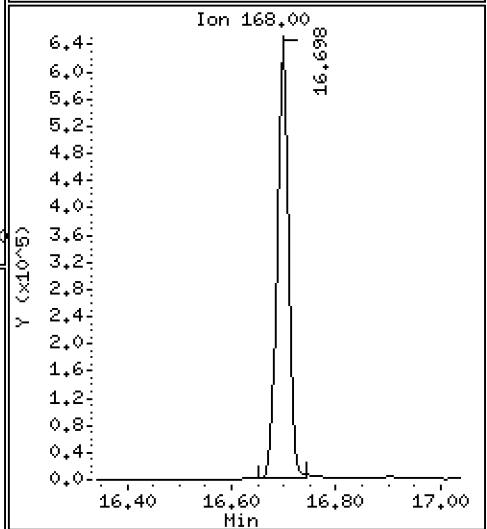
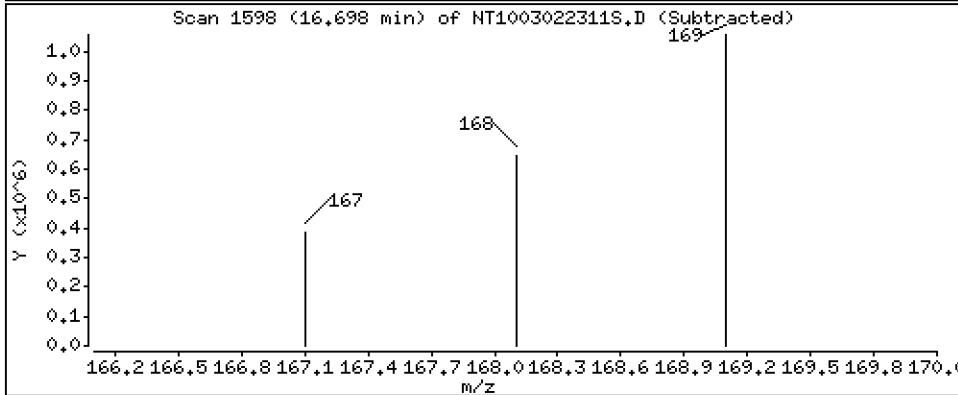
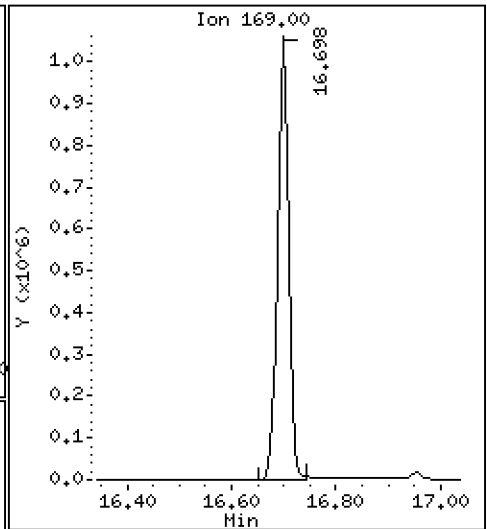
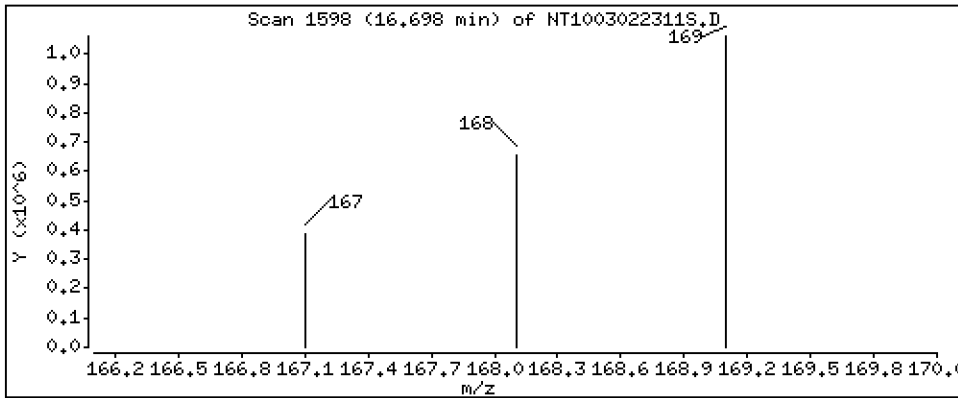
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 3.756 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

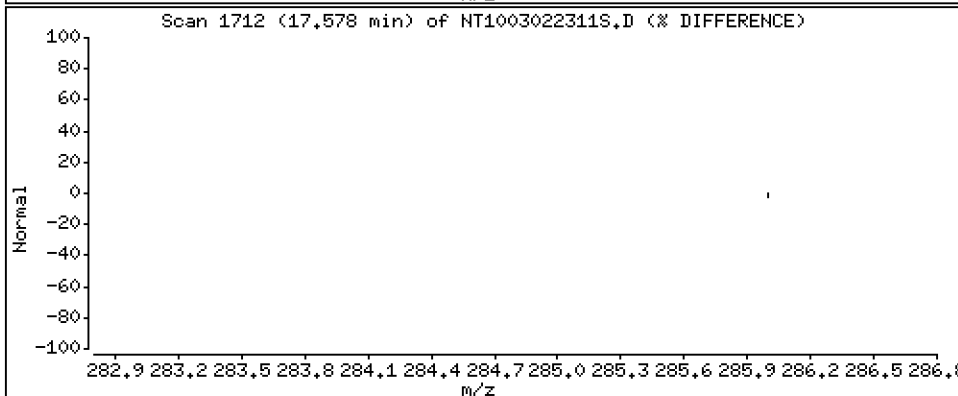
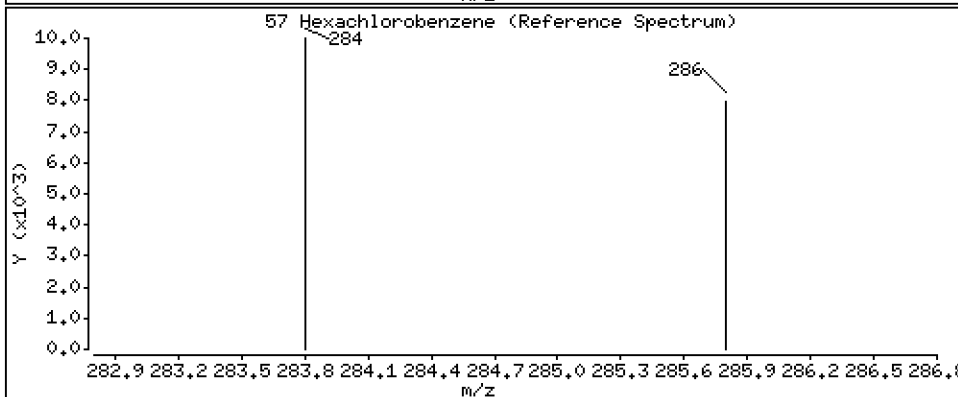
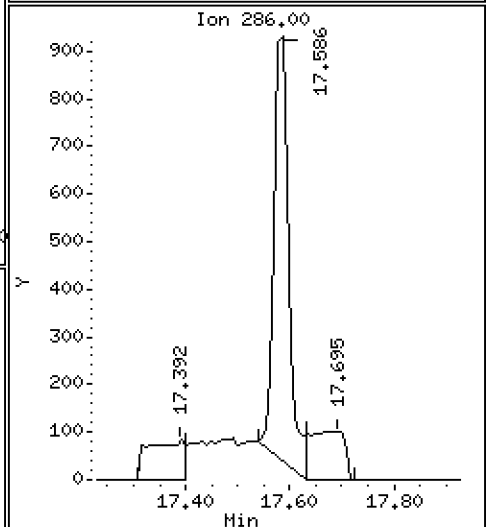
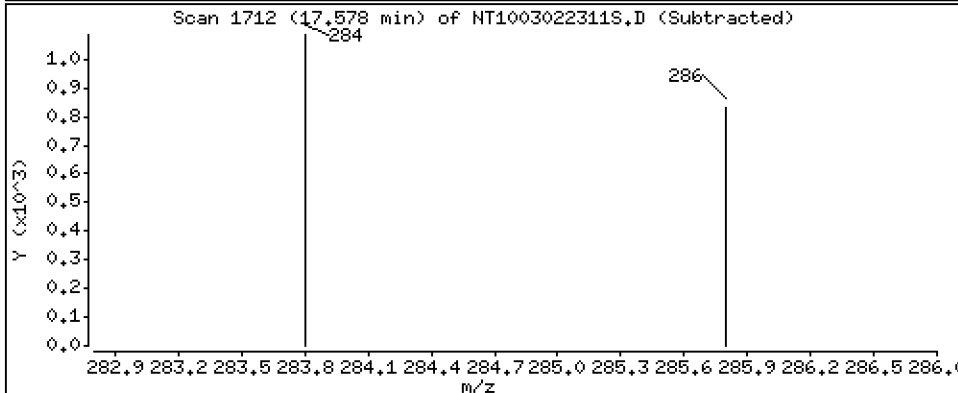
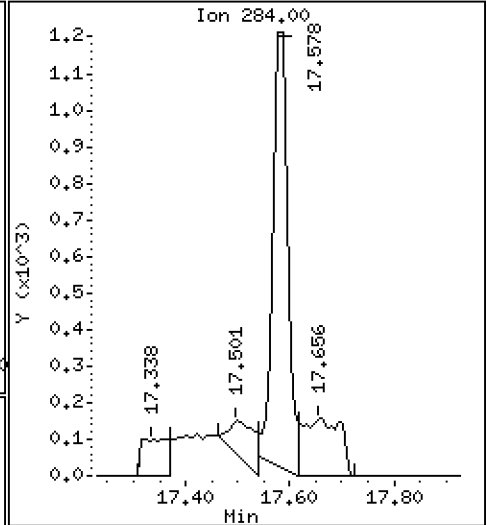
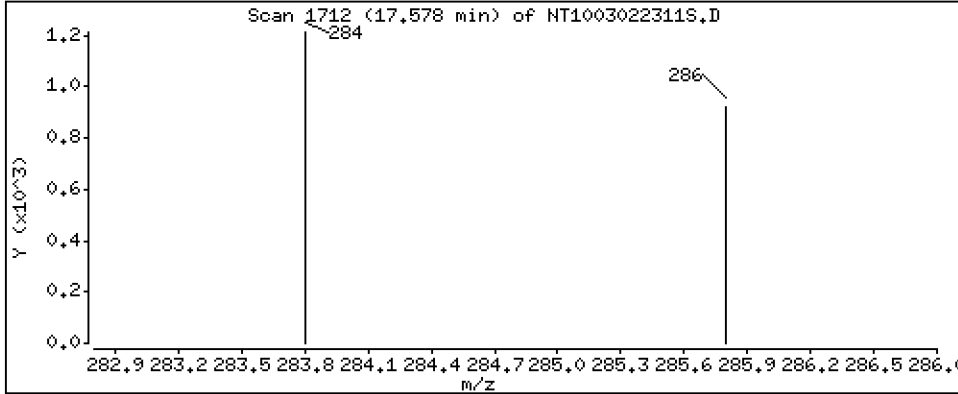
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,01174 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

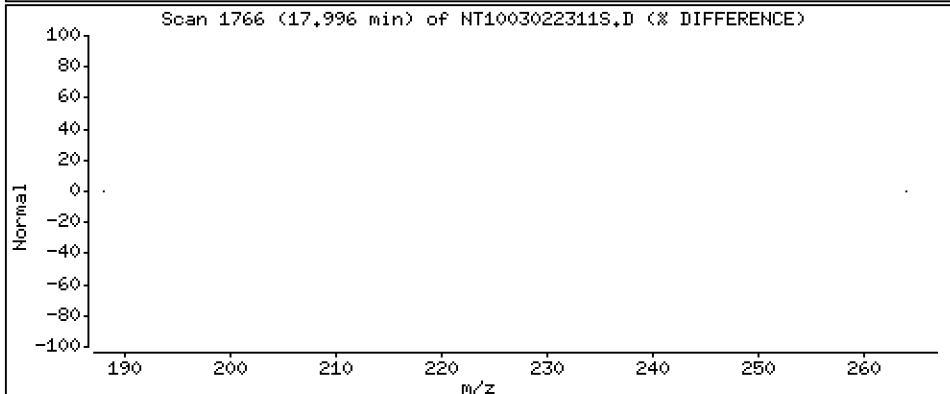
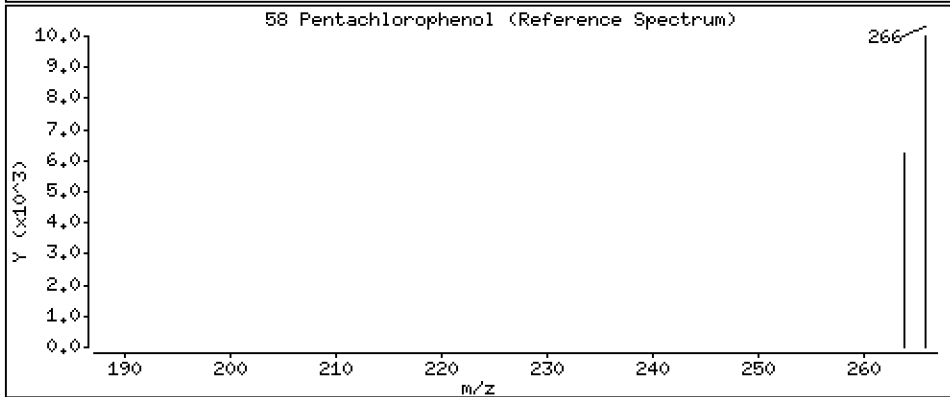
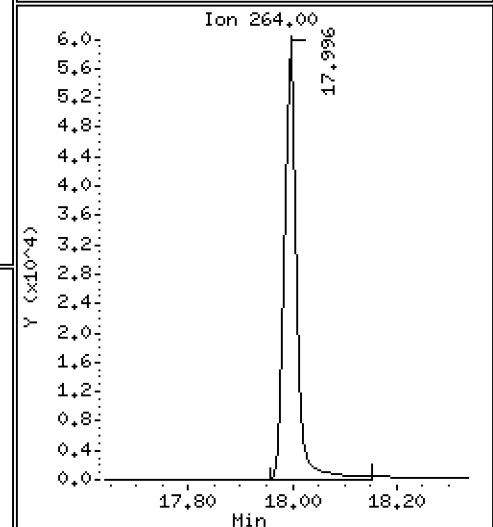
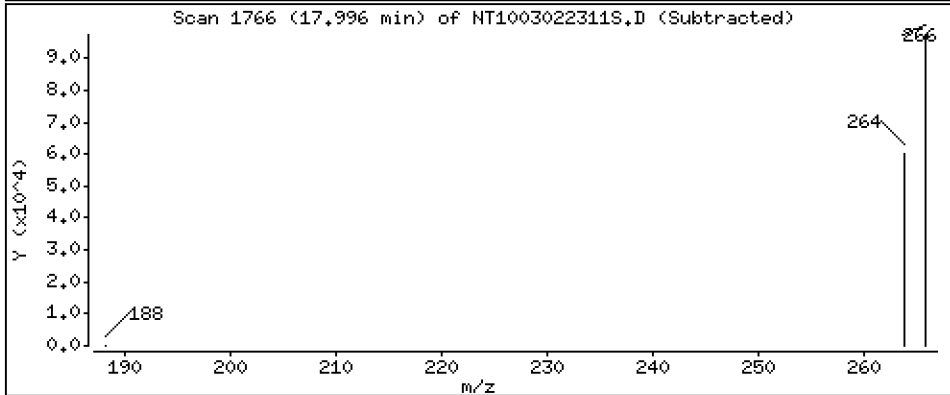
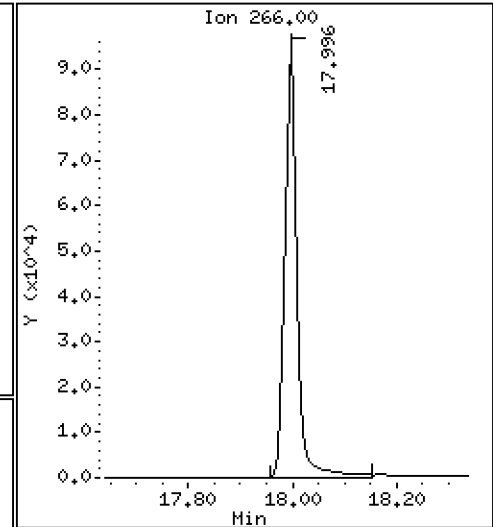
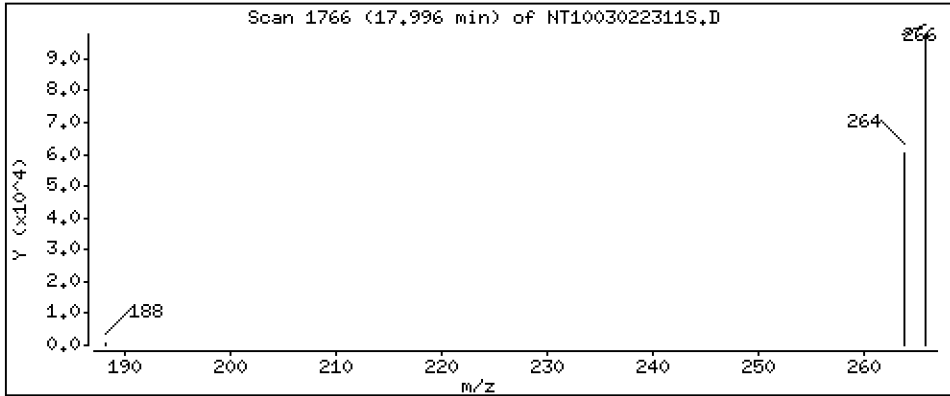
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 1,698 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

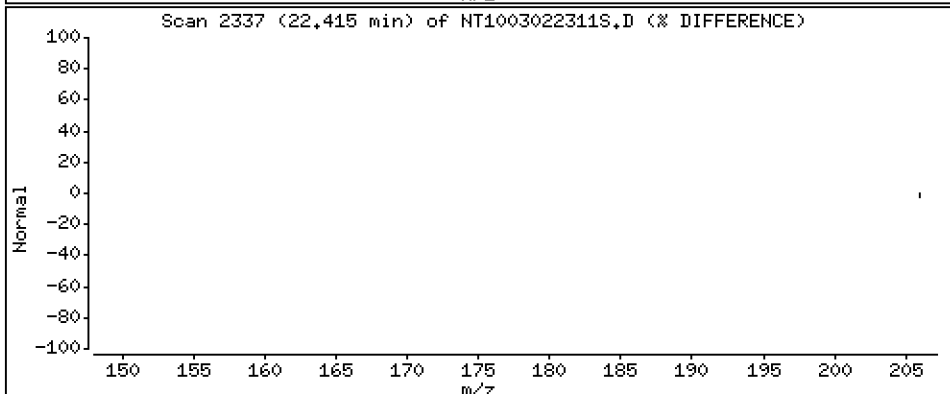
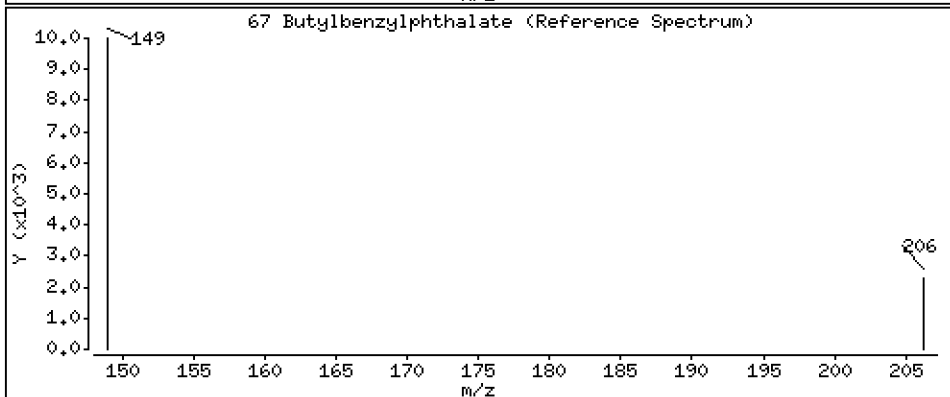
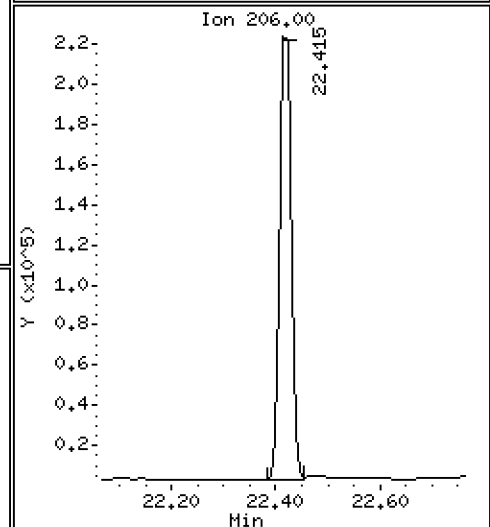
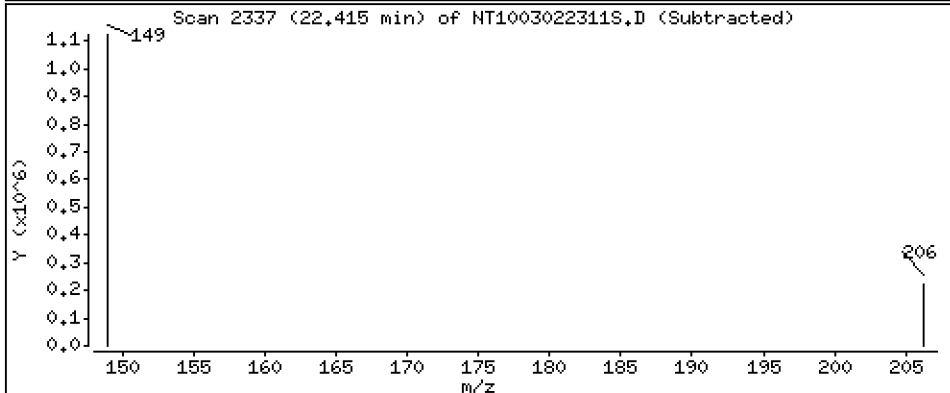
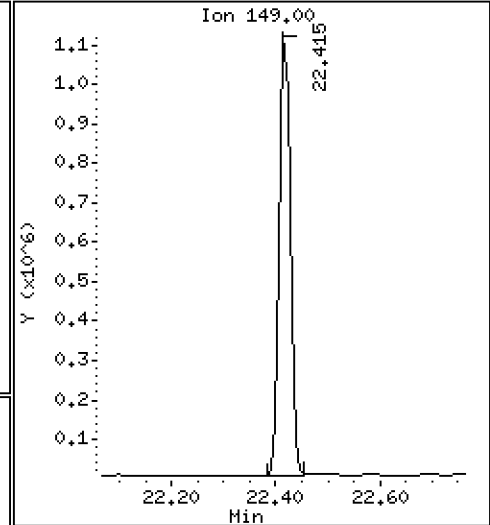
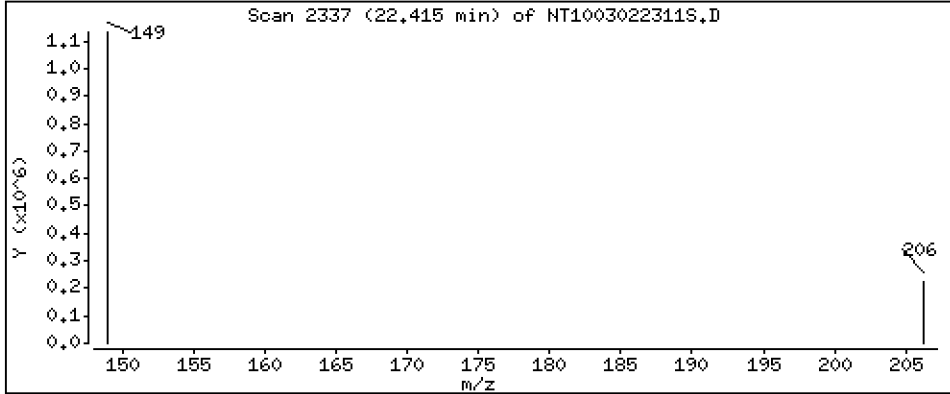
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 3,112 ug/L



Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

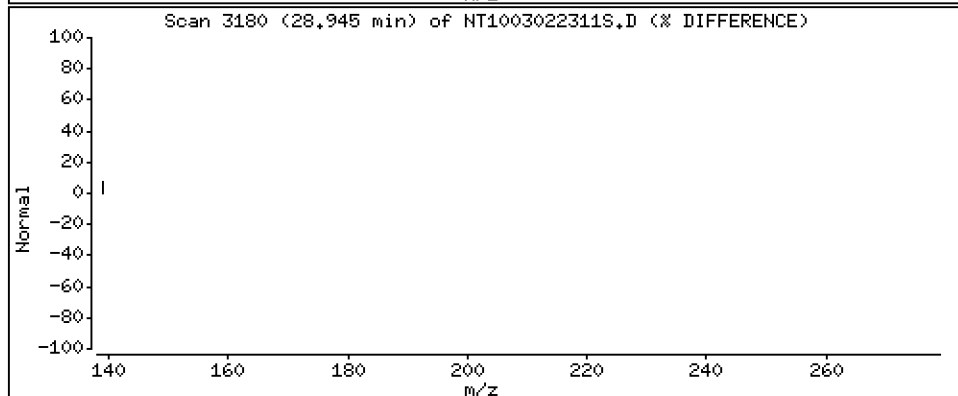
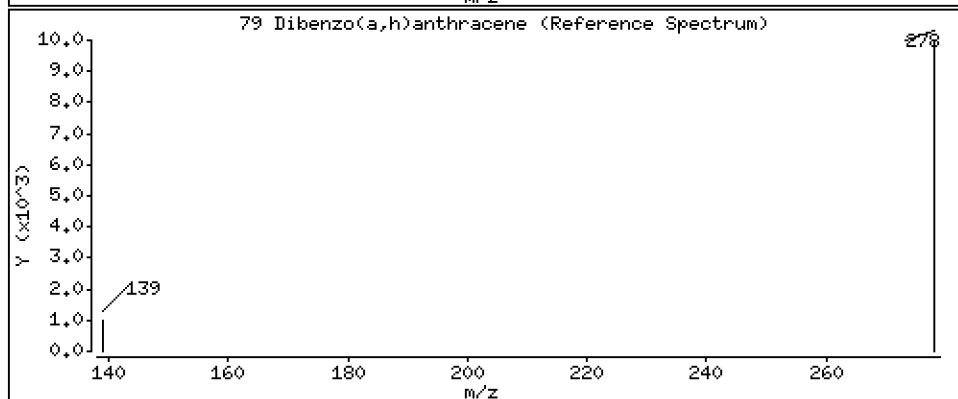
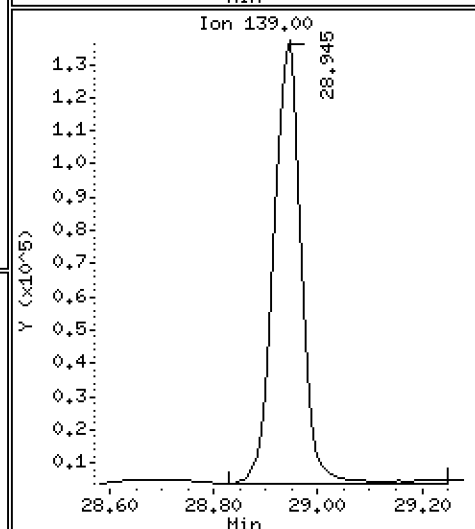
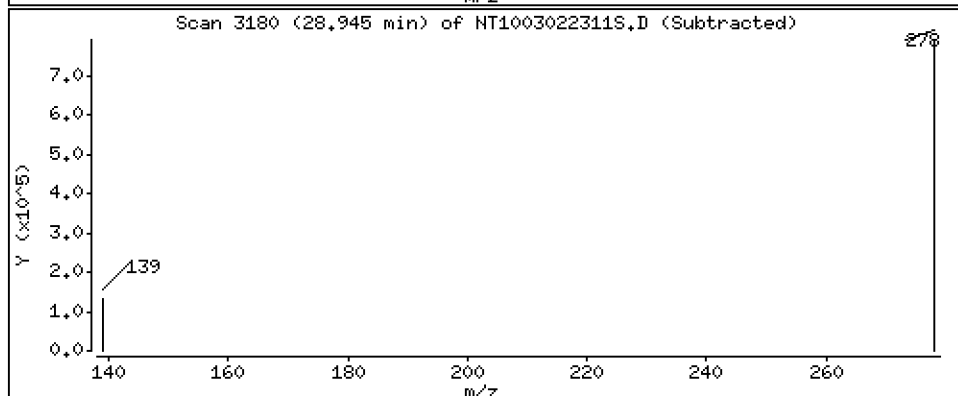
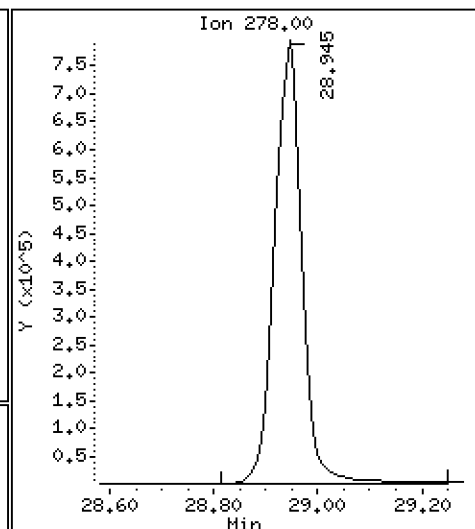
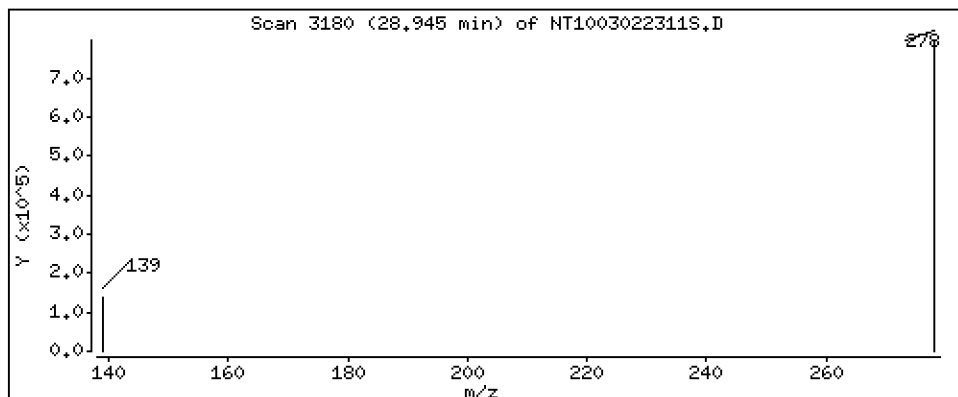
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 3,753 ug/L





Date : 02-MAR-2023 20:44

Client ID:

Instrument: nt10.i

Sample Info: BLA0624-SRM1

Volume Injected (uL): 1.0

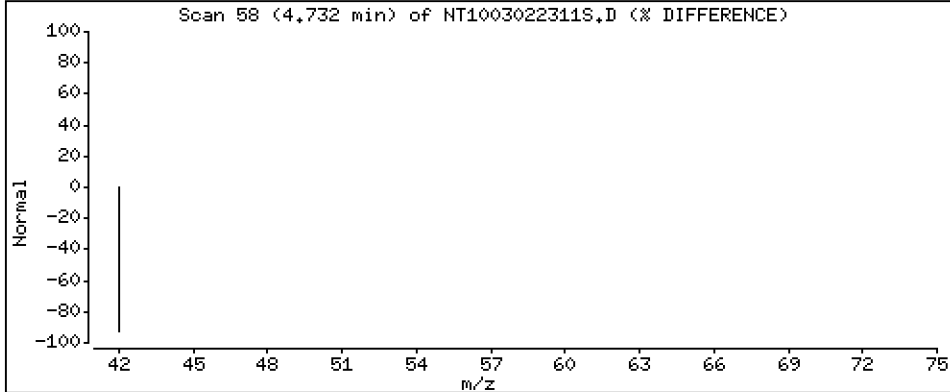
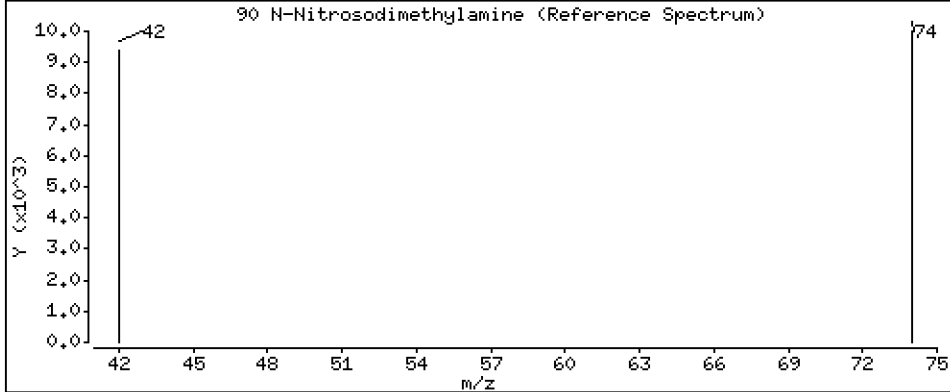
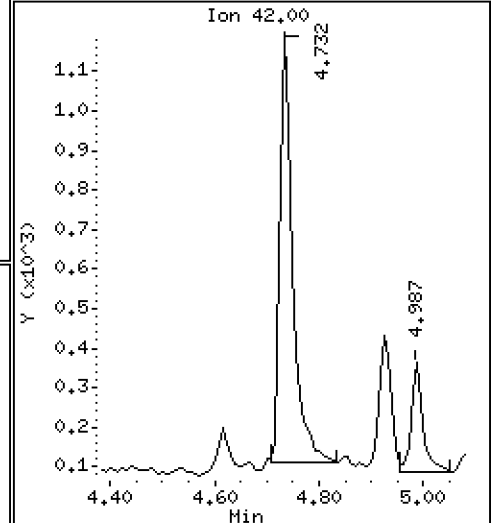
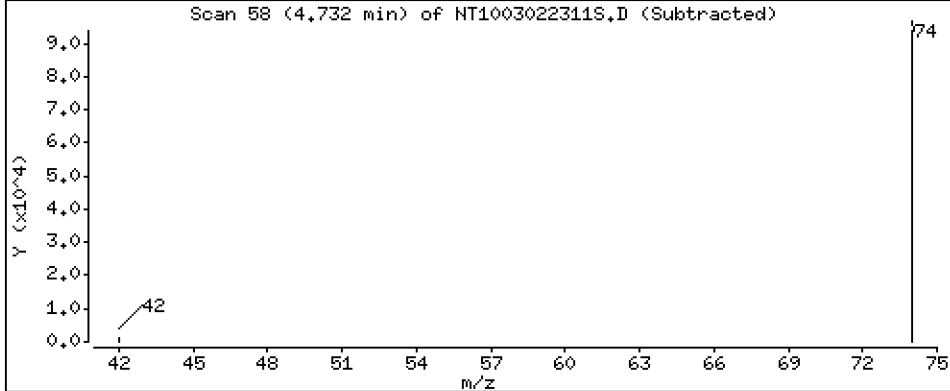
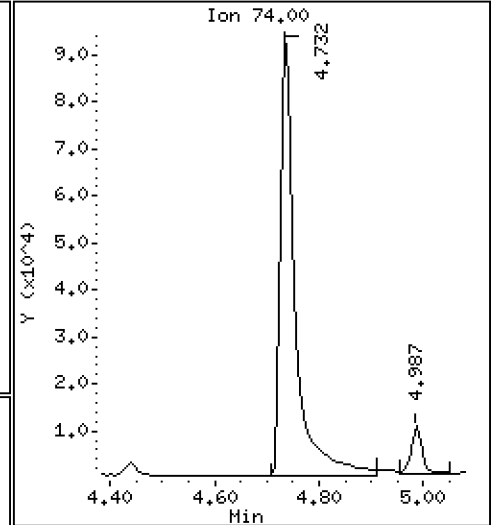
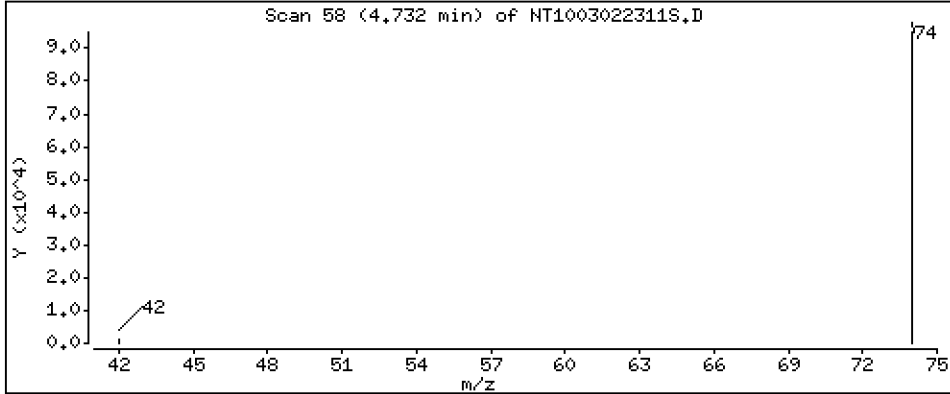
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 1.399 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022311S.D  
 Lab Smp Id: BLA0624-SRM1  
 Inj Date : 02-MAR-2023 20:44 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : BLA0624-SRM1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		1575203	7.19270	7.193 (R)
3 Phenol	94		8.524	8.517 (0.921)		865603	2.64398	2.644
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		339074	1.19270	1.193
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251 (1.000)		767091	4.00000	
9 1,4-Dichlorobenzene	146		9.143	9.282 (0.988)		339074	1.22674	1.227
11 Benzyl alcohol	79		9.539	9.476 (1.031)		31398	0.17502	0.1750
12 1,2-Dichlorobenzene	146		9.562	9.562 (1.034)		3530	0.01329	0.01329
13 2-Methylphenol	108		9.663	9.655 (1.044)		1279955	6.23865	6.239
15 4-Methylphenol	108		9.950	9.942 (1.076)		1680277	7.58593	7.586
16 N-Nitroso-di-n-propylamine	70		9.958	9.981 (1.076)		10352	0.07196	0.07196
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		1162291	4.84672	4.847
24 Benzoic acid	105		11.082	11.074 (0.945)		106321	0.81663	0.8166
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		311359	1.55159	1.552
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2788036	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994 (1.023)		274250	1.92586	1.926
39 Dimethylphthalate	163		14.749	14.741 (0.963)		2190768	4.99232	4.992
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1382029	4.00000	
50 Diethylphthalate	149		16.210	16.203 (1.058)		87777	0.21211	0.2121
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		1584342	3.75576	3.756
57 Hexachlorobenzene	284		17.578	17.578 (0.955)		2318	0.01174	0.01174

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	149186	1.69819	1.698
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2606597	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	1234616	5.14744	5.147 (R)
67 Butylbenzylphthalate	149	22.414	22.414	(0.957)	1540899	3.11192	3.112
* 69 Chrysene-d12	240	23.429	23.421	(1.000)	2965995	4.00000	
* 77 Perylene-d12	264	26.123	26.115	(1.000)	3162675	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.108)	2910766	3.75254	3.753
90 N-Nitrosodimethylamine	74	4.732	4.732	(0.511)	181438	1.39936	1.399

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022311S.D  
 Lab Smp Id: BLA0624-SRM1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	767091	55.47
27 Naphthalene-d8	1779056	889528	3558112	2788036	56.71
42 Acenaphthene-d10	954569	477285	1909138	1382029	44.78
59 Phenanthrene-d10	1596290	798145	3192580	2606597	63.29
69 Chrysene-d12	1649110	824555	3298220	2965995	79.85
77 Perylene-d12	1901958	950979	3803916	3162675	66.29

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.12	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022311S.D

Lab ID: BLA0624-SRM1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 20:44

RT CO-ELUTION COMPOUNDS

---

9.143 1,4-Dichlorobenzene and 1,3-Dichlorobenzene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.988	1.003	-0.0151	1,4-Dichlorobenzene
1.031	1.024	0.0067	Benzyl alcohol

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

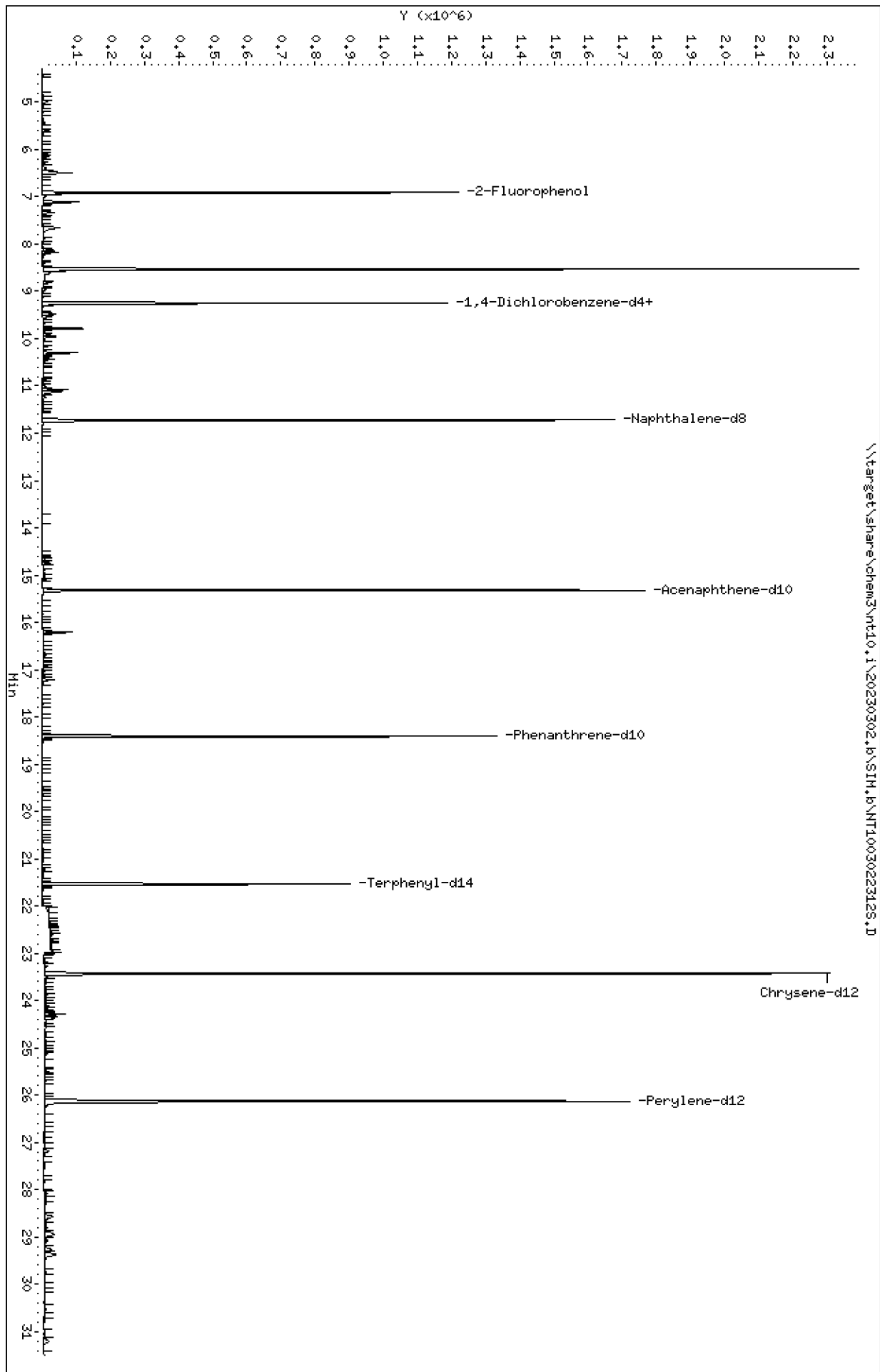
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230302.16\SIH.6\NT1003022312S.D  
Date: 02-MAR-2023 21:22  
Client ID:  
Sample Info: 23A0206-01  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIH.6\NT1003022312S.D



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

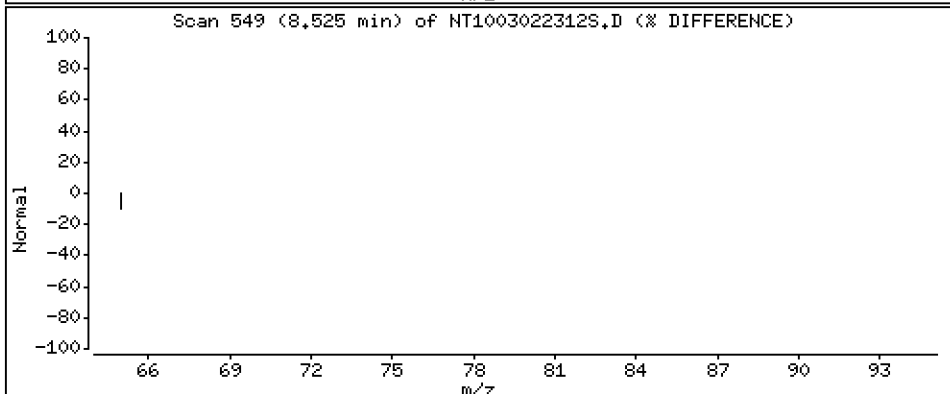
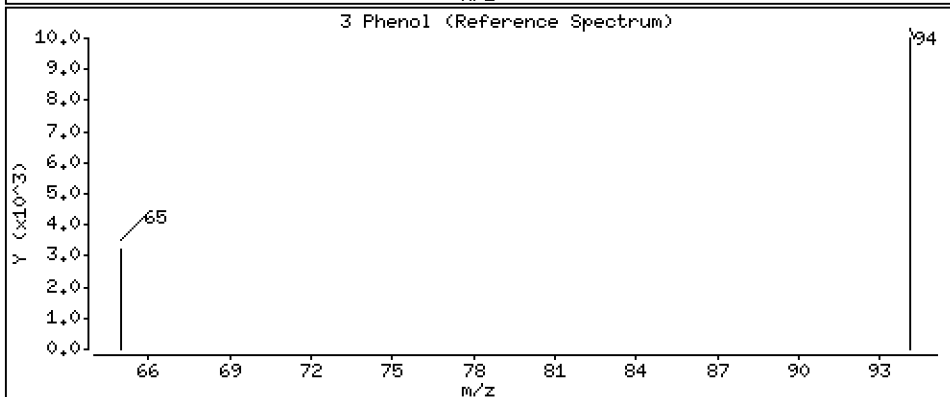
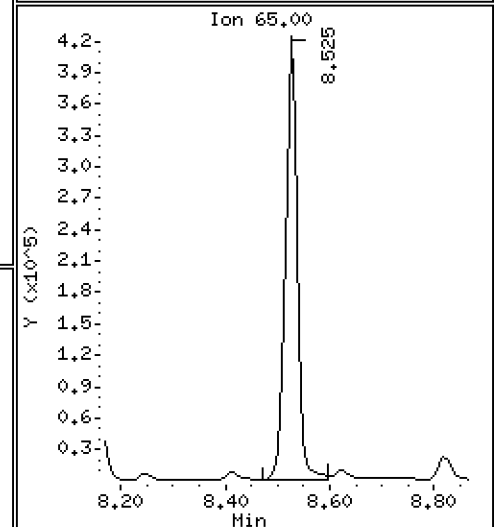
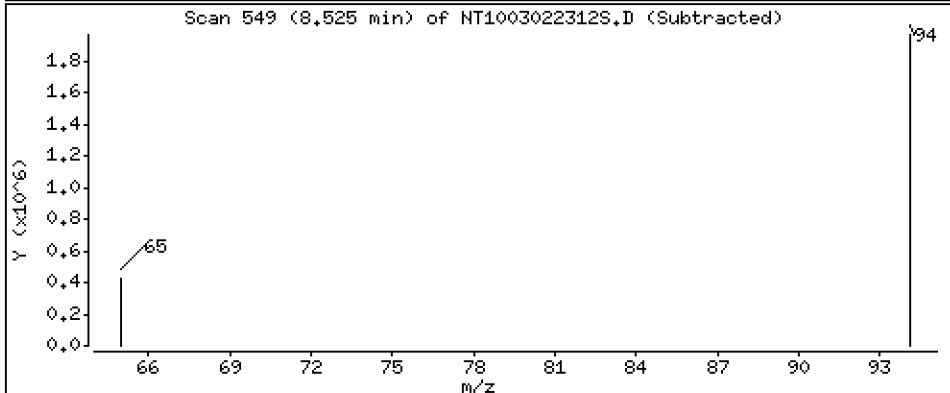
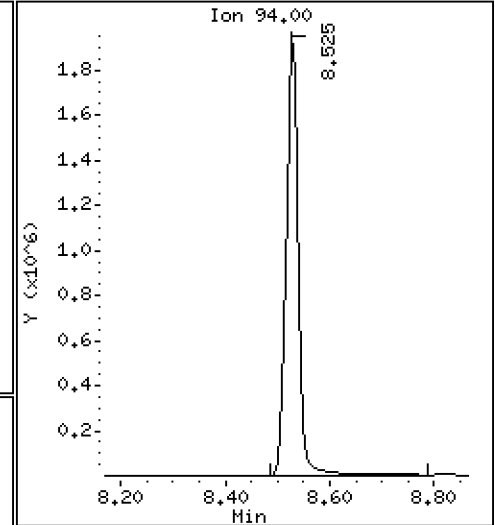
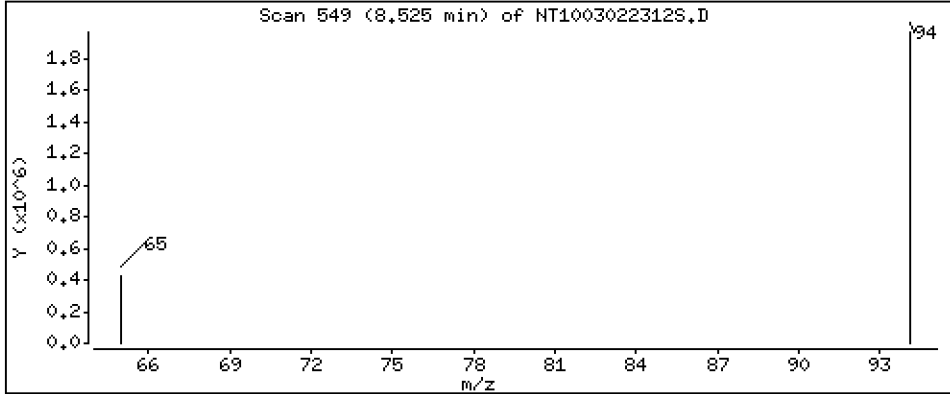
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 9.783 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

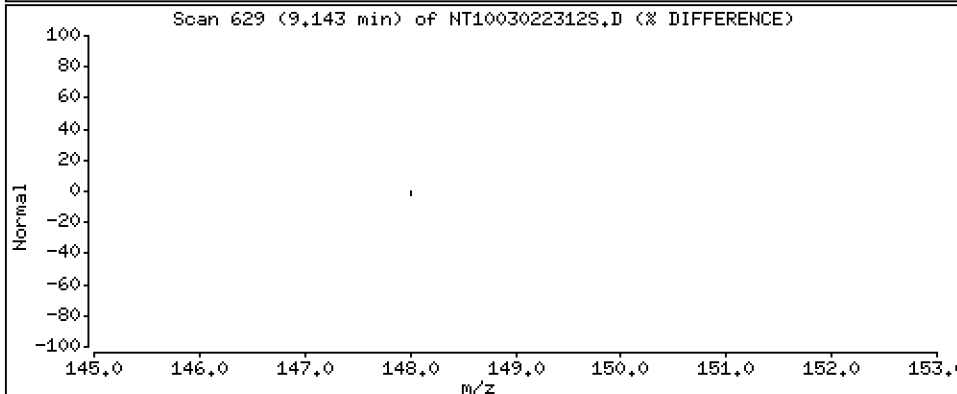
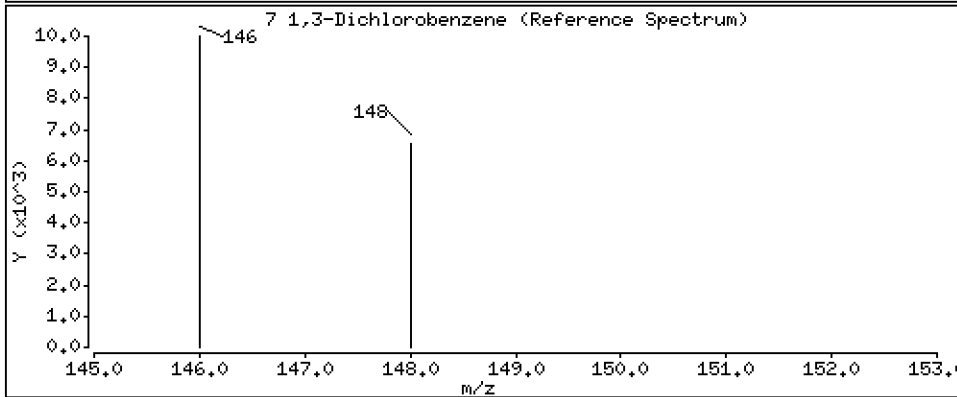
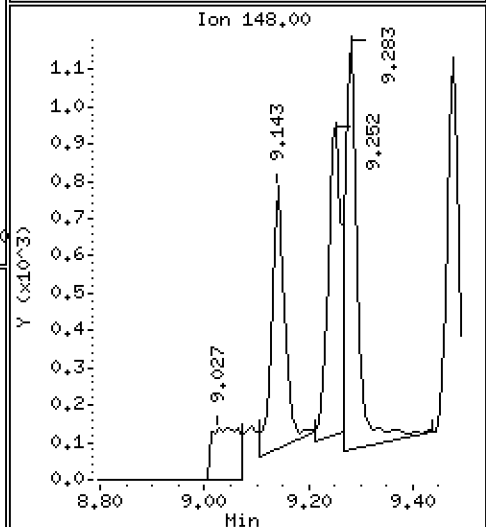
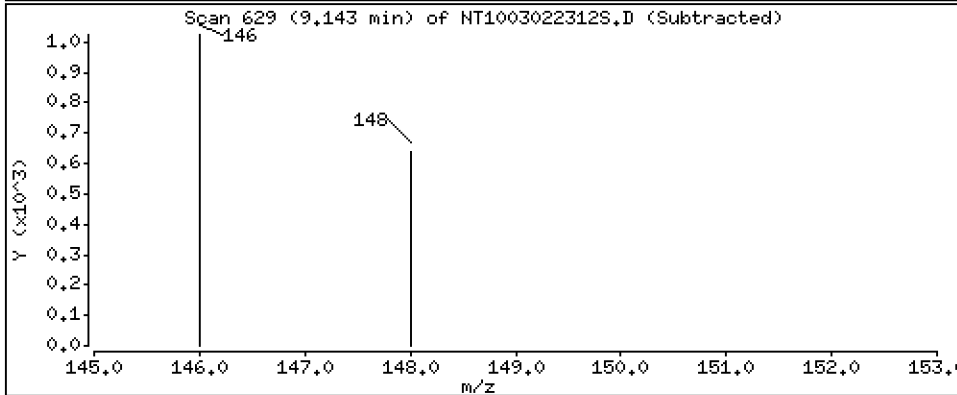
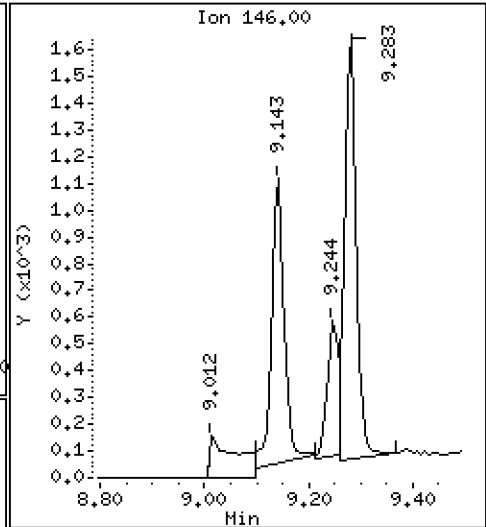
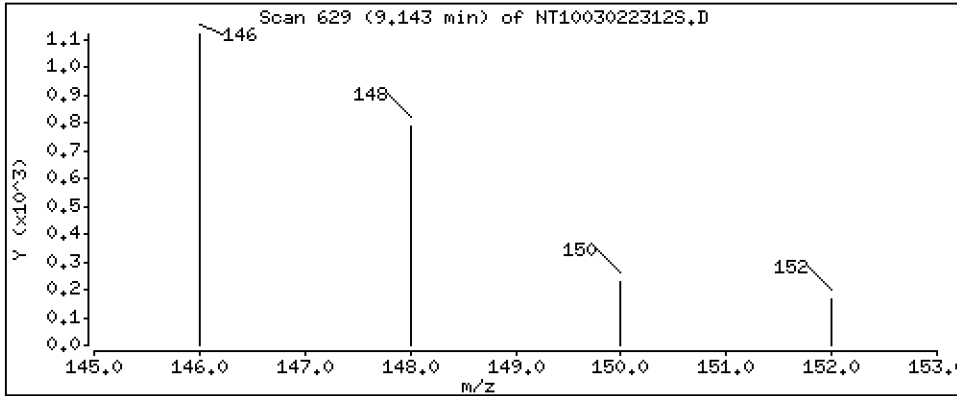
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.006583 ug/L





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

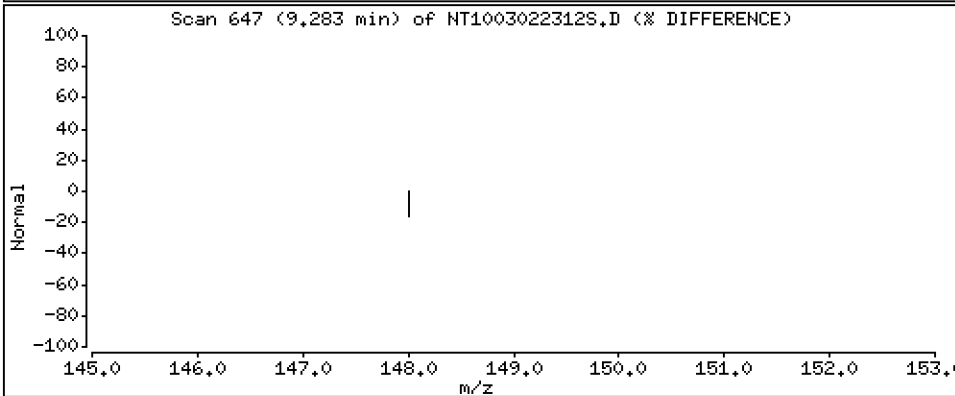
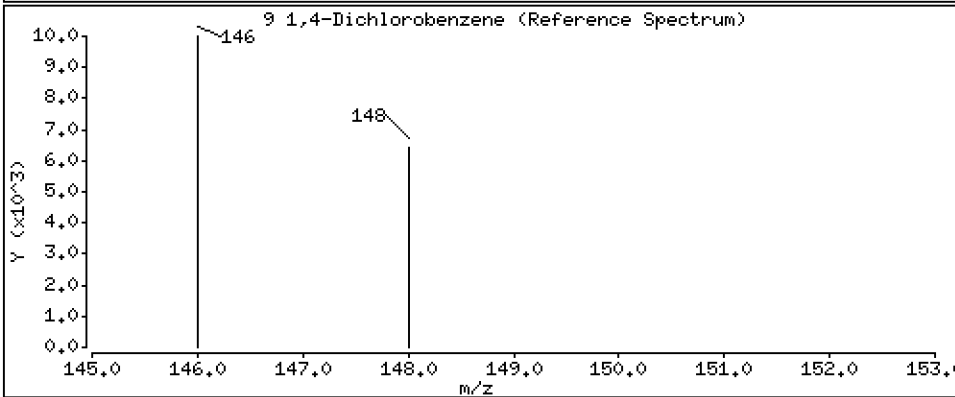
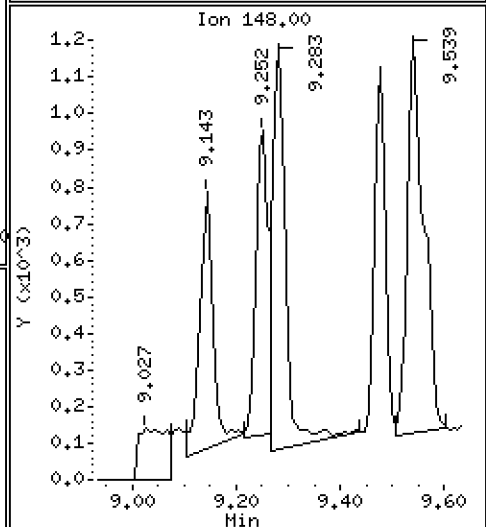
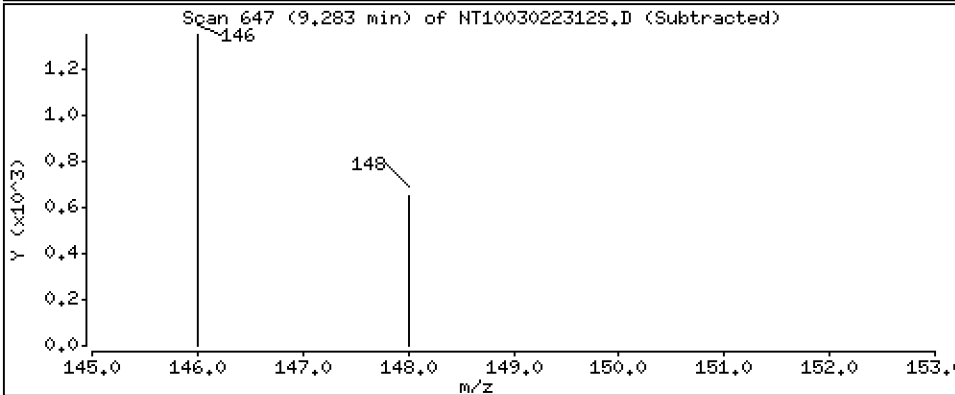
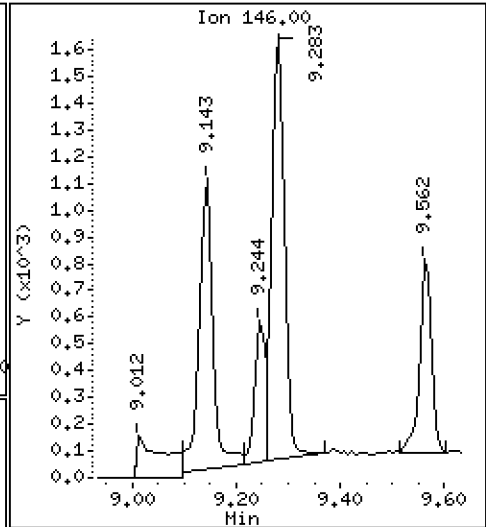
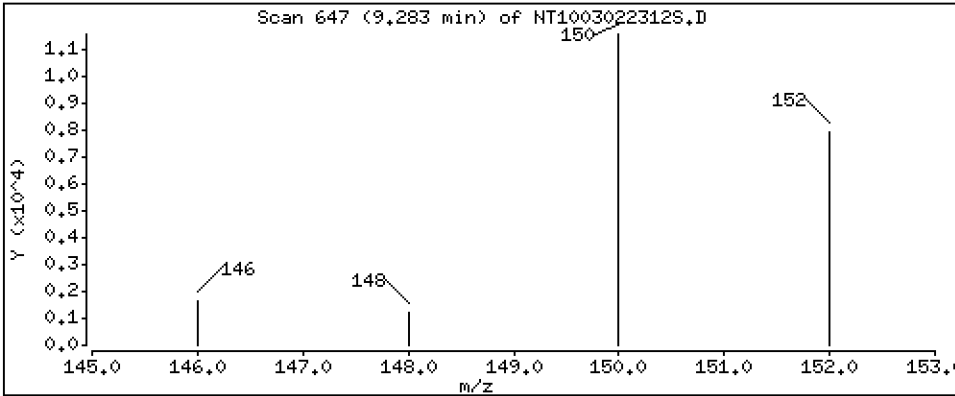
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.009987 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

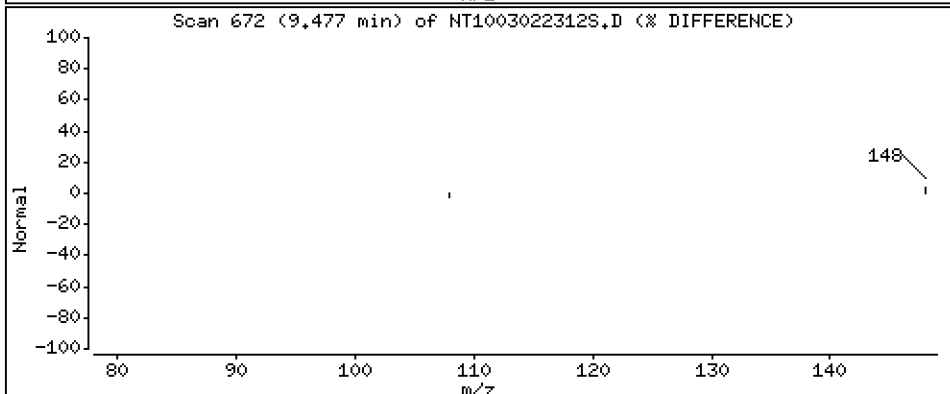
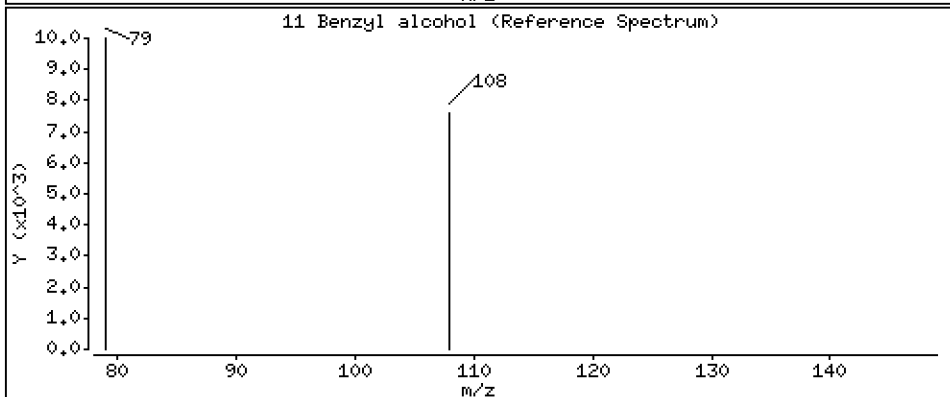
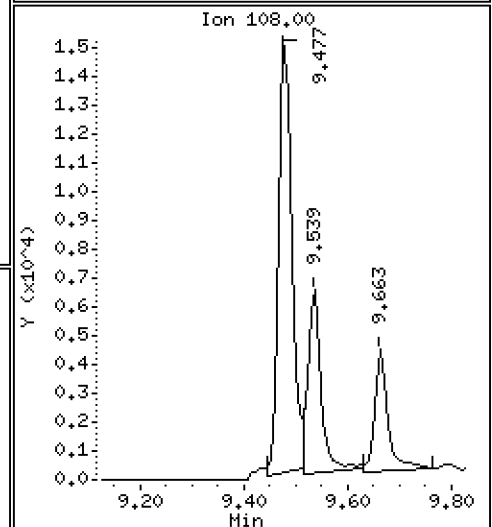
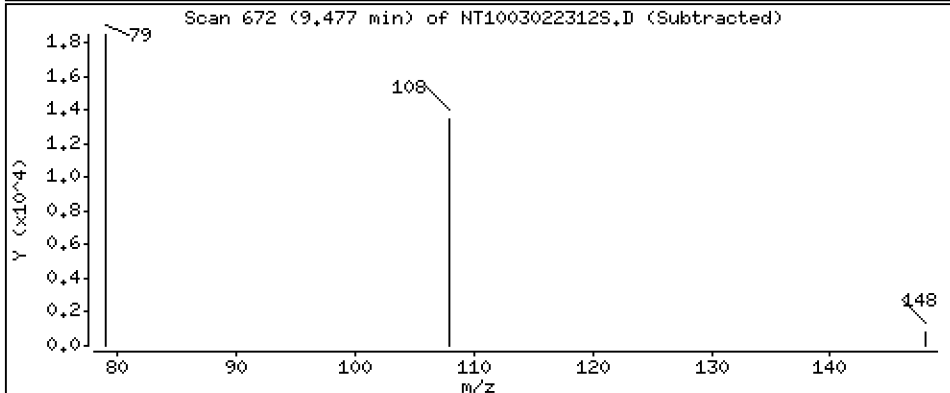
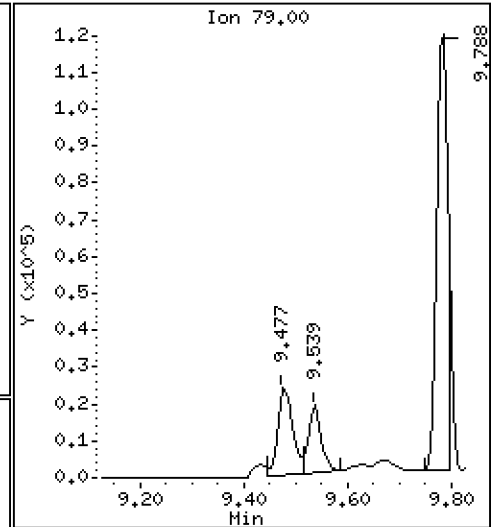
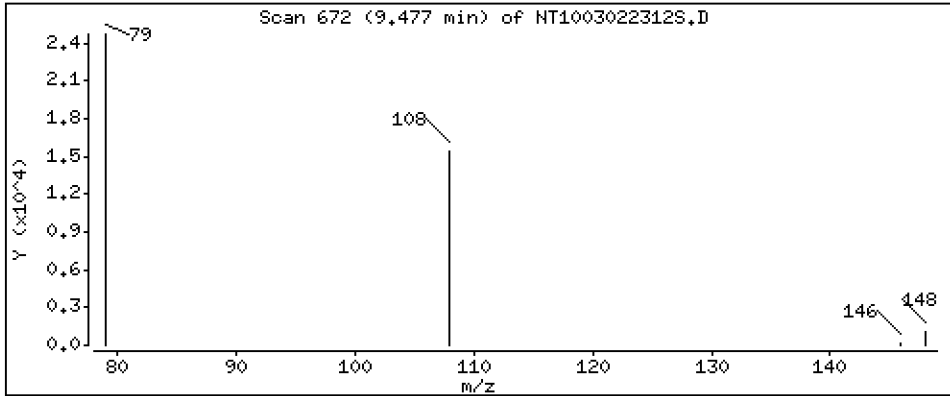
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.2733 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

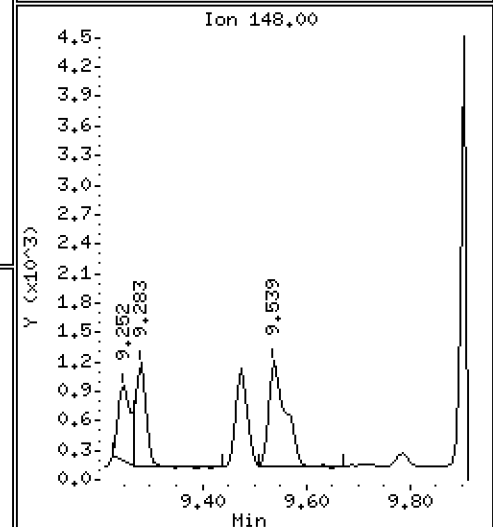
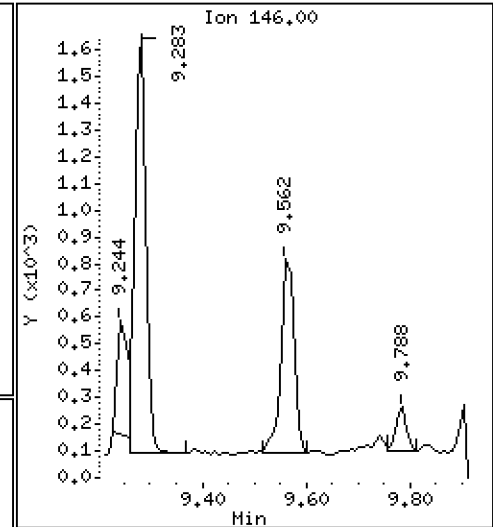
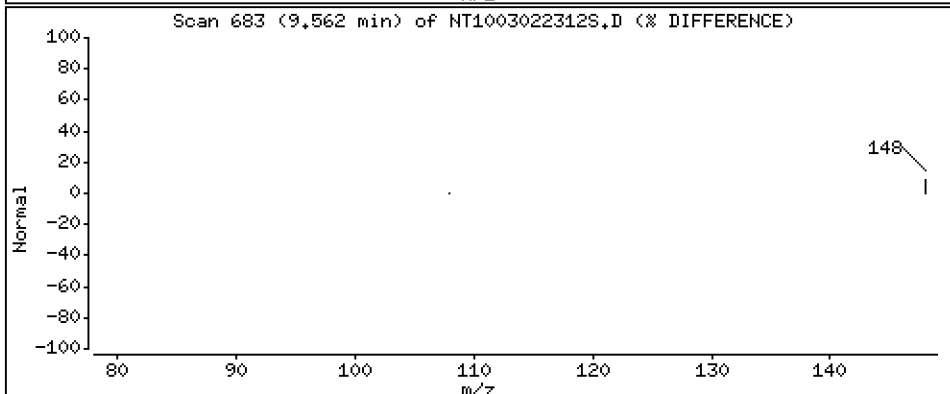
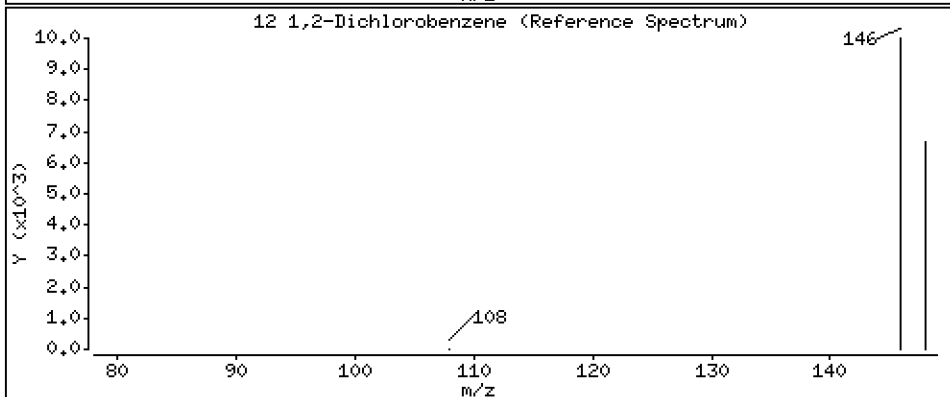
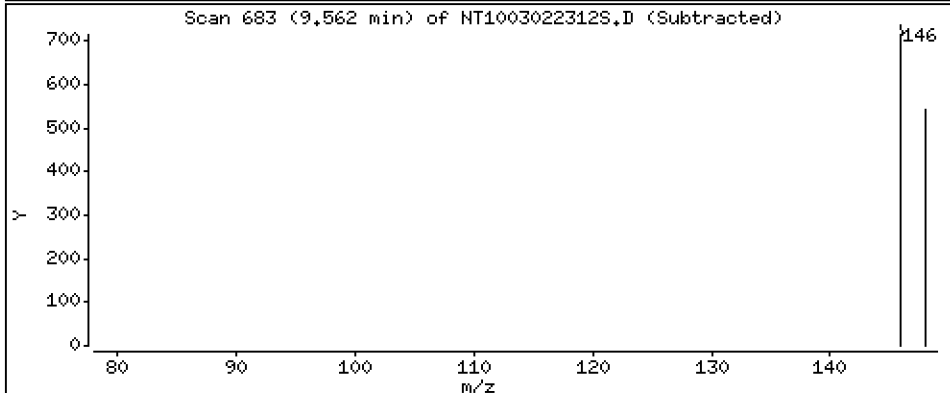
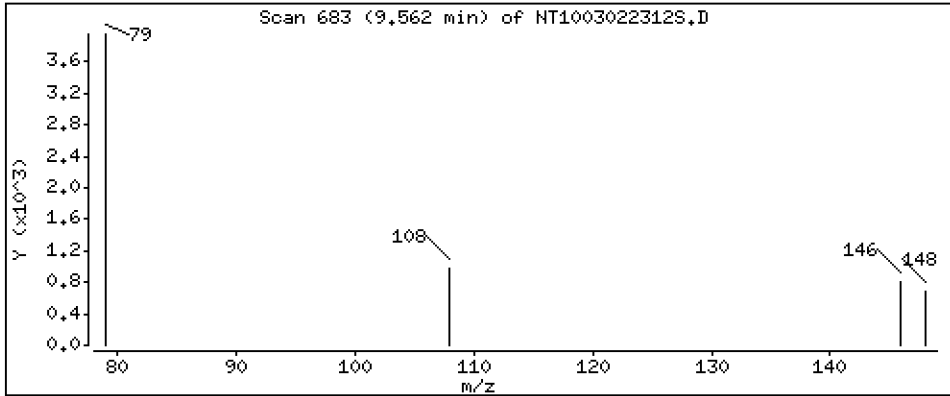
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.004811 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

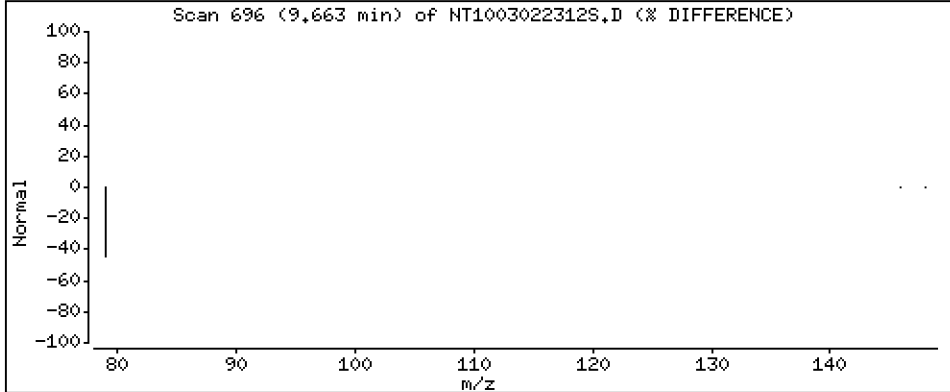
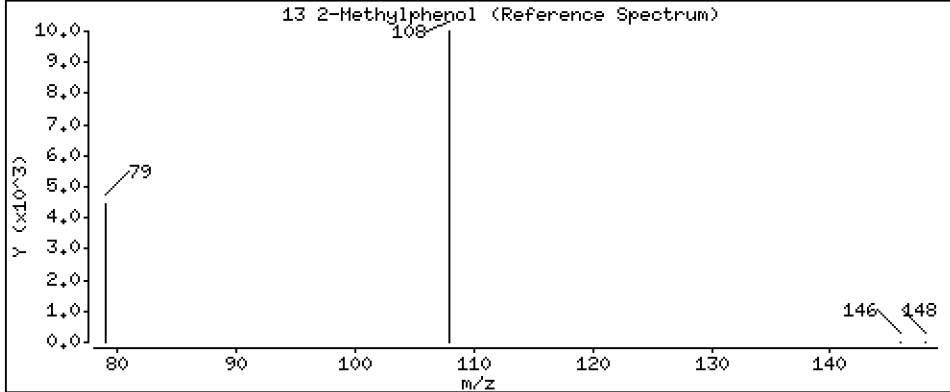
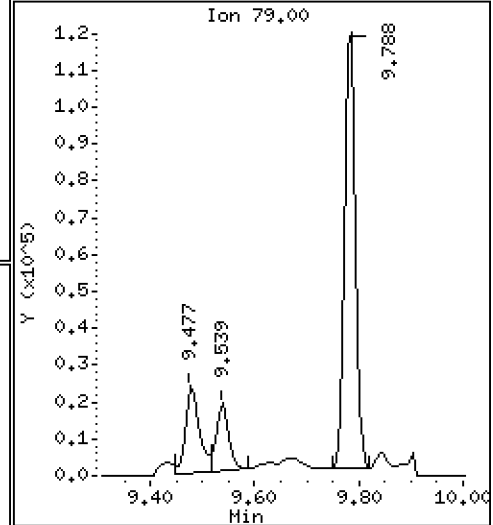
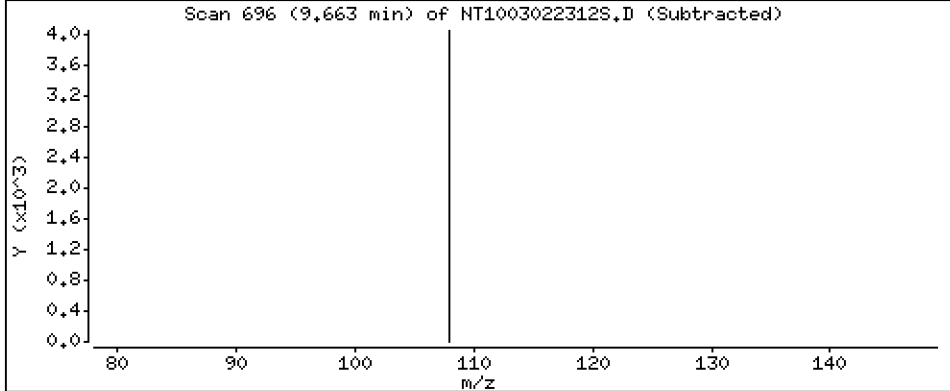
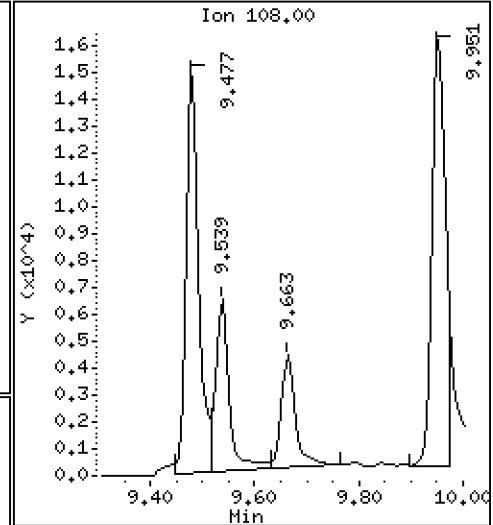
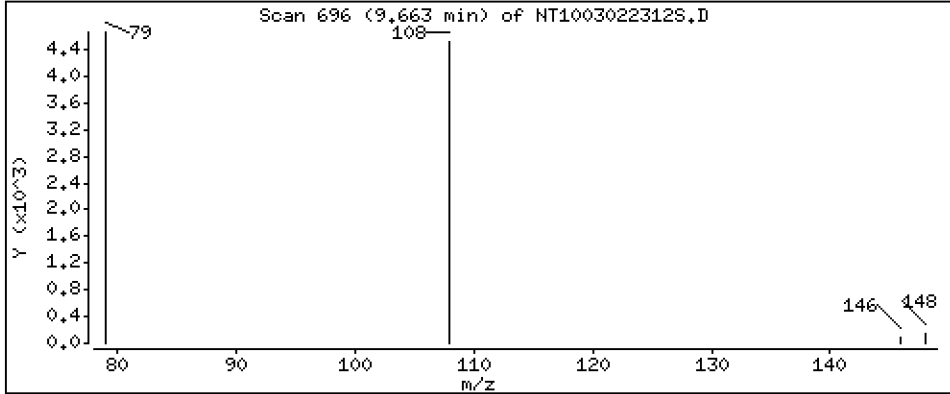
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.04254 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

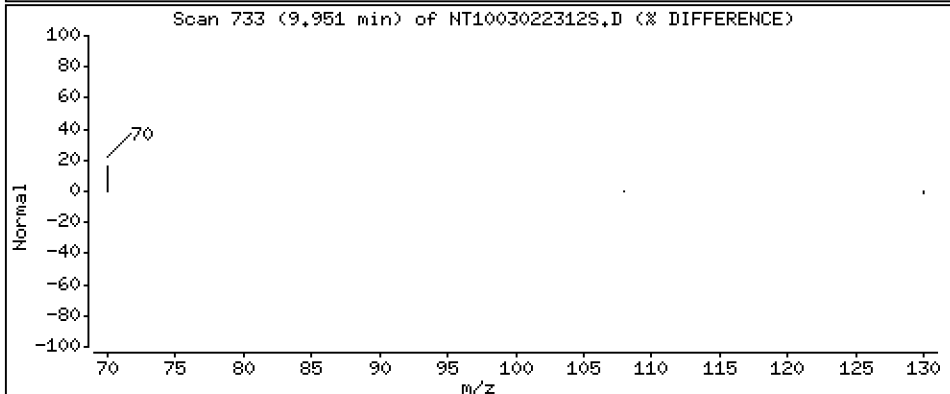
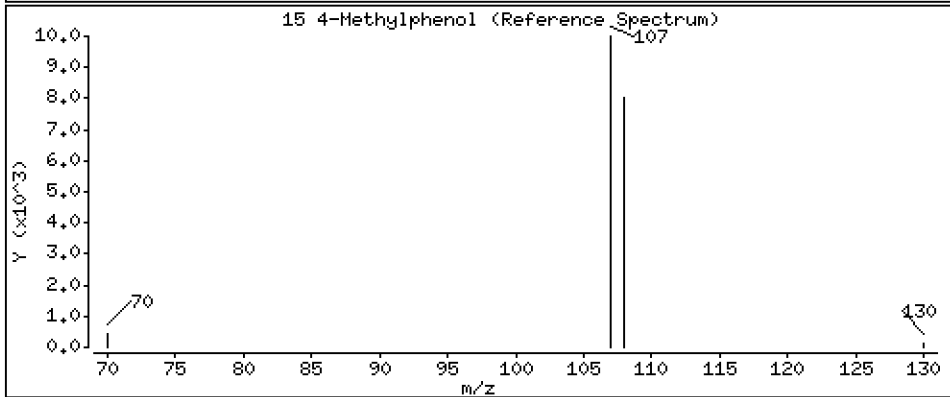
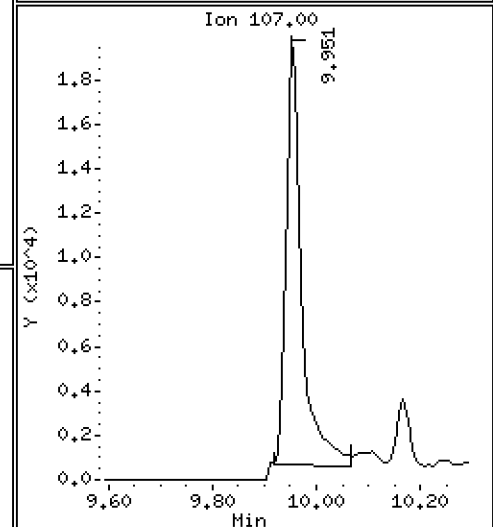
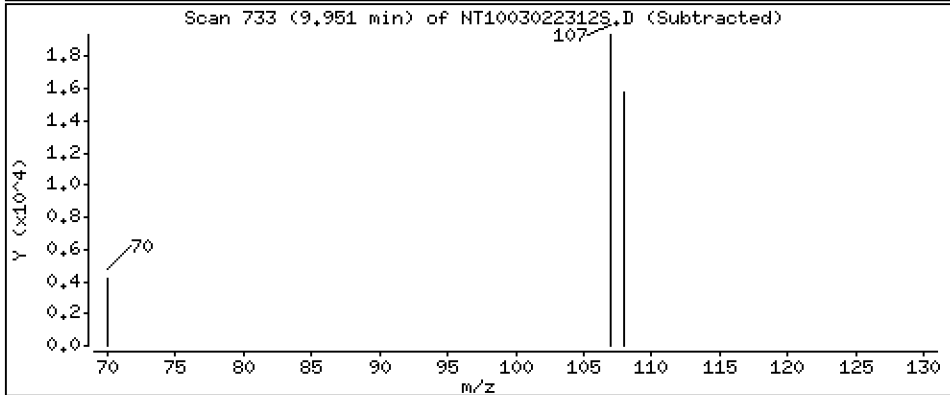
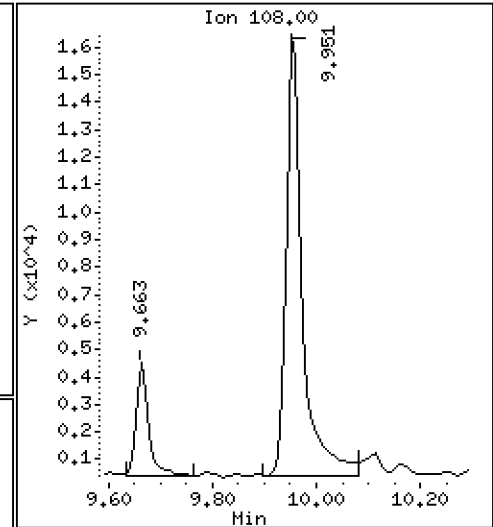
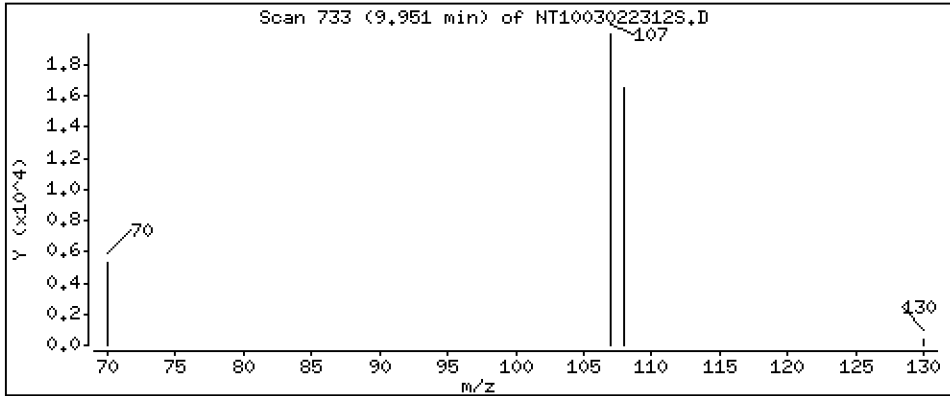
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1843 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

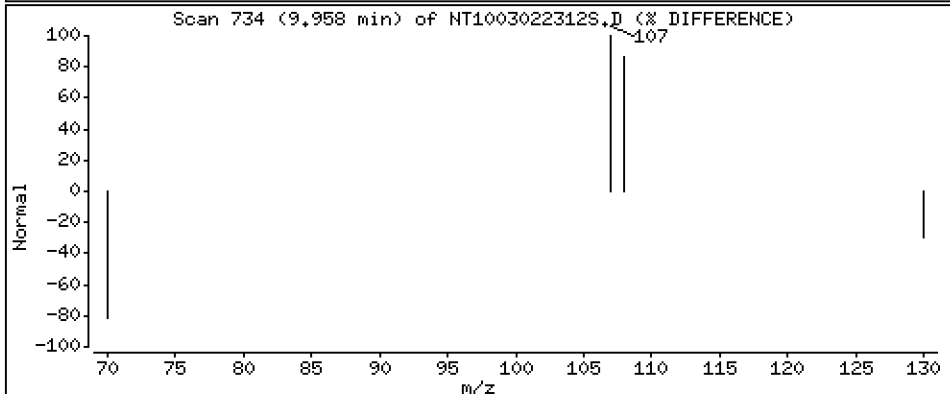
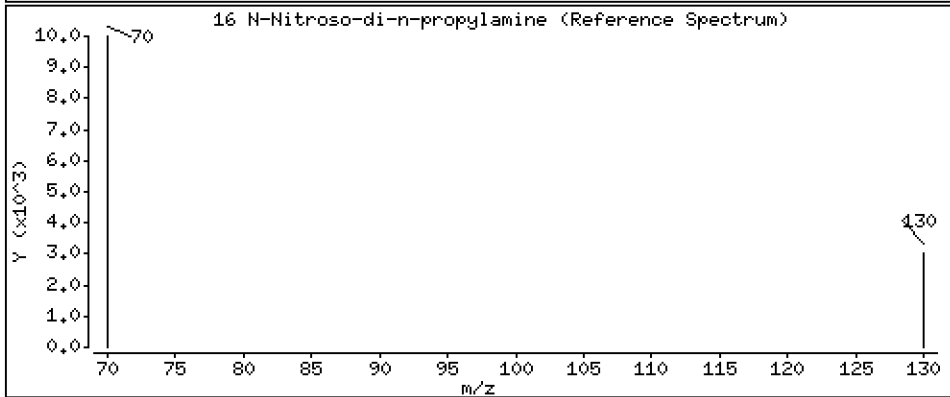
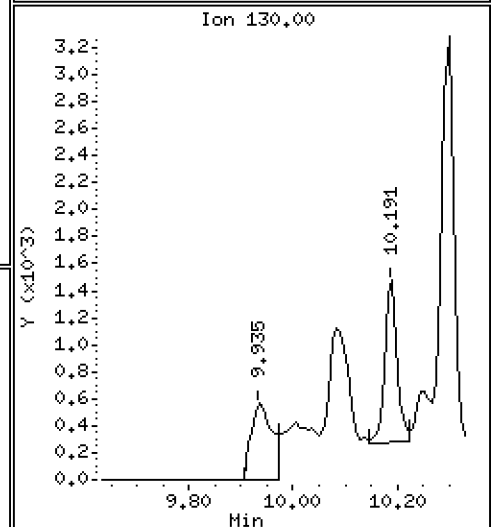
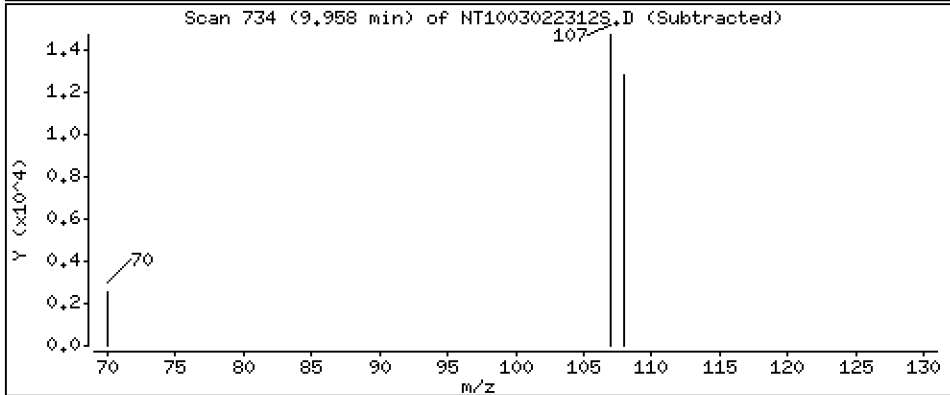
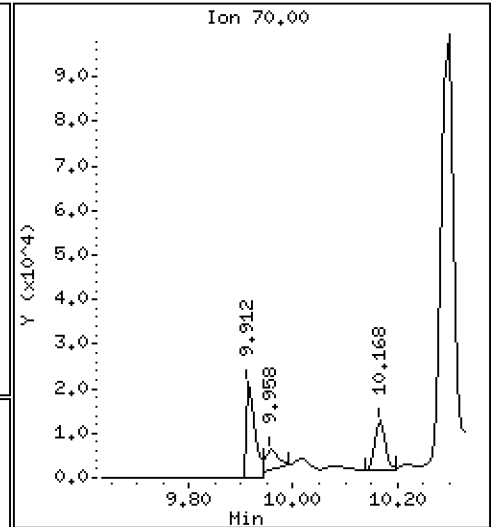
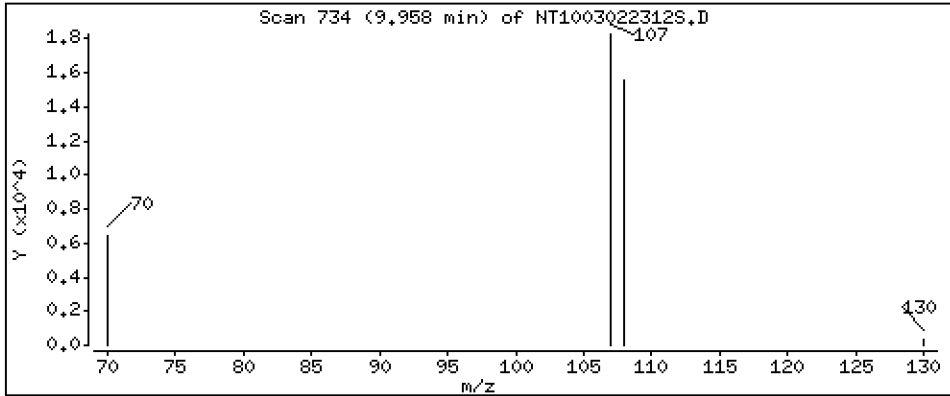
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.05906 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

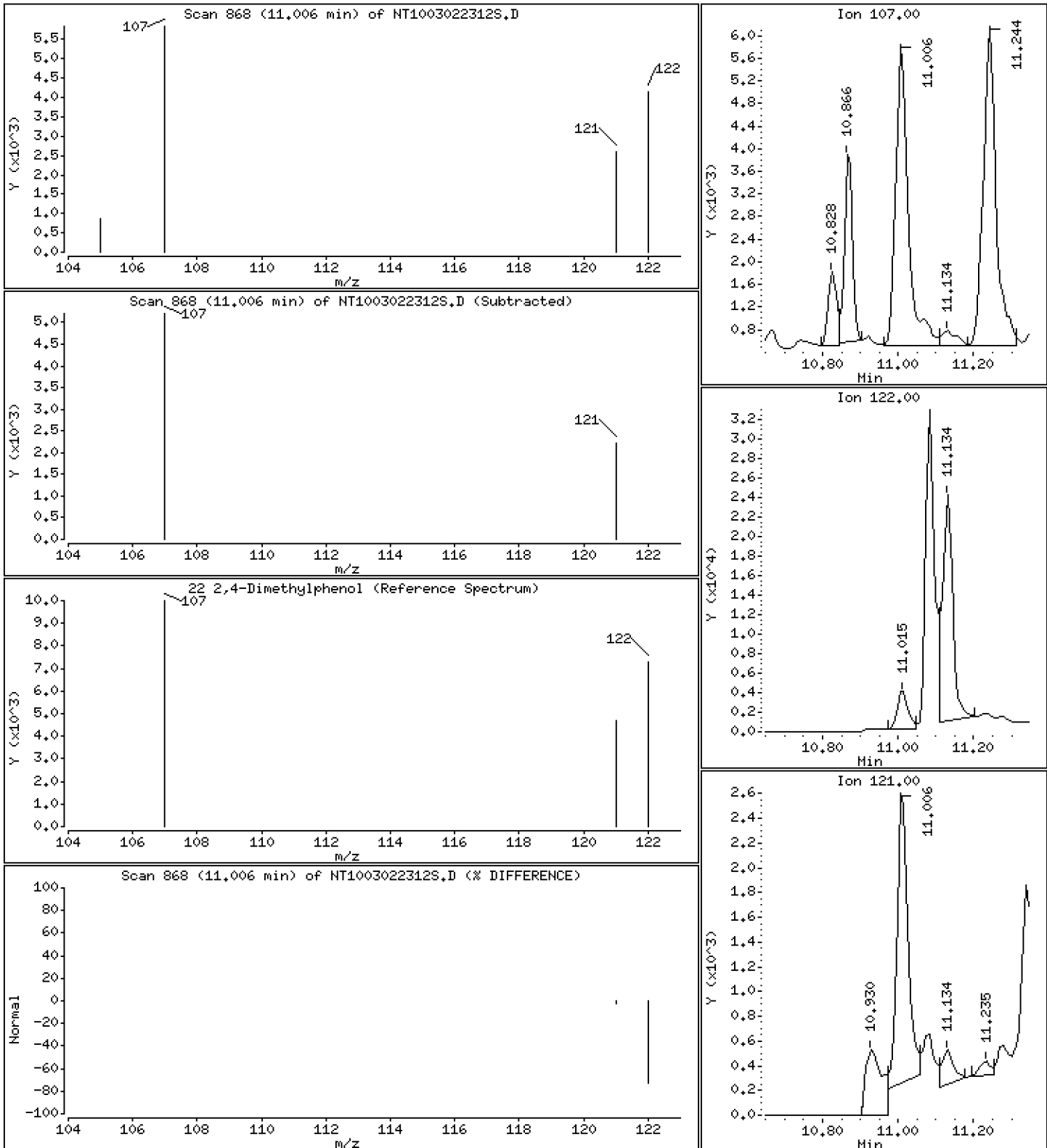
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.05672 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

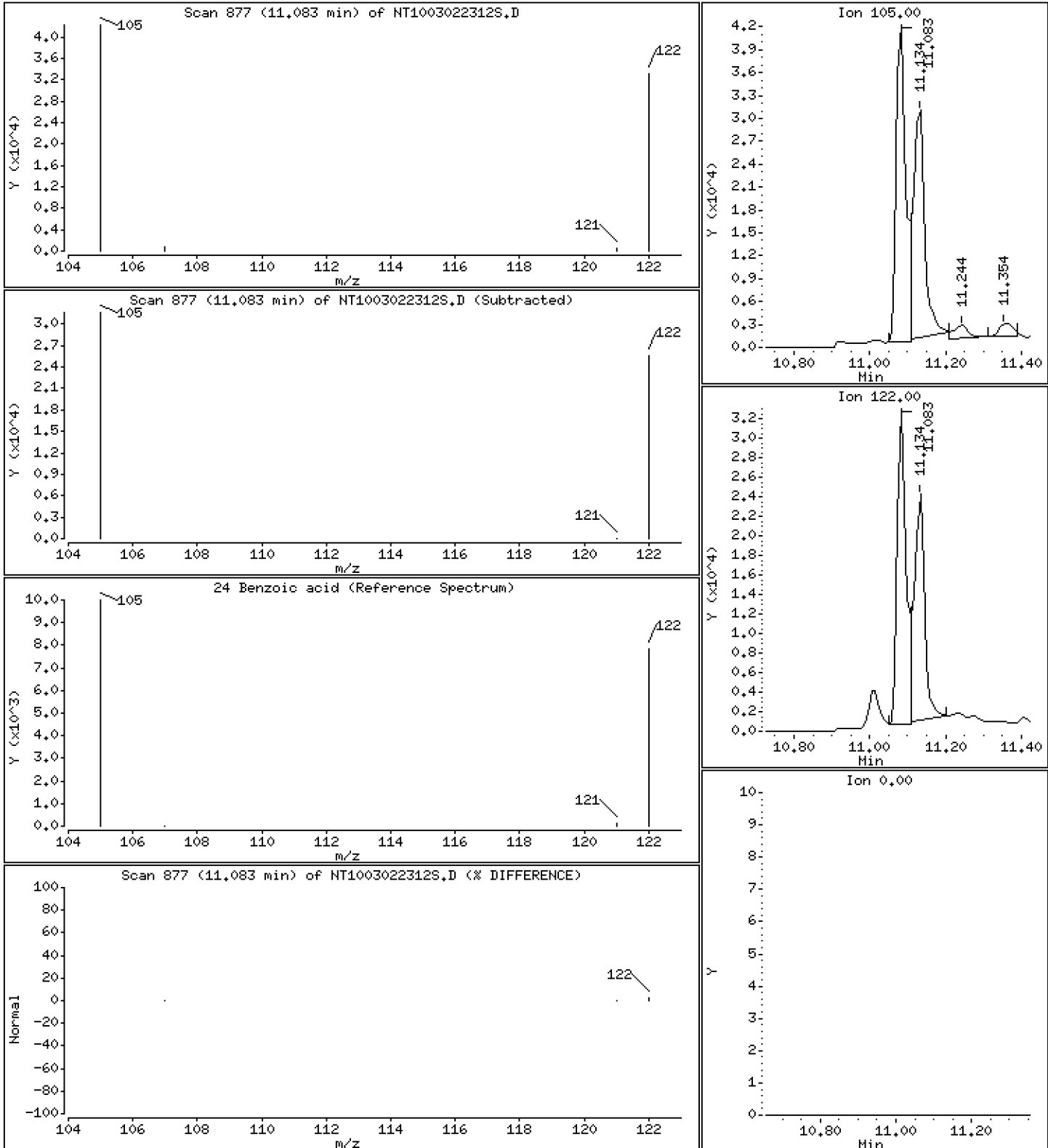
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.6311 ug/L





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

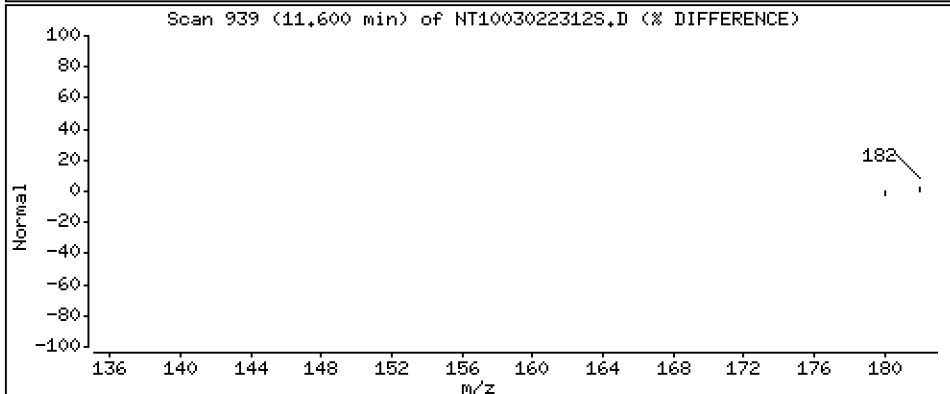
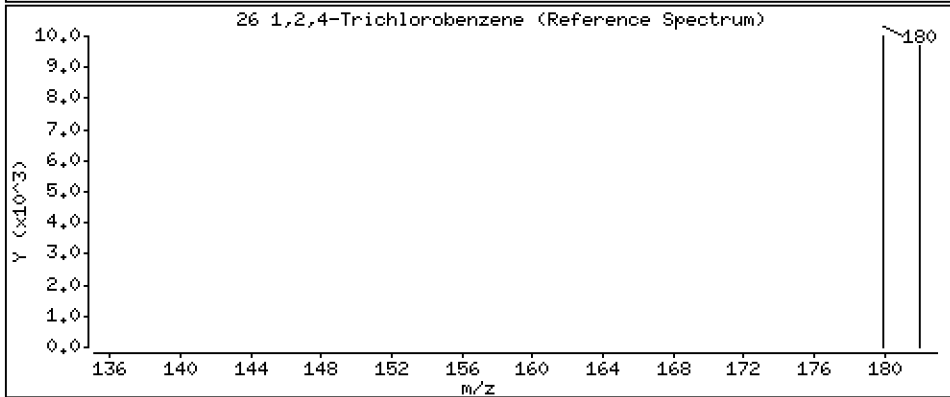
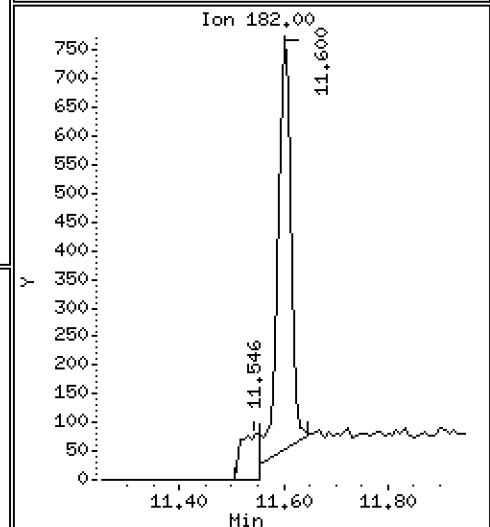
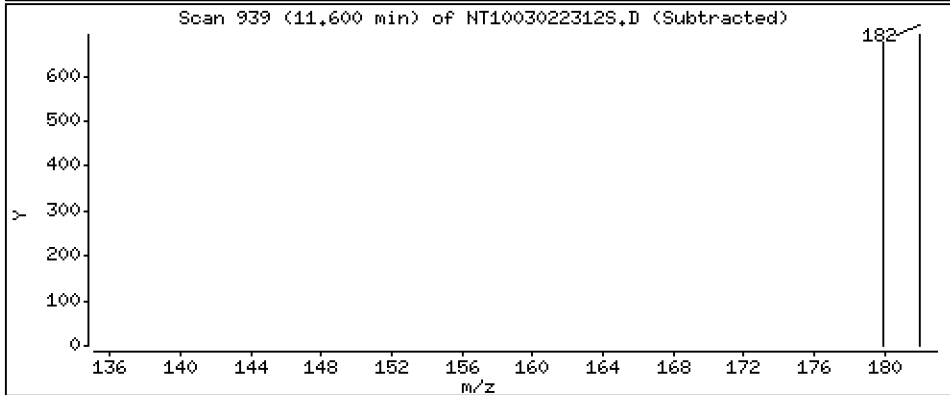
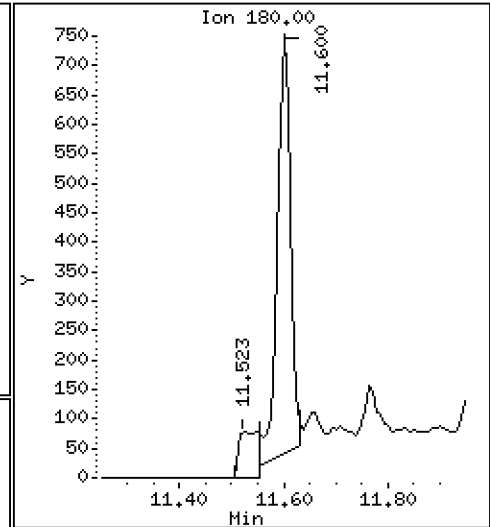
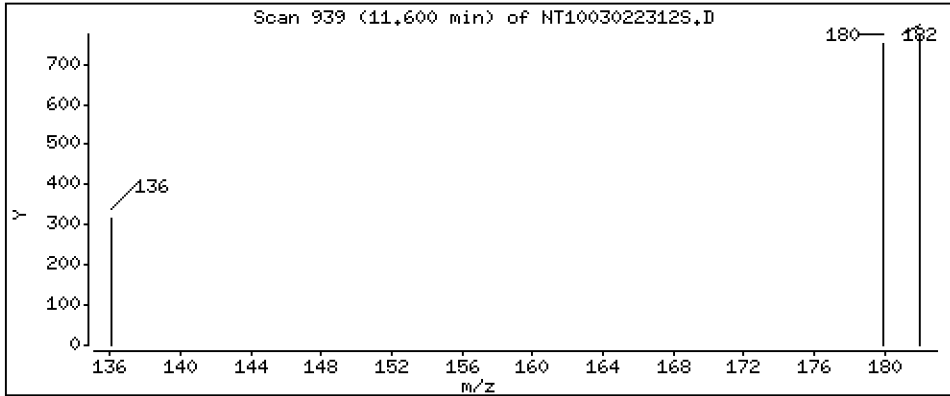
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,006590 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

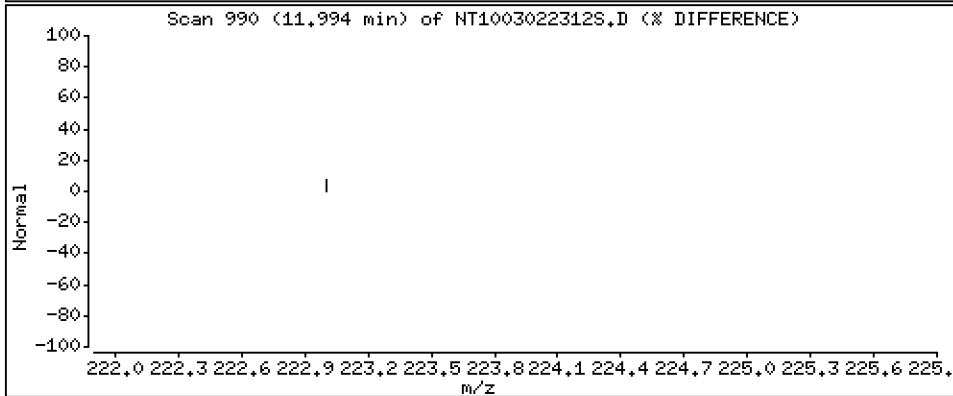
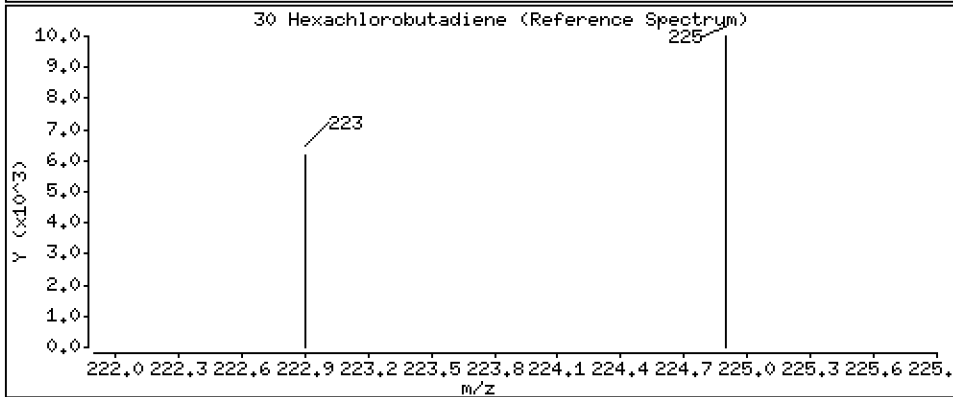
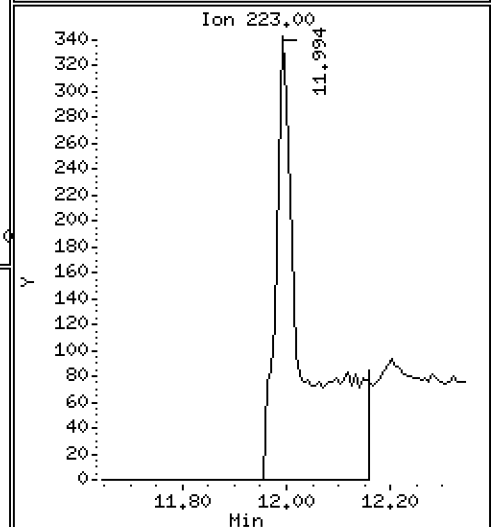
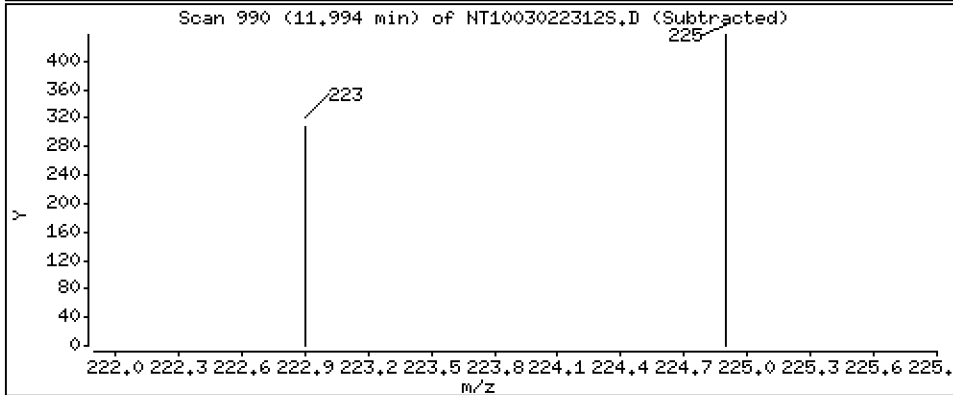
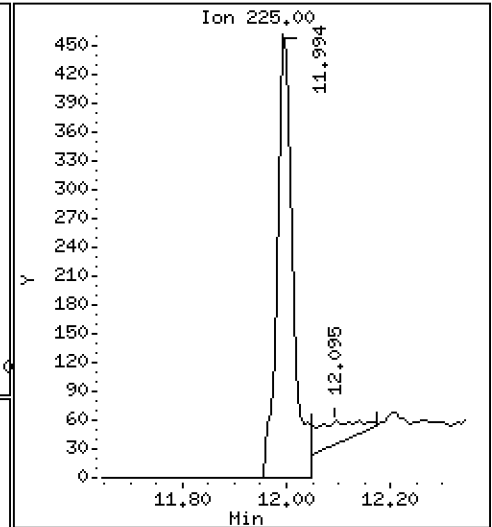
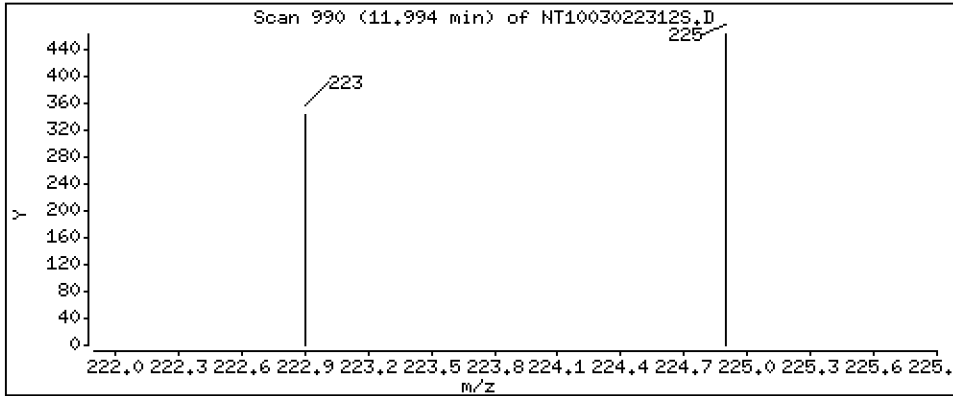
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,007303 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

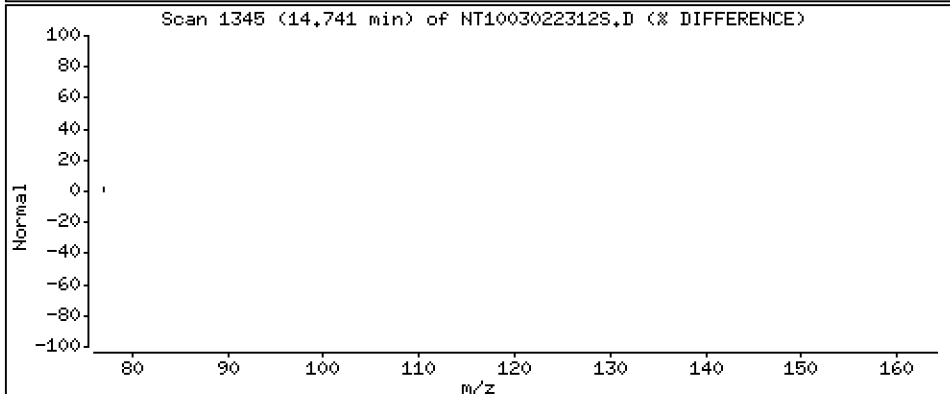
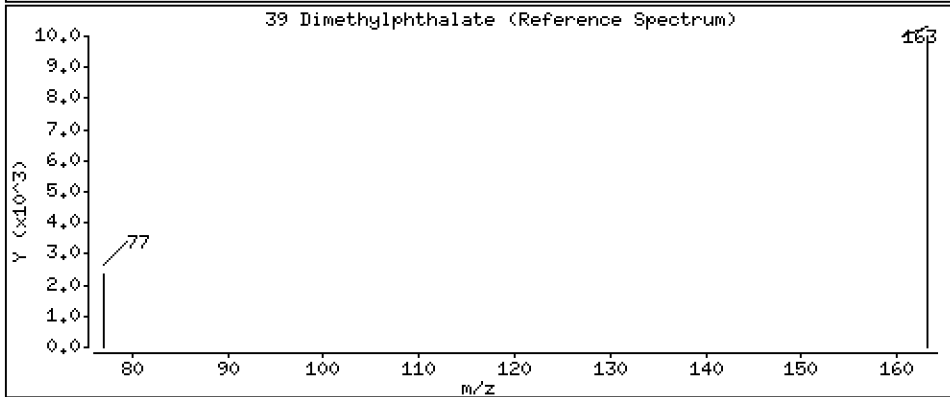
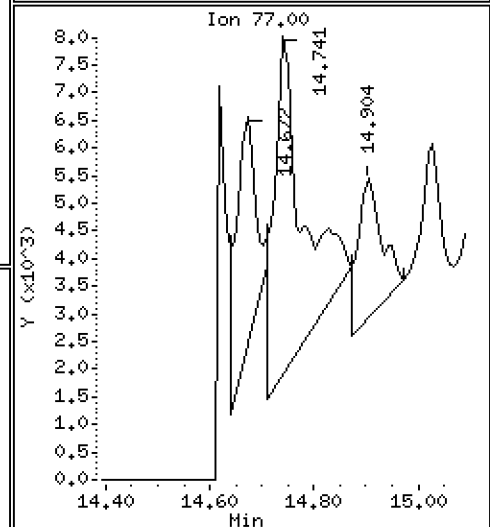
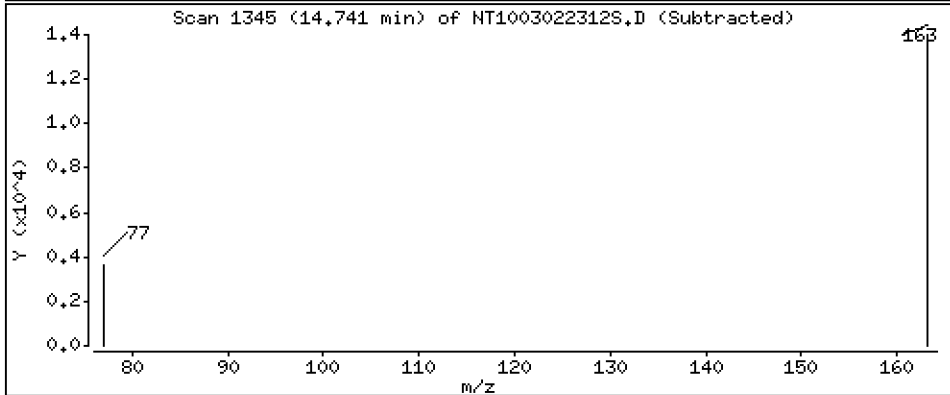
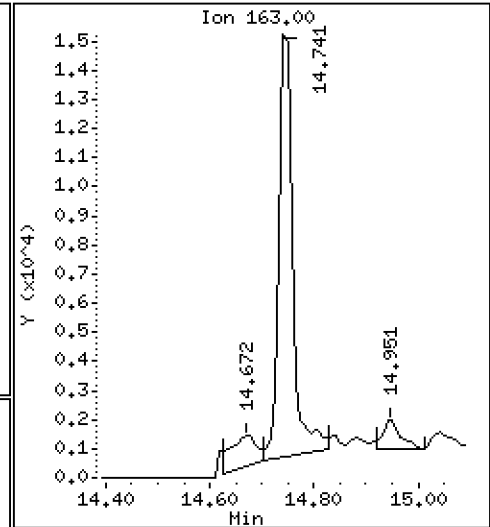
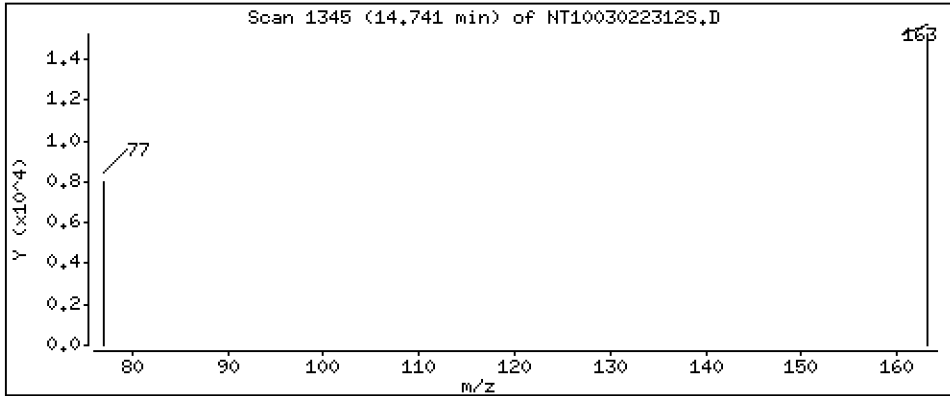
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 0.06597 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

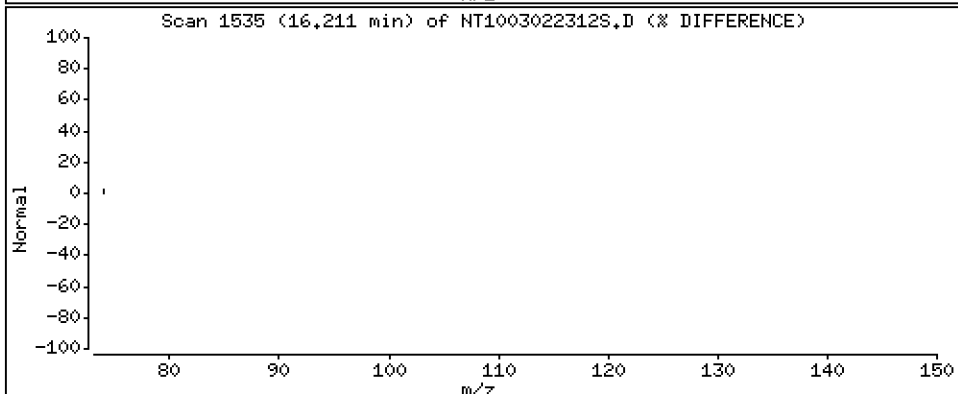
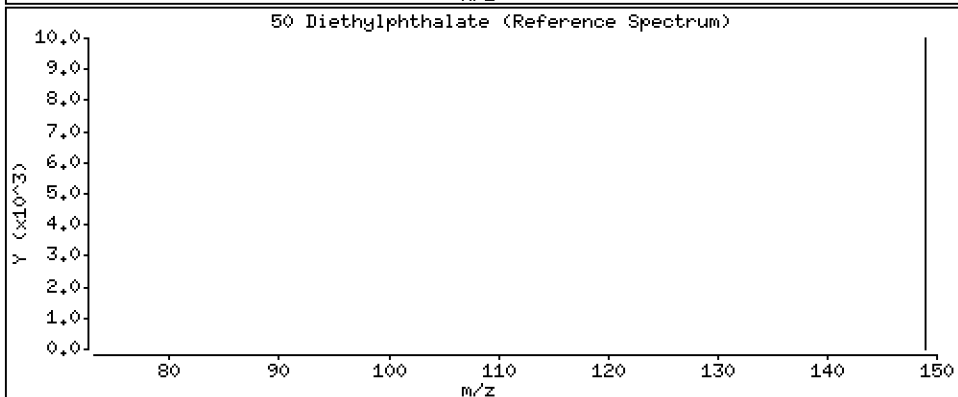
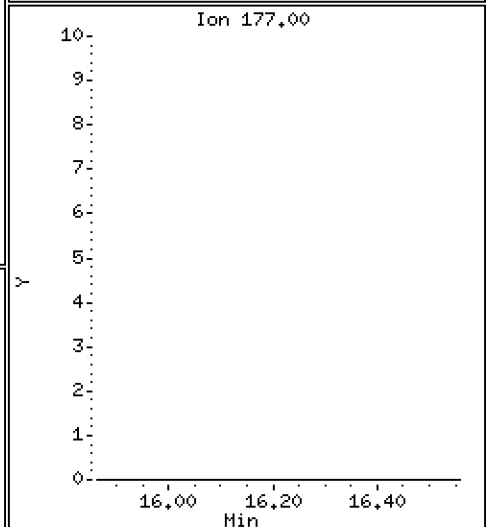
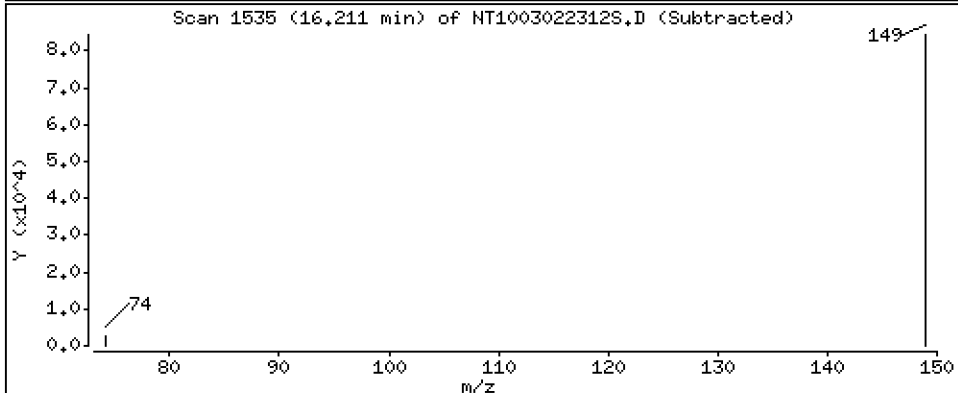
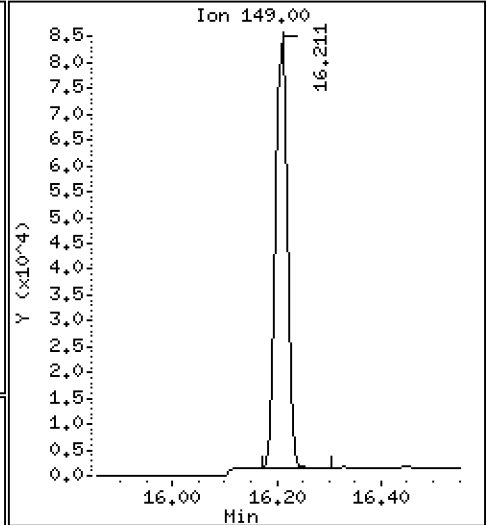
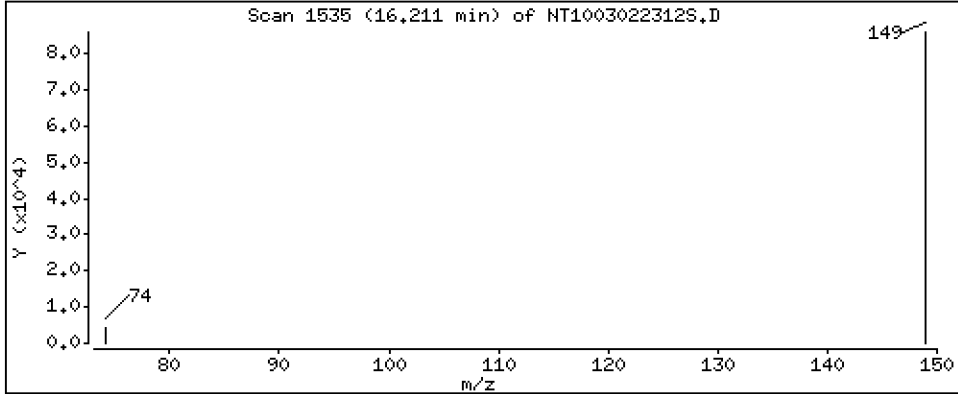
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,3326 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

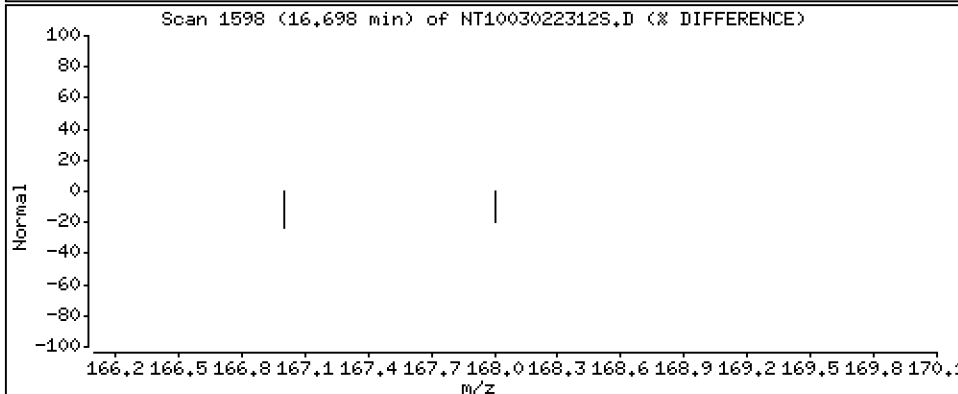
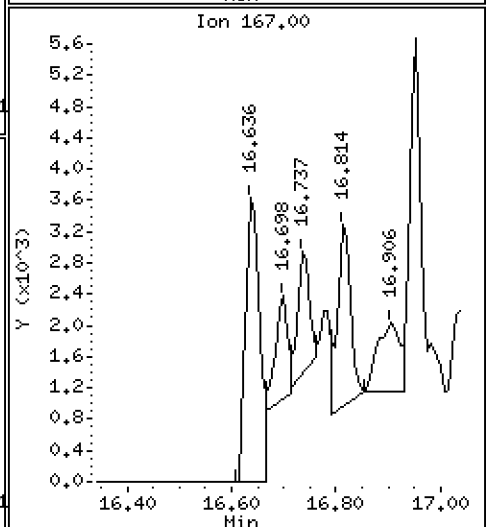
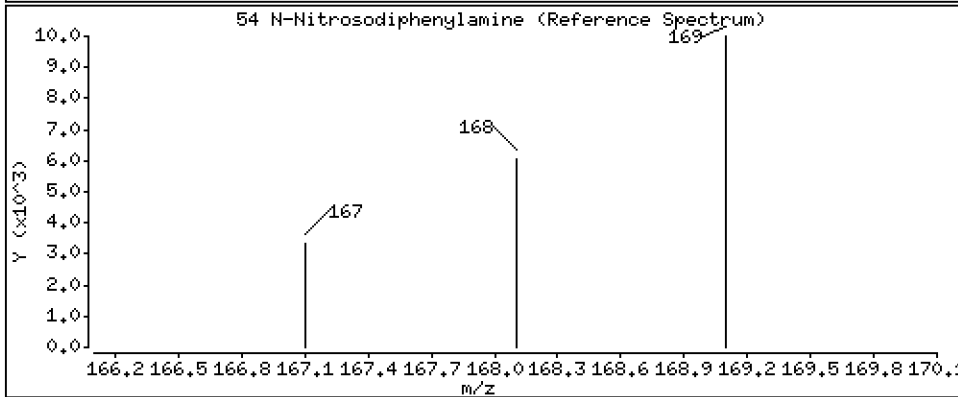
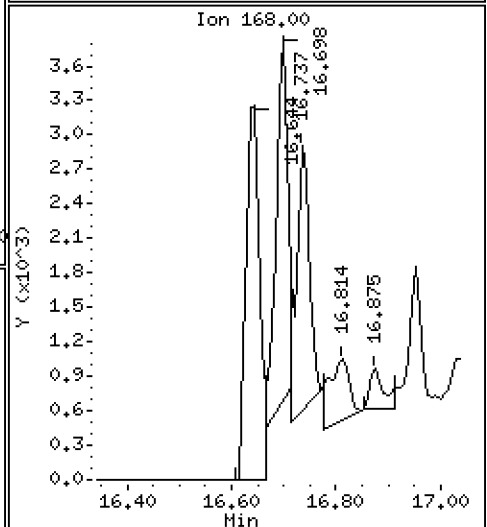
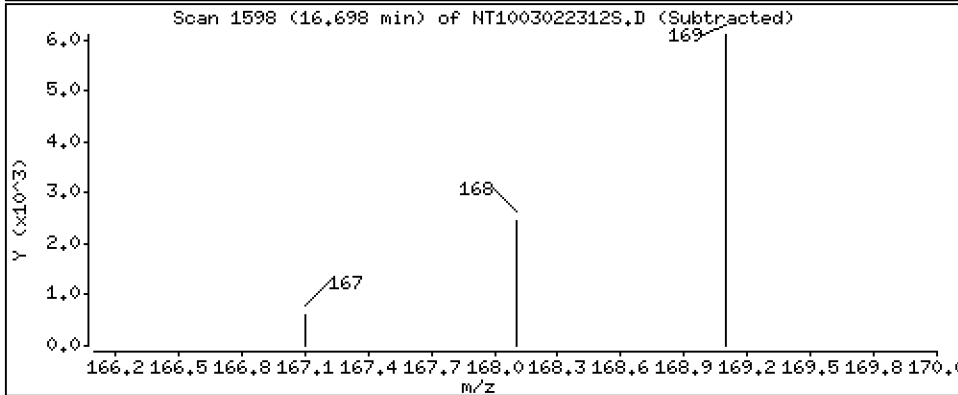
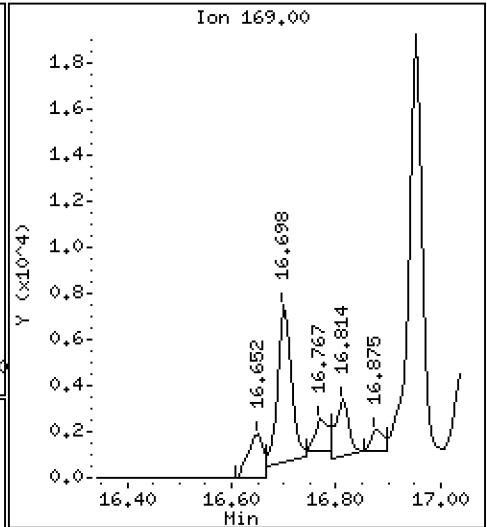
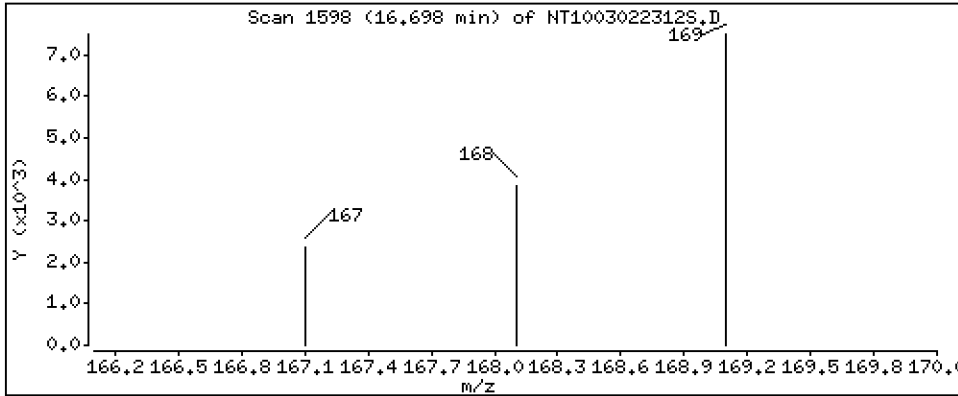
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.03481 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

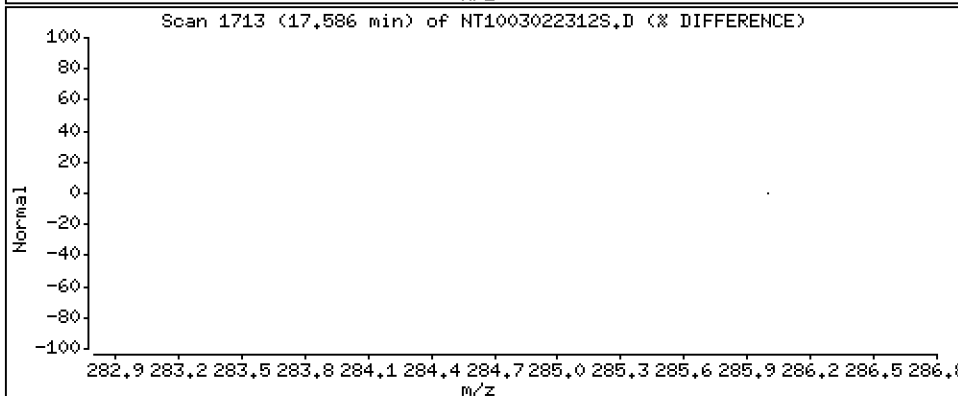
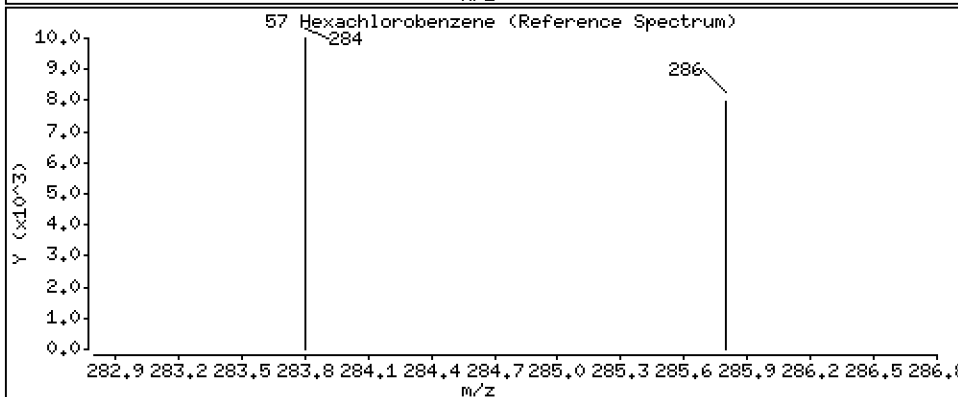
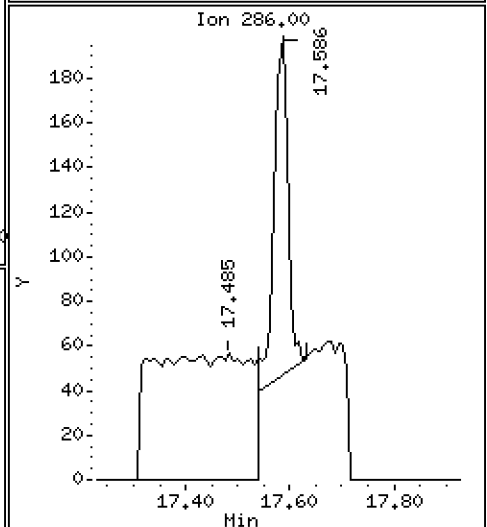
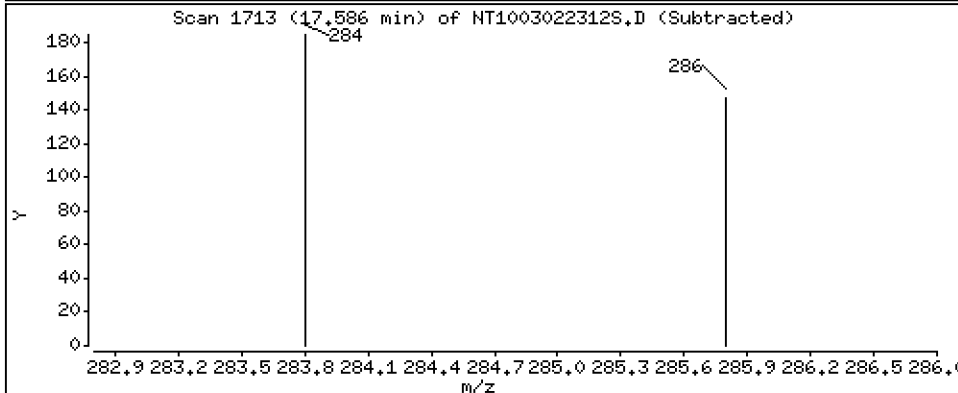
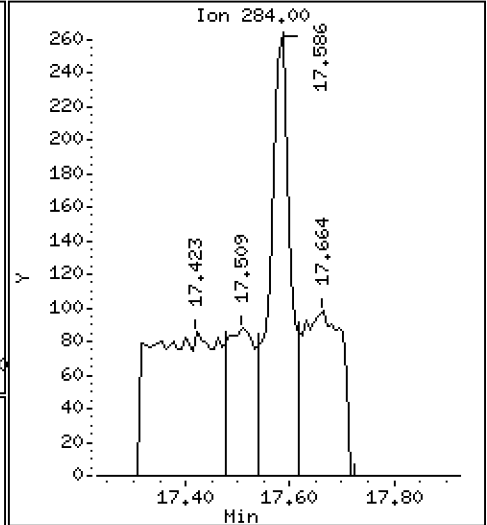
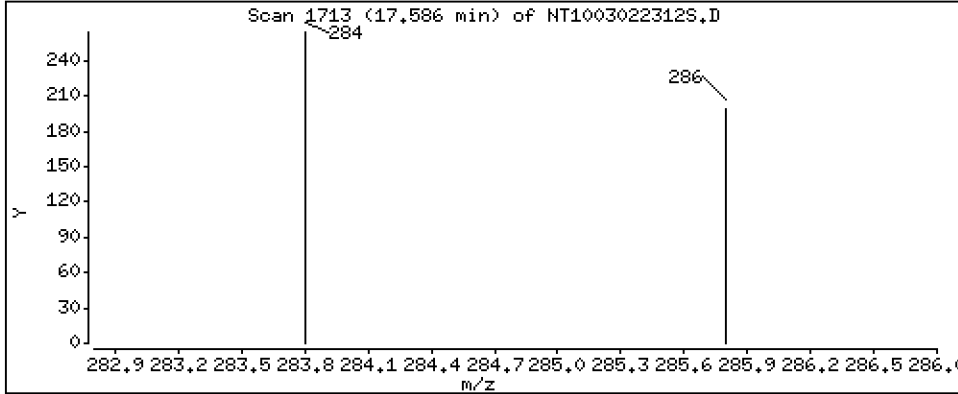
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,004138 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

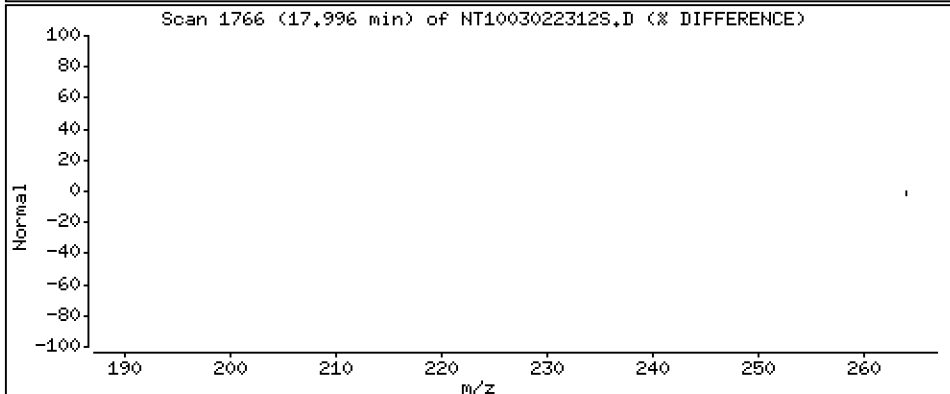
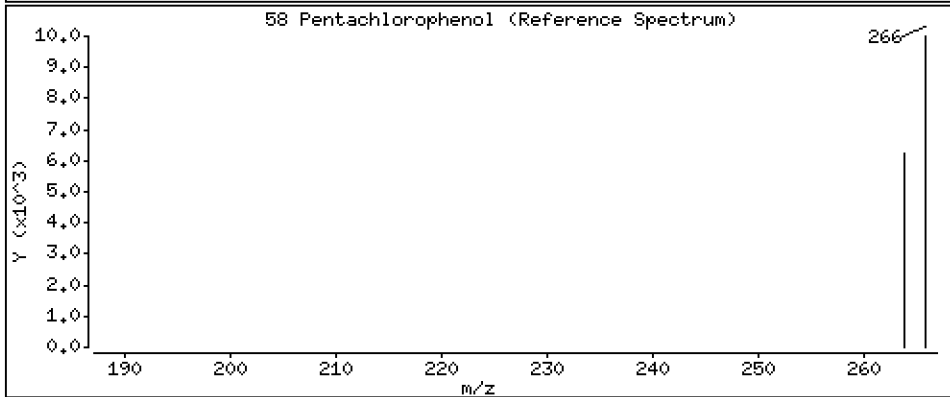
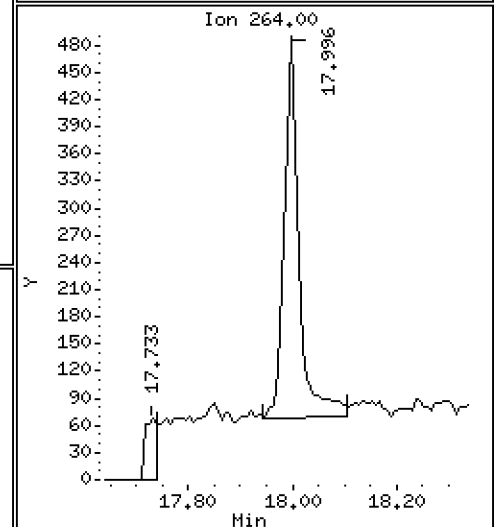
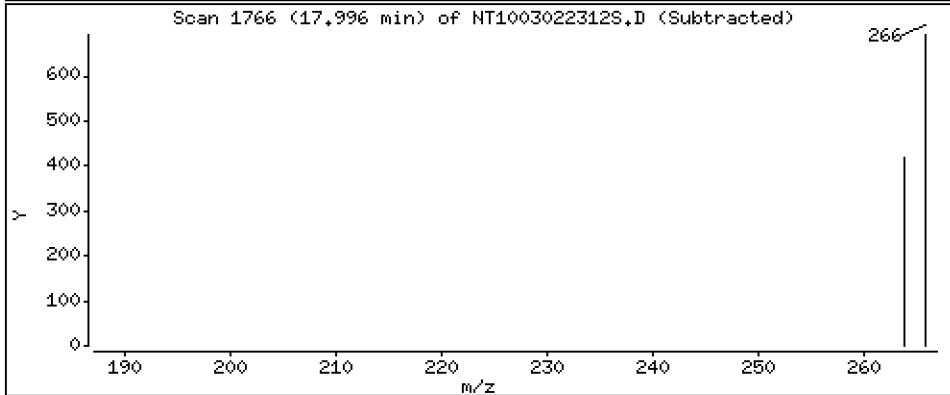
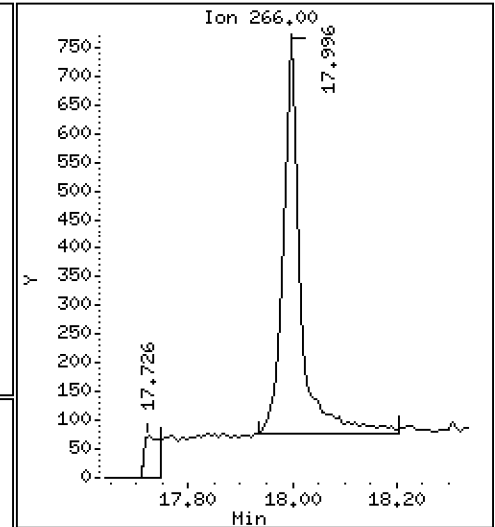
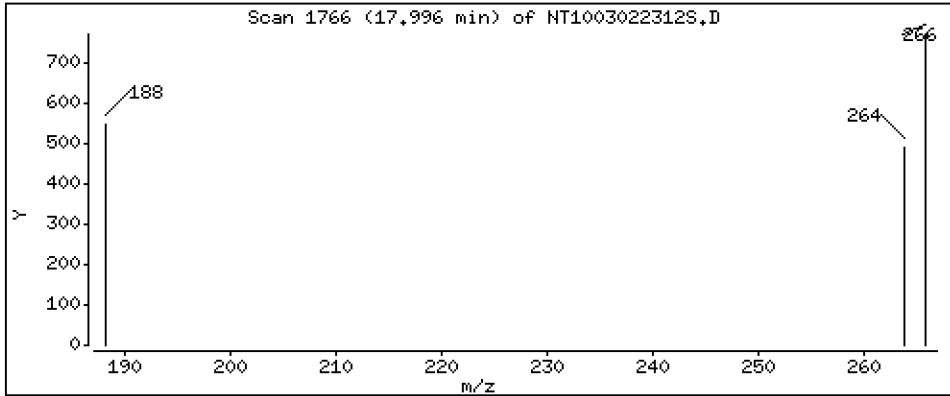
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,02110 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

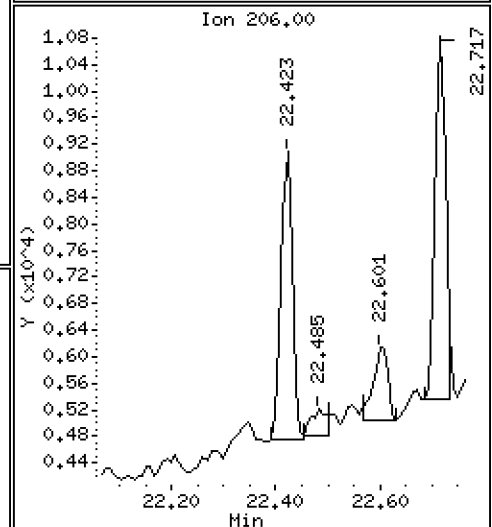
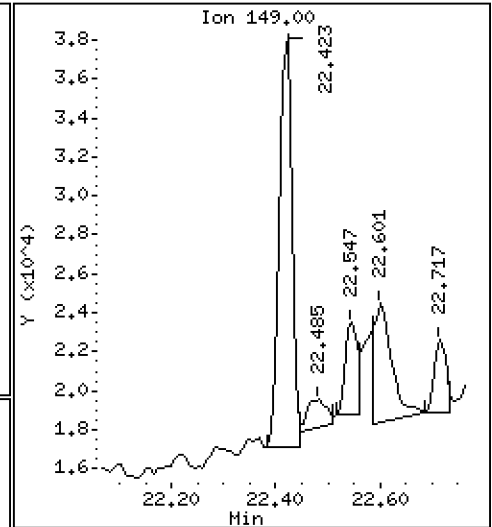
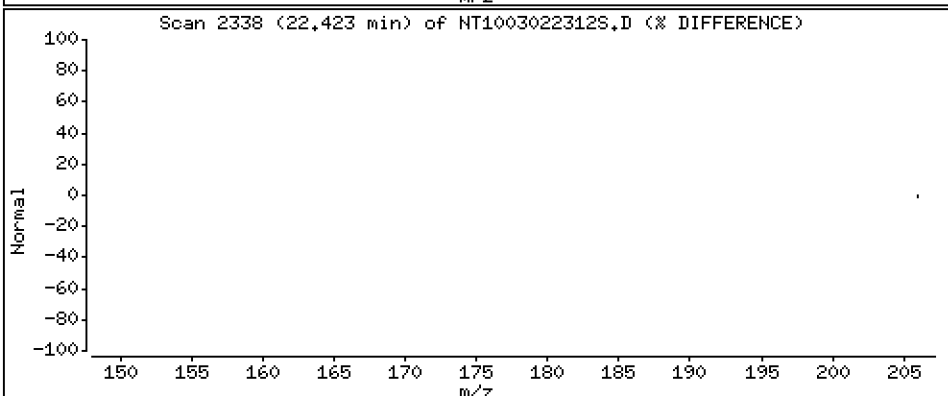
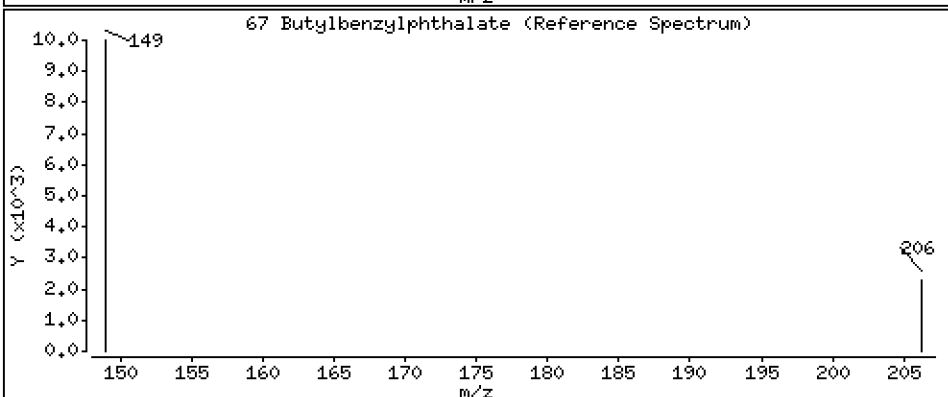
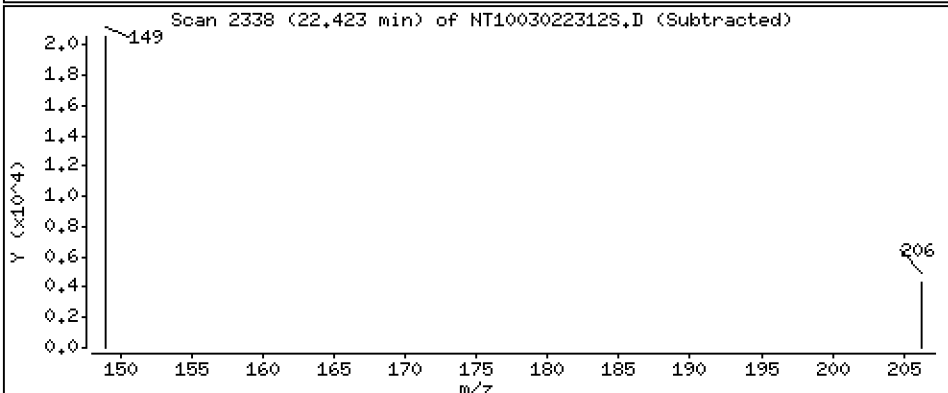
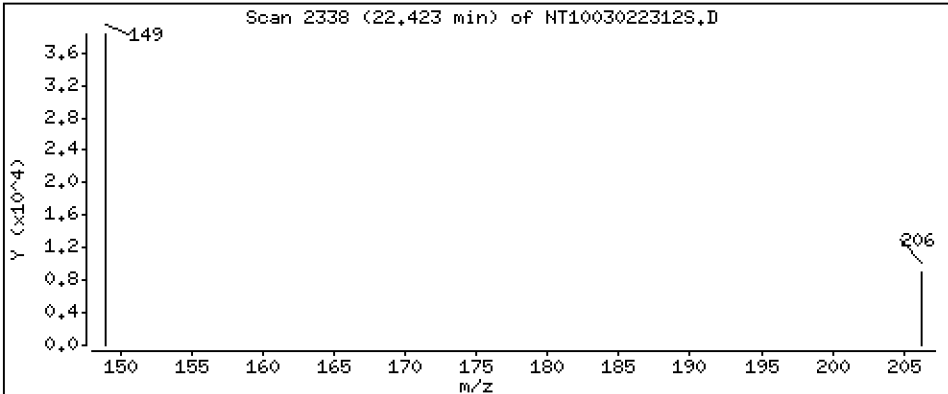
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,07165 ug/L





Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

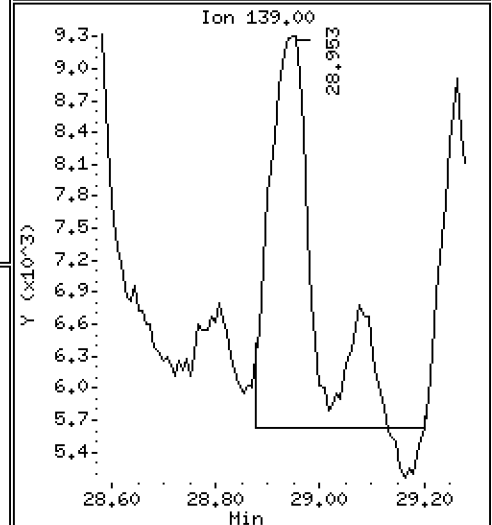
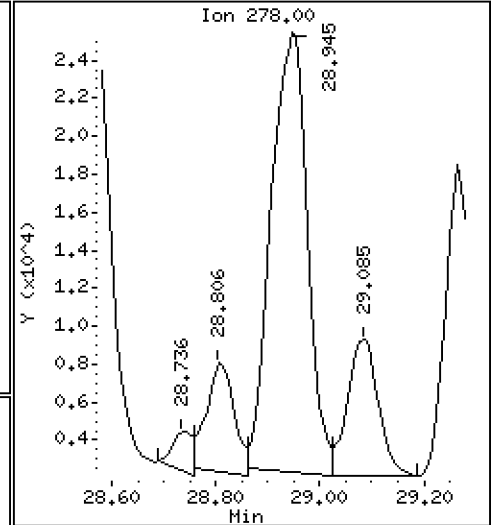
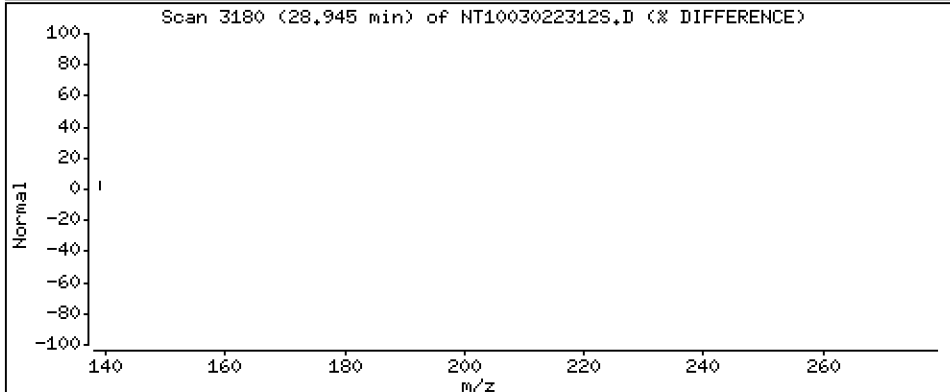
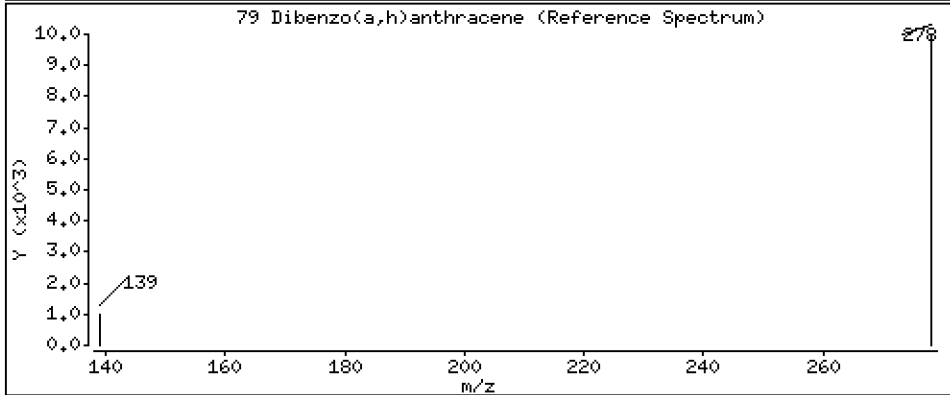
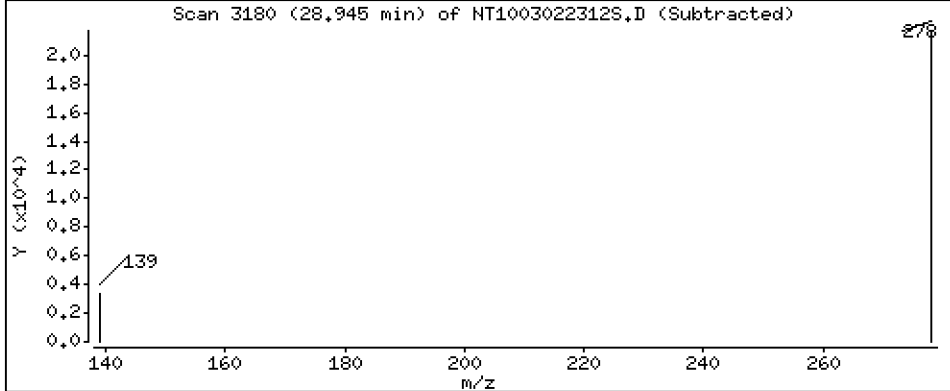
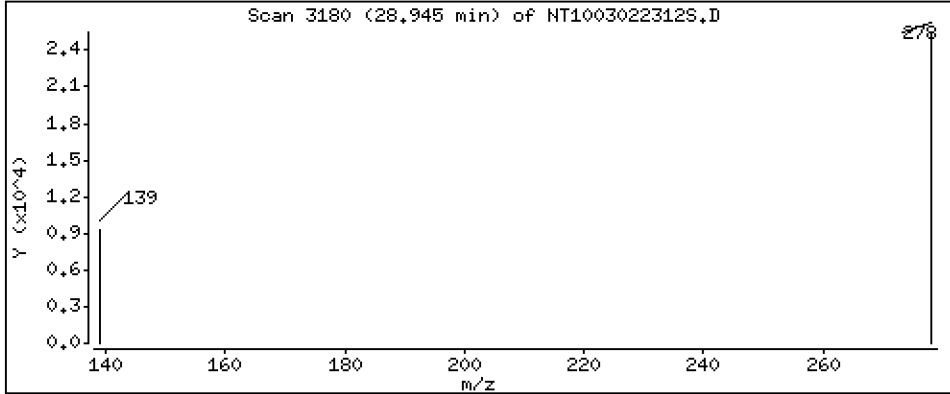
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 0.1597 ug/L



Date : 02-MAR-2023 21:22

Client ID:

Instrument: nt10.i

Sample Info: 23A0206-01

Volume Injected (uL): 1.0

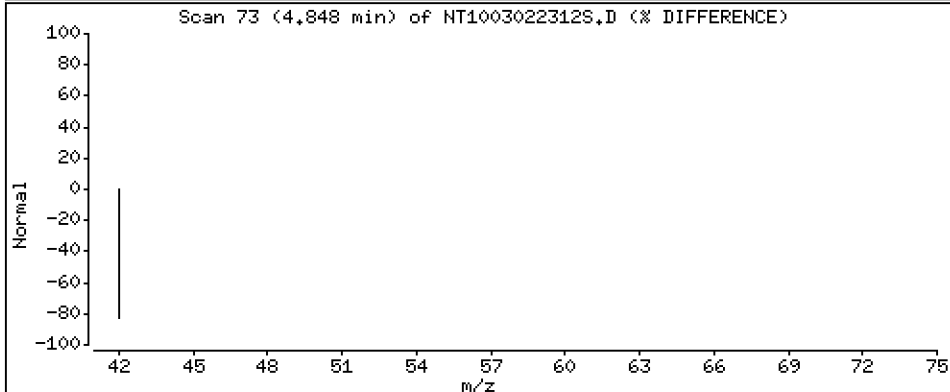
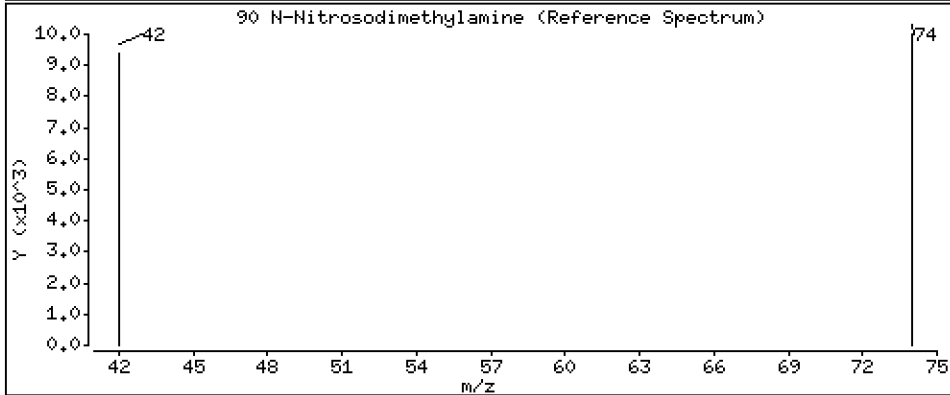
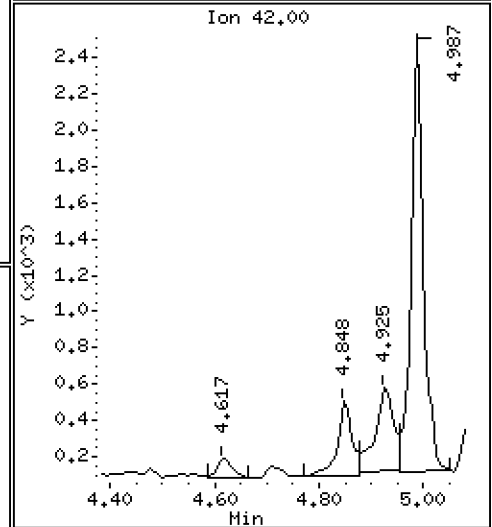
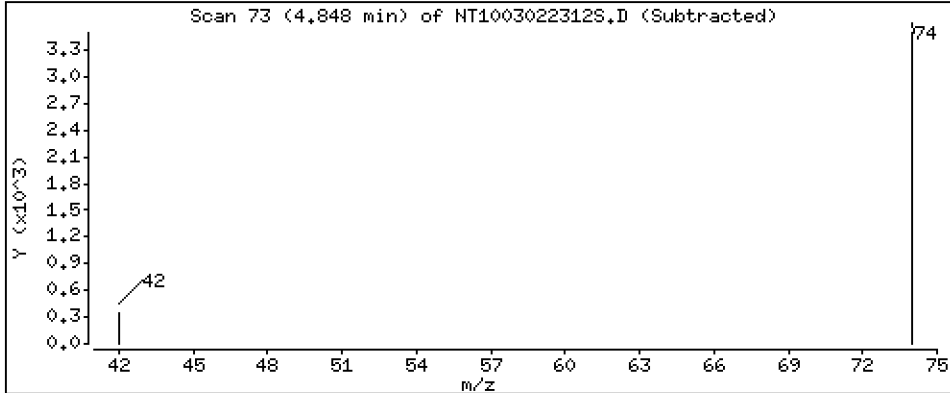
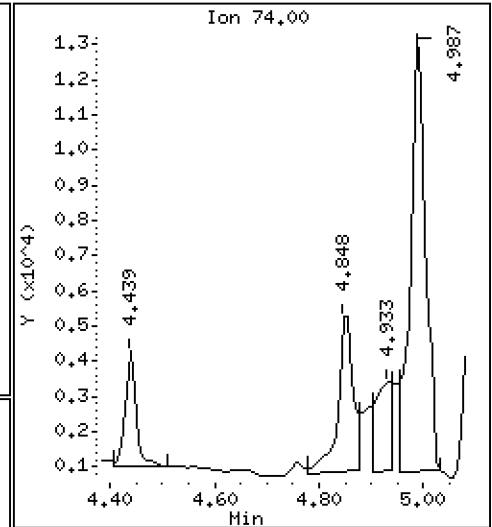
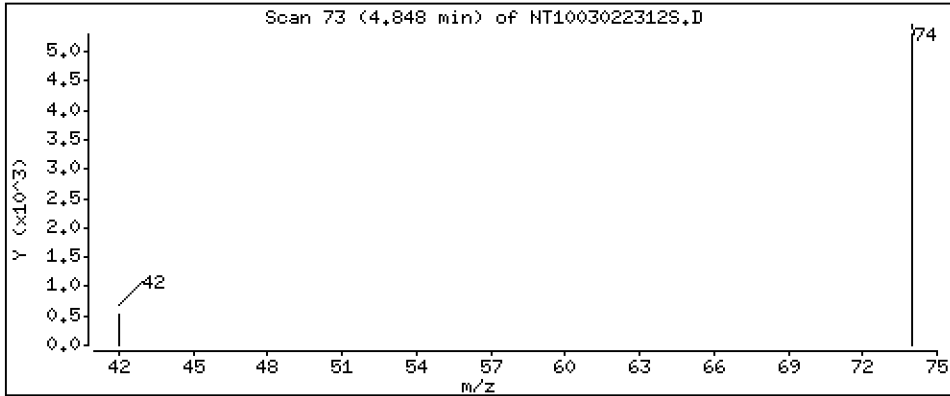
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 0.07999 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022312S.D  
 Lab Smp Id: 23A0206-01  
 Inj Date : 02-MAR-2023 21:22 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : 23A0206-01  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 14:53 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902	(0.747)	1411998	6.85580	6.856(R)	
3 Phenol	94		8.524	8.517	(0.921)	3134940	9.78296	9.783	
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	1760	0.00658	0.006583	
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251	(1.000)	721403	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.282	(1.003)	2596	0.00999	0.009987	
11 Benzyl alcohol	79		9.476	9.476	(1.024)	46173	0.27334	0.2733	
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	1202	0.00481	0.004811	
13 2-Methylphenol	108		9.663	9.655	(1.044)	7769	0.04254	0.04254	
15 4-Methylphenol	108		9.950	9.942	(1.076)	35061	0.18430	0.1843	
16 N-Nitroso-di-n-propylamine	70		9.958	9.981	(1.076)	7989	0.05906	0.05906	
22 2,4-Dimethylphenol	107		11.006	10.997	(0.939)	12257	0.05672	0.05672	
24 Benzoic acid	105		11.082	11.074	(0.945)	74985	0.63106	0.6311	
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	1208	0.00659	0.006590	
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	2546921	4.00000		
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	950	0.00730	0.007303	
39 Dimethylphthalate	163		14.741	14.741	(0.962)	25956	0.06597	0.06597	
* 42 Acenaphthene-d10	162		15.321	15.314	(1.000)	1239070	4.00000		
50 Diethylphthalate	149		16.210	16.203	(1.058)	123384	0.33255	0.3326	
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	12763	0.03481	0.03481	
57 Hexachlorobenzene	284		17.586	17.578	(0.955)	710	0.00414	0.004138	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.977)	1584	0.02110	0.02110
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2265720	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	1103320	4.89149	4.891(R)
67 Butylbenzylphthalate	149	22.422	22.414	(0.957)	33739	0.07165	0.07165
* 69 Chrysene-d12	240	23.429	23.421	(1.000)	2789268	4.00000	
* 77 Perylene-d12	264	26.131	26.115	(1.000)	3057877	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.108)	113304	0.15967	0.1597
90 N-Nitrosodimethylamine	74	4.848	4.732	(0.524)	9754	0.07999	0.07999

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022312S.D  
 Lab Smp Id: 23A0206-01  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	721403	46.21
27 Naphthalene-d8	1779056	889528	3558112	2546921	43.16
42 Acenaphthene-d10	954569	477285	1909138	1239070	29.80
59 Phenanthrene-d10	1596290	798145	3192580	2265720	41.94
69 Chrysene-d12	1649110	824555	3298220	2789268	69.14
77 Perylene-d12	1901958	950979	3803916	3057877	60.78

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022312S.D

Lab ID: 23A0206-01

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 21:22

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.524	0.511	0.0125	N-Nitrosodimethylamine

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	1642	NT1003012303S.D	SEQ-CAL8		1		9.25	358478		11.72	1302515		15.31	720687		18.40	1243145		23.42	1161833		26.11	1054384
2	1721	NT1003012304S.D	SEQ-CAL7		1		9.25	354441		11.72	1288295		15.31	739997		18.40	1248235		23.41	1079945		26.11	1086769
3	1759	NT1003012305S.D	SEQ-CAL6		1		9.24	334269		11.72	1202042		15.31	670352		18.40	1124281		23.41	948691		26.11	1004445
4	1837	NT1003012306S.D	SEQ-CAL5		1		9.24	320125		11.72	1136019		15.31	636993		18.40	1093620		23.41	1000300		26.10	1058448
5	1915	NT1003012307S.D	SEQ-CAL4		1		9.24	333617		11.72	1170292		15.31	639612		18.40	1094919		23.42	1048196		26.11	1117593
6	1953	NT1003012308S.D	SEQ-CAL3		1		9.25	314467		11.72	1088698		15.31	568154		18.40	979213		23.42	963807		26.11	1037909
7	2030	NT1003012309S.D	SEQ-CAL2		1		9.24	305434		11.72	1048978		15.31	536796		18.40	924275		23.42	947041		26.11	1060218
8	2109	NT1003012310S.D	SEQ-CAL1		1		9.25	370360		11.72	1262304		15.31	638059		18.40	1124768		23.42	1114478		26.11	1276260
9	2146	NT1003012311S.D	SEQ-SCV1		1		9.25	303734		11.72	1147551		15.31	645730		18.40	1151000		23.42	1297466		26.11	1394899
10	2224	NT1003012312S.D	SEQ-IBL1		1		9.25	515340		11.72	1787704		15.31	879316		18.40	1572306		23.42	1486349		26.11	1674195



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

ARI Job No.: SEQ- Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 01-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1642	NT1003012303S.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
1721	NT1003012304S.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
1759	NT1003012305S.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
1837	NT1003012306S.D	SEQ-CAL5		1	Pentachlorophenol,
1915	NT1003012307S.D	SEQ-CAL4		1	Pentachlorophenol,
1953	NT1003012308S.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2030	NT1003012309S.D	SEQ-CAL2		1	Benzyl alcohol, Berzoic acid,
2109	NT1003012310S.D	SEQ-CAL1		1	Benzyl alcohol, 2-Methylphenol, 4-Methylphenol, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Hexachlorobenzene,
2146	NT1003012311S.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
2224	NT1003012312S.D	SEQ-IBL1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 10-Mar-2023 11:02

NT1003012303S.D	Data Locked	yev, 10-
NT1003012304S.D	Data Locked	yev, 10-
NT1003012305S.D	Data Locked	yev, 10-
NT1003012306S.D	Data Locked	yev, 10-
NT1003012307S.D	Data Locked	yev, 10-
NT1003012308S.D	Data Locked	yev, 10-
NT1003012309S.D	Data Locked	yev, 10-
NT1003012310S.D	Data Locked	yev, 10-
NT1003012311S.D	Data Locked	yev, 10-
NT1003012312S.D	Data Locked	yev, 10-

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b
Inst ID: nt10.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07 RT08
FILENAME: NT1003012303S NT1003012304S NT1003012305S NT1003012306S NT1003012307S NT1003012308S NT1003012309S NT1003012310S
INJ. DATE: 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023 01-MAR-2023
INJ. TIME: 16:42 17:21 17:59 18:37 19:15 19:53 20:30 21:09

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, RT08, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include various chemical compounds like 2-Fluorophenol, Chlorobenzilate, Isodrin, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropyl-naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hydroxy)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.268	15.768-16.768	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.927	12.427-13.427	+++++	+++++
\$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.235	7.735-8.735	+++++	+++++
3 Phenol	8.525	8.517	8.517	8.518	8.518	8.525	8.525	8.533	8.533	8.033-9.033	8.522	0.006
4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.397	7.897-8.897	+++++	+++++
\$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.521	8.021-9.021	+++++	+++++
7 1,3-Dichlorobenzene	9.143	9.143	9.136	9.136	9.136	9.143	9.144	9.136	9.136	8.636-9.636	9.140	0.004
* 8 1,4-Dichlorobenzene-d4	9.252	9.252	9.244	9.245	9.245	9.252	9.245	9.252	9.252	8.752-9.752	9.248	0.004
9 1,4-Dichlorobenzene	9.283	9.283	9.275	9.276	9.276	9.275	9.276	9.275	9.275	8.775-9.775	9.277	0.003
\$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.230	8.730-9.730	+++++	+++++
11 Benzyl alcohol	9.477	9.477	9.469	9.477	9.477	9.485	9.485	9.508	9.508	9.008-10.008	9.482	0.012
12 1,2-Dichlorobenzene	9.562	9.562	9.562	9.563	9.563	9.562	9.563	9.563	9.563	9.063-10.063	9.562	0.000
13 2-Methylphenol	9.656	9.655	9.656	9.656	9.656	9.663	9.664	9.671	9.671	9.171-10.171	9.660	0.006
14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.413	8.913-9.913	+++++	+++++
15 4-Methylphenol	9.943	9.943	9.943	9.943	9.951	9.950	9.959	9.966	9.966	9.466-10.466	9.950	0.009
16 N-Nitroso-di-n-propyla	9.982	9.982	9.974	9.974	9.974	9.974	9.974	9.982	9.982	9.482-10.482	9.977	0.004
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.809	9.309-10.309	+++++	+++++
\$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.917	9.417-10.417	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.948	9.448-10.448	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.399	9.899-10.899	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.575	10.075-11.075	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
22 2,4-Dimethylphenol	11.006	10.998	10.998	10.998	10.998	10.998	11.007	11.006	11.006	10.506-11.506	11.001	0.004
23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.830	10.330-11.330	+++++	+++++
24 Benzoic acid	11.218	11.159	11.108	11.074	11.058	11.074	11.007	+++++	11.007	10.507-11.507	11.100	0.070
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.033	10.533-11.533	+++++	+++++
26 1,2,4-Trichlorobenzene	11.600	11.600	11.600	11.601	11.601	11.600	11.601	11.600	11.600	11.100-12.100	11.600	0.000
* 27 Naphthalene-d8	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.724	11.224-12.224	11.724	0.000
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.326	10.826-11.826	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.457	10.957-11.957	+++++	+++++
30 Hexachlorobutadiene	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.994	11.494-12.494	11.994	0.000
31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.432	11.932-12.932	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.710	12.210-13.210	+++++	+++++
33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.182	12.682-13.682	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.330	12.830-13.830	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.415	12.915-13.915	+++++	+++++
\$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.484	12.984-13.984	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.686	13.186-14.186	+++++	+++++
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.441-14.441	+++++	+++++
39 Dimethylphthalate	14.749	14.741	14.741	14.742	14.742	14.741	14.742	14.749	14.749	14.249-15.249	14.744	0.004
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.545	14.045-15.045	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.506	14.006-15.006	+++++	+++++
* 42 Acenaphthene-d10	15.314	15.314	15.314	15.314	15.314	15.314	15.314	15.314	15.314	14.814-15.814	15.314	0.000
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.785	14.285-15.285	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.924	14.424-15.424	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.001	14.501-15.501	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.248	14.748-15.748	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.171	14.671-15.671	+++++	+++++
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.302	14.802-15.802	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
50 Diethylphthalate	16.219	16.211	16.203	16.203	16.203	16.203	16.211	16.211	16.211	15.711-16.711	16.208	0.006
51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.037	15.537-16.537	+++++	+++++
53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.145	15.645-16.645	+++++	+++++
54 N-Nitrosodiphenylamine	16.698	16.690	16.690	16.691	16.691	16.698	16.698	16.706	16.706	16.206-17.206	16.695	0.006
55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.477	15.977-16.977	+++++	+++++
56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.939	16.439-17.439	+++++	+++++
57 Hexachlorobenzene	17.578	17.578	17.578	17.579	17.579	17.578	17.579	17.579	17.579	17.079-18.079	17.579	0.000
58 Pentachlorophenol	17.989	17.981	17.989	17.989	17.989	17.996	18.004	18.012	18.012	17.512-18.512	17.994	0.010
59 Phenanthrene-d10	18.399	18.399	18.399	18.399	18.399	18.399	18.399	18.399	18.399	17.899-18.899	18.399	0.000
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.899	17.399-18.399	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.991	17.491-18.491	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.324	17.824-18.824	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.152	18.652-19.652	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.289	19.789-20.789	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.715	20.215-21.215	+++++	+++++
66 Terphenyl-d14	21.524	21.524	21.524	21.525	21.525	21.524	21.525	21.532	21.532	21.032-22.032	21.526	0.003
67 Butylbenzylphthalate	22.407	22.407	22.407	22.407	22.415	22.415	22.407	22.415	22.415	21.915-22.915	22.410	0.004
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.875	22.375-23.375	+++++	+++++

ARI Labs, Inc.  
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Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 69 Chrysene-d12	23.421	23.414	23.414	23.414	23.422	23.421	23.422	23.422	23.422	22.922-23.922	23.419	0.004
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.844	22.344-23.344	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.952	22.452-23.452	+++++	+++++
72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.007	22.507-23.507	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.990	23.490-24.490	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.687	24.187-25.187	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.725	24.225-25.225	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.283	24.783-25.783	+++++	+++++
* 77 Perylene-d12	26.108	26.108	26.108	26.101	26.108	26.108	26.108	26.108	26.108	25.608-26.608	26.107	0.003
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.794	27.294-28.294	+++++	+++++
79 Dibenzo(a,h)anthracene	28.930	28.914	28.914	28.915	28.930	28.938	28.946	28.946	28.946	28.446-29.446	28.929	0.013
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.494	27.994-28.994	+++++	+++++
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
\$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
\$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
\$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
90 N-Nitrosodimethylamine	4.732	4.724	4.717	4.725	4.725	4.740	4.740	4.756	4.756	4.256-5.256	4.732	0.012
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.305	7.805-8.805	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.529	20.029-21.029	+++++	+++++
\$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++



ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Batch File: \\target\share\chem3\nt10.i\20230301.b\SIM.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.535	4.035-5.035	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
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 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Calibration File Names:

Level 1: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012310S.D  
 Level 2: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012309S.D  
 Level 3: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012308S.D  
 Level 4: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012307S.D  
 Level 5: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012306S.D  
 Level 6: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012305S.D  
 Level 7: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012304S.D  
 Level 8: \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012303S.D

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
140 Diallyate A	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
141 Diallate B	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
127 2-Isopropyl-naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
113 Diphenyl Oxide	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
112 Biphenyl	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
3 Phenol	3599	8264	19568	61458	128497	360891					
	767247	1593896					QUAD	0.000e+000	0.59382	-0.00714	0.99994
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.56799	1.52570	1.49198	1.51309	1.44269	1.43612					
	1.43451	1.44742					AVRG		1.48244		3.36989
9 1,4-Dichlorobenzene	1.50923	1.47580	1.43373	1.46395	1.40754	1.40391					
	1.39839	1.43790					AVRG		1.44131		2.72097



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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
11 Benzyl alcohol	1380	3114	10320	31347	65076	200086					
	449975	980075					QUAD	0.000e+000	1.07135	-0.05783	0.99978
12 1,2-Dichlorobenzene	1.43363	1.40456	1.36192	1.41000	1.36327	1.36665					
	1.36335	1.37939					AVRG		1.38535		1.96993
13 2-Methylphenol	1789	4548	11161	35755	75957	215648					
	472415	995533					QUAD	0.000e+000	0.98781	-0.03181	0.99992
14 2,2'-oxybis(1-Chloropropane)	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	2062	3746	9608	34768	75243	225735					
	500092	1071975					QUAD	0.000e+000	0.94989	-0.03839	0.99982
16 N-Nitroso-di-n-propylamine	1965	4218	10242	27908	57866	160503					
	338518	699099					QUAD	0.000e+000	1.33351	-0.02653	0.99995
17 Hexachloroethane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	6159	11856	27660	89362	185925	522194					
	1127131	2348644					QUAD	0.000e+000	2.94692	-0.09695	0.99996
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
24 Benzoic acid	+++++	+++++	7336	37634	126544	521508					
	1425868	3313595					QUAD	0.000e+000	5.37547	-0.57371	0.99759
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
26 1,2,4-Trichlorobenzene	0.28887	0.28679	0.28252	0.29461	0.28337	0.28328					
	0.28854	0.29525					AVRG		0.28790		1.72341
28 Naphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.21833	0.20386	0.19805	0.20413	0.19707	0.19656					
	0.20447	0.21198					AVRG		0.20431		3.73354
31 4-Chloro-3-methylphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	1.17306	1.13674	1.17700	1.32015	1.33033	1.34291					
	1.32177	1.35881					AVRG		1.27010		7.15698
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
50 Diethylphthalate	1.10372  1.26512	1.06260  1.31611	1.10882	1.22577	1.23779	1.26204					
							AVRG		1.19775		7.73514
51 4-Chlorophenyl-phenylether	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	0.52420  0.70947	0.58247  0.72627	0.62289	0.68128	0.64518	0.68703					
							AVRG		0.64735		10.57293
56 4-Bromophenyl-phenylether	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.29659  0.31009	0.29809  0.31346	0.29705	0.31056	0.29828	0.29945					
							AVRG		0.30295		2.34116

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
58 Pentachlorophenol	++++	1243	3505	15934	44811	176209					
	489921	1121362					QUAD	0.000e+000	7.54611	-2.24262	0.99782
60 Phenanthrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000
61 Anthracene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000
62 Carbazole	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000
63 Di-n-butylphthalate	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000
64 Fluoranthene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000
65 Pyrene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG	0.000e+000			0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
67 Butylbenzylphthalate	4671 915766	8617 1888709	19744	65574	144786	387221					
							QUAD	0.000e+000	1.48043	0.03284	0.99960
68 Benzo(a)anthracene	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000
70 3,3'-Dichlorobenzidine	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000
71 Chrysene	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000
72 bis(2-Ethylhexyl)phthalate	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000
73 Di-n-octylphthalate	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000
74 Benzo(b)fluoranthene	++++ ++++	++++ ++++	++++	++++	++++	++++					
							AVRG	0.000e+000			0.000e+000



ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	10824	20472	39856	120142	236566	599679					
	1371633	2937326					QUAD	0.000e+000	1.07973	-0.06563	0.99996
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	0.58127	0.59640	0.65358	0.68722	0.70407	0.73905					
	0.71236	0.73487					AVRG		0.67610		8.92506
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
101 Cholesterol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
103 Pyridine	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 1 2-Fluorophenol	1.02185	1.05555	1.08844	1.17836	1.17520	1.21583					
	1.18289	1.21771					AVRG		1.14198		6.62406
\$ 145 d8-1,4-Dioxane	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 2 Phenol-d5	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 5 2-Chlorophenol-d4	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
\$ 10 1,2-Dichlorobenzene-d4	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 18 Nitrobenzene-d5	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 36 2-Fluorobiphenyl	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 55 2,4,6-Tribromophenol	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 66 Terphenyl-d14	0.26682	0.28582	0.28446	0.31786	0.33307	0.36379					
	0.37637	0.35956					AVRG		0.32347		12.80012
\$ 85 p-Cresol-d4	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
\$ 86 Anthracene-d10	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-MAR-2023 16:42  
 End Cal Date : 01-MAR-2023 21:09  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 4.14  
 Integrator : HP RTE  
 Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Last Edit : 08-Mar-2023 14:14 yev

Compound	0.0500000	0.1000000	0.2000000	0.5000000	1.0000	2.5000	Curve	b	Coefficients		%RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1	m2	
	5.0000	10.0000									
	Level 7	Level 8									
87 Fluoranthene-d10	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
88 Dibenz(a,h)anthracene-d14	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
89 Diphenyl-d10	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000
95 D10-1-methylnaphthalene	++++	++++	++++	++++	++++	++++					
	++++	++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

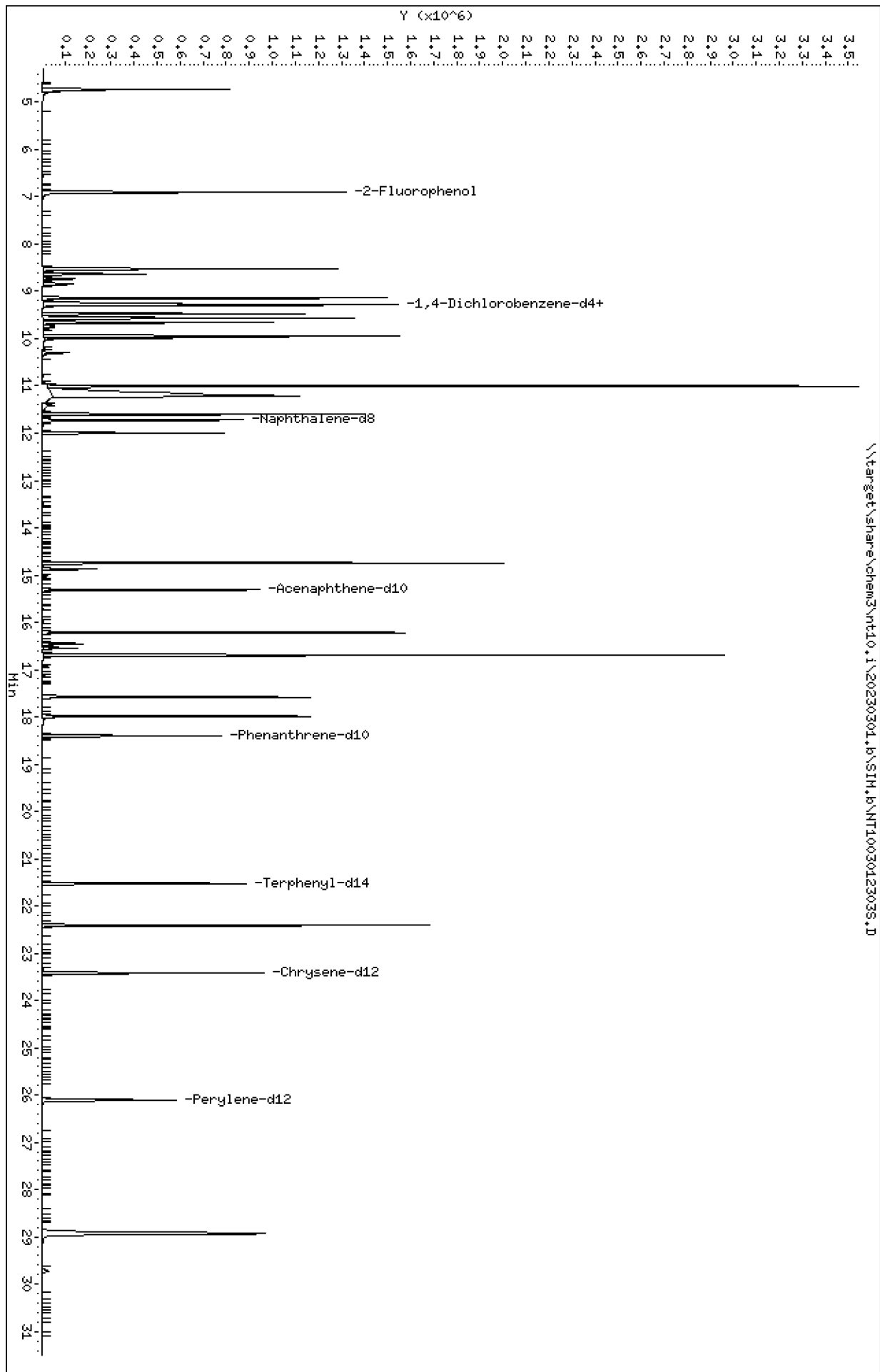
Start Cal Date : 01-MAR-2023 16:42  
End Cal Date : 01-MAR-2023 21:09  
Quant Method : ISTD  
Origin : Force  
Target Version : 4.14  
Integrator : HP RTE  
Method file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
Last Edit : 08-Mar-2023 14:14 yev

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

Data File: \\target\share\chem3\nt10.1\20230301.B\SIH.B\NT1003012303S.D  
 Date: 01-HRR-2023 16:42  
 Client ID:  
 Sample Info: SED-CAL8  
 Volume Injected (uL): 1.0  
 Column phase: ZB-5msi

Instrument: nt10.1  
 Operator: JGR  
 Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.B\SIH.B\NT1003012303S.D



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012303S.D  
 Lab Smp Id: SLC0143-CAL8  
 Inj Date : 01-MAR-2023 16:42 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL8  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3 Calibration Sample, Level: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	1636956	15.0000	15.99
3 Phenol	94		8.524	8.532	(0.921)	1593896	10.0000	9.997
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	1297168	10.0000	9.764
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.252	(1.000)	358478	4.00000	
9 1,4-Dichlorobenzene	146		9.282	9.275	(1.003)	1288638	10.0000	9.976 (H)
11 Benzyl alcohol	79		9.476	9.508	(1.024)	980075	10.0000	9.987
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	1236199	10.0000	9.957 (H)
13 2-Methylphenol	108		9.655	9.671	(1.044)	995533	10.0000	9.992 (H)
15 4-Methylphenol	108		9.942	9.966	(1.075)	1071975	10.0000	9.989
16 N-Nitroso-di-n-propylamine	70		9.981	9.982	(1.079)	699099	10.0000	9.999
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	2348644	20.0000	19.99
24 Benzoic acid	105		11.218	11.007	(0.957)	3313595	40.0000	39.85
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	961408	10.0000	10.26
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1302515	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	690276	10.0000	10.38
39 Dimethylphthalate	163		14.749	14.749	(0.963)	2448191	10.0000	10.70
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	720687	4.00000	
50 Diethylphthalate	149		16.218	16.211	(1.059)	2371265	10.0000	10.99
54 N-Nitrosodiphenylamine	169		16.698	16.705	(0.908)	2257135	10.0000	11.22
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	974187	10.0000	10.35



Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	
58 Pentachlorophenol	266		17.988	18.012	(0.978)	1121362	20.0000	19.93
* 59 Phenanthrene-d10	188		18.398	18.398	(1.000)	1243145	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	1044374	10.0000	11.12
67 Butylbenzylphthalate	149		22.407	22.415	(0.957)	1888709	10.0000	9.974
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	1161833	4.00000	
* 77 Perylene-d12	264		26.108	26.108	(1.000)	1054384	4.00000	
79 Dibenzo(a,h)anthracene	278		28.929	28.946	(1.108)	2937326	10.0000	9.994
90 N-Nitrosodimethylamine	74		4.732	4.755	(0.511)	1317165	20.0000	21.74

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012303S.D  
 Lab Smp Id: SLC0143-CAL8  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	358478	11.98
27 Naphthalene-d8	1136019	568010	2272038	1302515	14.66
42 Acenaphthene-d10	636993	318497	1273986	720687	13.14
59 Phenanthrene-d10	1093620	546810	2187240	1243145	13.67
69 Chrysene-d12	1000300	500150	2000600	1161833	16.15
77 Perylene-d12	1058448	529224	2116896	1054384	-0.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012303S.D

Lab ID: SLC0143-CAL8

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 16:42

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.957	0.000	0.9569		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

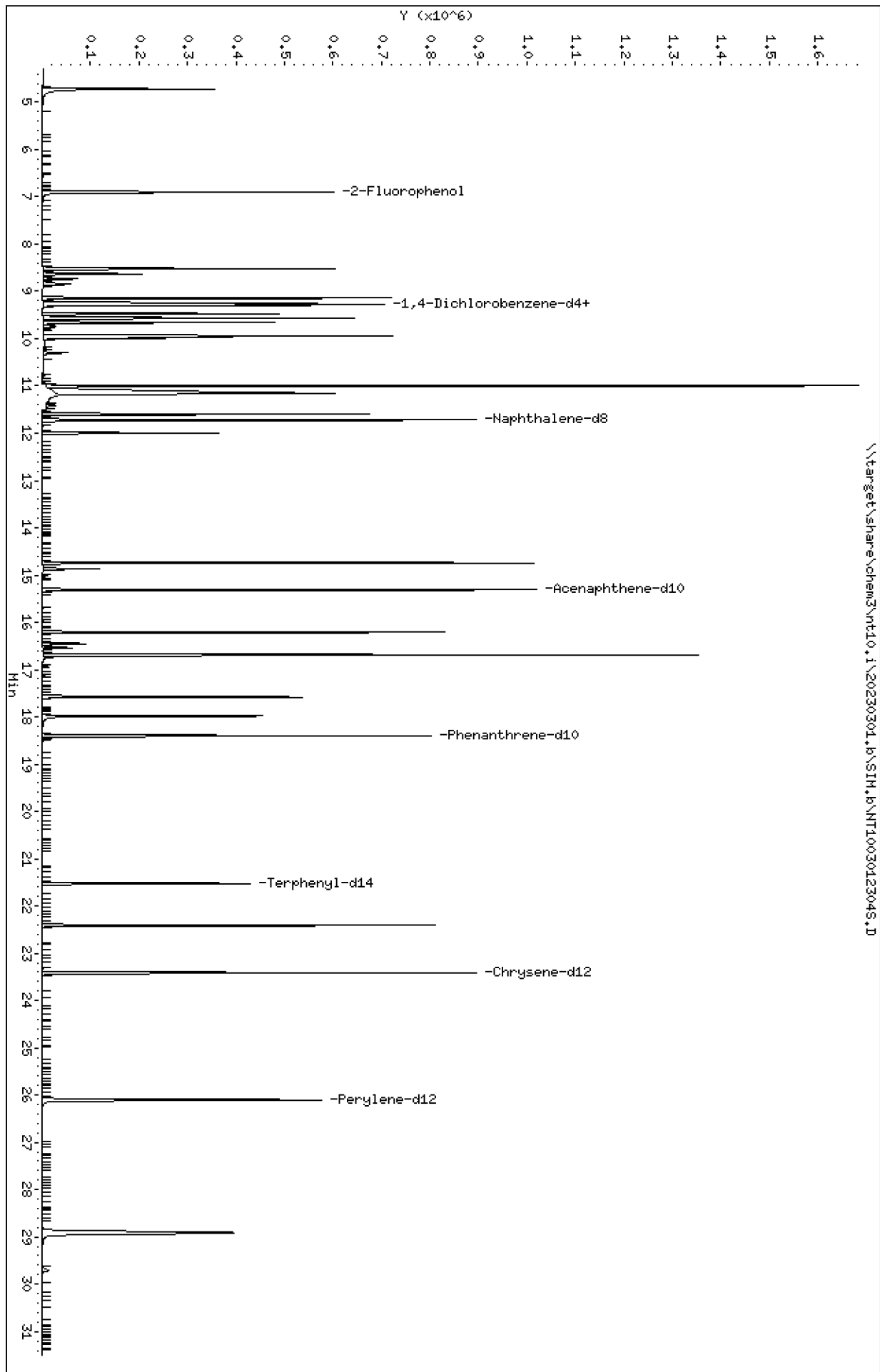
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230304.B\SIM.B\NT1003012304S.D  
Date: 01-MAR-2023 17:21  
Client ID:  
Sample Info: SED-CAL7  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230304.B\SIM.B\NT1003012304S.D



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012304S.D  
 Lab Smp Id: SLC0143-CAL7  
 Inj Date : 01-MAR-2023 17:21 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL7  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 4 Calibration Sample, Level: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	786120	7.50000	7.769
3 Phenol	94		8.517	8.532	(0.921)	767247	5.00000	5.008
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	635562	5.00000	4.838
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.252	(1.000)	354441	4.00000	
9 1,4-Dichlorobenzene	146		9.282	9.275	(1.003)	619560	5.00000	4.851
11 Benzyl alcohol	79		9.476	9.508	(1.024)	449975	5.00000	5.068
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	604033	5.00000	4.921
13 2-Methylphenol	108		9.655	9.671	(1.044)	472415	5.00000	5.040
15 4-Methylphenol	108		9.942	9.966	(1.075)	500092	5.00000	5.055
16 N-Nitroso-di-n-propylamine	70		9.981	9.982	(1.079)	338518	5.00000	4.998
22 2,4-Dimethylphenol	107		10.997	11.006	(0.938)	1127131	10.0000	10.02
24 Benzoic acid	105		11.158	11.007	(0.952)	1425868	20.0000	20.99
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	464653	5.00000	5.011
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1288295	4.00000	
30 Hexachlorobutadiene	225		11.993	11.994	(1.023)	329266	5.00000	5.004
39 Dimethylphthalate	163		14.741	14.749	(0.963)	1222634	5.00000	5.203
* 42 Acenaphthene-d10	162		15.313	15.314	(1.000)	739997	4.00000	
50 Diethylphthalate	149		16.210	16.211	(1.059)	1170231	5.00000	5.281
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	1106982	5.00000	5.480
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	483835	5.00000	5.118

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.980	18.012	(0.977)	489921	10.0000	10.47
* 59 Phenanthrene-d10	188		18.398	18.398	(1.000)	1248235	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	508078	5.00000	5.818
67 Butylbenzylphthalate	149		22.407	22.415	(0.957)	915766	5.00000	5.116
* 69 Chrysene-d12	240		23.413	23.421	(1.000)	1079945	4.00000	
* 77 Perylene-d12	264		26.107	26.108	(1.000)	1086769	4.00000	
79 Dibenzo(a,h)anthracene	278		28.914	28.946	(1.107)	1371633	5.00000	5.033
90 N-Nitrosodimethylamine	74		4.724	4.755	(0.511)	631222	10.0000	10.54

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012304S.D  
 Lab Smp Id: SLC0143-CAL7  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	354441	10.72
27 Naphthalene-d8	1136019	568010	2272038	1288295	13.40
42 Acenaphthene-d10	636993	318497	1273986	739997	16.17
59 Phenanthrene-d10	1093620	546810	2187240	1248235	14.14
69 Chrysene-d12	1000300	500150	2000600	1079945	7.96
77 Perylene-d12	1058448	529224	2116896	1086769	2.68

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.41	-0.00
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012304S.D

Lab ID: SLC0143-CAL7

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 17:21

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.952	0.000	0.9518		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



Data File: \\target\share\chem3\nt10.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1

Date : 01-MAR-2023 17:59

Client ID:

Sample Info: SED-CAL6

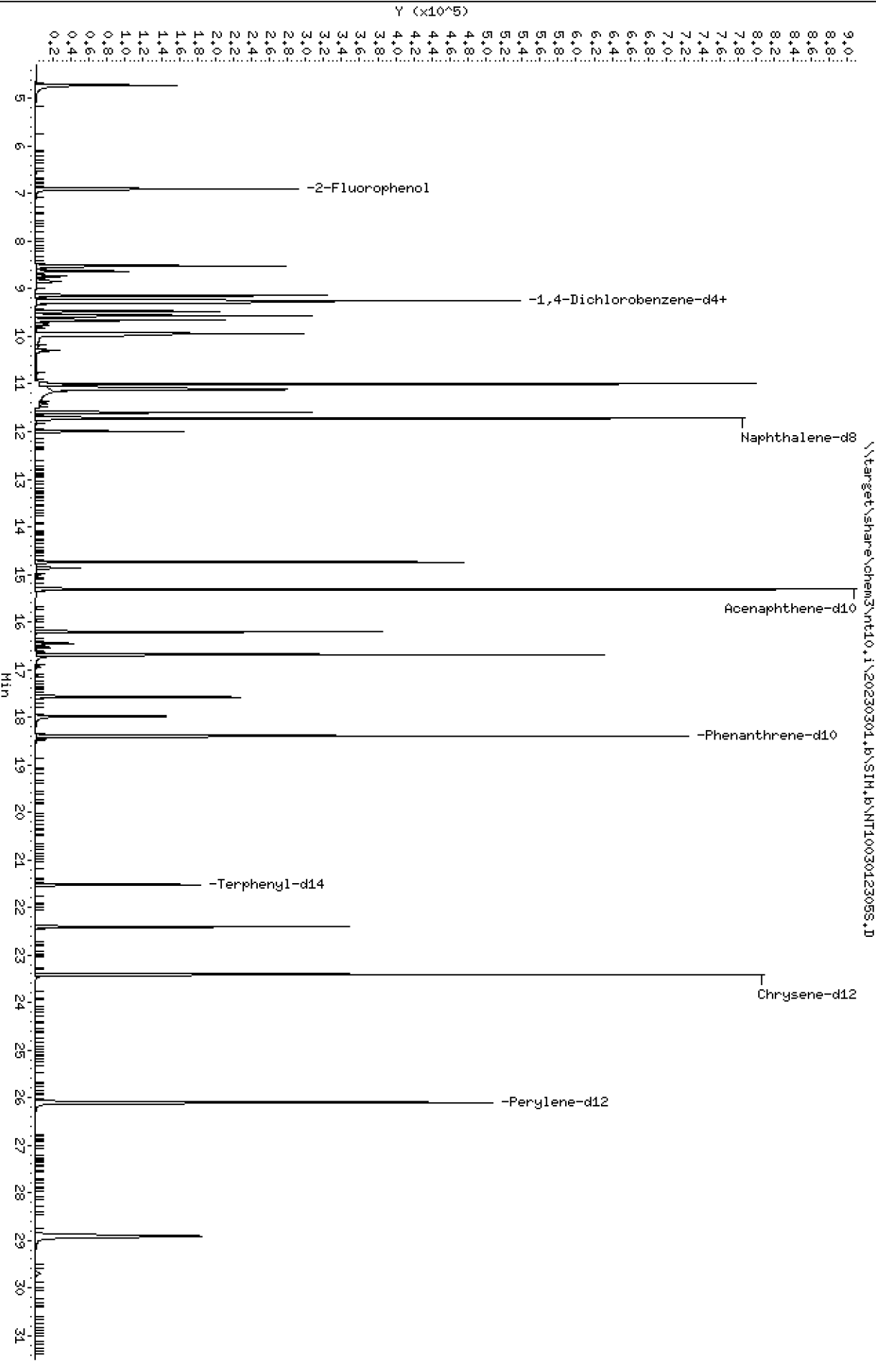
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.1

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012305S.D  
 Lab Smp Id: SLC0143-CAL6  
 Inj Date : 01-MAR-2023 17:59 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL6  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 5 Calibration Sample, Level: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.894	6.902	(0.746)	381012	3.75000	3.992
3 Phenol	94		8.517	8.532	(0.921)	360891	2.50000	2.531
7 1,3-Dichlorobenzene	146		9.135	9.136	(0.988)	300032	2.50000	2.422
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.252	(1.000)	334269	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.003)	293303	2.50000	2.435
11 Benzyl alcohol	79		9.469	9.508	(1.024)	200086	2.50000	2.482
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	285519	2.50000	2.466
13 2-Methylphenol	108		9.655	9.671	(1.044)	215648	2.50000	2.496
15 4-Methylphenol	108		9.942	9.966	(1.076)	225735	2.50000	2.496
16 N-Nitroso-di-n-propylamine	70		9.973	9.982	(1.079)	160503	2.50000	2.537
22 2,4-Dimethylphenol	107		10.997	11.006	(0.938)	522194	5.00000	5.048
24 Benzoic acid	105		11.108	11.007	(0.947)	521508	10.0000	8.897
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	212822	2.50000	2.460
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1202042	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	147673	2.50000	2.405
39 Dimethylphthalate	163		14.741	14.749	(0.963)	562639	2.50000	2.643
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	670352	4.00000	
50 Diethylphthalate	149		16.203	16.211	(1.058)	528755	2.50000	2.634
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	482758	2.50000	2.653
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	210419	2.50000	2.471

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.988	18.012	(0.978)	176209	5.00000	4.510
* 59 Phenanthrene-d10	188		18.398	18.398	(1.000)	1124281	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	215701	2.50000	2.812
67 Butylbenzylphthalate	149		22.407	22.415	(0.957)	387221	2.50000	2.439
* 69 Chrysene-d12	240		23.413	23.421	(1.000)	948691	4.00000	
* 77 Perylene-d12	264		26.108	26.108	(1.000)	1004445	4.00000	
79 Dibenzo(a,h)anthracene	278		28.914	28.946	(1.107)	599679	2.50000	2.485
90 N-Nitrosodimethylamine	74		4.716	4.755	(0.510)	308802	5.00000	5.466

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012305S.D  
 Lab Smp Id: SLC0143-CAL6  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	334269	4.42
27 Naphthalene-d8	1136019	568010	2272038	1202042	5.81
42 Acenaphthene-d10	636993	318497	1273986	670352	5.24
59 Phenanthrene-d10	1093620	546810	2187240	1124281	2.80
69 Chrysene-d12	1000300	500150	2000600	948691	-5.16
77 Perylene-d12	1058448	529224	2116896	1004445	-5.10

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.24	-0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.41	-0.00
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012305S.D

Lab ID: SLC0143-CAL6

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 17:59

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.947	0.000	0.9475		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

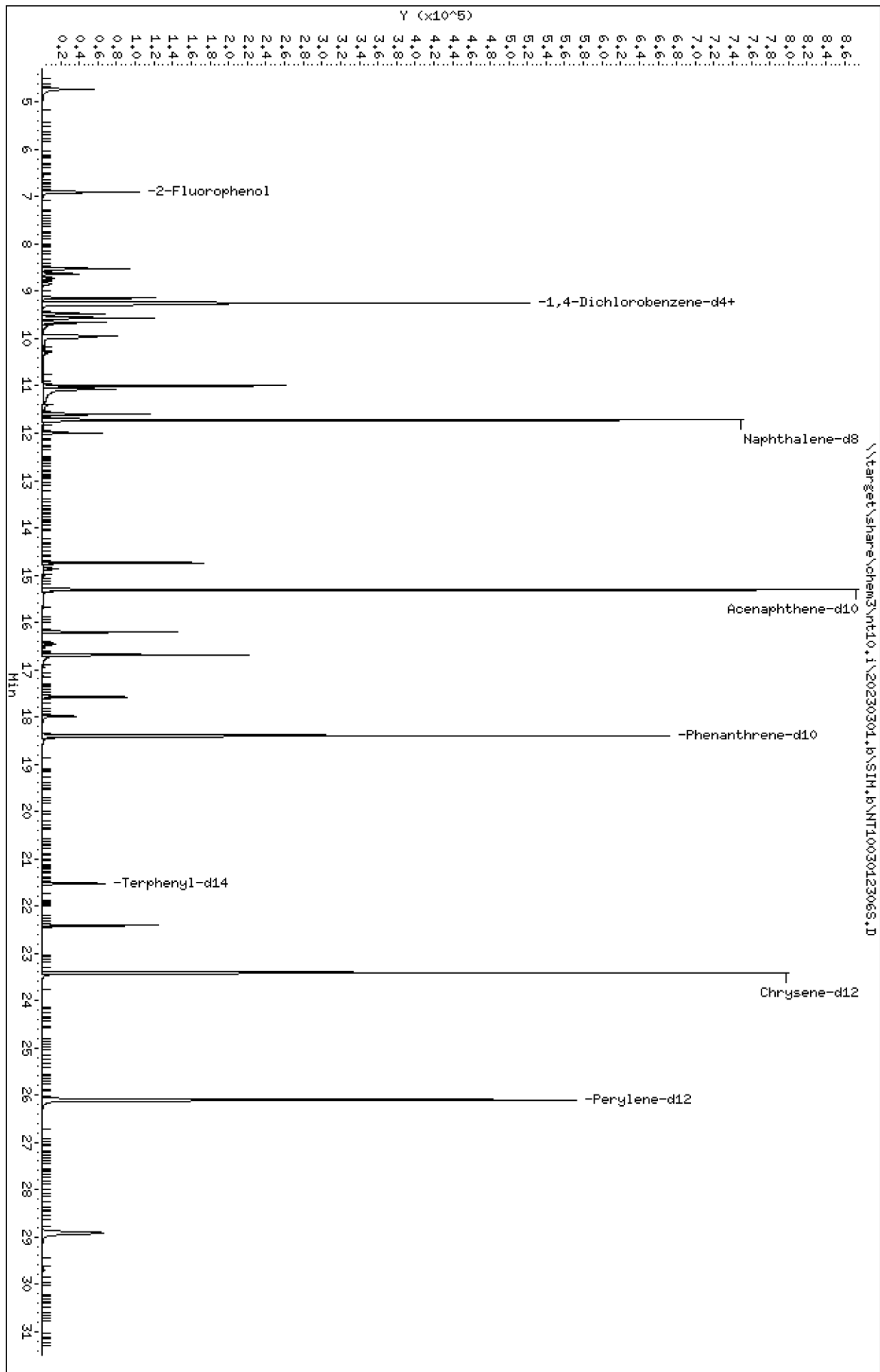
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012306S.D  
Date: 01-MAR-2023 18:37  
Client ID:  
Sample Info: SED-CAL5  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012306S.D  
 Lab Smp Id: SLC0143-CAL5  
 Inj Date : 01-MAR-2023 18:37 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL5  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 6 Calibration Sample, Level: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.894	6.902	(0.746)	141079	1.50000	1.544
3 Phenol	94		8.517	8.532	(0.921)	128497	1.00000	0.9488
7 1,3-Dichlorobenzene	146		9.135	9.136	(0.988)	115460	1.00000	0.9732
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.252	(1.000)	320125	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.003)	112647	1.00000	0.9766
11 Benzyl alcohol	79		9.477	9.508	(1.025)	65076	1.00000	0.8616
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	109104	1.00000	0.9841
13 2-Methylphenol	108		9.655	9.671	(1.044)	75957	1.00000	0.9304
15 4-Methylphenol	108		9.943	9.966	(1.076)	75243	1.00000	0.8846
16 N-Nitroso-di-n-propylamine	70		9.974	9.982	(1.079)	57866	1.00000	0.9607
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	185925	2.00000	1.919
24 Benzoic acid	105		11.074	11.007	(0.945)	126544	4.00000	2.367
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	80478	1.00000	0.9842
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1136019	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	55969	1.00000	0.9646
39 Dimethylphthalate	163		14.741	14.749	(0.963)	211852	1.00000	1.047
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	636993	4.00000	
50 Diethylphthalate	149		16.203	16.211	(1.058)	197116	1.00000	1.033
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	176396	1.00000	0.9967
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	81552	1.00000	0.9846

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.988	18.012	(0.978)	44811	2.00000	1.222 (M)
* 59 Phenanthrene-d10	188		18.399	18.398	(1.000)	1093620	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	83293	1.00000	1.030
67 Butylbenzylphthalate	149		22.407	22.415	(0.957)	144786	1.00000	0.8599
* 69 Chrysene-d12	240		23.414	23.421	(1.000)	1000300	4.00000	
* 77 Perylene-d12	264		26.100	26.108	(1.000)	1058448	4.00000	
79 Dibenzo(a,h)anthracene	278		28.914	28.946	(1.108)	236566	1.00000	0.9522
90 N-Nitrosodimethylamine	74		4.724	4.755	(0.511)	112695	2.00000	2.083

QC Flag Legend

M - Compound response manually integrated.



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012306S.D  
 Lab Smp Id: SLC0143-CAL5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	320125	0.00
27 Naphthalene-d8	1136019	568010	2272038	1136019	0.00
42 Acenaphthene-d10	636993	318497	1273986	636993	0.00
59 Phenanthrene-d10	1093620	546810	2187240	1093620	0.00
69 Chrysene-d12	1000300	500150	2000600	1000300	0.00
77 Perylene-d12	1058448	529224	2116896	1058448	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.24	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.41	0.00
77 Perylene-d12	26.10	25.60	26.60	26.10	0.00

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

REVIEW SUMMARY FOR FILE - NT1003012306S.D

Lab ID: SLC0143-CAL5

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 18:37

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.945	0.000	0.9446		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

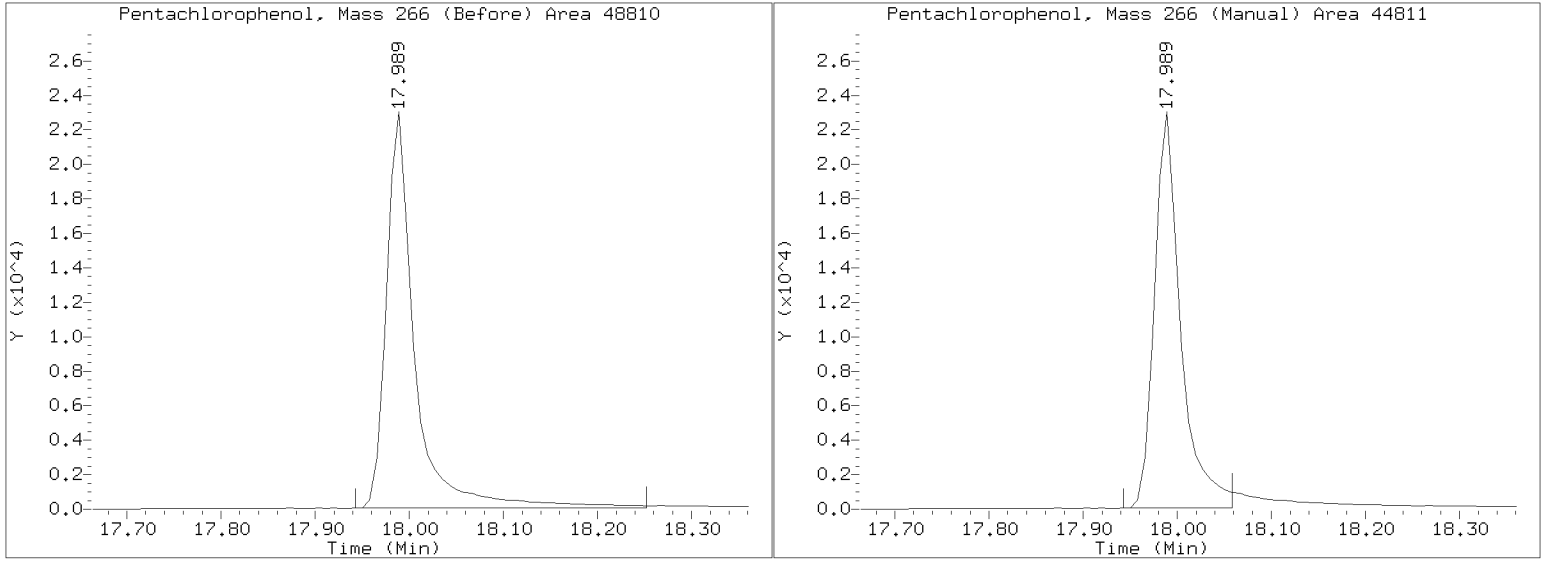
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/SIM.b/NT1003012306S.D  
Injection Date: 01-MAR-2023 18:37  
Lab ID: SLC0143-CAL5 Client ID:  
Report Date: 03/10/2023 10:37



Data File: \\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012307S.D

Date: 01-MAR-2023 19:15

Client ID:

Sample Info: SED-CAL4

Volume Injected (uL): 1.0

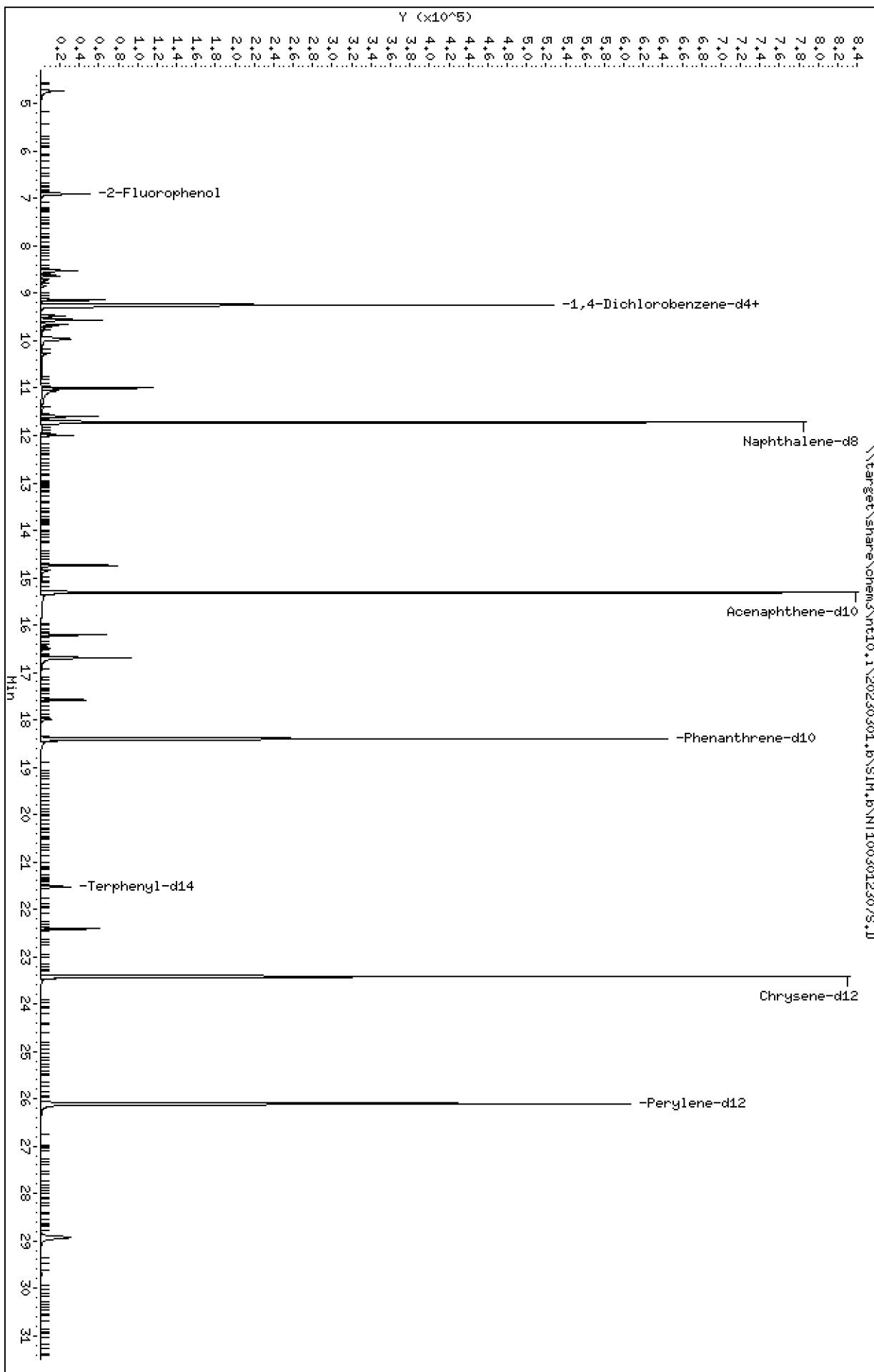
Column phase: ZB-5msi

Instrument: nt10.1

Operator: JGR

Column diameter: 0.25

Page 1



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012307S.D  
 Lab Smp Id: SLC0143-CAL4  
 Inj Date : 01-MAR-2023 19:15 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL4  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 7 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.894	6.902	(0.746)	73710	0.75000	0.7739
3 Phenol	94		8.517	8.532	(0.921)	61458	0.50000	0.4366
7 1,3-Dichlorobenzene	146		9.136	9.136	(0.988)	63099	0.50000	0.5103
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.252	(1.000)	333617	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.003)	61050	0.50000	0.5079
11 Benzyl alcohol	79		9.477	9.508	(1.025)	31347	0.50000	0.4006
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	58800	0.50000	0.5089
13 2-Methylphenol	108		9.655	9.671	(1.044)	35755	0.50000	0.4220
15 4-Methylphenol	108		9.950	9.966	(1.076)	34768	0.50000	0.3943
16 N-Nitroso-di-n-propylamine	70		9.974	9.982	(1.079)	27908	0.50000	0.4455
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	89362	1.00000	0.8978
24 Benzoic acid	105		11.057	11.007	(0.943)	37634	2.00000	0.6891
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	43097	0.50000	0.5116
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1170292	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	29862	0.50000	0.4996
39 Dimethylphthalate	163		14.741	14.749	(0.963)	105548	0.50000	0.5197
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	639612	4.00000	
50 Diethylphthalate	149		16.203	16.211	(1.058)	98002	0.50000	0.5117
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	93243	0.50000	0.5262
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	42505	0.50000	0.5126

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.989	18.012	(0.978)	15934	1.00000	0.4374 (M)
* 59 Phenanthrene-d10	188		18.399	18.398	(1.000)	1094919	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	41647	0.50000	0.4913
67 Butylbenzylphthalate	149		22.415	22.415	(0.957)	65574	0.50000	0.3710
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	1048196	4.00000	
* 77 Perylene-d12	264		26.108	26.108	(1.000)	1117593	4.00000	
79 Dibenzo(a,h)anthracene	278		28.930	28.946	(1.108)	120142	0.50000	0.4613
90 N-Nitrosodimethylamine	74		4.724	4.755	(0.511)	57317	1.00000	1.016

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012307S.D  
 Lab Smp Id: SLC0143-CAL4  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	333617	4.21
27 Naphthalene-d8	1136019	568010	2272038	1170292	3.02
42 Acenaphthene-d10	636993	318497	1273986	639612	0.41
59 Phenanthrene-d10	1093620	546810	2187240	1094919	0.12
69 Chrysene-d12	1000300	500150	2000600	1048196	4.79
77 Perylene-d12	1058448	529224	2116896	1117593	5.59

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.24	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012307S.D

Lab ID: SLC0143-CAL4

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 19:15

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.943	0.000	0.9431		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



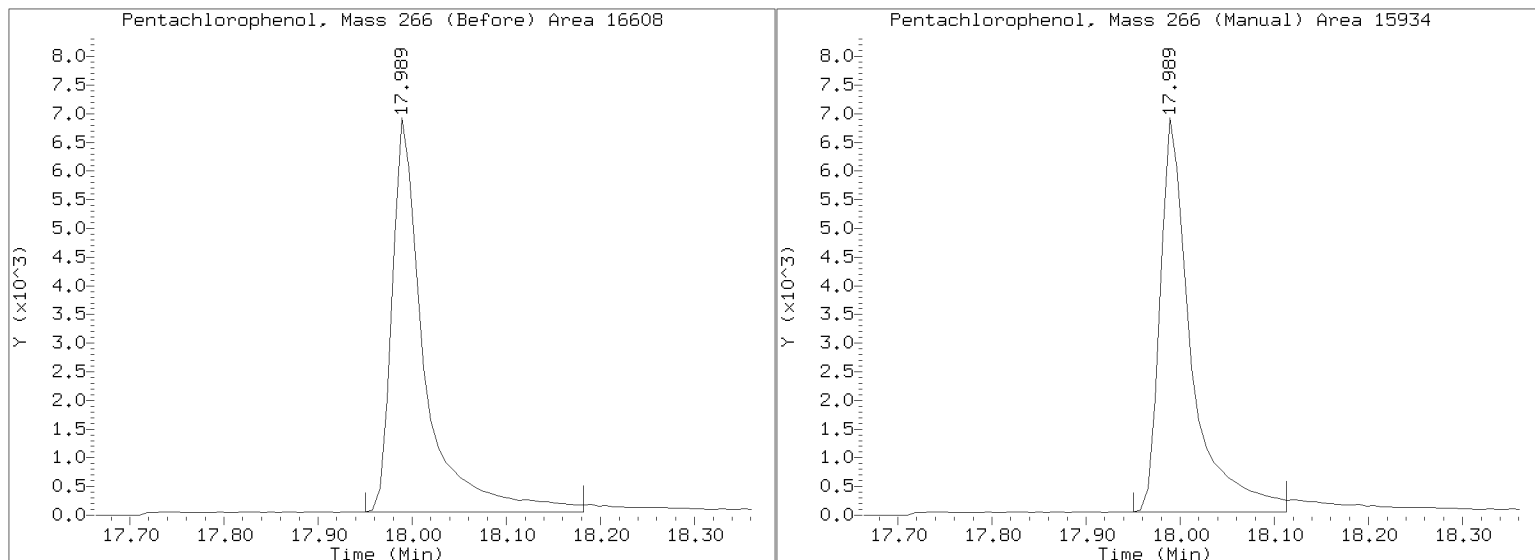
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Datafile: //target/share/chem3/nt10.i/20230301.b/SIM.b/NT1003012307S.D

Injection Date: 01-MAR-2023 19:15

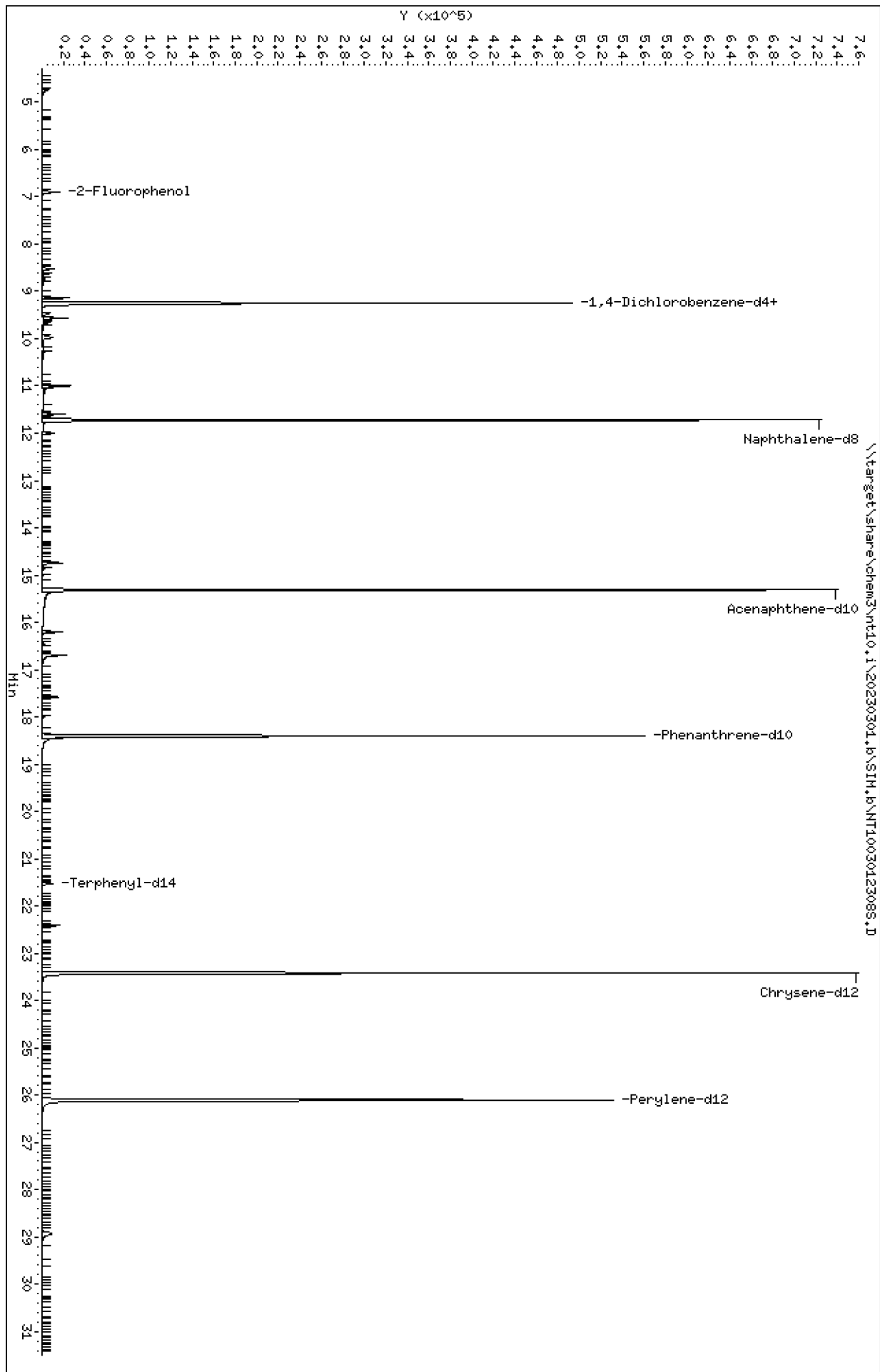
Lab ID: SLC0143-CAL4 Client ID:

Report Date: 03/10/2023 10:37



Data File: \\target\share\chem3\nt10.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1\20230301.1  
Date : 01-HRR-2023 19:53  
Client ID:  
Sample Info: SED-CAL3  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012308S.D  
 Lab Smp Id: SLC0143-CAL3  
 Inj Date : 01-MAR-2023 19:53 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL3  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 8 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	25671	0.30000	0.2859
3 Phenol	94		8.524	8.532	(0.921)	19568	0.20000	0.1477
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	23459	0.20000	0.2013
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.252	(1.000)	314467	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.002)	22543	0.20000	0.1989
11 Benzyl alcohol	79		9.484	9.508	(1.025)	10320	0.20000	0.1404
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	21414	0.20000	0.1966
13 2-Methylphenol	108		9.663	9.671	(1.044)	11161	0.20000	0.1401
15 4-Methylphenol	108		9.950	9.966	(1.076)	9608	0.20000	0.1159
16 N-Nitroso-di-n-propylamine	70		9.973	9.982	(1.078)	10242	0.20000	0.1736
22 2,4-Dimethylphenol	107		10.997	11.006	(0.938)	27660	0.40000	0.2992
24 Benzoic acid	105		11.074	11.007	(0.945)	7336	0.80000	0.1448
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	15379	0.20000	0.1963
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1088698	4.00000	
30 Hexachlorobutadiene	225		11.993	11.994	(1.023)	10781	0.20000	0.1939
39 Dimethylphthalate	163		14.741	14.749	(0.963)	33436	0.20000	0.1853
* 42 Acenaphthene-d10	162		15.313	15.314	(1.000)	568154	4.00000	
50 Diethylphthalate	149		16.203	16.211	(1.058)	31499	0.20000	0.1852
54 N-Nitrosodiphenylamine	169		16.698	16.705	(0.908)	30497	0.20000	0.1924
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	14544	0.20000	0.1961

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.996	18.012	(0.978)	3505	0.40000	0.1079
* 59 Phenanthrene-d10	188		18.398	18.398	(1.000)	979213	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	13708	0.20000	0.1759
67 Butylbenzylphthalate	149		22.414	22.415	(0.957)	19744	0.20000	0.1214
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	963807	4.00000	
* 77 Perylene-d12	264		26.107	26.108	(1.000)	1037909	4.00000	
79 Dibenzo(a,h)anthracene	278		28.937	28.946	(1.108)	39856	0.20000	0.1655
90 N-Nitrosodimethylamine	74		4.739	4.755	(0.512)	20553	0.40000	0.3867

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012308S.D  
 Lab Smp Id: SLC0143-CAL3  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	314467	-1.77
27 Naphthalene-d8	1136019	568010	2272038	1088698	-4.17
42 Acenaphthene-d10	636993	318497	1273986	568154	-10.81
59 Phenanthrene-d10	1093620	546810	2187240	979213	-10.46
69 Chrysene-d12	1000300	500150	2000600	963807	-3.65
77 Perylene-d12	1058448	529224	2116896	1037909	-1.94

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012308S.D

Lab ID: SLC0143-CAL3

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 19:53

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.945	0.000	0.9446		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230301.B\SIH.B\NT1003012309S.D

Date: 01-MAR-2023 20:30

Client ID:

Sample Info: SED-CAL2

Volume Injected (uL): 1.0

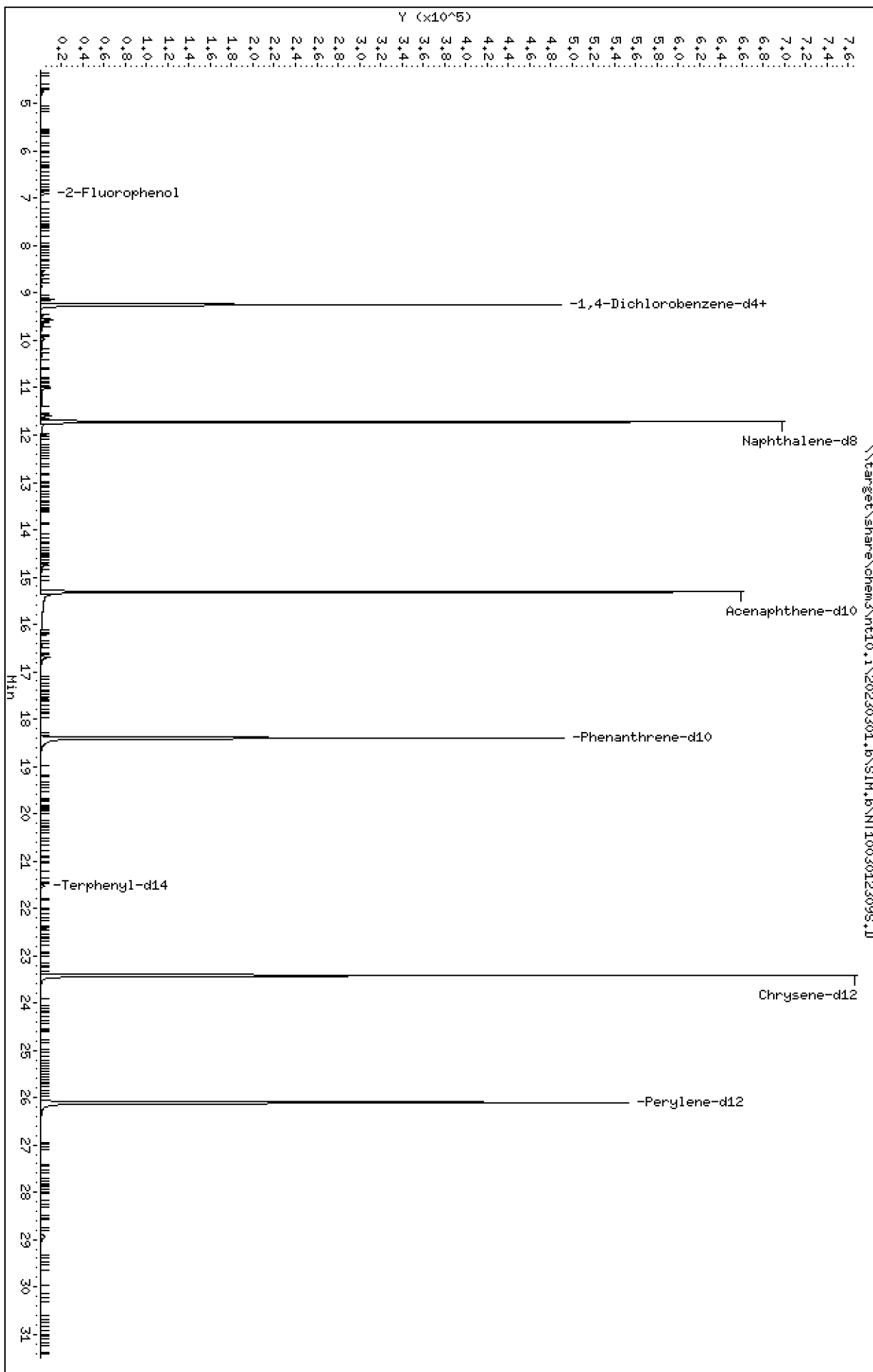
Column phase: ZB-5msi

Instrument: nt10.1

Operator: JGR

Column diameter: 0.25

Page 1



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012309S.D  
 Lab Smp Id: SLC0143-CAL2  
 Inj Date : 01-MAR-2023 20:30 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL2  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 9 Calibration Sample, Level: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.747)	12090	0.15000	0.1386
3 Phenol	94		8.525	8.532	(0.922)	8264	0.10000	0.06425
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.989)	11650	0.10000	0.1029
* 8 1,4-Dichlorobenzene-d4	152		9.244	9.252	(1.000)	305434	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.003)	11269	0.10000	0.1024
11 Benzyl alcohol	79		9.485	9.508	(1.026)	3114	0.10000	0.04367 (M)
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	10725	0.10000	0.1014
13 2-Methylphenol	108		9.663	9.671	(1.045)	4548	0.10000	0.05881
15 4-Methylphenol	108		9.958	9.966	(1.077)	3746	0.10000	0.04658
16 N-Nitroso-di-n-propylamine	70		9.974	9.982	(1.079)	4218	0.10000	0.07364
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	11856	0.20000	0.1332
24 Benzoic acid	105		11.006	11.007	(0.939)	172	0.40000	0.003526 (M)
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	7521	0.10000	0.09961
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1048978	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	5346	0.10000	0.09978
39 Dimethylphthalate	163		14.741	14.749	(0.963)	15255	0.10000	0.08950
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	536796	4.00000	
50 Diethylphthalate	149		16.211	16.211	(1.059)	14260	0.10000	0.08872
54 N-Nitrosodiphenylamine	169		16.698	16.705	(0.908)	13459	0.10000	0.08998
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	6888	0.10000	0.09840



Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
58 Pentachlorophenol	266		18.004	18.012	(0.979)	1243	0.20000	0.04058
* 59 Phenanthrene-d10	188		18.399	18.398	(1.000)	924275	4.00000	
\$ 66 Terphenyl-d14	244		21.524	21.532	(0.919)	6767	0.10000	0.08836
67 Butylbenzylphthalate	149		22.407	22.415	(0.957)	8617	0.10000	0.05389
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	947041	4.00000	
* 77 Perylene-d12	264		26.108	26.108	(1.000)	1060218	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.946	(1.109)	20472	0.10000	0.08330
90 N-Nitrosodimethylamine	74		4.740	4.755	(0.513)	9108	0.20000	0.1764

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012309S.D  
 Lab Smp Id: SLC0143-CAL2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	305434	-4.59
27 Naphthalene-d8	1136019	568010	2272038	1048978	-7.66
42 Acenaphthene-d10	636993	318497	1273986	536796	-15.73
59 Phenanthrene-d10	1093620	546810	2187240	924275	-15.48
69 Chrysene-d12	1000300	500150	2000600	947041	-5.32
77 Perylene-d12	1058448	529224	2116896	1060218	0.17

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.24	-0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012309S.D

Lab ID: SLC0143-CAL2

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 20:30

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.939	0.000	0.9388		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

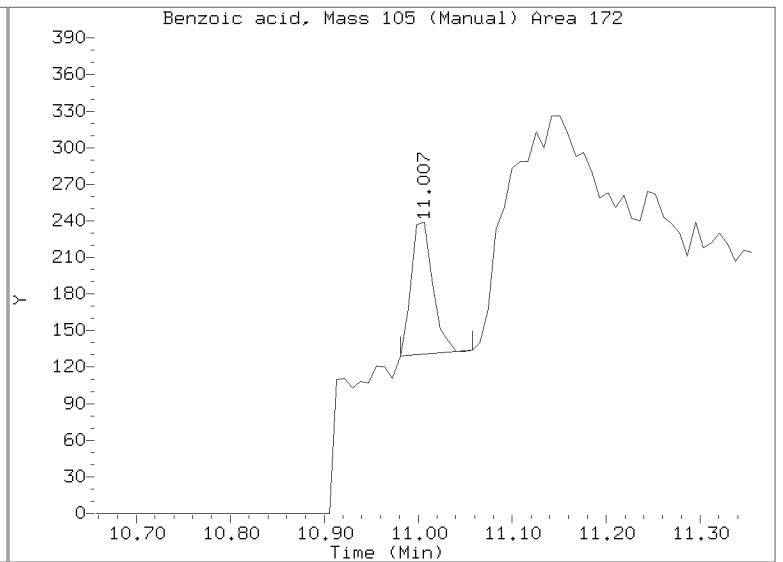
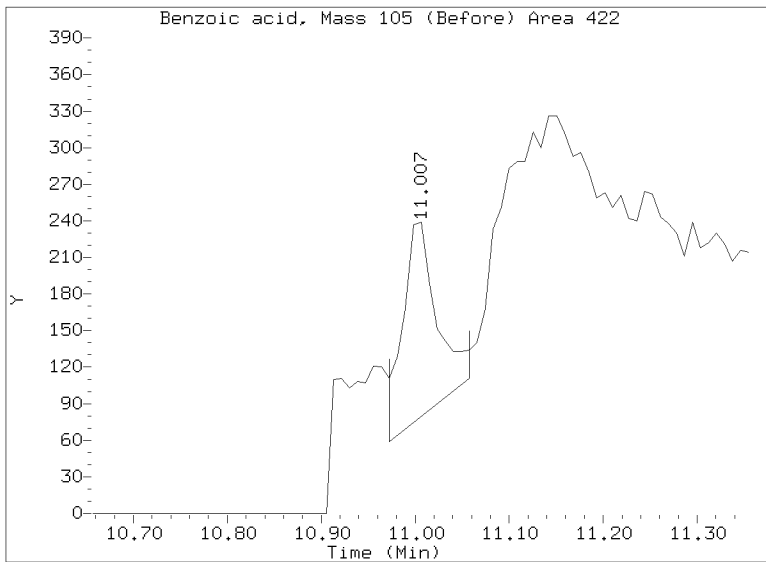
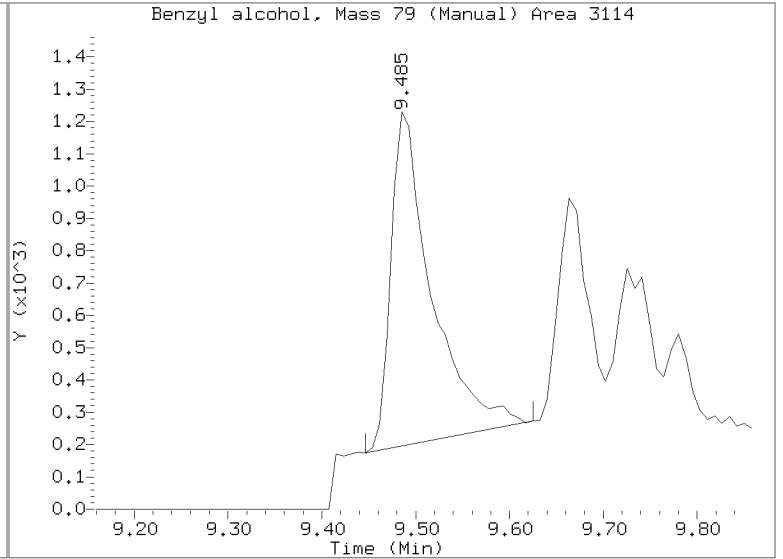
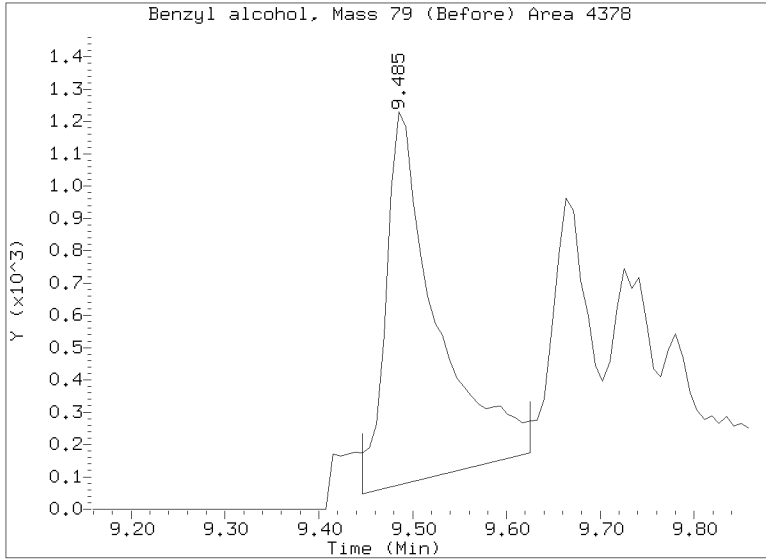
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

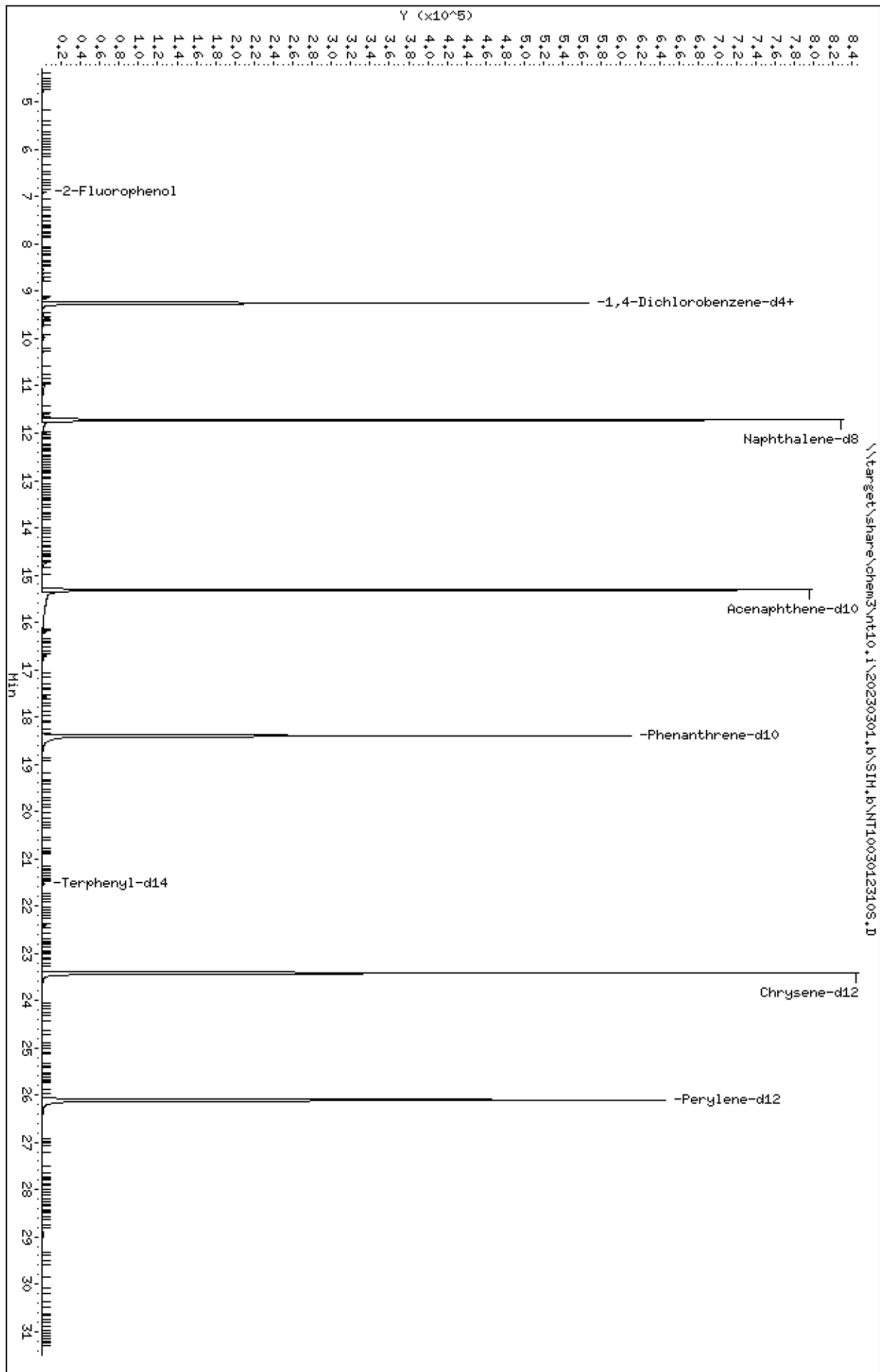
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/SIM.b/NT1003012309S.D  
Injection Date: 01-MAR-2023 20:30  
Lab ID: SLC0143-CAL2 Client ID:  
Report Date: 03/10/2023 10:37



Data File: \\target\share\chem3\nt10.1\20230301.B\SIH.B\NT1003012310S.D  
Date: 01-MAR-2023 21:09  
Client ID:  
Sample Info: SED-CAL1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012310S.D  
 Lab Smp Id: SLC0143-CAL1  
 Inj Date : 01-MAR-2023 21:09 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CAL1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 10 Calibration Sample, Level: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	7096	0.07500	0.06711
3 Phenol	94		8.532	8.532	(0.922)	3599	0.05000	0.02308
7 1,3-Dichlorobenzene	146		9.135	9.136	(0.987)	7259	0.05000	0.05289
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	370360	4.00000	
9 1,4-Dichlorobenzene	146		9.275	9.275	(1.002)	6987	0.05000	0.05236
11 Benzyl alcohol	79		9.508	9.508	(1.028)	1380	0.05000	0.01596 (M)
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	6637	0.05000	0.05174
13 2-Methylphenol	108		9.671	9.671	(1.045)	1789	0.05000	0.01908 (M)
15 4-Methylphenol	108		9.966	9.966	(1.077)	2062	0.05000	0.02115 (M)
16 N-Nitroso-di-n-propylamine	70		9.981	9.982	(1.079)	1965	0.05000	0.02830 (M)
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	6159	0.10000	0.05750
24 Benzoic acid	105		Compound Not Detected.					
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	4558	0.05000	0.05017
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1262304	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	3445	0.05000	0.05343
39 Dimethylphthalate	163		14.749	14.749	(0.963)	9356	0.05000	0.04618
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	638059	4.00000	
50 Diethylphthalate	149		16.211	16.211	(1.059)	8803	0.05000	0.04607
54 N-Nitrosodiphenylamine	169		16.705	16.705	(0.908)	7370	0.05000	0.04049 (M)
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	4170	0.05000	0.04895 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		18.012	18.012	(0.979)	397	0.10000	0.01065
* 59 Phenanthrene-d10	188		18.398	18.398	(1.000)	1124768	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	3717	0.05000	0.04124
67 Butylbenzylphthalate	149		22.415	22.415	(0.957)	4671	0.05000	0.02482
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	1114478	4.00000	
* 77 Perylene-d12	264		26.108	26.108	(1.000)	1276260	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.946	(1.109)	10824	0.05000	0.03661
90 N-Nitrosodimethylamine	74		4.755	4.755	(0.514)	5382	0.10000	0.08597

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012310S.D  
 Lab Smp Id: SLC0143-CAL1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	370360	15.69
27 Naphthalene-d8	1136019	568010	2272038	1262304	11.12
42 Acenaphthene-d10	636993	318497	1273986	638059	0.17
59 Phenanthrene-d10	1093620	546810	2187240	1124768	2.85
69 Chrysene-d12	1000300	500150	2000600	1114478	11.41
77 Perylene-d12	1058448	529224	2116896	1276260	20.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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



REVIEW SUMMARY FOR FILE - NT1003012310S.D

Lab ID: SLC0143-CAL1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 21:09

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003012310S.D

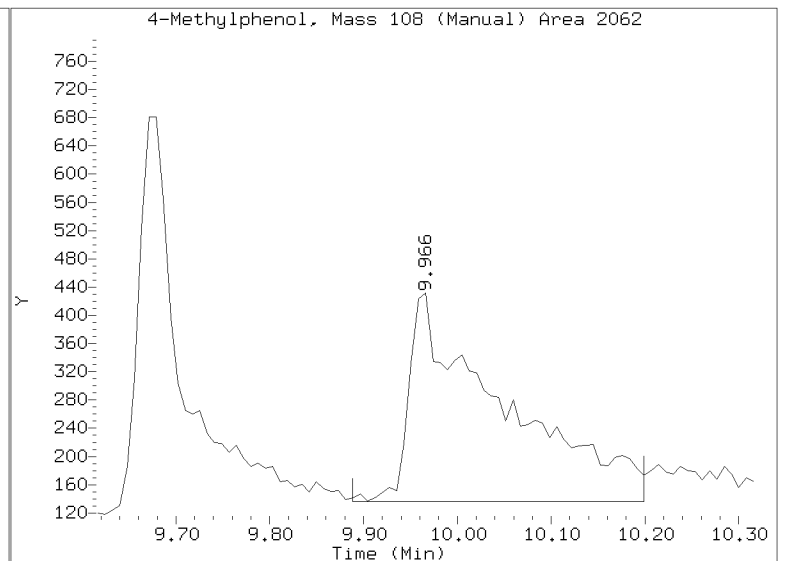
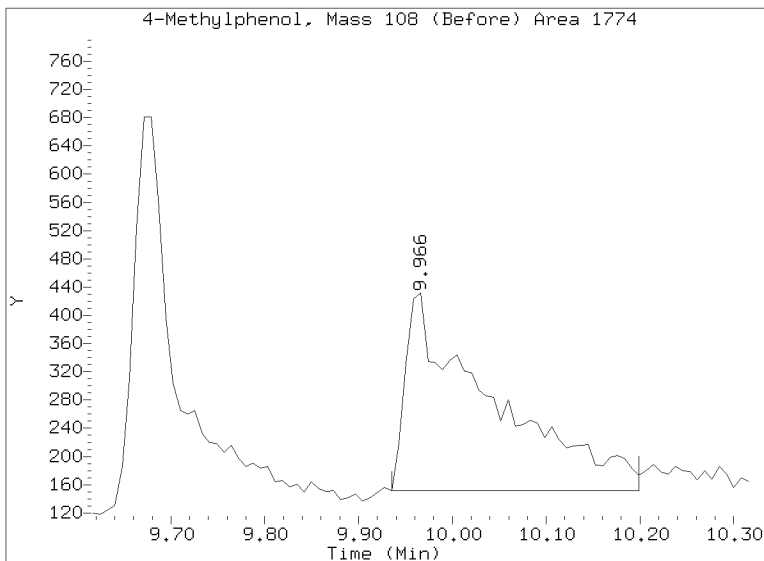
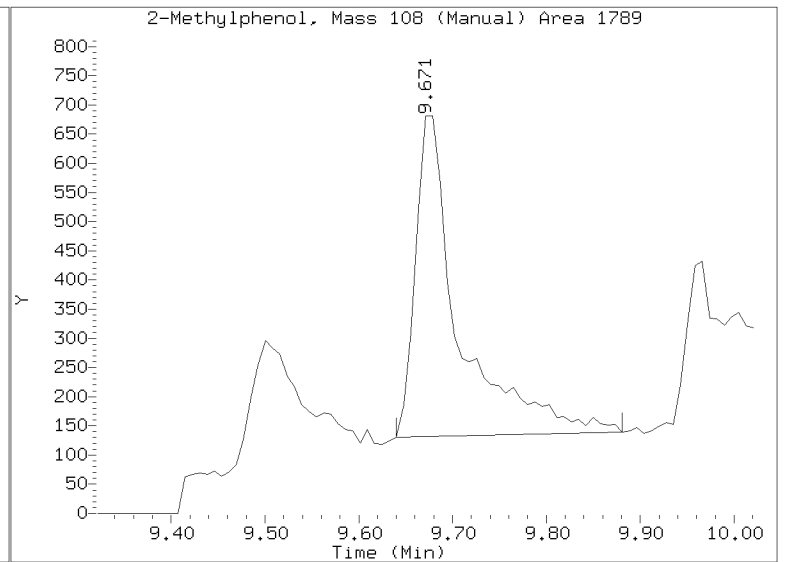
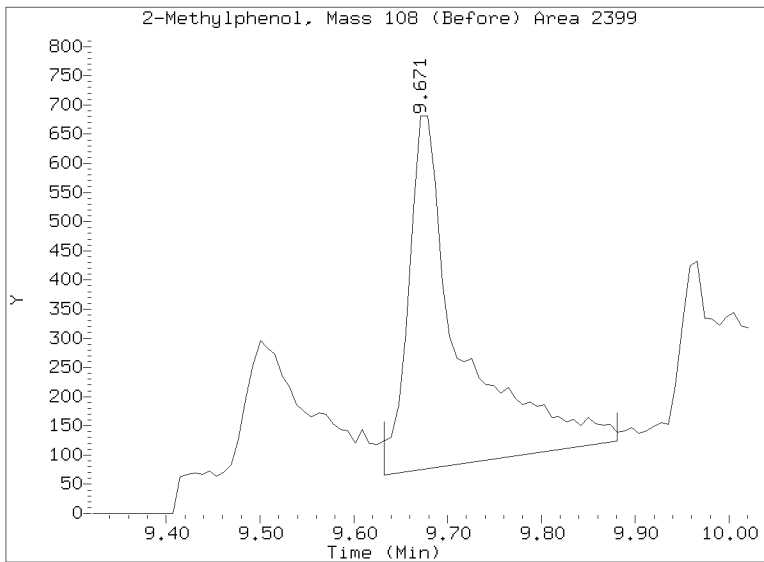
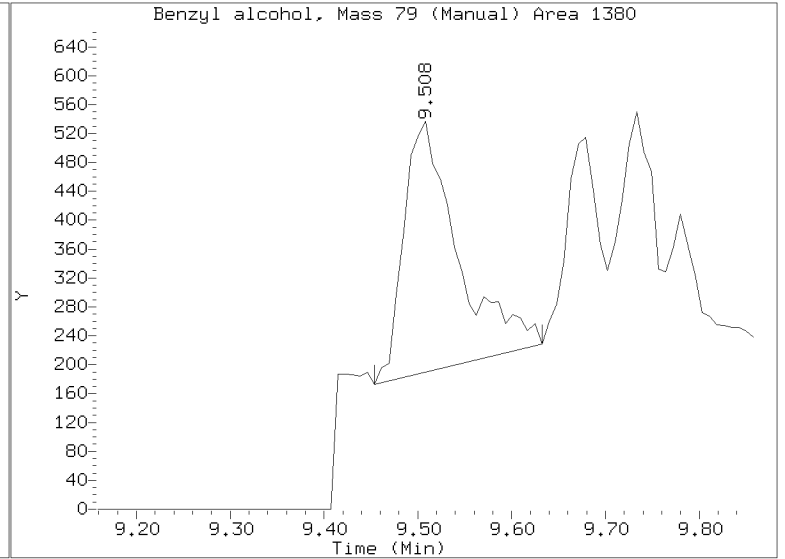
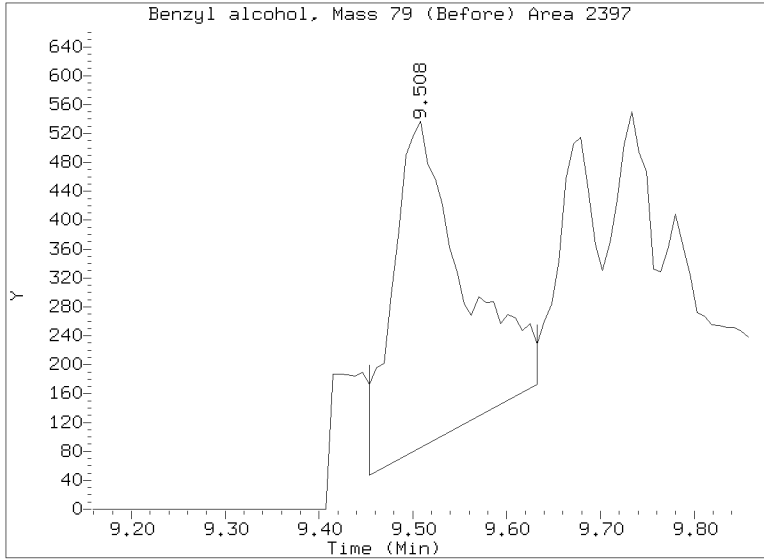
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

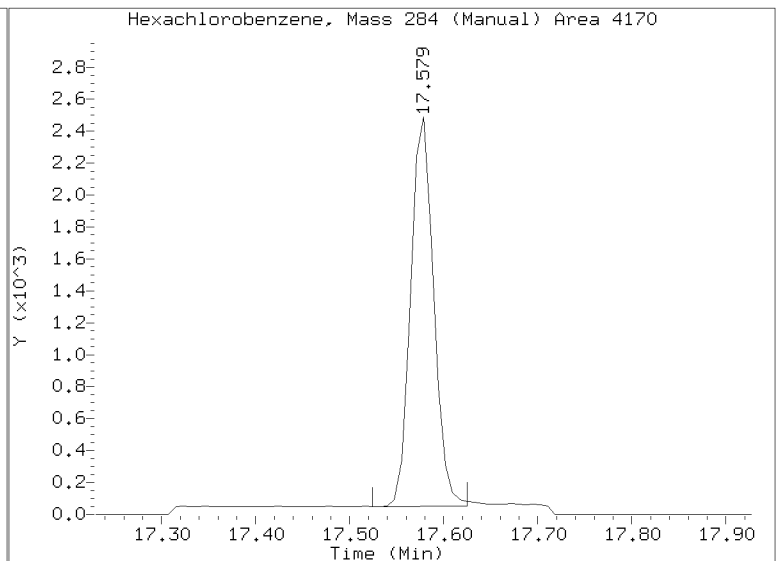
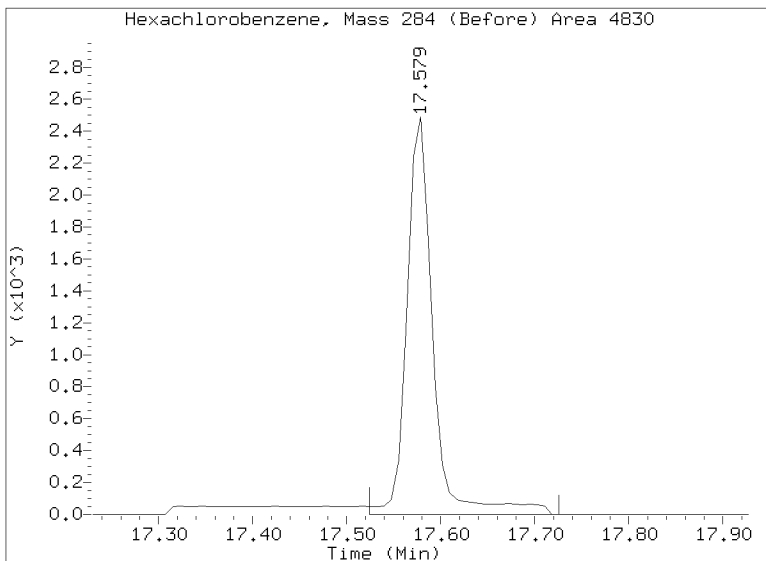
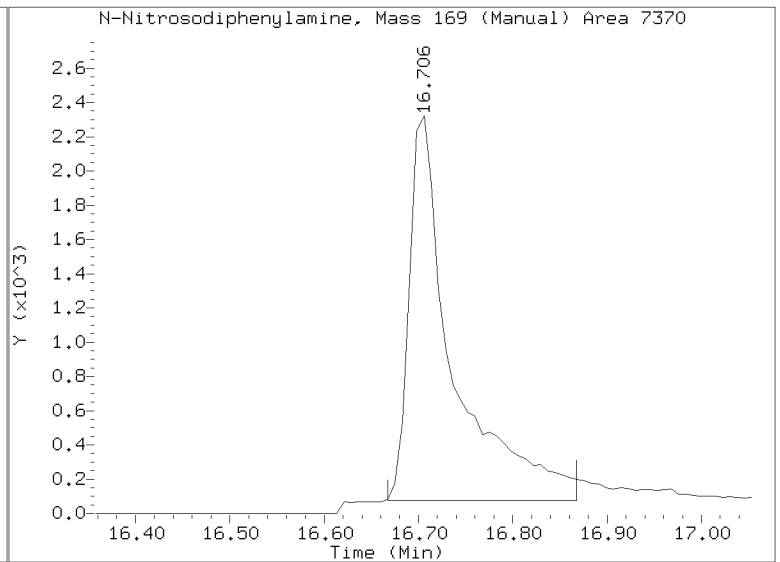
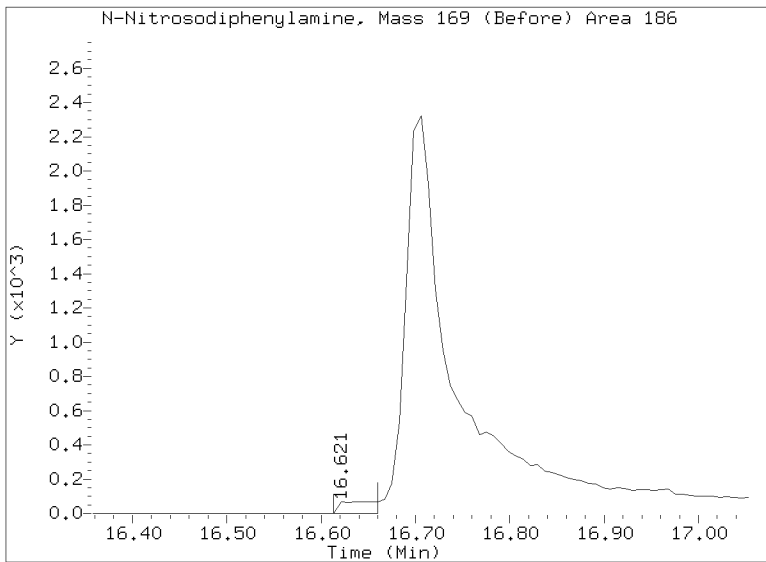
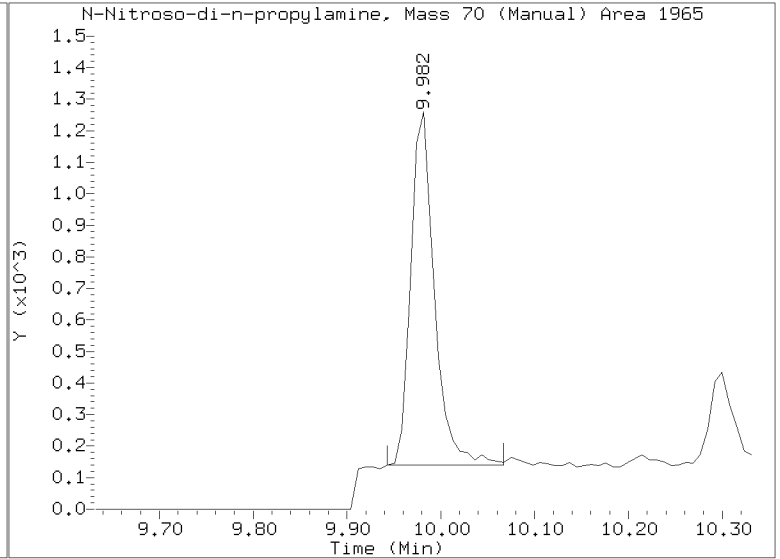
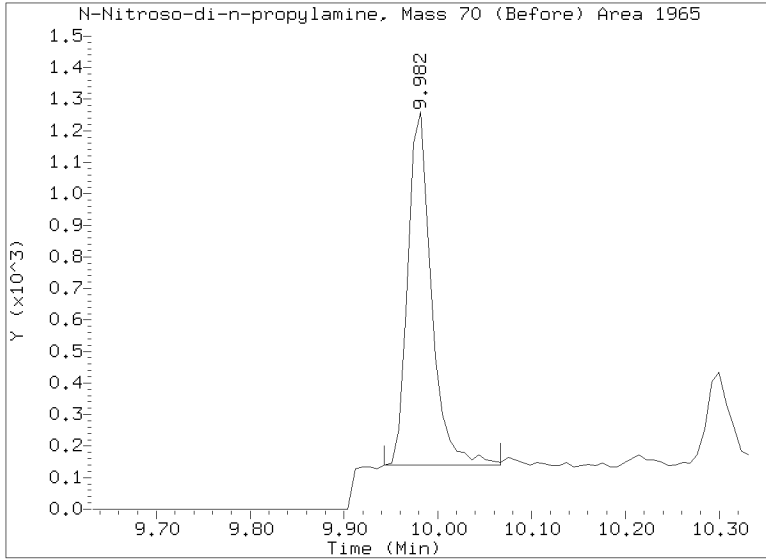
# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230301.b/SIM.b/NT1003012310S.D  
Injection Date: 01-MAR-2023 21:09  
Lab ID: SLC0143-CAL1 Client ID:  
Report Date: 03/10/2023 10:37



# Quant Ion Manual Peak Adjustment Report

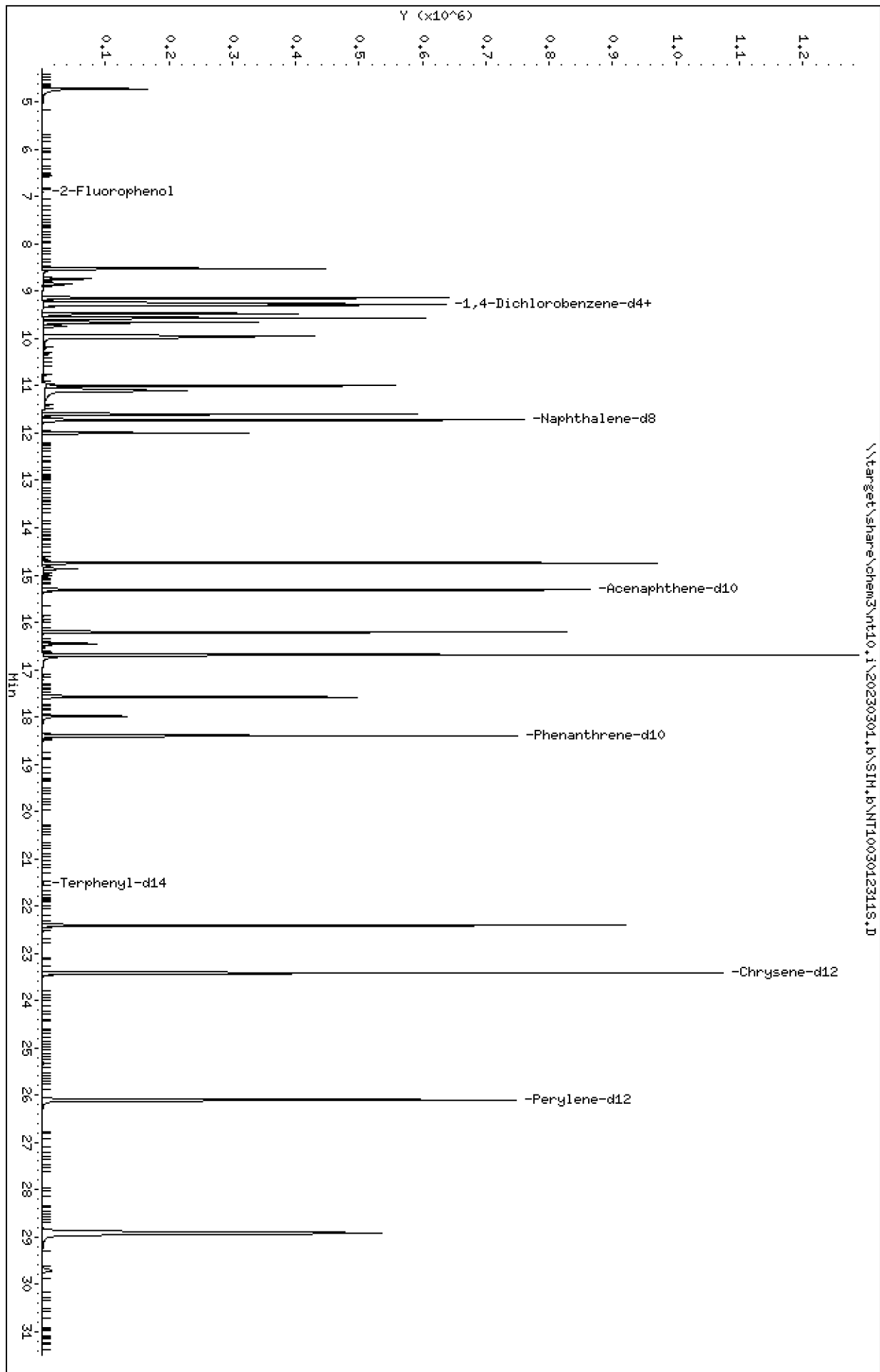
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Injection Date: 01-MAR-2023 21:09  
Lab ID:SLC0143-CAL1 Client ID:  
Report Date: 03/10/2023 10:37



Data File: \\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D  
Date: 01-MAR-2023 21:46  
Client ID:  
Sample Info: SED-SCV1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

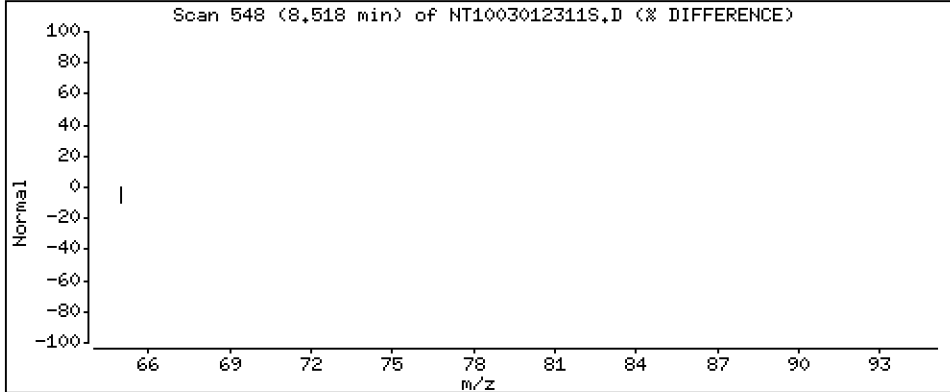
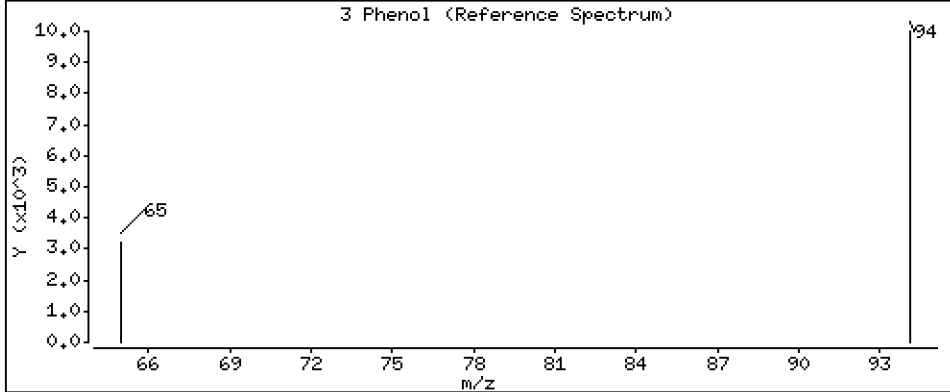
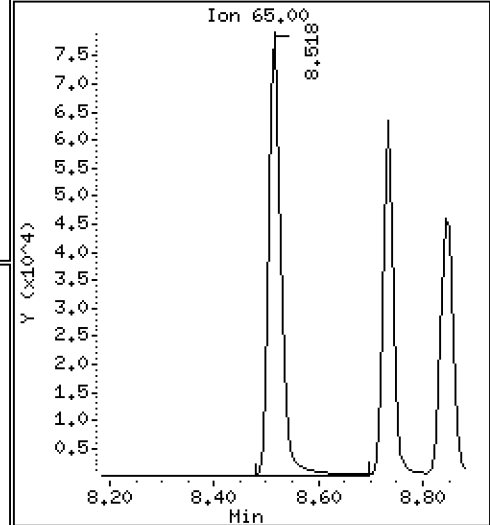
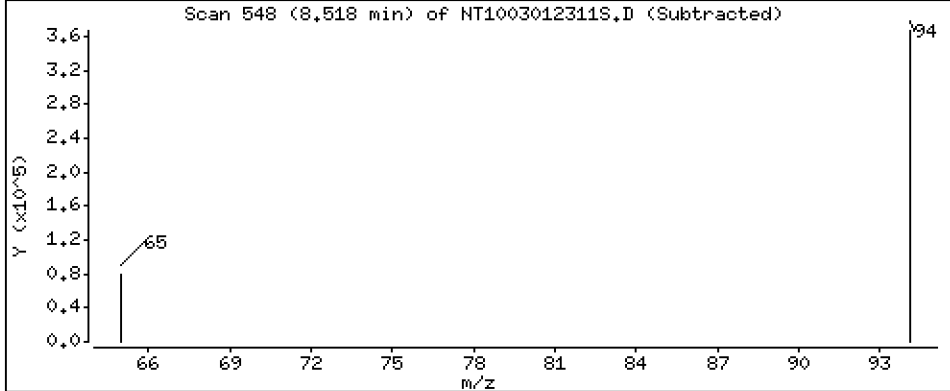
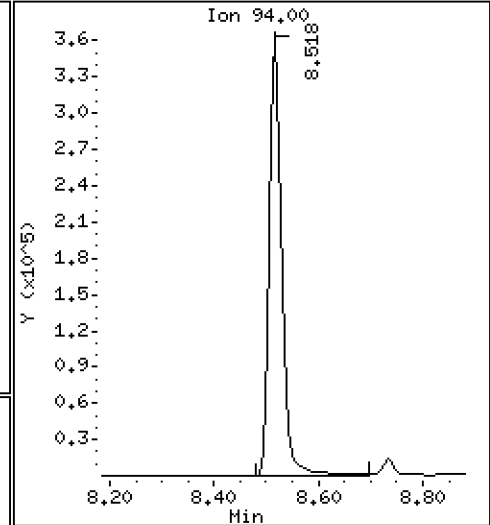
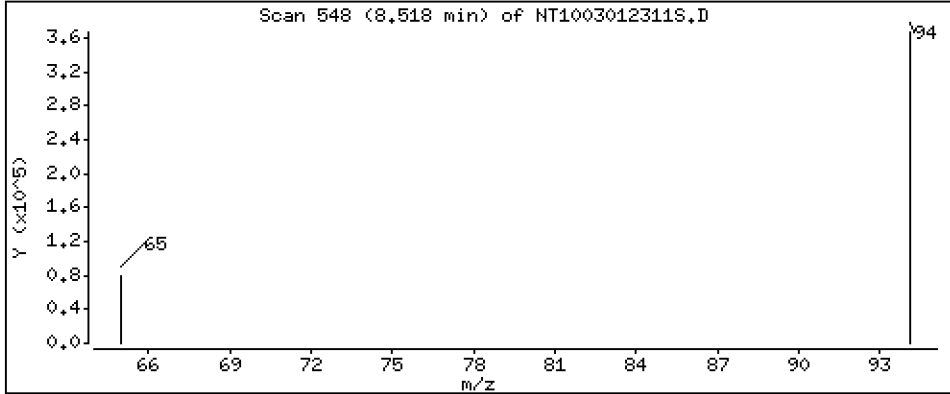
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.507 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

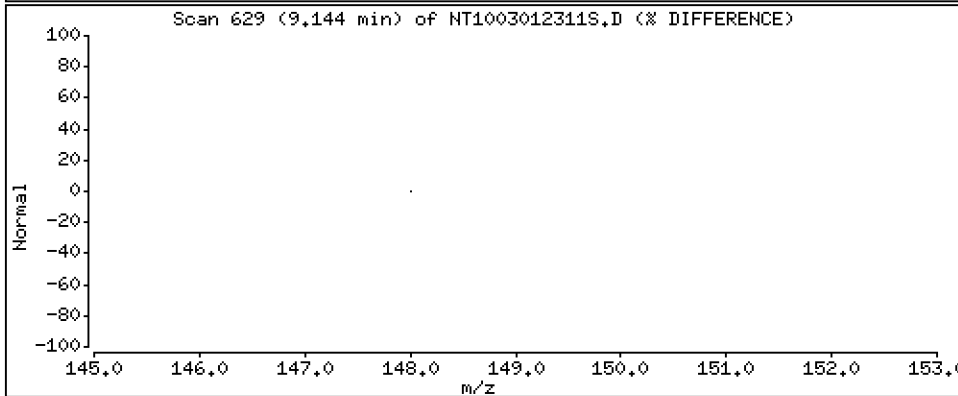
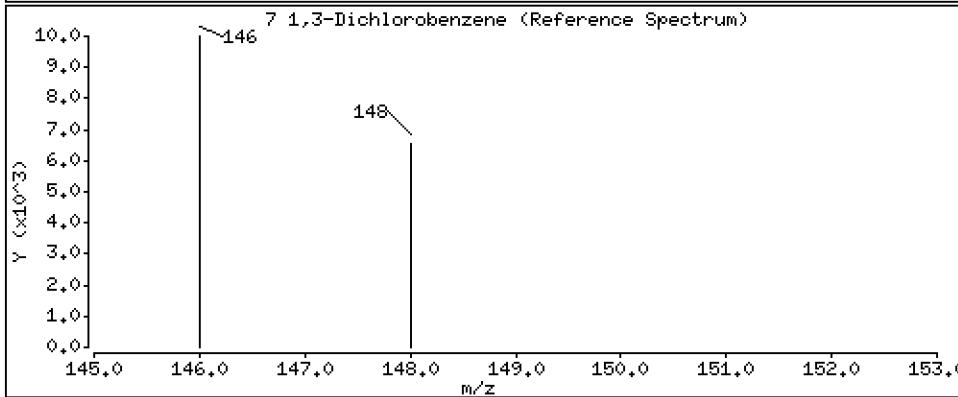
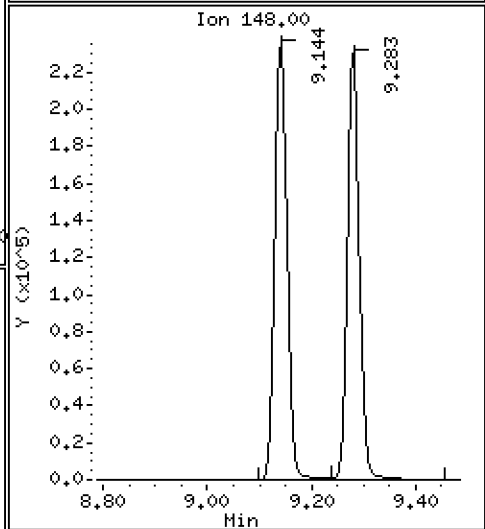
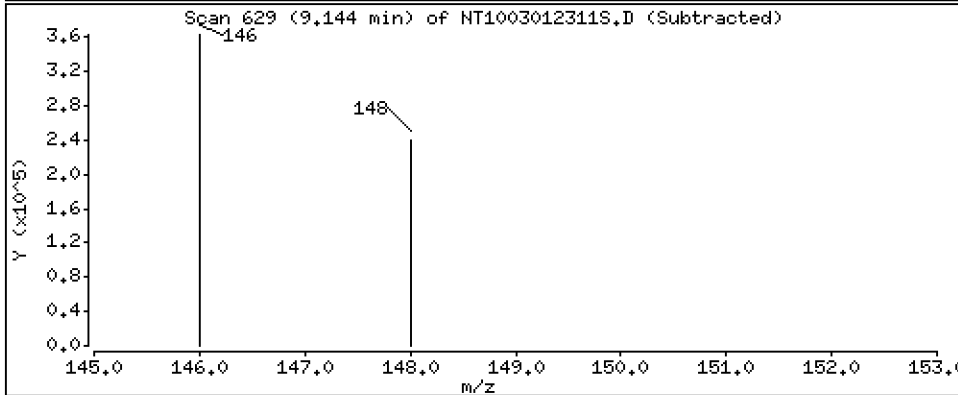
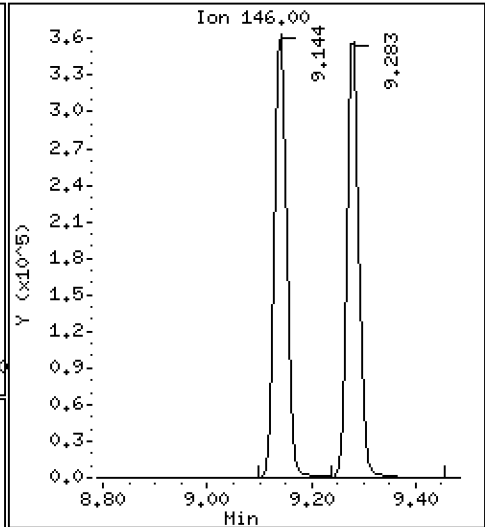
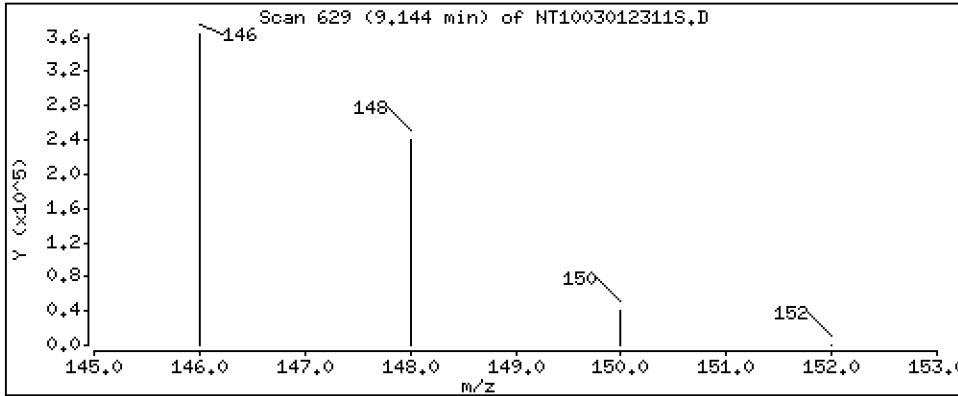
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 5.084 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

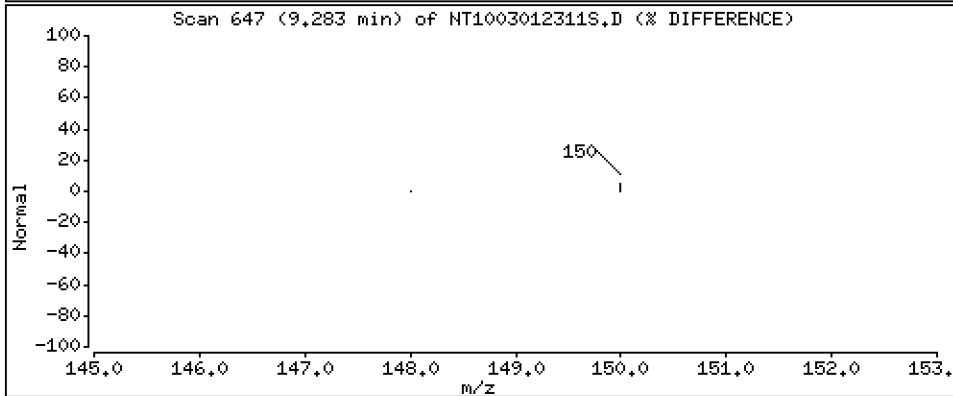
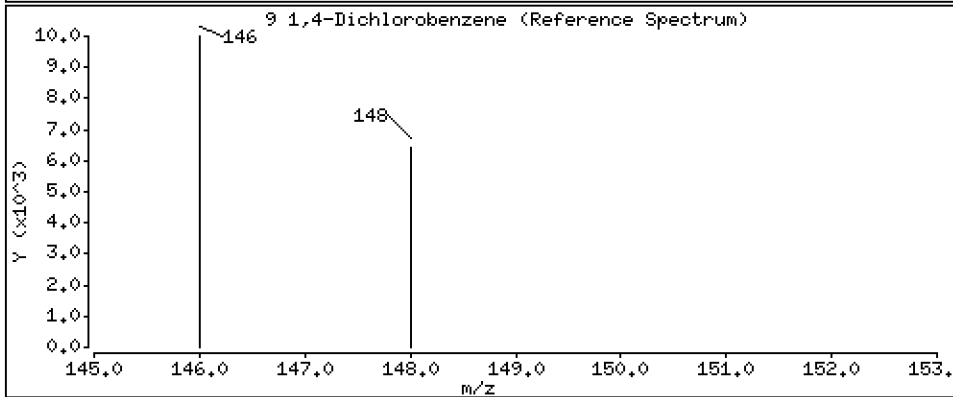
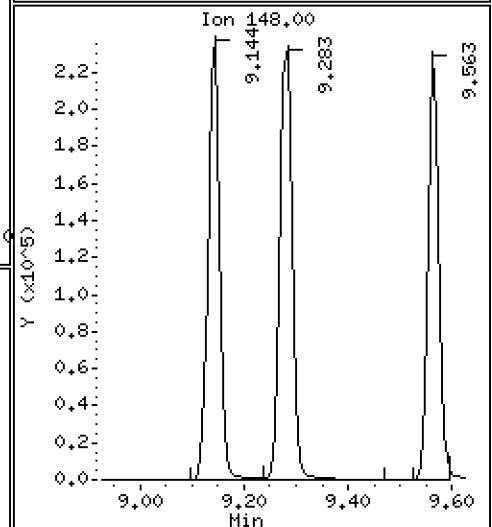
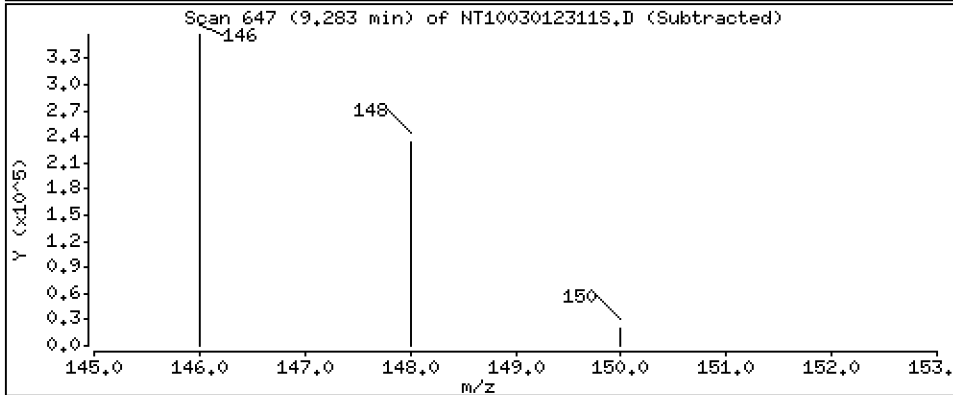
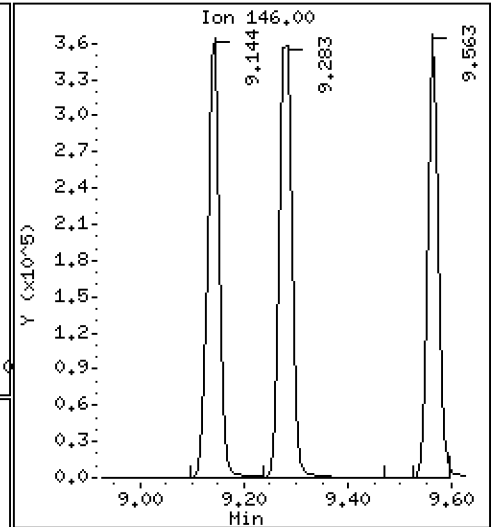
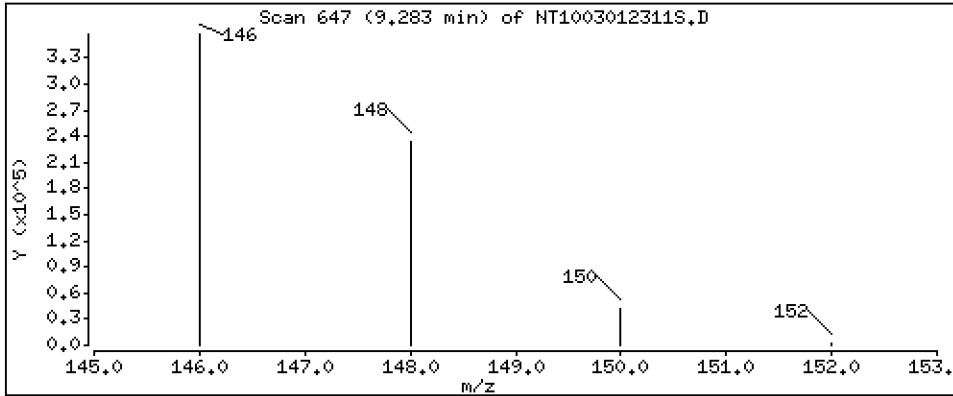
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 5,250 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

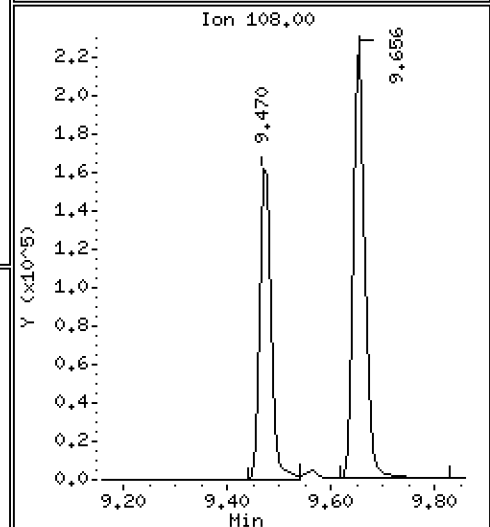
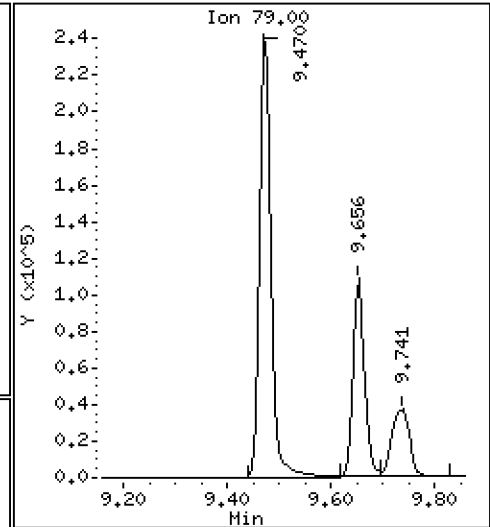
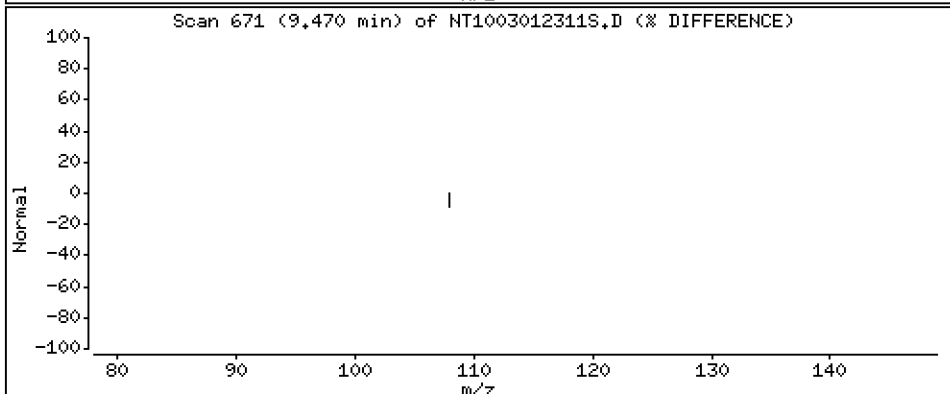
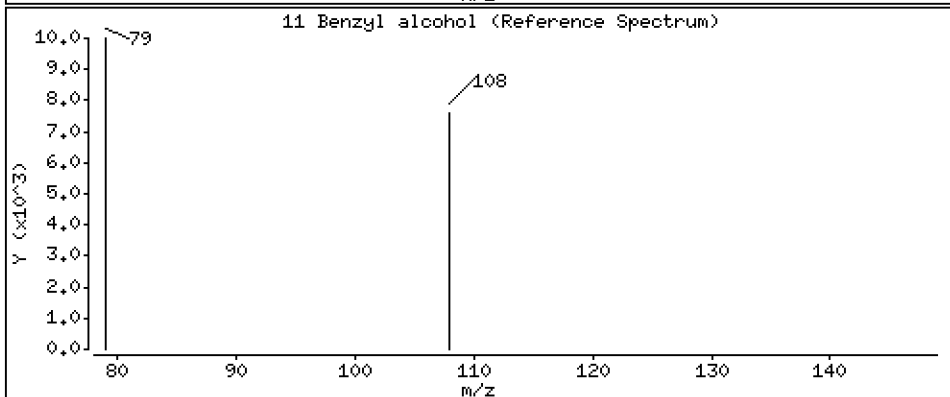
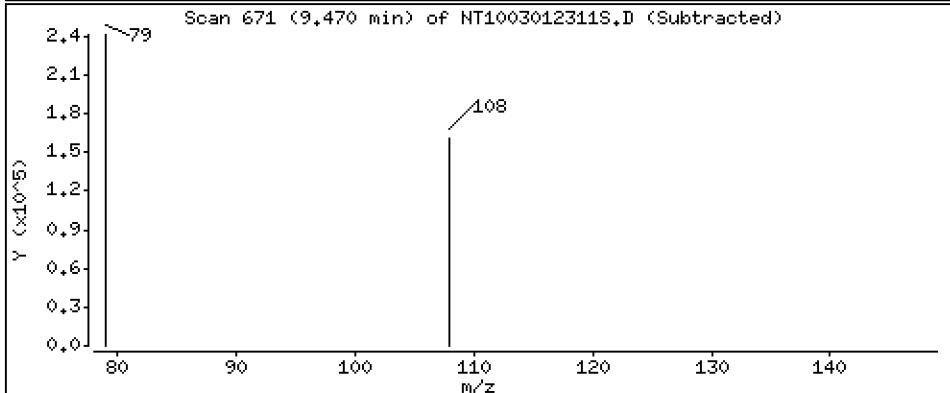
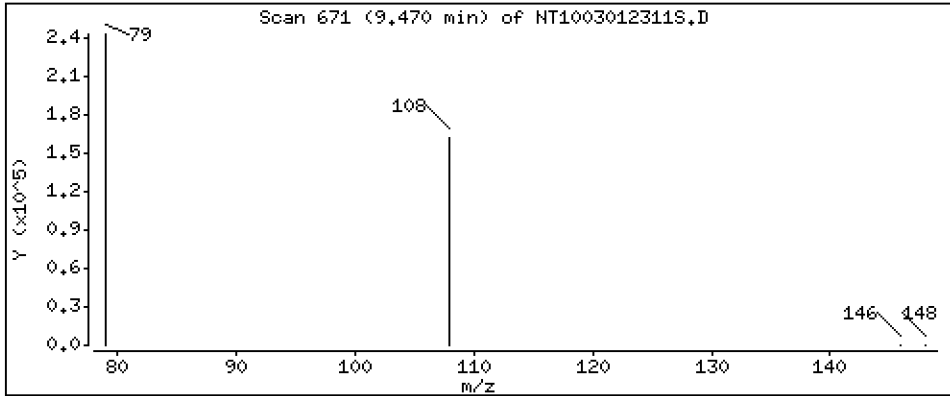
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5,104 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

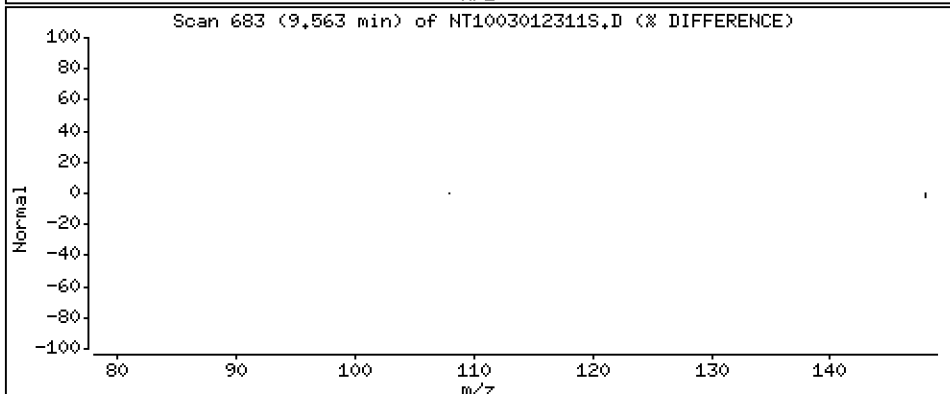
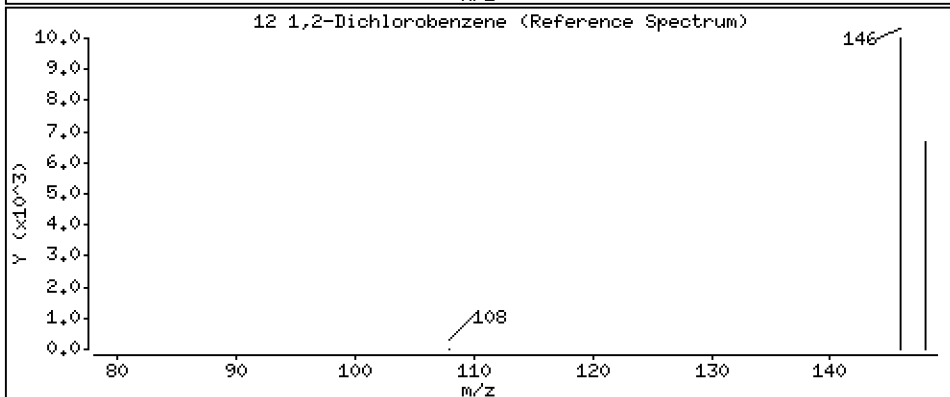
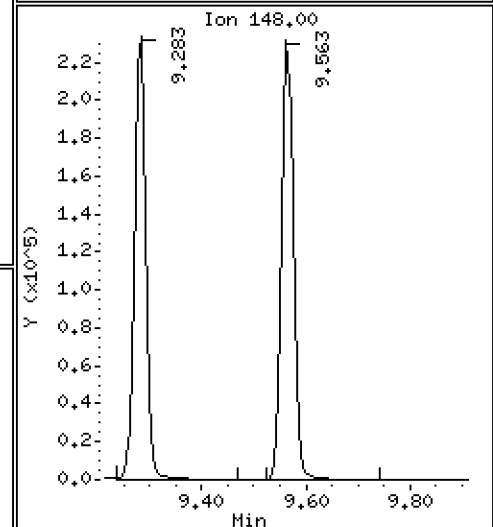
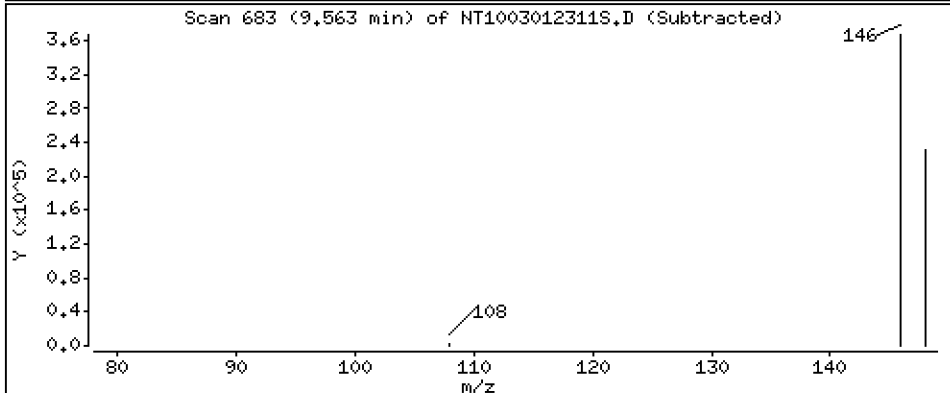
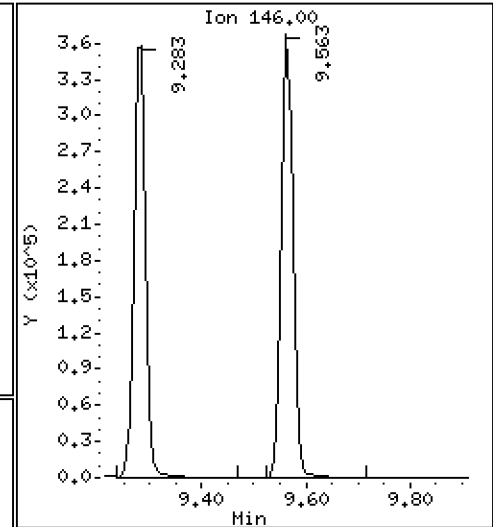
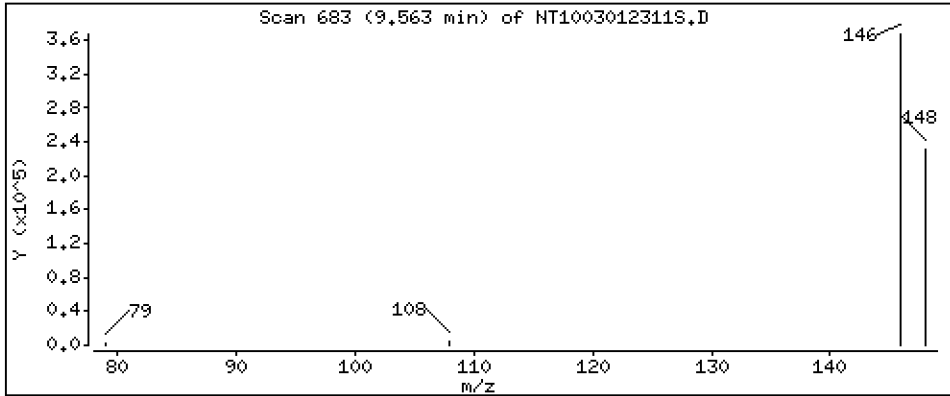
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5,142 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

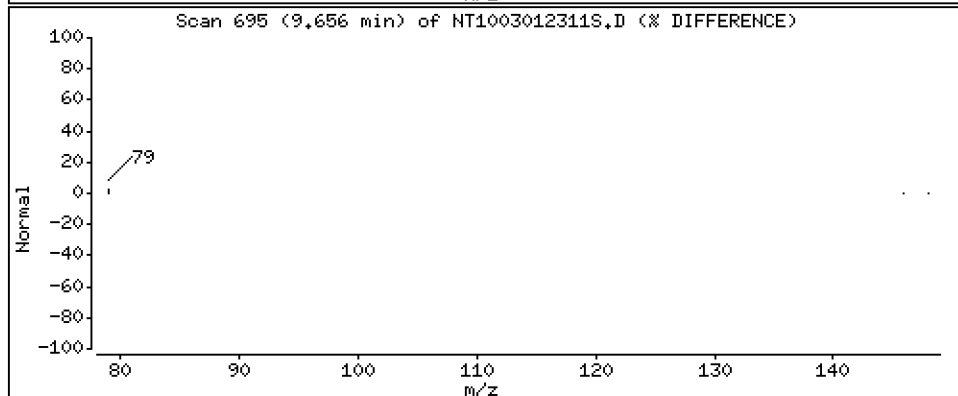
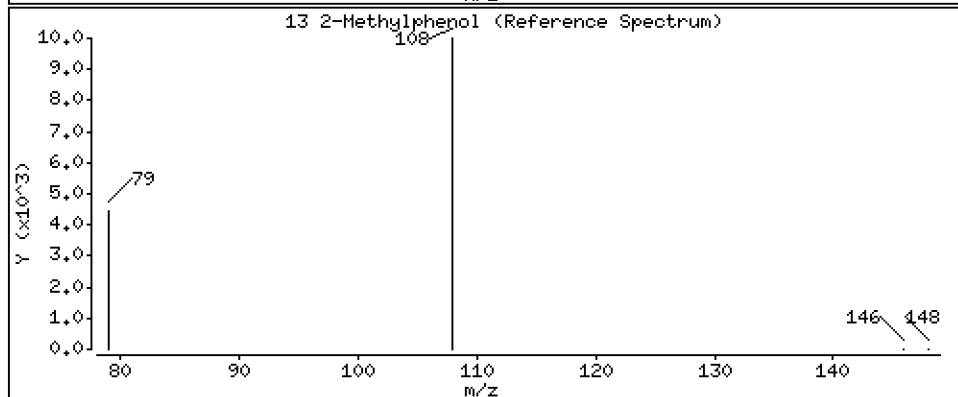
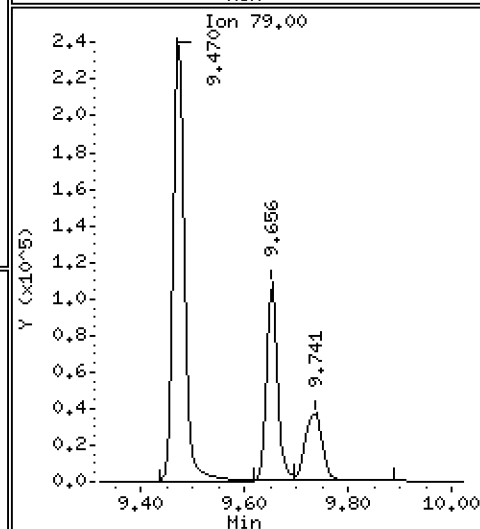
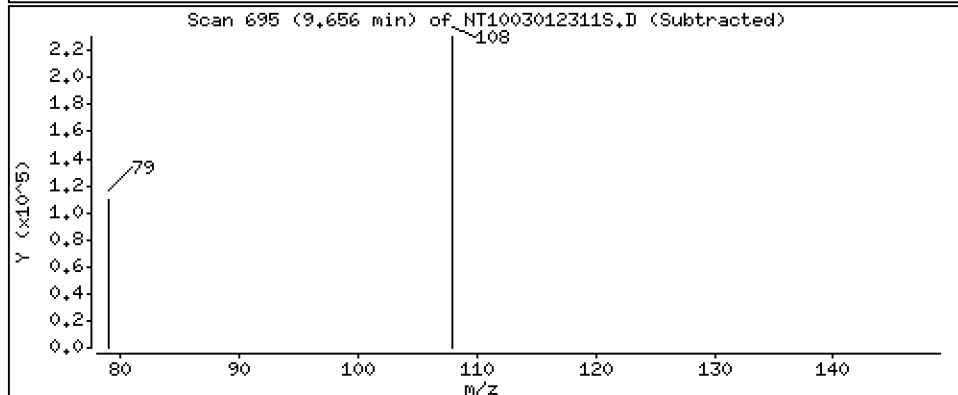
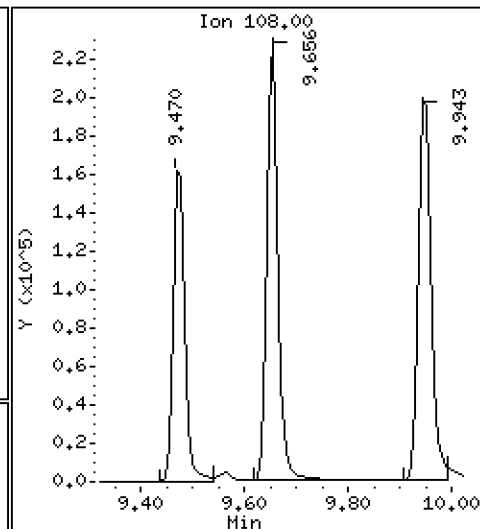
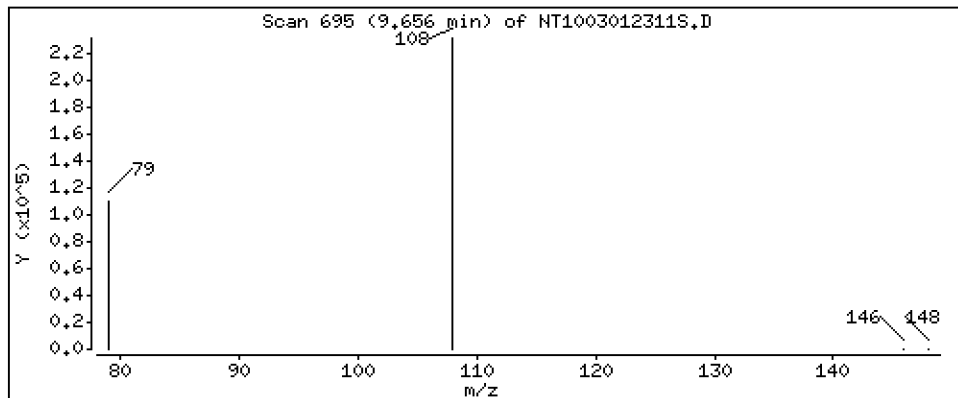
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.365 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

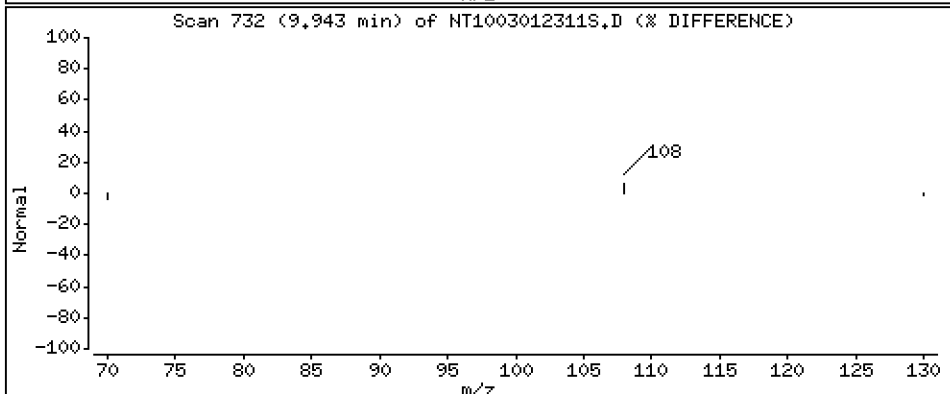
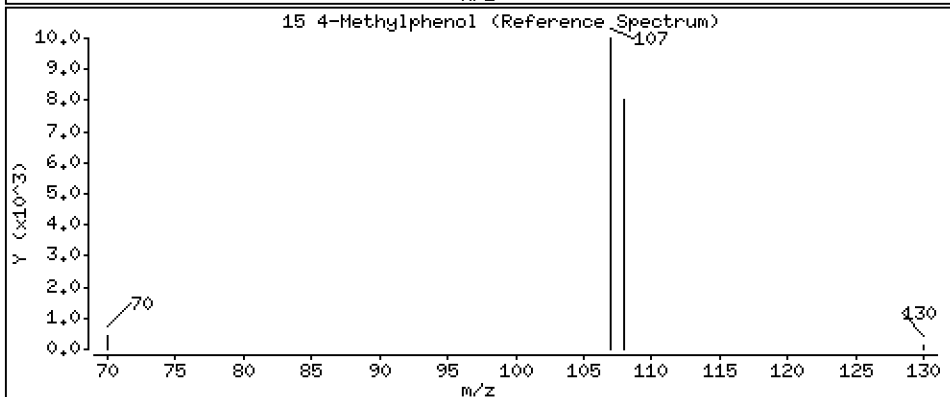
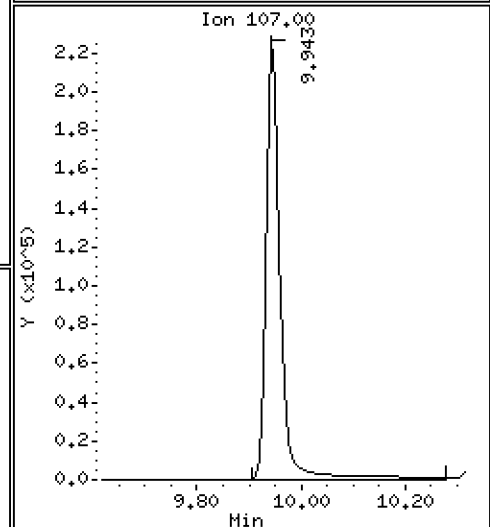
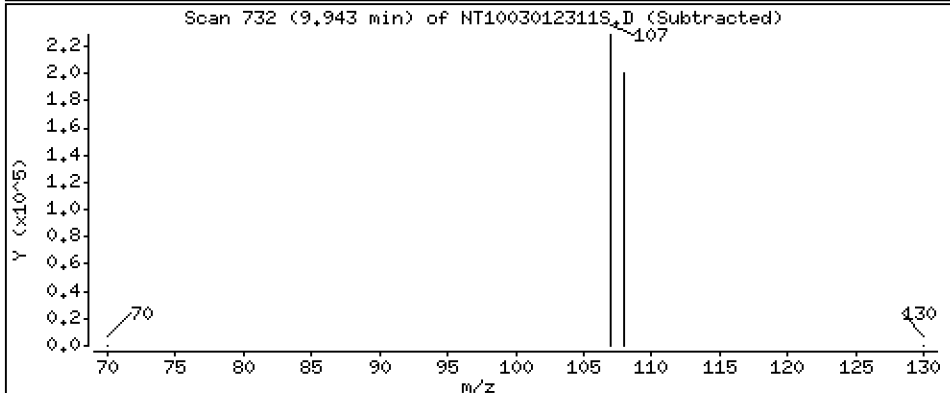
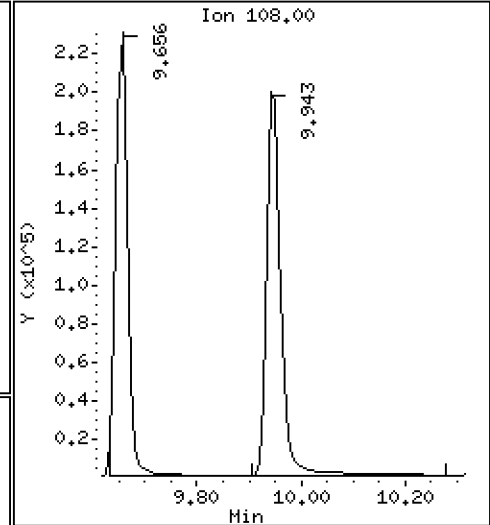
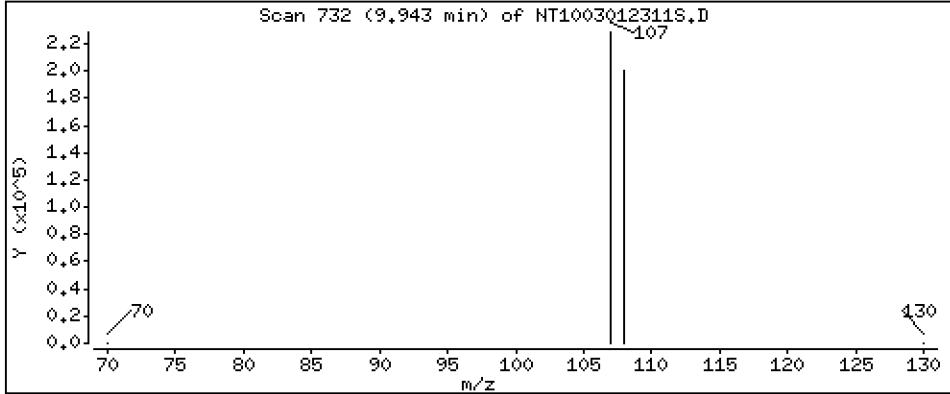
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.505 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

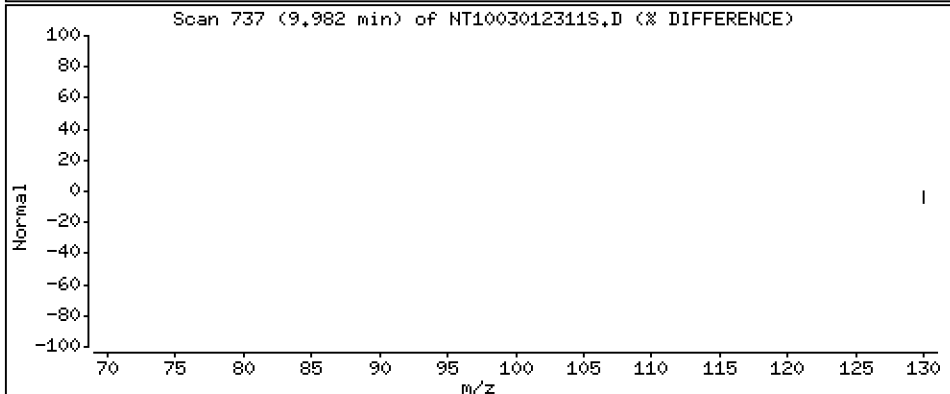
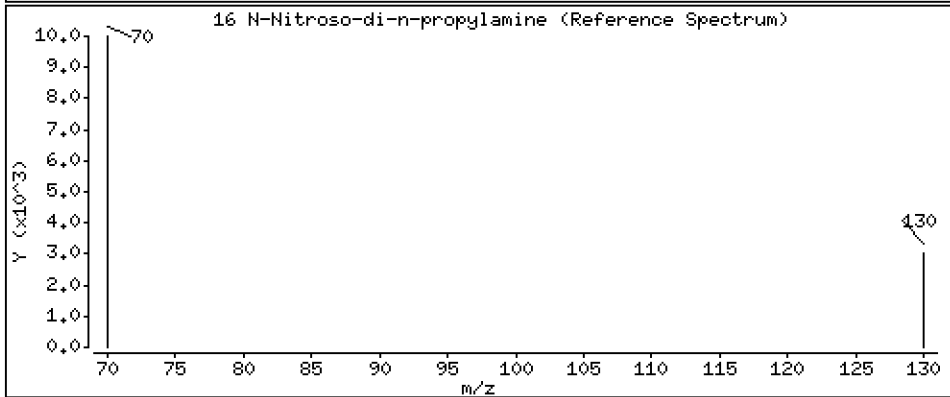
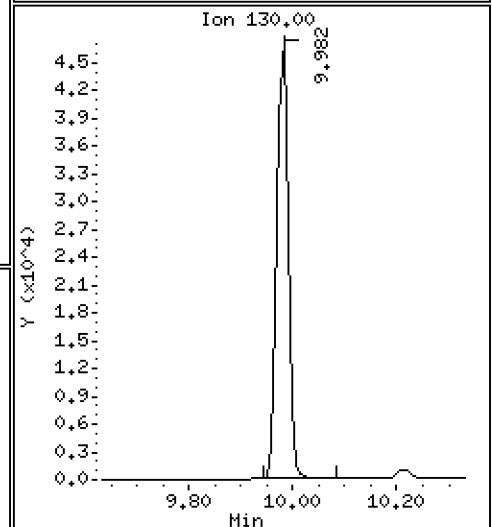
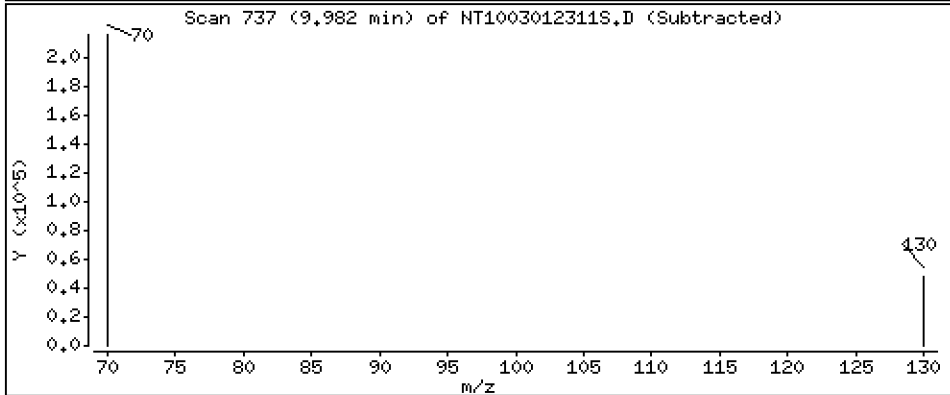
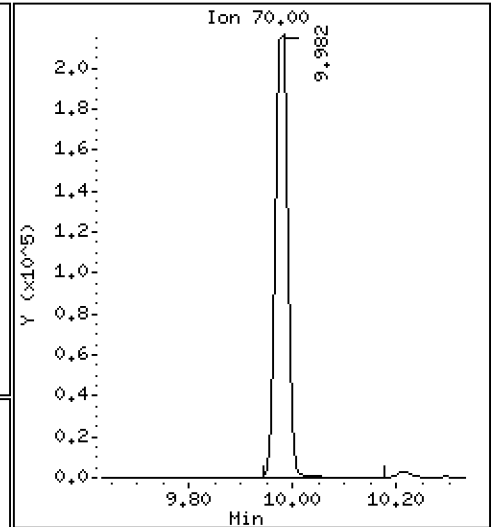
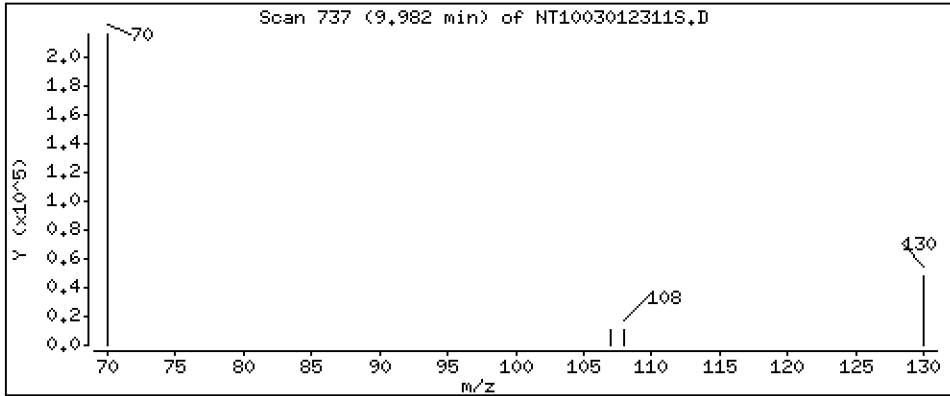
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,685 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

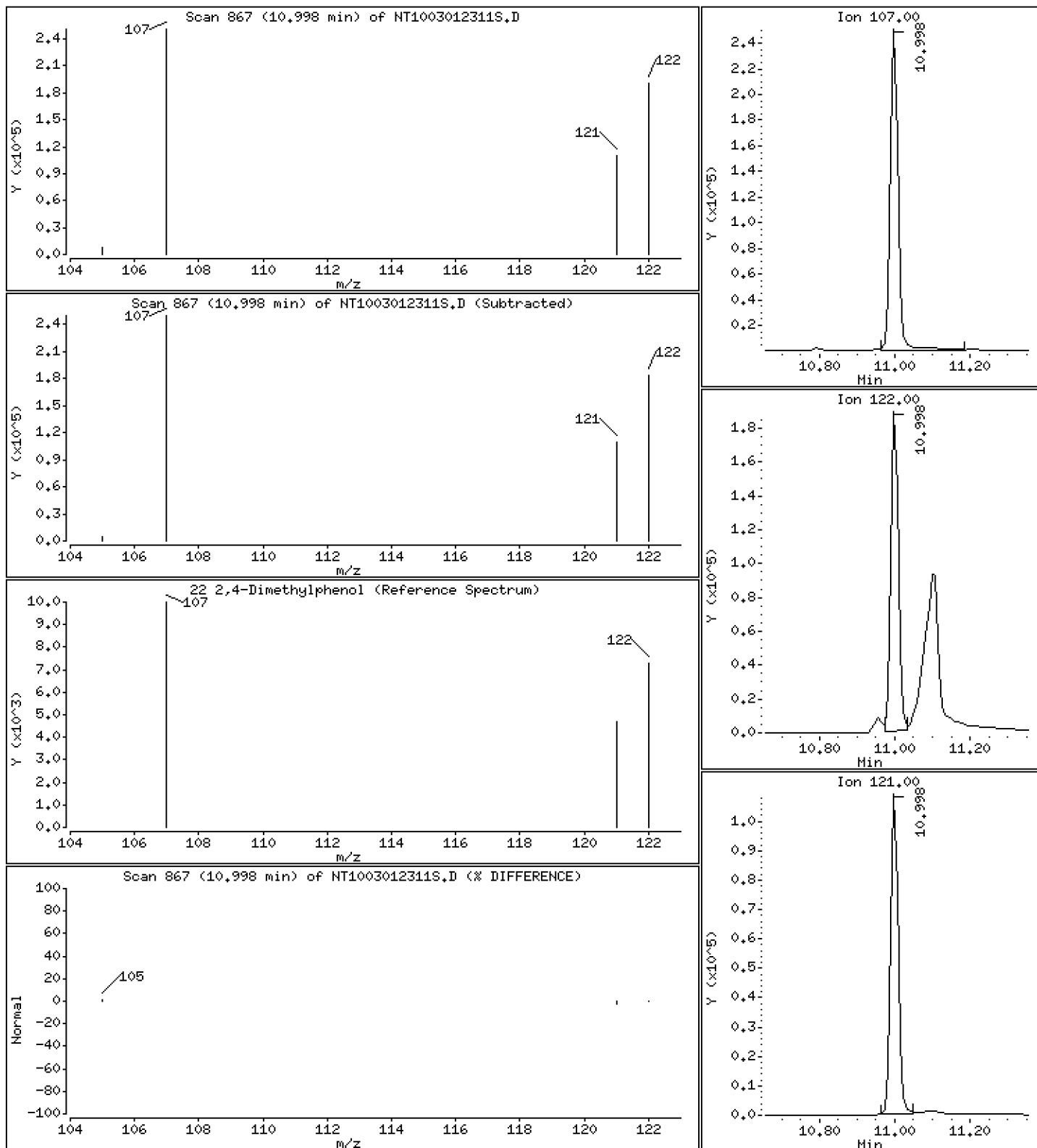
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 3.637 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

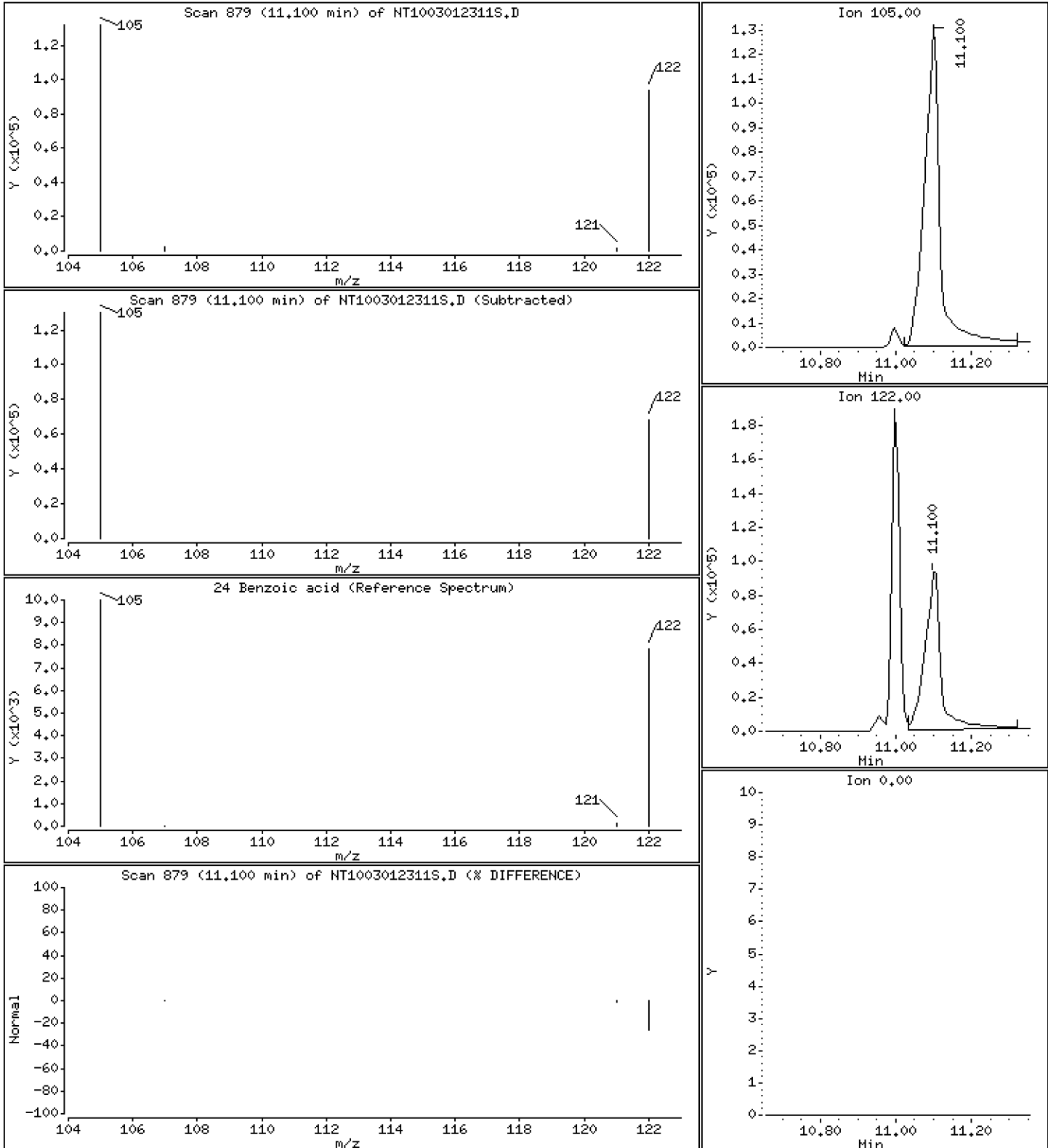
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 6,870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

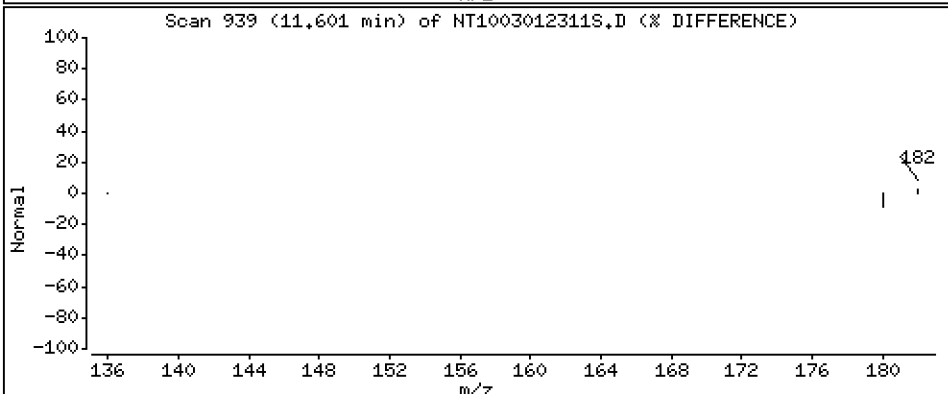
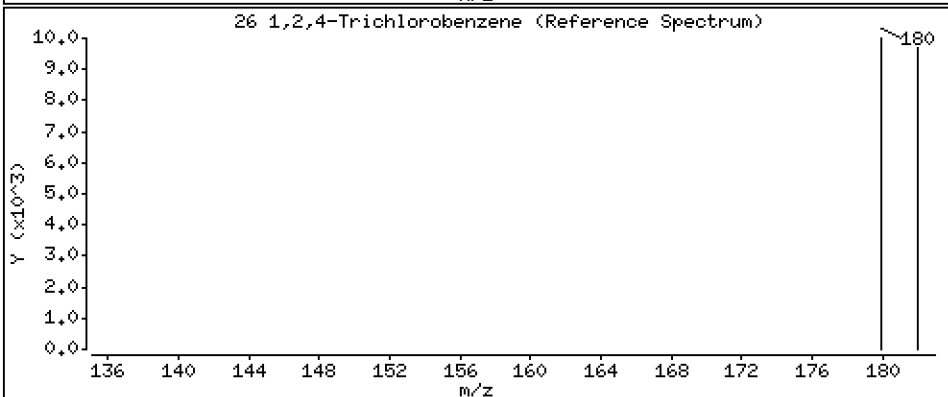
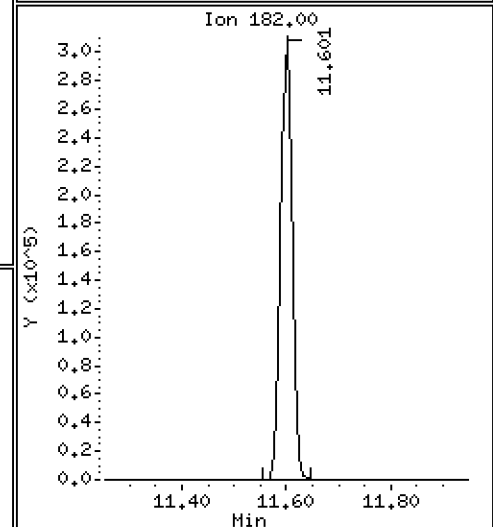
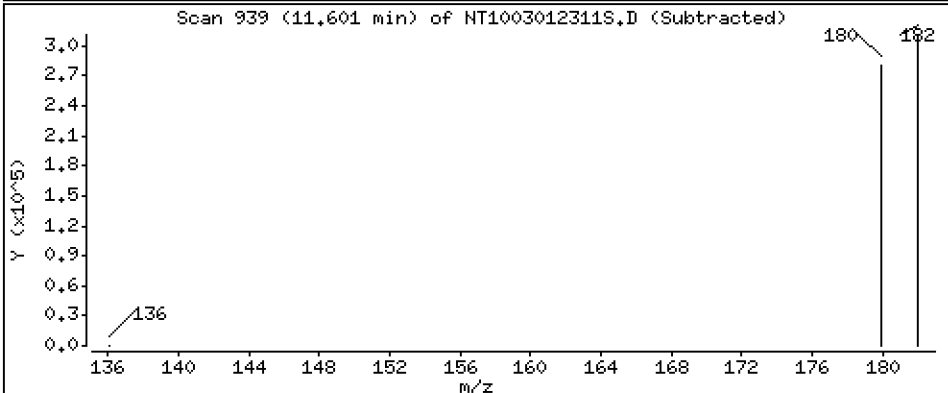
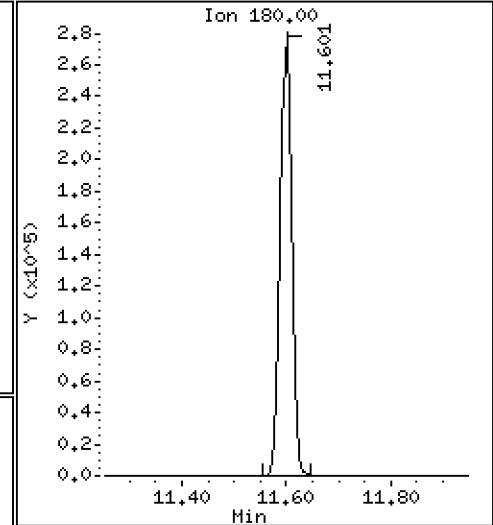
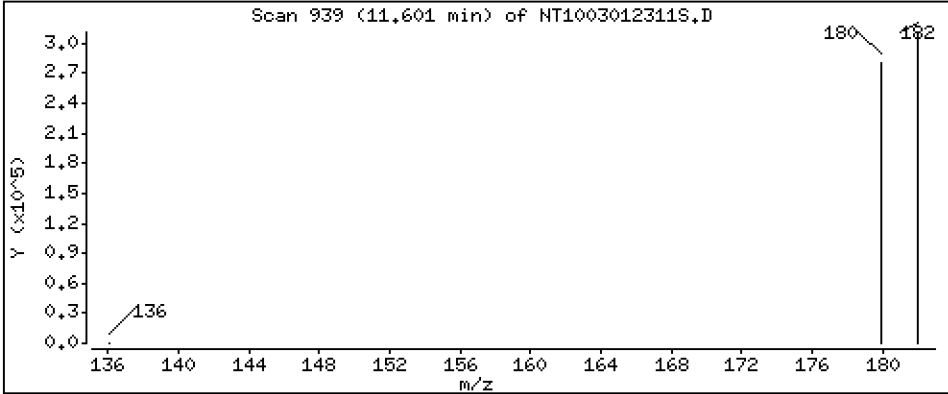
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

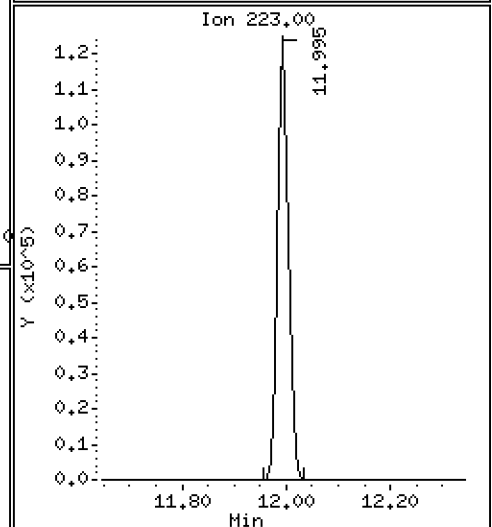
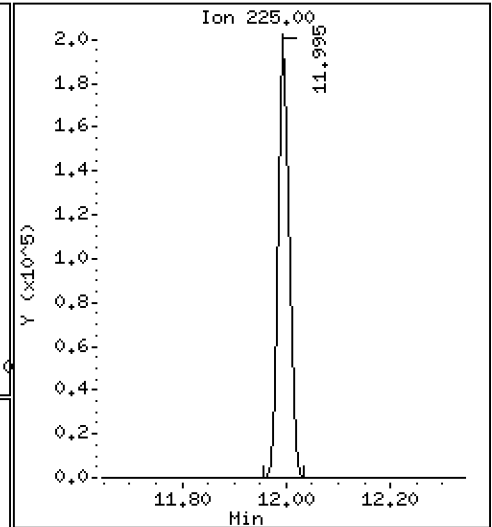
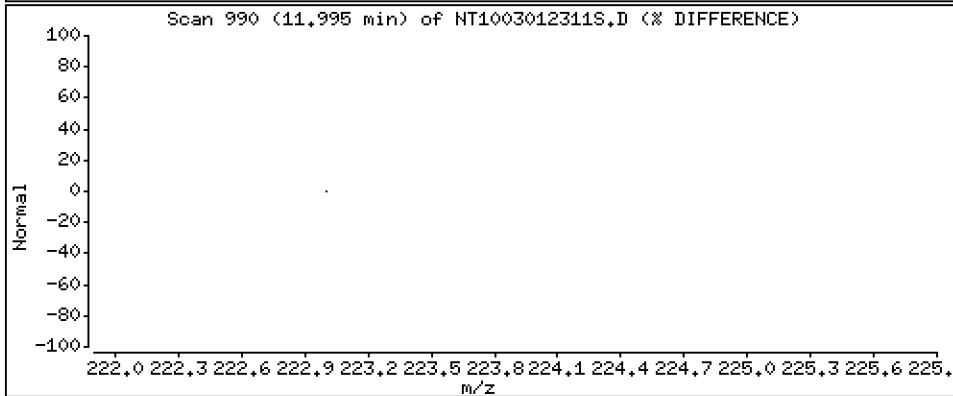
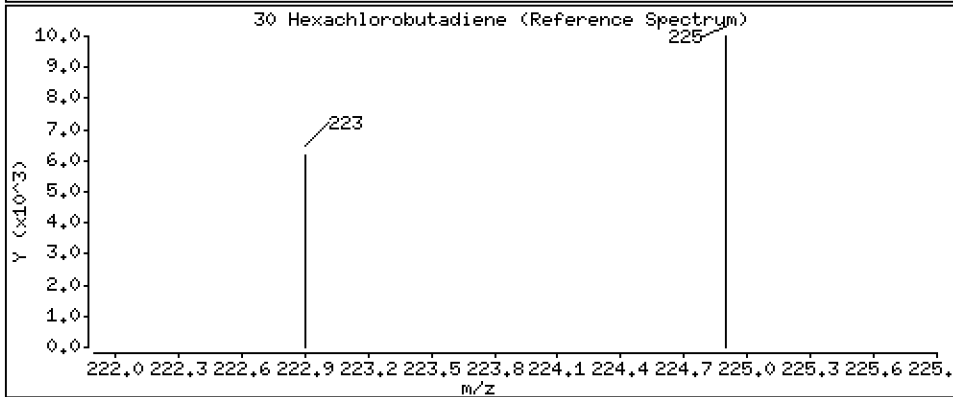
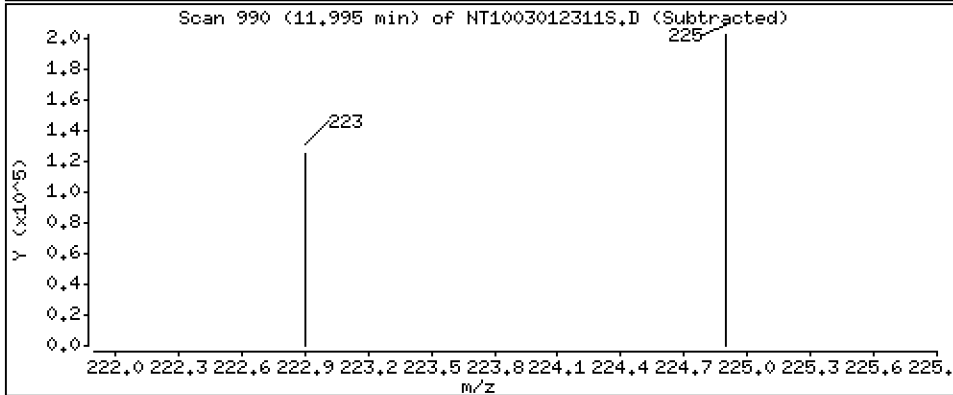
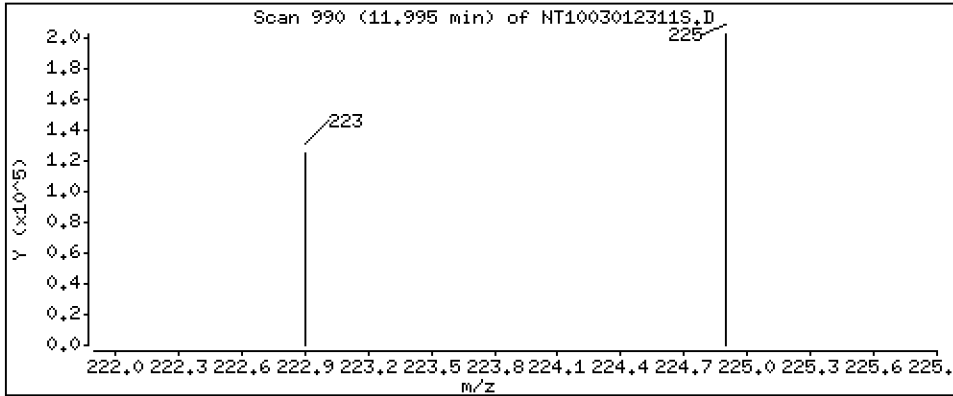
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,862 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

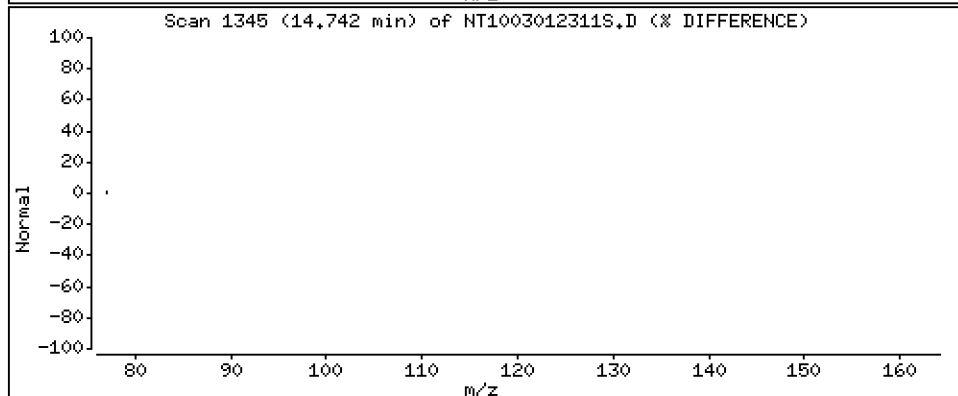
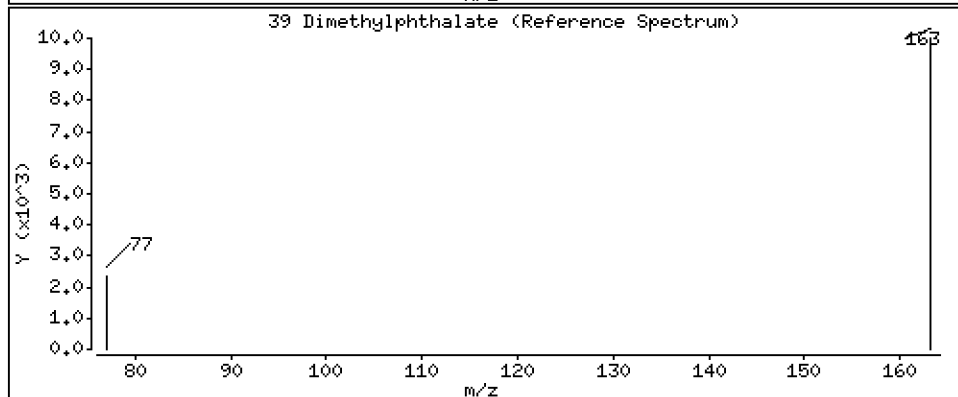
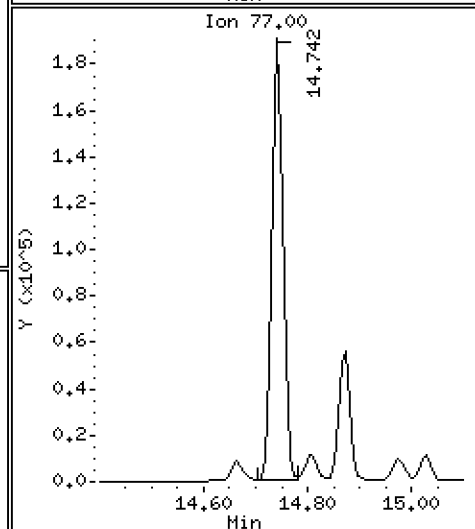
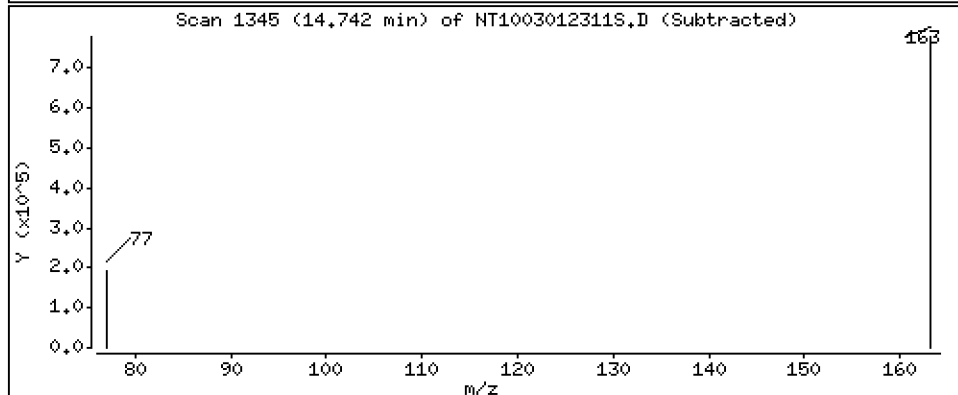
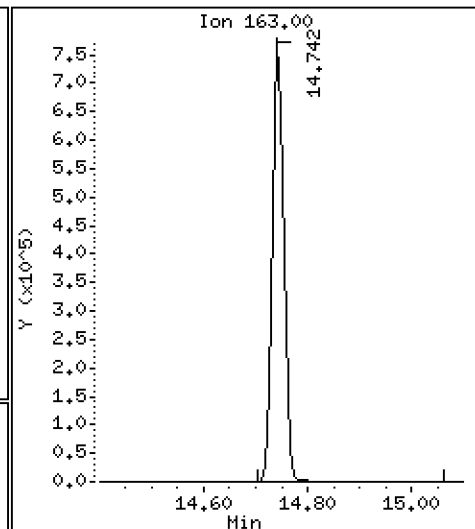
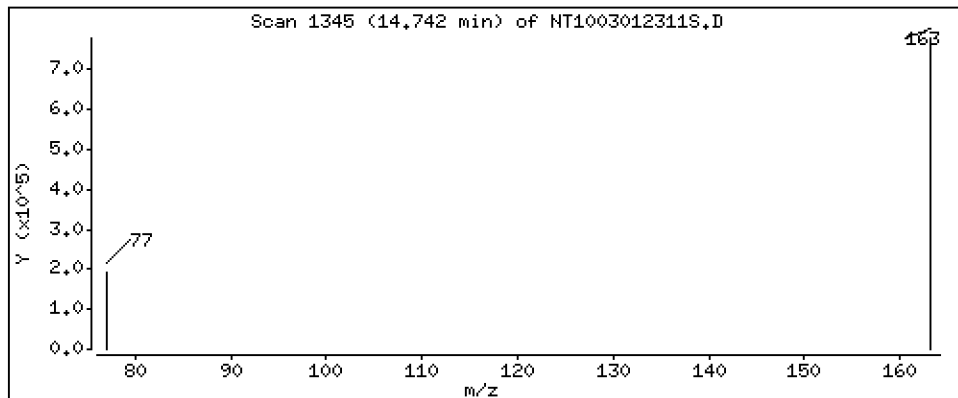
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 5,571 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

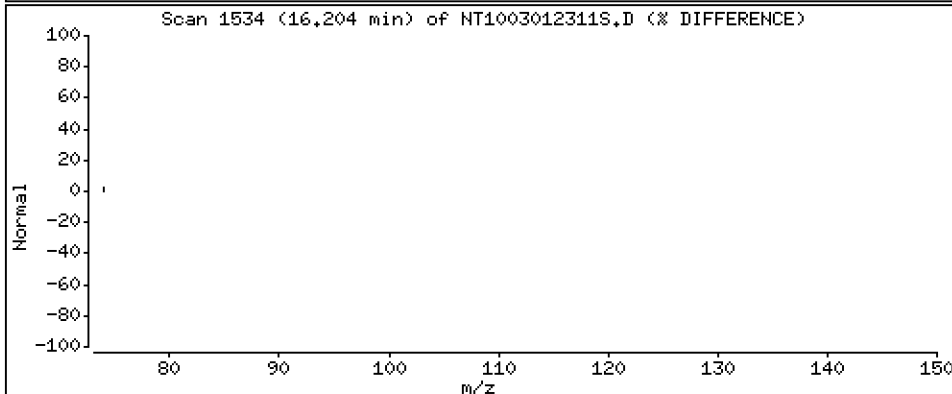
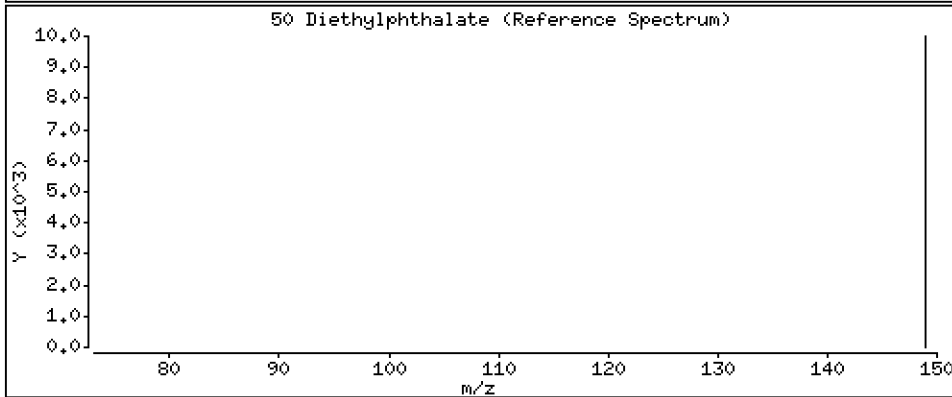
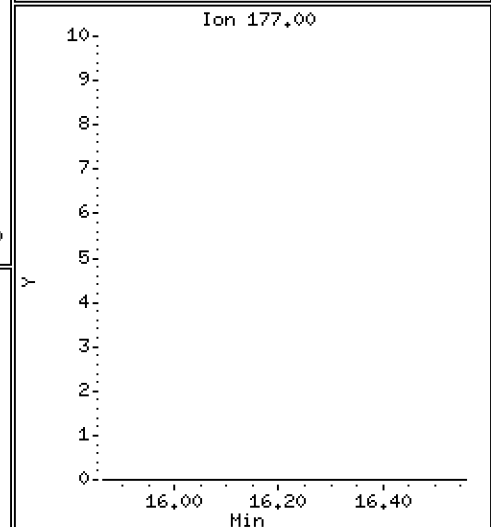
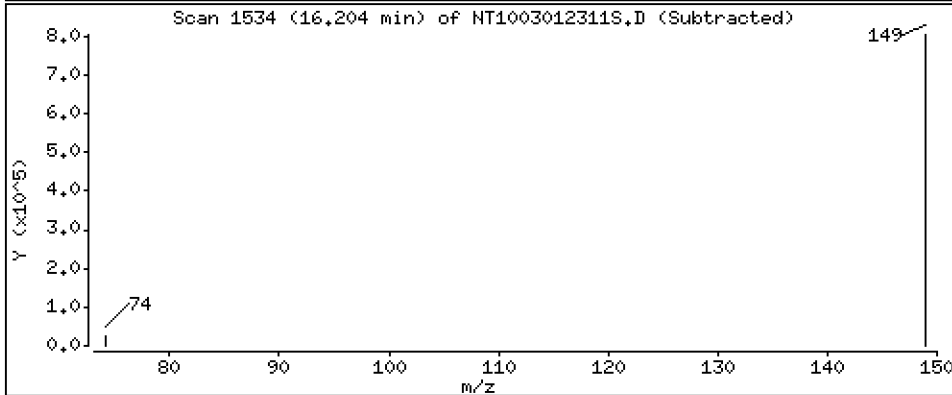
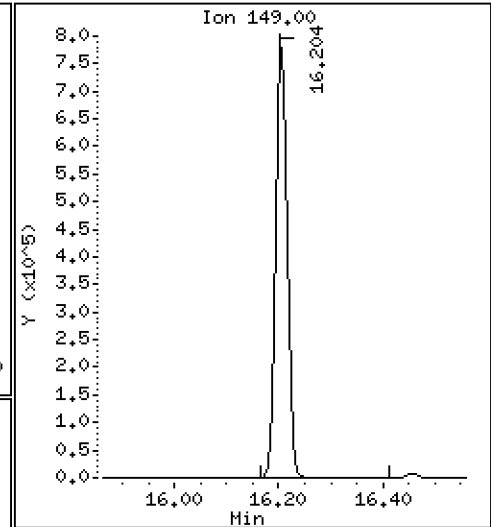
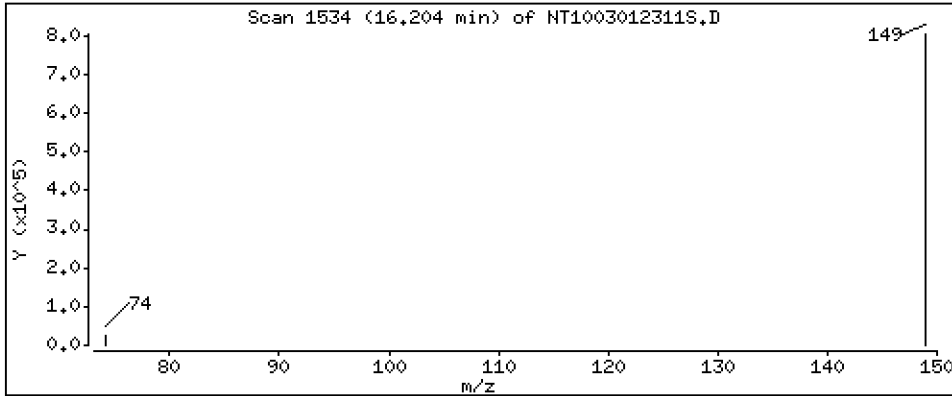
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,979 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

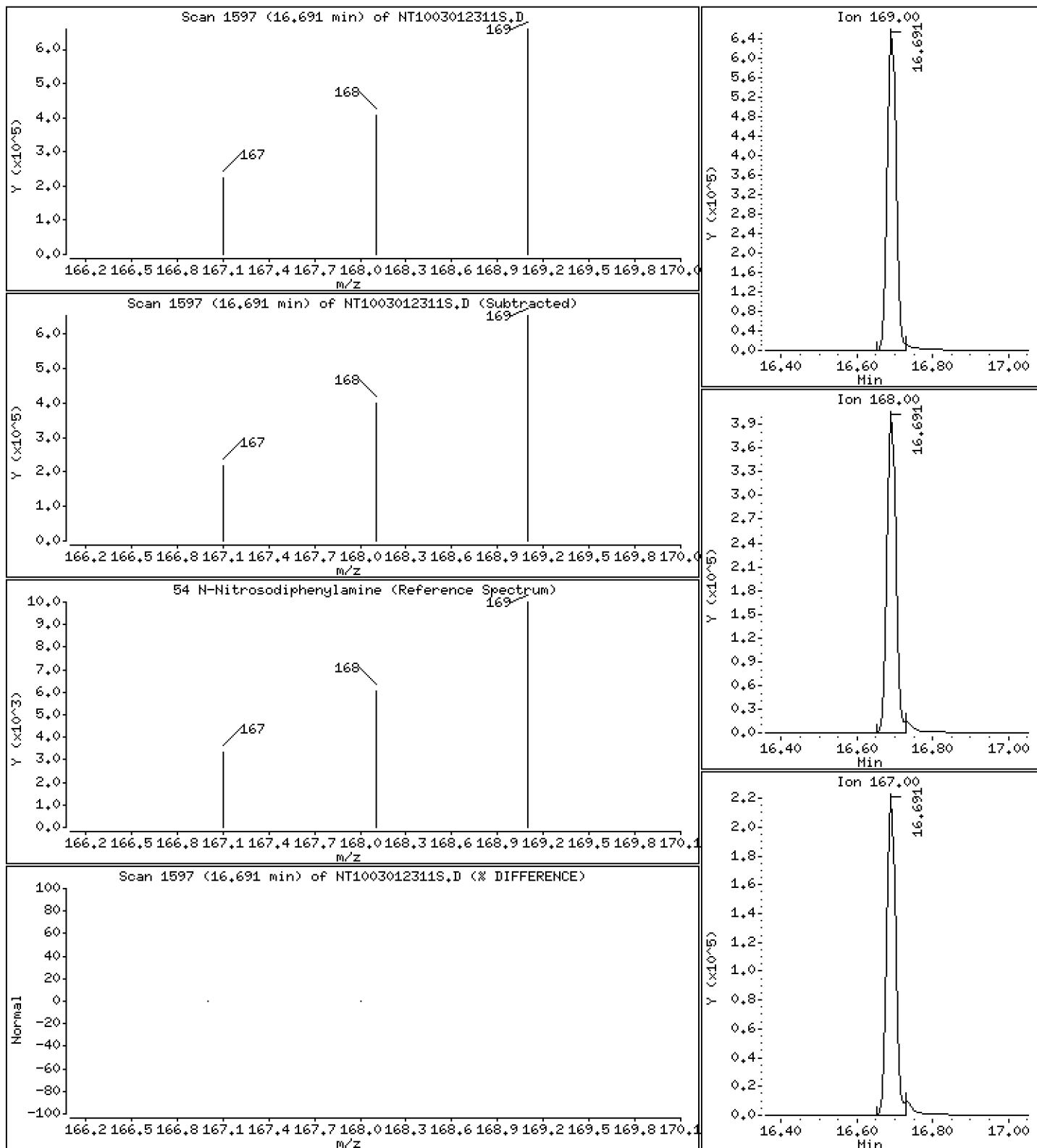
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 5.359 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

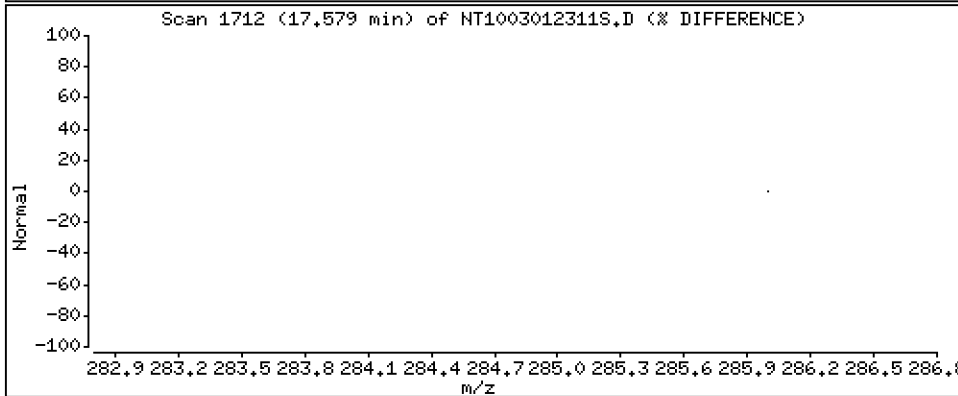
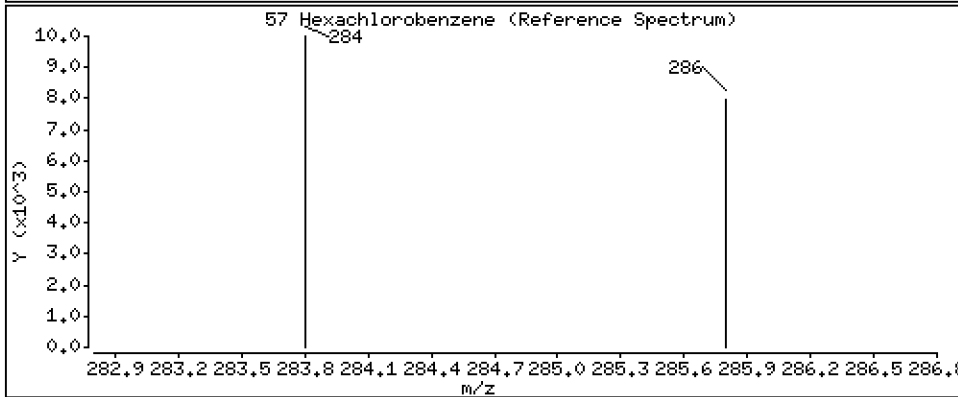
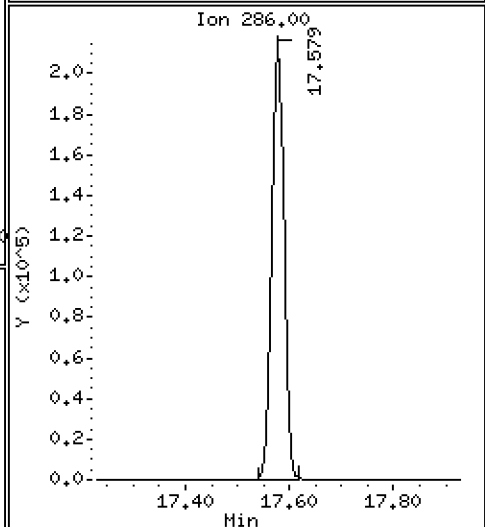
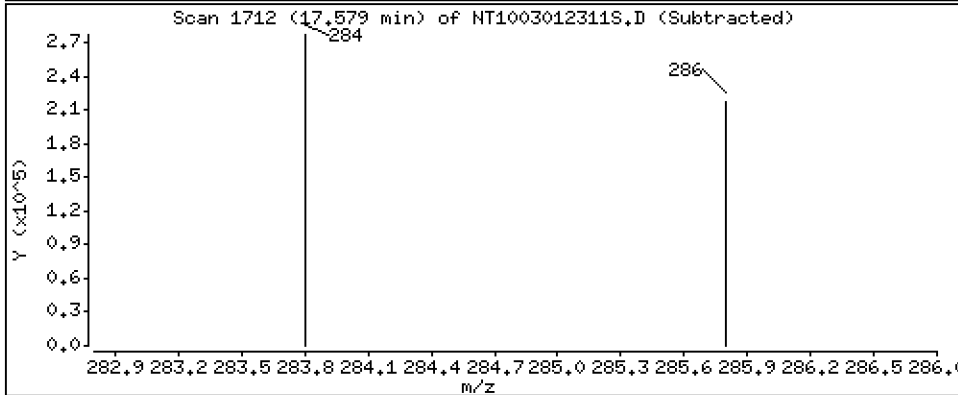
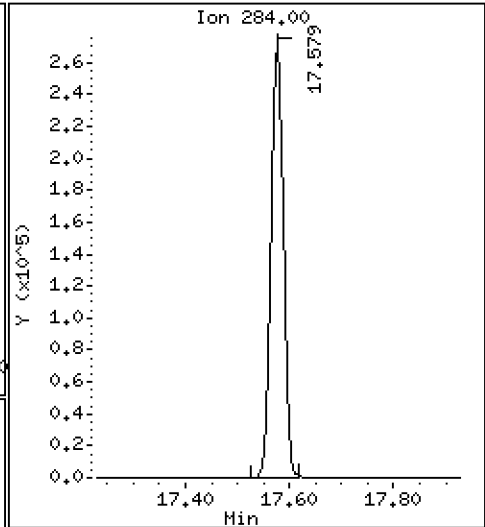
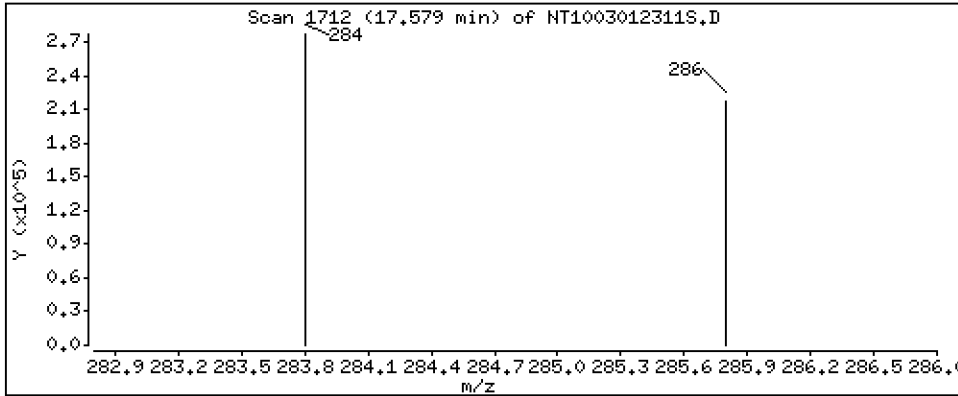
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,866 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

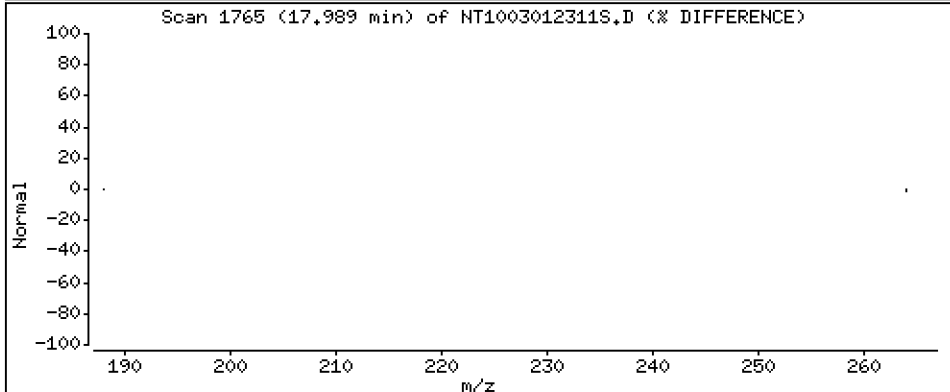
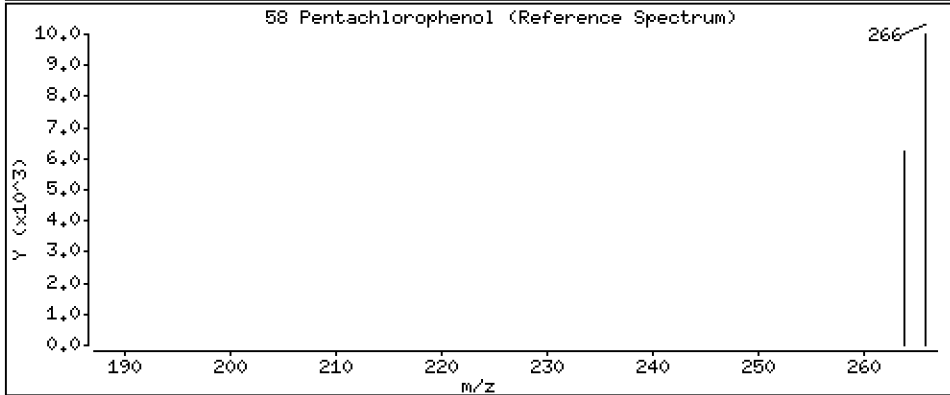
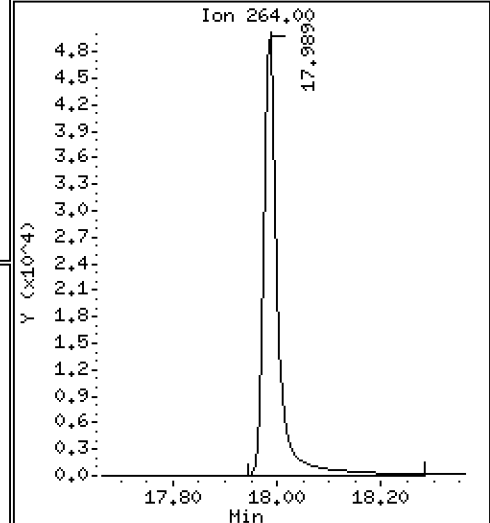
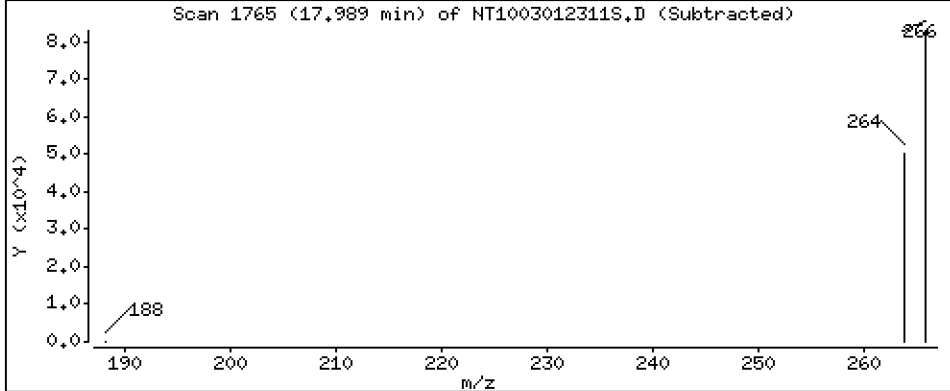
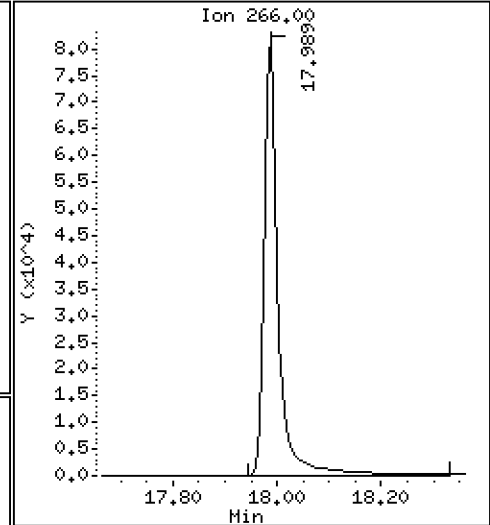
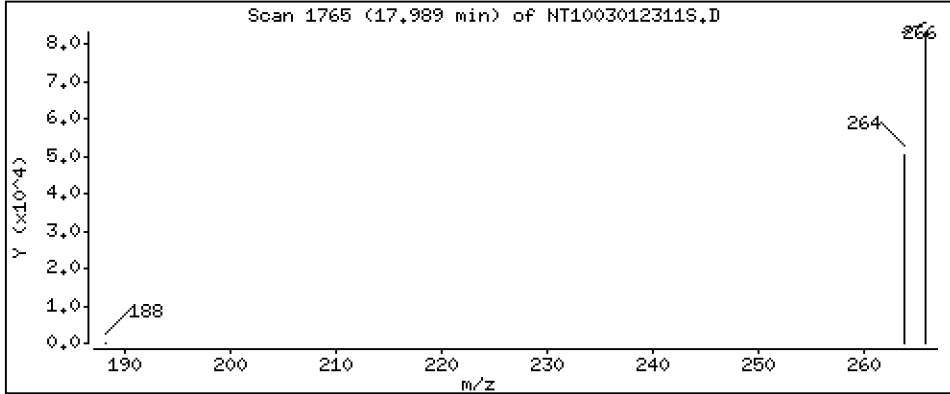
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,912 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

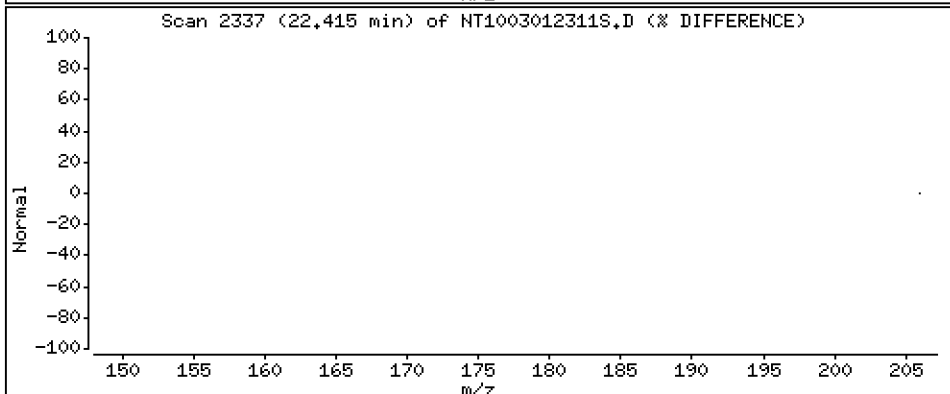
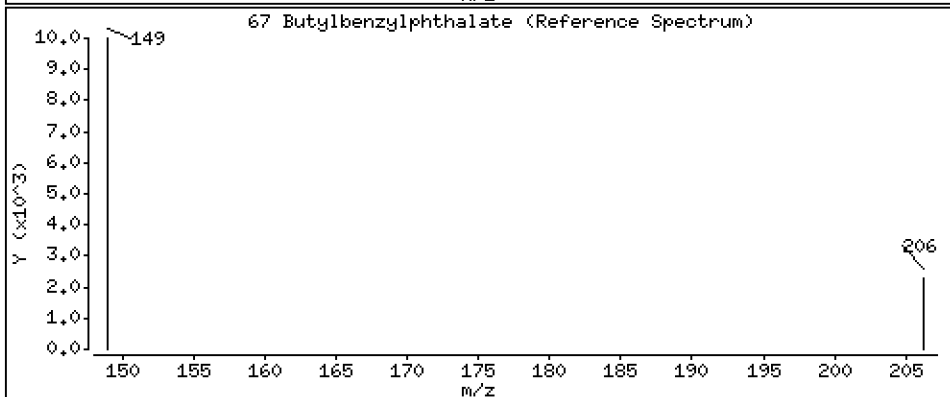
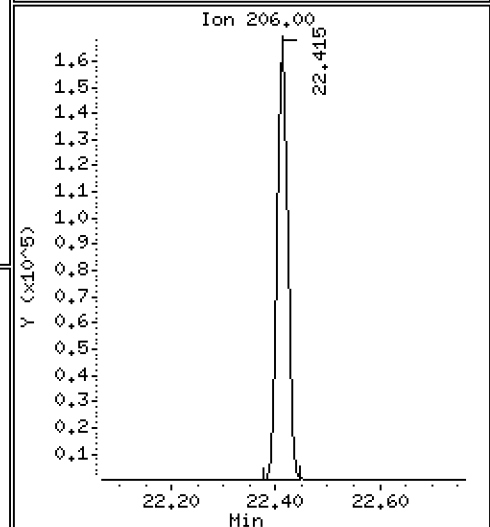
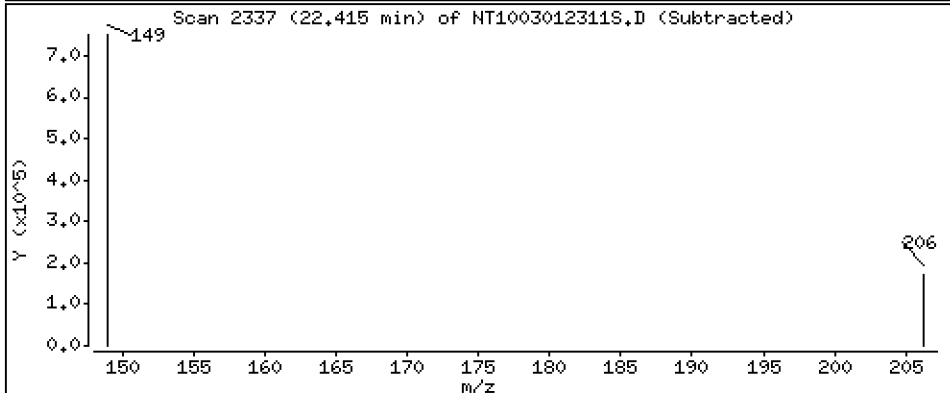
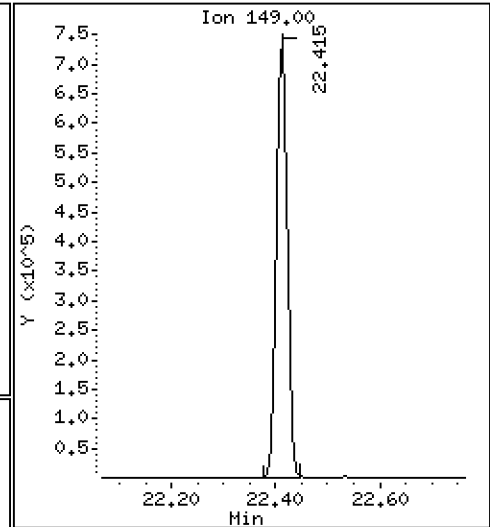
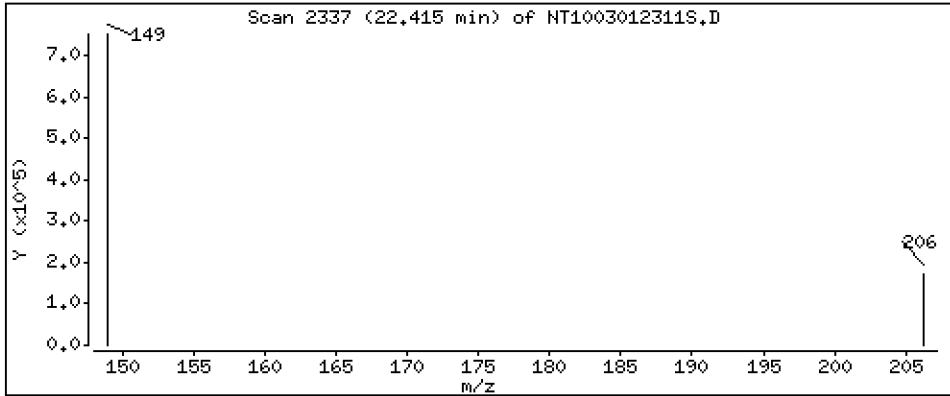
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,689 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

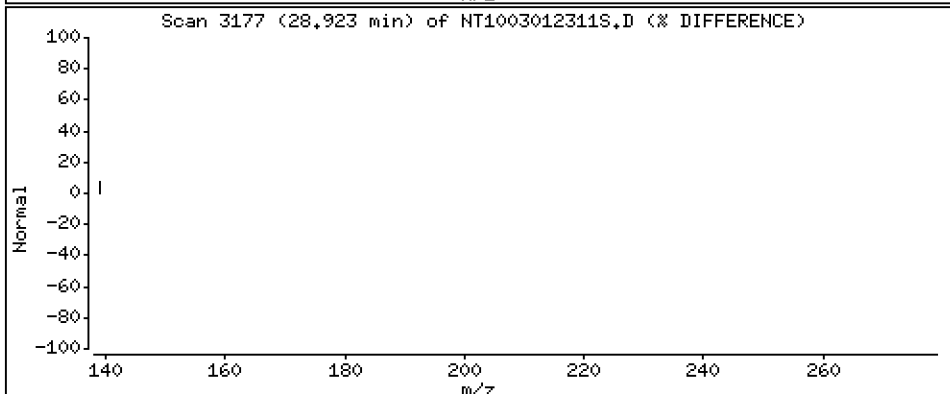
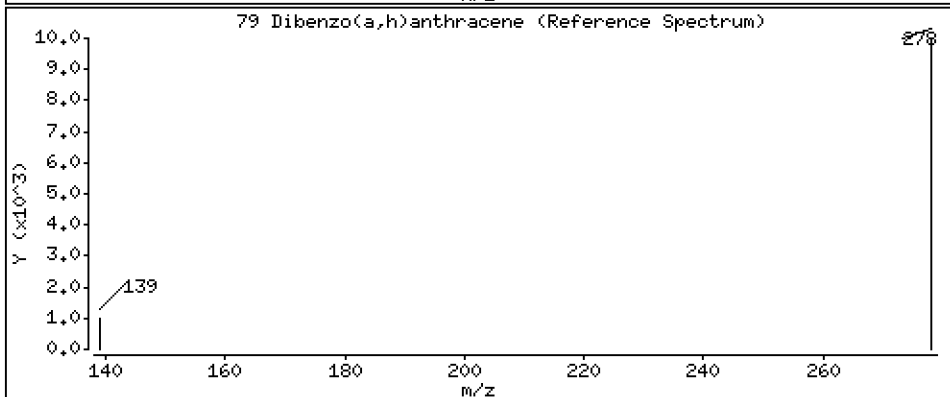
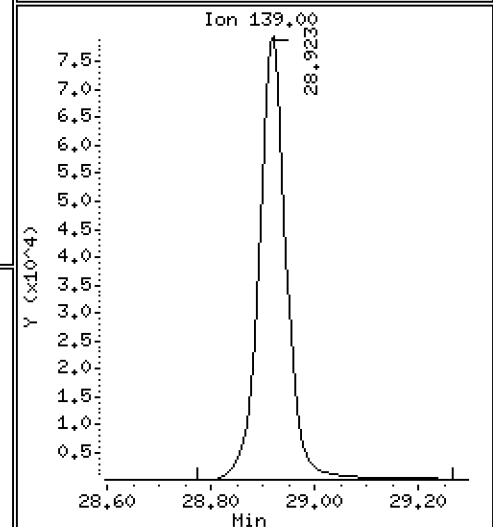
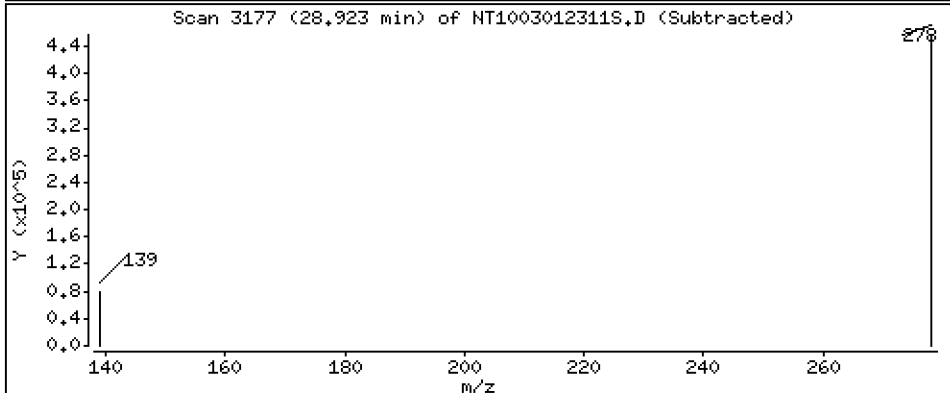
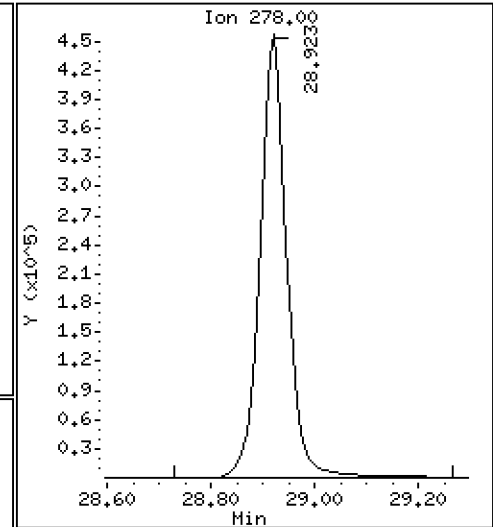
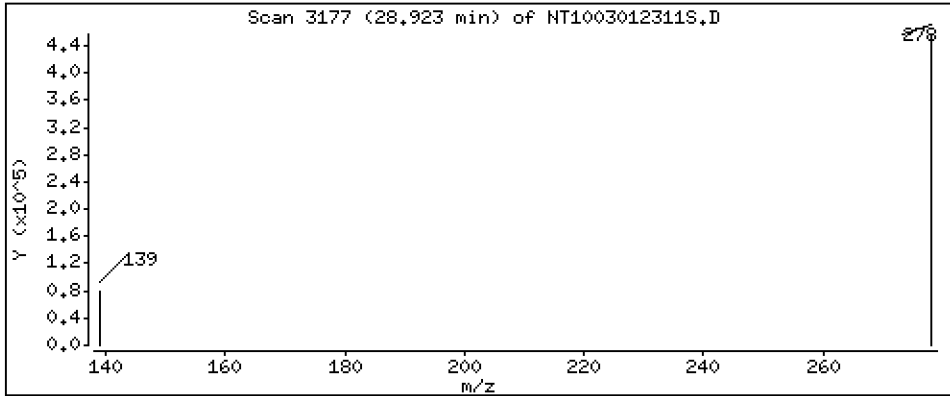
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,760 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

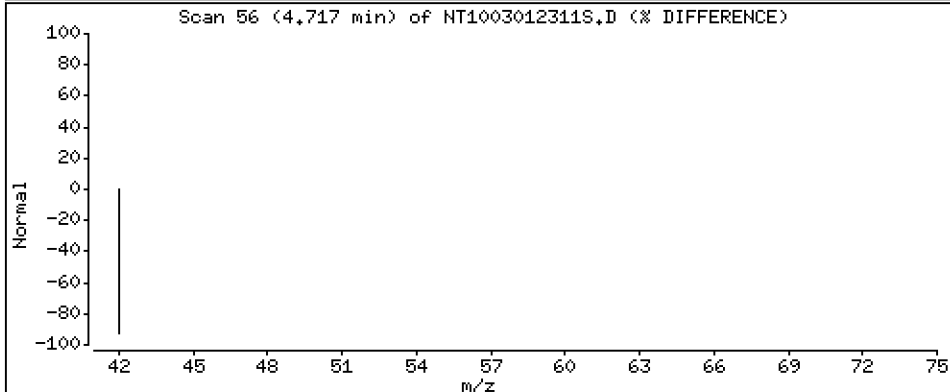
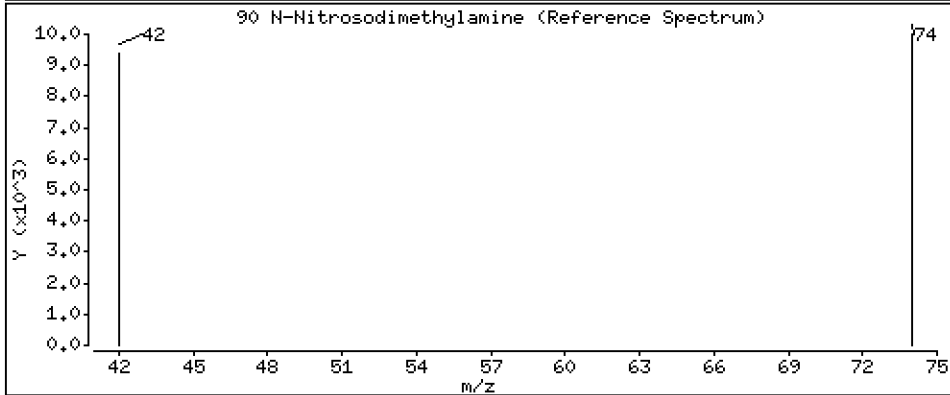
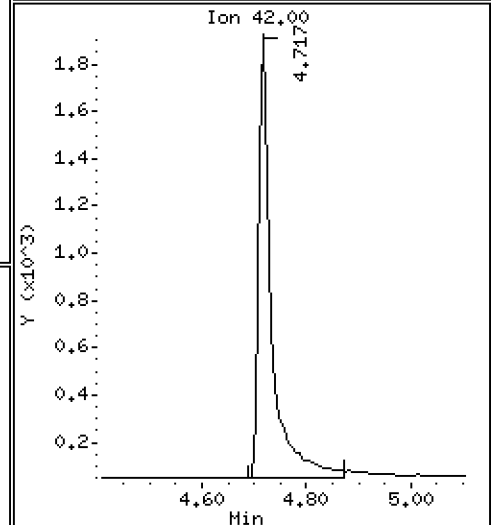
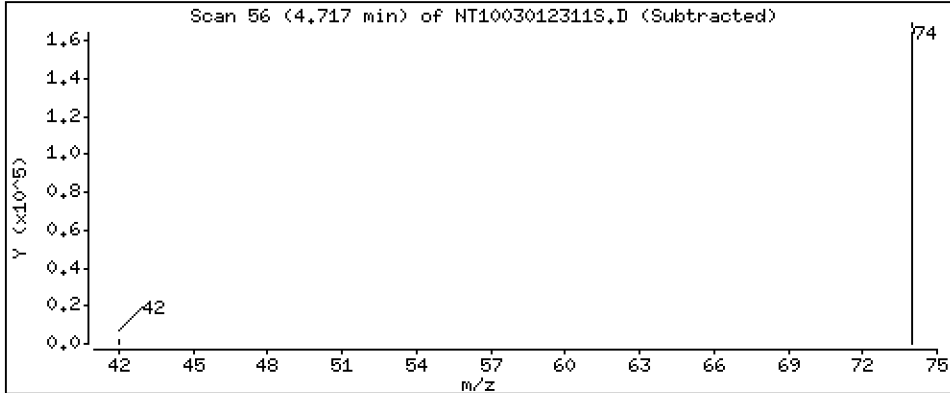
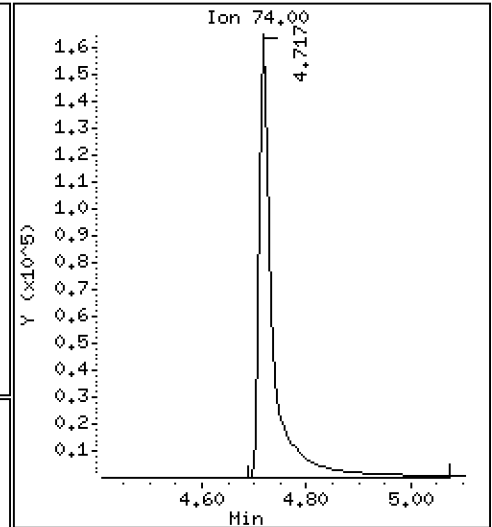
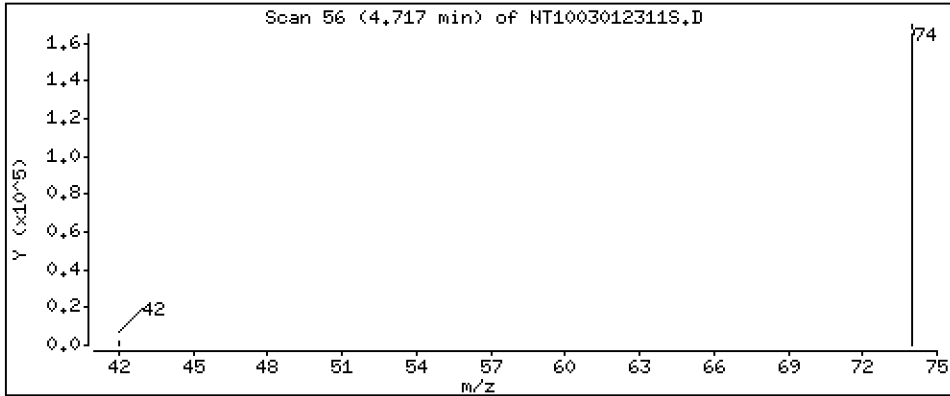
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 6.057 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Inj Date : 01-MAR-2023 21:46 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	3267	0.03768	0.03768 (R)
3 Phenol	94		8.517	8.532	(0.921)	590047	4.50660	4.507
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	572299	5.08409	5.084
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	303734	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.275	(1.003)	574537	5.24962	5.250
11 Benzyl alcohol	79		9.469	9.508	(1.023)	388582	5.10390	5.104
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	540938	5.14228	5.142
13 2-Methylphenol	108		9.655	9.671	(1.044)	348452	4.36547	4.365
15 4-Methylphenol	108		9.943	9.966	(1.075)	379262	4.50495	4.505
16 N-Nitroso-di-n-propylamine	70		9.982	9.982	(1.079)	330861	5.68451	5.685
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	357707	3.63670	3.637
24 Benzoic acid	105		11.099	11.007	(0.947)	380081	6.86990	6.870
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	402252	4.87012	4.870
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1147551	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	285002	4.86242	4.862
39 Dimethylphthalate	163		14.741	14.749	(0.963)	1142178	5.57065	5.571
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	645730	4.00000	
50 Diethylphthalate	149		16.203	16.211	(1.058)	1156037	5.97883	5.979
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	998237	5.35897	5.359
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	424193	4.86607	4.866

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	18.012	(0.978)	155412	3.91206	3.912
* 59 Phenanthrene-d10	188	18.399	18.398	(1.000)	1151000	4.00000	
\$ 66 Terphenyl-d14	244	21.524	21.532	(0.919)	2846	0.02712	0.02712 (R)
67 Butylbenzylphthalate	149	22.415	22.415	(0.957)	1009961	4.68912	4.689
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1297466	4.00000	
* 77 Perylene-d12	264	26.108	26.108	(1.000)	1394899	4.00000	
79 Dibenzo(a,h)anthracene	278	28.922	28.946	(1.108)	1657122	4.76032	4.760
90 N-Nitrosodimethylamine	74	4.717	4.755	(0.510)	310951	6.05685	6.057

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	303734	-5.12
27 Naphthalene-d8	1136019	568010	2272038	1147551	1.02
42 Acenaphthene-d10	636993	318497	1273986	645730	1.37
59 Phenanthrene-d10	1093620	546810	2187240	1151000	5.25
69 Chrysene-d12	1000300	500150	2000600	1297466	29.71
77 Perylene-d12	1058448	529224	2116896	1394899	31.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012311S.D

Lab ID: SLC0143-SCV1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.947	0.000	0.9467		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

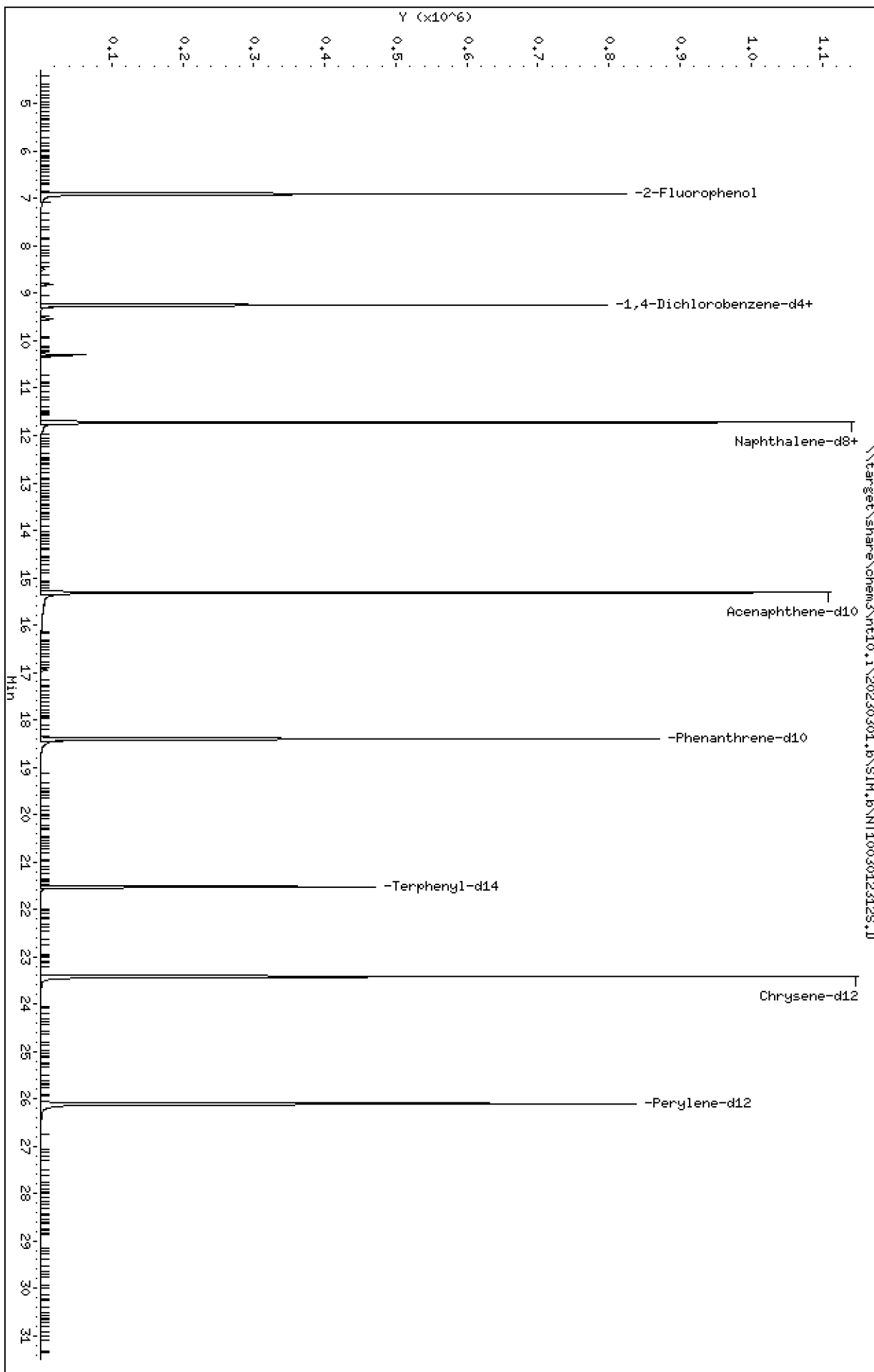
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.1\20230301\_B\SIM\_B\NT1003012312S.D  
Date: 01-MAR-2023 22:24  
Client ID:  
Sample Info: SED-IBL1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

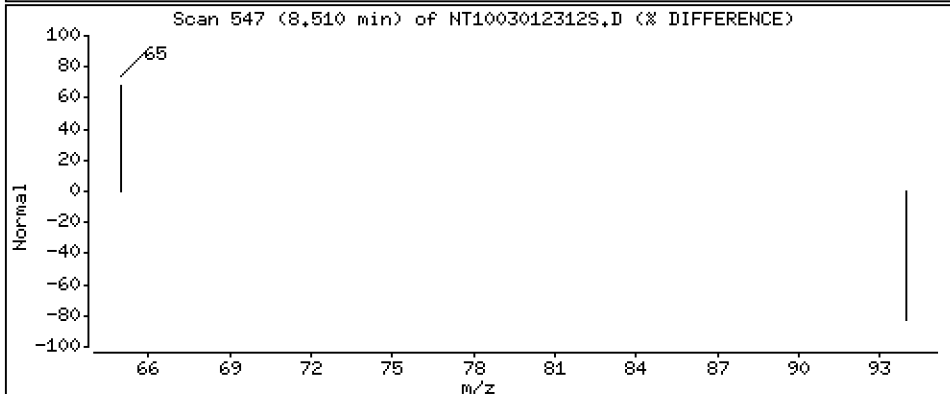
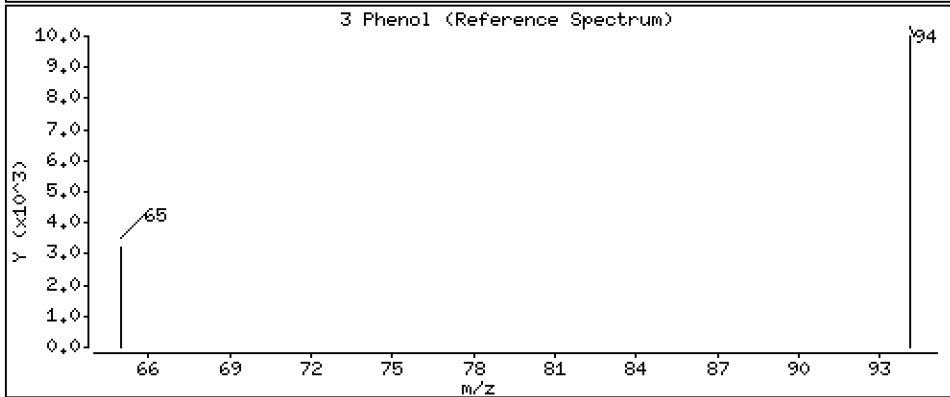
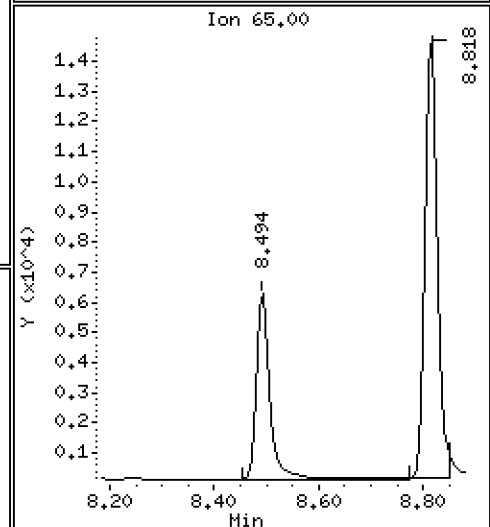
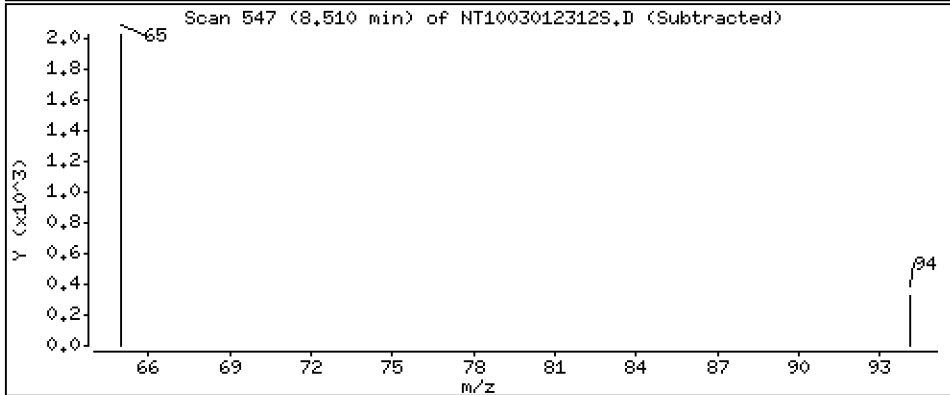
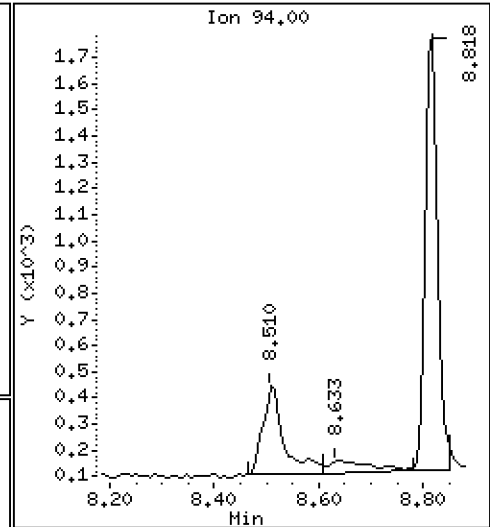
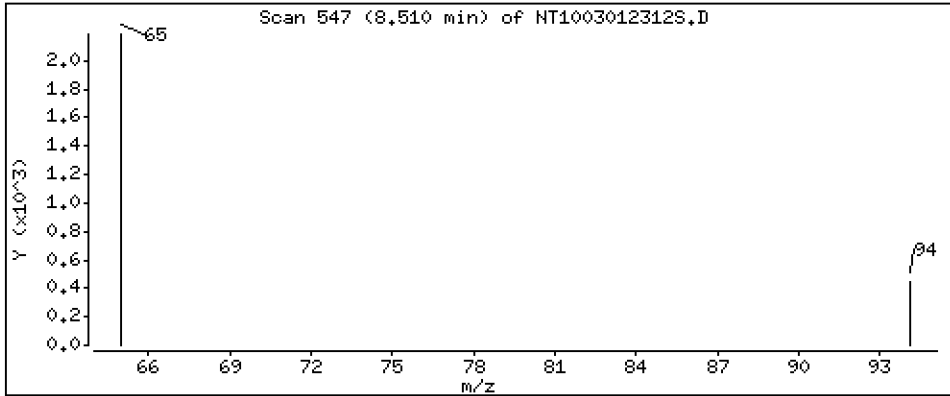
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.004664 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

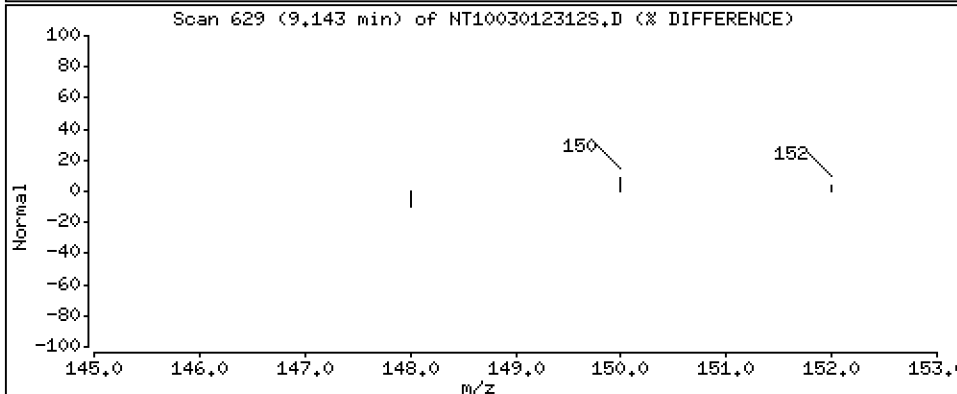
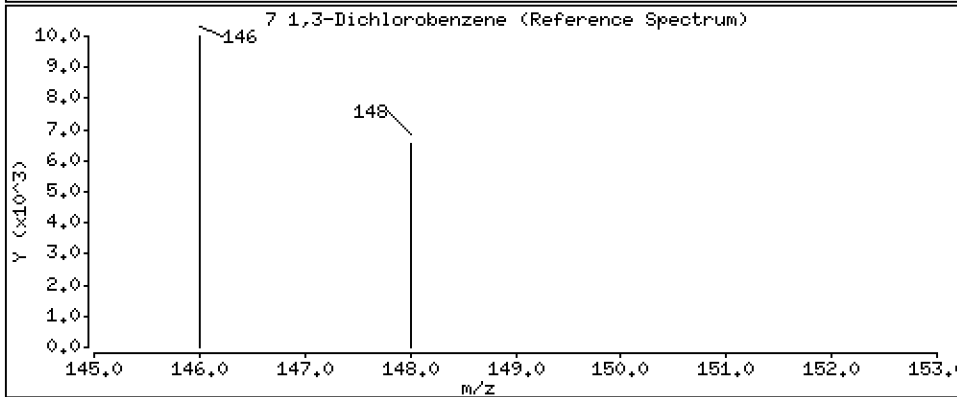
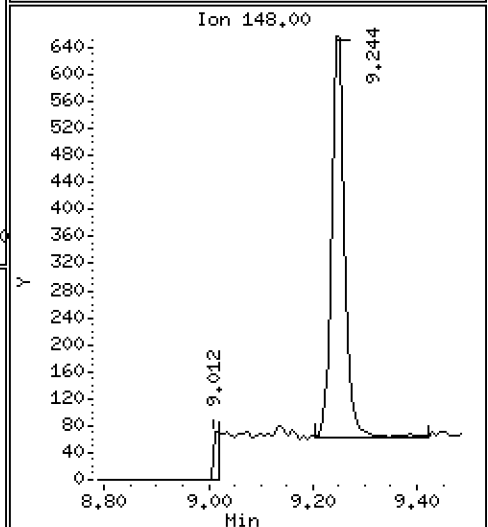
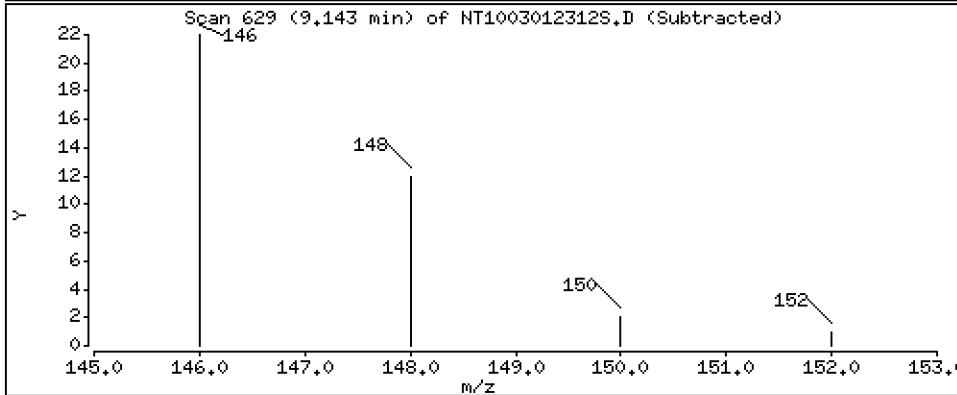
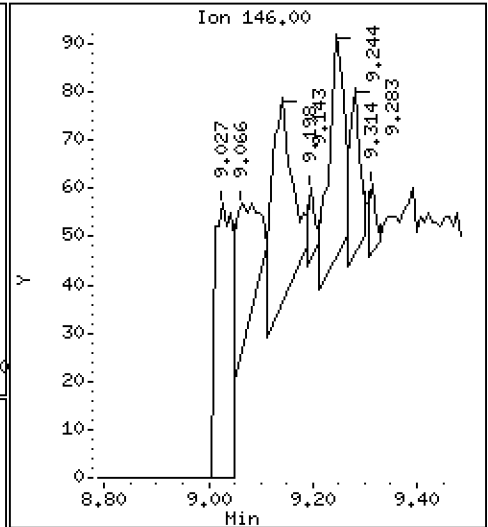
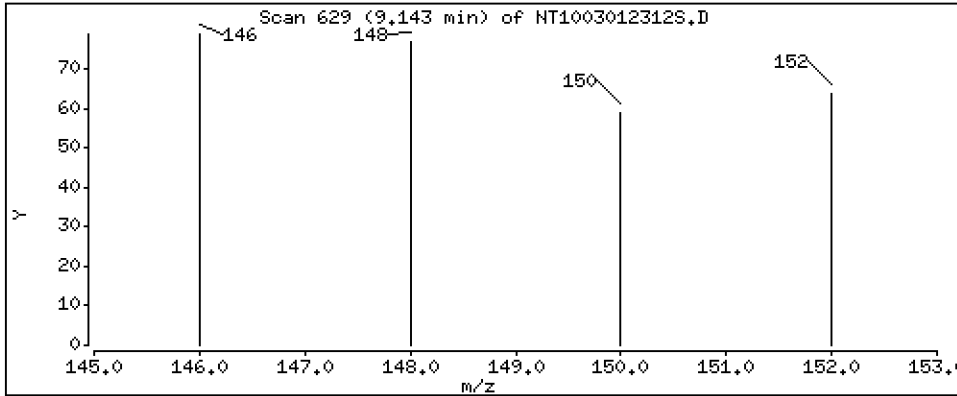
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

7 1,3-Dichlorobenzene

Concentration: 0,0006178 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

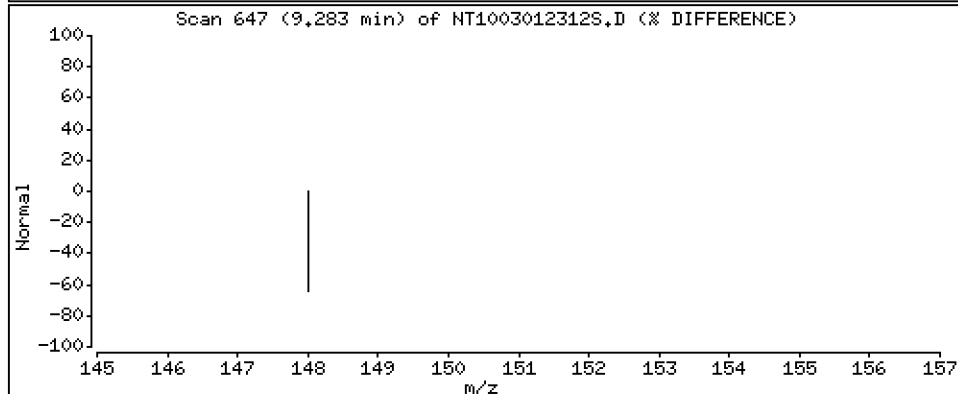
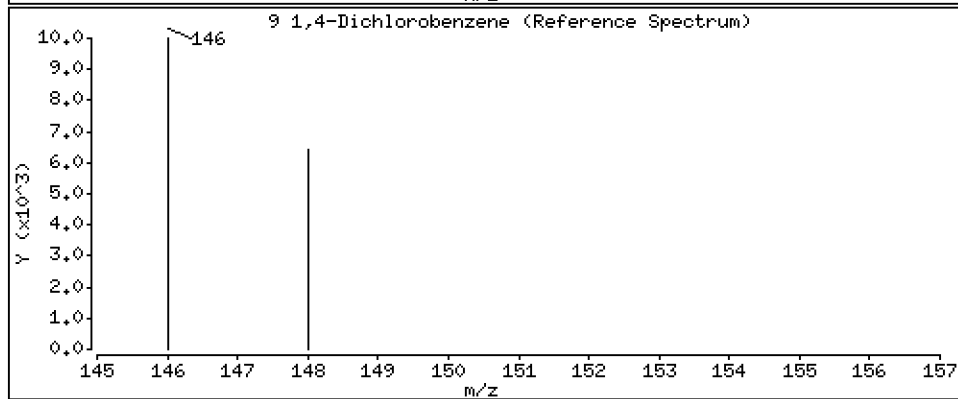
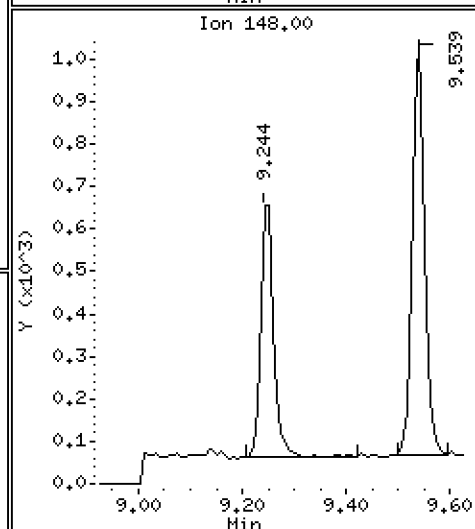
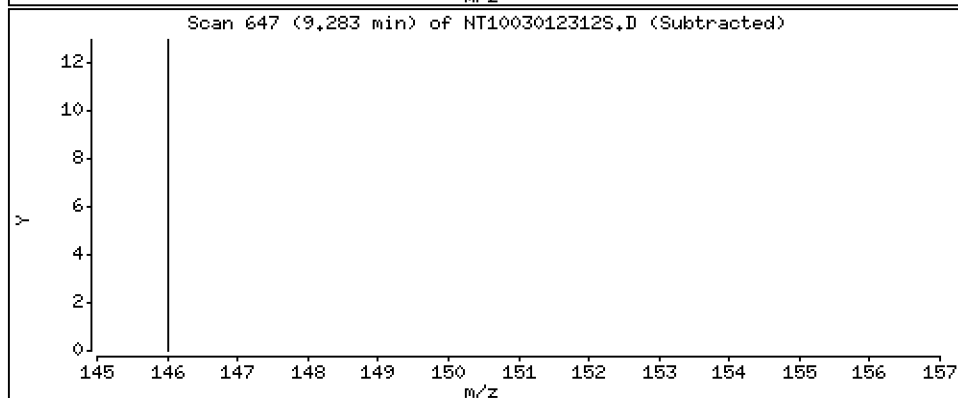
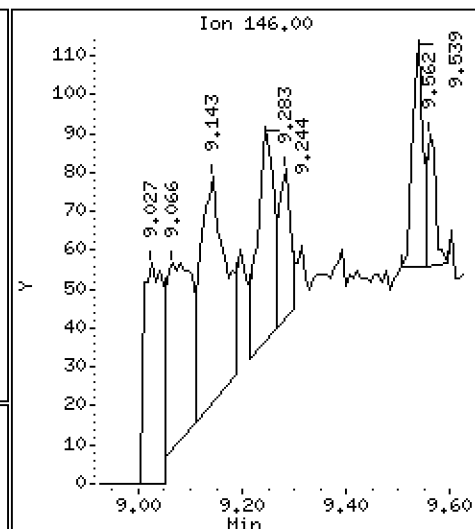
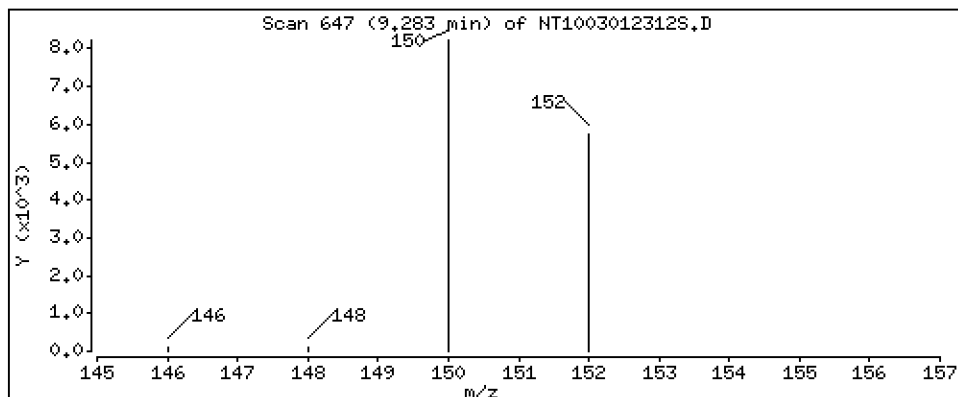
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.0003285 ug/L





Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

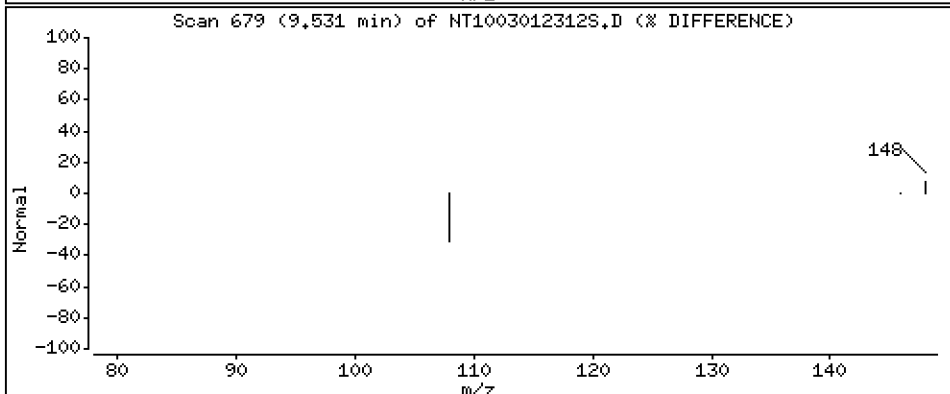
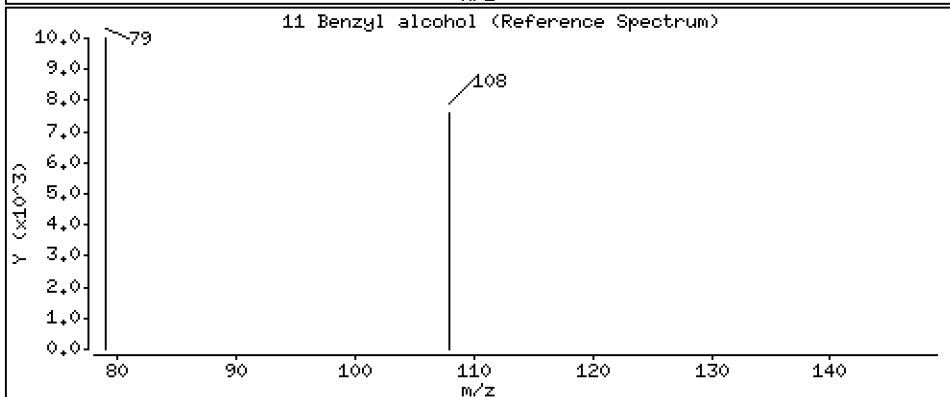
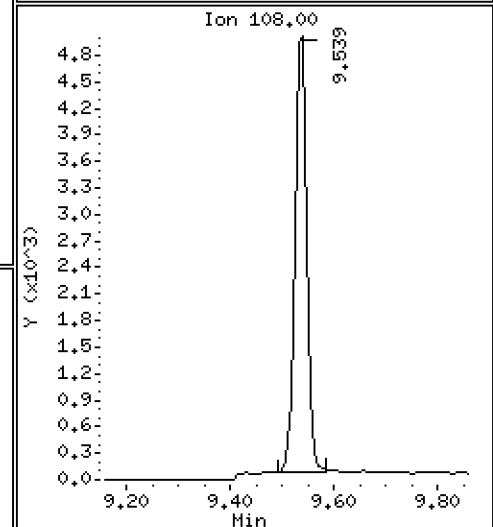
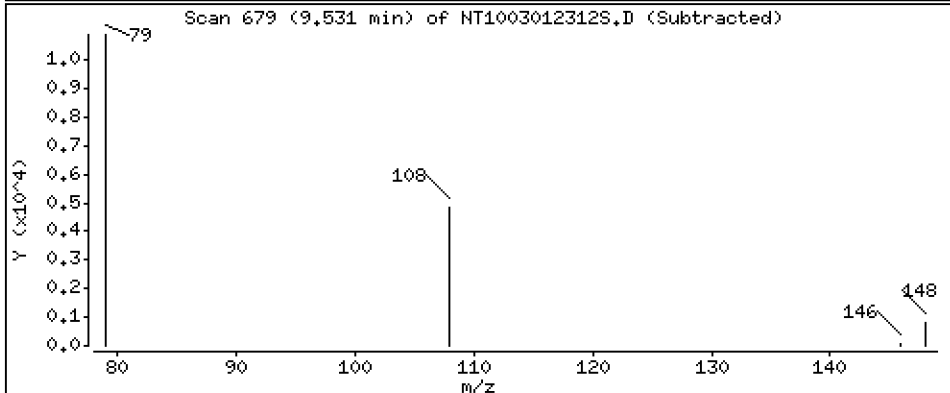
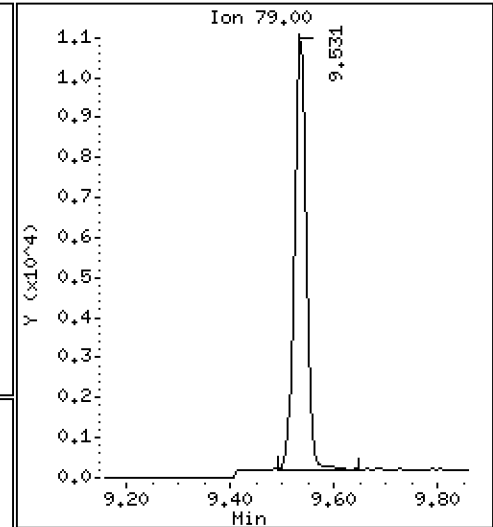
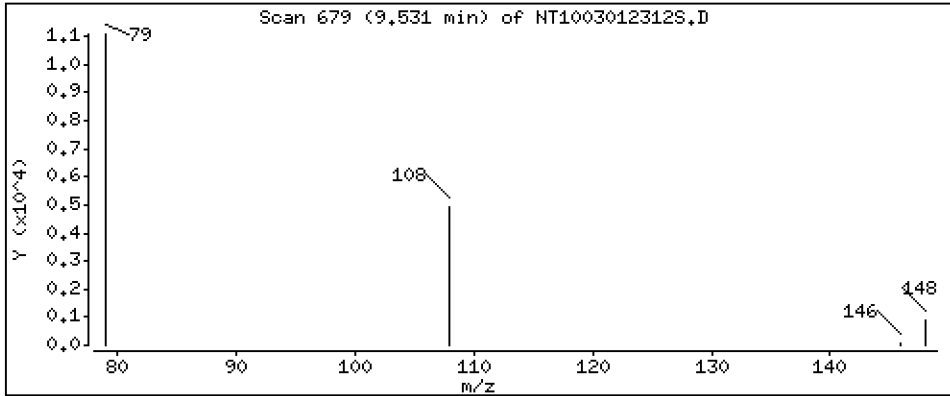
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1469 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

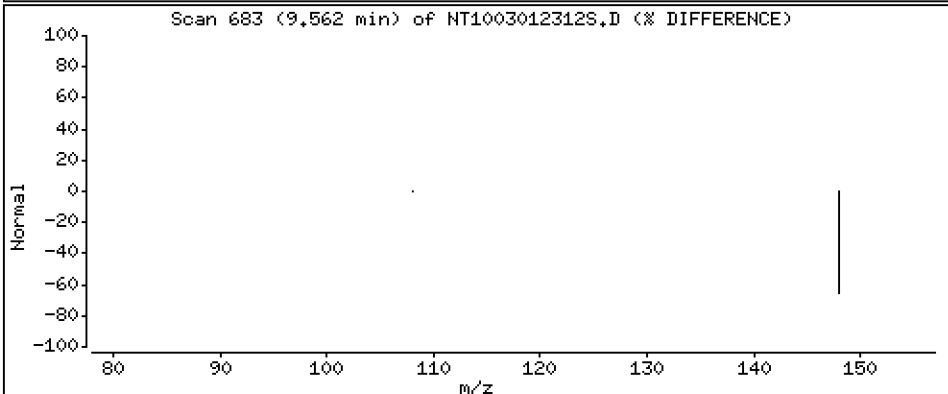
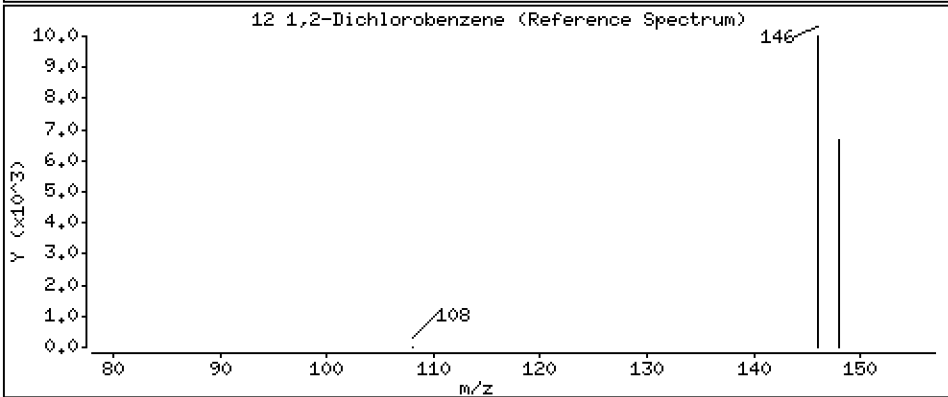
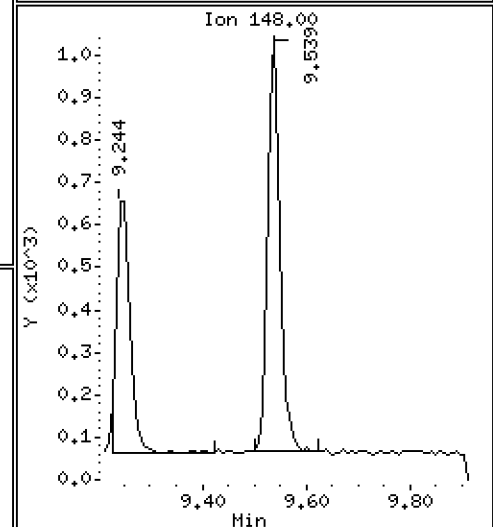
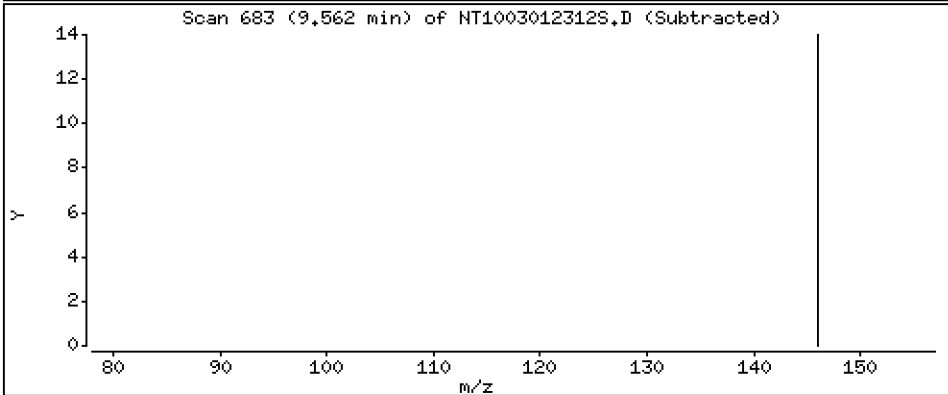
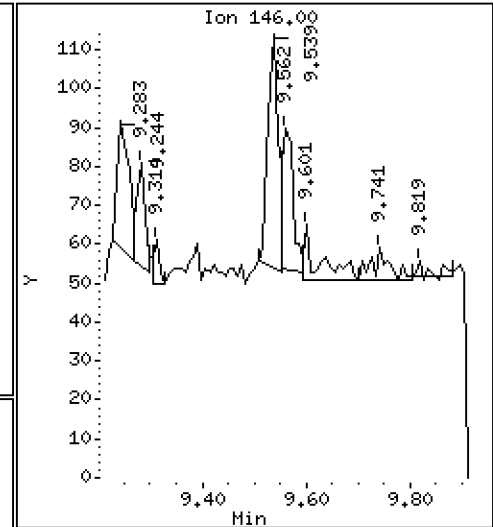
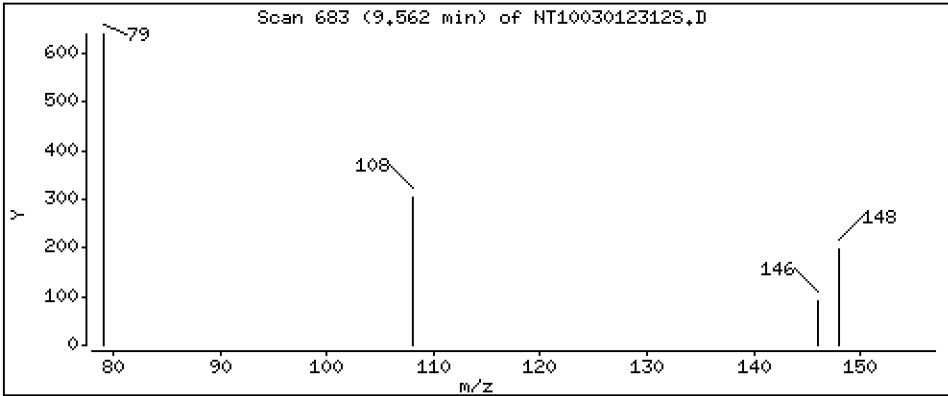
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.0002913 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

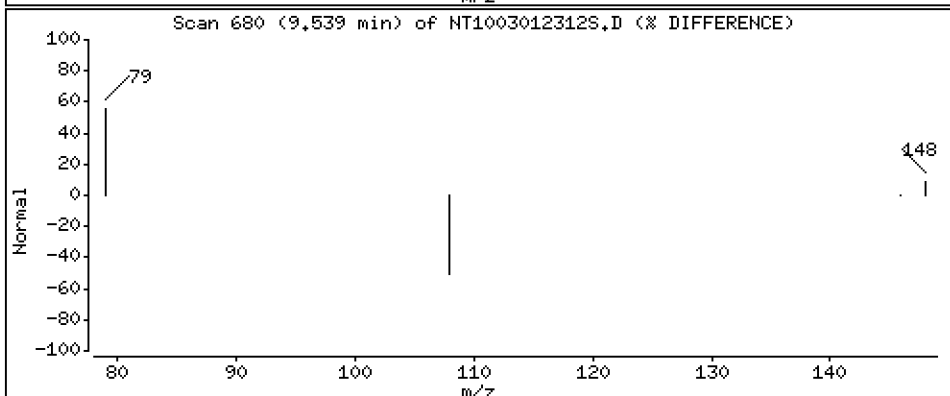
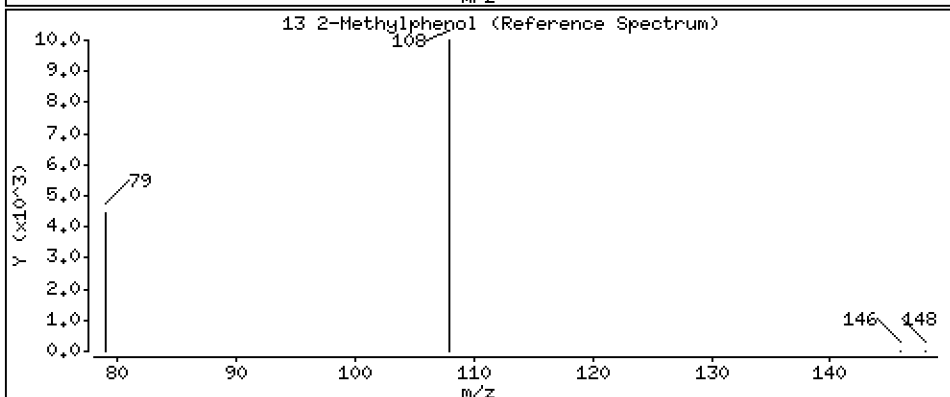
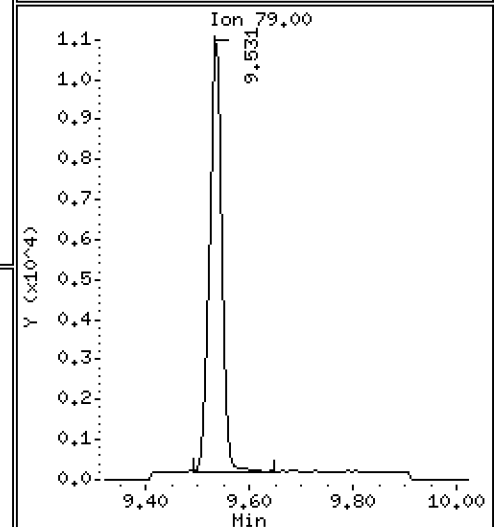
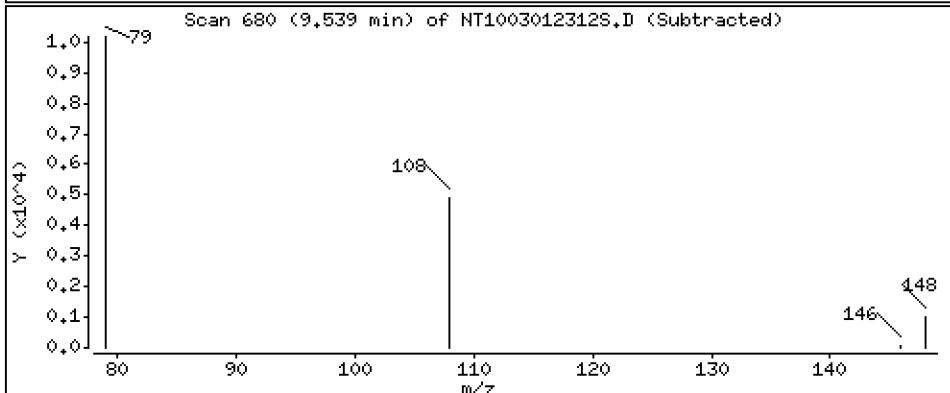
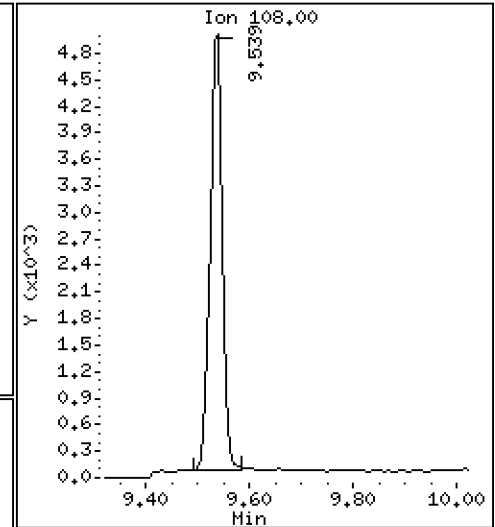
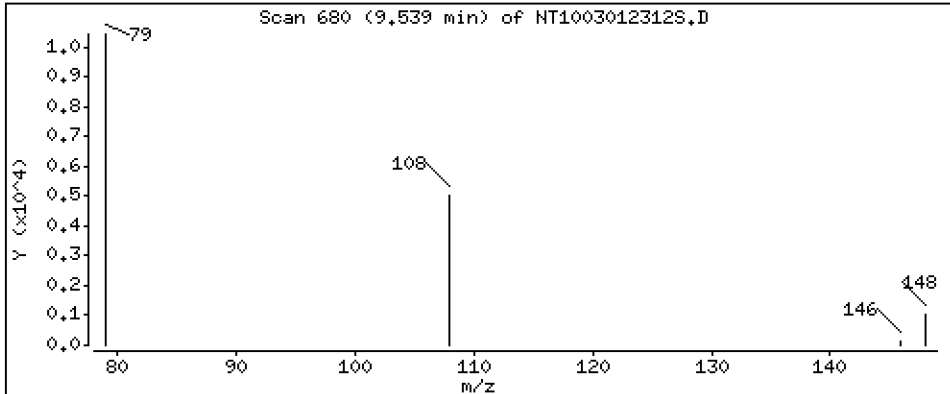
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.06143 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

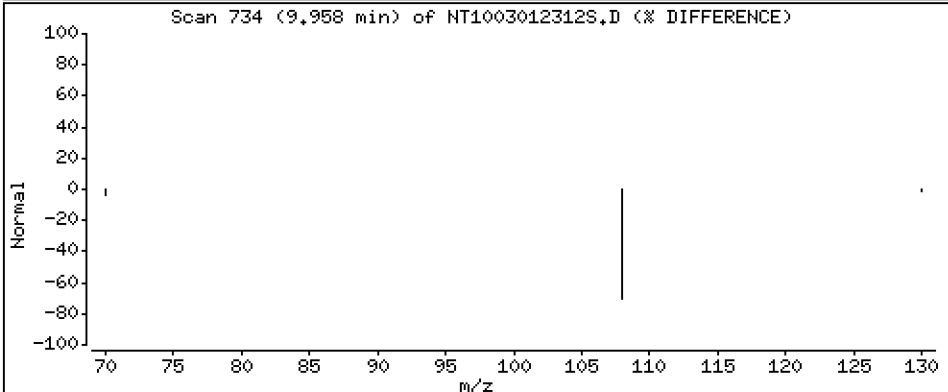
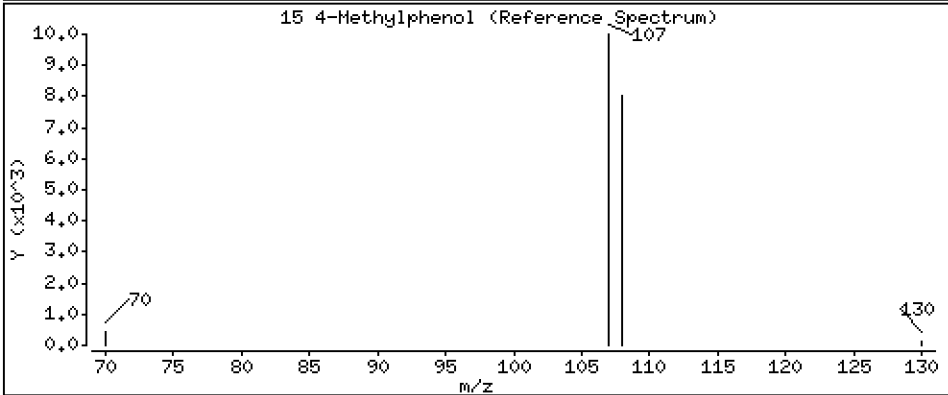
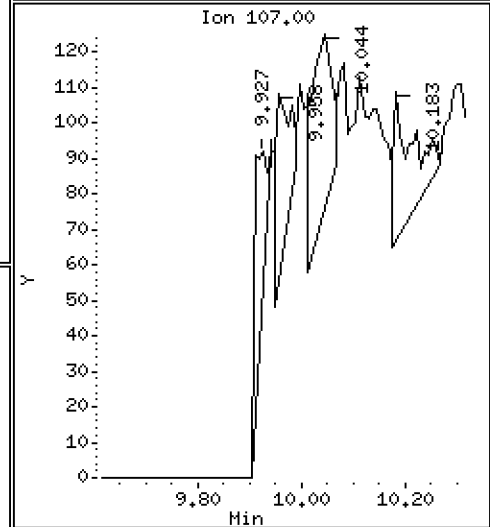
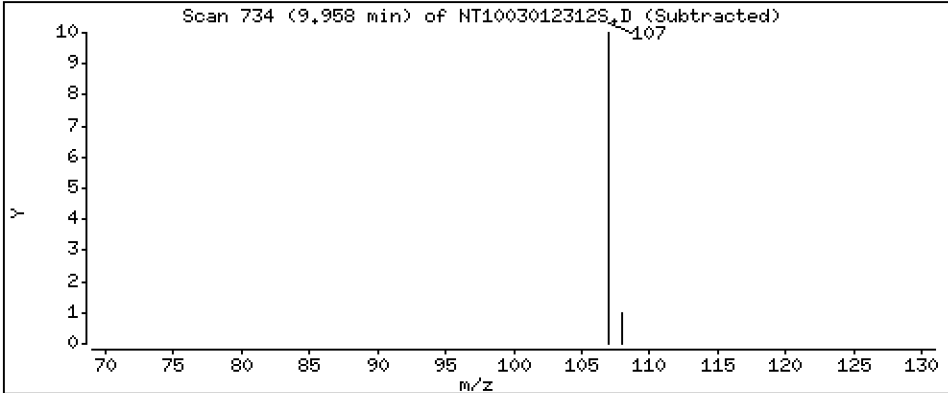
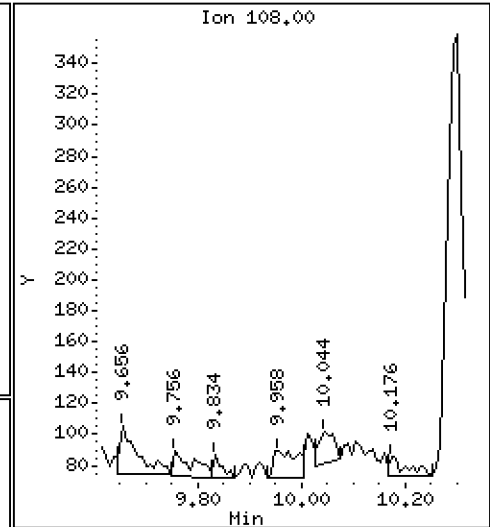
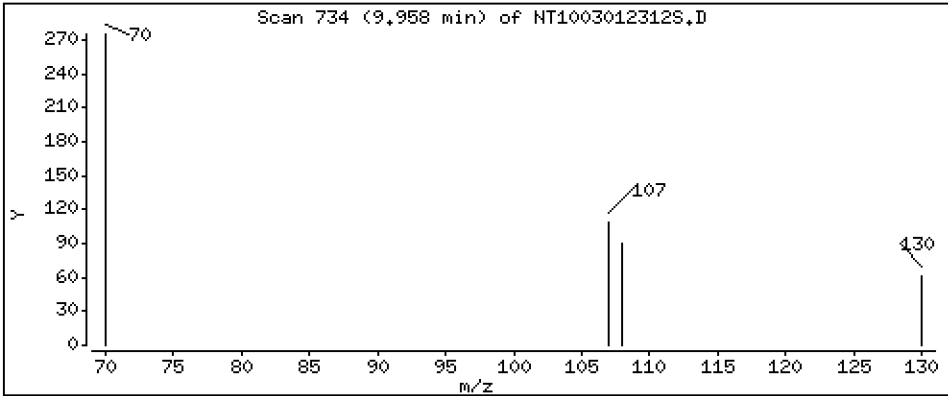
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.0004276 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

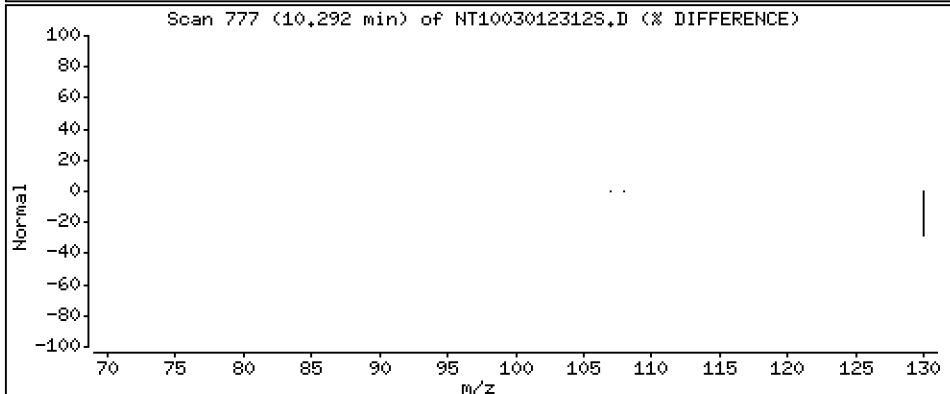
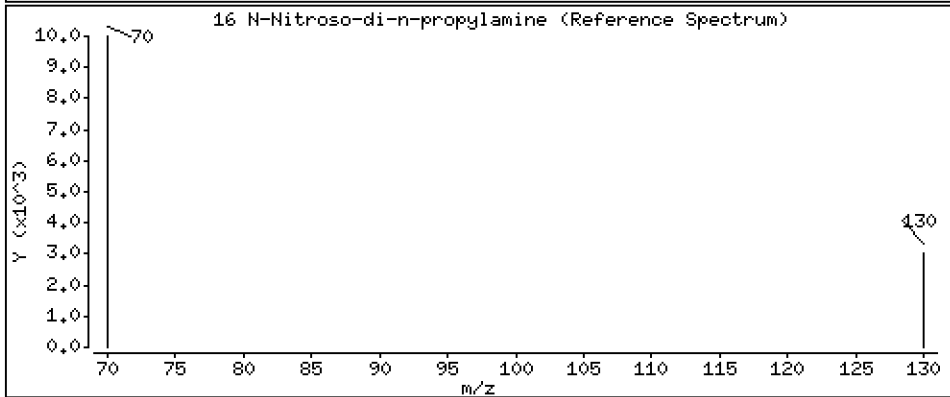
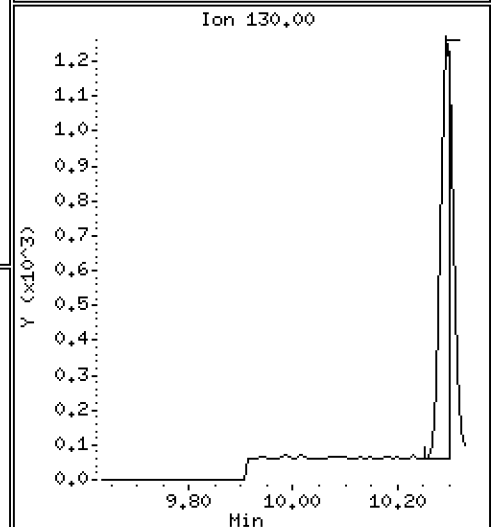
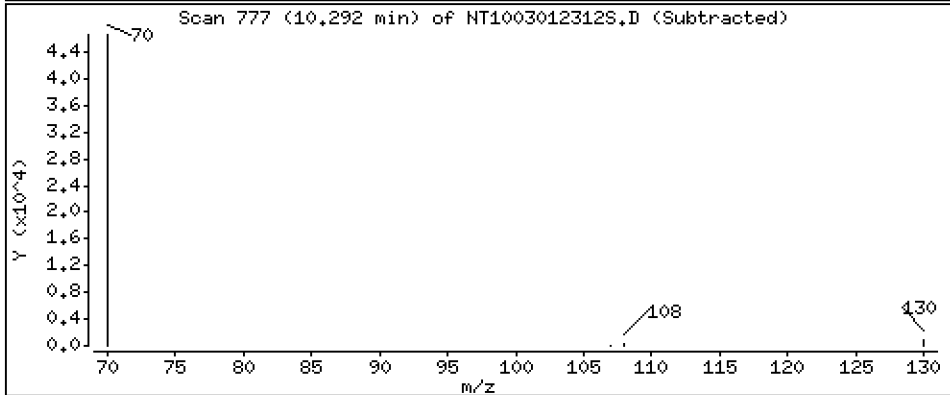
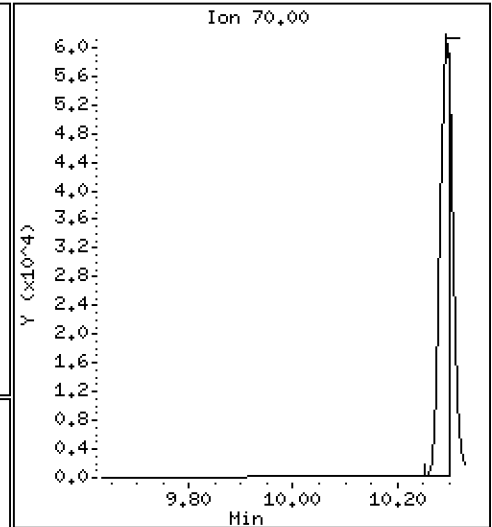
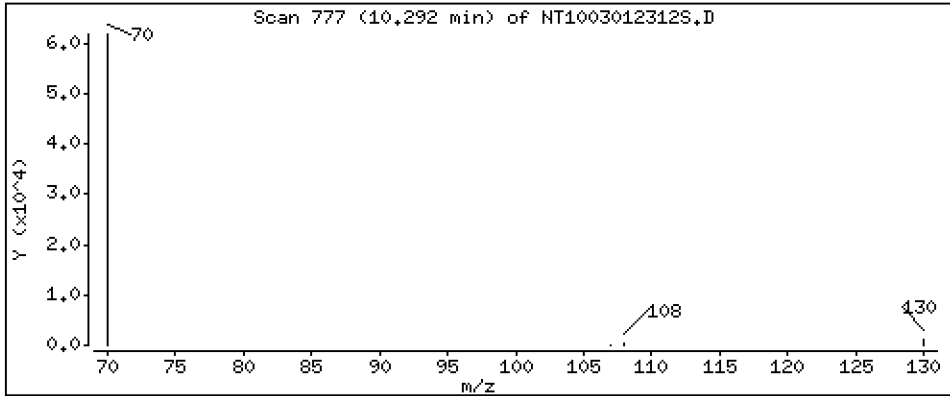
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 0,8128 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

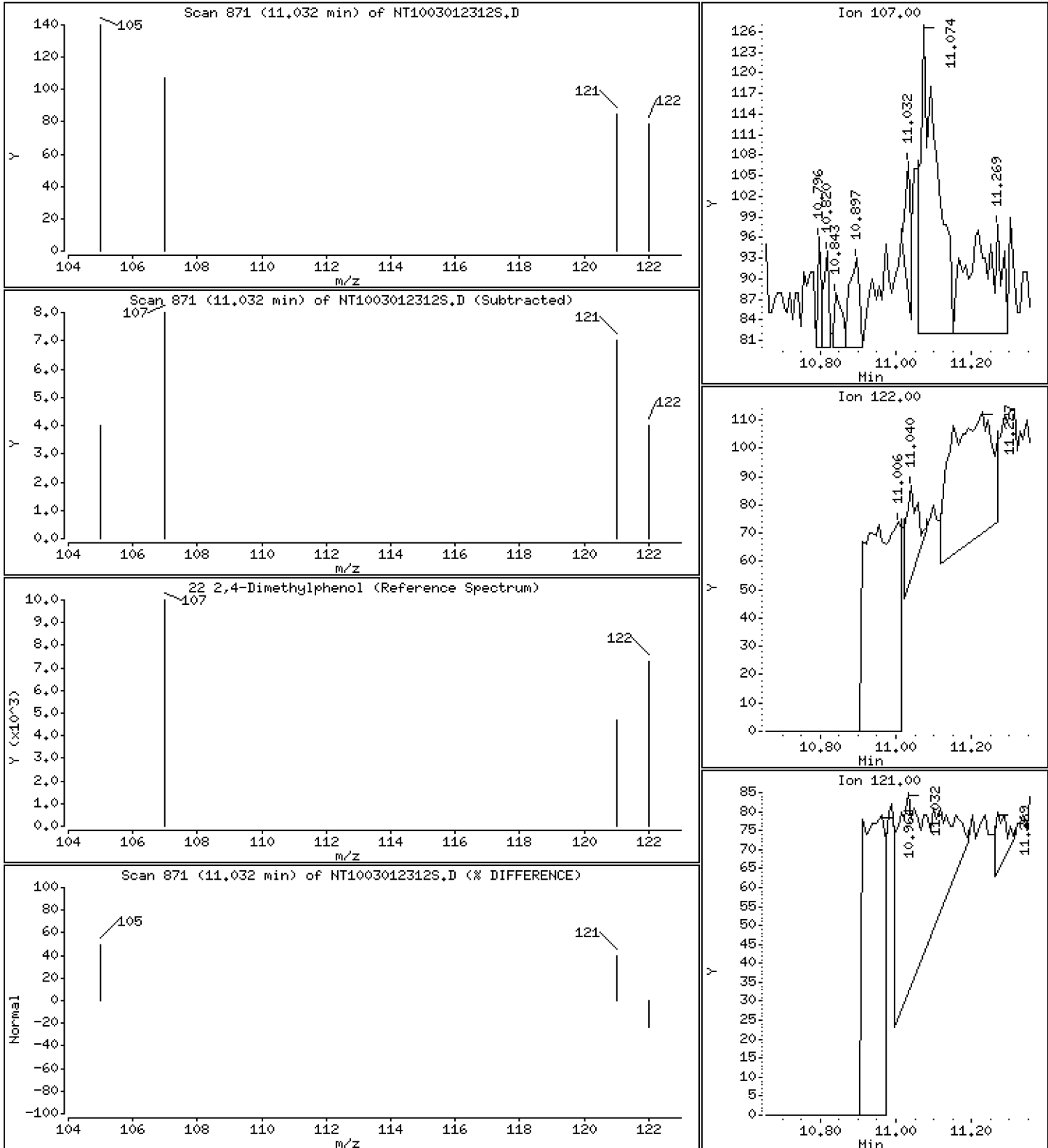
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.0001253 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

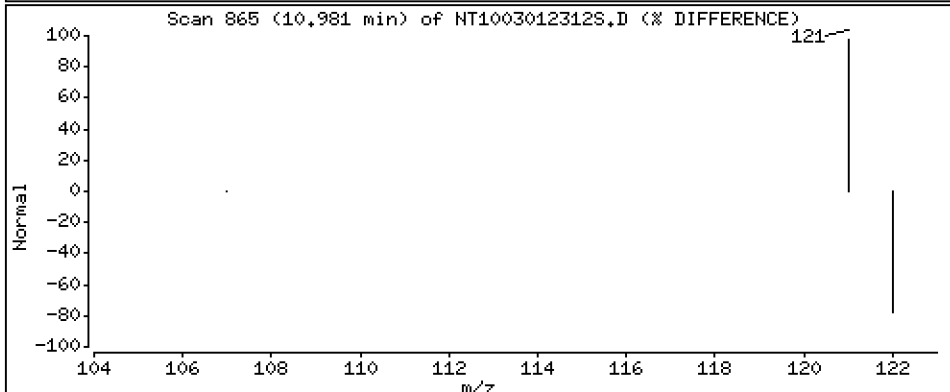
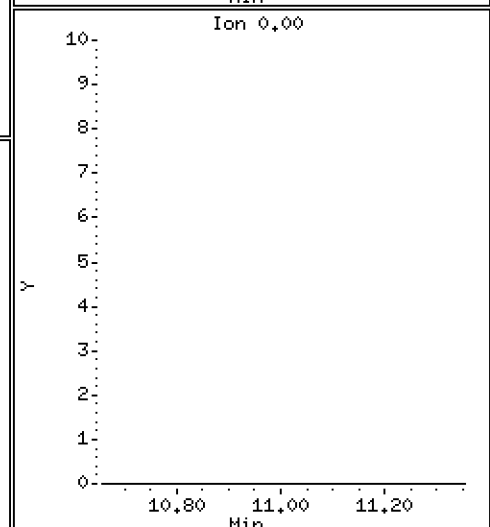
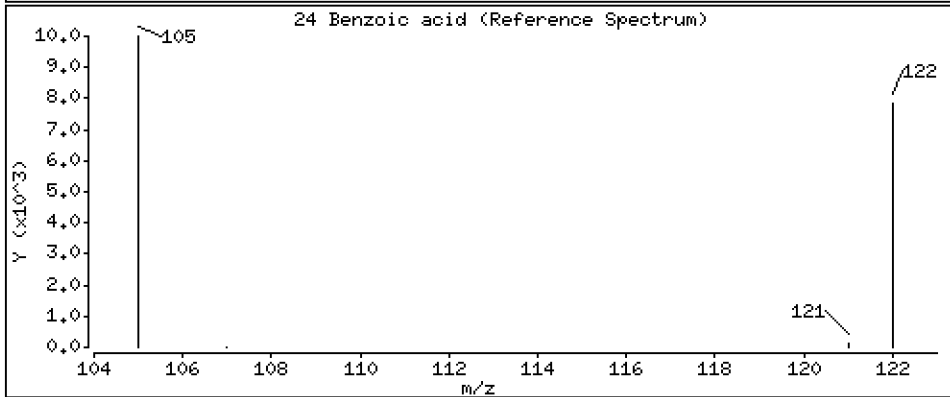
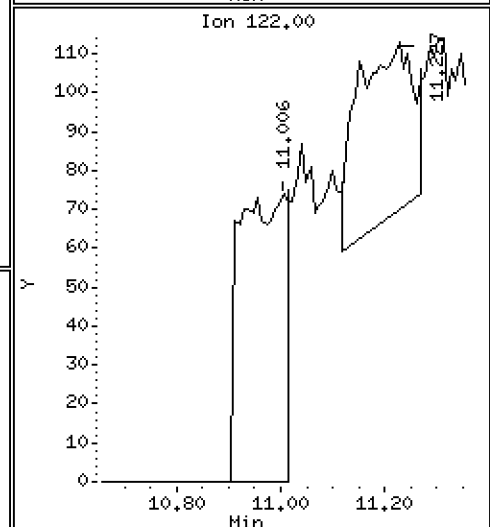
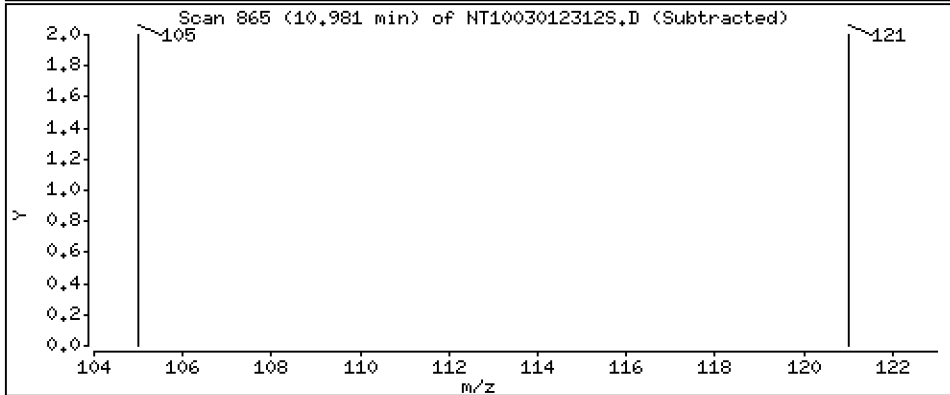
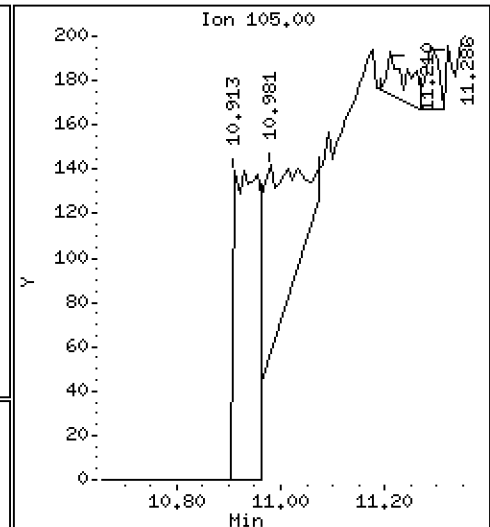
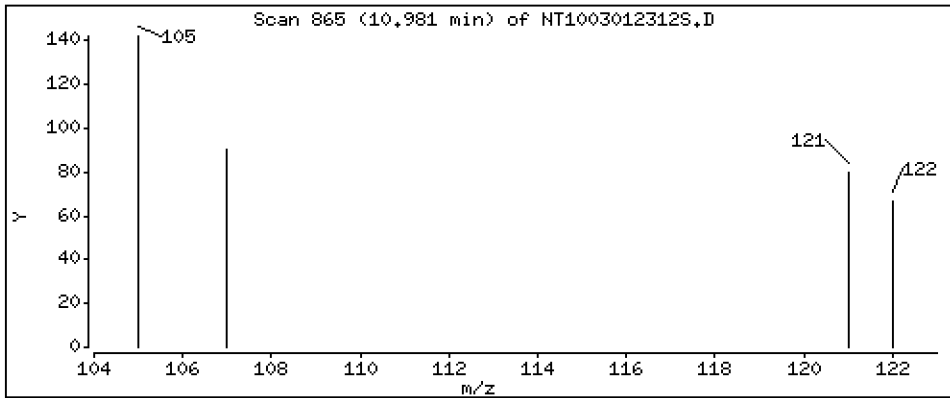
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.004402 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

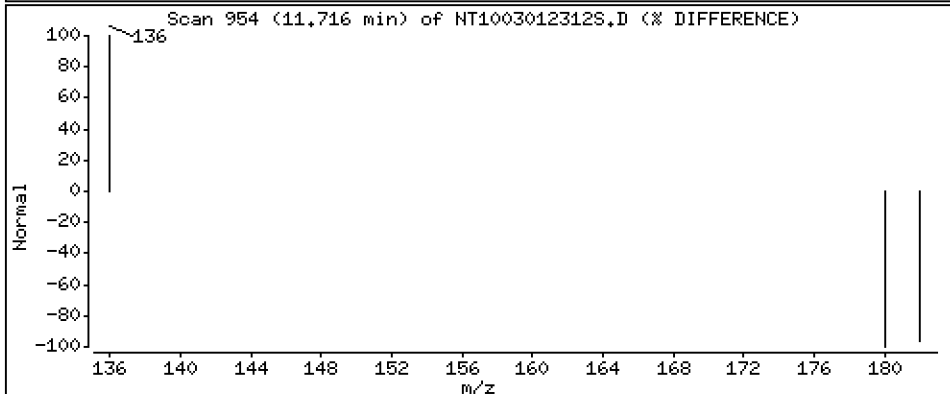
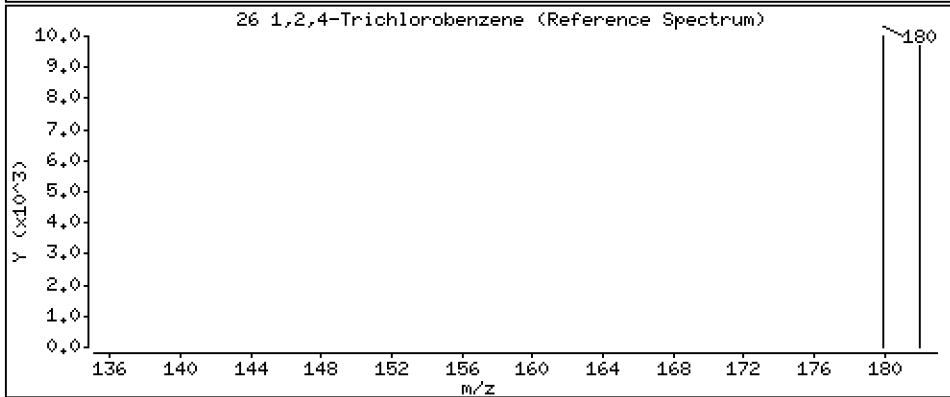
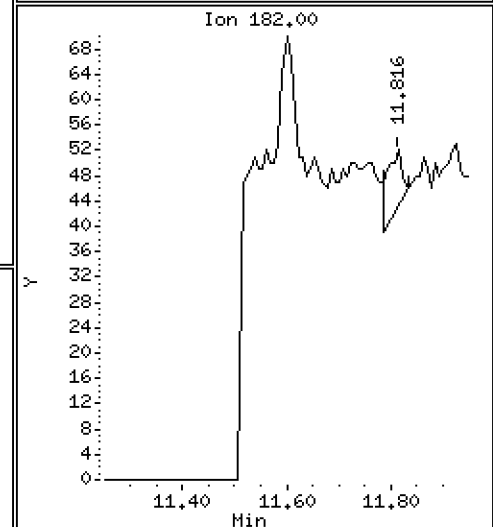
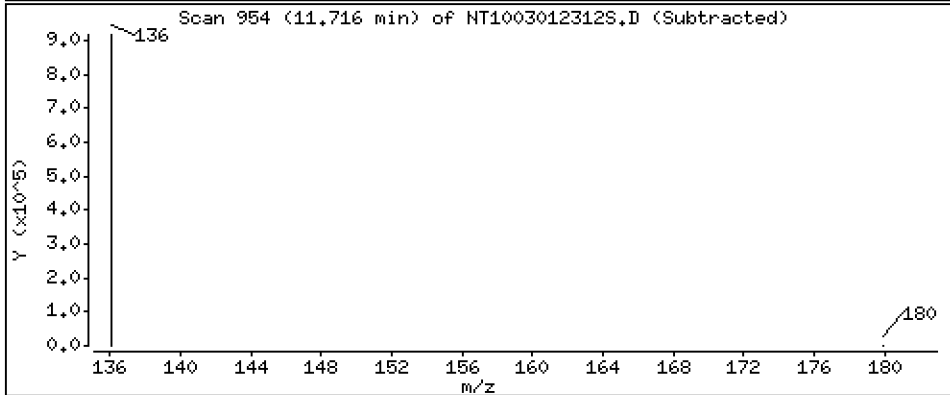
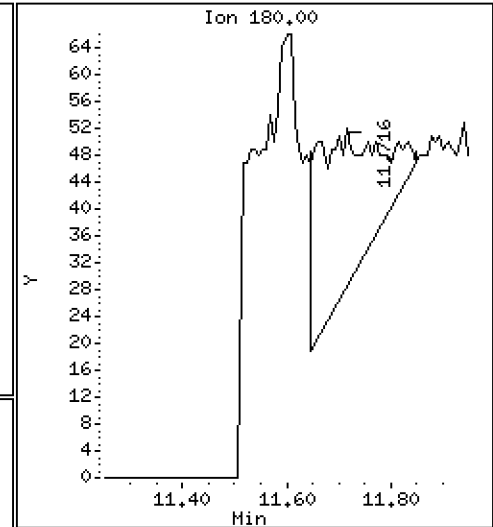
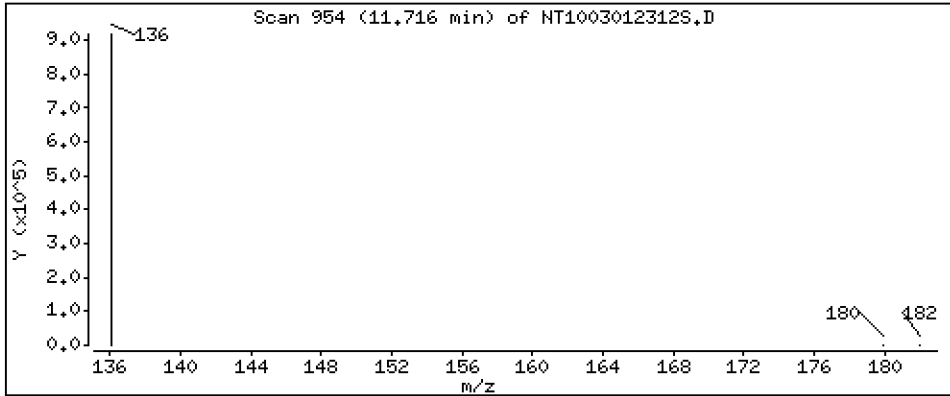
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

26 1,2,4-Trichlorobenzene

Concentration: 0,001531 ug/L





Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

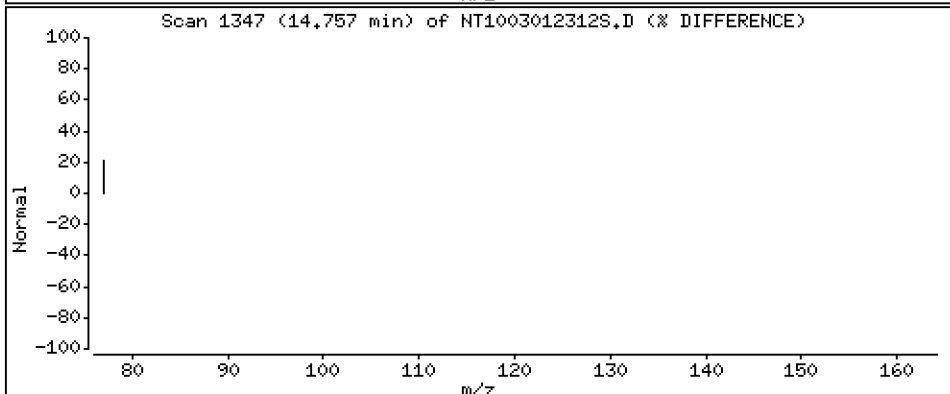
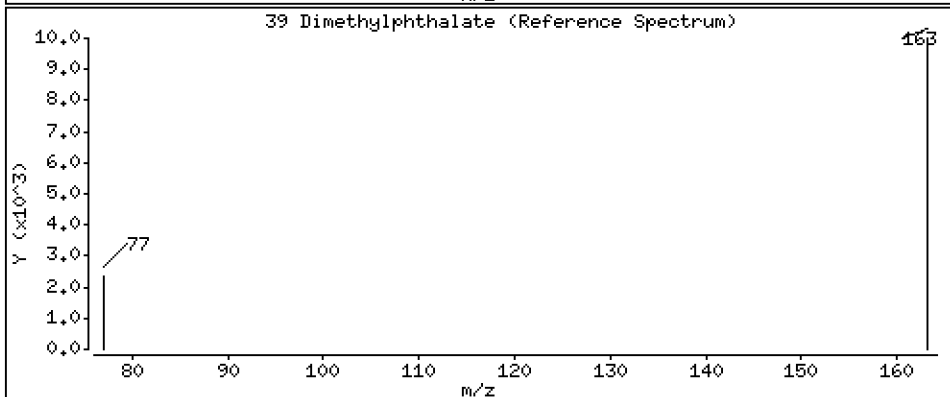
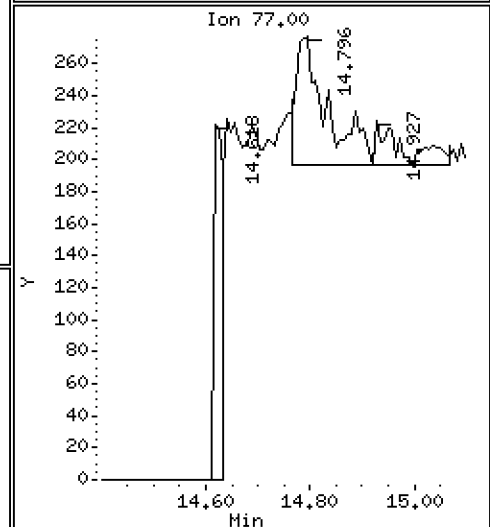
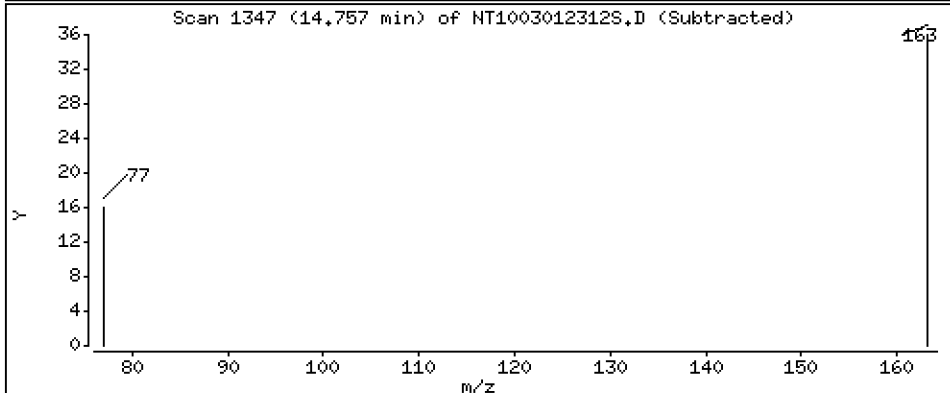
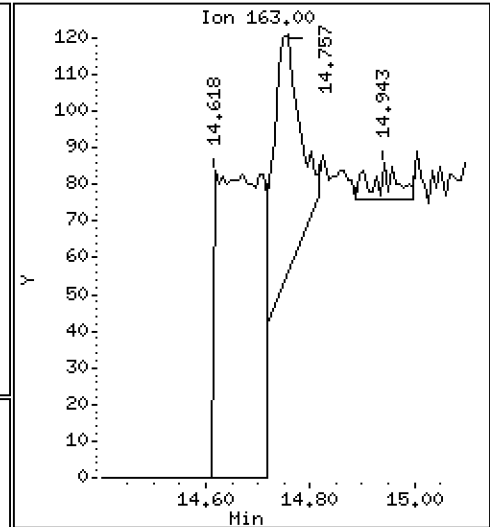
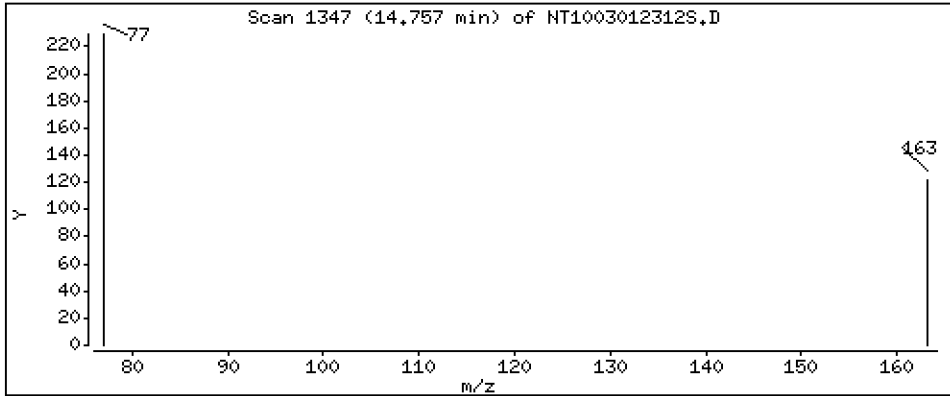
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,0008417 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

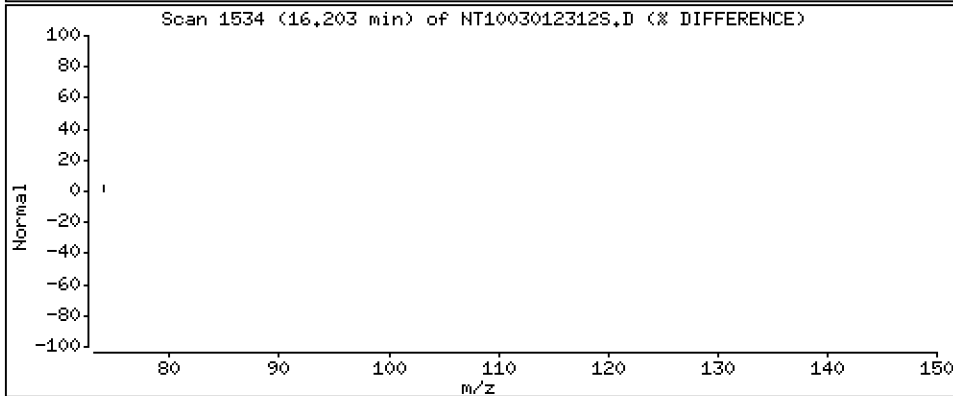
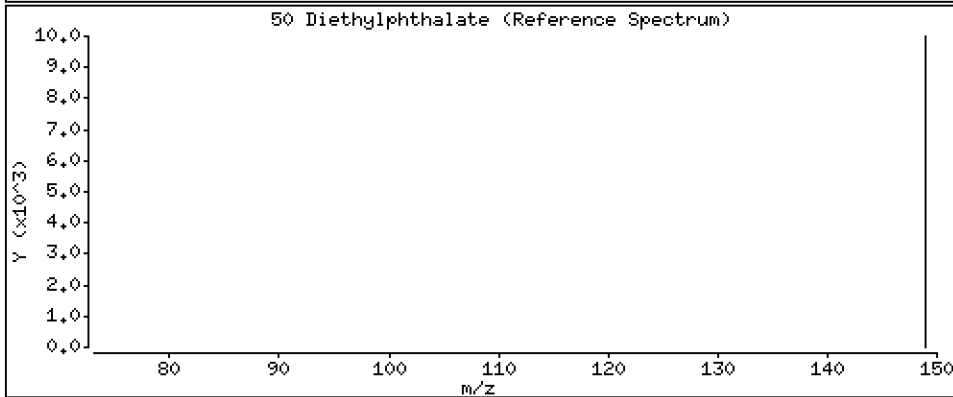
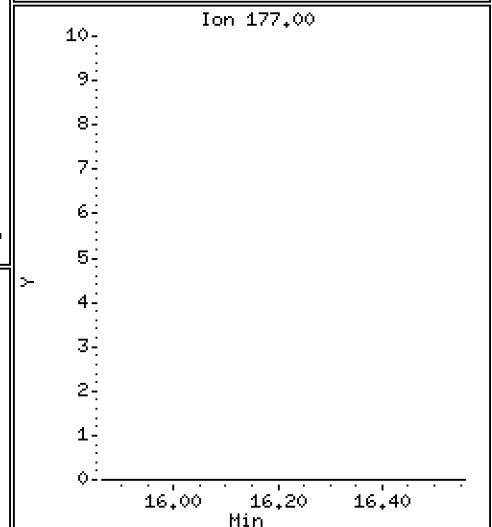
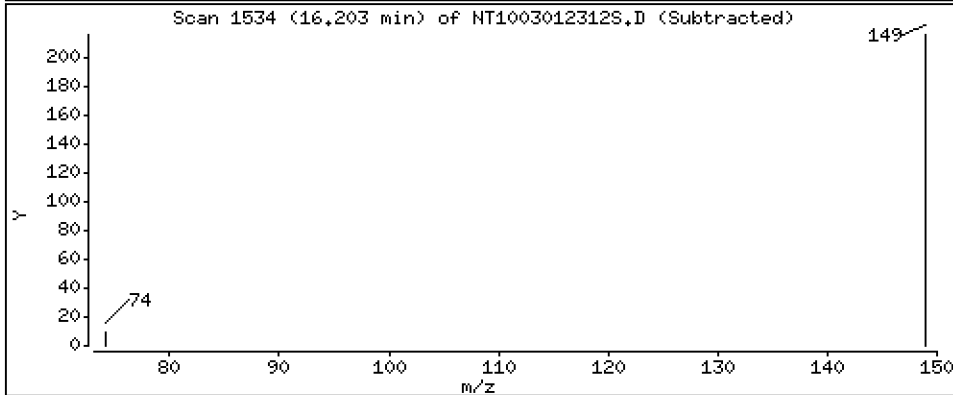
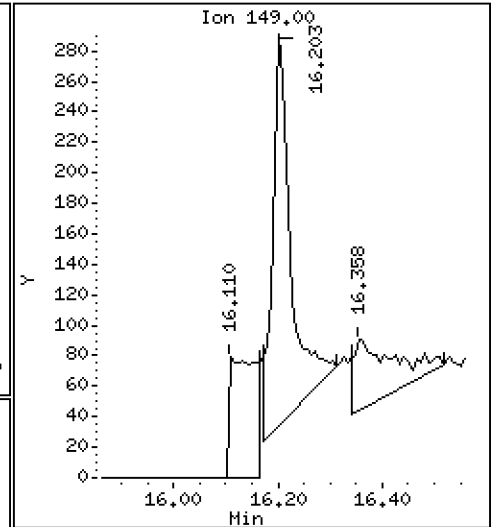
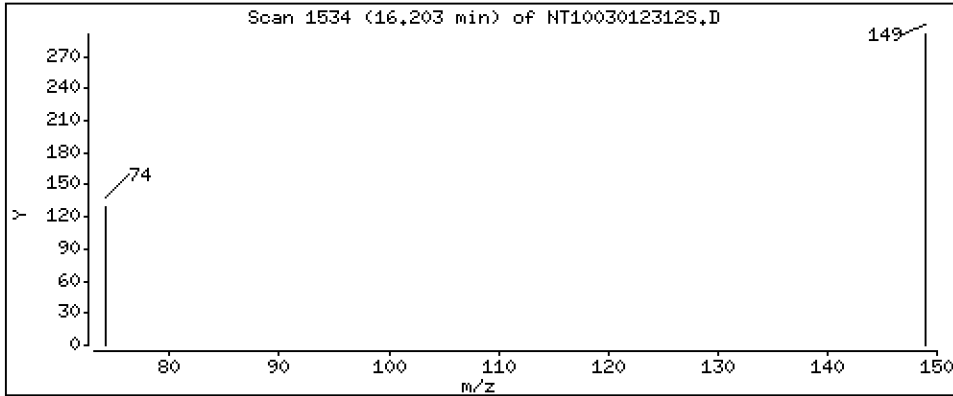
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,002321 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

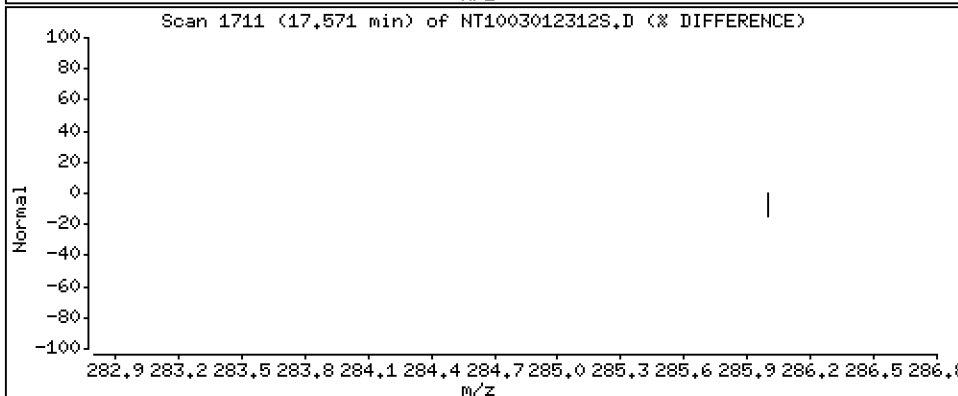
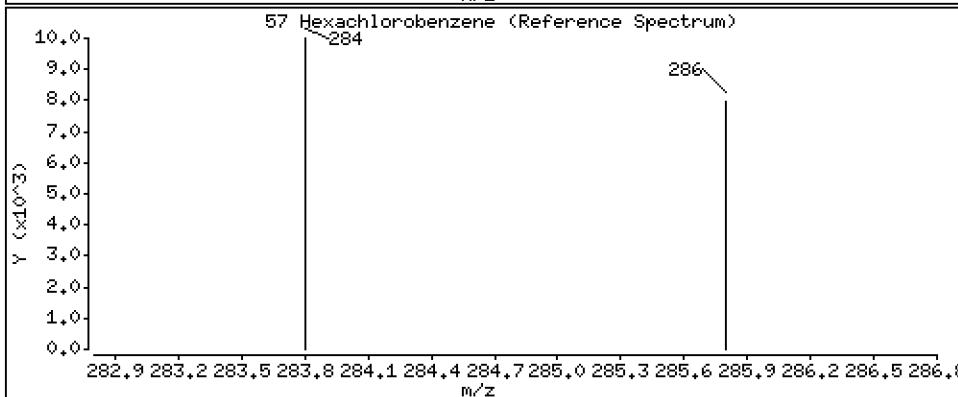
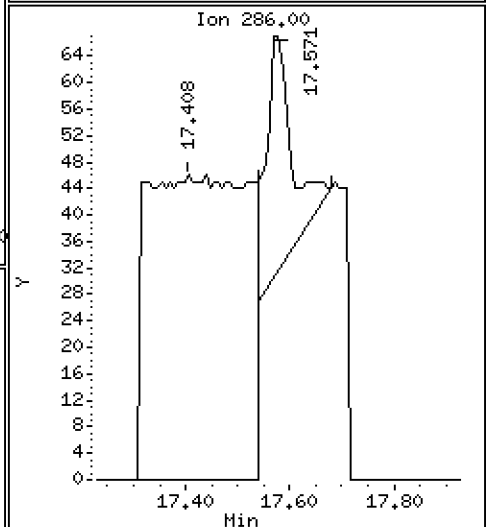
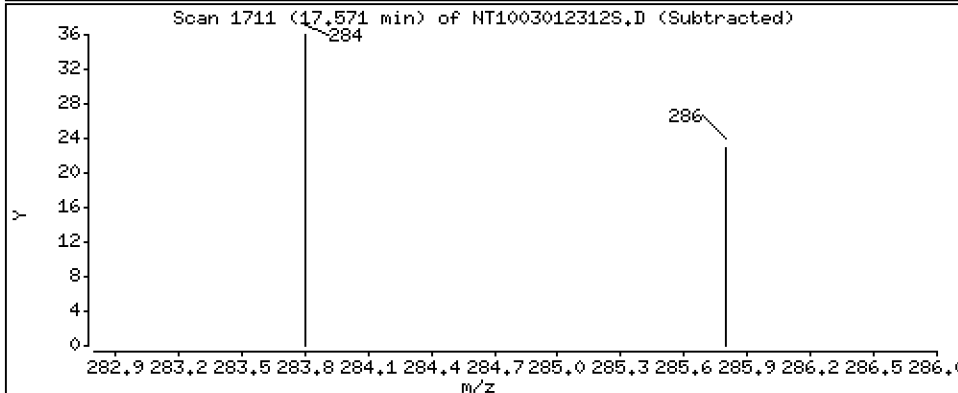
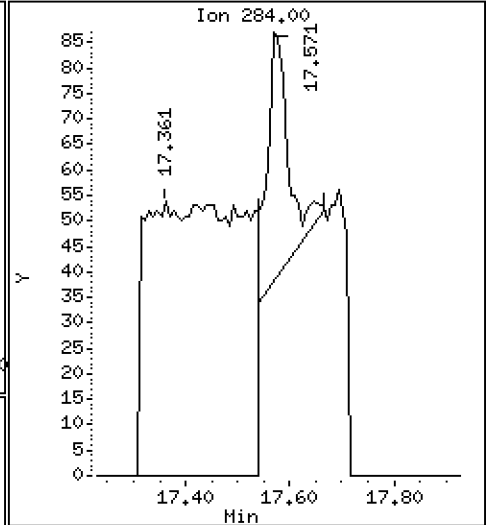
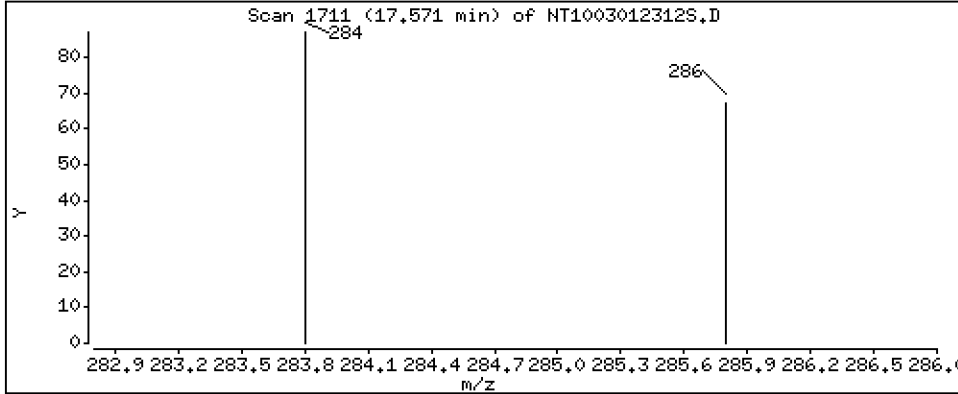
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.001117 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

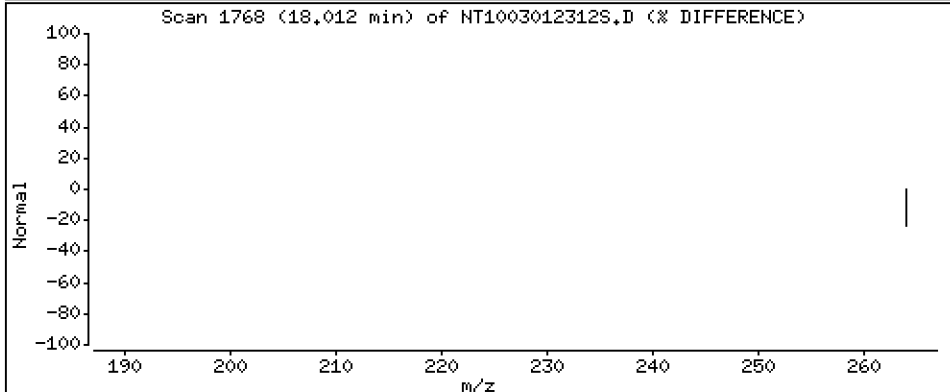
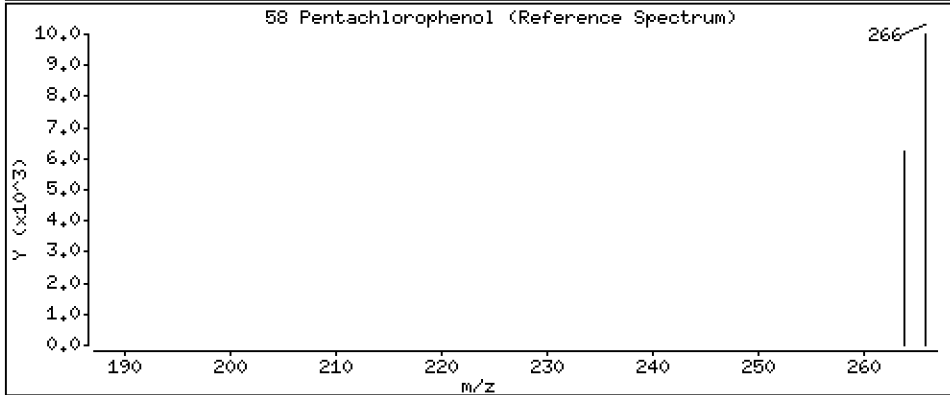
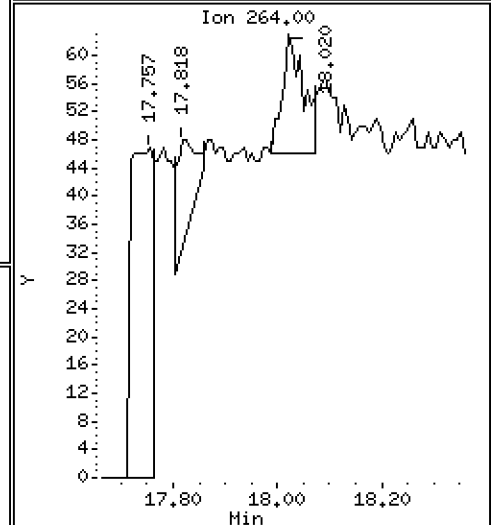
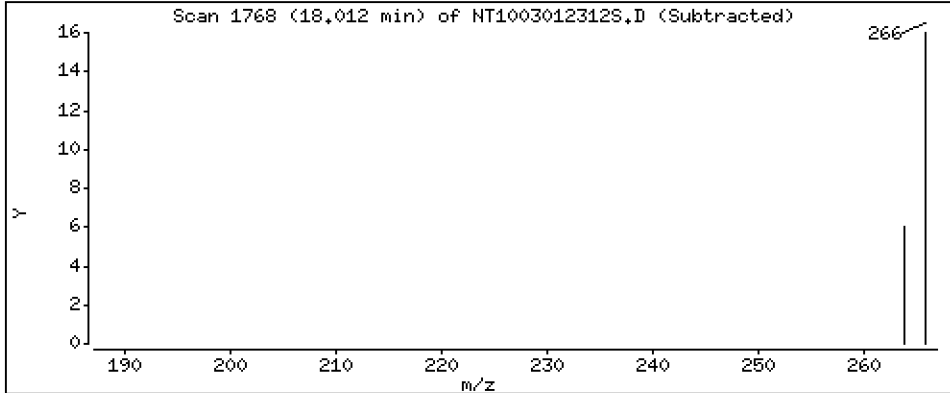
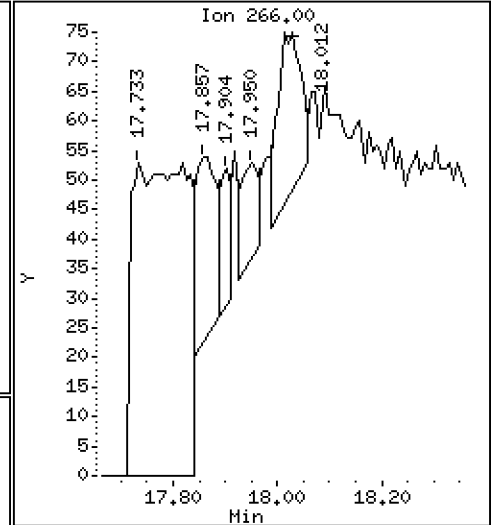
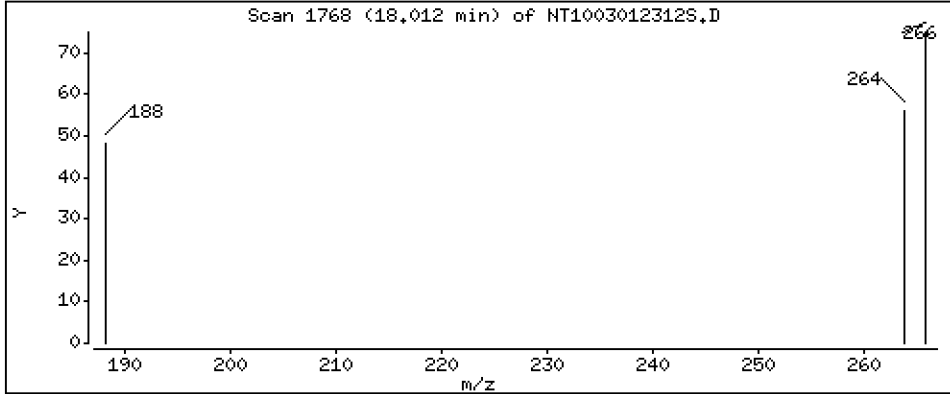
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 0.001689 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

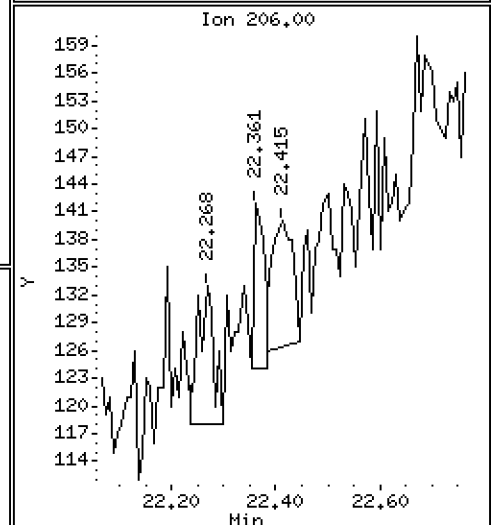
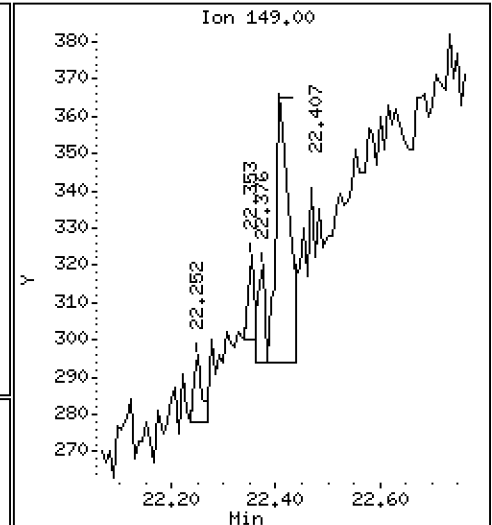
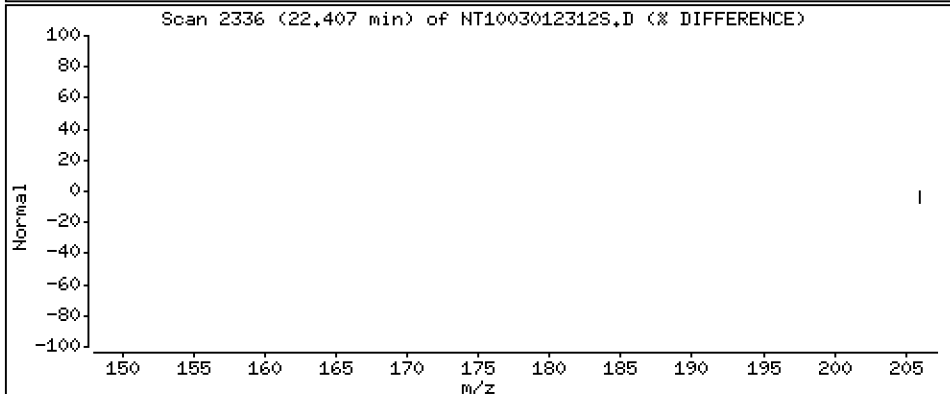
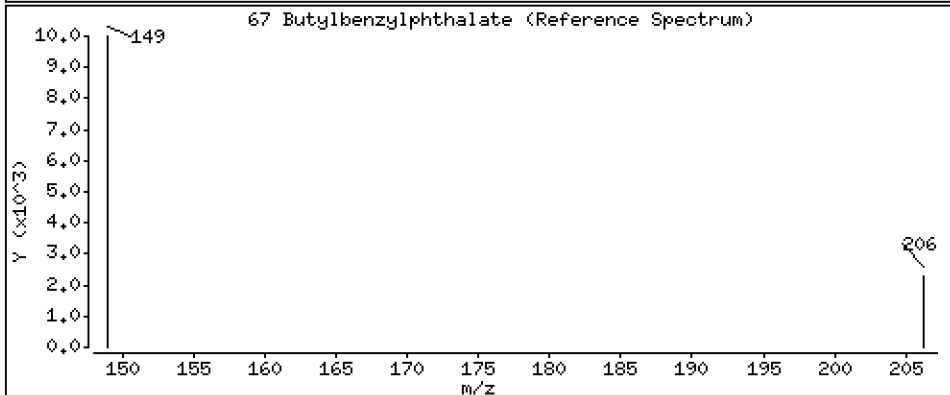
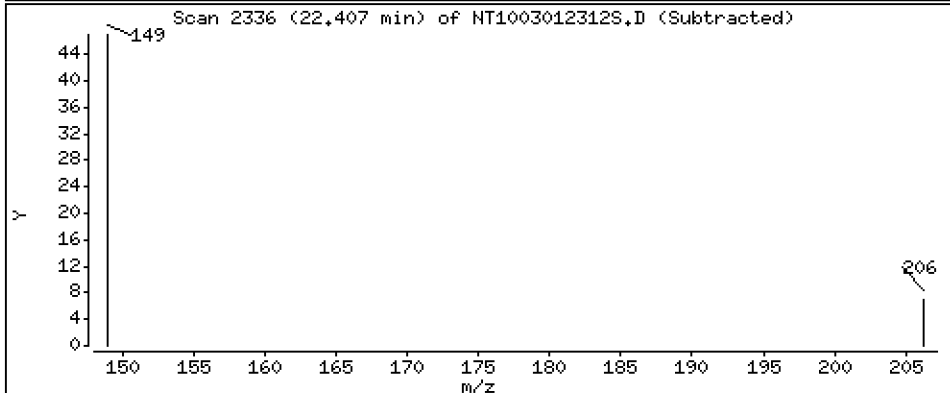
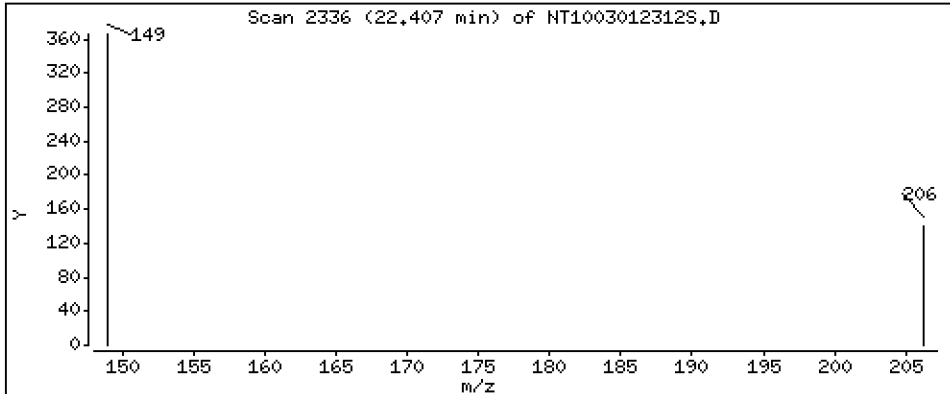
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.0004940 ug/L



Date : 01-MAR-2023 22:24

Client ID:

Instrument: nt10.i

Sample Info: SEQ-IBL1

Volume Injected (uL): 1.0

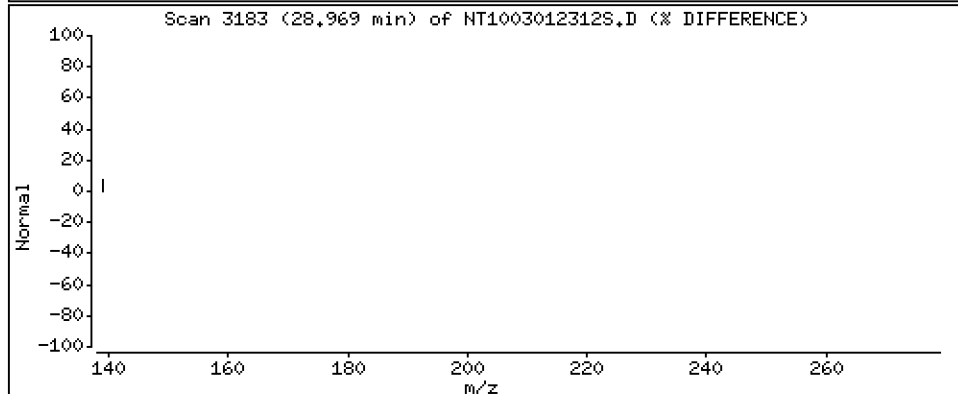
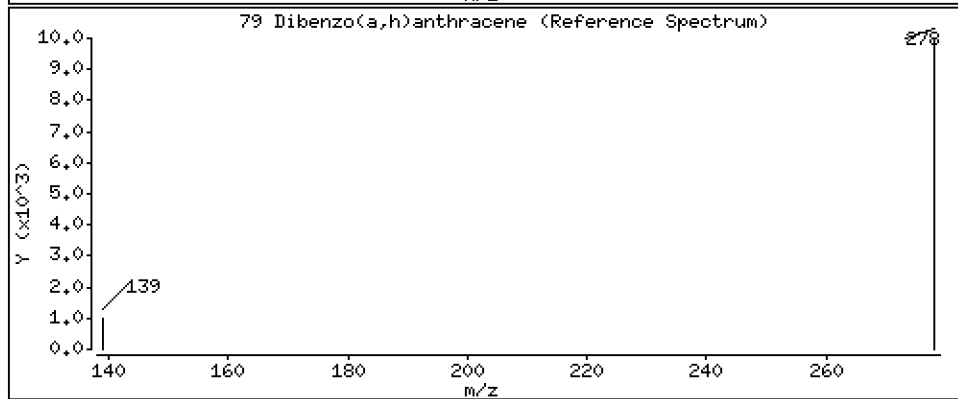
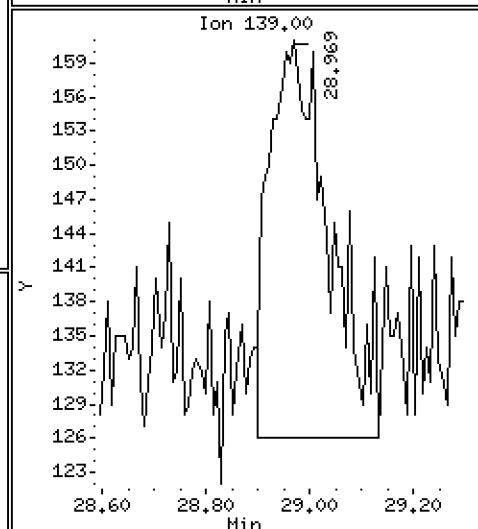
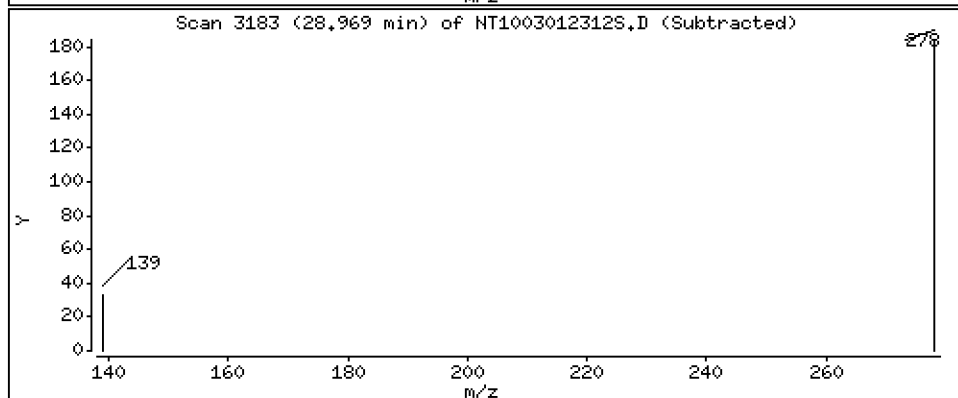
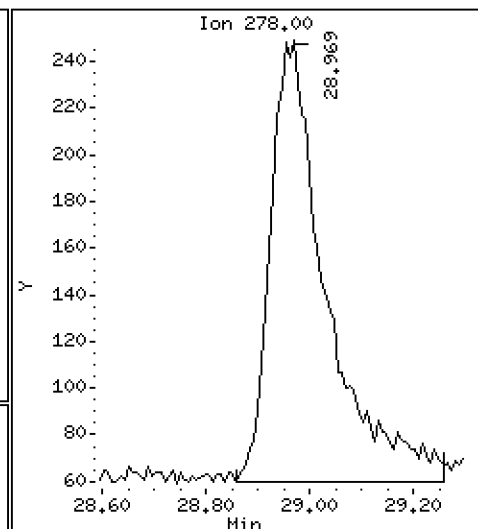
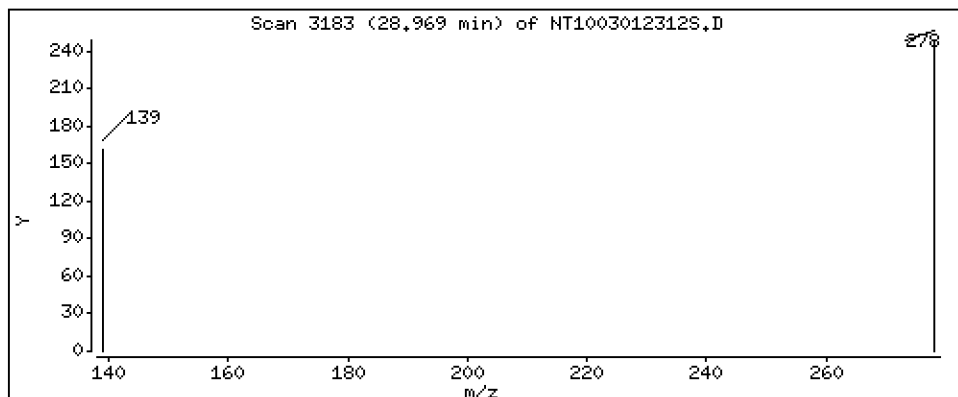
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,003648 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012312S.D  
 Lab Smp Id: SLC0143-ICB1  
 Inj Date : 01-MAR-2023 22:24 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-IBL1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
								ON-COLUMN	FINAL	
								(ug/mL)	( ug/L)	
\$ 1	2-Fluorophenol		112	6.894	6.902	(0.745)	1154017	7.84369	7.844 (R)	
	3 Phenol		94	8.509	8.532	(0.920)	1012	0.00466	0.004664	
	7 1,3-Dichlorobenzene		146	9.143	9.136	(0.988)	118	6e-004	0.0006178	
* 8	1,4-Dichlorobenzene-d4		152	9.251	9.252	(1.000)	515340	4.00000		
	9 1,4-Dichlorobenzene		146	9.282	9.275	(1.003)	61	3e-004	0.0003285	
	11 Benzyl alcohol		79	9.531	9.508	(1.030)	17695	0.14687	0.1469	
	12 1,2-Dichlorobenzene		146	9.562	9.563	(1.034)	52	3e-004	0.0002913	
	13 2-Methylphenol		108	9.539	9.671	(1.031)	8016	0.06143	0.06143	
	15 4-Methylphenol		108	9.958	9.966	(1.076)	58	4e-004	0.0004276	
	16 N-Nitroso-di-n-propylamine		70	10.292	9.982	(1.112)	78763	0.81276	0.8128	
	22 2,4-Dimethylphenol		107	11.031	11.006	(0.941)	19	1e-004	0.0001253	
	24 Benzoic acid		105	10.980	11.007	(0.937)	366	0.00440	0.004402	
	26 1,2,4-Trichlorobenzene		180	11.716	11.600	(0.999)	197	0.00153	0.001531	
* 27	Naphthalene-d8		136	11.723	11.723	(1.000)	1787704	4.00000		
	30 Hexachlorobutadiene		225	Compound Not Detected.						
	39 Dimethylphthalate		163	14.756	14.749	(0.964)	235	8e-004	0.0008417	
* 42	Acenaphthene-d10		162	15.314	15.314	(1.000)	879316	4.00000		
	50 Diethylphthalate		149	16.203	16.211	(1.058)	611	0.00232	0.002321	
	54 N-Nitrosodiphenylamine		169	Compound Not Detected.						
	57 Hexachlorobenzene		284	17.570	17.579	(0.955)	133	0.00112	0.001117	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.011	18.012	(0.979)	88	0.00169	0.001689
* 59 Phenanthrene-d10	188	18.398	18.398	(1.000)	1572306	4.00000	
\$ 66 Terphenyl-d14	244	21.524	21.532	(0.919)	589014	4.90043	4.900(R)
67 Butylbenzylphthalate	149	22.407	22.415	(0.957)	124	5e-004	0.0004940
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1486349	4.00000	
* 77 Perylene-d12	264	26.108	26.108	(1.000)	1674195	4.00000	
79 Dibenzo(a,h)anthracene	278	28.968	28.946	(1.110)	1414	0.00365	0.003648
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012312S.D  
 Lab Smp Id: SLC0143-ICB1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	515340	60.98
27 Naphthalene-d8	1136019	568010	2272038	1787704	57.37
42 Acenaphthene-d10	636993	318497	1273986	879316	38.04
59 Phenanthrene-d10	1093620	546810	2187240	1572306	43.77
69 Chrysene-d12	1000300	500150	2000600	1486349	48.59
77 Perylene-d12	1058448	529224	2116896	1674195	58.17

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	-0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	-0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	-0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012312S.D

Lab ID: SLC0143-ICB1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 22:24

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.031	1.045	-0.0143	2-Methylphenol
1.112	1.079	0.0335	N-Nitroso-di-n-propylamine
0.937	0.000	0.9366	Benzoic acid
0.999	0.989	0.0099	1,2,4-Trichlorobenzene

RRT check based on Ccal File: SIM.b/NT1003012310S.D

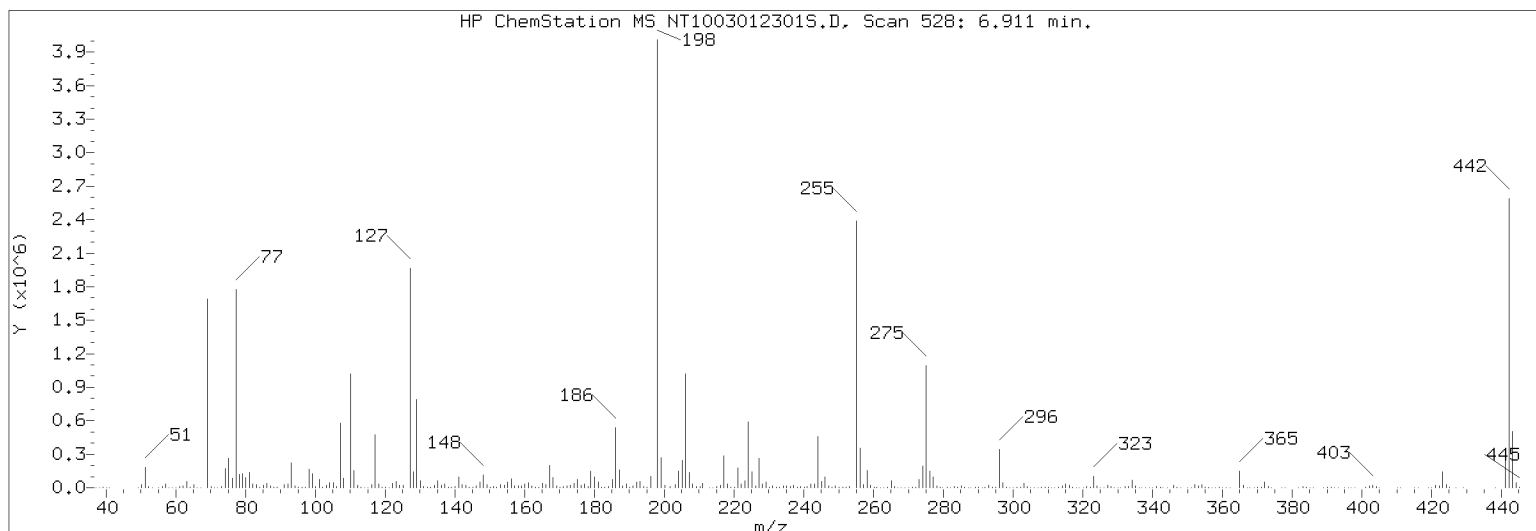
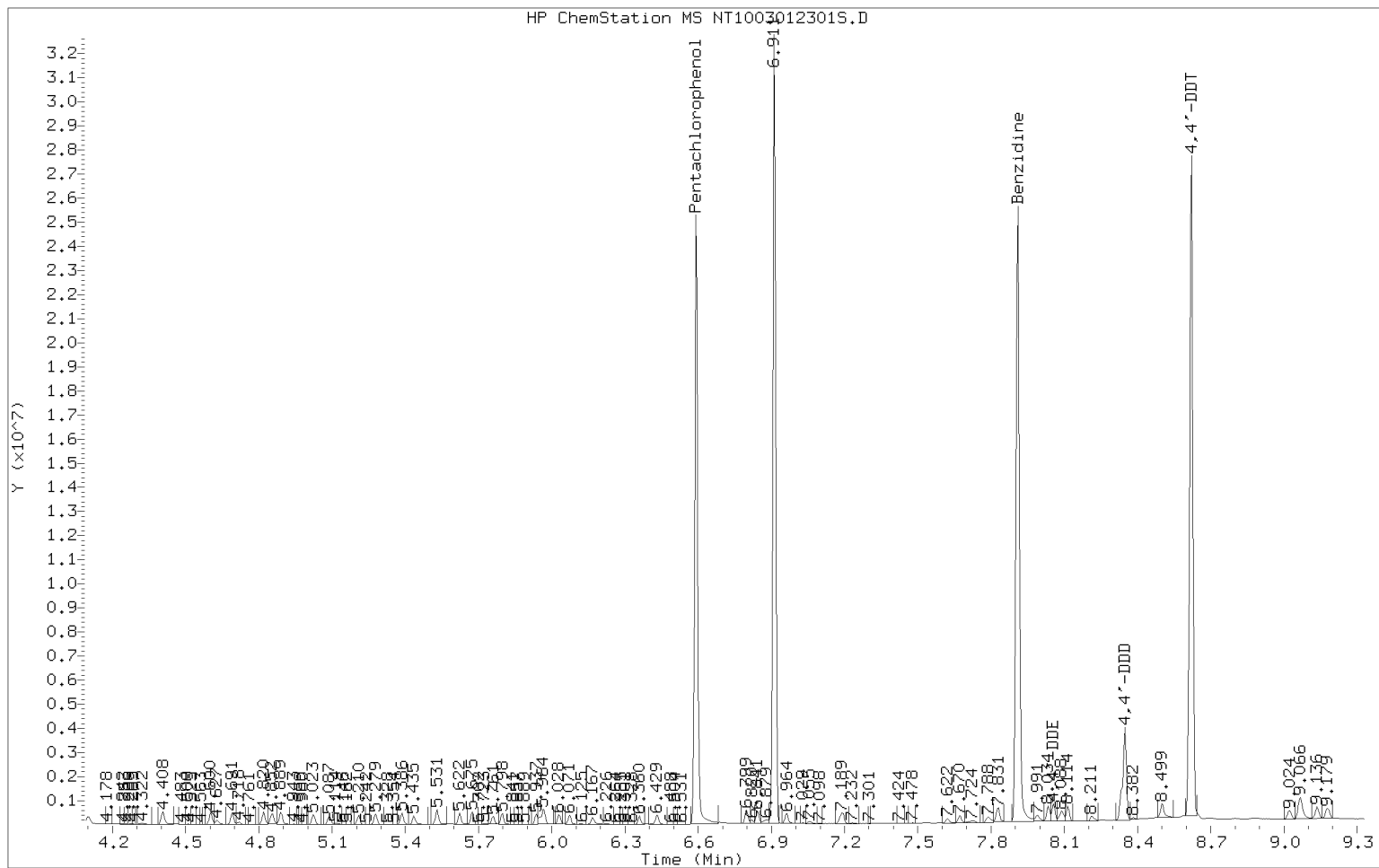
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

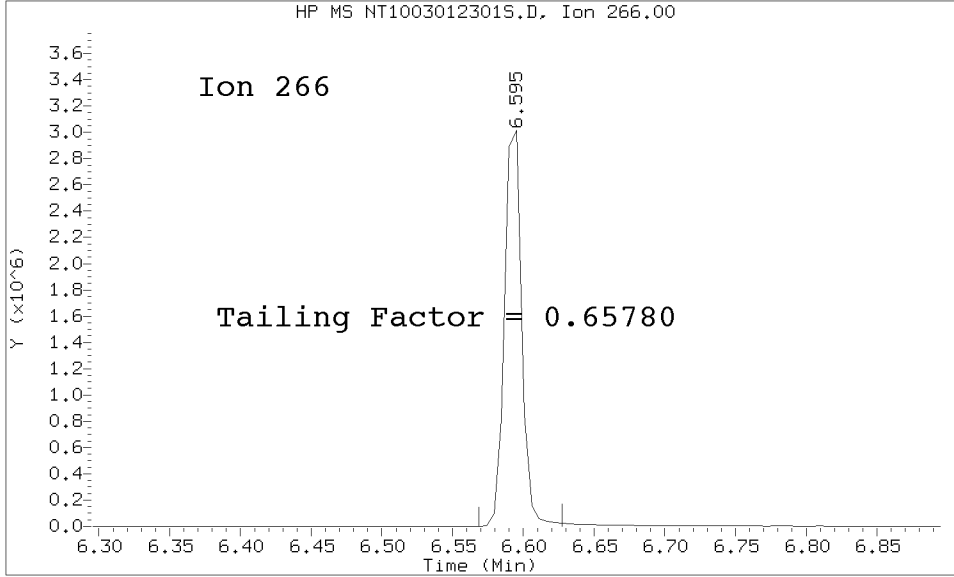
\* Only compounds listed in the work order have been verified by the analyst \*

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230301.b/SIM.b/NT1003012301S.D/NT1003012301S.D  
 Method Used: \20230301.b\SIM.b\DFTPP8270E.m Inst: nt10  
 Injection Date: 01-MAR-2023 15:49 Operator: JGR  
 Sample Info: SLC0143-TUN1 SLC0143-TUN1  
 Report Date: 07/05/2023 09:35



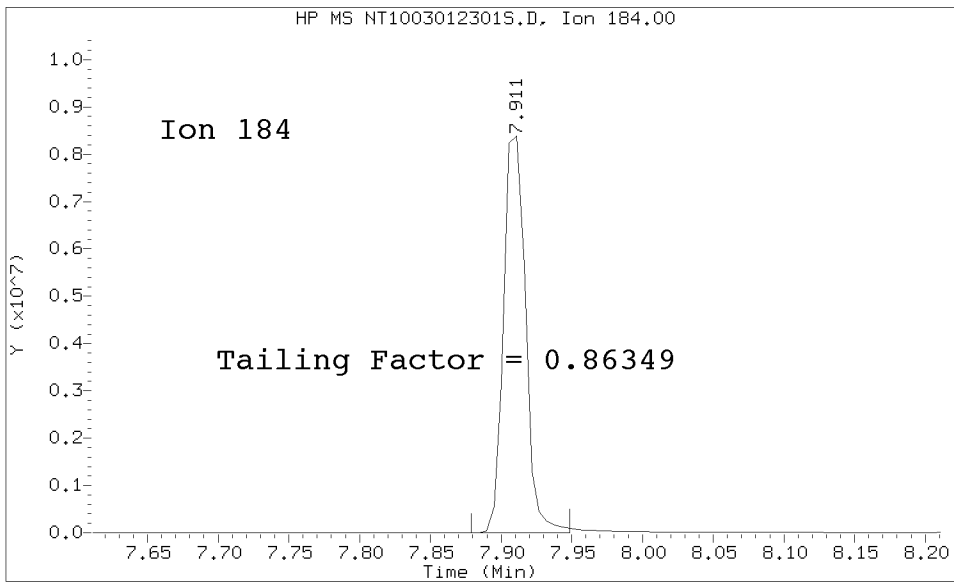
Datafile Analyzed: /20230301.b/SIM.b/NT1003012301S.D/NT1003012301S.D  
Method Used: \20230301.b\DFTPP8270E.m\sw846ddt.m Inst: nt10  
Injection Date: 01-MAR-2023 15:49 Operator: JGR  
Sample Info: SEQ-TUN1  
Report Date: 07/05/2023 09:35



Pentachlorophenol

=====  
Exp. RT = 6.590  
Found RT = 6.595

Tail Factor = 0.658 Maximum Allowed = 2.0



Benzidine

=====  
Exp. RT = 7.911  
Found RT = 7.911

Tail Factor = 0.863 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.6578035	2.000	PASS
Benzidine	0.8634886	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	4780124			N/A
4,4-DDE	47256	1.0	20.0	PASS
4,4-DDD	542360	10.2	20.0	PASS
4,4-DDD + DDE	589616	11.0	20.0	PASS

Tuning Sample, nt10.i/20230301.b/SIM.b/NT1003012301S.D, \*\*\* PASSED \*\*\*

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.33 ( 0.79)
69	Mass 69 relative abundance	41.10
70	Less than 2.00% of mass 69	0.15 ( 0.37)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
365	1.00 - 100.00% of mass 198	4.33
441	Less than 150.00% of mass 443	11.23 ( 73.44)
442	Less than 200.00% of mass 198	80.08
443	15.00 - 24.00% of mass 442	15.30 ( 19.10)

Data File: NT1003012301S.D  
Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522  
Location of Maximum: 198.00  
Number of points: 369

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	462	140.00	7430	237.00	14976	332.00	6725
38.00	1113	141.00	70248	238.00	2080	333.00	7901
39.00	4743	142.00	22264	239.00	7687	334.00	53800
40.00	108	143.00	15456	240.00	6126	335.00	13827
45.00	84	144.00	4558	241.00	9927	336.00	1422
49.00	890	145.00	3575	242.00	22800	337.00	158
50.00	20560	146.00	12885	243.00	23656	338.00	111
51.00	115400	147.00	37000	244.00	334528	339.00	1435
52.00	5980	148.00	83184	245.00	44200	340.00	1368
53.00	270	151.00	6891	246.00	75208	341.00	9189
55.00	1004	152.00	4801	247.00	14506	342.00	2530
56.00	6893	153.00	21920	248.00	2995	343.00	476
57.00	20032	154.00	16872	249.00	12012	344.00	229
58.00	1173	155.00	39720	250.00	2462	346.00	19040
59.00	381	156.00	58960	251.00	2978	347.00	3868
60.00	603	157.00	10415	252.00	3463	348.00	369
61.00	8555	158.00	12758	253.00	7543	350.00	680
62.00	12181	159.00	10289	254.00	2201	351.00	1509
63.00	36888	160.00	23104	255.00	1779712	352.00	24280
64.00	5850	161.00	32336	256.00	261248	353.00	16313
65.00	19656	162.00	10036	257.00	19960	354.00	23616
66.00	1277	163.00	2211	258.00	115664	355.00	4277
67.00	218	164.00	3370	259.00	18720	356.00	395
68.00	9335	165.00	26672	260.00	3097	357.00	288
69.00	1177088	166.00	21880	261.00	2983	358.00	496
70.00	4303	167.00	140736	262.00	311	359.00	2088
72.00	118	168.00	67144	263.00	1088	360.00	426
73.00	8187	169.00	12299	264.00	2758	361.00	287
74.00	117944	170.00	4307	265.00	46872	362.00	66
75.00	186240	171.00	6152	266.00	6551	363.00	78
76.00	58584	172.00	12323	267.00	641	364.00	312
77.00	1243648	173.00	16696	268.00	1031	365.00	124024
78.00	82568	174.00	30816	269.00	334	366.00	17240
79.00	86720	175.00	56392	270.00	1777	367.00	1640
80.00	67968	176.00	14808	271.00	3758	368.00	51
81.00	95752	177.00	24968	272.00	4667	369.00	81
82.00	22136	178.00	8414	273.00	54184	370.00	2231
83.00	20016	179.00	108176	274.00	145920	371.00	6578
84.00	1703	180.00	69200	275.00	822080	372.00	39896
85.00	15260	181.00	35088	276.00	108424	373.00	10420
86.00	27208	182.00	5707	277.00	76856	374.00	902
87.00	12947	183.00	2410	278.00	12879	377.00	1108
88.00	4317	184.00	9057	281.00	1271	378.00	190
89.00	1969	185.00	53272	282.00	1654	379.00	112
90.00	227	186.00	390848	283.00	8058	382.00	88
91.00	20144	187.00	115736	284.00	6096	383.00	11296
92.00	22872	188.00	12489	285.00	13310	384.00	3498
93.00	159616	189.00	26224	286.00	2664	385.00	1140
94.00	9906	190.00	3820	287.00	301	386.00	187

95.00	2189	191.00	11505	288.00	1049	388.00	81
96.00	5767	192.00	34688	289.00	3146	389.00	105
97.00	2485	193.00	41016	290.00	2684	390.00	4929
98.00	117552	194.00	9131	291.00	1791	391.00	3340
99.00	90792	195.00	3653	292.00	3510	392.00	2390
100.00	7885	196.00	74504	293.00	16520	393.00	475
101.00	52896	198.00	2863616	294.00	4295	395.00	216
102.00	3052	199.00	190976	295.00	4987	396.00	208
103.00	16416	200.00	14335	296.00	267904	397.00	274
104.00	30568	201.00	9948	297.00	37320	398.00	254
105.00	30136	203.00	20560	298.00	2786	401.00	2284
106.00	9766	204.00	107568	299.00	508	402.00	15386
107.00	410176	205.00	182464	300.00	217	403.00	21456
108.00	62280	206.00	743232	301.00	3180	404.00	8460
109.00	6029	207.00	96144	302.00	4702	405.00	1217
110.00	711808	208.00	26352	303.00	29528	408.00	105
111.00	108280	209.00	9347	304.00	7967	410.00	539
112.00	13160	210.00	10562	305.00	1122	411.00	56
113.00	4333	211.00	27120	306.00	358	415.00	1010
114.00	392	212.00	2578	307.00	530	416.00	312
115.00	1356	213.00	2139	308.00	3845	419.00	166
116.00	22112	214.00	764	309.00	2265	420.00	193
117.00	350208	215.00	8027	310.00	3023	421.00	17744
118.00	25424	216.00	16051	311.00	1030	422.00	15463
119.00	2716	217.00	211072	312.00	626	423.00	129392
120.00	4884	218.00	26304	313.00	2222	424.00	25976
121.00	587	219.00	2900	314.00	12766	425.00	2691
122.00	25416	220.00	3351	315.00	29288	426.00	96
123.00	40488	221.00	123968	316.00	15518	427.00	197
124.00	17936	222.00	24608	317.00	2892	429.00	55
125.00	15919	223.00	46856	318.00	260	437.00	78
127.00	1391616	224.00	432000	319.00	629	438.00	106
128.00	102568	225.00	107056	320.00	924	439.00	148
129.00	561152	226.00	10788	321.00	8267	440.00	550
130.00	46696	227.00	195904	322.00	3948	441.00	321664
131.00	8637	228.00	27456	323.00	81096	442.00	2293248
132.00	4190	229.00	39984	324.00	14693	443.00	438016
133.00	1654	230.00	5777	325.00	1371	444.00	39248
134.00	15899	231.00	15009	326.00	1762	445.00	2356
135.00	44024	232.00	3043	327.00	15694	446.00	82
136.00	18272	233.00	3542	328.00	7475	489.00	54
137.00	22936	234.00	12458	329.00	1733		
138.00	5085	235.00	13429	330.00	352		
139.00	2552	236.00	8601	331.00	463		





**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8270E-SIM**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00032

**Laboratory ID:** SLC0143-SCV1

**Sequence:** SLC0143

**Sequence Name:** SCV 5.0

**Standard ID:** K010066

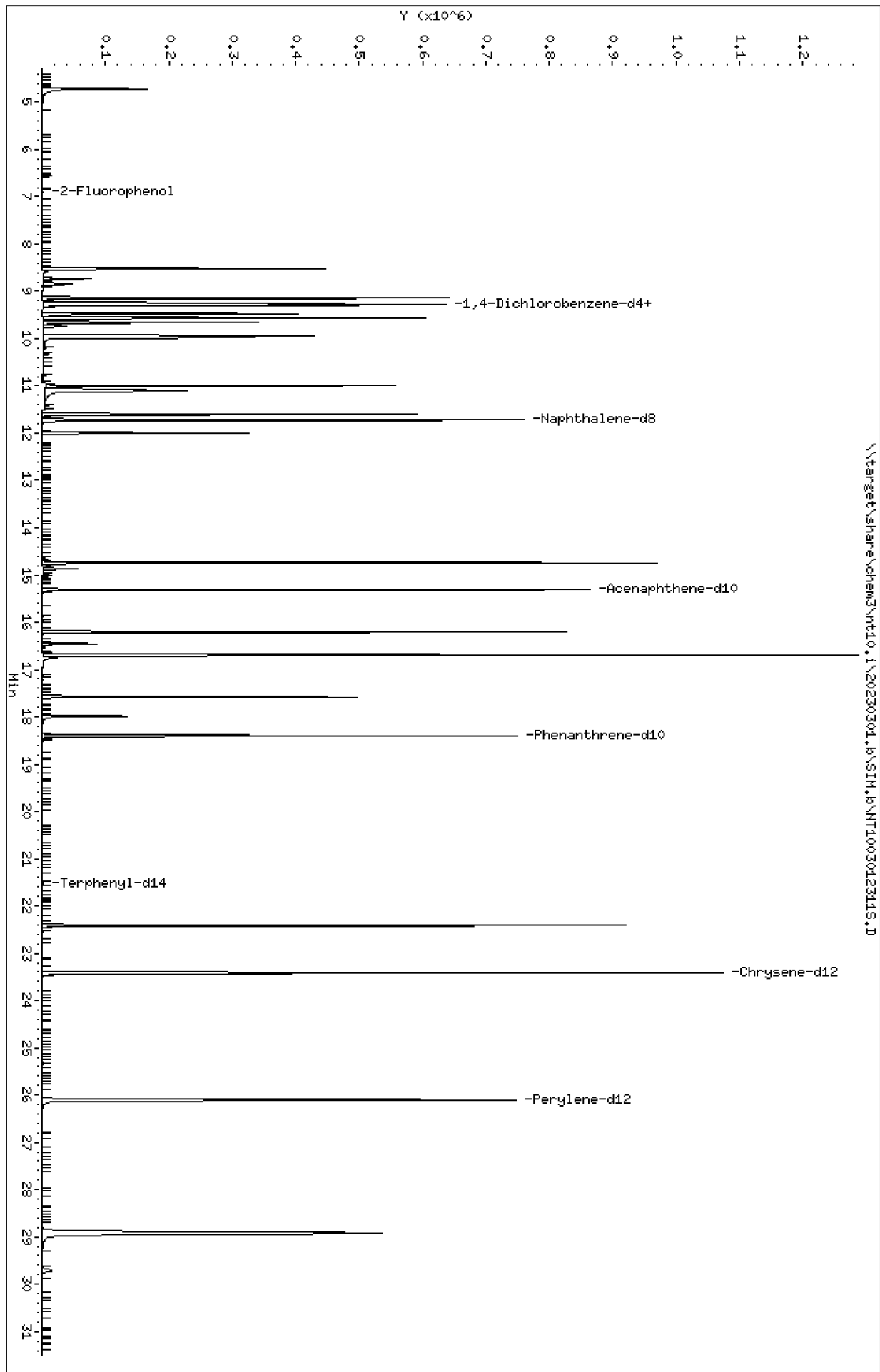
ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	5.2	5.0	20.00
1,2-Dichlorobenzene	5.0000	5.1	2.8	20.00
Benzyl Alcohol	5.0000	5.1	2.1	20.00
Benzoic acid	10.000	6.9	-31.3 *	20.00
2,4-Dimethylphenol	5.0000	3.6	-27.3 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-2.6	20.00
N-Nitrosodiphenylamine	5.0000	5.4	7.2	20.00
Pentachlorophenol	5.0000	3.9	-21.8 *	20.00
2-Fluorophenol	7.5000	0.0377	-99.5	
p-Terphenyl-d14	5.0000	0.0271	-99.5	

\* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230301.B\SIM.B\NT1003012311S.D  
Date: 01-MAR-2023 21:46  
Client ID:  
Sample Info: SED-SCV1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

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

\\target\share\chem3\nt10.i\20230301.B\SIM.B\NT1003012311S.D



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

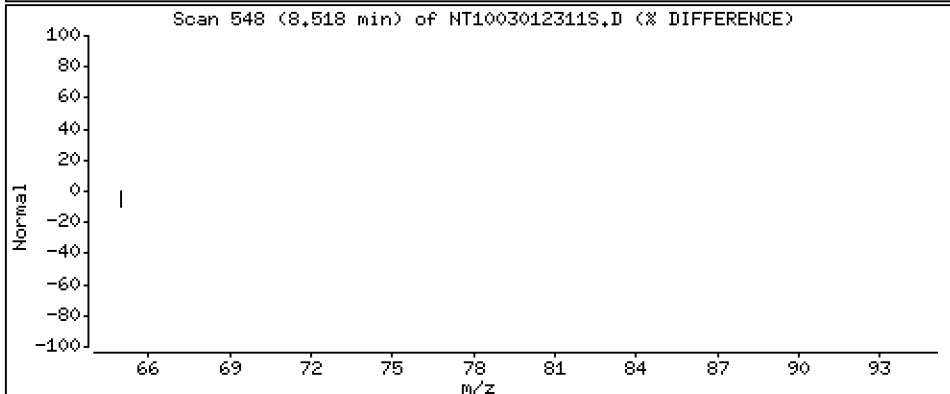
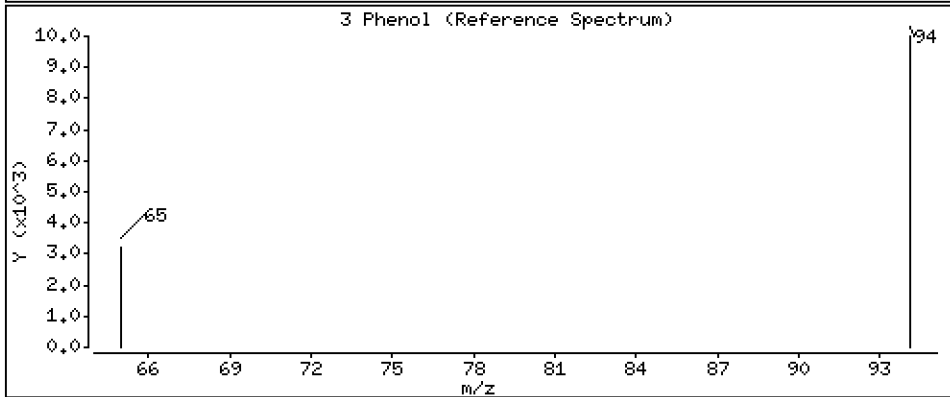
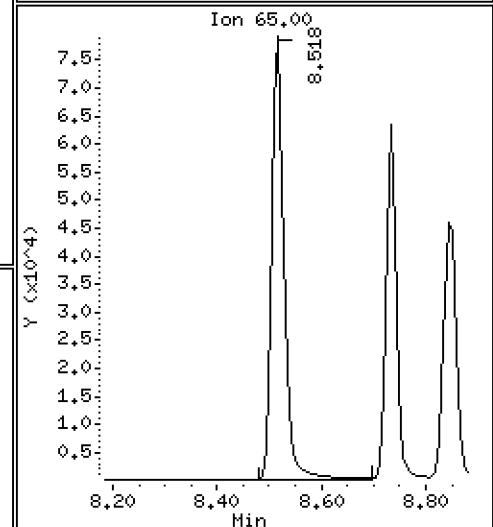
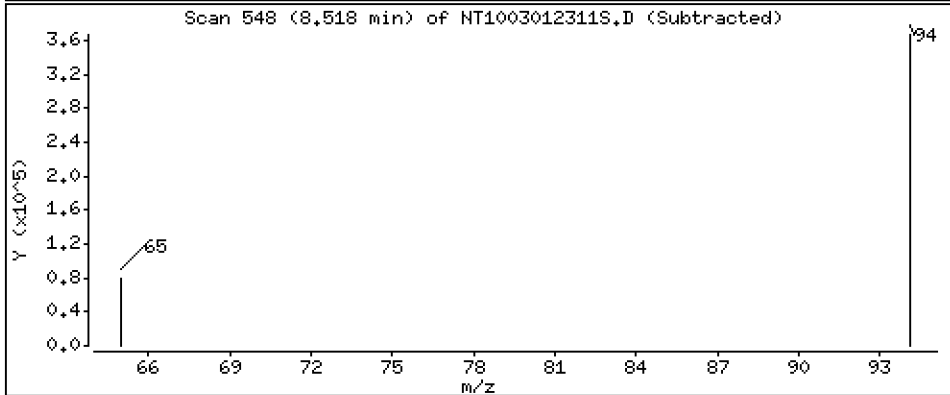
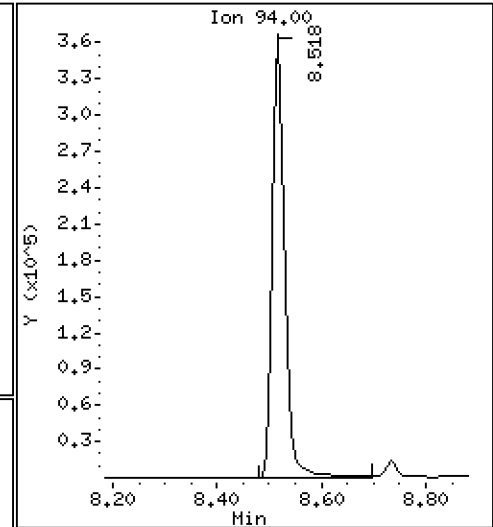
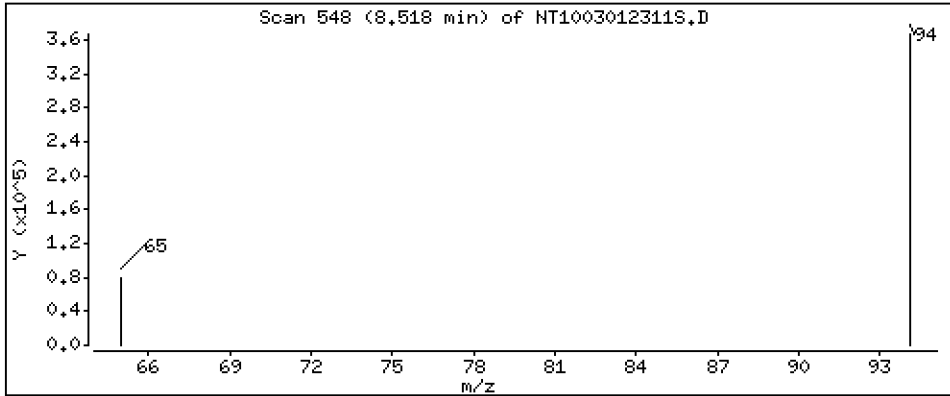
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.507 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

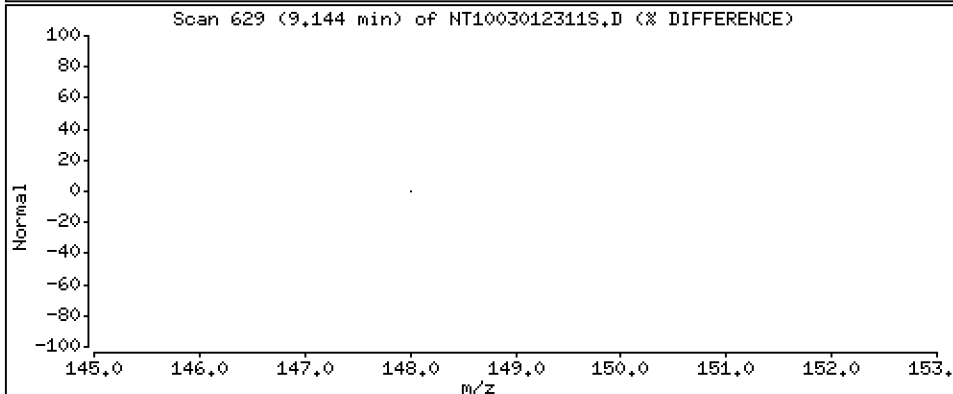
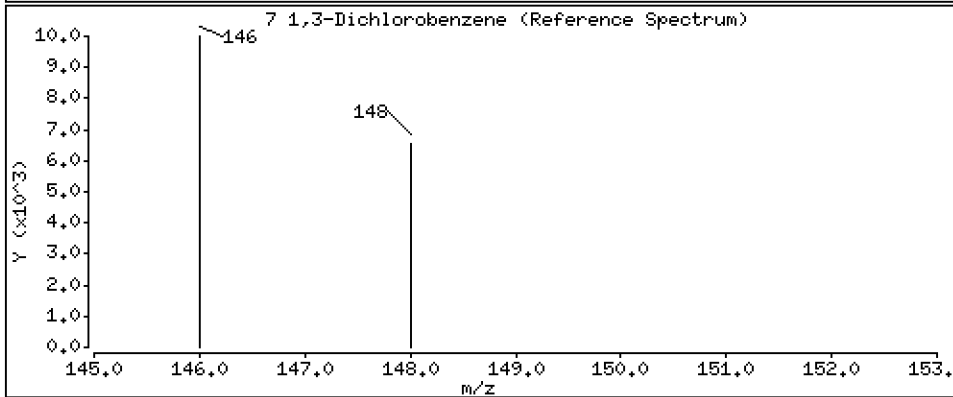
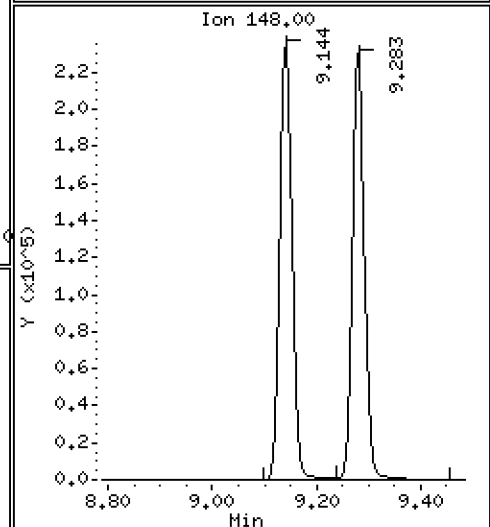
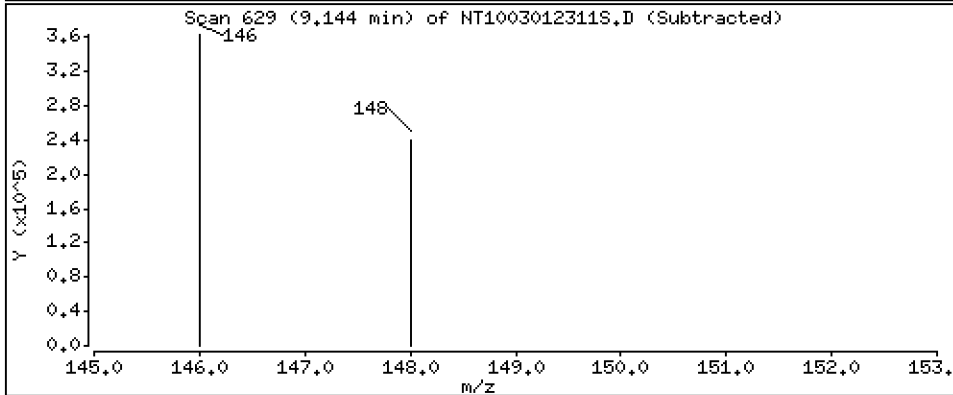
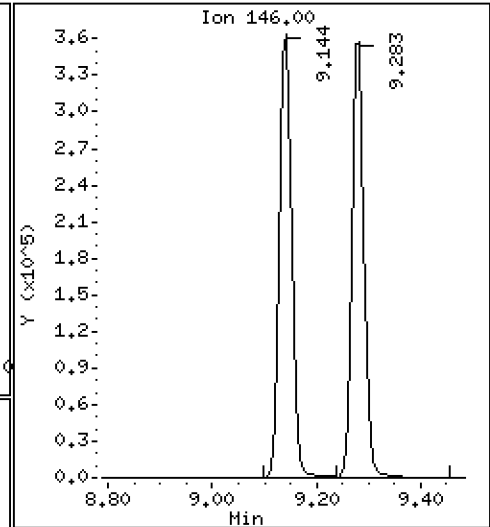
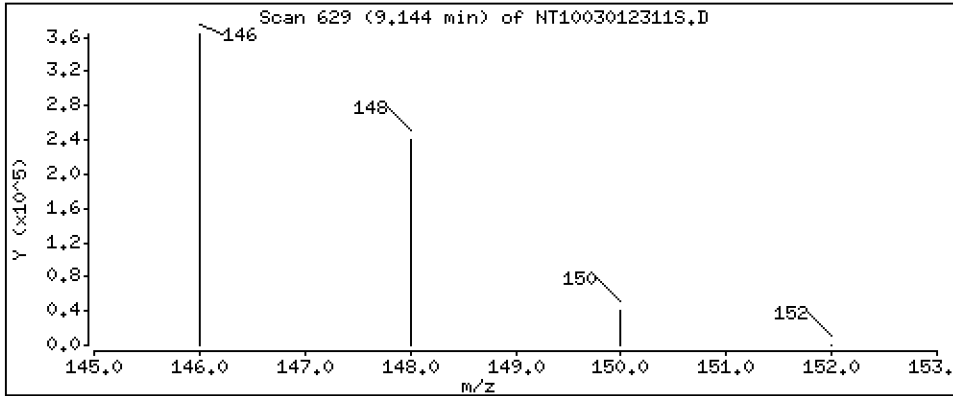
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 5.084 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

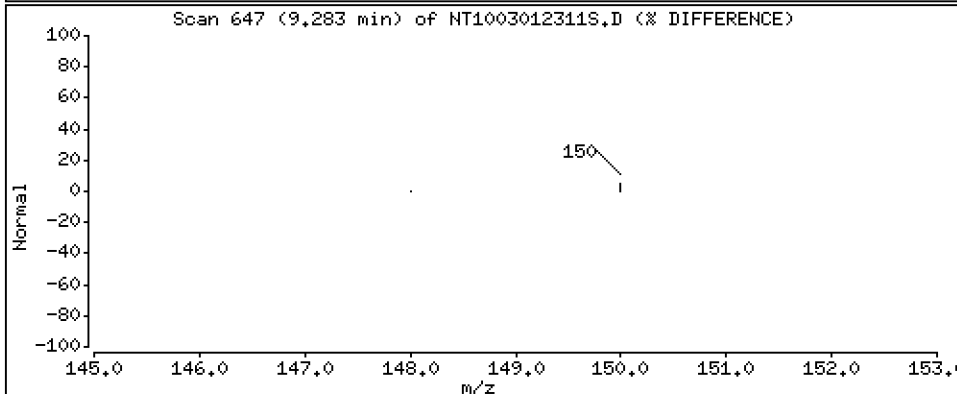
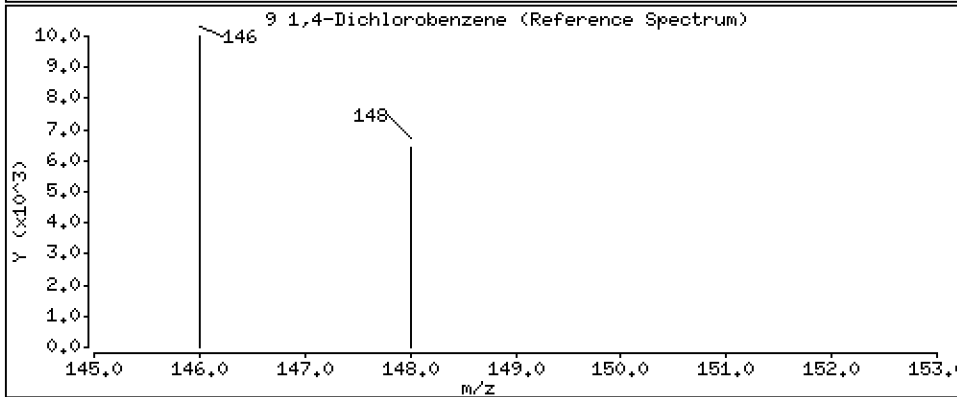
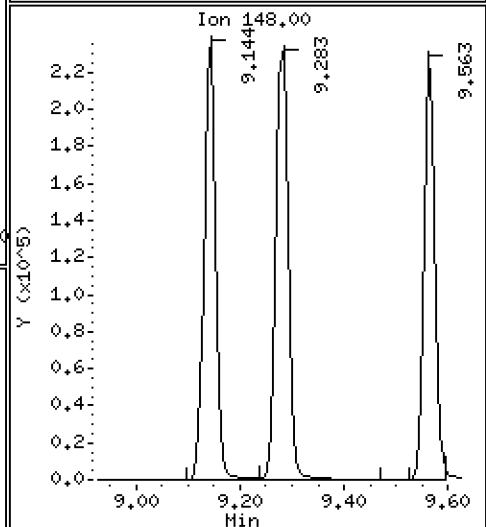
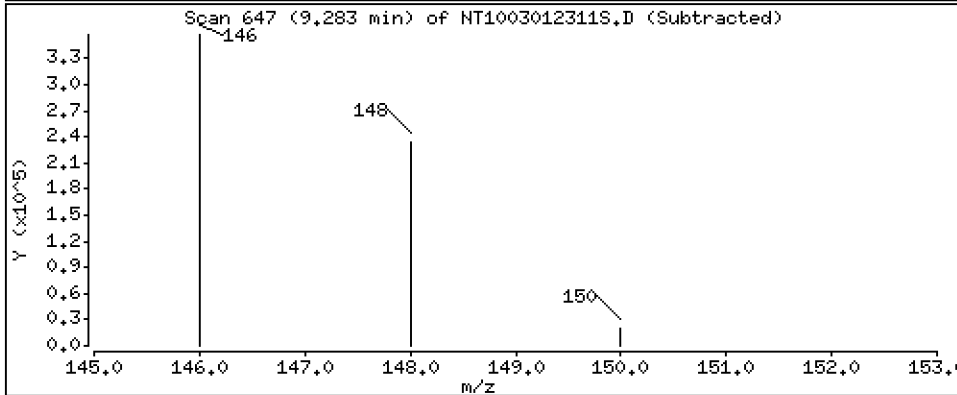
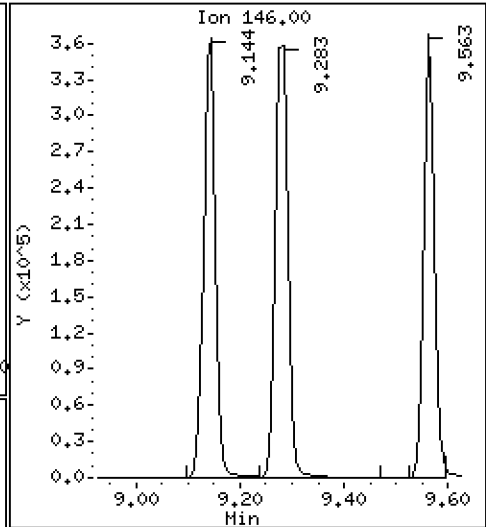
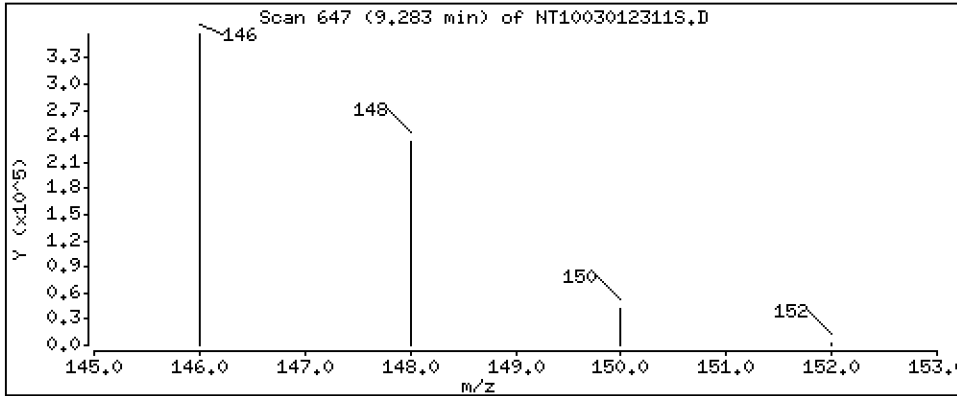
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 5,250 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

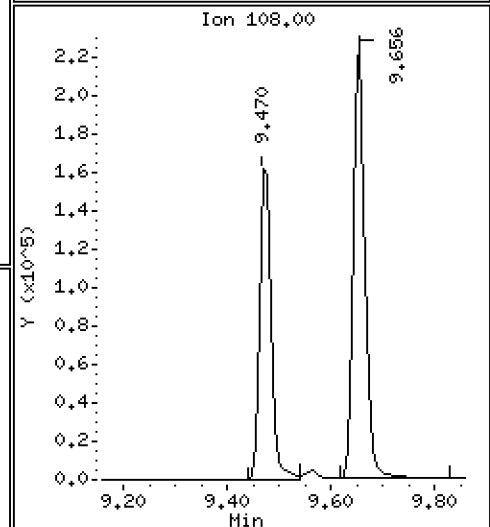
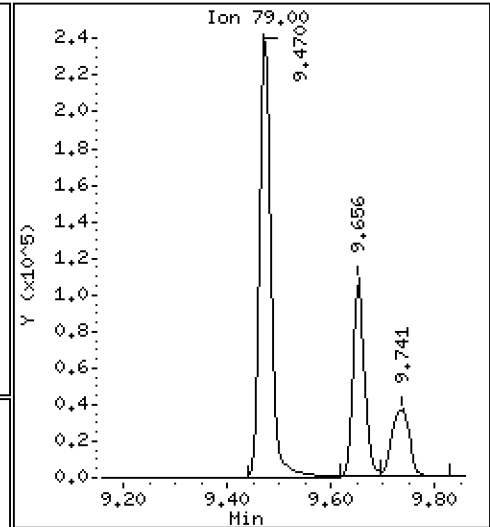
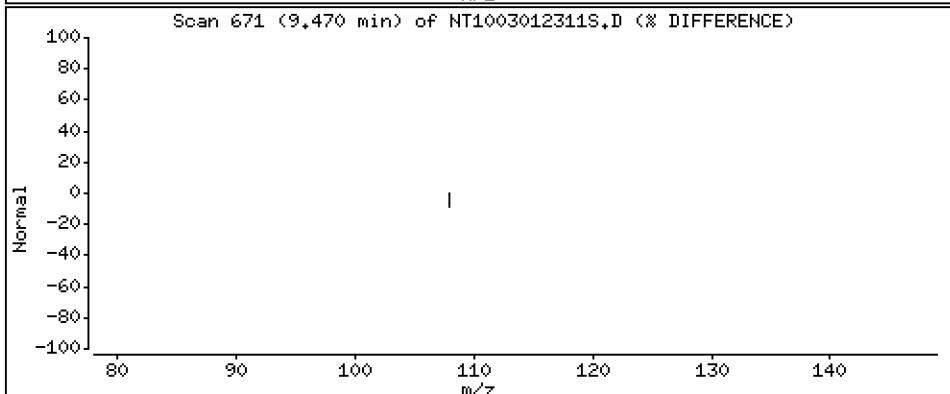
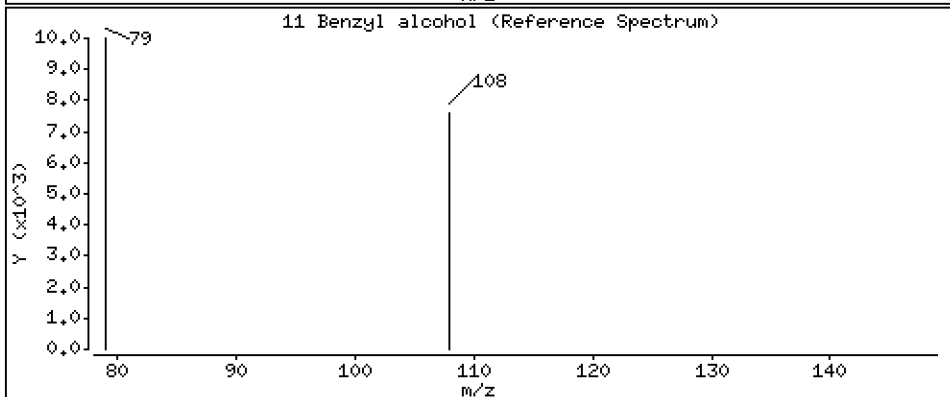
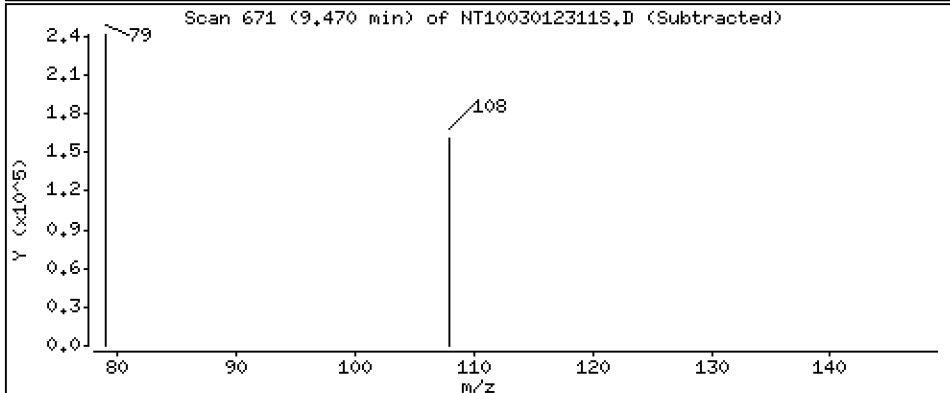
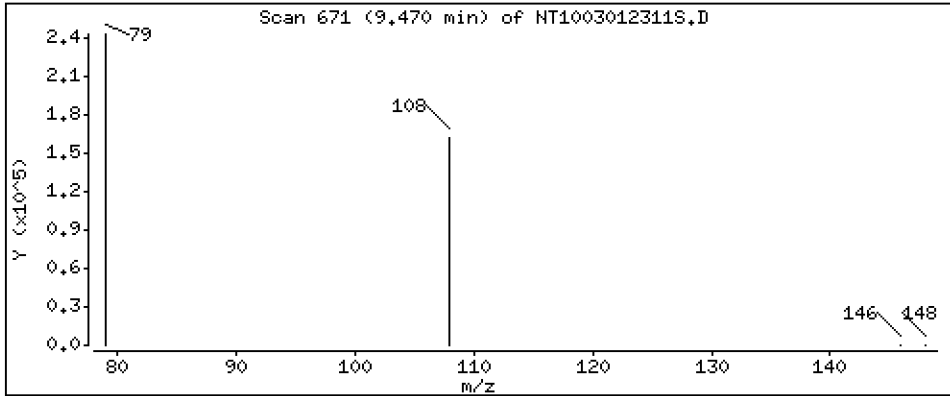
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5,104 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

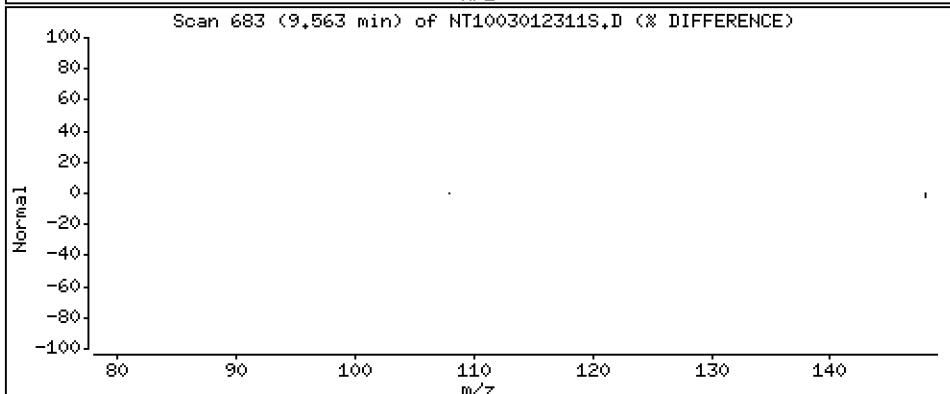
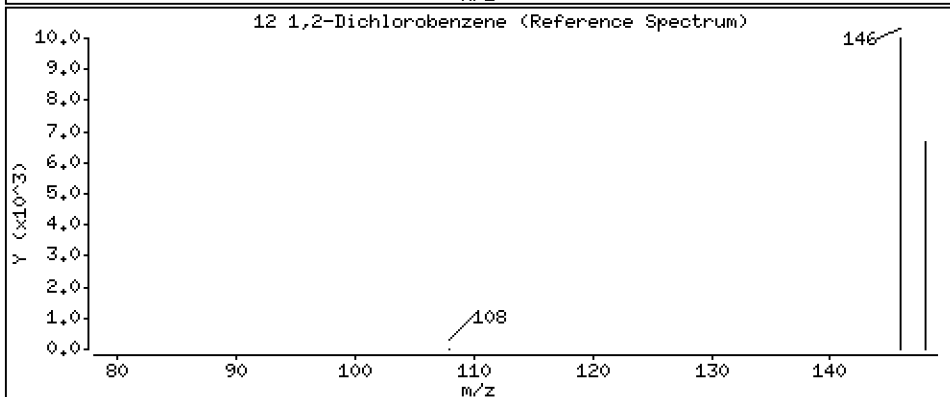
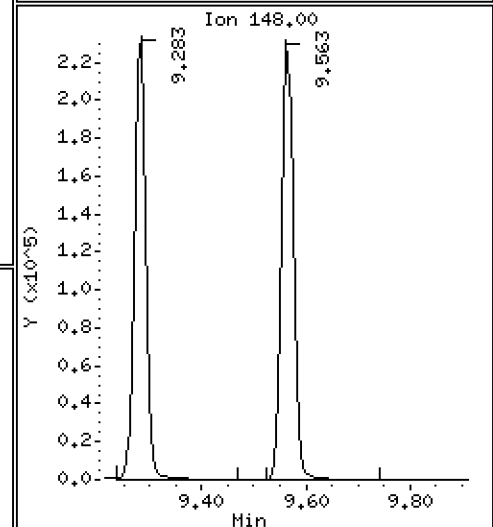
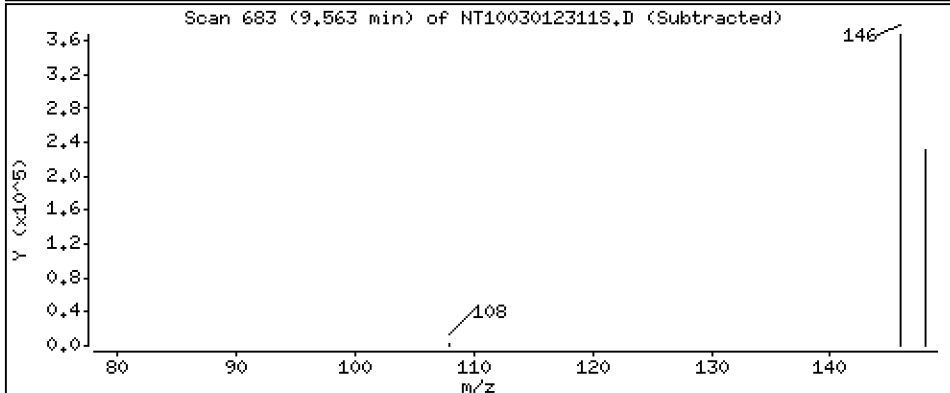
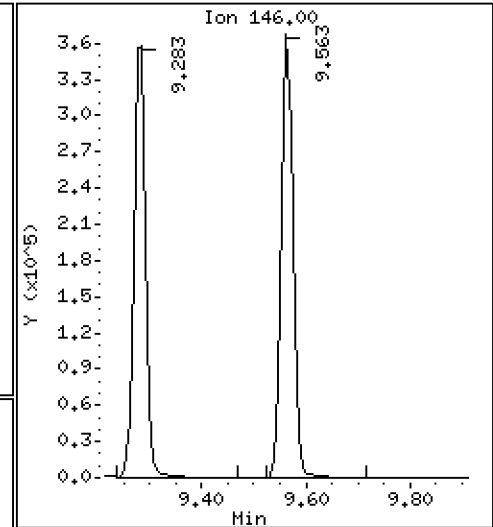
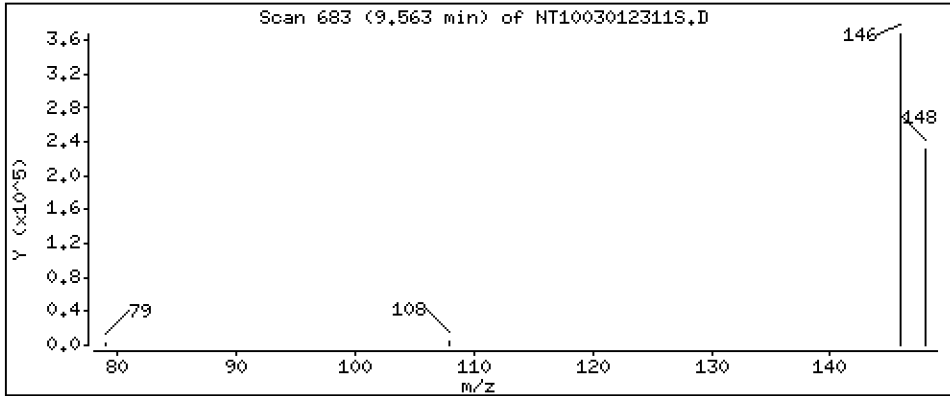
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5,142 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

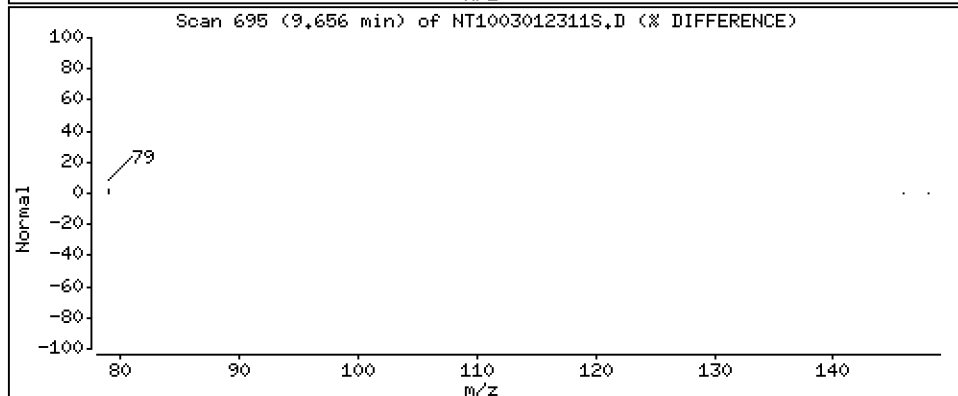
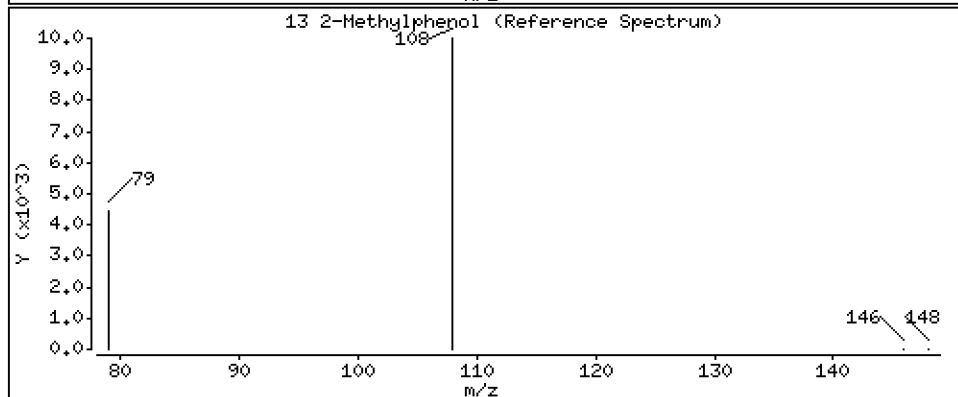
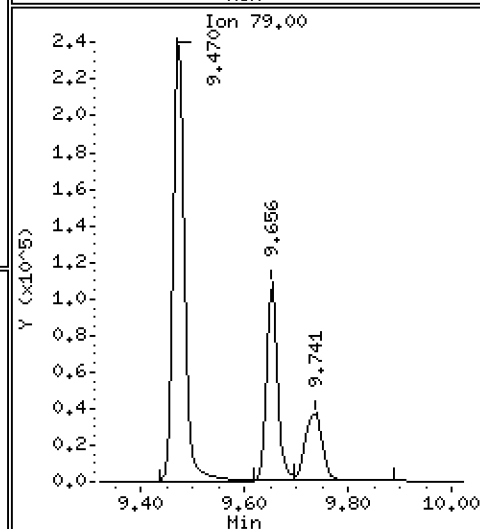
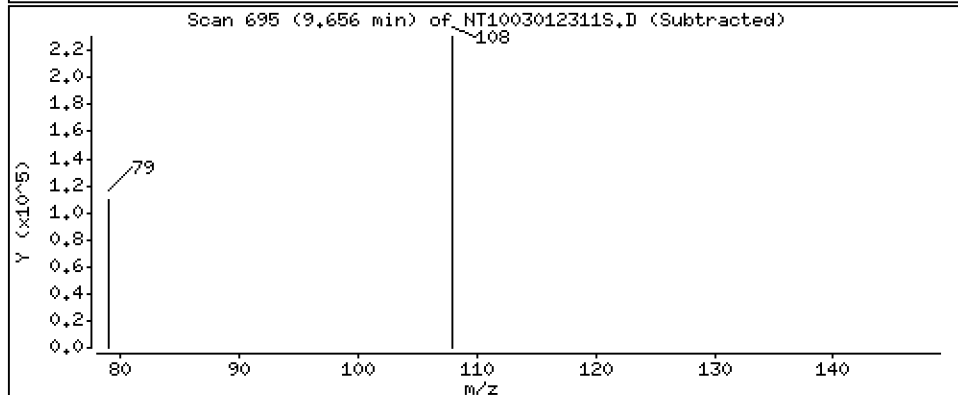
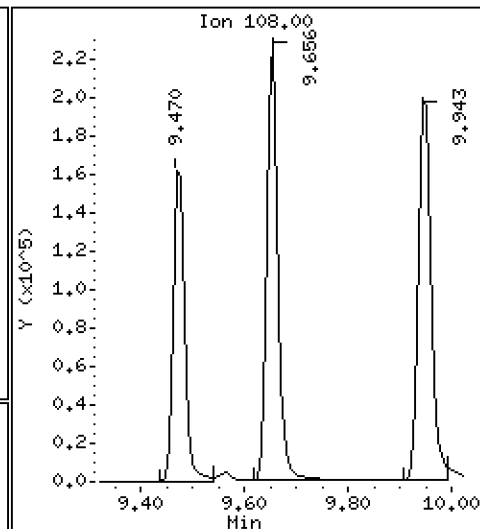
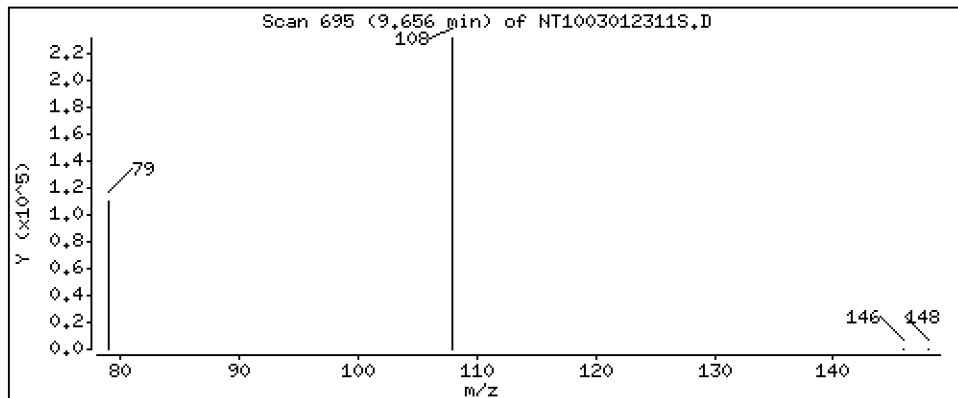
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.365 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

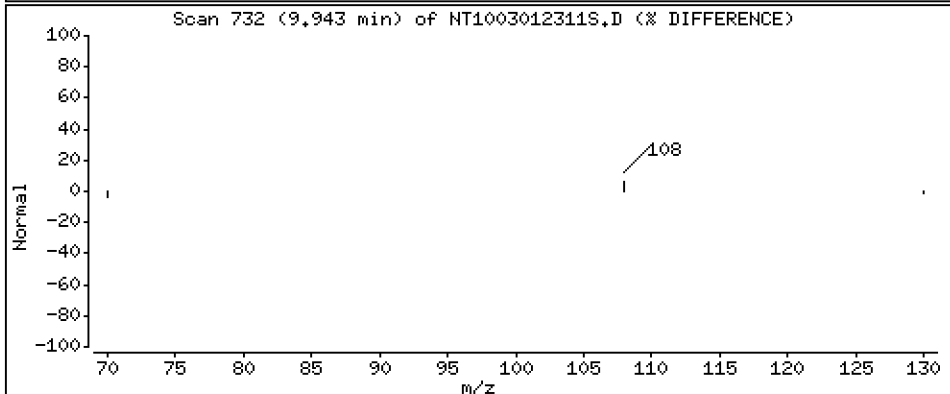
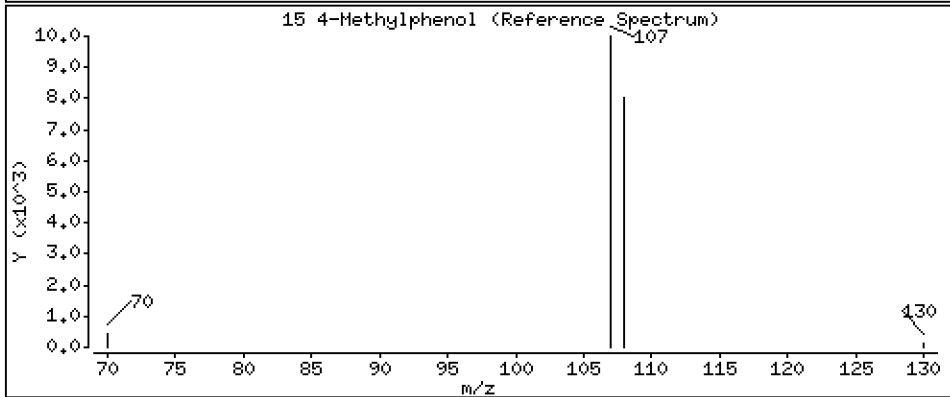
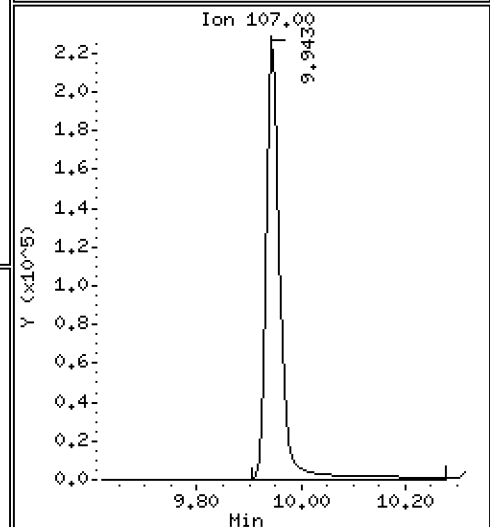
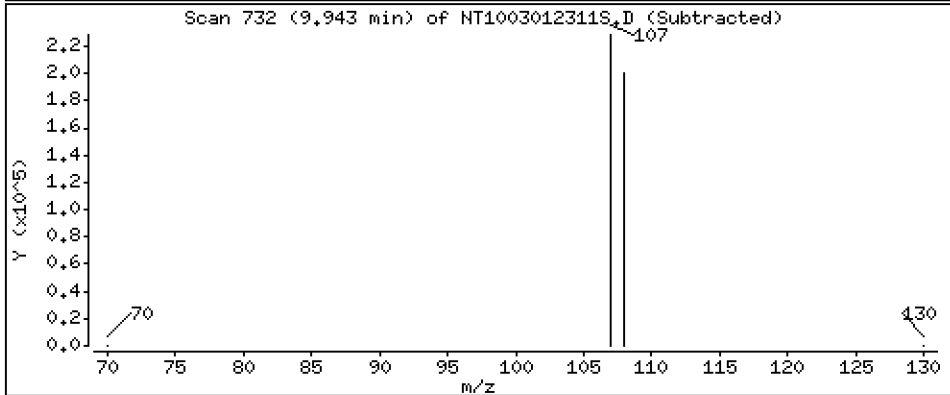
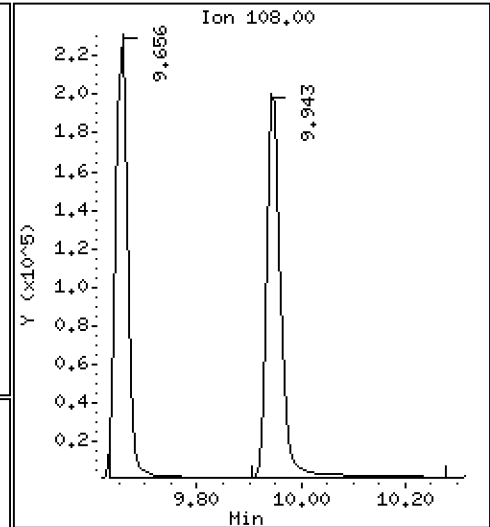
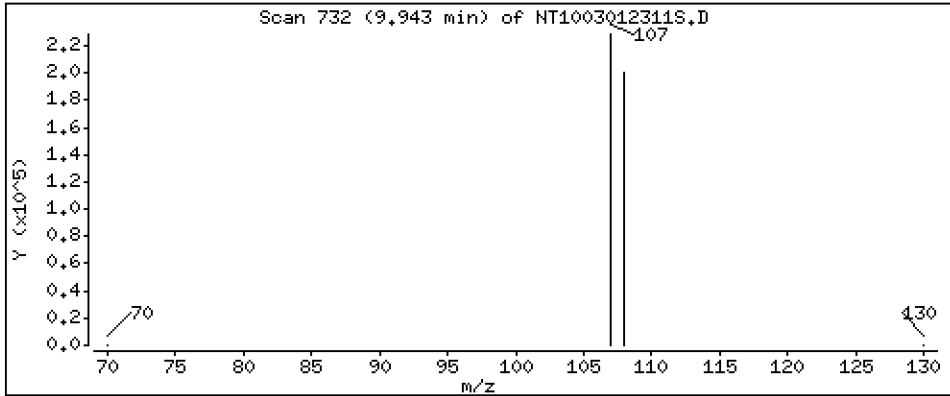
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.505 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

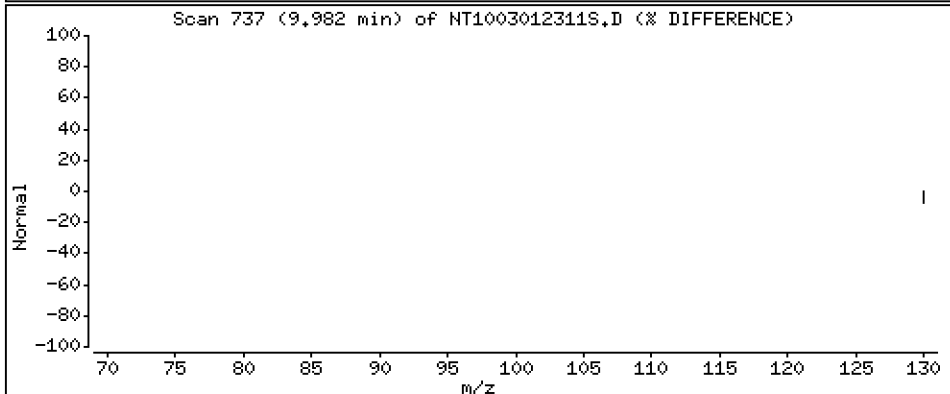
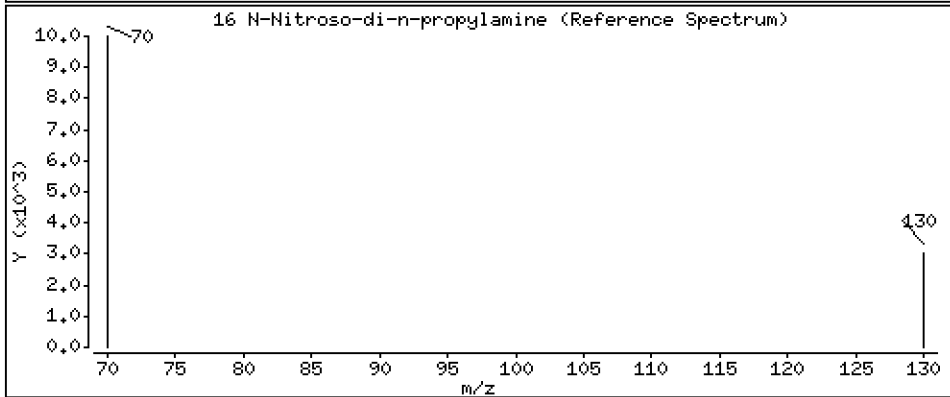
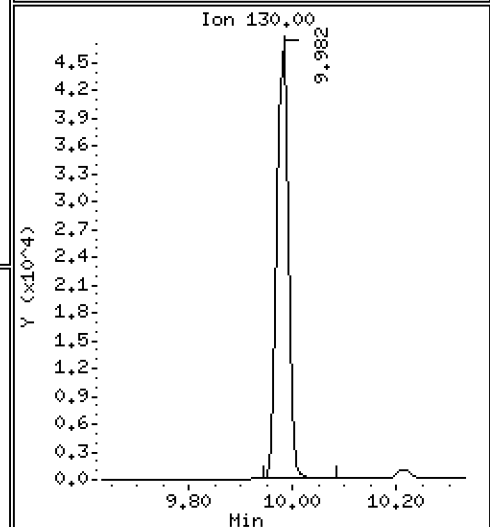
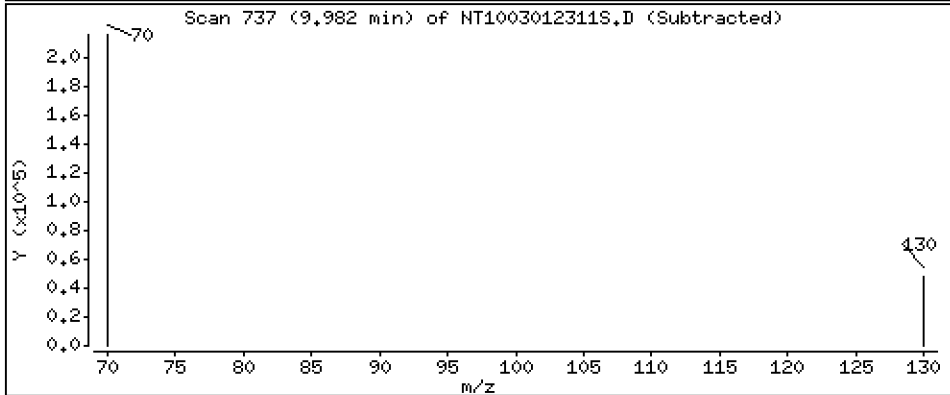
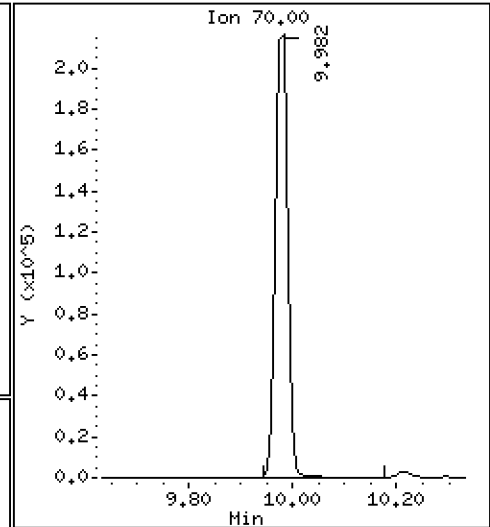
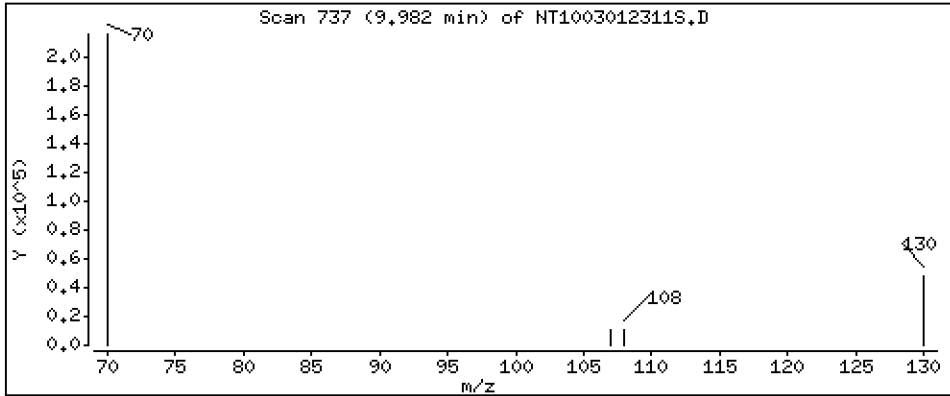
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,685 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

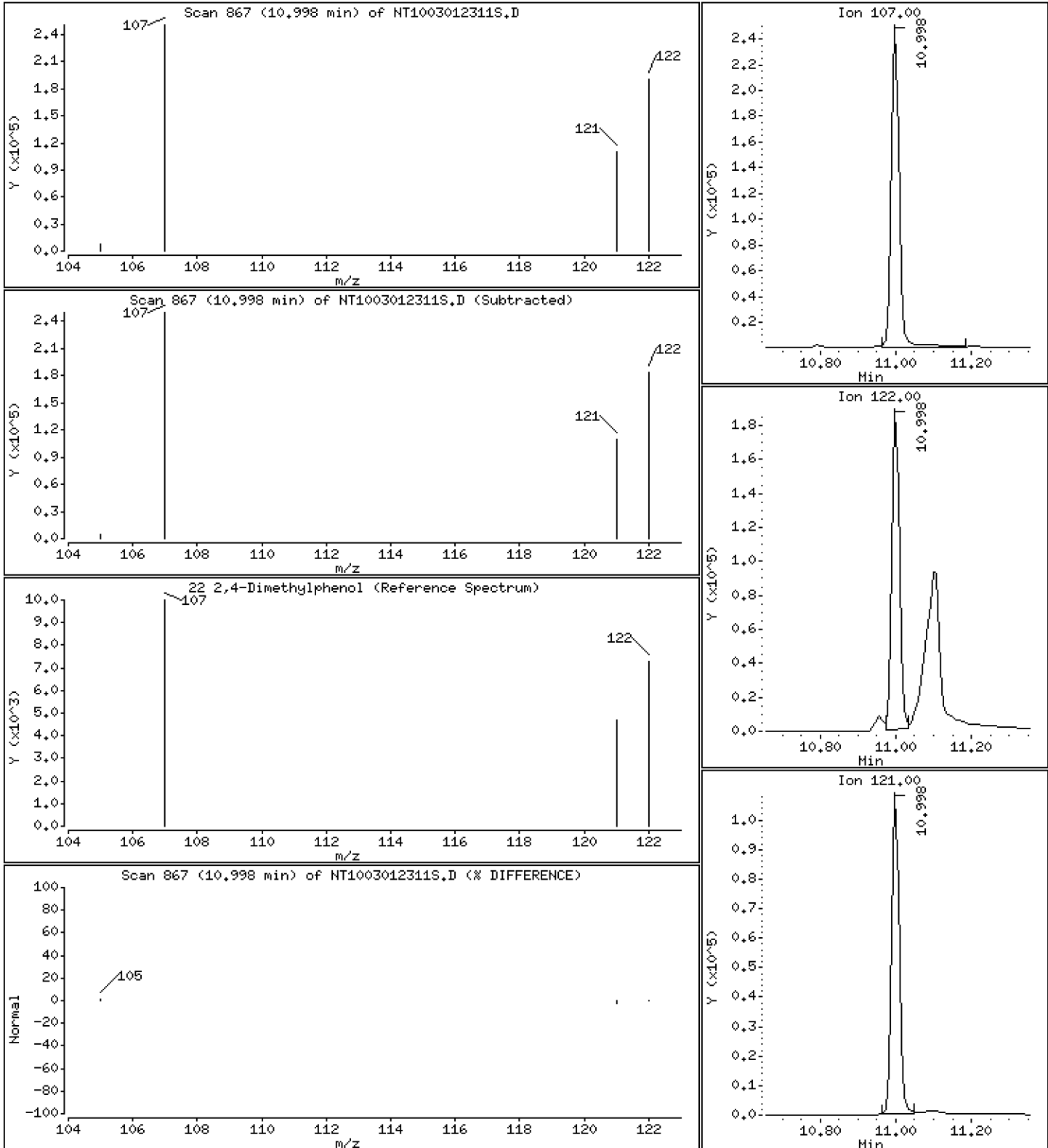
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 3.637 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

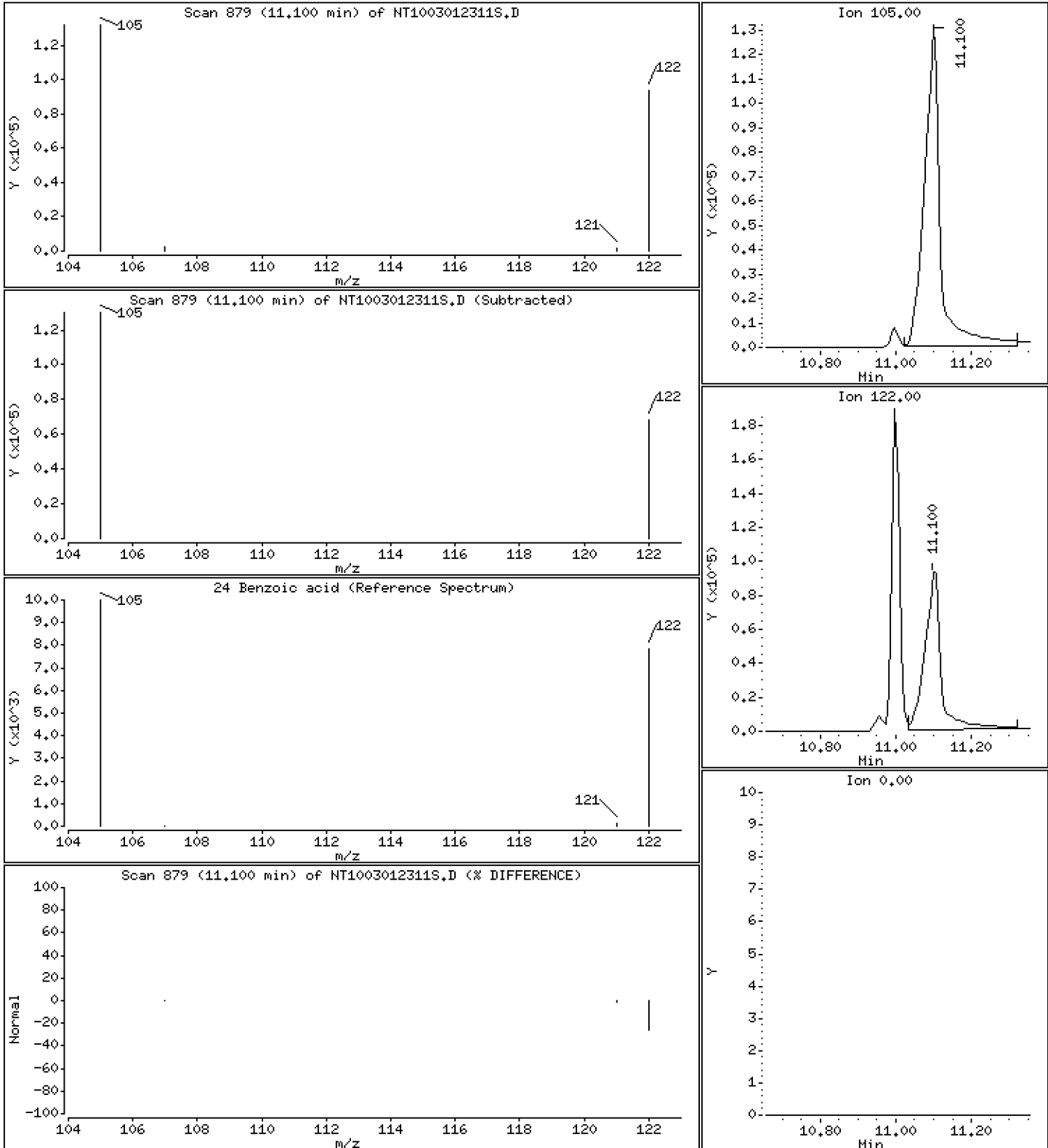
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 6,870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

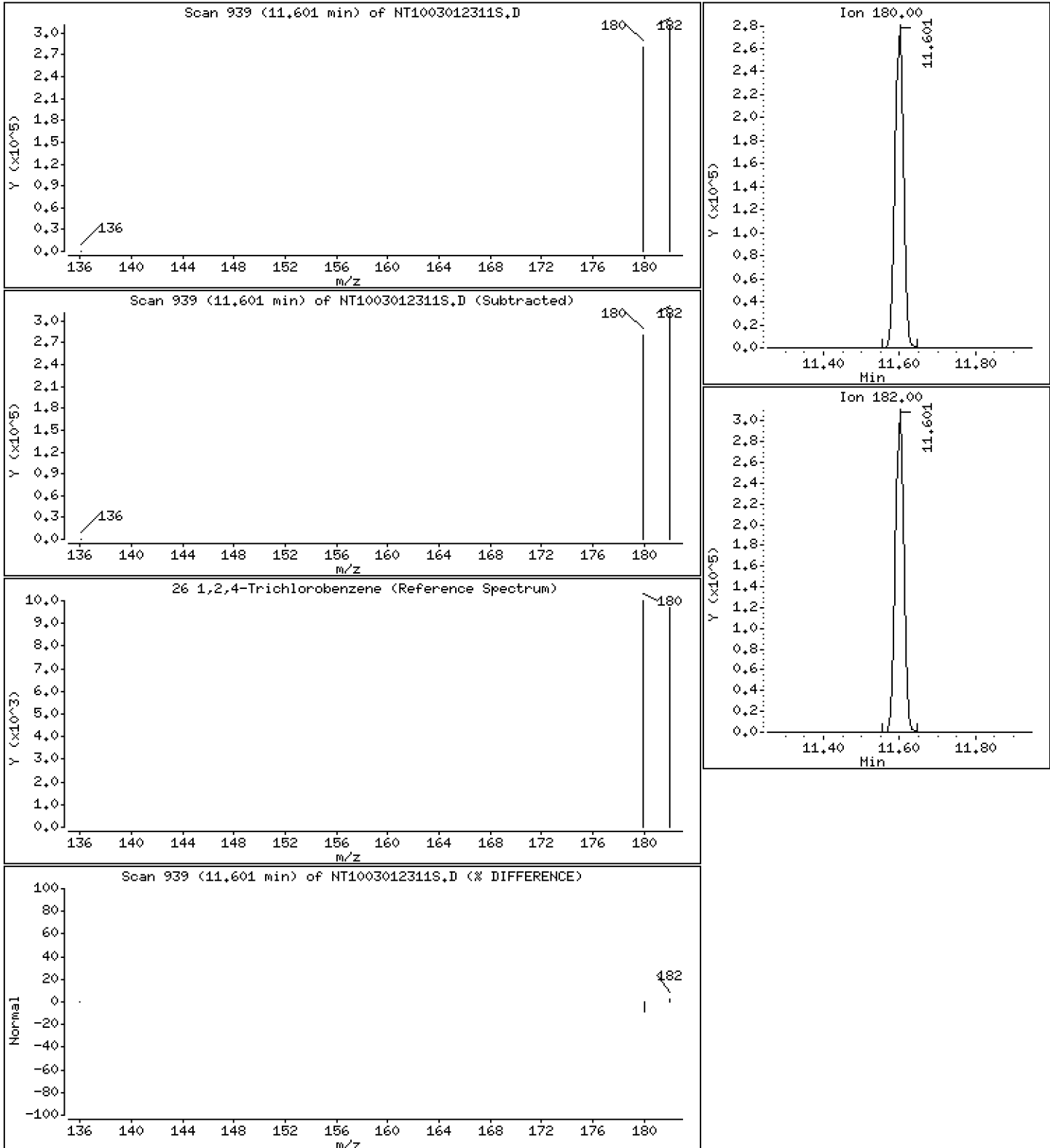
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

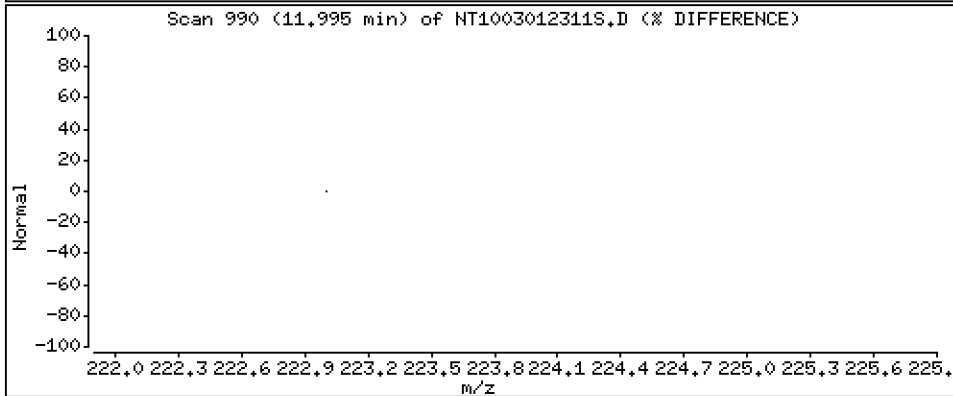
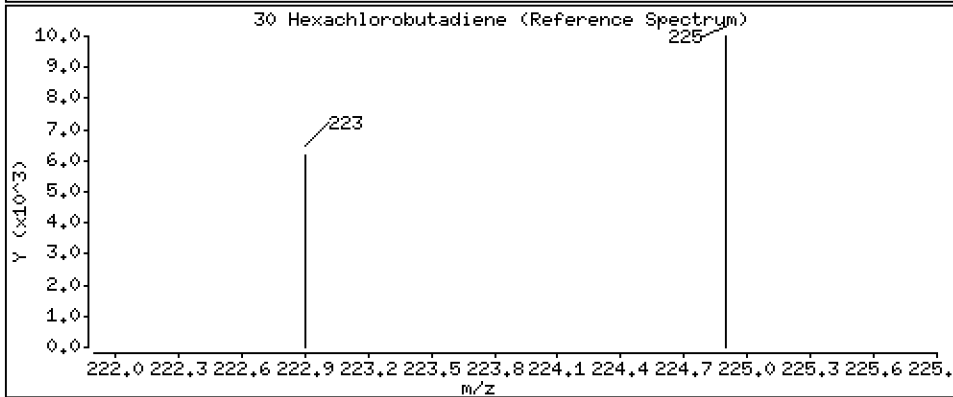
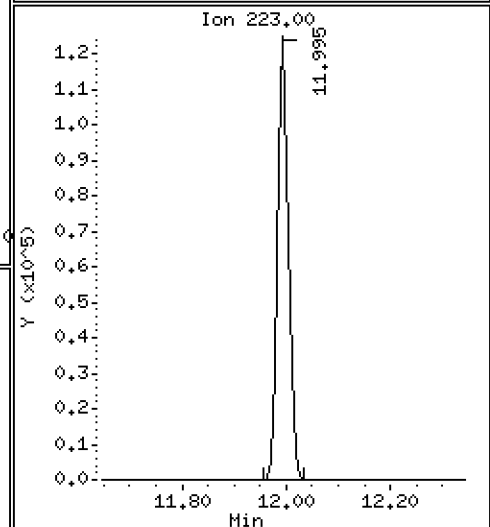
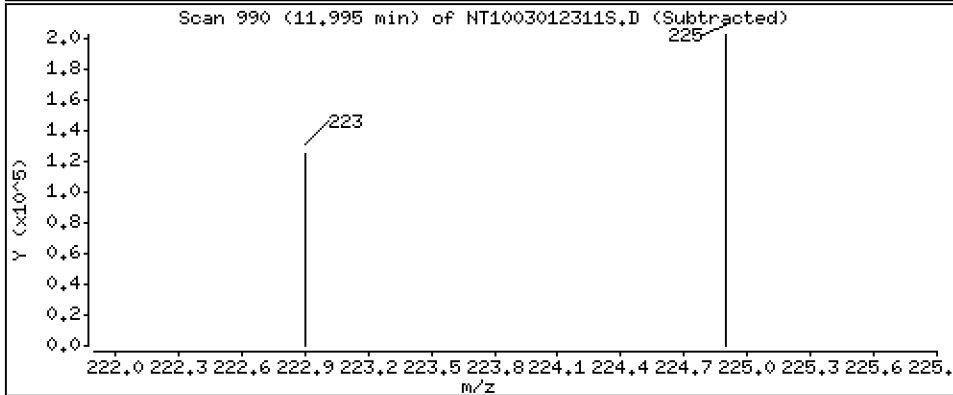
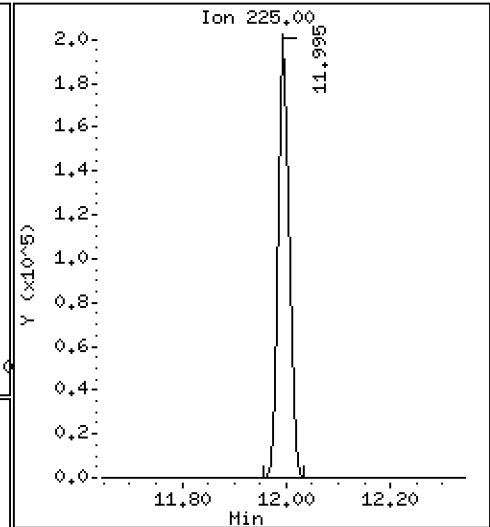
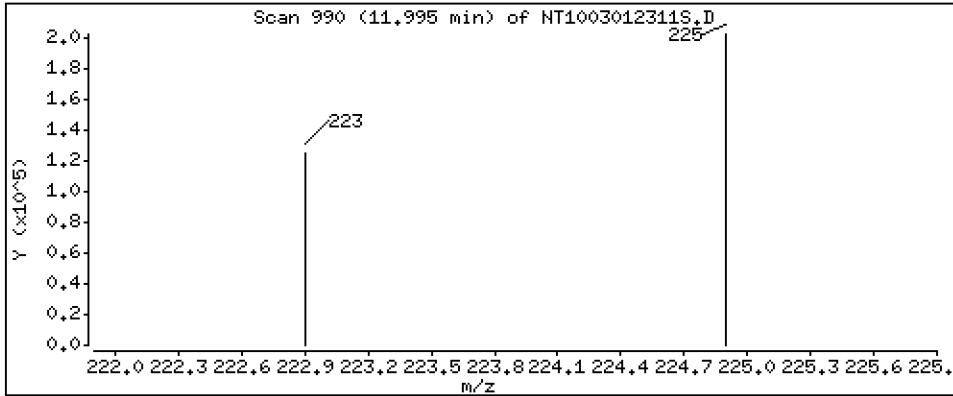
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,862 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

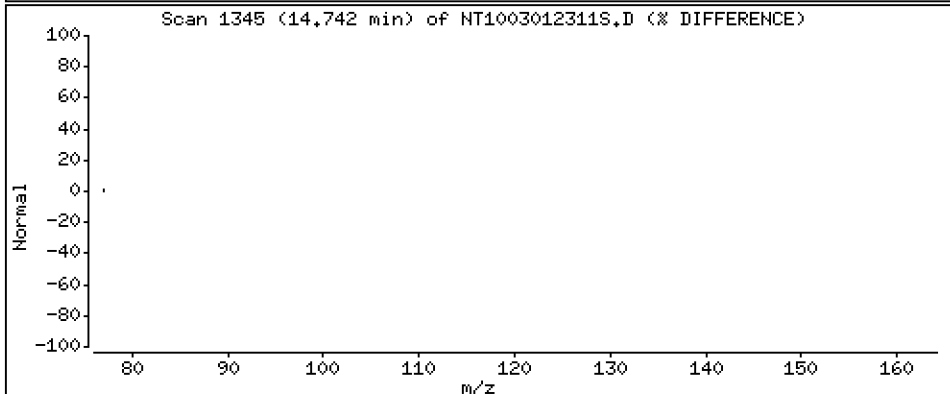
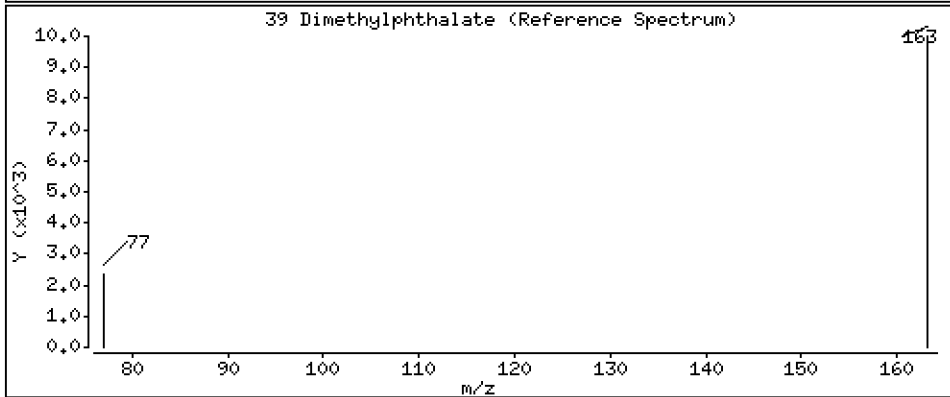
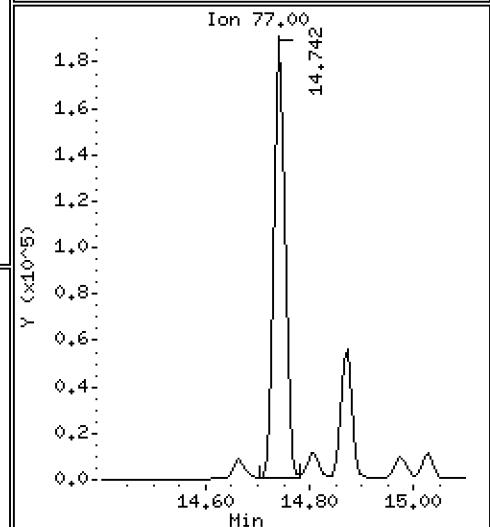
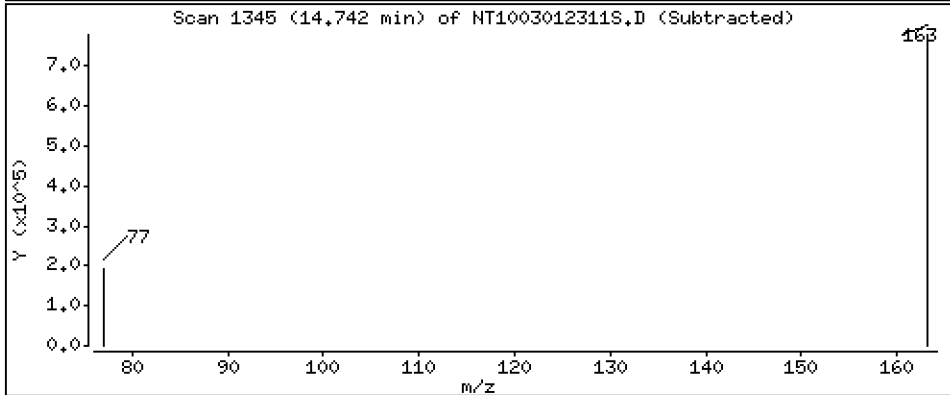
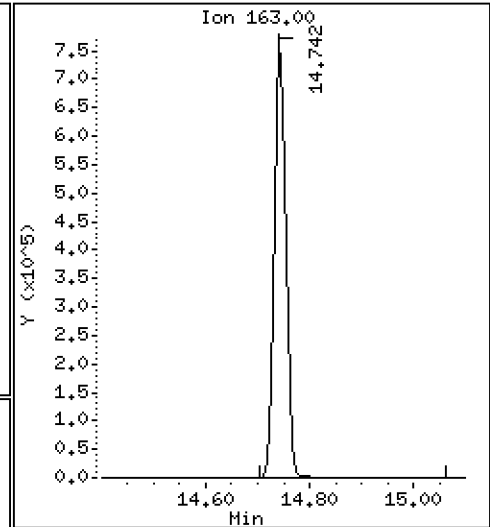
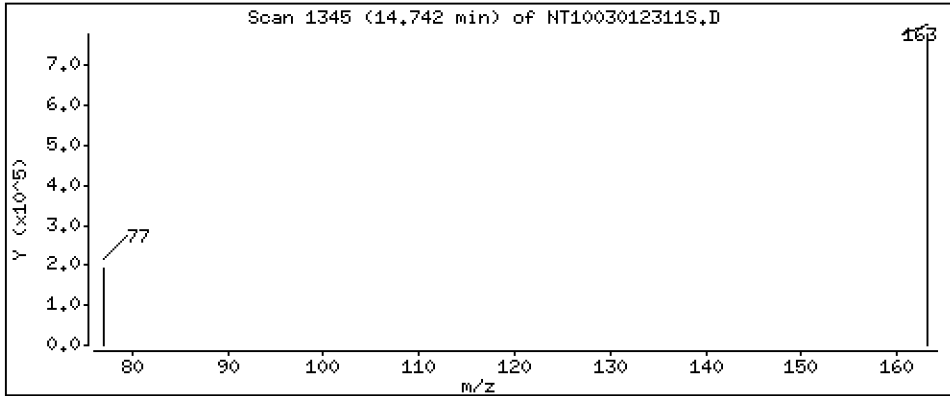
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 5.571 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

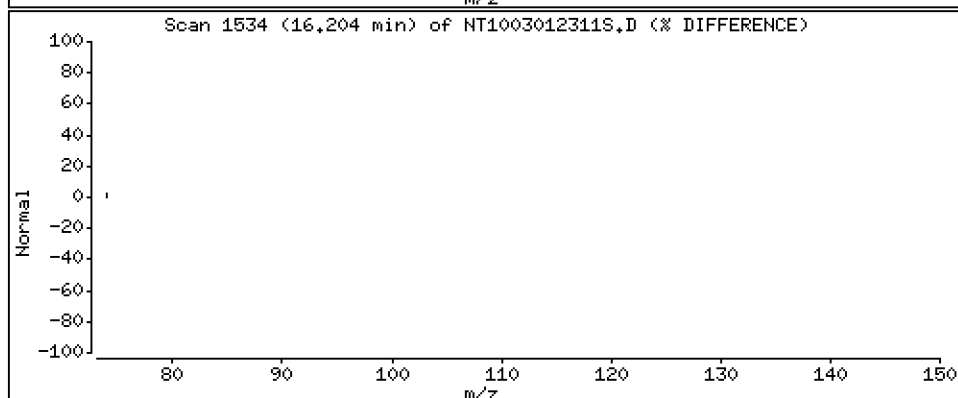
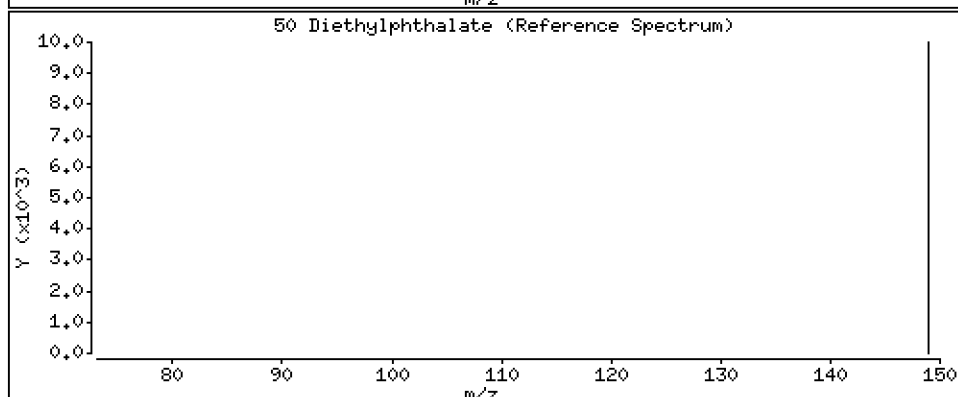
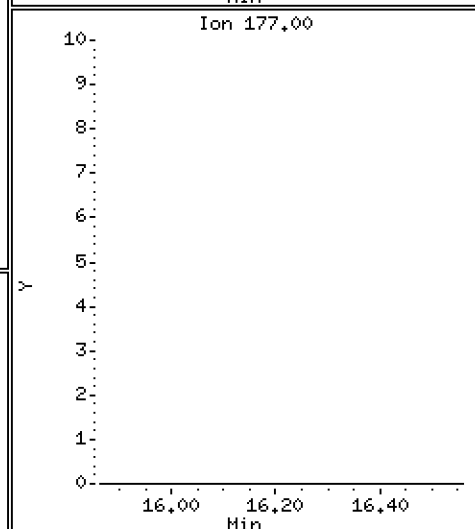
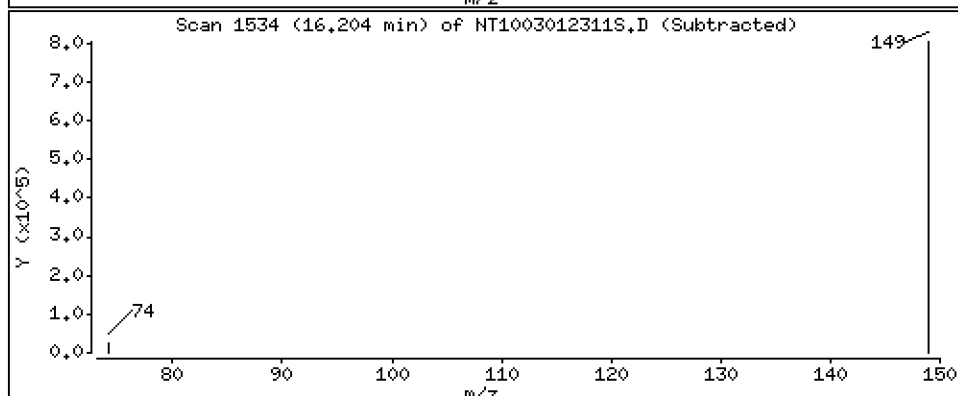
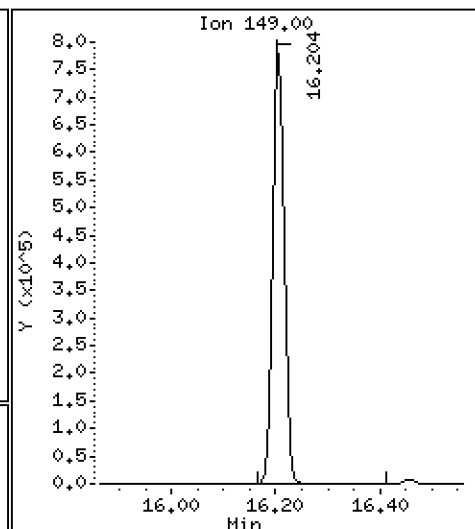
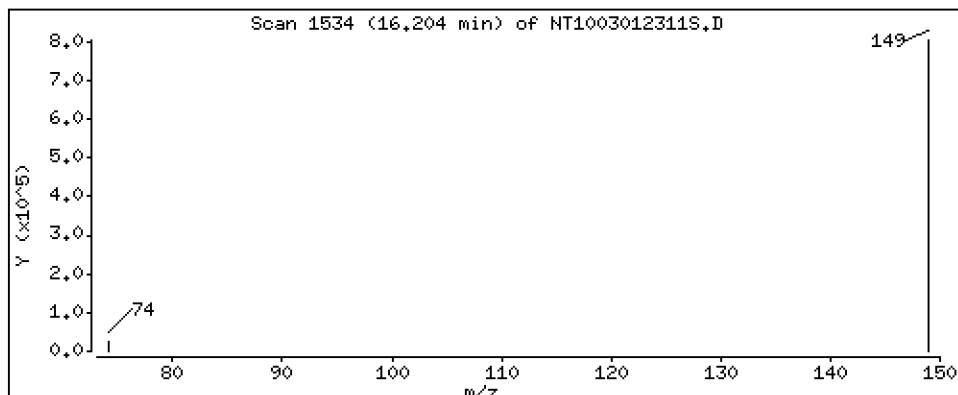
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,979 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

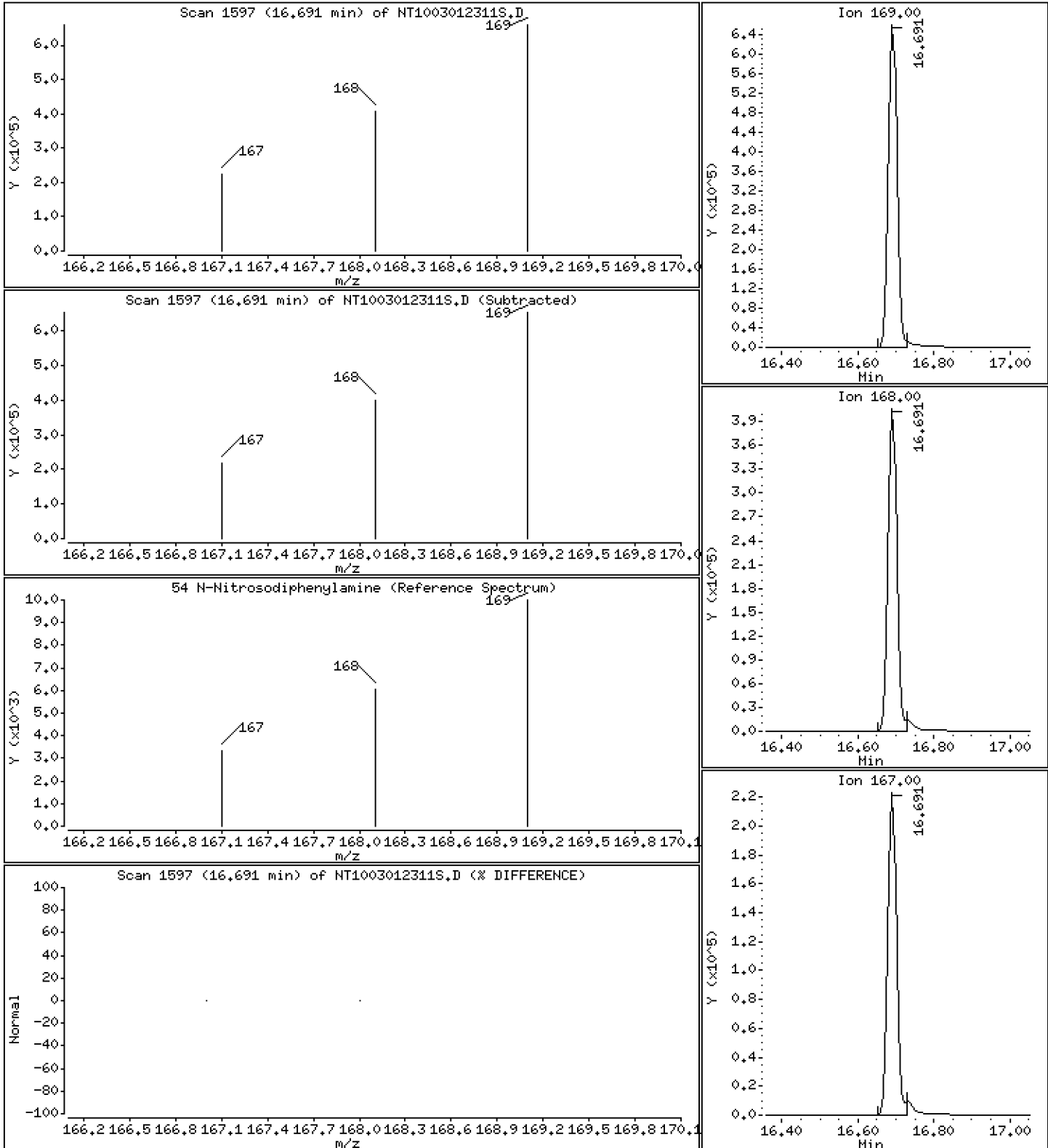
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 5.359 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

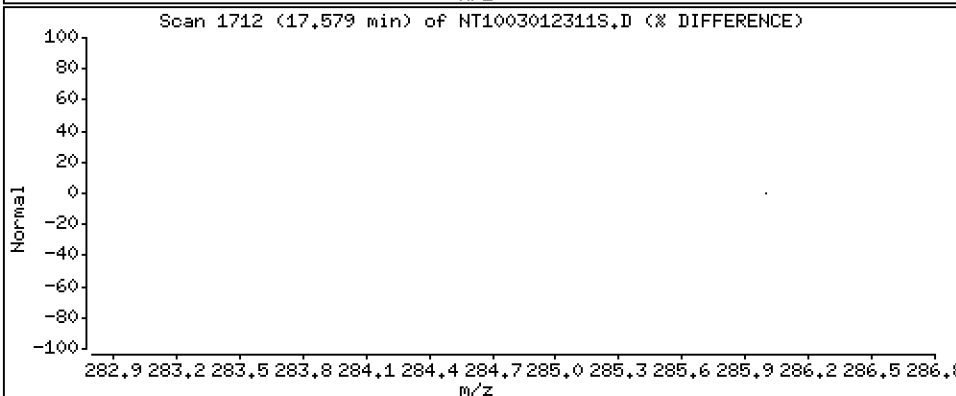
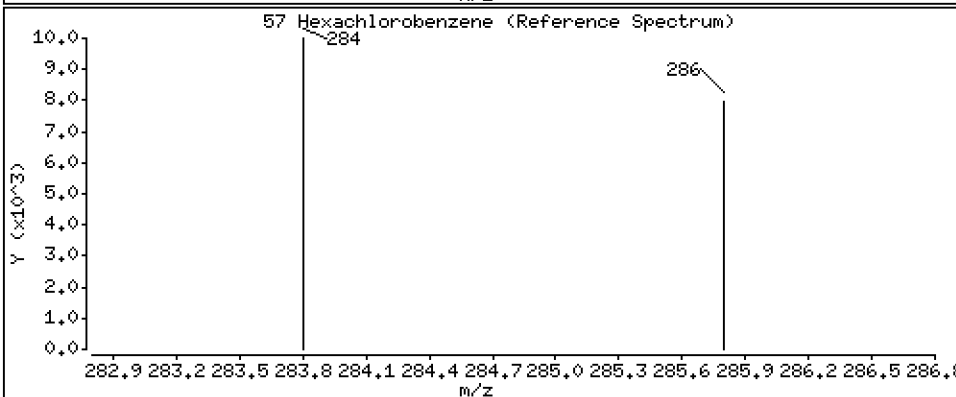
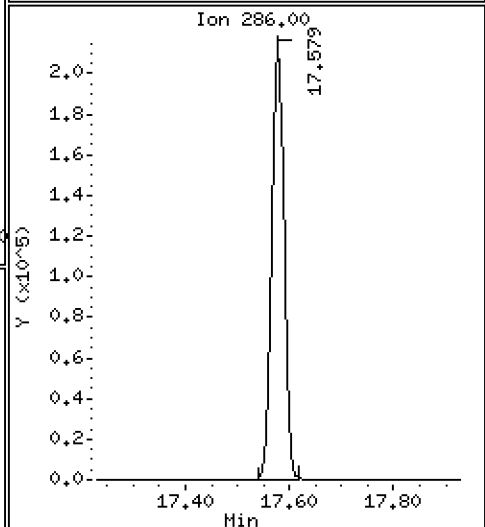
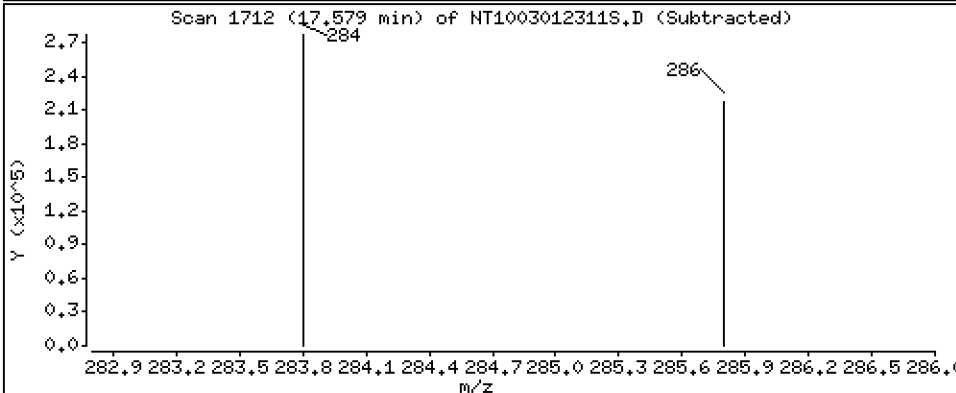
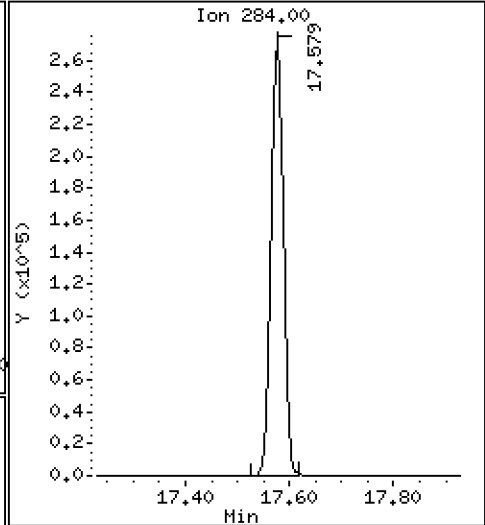
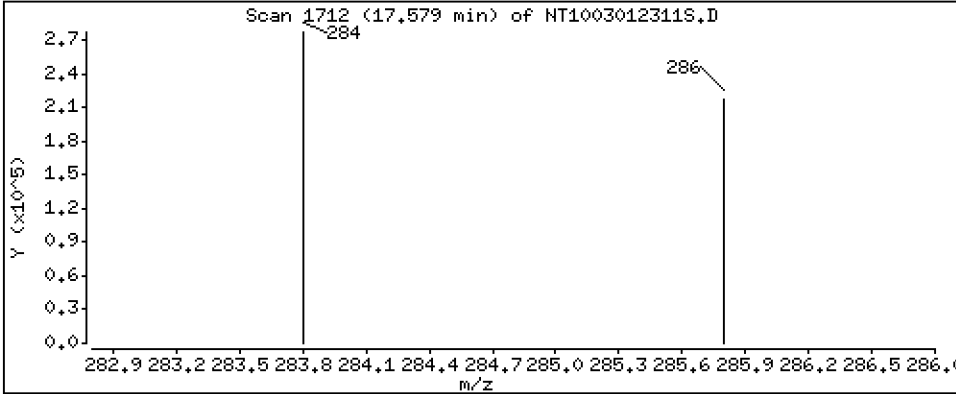
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,866 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

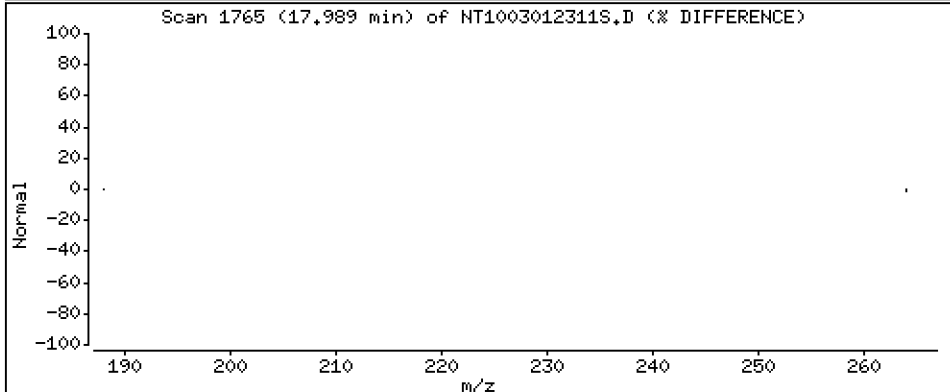
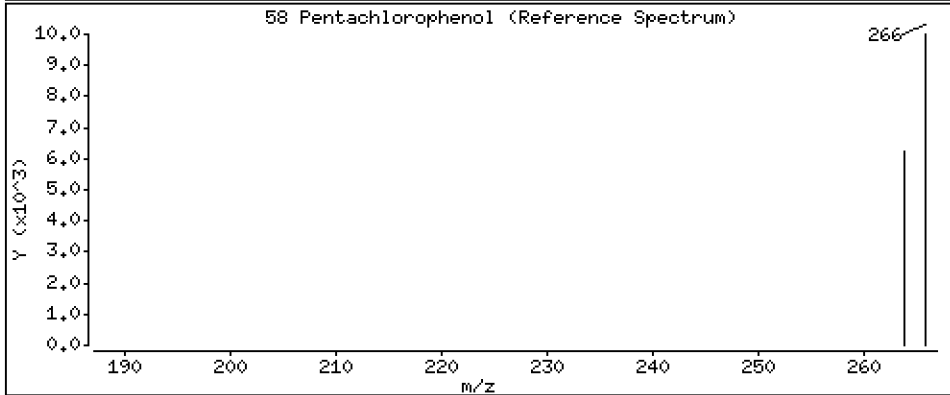
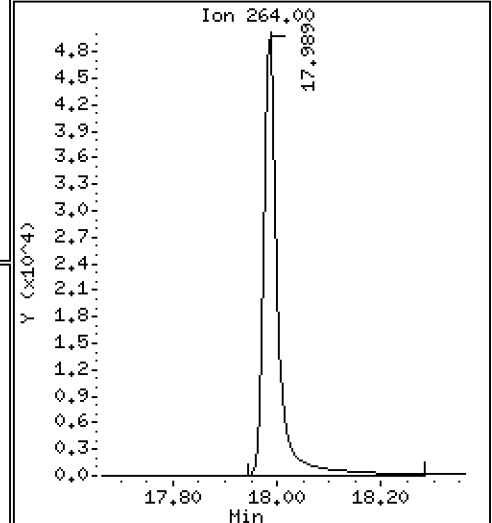
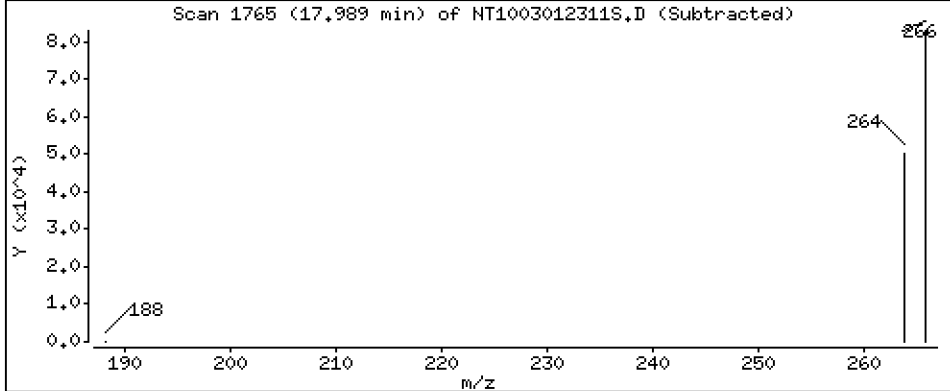
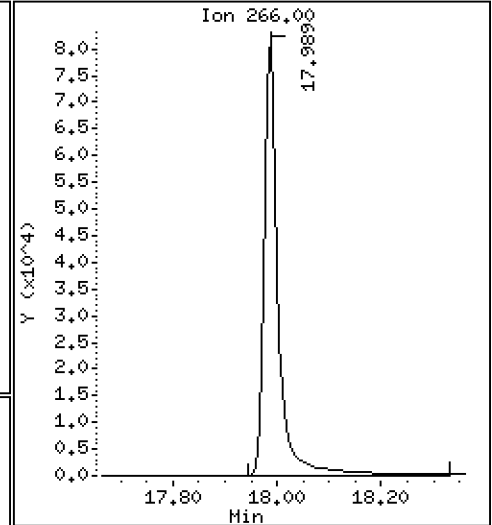
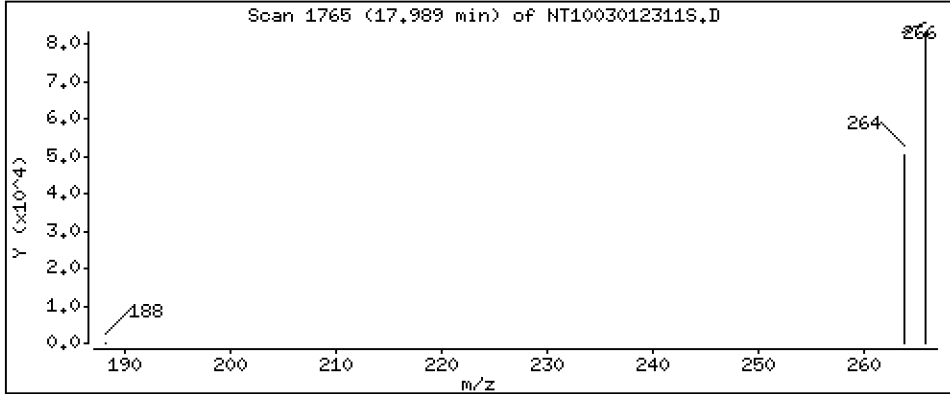
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,912 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

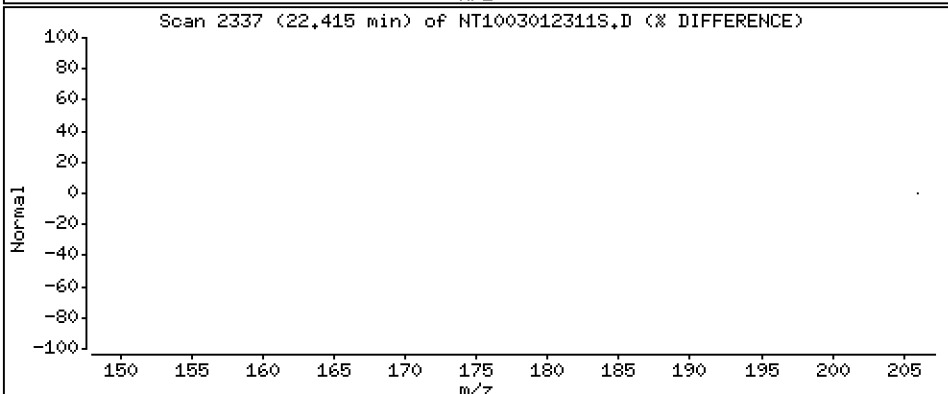
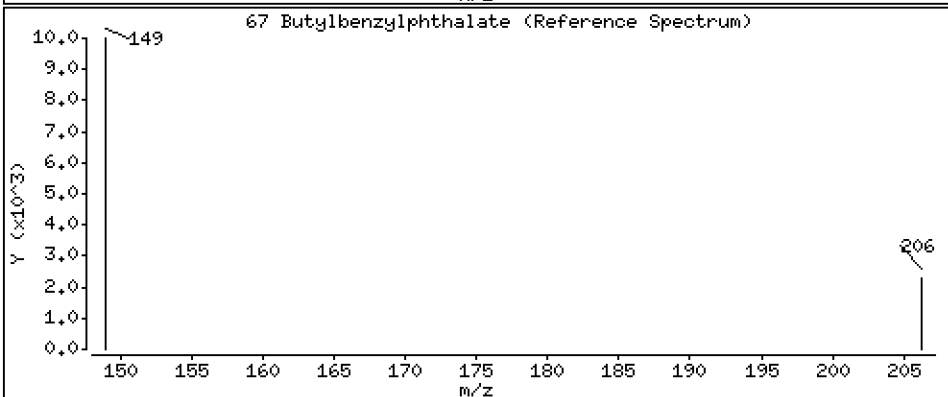
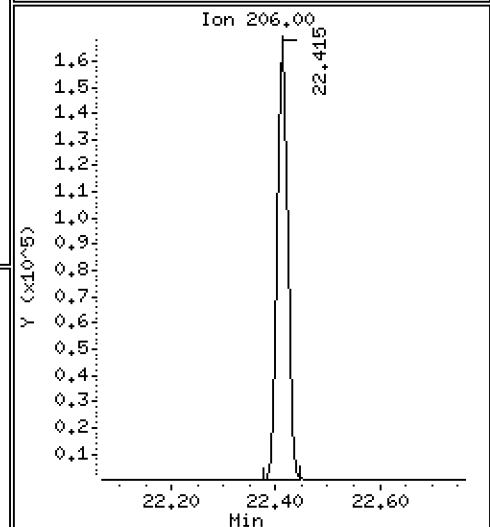
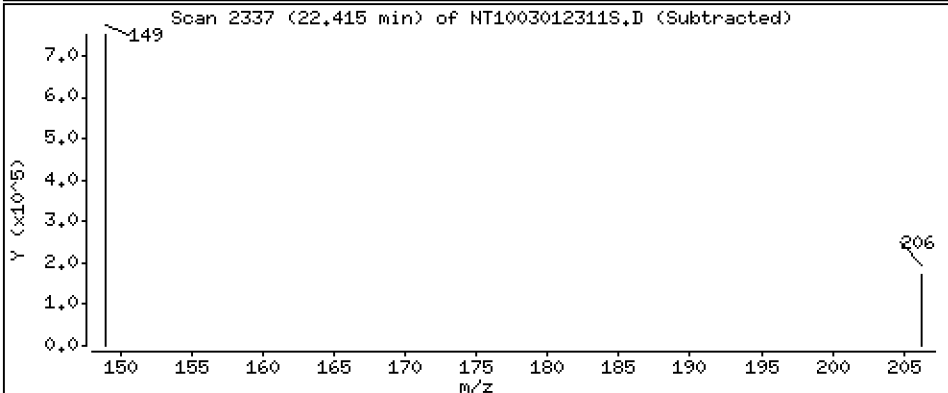
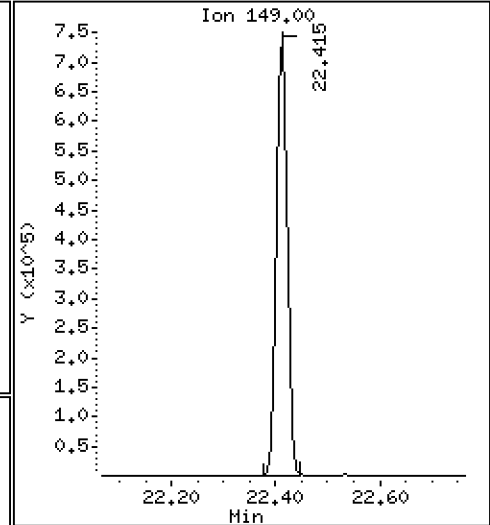
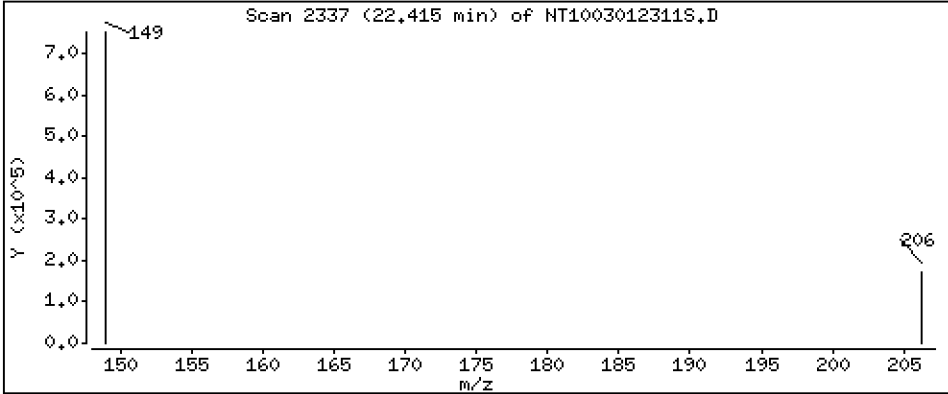
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,689 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

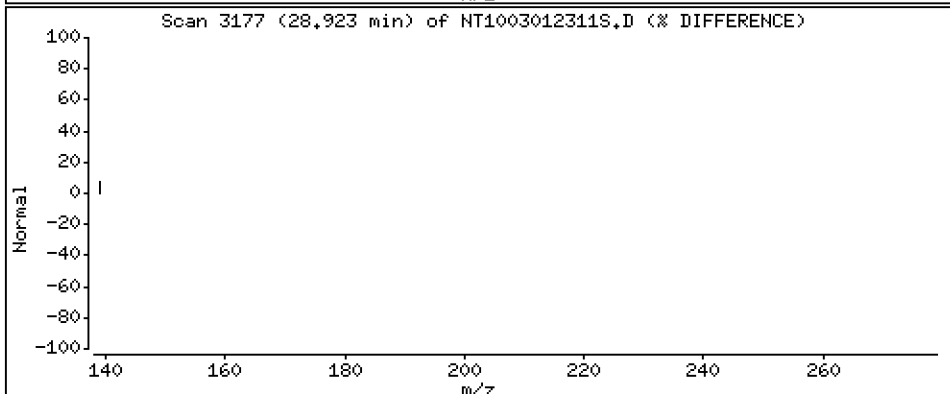
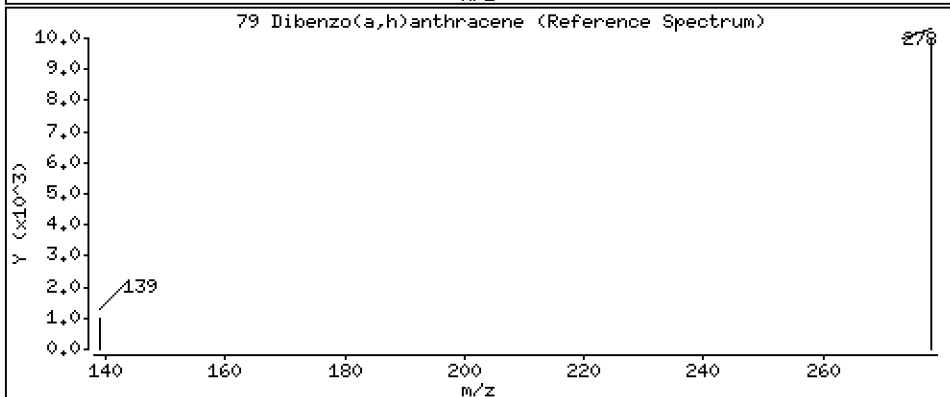
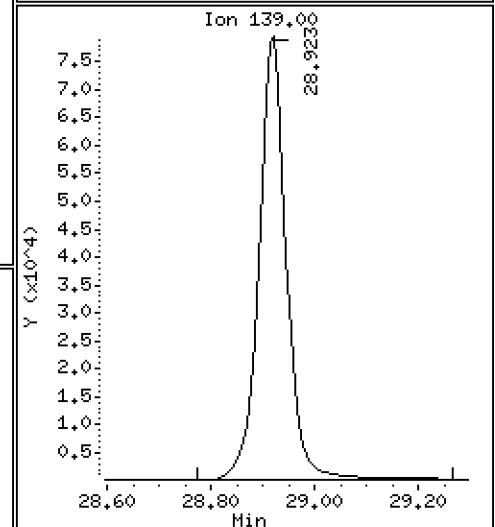
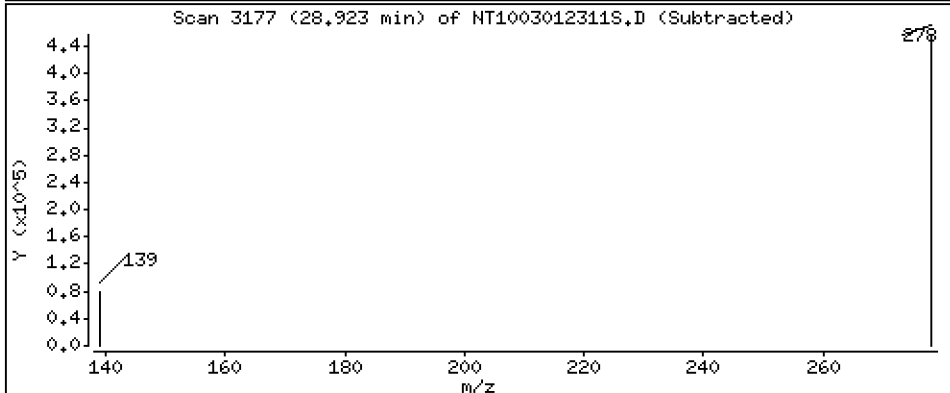
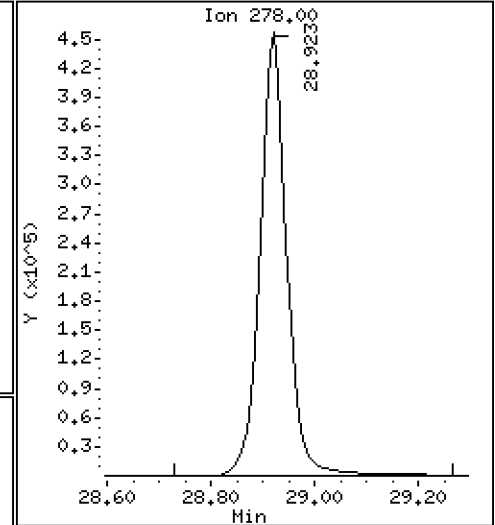
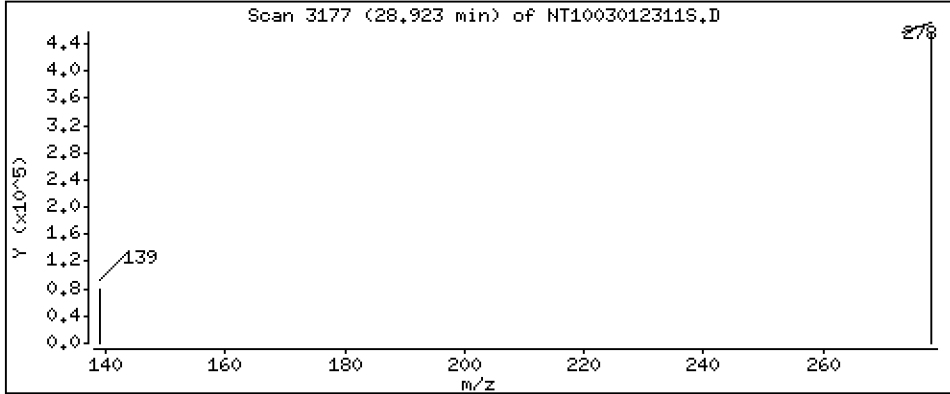
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,760 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

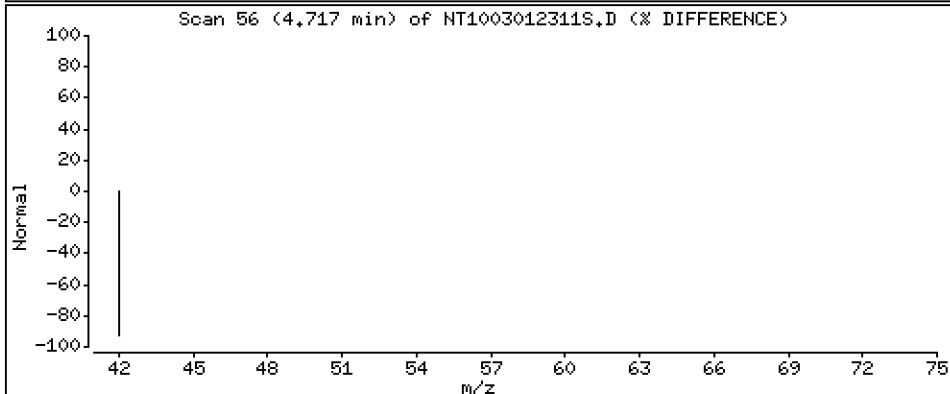
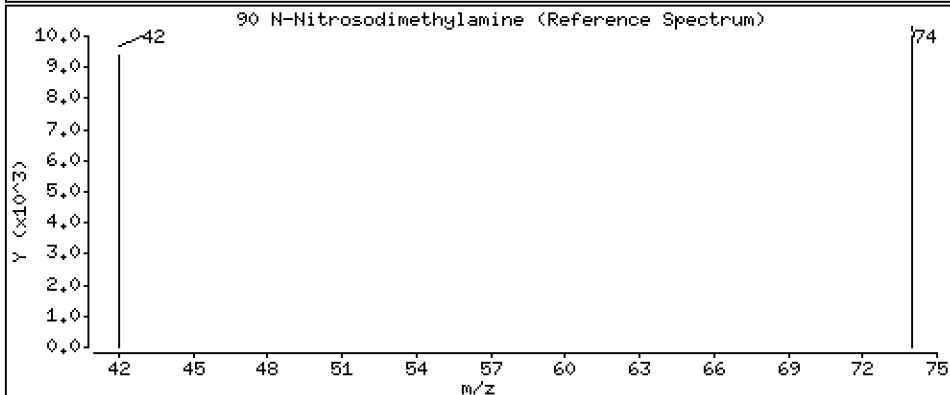
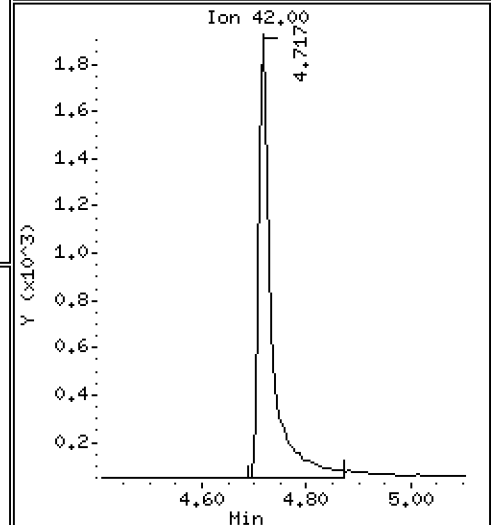
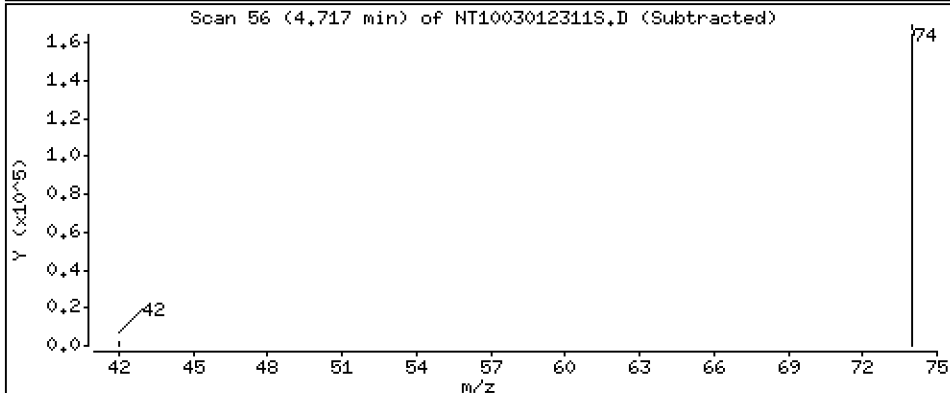
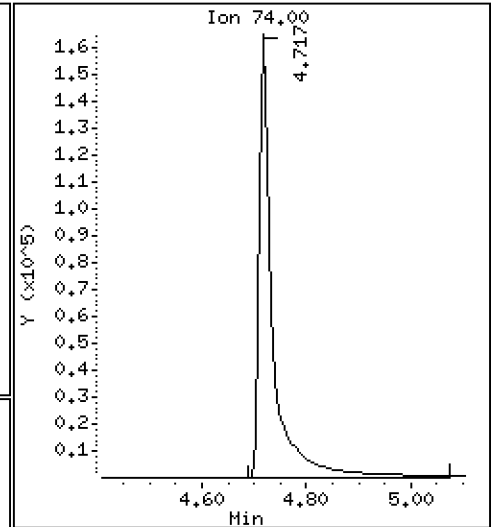
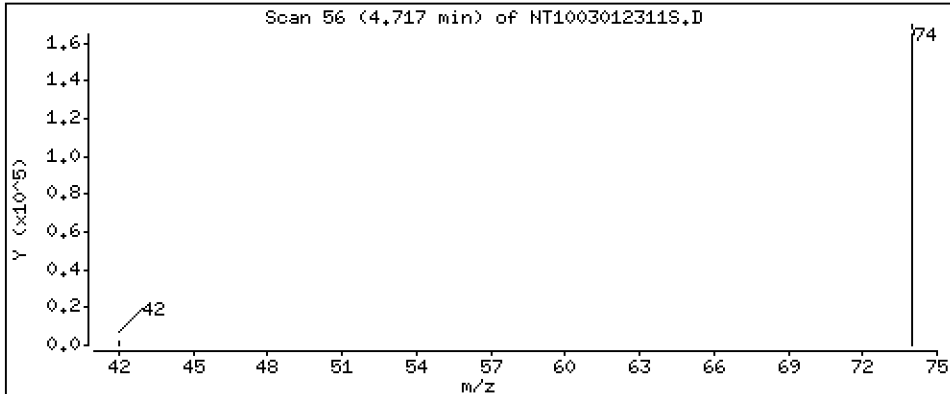
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 6.057 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Inj Date : 01-MAR-2023 21:46 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	3267	0.03768	0.03768	(R)
3 Phenol	94		8.517	8.532	(0.921)	590047	4.50660	4.507	
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	572299	5.08409	5.084	
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	303734	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.275	(1.003)	574537	5.24962	5.250	
11 Benzyl alcohol	79		9.469	9.508	(1.023)	388582	5.10390	5.104	
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	540938	5.14228	5.142	
13 2-Methylphenol	108		9.655	9.671	(1.044)	348452	4.36547	4.365	
15 4-Methylphenol	108		9.943	9.966	(1.075)	379262	4.50495	4.505	
16 N-Nitroso-di-n-propylamine	70		9.982	9.982	(1.079)	330861	5.68451	5.685	
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	357707	3.63670	3.637	
24 Benzoic acid	105		11.099	11.007	(0.947)	380081	6.86990	6.870	
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	402252	4.87012	4.870	
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1147551	4.00000		
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	285002	4.86242	4.862	
39 Dimethylphthalate	163		14.741	14.749	(0.963)	1142178	5.57065	5.571	
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	645730	4.00000		
50 Diethylphthalate	149		16.203	16.211	(1.058)	1156037	5.97883	5.979	
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	998237	5.35897	5.359	
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	424193	4.86607	4.866	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	18.012	(0.978)	155412	3.91206	3.912
* 59 Phenanthrene-d10	188	18.399	18.398	(1.000)	1151000	4.00000	
\$ 66 Terphenyl-d14	244	21.524	21.532	(0.919)	2846	0.02712	0.02712 (R)
67 Butylbenzylphthalate	149	22.415	22.415	(0.957)	1009961	4.68912	4.689
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1297466	4.00000	
* 77 Perylene-d12	264	26.108	26.108	(1.000)	1394899	4.00000	
79 Dibenzo(a,h)anthracene	278	28.922	28.946	(1.108)	1657122	4.76032	4.760
90 N-Nitrosodimethylamine	74	4.717	4.755	(0.510)	310951	6.05685	6.057

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	303734	-5.12
27 Naphthalene-d8	1136019	568010	2272038	1147551	1.02
42 Acenaphthene-d10	636993	318497	1273986	645730	1.37
59 Phenanthrene-d10	1093620	546810	2187240	1151000	5.25
69 Chrysene-d12	1000300	500150	2000600	1297466	29.71
77 Perylene-d12	1058448	529224	2116896	1394899	31.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012311S.D

Lab ID: SLC0143-SCV1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.947	0.000	0.9467		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



## SECOND-SOURCE CALIBRATION VERIFICATION

### EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GC00032

Laboratory ID: SLC0143-SCV1

Sequence: SLC0143

Standard ID: K010066

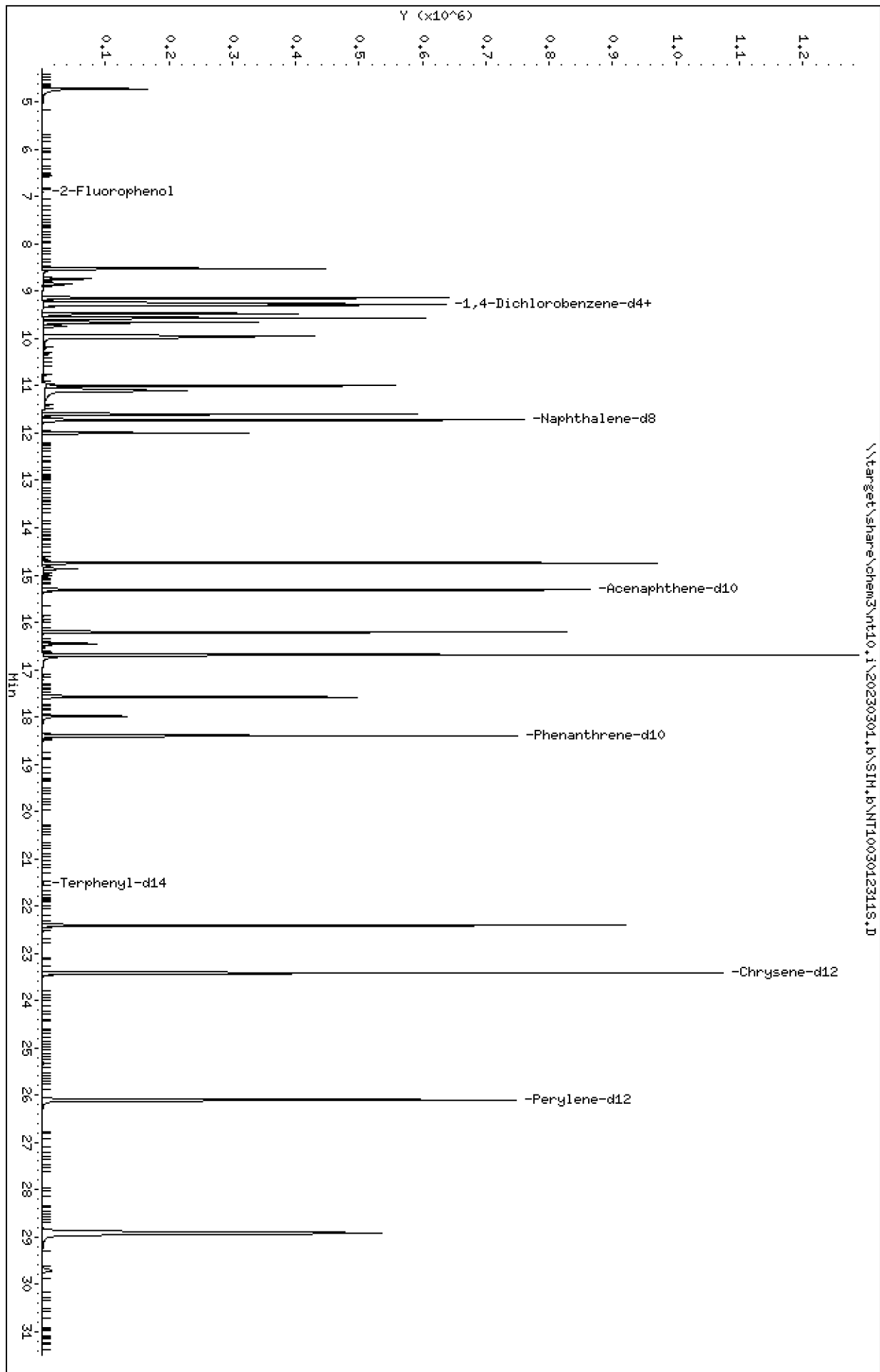
ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	5.2	5.0	20.00
1,2-Dichlorobenzene	5.0000	5.1	2.8	20.00
Benzyl Alcohol	5.0000	5.1	2.1	20.00
Benzoic acid	10.000	6.9	-31.3 *	20.00
2,4-Dimethylphenol	5.0000	3.6	-27.3 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-2.6	20.00
N-Nitrosodiphenylamine	5.0000	5.4	7.2	20.00
Pentachlorophenol	5.0000	3.9	-21.8 *	20.00
2-Fluorophenol	7.5000	0.0377	-99.5	
p-Terphenyl-d14	5.0000	0.0271	-99.5	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D  
Date: 01-MAR-2023 21:46  
Client ID:  
Sample Info: SED-SCV1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

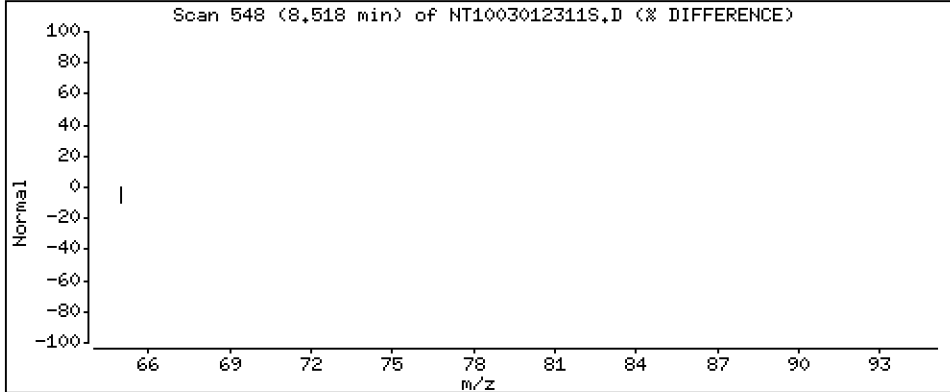
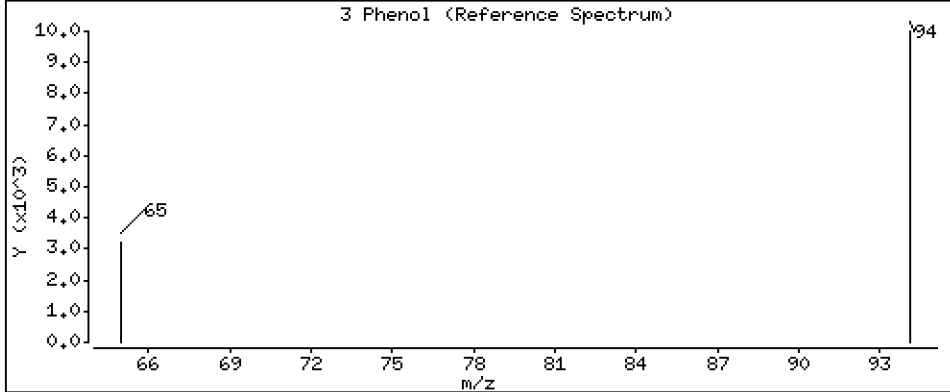
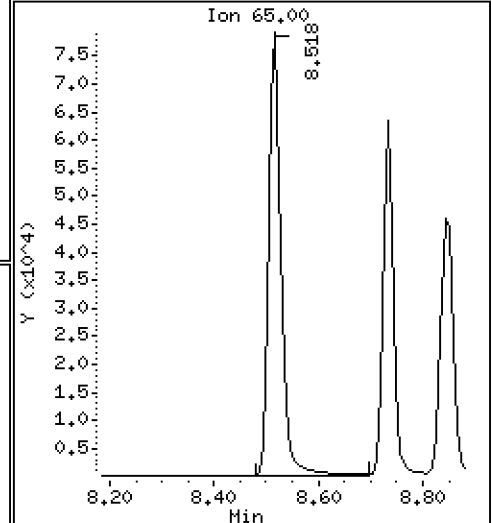
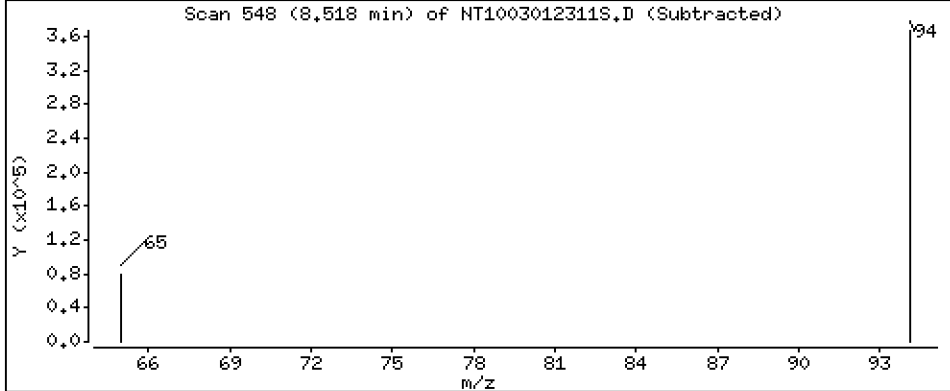
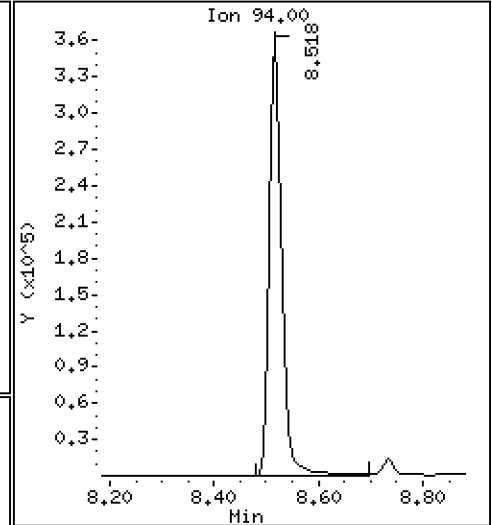
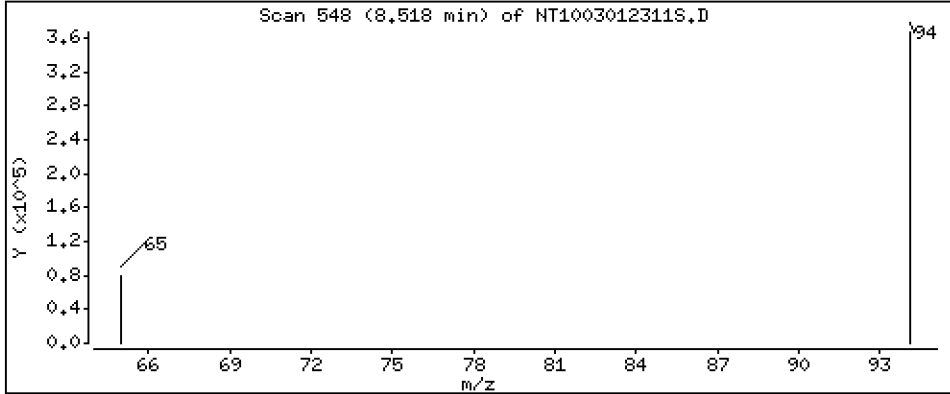
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.507 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

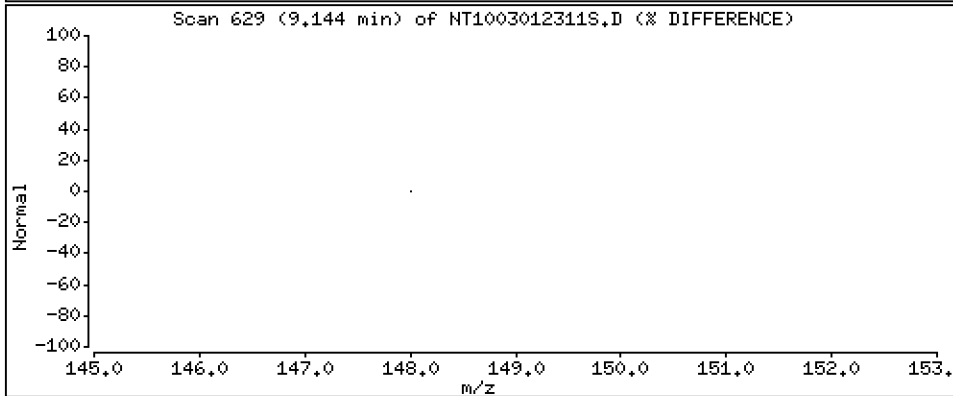
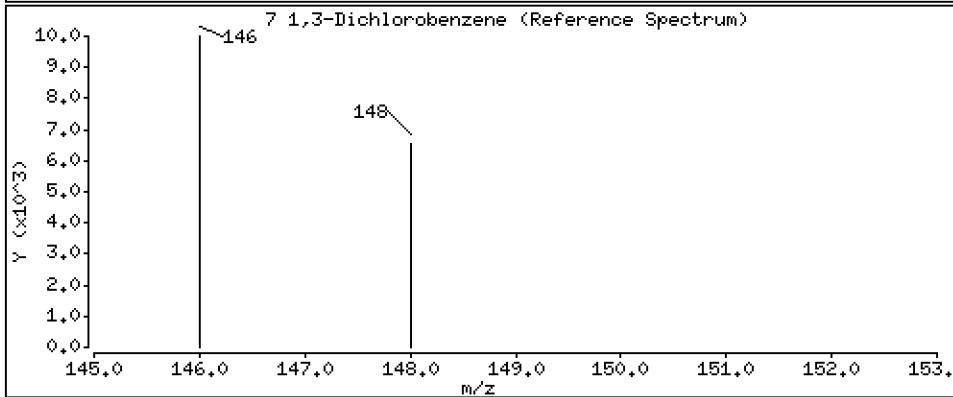
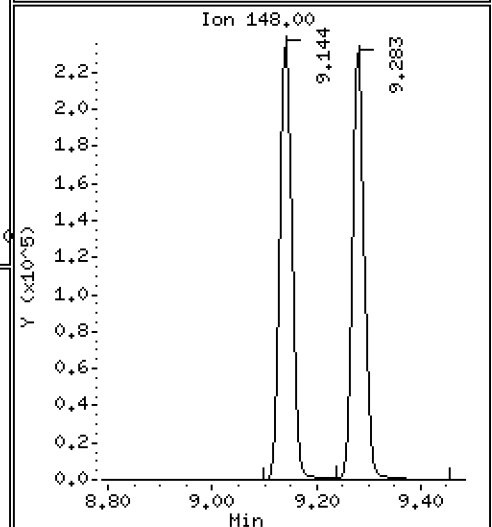
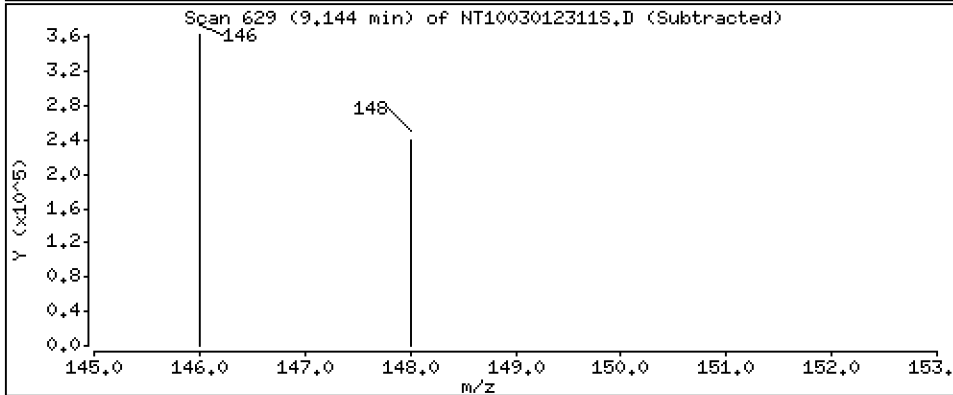
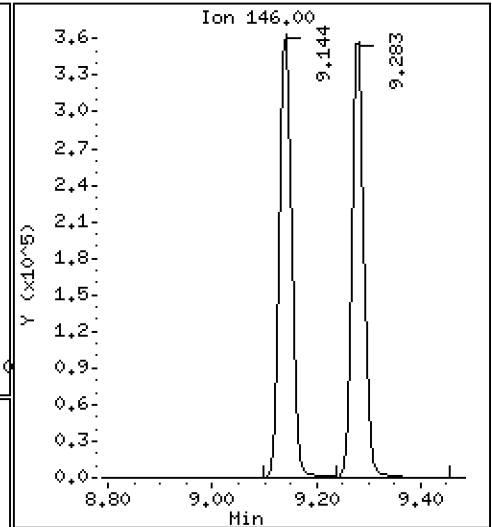
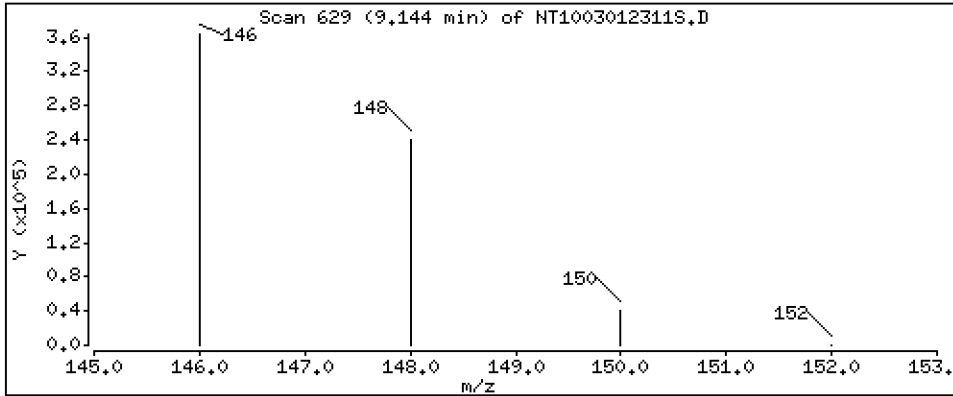
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 5.084 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

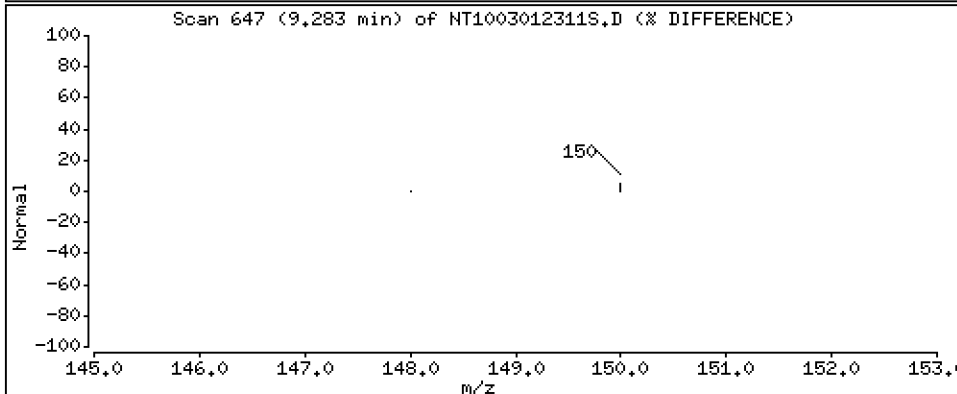
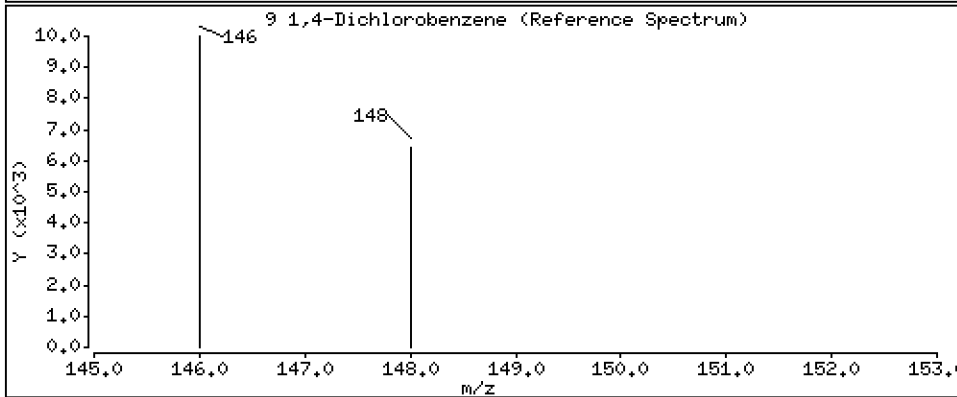
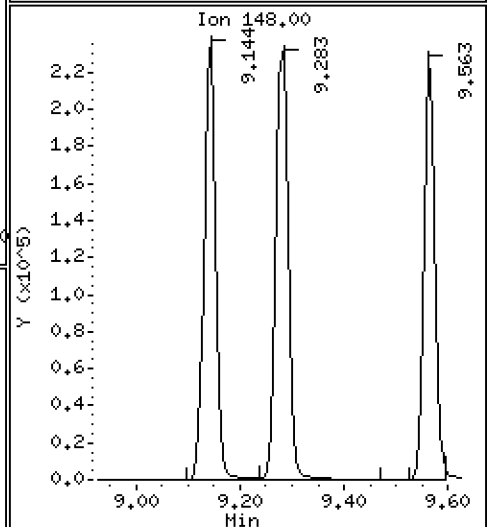
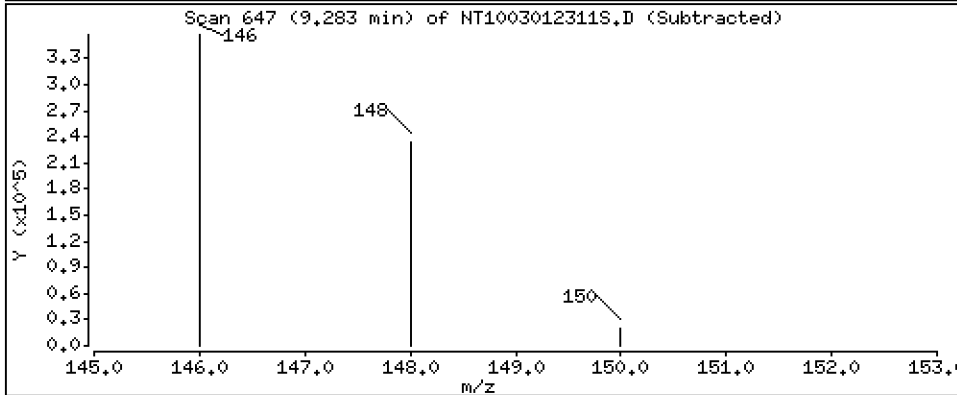
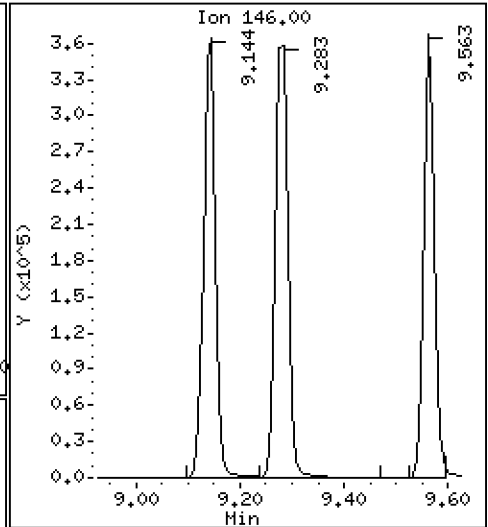
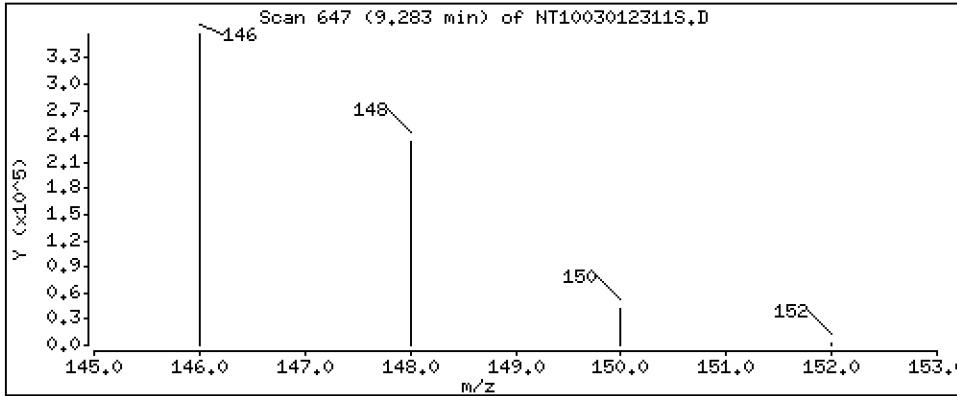
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9,1,4-Dichlorobenzene

Concentration: 5,250 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

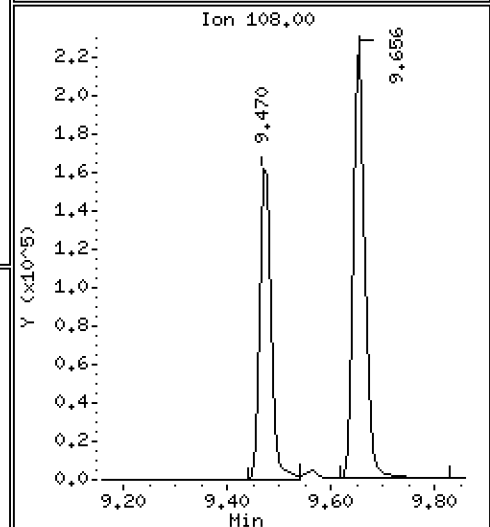
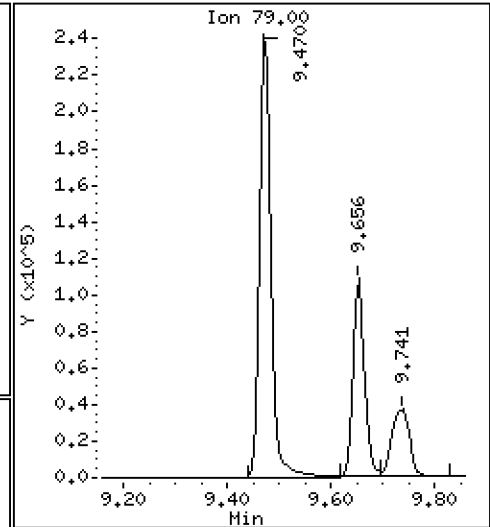
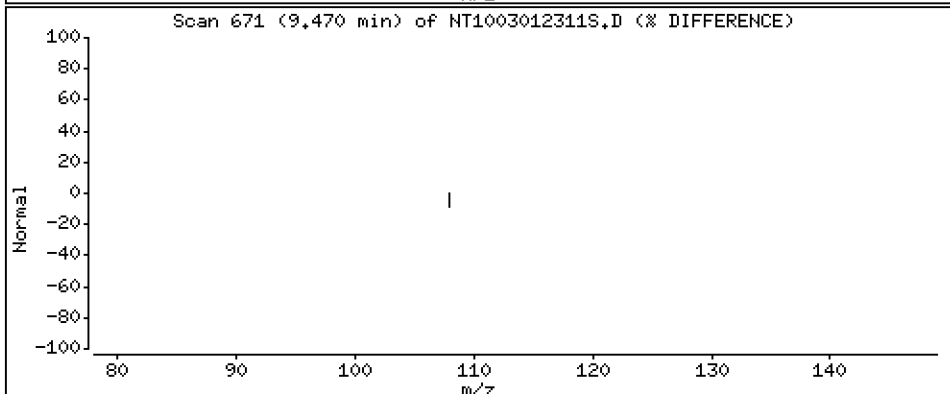
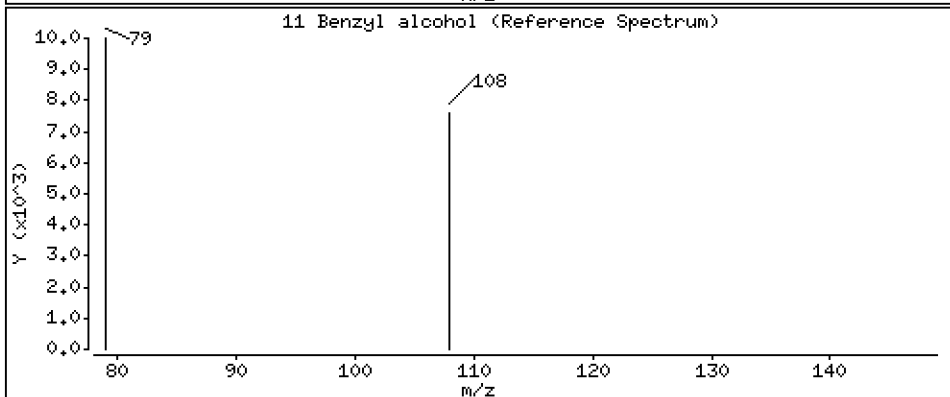
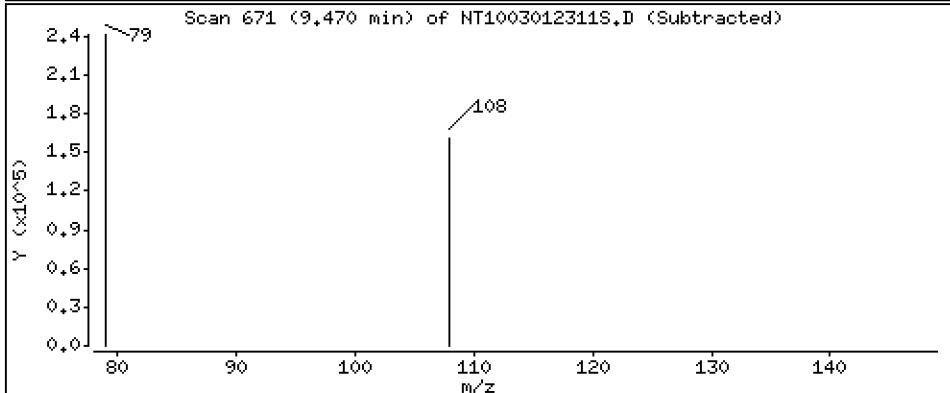
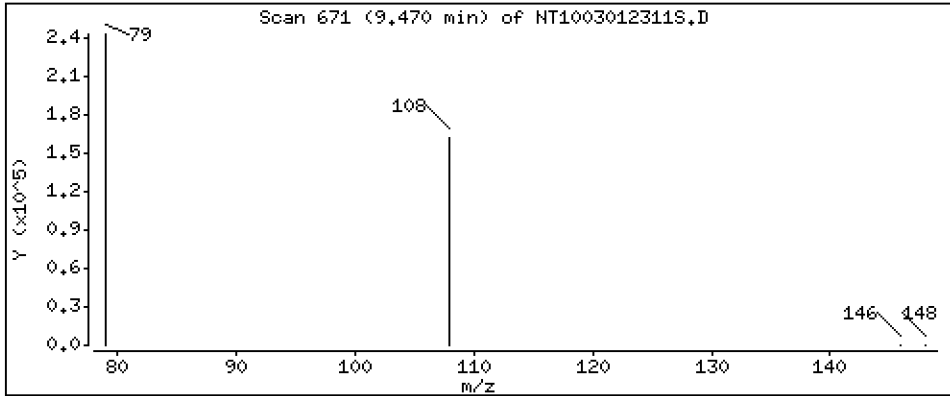
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5,104 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

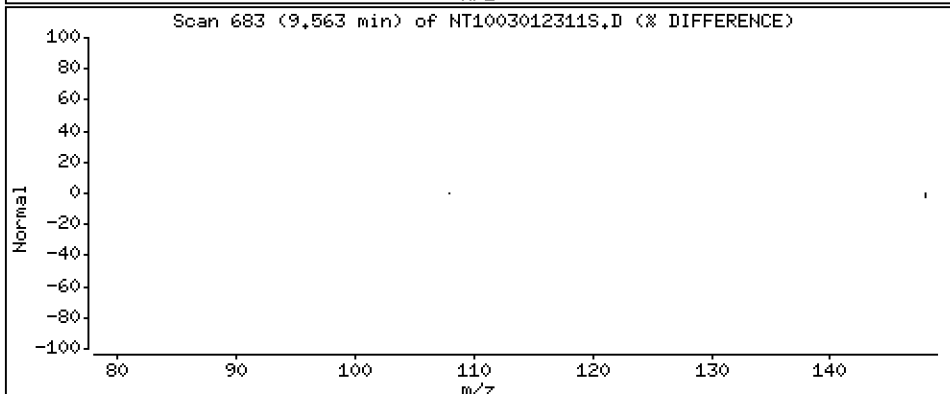
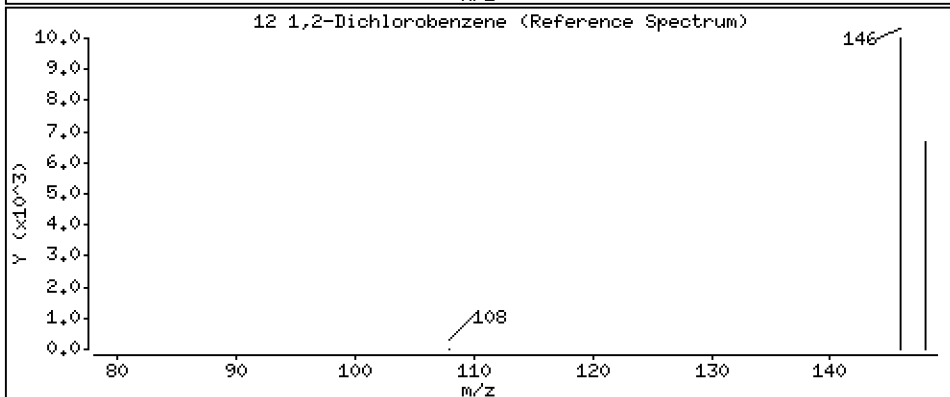
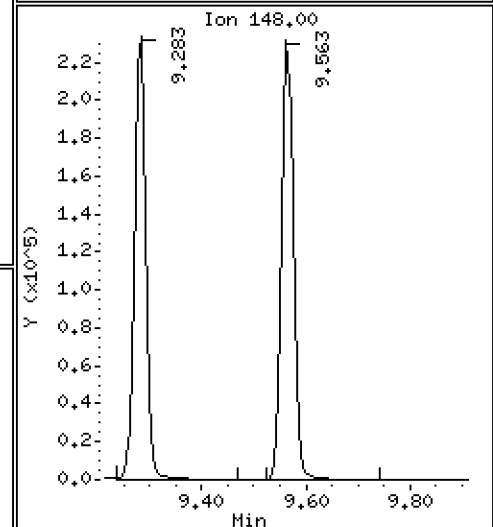
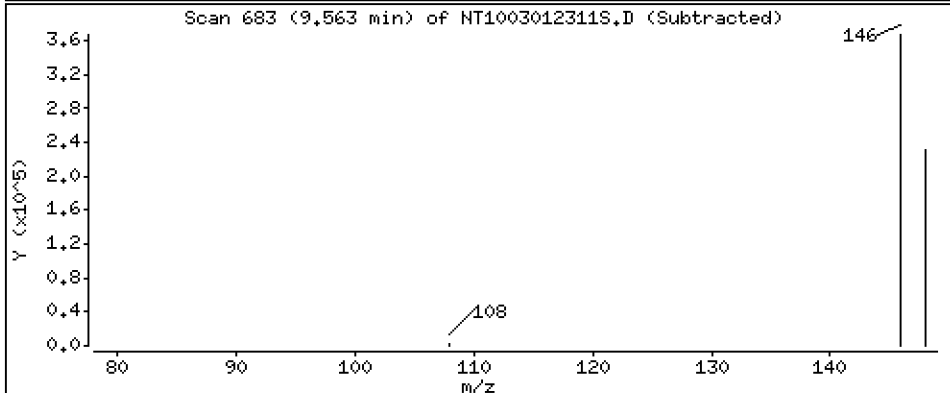
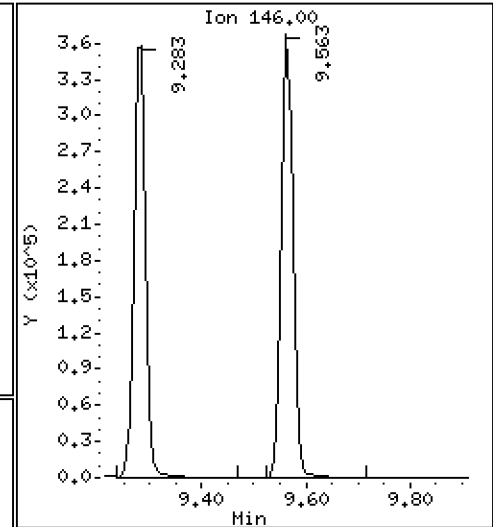
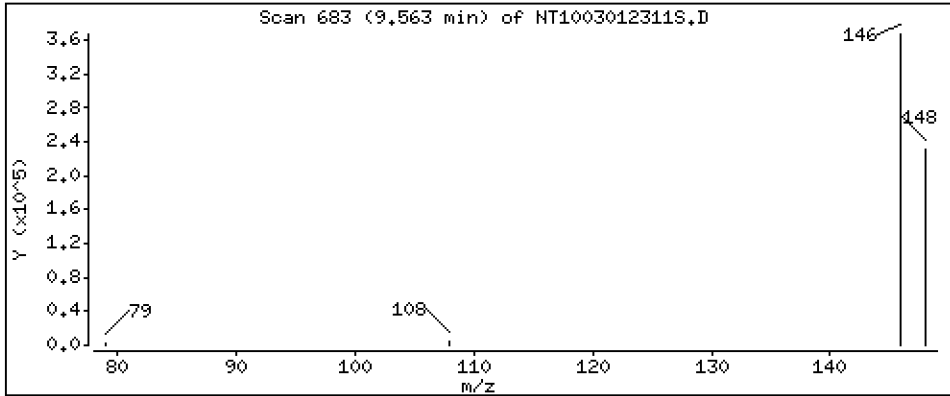
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5,142 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

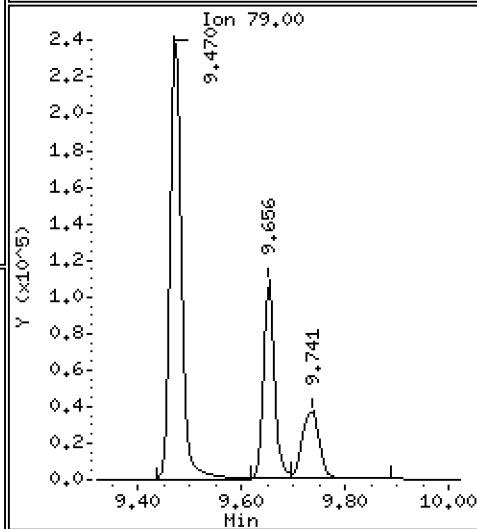
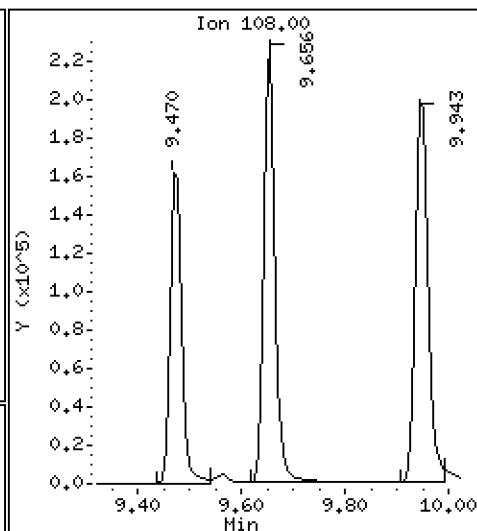
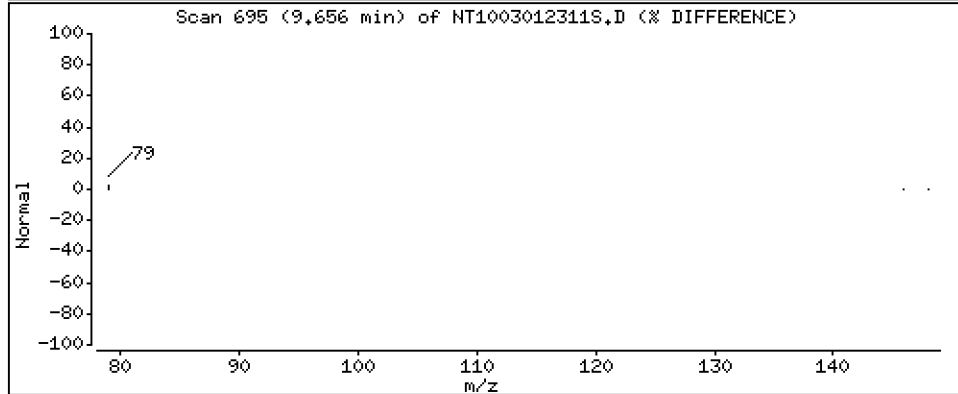
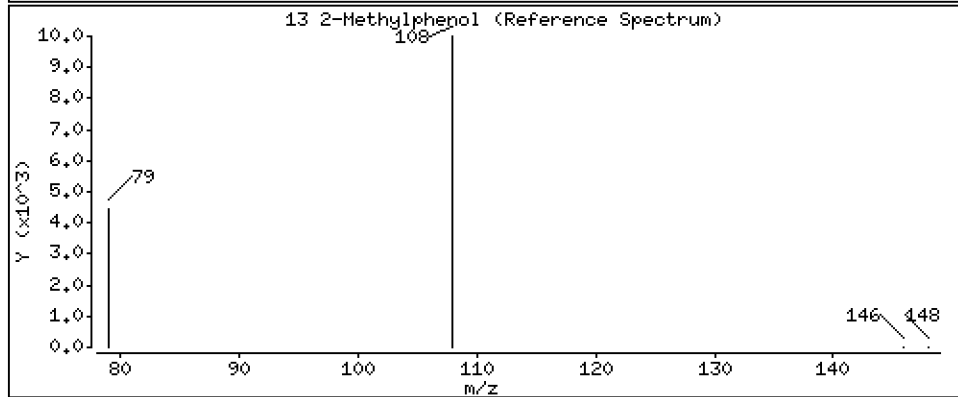
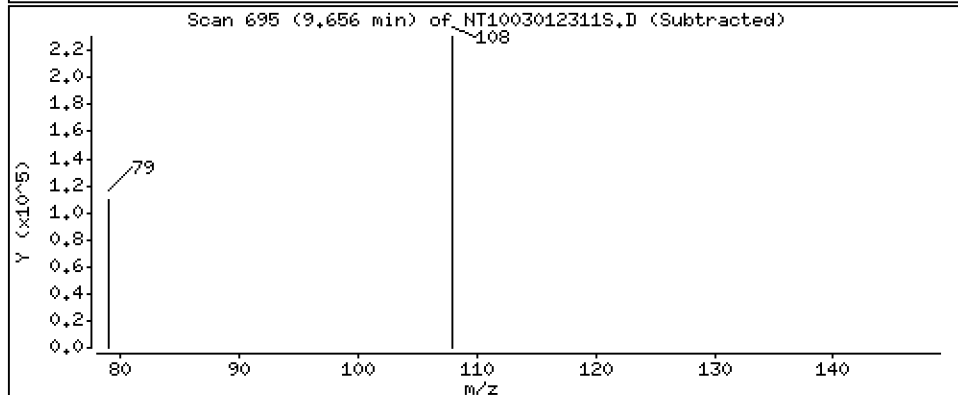
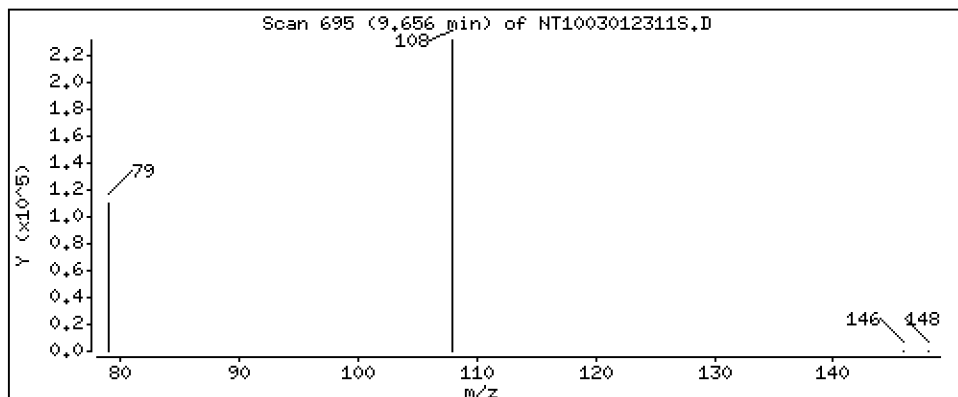
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.365 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

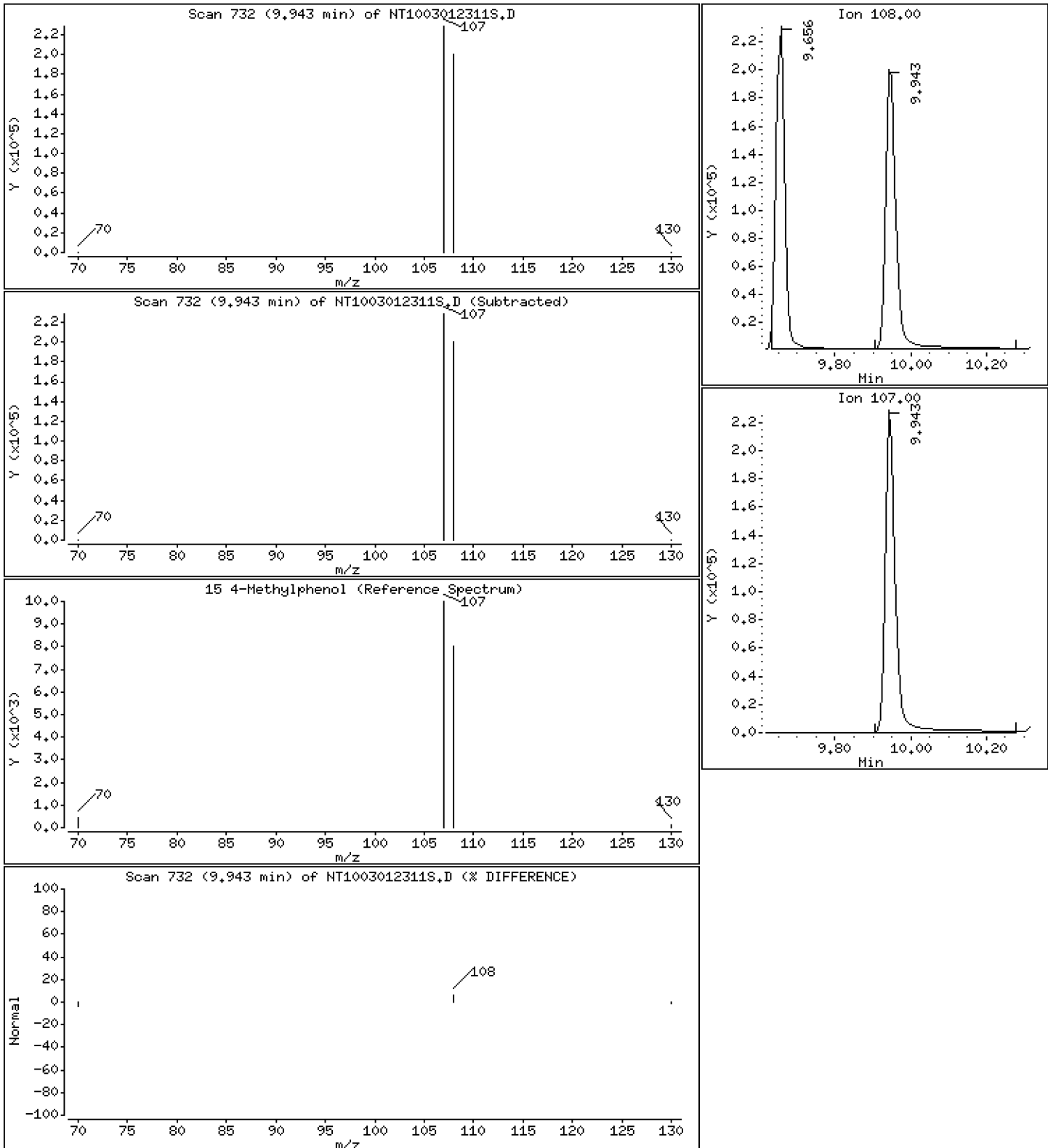
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.505 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

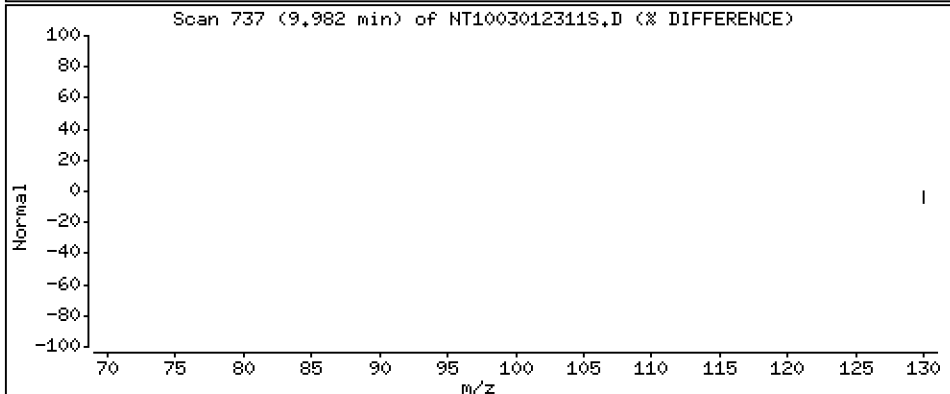
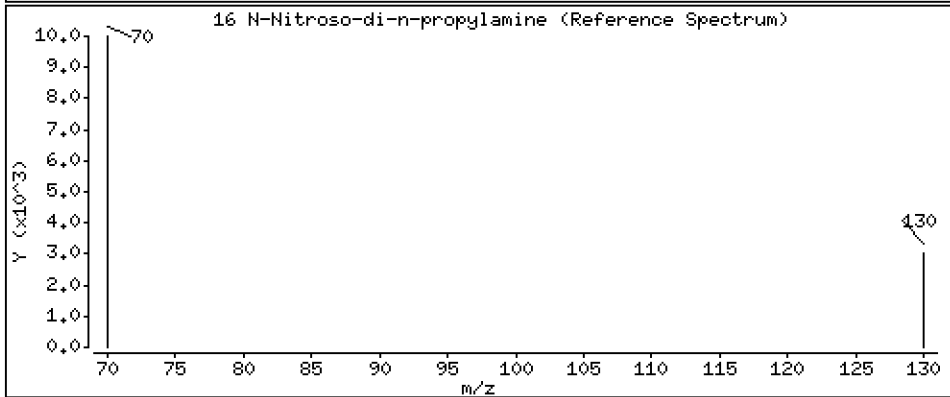
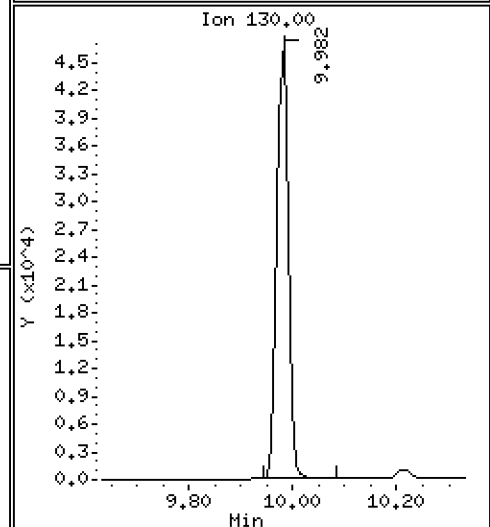
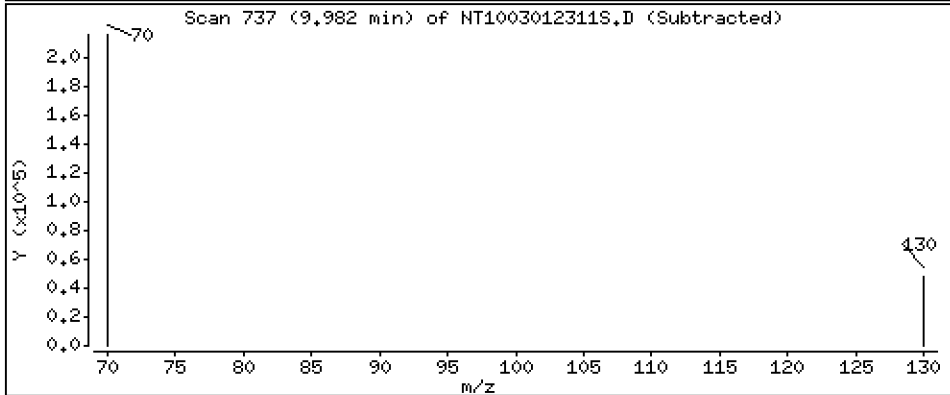
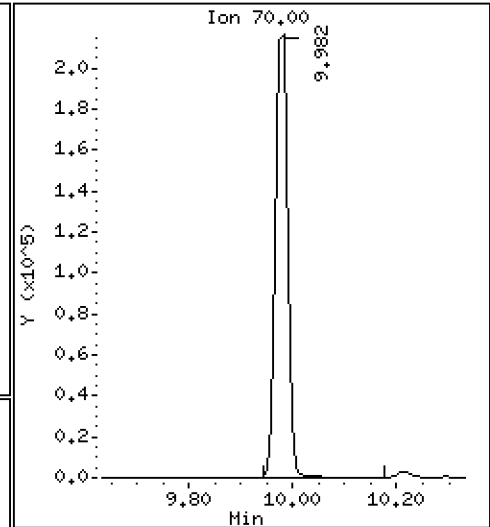
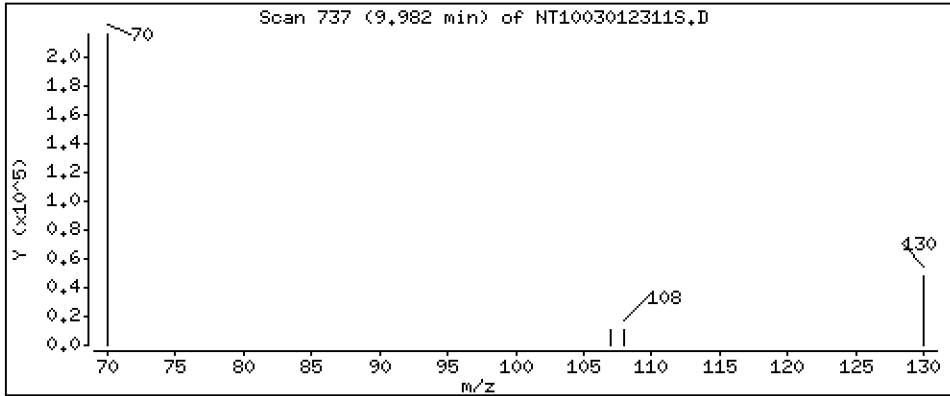
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,685 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

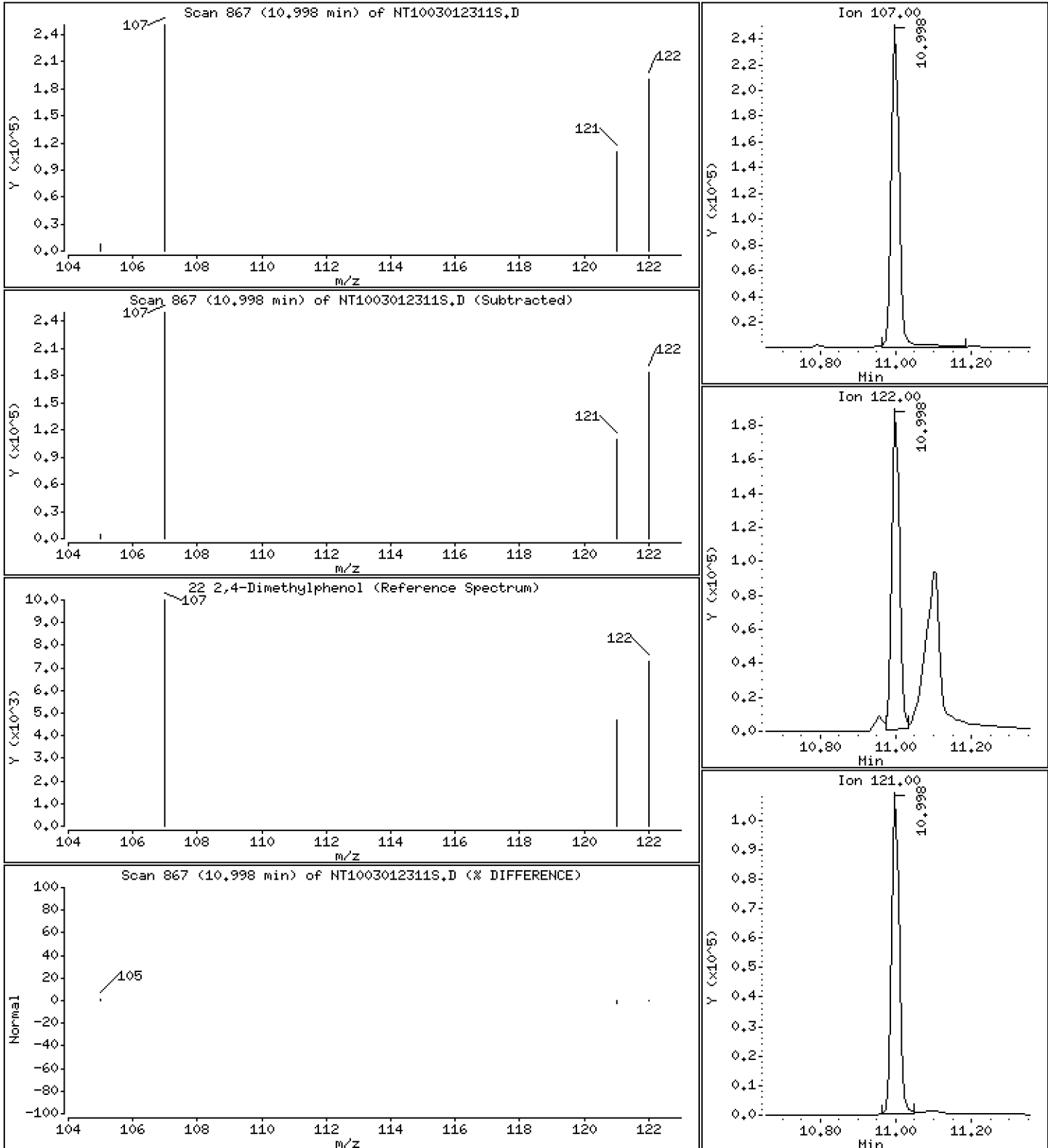
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 3.637 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

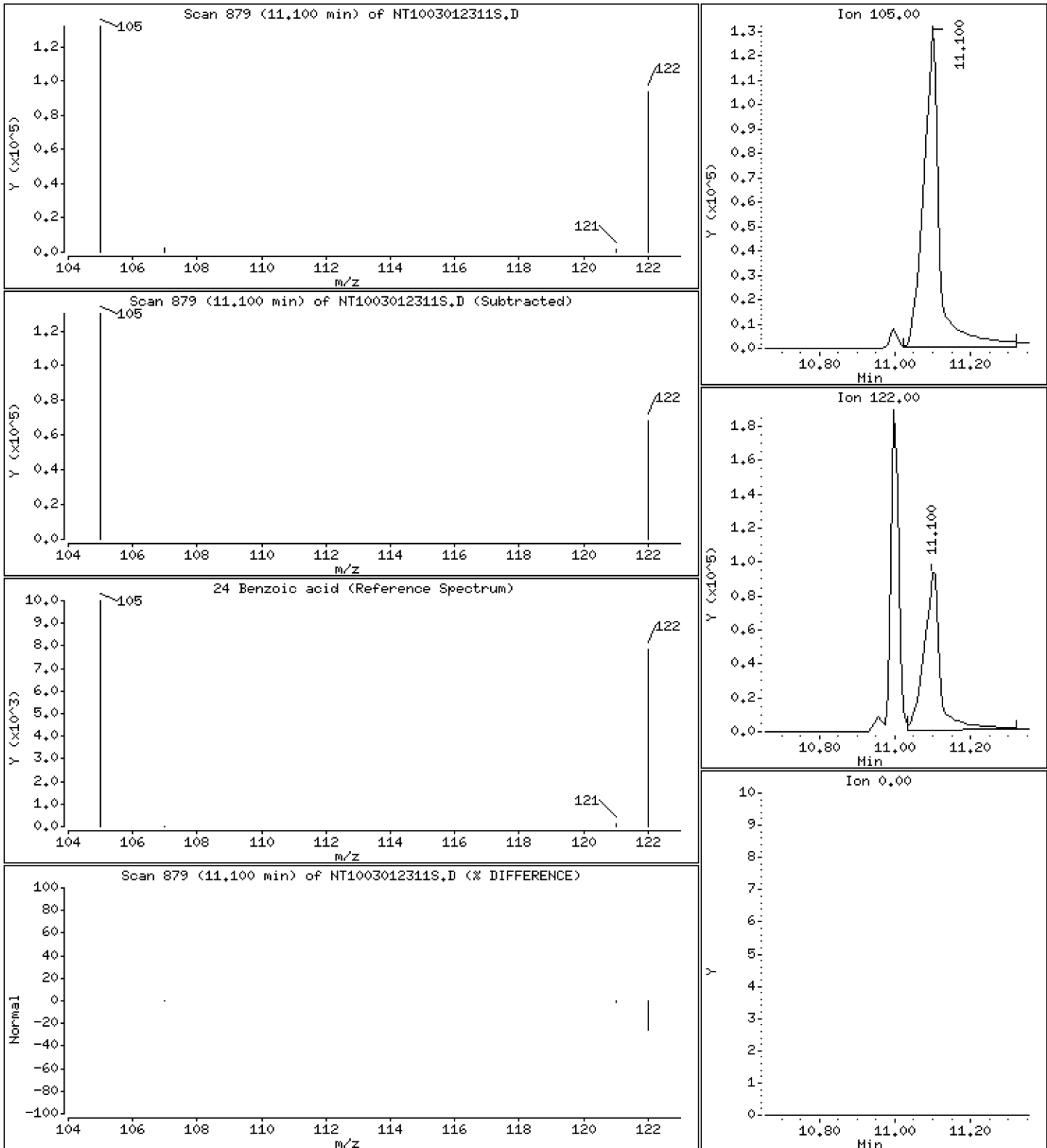
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 6,870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

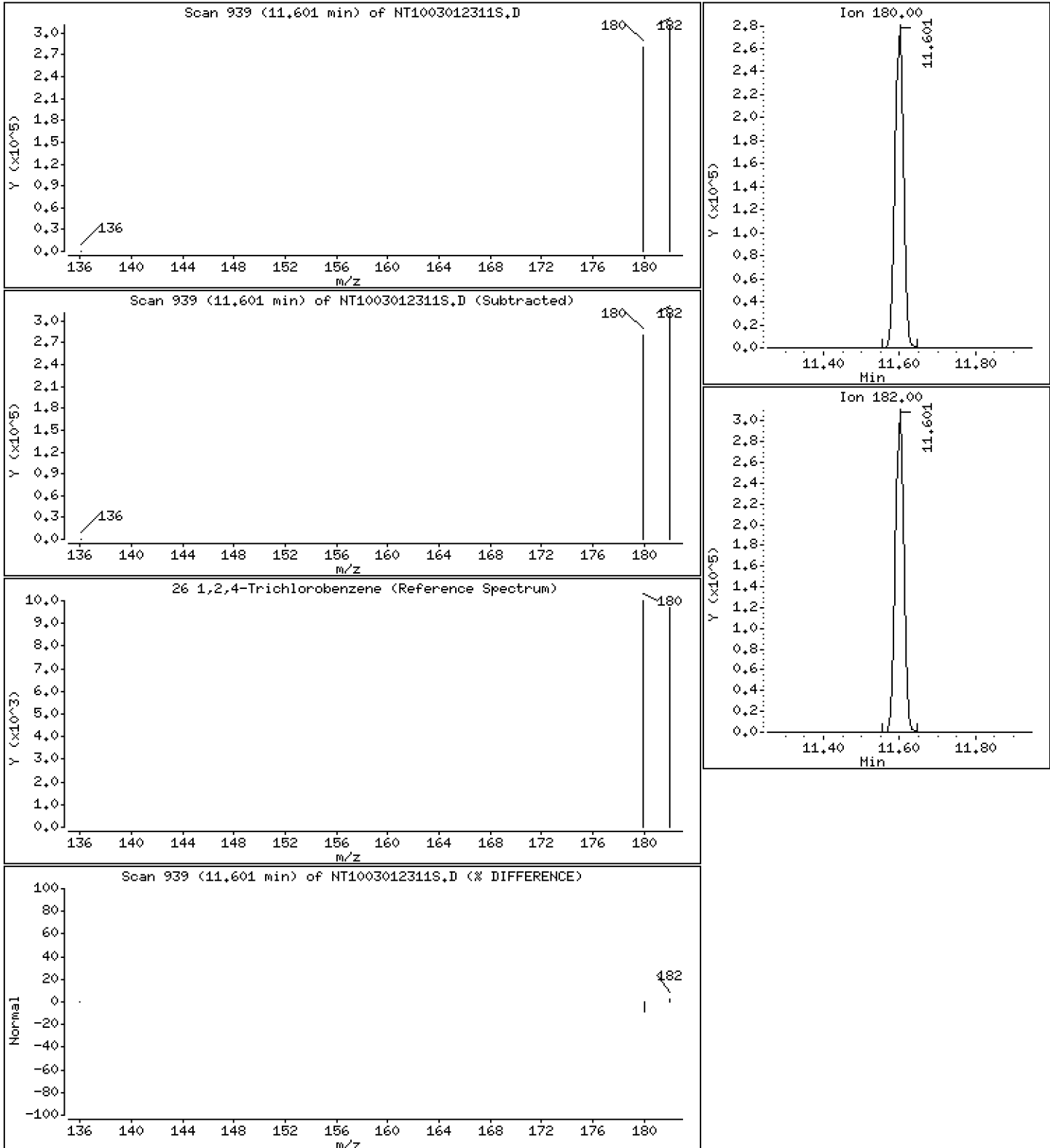
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

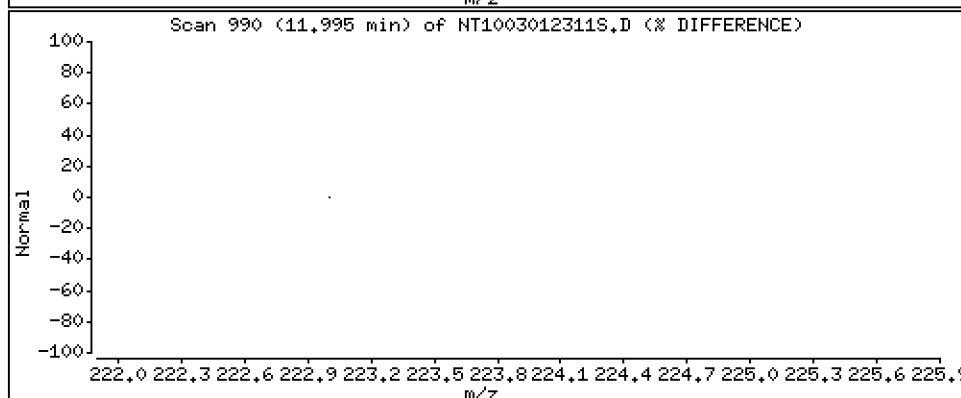
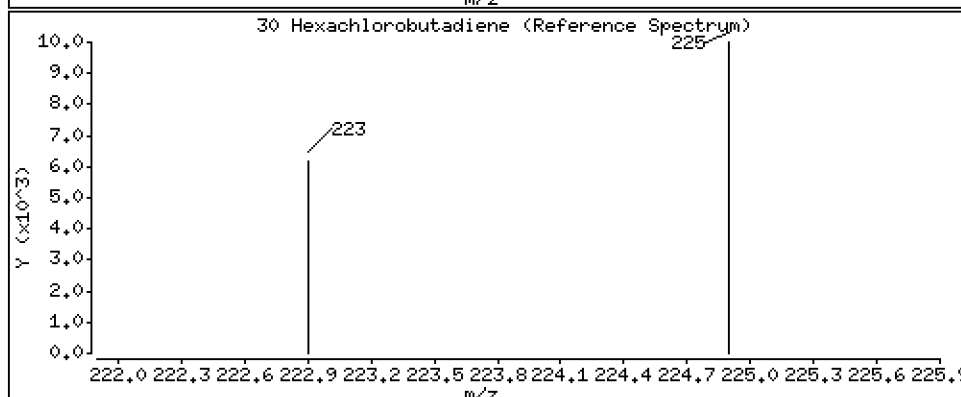
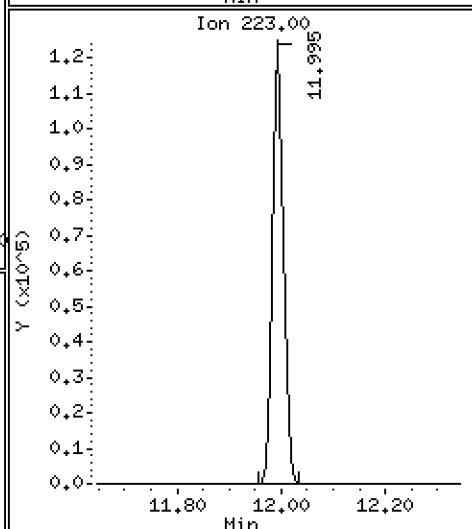
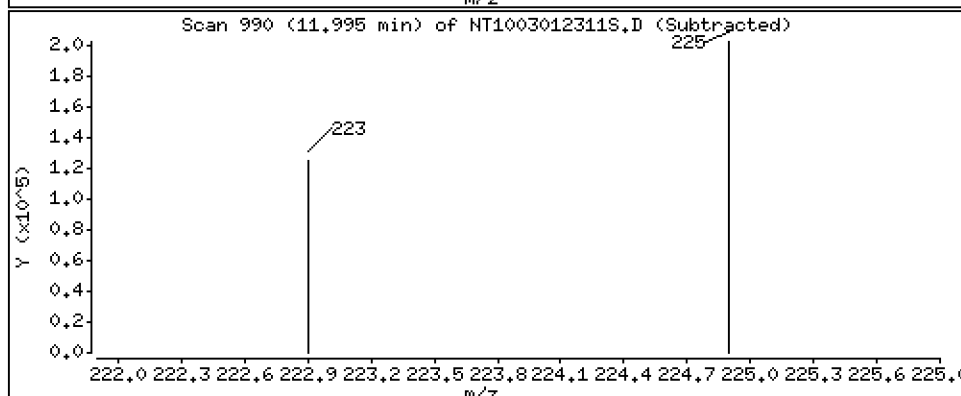
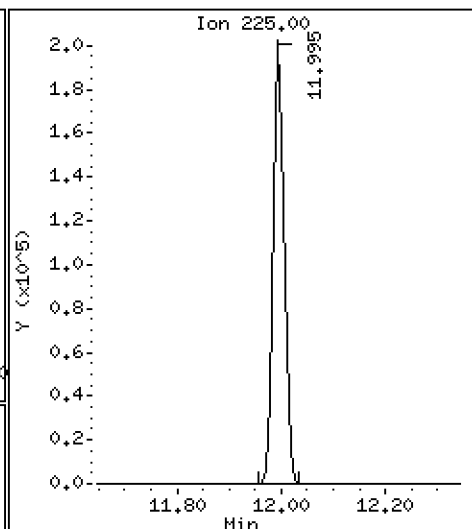
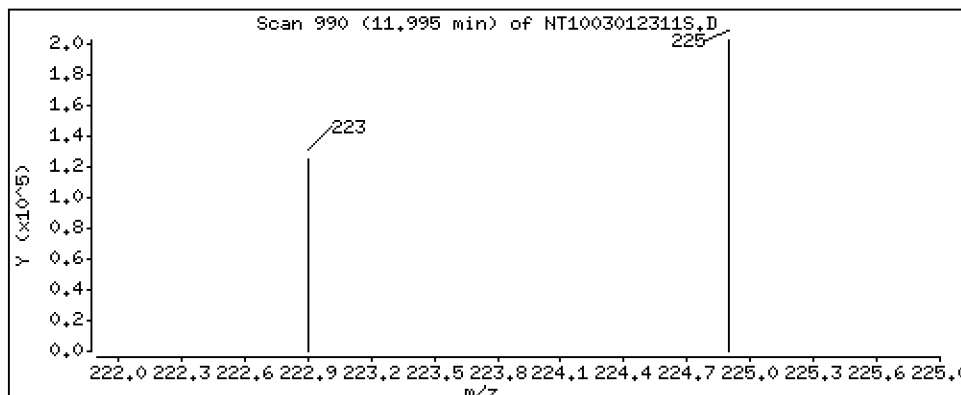
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,862 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

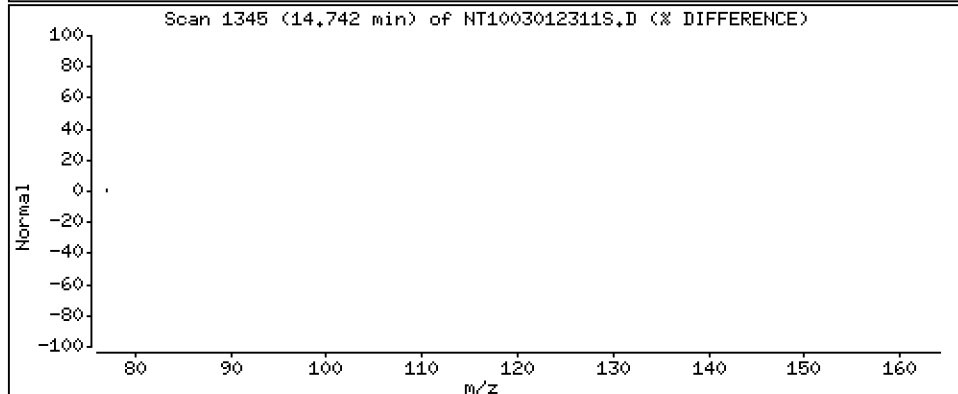
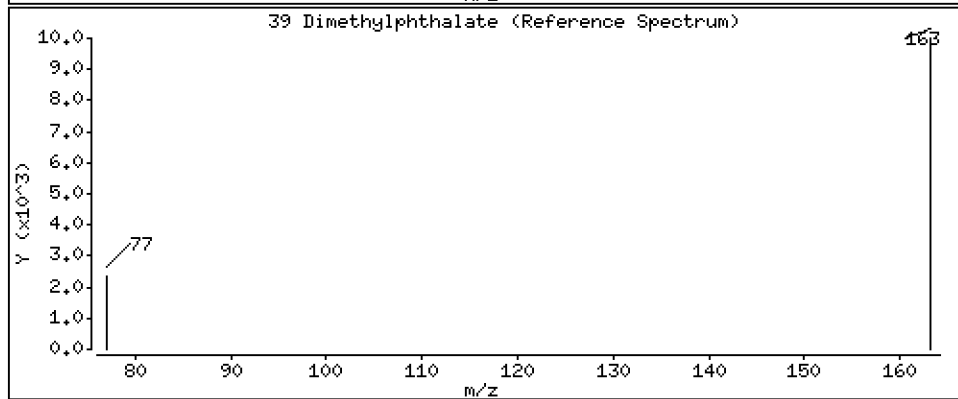
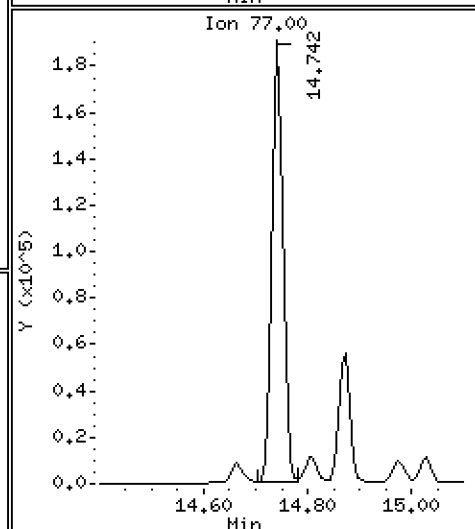
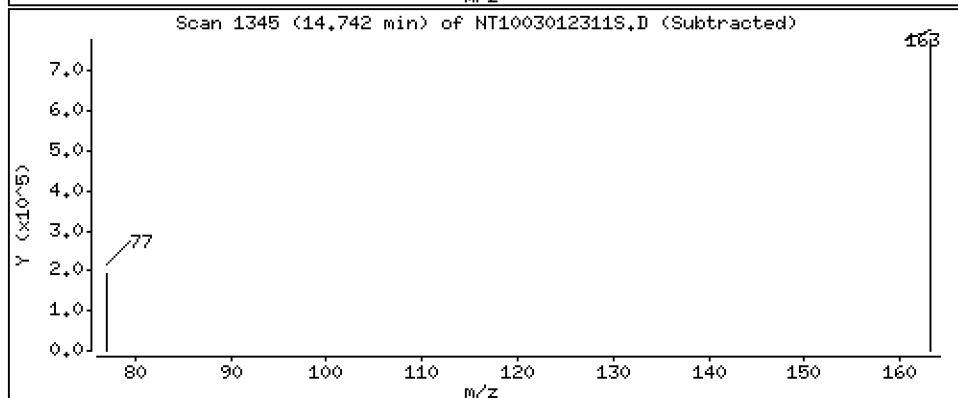
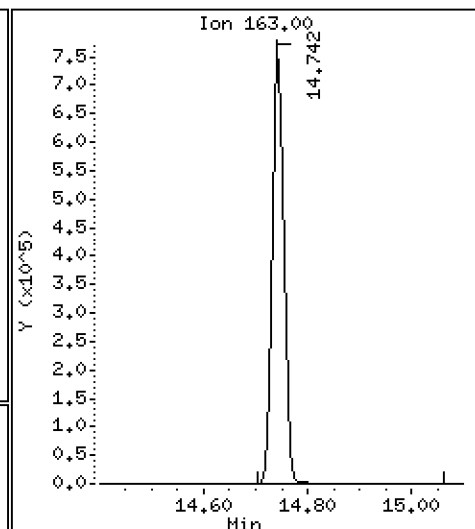
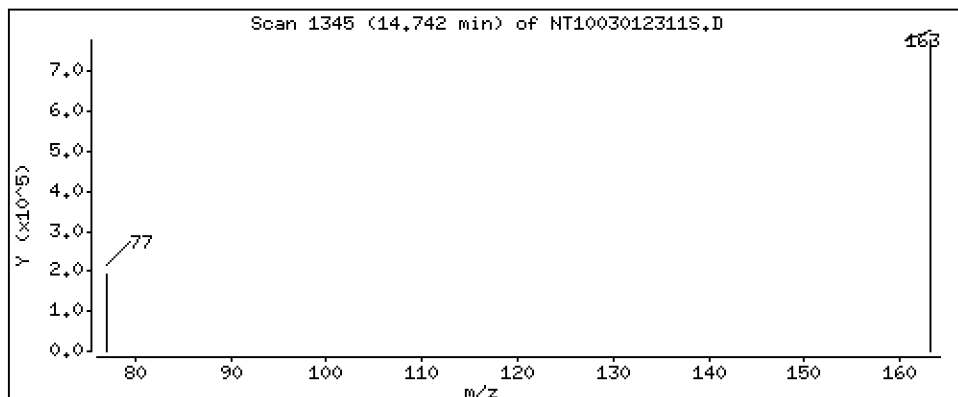
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 5.571 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

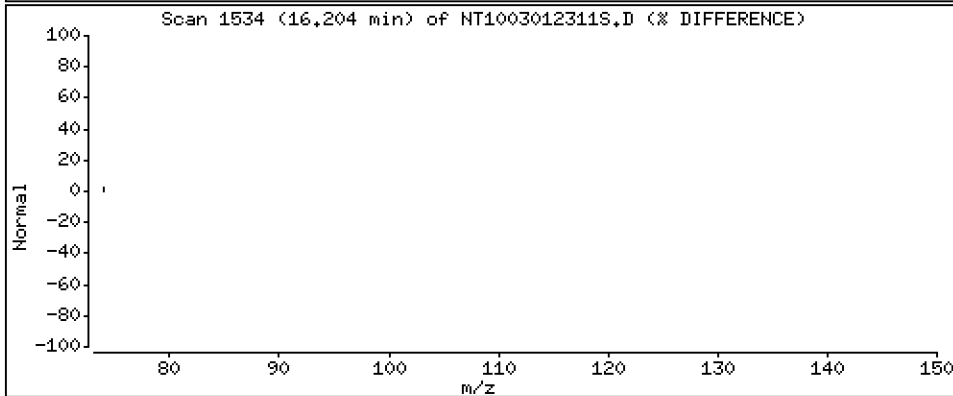
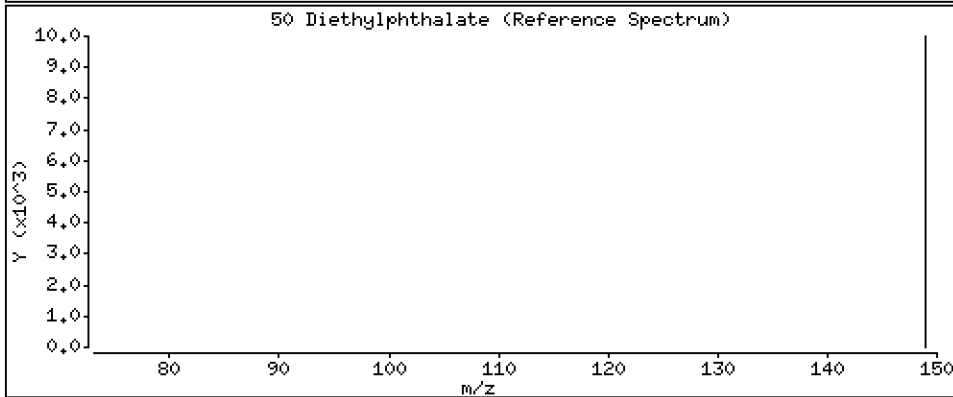
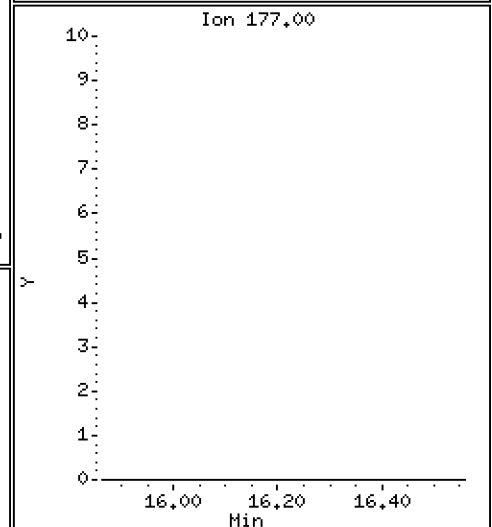
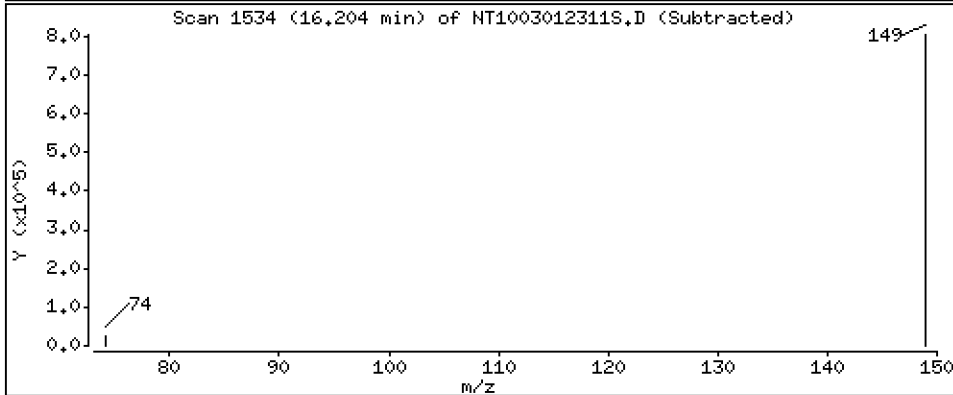
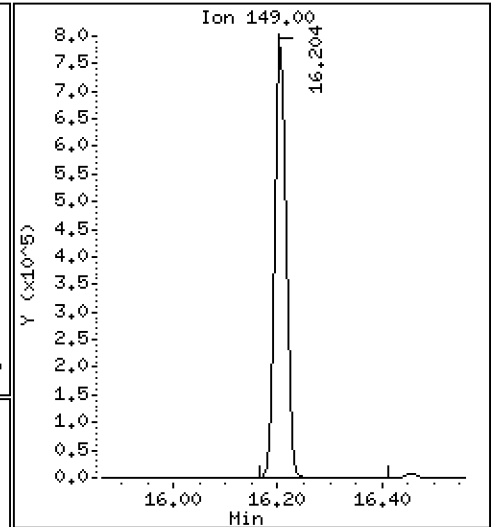
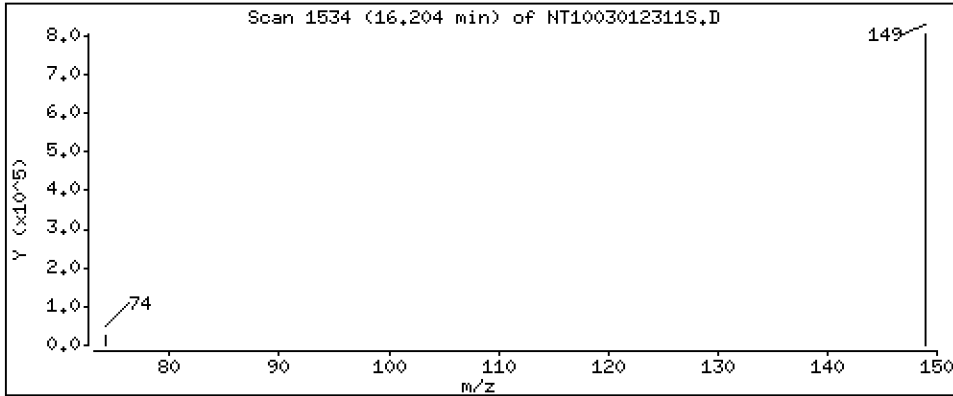
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,979 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

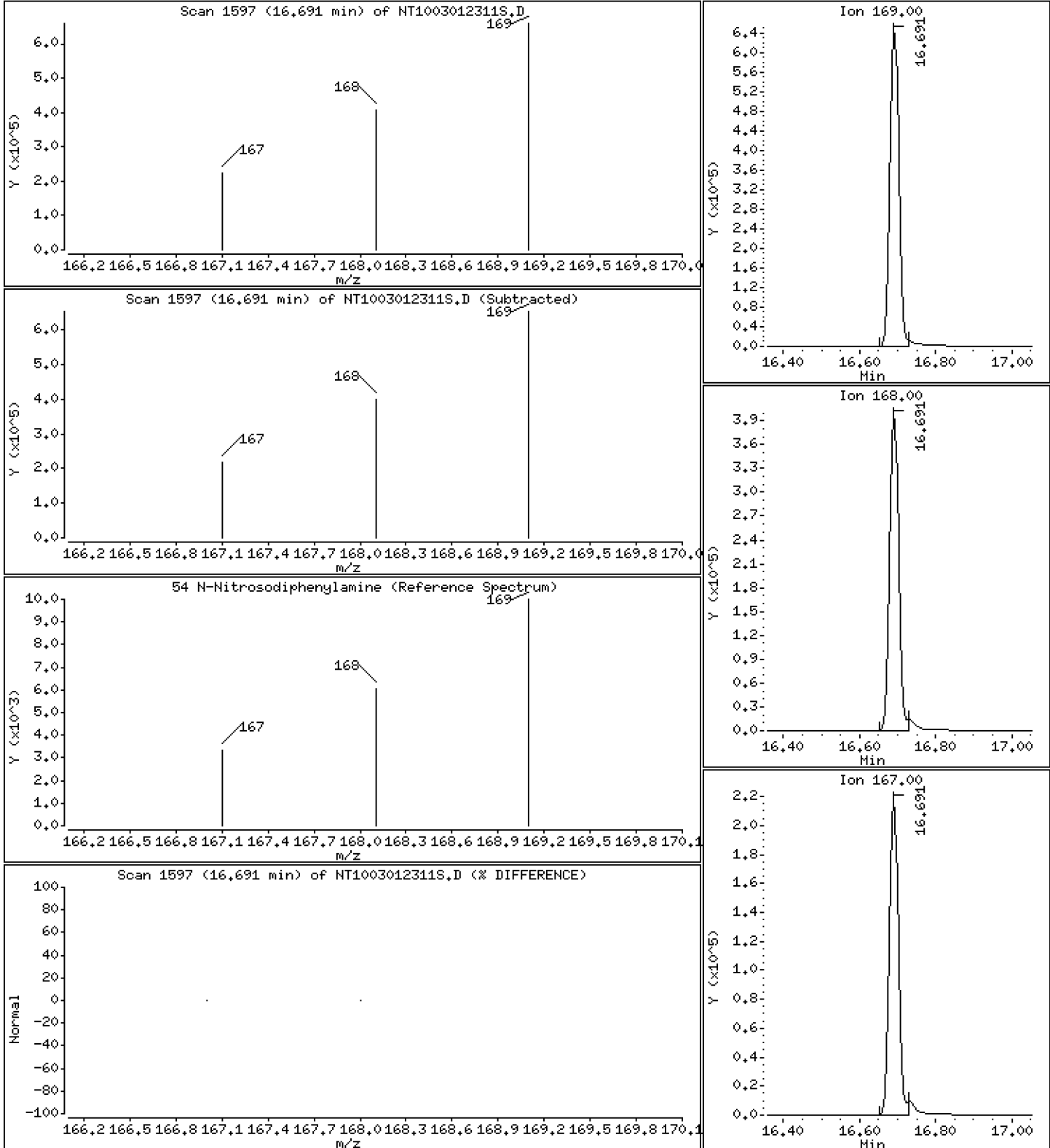
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 5.359 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

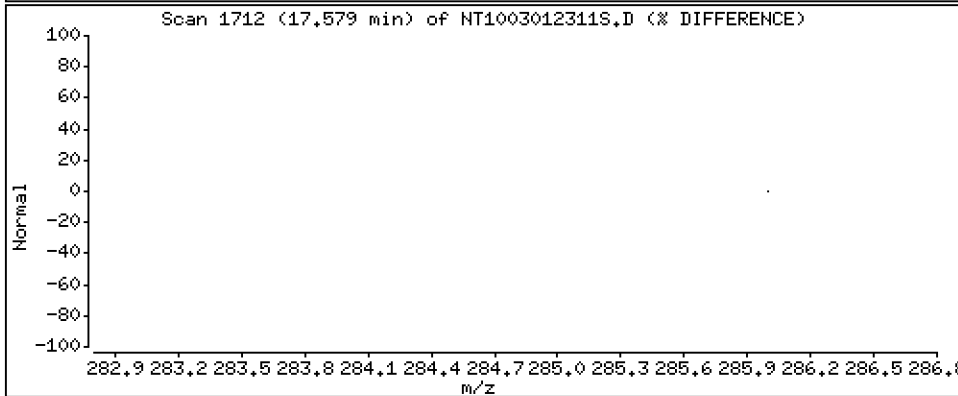
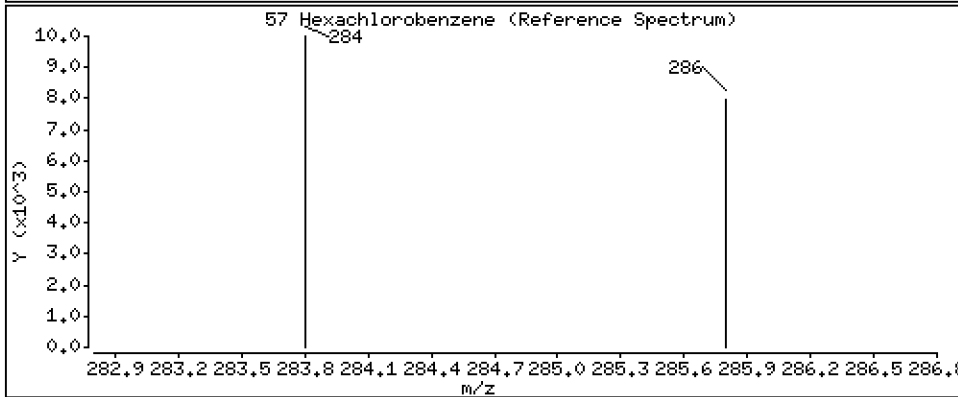
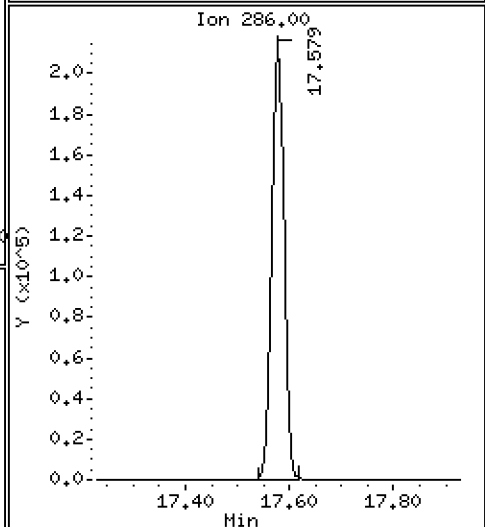
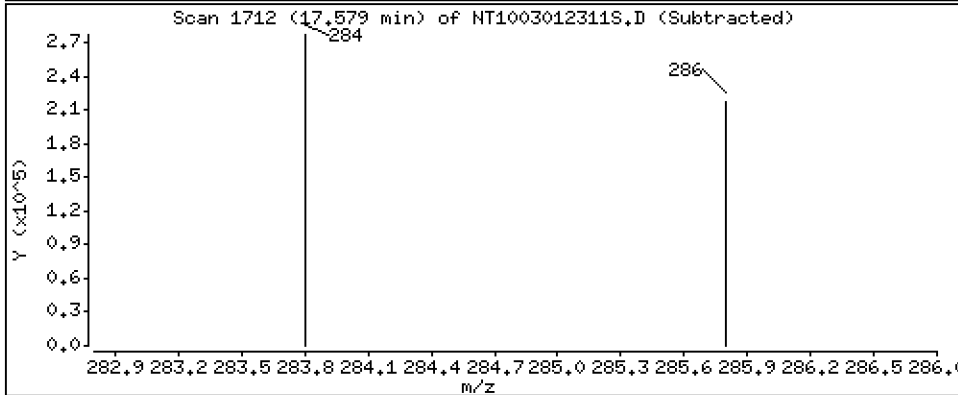
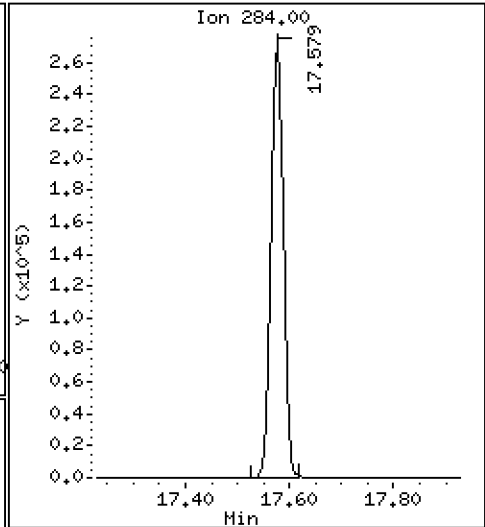
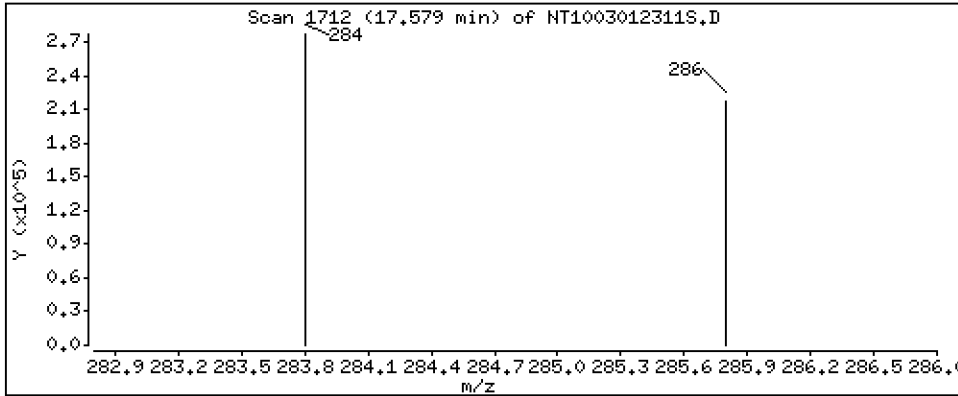
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 4,866 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

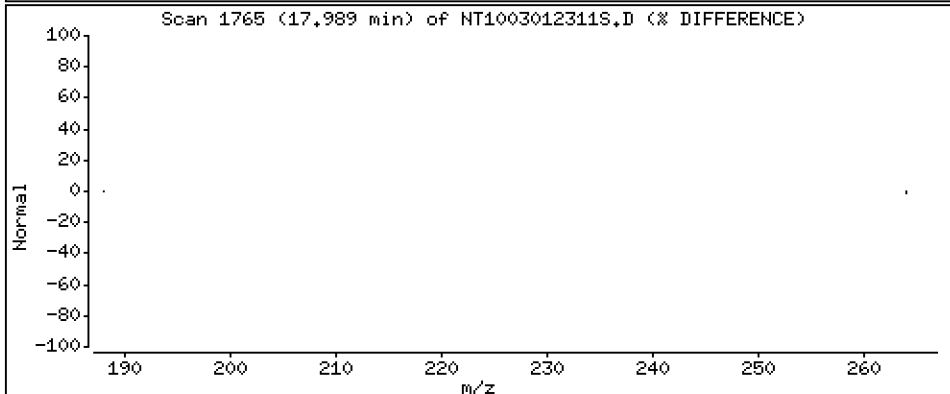
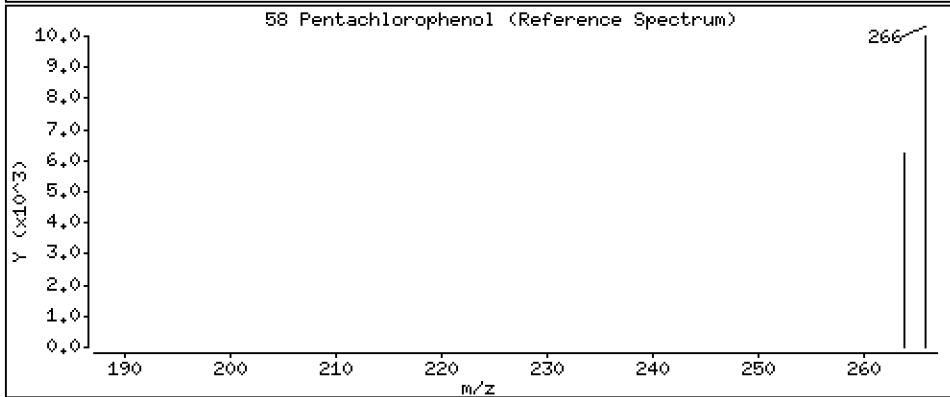
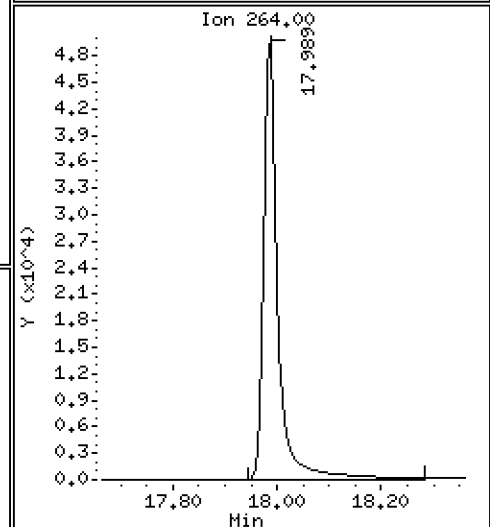
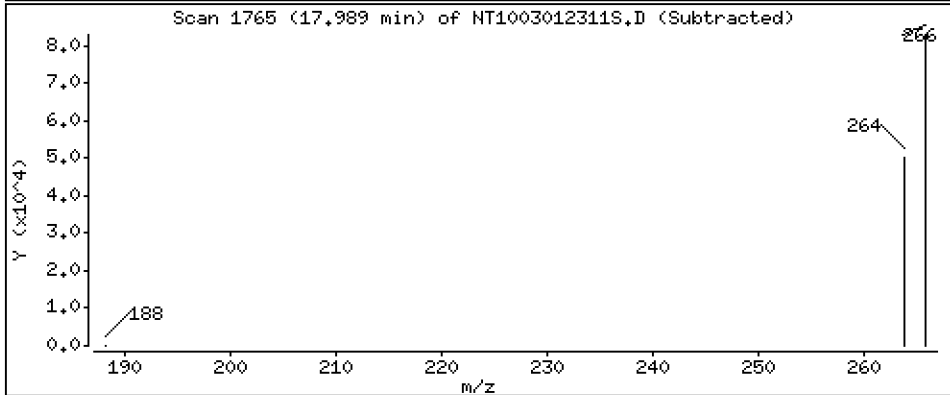
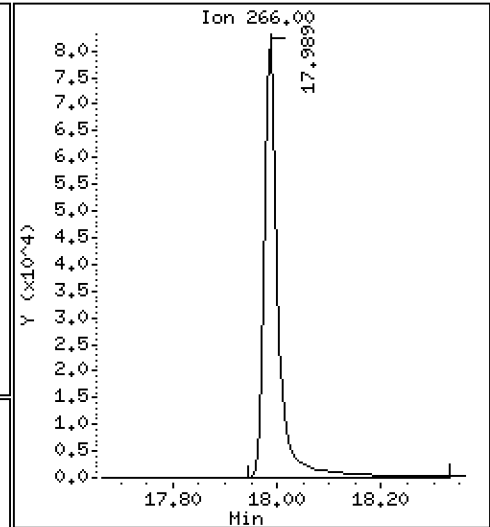
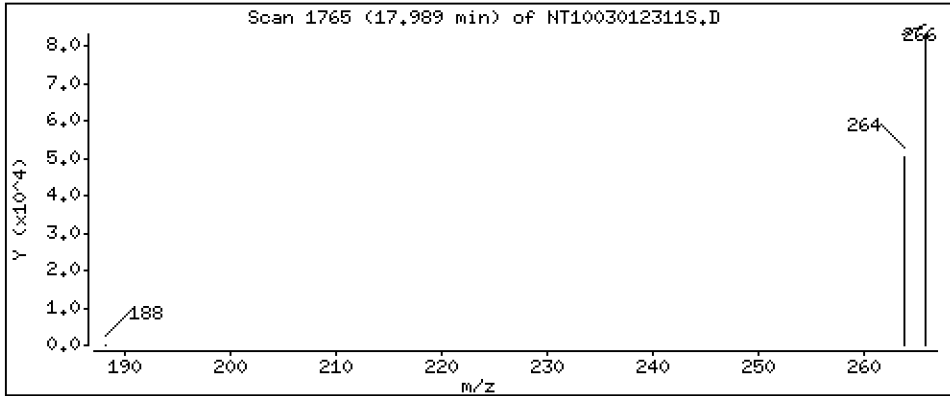
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,912 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

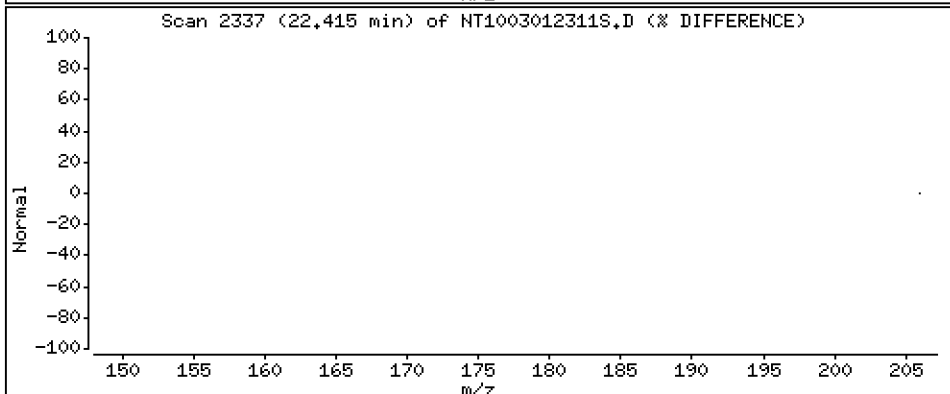
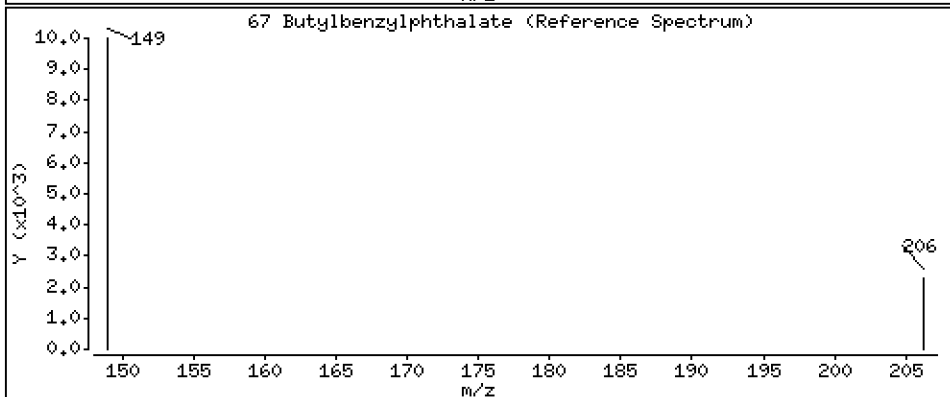
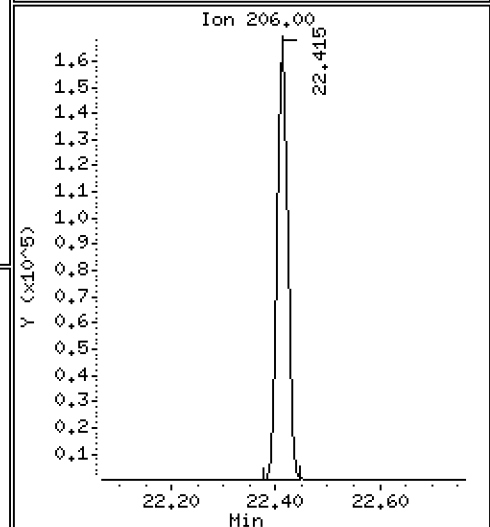
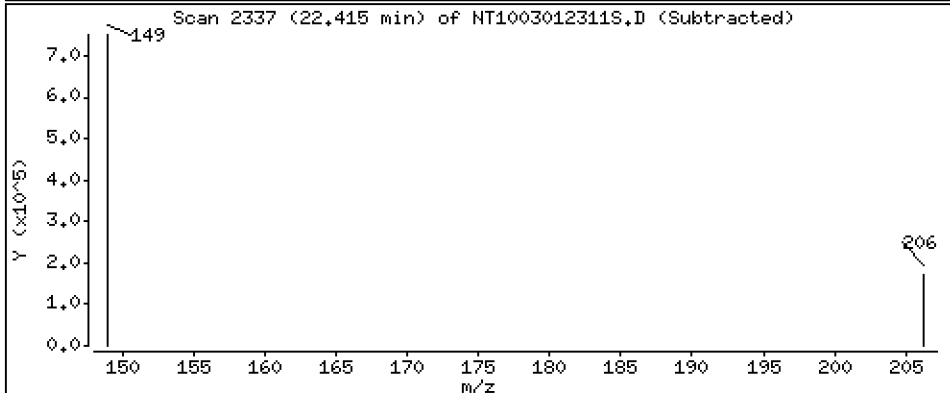
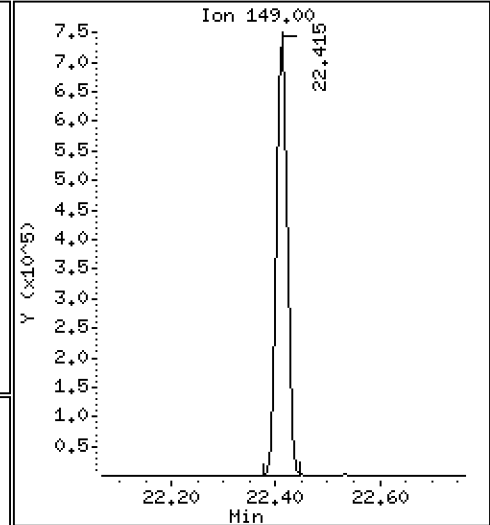
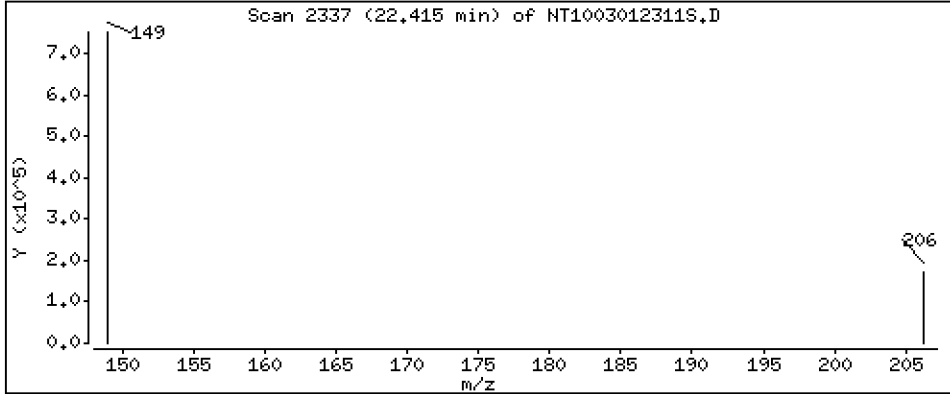
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,689 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

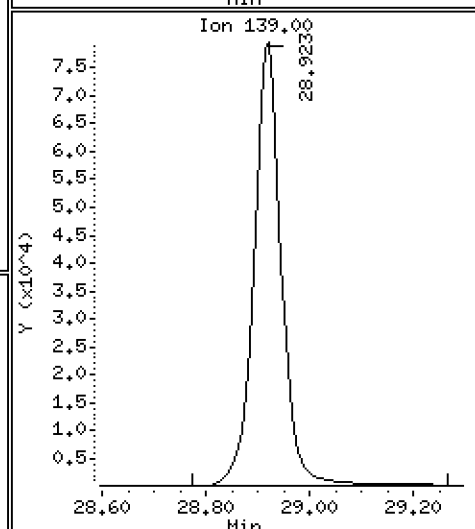
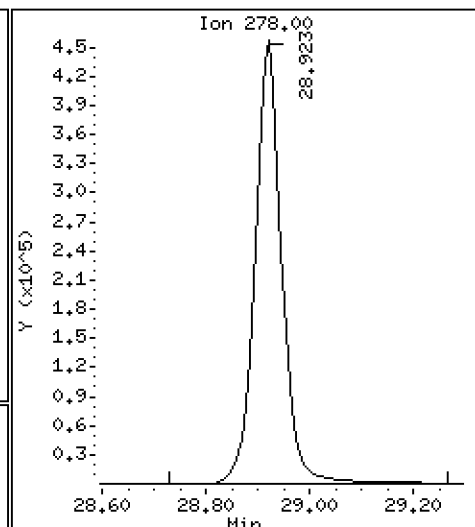
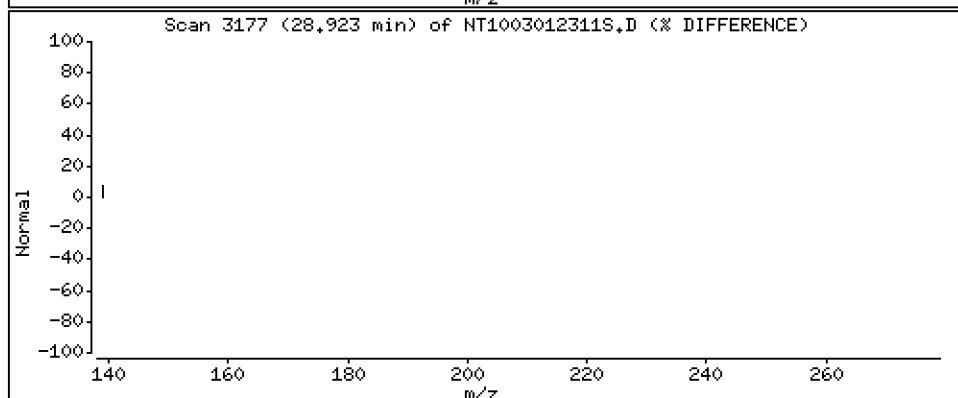
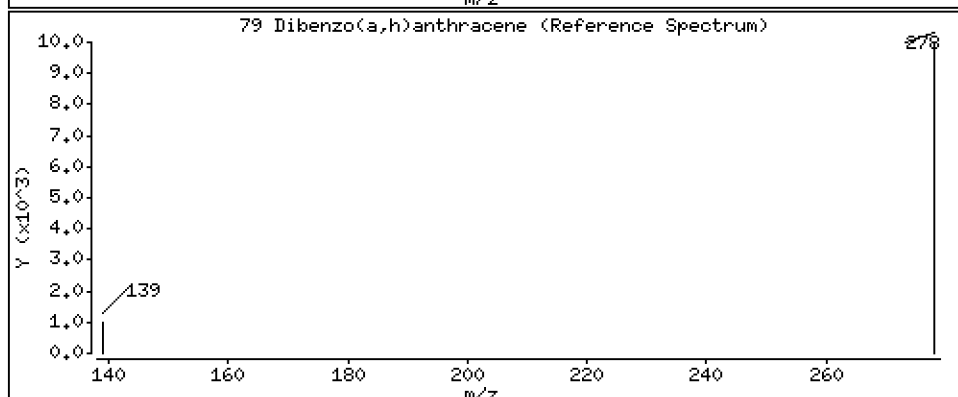
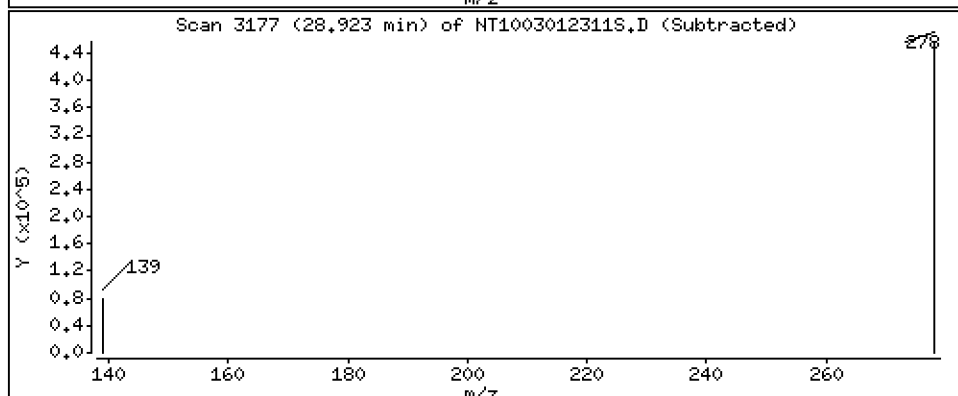
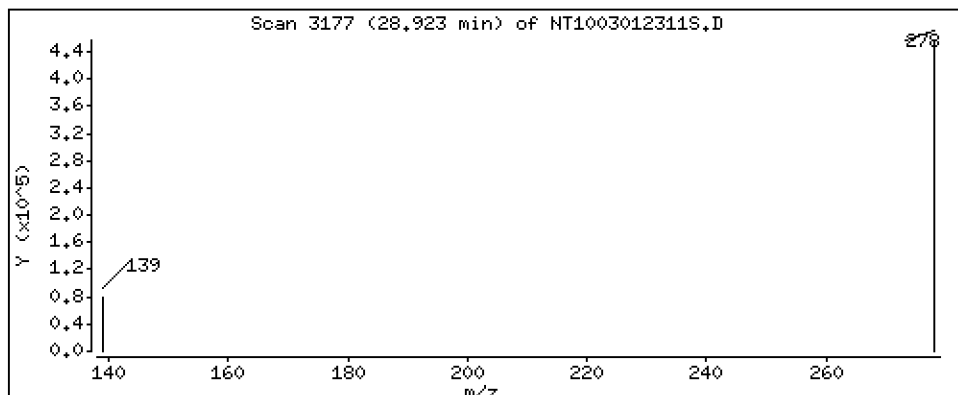
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,760 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

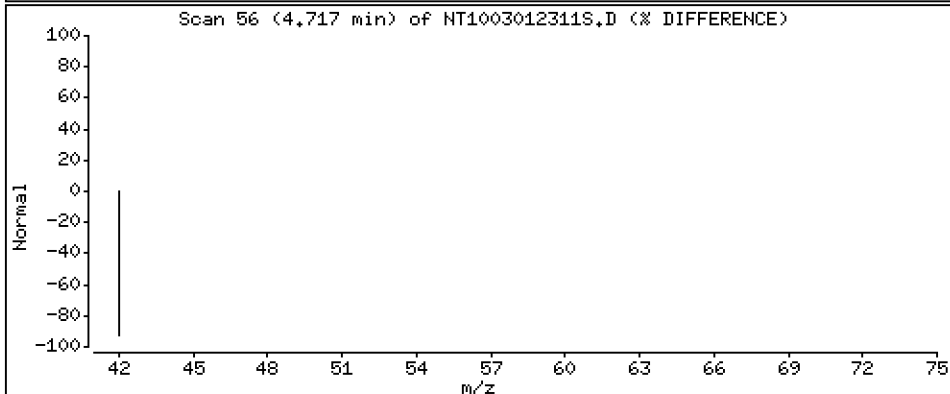
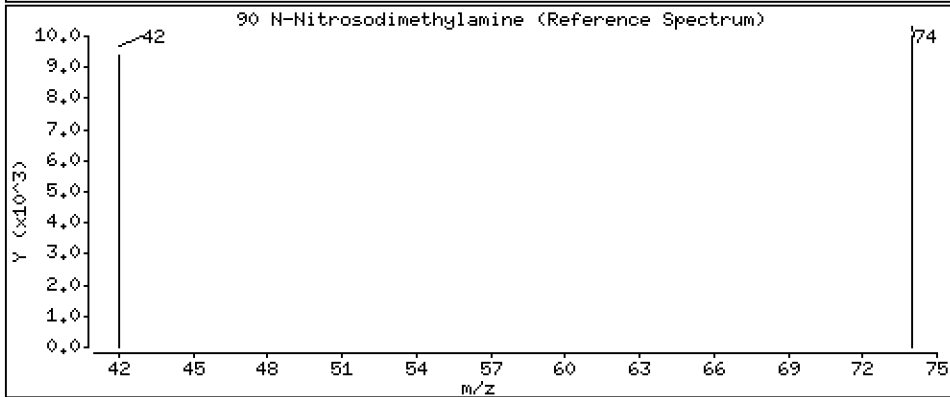
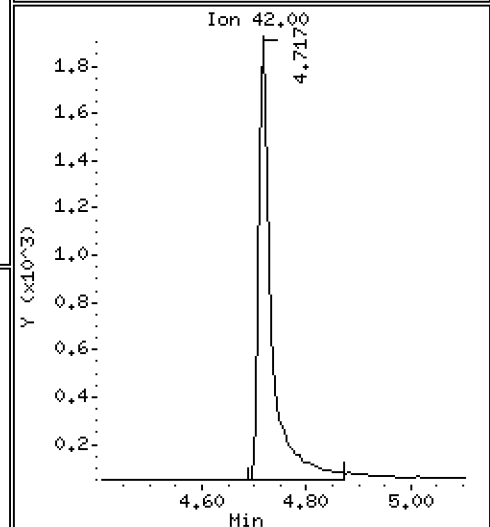
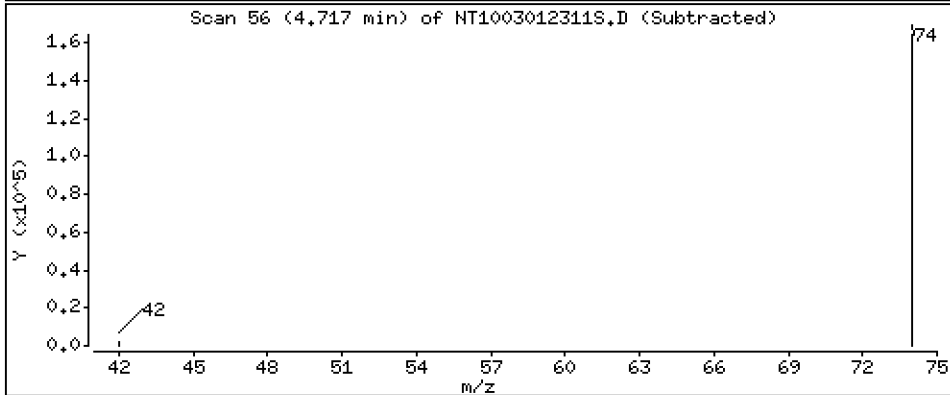
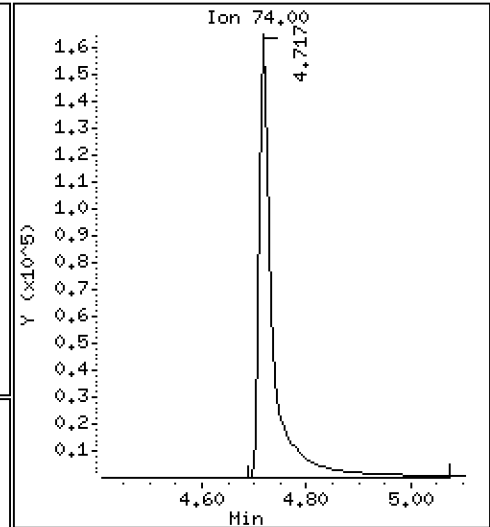
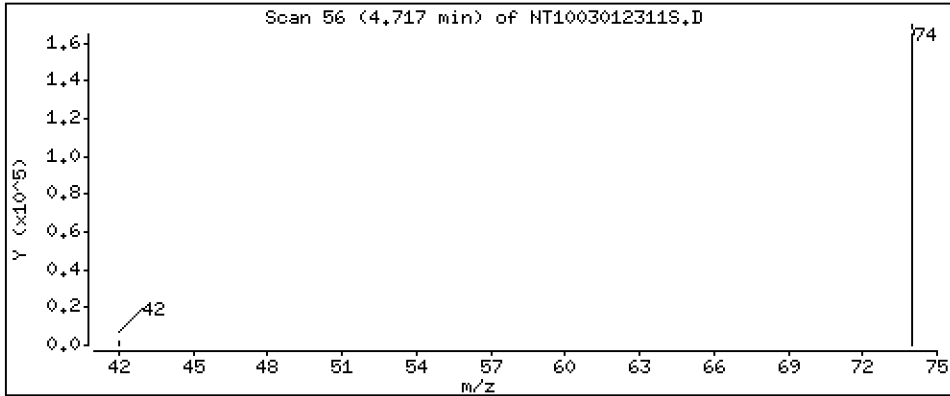
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 6.057 ug/L





ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Inj Date : 01-MAR-2023 21:46 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vo} * \text{Vi}) * \text{CpndVariable}$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN (ug/mL)	FINAL (ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	3267	0.03768	0.03768 (R)	
3 Phenol	94		8.517	8.532	(0.921)	590047	4.50660	4.507	
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	572299	5.08409	5.084	
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	303734	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.275	(1.003)	574537	5.24962	5.250	
11 Benzyl alcohol	79		9.469	9.508	(1.023)	388582	5.10390	5.104	
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	540938	5.14228	5.142	
13 2-Methylphenol	108		9.655	9.671	(1.044)	348452	4.36547	4.365	
15 4-Methylphenol	108		9.943	9.966	(1.075)	379262	4.50495	4.505	
16 N-Nitroso-di-n-propylamine	70		9.982	9.982	(1.079)	330861	5.68451	5.685	
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	357707	3.63670	3.637	
24 Benzoic acid	105		11.099	11.007	(0.947)	380081	6.86990	6.870	
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	402252	4.87012	4.870	
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1147551	4.00000		
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	285002	4.86242	4.862	
39 Dimethylphthalate	163		14.741	14.749	(0.963)	1142178	5.57065	5.571	
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	645730	4.00000		
50 Diethylphthalate	149		16.203	16.211	(1.058)	1156037	5.97883	5.979	
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	998237	5.35897	5.359	
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	424193	4.86607	4.866	

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	18.012	(0.978)	155412	3.91206	3.912
* 59 Phenanthrene-d10	188	18.399	18.398	(1.000)	1151000	4.00000	
\$ 66 Terphenyl-d14	244	21.524	21.532	(0.919)	2846	0.02712	0.02712 (R)
67 Butylbenzylphthalate	149	22.415	22.415	(0.957)	1009961	4.68912	4.689
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1297466	4.00000	
* 77 Perylene-d12	264	26.108	26.108	(1.000)	1394899	4.00000	
79 Dibenzo(a,h)anthracene	278	28.922	28.946	(1.108)	1657122	4.76032	4.760
90 N-Nitrosodimethylamine	74	4.717	4.755	(0.510)	310951	6.05685	6.057

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	303734	-5.12
27 Naphthalene-d8	1136019	568010	2272038	1147551	1.02
42 Acenaphthene-d10	636993	318497	1273986	645730	1.37
59 Phenanthrene-d10	1093620	546810	2187240	1151000	5.25
69 Chrysene-d12	1000300	500150	2000600	1297466	29.71
77 Perylene-d12	1058448	529224	2116896	1394899	31.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012311S.D

Lab ID: SLC0143-SCV1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.947	0.000	0.9467		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**INITIAL CALIBRATION CHECK**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00032

Lab File ID: NT1003022303S.D

Calibration Date: 03/01/2023

Sequence: SLC0157

Injection Date: 03/02/23

Lab Sample ID: SLC0157-ICV1

Injection Time: 14:13

Sequence Name: Initial Cal Check

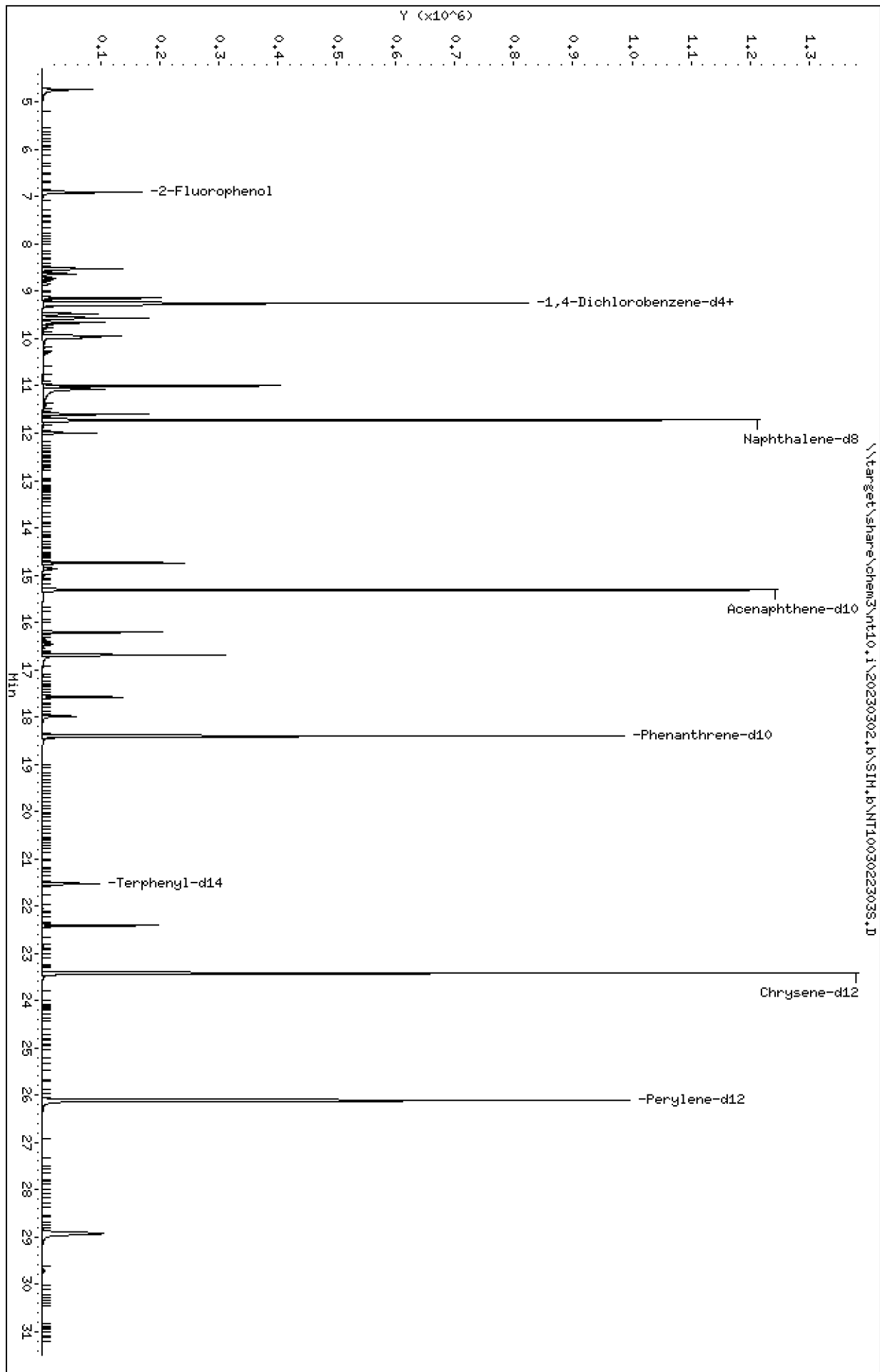
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.4290140		-0.9	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3959790		0.8	+/-20
Benzyl Alcohol	A	1.0000	0.9	0.7492523	0.8272840		-12.4	+/-20
Benzoic acid	A	4.0000	1.9	0.1431163	0.0913676		-51.4	+/-20 *
2,4-Dimethylphenol	A	2.0000	1.8	0.2957717	0.3139856		-8.0	+/-20
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.2879030	0.2877841		-0.04	+/-20
N-Nitrosodiphenylamine	A	1.0000	1.0	0.6473471	0.6429057		-0.7	+/-20
Pentachlorophenol	A	2.0000	1.3	0.0950913	0.0902029		-32.9	+/-20 *
2-Fluorophenol	A	1.5000	1.61	1.1419780	1.2239760		7.2	+/-20
p-Terphenyl-d14	A	1.0000	0.942	0.3234672	0.3047826		-5.8	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	84099.7200	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	296848.2000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	160957.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	276014.3000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	258259.1000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	271750.8000	1.0000		0.0	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.1\SIH.B\NT1003022303S.D  
Date: 02-MAR-2023 14:13  
Client ID:  
Sample Info: SED-ICVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.1\SIH.B\NT1003022303S.D



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022303S.D  
 Lab Smp Id: SLC0157-ICV1  
 Inj Date : 02-MAR-2023 14:13 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-ICVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:03 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	226474	1.50000	1.608
3 Phenol	94		8.517	8.517	(0.921)	198101	1.00000	0.9490
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	182702	1.00000	0.9991
* 8 1,4-Dichlorobenzene-d4	152		9.251	9.251	(1.000)	493417	4.00000	
9 1,4-Dichlorobenzene	146		9.282	9.282	(1.003)	176275	1.00000	0.9915
11 Benzyl alcohol	79		9.476	9.476	(1.024)	102049	1.00000	0.8764
12 1,2-Dichlorobenzene	146		9.562	9.562	(1.034)	172200	1.00000	1.008
13 2-Methylphenol	108		9.655	9.655	(1.044)	122736	1.00000	0.9750
15 4-Methylphenol	108		9.942	9.942	(1.075)	121561	1.00000	0.9268
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	89772	1.00000	0.9670
22 2,4-Dimethylphenol	107		10.997	10.997	(0.938)	279299	2.00000	1.841
24 Benzoic acid	105		11.074	11.074	(0.945)	162548	4.00000	1.945
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	127996	1.00000	0.9996
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	1779056	4.00000	
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	84635	1.00000	0.9314
39 Dimethylphthalate	163		14.741	14.741	(0.963)	301592	1.00000	0.9950
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	954569	4.00000	
50 Diethylphthalate	149		16.203	16.203	(1.058)	287740	1.00000	1.007
54 N-Nitrosodiphenylamine	169		16.690	16.690	(0.907)	256566	1.00000	0.9931
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	119208	1.00000	0.9860

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		17.988	17.988	(0.977)	71995	2.00000	1.343
* 59 Phenanthrene-d10	188		18.406	18.406	(1.000)	1596290	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	125655	1.00000	0.9422
67 Butylbenzylphthalate	149		22.414	22.414	(0.957)	198566	1.00000	0.7149
* 69 Chrysene-d12	240		23.421	23.421	(1.000)	1649110	4.00000	
* 77 Perylene-d12	264		26.115	26.115	(1.000)	1901958	4.00000	
79 Dibenzo(a,h)anthracene	278		28.929	28.929	(1.108)	380310	1.00000	0.8531
90 N-Nitrosodimethylamine	74		4.732	4.732	(0.511)	187791	2.00000	2.252



ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022303S.D  
 Lab Smp Id: SLC0157-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	493417	0.00
27 Naphthalene-d8	1779056	889528	3558112	1779056	0.00
42 Acenaphthene-d10	954569	477285	1909138	954569	0.00
59 Phenanthrene-d10	1596290	798145	3192580	1596290	0.00
69 Chrysene-d12	1649110	824555	3298220	1649110	0.00
77 Perylene-d12	1901958	950979	3803916	1901958	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022303S.D

Lab ID: SLC0157-ICV1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 14:13

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b\SIM.b

Instrument: nt10.i Date: 02-MAR-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 01-MAR-2023

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

ICV CAL: NT1003022303S.D 02-MAR-2023 14:13

Compound	%D
-----	
Benzoic acid	-51.4
Pentachlorophenol	-32.8
Butylbenzylphthalate	-28.5
-----	



**INITIAL CALIBRATION CHECK**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00032

Lab File ID: NT1003022315SICV.D

Calibration Date: 03/01/2023

Sequence: SLC0158

Injection Date: 03/02/23

Lab Sample ID: SLC0158-ICV1

Injection Time: 23:16

Sequence Name: Initial Cal Check

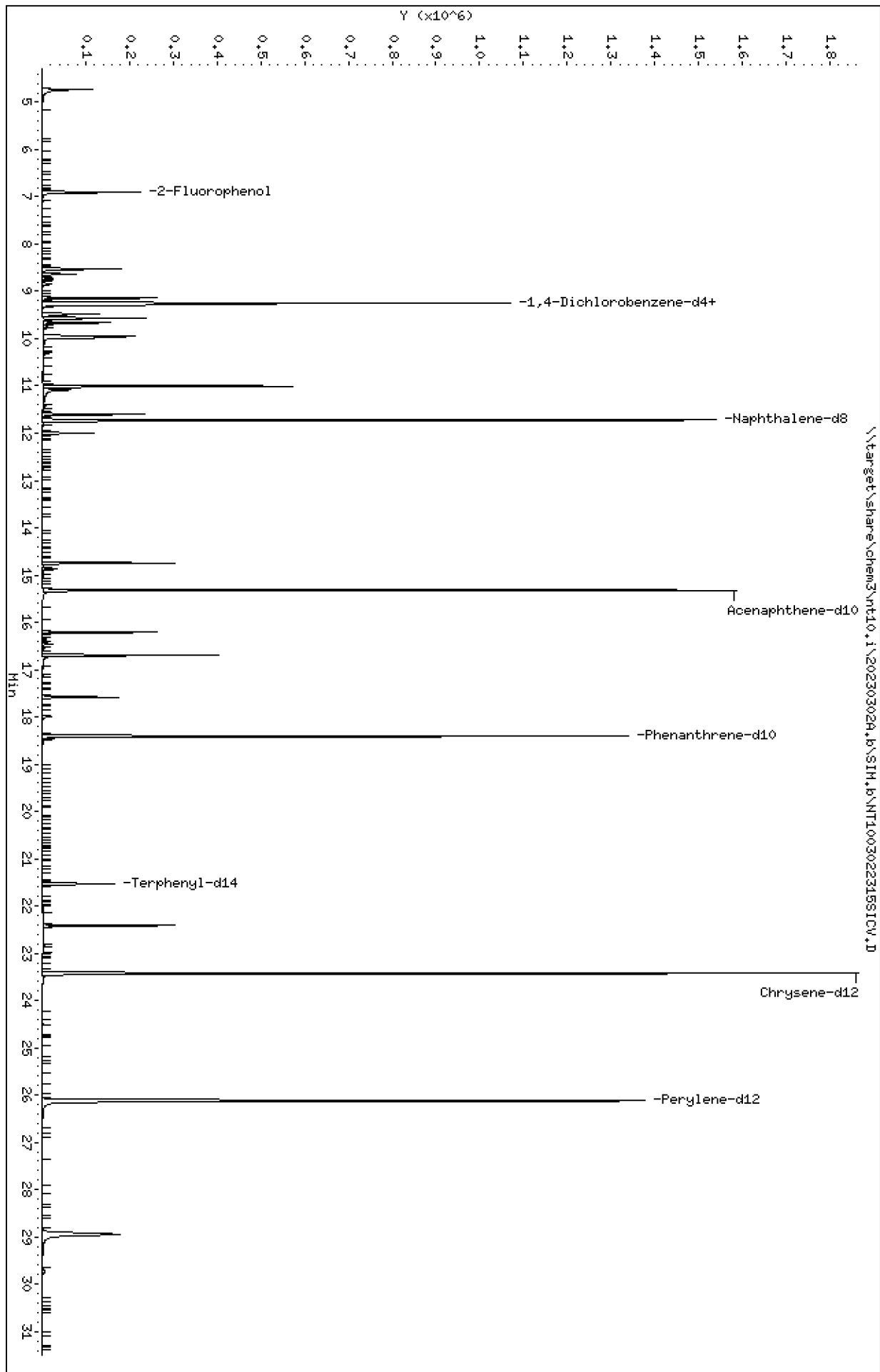
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.3992310		-2.9	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3732110		-0.9	+/-20
Benzyl Alcohol	A	1.0000	1.0	0.7492523	0.9342330		-1.2	+/-20
Benzoic acid	A	4.0000	0.9	0.1431163	0.0425677		-77.2	+/-20 *
2,4-Dimethylphenol	A	2.0000	2.0	0.2957717	0.3405092		-0.2	+/-20
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.2879030	0.3013394		4.7	+/-20
N-Nitrosodiphenylamine	A	1.0000	0.9	0.6473471	0.6023784		-7.0	+/-20
Pentachlorophenol	A	2.0000	0.4	0.0950913	0.0295676		-77.8	+/-20 *
2-Fluorophenol	A	1.5000	1.67	1.1419780	1.2741		11.6	+/-20
p-Terphenyl-d14	A	1.0000	0.998	0.3234672	0.3226648		-0.3	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	84099.7200	1.0000		0.0	*
Naphthalene-d8	A	4.0000	4.0	296848.2000	1.0000		0.0	*
Acenaphthene-d10	A	4.0000	4.0	160957.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	276014.3000	1.0000		0.0	*
Chrysene-d12	A	4.0000	4.0	258259.1000	1.0000		0.0	*
Perylene-d12	A	4.0000	4.0	271750.8000	1.0000		0.0	*

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302a,b\SIM,b\NT1003022315SICV.D  
Date: 02-MAR-2023 23:16  
Client ID:  
Sample Info: SED-CVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302a,b\SIM,b\NT1003022315SICV.D



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022315SICV.d  
 Lab Smp Id: SLC0158-ICV1  
 Inj Date : 02-MAR-2023 23:16 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CCVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	311720	1.50000	1.674
3 Phenol	94		8.525	8.525	(0.921)	259741	1.00000	0.9411
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	236548	1.00000	0.9783
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	652424	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	228223	1.00000	0.9708
11 Benzyl alcohol	79		9.477	9.477	(1.024)	152379	1.00000	0.9883
12 1,2-Dichlorobenzene	146		9.570	9.570	(1.034)	223979	1.00000	0.9912
13 2-Methylphenol	108		9.663	9.663	(1.044)	184224	1.00000	1.106
15 4-Methylphenol	108		9.950	9.950	(1.076)	184845	1.00000	1.064
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	137920	1.00000	1.123
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	398390	2.00000	1.996
24 Benzoic acid	105		11.082	11.082	(0.945)	99607	4.00000	0.9111
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	176281	1.00000	1.047
* 27 Naphthalene-d8	136		11.723	11.723	(1.000)	2339966	4.00000	
30 Hexachlorobutadiene	225		12.001	12.001	(1.024)	113390	1.00000	0.9487
39 Dimethylphthalate	163		14.749	14.749	(0.963)	385474	1.00000	1.023
* 42 Acenaphthene-d10	162		15.321	15.321	(1.000)	1186988	4.00000	
50 Diethylphthalate	149		16.210	16.210	(1.058)	392646	1.00000	1.105
54 N-Nitrosodiphenylamine	169		16.698	16.698	(0.907)	330327	1.00000	0.9305
57 Hexachlorobenzene	284		17.586	17.586	(0.955)	158280	1.00000	0.9528

Compounds	QUANT SIG		AMOUNTS					
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
58 Pentachlorophenol	266		17.996	17.996	(0.978)	32428	2.00000	0.4443
* 59 Phenanthrene-d10	188		18.406	18.406	(1.000)	2193485	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	197215	1.00000	0.9975
67 Butylbenzylphthalate	149		22.414	22.414	(0.957)	342698	1.00000	0.8326
* 69 Chrysene-d12	240		23.429	23.429	(1.000)	2444828	4.00000	
* 77 Perylene-d12	264		26.123	26.123	(1.000)	2842248	4.00000	
79 Dibenzo(a,h)anthracene	278		28.945	28.945	(1.108)	670955	1.00000	1.005
90 N-Nitrosodimethylamine	74		4.732	4.732	(0.511)	269392	2.00000	2.443

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022315SICV.d  
 Lab Smp Id: SLC0158-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	652424	32.23
27 Naphthalene-d8	1779056	889528	3558112	2339966	31.53
42 Acenaphthene-d10	954569	477285	1909138	1186988	24.35
59 Phenanthrene-d10	1596290	798145	3192580	2193485	37.41
69 Chrysene-d12	1649110	824555	3298220	2444828	48.25
77 Perylene-d12	1901958	950979	3803916	2842248	49.44

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.12	0.03

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



REVIEW SUMMARY FOR FILE - NT1003022315SICV.d

Lab ID: SLC0158-ICV1

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 02-MAR-2023 23:16

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302A.b\SIM.b

Instrument: nt10.i Date: 02-MAR-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 01-MAR-2023

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

ICV CAL: NT1003022315SICV.d 02-MAR-2023 23:16

Compound	%D
-----	
Benzoic acid	-77.2
N-Nitrosodimethylamine	22.1
Pentachlorophenol	-77.8
-----	



**INITIAL CALIBRATION CHECK**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: NT10

Calibration: GC00032

Lab File ID: NT1003022326SICV.D

Calibration Date: 03/01/2023

Sequence: SLC0159

Injection Date: 03/03/23

Lab Sample ID: SLC0159-ICV1

Injection Time: 06:14

Sequence Name: Initial Cal Check

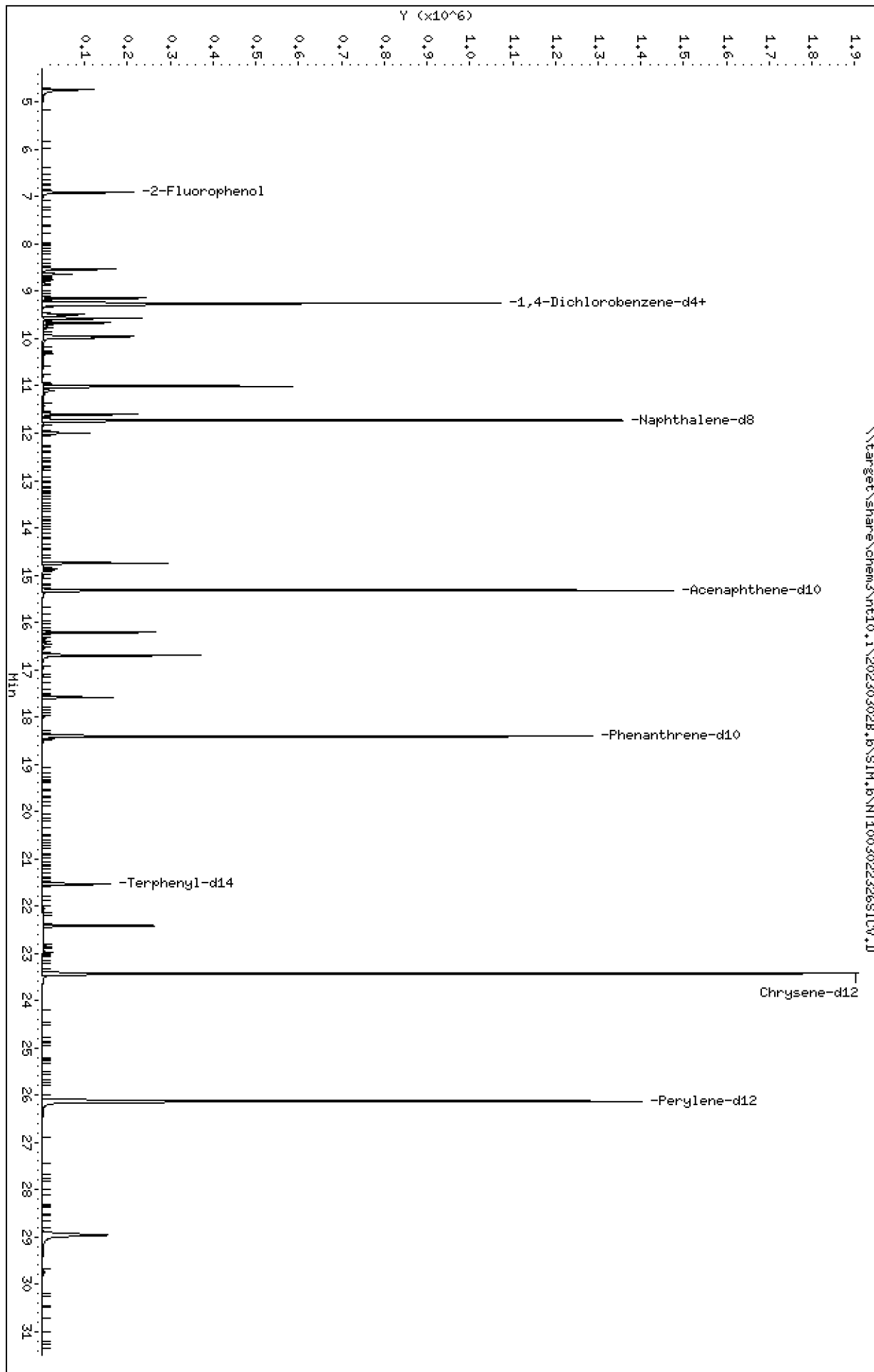
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.3908590		-3.5	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3671270		-1.3	+/-20
Benzyl Alcohol	A	1.0000	1.0	0.7492523	0.9616900		1.7	+/-20
Benzoic acid	A	4.0000	0.3	0.1431163	0.0148217		-92.0	+/-20 *
2,4-Dimethylphenol	A	2.0000	2.0	0.2957717	0.3465213		1.6	+/-20
1,2,4-Trichlorobenzene	A	1.0000	1.1	0.2879030	0.3086357		7.2	+/-20
N-Nitrosodiphenylamine	A	1.0000	0.9	0.6473471	0.5648725		-12.7	+/-20
Pentachlorophenol	A	2.0000	0.2	0.0950913	0.0103257		-92.2	+/-20 *
2-Fluorophenol	A	1.5000	1.67	1.1419780	1.2722890		11.4	+/-20
p-Terphenyl-d14	A	1.0000	1.12	0.3234672	0.3621857		12.0	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	84099.7200	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	296848.2000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	160957.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	276014.3000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	258259.1000	1.0000		0.0	*
Perylene-d12	A	4.0000	4.0	271750.8000	1.0000		0.0	*

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022326SICV.D  
Date: 03-MAR-2023 06:14  
Client ID:  
Sample Info: SED-CVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022326SICV.D



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022326SICV.d  
 Lab Smp Id: SLC0159-ICV1  
 Inj Date : 03-MAR-2023 06:14 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CCVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3 Continuing Calibration Sample  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT	ON-COL
	MASS						(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	296091	1.50000	1.671
3 Phenol	94		8.525	8.525	(0.921)	251976	1.00000	0.9597
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	223249	1.00000	0.9707
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	620595	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	215790	1.00000	0.9650
11 Benzyl alcohol	79		9.492	9.492	(1.026)	149205	1.00000	1.017
12 1,2-Dichlorobenzene	146		9.570	9.570	(1.034)	212108	1.00000	0.9868
13 2-Methylphenol	108		9.663	9.663	(1.044)	180258	1.00000	1.137
15 4-Methylphenol	108		9.950	9.950	(1.076)	181646	1.00000	1.099
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	132676	1.00000	1.136
22 2,4-Dimethylphenol	107		11.006	11.006	(0.938)	383514	2.00000	2.031
24 Benzoic acid	105		11.099	11.099	(0.946)	32808	4.00000	0.3182
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	170792	1.00000	1.072
* 27 Naphthalene-d8	136		11.731	11.731	(1.000)	2213509	4.00000	
30 Hexachlorobutadiene	225		12.001	12.001	(1.023)	105874	1.00000	0.9365
39 Dimethylphthalate	163		14.749	14.749	(0.963)	351467	1.00000	1.012
* 42 Acenaphthene-d10	162		15.321	15.321	(1.000)	1093970	4.00000	
50 Diethylphthalate	149		16.210	16.210	(1.058)	370178	1.00000	1.130
54 N-Nitrosodiphenylamine	169		16.698	16.698	(0.907)	300772	1.00000	0.8726
57 Hexachlorobenzene	284		17.586	17.586	(0.955)	148280	1.00000	0.9192

Compounds	QUANT SIG						AMOUNTS	
	MASS		RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
58 Pentachlorophenol	266		18.004	18.004	(0.978)	10996	2.00000	0.1556
* 59 Phenanthrene-d10	188		18.414	18.414	(1.000)	2129840	4.00000	
\$ 66 Terphenyl-d14	244		21.532	21.532	(0.919)	212536	1.00000	1.120
67 Butylbenzylphthalate	149		22.422	22.422	(0.957)	323850	1.00000	0.8195
* 69 Chrysene-d12	240		23.429	23.429	(1.000)	2347260	4.00000	
* 77 Perylene-d12	264		26.131	26.131	(1.000)	2638390	4.00000	
79 Dibenzo(a,h)anthracene	278		28.961	28.961	(1.108)	583336	1.00000	0.9421
90 N-Nitrosodimethylamine	74		4.732	4.732	(0.511)	261472	2.00000	2.493

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022326SICV.d  
 Lab Smp Id: SLC0159-ICV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	620595	25.77
27 Naphthalene-d8	1779056	889528	3558112	2213509	24.42
42 Acenaphthene-d10	954569	477285	1909138	1093970	14.60
59 Phenanthrene-d10	1596290	798145	3192580	2129840	33.42
69 Chrysene-d12	1649110	824555	3298220	2347260	42.33
77 Perylene-d12	1901958	950979	3803916	2638390	38.72

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.13	0.06

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

REVIEW SUMMARY FOR FILE - NT1003022326SICV.d

Lab ID: SLC0159-ICV1

nt10.i, 20230302B.b\SIM.b\SIMABN2.m, 03-MAR-2023 06:14

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b\SIM.b

Instrument: nt10.i Date: 03-MAR-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 01-MAR-2023

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

ICV CAL: NT1003022326SICV.d 03-MAR-2023 06:14

Compound	%D
-----	
Benzoic acid	-92.0
N-Nitrosodimethylamine	24.6
Pentachlorophenol	-92.2
-----	



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003012311S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0143</u>	Injection Date:	<u>03/01/23</u>
Lab Sample ID:	<u>SLC0143-SCV1</u>	Injection Time:	<u>21:46</u>
Sequence Name:	<u>SCV 5.0</u>		

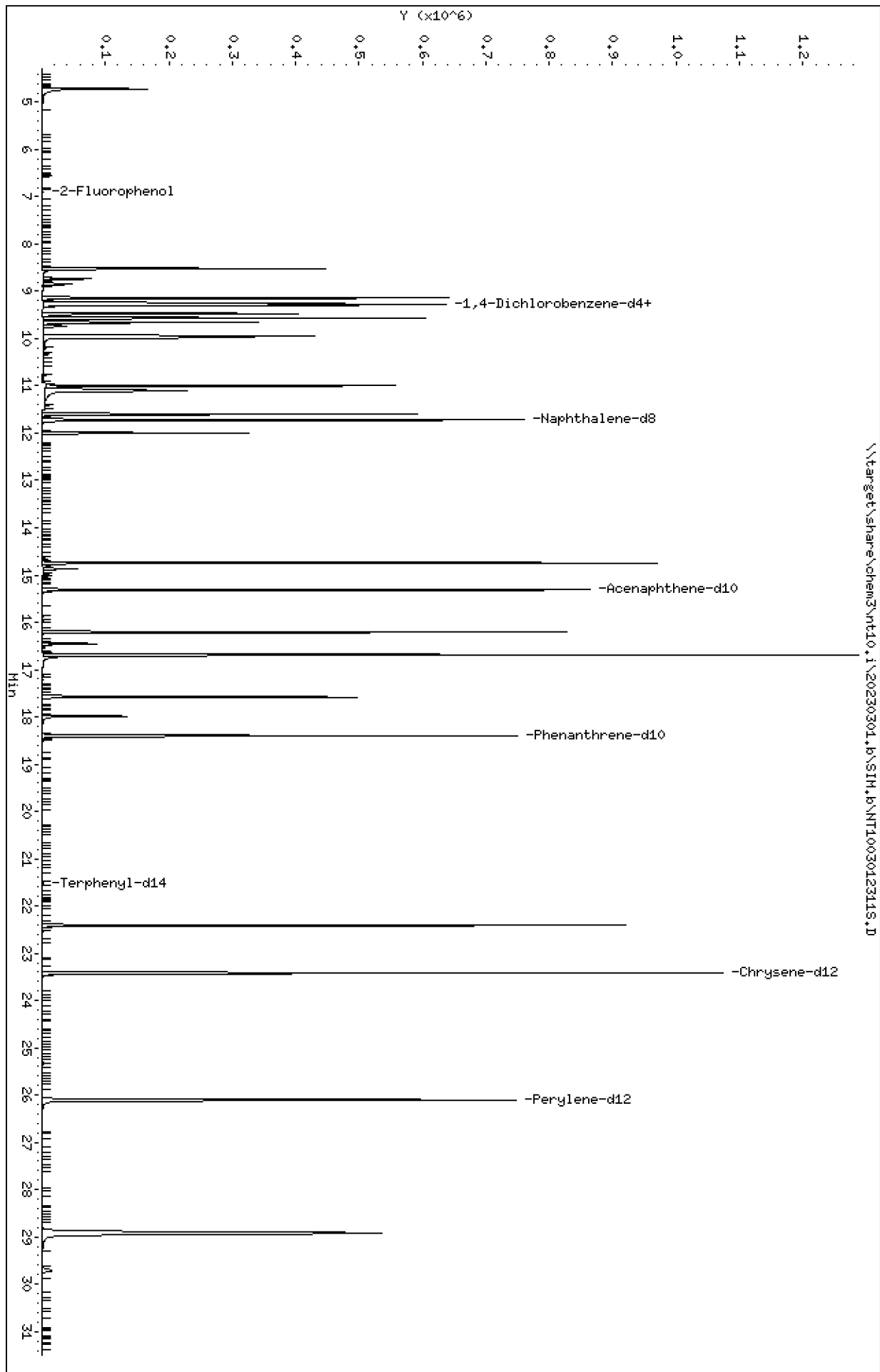
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	5.0000	5.2	1.4413080	1.5132640		5.0	+/-20
1,2-Dichlorobenzene	A	5.0000	5.1	1.3853460	1.4247680		2.8	+/-20
Benzyl Alcohol	A	5.0000	5.1	0.7492523	1.0234800		2.1	+/-20
Benzoic acid	A	10.000	6.9	0.1431163	0.1324842		-31.3	+/-20 *
2,4-Dimethylphenol	A	5.0000	3.6	0.2957717	0.2493707		-27.3	+/-20 *
1,2,4-Trichlorobenzene	A	5.0000	4.9	0.2879030	0.2804247		-2.6	+/-20
N-Nitrosodiphenylamine	A	5.0000	5.4	0.6473471	0.6938224		7.2	+/-20
Pentachlorophenol	A	5.0000	3.9	0.0950913	0.1080188		-21.8	+/-20 *
2-Fluorophenol	A	7.5000	0.0377	1.1419780	0.0057366		-99.5	
p-Terphenyl-d14	A	5.0000	0.0271	0.3234672	0.0017548		-99.5	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D  
Date: 01-MAR-2023 21:46  
Client ID:  
Sample Info: SED-SCV1  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230301.B\SIM.B\NT1003012311S.D



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

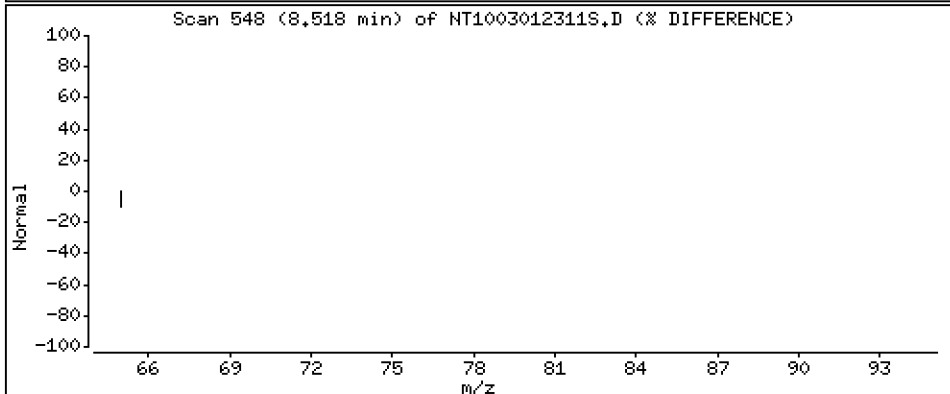
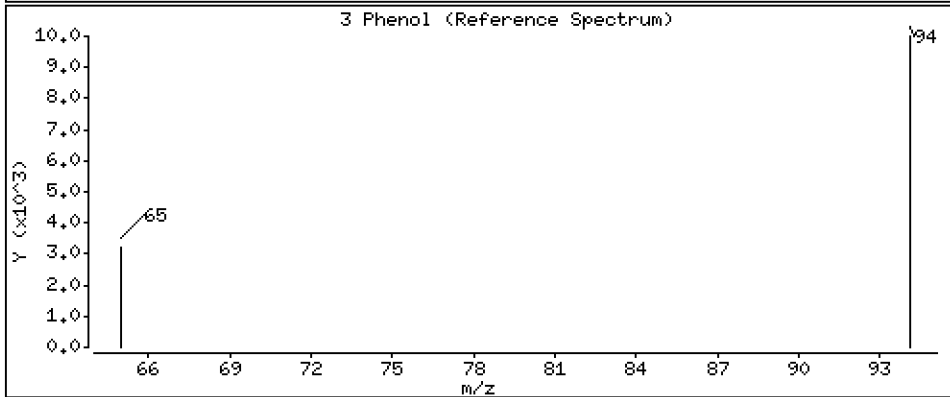
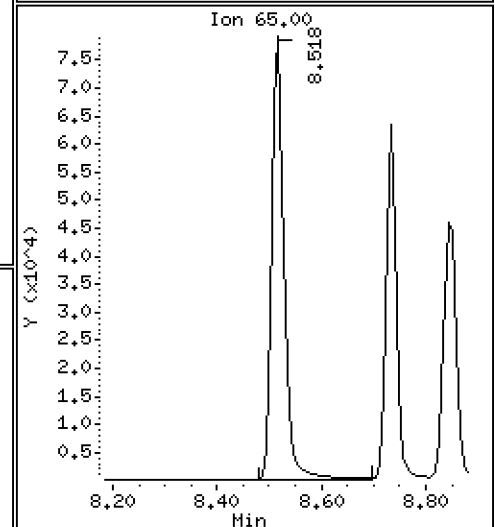
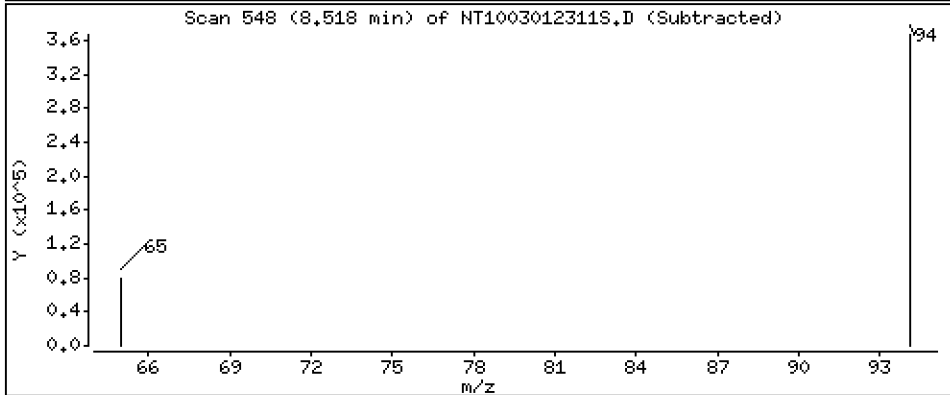
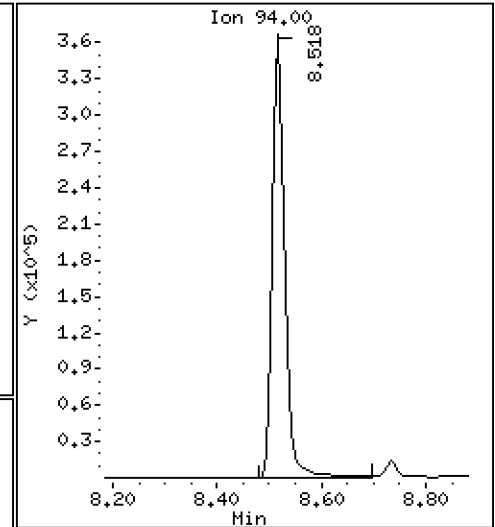
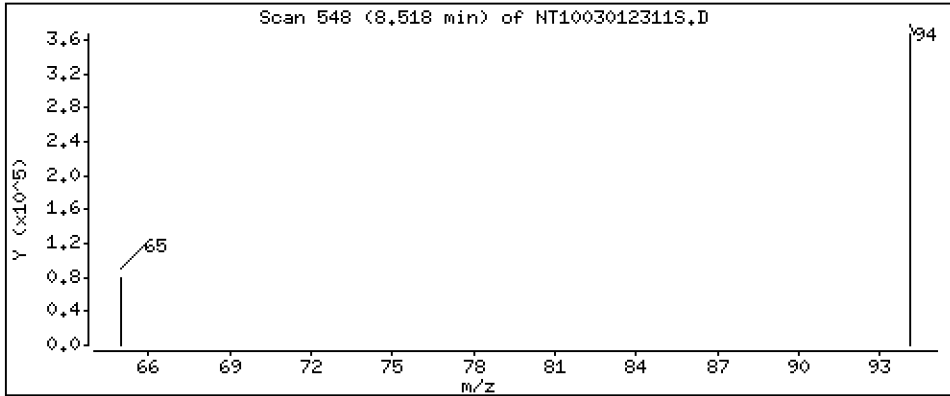
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 4.507 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

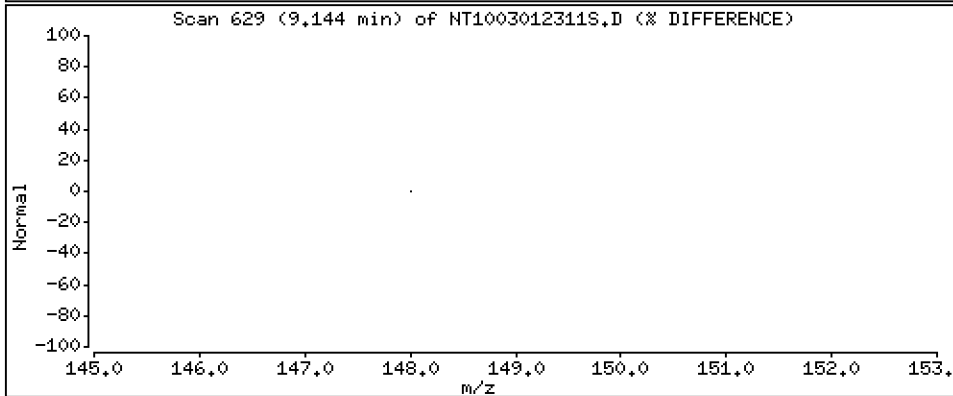
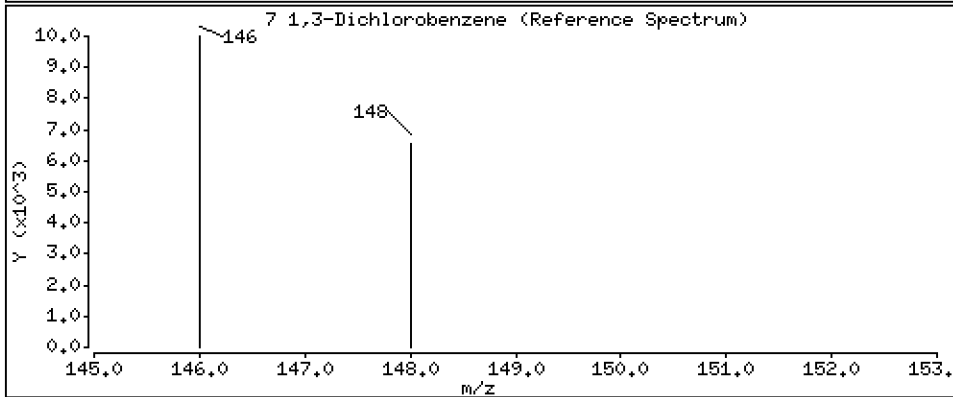
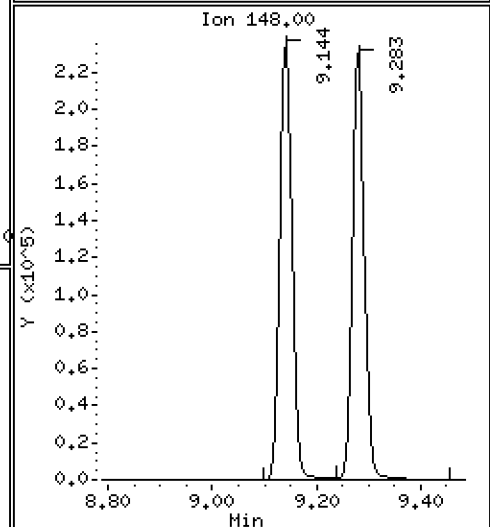
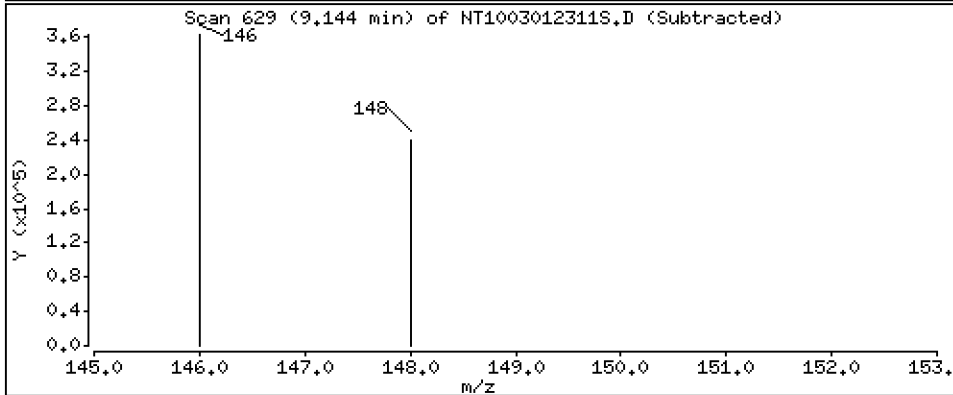
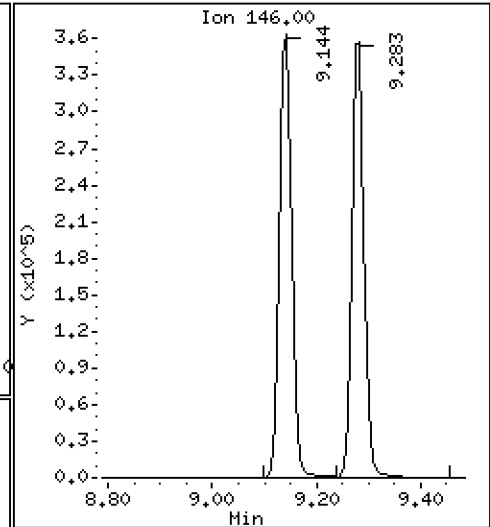
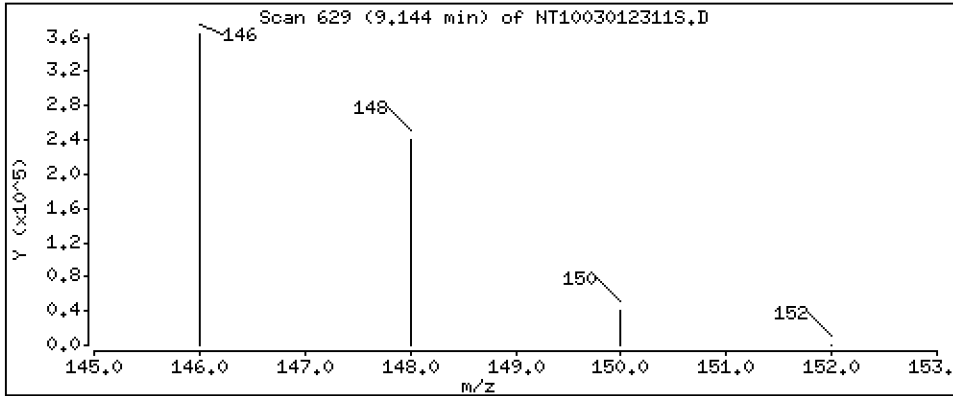
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 5.084 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

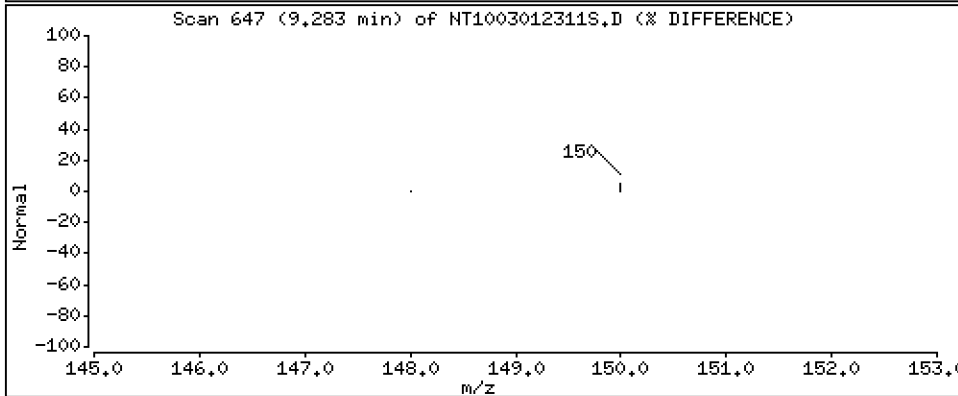
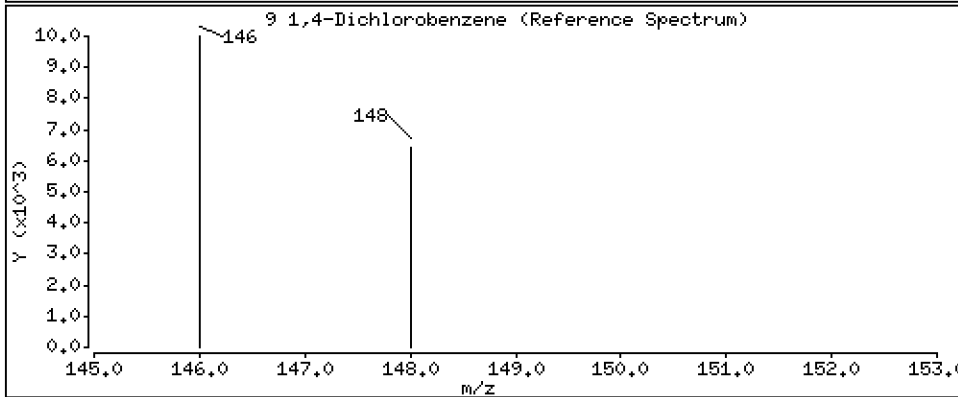
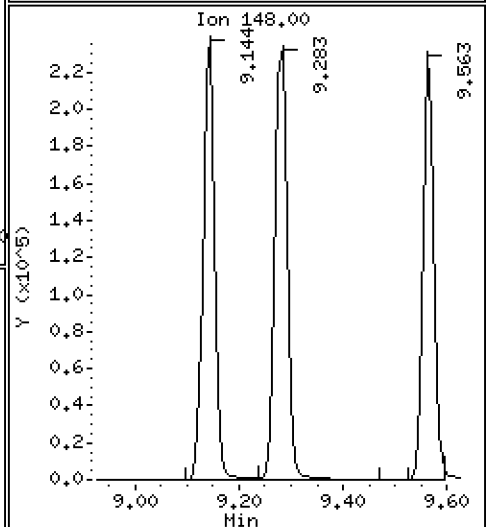
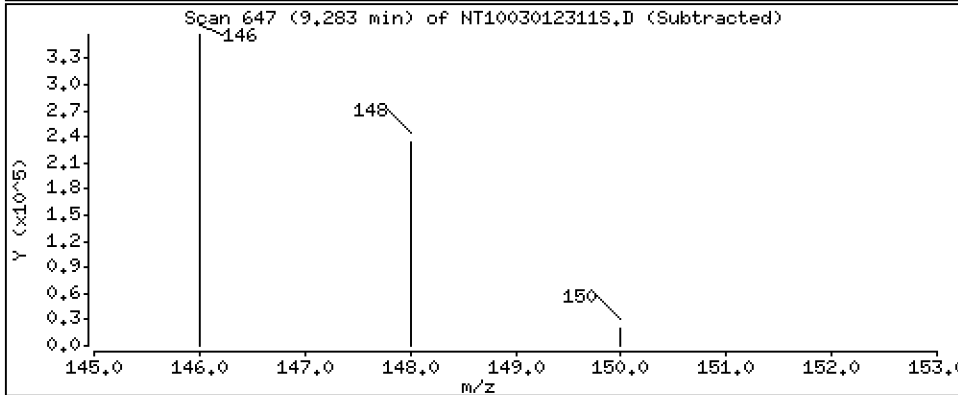
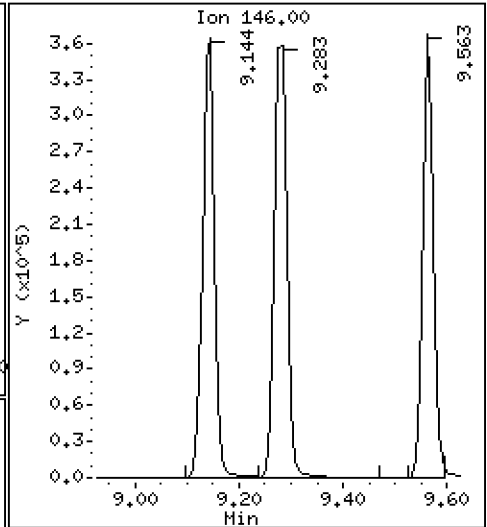
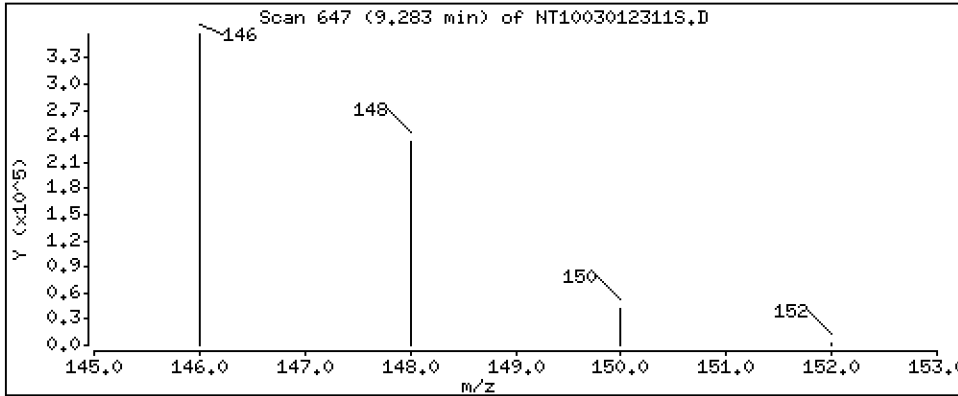
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 5,250 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

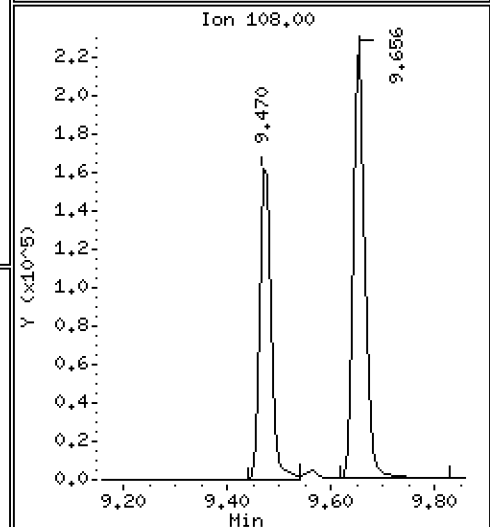
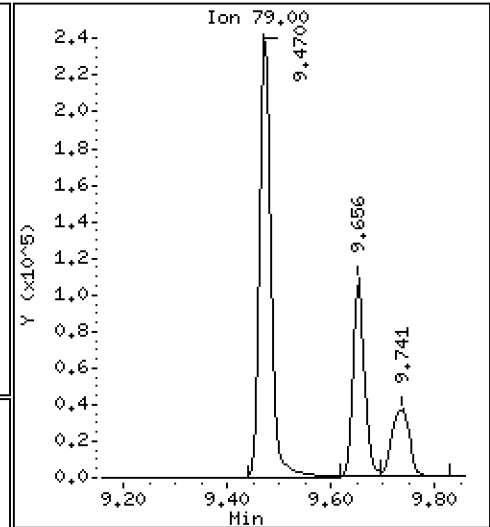
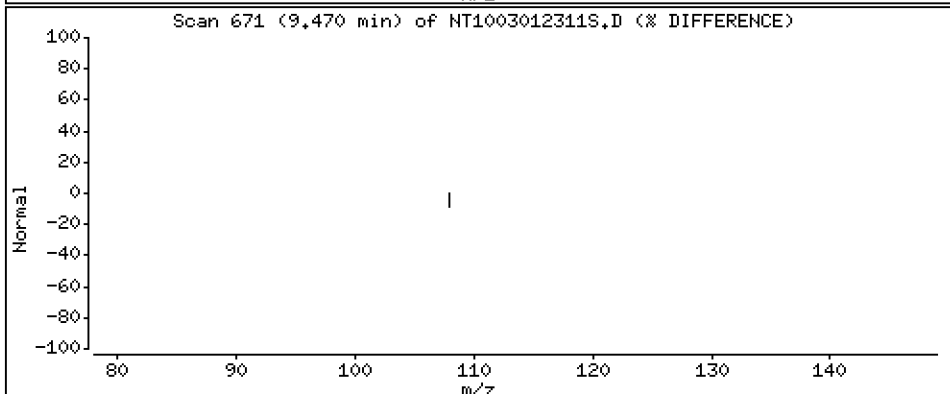
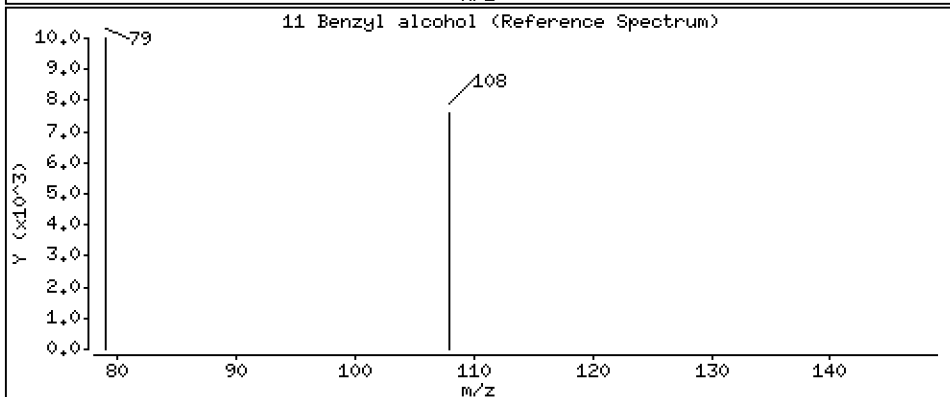
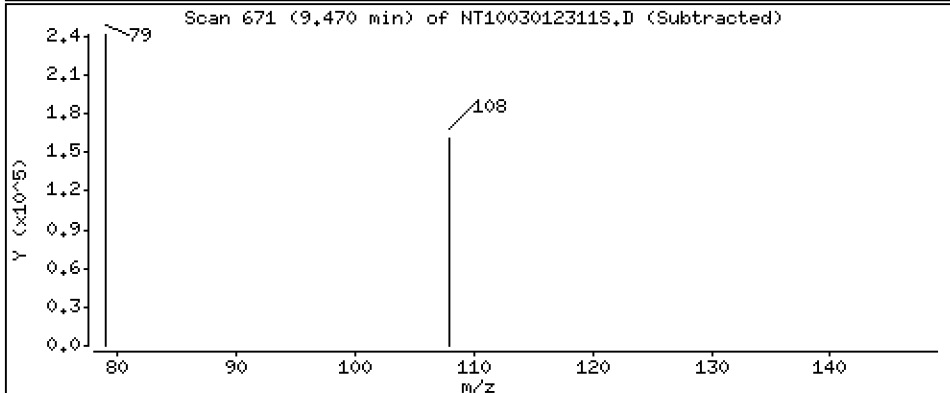
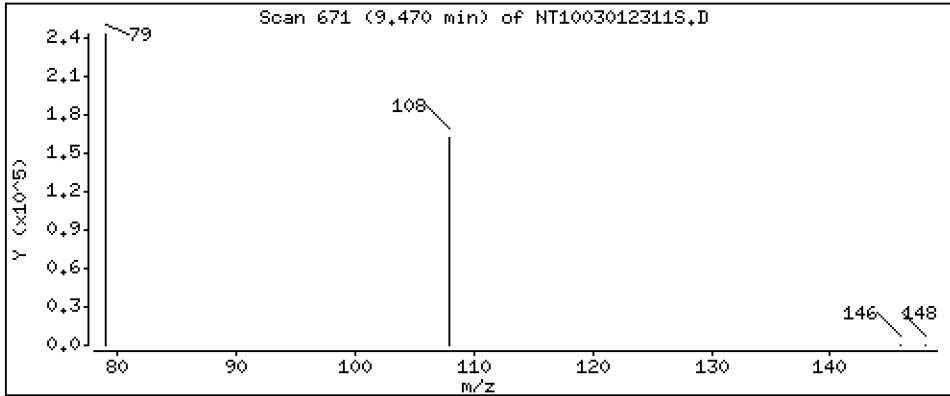
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 5,104 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

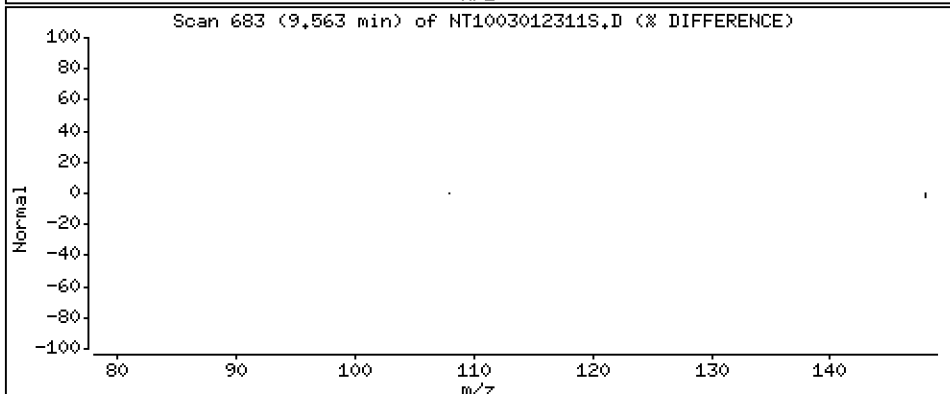
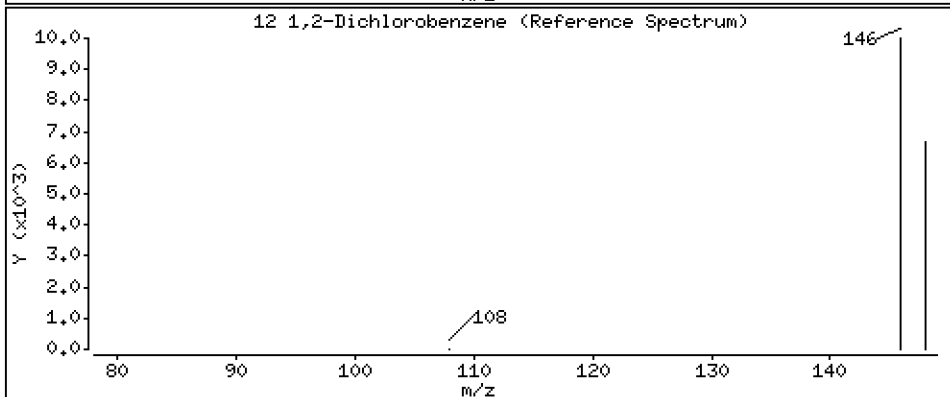
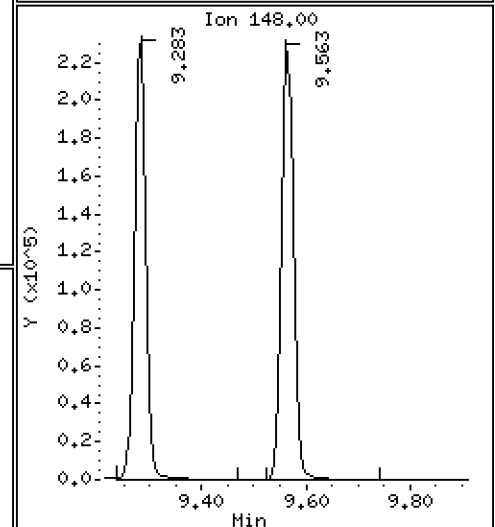
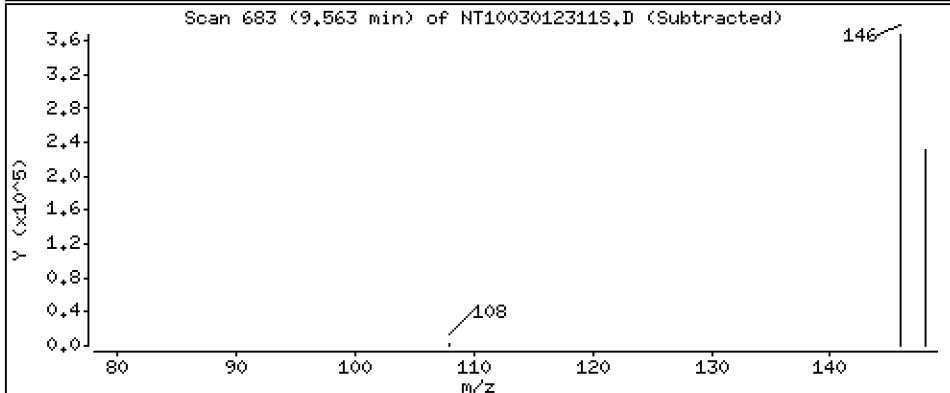
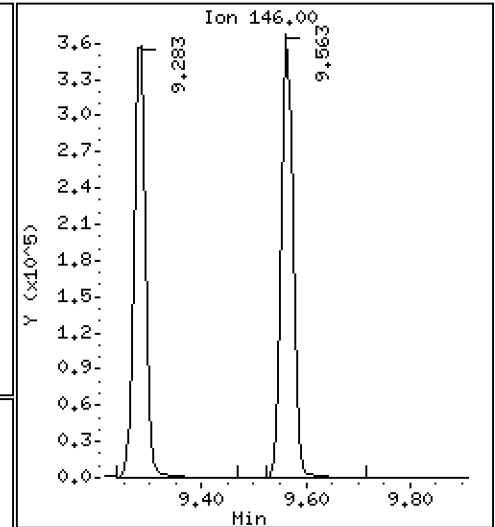
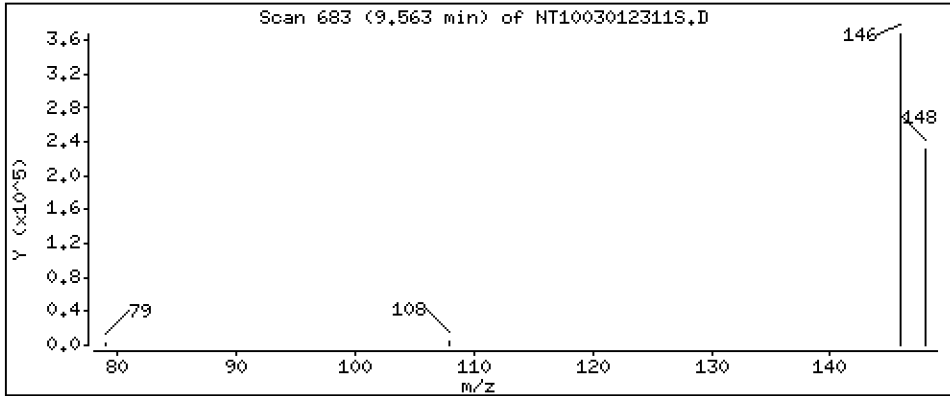
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 5,142 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

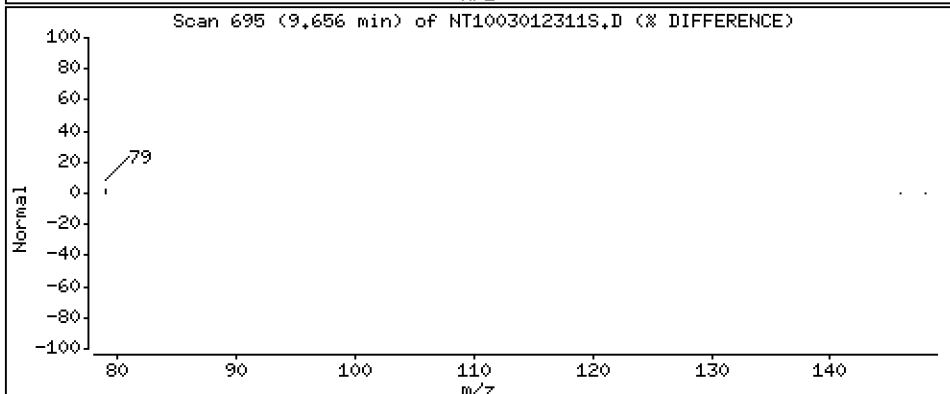
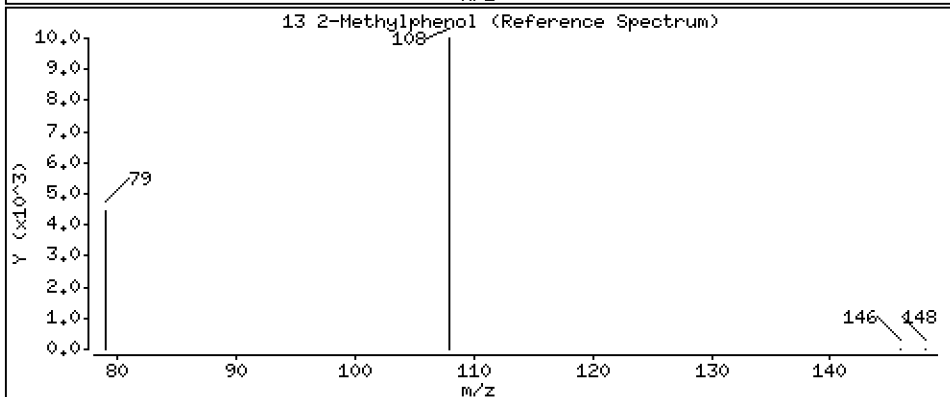
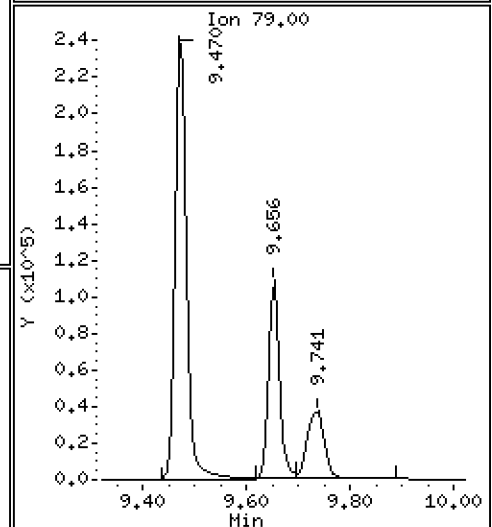
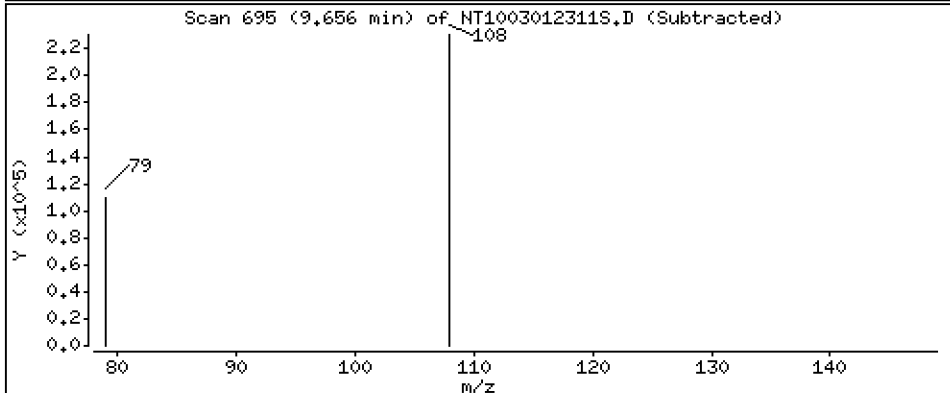
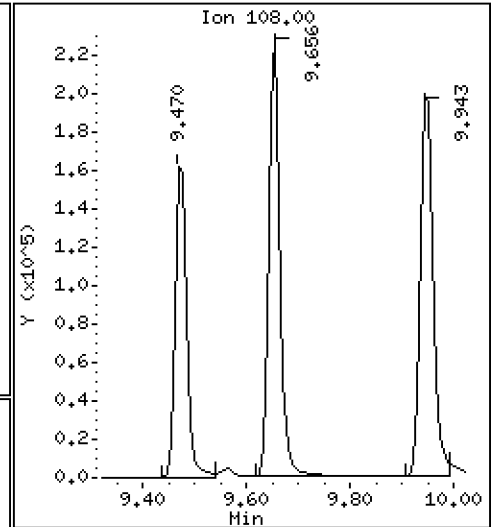
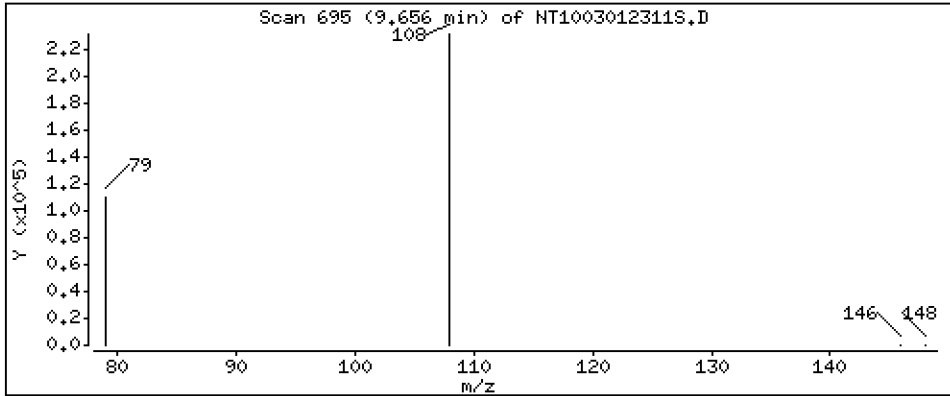
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 4.365 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

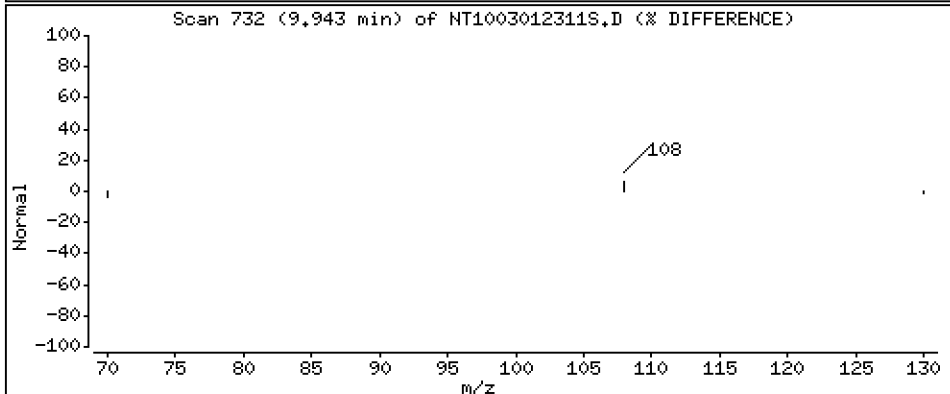
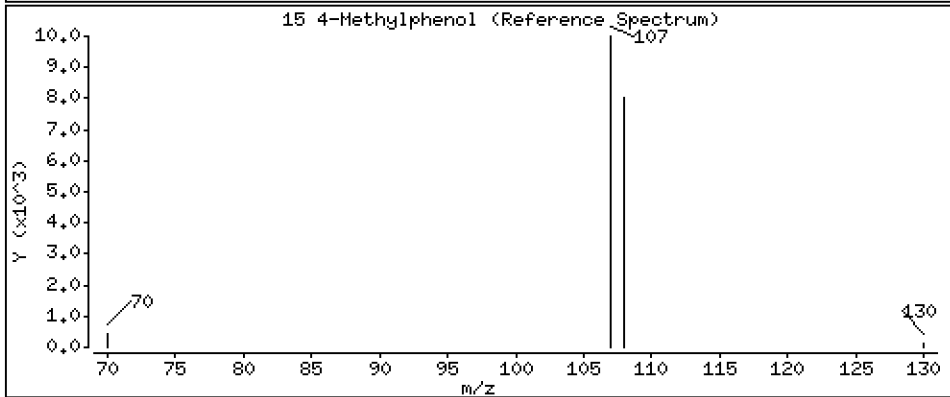
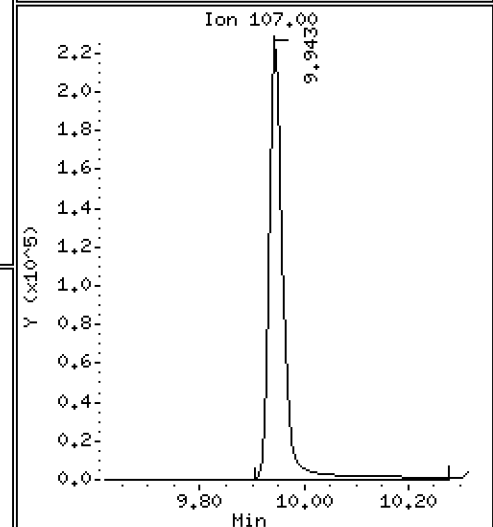
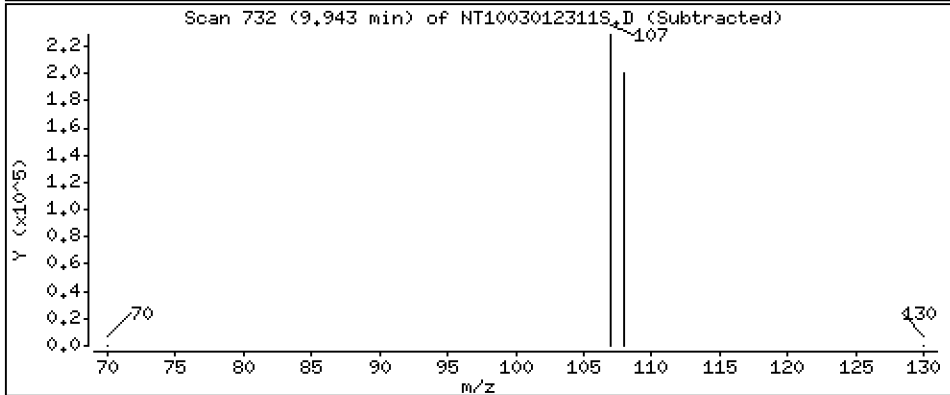
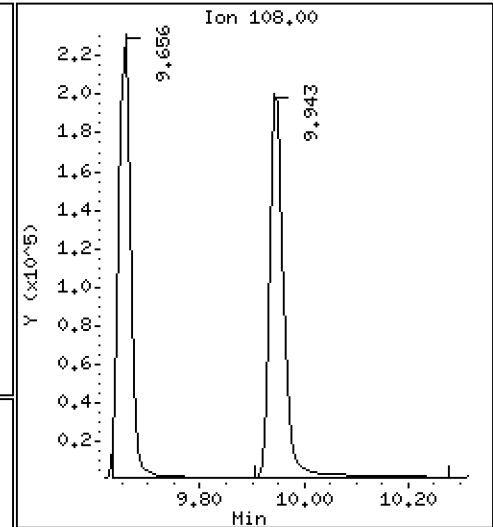
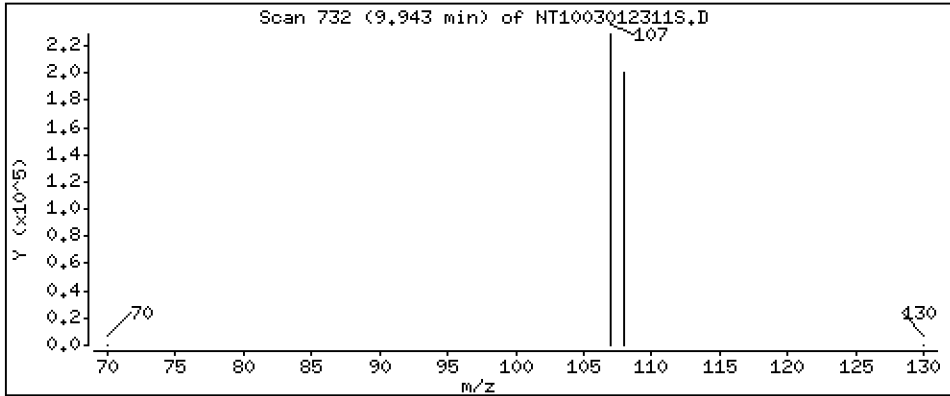
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 4.505 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

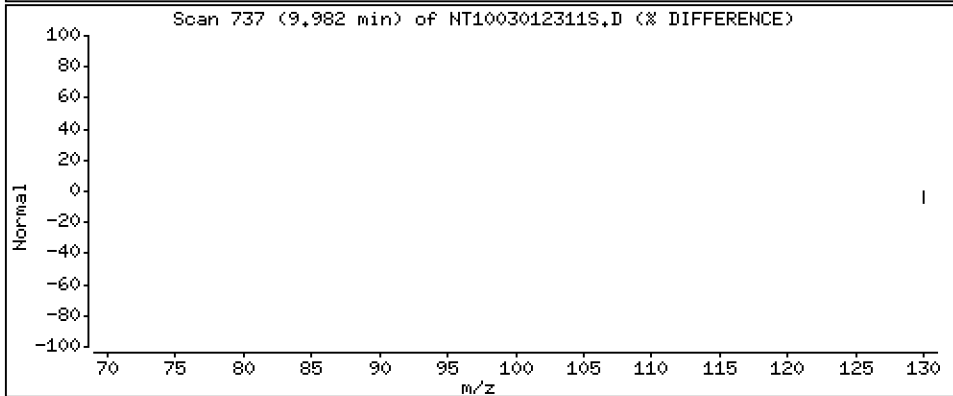
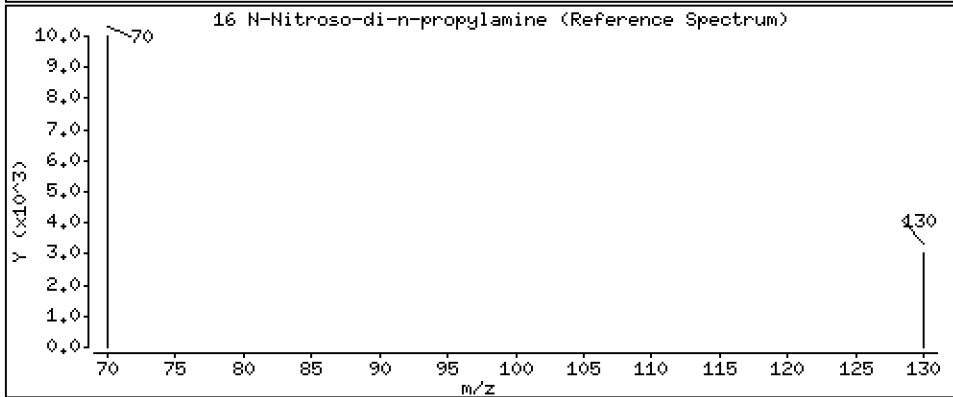
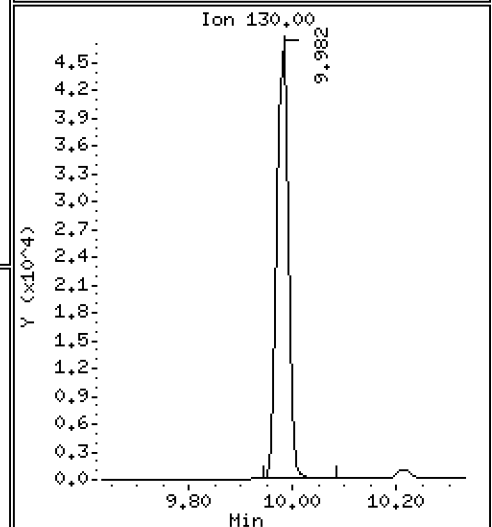
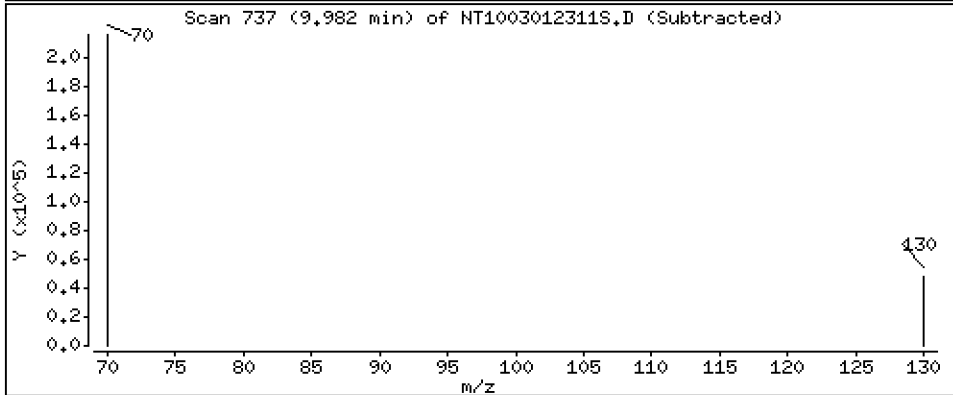
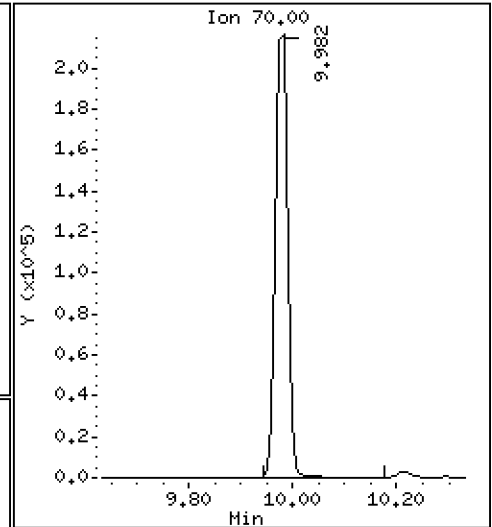
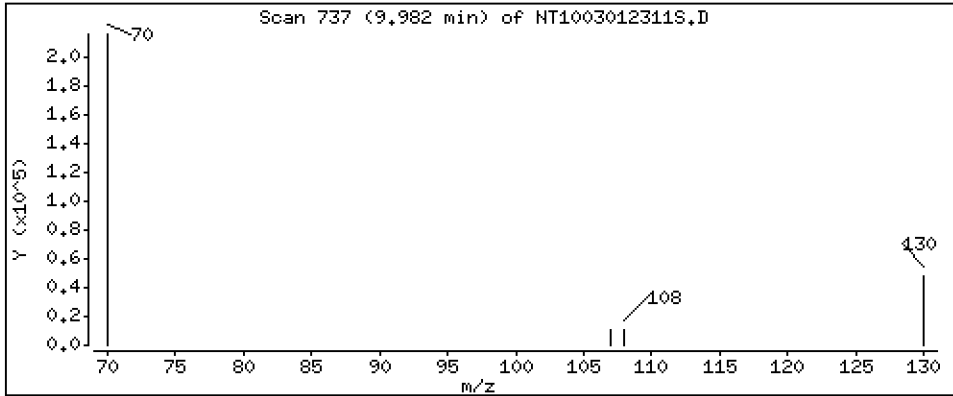
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 5,685 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

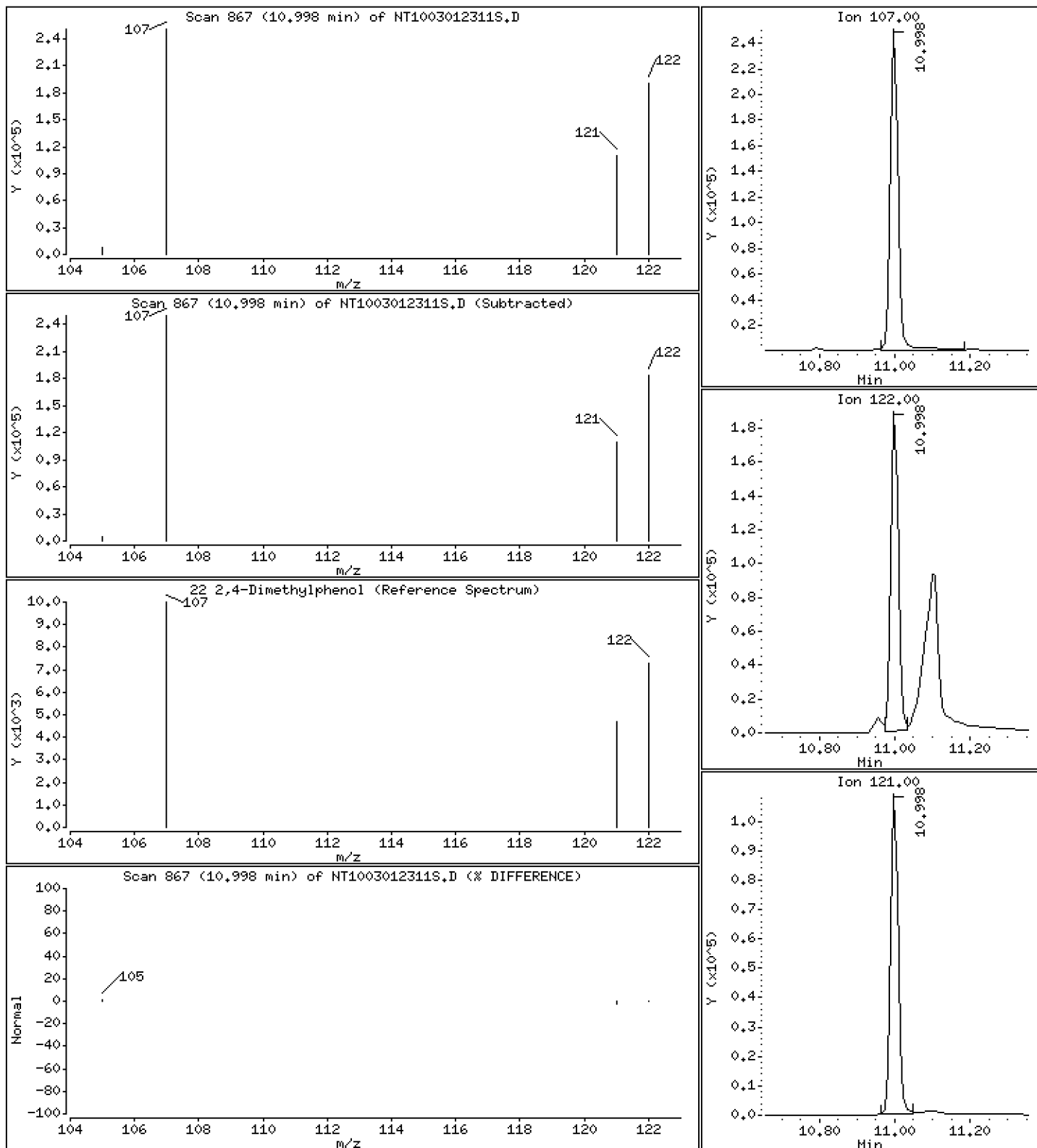
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 3.637 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

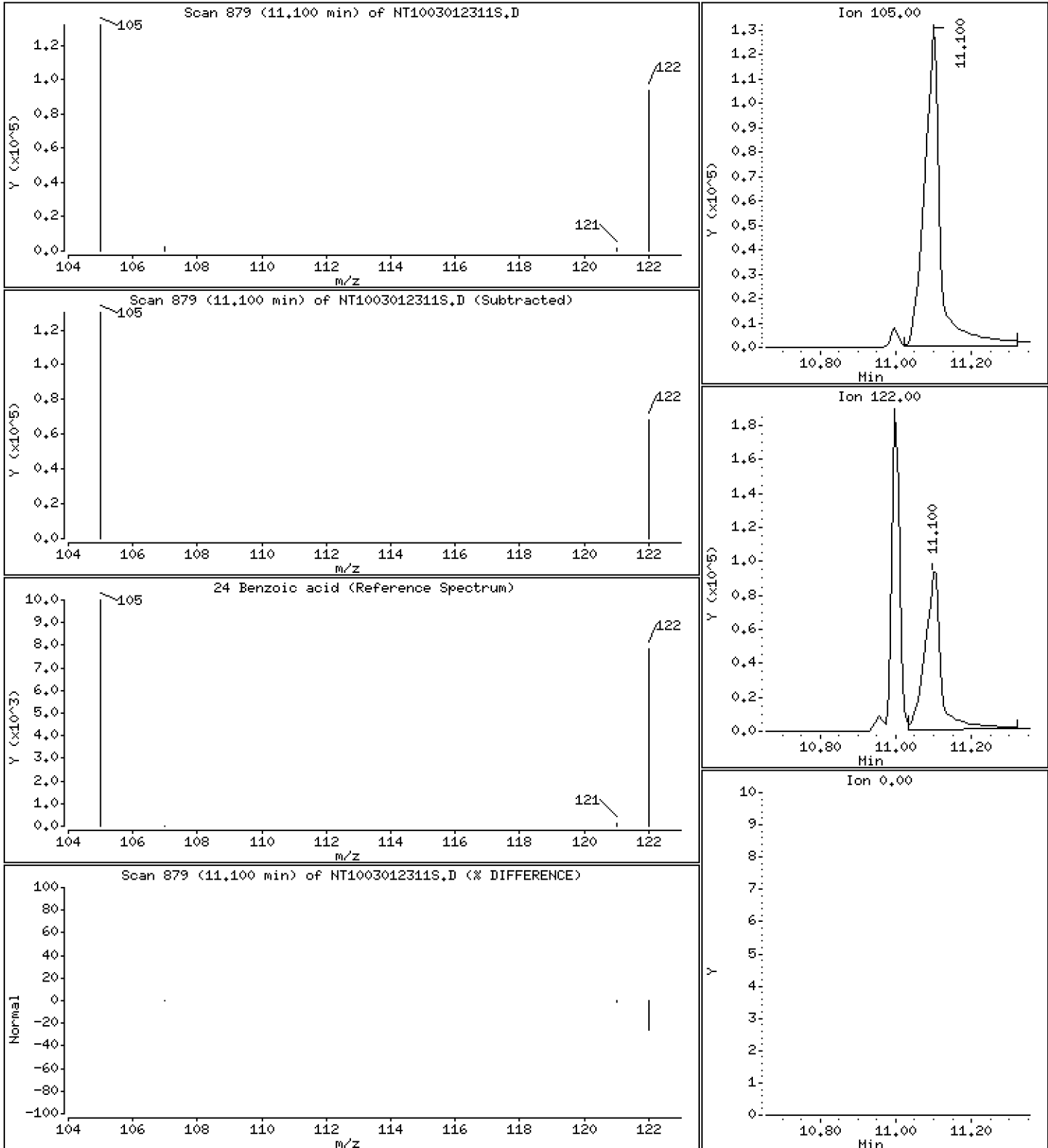
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 6,870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

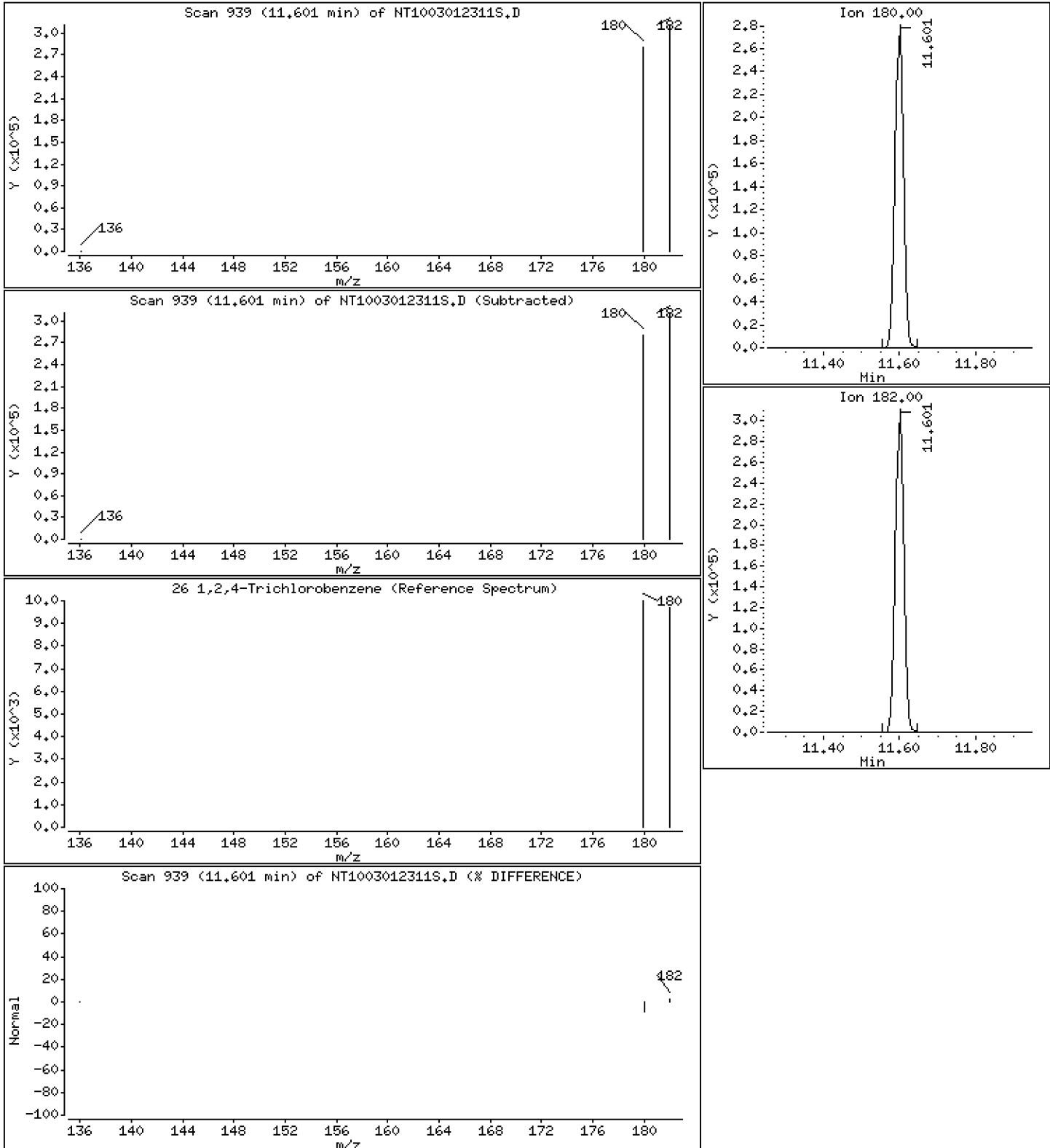
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 4.870 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

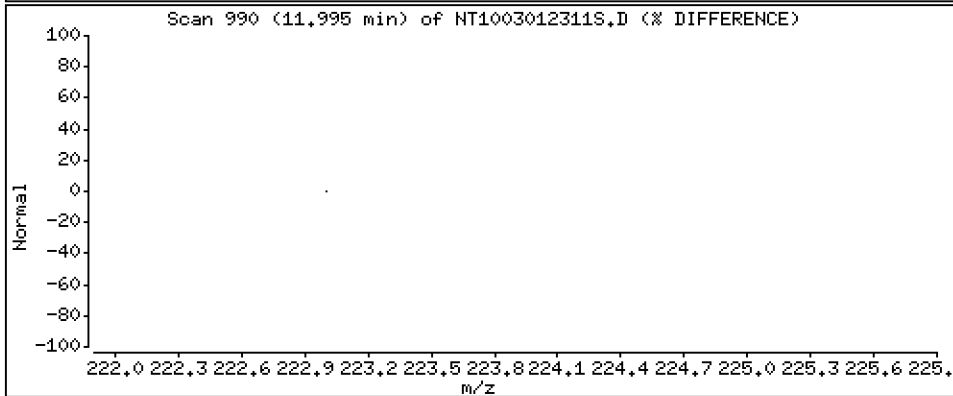
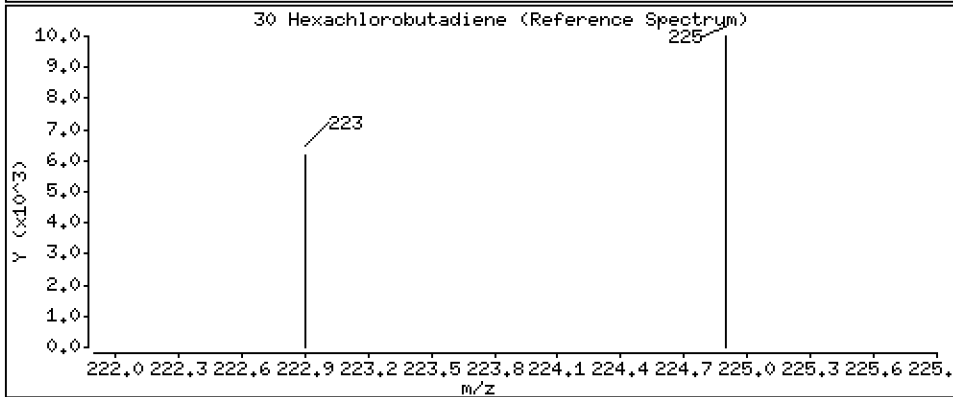
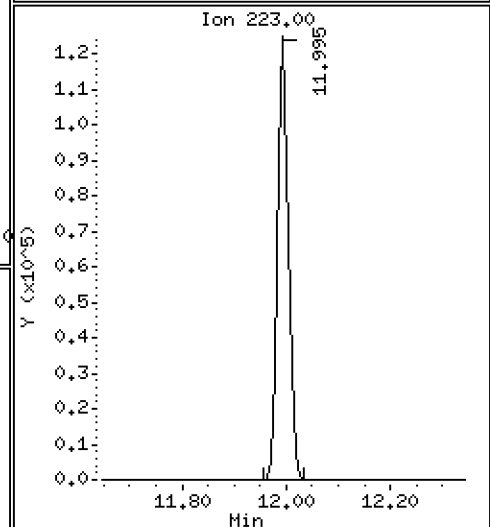
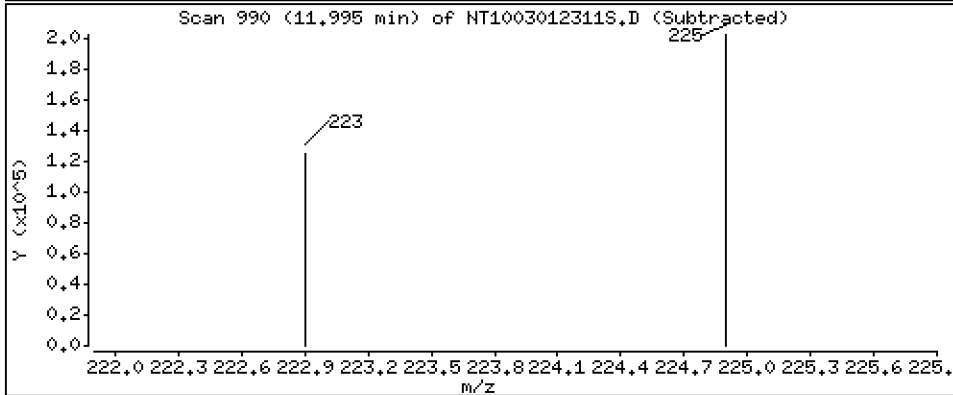
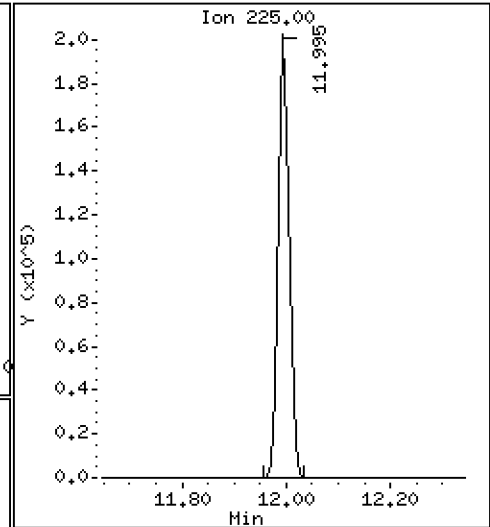
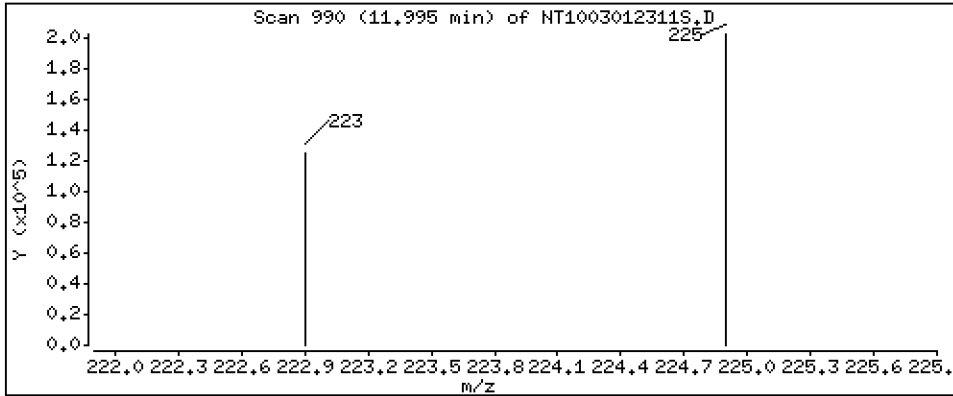
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 4,862 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

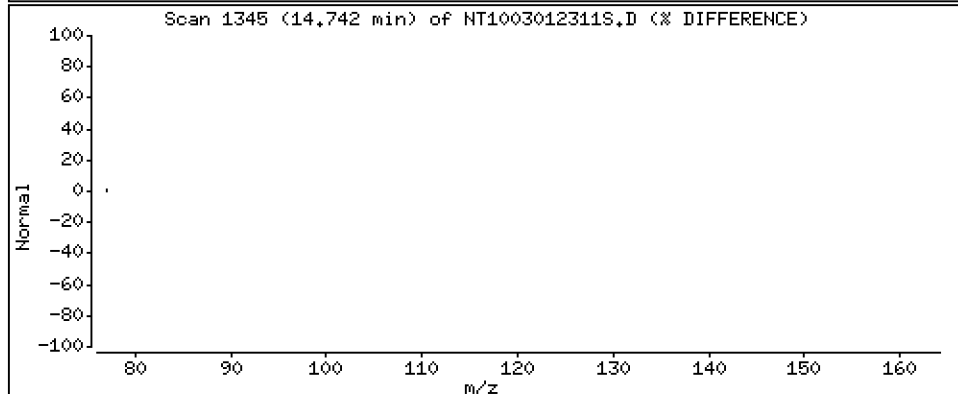
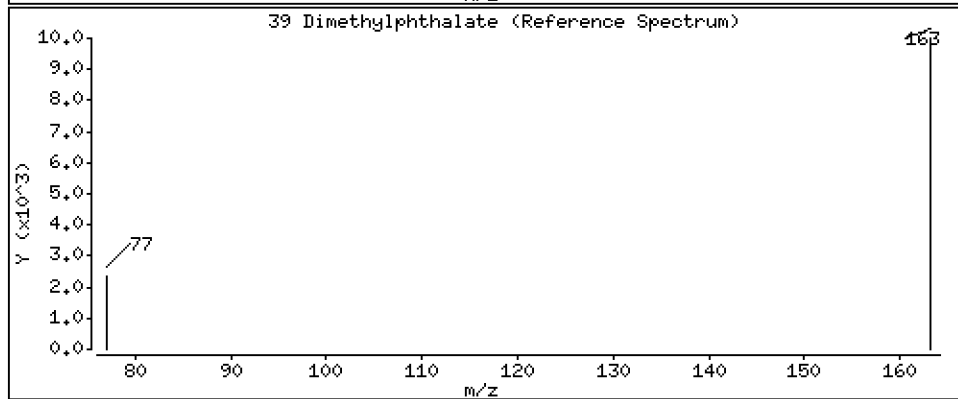
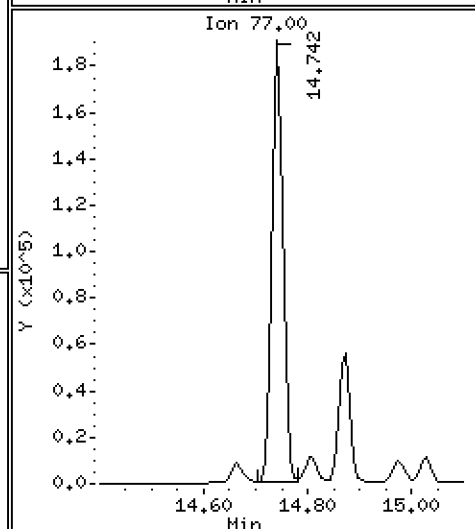
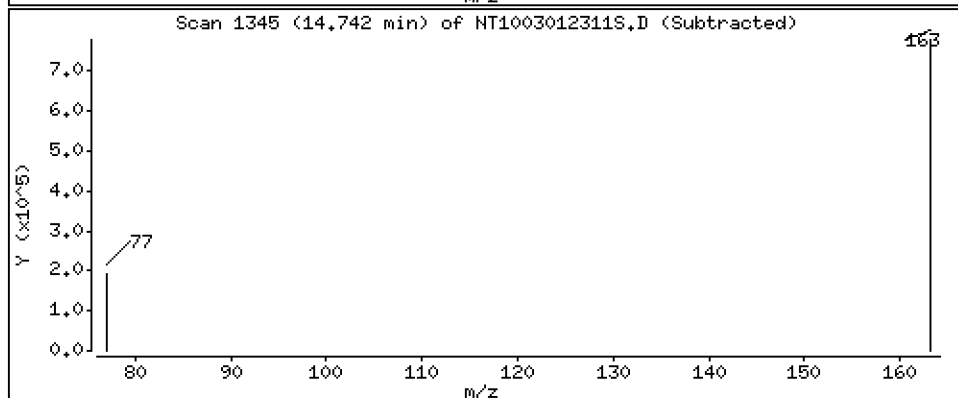
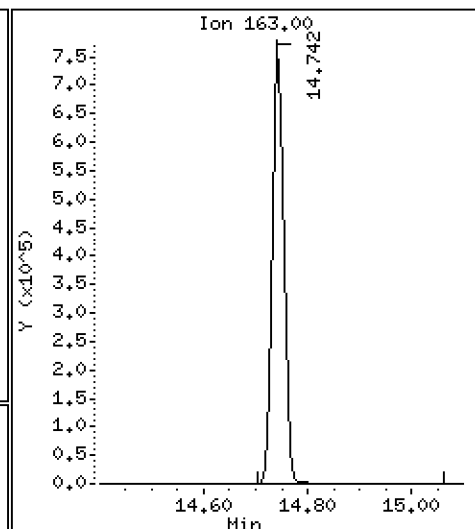
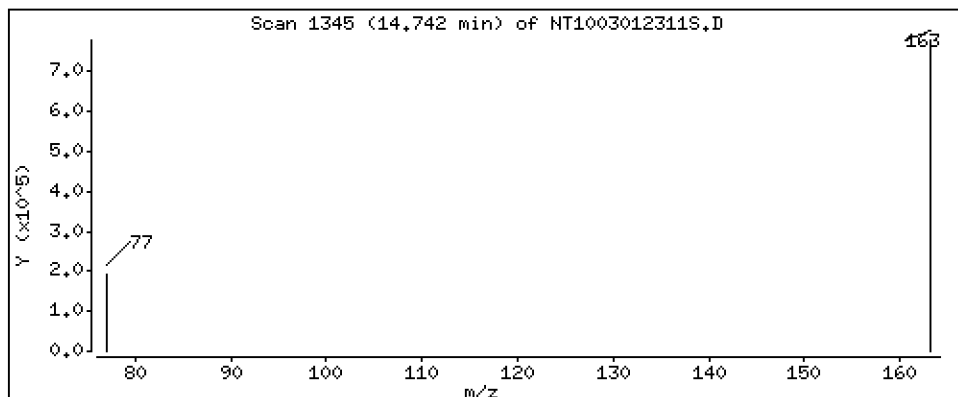
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 5.571 ug/L





Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

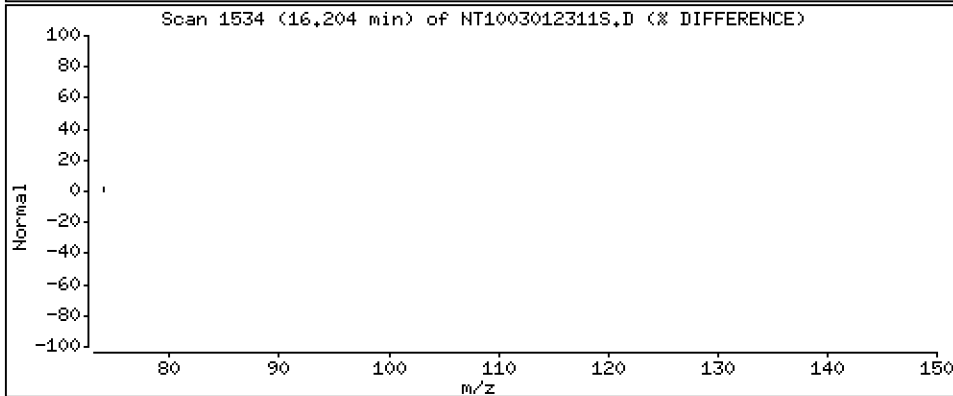
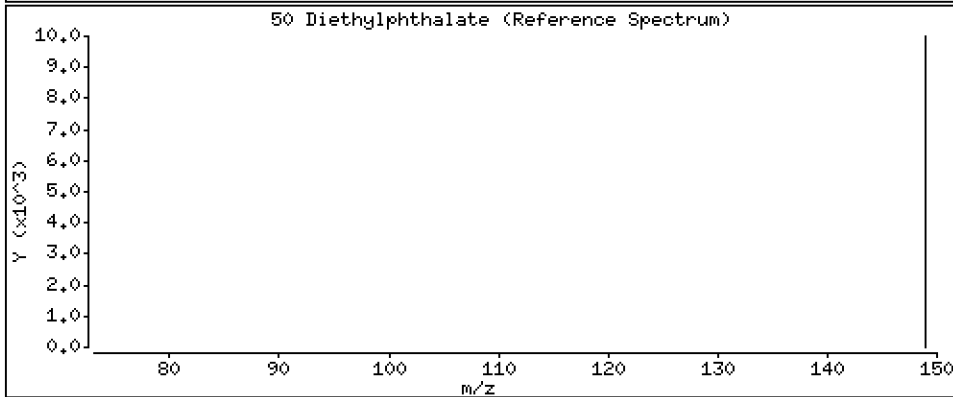
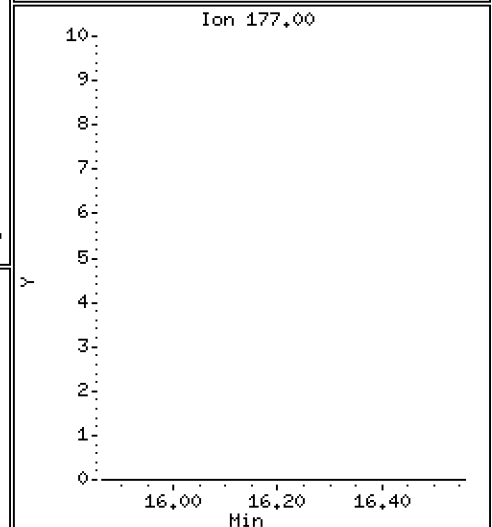
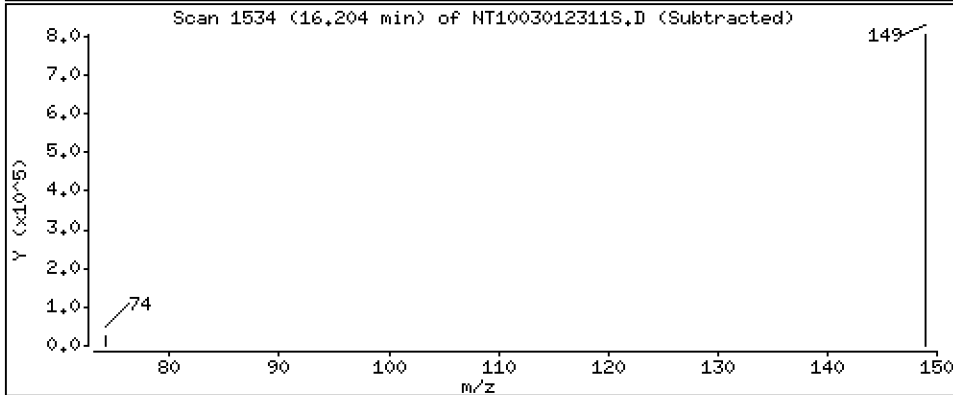
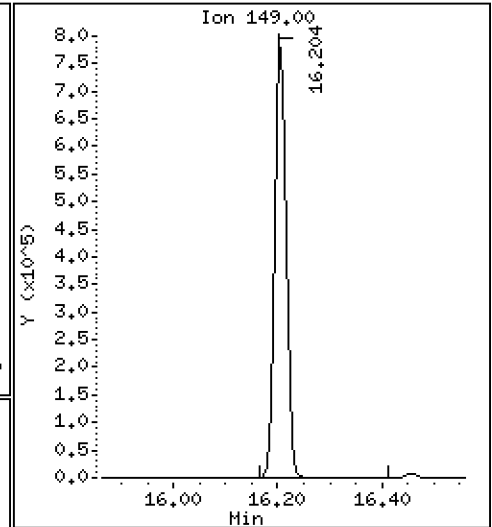
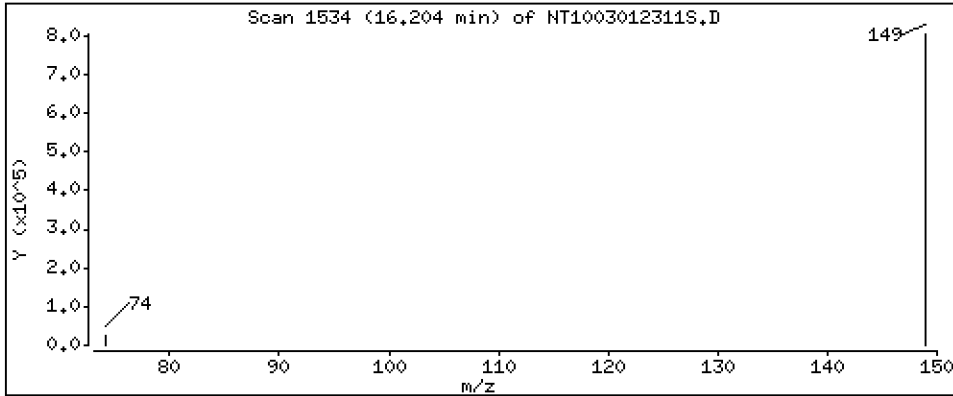
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 5,979 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

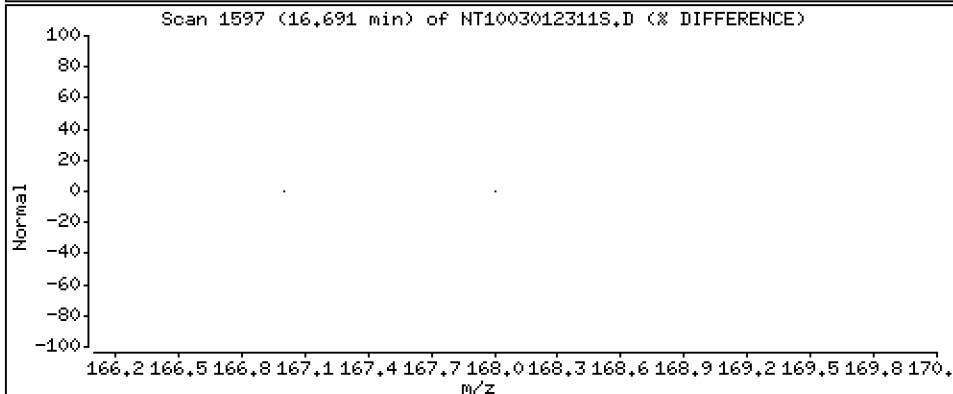
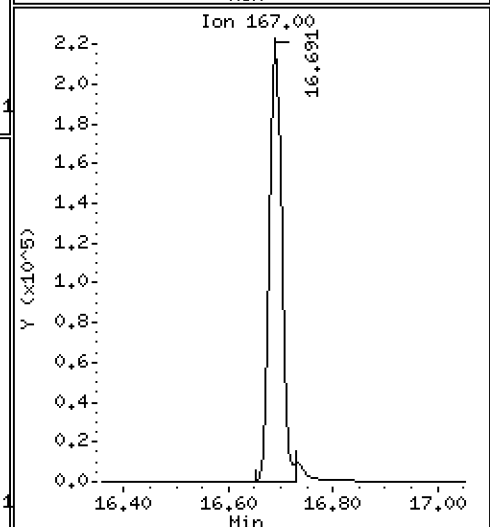
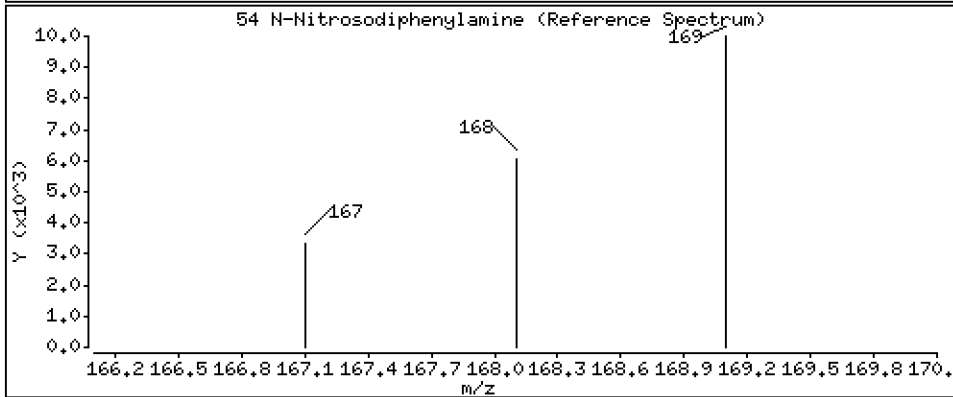
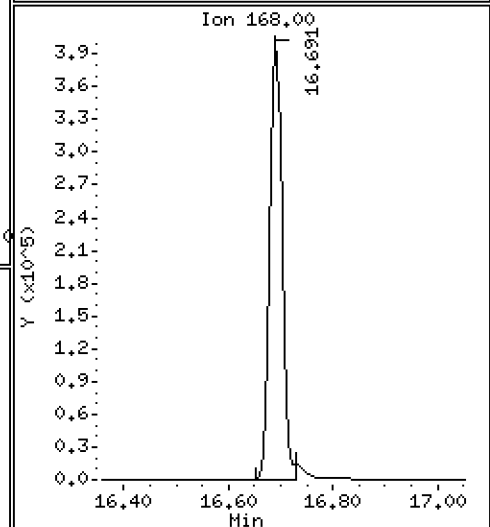
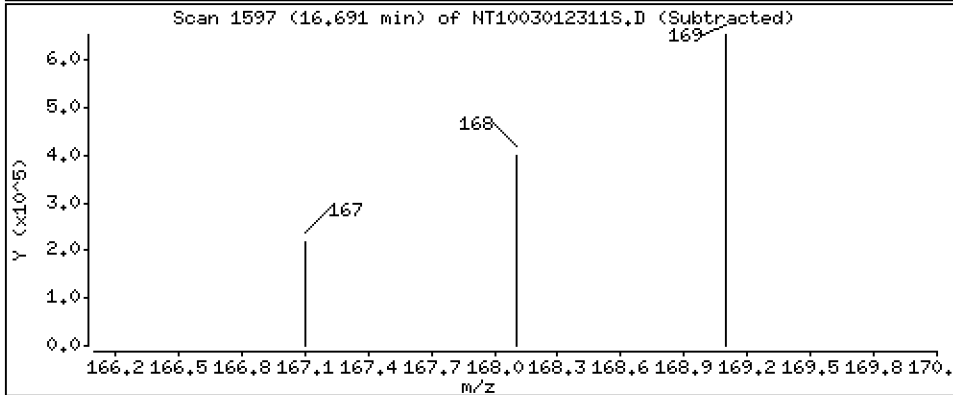
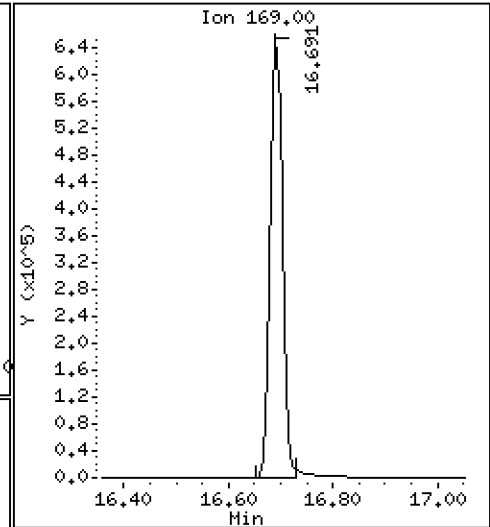
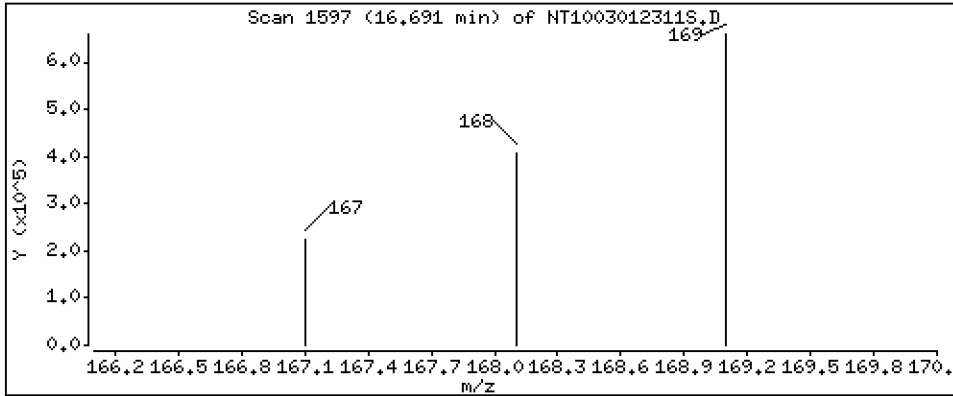
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 5.359 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

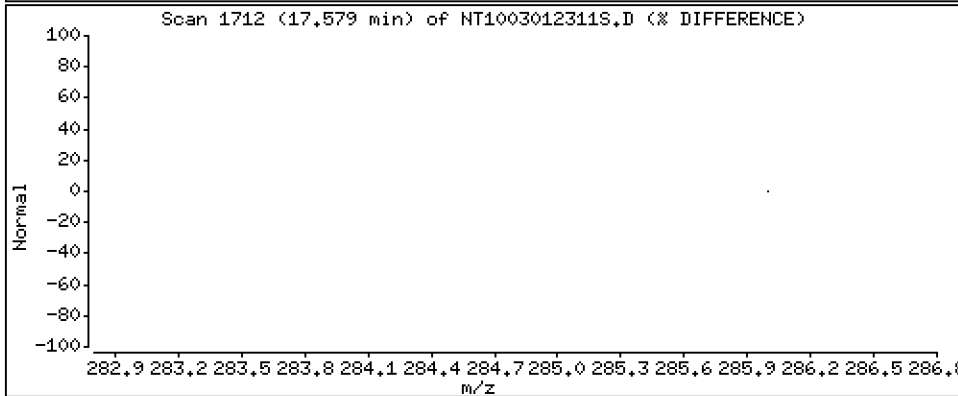
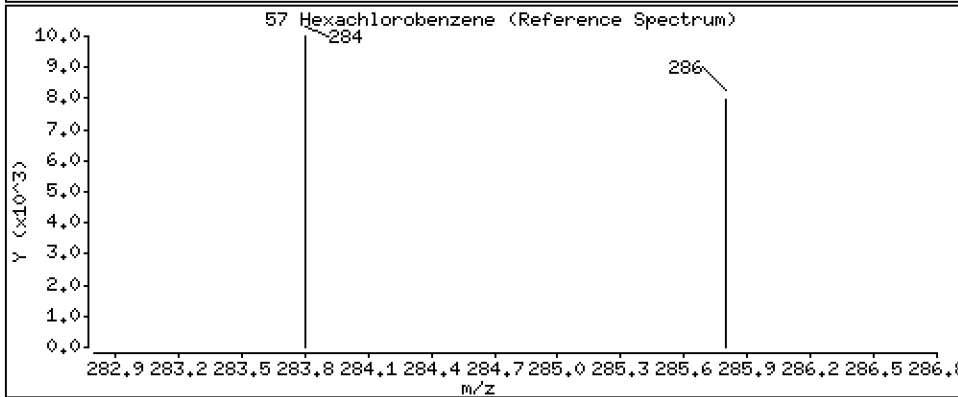
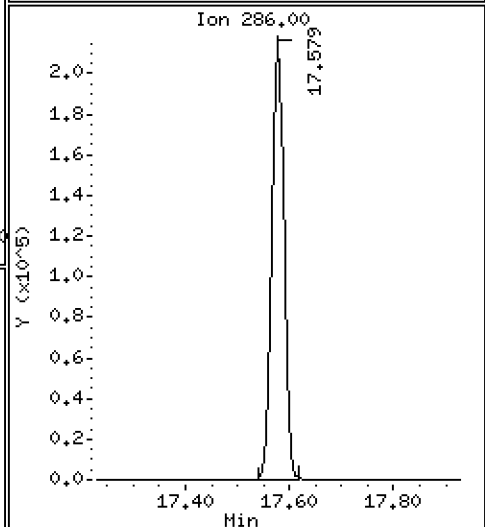
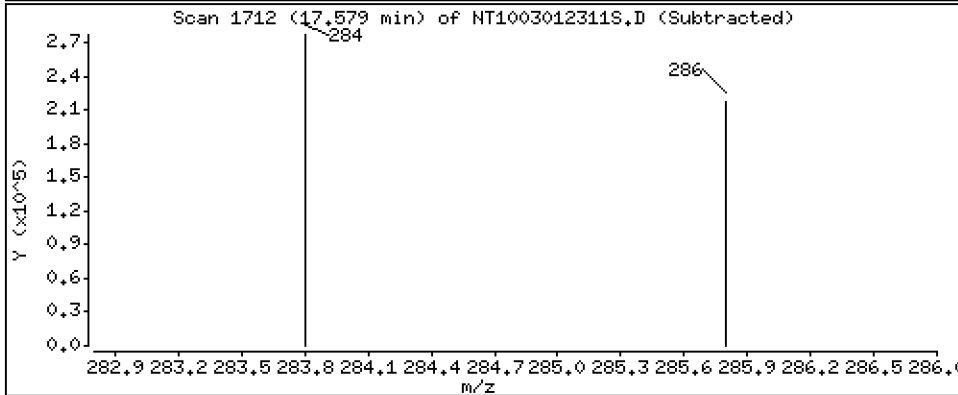
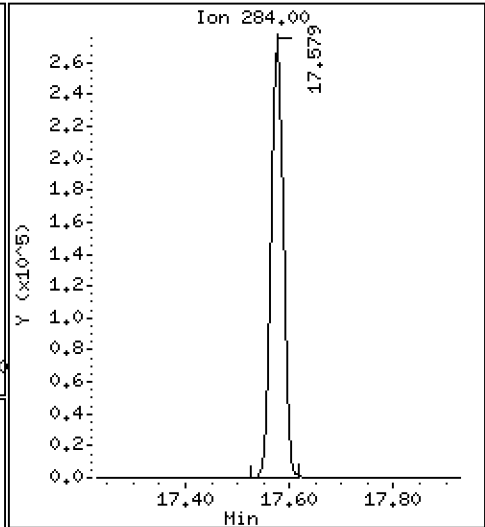
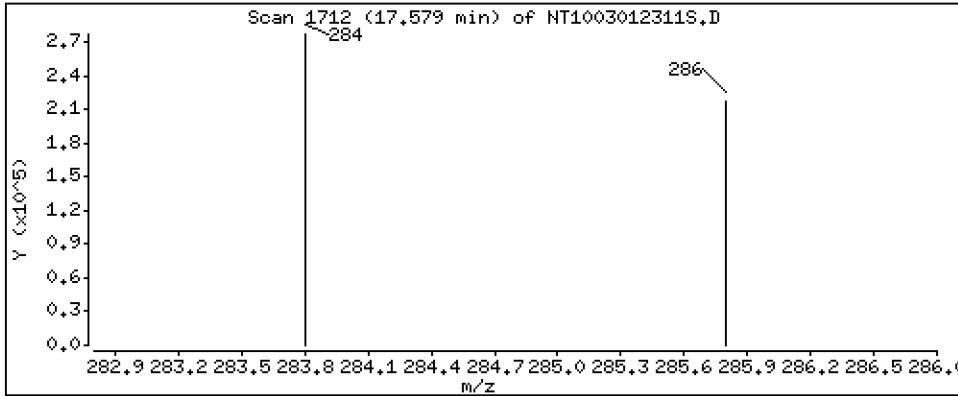
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 4.866 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

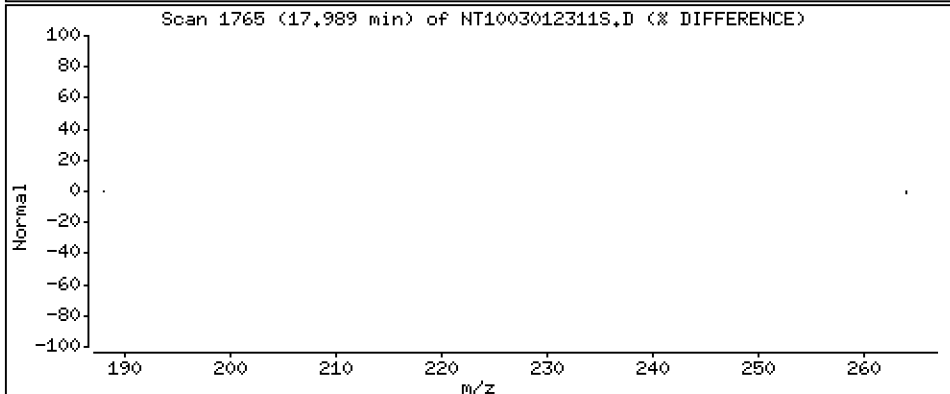
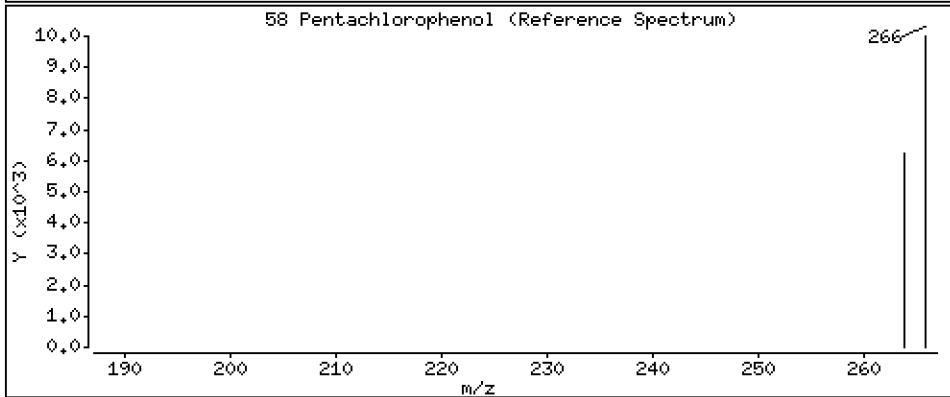
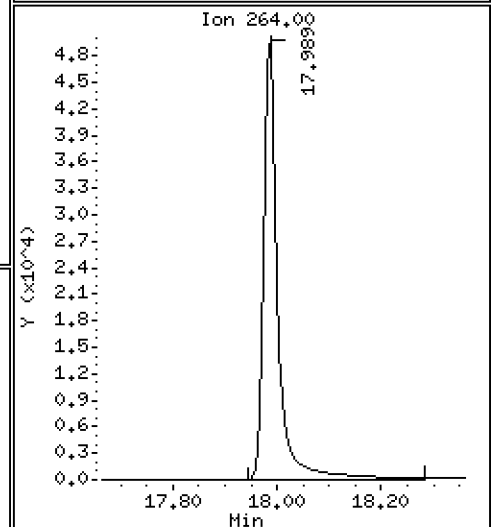
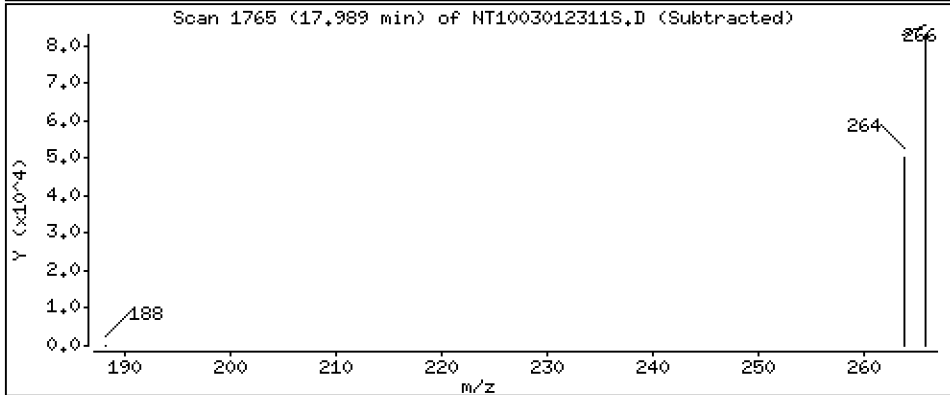
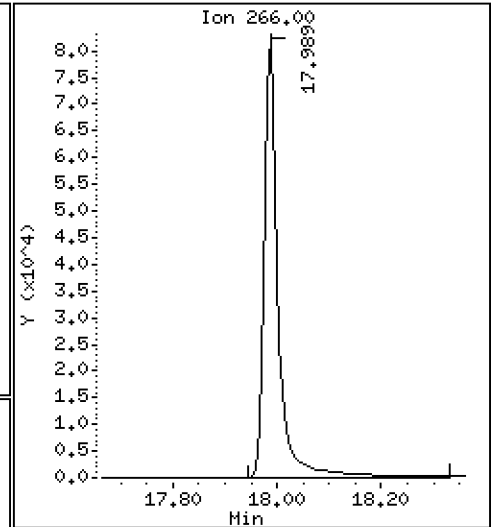
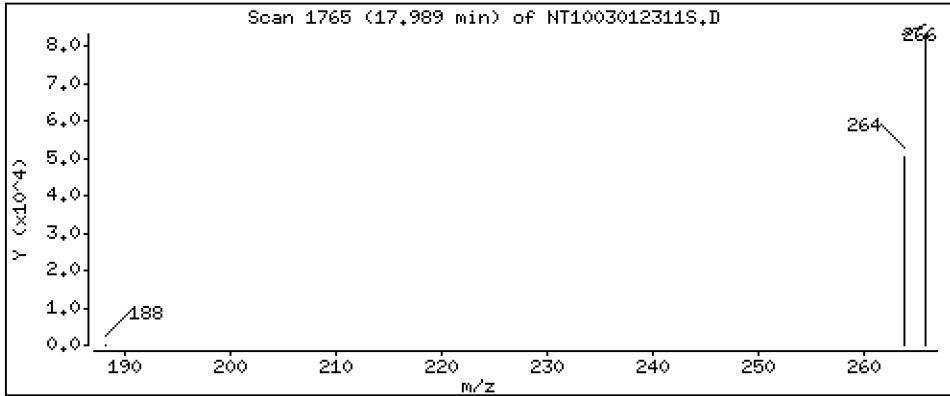
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 3,912 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

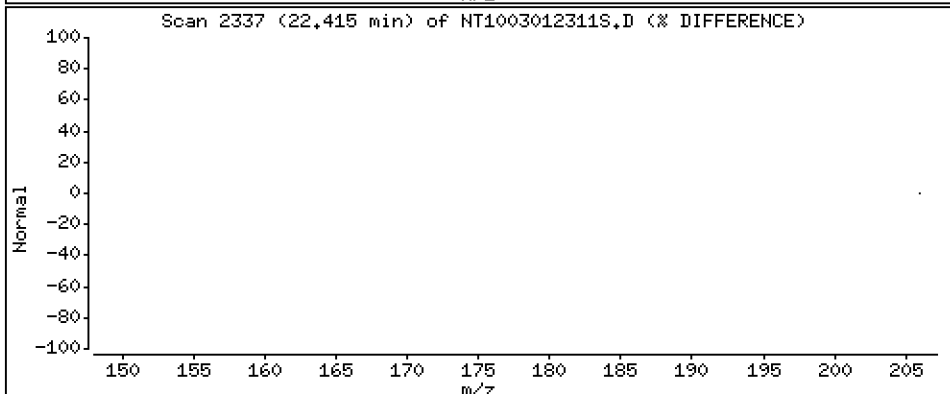
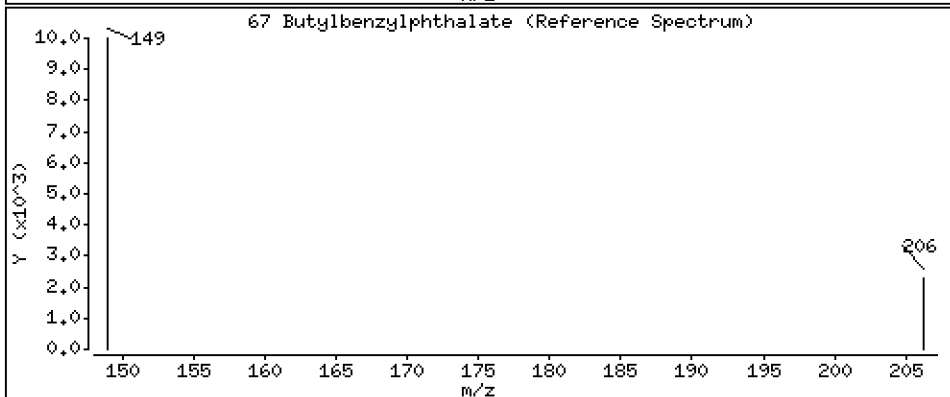
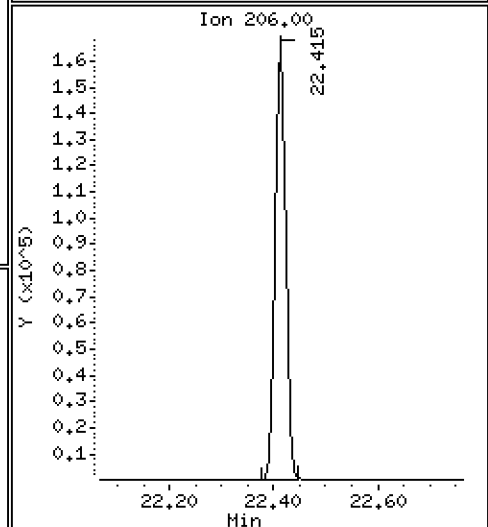
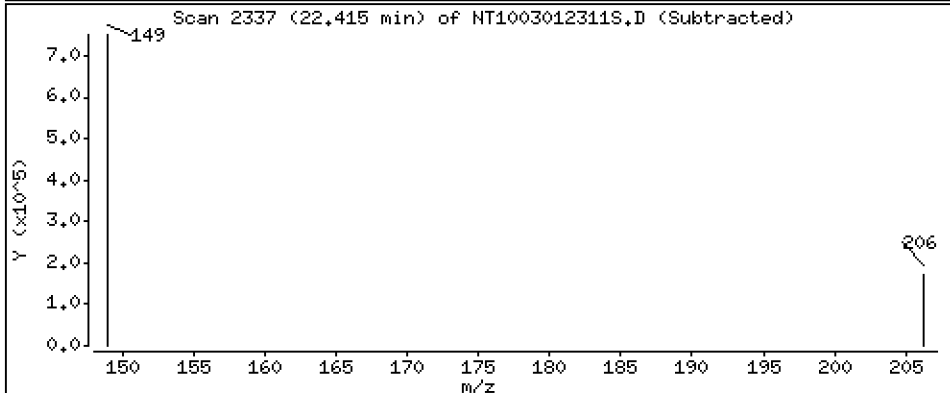
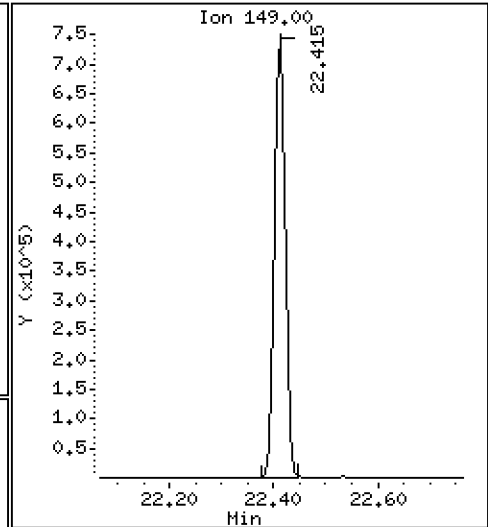
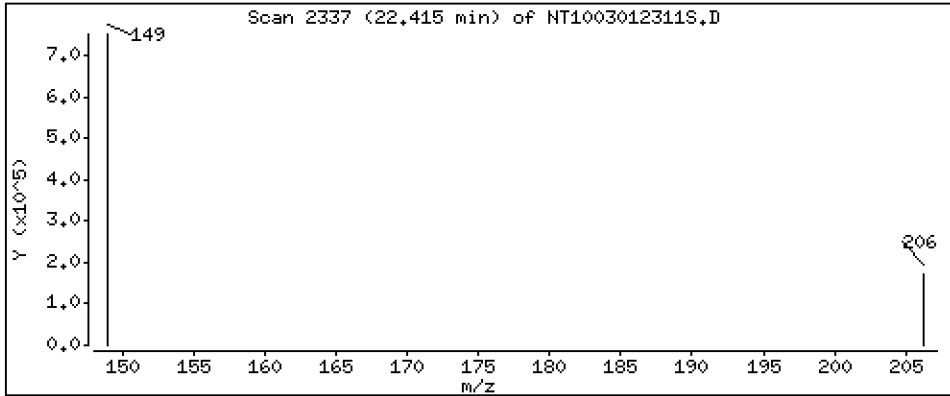
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 4,689 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

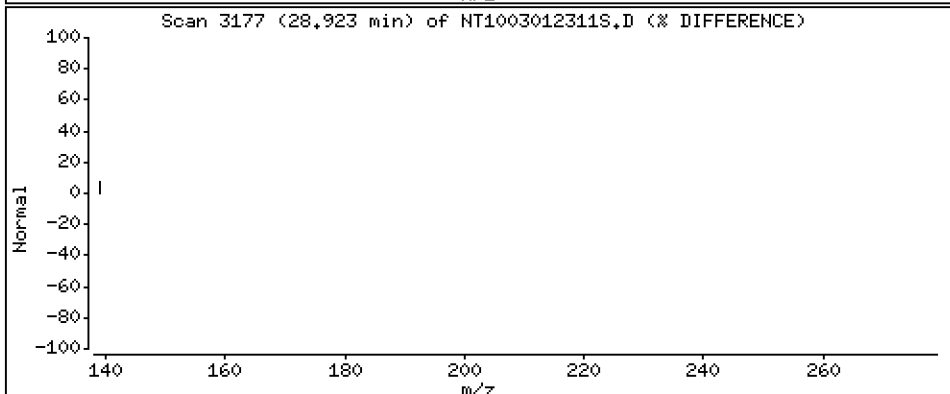
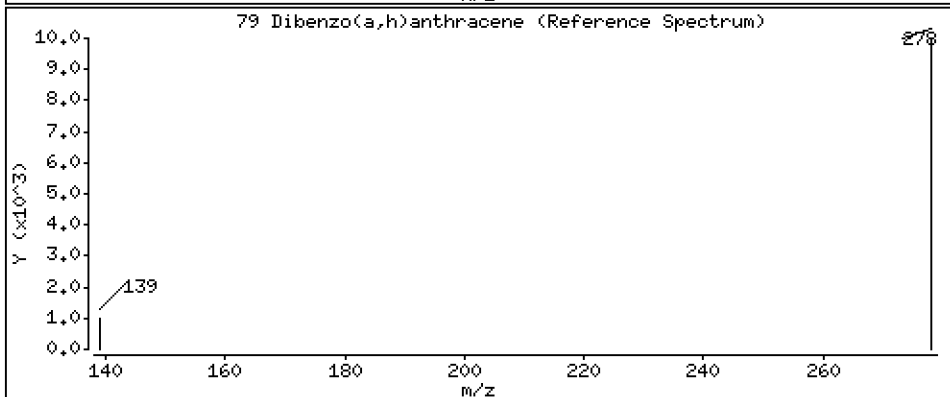
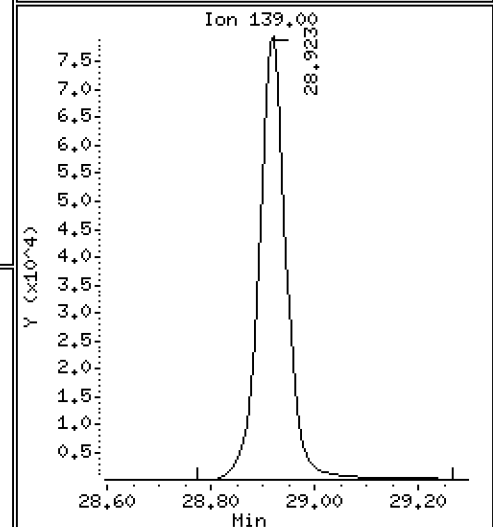
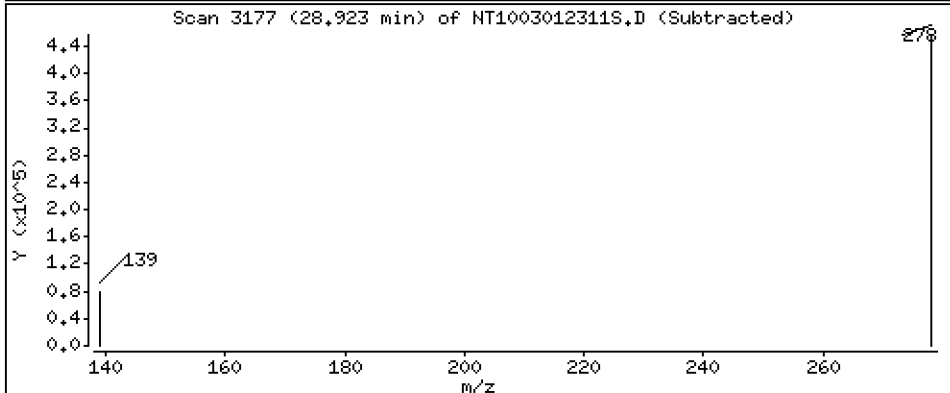
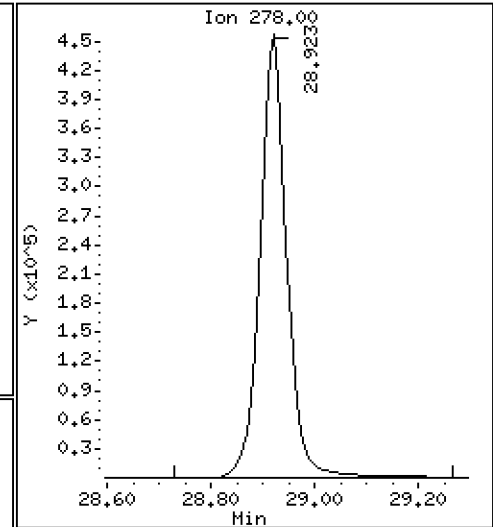
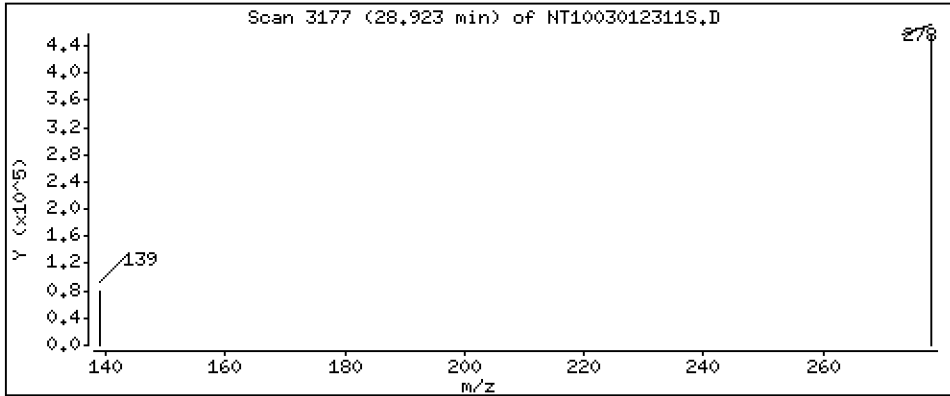
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 4,760 ug/L



Date : 01-MAR-2023 21:46

Client ID:

Instrument: nt10.i

Sample Info: SEQ-SCV1

Volume Injected (uL): 1.0

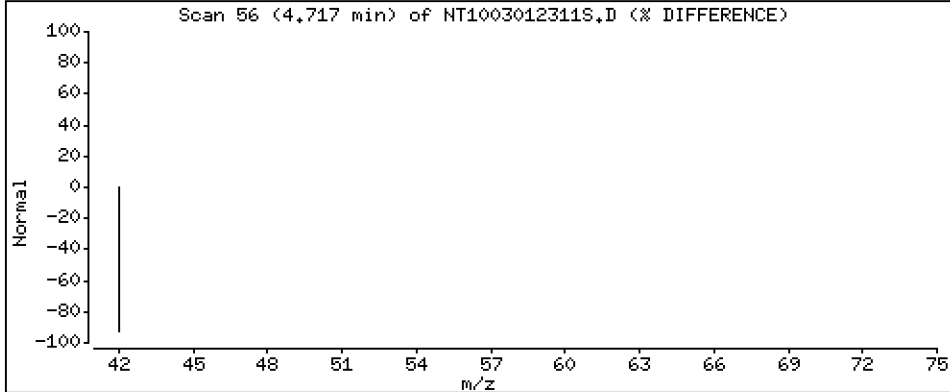
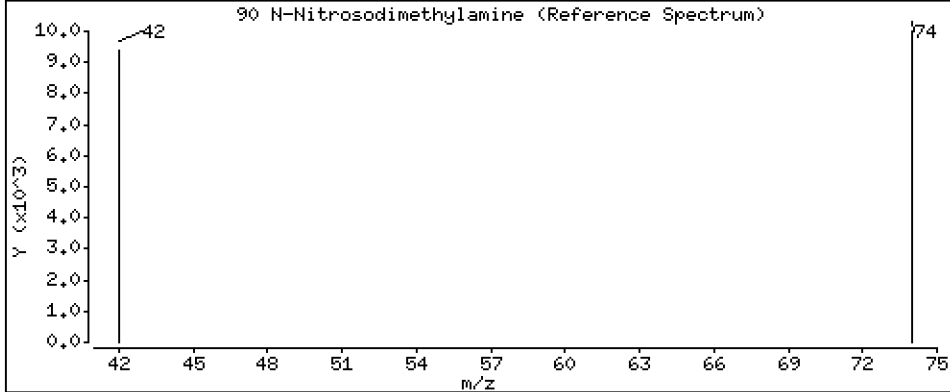
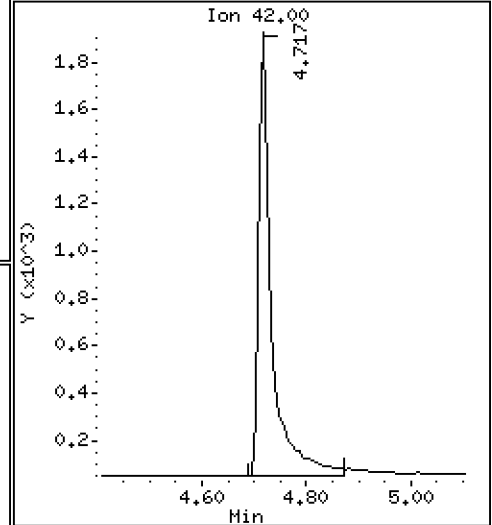
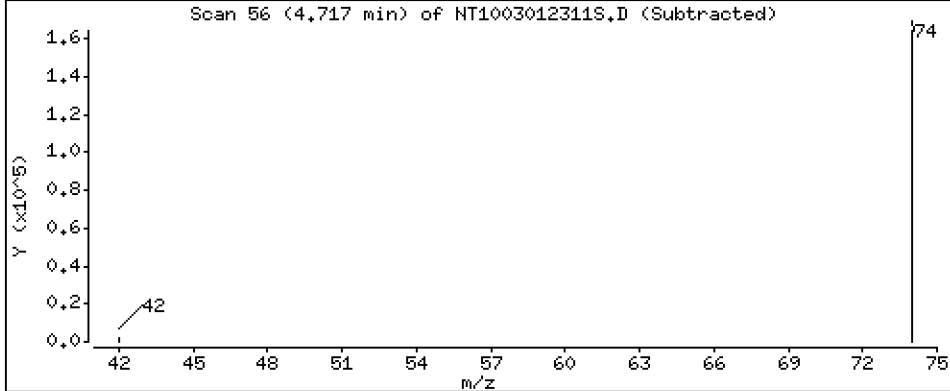
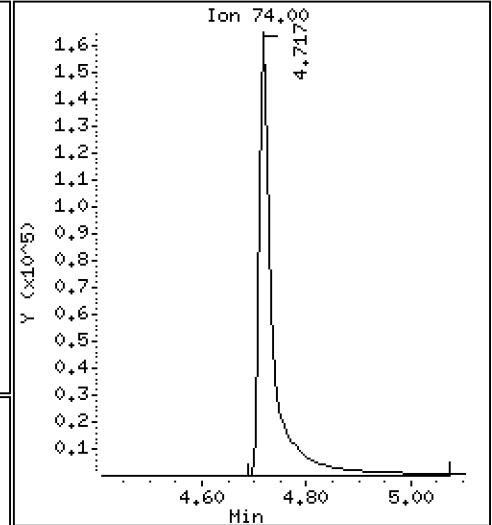
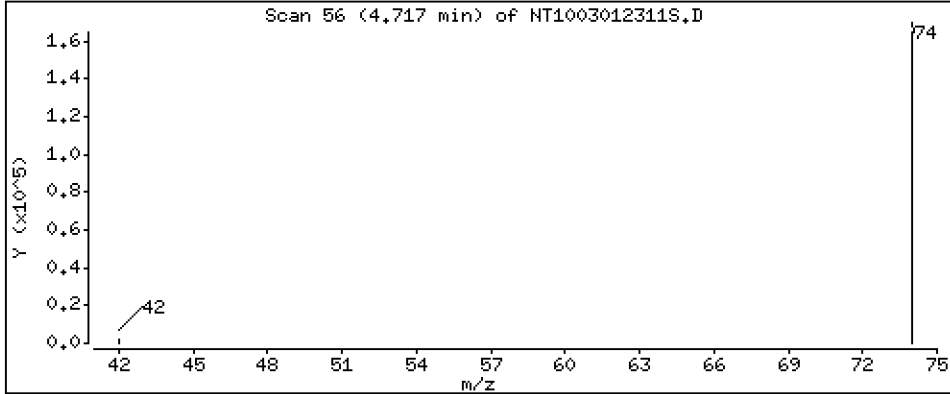
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 6.057 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230301.b\SIM.b\NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Inj Date : 01-MAR-2023 21:46 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-SCV1  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Meth Date : 08-Mar-2023 15:10 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	3267	0.03768	0.03768 (R)	
3 Phenol	94		8.517	8.532	(0.921)	590047	4.50660	4.507	
7 1,3-Dichlorobenzene	146		9.143	9.136	(0.988)	572299	5.08409	5.084	
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	303734	4.00000		
9 1,4-Dichlorobenzene	146		9.283	9.275	(1.003)	574537	5.24962	5.250	
11 Benzyl alcohol	79		9.469	9.508	(1.023)	388582	5.10390	5.104	
12 1,2-Dichlorobenzene	146		9.562	9.563	(1.034)	540938	5.14228	5.142	
13 2-Methylphenol	108		9.655	9.671	(1.044)	348452	4.36547	4.365	
15 4-Methylphenol	108		9.943	9.966	(1.075)	379262	4.50495	4.505	
16 N-Nitroso-di-n-propylamine	70		9.982	9.982	(1.079)	330861	5.68451	5.685	
22 2,4-Dimethylphenol	107		10.998	11.006	(0.938)	357707	3.63670	3.637	
24 Benzoic acid	105		11.099	11.007	(0.947)	380081	6.86990	6.870	
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	402252	4.87012	4.870	
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	1147551	4.00000		
30 Hexachlorobutadiene	225		11.994	11.994	(1.023)	285002	4.86242	4.862	
39 Dimethylphthalate	163		14.741	14.749	(0.963)	1142178	5.57065	5.571	
* 42 Acenaphthene-d10	162		15.314	15.314	(1.000)	645730	4.00000		
50 Diethylphthalate	149		16.203	16.211	(1.058)	1156037	5.97883	5.979	
54 N-Nitrosodiphenylamine	169		16.690	16.705	(0.907)	998237	5.35897	5.359	
57 Hexachlorobenzene	284		17.578	17.579	(0.955)	424193	4.86607	4.866	



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.989	18.012	(0.978)	155412	3.91206	3.912
* 59 Phenanthrene-d10	188	18.399	18.398	(1.000)	1151000	4.00000	
\$ 66 Terphenyl-d14	244	21.524	21.532	(0.919)	2846	0.02712	0.02712 (R)
67 Butylbenzylphthalate	149	22.415	22.415	(0.957)	1009961	4.68912	4.689
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1297466	4.00000	
* 77 Perylene-d12	264	26.108	26.108	(1.000)	1394899	4.00000	
79 Dibenzo(a,h)anthracene	278	28.922	28.946	(1.108)	1657122	4.76032	4.760
90 N-Nitrosodimethylamine	74	4.717	4.755	(0.510)	310951	6.05685	6.057

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003012311S.D  
 Lab Smp Id: SLC0143-SCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230301.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 01-MAR-2023  
 Calibration Time: 18:37  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	320125	160063	640250	303734	-5.12
27 Naphthalene-d8	1136019	568010	2272038	1147551	1.02
42 Acenaphthene-d10	636993	318497	1273986	645730	1.37
59 Phenanthrene-d10	1093620	546810	2187240	1151000	5.25
69 Chrysene-d12	1000300	500150	2000600	1297466	29.71
77 Perylene-d12	1058448	529224	2116896	1394899	31.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.24	8.74	9.74	9.25	0.08
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.31	0.00
59 Phenanthrene-d10	18.40	17.90	18.90	18.40	0.00
69 Chrysene-d12	23.41	22.91	23.91	23.42	0.03
77 Perylene-d12	26.10	25.60	26.60	26.11	0.03

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

REVIEW SUMMARY FOR FILE - NT1003012311S.D

Lab ID: SLC0143-SCV1

nt10.i, 20230301.b\SIM.b\SIMABN2.m, 01-MAR-2023 21:46

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
0.947	0.000	0.9467		Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003012310S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**CONTINUING CALIBRATION CHECK  
EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022315S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0157</u>	Injection Date:	<u>03/02/23</u>
Lab Sample ID:	<u>SLC0157-CCV1</u>	Injection Time:	<u>23:16</u>
Sequence Name:	<u>Calibration Check</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.3992310		-2.9	+/-50
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3732110		-0.9	+/-50
Benzyl Alcohol	A	1.0000	1.0	0.7492523	0.9342330		-1.2	+/-50
Benzoic acid	A	4.0000	0.9	0.1431163	0.0425677		-77.2	+/-50 *
2,4-Dimethylphenol	A	2.0000	2.0	0.2957717	0.3405092		-0.2	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.2879030	0.3013394		4.7	+/-50
N-Nitrosodiphenylamine	A	1.0000	0.9	0.6473471	0.6023784		-6.9	+/-50
Pentachlorophenol	A	2.0000	0.4	0.0950913	0.0295676		-77.8	+/-50 *
2-Fluorophenol	A	1.5000	1.67	1.1419780	1.2741000		11.6	+/-50
p-Terphenyl-d14	A	1.0000	0.998	0.3234672	0.3226648		-0.2	+/-50

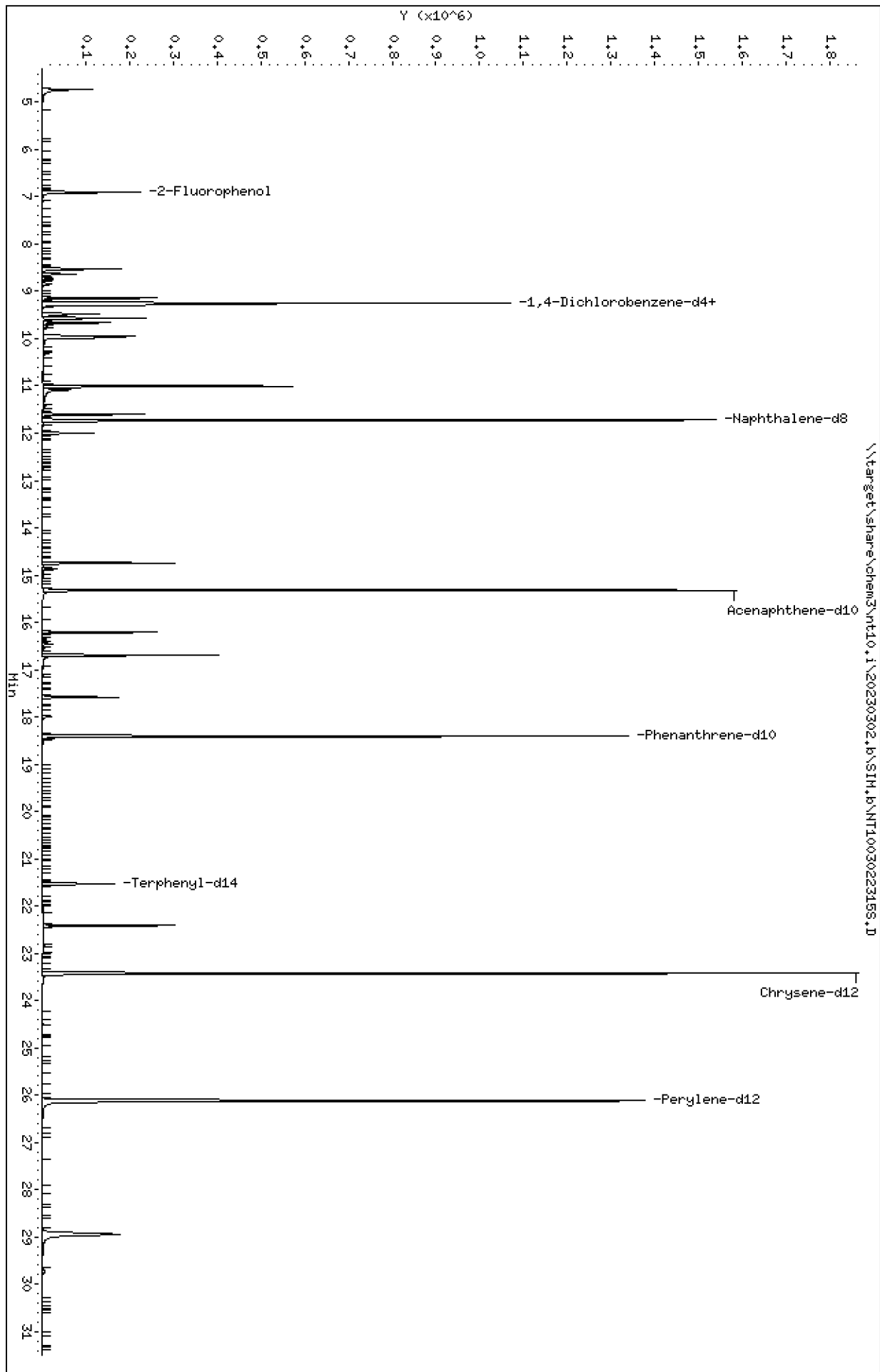
\* Values outside of QC limits

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.1\NT10030223155.D  
Date: 02-MAR-2023 23:16  
Client ID:  
Sample Info: SED-CVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.1\NT10030223155.D



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

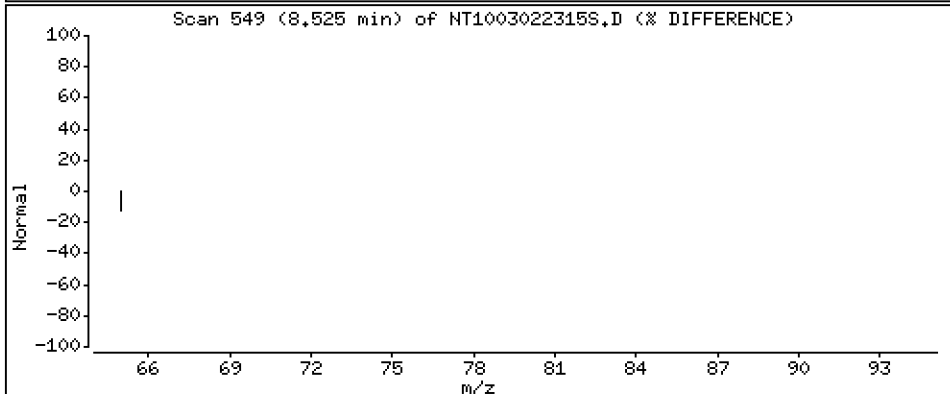
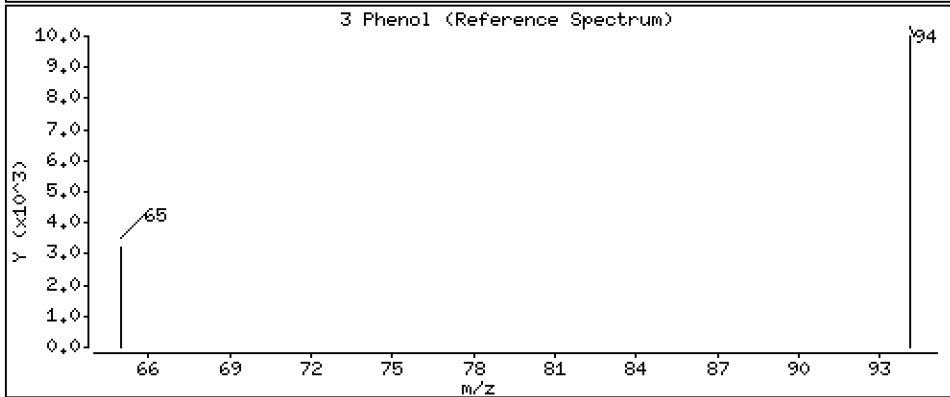
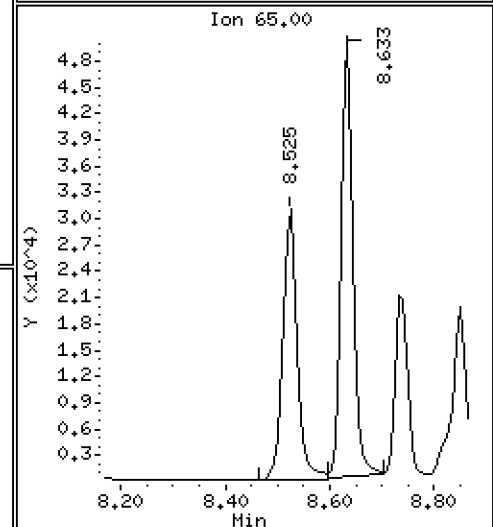
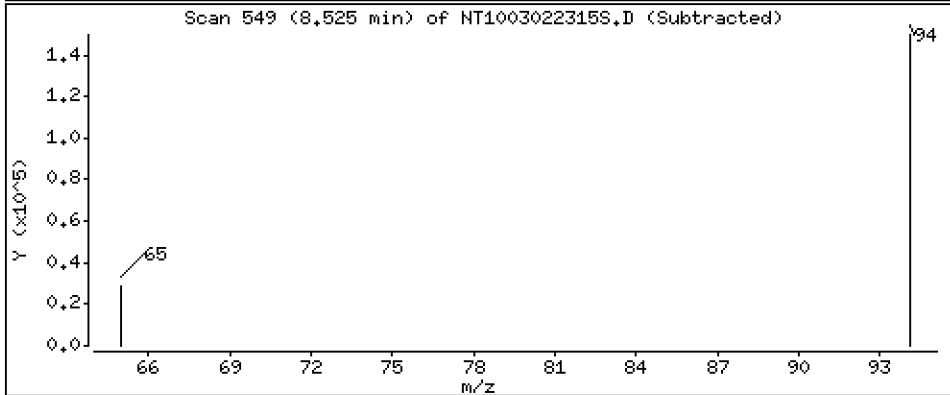
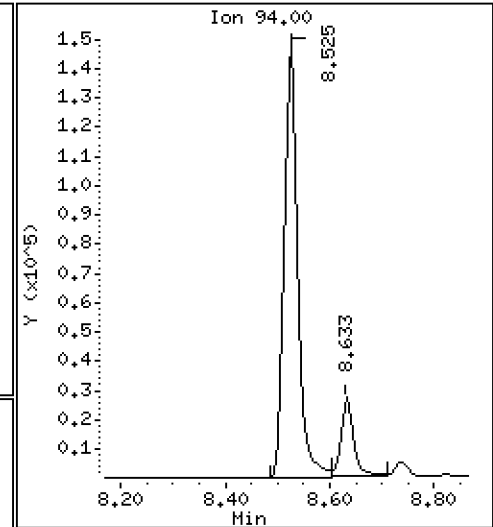
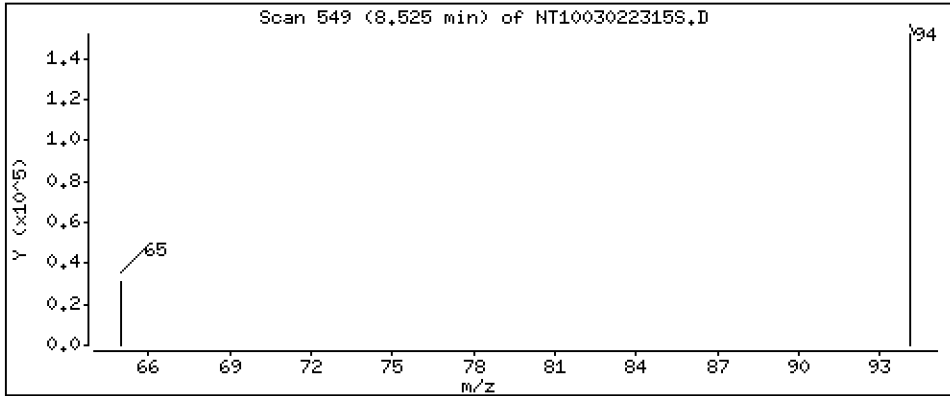
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.9411 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

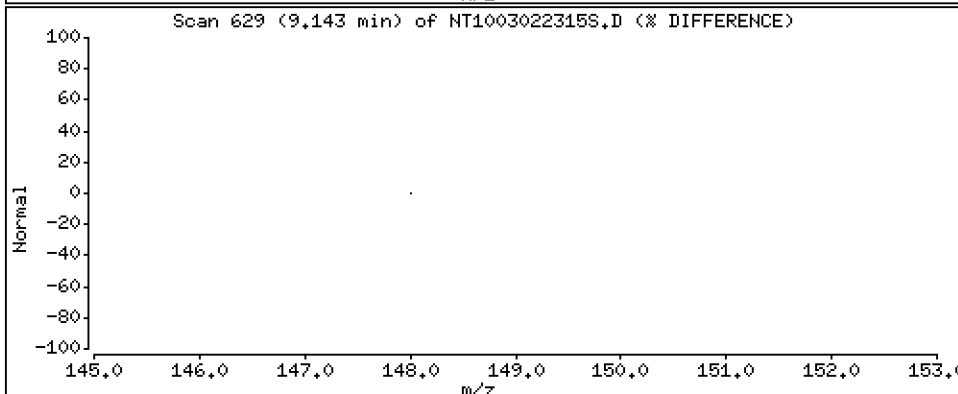
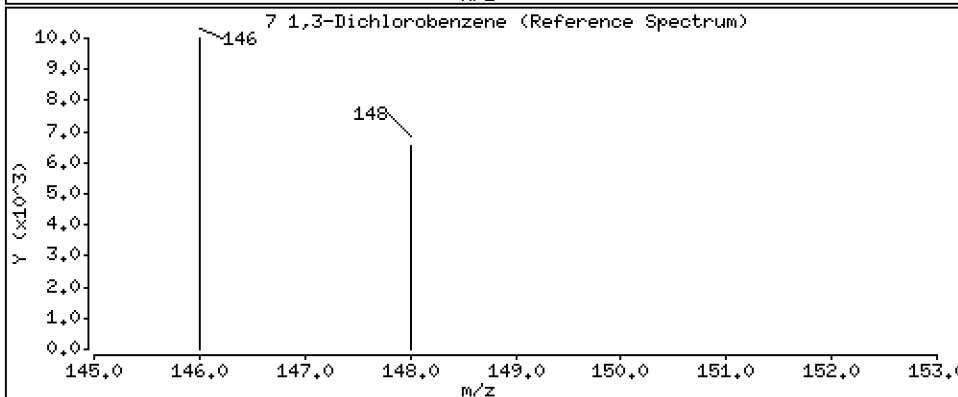
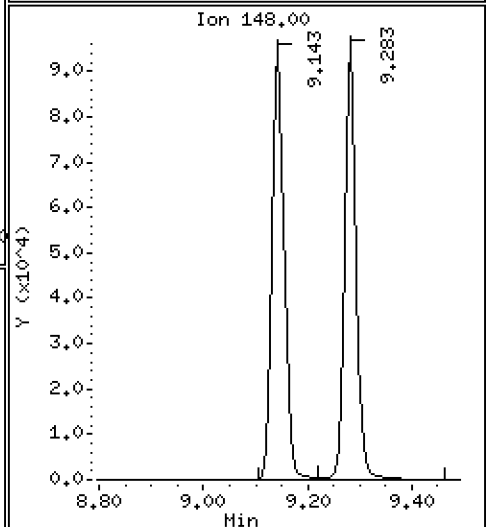
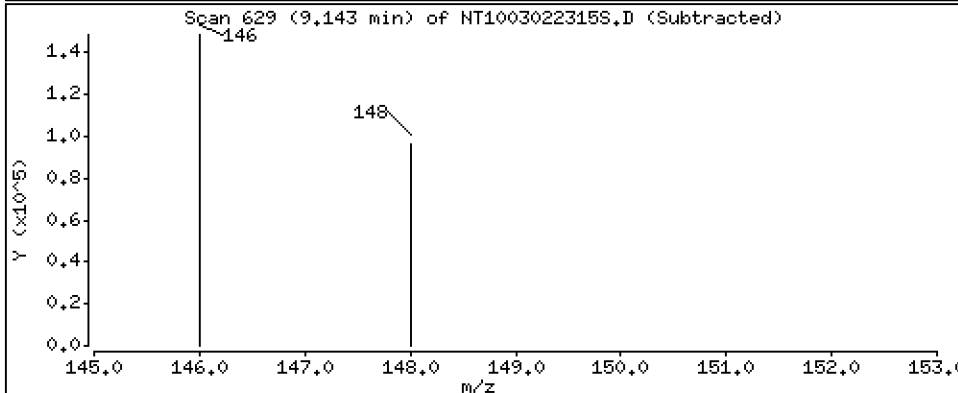
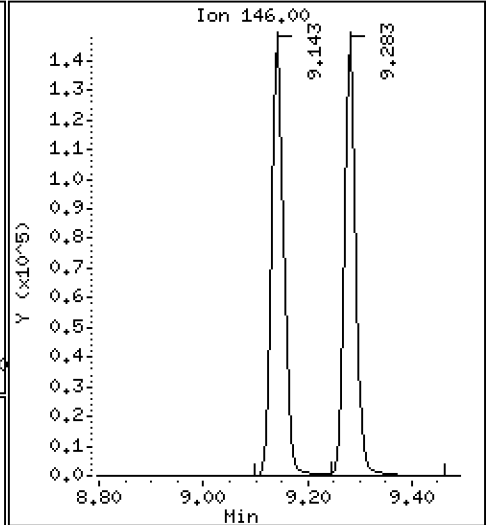
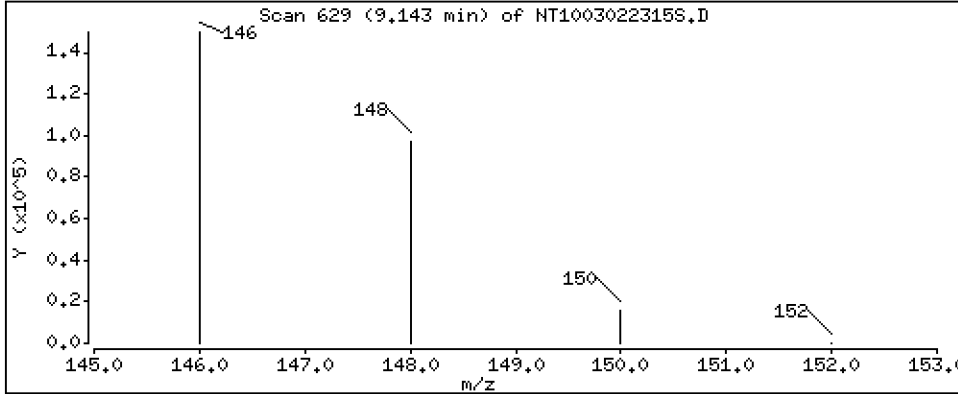
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.9783 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

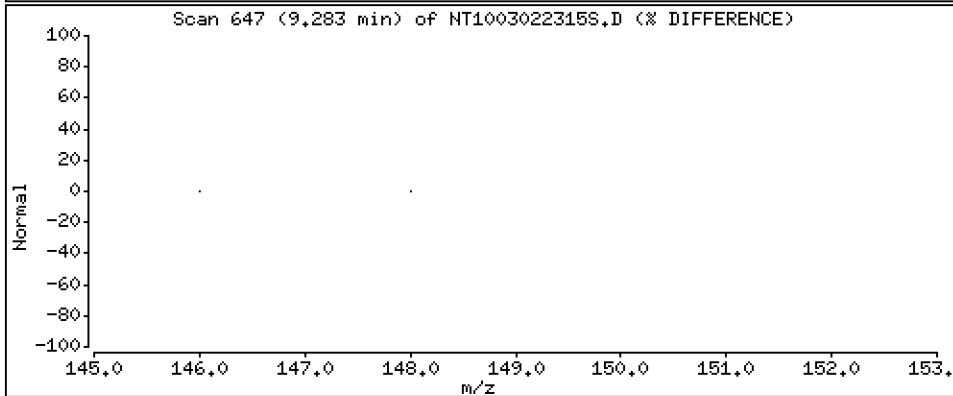
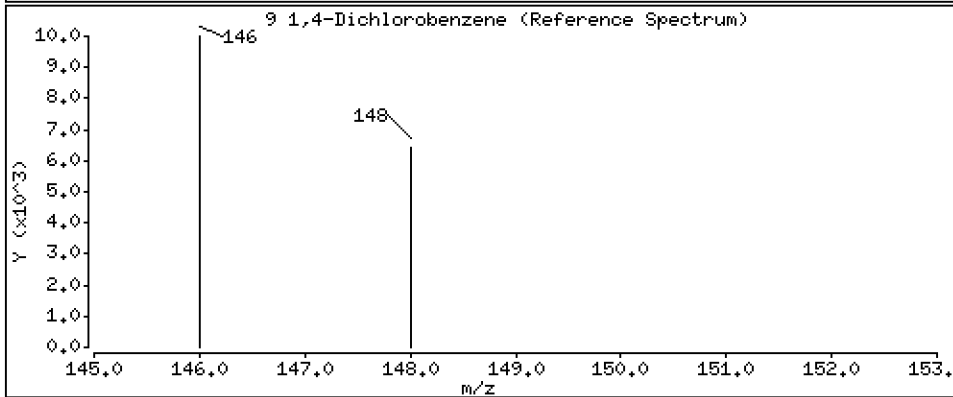
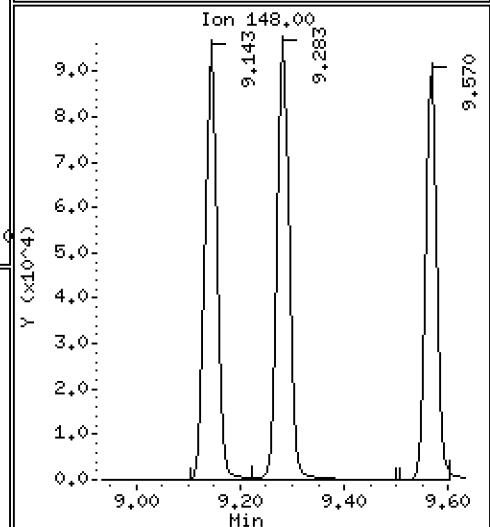
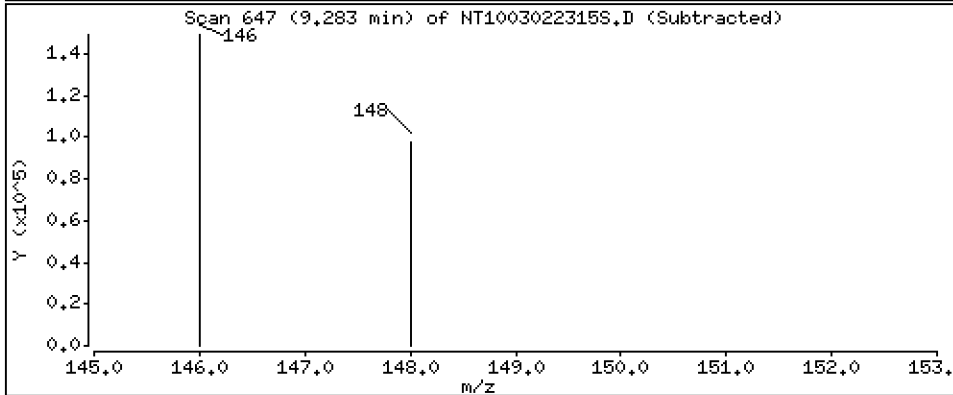
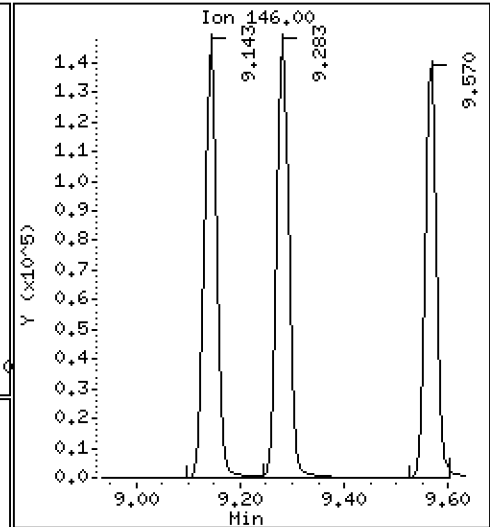
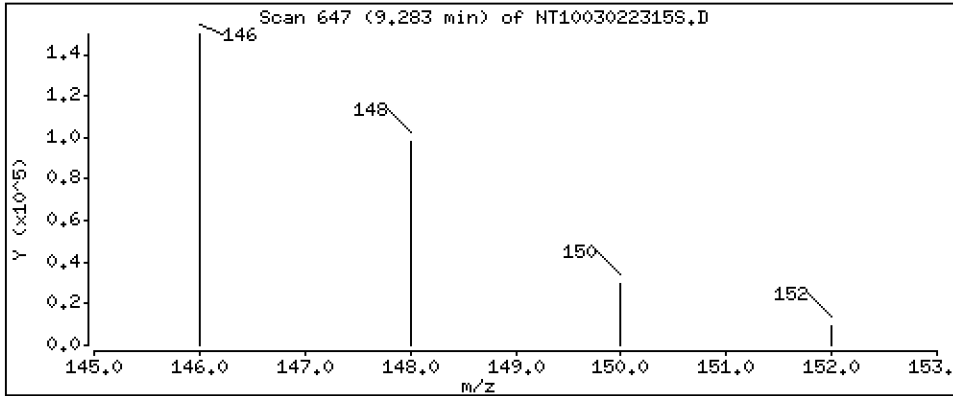
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.9708 ug/L





Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

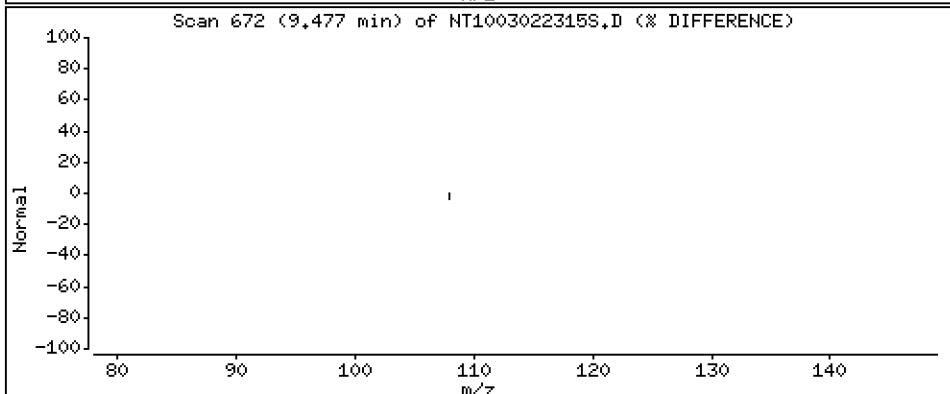
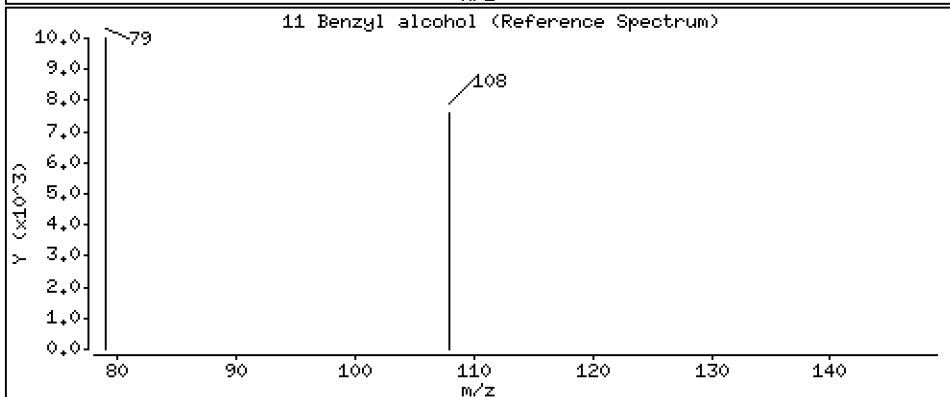
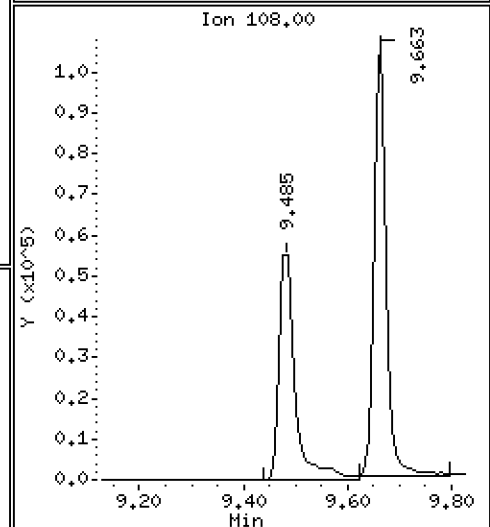
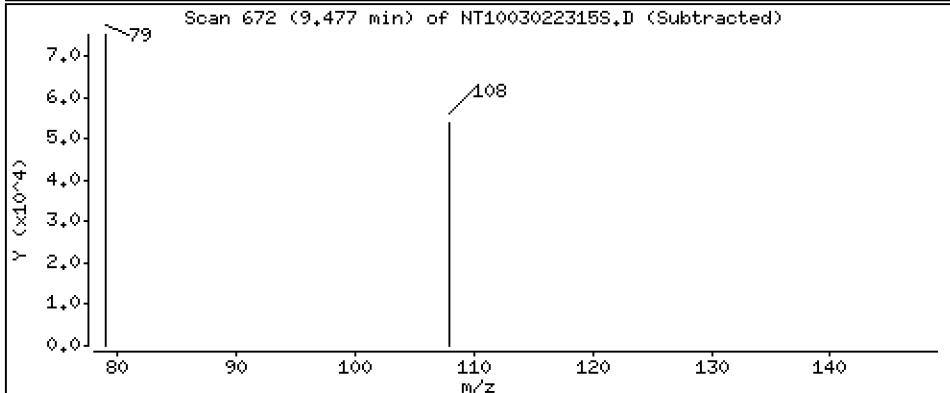
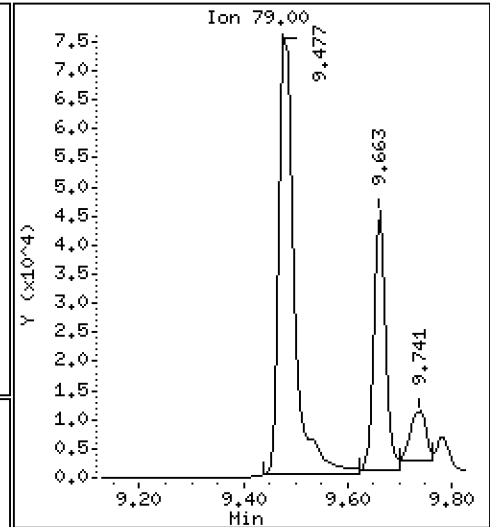
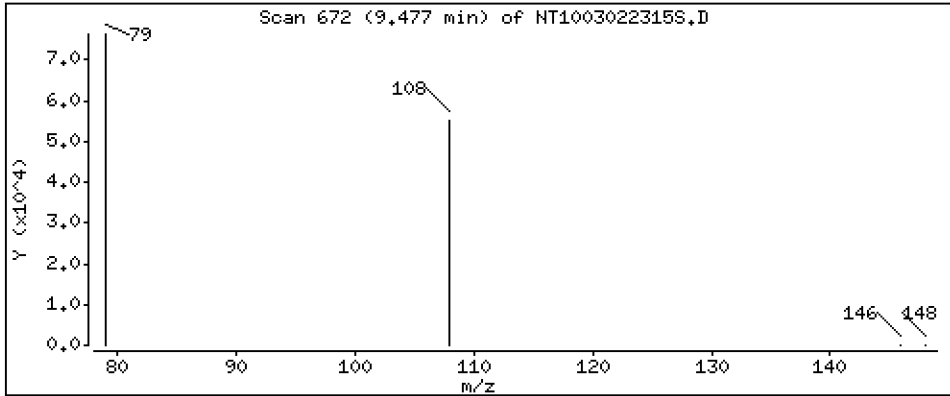
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.9883 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

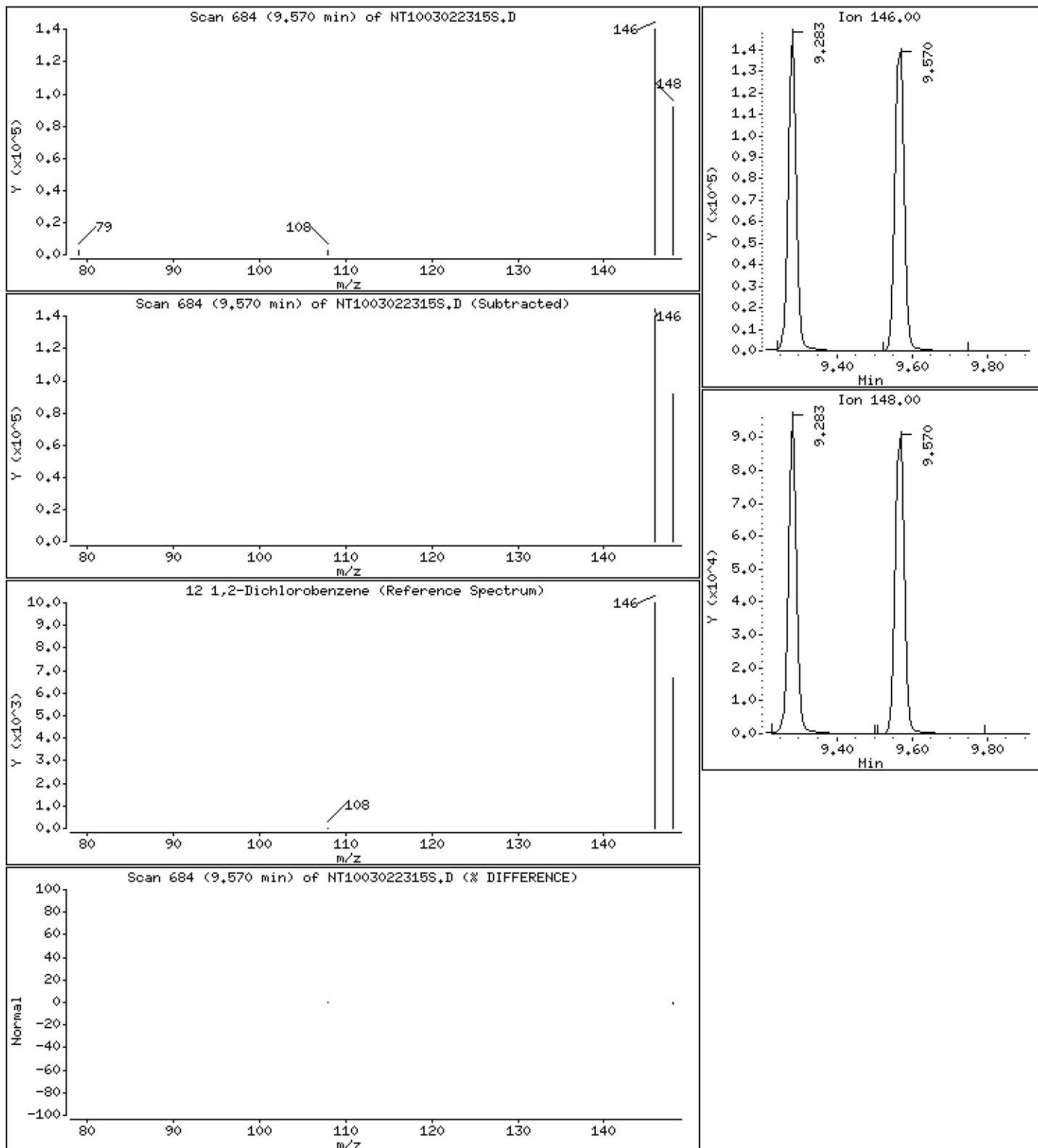
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.9912 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

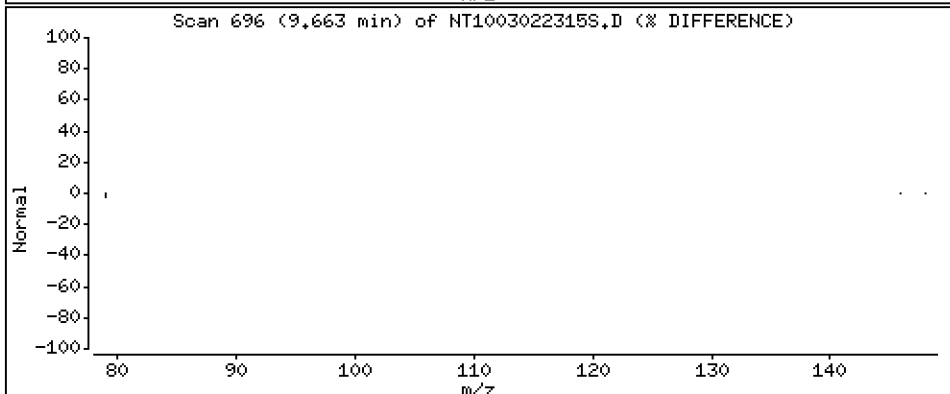
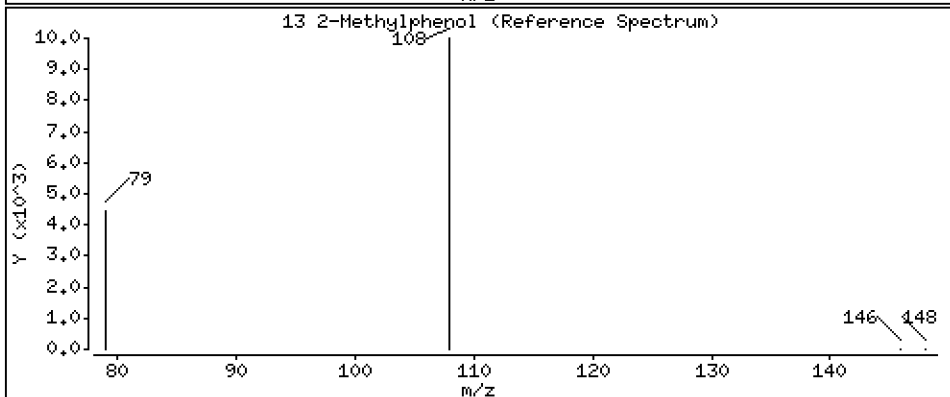
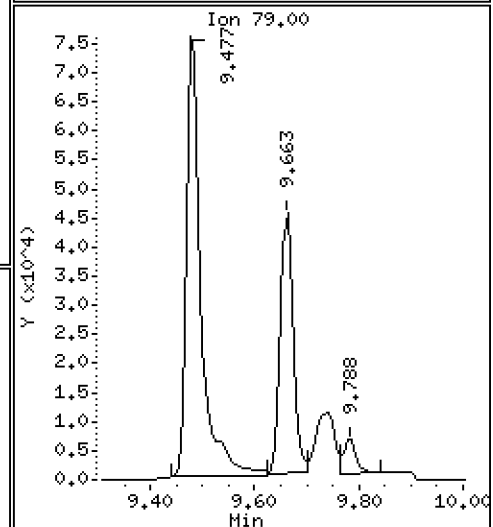
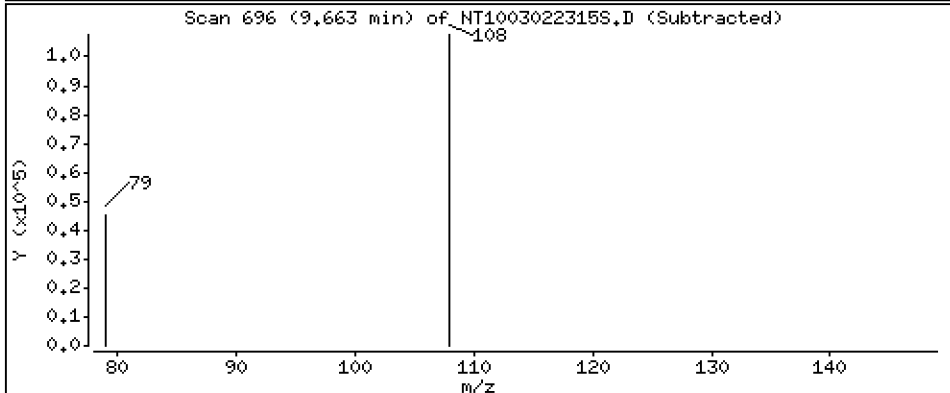
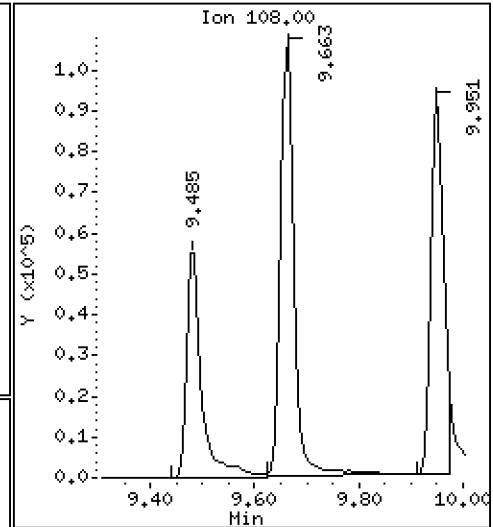
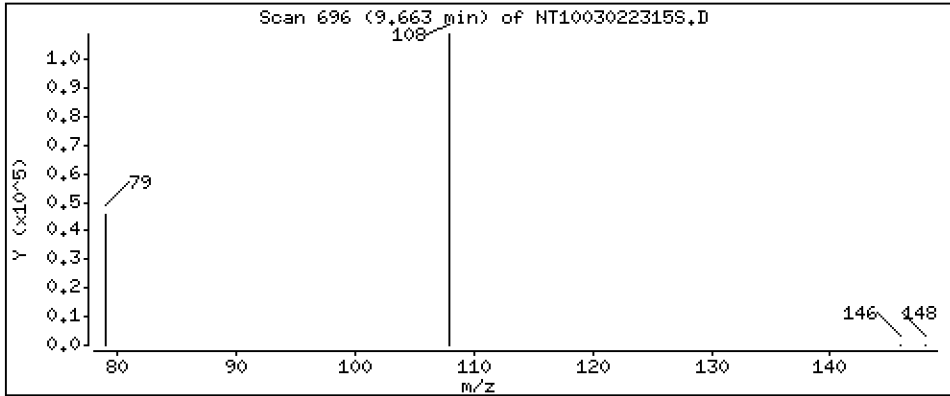
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 1.106 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

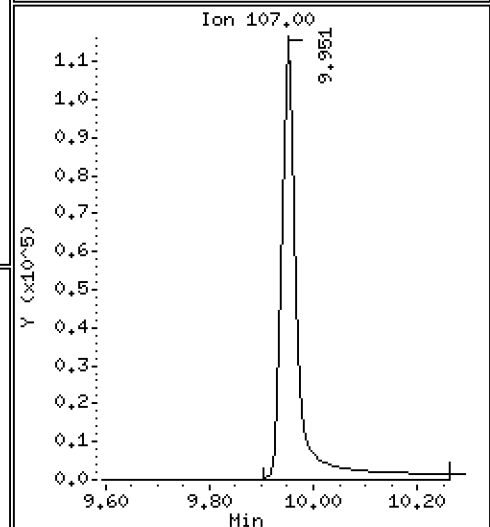
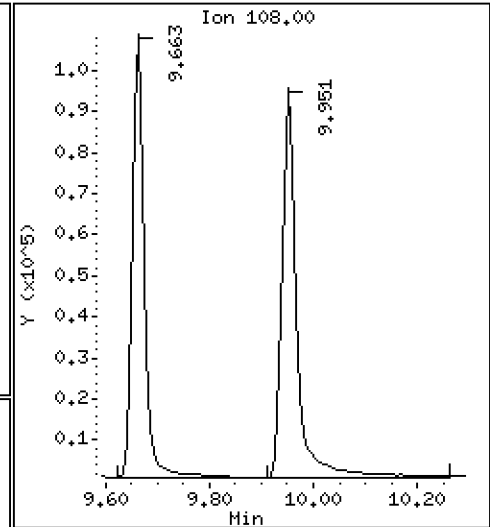
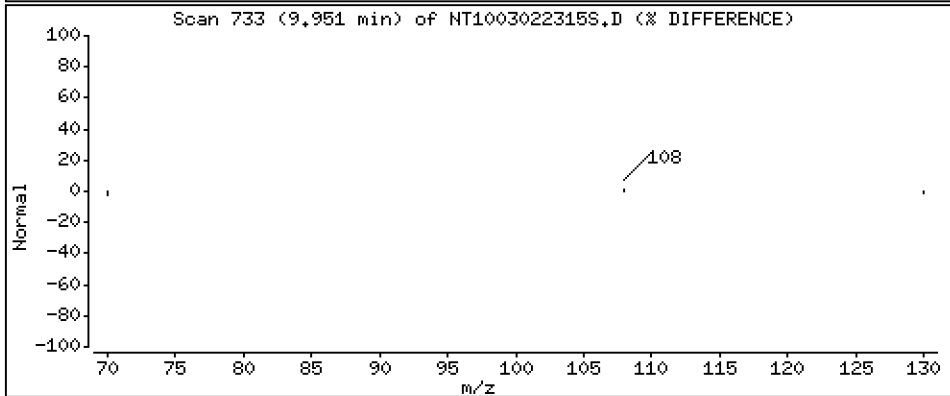
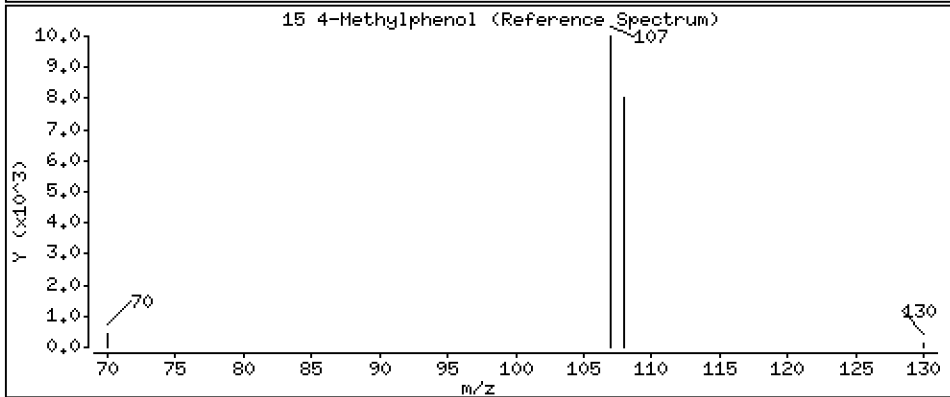
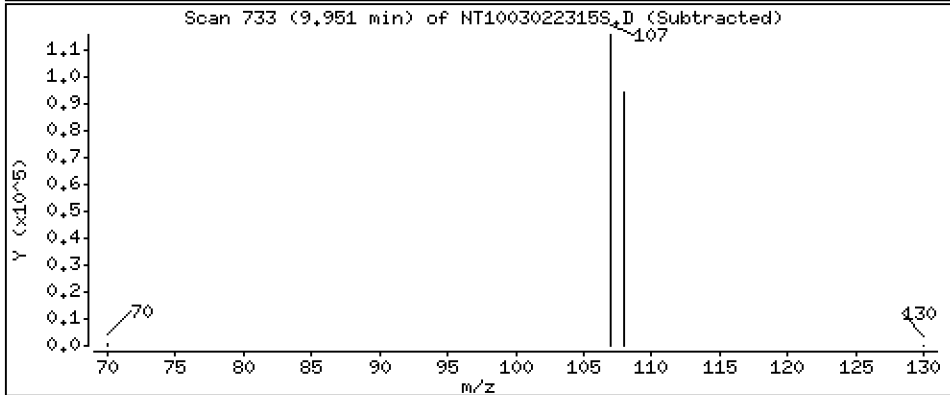
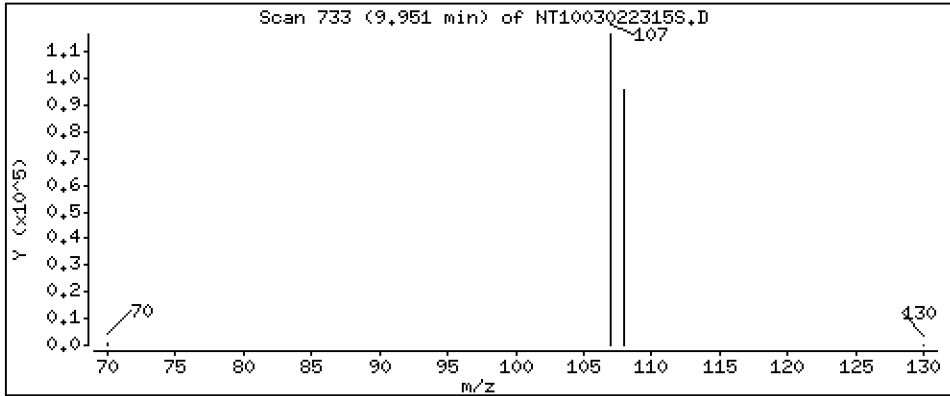
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 1.064 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

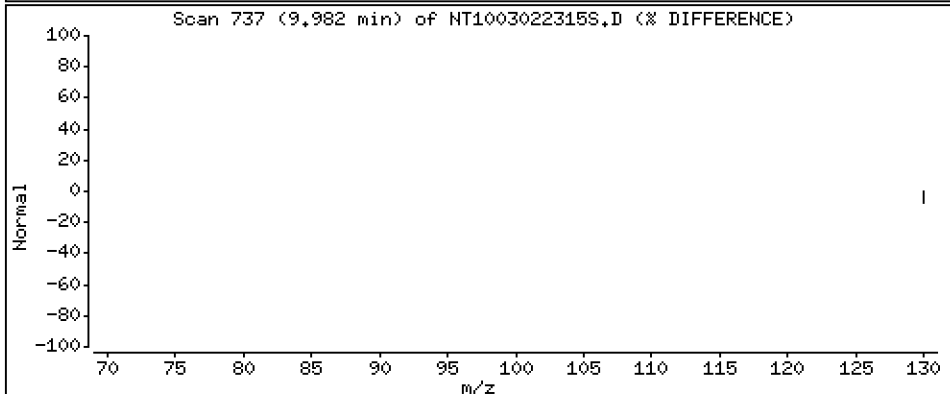
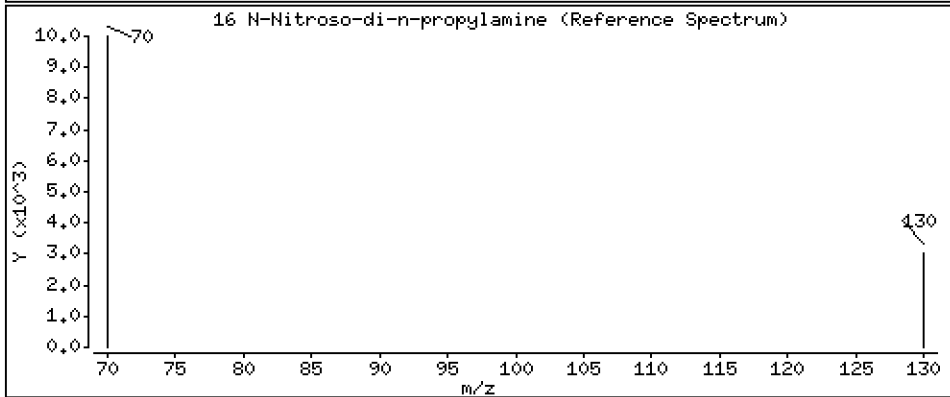
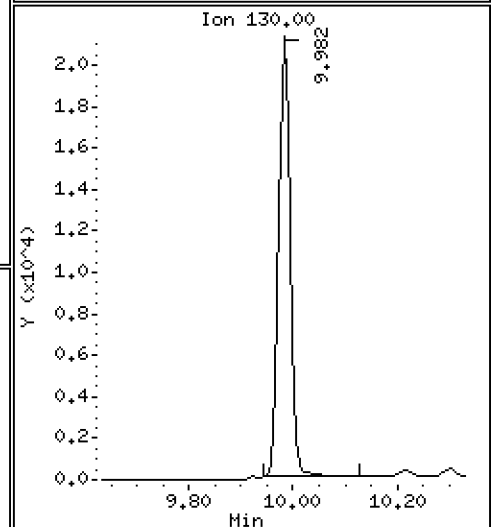
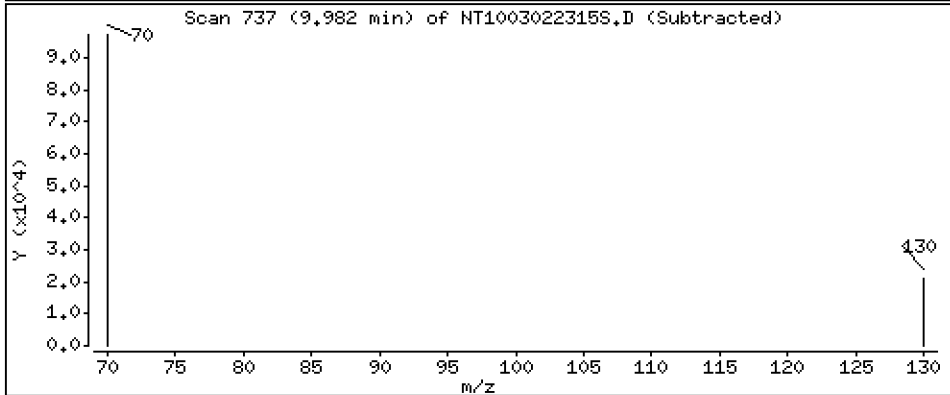
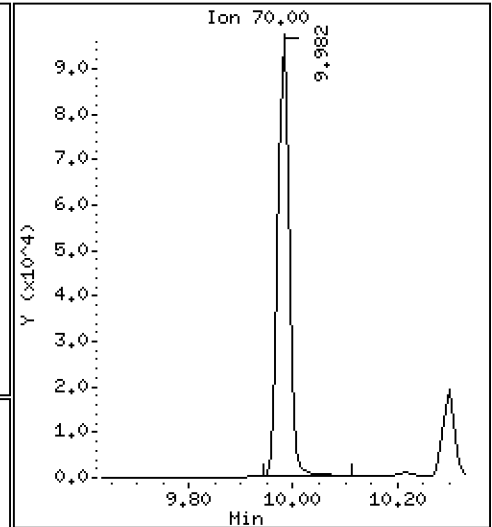
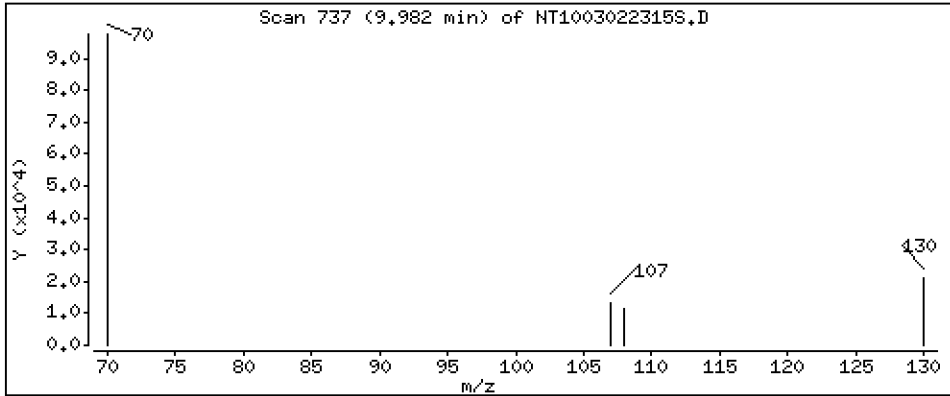
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 1,123 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

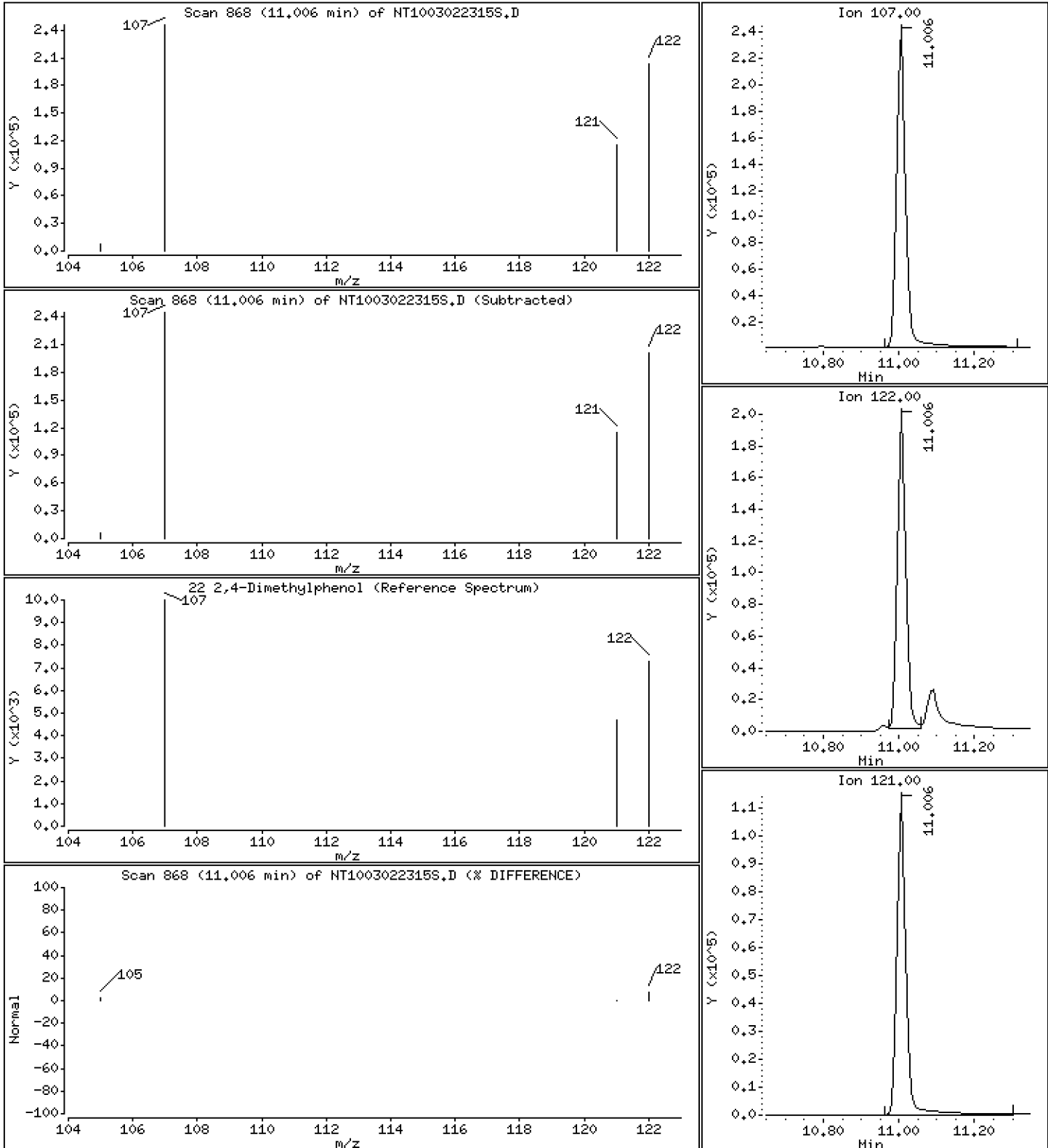
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 1,996 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

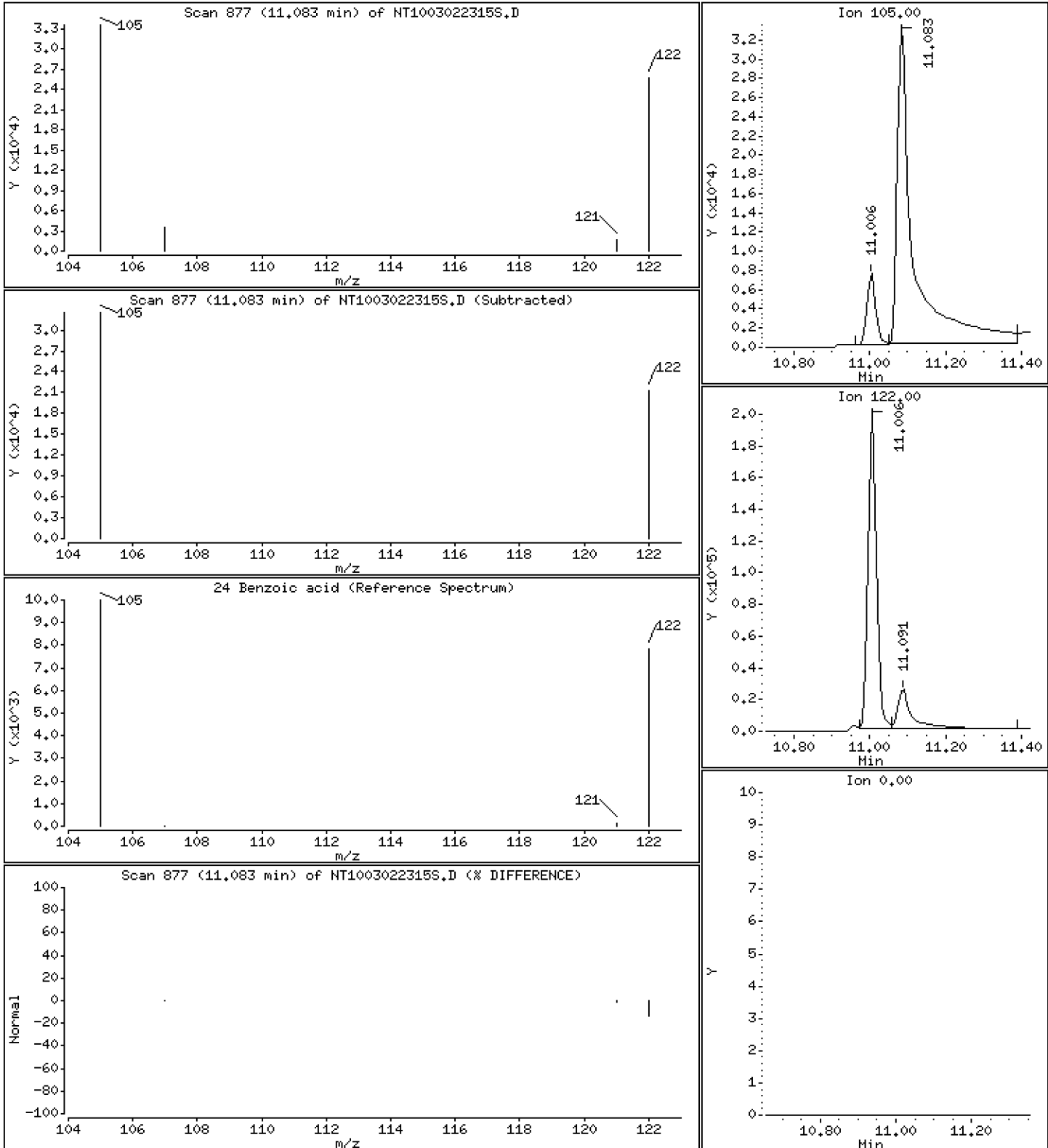
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.9111 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

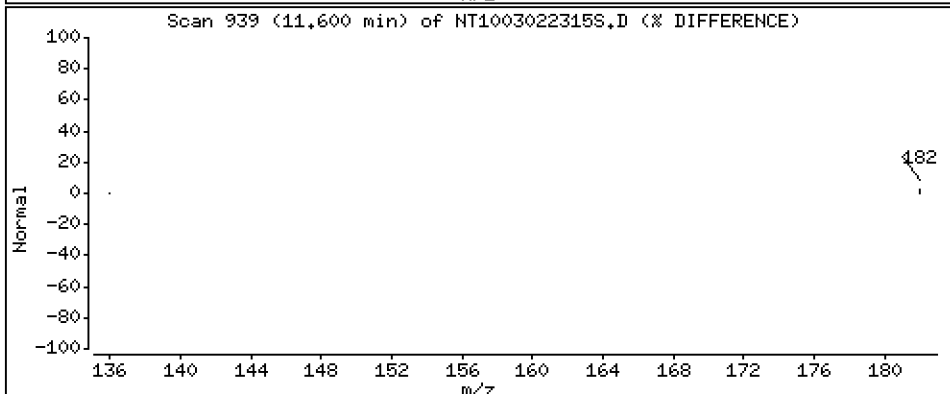
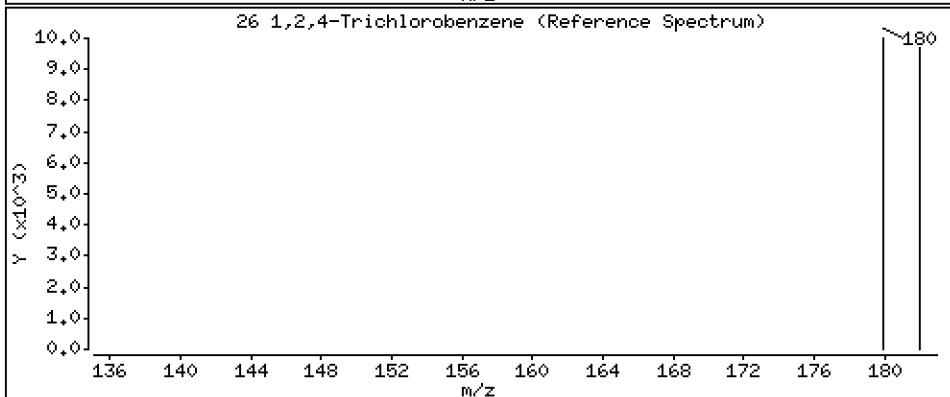
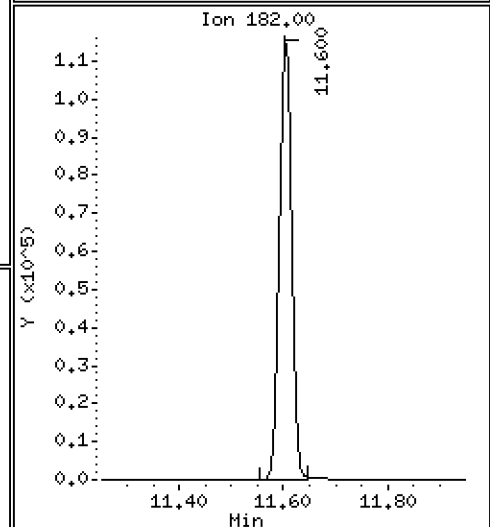
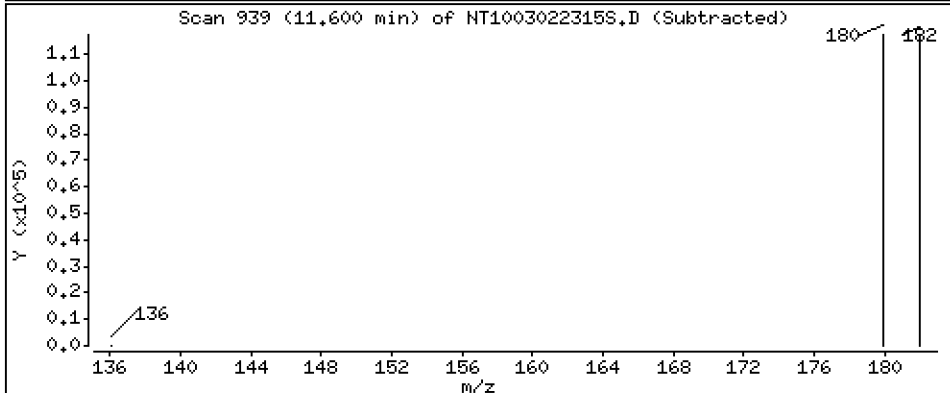
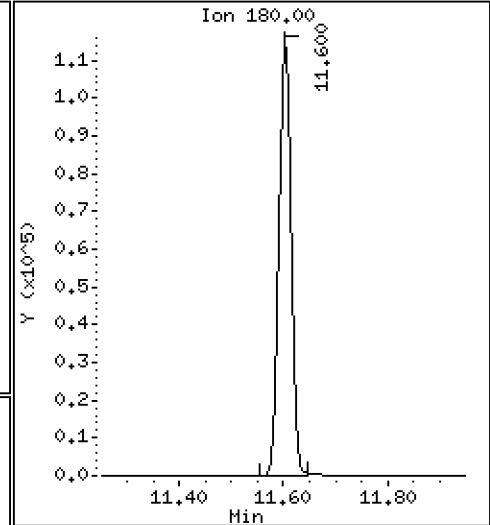
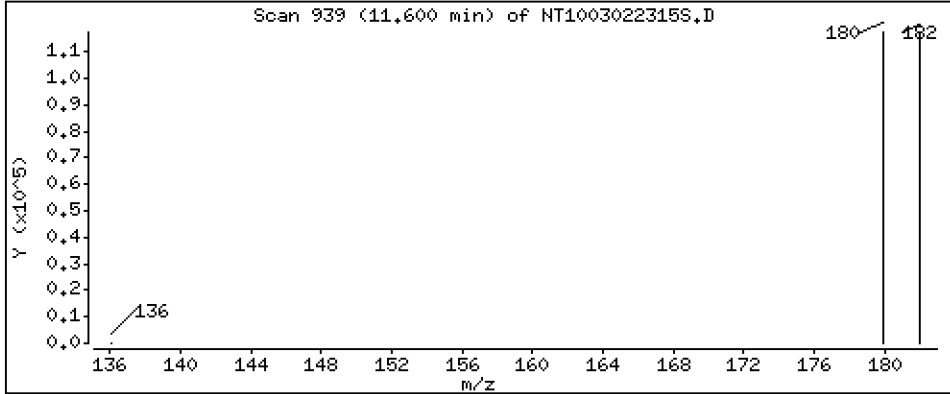
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 1.047 ug/L





Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

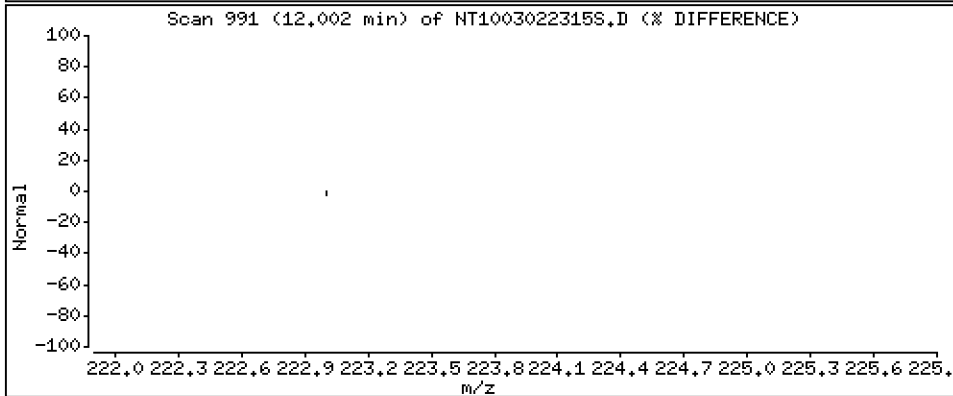
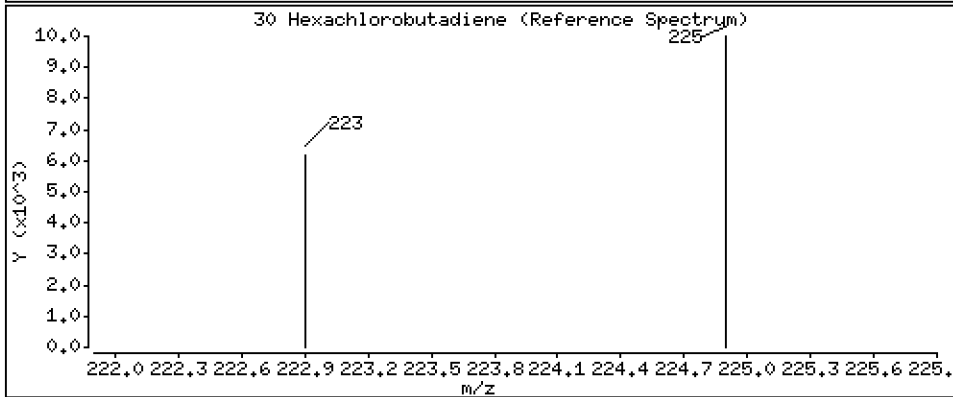
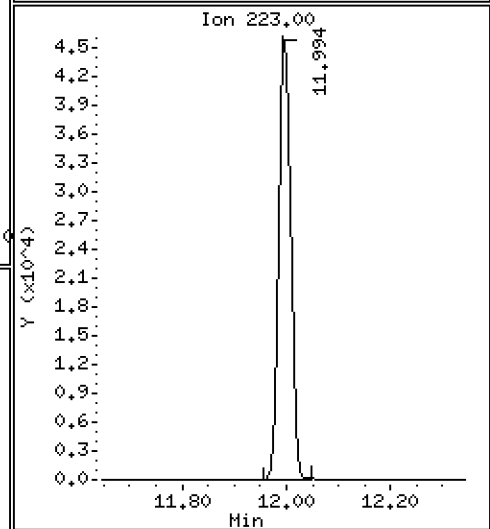
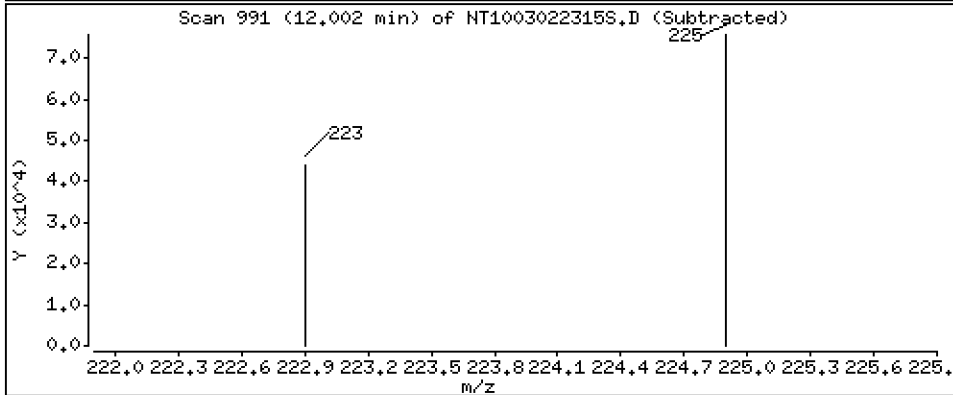
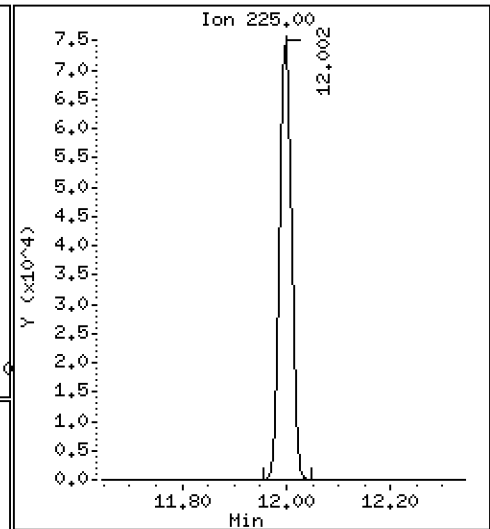
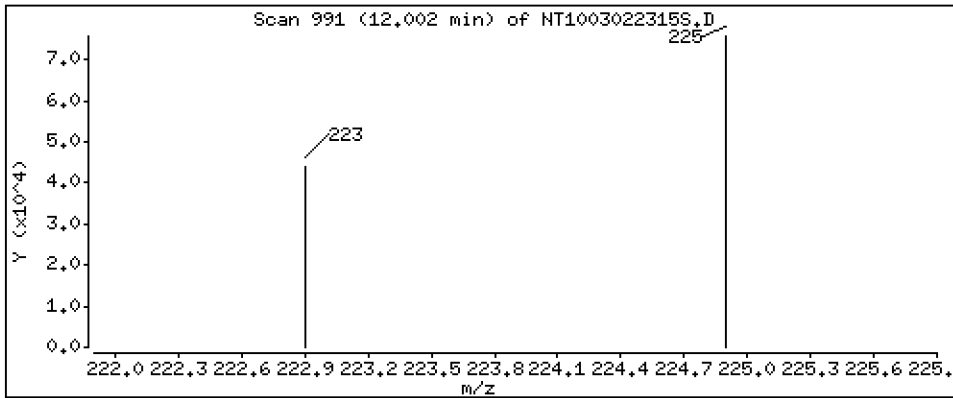
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,9487 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

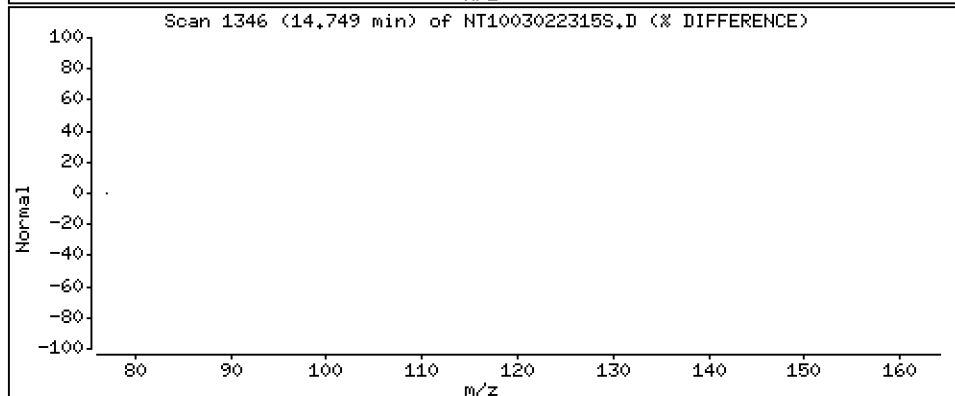
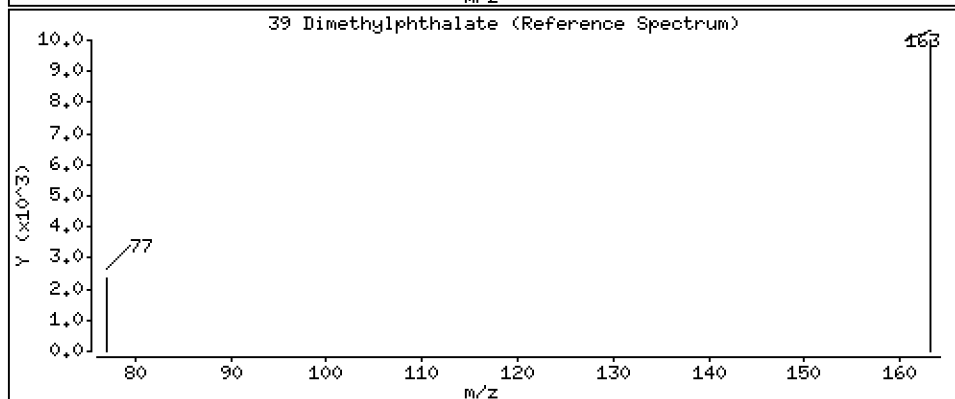
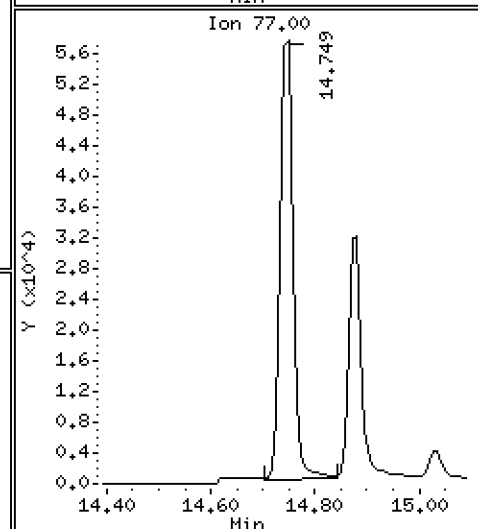
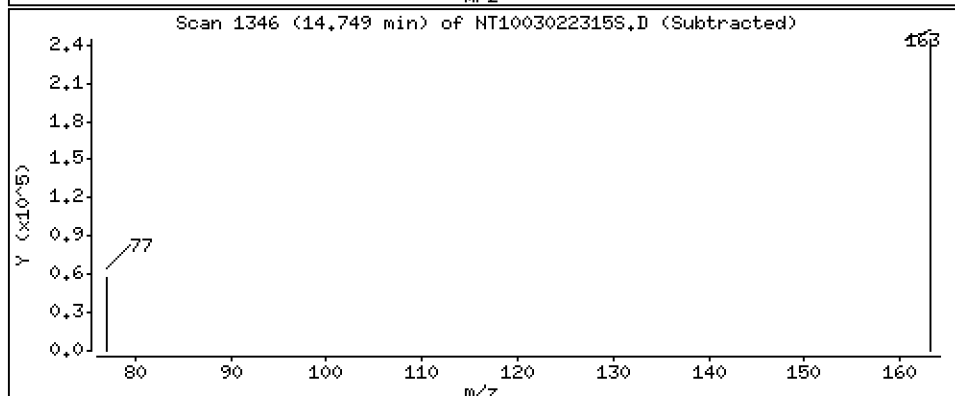
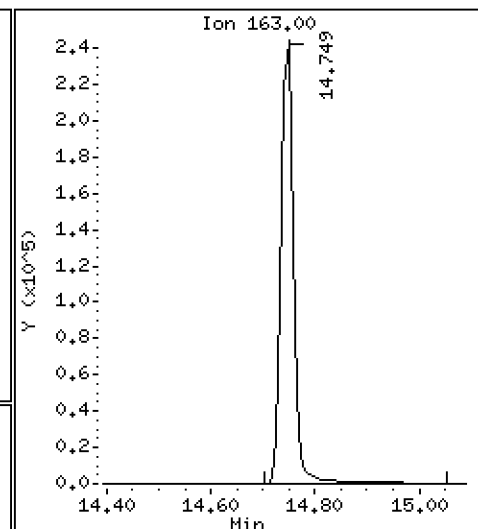
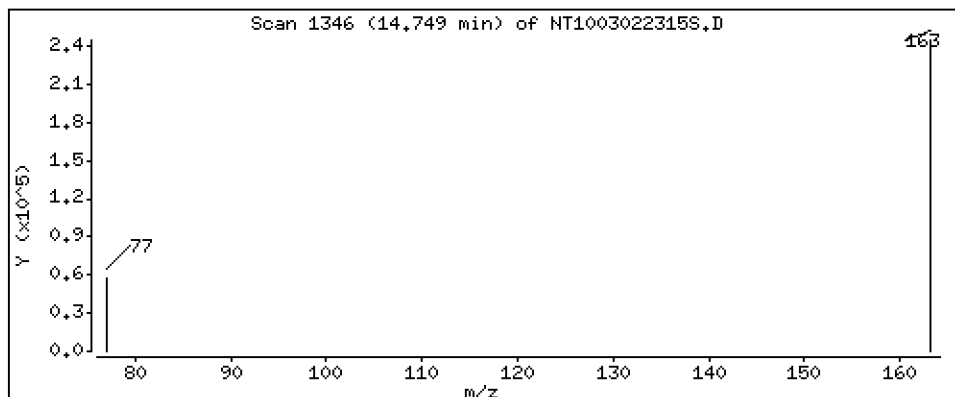
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 1,023 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

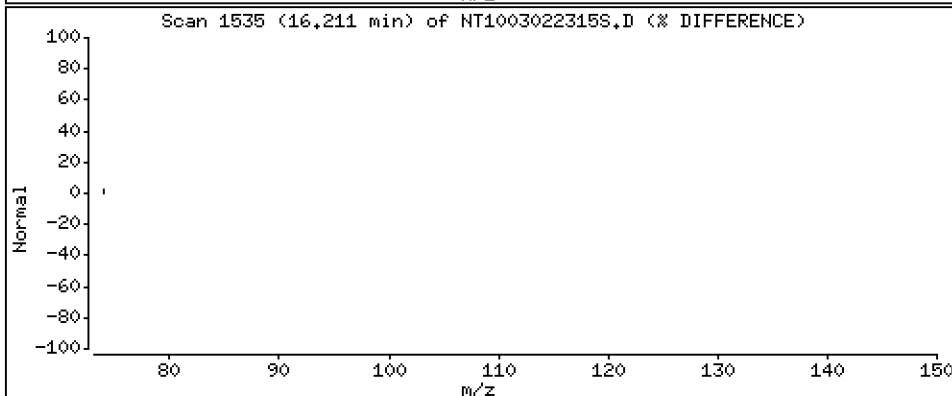
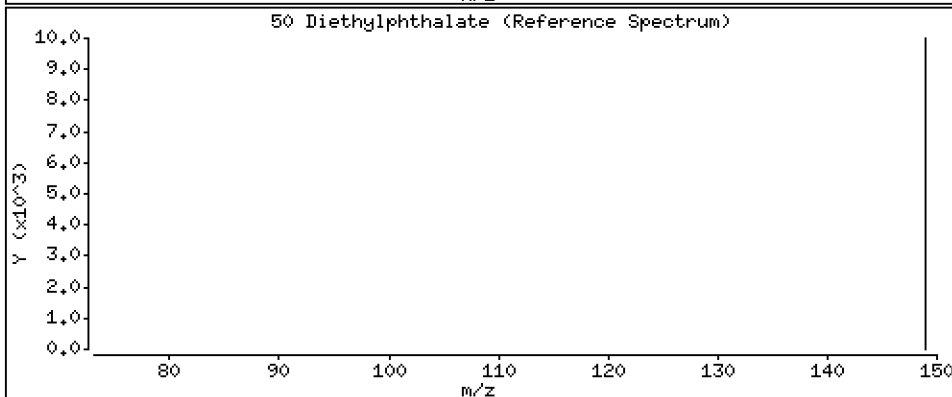
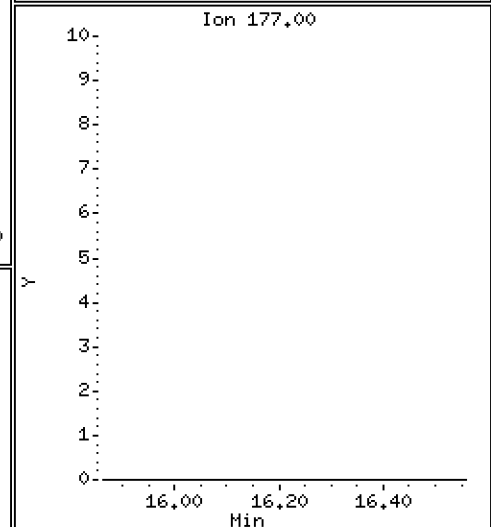
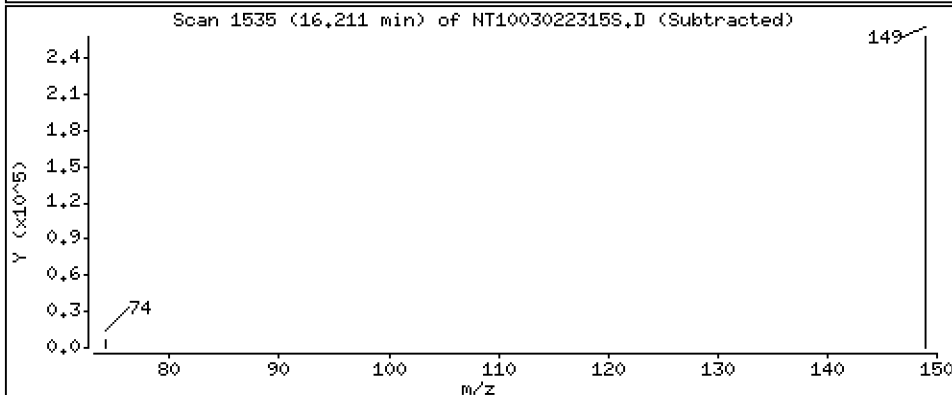
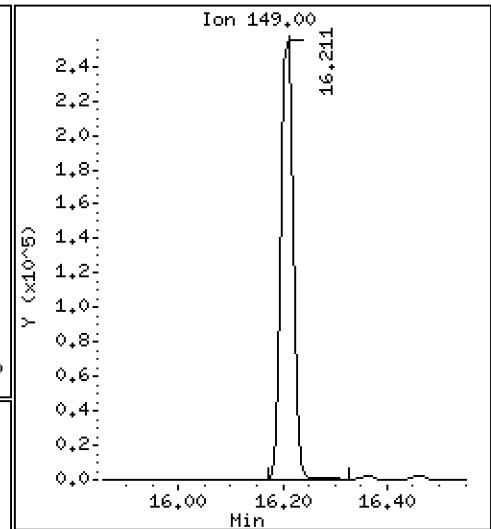
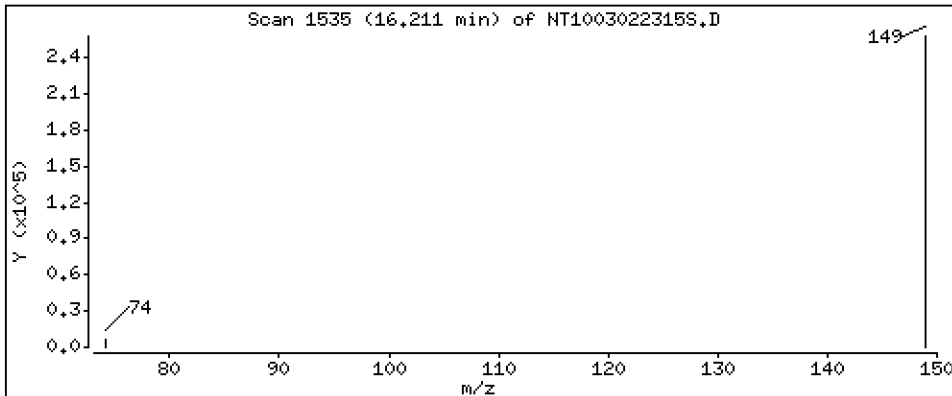
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 1,105 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

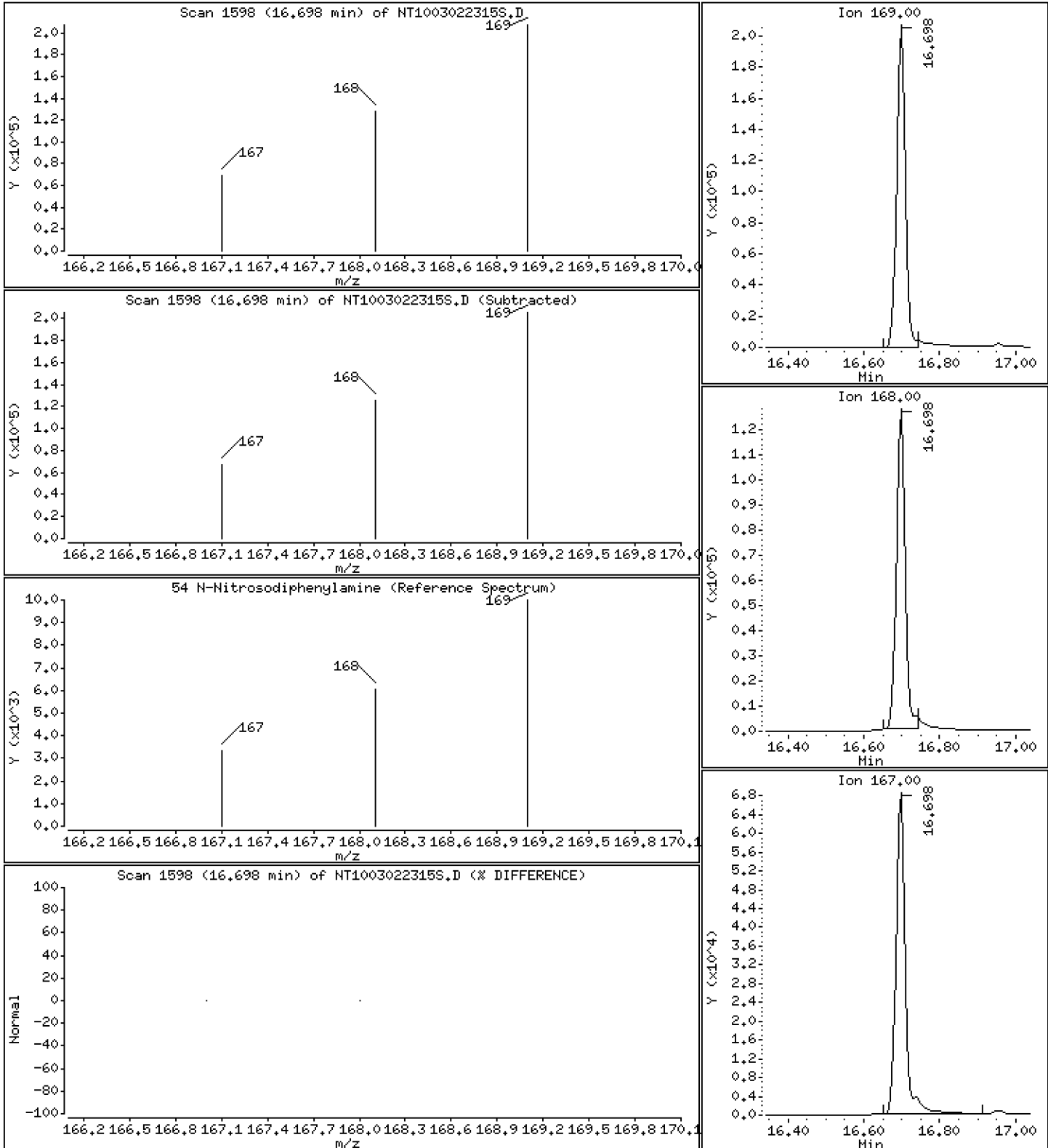
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.9305 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

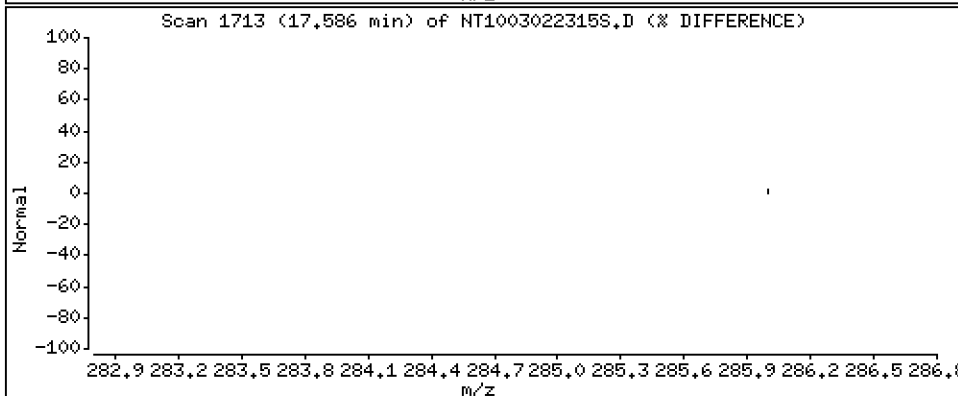
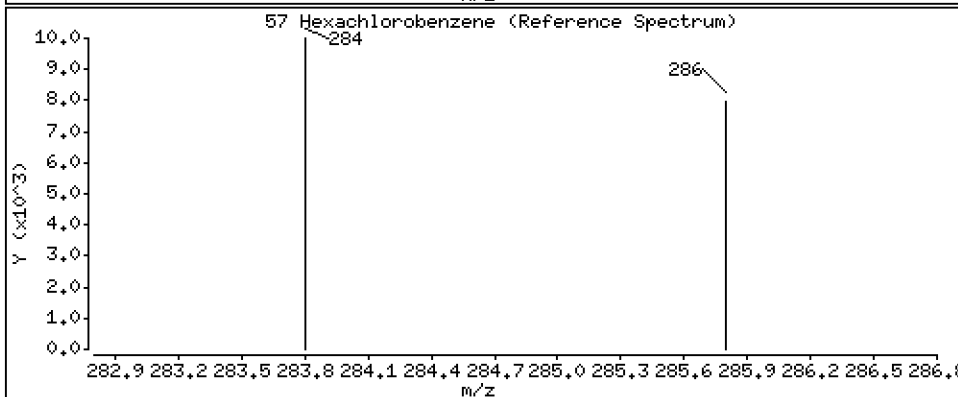
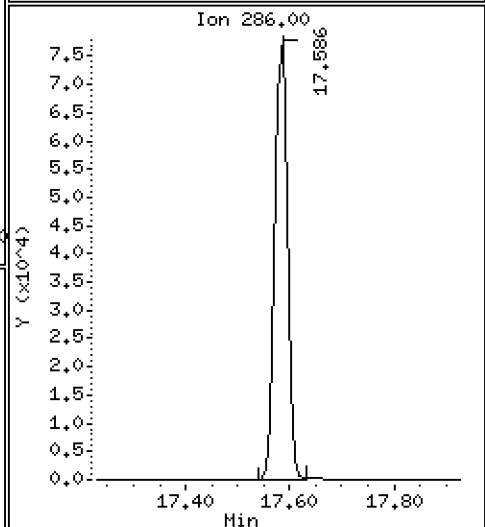
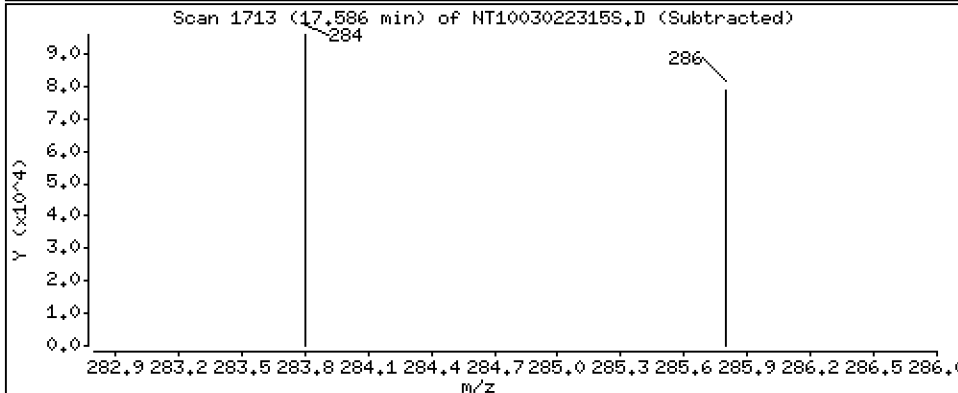
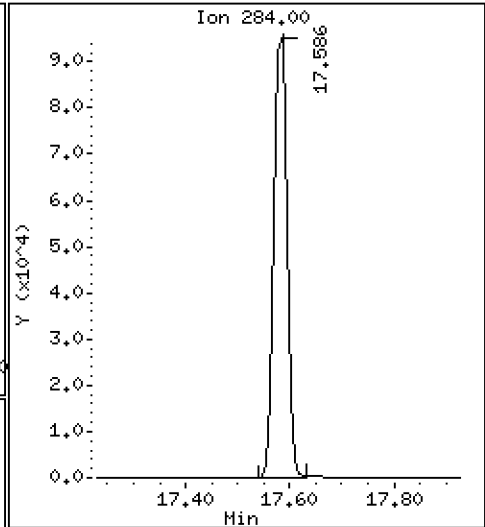
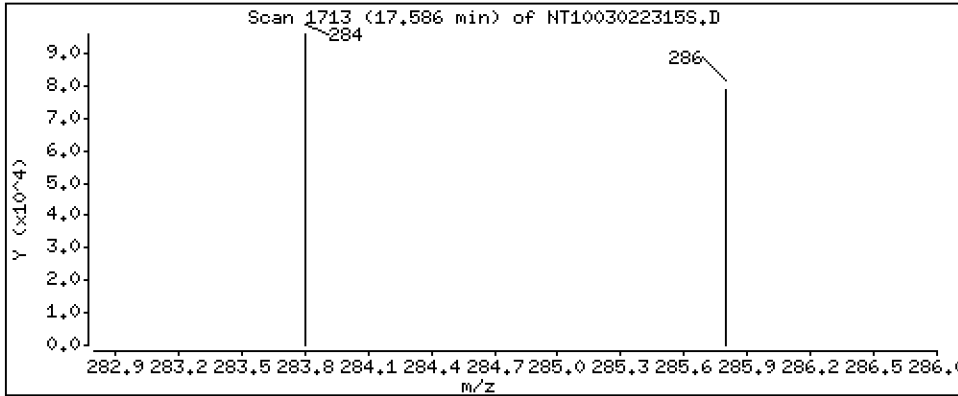
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

57 Hexachlorobenzene

Concentration: 0,9528 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

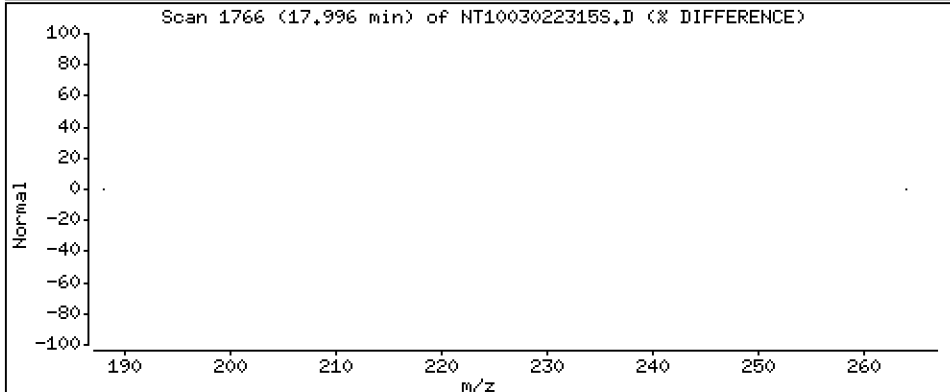
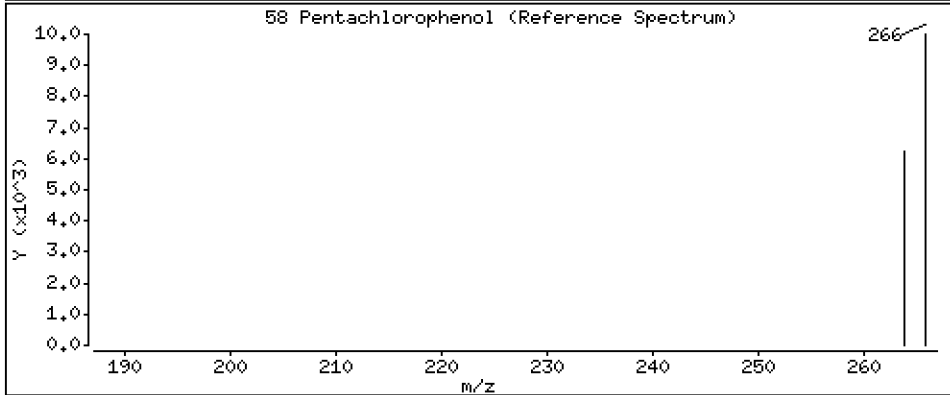
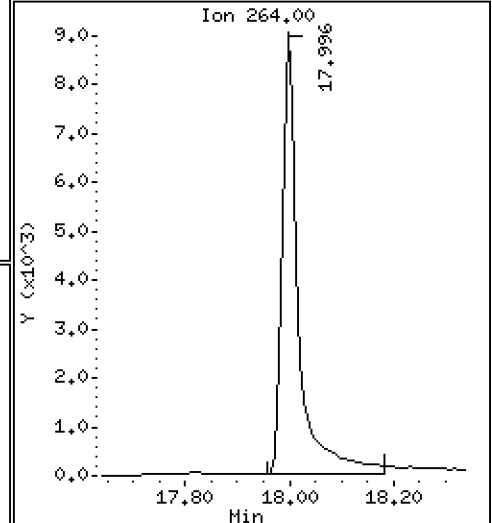
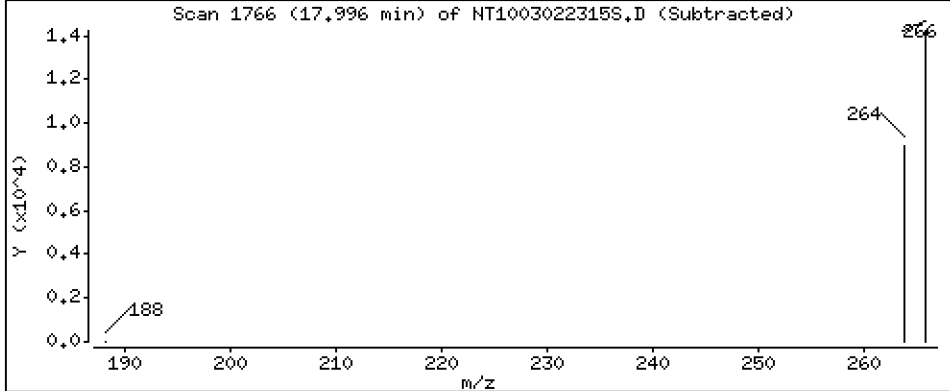
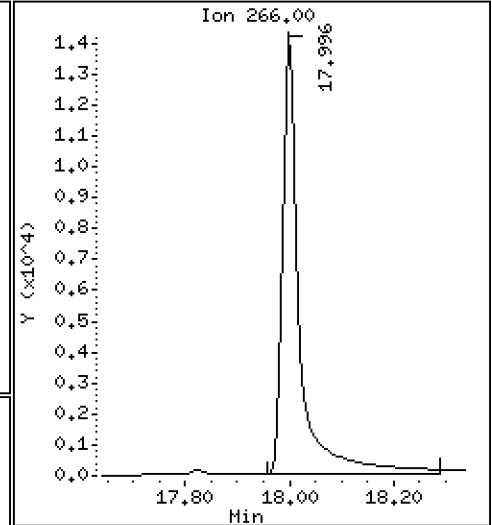
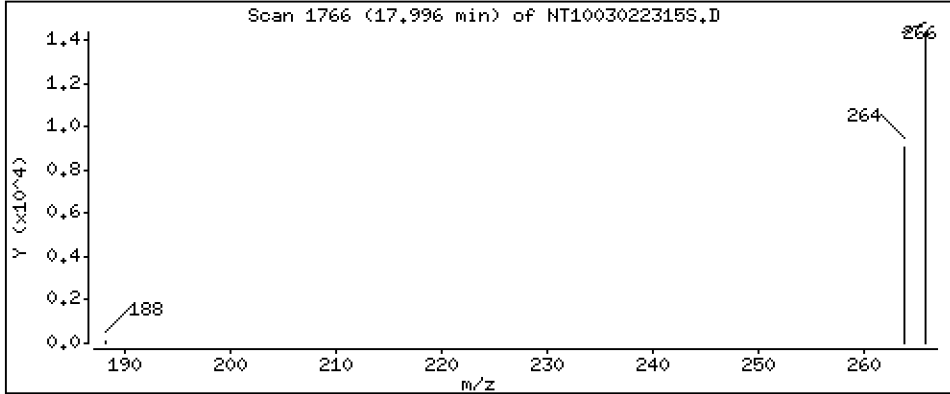
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,4443 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

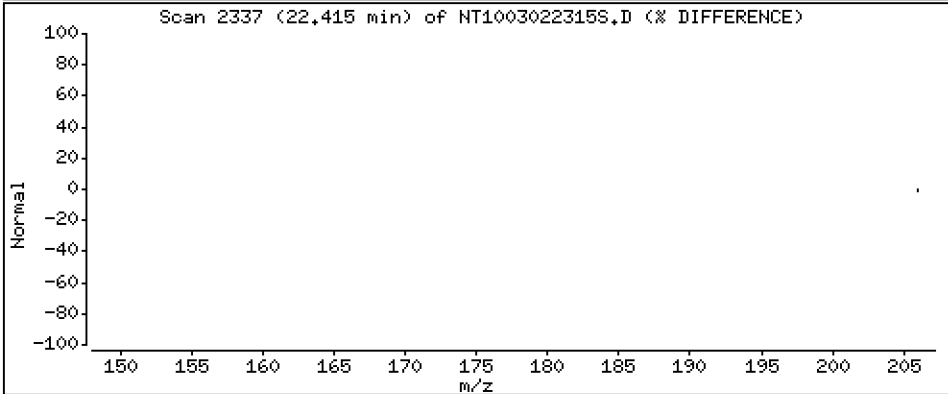
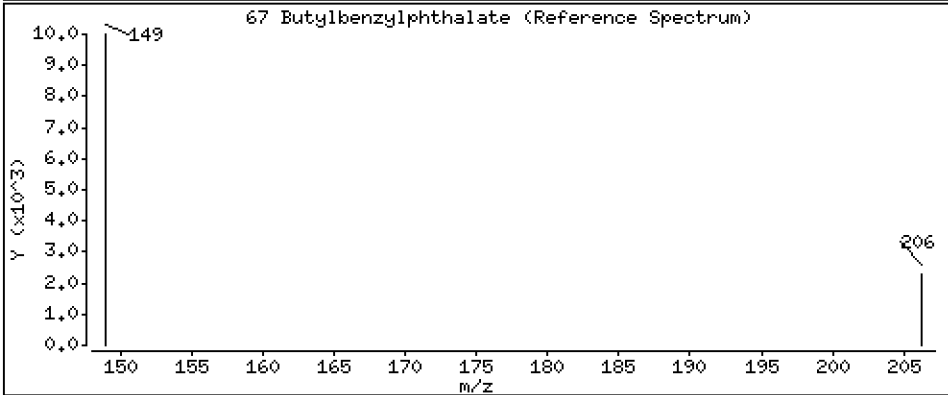
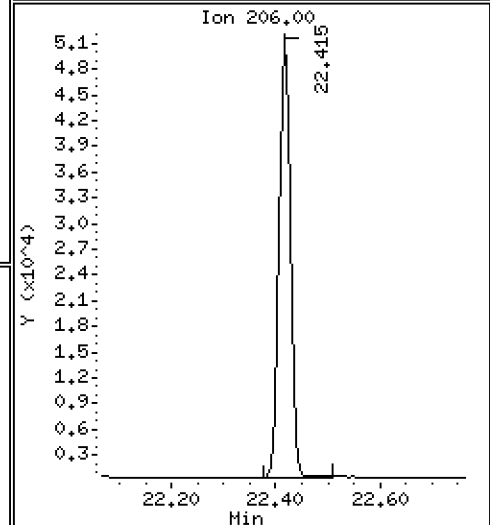
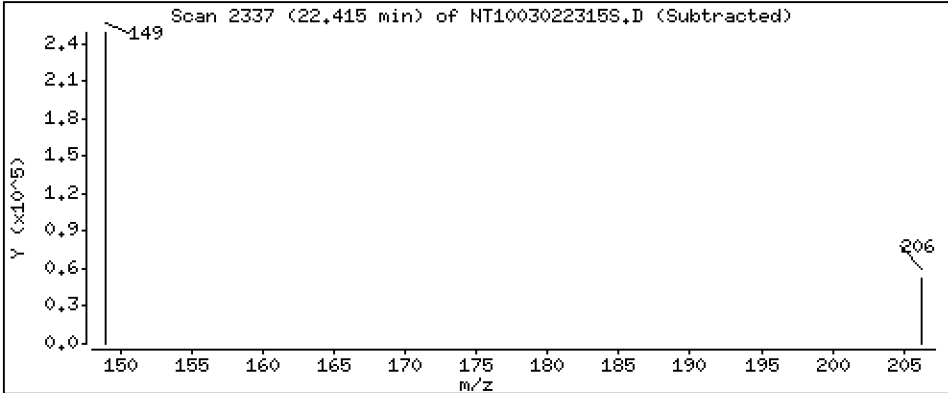
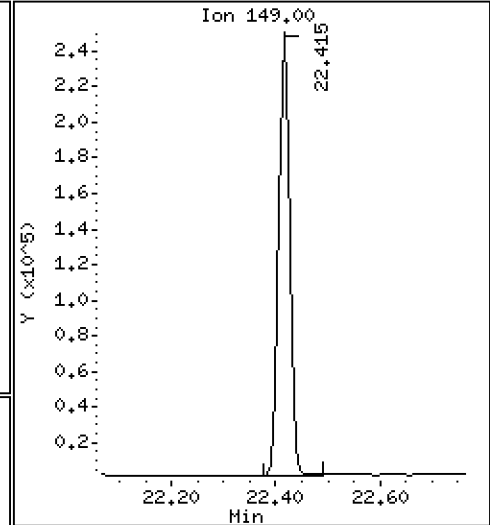
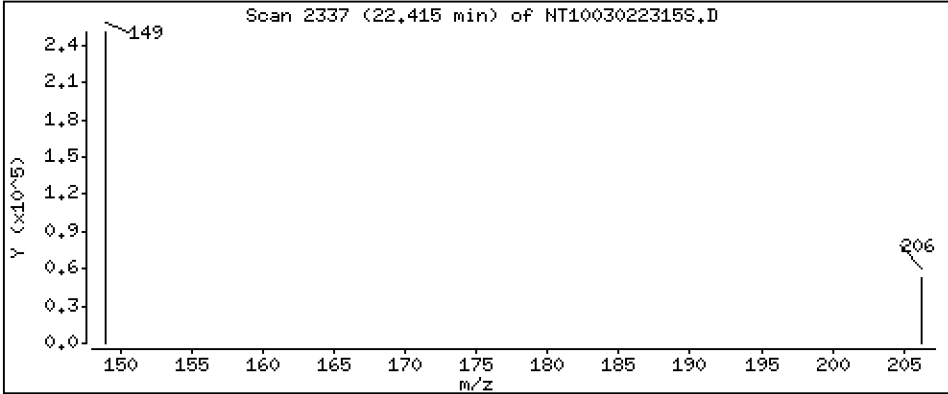
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 0.8326 ug/L



Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

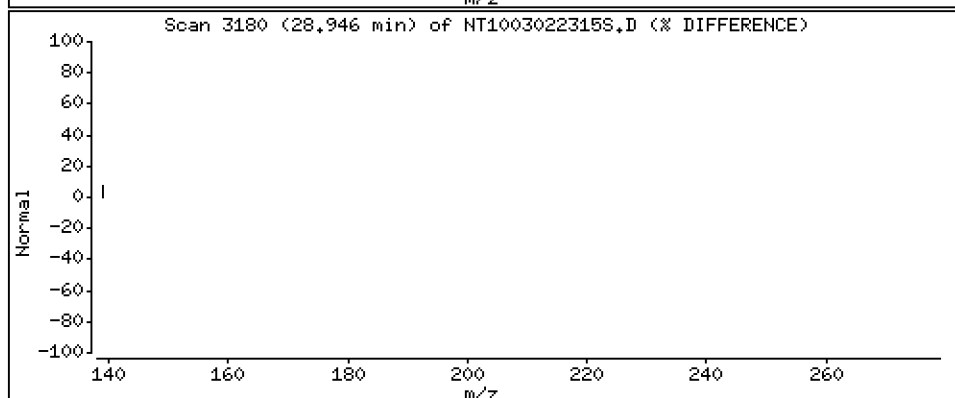
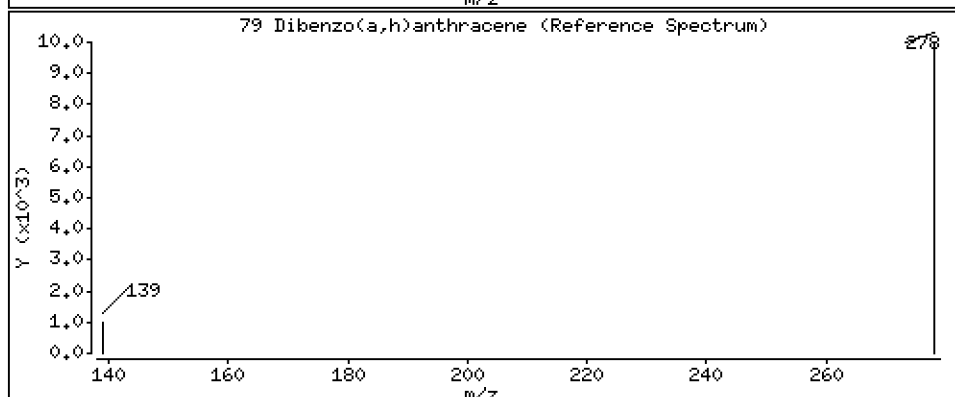
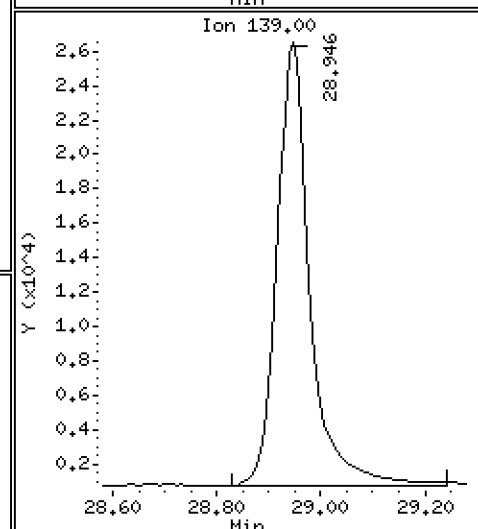
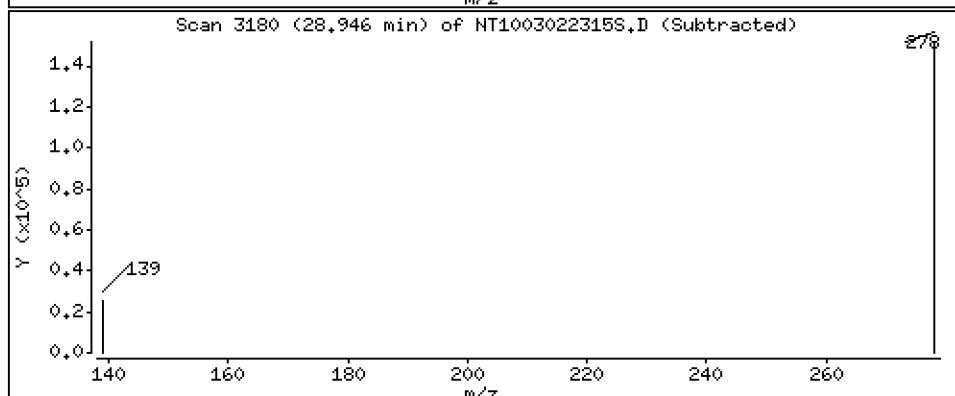
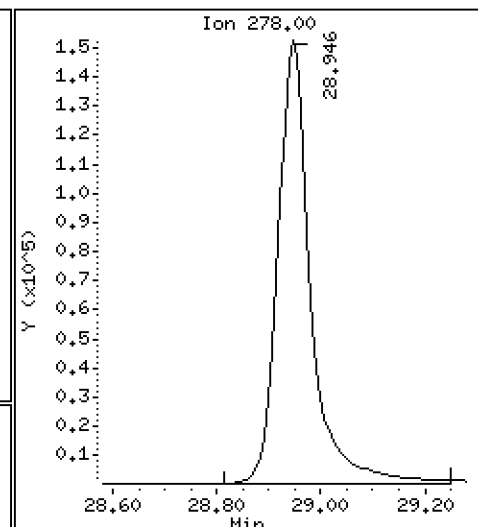
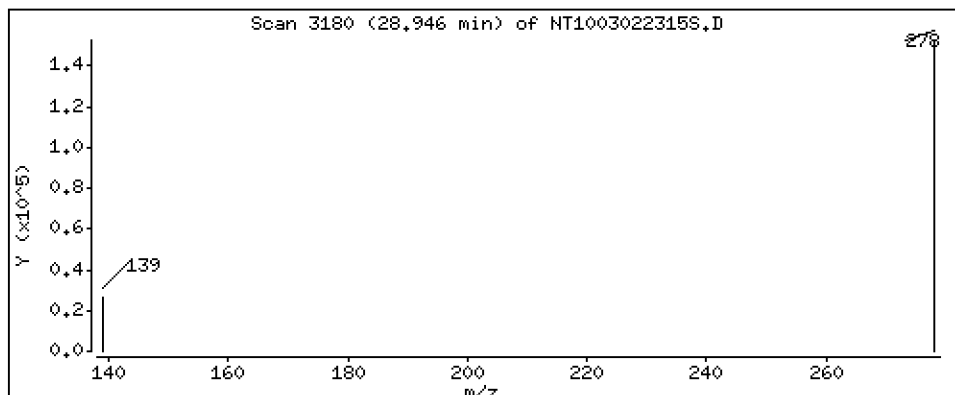
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 1,005 ug/L





Date : 02-MAR-2023 23:16

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

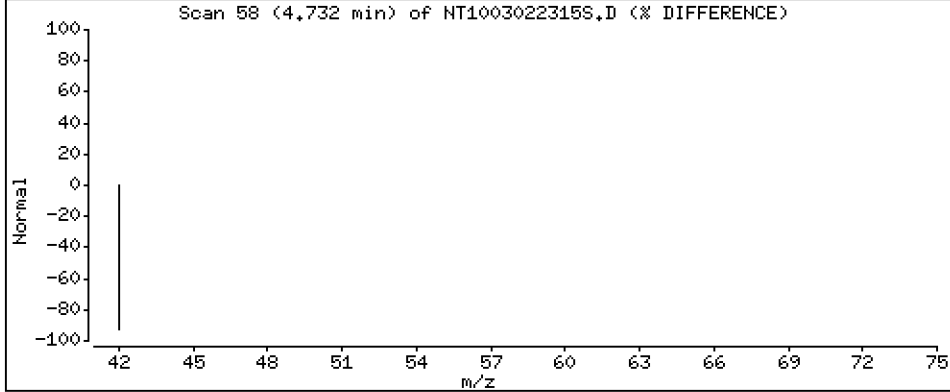
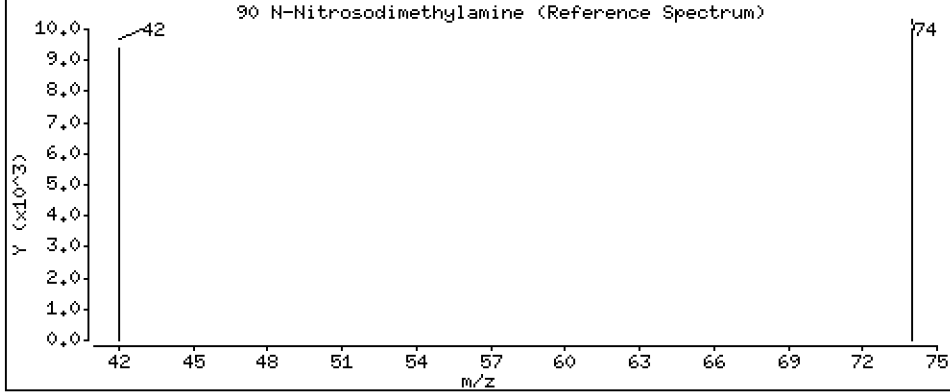
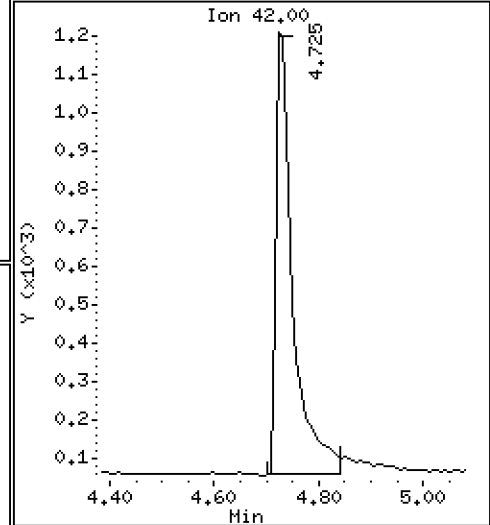
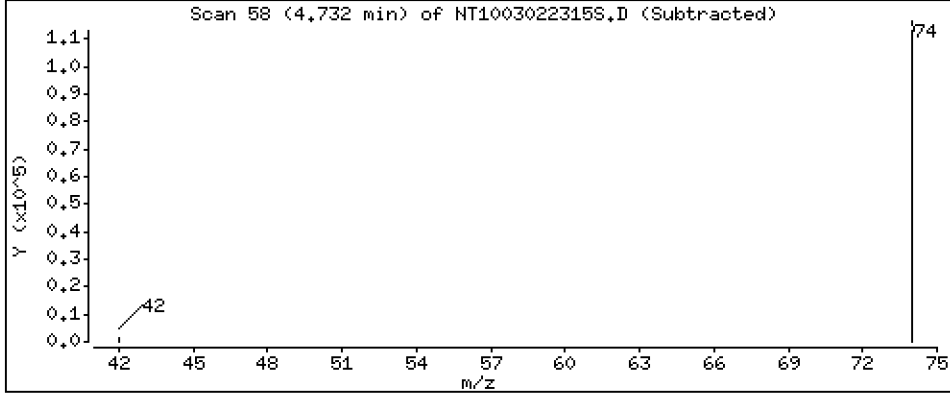
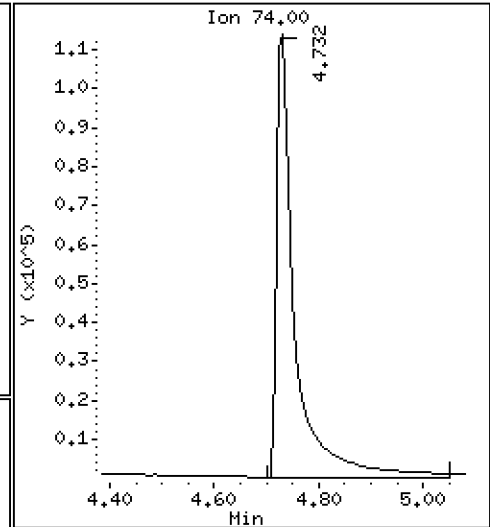
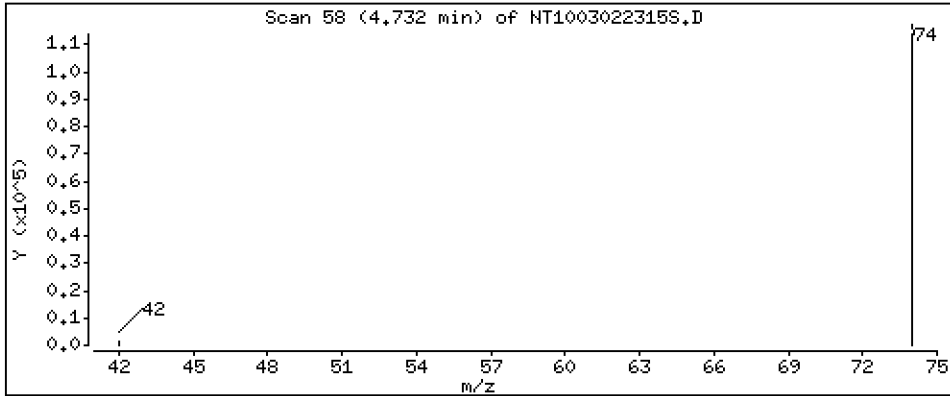
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 2.443 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022315S.D  
 Lab Smp Id: SLC0157-CCV1  
 Inj Date : 02-MAR-2023 23:16 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CCVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:03 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902 (0.746)		311720	1.67354	1.674 (R)
3 Phenol	94		8.525	8.517 (0.921)		259741	0.94112	0.9411
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		236548	0.97830	0.9783
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.251 (1.000)		652424	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.282 (1.003)		228223	0.97081	0.9708
11 Benzyl alcohol	79		9.477	9.476 (1.024)		152379	0.98827	0.9883
12 1,2-Dichlorobenzene	146		9.570	9.562 (1.034)		223979	0.99124	0.9912
13 2-Methylphenol	108		9.663	9.655 (1.044)		184224	1.10555	1.106
15 4-Methylphenol	108		9.950	9.942 (1.076)		184845	1.06417	1.064
16 N-Nitroso-di-n-propylamine	70		9.981	9.981 (1.079)		137920	1.12285	1.123
22 2,4-Dimethylphenol	107		11.006	10.997 (0.939)		398390	1.99567	1.996
24 Benzoic acid	105		11.082	11.074 (0.945)		99607	0.91113	0.9111
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		176281	1.04667	1.047
* 27 Naphthalene-d8	136		11.723	11.723 (1.000)		2339966	4.00000	
30 Hexachlorobutadiene	225		12.001	11.994 (1.024)		113390	0.94873	0.9487
39 Dimethylphthalate	163		14.749	14.741 (0.963)		385474	1.02276	1.023
* 42 Acenaphthene-d10	162		15.321	15.314 (1.000)		1186988	4.00000	
50 Diethylphthalate	149		16.210	16.203 (1.058)		392646	1.10471	1.105
54 N-Nitrosodiphenylamine	169		16.698	16.690 (0.907)		330327	0.93053	0.9305
57 Hexachlorobenzene	284		17.586	17.578 (0.955)		158280	0.95276	0.9528

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	32428	0.44428	0.4443
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2193485	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	197215	0.99752	0.9975(R)
67 Butylbenzylphthalate	149	22.414	22.414	(0.957)	342698	0.83265	0.8326
* 69 Chrysene-d12	240	23.429	23.421	(1.000)	2444828	4.00000	
* 77 Perylene-d12	264	26.123	26.115	(1.000)	2842248	4.00000	
79 Dibenzo(a,h)anthracene	278	28.945	28.929	(1.108)	670955	1.00492	1.005
90 N-Nitrosodimethylamine	74	4.732	4.732	(0.511)	269392	2.44288	2.443

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022315S.D  
 Lab Smp Id: SLC0157-CCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	652424	32.23
27 Naphthalene-d8	1779056	889528	3558112	2339966	31.53
42 Acenaphthene-d10	954569	477285	1909138	1186988	24.35
59 Phenanthrene-d10	1596290	798145	3192580	2193485	37.41
69 Chrysene-d12	1649110	824555	3298220	2444828	48.25
77 Perylene-d12	1901958	950979	3803916	2842248	49.44

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.43	0.03
77 Perylene-d12	26.12	25.62	26.62	26.12	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022315S.D

Lab ID: SLC0157-CCV1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 23:16

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**LOW-CONCENTRATION  
CONTINUING CALIBRATION CHECK  
EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022304S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0157</u>	Injection Date:	<u>03/02/23</u>
Lab Sample ID:	<u>SLC0157-LCV1</u>	Injection Time:	<u>16:17</u>
Sequence Name:	<u>Low Cal Check</u>		

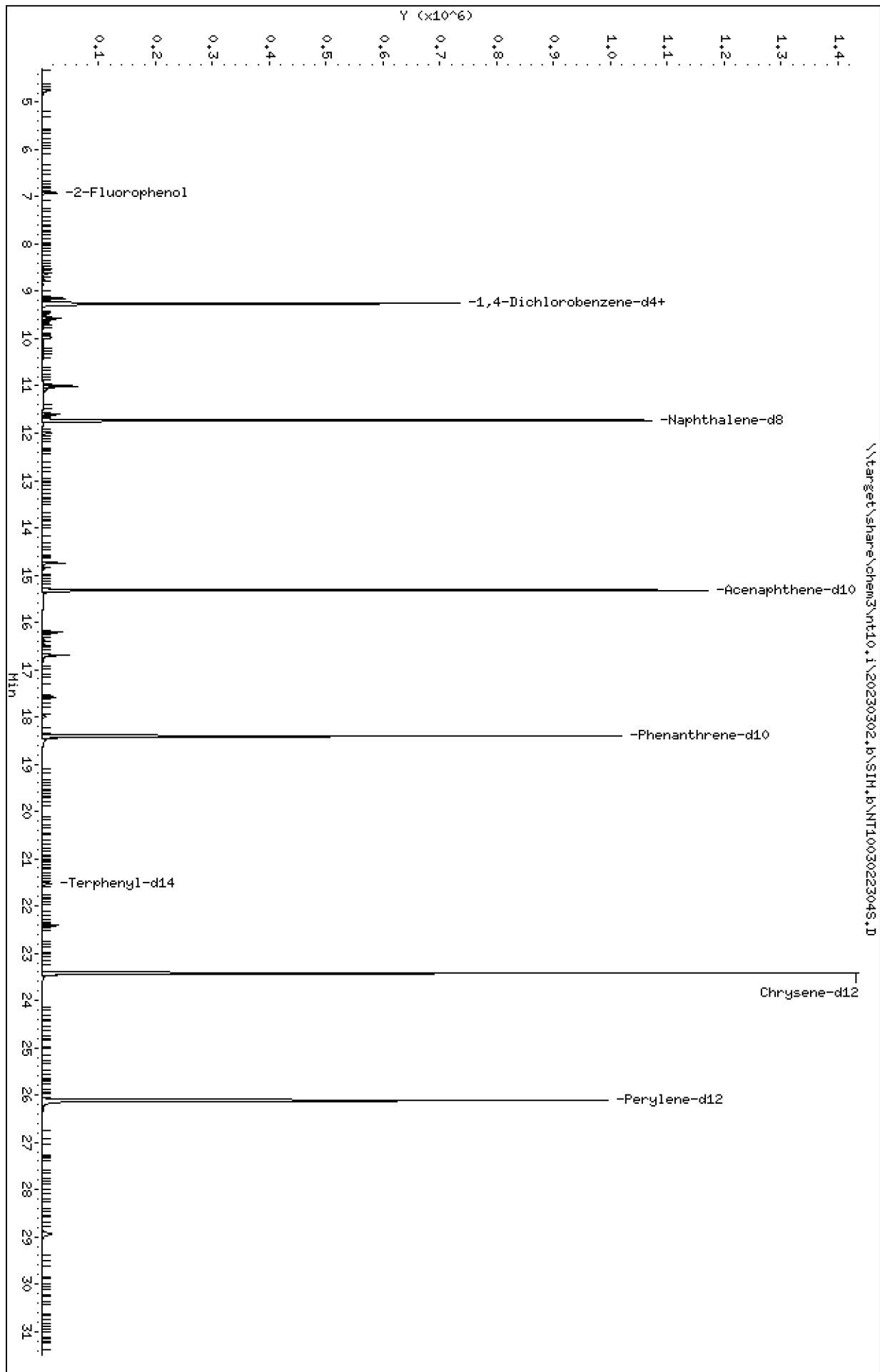
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.2	1.4413080	1.4395720		-0.1	
1,2-Dichlorobenzene	A	0.20000	0.2	1.3853460	1.4041810		1.4	
Benzyl Alcohol	A	0.20000	0.1	0.7492523	0.6506834		-30.4	
Benzoic acid	A	0.80000	0.3	0.1431163	0.0621735		-66.6	
2,4-Dimethylphenol	A	0.40000	0.3	0.2957717	0.2779248		-18.2	
1,2,4-Trichlorobenzene	A	0.20000	0.2	0.2879030	0.2828370		-1.8	
N-Nitrosodiphenylamine	A	0.20000	0.2	0.6473471	0.6150766		-5.0	
Pentachlorophenol	A	0.40000	0.2	0.0950913	0.0800703		-39.7	
2-Fluorophenol	A	0.30000	0.285	1.1419780	1.0844580		-5.0	
p-Terphenyl-d14	A	0.20000	0.176	0.3234672	0.2846530		-12.0	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022304S.D  
Date : 02-MAR-2023 16:17  
Client ID:  
Sample Info: SED-LCV200  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302.16\SIM.B\NT1003022304S.D



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

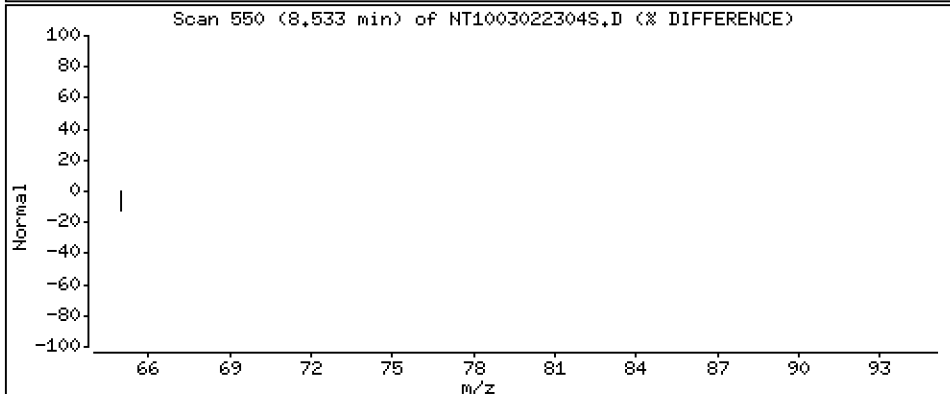
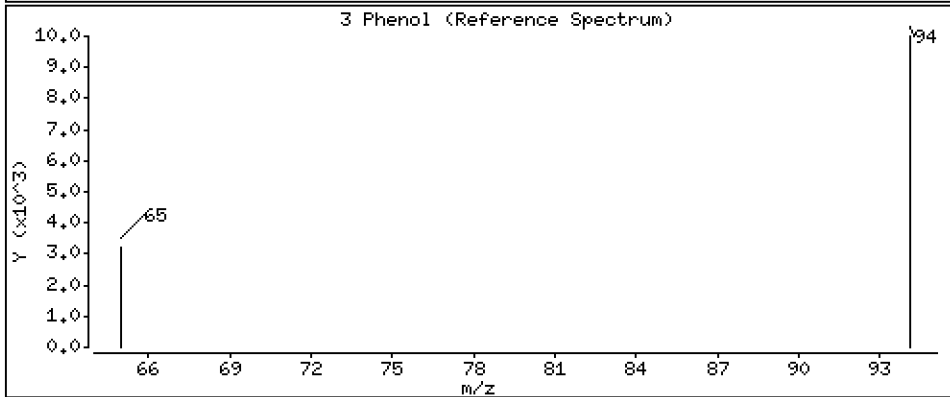
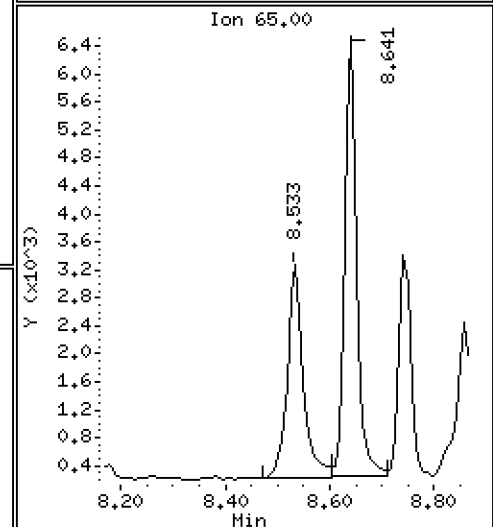
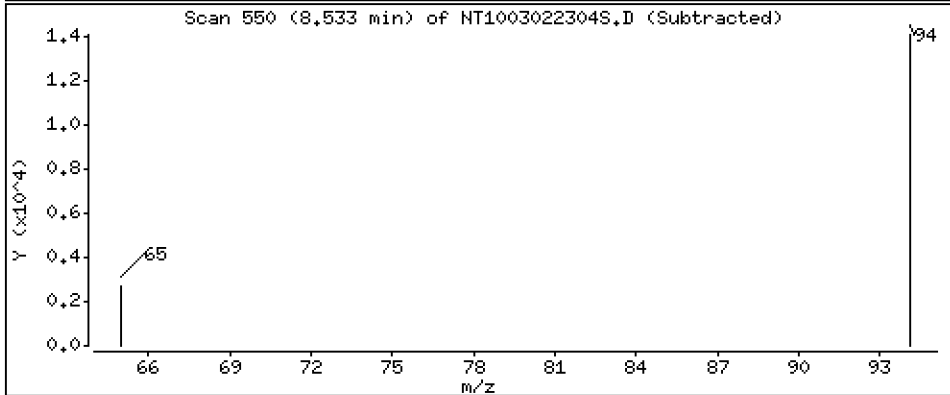
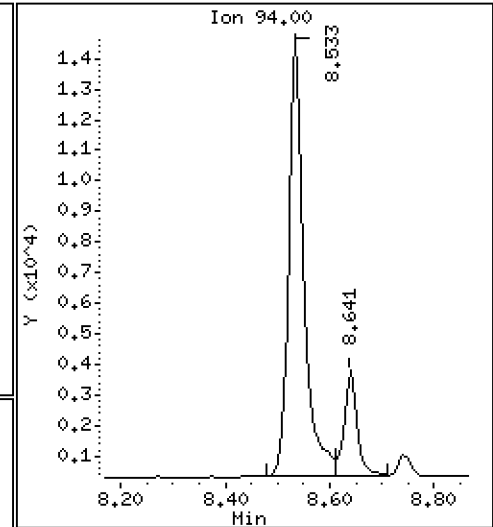
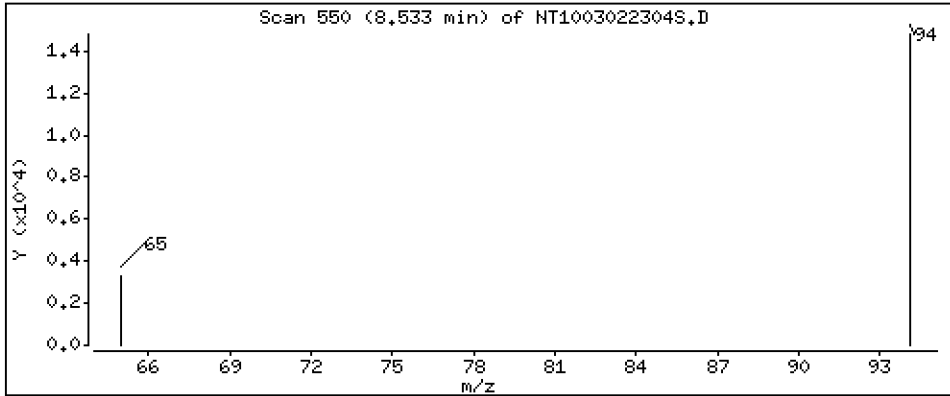
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.1516 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

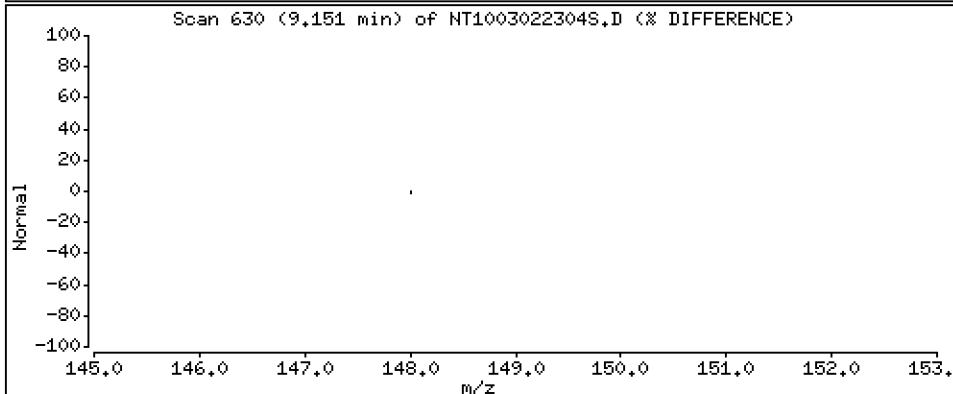
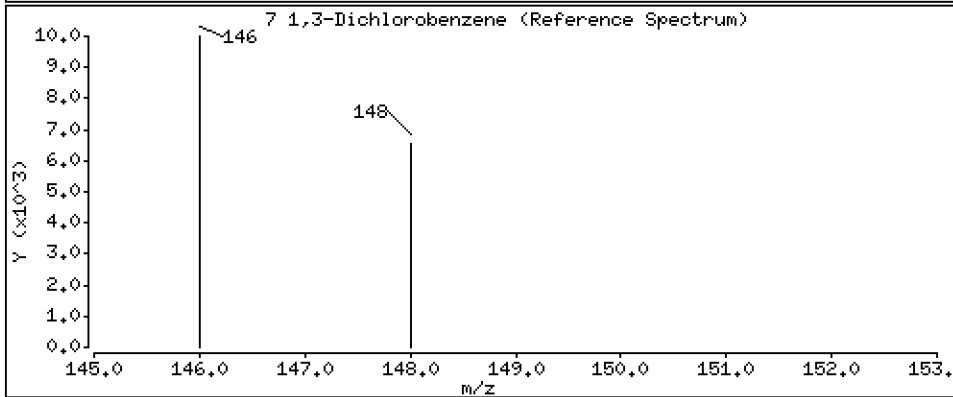
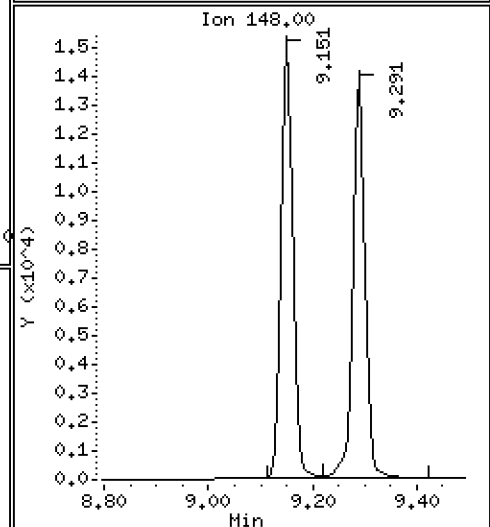
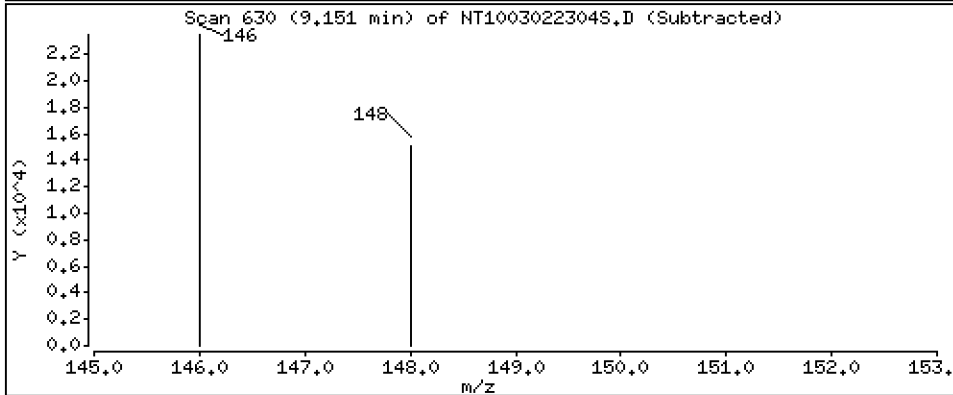
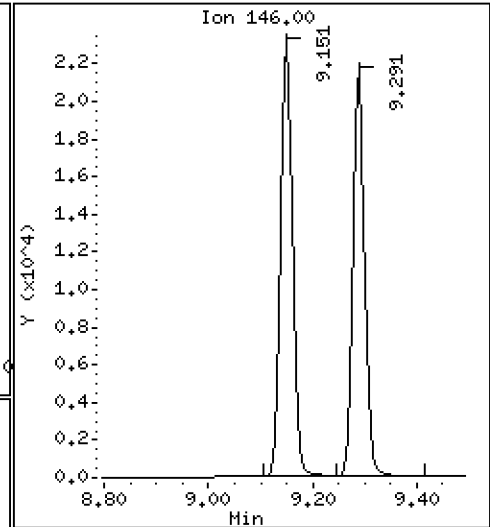
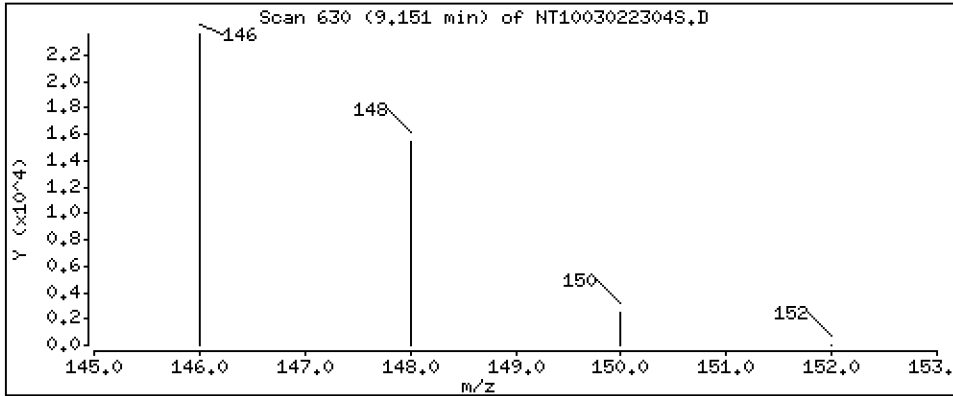
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.2034 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

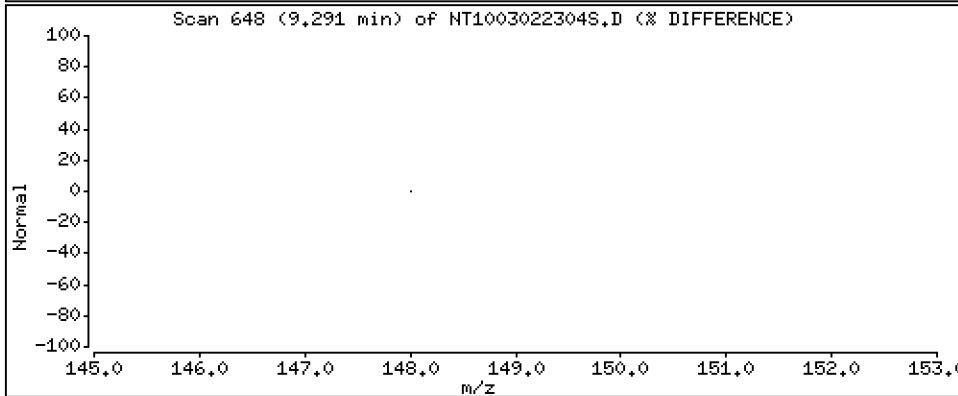
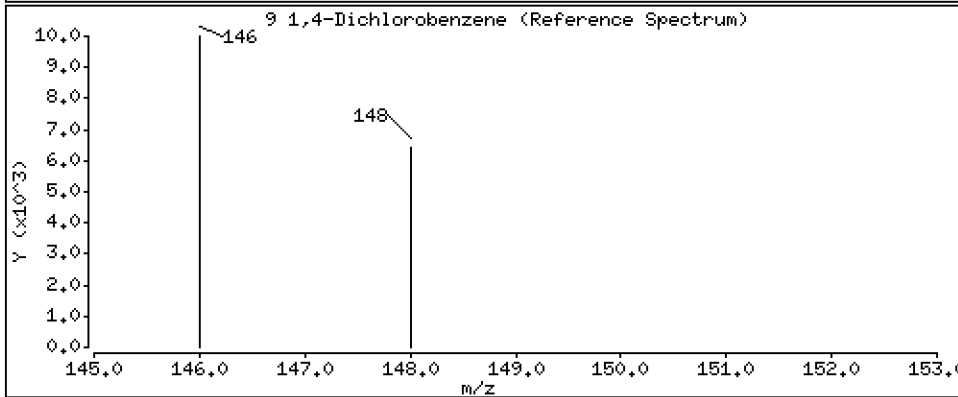
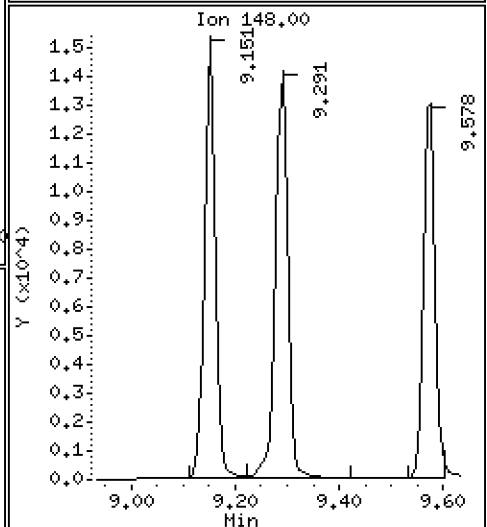
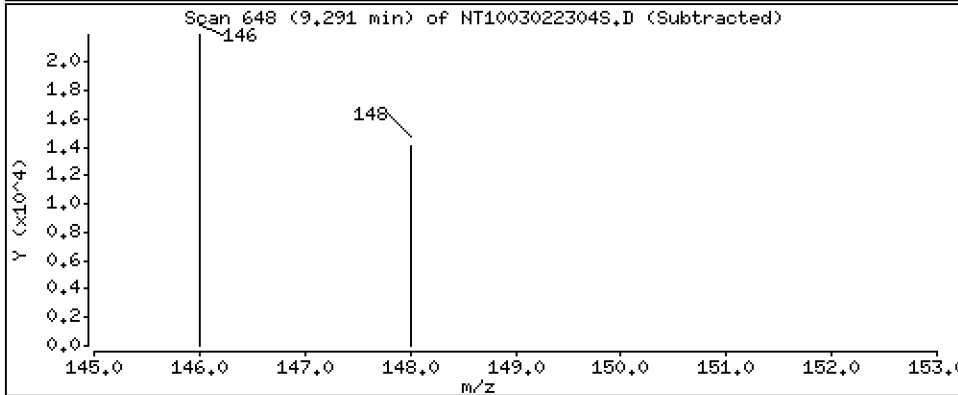
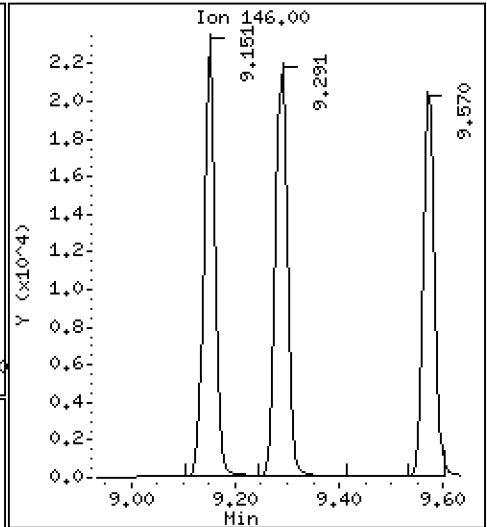
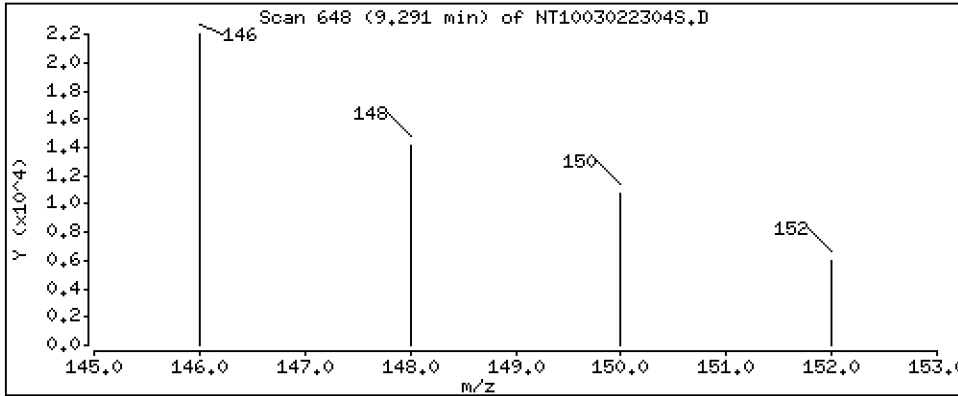
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.1998 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

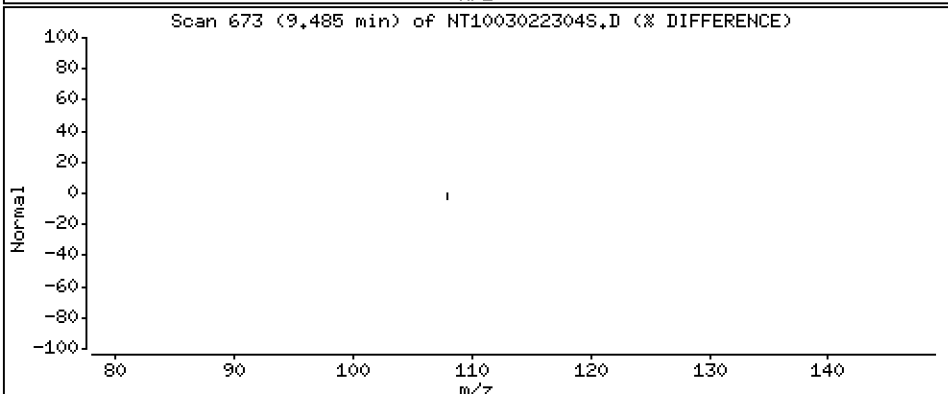
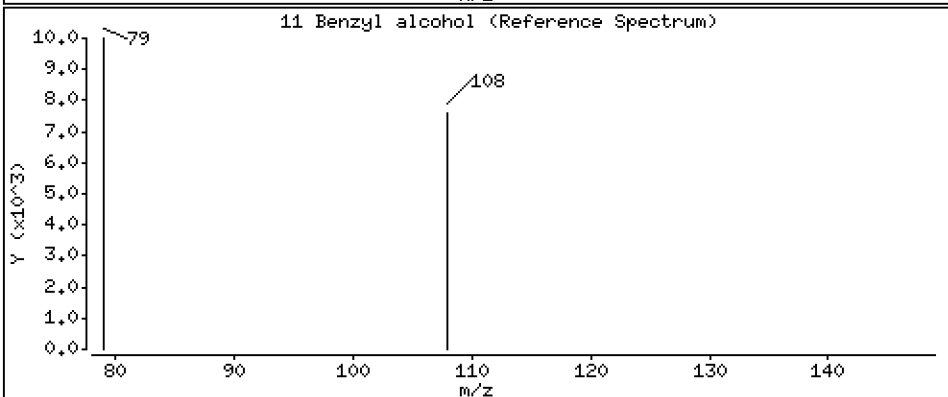
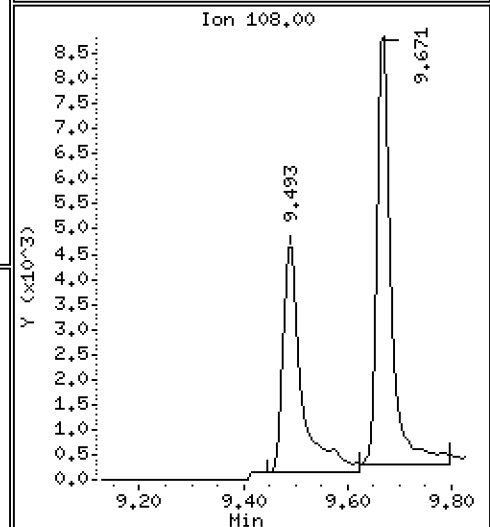
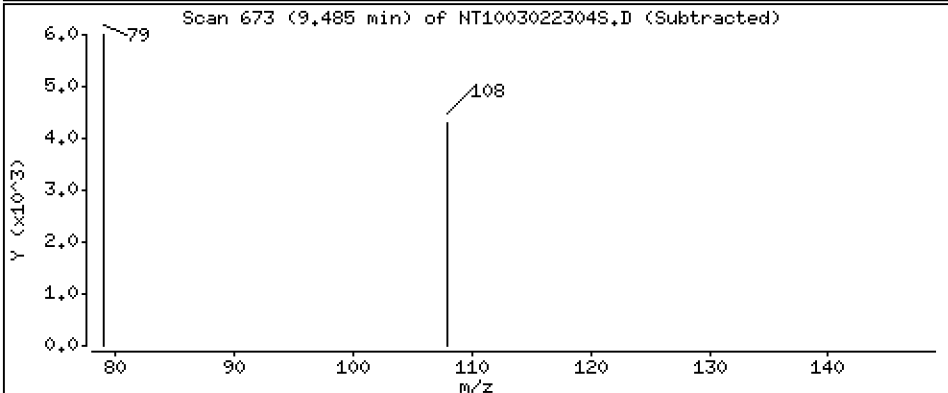
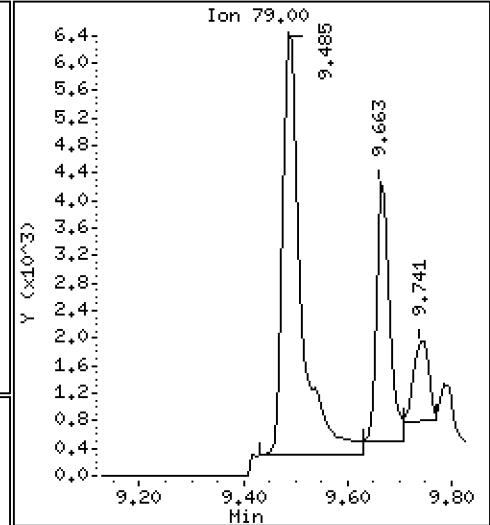
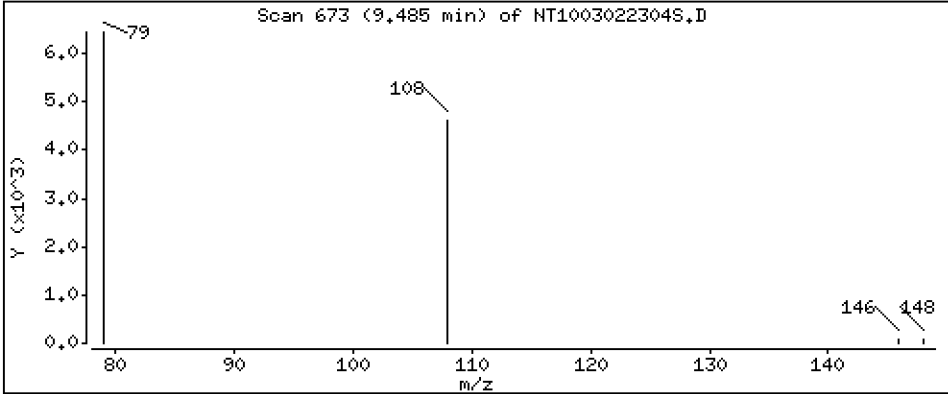
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1392 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

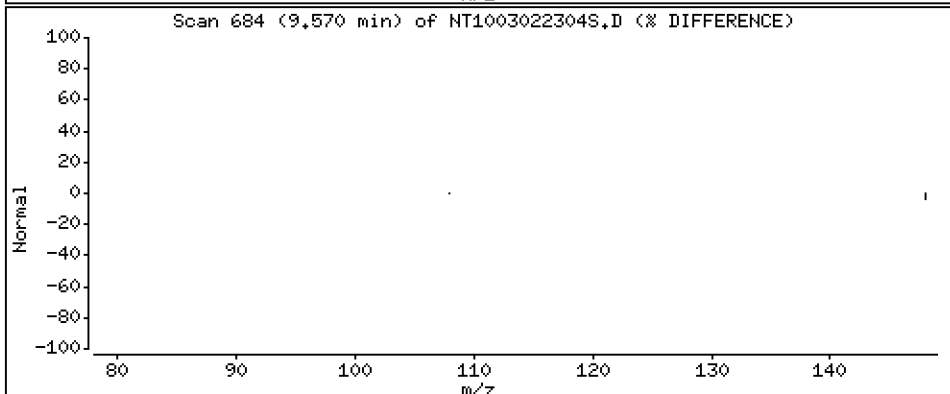
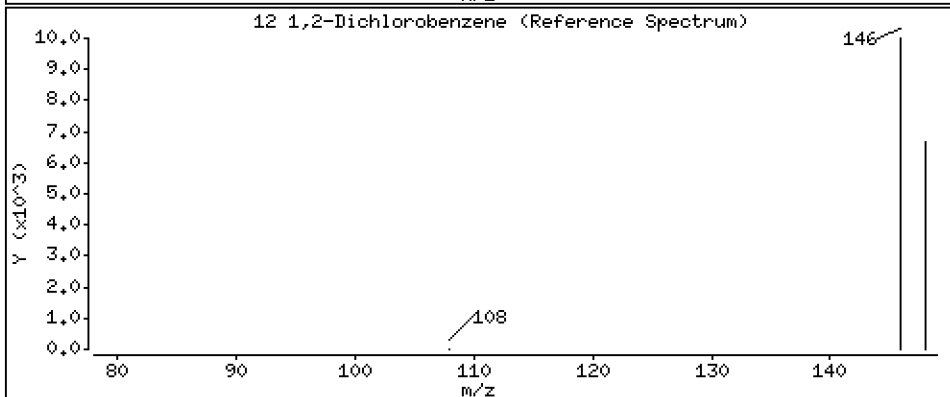
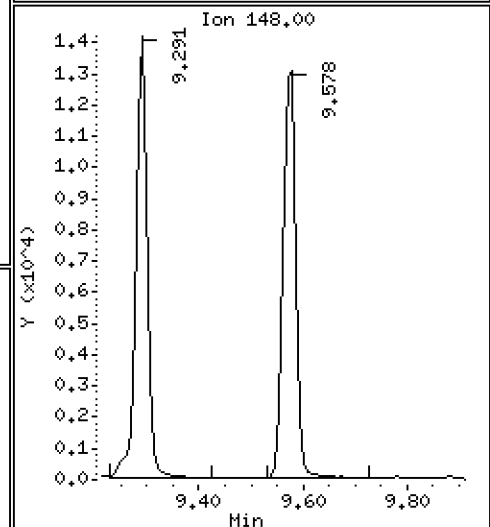
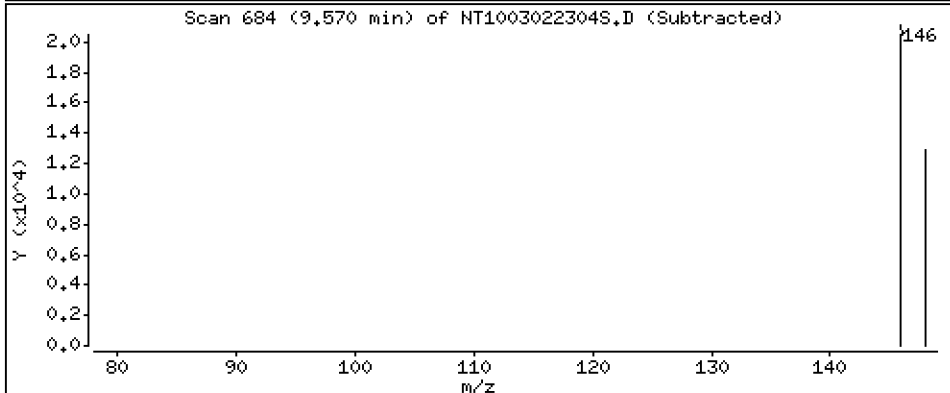
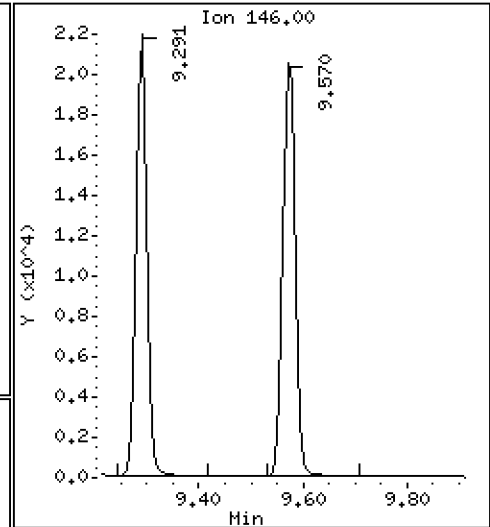
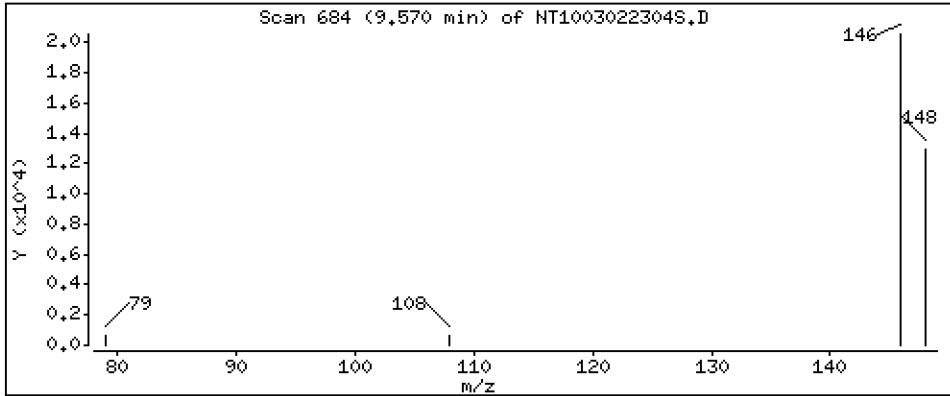
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.2027 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

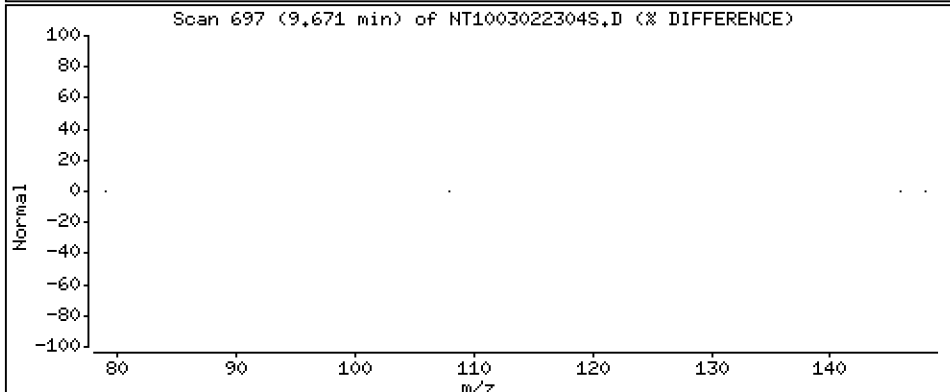
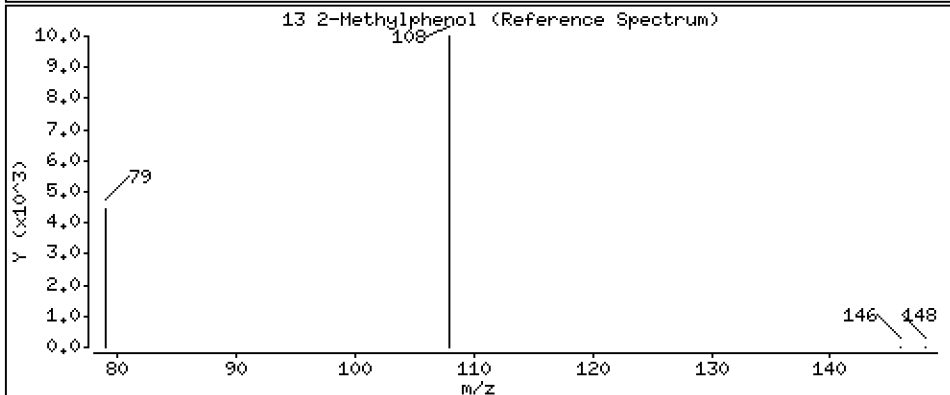
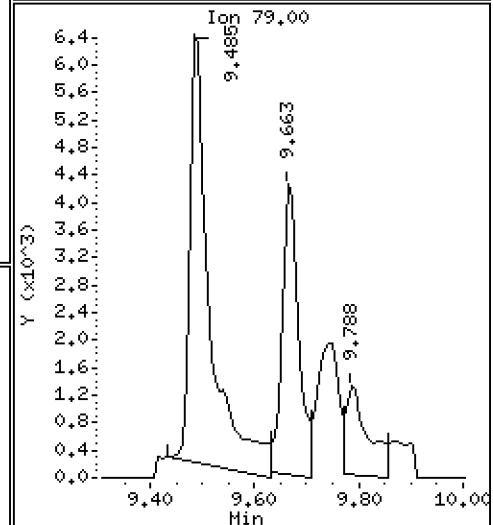
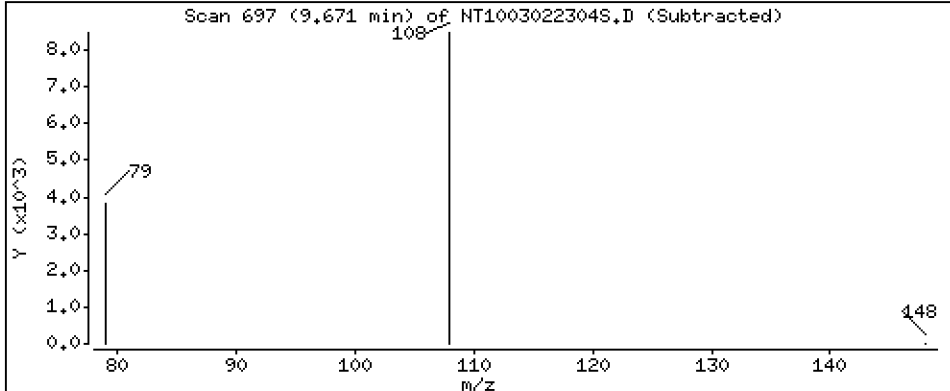
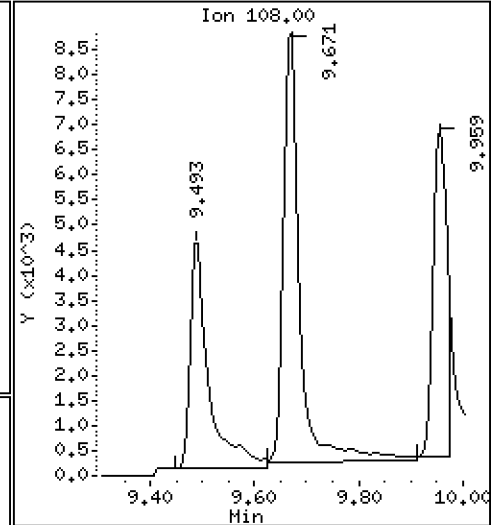
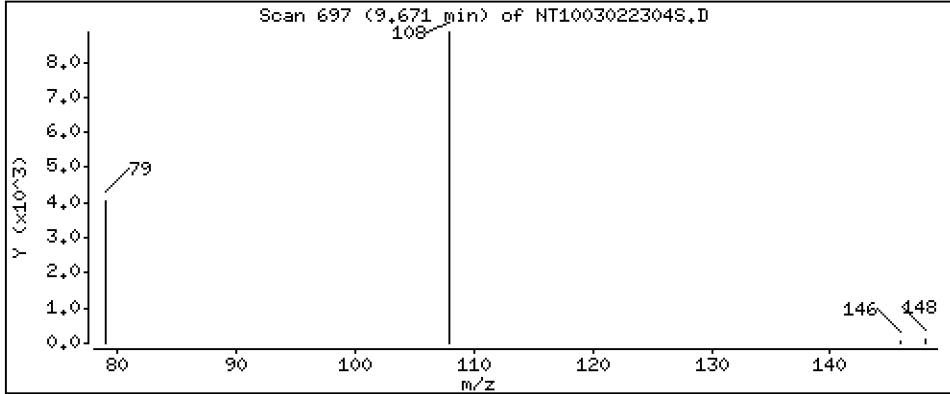
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1561 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

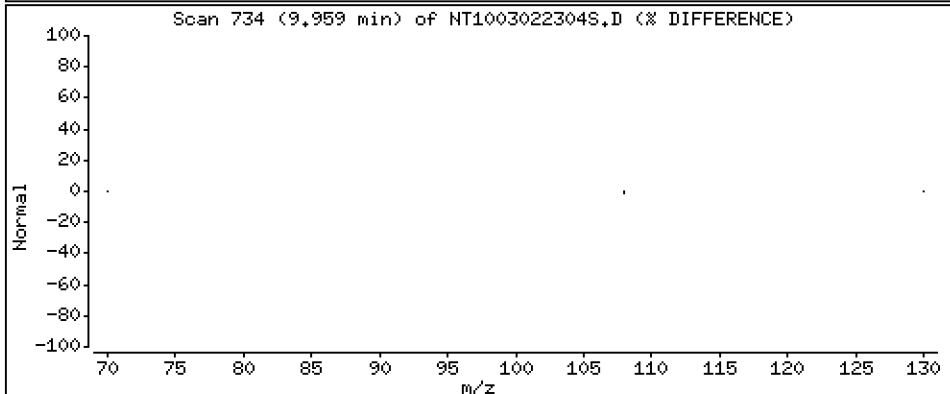
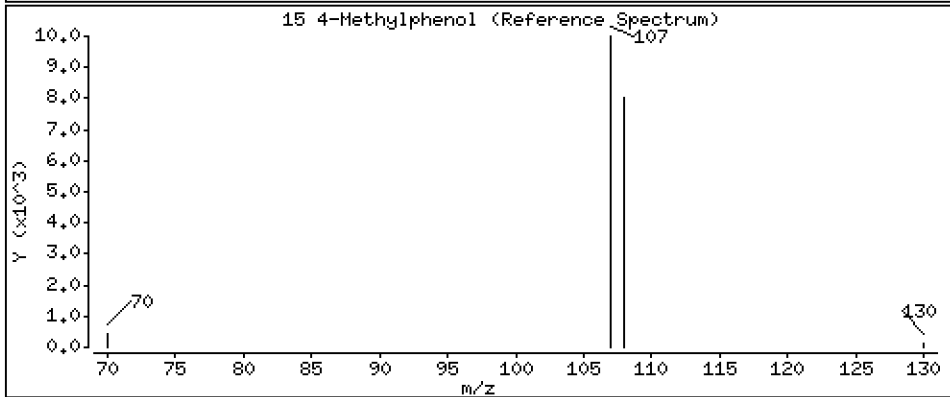
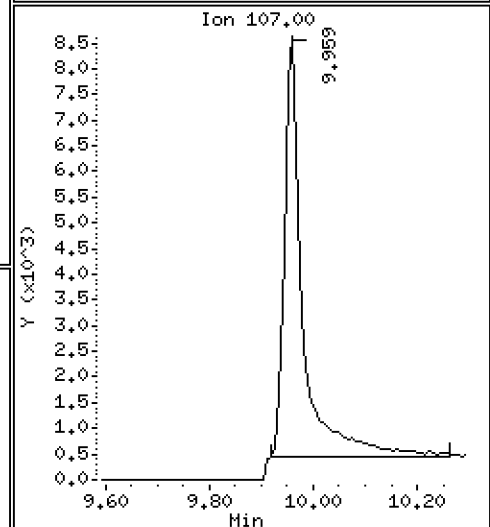
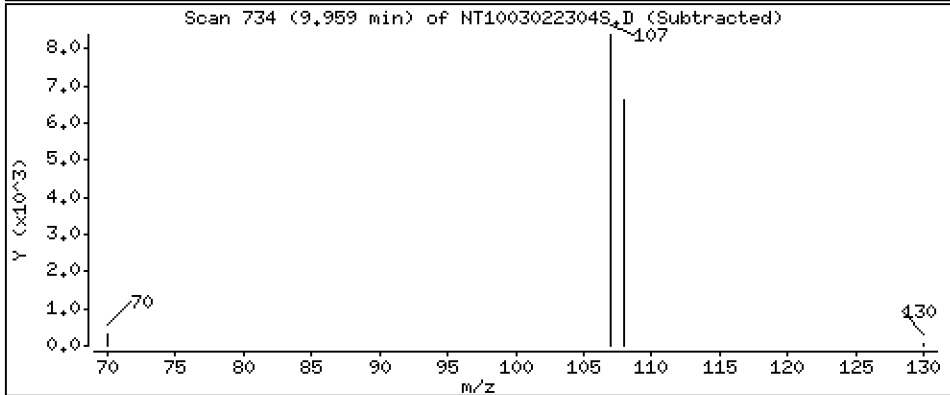
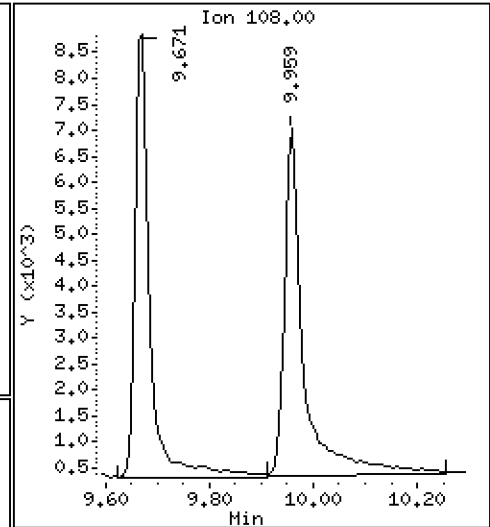
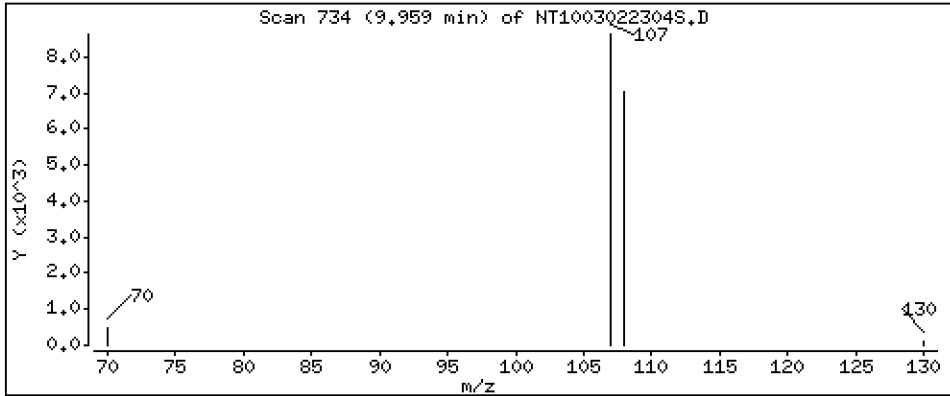
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1404 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

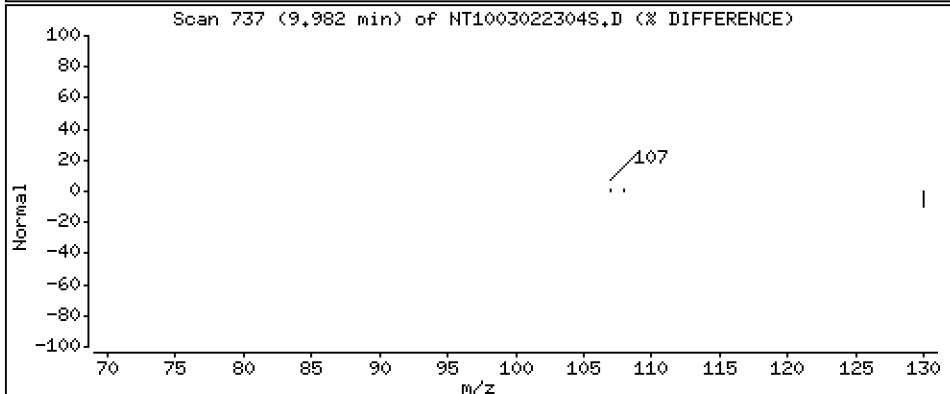
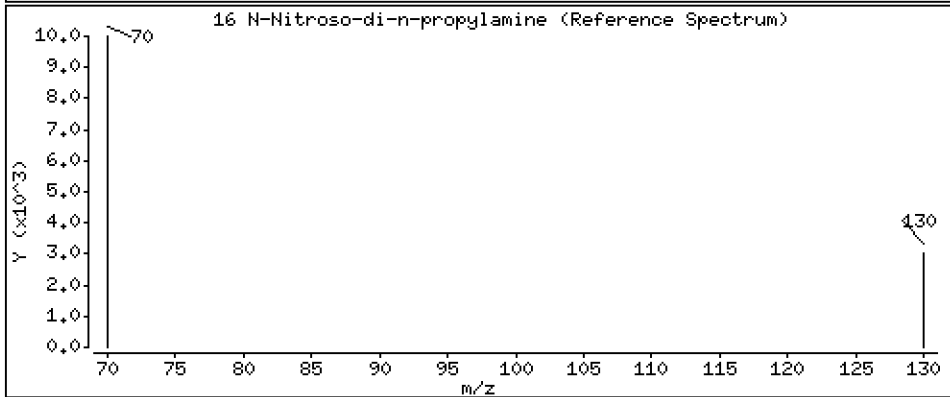
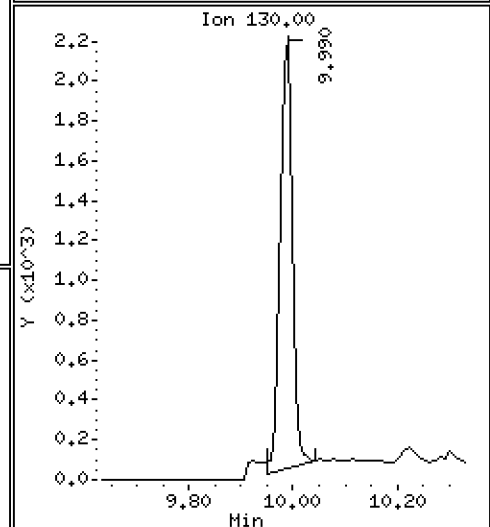
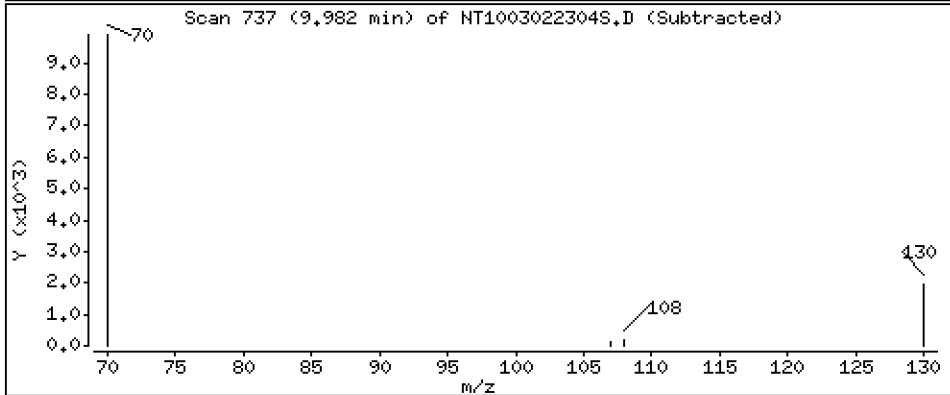
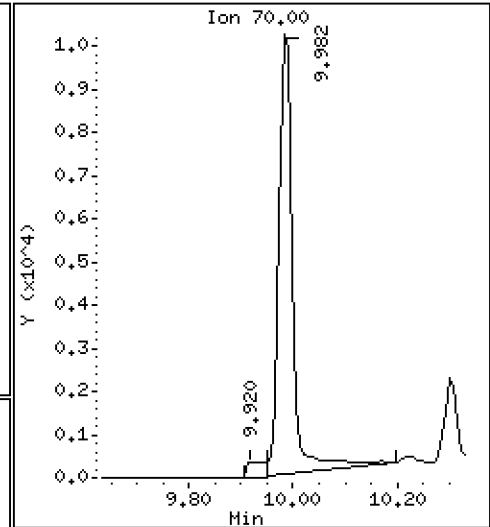
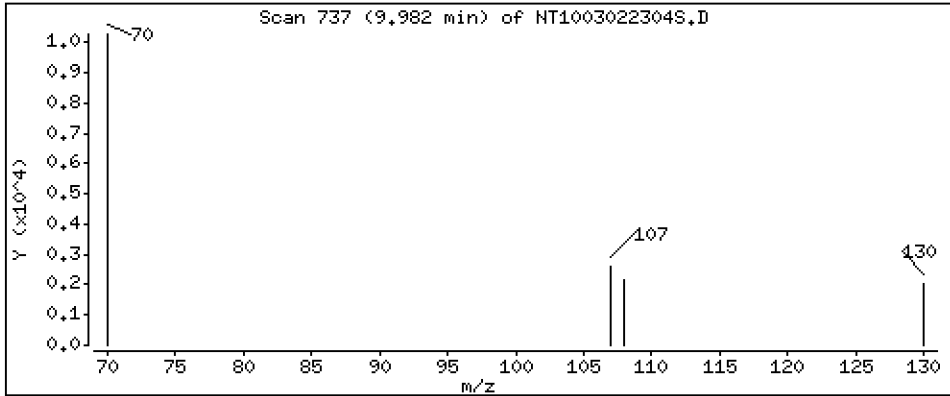
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.2077 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

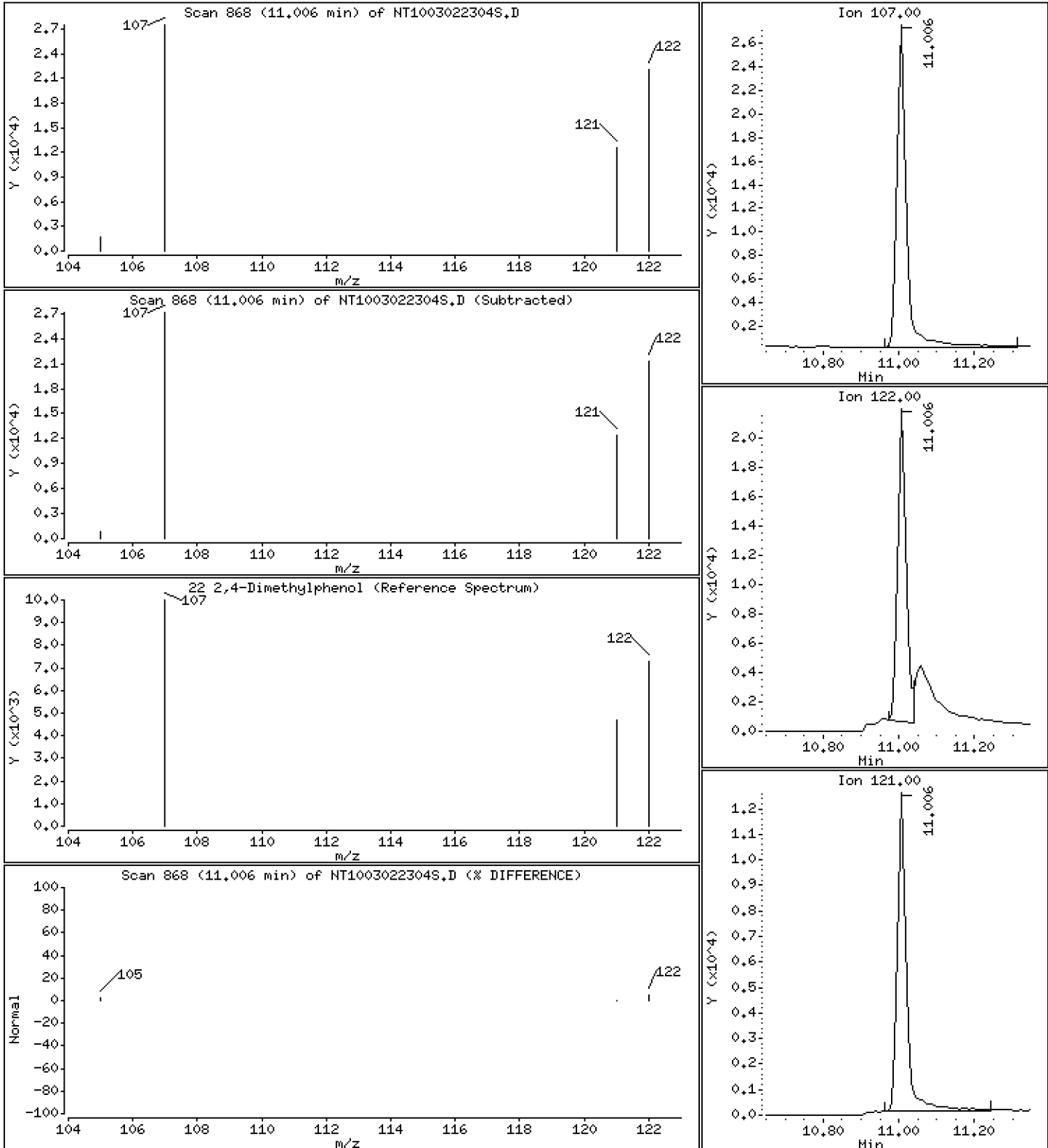
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

22 2,4-Dimethylphenol

Concentration: 0,3273 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

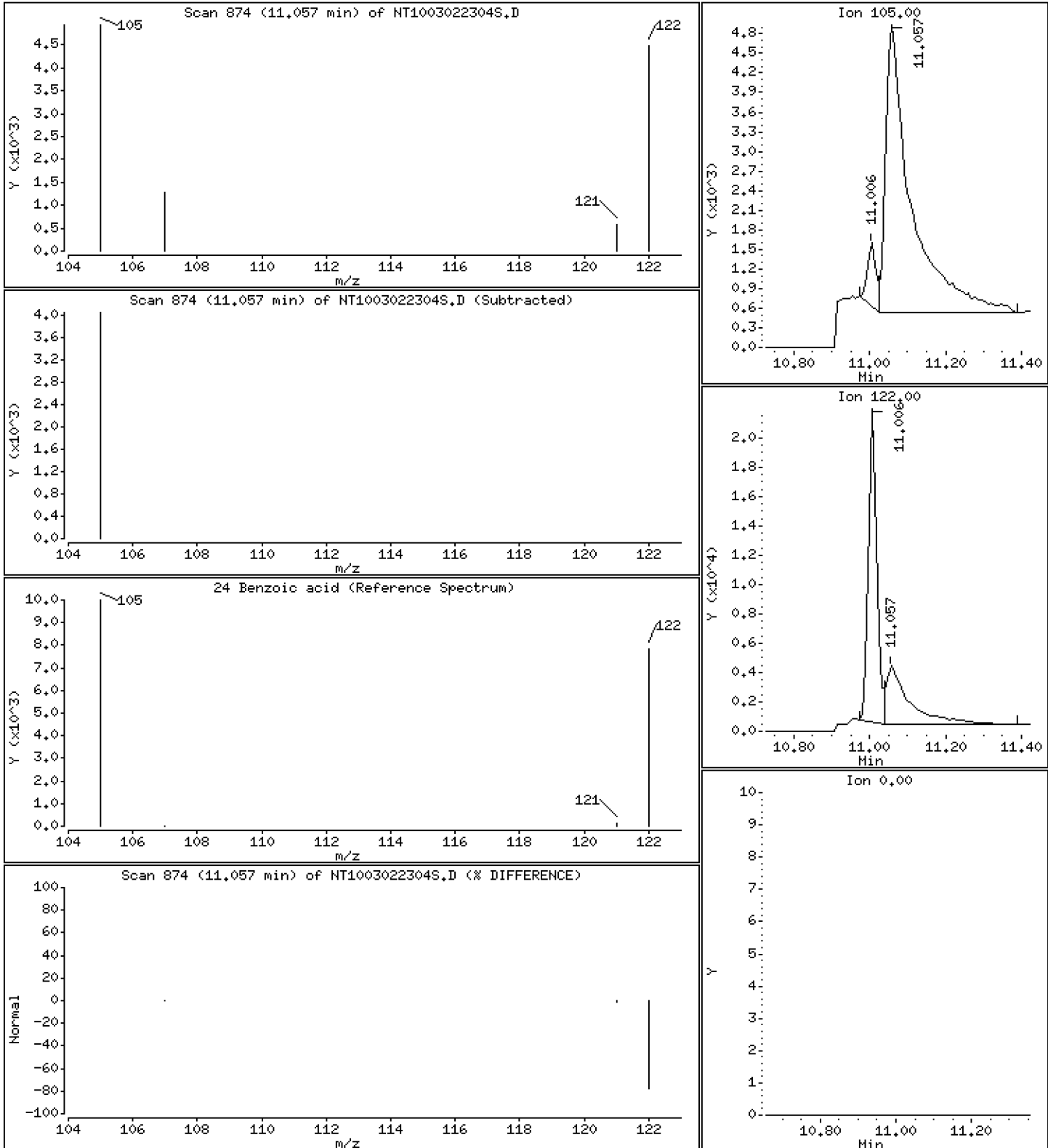
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.2670 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

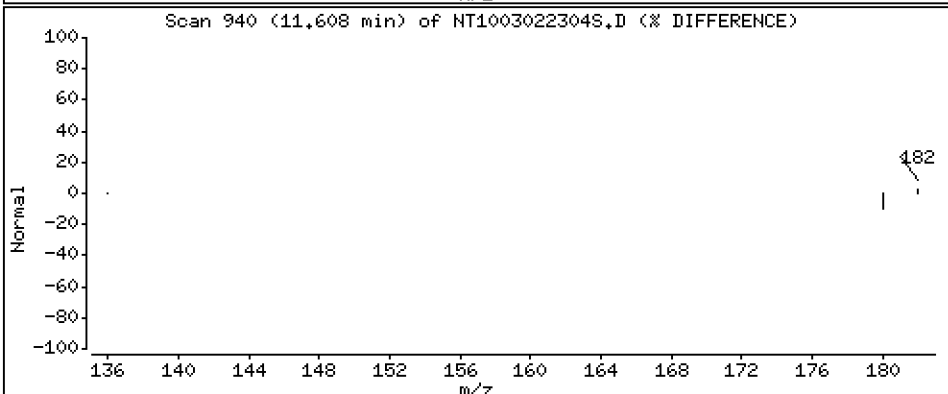
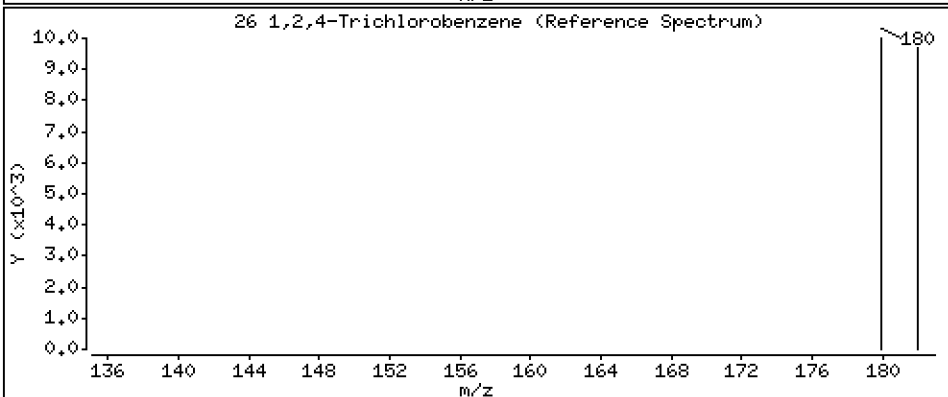
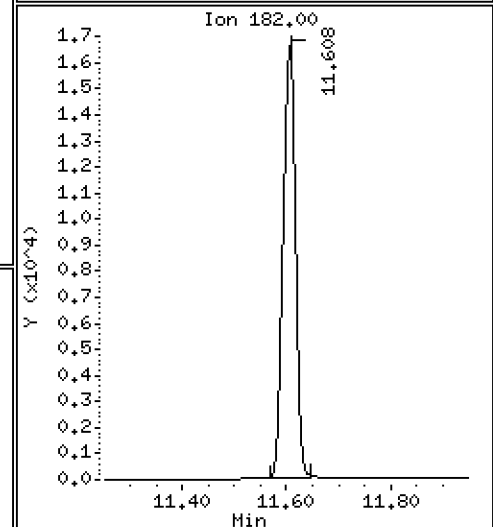
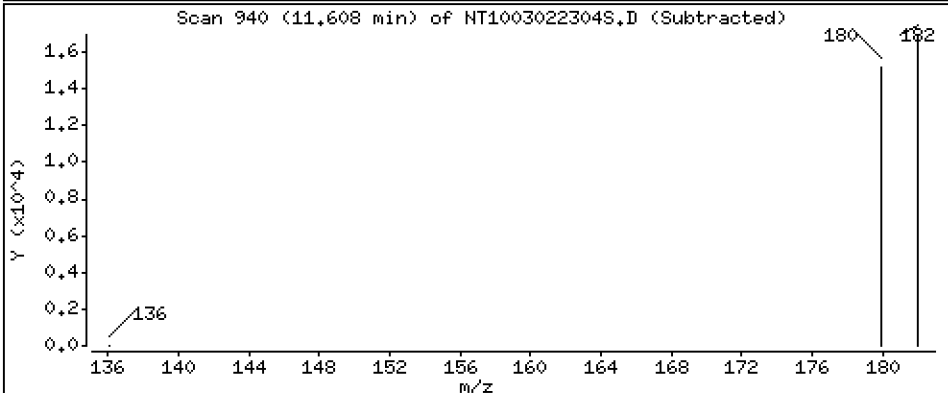
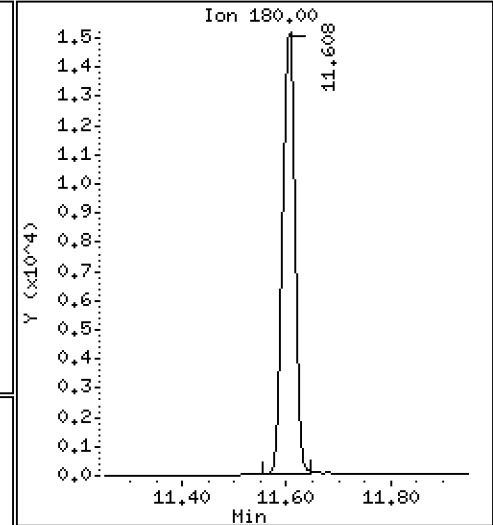
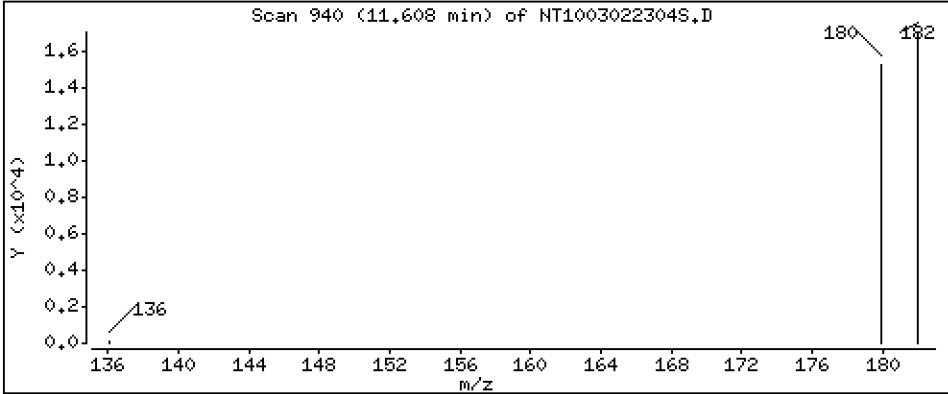
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.1965 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

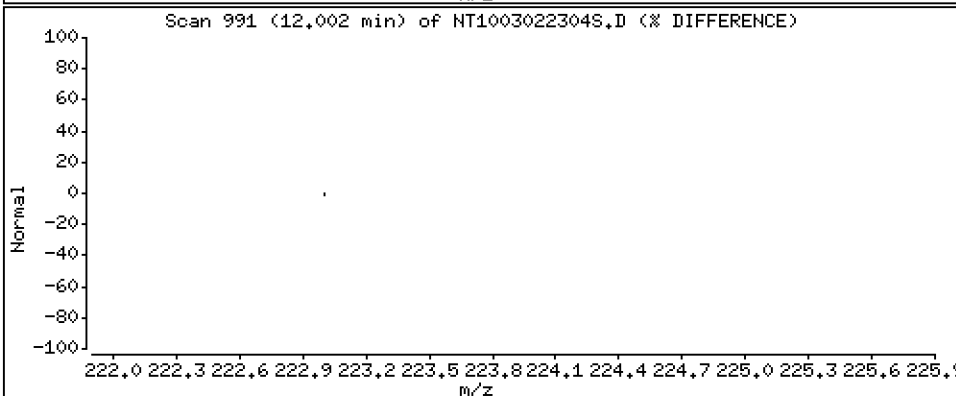
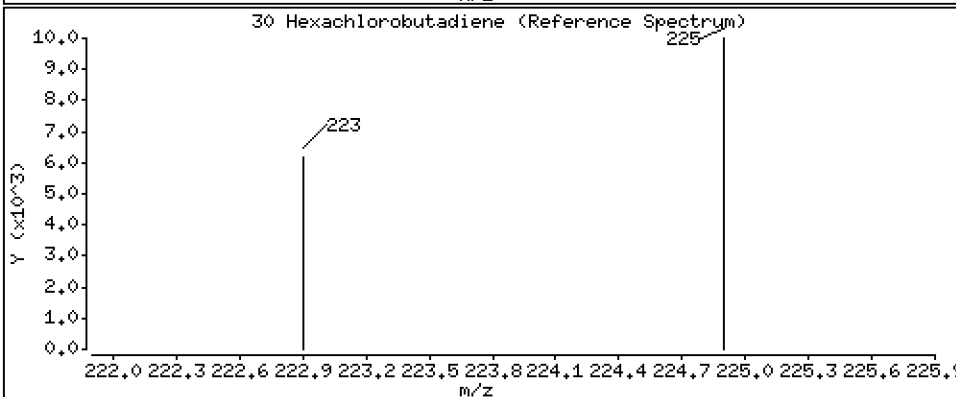
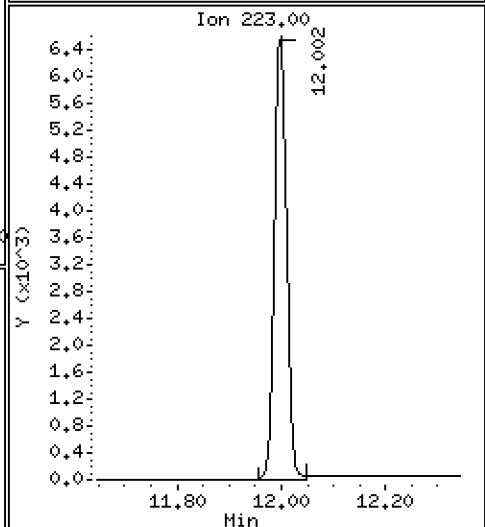
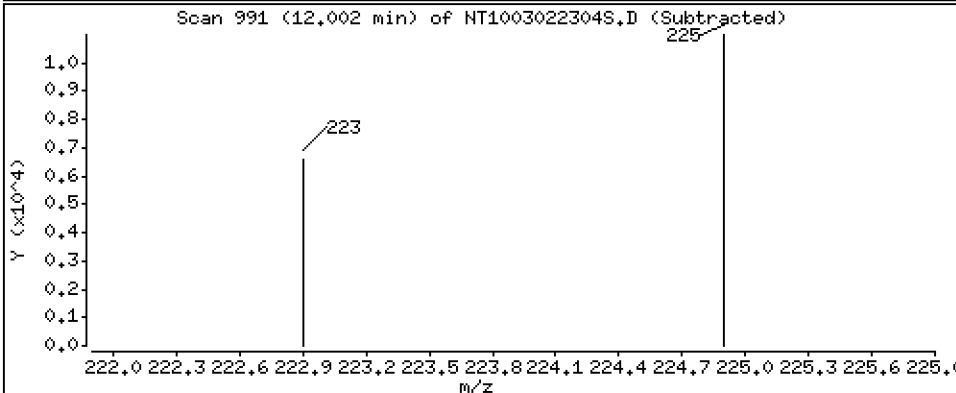
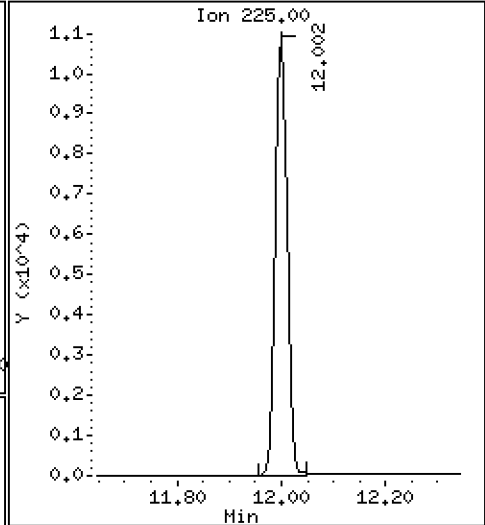
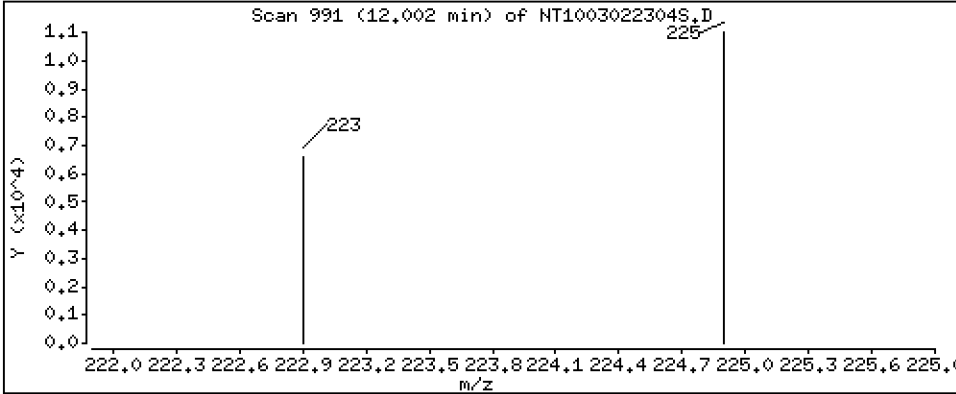
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,1890 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

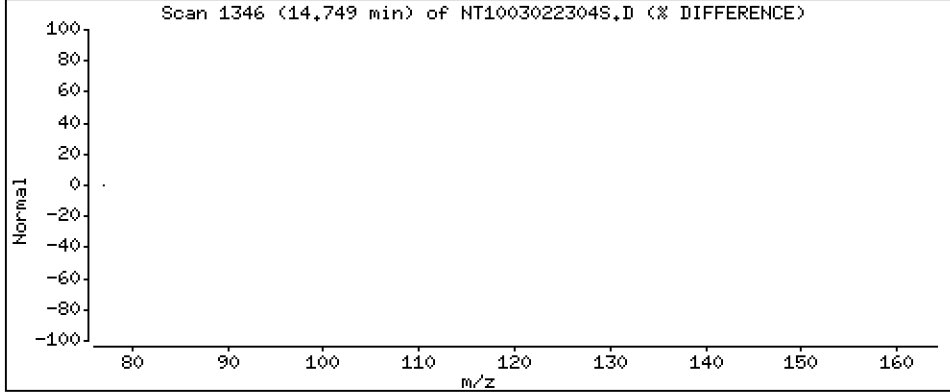
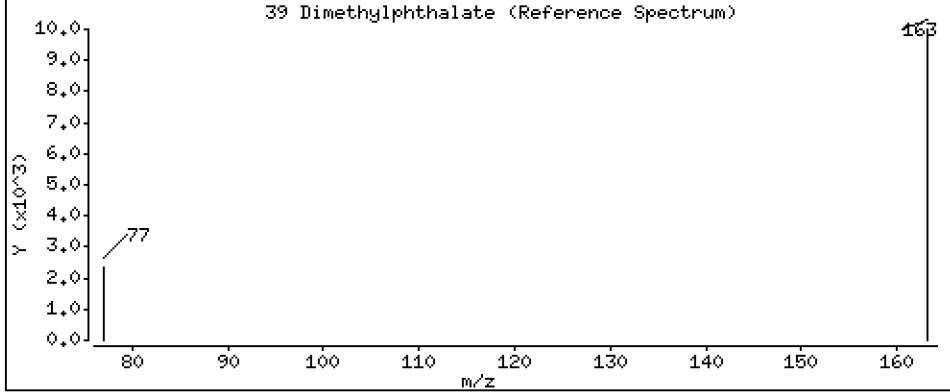
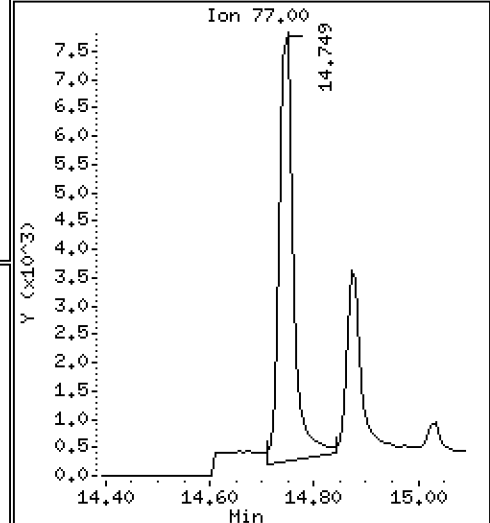
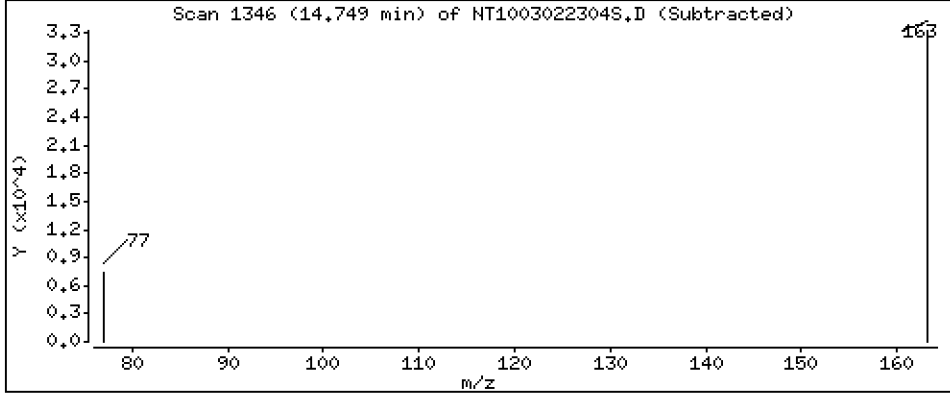
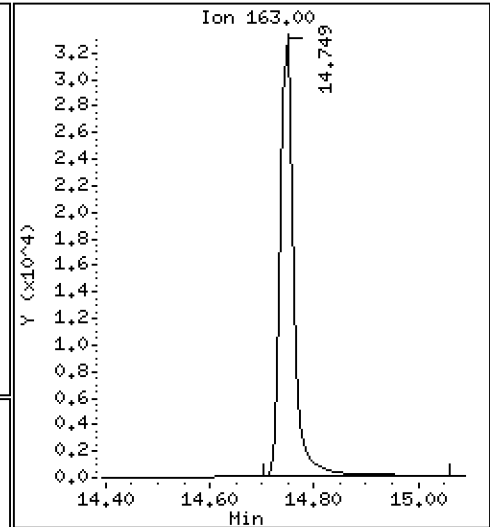
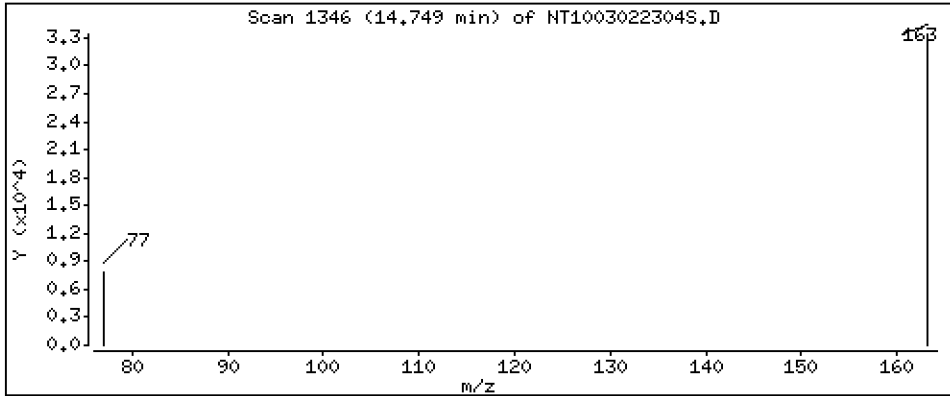
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,1960 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

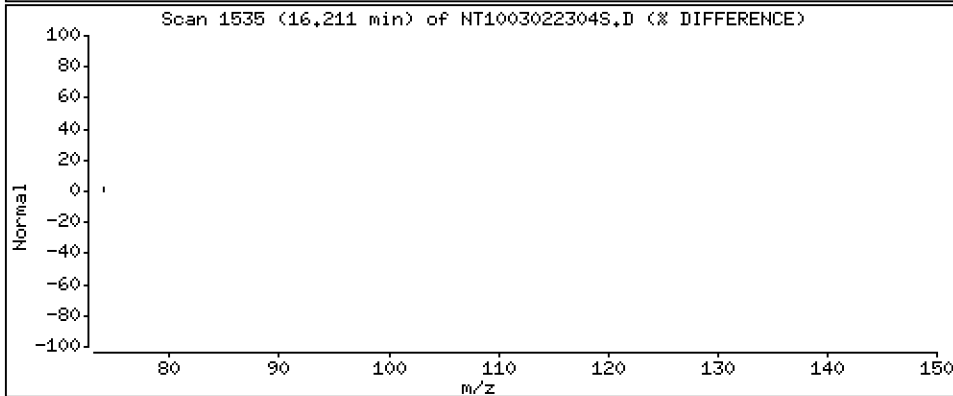
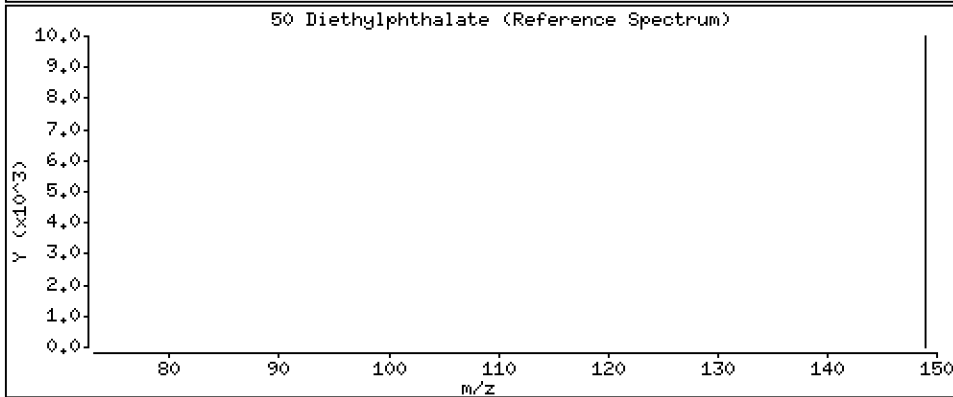
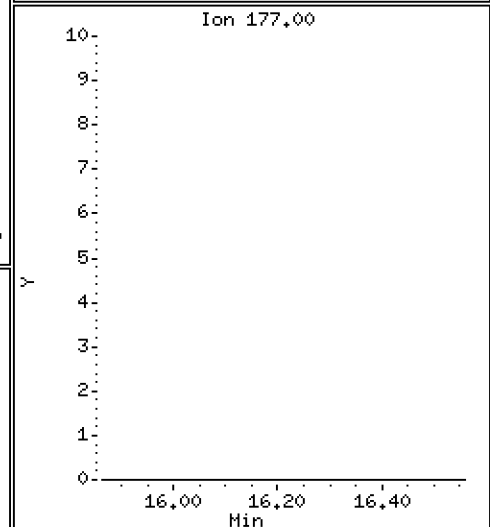
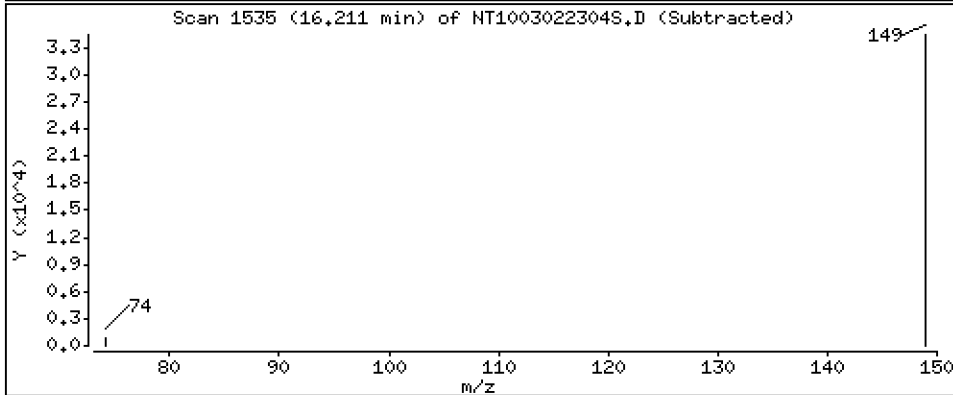
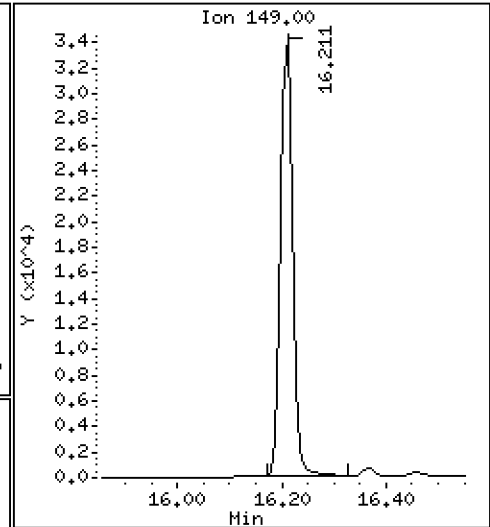
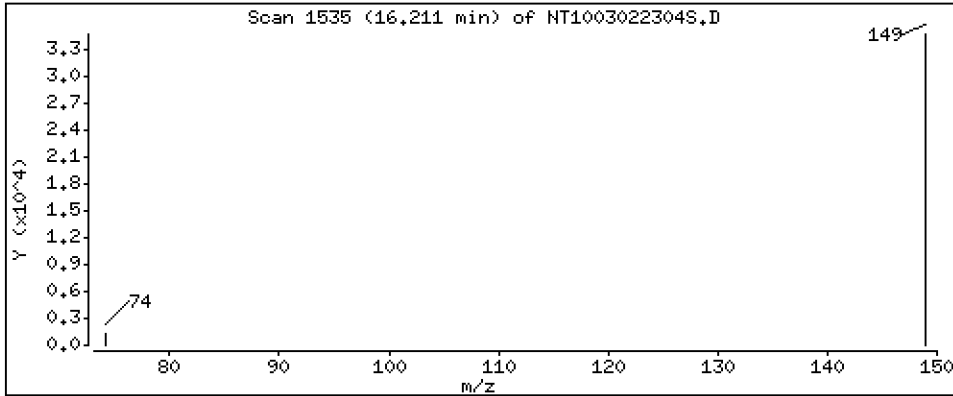
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 0.1894 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

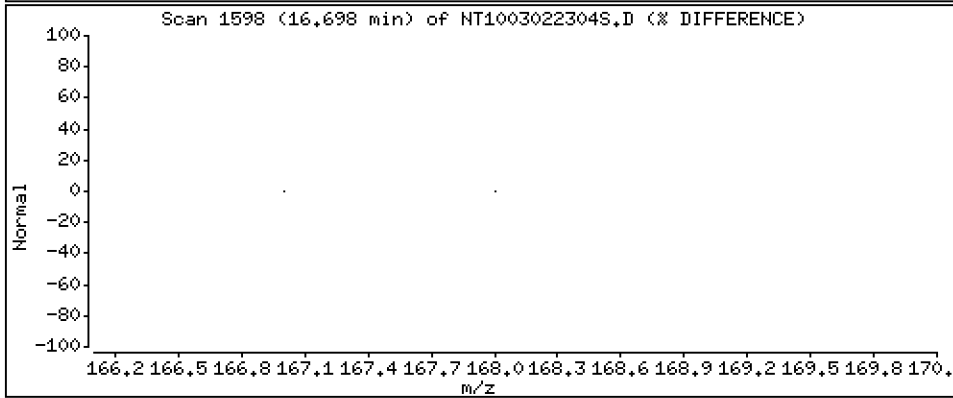
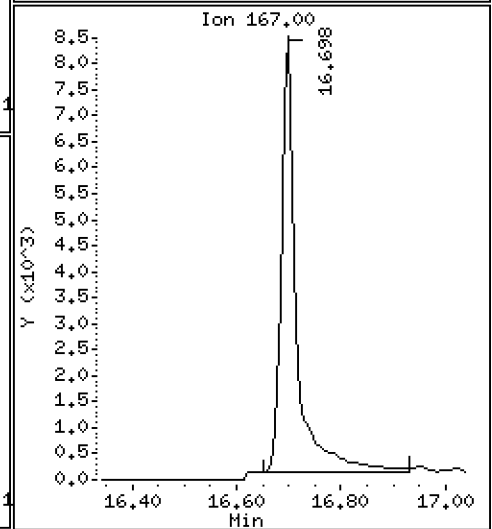
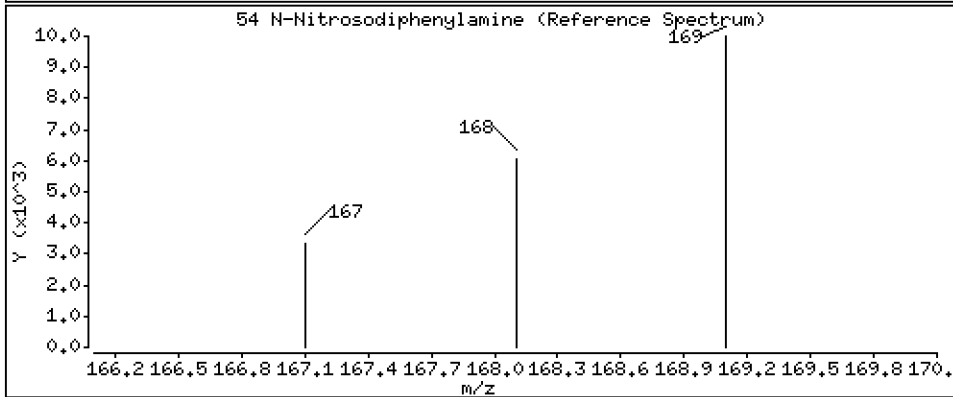
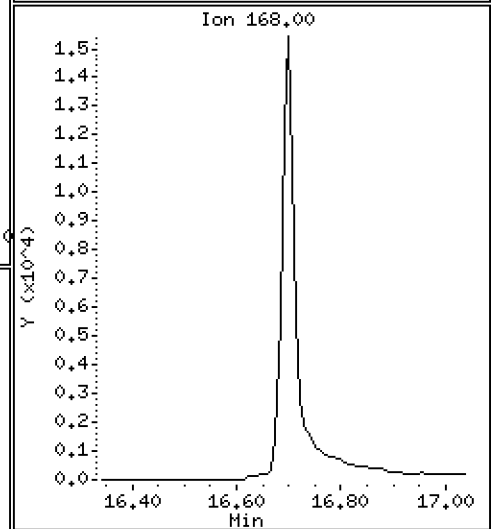
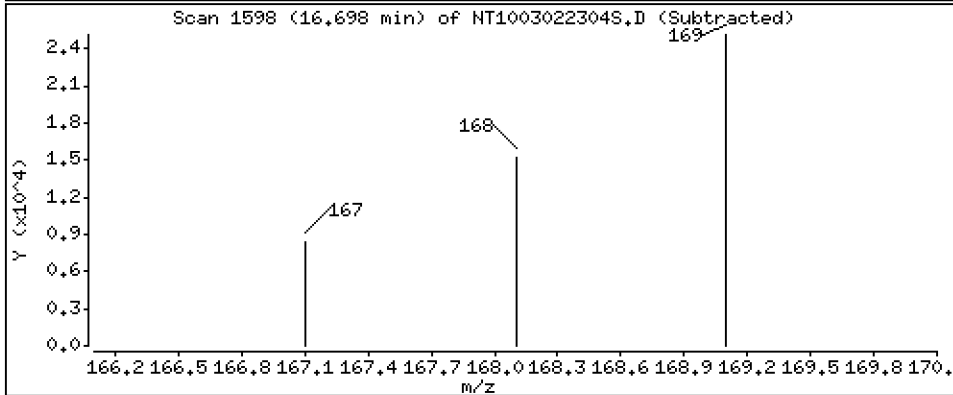
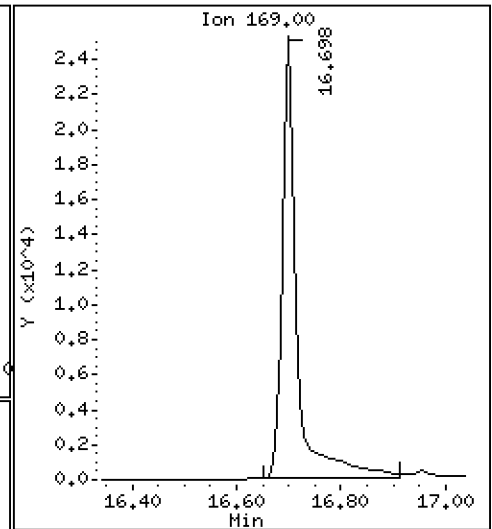
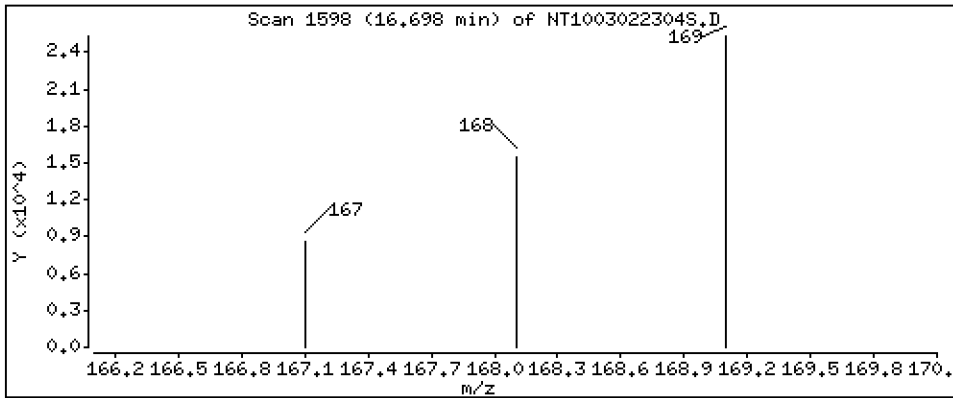
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.1900 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

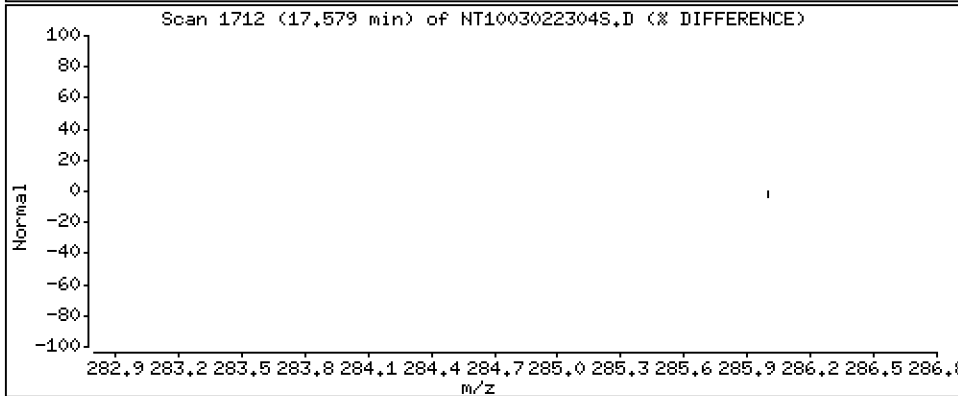
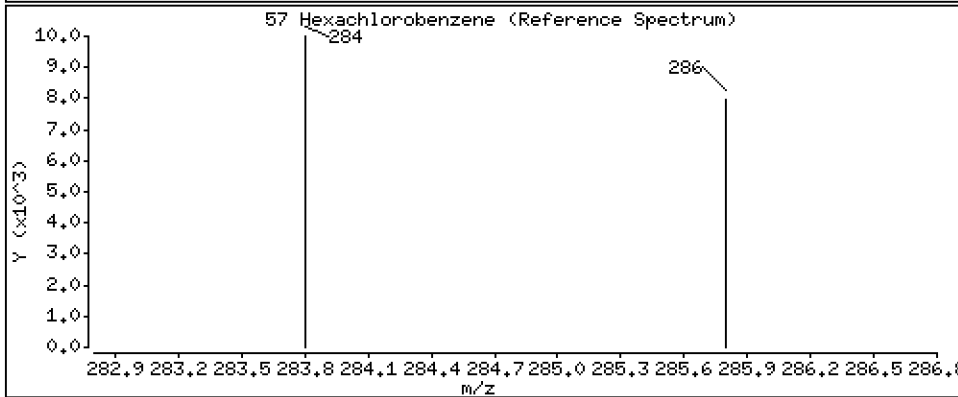
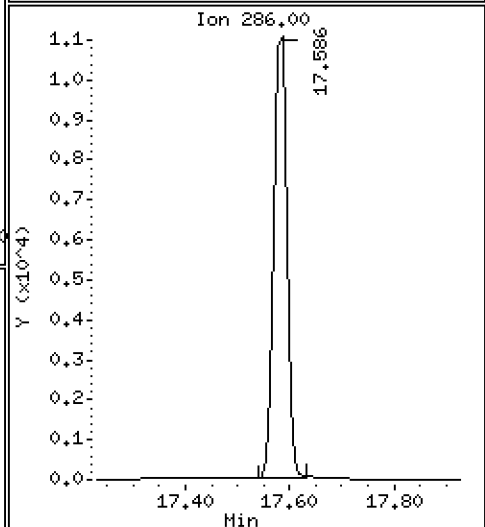
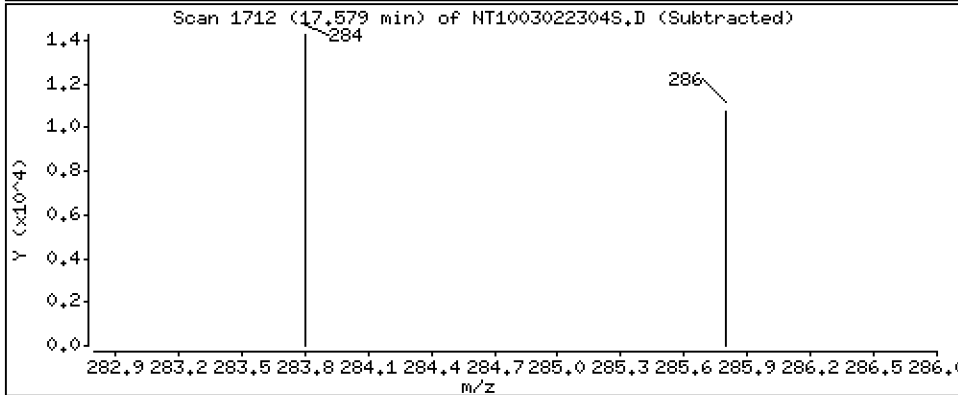
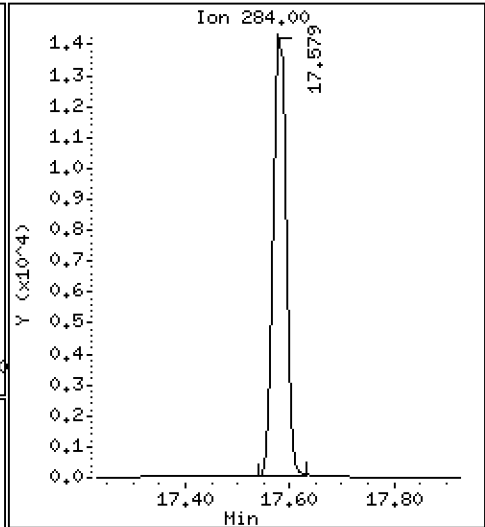
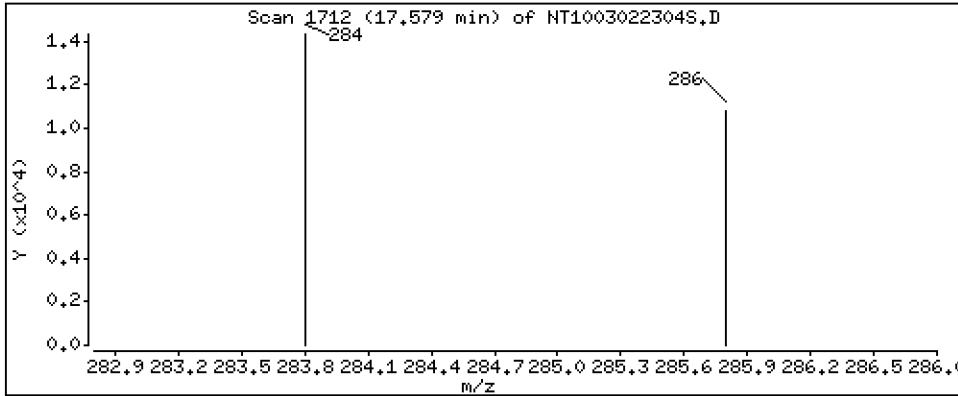
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.1915 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

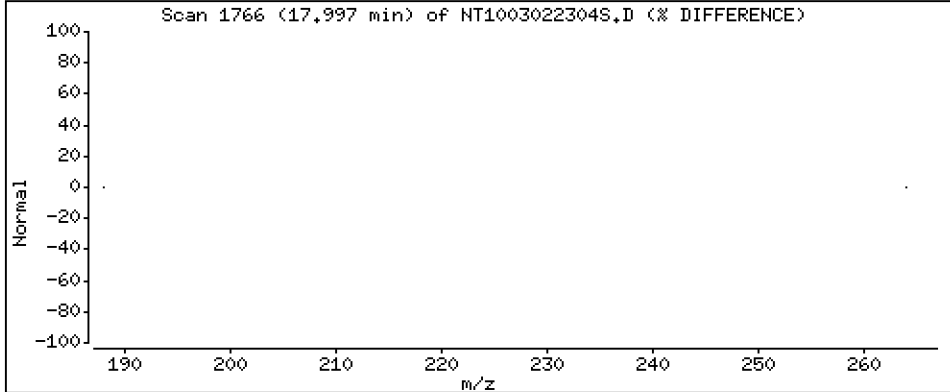
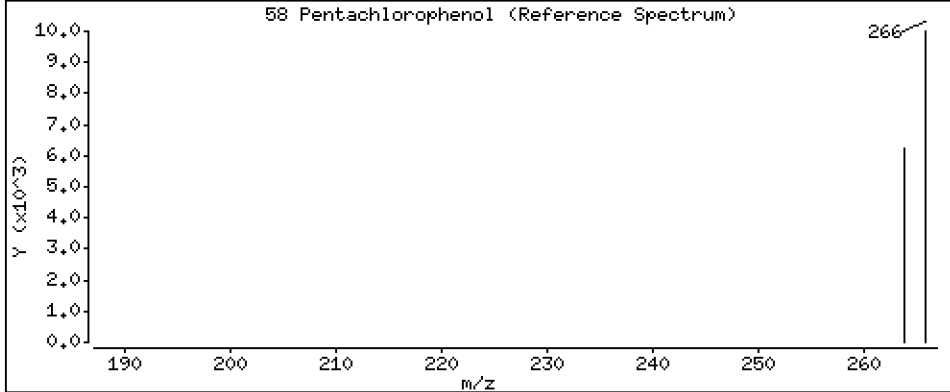
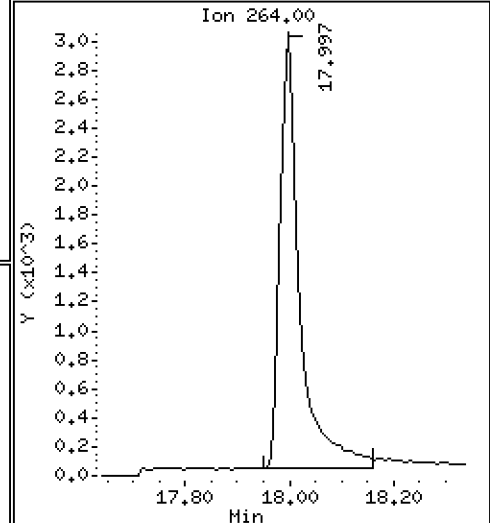
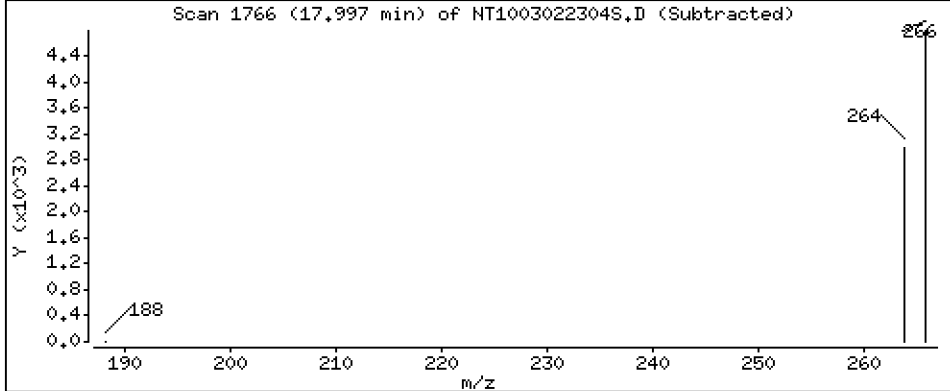
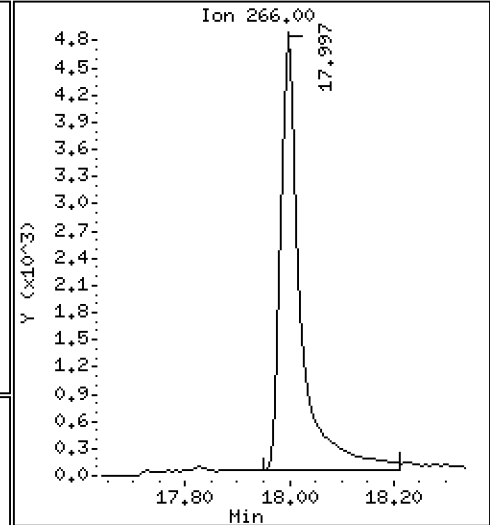
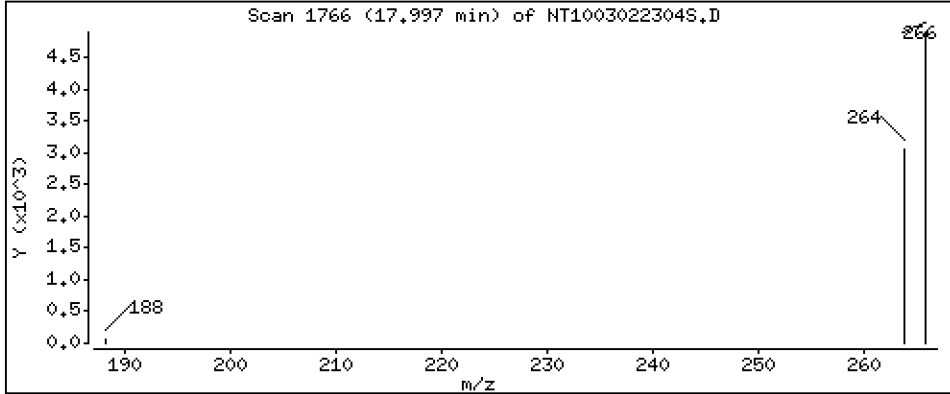
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,2411 ug/L





Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

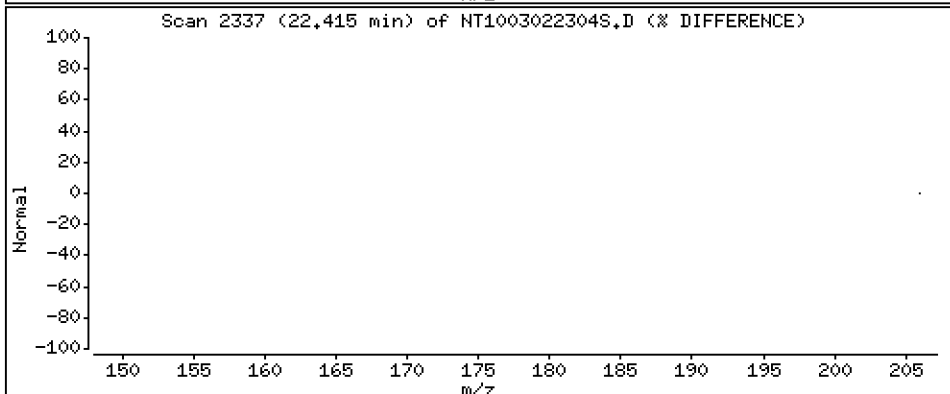
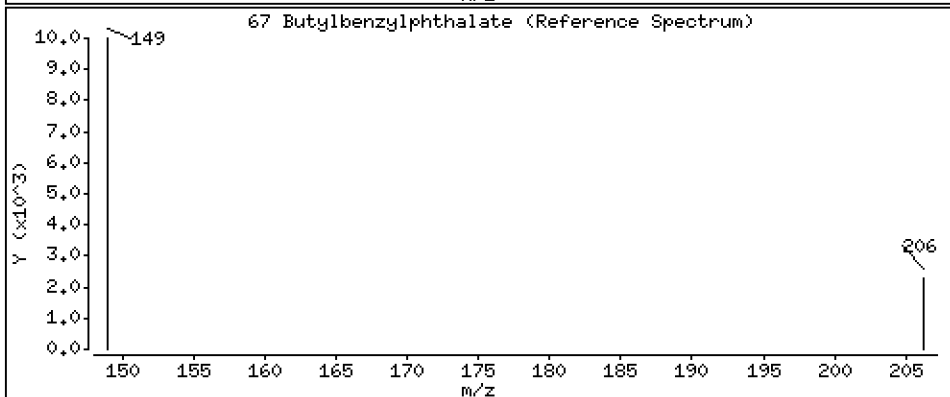
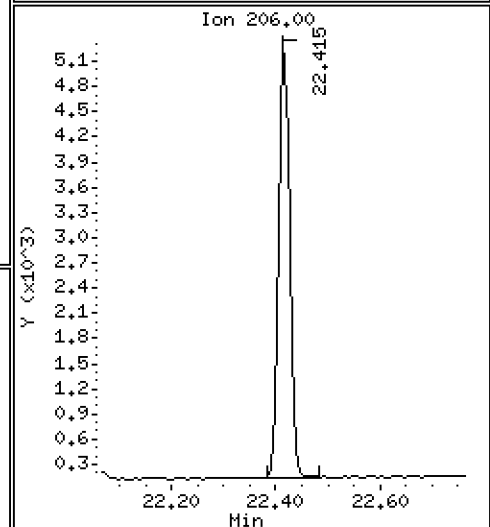
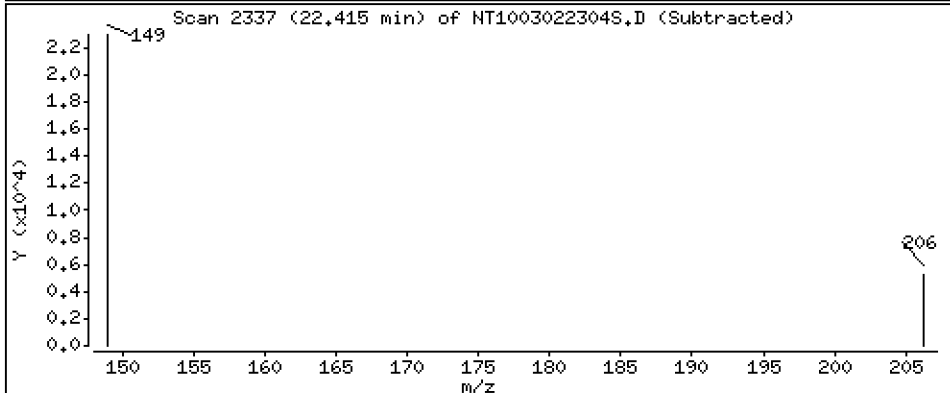
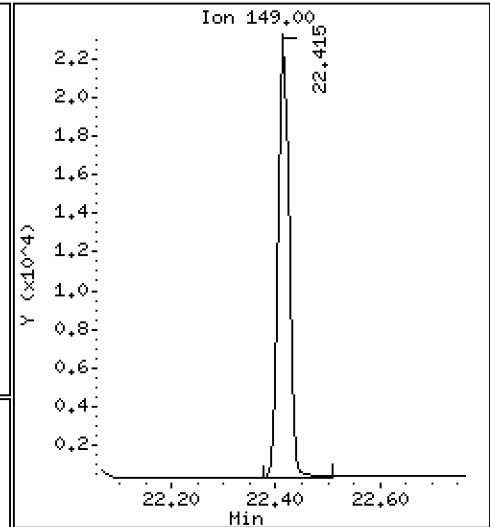
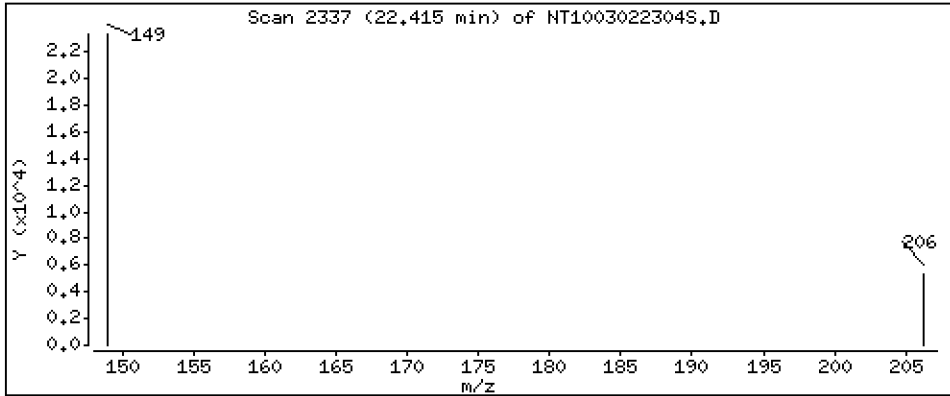
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,1126 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

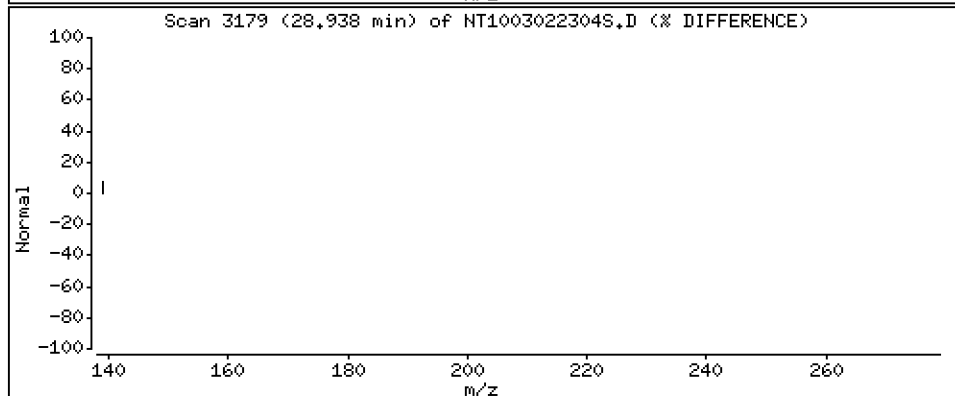
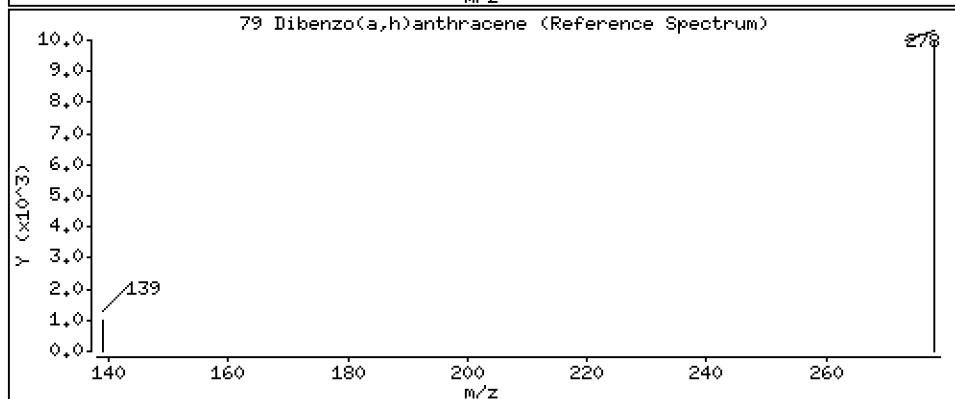
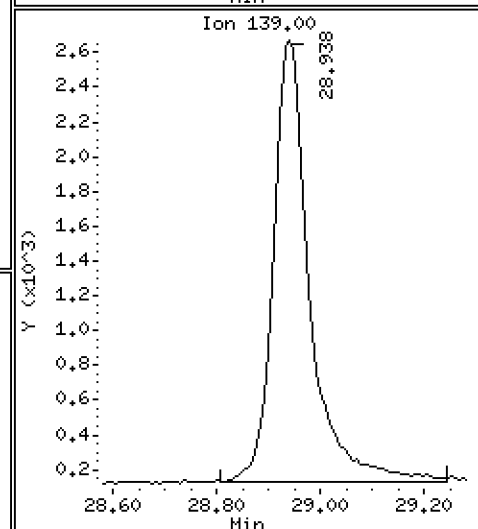
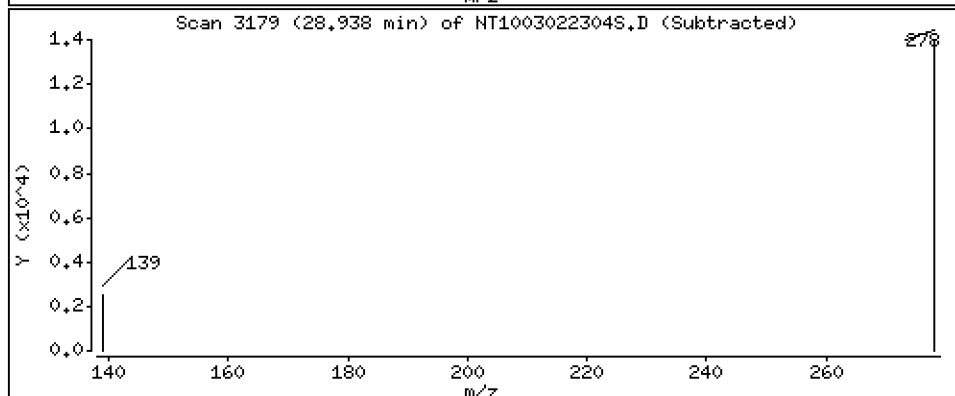
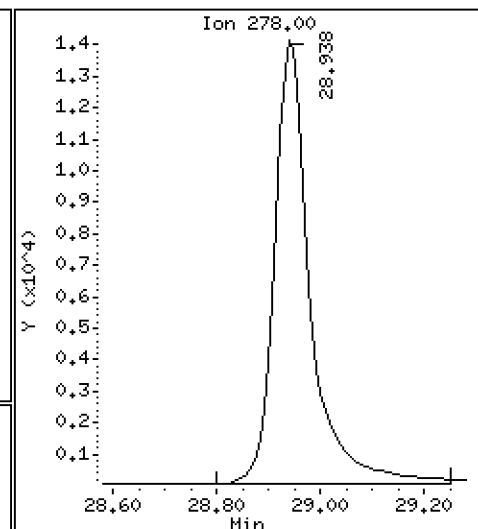
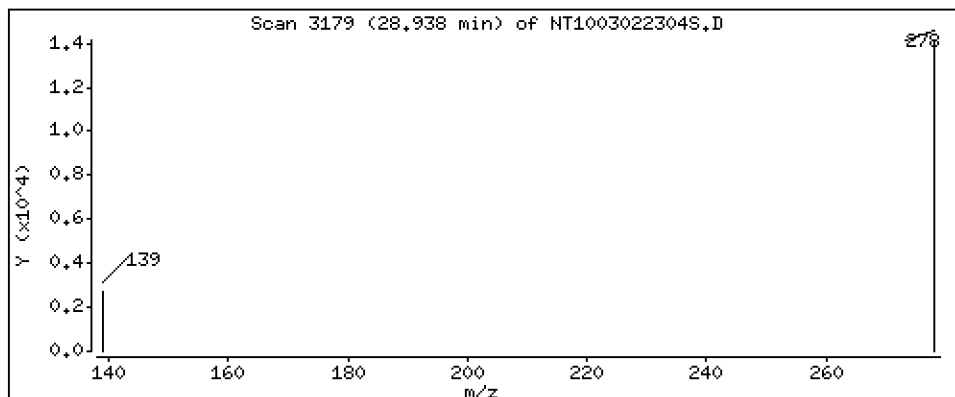
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1592 ug/L



Date : 02-MAR-2023 16:17

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

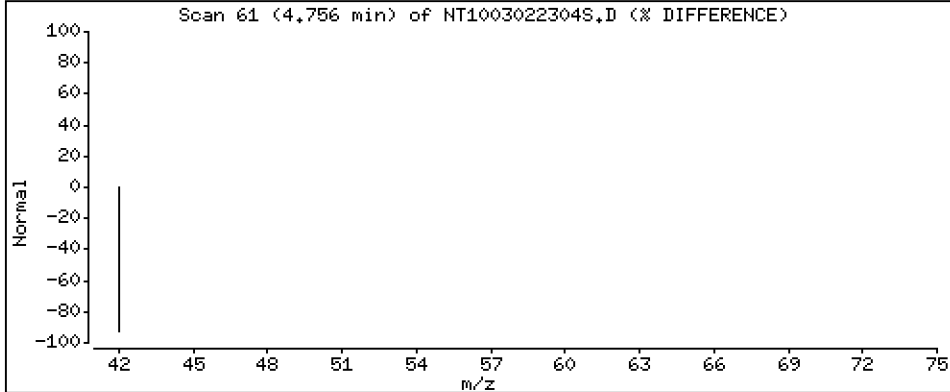
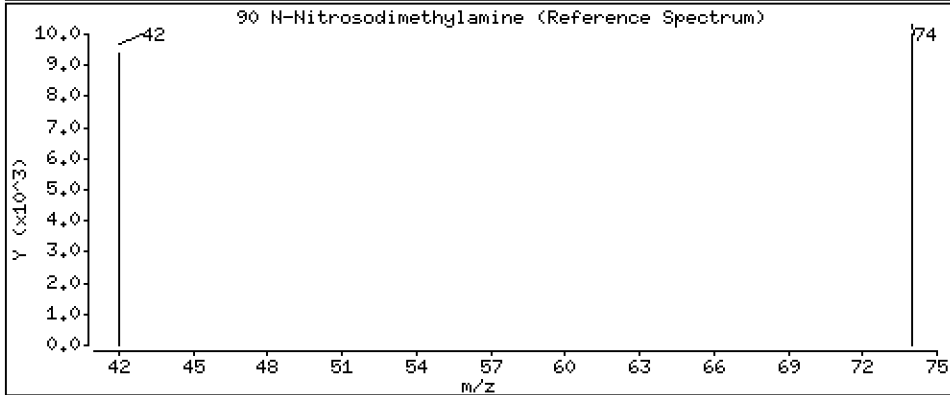
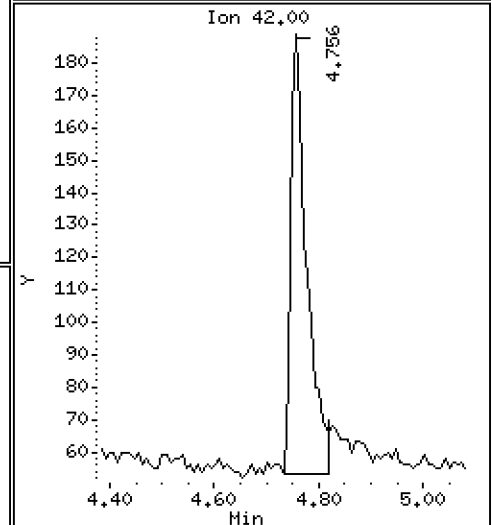
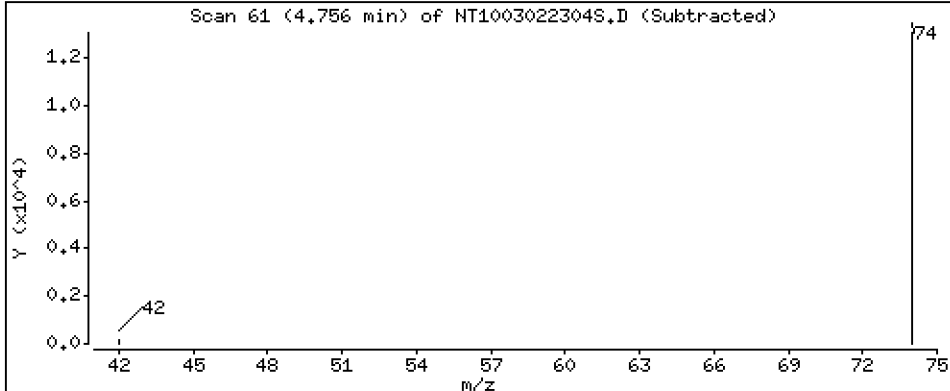
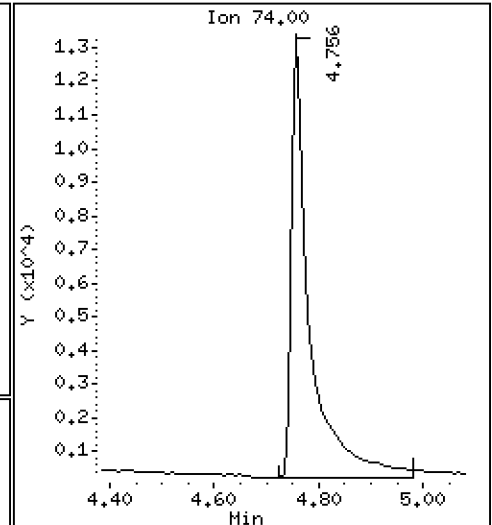
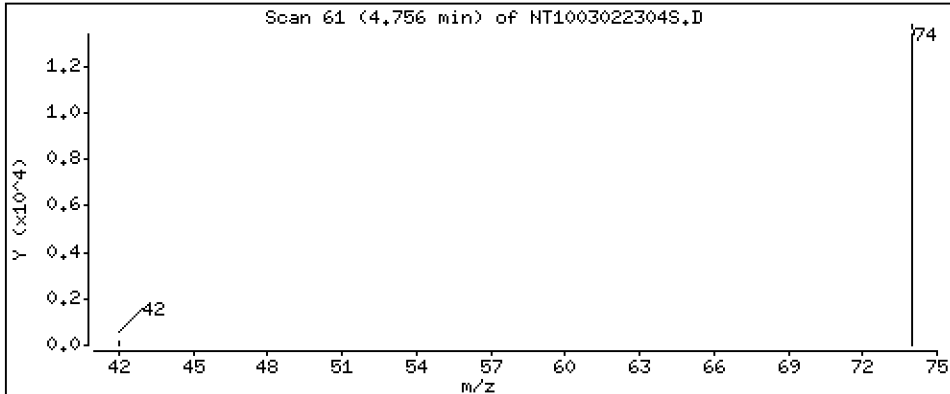
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 0.4218 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302.b\SIM.b\NT1003022304S.D  
 Lab Smp Id: SLC0157-LCV1  
 Inj Date : 02-MAR-2023 16:17 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:03 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.917	6.902	(0.747)	37782	0.28489	0.2849(R)
3 Phenol	94		8.532	8.517	(0.921)	29661	0.15155	0.1516
7 1,3-Dichlorobenzene	146		9.151	9.143	(0.988)	35012	0.20337	0.2034
* 8 1,4-Dichlorobenzene-d4	152		9.259	9.251	(1.000)	464527	4.00000	
9 1,4-Dichlorobenzene	146		9.290	9.282	(1.003)	33436	0.19976	0.1998
11 Benzyl alcohol	79		9.484	9.476	(1.024)	15113	0.13918	0.1392
12 1,2-Dichlorobenzene	146		9.570	9.562	(1.034)	32614	0.20272	0.2027
13 2-Methylphenol	108		9.671	9.655	(1.044)	18381	0.15615	0.1561
15 4-Methylphenol	108		9.958	9.942	(1.075)	17186	0.14036	0.1404
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.078)	18106	0.20774	0.2077
22 2,4-Dimethylphenol	107		11.006	10.997	(0.938)	46903	0.32731	0.3273
24 Benzoic acid	105		11.057	11.074	(0.943)	20985	0.26701	0.2670
26 1,2,4-Trichlorobenzene	180		11.608	11.600	(0.989)	23866	0.19648	0.1965
* 27 Naphthalene-d8	136		11.731	11.723	(1.000)	1687615	4.00000	
30 Hexachlorobutadiene	225		12.001	11.994	(1.023)	16292	0.18901	0.1890
39 Dimethylphthalate	163		14.749	14.741	(0.963)	56888	0.19600	0.1960
* 42 Acenaphthene-d10	162		15.321	15.314	(1.000)	914095	4.00000	
50 Diethylphthalate	149		16.211	16.203	(1.058)	51849	0.18943	0.1894
54 N-Nitrosodiphenylamine	169		16.698	16.690	(0.907)	49282	0.19003	0.1900
57 Hexachlorobenzene	284		17.578	17.578	(0.955)	23243	0.19151	0.1915

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	17.996	17.988	(0.978)	12831	0.24111	0.2411
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	1602467	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	23197	0.17600	0.1760 (R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	30986	0.11263	0.1126
* 69 Chrysene-d12	240	23.421	23.421	(1.000)	1629844	4.00000	
* 77 Perylene-d12	264	26.115	26.115	(1.000)	1824689	4.00000	
79 Dibenzo(a,h)anthracene	278	28.937	28.929	(1.108)	67394	0.15916	0.1592
90 N-Nitrosodimethylamine	74	4.755	4.732	(0.514)	33119	0.42181	0.4218

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022304S.D  
 Lab Smp Id: SLC0157-LCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 14:13  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	493417	246709	986834	464527	-5.86
27 Naphthalene-d8	1779056	889528	3558112	1687615	-5.14
42 Acenaphthene-d10	954569	477285	1909138	914095	-4.24
59 Phenanthrene-d10	1596290	798145	3192580	1602467	0.39
69 Chrysene-d12	1649110	824555	3298220	1629844	-1.17
77 Perylene-d12	1901958	950979	3803916	1824689	-4.06

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.26	0.09
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.31	14.81	15.81	15.32	0.05
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.42	22.92	23.92	23.42	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022304S.D

Lab ID: SLC0157-LCV1

nt10.i, 20230302.b\SIM.b\SIMABN2.m, 02-MAR-2023 16:17

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

---

NONE

RRT check based on Ccal File: SIM.b/NT1003022303S.D

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**CONTINUING CALIBRATION CHECK**  
**EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022326S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0158</u>	Injection Date:	<u>03/03/23</u>
Lab Sample ID:	<u>SLC0158-CCV1</u>	Injection Time:	<u>06:14</u>
Sequence Name:	<u>Calibration Check</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.3908590		-3.5	+/-50
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3671270		-1.3	+/-50
Benzyl Alcohol	A	1.0000	1.0	0.7492523	0.9616900		1.7	+/-50
Benzoic acid	A	4.0000	0.3	0.1431163	0.0148217		-92.0	+/-50 *
2,4-Dimethylphenol	A	2.0000	2.0	0.2957717	0.3465213		1.5	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.1	0.2879030	0.3086357		7.2	+/-50
N-Nitrosodiphenylamine	A	1.0000	0.9	0.6473471	0.5648725		-12.7	+/-50
Pentachlorophenol	A	2.0000	0.2	0.0950913	0.0103257		-92.2	+/-50 *
2-Fluorophenol	A	1.5000	1.67	1.1419780	1.2722890		11.4	+/-50
p-Terphenyl-d14	A	1.0000	1.12	0.3234672	0.3621857		12.0	+/-50

\* Values outside of QC limits

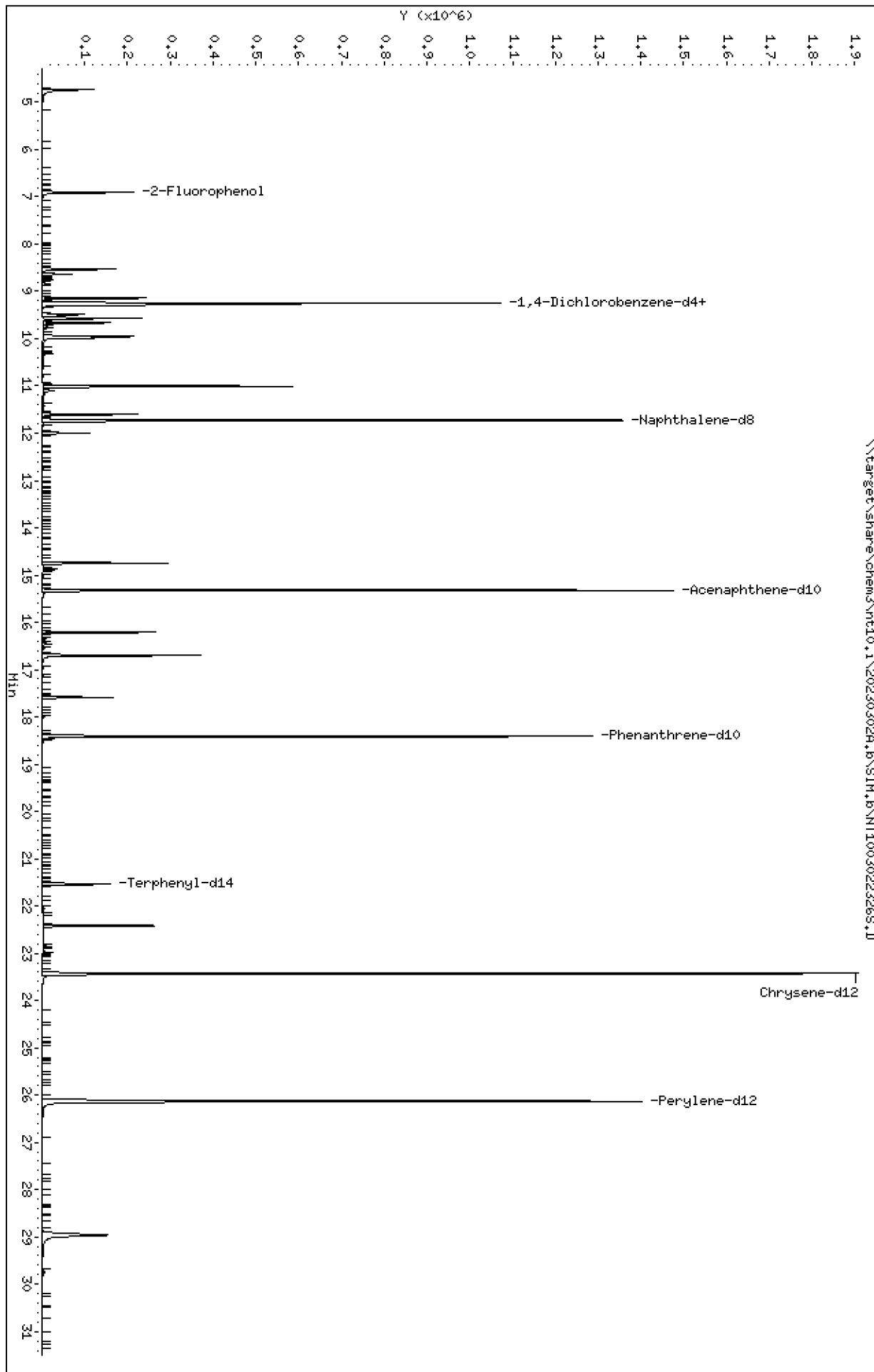
\* Values outside of QC limits



Data File: \\target\share\chem3\nt10.1\202303028,b\SIM,b\NT10030223268.D  
Date: 03-MAR-2023 06:14  
Client ID:  
Sample Info: SED-CVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028,b\SIM,b\NT10030223268.D



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

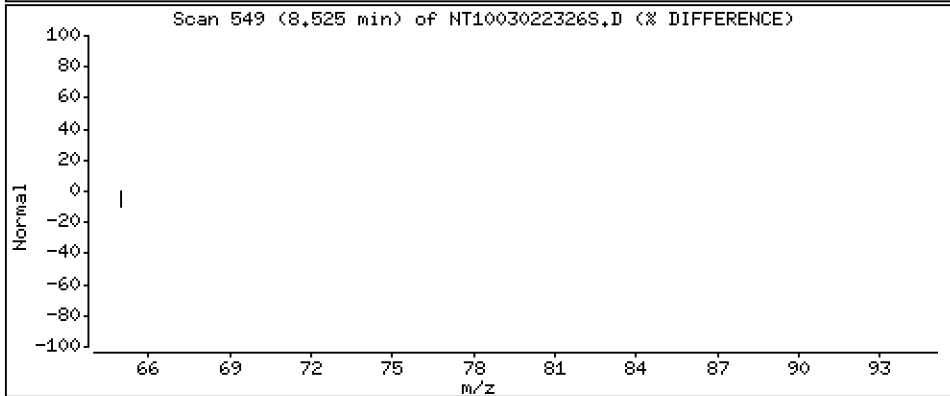
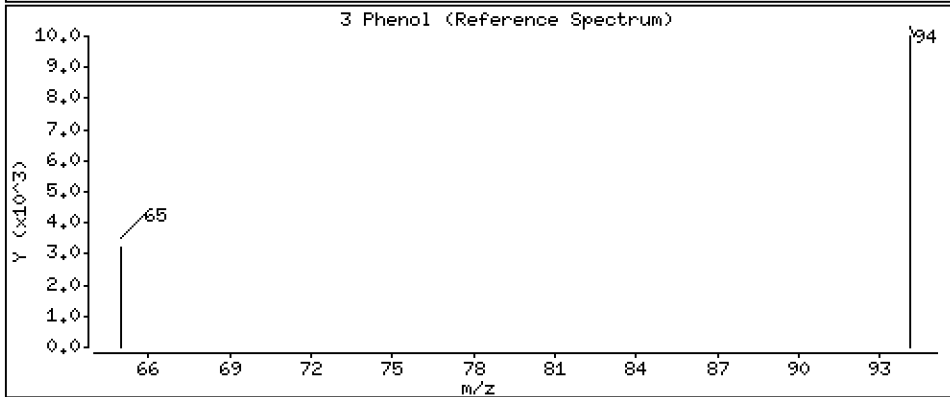
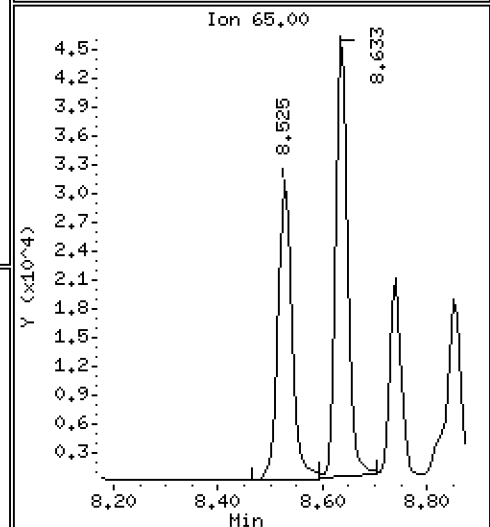
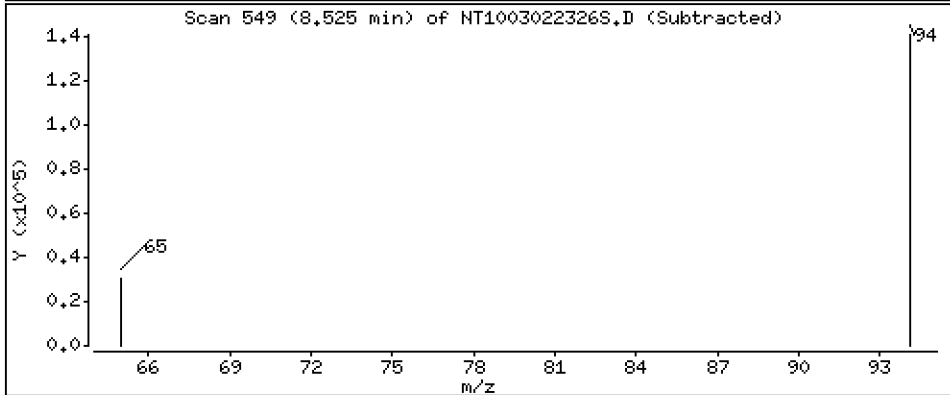
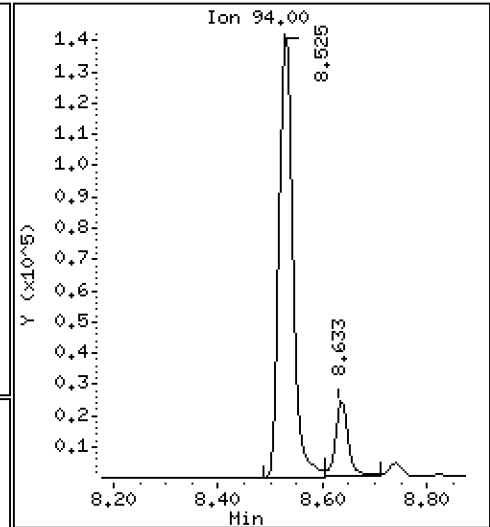
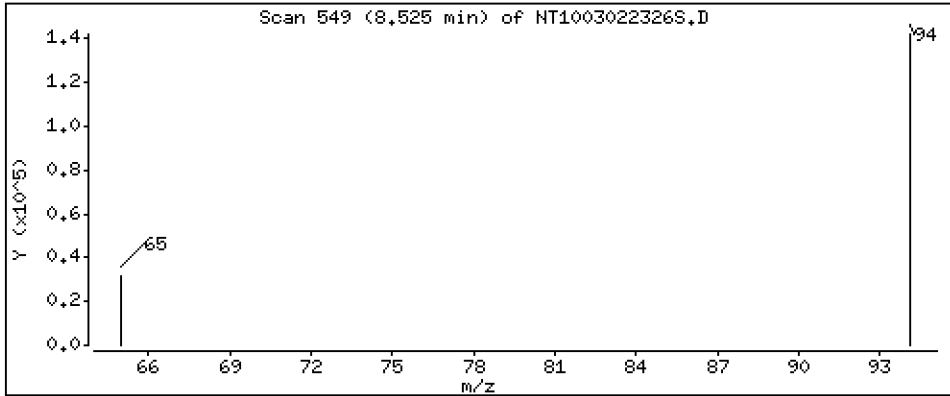
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.9597 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

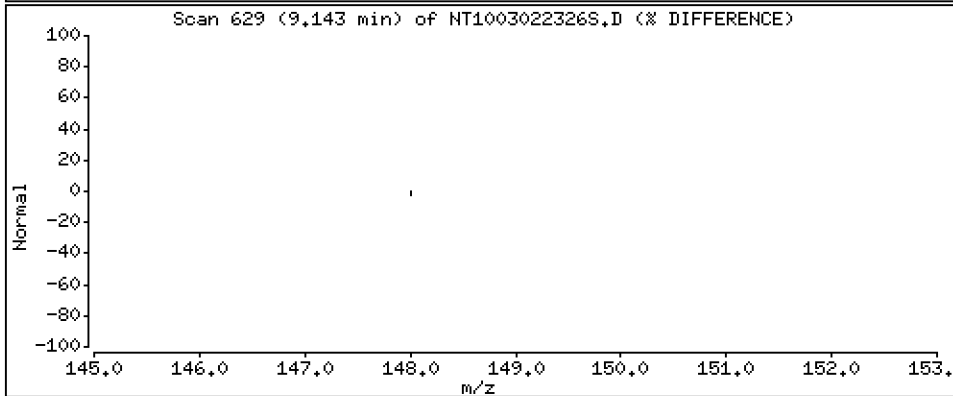
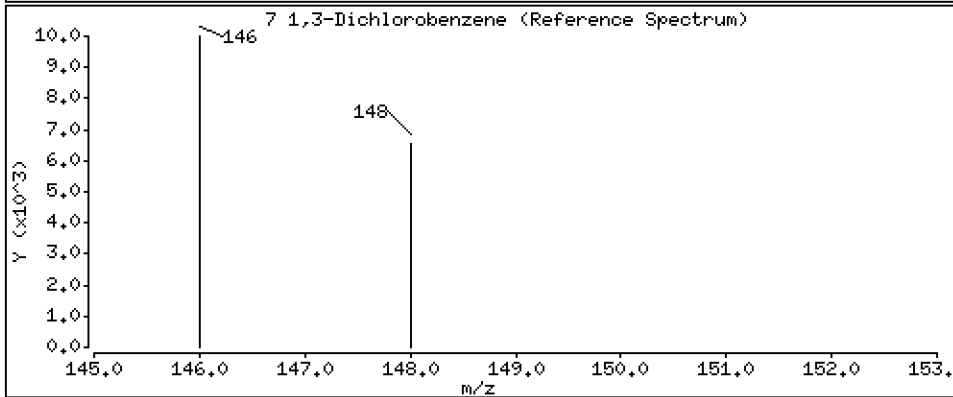
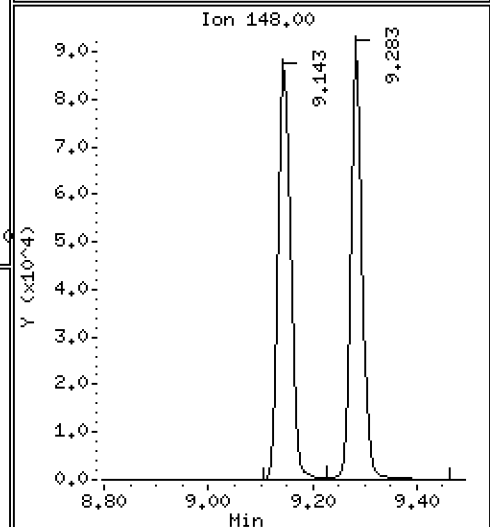
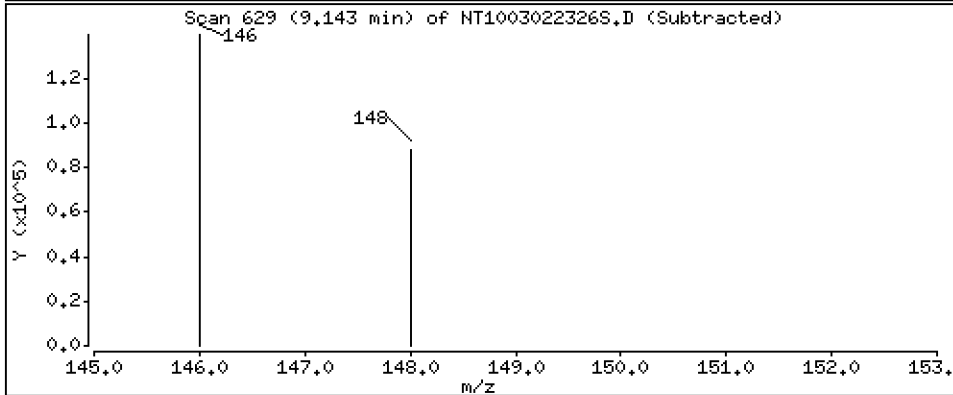
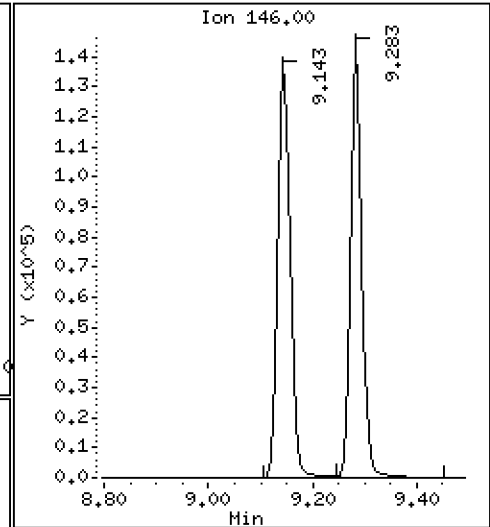
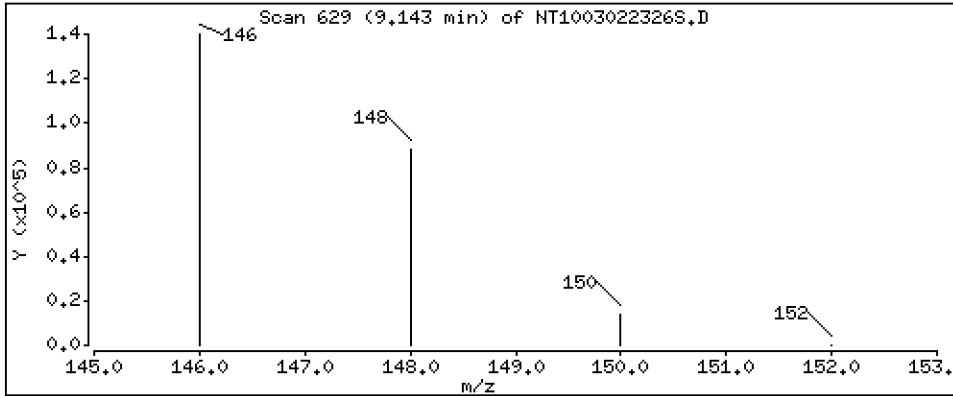
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.9707 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

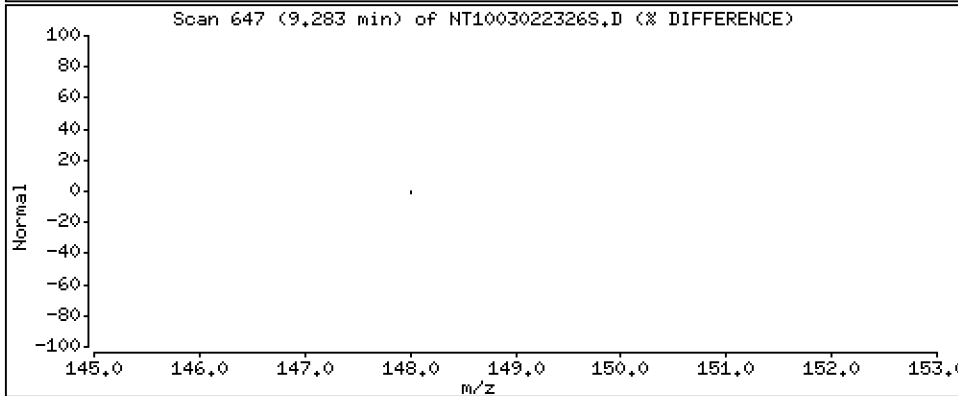
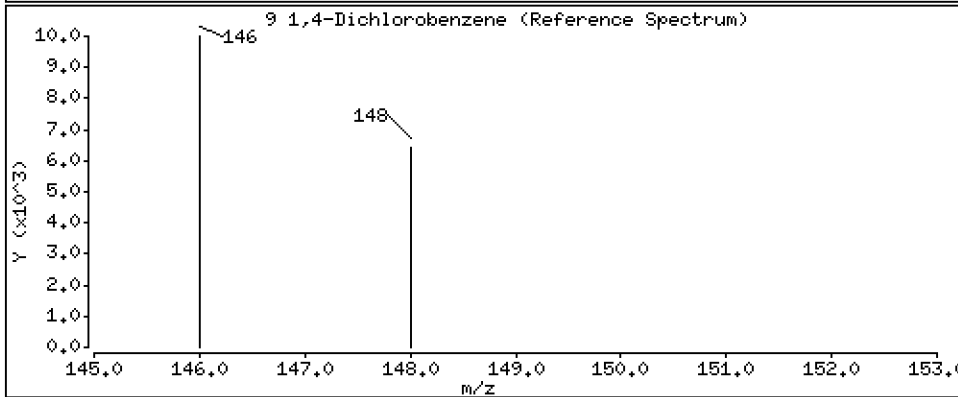
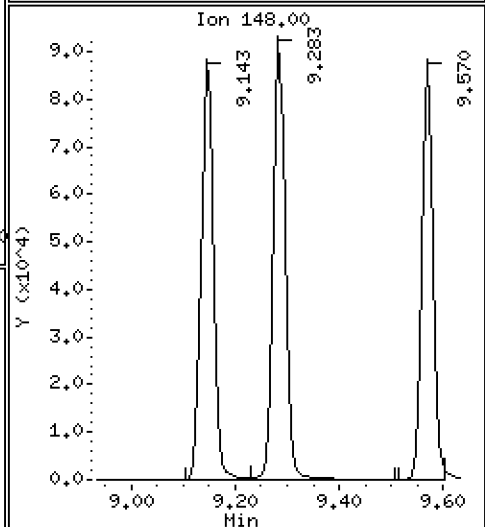
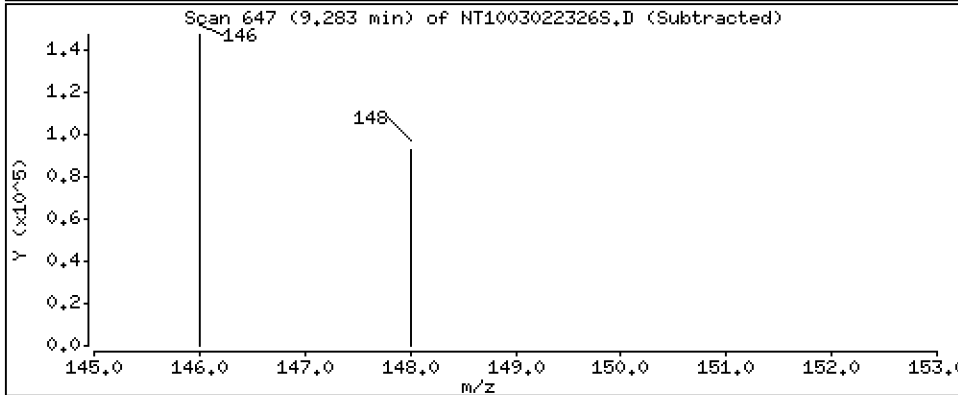
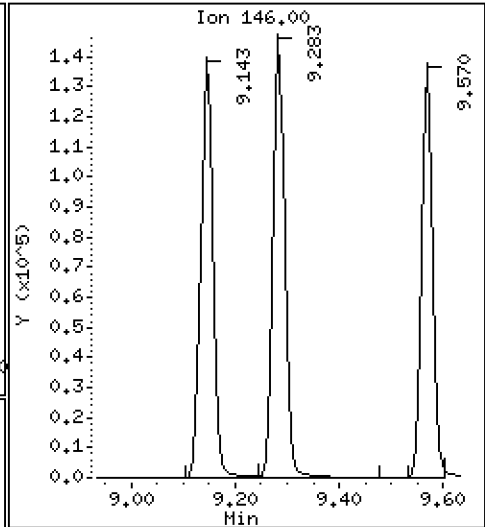
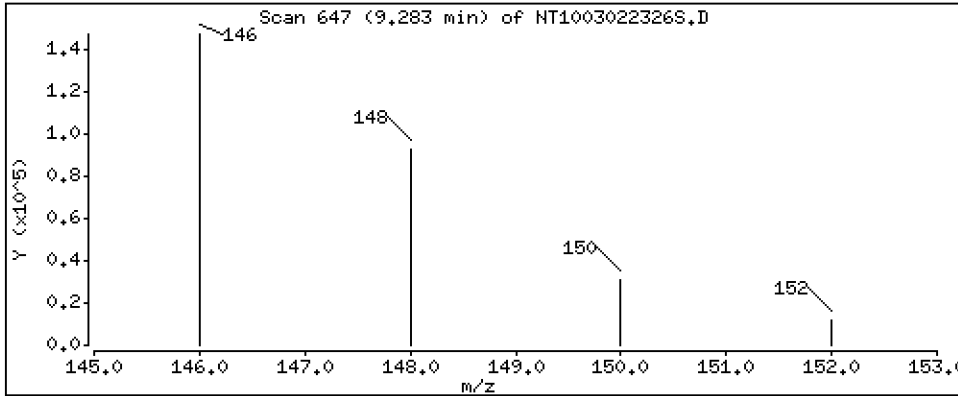
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.9650 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

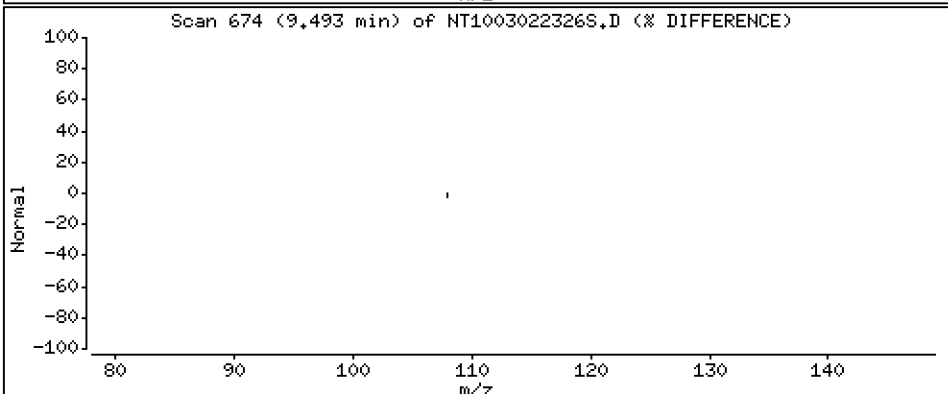
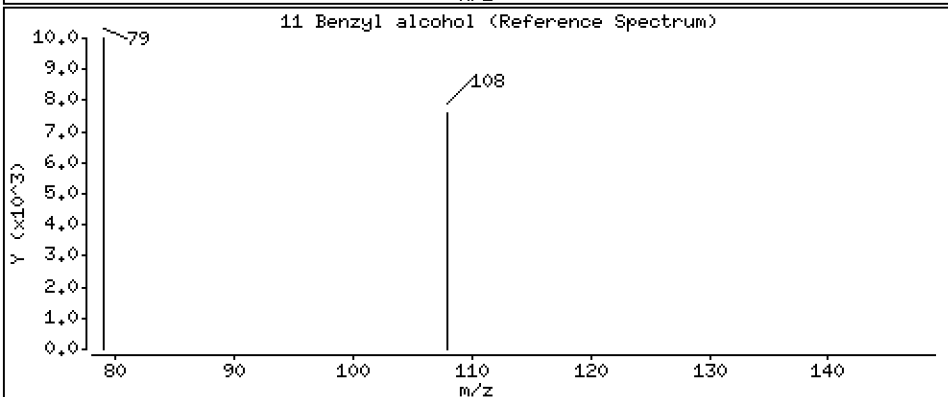
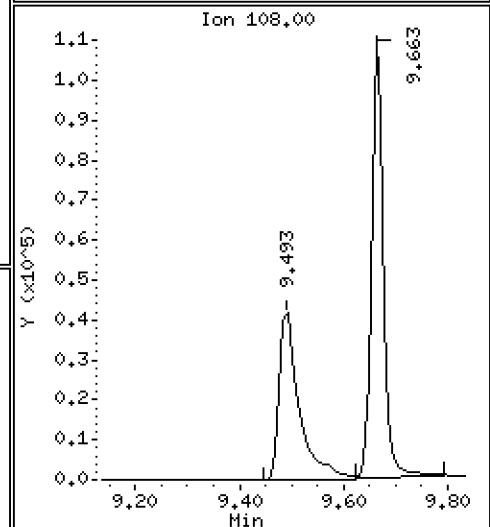
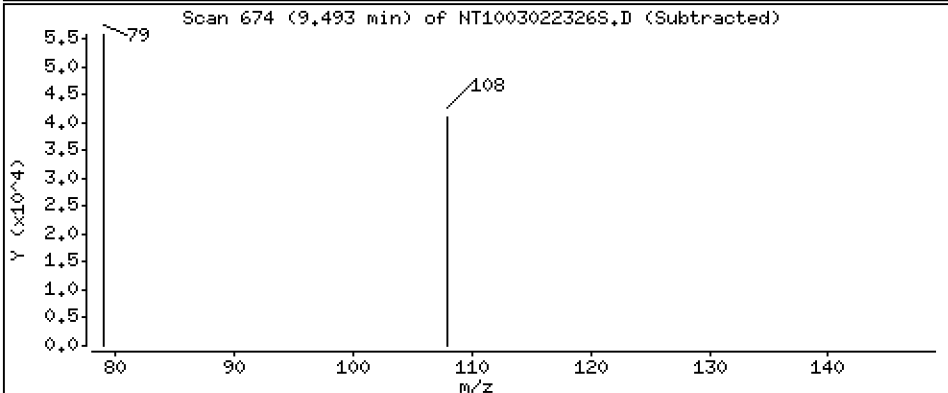
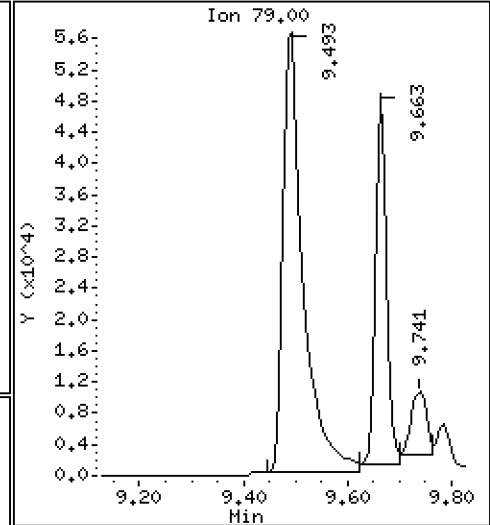
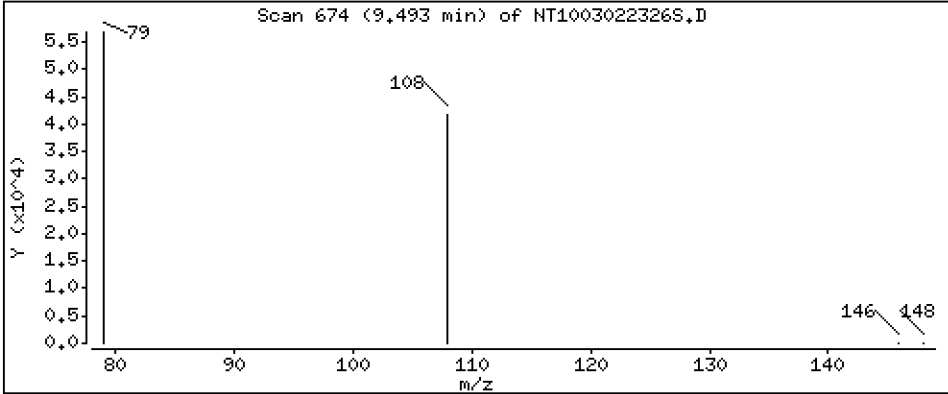
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 1.017 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

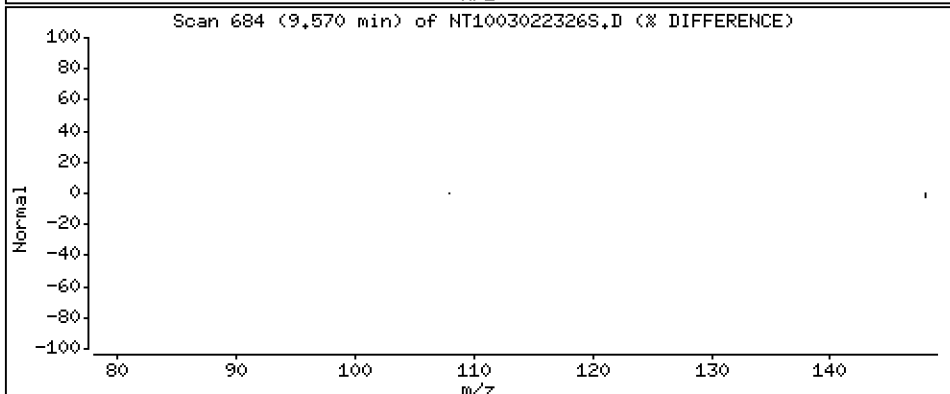
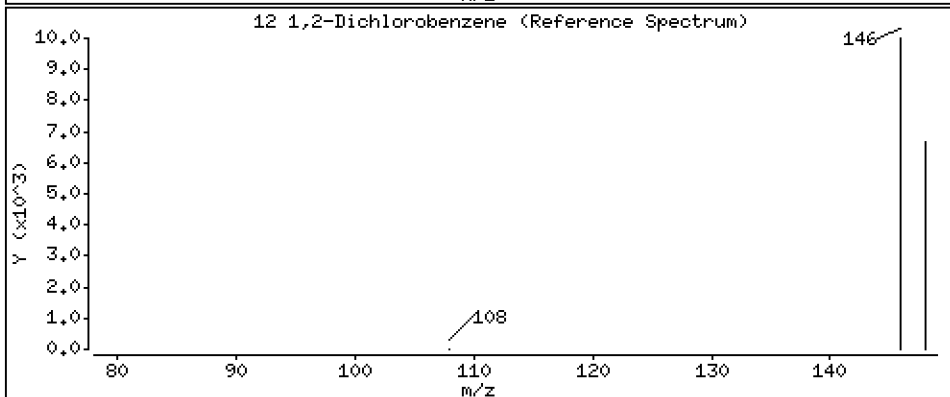
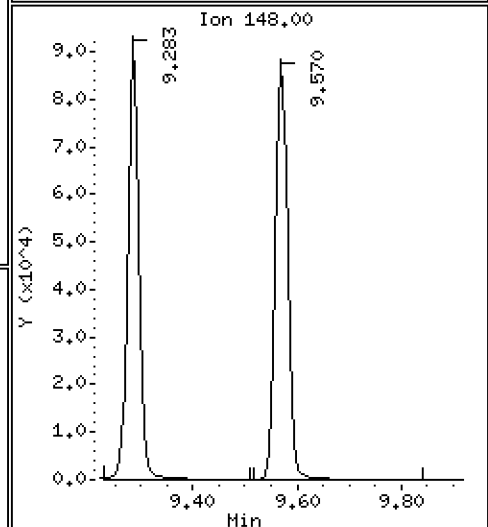
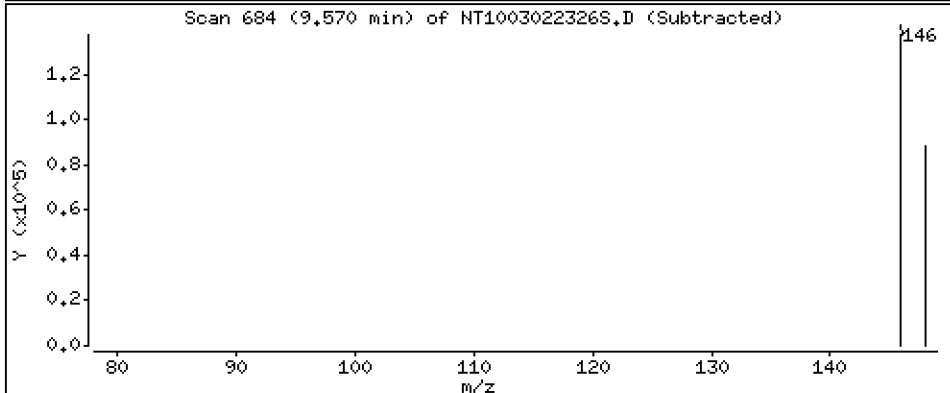
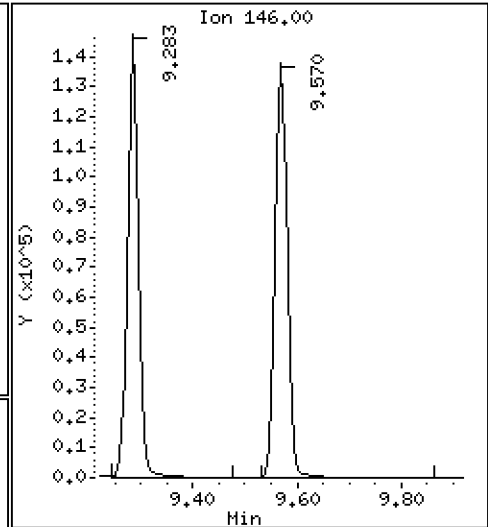
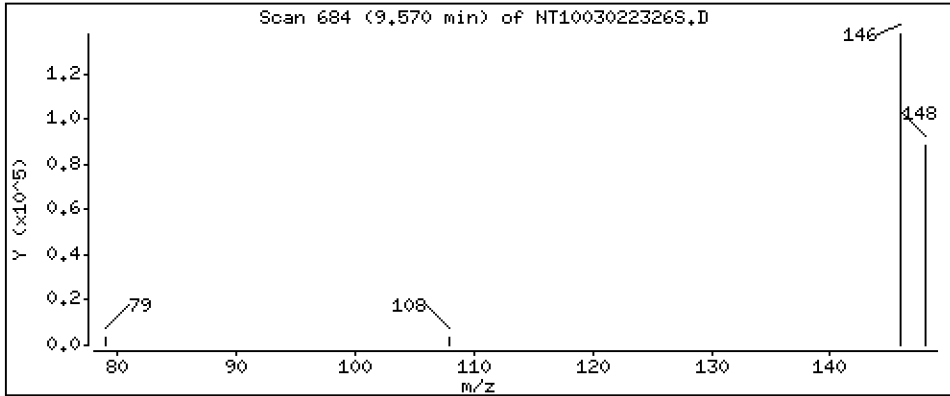
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.9868 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

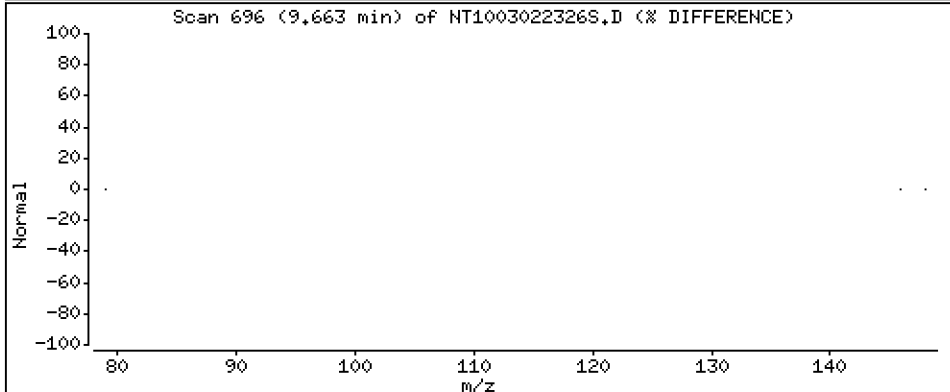
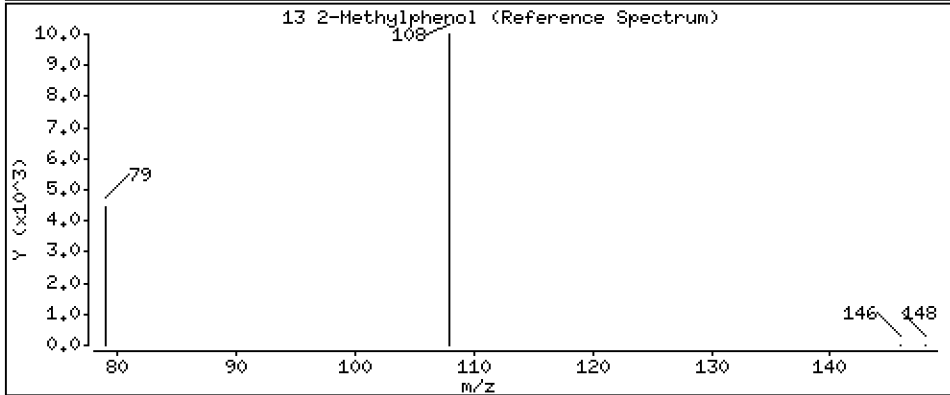
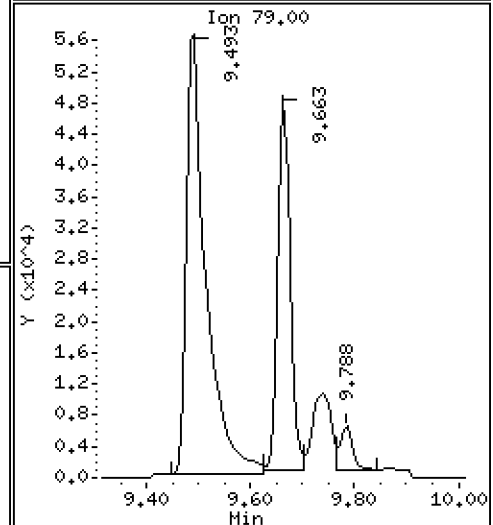
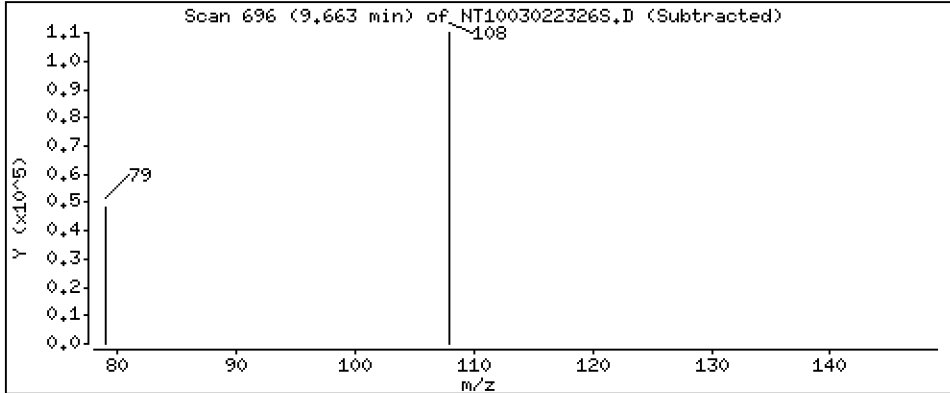
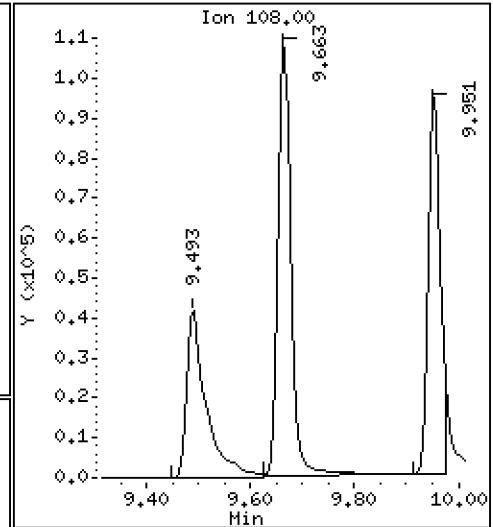
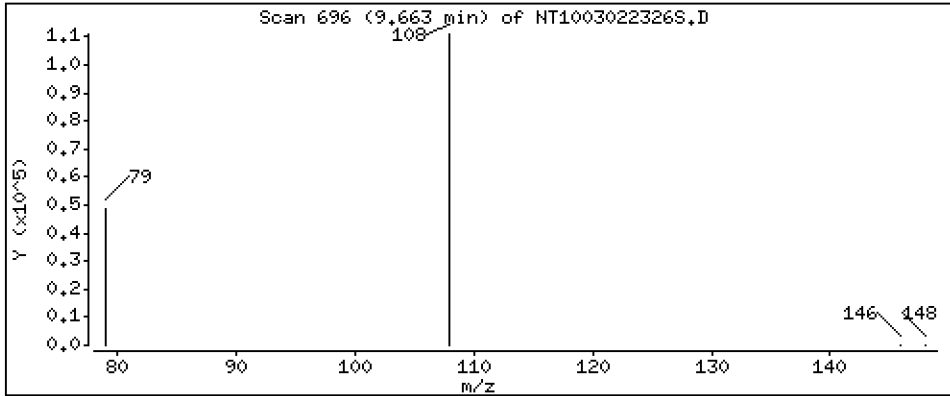
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 1.137 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

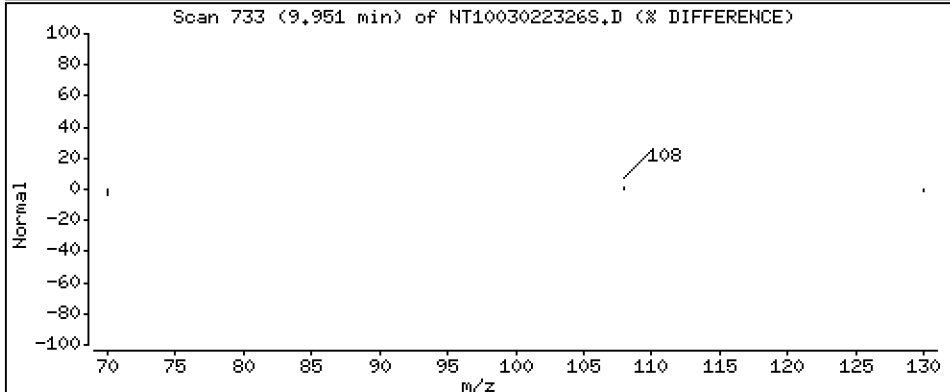
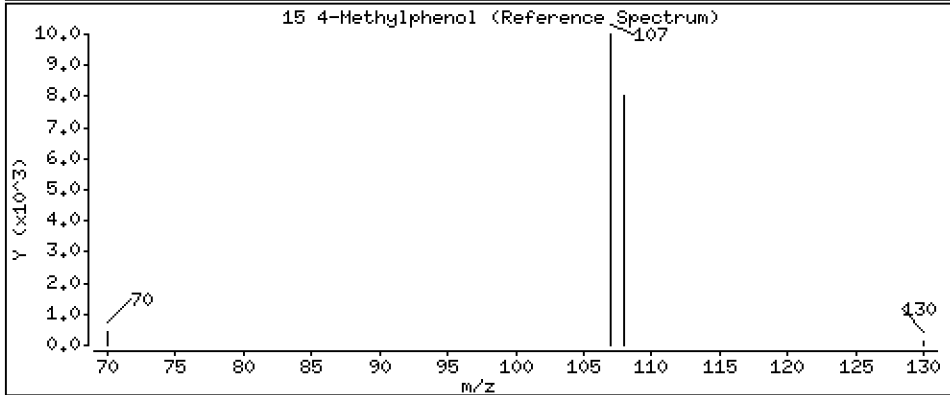
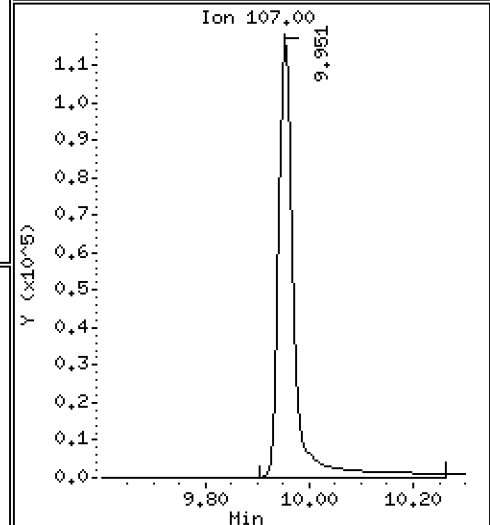
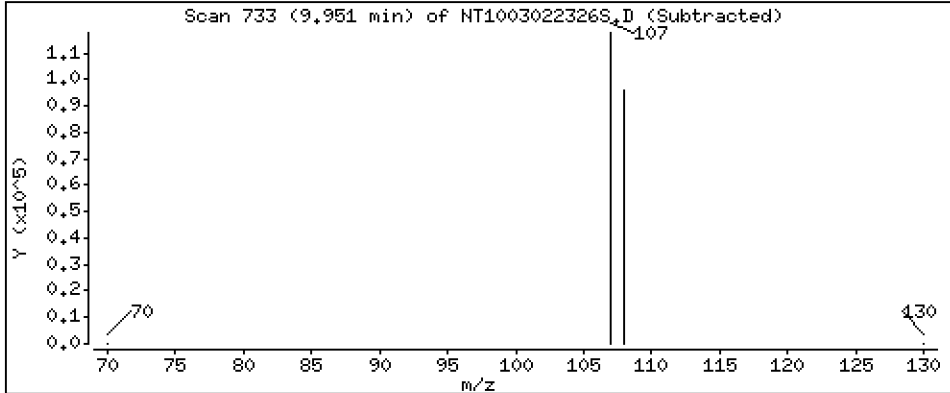
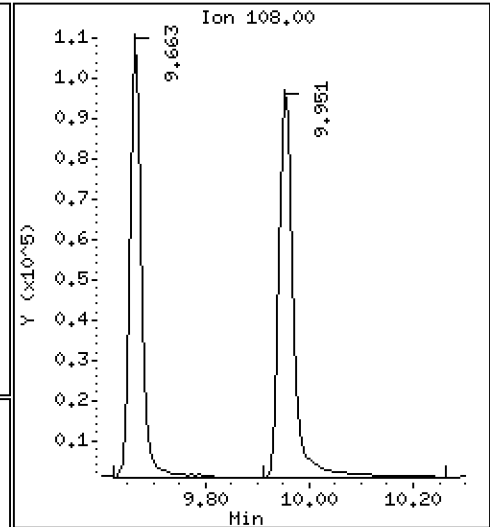
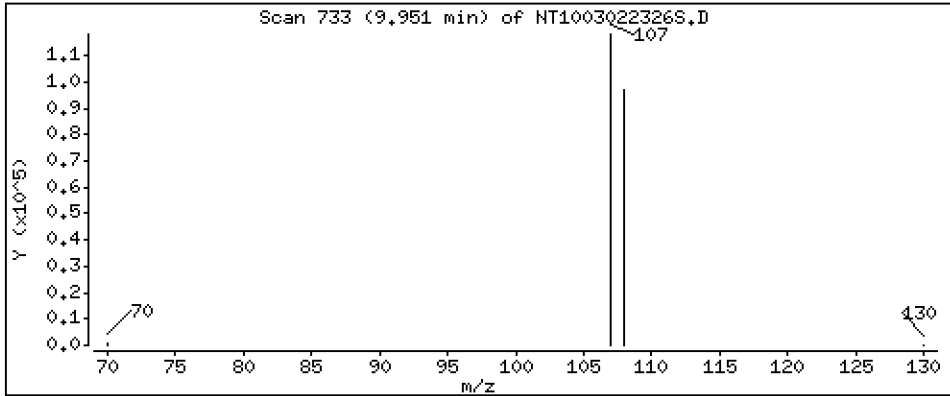
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 1.099 ug/L





Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

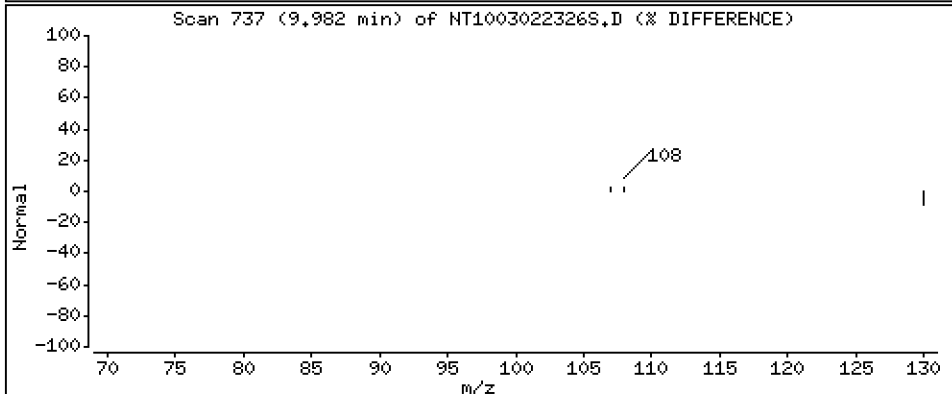
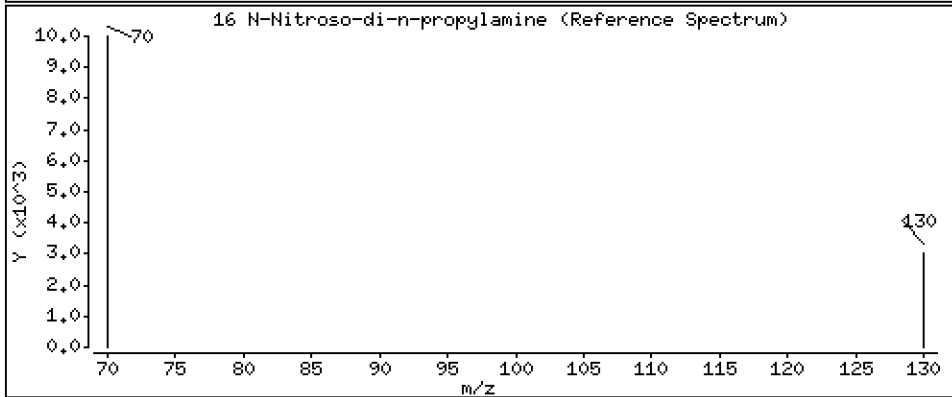
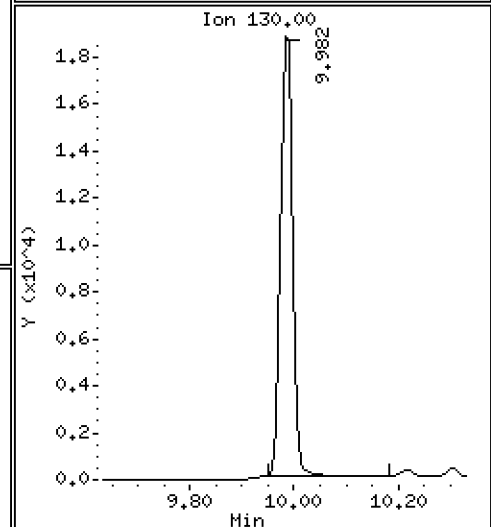
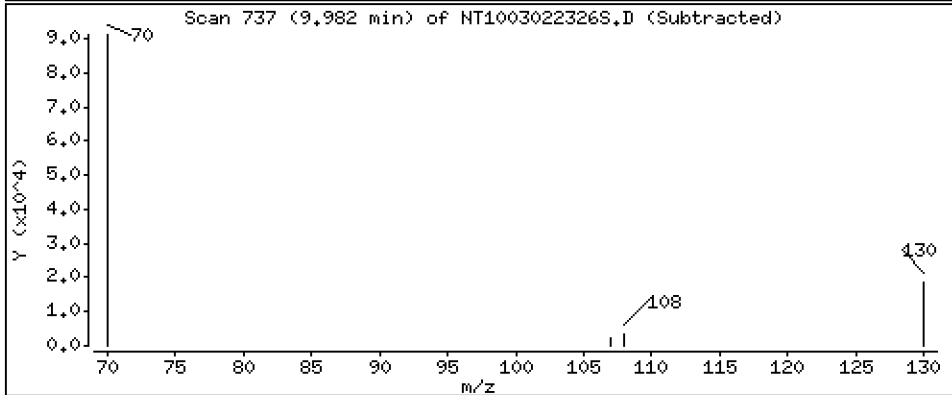
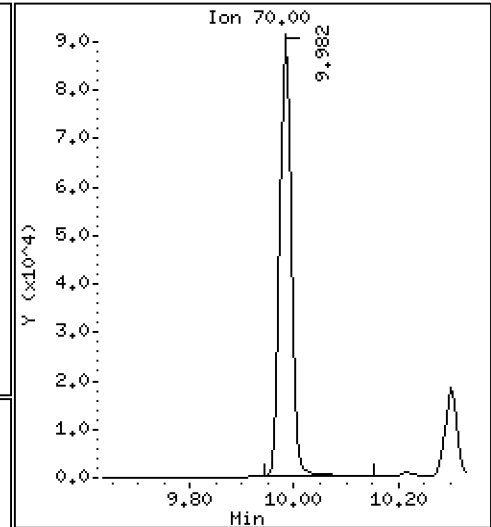
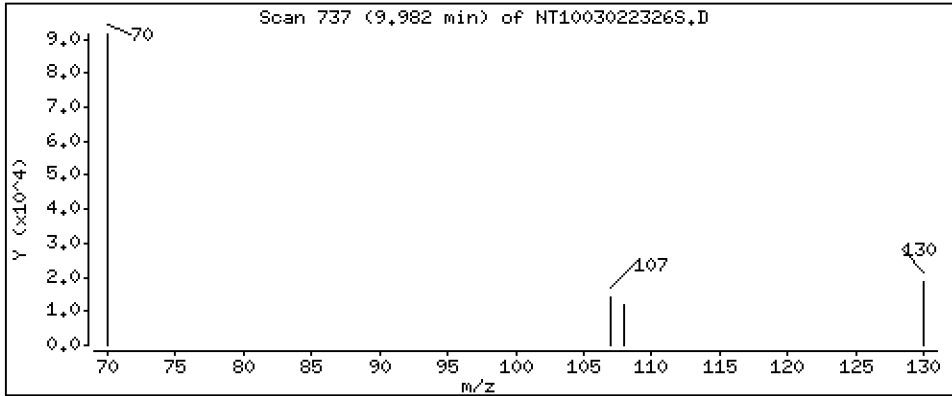
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

16 N-Nitroso-di-n-propylamine

Concentration: 1,136 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

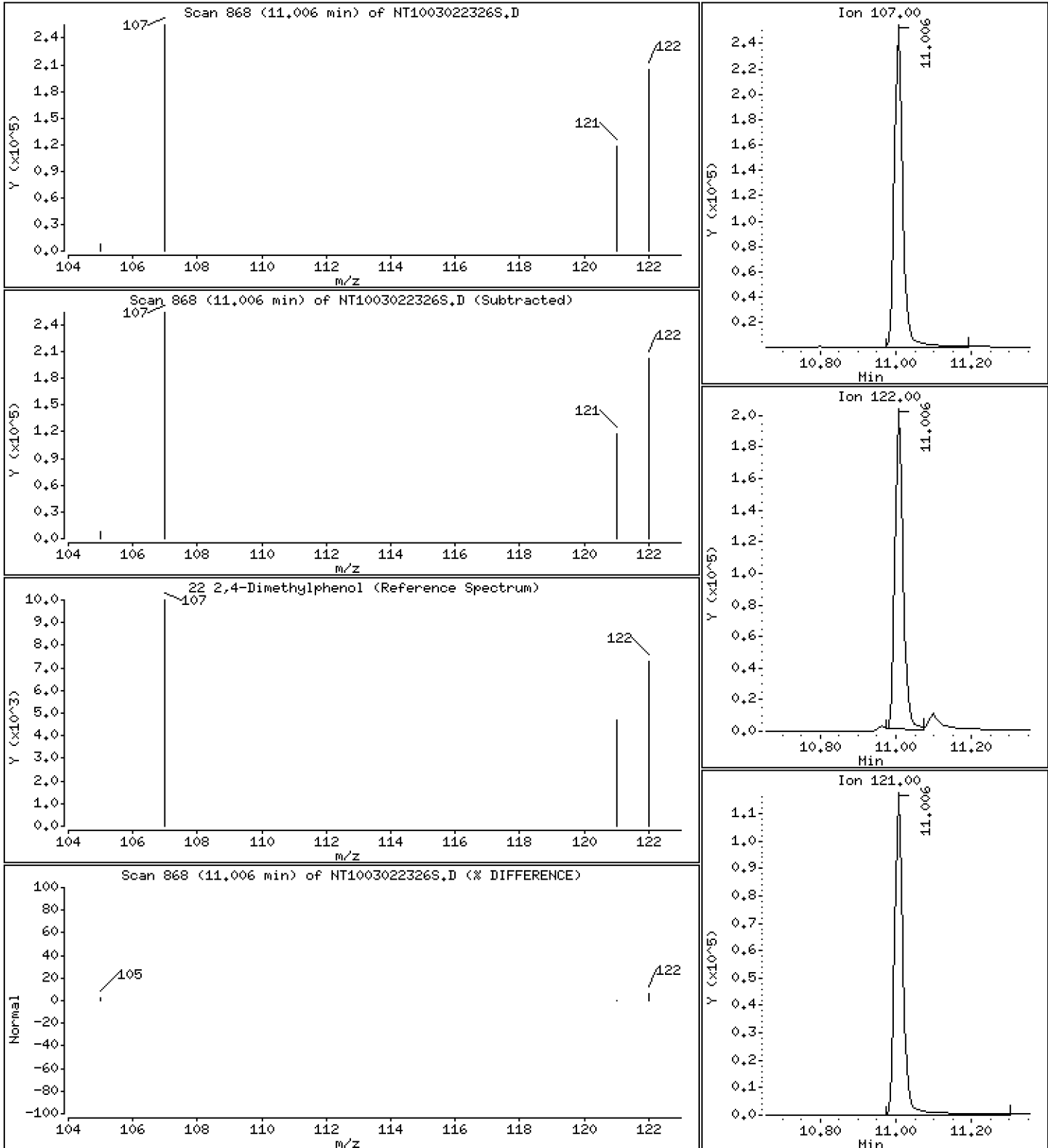
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 2.031 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

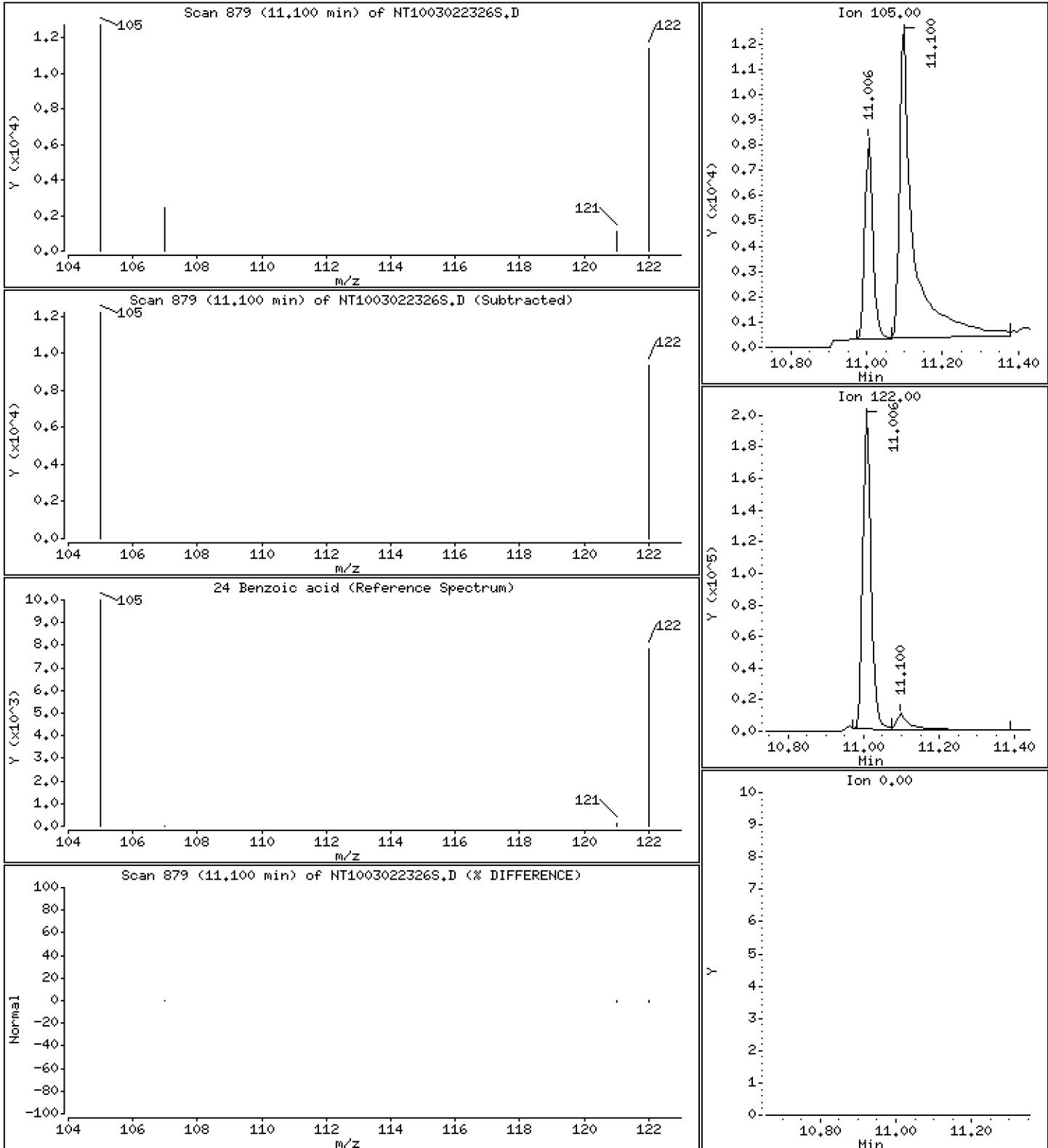
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3182 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

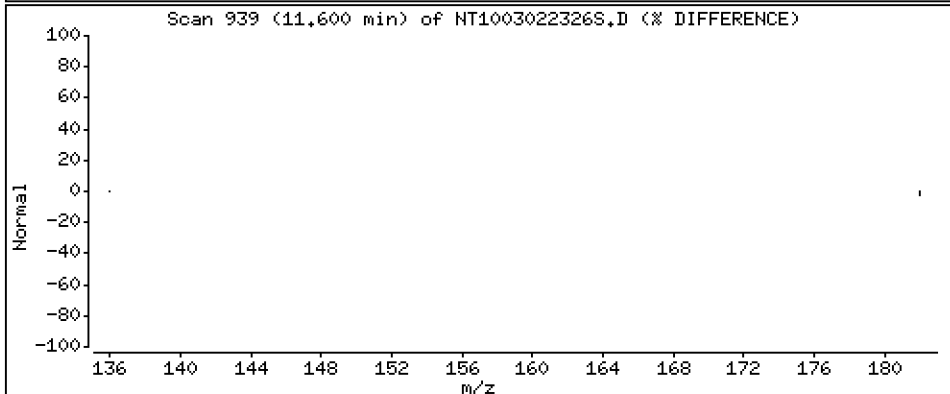
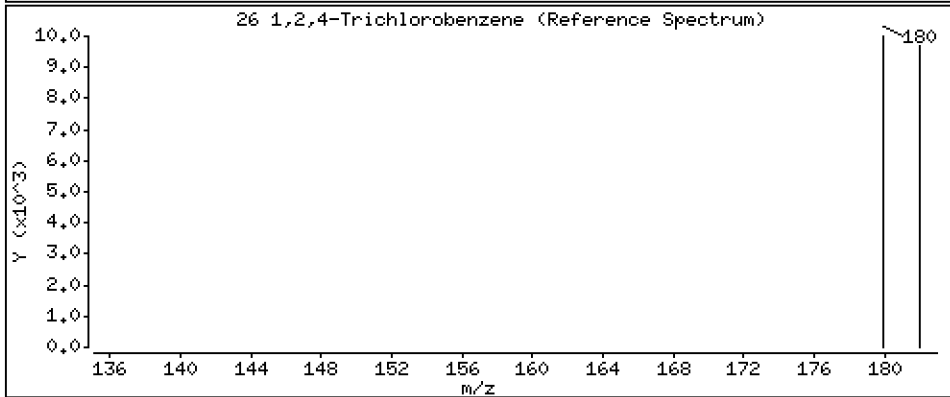
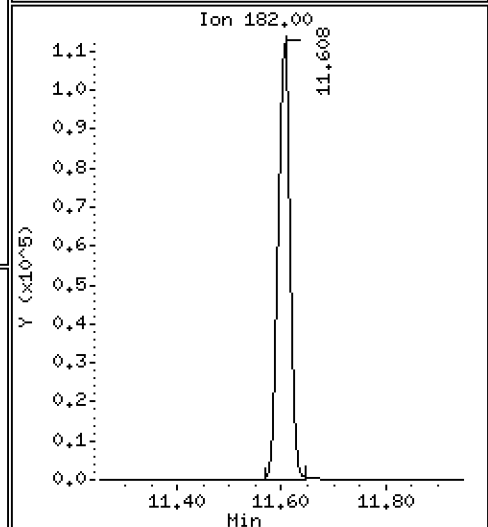
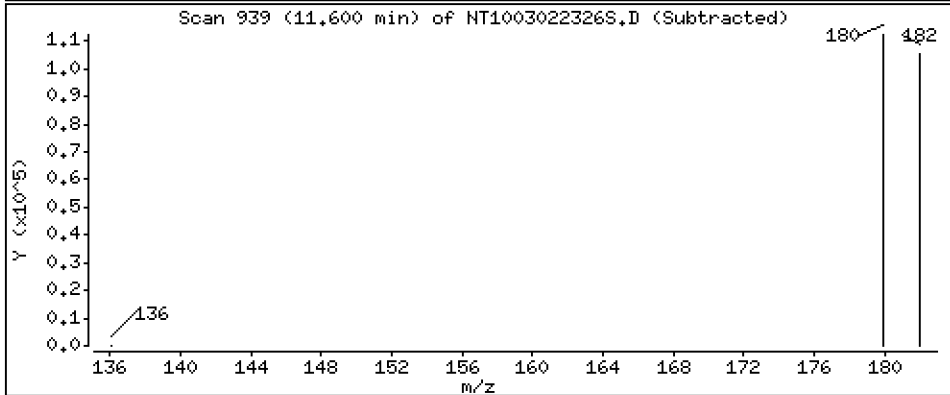
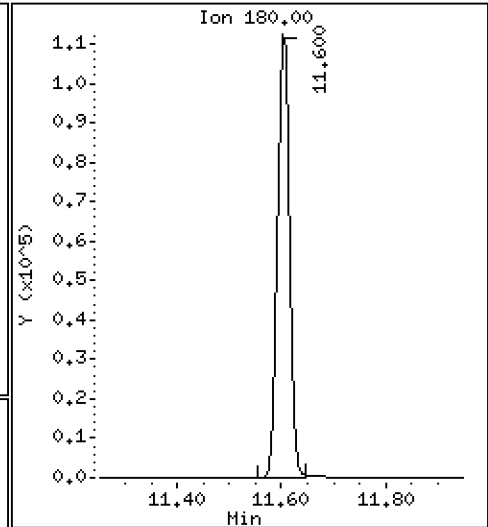
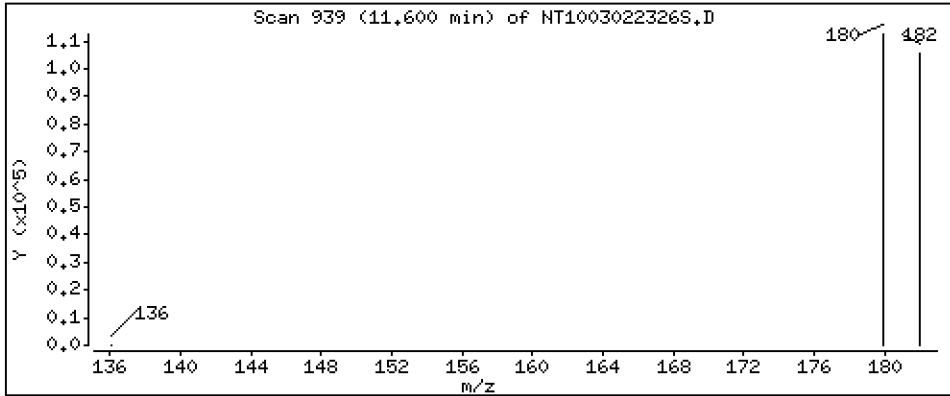
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 1.072 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

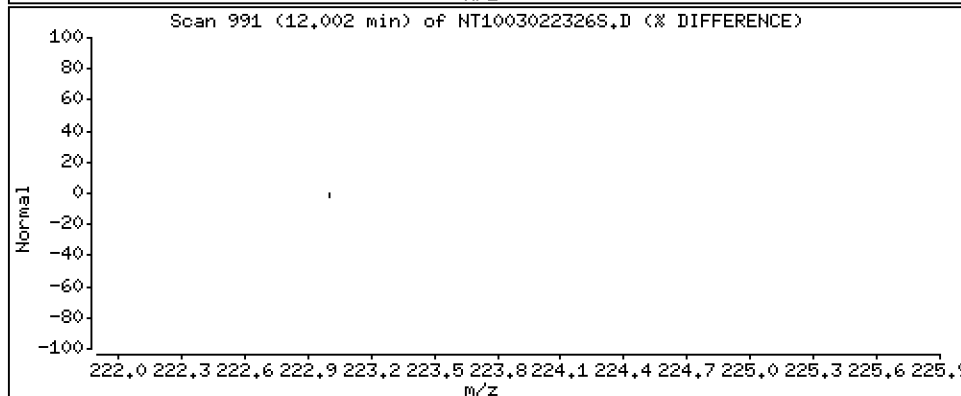
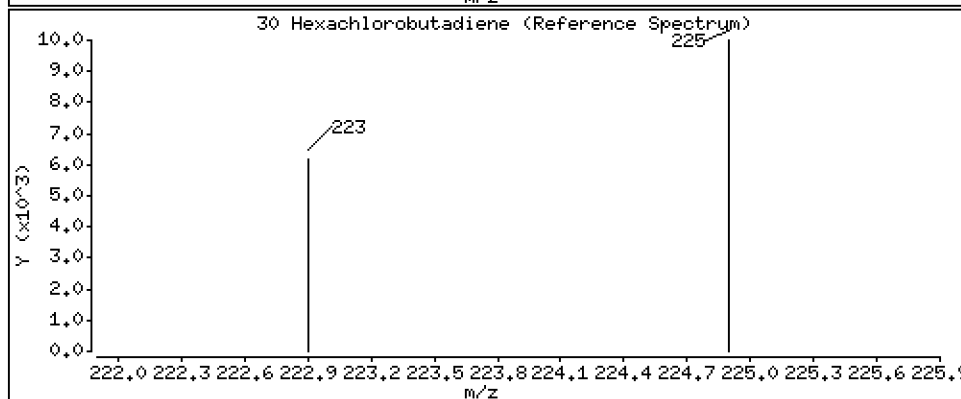
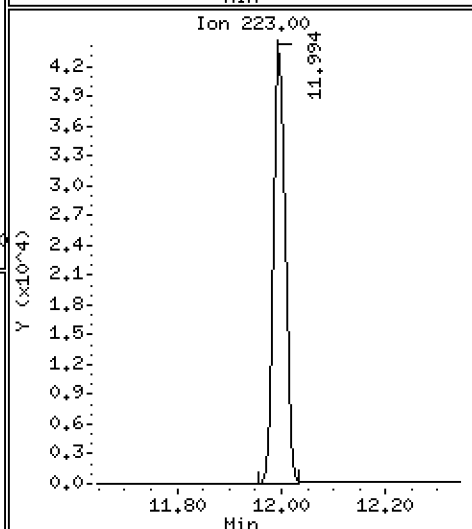
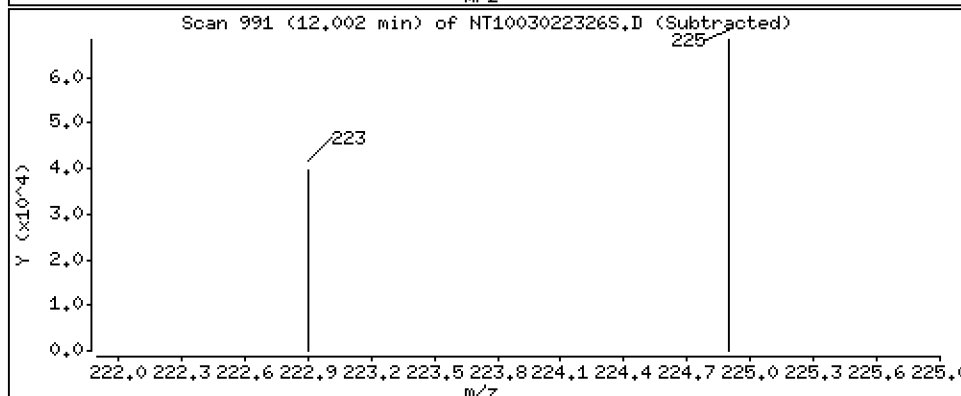
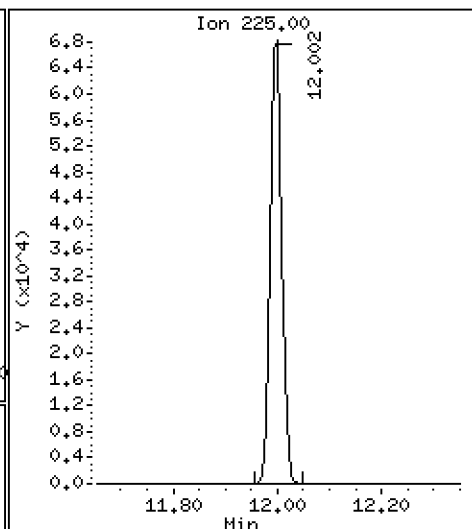
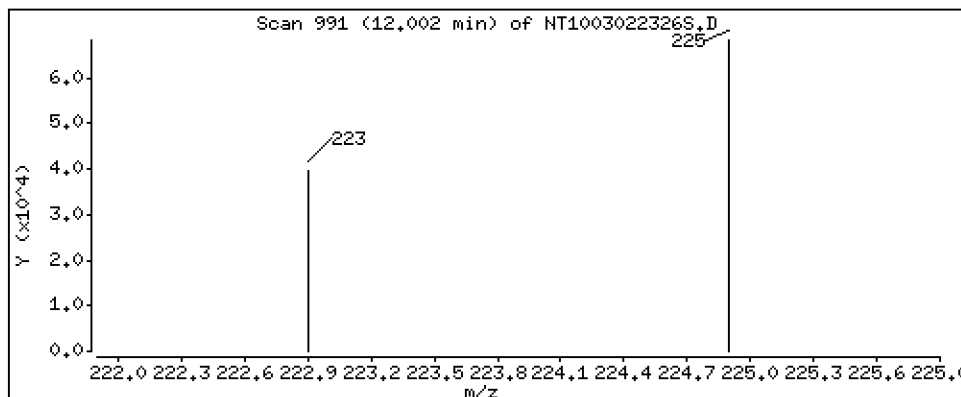
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,9365 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

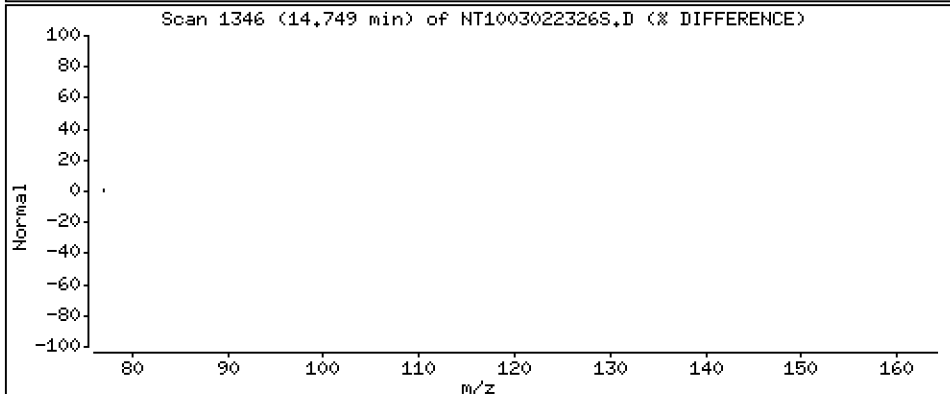
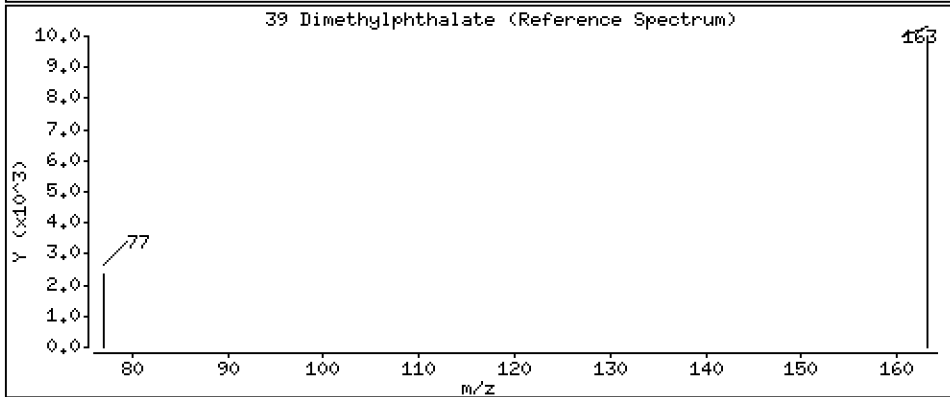
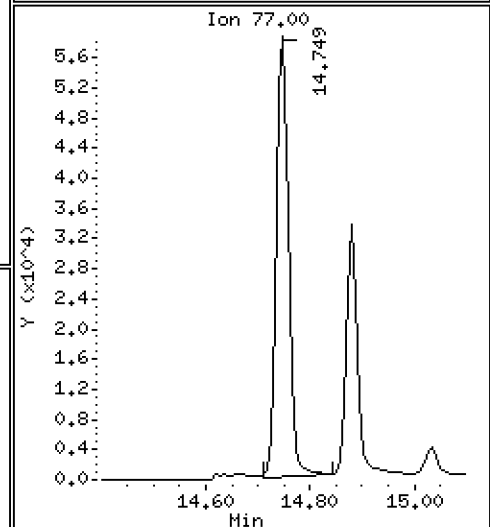
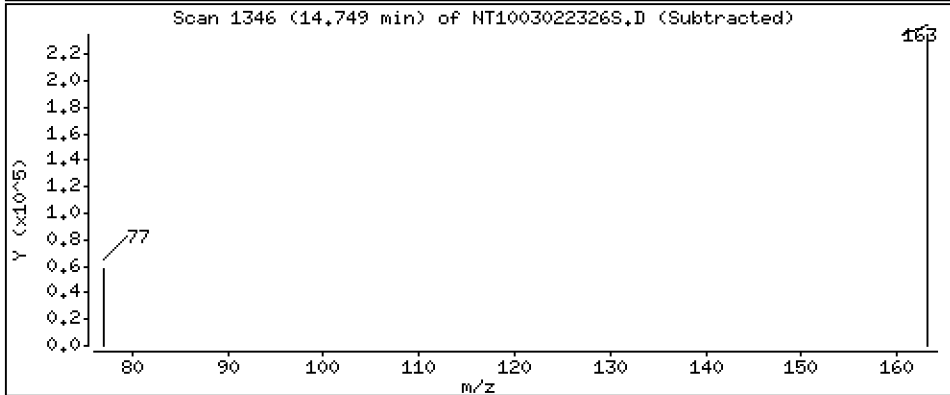
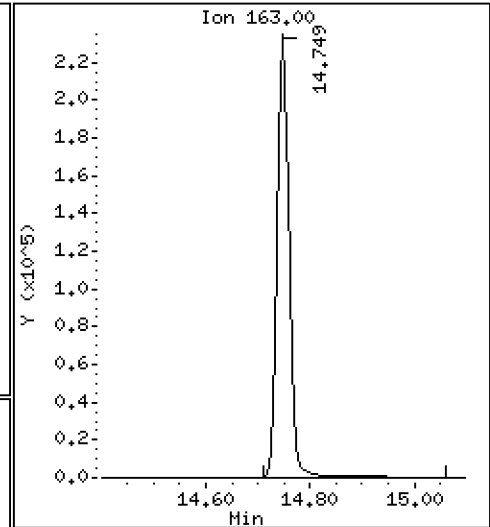
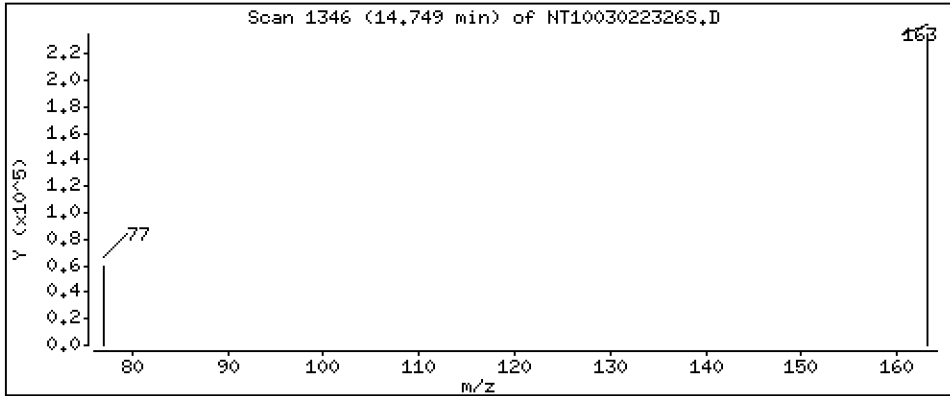
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 1,012 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

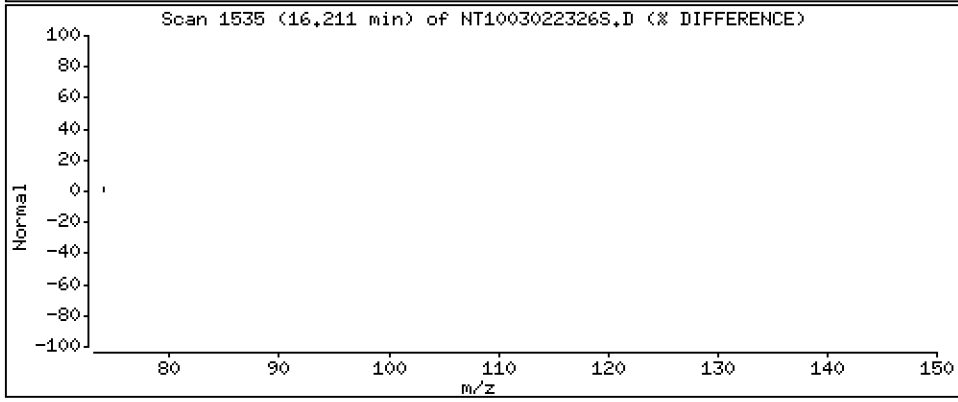
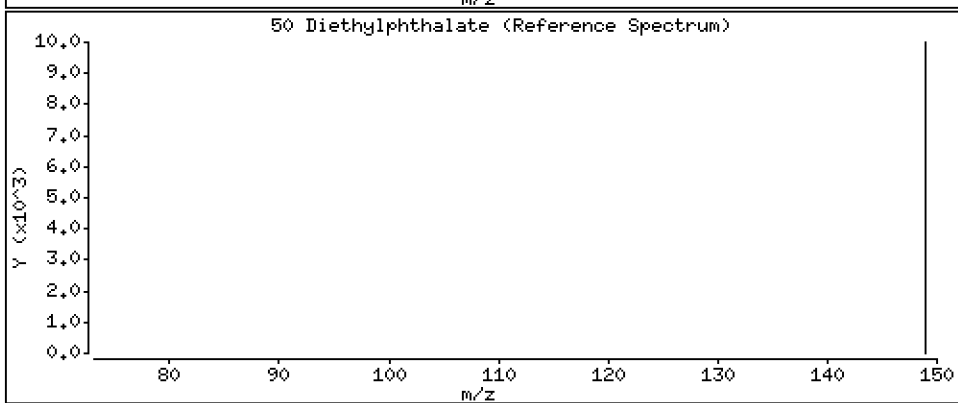
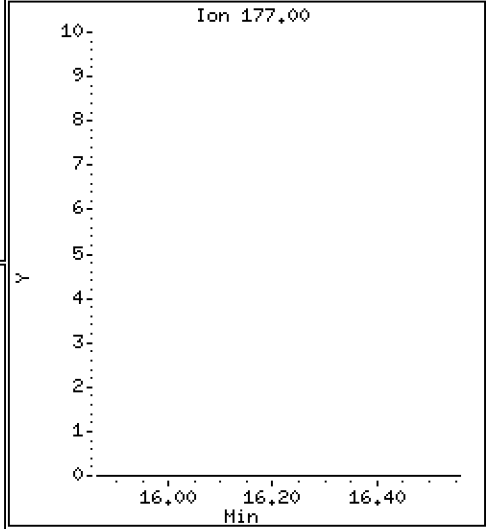
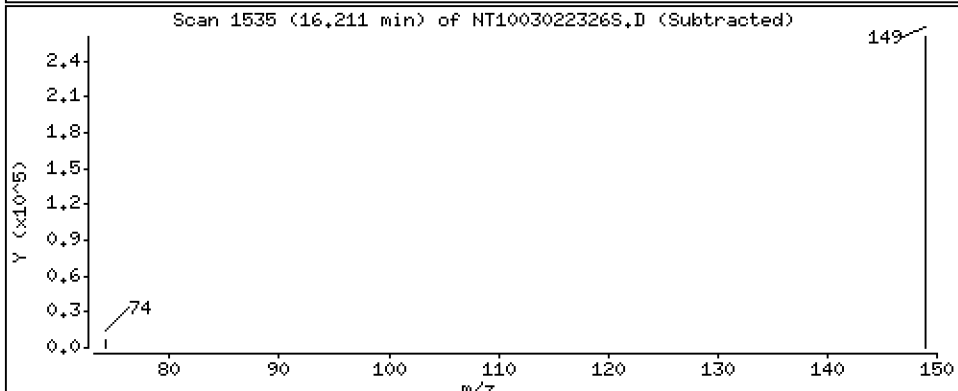
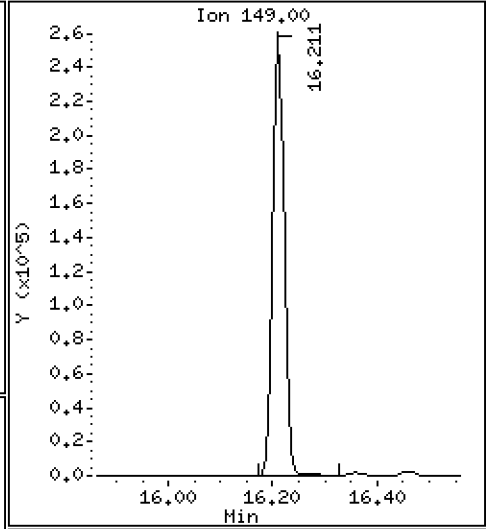
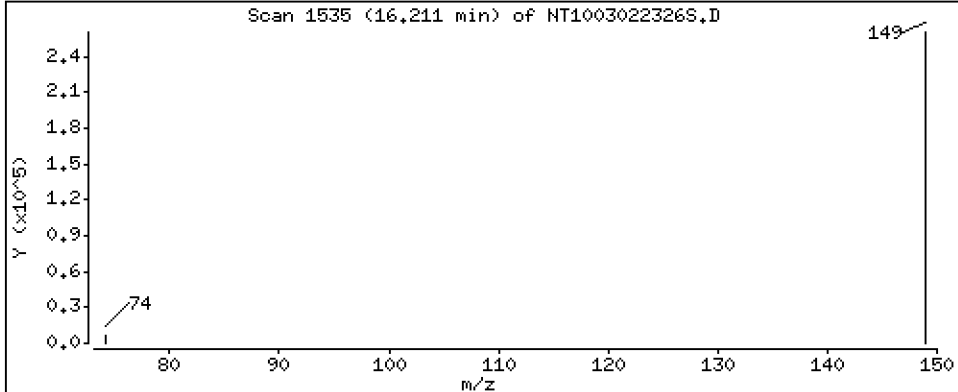
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 1,130 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

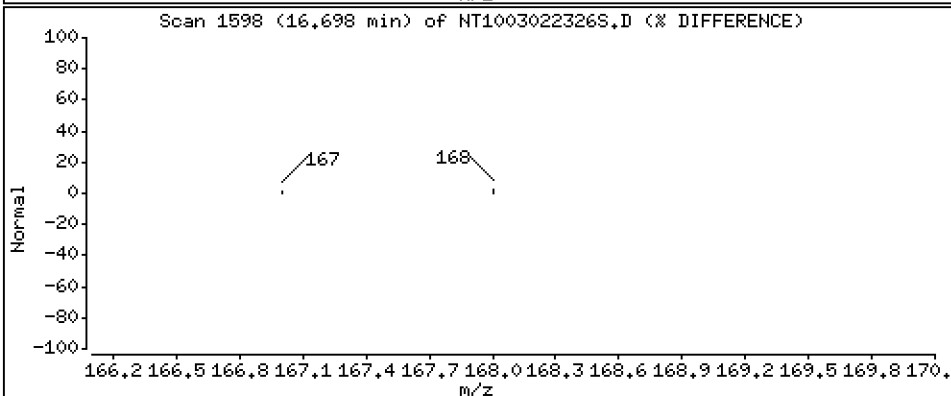
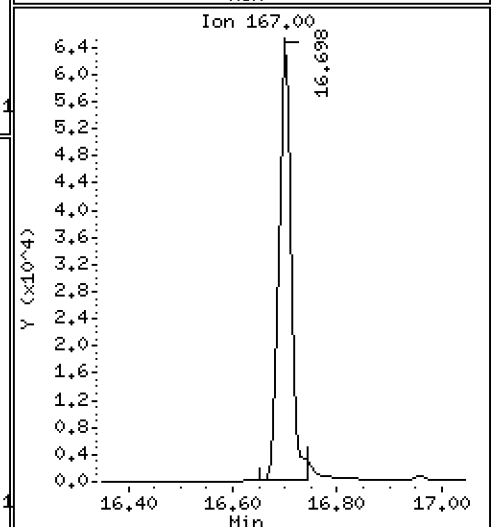
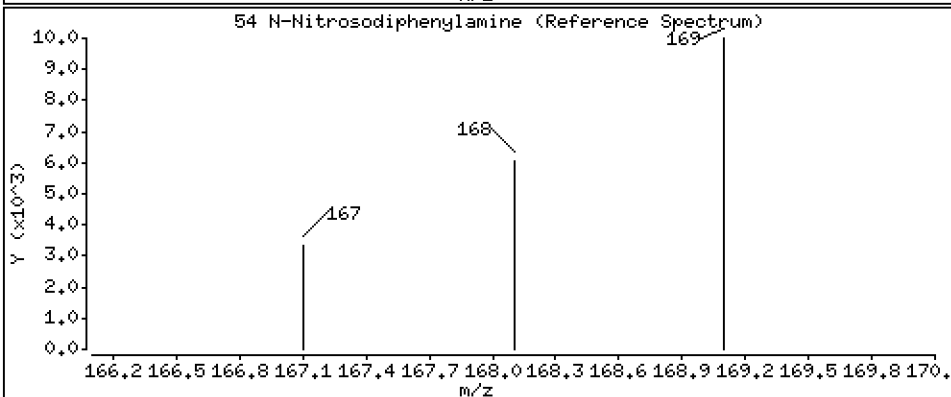
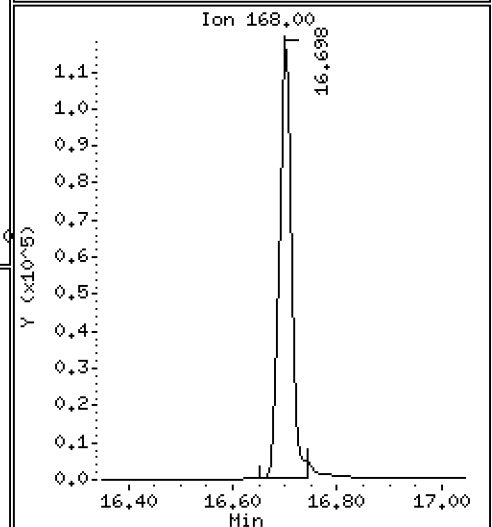
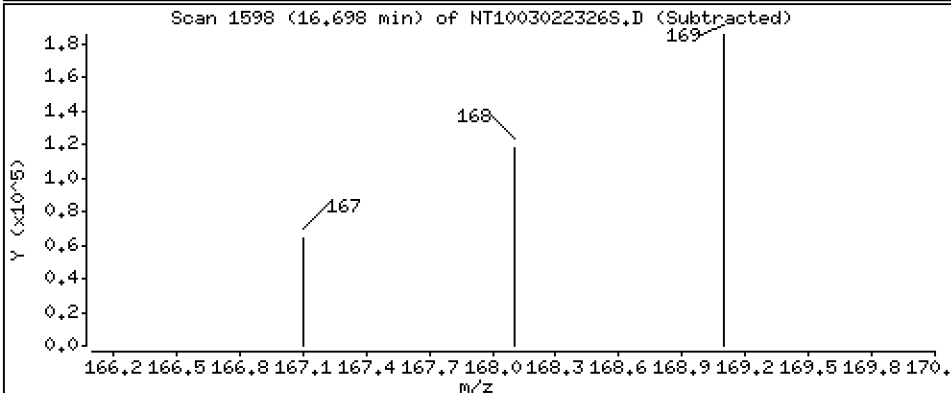
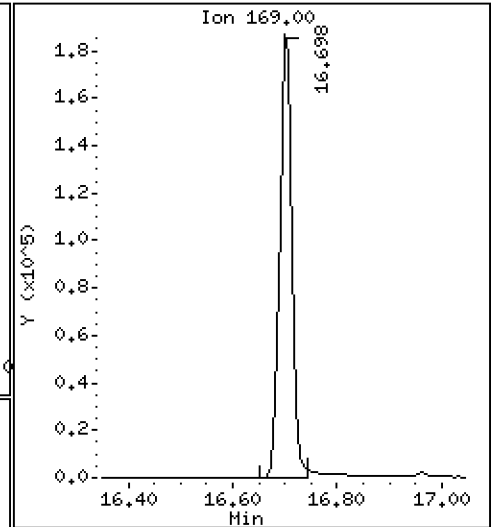
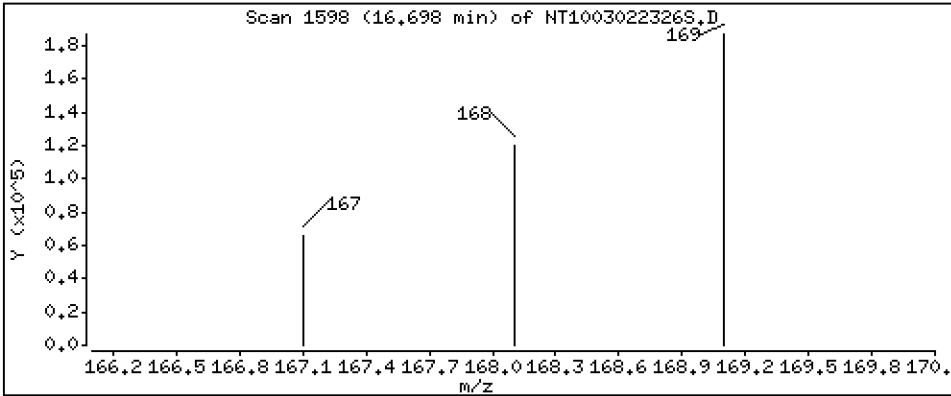
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.8726 ug/L





Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

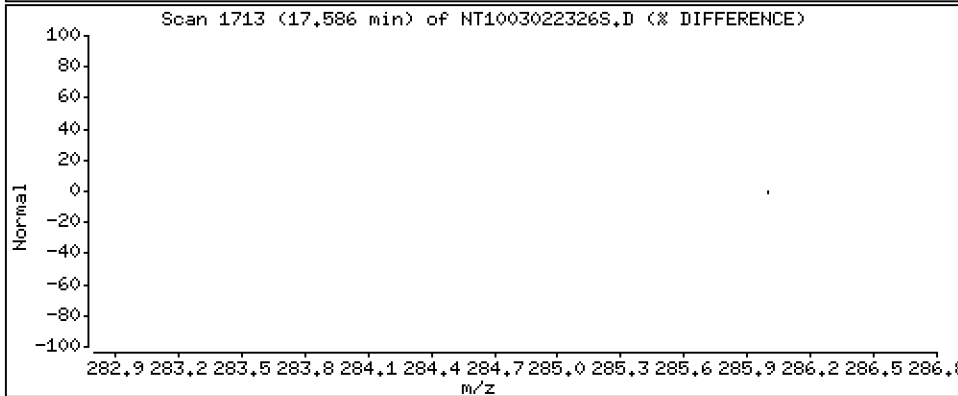
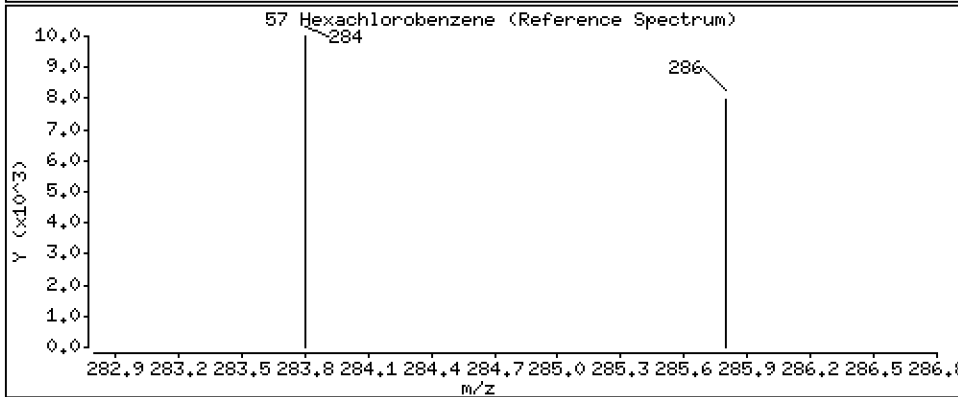
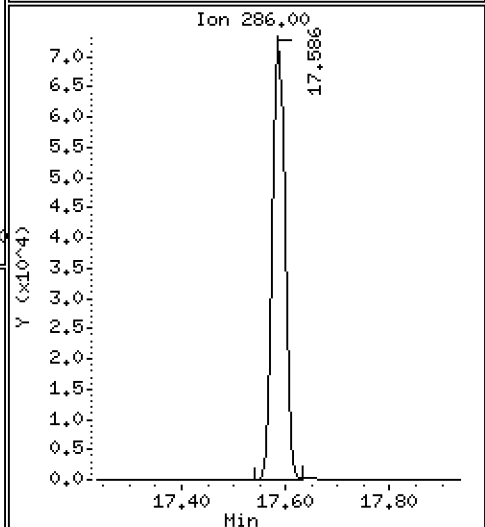
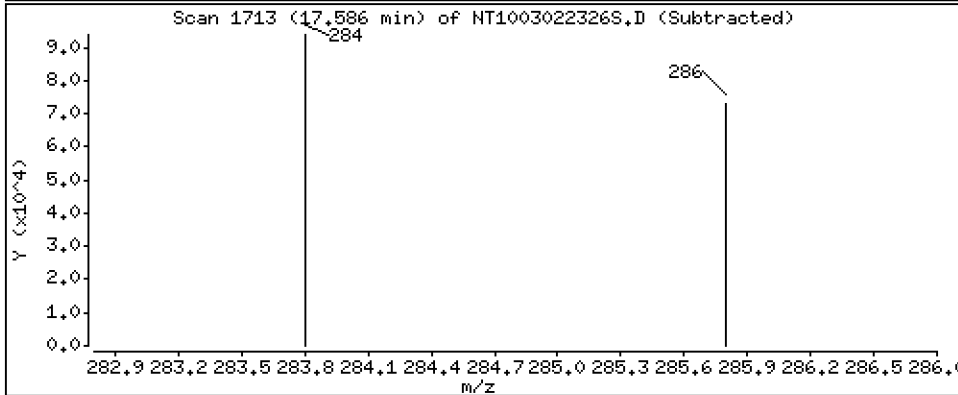
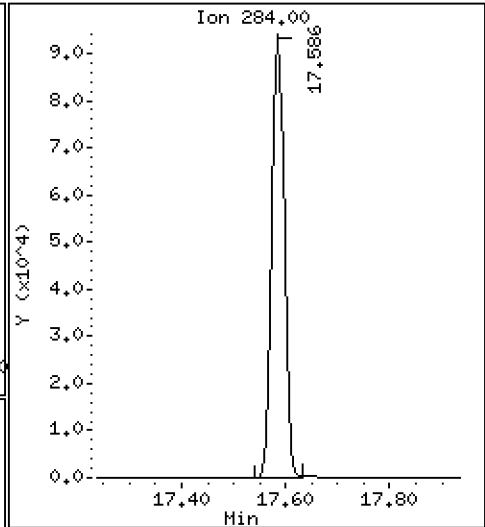
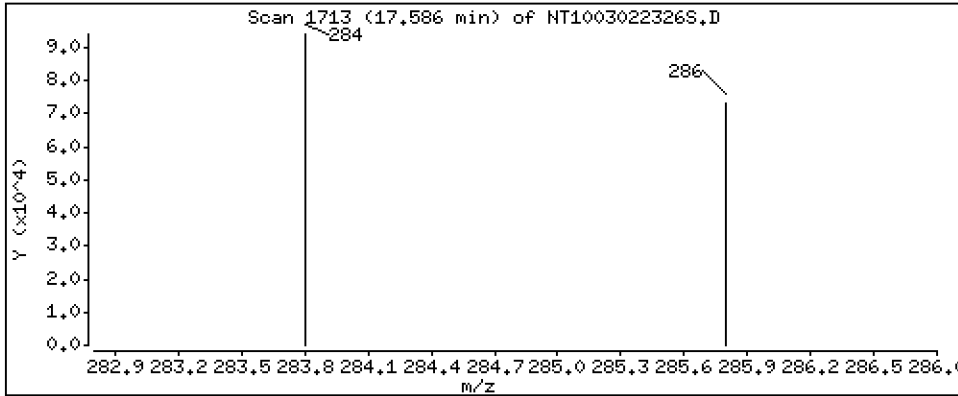
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.9192 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

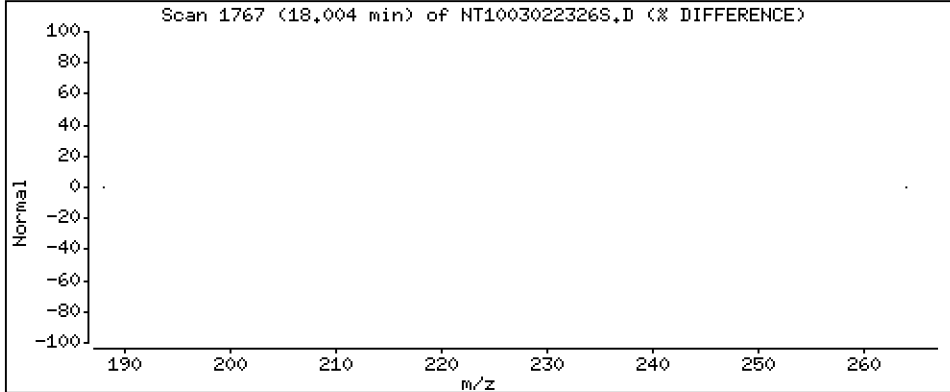
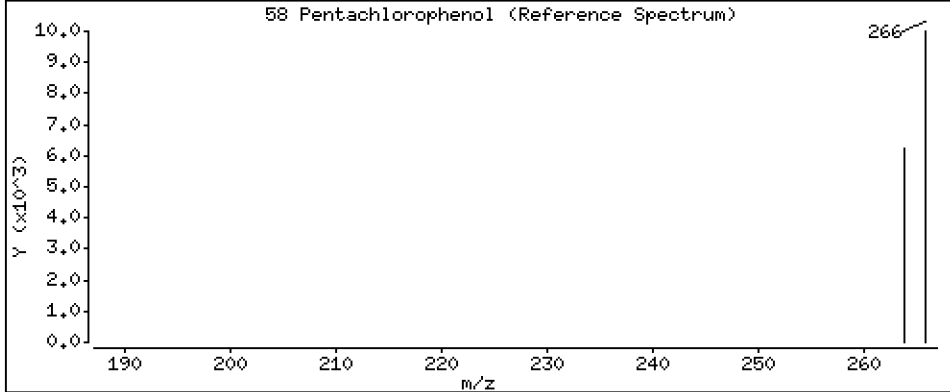
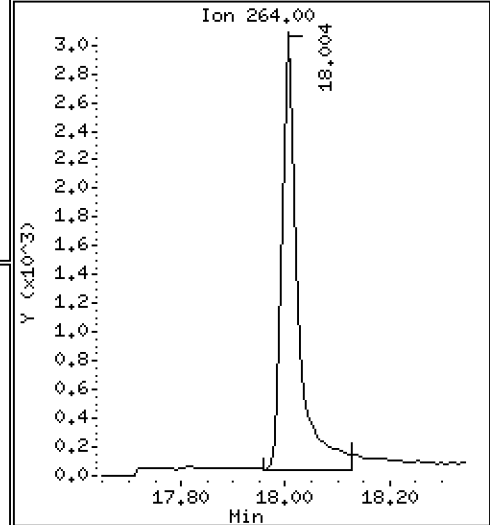
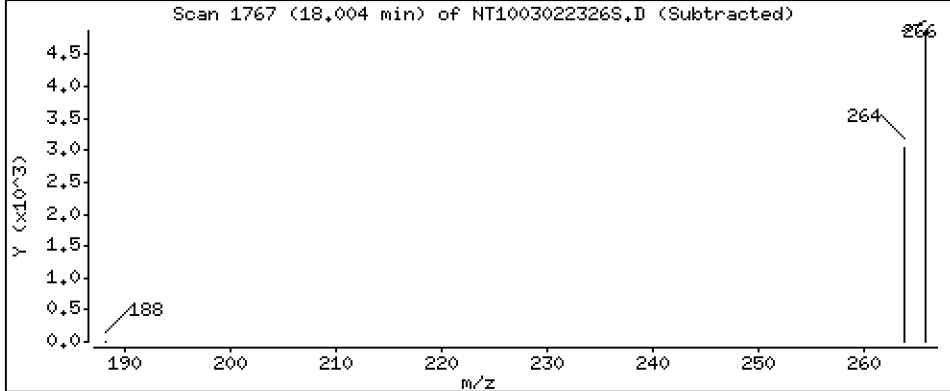
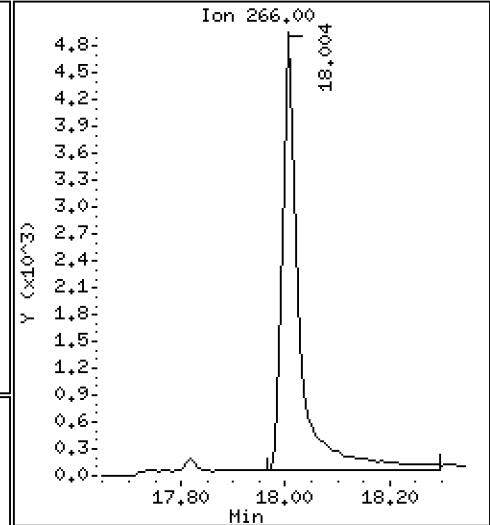
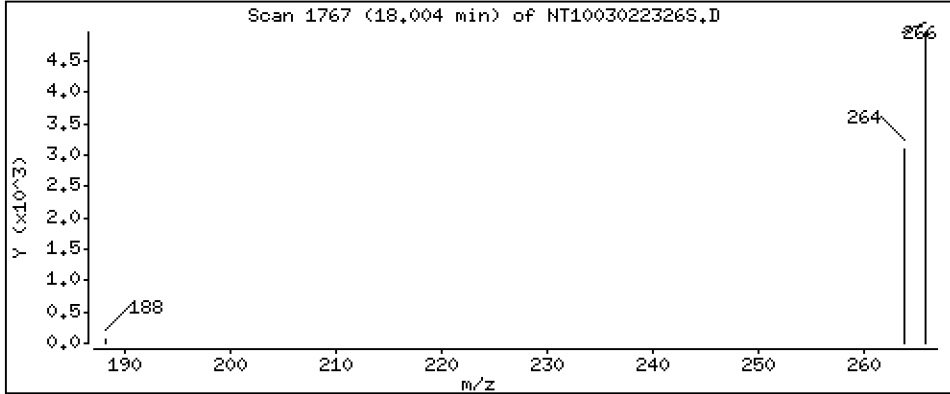
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,1556 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

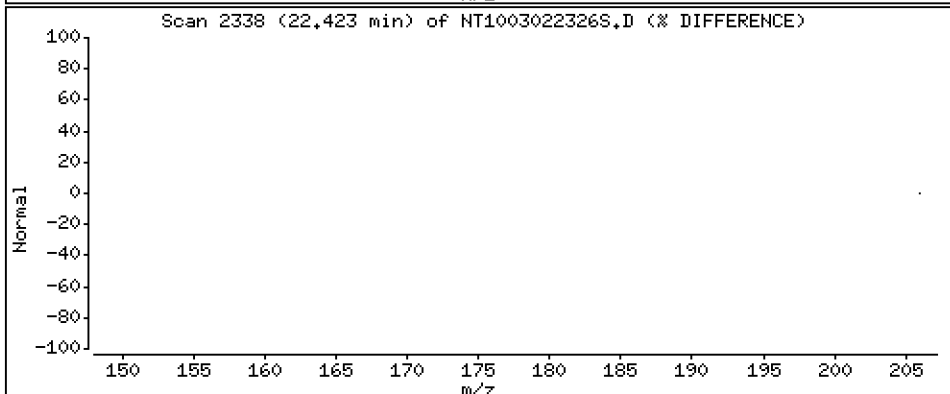
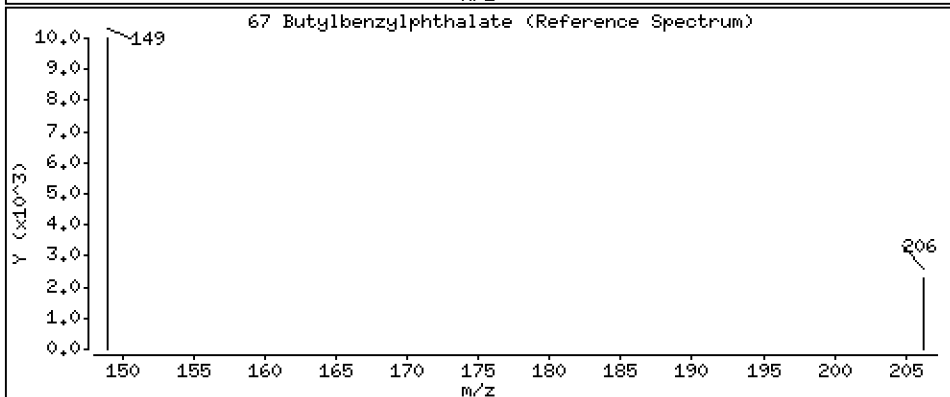
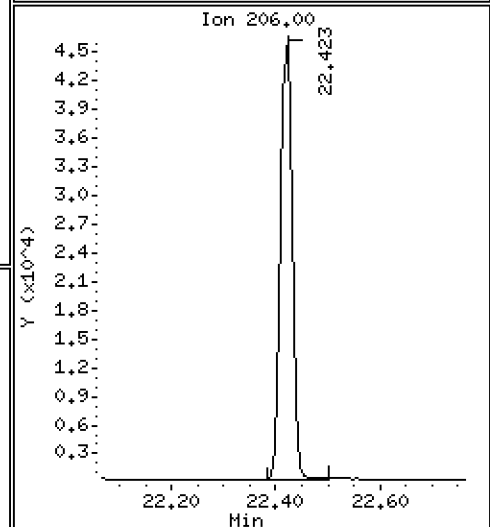
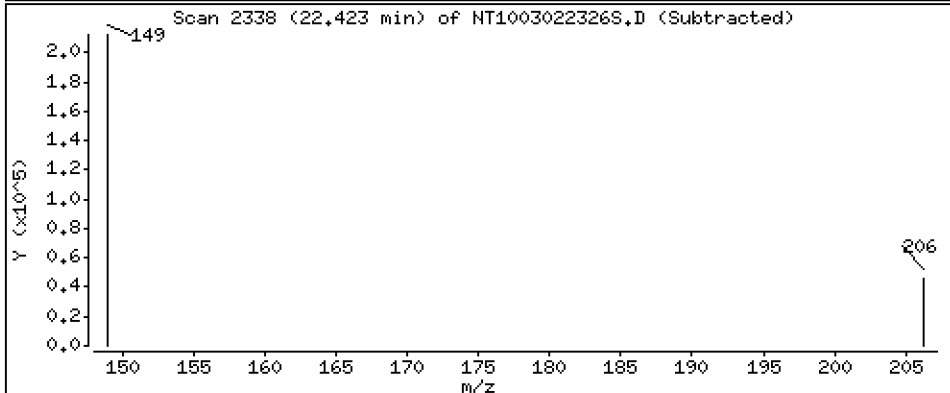
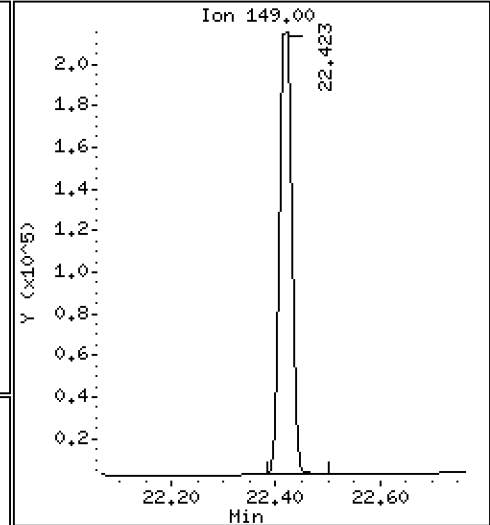
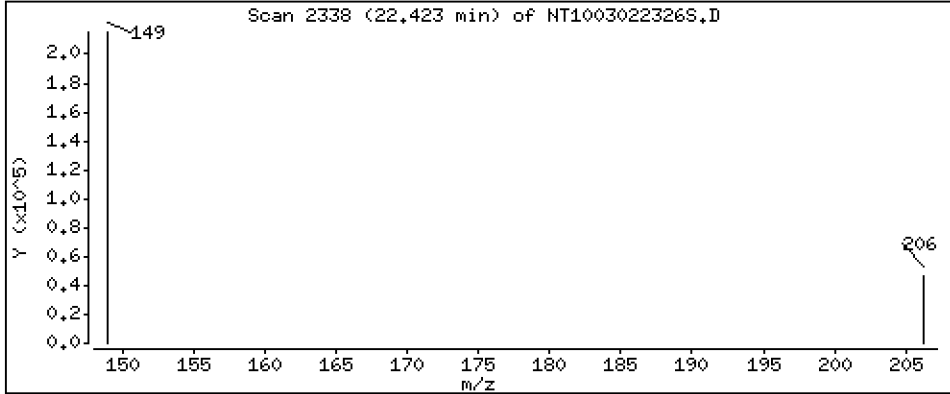
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,8195 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

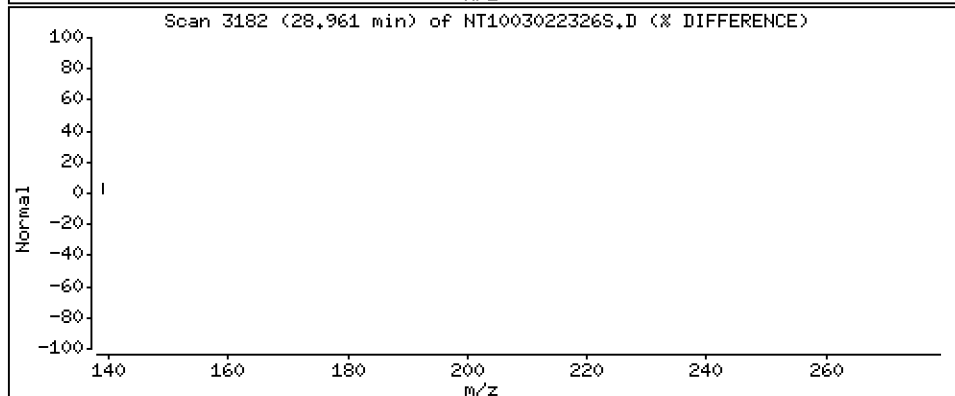
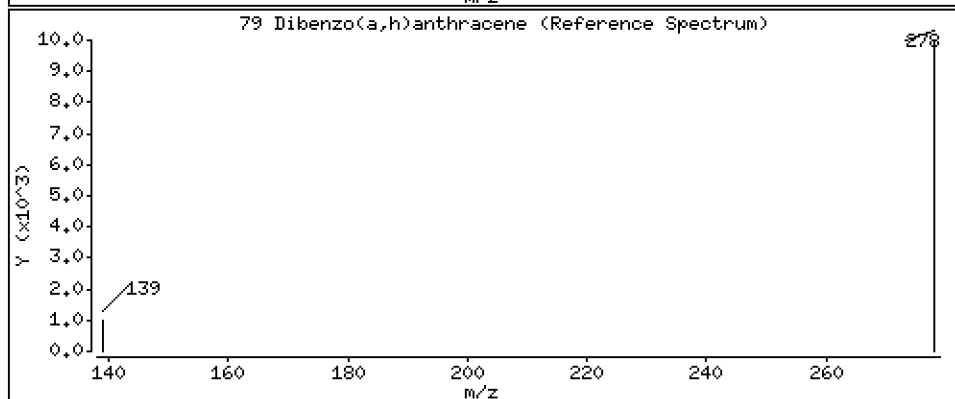
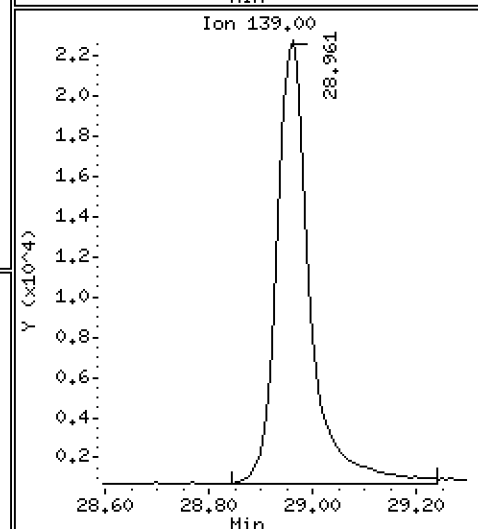
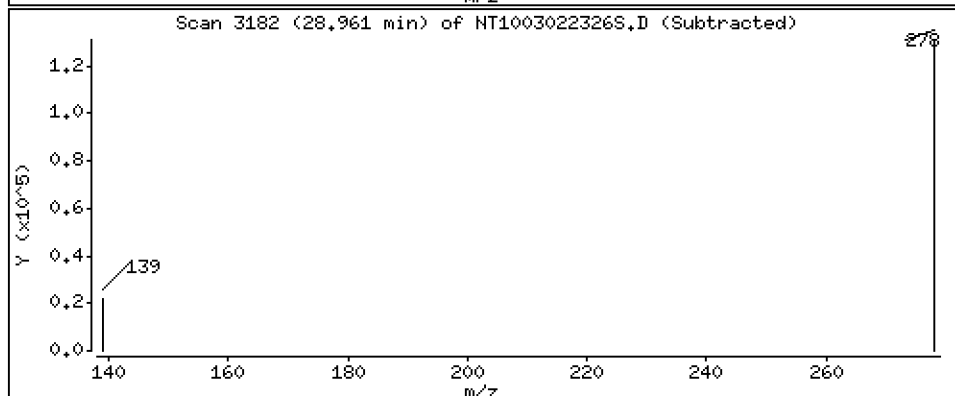
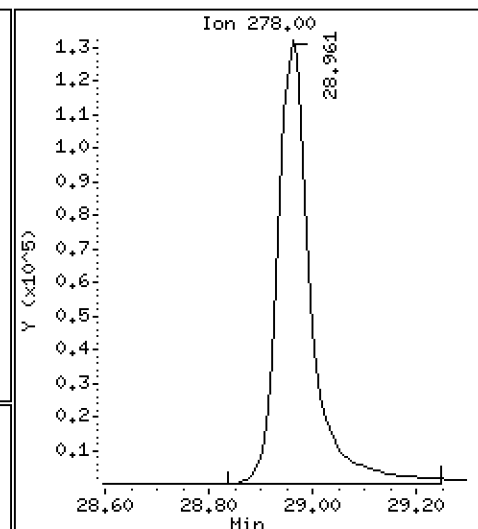
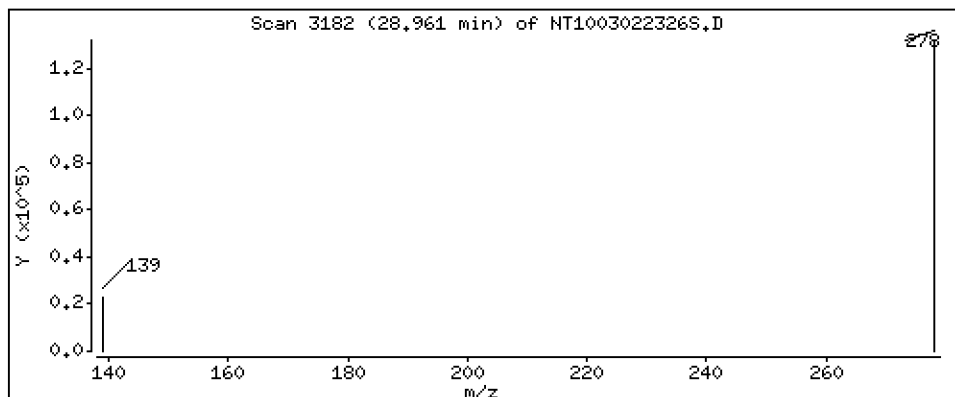
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,9421 ug/L



Date : 03-MAR-2023 06:14

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

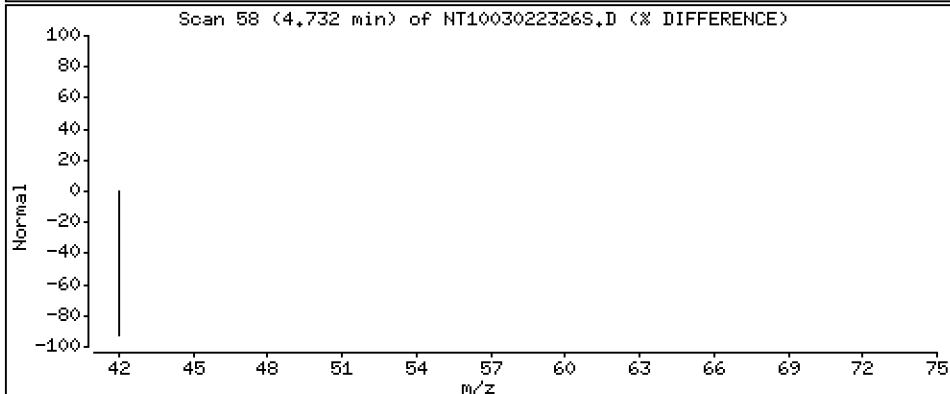
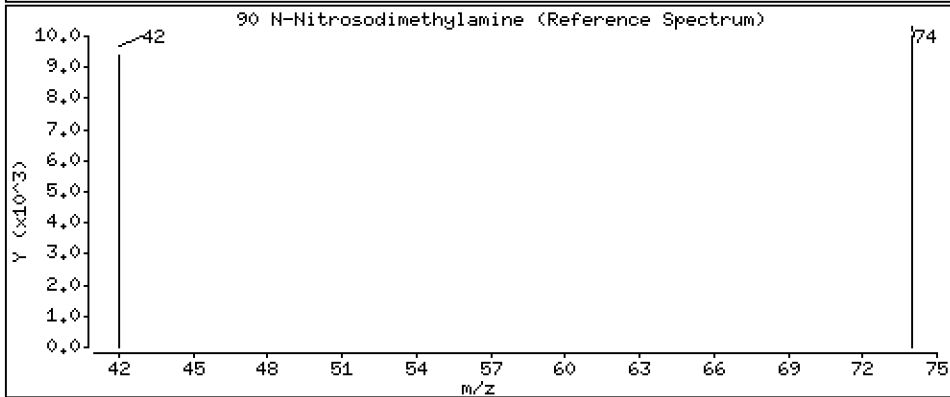
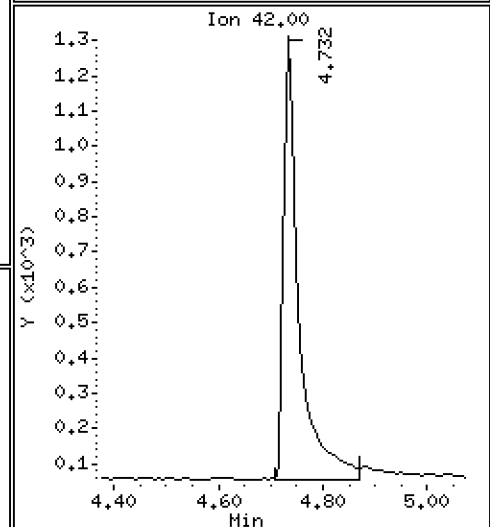
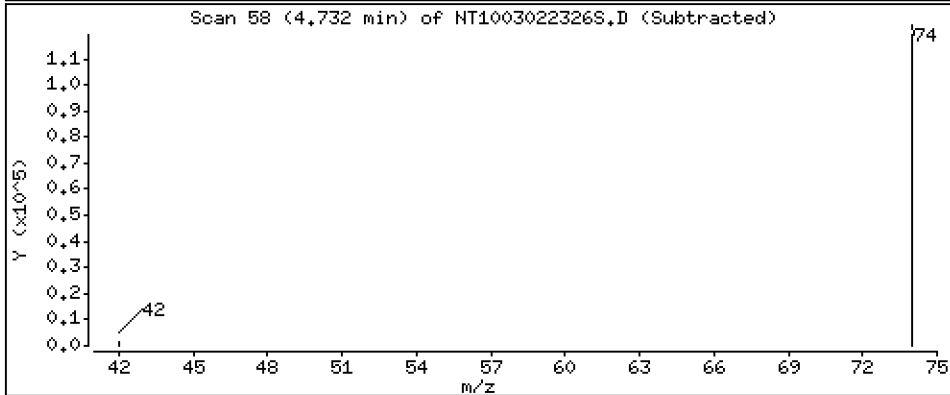
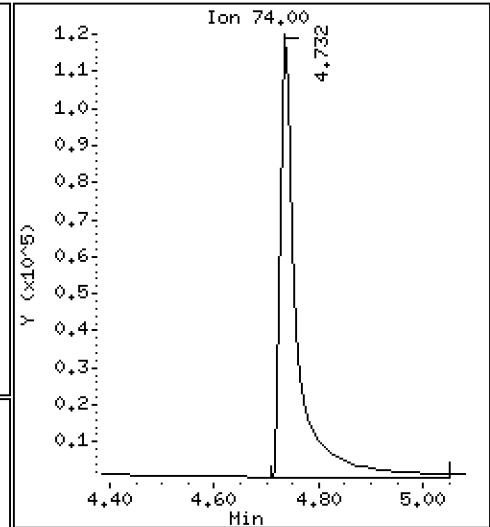
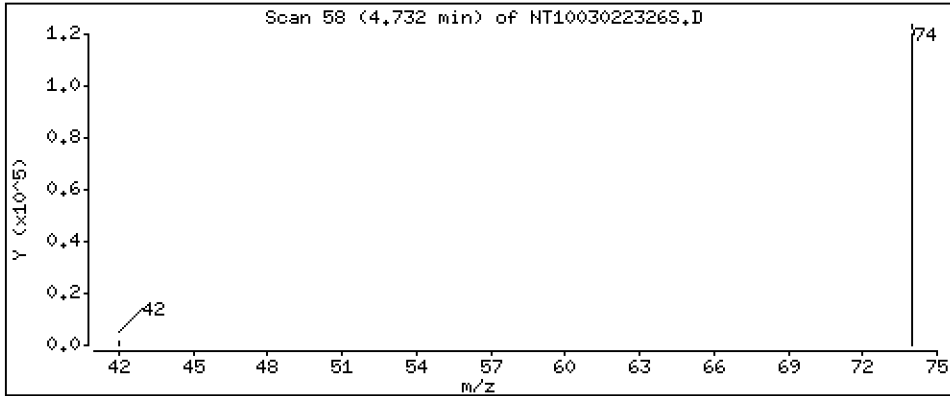
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 2.493 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022326S.D  
 Lab Smp Id: SLC0158-CCV1  
 Inj Date : 03-MAR-2023 06:14 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CCVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSSDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	296091	1.67116	1.671 (R)
3 Phenol	94		8.525	8.525	(0.921)	251976	0.95972	0.9597
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	223249	0.97066	0.9707
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	620595	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	215790	0.96500	0.9650
11 Benzyl alcohol	79		9.492	9.477	(1.026)	149205	1.01693	1.017
12 1,2-Dichlorobenzene	146		9.570	9.570	(1.034)	212108	0.98685	0.9868
13 2-Methylphenol	108		9.663	9.663	(1.044)	180258	1.13694	1.137
15 4-Methylphenol	108		9.950	9.950	(1.076)	181646	1.09897	1.099
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	132676	1.13550	1.136
22 2,4-Dimethylphenol	107		11.006	11.006	(0.938)	383514	2.03070	2.031
24 Benzoic acid	105		11.099	11.082	(0.946)	32808	0.31819	0.3182
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	170792	1.07201	1.072
* 27 Naphthalene-d8	136		11.731	11.723	(1.000)	2213509	4.00000	
30 Hexachlorobutadiene	225		12.001	12.001	(1.023)	105874	0.93645	0.9365
39 Dimethylphthalate	163		14.749	14.749	(0.963)	351467	1.01182	1.012
* 42 Acenaphthene-d10	162		15.321	15.321	(1.000)	1093970	4.00000	
50 Diethylphthalate	149		16.210	16.210	(1.058)	370178	1.13006	1.130
54 N-Nitrosodiphenylamine	169		16.698	16.698	(0.907)	300772	0.87260	0.8726
57 Hexachlorobenzene	284		17.586	17.586	(0.955)	148280	0.91923	0.9192

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.004	17.996	(0.978)	10996	0.15560	0.1556
* 59 Phenanthrene-d10	188	18.414	18.406	(1.000)	2129840	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	212536	1.11970	1.120(R)
67 Butylbenzylphthalate	149	22.422	22.414	(0.957)	323850	0.81952	0.8195
* 69 Chrysene-d12	240	23.429	23.429	(1.000)	2347260	4.00000	
* 77 Perylene-d12	264	26.131	26.123	(1.000)	2638390	4.00000	
79 Dibenzo(a,h)anthracene	278	28.961	28.945	(1.108)	583336	0.94206	0.9421
90 N-Nitrosodimethylamine	74	4.732	4.732	(0.511)	261472	2.49267	2.493

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022326S.D  
 Lab Smp Id: SLC0158-CCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	620595	-4.88
27 Naphthalene-d8	2339966	1169983	4679932	2213509	-5.40
42 Acenaphthene-d10	1186988	593494	2373976	1093970	-7.84
59 Phenanthrene-d10	2193485	1096743	4386970	2129840	-2.90
69 Chrysene-d12	2444828	1222414	4889656	2347260	-3.99
77 Perylene-d12	2842248	1421124	5684496	2638390	-7.17

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.73	0.07
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.04
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
77 Perylene-d12	26.12	25.62	26.62	26.13	0.03

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



REVIEW SUMMARY FOR FILE - NT1003022326S.D

Lab ID: SLC0158-CCV1

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 03-MAR-2023 06:14

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**LOW-CONCENTRATION  
CONTINUING CALIBRATION CHECK  
EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022316S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0158</u>	Injection Date:	<u>03/02/23</u>
Lab Sample ID:	<u>SLC0158-LCV1</u>	Injection Time:	<u>23:54</u>
Sequence Name:	<u>Low Cal Check</u>		

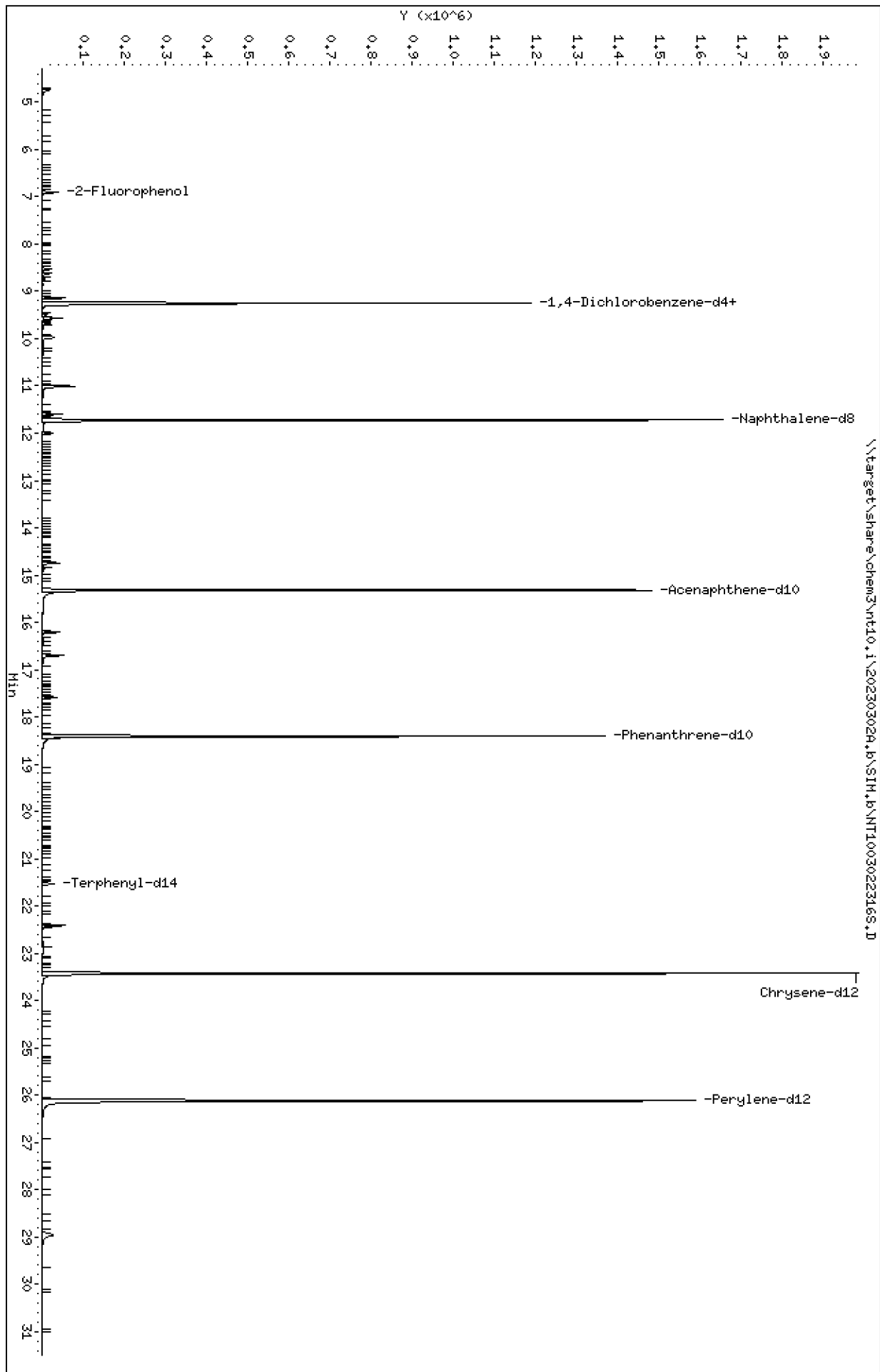
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.2	1.4413080	1.4056330		-2.5	
1,2-Dichlorobenzene	A	0.20000	0.2	1.3853460	1.3849830		-0.03	
Benzyl Alcohol	A	0.20000	0.1	0.7492523	0.6420735		-31.3	
Benzoic acid	A	0.80000	0.02	0.1431163	0.0052595		-97.2	
2,4-Dimethylphenol	A	0.40000	0.4	0.2957717	0.3044855		-10.4	
1,2,4-Trichlorobenzene	A	0.20000	0.2	0.2879030	0.2989565		3.8	
N-Nitrosodiphenylamine	A	0.20000	0.2	0.6473471	0.5802646		-10.4	
Pentachlorophenol	A	0.40000	0.01	0.0950913	0.0039055		-97.1	
2-Fluorophenol	A	0.30000	0.309	1.1419780	1.1765400		3.0	
p-Terphenyl-d14	A	0.20000	0.188	0.3234672	0.3041363		-6.0	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\202303028,b\SIH,b\NT10030223168.D  
Date: 02-MAR-2023 23:54  
Client ID:  
Sample Info: SED-LCV200  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\202303028,b\SIH,b\NT10030223168.D



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

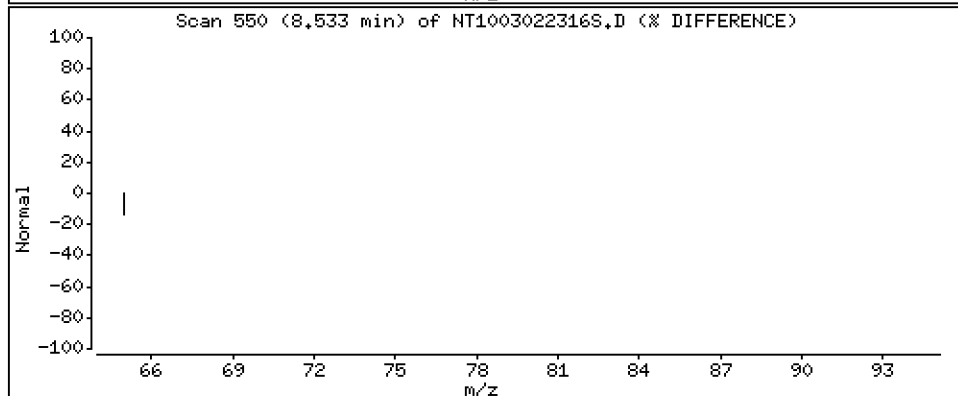
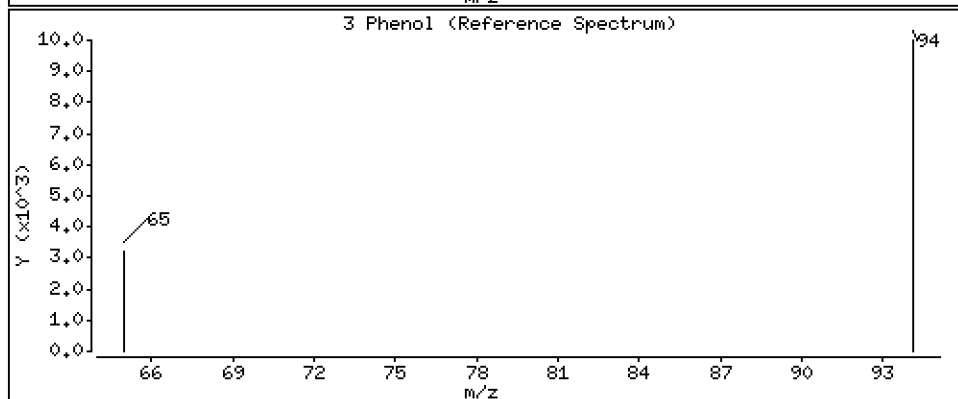
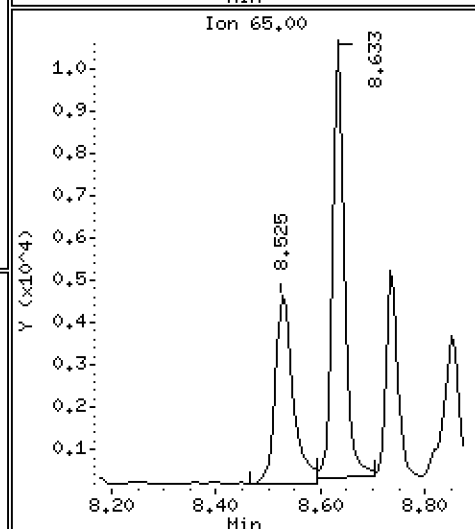
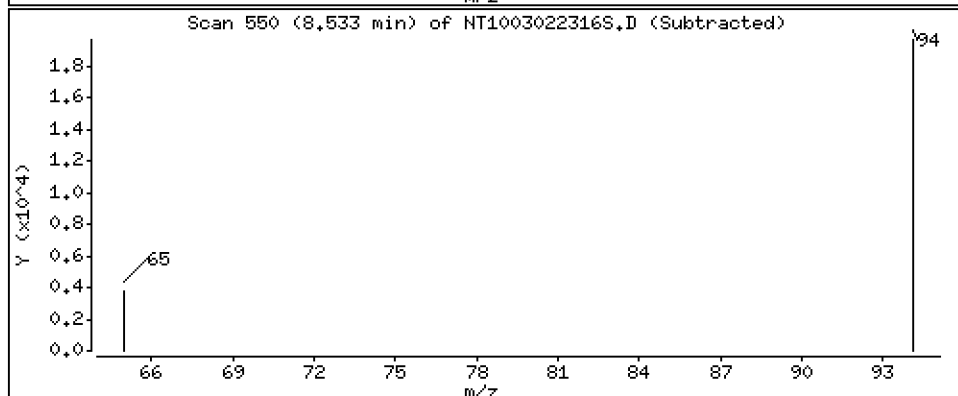
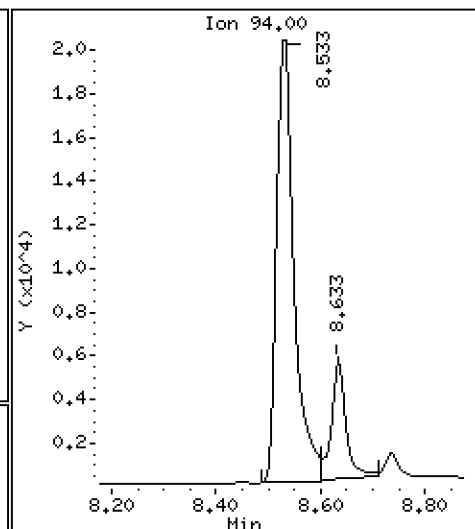
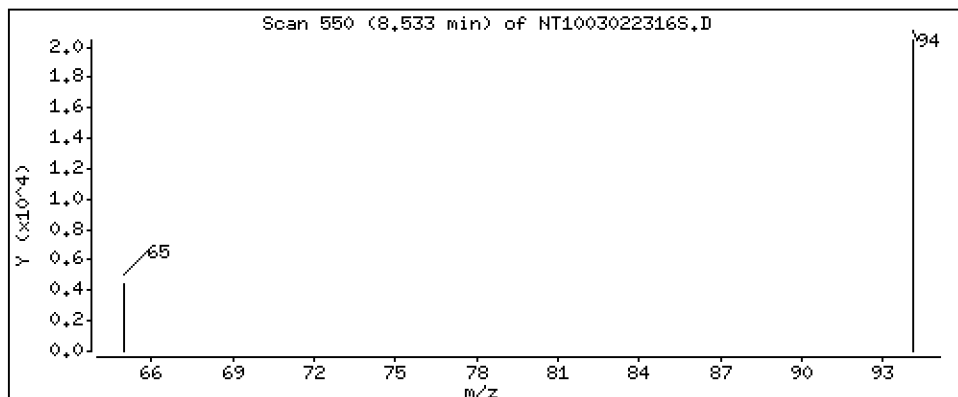
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.1545 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

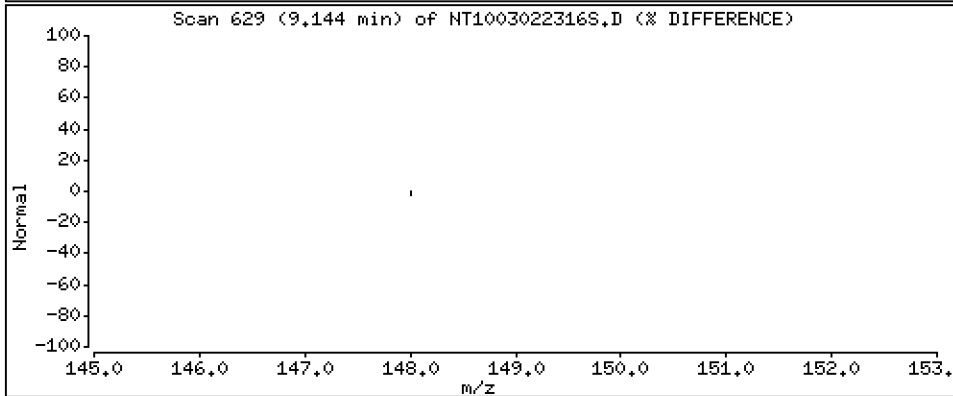
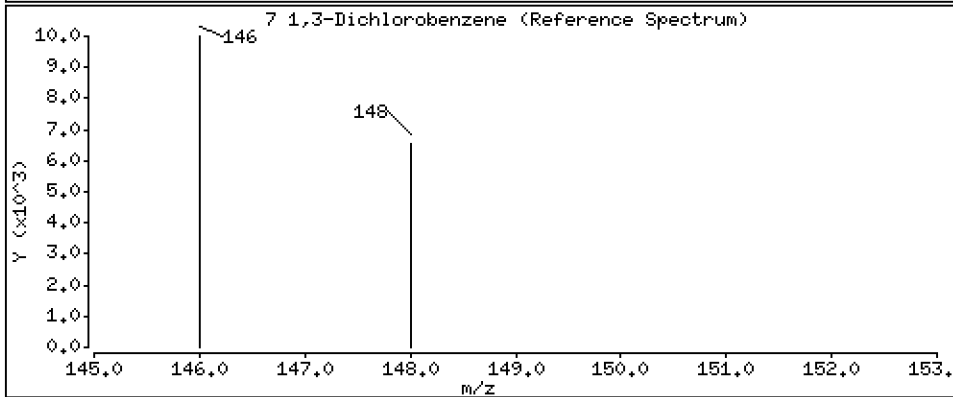
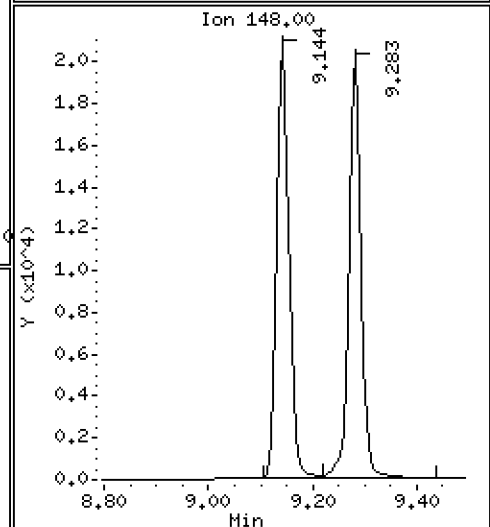
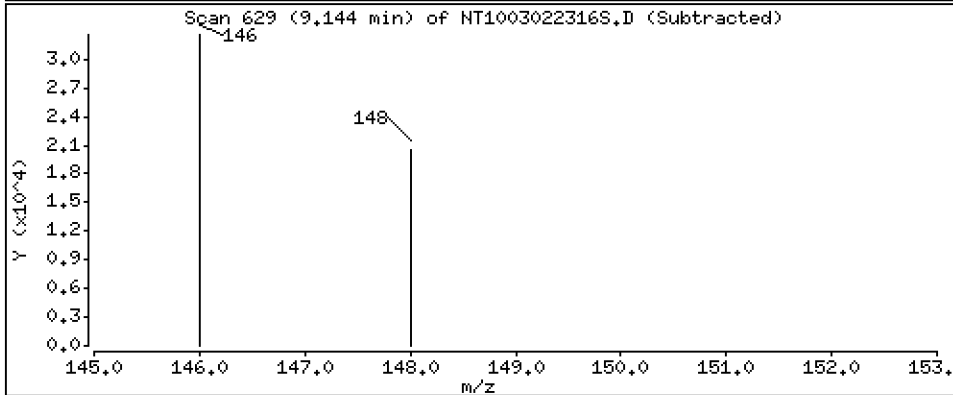
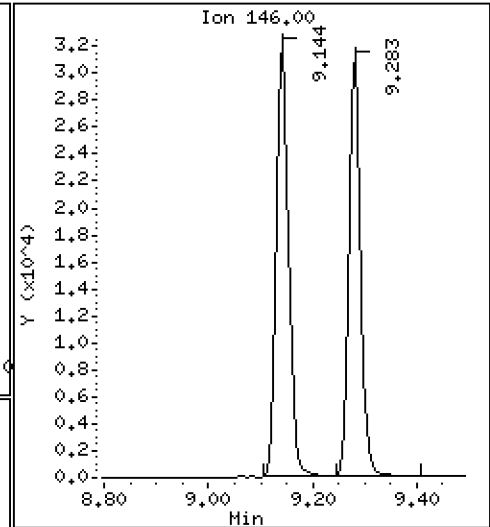
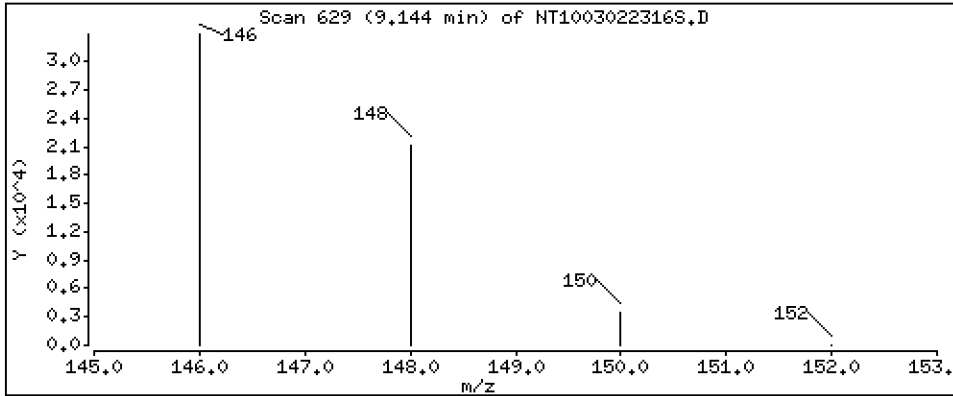
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.1992 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

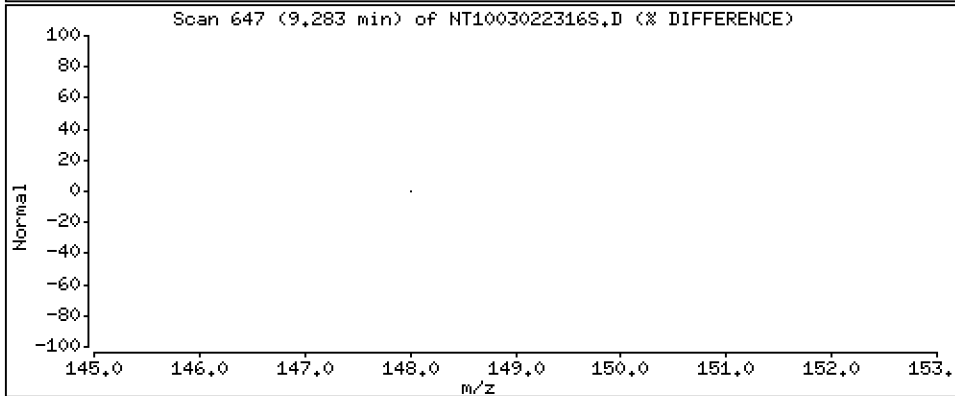
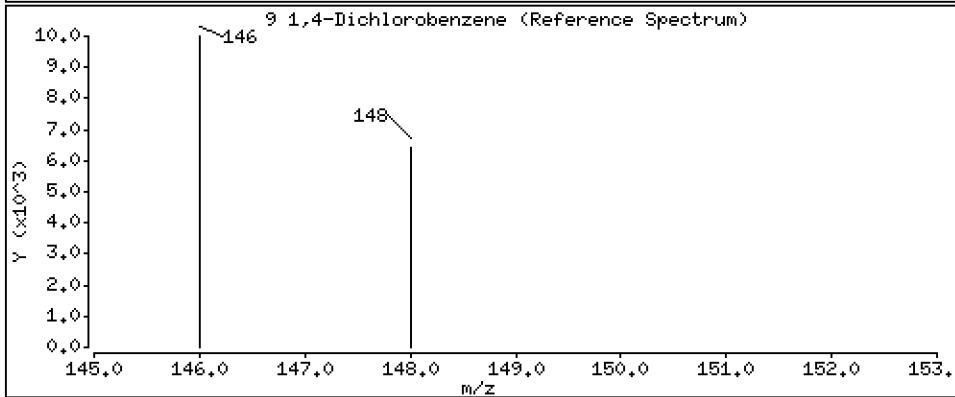
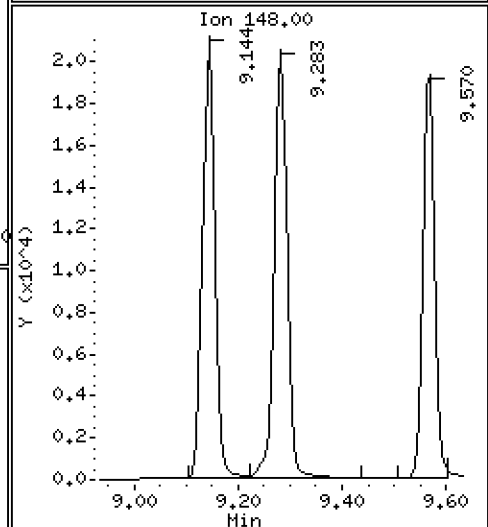
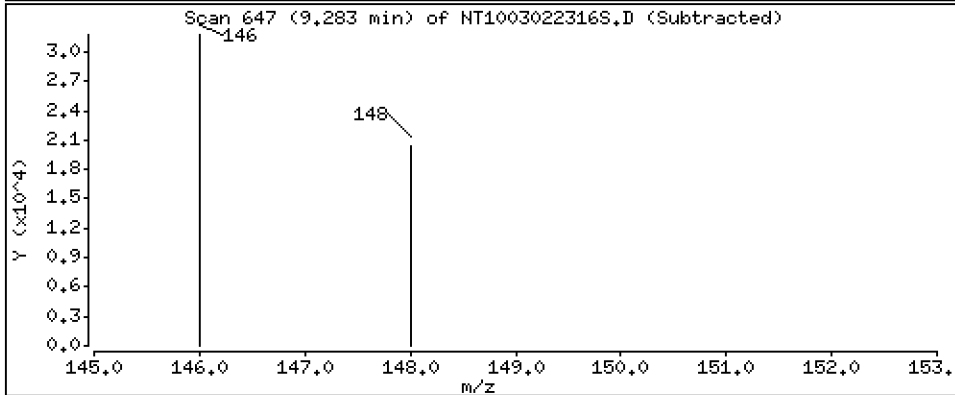
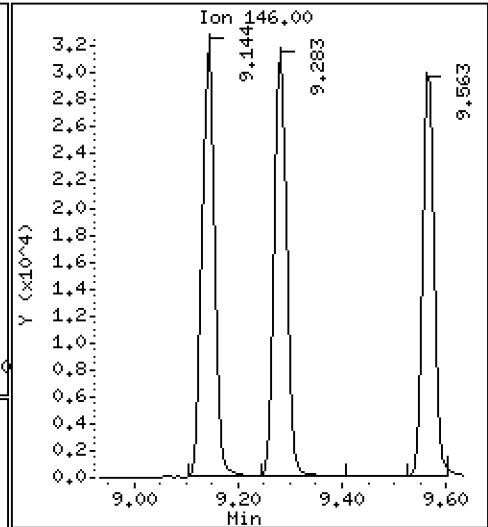
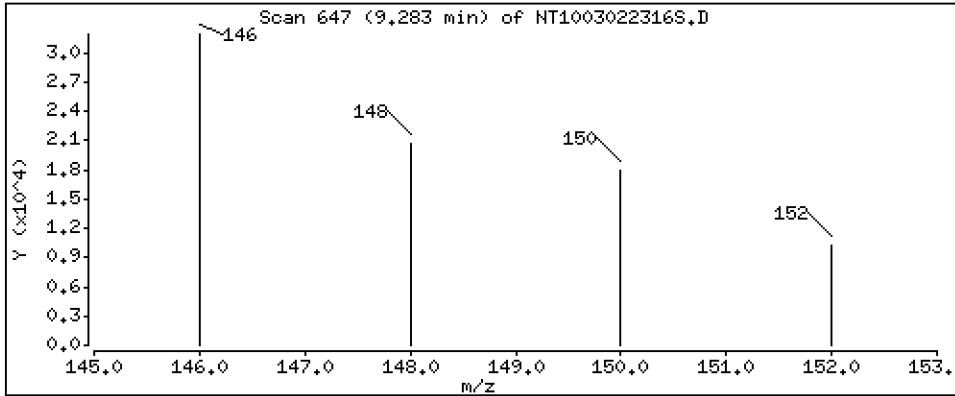
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.1950 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

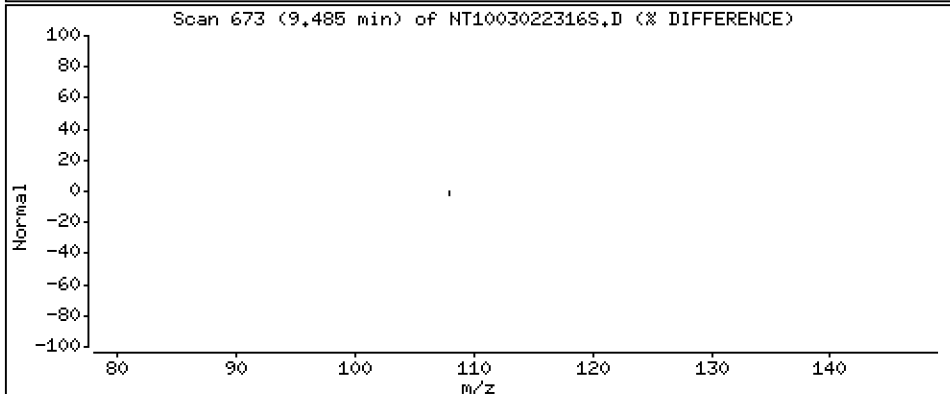
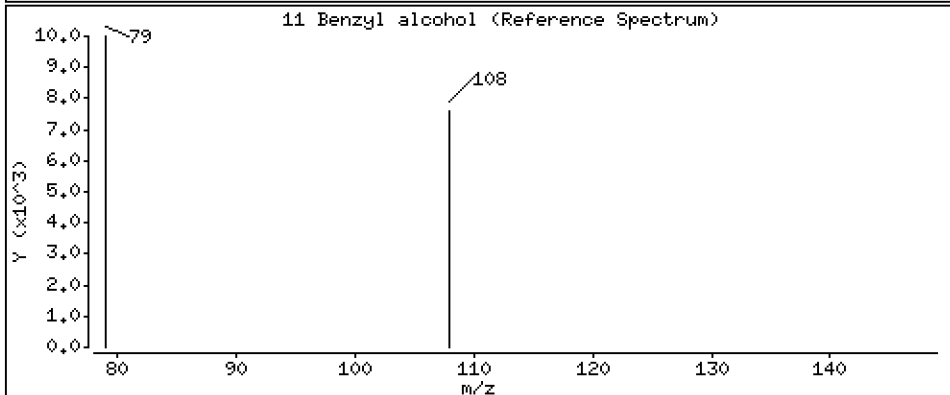
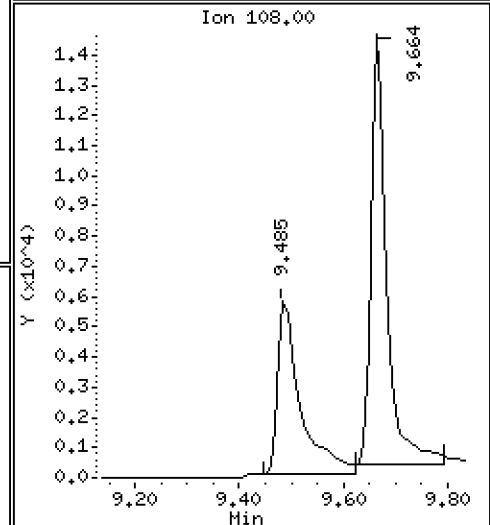
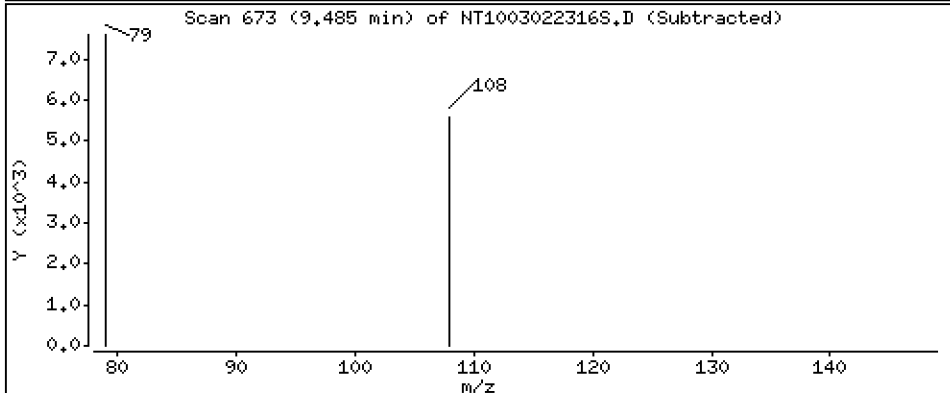
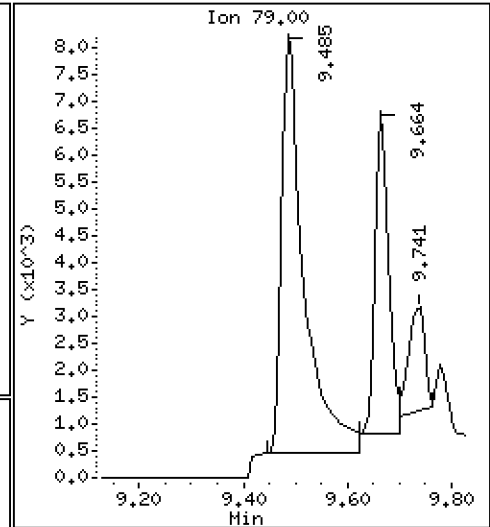
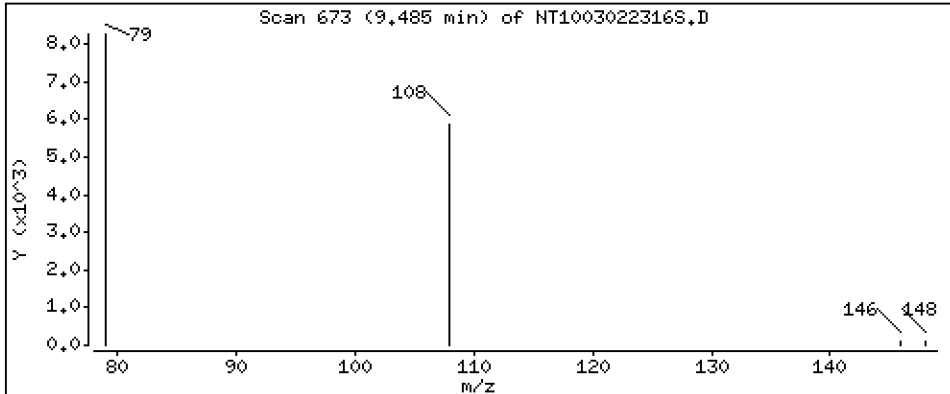
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.1373 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

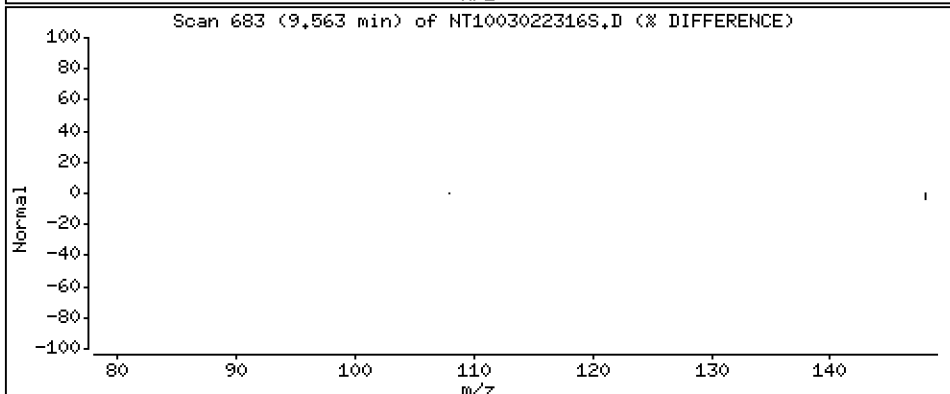
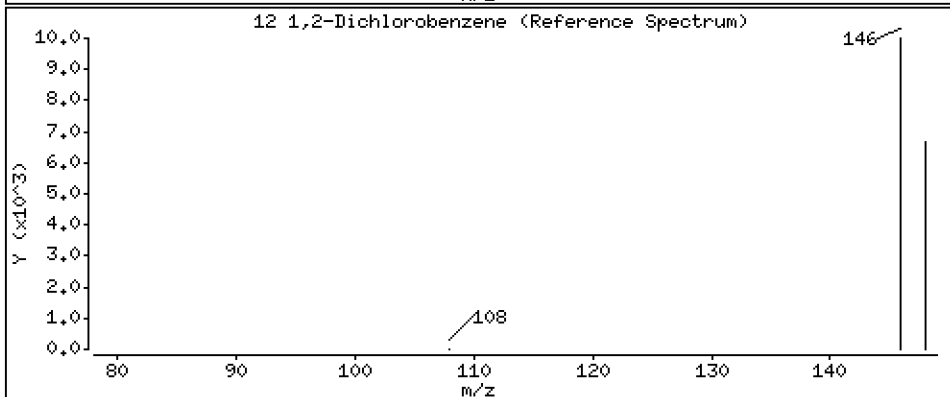
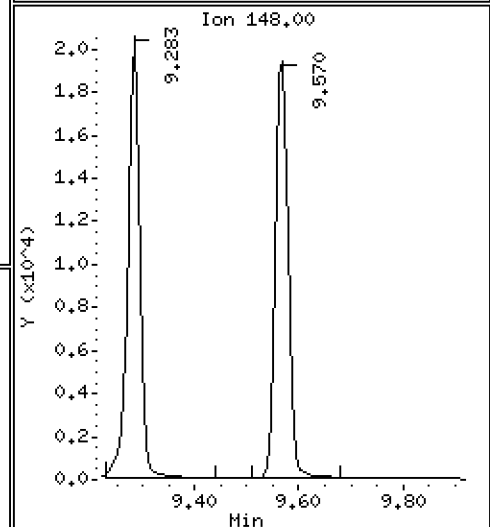
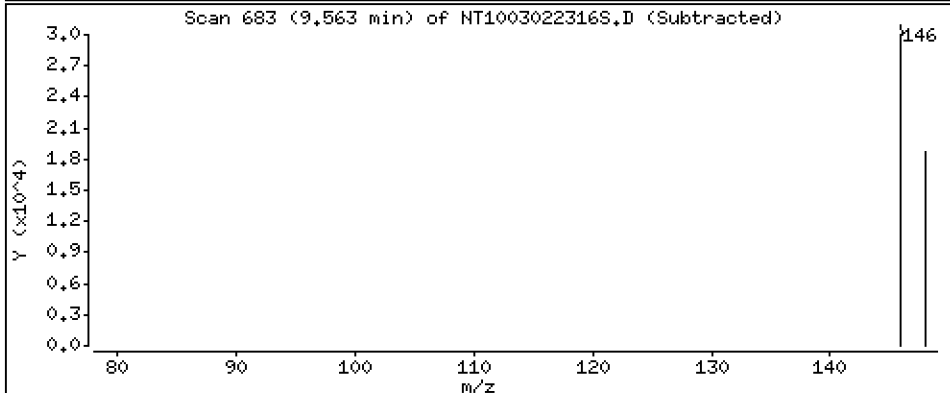
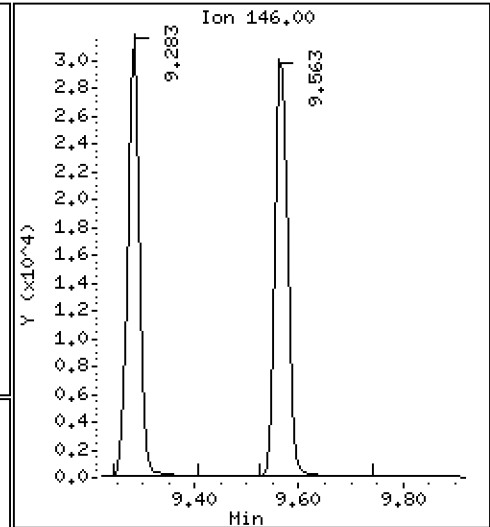
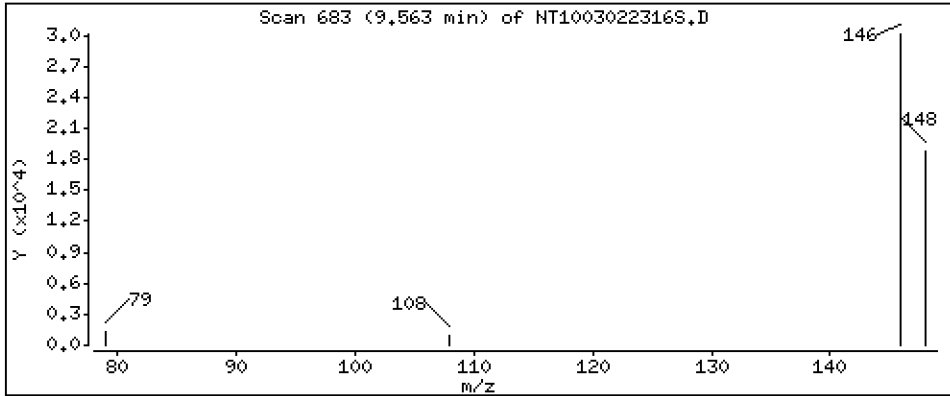
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.1999 ug/L





Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

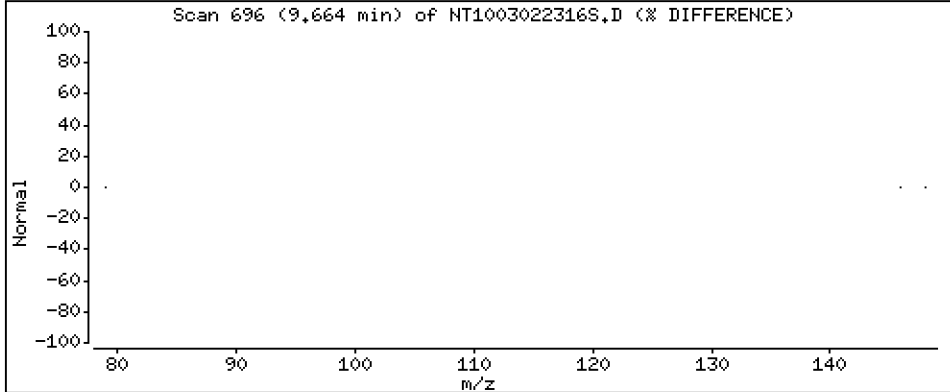
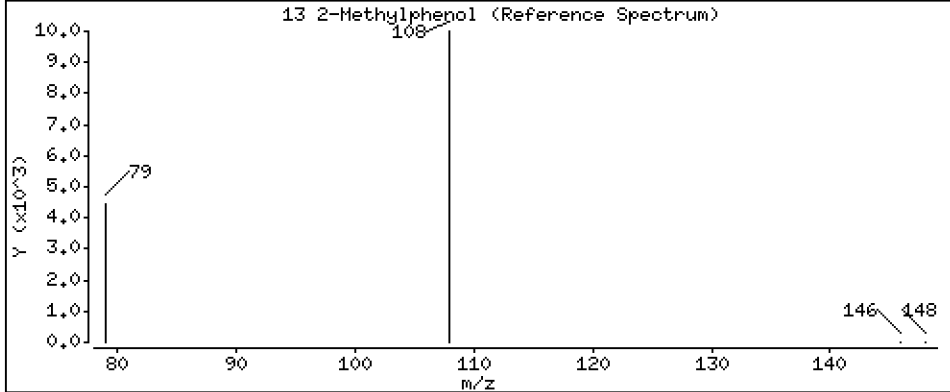
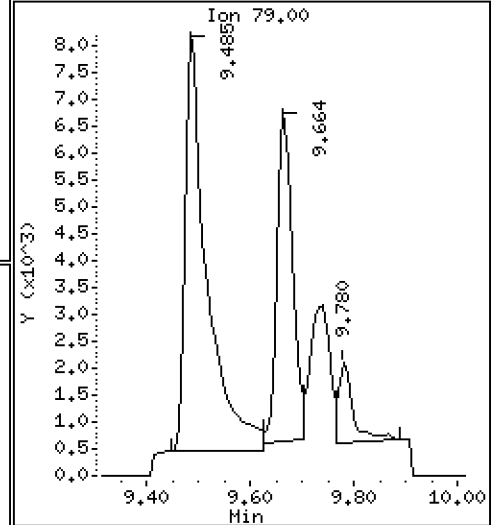
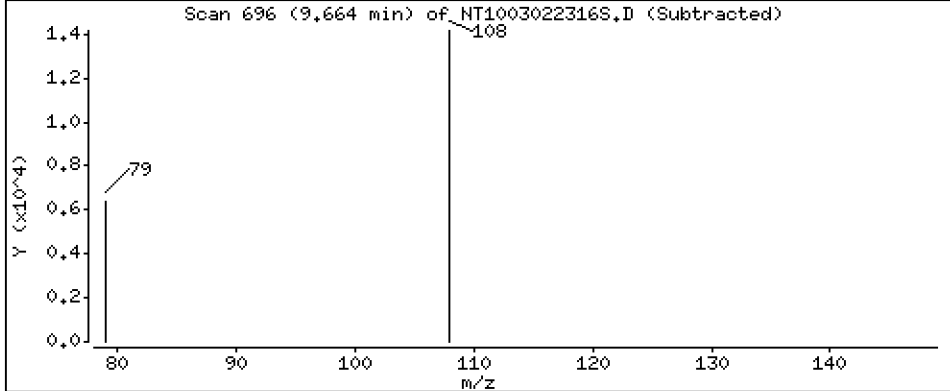
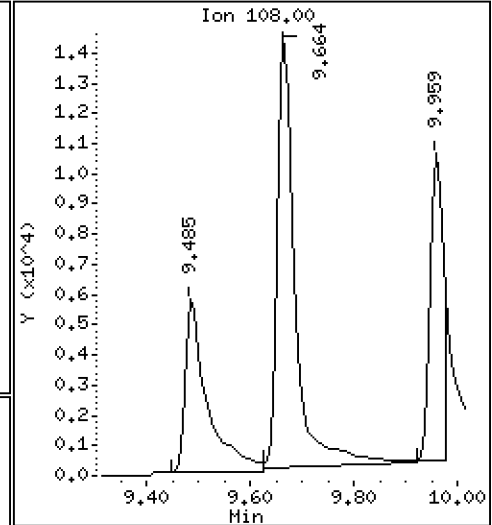
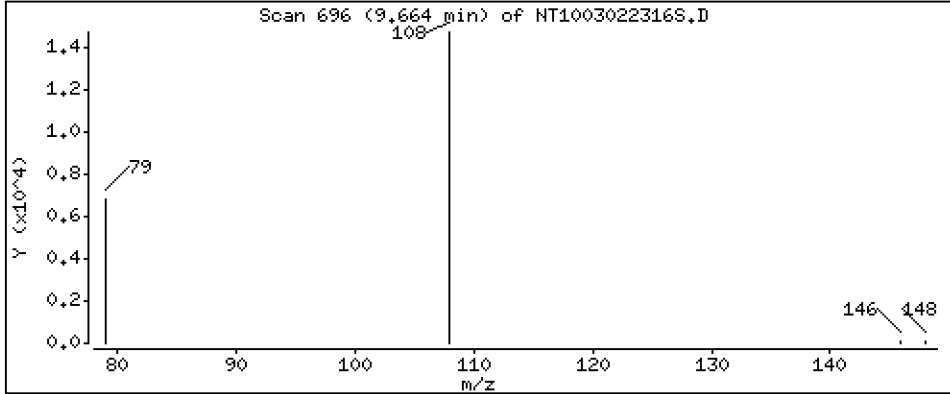
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1815 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

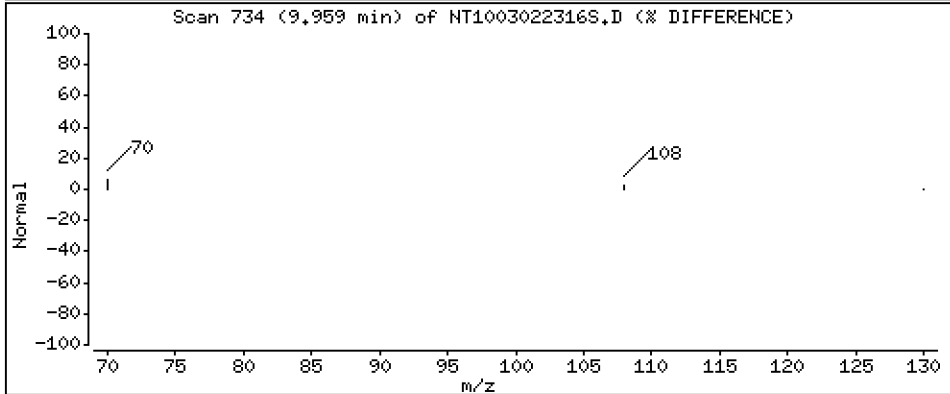
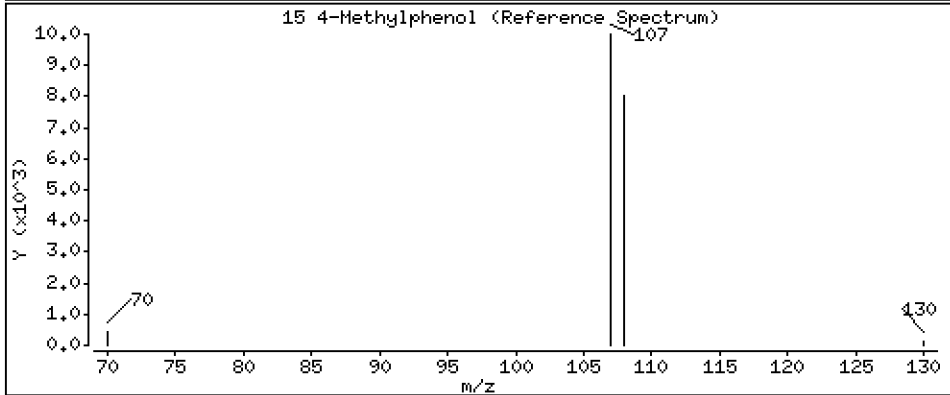
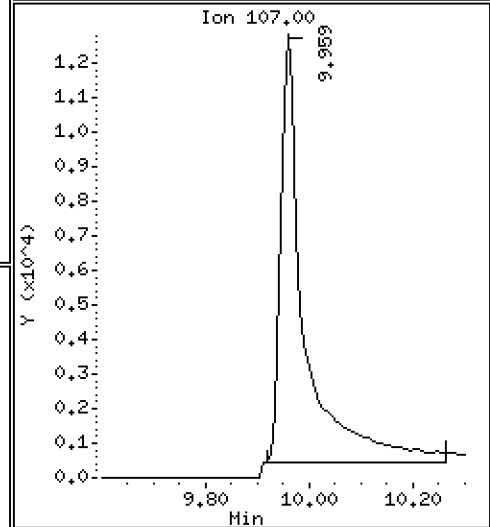
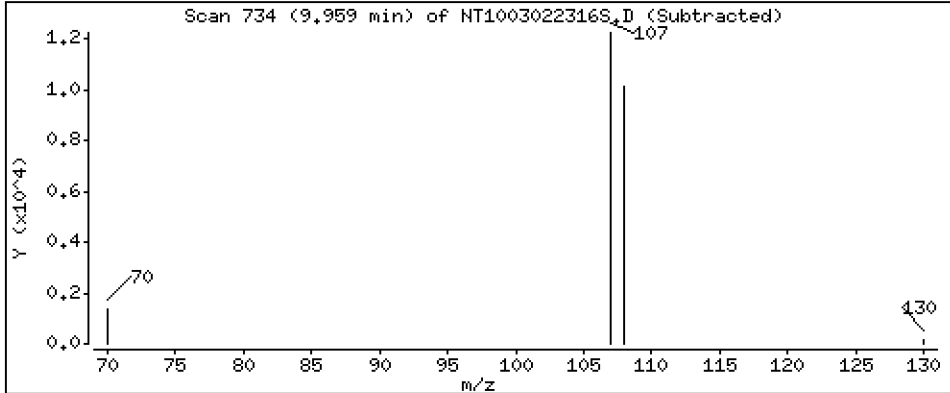
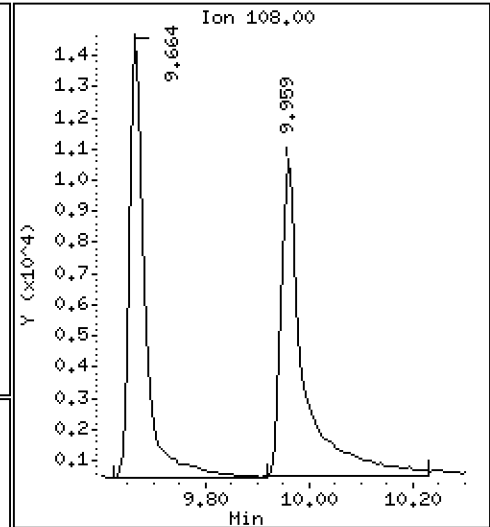
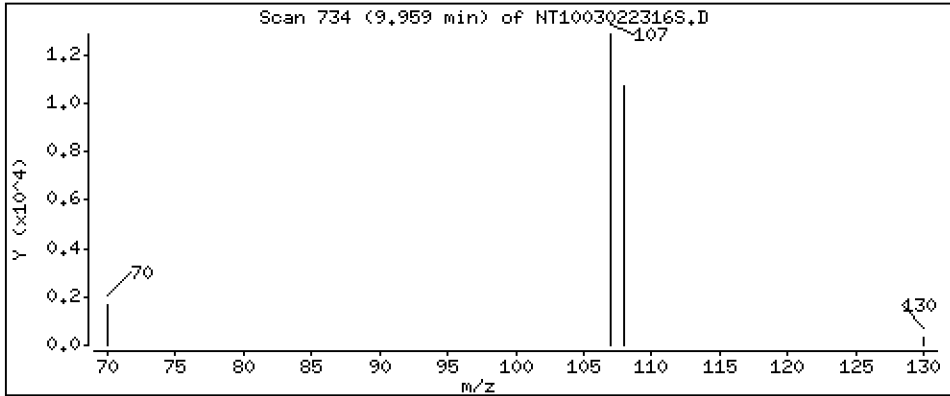
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1647 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

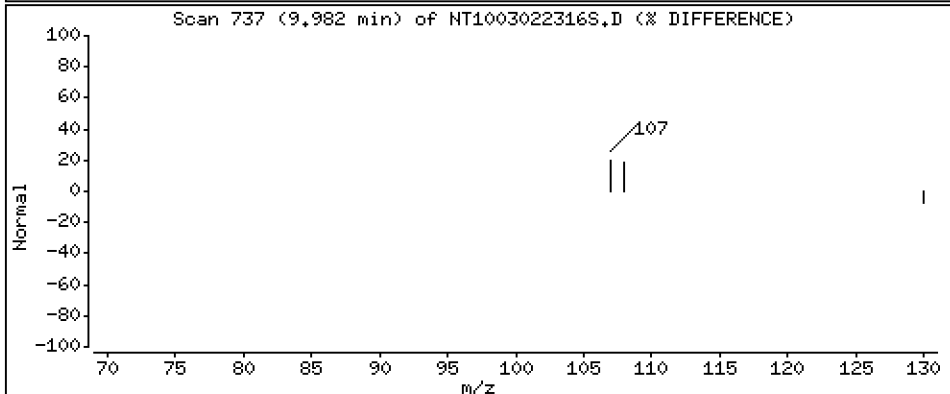
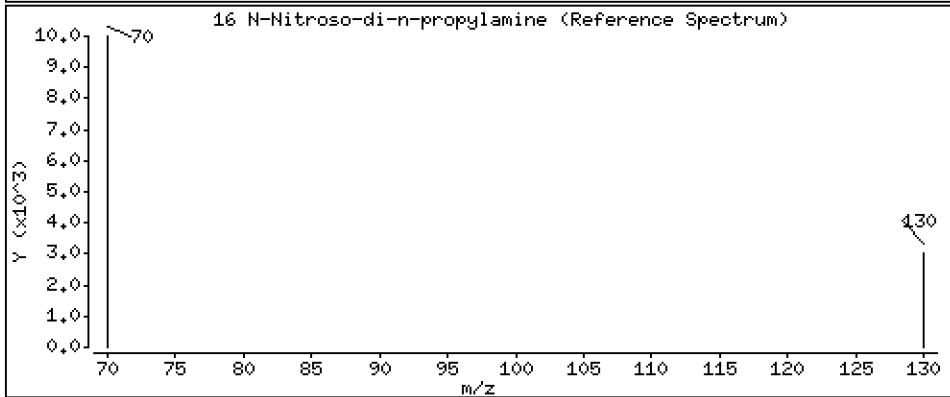
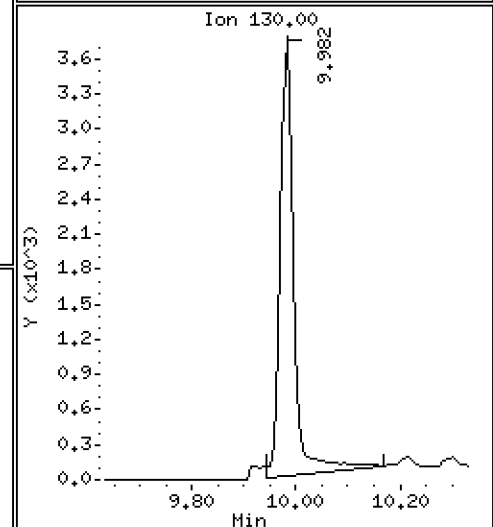
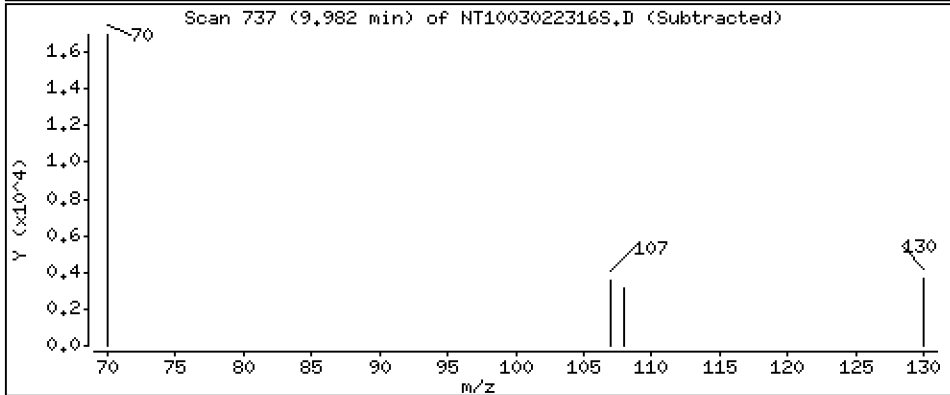
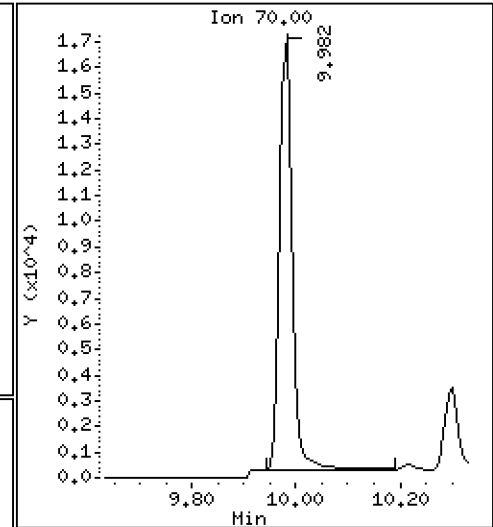
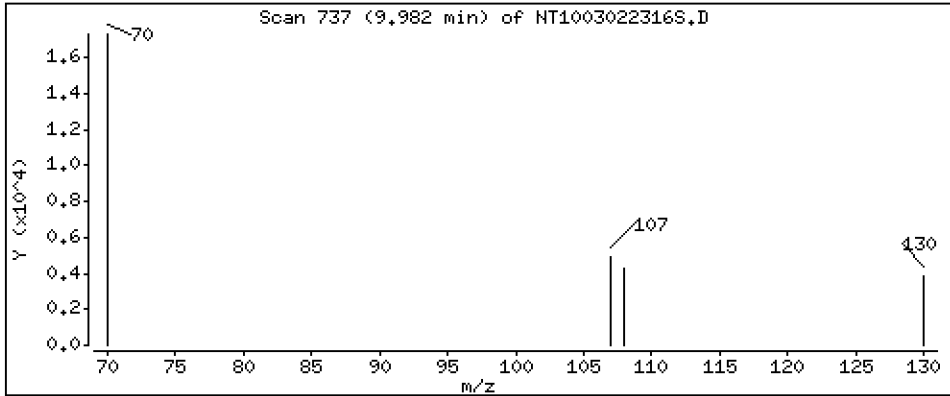
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.2045 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

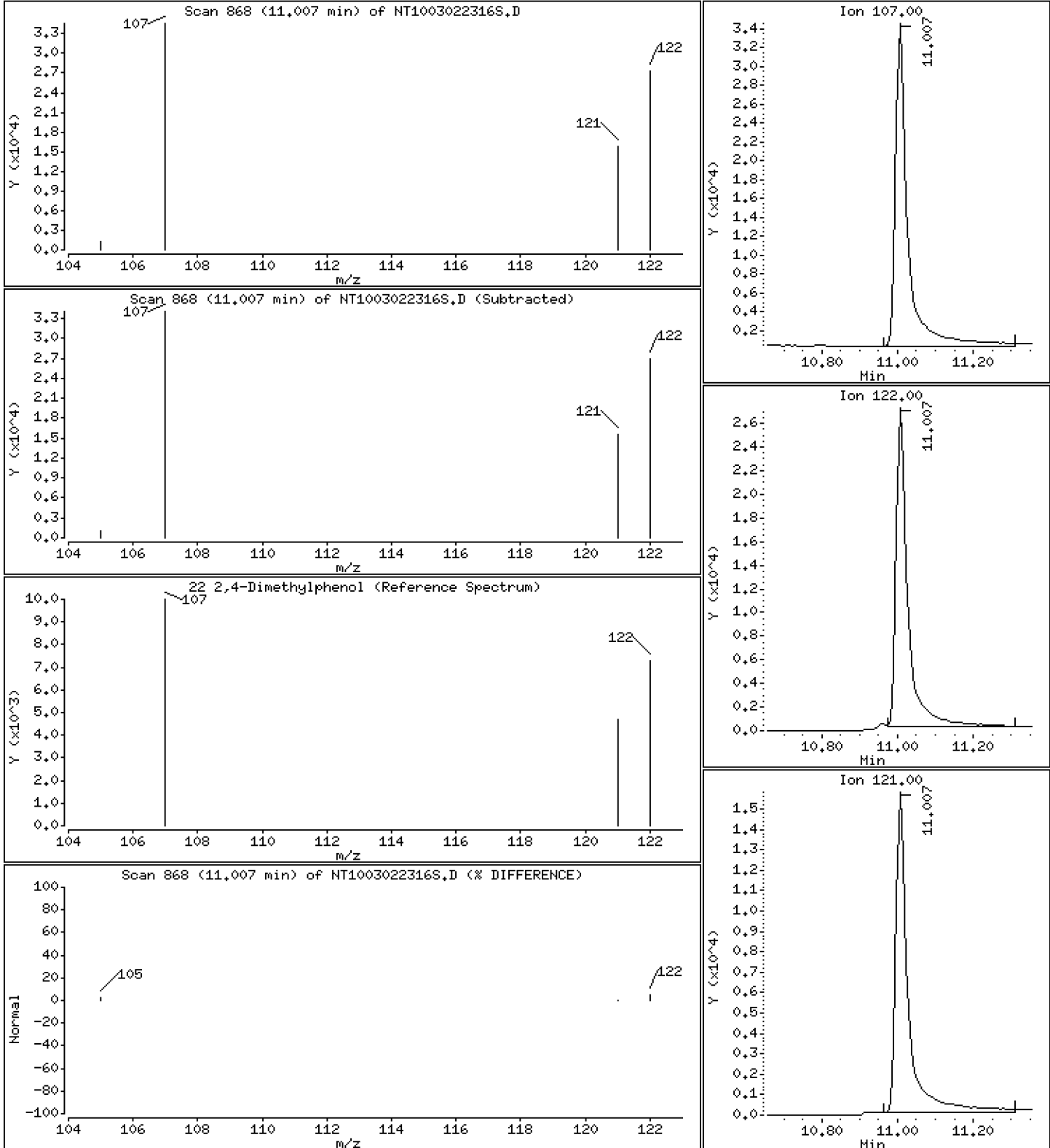
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.3586 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

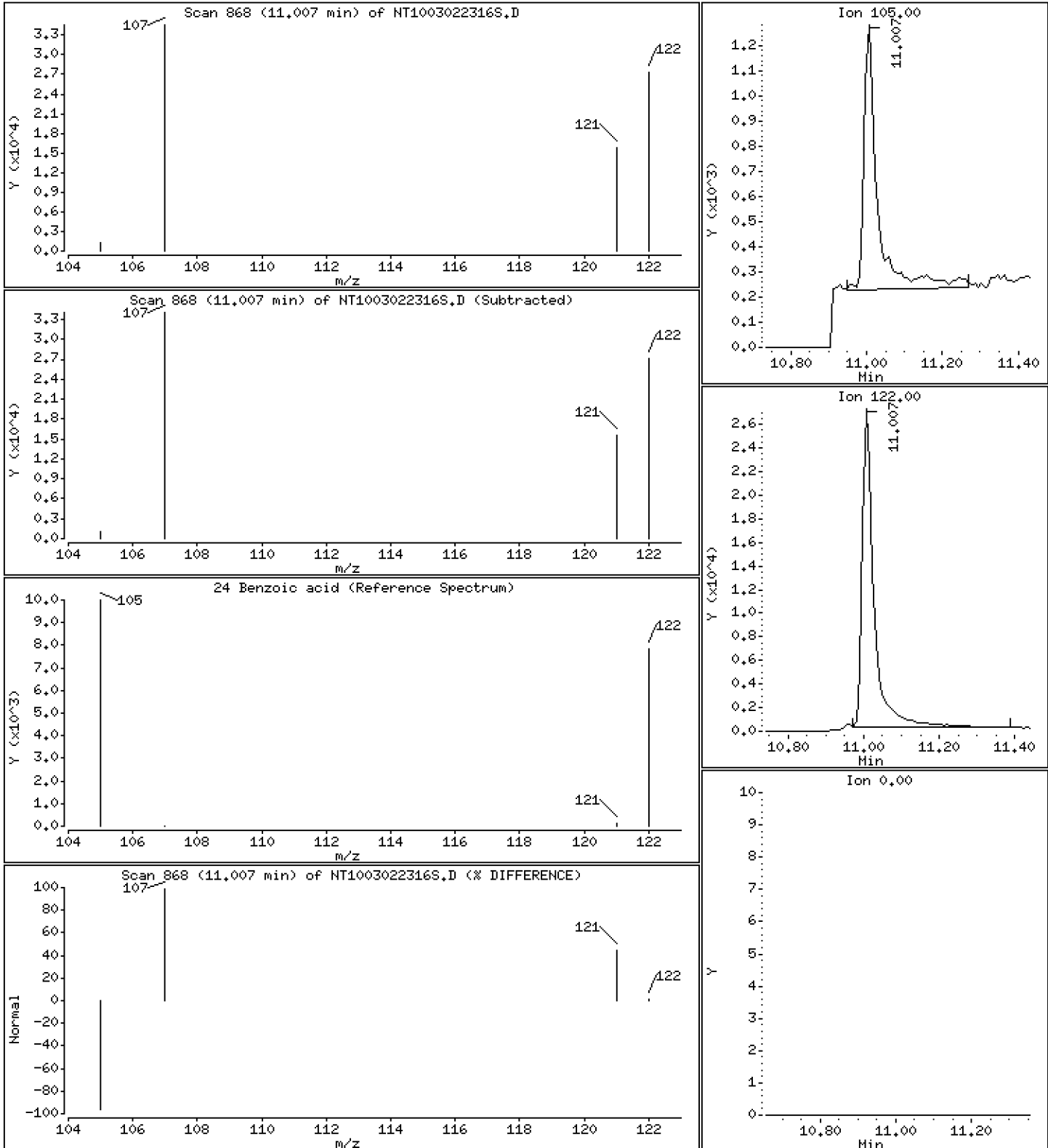
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

24 Benzoic acid

Concentration: 0,02262 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

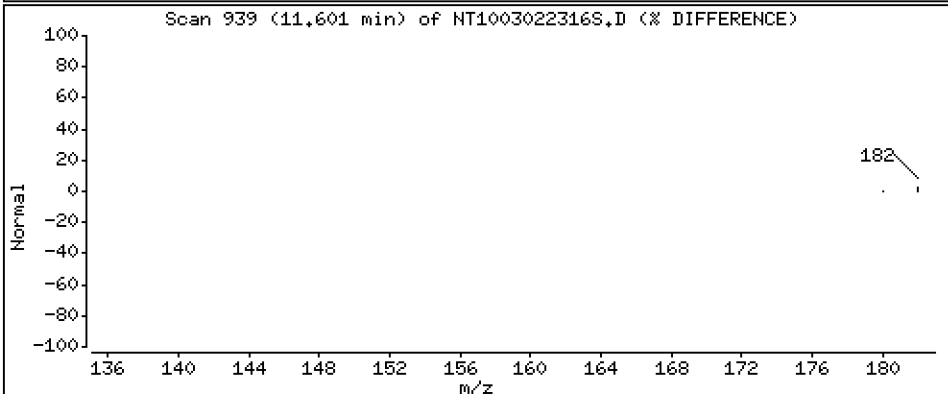
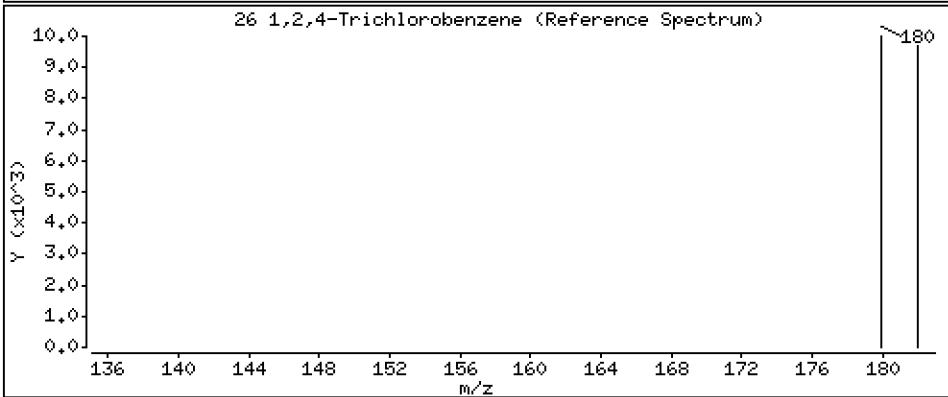
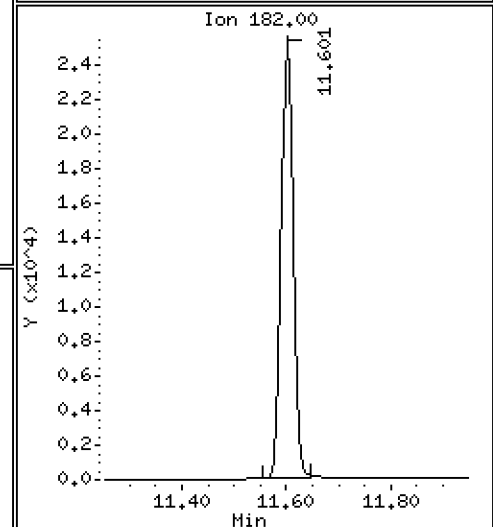
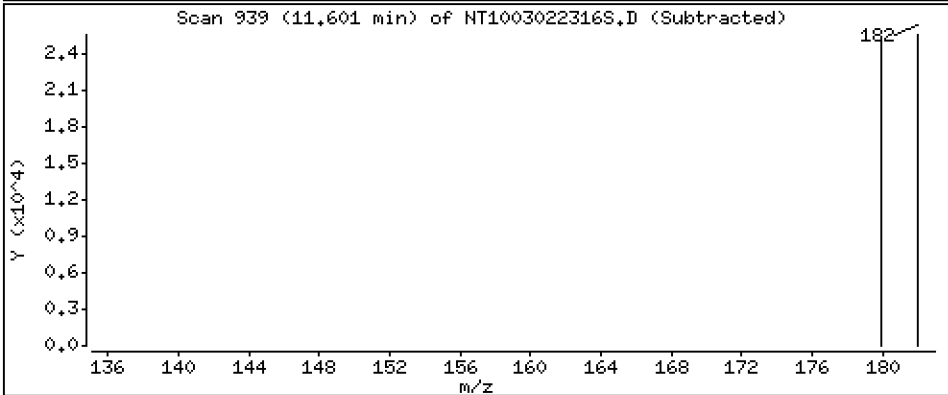
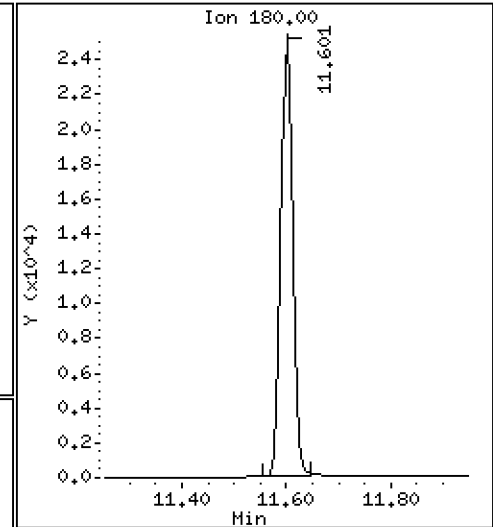
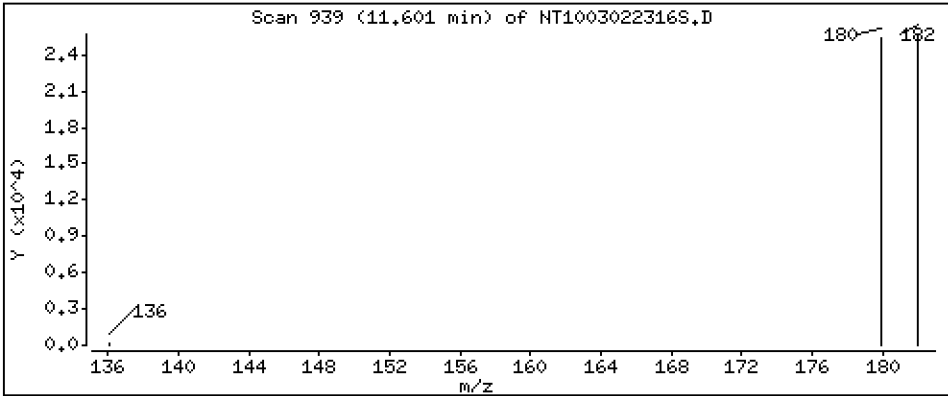
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.2077 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

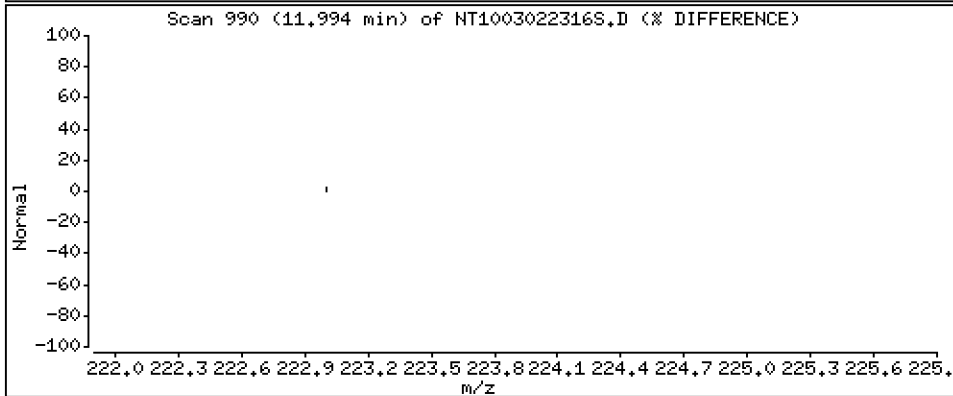
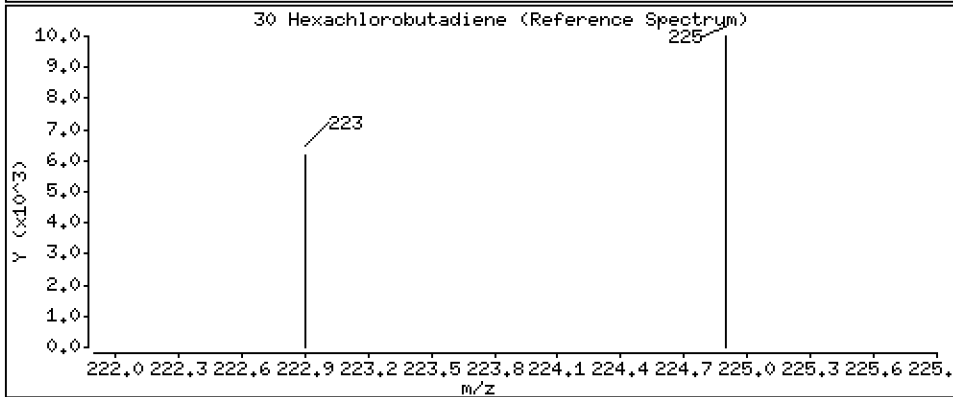
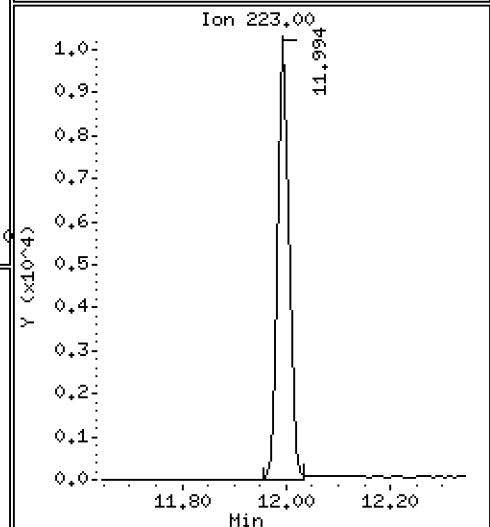
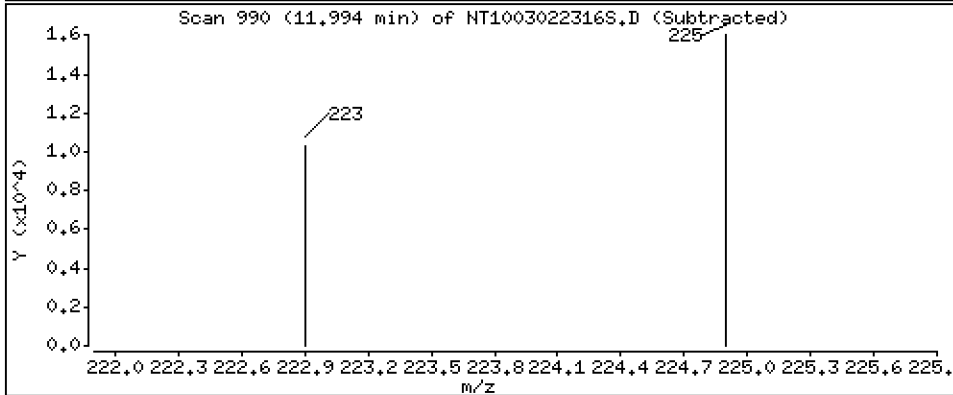
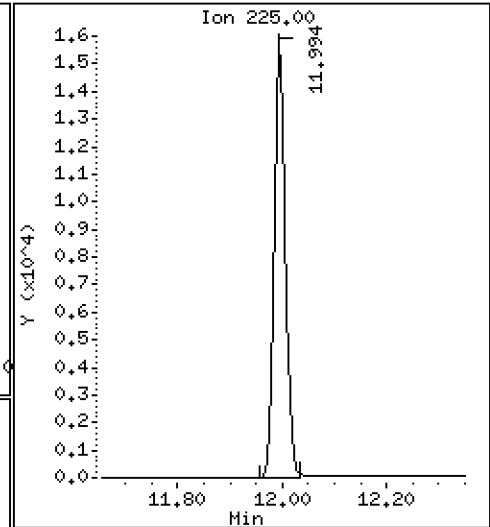
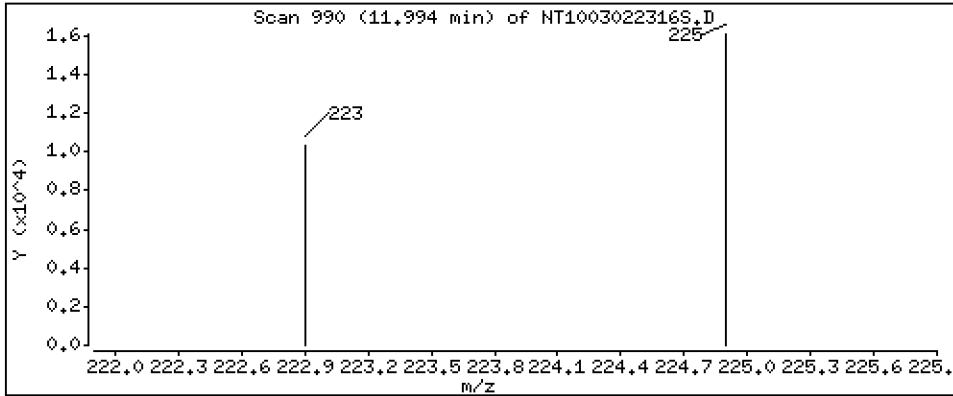
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,1836 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

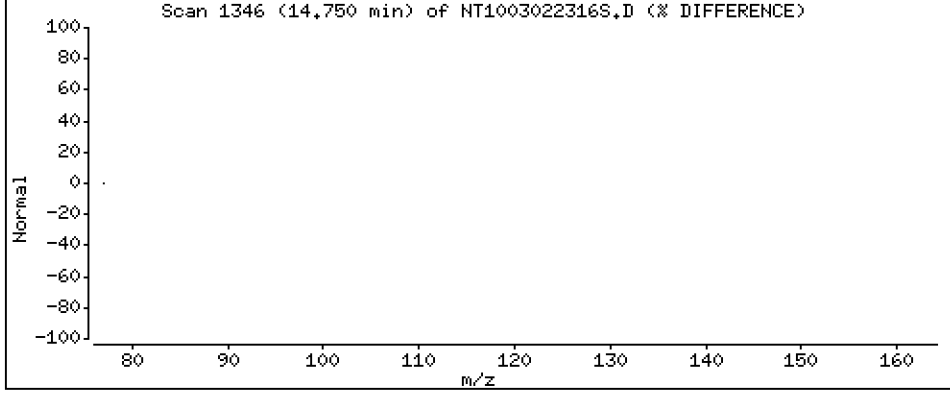
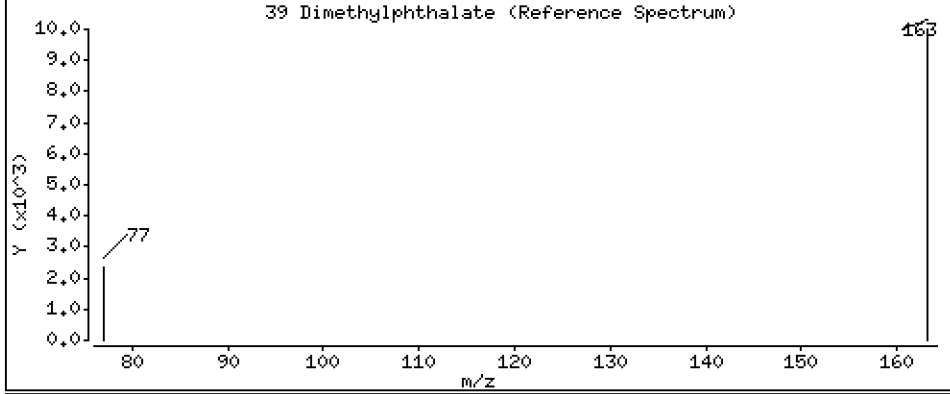
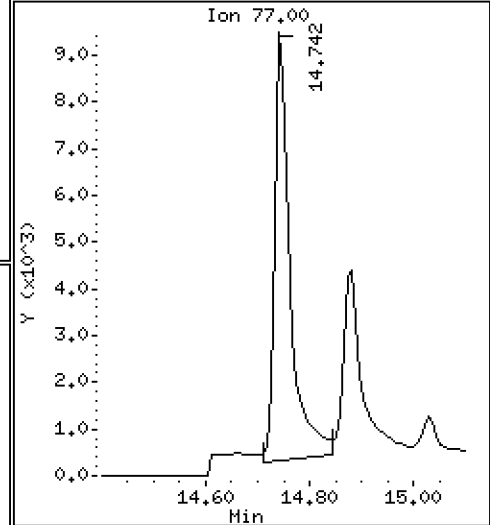
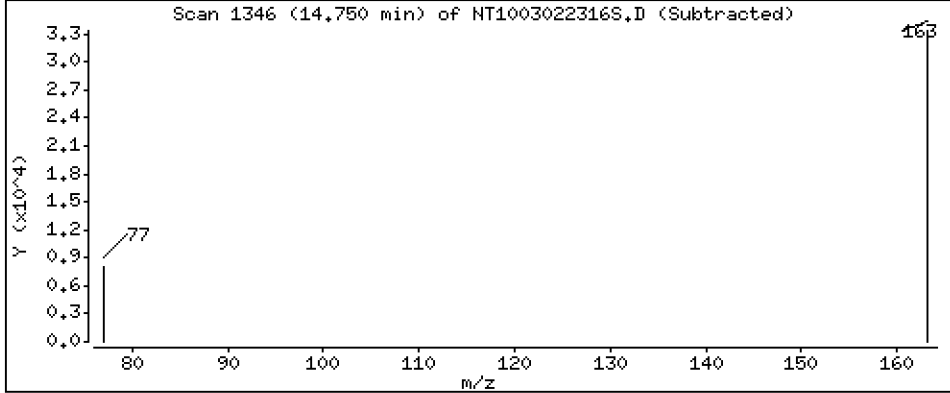
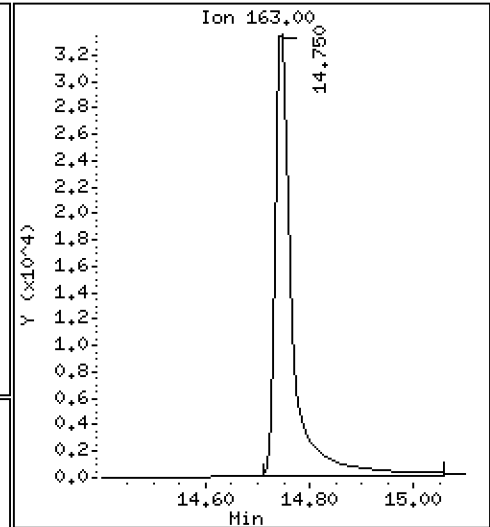
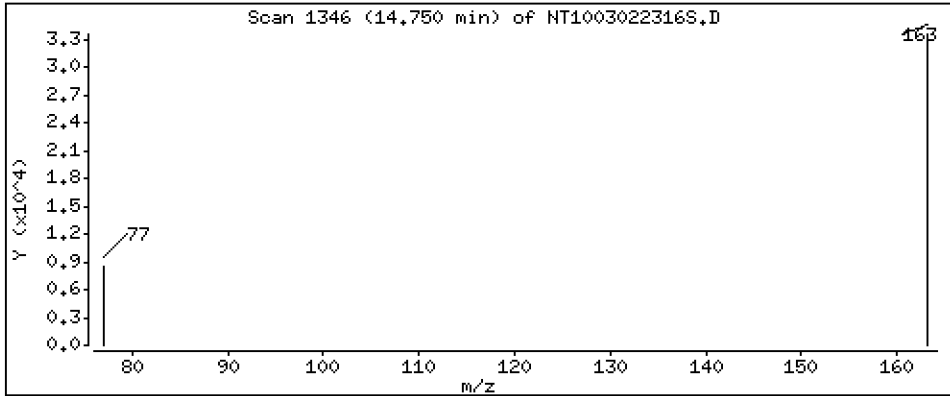
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,1892 ug/L





Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

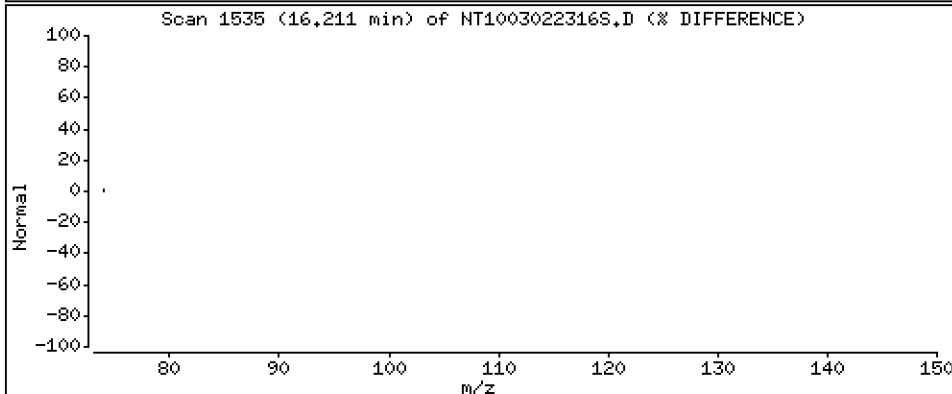
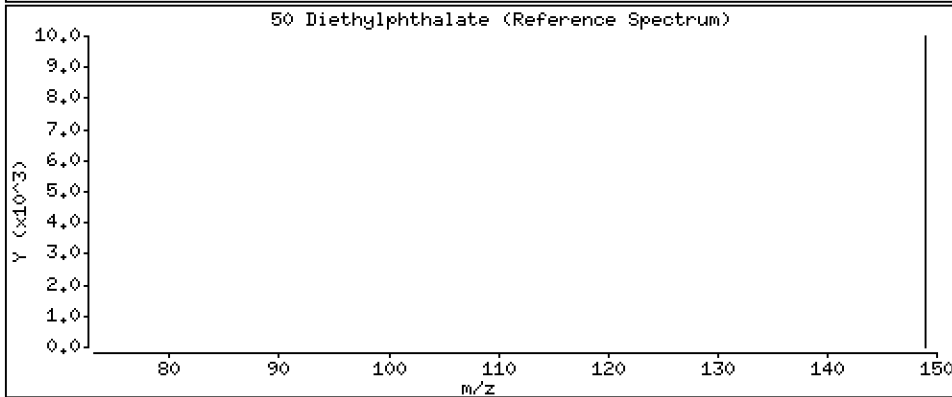
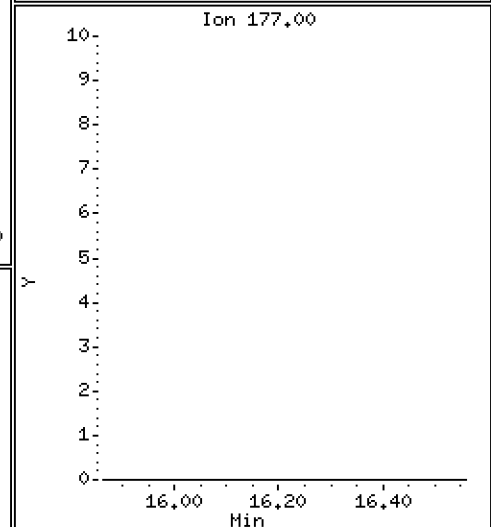
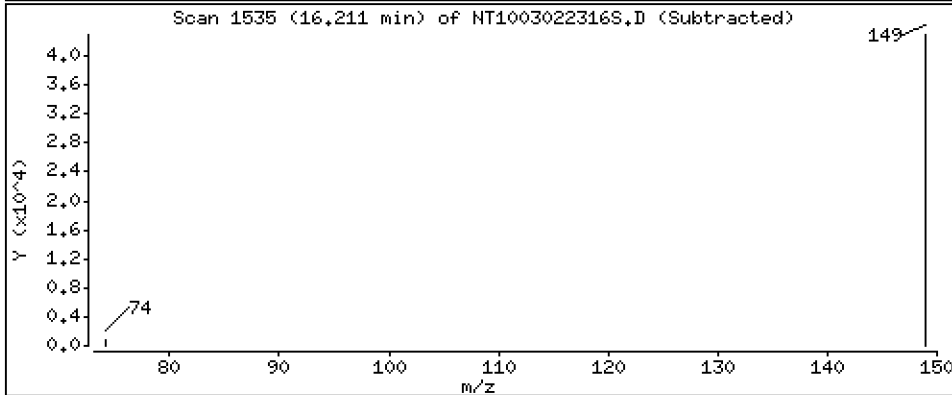
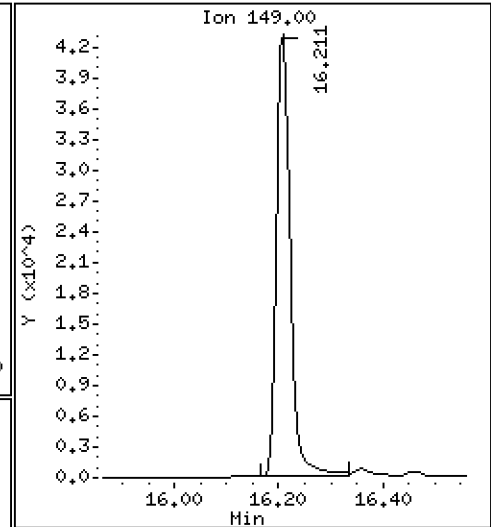
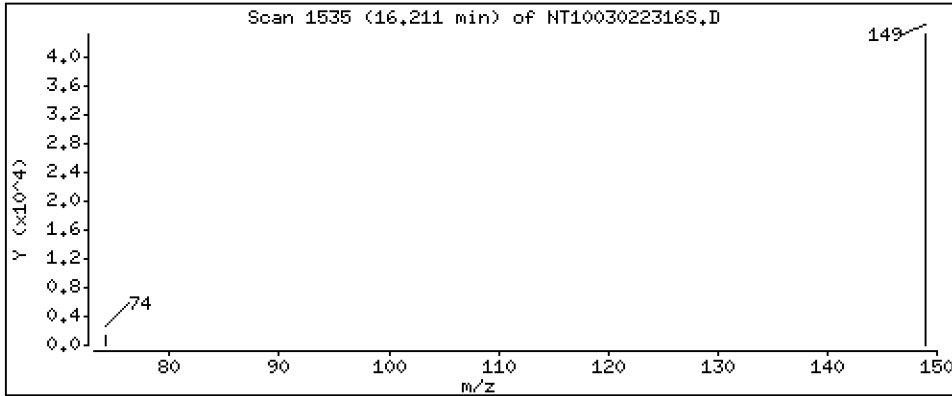
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2064 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

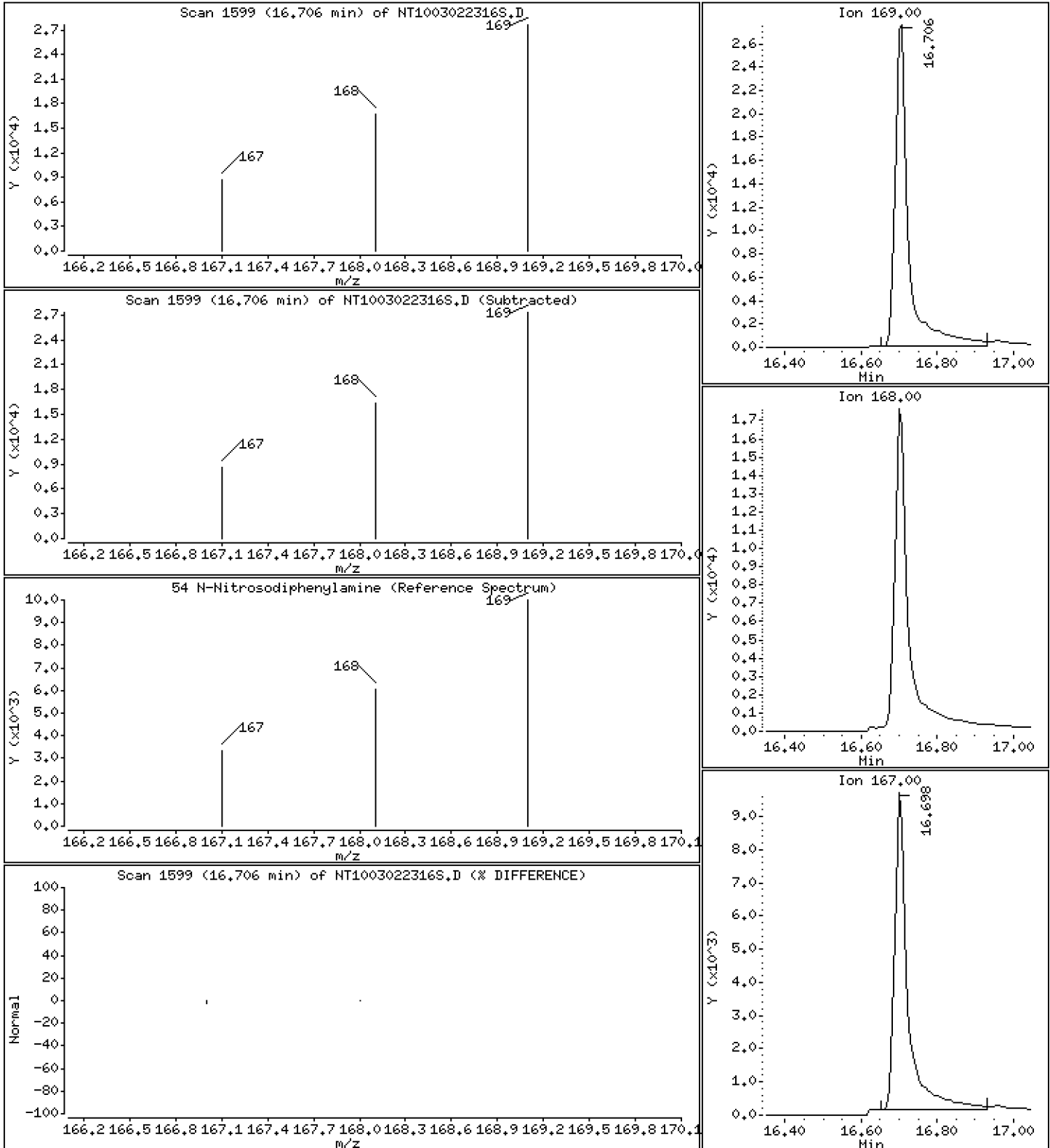
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.1793 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

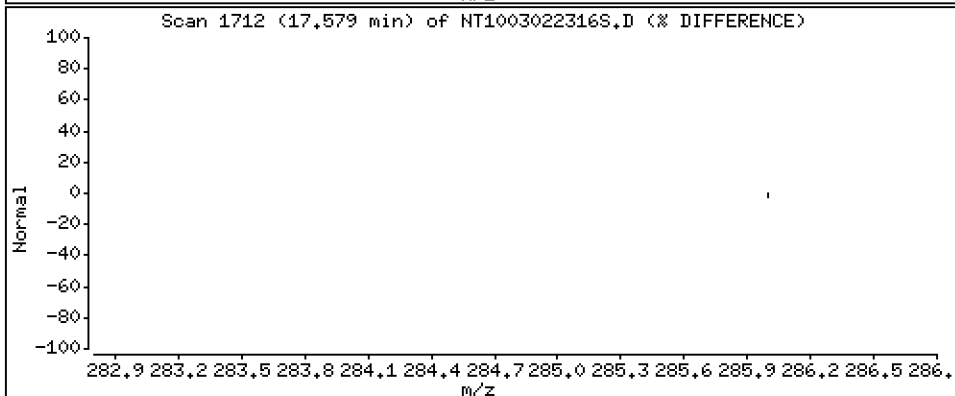
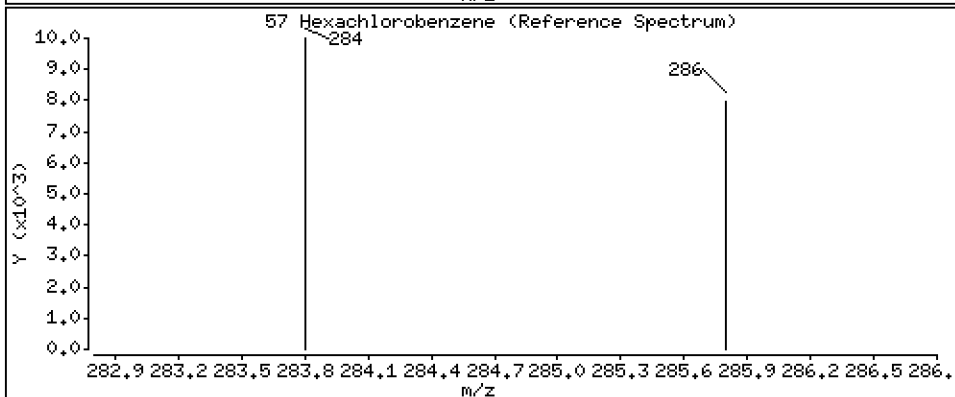
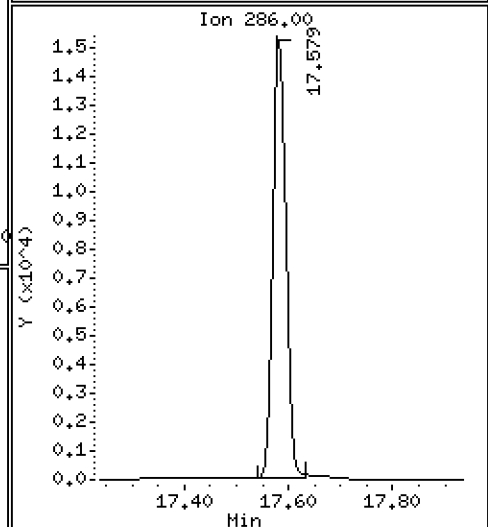
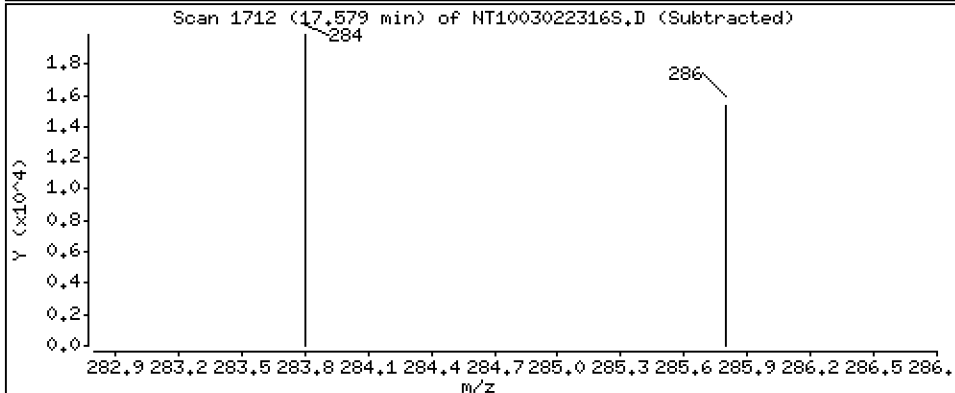
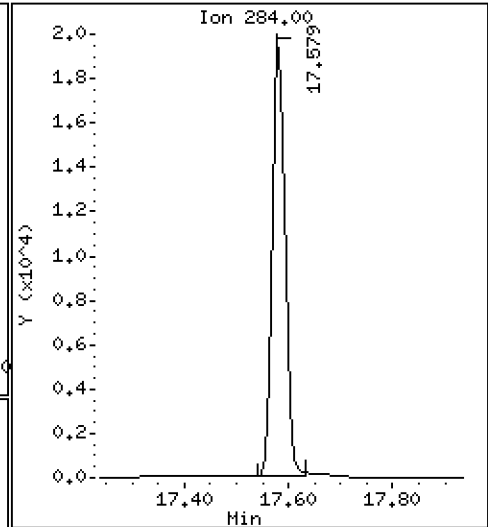
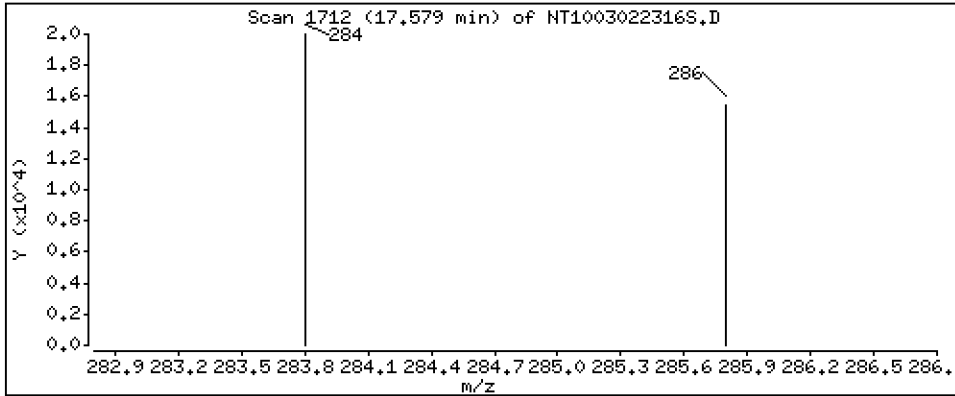
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.1852 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

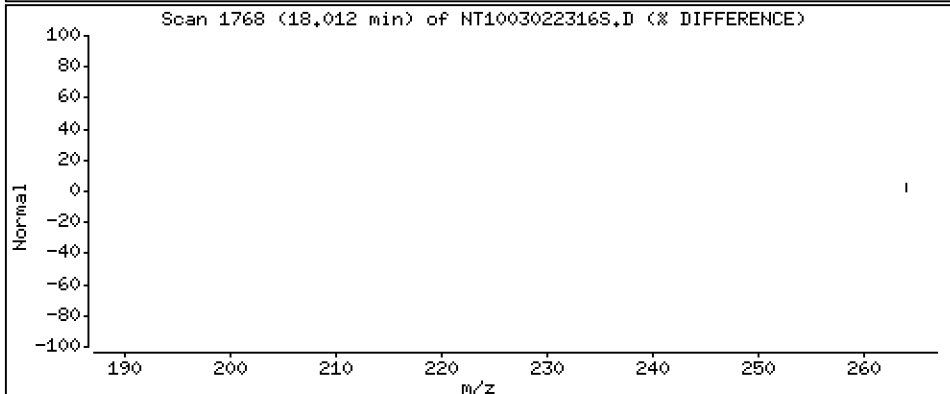
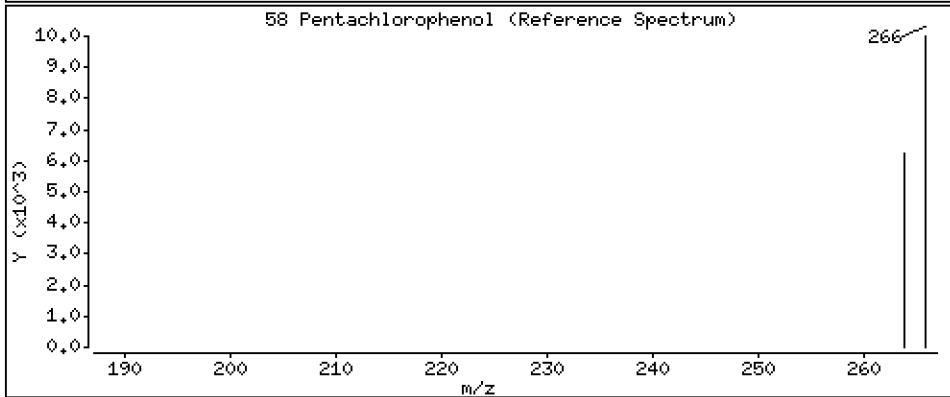
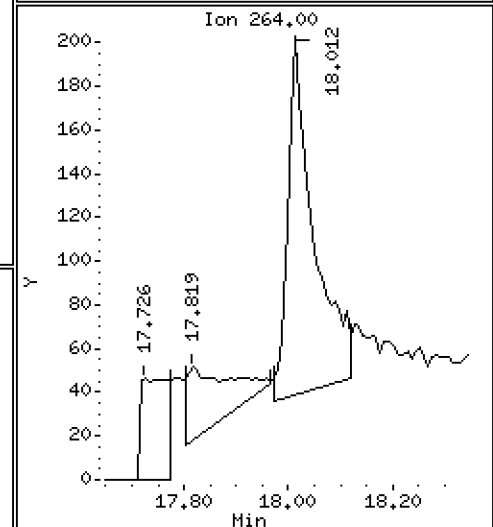
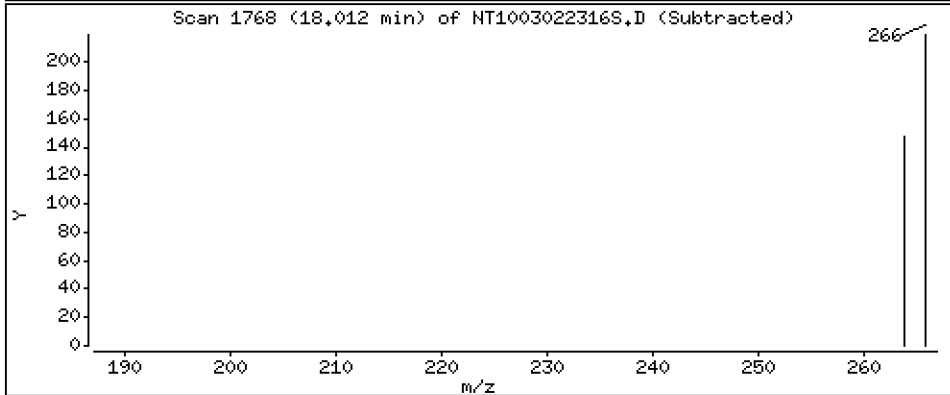
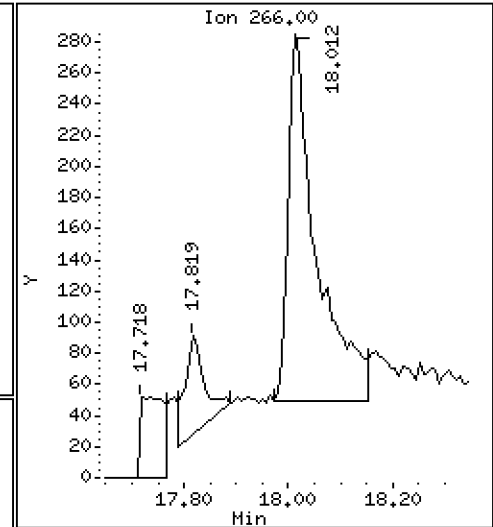
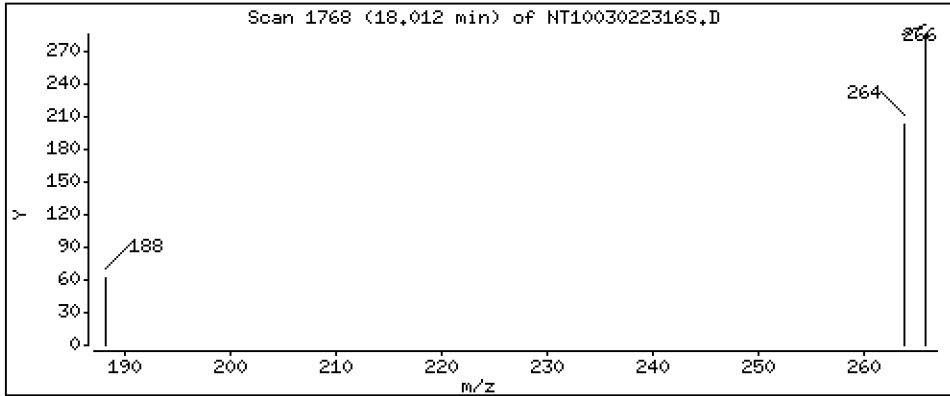
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,01179 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

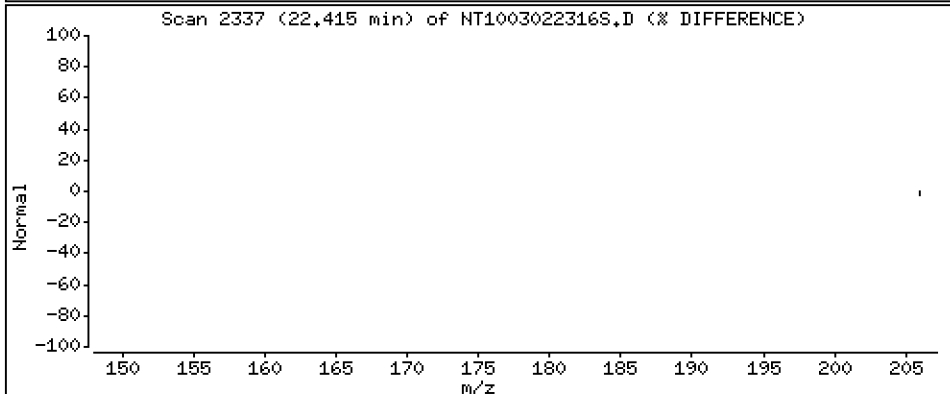
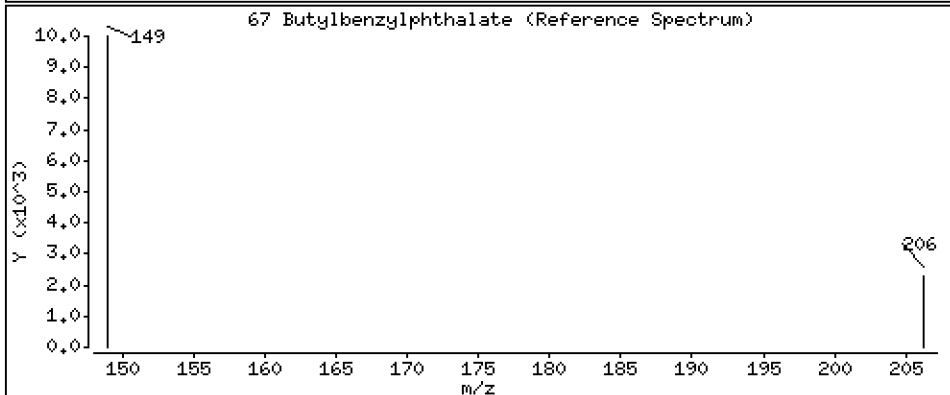
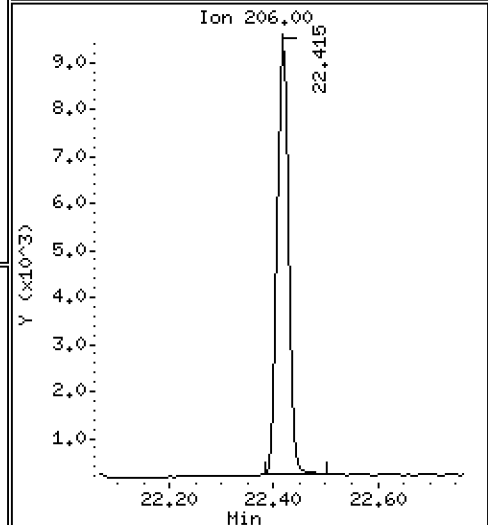
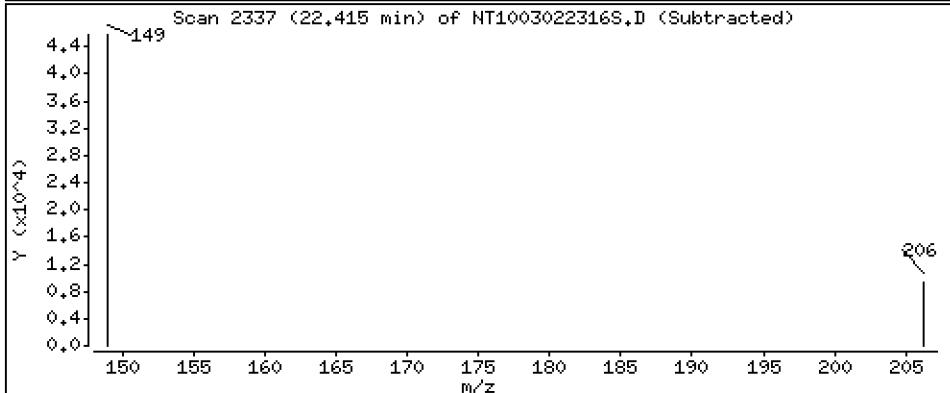
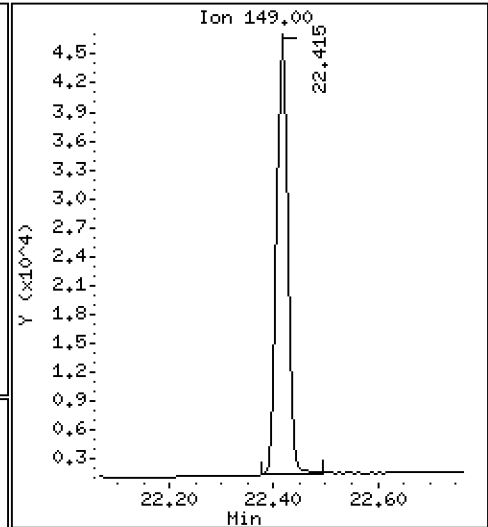
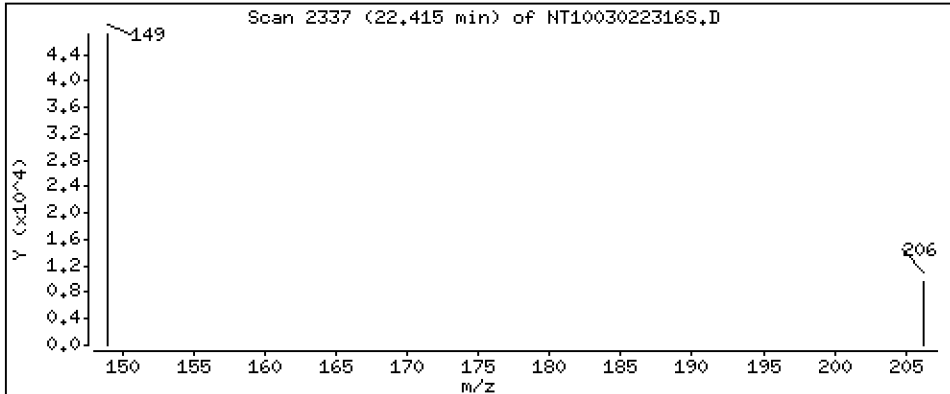
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,1531 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

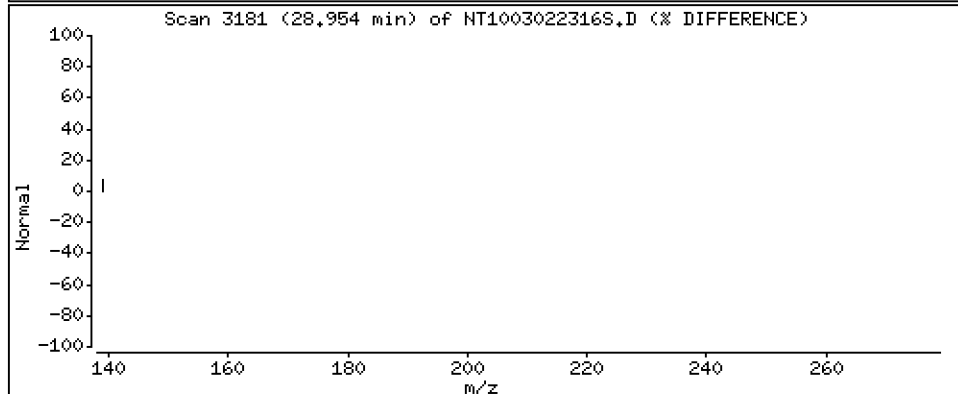
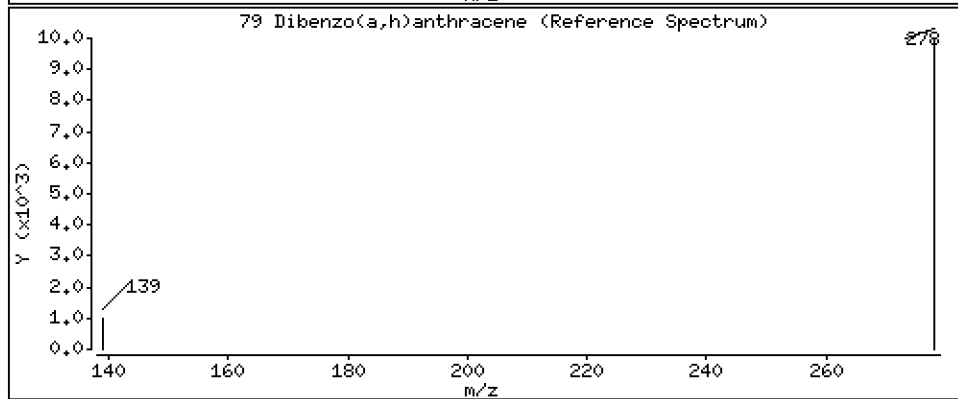
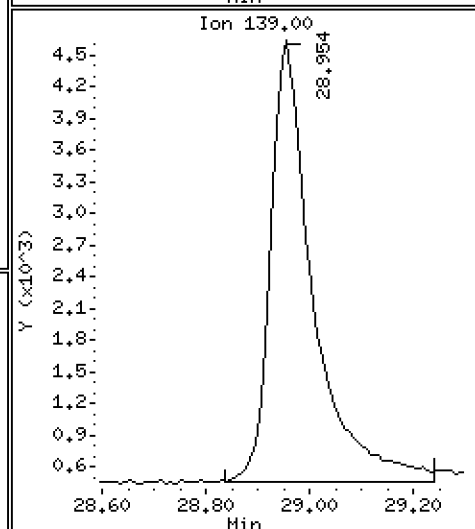
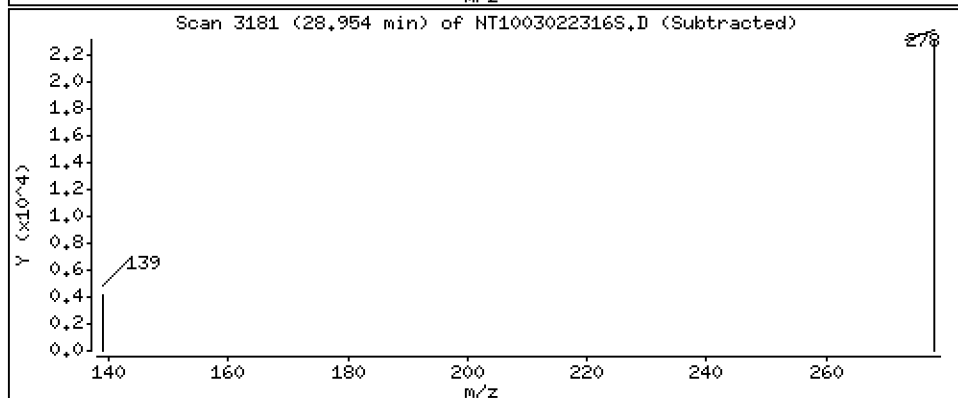
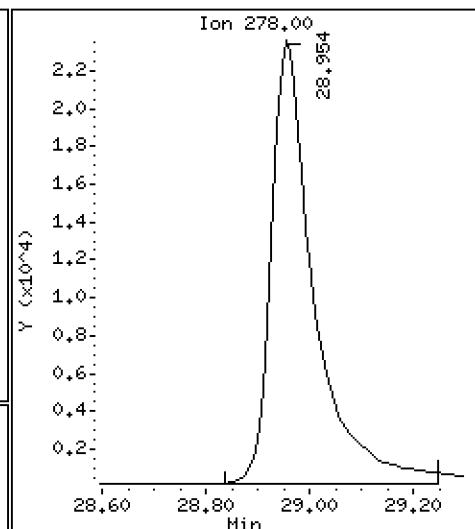
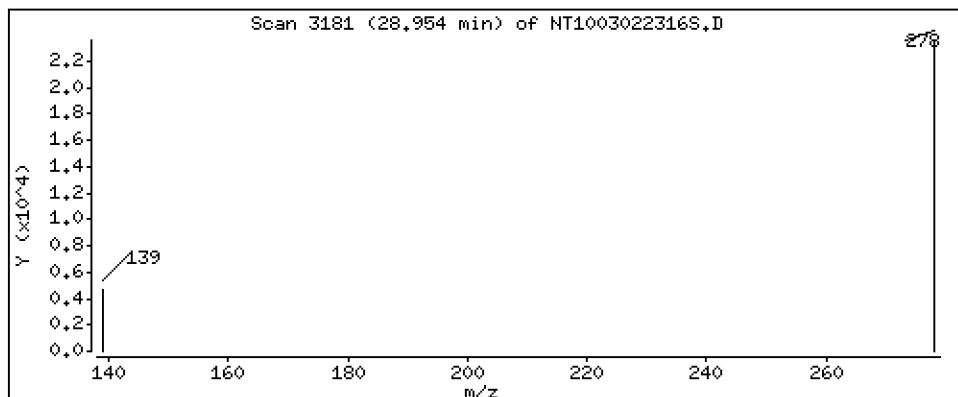
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1892 ug/L



Date : 02-MAR-2023 23:54

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

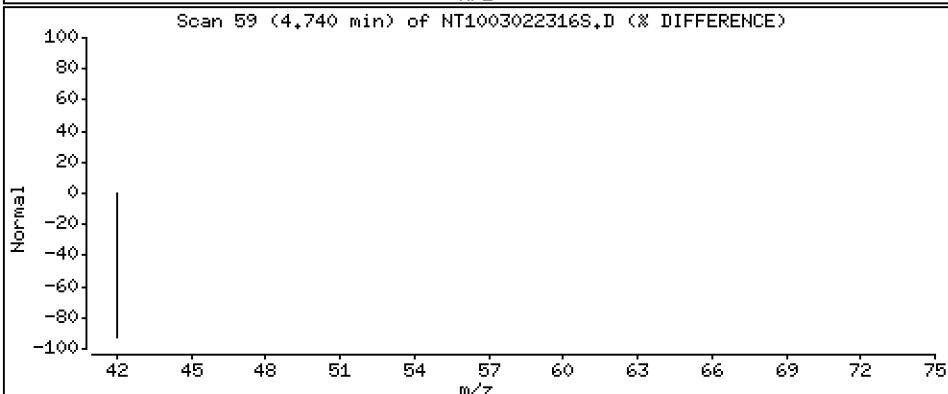
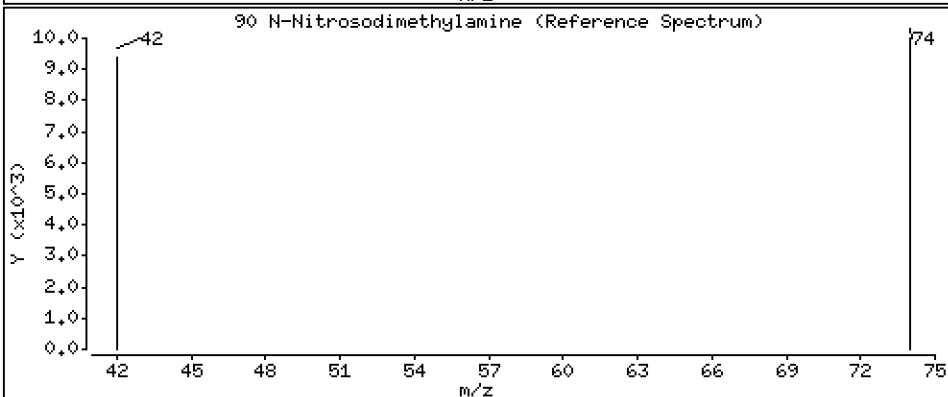
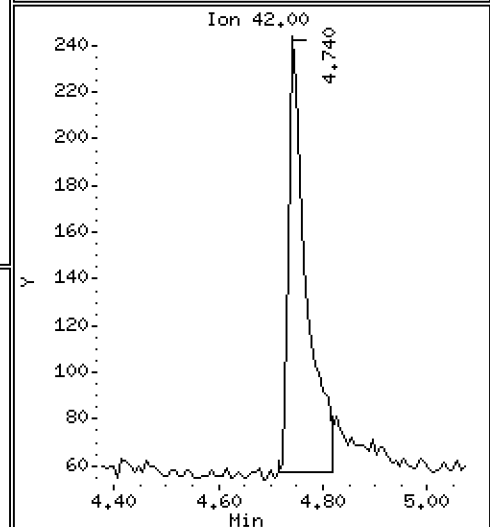
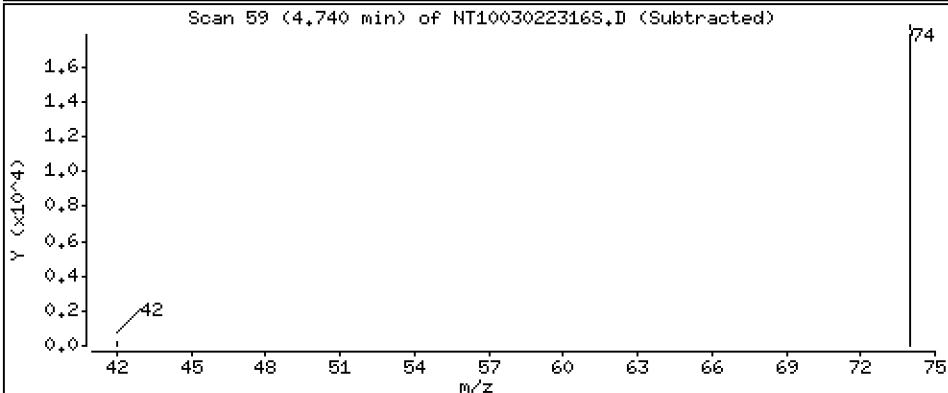
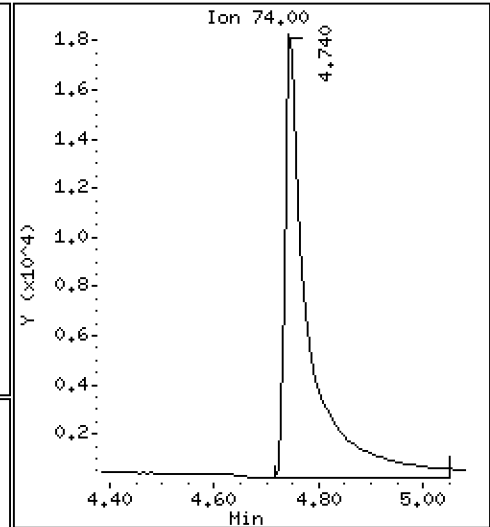
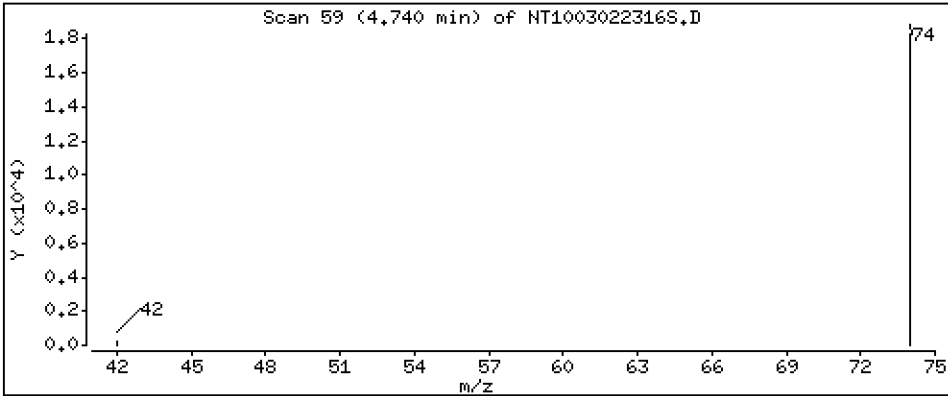
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 0.4782 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\NT1003022316S.D  
 Lab Smp Id: SLC0158-LCV1  
 Inj Date : 02-MAR-2023 23:54 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 06:37 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vo} * \text{Vi}) * \text{CpndVariable}$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	62814	0.30908	0.3091 (R)
3 Phenol	94		8.533	8.525	(0.922)	46339	0.15450	0.1545
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	52565	0.19925	0.1992
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	711850	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	50030	0.19505	0.1950
11 Benzyl alcohol	79		9.485	9.477	(1.025)	22853	0.13734	0.1373
12 1,2-Dichlorobenzene	146		9.562	9.570	(1.034)	49295	0.19995	0.1999
13 2-Methylphenol	108		9.663	9.663	(1.044)	32740	0.18146	0.1815
15 4-Methylphenol	108		9.958	9.950	(1.076)	30907	0.16468	0.1647
16 N-Nitroso-di-n-propylamine	70		9.981	9.981	(1.079)	27314	0.20451	0.2045
22 2,4-Dimethylphenol	107		11.006	11.006	(0.939)	76823	0.35856	0.3586
24 Benzoic acid	105		11.006	11.082	(0.939)	2654	0.02262	0.02262 (M)
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	37714	0.20768	0.2077
* 27 Naphthalene-d8	136		11.724	11.723	(1.000)	2523043	4.00000	
30 Hexachlorobutadiene	225		11.994	12.001	(1.023)	23660	0.18360	0.1836
39 Dimethylphthalate	163		14.749	14.749	(0.963)	74472	0.18917	0.1892
* 42 Acenaphthene-d10	162		15.322	15.321	(1.000)	1239819	4.00000	
50 Diethylphthalate	149		16.211	16.210	(1.058)	76623	0.20639	0.2064
54 N-Nitrosodiphenylamine	169		16.706	16.698	(0.908)	66785	0.17927	0.1793
57 Hexachlorobenzene	284		17.578	17.586	(0.955)	32282	0.18517	0.1852



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.012	17.996	(0.979)	899	0.01179	0.01179
* 59 Phenanthrene-d10	188	18.406	18.406	(1.000)	2301881	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	37975	0.18805	0.1880(R)
67 Butylbenzylphthalate	149	22.415	22.414	(0.957)	64527	0.15310	0.1531
* 69 Chrysene-d12	240	23.429	23.429	(1.000)	2497236	4.00000	
* 77 Perylene-d12	264	26.123	26.123	(1.000)	3041429	4.00000	
79 Dibenzo(a,h)anthracene	278	28.953	28.945	(1.108)	133602	0.18921	0.1892
90 N-Nitrosodimethylamine	74	4.740	4.732	(0.512)	57541	0.47823	0.4782

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022316S.D  
 Lab Smp Id: SLC0158-LCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302A.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 02-MAR-2023  
 Calibration Time: 23:16  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	652424	326212	1304848	711850	9.11
27 Naphthalene-d8	2339966	1169983	4679932	2523043	7.82
42 Acenaphthene-d10	1186988	593494	2373976	1239819	4.45
59 Phenanthrene-d10	2193485	1096743	4386970	2301881	4.94
69 Chrysene-d12	2444828	1222414	4889656	2497236	2.14
77 Perylene-d12	2842248	1421124	5684496	3041429	7.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.72	11.22	12.22	11.72	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
77 Perylene-d12	26.12	25.62	26.62	26.12	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022316S.D

Lab ID: SLC0158-LCV1

nt10.i, 20230302A.b\SIM.b\SIMABN2.m, 02-MAR-2023 23:54

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.939	0.945	-0.0065	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022315SICV.d

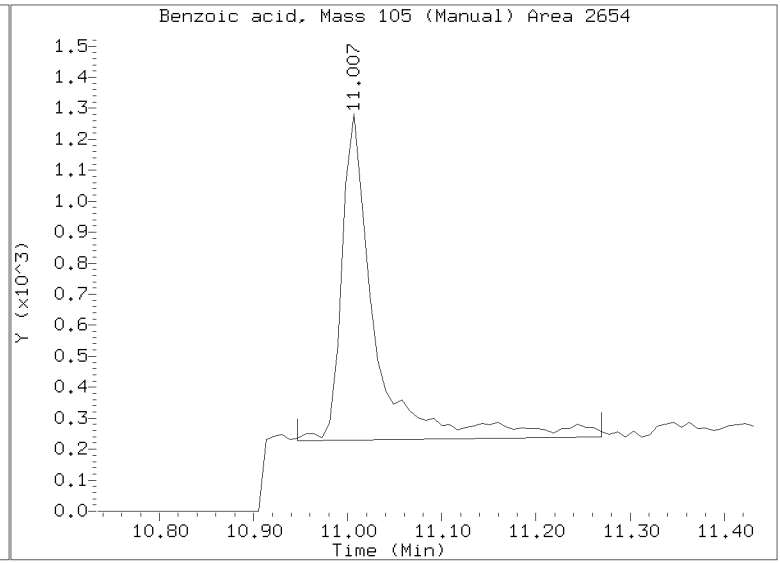
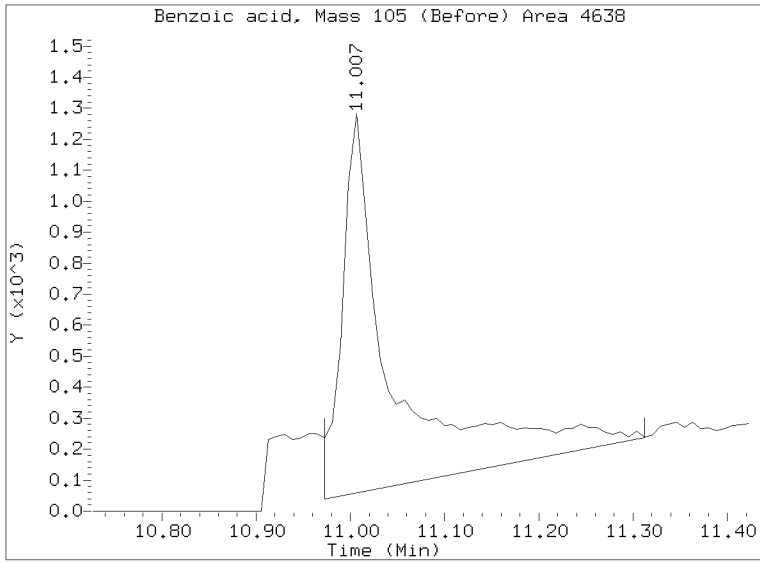
On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

# Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302A.b/SIM.b/NT1003022316S.D  
Injection Date: 02-MAR-2023 23:54  
Lab ID: SLC0158-LCV1 Client ID:  
Report Date: 03/11/2023 06:37





**CONTINUING CALIBRATION CHECK**  
**EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022335S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0159</u>	Injection Date:	<u>03/03/23</u>
Lab Sample ID:	<u>SLC0159-CCV1</u>	Injection Time:	<u>11:56</u>
Sequence Name:	<u>Calibration Check</u>		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.4413080	1.3692940		-5.0	+/-50
1,2-Dichlorobenzene	A	1.0000	1.0	1.3853460	1.3302810		-4.0	+/-50
Benzyl Alcohol	A	1.0000	1.0	0.7492523	0.9378089		-0.8	+/-50
Benzoic acid	A	4.0000	0.4	0.1431163	0.0166301		-91.1	+/-50 *
2,4-Dimethylphenol	A	2.0000	2.0	0.2957717	0.3483496		2.1	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.1	0.2879030	0.3227407		12.1	+/-50
N-Nitrosodiphenylamine	A	1.0000	0.8	0.6473471	0.5321275		-17.8	+/-50
Pentachlorophenol	A	2.0000	0.2	0.0950913	0.0102546		-92.3	+/-50 *
2-Fluorophenol	A	1.5000	1.68	1.1419780	1.2815010		12.2	+/-50
p-Terphenyl-d14	A	1.0000	1.33	0.3234672	0.4301988		33.0	+/-50

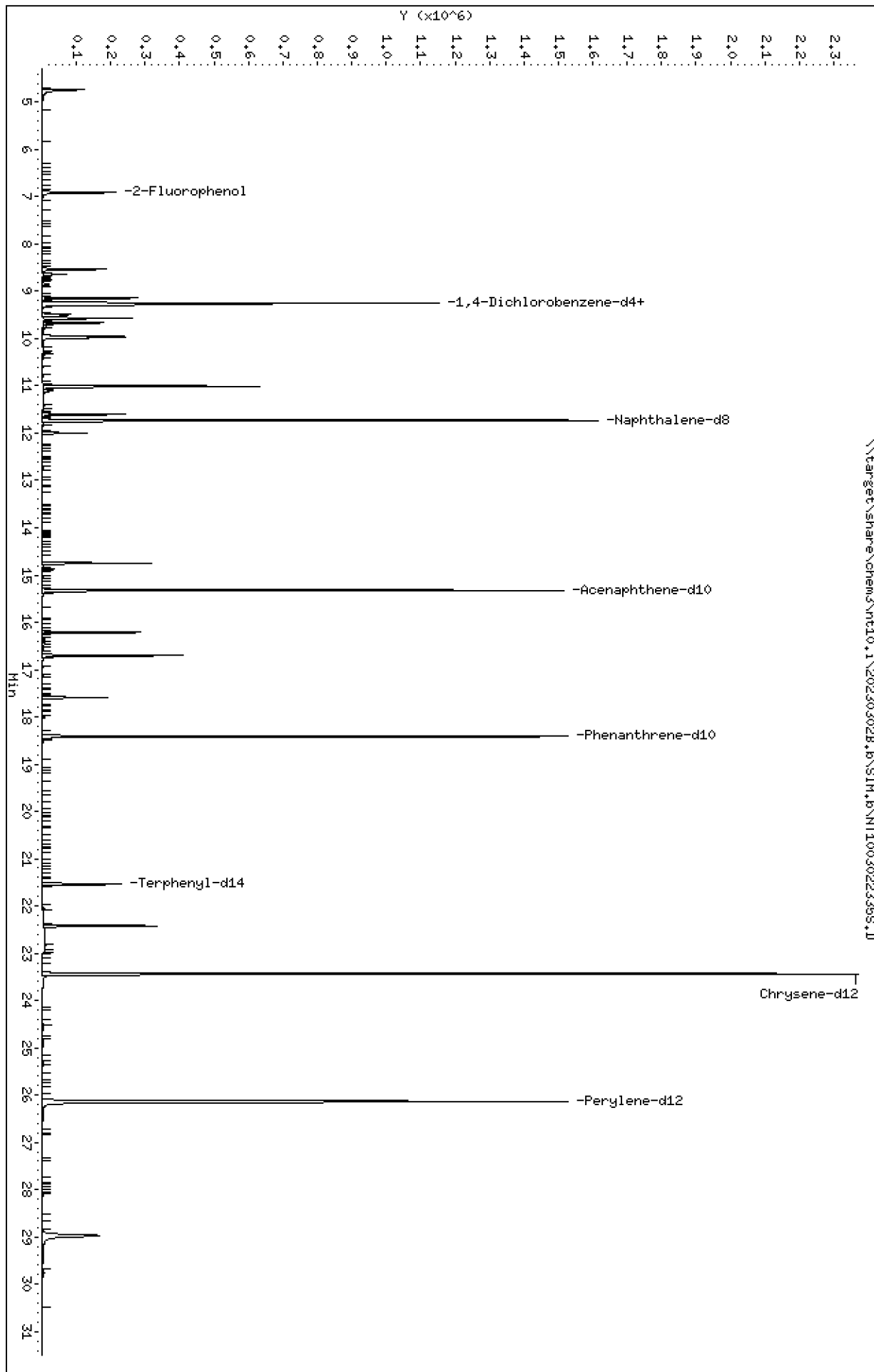
\* Values outside of QC limits

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT10030223355.D  
Date : 03-MAR-2023 11:56  
Client ID:  
Sample Info: SED-CVSIH  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT10030223355.D



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

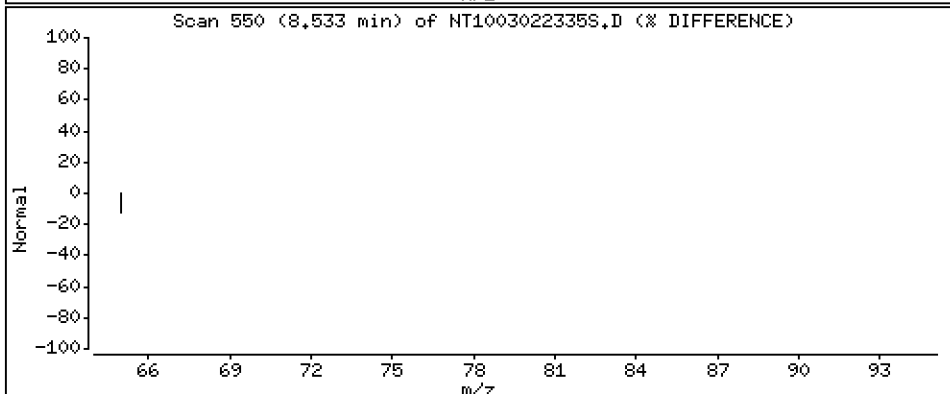
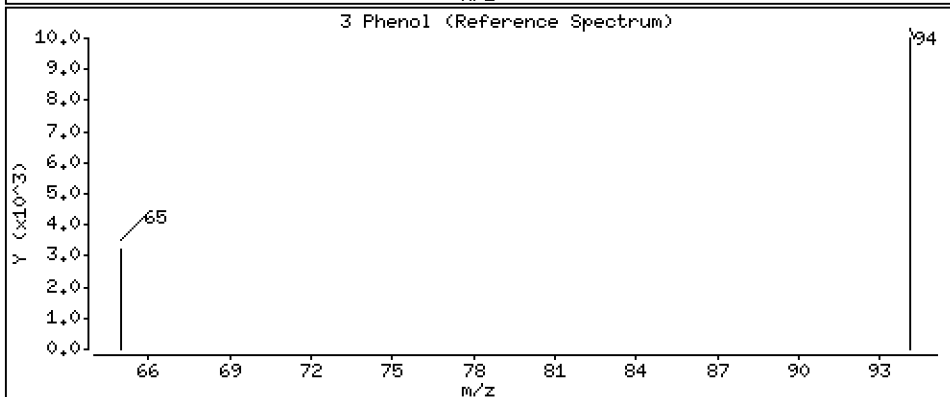
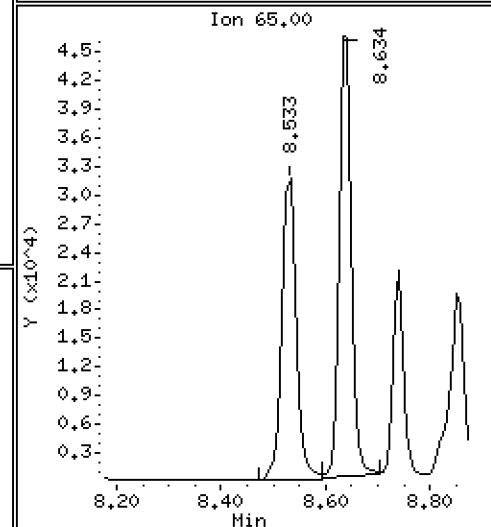
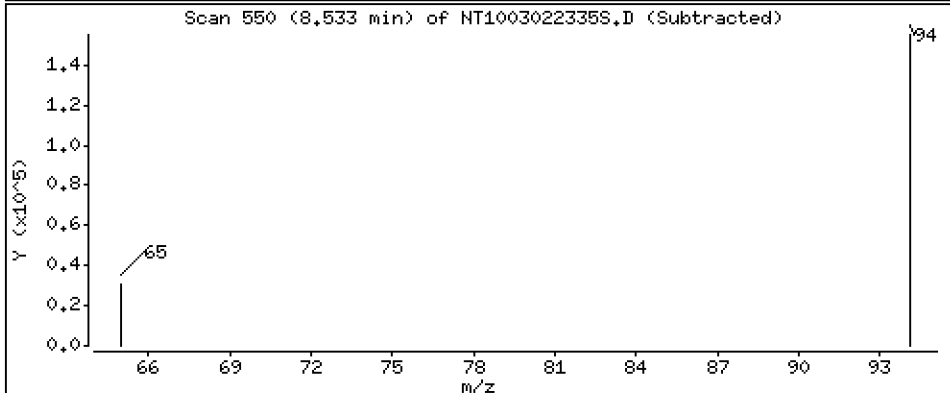
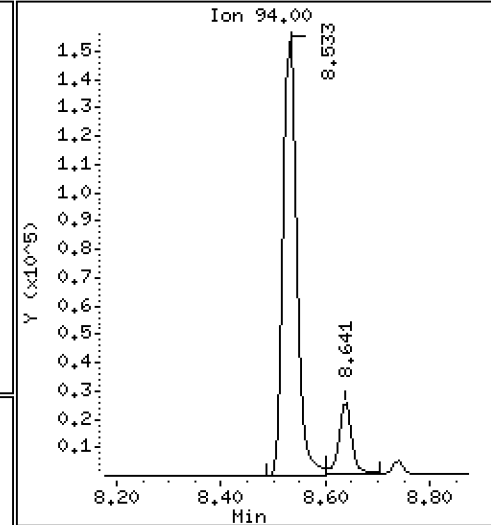
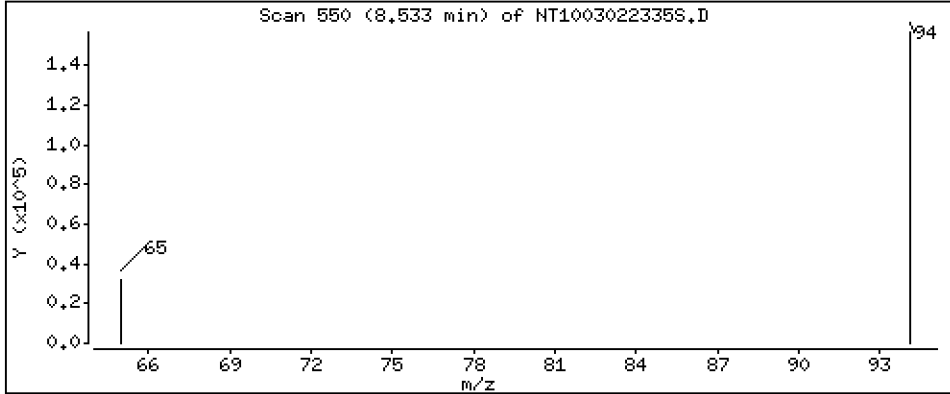
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 0.9189 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

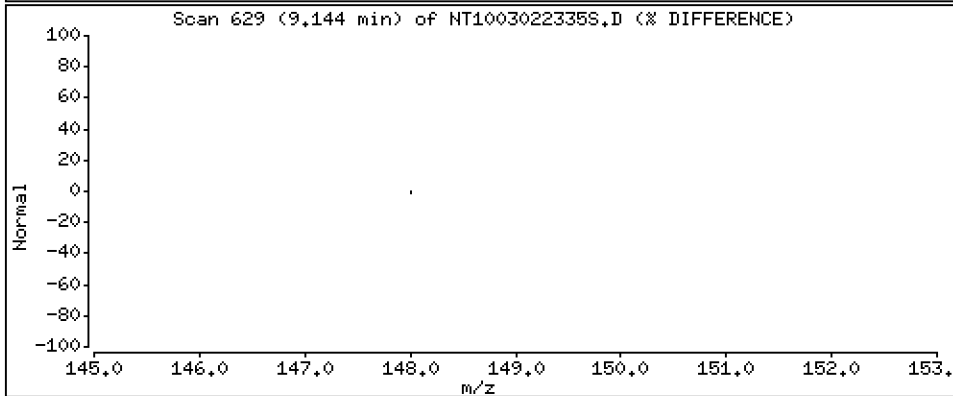
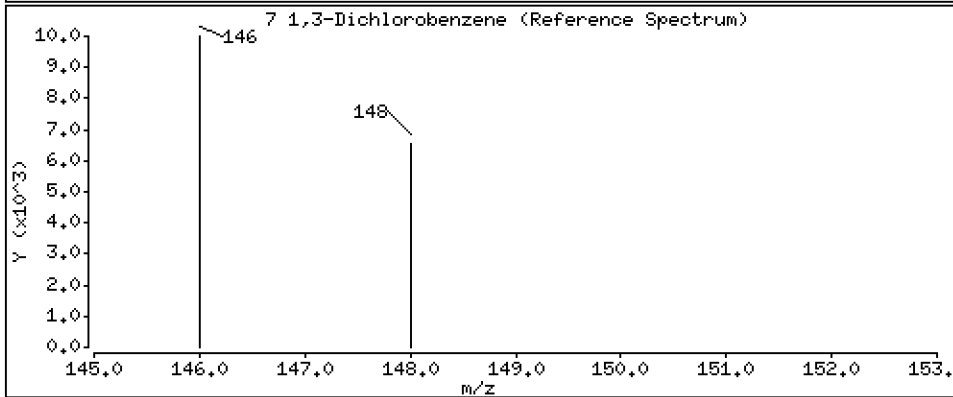
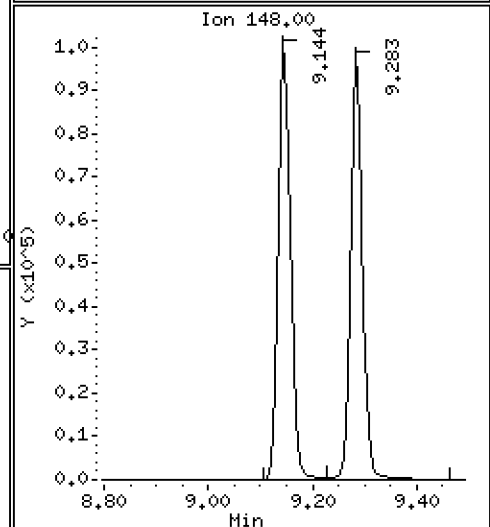
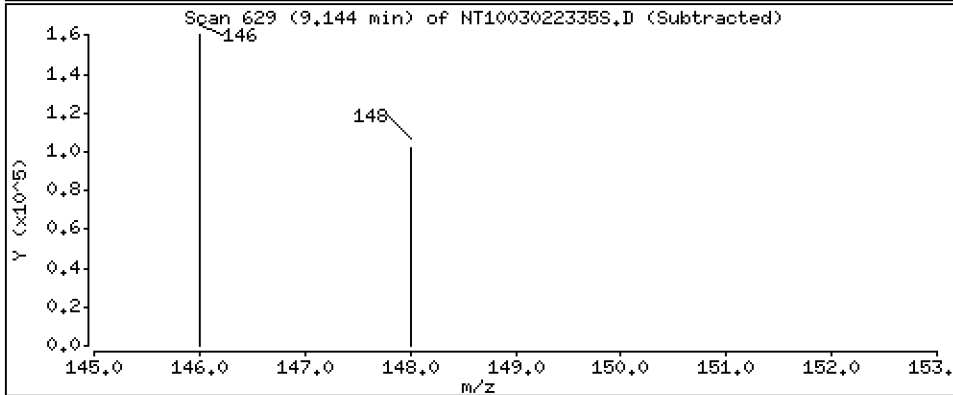
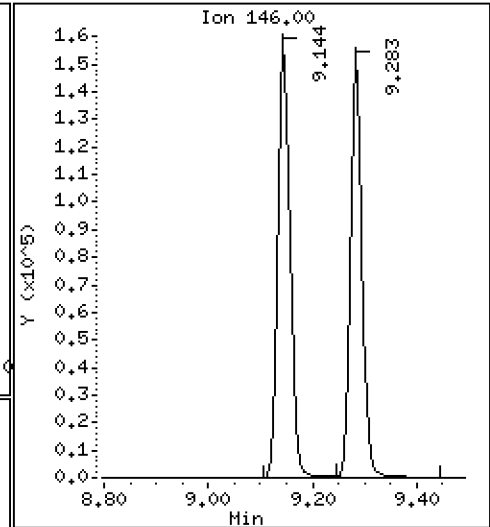
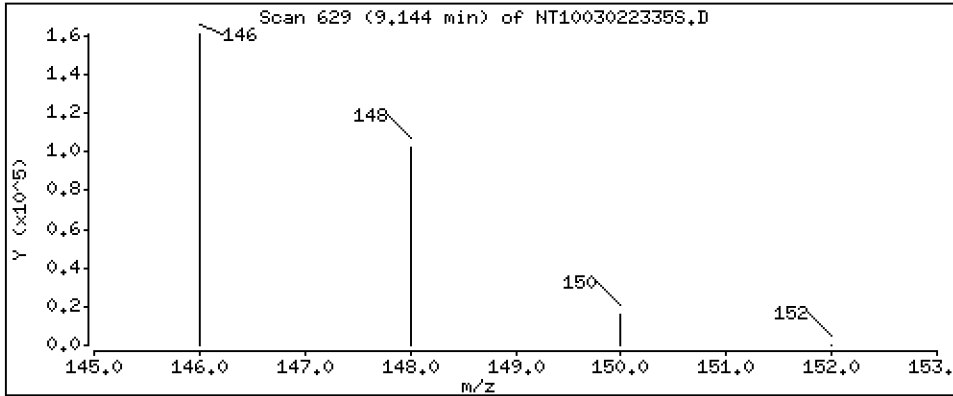
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.9695 ug/L





Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

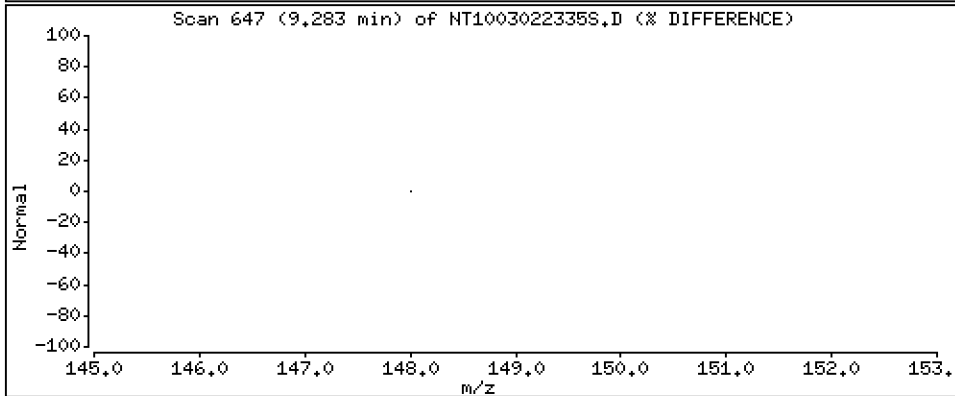
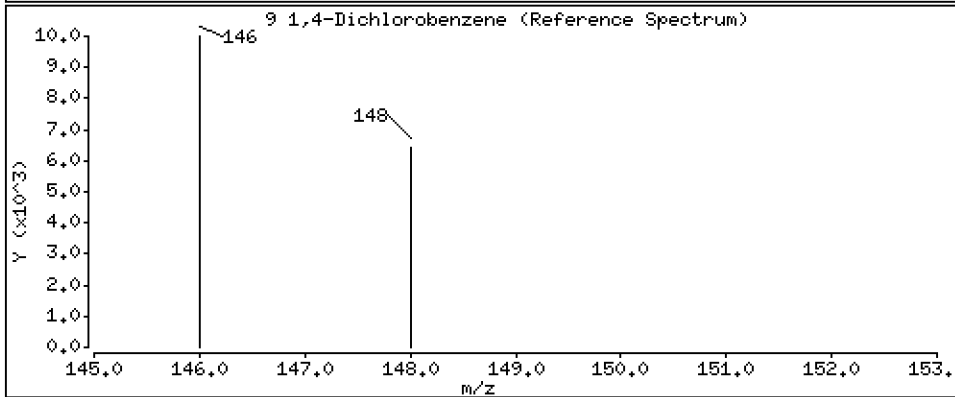
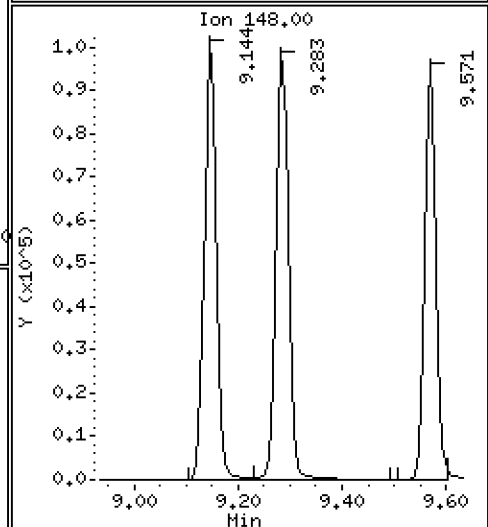
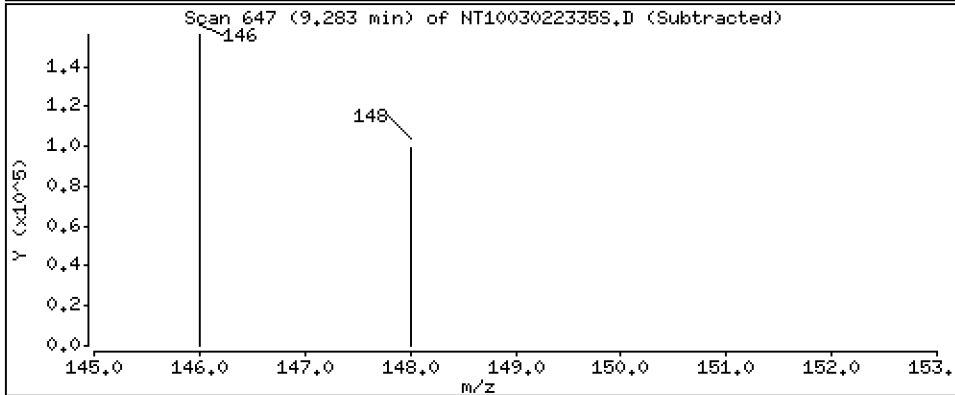
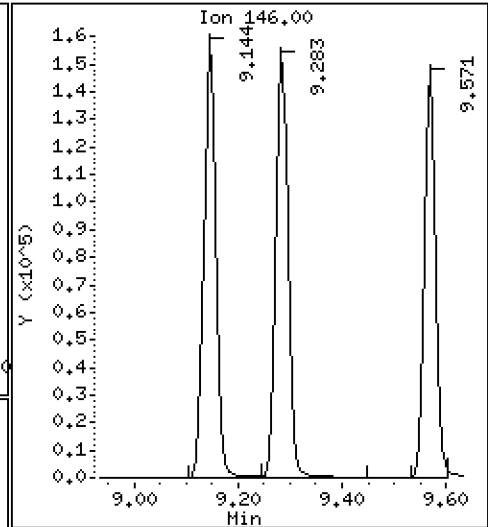
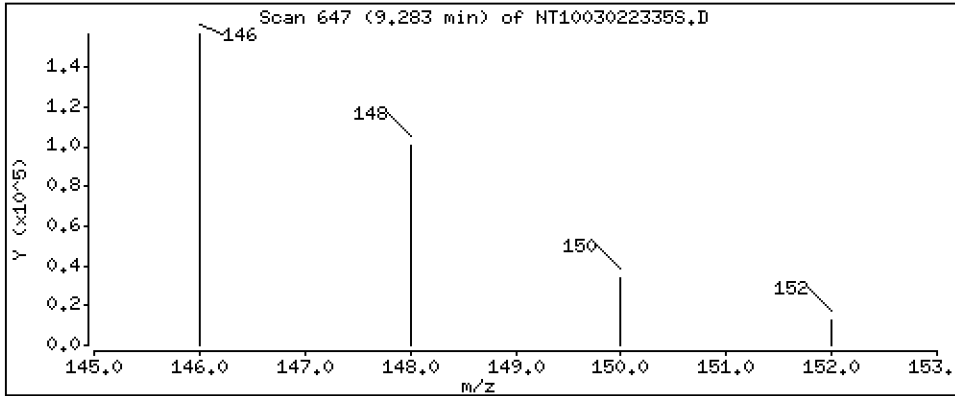
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.9500 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

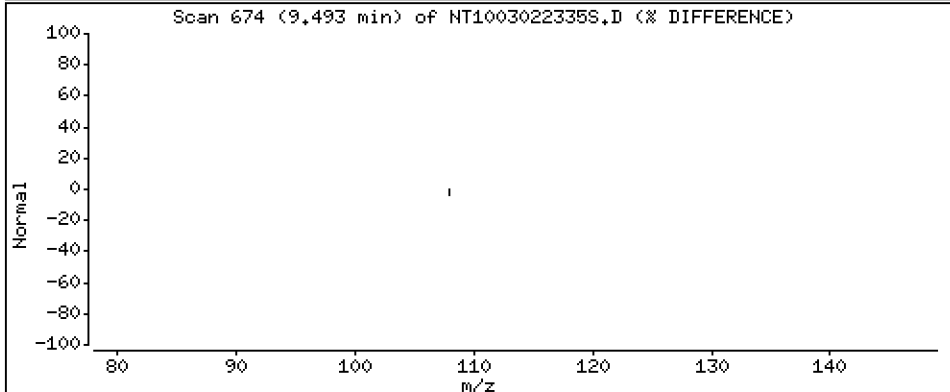
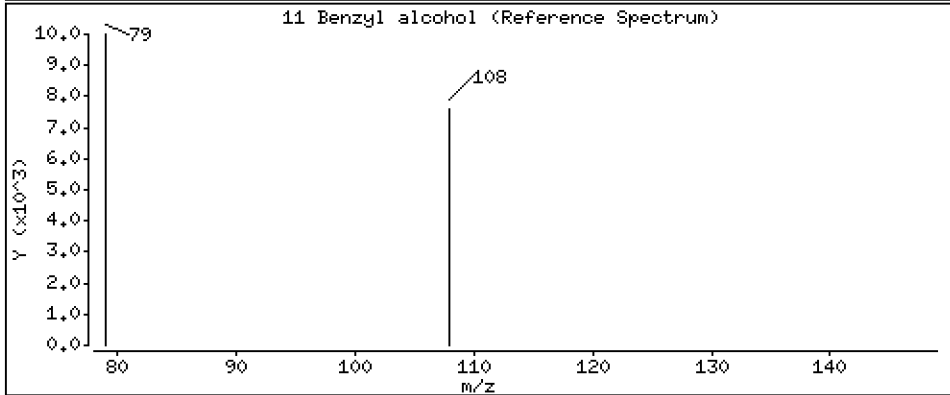
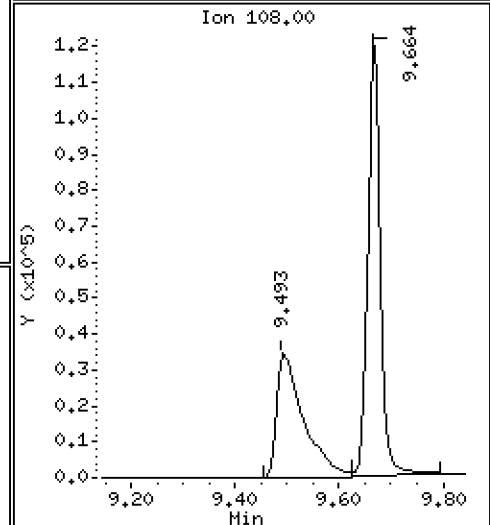
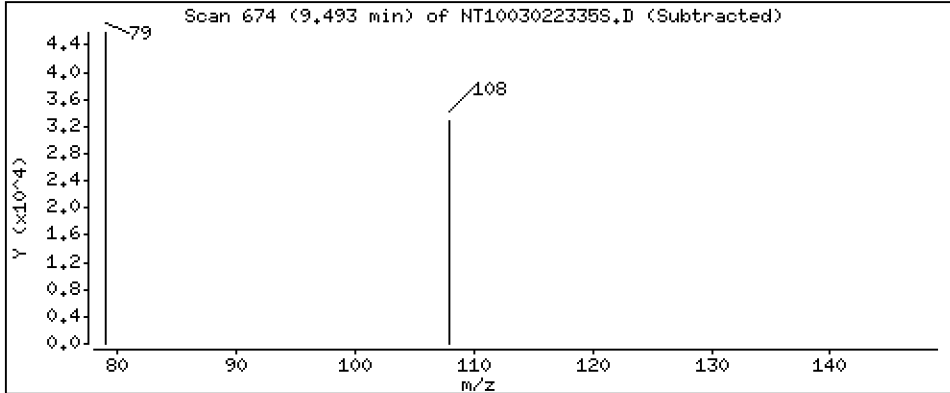
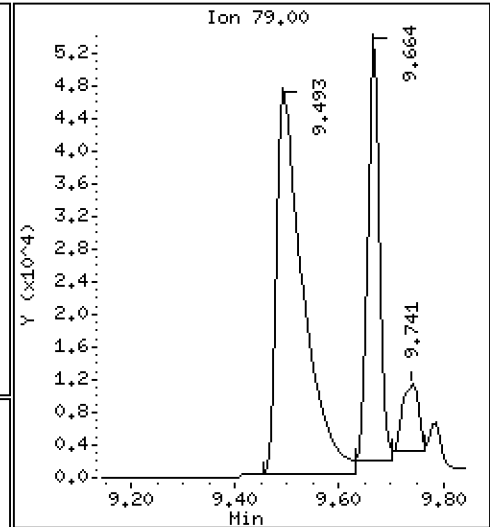
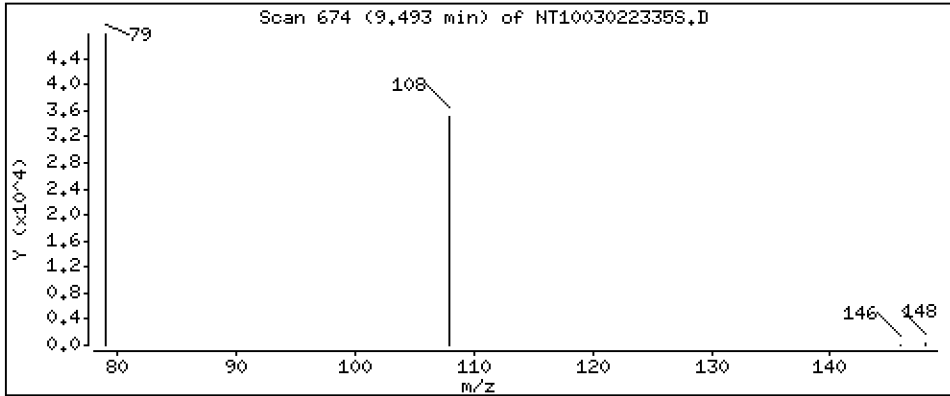
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 0.9920 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

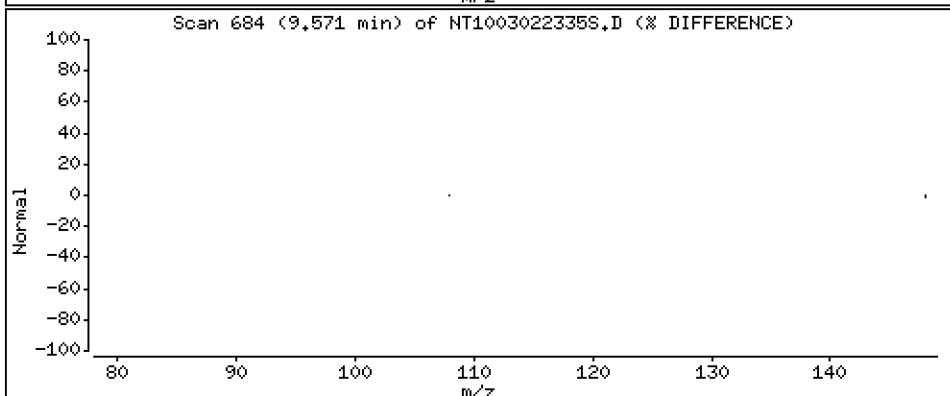
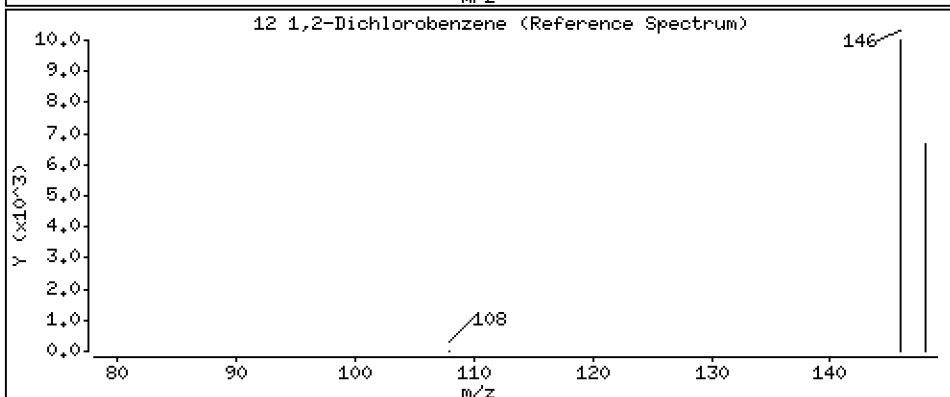
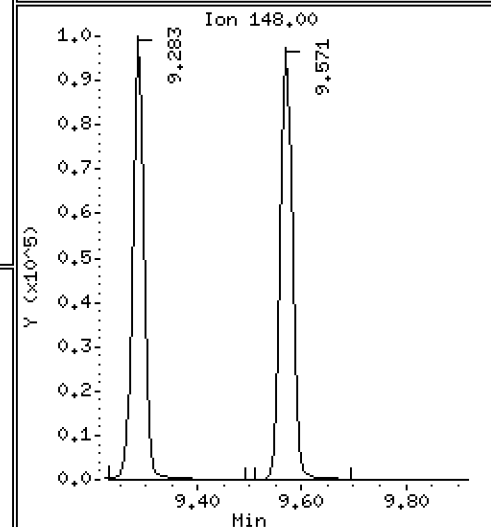
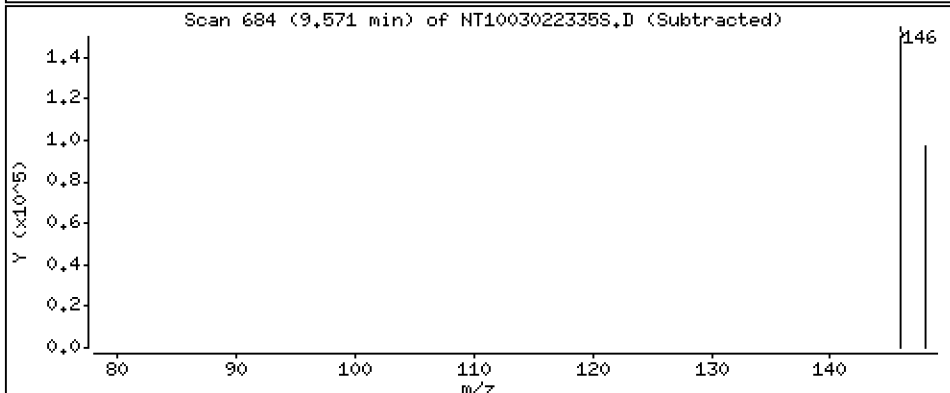
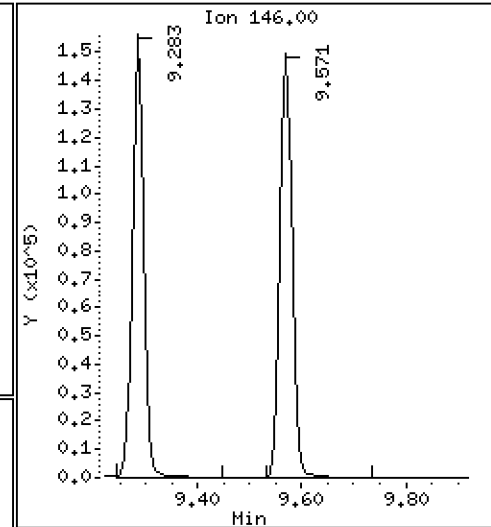
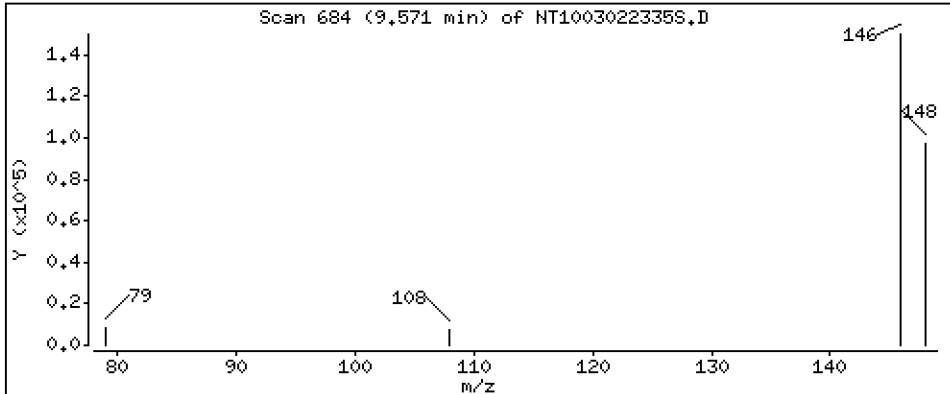
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.9603 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

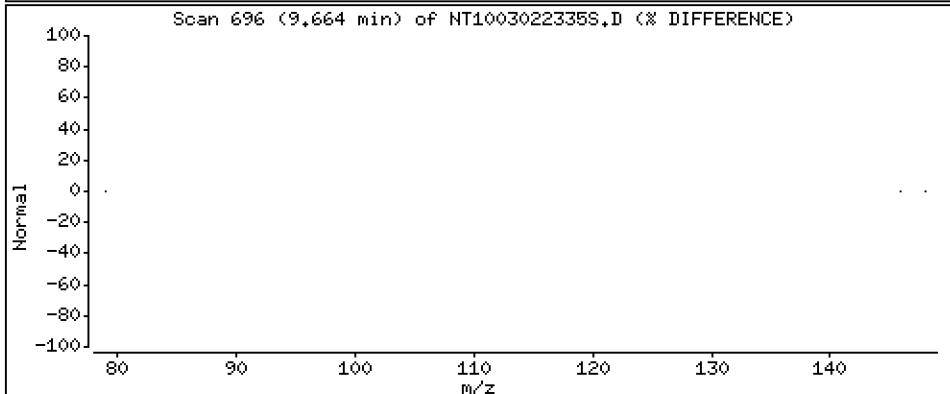
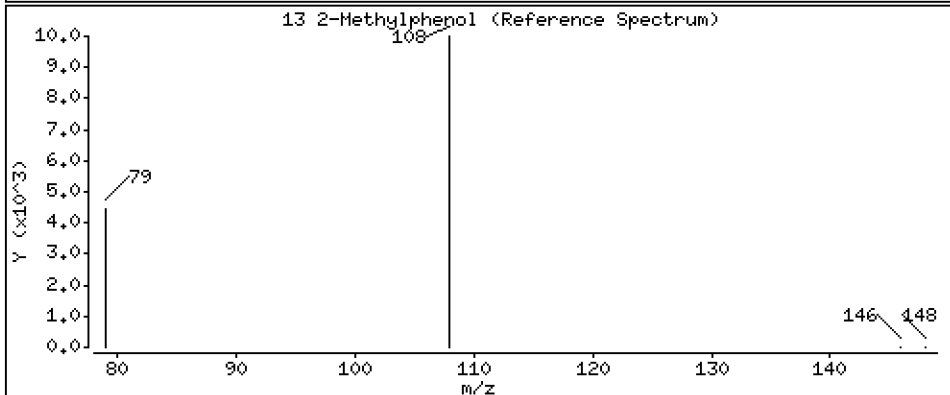
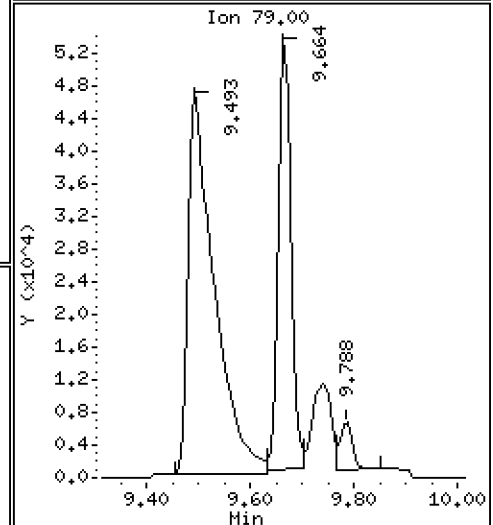
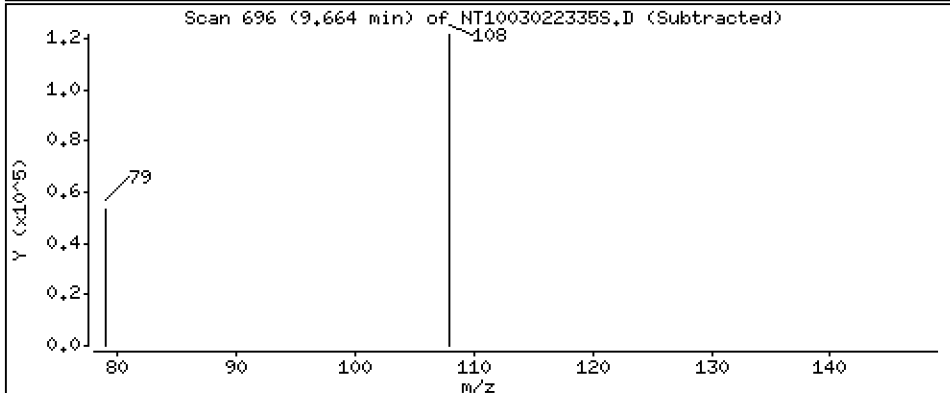
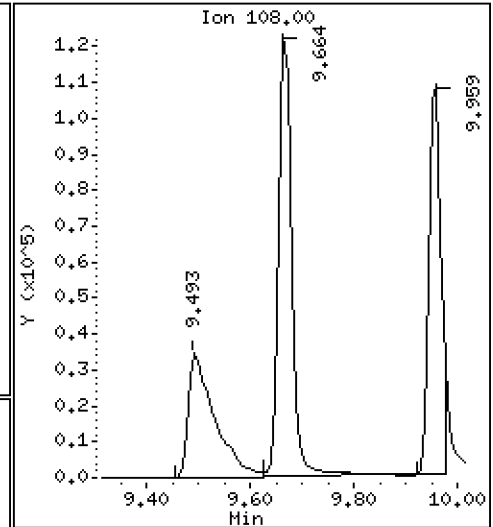
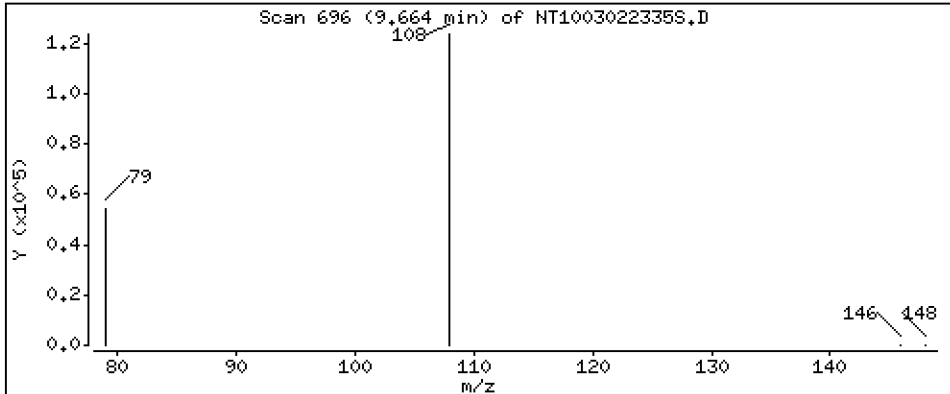
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 1.150 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

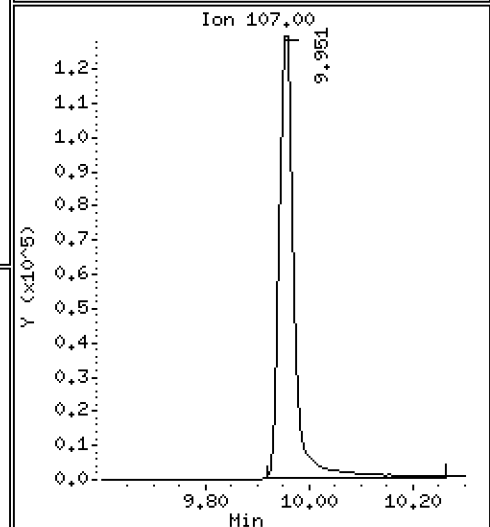
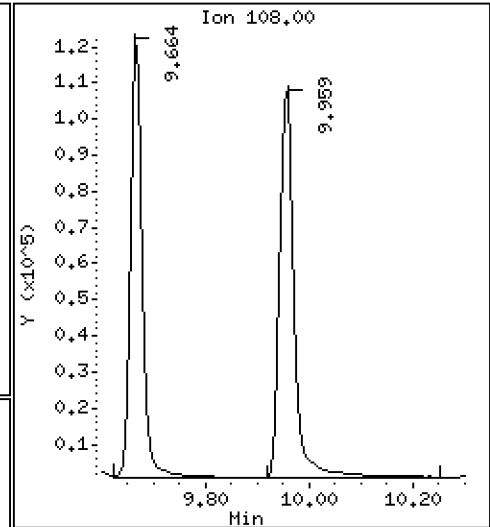
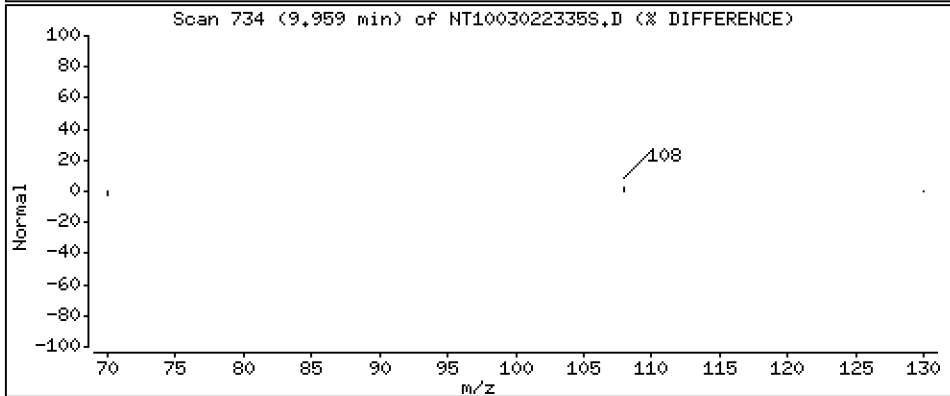
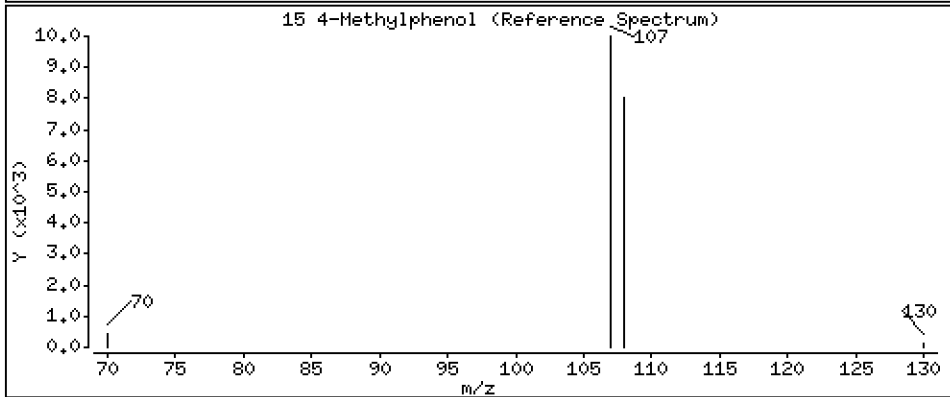
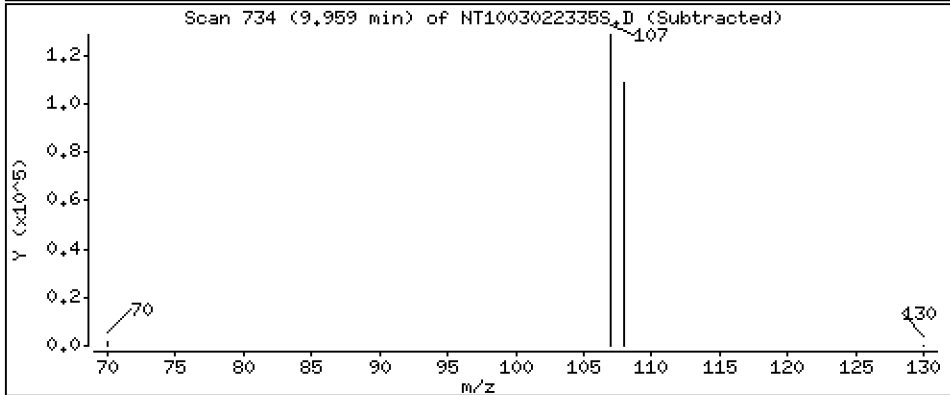
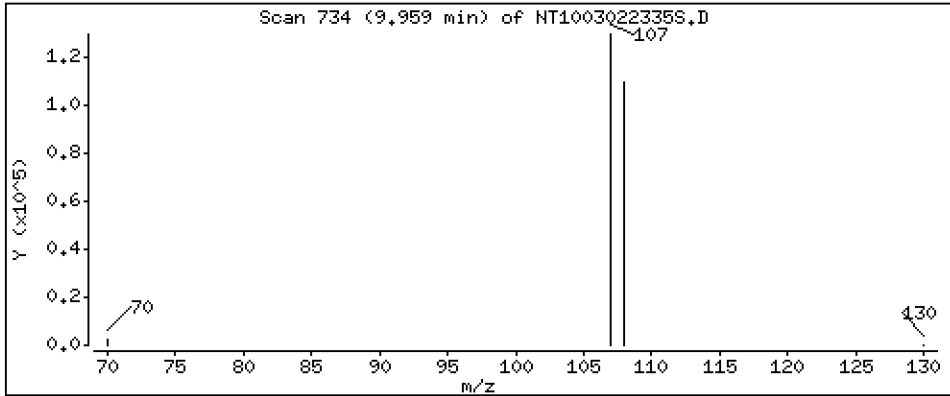
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 1.095 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

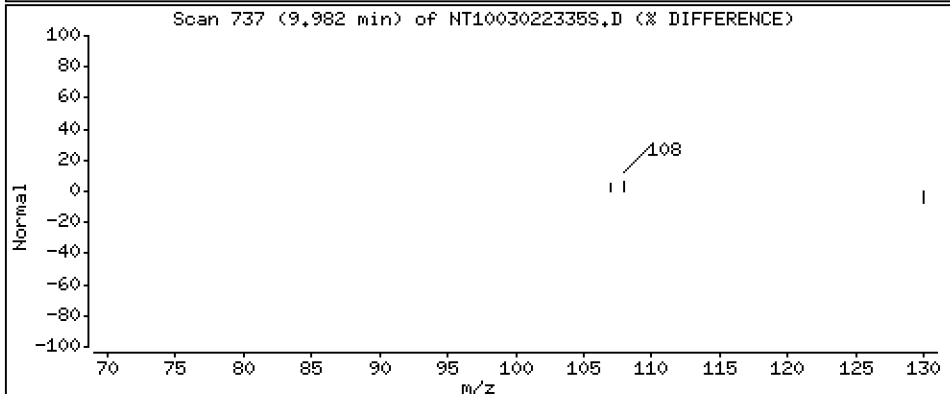
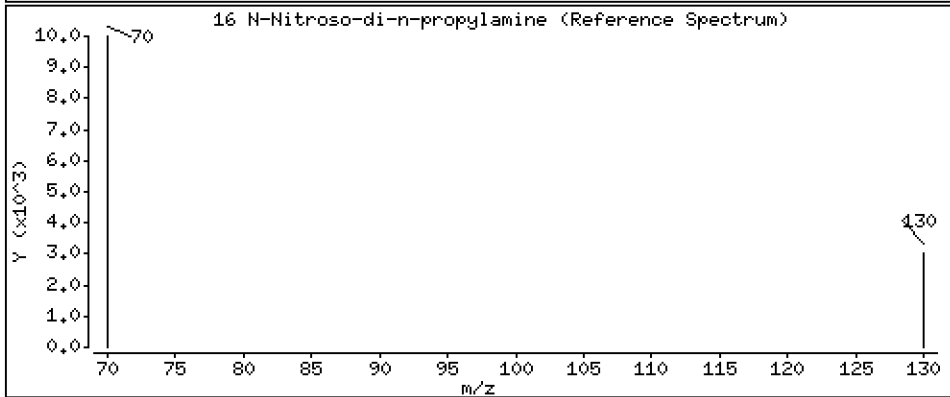
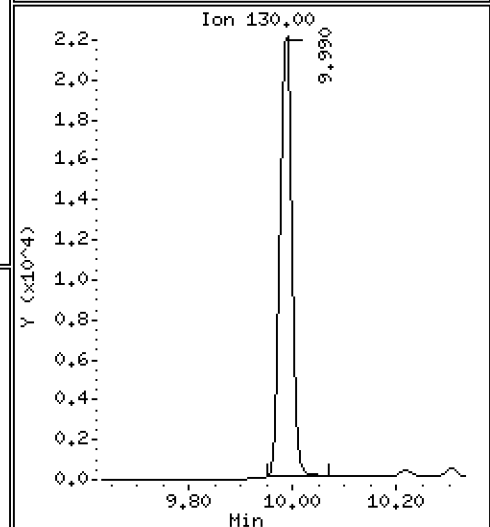
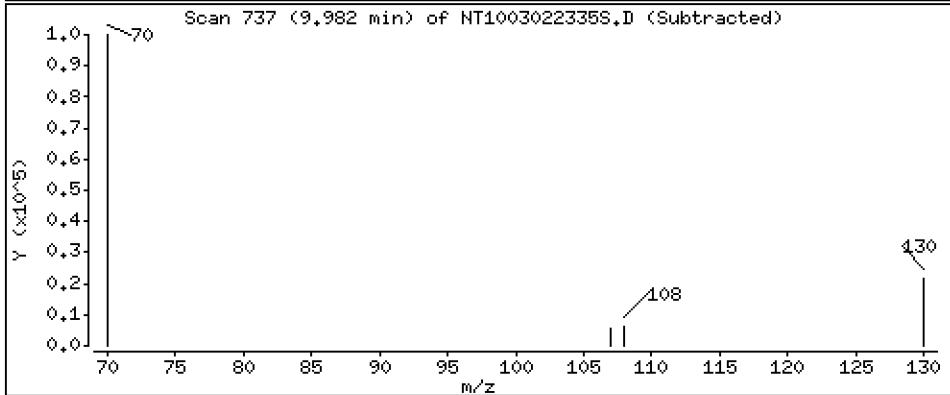
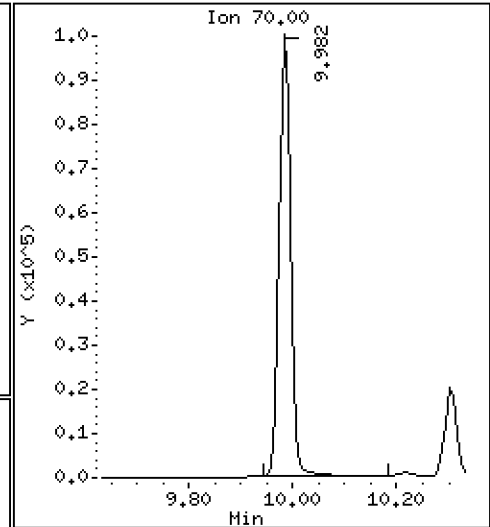
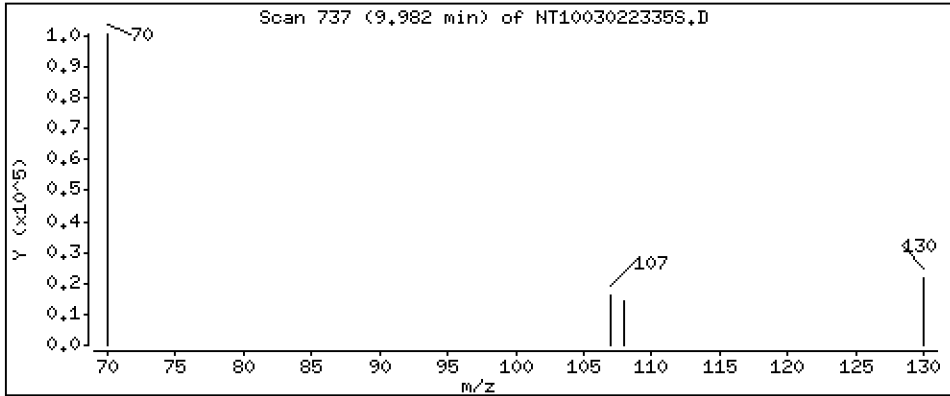
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 1.117 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

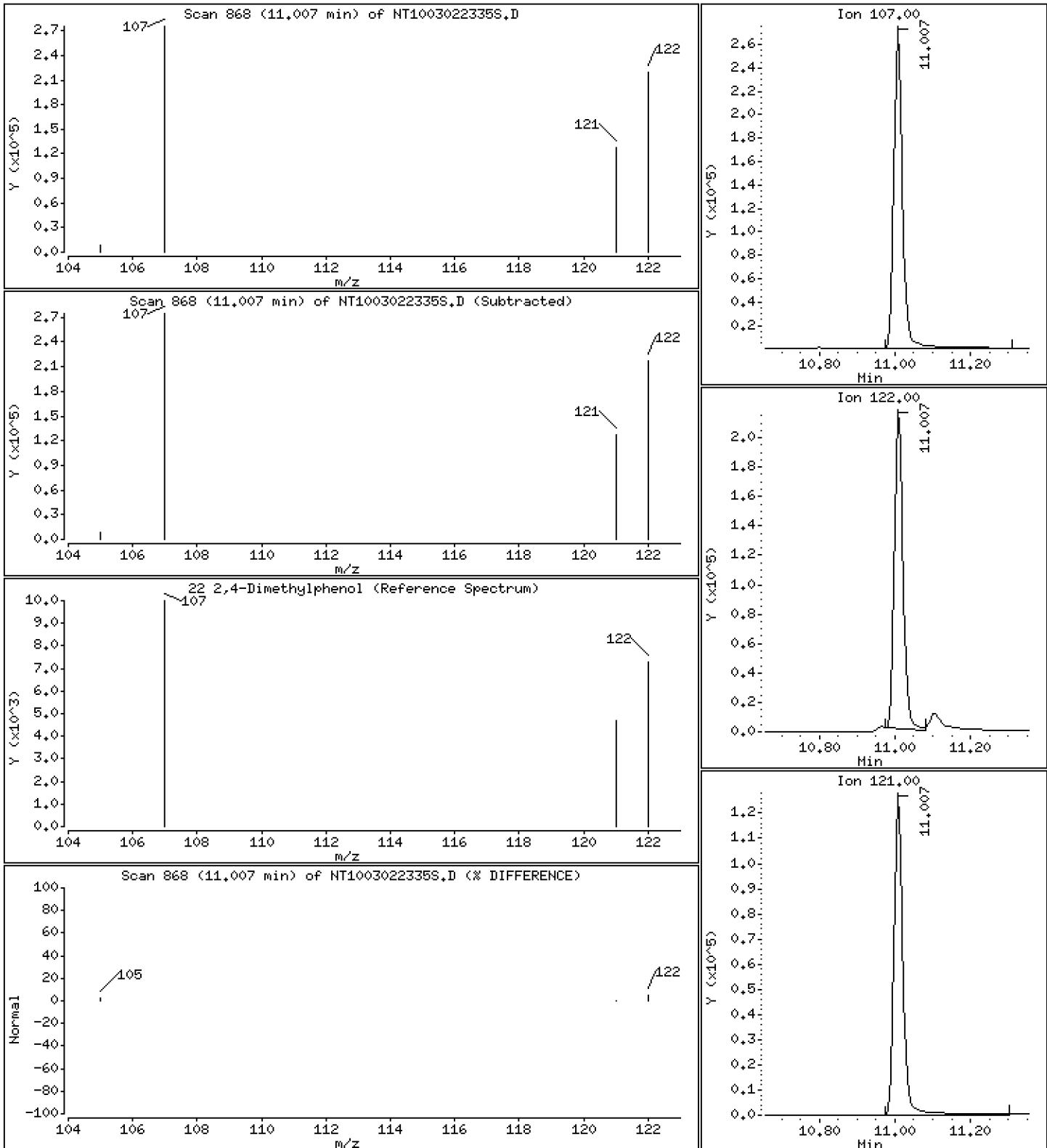
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 2,041 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

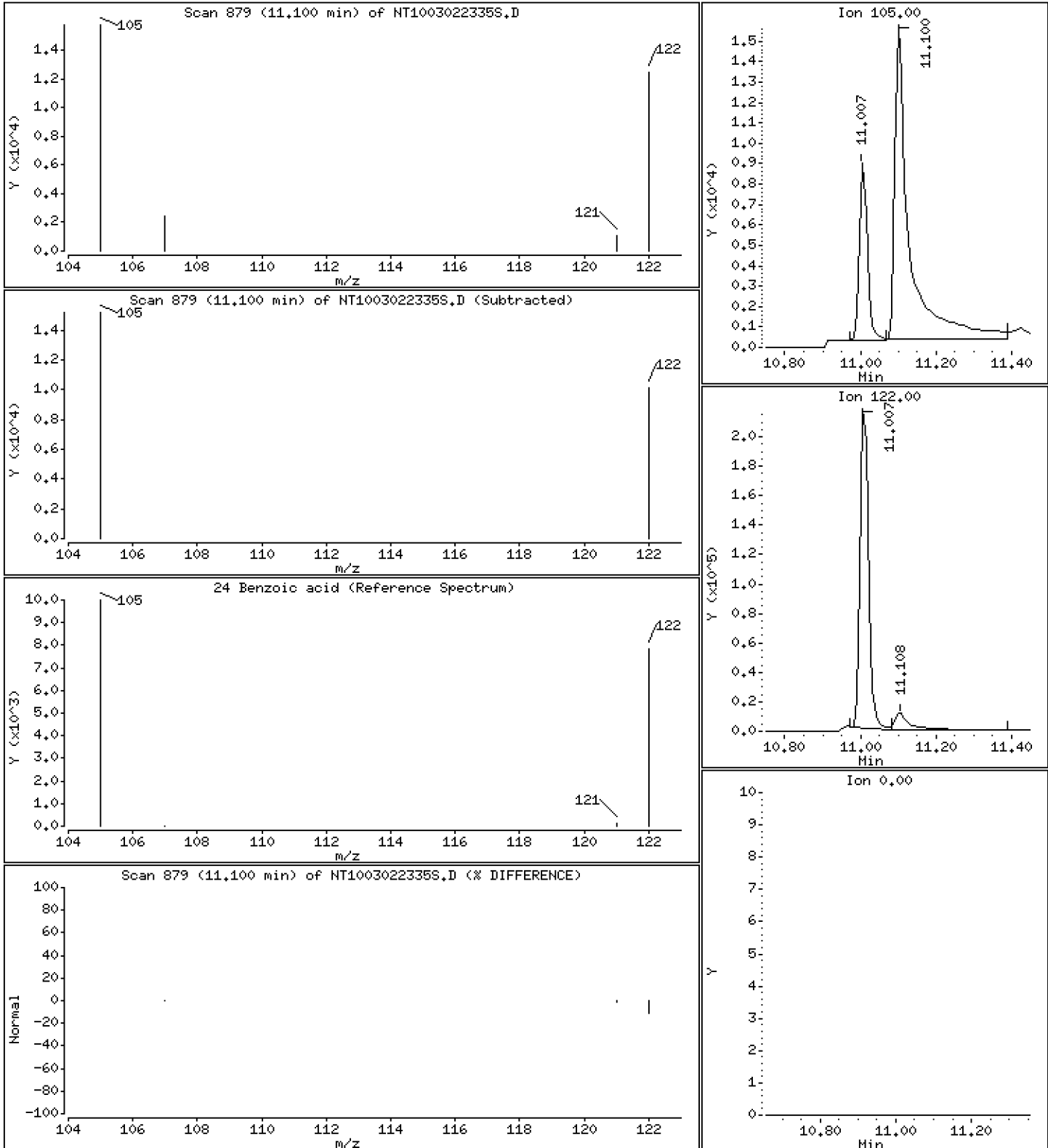
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.3569 ug/L





Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

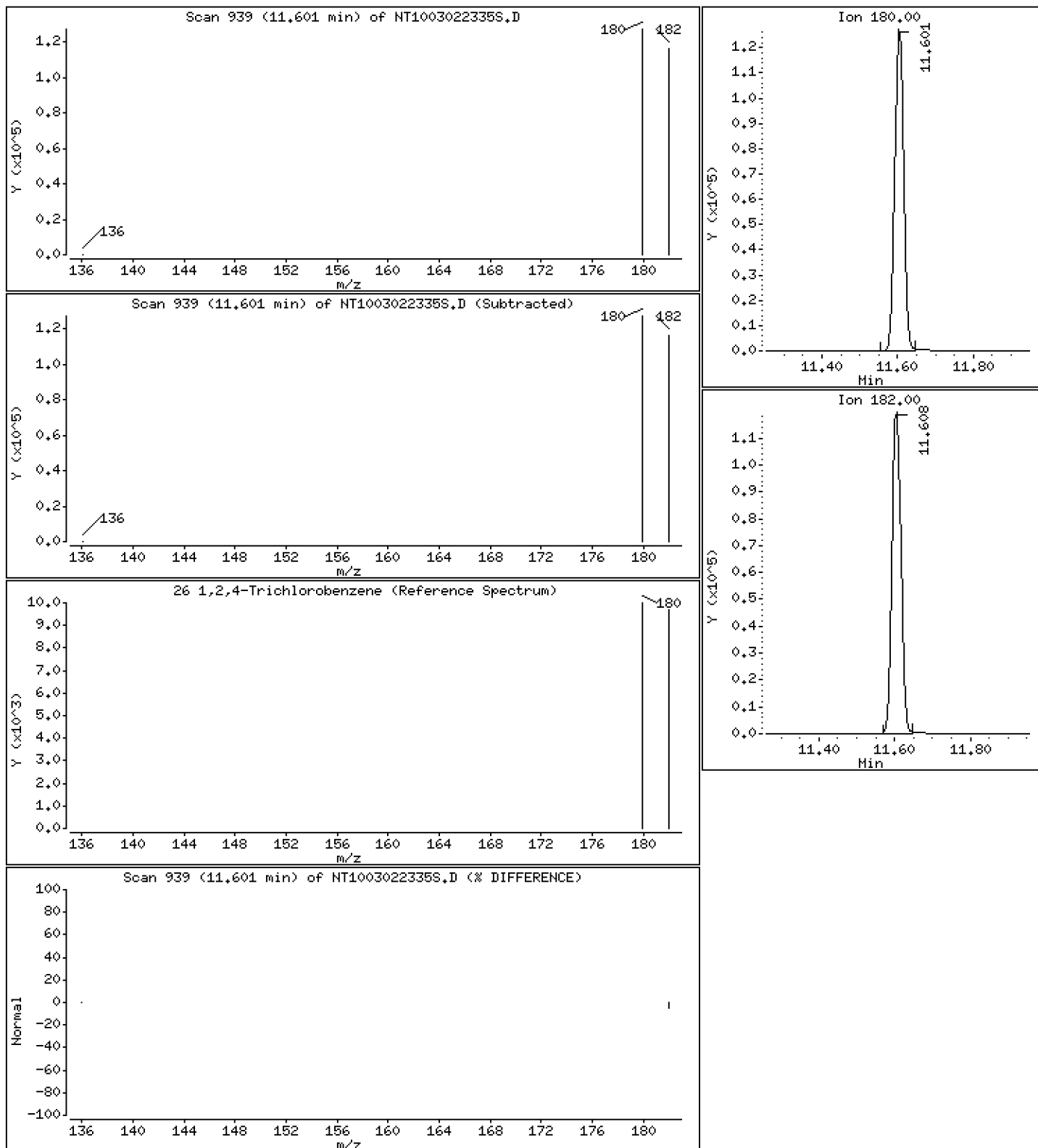
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 1.121 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

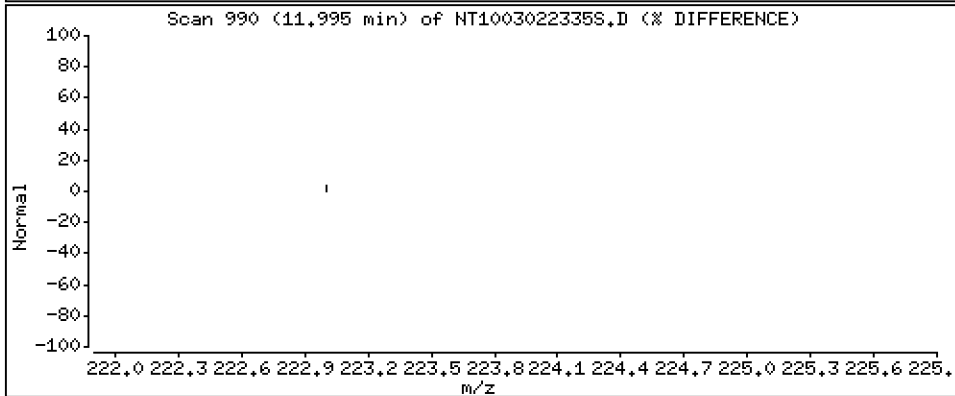
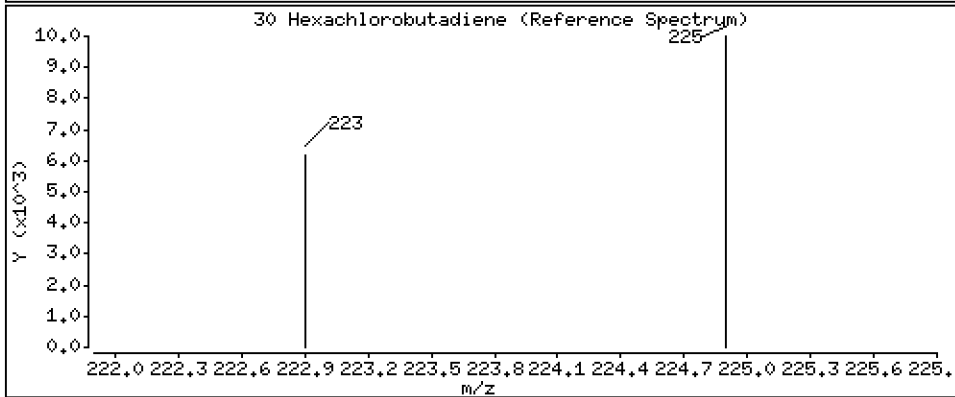
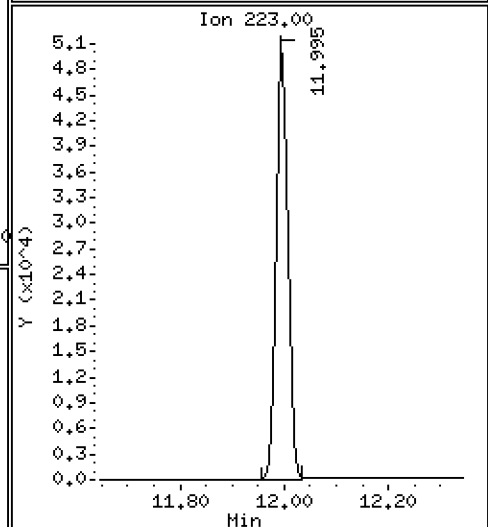
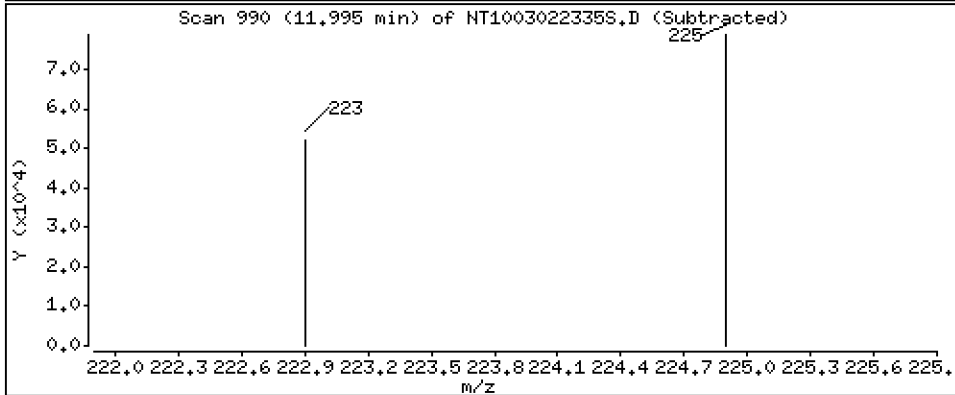
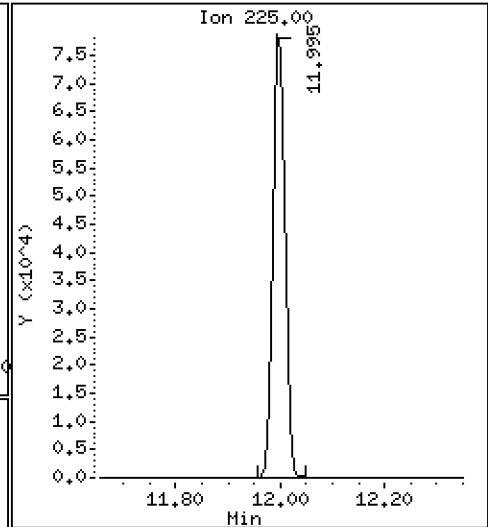
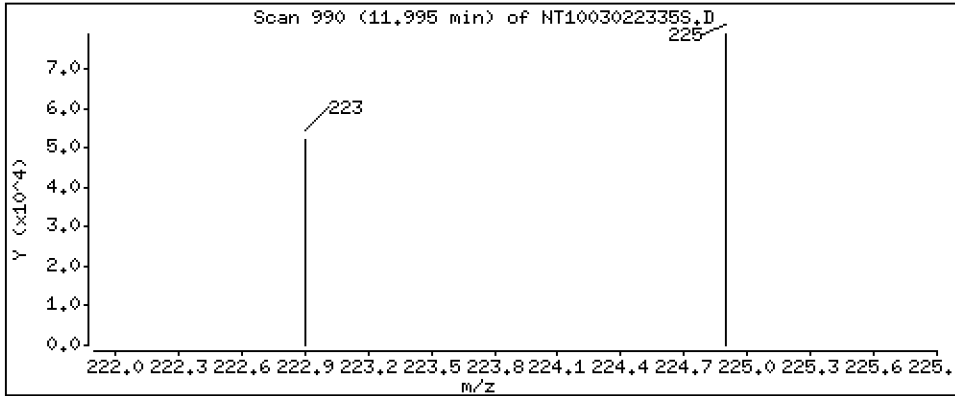
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

30 Hexachlorobutadiene

Concentration: 0,9704 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

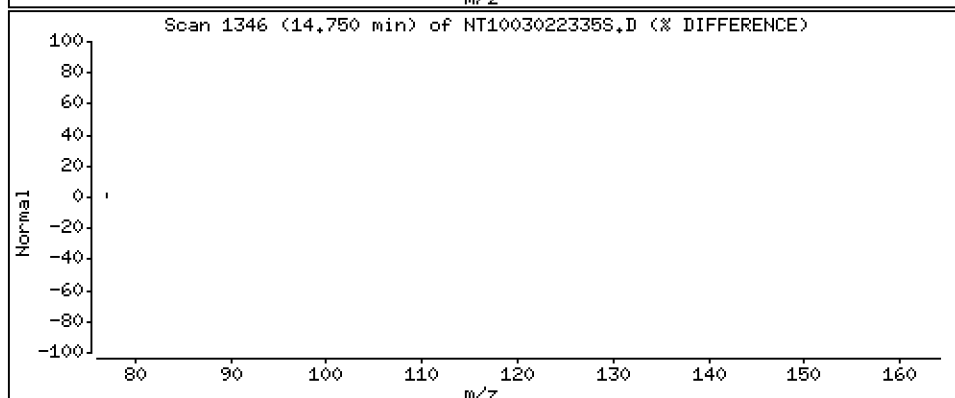
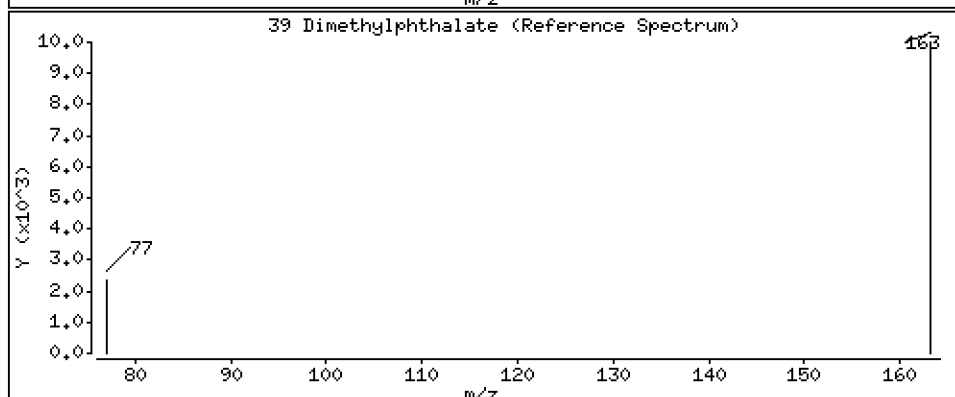
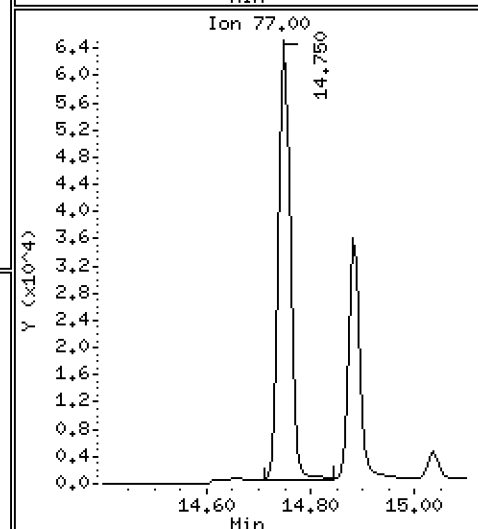
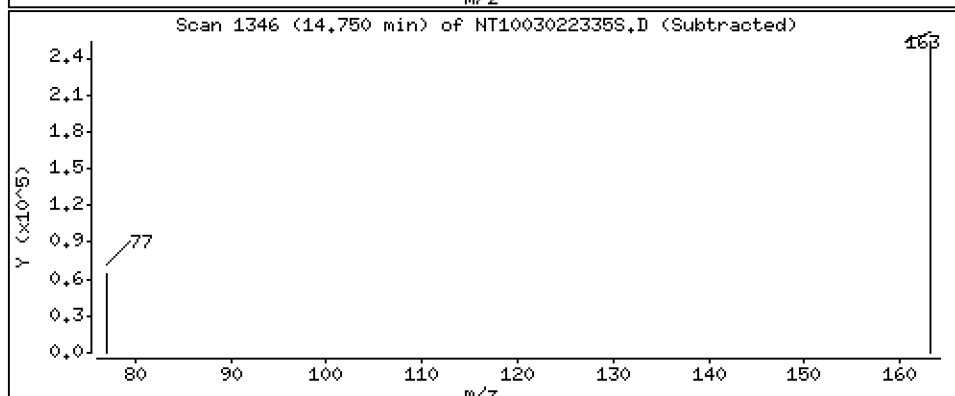
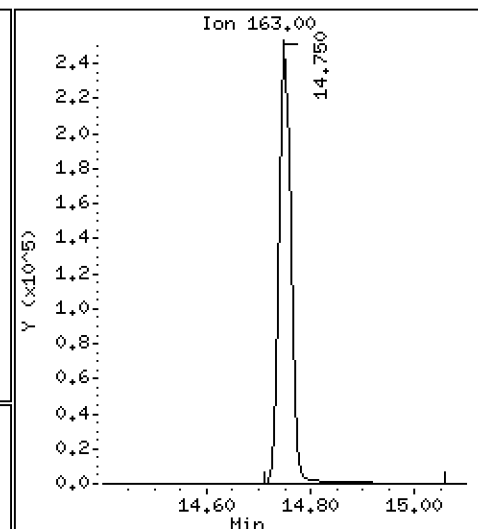
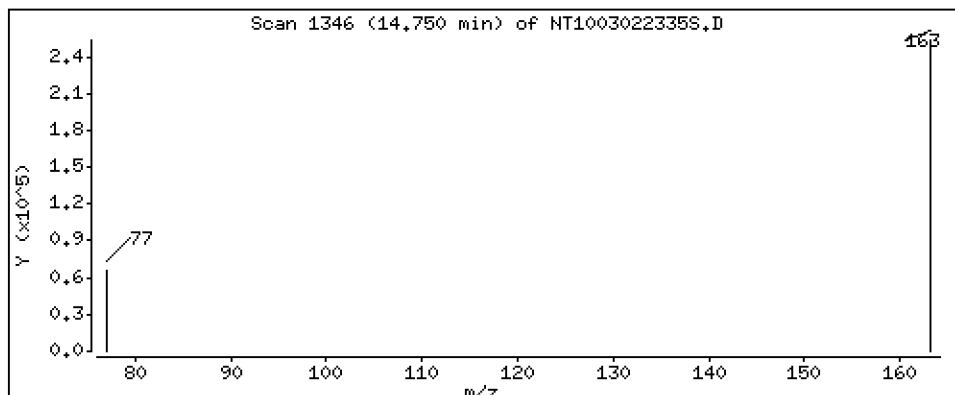
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 1,002 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

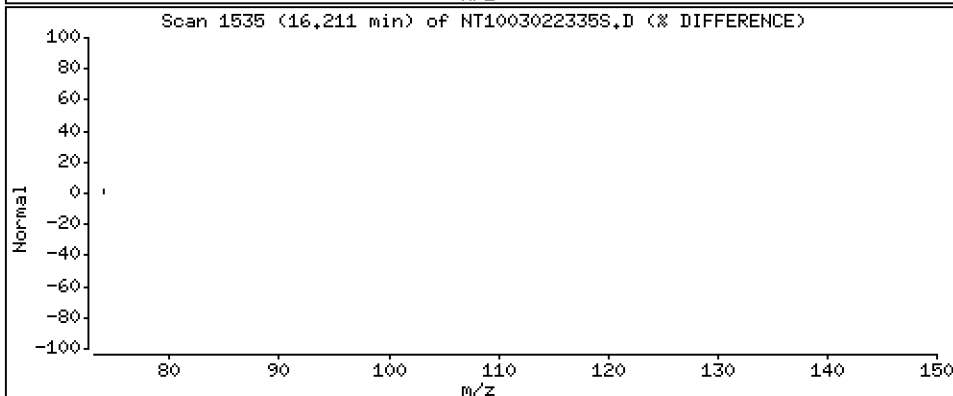
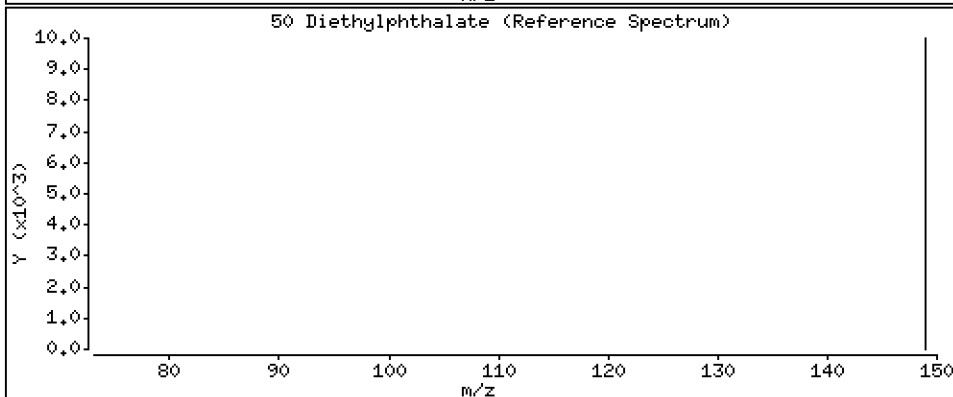
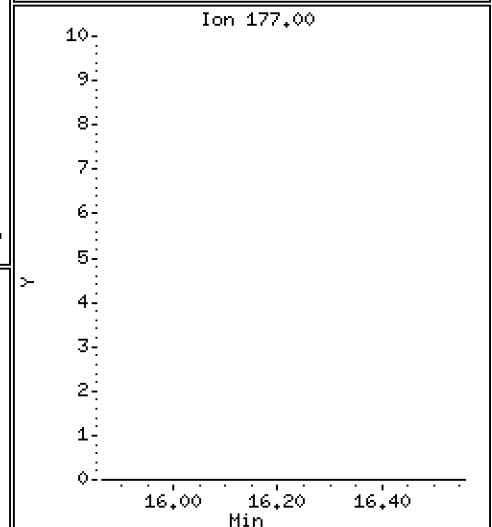
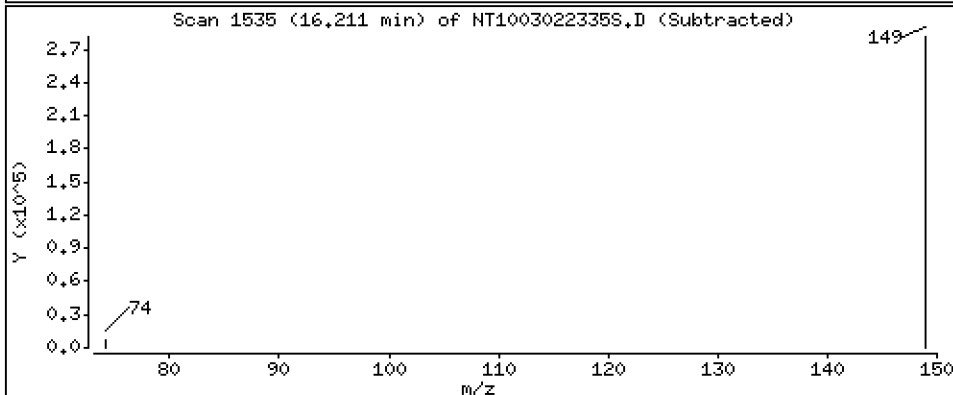
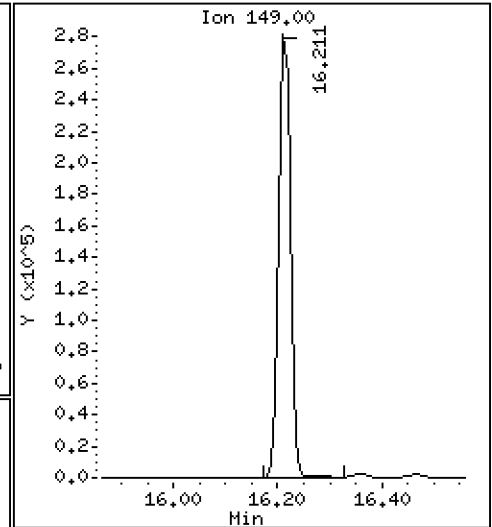
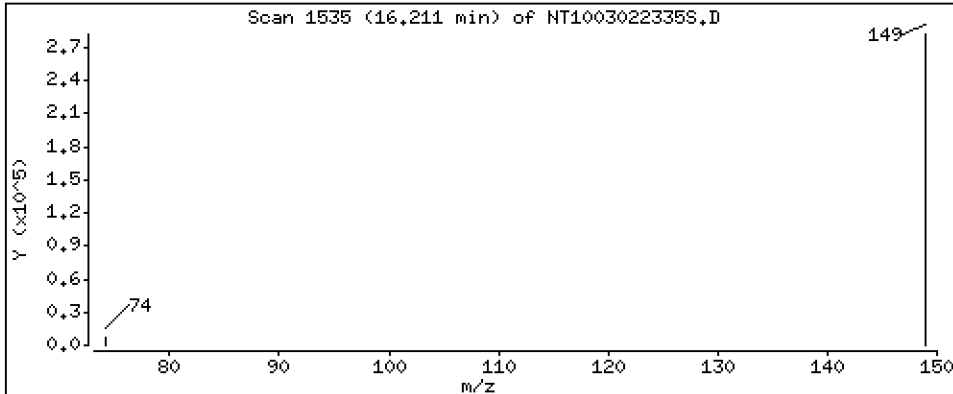
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 1.164 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

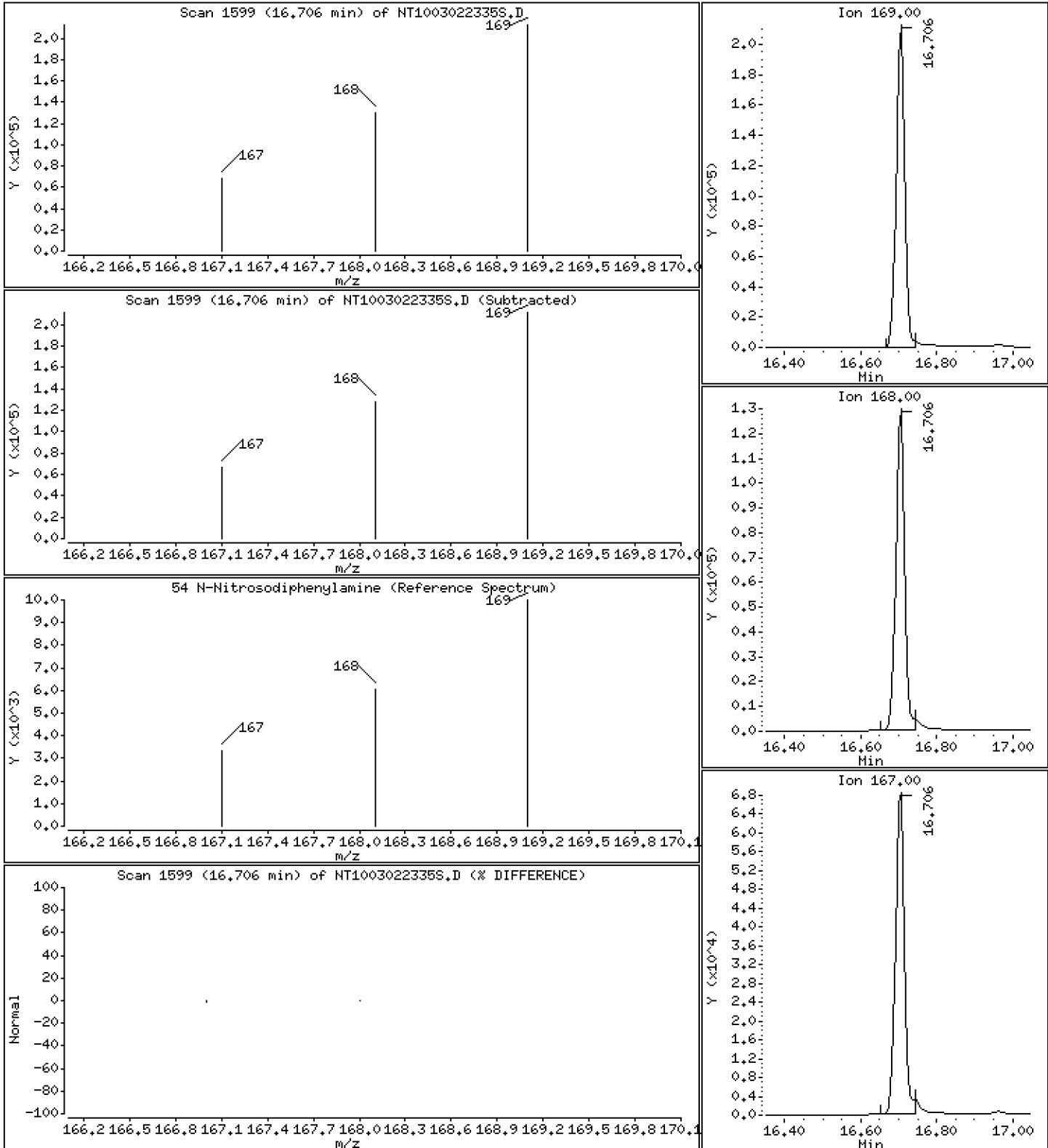
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.8220 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIM

Volume Injected (uL): 1.0

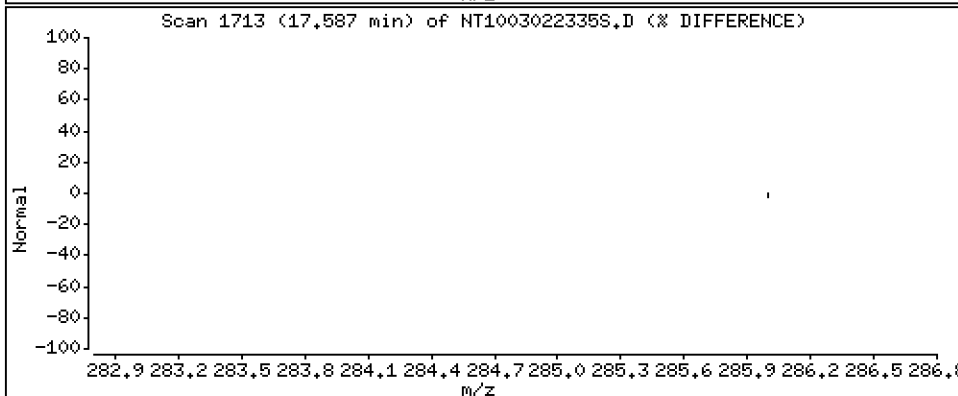
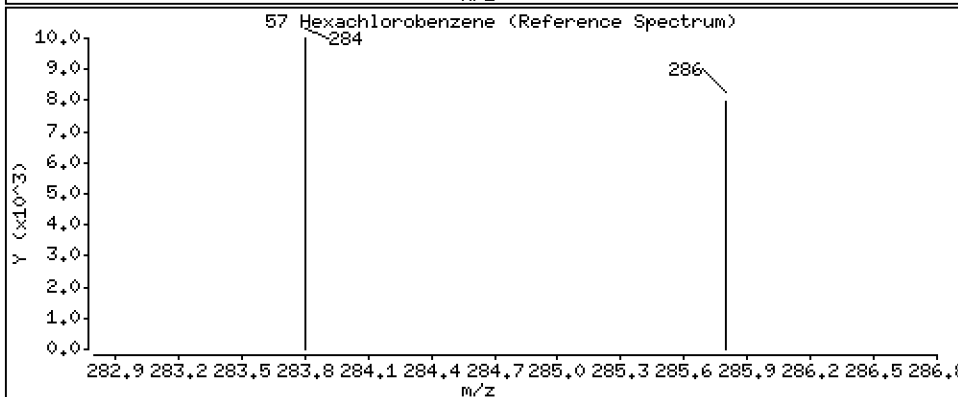
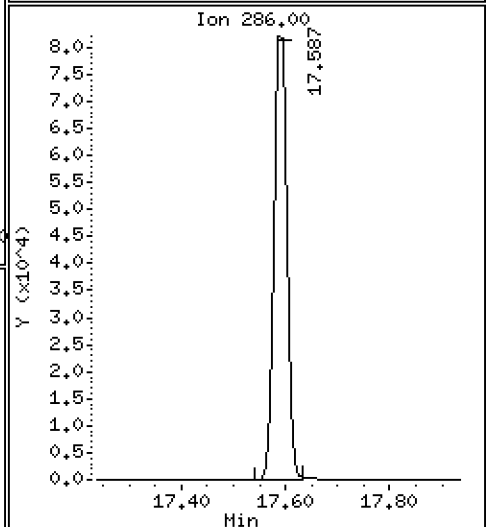
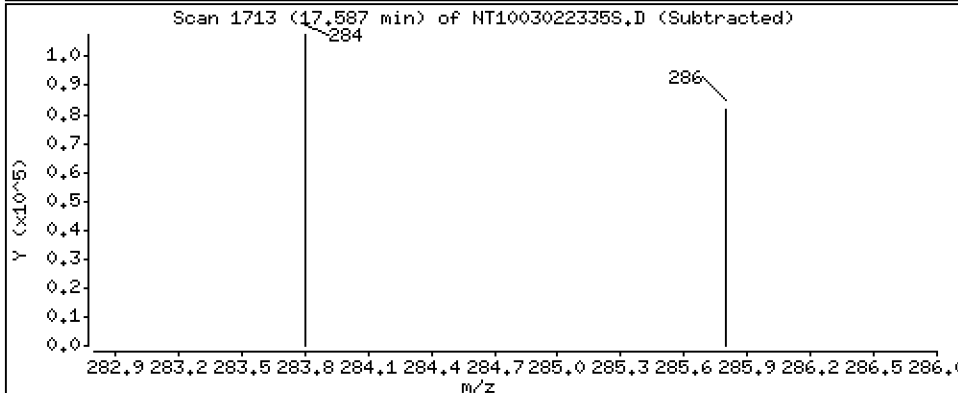
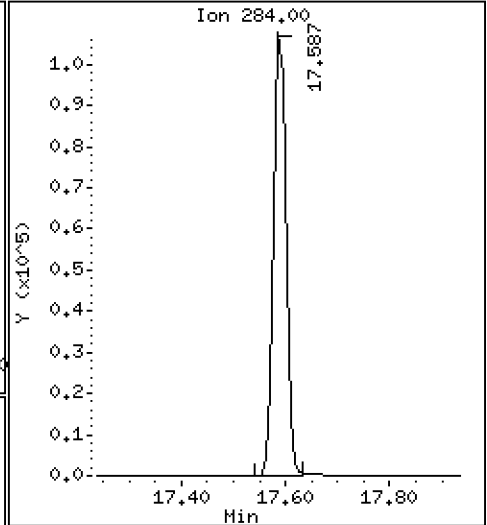
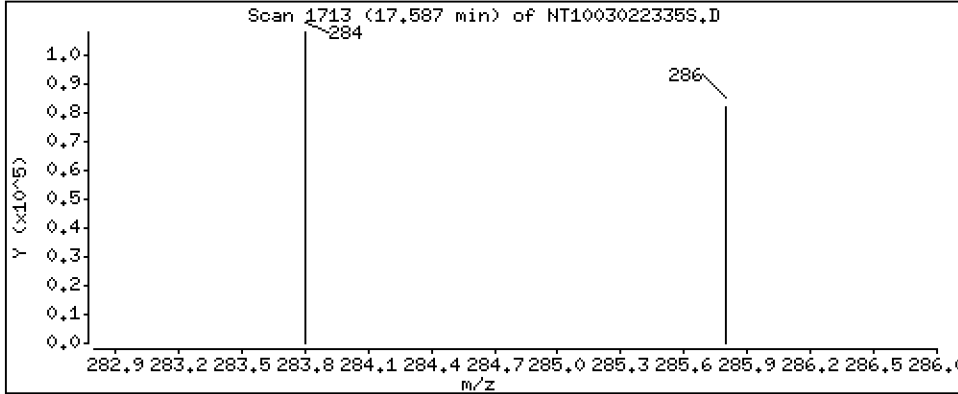
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.8953 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

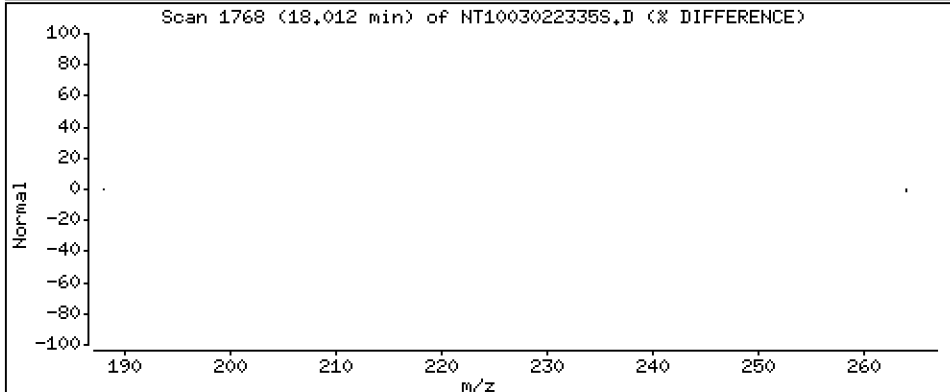
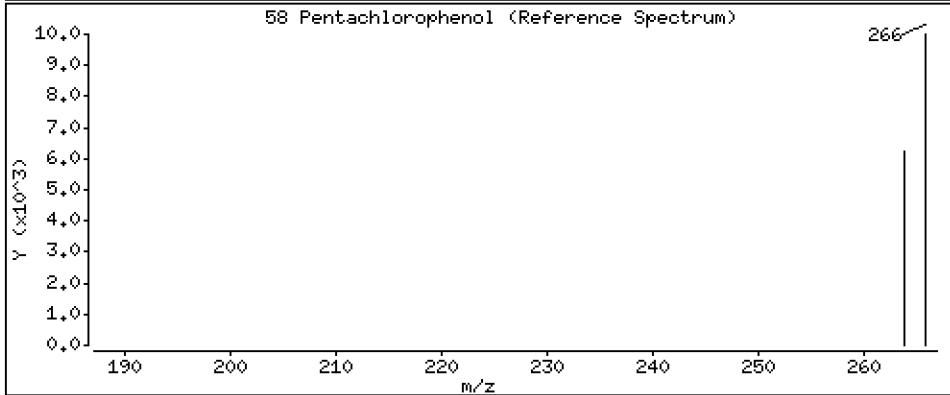
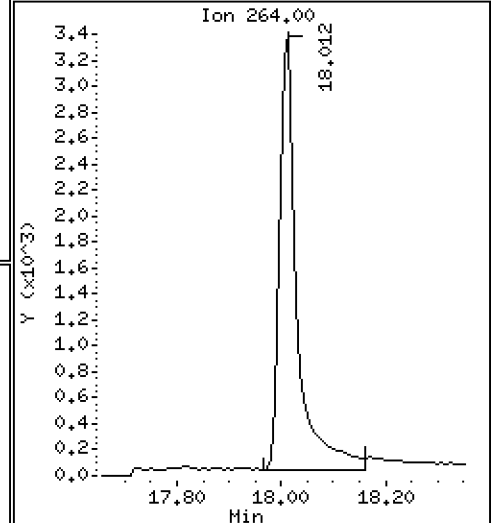
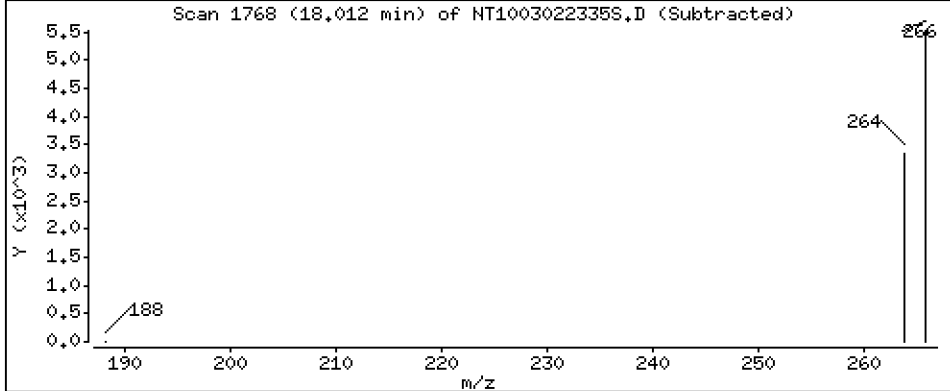
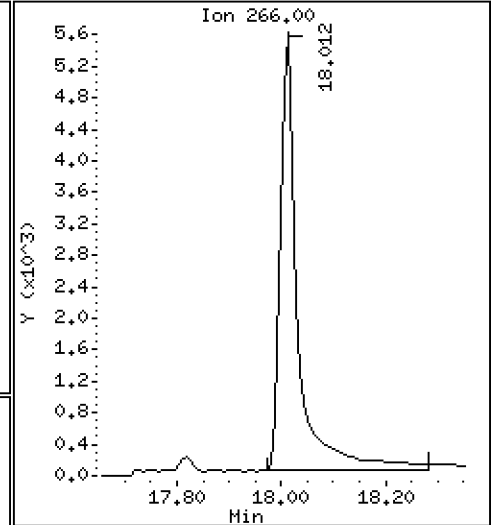
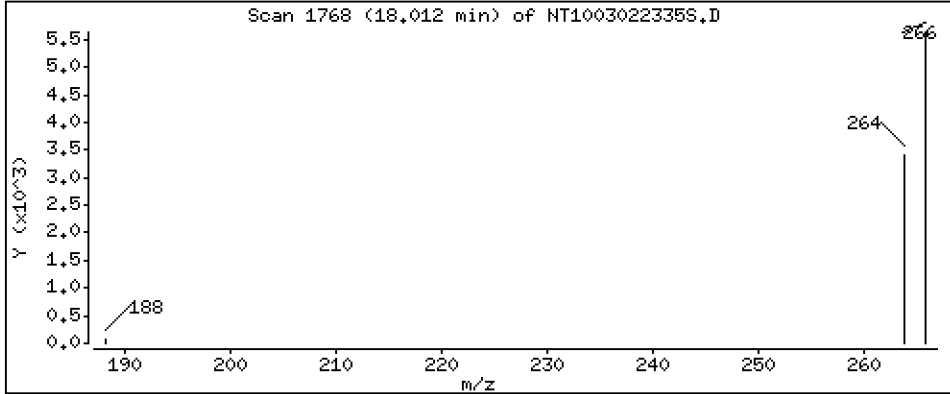
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,1545 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

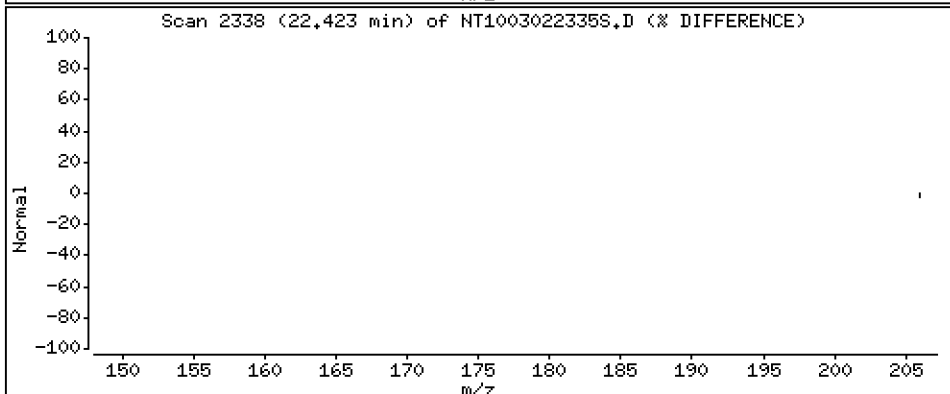
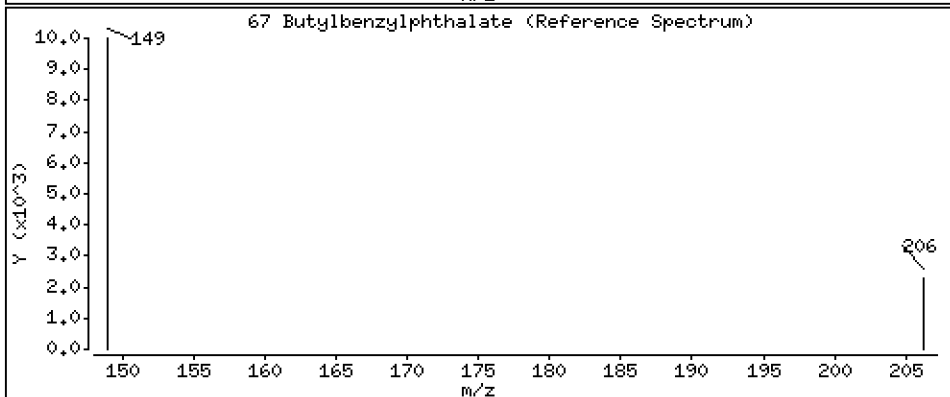
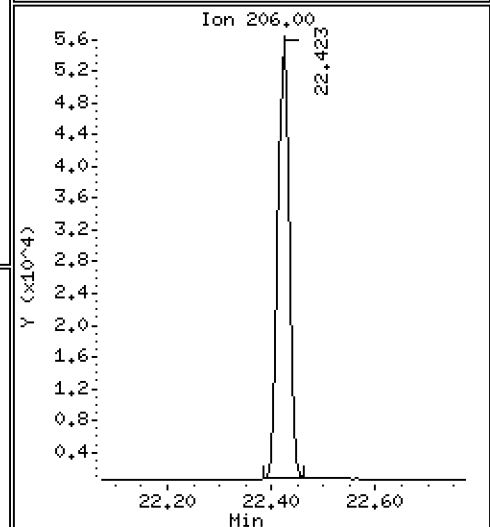
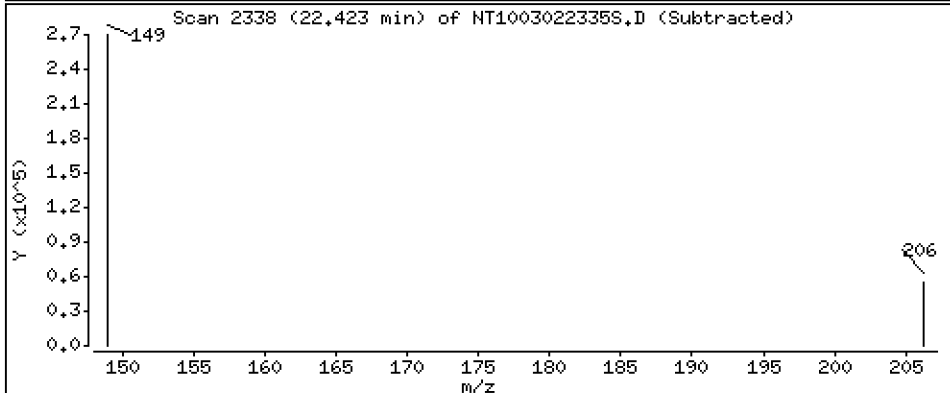
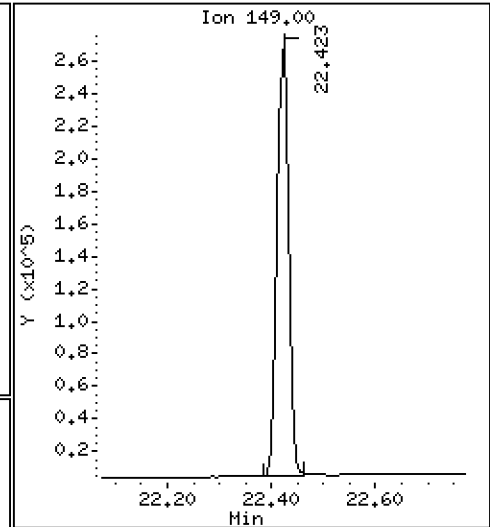
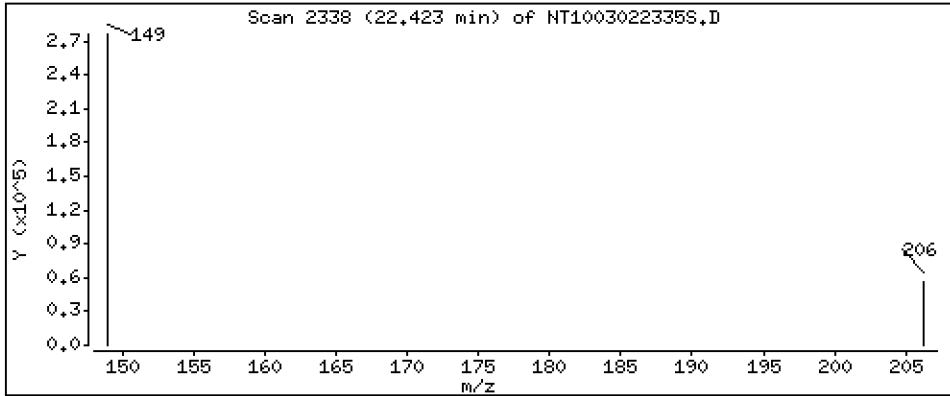
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,8147 ug/L





Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

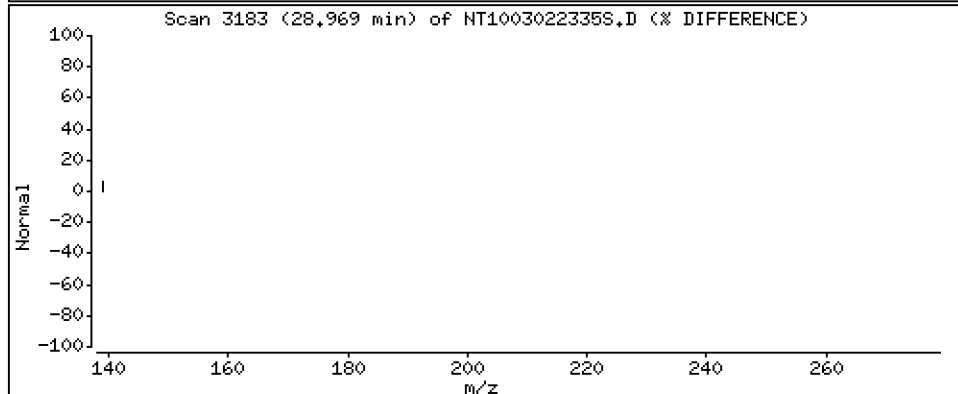
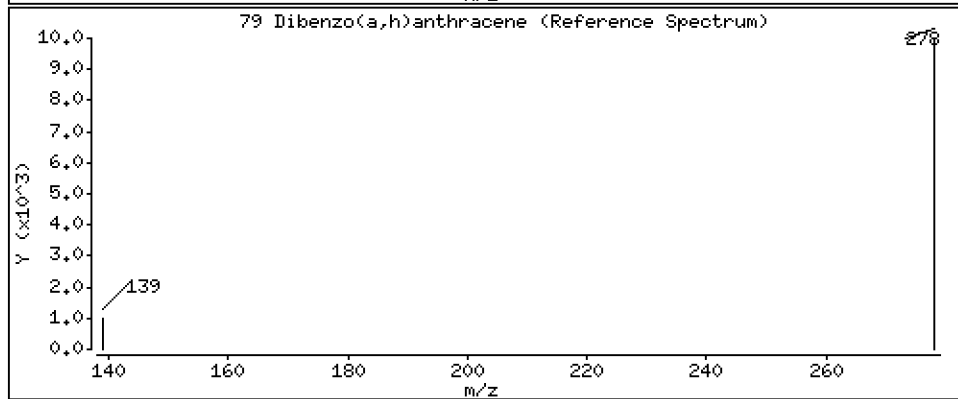
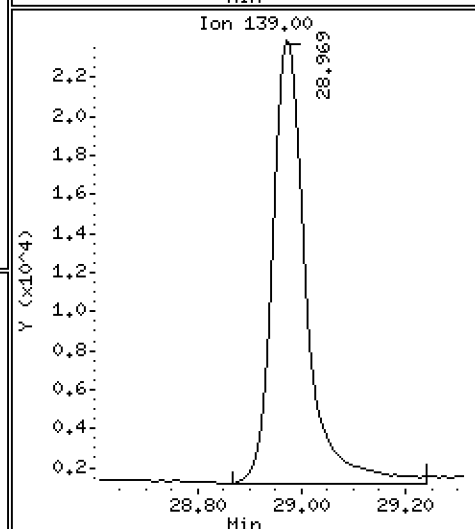
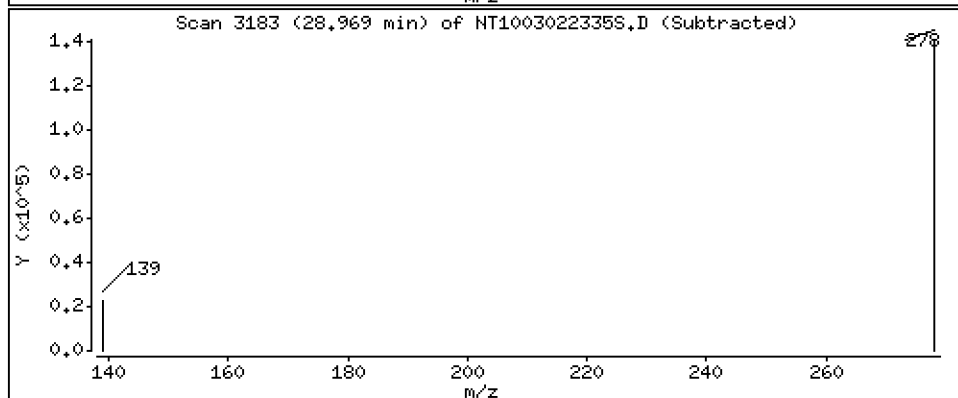
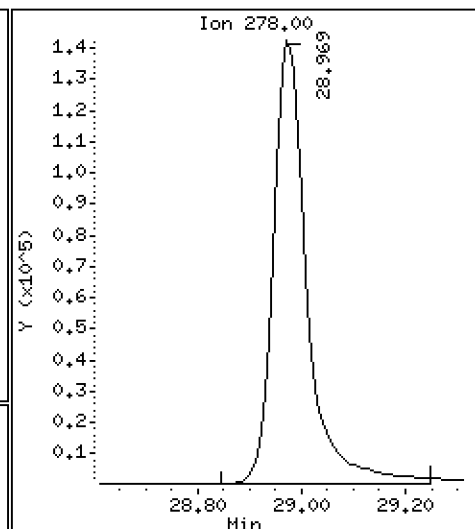
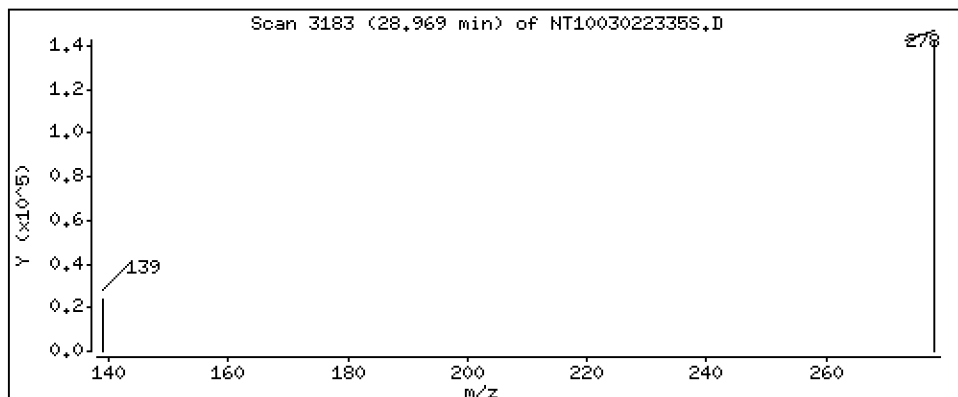
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,9092 ug/L



Date : 03-MAR-2023 11:56

Client ID:

Instrument: nt10.i

Sample Info: SEQ-CCVSIH

Volume Injected (uL): 1.0

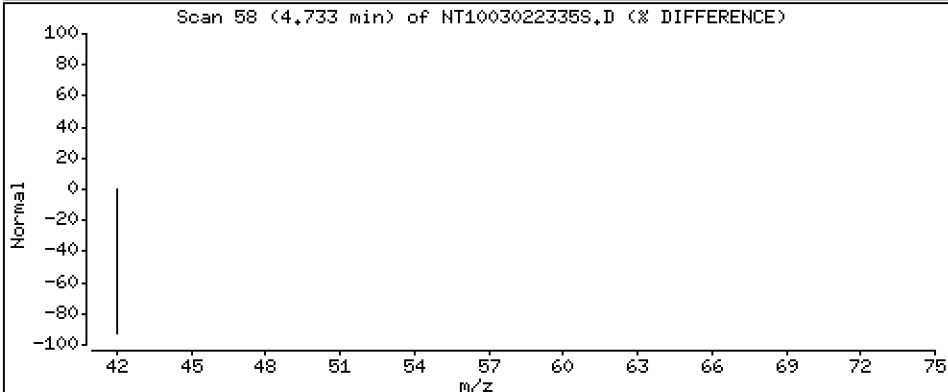
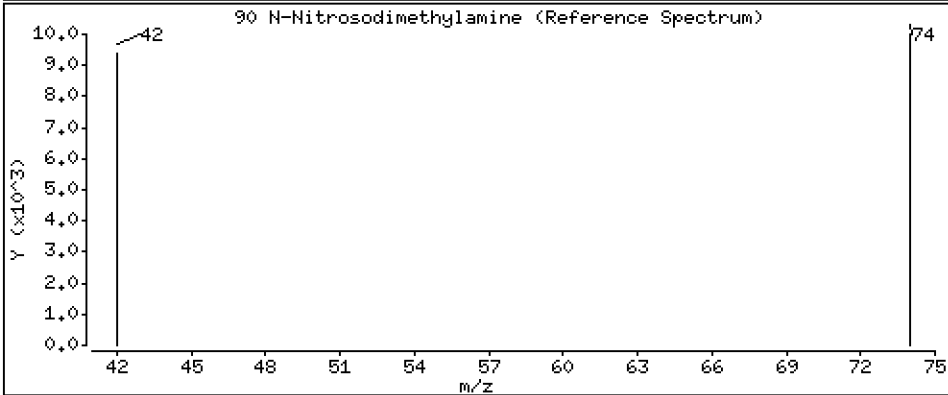
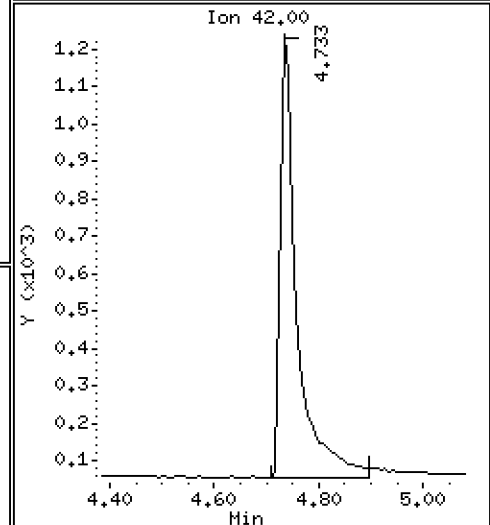
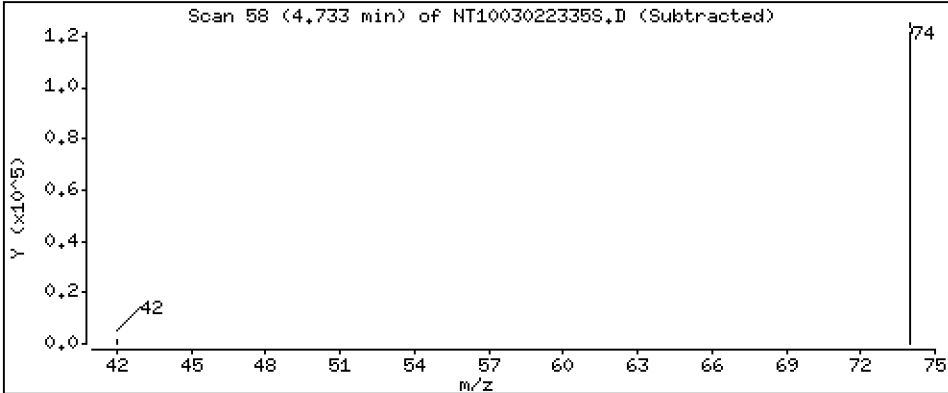
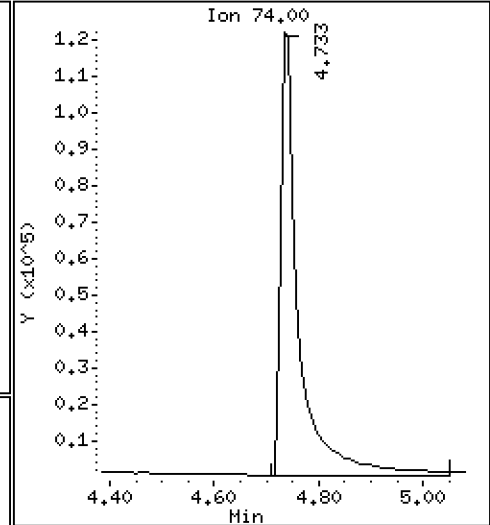
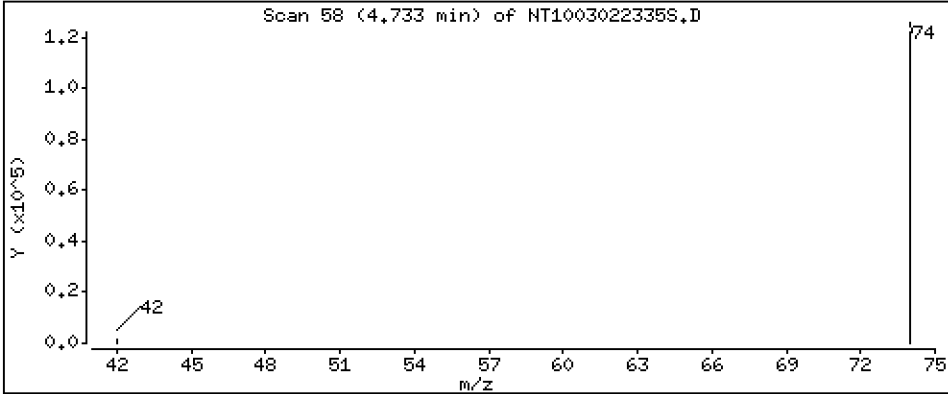
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

90 N-Nitrosodimethylamine

Concentration: 2.457 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022335S.D  
 Lab Smp Id: SLC0159-CCV1  
 Inj Date : 03-MAR-2023 11:56 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-CCVSIM  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula:  $Amt * DF * Uf * Vt / (Vo * Vi) * CpndVariable$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.910	6.902 (0.747)		333962	1.68327	1.683 (R)
3 Phenol	94		8.533	8.525 (0.922)		270101	0.91889	0.9189
7 1,3-Dichlorobenzene	146		9.143	9.143 (0.988)		249687	0.96947	0.9695
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252 (1.000)		694939	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283 (1.003)		237894	0.95004	0.9500
11 Benzyl alcohol	79		9.492	9.492 (1.026)		162930	0.99200	0.9920
12 1,2-Dichlorobenzene	146		9.570	9.570 (1.034)		231116	0.96025	0.9603
13 2-Methylphenol	108		9.663	9.663 (1.044)		204151	1.14976	1.150
15 4-Methylphenol	108		9.958	9.950 (1.076)		202659	1.09498	1.095
16 N-Nitroso-di-n-propylamine	70		9.982	9.981 (1.079)		146080	1.11655	1.117
22 2,4-Dimethylphenol	107		11.006	11.006 (0.938)		426552	2.04136	2.041
24 Benzoic acid	105		11.099	11.099 (0.946)		40727	0.35694	0.3569
26 1,2,4-Trichlorobenzene	180		11.600	11.600 (0.989)		197597	1.12100	1.121
* 27 Naphthalene-d8	136		11.731	11.731 (1.000)		2448988	4.00000	
30 Hexachlorobutadiene	225		11.994	12.001 (1.022)		121379	0.97036	0.9704
39 Dimethylphthalate	163		14.749	14.749 (0.963)		378368	1.00235	1.002
* 42 Acenaphthene-d10	162		15.322	15.321 (1.000)		1188831	4.00000	
50 Diethylphthalate	149		16.211	16.210 (1.058)		414456	1.16427	1.164
54 N-Nitrosodiphenylamine	169		16.706	16.698 (0.907)		329591	0.82201	0.8220
57 Hexachlorobenzene	284		17.586	17.586 (0.955)		167993	0.89529	0.8953

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.012	18.004	(0.978)	12703	0.15453	0.1545
* 59 Phenanthrene-d10	188	18.414	18.414	(1.000)	2477534	4.00000	
\$ 66 Terphenyl-d14	244	21.540	21.532	(0.919)	300039	1.32996	1.330(R)
67 Butylbenzylphthalate	149	22.423	22.422	(0.957)	382653	0.81471	0.8147
* 69 Chrysene-d12	240	23.437	23.429	(1.000)	2789771	4.00000	
* 77 Perylene-d12	264	26.139	26.131	(1.000)	3001781	4.00000	
79 Dibenzo(a,h)anthracene	278	28.969	28.961	(1.108)	640197	0.90917	0.9092
90 N-Nitrosodimethylamine	74	4.732	4.732	(0.512)	288612	2.45706	2.457

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022335S.D  
 Lab Smp Id: SLC0159-CCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	694939	11.98
27 Naphthalene-d8	2213509	1106755	4427018	2448988	10.64
42 Acenaphthene-d10	1093970	546985	2187940	1188831	8.67
59 Phenanthrene-d10	2129840	1064920	4259680	2477534	16.32
69 Chrysene-d12	2347260	1173630	4694520	2789771	18.85
77 Perylene-d12	2638390	1319195	5276780	3001781	13.77

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.44	0.03
77 Perylene-d12	26.13	25.63	26.63	26.14	0.03

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

REVIEW SUMMARY FOR FILE - NT1003022335S.D

Lab ID: SLC0159-CCV1

nt10.i, 20230302B.b\SIM.b\SIMABN2.m,

03-MAR-2023 11:56

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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



**LOW-CONCENTRATION  
CONTINUING CALIBRATION CHECK  
EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>NT10</u>	Calibration:	<u>GC00032</u>
Lab File ID:	<u>NT1003022327S.D</u>	Calibration Date:	<u>03/01/2023</u>
Sequence:	<u>SLC0159</u>	Injection Date:	<u>03/03/23</u>
Lab Sample ID:	<u>SLC0159-LCV1</u>	Injection Time:	<u>06:52</u>
Sequence Name:	<u>Low Cal Check</u>		

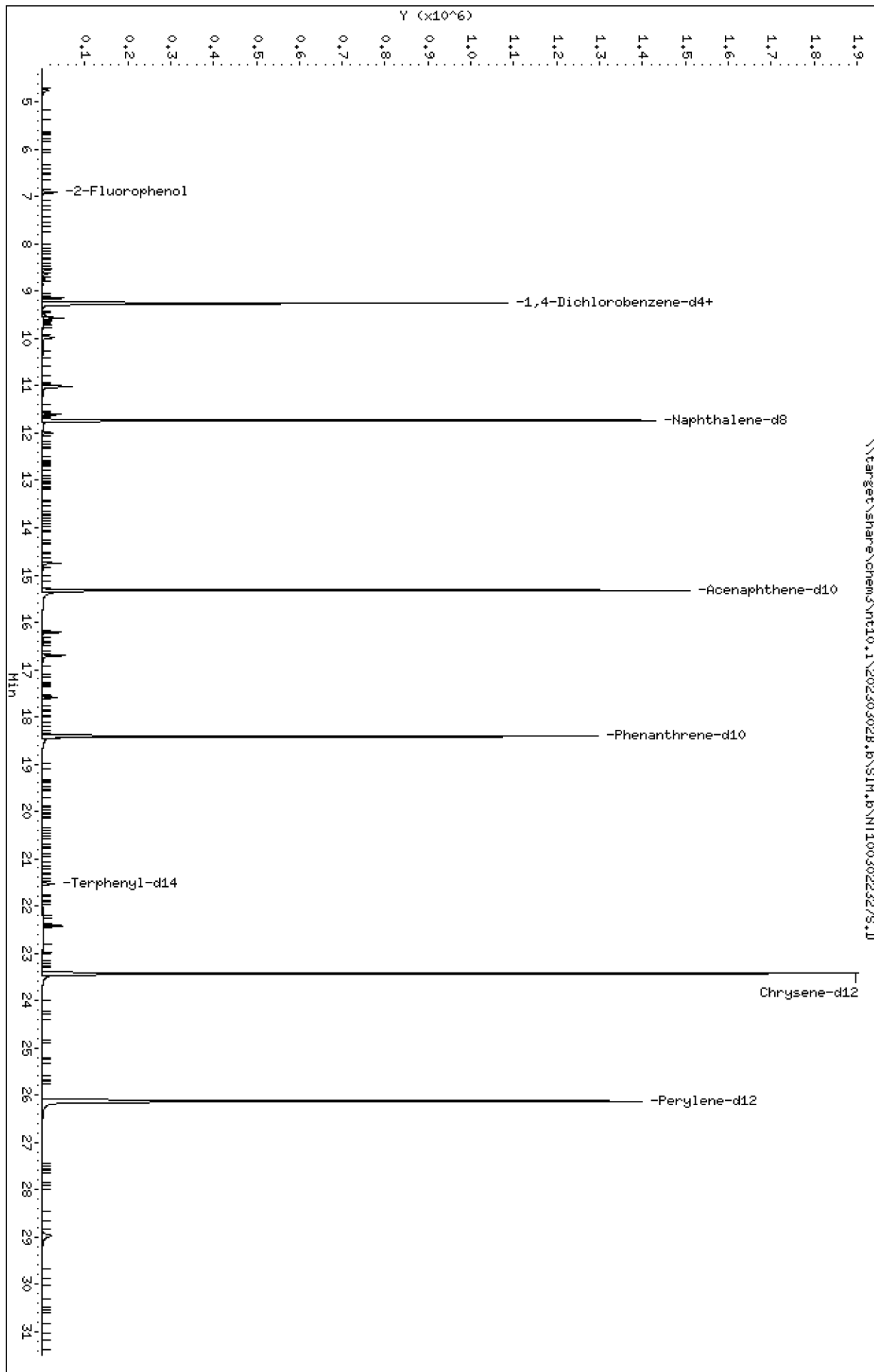
COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.2	1.4413080	1.3975010		-3.0	
1,2-Dichlorobenzene	A	0.20000	0.2	1.3853460	1.3759710		-0.7	
Benzyl Alcohol	A	0.20000	0.1	0.7492523	0.6881087		-26.4	
Benzoic acid	A	0.80000	0.02	0.1431163	0.0043265		-97.7	
2,4-Dimethylphenol	A	0.40000	0.4	0.2957717	0.3064200		-9.8	
1,2,4-Trichlorobenzene	A	0.20000	0.2	0.2879030	0.3097633		7.6	
N-Nitrosodiphenylamine	A	0.20000	0.2	0.6473471	0.5417252		-16.3	
Pentachlorophenol	A	0.40000	0.003	0.0950913	0.0009467		-99.3	
2-Fluorophenol	A	0.30000	0.311	1.1419780	1.1855550		3.8	
p-Terphenyl-d14	A	0.20000	0.215	0.3234672	0.3472456		7.4	

\* Values outside of QC limits

Data File: \\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022327S.D  
Date: 03-MAR-2023 06:52  
Client ID:  
Sample Info: SED-LCV200  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: JGR  
Column diameter: 0.25

\\target\share\chem3\nt10.1\20230302B.b\SIH.b\NT1003022327S.D





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

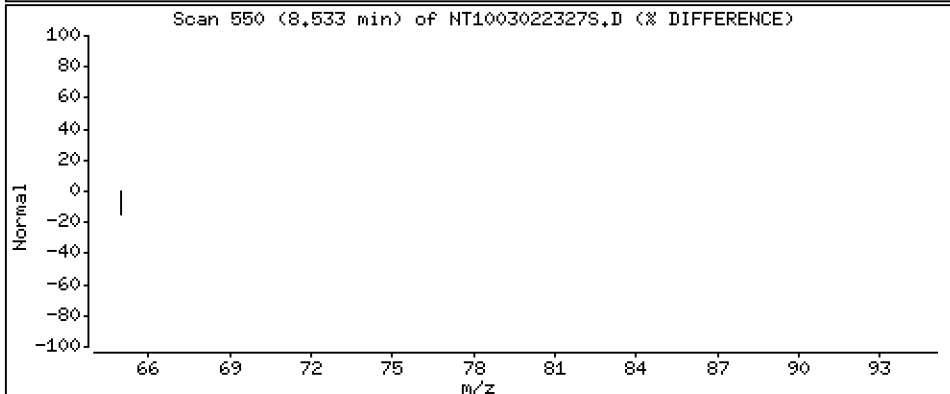
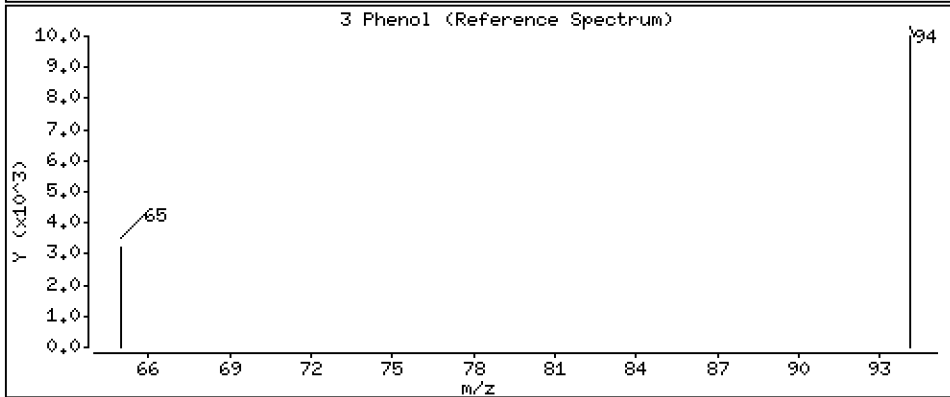
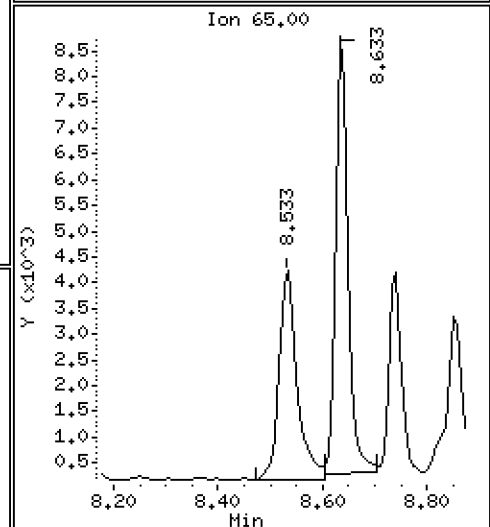
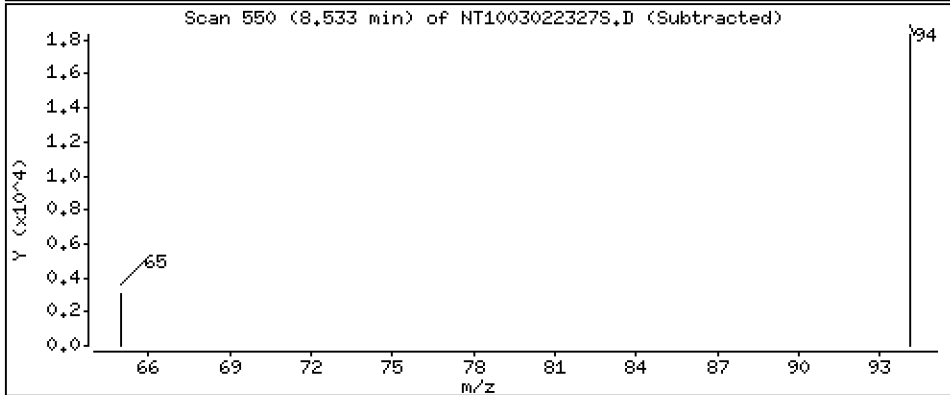
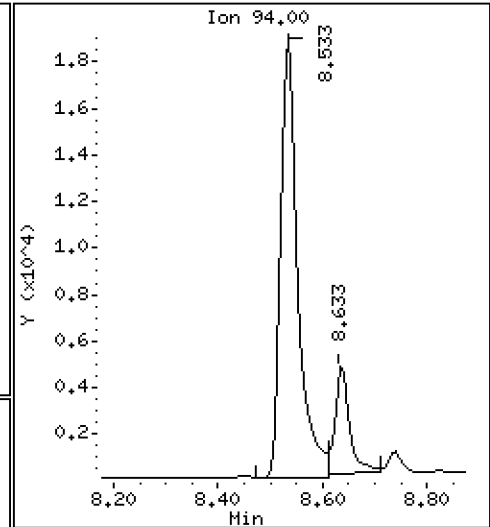
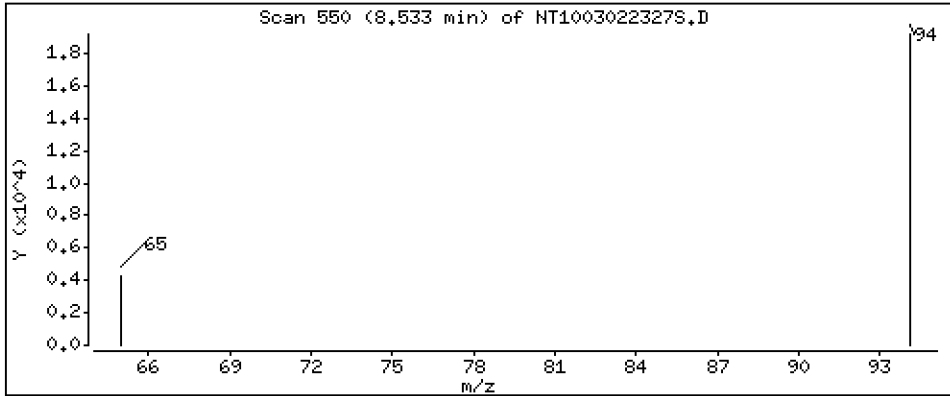
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 0,1560 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

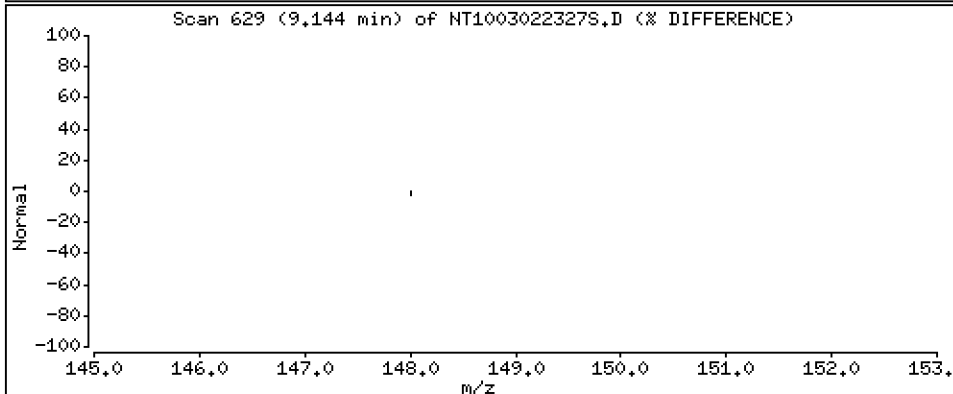
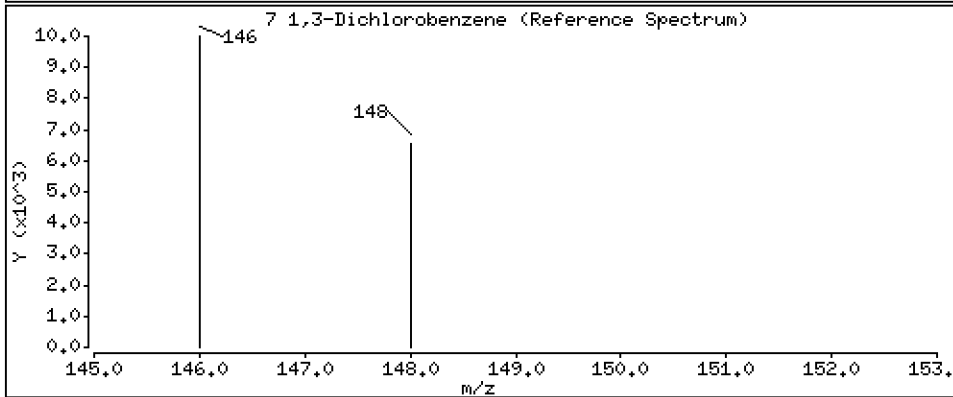
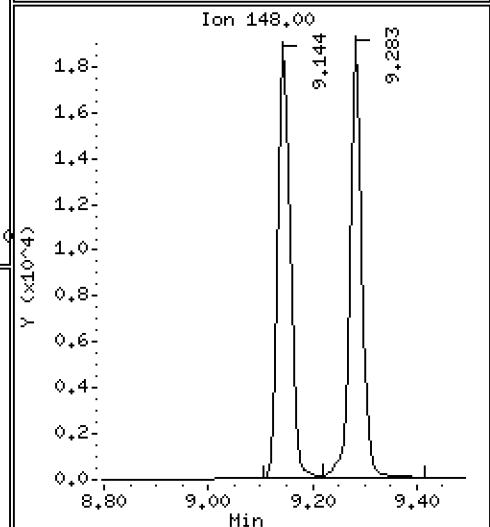
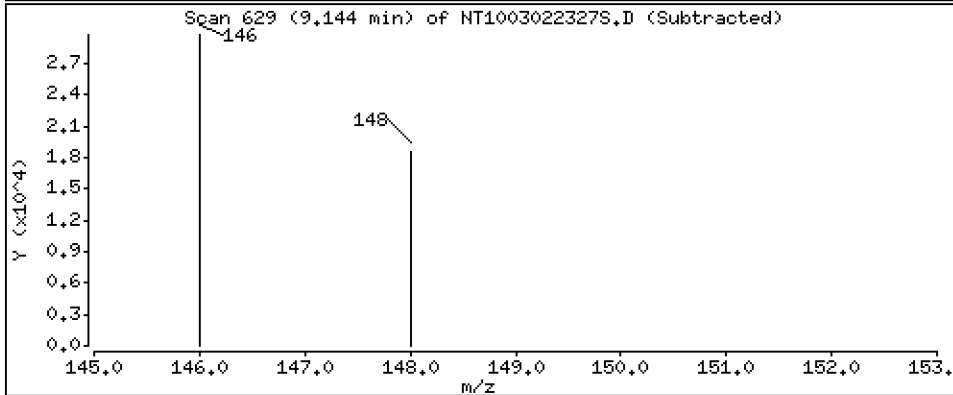
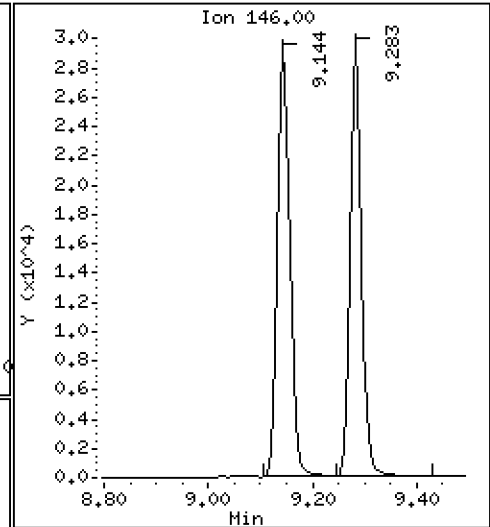
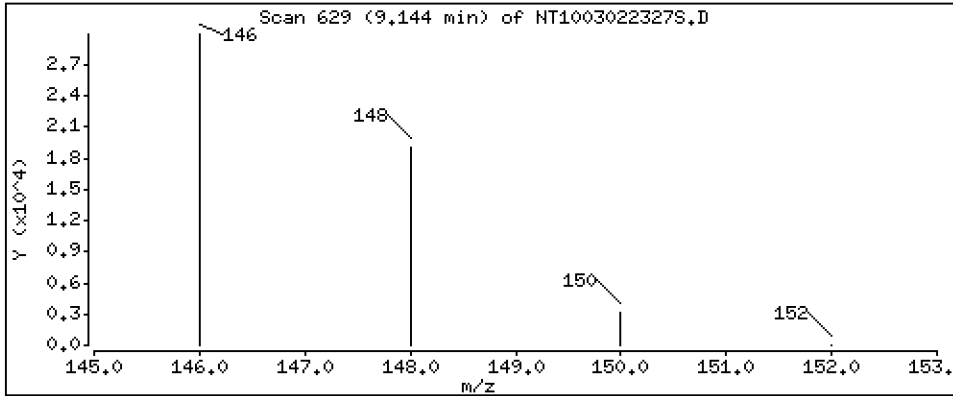
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

7 1,3-Dichlorobenzene

Concentration: 0.1989 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

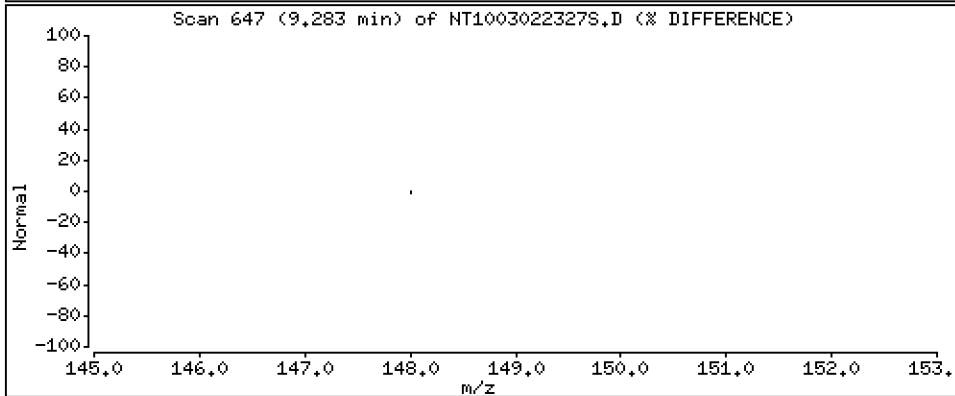
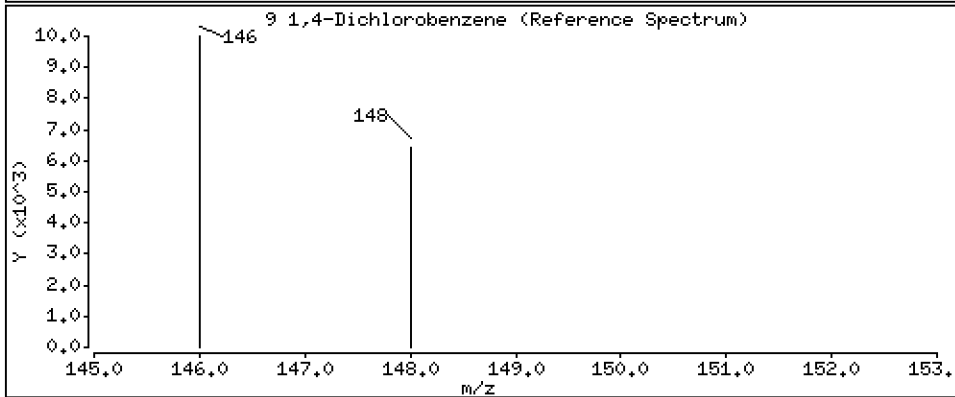
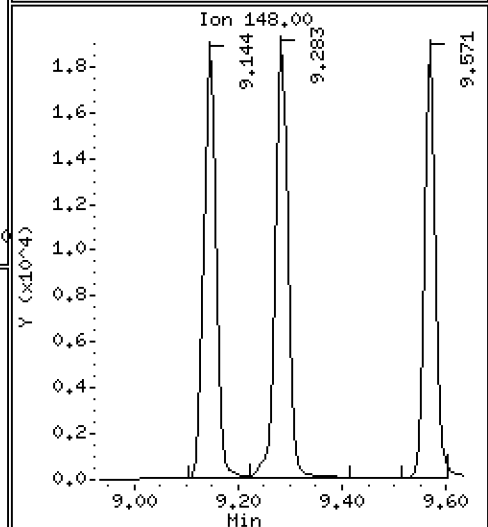
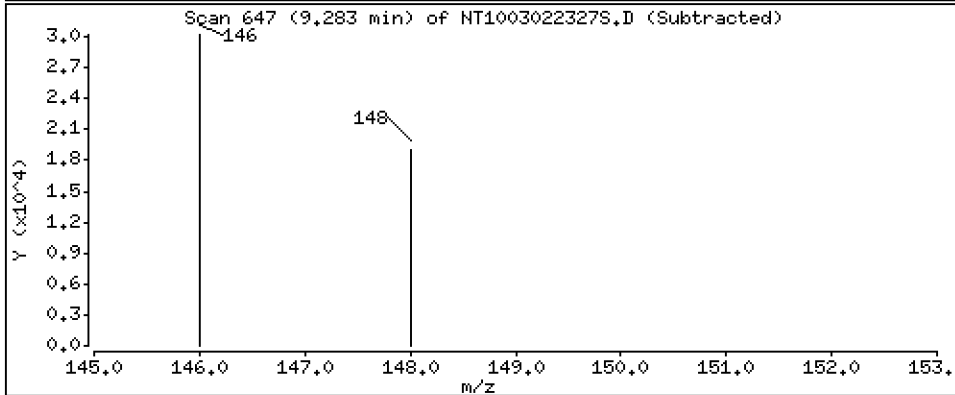
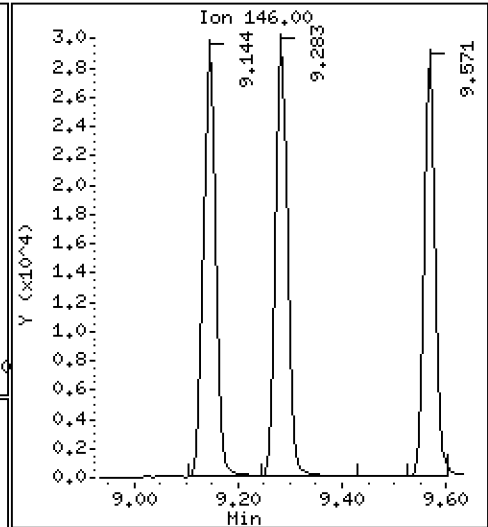
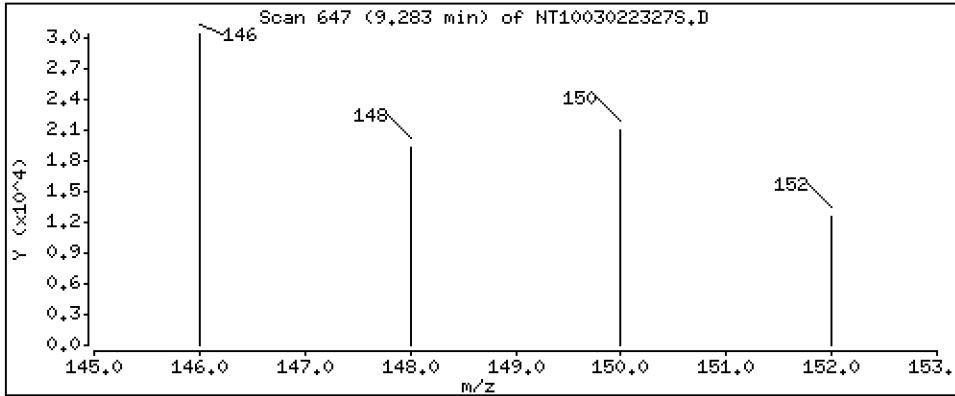
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

9 1,4-Dichlorobenzene

Concentration: 0.1939 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

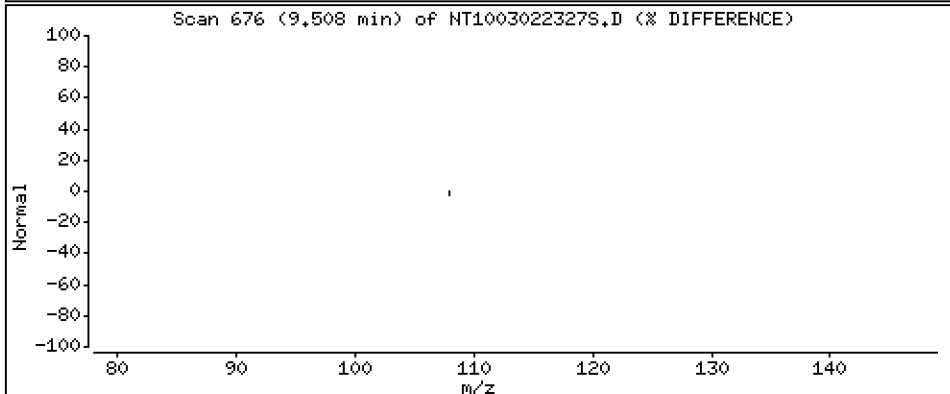
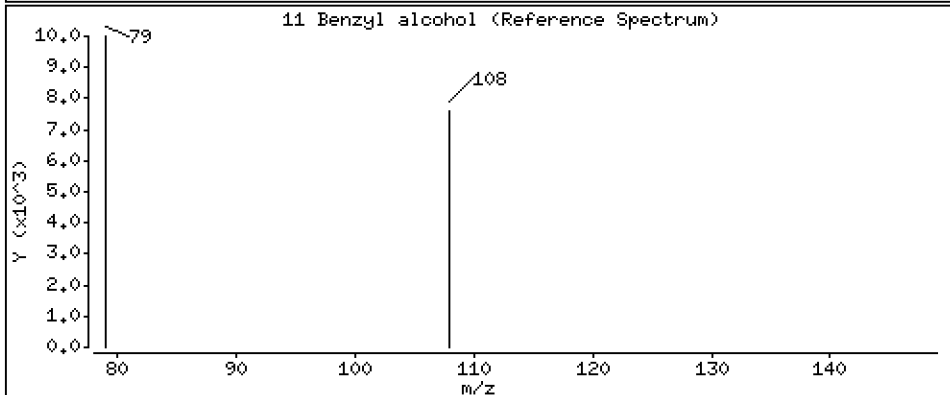
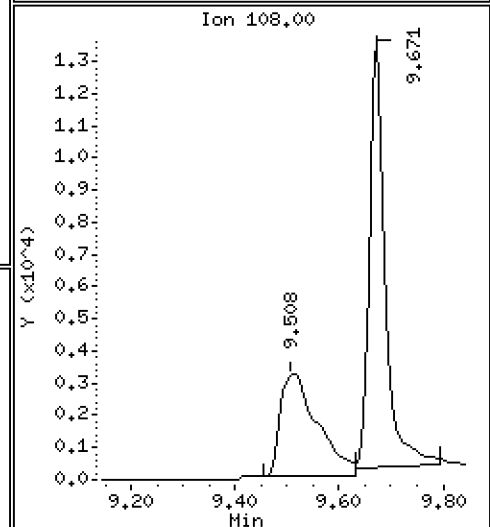
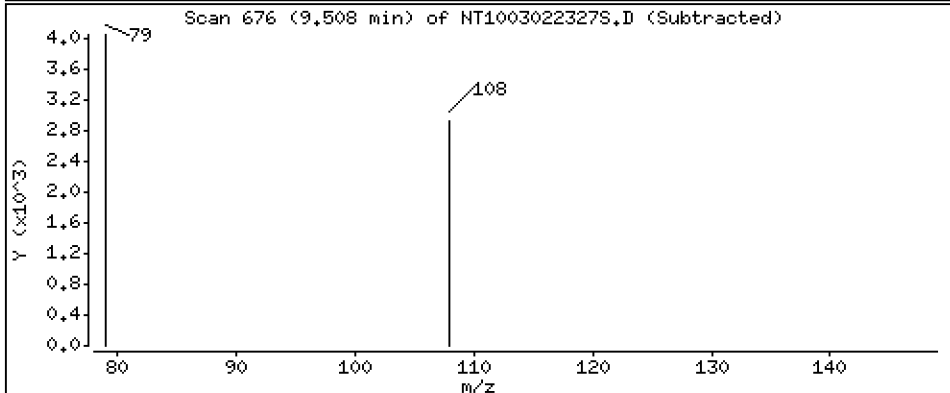
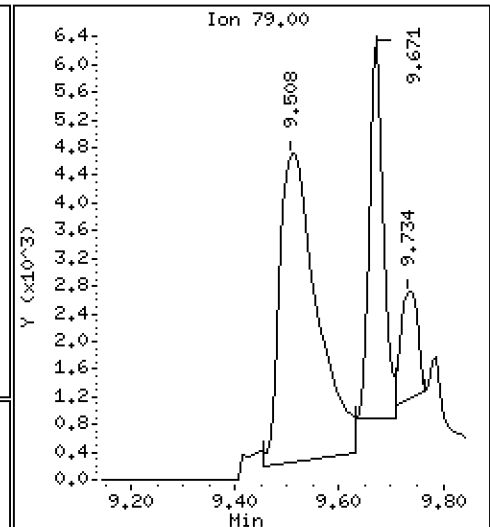
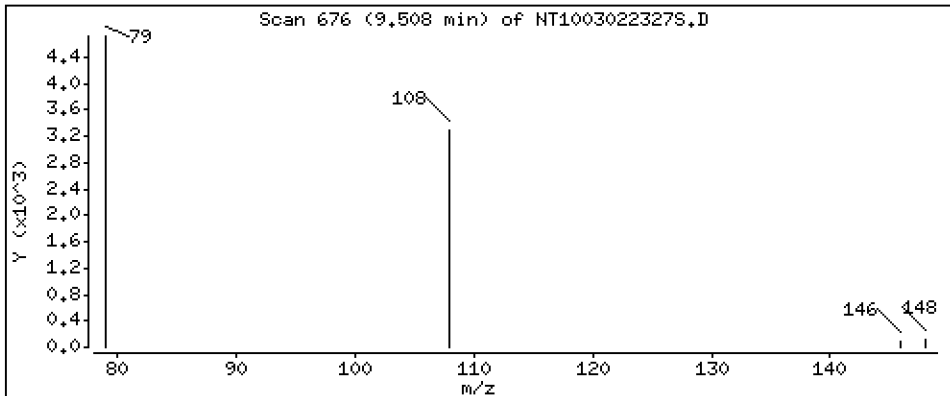
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

11 Benzyl alcohol

Concentration: 0,1472 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

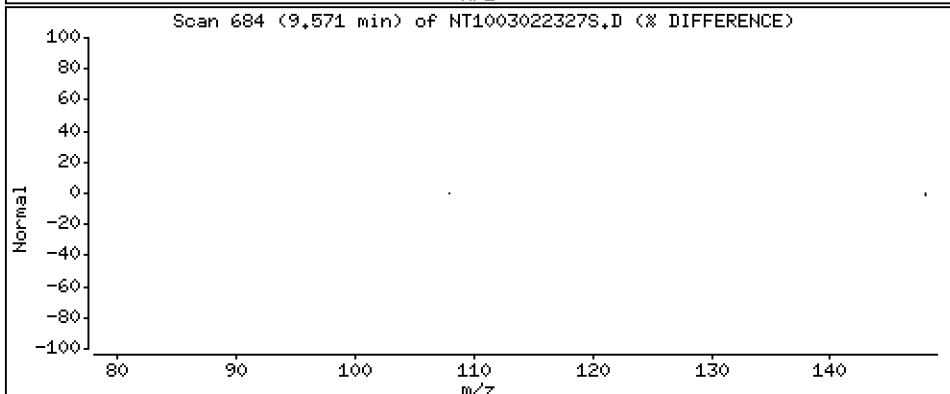
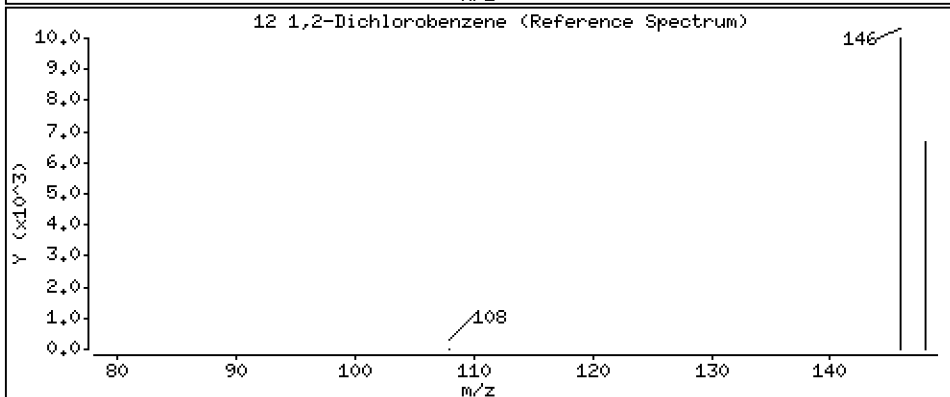
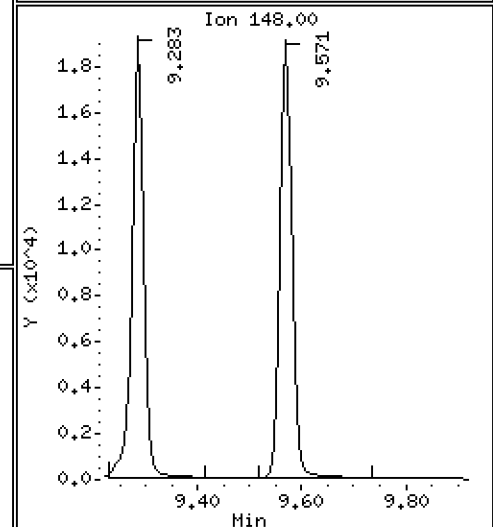
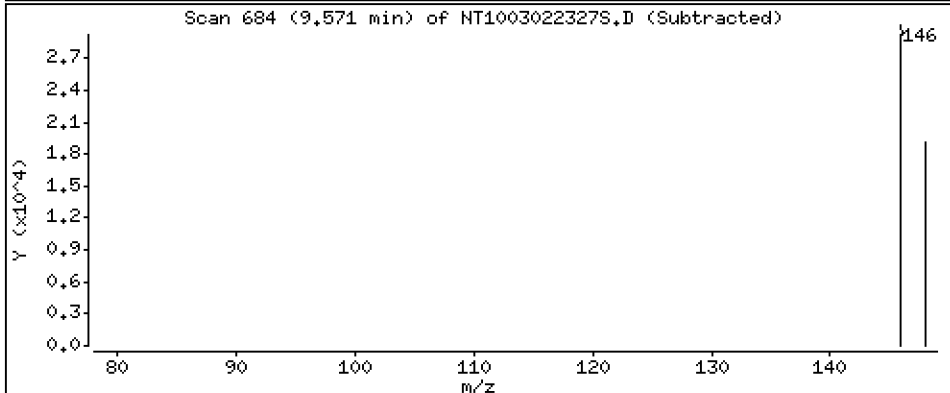
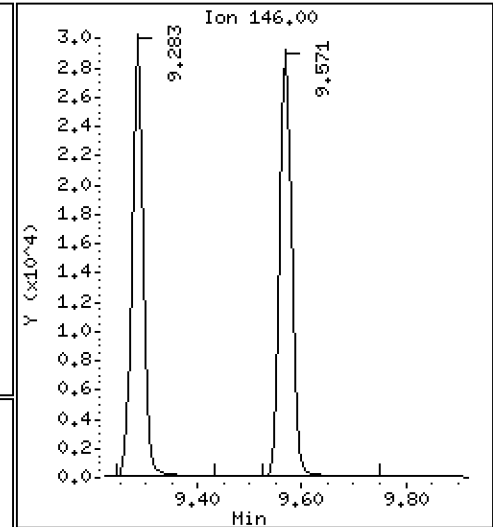
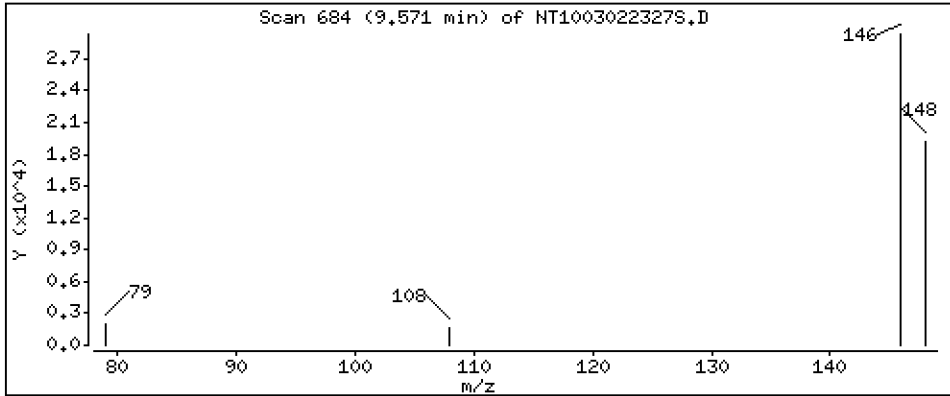
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

12 1,2-Dichlorobenzene

Concentration: 0.1986 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

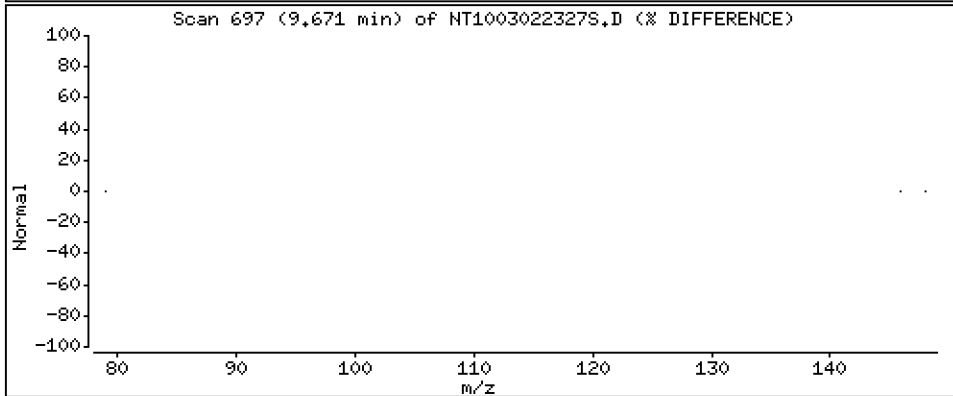
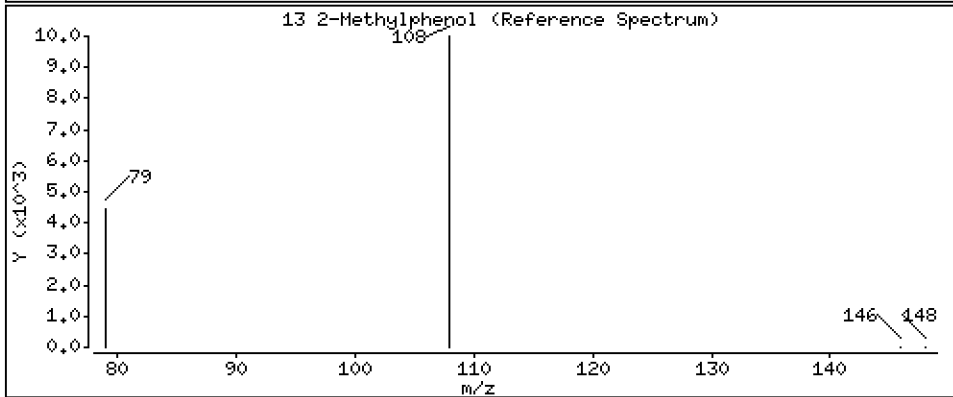
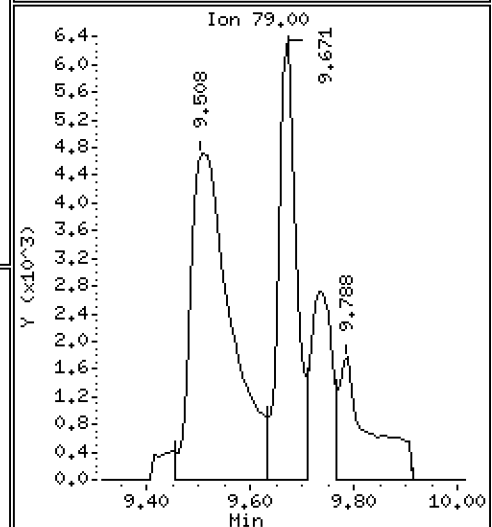
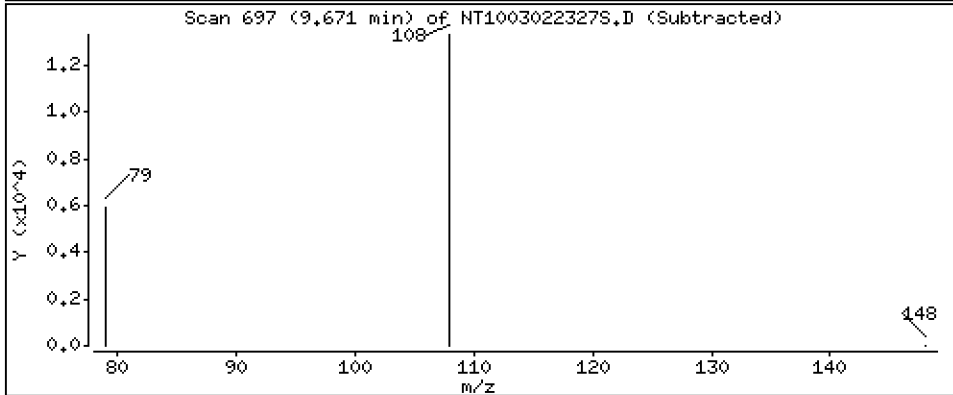
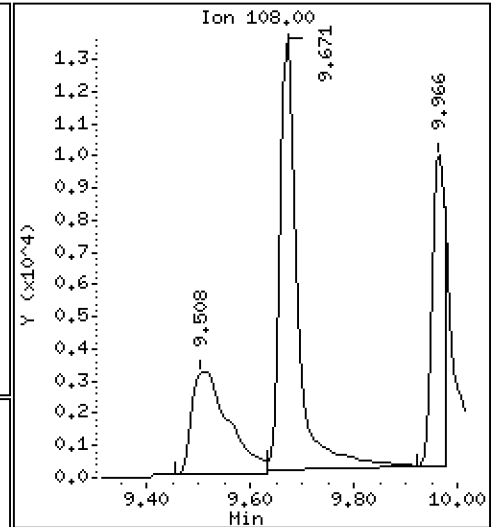
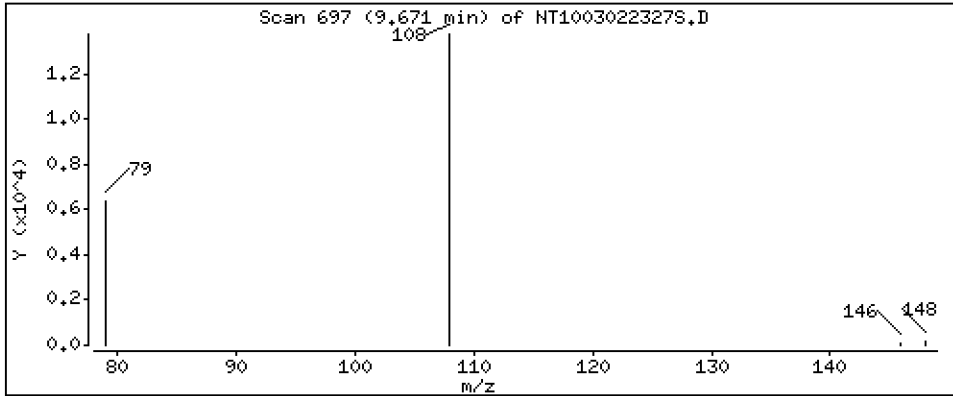
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 0.1866 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

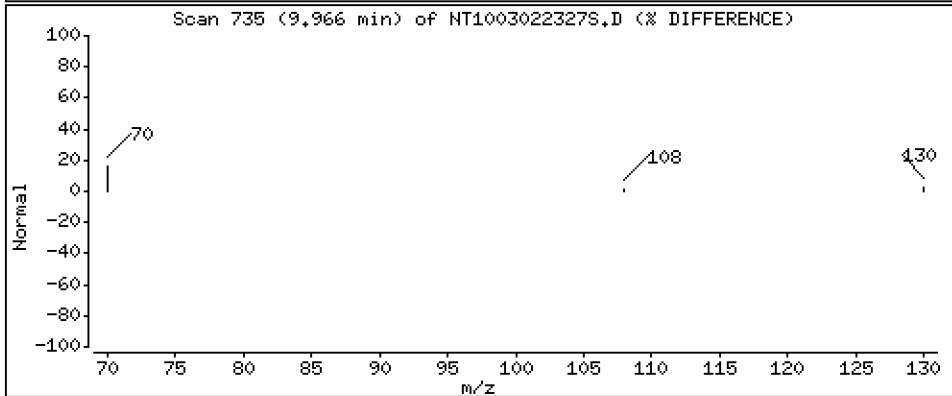
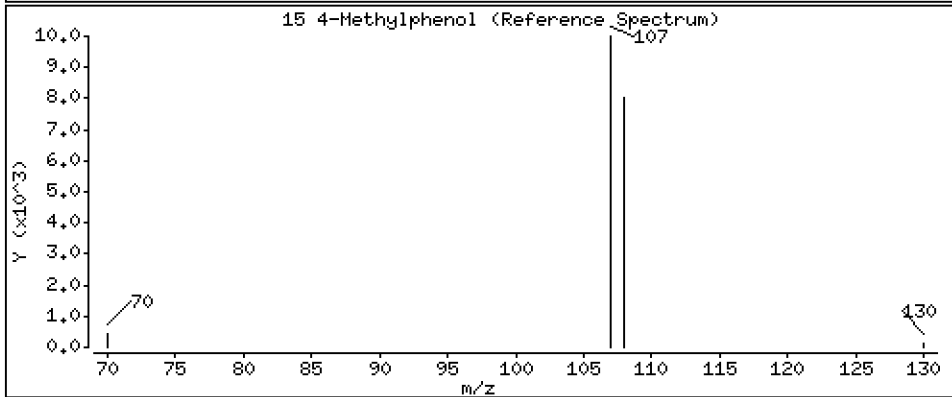
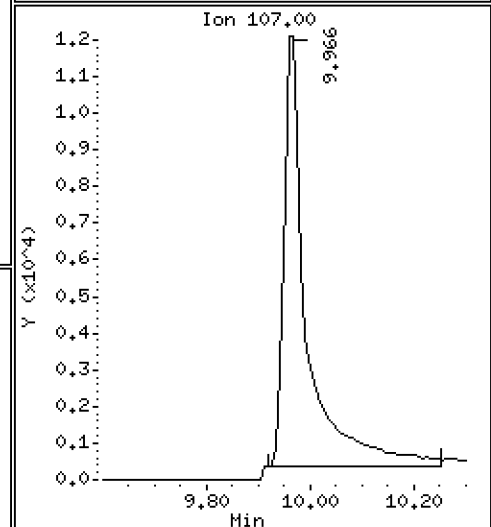
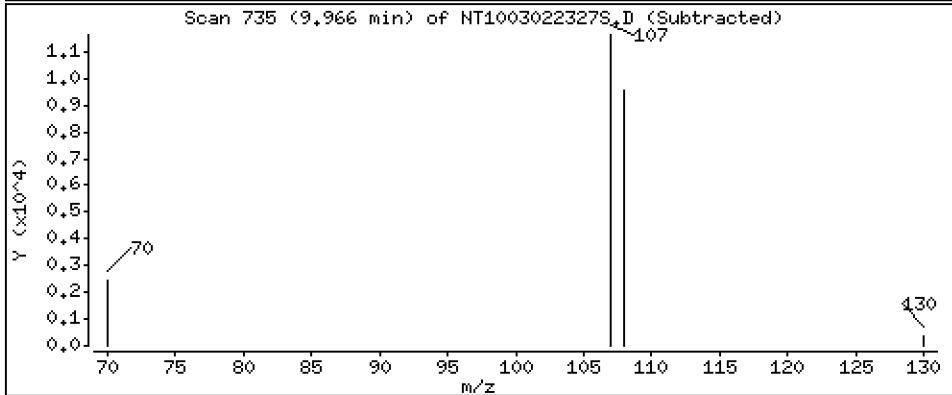
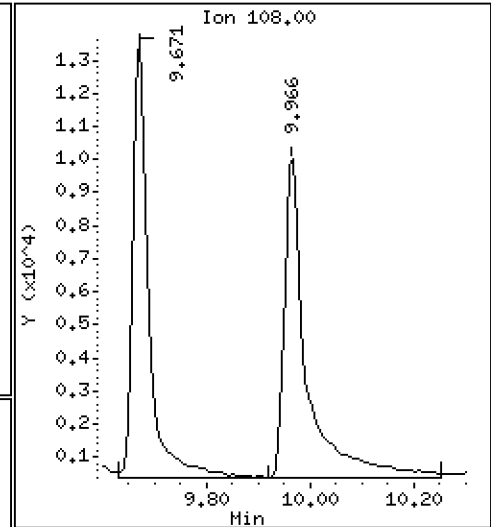
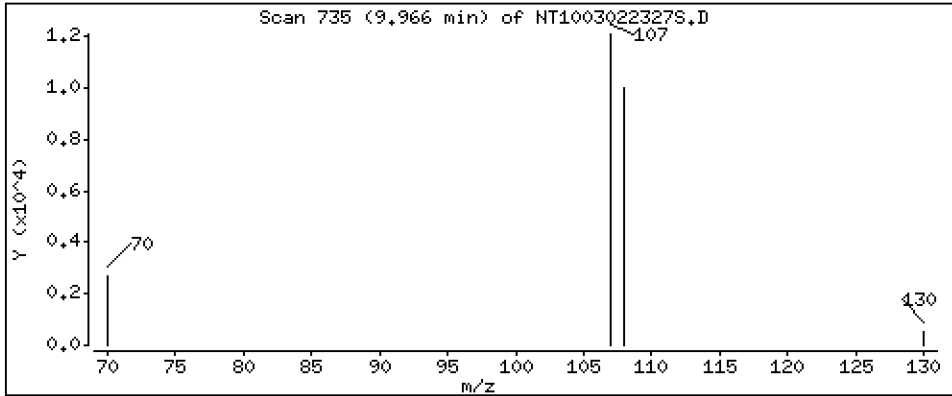
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 0.1707 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

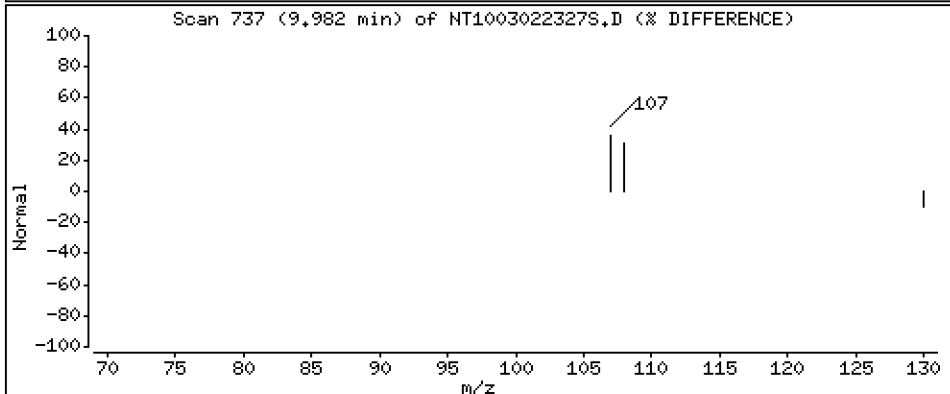
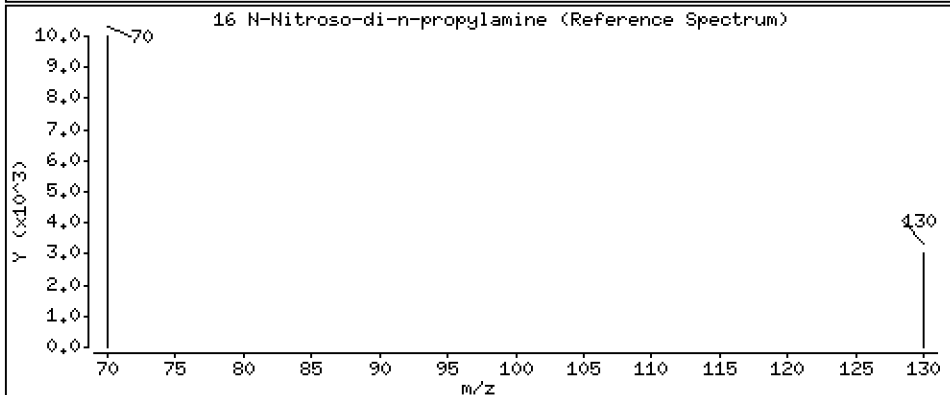
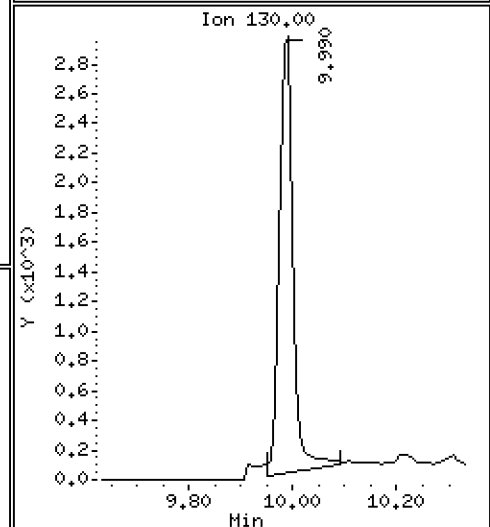
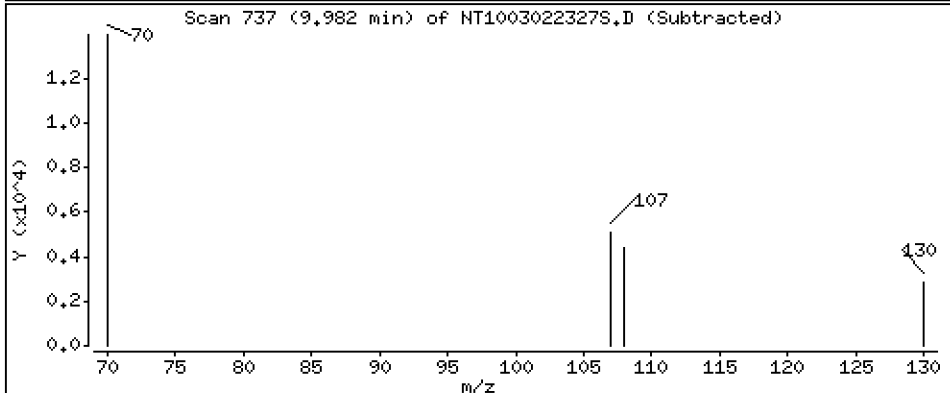
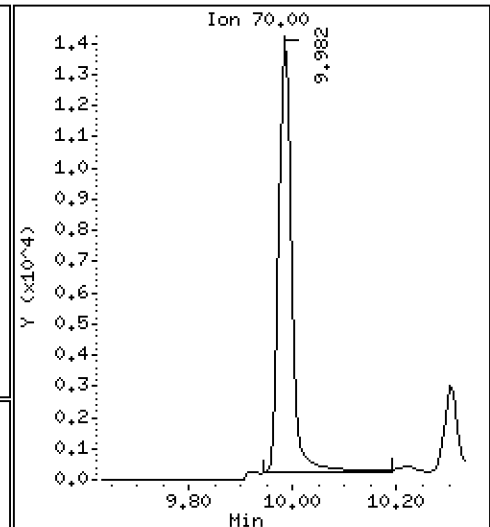
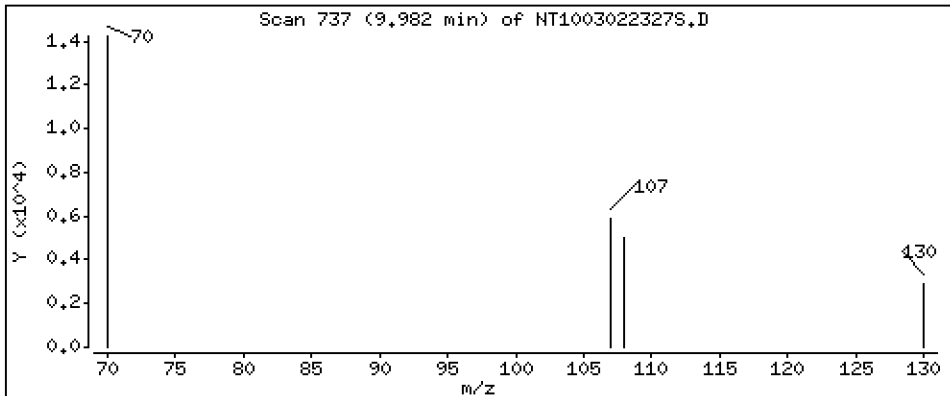
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

16 N-Nitroso-di-n-propylamine

Concentration: 0.1906 ug/L





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

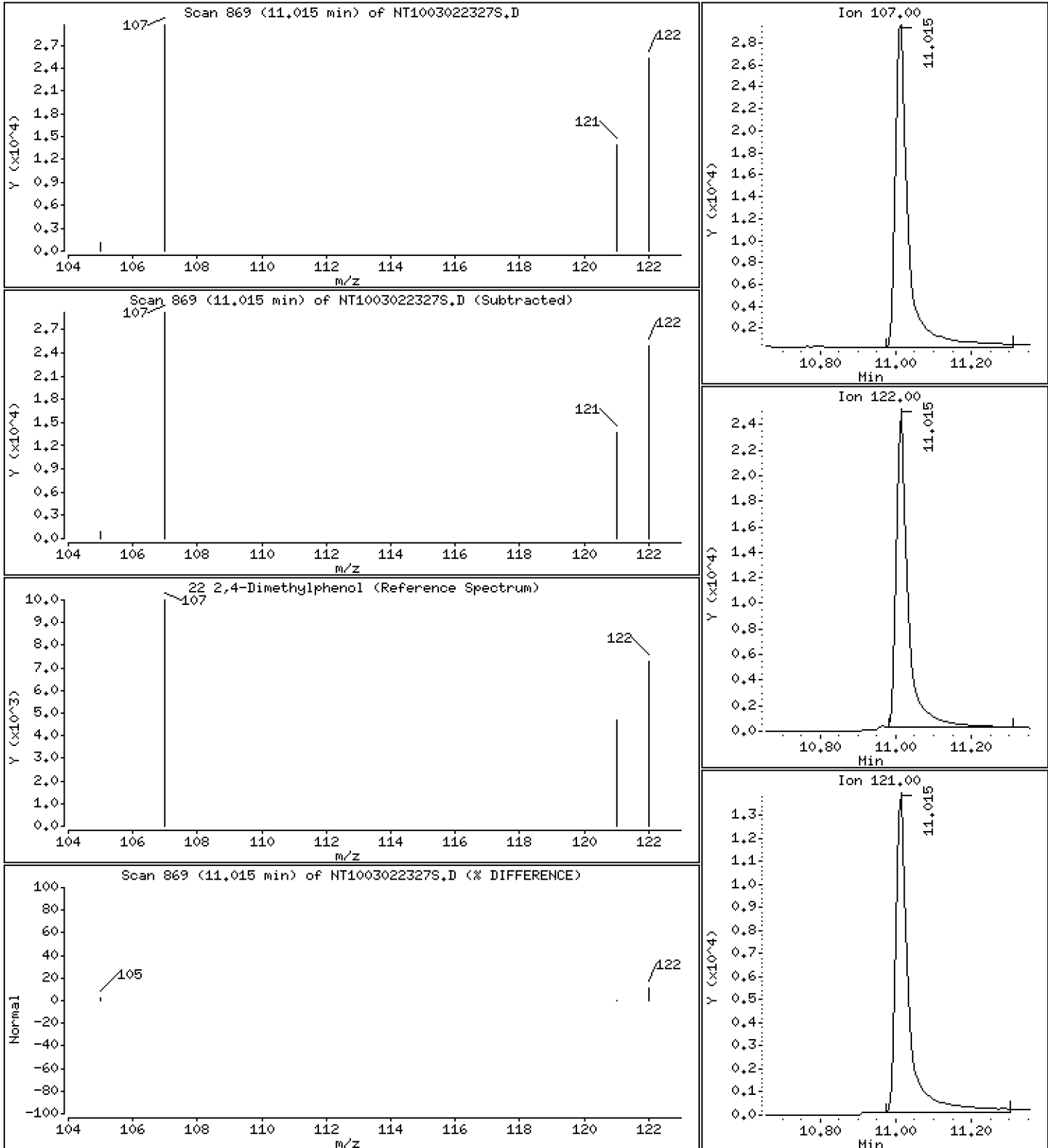
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

22 2,4-Dimethylphenol

Concentration: 0.3608 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

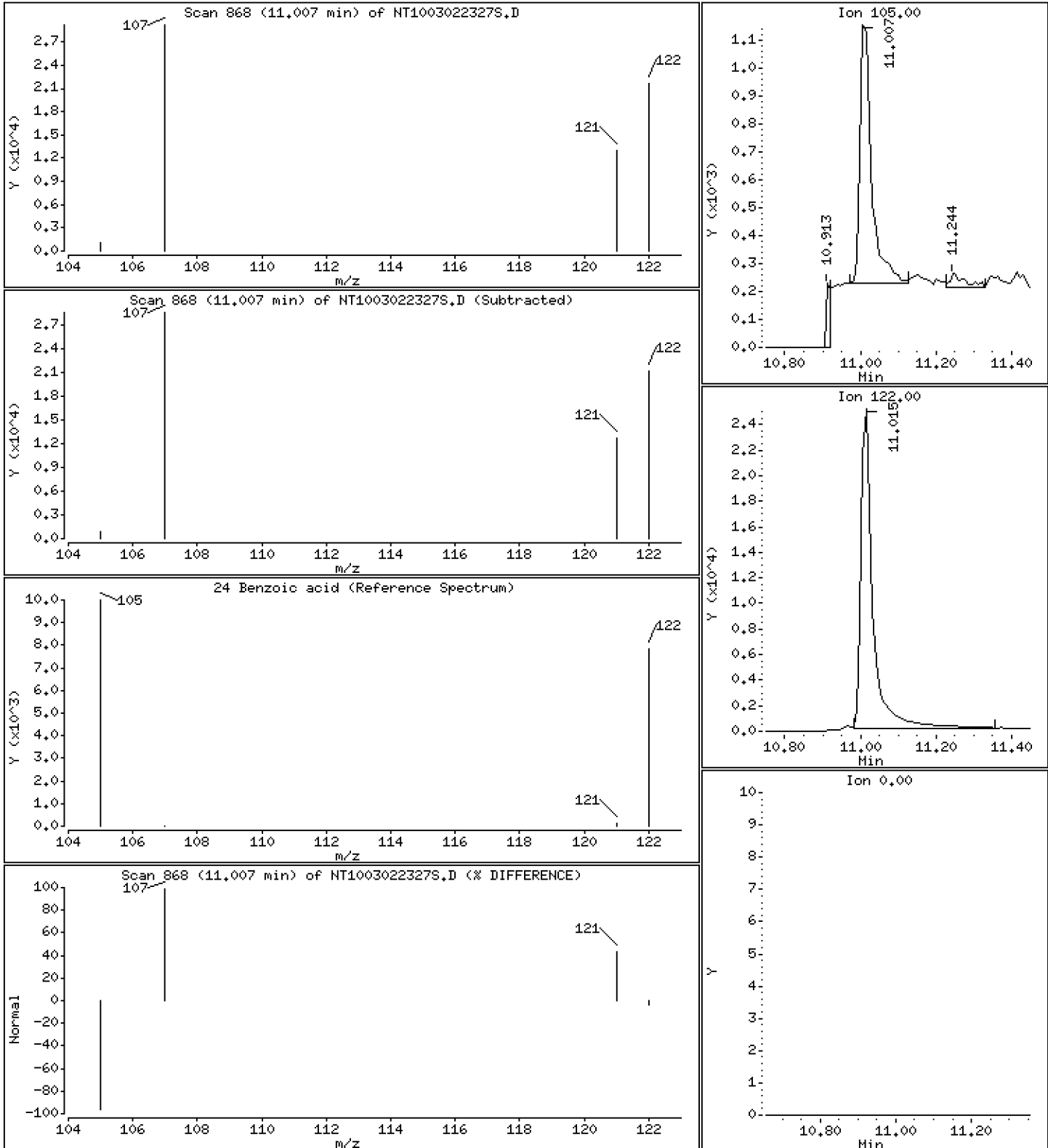
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 0.01860 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

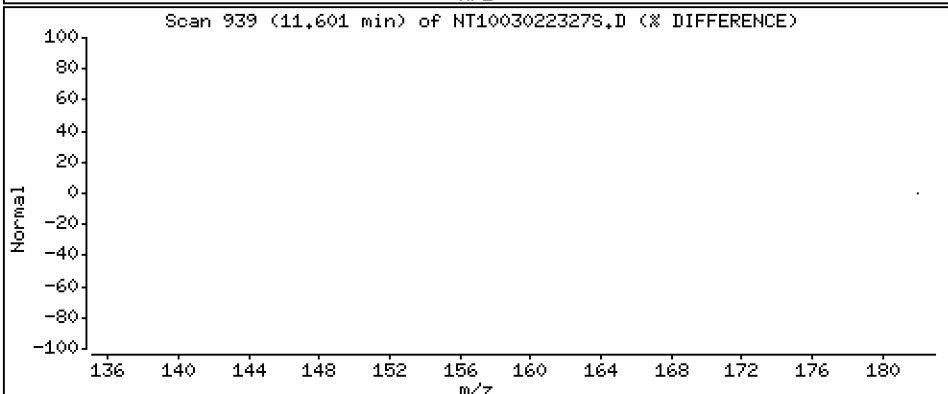
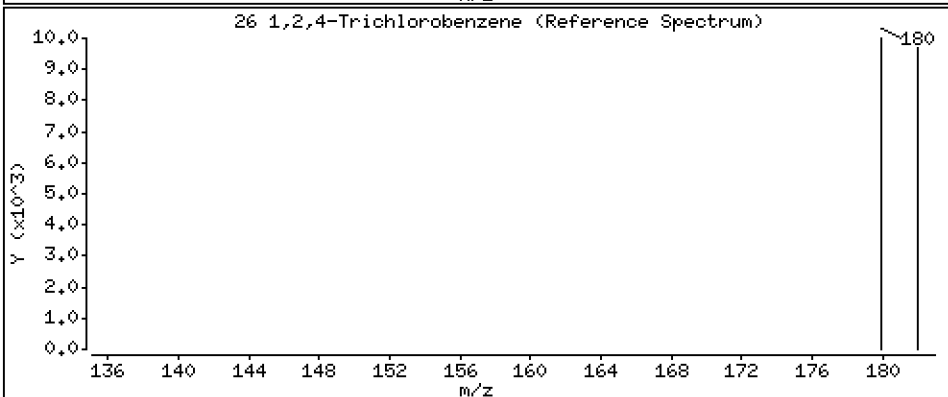
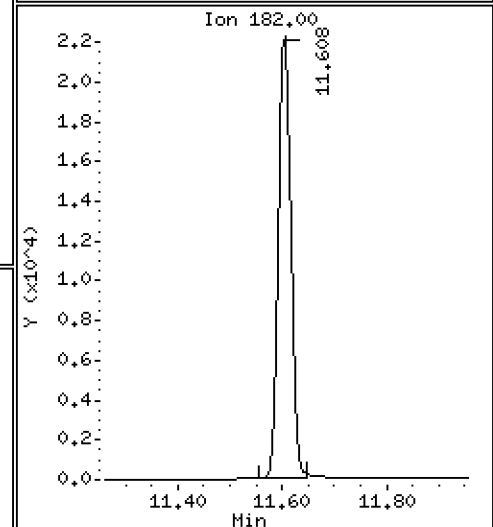
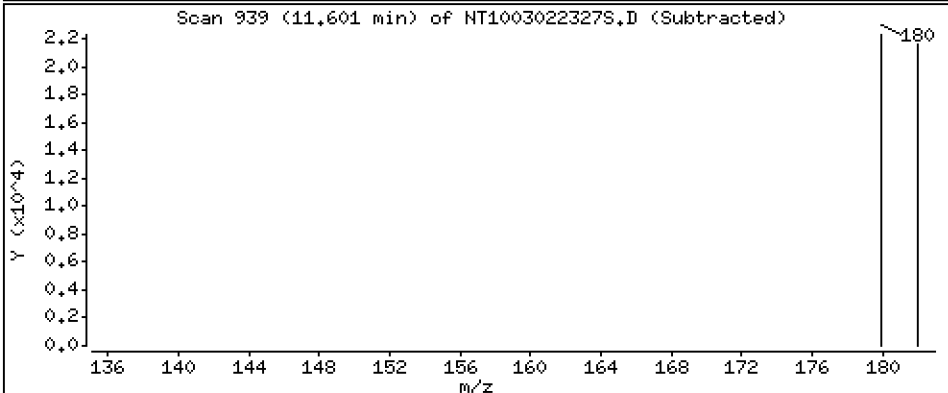
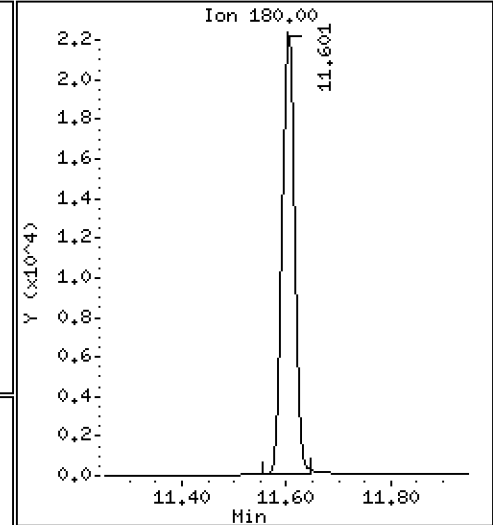
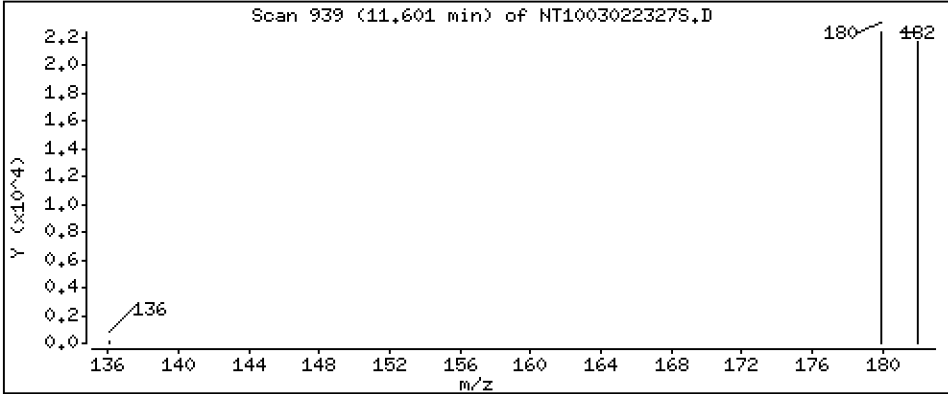
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

26 1,2,4-Trichlorobenzene

Concentration: 0.2152 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

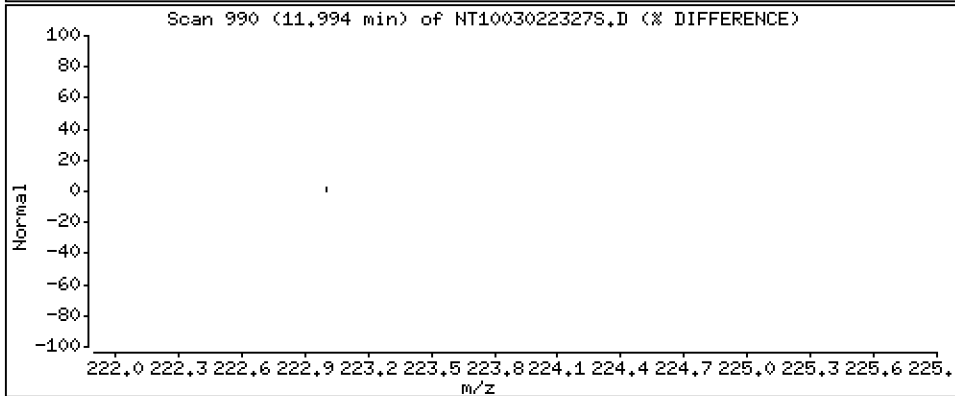
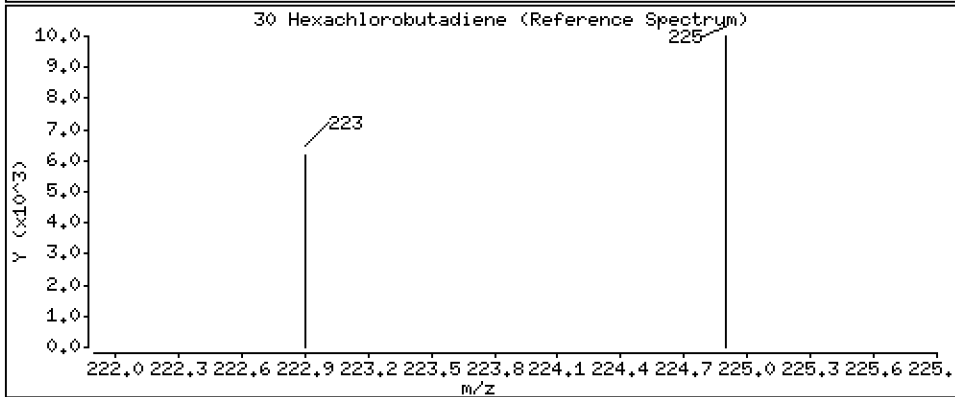
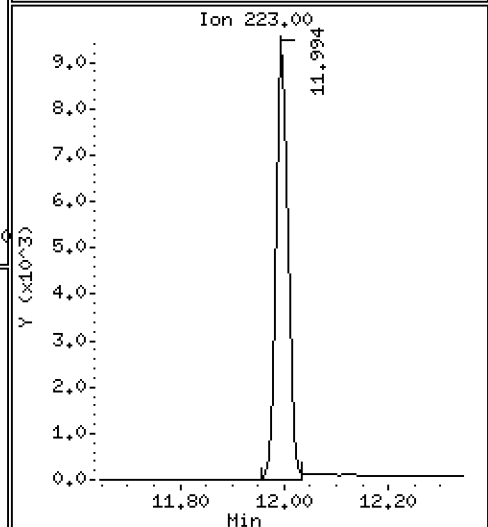
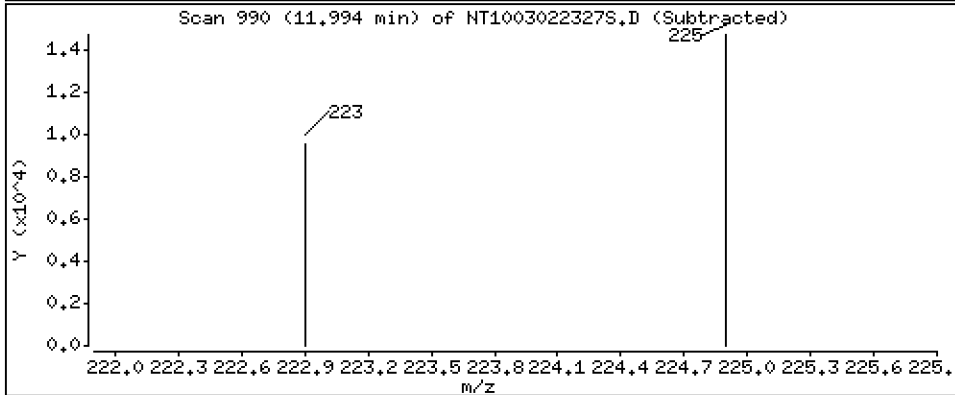
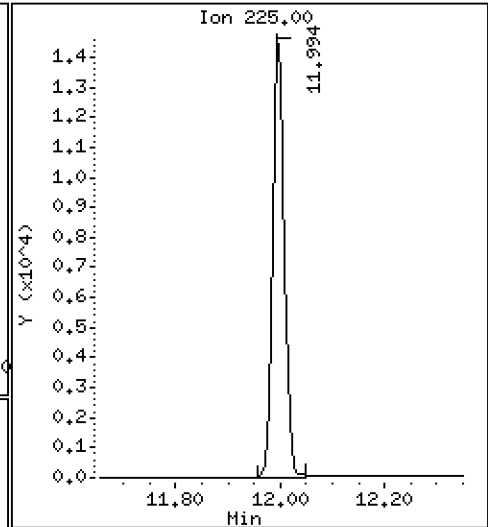
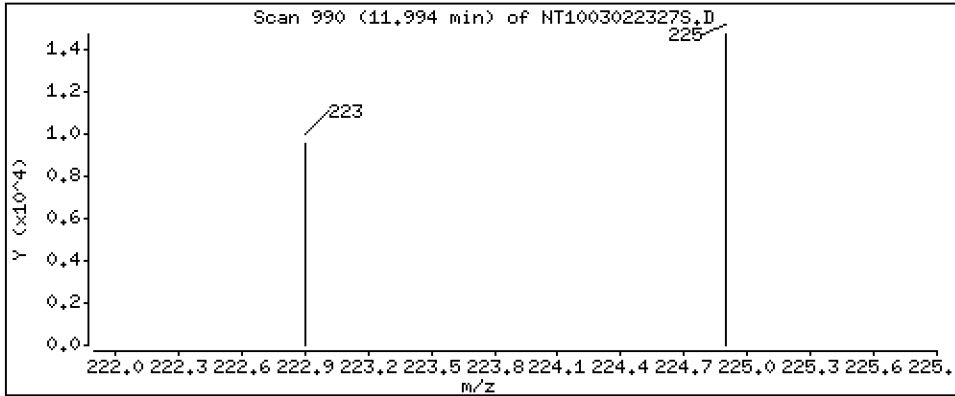
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

30 Hexachlorobutadiene

Concentration: 0.1945 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

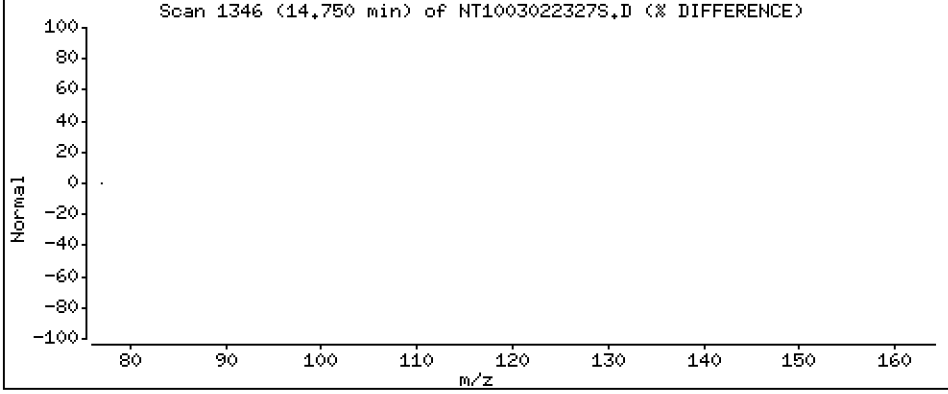
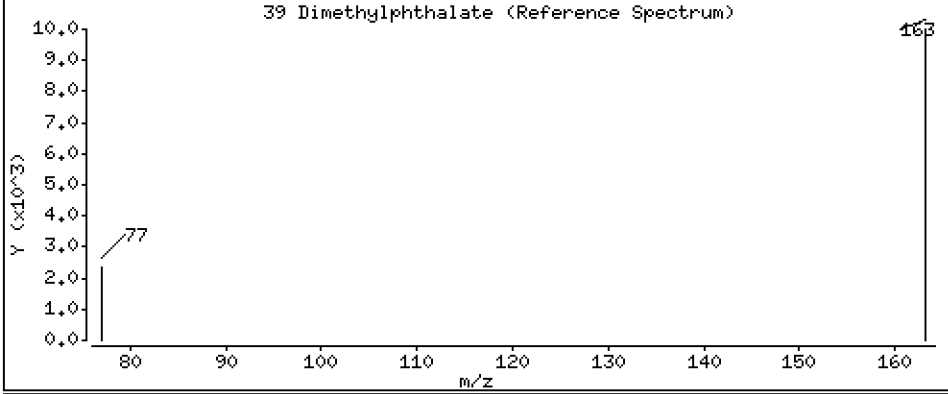
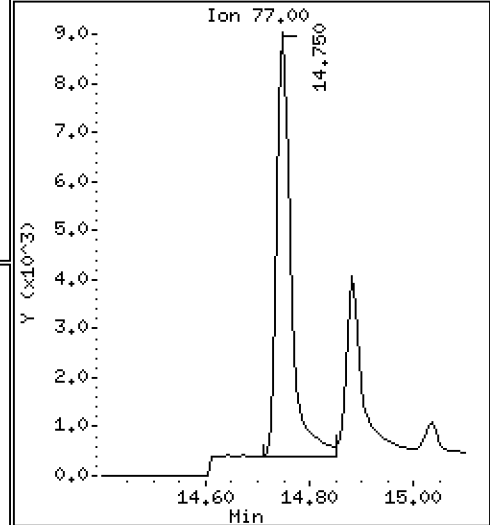
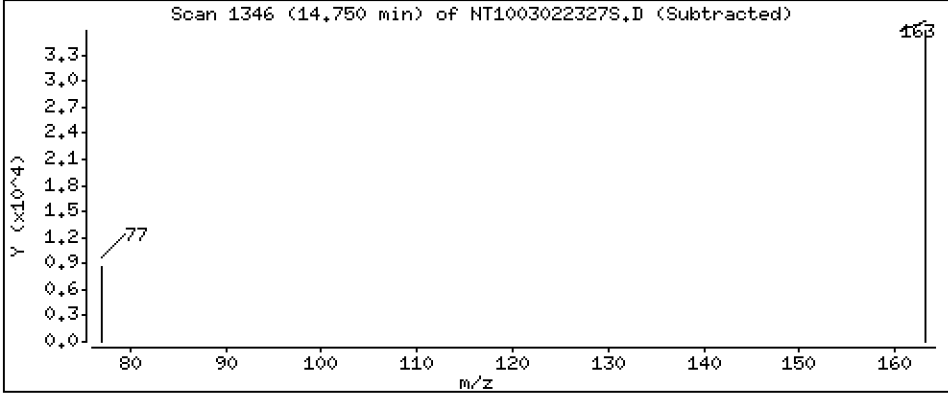
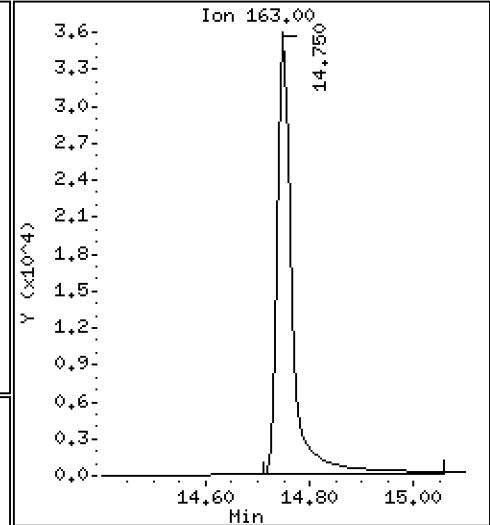
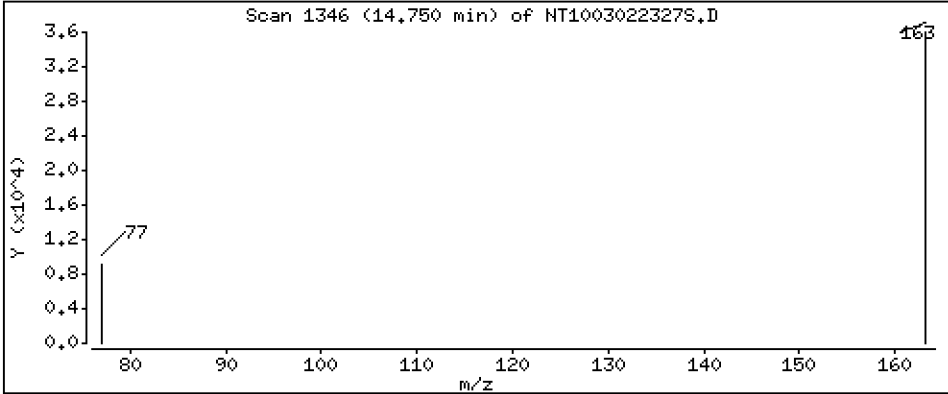
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

39 Dimethylphthalate

Concentration: 0,1882 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

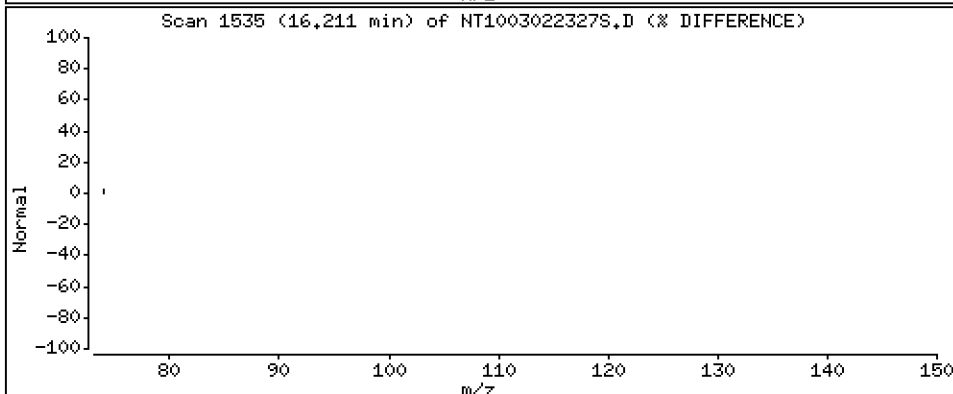
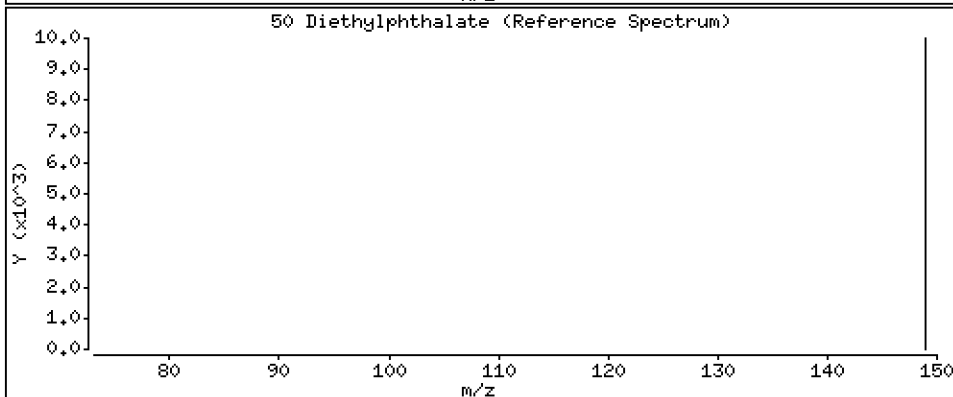
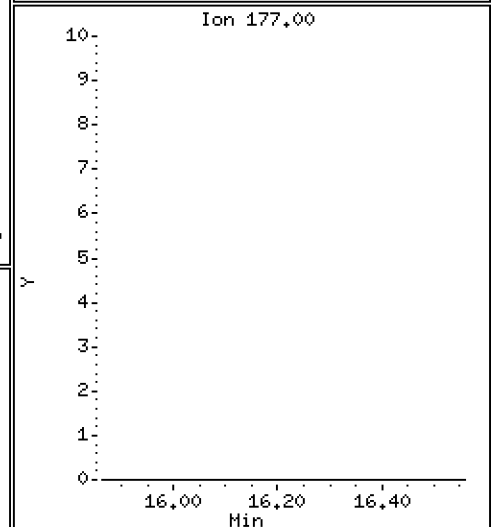
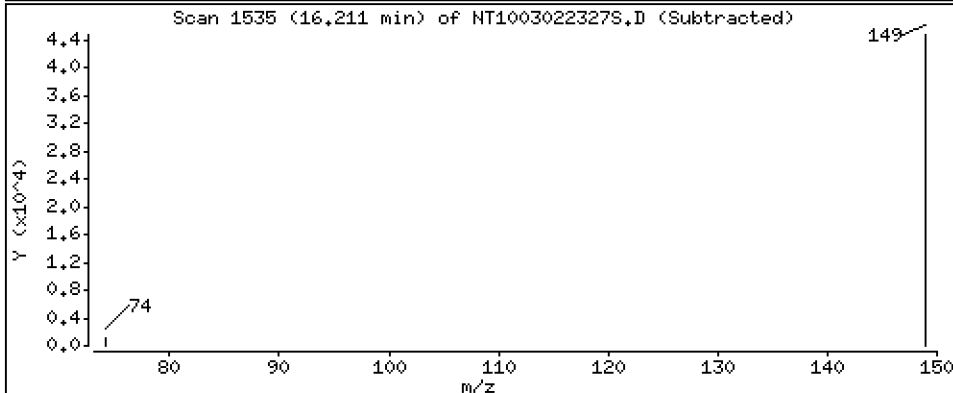
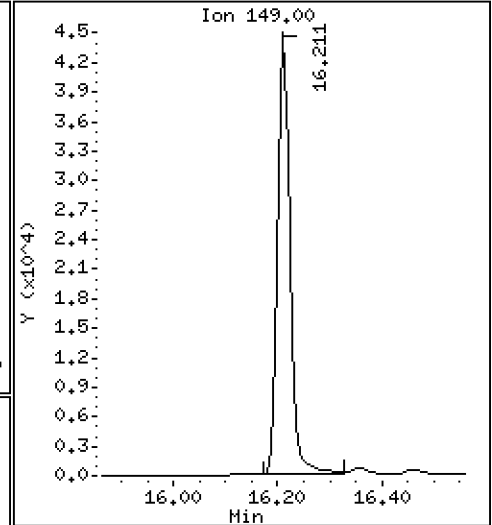
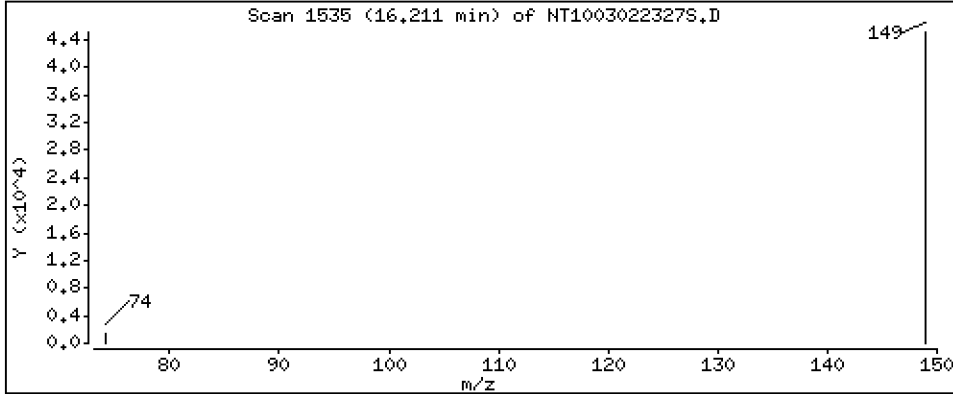
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

50 Diethylphthalate

Concentration: 0,2020 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

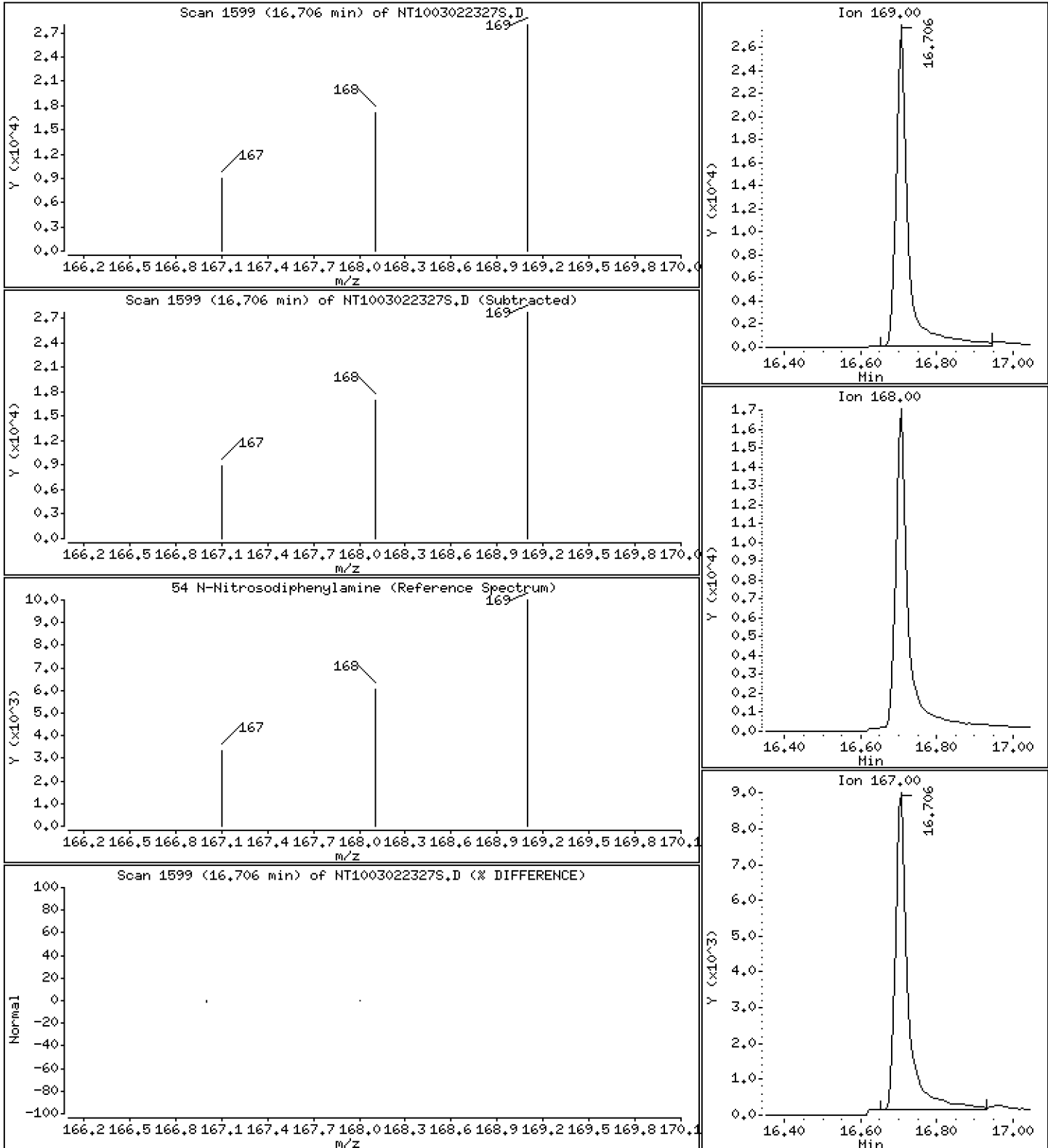
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

54 N-Nitrosodiphenylamine

Concentration: 0.1674 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

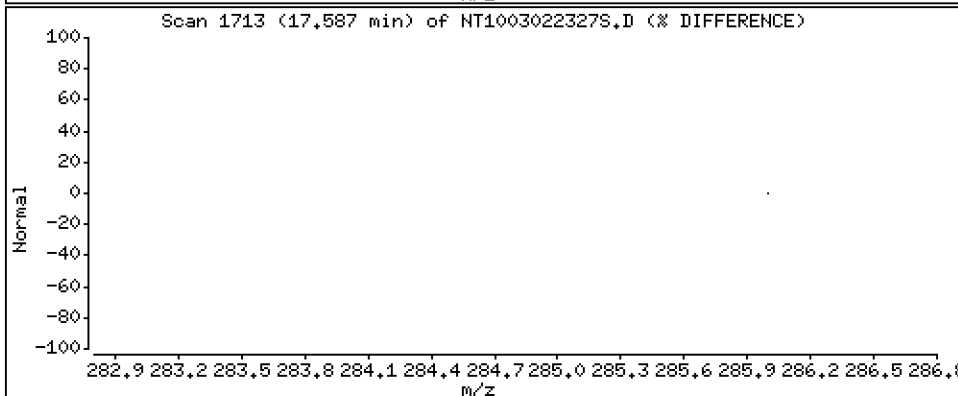
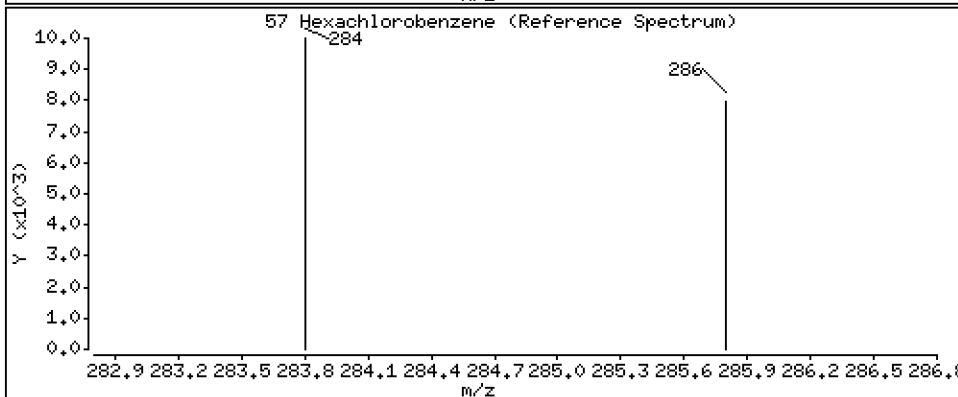
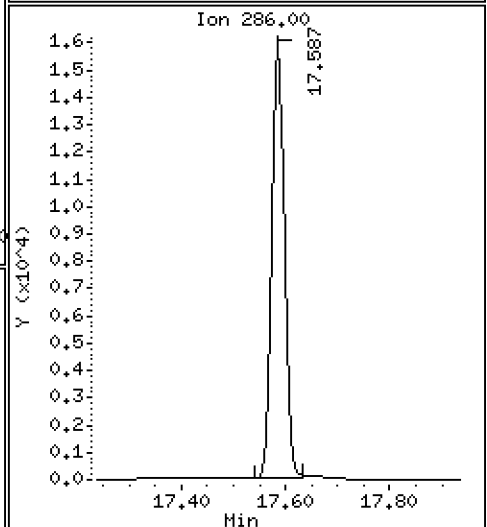
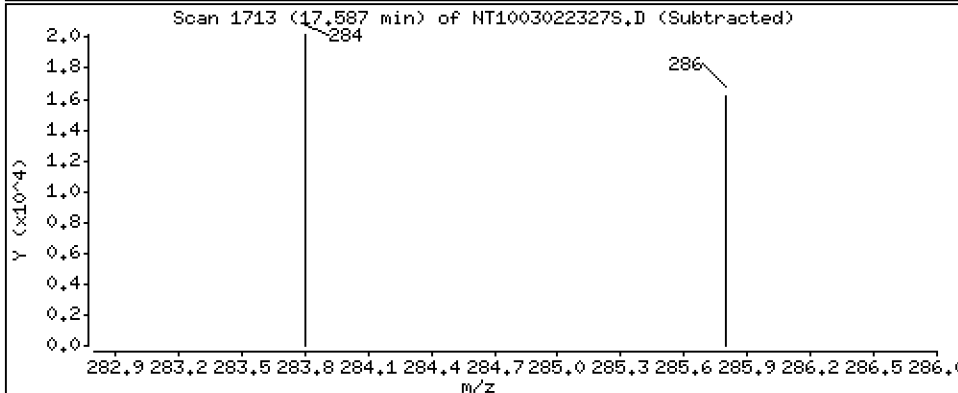
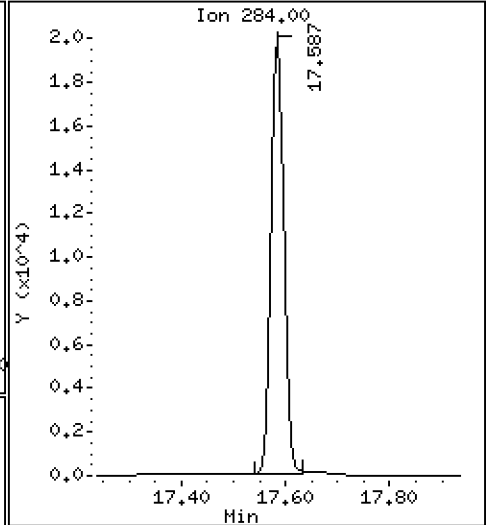
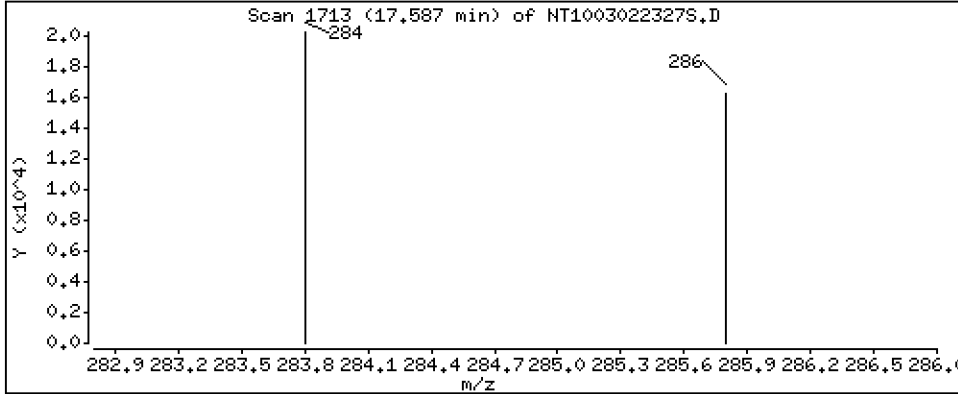
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25

57 Hexachlorobenzene

Concentration: 0.1907 ug/L





Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

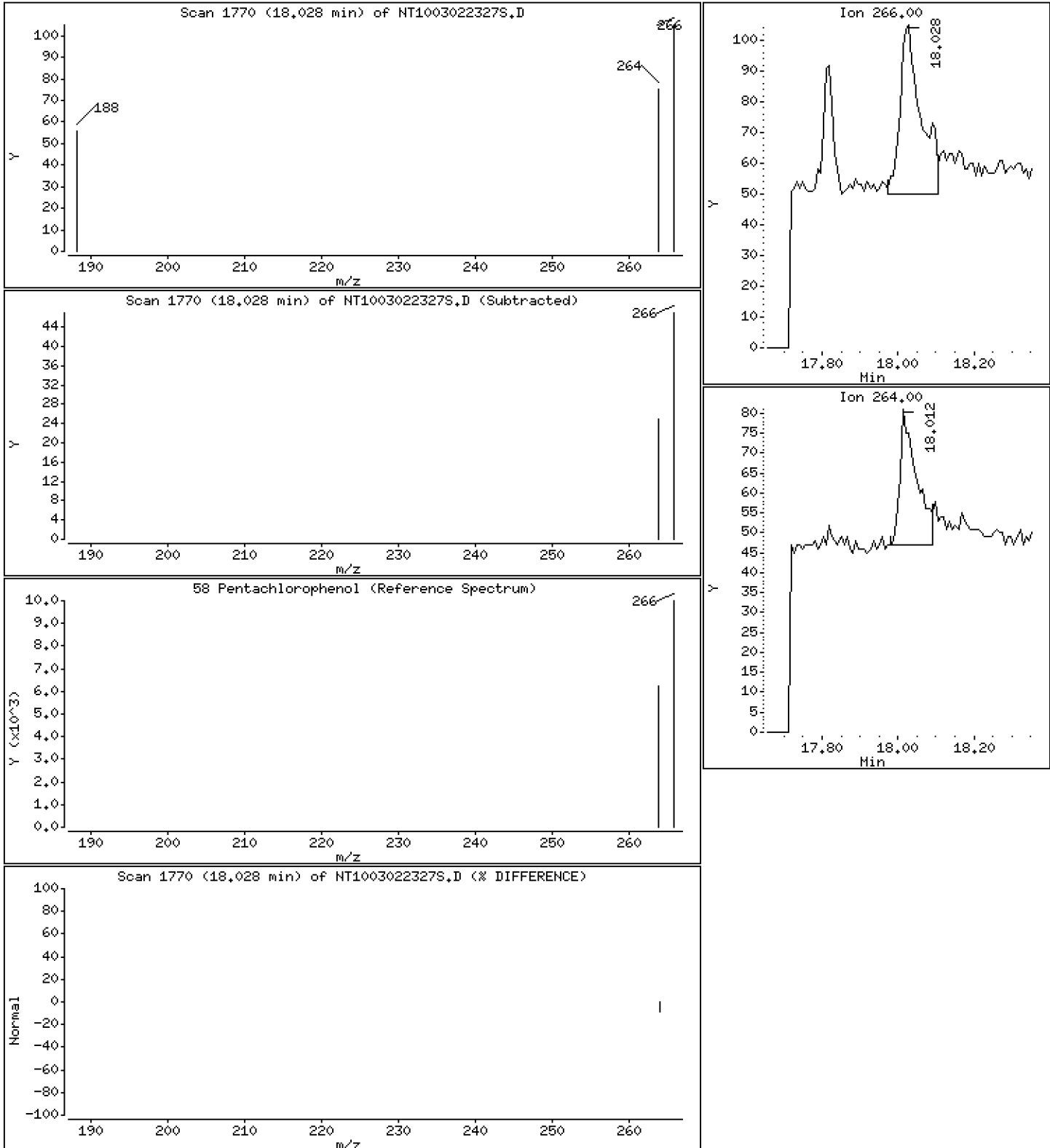
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

58 Pentachlorophenol

Concentration: 0,002857 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

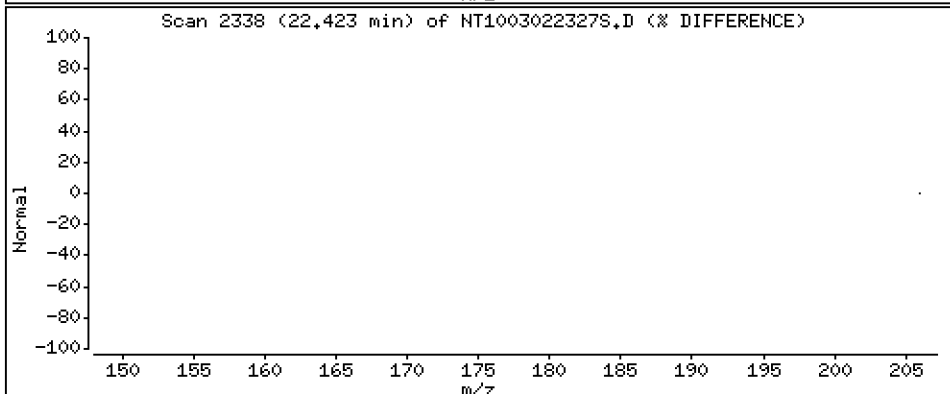
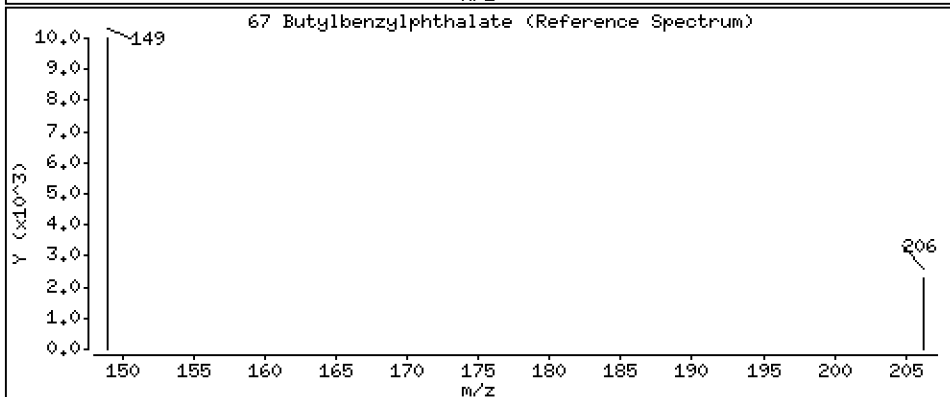
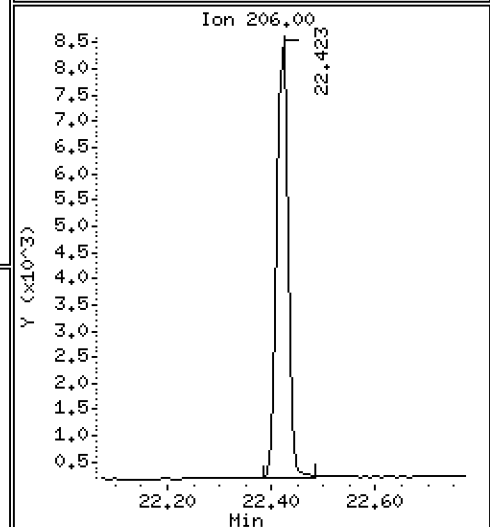
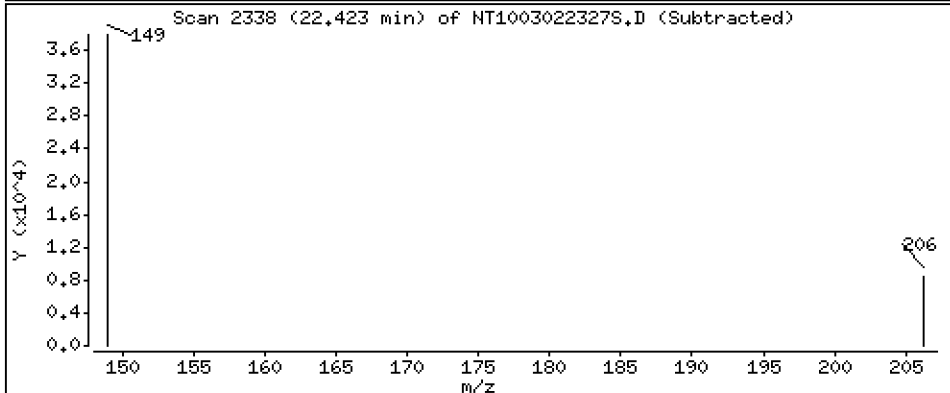
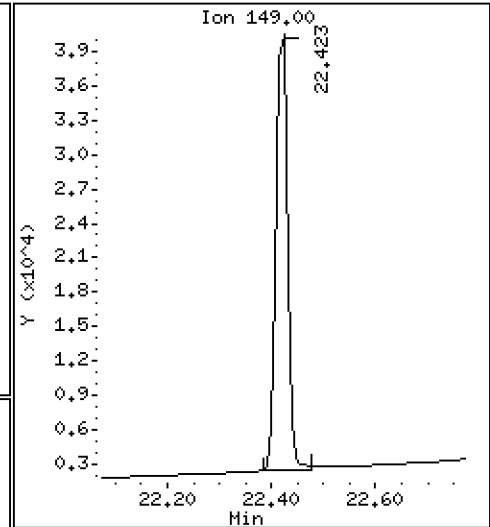
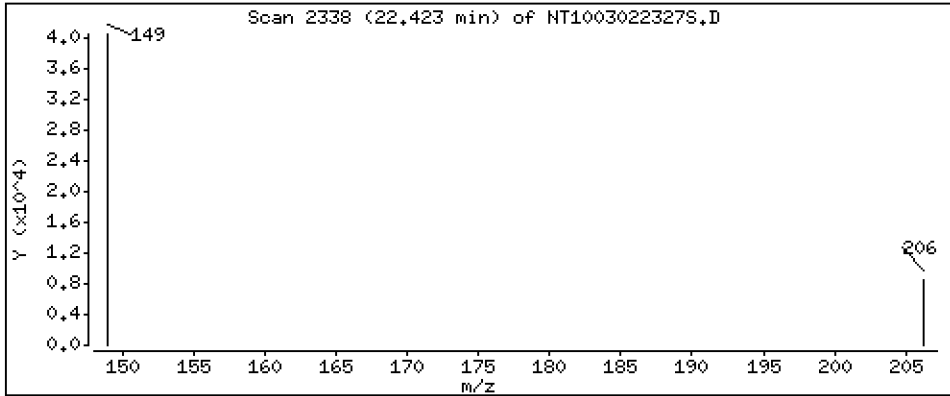
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

67 Butylbenzylphthalate

Concentration: 0,1363 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

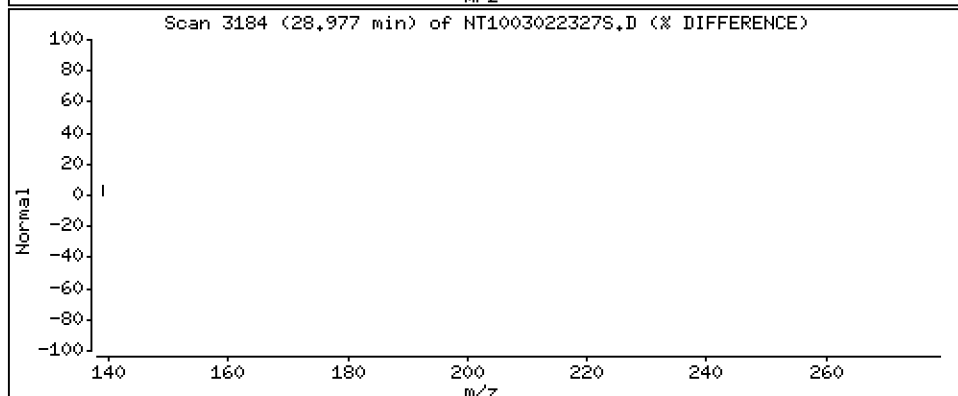
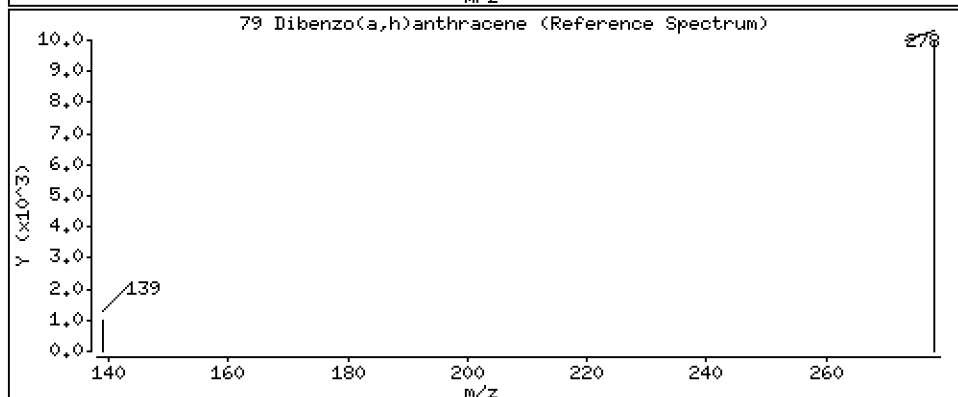
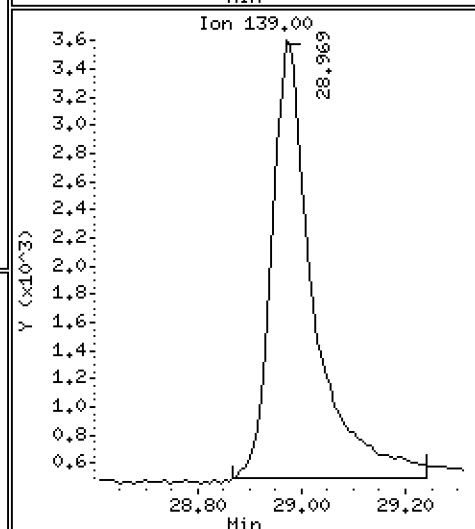
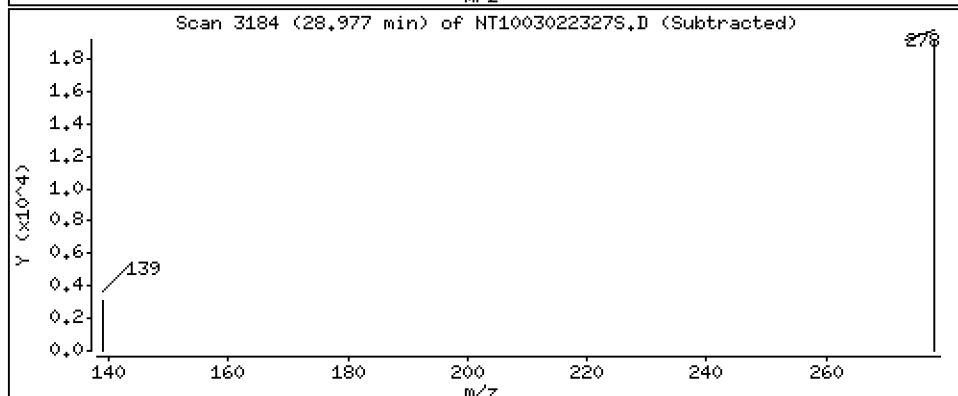
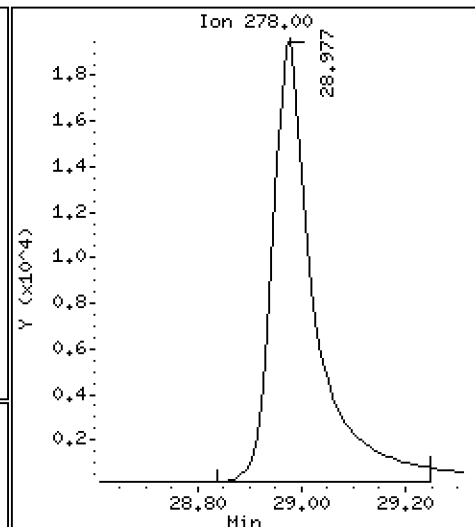
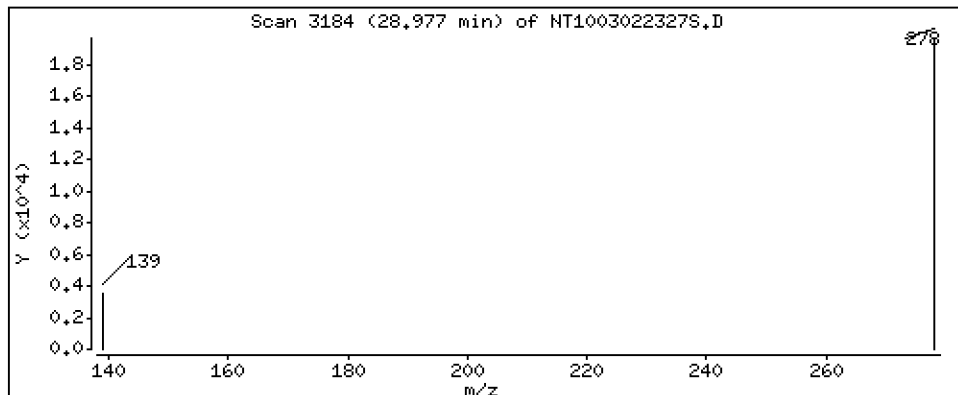
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

79 Dibenzo(a,h)anthracene

Concentration: 0,1735 ug/L



Date : 03-MAR-2023 06:52

Client ID:

Instrument: nt10.i

Sample Info: SEQ-LCV200

Volume Injected (uL): 1.0

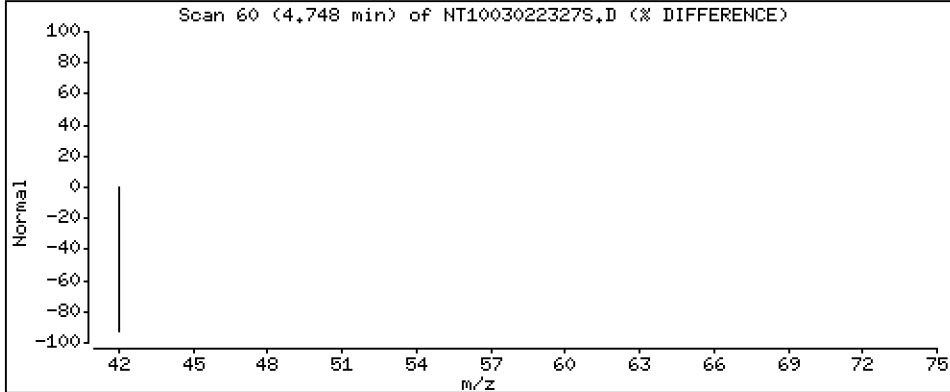
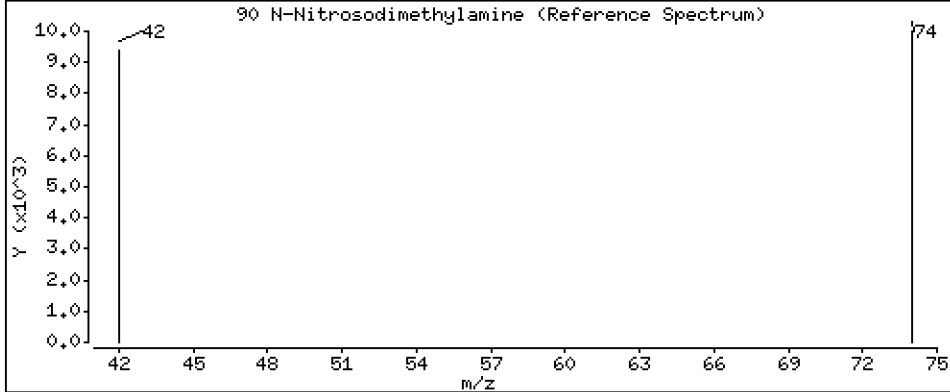
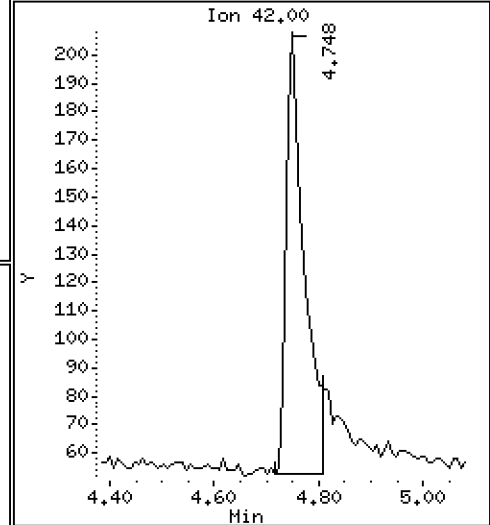
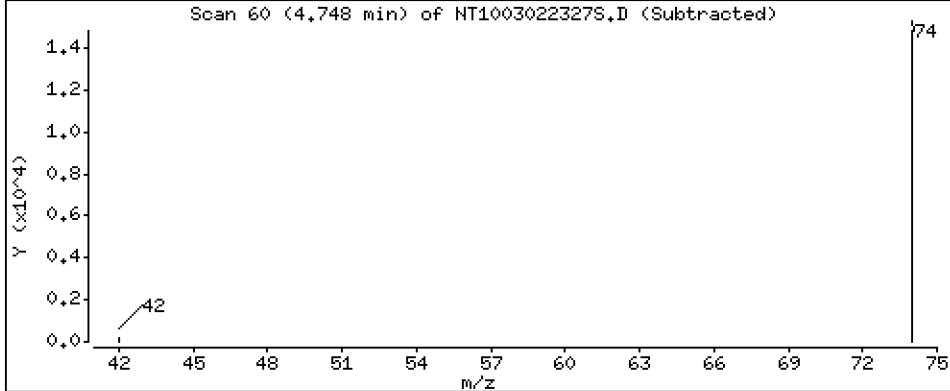
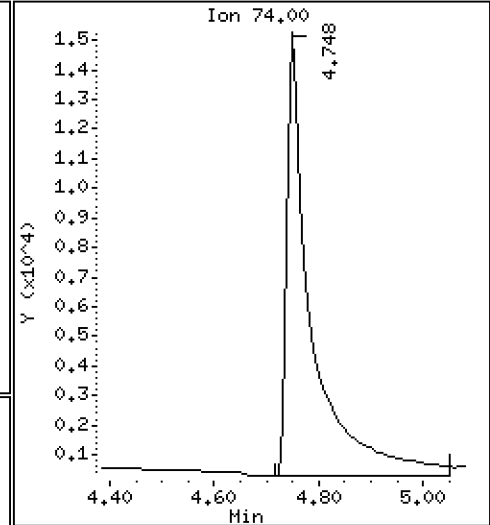
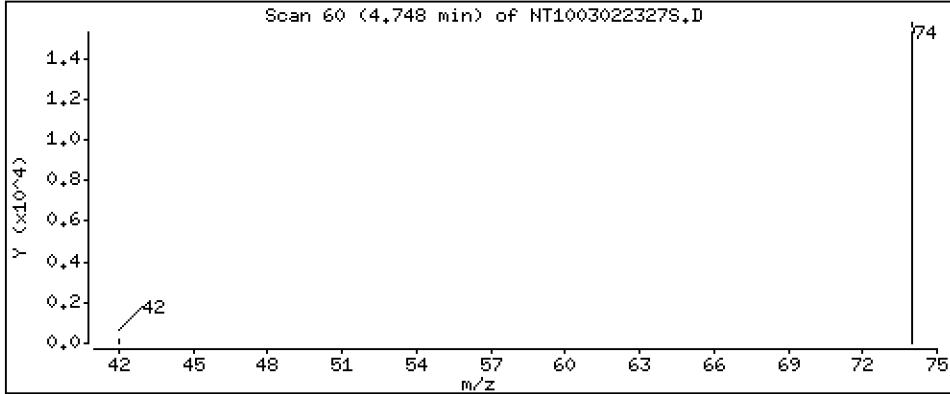
Operator: JGR

Column phase: ZB-5msi

Column diameter: 0,25

90 N-Nitrosodimethylamine

Concentration: 0,4470 ug/L



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\NT1003022327S.D  
 Lab Smp Id: SLC0159-LCV1  
 Inj Date : 03-MAR-2023 06:52 MS Autotune Date: 16-JAN-2023 16:42  
 Operator : JGR Inst ID: nt10.i  
 Smp Info : SEQ-LCV200  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Meth Date : 11-Mar-2023 07:04 yev Quant Type: ISTD  
 Cal Date : 01-MAR-2023 21:09 Cal File: NT1003012310S.D  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: PSDDA.sub  
 Target Version: 4.14  
 Processing Host: ORGDATA102

Concentration Formula: Amt \* DF \* Uf \* Vt/(Vo \* Vi) \* CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
	MASS						(ug/mL)	( ug/L)
\$ 1 2-Fluorophenol	112		6.902	6.902	(0.746)	57735	0.31145	0.3114 (R)
3 Phenol	94		8.533	8.525	(0.922)	42682	0.15601	0.1560
7 1,3-Dichlorobenzene	146		9.143	9.143	(0.988)	47872	0.19893	0.1989
* 8 1,4-Dichlorobenzene-d4	152		9.252	9.252	(1.000)	649316	4.00000	
9 1,4-Dichlorobenzene	146		9.283	9.283	(1.003)	45371	0.19392	0.1939
11 Benzyl alcohol	79		9.508	9.492	(1.028)	22340	0.14717	0.1472
12 1,2-Dichlorobenzene	146		9.570	9.570	(1.034)	44672	0.19865	0.1986
13 2-Methylphenol	108		9.671	9.663	(1.045)	30705	0.18656	0.1866
15 4-Methylphenol	108		9.966	9.950	(1.077)	29227	0.17072	0.1707
16 N-Nitroso-di-n-propylamine	70		9.982	9.981	(1.079)	23216	0.19058	0.1906
22 2,4-Dimethylphenol	107		11.015	11.006	(0.939)	70115	0.36083	0.3608
24 Benzoic acid	105		11.006	11.099	(0.938)	1980	0.01860	0.01860
26 1,2,4-Trichlorobenzene	180		11.600	11.600	(0.989)	35440	0.21519	0.2152
* 27 Naphthalene-d8	136		11.731	11.731	(1.000)	2288199	4.00000	
30 Hexachlorobutadiene	225		11.994	12.001	(1.022)	22731	0.19449	0.1945
39 Dimethylphthalate	163		14.749	14.749	(0.963)	68821	0.18816	0.1882
* 42 Acenaphthene-d10	162		15.322	15.321	(1.000)	1151876	4.00000	
50 Diethylphthalate	149		16.211	16.210	(1.058)	69663	0.20197	0.2020
54 N-Nitrosodiphenylamine	169		16.706	16.698	(0.907)	60944	0.16737	0.1674
57 Hexachlorobenzene	284		17.586	17.586	(0.955)	32494	0.19068	0.1907

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL ( ug/L)
58 Pentachlorophenol	266	18.027	18.004	(0.979)	213	0.00286	0.002857 (M)
* 59 Phenanthrene-d10	188	18.414	18.414	(1.000)	2249997	4.00000	
\$ 66 Terphenyl-d14	244	21.532	21.532	(0.919)	41609	0.21470	0.2147 (R)
67 Butylbenzylphthalate	149	22.423	22.422	(0.957)	55147	0.13634	0.1363
* 69 Chrysene-d12	240	23.429	23.429	(1.000)	2396517	4.00000	
* 77 Perylene-d12	264	26.131	26.131	(1.000)	2721850	4.00000	
79 Dibenzo(a,h)anthracene	278	28.976	28.961	(1.109)	109605	0.17349	0.1735
90 N-Nitrosodimethylamine	74	4.748	4.732	(0.513)	49060	0.44701	0.4470

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: NT1003022327S.D  
 Lab Smp Id: SLC0159-LCV1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JGR  
 Method File: \\target\share\chem3\nt10.i\20230302B.b\SIM.b\SIMABN2.m  
 Misc Info:

Calibration Date: 03-MAR-2023  
 Calibration Time: 06:14  
 Level: LOW  
 Sample Type: AIR

Test Mode:  
 Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	620595	310298	1241190	649316	4.63
27 Naphthalene-d8	2213509	1106755	4427018	2288199	3.37
42 Acenaphthene-d10	1093970	546985	2187940	1151876	5.29
59 Phenanthrene-d10	2129840	1064920	4259680	2249997	5.64
69 Chrysene-d12	2347260	1173630	4694520	2396517	2.10
77 Perylene-d12	2638390	1319195	5276780	2721850	3.16

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	9.25	8.75	9.75	9.25	0.00
27 Naphthalene-d8	11.73	11.23	12.23	11.73	0.00
42 Acenaphthene-d10	15.32	14.82	15.82	15.32	0.00
59 Phenanthrene-d10	18.41	17.91	18.91	18.41	0.00
69 Chrysene-d12	23.43	22.93	23.93	23.43	0.00
77 Perylene-d12	26.13	25.63	26.63	26.13	0.00

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

REVIEW SUMMARY FOR FILE - NT1003022327S.D

Lab ID: SLC0159-LCV1

nt10.i, 20230302B.b\SIM.b\SIMABN2.m,

03-MAR-2023 06:52

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.938	0.946	-0.0080	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1003022326SICV.d

On Column LOD for nt10.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

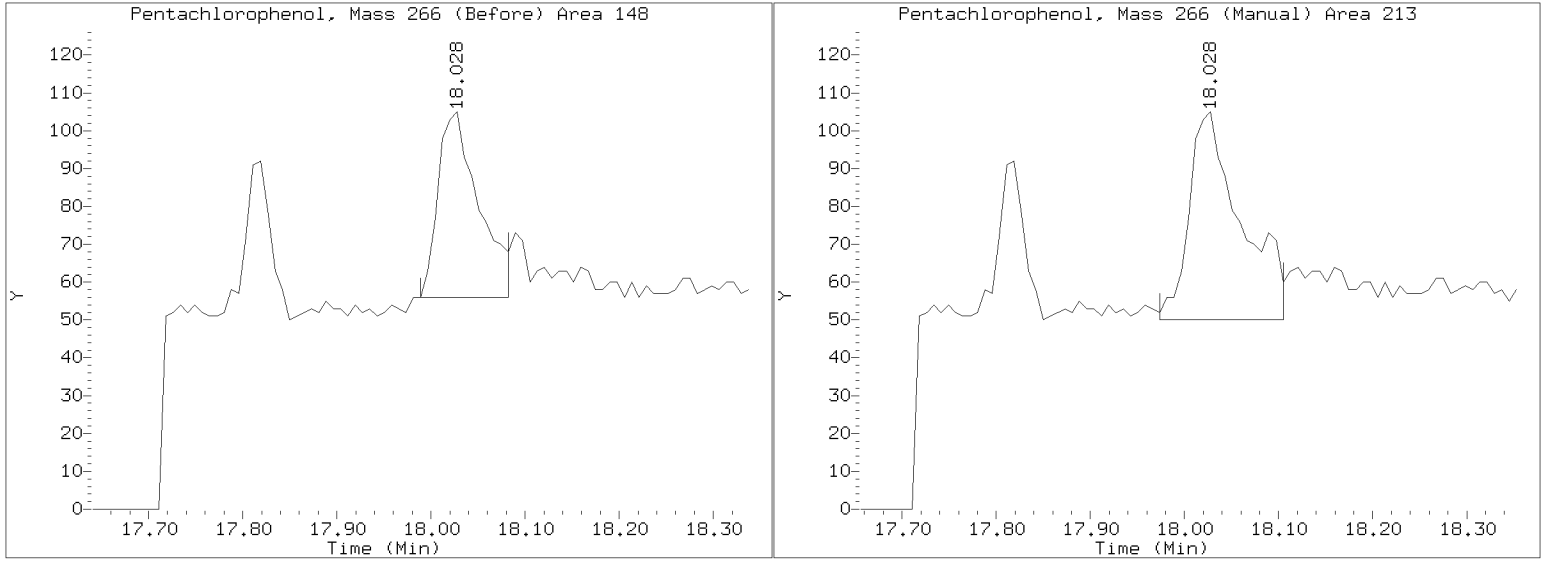
Exception: 1,2,4-Trichlorobenzene 0.0010

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



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230302B.b/SIM.b/NT1003022327S.D  
Injection Date: 03-MAR-2023 06:52  
Lab ID:SLC0159-LCV1 Client ID:  
Report Date: 03/11/2023 07:04





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0143

Instrument: NT10

Calibration: GC00032

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0143-TUN1	NT1003012301S.D	NA	03/01/23 15:49
CAL 10.0	SLC0143-CAL8	NT1003012303S.D	NA	03/01/23 16:42
CAL 5.0	SLC0143-CAL7	NT1003012304S.D	NA	03/01/23 17:21
CAL 2.5	SLC0143-CAL6	NT1003012305S.D	NA	03/01/23 17:59
CAL 1.0	SLC0143-CAL5	NT1003012306S.D	NA	03/01/23 18:37
CAL 0.50	SLC0143-CAL4	NT1003012307S.D	NA	03/01/23 19:15
CAL 0.20	SLC0143-CAL3	NT1003012308S.D	NA	03/01/23 19:53
CAL 0.10	SLC0143-CAL2	NT1003012309S.D	NA	03/01/23 20:30
CAL 0.05	SLC0143-CAL1	NT1003012310S.D	NA	03/01/23 21:09
SCV 5.0	SLC0143-SCV1	NT1003012311S.D	NA	03/01/23 21:46
Initial Cal Blank	SLC0143-ICB1	NT1003012312S.D	NA	03/01/23 22:24



ANALYSIS SEQUENCE

SLC0143

Instrument: NT10  
Calibration ID: UNASSIGNED

Printed: 3/10/2023 10:34:45AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0143-CAL1	QC		1		K011453	K010831		
SLC0143-CAL2	QC		2		K011452	K010831		
SLC0143-CAL3	QC		3		K011105	K010831		
SLC0143-CAL4	QC		4		K011106	K010831		
SLC0143-CAL5	QC		5		K011107	K010831		
SLC0143-CAL6	QC		6		K011108	K010831		
SLC0143-CAL7	QC		7		K011109	K010831		
SLC0143-CAL8	QC		8		K011110	K010831		
SLC0143-ICB1	QC		9		K005156	K010831		
SLC0143-SCV1	QC		10		K010066	K010831		

\_\_\_\_\_  
Samples Loaded By                                  Date

\_\_\_\_\_  
Data Processed By                                  Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	1642	NT1003012303S.D	SEQ-CAL8		1		9.25	358478		11.72	1302515		15.31	720687		18.40	1243145		23.42	1161833		26.11	1054384
2	1721	NT1003012304S.D	SEQ-CAL7		1		9.25	354441		11.72	1288295		15.31	739997		18.40	1248235		23.41	1079945		26.11	1086769
3	1759	NT1003012305S.D	SEQ-CAL6		1		9.24	334269		11.72	1202042		15.31	670352		18.40	1124281		23.41	948691		26.11	1004445
4	1837	NT1003012306S.D	SEQ-CAL5		1		9.24	320125		11.72	1136019		15.31	636993		18.40	1093620		23.41	1000300		26.10	1058448
5	1915	NT1003012307S.D	SEQ-CAL4		1		9.24	333617		11.72	1170292		15.31	639612		18.40	1094919		23.42	1048196		26.11	1117593
6	1953	NT1003012308S.D	SEQ-CAL3		1		9.25	314467		11.72	1088698		15.31	568154		18.40	979213		23.42	963807		26.11	1037909
7	2030	NT1003012309S.D	SEQ-CAL2		1		9.24	305434		11.72	1048978		15.31	536796		18.40	924275		23.42	947041		26.11	1060218
8	2109	NT1003012310S.D	SEQ-CAL1		1		9.25	370360		11.72	1262304		15.31	638059		18.40	1124768		23.42	1114478		26.11	1276260
9	2146	NT1003012311S.D	SEQ-SCV1		1		9.25	303734		11.72	1147551		15.31	645730		18.40	1151000		23.42	1297466		26.11	1394899
10	2224	NT1003012312S.D	SEQ-IBL1		1		9.25	515340		11.72	1787704		15.31	879316		18.40	1572306		23.42	1486349		26.11	1674195

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230301.b\SIM.b

ARI Job No.: SEQ- Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 01-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1642	NT1003012303S.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
1721	NT1003012304S.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
1759	NT1003012305S.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
1837	NT1003012306S.D	SEQ-CAL5		1	Pentachlorophenol,
1915	NT1003012307S.D	SEQ-CAL4		1	Pentachlorophenol,
1953	NT1003012308S.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2030	NT1003012309S.D	SEQ-CAL2		1	Benzyl alcohol, Berzoic acid,
2109	NT1003012310S.D	SEQ-CAL1		1	Benzyl alcohol, 2-Methylphenol, 4-Methylphenol, N-Nitroso-di-n-propylamine, N-Nitrosodiphenylamine, Hexachlorobenzene,
2146	NT1003012311S.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
2224	NT1003012312S.D	SEQ-IBL1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 10-Mar-2023 11:02

NT1003012303S.D	Data Locked	yev, 10-
NT1003012304S.D	Data Locked	yev, 10-
NT1003012305S.D	Data Locked	yev, 10-
NT1003012306S.D	Data Locked	yev, 10-
NT1003012307S.D	Data Locked	yev, 10-
NT1003012308S.D	Data Locked	yev, 10-
NT1003012309S.D	Data Locked	yev, 10-
NT1003012310S.D	Data Locked	yev, 10-
NT1003012311S.D	Data Locked	yev, 10-
NT1003012312S.D	Data Locked	yev, 10-



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0157

Instrument: NT10

Calibration: GC00032

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0157-ICV1	NT1003022303S.D	NA	03/02/23 14:13
Low Cal Check	SLC0157-LCV1	NT1003022304S.D	NA	03/02/23 16:17
Blank	BLA0624-BLK2	NT1003022306S.D	Solid	03/02/23 17:34
LCS	BLA0624-BS2	NT1003022307S.D	Solid	03/02/23 18:12
LCS Dup	BLA0624-BSD2	NT1003022308S.D	Solid	03/02/23 18:50
LDW23-SS1066	BLA0624-MS2	NT1003022309S.D	Solid	03/02/23 19:28
LDW23-SS1066	BLA0624-MSD2	NT1003022310S.D	Solid	03/02/23 20:06
Reference	BLA0624-SRM2	NT1003022311S.D	Solid	03/02/23 20:44
LDW23-SS1021	23A0206-01	NT1003022312S.D	Solid	03/02/23 21:22
LDW23-SS1015	23A0206-02	NT1003022313S.D	Solid	03/02/23 22:00
Calibration Check	SLC0157-CCV1	NT1003022315S.D	NA	03/02/23 23:16



ANALYSIS SEQUENCE

SLC0157

Instrument: NT10  
Calibration ID: GC00032

Printed: 3/11/2023 5:59:38AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0157-ICV1	QC		1		K011107	K010831		
SLC0157-LCV1	QC		2		K011452	K010831		
BLA0624-BLK2	QC		3			K010831		
BLA0624-BS2	QC		4			K010831		
BLA0624-BSD2	QC		5			K010831		
BLA0624-SRM2	QC		6			K010831		
BLA0624-MS2	QC		7			K010831		
BLA0624-MSD2	QC		8			K010831		
23A0206-01	8270E-SIM Dual Scan SVOC	B 04	9			K010831	Anchor QEA, LLC	
23A0206-02	8270E-SIM Dual Scan SVOC	B 04	10			K010831	Anchor QEA, LLC	
SLC0157-CCV1	QC		11		K011107	K010831		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	1413	NT1003022303S.D	SLC0157-ICV1		1		9.25	493417		11.72	1779056		15.31	954569		18.41	1596290		23.42	1649110		26.12	1901958
2	1617	NT1003022304S.D	SLC0157-LCV1		1		9.26	464527		11.73	1687615		15.32	914095		18.41	1602467		23.42	1629844		26.12	1824689
3	1656	NT1003022305S.D	SEQ-LCV100		1		9.25	449433		11.72	1595952		15.31	822385		18.41	1408565		23.42	1449074		26.12	1721904
4	1734	NT1003022306S.D	BLA0624-BLK2		1		9.24	543607		11.72	1966158		15.31	1028261		18.41	1826191		23.42	1845847		26.11	1929666
5	1812	NT1003022307S.D	BLA0624-BS2		1		9.25	451780		11.72	1744036		15.32	944486		18.41	1720859		23.42	1915960		26.12	1919174
6	1850	NT1003022308S.D	BLA0624-BSD2		1		9.25	560466		11.72	2085063		15.31	1113362		18.41	2000131		23.42	2168746		26.12	2165910
7	1928	NT1003022309S.D	BLA0624-MS2		1		9.25	643993		11.72	2374110		15.32	1258198		18.41	2803544		23.44	4232445		26.15	3782979
8	2006	NT1003022310S.D	BLA0624-MSD2		1		9.25	672370		11.72	2477168		15.32	1288517		18.41	2917258		23.45	4069829		26.15	3624176
9	2044	NT1003022311S.D	BLA0624-SRM2		1		9.25	767091		11.72	2788036		15.32	1382029		18.41	2606597		23.43	2965995		26.12	3162675
10	2122	NT1003022312S.D	23A0206-01		1		9.25	721403		11.72	2546921		15.32	1239070		18.41	2265720		23.43	2789268		26.13	3057877
11	2200	NT1003022313S.D	23A0206-02		1		9.25	776003		11.72	2749439		15.32	1322569		18.41	2488804		23.43	3061061		26.13	3330660
12	2316	NT1003022315S.D	SLC0157-CCV1		1		9.25	652424		11.72	2339966		15.32	1186988		18.41	2193485		23.43	2444828		26.12	2842248

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302.b\SIM.b

ARI Job No.: SLC0 Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 02-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1413	NT1003022303S.D	SLC0157-ICV1		1	NO MANUAL INTEGRATION
1617	NT1003022304S.D	SLC0157-LCV1		1	NO MANUAL INTEGRATION
1656	NT1003022305S.D	SEQ-LCV100		1	NO MANUAL INTEGRATION
1734	NT1003022306S.D	BLA0624-BLK2		1	NO MANUAL INTEGRATION
1812	NT1003022307S.D	BLA0624-BS2		1	NO MANUAL INTEGRATION
1850	NT1003022308S.D	BLA0624-BSD2		1	NO MANUAL INTEGRATION
1928	NT1003022309S.D	BLA0624-MS2		1	NO MANUAL INTEGRATION
2006	NT1003022310S.D	BLA0624-MSD2		1	NO MANUAL INTEGRATION
2044	NT1003022311S.D	BLA0624-SRM2		1	Hexachlorobenzene,
2122	NT1003022312S.D	23A0206-01		1	1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene, Dimethylphthalate, N-Nitrosodiphenylamine,
2200	NT1003022313S.D	23A0206-02		1	Hexachlorobutadiene, Benzyl alcohol, 2,4-Dimethylphenol, Benzoic acid, 1,2,4-Trichlorobenzene, Dimethylphthalate,
2316	NT1003022315S.D	SLC0157-CCV1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 11-Mar-2023 06:06

NT1003022303S.D	Data Locked	yev, 11-
NT1003022304S.D	Data Locked	yev, 11-
NT1003022305S.D	Data Locked	yev, 11-
NT1003022306S.D	Data Locked	yev, 11-
NT1003022307S.D	Data Locked	yev, 11-
NT1003022308S.D	Data Locked	yev, 11-
NT1003022309S.D	Data Locked	yev, 11-
NT1003022310S.D	Data Locked	yev, 11-
NT1003022311S.D	Data Locked	yev, 11-
NT1003022312S.D	Data Locked	yev, 11-
NT1003022313S.D	Data Locked	yev, 11-
NT1003022315S.D	Data Locked	yev, 11-



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0158

Instrument: NT10

Calibration: GC00032

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0158-ICV1	NT1003022315SICV.D	NA	03/02/23 23:16
Low Cal Check	SLC0158-LCV1	NT1003022316S.D	NA	03/02/23 23:54
LDW23-SS1164	23A0206-03	NT1003022318S.D	Solid	03/03/23 01:10
LDW23-SS1158	23A0206-04	NT1003022319S.D	Solid	03/03/23 01:47
LDW23-SS1151	23A0206-05	NT1003022320S.D	Solid	03/03/23 02:25
LDW23-SS1145	23A0206-06	NT1003022321S.D	Solid	03/03/23 03:03
LDW23-SS1139	23A0206-07	NT1003022322S.D	Solid	03/03/23 03:41
LDW23-SS1117	23A0206-08	NT1003022323S.D	Solid	03/03/23 04:19
LDW23-SS1103	23A0206-09	NT1003022324S.D	Solid	03/03/23 04:58
Calibration Check	SLC0158-CCV1	NT1003022326S.D	NA	03/03/23 06:14



**ANALYSIS SEQUENCE**

**SLC0158**

Instrument: NT10  
Calibration ID: GC00032

**Printed: 3/11/2023 6:27:06AM**

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0158-ICV1	QC		1		K011107	K010831		
SLC0158-LCV1	QC		2		K011105	K010831		
23A0206-03	8270E-SIM Dual Scan SVOC	B 04	3			K010831	Anchor QEA, LLC	
23A0206-04	8270E-SIM Dual Scan SVOC	B 04	4			K010831	Anchor QEA, LLC	
23A0206-05	8270E-SIM Dual Scan SVOC	B 04	5			K010831	Anchor QEA, LLC	
23A0206-06	8270E-SIM Dual Scan SVOC	B 04	6			K010831	Anchor QEA, LLC	
23A0206-07	8270E-SIM Dual Scan SVOC	B 04	7			K010831	Anchor QEA, LLC	
23A0206-08	8270E-SIM Dual Scan SVOC	B 04	8			K010831	Anchor QEA, LLC	
23A0206-09	8270E-SIM Dual Scan SVOC	B 04	9			K010831	Anchor QEA, LLC	
SLC0158-CCV1	QC		10		K011107	K010831		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302A.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	2316	NT1003022315SICV.D	SLC0158-ICV1		1		9.25	652424		11.72	2339966		15.32	1186988		18.41	2193485		23.43	2444828		26.12	2842248
2	2354	NT1003022316S.D	SLC0158-LCV1		1		9.25	711850		11.72	2523043		15.32	1239819		18.41	2301881		23.43	2497236		26.12	3041429
3	0031	NT1003022317S.D	SEQ-LCV100		1		9.25	738158		11.72	2596752		15.32	1248198		18.41	2290395		23.43	2383482		26.12	2943111
4	0110	NT1003022318S.D	23A0206-03		1		9.25	642722		11.72	2301930		15.32	1136623		18.41	2108607		23.43	2541069		26.14	2868605
5	0147	NT1003022319S.D	23A0206-04		1		9.25	573044		11.72	2085809		15.32	1026228		18.41	1928257		23.43	2342758		26.14	2571363
6	0225	NT1003022320S.D	23A0206-05		1		9.25	592608		11.72	2141508		15.32	1081523		18.41	2084209		23.44	2453304		26.14	2689474
7	0303	NT1003022321S.D	23A0206-06		1		9.25	543640		11.72	1998493		15.32	998232		18.41	1941569		23.44	2336243		26.14	2517750
8	0341	NT1003022322S.D	23A0206-07		1		9.25	554821		11.73	2020427		15.32	993652		18.41	1931236		23.44	2273401		26.14	2500835
9	0419	NT1003022323S.D	23A0206-08		1		9.25	559179		11.72	2026902		15.32	987073		18.41	1935025		23.44	2321727		26.15	2504209
10	0458	NT1003022324S.D	23A0206-09		1		9.25	549466		11.72	1998569		15.32	980914		18.41	1908297		23.44	2205026		26.14	2392354
11	0536	NT1003022325S.D	SEQ-CCVFULL		1		9.25	748980		11.73	2682676		15.33	1299943		18.41	2523654		23.44	3034078		26.14	3196979
12	0614	NT1003022326S.D	SLC0158-CCV1		1		9.25	620595		11.73	2213509		15.32	1093970		18.41	2129840		23.43	2347260		26.13	2638390

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302A.b\SIM.b

ARI Job No.: SLC0 Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 02-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2316	NT1003022315SICV.d	SLC0158-ICV1		1	NO MANUAL INTEGRATION
2354	NT1003022316S.D	SLC0158-LCV1		1	Benzoic acid,
0031	NT1003022317S.D	SEQ-LCV100		1	NO MANUAL INTEGRATION
0110	NT1003022318S.D	23A0206-03		1	2,4-Dimethylphenol, Benzoic acid, N-Nitrosodiphenylamine,
0147	NT1003022319S.D	23A0206-04		1	Benzyl alcohol, 2,4-Dimethylphenol, Benzoic acid, N-Nitrosodiphenylamine,
0225	NT1003022320S.D	23A0206-05		1	NO MANUAL INTEGRATION
0303	NT1003022321S.D	23A0206-06		1	1,4-Dichlorobenzene,
0341	NT1003022322S.D	23A0206-07		1	2-Methylphenol, Dimethylphthalate, N-Nitrosodiphenylamine,
0419	NT1003022323S.D	23A0206-08		1	2,4-Dimethylphenol, Benzoic acid, 1,2,4-Trichlorobenzene,
0458	NT1003022324S.D	23A0206-09		1	2,4-Dimethylphenol,
0536	NT1003022325S.D	SEQ-CCVFULL		1	NO MANUAL INTEGRATION
0614	NT1003022326S.D	SLC0158-CCV1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 11-Mar-2023 06:40

NT1003022315SICV.d	Data Locked	yev, 11-
NT1003022316S.D	Data Locked	yev, 11-
NT1003022317S.D	Data Locked	yev, 11-
NT1003022318S.D	Data Locked	yev, 11-
NT1003022319S.D	Data Locked	yev, 11-
NT1003022320S.D	Data Locked	yev, 11-
NT1003022321S.D	Data Locked	yev, 11-
NT1003022322S.D	Data Locked	yev, 11-
NT1003022323S.D	Data Locked	yev, 11-
NT1003022324S.D	Data Locked	yev, 11-
NT1003022325S.D	Data Locked	yev, 11-
NT1003022326S.D	Data Locked	yev, 11-





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0159

Instrument: NT10

Calibration: GC00032

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0159-ICV1	NT1003022326SICV.D	NA	03/03/23 06:14
Low Cal Check	SLC0159-LCV1	NT1003022327S.D	NA	03/03/23 06:52
LDW23-SS1100	23A0206-10	NT1003022329S.D	Solid	03/03/23 08:08
LDW23-SS1096	23A0206-11	NT1003022330S.D	Solid	03/03/23 08:46
LDW23-SS1094	23A0206-12	NT1003022331S.D	Solid	03/03/23 09:24
LDW23-SS1066	23A0206-13	NT1003022332S.D	Solid	03/03/23 10:02
LDW23-SS1061	23A0206-14	NT1003022333S.D	Solid	03/03/23 10:40
Calibration Check	SLC0159-CCV1	NT1003022335S.D	NA	03/03/23 11:56



ANALYSIS SEQUENCE

SLC0159

Instrument: NT10  
Calibration ID: GC00032

Printed: 3/11/2023 7:00:20AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0159-ICV1	QC		1		K011107	K010831		
SLC0159-LCV1	QC		2		K011105	K010831		
23A0206-10	8270E-SIM Dual Scan SVOC	B 04	3			K010831	Anchor QEA, LLC	
23A0206-11	8270E-SIM Dual Scan SVOC	B 04	4			K010831	Anchor QEA, LLC	
23A0206-12	8270E-SIM Dual Scan SVOC	B 04	5			K010831	Anchor QEA, LLC	
23A0206-13	8270E-SIM Dual Scan SVOC	B 04	6			K010831	Anchor QEA, LLC	
23A0206-14	8270E-SIM Dual Scan SVOC	B 04	7			K010831	Anchor QEA, LLC	
SLC0159-CCV1	QC		8		K011107	K010831		

\_\_\_\_\_  
Samples Loaded By                                  Date

\_\_\_\_\_  
Data Processed By                                  Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b\SIM.b

Time	Filename	LabID	ClientId	DF																			
1	0614	NT1003022326SICV.D	SLC0159-ICV1		1		9.25	620595		11.73	2213509		15.32	1093970		18.41	2129840		23.43	2347260		26.13	2638390
2	0652	NT1003022327S.D	SLC0159-LCV1		1		9.25	649316		11.73	2288199		15.32	1151876		18.41	2249997		23.43	2396517		26.13	2721850
3	0730	NT1003022328S.D	SEQ-LCV100		1		9.25	692451		11.73	2443864		15.32	1197846		18.41	2257852		23.43	2359884		26.13	2705837
4	0808	NT1003022329S.D	23A0206-10		1		9.25	551410		11.72	1990578		15.32	994141		18.41	1957092		23.44	2281189		26.14	2594335
5	0846	NT1003022330S.D	23A0206-11		1		9.25	557785		11.72	1991455		15.32	981978		18.41	1972895		23.44	2339078		26.15	2570041
6	0924	NT1003022331S.D	23A0206-12		1		9.25	523434		11.72	1910677		15.32	929452		18.41	1908204		23.44	2325537		26.15	2495427
7	1002	NT1003022332S.D	23A0206-13		1		9.25	538973		11.73	1942956		15.32	978826		18.42	2257510		23.45	2789786		26.16	2837247
8	1040	NT1003022333S.D	23A0206-14		1		9.25	493783		11.73	1805737		15.32	886447		18.41	1978572		23.45	2301069		26.16	2368742
9	1118	NT1003022334S.D	SEQ-CCVFULL		1		9.26	720528		11.73	2560865		15.33	1225575		18.41	2595767		23.44	3137142		26.15	3160204
10	1156	NT1003022335S.D	SLC0159-CCV1		1		9.25	694939		11.73	2448988		15.32	1188831		18.41	2477534		23.44	2789771		26.14	3001781

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230302B.b\SIM.b

ARI Job No.: SLC0 Method: SIM.b\SIMABN2.m Instrument: nt10.i Date: 03-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0614	NT1003022326SICV.d	SLC0159-ICV1		1	NO MANUAL INTEGRATION
0652	NT1003022327S.D	SLC0159-LCV1		1	Pentachlorophenol,
0730	NT1003022328S.D	SEQ-LCV100		1	NO MANUAL INTEGRATION
0808	NT1003022329S.D	23A0206-10		1	1,4-Dichlorobenzene, 2-Methylphenol, Benzoic acid,
0846	NT1003022330S.D	23A0206-11		1	Benzoic acid,
0924	NT1003022331S.D	23A0206-12		1	2,4-Dimethylphenol, 1,2,4-Trichlorobenzene,
1002	NT1003022332S.D	23A0206-13		1	2-Methylphenol, 2,4-Dimethylphenol, 1,2,4-Trichlorobenzene, Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine,
1040	NT1003022333S.D	23A0206-14		1	Dimethylphthalate, N-Nitrosodiphenylamine, Pentachlorophenol,
1118	NT1003022334S.D	SEQ-CCVFULL		1	NO MANUAL INTEGRATION
1156	NT1003022335S.D	SLC0159-CCV1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 11-Mar-2023 07:05

NT1003022326SICV.d	Data Locked	yev, 11-
NT1003022327S.D	Data Locked	yev, 11-
NT1003022328S.D	Data Locked	yev, 11-
NT1003022329S.D	Data Locked	yev, 11-
NT1003022330S.D	Data Locked	yev, 11-
NT1003022331S.D	Data Locked	yev, 11-
NT1003022332S.D	Data Locked	yev, 11-
NT1003022333S.D	Data Locked	yev, 11-
NT1003022334S.D	Data Locked	yev, 11-
NT1003022335S.D	Data Locked	yev, 11-



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG/WO:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0143</u>	Instrument:	<u>NT10</u>
Calibration:	<u>GC00032</u>	Calibration Date:	<u>03/01/2023</u>

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0143-SCV1 (Solid)</b>		Lab File ID: NT1003012311S.D			Analyzed: 03/01/23 21:46			
2-Fluorophenol	7.5000	0.502	0 - 200	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	5.0000	0.542	0 - 200	21.524	21.525	-0.0010	N/A	
<b>SLC0143-ICB1 (Solid)</b>		Lab File ID: NT1003012312S.D			Analyzed: 03/01/23 22:24			
2-Fluorophenol	7.5000	105	27 - 120	6.894	6.899	-0.0050	N/A	
p-Terphenyl-d14	5.0000	98.0	37 - 120	21.524	21.525	-0.0010	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC                      SDG/WO: 23A0206  
 Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
 Sequence: SLC0157    Instrument: NT10  
 Calibration: GC00032    Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0157-ICV1 (Solid)</b>			Lab File ID: NT1003022303S.D			Analyzed: 03/02/23 14:13		
2-Fluorophenol	1.5000	107	80 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	1.0000	94.2	80 - 120	21.532	21.525	0.0070	N/A	
<b>SLC0157-LCV1 (Solid)</b>			Lab File ID: NT1003022304S.D			Analyzed: 03/02/23 16:17		
2-Fluorophenol	0.30000	95.0	0 - 200	6.917	6.899	0.0180	N/A	
p-Terphenyl-d14	0.20000	88.0	0 - 200	21.532	21.525	0.0070	N/A	
<b>BLA0624-BLK2 (Solid)</b>			Lab File ID: NT1003022306S.D			Analyzed: 03/02/23 17:34		
2-Fluorophenol	750.00	74.1	27 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	500.00	91.7	37 - 120	21.532	21.525	0.0070	N/A	
<b>BLA0624-BS2 (Solid)</b>			Lab File ID: NT1003022307S.D			Analyzed: 03/02/23 18:12		
2-Fluorophenol	750.00	87.0	27 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	500.00	90.2	37 - 120	21.532	21.525	0.0070	N/A	
<b>BLA0624-BSD2 (Solid)</b>			Lab File ID: NT1003022308S.D			Analyzed: 03/02/23 18:50		
2-Fluorophenol	750.00	88.1	27 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	500.00	87.1	37 - 120	21.532	21.525	0.0070	N/A	
<b>BLA0624-MS2 (Solid)</b>			Lab File ID: NT1003022309S.D			Analyzed: 03/02/23 19:28		
2-Fluorophenol	749.58	86.6	27 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	499.72	91.3	37 - 120	21.547	21.525	0.0220	N/A	
<b>BLA0624-MSD2 (Solid)</b>			Lab File ID: NT1003022310S.D			Analyzed: 03/02/23 20:06		
2-Fluorophenol	749.58	90.5	27 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	499.72	98.9	37 - 120	21.548	21.525	0.0230	N/A	
<b>BLA0624-SRM2 (Solid)</b>			Lab File ID: NT1003022311S.D			Analyzed: 03/02/23 20:44		
2-Fluorophenol	7500.0	95.9	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	5000.0	103	37 - 120	21.532	21.525	0.0070	N/A	
<b>23A0206-01 (Solid)</b>			Lab File ID: NT1003022312S.D			Analyzed: 03/02/23 21:22		
2-Fluorophenol	749.17	91.4	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	499.44	97.8	37 - 120	21.532	21.525	0.0070	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG/WO: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0157

Instrument: NT10

Calibration: GC00032

Calibration Date: 03/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-02 (Solid)</b>		Lab File ID: NT1003022313S.D			Analyzed: 03/02/23 22:00			
2-Fluorophenol	748.13	86.3	27 - 120	6.909	6.899	0.0100	N/A	
p-Terphenyl-d14	498.75	99.9	37 - 120	21.539	21.525	0.0140	N/A	
<b>SLC0157-CCV1 (Solid)</b>		Lab File ID: NT1003022315S.D			Analyzed: 03/02/23 23:16			
2-Fluorophenol	1.5000	112	50 - 150	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	1.0000	99.8	50 - 150	21.532	21.525	0.0070	N/A	









**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG/WO:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0159</u>	Instrument:	<u>NT10</u>
Calibration:	<u>GC00032</u>	Calibration Date:	<u>03/01/2023</u>

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLC0159-ICV1 (Solid)</b> Lab File ID: NT1003022326SICV.D Analyzed: 03/03/23 06:14								
2-Fluorophenol	1.5000	111	80 - 120	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	1.0000	112	80 - 120	21.532	21.525	0.0070	N/A	
<b>SLC0159-LCV1 (Solid)</b> Lab File ID: NT1003022327S.D Analyzed: 03/03/23 06:52								
2-Fluorophenol	0.30000	104	0 - 200	6.902	6.899	0.0030	N/A	
p-Terphenyl-d14	0.20000	107	0 - 200	21.532	21.525	0.0070	N/A	
<b>23A0206-10 (Solid)</b> Lab File ID: NT1003022329S.D Analyzed: 03/03/23 08:08								
2-Fluorophenol	747.41	84.0	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	498.27	106	37 - 120	21.54	21.525	0.0150	N/A	
<b>23A0206-11 (Solid)</b> Lab File ID: NT1003022330S.D Analyzed: 03/03/23 08:46								
2-Fluorophenol	747.84	87.4	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	498.56	128	37 - 120	21.54	21.525	0.0150	N/A	*
<b>23A0206-12 (Solid)</b> Lab File ID: NT1003022331S.D Analyzed: 03/03/23 09:24								
2-Fluorophenol	747.55	90.6	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	498.36	131	37 - 120	21.54	21.525	0.0150	N/A	*
<b>23A0206-13 (Solid)</b> Lab File ID: NT1003022332S.D Analyzed: 03/03/23 10:02								
2-Fluorophenol	748.68	89.3	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	499.12	162	37 - 120	21.555	21.525	0.0300	N/A	*
<b>23A0206-14 (Solid)</b> Lab File ID: NT1003022333S.D Analyzed: 03/03/23 10:40								
2-Fluorophenol	734.54	84.1	27 - 120	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	489.70	163	37 - 120	21.555	21.525	0.0300	N/A	*
<b>SLC0159-CCV1 (Solid)</b> Lab File ID: NT1003022335S.D Analyzed: 03/03/23 11:56								
2-Fluorophenol	1.5000	112	50 - 150	6.91	6.899	0.0110	N/A	
p-Terphenyl-d14	1.0000	133	50 - 150	21.54	21.525	0.0150	N/A	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0143

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Secondary Cal Check (SLC0143-SCV1)</b>		(Solid)	Lab File ID: NT1003012311S.D			Analyzed: 03/01/23 21:46			
1,4-Dichlorobenzene-d4	303734	9.252	320125	9.244	95	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1147551	11.724	1136019	11.724	101	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	645730	15.314	636993	15.314	101	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1151000	18.399	1093620	18.399	105	50 - 200	0.000	+/-0.50	
Chrysene-d12	1297466	23.421	1000300	23.414	130	50 - 200	0.007	+/-0.50	
Perylene-d12	1394899	26.108	1058448	26.1	132	50 - 200	0.008	+/-0.50	
<b>Initial Cal Blank (SLC0143-ICB1)</b>		(Solid)	Lab File ID: NT1003012312S.D			Analyzed: 03/01/23 22:24			
1,4-Dichlorobenzene-d4	515340	9.251	320125	9.244	161	50 - 200	0.007	+/-0.50	
Naphthalene-d8	1787704	11.723	1136019	11.724	157	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	879316	15.314	636993	15.314	138	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1572306	18.398	1093620	18.399	144	50 - 200	-0.001	+/-0.50	
Chrysene-d12	1486349	23.421	1000300	23.414	149	50 - 200	0.007	+/-0.50	
Perylene-d12	1674195	26.108	1058448	26.1	158	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0157

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0157-ICV1)</b>		(Solid)	Lab File ID: NT1003022303S.D			Analyzed: 03/02/23 14:13			
1,4-Dichlorobenzene-d4	493417	9.251	493417	9.251	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1779056	11.723	1779056	11.723	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	954569	15.314	954569	15.314	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1596290	18.406	1596290	18.406	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	1649110	23.421	1649110	23.421	100	50 - 200	0.000	+/-0.50	
Perylene-d12	1901958	26.115	1901958	26.115	100	50 - 200	0.000	+/-0.50	
<b>Low Cal Check (SLC0157-LCV1)</b>		(Solid)	Lab File ID: NT1003022304S.D			Analyzed: 03/02/23 16:17			
1,4-Dichlorobenzene-d4	464527	9.259	493417	9.251	94	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1687615	11.731	1779056	11.723	95	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	914095	15.321	954569	15.314	96	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1602467	18.406	1596290	18.406	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	1629844	23.421	1649110	23.421	99	50 - 200	0.000	+/-0.50	
Perylene-d12	1824689	26.115	1901958	26.115	96	50 - 200	0.000	+/-0.50	
<b>Blank (BLA0624-BLK2)</b>		(Solid)	Lab File ID: NT1003022306S.D			Analyzed: 03/02/23 17:34			
1,4-Dichlorobenzene-d4	543607	9.244	493417	9.251	110	50 - 200	-0.007	+/-0.50	
Naphthalene-d8	1966158	11.724	1779056	11.723	111	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1028261	15.314	954569	15.314	108	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1826191	18.406	1596290	18.406	114	50 - 200	0.000	+/-0.50	
Chrysene-d12	1845847	23.421	1649110	23.421	112	50 - 200	0.000	+/-0.50	
Perylene-d12	1929666	26.108	1901958	26.115	101	50 - 200	-0.007	+/-0.50	
<b>LCS (BLA0624-BS2)</b>		(Solid)	Lab File ID: NT1003022307S.D			Analyzed: 03/02/23 18:12			
1,4-Dichlorobenzene-d4	451780	9.252	493417	9.251	92	50 - 200	0.001	+/-0.50	
Naphthalene-d8	1744036	11.724	1779056	11.723	98	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	944486	15.322	954569	15.314	99	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	1720859	18.406	1596290	18.406	108	50 - 200	0.000	+/-0.50	
Chrysene-d12	1915960	23.421	1649110	23.421	116	50 - 200	0.000	+/-0.50	
Perylene-d12	1919174	26.116	1901958	26.115	101	50 - 200	0.001	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0157

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LCS Dup (BLA0624-BSD2 )</b>		(Solid)	Lab File ID: NT1003022308S.D			Analyzed: 03/02/23 18:50			
1,4-Dichlorobenzene-d4	560466	9.252	493417	9.251	114	50 - 200	0.001	+/-0.50	
Naphthalene-d8	2085063	11.723	1779056	11.723	117	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1113362	15.314	954569	15.314	117	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2000131	18.406	1596290	18.406	125	50 - 200	0.000	+/-0.50	
Chrysene-d12	2168746	23.421	1649110	23.421	132	50 - 200	0.000	+/-0.50	
Perylene-d12	2165910	26.115	1901958	26.115	114	50 - 200	0.000	+/-0.50	
<b>Matrix Spike (BLA0624-MS2 )</b>		(Solid)	Lab File ID: NT1003022309S.D			Analyzed: 03/02/23 19:28			
1,4-Dichlorobenzene-d4	643993	9.251	493417	9.251	131	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2374110	11.723	1779056	11.723	133	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1258198	15.321	954569	15.314	132	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2803544	18.414	1596290	18.406	176	50 - 200	0.008	+/-0.50	
Chrysene-d12	4232445	23.444	1649110	23.421	257	50 - 200	0.023	+/-0.50	*
Perylene-d12	3782979	26.146	1901958	26.115	199	50 - 200	0.031	+/-0.50	
<b>Matrix Spike Dup (BLA0624-MSD2 )</b>		(Solid)	Lab File ID: NT1003022310S.D			Analyzed: 03/02/23 20:06			
1,4-Dichlorobenzene-d4	672370	9.252	493417	9.251	136	50 - 200	0.001	+/-0.50	
Naphthalene-d8	2477168	11.724	1779056	11.723	139	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1288517	15.322	954569	15.314	135	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	2917258	18.414	1596290	18.406	183	50 - 200	0.008	+/-0.50	
Chrysene-d12	4069829	23.445	1649110	23.421	247	50 - 200	0.024	+/-0.50	*
Perylene-d12	3624176	26.147	1901958	26.115	191	50 - 200	0.032	+/-0.50	
<b>Reference (BLA0624-SRM2 )</b>		(Solid)	Lab File ID: NT1003022311S.D			Analyzed: 03/02/23 20:44			
1,4-Dichlorobenzene-d4	767091	9.251	493417	9.251	155	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2788036	11.723	1779056	11.723	157	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1382029	15.321	954569	15.314	145	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2606597	18.406	1596290	18.406	163	50 - 200	0.000	+/-0.50	
Chrysene-d12	2965995	23.429	1649110	23.421	180	50 - 200	0.008	+/-0.50	
Perylene-d12	3162675	26.123	1901958	26.115	166	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0157

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1021 (23A0206-01 )</b>		(Solid)	Lab File ID: NT1003022312S.D			Analyzed: 03/02/23 21:22			
1,4-Dichlorobenzene-d4	721403	9.251	493417	9.251	146	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2546921	11.723	1779056	11.723	143	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1239070	15.321	954569	15.314	130	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2265720	18.414	1596290	18.406	142	50 - 200	0.008	+/-0.50	
Chrysene-d12	2789268	23.429	1649110	23.421	169	50 - 200	0.008	+/-0.50	
Perylene-d12	3057877	26.131	1901958	26.115	161	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1015 (23A0206-02 )</b>		(Solid)	Lab File ID: NT1003022313S.D			Analyzed: 03/02/23 22:00			
1,4-Dichlorobenzene-d4	776003	9.251	493417	9.251	157	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2749439	11.723	1779056	11.723	155	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1322569	15.321	954569	15.314	139	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2488804	18.414	1596290	18.406	156	50 - 200	0.008	+/-0.50	
Chrysene-d12	3061061	23.429	1649110	23.421	186	50 - 200	0.008	+/-0.50	
Perylene-d12	3330660	26.131	1901958	26.115	175	50 - 200	0.016	+/-0.50	
<b>Calibration Check (SLC0157-CCV1 )</b>		(Solid)	Lab File ID: NT1003022315S.D			Analyzed: 03/02/23 23:16			
1,4-Dichlorobenzene-d4	652424	9.252	493417	9.251	132	50 - 200	0.001	+/-0.50	
Naphthalene-d8	2339966	11.723	1779056	11.723	132	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1186988	15.321	954569	15.314	124	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	2193485	18.406	1596290	18.406	137	50 - 200	0.000	+/-0.50	
Chrysene-d12	2444828	23.429	1649110	23.421	148	50 - 200	0.008	+/-0.50	
Perylene-d12	2842248	26.123	1901958	26.115	149	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0158

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0158-ICV1)</b>		(Solid)	Lab File ID: NT1003022315SICV.D			Analyzed: 03/02/23 23:16			
1,4-Dichlorobenzene-d4	652424	9.252	652424	9.252	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2339966	11.723	2339966	11.723	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1186988	15.321	1186988	15.321	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2193485	18.406	2193485	18.406	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	2444828	23.429	2444828	23.429	100	50 - 200	0.000	+/-0.50	
Perylene-d12	2842248	26.123	2842248	26.123	100	50 - 200	0.000	+/-0.50	
<b>Low Cal Check (SLC0158-LCV1)</b>		(Solid)	Lab File ID: NT1003022316S.D			Analyzed: 03/02/23 23:54			
1,4-Dichlorobenzene-d4	711850	9.252	652424	9.252	109	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2523043	11.724	2339966	11.723	108	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1239819	15.322	1186988	15.321	104	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2301881	18.406	2193485	18.406	105	50 - 200	0.000	+/-0.50	
Chrysene-d12	2497236	23.429	2444828	23.429	102	50 - 200	0.000	+/-0.50	
Perylene-d12	3041429	26.123	2842248	26.123	107	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1164 (23A0206-03)</b>		(Solid)	Lab File ID: NT1003022318S.D			Analyzed: 03/03/23 01:10			
1,4-Dichlorobenzene-d4	642722	9.252	652424	9.252	99	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2301930	11.724	2339966	11.723	98	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1136623	15.322	1186988	15.321	96	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2108607	18.406	2193485	18.406	96	50 - 200	0.000	+/-0.50	
Chrysene-d12	2541069	23.429	2444828	23.429	104	50 - 200	0.000	+/-0.50	
Perylene-d12	2868605	26.139	2842248	26.123	101	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1158 (23A0206-04)</b>		(Solid)	Lab File ID: NT1003022319S.D			Analyzed: 03/03/23 01:47			
1,4-Dichlorobenzene-d4	573044	9.252	652424	9.252	88	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2085809	11.724	2339966	11.723	89	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1026228	15.322	1186988	15.321	86	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1928257	18.406	2193485	18.406	88	50 - 200	0.000	+/-0.50	
Chrysene-d12	2342758	23.429	2444828	23.429	96	50 - 200	0.000	+/-0.50	
Perylene-d12	2571363	26.139	2842248	26.123	90	50 - 200	0.016	+/-0.50	





**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0158

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1151 (23A0206-05 )</b>		(Solid)	Lab File ID: NT1003022320S.D			Analyzed: 03/03/23 02:25			
1,4-Dichlorobenzene-d4	592608	9.252	652424	9.252	91	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2141508	11.724	2339966	11.723	92	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	1081523	15.322	1186988	15.321	91	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2084209	18.414	2193485	18.406	95	50 - 200	0.008	+/-0.50	
Chrysene-d12	2453304	23.437	2444828	23.429	100	50 - 200	0.008	+/-0.50	
Perylene-d12	2689474	26.139	2842248	26.123	95	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1145 (23A0206-06 )</b>		(Solid)	Lab File ID: NT1003022321S.D			Analyzed: 03/03/23 03:03			
1,4-Dichlorobenzene-d4	543640	9.252	652424	9.252	83	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1998493	11.724	2339966	11.723	85	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	998232	15.322	1186988	15.321	84	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1941569	18.414	2193485	18.406	89	50 - 200	0.008	+/-0.50	
Chrysene-d12	2336243	23.437	2444828	23.429	96	50 - 200	0.008	+/-0.50	
Perylene-d12	2517750	26.139	2842248	26.123	89	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1139 (23A0206-07 )</b>		(Solid)	Lab File ID: NT1003022322S.D			Analyzed: 03/03/23 03:41			
1,4-Dichlorobenzene-d4	554821	9.252	652424	9.252	85	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2020427	11.731	2339966	11.723	86	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	993652	15.322	1186988	15.321	84	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1931236	18.414	2193485	18.406	88	50 - 200	0.008	+/-0.50	
Chrysene-d12	2273401	23.437	2444828	23.429	93	50 - 200	0.008	+/-0.50	
Perylene-d12	2500835	26.139	2842248	26.123	88	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1117 (23A0206-08 )</b>		(Solid)	Lab File ID: NT1003022323S.D			Analyzed: 03/03/23 04:19			
1,4-Dichlorobenzene-d4	559179	9.252	652424	9.252	86	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2026902	11.724	2339966	11.723	87	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	987073	15.322	1186988	15.321	83	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1935025	18.414	2193485	18.406	88	50 - 200	0.008	+/-0.50	
Chrysene-d12	2321727	23.437	2444828	23.429	95	50 - 200	0.008	+/-0.50	
Perylene-d12	2504209	26.147	2842248	26.123	88	50 - 200	0.024	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0158

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1103 (23A0206-09 )</b>		(Solid)	Lab File ID: NT1003022324S.D			Analyzed: 03/03/23 04:58			
1,4-Dichlorobenzene-d4	549466	9.252	652424	9.252	84	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1998569	11.723	2339966	11.723	85	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	980914	15.321	1186988	15.321	83	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1908297	18.414	2193485	18.406	87	50 - 200	0.008	+/-0.50	
Chrysene-d12	2205026	23.437	2444828	23.429	90	50 - 200	0.008	+/-0.50	
Perylene-d12	2392354	26.139	2842248	26.123	84	50 - 200	0.016	+/-0.50	
<b>Calibration Check (SLC0158-CCV1 )</b>		(Solid)	Lab File ID: NT1003022326S.D			Analyzed: 03/03/23 06:14			
1,4-Dichlorobenzene-d4	620595	9.252	652424	9.252	95	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2213509	11.731	2339966	11.723	95	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	1093970	15.321	1186988	15.321	92	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2129840	18.414	2193485	18.406	97	50 - 200	0.008	+/-0.50	
Chrysene-d12	2347260	23.429	2444828	23.429	96	50 - 200	0.000	+/-0.50	
Perylene-d12	2638390	26.131	2842248	26.123	93	50 - 200	0.008	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0159

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLC0159-ICV1)</b>		(Solid)	Lab File ID: NT1003022326SICV.D			Analyzed: 03/03/23 06:14			
1,4-Dichlorobenzene-d4	620595	9.252	620595	9.252	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2213509	11.731	2213509	11.731	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1093970	15.321	1093970	15.321	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	2129840	18.414	2129840	18.414	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	2347260	23.429	2347260	23.429	100	50 - 200	0.000	+/-0.50	
Perylene-d12	2638390	26.131	2638390	26.131	100	50 - 200	0.000	+/-0.50	
<b>Low Cal Check (SLC0159-LCV1)</b>		(Solid)	Lab File ID: NT1003022327S.D			Analyzed: 03/03/23 06:52			
1,4-Dichlorobenzene-d4	649316	9.252	620595	9.252	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2288199	11.731	2213509	11.731	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1151876	15.322	1093970	15.321	105	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2249997	18.414	2129840	18.414	106	50 - 200	0.000	+/-0.50	
Chrysene-d12	2396517	23.429	2347260	23.429	102	50 - 200	0.000	+/-0.50	
Perylene-d12	2721850	26.131	2638390	26.131	103	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1100 (23A0206-10)</b>		(Solid)	Lab File ID: NT1003022329S.D			Analyzed: 03/03/23 08:08			
1,4-Dichlorobenzene-d4	551410	9.252	620595	9.252	89	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1990578	11.723	2213509	11.731	90	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	994141	15.321	1093970	15.321	91	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1957092	18.414	2129840	18.414	92	50 - 200	0.000	+/-0.50	
Chrysene-d12	2281189	23.437	2347260	23.429	97	50 - 200	0.008	+/-0.50	
Perylene-d12	2594335	26.139	2638390	26.131	98	50 - 200	0.008	+/-0.50	
<b>LDW23-SS1096 (23A0206-11)</b>		(Solid)	Lab File ID: NT1003022330S.D			Analyzed: 03/03/23 08:46			
1,4-Dichlorobenzene-d4	557785	9.252	620595	9.252	90	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1991455	11.723	2213509	11.731	90	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	981978	15.321	1093970	15.321	90	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1972895	18.414	2129840	18.414	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	2339078	23.437	2347260	23.429	100	50 - 200	0.008	+/-0.50	
Perylene-d12	2570041	26.146	2638390	26.131	97	50 - 200	0.015	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0159

Instrument: NT10

Calibration: GC00032

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1094 (23A0206-12 )</b>		(Solid)	Lab File ID: NT1003022331S.D			Analyzed: 03/03/23 09:24			
1,4-Dichlorobenzene-d4	523434	9.252	620595	9.252	84	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1910677	11.724	2213509	11.731	86	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	929452	15.322	1093970	15.321	85	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1908204	18.414	2129840	18.414	90	50 - 200	0.000	+/-0.50	
Chrysene-d12	2325537	23.437	2347260	23.429	99	50 - 200	0.008	+/-0.50	
Perylene-d12	2495427	26.147	2638390	26.131	95	50 - 200	0.016	+/-0.50	
<b>LDW23-SS1066 (23A0206-13 )</b>		(Solid)	Lab File ID: NT1003022332S.D			Analyzed: 03/03/23 10:02			
1,4-Dichlorobenzene-d4	538973	9.252	620595	9.252	87	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1942956	11.731	2213509	11.731	88	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	978826	15.322	1093970	15.321	89	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2257510	18.422	2129840	18.414	106	50 - 200	0.008	+/-0.50	
Chrysene-d12	2789786	23.452	2347260	23.429	119	50 - 200	0.023	+/-0.50	
Perylene-d12	2837247	26.162	2638390	26.131	108	50 - 200	0.031	+/-0.50	
<b>LDW23-SS1061 (23A0206-14 )</b>		(Solid)	Lab File ID: NT1003022333S.D			Analyzed: 03/03/23 10:40			
1,4-Dichlorobenzene-d4	493783	9.252	620595	9.252	80	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1805737	11.731	2213509	11.731	82	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	886447	15.322	1093970	15.321	81	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	1978572	18.414	2129840	18.414	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	2301069	23.452	2347260	23.429	98	50 - 200	0.023	+/-0.50	
Perylene-d12	2368742	26.162	2638390	26.131	90	50 - 200	0.031	+/-0.50	
<b>Calibration Check (SLC0159-CCV1 )</b>		(Solid)	Lab File ID: NT1003022335S.D			Analyzed: 03/03/23 11:56			
1,4-Dichlorobenzene-d4	694939	9.252	620595	9.252	112	50 - 200	0.000	+/-0.50	
Naphthalene-d8	2448988	11.731	2213509	11.731	111	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	1188831	15.322	1093970	15.321	109	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	2477534	18.414	2129840	18.414	116	50 - 200	0.000	+/-0.50	
Chrysene-d12	2789771	23.437	2347260	23.429	119	50 - 200	0.008	+/-0.50	
Perylene-d12	3001781	26.139	2638390	26.131	114	50 - 200	0.008	+/-0.50	



## HOLDING TIME SUMMARY

**Analysis: EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 21:22	34	40	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 22:00	34	40	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 01:10	34	40	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 01:47	34	40	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 02:25	34	40	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 03:03	35	40	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 03:41	35	40	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 04:19	35	40	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 04:58	35	40	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 08:08	35	40	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 08:46	35	40	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 09:24	35	40	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 10:02	35	40	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/27/23 14:44	16	365	03/03/23 10:40	35	40	
Matrix Spike BLA0624-MS2	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 19:28	34	40	
Matrix Spike Dup BLA0624-MSD2	01/11/23 12:40	01/11/23 17:05	01/27/23 14:44	16	365	03/02/23 20:06	34	40	

\* Indicates hold time exceedance.



**METHOD DETECTION  
AND REPORTING LIMITS**  
**EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: NT10

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
1,4-Dichlorobenzene	0.6	5.0	ug/kg
1,2-Dichlorobenzene	0.7	5.0	ug/kg
Benzyl Alcohol	2.5	20.0	ug/kg
Benzoic acid	13.4	100	ug/kg
2,4-Dimethylphenol	2.2	20.0	ug/kg
1,2,4-Trichlorobenzene	2.7	5.0	ug/kg
N-Nitrosodiphenylamine	1.3	5.0	ug/kg
Pentachlorophenol	2.1	20.0	ug/kg



Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

**Comments**

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

**B001941**

SVOA 2,4-Dinitrophenol  
Expires 12/31/2029  
*Prepared By Jianqing Zhou 9/25/2013*



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: \_\_\_\_\_

Lot #: 644 5021

Purity: 90.29%

Analyst: AB





Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

**Comments**

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

**B001945**

SVOC Benzoic Acid

Expires 12/31/2029

*Prepared By Jianqing Zhou 12/31/2012*

Reviewed By

Date



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: \_\_\_\_\_

Lot #: A0224339

Purity: 98%

Analyst: AB



Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

**Comments**

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

**B001948**

SVOA 4,6-Dinitro-2-Methylphenol  
Expires 12/31/2029  
*Prepared By Jianqing Zhou 9/25/2013*



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: \_\_\_\_\_

Lot #: 179-31A

Purity: 99%

Analyst: RB



Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

**Comments**

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL



**B002054**  
SVOA 1-Methylnaphthalene  
Solvent / Lot: NA  
Prep: 12/13/2012 by JZ  
Exp: 12/31/2029  
Location:



Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: \_\_\_\_\_

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 62-53

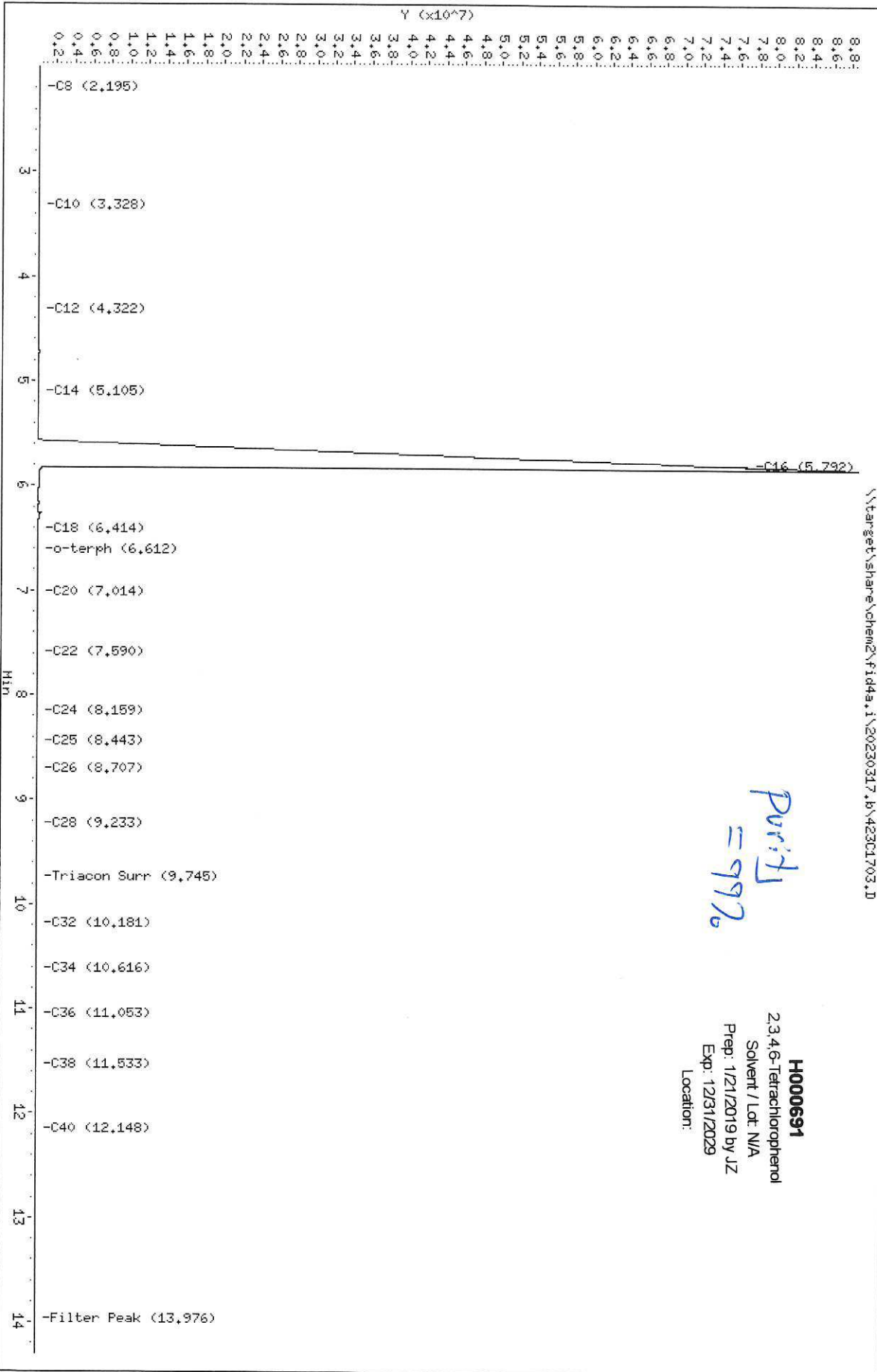
Purity: 99%

Analyst: AB

Data File: \\target\share\chem2\fid4a,1\20230317,1\42301703.D  
Date: 17-MAR-2023 10:46  
Client ID:  
Sample Info: K007226

Column phase: RTX-1

Instrument: fid4a,1  
Operator: AA  
Column diameter: 0.25



Purity = 99%

**H000691**  
2,3,4,6-Tetrachlorophenol  
Solvent / Lot: N/A  
Prep: 1/21/2019 by JZ  
Exp: 12/31/2029  
Location:

H000691

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D  
 Lab Smp Id: K007226  
 Inj Date : 17-MAR-2023 10:46  
 Operator : AA Inst ID: fid4a.i  
 Smp Info : K007226  
 Misc Info :  
 Comment :  
 Method : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m  
 Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%  
 Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: Falcon+ Compound Sublist: tph.sub  
 Target Version: 4.14  
 Processing Host: ALFONSO-201901

Concentration Formula: Amt \* DF \* CpndVariable  
 Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	



RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	\$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	\$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	



RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
===== 677340272	===== 268782821	===== 100.000			

Total unknown % area = 25.478

# Certificate of Composition - Analytical Standard

## BASE STOCK

**Product no.:** 22523051  
**Lot no.:** LRAC9813  
**Expiry Date:** May 2023  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** Dichloromethane  
**Certificate version:** LRAC9813.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)

**J005199**

SVOA-ABN BASE STOCK-200-800ug/ml  
 Expires 5/31/2023  
 Prepared By Jiangqing Zhou 5/18/2021

Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.



**Health and safety information:**

All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Certificate issue date:**

12-May-2021



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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## Certificate of Composition - Analytical Standard

## ACID STOCK

**Product no.:** 22523046  
**Lot no.:** LRAC9812  
**Expiry Date:** May 2023  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** Dichloromethane  
**Certificate version:** LRAC9812.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)

**J005200**  
 SVOA-ABN ACID STOCK-200-800ug/ml  
 Solvent / Lot: DCM  
 Prep: 5/18/2021 by JZ  
 Exp: 5/31/2023  
 Location:

 5/18/21

Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.



# Certificate of Analysis

**J008074**

 SVOA PAH STD 2000ug/ml  
 Expires 6/30/2023  
 Prepared By Joshua Rains 8/5/2021

**Product Name:** PAH Standard

**Product Number:** US-106N-1

**Lot Issue Date:** 11-Jun-2020

**Lot Number:** 0006540449

**Expiration Date:** 30-Jun-2023

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

**Matrix:** methylene chloride/benzene (1:1)

# Certificate of Analysis

**Product Number:** US-106N-1

**Lot Number:** 0006540449

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Hazards:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this RM.

**Expiration of Certification:**

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

**Sample lot approver:**



Monica Bourgeois  
QMS Representative



ISO 17034 Cert No.  
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

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[www.agilent.com/quality/](http://www.agilent.com/quality/)



ISO 17025 Cert  
No. AT-1937

# Certificate of Analysis

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Access your Safety Data Sheets and digital Certificates at [www.phenova.com/documents](http://www.phenova.com/documents).

## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101244

**Lot Number:** CL16062

**Description:** Benzidines Standard

**Certification Date:** November 19, 2020

**Storage:** 4 °C

**Expiration Date:** November 30, 2030

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

**J008310**

Benzidines std @2000ug/ml

Expires 11/30/2030

Prepared By Van Spohn 8/12/2021

# Certificate of Analysis

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. Quality Standards: Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.

<sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03



# Certificate of Analysis

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101246

**Lot Number:** CL16693

**Description:** Benzoic Acid

**Certification Date:** May 6, 2021

**Storage:** 4 °C

**Expiration Date:** April 30, 2031

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).  
$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



phenova<sup>®</sup> A Phenomenex  
Company  
Certified Reference Materials

Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis

**Produced by Phenova**

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101443

**Lot Number:** CL17696

**Description:** Aniline

**Certification Date:** December 14, 2021

**Storage:** 4 °C

**Expiration Date:** December 31, 2029

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 3239



Reference Material Producer  
Certificate No. 2427.02



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Chemical Testing Laboratory  
Certificate No. 2427.03



# Certificate of Analysis



Page 2 of 2

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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).  
$$u_{CRM} = k\sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

Product ID CRM143-50G  
Lot LRAC8918  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

### Certified Values

Analyte	Units	Certified <sup>1,4</sup> Value
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380



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## Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

## Informational Values



# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

**Product ID** CRM143-50G  
**Lot** LRAC8918  
**Expiration Date** January 2024  
**Manufacturing Date** January 2021  
**Storage Conditions** Refrigerate  
**Solvent/Matrix** SOIL

Analyte	Units	Suggested Acceptance Windows	Standard Deviation
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307



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## Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

### Additional Information:

#### DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4°C.

The sample has been intentionally prepared with an apparent headspace.

#### STORAGE

The sample should be stored at 4°C. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4°C.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

# Certificate of Analysis

## BNAs - Sandy Loam 1

*Certified  
Reference  
Material*

### Description

**Product ID** CRM143-50G  
**Lot** LRAC8918  
**Expiration Date** January 2024  
**Manufacturing Date** January 2021  
**Storage Conditions** Refrigerate  
**Solvent/Matrix** SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

### SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

### SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.



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# Description

Lot **LRAC8918**  
Expiration Date January 2024  
Manufacturing Date January 2021  
Storage Conditions Refrigerate  
Solvent/Matrix SOIL

**1 Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.  
**4 Ucrm - Uncertainty** values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**k:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

**6 Analytical Value-** For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

**Traceability:** The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Homogeneity:** Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

**THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).**



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

**Certification Date** January 05, 2021  
**Version** 0-152021





# Certificate of Analysis



Phenova Certified Reference Materials are sold by Phenomenex.

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## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101291

**Lot Number:** CL11000

**Description:** GC/MS Tuning Mix

**Certification Date:** May 9, 2014

**Storage:** 4 °C

**Expiration Date:** December 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in Methylene chloride

**Revision Date:** August 5, 2015

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

### K003891

GC/MS Tune solution-1000ug/ml

Solvent / Lot: CL11000

Prep: 4/22/2022 by VS

Exp: 12/31/2023

Location:



Reference Material Producer  
Certificate No. 2427.02



Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC-MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

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Reference Materials Producer  
Cert #2495.01



## Certificate of Analysis



Chemical Testing  
Cert #2495.02

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

This SPEXOrganics® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

### Certified Compounds:

<u>Compound</u>	<u>CAS #</u>	<u>Labeled</u>	<u>Purity</u>	<u>Certified†</u>	<u>Uncertainty</u>
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

*Certificate of Reference Material*

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

**Final Solution Verification:**

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Mave

# Report of Certification

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

**This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:**

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

## **Storage Requirements:**

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

## **Instructions for Use:**

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25 µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

## **Material Source:**

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

## **Method of Preparation:**

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

## **Homogeneity:**

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

## **Statistical Estimator and Confidence Limits:**

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$  where X=certified value, U=expanded uncertainty, x=property value
- $U = k u_c$  where k=2 is the coverage factor at the 95% confidence level
- $u_c =$  combined standard uncertainty obtained by combining the individual compound standard uncertainty components  $u_i$ , where  $u_c = \sqrt{\sum u_i^2}$

## **Legal Notice:**

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Phone: 1-732-549-7144 • Fax 1-732-603-9647





## Certificate of Analysis

**Catalog Number:** ECS-A-030

**Lot No.** AA210126005

**Description:** Base/Neutrals Mix 1

**Matrix:** Methylene Chloride

**Manufactured Date:** 1-26-2021

**Expiration Date:** 1-26-2024

This SPEXOrganics® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

### Certified Compounds:

<u>Compound</u>	<u>CAS #</u>	<u>Labeled</u>	<u>Purity</u>	<u>Certified†</u>	<u>Uncertainty</u>
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
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N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

## Certificate of Reference Material

**Catalog Number:** ECS-A-030

**Lot No.** AA210126005

**Description:** Base/Neutrals Mix 1

**Matrix:** Methylene Chloride

**Manufactured Date:** 1-26-2021

**Expiration Date:** 1-26-2024

### **Final Solution Verification:**

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Moore

## Report of Certification

**Catalog Number:** ECS-A-030 **Lot No.** AA210126005  
**Description:** Base/Neutrals Mix 1  
**Matrix:** Methylene Chloride **Manufactured Date:** 1-26-2021  
**Expiration Date:** 1-26-2024

**This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:**

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

### Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

### Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25 µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

### Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

### Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been used in all preparations.

### Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

### Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$  where X=certified value, U=expanded uncertainty, x=property value
- $U = ku$ , where k=2 is the coverage factor at the 95% confidence level
- $u_c =$  combined standard uncertainty obtained by combining the individual compound standard uncertainty components  $u_i$ , where  $u_c = \sqrt{\sum u_i^2}$

### Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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# Certificate of Analysis

**Product Name:** Toxic Substances Standard

**Product Number:** US-104N-1

**Lot Issue Date:** 02-Jul-2021

**Lot Number:** 0006620643

**Expiration Date:** 31-Jul-2023

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

**Matrix:** methylene chloride (dichloromethane)

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**K004544**

toxic sub mix#2

Solvent / Lot: methylene chloride

Prep: 5/11/2022 by JZ

Exp: 7/31/2023

Location:

*JZ* 05/11/22



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 2

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937





CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31493 Lot No.: A0181243
Description: CLP 04.1 BNA Surrogate Mix
CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: October 31, 2025 Storage: 10°C or colder
Handling: Sonicate prior to use. Ship: Ambient

Handwritten signature and date: 05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Table with 7 columns: Elution Order, Compound, CAS #, Purity, Weight, µg/mL, and Stressed. Contains 7 rows of data for various compounds like 2-Fluorophenol, Phenol-d6, 2-Chlorophenol-d4, 1,2-Dichlorobenzene-d4, Nitrobenzene-d5, 2-Fluorobiphenyl, and 2,4,6-Tribromophenol.



# Certificate of Analysis

**Produced by Phenova**

6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com  
Access your Safety Data Sheets and digital Certificates at [www.phenova.com/documents](http://www.phenova.com/documents).

## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101246

**Lot Number:** CL17953

**Description:** Benzoic Acid

**Certification Date:** January 31, 2022

**Storage:** 4 °C

**Expiration Date:** January 31, 2032

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

**K004603**

Benzoic Acid @2000ug/ml

Solvent / Lot: N/A

Prep: 5/13/2022 by JZ

Exp: 1/31/2032

Location: GC

*5/13/22*



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis

**Produced by Phenova**

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Access your Safety Data Sheets and digital Certificates at [www.phenova.com/documents](http://www.phenova.com/documents).

## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101244

**Lot Number:** CL17662

**Description:** Benzidines Standard

**Certification Date:** December 2, 2021

**Storage:** 4 °C

**Expiration Date:** November 30, 2031

**Provided As:** 1 mL in 2 mL Ampoule in Methylene Chloride

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

**K004604**

Benzidines std @2000ug/ml  
Solvent / Lot: Mecl2  
Prep: 5/13/2022 by JZ  
Exp: 11/30/2031  
Location: GC

*JZ 5/13/22*



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

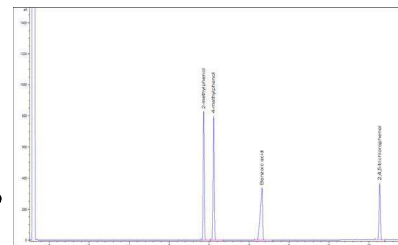


Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis - Certified Reference Material

## EPA TCL Hazardous Substances Mix 1

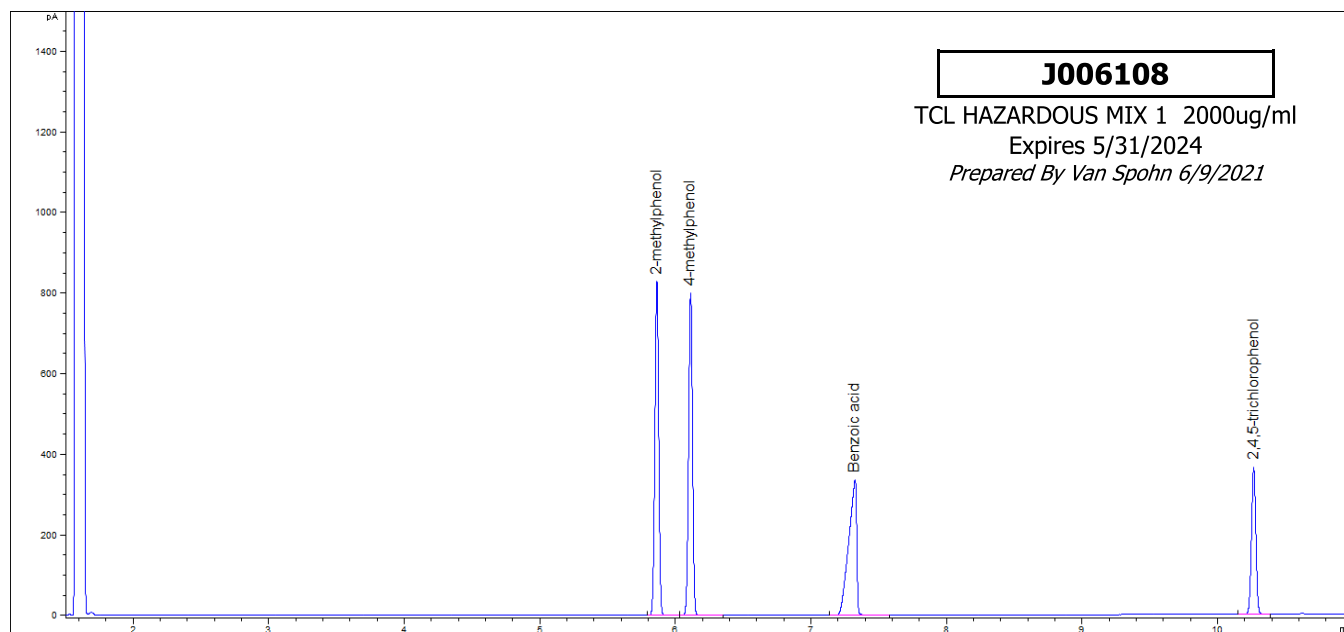
**Product no.:** 48907  
**Lot no.:** LRAC9610  
**Expiry Date:** May 2024  
**Manufacturing Date:** May 2021  
**Storage:** Refrigerate  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAC9610.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)



### Certified Values:

Analyte	Certified Value	Units	Raw Material Purity, %	Elution order	Raw Material Lot
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

### Informational Values:



### Additional Information:

**Analytical Method Parameters:**  
 Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)  
 Carrier Gas: H<sub>2</sub>, Flow: 4.5 mL/min  
 Inlet Temperature: 170 °C, Injection Volume: 1 µL  
 Injection Mode: Split, Split Ratio: 20:1



Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)  
Detector: FID  
Detector Temperature: 310 °C

**Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Accreditation:** Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

**Certificate issue date:** 20-May-2021



Handwritten signature of Andy Ommen in black ink.

Andy Ommen - QC Manager

Handwritten signature of Mark Pooler in black ink.

Mark Pooler - QA Supervisor

**Details on metrological traceability:** This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

**Associated uncertainty:** Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**Homogeneity assessment:** Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

**Stability assessment:**

Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

**Disclaimer:** The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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The life science business of Merck KGaA, Darmstadt, Germany  
operates as MilliporeSigma in the US and Canada.

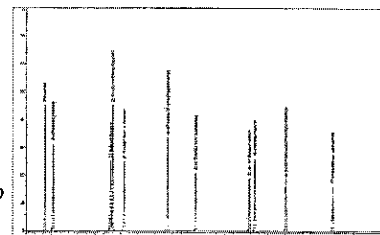




# Certificate of Analysis - Certified Reference Material

## EPA TCL Phenols Mix

**Product no.:** 48904  
**Lot no.:** LRAD0139  
**Expiry Date:** July 2024  
**Manufacturing Date:** July 2021  
**Storage:** REFRIGERATE  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAD0139.01 (Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)



### Certified Values:

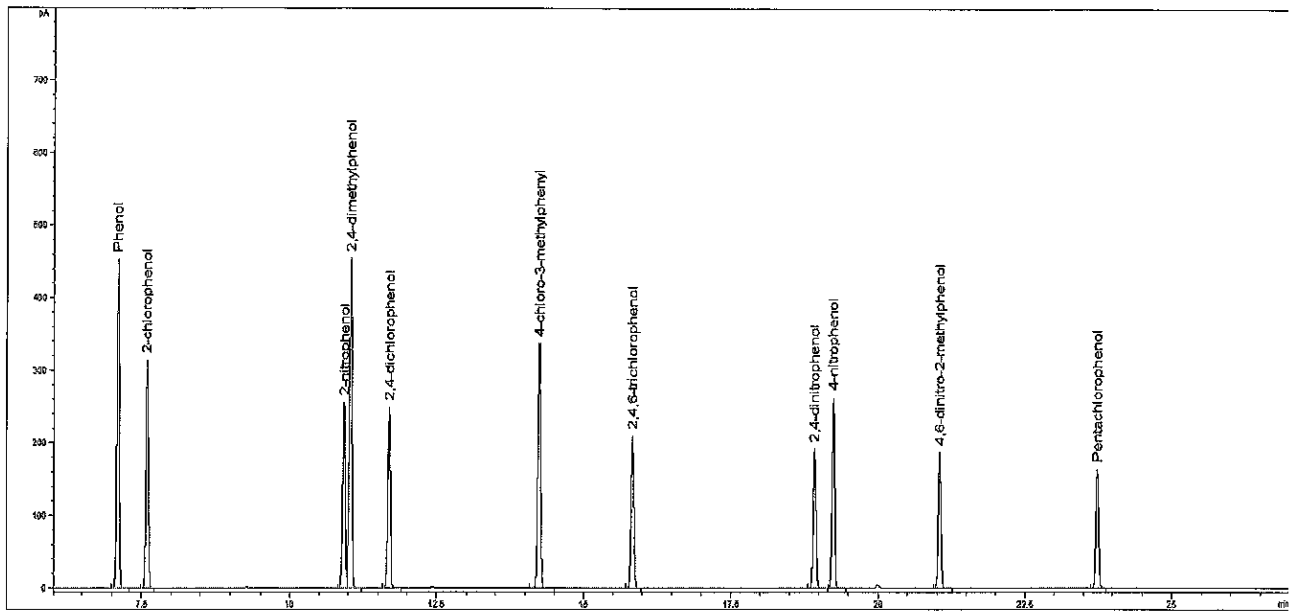
Analyte	Certified Value	Units	Raw Material Purity, %	Raw Material Lot
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

### ASSAY Method

#### J013597

TCL Phenols Mix 2000ug/ml  
 Solvent / Lot: LRAD0139  
 Prep: 12/30/2021 by VS  
 Exp: 7/31/2024  
 Location:





**METHOD: GC (Bellefonte Method )**

Column: SPB-5, 30 m x 0.53 mm I.D., 1.5 µm film thickness

Carrier Gas: H<sub>2</sub> Flow Rate: 4.5 mL/min

Inlet Temperature: 200 °C Injection Volume: 1.0 µL

Injection Mode: 25:1

Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)

Detector: FID Temperature: 310 °C

**Elution details:**

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorophenol
6	14.242	4-chloro-3-methylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

**Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

**Health and safety information:** All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Accreditation:** Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

**Certificate issue date:** 12-Jul-2021



*Andy Ommen*

*Mark Pooler*

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

**Details on metrological traceability:**

This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

**Associated uncertainty:**

Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

**Homogeneity assessment:**

Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

**Stability assessment:**

Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial



**Certificate of analysis revision history:**

<b>Certificate version</b>	<b>Date</b>	<b>Reason for version</b>
LRAD0139.01	12-Jul-2021	Original Release Date

**Disclaimer:** The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.



# Certificate of Analysis

**Produced by Phenova**

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101444

**Lot Number:** CL18355

**Description:** 8270 Calibration Standard

**Certification Date:** July 25, 2022

**Storage:** -18 °C

**Expiration Date:** August 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

**K007995**

SVOA-8270 LCS MIX 1000ug/ml

Solvent / Lot: N/A

Prep: 8/29/2022 by JZ

Exp: 8/31/2023

Location: FREEZER 44



Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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**Lot Number:** CL18355

**Description:** 8270 Calibration Standard

**Certification Date:** July 25, 2022

**Storage:** -18 °C

**Expiration Date:** August 31, 2023

**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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**Catalog No.:** AL0-101444      **Lot Number:** CL18355  
**Description:** 8270 Calibration Standard      **Certification Date:** July 25, 2022  
**Storage:** -18 °C      **Expiration Date:** August 31, 2023  
**Provided As:** 1 mL in 2 mL Ampoule in MeCl<sub>2</sub>/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

**Notes:** The proper chemical name for Bis(2-Chloroisopropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.



# Certificate of Analysis

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. Quality Standards: Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = \sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Composition - Analytical Standard

## BASE STOCK

**Product no.:** 22523051  
**Lot no.:** LRAD2751  
**Expiry Date:** June 2024  
**Manufacturing Date:** June 2022  
**Storage:** REFRIGERATE  
**Solvent/Matrix:** DICHLOROMETHANE  
**Certificate version:** LRAD2751.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: [www.sigma-aldrich.com](http://www.sigma-aldrich.com) for the most current version.)*

Analyte	Assigned Value	Units	Raw Material Purity, %	Raw Material Lot
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

**Measurement method:** Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

**Intended use:** Intended for R&D and Analytical Use only. Not for drug, household or other uses.

**Packaging:** 1 mL in amber ampule

**Instructions for handling and correct use:** Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user's location. Open slowly and carefully to avoid dispersion of the material.



**Health and safety information:**

All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

**Certificate issue date:**

03 JUN 2022



Andy Ommen - QC Manager



Scott Stetler - QA Manager

**Certificate of analysis revision history:**

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

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Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021307.D  
Data file 2: /20230213.b/B20230213.b/23021307.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-01  
Client ID:  
Injection Date: 13-FEB-2023 15:05  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.314	0.015	19942	4.809	-0.006	2423	2.10	0.17	170.7*	alpha-BHC
4.674	-0.008	4160	5.314	0.024	13777	1.14	2.49	74.4*	beta-BHC
4.870	0.007	73843	----	----	----	9.52	0.00	---	delta-BHC
4.600	0.002	18085	5.206	-0.003	5135	2.20	0.42	136.4*	gamma-BHC (Lindane)
5.065	-0.013	20622	5.746	0.013	31598	2.82	2.82	0.1	Heptachlor
5.417	0.018	36007	6.131	-0.004	16819	4.39	1.31	107.8*	Aldrin
6.059	-0.013	20439	6.772	-0.020	143508	2.87	13.56	130.1*	Heptachlor epoxide b
6.560	0.045	121510	7.224	-0.012	9925	18.61	1.06	178.4*	Endosulfan I
6.804	0.029	11274	7.512	-0.018	49603	1.61	4.81	99.9*	Dieldrin
6.429	-0.010	92791	7.318	-0.004	53289	14.25	5.64	86.6*	4,4'-DDE
7.049	0.024	192410	----	----	----	37.42	0.00	---	Endrin
7.289	0.025	14217	8.075	0.008	83466	3.07	11.49	115.6*	Endosulfan II
----	----	----	7.926	-0.004	53443	0.00	7.75	---	4,4'-DDD
8.117	-0.009	7525	----	----	----	1.71	0.00	---	Endosulfan sulfate
----	----	----	8.252	0.005	320825	0.00	48.21	---	4,4'-DDT
7.892	0.026	22235	----	----	----	10.72	0.00	---	Methoxychlor
8.433	0.034	1199	9.207	0.018	117965	0.24	17.12	194.5*	Endrin ketone
7.714	0.022	49379	8.392	-0.006	45748	13.37	8.93	39.9	Endrin aldehyde
6.210	-0.005	13546	----	----	----	1.87	0.00	---	trans-Chlordane
6.379	0.018	57625	7.161	-0.003	11737	7.95	1.14	149.9*	cis-Chlordane
2.276	-0.020	5573	2.447	-0.027	71984	0.56	5.20	161.1*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00	---	Hexachlorobenzene
3.790	-0.000	191565	4.181	-0.001	287005	28.57	28.03	1.9	Tetrachloro-m-xylene
9.304	-0.002	176475	10.402	-0.001	197695	44.40	35.88	21.2	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	493071	-26.7
Hexabromobiphenyl	609723	392243	-35.7

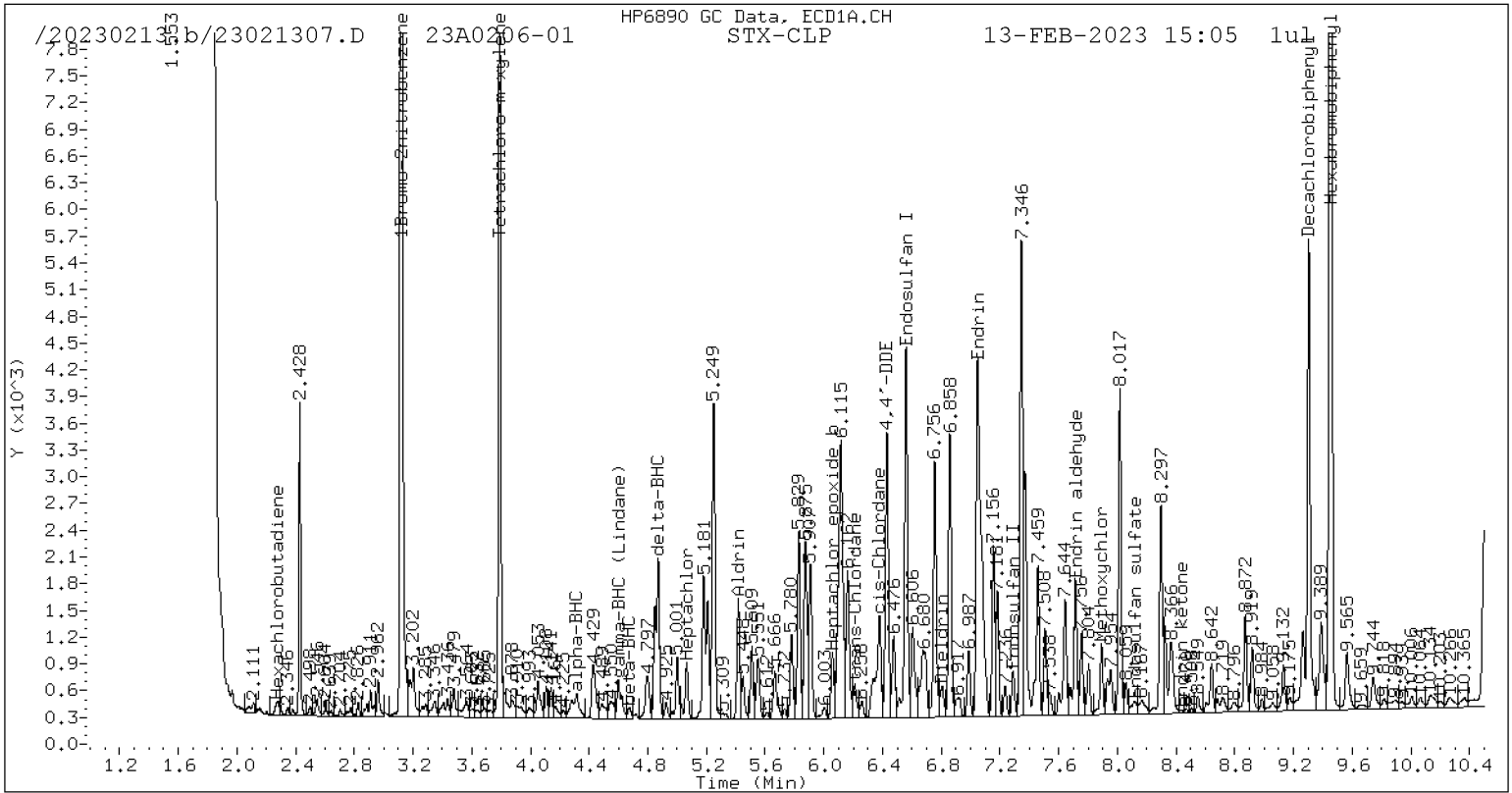
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	727405	-27.7
Hexabromobiphenyl	769764	498481	-35.2

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

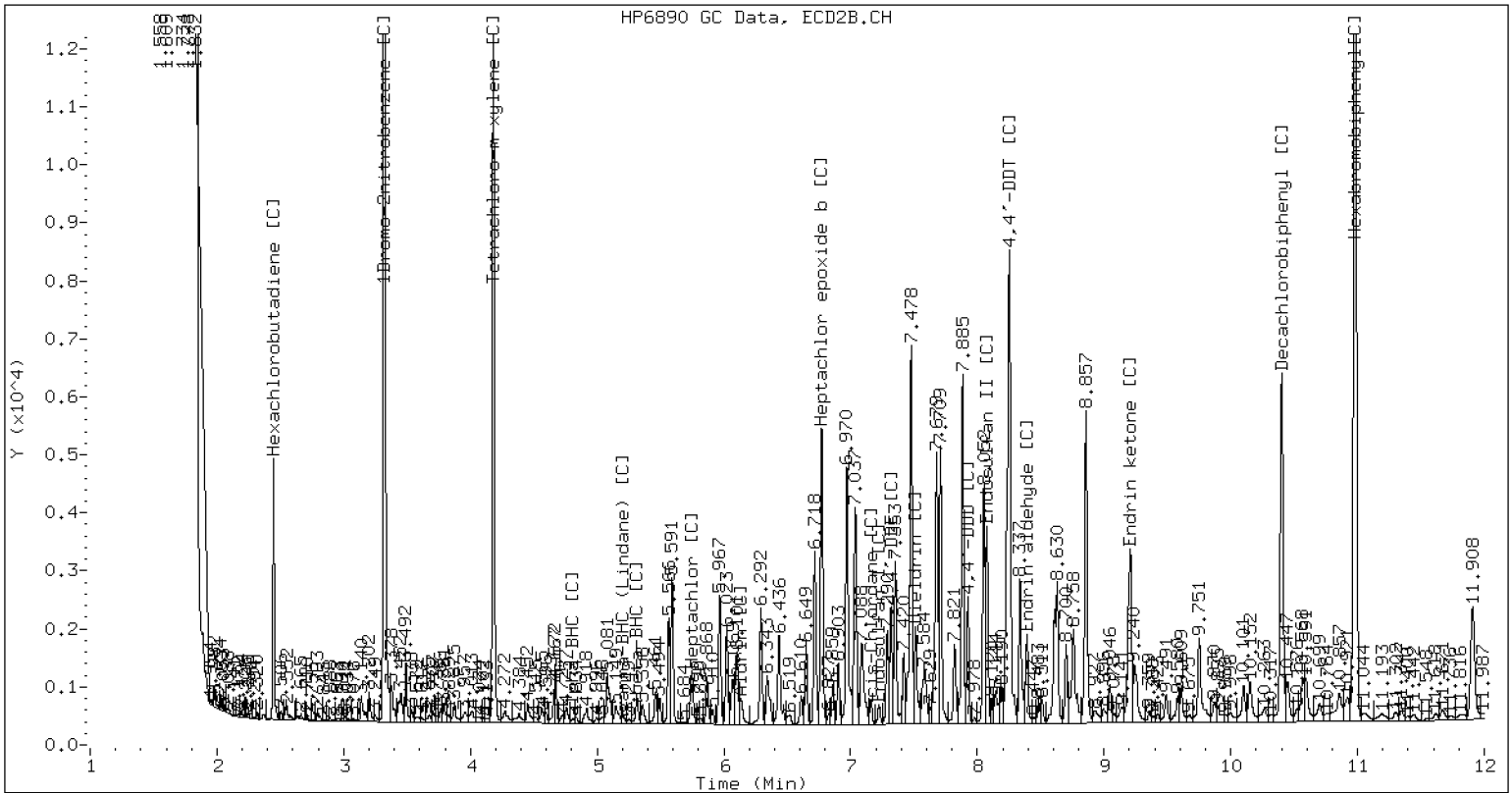
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021307.D 23A0206-01 CLP2



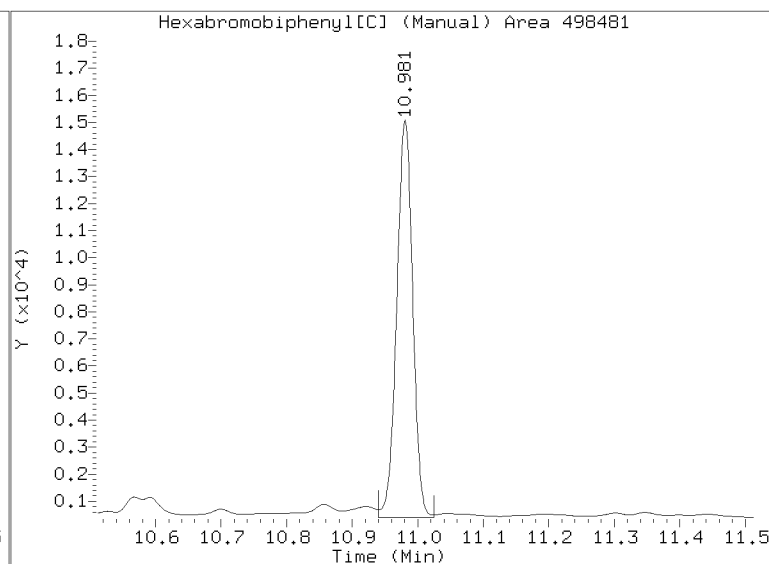
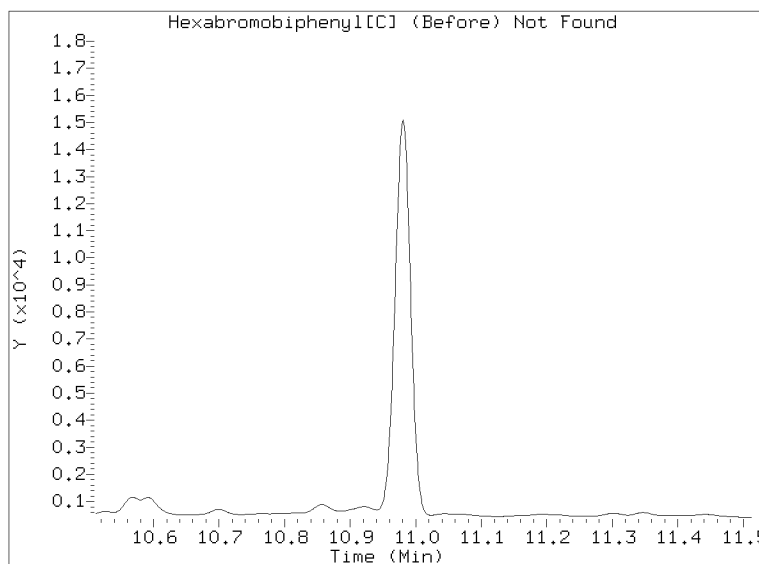
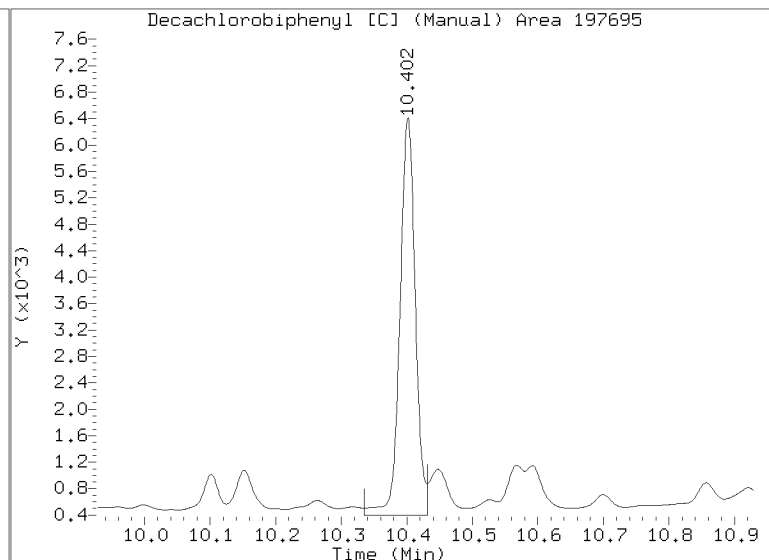
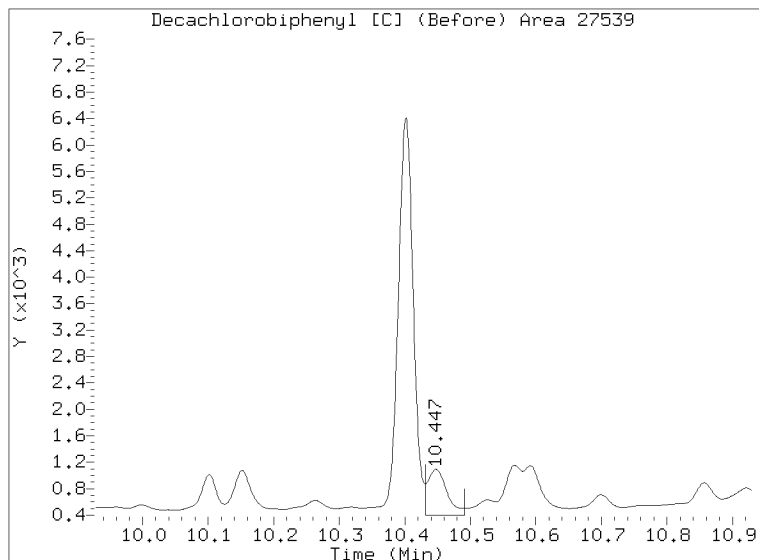
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021307.D

Injection Date: 13-FEB-2023 15:05

Lab ID:23A0206-01 Client ID:





**LDW23-SS1015**

**Dual Column**  
**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-02 B</u>
	File ID: <u>23021308.D</u>
Sampled: <u>01/11/23 08:37</u>	Prepared: <u>01/30/23 14:14</u>
	Analyzed: <u>02/13/23 15:23</u>
% Solids: <u>47.11</u>	Preparation: <u>EPA 3546 (Microwave)</u>
	Initial/Final: <u>26.58 g Wet / 2.5 mL</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
	Calibration: <u>FL00041</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9860	9.00	113	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9860	7.84	98.2	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9860	5.74	71.8	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9860	5.80	72.7	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021308.D  
Data file 2: /20230213.b/B20230213.b/23021308.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-02  
Client ID:  
Injection Date: 13-FEB-2023 15:23  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.314	0.015	17081	4.810	-0.005	2067	1.85	0.15	170.5*	alpha-BHC
4.674	-0.007	5878	5.314	0.024	12956	1.65	2.42	37.9	beta-BHC
4.870	0.007	72851	----	----	----	9.64	0.00	---	delta-BHC
4.600	0.001	16774	5.206	-0.003	4621	2.09	0.39	137.5*	gamma-BHC (Lindane)
5.065	-0.013	17586	5.746	0.013	32227	2.46	2.98	19.0	Heptachlor
5.417	0.018	52979	6.133	-0.003	17461	6.63	1.41	129.6*	Aldrin
6.059	-0.013	21224	6.772	-0.019	146146	3.06	14.32	129.6*	Heptachlor epoxide b
6.560	0.045	119804	7.225	-0.011	11952	18.83	1.33	173.6*	Endosulfan I
6.804	0.029	12254	7.513	-0.017	53969	1.79	5.43	100.7*	Dieldrin
6.430	-0.010	95969	7.319	-0.004	56245	15.12	6.17	84.1*	4,4'-DDE
7.049	0.024	206717	----	----	----	33.60	0.00	---	Endrin
7.290	0.026	16064	8.076	0.009	89232	2.90	12.25	123.4*	Endosulfan II
----	----	----	7.926	-0.004	57609	0.00	8.33	---	4,4'-DDD
8.114	-0.011	8168	----	----	----	1.55	0.00	---	Endosulfan sulfate
----	----	----	8.252	0.005	366960	0.00	55.01	---	4,4'-DDT
7.892	0.026	26806	----	----	----	10.80	0.00	---	Methoxychlor
----	----	----	9.206	0.017	140617	0.00	20.35	---	Endrin ketone
7.714	0.022	48590	8.391	-0.006	55770	11.00	10.85	1.3	Endrin aldehyde
6.211	-0.005	14513	----	----	----	2.06	0.00	---	trans-Chlordane
6.380	0.019	60151	7.162	-0.002	12821	8.52	1.29	147.5*	cis-Chlordane
2.291	-0.005	8383	2.446	-0.028	75411	0.87	5.65	146.9*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00	---	Hexachlorobenzene
3.790	-0.000	187676	4.181	-0.001	287042	28.73	29.06	1.2	Tetrachloro-m-xylene
9.305	-0.001	214262	10.402	-0.001	217016	45.07	39.29	13.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	480393	-28.6
Hexabromobiphenyl	609723	469228	-23.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	701596	-30.3
Hexabromobiphenyl	769764	499770	-35.1

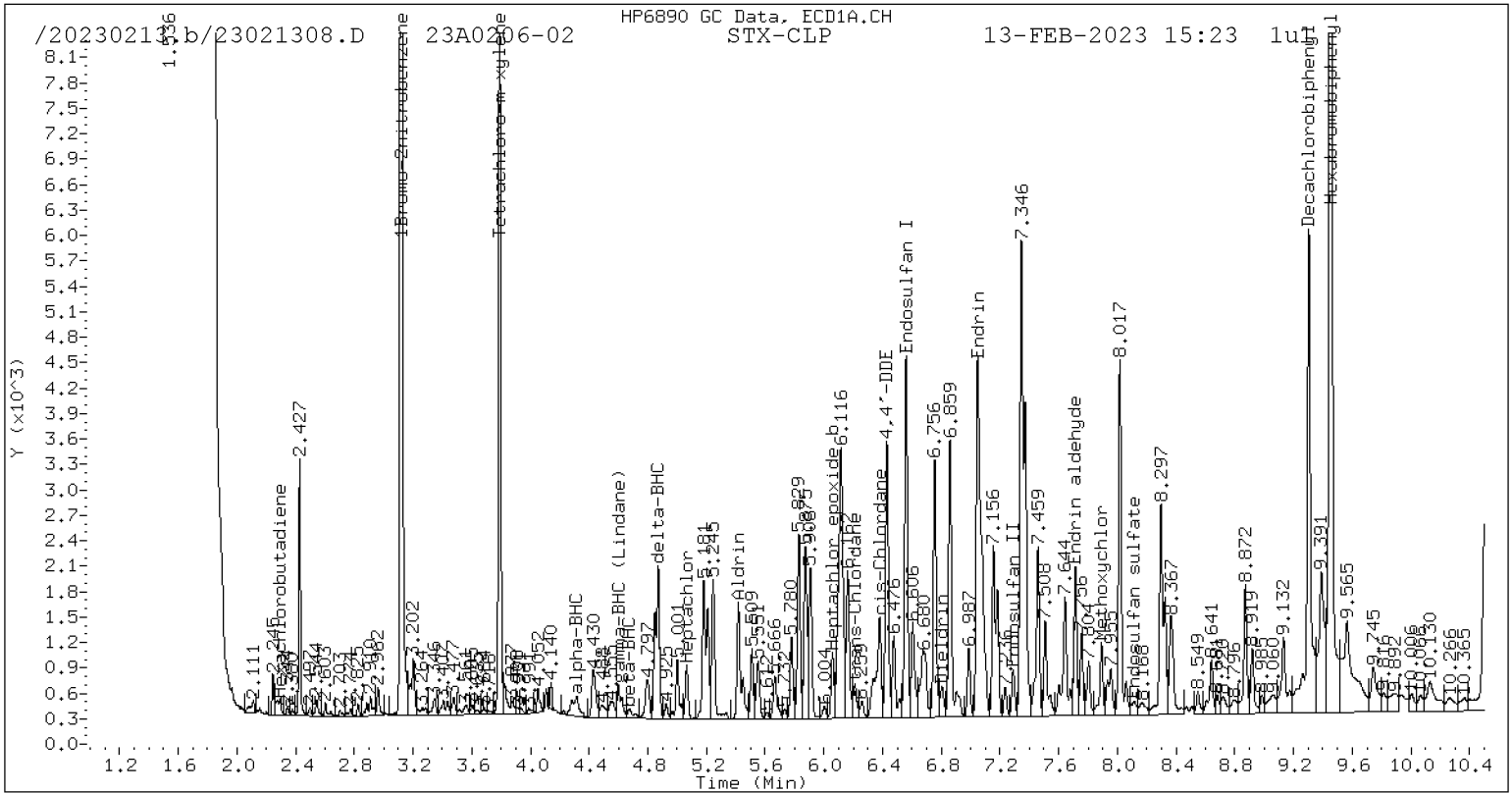
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

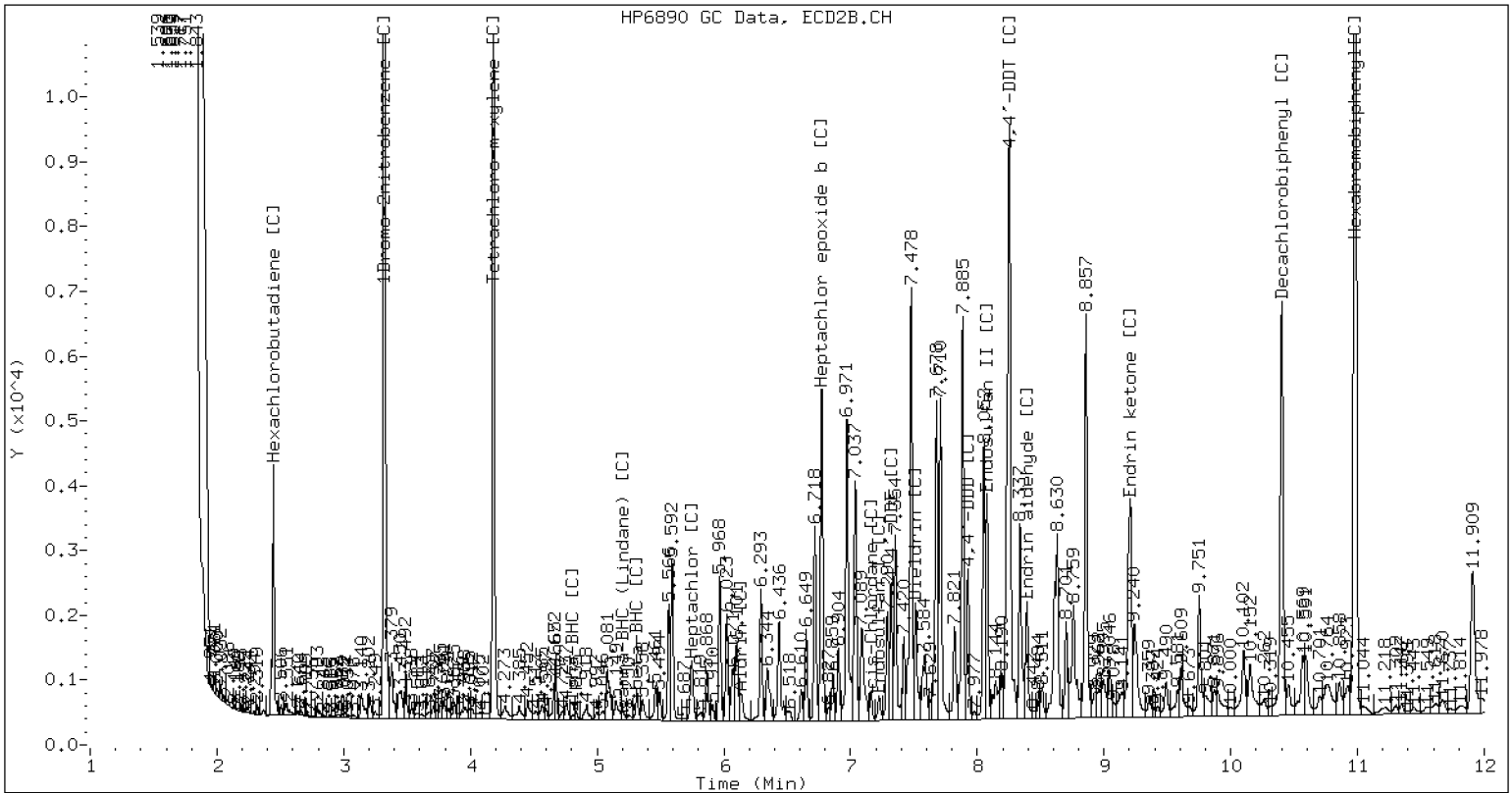


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021308.D 23A0206-02 CLP2



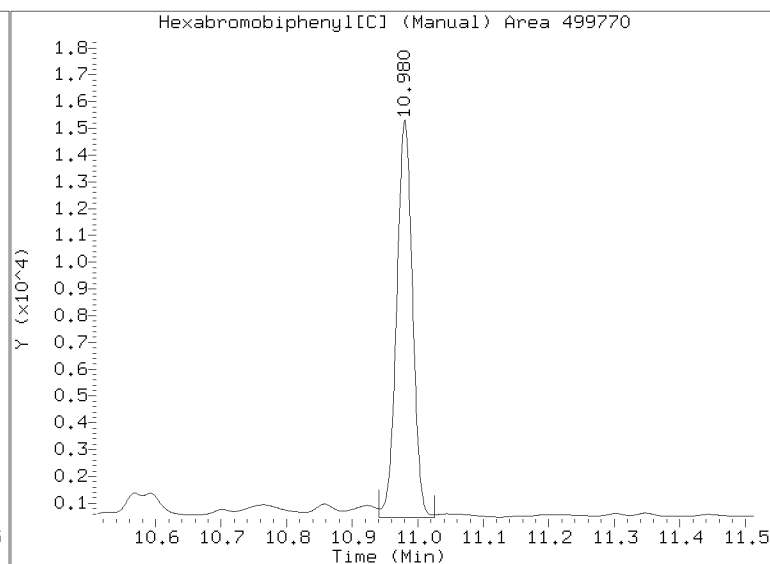
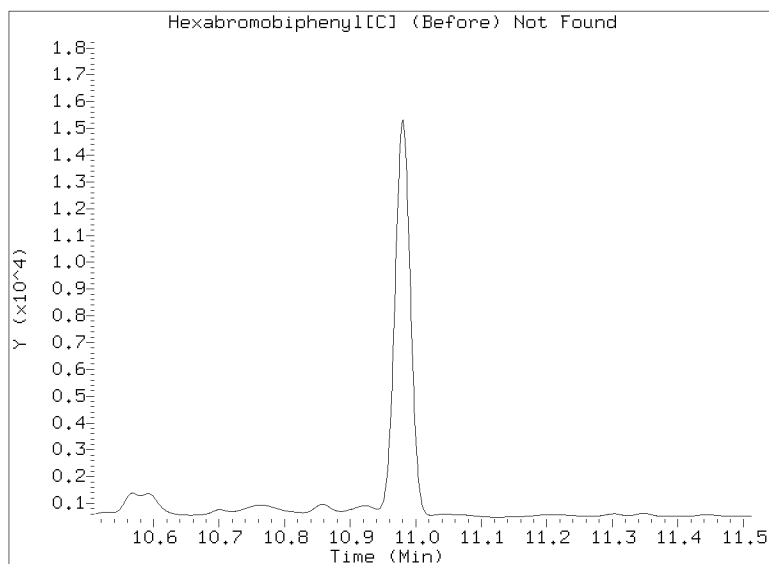
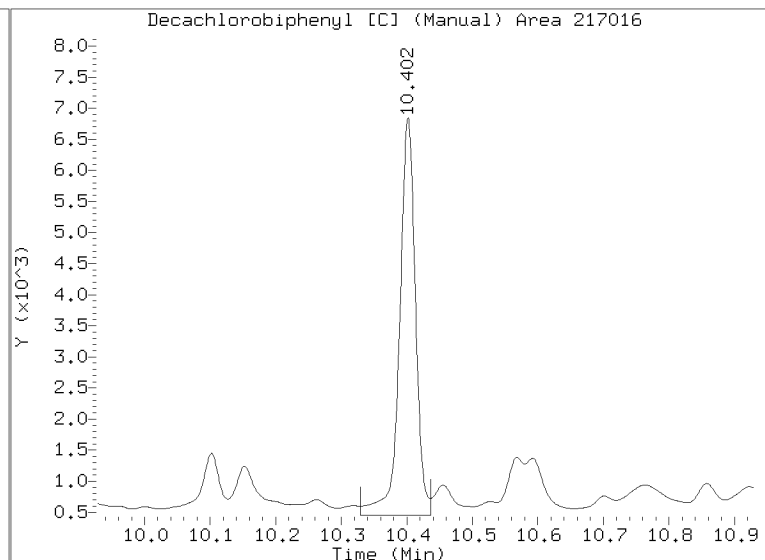
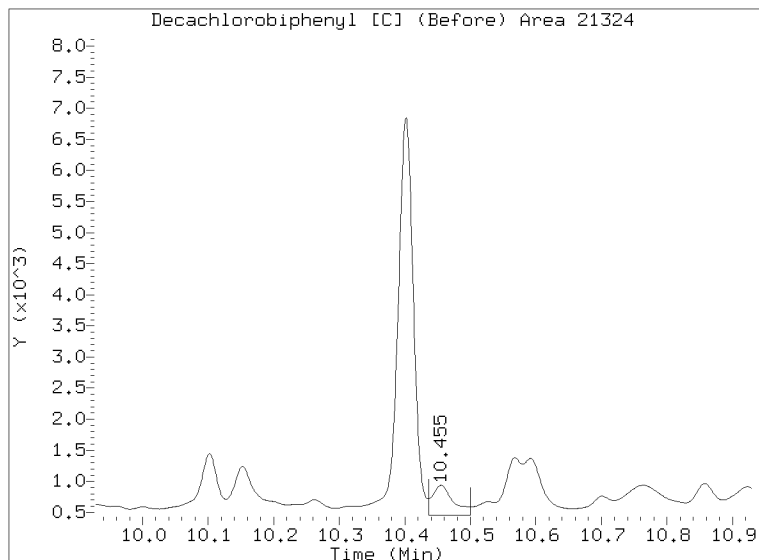
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021308.D

Injection Date: 13-FEB-2023 15:23

Lab ID:23A0206-02 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-03 B</u>
		File ID:	<u>23021309.D</u>
Sampled:	<u>01/11/23 09:18</u>	Prepared:	<u>01/30/23 14:14</u>
		Analyzed:	<u>02/13/23 15:41</u>
% Solids:	<u>48.34</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>25.87 g Wet / 2.5 mL</u>
Batch:	<u>BLA0622</u>	Sequence:	<u>SLB0237</u>
		Calibration:	<u>FL00041</u>
Instrument:	<u>ECD6</u>	Column 1:	<u>STX-CLP</u>
		Column 2:	<u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9964	7.49	93.6	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9964	7.77	97.2	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9964	5.53	69.2	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9964	5.94	74.2	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021309.D  
Data file 2: /20230213.b/B20230213.b/23021309.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-03  
Client ID:  
Injection Date: 13-FEB-2023 15:41  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	5580	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.316	0.017	36055	4.809	-0.006	5580	3.64	0.39	161.6*	alpha-BHC
4.718	0.037	4643	5.314	0.024	12375	1.22	2.25	59.7*	beta-BHC
4.870	0.006	60791	5.670	0.028	7283	7.51	0.61	169.9*	delta-BHC
4.603	0.004	33938	5.208	-0.002	6705	3.95	0.55	151.4*	gamma-BHC (Lindane)
5.064	-0.014	16026	5.745	0.012	28424	2.10	2.56	19.8	Heptachlor
5.416	0.017	49152	6.135	-0.000	16021	5.74	1.26	127.8*	Aldrin
6.115	0.043	170034	6.771	-0.020	169700	22.90	16.18	34.4	Heptachlor epoxide b
6.560	0.045	159219	7.225	-0.012	14336	23.36	1.55	175.1*	Endosulfan I
----			7.512	-0.018	78328	0.00	7.67	---	Dieldrin
6.428	-0.012	114122	7.318	-0.005	47642	16.79	5.09	107.0*	4,4'-DDE
7.048	0.023	298944	----			59.62	0.00	---	Endrin
7.288	0.024	17626	8.076	0.009	120063	3.90	16.97	125.2*	Endosulfan II
----			7.925	-0.004	48166	0.00	7.17	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			8.254	0.007	464915	0.00	71.74	---	4,4'-DDT
7.892	0.026	42372	----			20.95	0.00	---	Methoxychlor
----			9.207	0.019	223860	0.00	33.36	---	Endrin ketone
7.713	0.022	84863	8.392	-0.006	77770	23.57	15.58	40.8*	Endrin aldehyde
6.258	0.043	7274	----			0.96	0.00	---	trans-Chlordane
6.379	0.018	66992	7.161	-0.003	10557	8.86	1.03	158.3*	cis-Chlordane
2.277	-0.020	9974	2.446	-0.027	62008	0.96	4.52	129.8*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.790	-0.001	193568	4.181	-0.001	301463	27.66	29.70	7.1	Tetrachloro-m-xylene
9.304	-0.002	145141	10.401	-0.001	208527	37.45	38.86	3.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	514587	-23.5
Hexabromobiphenyl	609723	382461	-37.3

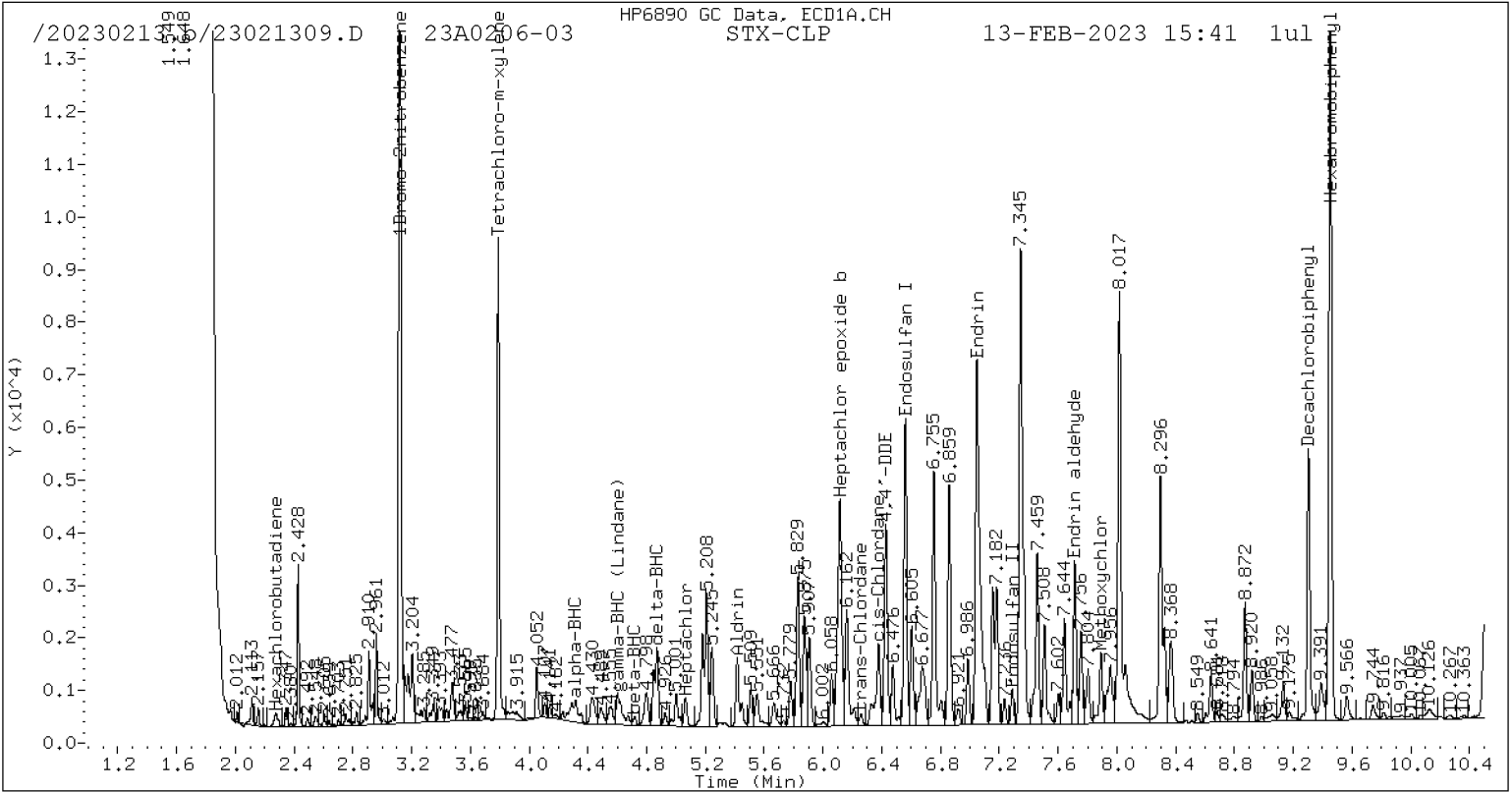
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	721138	-28.4
Hexabromobiphenyl	769764	485495	-36.9

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

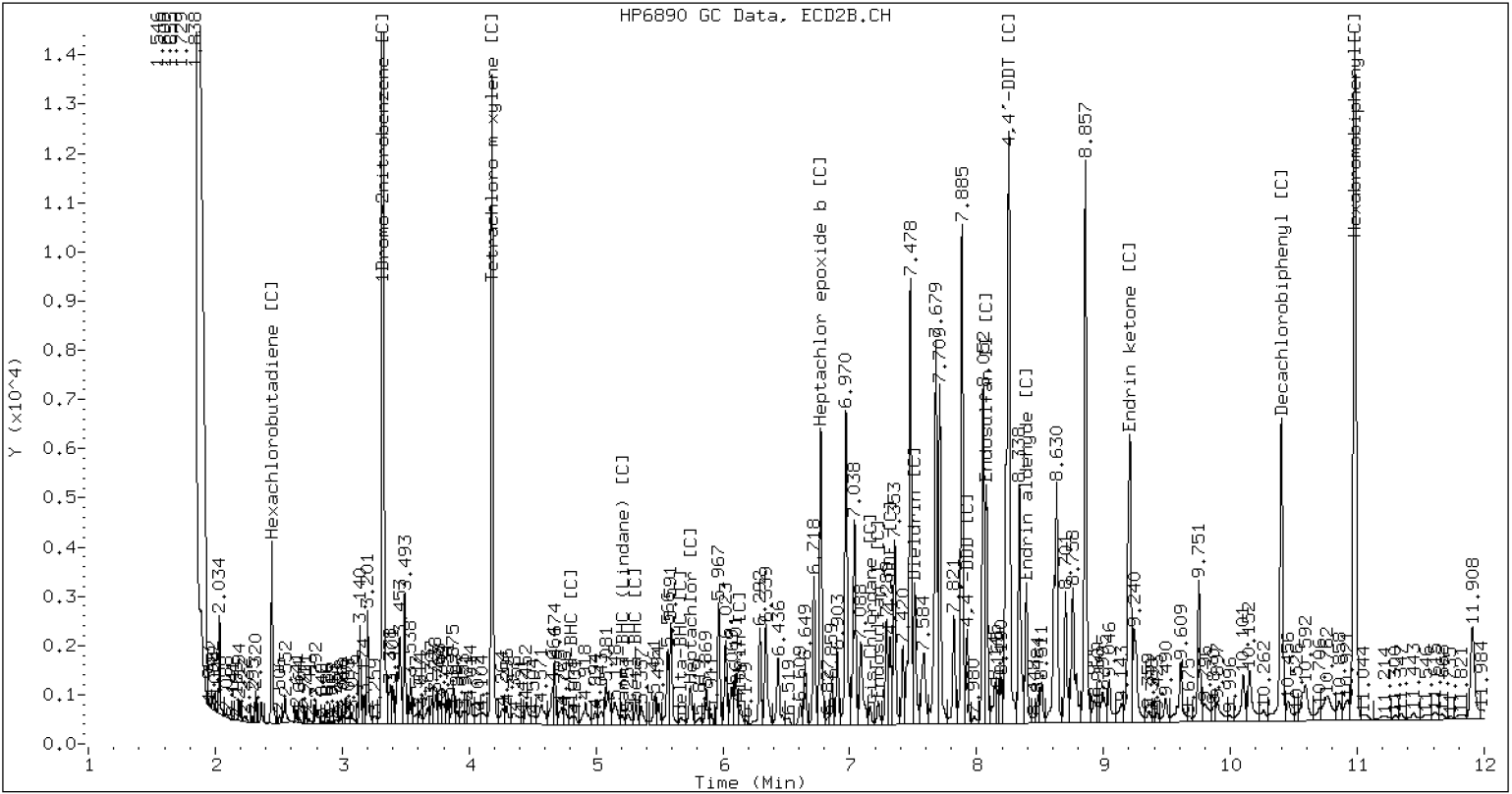
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021309.D 23A0206-03 CLP2



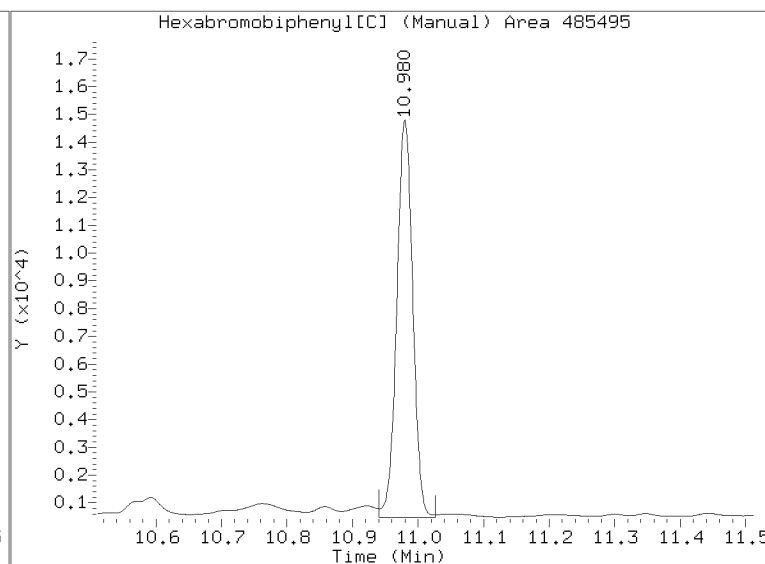
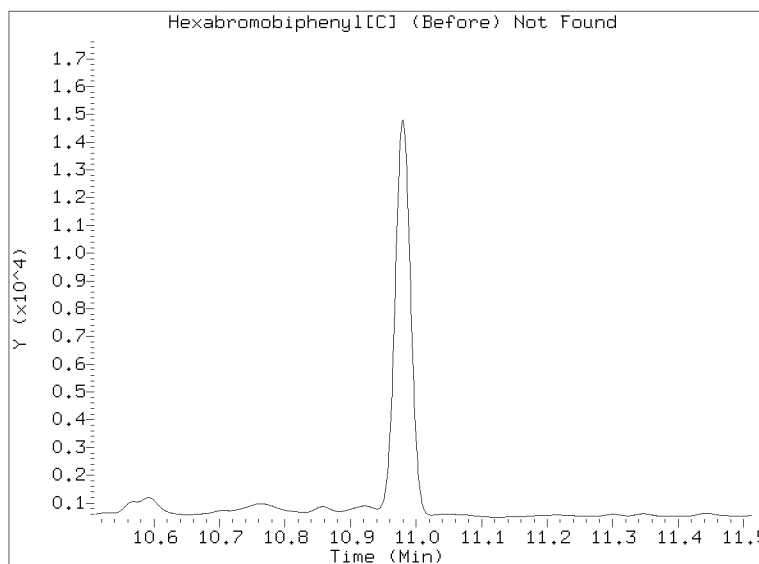
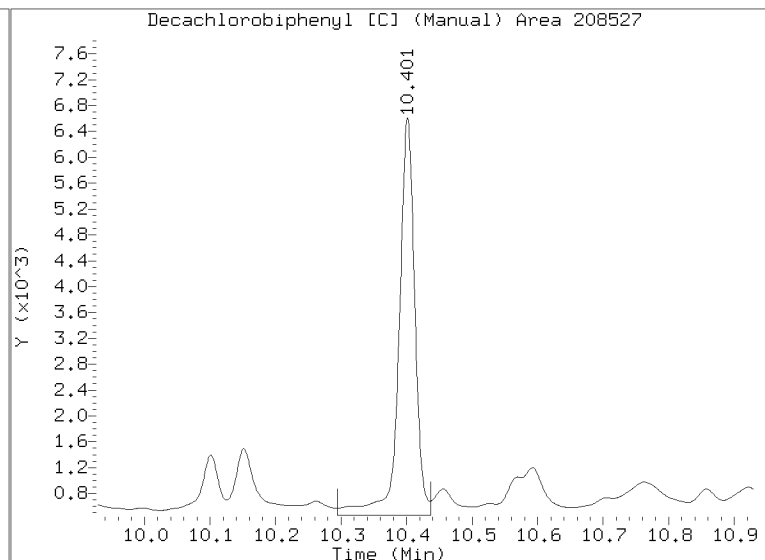
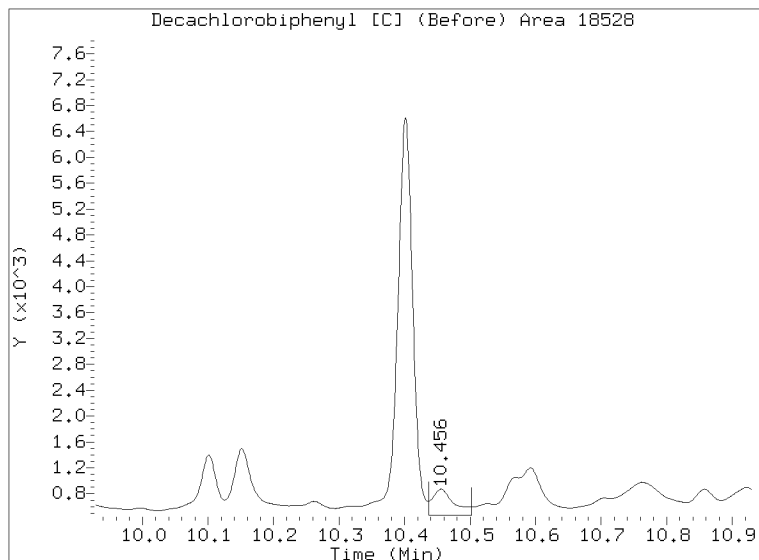
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021309.D

Injection Date: 13-FEB-2023 15:41

Lab ID:23A0206-03 Client ID:





**Dual Column**

**ORGANIC ANALYSIS DATA SHEET  
EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-04 B</u>
Sampled: <u>01/11/23 09:35</u>	Prepared: <u>01/30/23 14:14</u>
% Solids: <u>49.34</u>	Preparation: <u>EPA 3546 (Microwave)</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	File ID: <u>23021310.D</u>
	Analyzed: <u>02/13/23 15:59</u>
	Initial/Final: <u>25.36 g Wet / 2.5 mL</u>
	Calibration: <u>FL00041</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9919	7.00	87.6	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9919	7.28	91.1	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9919	5.79	72.5	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9919	5.70	71.3	30 - 160	



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021310.D  
Data file 2: /20230213.b/B20230213.b/23021310.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-04  
Client ID:  
Injection Date: 13-FEB-2023 15:59  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.288	-0.011	17348	4.812	-0.003	3511	1.84	0.25	152.6*	alpha-BHC
4.672	-0.009	6747	5.315	0.024	12033	1.85	2.22	18.1	beta-BHC
4.870	0.007	59187	----	----	----	7.66	0.00	---	delta-BHC
4.601	0.002	22061	5.207	-0.002	5748	2.69	0.48	139.9*	gamma-BHC (Lindane)
5.065	-0.013	18058	5.746	0.013	26670	2.48	2.44	1.6	Heptachlor
5.417	0.018	32118	6.134	-0.001	14923	3.93	1.19	106.8*	Aldrin
6.059	-0.013	18816	6.772	-0.020	120727	2.66	11.69	125.9*	Heptachlor epoxide b
6.560	0.045	106380	7.225	-0.011	10192	16.37	1.12	174.4*	Endosulfan I
6.804	0.028	9551	7.513	-0.018	46354	1.37	4.61	108.4*	Dieldrin
6.430	-0.010	81141	7.318	-0.004	45468	12.51	4.93	87.0*	4,4'-DDE
7.049	0.024	173712	----	----	----	33.31	0.00	---	Endrin
7.289	0.025	11468	8.075	0.009	69962	2.44	9.59	118.8*	Endosulfan II
----	----	----	7.926	-0.004	47237	0.00	6.83	---	4,4'-DDD
----	----	----	----	----	----	0.00	0.00	---	Endosulfan sulfate
----	----	----	8.253	0.006	261455	0.00	39.15	---	4,4'-DDT
7.892	0.026	16328	----	----	----	7.76	0.00	---	Methoxychlor
----	----	----	9.207	0.018	112201	0.00	16.22	---	Endrin ketone
7.714	0.022	43588	8.390	-0.008	55607	11.64	10.81	7.4	Endrin aldehyde
6.211	-0.005	12087	----	----	----	1.68	0.00	---	trans-Chlordane
6.379	0.018	48733	7.161	-0.003	10868	6.75	1.08	144.9*	cis-Chlordane
2.277	-0.020	8368	2.446	-0.027	66627	0.85	4.93	141.4*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00	---	Hexachlorobenzene
3.791	-0.000	193539	4.181	-0.000	285294	29.00	28.53	1.6	Tetrachloro-m-xylene
9.304	-0.002	141131	10.401	-0.002	201401	35.02	36.42	3.9	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	490786	-27.0
Hexabromobiphenyl	609723	397735	-34.8

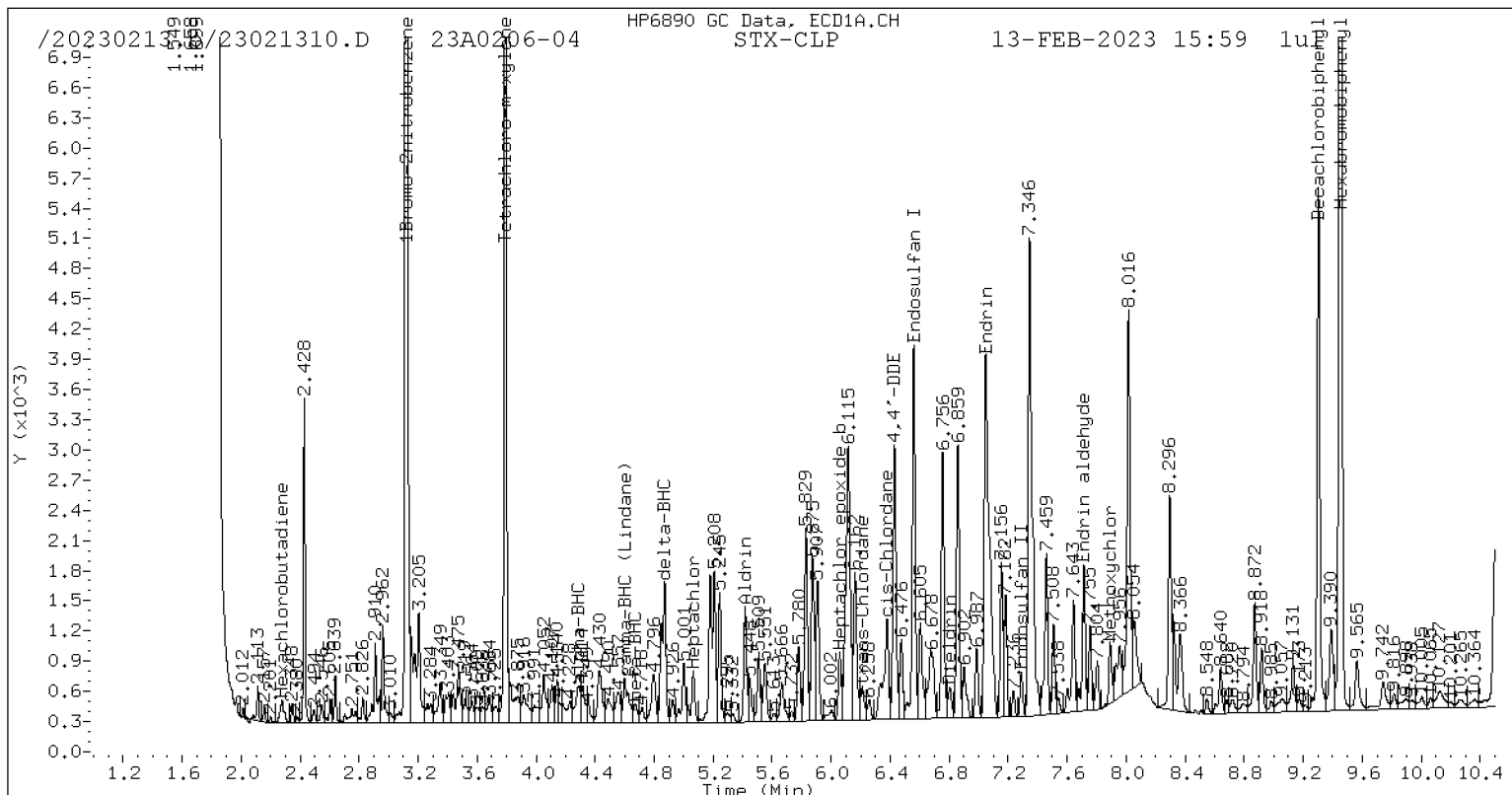
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	710286	-29.4
Hexabromobiphenyl	769764	500315	-35.0

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

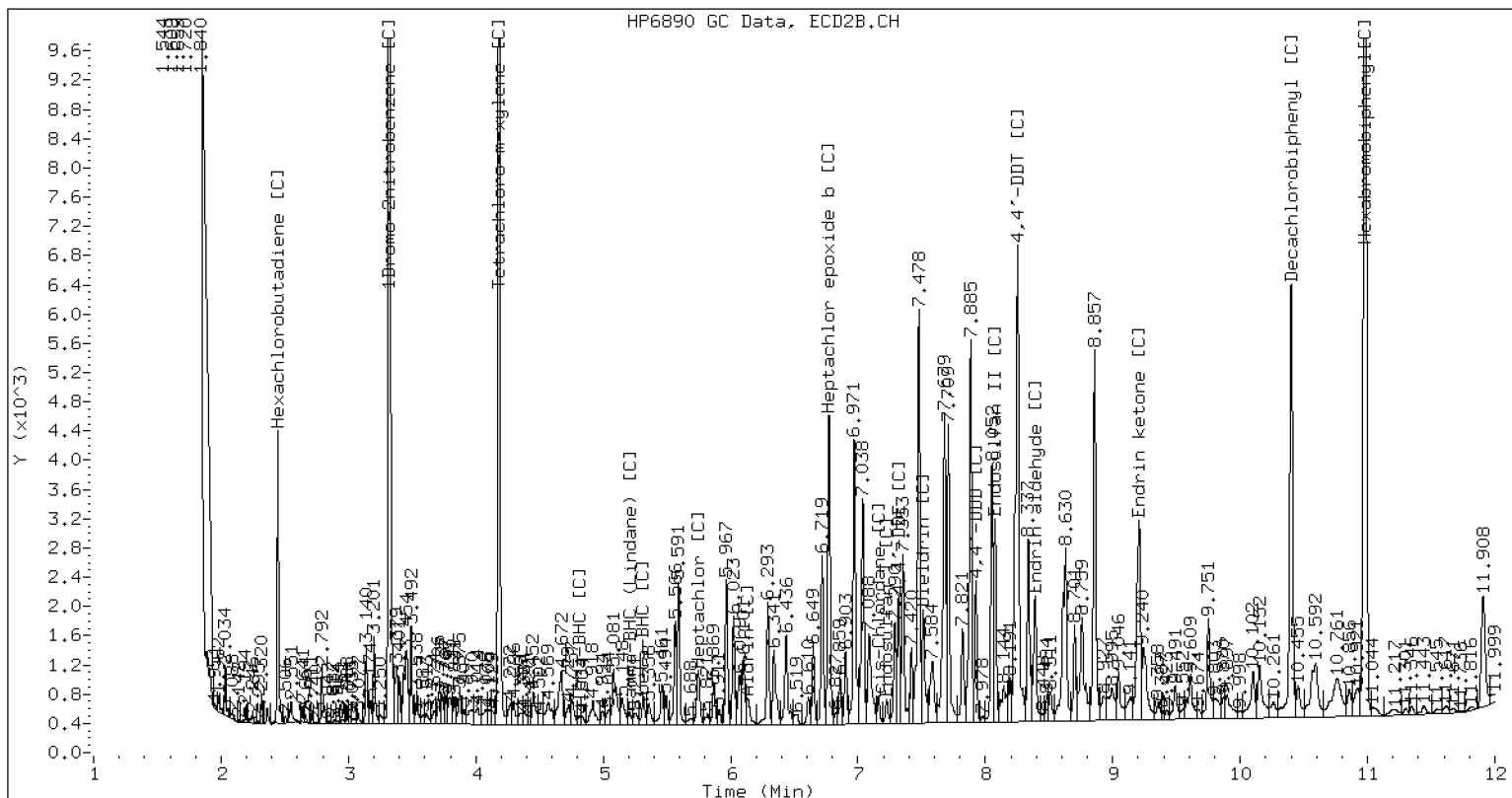
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

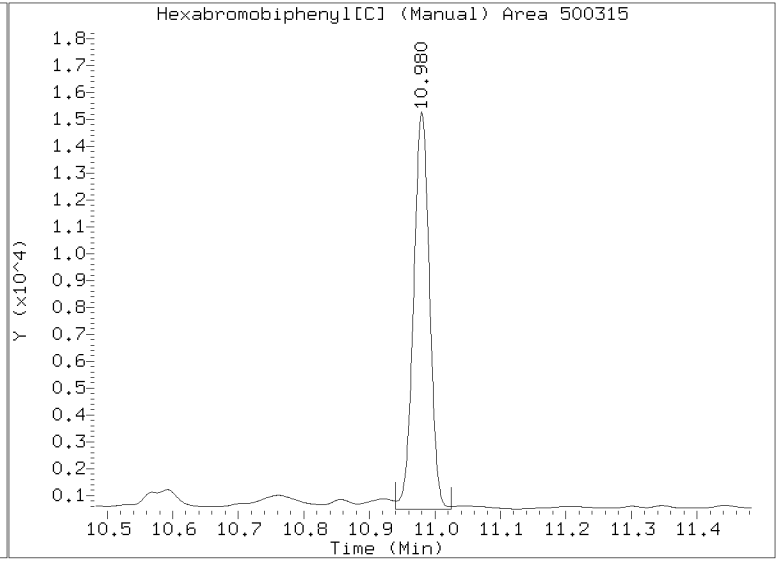
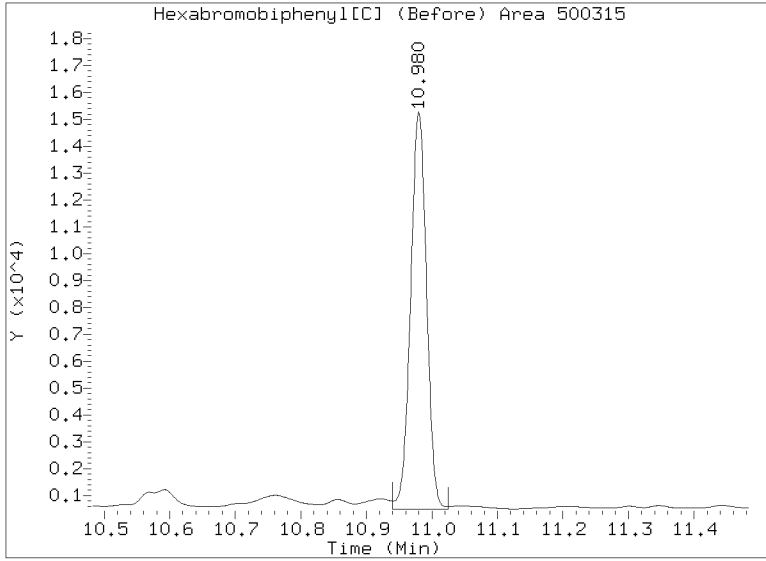
/20230213.b/B20230213.b/23021310.D 23A0206-04 CLP2



CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021310.D  
Injection Date: 13-FEB-2023 15:59  
Lab ID:23A0206-04 Client ID:





**ORGANIC ANALYSIS DATA SHEET  
EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-05 B</u>
		File ID:	<u>23021311.D</u>
Sampled:	<u>01/11/23 09:50</u>	Prepared:	<u>01/30/23 14:14</u>
		Analyzed:	<u>02/13/23 16:17</u>
% Solids:	<u>52.94</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>23.68 g Wet / 2.5 mL</u>
Batch:	<u>BLA0622</u>	Sequence:	<u>SLB0237</u>
		Calibration:	<u>FL00041</u>
Instrument:	<u>ECD6</u>	Column 1:	<u>STX-CLP</u>
		Column 2:	<u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9769	7.19	90.2	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9769	7.14	89.5	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9769	5.39	67.6	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9769	5.48	68.7	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021311.D  
Data file 2: /20230213.b/B20230213.b/23021311.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-05  
Client ID:  
Injection Date: 13-FEB-2023 16:17  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.313	0.014	22977	4.834	0.019	4721	2.35	0.32 152.0*	alpha-BHC
4.673	-0.008	10429	5.315	0.025	11156	2.77	2.00 32.6	beta-BHC
4.870	0.007	62060	----	----	----	7.78	0.00 ---	delta-BHC
4.601	0.002	12476	5.208	-0.002	4907	1.47	0.39 115.7*	gamma-BHC (Lindane)
5.066	-0.013	16871	5.746	0.012	26930	2.24	2.38 6.2	Heptachlor
5.418	0.019	33715	6.134	-0.001	16961	3.99	1.32 100.9*	Aldrin
6.059	-0.013	19685	6.772	-0.020	129383	2.69	12.13 127.4*	Heptachlor epoxide b
6.560	0.046	109918	7.225	-0.011	11091	16.36	1.18 173.1*	Endosulfan I
6.803	0.028	11259	7.513	-0.017	49181	1.56	4.74 100.9*	Dieldrin
6.429	-0.011	77064	7.319	-0.004	42885	11.50	4.50 87.5*	4,4'-DDE
7.049	0.024	185625	----	----	----	35.76	0.00 ---	Endrin
7.289	0.025	12057	8.076	0.009	75398	2.58	10.37 120.3*	Endosulfan II
----	----	----	7.926	-0.004	42860	0.00	6.21 ---	4,4'-DDD
----	----	----	----	----	----	0.00	0.00 ---	Endosulfan sulfate
----	----	----	8.253	0.006	274403	0.00	41.19 ---	4,4'-DDT
7.892	0.026	25148	----	----	----	12.01	0.00 ---	Methoxychlor
----	----	----	9.206	0.017	165306	0.00	23.96 ---	Endrin ketone
7.714	0.022	61996	8.392	-0.006	52133	16.63	10.16 48.3*	Endrin aldehyde
6.210	-0.005	10911	----	----	----	1.47	0.00 ---	trans-Chlordane
6.379	0.019	48677	7.161	-0.003	10217	6.53	0.98 147.7*	cis-Chlordane
2.276	-0.021	4765	2.446	-0.027	72739	0.47	5.21 167.2*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00 ---	Hexachlorobenzene
3.791	-0.000	186577	4.181	-0.000	283817	27.05	27.50 1.6	Tetrachloro-m-xylene
9.304	-0.002	144738	10.401	-0.002	197425	36.07	35.80 0.8	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	507154	-24.6
Hexabromobiphenyl	609723	395991	-35.1

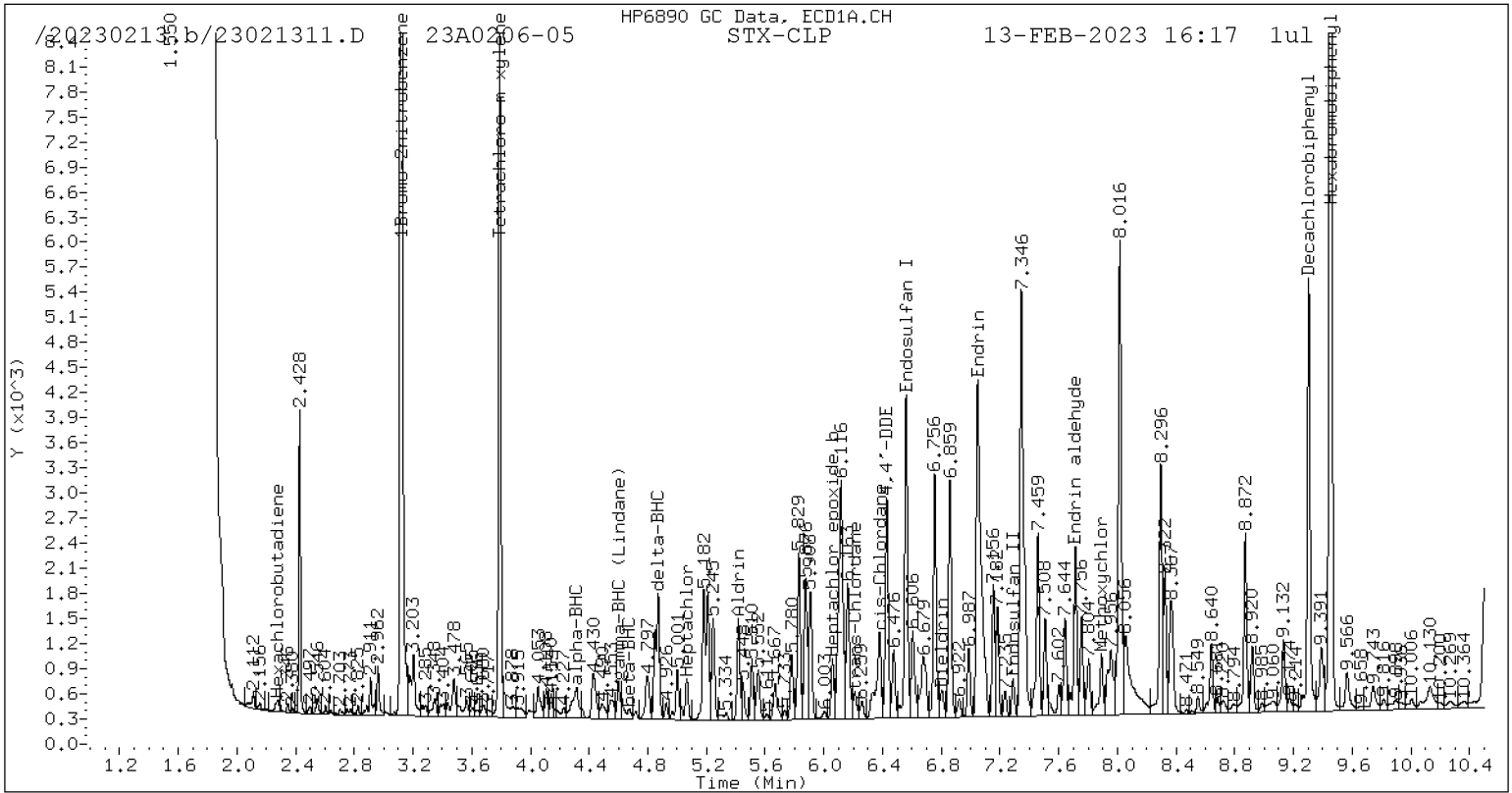
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	733247	-27.1
Hexabromobiphenyl	769764	499025	-35.2

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

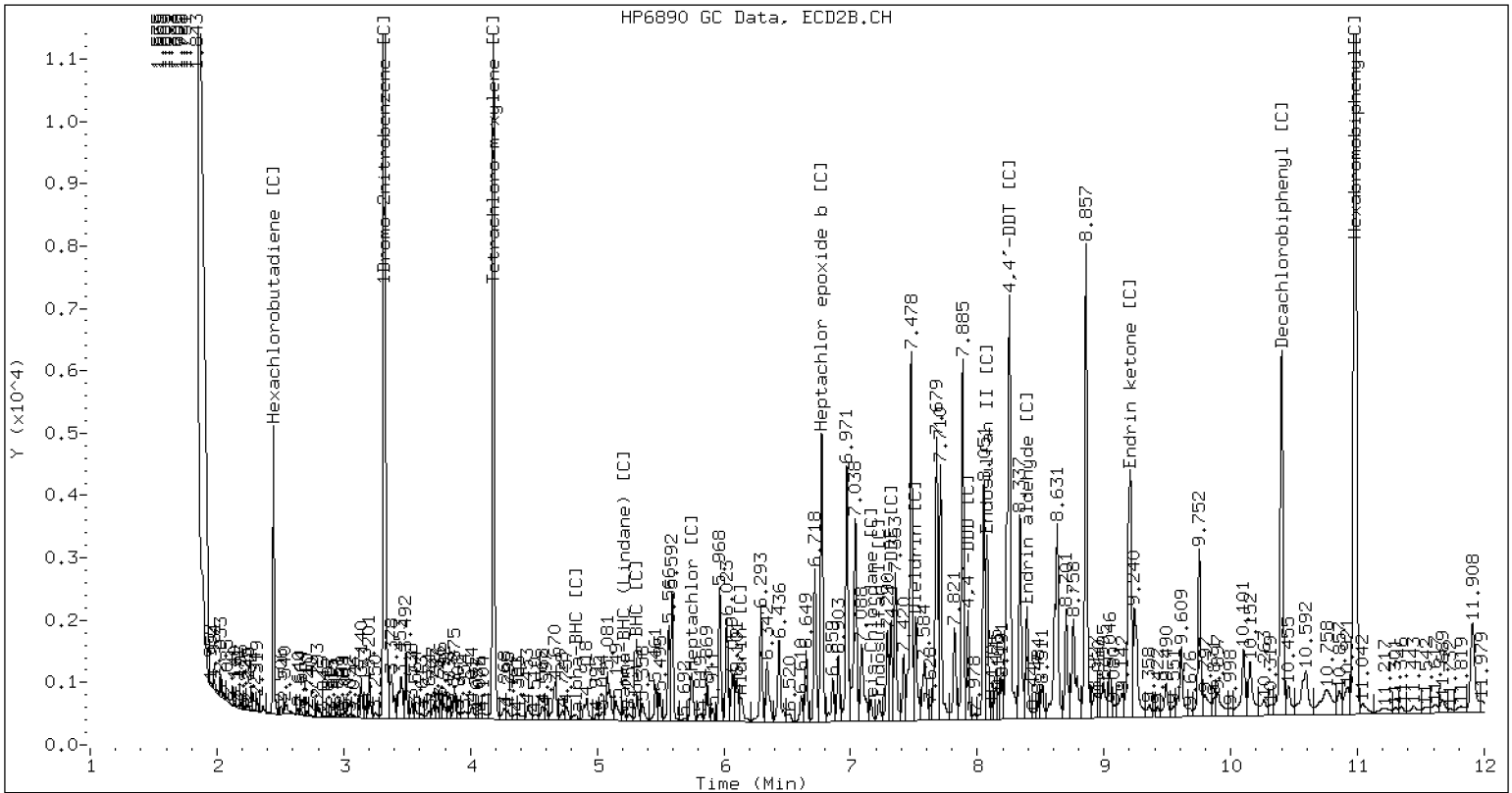
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021311.D 23A0206-05 CLP2



CLP-2 Manual Integration: NO

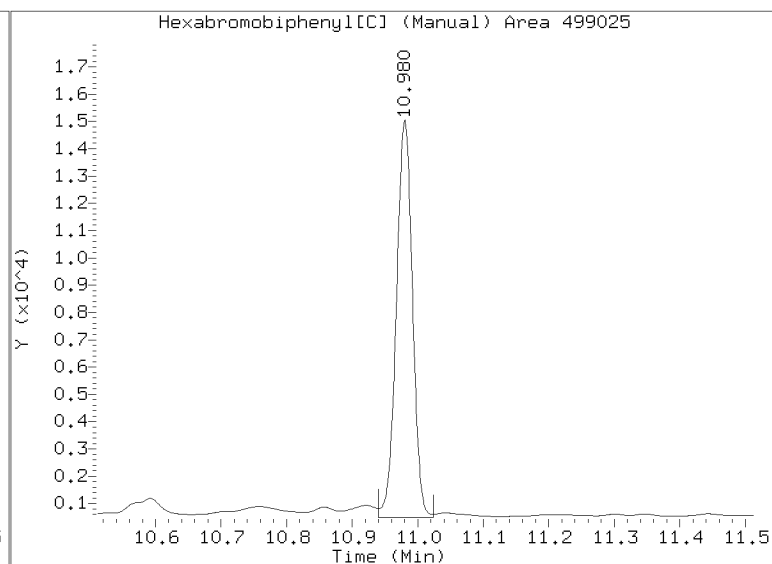
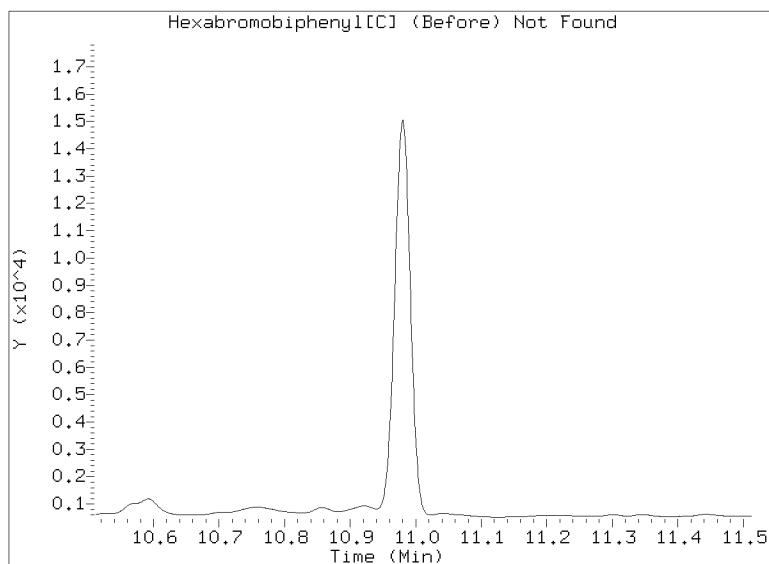
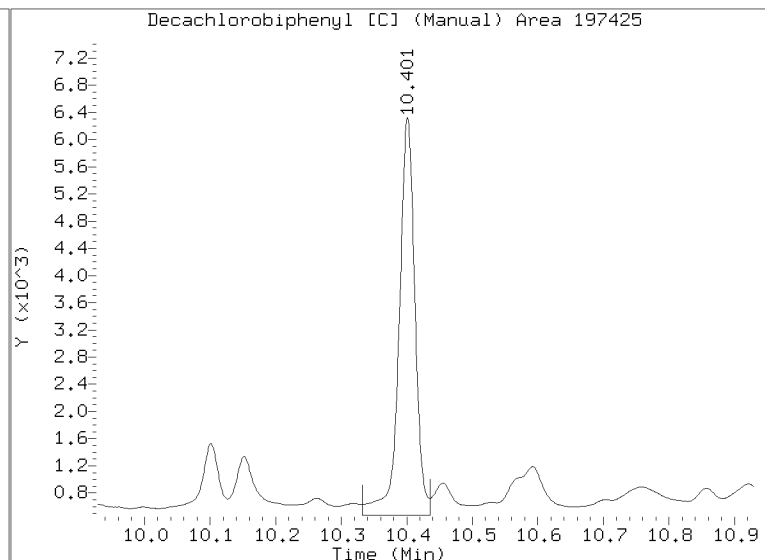
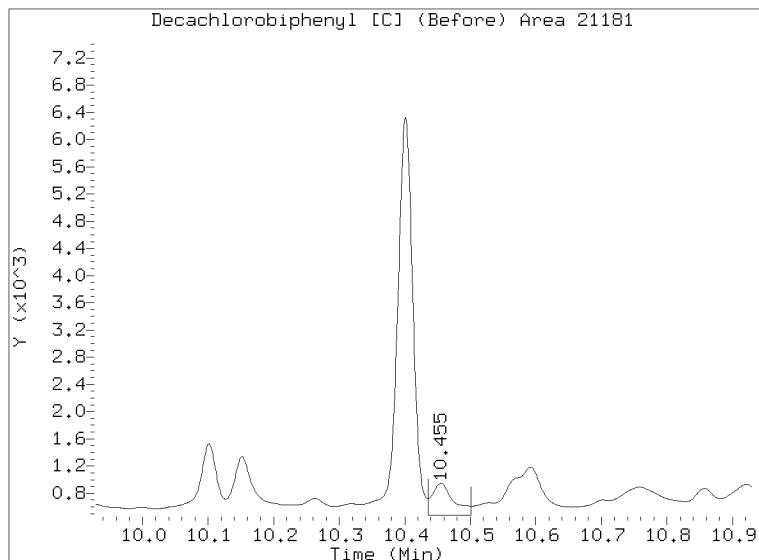


# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021311.D

Injection Date: 13-FEB-2023 16:17

Lab ID:23A0206-05 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-06 B</u>
Sampled: <u>01/11/23 10:07</u>	Prepared: <u>01/30/23 14:14</u>
% Solids: <u>55.16</u>	Preparation: <u>EPA 3546 (Microwave)</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	File ID: <u>23021312.D</u>
	Analyzed: <u>02/13/23 16:35</u>
	Initial/Final: <u>22.67 g Wet / 2.5 mL</u>
	Calibration: <u>FL00041</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9969	7.04	88.0	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9969	6.97	87.1	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9969	5.30	66.3	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9969	5.25	65.6	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021312.D  
Data file 2: /20230213.b/B20230213.b/23021312.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-06  
Client ID:  
Injection Date: 13-FEB-2023 16:35  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.314	0.015	21338	4.834	0.019	4224	2.24	0.29	154.1*	alpha-BHC
4.674	-0.008	4339	5.315	0.025	10936	1.18	1.98	50.4*	beta-BHC
4.871	0.007	64753	----			8.30	0.00	---	delta-BHC
4.601	0.002	17479	5.207	-0.002	4507	2.11	0.36	141.1*	gamma-BHC (Lindane)
5.066	-0.013	18334	5.745	0.012	29506	2.49	2.64	5.7	Heptachlor
5.418	0.019	39405	6.135	-0.001	15029	4.78	1.18	121.0*	Aldrin
6.059	-0.012	24718	6.772	-0.020	160491	3.46	15.19	125.9*	Heptachlor epoxide b
6.561	0.046	144080	7.224	-0.012	12153	21.95	1.31	177.5*	Endosulfan I
6.804	0.029	12623	7.512	-0.018	55981	1.79	5.44	101.0*	Dieldrin
6.429	-0.011	95024	7.318	-0.005	42185	14.51	4.47	105.8*	4,4'-DDE
7.050	0.024	215922	----			42.11	0.00	---	Endrin
7.289	0.025	13669	8.075	0.008	91513	2.96	12.55	123.7*	Endosulfan II
----			7.926	-0.004	51499	0.00	7.45	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			8.253	0.006	319448	0.00	47.85	---	4,4'-DDT
7.892	0.026	22386	----			10.82	0.00	---	Methoxychlor
----			9.207	0.018	134106	0.00	19.40	---	Endrin ketone
7.714	0.022	51569	8.392	-0.006	46718	14.01	9.09	42.6*	Endrin aldehyde
6.211	-0.004	11347	----			1.56	0.00	---	trans-Chlordane
6.379	0.019	61293	7.161	-0.003	10850	8.41	1.05	155.5*	cis-Chlordane
2.280	-0.016	6039	2.446	-0.027	77666	0.60	5.62	161.2*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.791	-0.000	178789	4.181	-0.001	268372	26.53	26.25	1.0	Tetrachloro-m-xylene
9.304	-0.002	139465	10.401	-0.001	192679	35.20	34.86	1.0	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	495614	-26.3
Hexabromobiphenyl	609723	391066	-35.9

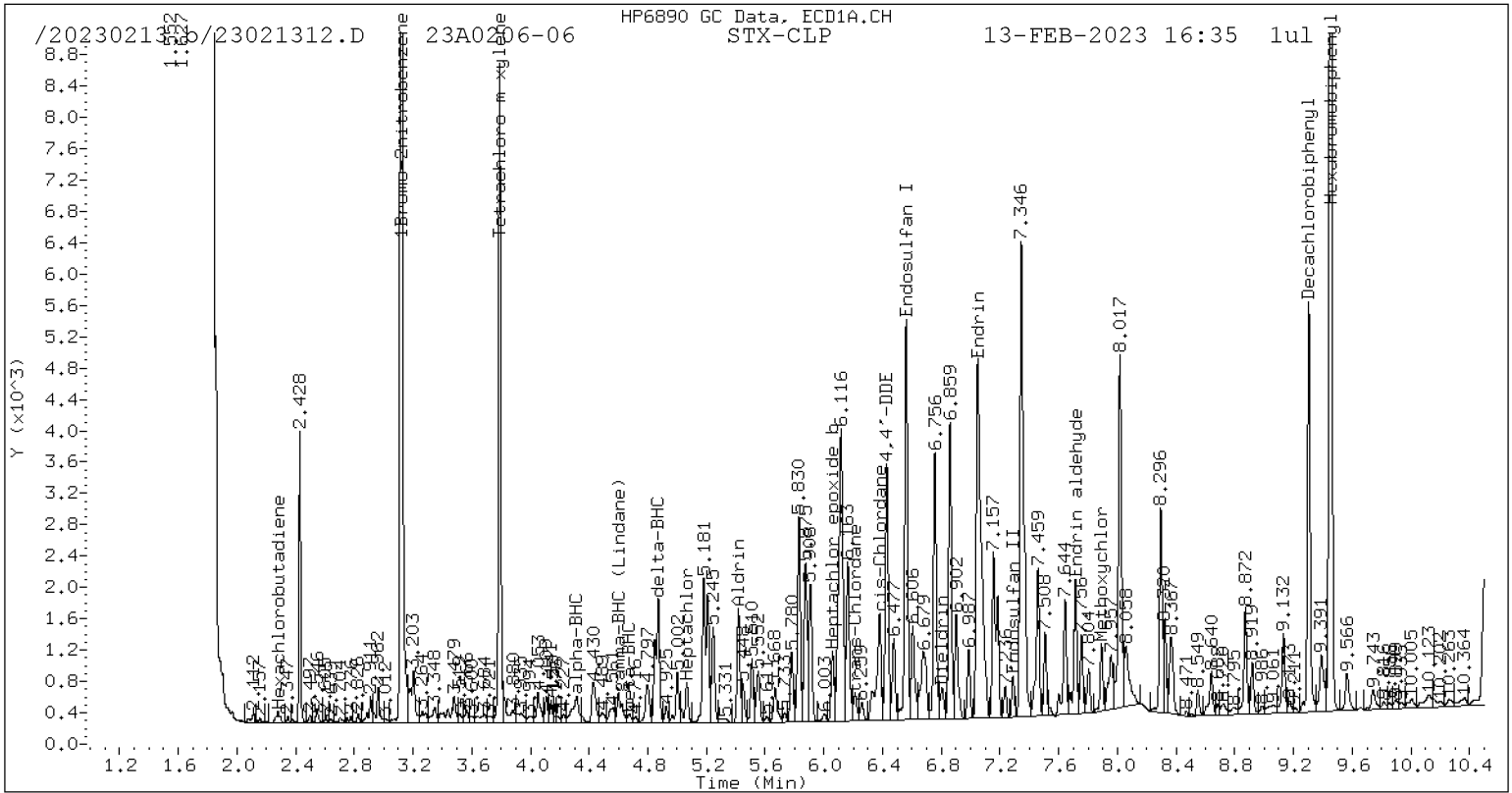
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	726203	-27.8
Hexabromobiphenyl	769764	500137	-35.0

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

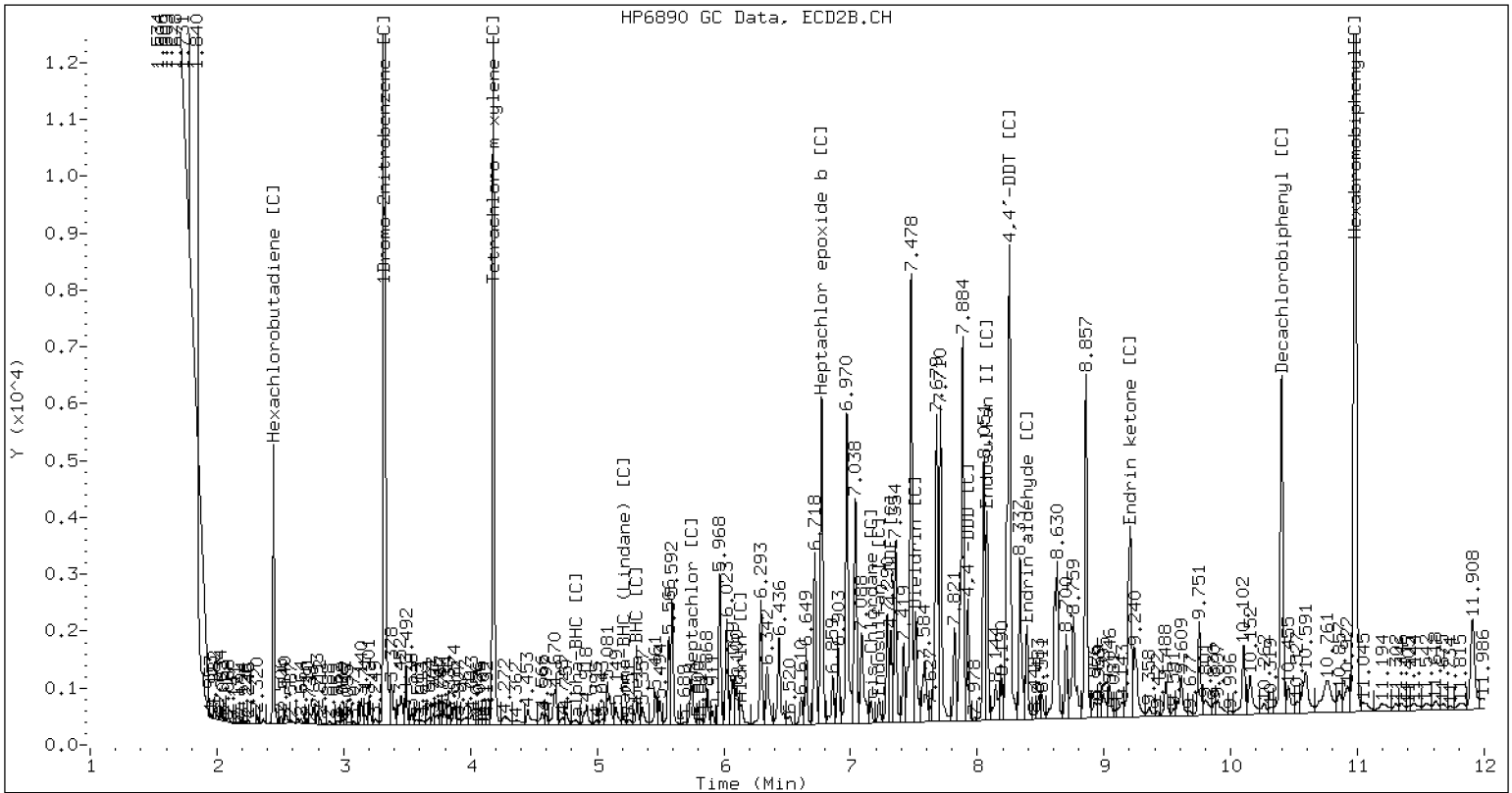
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021312.D 23A0206-06 CLP2



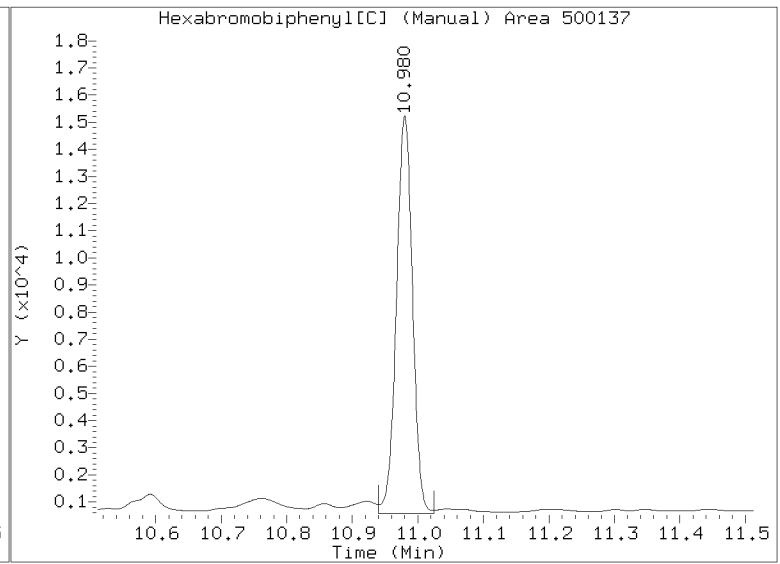
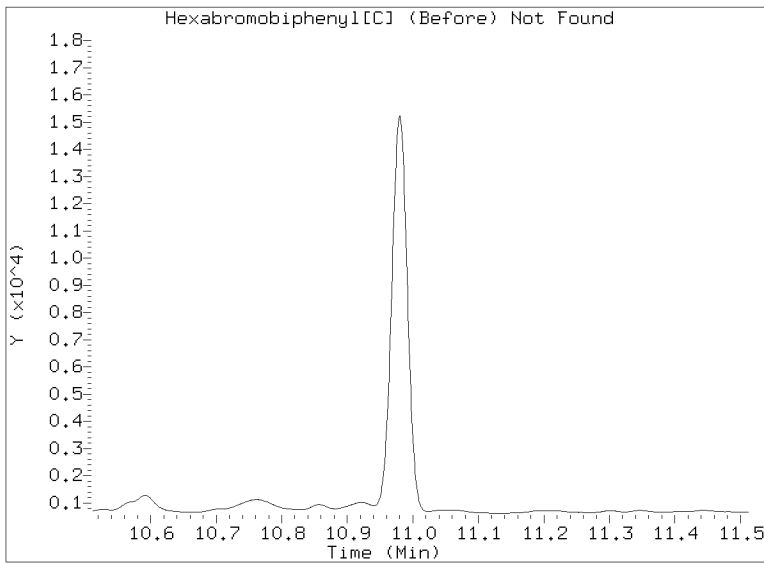
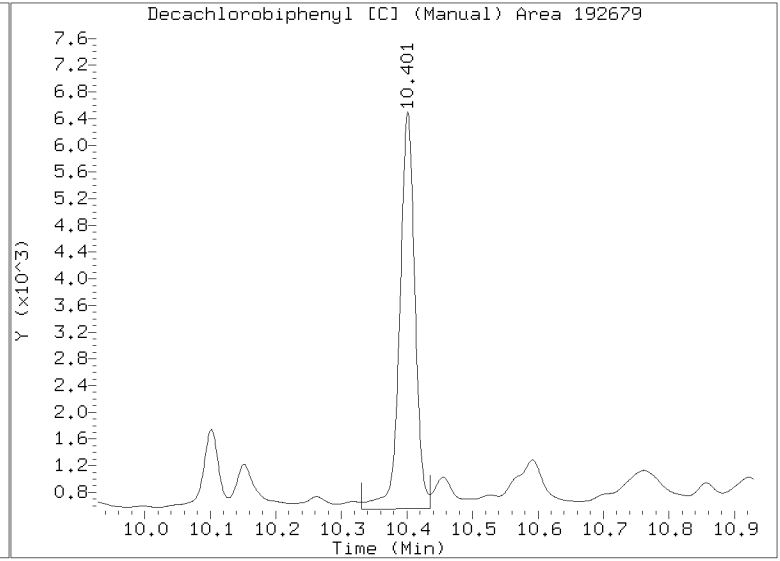
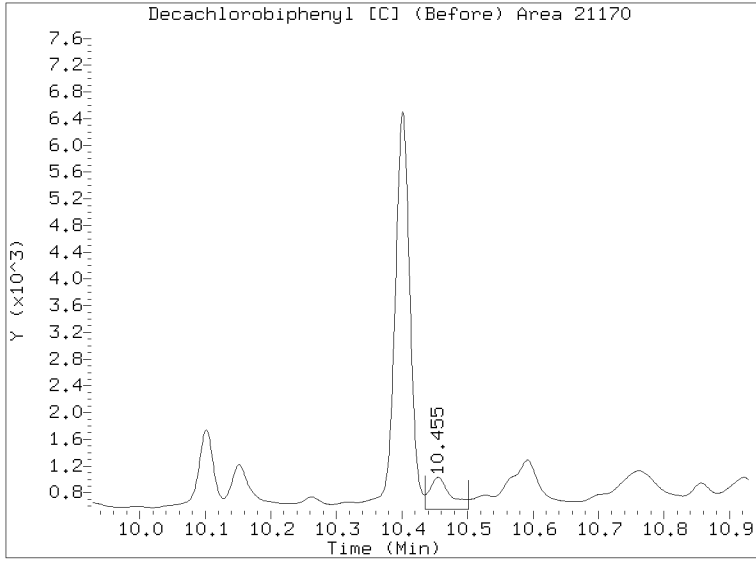
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021312.D

Injection Date: 13-FEB-2023 16:35

Lab ID:23A0206-06 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-07 B</u>
		File ID:	<u>23021313.D</u>
Sampled:	<u>01/11/23 10:20</u>	Prepared:	<u>01/30/23 14:14</u>
		Analyzed:	<u>02/13/23 16:53</u>
% Solids:	<u>60.17</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>20.77 g Wet / 2.5 mL</u>
Batch:	<u>BLA0622</u>	Sequence:	<u>SLB0237</u>
		Calibration:	<u>FL00041</u>
Instrument:	<u>ECD6</u>	Column 1:	<u>STX-CLP</u>
		Column 2:	<u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.15	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	8.0017	6.69	83.6	30 - 160	
<i>Decachlorobiphenyl</i>	2	8.0017	7.38	92.3	30 - 160	
<i>Tetrachlorometaxylene</i>	1	8.0017	5.11	63.8	30 - 160	
<i>Tetrachlorometaxylene</i>	2	8.0017	5.04	63.0	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021313.D  
Data file 2: /20230213.b/B20230213.b/23021313.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-07  
Client ID:  
Injection Date: 13-FEB-2023 16:53  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.313	0.014	14597	4.834	0.019	2334	1.54	0.16	161.5*	alpha-BHC
----			5.315	0.025	6088	0.00	1.13	---	beta-BHC
4.870	0.007	42381	----			5.46	0.00	---	delta-BHC
4.601	0.003	8251	5.207	-0.002	2309	1.00	0.19	135.9*	gamma-BHC (Lindane)
5.065	-0.013	12000	5.745	0.012	20005	1.64	1.83	10.9	Heptachlor
5.417	0.018	32777	6.135	-0.001	13727	4.00	1.10	113.7*	Aldrin
6.059	-0.013	21631	6.771	-0.021	141560	3.04	13.71	127.4*	Heptachlor epoxide b
6.560	0.046	130983	7.224	-0.012	12010	20.07	1.32	175.3*	Endosulfan I
6.804	0.029	10653	7.513	-0.017	44656	1.52	4.44	98.0*	Dieldrin
6.429	-0.011	86221	7.318	-0.005	33398	13.24	3.62	114.1*	4,4'-DDE
7.050	0.025	172923	----			33.69	0.00	---	Endrin
7.289	0.025	12164	8.075	0.009	83587	2.63	11.47	125.3*	Endosulfan II
----			7.926	-0.004	33327	0.00	4.82	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			8.254	0.007	280542	0.00	42.04	---	4,4'-DDT
7.892	0.026	27558	----			13.31	0.00	---	Methoxychlor
----			9.207	0.018	108358	0.00	15.68	---	Endrin ketone
7.715	0.023	41605	8.392	-0.006	39940	11.29	7.77	36.9	Endrin aldehyde
6.211	-0.005	7976	----			1.10	0.00	---	trans-Chlordane
6.379	0.019	53018	7.161	-0.003	8659	7.32	0.86	158.0*	cis-Chlordane
2.277	-0.020	2938	2.446	-0.028	55888	0.30	4.14	173.3*	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.791	0.000	171059	4.181	-0.000	251774	25.52	25.19	1.3	Tetrachloro-m-xylene
9.304	-0.002	132676	10.401	-0.002	203915	33.44	36.91	9.8	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits



INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	492886	-26.7
Hexabromobiphenyl	609723	391539	-35.8

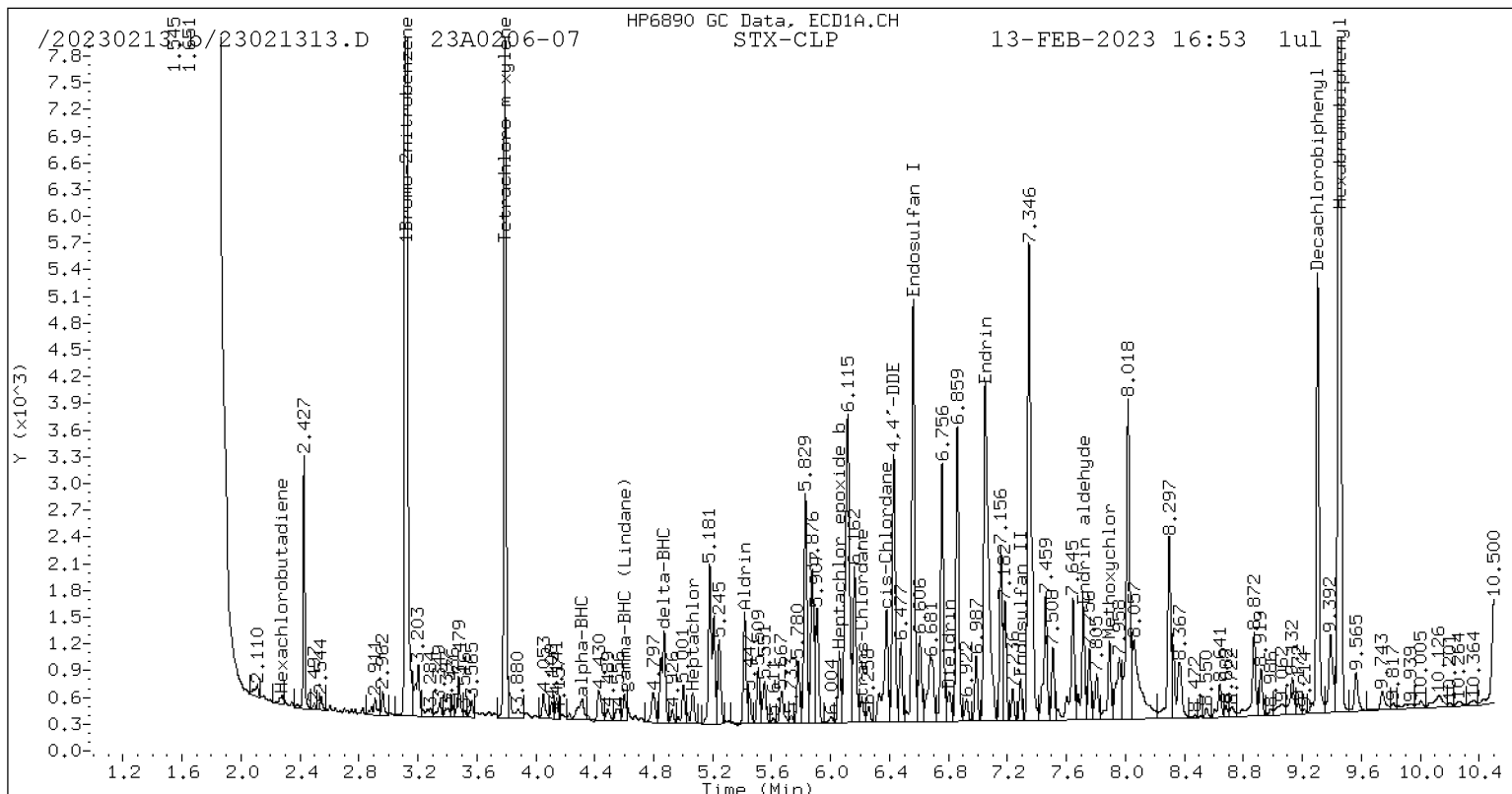
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	710006	-29.5
Hexabromobiphenyl	769764	499906	-35.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

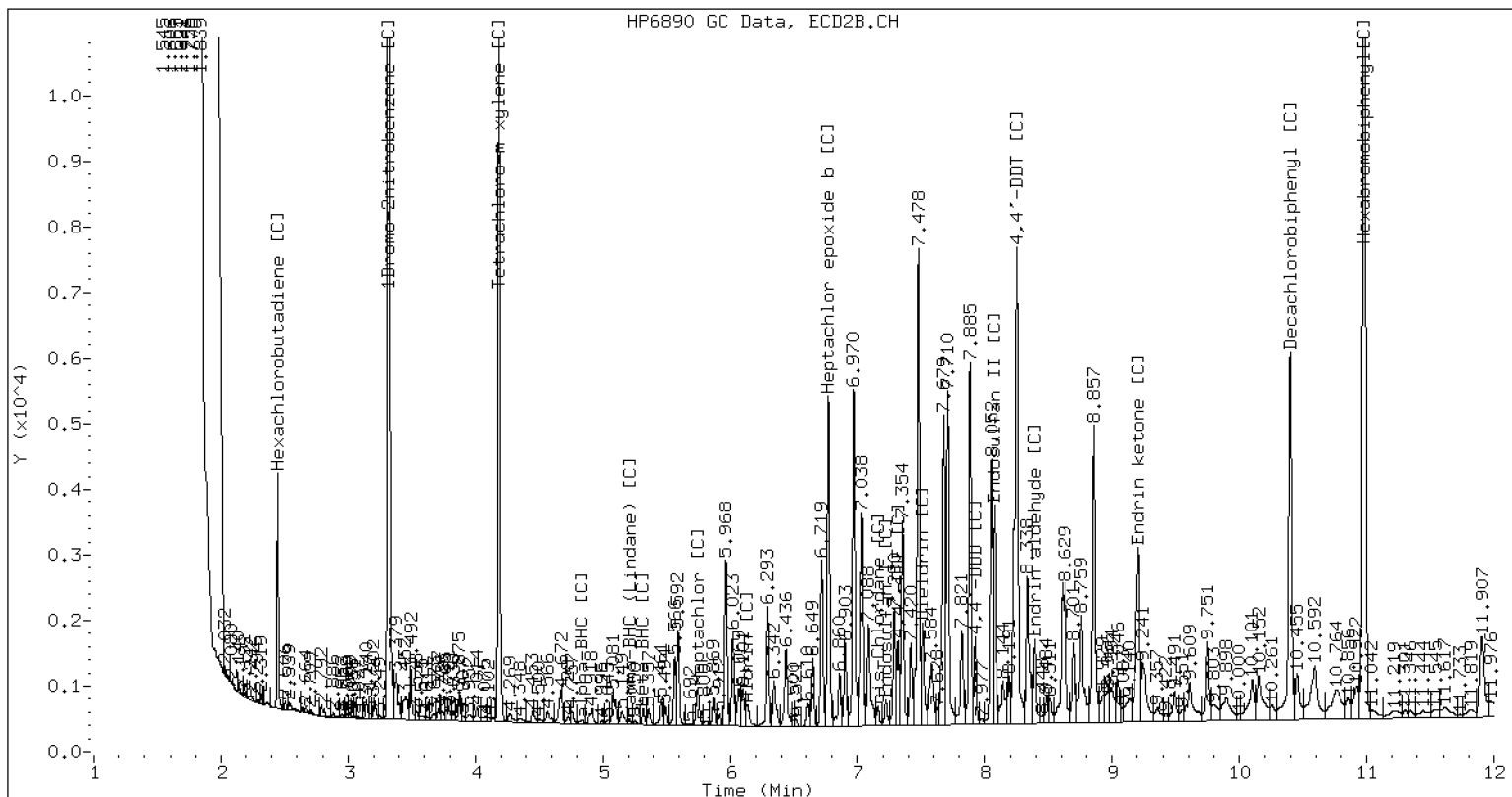
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021313.D 23A0206-07 CLP2



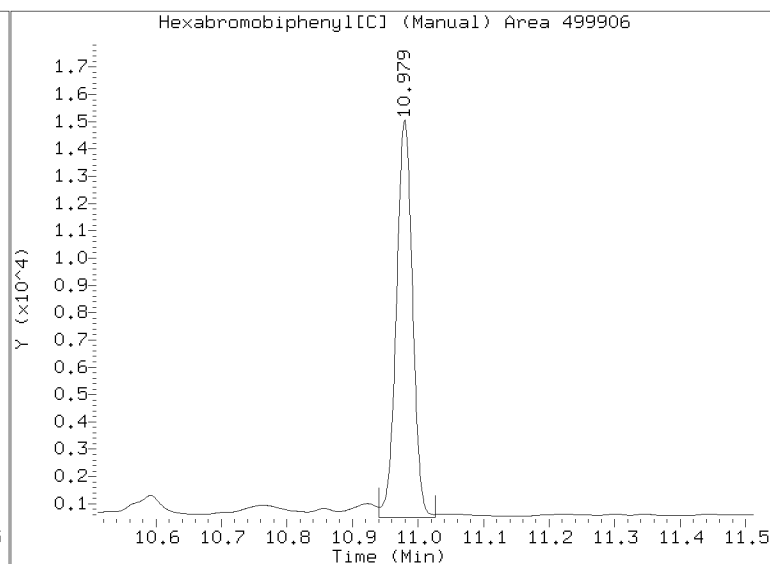
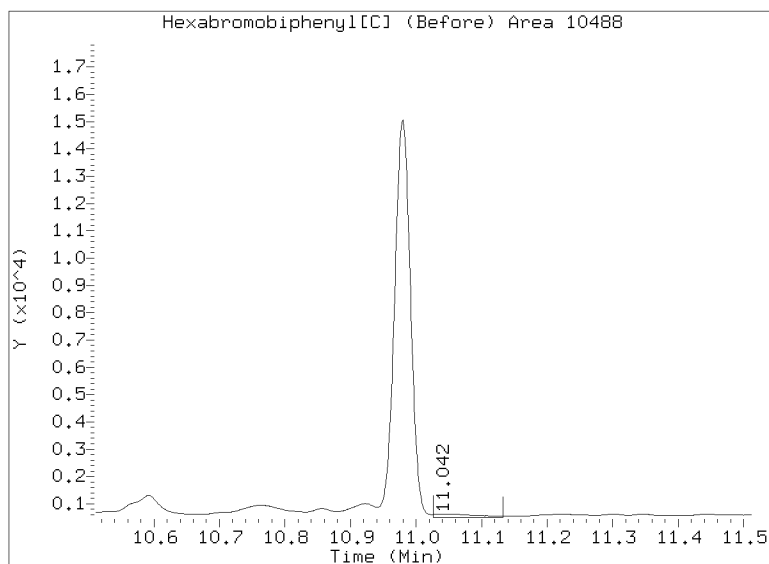
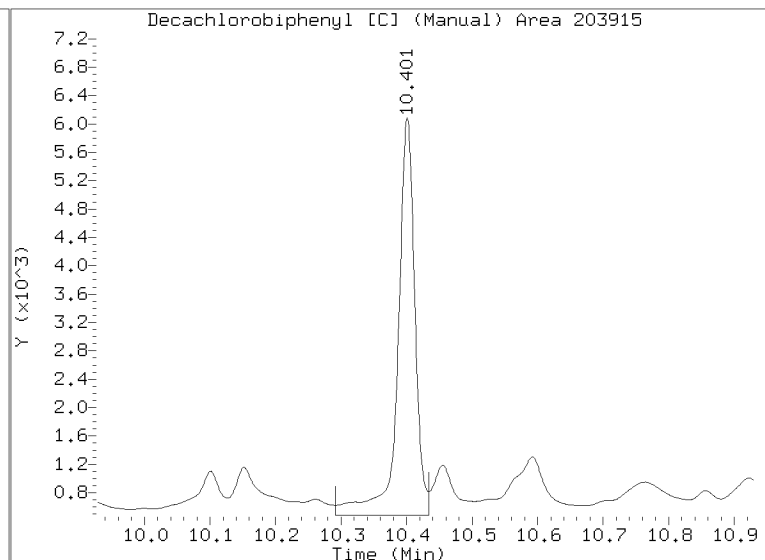
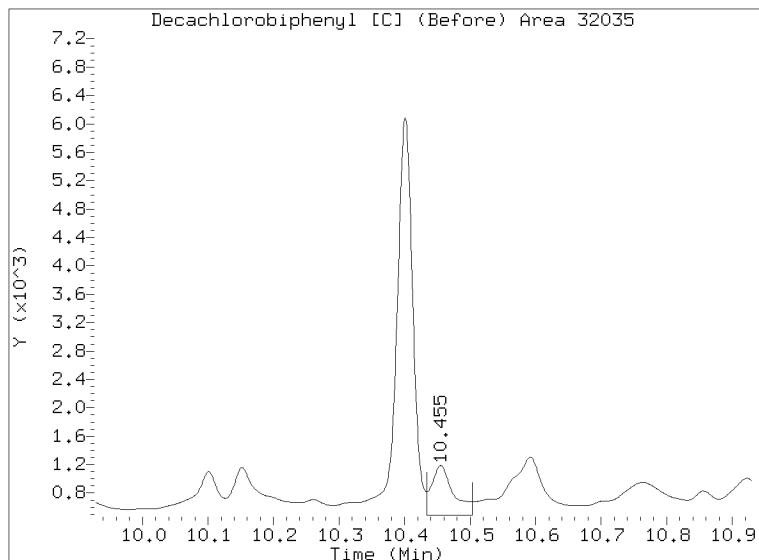
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021313.D

Injection Date: 13-FEB-2023 16:53

Lab ID:23A0206-07 Client ID:





**Dual Column**

**LDW23-SS1117**

**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>	
Client: <u>Anchor QEA, LLC</u>		
Project: <u>AOC5 MR Phase 1</u>		
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-08 B</u>	File ID: <u>23021314.D</u>
Sampled: <u>01/11/23 10:40</u>	Prepared: <u>01/30/23 14:14</u>	Analyzed: <u>02/13/23 17:11</u>
% Solids: <u>51.97</u>	Preparation: <u>EPA 3546 (Microwave)</u>	Initial/Final: <u>24.13 g Wet / 2.5 mL</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>	Calibration: <u>FL00041</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	2.74	0.14	0.50	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9743	6.64	83.3	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9743	6.59	82.7	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9743	5.33	66.9	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9743	5.22	65.4	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021314.D  
Data file 2: /20230213.b/B20230213.b/23021314.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-08  
Client ID:  
Injection Date: 13-FEB-2023 17:11  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.315	0.016	19197	4.811	-0.004	2318	1.97	0.16	170.7*	alpha-BHC
4.673	-0.008	3914	5.315	0.025	11069	1.04	1.95	60.8*	beta-BHC
4.870	0.007	54710	----	----	----	6.87	0.00	---	delta-BHC
4.601	0.002	17068	5.206	-0.003	4968	2.02	0.39	134.9*	gamma-BHC (Lindane)
5.065	-0.013	15160	5.746	0.013	25329	2.02	2.21	9.2	Heptachlor
5.417	0.018	30822	6.127	-0.008	52500	3.66	4.01	9.3	Aldrin
6.059	-0.012	17290	6.772	-0.020	116676	2.37	10.79	128.0*	Heptachlor epoxide b
----	----	----	7.226	-0.010	11204	0.00	1.18	---	Endosulfan I
6.804	0.029	9305	7.513	-0.018	38603	1.29	3.66	95.8*	Dieldrin
6.430	-0.010	77106	7.318	-0.004	41239	11.53	4.27	91.9*	4,4'-DDE
7.049	0.024	157807	----	----	----	29.72	0.00	---	Endrin
7.289	0.025	11117	8.076	0.009	64832	2.33	8.67	115.4*	Endosulfan II
----	----	----	7.926	-0.004	41053	0.00	5.79	---	4,4'-DDD
----	----	----	----	----	----	0.00	0.00	---	Endosulfan sulfate
----	----	----	8.253	0.006	240239	0.00	35.10	---	4,4'-DDT
7.891	0.026	24302	----	----	----	11.35	0.00	---	Methoxychlor
8.433	0.033	2362	9.207	0.018	100895	0.45	14.23	187.6*	Endrin ketone
7.714	0.022	40744	8.391	-0.007	35874	10.69	6.80	44.4*	Endrin aldehyde
6.210	-0.005	13490	----	----	----	1.82	0.00	---	trans-Chlordane
6.379	0.018	52330	7.161	-0.003	12392	7.03	1.17	142.8*	cis-Chlordane
2.278	-0.018	6706	2.447	-0.027	22261	0.66	1.57	82.2*	Hexachlorobutadiene
4.141	-0.001	124540	4.674	-0.001	171062	13.76	12.61	8.7	Hexachlorobenzene
3.791	-0.000	184225	4.181	-0.000	273995	26.75	26.17	2.2	Tetrachloro-m-xylene
9.304	-0.002	136678	10.401	-0.001	187399	33.31	33.07	0.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	506325	-24.7
Hexabromobiphenyl	609723	404954	-33.6

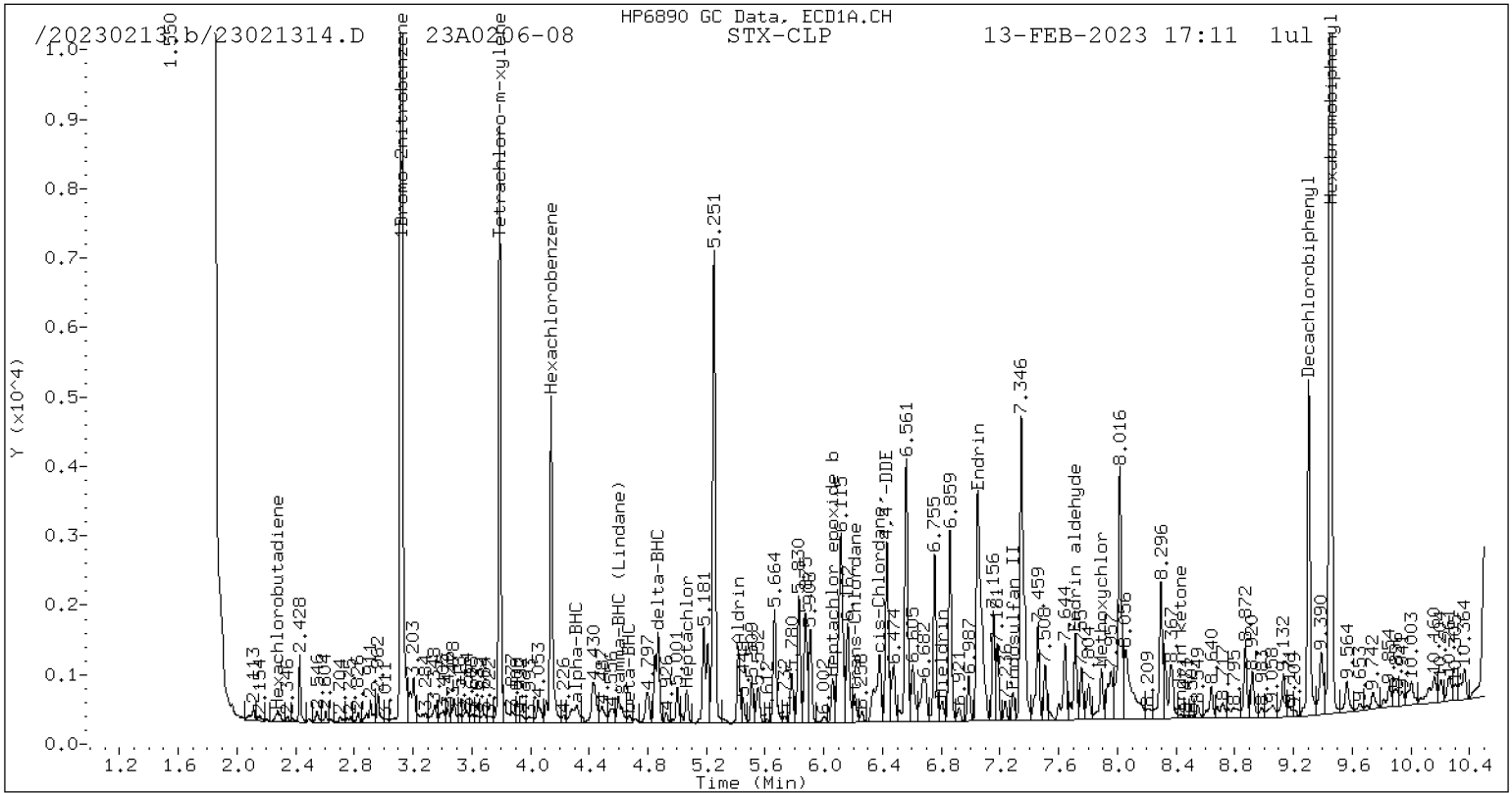
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	743668	-26.1
Hexabromobiphenyl	769764	512798	-33.4

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

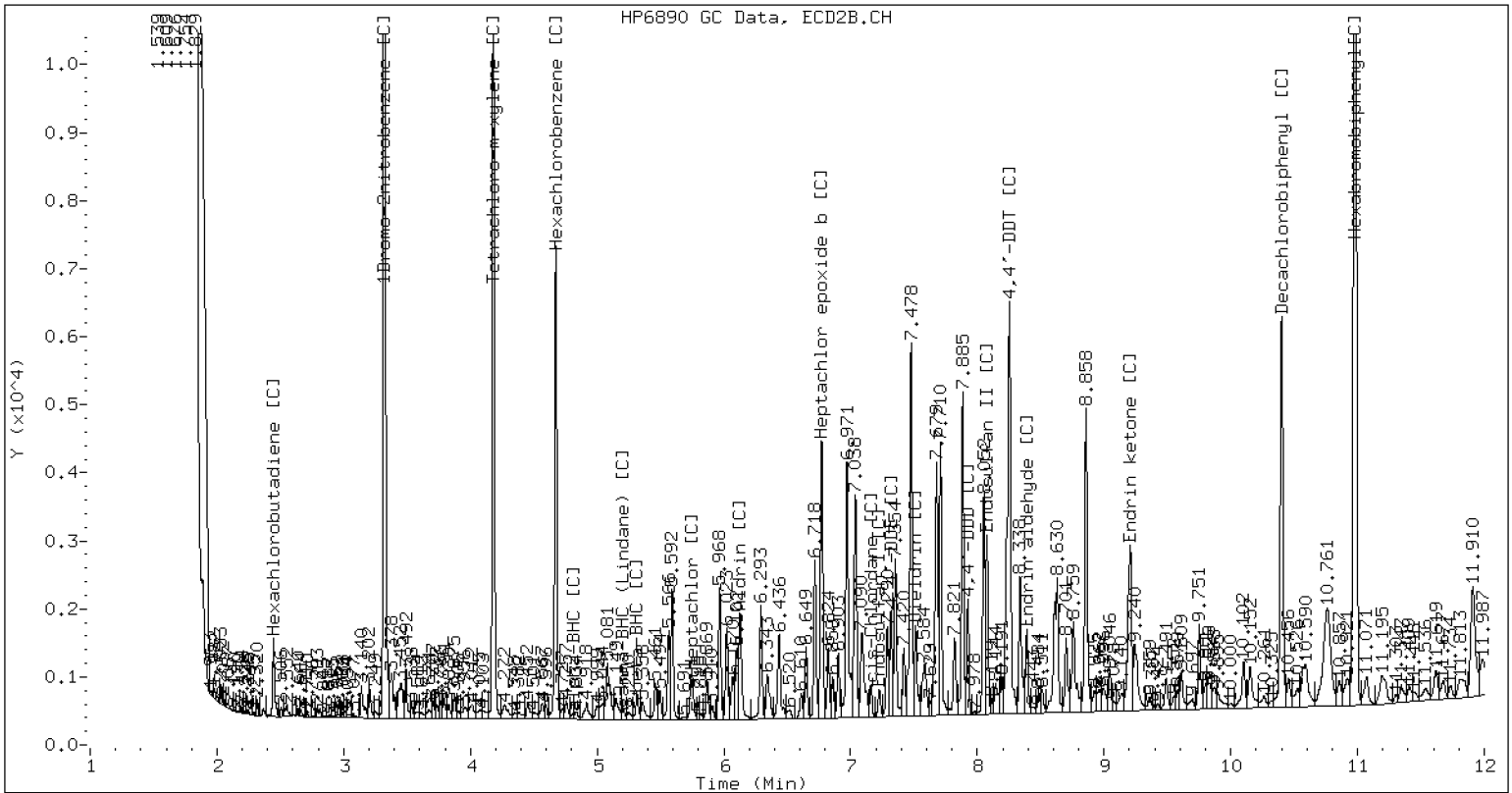
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021314.D 23A0206-08 CLP2



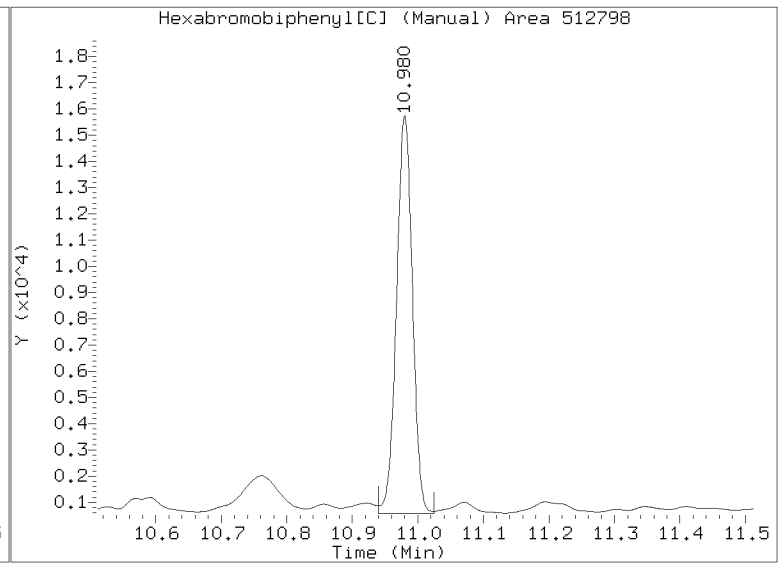
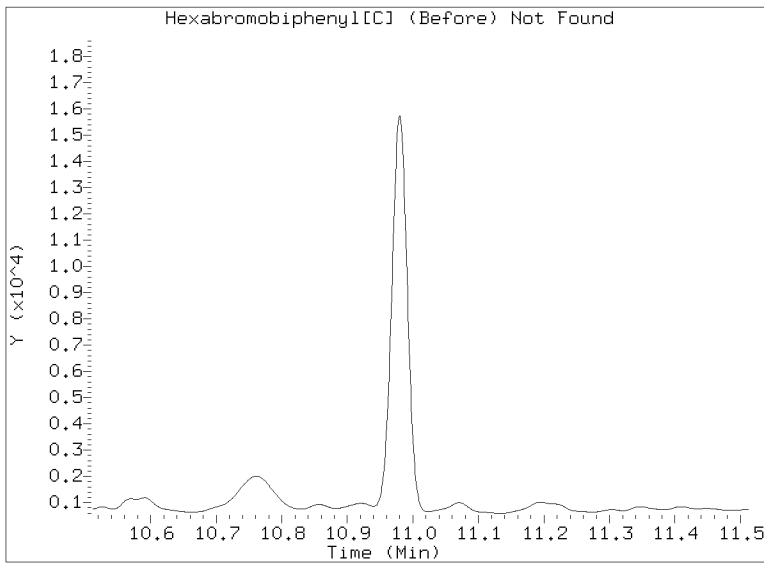
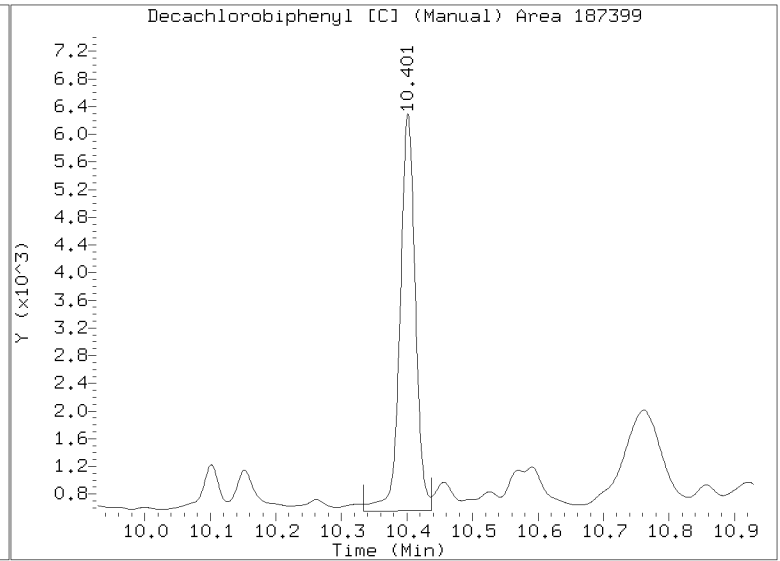
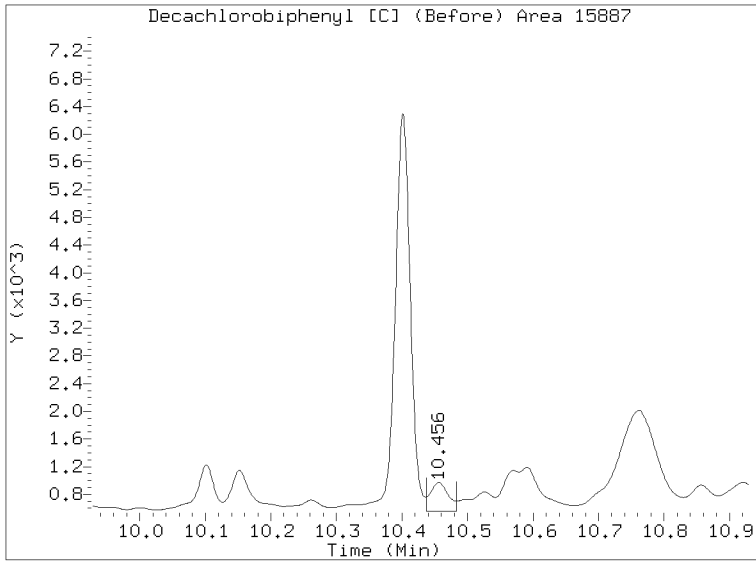
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021314.D

Injection Date: 13-FEB-2023 17:11

Lab ID:23A0206-08 Client ID:







Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021315.D  
Data file 2: /20230213.b/B20230213.b/23021315.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-09  
Client ID:  
Injection Date: 13-FEB-2023 17:29  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	5894	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.315	0.016	34648	4.835	0.020	5894	3.56	0.40	159.1*	alpha-BHC
4.674	-0.007	6690	5.315	0.025	16361	1.78	2.95	49.4*	beta-BHC
4.870	0.006	92583	5.668	0.026	6532	11.63	0.54	182.1*	delta-BHC
4.601	0.002	29951	5.207	-0.002	6424	3.55	0.52	148.9*	gamma-BHC (Lindane)
5.065	-0.013	22388	5.746	0.013	39401	2.98	3.52	16.6	Heptachlor
5.417	0.018	40783	6.133	-0.002	15143	4.84	1.18	121.4*	Aldrin
6.059	-0.013	23851	6.772	-0.020	166696	3.27	15.77	131.4*	Heptachlor epoxide b
6.560	0.045	129345	7.225	-0.011	24157	19.31	2.59	152.6*	Endosulfan I
6.805	0.029	11110	7.512	-0.018	66456	1.54	6.46	122.8*	Dieldrin
6.430	-0.010	98449	7.319	-0.004	70615	14.73	7.48	65.3*	4,4'-DDE
7.049	0.024	203652	----	----	----	39.51	0.00	---	Endrin
7.290	0.026	14973	8.075	0.009	115315	3.23	14.18	125.9*	Endosulfan II
----	----	----	7.926	-0.004	59870	0.00	7.76	---	4,4'-DDD
8.164	0.039	8093	----	----	----	1.84	0.00	---	Endosulfan sulfate
----	----	----	8.253	0.006	378218	0.00	50.78	---	4,4'-DDT
7.892	0.026	39766	----	----	----	19.12	0.00	---	Methoxychlor
8.433	0.033	3188	9.207	0.018	188438	0.63	24.43	189.9*	Endrin ketone
7.714	0.022	55440	8.391	-0.007	92009	14.98	16.04	6.8	Endrin aldehyde
6.210	-0.005	14565	----	----	----	1.96	0.00	---	trans-Chlordane
6.379	0.018	60844	7.161	-0.003	17857	8.18	1.73	130.1*	cis-Chlordane
2.275	-0.021	5341	2.446	-0.028	45614	0.52	3.30	145.2*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00	---	Hexachlorobenzene
3.790	-0.000	170449	4.181	-0.000	253707	24.78	24.80	0.1	Tetrachloro-m-xylene
9.305	-0.001	134495	10.401	-0.002	369319	33.76	59.89	55.8*	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	505839	-24.8
Hexabromobiphenyl	609723	393195	-35.5

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	726695	-27.8
Hexabromobiphenyl	769764	557954	-27.5

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

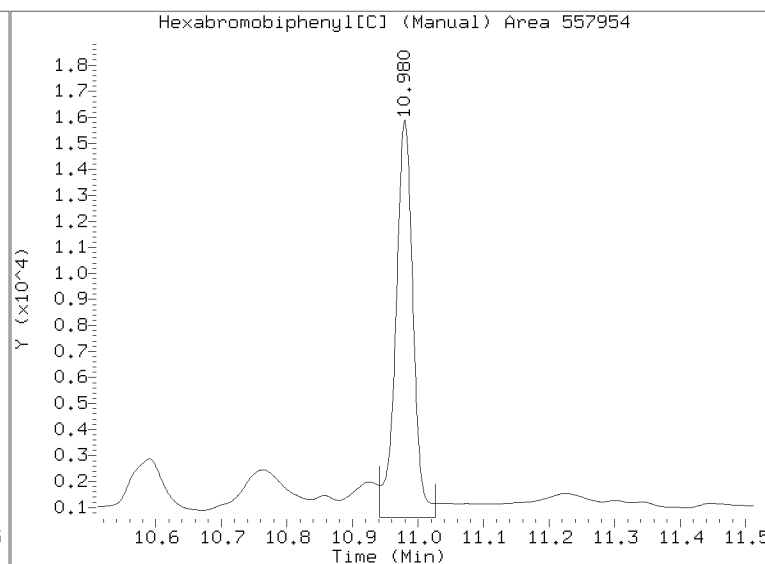
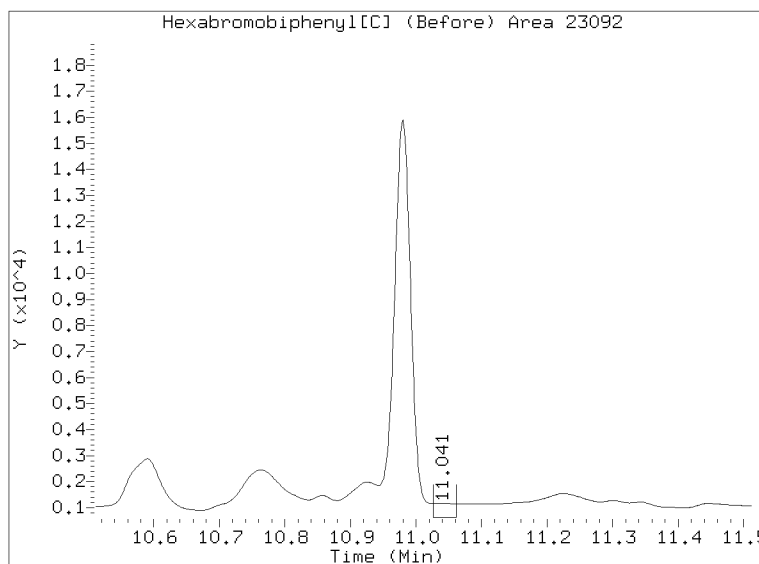
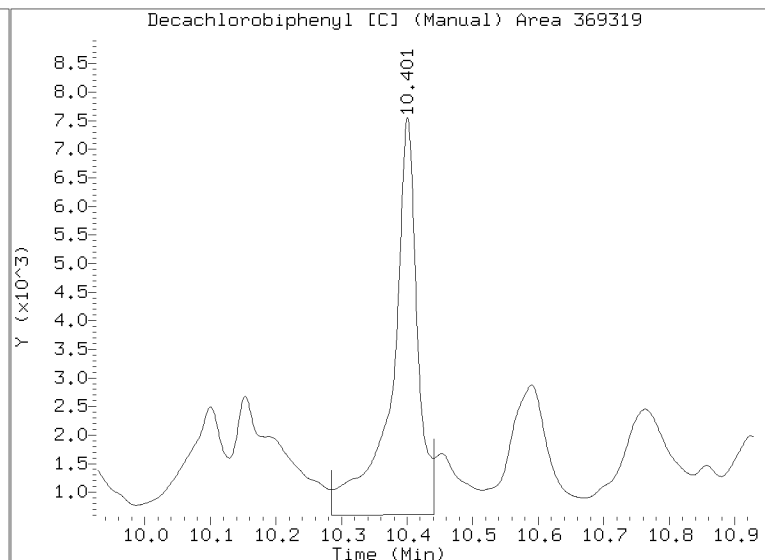
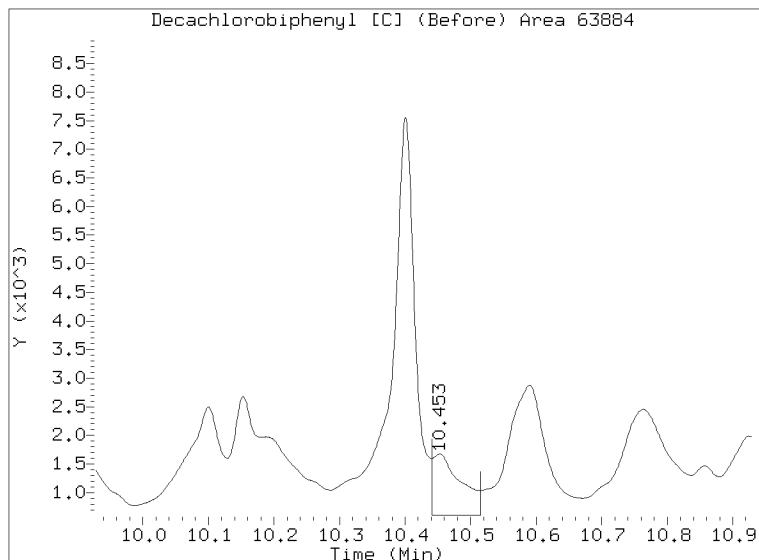


# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021315.D

Injection Date: 13-FEB-2023 17:29

Lab ID:23A0206-09 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-10 B</u>
	File ID: <u>23021316.D</u>
Sampled: <u>01/11/23 11:28</u>	Prepared: <u>01/30/23 14:14</u>
	Analyzed: <u>02/13/23 17:47</u>
% Solids: <u>42.92</u>	Preparation: <u>EPA 3546 (Microwave)</u>
	Initial/Final: <u>29.14 g Wet / 2.5 mL</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
	Calibration: <u>FL00041</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9956	6.96	87.1	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9956	6.87	85.9	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9956	5.06	63.3	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9956	4.96	62.0	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021316.D  
Data file 2: /20230213.b/B20230213.b/23021316.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-10  
Client ID:  
Injection Date: 13-FEB-2023 17:47  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.314	0.015	25992	4.835	0.020	6576	2.69	0.45	143.1*	alpha-BHC
4.673	-0.008	5419	5.315	0.025	15353	1.46	2.74	61.2*	beta-BHC
4.870	0.007	92443	----	----	----	11.71	0.00	---	delta-BHC
4.600	0.002	23294	5.207	-0.002	5855	2.78	0.47	142.3*	gamma-BHC (Lindane)
5.065	-0.013	23421	5.746	0.013	38010	3.14	3.36	6.6	Heptachlor
5.417	0.018	39224	----	----	----	4.70	0.00	---	Aldrin
6.059	-0.013	21205	6.772	-0.019	160702	2.93	15.04	134.8*	Heptachlor epoxide b
6.560	0.045	134871	7.225	-0.011	13153	20.29	1.40	174.3*	Endosulfan I
6.804	0.029	11849	7.513	-0.017	54225	1.66	5.21	103.4*	Dieldrin
6.430	-0.010	98900	7.319	-0.004	58656	14.92	6.15	83.3*	4,4'-DDE
7.049	0.024	207773	----	----	----	39.94	0.00	---	Endrin
7.291	0.027	17727	8.076	0.009	95390	3.79	12.67	108.0*	Endosulfan II
----	----	----	7.926	-0.003	57424	0.00	8.04	---	4,4'-DDD
----	----	----	----	----	----	0.00	0.00	---	Endosulfan sulfate
----	----	----	8.253	0.006	358763	0.00	52.03	---	4,4'-DDT
7.892	0.026	22045	----	----	----	10.50	0.00	---	Methoxychlor
----	----	----	9.207	0.018	138017	0.00	19.33	---	Endrin ketone
7.714	0.022	56084	8.390	-0.008	68118	15.01	12.83	15.7	Endrin aldehyde
6.210	-0.005	14530	----	----	----	1.98	0.00	---	trans-Chlordane
6.379	0.018	60012	7.162	-0.002	13599	8.14	1.30	144.7*	cis-Chlordane
2.277	-0.020	5642	2.446	-0.027	54520	0.56	3.90	150.0*	Hexachlorobutadiene
----	----	----	----	----	----	0.00	0.00	---	Hexachlorobenzene
3.791	0.000	172866	4.181	-0.000	256398	25.33	24.79	2.2	Tetrachloro-m-xylene
9.304	-0.002	140010	10.402	-0.001	196086	34.82	34.34	1.4	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	501808	-25.4
Hexabromobiphenyl	609723	396799	-34.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	734781	-27.0
Hexabromobiphenyl	769764	516574	-32.9

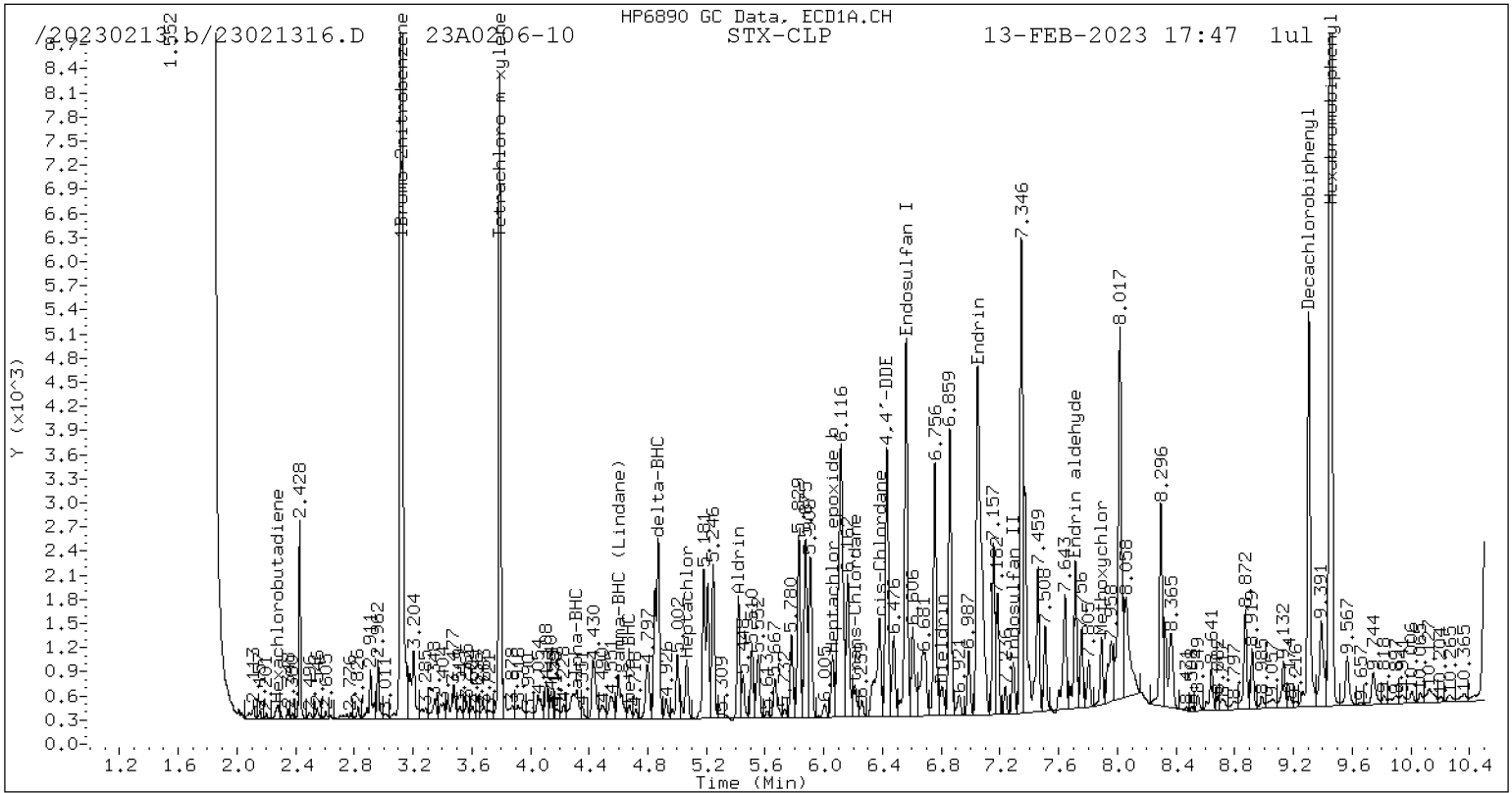
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

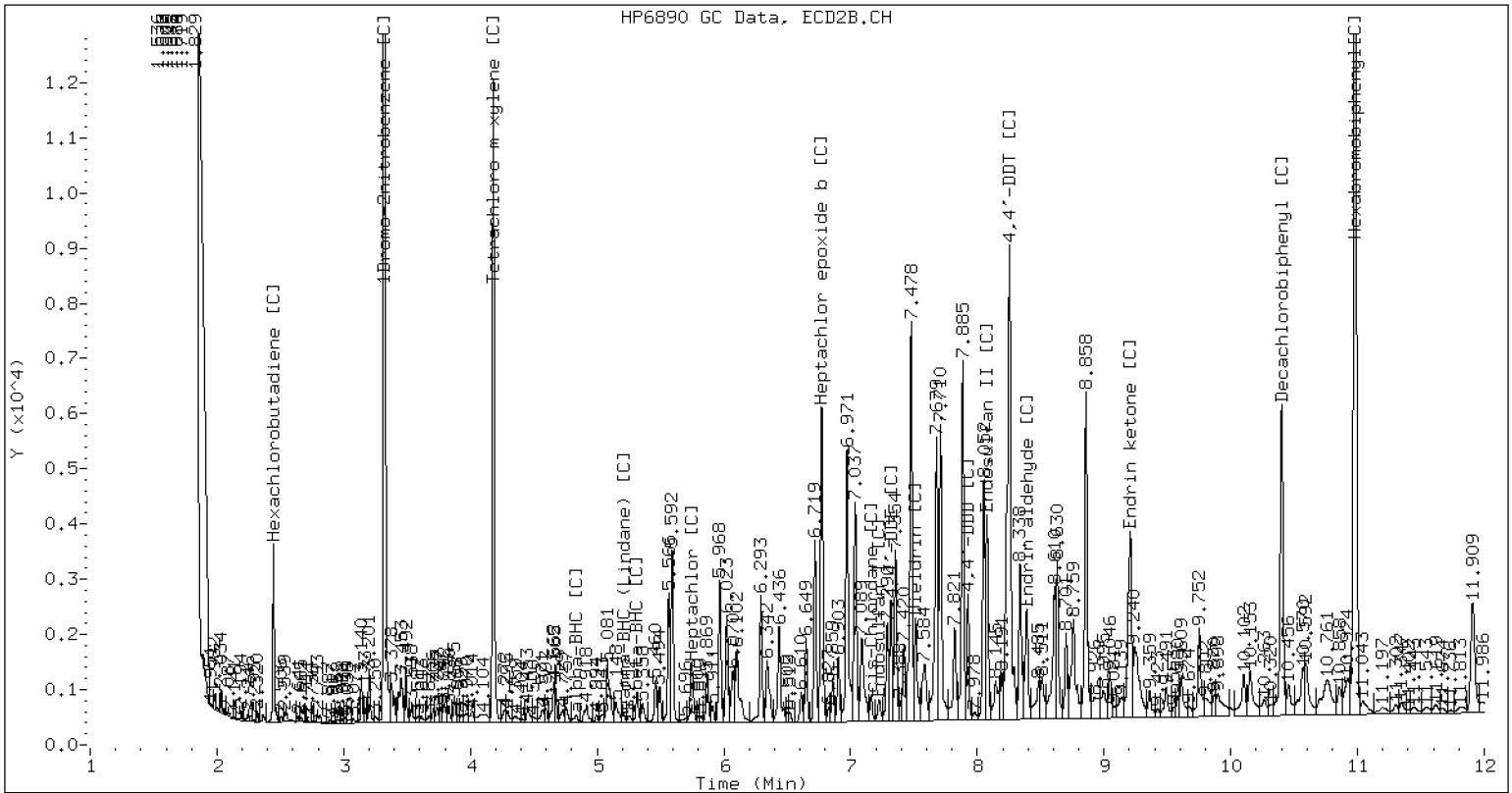


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021316.D 23A0206-10 CLP2



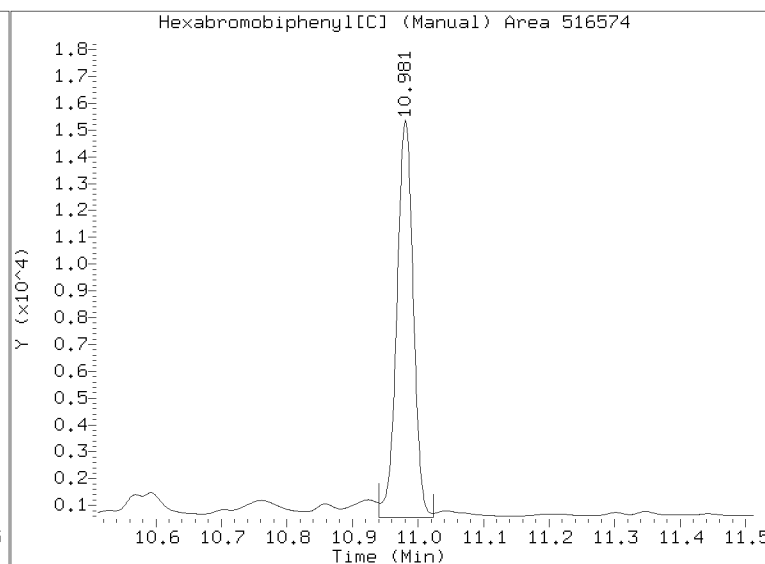
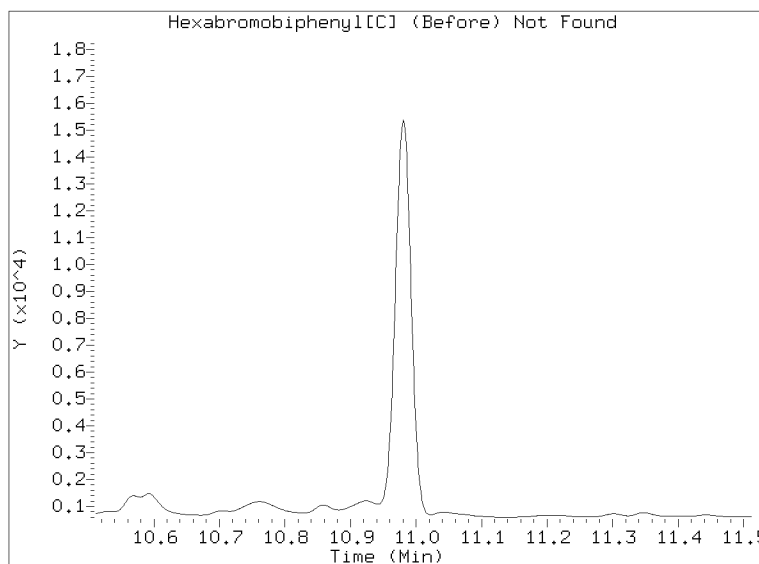
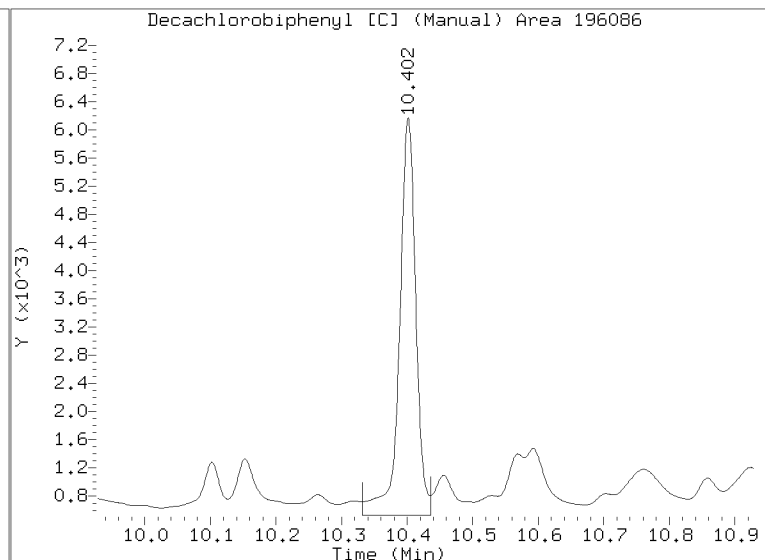
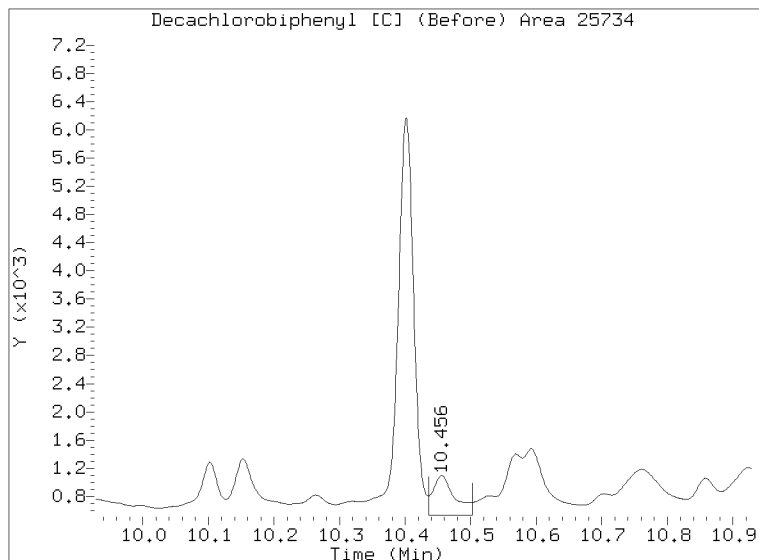
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021316.D

Injection Date: 13-FEB-2023 17:47

Lab ID:23A0206-10 Client ID:





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021319.D  
Data file 2: /20230213.b/B20230213.b/23021319.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-11  
Client ID:  
Injection Date: 13-FEB-2023 18:41  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	8036	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.315	0.016	30275	4.834	0.019	8036	3.08	0.54	140.2*	alpha-BHC
4.673	-0.008	5928	5.315	0.025	14221	1.57	2.52	46.6*	beta-BHC
4.871	0.007	87401	----	----	----	10.89	0.00	---	delta-BHC
4.601	0.003	24138	5.208	-0.002	6537	2.83	0.52	138.1*	gamma-BHC (Lindane)
5.066	-0.013	22829	5.746	0.013	34416	3.01	3.02	0.1	Heptachlor
5.418	0.019	38177	6.135	-0.000	14061	4.50	1.08	122.5*	Aldrin
6.059	-0.013	20410	6.772	-0.020	151397	2.77	14.06	134.1*	Heptachlor epoxide b
6.560	0.046	123913	7.225	-0.011	9983	18.34	1.05	178.3*	Endosulfan I
6.804	0.029	11403	7.513	-0.017	51806	1.57	4.94	103.5*	Dieldrin
6.430	-0.010	93366	7.319	-0.004	55008	13.85	5.72	83.1*	4,4'-DDE
7.050	0.025	201691	----	----	----	37.81	0.00	---	Endrin
7.290	0.026	14606	8.076	0.009	87958	3.04	11.65	117.2*	Endosulfan II
----	----	----	7.926	-0.004	55410	0.00	7.73	---	4,4'-DDD
8.115	-0.011	5185	----	----	----	1.14	0.00	---	Endosulfan sulfate
----	----	----	8.254	0.006	310108	0.00	44.83	---	4,4'-DDT
7.892	0.026	22188	----	----	----	10.31	0.00	---	Methoxychlor
----	----	----	9.207	0.018	135357	0.00	18.90	---	Endrin ketone
7.714	0.022	56026	8.391	-0.006	52524	14.63	9.86	38.9	Endrin aldehyde
6.211	-0.004	13588	----	----	----	1.82	0.00	---	trans-Chlordane
6.379	0.019	57231	7.161	-0.003	11776	7.63	1.12	148.8*	cis-Chlordane
2.276	-0.020	6554	2.446	-0.028	58051	0.64	4.12	146.4*	Hexachlorobutadiene
4.141	-0.001	14853	----	----	----	1.63	0.00	---	Hexachlorobenzene
3.791	0.000	178978	4.181	-0.000	271585	25.80	26.06	1.0	Tetrachloro-m-xylene
9.305	-0.001	140423	10.401	-0.002	189919	34.06	33.16	2.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	510122	-24.1
Hexabromobiphenyl	609723	406904	-33.3

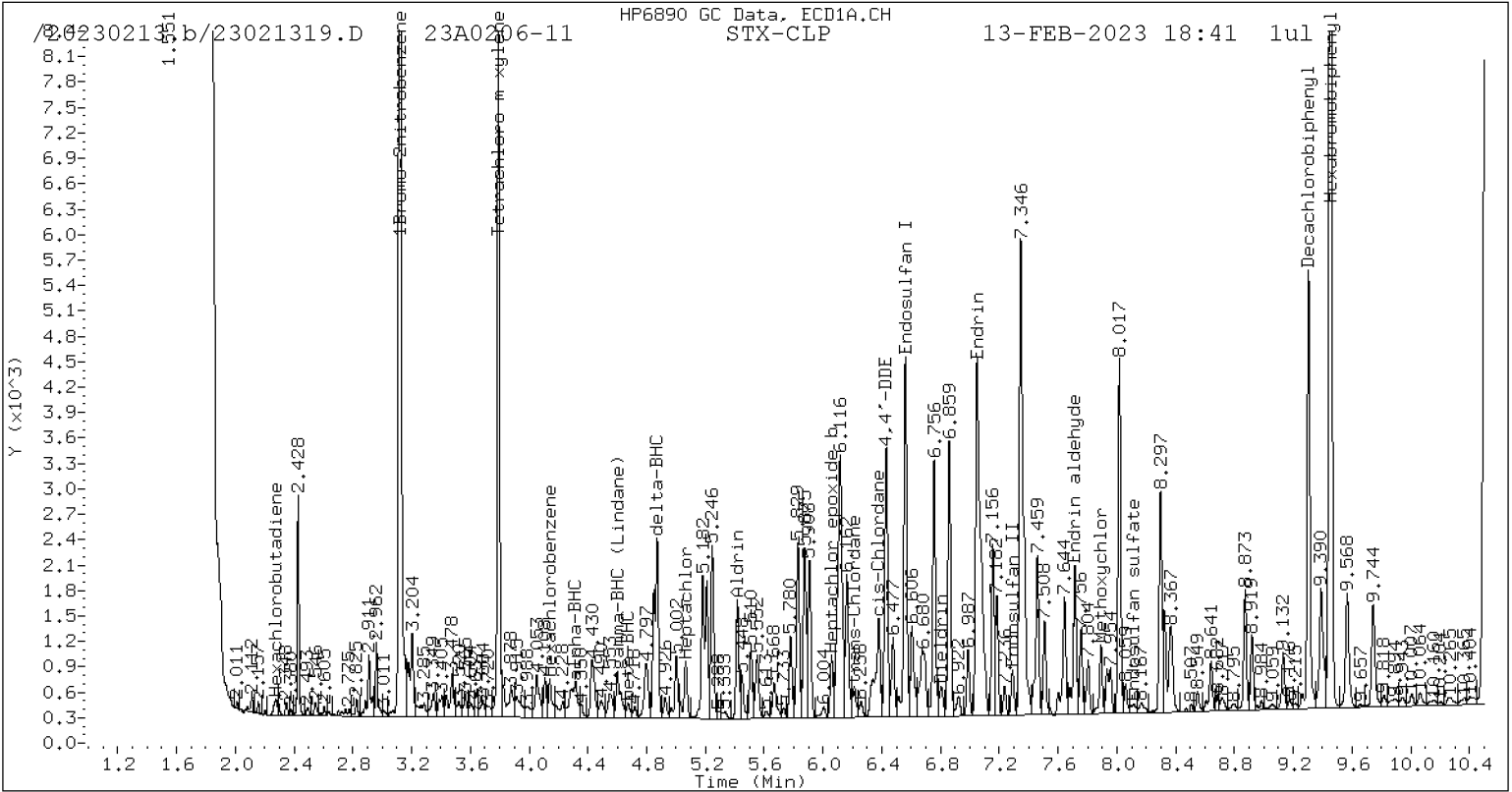
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	740319	-26.4
Hexabromobiphenyl	769764	518173	-32.7

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

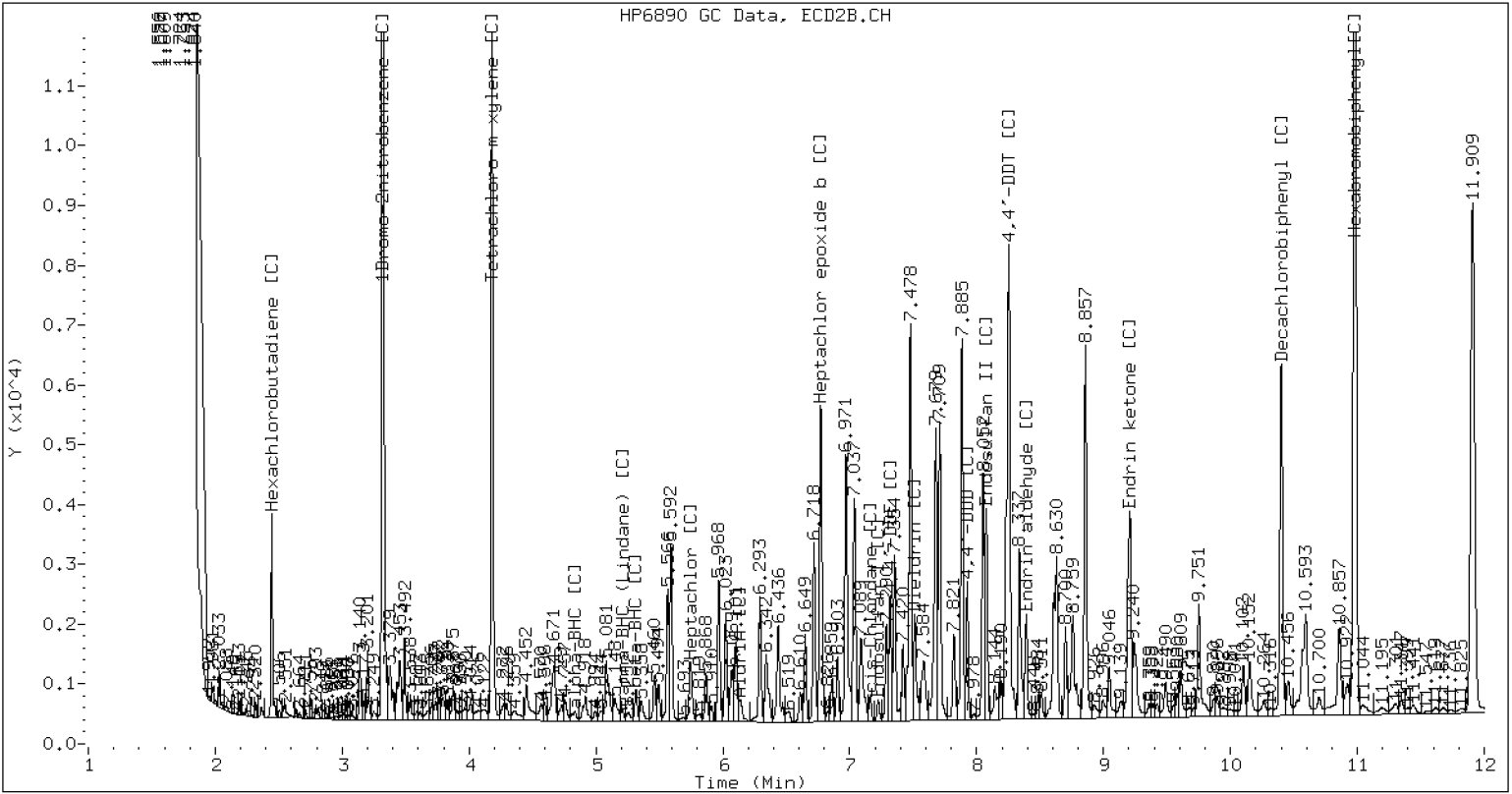
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021319.D 23A0206-11 CLP2



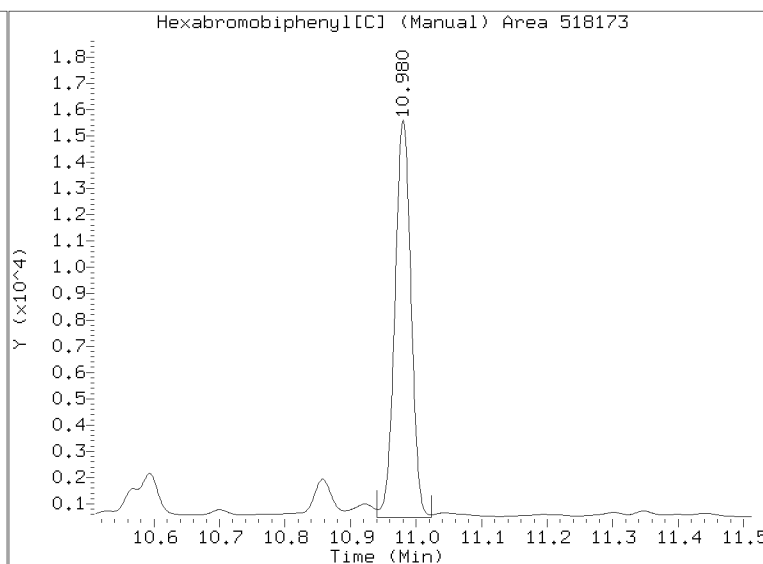
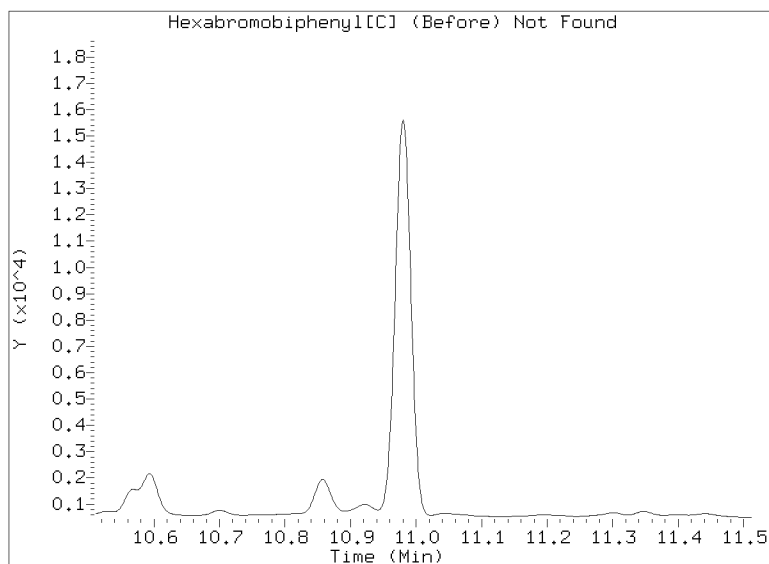
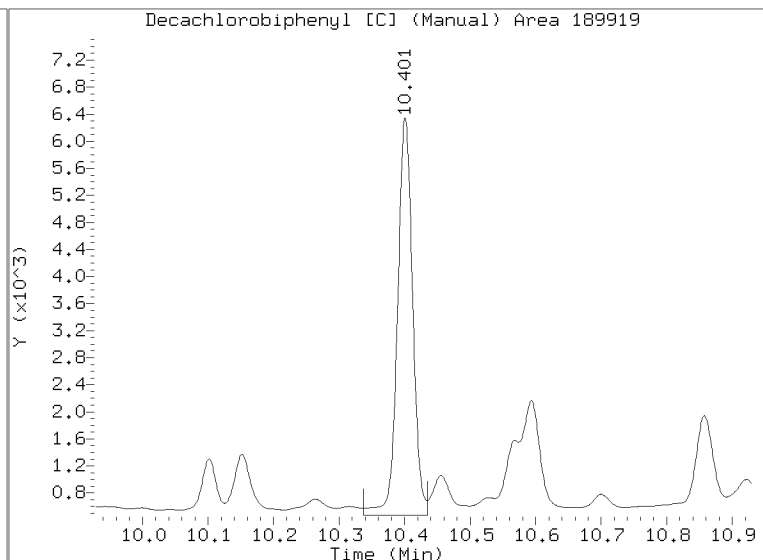
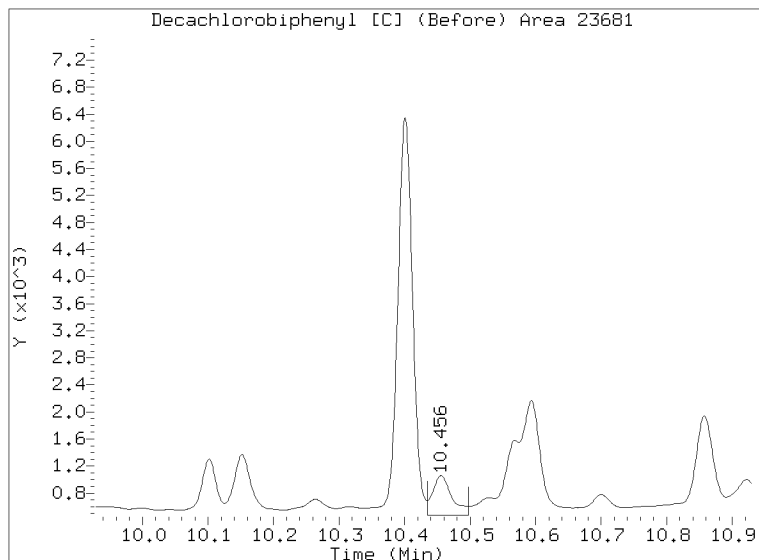
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021319.D

Injection Date: 13-FEB-2023 18:41

Lab ID:23A0206-11 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-12 B</u>
	File ID: <u>23021320.D</u>
Sampled: <u>01/11/23 12:19</u>	Prepared: <u>01/30/23 14:14</u>
	Analyzed: <u>02/13/23 18:58</u>
% Solids: <u>48.05</u>	Preparation: <u>EPA 3546 (Microwave)</u>
	Initial/Final: <u>26.12 g Wet / 2.5 mL</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
	Calibration: <u>FL00041</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9677	6.77	85.0	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9677	7.23	90.8	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9677	5.21	65.4	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9677	5.04	63.3	30 - 160	



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021320.D  
Data file 2: /20230213.b/B20230213.b/23021320.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-12  
Client ID:  
Injection Date: 13-FEB-2023 18:58  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.302	0.003	33505	4.814	-0.001	7367	3.34	0.49	149.2*	alpha-BHC
4.674	-0.007	6258	5.315	0.025	17422	1.62	3.03	60.5*	beta-BHC
4.870	0.007	99464	----	----	----	12.15	0.00	---	delta-BHC
4.601	0.002	27317	5.207	-0.002	6484	3.14	0.50	144.7*	gamma-BHC (Lindane)
5.065	-0.013	25051	5.745	0.012	37344	3.24	3.21	1.0	Heptachlor
5.417	0.018	49445	----	----	----	5.71	0.00	---	Aldrin
6.059	-0.013	21610	6.772	-0.020	172021	2.88	15.66	137.9*	Heptachlor epoxide b
6.560	0.046	136899	7.224	-0.012	12131	19.86	1.25	176.3*	Endosulfan I
6.804	0.029	11324	7.512	-0.018	53285	1.53	4.98	106.1*	Dieldrin
6.429	-0.011	92118	7.318	-0.005	53213	13.40	5.43	84.7*	4,4'-DDE
7.049	0.024	198357	7.884	0.030	155544	37.09	20.93	55.7*	Endrin
7.289	0.025	13831	8.075	0.008	87446	2.87	11.48	119.9*	Endosulfan II
----	----	----	7.925	-0.004	57767	0.00	7.99	---	4,4'-DDD
8.114	-0.012	6098	----	----	----	1.33	0.00	---	Endosulfan sulfate
7.368	-0.011	89268	8.251	0.004	350594	18.34	50.25	93.1*	4,4'-DDT
7.891	0.026	23510	----	----	----	10.90	0.00	---	Methoxychlor
----	----	----	9.207	0.018	128579	0.00	17.80	---	Endrin ketone
7.714	0.022	51278	8.391	-0.007	51382	13.35	9.56	33.1	Endrin aldehyde
6.210	-0.005	13231	----	----	----	1.73	0.00	---	trans-Chlordane
6.379	0.018	59893	7.161	-0.003	12386	7.83	1.16	148.5*	cis-Chlordane
2.279	-0.017	8337	2.447	-0.027	61955	0.79	4.31	137.8*	Hexachlorobutadiene
4.141	-0.001	40225	----	----	----	4.32	0.00	---	Hexachlorobenzene
3.791	0.000	185124	4.181	-0.001	269138	26.16	25.32	3.2	Tetrachloro-m-xylene
9.304	-0.002	140443	10.401	-0.002	209693	33.98	36.30	6.6	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	520403	-22.6
Hexabromobiphenyl	609723	407908	-33.1

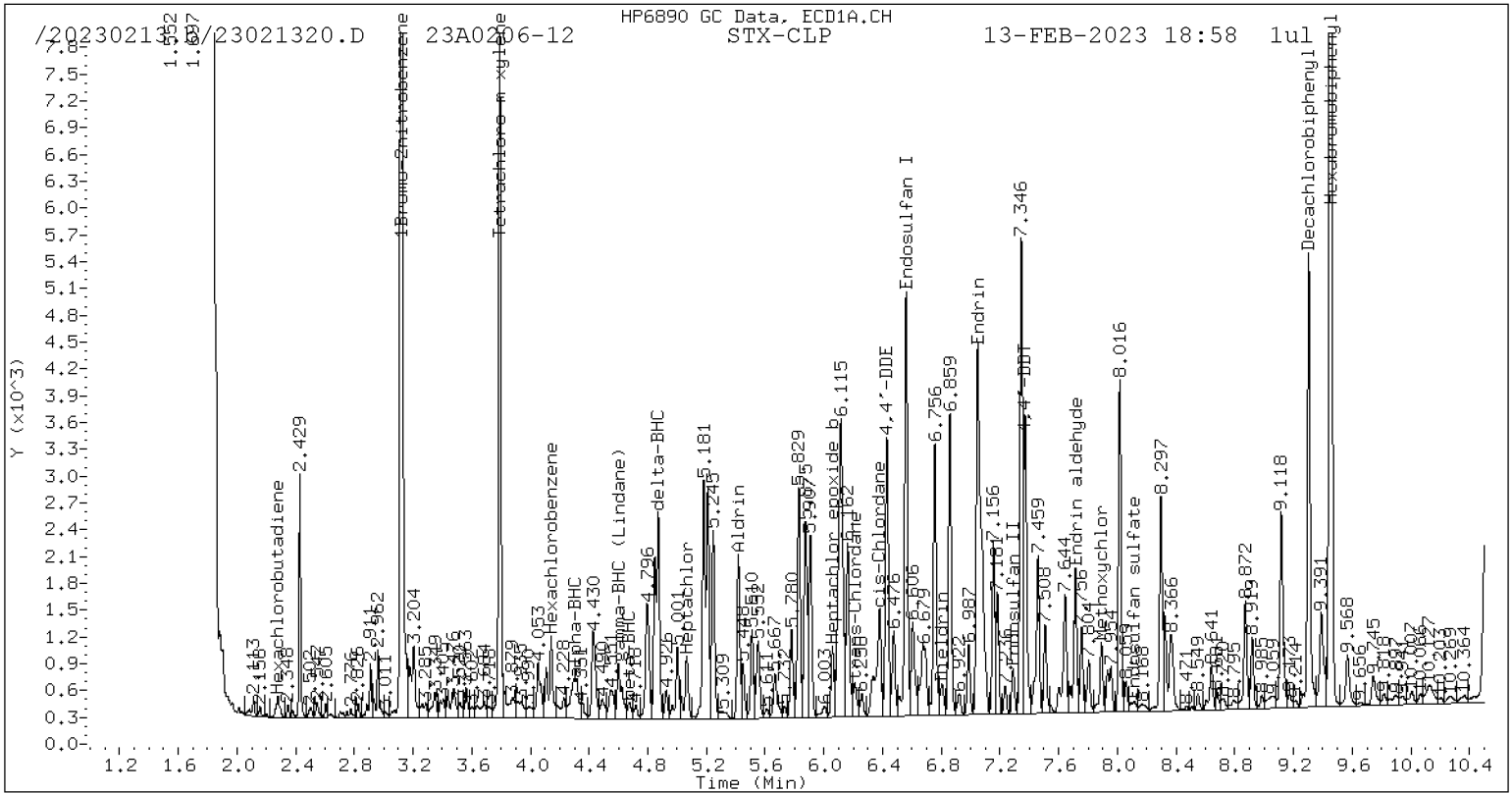
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	755026	-25.0
Hexabromobiphenyl	769764	522650	-32.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

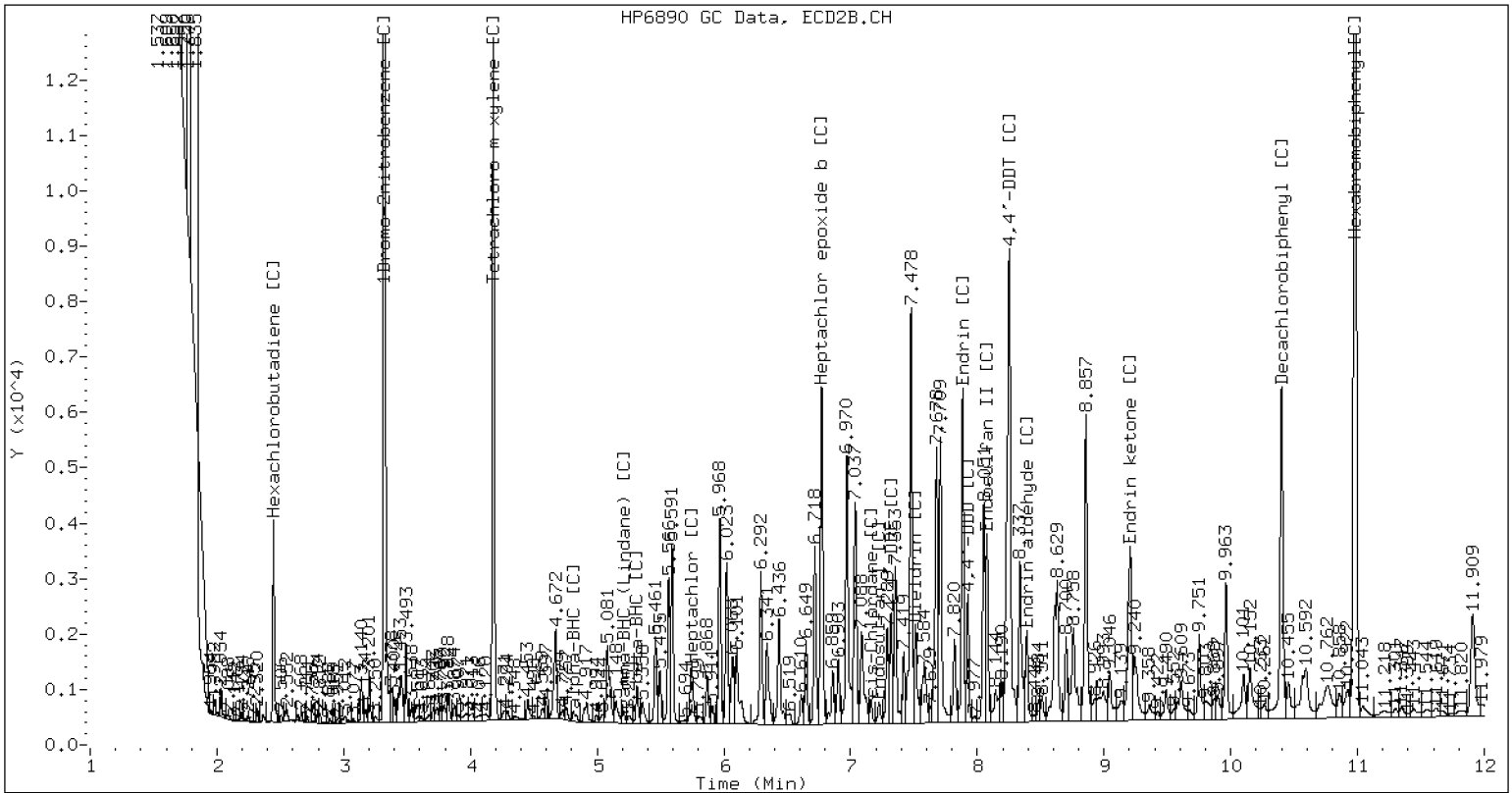
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021320.D 23A0206-12 CLP2



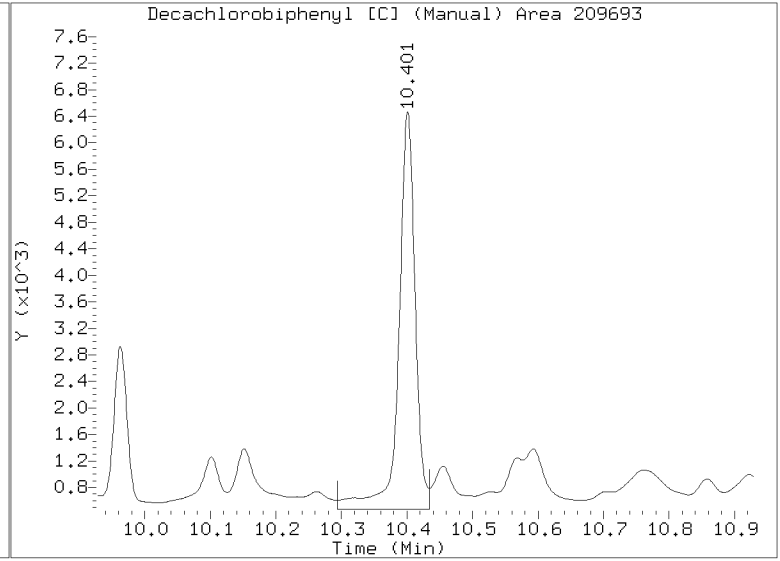
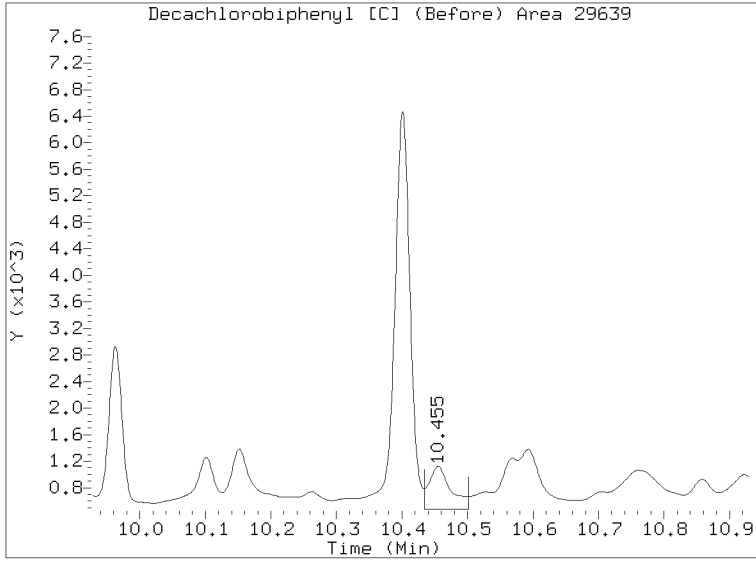
CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021320.D

Injection Date: 13-FEB-2023 18:58

Lab ID:23A0206-12 Client ID:





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: 23A0206-13 B

File ID: 23021321.D

Sampled: 01/11/23 12:40

Prepared: 01/30/23 14:14

Analyzed: 02/13/23 19:16

% Solids: 60.13

Preparation: EPA 3546 (Microwave)

Initial/Final: 20.8 g Wet / 2.5 mL

Batch: BLA0622

Sequence: SLB0237

Calibration: FL00041

Instrument: ECD6

Column 1: STX-CLP

Column 2: STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9955	8.24	103	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9955	7.39	92.5	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9955	11.7	146	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9955	5.73	71.6	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021321.D  
Data file 2: /20230213.b/B20230213.b/23021321.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-13  
Client ID:  
Injection Date: 13-FEB-2023 19:16  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.306	0.007	165689	4.835	0.020	222702	18.15	16.19	11.4	alpha-BHC
4.710	0.029	494155	5.316	0.025	2161399	140.59	413.38	98.5*	beta-BHC
4.871	0.007	8542121	----			1144.80	0.00	---	delta-BHC
4.599	0.001	1431964	5.208	-0.001	754123	180.90	64.61	94.7*	gamma-BHC (Lindane)
5.065	-0.013	891264	5.743	0.010	1714384	126.54	162.16	24.7	Heptachlor
5.419	0.020	1911874	6.124	-0.011	55507	242.22	4.60	192.5*	Aldrin
6.118	0.046	1620887	6.774	-0.018	2427268	236.84	243.17	2.6	Heptachlor epoxide b
----			7.225	-0.011	105120	0.00	11.95	---	Endosulfan I
6.806	0.031	66368	7.513	-0.017	410320	9.84	42.21	124.4*	Dieldrin
6.429	-0.011	377157	----			60.20	0.00	---	4,4'-DDE
7.052	0.027	701036	----			134.84	0.00	---	Endrin
7.295	0.031	90922	8.078	0.011	479668	19.43	63.68	106.5*	Endosulfan II
7.101	0.014	112795	7.926	-0.004	86102	24.08	12.05	66.6*	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			8.255	0.008	660275	0.00	95.71	---	4,4'-DDT
7.895	0.029	55383	----			26.41	0.00	---	Methoxychlor
----			9.208	0.019	643849	0.00	90.13	---	Endrin ketone
7.716	0.024	335030	8.391	-0.007	342593	89.75	64.48	32.8	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
6.380	0.020	303016	7.161	-0.003	72612	43.47	7.46	141.4*	cis-Chlordane
2.280	-0.016	12773	2.446	-0.027	43175	1.34	3.31	84.9*	Hexachlorobutadiene
----			4.661	-0.014	2156827	0.00	172.32	---	Hexachlorobenzene
3.790	-0.001	377501	4.180	-0.001	276746	58.53	28.65	68.6*	Tetrachloro-m-xylene
9.309	0.003	165680	10.404	0.002	211280	41.23	36.99	10.8	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	474228	-29.5
Hexabromobiphenyl	609723	396563	-35.0

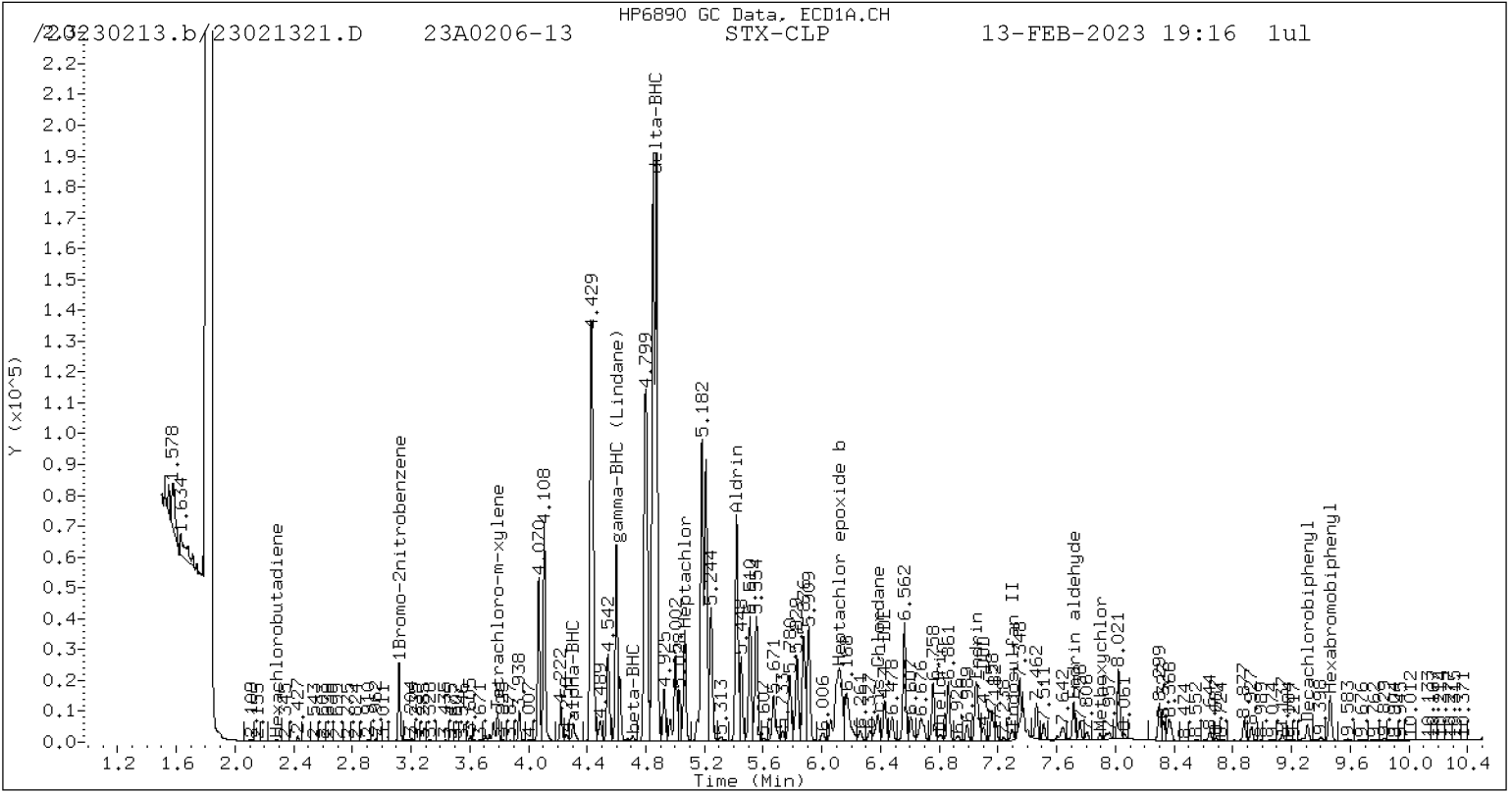
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	686243	-31.8
Hexabromobiphenyl	769764	516799	-32.9

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

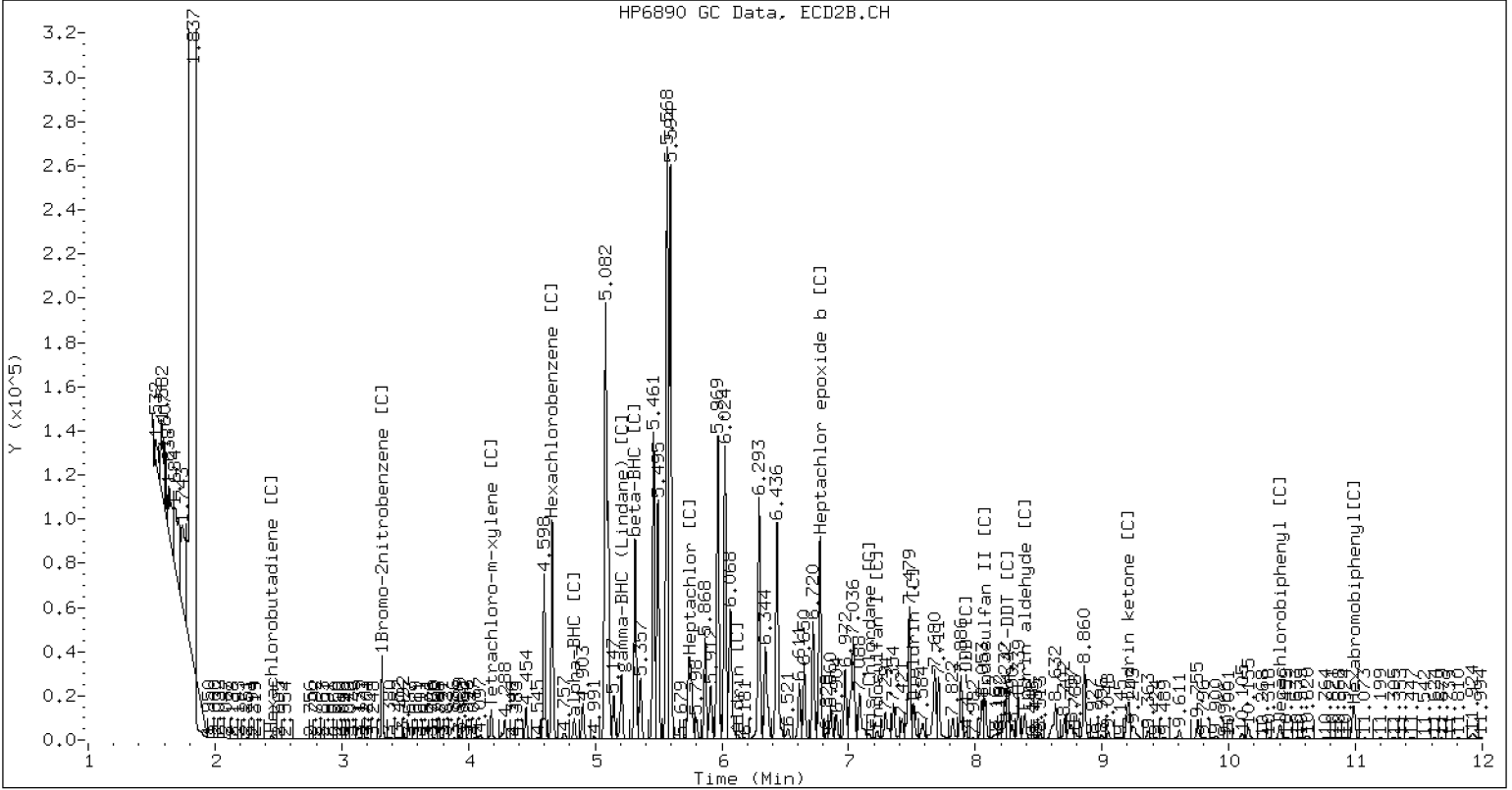
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021321.D 23A0206-13 CLP2



CLP-2 Manual Integration: NO





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	
Project: <u>AOC5 MR Phase 1</u>	
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-14 B</u>
Sampled: <u>01/11/23 13:03</u>	Prepared: <u>01/30/23 14:14</u>
% Solids: <u>51.18</u>	Preparation: <u>EPA 3546 (Microwave)</u>
Batch: <u>BLA0622</u>	Sequence: <u>SLB0237</u>
Instrument: <u>ECD6</u>	Column 1: <u>STX-CLP</u>
	File ID: <u>23021322.D</u>
	Analyzed: <u>02/13/23 19:34</u>
	Initial/Final: <u>24.46 g Wet / 2.5 mL</u>
	Calibration: <u>FL00041</u>
	Column 2: <u>STX-CLPII</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9881	7.43	93.0	30 - 160	
<i>Decachlorobiphenyl</i>	2	7.9881	9.78	122	30 - 160	
<i>Tetrachlorometaxylene</i>	1	7.9881	5.67	71.0	30 - 160	
<i>Tetrachlorometaxylene</i>	2	7.9881	4.97	62.2	30 - 160	

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021322.D  
Data file 2: /20230213.b/B20230213.b/23021322.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: 23A0206-14  
Client ID:  
Injection Date: 13-FEB-2023 19:34  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.310	0.011	35872	4.835	0.020	13816	3.86	0.96	120.3*	alpha-BHC
4.674	-0.007	30981	5.315	0.024	95189	8.65	17.39	67.1*	beta-BHC
4.870	0.007	429732	----	----	----	56.54	0.00	---	delta-BHC
4.599	0.000	85281	5.207	-0.002	38218	10.58	3.13	108.7*	gamma-BHC (Lindane)
5.065	-0.014	52936	5.744	0.011	106286	7.38	9.60	26.2	Heptachlor
5.417	0.018	120256	----	----	----	14.96	0.00	---	Aldrin
6.116	0.045	227890	6.773	-0.019	261225	32.69	25.00	26.6	Heptachlor epoxide b
----	----	----	7.224	-0.012	21092	0.00	2.29	---	Endosulfan I
6.804	0.029	12662	7.513	-0.017	76511	1.84	7.52	121.3*	Dieldrin
6.430	-0.010	124058	7.319	-0.004	60802	19.44	6.52	99.6*	4,4'-DDE
7.049	0.024	215991	----	----	----	40.87	0.00	---	Endrin
7.291	0.027	19134	8.076	0.009	112084	4.02	15.09	115.8*	Endosulfan II
----	----	----	7.926	-0.004	57680	0.00	8.18	---	4,4'-DDD
----	----	----	----	----	----	0.00	0.00	---	Endosulfan sulfate
----	----	----	8.254	0.007	342966	0.00	50.41	---	4,4'-DDT
7.892	0.026	41715	----	----	----	19.56	0.00	---	Methoxychlor
----	----	----	9.206	0.017	185444	0.00	26.32	---	Endrin ketone
7.714	0.023	70606	8.391	-0.007	97399	18.60	18.59	0.1	Endrin aldehyde
6.258	0.043	38252	----	----	----	5.40	0.00	---	trans-Chlordane
6.379	0.018	76719	7.161	-0.003	17598	10.80	1.73	144.9*	cis-Chlordane
2.291	-0.005	8376	2.447	-0.027	34919	0.86	2.55	99.3*	Hexachlorobutadiene
4.174	0.032	12365	4.661	-0.014	100304	1.43	7.66	137.0*	Hexachlorobenzene
3.790	-0.000	186660	4.181	-0.001	251451	28.41	24.87	13.3	Tetrachloro-m-xylene
9.304	-0.002	151967	10.401	-0.002	275925	37.20	48.99	27.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	483060	-28.2
Hexabromobiphenyl	609723	403155	-33.9

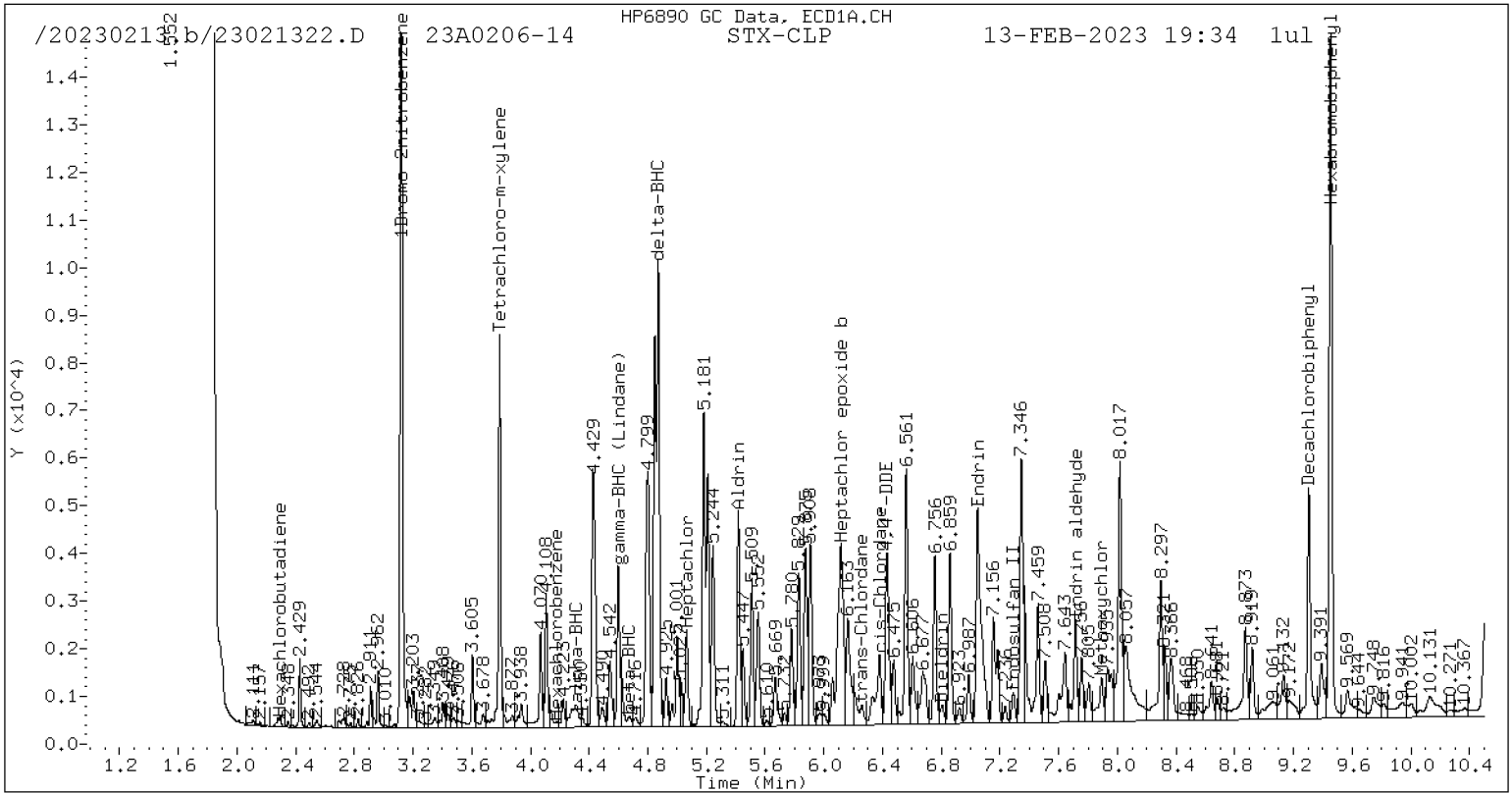
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	718265	-28.6
Hexabromobiphenyl	769764	509630	-33.8

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

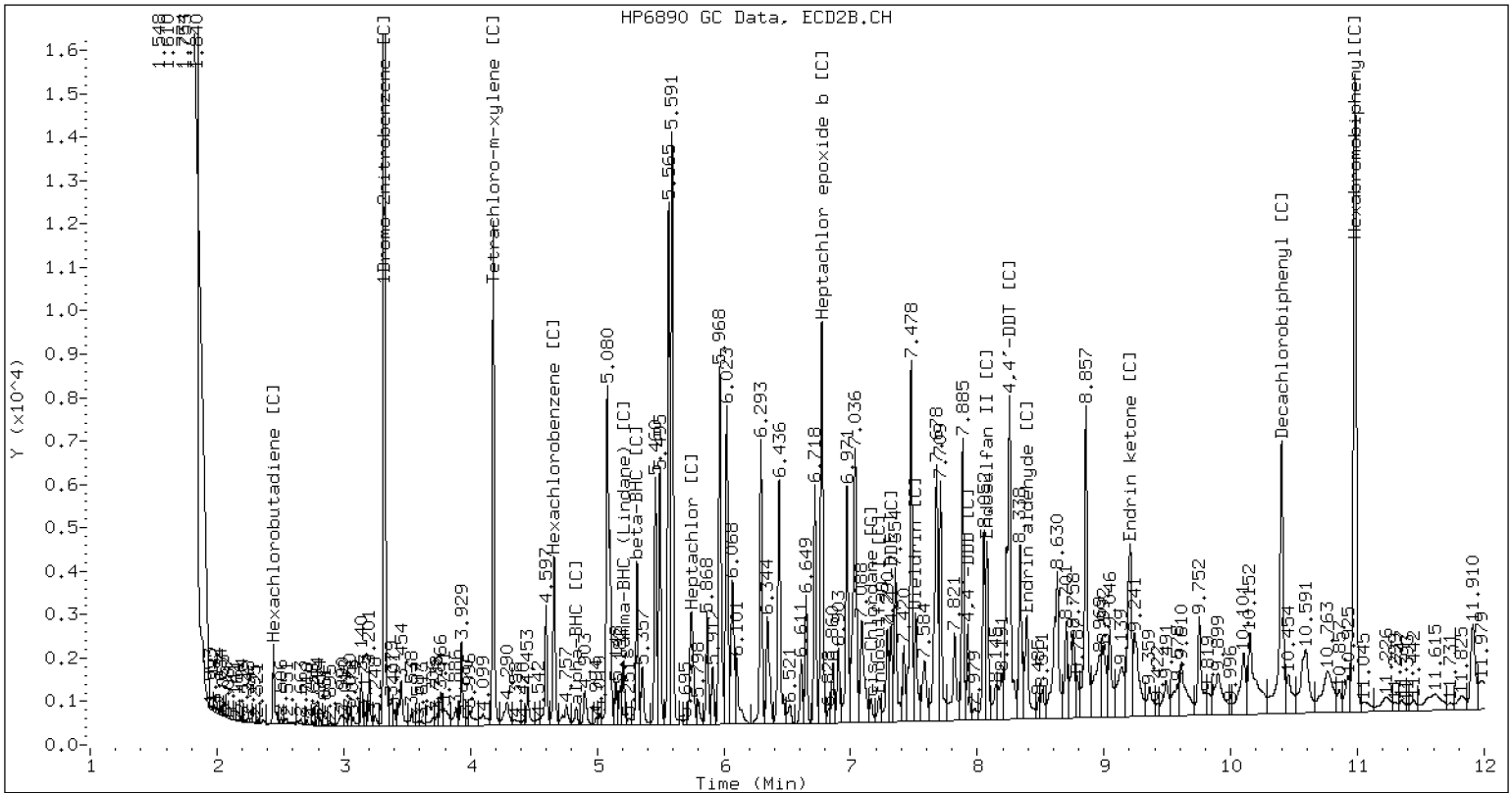
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021322.D 23A0206-14 CLP2



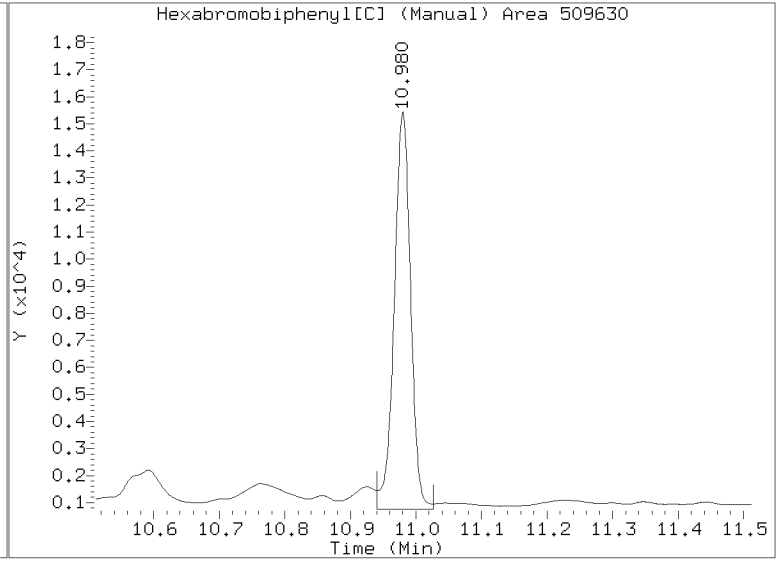
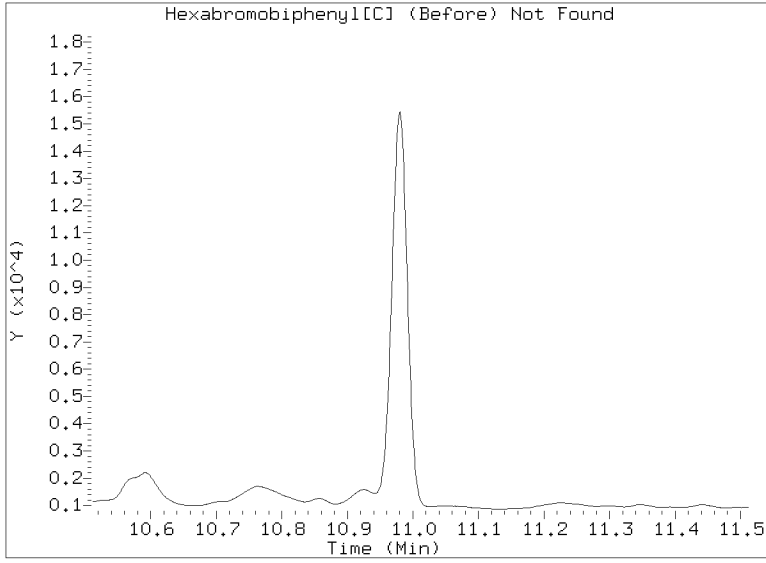
CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021322.D

Injection Date: 13-FEB-2023 19:34

Lab ID:23A0206-14 Client ID:





**PREPARATION BATCH SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0622 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	23021307.D	01/30/23 14:14	
LDW23-SS1015	23A0206-02	23021308.D	01/30/23 14:14	
LDW23-SS1164	23A0206-03	23021309.D	01/30/23 14:14	
LDW23-SS1158	23A0206-04	23021310.D	01/30/23 14:14	
LDW23-SS1151	23A0206-05	23021311.D	01/30/23 14:14	
LDW23-SS1145	23A0206-06	23021312.D	01/30/23 14:14	
LDW23-SS1139	23A0206-07	23021313.D	01/30/23 14:14	
LDW23-SS1117	23A0206-08	23021314.D	01/30/23 14:14	
LDW23-SS1103	23A0206-09	23021315.D	01/30/23 14:14	
LDW23-SS1100	23A0206-10	23021316.D	01/30/23 14:14	
LDW23-SS1096	23A0206-11	23021319.D	01/30/23 14:14	
LDW23-SS1094	23A0206-12	23021320.D	01/30/23 14:14	
LDW23-SS1066	23A0206-13	23021321.D	01/30/23 14:14	
LDW23-SS1061	23A0206-14	23021322.D	01/30/23 14:14	
Blank	BLA0622-BLK1	23021304.D	01/30/23 14:14	
LCS	BLA0622-BS1	23021305.D	01/30/23 14:14	
LCS Dup	BLA0622-BSD1	23021306.D	01/30/23 14:14	
LDW23-SS1066	BLA0622-MS1	23021323.D	01/30/23 14:14	
LDW23-SS1066	BLA0622-MSD1	23021324.D	01/30/23 14:14	



Batch: BLA0622

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version: HCB Only)

Matrix: Solid

Date Prepared: 4/30/23

Balance ID: B146462614

Set Up By: GTO 11/6/23

**WO Comments**  
23A0206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36, K011477-79, MS/MSD <E> <H>BPR J006840-43, 7935-36, K011477-79, Dup <H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND
QLS 10	QLS Spike

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g)		(REQ) GPC (1:1)	<input checked="" type="checkbox"/> Yes / No Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL <del>Ethyl</del> <del>Acetate</del>	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
		Target Dry: 12.5 (Wet)	Actual							
23A0206-01 B	48.2	(25.93)	25.95	1 2 3	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-02 B	47.1	(26.53)	26.58		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-03 B	48.3	(25.86)	25.87		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-04 B	49.3	(25.33)	25.36		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-05 B	52.9	(23.61)	23.68		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-06 B	55.2	(22.66)	22.67		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-07 B	60.2	(20.77)	20.77		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-08 B	52.0	(24.05)	24.13		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-09 B	41.9	(29.85)	29.91		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-10 B	42.9	(29.12)	29.14		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-11 B	43.0	(29.10)	29.17		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-12 B	48.1	(26.02)	26.12		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-13 B	60.1	(20.79)	20.84		5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0206-14 B	51.2	(24.42)	24.46		5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g)		(REQ) GPC (1:1)	<input checked="" type="checkbox"/> Yes / No Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL <del>Ethyl</del> <del>Acetate</del>	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
		Target Dry: 12.5 (Wet)	Actual							
BLA0622-BLK1	100.0	(12.50)	12.54	1 2 3	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0622-BS1	100.0	(12.50)	12.54		5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0622-BSD1	100.0	(12.50)	12.54		5mL	5mL	(2:5) 2mL	2.5	1.0	
BLA0622-MS1	60.1	(20.79)	20.84		5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0206-13
BLA0622-MSD1	60.1	(20.79)	20.84		5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0206-13

Client verified By: [Signature] 4/30/23

Date

Preparation Reviewed By: GTO 2/8/23

Date

Extraction Date and Time: 4/30/23 14:14





Batch: BLA0622

Prepared using: EPA 3546 (Microwave)  
8081B Pest (PSDDA) in Solid (Version: HCB Only)

WO Comments  
23A0206: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43,  
7935-36, K011477-79, MS/MSD </E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Reagents Used

Surrogates & Spike Standards Used

Microwave	Station/Reagent	Standard ID
2 3 CT 1/3/23 Analyst/Date	Microwave	
	Analyst: CT/1/3/23 Date: 1/3/23	
Pre GPC KD 100°C (No Exchange) 3 6 CT 2/2/23 Analyst/Date	Hexane	K01373
	80:20 Hexane/Acetone	L000257
	1:1 Hexane/Acetone	L000646
	Neutral Glass Wool	L000350
TurboVap Pre GPC 1 2 3 4 5 LS 2/3/23 Analyst/Date	Anhydrous Sodium Sulfate	N/A
	Neutral Glass Wool	N/A
Post GPC KD 80 - 85°C Hexane Exchange (2 X 20 mL) 100°C 3 4 6 LS 2/5/23 Analyst/Date	Anhydrous Sodium Sulfate	N/A
	Neutral Glass Wool	N/A
	GPC Filter Prep	
TurboVap Pre-Cleanups 1 2 3 4 5 TWC 2/3/23 Analyst/Date	Analyst: TWC Date: 2/3/23	
	Methylene Chloride	L000808
	Hexane	K01373
TurboVap Post-Cleanups 1 2 3 4 5 CT 2/8/23 Analyst/Date	Analyst: TWC Date: 2/3/23	
	Methylene Chloride	L000808
	Hexane	K01373
Vialing CT 2/8/23 Analyst/Date	Analyst: TWC Date: 2/8/23	
	Hexane	K01373
	Sulfuric Acid	L001033
	<del>Ethyl Acetate</del>	
	Tetrabutylammonium hydrogensulfate (TBAS)	L000840
	Sodium Sulfite	K010363
	Silica Gel (SPE) Darts	K011573

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate	N L000773	50µL	CT	CT
2µg/mL	Exp Date: 7/21/24			
Spike (Freezer)	3 K011471	100µL	CT	CT
0.5/1.5µg/mL	Exp Date: 6/10/23			

MANUALLY ENTER EXPIRATION DATES!

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

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





Batch: BLA0622

Prepared using: EPA 3546 (Microwave)  
8081B Pest (PSDDA) in Solid (Version: HCB Only)

**WO Comments**  
23A0206: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43, 7935-36, K011477-79, MS/MSD </E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
<p><b>SPECIAL INSTRUCTIONS:</b></p> <ol style="list-style-type: none"> <li>1. Weigh into beakers-lightly dry with Sodium Sulfate.</li> <li>2. Transfer to microwave vessels.</li> <li>3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization).</li> <li>4. Add surr/spike.</li> <li>5. Microwave on appropriate power setting determined by # of samples.</li> <li>6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool.</li> <li>7. Decant 1:1 Hex/ACE into Erlenmeyer flask using a funnel containing neutral glasswool.</li> <li>8. Rinse with Hexane.</li> <li>9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization).</li> <li>10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane.</li> <li>11. KD to 5mL at 100°C. (NO HEXANE EXCHANGE).</li> <li>12. TurboVap</li> <li>13. GPC</li> <li>14. After GPC: KD at 80 - 85°C</li> <li>15. Exchange to Hexane at 100°C 2 x 20 mL).</li> <li>16. TurboVap.</li> <li>17. Cleanups, if Acid cleaning do not add Ethyl Acetate for Sulfur Clean. Do Not Acid Clean if Acid liable compounds are requested.</li> <li>18. Vial in Hexane.</li> </ol> <p>A. Need Total Solids Y / <input type="checkbox"/> N</p> <p>B. Archive/Freeze <input checked="" type="checkbox"/> Y <input type="checkbox"/> N</p>	



Extraction Parameter: PEST Extraction Batch BLAD62

Total Solids Batch: BLAD562 Work Order(s): 23A0206

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=	
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= 206-1,2,3,4,5,6,7,8,9,10,11,12,13,14	DP 1/25/23
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input type="checkbox"/> Rocks (%+size)?	
<input type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=	
<input checked="" type="checkbox"/> Previously Frozen = All samples	OTO 1/26/23
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input checked="" type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=	
<input type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).	
<input type="checkbox"/> Share Samples Y/N	
<input type="checkbox"/> Multiple Jars Y/N	
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=	
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0067

Cleanup Type: Sulfuric Acid

Cleanup Method: EPA 3665 Sulfuric Acid Cleanup - uL

Analysis: EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1094	23A0206-12	23021320.D	02/08/2023	
LDW23-SS1103	23A0206-09	23021315.D	02/08/2023	
LDW23-SS1100	23A0206-10	23021316.D	02/08/2023	
LDW23-SS1096	23A0206-11	23021319.D	02/08/2023	
LDW23-SS1145	23A0206-06	23021312.D	02/08/2023	
LDW23-SS1139	23A0206-07	23021313.D	02/08/2023	
Matrix Spike Dup	BLA0622-MSD1	23021324.D	02/08/2023	
LDW23-SS1151	23A0206-05	23021311.D	02/08/2023	
LDW23-SS1117	23A0206-08	23021314.D	02/08/2023	
LDW23-SS1164	23A0206-03	23021309.D	02/08/2023	
LDW23-SS1158	23A0206-04	23021310.D	02/08/2023	
LDW23-SS1066	23A0206-13	23021321.D	02/08/2023	
LDW23-SS1061	23A0206-14	23021322.D	02/08/2023	
LDW23-SS1021	23A0206-01	23021307.D	02/08/2023	
Matrix Spike	BLA0622-MS1	23021323.D	02/08/2023	
LCS Dup	BLA0622-BSD1	23021306.D	02/08/2023	
LCS	BLA0622-BS1	23021305.D	02/08/2023	
Blank	BLA0622-BLK1	23021304.D	02/08/2023	
LDW23-SS1015	23A0206-02	23021308.D	02/08/2023	



## CLEANUP BENCH SHEET

CLB0067

Matrix: Solid

Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL

Printed: 2/8/2023 4:09:12PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-02	B	LDW23-SS1015	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-03	B	LDW23-SS1164	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-04	B	LDW23-SS1158	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-05	B	LDW23-SS1151	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-06	B	LDW23-SS1145	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-07	B	LDW23-SS1139	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-08	B	LDW23-SS1117	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-09	B	LDW23-SS1103	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-10	B	LDW23-SS1100	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-11	B	LDW23-SS1096	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-12	B	LDW23-SS1094	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-13	B	LDW23-SS1066	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-14	B	LDW23-SS1061	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
BLA0622-BLK1	-	Blank	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BS1	-	LCS	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BSD1	-	LCS Dup	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MS1	-	Matrix Spike	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/8/2023	CTO	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0068

Cleanup Type: Sulfur

Cleanup Method: EPA 3660B Sulfur Cleanup - uL

Analysis: EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1158	23A0206-04	23021310.D	02/08/2023	
LDW23-SS1066	23A0206-13	23021321.D	02/08/2023	
LCS	BLA0622-BS1	23021305.D	02/08/2023	
LDW23-SS1094	23A0206-12	23021320.D	02/08/2023	
LCS Dup	BLA0622-BSD1	23021306.D	02/08/2023	
LDW23-SS1100	23A0206-10	23021316.D	02/08/2023	
LDW23-SS1061	23A0206-14	23021322.D	02/08/2023	
LDW23-SS1139	23A0206-07	23021313.D	02/08/2023	
LDW23-SS1145	23A0206-06	23021312.D	02/08/2023	
LDW23-SS1164	23A0206-03	23021309.D	02/08/2023	
LDW23-SS1021	23A0206-01	23021307.D	02/08/2023	
LDW23-SS1117	23A0206-08	23021314.D	02/08/2023	
Matrix Spike Dup	BLA0622-MSD1	23021324.D	02/08/2023	
LDW23-SS1015	23A0206-02	23021308.D	02/08/2023	
Blank	BLA0622-BLK1	23021304.D	02/08/2023	
Matrix Spike	BLA0622-MS1	23021323.D	02/08/2023	
LDW23-SS1103	23A0206-09	23021315.D	02/08/2023	
LDW23-SS1151	23A0206-05	23021311.D	02/08/2023	
LDW23-SS1096	23A0206-11	23021319.D	02/08/2023	



## CLEANUP BENCH SHEET

CLB0068

Matrix: Solid Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL

Printed: 2/8/2023 4:09:41PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-02	B	LDW23-SS1015	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-03	B	LDW23-SS1164	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-04	B	LDW23-SS1158	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-05	B	LDW23-SS1151	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-06	B	LDW23-SS1145	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-07	B	LDW23-SS1139	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-08	B	LDW23-SS1117	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-09	B	LDW23-SS1103	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-10	B	LDW23-SS1100	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-11	B	LDW23-SS1096	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-12	B	LDW23-SS1094	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-13	B	LDW23-SS1066	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-14	B	LDW23-SS1061	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
BLA0622-BLK1	-	Blank	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BS1	-	LCS	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BSD1	-	LCS Dup	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MS1	-	Matrix Spike	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/8/2023	CTO	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0069

Cleanup Type: GPC

Cleanup Method: EPA 3640A GPC Cleanup 1:1

Analysis: EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1145	23A0206-06	23021312.D	02/08/2023	
LDW23-SS1096	23A0206-11	23021319.D	02/08/2023	
LDW23-SS1094	23A0206-12	23021320.D	02/08/2023	
LDW23-SS1103	23A0206-09	23021315.D	02/08/2023	
LDW23-SS1061	23A0206-14	23021322.D	02/08/2023	
LDW23-SS1151	23A0206-05	23021311.D	02/08/2023	
LDW23-SS1021	23A0206-01	23021307.D	02/08/2023	
LDW23-SS1015	23A0206-02	23021308.D	02/08/2023	
LDW23-SS1100	23A0206-10	23021316.D	02/08/2023	
LDW23-SS1117	23A0206-08	23021314.D	02/08/2023	
LDW23-SS1139	23A0206-07	23021313.D	02/08/2023	
LDW23-SS1158	23A0206-04	23021310.D	02/08/2023	
LDW23-SS1164	23A0206-03	23021309.D	02/08/2023	
Blank	BLA0622-BLK1	23021304.D	02/08/2023	
LCS	BLA0622-BS1	23021305.D	02/08/2023	
Matrix Spike Dup	BLA0622-MSD1	23021324.D	02/08/2023	
LCS Dup	BLA0622-BSD1	23021306.D	02/08/2023	
Matrix Spike	BLA0622-MS1	23021323.D	02/08/2023	
LDW23-SS1066	23A0206-13	23021321.D	02/08/2023	



## CLEANUP BENCH SHEET

CLB0069

Matrix: Solid

Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1

Check Standard: CLA0166-GPC1

Printed: 2/8/2023 4:10:12PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-02	B	LDW23-SS1015	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-03	B	LDW23-SS1164	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-04	B	LDW23-SS1158	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-05	B	LDW23-SS1151	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-06	B	LDW23-SS1145	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-07	B	LDW23-SS1139	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-08	B	LDW23-SS1117	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-09	B	LDW23-SS1103	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-10	B	LDW23-SS1100	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-11	B	LDW23-SS1096	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-12	B	LDW23-SS1094	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-13	B	LDW23-SS1066	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-14	B	LDW23-SS1061	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
BLA0622-BLK1	-	Blank	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BS1	-	LCS	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BSD1	-	LCS Dup	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MS1	-	Matrix Spike	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/8/2023	CTO	





## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0070

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup - uL

Analysis: EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1117	23A0206-08	23021314.D	02/08/2023	
LDW23-SS1164	23A0206-03	23021309.D	02/08/2023	
Blank	BLA0622-BLK1	23021304.D	02/08/2023	
LDW23-SS1015	23A0206-02	23021308.D	02/08/2023	
LDW23-SS1103	23A0206-09	23021315.D	02/08/2023	
Matrix Spike Dup	BLA0622-MSD1	23021324.D	02/08/2023	
LCS Dup	BLA0622-BSD1	23021306.D	02/08/2023	
LDW23-SS1158	23A0206-04	23021310.D	02/08/2023	
LDW23-SS1139	23A0206-07	23021313.D	02/08/2023	
LDW23-SS1145	23A0206-06	23021312.D	02/08/2023	
LDW23-SS1061	23A0206-14	23021322.D	02/08/2023	
LDW23-SS1100	23A0206-10	23021316.D	02/08/2023	
LDW23-SS1096	23A0206-11	23021319.D	02/08/2023	
LDW23-SS1021	23A0206-01	23021307.D	02/08/2023	
LDW23-SS1094	23A0206-12	23021320.D	02/08/2023	
LCS	BLA0622-BS1	23021305.D	02/08/2023	
Matrix Spike	BLA0622-MS1	23021323.D	02/08/2023	
LDW23-SS1066	23A0206-13	23021321.D	02/08/2023	
LDW23-SS1151	23A0206-05	23021311.D	02/08/2023	



## CLEANUP BENCH SHEET

CLB0070

Matrix: Solid      Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL

Printed: 2/8/2023 4:10:36PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-02	B	LDW23-SS1015	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-03	B	LDW23-SS1164	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-04	B	LDW23-SS1158	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-05	B	LDW23-SS1151	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-06	B	LDW23-SS1145	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-07	B	LDW23-SS1139	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-08	B	LDW23-SS1117	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-09	B	LDW23-SS1103	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-10	B	LDW23-SS1100	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-11	B	LDW23-SS1096	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-12	B	LDW23-SS1094	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-13	B	LDW23-SS1066	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
23A0206-14	B	LDW23-SS1061	B 01	2.5	2.5	8081B Pest (PSDDA)	2/8/2023	CTO	
BLA0622-BLK1	-	Blank	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BS1	-	LCS	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-BSD1	-	LCS Dup	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MS1	-	Matrix Spike	-	2.5	2.5	-	2/8/2023	CTO	
BLA0622-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/8/2023	CTO	



**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 8081B**

Blank
-------

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BLA0622-BLK1</u>
Sampled:	<u>N/A</u>	Prepared:	<u>01/30/23 14:14</u>
Solids:		Preparation:	<u>EPA 3546 (Microwave)</u>
Batch:	<u>BLA0622</u>	Sequence:	<u>SLB0237</u>
Instrument:	<u>ECD6</u>	Column:	<u>STX-CLP</u>
		File ID:	<u>23021304.D</u>
		Analyzed:	<u>02/13/23 14:11</u>
		Initial/Final:	<u>12.5 g / 2.5 mL</u>
		Calibration:	<u>FL00041</u>
		Cleanups:	<u>GPC, Silica Gel, Sulfur, Sulfuric Acid</u>

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50
SURROGATES		ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl		8.0000	6.36	79.5	30 - 160	
Decachlorobiphenyl [2C]		8.0000	6.42	80.3	30 - 160	
Tetrachlorometaxylene		8.0000	6.40	80.0	30 - 160	
Tetrachlorometaxylene [2C]		8.0000	5.62	70.2	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021304.D  
Data file 2: /20230213.b/B20230213.b/23021304.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: BIA0622-BLK1  
Client ID:  
Injection Date: 13-FEB-2023 14:11  
Report Date: 02/17/2023 12:16  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag		
----		4.812	-0.003	3569	0.00	0.25	---	alpha-BHC	
----		----			0.00	0.00	---	beta-BHC	
----		----			0.00	0.00	---	delta-BHC	
----		5.209	-0.000	790	0.00	0.07	---	gamma-BHC (Lindane)	
----		5.733	0.000	1783	0.00	0.16	---	Heptachlor	
----		6.134	-0.001	12293	0.00	0.98	---	Aldrin	
----		6.797	0.005	2911	0.00	0.28	---	Heptachlor epoxide b	
----		----			0.00	0.00	---	Endosulfan I	
----		7.518	-0.012	454	0.00	0.05	---	Dieldrin	
----		7.320	-0.003	484	0.00	0.05	---	4,4'-DDE	
----		----			0.00	0.00	---	Endrin	
----		8.054	-0.013	1258	0.00	0.17	---	Endosulfan II	
----		----			0.00	0.00	---	4,4'-DDD	
----		----			0.00	0.00	---	Endosulfan sulfate	
----		8.254	0.006	2833	0.00	0.42	---	4,4'-DDT	
----		8.896	0.006	1624	0.00	0.55	---	Methoxychlor	
----		9.187	-0.002	8609	0.00	1.24	---	Endrin ketone	
----		8.392	-0.006	1772	0.00	0.34	---	Endrin aldehyde	
----		6.999	-0.004	744	0.00	0.07	---	trans-Chlordane	
----		----			0.00	0.00	---	cis-Chlordane	
----		2.447	-0.027	67143	0.00	4.97	---	Hexachlorobutadiene	
----		----			0.00	0.00	---	Hexachlorobenzene	
3.791	0.001	193966	4.182	0.000	280779	32.01	28.10	13.0	Tetrachloro-m-xylene
9.305	-0.001	137729	10.402	-0.001	178392	31.78	32.11	1.0	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	445618	-33.7
Hexabromobiphenyl	609723	427709	-29.9

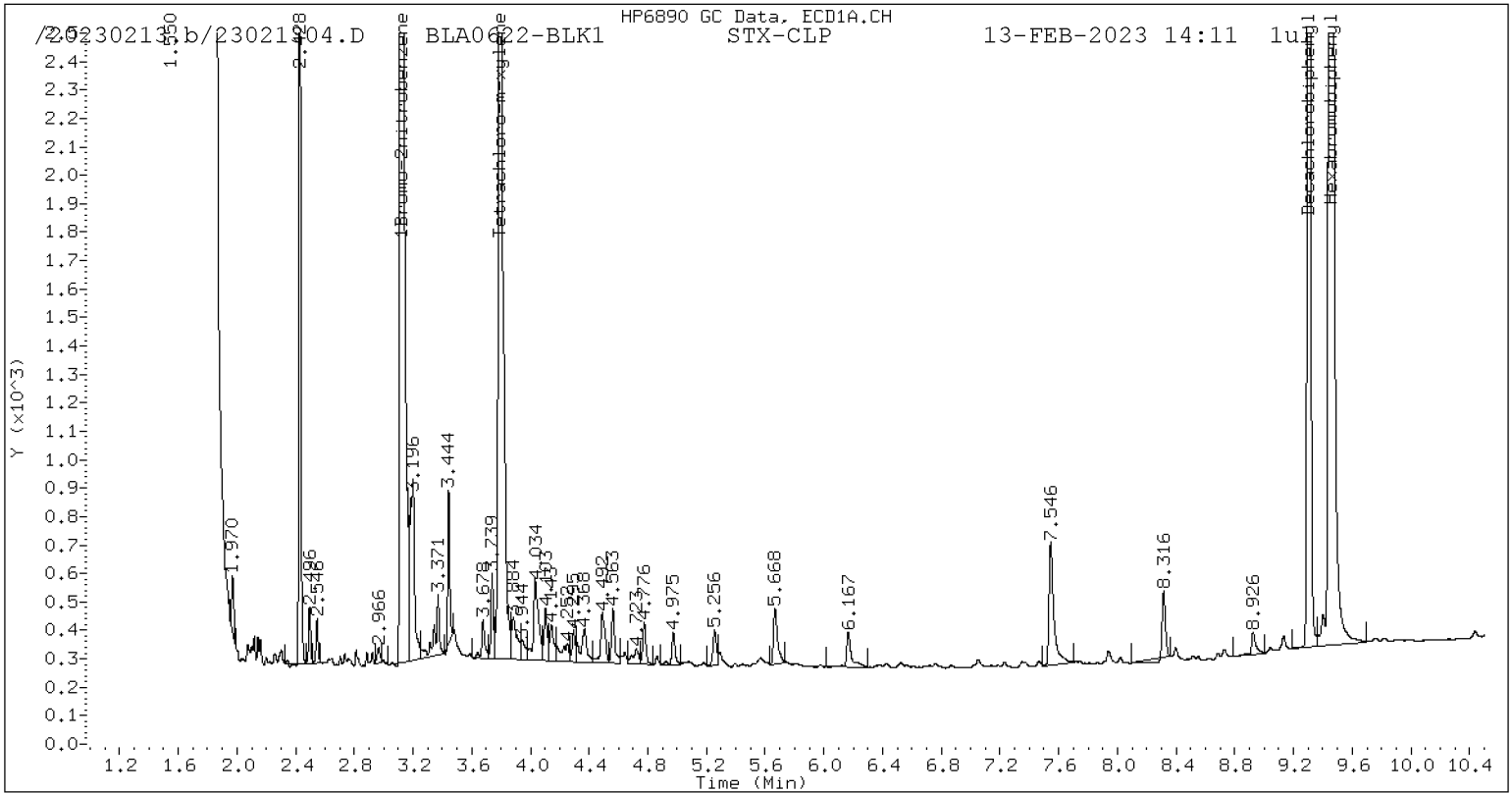
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	709967	-29.5
Hexabromobiphenyl	769764	502729	-34.7

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

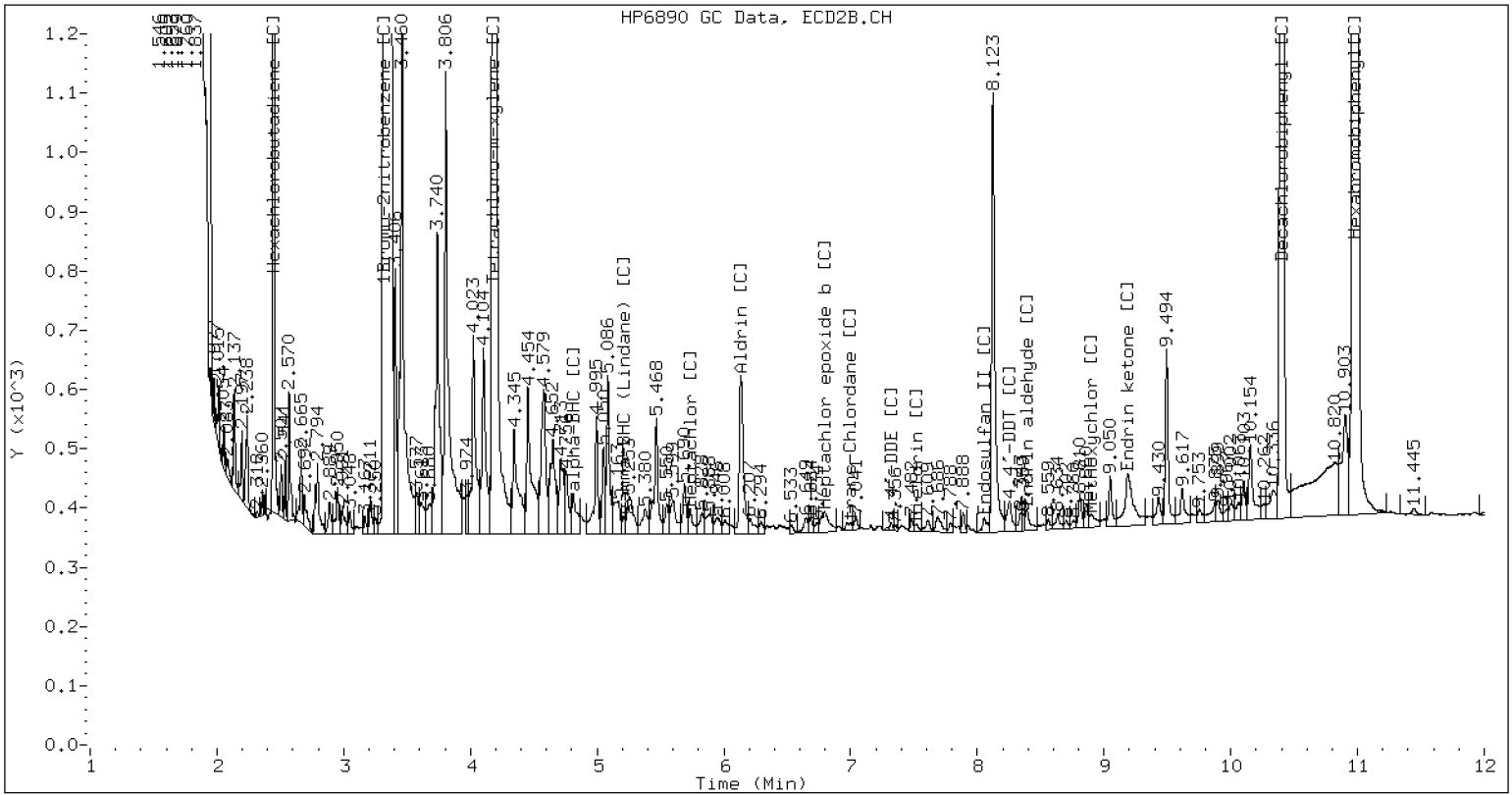
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021304.D BLA0622-BLK1 CLP2



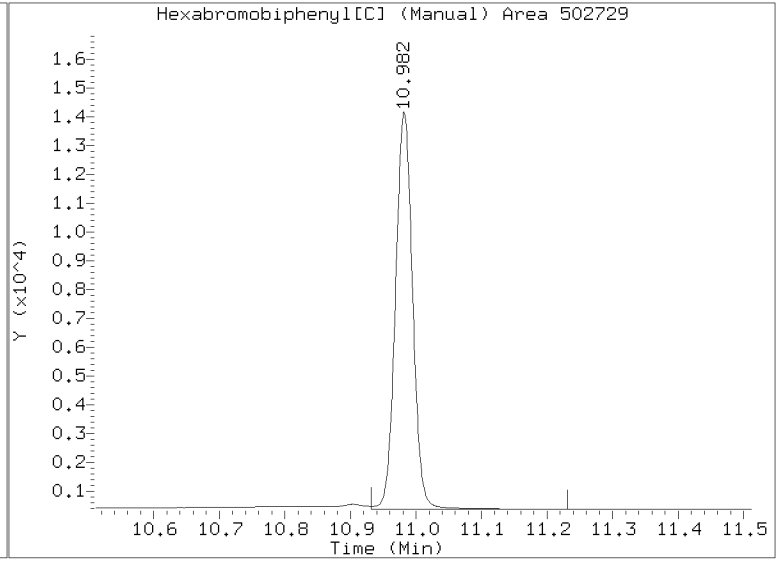
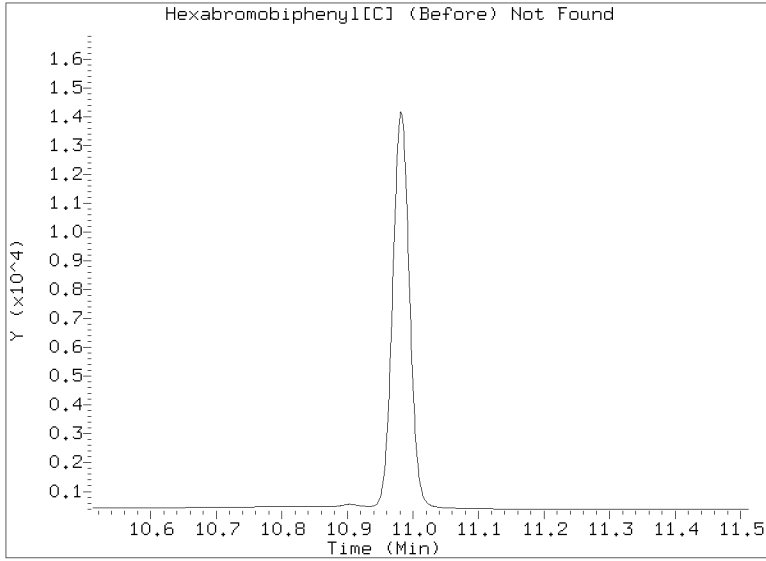
CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021304.D

Injection Date: 13-FEB-2023 14:11

Lab ID:BLA0622-BLK1 Client ID:





**LCS / LCS DUPLICATE RECOVERY**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>02/13/23 14:29</u>
Batch:	<u>BLA0622</u>	Laboratory ID:	<u>BLA0622-BS1</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>12.5 g / 2.5 mL</u>		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.81		70.2	26 - 128

\* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Hexachlorobenzene	4.00	3.29		82.2	15.8	30	26 - 128

\* Indicates values outside of QC limits



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021305.D  
Data file 2: /20230213.b/B20230213.b/23021305.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: BIA0622-BS1  
Client ID:  
Injection Date: 13-FEB-2023 14:29  
Report Date: 02/17/2023 12:16  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.299	0.000	140385	4.815	-0.000	221763	14.96	14.29	4.6	alpha-BHC
4.682	0.001	59112	5.290	-0.000	87034	16.36	14.75	10.4	beta-BHC
4.863	-0.000	130603	5.640	-0.002	197795	17.03	15.47	9.6	delta-BHC
4.599	0.000	134649	5.209	-0.001	203286	16.55	15.43	7.0	gamma-BHC (Lindane)
5.079	0.000	121381	5.732	-0.001	175617	16.77	14.72	13.0	Heptachlor
5.399	-0.000	123654	6.134	-0.001	162242	15.24	11.91	24.5	Aldrin
6.071	-0.001	111967	6.791	-0.001	166046	15.92	14.74	7.7	Heptachlor epoxide b
6.515	-0.000	137438	7.235	-0.001	185385	21.29	18.67	13.1	Endosulfan I
----			7.514	-0.017	1209	0.00	0.11	---	Dieldrin
6.437	-0.003	220443	7.321	-0.002	319119	34.23	31.72	7.6	4,4'-DDE
----			7.863	0.008	1401	0.00	0.18	---	Endrin
7.263	-0.001	30041	8.065	-0.002	38591	5.70	4.93	14.5	Endosulfan II
7.085	-0.002	192812	7.928	-0.001	267086	36.55	35.95	1.6	4,4'-DDD
8.125	-0.000	118533	8.665	-0.001	163176	23.68	23.74	0.2	Endosulfan sulfate
7.377	-0.001	199313	8.246	-0.002	242425	37.39	33.81	10.0	4,4'-DDT
----			8.878	-0.012	14413	0.00	4.54	---	Methoxychlor
8.399	-0.000	145930	9.188	-0.001	177444	25.45	23.90	6.3	Endrin ketone
7.692	-0.000	9325	8.397	-0.001	17133	2.22	3.10	33.3	Endrin aldehyde
6.213	-0.002	127224	7.002	-0.001	173754	17.81	15.47	14.1	trans-Chlordane
6.360	-0.001	118227	7.162	-0.002	166535	16.50	15.15	8.5	cis-Chlordane
2.296	0.000	127506	2.474	0.001	180113	12.97	12.22	5.9	Hexachlorobutadiene
4.143	0.001	122310	4.675	0.000	189181	14.04	13.39	4.7	Hexachlorobenzene
3.792	0.002	215938	4.182	0.000	327746	32.57	30.06	8.0	Tetrachloro-m-xylene
9.305	-0.001	153480	10.402	-0.001	213894	33.91	36.03	6.1	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	487456	-27.5
Hexabromobiphenyl	609723	446691	-26.7

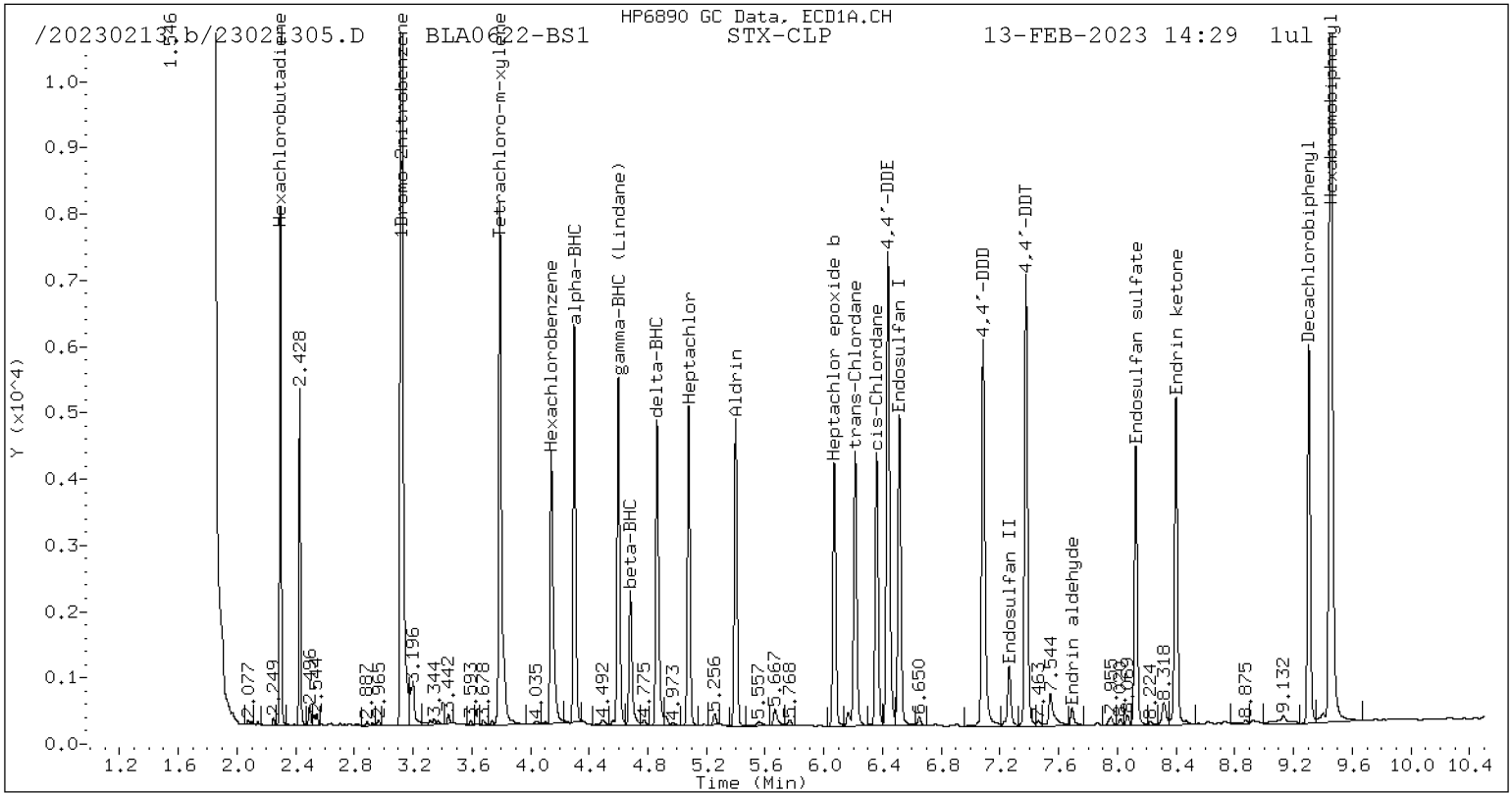
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	774463	-23.1
Hexabromobiphenyl	769764	537114	-30.2

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

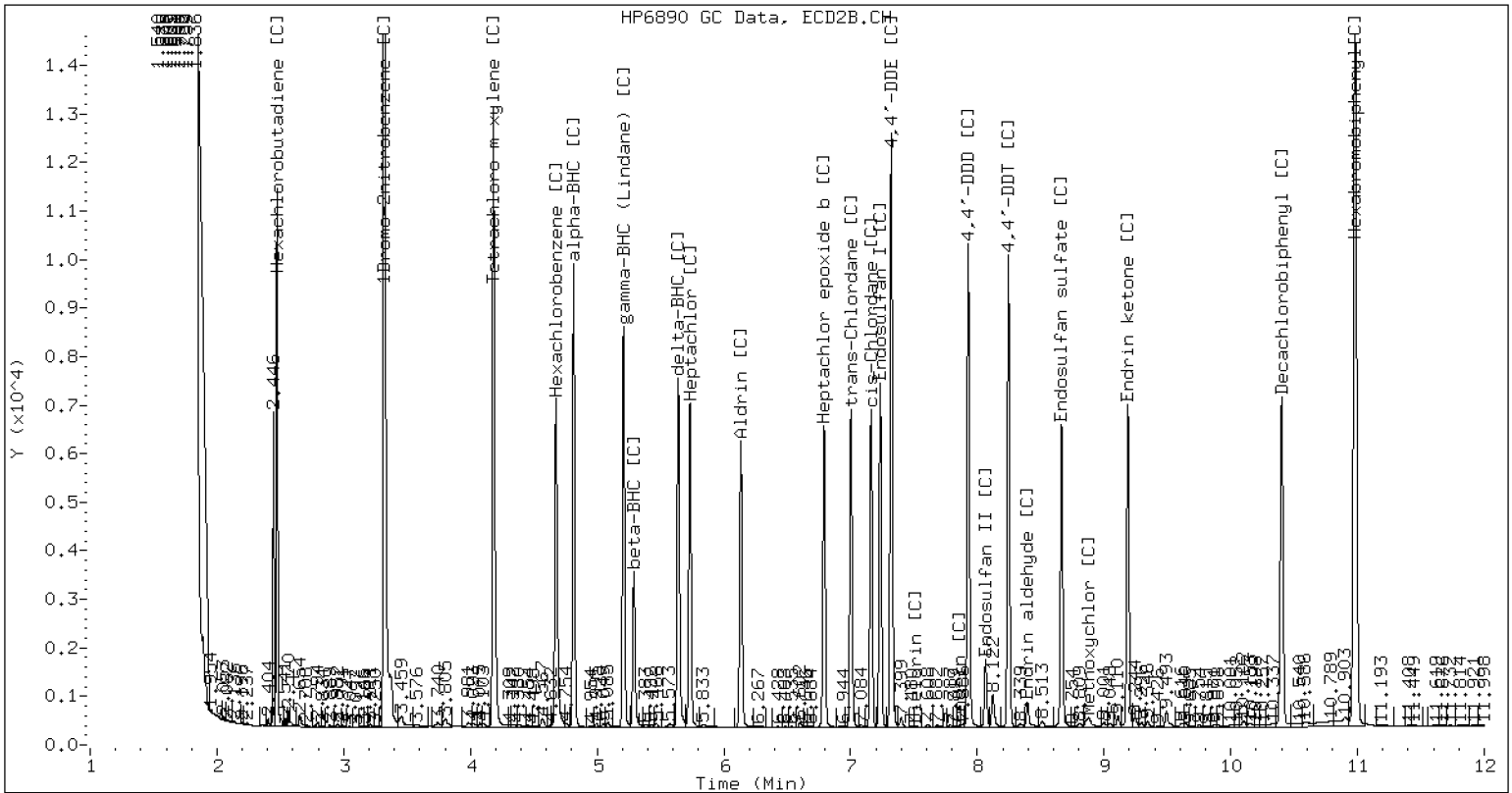
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021305.D BLA0622-BS1 CLP2



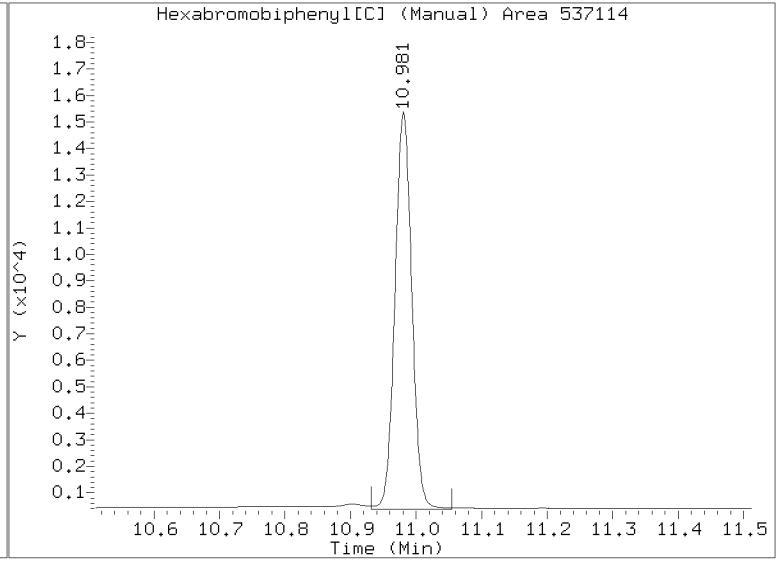
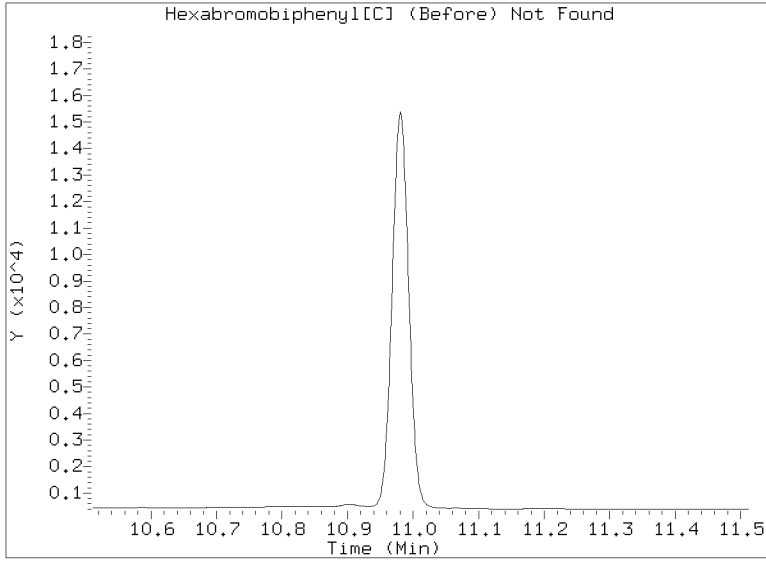
CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021305.D

Injection Date: 13-FEB-2023 14:29

Lab ID:BLA0622-BS1 Client ID:



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021306.D  
Data file 2: /20230213.b/B20230213.b/23021306.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: BIA0622-BSD1  
Client ID:  
Injection Date: 13-FEB-2023 14:47  
Report Date: 02/17/2023 12:16  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Response	RT	CLP2 Col Shift Response	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.298	-0.001	161530	4.815	-0.000	246308	16.97	15.93	6.3	alpha-BHC
4.680	-0.001	64645	5.289	-0.001	95610	17.64	16.26	8.1	beta-BHC
4.862	-0.001	143573	5.640	-0.002	221222	18.45	17.37	6.0	delta-BHC
4.598	-0.001	146820	5.208	-0.001	224400	17.79	17.10	3.9	gamma-BHC (Lindane)
5.078	-0.001	134676	5.732	-0.002	197858	18.34	16.64	9.7	Heptachlor
5.398	-0.001	138620	6.134	-0.001	180207	16.84	13.28	23.7	Aldrin
6.070	-0.001	124649	6.790	-0.001	185900	17.47	16.56	5.3	Heptachlor epoxide b
6.514	-0.001	185597	7.235	-0.001	257214	28.34	26.00	8.6	Endosulfan I
----			7.532	0.001	1605	0.00	0.15	---	Dieldrin
6.436	-0.004	238393	7.320	-0.002	347735	36.49	34.70	5.0	4,4'-DDE
----			7.862	0.008	1919	0.00	0.25	---	Endrin
7.262	-0.002	56130	8.066	-0.001	78698	10.53	9.89	6.2	Endosulfan II
7.085	-0.003	202723	7.928	-0.001	287775	37.99	38.11	0.3	4,4'-DDD
8.125	-0.001	160808	8.665	-0.001	222706	31.76	31.87	0.4	Endosulfan sulfate
7.376	-0.002	209958	8.246	-0.002	272016	38.94	37.33	4.2	4,4'-DDT
7.865	-0.001	20733	8.888	-0.002	35478	8.68	11.00	23.6	Methoxychlor
8.398	-0.001	240096	9.188	-0.001	301113	41.40	39.90	3.7	Endrin ketone
7.691	-0.001	19013	8.396	-0.001	32165	4.47	5.73	24.7	Endrin aldehyde
6.213	-0.002	138298	7.002	-0.001	190348	19.08	17.01	11.5	trans-Chlordane
6.359	-0.001	129707	7.162	-0.002	182665	17.84	16.68	6.7	cis-Chlordane
2.296	-0.001	146557	2.474	0.000	202902	14.69	13.82	6.1	Hexachlorobutadiene
4.143	0.001	145377	4.675	-0.000	207013	16.45	14.71	11.1	Hexachlorobenzene
3.791	0.000	225945	4.181	0.000	320461	33.60	29.51	13.0	Tetrachloro-m-xylene
9.305	-0.001	146416	10.401	-0.001	218189	31.99	36.16	12.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	494543	-26.5
Hexabromobiphenyl	609723	451766	-25.9

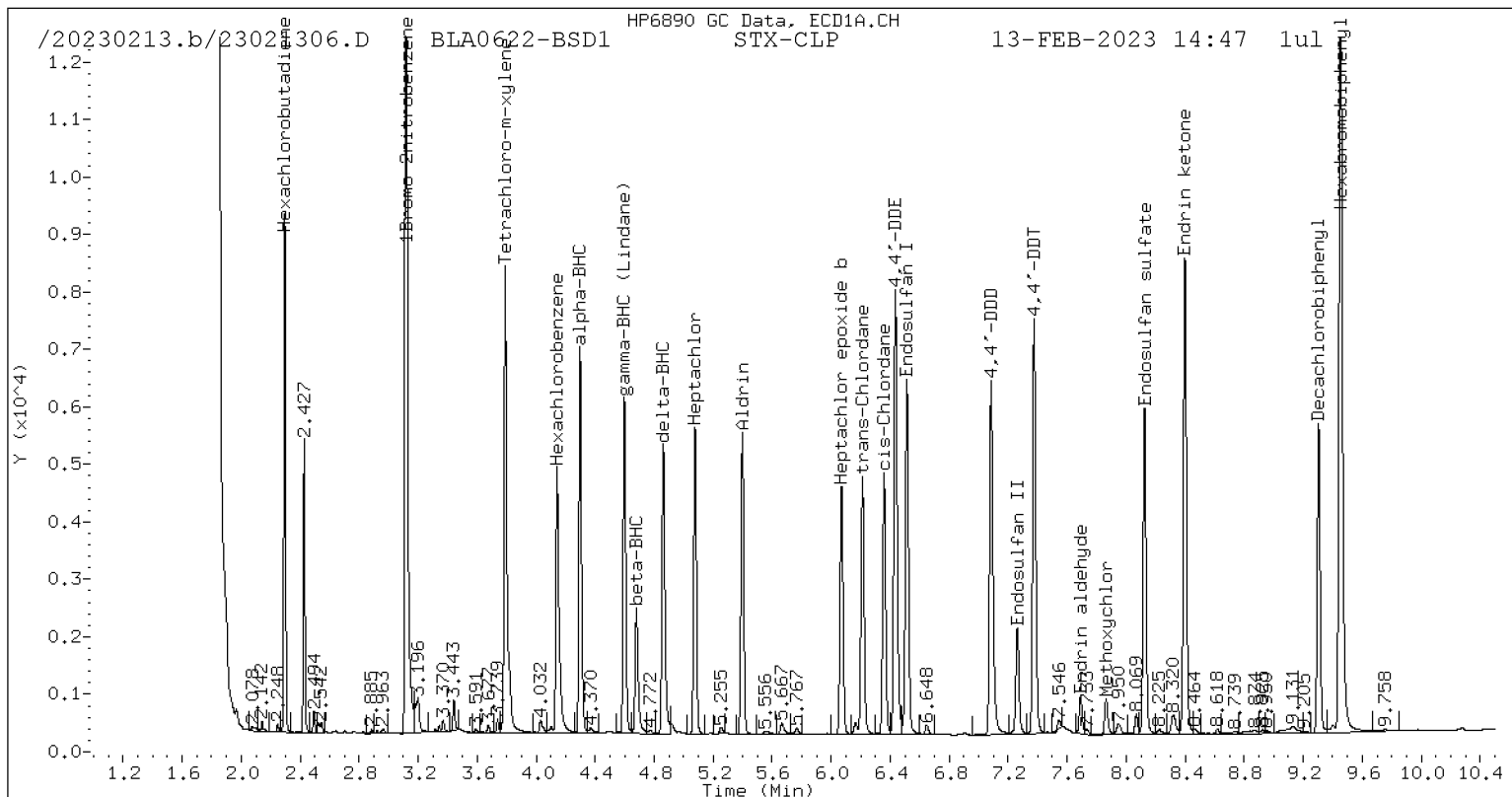
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	771575	-23.3
Hexabromobiphenyl	769764	545926	-29.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

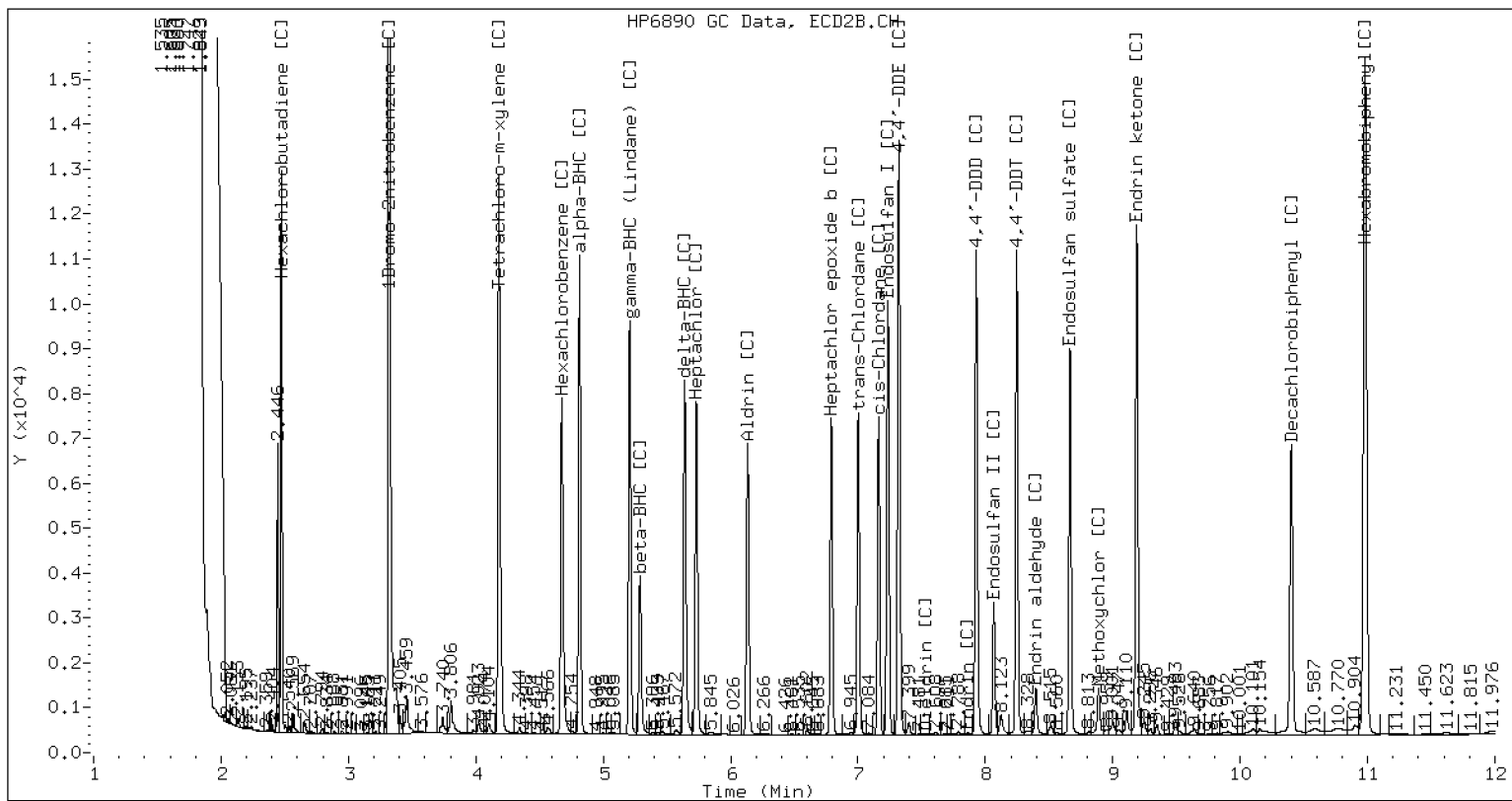
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021306.D BLA0622-BSD1 CLP2



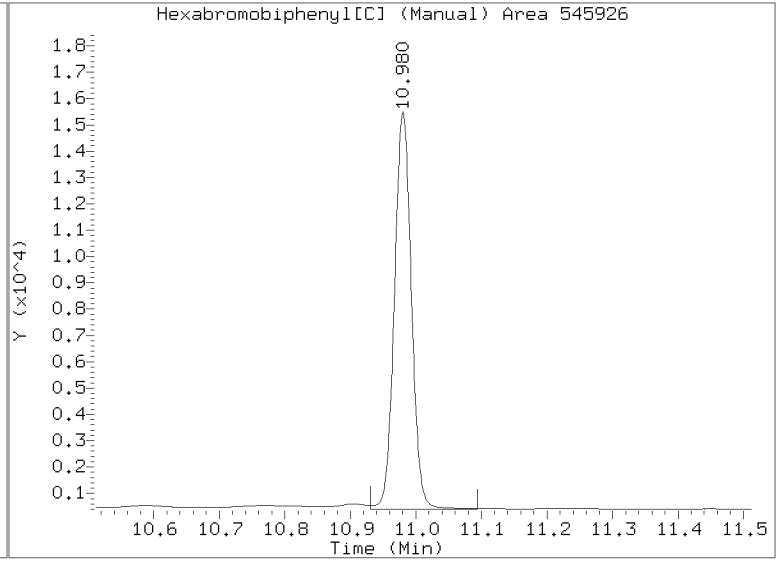
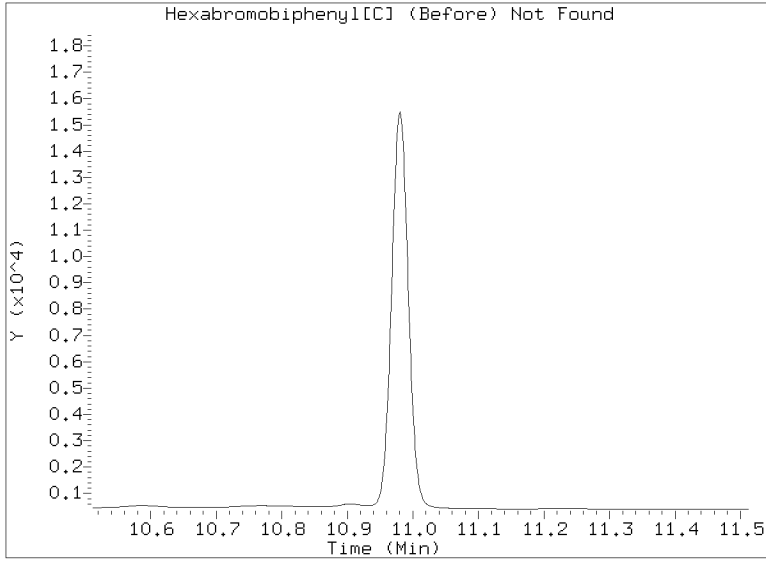
CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021306.D

Injection Date: 13-FEB-2023 14:47

Lab ID:BLA0622-BSD1 Client ID:







**MS / MS DUPLICATE RECOVERY  
EPA 8081B**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor OEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Matrix: <u>Solid</u>	Analyzed: <u>02/13/23 19:52</u>
Batch: <u>BLA0622</u>	Laboratory ID: <u>BLA0622-MS1</u>
Preparation: <u>EPA 3546 (Microwave)</u>	Sequence Name: <u>Matrix Spike</u>
Initial/Final: <u>20.8 g / 2.5 mL</u>	Source Sample: <u>LDW23-SS1066</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	ND	U	2.86	P1	71.5	26 - 128

\* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.



**MS / MS DUPLICATE RECOVERY**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>02/13/23 20:10</u>
Batch:	<u>BLA0622</u>	Laboratory ID:	<u>BLA0622-MSD1</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>Matrix Spike Dup</u>
Initial/Final:	<u>20.8 g / 2.5 mL</u>	Source Sample:	<u>LDW23-SS1066</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Hexachlorobenzene	4.00	ND	*, U	*		30	26 - 128

\* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021323.D  
Data file 2: /20230213.b/B20230213.b/23021323.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: BIA0622-MS1  
Client ID:  
Injection Date: 13-FEB-2023 19:52  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Shift	CLP Col Response	RT	CLP2 Shift	CLP2 Col Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.302	0.003	248614	4.815	-0.000	163137	27.48	11.38	82.8*	alpha-BHC
4.680	-0.001	488574	5.316	0.026	2161192	140.24	396.62	95.5*	beta-BHC
4.871	0.008	8632861	5.639	-0.003	159716	1167.33	13.53	195.4*	delta-BHC
4.600	0.001	1487771	5.208	-0.001	886866	189.64	72.91	88.9*	gamma-BHC (Lindane)
5.066	-0.012	997530	5.742	0.009	1880897	142.90	170.71	17.7	Heptachlor
5.419	0.020	2028751	6.133	-0.003	183607	259.33	14.60	178.7*	Aldrin
6.116	0.044	1949085	6.775	-0.017	2793370	287.34	268.53	6.8	Heptachlor epoxide b
6.514	-0.001	115559	7.231	-0.005	264878	18.56	28.89	43.5*	Endosulfan I
6.803	0.028	108719	7.513	-0.017	594957	16.26	58.73	113.3*	Dieldrin
6.431	-0.009	588657	7.319	-0.004	379408	94.80	40.84	79.6*	4,4'-DDE
7.050	0.025	1187992	----	----	----	232.63	0.00	---	Endrin
7.293	0.029	190721	8.078	0.012	689453	41.49	94.61	78.1*	Endosulfan II
----	----	----	7.926	-0.003	275159	0.00	39.79	---	4,4'-DDD
8.125	-0.001	218675	8.664	-0.002	97250	50.10	15.20	106.9*	Endosulfan sulfate
7.400	0.022	1524151	8.251	0.004	1818204	327.84	272.41	18.5	4,4'-DDT
7.893	0.027	115504	----	----	----	56.07	0.00	---	Methoxychlor
----	----	----	9.198	0.009	1518271	0.00	219.66	---	Endrin ketone
7.715	0.023	654206	8.384	-0.013	1763771	178.42	343.11	63.2*	Endrin aldehyde
----	----	----	----	----	----	0.00	0.00	---	trans-Chlordane
6.379	0.019	507195	7.162	-0.002	167232	73.41	16.48	126.7*	cis-Chlordane
2.296	-0.000	128636	2.474	0.001	172972	13.57	12.71	6.6	Hexachlorobutadiene
4.138	-0.004	120214	4.662	-0.013	2232358	14.31	171.14	169.1*	Hexachlorobenzene
3.790	-0.000	357120	4.181	-0.001	244482	55.87	24.29	78.8*	Tetrachloro-m-xylene
9.305	-0.001	149225	10.402	-0.001	182547	37.81	33.03	13.5	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	470017	-30.1
Hexabromobiphenyl	609723	389525	-36.1

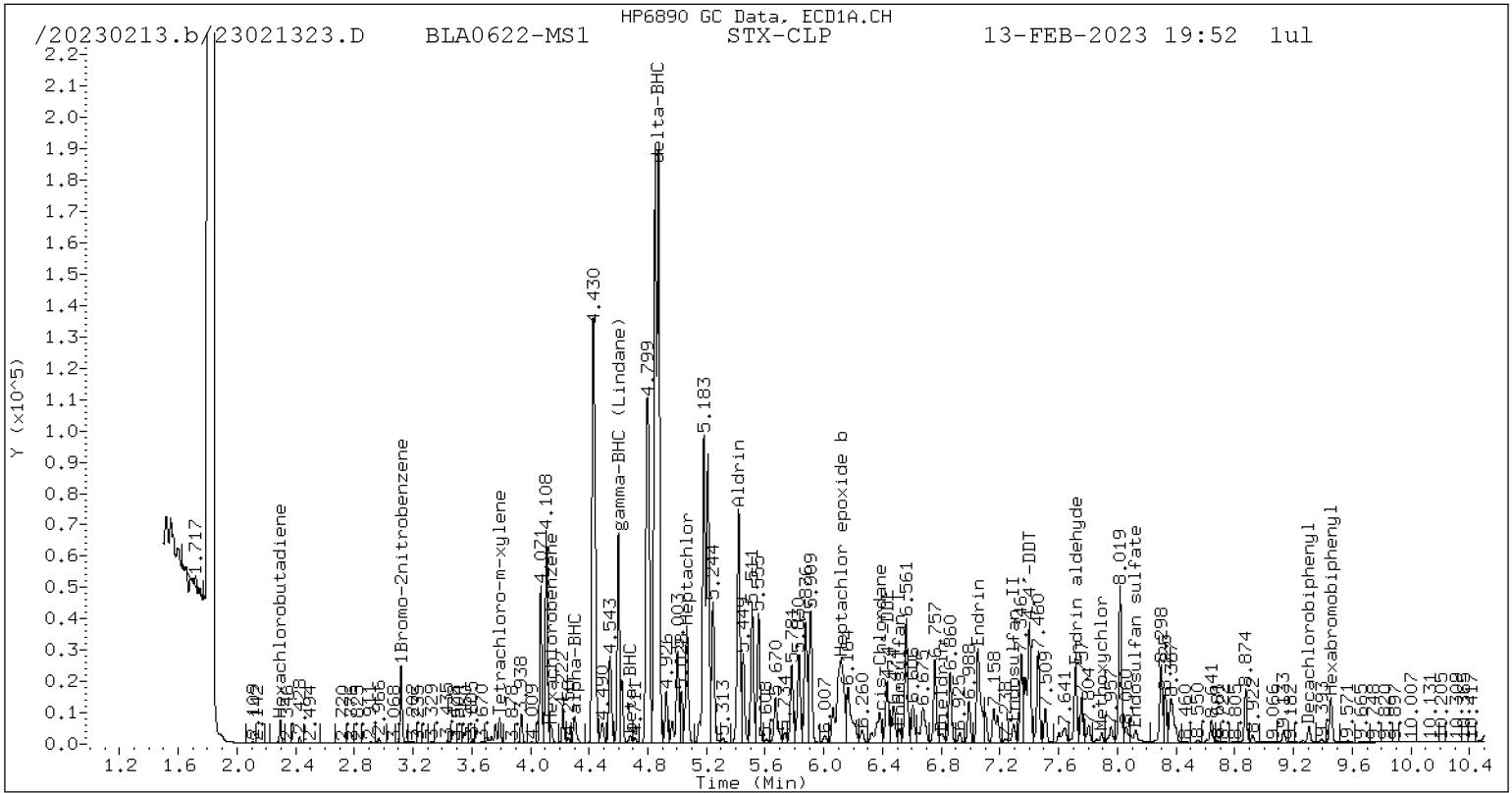
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	715167	-28.9
Hexabromobiphenyl	769764	500014	-35.0

\* Standard Areas taken from Initial Cal Level 5

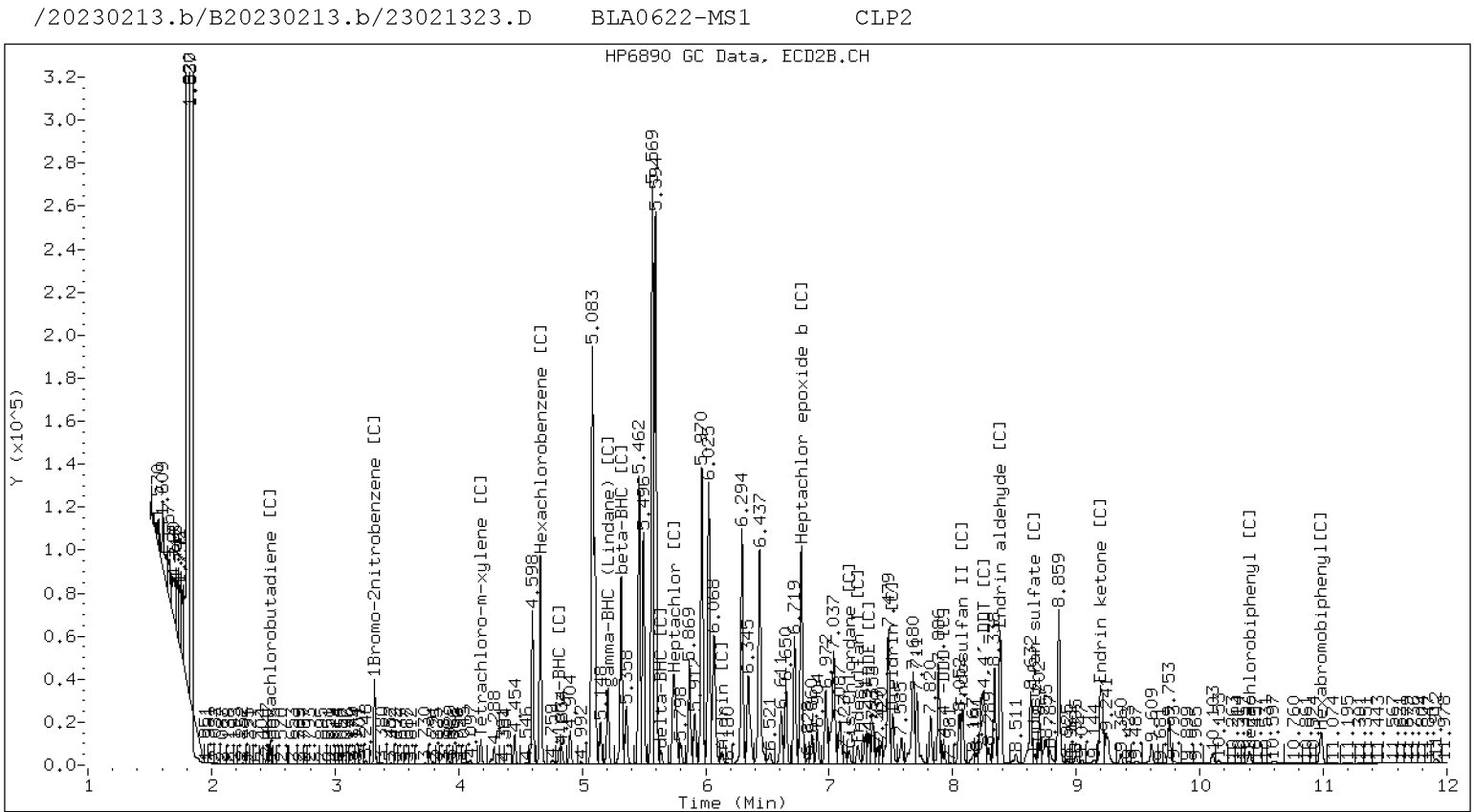
Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



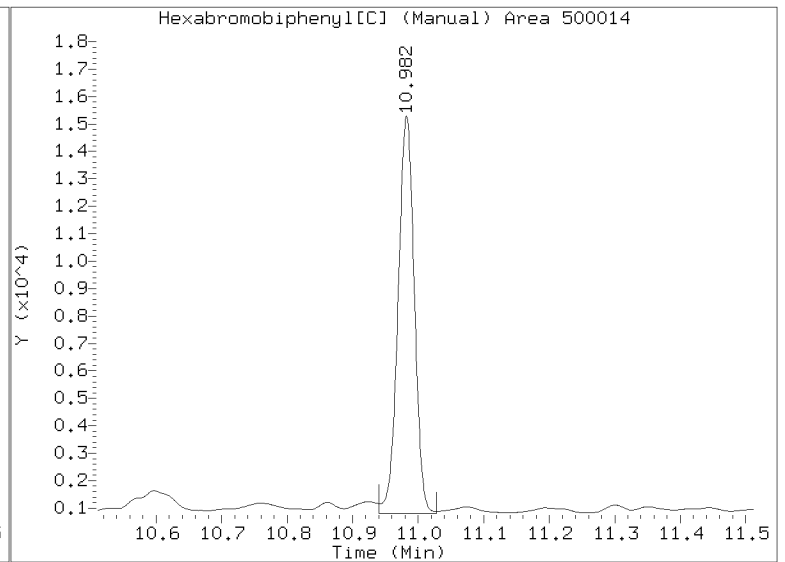
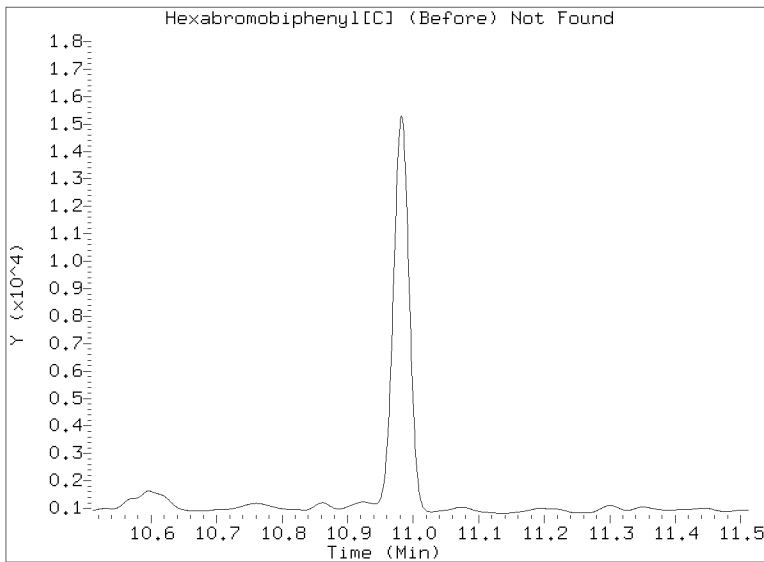
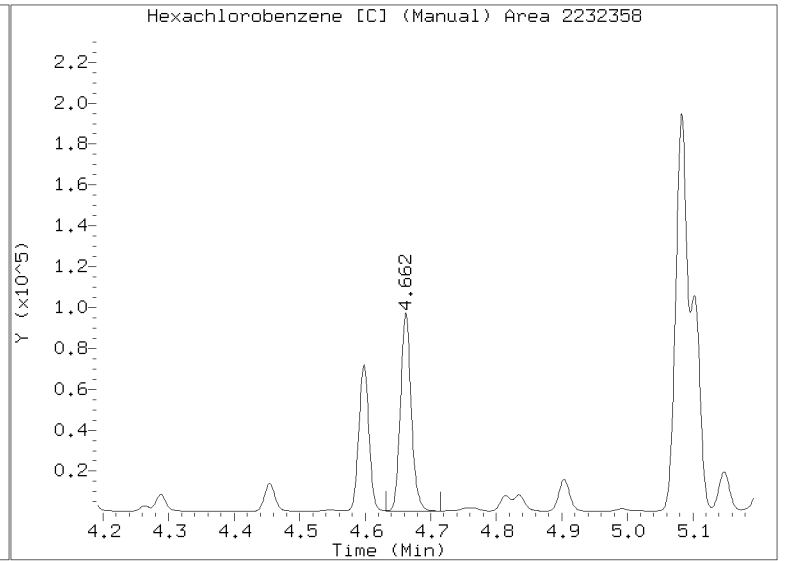
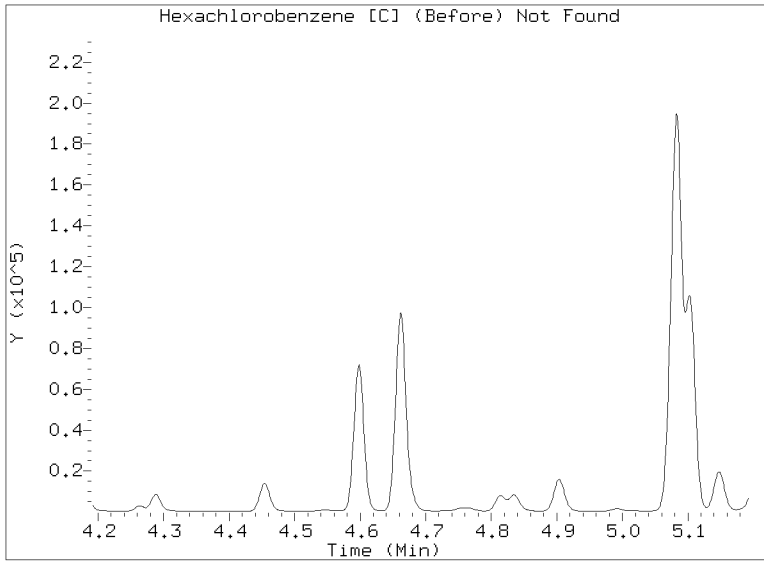
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021323.D

Injection Date: 13-FEB-2023 19:52

Lab ID:BLA0622-MS1 Client ID:



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021324.D  
Data file 2: /20230213.b/B20230213.b/23021324.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: BIA0622-MSD1  
Client ID:  
Injection Date: 13-FEB-2023 20:10  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.305	0.006	764442	4.835	0.020	1146839	85.46	82.06	4.1	alpha-BHC
4.679	-0.003	60865	5.319	0.029	11059685	17.67	2081.54	196.6*	beta-BHC
4.873	0.010	36428684	5.638	-0.003	164294	4982.89	14.27	198.9*	delta-BHC
4.602	0.003	13731163	5.209	-0.000	2870716	1770.48	242.05	151.9*	gamma-BHC (Lindane)
5.068	-0.011	8863345	5.762	0.029	13467618	1284.40	1253.56	2.4	Heptachlor
5.421	0.022	16502825	6.126	-0.009	702284	2133.93	57.25	189.5*	Aldrin
----			6.779	-0.013	17864412	0.00	1761.21	---	Heptachlor epoxide b
----			7.226	-0.010	888859	0.00	99.43	---	Endosulfan I
6.807	0.032	483541	7.513	-0.017	1756881	73.14	177.86	83.4*	Dieldrin
6.429	-0.011	2581479	----			420.57	0.00	---	4,4'-DDE
7.052	0.027	3019723	----			573.43	0.00	---	Endrin
7.294	0.030	536805	8.077	0.010	3535621	113.24	482.33	123.9*	Endosulfan II
----			7.926	-0.004	394736	0.00	56.75	---	4,4'-DDD
8.121	-0.005	189344	8.664	-0.002	108147	42.06	16.80	85.8*	Endosulfan sulfate
----			8.255	0.008	5407336	0.00	805.39	---	4,4'-DDT
7.893	0.027	401923	----			189.19	0.00	---	Methoxychlor
----			9.207	0.018	2401222	0.00	345.37	---	Endrin ketone
7.714	0.023	1405730	8.389	-0.008	1253376	371.77	242.39	42.1*	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
6.381	0.020	2258389	7.162	-0.002	194047	330.64	19.61	177.6*	cis-Chlordane
2.296	0.000	138558	2.474	0.001	225570	14.79	17.00	13.9	Hexachlorobutadiene
----			4.664	-0.011	8578335	0.00	674.46	---	Hexachlorobenzene
3.790	-0.000	159771	4.181	-0.000	242376	25.29	24.69	2.4	Tetrachloro-m-xylene
9.306	-0.000	158412	10.403	-0.000	253878	38.92	45.67	16.0	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	464638	-30.9
Hexabromobiphenyl	609723	401678	-34.1

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	697346	-30.7
Hexabromobiphenyl	769764	502967	-34.7

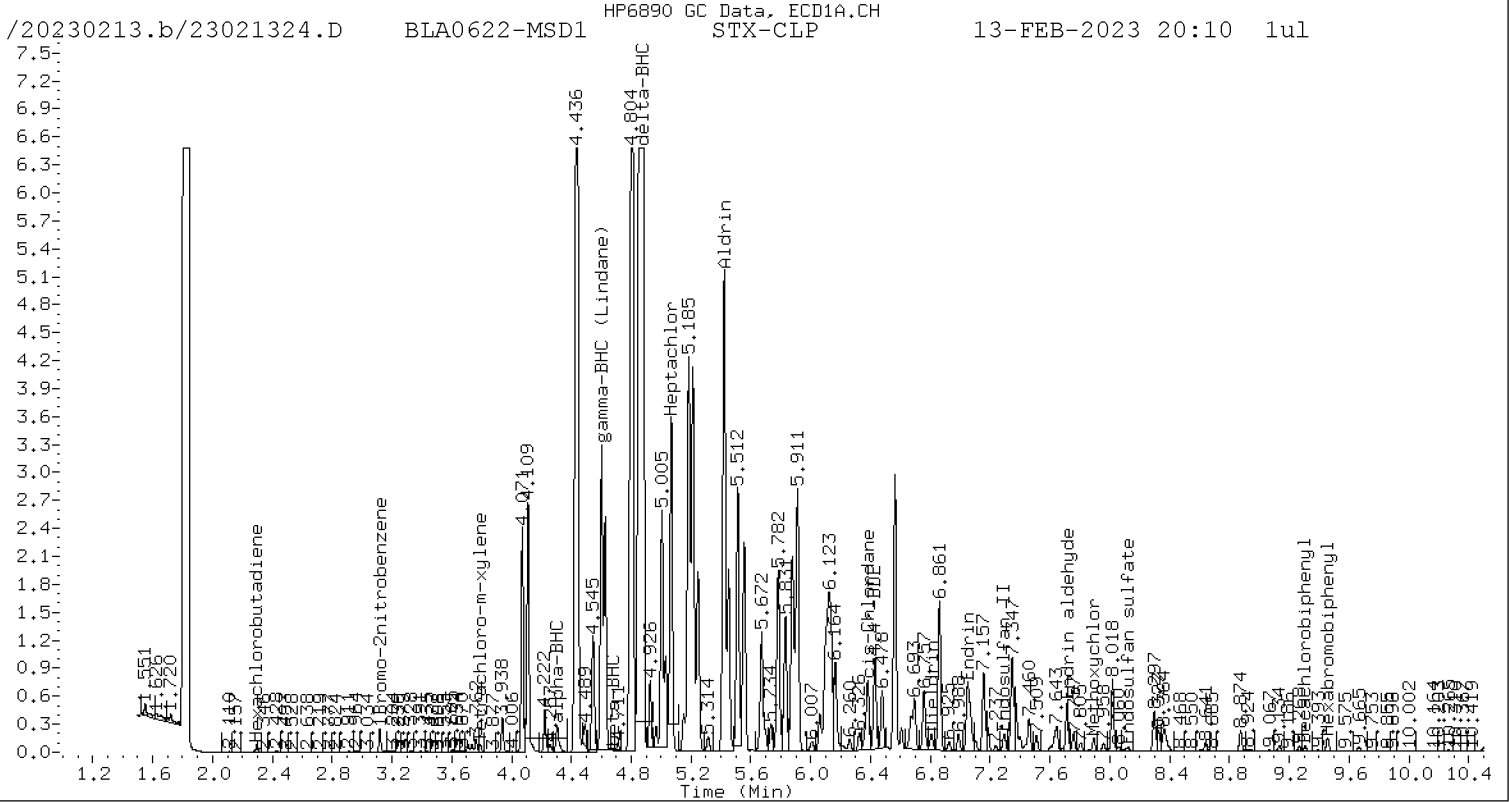
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

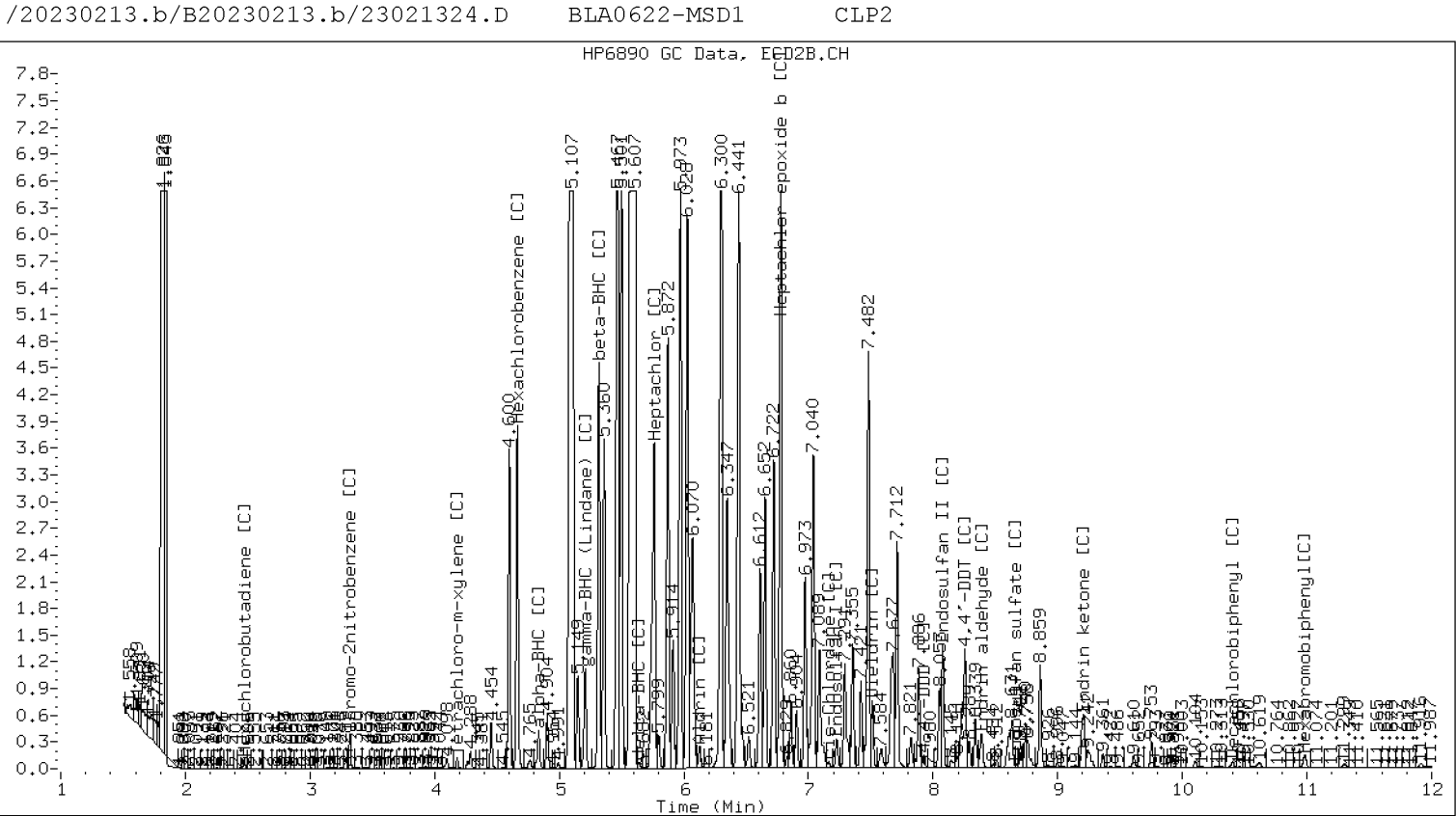
<- Indicates standard response outside Limits (-50 to +100%)



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO



## INITIAL CALIBRATION DATA

### EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC			2.5	1.564682	5	1.558115	10	1.57359	20	1.566596	40	1.528219
beta-BHC			2.5	0.6501672	5	0.6116678	10	0.6049898	20	0.5910241	40	0.567415
gamma-BHC (Lindane)			2.5	1.364013	5	1.359107	10	1.367627	20	1.357913	40	1.317203
delta-BHC			2.5	1.267737	5	1.264366	10	1.278672	20	1.286232	40	1.255792
Heptachlor			2.5	1.26903	5	1.222902	10	1.218715	20	1.207966	40	1.145438
Aldrin			2.5	1.349967	5	1.349283	10	1.40535	20	1.372547	40	1.307197
Heptachlor Epoxide			2.5	1.231126	5	1.189593	10	1.20792	20	1.178021	40	1.104377
trans-Chlordane (beta-Chlordane)			2.5	1.262297	5	1.202181	10	1.202336	20	1.19062	40	1.128117
cis-Chlordane (alpha-chlordane)			2.5	1.308183	5	1.222582	10	1.200602	20	1.177182	40	1.111332
Endosulfan I			2.5	1.143813	5	1.097776	10	1.093658	20	1.076133	40	1.011287
4,4'-DDE			5	1.141182	10	1.108491	20	1.098369	40	1.077225	80	0.9961189
Dieldrin			5	1.225418	10	1.190449	20	1.185191	40	1.155764	80	1.077517
Endrin			5	1.158191	10	1.117563	20	1.079508	40	1.061387	80	0.9725989
Endosulfan II			5	0.9400399	10	0.9913797	20	1.005265	40	0.925043	80	0.9337917
4,4'-DDD			5	1.004568	10	0.9927897	20	0.9803235	40	0.9586353	80	0.8937077
Endrin Aldehyde			5	0.8167784	10	0.7834798	20	0.7706241	40	0.7573308	80	0.7147756
4,4'-DDT			5	1.007054	10	0.9936998	20	0.9768522	40	0.9722874	80	0.9123228
Endosulfan Sulfate			5	0.9534179	10	0.9413755	20	0.9158457	40	0.9056998	80	0.8542021
Endrin Ketone			5	1.134866	10	1.083274	20	1.043162	40	1.021136	80	0.9645492
Methoxychlor			25	0.4887243	50	0.4567517	100	0.4291758	200	0.4123964	400	0.380531
Hexachlorobutadiene			2.5	1.967135	5	1.727858	10	1.608612	20	1.550898	40	1.457962
Hexachlorobenzene			2.5	1.583946	5	1.509865	10	1.463674	20	1.414258	40	1.348389
Decachlorobiphenyl			5	0.9567749	10	0.8690419	20	0.8114883	40	0.7853665	80	0.7399881
Tetrachlorometaxylene			5	1.223478	10	1.154628	20	1.122612	40	1.064313	80	1.018952







**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE	80	0.7262802	160	0.6559468								
2,4'-DDD	80	0.6522807	160	0.6001736								
2,4'-DDT	80	0.7135595	160	0.6495601								
Oxychlorane	80	0.9018234	160	0.8351028								
cis-Nonachlor	80	1.140435	160	1.065099								
trans-Nonachlor	80	1.167639	160	1.085646								
Mirex	80	0.706171	160	0.6667706								



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

### **INITIAL CALIBRATION DATA EPA 8081B**

Laboratory: Analytical Resources, LLC      SDG: 23A0206  
Client: Anchor QEA, LLC      Project: AOC5 MR Phase 1  
Calibration: FL00041      Instrument: ECD6  
Calibration Date: 12/14/2022      Column (1): STX-CLP

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	



**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	



**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC	1.540148	3.1			RSD (20)	
beta-BHC	0.5929524	6.8			RSD (20)	
gamma-BHC (Lindane)	1.33534	3.5			RSD (20)	
delta-BHC	1.258744	2.5			RSD (20)	
Heptachlor	1.188151	6.1			RSD (20)	
Aldrin	1.331535	5.2			RSD (20)	
Heptachlor Epoxide	1.15453	6.9			RSD (20)	
trans-Chlordane (beta-Chlordane)	1.172613	6.3			RSD (20)	
cis-Chlordane (alpha-chlordane)	1.176038	8.0			RSD (20)	
Endosulfan I	1.059517	7.1			RSD (20)	
4,4'-DDE	1.056843	7.9			RSD (20)	
Dieldrin	1.138281	7.6			RSD (20)	
Endrin	1.048819	9.0			RSD (20)	
Endosulfan II	0.944155	5.2			RSD (20)	
4,4'-DDD	0.9449058	6.9			RSD (20)	
Endrin Aldehyde	0.7530726	6.7			RSD (20)	
4,4'-DDT	0.9548168	5.7			RSD (20)	
Endosulfan Sulfate	0.8965158	6.2			RSD (20)	
Endrin Ketone	1.027011	7.7			RSD (20)	
Methoxychlor	0.4231113	10.6			RSD (20)	
Hexachlorobutadiene	1.613515	13.2			RSD (20)	
Hexachlorobenzene	1.429894	8.1			RSD (20)	
2,4'-DDE	0.7852778	10.3			RSD (20)	
2,4'-DDD	0.698595	8.8			RSD (20)	
2,4'-DDT	0.7548286	8.4			RSD (20)	
Oxychlordane	0.951144	7.5			RSD (20)	
cis-Nonachlor	1.211391	7.8			RSD (20)	
trans-Nonachlor	1.244025	8.1			RSD (20)	
Mirex	0.7535613	8.1			RSD (20)	
Decachlorobiphenyl	0.8105886	11.4			RSD (20)	
Tetrachlorometaxylene	1.087951	9.2			RSD (20)	





**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: FL00041

Instrument: ECD6

Calibration Date: 12/14/2022

Column (2): STX-CLPII

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]			2.5	1.582358	5	1.586238	10	1.633164	20	1.640486	40	1.615441
beta-BHC [2C]			2.5	0.652782	5	0.6172948	10	0.6184608	20	0.6125812	40	0.5918008
gamma-BHC (Lindane) [2C]			2.5	1.355071	5	1.348783	10	1.381456	20	1.392772	40	1.366606
delta-BHC [2C]			2.5	1.323764	5	1.307234	10	1.339425	20	1.328433	40	1.331977
Heptachlor [2C]			2.5	1.270249	5	1.234236	10	1.258409	20	1.272245	40	1.215755
Aldrin [2C]			2.5	1.511397	5	1.416724	10	1.432636	20	1.430376	40	1.370917
Heptachlor Epoxide [2C]			2.5	1.2977	5	1.174596	10	1.174288	20	1.174706	40	1.114434
trans-Chlordane (beta-Chlordane) [2C]			2.5	1.25449	5	1.176102	10	1.164843	20	1.168848	40	1.125534
cis-Chlordane (alpha-chlordane) [2C]			2.5	1.258498	5	1.153199	10	1.135052	20	1.136251	40	1.089792
Endosulfan I [2C]			2.5	1.118263	5	1.044155	10	1.035412	20	1.034697	40	0.9885012
4,4'-DDE [2C]			5	1.120237	10	1.069625	20	1.064387	40	1.055415	80	0.9897135
Dieldrin [2C]			5	1.270008	10	1.162844	20	1.139359	40	1.136098	80	1.071389
Endrin [2C]			5	1.256912	10	1.17909	20	1.159477	40	1.149599	80	1.066056
Endosulfan II [2C]			5	1.296819	10	1.202961	20	1.188491	40	1.160501	80	1.099056
4,4'-DDD [2C]			5	1.234482	10	1.121556	20	1.117792	40	1.112003	80	1.04628
Endrin Aldehyde [2C]			5	0.9430111	10	0.8430348	20	0.8249196	40	0.8129946	80	0.7727701
4,4'-DDT [2C]			5	1.175911	10	1.077825	20	1.067612	40	1.073272	80	1.019364
Endosulfan Sulfate [2C]			5	1.137768	10	1.042553	20	1.030373	40	1.023023	80	0.9721732
Endrin Ketone [2C]			5	1.235631	10	1.119988	20	1.114405	40	1.100852	80	1.047659
Methoxychlor [2C]			25	0.5184064	50	0.4866753	100	0.4751666	200	0.4681736	400	0.4433957
Hexachlorobutadiene [2C]			2.5	1.975612	5	1.648845	10	1.492482	20	1.376096	40	1.341211
Hexachlorobenzene [2C]			2.5	1.602215	5	1.520618	10	1.491402	20	1.450251	40	1.385947
Decachlorobiphenyl [2C]			5	1.087142	10	0.9391597	20	0.8562421	40	0.8499592	80	0.8013928
Tetrachlorometaxylene [2C]			5	1.220863	10	1.179368	20	1.164832	40	1.127982	80	1.06878



**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]	80	1.561903										
beta-BHC [2C]	80	0.5642956										
gamma-BHC (Lindane) [2C]	80	1.31891										
delta-BHC [2C]	80	1.29291										
Heptachlor [2C]	80	1.144118										
Aldrin [2C]	80	1.281263										
Heptachlor Epoxide [2C]	80	1.046144										
trans-Chlordane (beta-Chlordane) [2C]	80	1.072685										
cis-Chlordane (alpha-chlordane) [2C]	80	1.03859										
Endosulfan I [2C]	80	0.9325836										
4,4'-DDE [2C]	160	0.9356313										
Dieldrin [2C]	160	1.019365										
Endrin [2C]	160	1.013782										
Endosulfan II [2C]	160	1.047801										
4,4'-DDD [2C]	160	1.006382										
Endrin Aldehyde [2C]	160	0.7380269										
4,4'-DDT [2C]	160	0.9933936										
Endosulfan Sulfate [2C]	160	0.9372514										
Endrin Ketone [2C]	160	1.016567										
Methoxychlor [2C]	800	0.4436418										
Hexachlorobutadiene [2C]	80	1.300813										
Hexachlorobenzene [2C]	80	1.304223										
2,4'-DDE [2C]					5	0.8343307	10	0.8052418	20	0.7431295	40	0.7258871
2,4'-DDD [2C]					5	0.9097548	10	0.8797099	20	0.8273813	40	0.8164191
2,4'-DDT [2C]					5	0.9400077	10	0.8804604	20	0.8502582	40	0.8485216
Oxychlordane [2C]					5	0.9644685	10	0.9467754	20	0.9033255	40	0.8966281
cis-Nonachlor [2C]					5	1.449238	10	1.407074	20	1.376474	40	1.372123



**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC    SDG: 23A0206  
 Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
 Calibration: FL00041    Instrument: ECD6  
 Calibration Date: 12/14/2022    Column (2): STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor [2C]					5	1.488853	10	1.51762	20	1.451789	40	1.447663
Mirex [2C]					5	0.9331395	10	0.8115521	20	0.7946205	40	0.762682
Decachlorobiphenyl [2C]	160	0.7711875										
Tetrachlorometaxylene [2C]	160	0.9948184										



**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE [2C]	80	0.6667087	160	0.6020159								
2,4'-DDD [2C]	80	0.76623	160	0.7136982								
2,4'-DDT [2C]	80	0.7977257	160	0.7424898								
Oxychlorane [2C]	80	0.8433342	160	0.7909247								
cis-Nonachlor [2C]	80	1.313286	160	1.248174								
trans-Nonachlor [2C]	80	1.376815	160	1.306683								
Mirex [2C]	80	0.7399752	160	0.7075065								





**INITIAL CALIBRATION DATA**  
**EPA 8081B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	



INITIAL CALIBRATION DATA  
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC [2C]	1.603265	1.9			RSD (20)	
beta-BHC [2C]	0.6095359	4.9			RSD (20)	
gamma-BHC (Lindane) [2C]	1.3606	1.9			RSD (20)	
delta-BHC [2C]	1.320624	1.3			RSD (20)	
Heptachlor [2C]	1.232502	3.9			RSD (20)	
Aldrin [2C]	1.407219	5.4			RSD (20)	
Heptachlor Epoxide [2C]	1.163645	7.1			RSD (20)	
trans-Chlordane (beta-Chlordane) [2C]	1.160417	5.2			RSD (20)	
cis-Chlordane (alpha-chlordane) [2C]	1.13523	6.5			RSD (20)	
Endosulfan I [2C]	1.025602	6.0			RSD (20)	
4,4'-DDE [2C]	1.039168	6.3			RSD (20)	
Dieldrin [2C]	1.133177	7.5			RSD (20)	
Endrin [2C]	1.137486	7.6			RSD (20)	
Endosulfan II [2C]	1.165938	7.4			RSD (20)	
4,4'-DDD [2C]	1.106416	7.0			RSD (20)	
Endrin Aldehyde [2C]	0.8224595	8.5			RSD (20)	
4,4'-DDT [2C]	1.067896	5.9			RSD (20)	
Endosulfan Sulfate [2C]	1.023857	6.7			RSD (20)	
Endrin Ketone [2C]	1.10585	6.8			RSD (20)	
Methoxychlor [2C]	0.4725766	6.0			RSD (20)	
Hexachlorobutadiene [2C]	1.52251	16.8			RSD (20)	
Hexachlorobenzene [2C]	1.459109	7.2			RSD (20)	
2,4'-DDE [2C]	0.7295523	11.8			RSD (20)	
2,4'-DDD [2C]	0.8188656	8.8			RSD (20)	
2,4'-DDT [2C]	0.8432439	8.1			RSD (20)	
Oxychlordane [2C]	0.8909094	7.3			RSD (20)	
cis-Nonachlor [2C]	1.361061	5.2			RSD (20)	
trans-Nonachlor [2C]	1.43157	5.4			RSD (20)	
Mirex [2C]	0.7915793	9.9			RSD (20)	
Decachlorobiphenyl [2C]	0.8841805	13.0			RSD (20)	
Tetrachlorometaxylene [2C]	1.126107	7.3			RSD (20)	



ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6  
Calibration ID: FL00041

Element Column ID:

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WPDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		





ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6  
Calibration ID: FL00041

Element Column ID:

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022	19:27	22121401.D	1	RINSE	
2	14-DEC-2022	19:44	22121402.D	1	RINSE	
3	14-DEC-2022	20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022	20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022	20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022	20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022	21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022	21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022	21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022	22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022	22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022	22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022	23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022	23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022	23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022	23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022	00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022	00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022	00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022	01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022	01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022	01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022	01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022	02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022	02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022	02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022	03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022	03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022	03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022	04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022	04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022	04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022	04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022	05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022	05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022	05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022	06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022	06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022	06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022	07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022	07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022	07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022	07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022	08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022	08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022	08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022	09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022	09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022	09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022	10:02	22121450.D	1	BKK0142-MSD1	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE	1		NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1	1		NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2	1		NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A	1		NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A	1		NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A	1		NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A	1		NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A	1		NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A	1		NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A	1		NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A	1		NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A	1		NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA	1		NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB	1		NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC	1		NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD	1		NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE	1		NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1	1		NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2	1		NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3	1		NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4	1		NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1	1		NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1	1		NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2	1		NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3	1		NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1	1		NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1	1		NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1	1		NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2	1		NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1	1		NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1	1		NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1	1		NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01	1		NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04	1		NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01	1		trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01	1		Heptachlor epoxide b,
1131	22121455.D	22K0429-02	1		Heptachlor epoxide b,
1149	22121456.D	22K0429-03	1		Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3	1		NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1	1		NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2	1		NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3	1		NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4	1		NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1	1		NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1	1		NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1	1		NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01	1		NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01	1		NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01	1		NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1	1		NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1	1		NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2	1		NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1 10		1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1	1		NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1	1		NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1	1		NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2	1		NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3	1		NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4	1		NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5	1		NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6	1		NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7	1		NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8	1		NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9	1		NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA	1		NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB	1		NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC	1		NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD	1		NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE	1		NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1	1		NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A	1		NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A	1		NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A	1		NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A	1		NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A	1		NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A	1		NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A	1		NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A	1		NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A	1		NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA	1		NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB	1		NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC	1		NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD	1		NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE	1		NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2	1		NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1	1		NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2	1		NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4	1		NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1	1		NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1	1		NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2	1		NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3	1		NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1	1		NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1	1		NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1	1		NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2	1		NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1	1		NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1	1		NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1	1		NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01	1		NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04	1		NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01	1		trans-Chlordane [C],
1113	22121454.D	22K0429-01	1		NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02	1		Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03	1		Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D SEQ-PEM3		1		NO MANUAL INTEGRATION
1225	22121458.D SEQ-CCV1		1		NO MANUAL INTEGRATION
1243	22121459.D SEQ-CCV2		1		NO MANUAL INTEGRATION
1301	22121460.D SEQ-CCV3		1		NO MANUAL INTEGRATION
1319	22121461.D SEQ-CCV4		1		NO MANUAL INTEGRATION
1336	22121462.D BKK0380-BLK1		1		NO MANUAL INTEGRATION
1354	22121463.D BKK0380-BS1		1		NO MANUAL INTEGRATION
1412	22121464.D BKK0380-BSD1		1		NO MANUAL INTEGRATION
1430	22121465.D 22K0157-01		1		NO MANUAL INTEGRATION
1448	22121466.D 22K0230-01		1		NO MANUAL INTEGRATION
1506	22121467.D 22K0231-01		1		NO MANUAL INTEGRATION
1524	22121468.D BKK0382-BLK1		1		NO MANUAL INTEGRATION
1542	22121469.D BKK0382-BS1		1		NO MANUAL INTEGRATION
1600	22121470.D BKK0382-BS2		1		NO MANUAL INTEGRATION
1618	22121471.D BKK0382-BSD1		1		NO MANUAL INTEGRATION
1635	22121472.D 22K0075-01		1		NO MANUAL INTEGRATION
1653	22121473.D SEQ-PEM4		1		NO MANUAL INTEGRATION
1711	22121474.D SEQ-CCV5		1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1 10		1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains,	17-Dec-2022	10:57
22121402.D	Data Locked	jrains,	17-Dec-2022	10:57
22121403.D	Data Locked	jrains,	17-Dec-2022	10:57
22121404.D	Data Locked	jrains,	17-Dec-2022	10:57
22121405.D	Data Locked	jrains,	17-Dec-2022	10:57
22121406.D	Data Locked	jrains,	17-Dec-2022	10:57
22121407.D	Data Locked	jrains,	17-Dec-2022	10:57
22121408.D	Data Locked	jrains,	17-Dec-2022	10:57
22121409.D	Data Locked	jrains,	17-Dec-2022	10:57
22121410.D	Data Locked	jrains,	17-Dec-2022	10:57
22121411.D	Data Locked	jrains,	17-Dec-2022	10:57
22121412.D	Data Locked	jrains,	17-Dec-2022	10:57
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22121414.D	Data Locked	jrains,	17-Dec-2022	10:57
22121415.D	Data Locked	jrains,	17-Dec-2022	10:57
22121416.D	Data Locked	jrains,	17-Dec-2022	10:57
22121417.D	Data Locked	jrains,	17-Dec-2022	10:57
22121418.D	Data Locked	jrains,	17-Dec-2022	10:57
22121419.D	Data Locked	jrains,	17-Dec-2022	10:57
22121420.D	Data Locked	jrains,	17-Dec-2022	10:57
22121421.D	Data Locked	jrains,	17-Dec-2022	10:57
22121422.D	Data Locked	jrains,	17-Dec-2022	10:57
22121423.D	Data Locked	jrains,	17-Dec-2022	10:57
22121424.D	Data Locked	jrains,	17-Dec-2022	10:57
22121425.D	Data Locked	jrains,	17-Dec-2022	10:57
22121426.D	Data Locked	jrains,	17-Dec-2022	10:57
22121427.D	Data Locked	jrains,	17-Dec-2022	10:57
22121428.D	Data Locked	jrains,	17-Dec-2022	10:57
22121429.D	Data Locked	jrains,	17-Dec-2022	10:57
22121430.D	Data Locked	jrains,	17-Dec-2022	10:57
22121431.D	Data Locked	jrains,	17-Dec-2022	10:57
22121432.D	Data Locked	jrains,	17-Dec-2022	10:57
22121433.D	Data Locked	jrains,	17-Dec-2022	10:57
22121434.D	Data Locked	jrains,	17-Dec-2022	10:57

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
 End Cal Date : 15-DEC-2022 05:16  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 jrains  
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121428.D  
 Level 2: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121429.D  
 Level 3: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121430.D  
 Level 4: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121431.D  
 Level 5: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121432.D  
 Level 6: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121433.D  
 Level 7: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121434.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
1 Hexachlorobutadiene [C]	++++ 1.30081	1.97561	1.64885	1.49248	1.37610	1.34121	1.52251	16.761
5 Hexachlorobenzene [C]	++++ 1.30422	1.60221	1.52062	1.49140	1.45025	1.38595	1.45911	7.170
6 alpha-BHC [C]	++++ 1.56190	1.58236	1.58624	1.63316	1.64049	1.61544	1.60327	1.946
7 gamma-BHC (Lindane) [C]	++++ 1.31891	1.35507	1.34878	1.38146	1.39277	1.36661	1.36060	1.921
8 beta-BHC [C]	++++ 0.56430	0.65278	0.61729	0.61846	0.61258	0.59180	0.60954	4.856
9 delta-BHC [C]	++++ 1.29291	1.32376	1.30723	1.33943	1.32843	1.33198	1.32062	1.312
10 Heptachlor [C]	++++ 1.14412	1.27025	1.23424	1.25841	1.27225	1.21576	1.23250	3.937
11 Chlorthalonil	++++ ++++	++++	++++	++++	++++	++++	++++	++++

## ARI Labs, Inc.

## INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
 End Cal Date : 15-DEC-2022 05:16  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
80.000 Level 7								
12 Aldrin [C]	++++ 1.28126	1.51140	1.41672	1.43264	1.43038	1.37092	1.40722	5.441
13 Heptachlor Epoxide a	++++ ++++	++++	++++	++++	++++	++++	++++	++++
14 Heptachlor epoxide b [C]	++++ 1.04614	1.29770	1.17460	1.17429	1.17471	1.11443	1.16364	7.144
15 cis-Chlordane [C]	++++ 1.03859	1.25850	1.15320	1.13505	1.13625	1.08979	1.13523	6.464
16 trans-Chlordane [C]	++++ 1.07269	1.25449	1.17610	1.16484	1.16885	1.12553	1.16042	5.185
17 Endosulfan I [C]	++++ 0.93258	1.11826	1.04415	1.03541	1.03470	0.98850	1.02560	6.032
18 4,4'-DDE [C]	++++ 0.93563	1.12024	1.06963	1.06439	1.05541	0.98971	1.03917	6.320
19 Dieldrin [C]	++++ 1.01937	1.27001	1.16284	1.13936	1.13610	1.07139	1.13318	7.532
20 Endrin [C]	++++ 1.01378	1.25691	1.17909	1.15948	1.14960	1.06606	1.13749	7.566
21 4,4'-DDD [C]	++++ 1.00638	1.23448	1.12156	1.11779	1.11200	1.04628	1.10642	7.049
22 Endosulfan II [C]	++++ 1.04780	1.29682	1.20296	1.18849	1.16050	1.09906	1.16594	7.425



ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
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 Target Version : 4.14  
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 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
23 4,4'-DDT [C]	80.000 Level 7	1.17591	1.07782	1.06761	1.07327	1.01936	1.06790	5.878
24 Endrin aldehyde [C]	0.73803	0.94301	0.84303	0.82492	0.81299	0.77277	0.82246	8.537
25 Endosulfan sulfate [C]	0.93725	1.13777	1.04255	1.03037	1.02302	0.97217	1.02386	6.702
26 Methoxychlor [C]	0.44364	0.51841	0.48668	0.47517	0.46817	0.44340	0.47258	5.996
27 Endrin ketone [C]	1.01657	1.23563	1.11999	1.11440	1.10085	1.04766	1.10585	6.827
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
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 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
31 Aroclor-1232 (1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
32 Aroclor-1242 (1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
 End Cal Date : 15-DEC-2022 05:16  
 Quant Method : ISTD  
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 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
33 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
34 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
 End Cal Date : 15-DEC-2022 05:16  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
36 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
 End Cal Date : 15-DEC-2022 05:16  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 jrains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
80.000 Level 7								
37 Aroclor-1268 (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
38 Toxaphene [C] (1)	0.01492 0.01387	0.01529	0.01573	0.01558	0.01527	0.01455	0.01503	4.285
(2)	0.03524 0.03010	0.03538	0.03581	0.03480	0.03351	0.03170	0.03379	6.368
(3)	0.02615 0.02387	0.02659	0.02671	0.02640	0.02571	0.02464	0.02572	4.197
(4)	0.08868 0.07782	0.08690	0.08740	0.08502	0.08225	0.07926	0.08390	5.022
(5)	0.04138 0.04062	0.04124	0.04193	0.04145	0.04102	0.04046	0.04116	1.227
39 2,4-DDE [C]	+++++ 0.60202	0.83433	0.80524	0.74313	0.72589	0.66671	0.72955	11.810

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38  
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 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 jrains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
40 2,4-DDD [C]	++++ 0.71370	0.90975	0.87971	0.82738	0.81642	0.76623	0.81887	8.785
41 2,4-DDT [C]	++++ 0.74249	0.94001	0.88046	0.85026	0.84852	0.79773	0.84324	8.052
42 Hexachloroethane [C]	++++ ++++	++++	++++	++++	++++	++++	++++	++++
43 Oxychlordan [C]	++++ 0.79092	0.96447	0.94678	0.90333	0.89663	0.84333	0.89091	7.271
44 trans-Nonachlor [C]	++++ 1.30668	1.48885	1.51762	1.45179	1.44766	1.37681	1.43157	5.406
45 cis-Nonachlor [C]	++++ 1.24817	1.44924	1.40707	1.37647	1.37212	1.31329	1.36106	5.224
46 Mirex [C]	++++ 0.70751	0.93314	0.81155	0.79462	0.76268	0.73998	0.79158	9.949
47 bis-(2-ethylhexyl) Phthalate	++++ ++++	++++	++++	++++	++++	++++	++++	++++
48 Chlordane (NOS) [C] (1)	0.03877 0.03764	0.03690	0.03764	0.03840	0.03761	0.03805	0.03786	1.615
(2)	0.04647 0.03825	0.04439	0.04416	0.04357	0.04103	0.03978	0.04252	6.844
(3)	0.14135 0.13812	0.14252	0.14927	0.15059	0.14418	0.14081	0.14383	3.173

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Last Edit : 15-Dec-2022 08:33 j rains  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 4 Tetrachloro-m-xylene [C]	+++++	1.22086	1.17937	1.16483	1.12798	1.06878	1.12611	7.306
\$ 28 Decachlorobiphenyl [C]	+++++	1.08714	0.93916	0.85624	0.84996	0.80139	0.88418	12.973

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem4\ecd6.i\20220809.b\22080909.D  
 Level 2: \\target\share\chem4\ecd6.i\20220809.b\22080910.D  
 Level 3: \\target\share\chem4\ecd6.i\20220809.b\22080911.D  
 Level 4: \\target\share\chem4\ecd6.i\20220809.b\22080912.D  
 Level 5: \\target\share\chem4\ecd6.i\20220809.b\22080913.D  
 Level 6: \\target\share\chem4\ecd6.i\20220809.b\22080914.D  
 Level 7: \\target\share\chem4\ecd6.i\20220809.b\22080915.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
1 Hexachlorobutadiene	++++ 1.30292	1.64215	1.55667	1.51049	1.47308	1.40536	1.48178	7.988
5 Hexachlorobenzene	++++ 1.15582	1.48647	1.40778	1.36481	1.31957	1.25458	1.33150	8.750
6 alpha-BHC	++++ 1.29587	1.41183	1.40802	1.42270	1.42790	1.37811	1.39074	3.567
7 gamma-BHC (Lindane)	++++ 1.11861	1.20108	1.18733	1.20704	1.21598	1.18532	1.18589	2.948
8 beta-BHC	++++ 0.50588	0.65244	0.60612	0.58927	0.57533	0.54649	0.57925	8.684
9 delta-BHC	++++ 1.16159	1.15252	1.13315	1.18185	1.21952	1.21492	1.17726	2.950
10 Heptachlor	++++ 0.94214	1.18674	1.12881	1.11527	1.09009	1.03076	1.08230	7.897
11 Aldrin	++++ 0.96536	1.14505	1.10493	1.10576	1.09698	1.04621	1.07738	5.877



ARI Labs, Inc.

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 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
80.000 Level 7								
12 Chlorthalonil	++++	++++	++++	++++	++++	++++	++++	++++
13 Heptachlor Epoxide a	++++	++++	++++	++++	++++	++++	++++	++++
14 Heptachlor epoxide b	++++ 0.81733	1.05278	0.99602	0.98316	0.95413	0.89408	0.94959	8.751
15 cis-Chlordane	++++ 0.82943	1.00217	0.95563	0.94931	0.93343	0.89233	0.92705	6.424
16 trans-Chlordane	++++ 0.84267	1.02223	0.96054	0.95840	0.94631	0.90606	0.93937	6.420
17 Endosulfan I	++++ 0.77363	1.10444	1.01004	0.97510	0.92642	0.86761	0.94287	12.207
18 4,4'-DDE	++++ 0.73346	0.85783	0.84618	0.86175	0.85068	0.80349	0.82557	6.027
19 Dieldrin	++++ 0.79720	1.02112	0.97469	0.96064	0.93395	0.87876	0.92773	8.553
20 Endrin	++++ 0.92125	1.03359	0.99258	1.01493	1.03951	0.95184	0.99228	4.755
21 4,4'-DDD	++++ 1.02286	1.26749	1.21690	1.21140	1.19455	1.09258	1.16763	7.815
22 Endosulfan II	++++ 1.05695	1.32213	1.30831	1.28817	1.25191	1.14300	1.22841	8.614

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
23 4,4'-DDT	++++ 1.06544	1.20278	1.19912	1.21231	1.21971	1.13284	1.17203	5.186
24 Endrin aldehyde	++++ 0.84575	1.05042	1.01673	1.00197	0.99460	0.91340	0.97048	7.836
25 Methoxychlor	++++ 0.43428	0.56408	0.54010	0.51985	0.50693	0.45626	0.50358	9.854
26 Endosulfan sulfate	++++ 0.94888	1.14290	1.11216	1.09802	1.09968	1.00734	1.06816	6.922
27 Endrin ketone	++++ 1.12695	1.47959	1.40243	1.34455	1.31335	1.19489	1.31029	9.966
29 Aroclor-1016(1)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(2)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(3)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(4)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(5)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
30 Aroclor-1221(1)	++++ ++++	++++	++++	++++	++++	++++	++++	++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
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 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
31 Aroclor-1232 (1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
32 Aroclor-1242 (1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
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 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(6)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
33 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
34 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
35 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
36 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
37 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
38 Toxaphene(1)	0.02824 0.02792	0.03896	0.03693	0.03480	0.03418	0.02891		0.03285	13.645
(2)	0.08343 0.08263	0.10636	0.10204	0.09499	0.09608	0.08394		0.09278	10.362
(3)	0.04776 0.05119	0.06283	0.06069	0.06020	0.06090	0.05141		0.05643	10.755
(4)	0.05098 0.06388	0.07225	0.07089	0.06844	0.06847	0.06296		0.06541	11.021
(5)	0.04955 0.05934	0.06896	0.06748	0.06372	0.06603	0.05846		0.06194	10.880

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
39 2,4-DDE	++++ 0.89319	1.14103	1.08072	1.09005	1.06169	0.88466	1.02522	10.614
40 2,4-DDD	++++ 0.85318	1.08881	1.01841	0.99599	0.98400	0.85150	0.96531	9.816
41 2,4-DDT	++++ 0.88215	0.97799	0.97179	0.97332	0.98841	0.88743	0.94685	5.117
42 Hexachloroethane	++++ ++++	++++	++++	++++	++++	++++	++++	++++
43 Oxychlordane	++++ 1.05015	1.32927	1.24890	1.22496	1.20236	1.04785	1.18392	9.540
44 trans-Nonachlor	++++ 1.36253	1.68629	1.57989	1.58456	1.55669	1.34437	1.51906	8.949
45 cis-Nonachlor	++++ 1.35527	1.62941	1.55213	1.53413	1.52347	1.34758	1.49033	7.639
46 Mirex	++++ 0.85786	1.20478	1.11168	1.05006	1.00932	0.85381	1.01459	13.749
47 bis-(2-ethylhexyl) Phthalate	++++ ++++	++++	++++	++++	++++	++++	++++	++++
48 Chlordane (NOS) (1)	0.06029 0.04531	0.05735	0.05369	0.05005	0.04581	0.04808	0.05151	11.230
(2)	0.15038 0.12030	0.14213	0.13501	0.13074	0.12020	0.12674	0.13221	8.482

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
 End Cal Date : 13-DEC-2022 22:43  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(3)	0.17221	0.15459	0.13623	0.13893	0.12753	0.13518		0.14232	11.024
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		+++++	+++++
4 Tetrachloro-m-xylene	+++++	1.10401	1.05839	1.02629	0.99588	0.93352		0.99475	9.166



ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03  
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 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
 Last Edit : 14-Dec-2022 10:32  
 Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
80.000 Level 7								
\$ 28 Decachlorobiphenyl	+++++	0.99444	0.96249	0.90111	0.87014	0.79161	0.87939	10.607
	0.75653							

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Table with 7 columns: ID, RT01, RT02, RT03, RT04, RT05, RT06, RT07. Rows include FILENAME, INJ. DATE, and INJ. TIME for each RT column.

Main data table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Lists compounds like Hexachlorobutadiene, Aldrin, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE	6.489	6.489	6.490	6.490	6.489	6.489	6.490	6.489	6.459-6.519	6.489	0.000
19 Dieldrin	6.831	6.832	6.832	6.832	6.831	6.832	6.832	6.831	6.801-6.861	6.832	0.000
20 Endrin	7.081	7.081	7.082	7.082	7.081	7.082	7.082	7.081	7.051-7.111	7.082	0.000
21 4,4'-DDD	7.135	7.136	7.136	7.136	7.135	7.136	7.135	7.135	7.105-7.165	7.136	0.000
22 Endosulfan II	7.318	7.317	7.318	7.318	7.317	7.317	7.317	7.317	7.287-7.347	7.317	0.000
23 4,4'-DDT	7.427	7.427	7.428	7.428	7.427	7.427	7.428	7.427	7.397-7.457	7.428	0.000
24 Endrin aldehyde	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.716-7.776	7.746	0.000
25 Methoxychlor	7.912	7.912	7.913	7.912	7.912	7.912	7.912	7.912	7.882-7.942	7.912	0.000
26 Endosulfan sulfate	8.180	8.179	8.180	8.180	8.180	8.179	8.180	8.180	8.150-8.210	8.180	0.000
27 Endrin ketone	8.453	8.452	8.454	8.453	8.453	8.453	8.454	8.453	8.423-8.483	8.453	0.001
28 Decachlorobiphenyl	9.355	9.354	9.355	9.355	9.355	9.355	9.356	9.355	9.325-9.385	9.355	0.000
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlorane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121405 22121406 22121407 22121408 22121409 22121410 22121411
INJ. DATE: 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022
INJ. TIME: 20:38 20:56 21:14 21:31 21:49 22:07 22:25

Table with 12 columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows list various chemical compounds like Hexachlorobutadiene, Bromobenzene, Hexabromobiphenyl, etc., with their respective retention times and standard deviations.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	7.370	7.370	7.371	7.371	7.370	7.371	7.371	7.371	7.341-7.401	7.371	0.000
19 Dieldrin [C]	7.582	7.582	7.583	7.583	7.582	7.582	7.583	7.583	7.553-7.613	7.582	0.000
20 Endrin [C]	7.906	7.906	7.906	7.907	7.907	7.907	7.907	7.907	7.877-7.937	7.907	0.000
21 4,4'-DDD [C]	7.976	7.976	7.976	7.977	7.976	7.976	7.976	7.976	7.946-8.006	7.976	0.000
22 Endosulfan II [C]	8.117	8.116	8.117	8.117	8.117	8.117	8.117	8.117	8.087-8.147	8.117	0.000
23 4,4'-DDT [C]	8.294	8.294	8.294	8.295	8.295	8.295	8.295	8.295	8.265-8.325	8.295	0.000
24 Endrin aldehyde [C]	8.448	8.447	8.448	8.448	8.448	8.448	8.448	8.448	8.418-8.478	8.448	0.000
25 Endosulfan sulfate [C]	8.715	8.714	8.715	8.715	8.715	8.715	8.715	8.715	8.685-8.745	8.715	0.000
26 Methoxychlor [C]	8.935	8.934	8.935	8.936	8.935	8.935	8.936	8.936	8.906-8.966	8.935	0.001
27 Endrin ketone [C]	9.239	9.239	9.239	9.240	9.239	9.239	9.240	9.240	9.210-9.270	9.239	0.000
28 Decachlorobiphenyl [C]	10.466	10.465	10.466	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.001
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlorane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121412 22121413 22121414 22121415 22121416 22121417 22121418
INJ. DATE: 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022 14-DEC-2022 15-DEC-2022 15-DEC-2022
INJ. TIME: 22:43 23:01 23:19 23:36 23:54 00:12 00:30

Table with 12 columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows list various compounds like Hexachlorobutadiene, Bromo-2nitrobenzene, Hexabromobiphenyl, etc., with their respective retention times and standard deviations.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_



ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.355	9.325-9.385	+++++	+++++
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
39 2,4-DDE	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.076-6.136	6.106	0.000

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.681	6.681	6.681	6.681	6.681	6.681	6.680	6.681	6.651-6.711	6.681	0.000
41 2,4-DDT	6.956	6.957	6.956	6.956	6.957	6.956	6.956	6.957	6.927-6.987	6.956	0.000
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlorane	6.014	6.015	6.014	6.015	6.014	6.014	6.014	6.014	5.984-6.044	6.015	0.000
44 trans-Nonachlor	6.397	6.398	6.398	6.398	6.397	6.397	6.397	6.397	6.367-6.427	6.398	0.000
45 cis-Nonachlor	7.112	7.112	7.111	7.112	7.112	7.112	7.112	7.112	7.082-7.142	7.112	0.000
46 Mirex	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.052-8.112	8.082	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Table with 7 columns: ID, RT01, RT02, RT03, RT04, RT05, RT06, RT07. Rows include FILENAME, INJ. DATE, and INJ. TIME for various samples.

Main data table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Lists 17 compounds with their retention times and standard deviations.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	10.471	10.467	10.437-10.497	10.471	0.000
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
39 2,4-DDE [C]	7.036	7.036	7.035	7.036	7.036	7.036	7.036	7.036	7.006-7.066	7.036	0.000

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
 Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	7.591	7.590	7.590	7.591	7.590	7.591	7.591	7.591	7.561-7.621	7.591	0.000
41 2,4-DDT [C]	7.913	7.914	7.913	7.913	7.913	7.914	7.913	7.913	7.883-7.943	7.913	0.000
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlorane [C]	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.711-6.771	6.741	0.000
44 trans-Nonachlor [C]	7.154	7.154	7.154	7.155	7.154	7.155	7.155	7.155	7.125-7.185	7.154	0.000
45 cis-Nonachlor [C]	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.945-8.005	7.975	0.000
46 Mirex [C]	9.223	9.223	9.222	9.223	9.222	9.223	9.223	9.223	9.193-9.253	9.223	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121421 22121422 22121423 22121424 22121425 22121426 22121427
INJ. DATE: 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022
INJ. TIME: 01:24 01:42 01:59 02:17 02:35 02:53 03:11

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include compounds like Hexachlorobutadiene, Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Hexachlorobenzene, alpha-BHC, gamma-BHC (Lindane), beta-BHC, delta-BHC, Heptachlor, Aldrin, Chlorthalonil, Heptachlor Epoxide a, Heptachlor epoxide b, cis-Chlordane, trans-Chlordane, and Endosulfan I.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	9.380	9.355	9.325-9.385	9.380	0.000
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlorane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	5.593	5.593	5.593	5.593	5.593	5.592	5.593	5.593	5.563-5.623	5.593	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++



ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121421 22121422 22121423 22121424 22121425 22121426 22121427
INJ. DATE: 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022
INJ. TIME: 01:24 01:42 01:59 02:17 02:35 02:53 03:11

Table with 12 columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows list various compounds like Hexachlorobutadiene, Bromo-2nitrobenzene, Hexabromobiphenyl, etc., with their respective retention times and standard deviations.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
 Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.467	10.437-10.497	+++++	+++++
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
 Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlorane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	5.612	5.612	5.612	5.611	5.612	5.612	5.612	5.612	5.582-5.642	5.612	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121428 22121429 22121430 22121431 22121432 22121433 22121434
INJ. DATE: 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022
INJ. TIME: 03:29 03:46 04:04 04:22 04:40 04:58 05:16

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include compounds like Hexachlorobutadiene, Bromo-2nitrobenzene, Hexabromobiphenyl, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
§ 28 Decachlorobiphenyl	9.355	9.355	9.355	9.355	9.356	9.356	9.355	9.355	9.325-9.385	9.356	0.000
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
38 Toxaphene	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.901-6.961	6.931	0.000
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlorane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID: RT01 RT02 RT03 RT04 RT05 RT06 RT07
FILENAME: 22121428 22121429 22121430 22121431 22121432 22121433 22121434
INJ. DATE: 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022 15-DEC-2022
INJ. TIME: 03:29 03:46 04:04 04:22 04:40 04:58 05:16

Table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT07, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include compounds like Hexachlorobutadiene, 1Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Hexachlorobenzene, alpha-BHC, gamma-BHC (Lindane), beta-BHC, delta-BHC, Heptachlor, Chlorthalonil, Aldrin, Heptachlor Epoxide a, Heptachlor epoxide b, cis-Chlordane, trans-Chlordane, and Endosulfan I.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
\$ 28 Decachlorobiphenyl [C]	10.467	10.467	10.467	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.000
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	7.125	7.125	7.125	7.125	7.126	7.126	7.126	7.126	7.096-7.156	7.125	0.000
39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++



ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m  
 Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b  
 Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlorane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D  
Data file 2: /20221214.b/B20221214.b/22121403.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-IBL1  
Client ID:  
Injection Date: 14-DEC-2022 20:02  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			6.824	-0.021	2291	0.00	0.14	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			7.597	0.015	1696	0.00	0.11	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			8.135	0.018	285	0.00	0.02	---	Endosulfan II
----			7.975	-0.002	1369	0.00	0.12	---	4,4'-DDD
----			8.720	0.005	243	0.00	0.02	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			8.924	-0.013	546	0.00	0.11	---	Methoxychlor
8.444	-0.009	1962	9.226	-0.013	2888	0.23	0.25	10.1	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			7.070	0.014	4708	0.00	0.30	---	trans-Chlordane
----			7.219	0.003	810	0.00	0.05	---	cis-Chlordane
2.351	0.028	6378	2.512	0.012	33421	0.42	1.60	116.6*	Hexachlorobutadiene
4.183	0.001	4869	4.721	0.003	421	0.36	0.02	178.1*	Hexachlorobenzene
3.828	0.000	375293	4.220	-0.000	579767	36.70	37.46	2.1	Tetrachloro-m-xylene
9.356	0.001	243291	10.467	0.000	323668	35.86	35.40	1.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	751998	5.8
Hexabromobiphenyl	641833	669495	4.3

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1099555	3.8
Hexabromobiphenyl	797125	827325	3.8

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D  
Data file 2: /20221214.b/B20221214.b/22121403.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-IBL1  
Client ID:  
Injection Date: 14-DEC-2022 20:02  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag		
RT	Shift Response	RT	Shift Response	on col	on col		

=====

7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %  
((6258+15566) \* 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %  
((21328+19276) \* 100)/(21328+19276+745471)

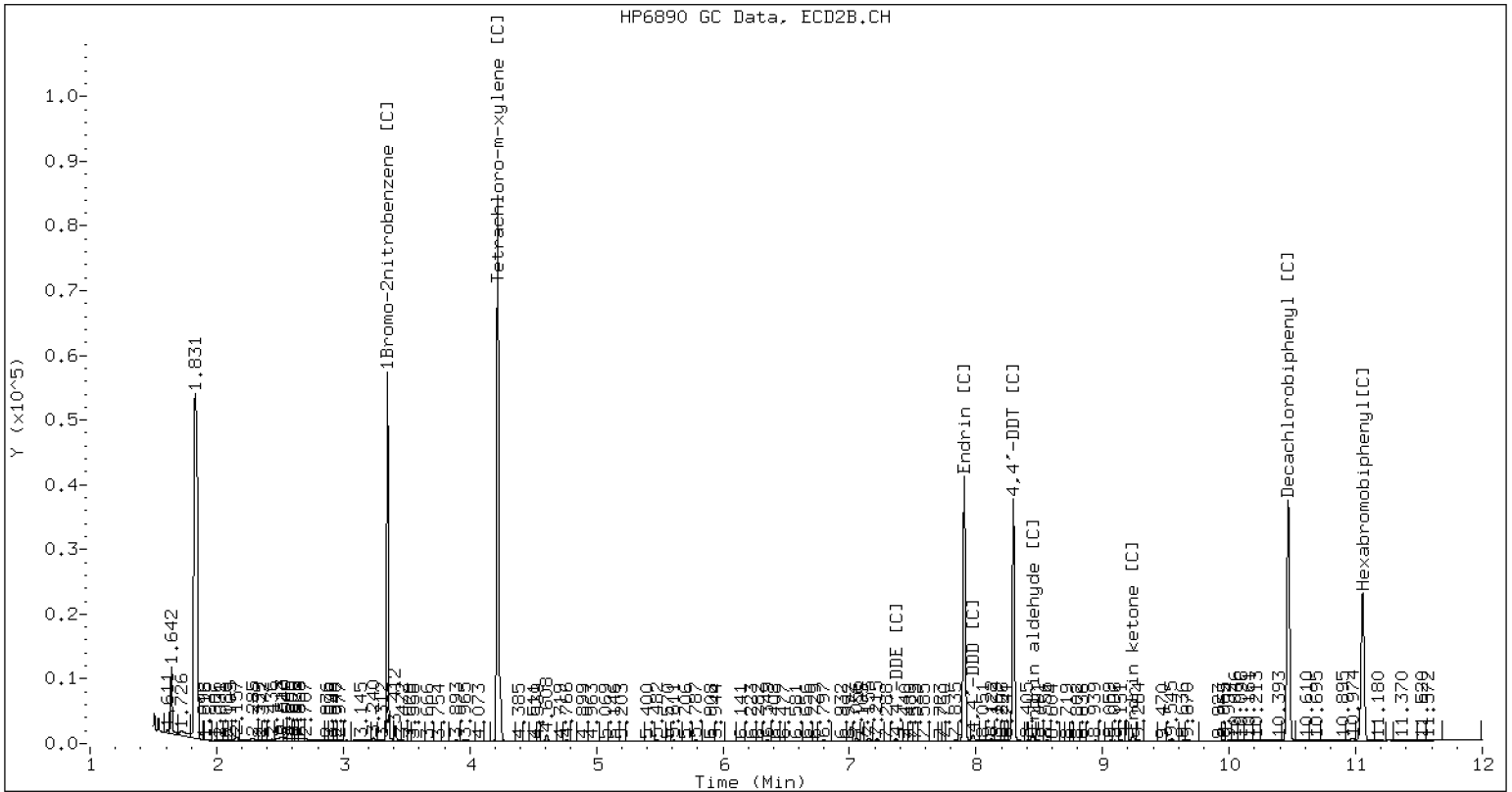
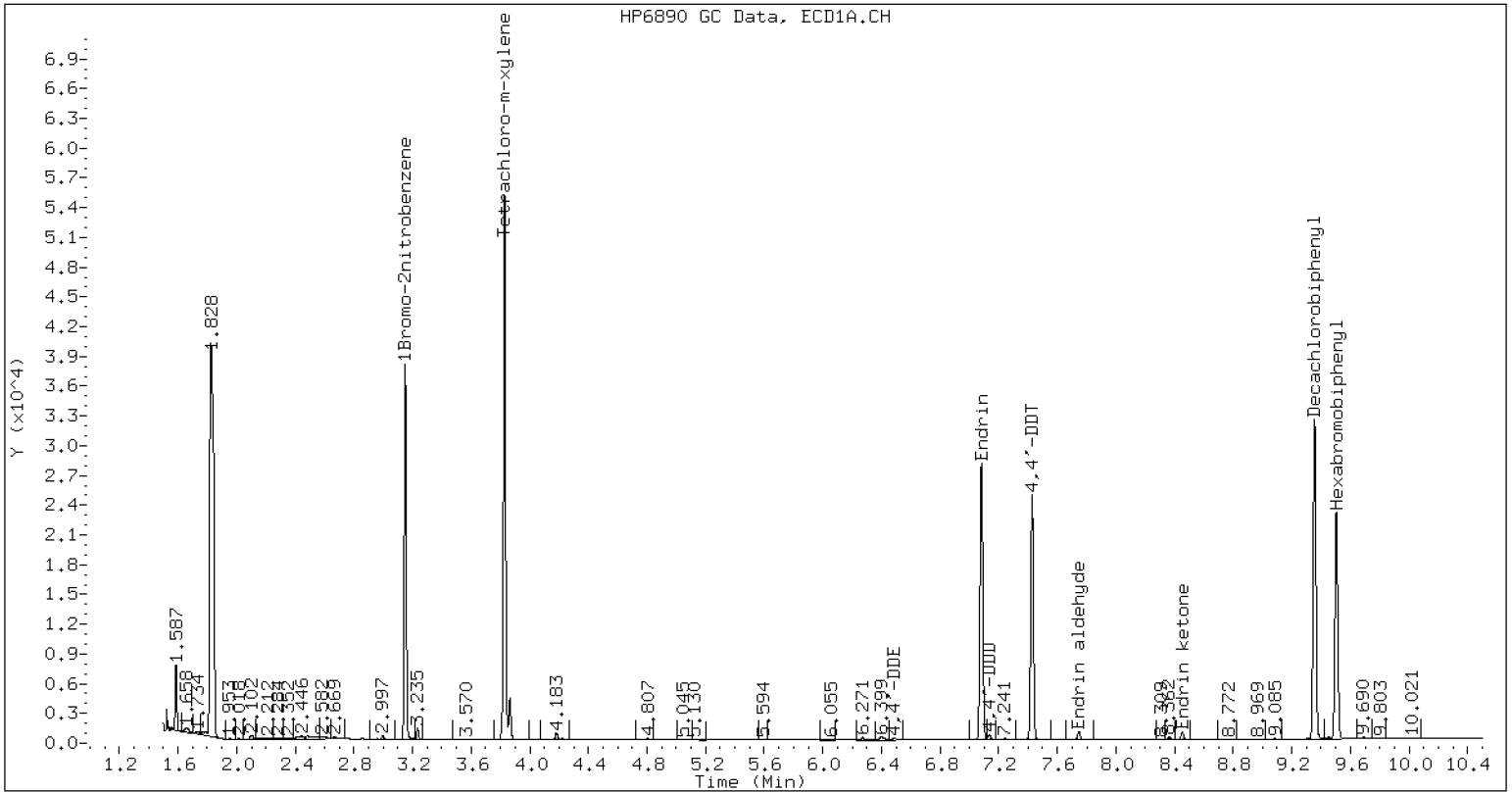
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl [C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

DDT Percent Breakdown = 4.8 %  
((11906+32697) \* 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %  
((31426+28268) \* 100)/(31426+28268+1029194)







7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1                      InstID,Data File: ecd6.i, 22121404.D  
Analysis Date: 14-DEC-2022 20:20      Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1    ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %  
 $((6258+15566) * 100)/(6258+15566+629664)$

Endrin Percent Breakdown = 5.2 %  
 $((21328+19276) * 100)/(21328+19276+745471)$

GC Column: STX-CLP1    ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D  
Data file 2: /20221214.b/B20221214.b/22121405.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL1  
Client ID:  
Injection Date: 14-DEC-2022 20:38  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.342	-0.000	17720	4.860	-0.001	25579	1.30	1.22	6.4	alpha-BHC
4.726	-0.000	7513	5.337	-0.000	10927	1.43	1.37	4.4	beta-BHC
4.909	-0.000	14050	5.690	-0.000	21188	1.26	1.23	2.8	delta-BHC
4.645	-0.000	15329	5.257	-0.001	21981	1.30	1.24	4.9	gamma-BHC (Lindane)
5.130	-0.000	14540	5.786	-0.000	20395	1.38	1.27	8.9	Heptachlor
5.453	-0.001	15026	6.190	-0.001	24413	1.28	1.33	3.9	Aldrin
6.130	0.000	13937	6.845	-0.000	21959	1.37	1.44	5.6	Heptachlor epoxide b
6.572	-0.000	13220	7.288	-0.000	19257	1.41	1.44	1.8	Endosulfan I
6.831	0.000	27285	7.582	-0.001	43580	2.71	2.94	8.2	Dieldrin
6.489	0.000	25951	7.370	-0.001	37722	2.78	2.78	0.0	4,4'-DDE
7.081	0.000	24429	7.906	-0.001	31381	2.94	2.78	5.3	Endrin
7.318	0.001	19827	8.117	-0.000	30675	2.65	2.66	0.3	Endosulfan II
7.135	0.000	20434	7.976	-0.000	28995	2.73	2.65	3.0	4,4'-DDD
8.180	-0.000	19661	8.715	-0.000	26689	2.76	2.63	4.9	Endosulfan sulfate
7.427	0.000	20071	8.294	-0.001	26950	2.65	2.55	3.9	4,4'-DDT
7.912	-0.000	52385	8.935	-0.001	65896	15.60	14.07	10.3	Methoxychlor
8.453	-0.001	24276	9.239	-0.000	30129	2.98	2.75	8.0	Endrin ketone
7.746	-0.000	17209	8.448	-0.000	21218	2.88	2.60	10.1	Endrin aldehyde
6.270	-0.001	14829	7.056	-0.000	22517	1.43	1.48	3.7	trans-Chlordane
6.417	0.000	15767	7.215	-0.000	22150	1.52	1.49	1.6	cis-Chlordane
2.323	-0.001	27320	2.500	-0.001	42655	1.92	2.14	11.3	Hexachlorobutadiene
4.182	0.000	18555	4.718	-0.000	27377	1.47	1.44	2.2	Hexachlorobenzene
3.828	-0.000	28792	4.220	-0.001	41270	2.99	2.80	6.5	Tetrachloro-m-xylene
9.355	-0.000	21954	10.466	-0.000	30646	3.41	3.50	2.5	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	707324	-0.5
Hexabromobiphenyl	641833	634819	-1.1

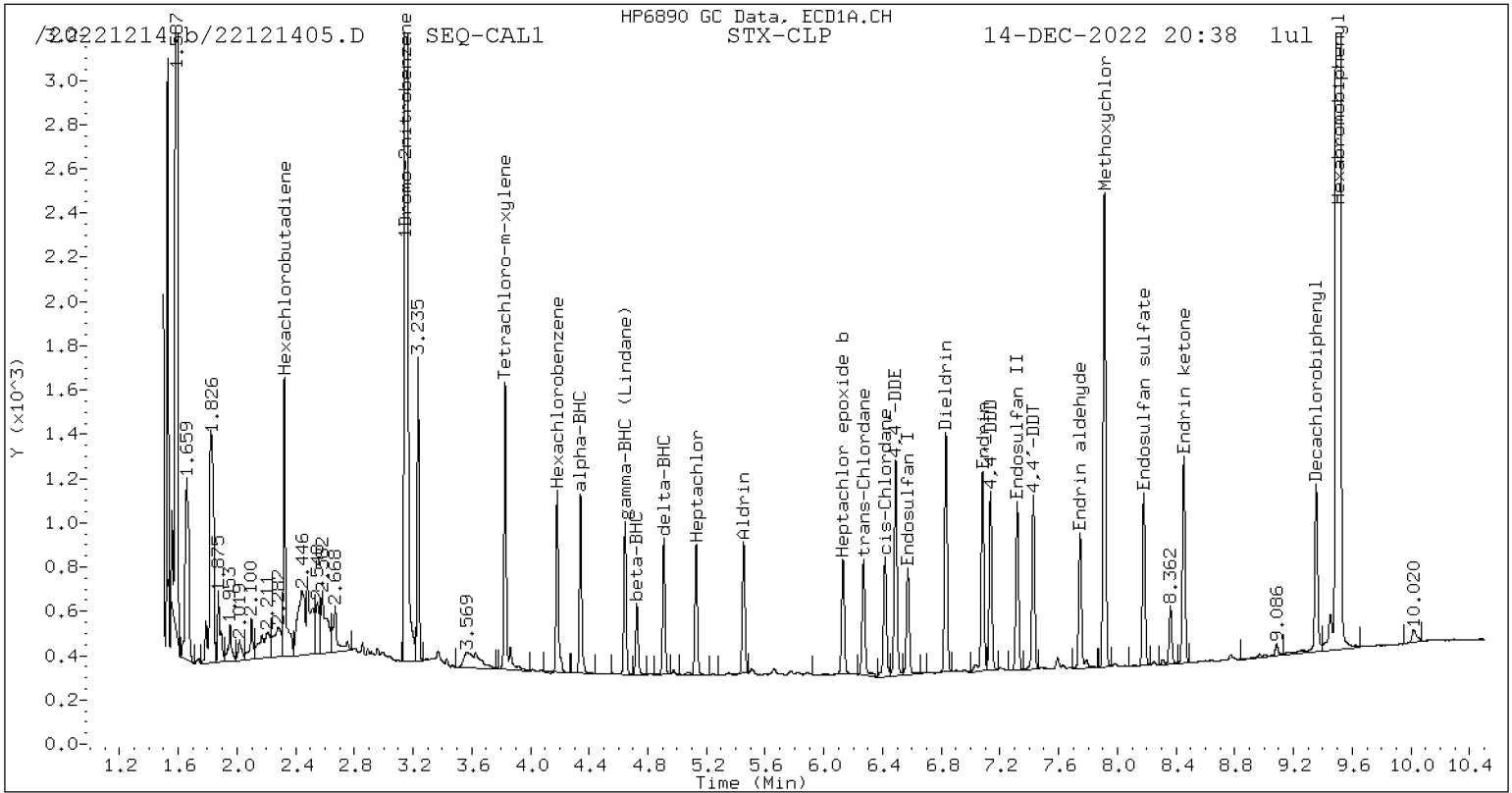
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1045524	-1.3
Hexabromobiphenyl	797125	792558	-0.6

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

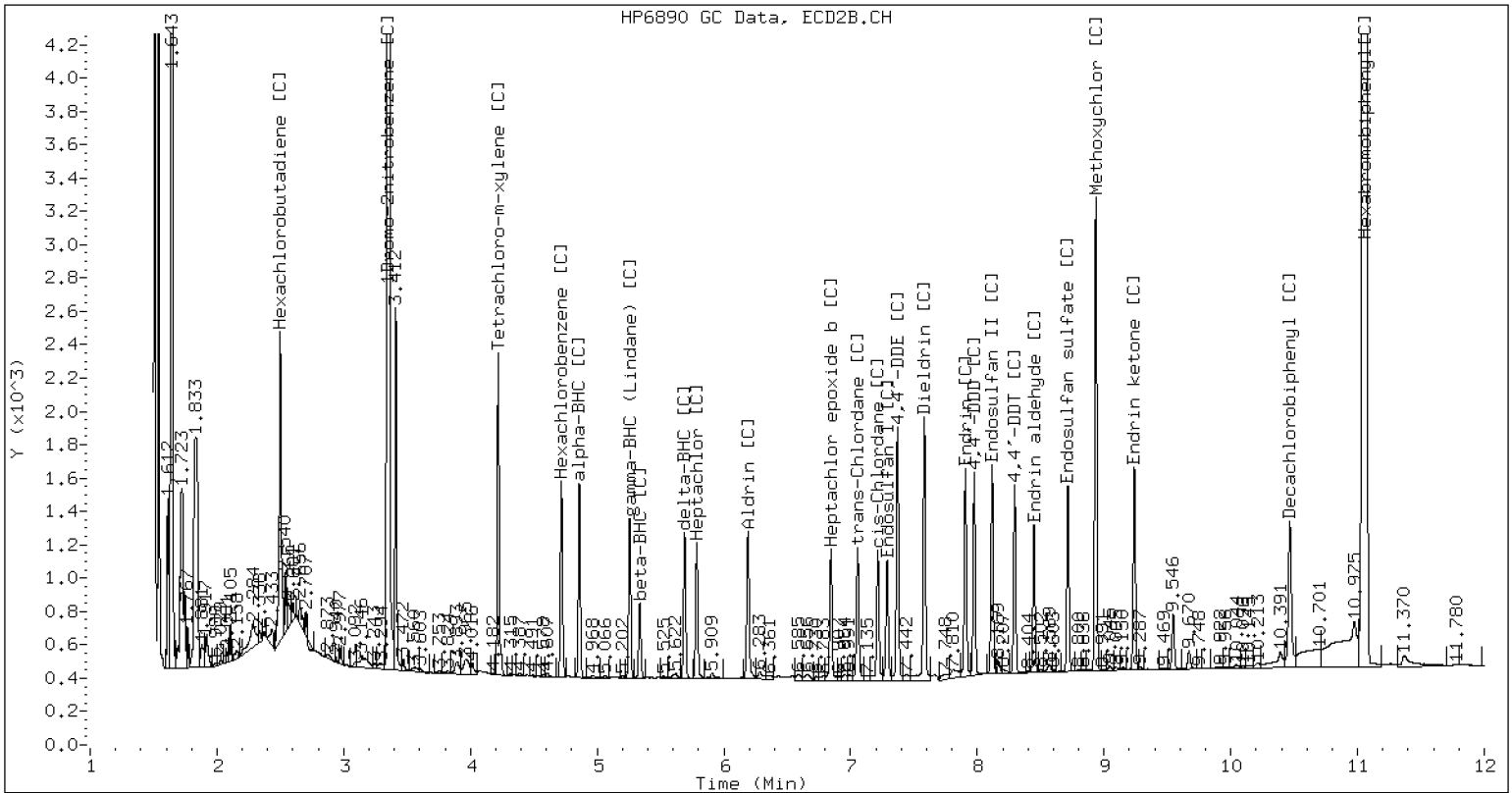
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121405.D SEQ-CAL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D  
Data file 2: /20221214.b/B20221214.b/22121405.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL1  
Client ID:  
Injection Date: 14-DEC-2022 20:38  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D  
Data file 2: /20221214.b/B20221214.b/22121406.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL2  
Client ID:  
Injection Date: 14-DEC-2022 20:56  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.342	-0.000	35088	4.859	-0.001	52514	2.54	2.47	2.9	alpha-BHC
4.726	-0.000	14580	5.337	-0.000	21664	2.74	2.68	2.4	beta-BHC
4.909	-0.000	28429	5.691	-0.000	43932	2.52	2.51	0.5	delta-BHC
4.645	0.000	30588	5.257	-0.001	44971	2.55	2.49	2.5	gamma-BHC (Lindane)
5.129	-0.001	28458	5.787	-0.000	42156	2.67	2.58	3.6	Heptachlor
5.453	-0.001	30273	6.190	-0.001	50159	2.53	2.69	5.8	Aldrin
6.130	-0.001	27608	6.845	-0.001	43067	2.67	2.79	4.5	Heptachlor epoxide b
6.572	-0.000	25650	7.288	-0.001	37112	2.70	2.73	1.0	Endosulfan I
6.832	0.000	54960	7.582	-0.001	84296	5.38	5.60	4.0	Dieldrin
6.489	-0.000	51182	7.370	-0.001	74355	5.40	5.39	0.2	4,4'-DDE
7.081	0.000	46577	7.906	-0.001	63434	5.52	5.52	0.1	Endrin
7.317	0.001	37804	8.116	-0.001	65448	4.98	5.56	11.1	Endosulfan II
7.136	0.001	40399	7.976	-0.001	62302	5.32	5.58	4.8	4,4'-DDD
8.179	-0.001	38342	8.714	-0.001	57421	5.32	5.56	4.4	Endosulfan sulfate
7.427	-0.000	40499	8.294	-0.001	59346	5.27	5.51	4.3	4,4'-DDT
7.912	-0.000	98271	8.934	-0.002	130815	28.88	27.42	5.2	Methoxychlor
8.452	-0.001	45639	9.239	-0.001	62360	5.53	5.59	1.1	Endrin ketone
7.746	0.000	32847	8.447	-0.001	47592	5.42	5.73	5.6	Endrin aldehyde
6.271	0.000	28307	7.055	-0.001	41633	2.69	2.70	0.4	trans-Chlordane
6.417	0.000	29336	7.215	-0.000	41766	2.78	2.77	0.3	cis-Chlordane
2.323	-0.001	44113	2.500	-0.001	65565	3.05	3.24	6.2	Hexachlorobutadiene
4.182	-0.000	35520	4.718	-0.000	53173	2.77	2.75	0.9	Hexachlorobenzene
3.828	-0.000	54873	4.220	-0.001	81034	5.62	5.42	3.7	Tetrachloro-m-xylene
9.354	-0.001	38477	10.465	-0.001	54866	5.90	6.15	4.1	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	717600	1.0
Hexabromobiphenyl	641833	643445	0.3

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1061990	0.3
Hexabromobiphenyl	797125	807490	1.3

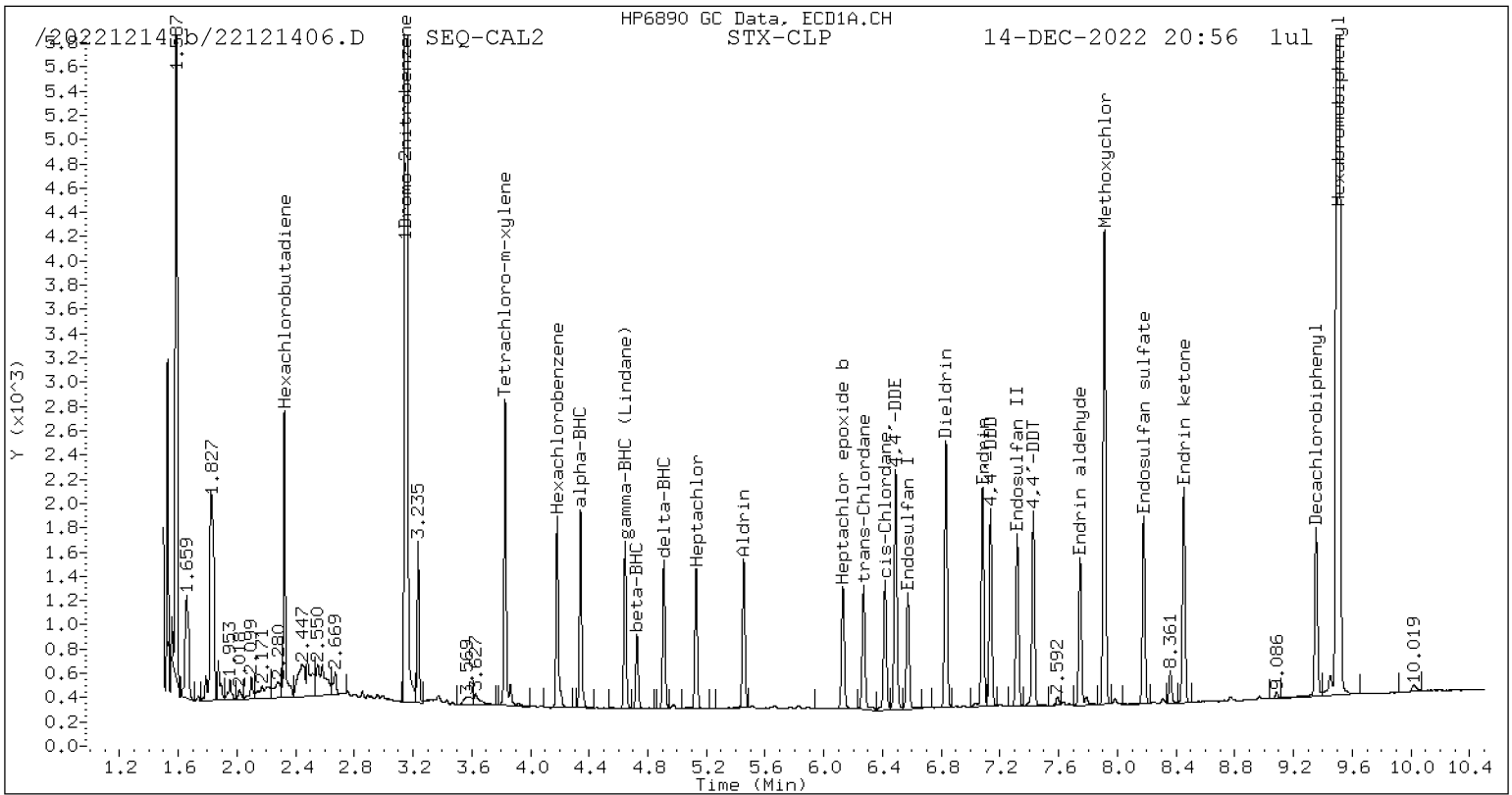
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

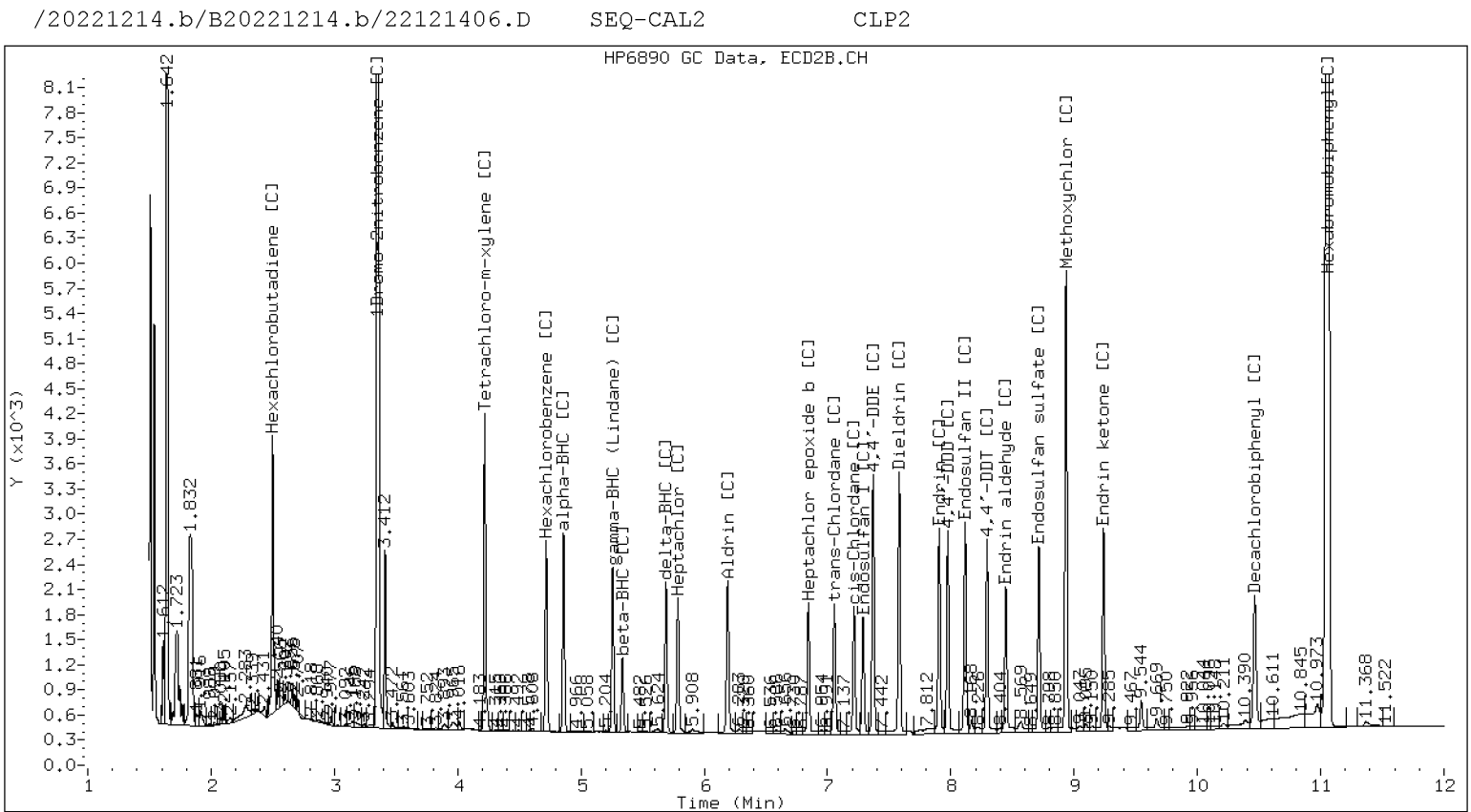
<- Indicates standard response outside Limits (-50 to +100%)



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D  
Data file 2: /20221214.b/B20221214.b/22121406.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL2  
Client ID:  
Injection Date: 14-DEC-2022 20:56  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D  
Data file 2: /20221214.b/B20221214.b/22121407.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL3  
Client ID:  
Injection Date: 14-DEC-2022 21:14  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.343	0.001	68202	4.860	-0.000	103195	5.06	4.95	2.2	alpha-BHC
4.727	0.000	26774	5.338	0.000	40159	5.16	5.06	1.8	beta-BHC
4.910	0.001	55344	5.691	0.000	85044	5.02	4.95	1.5	delta-BHC
4.646	0.001	59491	5.258	0.000	87747	5.09	4.96	2.6	gamma-BHC (Lindane)
5.130	0.000	53529	5.787	0.000	80295	5.15	5.01	2.7	Heptachlor
5.455	0.001	59061	6.191	0.000	92167	5.07	5.03	0.7	Aldrin
6.132	0.001	52071	6.845	-0.000	76415	5.15	5.05	2.1	Heptachlor epoxide b
6.573	0.001	48052	7.289	-0.000	67929	5.18	5.09	1.8	Endosulfan I
6.832	0.001	104217	7.583	-0.000	151301	10.46	10.26	1.9	Dieldrin
6.490	0.001	97042	7.371	0.000	139172	10.49	10.29	1.9	4,4'-DDE
7.082	0.001	87185	7.906	-0.001	115830	10.66	10.37	2.8	Endrin
7.318	0.001	77341	8.117	0.000	118175	10.50	10.32	1.8	Endosulfan II
7.136	0.001	77451	7.976	0.000	110178	10.51	10.14	3.6	4,4'-DDD
8.180	0.001	73440	8.715	0.000	102417	10.50	10.18	3.1	Endosulfan sulfate
7.428	0.001	77522	8.294	-0.001	105882	10.41	10.09	3.1	4,4'-DDT
7.913	0.001	178164	8.935	-0.001	239047	53.98	51.49	4.7	Methoxychlor
8.454	0.000	84510	9.239	-0.000	110024	10.55	10.13	4.1	Endrin ketone
7.746	0.001	61122	8.448	-0.000	82817	10.40	10.25	1.5	Endrin aldehyde
6.271	0.001	52622	7.056	-0.000	76513	5.13	5.07	1.1	trans-Chlordane
6.417	0.001	53515	7.216	0.000	75023	5.20	5.08	2.3	cis-Chlordane
2.324	-0.000	75632	2.500	-0.000	107268	5.35	5.41	1.1	Hexachlorobutadiene
4.183	0.001	66090	4.718	-0.000	98926	5.28	5.21	1.3	Hexachlorobenzene
3.828	0.000	101081	4.220	-0.000	153451	10.61	10.47	1.3	Tetrachloro-m-xylene
9.355	-0.000	67797	10.466	-0.000	92260	10.72	10.62	0.9	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	700354	-1.4
Hexabromobiphenyl	641833	624108	-2.8

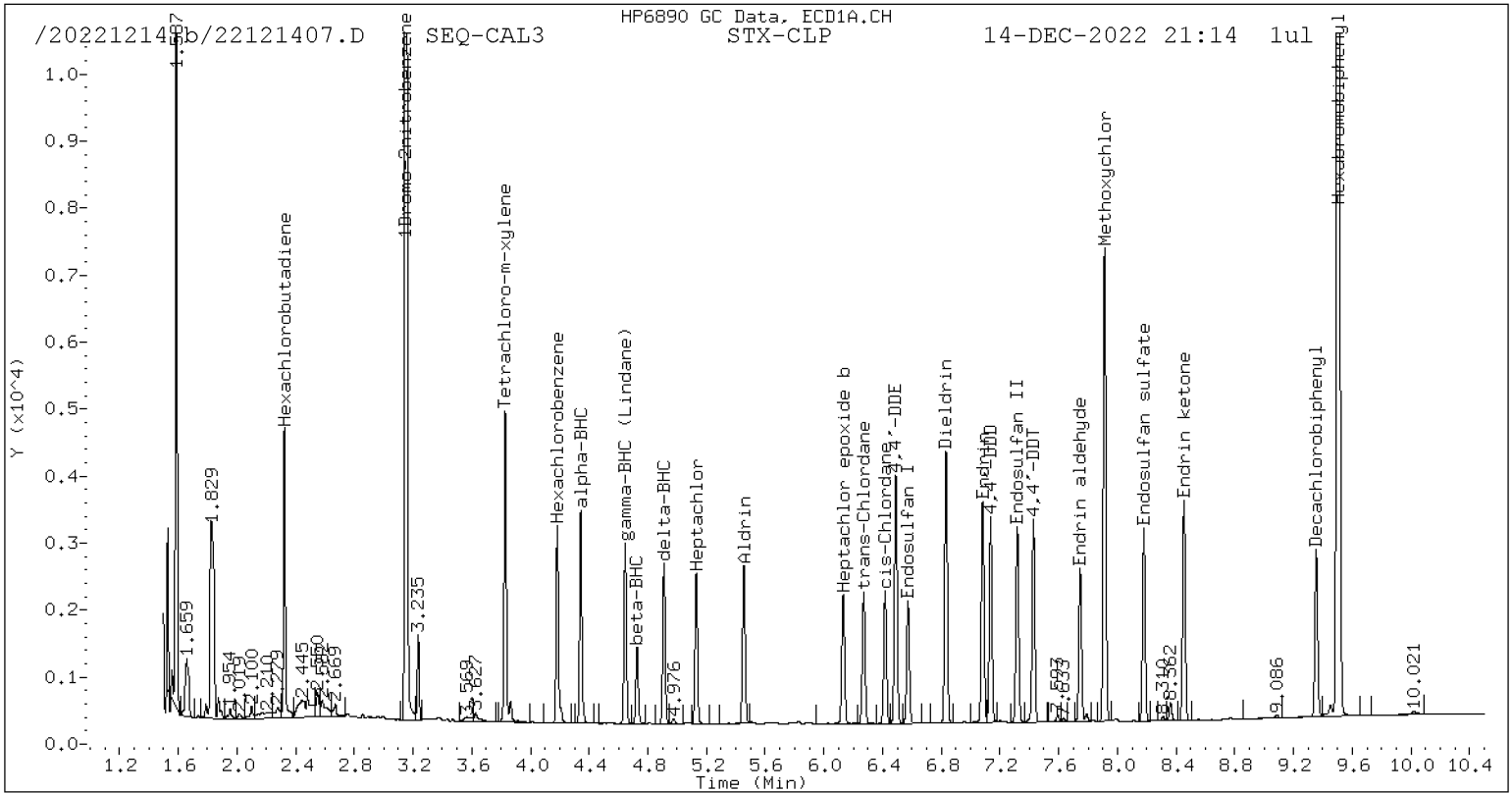
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1040903	-1.7
Hexabromobiphenyl	797125	785894	-1.4

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

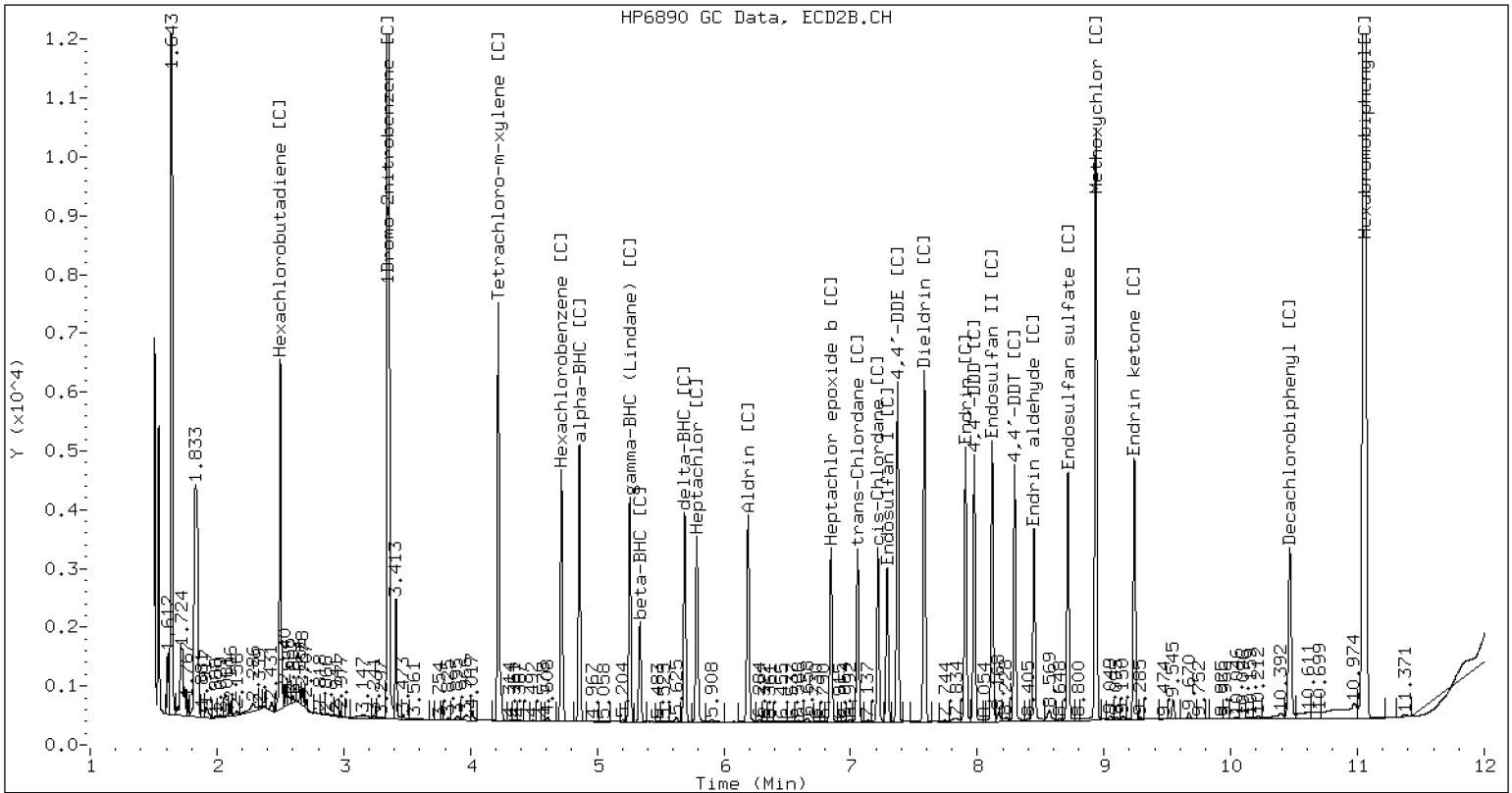
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121407.D SEQ-CAL3 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D  
Data file 2: /20221214.b/B20221214.b/22121407.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL3  
Client ID:  
Injection Date: 14-DEC-2022 21:14  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D  
Data file 2: /20221214.b/B20221214.b/22121408.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL4  
Client ID:  
Injection Date: 14-DEC-2022 21:31  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.343	0.000	139784	4.860	-0.000	216159	10.22	10.19	0.3	alpha-BHC
4.726	0.000	53742	5.337	0.000	81857	10.20	10.15	0.6	beta-BHC
4.910	0.001	113586	5.691	0.000	177281	10.16	10.14	0.2	delta-BHC
4.646	0.000	121488	5.258	0.000	182844	10.24	10.15	0.9	gamma-BHC (Lindane)
5.130	0.000	108260	5.787	-0.000	166558	10.26	10.21	0.5	Heptachlor
5.454	0.000	124839	6.191	0.000	189618	10.55	10.18	3.6	Aldrin
6.131	0.001	107301	6.846	0.001	155424	10.46	10.09	3.6	Heptachlor epoxide b
6.573	0.000	97151	7.289	0.000	137043	10.32	10.10	2.2	Endosulfan I
6.832	0.001	210564	7.583	0.000	301602	20.82	20.11	3.5	Dieldrin
6.490	0.001	195139	7.371	0.000	281756	20.79	20.49	1.5	4,4'-DDE
7.082	0.001	173216	7.907	-0.000	231062	20.59	20.39	1.0	Endrin
7.318	0.001	161303	8.117	0.001	236844	21.29	20.39	4.4	Endosulfan II
7.136	0.001	157301	7.977	0.001	222755	20.75	20.21	2.7	4,4'-DDD
8.180	0.000	146955	8.715	0.000	205334	20.43	20.13	1.5	Endosulfan sulfate
7.428	0.001	156744	8.295	-0.000	212755	20.46	19.99	2.3	4,4'-DDT
7.912	0.001	344324	8.936	-0.001	473459	101.43	100.55	0.9	Methoxychlor
8.453	-0.000	167384	9.240	0.000	222080	20.31	20.15	0.8	Endrin ketone
7.746	0.000	123653	8.448	0.000	164391	20.47	20.06	2.0	Endrin aldehyde
6.271	0.001	106805	7.056	0.000	154174	10.25	10.04	2.1	trans-Chlordane
6.418	0.001	106651	7.216	0.001	150231	10.21	10.00	2.1	cis-Chlordane
2.323	-0.000	142895	2.500	-0.001	197539	9.97	9.80	1.7	Hexachlorobutadiene
4.183	0.000	130020	4.718	0.000	197396	10.24	10.22	0.1	Hexachlorobenzene
3.828	0.000	199446	4.220	-0.000	308345	20.64	20.69	0.2	Tetrachloro-m-xylene
9.355	0.000	130210	10.466	-0.000	170633	20.02	19.37	3.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	710650	0.0
Hexabromobiphenyl	641833	641833	0.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1058848	0.0
Hexabromobiphenyl	797125	797125	0.0

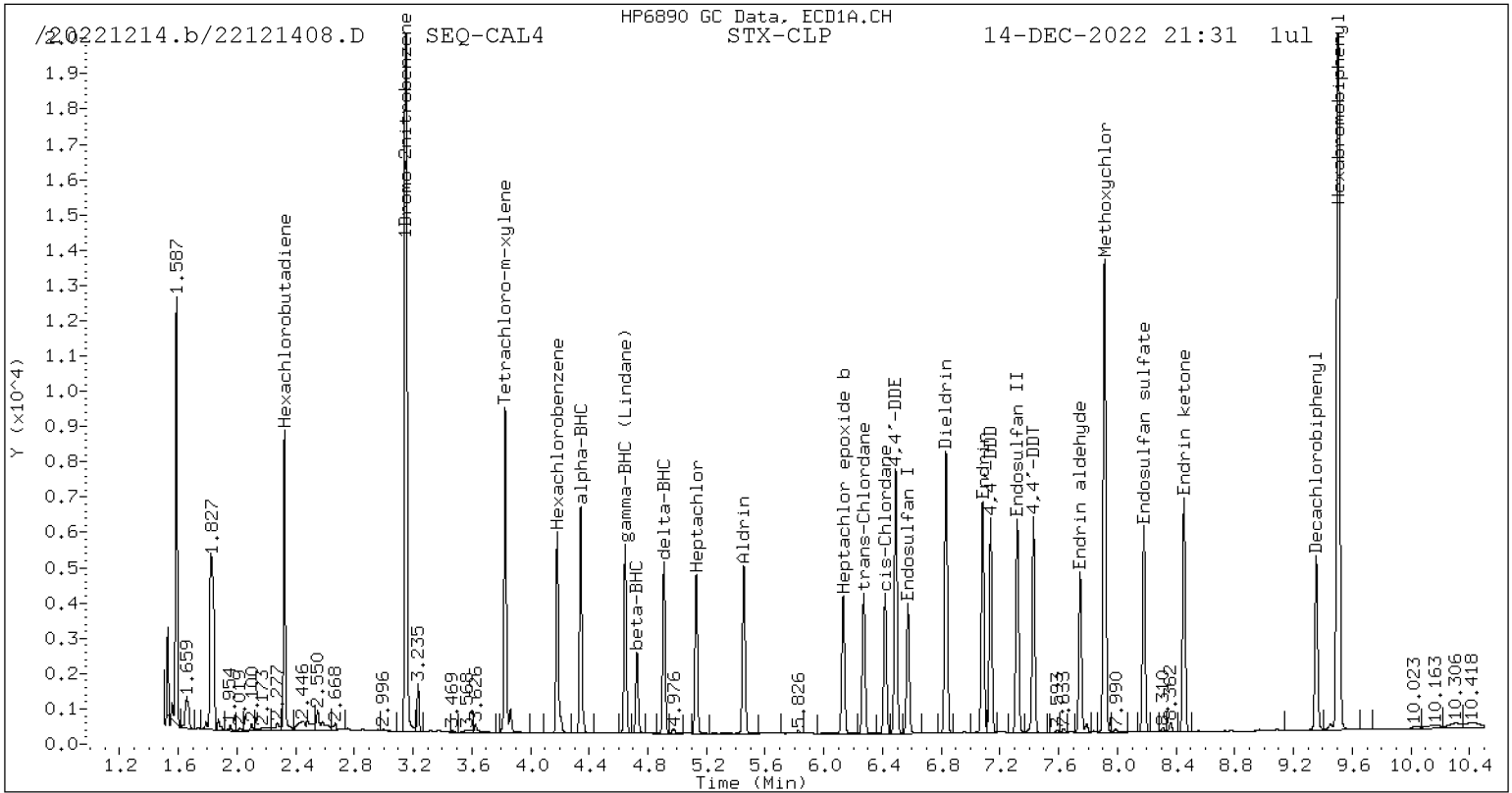
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

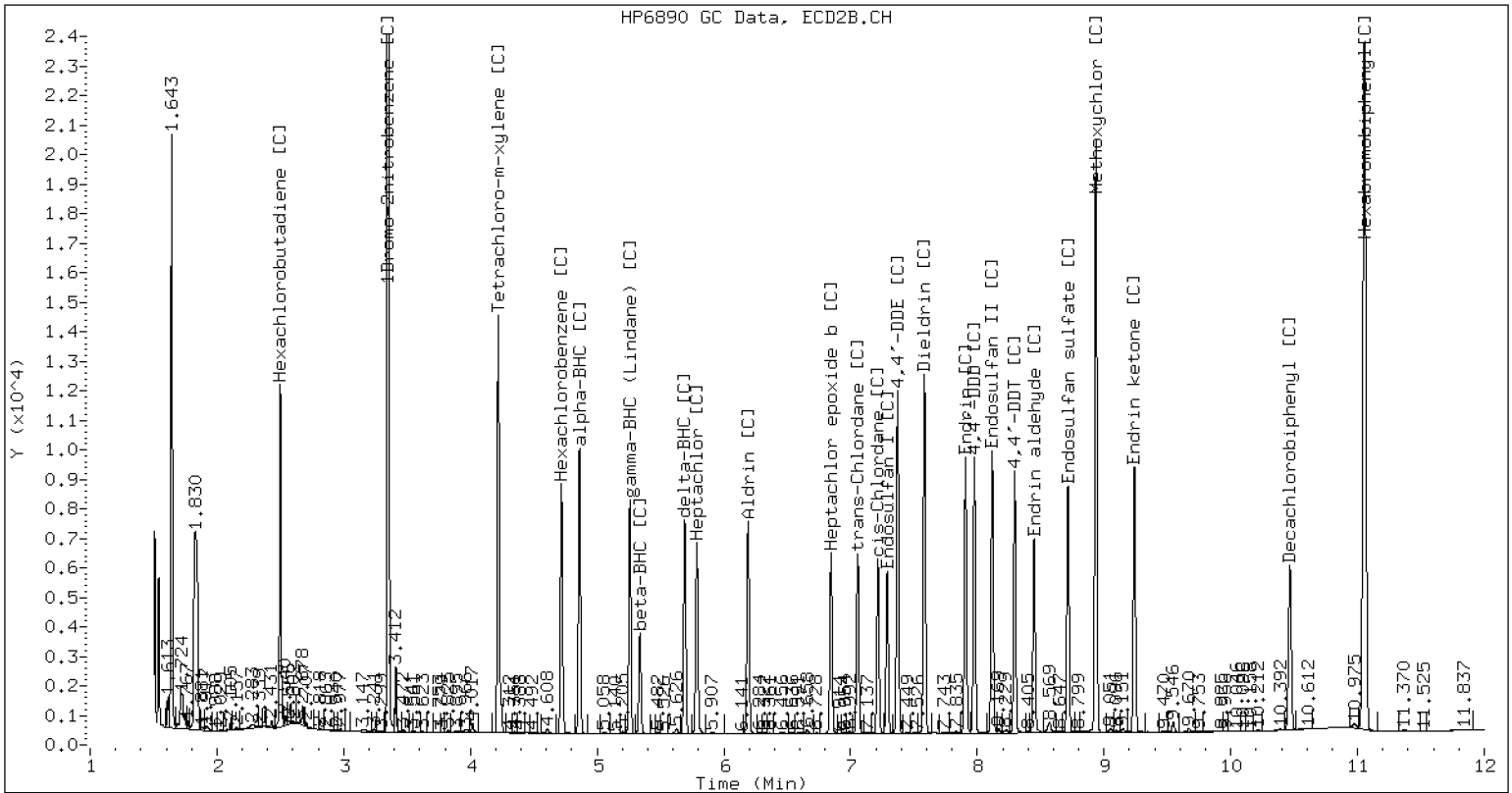


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121408.D SEQ-CAL4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D  
Data file 2: /20221214.b/B20221214.b/22121408.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL4  
Client ID:  
Injection Date: 14-DEC-2022 21:31  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D  
Data file 2: /20221214.b/B20221214.b/22121409.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL5  
Client ID:  
Injection Date: 14-DEC-2022 21:49  
Report Date: 12/16/2022 15:30  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag		
4.342	0.000	263355	4.860	-0.001	412780	20.34	20.46	0.6	alpha-BHC
4.726	0.000	99355	5.337	-0.000	154138	19.93	20.10	0.8	beta-BHC
4.909	0.000	216224	5.690	-0.000	334261	20.44	20.12	1.6	delta-BHC
4.645	0.000	228274	5.258	-0.000	350450	20.34	20.47	0.7	gamma-BHC (Lindane)
5.130	0.000	203067	5.787	-0.000	320123	20.33	20.64	1.5	Heptachlor
5.454	0.000	230734	6.191	-0.000	359912	20.62	20.33	1.4	Aldrin
6.130	0.000	198033	6.845	-0.000	295580	20.41	20.19	1.1	Heptachlor epoxide b
6.572	0.000	180905	7.289	-0.000	260351	20.31	20.18	0.7	Endosulfan I
6.831	0.000	388583	7.582	-0.000	571731	40.61	40.10	1.3	Dieldrin
6.489	0.000	362177	7.370	-0.000	531128	40.77	40.63	0.4	4,4'-DDE
7.081	0.000	323576	7.907	-0.000	442460	40.48	40.43	0.1	Endrin
7.317	0.000	282010	8.117	-0.000	446656	39.19	39.81	1.6	Endosulfan II
7.135	0.000	292251	7.976	-0.000	427990	40.58	40.20	0.9	4,4'-DDD
8.180	0.000	276113	8.715	0.000	393743	40.41	39.97	1.1	Endosulfan sulfate
7.427	0.000	296413	8.295	-0.000	413083	40.73	40.20	1.3	4,4'-DDT
7.912	0.000	628619	8.935	-0.001	900958	194.94	198.14	1.6	Methoxychlor
8.453	0.000	311305	9.239	-0.000	423698	39.77	39.82	0.1	Endrin ketone
7.746	0.000	230881	8.448	0.000	312907	40.23	39.54	1.7	Endrin aldehyde
6.271	0.000	200151	7.056	-0.000	294106	20.31	20.15	0.8	trans-Chlordane
6.417	0.000	197892	7.216	-0.000	285904	20.02	20.02	0.0	cis-Chlordane
2.324	0.000	260716	2.500	-0.000	346254	19.22	18.08	6.2	Hexachlorobutadiene
4.182	0.000	237746	4.718	-0.000	364913	19.78	19.88	0.5	Hexachlorobenzene
3.828	0.000	357836	4.220	-0.000	567647	39.13	40.07	2.4	Tetrachloro-m-xylene
9.355	0.000	239428	10.466	-0.001	327134	38.76	38.45	0.8	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	672426	0.0
Hexabromobiphenyl	609723	609723	0.0

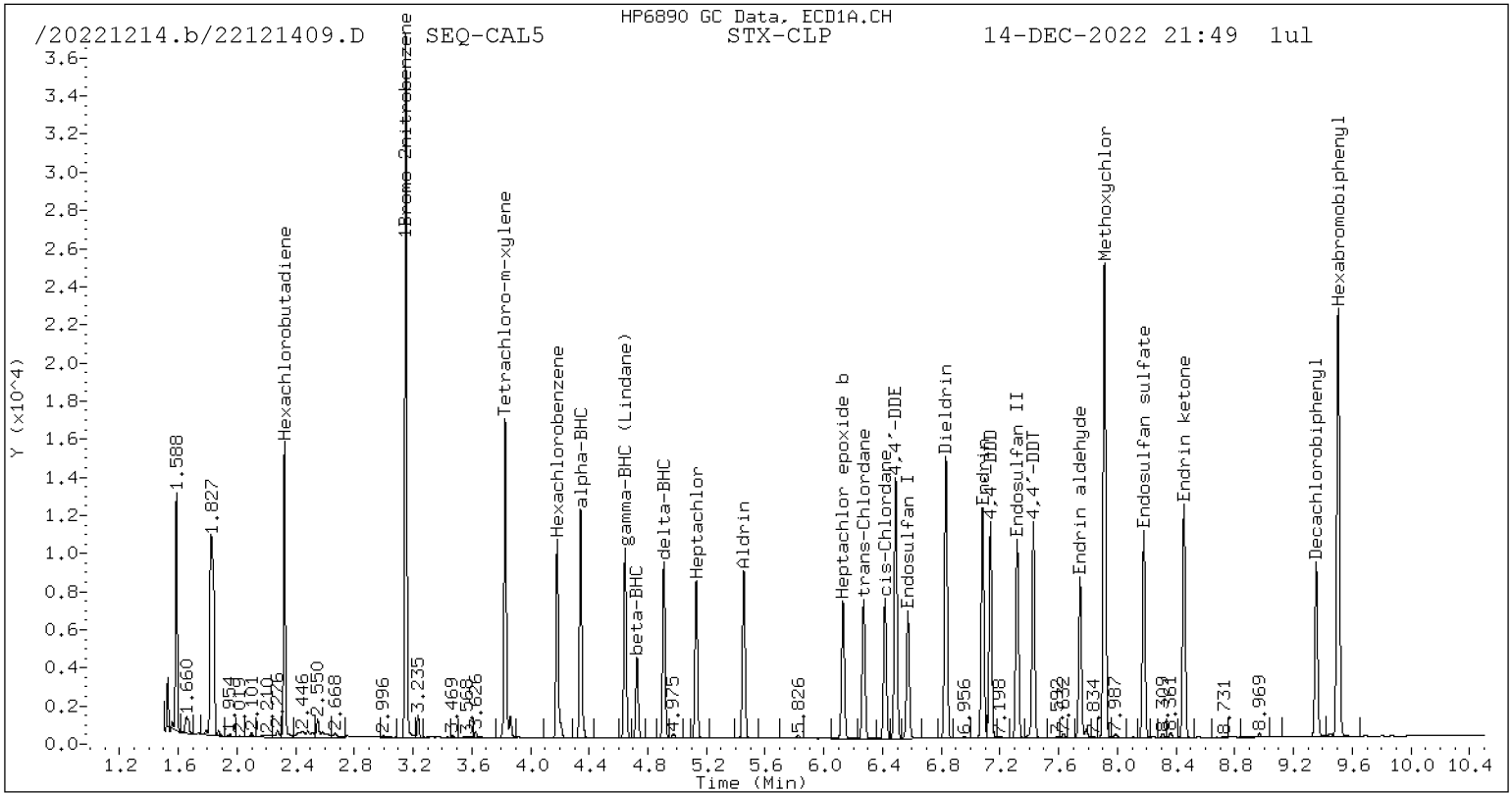
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	1006482	0.0
Hexabromobiphenyl	769764	769764	0.0

\* Standard Areas taken from Initial Cal Level 5

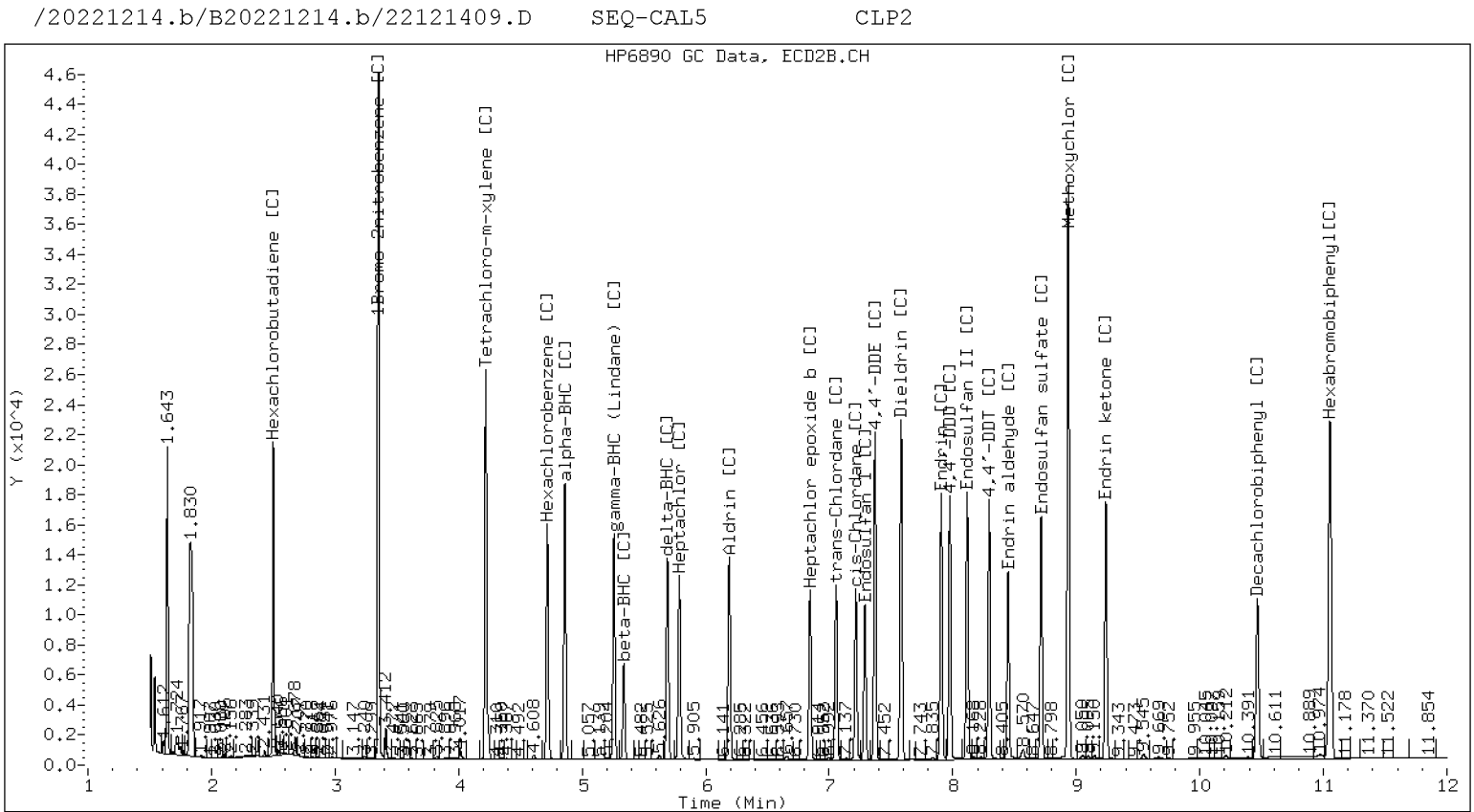
Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D  
Data file 2: /20221214.b/B20221214.b/22121409.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL5  
Client ID:  
Injection Date: 14-DEC-2022 21:49  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag		
RT	Shift Response	RT	Shift Response	on col	on col		

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D  
Data file 2: /20221214.b/B20221214.b/22121410.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL6  
Client ID:  
Injection Date: 14-DEC-2022 22:07  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.342	0.000	535902	4.860	-0.000	849533	39.69	40.30	1.5	alpha-BHC
4.726	0.000	198976	5.337	-0.000	311218	38.28	38.84	1.4	beta-BHC
4.910	0.000	440370	5.691	0.000	700464	39.91	40.34	1.1	delta-BHC
4.646	0.000	461905	5.258	0.000	718675	39.46	40.18	1.8	gamma-BHC (Lindane)
5.130	0.000	401672	5.787	0.000	639345	38.56	39.46	2.3	Heptachlor
5.454	0.000	458396	6.190	-0.000	720942	39.27	38.97	0.8	Aldrin
6.130	0.000	387273	6.846	0.000	586062	38.26	38.31	0.1	Heptachlor epoxide b
6.572	-0.000	354629	7.288	-0.001	519836	38.18	38.55	1.0	Endosulfan I
6.832	0.000	755708	7.582	-0.000	1126850	75.73	75.64	0.1	Dieldrin
6.489	0.000	698620	7.371	-0.000	1040947	75.40	76.19	1.0	4,4'-DDE
7.082	0.000	615481	7.907	-0.000	858461	74.19	74.98	1.1	Endrin
7.317	0.000	590923	8.117	-0.000	885035	79.12	75.41	4.8	Endosulfan II
7.136	0.000	565557	7.976	-0.000	842536	75.67	75.65	0.0	4,4'-DDD
8.179	-0.001	540557	8.715	0.000	782860	76.22	75.96	0.3	Endosulfan sulfate
7.427	0.000	577337	8.295	-0.000	820861	76.44	76.36	0.1	4,4'-DDT
7.912	-0.000	1204040	8.935	-0.001	1785262	359.75	375.30	4.2	Methoxychlor
8.453	-0.001	610387	9.239	-0.000	843646	75.13	75.79	0.9	Endrin ketone
7.746	-0.000	452325	8.448	0.000	622287	75.93	75.17	1.0	Endrin aldehyde
6.271	0.000	395598	7.056	-0.000	591899	38.48	38.80	0.8	trans-Chlordane
6.417	0.001	389712	7.215	-0.000	573103	37.80	38.40	1.6	cis-Chlordane
2.324	0.000	511265	2.500	-0.000	705320	36.14	35.24	2.5	Hexachlorobutadiene
4.183	0.001	472841	4.718	0.000	728846	37.72	37.99	0.7	Hexachlorobenzene
3.828	-0.000	714634	4.221	0.000	1124106	74.93	75.93	1.3	Tetrachloro-m-xylene
9.355	-0.000	468280	10.466	-0.001	645336	73.03	72.51	0.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	701342	-1.3
Hexabromobiphenyl	641833	632821	-1.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1051766	-0.7
Hexabromobiphenyl	797125	805268	1.0

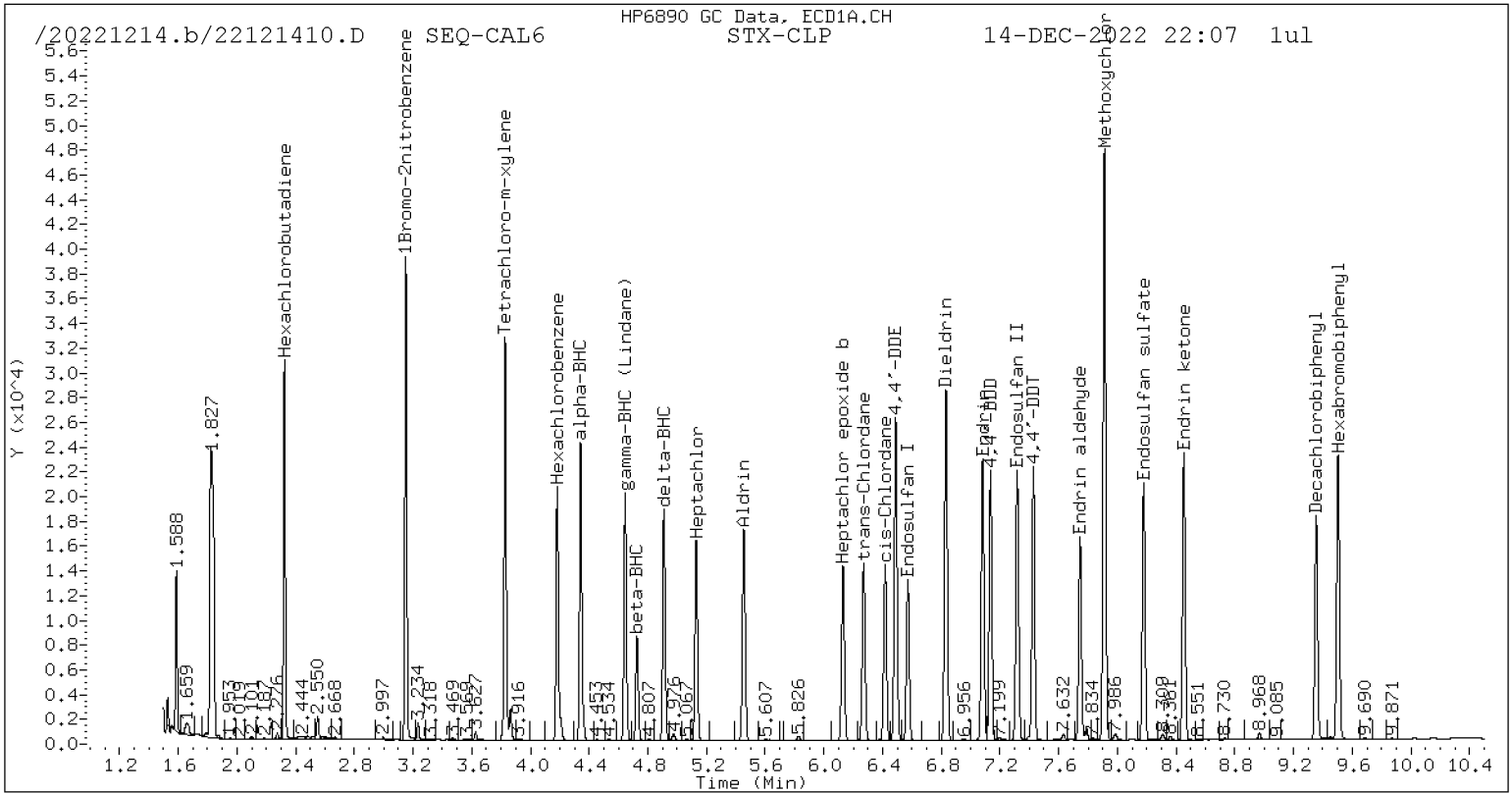
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

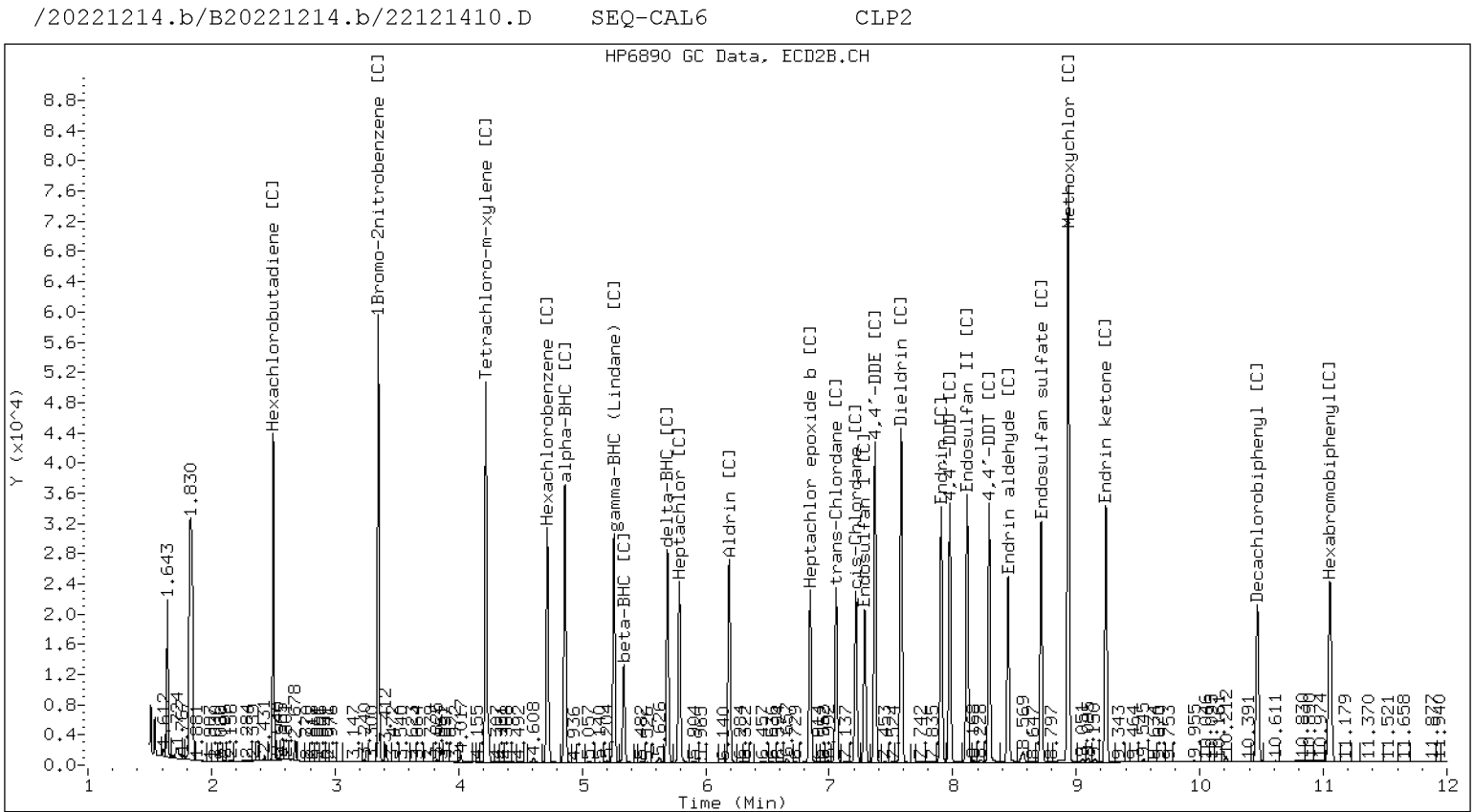
<- Indicates standard response outside Limits (-50 to +100%)



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D  
Data file 2: /20221214.b/B20221214.b/22121410.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL6  
Client ID:  
Injection Date: 14-DEC-2022 22:07  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col		CLP2 Col		STX-CLP	CLP2		
RT	Shift Response	RT	Shift Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D  
Data file 2: /20221214.b/B20221214.b/22121411.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL7  
Client ID:  
Injection Date: 14-DEC-2022 22:25  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag		
4.342	0.000	1012605	4.861	0.000	1623058	75.30	77.94	3.4	alpha-BHC
4.726	0.000	371916	5.337	0.000	586390	71.84	74.06	3.1	beta-BHC
4.910	0.000	837966	5.691	0.000	1343533	76.25	78.32	2.7	delta-BHC
4.645	-0.000	870454	5.258	0.000	1370551	74.66	77.55	3.8	gamma-BHC (Lindane)
5.130	0.000	743802	5.787	0.000	1188915	71.70	74.26	3.5	Heptachlor
5.454	0.000	841598	6.191	0.000	1331430	72.39	72.84	0.6	Aldrin
6.130	-0.000	709774	6.845	0.000	1087105	70.41	71.92	2.1	Heptachlor epoxide b
6.573	0.000	652702	7.289	0.000	969098	70.56	72.74	3.1	Endosulfan I
6.832	0.000	1390496	7.583	0.000	2118555	139.91	143.93	2.8	Dieldrin
6.490	0.001	1284777	7.371	0.000	1944530	139.23	144.06	3.4	4,4'-DDE
7.082	0.001	1132487	7.907	0.000	1618631	137.86	142.60	3.4	Endrin
7.317	0.000	1089554	8.117	0.000	1672946	147.33	143.79	2.4	Endosulfan II
7.135	0.000	1051958	7.976	0.000	1606815	142.14	145.53	2.4	4,4'-DDD
8.180	0.000	1013288	8.715	0.000	1496440	144.30	146.47	1.5	Endosulfan sulfate
7.428	0.001	1086138	8.295	0.000	1586078	145.23	148.84	2.5	4,4'-DDT
7.912	0.001	2325261	8.936	0.000	3541650	701.64	751.02	6.8	Methoxychlor
8.454	0.000	1146784	9.240	0.000	1623077	142.56	147.08	3.1	Endrin ketone
7.746	-0.000	846477	8.448	0.000	1178353	143.51	143.57	0.0	Endrin aldehyde
6.271	0.000	733514	7.056	0.000	1114685	71.64	73.95	3.2	trans-Chlordane
6.417	0.001	723886	7.216	0.000	1079255	70.50	73.19	3.7	cis-Chlordane
2.324	0.000	955982	2.501	0.000	1351745	67.86	68.35	0.7	Hexachlorobutadiene
4.182	0.000	879573	4.718	0.000	1355289	70.45	71.51	1.5	Hexachlorobenzene
3.828	0.000	1318381	4.220	0.000	2067539	138.79	141.35	1.8	Tetrachloro-m-xylene
9.356	0.000	878340	10.467	0.000	1231298	138.34	139.55	0.9	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	698499	-1.7
Hexabromobiphenyl	641833	626605	-2.4

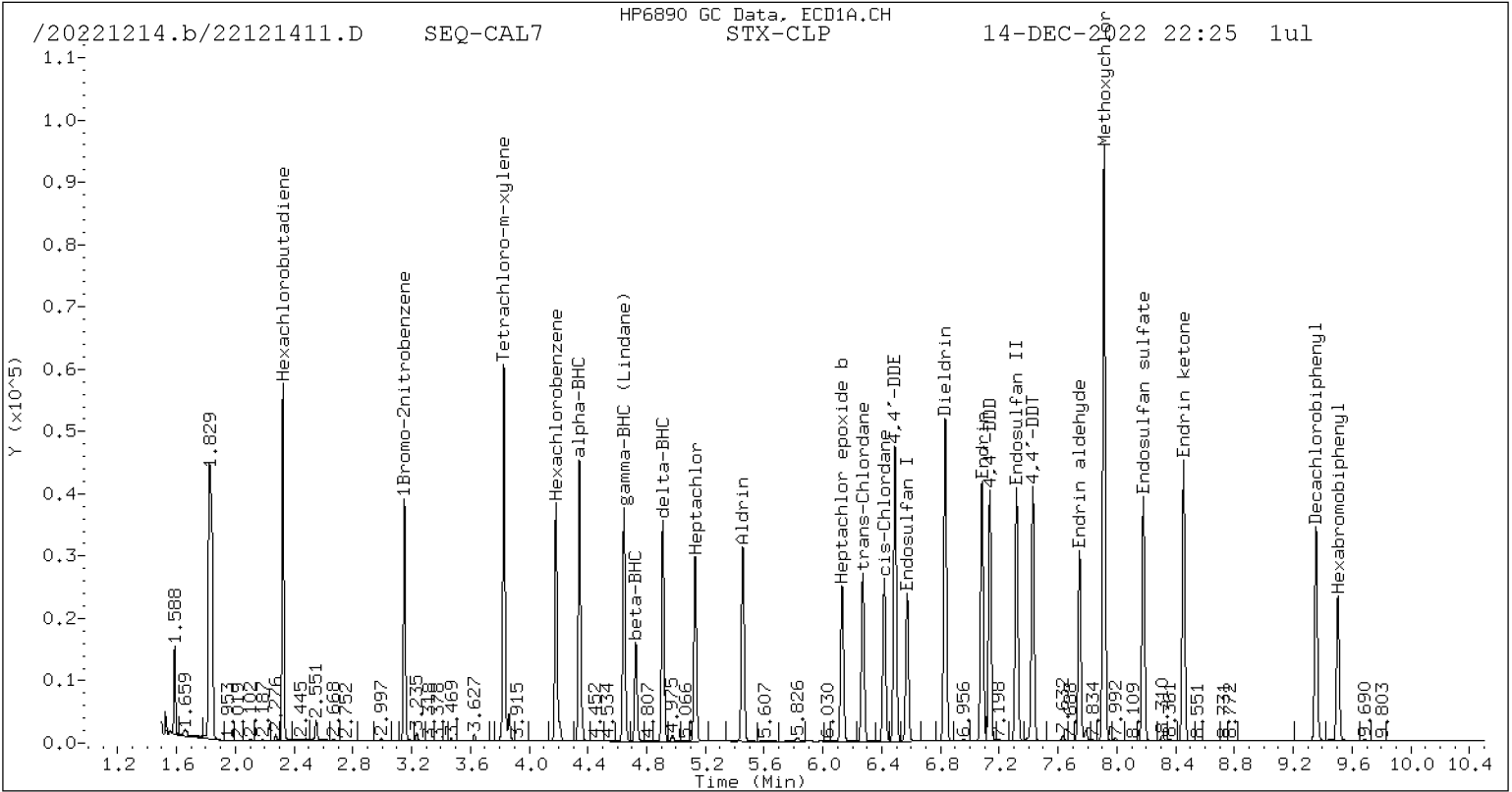
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1039154	-1.9
Hexabromobiphenyl	797125	798313	0.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D  
Data file 2: /20221214.b/B20221214.b/22121411.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL7  
Client ID:  
Injection Date: 14-DEC-2022 22:25  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col		CLP2 Col		STX-CLP	CLP2		
RT	Shift Response	RT	Shift Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D  
Data file 2: /20221214.b/B20221214.b/22121412.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL8  
Client ID:  
Injection Date: 14-DEC-2022 22:43  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag		
6.014	-0.000	22184	6.741	-0.000	34211	2.89	2.85	1.2	Oxychlorthane
6.106	-0.000	18661	7.036	-0.000	30817	2.94	3.14	6.5	2,4-DDE
6.397	-0.000	30616	7.154	-0.001	41466	3.05	2.82	7.5	trans-Nonachlor
6.681	0.000	16263	7.591	0.000	26177	2.88	3.12	7.9	2,4-DDD
6.956	-0.001	17569	7.913	-0.000	24398	2.88	2.82	2.1	2,4-DDT
7.112	-0.000	29417	7.975	-0.000	37972	3.01	2.72	9.9	cis-Nonachlor
8.082	-0.000	18819	9.223	-0.000	24312	3.09	3.00	3.1	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	713898	0.5
Hexabromobiphenyl	641833	646441	0.7

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1076864	1.7
Hexabromobiphenyl	797125	820275	2.9

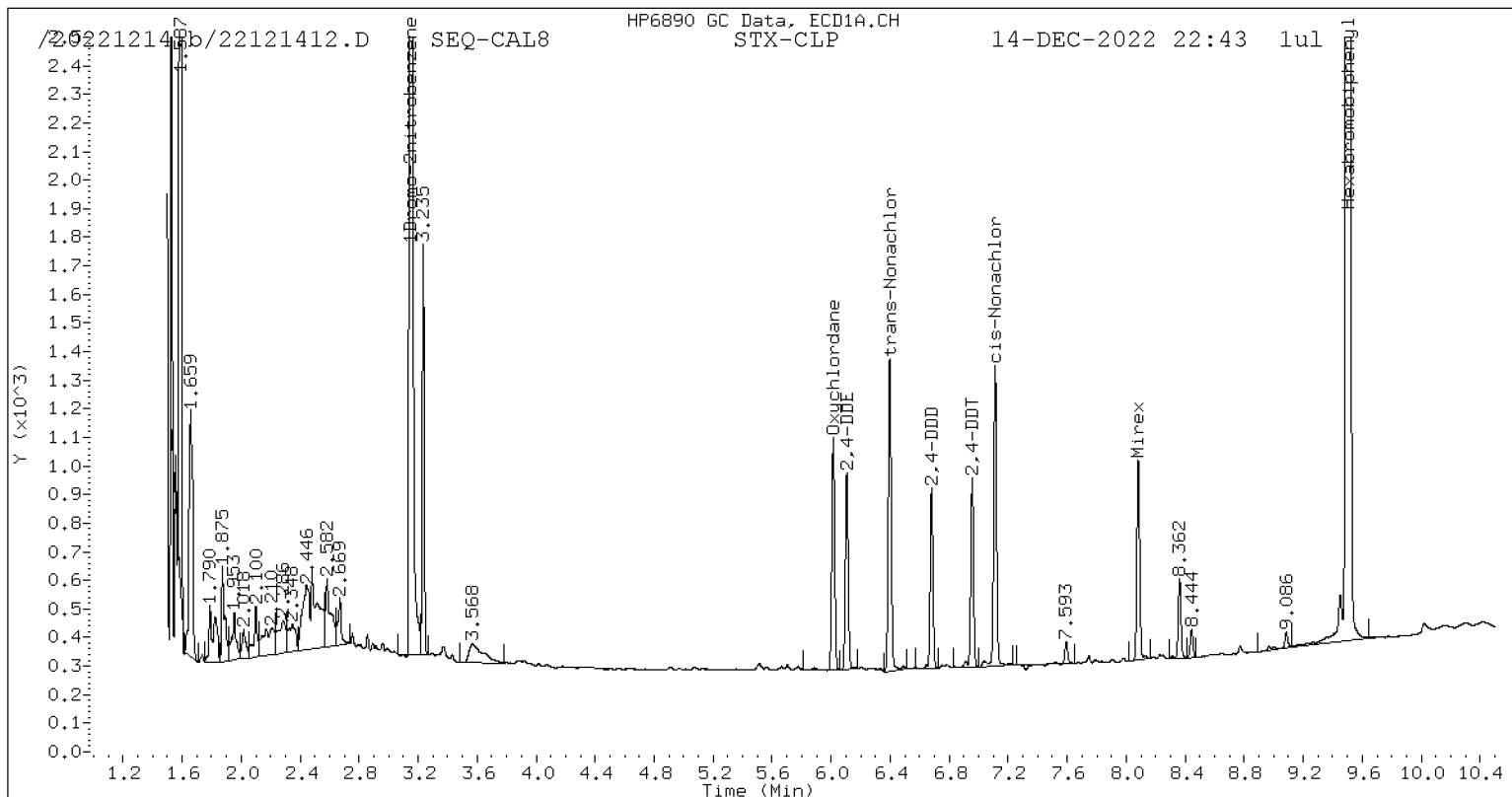
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

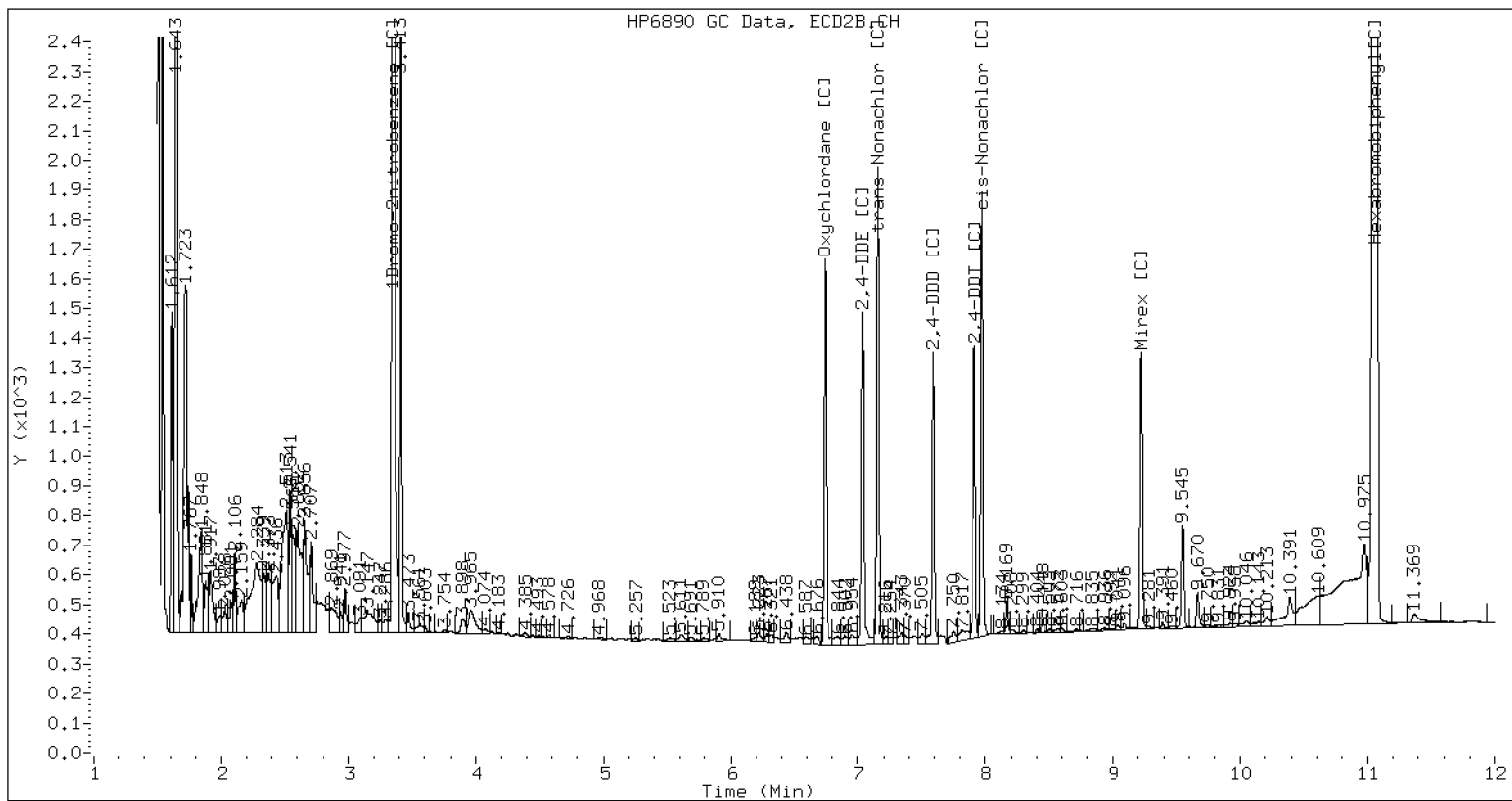


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121412.D SEQ-CAL8 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D  
Data file 2: /20221214.b/B20221214.b/22121412.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL8  
Client ID:  
Injection Date: 14-DEC-2022 22:43  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D  
Data file 2: /20221214.b/B20221214.b/22121413.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL9  
Client ID:  
Injection Date: 14-DEC-2022 23:01  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
6.015	0.000	39121	6.741	-0.000	61505	5.34	5.41	1.3	Oxychlorane
6.106	0.000	33487	7.036	-0.000	53206	5.54	5.72	3.1	2,4-DDE
6.398	0.000	51858	7.154	-0.001	72836	5.42	5.20	4.1	trans-Nonachlor
6.681	0.000	29307	7.590	-0.000	44506	5.45	5.55	1.9	2,4-DDD
6.957	-0.000	31530	7.914	0.000	45986	5.43	5.57	2.6	2,4-DDT
7.112	-0.000	50912	7.975	0.000	70898	5.46	5.32	2.6	cis-Nonachlor
8.082	-0.000	32004	9.223	-0.000	45650	5.52	5.89	6.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	672507	-5.4
Hexabromobiphenyl	641833	615627	-4.1

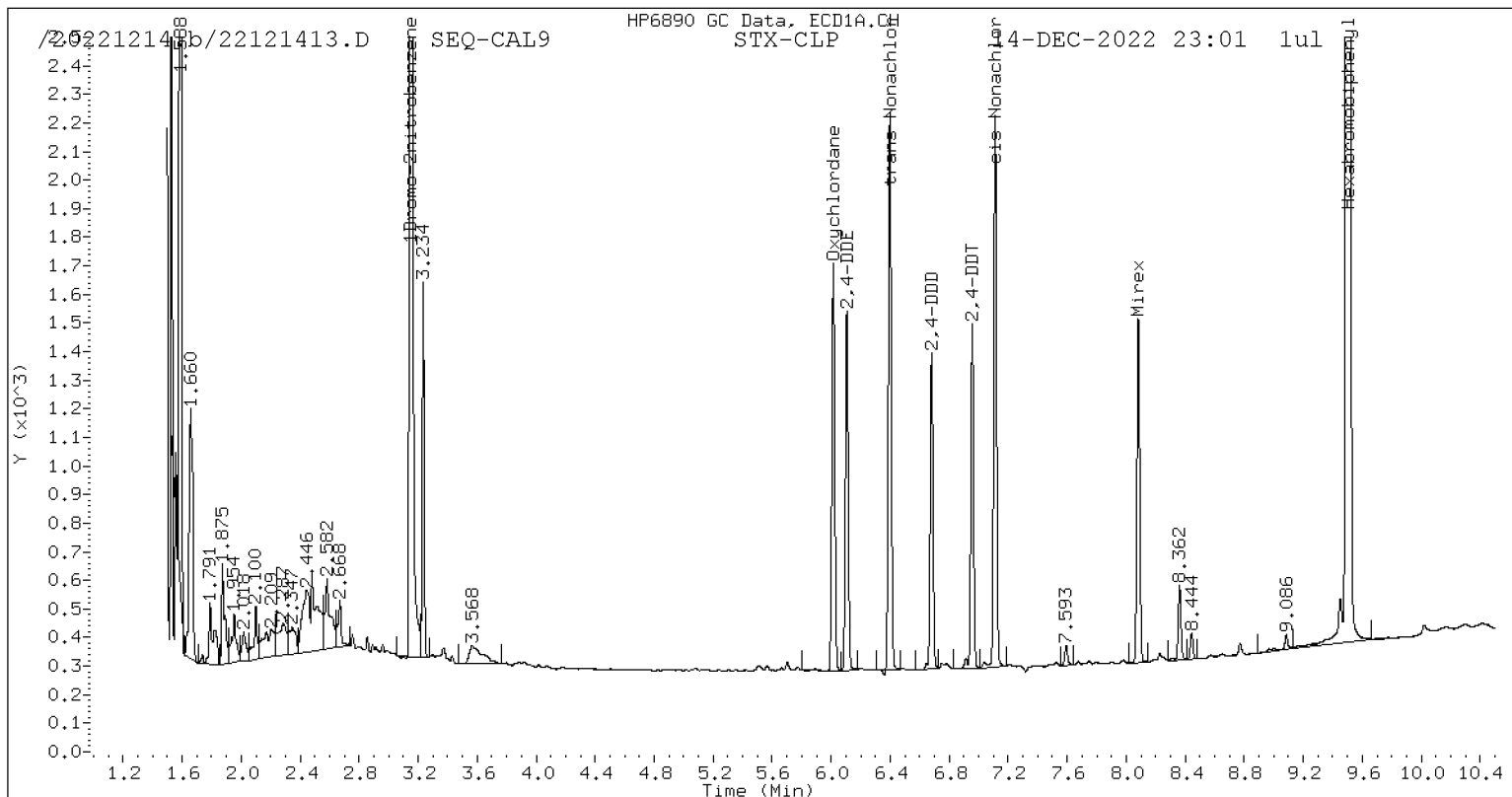
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1020334	-3.6
Hexabromobiphenyl	797125	782734	-1.8

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

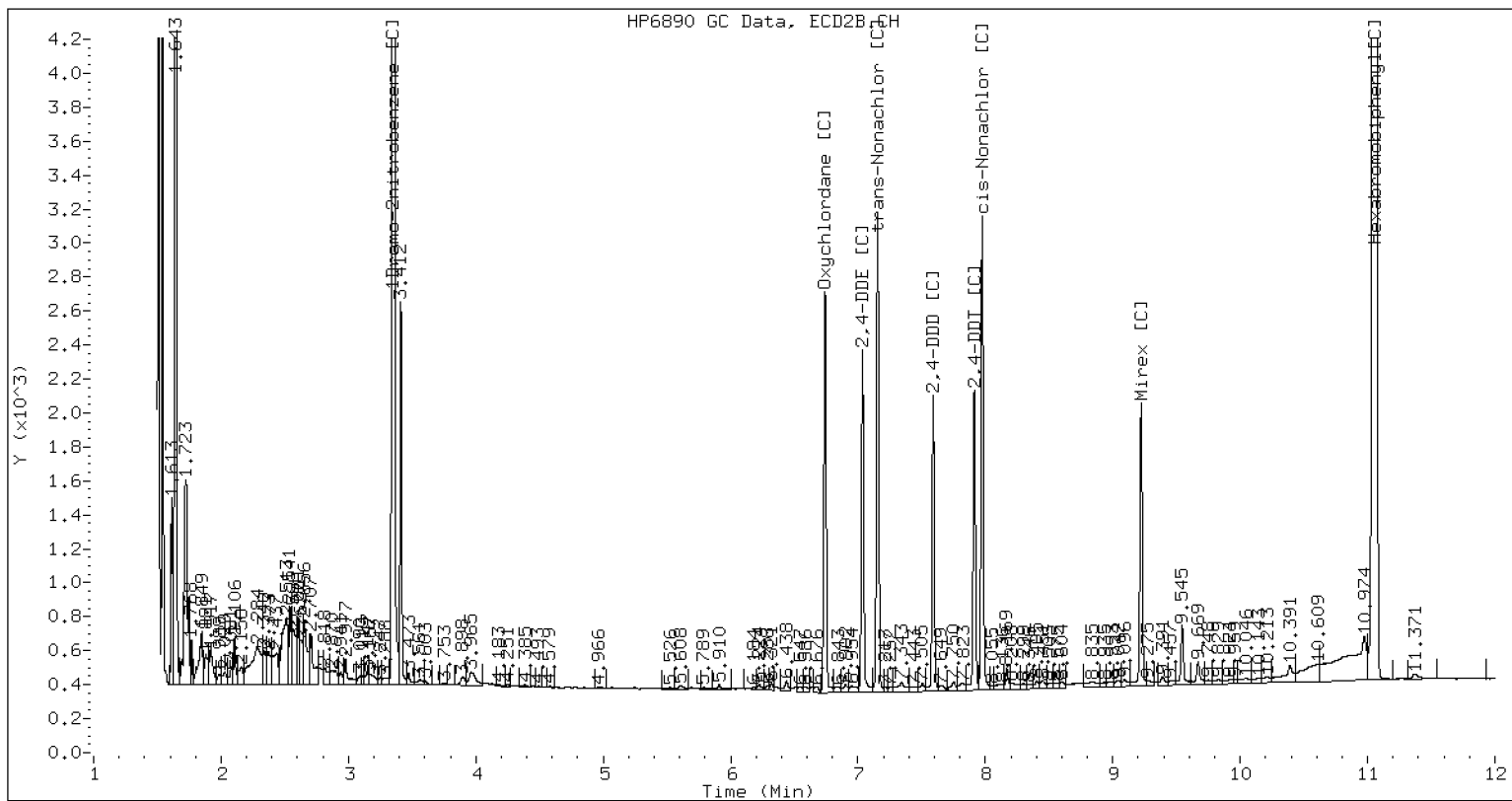
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121413.D SEQ-CAL9 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D  
Data file 2: /20221214.b/B20221214.b/22121413.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL9  
Client ID:  
Injection Date: 14-DEC-2022 23:01  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D  
Data file 2: /20221214.b/B20221214.b/22121414.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALA  
Client ID:  
Injection Date: 14-DEC-2022 23:19  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
6.014	-0.000 82473	6.741 -0.001 127500	6.741	10.63	10.63	0.0	Oxychlorthane
6.106	-0.000 69109	7.035 -0.001 108440	7.035	10.79	11.04	2.3	2,4-DDE
6.398	0.000 108386	7.154 -0.001 157712	7.154	10.68	10.60	0.7	trans-Nonachlor
6.681	0.000 60517	7.590 -0.000 91420	7.590	10.62	10.74	1.2	2,4-DDD
6.956	-0.001 65300	7.913 0.000 91498	7.913	10.61	10.44	1.6	2,4-DDT
7.111	-0.001 104247	7.975 -0.000 146224	7.975	10.55	10.34	2.0	cis-Nonachlor
8.082	-0.000 65614	9.222 -0.000 84337	9.222	10.67	10.25	4.0	Mirex
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	712122	0.2
Hexabromobiphenyl	641833	652595	1.7

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1077341	1.7
Hexabromobiphenyl	797125	831365	4.3

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D  
Data file 2: /20221214.b/B20221214.b/22121414.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALA  
Client ID:  
Injection Date: 14-DEC-2022 23:19  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D  
Data file 2: /20221214.b/B20221214.b/22121415.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALB  
Client ID:  
Injection Date: 14-DEC-2022 23:36  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
6.015	0.001 154379	6.741 -0.000 238017	20.80	20.28	2.5	Oxychlorthane		
6.106	-0.000 128483	7.036 -0.000 195807	20.97	20.37	2.9	2,4-DDE		
6.398	0.000 200622	7.155 -0.000 289952	20.66	20.28	1.9	trans-Nonachlor		
6.681	0.000 113972	7.591 0.000 165245	20.90	20.21	3.4	2,4-DDD		
6.956	-0.001 122412	7.913 0.000 169814	20.78	20.17	3.0	2,4-DDT		
7.112	-0.000 194165	7.975 -0.000 274910	20.54	20.23	1.5	cis-Nonachlor		
8.082	-0.000 119271	9.223 0.000 158702	20.28	20.08	1.0	Mirex		
----		----	0.00	0.00	---	Tetrachloro-m-xylene		
----		----	0.00	0.00	---	Decachlorobiphenyl		

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	693450	-2.4
Hexabromobiphenyl	641833	624334	-2.7

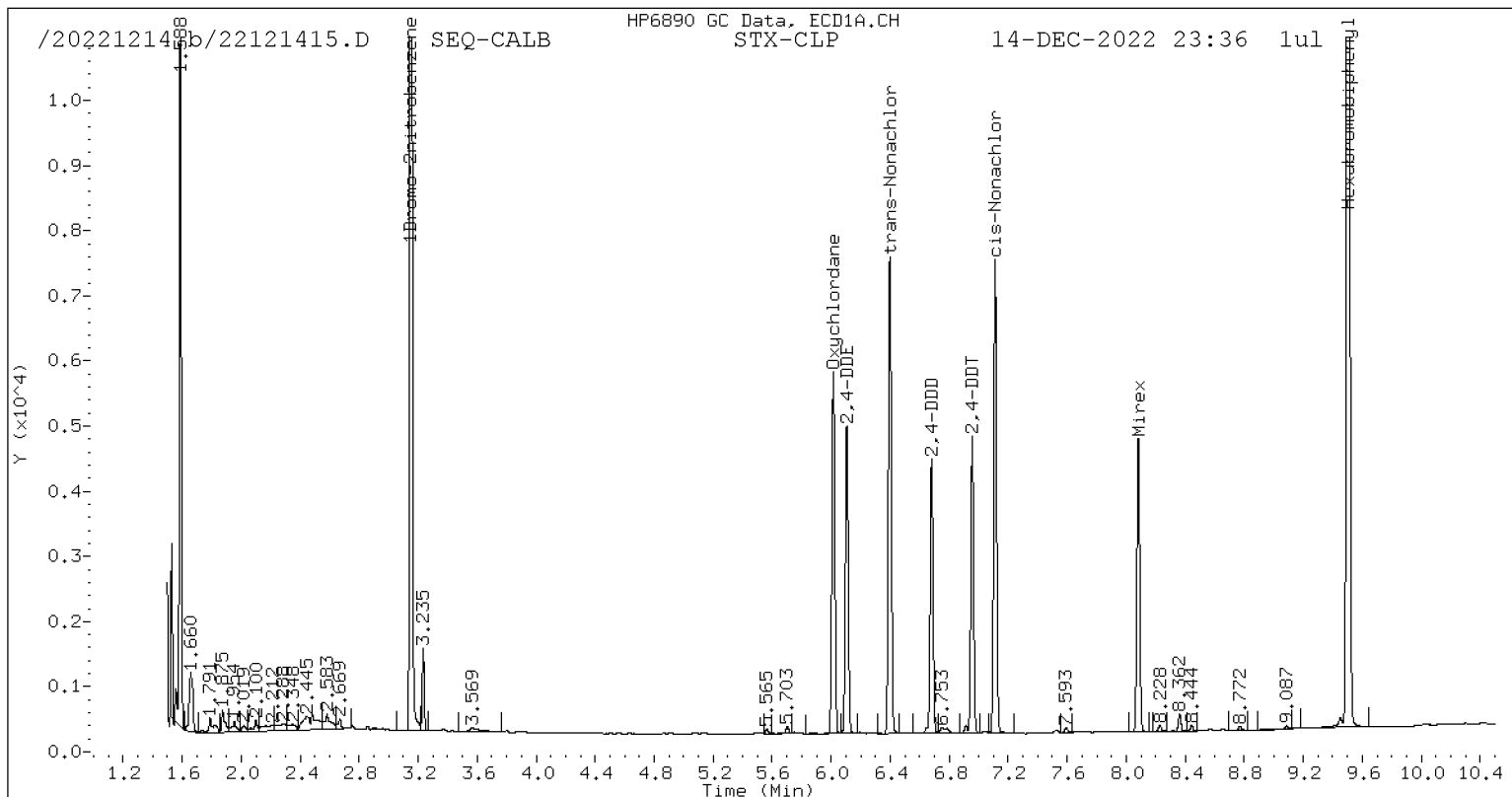
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1053959	-0.5
Hexabromobiphenyl	797125	798882	0.2

\* Standard Areas taken from Initial Cal Level 5

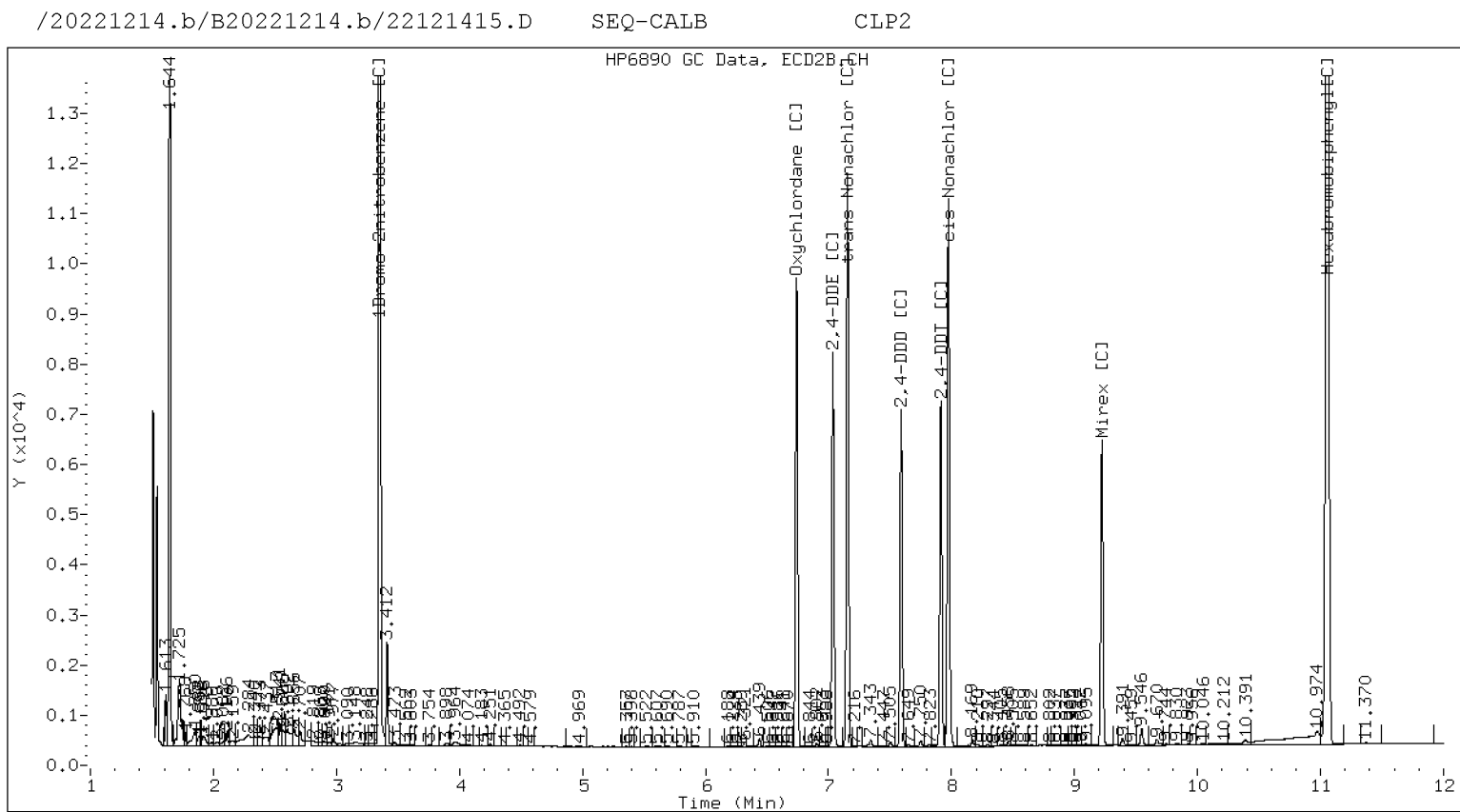
Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D  
Data file 2: /20221214.b/B20221214.b/22121415.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALB  
Client ID:  
Injection Date: 14-DEC-2022 23:36  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D  
 Data file 2: /20221214.b/B20221214.b/22121416.D  
 Method: \20221214.b\PEST.m  
 Compound Sublist: WND.sub  
 Instrument, Inj. Vol.: ecd6.i, 1ul  
 Operator: JGR

ARI ID: SEQ-CALC  
 Client ID:  
 Injection Date: 14-DEC-2022 23:54  
 Report Date: 12/16/2022 15:19  
 Units: ng/mL  
 Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
6.014	0.000	292499	6.741	-0.000	460731	40.08	40.26	0.4	Oxychlorthane
6.106	0.000	242066	7.036	-0.000	372996	40.18	39.80	0.9	2,4-DDE
6.397	0.000	383329	7.154	-0.001	567971	40.16	40.45	0.7	trans-Nonachlor
6.681	0.000	216474	7.590	-0.000	320311	40.39	39.88	1.3	2,4-DDD
6.957	0.000	233738	7.913	-0.000	332906	40.36	40.25	0.3	2,4-DDT
7.112	0.000	373705	7.975	-0.000	538334	40.21	40.33	0.3	cis-Nonachlor
8.082	0.000	229604	9.222	-0.000	299228	39.71	38.54	3.0	Mirex
3.800	-0.028	1151	----			0.13	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	674573	-5.1
Hexabromobiphenyl	641833	613787	-4.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1027697	-2.9
Hexabromobiphenyl	797125	784673	-1.6

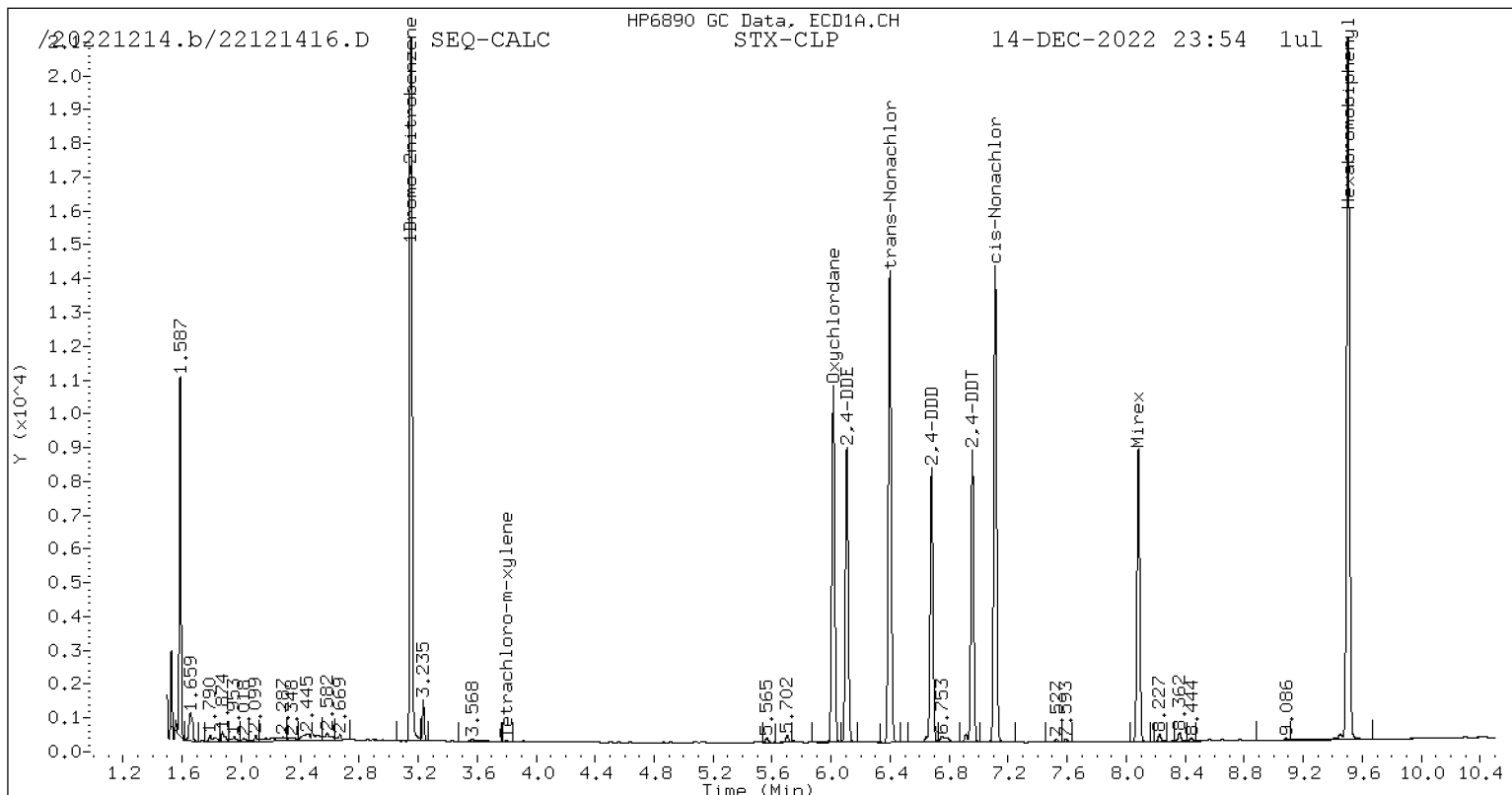
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

<- Indicates standard response outside Limits (-50 to +100%)

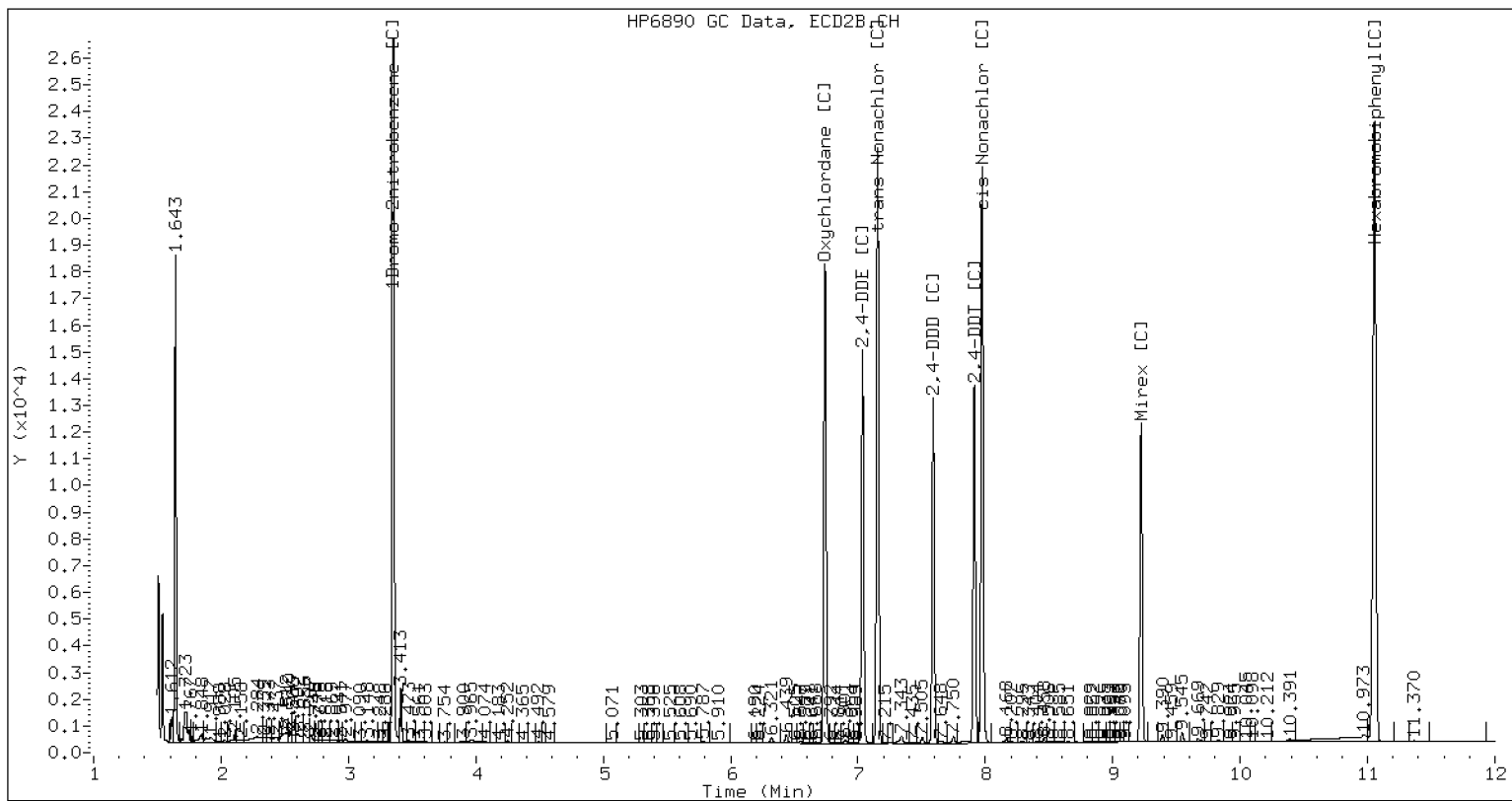


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121416.D SEQ-CALC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D  
Data file 2: /20221214.b/B20221214.b/22121416.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALC  
Client ID:  
Injection Date: 14-DEC-2022 23:54  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag		
RT	Shift Response	RT	Shift Response	on col	on col		

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D  
Data file 2: /20221214.b/B20221214.b/22121417.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALD  
Client ID:  
Injection Date: 15-DEC-2022 00:12  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
6.014	-0.000 544254	6.741 -0.000 856443	75.85	75.73	0.2	Oxychlorthane	
6.106	-0.000 438313	7.036 -0.000 677072	73.99	73.11	1.2	2,4-DDE	
6.397	-0.000 704675	7.155 0.000 1067899	75.09	76.94	2.4	trans-Nonachlor	
6.681	0.000 393654	7.591 0.000 594311	74.70	74.86	0.2	2,4-DDD	
6.956	-0.001 430636	7.914 0.000 618740	75.63	75.68	0.1	2,4-DDT	
7.112	-0.000 688257	7.975 0.000 1018624	75.31	77.19	2.5	cis-Nonachlor	
8.082	-0.001 426177	9.223 0.000 573947	74.97	74.78	0.2	Mirex	
3.800	-0.028 2109	----	0.23	0.00	---	Tetrachloro-m-xylene	
----		----	0.00	0.00	---	Decachlorobiphenyl	

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	664375	-6.5
Hexabromobiphenyl	641833	603504	-6.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1015544	-4.1
Hexabromobiphenyl	797125	775630	-2.7

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D  
Data file 2: /20221214.b/B20221214.b/22121417.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALD  
Client ID:  
Injection Date: 15-DEC-2022 00:12  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D  
 Data file 2: /20221214.b/B20221214.b/22121418.D  
 Method: \20221214.b\PEST.m  
 Compound Sublist: WND.sub  
 Instrument, Inj. Vol.: ecd6.i, 1ul  
 Operator: JGR

ARI ID: SEQ-CALE  
 Client ID:  
 Injection Date: 15-DEC-2022 00:30  
 Report Date: 12/16/2022 15:19  
 Units: ng/mL  
 Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
6.014	0.000	1020828	6.741	0.000	1630330	140.48	142.04	1.1	Oxychlorane
6.106	-0.000	801828	7.036	0.000	1240933	133.65	132.03	1.2	2,4-DDE
6.397	0.000	1327091	7.155	0.000	2047915	139.63	146.04	4.5	trans-Nonachlor
6.680	-0.000	733651	7.591	0.000	1118552	137.46	139.45	1.4	2,4-DDD
6.956	-0.001	794021	7.913	0.000	1163676	137.69	140.88	2.3	2,4-DDT
7.112	-0.000	1301975	7.975	0.000	1956215	140.68	146.73	4.2	cis-Nonachlor
8.082	-0.001	815059	9.223	0.000	1108848	141.57	143.01	1.0	Mirex
3.800	-0.028	3997	----			0.43	0.00	---	Tetrachloro-m-xylene
----			10.471	0.004	3393	0.00	0.39	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	675789	-4.9
Hexabromobiphenyl	641833	611199	-4.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1030648	-2.7
Hexabromobiphenyl	797125	783631	-1.7

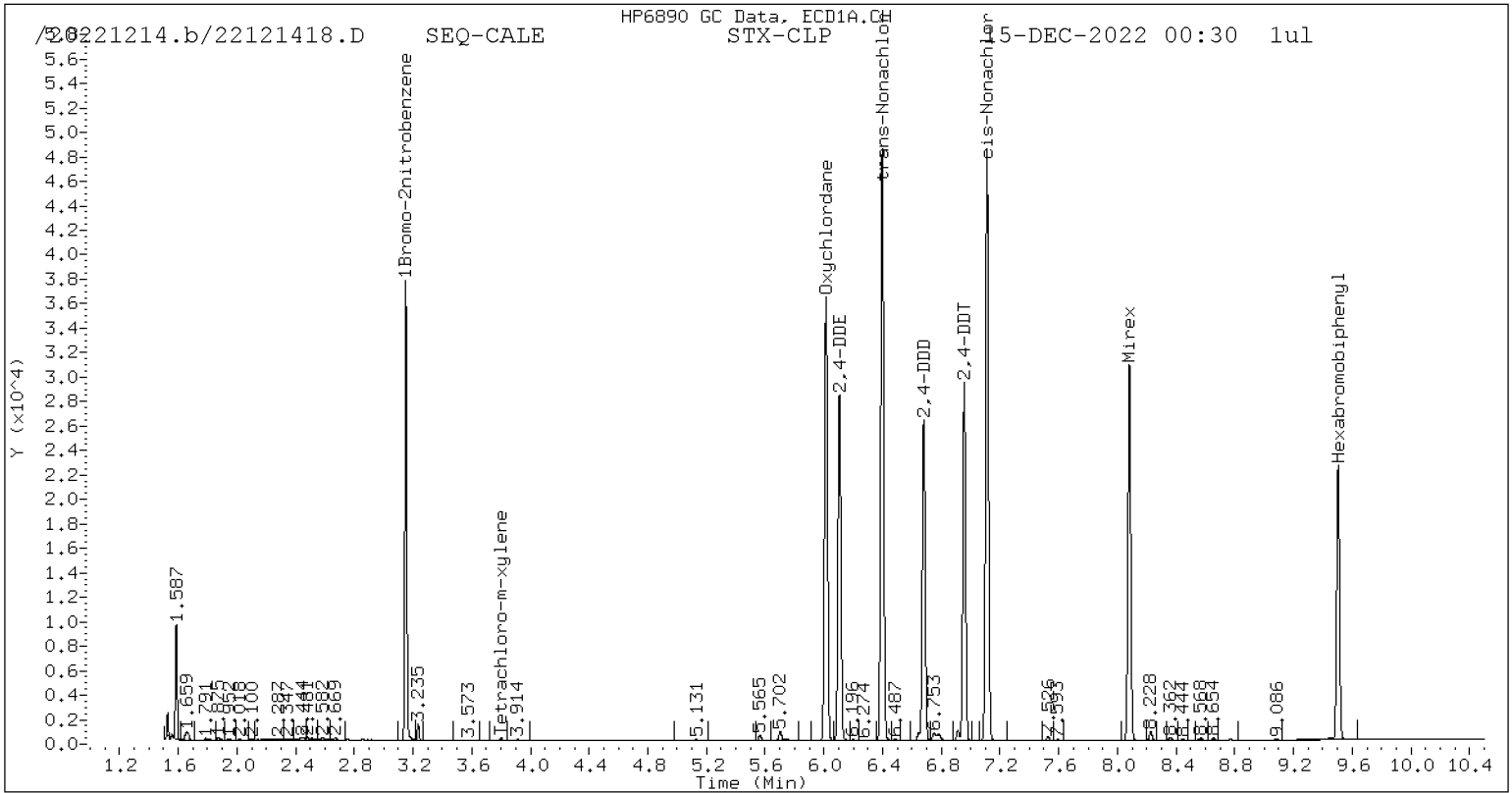
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

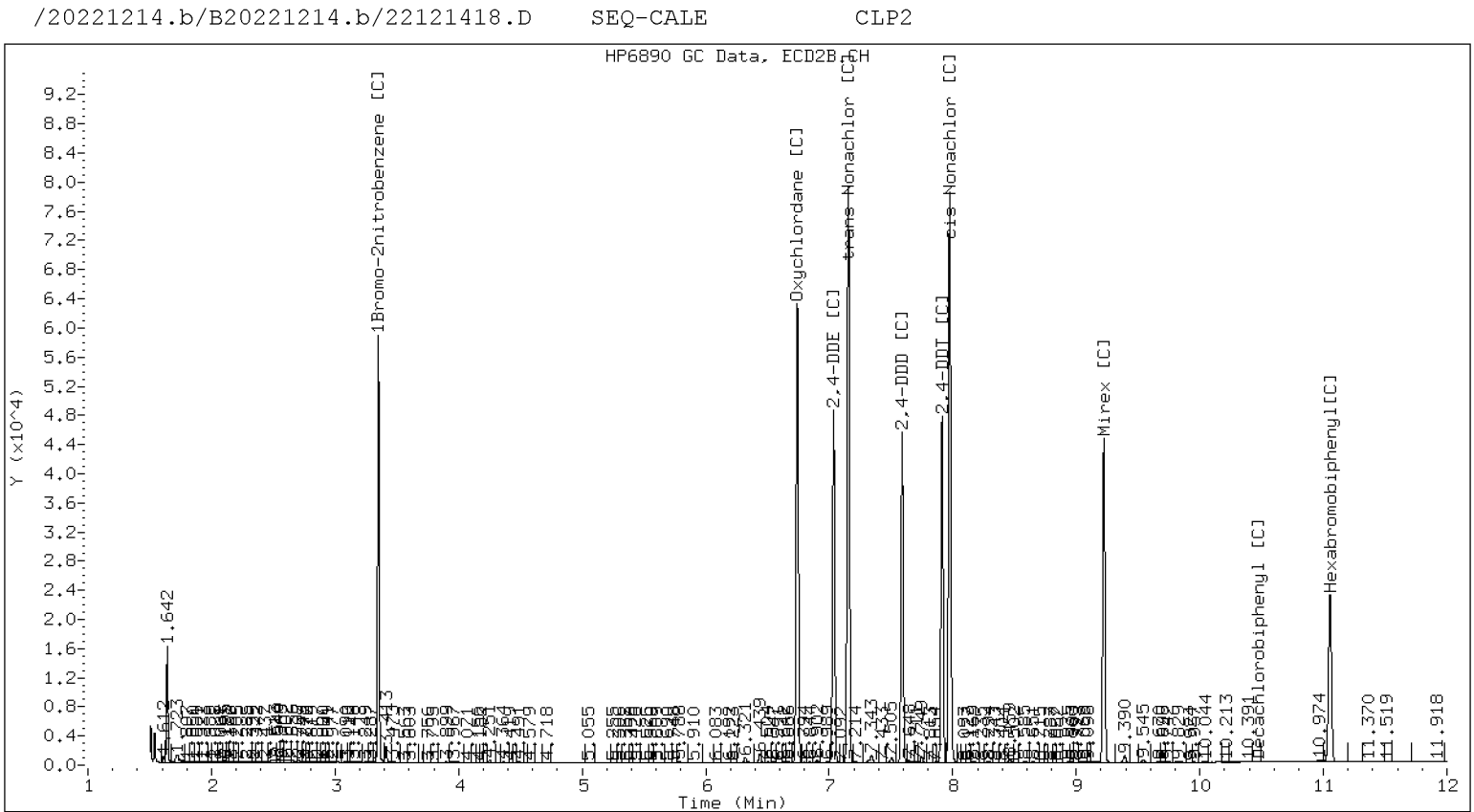
<- Indicates standard response outside Limits (-50 to +100%)



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D  
Data file 2: /20221214.b/B20221214.b/22121418.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALE  
Client ID:  
Injection Date: 15-DEC-2022 00:30  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D  
Data file 2: /20221214.b/B20221214.b/22121419.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-SCV1  
Client ID:  
Injection Date: 15-DEC-2022 00:48  
Report Date: 12/16/2022 15:19  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.342	0.000	643235	4.860	-0.000	1047709	49.66	51.22	3.1	alpha-BHC
4.726	-0.000	242617	5.337	0.000	386388	48.66	49.69	2.1	beta-BHC
4.909	0.000	554797	5.692	0.001	897343	52.41	53.26	1.6	delta-BHC
4.646	0.001	573983	5.258	0.000	915596	51.11	52.75	3.1	gamma-BHC (Lindane)
5.130	0.000	495138	5.788	0.001	804002	49.55	51.13	3.1	Heptachlor
5.454	0.000	526615	6.191	0.000	842909	47.03	46.95	0.2	Aldrin
6.130	0.000	469481	6.846	0.000	724932	48.36	48.83	1.0	Heptachlor epoxide b
6.573	0.000	423102	7.289	-0.000	632890	47.49	48.37	1.8	Endosulfan I
6.832	0.000	478299	7.583	0.000	724854	49.97	50.14	0.3	Dieldrin
6.489	0.000	448741	7.371	0.000	670346	50.49	50.56	0.1	4,4'-DDE
7.082	0.001	396143	7.907	0.000	551004	50.36	50.73	0.7	Endrin
7.318	0.001	350431	8.118	0.001	537104	49.49	48.24	2.6	Endosulfan II
7.136	0.001	355688	7.977	0.001	525927	50.19	49.78	0.8	4,4'-DDD
8.180	0.000	347949	8.716	0.001	502438	51.75	51.39	0.7	Endosulfan sulfate
7.428	0.001	368644	8.295	-0.000	524685	51.48	51.45	0.1	4,4'-DDT
7.913	0.001	174306	8.935	-0.001	238791	54.93	52.91	3.7	Methoxychlor
8.454	0.000	394474	9.240	-0.000	540431	51.21	51.18	0.1	Endrin ketone
7.746	0.001	316262	8.448	0.000	449269	56.00	57.20	2.1	Endrin aldehyde
6.271	0.000	490842	7.056	0.000	748350	49.78	50.55	1.5	trans-Chlordane
6.417	0.001	469513	7.216	0.000	700871	47.47	48.39	1.9	cis-Chlordane
----			2.512	0.011	11364	0.00	0.59	---	Hexachlorobutadiene
----			4.719	0.001	634	0.00	0.03	---	Hexachlorobenzene
----			4.220	-0.000	1724	0.00	0.12	---	Tetrachloro-m-xylene
----			10.468	0.001	643	0.00	0.08	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	672755	-5.3
Hexabromobiphenyl	641833	599983	-6.5

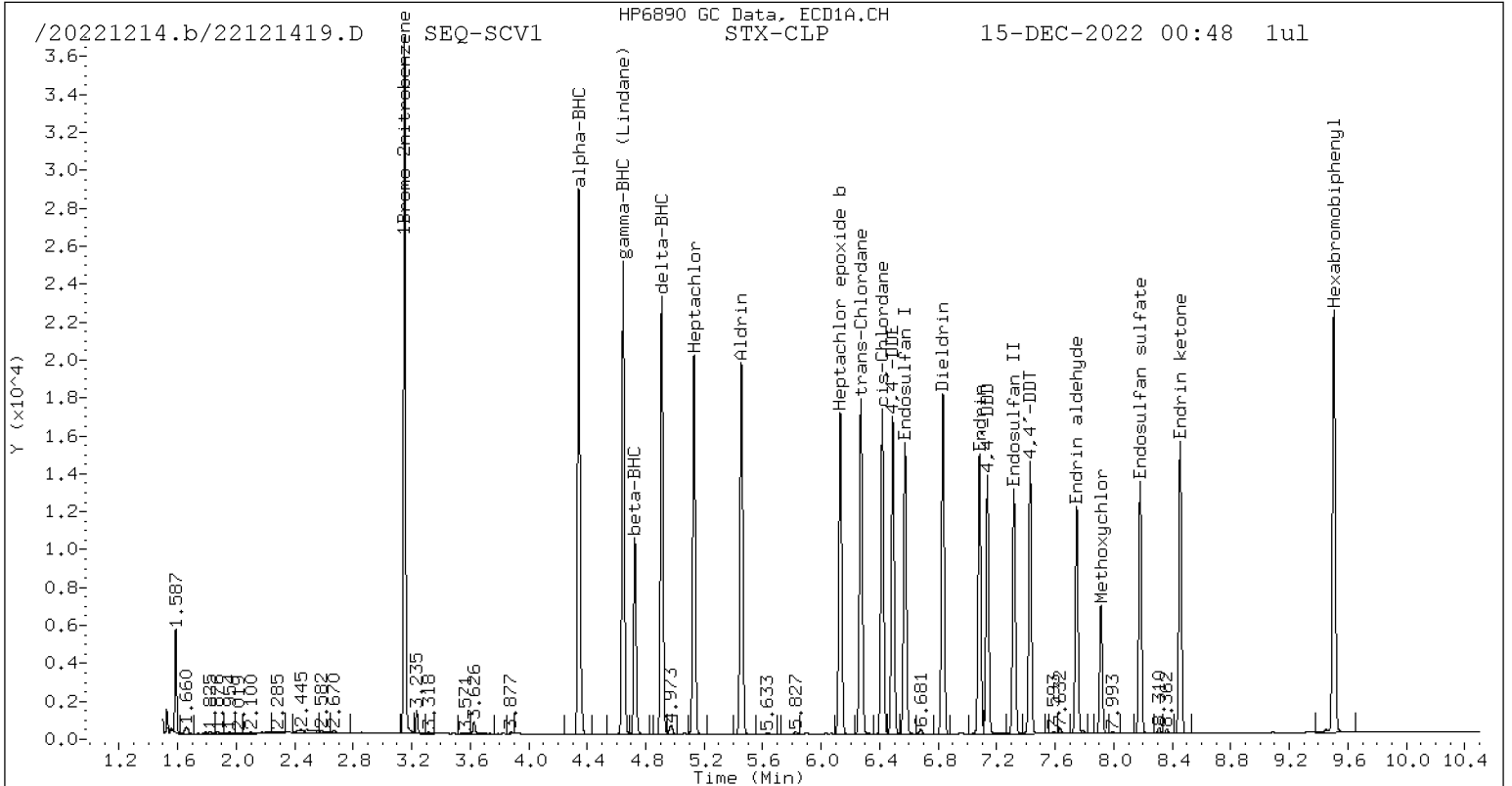
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1020655	-3.6
Hexabromobiphenyl	797125	763949	-4.2

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

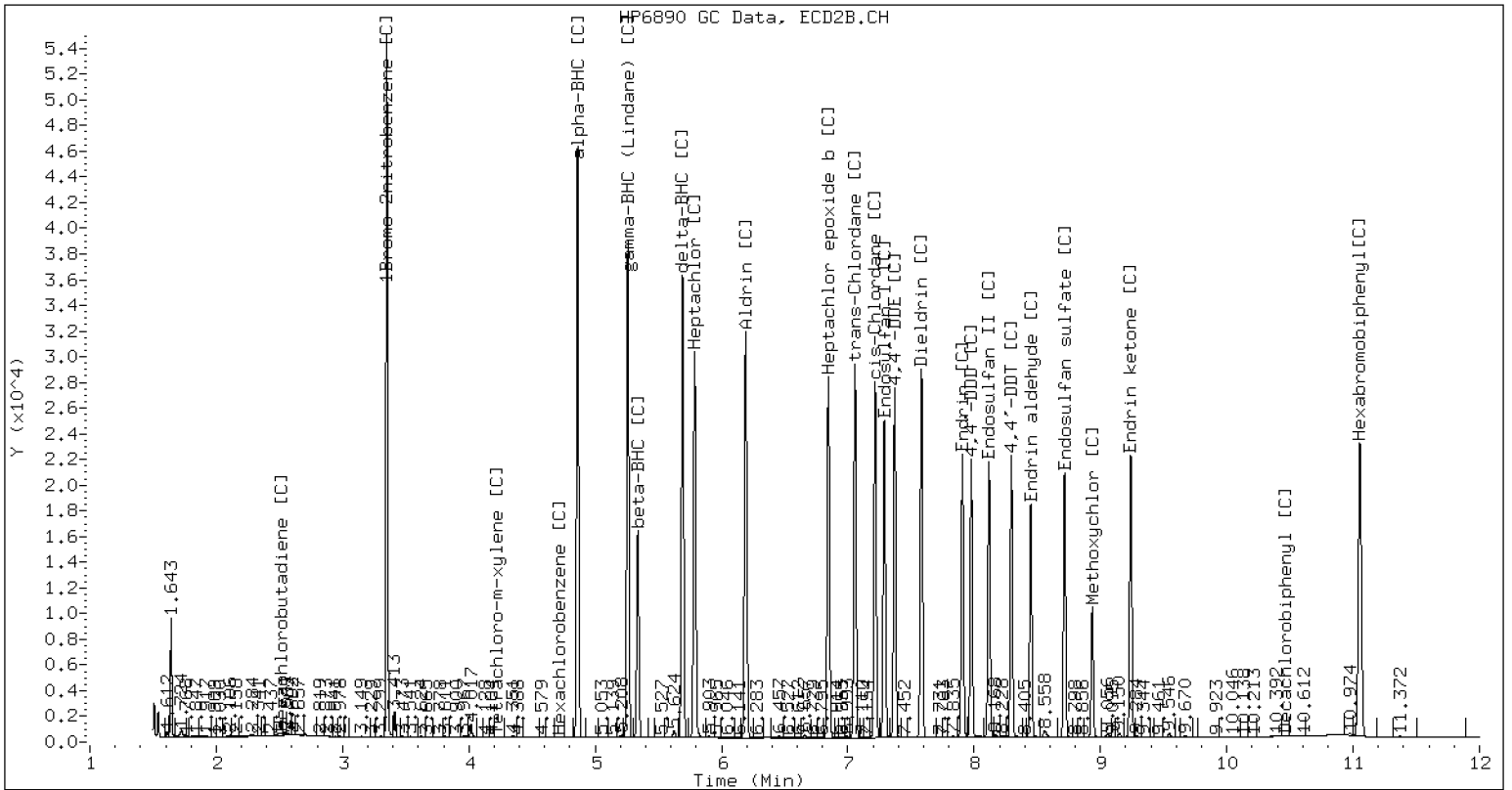
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121419.D SEQ-SCV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D  
Data file 2: /20221214.b/B20221214.b/22121419.D  
Method: \20221214.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-SCV1  
Client ID:  
Injection Date: 15-DEC-2022 00:48  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D  
Data file 2: /20221214.b/B20221214.b/22121420.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-SCV2  
Client ID:  
Injection Date: 15-DEC-2022 01:06  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
6.014	-0.000	374516	6.741	0.000	591348	51.08	50.07	2.0	Oxychlorthane
6.106	-0.000	261097	7.036	-0.000	403824	43.13	41.76	3.2	2,4-DDE
6.397	-0.000	444133	7.155	-0.000	657777	46.31	45.91	0.9	trans-Nonachlor
6.681	0.000	222534	7.591	0.000	334706	41.32	40.84	1.2	2,4-DDD
6.956	-0.001	262722	7.914	0.000	382016	45.15	45.26	0.2	2,4-DDT
7.111	-0.001	455894	7.975	0.000	655718	48.82	48.13	1.4	cis-Nonachlor
8.081	-0.001	256593	9.223	0.000	343173	44.17	43.31	2.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	687052	-3.3
Hexabromobiphenyl	641833	616730	-3.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1060438	0.2
Hexabromobiphenyl	797125	800740	0.5

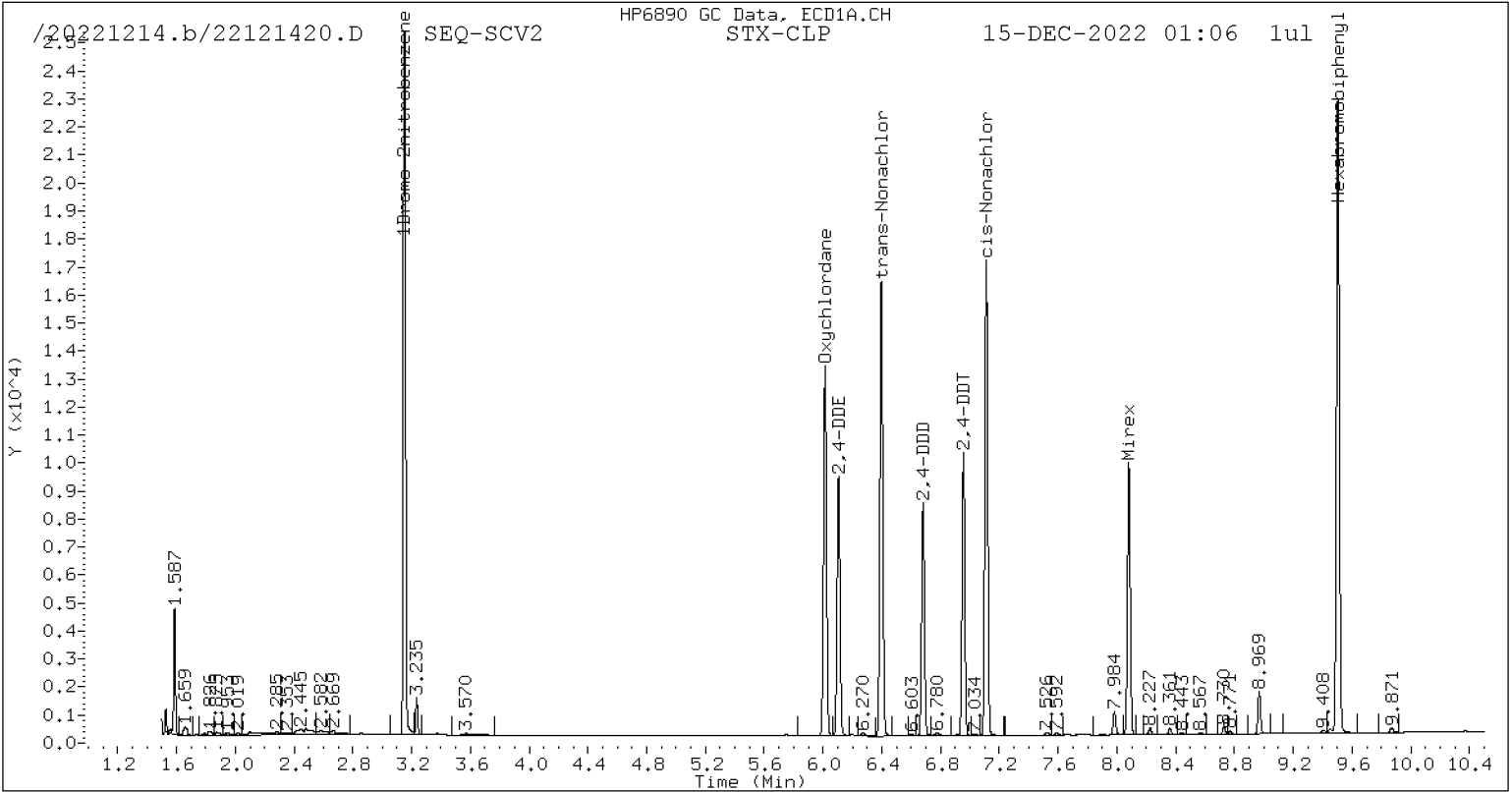
\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

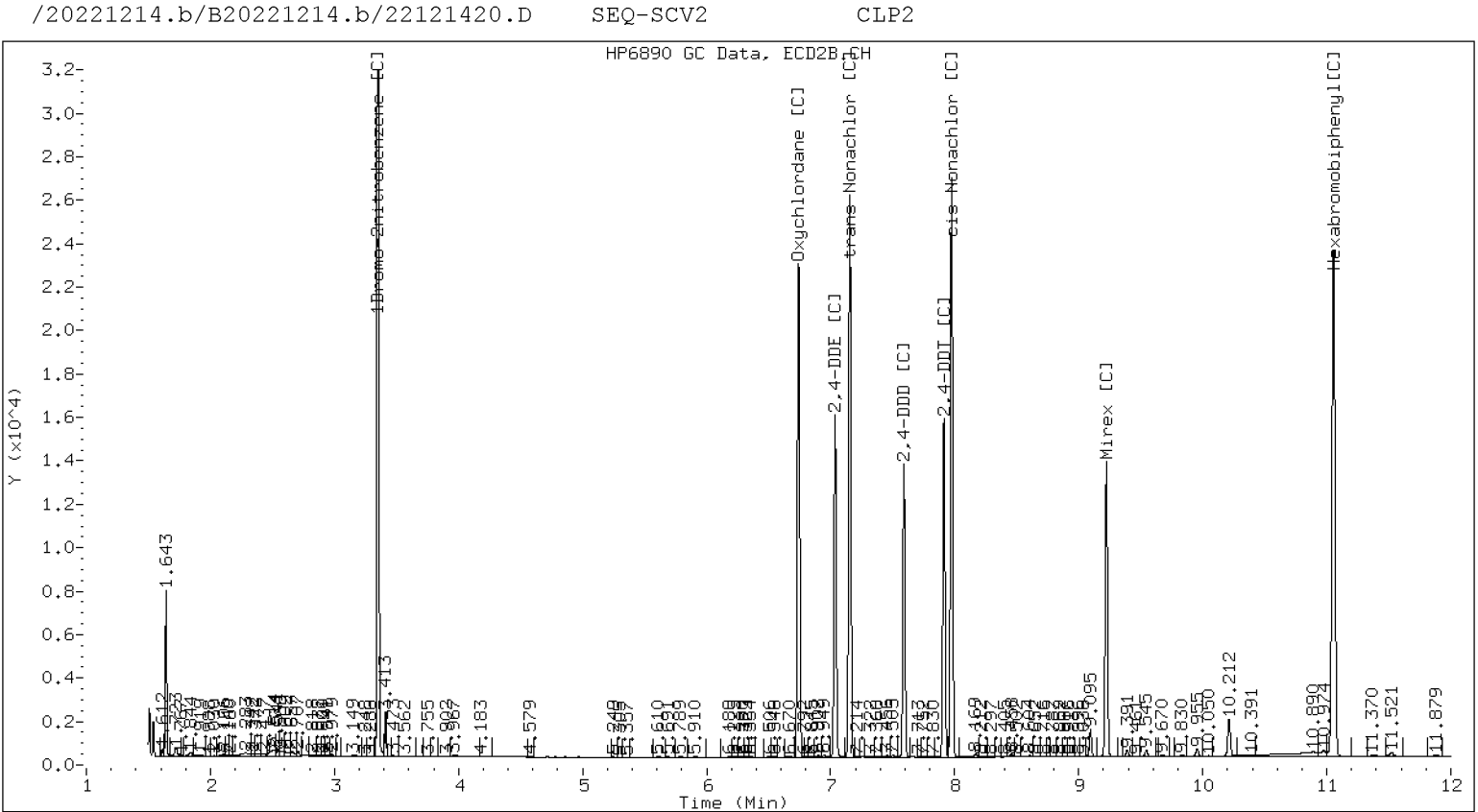
<- Indicates standard response outside Limits (-50 to +100%)



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D  
Data file 2: /20221214.b/B20221214.b/22121420.D  
Method: \20221214.b\PEST.m  
Compound Sublist: WND.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-SCV2  
Client ID:  
Injection Date: 15-DEC-2022 01:06  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D  
Data file 2: /20221214.b/B20221214.b/22121421.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL1A  
Client ID:  
Injection Date: 15-DEC-2022 01:24  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	361	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
----		4.215 -0.006	361		0.00 0.02	---	Tetrachloro-m-xylene
----		----			0.00 0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

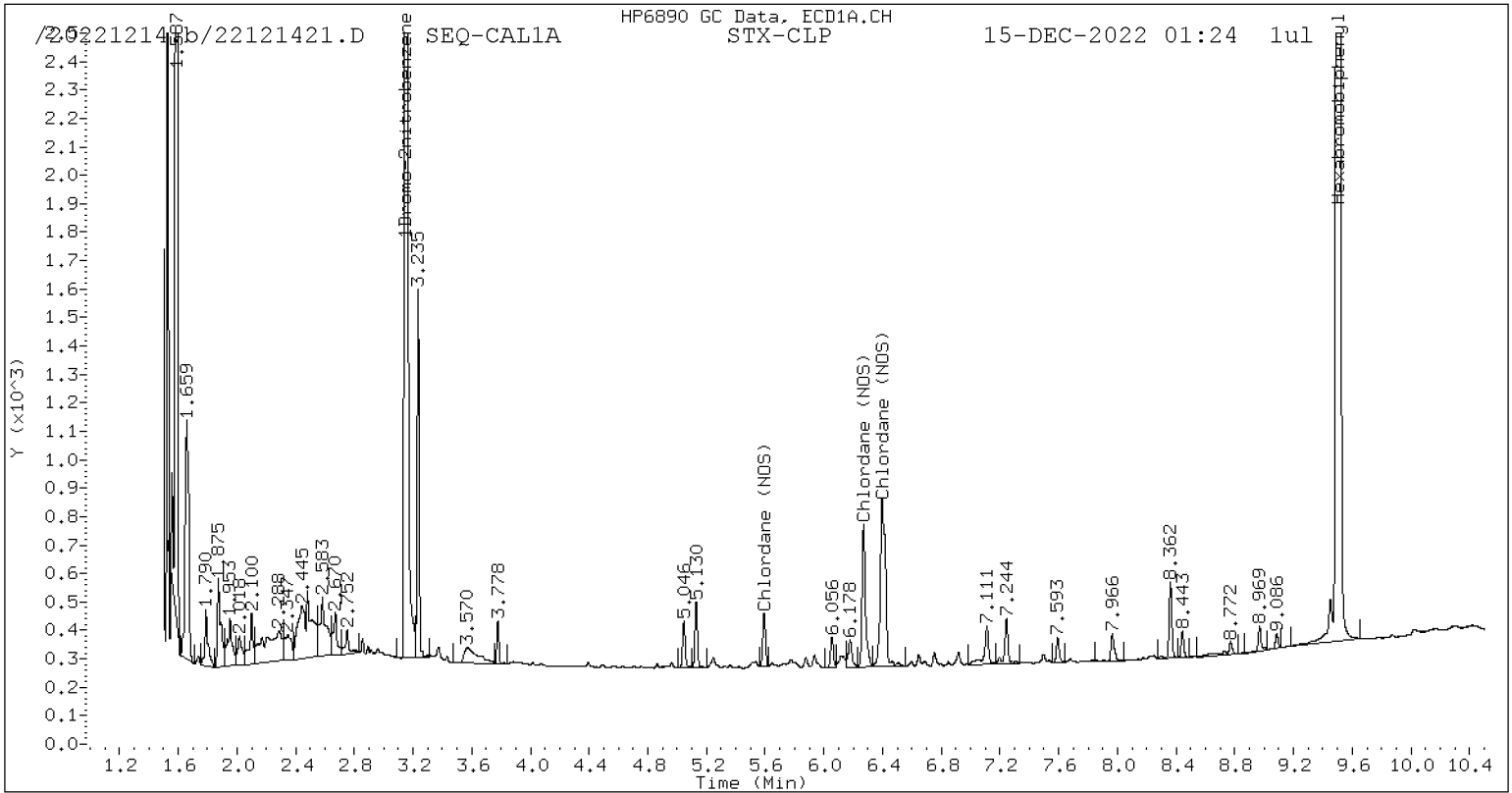
Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	601512	-15.4
Hexabromobiphenyl	641833	690103	7.5

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	776759	-26.6
Hexabromobiphenyl	797125	1058847	32.8

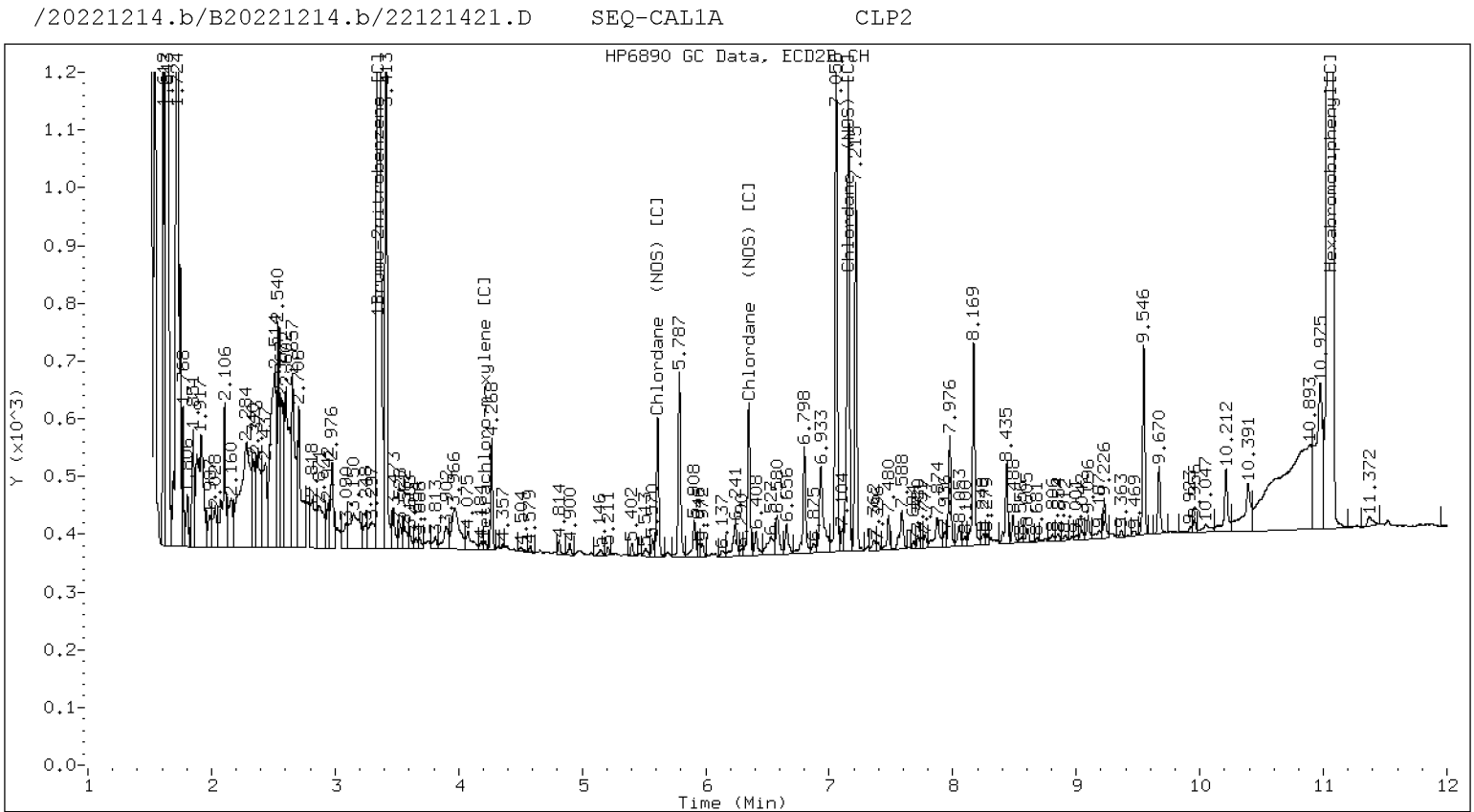
\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	5054	13.1	1	5.612	-0.000	6415	12.8
Chlordane (NOS)	2	6.271	-0.000	15913	12.4	2	6.349	-0.000	7689	13.7
Chlordane (NOS)	3	6.399	0.000	29332	13.1	3	7.155	-0.001	23386	12.3
Total STX-CLPAve (3 peaks): 12.882					Total CLP2Ave (3 peaks): 12.916					RPD = 0
Corrected Ave (3 peaks): 12.882					Corrected Ave (3 peaks): 12.916					RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D  
Data file 2: /20221214.b/B20221214.b/22121421.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL1A  
Client ID:  
Injection Date: 15-DEC-2022 01:24  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D  
Data file 2: /20221214.b/B20221214.b/22121422.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL2A  
Client ID:  
Injection Date: 15-DEC-2022 01:42  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	611280	-14.0
Hexabromobiphenyl	641833	704720	9.8

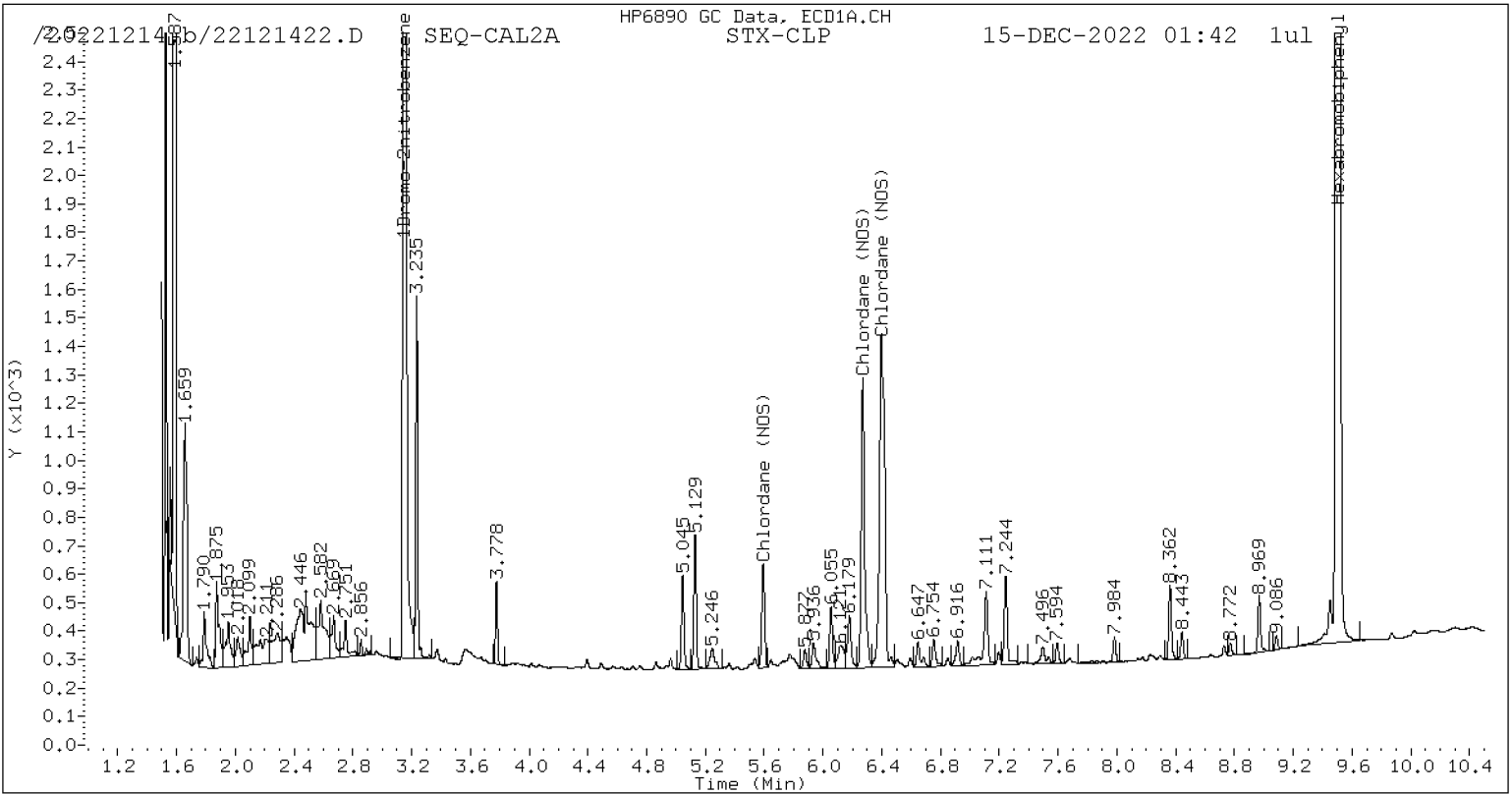
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	793365	-25.1
Hexabromobiphenyl	797125	1083049	35.9

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	10046	25.5	1	5.612	-0.000	12488	24.4
Chlordane (NOS)	2	6.271	-0.000	32715	25.0	2	6.348	-0.001	15023	26.1
Chlordane (NOS)	3	6.399	0.000	58016	25.4	3	7.155	-0.000	48236	24.8
Total STX-CLPAve (3 peaks): 25.309					Total CLP2Ave (3 peaks): 25.077					RPD = 1
Corrected Ave (3 peaks): 25.309					Corrected Ave (3 peaks): 25.077					RPD = 1

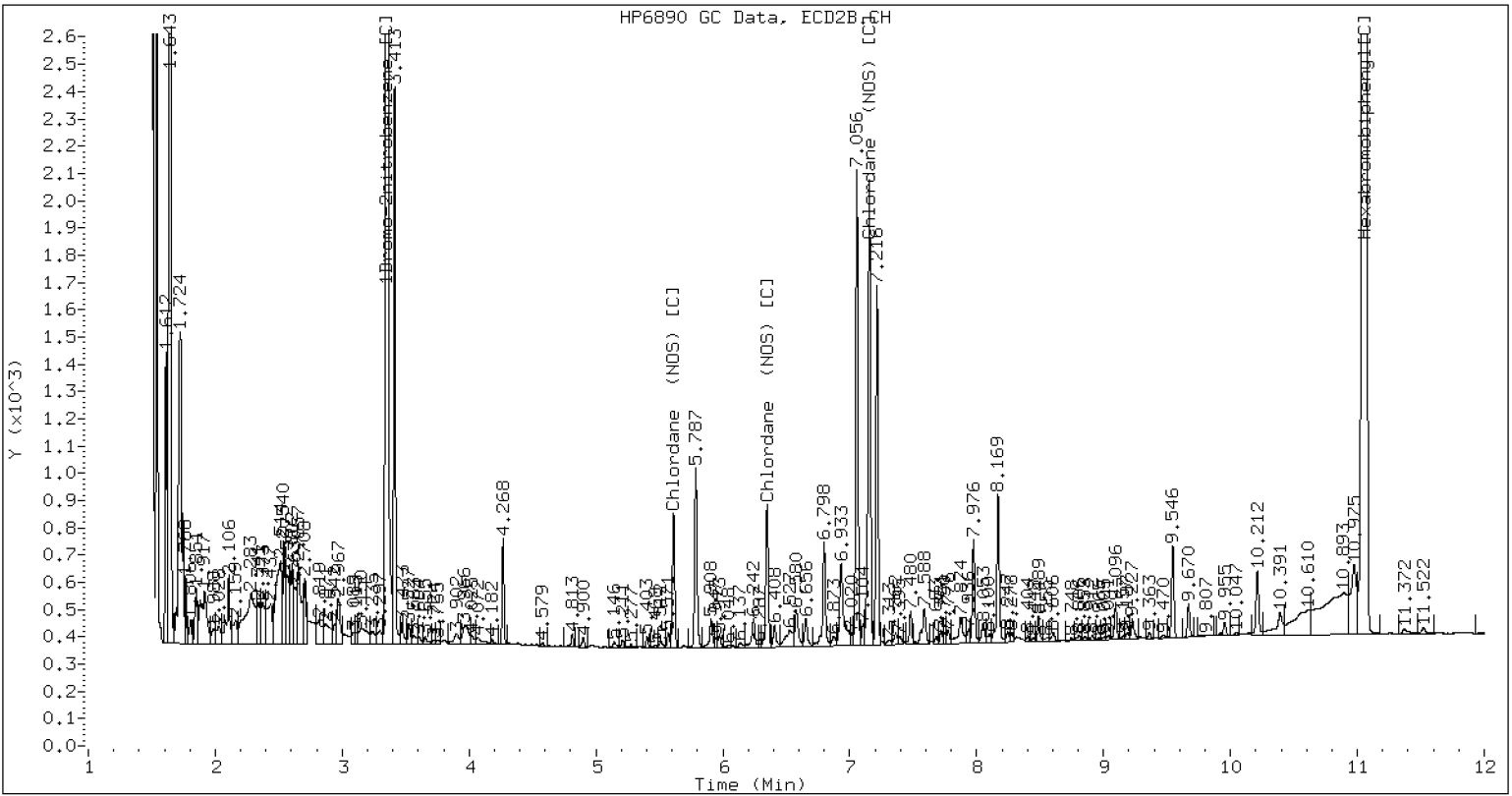


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121422.D SEQ-CAL2A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D  
Data file 2: /20221214.b/B20221214.b/22121422.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL2A  
Client ID:  
Injection Date: 15-DEC-2022 01:42  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D  
Data file 2: /20221214.b/B20221214.b/22121423.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL3A  
Client ID:  
Injection Date: 15-DEC-2022 01:59  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

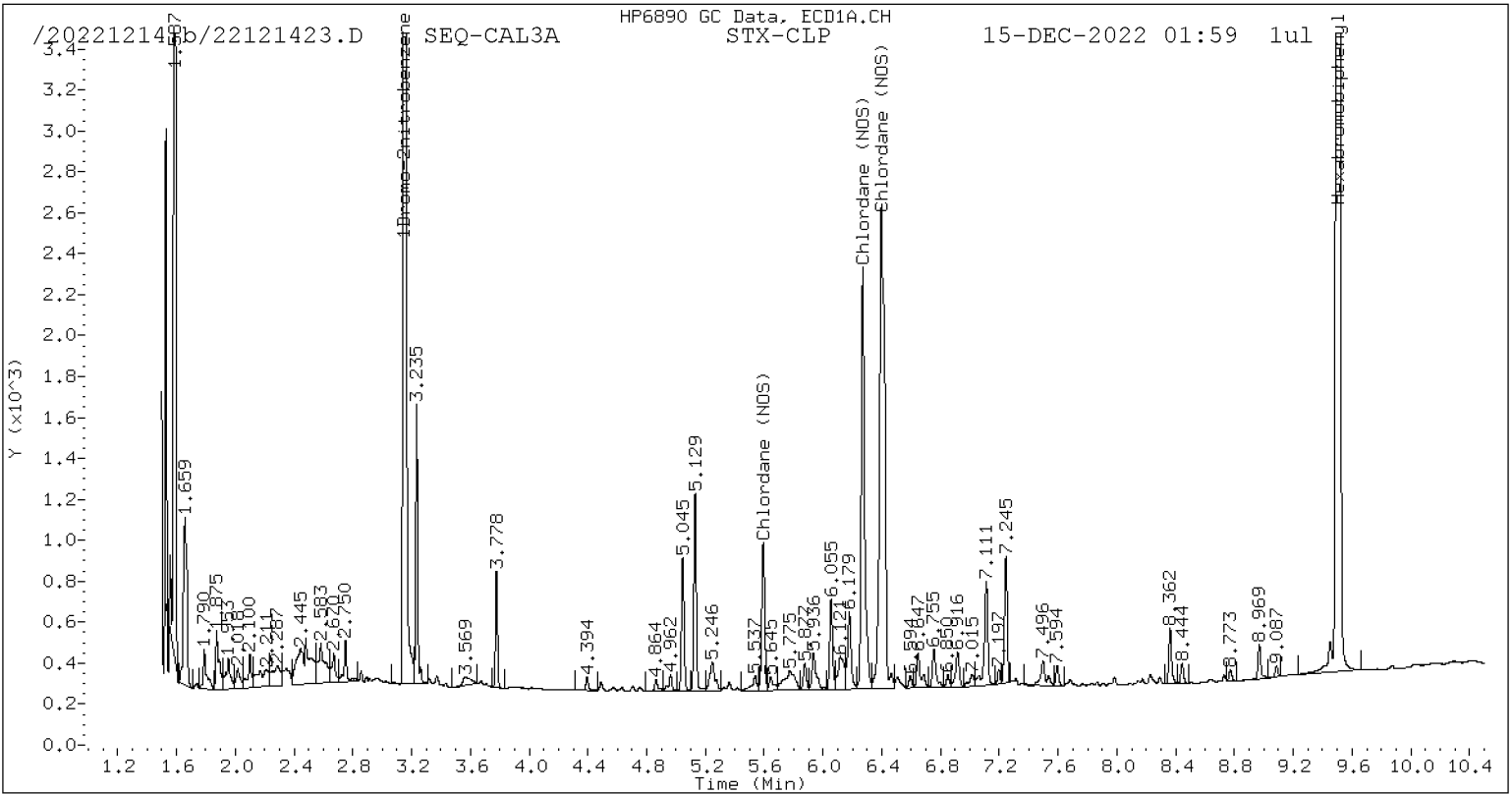
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	592438	-16.6
Hexabromobiphenyl	641833	685225	6.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	769029	-27.4
Hexabromobiphenyl	797125	1054742	32.3

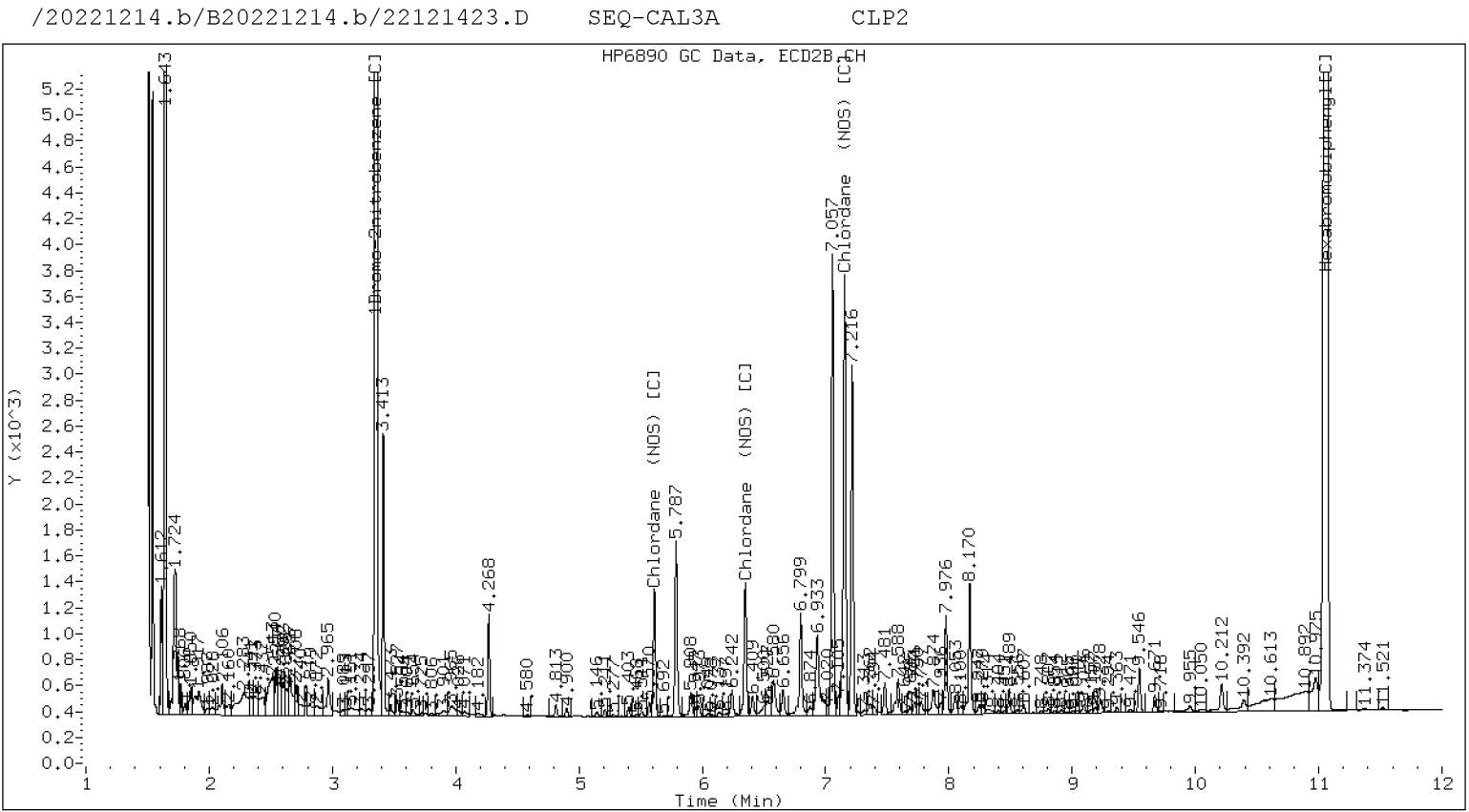
\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.001	20502	53.5	1	5.612	-0.000	24816	49.7
Chlordane (NOS)	2	6.271	-0.000	66320	52.2	2	6.349	0.000	29114	51.9
Chlordane (NOS)	3	6.399	0.000	116820	52.6	3	7.155	-0.000	98401	51.9
Total STX-CLPAve (3 peaks): 52.767					Total CLP2Ave (3 peaks): 51.179					RPD = 3
Corrected Ave (3 peaks): 52.767					Corrected Ave (3 peaks): 51.179					RPD = 3

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D  
Data file 2: /20221214.b/B20221214.b/22121423.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL3A  
Client ID:  
Injection Date: 15-DEC-2022 01:59  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D  
Data file 2: /20221214.b/B20221214.b/22121424.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL4A  
Client ID:  
Injection Date: 15-DEC-2022 02:17  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	584808	-17.7
Hexabromobiphenyl	641833	675665	5.3

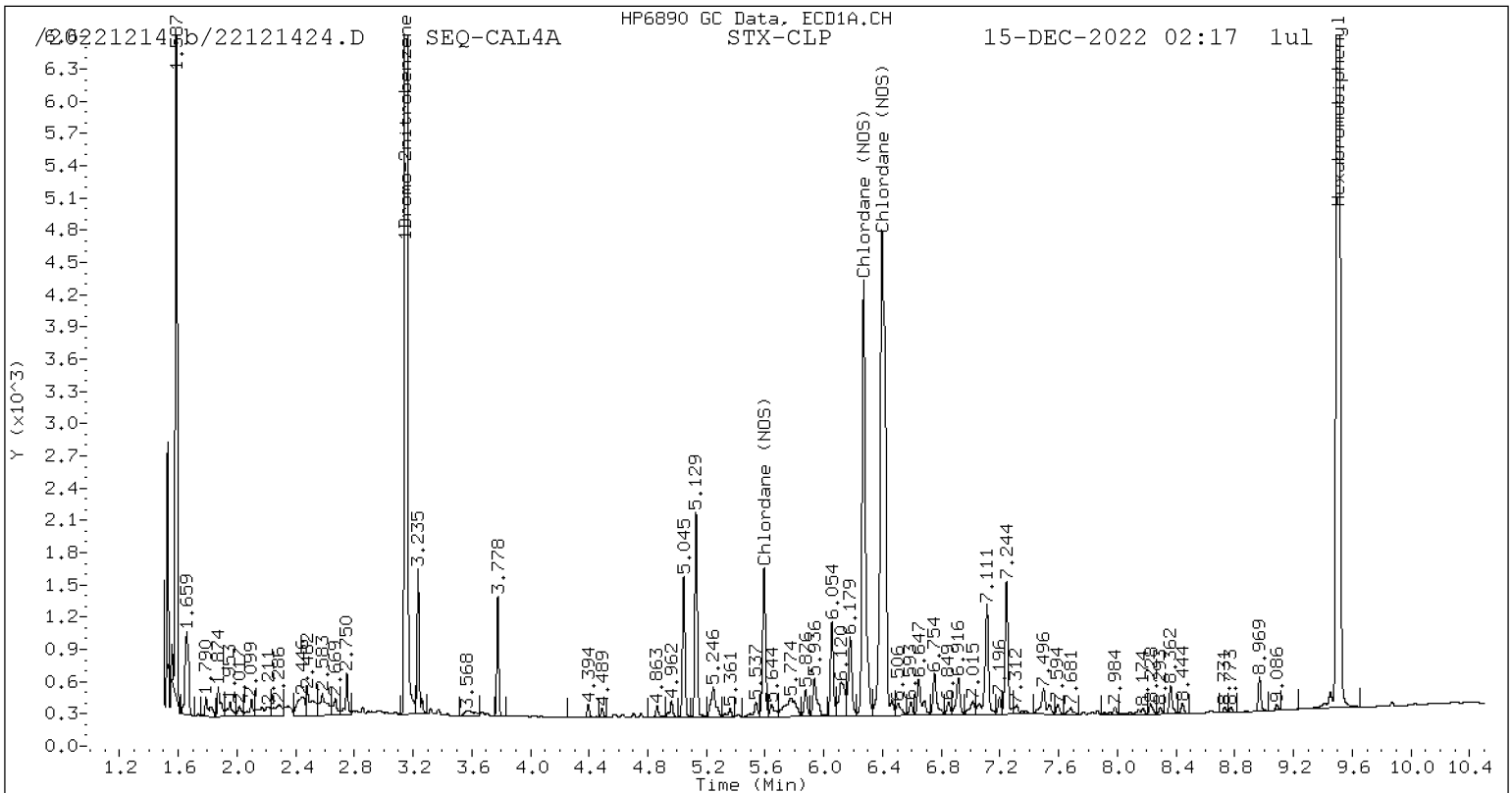
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	758204	-28.4
Hexabromobiphenyl	797125	1039488	30.4

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

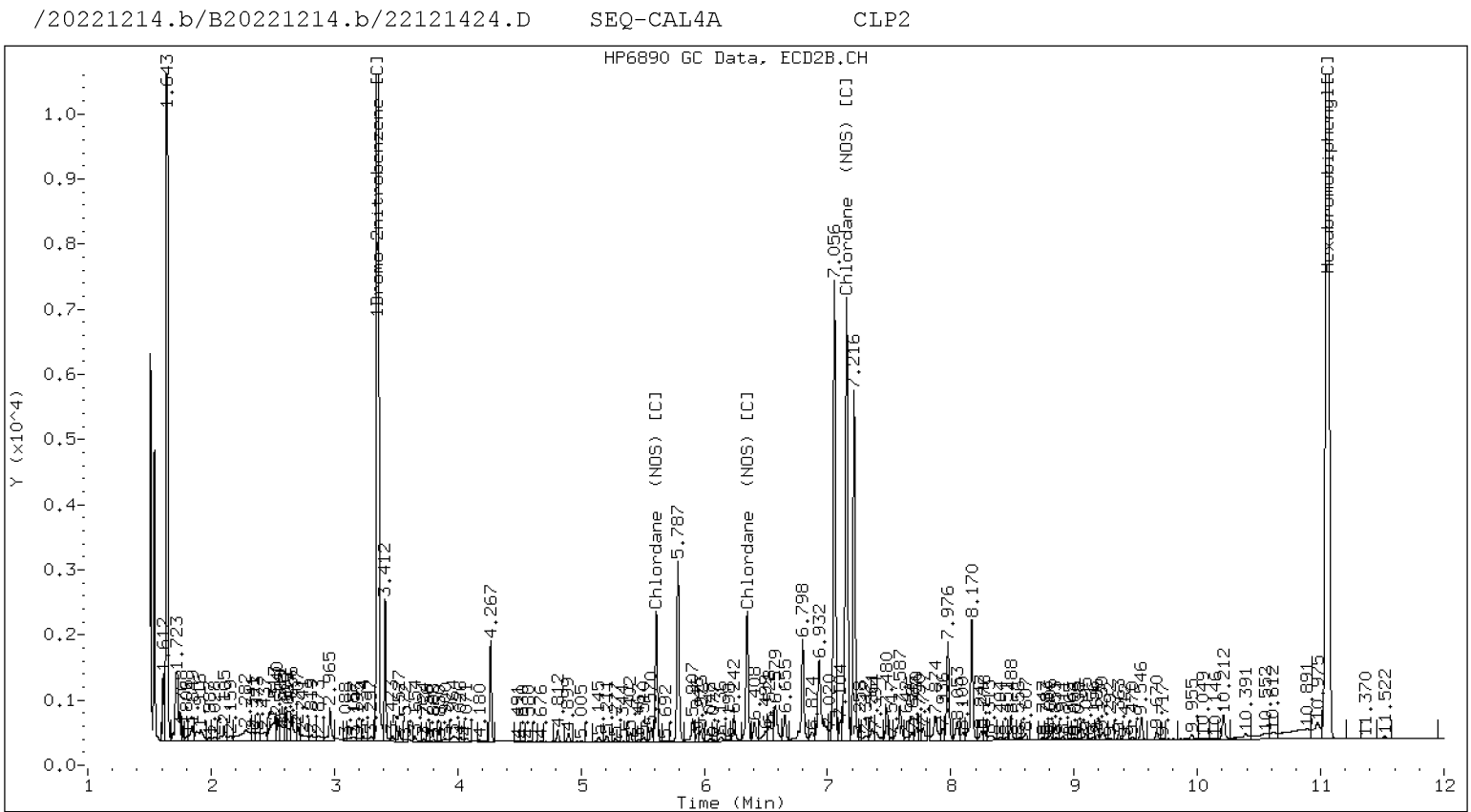
Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	-0.000	39696	105.0	1	5.611	-0.001	49889	101.4
Chlordane (NOS)	2	6.271	-0.000	131726	105.2	2	6.348	-0.001	56608	102.5
Chlordane (NOS)	3	6.398	-0.001	229050	104.6	3	7.155	-0.000	195665	104.7
Total STX-CLPAve (3 peaks): 104.931					Total CLP2Ave (3 peaks): 102.854					RPD = 2
Corrected Ave (3 peaks): 104.931					Corrected Ave (3 peaks): 102.854					RPD = 2



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D  
Data file 2: /20221214.b/B20221214.b/22121424.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL4A  
Client ID:  
Injection Date: 15-DEC-2022 02:17  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col		CLP2 Col		STX-CLP	CLP2		
RT	Shift Response	RT	Shift Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D  
Data file 2: /20221214.b/B20221214.b/22121425.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL5A  
Client ID:  
Injection Date: 15-DEC-2022 02:35  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

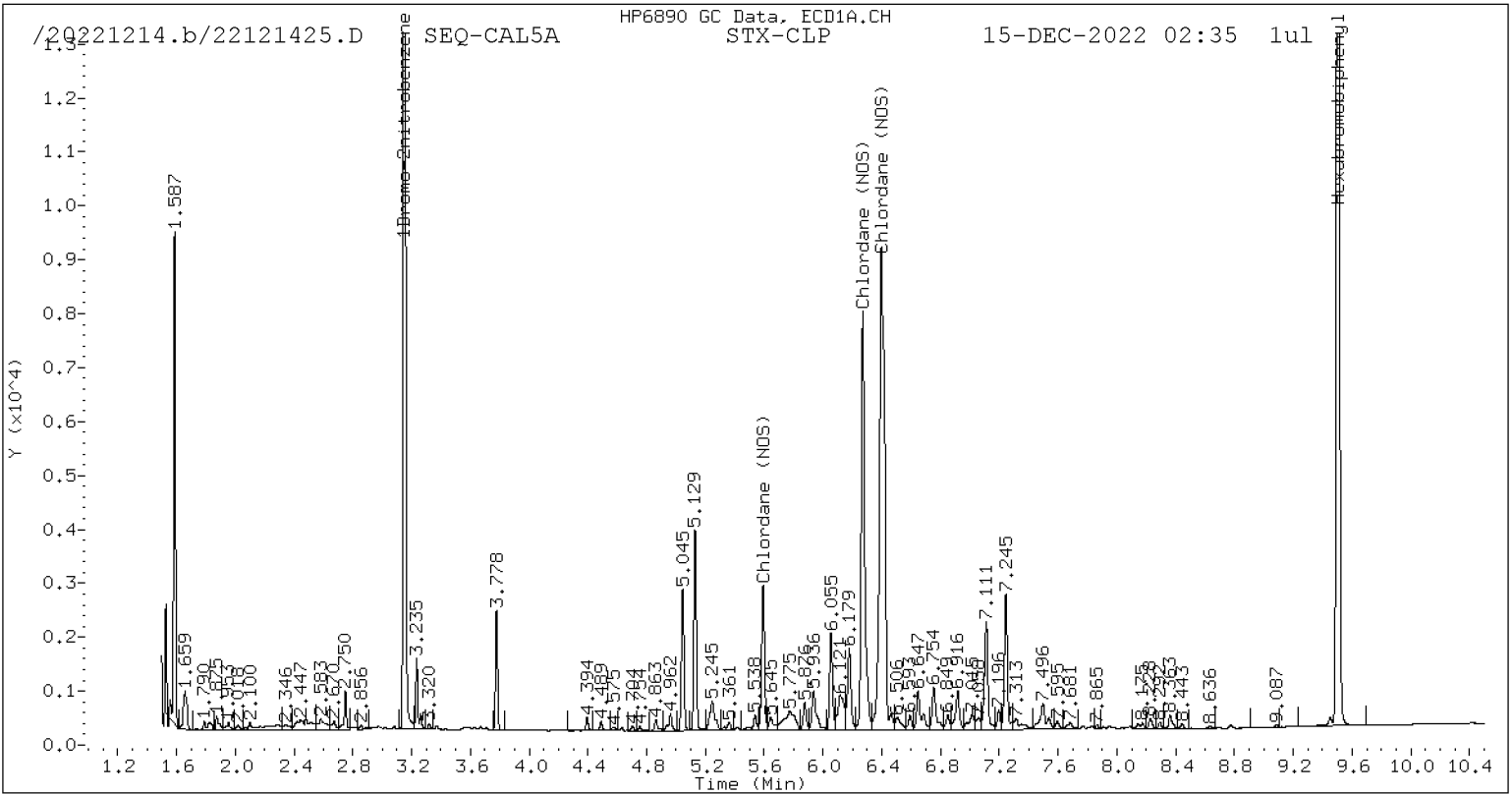
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	612592	-13.8
Hexabromobiphenyl	641833	705251	9.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	792856	-25.1
Hexabromobiphenyl	797125	1079718	35.5

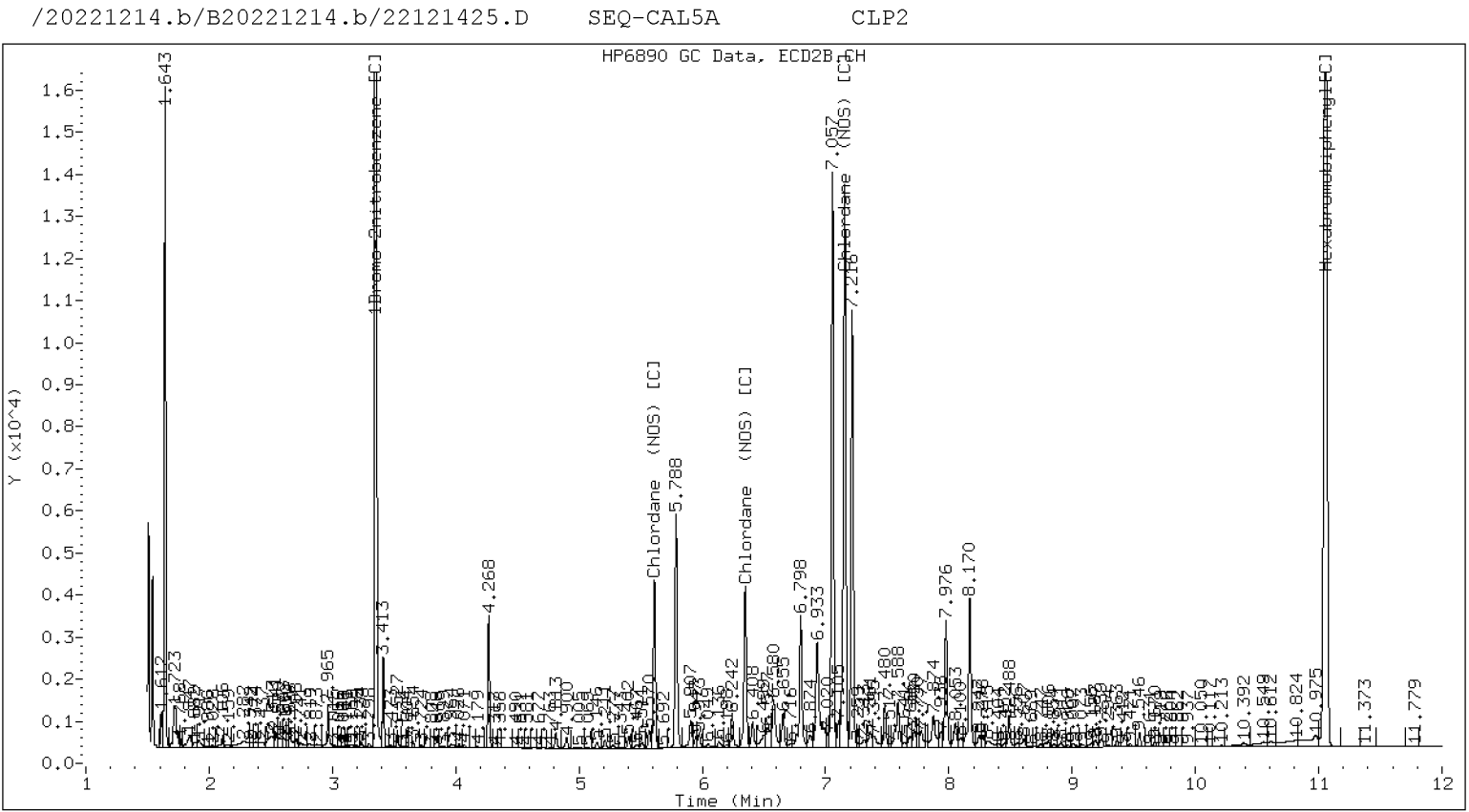
\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	77307	196.0	1	5.612	-0.000	101527	198.7
Chlordane (NOS)	2	6.271	0.000	261078	199.7	2	6.349	-0.001	110757	193.0
Chlordane (NOS)	3	6.399	0.000	449301	196.5	3	7.155	-0.000	389197	200.5
Total STX-CLPAve (3 peaks): 197.408					Total CLP2Ave (3 peaks): 197.390					RPD = 0
Corrected Ave (3 peaks): 197.408					Corrected Ave (3 peaks): 197.390					RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D  
Data file 2: /20221214.b/B20221214.b/22121425.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL5A  
Client ID:  
Injection Date: 15-DEC-2022 02:35  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift Response	RT	Shift Response	on col on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D  
Data file 2: /20221214.b/B20221214.b/22121426.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL6A  
Client ID:  
Injection Date: 15-DEC-2022 02:53  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
----		----		0.00	0.00	---	Tetrachloro-m-xylene
----		----		0.00	0.00	---	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	603526	-15.1
Hexabromobiphenyl	641833	699031	8.9

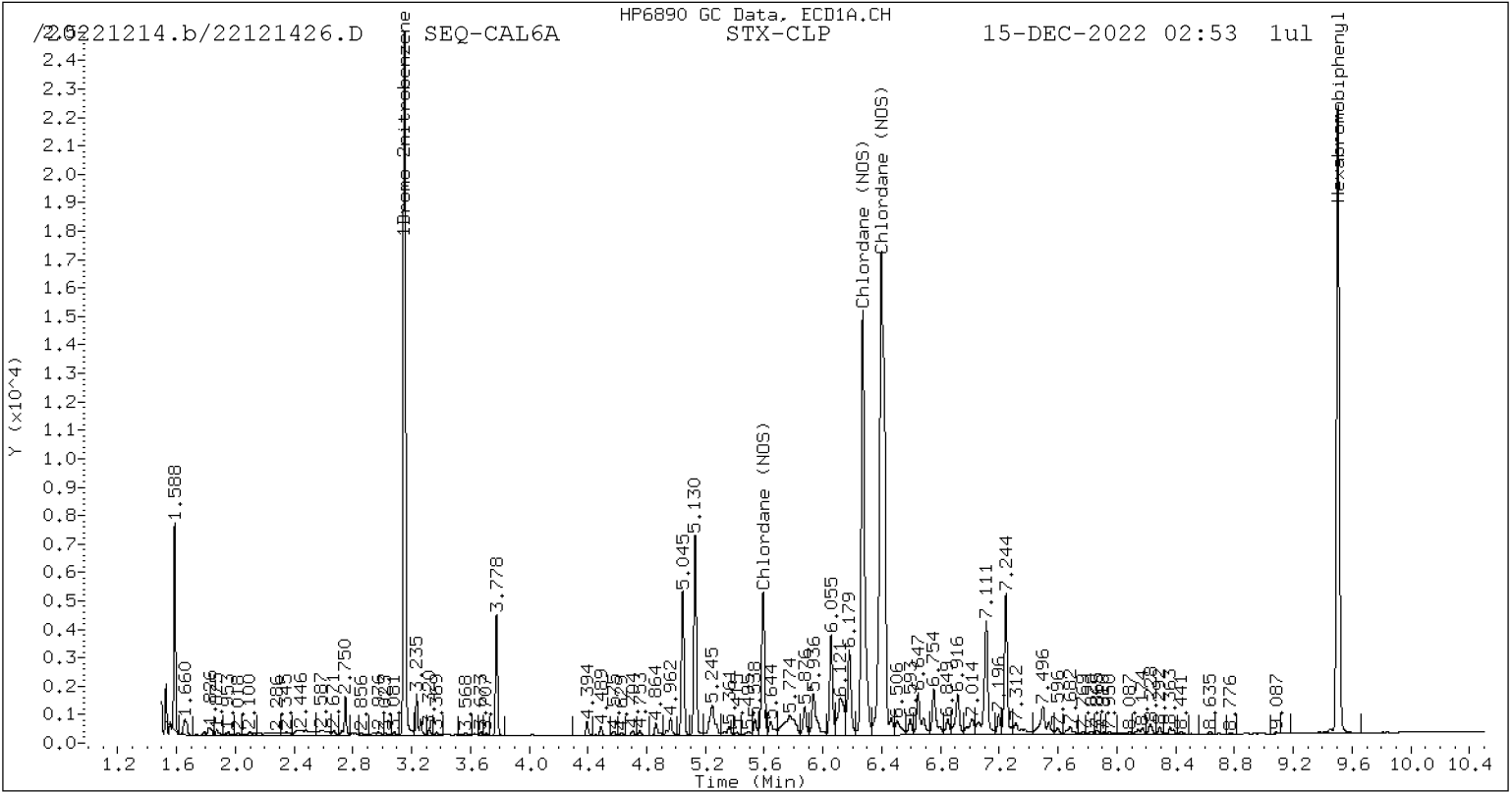
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	779405	-26.4
Hexabromobiphenyl	797125	1068976	34.1

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

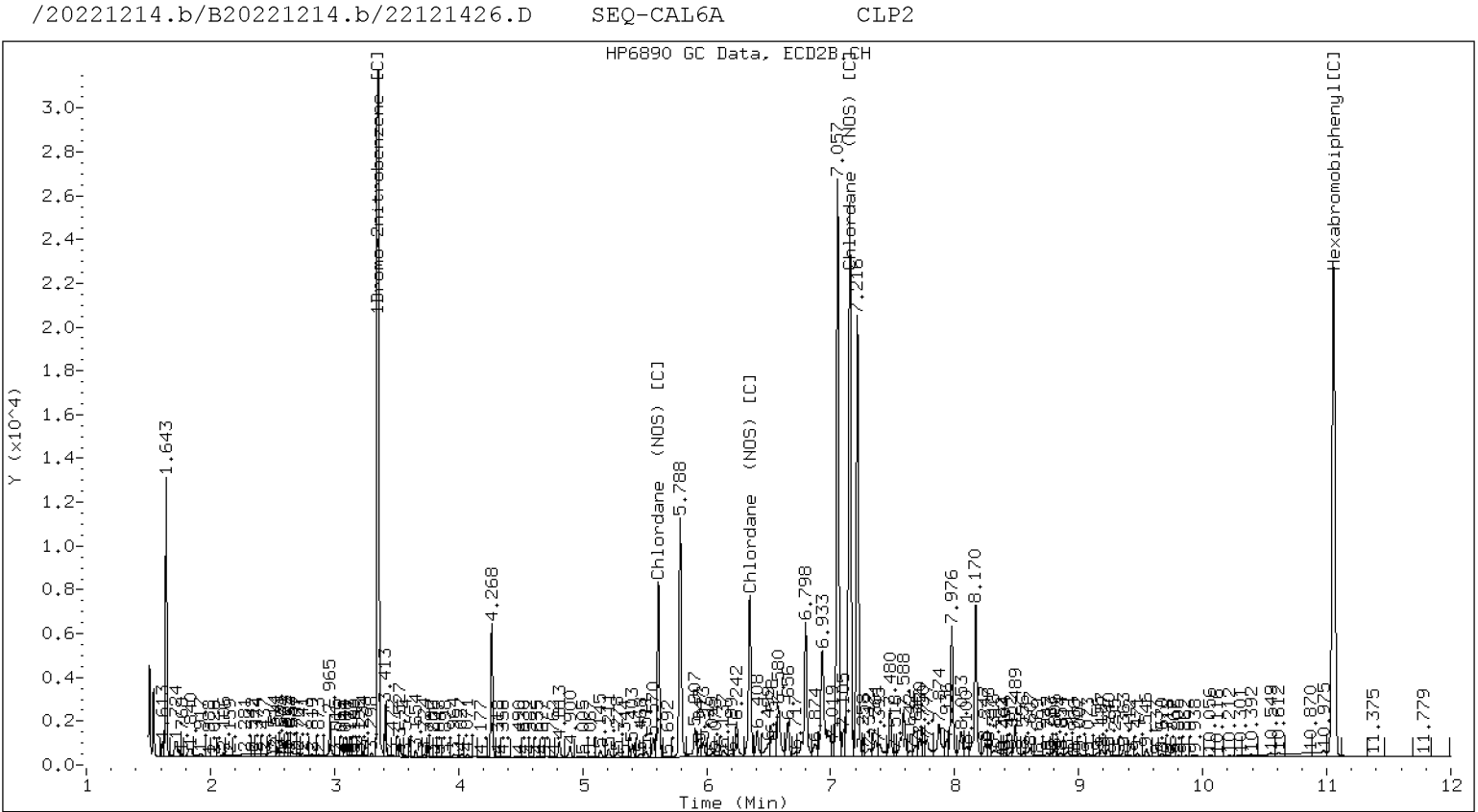
Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.592	-0.000	146950	375.8	1	5.612	-0.000	203386	402.0
Chlordane (NOS)	2	6.271	-0.000	503310	388.5	2	6.349	-0.000	212637	374.2
Chlordane (NOS)	3	6.399	0.000	857451	378.4	3	7.155	-0.000	752631	391.6
Total STX-CLPAve (3 peaks): 380.894					Total CLP2Ave (3 peaks): 389.290					RPD = 2
Corrected Ave (3 peaks): 380.894					Corrected Ave (3 peaks): 389.290					RPD = 2



Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D  
Data file 2: /20221214.b/B20221214.b/22121426.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL6A  
Client ID:  
Injection Date: 15-DEC-2022 02:53  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D  
 Data file 2: /20221214.b/B20221214.b/22121427.D  
 Method: \20221214.b\PEST.m  
 Compound Sublist: TECHCHLOR.sub  
 Instrument, Inj. Vol.: ecd6.i, 1ul  
 Operator: JGR

ARI ID: SEQ-CAL7A  
 Client ID:  
 Injection Date: 15-DEC-2022 03:11  
 Report Date: 12/16/2022 15:20  
 Units: ng/mL  
 Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
9.380	0.025	1930				0.31	0.00	---	Decachlorobiphenyl
						0.00	0.00	---	Tetrachloro-m-xylene

- \* Indicates RPD > 40%
- A Indicates Peak Height was used for Column 1 quantitation instead of Area
- B Indicates Peak Height was used for Column 2 quantitation instead of Area
- M Indicates Column 1 peak was manually integrated
- N Indicates Column 2 peak was manually integrated
- ~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

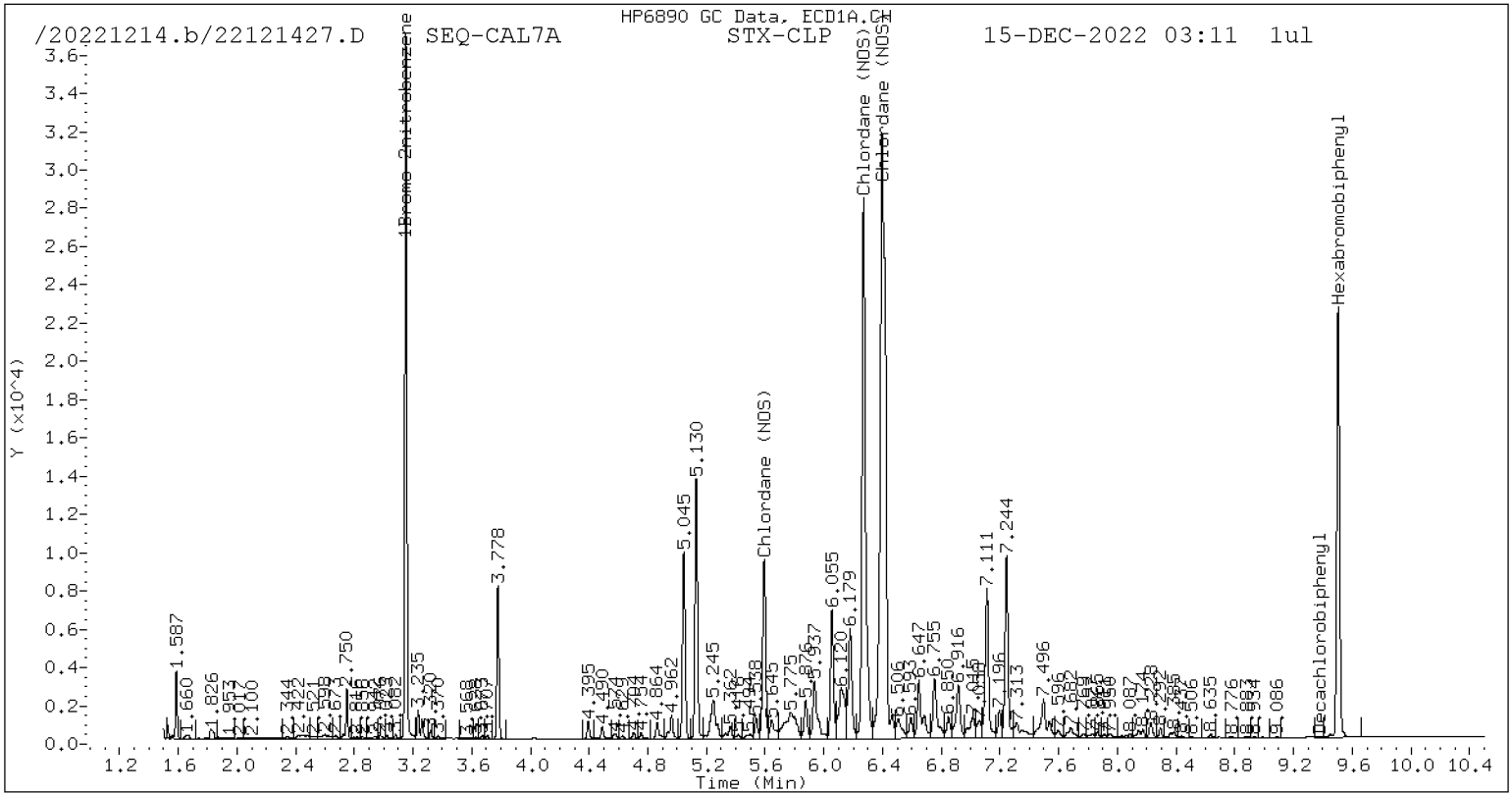
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	610159	-14.1
Hexabromobiphenyl	641833	692215	7.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	790388	-25.4
Hexabromobiphenyl	797125	1059143	32.9

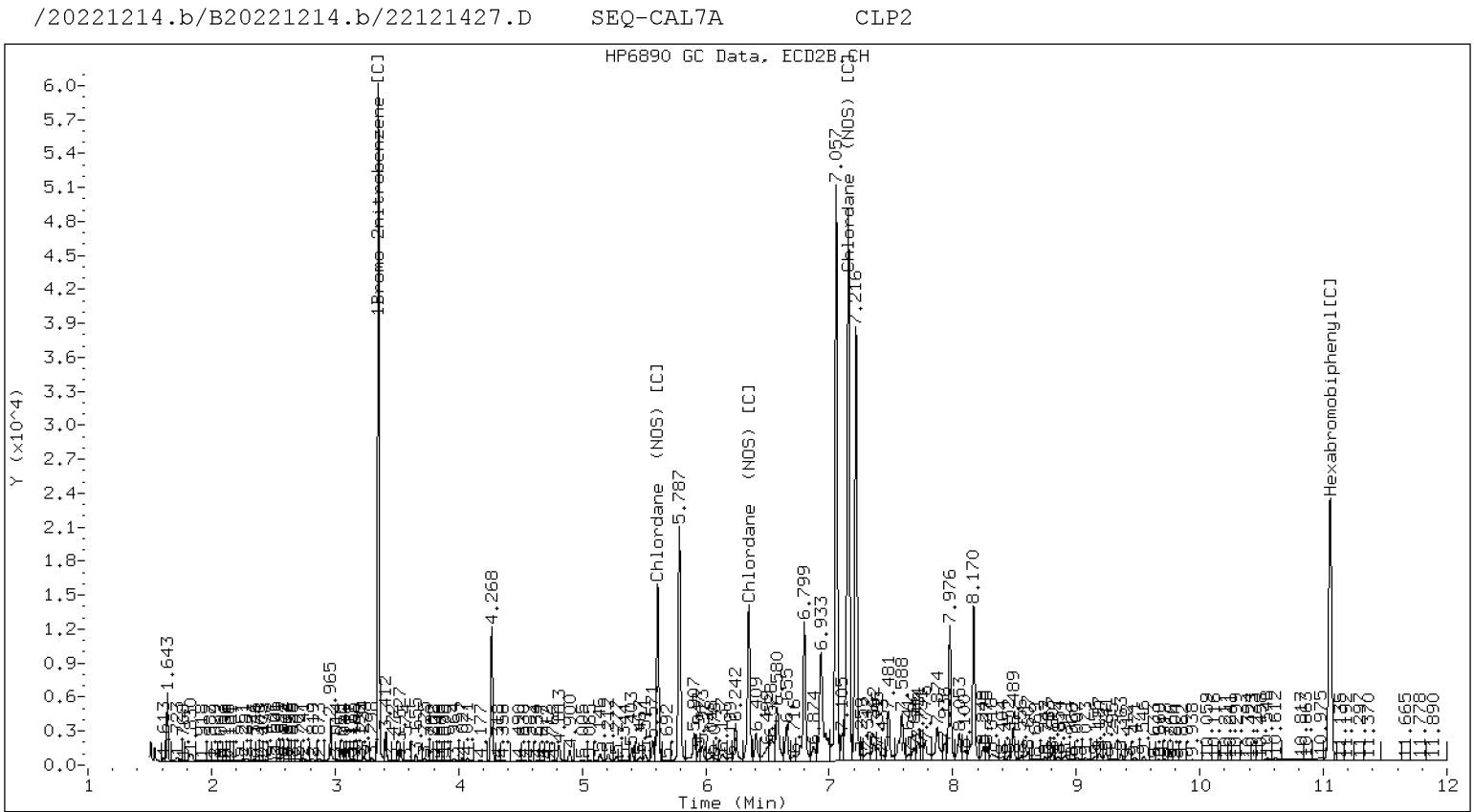
\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.001	276980	715.3	1	5.612	0.000	398620	795.3
Chlordane (NOS)	2	6.271	-0.000	961368	749.3	2	6.349	0.000	405170	719.7
Chlordane (NOS)	3	6.399	-0.000	1631241	727.0	3	7.155	0.000	1462876	768.2
Total STX-CLPAve (3 peaks): 730.539					Total CLP2Ave (3 peaks): 761.064					RPD = 4
Corrected Ave (3 peaks): 730.539					Corrected Ave (3 peaks): 761.064					RPD = 4

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D  
Data file 2: /20221214.b/B20221214.b/22121427.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TECHCHLOR.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL7A  
Client ID:  
Injection Date: 15-DEC-2022 03:11  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col		CLP2 Col		STX-CLP	CLP2		
RT	Shift Response	RT	Shift Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D  
Data file 2: /20221214.b/B20221214.b/22121428.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL8A  
Client ID:  
Injection Date: 15-DEC-2022 03:29  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.828	0.000	8893	4.221	0.000	14795	0.95	0.98	4.0	Tetrachloro-m-xylene
9.355	0.000	15511	10.467	0.000	24896	2.54	2.86	11.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	691781	-2.7
Hexabromobiphenyl	641833	602865	-6.1

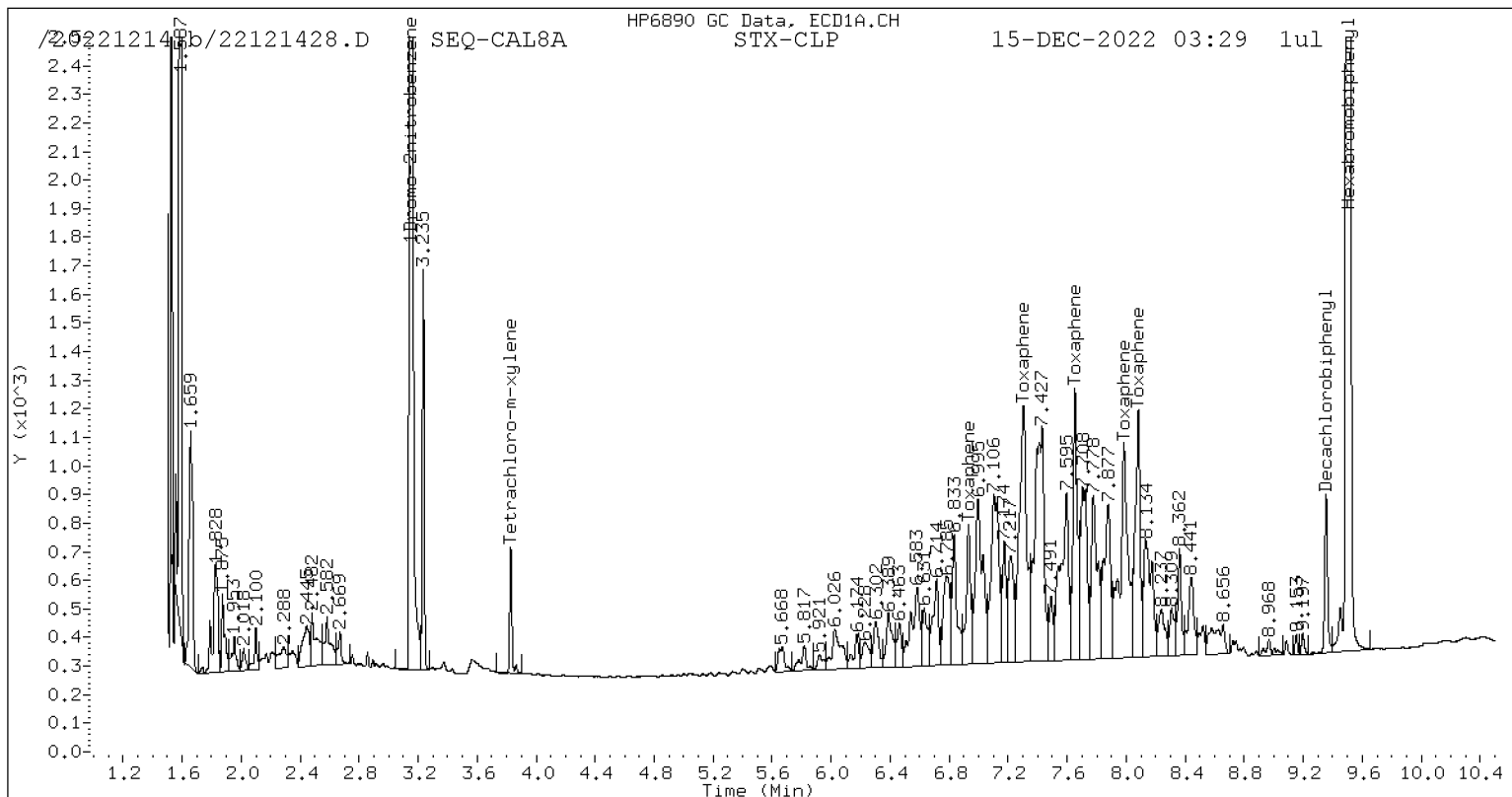
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1068328	0.9
Hexabromobiphenyl	797125	788806	-1.0

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			Amount	
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	20939	118.9	1	7.125	-0.000	18390	124.1		
Toxaphene	2	7.304	0.000	62921	127.5	2	7.553	-0.000	43437	130.4		
Toxaphene	3	7.653	-0.000	40147	126.2	3	8.059	-0.001	32235	127.1		
Toxaphene	4	7.985	-0.001	56816	133.6	4	8.201	-0.001	109296	132.1		
Toxaphene	5	8.082	-0.000	39643	123.4	5	8.958	-0.001	50997	125.7		
Total STX-CLPAve (5 peaks):					125.907	Total CLP2Ave (5 peaks):					127.865	RPD = 2
Corrected Ave (5 peaks):					125.907	Corrected Ave (5 peaks):					127.865	RPD = 2

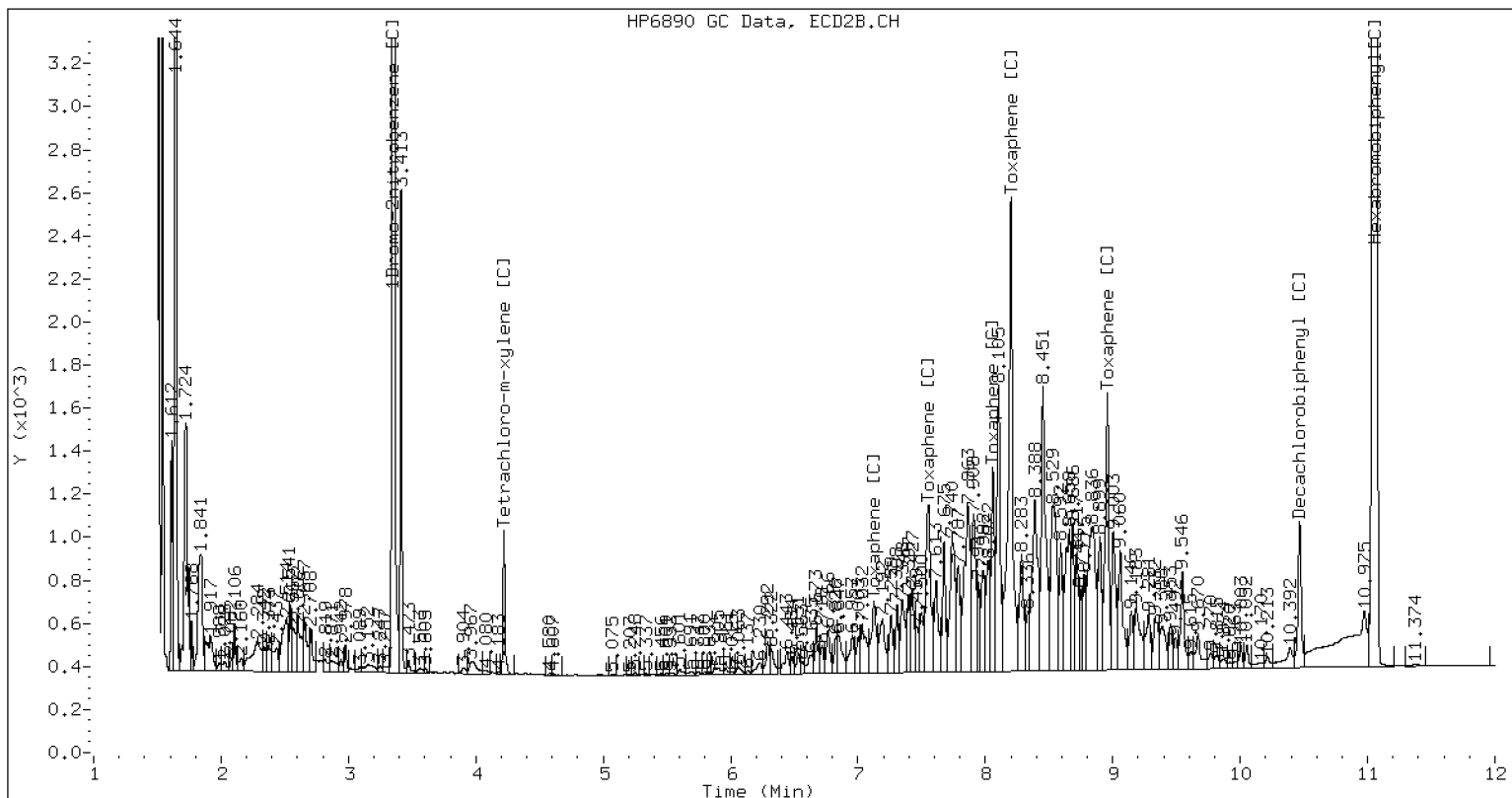


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121428.D SEQ-CAL8A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D  
Data file 2: /20221214.b/B20221214.b/22121428.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL8A  
Client ID:  
Injection Date: 15-DEC-2022 03:29  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D  
Data file 2: /20221214.b/B20221214.b/22121429.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL9A  
Client ID:  
Injection Date: 15-DEC-2022 03:46  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.828	-0.000	18632	4.220	1.92	1.92	0.1	Tetrachloro-m-xylene
9.355	0.000	29179	10.467	4.64	4.98	7.1	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

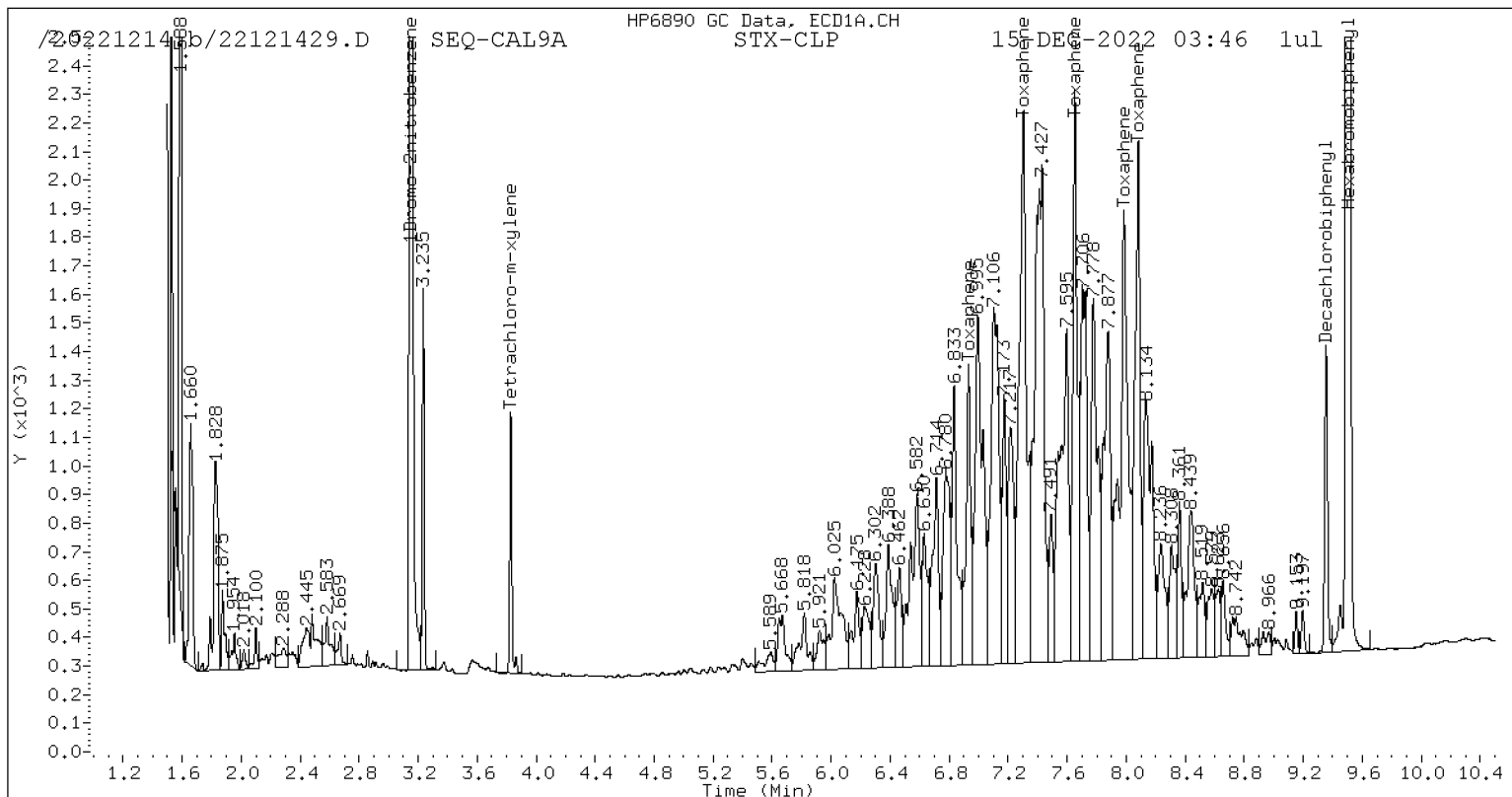
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	713620	0.4
Hexabromobiphenyl	641833	620026	-3.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1104488	4.3
Hexabromobiphenyl	797125	811719	1.8

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

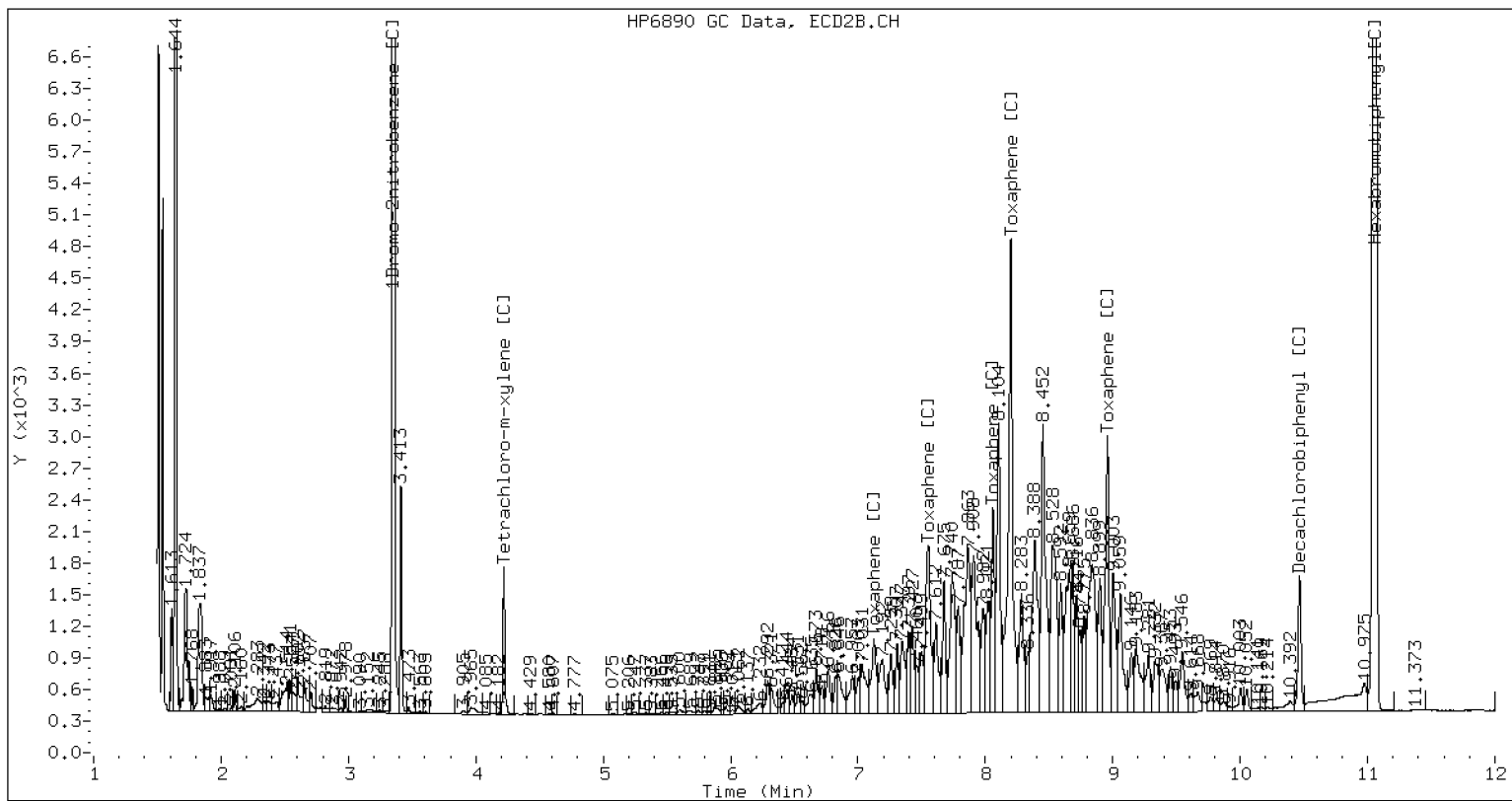
Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			Amount	
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	47415	261.8	1	7.125	-0.001	38790	254.4		
Toxaphene	2	7.302	-0.001	134642	265.2	2	7.552	-0.001	89754	261.8		
Toxaphene	3	7.652	-0.001	86679	264.9	3	8.059	-0.001	67442	258.4		
Toxaphene	4	7.985	-0.001	125891	287.7	4	8.200	-0.001	220426	258.9		
Toxaphene	5	8.081	-0.000	85903	260.0	5	8.958	-0.001	104601	250.5		
Total STX-CLPAve (5 peaks):					267.939	Total CLP2Ave (5 peaks):					256.784	RPD = 4
Corrected Ave (5 peaks):					267.939	Corrected Ave (5 peaks):					256.784	RPD = 4

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121429.D SEQ-CAL9A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D  
Data file 2: /20221214.b/B20221214.b/22121429.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CAL9A  
Client ID:  
Injection Date: 15-DEC-2022 03:46  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D  
Data file 2: /20221214.b/B20221214.b/22121430.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAA  
Client ID:  
Injection Date: 15-DEC-2022 04:04  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.828	-0.000	37717	4.220	0.000	60469	3.98	3.98	0.0	Tetrachloro-m-xylene
9.355	0.000	57106	10.467	0.000	82418	9.20	9.32	1.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696179	-2.0
Hexabromobiphenyl	641833	612804	-4.5

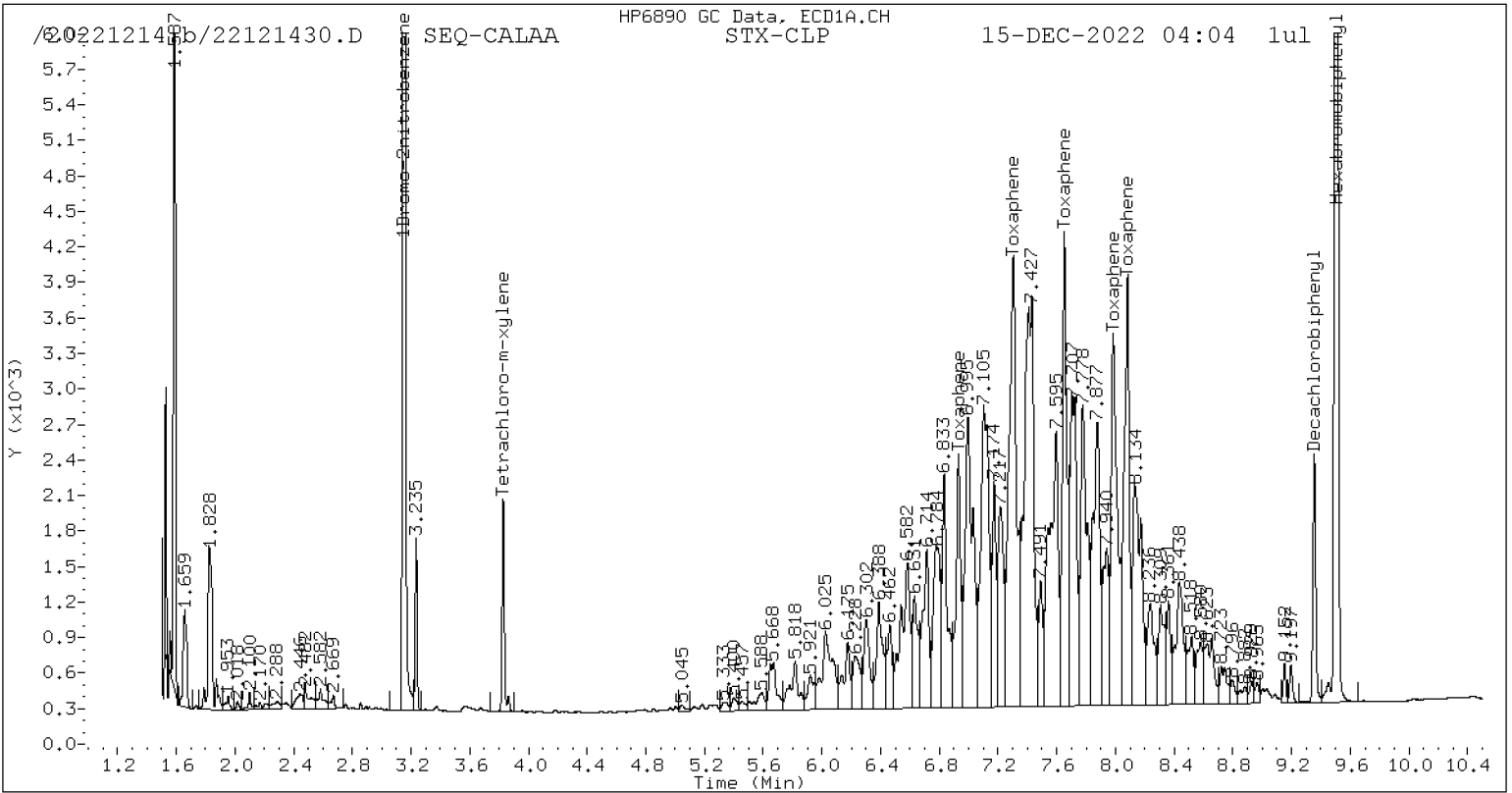
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1078803	1.9
Hexabromobiphenyl	797125	800071	0.4

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	-0.000	96535	539.4	1	7.125	-0.001	78635	523.1		
Toxaphene	2	7.304	0.000	273576	545.2	2	7.553	-0.001	179081	529.9		
Toxaphene	3	7.652	-0.001	177095	547.7	3	8.059	-0.001	133547	519.1		
Toxaphene	4	7.985	-0.001	190443	440.4	4	8.200	-0.001	437035	520.8		
Toxaphene	5	8.082	-0.000	175009	535.8	5	8.958	-0.001	209659	509.4		
Total STX-CLPAve (5 peaks):					521.711	Total CLP2Ave (5 peaks):					520.468	RPD = 0
Corrected Ave (5 peaks):					521.711	Corrected Ave (5 peaks):					520.468	RPD = 0

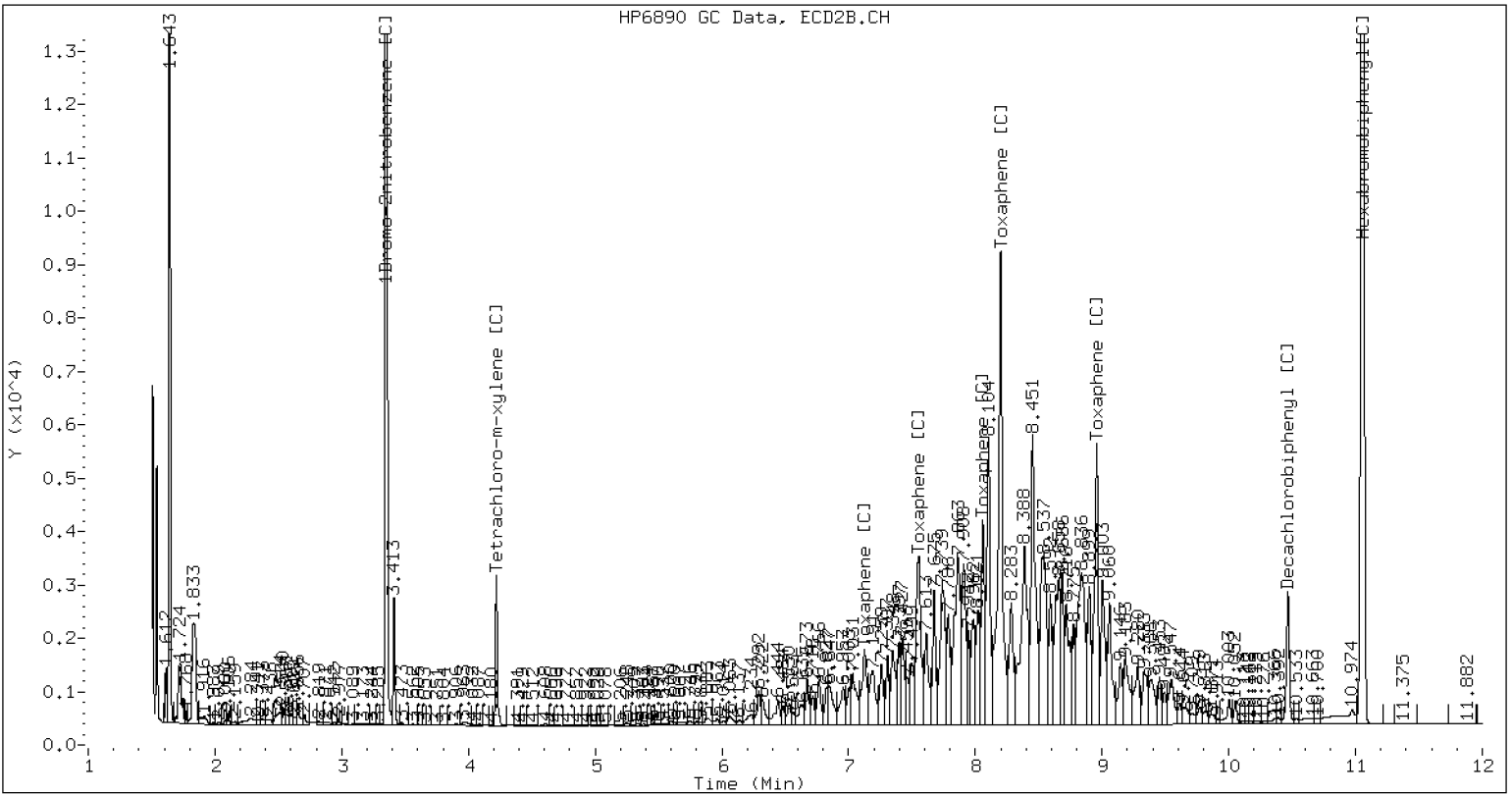


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121430.D SEQ-CALAA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D  
Data file 2: /20221214.b/B20221214.b/22121430.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAA  
Client ID:  
Injection Date: 15-DEC-2022 04:04  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D  
Data file 2: /20221214.b/B20221214.b/22121431.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAB  
Client ID:  
Injection Date: 15-DEC-2022 04:22  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.828	0.000 74347	4.221 0.000 119694	7.73	7.77	0.5	Tetrachloro-m-xylene
9.355	-0.000 107024	10.466 -0.000 151970	17.00	17.11	0.7	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

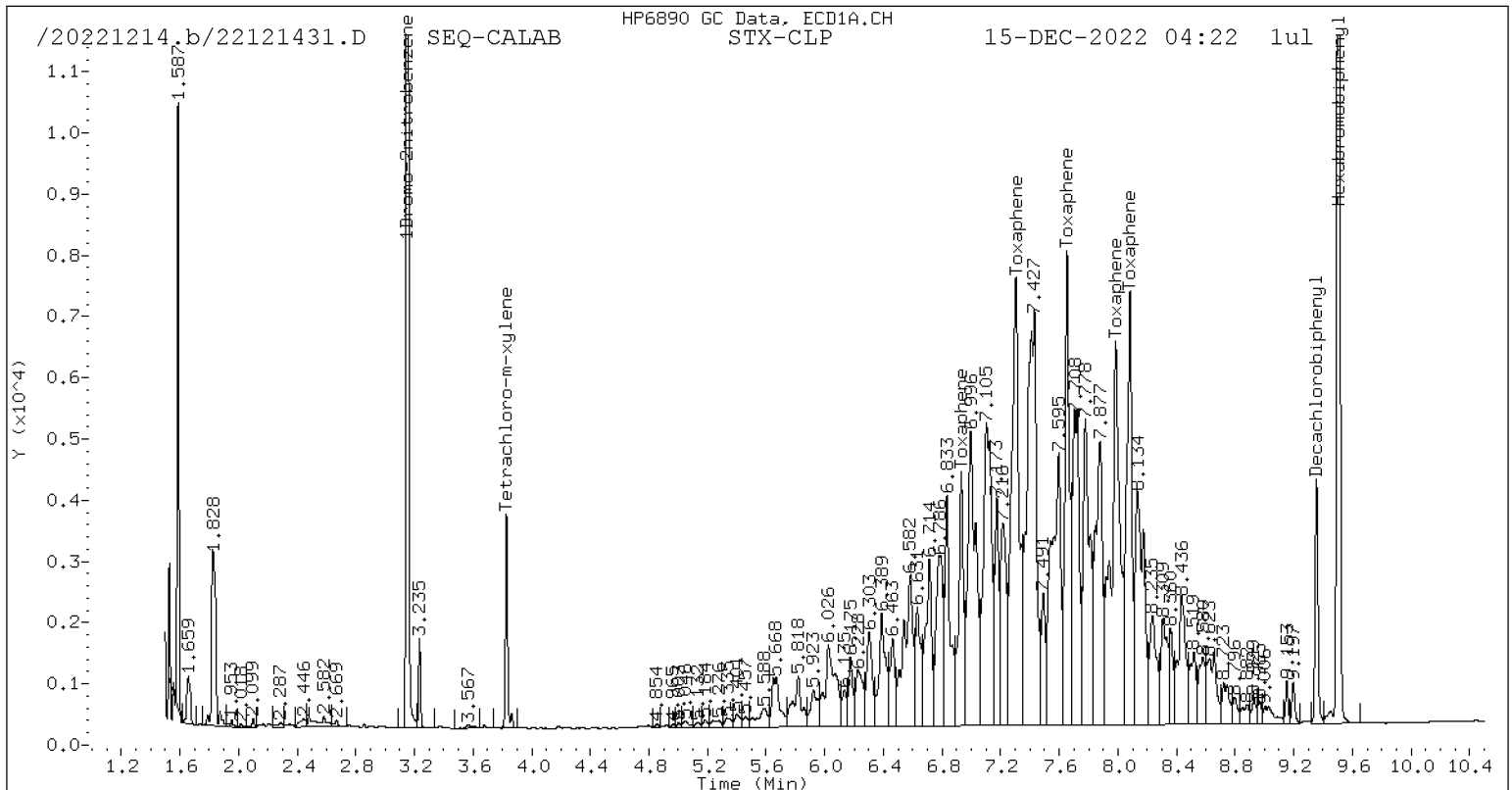
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	706924	-0.5
Hexabromobiphenyl	641833	621486	-3.2

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1093936	3.3
Hexabromobiphenyl	797125	803782	0.8

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

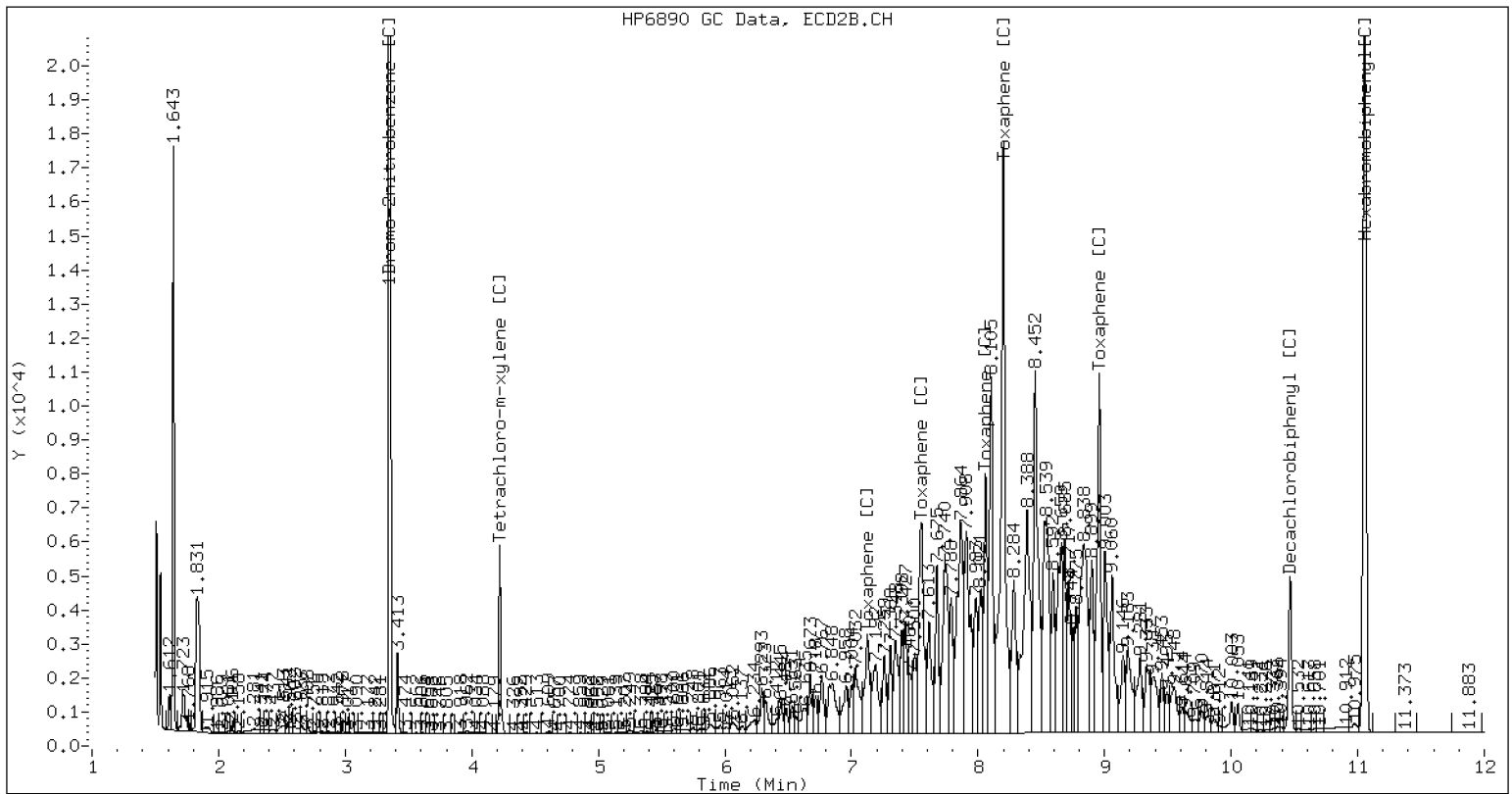
Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	192757	1062.0	1	7.125	-0.000	156515	1036.5		
Toxaphene	2	7.303	-0.000	530863	1043.2	2	7.553	-0.001	349637	1029.8		
Toxaphene	3	7.653	-0.000	344194	1049.6	3	8.059	-0.000	265296	1026.5		
Toxaphene	4	7.986	-0.000	522105	1190.6	4	8.201	-0.001	854255	1013.3		
Toxaphene	5	8.082	-0.000	345477	1043.0	5	8.958	-0.001	416452	1007.1		
Total STX-CLPAve (5 peaks):					1077.665	Total CLP2Ave (5 peaks):					1022.630	RPD = 5
Corrected Ave (5 peaks):					1077.665	Corrected Ave (5 peaks):					1022.630	RPD = 5

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121431.D SEQ-CALAB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D  
Data file 2: /20221214.b/B20221214.b/22121431.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAB  
Client ID:  
Injection Date: 15-DEC-2022 04:22  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D  
 Data file 2: /20221214.b/B20221214.b/22121432.D  
 Method: \20221214.b\PEST.m  
 Compound Sublist: TOXAPH.sub  
 Instrument, Inj. Vol.: ecd6.i, 1ul  
 Operator: JGR

ARI ID: SEQ-CALAC  
 Client ID:  
 Injection Date: 15-DEC-2022 04:40  
 Report Date: 12/16/2022 15:20  
 Units: ng/mL  
 Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.828	0.000	169388	4.221	0.000	273030	18.51	18.69	1.0	Tetrachloro-m-xylene
9.356	0.001	234532	10.466	-0.000	332716	40.53	40.11	1.0	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672958	-5.3
Hexabromobiphenyl	641833	571112	-11.0

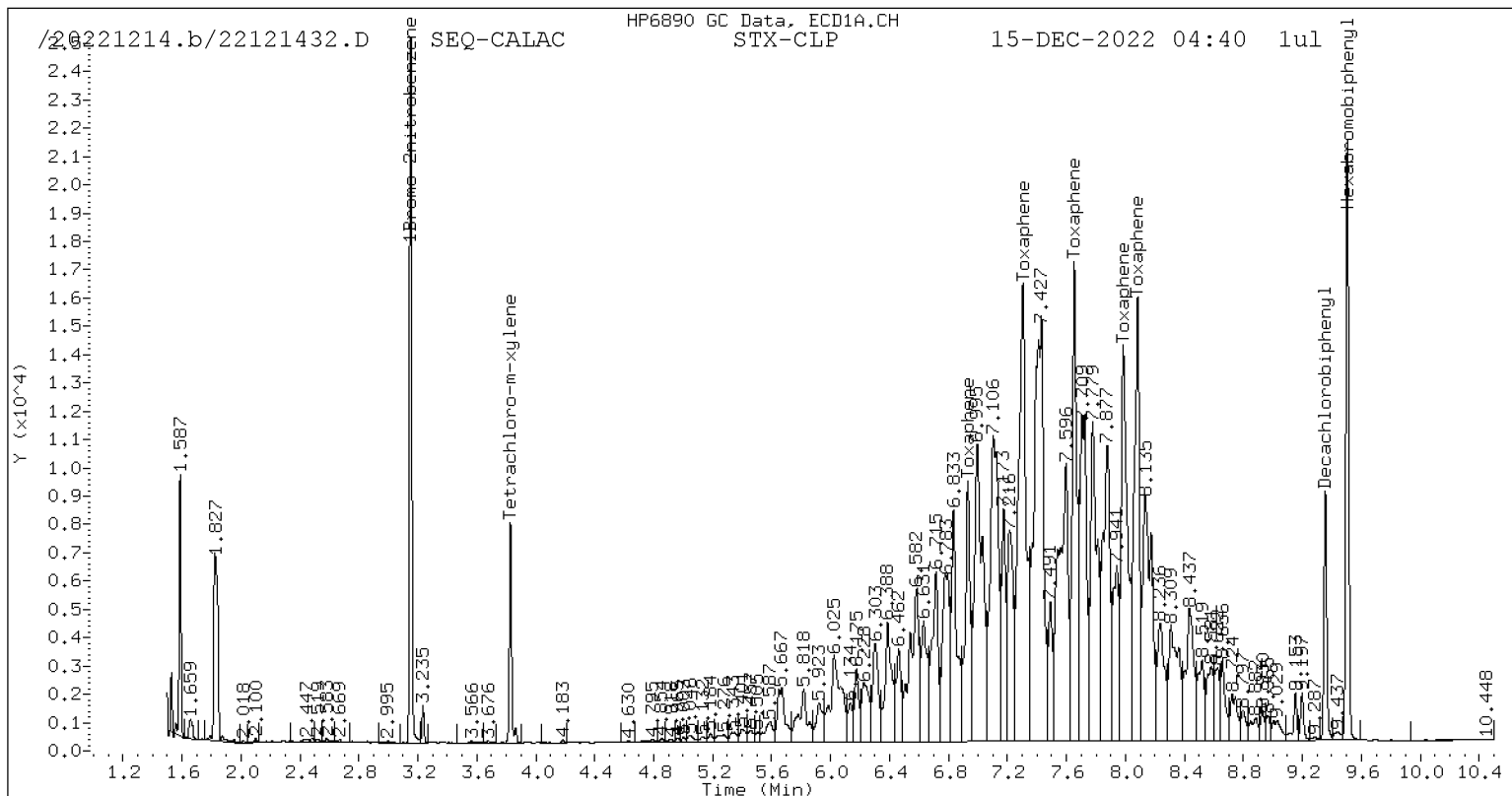
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1037593	-2.0
Hexabromobiphenyl	797125	750492	-5.9

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	432250	2591.5	1	7.126	-0.000	358061	2539.5		
Toxaphene	2	7.303	0.000	1180375	2524.1	2	7.553	0.000	785942	2479.1		
Toxaphene	3	7.653	0.000	762221	2529.4	3	8.059	-0.000	602985	2498.7		
Toxaphene	4	7.986	0.000	863552	2142.9	4	8.201	-0.001	1929083	2450.8		
Toxaphene	5	8.082	0.000	777497	2554.3	5	8.958	-0.001	962132	2492.0		
Total STX-CLPAve (5 peaks):					2468.427	Total CLP2Ave (5 peaks):					2492.024	RPD = 1
Corrected Ave (5 peaks):					2468.427	Corrected Ave (5 peaks):					2492.024	RPD = 1

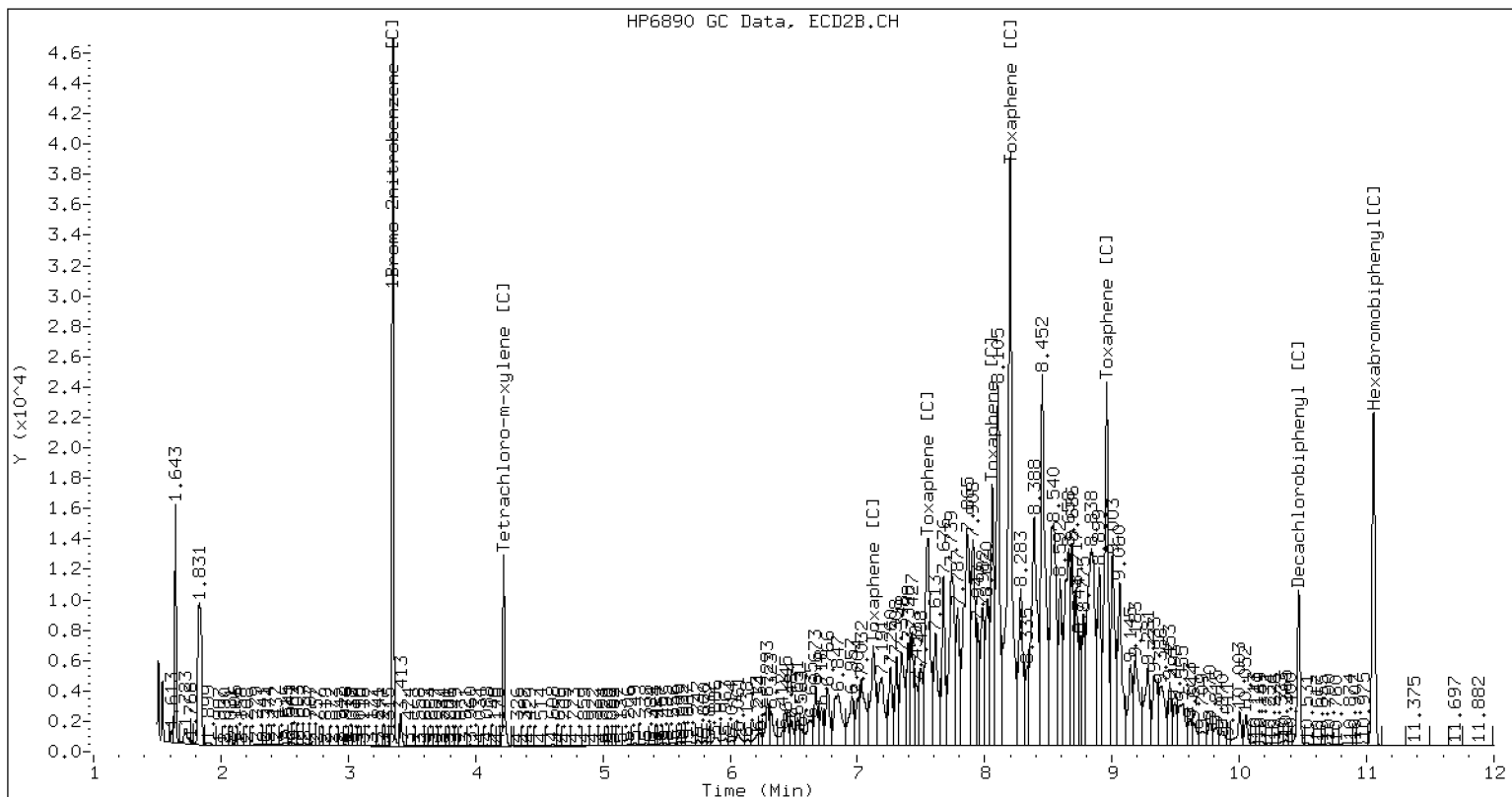


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121432.D SEQ-CALAC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D  
Data file 2: /20221214.b/B20221214.b/22121432.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAC  
Client ID:  
Injection Date: 15-DEC-2022 04:40  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D  
Data file 2: /20221214.b/B20221214.b/22121433.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAD  
Client ID:  
Injection Date: 15-DEC-2022 04:58  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.828	-0.000	329284	4.221	0.000	536251	34.78	35.63	2.4	Tetrachloro-m-xylene
9.356	0.000	464116	10.466	-0.000	660536	76.95	77.19	0.3	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

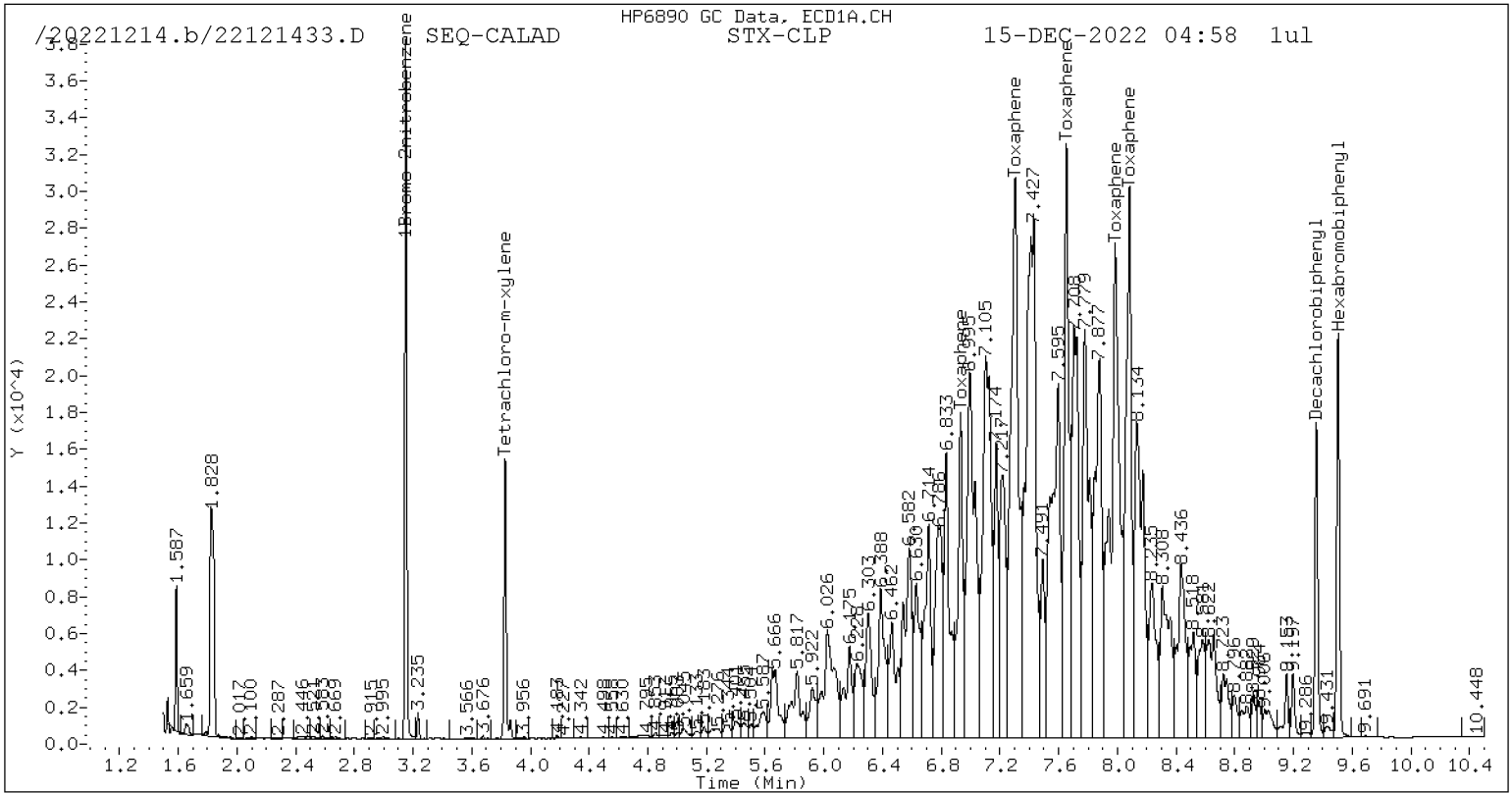
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	696178	-2.0
Hexabromobiphenyl	641833	595287	-7.3

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1069205	1.0
Hexabromobiphenyl	797125	774218	-2.9

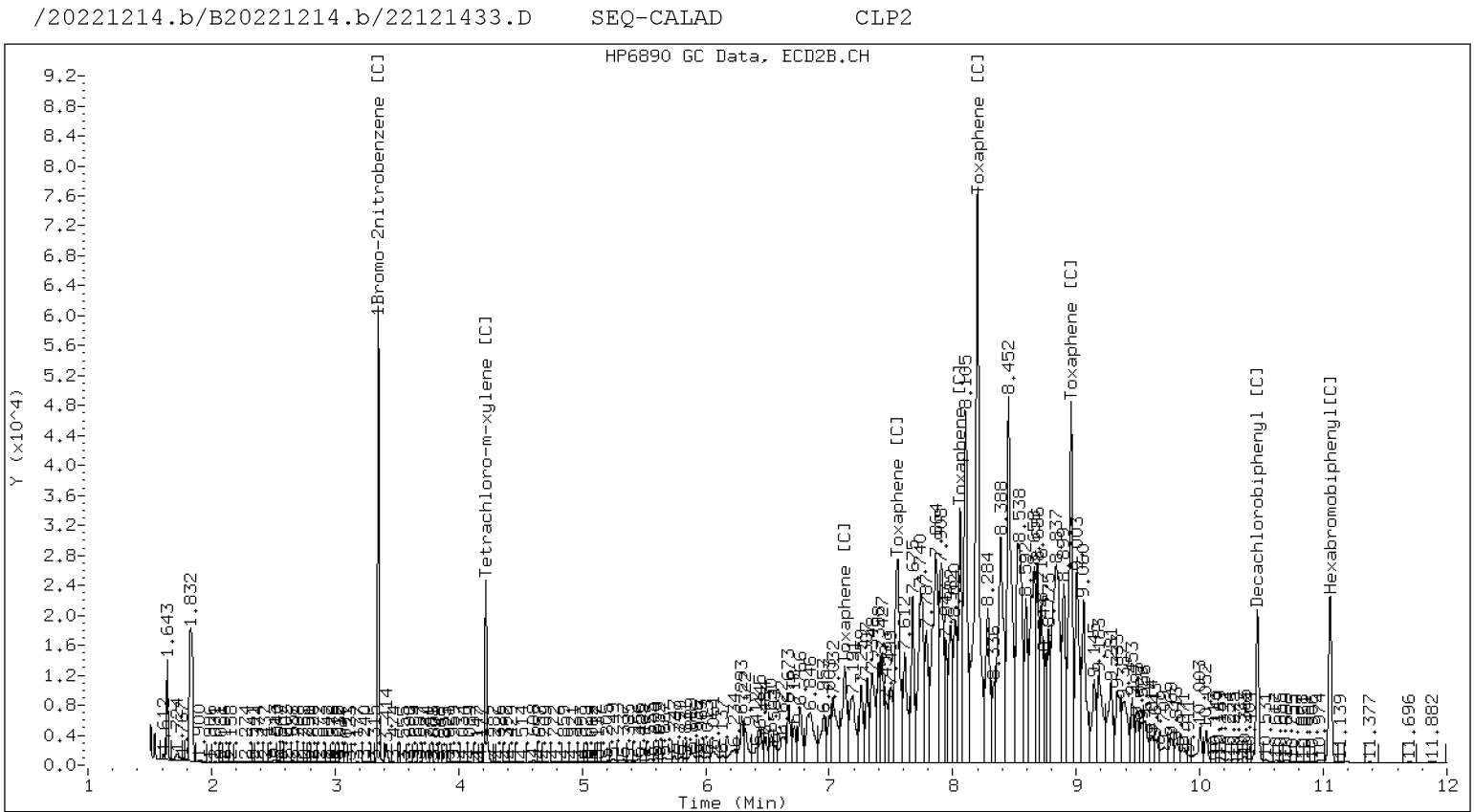
\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	828531	4765.6	1	7.126	-0.000	704213	4841.5		
Toxaphene	2	7.303	-0.000	2275106	4667.4	2	7.554	0.000	1533921	4690.3		
Toxaphene	3	7.653	-0.000	1493693	4755.4	3	8.059	-0.001	1192086	4788.5		
Toxaphene	4	7.986	0.000	2318449	5519.5	4	8.201	-0.001	3835448	4723.4		
Toxaphene	5	8.081	-0.000	1509568	4758.0	5	8.958	-0.000	1957568	4914.8		
Total STX-CLPAve (5 peaks):					4893.192	Total CLP2Ave (5 peaks):					4791.694	RPD = 2
Corrected Ave (5 peaks):					4893.192	Corrected Ave (5 peaks):					4791.694	RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D  
Data file 2: /20221214.b/B20221214.b/22121433.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAD  
Client ID:  
Injection Date: 15-DEC-2022 04:58  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col	

=====

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D  
Data file 2: /20221214.b/B20221214.b/22121434.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAE  
Client ID:  
Injection Date: 15-DEC-2022 05:16  
Report Date: 12/16/2022 15:20  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.828	-0.000 626937	4.221 0.000 1016753	65.66	67.54	2.8	Tetrachloro-m-xylene	
9.355	0.000 899917	10.467 0.000 1293767	145.37	151.89	4.4	Decachlorobiphenyl	

- \* Indicates RPD > 40%
- A Indicates Peak Height was used for Column 1 quantitation instead of Area
- B Indicates Peak Height was used for Column 2 quantitation instead of Area
- M Indicates Column 1 peak was manually integrated
- N Indicates Column 2 peak was manually integrated
- ~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	710650	702143	-1.2
Hexabromobiphenyl	641833	610983	-4.8

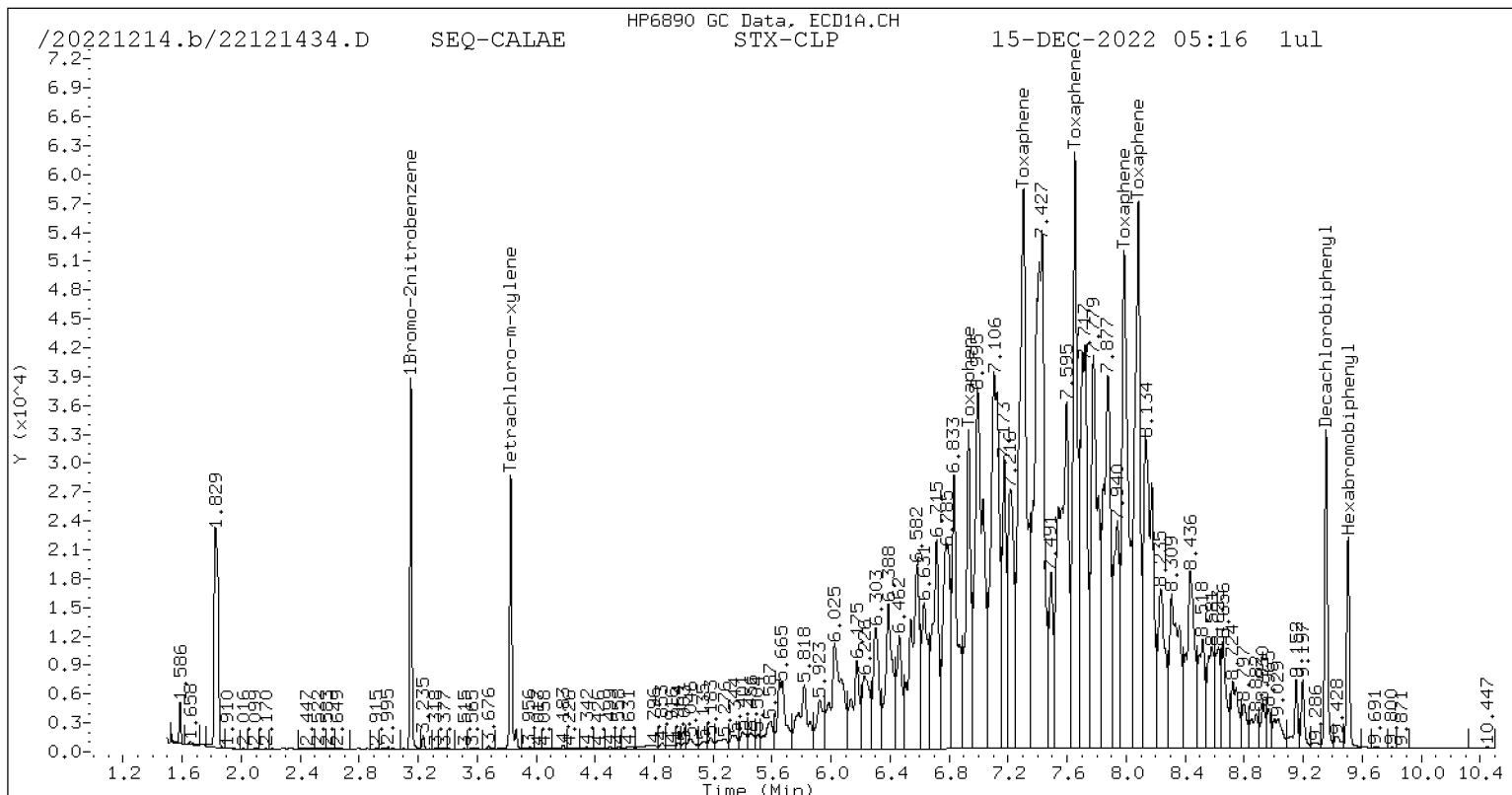
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1058848	1069521	1.0
Hexabromobiphenyl	797125	770702	-3.3

\* Standard Areas taken from Initial Cal Level 5  
 Initial Calibration Date: 14-DEC-2022  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.931	0.000	1553785	8707.6	1	7.126	0.000	1336419	9229.8		
Toxaphene	2	7.303	-0.000	4216546	8428.1	2	7.553	0.000	2900195	8908.4		
Toxaphene	3	7.653	-0.000	2652265	8227.0	3	8.060	0.000	2299294	9278.2		
Toxaphene	4	7.987	0.001	3225164	7480.8	4	8.201	0.000	7496819	9274.6		
Toxaphene	5	8.082	-0.000	2882252	8851.2	5	8.959	0.000	3913616	9870.7		
Total STX-CLPAve (5 peaks):					8338.950	Total CLP2Ave (5 peaks):					9312.318	RPD = 11
Corrected Ave (5 peaks):					8338.950	Corrected Ave (5 peaks):					9312.318	RPD = 11

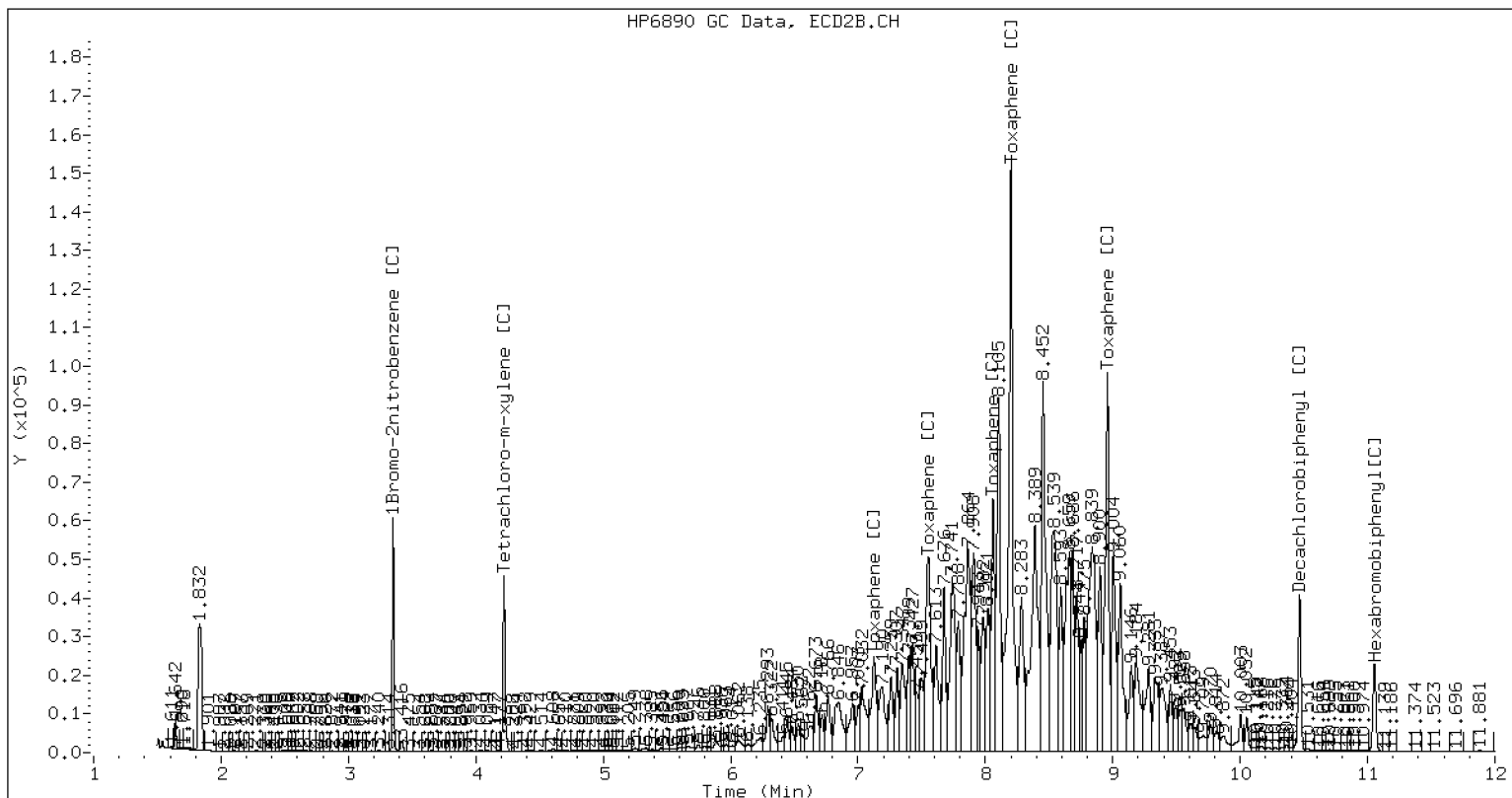


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121434.D SEQ-CALAE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D  
Data file 2: /20221214.b/B20221214.b/22121434.D  
Method: \20221214.b\PEST.m  
Compound Sublist: TOXAPH.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: JGR

ARI ID: SEQ-CALAE  
Client ID:  
Injection Date: 15-DEC-2022 05:16  
Report Date: 12/15/2022 09:09  
Units: ng/mL  
Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag				
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

=====



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021303.D  
Data file 2: /20230213.b/B20230213.b/23021303.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: SIB0237-ICV1  
Client ID:  
Injection Date: 13-FEB-2023 13:53  
Report Date: 02/17/2023 12:16  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
4.299	0.000	385166	4.815	0.000	591161	22.93	22.31 2.8 alpha-BHC
4.681	0.000	150867	5.290	0.000	221903	23.33	22.03 5.8 beta-BHC
4.863	0.000	331352	5.642	0.000	479832	24.14	21.98 9.3 delta-BHC
4.599	0.000	319554	5.209	0.000	499695	21.94	22.22 1.3 gamma-BHC (Lindane)
5.078	0.000	302682	5.733	0.000	440264	23.36	21.61 7.8 Heptachlor
5.399	0.000	317692	6.135	0.000	489547	21.88	21.05 3.9 Aldrin
6.072	0.000	271636	6.792	0.000	398191	21.57	20.70 4.1 Heptachlor epoxide b
6.515	0.000	286877	7.236	0.000	357255	24.83	21.07 16.4 Endosulfan I
6.775	0.000	532996	7.530	0.000	761256	42.93	40.64 5.5 Dieldrin
6.440	0.000	492409	7.323	0.000	740969	42.72	43.14 1.0 4,4'-DDE
7.025	0.000	364580	7.854	0.000	496172	33.58	35.94 6.8 Endrin
7.264	0.000	455043	8.067	0.000	606712	46.56	42.88 8.2 Endosulfan II
7.087	0.000	441342	7.930	0.000	593025	45.12	44.16 2.1 4,4'-DDD
8.126	0.000	404235	8.666	0.000	565565	43.56	45.52 4.4 Endosulfan sulfate
7.378	0.000	457513	8.247	0.000	577599	46.29	44.57 3.8 4,4'-DDT
7.866	0.000	907770	8.890	0.000	1081159	207.27	188.51 9.5 Methoxychlor
8.400	0.000	470936	9.189	0.000	602288	44.30	44.88 1.3 Endrin ketone
7.692	0.000	360981	8.398	0.000	465305	46.31	46.62 0.7 Endrin aldehyde
6.215	0.000	280851	7.004	0.000	405296	21.96	21.13 3.9 trans-Chlordane
6.361	0.000	277028	7.164	0.000	394538	21.60	21.03 2.7 cis-Chlordane
2.296	0.000	356877	2.473	0.000	509414	20.28	20.24 0.2 Hexachlorobutadiene
4.142	0.000	318003	4.675	0.000	483385	20.39	20.04 1.7 Hexachlorobenzene
3.791	0.000	475425	4.181	0.000	730409	40.07	39.24 2.1 Tetrachloro-m-xylene
9.306	0.000	302673	10.403	0.000	386396	36.07	36.01 0.2 Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	872478	29.8
Hexabromobiphenyl	609723	828072	35.8

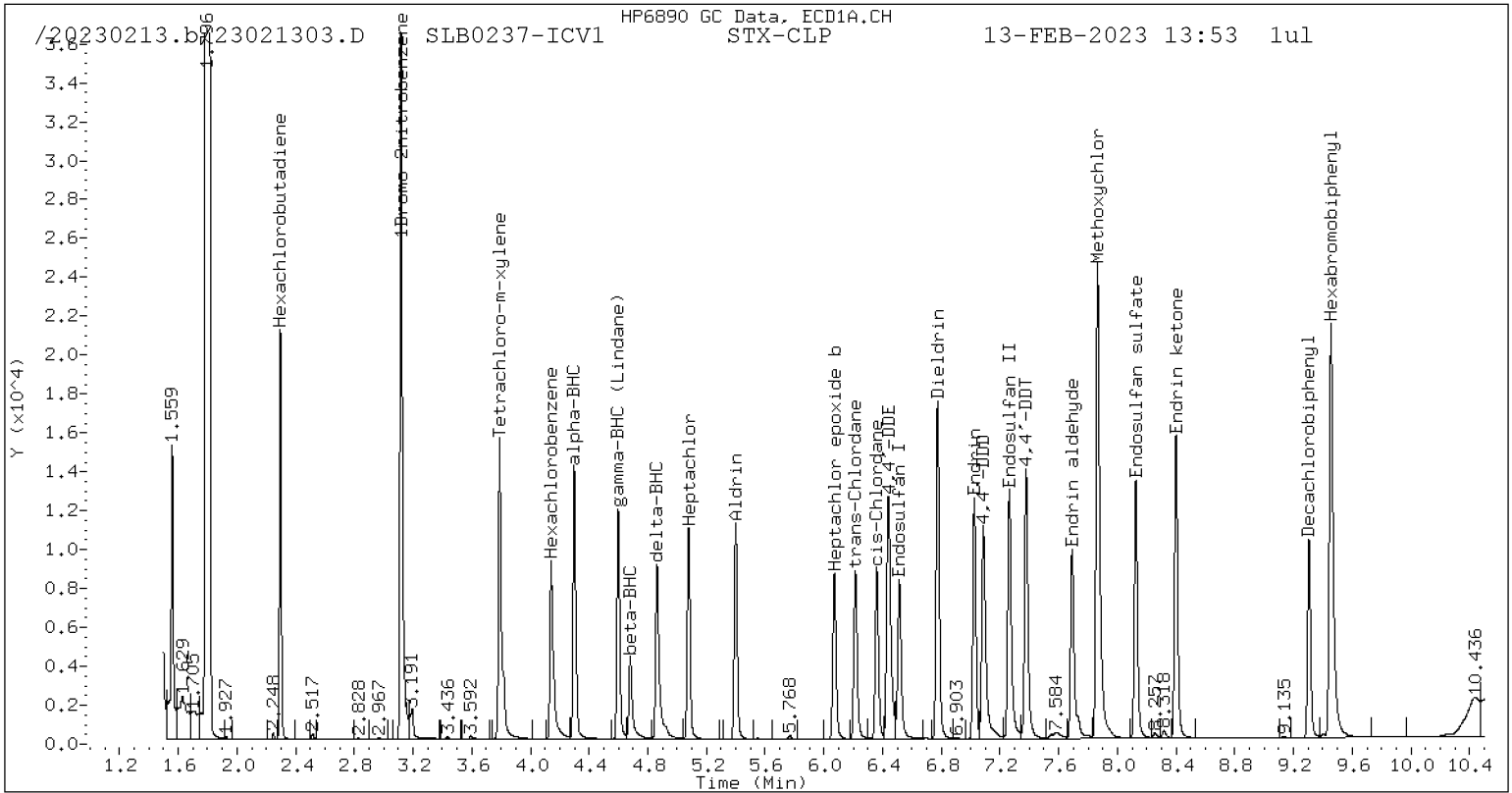
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	1322323	31.4
Hexabromobiphenyl	769764	970888	26.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

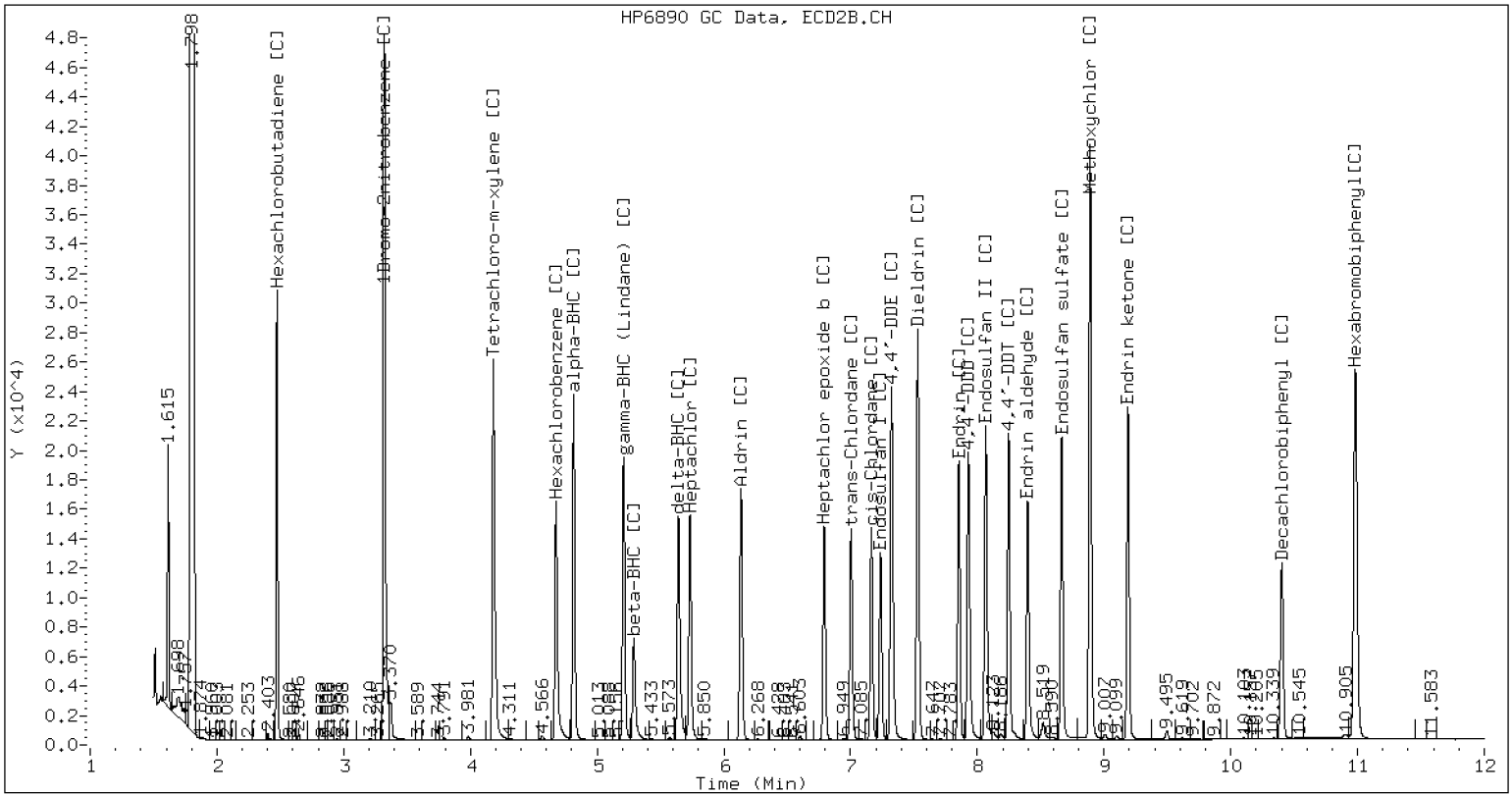
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021303.D SLB0237-ICV1 CLP2



CLP-2 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD6</u>	Calibration:	<u>FL00041</u>
Lab File ID:	<u>23021318.D</u>	Calibration Date:	<u>12/14/2022</u>
Sequence:	<u>SLB0237</u>	Injection Date:	<u>02/13/23</u>
Lab Sample ID:	<u>SLB0237-CCV1</u>	Injection Time:	<u>18:23</u>
Sequence Name:	<u>INDAE</u>		

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.2	1.4298940	1.4412880		0.8	+/-20
Hexachlorobenzene [2C]	A	20.000	17.7	1.4591090	1.2885810		-11.7	+/-20
Decachlorobiphenyl	A	40.000	35.9	0.8105886	0.7278352		-10.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	0.8841805	0.7955198		-10.0	+/-20
Tetrachlorometaxylene	A	40.000	40.0	1.0879510	1.0884600		0.05	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.7	1.1261070	1.0046290		-10.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021318.D  
Data file 2: /20230213.b/B20230213.b/23021318.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: SIB0237-CCV1  
Client ID:  
Injection Date: 13-FEB-2023 18:23  
Report Date: 02/17/2023 12:17  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.301	0.002	194160	4.816	0.001	294989	22.33	19.24	14.9	alpha-BHC
4.683	0.002	77768	5.291	0.001	112550	23.23	19.31	18.4	beta-BHC
4.866	0.003	160725	5.643	0.001	226060	22.62	17.90	23.3	delta-BHC
4.601	0.002	158602	5.210	0.000	247692	21.04	19.04	10.0	gamma-BHC (Lindane)
5.080	0.001	155598	5.733	0.000	236809	23.20	20.09	14.3	Heptachlor
5.400	0.001	161345	6.136	0.000	244794	21.47	18.19	16.5	Aldrin
6.073	0.002	140571	6.792	0.000	201681	21.57	18.13	17.3	Heptachlor epoxide b
6.517	0.003	156569	7.236	-0.000	176685	26.18	18.02	36.9	Endosulfan I
6.777	0.002	278472	7.530	-0.000	386242	43.34	35.65	19.5	Dieldrin
6.443	0.003	244136	7.323	0.000	371027	40.92	37.34	9.2	4,4'-DDE
7.026	0.001	152996	7.855	0.000	207941	27.06	27.83	2.8	Endrin
7.266	0.002	241934	8.067	0.000	308364	47.54	40.26	16.6	Endosulfan II
7.090	0.003	225828	7.931	0.001	299466	44.34	41.20	7.3	4,4'-DDD
8.127	0.001	242834	8.666	0.000	290419	50.25	43.18	15.1	Endosulfan sulfate
7.381	0.002	237235	8.247	0.000	308753	46.10	44.01	4.6	4,4'-DDT
7.868	0.003	465508	8.891	0.001	589006	204.12	189.74	7.3	Methoxychlor
8.401	0.001	253677	9.190	0.001	335185	45.83	46.14	0.7	Endrin ketone
7.694	0.002	211925	8.398	0.000	254221	52.21	47.06	10.4	Endrin aldehyde
6.216	0.001	142529	7.004	0.000	199319	21.53	17.96	18.1	trans-Chlordane
6.362	0.002	138238	7.163	-0.001	192710	20.82	17.75	15.9	cis-Chlordane
2.297	0.001	184101	2.475	0.001	256275	20.21	17.60	13.8	Hexachlorobutadiene
4.145	0.003	162716	4.677	0.001	246415	20.16	17.66	13.2	Hexachlorobenzene
3.793	0.002	245766	4.183	0.001	384230	40.02	35.69	11.4	Tetrachloro-m-xylene
9.308	0.002	156922	10.403	0.001	209026	35.92	35.99	0.2	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits



INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	451585	-32.8
Hexabromobiphenyl	609723	431202	-29.3

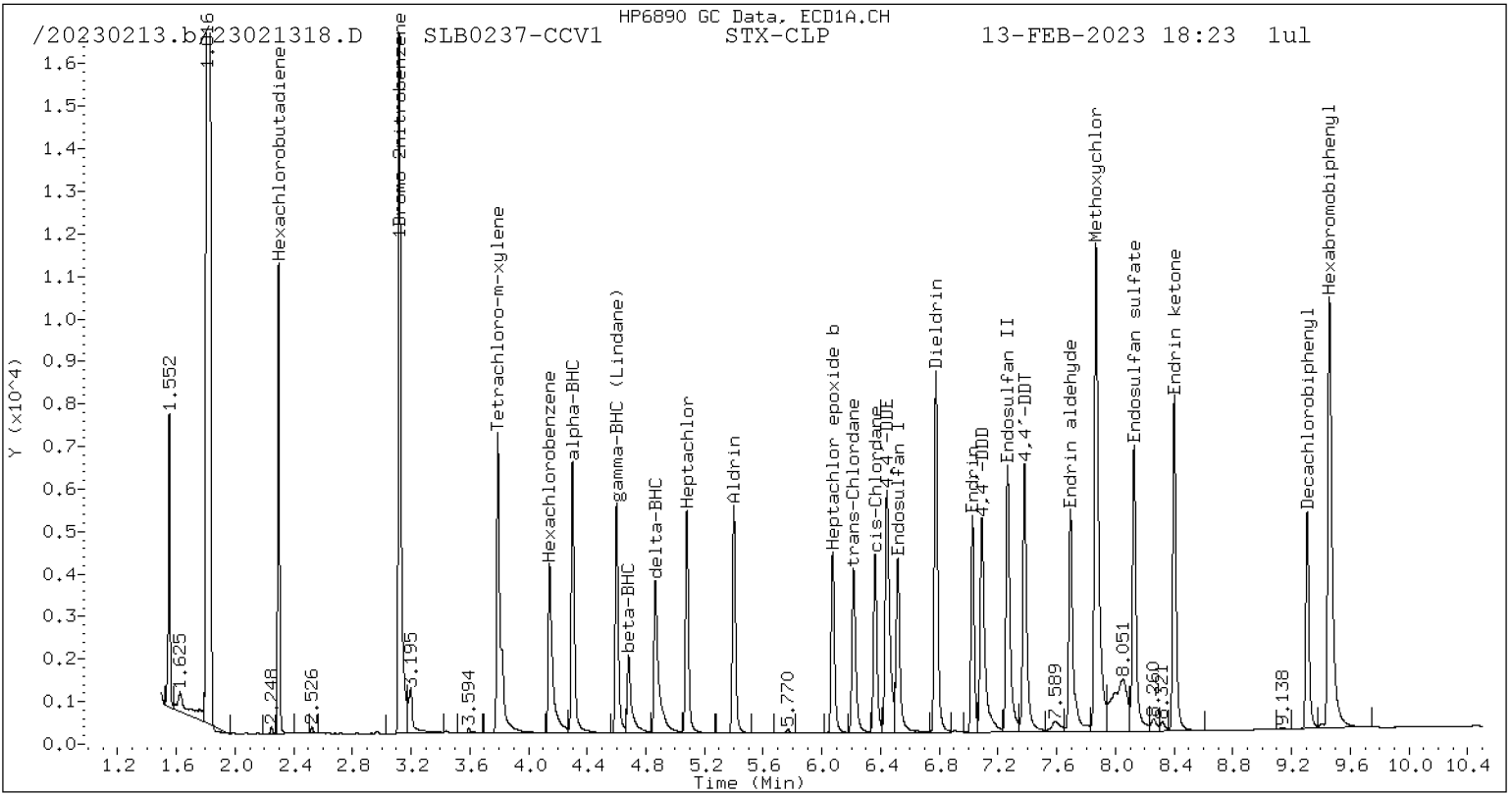
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	764919	-24.0
Hexabromobiphenyl	769764	525508	-31.7

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

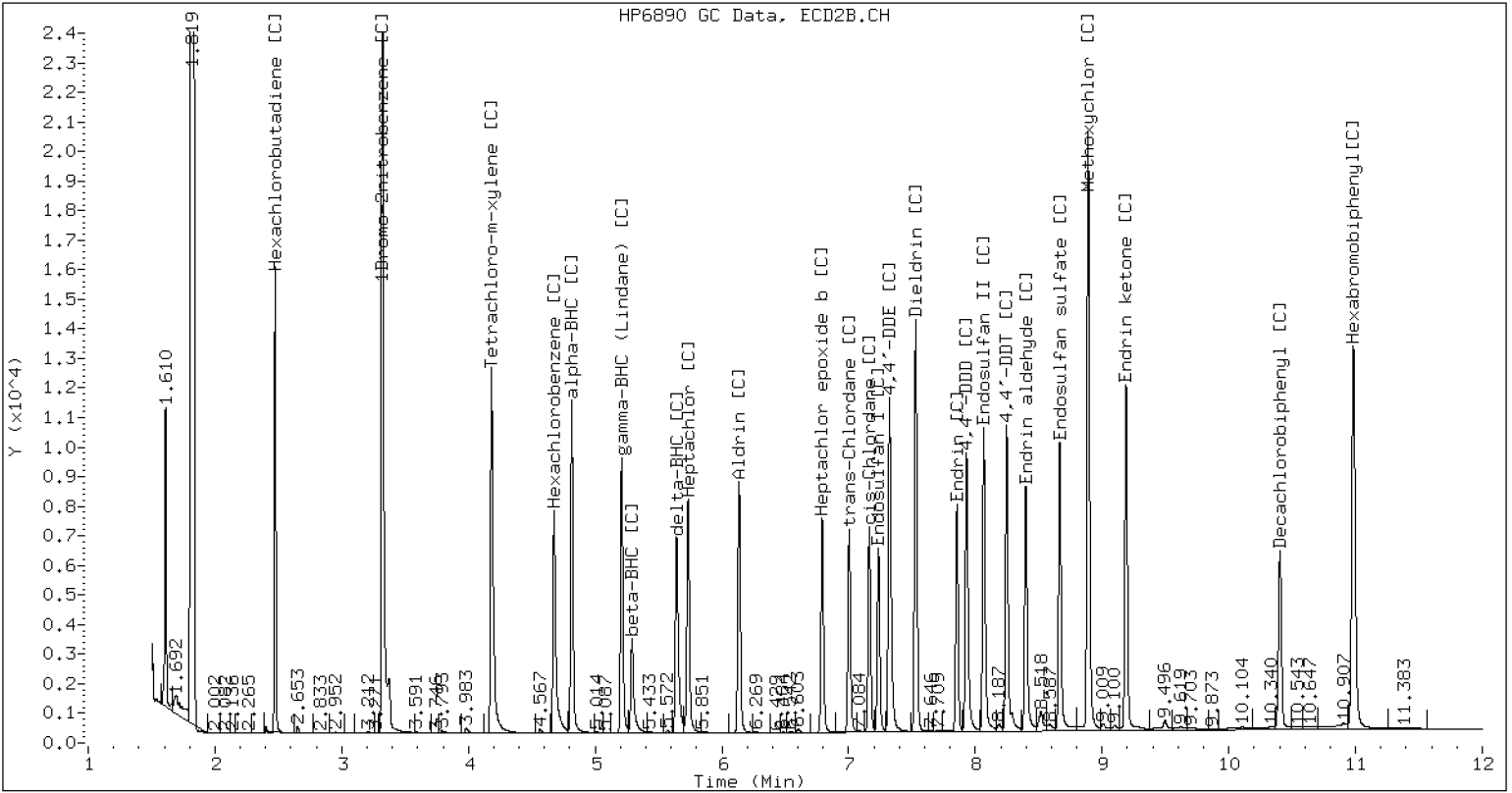
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021318.D SLB0237-CCV1 CLP2



CLP-2 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD6</u>	Calibration:	<u>FL00041</u>
Lab File ID:	<u>23021336.D</u>	Calibration Date:	<u>12/14/2022</u>
Sequence:	<u>SLB0237</u>	Injection Date:	<u>02/13/23</u>
Lab Sample ID:	<u>SLB0237-CCV2</u>	Injection Time:	<u>23:45</u>
Sequence Name:	<u>INDAE</u>		

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.9	1.4298940	1.4234100		-0.5	+/-20
Hexachlorobenzene [2C]	A	20.000	19.0	1.4591090	1.3855120		-5.0	+/-20
Decachlorobiphenyl	A	40.000	35.2	0.8105886	0.7132044		-12.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.2	0.8841805	0.7791637		-11.9	+/-20
Tetrachlorometaxylene	A	40.000	39.1	1.0879510	1.0644710		-2.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.6	1.1261070	1.0576030		-6.1	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021336.D  
 Data file 2: /20230213.b/B20230213.b/23021336.D  
 Method: \20230213.b\PEST.m  
 Compound Sublist: INDA.sub  
 Instrument, Inj. Vol.: ecd6.i, 1ul  
 Operator: AA/JR

ARI ID: SIB0237-CCV2  
 Client ID:  
 Injection Date: 13-FEB-2023 23:45  
 Report Date: 02/17/2023 12:17  
 Units: ng/mL  
 Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.299	0.000	361457	4.814	-0.000	561582	21.94	21.02	4.3	alpha-BHC
4.681	0.000	142563	5.290	-0.001	207695	22.47	20.45	9.4	beta-BHC
4.864	0.000	317618	5.641	-0.001	452056	23.59	20.54	13.8	delta-BHC
4.599	0.001	306353	5.208	-0.001	475058	21.44	20.96	2.3	gamma-BHC (Lindane)
5.079	0.001	289449	5.732	-0.001	428063	22.77	20.84	8.8	Heptachlor
5.400	0.001	301007	6.134	-0.001	444319	21.13	18.95	10.9	Aldrin
6.072	0.001	255233	6.791	-0.000	350955	20.66	18.10	13.2	Heptachlor epoxide b
6.516	0.001	255207	7.235	-0.001	294126	22.52	17.21	26.7	Endosulfan I
6.776	0.000	494995	7.529	-0.001	634223	40.65	33.59	19.0	Dieldrin
6.440	-0.000	463564	7.322	-0.001	615164	41.00	35.53	14.3	4,4'-DDE
7.026	0.001	261427	7.854	-0.001	329027	27.98	27.74	0.9	Endrin
7.264	0.000	418251	8.066	-0.001	496023	49.73	40.79	19.7	Endosulfan II
7.087	-0.000	399778	7.929	-0.000	487429	47.50	42.24	11.7	4,4'-DDD
8.126	0.001	410284	8.665	-0.001	457142	51.38	42.81	18.2	Endosulfan sulfate
7.379	0.000	400918	8.247	-0.001	495036	47.14	44.45	5.9	4,4'-DDT
7.866	0.000	813487	8.890	-0.000	1003472	215.84	203.61	5.8	Methoxychlor
8.400	0.000	437877	9.189	-0.000	534700	47.87	46.36	3.2	Endrin ketone
7.693	0.001	348779	8.397	-0.001	403975	51.99	47.10	9.9	Endrin aldehyde
6.215	-0.000	260314	7.003	-0.000	340843	20.75	17.63	16.3	trans-Chlordane
6.361	0.000	253946	7.162	-0.002	323072	20.18	17.08	16.7	cis-Chlordane
2.296	0.000	346462	2.473	-0.000	491295	20.07	19.37	3.6	Hexachlorobutadiene
4.143	0.000	304557	4.675	0.000	461702	19.91	18.99	4.7	Hexachlorobenzene
3.791	0.000	455515	4.181	-0.000	704862	39.14	37.57	4.1	Tetrachloro-m-xylene
9.307	0.001	254114	10.402	-0.000	325034	35.19	35.25	0.2	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	855852	27.3
Hexabromobiphenyl	609723	712598	16.9

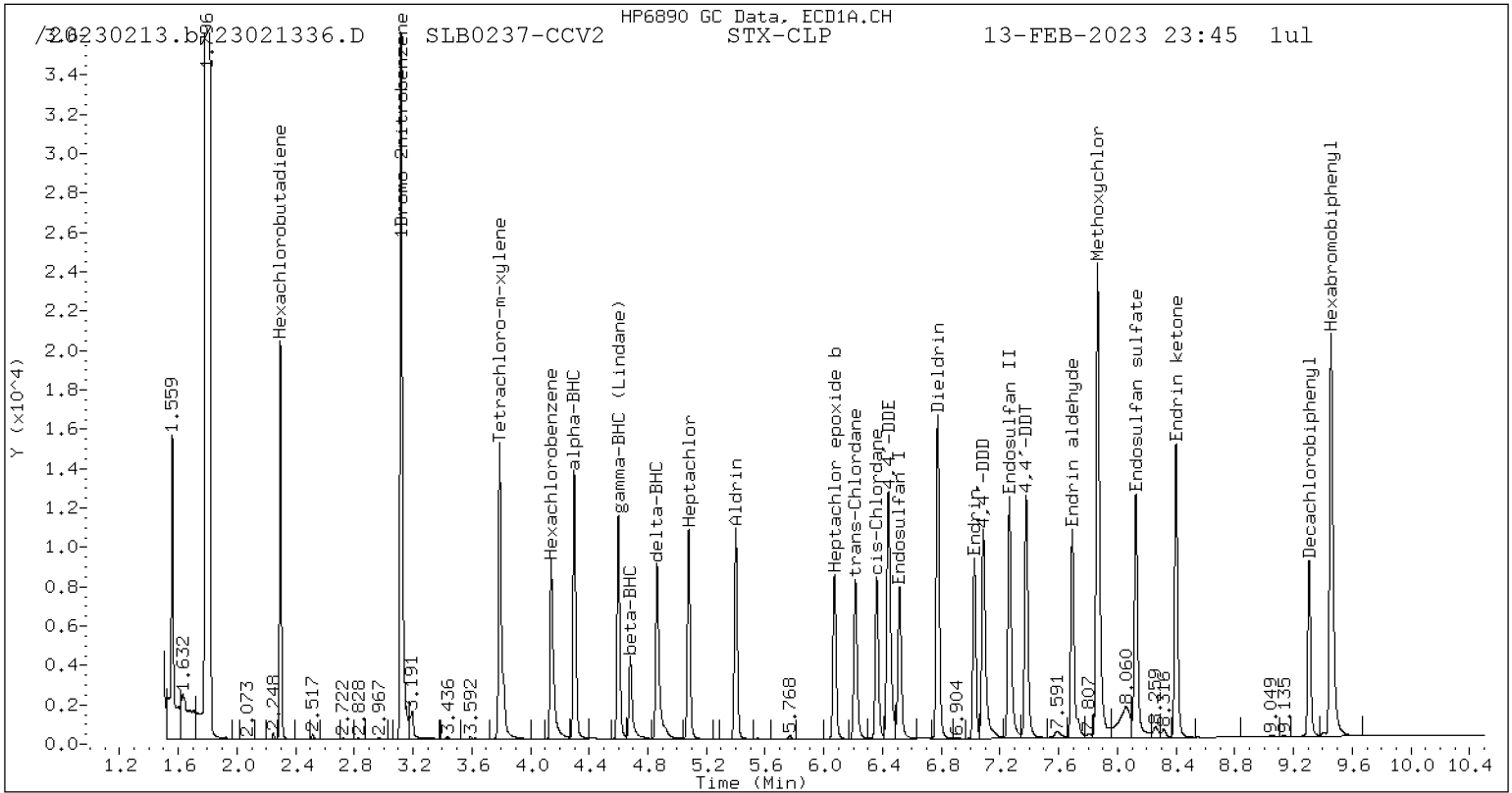
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	1332943	32.4
Hexabromobiphenyl	769764	834315	8.4

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

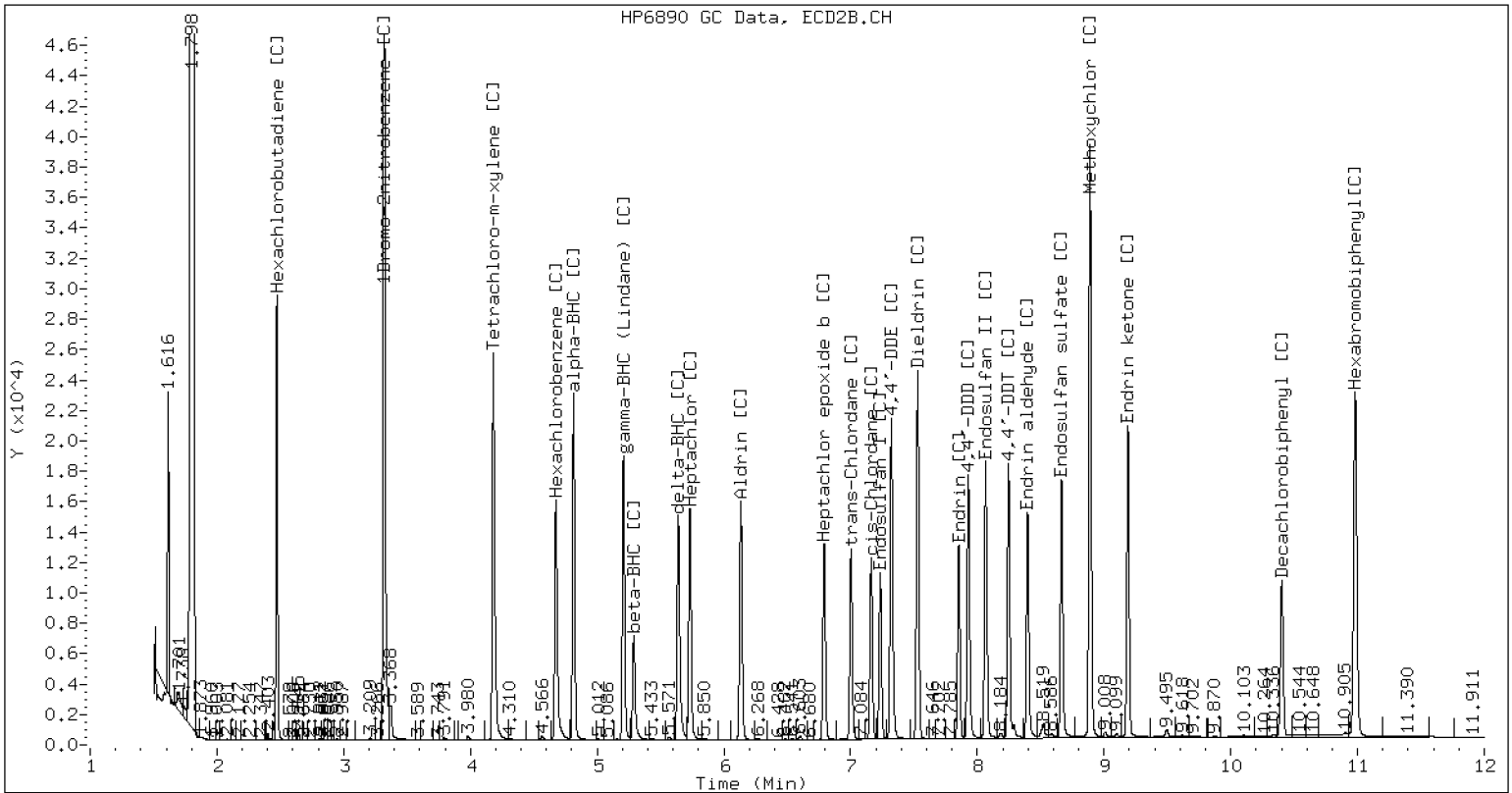
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021336.D SLB0237-CCV2 CLP2



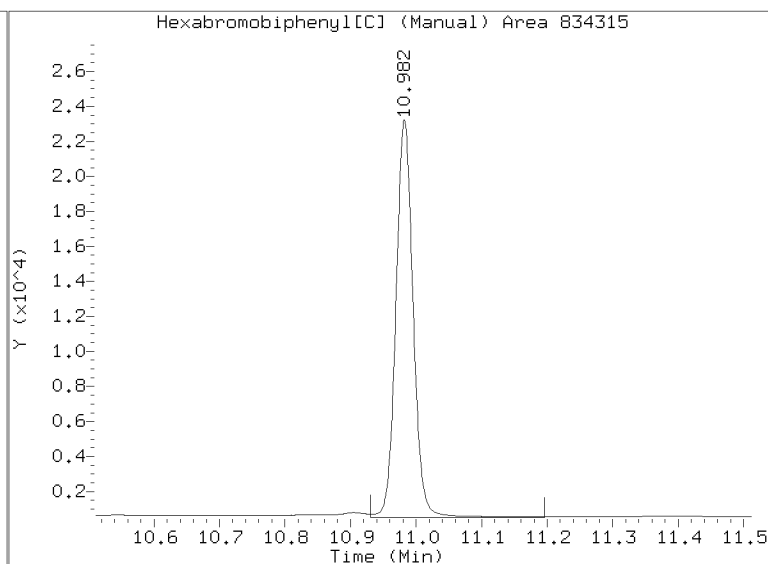
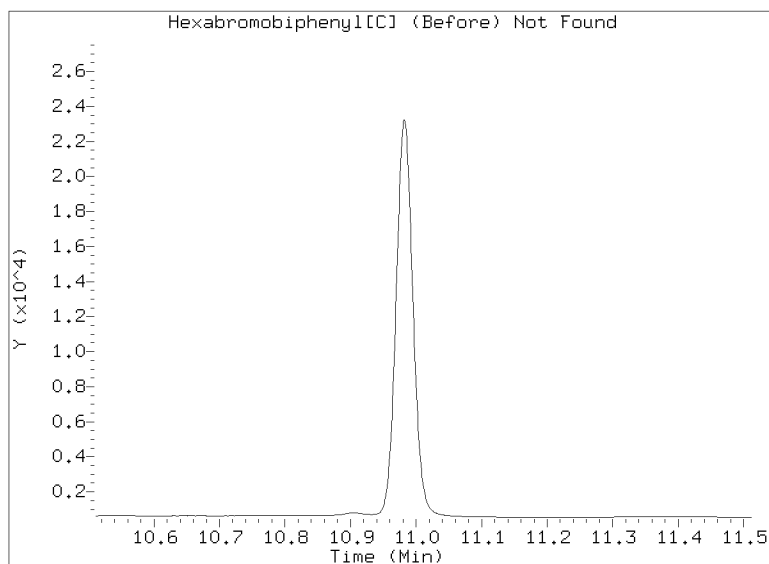
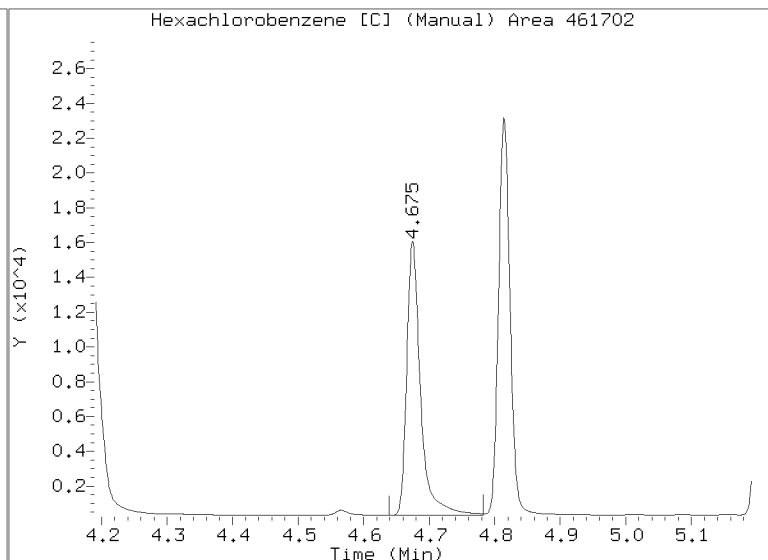
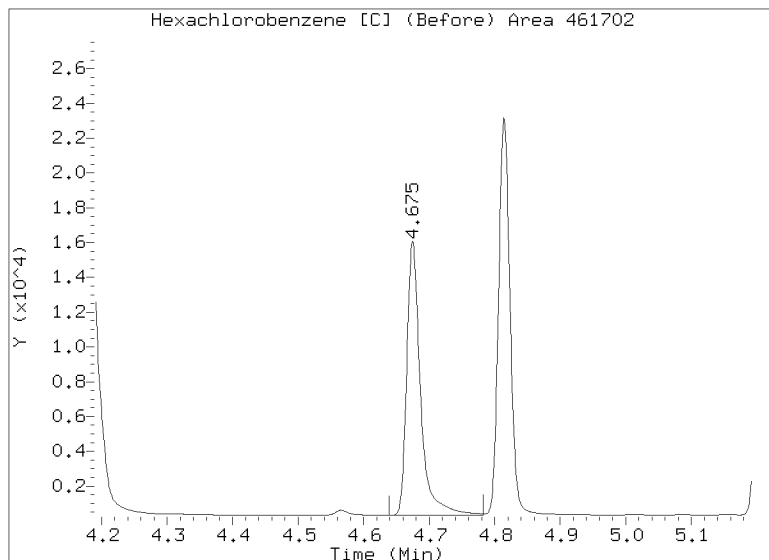
CLP-2 Manual Integration: NO

# Manual Peak Adjustment Report, CLP-2

Datafile: /20230213.b/B20230213.b/23021336.D

Injection Date: 13-FEB-2023 23:45

Lab ID:SEQ-CCV2 Client ID:





**CONTINUING CALIBRATION CHECK**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD6</u>	Calibration:	<u>FL00041</u>
Lab File ID:	<u>23021345.D</u>	Calibration Date:	<u>12/14/2022</u>
Sequence:	<u>SLB0237</u>	Injection Date:	<u>02/14/23</u>
Lab Sample ID:	<u>SLB0237-CCV3</u>	Injection Time:	<u>02:26</u>
Sequence Name:	<u>INDAE</u>		

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.2	1.4298940	1.4436410		1.0	+/-20
Hexachlorobenzene [2C]	A	20.000	19.1	1.4591090	1.3914940		-4.6	+/-20
Decachlorobiphenyl	A	40.000	35.8	0.8105886	0.7261920		-10.4	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.6	0.8841805	0.8094974		-8.4	+/-20
Tetrachlorometaxylene	A	40.000	40.1	1.0879510	1.0896450		0.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.1261070	1.0754550		-4.5	+/-20

\* Values outside of QC limits



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230213.b/23021345.D  
Data file 2: /20230213.b/B20230213.b/23021345.D  
Method: \20230213.b\PEST.m  
Compound Sublist: INDA.sub  
Instrument, Inj. Vol.: ecd6.i, 1ul  
Operator: AA/JR

ARI ID: SIB0237-CCV3  
Client ID:  
Injection Date: 14-FEB-2023 02:26  
Report Date: 02/17/2023 12:18  
Units: ng/mL  
Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
4.301	0.002	188179	4.816	0.001	290256	21.84	20.61	5.8	alpha-BHC
4.683	0.002	74818	5.291	0.001	108840	22.55	20.33	10.4	beta-BHC
4.866	0.003	158990	5.642	-0.000	225657	22.57	19.45	14.9	delta-BHC
4.601	0.002	156260	5.210	0.000	243980	20.91	20.41	2.4	gamma-BHC (Lindane)
5.080	0.002	151735	5.733	-0.000	224276	22.82	20.71	9.7	Heptachlor
5.401	0.002	157825	6.135	-0.000	231176	21.18	18.70	12.5	Aldrin
6.073	0.002	135112	6.792	-0.000	183074	20.92	17.91	15.5	Heptachlor epoxide b
6.517	0.002	139246	7.236	-0.000	153178	23.49	17.00	32.0	Endosulfan I
6.777	0.002	262196	7.529	-0.001	332610	41.17	33.41	20.8	Dieldrin
6.442	0.002	238516	7.323	-0.000	320500	40.34	35.11	13.9	4,4'-DDE
7.027	0.002	131361	7.854	-0.000	159476	25.04	23.91	4.6	Endrin
7.265	0.001	220942	8.066	-0.000	263585	46.79	38.55	19.3	Endosulfan II
7.089	0.002	210480	7.929	-0.000	254875	44.54	39.29	12.5	4,4'-DDD
8.127	0.001	213399	8.665	-0.000	252070	47.60	41.99	12.5	Endosulfan sulfate
7.380	0.001	208384	8.247	-0.001	235096	43.64	37.54	15.0	4,4'-DDT
7.867	0.001	444931	8.889	-0.001	533735	210.27	192.61	8.8	Methoxychlor
8.401	0.001	235199	9.189	-0.000	291229	45.79	44.91	1.9	Endrin ketone
7.693	0.001	189288	8.397	-0.001	222039	50.26	46.04	8.8	Endrin aldehyde
6.217	0.002	135624	7.004	0.000	175272	20.67	17.19	18.4	trans-Chlordane
6.362	0.001	133329	7.163	-0.001	167755	20.26	16.82	18.6	cis-Chlordane
2.297	0.001	181738	2.475	0.002	267244	20.13	19.98	0.7	Hexachlorobutadiene
4.145	0.003	161551	4.676	0.001	244490	20.19	19.07	5.7	Hexachlorobenzene
3.793	0.002	243874	4.182	0.001	377922	40.06	38.20	4.8	Tetrachloro-m-xylene
9.307	0.001	145266	10.402	-0.001	189866	35.84	36.62	2.2	Decachlorobiphenyl

\* Indicates RPD > 40%

A Indicates Peak Height was used for Column 1 quantitation instead of Area

B Indicates Peak Height was used for Column 2 quantitation instead of Area

M Indicates Column 1 peak was manually integrated

N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	672426	447621	-33.4
Hexabromobiphenyl	609723	400076	-34.4

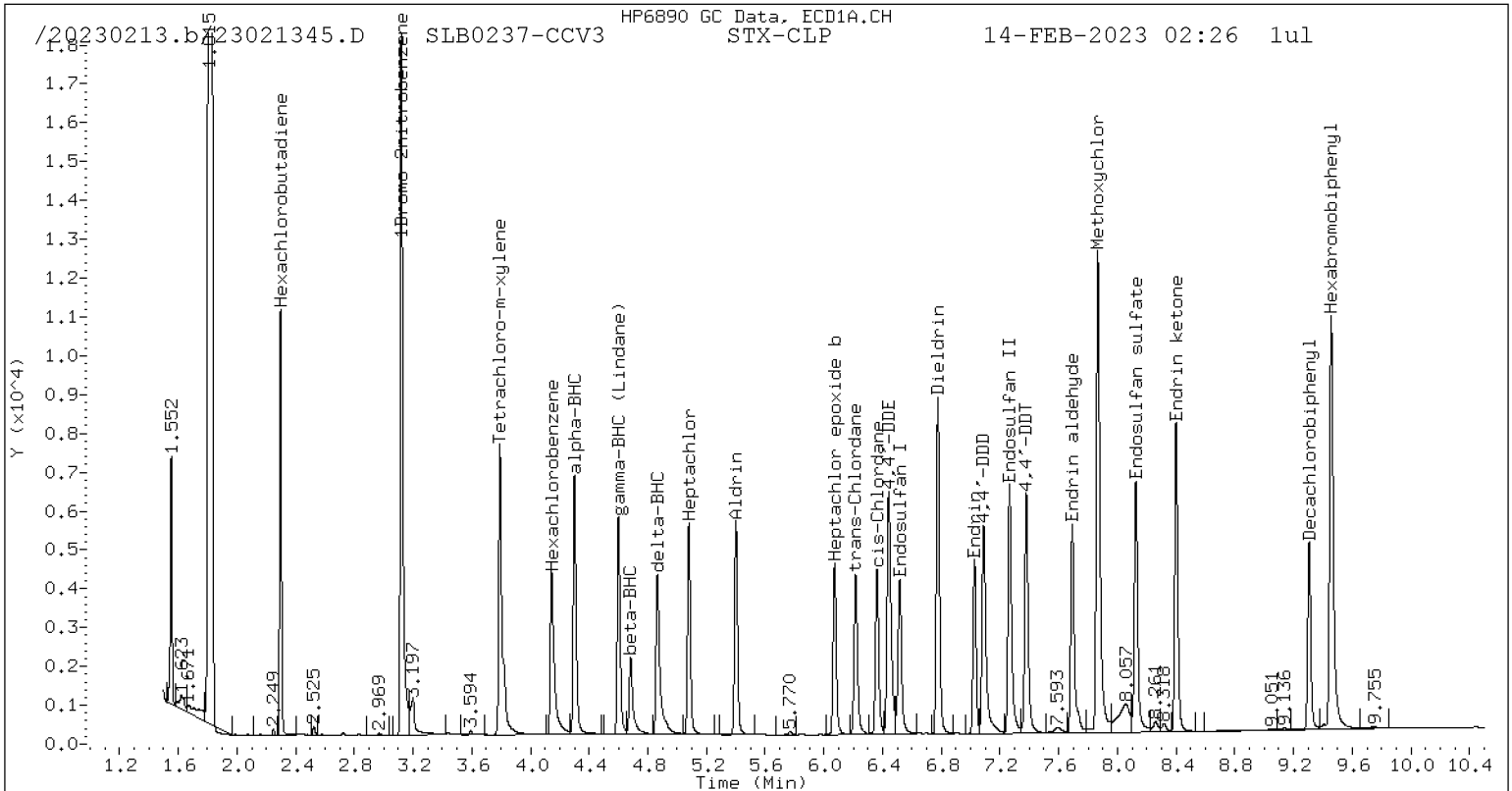
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	1006482	702813	-30.2
Hexabromobiphenyl	769764	469096	-39.1

\* Standard Areas taken from Initial Cal Level 5

Initial Calibration Date: 14-DEC-2022

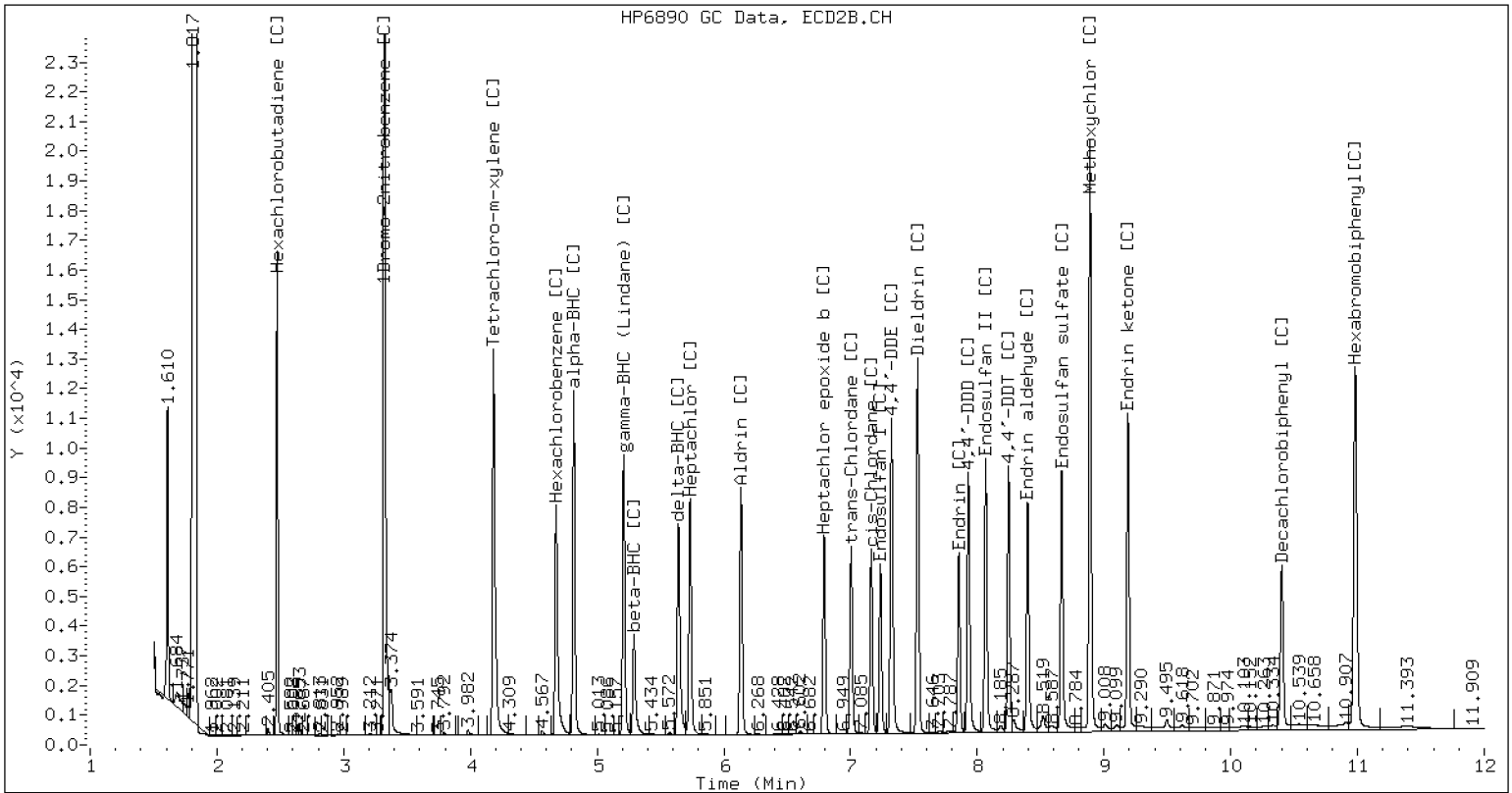
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230213.b/B20230213.b/23021345.D SLB0237-CCV3 CLP2



CLP-2 Manual Integration: NO



**PERFORMANCE EVALUATION DATA SHEET**

DS1

**EPA 8081B**

Laboratory: Analytical Resources, LLC

Laboratory ID: SKL0233-PEM1

File ID: 22121404.D

Client: Anchor QEA, LLC

Matrix: Water

Instrument: ECD6

Project: AOC5 MR Phase 1

Analyzed: 12/14/2022

Sequence: SKL0233

SDG: 23A0206

Calibration: FL00041

Column: 1

PEM COMPOUND	RT	Response
4,4'-DDE	6.49	6258
Endrin	7.08	745471
4,4'-DDD	7.14	15566
Endrin Aldehyde	7.75	21328
4,4'-DDT	7.43	629664
Endrin Ketone	8.45	19276

4,4'-DDT %Breakdown (1): 3.3

Endrin %Breakdown (1): 5.2



**PERFORMANCE EVALUATION DATA SHEET**

DS1

**EPA 8081B**

Laboratory: Analytical Resources, LLC

Laboratory ID: SKL0233-PEM1

File ID: 22121404.D

Client: Anchor QEA, LLC

Matrix: Water

Instrument: ECD6

Project: AOC5 MR Phase 1

Analyzed: 12/14/2022

Sequence: SKL0233

SDG: 23A0206

Calibration: FL00041

Column: 2

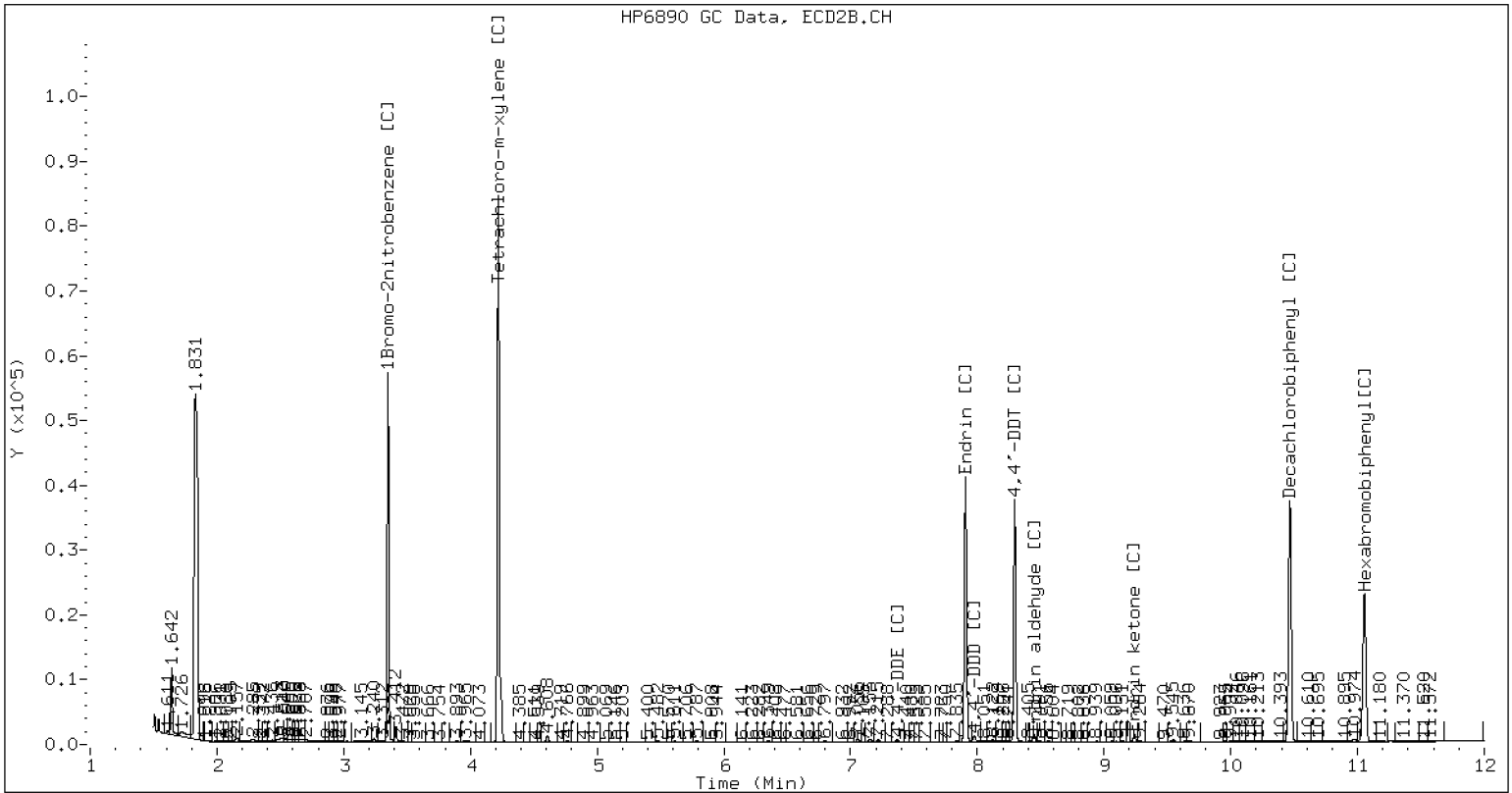
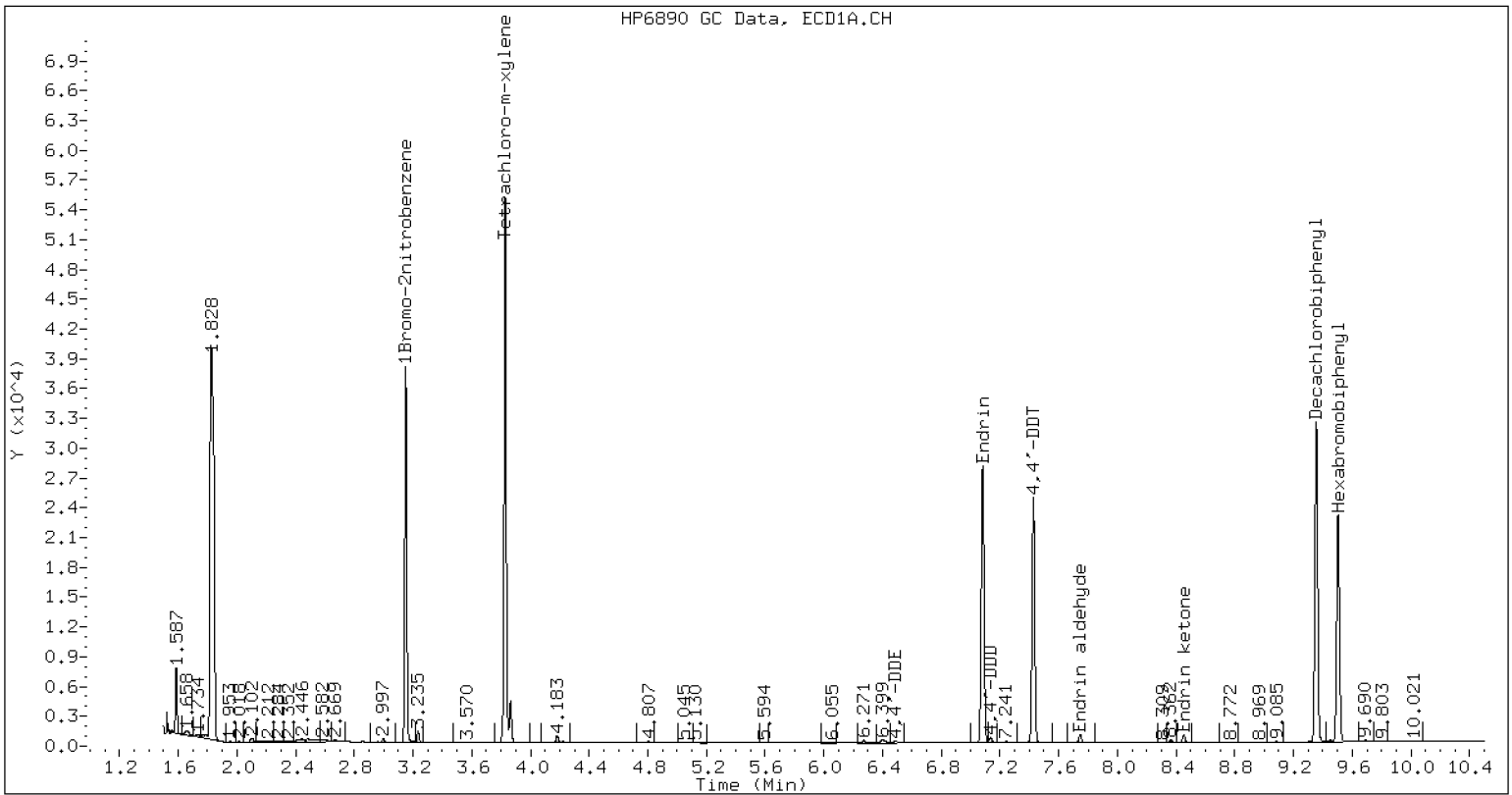
PEM COMPOUND	RT	Response
4,4'-DDE	7.37	11906
Endrin	7.91	1029194
4,4'-DDD	7.98	32697
Endrin Aldehyde	8.45	31426
4,4'-DDT	8.30	890195
Endrin Ketone	9.24	28268

4,4'-DDT %Breakdown (1): 4.8

Endrin %Breakdown (1): 5.5









7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1                      InstID,Data File: ecd6.i, 22121404.D  
Analysis Date: 14-DEC-2022 20:20      Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1    ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %  
 $((6258+15566) * 100)/(6258+15566+629664)$

Endrin Percent Breakdown = 5.2 %  
 $((21328+19276) * 100)/(21328+19276+745471)$

GC Column: STX-CLP1    ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312



Dual Column  
ANALYSIS BATCH (SEQUENCE) SUMMARY  
EPA 8081B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SKL0233

Instrument: ECD6

Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SKL0233-PEM1	22121404.D	22121404.D	NA	12/14/22 20:20
Cal Standard	SKL0233-CAL1	22121405.D	22121405.D	NA	12/14/22 20:38
Cal Standard	SKL0233-CAL2	22121406.D	22121406.D	NA	12/14/22 20:56
Cal Standard	SKL0233-CAL3	22121407.D	22121407.D	NA	12/14/22 21:14
Cal Standard	SKL0233-CAL4	22121408.D	22121408.D	NA	12/14/22 21:31
Cal Standard	SKL0233-CAL5	22121409.D	22121409.D	NA	12/14/22 21:49
Cal Standard	SKL0233-CAL6	22121410.D	22121410.D	NA	12/14/22 22:07
Cal Standard	SKL0233-CAL7	22121411.D	22121411.D	NA	12/14/22 22:25
Cal Standard	SKL0233-CAL8	22121412.D	22121412.D	NA	12/14/22 22:43
Cal Standard	SKL0233-CAL9	22121413.D	22121413.D	NA	12/14/22 23:01
Cal Standard	SKL0233-CALA	22121414.D	22121414.D	NA	12/14/22 23:19
Cal Standard	SKL0233-CALB	22121415.D	22121415.D	NA	12/14/22 23:36
Cal Standard	SKL0233-CALC	22121416.D	22121416.D	NA	12/14/22 23:54
Cal Standard	SKL0233-CALD	22121417.D	22121417.D	NA	12/15/22 00:12
Cal Standard	SKL0233-CALE	22121418.D	22121418.D	NA	12/15/22 00:30



ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6  
Calibration ID: FL00041

Element Column ID:

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WPDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		



ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6  
Calibration ID: FL00041

Element Column ID:

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022	19:27	22121401.D	1	RINSE	
2	14-DEC-2022	19:44	22121402.D	1	RINSE	
3	14-DEC-2022	20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022	20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022	20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022	20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022	21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022	21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022	21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022	22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022	22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022	22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022	23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022	23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022	23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022	23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022	00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022	00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022	00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022	01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022	01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022	01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022	01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022	02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022	02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022	02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022	03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022	03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022	03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022	04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022	04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022	04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022	04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022	05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022	05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022	05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022	06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022	06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022	06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022	07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022	07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022	07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022	07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022	08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022	08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022	08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022	09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022	09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022	09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022	10:02	22121450.D	1	BKK0142-MSD1	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE	1		NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1	1		NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2	1		NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A	1		NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A	1		NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A	1		NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A	1		NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A	1		NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A	1		NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A	1		NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A	1		NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A	1		NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA	1		NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB	1		NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC	1		NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD	1		NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE	1		NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1	1		NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2	1		NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3	1		NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4	1		NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1	1		NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1	1		NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2	1		NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3	1		NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1	1		NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1	1		NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1	1		NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2	1		NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1	1		NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1	1		NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1	1		NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01	1		NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04	1		NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01	1		trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01	1		Heptachlor epoxide b,
1131	22121455.D	22K0429-02	1		Heptachlor epoxide b,
1149	22121456.D	22K0429-03	1		Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3	1		NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1	1		NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2	1		NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3	1		NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4	1		NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1	1		NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1	1		NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1	1		NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01	1		NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01	1		NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01	1		NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1	1		NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1	1		NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2	1		NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1 10		1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1	1		NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1	1		NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1	1		NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2	1		NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3	1		NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4	1		NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5	1		NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6	1		NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7	1		NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8	1		NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9	1		NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA	1		NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB	1		NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC	1		NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD	1		NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE	1		NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1	1		NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A	1		NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A	1		NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A	1		NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A	1		NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A	1		NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A	1		NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A	1		NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A	1		NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A	1		NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA	1		NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB	1		NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC	1		NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD	1		NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE	1		NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2	1		NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1	1		NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2	1		NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4	1		NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1	1		NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1	1		NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2	1		NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3	1		NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1	1		NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1	1		NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1	1		NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2	1		NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1	1		NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1	1		NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1	1		NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01	1		NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04	1		NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01	1		trans-Chlordane [C],
1113	22121454.D	22K0429-01	1		NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02	1		Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03	1		Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D SEQ-PEM3		1		NO MANUAL INTEGRATION
1225	22121458.D SEQ-CCV1		1		NO MANUAL INTEGRATION
1243	22121459.D SEQ-CCV2		1		NO MANUAL INTEGRATION
1301	22121460.D SEQ-CCV3		1		NO MANUAL INTEGRATION
1319	22121461.D SEQ-CCV4		1		NO MANUAL INTEGRATION
1336	22121462.D BKK0380-BLK1		1		NO MANUAL INTEGRATION
1354	22121463.D BKK0380-BS1		1		NO MANUAL INTEGRATION
1412	22121464.D BKK0380-BSD1		1		NO MANUAL INTEGRATION
1430	22121465.D 22K0157-01		1		NO MANUAL INTEGRATION
1448	22121466.D 22K0230-01		1		NO MANUAL INTEGRATION
1506	22121467.D 22K0231-01		1		NO MANUAL INTEGRATION
1524	22121468.D BKK0382-BLK1		1		NO MANUAL INTEGRATION
1542	22121469.D BKK0382-BS1		1		NO MANUAL INTEGRATION
1600	22121470.D BKK0382-BS2		1		NO MANUAL INTEGRATION
1618	22121471.D BKK0382-BSD1		1		NO MANUAL INTEGRATION
1635	22121472.D 22K0075-01		1		NO MANUAL INTEGRATION
1653	22121473.D SEQ-PEM4		1		NO MANUAL INTEGRATION
1711	22121474.D SEQ-CCV5		1		NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1 10		1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	j rains, 17-Dec-2022 10:57
22121402.D	Data Locked	j rains, 17-Dec-2022 10:57
22121403.D	Data Locked	j rains, 17-Dec-2022 10:57
22121404.D	Data Locked	j rains, 17-Dec-2022 10:57
22121405.D	Data Locked	j rains, 17-Dec-2022 10:57
22121406.D	Data Locked	j rains, 17-Dec-2022 10:57
22121407.D	Data Locked	j rains, 17-Dec-2022 10:57
22121408.D	Data Locked	j rains, 17-Dec-2022 10:57
22121409.D	Data Locked	j rains, 17-Dec-2022 10:57
22121410.D	Data Locked	j rains, 17-Dec-2022 10:57
22121411.D	Data Locked	j rains, 17-Dec-2022 10:57
22121412.D	Data Locked	j rains, 17-Dec-2022 10:57
22121413.D	Data Locked	j rains, 17-Dec-2022 10:57
22121414.D	Data Locked	j rains, 17-Dec-2022 10:57
22121415.D	Data Locked	j rains, 17-Dec-2022 10:57
22121416.D	Data Locked	j rains, 17-Dec-2022 10:57
22121417.D	Data Locked	j rains, 17-Dec-2022 10:57
22121418.D	Data Locked	j rains, 17-Dec-2022 10:57
22121419.D	Data Locked	j rains, 17-Dec-2022 10:57
22121420.D	Data Locked	j rains, 17-Dec-2022 10:57
22121421.D	Data Locked	j rains, 17-Dec-2022 10:57
22121422.D	Data Locked	j rains, 17-Dec-2022 10:57
22121423.D	Data Locked	j rains, 17-Dec-2022 10:57
22121424.D	Data Locked	j rains, 17-Dec-2022 10:57
22121425.D	Data Locked	j rains, 17-Dec-2022 10:57
22121426.D	Data Locked	j rains, 17-Dec-2022 10:57
22121427.D	Data Locked	j rains, 17-Dec-2022 10:57
22121428.D	Data Locked	j rains, 17-Dec-2022 10:57
22121429.D	Data Locked	j rains, 17-Dec-2022 10:57
22121430.D	Data Locked	j rains, 17-Dec-2022 10:57
22121431.D	Data Locked	j rains, 17-Dec-2022 10:57
22121432.D	Data Locked	j rains, 17-Dec-2022 10:57
22121433.D	Data Locked	j rains, 17-Dec-2022 10:57
22121434.D	Data Locked	j rains, 17-Dec-2022 10:57





**ANALYSIS SEQUENCE**

**SLB0237**

Instrument: ECD6  
Calibration ID: FL00041

Printed: 2/17/2023 12:00:09PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0237-PEM1	QC		1		K007286	L000844		
SLB0237-ICV1	QC		2		L000845	L000844		
BLA0622-BLK1	QC		3			L000844		
BLA0622-BS1	QC		4			L000844		
BLA0622-BSD1	QC		5			L000844		
BLA0622-MS1	QC		6			L000844		
BLA0622-MSD1	QC		7			L000844		
23A0206-01	8081B Pest (PSDDA)	B 01	8			L000844	Anchor QEA, LLC	
23A0206-02	8081B Pest (PSDDA)	B 01	9			L000844	Anchor QEA, LLC	
23A0206-03	8081B Pest (PSDDA)	B 01	10			L000844	Anchor QEA, LLC	
23A0206-04	8081B Pest (PSDDA)	B 01	11			L000844	Anchor QEA, LLC	
23A0206-05	8081B Pest (PSDDA)	B 01	12			L000844	Anchor QEA, LLC	
23A0206-06	8081B Pest (PSDDA)	B 01	13			L000844	Anchor QEA, LLC	
23A0206-07	8081B Pest (PSDDA)	B 01	14			L000844	Anchor QEA, LLC	
23A0206-08	8081B Pest (PSDDA)	B 01	15			L000844	Anchor QEA, LLC	
23A0206-09	8081B Pest (PSDDA)	B 01	16			L000844	Anchor QEA, LLC	
23A0206-10	8081B Pest (PSDDA)	B 01	17			L000844	Anchor QEA, LLC	
SLB0237-PEM2	QC		18		K007286	L000844		
SLB0237-CCV1	QC		19		L000845	L000844		
23A0206-11	8081B Pest (PSDDA)	B 01	20			L000844	Anchor QEA, LLC	
23A0206-12	8081B Pest (PSDDA)	B 01	21			L000844	Anchor QEA, LLC	

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**ANALYSIS SEQUENCE**

**SLB0237**

Instrument: ECD6  
Calibration ID: FL00041

Printed: 2/17/2023 12:00:09PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0206-13	8081B Pest (PSDDA)	B 01	22			L000844	Anchor QEA, LLC	
23A0206-14	8081B Pest (PSDDA)	B 01	23			L000844	Anchor QEA, LLC	
BLA0684-BLK1	QC		24			L000844		
BLA0684-BS1	QC		25			L000844		
BLA0684-BSD1	QC		26			L000844		
BLA0684-MS1	QC		27			L000844		
BLA0684-MSD1	QC		28			L000844		
23A0313-08	8081B Pest (PSDDA)	A 01	29			L000844	Anchor QEA, LLC	
23A0313-09	8081B Pest (PSDDA)	A 01	30			L000844	Anchor QEA, LLC	
23A0313-10	8081B Pest (PSDDA)	A 01	31			L000844	Anchor QEA, LLC	
23A0313-11	8081B Pest (PSDDA)	A 01	32			L000844	Anchor QEA, LLC	
23A0313-13	8081B Pest (PSDDA)	A 01	33			L000844	Anchor QEA, LLC	
23A0326-01	8081B Pest (PSDDA)	A 01	34			L000844	Anchor QEA, LLC	
23A0326-02	8081B Pest (PSDDA)	A 01	35			L000844	Anchor QEA, LLC	
23A0326-04	8081B Pest (PSDDA)	A 01	36			L000844	Anchor QEA, LLC	
SLB0237-PEM3	QC		37		K007286	L000844		
SLB0237-CCV2	QC		38		L000845	L000844		
23A0326-05	8081B Pest (PSDDA)	A 01	39			L000844	Anchor QEA, LLC	
23A0326-10	8081B Pest (PSDDA)	A 01	40			L000844	Anchor QEA, LLC	
23A0326-11	8081B Pest (PSDDA)	A 01	41			L000844	Anchor QEA, LLC	
23A0326-12	8081B Pest (PSDDA)	A 01	42			L000844	Anchor QEA, LLC	

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230213.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	13-FEB-2023	13:18	23021301.D	1	RINSE	
2	13-FEB-2023	13:36	23021302.D	1	SEQ-PEM1	
3	13-FEB-2023	13:53	23021303.D	1	SEQ-ICV1	
4	13-FEB-2023	14:11	23021304.D	1	BLA0622-BLK1	
5	13-FEB-2023	14:29	23021305.D	1	BLA0622-BS1	
6	13-FEB-2023	14:47	23021306.D	1	BLA0622-BSD1	
7	13-FEB-2023	15:05	23021307.D	1	23A0206-01	
8	13-FEB-2023	15:23	23021308.D	1	23A0206-02	
9	13-FEB-2023	15:41	23021309.D	1	23A0206-03	
10	13-FEB-2023	15:59	23021310.D	1	23A0206-04	
11	13-FEB-2023	16:17	23021311.D	1	23A0206-05	
12	13-FEB-2023	16:35	23021312.D	1	23A0206-06	
13	13-FEB-2023	16:53	23021313.D	1	23A0206-07	
14	13-FEB-2023	17:11	23021314.D	1	23A0206-08	
15	13-FEB-2023	17:29	23021315.D	1	23A0206-09	
16	13-FEB-2023	17:47	23021316.D	1	23A0206-10	
17	13-FEB-2023	18:05	23021317.D	1	SEQ-PEM2	
18	13-FEB-2023	18:23	23021318.D	1	SEQ-CCV1	
19	13-FEB-2023	18:41	23021319.D	1	23A0206-11	
20	13-FEB-2023	18:58	23021320.D	1	23A0206-12	
21	13-FEB-2023	19:16	23021321.D	1	23A0206-13	
22	13-FEB-2023	19:34	23021322.D	1	23A0206-14	
23	13-FEB-2023	19:52	23021323.D	1	BLA0622-MS1	
24	13-FEB-2023	20:10	23021324.D	1	BLA0622-MSD1	
25	13-FEB-2023	20:28	23021325.D	1	BLA0684-BLK1	
26	13-FEB-2023	20:46	23021326.D	1	BLA0684-BS1	
27	13-FEB-2023	21:04	23021327.D	1	BLA0684-BSD1	
28	13-FEB-2023	21:22	23021328.D	1	BLA0684-MS1	
29	13-FEB-2023	21:40	23021329.D	1	BLA0684-MSD1	
30	13-FEB-2023	21:58	23021330.D	1	23A0313-08	
31	13-FEB-2023	22:15	23021331.D	1	23A0313-09	
32	13-FEB-2023	22:33	23021332.D	1	23A0313-10	
33	13-FEB-2023	22:51	23021333.D	1	23A0313-11	
34	13-FEB-2023	23:09	23021334.D	1	23A0313-13	
35	13-FEB-2023	23:27	23021335.D	1	SEQ-PEM3	
36	13-FEB-2023	23:45	23021336.D	1	SEQ-CCV2	
37	14-FEB-2023	00:03	23021337.D	1	23A0326-01	
38	14-FEB-2023	00:21	23021338.D	1	23A0326-02	
39	14-FEB-2023	00:39	23021339.D	1	23A0326-04	
40	14-FEB-2023	00:57	23021340.D	1	23A0326-05	
41	14-FEB-2023	01:15	23021341.D	1	23A0326-10	
42	14-FEB-2023	01:32	23021342.D	1	23A0326-11	
43	14-FEB-2023	01:50	23021343.D	1	23A0326-12	
44	14-FEB-2023	02:08	23021344.D	1	SEQ-PEM4	
45	14-FEB-2023	02:26	23021345.D	1	SEQ-CCV3	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230213.b

ARI Job No.: SEQ- Method: PEST.m Instrument: ecd6.i Date: 13-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1336	23021302.D	SEQ-PEM1		1	Endrin, 4,4'-DDD,
1353	23021303.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
1411	23021304.D	BLA0622-BLK1		1	NO MANUAL INTEGRATION
1429	23021305.D	BLA0622-BS1		1	NO MANUAL INTEGRATION
1447	23021306.D	BLA0622-BSD1		1	NO MANUAL INTEGRATION
1505	23021307.D	23A0206-01		1	NO MANUAL INTEGRATION
1523	23021308.D	23A0206-02		1	NO MANUAL INTEGRATION
1541	23021309.D	23A0206-03		1	NO MANUAL INTEGRATION
1559	23021310.D	23A0206-04		1	NO MANUAL INTEGRATION
1617	23021311.D	23A0206-05		1	NO MANUAL INTEGRATION
1635	23021312.D	23A0206-06		1	NO MANUAL INTEGRATION
1653	23021313.D	23A0206-07		1	NO MANUAL INTEGRATION
1711	23021314.D	23A0206-08		1	NO MANUAL INTEGRATION
1729	23021315.D	23A0206-09		1	NO MANUAL INTEGRATION
1747	23021316.D	23A0206-10		1	NO MANUAL INTEGRATION
1805	23021317.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
1823	23021318.D	SEQ-CCV1		1	NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230213.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1841	23021319.D	23A0206-11	1		NO MANUAL INTEGRATION
1858	23021320.D	23A0206-12	1		NO MANUAL INTEGRATION
1916	23021321.D	23A0206-13	1		NO MANUAL INTEGRATION
1934	23021322.D	23A0206-14	1		NO MANUAL INTEGRATION
1952	23021323.D	BLA0622-MS1	1		NO MANUAL INTEGRATION
2010	23021324.D	BLA0622-MSD1	1		NO MANUAL INTEGRATION
2028	23021325.D	BLA0684-BLK1	1		NO MANUAL INTEGRATION
2046	23021326.D	BLA0684-BS1	1		NO MANUAL INTEGRATION
2104	23021327.D	BLA0684-BSD1	1		NO MANUAL INTEGRATION
2122	23021328.D	BLA0684-MS1	1		NO MANUAL INTEGRATION
2140	23021329.D	BLA0684-MSD1	1		NO MANUAL INTEGRATION
2158	23021330.D	23A0313-08	1		NO MANUAL INTEGRATION
2215	23021331.D	23A0313-09	1		NO MANUAL INTEGRATION
2233	23021332.D	23A0313-10	1		NO MANUAL INTEGRATION
2251	23021333.D	23A0313-11	1		NO MANUAL INTEGRATION
2309	23021334.D	23A0313-13	1		NO MANUAL INTEGRATION
2327	23021335.D	SEQ-PEM3	1		NO MANUAL INTEGRATION
2345	23021336.D	SEQ-CCV2	1		NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230213.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0003	23021337.D	23A0326-01	1	NO	MANUAL INTEGRATION
0021	23021338.D	23A0326-02	1	NO	MANUAL INTEGRATION
0039	23021339.D	23A0326-04	1	NO	MANUAL INTEGRATION
0057	23021340.D	23A0326-05	1	NO	MANUAL INTEGRATION
0115	23021341.D	23A0326-10	1	NO	MANUAL INTEGRATION
0132	23021342.D	23A0326-11	1	NO	MANUAL INTEGRATION
0150	23021343.D	23A0326-12	1	NO	MANUAL INTEGRATION
0208	23021344.D	SEQ-PEM4	1	NO	MANUAL INTEGRATION
0226	23021345.D	SEQ-CCV3	1	NO	MANUAL INTEGRATION

Security Status Report

Date: 17-Feb-2023 11:49

23021302.D	Data Locked	yev, 17-
23021303.D	Data Locked	yev, 17-
23021304.D	Data Locked	yev, 17-
23021305.D	Data Locked	yev, 17-
23021306.D	Data Locked	yev, 17-
23021307.D	Data Locked	yev, 17-
23021308.D	Data Locked	yev, 17-
23021309.D	Data Locked	yev, 17-
23021310.D	Data Locked	yev, 17-
23021311.D	Data Locked	yev, 17-
23021312.D	Data Locked	yev, 17-
23021313.D	Data Locked	yev, 17-
23021314.D	Data Locked	yev, 17-
23021315.D	Data Locked	yev, 17-
23021316.D	Data Locked	yev, 17-
23021317.D	Data Locked	yev, 17-
23021318.D	Data Locked	yev, 17-
23021319.D	Data Locked	yev, 17-
23021320.D	Data Locked	yev, 17-
23021321.D	Data Locked	yev, 17-
23021322.D	Data Locked	yev, 17-
23021323.D	Data Locked	yev, 17-
23021324.D	Data Locked	yev, 17-
23021325.D	Data Locked	yev, 17-
23021326.D	Data Locked	yev, 17-
23021327.D	Data Locked	yev, 17-
23021328.D	Data Locked	yev, 17-
23021329.D	Data Locked	yev, 17-
23021330.D	Data Locked	yev, 17-
23021331.D	Data Locked	yev, 17-
23021332.D	Data Locked	yev, 17-
23021333.D	Data Locked	yev, 17-
23021334.D	Data Locked	yev, 17-
23021335.D	Data Locked	yev, 17-
23021336.D	Data Locked	yev, 17-
23021337.D	Data Locked	yev, 17-
23021338.D	Data Locked	yev, 17-
23021339.D	Data Locked	yev, 17-
23021340.D	Data Locked	yev, 17-
23021341.D	Data Locked	yev, 17-
23021342.D	Data Locked	yev, 17-
23021343.D	Data Locked	yev, 17-
23021344.D	Data Locked	yev, 17-
23021345.D	Data Locked	yev, 17-



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8081B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG/WO:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SKL0233</u>	Instrument:	<u>ECD6</u>
Calibration:	<u>FL00041</u>	Calibration Date:	<u>12/15/2022</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SKL0233-PEM1 (Water)</b>		Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20			
Decachlorobiphenyl	160.00	83.0	0 - 200	9.355	9.354666	0.0003	+/-0.1	
Decachlorobiphenyl [2C]	160.00	83.5	0 - 200	10.466	10.4655	0.0005	+/-0.1	
Tetrachlorometaxylene	160.00	78.1	0 - 200	3.828	3.827833	0.0002	+/-0.1	
Tetrachlorometaxylene [2C]	160.00	83.5	0 - 200	4.22	4.219666	0.0003	+/-0.1	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0237  
Calibration: FL00041

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration Date: 12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0237-ICV1 (Solid)</b> Lab File ID: 23021303.D Analyzed: 02/13/23 13:53								
Decachlorobiphenyl	40.000	90.3	80 - 120	9.305	9.354666	-0.0497	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	10.402	10.4655	-0.0635	+/-0.1	
Tetrachlorometaxylene	40.000	100	80 - 120	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	4.181	4.219666	-0.0387	+/-0.1	
<b>BLA0622-BLK1 (Solid)</b> Lab File ID: 23021304.D Analyzed: 02/13/23 14:11								
Decachlorobiphenyl	8.0000	79.5	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	80.3	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	8.0000	80.0	30 - 160	3.791	3.827833	-0.0368	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	70.2	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>BLA0622-BS1 (Solid)</b> Lab File ID: 23021305.D Analyzed: 02/13/23 14:29								
Decachlorobiphenyl	8.0000	84.8	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	90.1	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	8.0000	81.4	30 - 160	3.792	3.827833	-0.0358	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	75.2	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>BLA0622-BSD1 (Solid)</b> Lab File ID: 23021306.D Analyzed: 02/13/23 14:47								
Decachlorobiphenyl	8.0000	80.0	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	90.4	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	8.0000	84.0	30 - 160	3.791	3.827833	-0.0368	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	73.8	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>23A0206-01 (Solid)</b> Lab File ID: 23021307.D Analyzed: 02/13/23 15:05								
Decachlorobiphenyl	7.9949	111	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9949	89.7	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9949	71.4	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9949	70.1	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-02 (Solid)</b> Lab File ID: 23021308.D Analyzed: 02/13/23 15:23								
Decachlorobiphenyl	7.9860	113	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9860	98.2	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9860	71.8	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9860	72.7	30 - 160	4.18	4.219666	-0.0397	+/-0.1	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0237  
Calibration: FL00041

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-03 (Solid)</b>			Lab File ID: 23021309.D		Analyzed: 02/13/23 15:41			
Decachlorobiphenyl	7.9964	93.6	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9964	97.2	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9964	69.2	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9964	74.2	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-04 (Solid)</b>			Lab File ID: 23021310.D		Analyzed: 02/13/23 15:59			
Decachlorobiphenyl	7.9919	87.6	30 - 160	9.303	9.354666	-0.0517	+/-0.1	
Decachlorobiphenyl [2C]	7.9919	91.1	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	7.9919	72.5	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9919	71.3	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-05 (Solid)</b>			Lab File ID: 23021311.D		Analyzed: 02/13/23 16:17			
Decachlorobiphenyl	7.9769	90.2	30 - 160	9.303	9.354666	-0.0517	+/-0.1	
Decachlorobiphenyl [2C]	7.9769	89.5	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9769	67.6	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9769	68.7	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>23A0206-06 (Solid)</b>			Lab File ID: 23021312.D		Analyzed: 02/13/23 16:35			
Decachlorobiphenyl	7.9969	88.0	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9969	87.1	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9969	66.3	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9969	65.6	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-07 (Solid)</b>			Lab File ID: 23021313.D		Analyzed: 02/13/23 16:53			
Decachlorobiphenyl	8.0017	83.6	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	8.0017	92.3	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	8.0017	63.8	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	8.0017	63.0	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>23A0206-08 (Solid)</b>			Lab File ID: 23021314.D		Analyzed: 02/13/23 17:11			
Decachlorobiphenyl	7.9743	83.3	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9743	82.7	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9743	66.9	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9743	65.4	30 - 160	4.181	4.219666	-0.0387	+/-0.1	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0237  
Calibration: FL00041

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-09 (Solid)</b> Lab File ID: 23021315.D Analyzed: 02/13/23 17:29								
Decachlorobiphenyl	7.9832	84.4	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9832	150	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	7.9832	61.9	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9832	62.0	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>23A0206-10 (Solid)</b> Lab File ID: 23021316.D Analyzed: 02/13/23 17:47								
Decachlorobiphenyl	7.9956	87.1	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9956	85.9	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9956	63.3	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9956	62.0	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>SLB0237-CCV1 (Solid)</b> Lab File ID: 23021318.D Analyzed: 02/13/23 18:23								
Decachlorobiphenyl	40.000	89.8	80 - 120	9.307	9.354666	-0.0477	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	10.403	10.4655	-0.0625	+/-0.1	
Tetrachlorometaxylene	40.000	100	80 - 120	3.792	3.827833	-0.0358	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	89.2	80 - 120	4.182	4.219666	-0.0377	+/-0.1	
<b>23A0206-11 (Solid)</b> Lab File ID: 23021319.D Analyzed: 02/13/23 18:41								
Decachlorobiphenyl	7.9818	85.1	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9818	82.9	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	7.9818	64.5	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9818	65.2	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-12 (Solid)</b> Lab File ID: 23021320.D Analyzed: 02/13/23 18:58								
Decachlorobiphenyl	7.9677	85.0	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9677	90.8	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	7.9677	65.4	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9677	63.3	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>23A0206-13 (Solid)</b> Lab File ID: 23021321.D Analyzed: 02/13/23 19:16								
Decachlorobiphenyl	7.9955	103	30 - 160	9.309	9.354666	-0.0457	+/-0.1	
Decachlorobiphenyl [2C]	7.9955	92.5	30 - 160	10.404	10.4655	-0.0615	+/-0.1	
Tetrachlorometaxylene	7.9955	146	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9955	71.6	30 - 160	4.18	4.219666	-0.0397	+/-0.1	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0237  
Calibration: FL00041

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-14 (Solid)</b> Lab File ID: 23021322.D Analyzed: 02/13/23 19:34								
Decachlorobiphenyl	7.9881	93.0	30 - 160	9.304	9.354666	-0.0507	+/-0.1	
Decachlorobiphenyl [2C]	7.9881	122	30 - 160	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	7.9881	71.0	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9881	62.2	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>BLA0622-MS1 (Solid)</b> Lab File ID: 23021323.D Analyzed: 02/13/23 19:52								
Decachlorobiphenyl	7.9955	94.5	30 - 160	9.305	9.354666	-0.0497	+/-0.1	
Decachlorobiphenyl [2C]	7.9955	82.6	30 - 160	10.402	10.4655	-0.0635	+/-0.1	
Tetrachlorometaxylene	7.9955	140	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9955	60.7	30 - 160	4.18	4.219666	-0.0397	+/-0.1	
<b>BLA0622-MSD1 (Solid)</b> Lab File ID: 23021324.D Analyzed: 02/13/23 20:10								
Decachlorobiphenyl	7.9955	97.3	30 - 160	9.305	9.354666	-0.0497	+/-0.1	
Decachlorobiphenyl [2C]	7.9955	114	30 - 160	10.402	10.4655	-0.0635	+/-0.1	
Tetrachlorometaxylene	7.9955	63.2	30 - 160	3.79	3.827833	-0.0378	+/-0.1	
Tetrachlorometaxylene [2C]	7.9955	61.7	30 - 160	4.181	4.219666	-0.0387	+/-0.1	
<b>SLB0237-CCV2 (Solid)</b> Lab File ID: 23021336.D Analyzed: 02/13/23 23:45								
Decachlorobiphenyl	40.000	88.0	80 - 120	9.306	9.354666	-0.0487	+/-0.1	
Decachlorobiphenyl [2C]	40.000	88.1	80 - 120	10.402	10.4655	-0.0635	+/-0.1	
Tetrachlorometaxylene	40.000	97.8	80 - 120	3.791	3.827833	-0.0368	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	93.9	80 - 120	4.18	4.219666	-0.0397	+/-0.1	
<b>SLB0237-CCV3 (Solid)</b> Lab File ID: 23021345.D Analyzed: 02/14/23 02:26								
Decachlorobiphenyl	40.000	89.6	80 - 120	9.306	9.354666	-0.0487	+/-0.1	
Decachlorobiphenyl [2C]	40.000	91.6	80 - 120	10.401	10.4655	-0.0645	+/-0.1	
Tetrachlorometaxylene	40.000	100	80 - 120	3.792	3.827833	-0.0358	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	95.5	80 - 120	4.182	4.219666	-0.0377	+/-0.1	





**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SKL0233

Instrument: ECD6

Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Performance Mix (SKL0233-PEM1 )</b>		(Water)	Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20			
1-Bromo-2-Nitrobenzene	683485	3.15	672426	3.15	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	619012	9.503	609723	9.504	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1005375	3.35	1006482	3.35	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	772586	11.054	769764	11.053	100	50 - 200	0.001	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0237

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLB0237-ICV1)</b>		(Solid)	Lab File ID: 23021303.D			Analyzed: 02/13/23 13:53			
1-Bromo-2-Nitrobenzene	872478	3.118	872478	3.118	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	828072	9.455	828072	9.455	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1322323	3.319	1322323	3.319	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	970888	10.983	970888	10.983	100	50 - 200	0.000	+/-0.50	
<b>Blank (BLA0622-BLK1)</b>		(Solid)	Lab File ID: 23021304.D			Analyzed: 02/13/23 14:11			
1-Bromo-2-Nitrobenzene	445618	3.12	872478	3.118	51	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	427709	9.453	828072	9.455	52	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	709967	3.32	1322323	3.319	54	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	502729	10.981	970888	10.983	52	50 - 200	-0.002	+/-0.50	
<b>LCS (BLA0622-BS1)</b>		(Solid)	Lab File ID: 23021305.D			Analyzed: 02/13/23 14:29			
1-Bromo-2-Nitrobenzene	487456	3.12	872478	3.118	56	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	446691	9.453	828072	9.455	54	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	774463	3.32	1322323	3.319	59	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	537114	10.98	970888	10.983	55	50 - 200	-0.003	+/-0.50	
<b>LCS Dup (BLA0622-BSD1)</b>		(Solid)	Lab File ID: 23021306.D			Analyzed: 02/13/23 14:47			
1-Bromo-2-Nitrobenzene	494543	3.118	872478	3.118	57	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	451766	9.453	828072	9.455	55	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	771575	3.319	1322323	3.319	58	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	545926	10.98	970888	10.983	56	50 - 200	-0.003	+/-0.50	
<b>LDW23-SS1021 (23A0206-01)</b>		(Solid)	Lab File ID: 23021307.D			Analyzed: 02/13/23 15:05			
1-Bromo-2-Nitrobenzene	493071	3.119	872478	3.118	57	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	392243	9.452	828072	9.455	47	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	727405	3.319	1322323	3.319	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	498481	10.98	970888	10.983	51	50 - 200	-0.003	+/-0.50	
<b>LDW23-SS1015 (23A0206-02)</b>		(Solid)	Lab File ID: 23021308.D			Analyzed: 02/13/23 15:23			
1-Bromo-2-Nitrobenzene	480393	3.118	872478	3.118	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	469228	9.452	828072	9.455	57	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	701596	3.319	1322323	3.319	53	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	499770	10.98	970888	10.983	51	50 - 200	-0.003	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0237

Instrument: ECD6

Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1164 (23A0206-03 )</b>		(Solid)	Lab File ID: 23021309.D		Analyzed: 02/13/23 15:41				
1-Bromo-2-Nitrobenzene	514587	3.119	872478	3.118	59	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	382461	9.452	828072	9.455	46	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	721138	3.319	1322323	3.319	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	485495	10.979	970888	10.983	50	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1158 (23A0206-04 )</b>		(Solid)	Lab File ID: 23021310.D		Analyzed: 02/13/23 15:59				
1-Bromo-2-Nitrobenzene	490786	3.119	872478	3.118	56	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	397735	9.451	828072	9.455	48	50 - 200	-0.004	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	710286	3.319	1322323	3.319	54	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	500315	10.979	970888	10.983	52	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1151 (23A0206-05 )</b>		(Solid)	Lab File ID: 23021311.D		Analyzed: 02/13/23 16:17				
1-Bromo-2-Nitrobenzene	507154	3.119	872478	3.118	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	395991	9.451	828072	9.455	48	50 - 200	-0.004	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	733247	3.319	1322323	3.319	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	499025	10.98	970888	10.983	51	50 - 200	-0.003	+/-0.50	
<b>LDW23-SS1145 (23A0206-06 )</b>		(Solid)	Lab File ID: 23021312.D		Analyzed: 02/13/23 16:35				
1-Bromo-2-Nitrobenzene	495614	3.119	872478	3.118	57	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	391066	9.452	828072	9.455	47	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	726203	3.319	1322323	3.319	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	500137	10.979	970888	10.983	52	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1139 (23A0206-07 )</b>		(Solid)	Lab File ID: 23021313.D		Analyzed: 02/13/23 16:53				
1-Bromo-2-Nitrobenzene	492886	3.118	872478	3.118	56	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	391539	9.452	828072	9.455	47	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	710006	3.319	1322323	3.319	54	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	499906	10.979	970888	10.983	51	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1117 (23A0206-08 )</b>		(Solid)	Lab File ID: 23021314.D		Analyzed: 02/13/23 17:11				
1-Bromo-2-Nitrobenzene	506325	3.119	872478	3.118	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	404954	9.452	828072	9.455	49	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	743668	3.319	1322323	3.319	56	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	512798	10.979	970888	10.983	53	50 - 200	-0.004	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC  
Client: Anchor OEA, LLC  
Sequence: SLB0237

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD6  
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1103 (23A0206-09 )</b>		(Solid)	Lab File ID: 23021315.D		Analyzed: 02/13/23 17:29				
1-Bromo-2-Nitrobenzene	505839	3.118	872478	3.118	58	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	393195	9.452	828072	9.455	47	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	726695	3.319	1322323	3.319	55	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	557954	10.979	970888	10.983	57	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1100 (23A0206-10 )</b>		(Solid)	Lab File ID: 23021316.D		Analyzed: 02/13/23 17:47				
1-Bromo-2-Nitrobenzene	501808	3.119	872478	3.118	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	396799	9.452	828072	9.455	48	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	734781	3.319	1322323	3.319	56	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	516574	10.98	970888	10.983	53	50 - 200	-0.003	+/-0.50	
<b>LDW23-SS1096 (23A0206-11 )</b>		(Solid)	Lab File ID: 23021319.D		Analyzed: 02/13/23 18:41				
1-Bromo-2-Nitrobenzene	510122	3.119	872478	3.118	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	406904	9.452	828072	9.455	49	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	740319	3.319	1322323	3.319	56	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	518173	10.98	970888	10.983	53	50 - 200	-0.003	+/-0.50	
<b>LDW23-SS1094 (23A0206-12 )</b>		(Solid)	Lab File ID: 23021320.D		Analyzed: 02/13/23 18:58				
1-Bromo-2-Nitrobenzene	520403	3.119	872478	3.118	60	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	407908	9.452	828072	9.455	49	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	755026	3.319	1322323	3.319	57	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	522650	10.979	970888	10.983	54	50 - 200	-0.004	+/-0.50	
<b>LDW23-SS1066 (23A0206-13 )</b>		(Solid)	Lab File ID: 23021321.D		Analyzed: 02/13/23 19:16				
1-Bromo-2-Nitrobenzene	474228	3.118	872478	3.118	54	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	396563	9.463	828072	9.455	48	50 - 200	0.008	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	686243	3.318	1322323	3.319	52	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	516799	10.985	970888	10.983	53	50 - 200	0.002	+/-0.50	
<b>LDW23-SS1061 (23A0206-14 )</b>		(Solid)	Lab File ID: 23021322.D		Analyzed: 02/13/23 19:34				
1-Bromo-2-Nitrobenzene	483060	3.119	872478	3.118	55	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	403155	9.452	828072	9.455	49	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	718265	3.319	1322323	3.319	54	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	509630	10.979	970888	10.983	52	50 - 200	-0.004	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0237

Instrument: ECD6

Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Matrix Spike (BLA0622-MS1)</b>		(Solid)	Lab File ID: 23021323.D			Analyzed: 02/13/23 19:52			
1-Bromo-2-Nitrobenzene	470017	3.119	872478	3.118	54	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	389525	9.454	828072	9.455	47	50 - 200	-0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	715167	3.319	1322323	3.319	54	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	500014	10.982	970888	10.983	52	50 - 200	-0.001	+/-0.50	
<b>Matrix Spike Dup (BLA0622-MSD1)</b>		(Solid)	Lab File ID: 23021324.D			Analyzed: 02/13/23 20:10			
1-Bromo-2-Nitrobenzene	464638	3.119	872478	3.118	53	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	401678	9.455	828072	9.455	49	50 - 200	0.000	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	697346	3.319	1322323	3.319	53	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	502967	10.982	970888	10.983	52	50 - 200	-0.001	+/-0.50	





## HOLDING TIME SUMMARY

**Analysis: EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 15:05	14	40	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 15:23	14	40	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 15:41	14	40	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 15:59	14	40	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 16:17	14	40	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 16:35	14	40	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 16:53	14	40	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 17:11	14	40	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 17:29	14	40	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 17:47	14	40	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 18:41	14	40	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 18:58	14	40	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 19:16	14	40	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 19:34	14	40	
Matrix Spike BLA0622-MS1	01/11/23 12:40	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 19:52	14	40	
Matrix Spike Dup BLA0622-MSD1	01/11/23 12:40	01/11/23 17:05	01/30/23 14:14	19	365	02/13/23 20:10	14	40	

\* Indicates hold time exceedance.



**METHOD DETECTION  
AND REPORTING LIMITS**

**EPA 8081B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: ECD6

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Hexachlorobenzene	0.15	0.50	ug/kg
Hexachlorobenzene [2C]	0.15	0.50	ug/kg



# CERTIFICATE OF ANALYSIS

**Catalog No:** S-279N  
**Description:** Tetrachloro-m-xylene  
**Lot:** 0052481B-1  
**Solvent:** N/A  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jul 28, 2005  
**Expiration:** Jul 28, 2015  
**Sample Size:** 100 mg  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



**Signal Word:** Warning

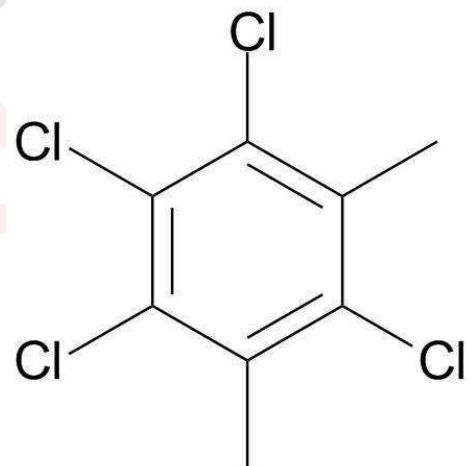
## Certified Reference Material



Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration <sup>1</sup>
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

### Identification:

Molecular formula: C<sub>8</sub>H<sub>6</sub>Cl<sub>4</sub>  
Molecular weight: 243.94



**C000147**

tetrachlorometaxylene

Expires 1/15/2020

Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>1</sup> The Uncertainty calculated for this product is  $\pm 2.4\%$ . These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager



# AccuStandard

125 Market Street  
New Haven, CT 06513  
(203) 786-5290

## CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N

EXPIRATION: Jul 28, 2015

DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl

LOT #: 990521LB-AC

SOLVENT: N/A

This product is guaranteed accurate to  $\pm 0.5\%$  of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>1</sup>	Certified Analyte Concentration <sup>2</sup>
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

2;

**C000148**

decachlorobiphenyl

Expires 1/15/2020

Prepared By Joshua Rains 1/15/2014

*\* I 1768 A*

Certified by:

*R. Cooper*

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.  
A period (.) is used as a decimal place marker.

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480  
 2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is  $\pm 0.5\%$  which is the Combined Uncertainty  $U_c(y)$ . It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is  $U$  which is  $U_c(y) * K$  where  $K$  is the coverage factor at the 95% confidence level ( $K=2$ ).  
 3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

*\* Recertified ~ 4-6-09 (S)*



**Analytical Standard Record**  
**Standard ID: C000148**

Printed: 4/23/2015 11:54:44AM

Description:	decachlorobiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	9905211b-ac
Vendor Catalog #:			

**Comments**

see i1768a  
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By

Date

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-066S  
**Description:** Mirex  
**Lot:** 219051741-01  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jun 5, 2020  
**Expiration:** Jun 5, 2024  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4



**1007970**

Mirex 2d source  
Solvent / Lot: MeOH  
Prep: 9/7/2020 by JR  
Exp: 6/5/2024  
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.


<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:   
Larry Decker, Organic QC Manager

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-026S  
**Description:** o,p'-DDE  
**Lot:** 218021093-01  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Feb 10, 2020  
**Expiration:** Feb 10, 2023  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

### Certified Reference Material



Component	CAS #	Purity %	Prepared Concentration <sup>2</sup>	Certified Analyte Concentration <sup>1</sup>
		(GC/MS)	(µg/mL)	(µg/mL)
o,p'-DDE	3424-82-6	99.9	100.4	100.3

I7971

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 822-275872-11

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:

Larry Decker, Organic QC Manager



# CERTIFICATE OF ANALYSIS

**Catalog No:** P-184S  
**Description:** trans-Nonachlor  
**Lot:** 218011470  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jan 30, 2018  
**Expiration:** Jan 30, 2028  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

### Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

I 7974

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.


<sup>2</sup> All weights are traceable through NIST, Test No. 822-275872-11

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:   
Larry Decker, Organic QC Manager

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-024S  
**Description:** o,p'-DDD  
**Lot:** 220051307  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** May 27, 2020  
**Expiration:** Jun 27, 2022  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2



**I010773**

o,p-DDD  
Solvent / Lot: methanol  
Prep: 11/20/2020 by VS  
Exp: 6/27/2022  
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:   
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

**1. Quality Standards:**

ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories ANAB Certificate Number AT-1339

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations Certificate Number 3774

**2 Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

**3 Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this

**4 Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

**5 Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

**6 Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

**7 Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.



# CERTIFICATE OF ANALYSIS

**Catalog No:** P-331S  
**Description:** Oxychlordane Isomer  
**Lot:** 218101131  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Oct 8, 2018  
**Expiration:** Nov 8, 2020  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Oxychlordane Isomer	27304-13-8	97.7	102.4*	100.0



**I010795**

Oxychlordane isomer  
Solvent / Lot: methanol  
Prep: 11/20/2020 by VS  
Exp: 6/20/2022  
Location:

\* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.


<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:   
Larry Decker, Organic QC Manager

**1. Quality Standards:**

ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

**2 Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

**3 Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

**4 Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

**5 Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

**6 Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

**7 Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-297S

**Description:** cis-Nonachlor

**Lot:** 217121240

**Solvent:** Methanol

**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Dec 13, 2017

**Expiration:** Dec 13, 2020

**Sample Size:** 1 mL

**Components:** 1

**Storage Condition:** Ambient (>5 °C)



**Signal Word:** Danger

## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>1</sup> (µg/mL)	Certified Analyte Concentration <sup>2</sup> (µg/mL)
cis-Nonachlor	5103-73-1	98.6	100.4	99.0

**I010796**

cis-Nonochlor-Accustd-100ug/ml

Solvent / Lot: methanol

Prep: 11/20/2020 by VS

Exp: 11/27/2022

Location:



A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>1</sup> All weights are traceable through NIST, Test No. 822-275872-11

<sup>2</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By: 

Larry Decker, Organic QC Manager

## 1. Quality Standards:

ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11.
3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.
4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.
7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

# CERTIFICATE OF ANALYSIS

**Catalog No:** APP-9-112-D-20X  
**Description:** Hexachlorobenzene in Dichloromethane  
**Lot:** 219051389  
**Solvent:** Dichloromethane  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** May 13, 2019  
**Expiration:** May 13, 2029  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



### Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Hexachlorobenzene	118-74-1	99.0	2002	1982



### J006504

Hexachlorobenzene  
Solvent / Lot: Dichloromethane  
Prep: 6/21/2021 by YZ  
Exp: 5/13/2029  
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By:   
Larry Decker, Organic QC Manager

**1. Quality Standards:**

ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

**2 Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

**3 Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this

**4 Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

**5 Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

**6 Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

**7 Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-028S  
**Description:** o,p'-DDT  
**Lot:** 221071322  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jul 21, 2021  
**Expiration:** Aug 21, 2023  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



## Certified Reference Material



AR-1463

Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
o,p'-DDT	789-02-6	99.9	100.1	100.0

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.


The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:   
Larry Decker, Organic QC Manager

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.



# CERTIFICATE OF ANALYSIS

Catalog No: P-024S  
Description: o,p'-DDD  
Lot: 220051307-01  
Solvent: Methanol  
Hazards: Refer to SDS for complete safety information

Date Certified: Jul 6, 2021  
Expiration: Aug 6, 2023  
Sample Size: 1 mL  
Components: 1  
Storage Condition: Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

K 0448

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-331S  
**Description:** Oxychlordane Isomer  
**Lot:** 221051706  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** May 28, 2021  
**Expiration:** Jun 28, 2023  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Oxychlordane Isomer	27304-13-8	99.2	100.1	99.3

### K000449

Oxychlordane isomer  
Solvent / Lot: methanol  
Prep: 1/13/2022 by YZ  
Exp: 6/28/2023  
Location:

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.


The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:   
Larry Decker, Organic QC Manager

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

# CERTIFICATE OF ANALYSIS

**Catalog No:** P-297S  
**Description:** cis-Nonachlor  
**Lot:** 221041461  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Apr 22, 2021  
**Expiration:** Apr 22, 2024  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
cis-Nonachlor	5103-73-1	98.6	101.1	99.7

K 000450

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager



# CERTIFICATE OF ANALYSIS

**Catalog No:** P-184S  
**Description:** trans-Nonachlor  
**Lot:** 220091107  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Sep 11, 2020  
**Expiration:** Sep 11, 2030  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

## Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

K-00451

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager

# CERTIFICATE OF ANALYSIS

Catalog No: P-066S  
Description: Mirex  
Lot: 219051741-01  
Solvent: Methanol  
Hazards: Refer to SDS for complete safety information

Date Certified: Jun 5, 2020  
Expiration: Jun 5, 2024  
Sample Size: 1 mL  
Components: 1  
Storage Condition: Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

*K 000952*

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager



K 000 452

# CERTIFICATE OF ANALYSIS

Catalog No: P-066S

Description: Mirex

Lot: 221121451

Solvent: Methanol

Hazards: Refer to SDS for complete safety information

Date Certified: Dec 27, 2021

Expiration: Dec 27, 2025

Sample Size: 1 mL

Components: 1

Storage Condition: Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-8081-DS  
**Description:** 4,4'-DDT & Endrin  
**Lot:** 221031488-04  
**Solvent:** Hexane  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Apr 8, 2022  
**Expiration:** May 8, 2023  
**Sample Size:** 1 mL  
**Components:** 2  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
4,4'-DDT	50-29-3	100.0	200.9	200.9
Endrin	72-20-8	99.8	200.0	199.6

K7002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

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This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:



Larry Decker, Organic QC Manager





# CERTIFIED REFERENCE MATERIAL

110 Benner Circle  
Bellefonte, PA 16823-8812  
Tel: (800)356-1688  
Fax: (814)353-1309

www.restek.com

## Certificate of Analysis



### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

*This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.*

**Catalog No. :** 32292 **Lot No.:** A0185477

**Description :** Organochlorine Pesticide Mix AB # 2  
Organochlorine Pesticide Mix AB # 2 8-80 µg/mL, Hexane/Toluene(1:1), 1mL/ampul

**Container Size :** 2 mL **Pkg Amt:** > 1 mL

**Expiration Date :** May 31, 2026 **Storage:** 10°C or colder

**Ship:** Ambient

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)					
1	alpha-BHC	8.1 µg/mL	+/-	0.0660	µg/mL	Gravimetric		
	CAS # 319-84-6 (Lot 12307600)		+/-	0.3703			µg/mL	Unstressed
	Purity 99%		+/-	0.5325			µg/mL	Stressed
2	gamma-BHC (Lindane)	8.0 µg/mL	+/-	0.0654	µg/mL	Gravimetric		
	CAS # 58-89-9 (Lot 13087200)		+/-	0.3672			µg/mL	Unstressed
	Purity 99%		+/-	0.5281			µg/mL	Stressed
3	beta-BHC	8.1 µg/mL	+/-	0.0660	µg/mL	Gravimetric		
	CAS # 319-85-7 (Lot 0588007-4)		+/-	0.3703			µg/mL	Unstressed
	Purity 99%		+/-	0.5325			µg/mL	Stressed
4	delta-BHC	8.1 µg/mL	+/-	0.0660	µg/mL	Gravimetric		
	CAS # 319-86-8 (Lot 13112400)		+/-	0.3703			µg/mL	Unstressed
	Purity 99%		+/-	0.5325			µg/mL	Stressed
5	Heptachlor	8.0 µg/mL	+/-	0.0654	µg/mL	Gravimetric		
	CAS # 76-44-8 (Lot 803759)		+/-	0.3672			µg/mL	Unstressed
	Purity 99%		+/-	0.5281			µg/mL	Stressed
6	Aldrin	8.1 µg/mL	+/-	0.0660	µg/mL	Gravimetric		
	CAS # 309-00-2 (Lot 12983100)		+/-	0.3702			µg/mL	Unstressed
	Purity 96%		+/-	0.5323			µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	8.1 µg/mL	+/-	0.0660	µg/mL	Gravimetric		
	CAS # 1024-57-3 (Lot 13168200)		+/-	0.3703			µg/mL	Unstressed
	Purity 99%		+/-	0.5325			µg/mL	Stressed

8	trans-Chlordane <b>CAS #</b> 5103-74-2 <b>Purity</b> 98%	(Lot 32943)	8.0 µg/mL	+/- 0.0657 +/- 0.3689 +/- 0.5305	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	cis-Chlordane <b>CAS #</b> 5103-71-9 <b>Purity</b> 98%	(Lot 31766)	8.0 µg/mL	+/- 0.0657 +/- 0.3689 +/- 0.5305	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Endosulfan I <b>CAS #</b> 959-98-8 <b>Purity</b> 99%	(Lot BCCF4060)	8.0 µg/mL	+/- 0.0654 +/- 0.3672 +/- 0.5281	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	4,4'-DDE <b>CAS #</b> 72-55-9 <b>Purity</b> 99%	(Lot GHYQG)	16.1 µg/mL	+/- 0.1314 +/- 0.7375 +/- 1.0606	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Dieldrin <b>CAS #</b> 60-57-1 <b>Purity</b> 98%	(Lot 11129900)	16.1 µg/mL	+/- 0.1320 +/- 0.7408 +/- 1.0653	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Endrin <b>CAS #</b> 72-20-8 <b>Purity</b> 99%	(Lot 13157400)	16.1 µg/mL	+/- 0.1320 +/- 0.7406 +/- 1.0650	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	4,4'-DDD <b>CAS #</b> 72-54-8 <b>Purity</b> 99%	(Lot HAN02)	16.1 µg/mL	+/- 0.1320 +/- 0.7406 +/- 1.0650	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Endosulfan II <b>CAS #</b> 33213-65-9 <b>Purity</b> 99%	(Lot 12448900)	16.0 µg/mL	+/- 0.1309 +/- 0.7345 +/- 1.0562	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	4,4'-DDT <b>CAS #</b> 50-29-3 <b>Purity</b> 98%	(Lot 220428JLM)	16.1 µg/mL	+/- 0.1315 +/- 0.7378 +/- 1.0610	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Endrin aldehyde <b>CAS #</b> 7421-93-4 <b>Purity</b> 99%	(Lot 30720)	16.1 µg/mL	+/- 0.1314 +/- 0.7375 +/- 1.0606	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Endosulfan sulfate <b>CAS #</b> 1031-07-8 <b>Purity</b> 99%	(Lot BCCB0424)	16.1 µg/mL	+/- 0.1320 +/- 0.7406 +/- 1.0650	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Methoxychlor <b>CAS #</b> 72-43-5 <b>Purity</b> 98%	(Lot 13027000)	80.2 µg/mL	+/- 0.5781 +/- 3.6697 +/- 5.2871	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Endrin ketone <b>CAS #</b> 53494-70-5 <b>Purity</b> 99%	(Lot 13026800)	16.1 µg/mL	+/- 0.1314 +/- 0.7375 +/- 1.0606	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

**Solvent:** Hexane/Toluene (50:50)  
**CAS #** 110-54-3/108-88-3  
**Purity** 99%

**Column:**  
30m x .25mm x .2um  
Rtx-CLP II (cat.# 11323)

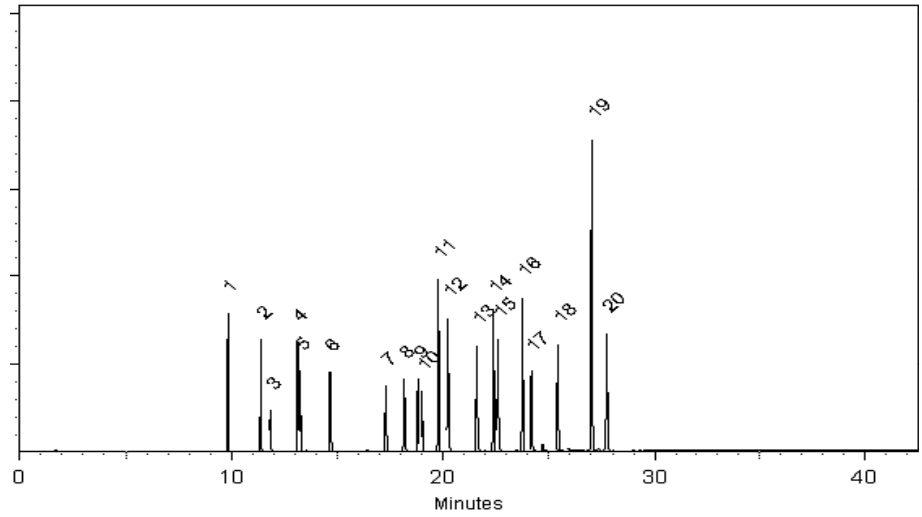
**Carrier Gas:**  
helium-constant pressure 20 psi.

**Temp. Program:**  
150°C to 300°C  
@ 4°C/min. ( hold 5 min.)

**Inj. Temp:**  
200°C

**Det. Temp:**  
300°C

**Det. Type:**  
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

  
Morgan Craighead - Mix Technician

**Date Mixed:** 19-May-2022      **Balance:** B442140311

  
Fang-Yun Lo - GC Analyst

**Date Passed:** 26-May-2022

Manufactured under Restek's ISO 9001:2015  
Registered Quality System  
Certificate #FM 80397

## General Certified Reference Material Notes

### Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

### Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

### Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

*k* is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at [www.restek.com/Contact-Us](http://www.restek.com/Contact-Us) for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at [www.restek.com/Contact-Us](http://www.restek.com/Contact-Us).
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

### Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

### Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-502-36-10X  
**Description:** Hexachlorobutadiene  
**Lot:** 222031188  
**Solvent:** Methanol  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Mar 11, 2022  
**Expiration:** Apr 11, 2024  
**Sample Size:** 1 mL  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



**Signal Word:** Danger

## Certified Reference Material



AR-1463

Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>2</sup> All weights are traceable through NIST, Test No. 684/289871-17

<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is  $\pm 2.4\%$ . This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager

**1. Quality Standards:**

ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

ISO 9001:2015 – Quality Management System – Requirements  
Eagle Registrations

- 2. Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.
- 3. Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.
- 4. Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.
- 5. Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label
- 6. Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula:  $u_a = \sqrt{(u(V))^2 + (u(m))^2 + (u(IV))^2 + (u(RO))^2}$  This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of  $k=2$  is chosen using approximately a 95% confidence level.
- 7. Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

# CERTIFICATE OF ANALYSIS

**Catalog No:** M-502-36-10X

**Description:** Hexachlorobutadiene

**Lot:** 222031188

**Solvent:** Methanol

**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Mar 11, 2022

**Expiration:** Apr 11, 2024

**Sample Size:** 1 mL

**Components:** 1

**Storage Condition:** Ambient (>5 °C)



Signal Word: Danger

Certified Reference Material



Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>2</sup> (µg/mL)	Certified Analyte Concentration <sup>1</sup> (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

K011468

This Certified Reference Material was verified in accordance with ISO/IEC 17025

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<sup>1</sup> Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager



ORGANIC ANALYSIS DATA SHEET  
EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Solid Laboratory ID: 23A0206-01 B File ID: 02072311ECD7.D  
 Sampled: 01/11/23 08:25 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 16:11  
 % Solids: 48.20 Preparation: EPA 3546 (Microwave) Initial/Final: 25.97 g Wet / 2.5 mL  
 Batch: BLA0625 Sequence: SLB0109 Calibration: GA00061  
 Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	35.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	54.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	34.2	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9888	5.74	71.9	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9888	5.45	68.3	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9888	5.57	69.7	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9888	5.79	72.4	44 - 120	



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072311ECD7.D  
Data file 2: /230207.b/230207.b/02072311ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-01  
Client ID:  
Injection Date: 07-FEB-2023 16:11  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	153911	5.683	-0.002	131484	27.3	29.0	5.9	Tetrachloro-m-xylene
13.884	-0.004	125627	14.113	-0.004	157873	28.7	27.9	3.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	398665	-20.8
Hexabromobiphenyl	647433	408571	-36.9

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335643	-0.4
Hexabromobiphenyl	382032	356942	-6.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.395	-0.007	28140	141.1	1	8.297	-0.006	25880	170.6	
Aroclor-1248	2	8.563	-0.011	25342	99.6	2	8.704	-0.005	24362	149.2	
Aroclor-1248	3	8.981	-0.012	71586	147.1	3	9.136	-0.015	37819	189.5	
Aroclor-1248	4	9.284	-0.008	77924	323.5	4	9.532	-0.042	30513	123.6	
Total CollAve (4 peaks):				177.8	Total Col2Ave (4 peaks):				158.2	RPD = 12	
Corrected Ave (3 peaks):				129.3	Corrected Ave (3 peaks):				147.8	RPD = 13	
Aroclor-1254	1	9.284	-0.015	77924	191.8	1	9.436	-0.007	62235	255.6	
Aroclor-1254	2	9.360	-0.017	30443	175.5	2	9.954	-0.009	35805	181.9	
Aroclor-1254	3	9.656	-0.013	69220	265.9	3	10.103	-0.011	104280	242.9	
Aroclor-1254	4	9.785	-0.023	111340	218.3	4	10.346	-0.017	137724	320.8	
Aroclor-1254	5	10.120	-0.057	133873	403.6	5	10.552	-0.010	86007	359.7	
Total CollAve (5 peaks):				251.0	Total Col2Ave (5 peaks):				272.2	RPD = 8	
Corrected Ave (4 peaks):				212.9	Corrected Ave (4 peaks):				250.3	RPD = 16	
Aroclor-1260	1	11.031	-0.013	36336	158.5	1	11.642	-0.007	47367	183.9	
Aroclor-1260	2	11.346	-0.015	32436	137.6	2	11.903	-0.009	84983	130.4	
Aroclor-1260	3	11.716	-0.018	93691	151.0	3	12.422	-0.010	36390	224.1	
Aroclor-1260	4	12.117	-0.022	48245	150.5	4	12.486	-0.010	61549	146.0	
Aroclor-1260	5	12.232	-0.011	22614	161.9	NS	---			---	
Total CollAve (5 peaks):				151.9	Total Col2Ave (4 peaks):				171.1	RPD = 12	
Corrected Ave (4 peaks):				149.4	Corrected Ave (3 peaks):				153.5	RPD = 3	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						

Total PCB Area Col1 (5.908 - 13.788) = 2013164 Col1 Total PCB = 0.4 ppm\*  
Total PCB Area Col2 (5.785 - 14.017) = 1806968 Col2 Total PCB = 0.5 ppm\*

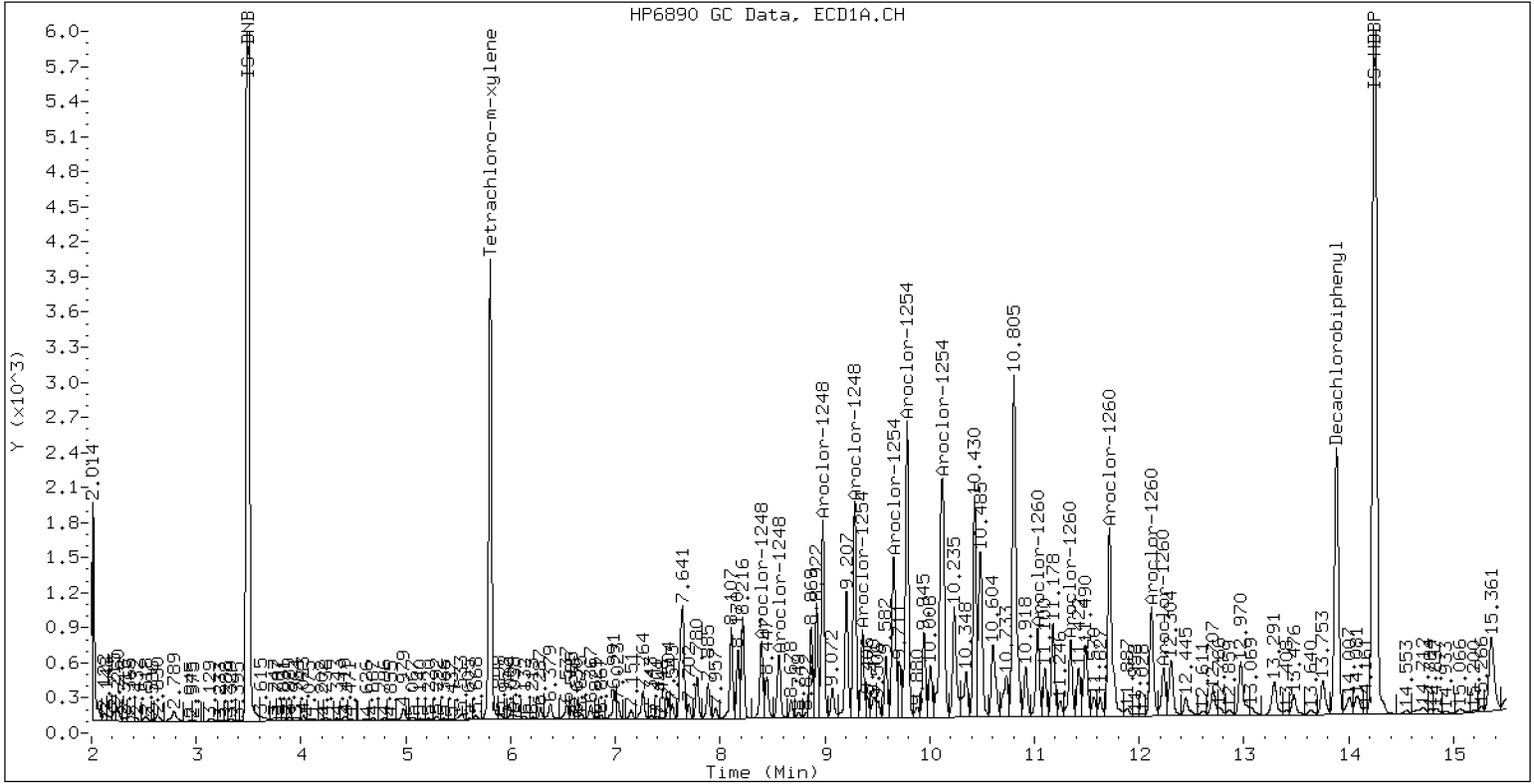
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-01

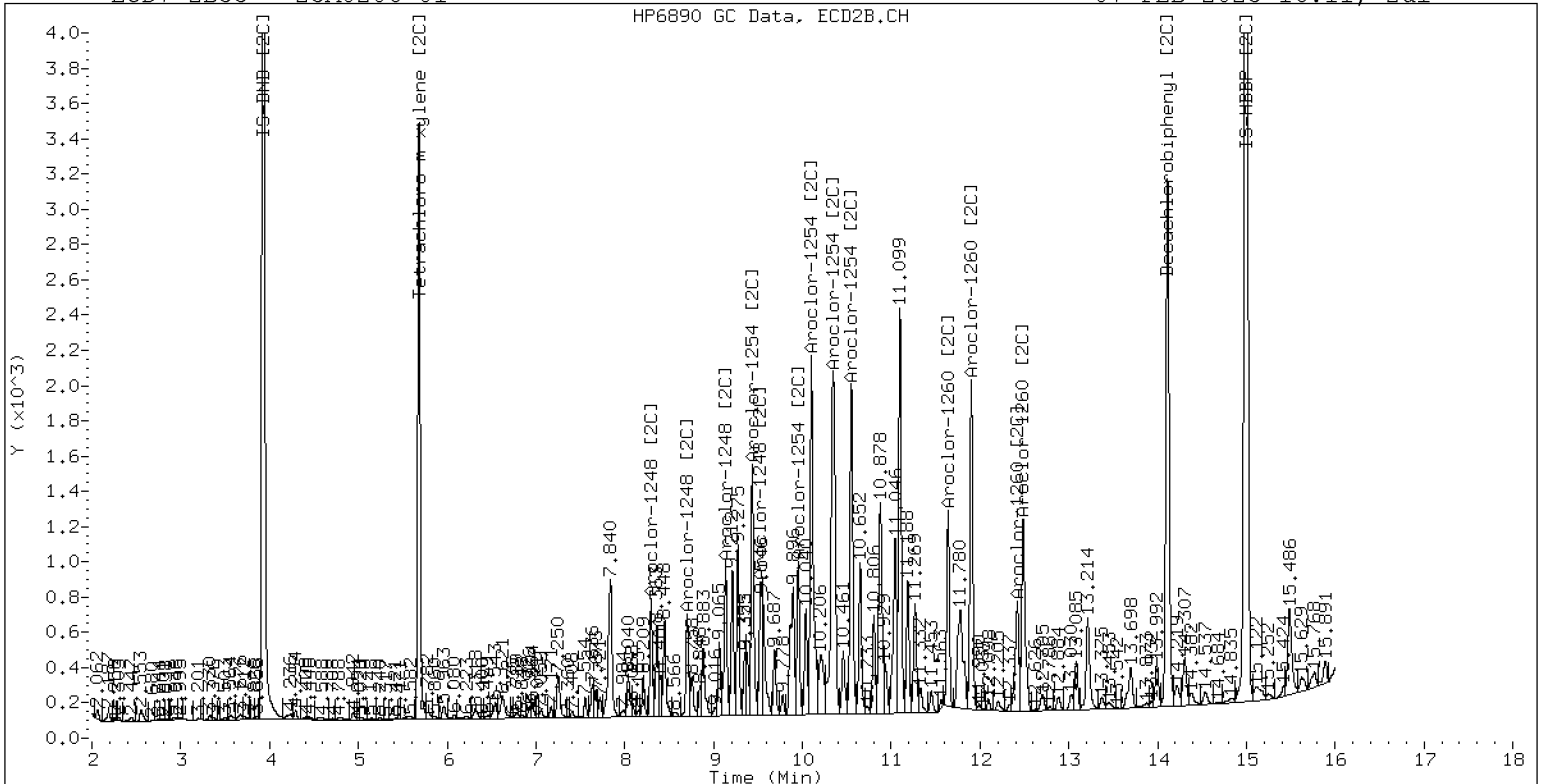
07-FEB-2023 16:11, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-01

07-FEB-2023 16:11, 2ul

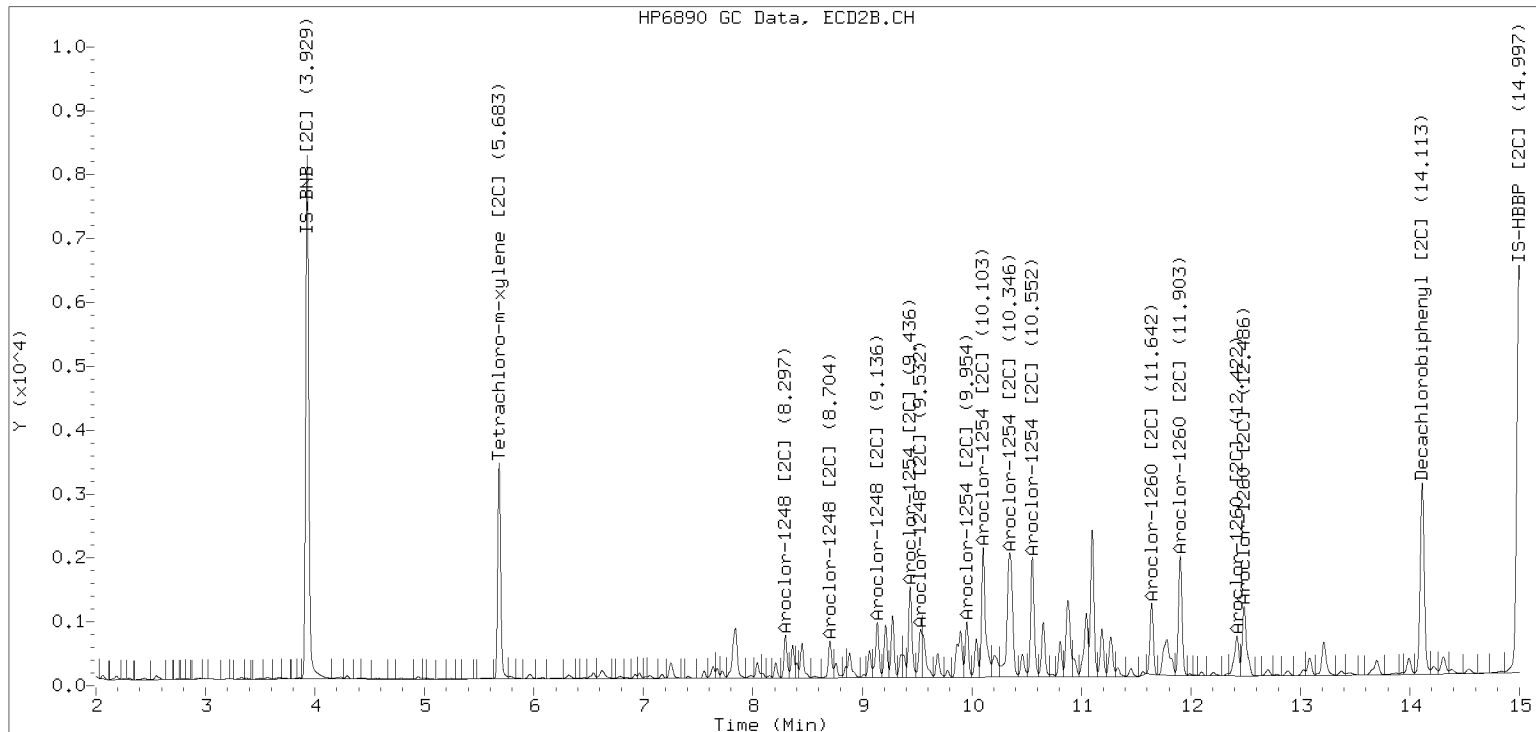


ZB-35 Manual Integration: YES

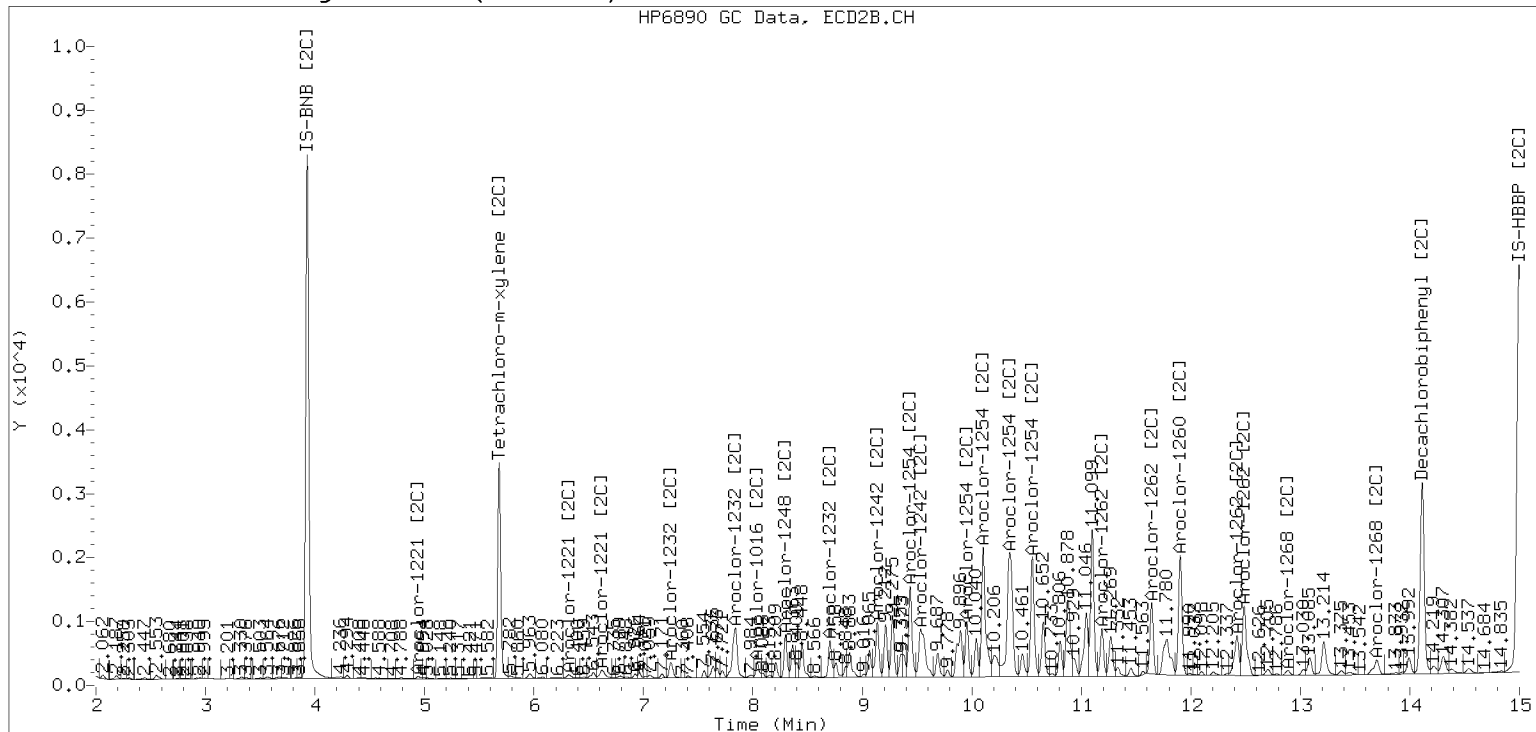
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072311ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





ORGANIC ANALYSIS DATA SHEET  
EPA 8082A

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-02 B</u>
		File ID:	<u>02072312ECD7.D</u>
Sampled:	<u>01/11/23 08:37</u>	Prepared:	<u>01/28/23 12:01</u>
		Analyzed:	<u>02/07/23 16:32</u>
% Solids:	<u>47.11</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>26.57 g Wet / 2.5 mL</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0109</u>
		Calibration:	<u>GA00061</u>
Instrument:	<u>ECD7</u>	Column 1:	<u>ZB5</u>
		Column 2:	<u>ZB35</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	38.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	59.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	42.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9891	5.74	71.8	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9891	5.31	66.5	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9891	5.66	70.9	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9891	5.69	71.2	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072312ECD7.D  
Data file 2: /230207.b/230207.b/02072312ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-02  
Client ID:  
Injection Date: 07-FEB-2023 16:32  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
5.806	-0.002	151625	5.683	-0.002	130733	26.6	28.5	6.8	Tetrachloro-m-xylene
13.883	-0.005	119000	14.112	-0.005	152918	28.7	28.4	1.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	403127	-19.9
Hexabromobiphenyl	647433	387392	-40.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	339511	0.8
Hexabromobiphenyl	382032	339755	-11.1

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.395	-0.007	31003	153.7	1	8.298	-0.005	27868	181.6	
Aroclor-1248	2	8.564	-0.011	26633	103.5	2	8.704	-0.006	26286	159.1	
Aroclor-1248	3	8.981	-0.012	78345	159.2	3	9.136	-0.015	41068	203.5	
Aroclor-1248	4	9.284	-0.008	85346	350.4	4	9.531	-0.043	34147	136.8	
Total CollAve (4 peaks):				191.7	Total Col2Ave (4 peaks):				170.2	RPD = 12	
Corrected Ave (3 peaks):				138.8	Corrected Ave (3 peaks):				159.2	RPD = 14	
Aroclor-1254	1	9.284	-0.015	85346	207.7	1	9.436	-0.008	68317	277.4	
Aroclor-1254	2	9.360	-0.018	33107	188.7	2	9.954	-0.009	39090	196.3	
Aroclor-1254	3	9.656	-0.013	73942	280.9	3	10.103	-0.011	116645	268.6	
Aroclor-1254	4	9.785	-0.024	117889	228.5	4	10.346	-0.017	148907	342.9	
Aroclor-1254	5	10.120	-0.057	70284	<del>209.5</del>	5	10.553	-0.009	96905	400.6	
Total CollAve (5 peaks):				223.1	Total Col2Ave (5 peaks):				297.2	RPD = 28	
Corrected Ave (4 peaks):				208.6	Corrected Ave (4 peaks):				271.3	RPD = 26	
				<b>226.45</b>							
Aroclor-1260	1	11.031	-0.013	40501	186.3	1	11.641	-0.007	54455	222.2	
Aroclor-1260	2	11.346	-0.014	36372	162.8	2	11.903	-0.009	99742	160.8	
Aroclor-1260	3	11.717	-0.018	106822	181.6	3	12.421	-0.011	43019	278.3	
Aroclor-1260	4	12.118	-0.022	54519	179.4	4	12.486	-0.010	71990	179.4	
Aroclor-1260	5	12.233	-0.011	25721	194.2	NS	---			----	
Total CollAve (5 peaks):				180.9	Total Col2Ave (4 peaks):				210.2	RPD = 15	
Corrected Ave (4 peaks):				177.5	Corrected Ave (3 peaks):				187.5	RPD = 5	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						



Total PCB Area Col1 (5.908 - 13.788) = 2226725 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 2038768 Col2 Total PCB = 0.6 ppm\*

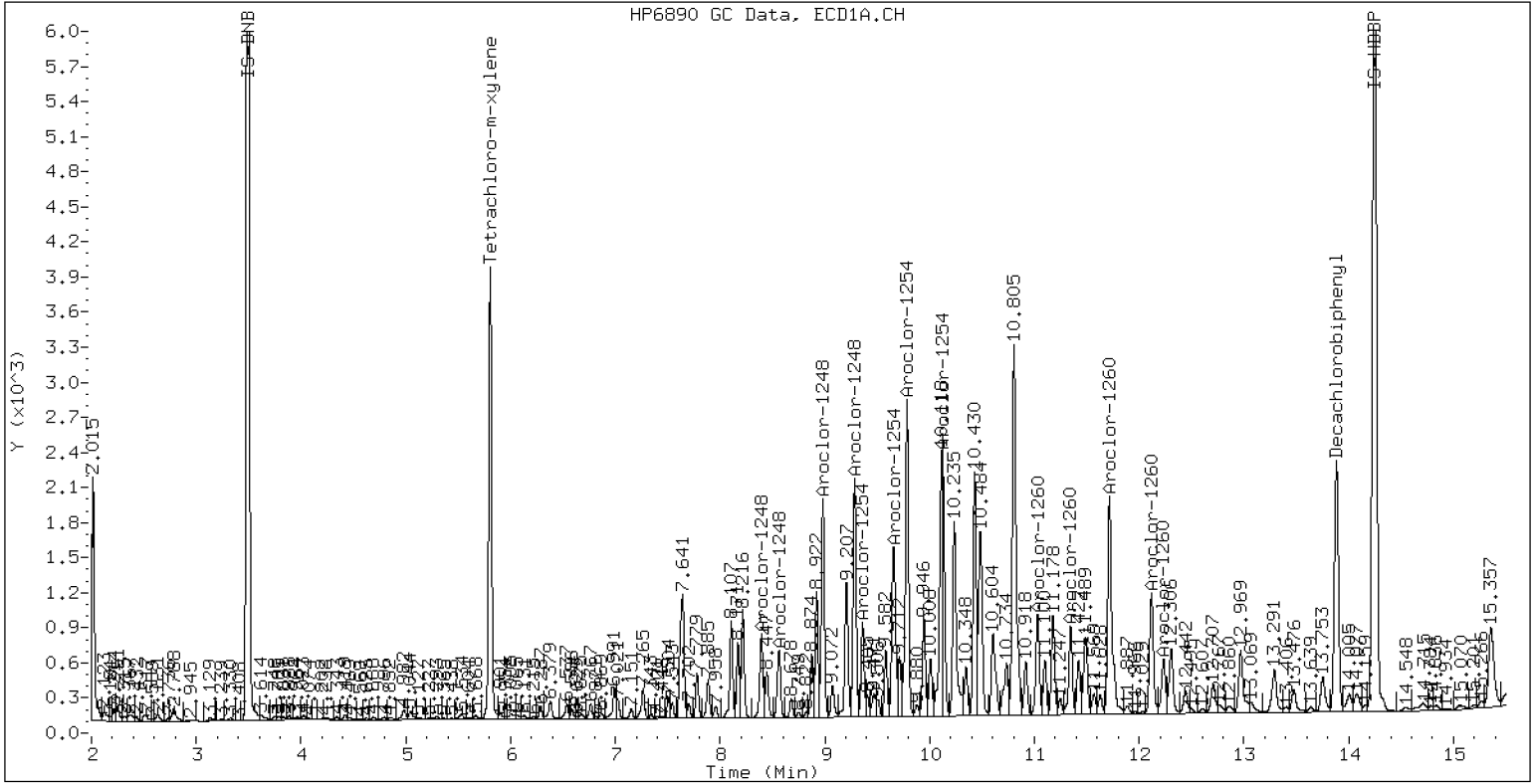
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-02

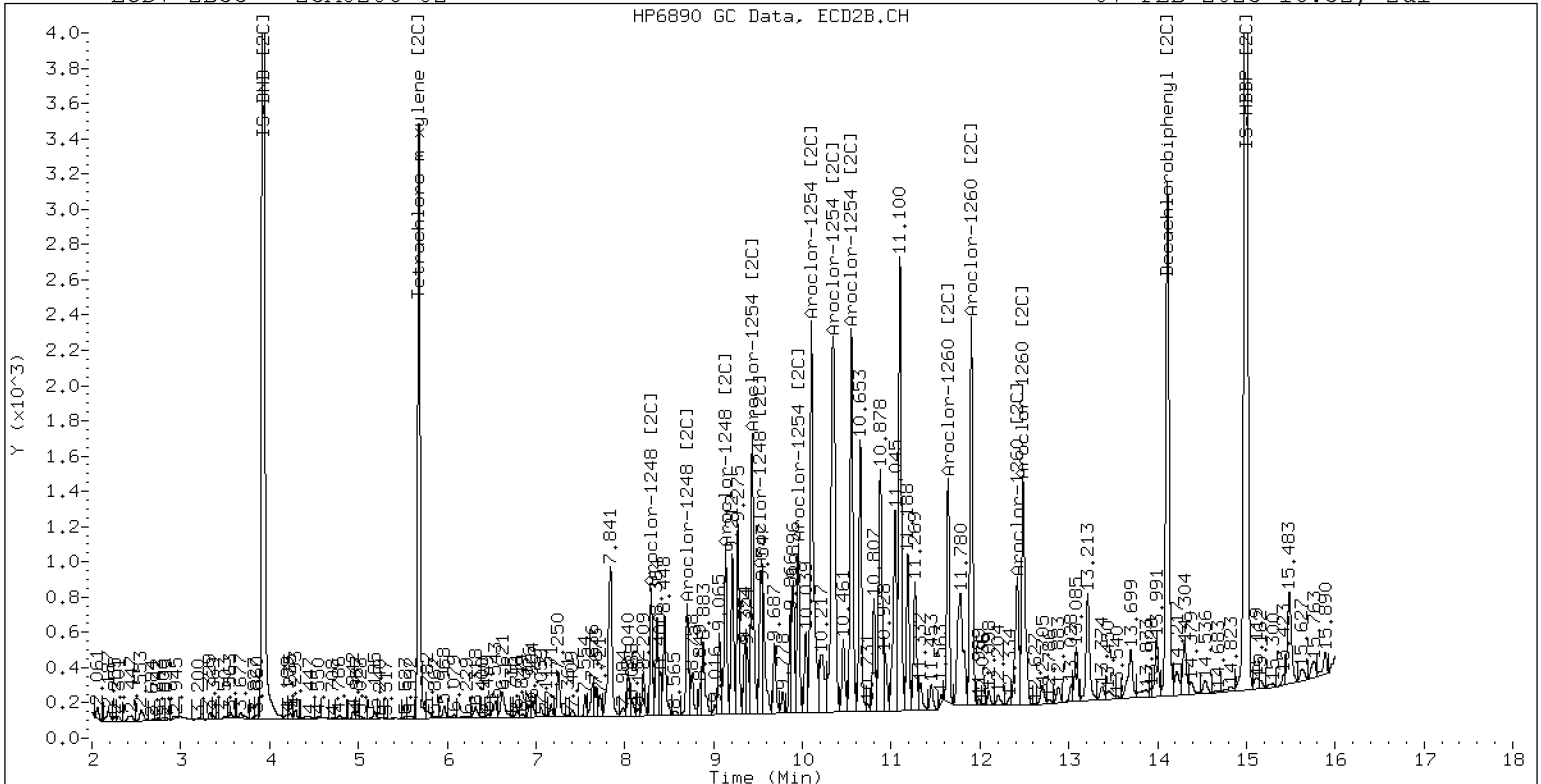
07-FEB-2023 16:32, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-02

07-FEB-2023 16:32, 2ul



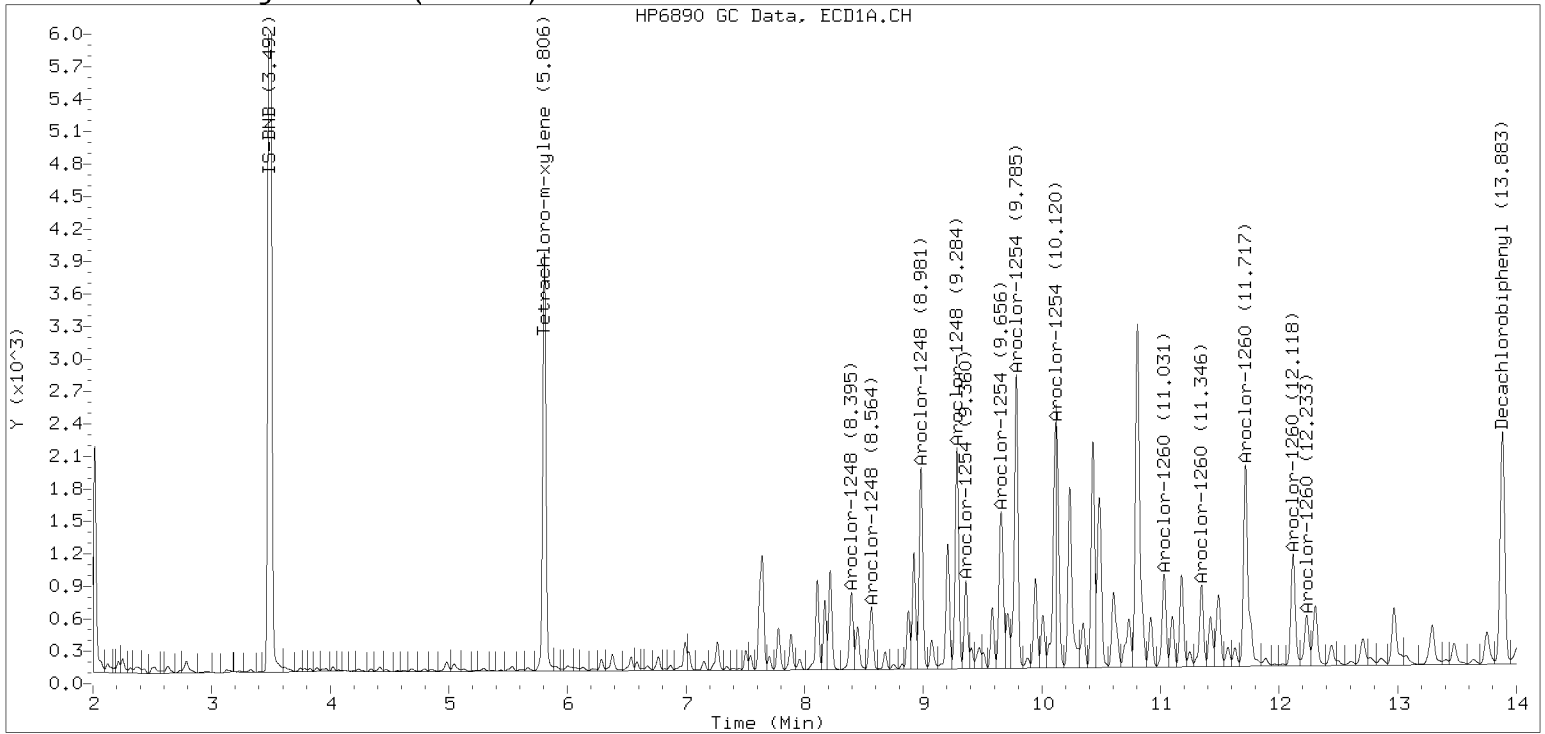
ZB-35 Manual Integration: YES

Manual Peak Adjustment, ZB-5

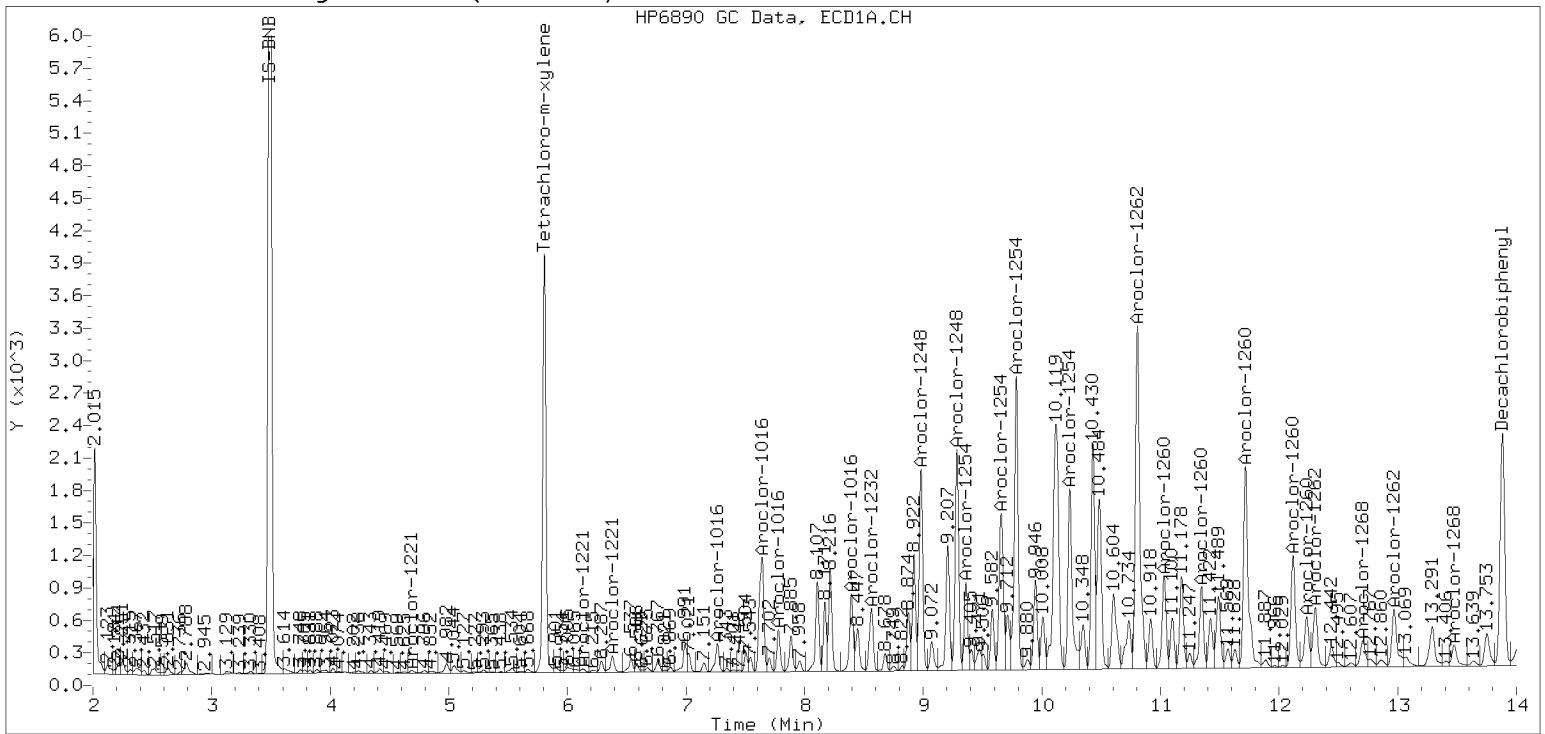
Datafile: ecd7.i/230207.b/02072312ECD7.D

Injection Date: 07-FEB-2023 16:32

Manual Integration (After)



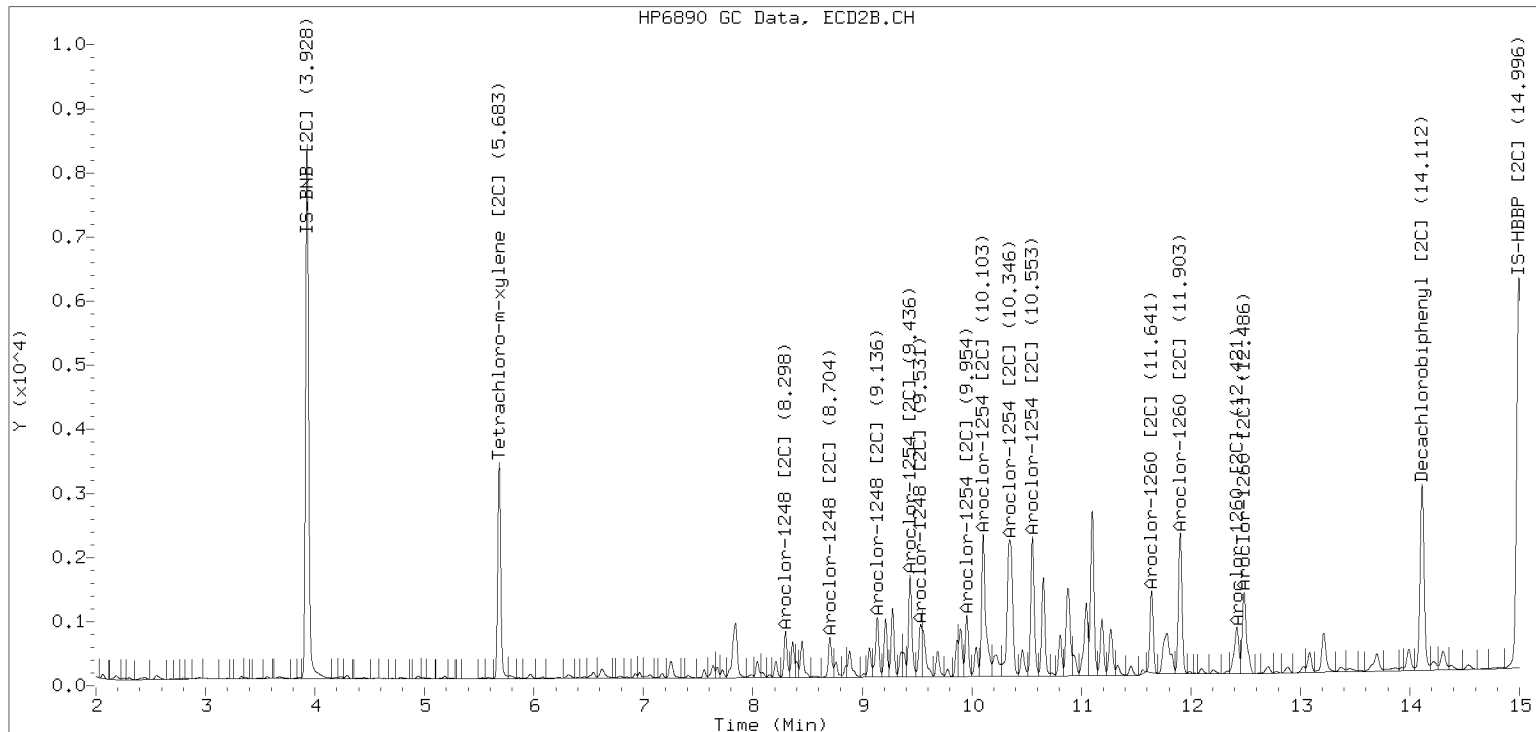
Processed Integration (Before)



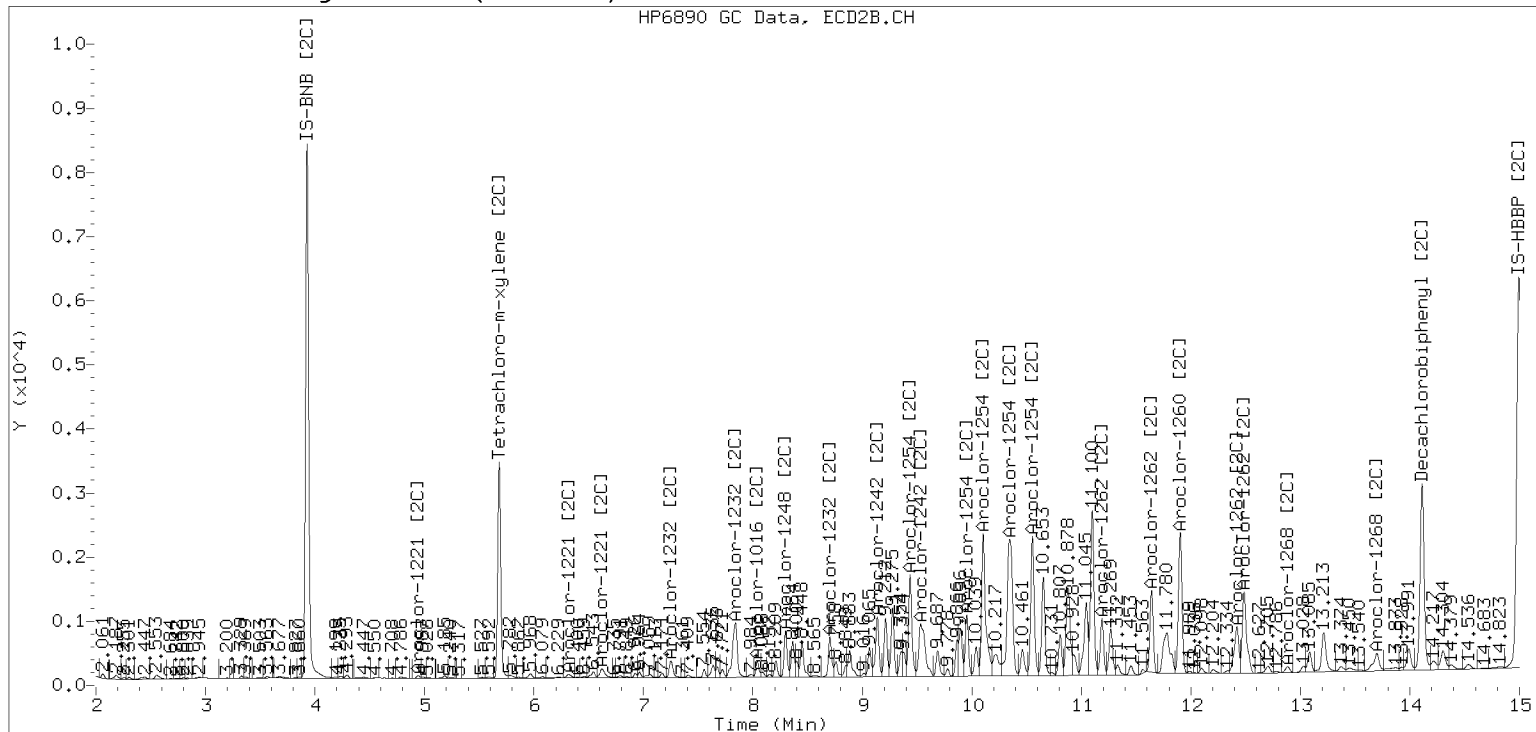
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072312ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Solid Laboratory ID: 23A0206-03 B File ID: 02072313ECD7.D  
 Sampled: 01/11/23 09:18 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 16:53  
 % Solids: 48.34 Preparation: EPA 3546 (Microwave) Initial/Final: 25.89 g Wet / 2.5 mL  
 Batch: BLA0625 Sequence: SLB0109 Calibration: GA00061  
 Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	35.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	57.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	39.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9903	5.86	73.4	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9903	5.50	68.8	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9903	5.79	72.4	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9903	6.17	77.2	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072313ECD7.D  
Data file 2: /230207.b/230207.b/02072313ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-03  
Client ID:  
Injection Date: 07-FEB-2023 16:53  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	154538	5.682	-0.003	134949	27.5	30.9	11.5	Tetrachloro-m-xylene
13.882	-0.006	117014	14.112	-0.005	152298	29.4	29.0	1.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	397235	-21.1
Hexabromobiphenyl	647433	372711	-42.4
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	323261	-4.1
Hexabromobiphenyl	382032	331316	-13.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.395	-0.007	27950	140.7	1	8.297	-0.006	27089	185.4
Aroclor-1248	2	8.563	-0.011	22288	87.9	2	8.703	-0.006	24143	153.5
Aroclor-1248	3	8.981	-0.012	71838	148.2	3	9.136	-0.015	34845	181.3
Aroclor-1248	4	9.285	-0.007	78976	329.1	4	9.531	-0.043	32772	137.9
Total CollAve (4 peaks):				176.4	Total Col2Ave (4 peaks):				164.5	RPD = 7
Corrected Ave (3 peaks):				125.6	Corrected Ave (3 peaks):				157.6	RPD = 23
Aroclor-1254	1	9.285	-0.014	78976	195.1	1	9.436	-0.007	63421	270.4
Aroclor-1254	2	9.360	-0.018	31741	183.6	2	9.955	-0.008	33693	177.7
Aroclor-1254	3	9.656	-0.014	62966	242.7	3	10.103	-0.011	108265	261.8
Aroclor-1254	4	9.784	-0.024	109858	216.1	4	10.347	-0.016	136511	330.1
Aroclor-1254	5	10.121	-0.057	60914	184.3	5	10.553	-0.009	91402	396.9
Total CollAve (5 peaks):				204.4	Total Col2Ave (5 peaks):				287.4	RPD = 34
Corrected Ave (4 peaks):				194.8	Corrected Ave (4 peaks):				260.0	RPD = 29
<b>209.375</b>										
Aroclor-1260	1	11.031	-0.013	37851	181.0	1	11.641	-0.007	50208	210.1
Aroclor-1260	2	11.346	-0.014	33686	156.7	2	11.903	-0.009	92391	152.8
Aroclor-1260	3	11.716	-0.018	93510	165.2	3	12.423	-0.009	38164	253.2
Aroclor-1260	4	12.118	-0.022	50365	172.3	4	12.486	-0.010	67631	172.8
Aroclor-1260	5	12.232	-0.012	24306	190.7	NS	---			----
Total CollAve (5 peaks):				173.2	Total Col2Ave (4 peaks):				197.2	RPD = 13
Corrected Ave (4 peaks):				168.8	Corrected Ave (3 peaks):				178.6	RPD = 6
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.788) = 2008793 Col1 Total PCB = 0.4 ppm\*  
Total PCB Area Col2 (5.785 - 14.017) = 1862902 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

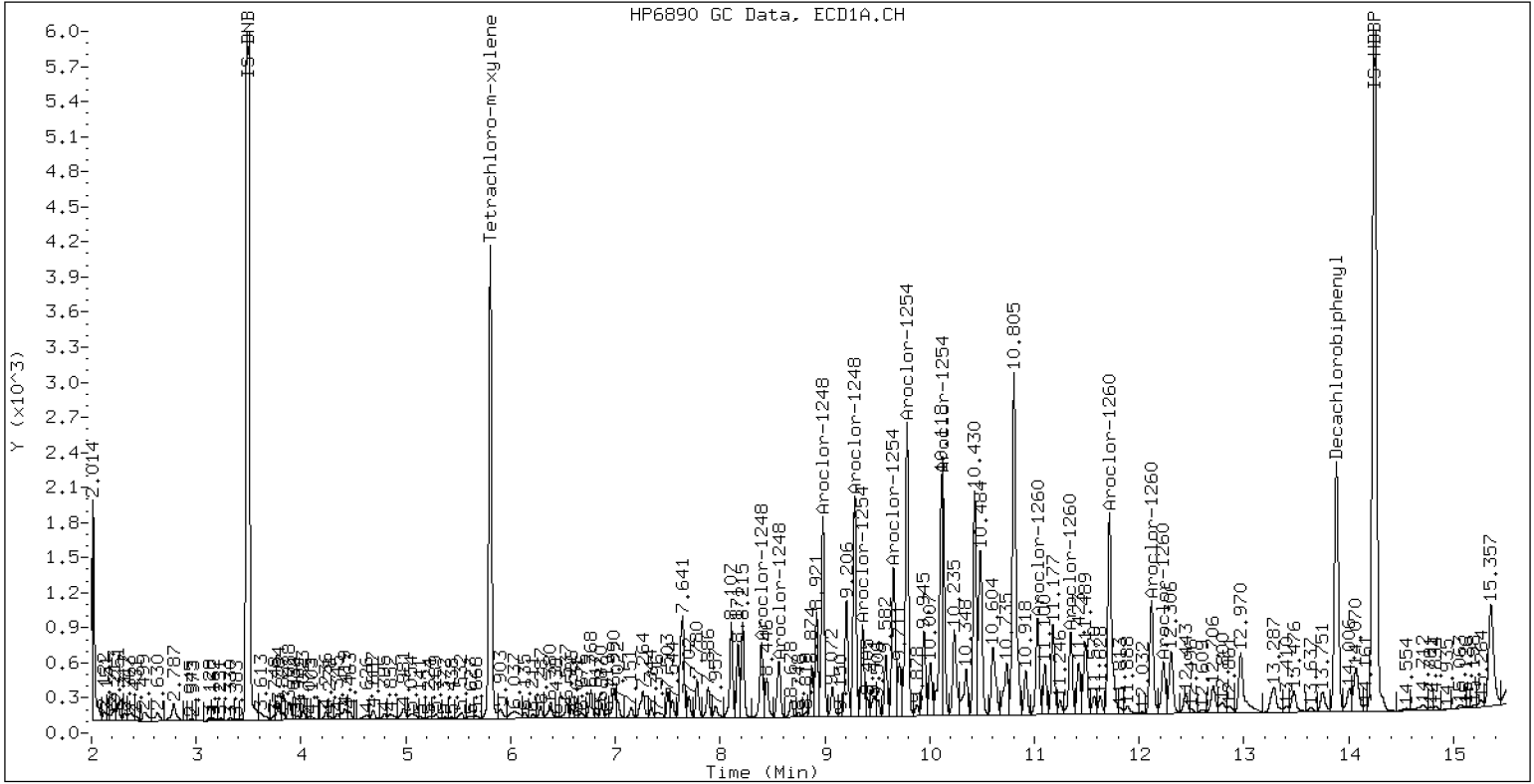
PCB-Form 10 Mod.



PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-03

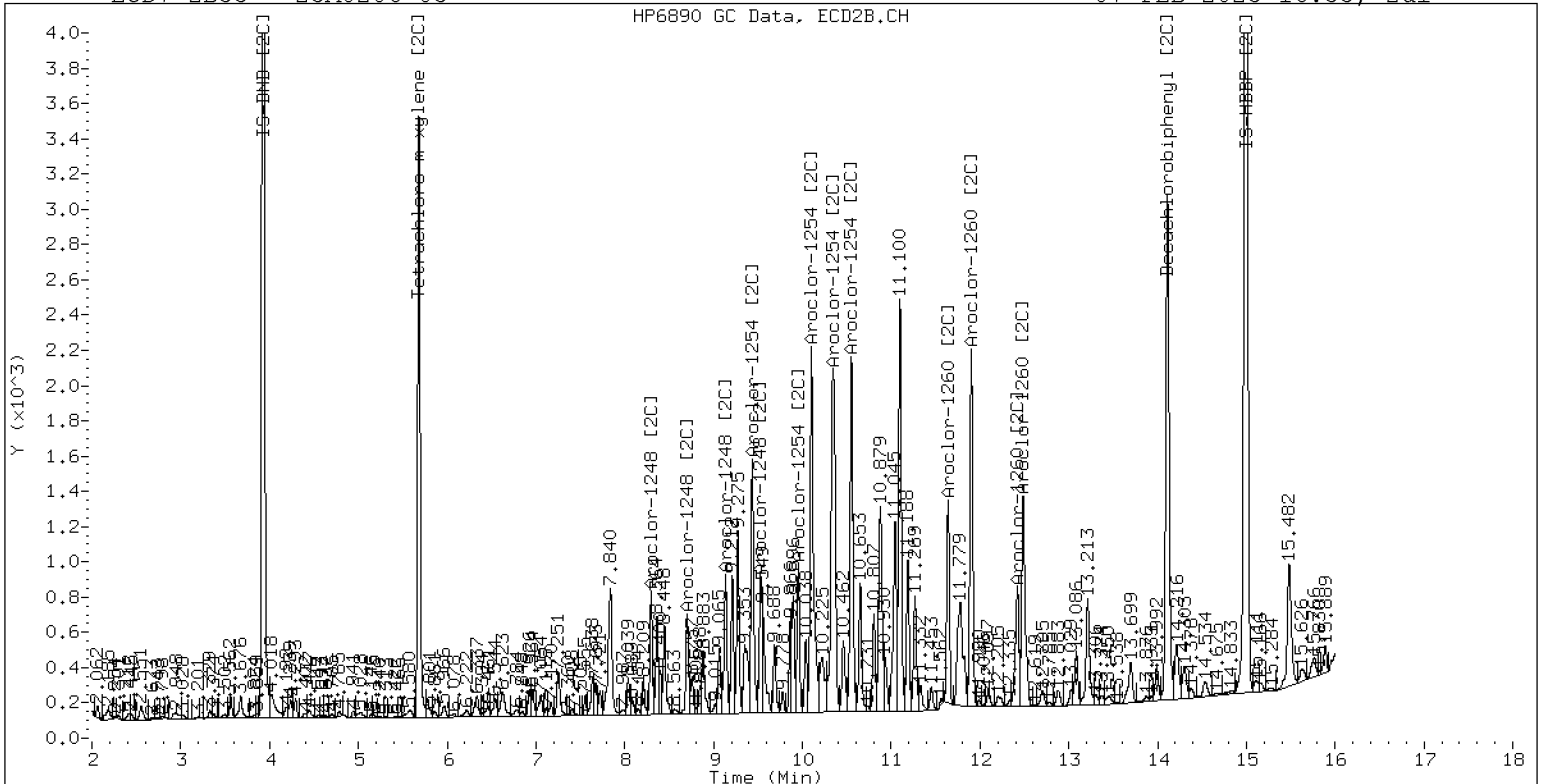
07-FEB-2023 16:53, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-03

07-FEB-2023 16:53, 2ul



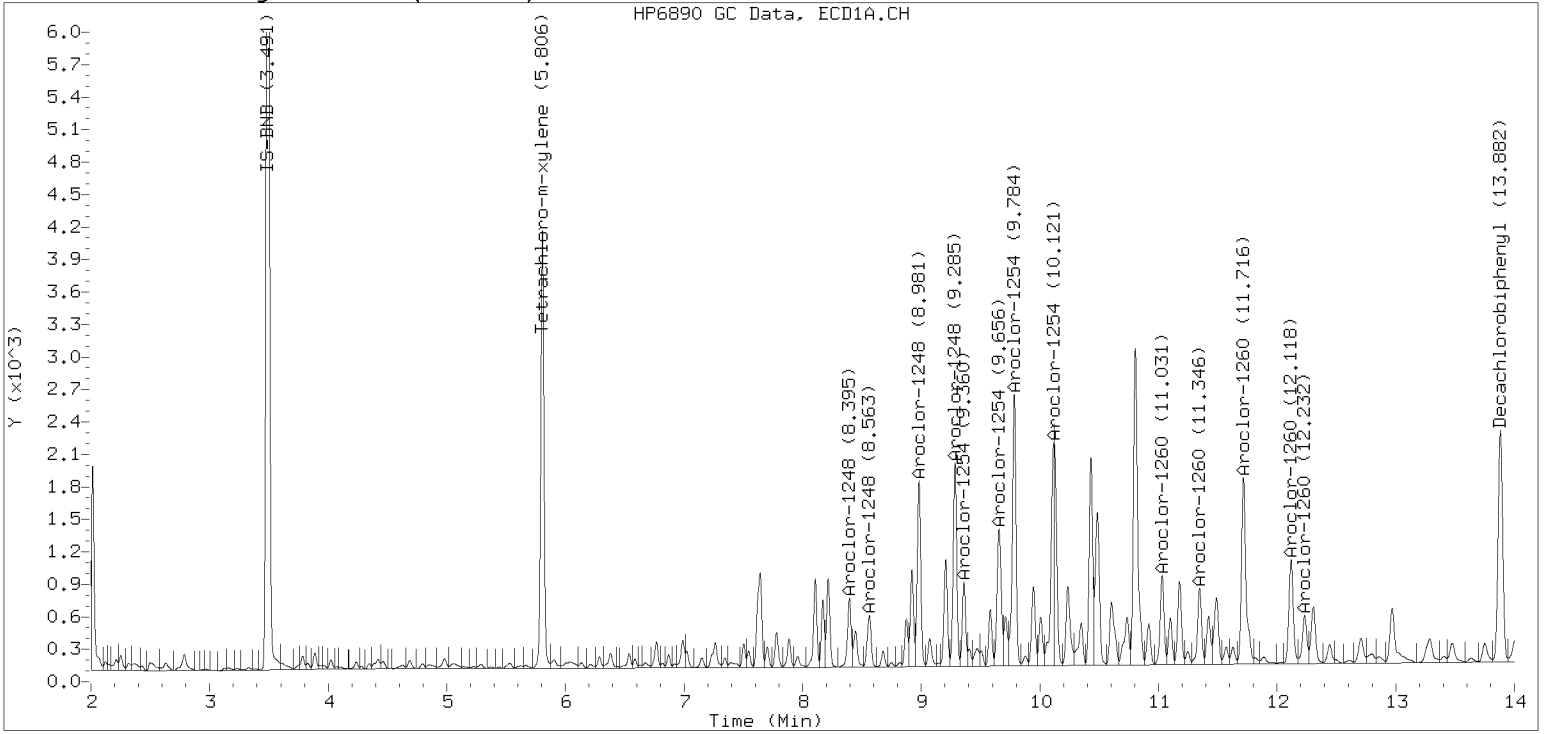
ZB-35 Manual Integration: YES

Manual Peak Adjustment, ZB-5

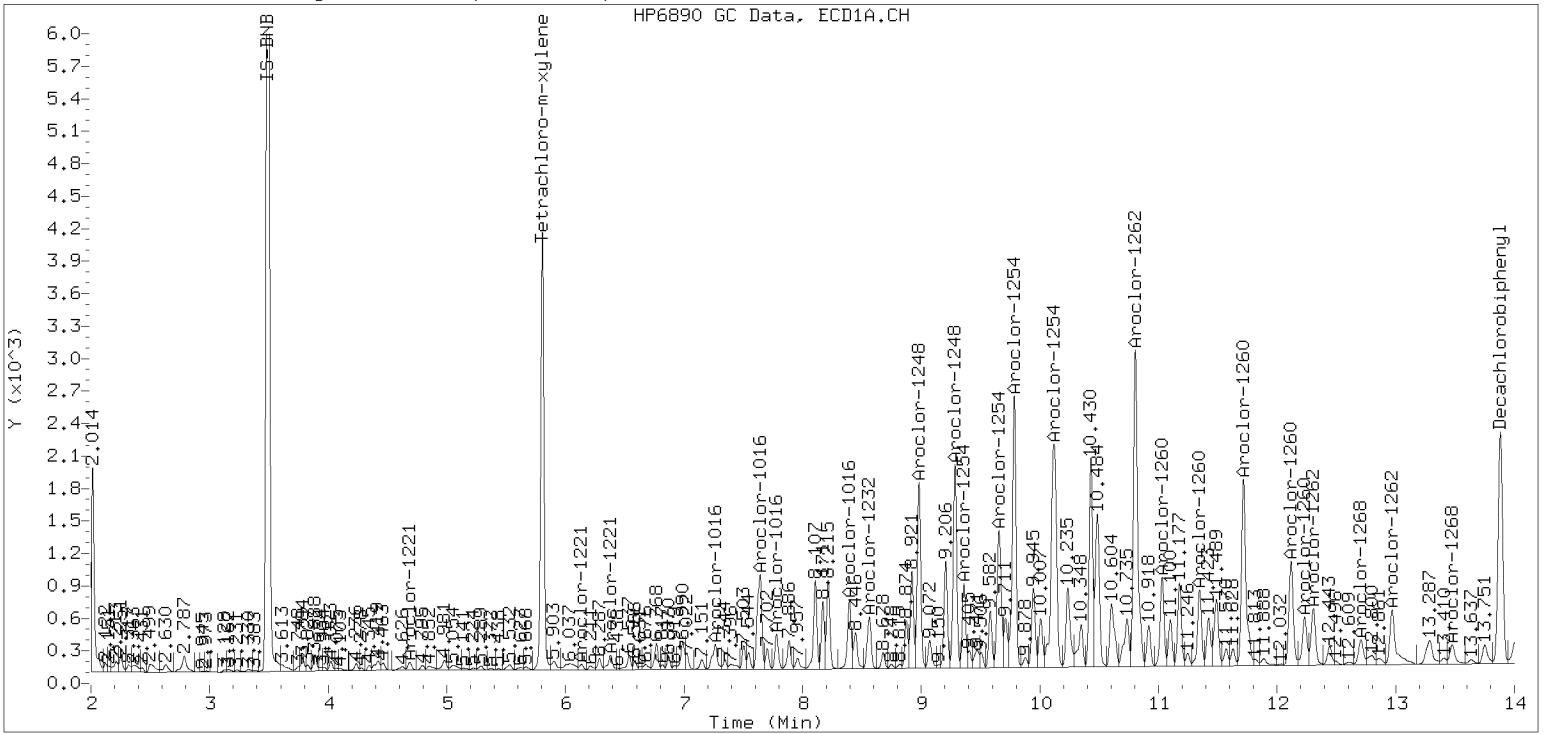
Datafile: ecd7.i/230207.b/02072313ECD7.D

Injection Date: 07-FEB-2023 16:53

Manual Integration (After)



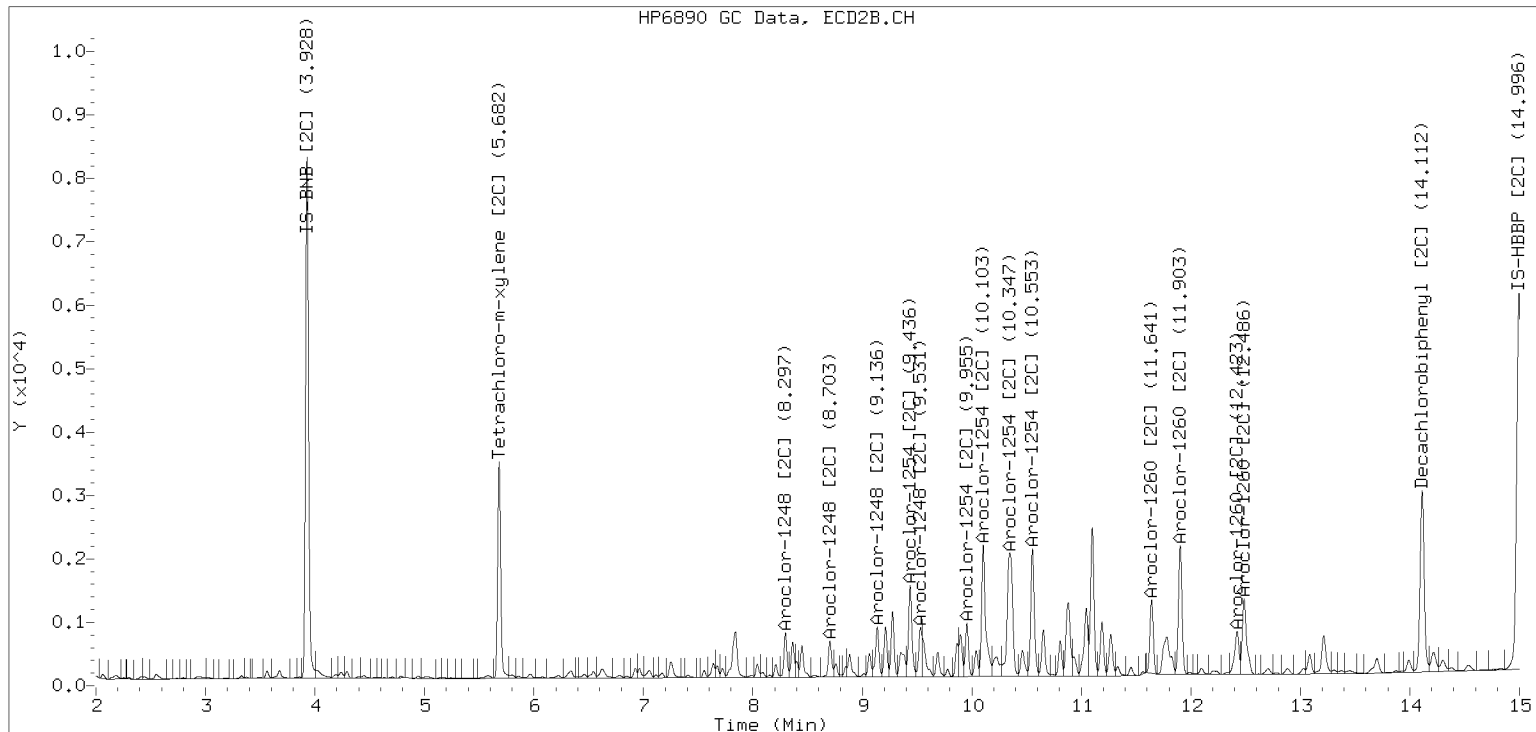
Processed Integration (Before)



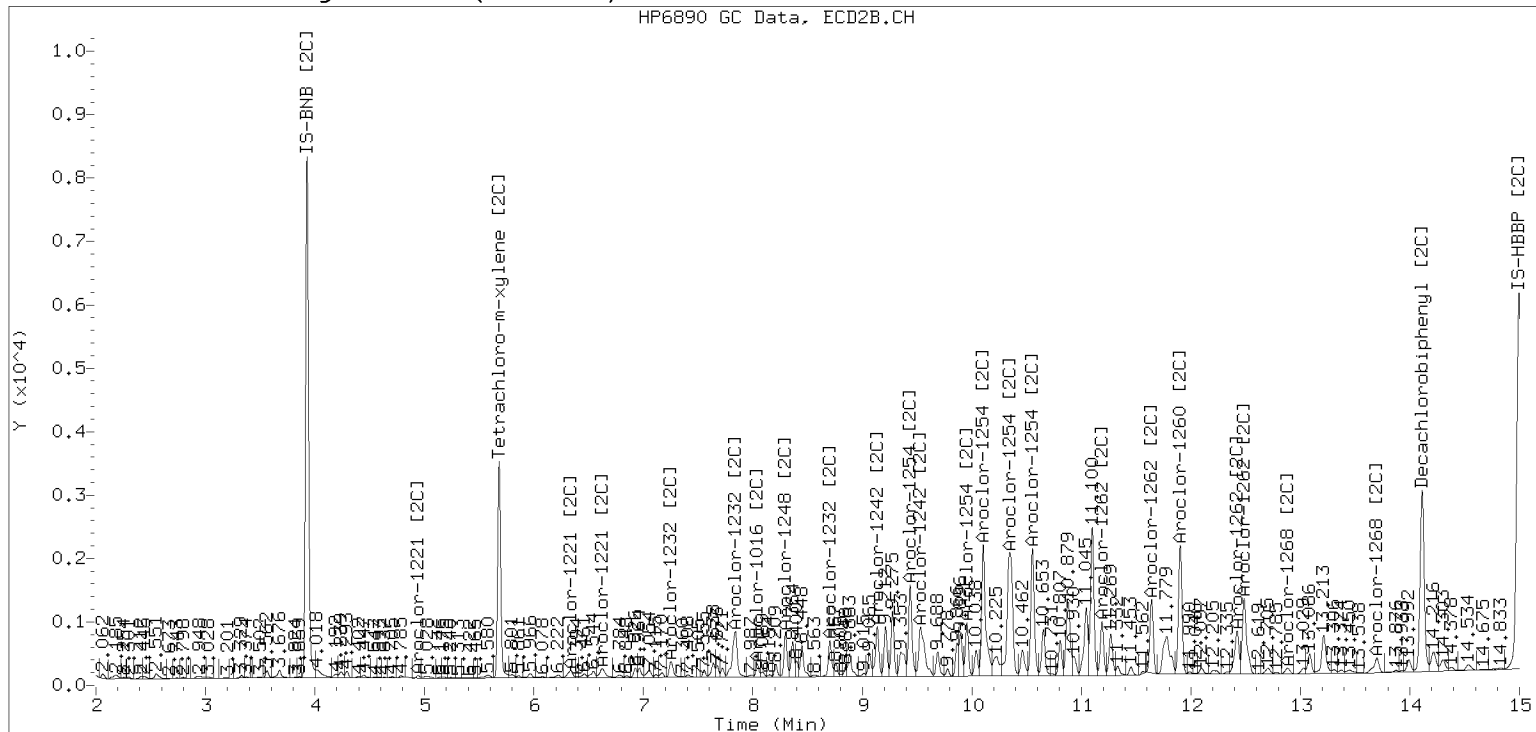
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072313ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





Dual Column

**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Solid Laboratory ID: 23A0206-04 B File ID: 02072314ECD7.D  
 Sampled: 01/11/23 09:35 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 17:14  
 % Solids: 49.34 Preparation: EPA 3546 (Microwave) Initial/Final: 25.36 g Wet / 2.5 mL  
 Batch: BLA0625 Sequence: SLB0109 Calibration: GA00061  
 Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	32.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	50.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	36.3	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9919	5.77	72.3	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9919	5.42	67.8	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9919	5.71	71.5	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9919	5.82	72.8	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072314ECD7.D  
Data file 2: /230207.b/230207.b/02072314ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-04  
Client ID:  
Injection Date: 07-FEB-2023 17:14  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	150643	5.682	-0.002	131434	27.1	29.1	7.1	Tetrachloro-m-xylene
13.883	-0.005	116077	14.113	-0.004	151146	28.9	28.6	1.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	392736	-22.0
Hexabromobiphenyl	647433	375508	-42.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	333801	-0.9
Hexabromobiphenyl	382032	332971	-12.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.395	-0.006	25482	129.7	1	8.298	-0.005	24430	161.9	
Aroclor-1248	2	8.563	-0.011	21284	84.9	2	8.704	-0.006	21380	131.6	
Aroclor-1248	3	8.982	-0.012	63105	131.6	3	9.136	-0.015	32144	162.0	
Aroclor-1248	4	9.285	-0.007	70846	298.6	4	9.531	-0.044	28639	116.7	
Total CollAve (4 peaks):				161.2	Total Col2Ave (4 peaks):				143.1	RPD = 12	
Corrected Ave (3 peaks):				115.4	Corrected Ave (3 peaks):				136.7	RPD = 17	
Aroclor-1254	1	9.285	-0.014	70846	177.0	1	9.436	-0.007	57211	236.2	
Aroclor-1254	2	9.360	-0.018	27786	162.6	2	9.955	-0.009	31099	158.9	
Aroclor-1254	3	9.656	-0.013	58979	230.0	3	10.103	-0.011	97662	228.7	
Aroclor-1254	4	9.785	-0.024	98677	196.4	4	10.351	-0.012	124441	291.4	
Aroclor-1254	5	10.119	-0.059	59734	182.8	5	10.553	-0.009	82167	345.5	
Total CollAve (5 peaks):				189.7	Total Col2Ave (5 peaks):				252.2	RPD = 28	
Corrected Ave (4 peaks):				179.7	Corrected Ave (4 peaks):				228.8	RPD = 24	
				<b>191.5</b>							
Aroclor-1260	1	11.031	-0.012	35212	167.1	1	11.642	-0.007	46789	194.8	
Aroclor-1260	2	11.347	-0.013	31327	144.6	2	11.903	-0.009	85154	140.1	
Aroclor-1260	3	11.717	-0.017	91134	159.8	3	12.422	-0.010	35734	235.9	
Aroclor-1260	4	12.117	-0.022	47088	159.8	4	12.486	-0.010	61323	155.9	
Aroclor-1260	5	12.233	-0.011	22923	178.5	NS	---			---	
Total CollAve (5 peaks):				162.0	Total Col2Ave (4 peaks):				181.7	RPD = 11	
Corrected Ave (4 peaks):				157.9	Corrected Ave (3 peaks):				163.6	RPD = 4	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						

Total PCB Area Col1 (5.908 - 13.788) = 1823571 Col1 Total PCB = 0.4 ppm\*  
Total PCB Area Col2 (5.785 - 14.017) = 1673595 Col2 Total PCB = 0.5 ppm\*

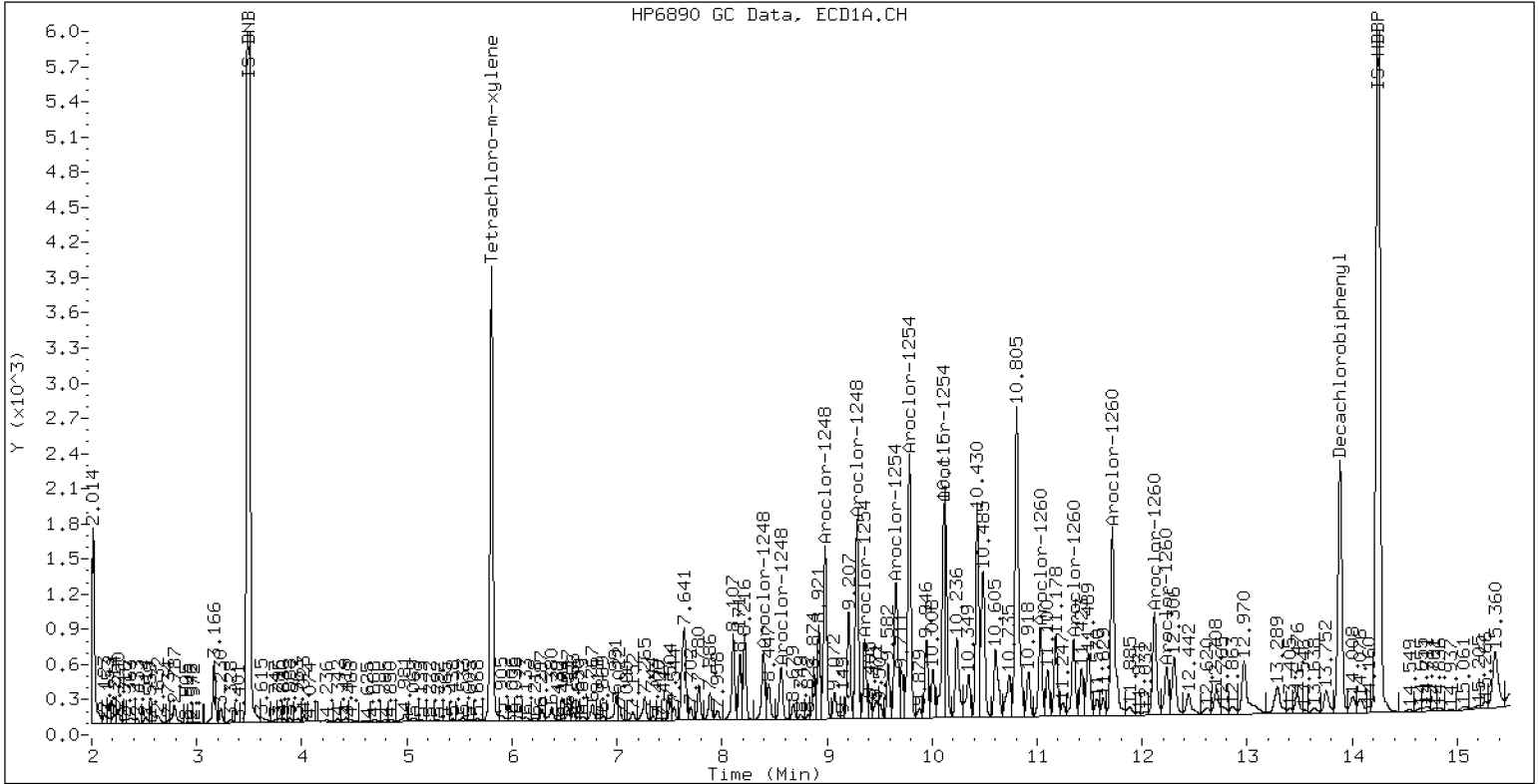
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-04

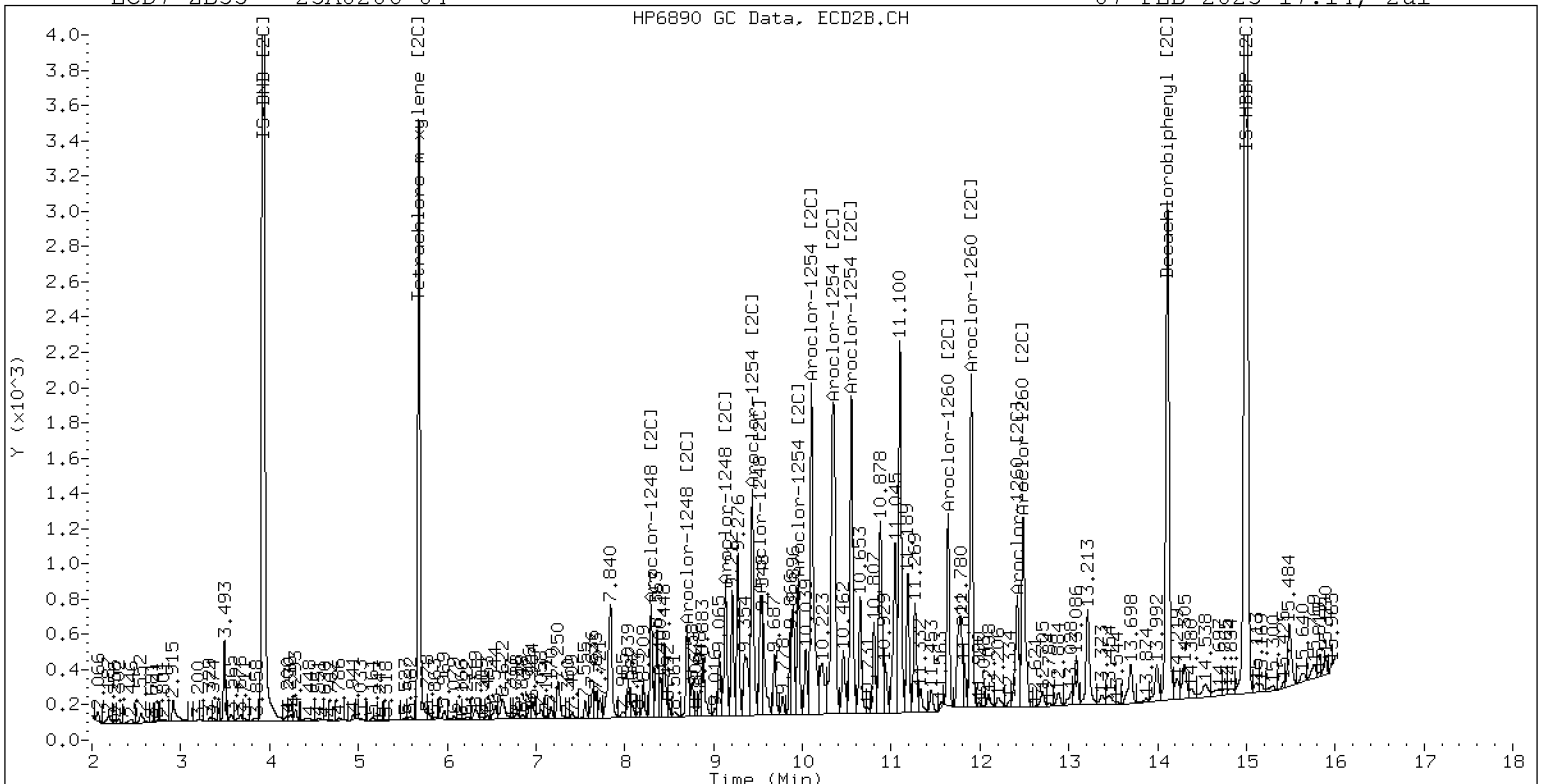
07-FEB-2023 17:14, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-04

07-FEB-2023 17:14, 2ul



ZB-35 Manual Integration: YES

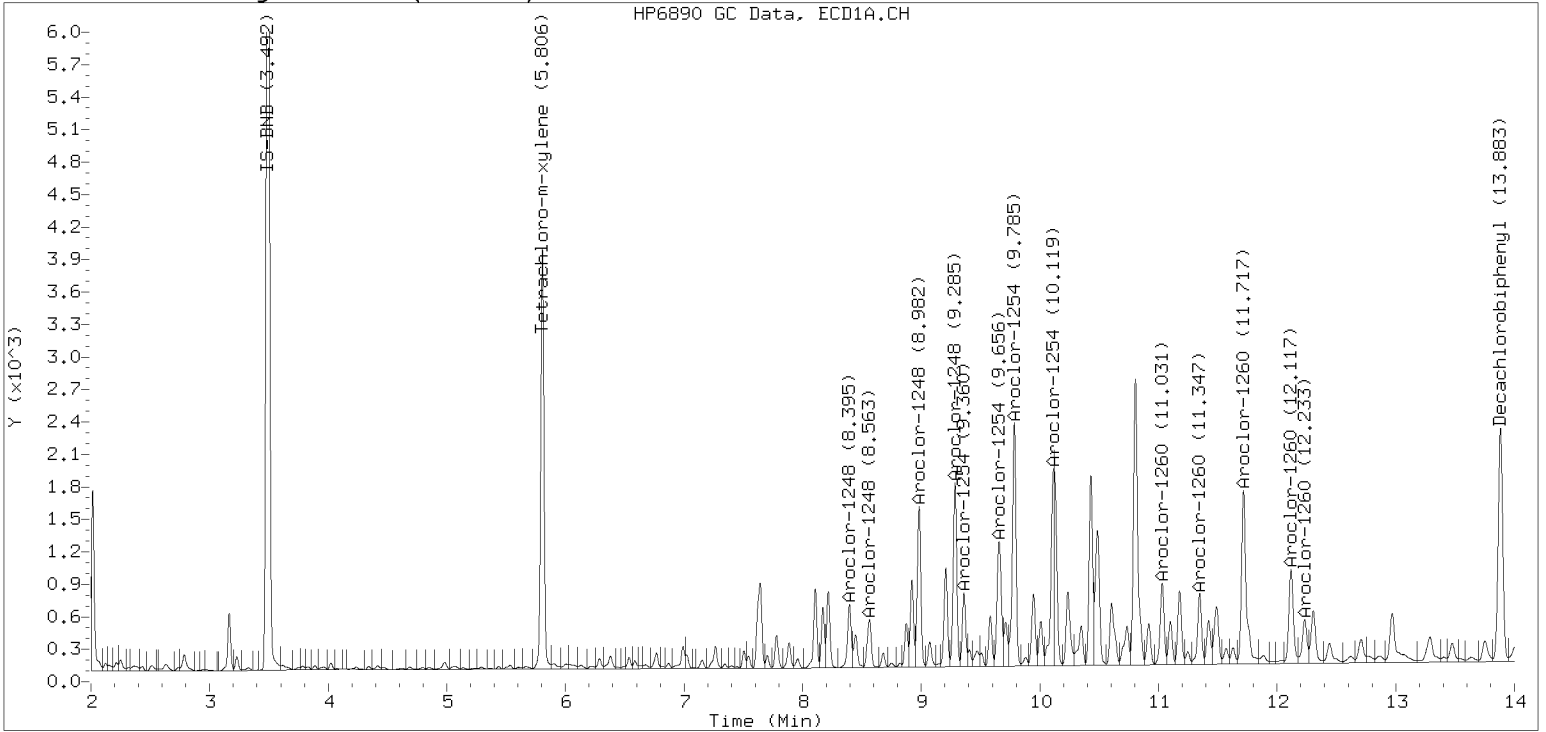


Manual Peak Adjustment, ZB-5

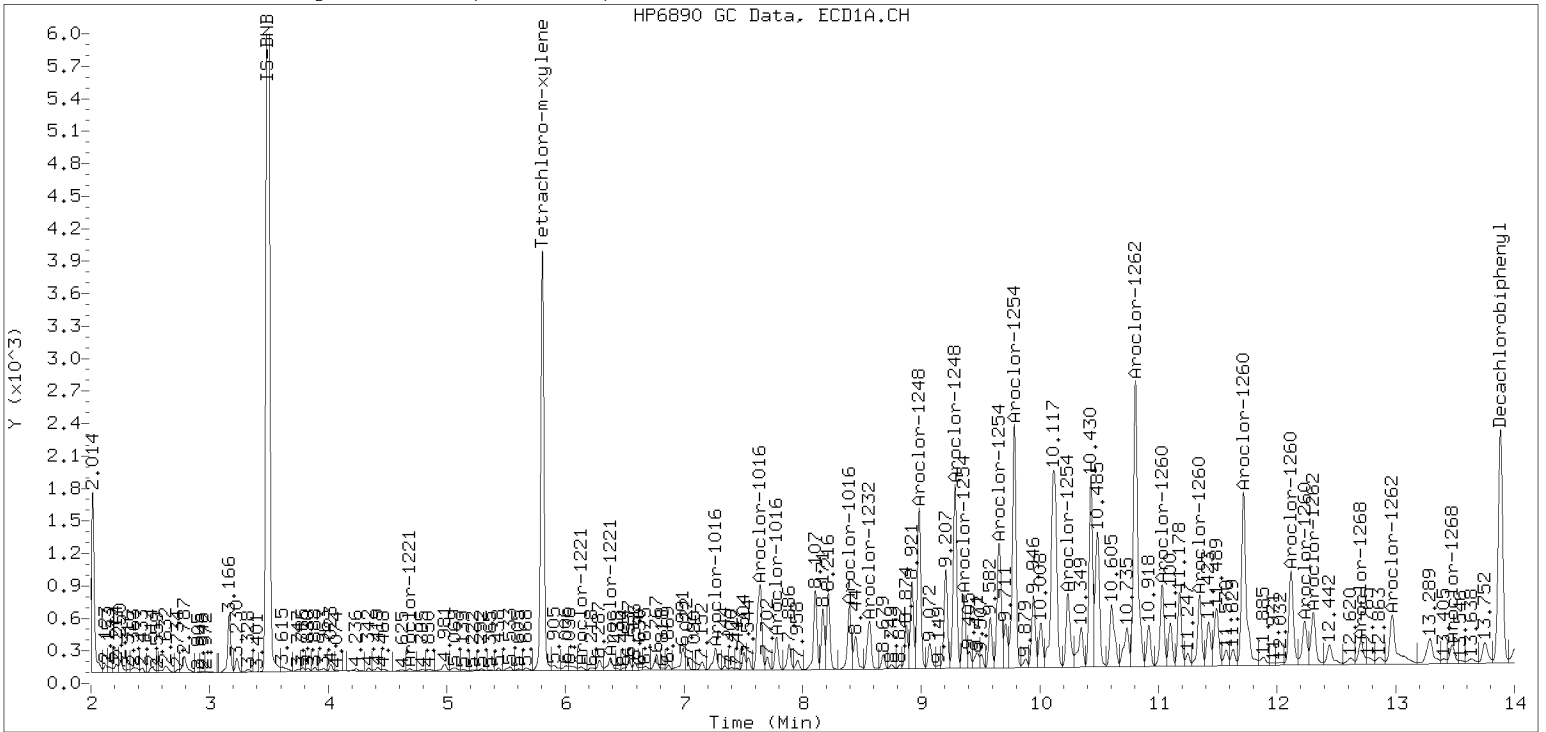
Datafile: ecd7.i/230207.b/02072314ECD7.D

Injection Date: 07-FEB-2023 17:14

Manual Integration (After)



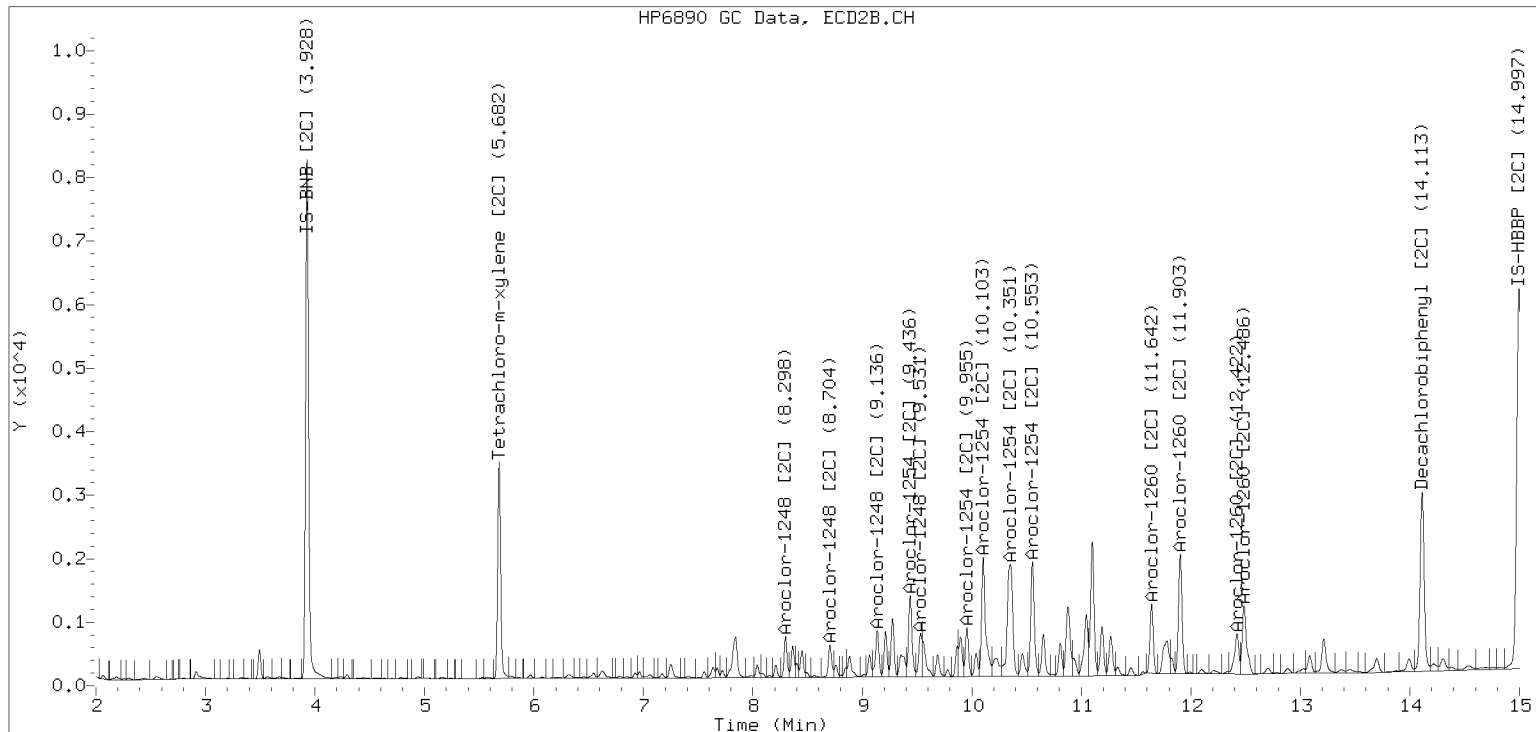
Processed Integration (Before)



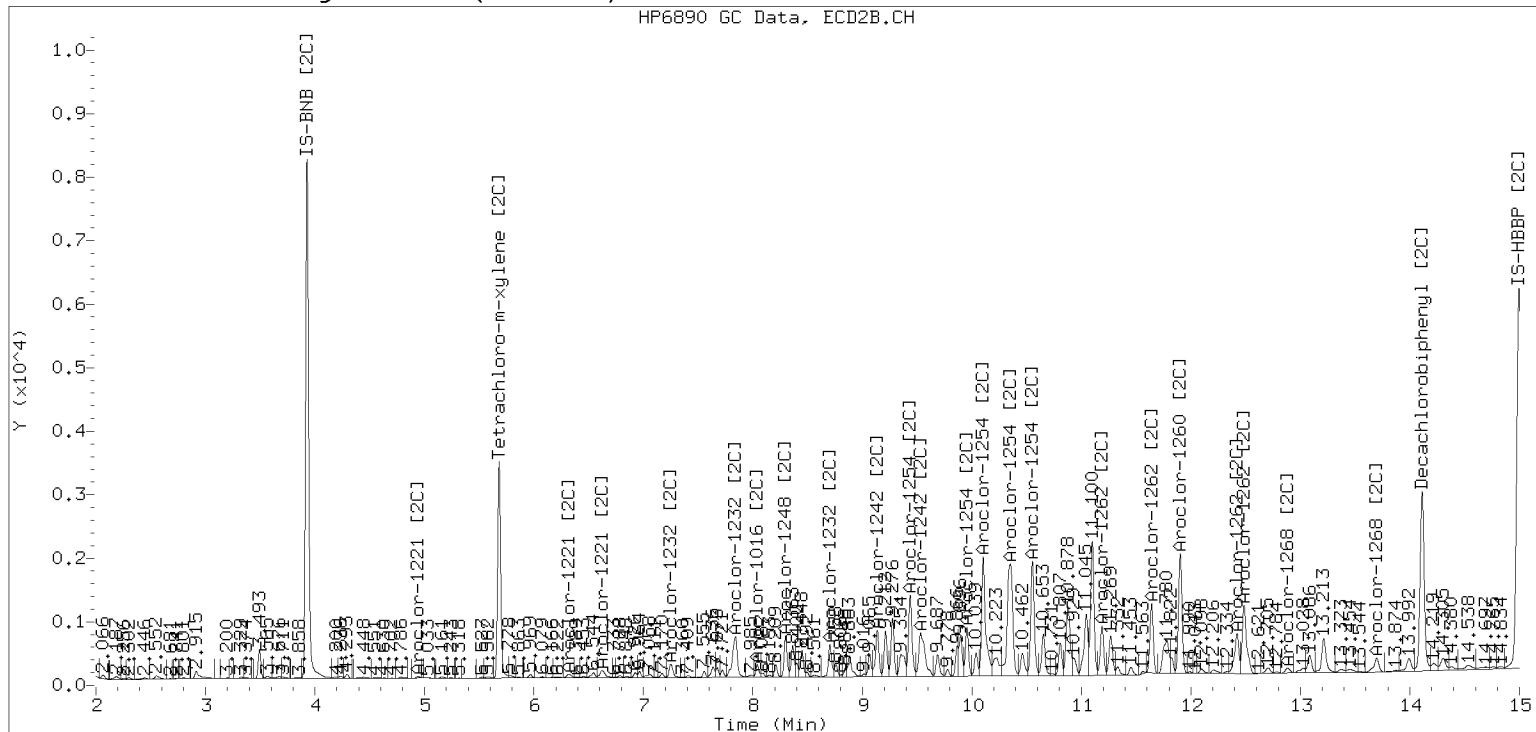
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072314ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





LDW23-SS1151

**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: 23A0206-05 B

File ID: 02072315ECD7.D

Sampled: 01/11/23 09:50

Prepared: 01/28/23 12:01

Analyzed: 02/07/23 17:35

% Solids: 52.94

Preparation: EPA 3546 (Microwave)

Initial/Final: 23.65 g Wet / 2.5 mL

Batch: BLA0625

Sequence: SLB0109

Calibration: GA00061

Instrument: ECD7

Column 1: ZB5

Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	32.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	50.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	36.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9870	5.91	74.0	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9870	5.49	68.7	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9870	5.77	72.2	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9870	6.04	75.7	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072315ECD7.D  
Data file 2: /230207.b/230207.b/02072315ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-05  
Client ID:  
Injection Date: 07-FEB-2023 17:35  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	157277	5.683	-0.002	137182	27.5	30.3	9.6	Tetrachloro-m-xylene
13.884	-0.004	117473	14.113	-0.004	150465	29.6	28.9	2.5	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	404707	-19.6
Hexabromobiphenyl	647433	370906	-42.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335326	-0.5
Hexabromobiphenyl	382032	328179	-14.1

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.395	-0.006	26385	130.3	1	8.298	-0.005	25337	167.2	
Aroclor-1248	2	8.564	-0.010	21931	84.9	2	8.704	-0.006	22830	139.9	
Aroclor-1248	3	8.982	-0.011	67301	136.2	3	9.137	-0.014	33046	165.8	
Aroclor-1248	4	9.285	-0.008	71702	293.2	4	9.530	-0.045	29635	120.2	
Total CollAve (4 peaks):				161.2	Total Col2Ave (4 peaks):				148.3	RPD = 8	
Corrected Ave (3 peaks):				117.2	Corrected Ave (3 peaks):				142.0	RPD = 19	
Aroclor-1254	1	9.285	-0.014	71702	173.8	1	9.436	-0.007	57691	237.1	
Aroclor-1254	2	9.360	-0.017	29469	167.3	2	9.955	-0.008	29573	150.4	
Aroclor-1254	3	9.657	-0.013	56047	212.1	3	10.103	-0.011	98818	230.4	
Aroclor-1254	4	9.785	-0.023	100078	193.3	4	10.350	-0.013	123837	288.7	
Aroclor-1254	5	10.118	-0.059	125065	371.4	5	10.553	-0.009	83768	350.6	
Total CollAve (5 peaks):				223.6	Total Col2Ave (5 peaks):				251.5	RPD = 12	
Corrected Ave (4 peaks):				186.6	Corrected Ave (4 peaks):				226.7	RPD = 19	
Aroclor-1260	1	11.032	-0.011	37091	178.2	1	11.641	-0.007	45696	193.0	
Aroclor-1260	2	11.347	-0.014	31733	148.3	2	11.903	-0.009	86983	145.2	
Aroclor-1260	3	11.716	-0.018	89190	158.4	3	12.422	-0.010	34817	233.2	
Aroclor-1260	4	12.117	-0.022	47275	162.5	4	12.486	-0.010	63432	163.6	
Aroclor-1260	5	12.233	-0.011	22596	178.1	NS	---			---	
Total CollAve (5 peaks):				165.1	Total Col2Ave (4 peaks):				183.8	RPD = 11	
Corrected Ave (4 peaks):				161.8	Corrected Ave (3 peaks):				167.3	RPD = 3	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						

Total PCB Area Col1 (5.908 - 13.788) = 1846885 Col1 Total PCB = 0.4 ppm\*  
Total PCB Area Col2 (5.785 - 14.017) = 1700100 Col2 Total PCB = 0.5 ppm\*

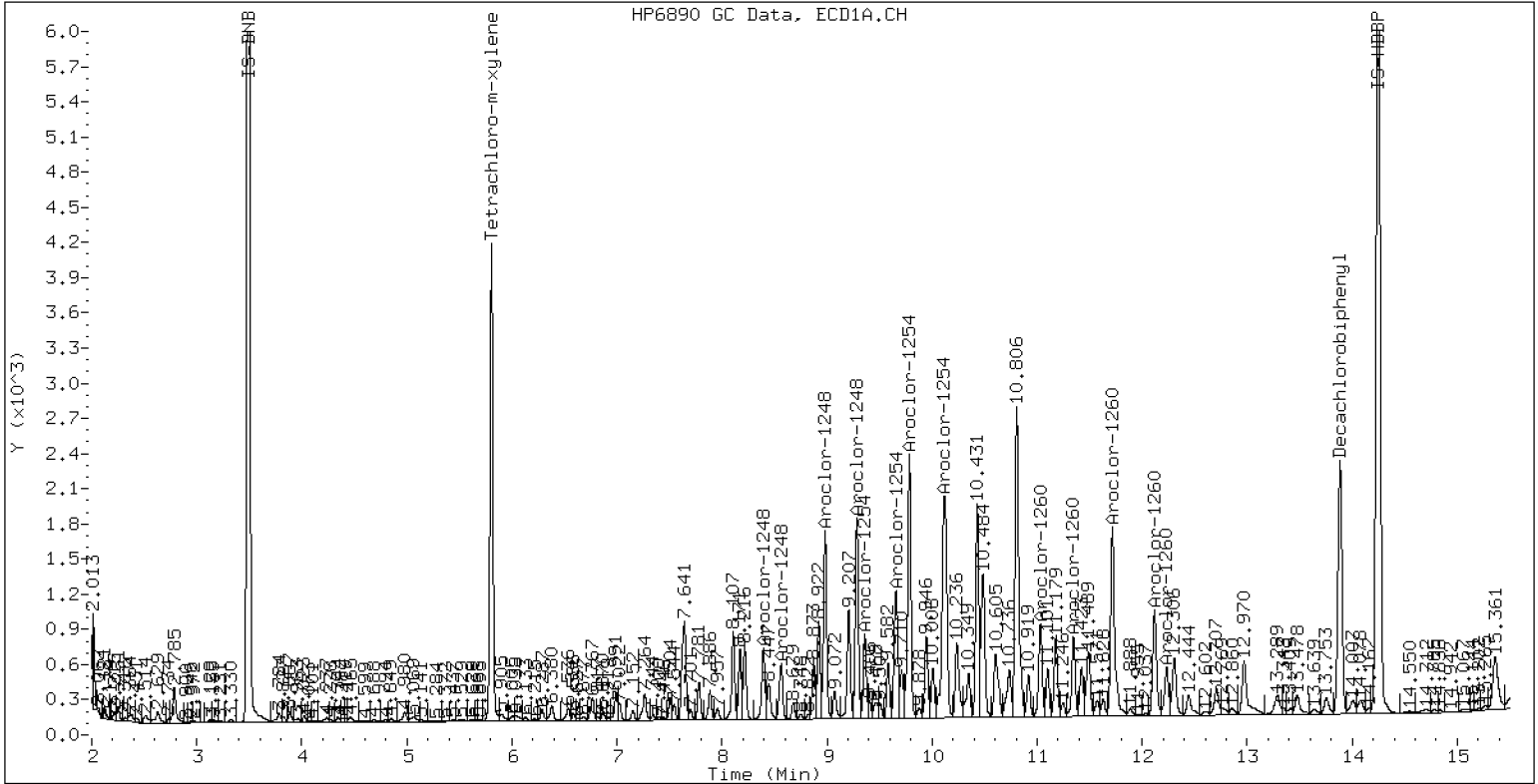
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-05

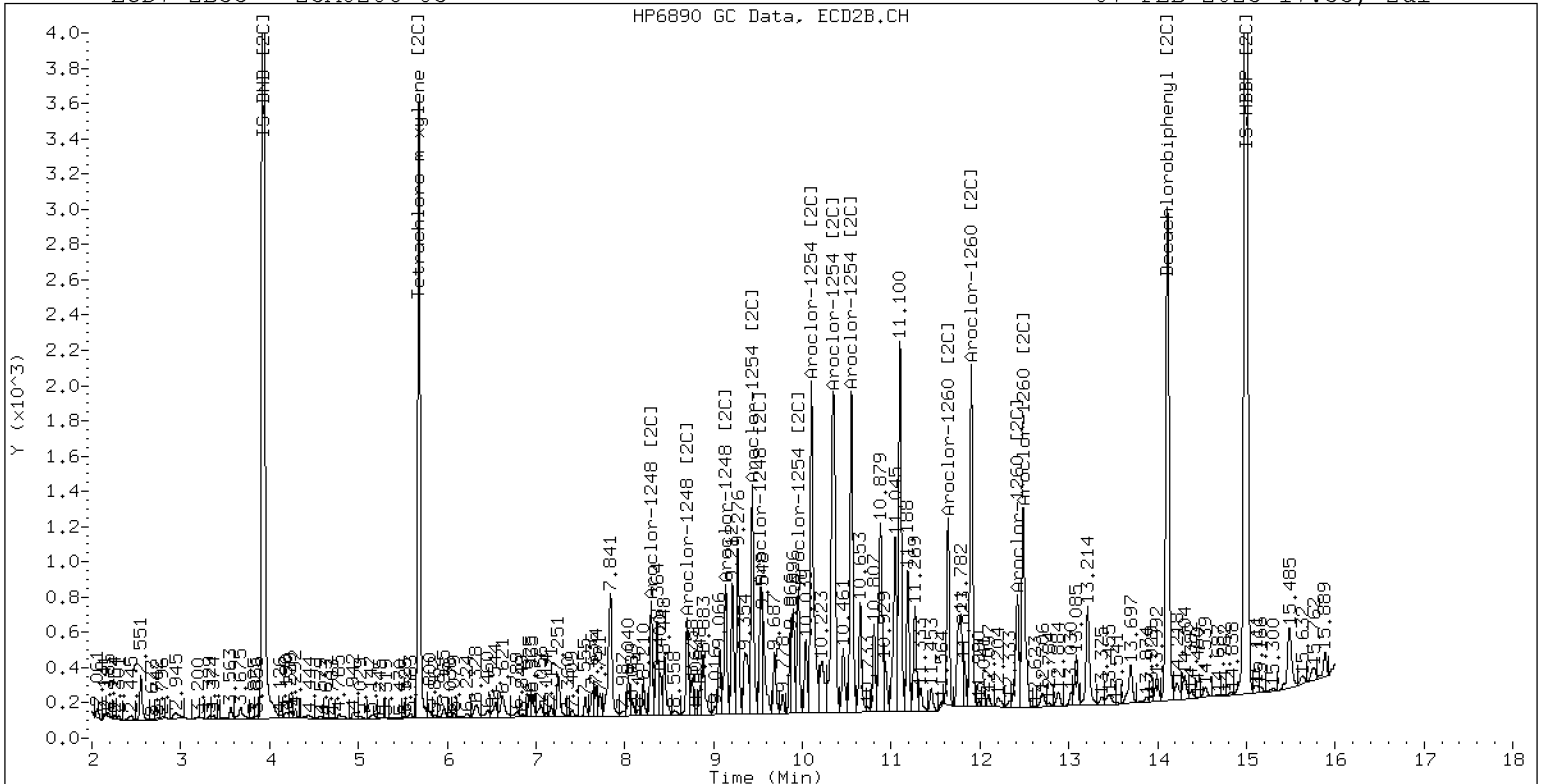
07-FEB-2023 17:35, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-05

07-FEB-2023 17:35, 2ul



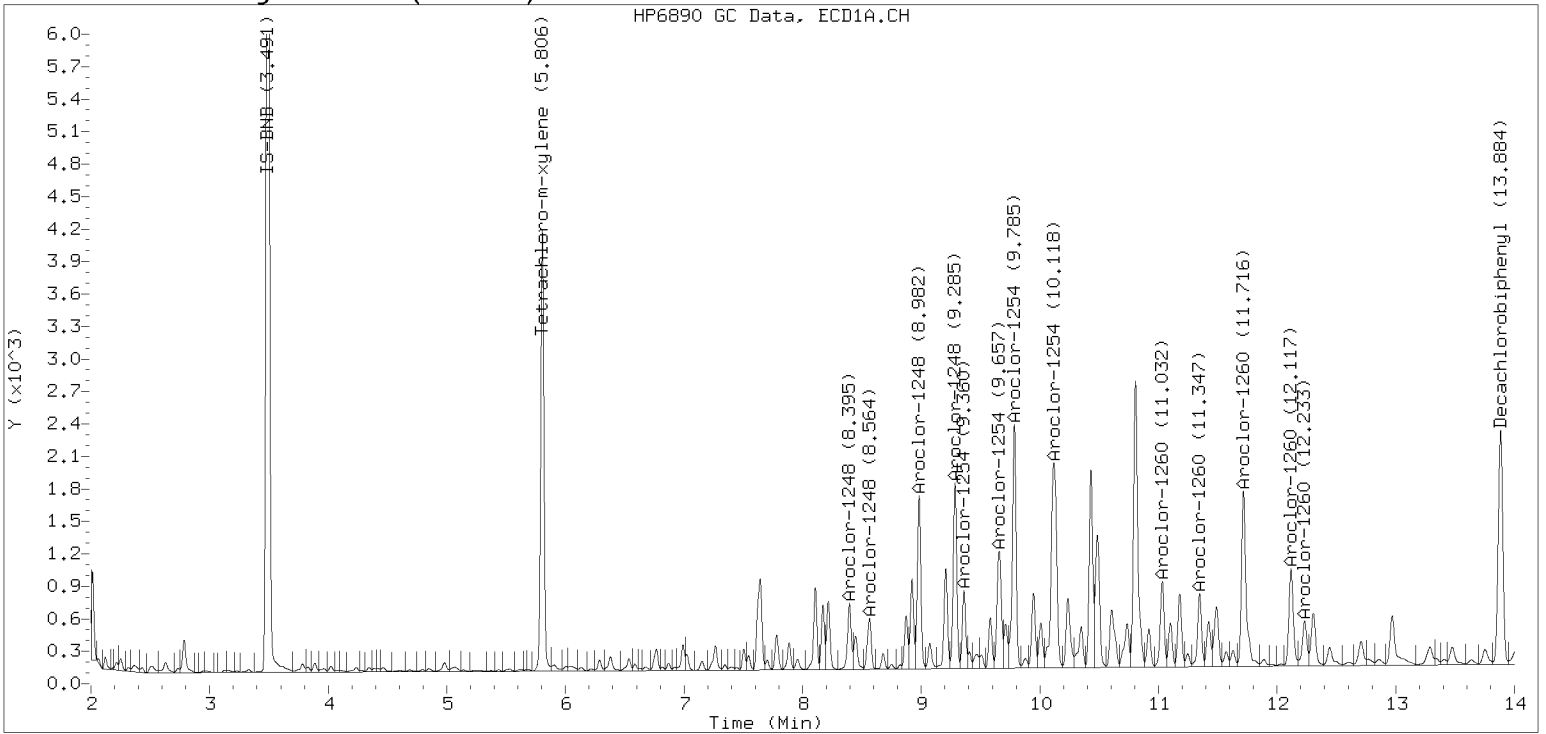
ZB-35 Manual Integration: YES

Manual Peak Adjustment, ZB-5

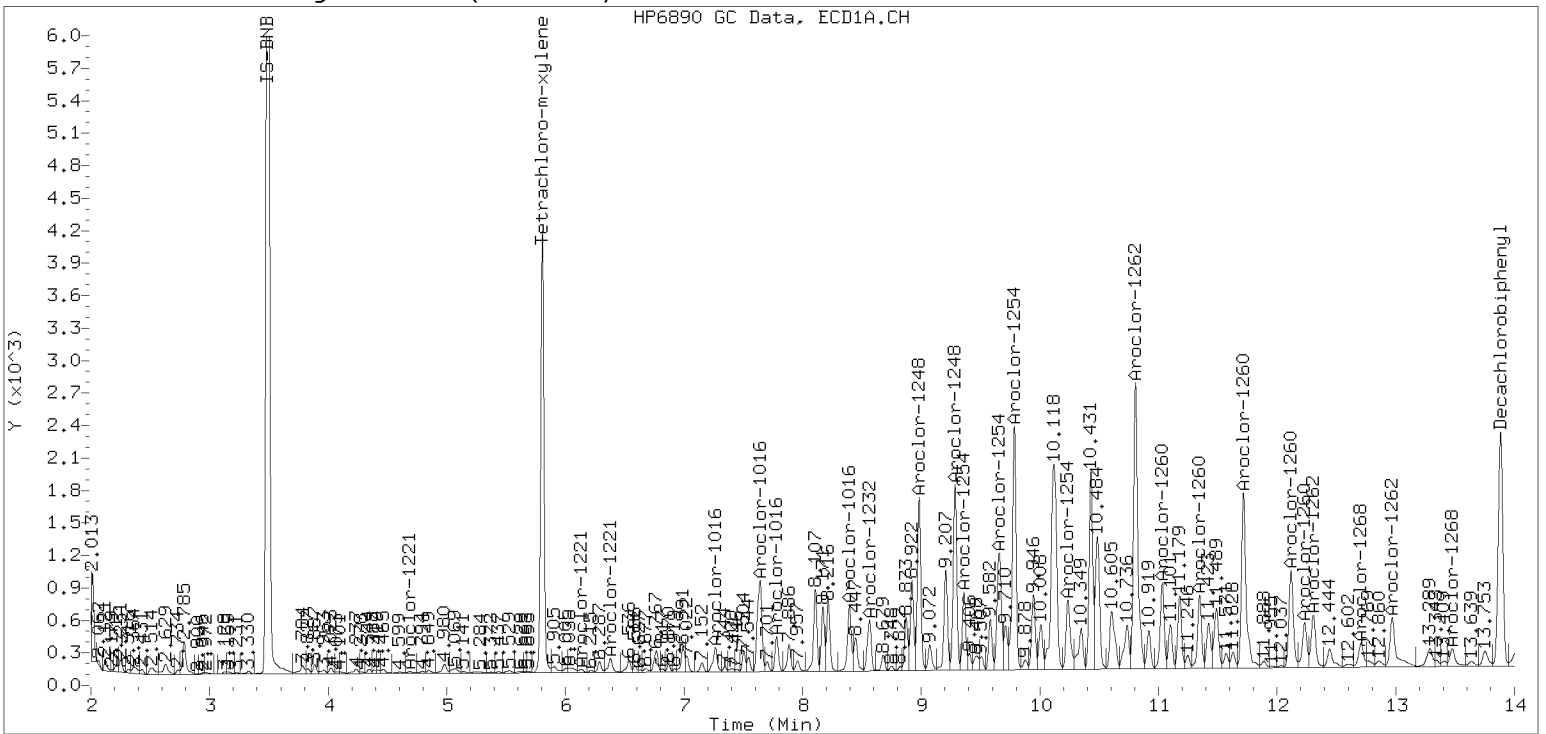
Datafile: ecd7.i/230207.b/02072315ECD7.D

Injection Date: 07-FEB-2023 17:35

Manual Integration (After)



Processed Integration (Before)

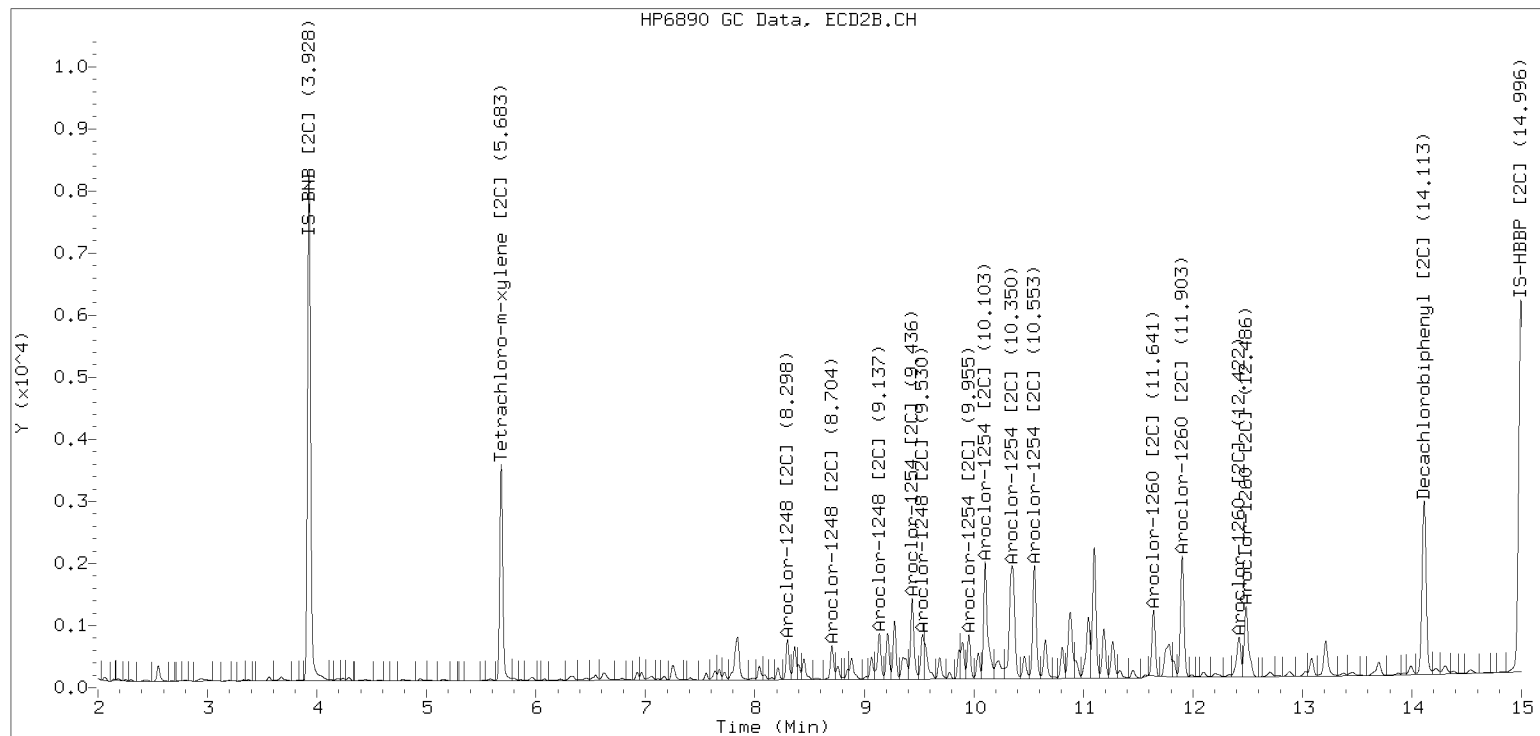




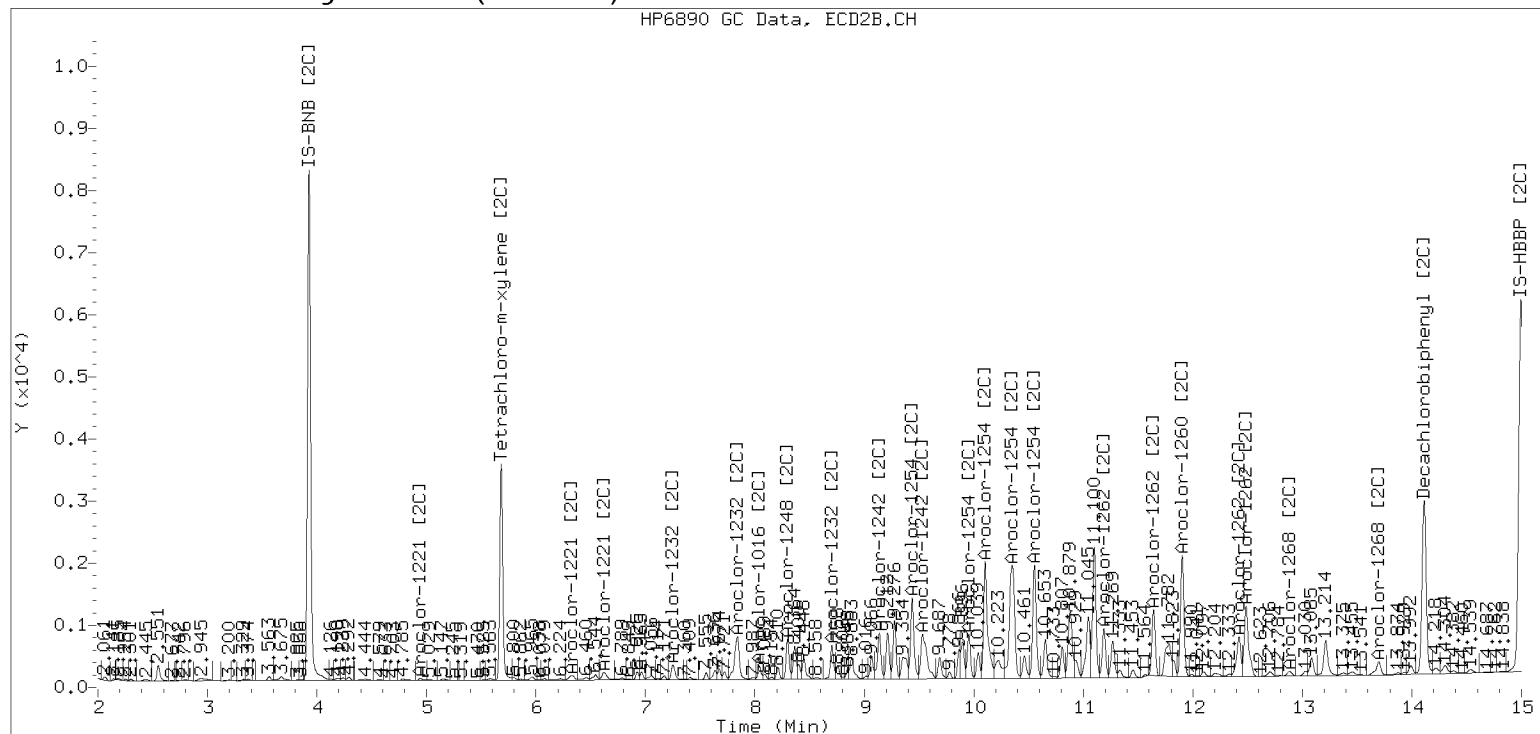
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072315ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





Dual Column

**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Solid Laboratory ID: 23A0206-06 B File ID: 02072316ECD7.D  
 Sampled: 01/11/23 10:07 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 17:57  
 % Solids: 55.16 Preparation: EPA 3546 (Microwave) Initial/Final: 22.67 g Wet / 2.5 mL  
 Batch: BLA0625 Sequence: SLB0109 Calibration: GA00061  
 Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	41.9	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	61.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	39.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9969	5.70	71.2	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9969	5.18	64.8	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9969	5.64	70.6	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9969	5.79	72.4	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072316ECD7.D  
Data file 2: /230207.b/230207.b/02072316ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-06  
Client ID:  
Injection Date: 07-FEB-2023 17:57  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	148406	5.682	-0.002	132472	25.9	28.9	11.0	Tetrachloro-m-xylene
13.884	-0.004	115171	14.113	-0.004	151172	28.5	28.2	0.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	404891	-19.6
Hexabromobiphenyl	647433	378032	-41.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338531	0.5
Hexabromobiphenyl	382032	337373	-11.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.395	-0.006	33172	163.8	1	8.297	-0.006	32375	211.6
Aroclor-1248	2	8.563	-0.011	26398	102.2	2	8.704	-0.005	29444	178.8
Aroclor-1248	3	8.982	-0.012	80287	162.4	3	9.136	-0.016	40946	203.4
Aroclor-1248	4	9.284	-0.008	91302	373.2	4	9.532	-0.043	60809	244.3
Total CollAve (4 peaks):				200.4	Total Col2Ave (4 peaks):				209.5	RPD = 4
Corrected Ave (3 peaks):				142.8	Corrected Ave (3 peaks):				197.9	RPD = 32
Aroclor-1254	1	9.284	-0.014	91302	221.3	1	9.436	-0.007	71956	293.0
Aroclor-1254	2	9.361	-0.017	35588	202.0	2	9.955	-0.008	40302	203.0
Aroclor-1254	3	9.656	-0.014	68357	258.5	3	10.103	-0.011	124615	287.8
Aroclor-1254	4	9.785	-0.024	127177	245.5	4	10.347	-0.015	151202	349.2
Aroclor-1254	5	10.120	-0.057	74002	<del>219.7</del>	5	10.553	-0.009	96932	401.9
Total CollAve (5 peaks):				229.4	Total Col2Ave (5 peaks):				307.0	RPD = 29
Corrected Ave (4 peaks):				222.1	Corrected Ave (4 peaks):				283.2	RPD = 24
<b>231.825</b>										
Aroclor-1260	1	11.031	-0.012	37859	178.5	1	11.642	-0.006	51528	211.7
Aroclor-1260	2	11.347	-0.014	33397	153.2	2	11.904	-0.008	94389	153.3
Aroclor-1260	3	11.717	-0.017	94653	164.9	3	12.422	-0.010	37620	245.1
Aroclor-1260	4	12.118	-0.022	47327	159.6	4	12.488	-0.008	67429	169.2
Aroclor-1260	5	12.234	-0.010	24683	190.9	NS	---			----
Total CollAve (5 peaks):				169.4	Total Col2Ave (4 peaks):				194.8	RPD = 14
Corrected Ave (4 peaks):				164.0	Corrected Ave (3 peaks):				178.1	RPD = 8
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.788) = 2129158 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 2003980 Col2 Total PCB = 0.6 ppm\*

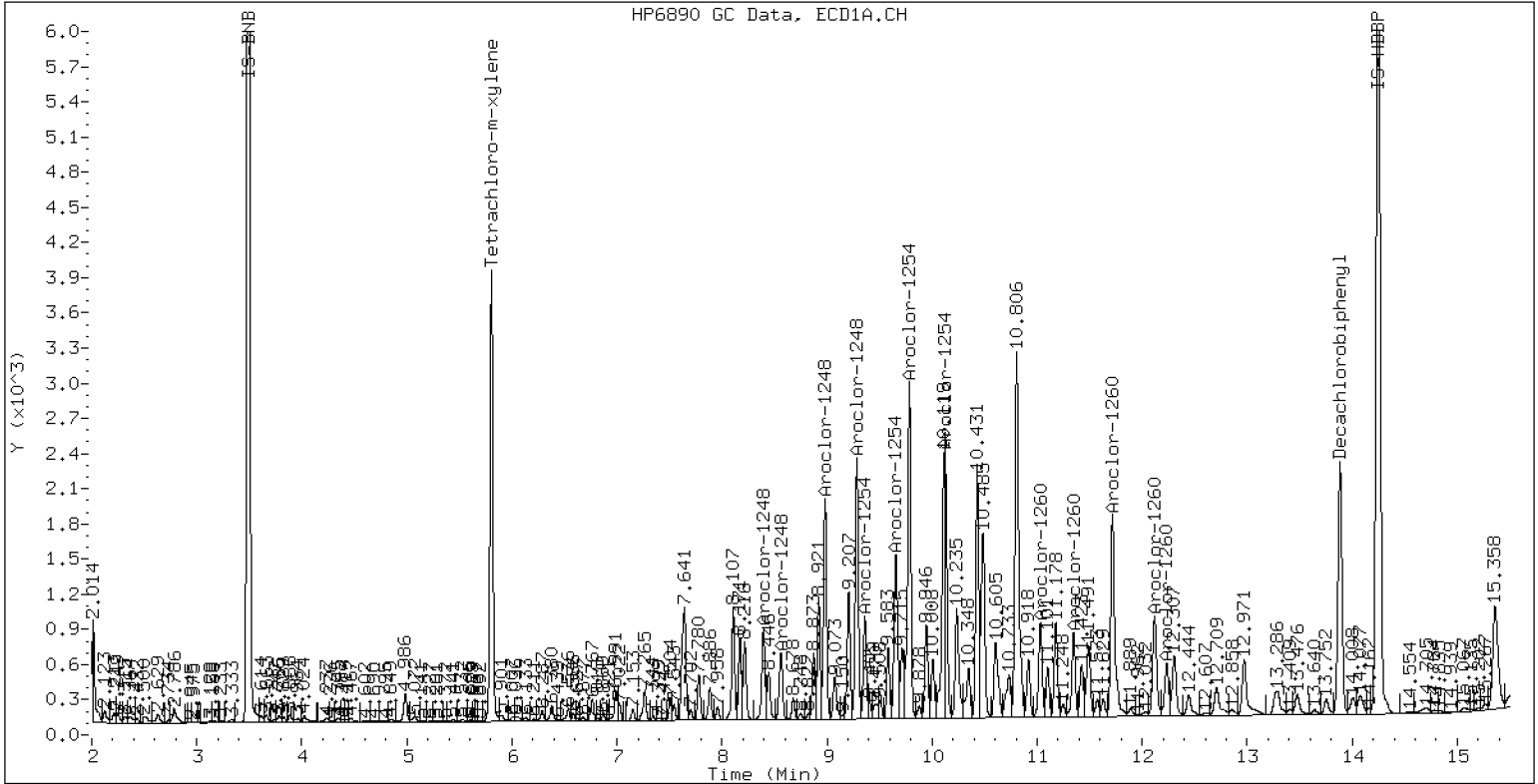
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-06

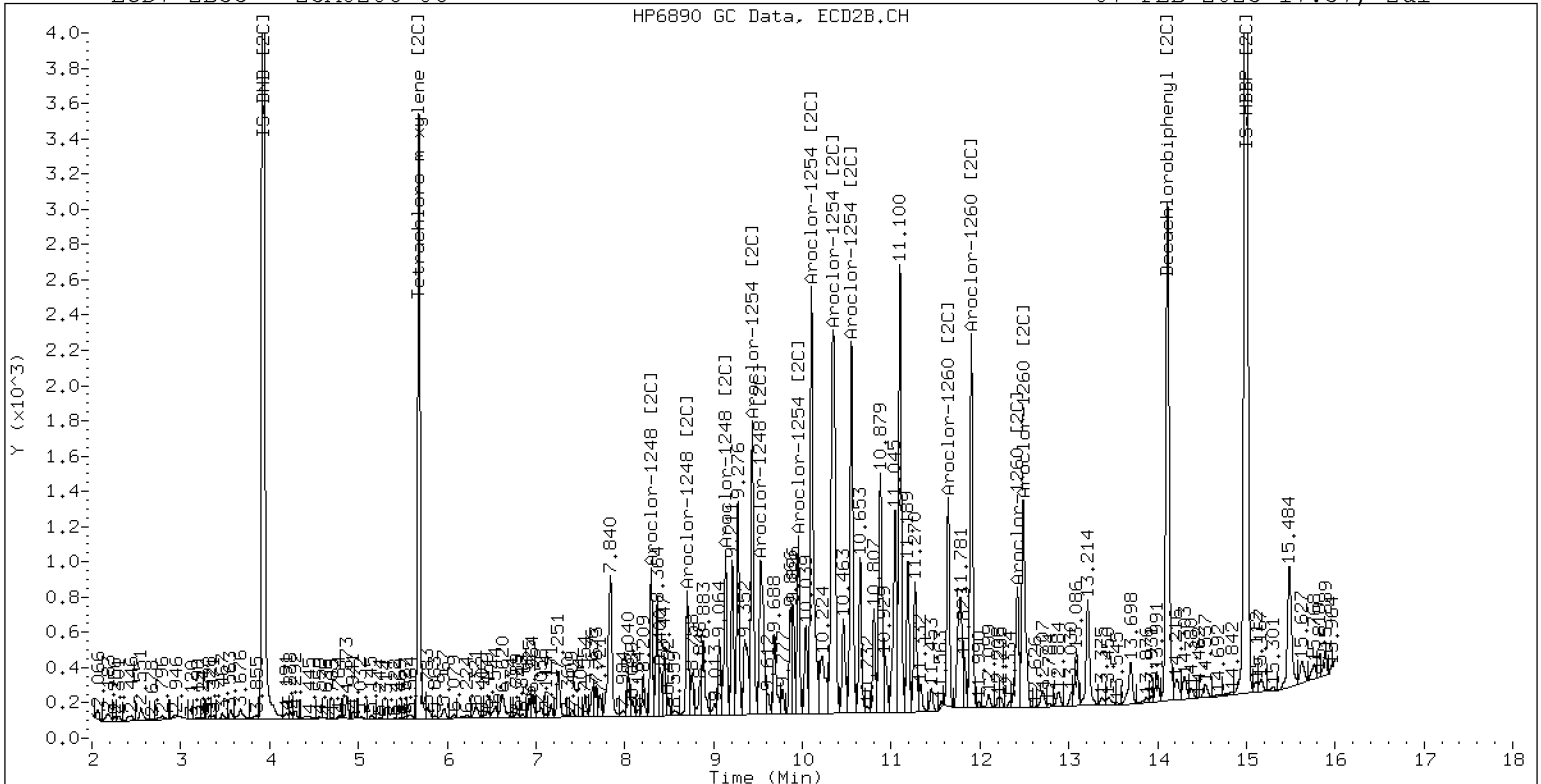
07-FEB-2023 17:57, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-06

07-FEB-2023 17:57, 2ul



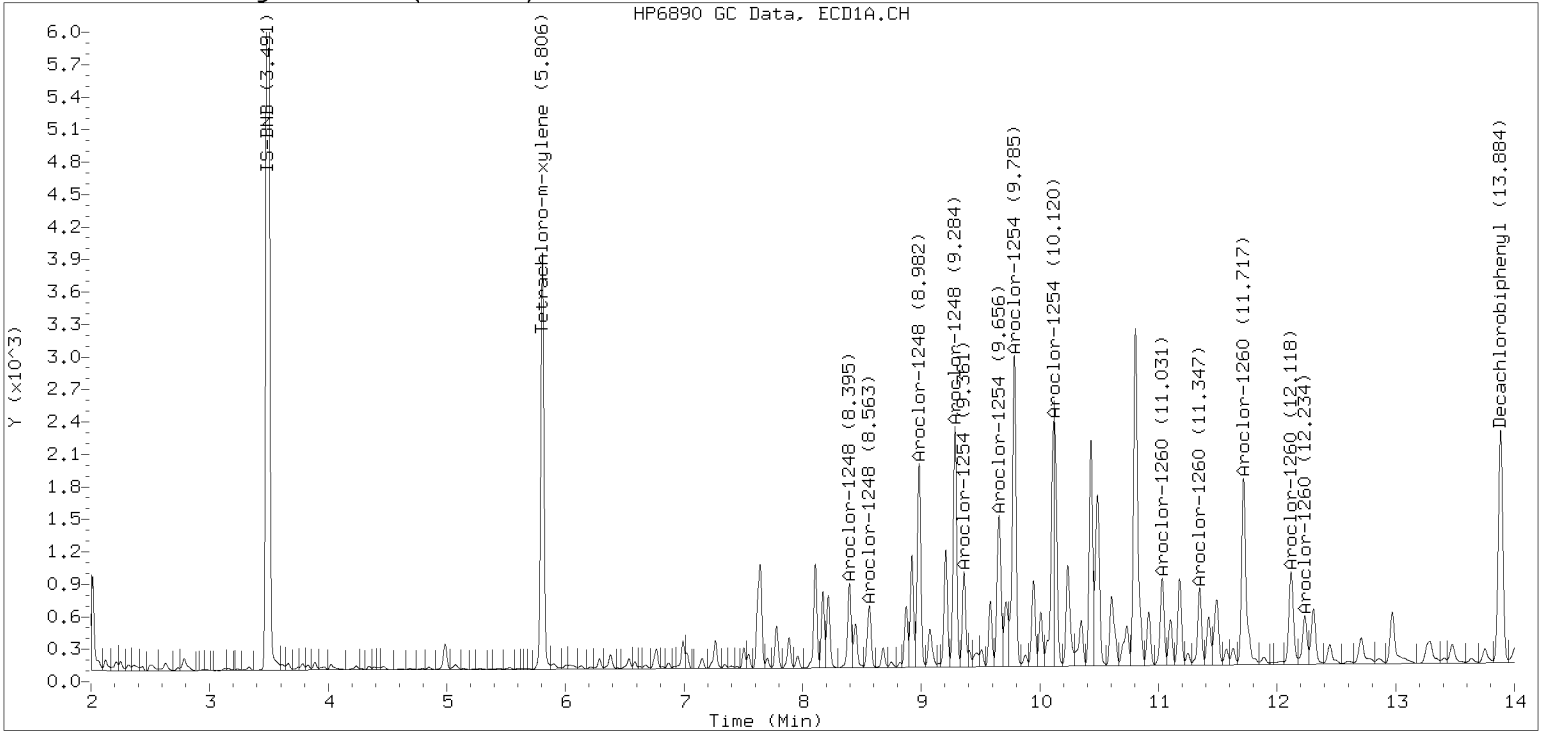
ZB-35 Manual Integration: YES

Manual Peak Adjustment, ZB-5

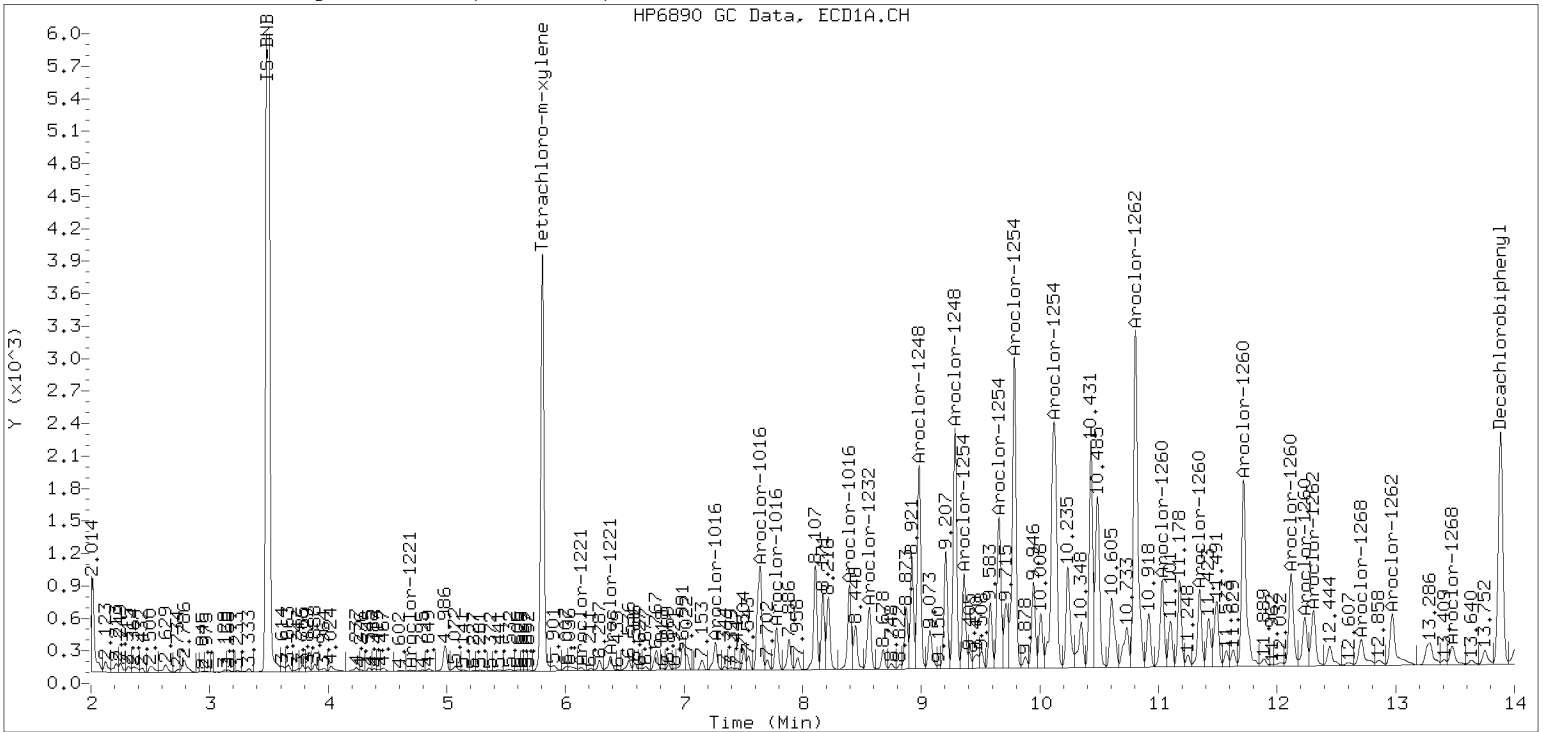
Datafile: ecd7.i/230207.b/02072316ECD7.D

Injection Date: 07-FEB-2023 17:57

Manual Integration (After)



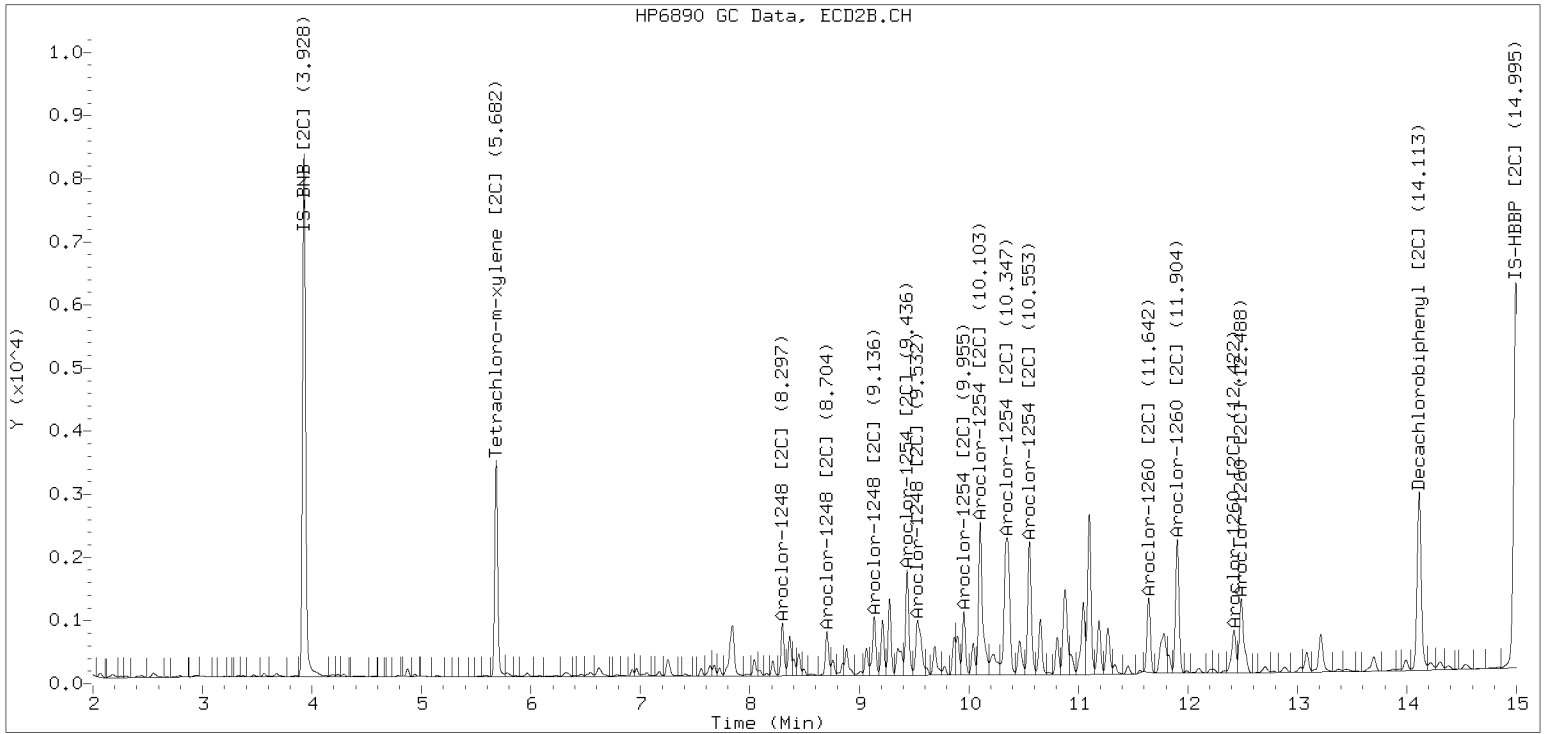
Processed Integration (Before)



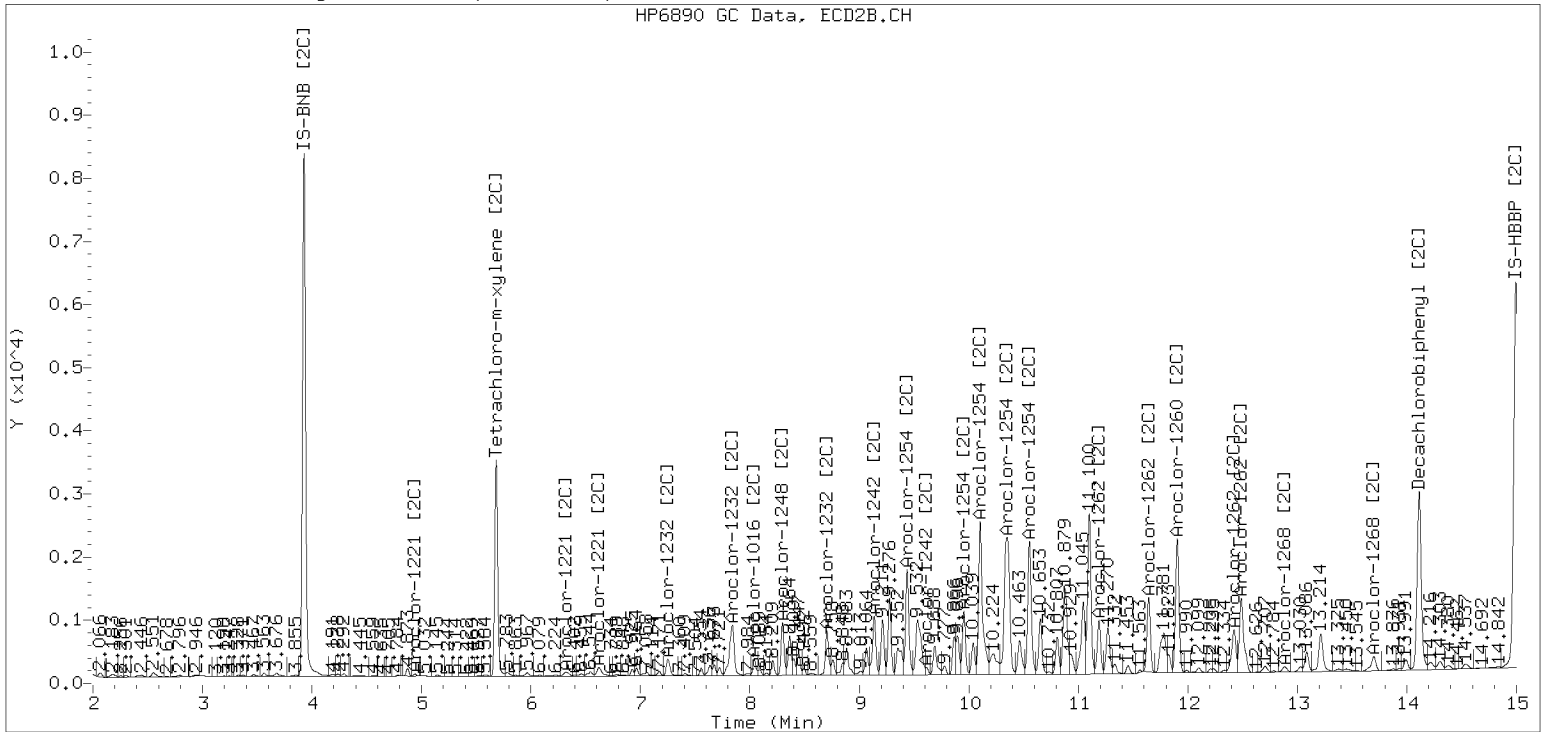
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072316ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)







**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>	
Client: <u>Anchor QEA, LLC</u>		
Project: <u>AOC5 MR Phase 1</u>		
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-07 B</u>	File ID: <u>02072317ECD7.D</u>
Sampled: <u>01/11/23 10:20</u>	Prepared: <u>01/28/23 12:01</u>	Analyzed: <u>02/07/23 18:18</u>
% Solids: <u>60.17</u>	Preparation: <u>EPA 3546 (Microwave)</u>	Initial/Final: <u>20.79 g Wet / 2.5 mL</u>
Batch: <u>BLA0625</u>	Sequence: <u>SLB0109</u>	Calibration: <u>GA00061</u>
Instrument: <u>ECD7</u>	Column 1: <u>ZB5</u>	Column 2: <u>ZB35</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	28.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	45.3	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	29.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9940	5.56	69.5	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9940	5.40	67.6	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9940	5.45	68.1	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9940	5.94	74.3	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072317ECD7.D                   ARI ID: 23A0206-07  
Data file 2: /230207.b/230207.b/02072317ECD7.D           Client ID:  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m       Injection Date: 07-FEB-2023 18:18  
Compound Sublist: PCB.sub                                    Report Date: 02/08/2023 11:48  
Instrument, Inj. Vol.: ecd7.i, 2ul                         Matrix: NONE  
Quant Method: Internal Std                                  Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	161385	5.682	-0.002	143126	27.0	29.7	9.4	Tetrachloro-m-xylene
13.884	-0.005	120004	14.112	-0.005	157217	27.8	27.3	2.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	422258	-16.1
Hexabromobiphenyl	647433	403465	-37.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	356412	5.8
Hexabromobiphenyl	382032	363469	-4.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.006	23300	110.3	1	8.298	-0.005	23538	146.1
Aroclor-1248	2	8.563	-0.011	18129	67.3	2	8.705	-0.005	20084	115.8
Aroclor-1248	3	8.983	-0.011	59212	114.9	3	9.137	-0.014	28869	136.2
Aroclor-1248	4	9.284	-0.008	69760	273.4	4	9.531	-0.043	28931	110.4
Total CollAve (4 peaks):				141.5		Total Col2Ave (4 peaks):				127.1 RPD = 11
Corrected Ave (3 peaks):				97.5		Corrected Ave (3 peaks):				120.8 RPD = 21
Aroclor-1254	1	9.284	-0.014	69760	162.1	1	9.436	-0.007	55005	212.7
Aroclor-1254	2	9.360	-0.017	28406	154.6	2	9.955	-0.008	30302	145.0
Aroclor-1254	3	9.654	-0.015	53311	193.3	3	10.103	-0.011	95021	208.4
Aroclor-1254	4	9.785	-0.023	96194	178.0	4	10.345	-0.017	120168	263.6
Aroclor-1254	5	10.126	-0.052	45907	130.7	5	10.553	-0.010	76919	302.9
Total CollAve (5 peaks):				163.7		Total Col2Ave (5 peaks):				226.5 RPD = 32
Corrected Ave (4 peaks):				156.3		Corrected Ave (4 peaks):				207.4 RPD = 28
<b>172</b>										
Aroclor-1260	1	11.032	-0.012	31632	139.7	1	11.642	-0.007	42808	163.3
Aroclor-1260	2	11.348	-0.013	27129	116.6	2	11.903	-0.009	75256	113.4
Aroclor-1260	3	11.717	-0.017	78093	127.5	3	12.422	-0.009	31179	188.6
Aroclor-1260	4	12.118	-0.021	41428	130.9	4	12.487	-0.009	55605	129.5
Aroclor-1260	5	12.233	-0.011	19593	142.0	NS	---			----
Total CollAve (5 peaks):				131.3		Total Col2Ave (4 peaks):				148.7 RPD = 12
Corrected Ave (4 peaks):				128.7		Corrected Ave (3 peaks):				135.4 RPD = 5
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.788) = 1645704 Col1 Total PCB = 0.3 ppm\*  
Total PCB Area Col2 (5.785 - 14.017) = 1531052 Col2 Total PCB = 0.4 ppm\*

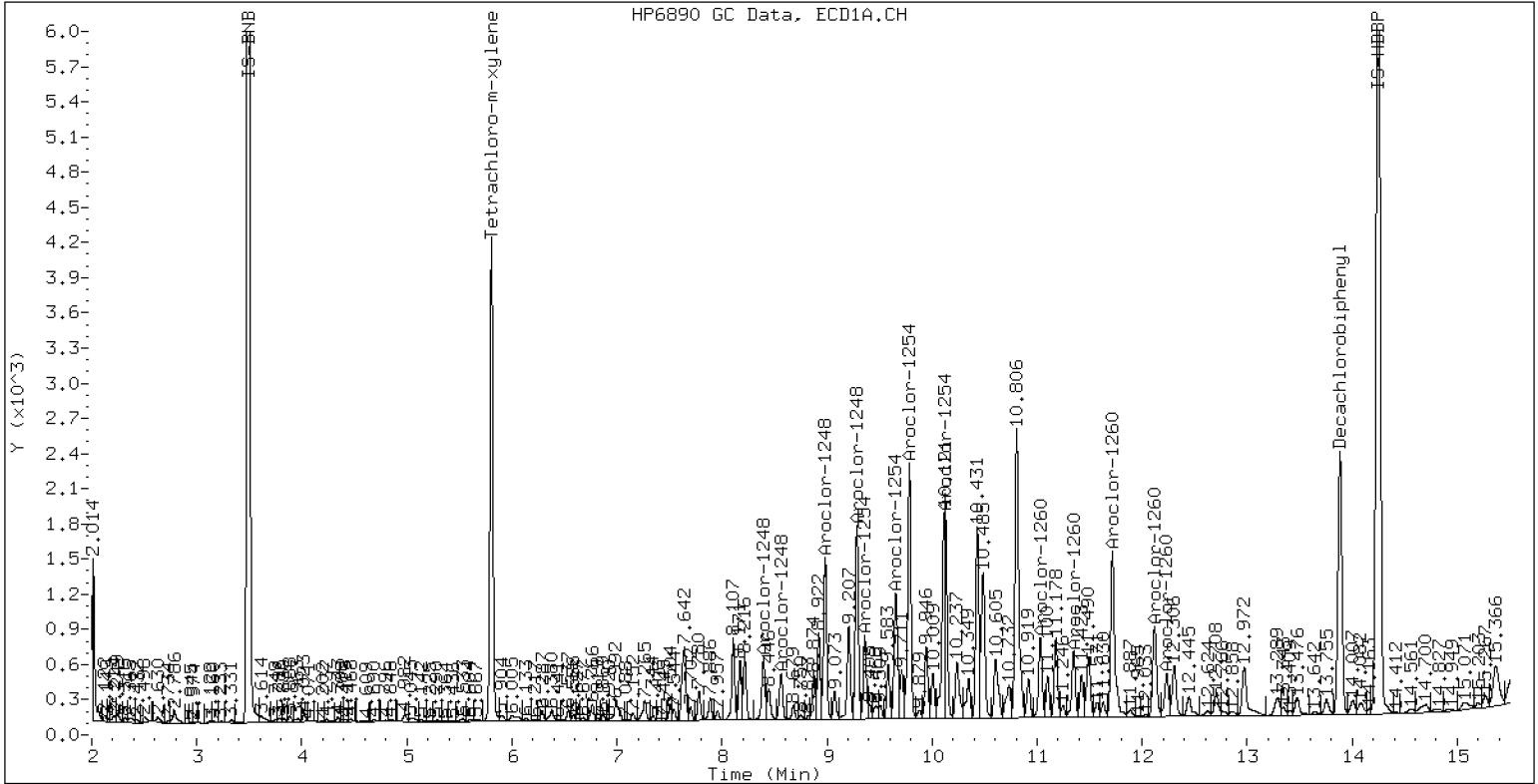
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-07

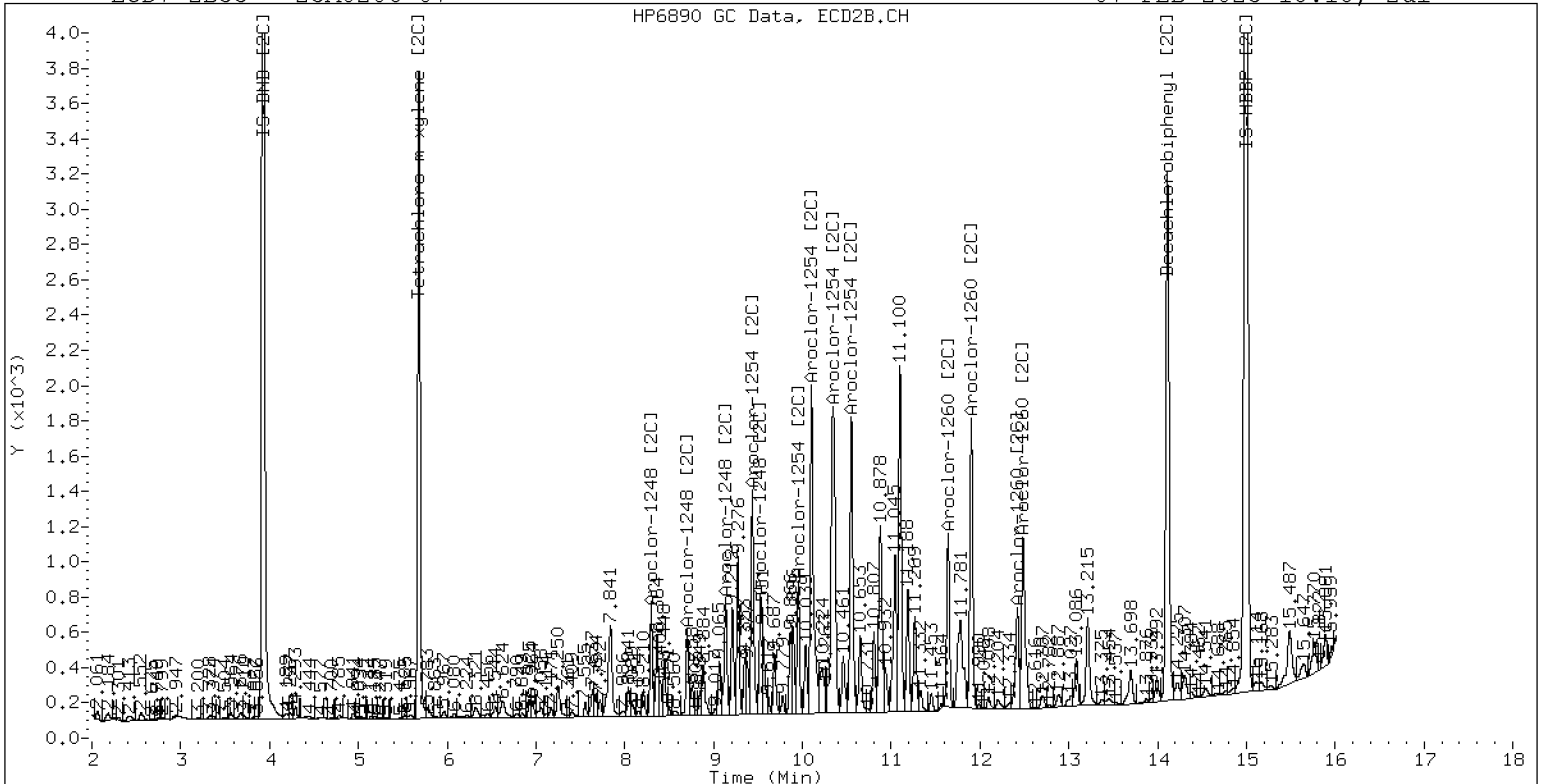
07-FEB-2023 18:18, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-07

07-FEB-2023 18:18, 2ul



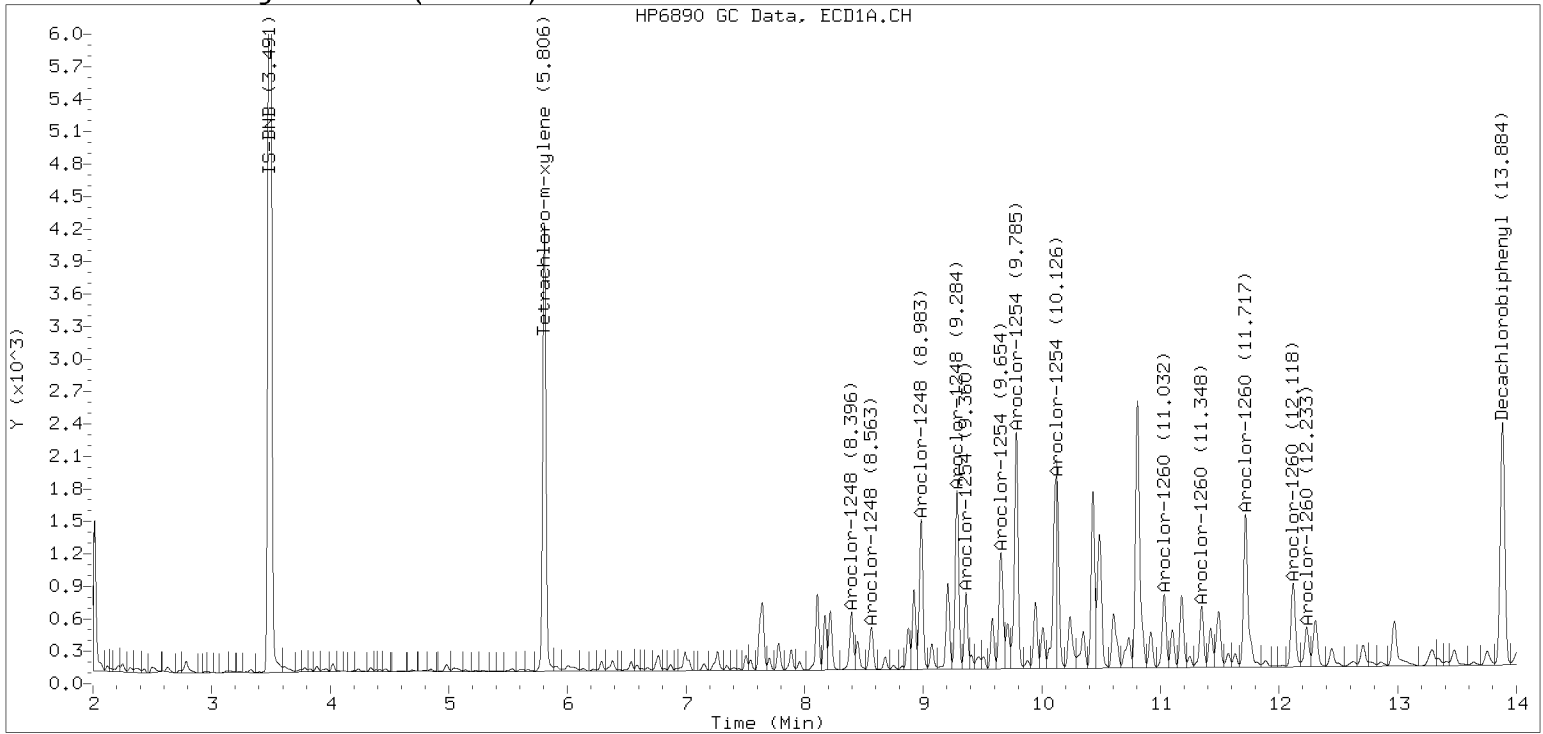
ZB-35 Manual Integration: YES

# Manual Peak Adjustment, ZB-5

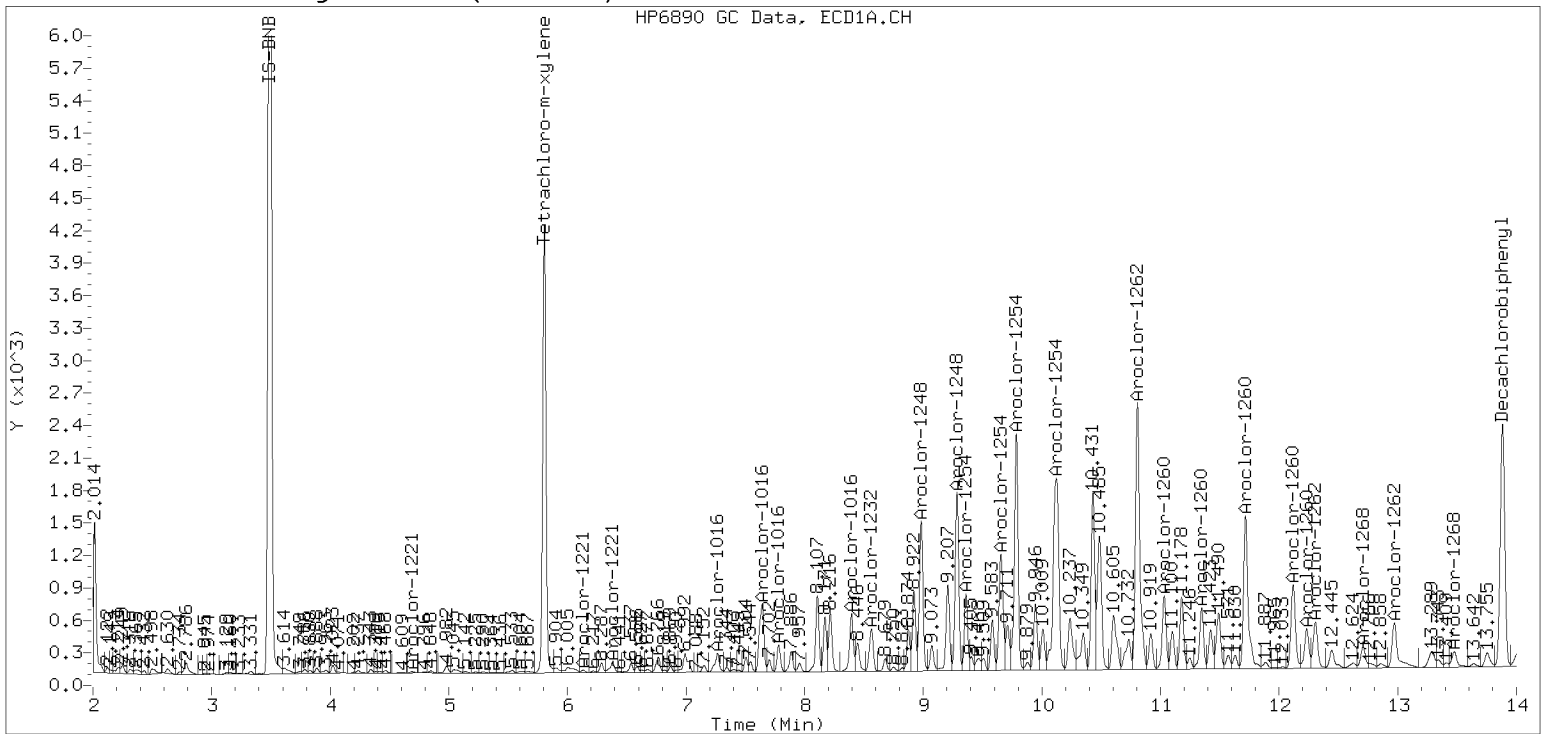
Datafile: ecd7.i/230207.b/02072317ECD7.D

Injection Date: 07-FEB-2023 18:18

## Manual Integration (After)



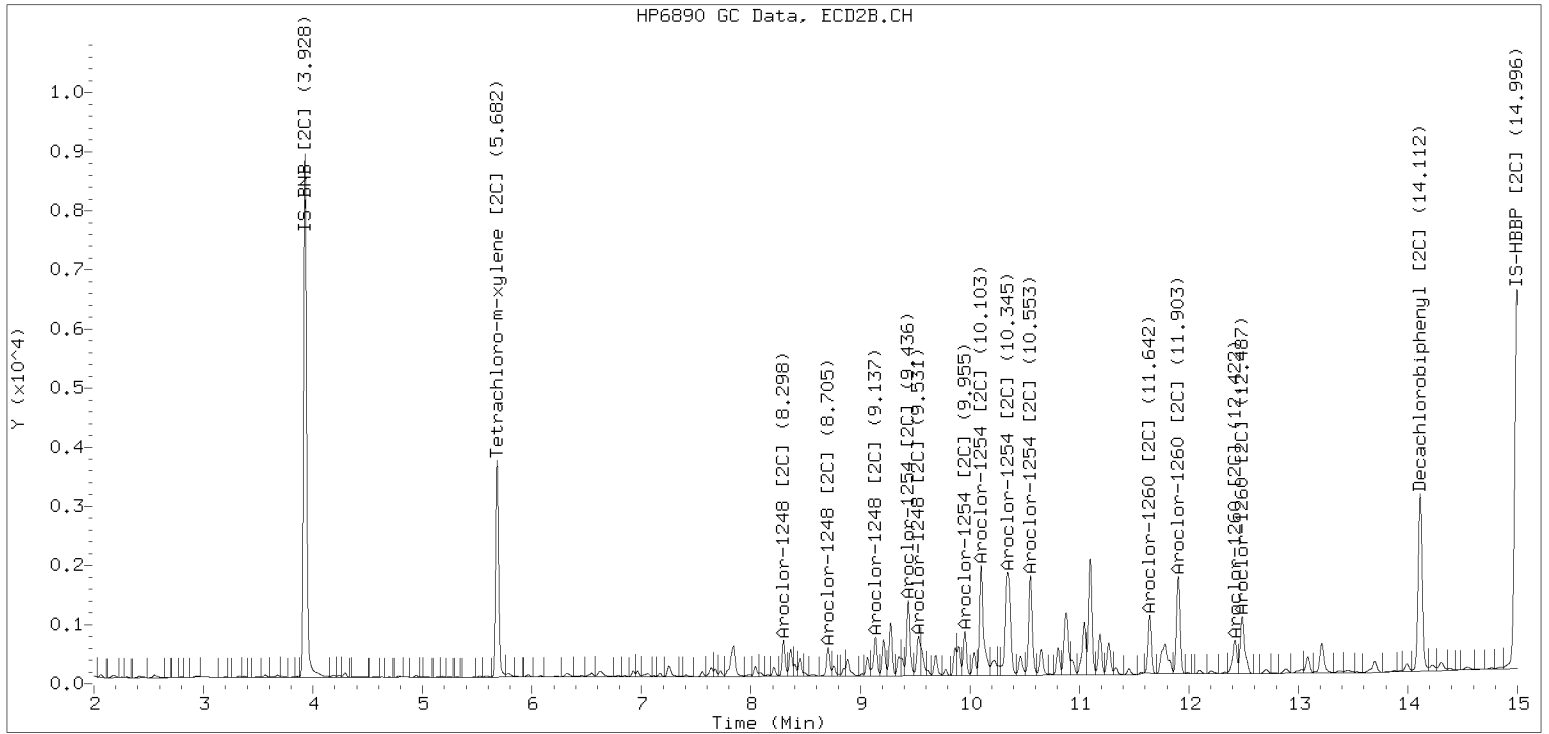
## Processed Integration (Before)



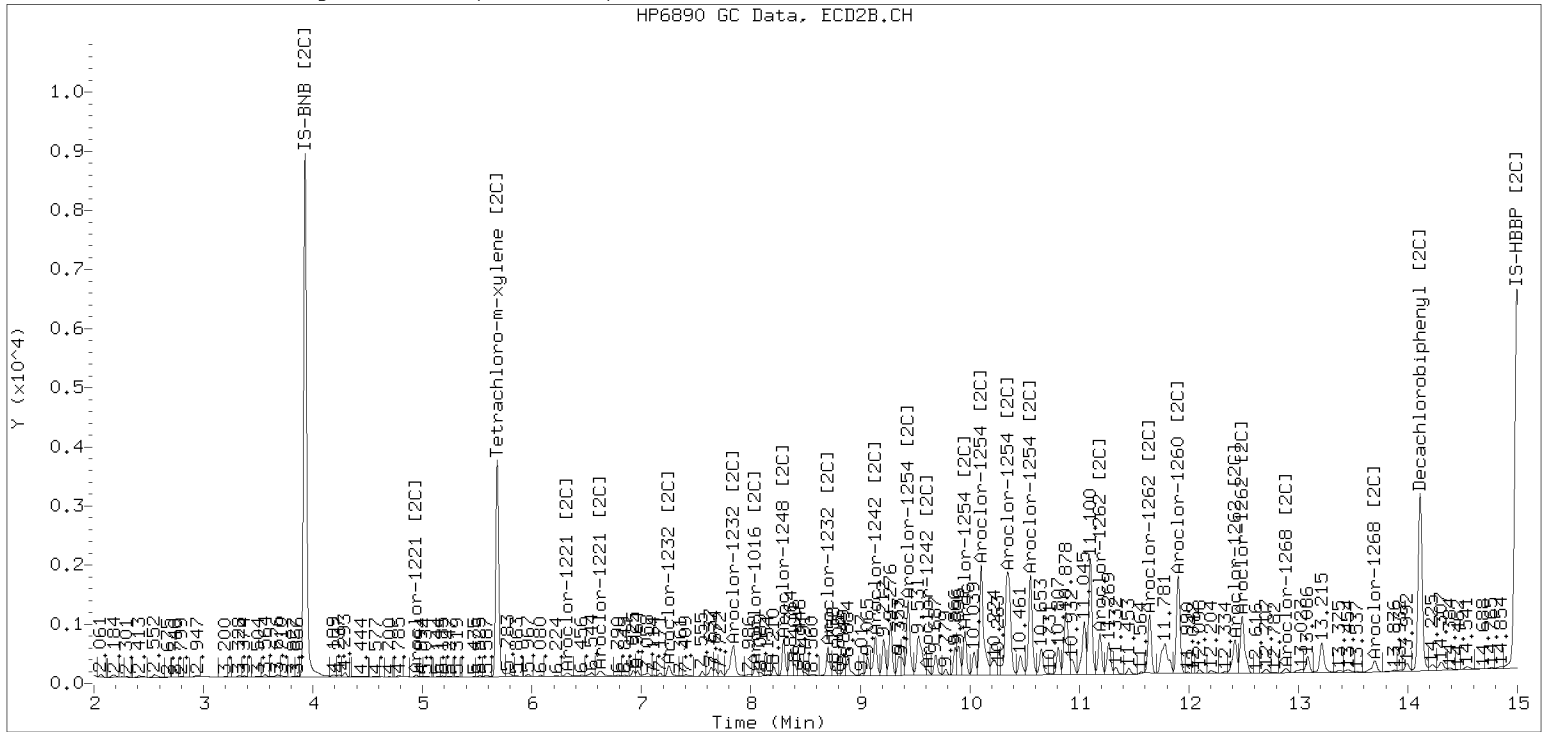
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230207.b/230207.b/02072317ECD7.D Injection Date: 07-FEB-2023

Manual Integration (After)



Processed Integration (Before)





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: 23A0206-08 B

File ID: 02082309ECD7.D

Sampled: 01/11/23 10:40

Prepared: 01/28/23 12:01

Analyzed: 02/08/23 12:26

% Solids: 51.97

Preparation: EPA 3546 (Microwave)

Initial/Final: 24.1 g Wet / 2.5 mL

Batch: BLA0625

Sequence: SLB0127

Calibration: GA00061

Instrument: ECD7

Column 1: ZB5

Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	28.4	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	48.0	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	33.2	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9842	5.62	70.4	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9842	5.21	65.3	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9842	5.39	67.5	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9842	5.73	71.8	44 - 120	



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082309ECD7.D  
Data file 2: /230208.b/230208.b/02082309ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-08  
Client ID:  
Injection Date: 08-FEB-2023 12:26  
Report Date: 02/09/2023 10:55  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.805	-0.002	133560	5.682	-0.003	122557	26.1	28.7	9.6	Tetrachloro-m-xylene
13.884	-0.004	110805	14.114	-0.003	143326	28.2	27.0	4.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	361969	-28.1
Hexabromobiphenyl	647433	367872	-43.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	315547	-6.3
Hexabromobiphenyl	382032	334698	-12.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.396	-0.010	21799	120.4	1	8.298	-0.005	22345	156.7	
Aroclor-1248	2	8.564	-0.016	18306	79.3	2	8.705	-0.005	20271	132.0	
Aroclor-1248	3	8.983	-0.016	54091	122.4	3	9.137	-0.014	31841	169.7	
Aroclor-1248	4	9.285	-0.008	61933	283.2	4	9.531	-0.043	25474	109.8	
Total CollAve (4 peaks):				151.3	Total Col2Ave (4 peaks):				142.1	RPD = 6	
Corrected Ave (3 peaks):				107.4	Corrected Ave (3 peaks):				132.8	RPD = 21	
Aroclor-1254	1	9.285	-0.007	61933	167.9	1	9.437	-0.007	51860	226.5	
Aroclor-1254	2	9.361	-0.009	23919	151.9	2	9.955	-0.009	29493	159.4	
Aroclor-1254	3	9.658	-0.003	56700	239.9	3	10.104	-0.012	85621	212.1	
Aroclor-1254	4	9.786	-0.013	87220	188.3	4	10.347	-0.018	113628	281.5	
Aroclor-1254	5	10.120	-0.037	112148	372.4	5	10.553	-0.010	72325	321.7	
Total CollAve (5 peaks):				224.1	Total Col2Ave (5 peaks):				240.3	RPD = 7	
Corrected Ave (4 peaks):				187.0	Corrected Ave (4 peaks):				219.9	RPD = 16	
Aroclor-1260	1	11.032	-0.008	31576	153.0	1	11.643	-0.006	39085	161.9	
Aroclor-1260	2	11.347	-0.009	25513	120.2	2	11.904	-0.008	74959	122.7	
Aroclor-1260	3	11.719	-0.009	77045	137.9	3	12.423	-0.008	35343	232.1	
Aroclor-1260	4	12.119	-0.012	38782	134.4	4	12.488	-0.008	58409	147.7	
Aroclor-1260	5	12.235	-0.005	21097	167.7	NS	---			---	
Total CollAve (5 peaks):				142.6	Total Col2Ave (4 peaks):				166.1	RPD = 15	
Corrected Ave (4 peaks):				136.4	Corrected Ave (3 peaks):				144.1	RPD = 6	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						

Total PCB Area Col1 (5.908 - 13.789) = 3485639 Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 3005483 Col2 Total PCB = 0.9 ppm\*

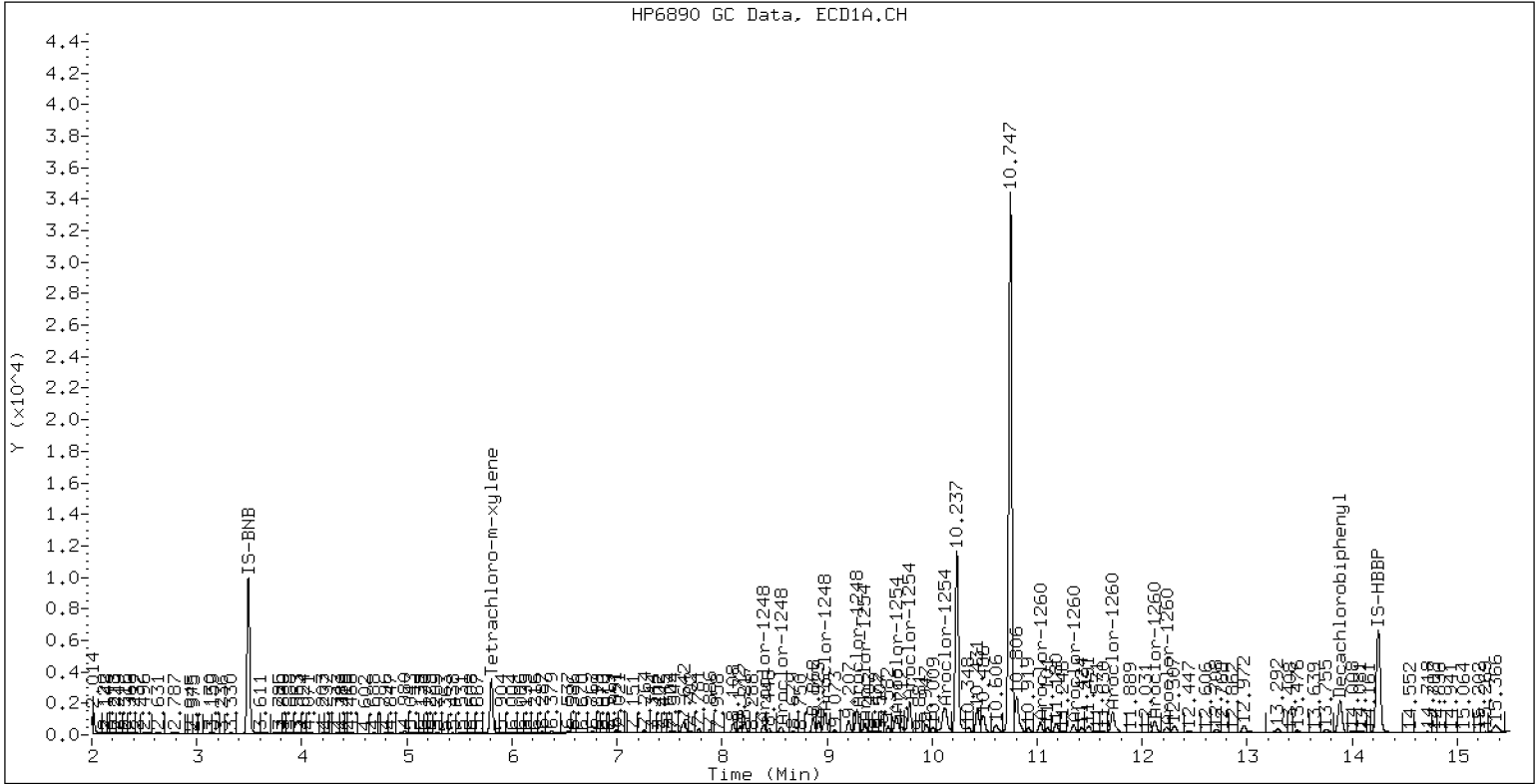
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-08

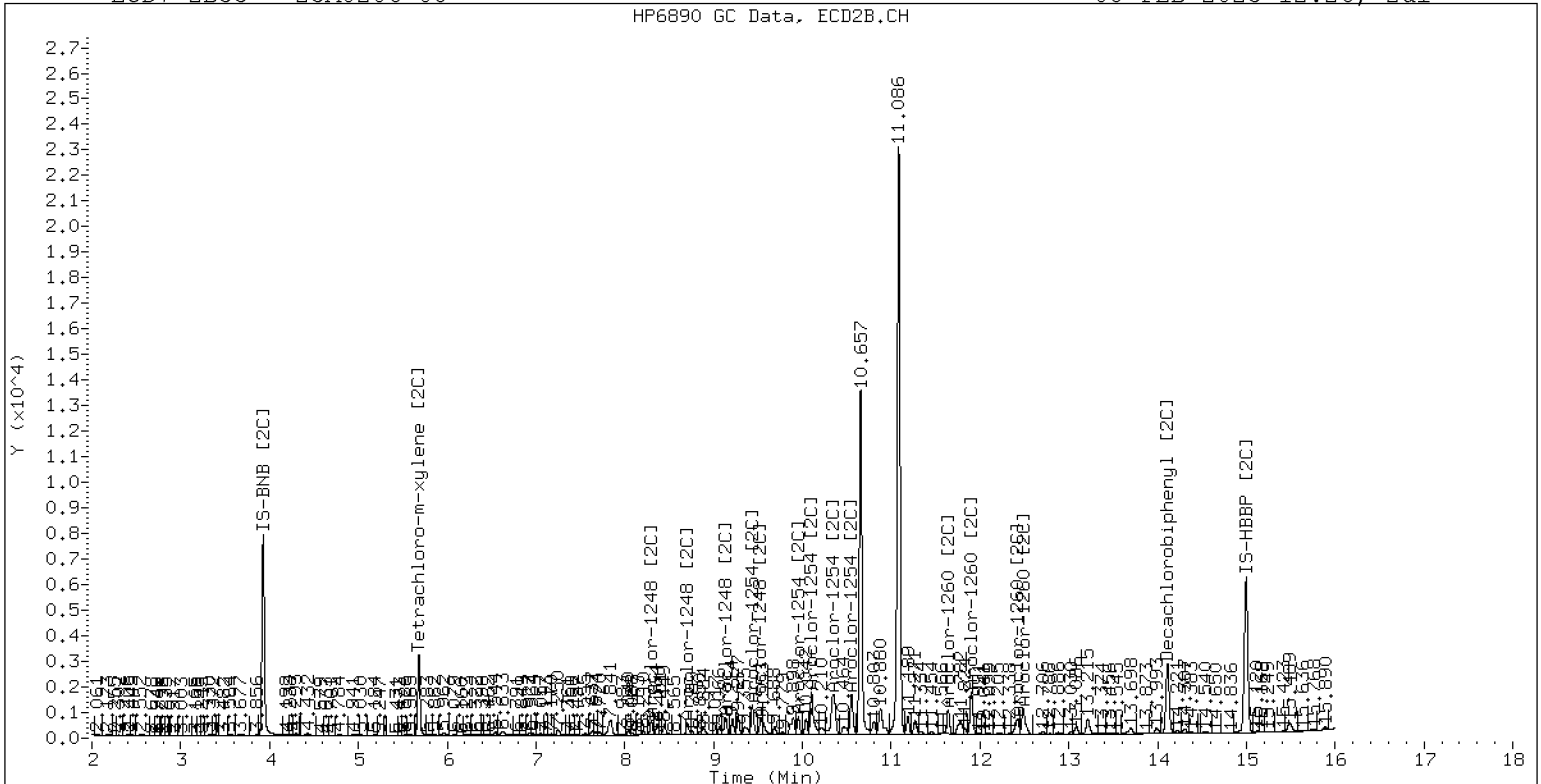
08-FEB-2023 12:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-08

08-FEB-2023 12:26, 2ul

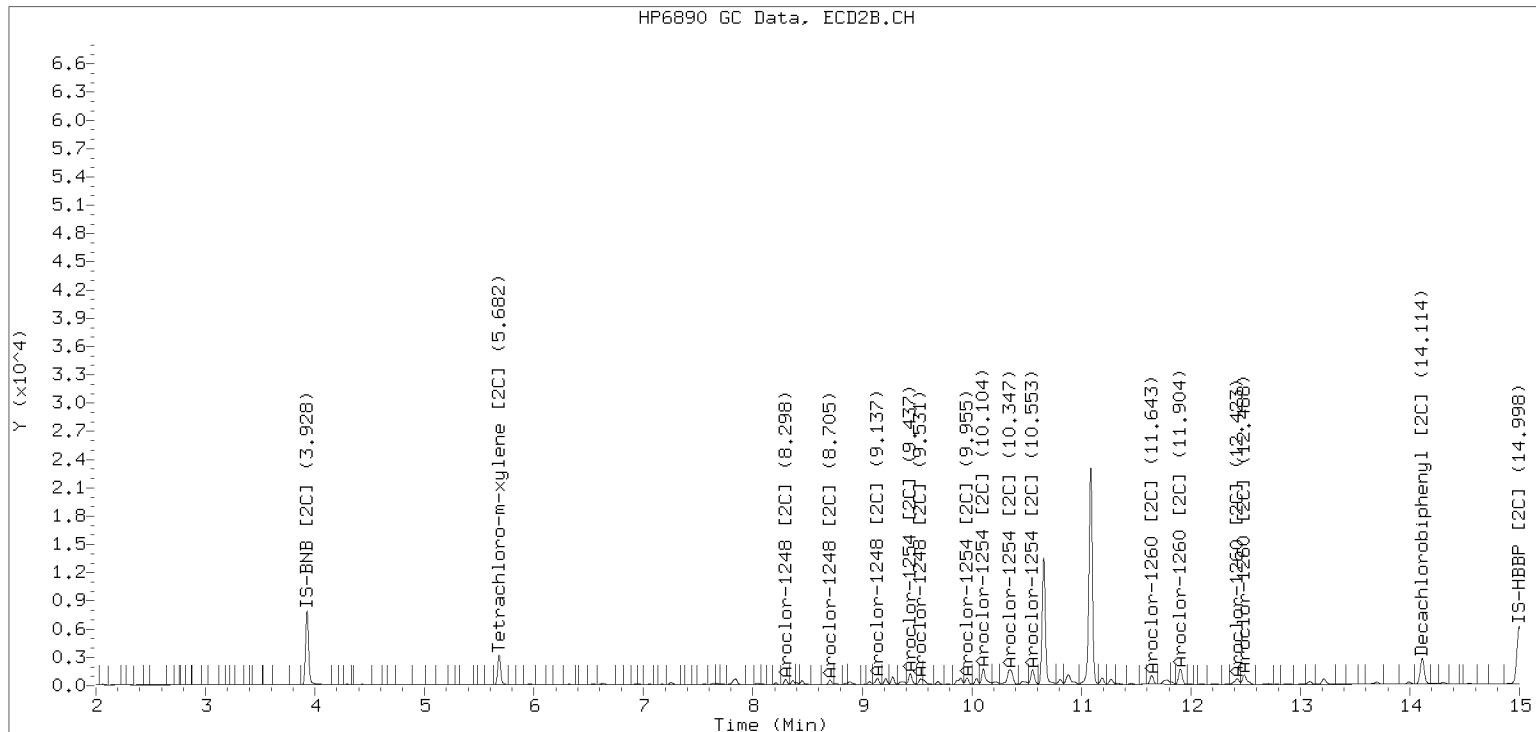


ZB-35 Manual Integration: YES

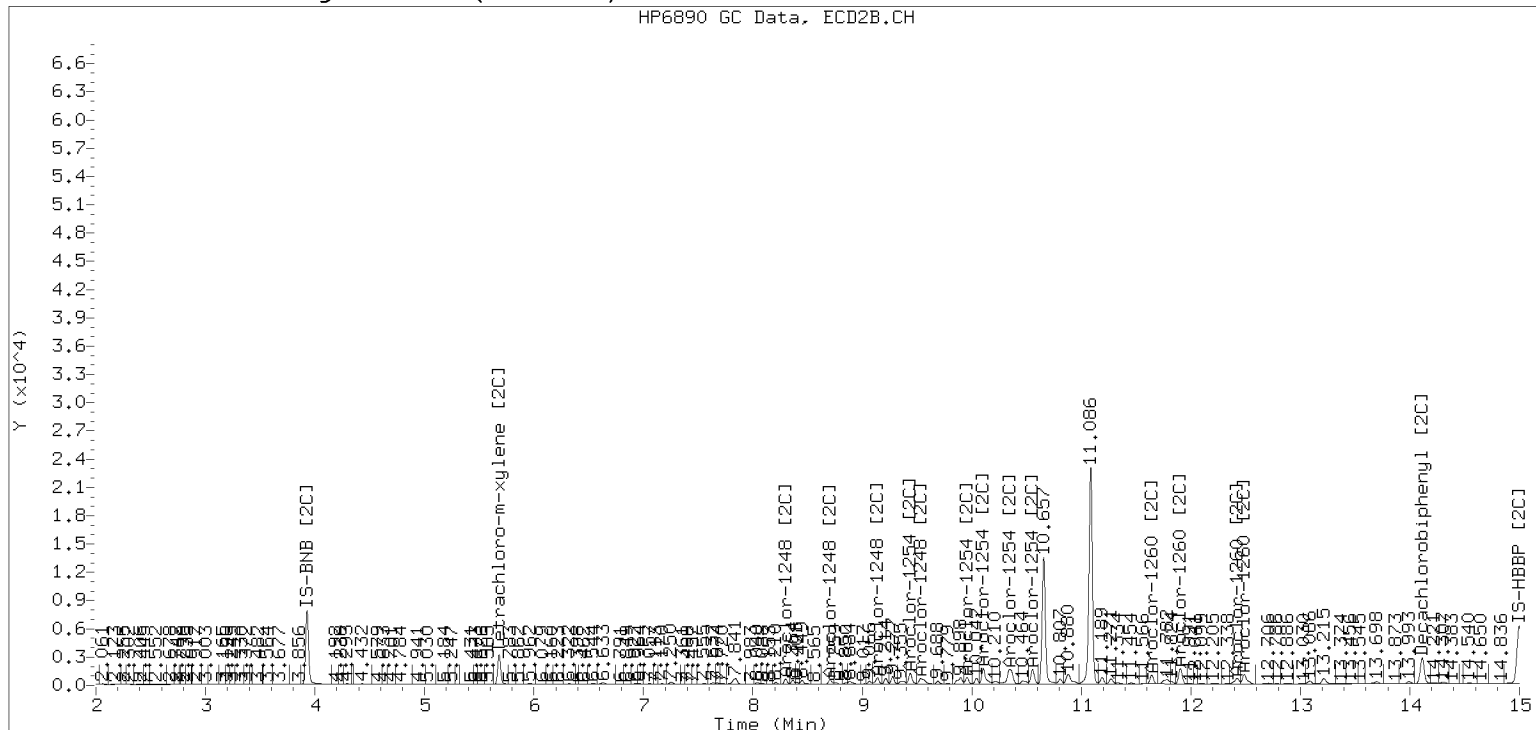
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082309ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: 23A0206-09 B

File ID: 02082310ECD7.D

Sampled: 01/11/23 11:15

Prepared: 01/28/23 12:01

Analyzed: 02/08/23 12:47

% Solids: 41.88

Preparation: EPA 3546 (Microwave)

Initial/Final: 29.9 g Wet / 2.5 mL

Batch: BLA0625

Sequence: SLB0127

Calibration: GA00061

Instrument: ECD7

Column 1: ZB5

Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	34.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	56.3	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	40.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9859	5.65	70.8	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9859	5.13	64.3	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9859	5.45	68.3	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9859	5.53	69.3	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082310ECD7.D  
Data file 2: /230208.b/230208.b/02082310ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-09  
Client ID:  
Injection Date: 08-FEB-2023 12:47  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	129421	5.682	-0.002	116887	25.7	27.7	7.5	Tetrachloro-m-xylene
13.884	-0.005	103421	14.114	-0.003	136909	28.3	27.3	3.7	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	356256	-29.2
Hexabromobiphenyl	647433	341408	-47.3

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	312008	-7.4
Hexabromobiphenyl	382032	315918	-17.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	---			0.0	3	---			0.0	
Aroclor-1016	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	---			0.0	
Aroclor-1221	3	---			0.0	3	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	---			0.0	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	---			0.0	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	---			0.0	3	---			0.0	
Aroclor-1242	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.396	-0.010	27796	156.0	1	8.299	-0.005	27187	192.8	
Aroclor-1248	2	8.564	-0.016	24550	108.0	2	8.705	-0.005	25374	167.1	
Aroclor-1248	3	8.982	-0.017	67295	154.8	3	9.137	-0.014	37831	203.9	
Aroclor-1248	4	9.285	-0.008	70351	326.8	4	9.534	-0.041	29221	127.4	
Total CollAve (4 peaks):				186.4	Total Col2Ave (4 peaks):				172.8	RPD = 8	
Corrected Ave (3 peaks):				139.6	Corrected Ave (3 peaks):				162.4	RPD = 15	
Aroclor-1254	1	9.285	-0.007	70351	193.8	1	9.437	-0.007	59184	261.5	
Aroclor-1254	2	9.361	-0.010	27886	179.9	2	9.955	-0.009	34388	188.0	
Aroclor-1254	3	9.658	-0.004	60361	259.5	3	10.103	-0.012	102838	257.7	
Aroclor-1254	4	9.785	-0.014	98551	216.2	4	10.345	-0.020	130929	328.1	
Aroclor-1254	5	10.122	-0.035	120929	408.0	5	10.554	-0.009	83322	374.8	
Total CollAve (5 peaks):				251.4	Total Col2Ave (5 peaks):				282.0	RPD = 11	
Corrected Ave (4 peaks):				212.3	Corrected Ave (4 peaks):				258.8	RPD = 20	
Aroclor-1260	1	11.032	-0.007	32077	167.5	1	11.643	-0.006	46656	204.7	
Aroclor-1260	2	11.349	-0.007	30943	157.1	2	11.904	-0.008	84018	145.7	
Aroclor-1260	3	11.718	-0.010	85111	164.2	3	12.423	-0.008	41039	285.5	
Aroclor-1260	4	12.118	-0.014	41889	156.4	4	12.488	-0.008	62495	167.5	
Aroclor-1260	5	12.235	-0.005	21793	186.7	NS	---			----	
Total CollAve (5 peaks):				166.4	Total Col2Ave (4 peaks):				200.9	RPD = 19	
Corrected Ave (4 peaks):				161.3	Corrected Ave (3 peaks):				172.6	RPD = 7	
Aroclor-1262	1	---			0.0	1	---			0.0	
Aroclor-1262	2	---			0.0	2	---			0.0	
Aroclor-1262	3	---			0.0	3	---			0.0	
Aroclor-1262	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	---			0.0	1	---			0.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	---			0.0	3	---			0.0	
Aroclor-1268	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						



Total PCB Area Col1 (5.908 - 13.789) = 1869458 Col1 Total PCB = 0.5 ppm\*  
Total PCB Area Col2 (5.785 - 14.016) = 1818248 Col2 Total PCB = 0.6 ppm\*

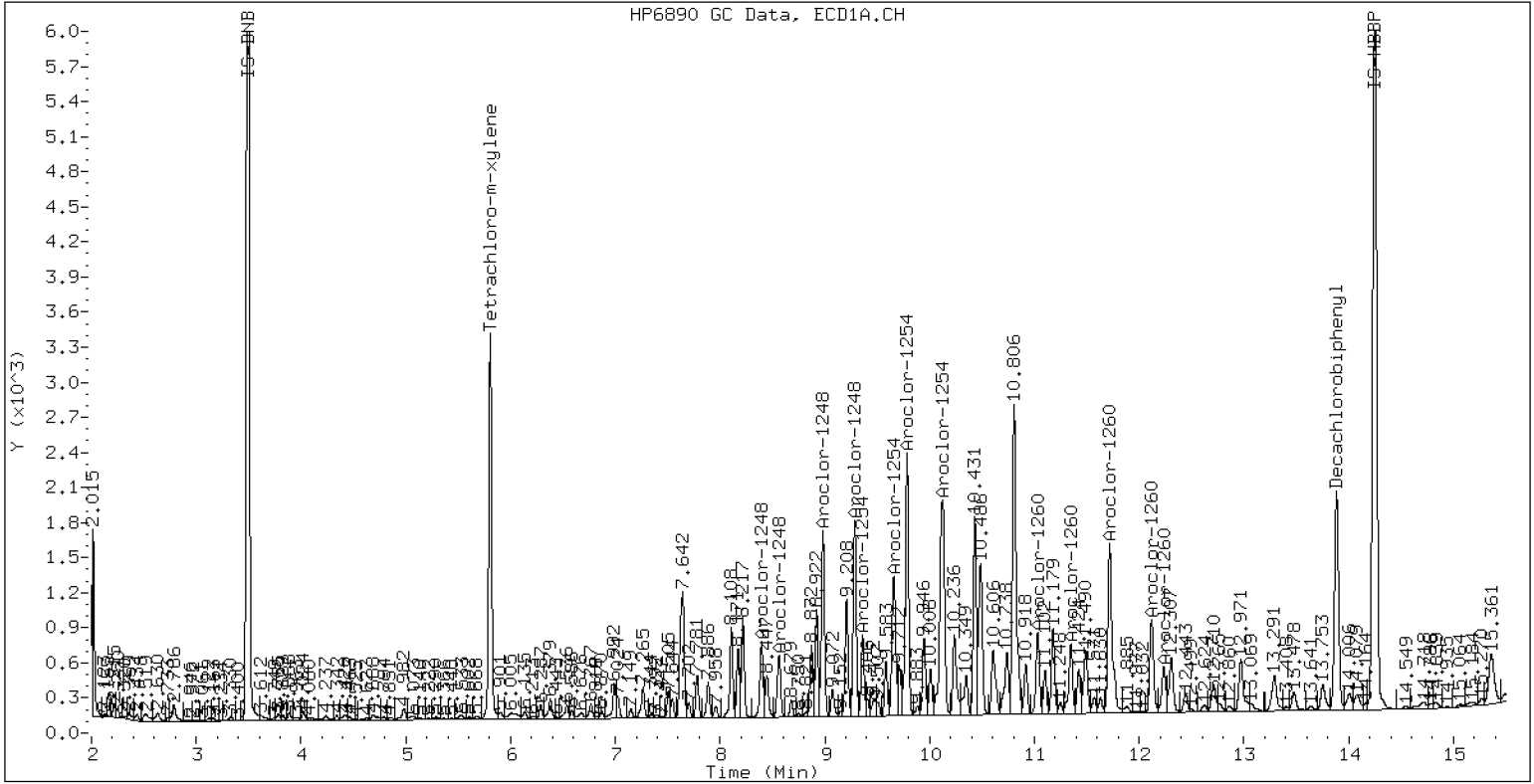
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-09

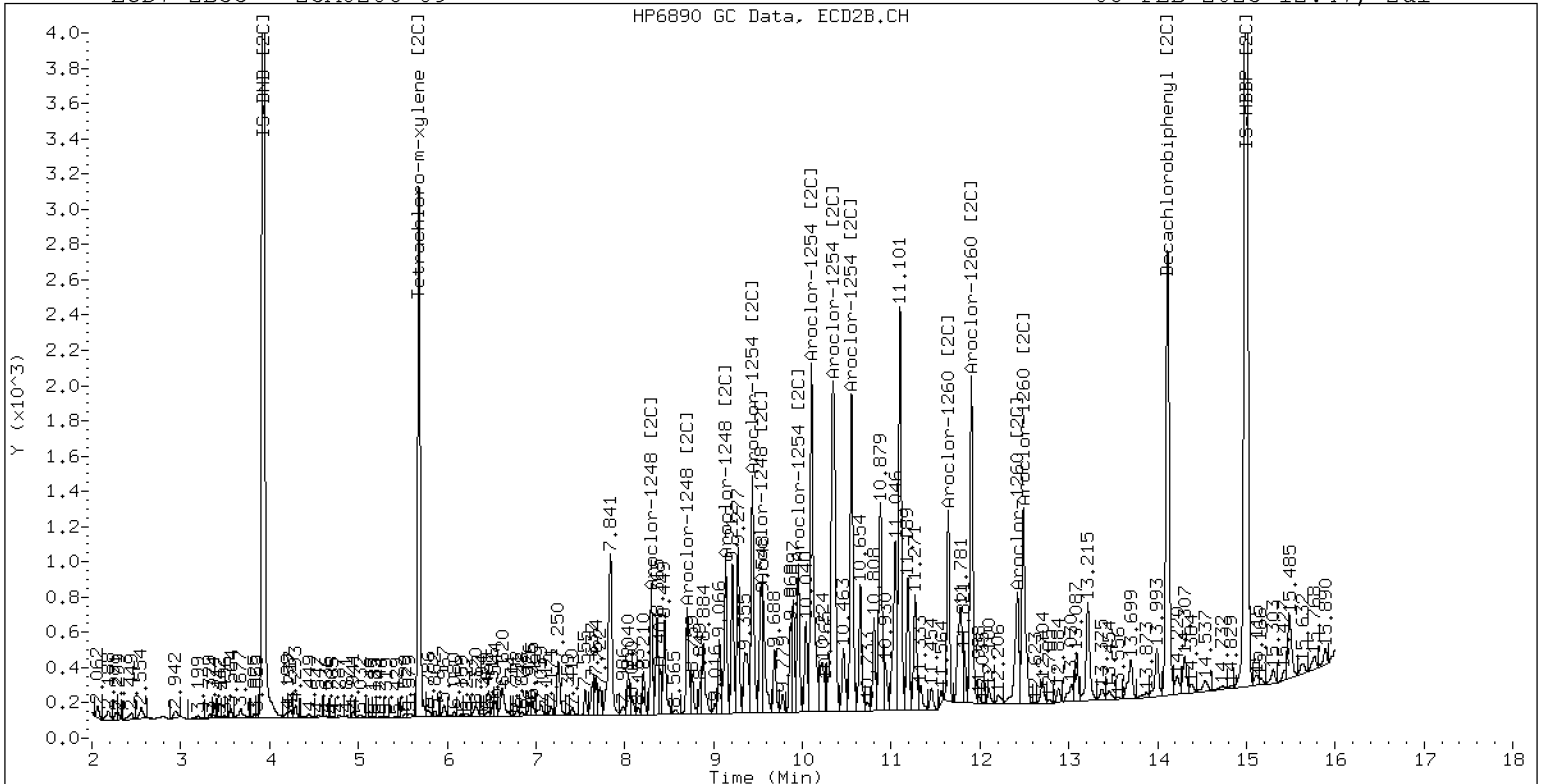
08-FEB-2023 12:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-09

08-FEB-2023 12:47, 2ul

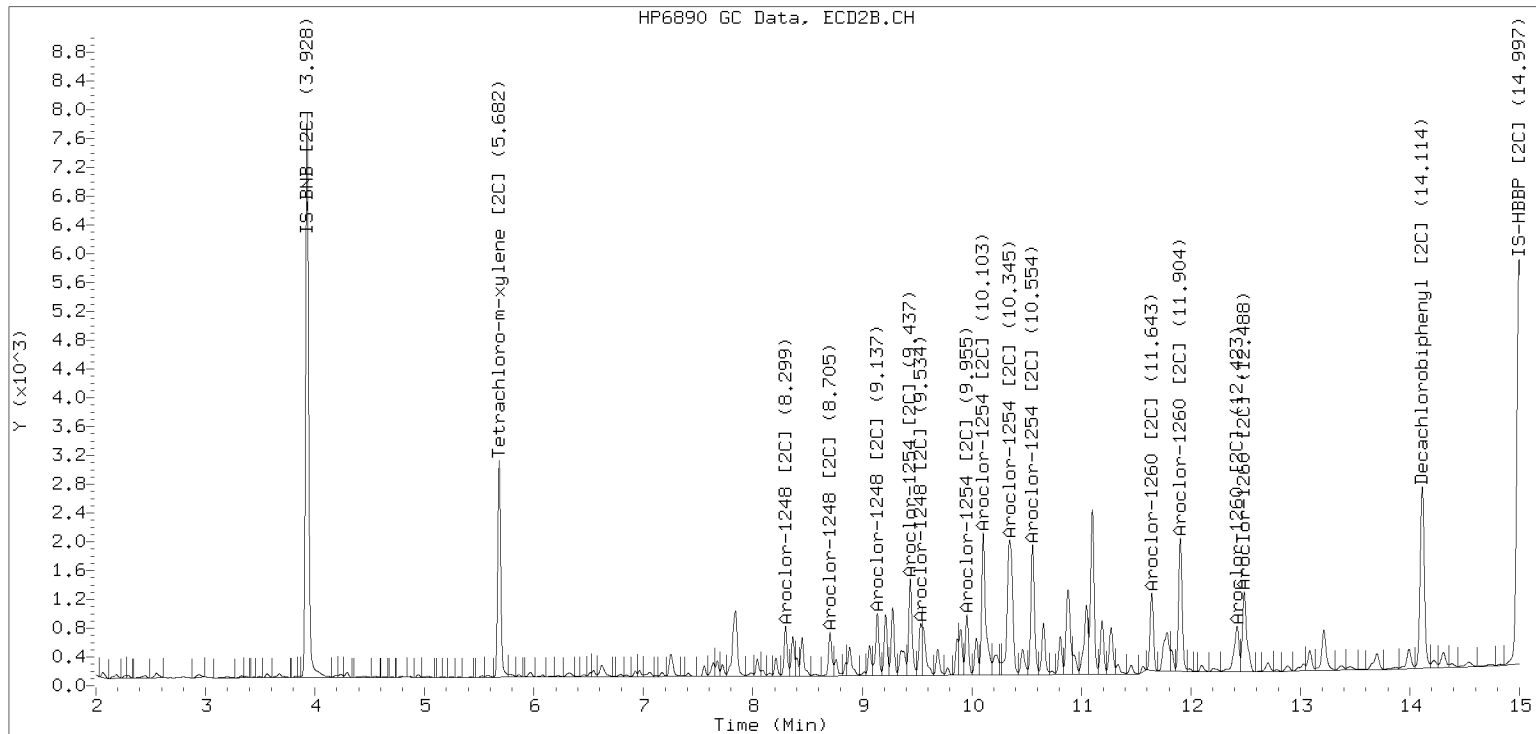


ZB-35 Manual Integration: YES

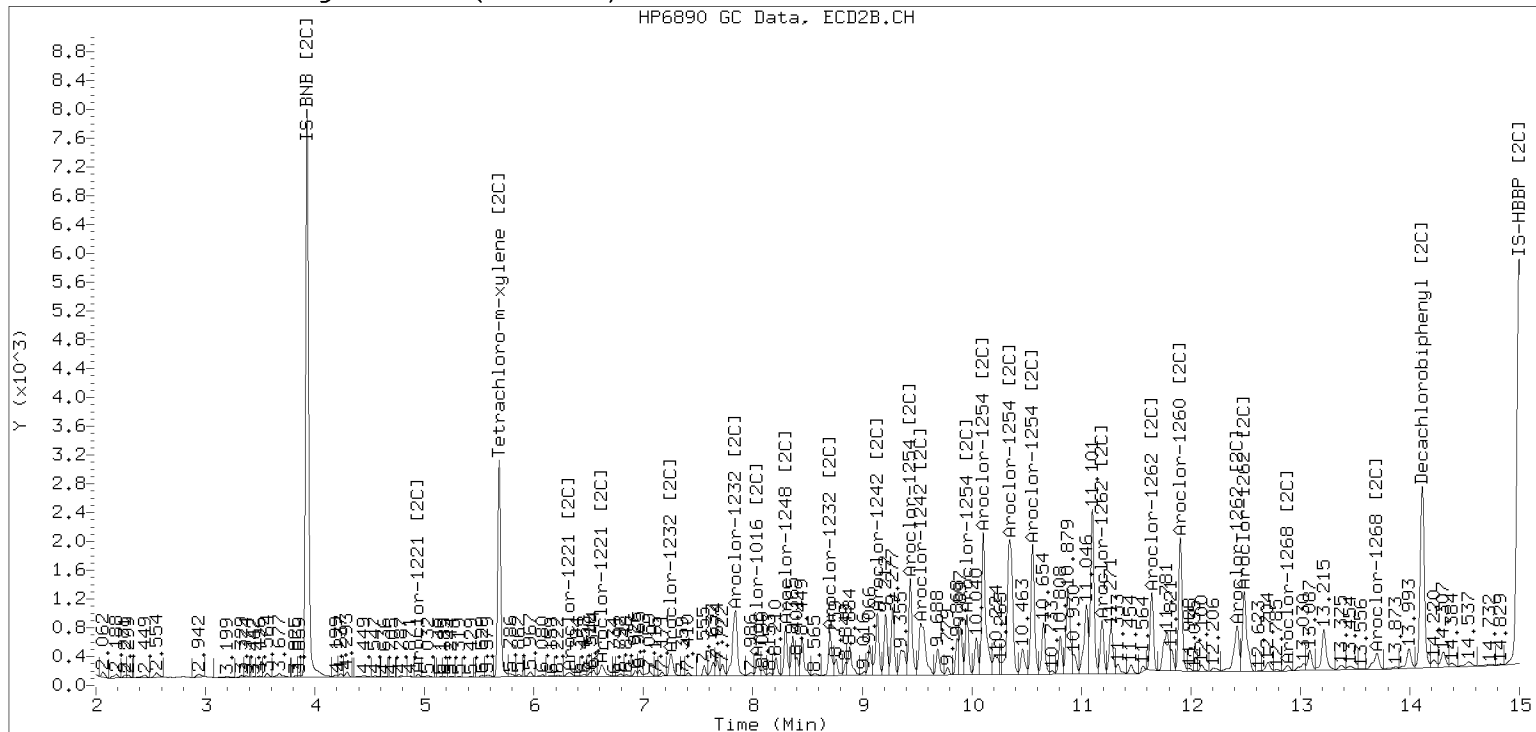
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082310ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-10 B</u>
		File ID:	<u>02082311ECD7.D</u>
Sampled:	<u>01/11/23 11:28</u>	Prepared:	<u>01/28/23 12:01</u>
		Analyzed:	<u>02/08/23 13:08</u>
% Solids:	<u>42.92</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>29.15 g Wet / 2.5 mL</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0127</u>
		Calibration:	<u>GA00061</u>
Instrument:	<u>ECD7</u>	Column 1:	<u>ZB5</u>
		Column 2:	<u>ZB35</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	37.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	62.4	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	45.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9929	5.61	70.2	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9929	4.94	61.9	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9929	5.51	68.9	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9929	5.35	66.9	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082311ECD7.D  
Data file 2: /230208.b/230208.b/02082311ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-10  
Client ID:  
Injection Date: 08-FEB-2023 13:08  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	126240	5.682	-0.003	113468	24.7	26.8	7.9	Tetrachloro-m-xylene
13.883	-0.005	100722	14.113	-0.003	134571	28.1	27.6	1.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	360991	-28.3
Hexabromobiphenyl	647433	335243	-48.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	313533	-6.9
Hexabromobiphenyl	382032	307587	-19.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.396	-0.010	29227	161.8	1	8.299	-0.005	29488	208.1
Aroclor-1248	2	8.564	-0.016	25372	110.1	2	8.705	-0.005	27175	178.1
Aroclor-1248	3	8.982	-0.017	73327	166.4	3	9.138	-0.014	40798	218.9
Aroclor-1248	4	9.286	-0.008	78395	359.4	4	9.534	-0.041	33635	145.9
Total CollAve (4 peaks):				199.5	Total Col2Ave (4 peaks):				187.7	RPD = 6
Corrected Ave (3 peaks):				146.1	Corrected Ave (3 peaks):				177.4	RPD = 19
Aroclor-1254	1	9.286	-0.007	78395	213.1	1	9.438	-0.007	65508	288.0
Aroclor-1254	2	9.361	-0.010	30511	194.2	2	9.956	-0.008	37709	205.1
Aroclor-1254	3	9.657	-0.005	66003	280.0	3	10.105	-0.010	113530	283.1
Aroclor-1254	4	9.785	-0.013	108316	234.5	4	10.346	-0.020	148715	370.8
Aroclor-1254	5	10.121	-0.036	134726	448.5	5	10.554	-0.009	92761	415.3
Total CollAve (5 peaks):				274.1	Total Col2Ave (5 peaks):				312.5	RPD = 13
Corrected Ave (4 peaks):				230.5	Corrected Ave (4 peaks):				286.7	RPD = 22
Aroclor-1260	1	11.032	-0.008	34590	183.9	1	11.643	-0.006	51788	233.4
Aroclor-1260	2	11.347	-0.009	31384	162.3	2	11.904	-0.008	91964	163.8
Aroclor-1260	3	11.718	-0.010	95224	187.1	3	12.422	-0.008	44946	321.2
Aroclor-1260	4	12.119	-0.013	46425	176.5	4	12.488	-0.007	66546	183.2
Aroclor-1260	5	12.233	-0.006	21170	184.7	NS	---			----
Total CollAve (5 peaks):				178.9	Total Col2Ave (4 peaks):				225.4	RPD = 23
Corrected Ave (4 peaks):				176.8	Corrected Ave (3 peaks):				193.5	RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.789) = 2019619 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1972145 Col2 Total PCB = 0.6 ppm\*

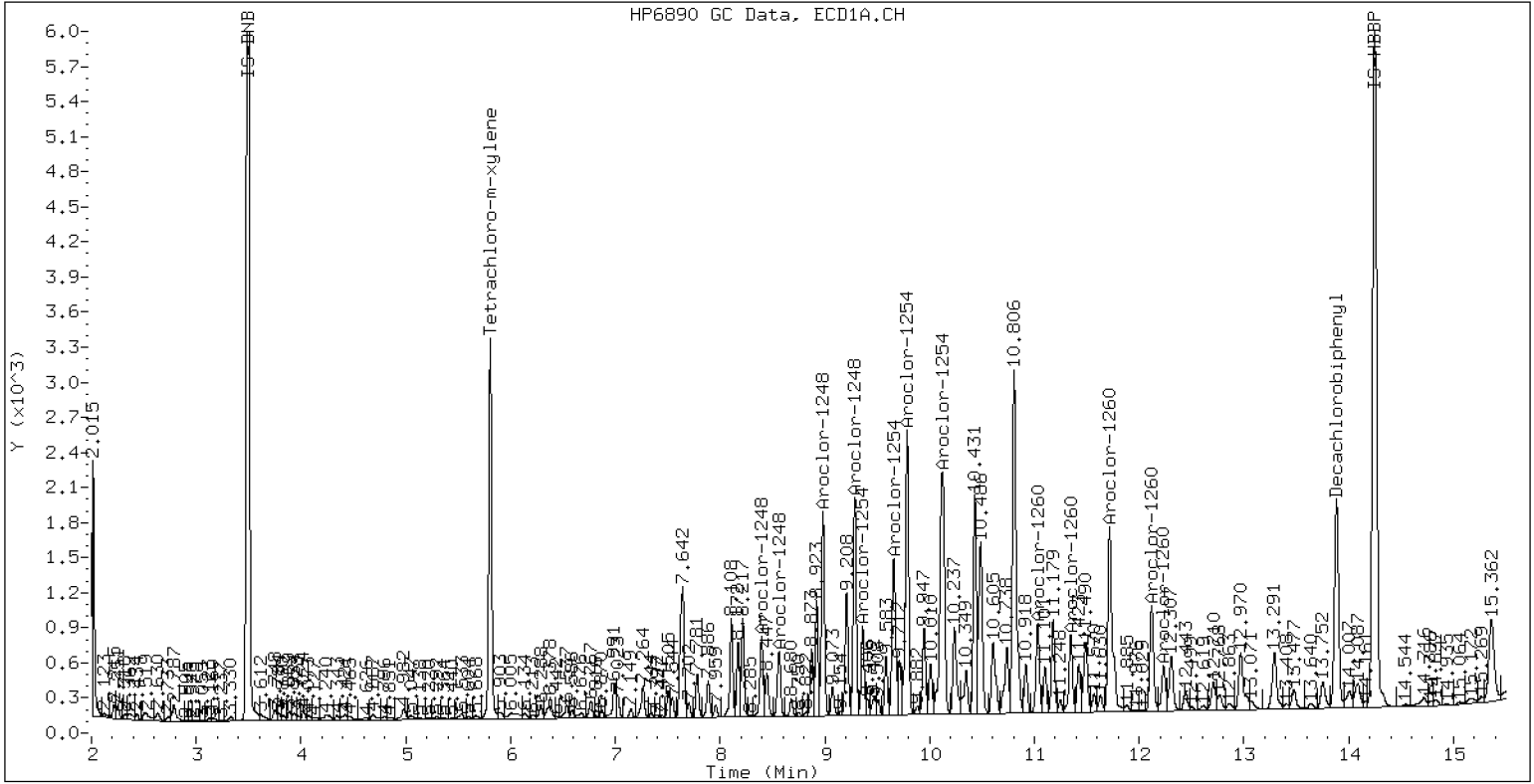
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-10

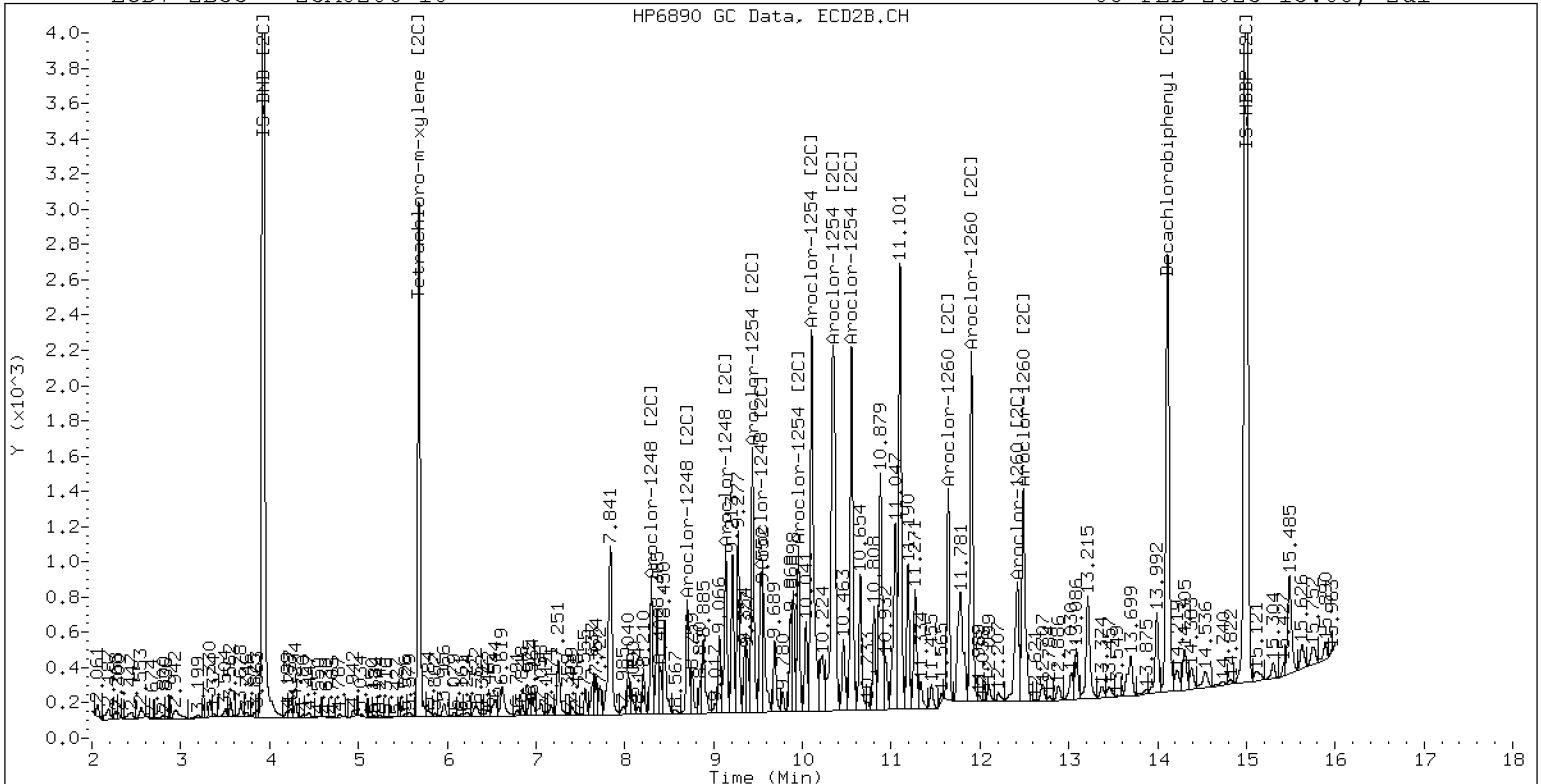
08-FEB-2023 13:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-10

08-FEB-2023 13:08, 2ul



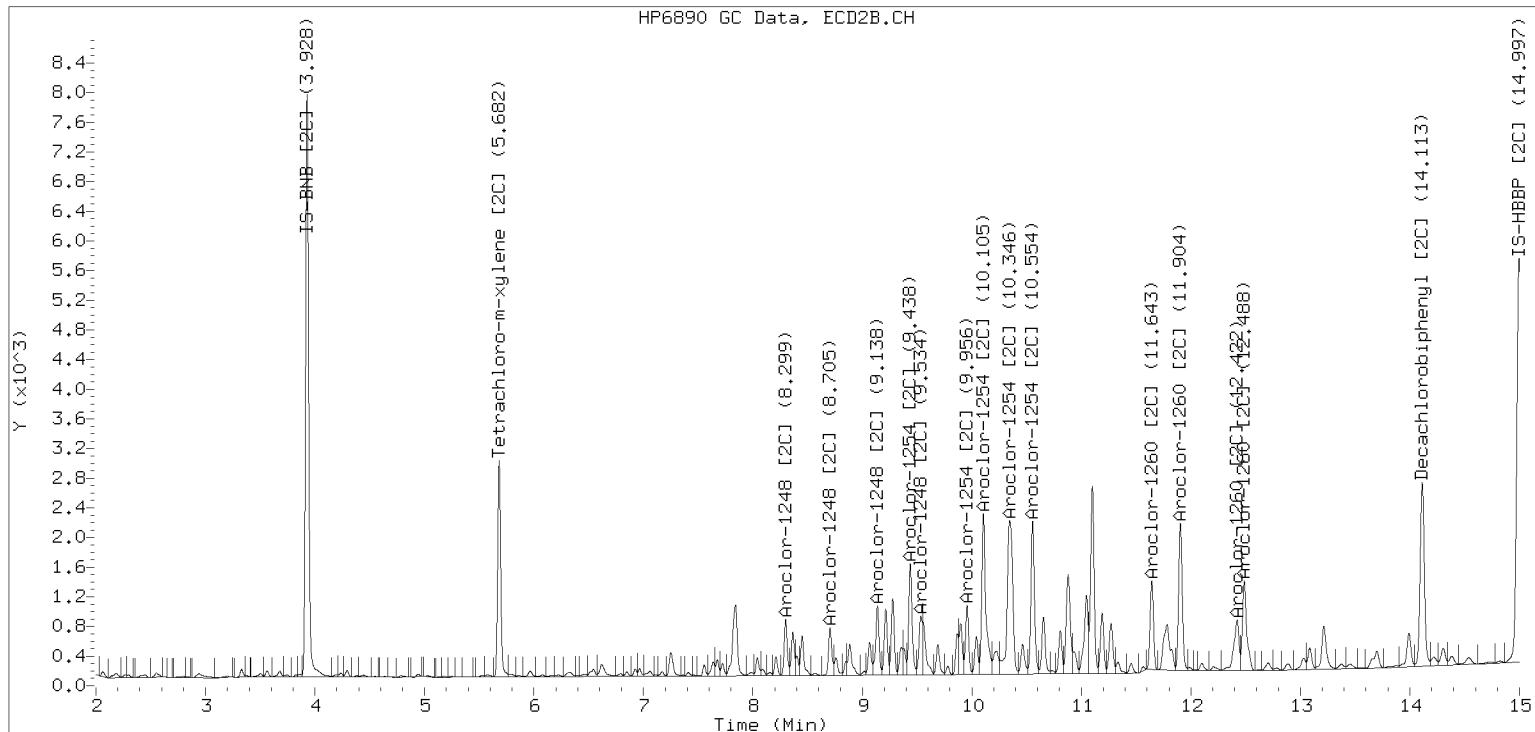
ZB-35 Manual Integration: YES



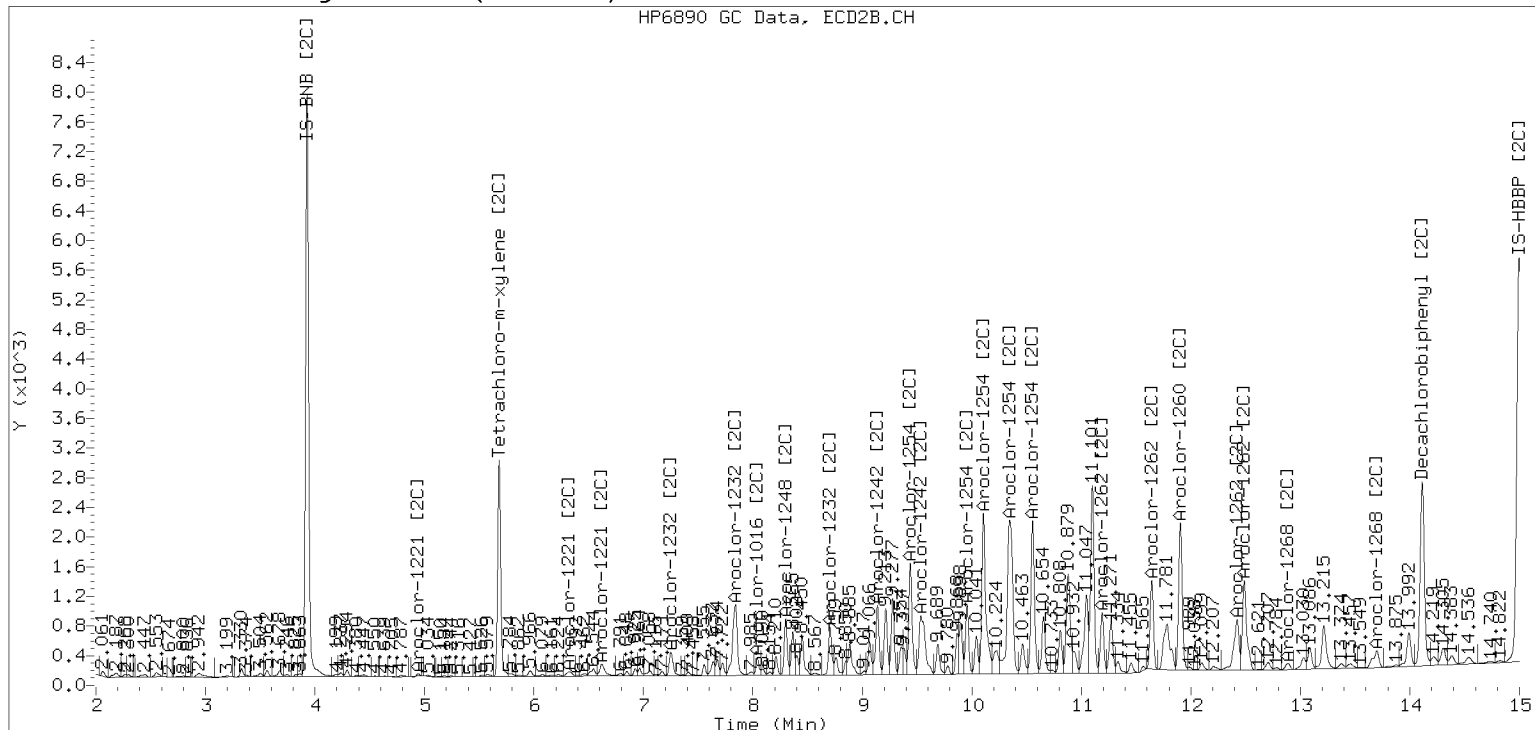
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082311ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: 23A0206-11 B

File ID: 02082312ECD7.D

Sampled: 01/11/23 11:43

Prepared: 01/28/23 12:01

Analyzed: 02/08/23 13:29

% Solids: 42.95

Preparation: EPA 3546 (Microwave)

Initial/Final: 29.1 g Wet / 2.5 mL

Batch: BLA0625

Sequence: SLB0127

Calibration: GA00061

Instrument: ECD7

Column 1: ZB5

Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	33.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	55.8	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	43.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	8.0010	5.56	69.5	40 - 126	
<i>Tetrachlorometaxylene</i>	1	8.0010	5.06	63.2	44 - 120	
<i>Decachlorobiphenyl</i>	2	8.0010	5.46	68.3	40 - 126	
<i>Tetrachlorometaxylene</i>	2	8.0010	5.62	70.2	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082312ECD7.D  
Data file 2: /230208.b/230208.b/02082312ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-11  
Client ID:  
Injection Date: 08-FEB-2023 13:29  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.001	127690	5.683	-0.002	114934	25.3	28.1	10.5	Tetrachloro-m-xylene
13.885	-0.004	99219	14.113	-0.003	134840	27.8	27.3	1.8	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	357277	-29.0
Hexabromobiphenyl	647433	333760	-48.4

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	302729	-10.1
Hexabromobiphenyl	382032	311144	-18.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.396	-0.009	25544	142.9	1	8.299	-0.005	24860	181.7
Aroclor-1248	2	8.564	-0.016	22081	96.9	2	8.705	-0.005	23204	157.5
Aroclor-1248	3	8.982	-0.017	63141	144.8	3	9.138	-0.014	34945	194.2
Aroclor-1248	4	9.286	-0.008	65940	305.5	4	9.532	-0.043	29321	131.7
Total CollAve (4 peaks):				172.5	Total Col2Ave (4 peaks):				166.3	RPD = 4
Corrected Ave (3 peaks):				128.2	Corrected Ave (3 peaks):				157.0	RPD = 20
Aroclor-1254	1	9.286	-0.007	65940	181.1	1	9.437	-0.007	56506	257.3
Aroclor-1254	2	9.361	-0.010	26745	172.0	2	9.956	-0.008	31279	176.2
Aroclor-1254	3	9.657	-0.004	57341	245.8	3	10.105	-0.011	97260	251.2
Aroclor-1254	4	9.786	-0.013	93302	204.1	4	10.348	-0.017	125563	324.3
Aroclor-1254	5	10.122	-0.035	116440	391.7	5	10.555	-0.009	83291	386.2
Total CollAve (5 peaks):				238.9	Total Col2Ave (5 peaks):				279.0	RPD = 15
Corrected Ave (4 peaks):				200.7	Corrected Ave (4 peaks):				252.2	RPD = 23
Aroclor-1260	1	11.033	-0.007	35396	189.0	1	11.644	-0.005	48134	214.4
Aroclor-1260	2	11.347	-0.009	30169	156.7	2	11.904	-0.008	95600	168.3
Aroclor-1260	3	11.718	-0.010	95179	187.8	3	12.422	-0.008	42206	298.2
Aroclor-1260	4	12.118	-0.013	47347	180.8	4	12.488	-0.008	71183	193.7
Aroclor-1260	5	12.234	-0.006	22935	200.9	NS	---			----
Total CollAve (5 peaks):				183.1	Total Col2Ave (4 peaks):				218.7	RPD = 18
Corrected Ave (4 peaks):				178.6	Corrected Ave (3 peaks):				192.2	RPD = 7
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.789) = 1814213 Col1 Total PCB = 0.4 ppm\*  
Total PCB Area Col2 (5.785 - 14.016) = 1778274 Col2 Total PCB = 0.6 ppm\*

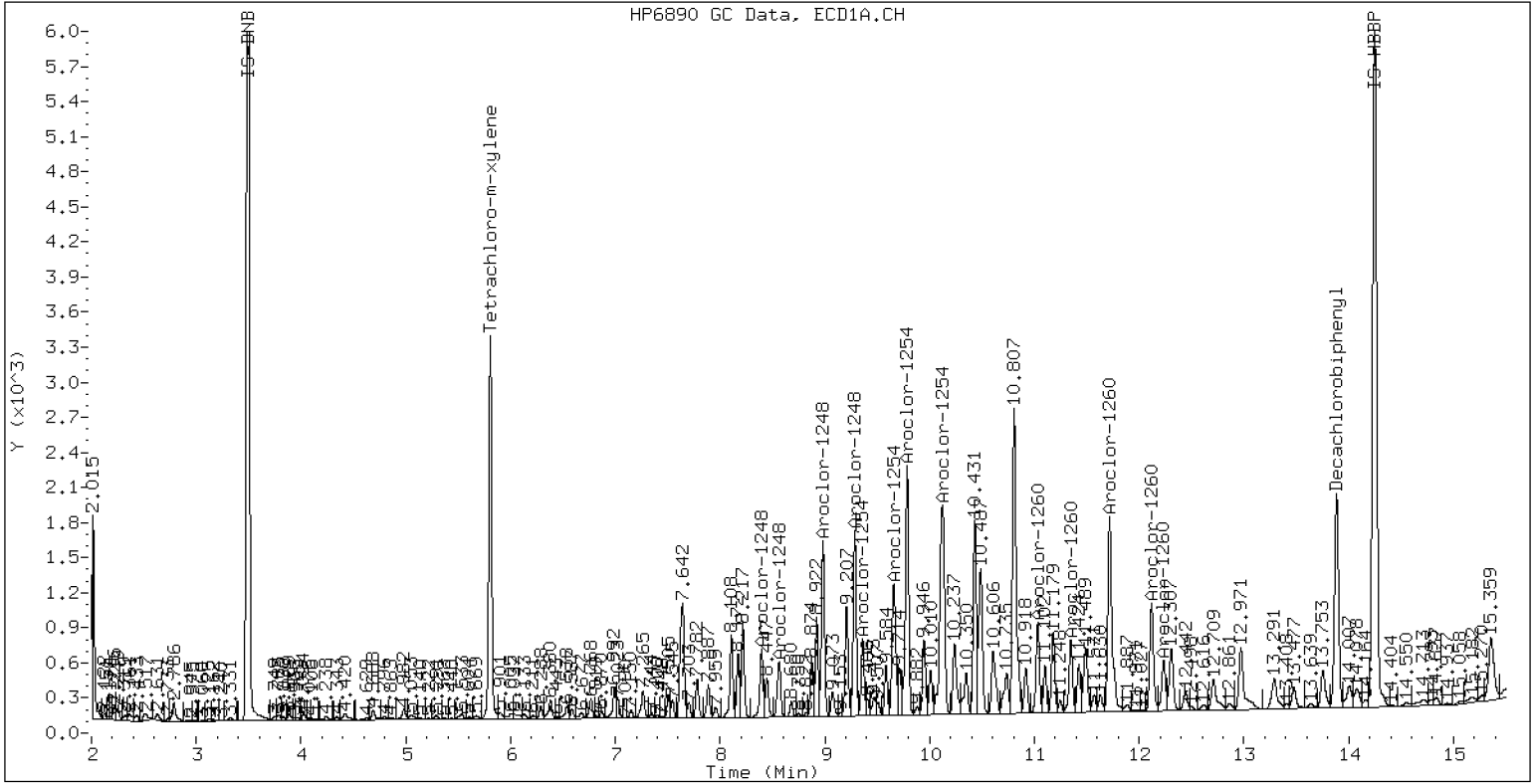
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-11

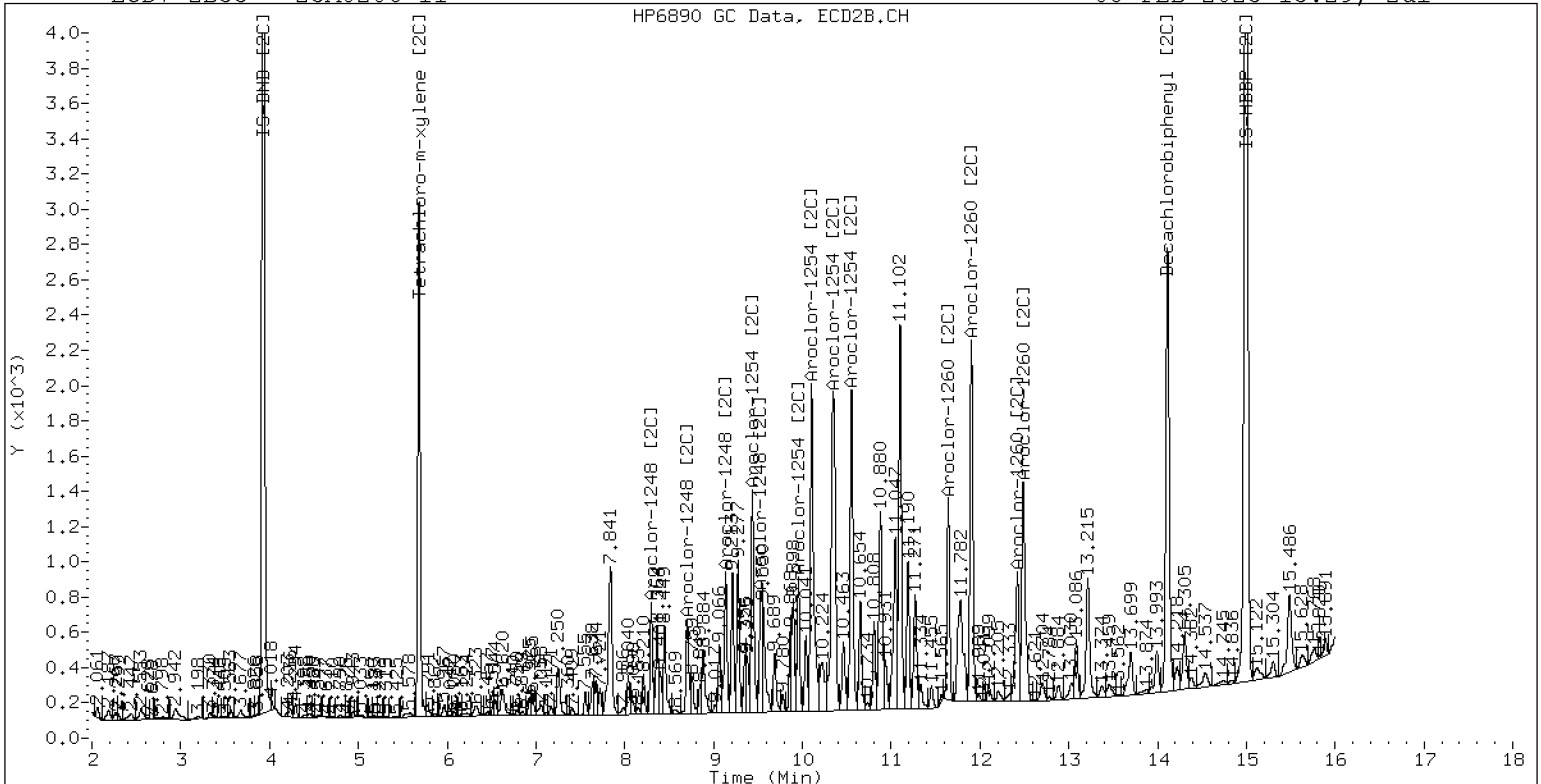
08-FEB-2023 13:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-11

08-FEB-2023 13:29, 2ul

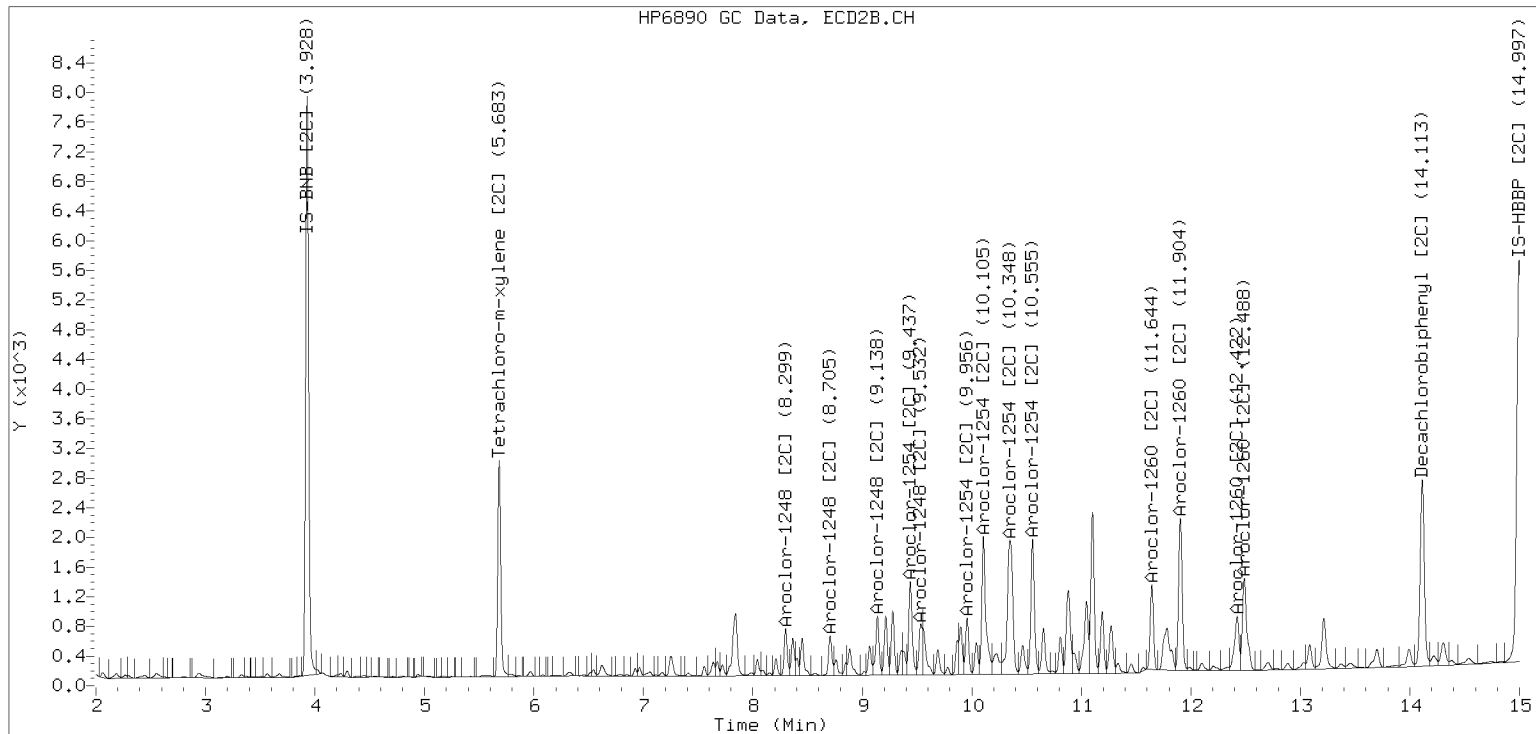


ZB-35 Manual Integration: YES

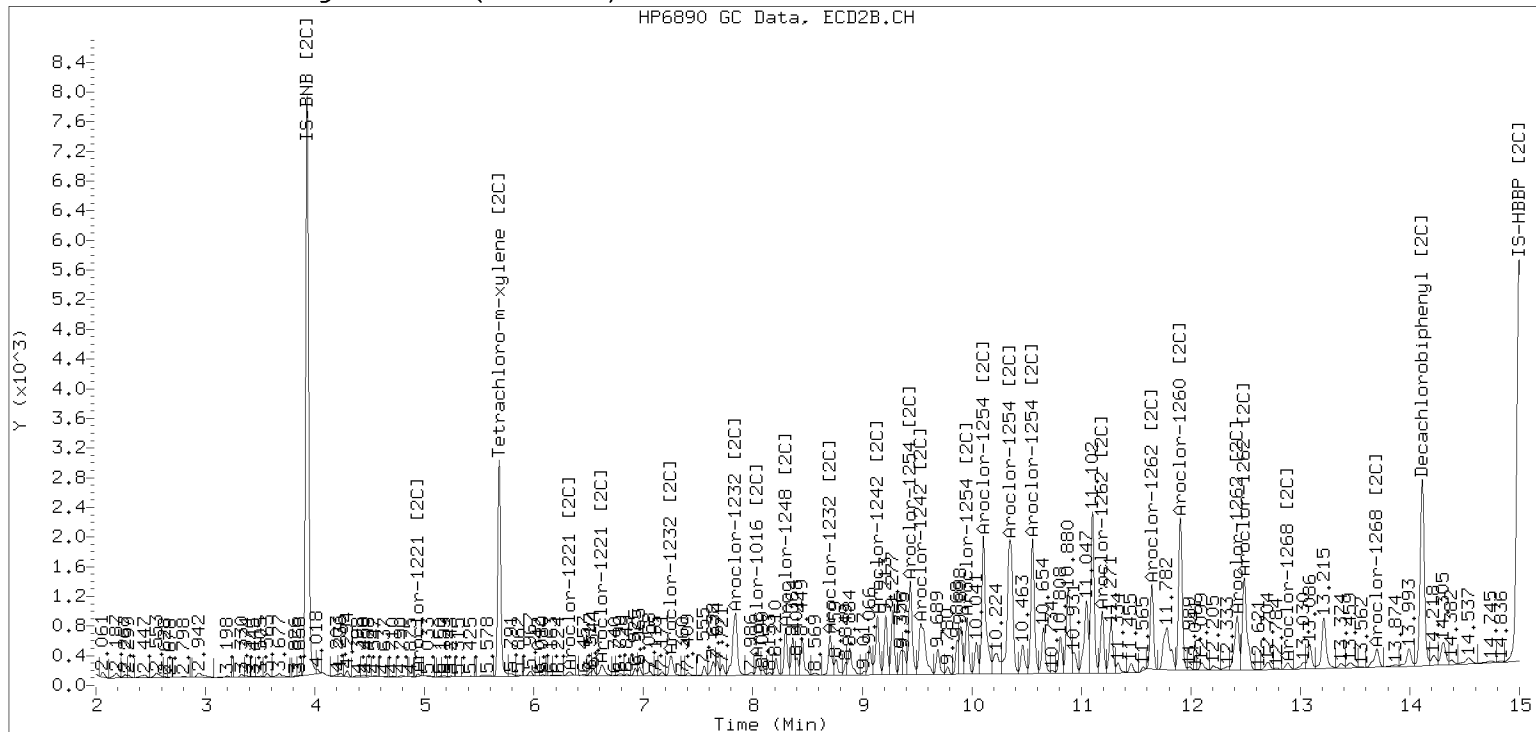
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082312ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)





Dual Column

LDW23-SS1094

ORGANIC ANALYSIS DATA SHEET  
EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Solid Laboratory ID: 23A0206-12 B File ID: 02082313ECD7.D  
 Sampled: 01/11/23 12:19 Prepared: 01/28/23 12:01 Analyzed: 02/08/23 13:50  
 % Solids: 48.05 Preparation: EPA 3546 (Microwave) Initial/Final: 26.07 g Wet / 2.5 mL  
 Batch: BLA0625 Sequence: SLB0127 Calibration: GA00061  
 Instrument: ECD7 Column 1: ZB5 Column 2: ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	48.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	62.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	39.2	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9830	5.45	68.2	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9830	4.97	62.2	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9830	5.44	68.2	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9830	5.40	67.6	44 - 120	



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082313ECD7.D  
 Data file 2: /230208.b/230208.b/02082313ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
 Compound Sublist: PCB.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: 23A0206-12  
 Client ID:  
 Injection Date: 08-FEB-2023 13:50  
 Report Date: 02/09/2023 10:56  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	126291	5.682	-0.002	115289	24.9	27.1	8.3	Tetrachloro-m-xylene
13.885	-0.003	96096	14.113	-0.003	132924	27.3	27.3	0.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	358933	-28.7
Hexabromobiphenyl	647433	329330	-49.1

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	315166	-6.5
Hexabromobiphenyl	382032	307157	-19.6

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.395	-0.010	35965	200.3	1	8.298	-0.006	42227	296.4
Aroclor-1248	2	8.564	-0.016	28306	123.6	2	8.704	-0.006	32187	209.9
Aroclor-1248	3	8.983	-0.016	78812	179.9	3	9.137	-0.015	40585	216.6
Aroclor-1248	4	9.285	-0.009	79586	367.0	4	9.532	-0.043	59344	256.1
Total CollAve (4 peaks):				217.7	Total Col2Ave (4 peaks):				244.7	RPD = 12
Corrected Ave (3 peaks):				167.9	Corrected Ave (3 peaks):				227.5	RPD = 30
Aroclor-1254	1	9.285	-0.008	79586	217.6	1	9.437	-0.008	64907	283.9
Aroclor-1254	2	9.361	-0.010	33311	213.3	2	9.955	-0.009	35056	189.7
Aroclor-1254	3	9.656	-0.006	62277	265.7	3	10.104	-0.012	116500	289.0
Aroclor-1254	4	9.785	-0.013	114238	248.7	4	10.347	-0.019	145861	361.8
Aroclor-1254	5	10.123	-0.034	133105	445.7	5	10.554	-0.010	96617	430.3
Total CollAve (5 peaks):				278.2	Total Col2Ave (5 peaks):				310.9	RPD = 11
Corrected Ave (4 peaks):				236.3	Corrected Ave (4 peaks):				281.1	RPD = 17
Aroclor-1260	1	11.032	-0.008	37386	202.3	1	11.642	-0.007	47565	214.7
Aroclor-1260	2	11.347	-0.009	28166	148.3	2	11.904	-0.008	83037	148.1
Aroclor-1260	3	11.717	-0.011	81344	162.7	3	12.422	-0.009	35393	253.3
Aroclor-1260	4	12.118	-0.013	42133	163.1	4	12.486	-0.009	61786	170.3
Aroclor-1260	5	12.234	-0.006	19945	177.1	NS	---			----
Total CollAve (5 peaks):				170.7	Total Col2Ave (4 peaks):				196.6	RPD = 14
Corrected Ave (4 peaks):				162.8	Corrected Ave (3 peaks):				177.7	RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.789) = 2027452 Col1 Total PCB = 0.5 ppm\*  
Total PCB Area Col2 (5.785 - 14.016) = 1983939 Col2 Total PCB = 0.6 ppm\*

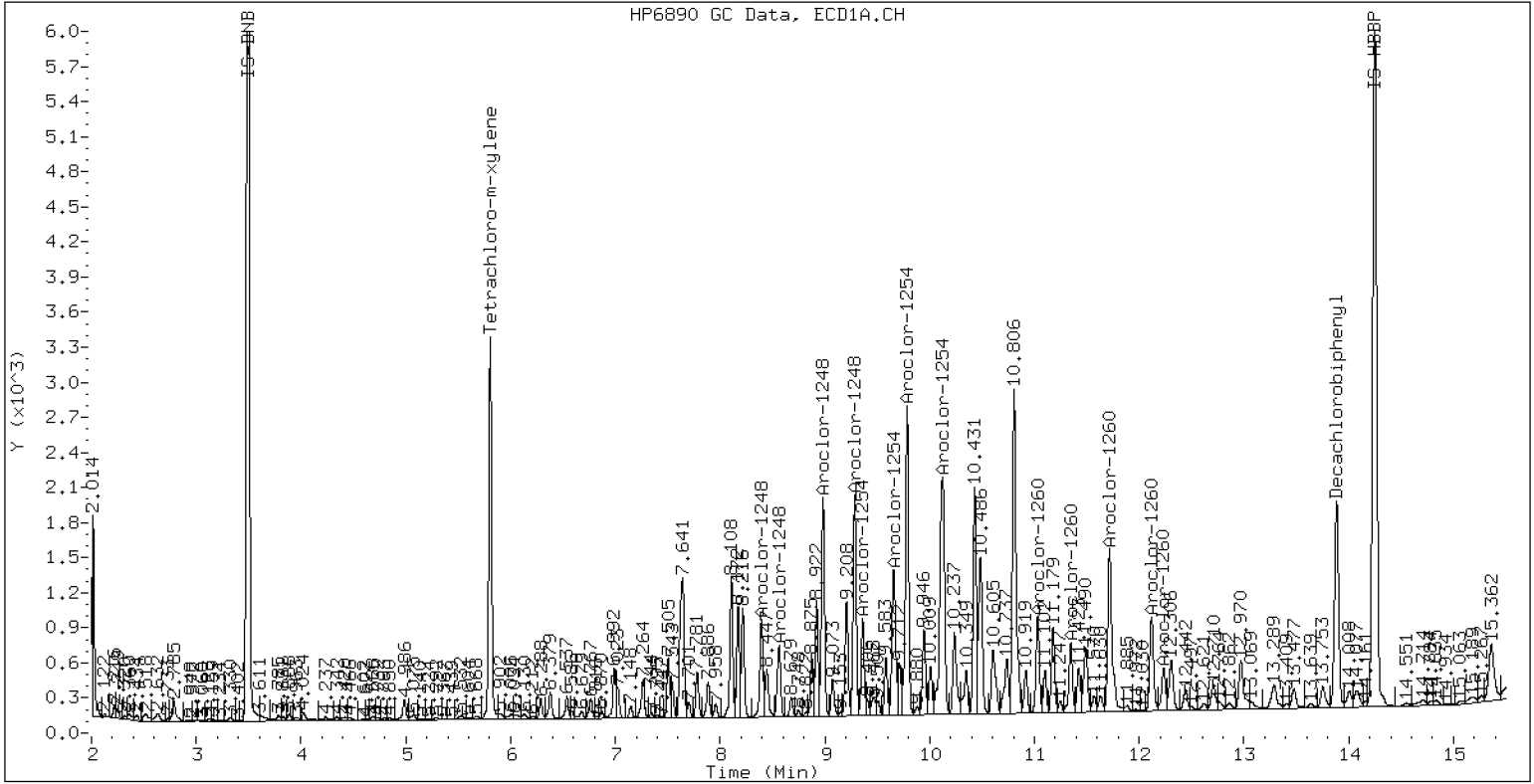
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-12

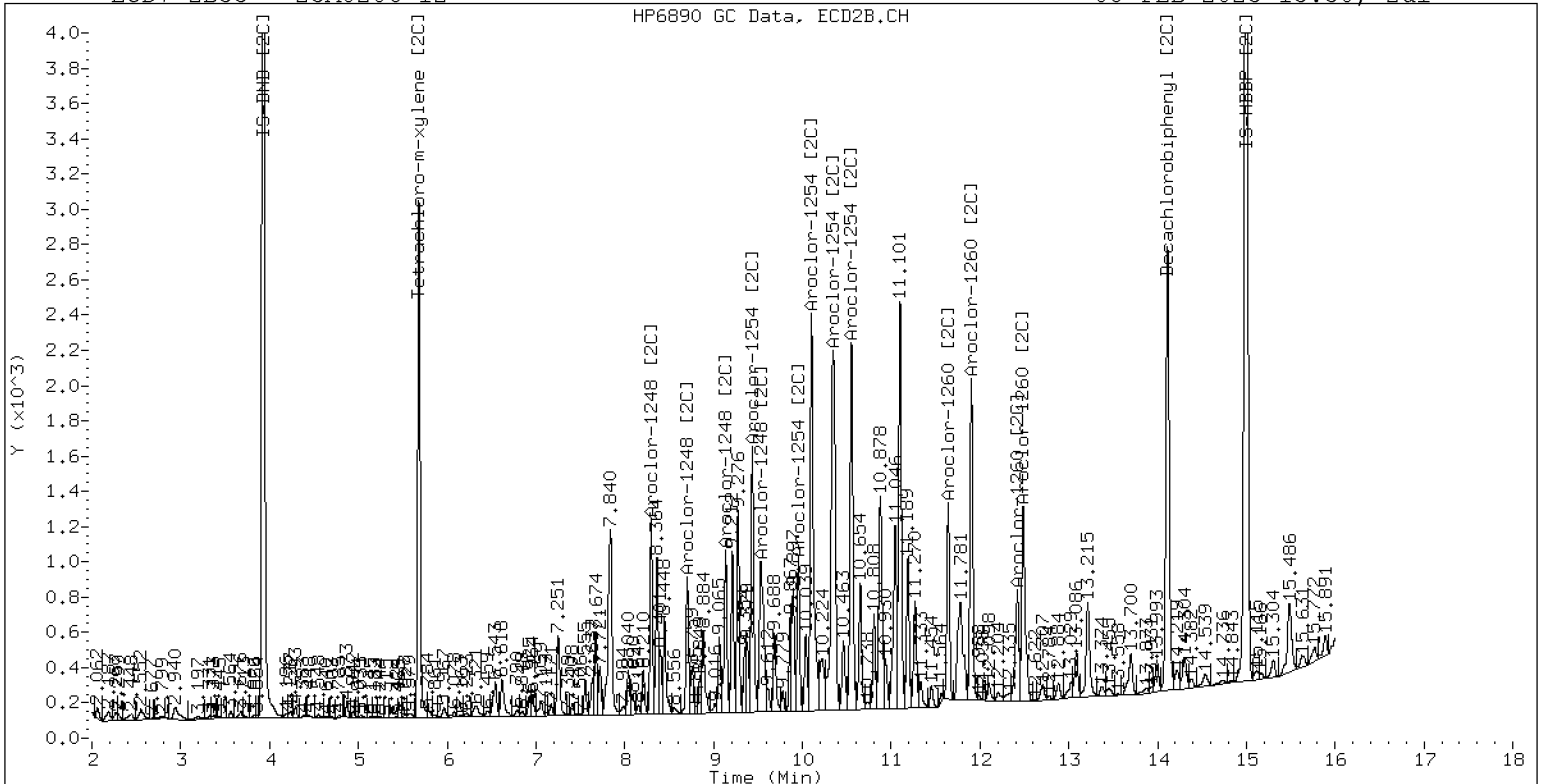
08-FEB-2023 13:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0206-12

08-FEB-2023 13:50, 2ul



ZB-35 Manual Integration: YES





**ORGANIC ANALYSIS DATA SHEET**  
**EPA 8082A**

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>	
Client: <u>Anchor QEA, LLC</u>		
Project: <u>AOC5 MR Phase 1</u>		
Matrix: <u>Solid</u>	Laboratory ID: <u>23A0206-13 B</u>	File ID: <u>02092308ECD7.D</u>
Sampled: <u>01/11/23 12:40</u>	Prepared: <u>01/28/23 12:01</u>	Analyzed: <u>02/09/23 14:41</u>
% Solids: <u>60.13</u>	Preparation: <u>EPA 3546 (Microwave)</u>	Initial/Final: <u>20.79 g Wet / 2.5 mL</u>
Batch: <u>BLA0625</u>	Sequence: <u>SLB0148</u>	Calibration: <u>GA00061</u>
Instrument: <u>ECD7</u>	Column 1: <u>ZB5</u>	Column 2: <u>ZB35</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	50	200	78.0	200	U
11104-28-2	Aroclor 1221	1	50	200	78.0	200	U
11141-16-5	Aroclor 1232	1	50	200	78.0	200	U
53469-21-9	Aroclor 1242	1	50	5000	78.0	200	D
12672-29-6	Aroclor 1248	1	50	200	78.0	200	U
11097-69-1	Aroclor 1254	2	50	801	78.0	200	D
11096-82-5	Aroclor 1260	2	50	484	29.4	200	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9993	7.10	88.7	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9993	6.69	83.7	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9993	6.43	80.3	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9993	6.13	76.7	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092308ECD7.D  
Data file 2: /230209.b/230209.b/02092308ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 23A0206-13RE3  
Client ID:  
Injection Date: 09-FEB-2023 14:41  
Report Date: 02/10/2023 14:06  
Matrix: NONE  
Dilution Factor: 50.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.804	-0.004	3458	5.683	-0.002	2779	0.7	0.6	8.7	Tetrachloro-m-xylene
13.885	-0.004	4082	14.114	-0.000	4742	0.7	0.6	9.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365472	-27.4
Hexabromobiphenyl	647433	537870	-16.9
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335153	-0.5
Hexabromobiphenyl	382032	464929	21.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	7.265	-0.004	55482	495.8	1	7.251	-0.001	121157	826.6
Aroclor-1242	2	7.630	-0.021	233560	637.7	2	7.839	-0.010	211831	650.6
Aroclor-1242	3	8.398	-0.004	51019	468.9	3	9.145	-0.008	25129	246.5
Aroclor-1242	4	8.566	-0.009	65398	397.9	4	9.564	-0.016	29434	217.8
Total CollAve (4 peaks):				500.1	Total Col2Ave (4 peaks):				485.4	RPD = 3
Corrected Ave (3 peaks):				454.2	Corrected Ave (3 peaks):				371.6	RPD = 20
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1254	1	9.288	-0.006	32165	86.4	1	9.441	-0.004	19424	79.9
Aroclor-1254	2	9.366	-0.005	14931	93.9	2	9.960	-0.004	8089	41.2
Aroclor-1254	3	9.657	-0.005	10429	43.7	3	10.112	-0.005	41476	96.7
Aroclor-1254	4	9.793	-0.007	41596	88.9	4	10.361	-0.006	38130	88.9
Aroclor-1254	5	10.135	-0.026	15401	50.6	5	10.558	-0.005	22359	93.6
Total CollAve (5 peaks):				72.7	Total Col2Ave (5 peaks):				80.1	RPD = 10
Corrected Ave (4 peaks):				67.4	Corrected Ave (4 peaks):				75.9	RPD = 12
Aroclor-1260	1	11.036	-0.004	19376	64.2	1	11.646	-0.003	14814	44.2
Aroclor-1260	2	11.352	-0.004	14401	46.4	2	11.908	-0.005	34308	40.4
Aroclor-1260	3	11.724	-0.006	33096	40.5	3	12.427	-0.004	13653	64.6
Aroclor-1260	4	12.126	-0.007	14939	35.4	4	12.493	-0.004	24525	44.7
Aroclor-1260	5	12.237	-0.002	9648	52.5	NS	---			---
Total CollAve (5 peaks):				47.8	Total Col2Ave (4 peaks):				48.5	RPD = 1
Corrected Ave (4 peaks):				43.7	Corrected Ave (3 peaks):				43.1	RPD = 1
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					



Total PCB Area Col1 (5.908 - 13.790) = 1679484 Col1 Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1548932 Col2 Total PCB = 0.4 ppm\*

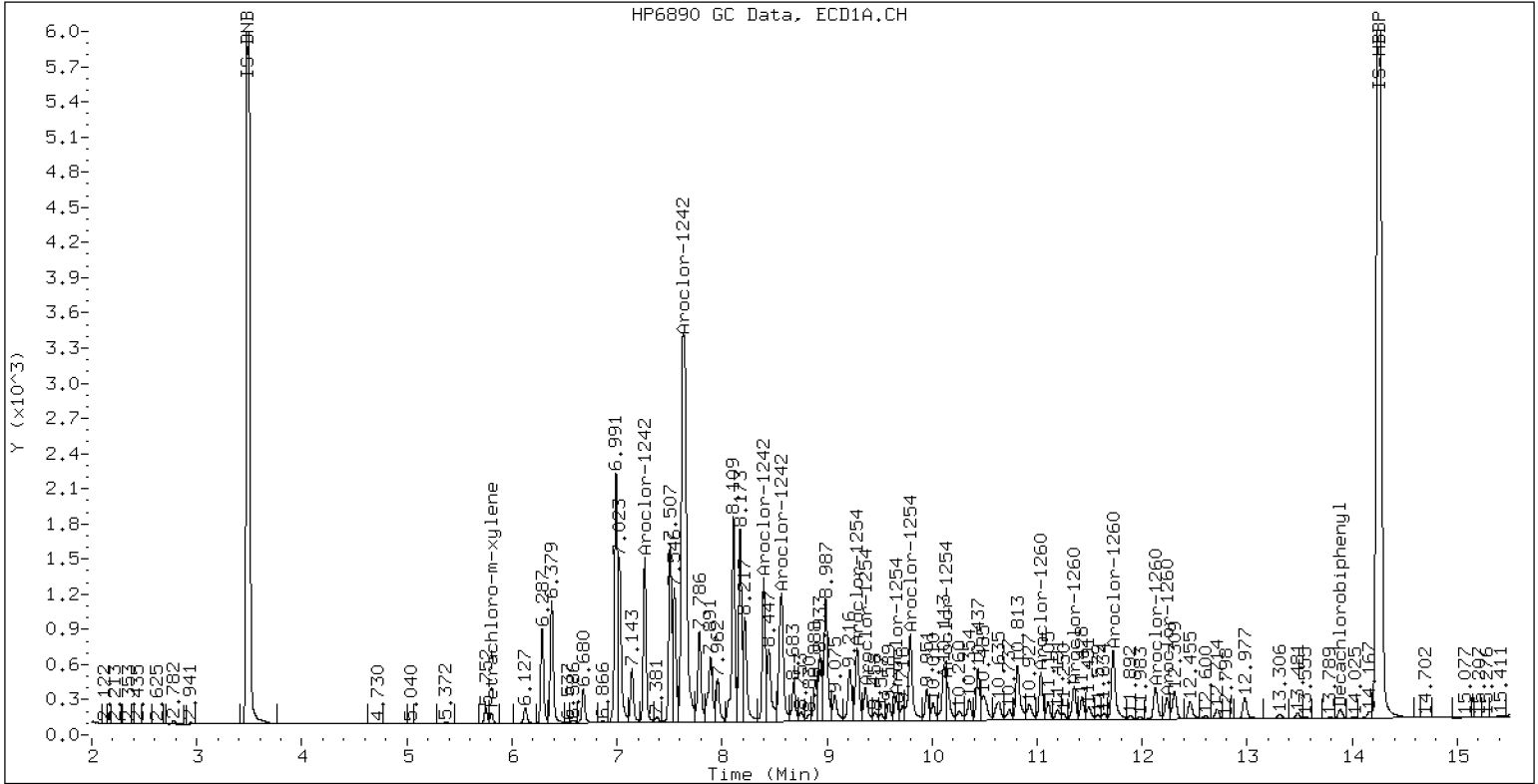
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-13RE3

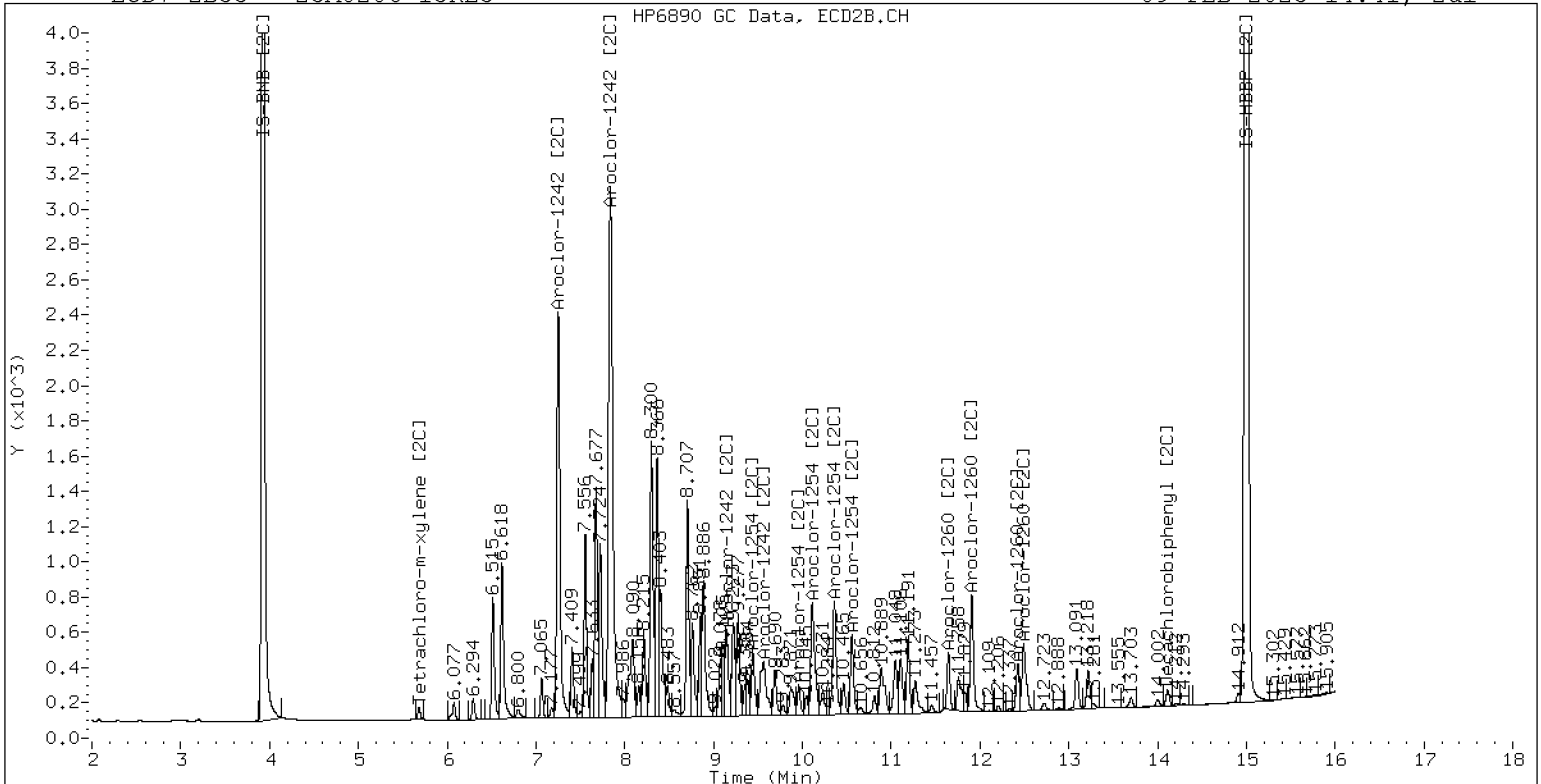
09-FEB-2023 14:41, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-13RE3

09-FEB-2023 14:41, 2ul

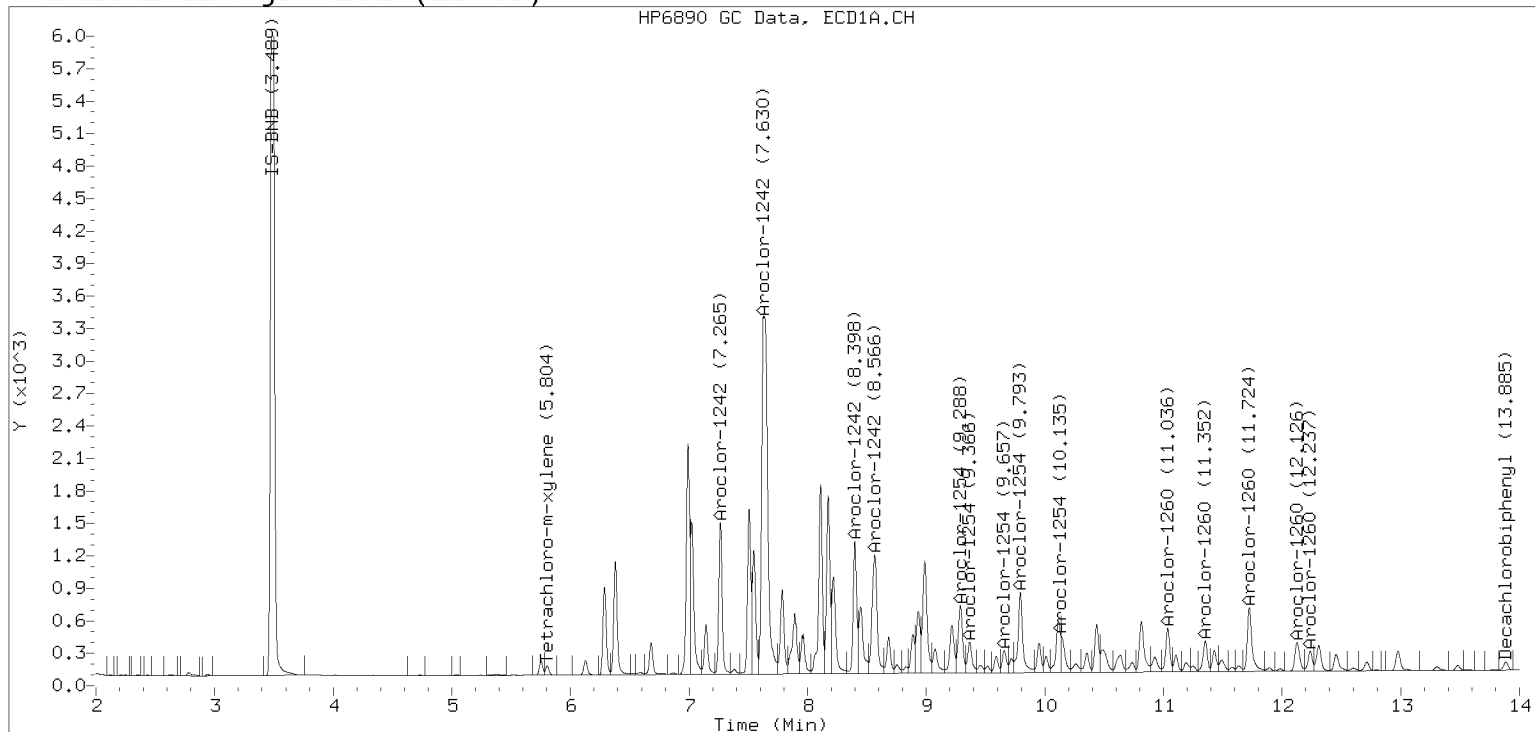


ZB-35 Manual Integration: NO

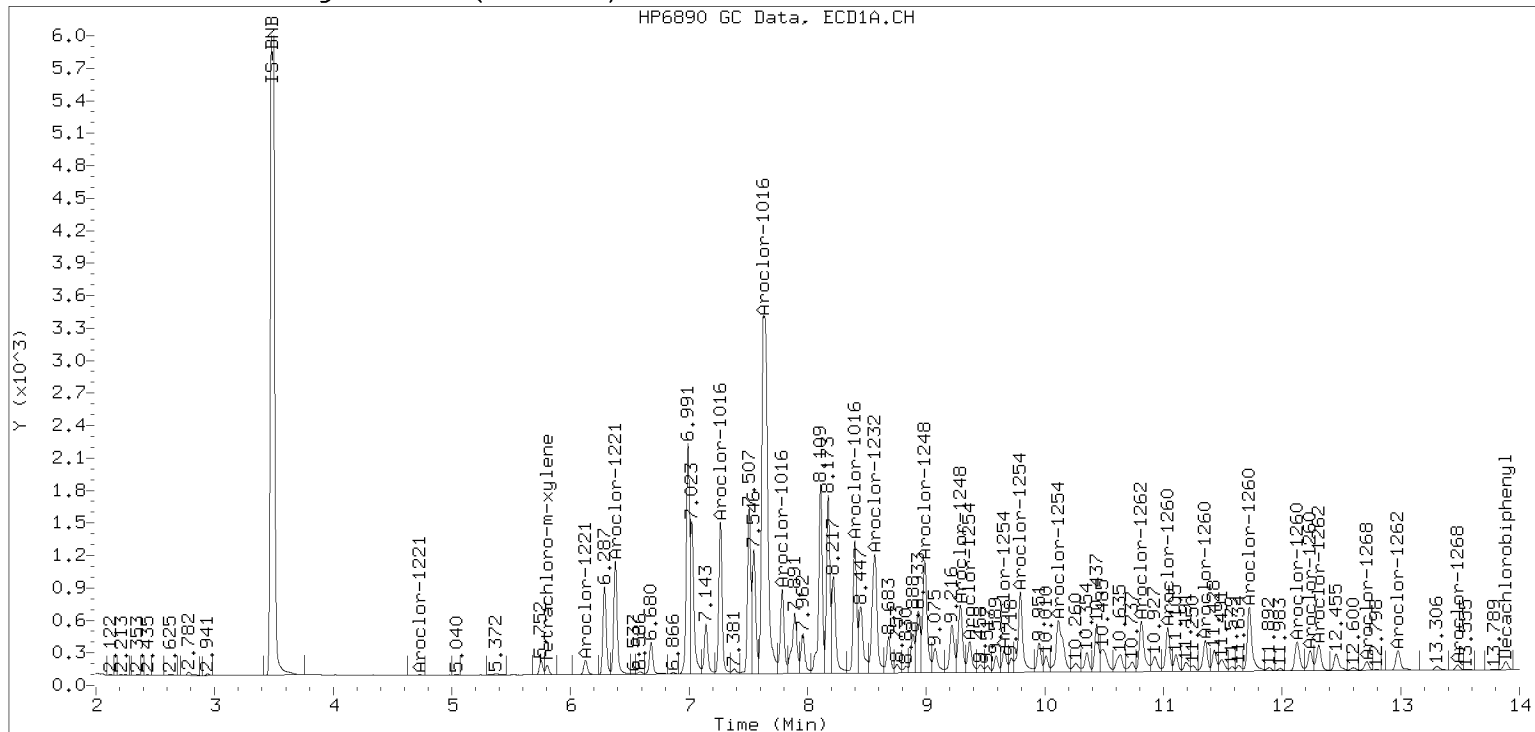
# Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092308ECD7.D Injection Date: 09-FEB-2023 14:41

## Manual Integration (After)



## Processed Integration (Before)





ORGANIC ANALYSIS DATA SHEET  
EPA 8082A

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>		
Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Solid</u>	Laboratory ID:	<u>23A0206-14 B</u>
		File ID:	<u>02082315ECD7.D</u>
Sampled:	<u>01/11/23 13:03</u>	Prepared:	<u>01/28/23 12:01</u>
		Analyzed:	<u>02/08/23 14:32</u>
% Solids:	<u>51.18</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
		Initial/Final:	<u>24.47 g Wet / 2.5 mL</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0127</u>
		Calibration:	<u>GA00061</u>
Instrument:	<u>ECD7</u>	Column 1:	<u>ZB5</u>
		Column 2:	<u>ZB35</u>

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	94.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	69.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	48.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
<i>Decachlorobiphenyl</i>	1	7.9848	5.74	71.9	40 - 126	
<i>Tetrachlorometaxylene</i>	1	7.9848	4.96	62.2	44 - 120	
<i>Decachlorobiphenyl</i>	2	7.9848	5.44	68.2	40 - 126	
<i>Tetrachlorometaxylene</i>	2	7.9848	5.49	68.8	44 - 120	

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082315ECD7.D                   ARI ID: 23A0206-14  
 Data file 2: /230208.b/230208.b/02082315ECD7.D       Client ID:  
 Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m   Injection Date: 08-FEB-2023 14:32  
 Compound Sublist: PCB.sub                               Report Date: 02/09/2023 10:56  
 Instrument, Inj. Vol.: ecd7.i, 2ul                     Matrix: NONE  
 Quant Method: Internal Std                             Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.002	127976	5.682	-0.003	114900	24.9	27.5	10.1	Tetrachloro-m-xylene
13.885	-0.003	104782	14.114	-0.003	136874	28.7	27.3	5.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	364130	-27.7
Hexabromobiphenyl	647433	340776	-47.4

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	309005	-8.3
Hexabromobiphenyl	382032	316187	-17.2

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1248	1	8.396	-0.010	71884	394.6	1	8.298	-0.006	94264	674.9
Aroclor-1248	2	8.562	-0.018	78140	336.3	2	8.704	-0.006	72316	481.0
Aroclor-1248	3	8.981	-0.018	117470	264.3	3	9.137	-0.015	69323	377.3
Aroclor-1248	4	9.285	-0.009	93424	424.7	4	9.553	-0.021	83023	365.4
Total CollAve (4 peaks):				355.0	Total Col2Ave (4 peaks):				474.7	RPD = 29
Corrected Ave (3 peaks):				331.7	Corrected Ave (3 peaks):				407.9	RPD = 21
Aroclor-1254	1	9.285	-0.008	93424	251.7	1	9.437	-0.007	72795	324.7
Aroclor-1254	2	9.360	-0.010	36535	230.6	2	9.956	-0.008	40935	225.9
Aroclor-1254	3	9.655	-0.007	68573	288.4	3	10.103	-0.012	133402	337.5
Aroclor-1254	4	9.785	-0.014	131670	282.6	4	10.346	-0.019	156972	397.1
Aroclor-1254	5	10.123	-0.034	79486	262.3	5	10.553	-0.010	98398	447.0
Total CollAve (5 peaks):				263.1	Total Col2Ave (5 peaks):				346.4	RPD = 27
Corrected Ave (4 peaks):				256.8	Corrected Ave (4 peaks):				321.3	RPD = 22
Aroclor-1260	1	11.032	-0.008	42361	221.5	1	11.642	-0.007	52715	231.1
Aroclor-1260	2	11.347	-0.009	36957	188.0	2	11.904	-0.008	98119	170.0
Aroclor-1260	3	11.717	-0.010	87064	168.3	3	12.422	-0.009	52851	367.4
Aroclor-1260	4	12.119	-0.013	49508	185.2	4	12.487	-0.008	72133	193.1
Aroclor-1260	5	12.235	-0.005	26291	225.6	NS	---			---
Total CollAve (5 peaks):				197.7	Total Col2Ave (4 peaks):				240.4	RPD = 19
Corrected Ave (4 peaks):				190.8	Corrected Ave (3 peaks):				198.1	RPD = 4
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks					

Total PCB Area Col1 (5.908 - 13.789) = 3308884 Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 3124889 Col2 Total PCB = 1.0 ppm\*

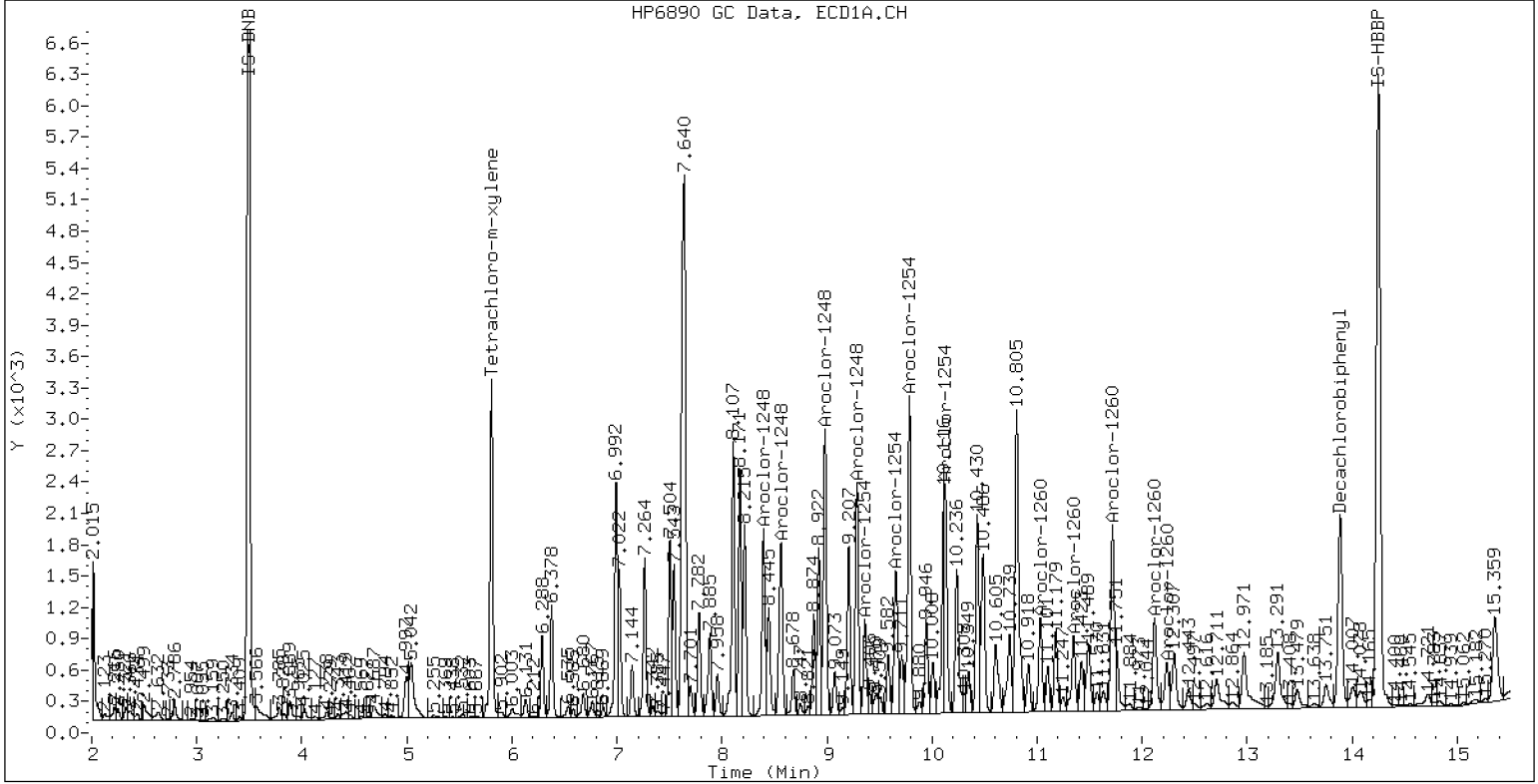
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 23A0206-14

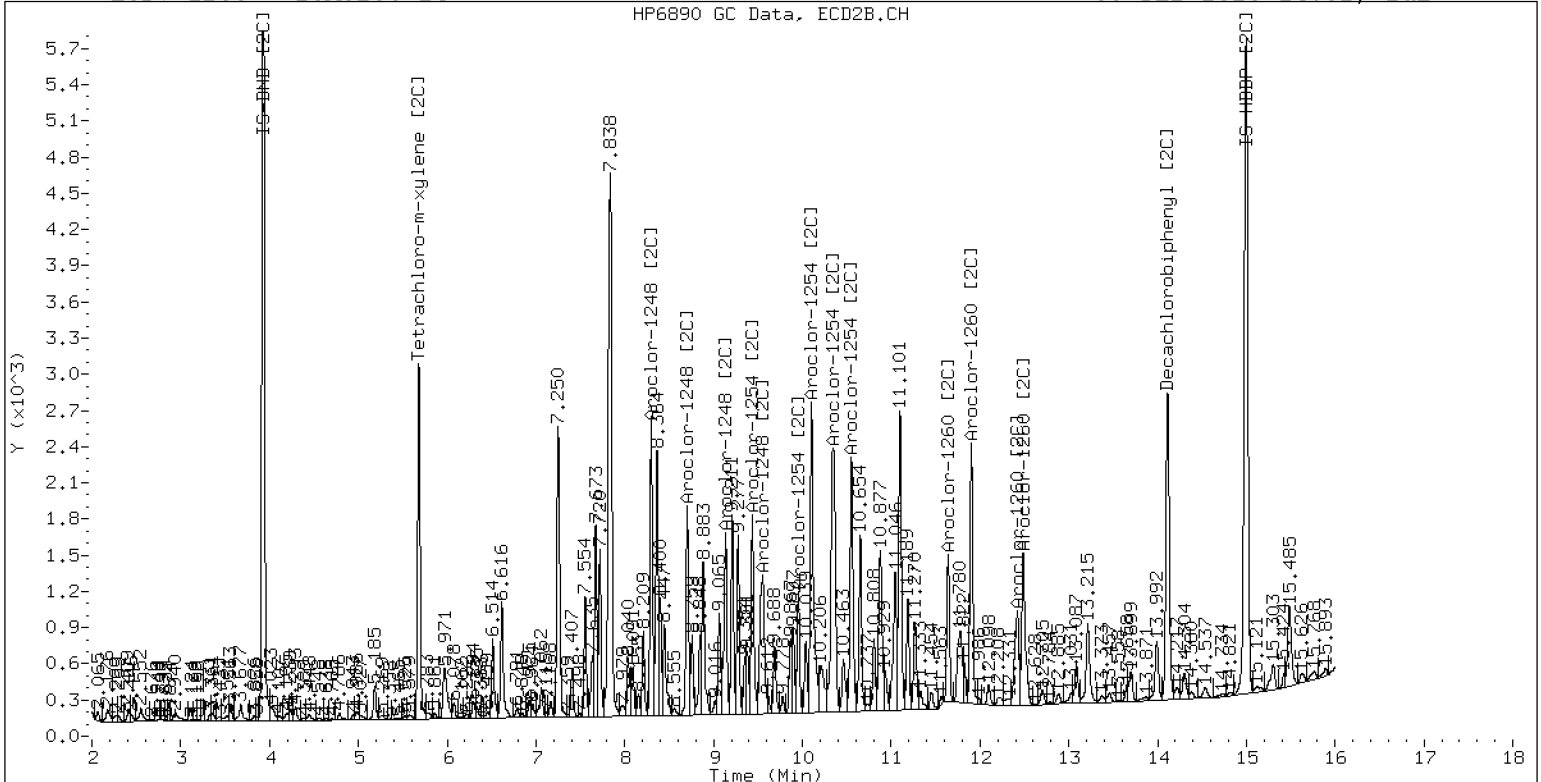
08-FEB-2023 14:32, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0206-14

08-FEB-2023 14:32, 2ul



ZB-35 Manual Integration: NO

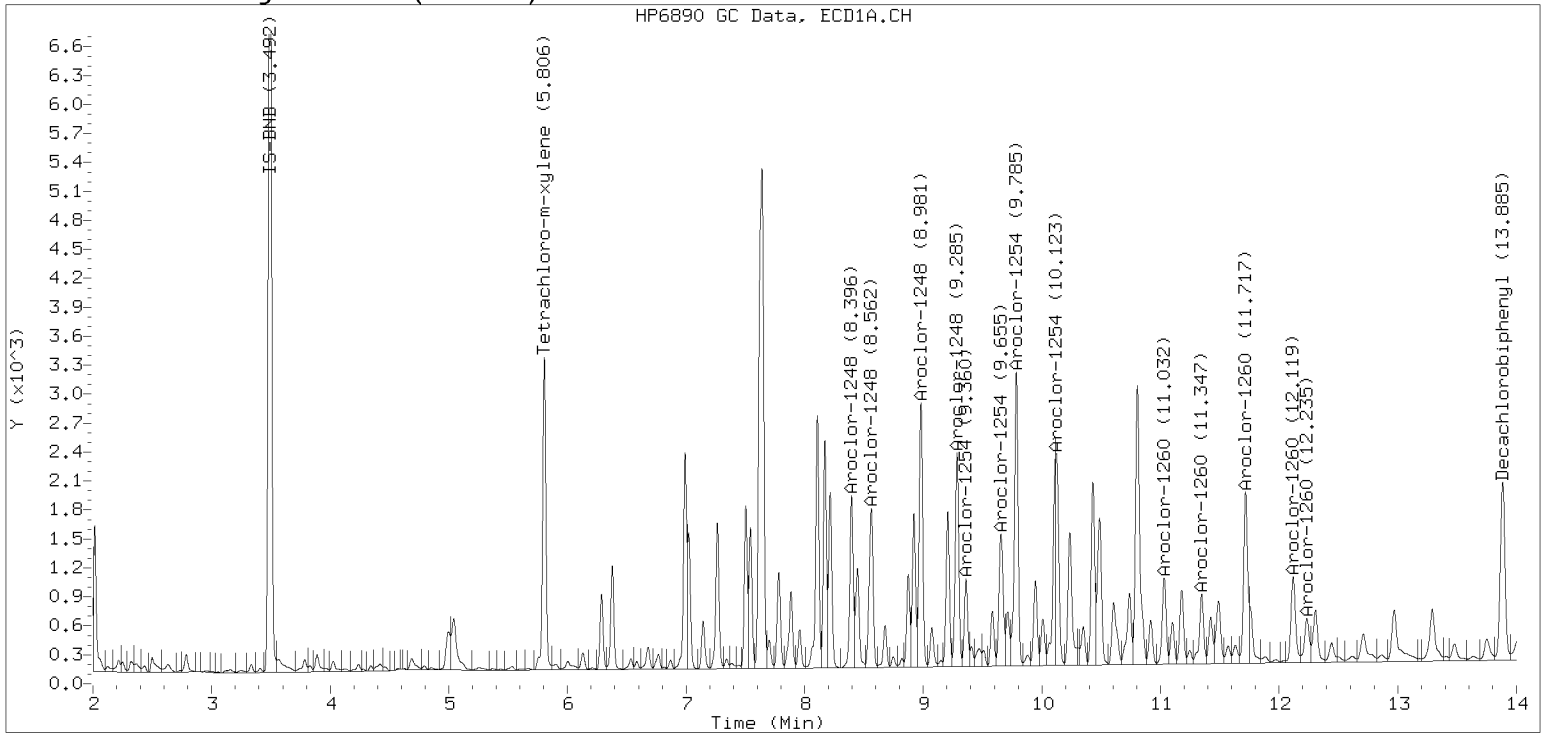


Manual Peak Adjustment, ZB-5

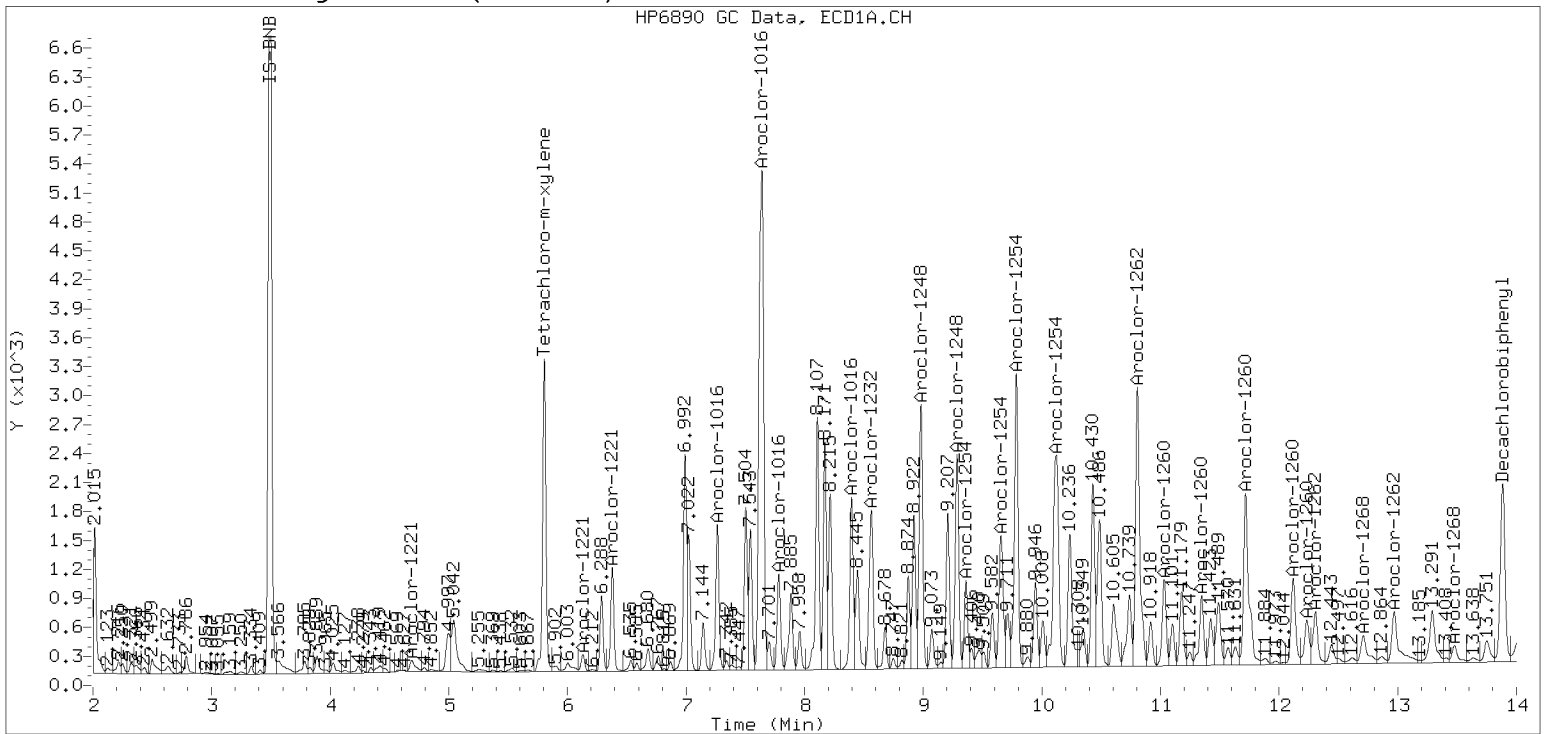
Datafile: ecd7.i/230208.b/02082315ECD7.D

Injection Date: 08-FEB-2023 14:32

Manual Integration (After)



Processed Integration (Before)





**PREPARATION BATCH SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0625 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	02072311ECD7.D	01/28/23 12:01	
LDW23-SS1015	23A0206-02	02072312ECD7.D	01/28/23 12:01	
LDW23-SS1164	23A0206-03	02072313ECD7.D	01/28/23 12:01	
LDW23-SS1158	23A0206-04	02072314ECD7.D	01/28/23 12:01	
LDW23-SS1151	23A0206-05	02072315ECD7.D	01/28/23 12:01	
LDW23-SS1145	23A0206-06	02072316ECD7.D	01/28/23 12:01	
LDW23-SS1139	23A0206-07	02072317ECD7.D	01/28/23 12:01	
LDW23-SS1117	23A0206-08	02082309ECD7.D	01/28/23 12:01	
LDW23-SS1103	23A0206-09	02082310ECD7.D	01/28/23 12:01	
LDW23-SS1100	23A0206-10	02082311ECD7.D	01/28/23 12:01	
LDW23-SS1096	23A0206-11	02082312ECD7.D	01/28/23 12:01	
LDW23-SS1094	23A0206-12	02082313ECD7.D	01/28/23 12:01	
LDW23-SS1066	23A0206-13	02092308ECD7.D	01/28/23 12:01	
LDW23-SS1061	23A0206-14	02082315ECD7.D	01/28/23 12:01	
Blank	BLA0625-BLK1	02072307ECD7.D	01/28/23 12:01	
LCS	BLA0625-BS1	02072308ECD7.D	01/28/23 12:01	
LCS Dup	BLA0625-BSD1	02072309ECD7.D	01/28/23 12:01	
LDW23-SS1139	BLA0625-MS1	02072318ECD7.D	01/28/23 12:01	
LDW23-SS1139	BLA0625-MSD1	02072319ECD7.D	01/28/23 12:01	
Reference	BLA0625-SRM1	02072310ECD7.D	01/28/23 12:01	



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**ORGANICS PREPARATION BENCH SHEET**

Batch: BLA0625

Prepared using: EPA 3546 (Microwave)  
8082A PCB Solid 4 in Solid (Version:7 Arcolors)

Matrix: Solid Date Prepared: 4/12/23

Balance ID: B146462614 Set Up By: CP/1/26/23

**WO Comments**  
23A0206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD <E>  
<H>BPR J006840-43, 7935-36, K011477-79, Dup <H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0206-01 B	48.2	(25.93)	<u>25.47</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-02 B	47.1	(26.53)	<u>26.57</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-03 B	48.3	(25.86)	<u>25.89</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-04 B	49.3	(25.33)	<u>25.36</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-05 B	52.9	(23.61)	<u>23.65</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-06 B	55.2	(22.66)	<u>22.67</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-07 B	60.2	(20.77)	<u>20.79</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-08 B	52.0	(24.05)	<u>24.10</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-09 B	41.9	(29.85)	<u>29.90</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-10 B	42.9	(29.12)	<u>29.15</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-11 B	43.0	(29.10)	<u>29.10</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-12 B	48.1	(26.02)	<u>26.07</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-13 B	60.1	(20.79)	<u>20.79</u>	5mL	5mL	2mL	2.5	1.0	
23A0206-14 B	51.2	(24.42)	<u>24.47</u>	5mL	5mL	2mL	2.5	1.0	

**Batch QC**

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL)	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0625-BLK1	100.0	(12.50)	<u>12.54</u>	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0625-BS1	100.0	(12.50)	<u>12.54</u>	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0625-BSD1	100.0	(12.50)	<u>12.54</u>	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0625-MS1	60.2	(20.77)	<u>20.77</u>	5mL	5mL	2mL	2.5	1.0	Use 23A0206-07
BLA0625-MSD1	60.2	(20.77)	<u>20.77</u>	5mL	5mL	2mL	2.5	1.0	Use 23A0206-07
BLA0625-SRM1	100.0	(12.50)	<u>12.54</u>	5mL	5mL	2mL	2.5	1.0	Use K011478

+1g DI WATER

Client ID: 4128/23 Date: 4/12/23 Preparation Reviewed By: LS Date: 2/1/23 Extraction Date and Time: 41/28/23 12:41



Analytical Resources, LLC  
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0625

Prepared using: EPA 3546 (Microwave)  
8082A PCB Solid 4 in Solid (Version: 7 Avectors)

WO Comments  
23A0206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <M> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43,  
7935-36;K:011477-79, MS/MSD <E>  
<H>BPR J006840-43, 7935-36, K:011477-79, Dup <H> Store in freezer (except GS)

Prep Steps		Reagents Used		Surrogates & Spike Standards Used			
Microwave	Station/Reagent	Standard ID	Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
M ① 2 3 EPA1128123 Analysr/Date	Microwave Analysr: <u>CFM</u> Date: 2/1/23	23 23 23	Surrogate 2ug/mL	N L000773 7/2/2023	50µL	CF	M
Hexane Exchange (2 X 20 mL)	Neutral Glass Wool	444 354 446	Spike 20ug/mL	1 K008150 9/5/2023	63µL	CF	M
KD 100°C	1:1 Hexane/Acetone	446	<b>MANUALLY ENTER EXPIRATION DATES!</b>				
Hexane Exchange (2 X 20 mL)	Anhydrous Sodium Sulfate	445					
① 1 2 3 ④ 5 6 UJ 2/6/23 Analysr/Date	Anhydrous Sodium Sulfate	2/6/23					
Turbo Vap	Hexane	14011573					
Pre Cleanups	Vialing Analysr: UJ Date: 2/7/23						
1 2 3 4 5 UJ 2/6/23 Analysr/Date	Hexane	14011573					
Turbo Vap	Concentrated Sulfuric Acid	1401033					
Post Cleanups	Silica Gel (SPE) Darts	14011573					
1 2 3 4 5 UJ 2/7/23 Analysr/Date	Sodium Sulfite	14010363					
Vialing Analysr/Date	Tetrabutylammonium hydrogensulfate (TBAS)	140008440					
UJ 2/7/23 Analysr/Date							

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

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



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**ORGANICS PREPARATION BENCH SHEET**

Batch: BLA0625

Prepared using: EPA 3546 (Microwave)  
8082A PCB Solid 4 In Solid (Version: 7 Arcolors)

**WO Comments**

23A0206: <C>BPR SRM, MS, DUP <C> <M>BPR PS, MS/MSD <N> <E>BPR 8270E RM K000591, SIM PAH RM 1009127 PCB RM J006840-43, 7935-36, K011477-79, MS/MSD <E> <H>BPR 1006840-43, 7935-36, K011477-79, Dup <H> Store in freezer (except GS)

**Prep Instructions**

**SPECIAL INSTRUCTIONS:**

1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization.
4. Add surr/spike.
5. Microwave on appropriate power setting determined by # of samples.
6. After microwave-~~Re~~-homogenize while hot then cool vessels in R-05 15 minutes. ~~Re~~-homogenize while cool.
7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug.
8. ~~Re~~-homogenize and rinse with 1:1 Hexane/Acetone.
9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane.
10. KD on 100° bath.
11. Exchange (2 X with 20mL) Hexane.
12. TurboVap.
13. Clean-ups.
14. TurboVap.
15. Vial with Hexane.

A. Need Total Solids Y  N

B. Archive/Freeze  Y  N



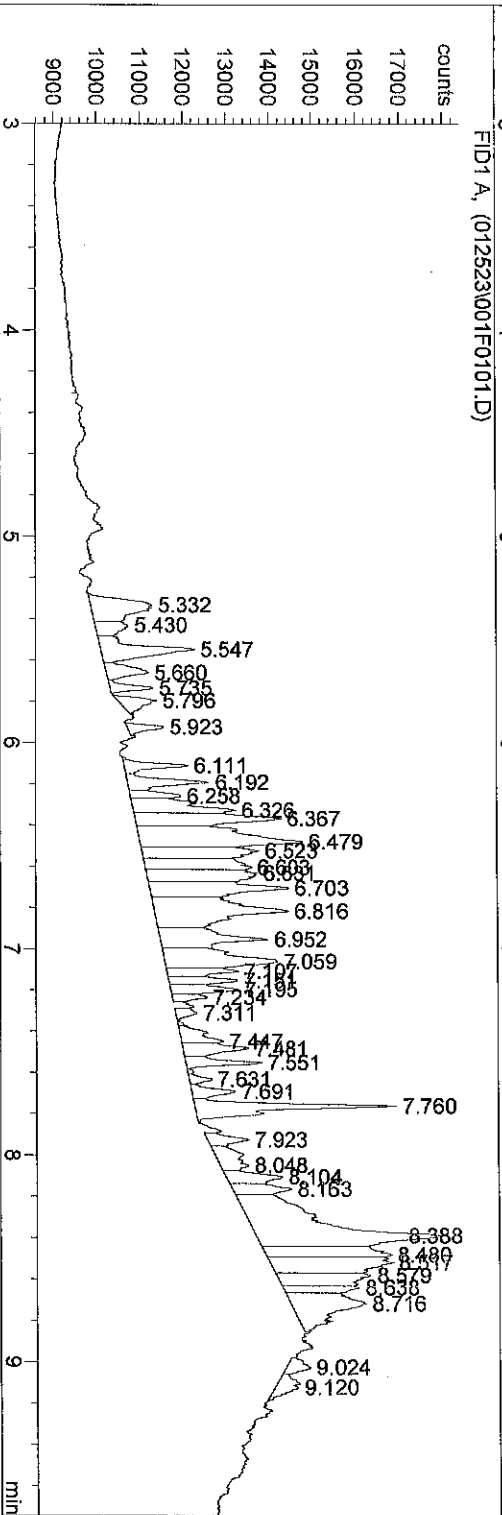
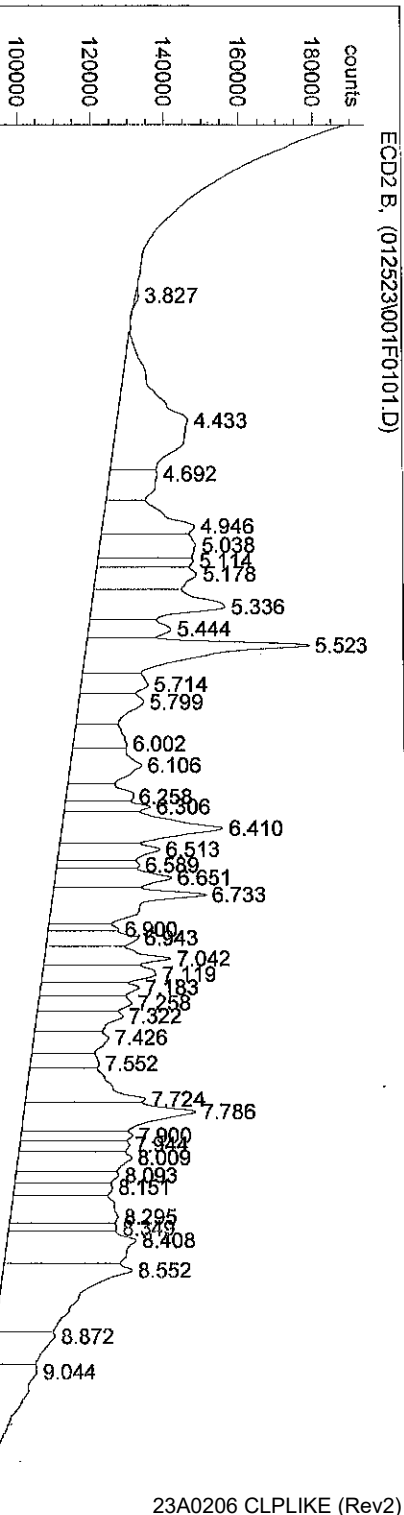


Extraction Parameter: PCB Extraction Batch BLA0615

Total Solids Batch: BLA0562 Work Order(s): 23A0206

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=	
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= 206-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	DP 1/25/23
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input type="checkbox"/> Rocks (%+size)?	
<input type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=	
<input type="checkbox"/> Previously Frozen =	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input checked="" type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=	
<input type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).	
<input type="checkbox"/> Share Samples Y / N	
<input type="checkbox"/> Multiple Jars Y / N	
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=	
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=	

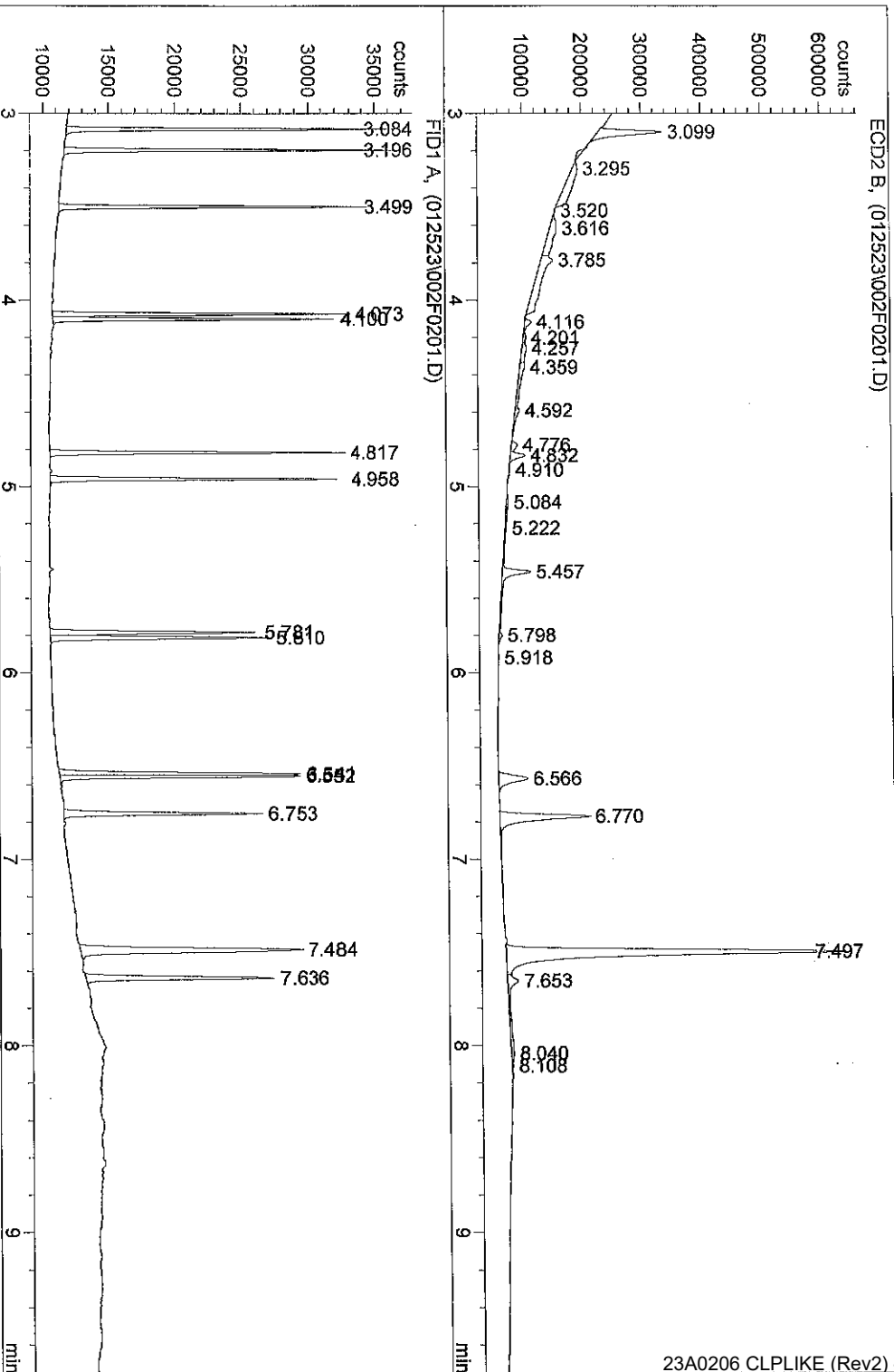
Injection Date : 1/25/2023 5:19:29 PM  
 Sample Name : DCM RINSE  
 Acq. Operator : DXF  
 Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
 Method : C:\HPCHEM\1\METHODS\SCREEN.M  
 Last changed : 7/9/2021 3:37:33 AM by TW  
 SCREEN METHOD  
 Seq. Line : 1  
 Location : Vial 1  
 Inj : 1  
 Inj Volume : 1 µl



\*\*\* End of Report \*\*\*

Injection Date : 1/25/2023 5:33:37 PM  
 Sample Name : PNA STD 10 PPM  
 Acq. Operator : DXP  
 Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
 Method : C:\HPCHEM\1\METHODS\SCREEN.M  
 Last changed : 7/9/2021 3:37:33 AM by TW  
 SCREEN METHOD

Seq. Line : 2  
 Location : Vial 2  
 Inj : 1  
 Inj Volume : 1 µl



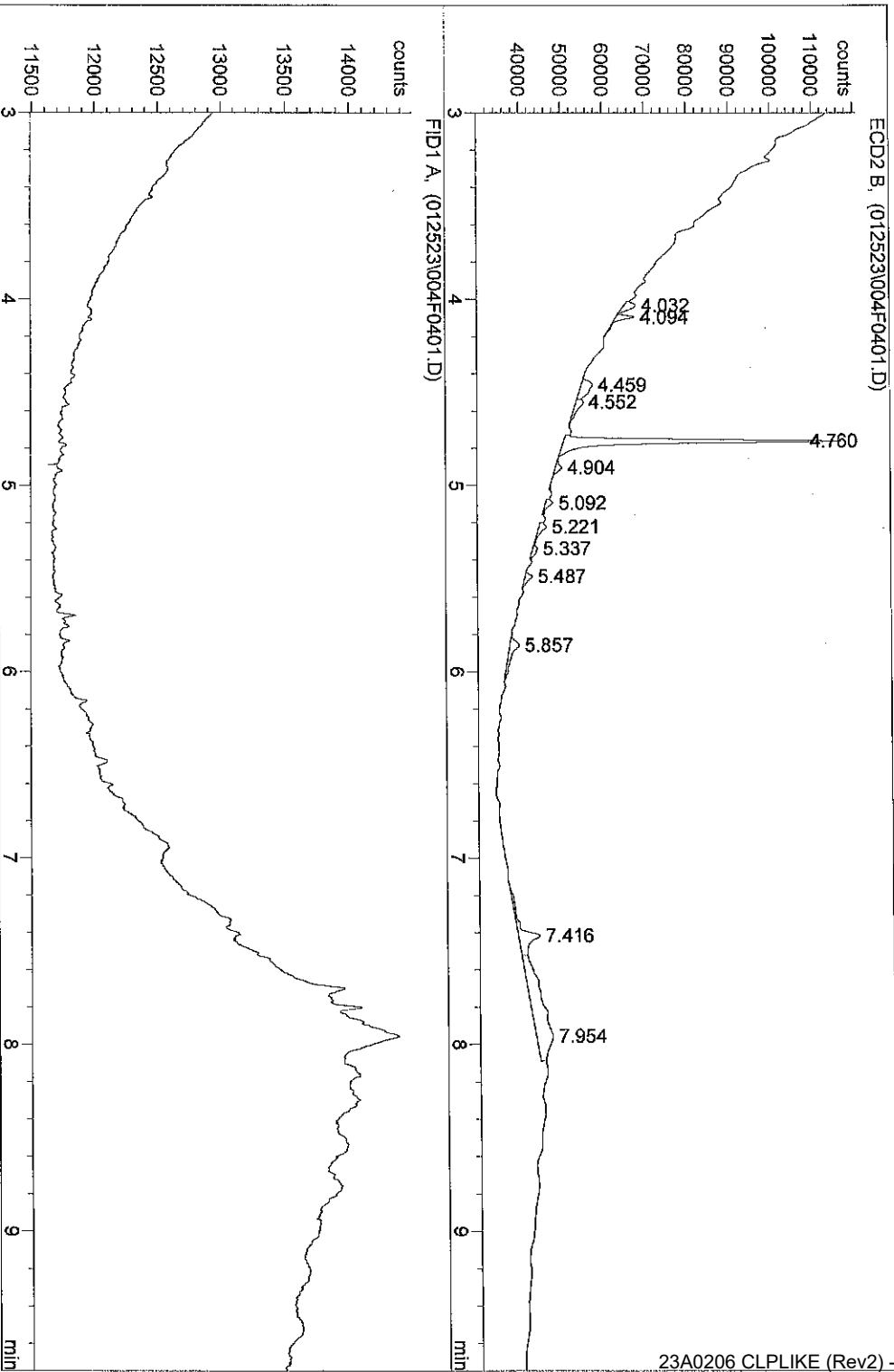
\*\*\* End of Report \*\*\*





Injection Date : 1/25/2023 6:01:53 PM  
Sample Name : 23A0206 01  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

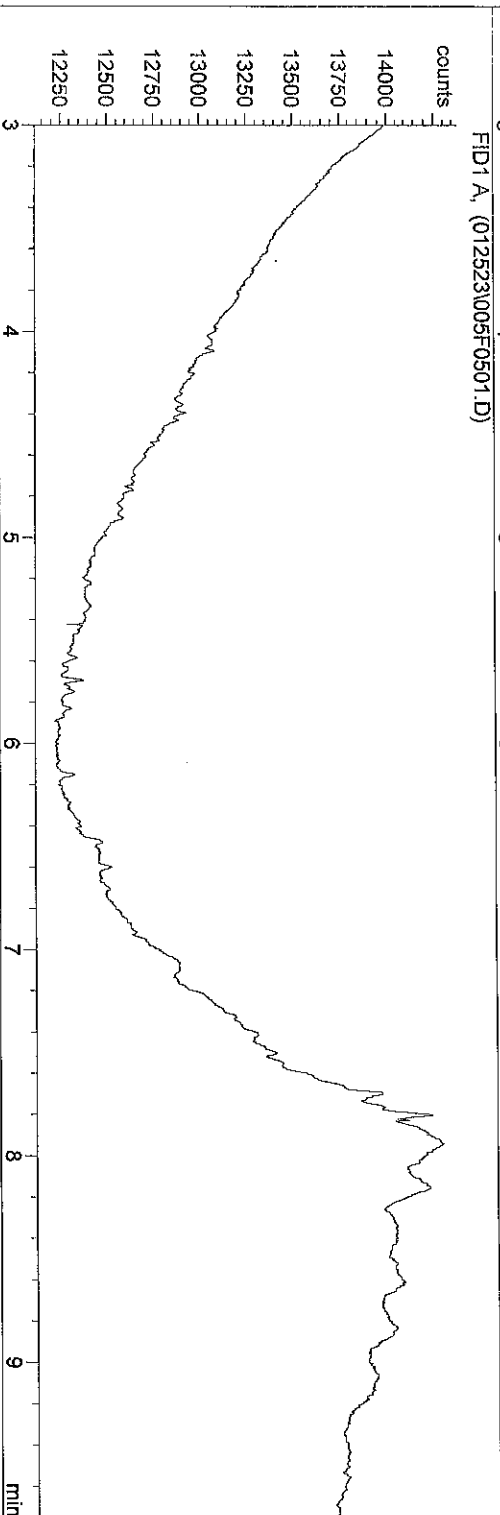
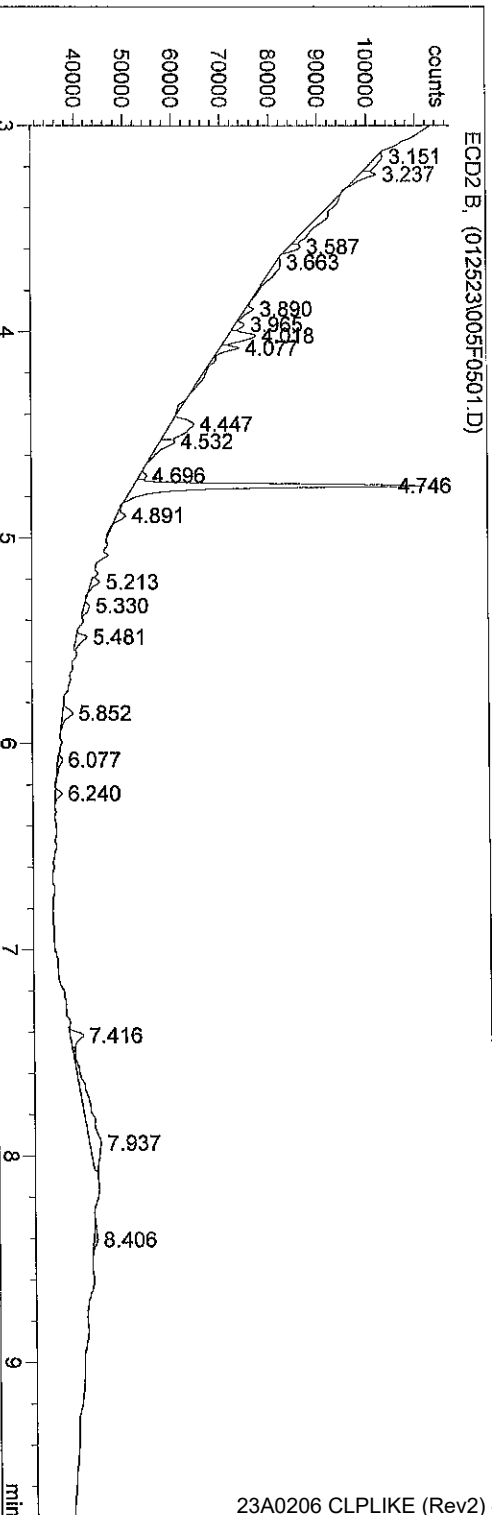
Seq. Line : 4  
Location : Vial 4  
Inj : 1  
Inj Volume : 1 µl



\*\*\* End of Report \*\*\*

Injection Date : 1/25/2023 6:16:21 PM  
Sample Name : 23A0206 02  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

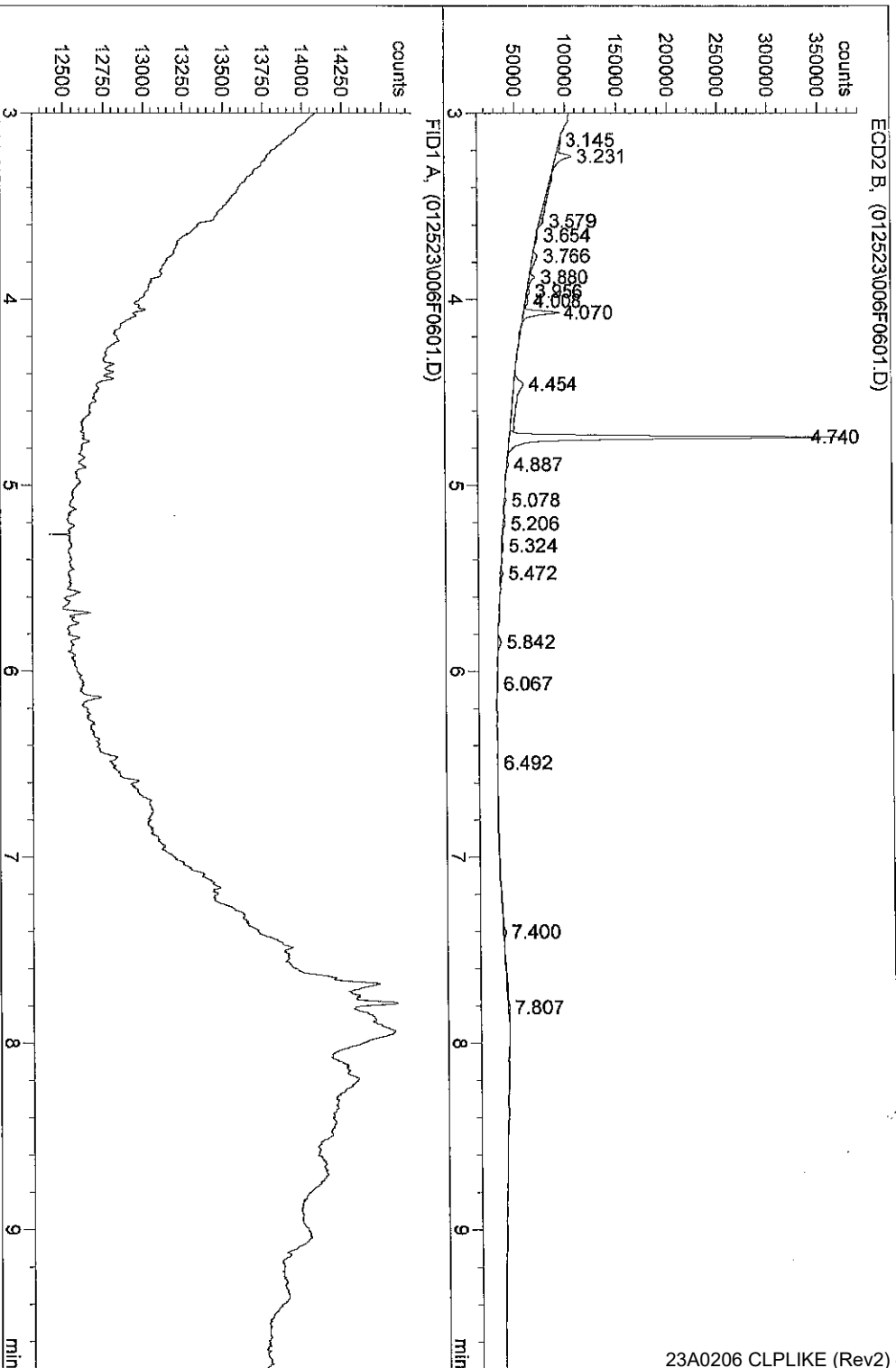
Seq. Line : 5  
Location : Vial 5  
Inj : 1  
Inj Volume : 1 µl



\*\*\* End of Report \*\*\*

Injection Date : 1/25/2023 6:30:20 PM  
Sample Name : 23A0206 03  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

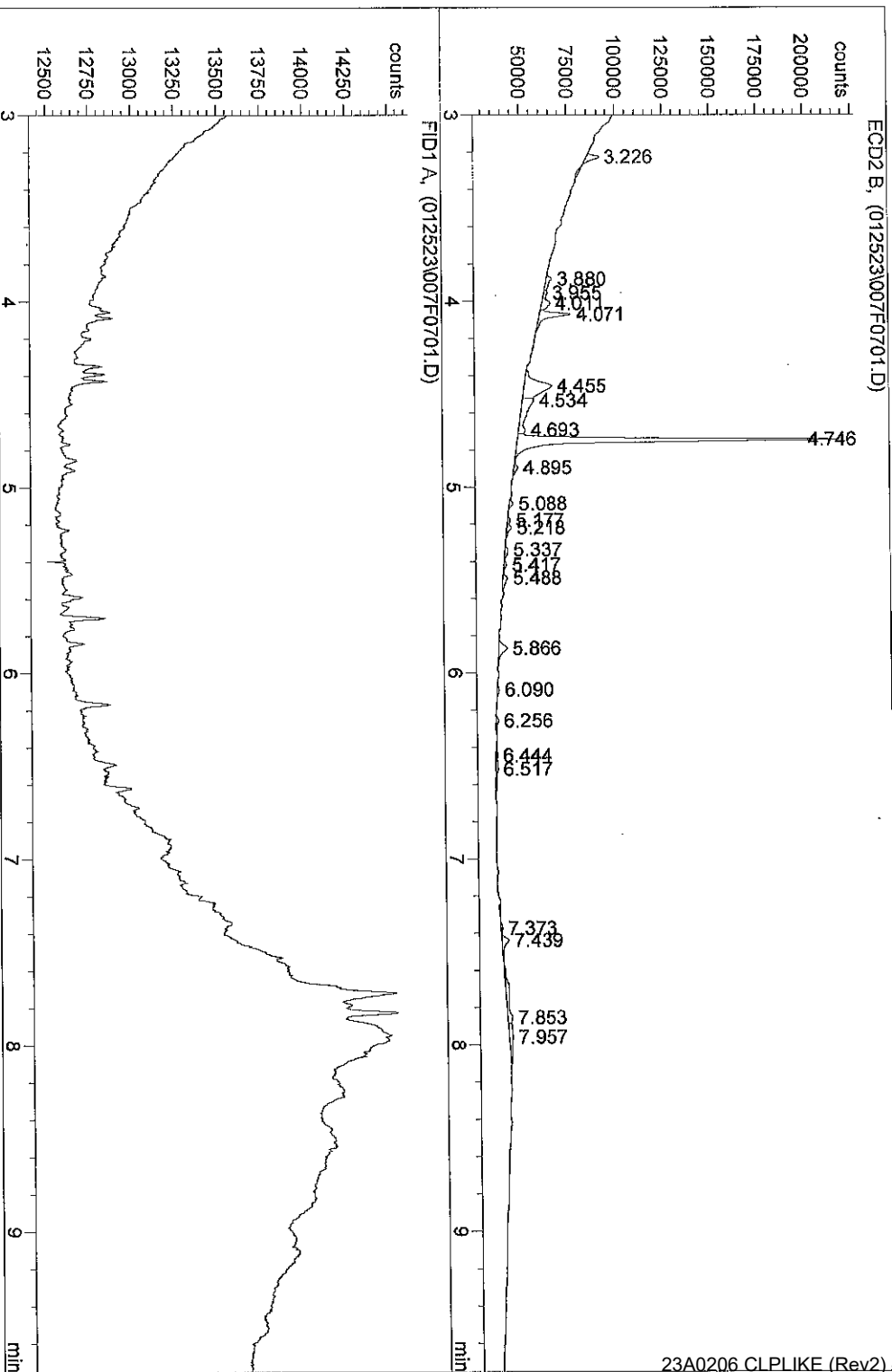
Seq. Line : 6  
Location : Vial 6  
Inj : 1  
Inj Volume : 1 µl



\*\*\* End of Report \*\*\*

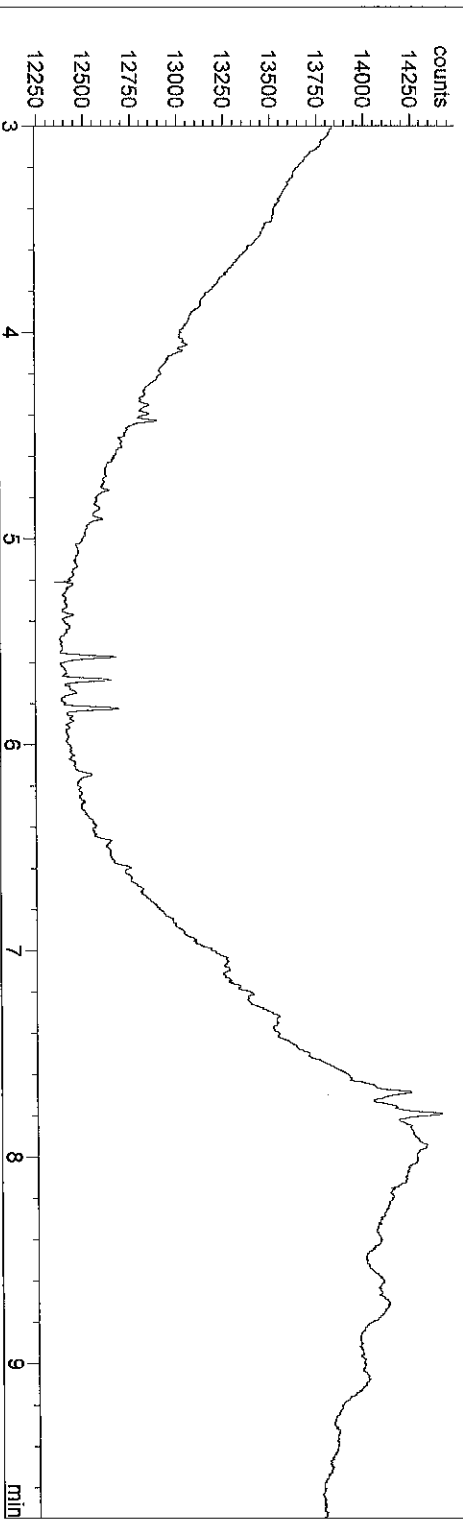
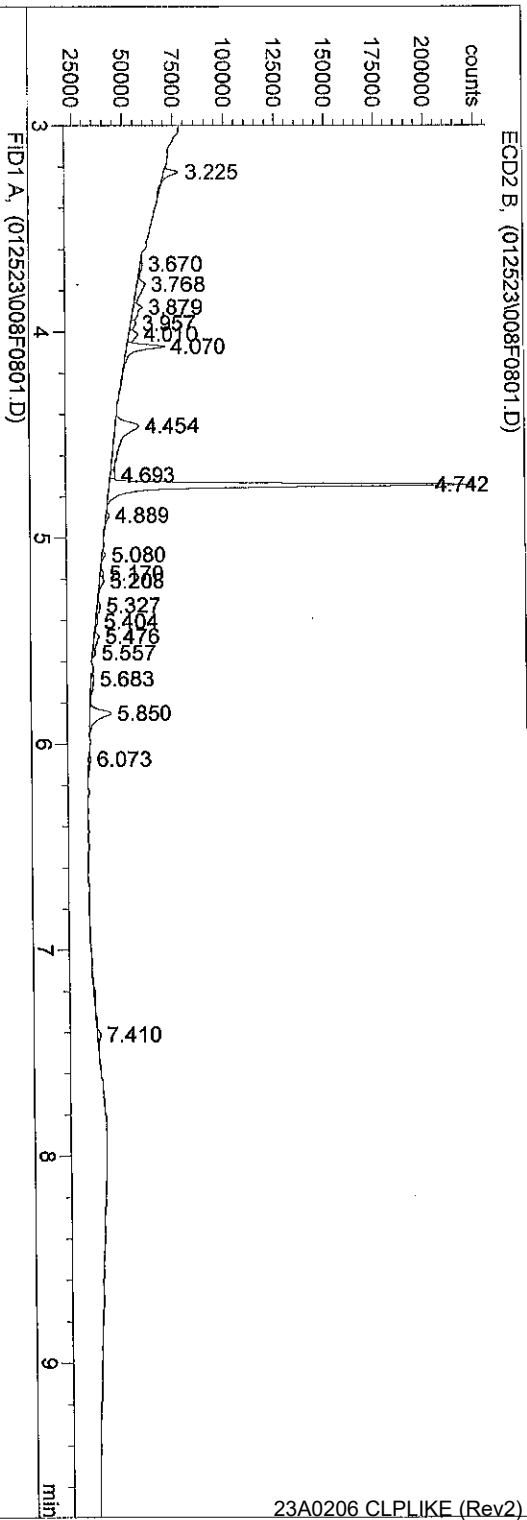
Injection Date : 1/25/2023 6:44:57 PM  
Sample Name : 23A0206 04  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

Seq. Line : 7  
Location : Vial 7  
Inj : 1  
Inj Volume : 1 µl



\*\*\* End of Report \*\*\*

Injection Date : 1/25/2023 6:58:50 PM  
 Sample Name : 23A0206 05  
 Acq. Operator : DXP  
 Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
 Method : C:\HPCHEM\1\METHODS\SCREEN.M  
 Last changed : 7/9/2021 3:37:33 AM by TW  
 SCREEN METHOD  
 Seq. Line : 8  
 Location : Vial 8  
 Inf : 1  
 Inf Volume : 1 µl

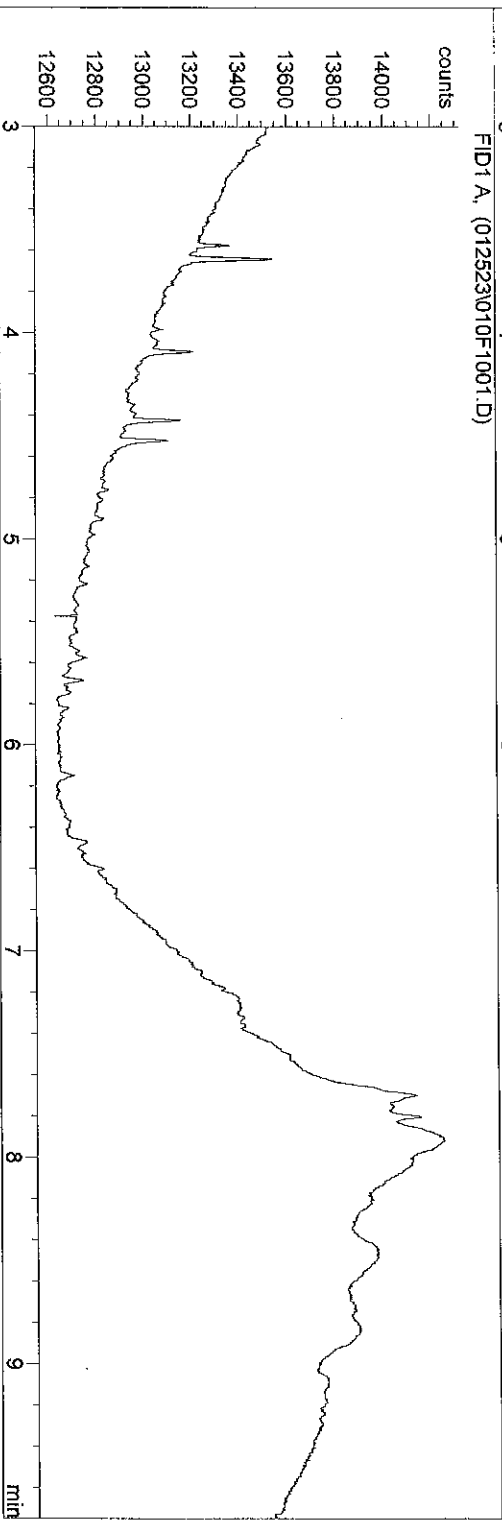
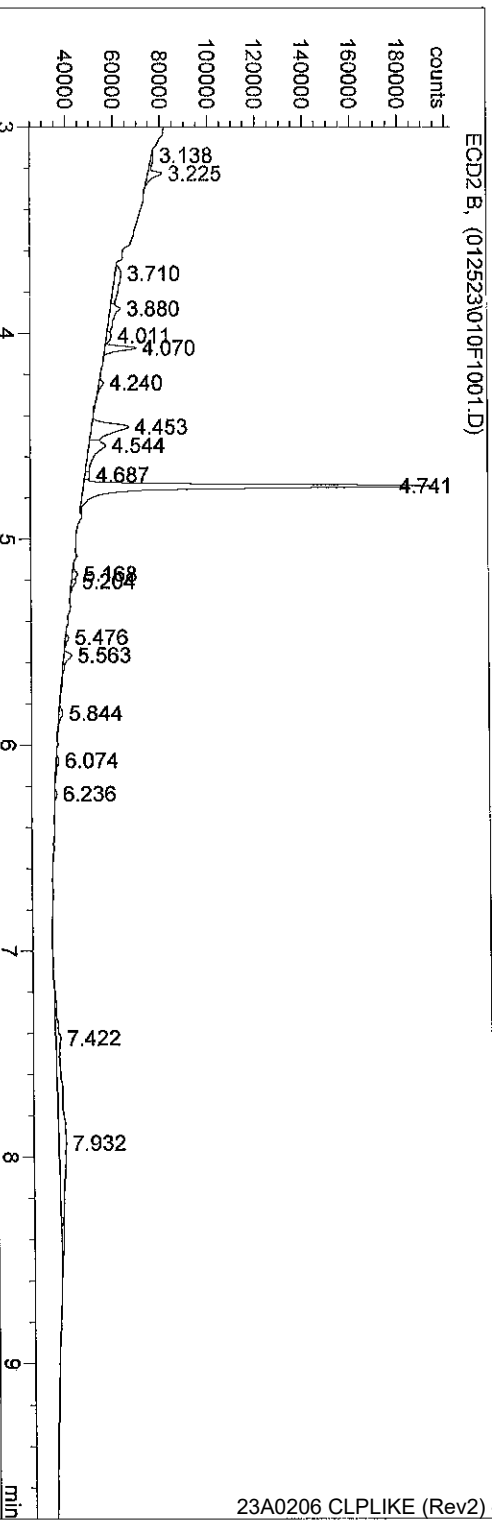


\*\*\* End of Report \*\*\*



Injection Date : 1/25/2023 7:27:28 PM  
Sample Name : 23A0206 07  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

Seq. Line : 10  
Location : Vial 10  
Inj : 1  
Inj Volume : 1 µl

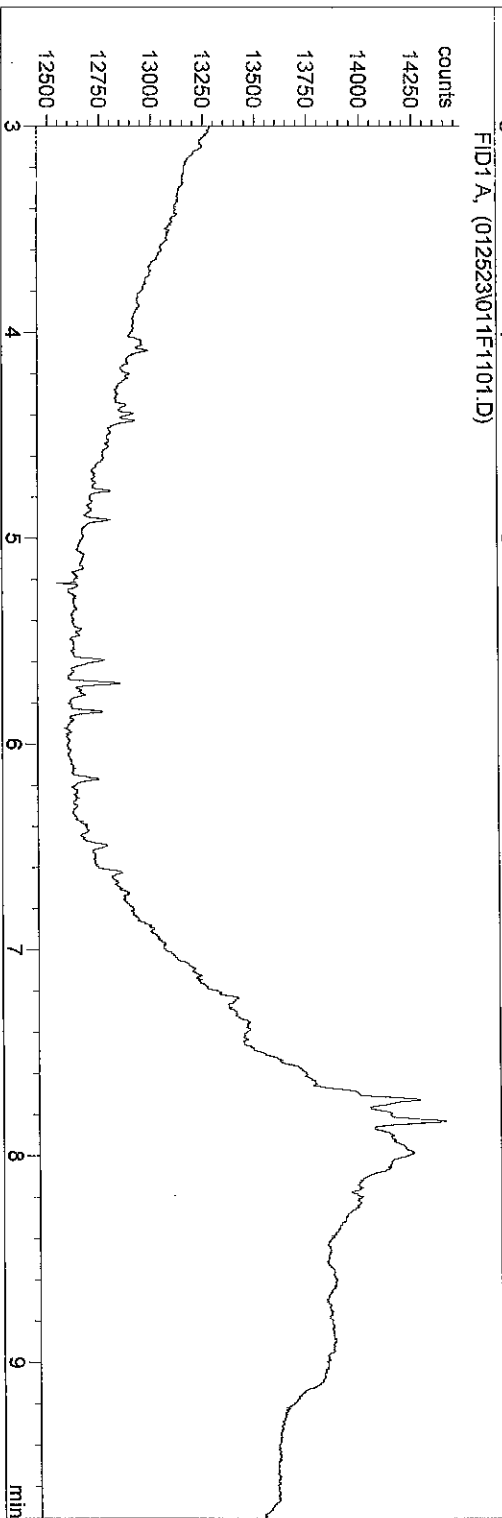
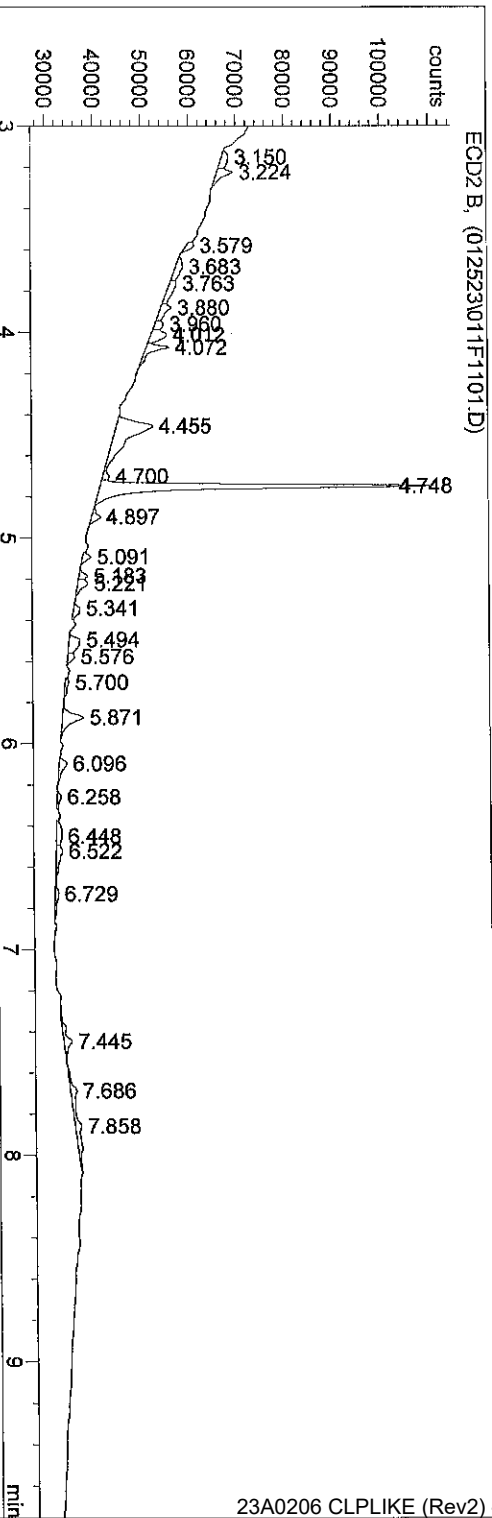


\*\*\* End of Report \*\*\*



Injection Date : 1/25/2023 7:42:01 PM  
Sample Name : 23A0206 08  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

Seq. Line : 11  
Location : Vial 11  
Inj : 1  
Inj Volume : 1 µl

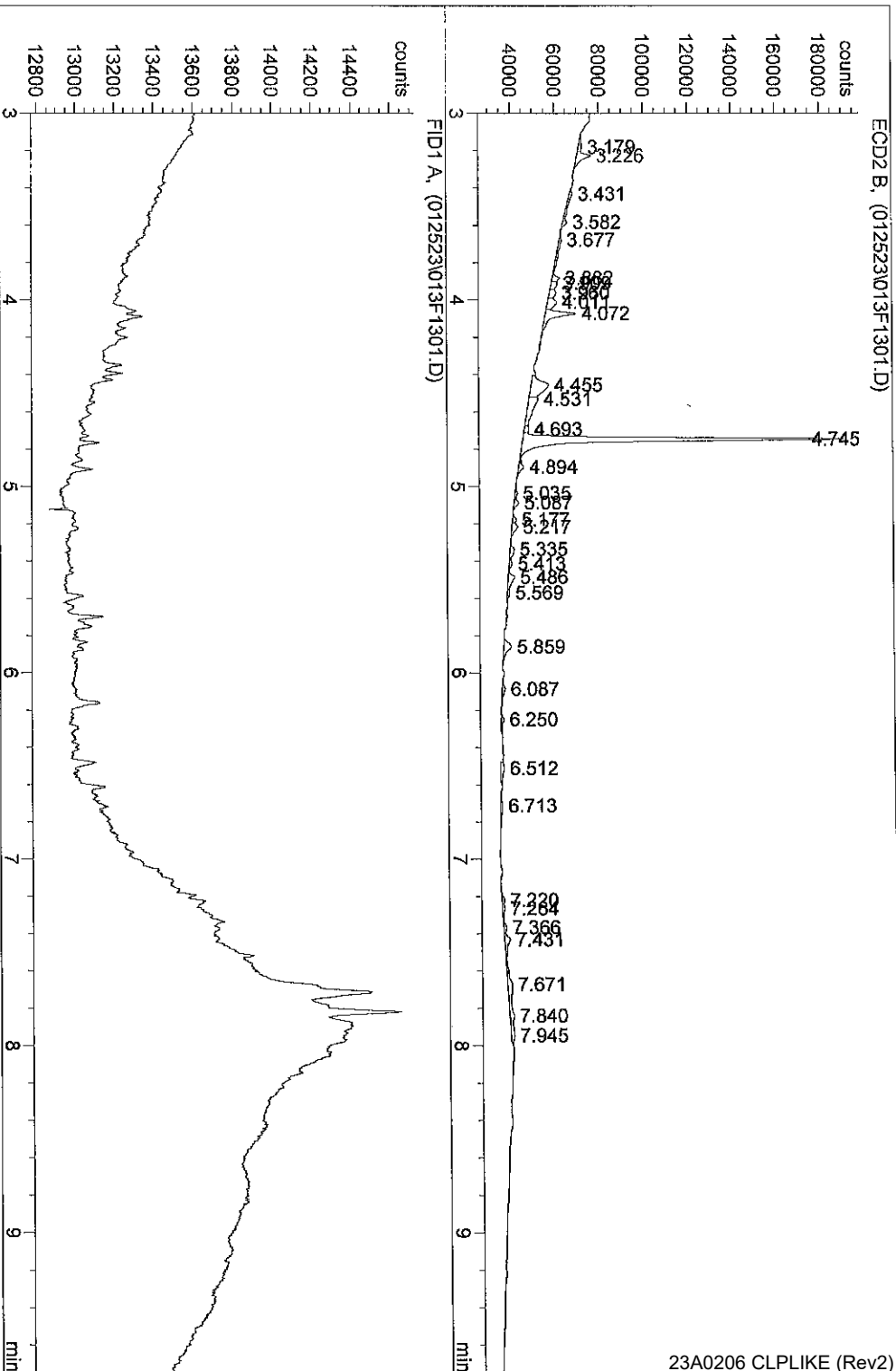




Injection Date : 1/25/2023 8:10:28 PM  
 Sample Name : 23A0206 10  
 Acq. Operator : DXP

Seq. Line : 13  
 Location : Vial 13  
 Inj : 1  
 Inj Volume : 1 µl

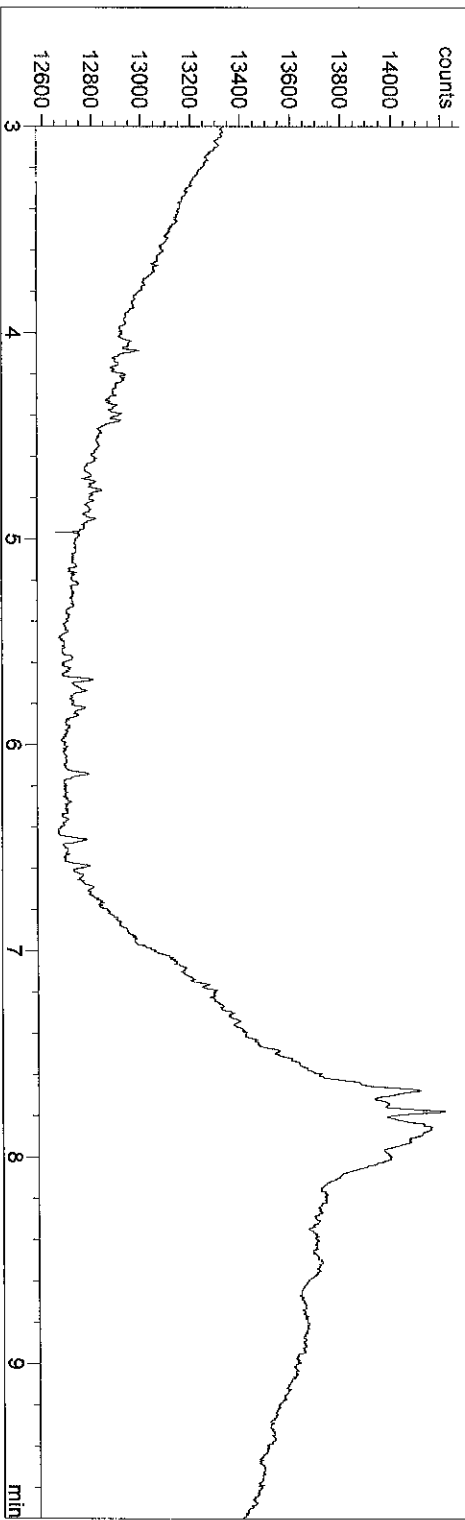
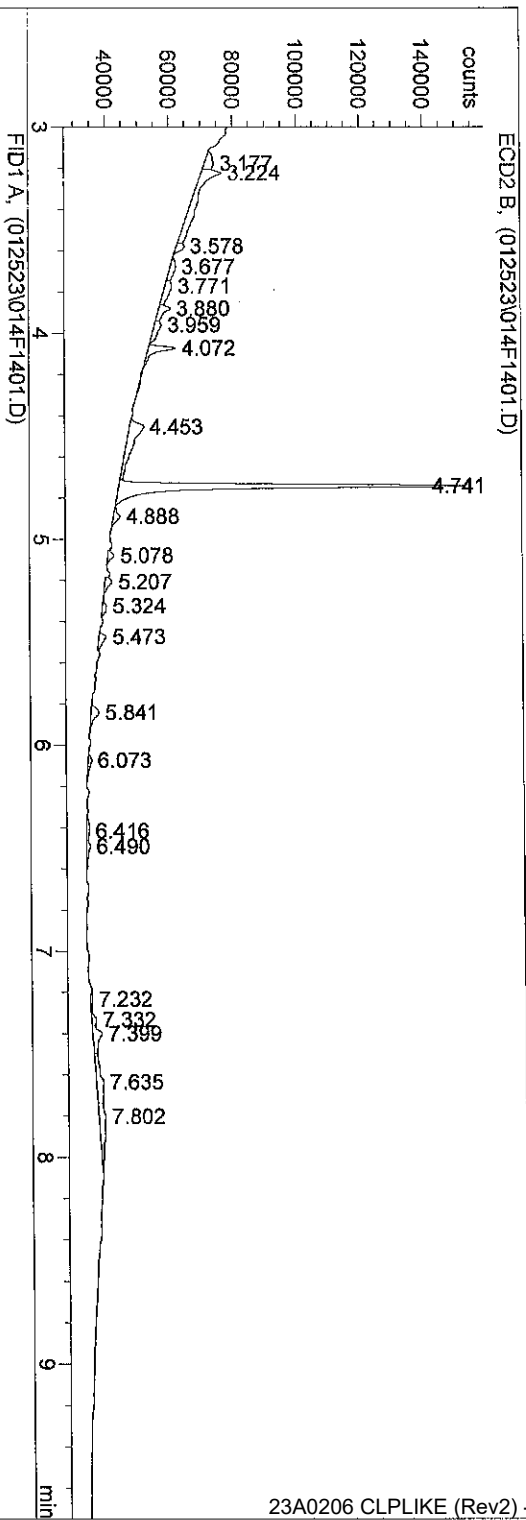
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
 Method : C:\HPCHEM\1\METHODS\SCREEN.M  
 Last changed : 7/9/2021 3:37:33 AM by TW  
 SCREEN METHOD



\*\*\* End of Report \*\*\*

Injection Date : 1/25/2023 8:24:31 PM  
Sample Name : 23A0206 11  
Acq. Operator : DXP  
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
Method : C:\HPCHEM\1\METHODS\SCREEN.M  
Last changed : 7/9/2021 3:37:33 AM by TW  
SCREEN METHOD

Seq. Line : 14  
Location : Vial 14  
Inf : 1  
Inf Volume : 1 µl



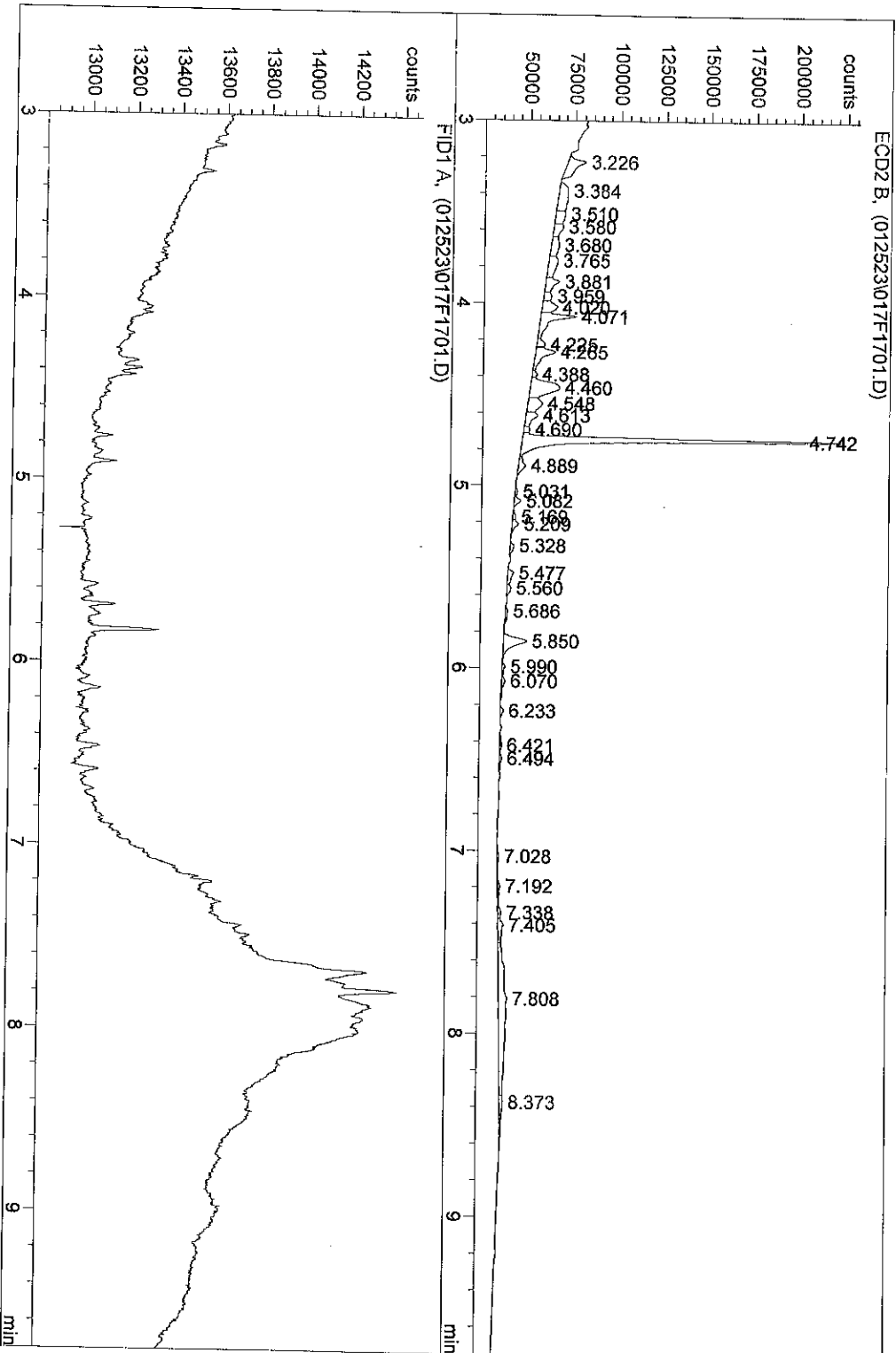
\*\*\* End of Report \*\*\*





Injection Date : 1/25/2023 9:07:36 PM  
 Sample Name : 23A0206 14  
 Acq. Operator : DXP  
 Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S  
 Method : C:\HPCHEM\1\METHODS\SCREEN.M  
 Last changed : 7/9/2021 3:37:33 AM by TW  
 SCREEN METHOD

Seq. Line : 17  
 Location : Vial 17  
 Inj : 1  
 Inj Volume : 1 µl



\*\*\* End of Report \*\*\*



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0045

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup - uL

Analysis: EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1015	23A0206-02	02072312ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0625-MSD1	02072319ECD7.D	02/07/2023	
Matrix Spike	BLA0625-MS1	02072318ECD7.D	02/07/2023	
LCS Dup	BLA0625-BSD1	02072309ECD7.D	02/07/2023	
LCS	BLA0625-BS1	02072308ECD7.D	02/07/2023	
Blank	BLA0625-BLK1	02072307ECD7.D	02/07/2023	
LDW23-SS1158	23A0206-04	02072314ECD7.D	02/07/2023	
LDW23-SS1151	23A0206-05	02072315ECD7.D	02/07/2023	
Reference	BLA0625-SRM1	02072310ECD7.D	02/07/2023	
LDW23-SS1096	23A0206-11	02082312ECD7.D	02/07/2023	
LDW23-SS1066	23A0206-13	02092308ECD7.D	02/07/2023	
LDW23-SS1021	23A0206-01	02072311ECD7.D	02/07/2023	
LDW23-SS1061	23A0206-14	02082315ECD7.D	02/07/2023	
LDW23-SS1164	23A0206-03	02072313ECD7.D	02/07/2023	
LDW23-SS1094	23A0206-12	02082313ECD7.D	02/07/2023	
LDW23-SS1139	23A0206-07	02072317ECD7.D	02/07/2023	
LDW23-SS1100	23A0206-10	02082311ECD7.D	02/07/2023	
LDW23-SS1103	23A0206-09	02082310ECD7.D	02/07/2023	
LDW23-SS1117	23A0206-08	02082309ECD7.D	02/07/2023	
LDW23-SS1145	23A0206-06	02072316ECD7.D	02/07/2023	





**CLEANUP BENCH SHEET**

CLB0045

Matrix: Solid

Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL

Printed: 2/7/2023 10:17:42AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-12	B	LDW23-SS1094	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
BLA0625-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	LMJ	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0046

Cleanup Type: Sulfur

Cleanup Method: EPA 3660B Sulfur Cleanup - uL

Analysis: EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1015	23A0206-02	02072312ECD7.D	02/07/2023	
LDW23-SS1145	23A0206-06	02072316ECD7.D	02/07/2023	
LDW23-SS1164	23A0206-03	02072313ECD7.D	02/07/2023	
Reference	BLA0625-SRM1	02072310ECD7.D	02/07/2023	
LDW23-SS1139	23A0206-07	02072317ECD7.D	02/07/2023	
Blank	BLA0625-BLK1	02072307ECD7.D	02/07/2023	
LCS	BLA0625-BS1	02072308ECD7.D	02/07/2023	
LCS Dup	BLA0625-BSD1	02072309ECD7.D	02/07/2023	
LDW23-SS1158	23A0206-04	02072314ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0625-MSD1	02072319ECD7.D	02/07/2023	
LDW23-SS1100	23A0206-10	02082311ECD7.D	02/07/2023	
LDW23-SS1151	23A0206-05	02072315ECD7.D	02/07/2023	
LDW23-SS1103	23A0206-09	02082310ECD7.D	02/07/2023	
LDW23-SS1117	23A0206-08	02082309ECD7.D	02/07/2023	
LDW23-SS1096	23A0206-11	02082312ECD7.D	02/07/2023	
LDW23-SS1094	23A0206-12	02082313ECD7.D	02/07/2023	
LDW23-SS1066	23A0206-13	02092308ECD7.D	02/07/2023	
LDW23-SS1061	23A0206-14	02082315ECD7.D	02/07/2023	
LDW23-SS1021	23A0206-01	02072311ECD7.D	02/07/2023	
Matrix Spike	BLA0625-MS1	02072318ECD7.D	02/07/2023	



**CLEANUP BENCH SHEET**

CLB0046

Matrix: Solid

Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL

Printed: 2/7/2023 10:18:28AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-12	B	LDW23-SS1094	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
BLA0625-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	LMJ	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLB0047

Cleanup Type: Sulfuric Acid

Cleanup Method: EPA 3665 Sulfuric Acid Cleanup - uL

Analysis: EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1145	23A0206-06	02072316ECD7.D	02/07/2023	
LDW23-SS1015	23A0206-02	02072312ECD7.D	02/07/2023	
LDW23-SS1021	23A0206-01	02072311ECD7.D	02/07/2023	
LDW23-SS1066	23A0206-13	02092308ECD7.D	02/07/2023	
LDW23-SS1158	23A0206-04	02072314ECD7.D	02/07/2023	
LDW23-SS1096	23A0206-11	02082312ECD7.D	02/07/2023	
LDW23-SS1100	23A0206-10	02082311ECD7.D	02/07/2023	
LDW23-SS1103	23A0206-09	02082310ECD7.D	02/07/2023	
LDW23-SS1094	23A0206-12	02082313ECD7.D	02/07/2023	
LDW23-SS1139	23A0206-07	02072317ECD7.D	02/07/2023	
LCS Dup	BLA0625-BSD1	02072309ECD7.D	02/07/2023	
LDW23-SS1151	23A0206-05	02072315ECD7.D	02/07/2023	
LDW23-SS1164	23A0206-03	02072313ECD7.D	02/07/2023	
LDW23-SS1061	23A0206-14	02082315ECD7.D	02/07/2023	
Blank	BLA0625-BLK1	02072307ECD7.D	02/07/2023	
Reference	BLA0625-SRM1	02072310ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0625-MSD1	02072319ECD7.D	02/07/2023	
Matrix Spike	BLA0625-MS1	02072318ECD7.D	02/07/2023	
LCS	BLA0625-BS1	02072308ECD7.D	02/07/2023	
LDW23-SS1117	23A0206-08	02082309ECD7.D	02/07/2023	



**CLEANUP BENCH SHEET**

CLB0047

Matrix: Solid      Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL      Printed: 2/7/2023 10:19:08AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0206-01	B	LDW23-SS1021	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-02	B	LDW23-SS1015	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-03	B	LDW23-SS1164	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-04	B	LDW23-SS1158	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-05	B	LDW23-SS1151	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-06	B	LDW23-SS1145	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-07	B	LDW23-SS1139	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-08	B	LDW23-SS1117	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-09	B	LDW23-SS1103	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-10	B	LDW23-SS1100	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-11	B	LDW23-SS1096	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-12	B	LDW23-SS1094	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-13	B	LDW23-SS1066	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
23A0206-14	B	LDW23-SS1061	B 03	2.5	2.5	8082A PCB Solid 4	2/7/2023	LMJ	
BLA0625-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	LMJ	
BLA0625-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	LMJ	



**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 8082A**

<b>Blank</b>
--------------

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BLA0625-BLK1</u>
Sampled:	<u>N/A</u>	Prepared:	<u>01/28/23 12:01</u>
Solids:		Preparation:	<u>EPA 3546 (Microwave)</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0109</u>
Instrument:	<u>ECD7</u>	Column:	<u>ZB5</u>
		File ID:	<u>02072307ECD7.D</u>
		Analyzed:	<u>02/07/23 14:47</u>
		Initial/Final:	<u>12.5 g / 2.5 mL</u>
		Calibration:	<u>GA00061</u>
		Cleanups:	<u>Silica Gel, Sulfur, Sulfuric Acid</u>

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	5.91	73.8	40 - 126	
Tetrachlorometaxylene	8.0000	6.56	81.9	44 - 120	
Decachlorobiphenyl [2C]	8.0000	6.26	78.3	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	6.44	80.5	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072307ECD7.D  
Data file 2: /230207.b/230207.b/02072307ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

**BLA**  
ARI ID: ~~BLA~~0625-BLK1  
Client ID:  
Injection Date: 07-FEB-2023 14:47  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	ZB5 Col Response	RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	204827	5.685	0.001	166301	32.8	32.2	1.7	Tetrachloro-m-xylene
13.888	-0.000	253573	14.115	-0.002	279526	29.5	31.3	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	442112	-12.2
Hexabromobiphenyl	647433	802836	24.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	381916	13.4
Hexabromobiphenyl	382032	562484	47.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Coll (5.908 - 13.788) = 48002

Coll Total PCB = 0.0 ppm\*



Total PCB Area Col2 (5.785 - 14.017) = 36953 Col2 Total PCB = 0.0 ppm\*

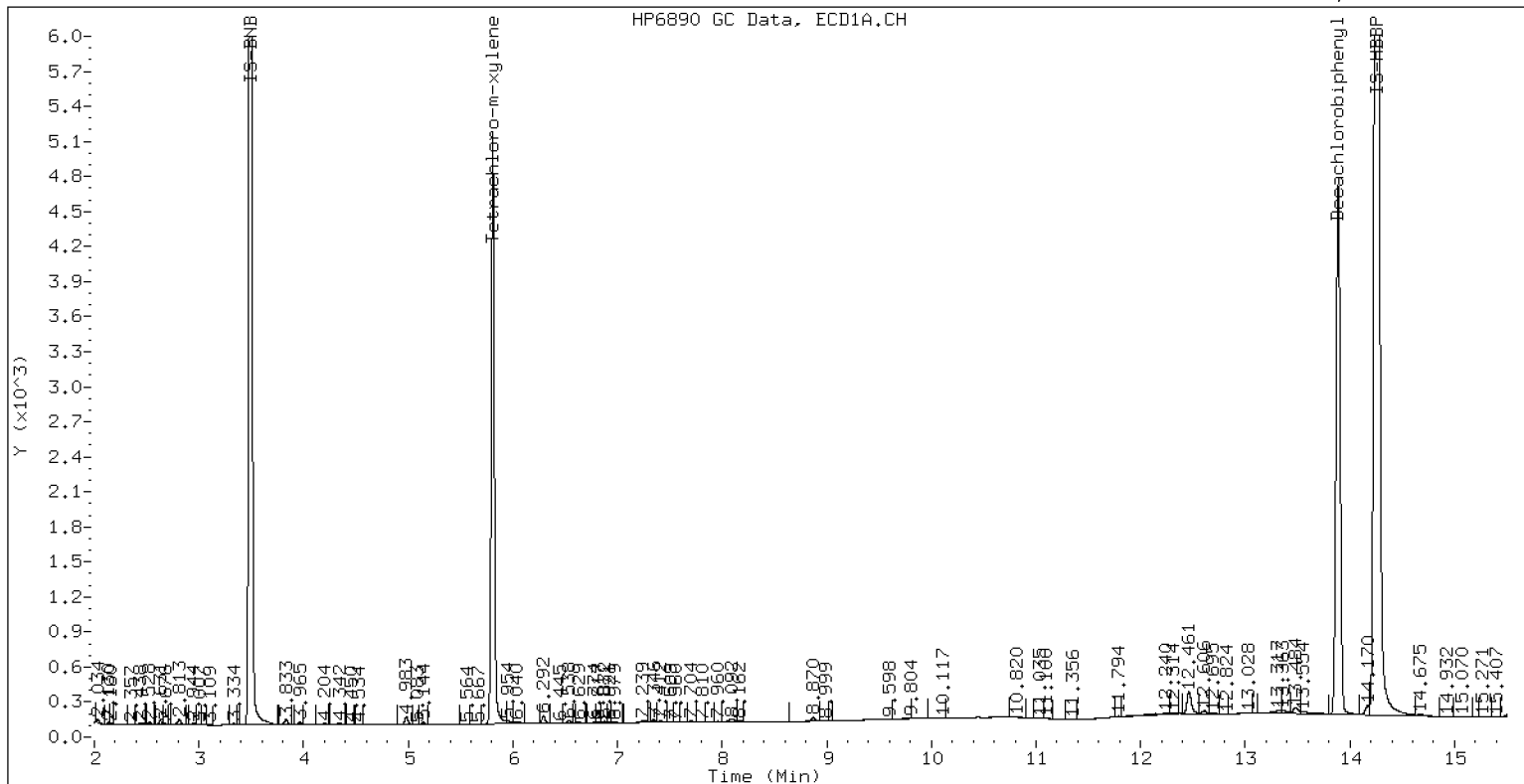
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 BLB0625-BLK1

07-FEB-2023 14:47, 2ul





**LCS / LCS DUPLICATE RECOVERY**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>02/07/23 15:08</u>
Batch:	<u>BLA0625</u>	Laboratory ID:	<u>BLA0625-BS1</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>12.5 g / 2.5 mL</u>		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	101	98.1		97.3	56 - 120
Aroclor 1260 [2C]	101	88.3		87.6	58 - 120

\* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016 [2C]	101	91.8		91.1	6.57	30	56 - 120
Aroclor 1260 [2C]	101	81.0		80.3	8.60	30	58 - 120

\* Indicates values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072308ECD7.D  
Data file 2: /230207.b/230207.b/02072308ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

**BLA**  
ARI ID: ~~511~~0625-BS1  
Client ID:  
Injection Date: 07-FEB-2023 15:08  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	ZB5 Col Response	RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	203189	5.685	0.000	159999	33.6	32.0	5.1	Tetrachloro-m-xylene
13.887	-0.001	255390	14.116	-0.001	283958	29.6	32.5	9.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	427305	-15.1
Hexabromobiphenyl	647433	805958	24.5
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	370346	9.9
Hexabromobiphenyl	382032	550881	44.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.002	76834	483.9	1	7.253	-0.000	95501	475.4
Aroclor-1016	2	7.646	-0.004	264301	502.4	2	7.846	-0.002	223433	507.6
Aroclor-1016	3	7.784	-0.004	106375	439.4	3	8.046	-0.002	90789	505.4
Aroclor-1016	4	8.399	-0.004	80607	517.7	4	8.302	-0.001	66612	473.0
Total CollAve (4 peaks):				485.8		Total Col2Ave (4 peaks):				490.4 RPD = 1
Corrected Ave (3 peaks):				475.2		Corrected Ave (3 peaks):				484.6 RPD = 2
Aroclor-1221	1	4.733	0.000	655	20.7	1	4.959	0.000	330	12.2
Aroclor-1221	2	6.131	-0.003	9836	152.3	2	6.296	-0.002	8955	150.5
Aroclor-1221	3	6.381	-0.003	48781	325.4	3	6.620	-0.003	37062	369.1
Total CollAve (3 peaks):				166.1		Total Col2Ave (3 peaks):				177.3 RPD = 6
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.733	-0.000	655	33.2	1	4.959	-0.001	330	20.0
Aroclor-1232	2	6.131	-0.003	9836	221.4	2	7.253	-0.004	95501	1036.3
Aroclor-1232	3	7.646	-0.012	264301	1189.3	3	7.846	-0.008	223433	1190.5
Aroclor-1232	4	8.571	-0.014	99770	1048.9	4	8.708	-0.005	70264	1347.4
Total CollAve (4 peaks):				623.2		Total Col2Ave (4 peaks):				898.6 RPD = 36
Corrected Ave (3 peaks):				434.5		Corrected Ave (3 peaks):				748.9 RPD = 53*
Aroclor-1242	1	7.267	-0.003	76834	587.2	1	7.253	-0.000	95501	589.6
Aroclor-1242	2	7.646	-0.009	264301	617.2	2	7.846	-0.003	223433	621.1
Aroclor-1242	3	8.399	-0.007	80607	633.6	3	9.146	-0.005	11862	105.3
Aroclor-1242	4	8.571	-0.011	99770	519.1	4	9.572	-0.003	6652	44.5
Total CollAve (4 peaks):				589.3		Total Col2Ave (4 peaks):				340.1 RPD = 54*
Corrected Ave (3 peaks):				574.5		Corrected Ave (3 peaks):				246.5 RPD = 80*
Aroclor-1248	1	8.399	-0.002	80607	377.1	1	8.302	-0.001	66612	397.9
Aroclor-1248	2	8.571	-0.004	99770	365.9	2	8.708	-0.001	70264	389.9
Aroclor-1248	3	8.988	-0.005	76608	146.9	3	9.146	-0.005	11862	53.9
Aroclor-1248	4	9.293	0.001	81161	314.4	4	9.572	-0.003	6652	24.4
Total CollAve (4 peaks):				301.1		Total Col2Ave (4 peaks):				216.5 RPD = 33
Corrected Ave (3 peaks):				275.7		Corrected Ave (3 peaks):				156.1 RPD = 55*
Aroclor-1254	1	9.293	-0.006	81161	186.4	1	9.442	-0.002	58894	219.2
Aroclor-1254	2	---	---	---	0.0	2	9.963	-0.001	13043	60.1
Aroclor-1254	3	9.659	-0.011	15981	57.3	3	10.141	0.026	136343	287.8
Aroclor-1254	4	9.795	-0.014	45870	83.9	4	10.365	0.002	173330	365.9
Aroclor-1254	5	10.113	-0.064	215654	606.5	5	10.559	-0.003	226758	859.4
Total CollAve (4 peaks):				233.5		Total Col2Ave (5 peaks):				358.5 RPD = 42*
Corrected Ave (3 peaks):				109.2		Corrected Ave (4 peaks):				233.2 RPD = 72*
Aroclor-1260	1	11.038	-0.006	175378	387.8	1	11.647	-0.002	173659	437.0
Aroclor-1260	2	11.353	-0.007	181610	390.7	2	11.910	-0.002	416894	414.6
Aroclor-1260	3	11.725	-0.009	444246	363.0	3	12.429	-0.002	119858	478.3
Aroclor-1260	4	12.128	-0.011	241542	382.0	4	12.494	-0.002	283284	435.3
Aroclor-1260	5	12.238	-0.006	96931	351.7	NS	---	---	---	---
Total CollAve (5 peaks):				375.1		Total Col2Ave (4 peaks):				441.3 RPD = 16
Corrected Ave (4 peaks):				371.1		Corrected Ave (3 peaks):				429.0 RPD = 14
Aroclor-1262	1	10.815	-0.017	347405	1065.9	1	11.193	-0.007	160442	297.6
Aroclor-1262	2	12.238	-0.008	96931	188.4	2	11.647	-0.006	173659	378.8
Aroclor-1262	3	12.311	-0.009	115282	206.4	3	12.429	-0.005	119858	245.5
Aroclor-1262	4	12.979	-0.010	107039	210.3	4	12.494	-0.009	283284	362.3
Total CollAve (4 peaks):				417.8		Total Col2Ave (4 peaks):				321.0 RPD = 26
Corrected Ave (3 peaks):				201.7		Corrected Ave (3 peaks):				301.8 RPD = 40
Aroclor-1268	1	12.238	-0.007	96931	72.8	1	12.429	-0.004	119858	93.2
Aroclor-1268	2	12.311	-0.007	115282	86.8	2	12.494	-0.007	283284	206.9
Aroclor-1268	3	12.716	0.017	51398	46.7	3	12.888	-0.005	7043	6.2
Aroclor-1268	4	13.481	-0.008	29911	9.2	4	13.704	-0.005	33471	9.5
Total CollAve (4 peaks):				53.9		Total Col2Ave (4 peaks):				78.9 RPD = 38

Corrected Ave (3 peaks): 42.9      Corrected Ave (3 peaks): 36.3      RPD = 17

Total PCB Area Col1 (5.908 - 13.788) = 4827983      Col1 Total PCB = 1.0 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 4094362      Col2 Total PCB = 1.0 ppm\*

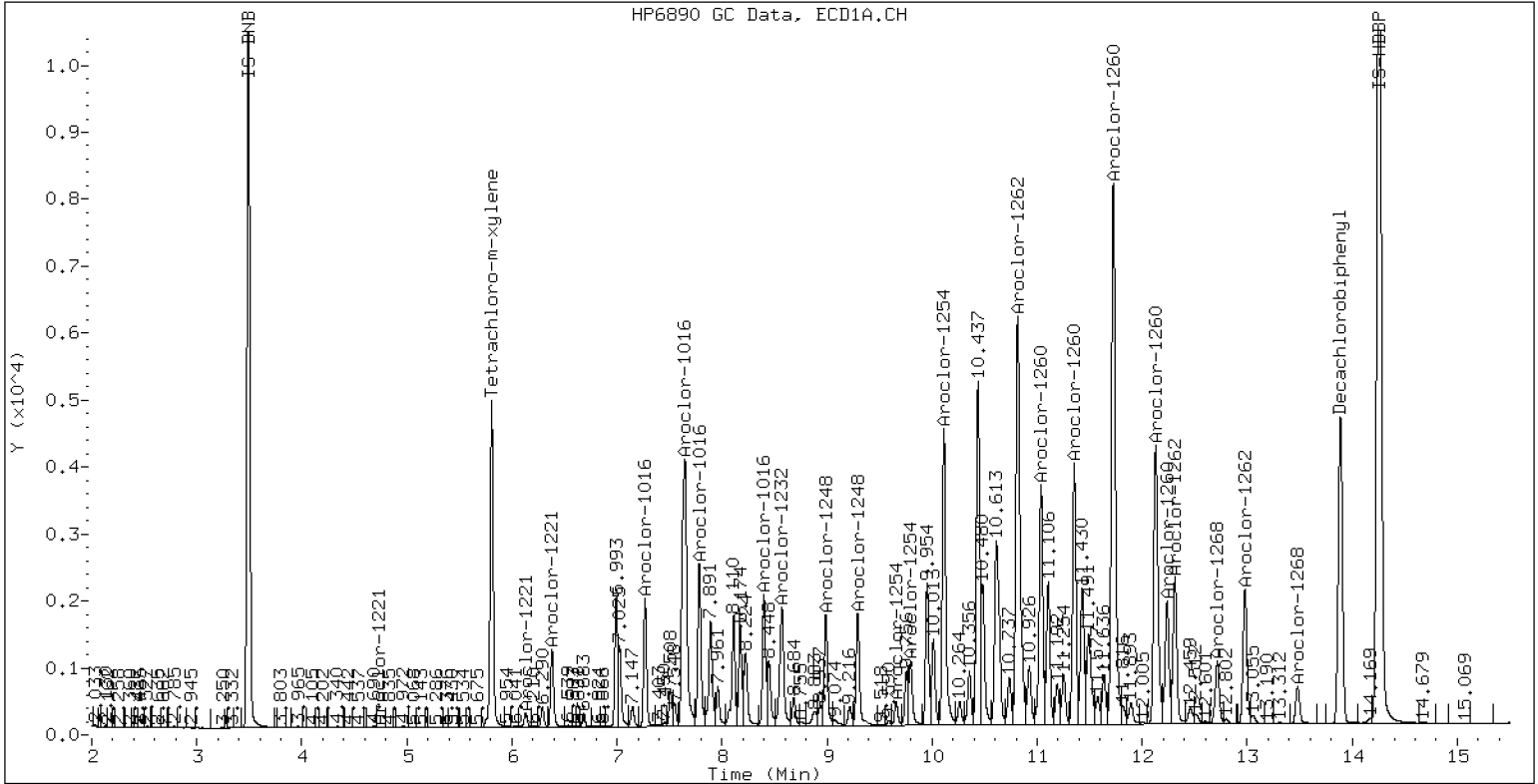
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 BLB0625-BS1

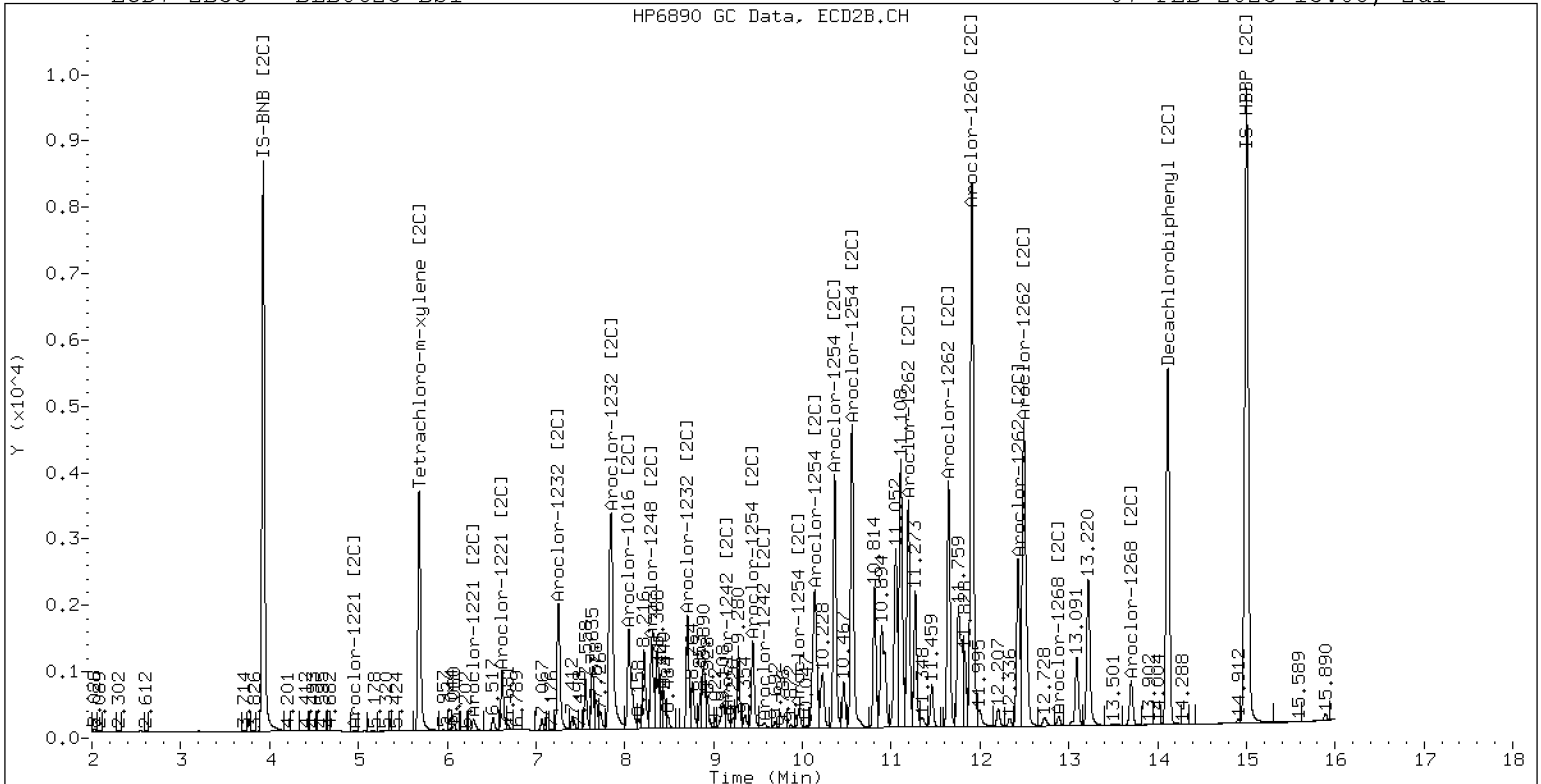
07-FEB-2023 15:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0625-BS1

07-FEB-2023 15:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072309ECD7.D  
Data file 2: /230207.b/230207.b/02072309ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

**BLA**  
ARI ID: ~~BLA~~0625-BSD1  
Client ID:  
Injection Date: 07-FEB-2023 15:29  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	ZB5 Col Response	RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.807	-0.001	204226	5.685	0.000	160820	33.7	32.2	4.6	Tetrachloro-m-xylene
13.888	-0.001	260203	14.116	-0.001	287854	29.8	32.3	8.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	428864	-14.8
Hexabromobiphenyl	647433	815759	26.0
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	369826	9.8
Hexabromobiphenyl	382032	561182	46.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)



ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.003	73102	458.7	1	7.253	-0.001	89134	444.4
Aroclor-1016	2	7.647	-0.003	243558	461.2	2	7.846	-0.002	209252	476.0
Aroclor-1016	3	7.784	-0.004	97988	403.3	3	8.046	-0.002	85209	475.0
Aroclor-1016	4	8.400	-0.004	74101	474.1	4	8.302	-0.001	62050	441.2
Total CollAve (4 peaks):				449.4		Total Col2Ave (4 peaks):				459.2 RPD = 2
Corrected Ave (3 peaks):				441.1		Corrected Ave (3 peaks):				453.6 RPD = 3
Aroclor-1221	1	4.734	0.001	684	21.6	1	4.956	-0.003	337	12.4
Aroclor-1221	2	6.130	-0.004	7942	122.5	2	6.297	-0.001	10945	184.2
Aroclor-1221	3	6.381	-0.003	44214	293.8	3	6.620	-0.003	35337	352.4
Total CollAve (3 peaks):				146.0		Total Col2Ave (3 peaks):				183.0 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.734	0.000	684	34.6	1	4.956	-0.003	337	20.5
Aroclor-1232	2	6.130	-0.003	7942	178.1	2	7.253	-0.004	89134	968.6
Aroclor-1232	3	7.647	-0.011	243558	1092.0	3	7.846	-0.008	209252	1116.5
Aroclor-1232	4	8.571	-0.013	90708	950.1	4	8.708	-0.005	66099	1269.3
Total CollAve (4 peaks):				563.7		Total Col2Ave (4 peaks):				843.7 RPD = 40
Corrected Ave (3 peaks):				387.6		Corrected Ave (3 peaks):				701.9 RPD = 58*
Aroclor-1242	1	7.267	-0.003	73102	556.7	1	7.253	-0.001	89134	551.1
Aroclor-1242	2	7.647	-0.008	243558	566.7	2	7.846	-0.003	209252	582.5
Aroclor-1242	3	8.400	-0.007	74101	580.3	3	9.146	-0.005	11175	99.3
Aroclor-1242	4	8.571	-0.010	90708	470.3	4	9.571	-0.004	6435	43.2
Total CollAve (4 peaks):				543.5		Total Col2Ave (4 peaks):				319.0 RPD = 52*
Corrected Ave (3 peaks):				531.2		Corrected Ave (3 peaks):				231.2 RPD = 79*
Aroclor-1248	1	8.400	-0.002	74101	345.4	1	8.302	-0.002	62050	371.2
Aroclor-1248	2	8.571	-0.003	90708	331.5	2	8.708	-0.001	66099	367.3
Aroclor-1248	3	8.989	-0.005	69944	133.6	3	9.146	-0.005	11175	50.8
Aroclor-1248	4	9.292	0.000	73959	285.4	4	9.571	-0.003	6435	23.7
Total CollAve (4 peaks):				274.0		Total Col2Ave (4 peaks):				203.3 RPD = 30
Corrected Ave (3 peaks):				250.2		Corrected Ave (3 peaks):				147.3 RPD = 52*
Aroclor-1254	1	9.292	-0.007	73959	169.2	1	9.443	-0.001	54602	203.5
Aroclor-1254	2	---			0.0	2	9.962	-0.001	11993	55.3
Aroclor-1254	3	9.659	-0.011	14441	51.6	3	10.139	0.025	124841	263.9
Aroclor-1254	4	9.795	-0.014	42908	78.2	4	10.365	0.002	159258	336.7
Aroclor-1254	5	10.114	-0.063	198030	555.0	5	10.560	-0.002	208584	791.6
Total CollAve (4 peaks):				213.5		Total Col2Ave (5 peaks):				330.2 RPD = 43*
Corrected Ave (3 peaks):				99.7		Corrected Ave (4 peaks):				214.8 RPD = 73*
Aroclor-1260	1	11.038	-0.006	161553	353.0	1	11.648	-0.001	160356	396.1
Aroclor-1260	2	11.354	-0.006	167850	356.7	2	11.911	-0.001	389141	379.9
Aroclor-1260	3	11.726	-0.008	413702	334.0	3	12.430	-0.002	112318	439.9
Aroclor-1260	4	12.129	-0.011	223952	349.9	4	12.495	-0.001	267594	403.7
Aroclor-1260	5	12.238	-0.006	89560	321.0	NS	---			----
Total CollAve (5 peaks):				342.9		Total Col2Ave (4 peaks):				404.9 RPD = 17
Corrected Ave (4 peaks):				339.5		Corrected Ave (3 peaks):				393.2 RPD = 15
Aroclor-1262	1	10.815	-0.017	318733	966.2	1	11.194	-0.006	147841	269.2
Aroclor-1262	2	12.238	-0.008	89560	172.0	2	11.648	-0.005	160356	343.3
Aroclor-1262	3	12.313	-0.008	107647	190.4	3	12.430	-0.004	112318	225.8
Aroclor-1262	4	12.980	-0.009	100260	194.6	4	12.495	-0.009	267594	336.0
Total CollAve (4 peaks):				380.8		Total Col2Ave (4 peaks):				293.6 RPD = 26
Corrected Ave (3 peaks):				185.7		Corrected Ave (3 peaks):				277.0 RPD = 39
Aroclor-1268	1	12.238	-0.007	89560	66.5	1	12.430	-0.004	112318	85.7
Aroclor-1268	2	12.313	-0.006	107647	80.1	2	12.495	-0.007	267594	191.9
Aroclor-1268	3	12.715	0.016	47993	43.1	3	12.888	-0.005	6576	5.7
Aroclor-1268	4	13.483	-0.006	31455	9.5	4	13.704	-0.005	31866	8.9
Total CollAve (4 peaks):				49.8		Total Col2Ave (4 peaks):				73.0 RPD = 38

Corrected Ave (3 peaks): 39.7      Corrected Ave (3 peaks): 33.4      RPD = 17

Total PCB Area Col1 (5.908 - 13.788) = 4462812      Col1 Total PCB = 0.9 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 3827150      Col2 Total PCB = 1.0 ppm\*

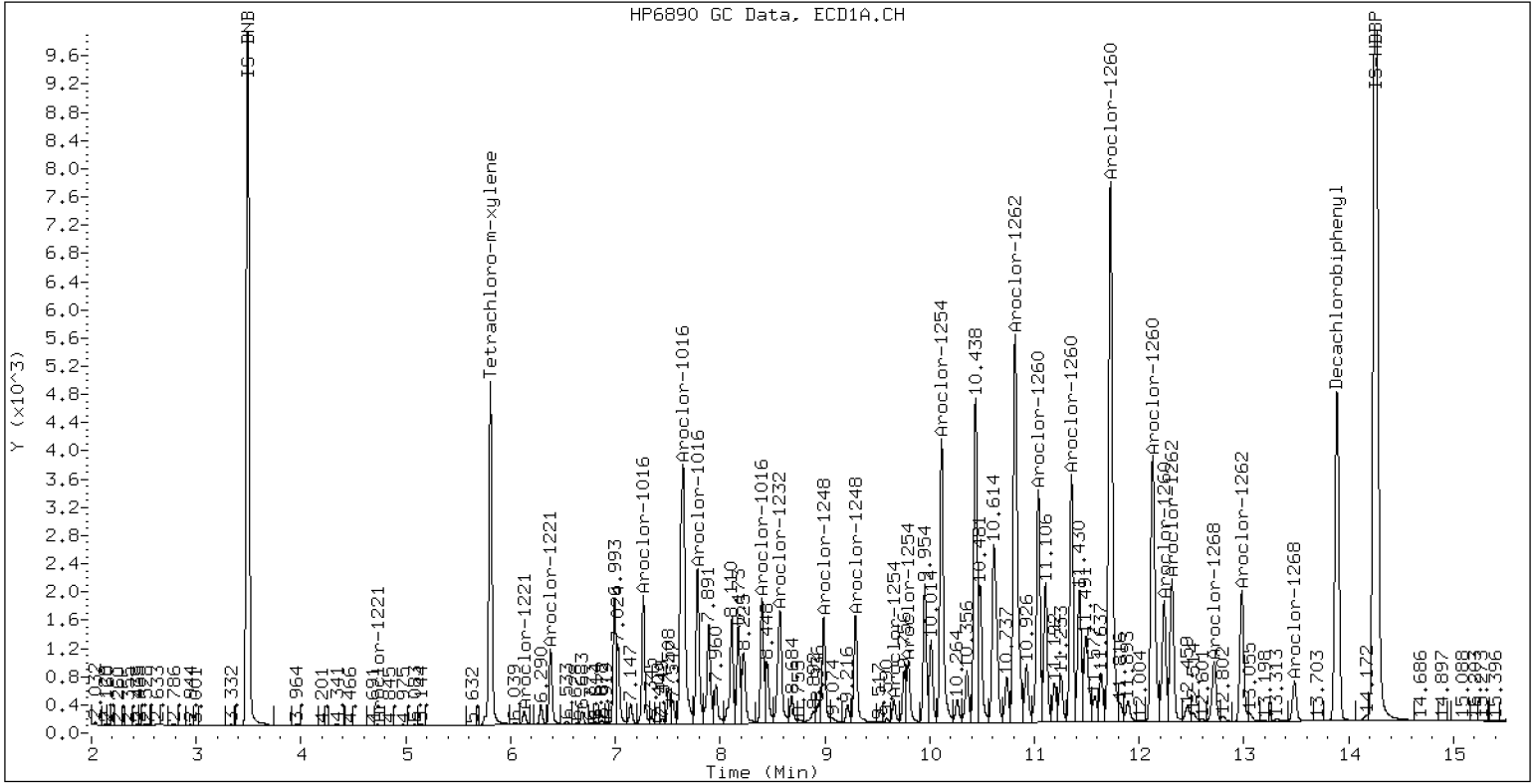
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 BLB0625-BSD1

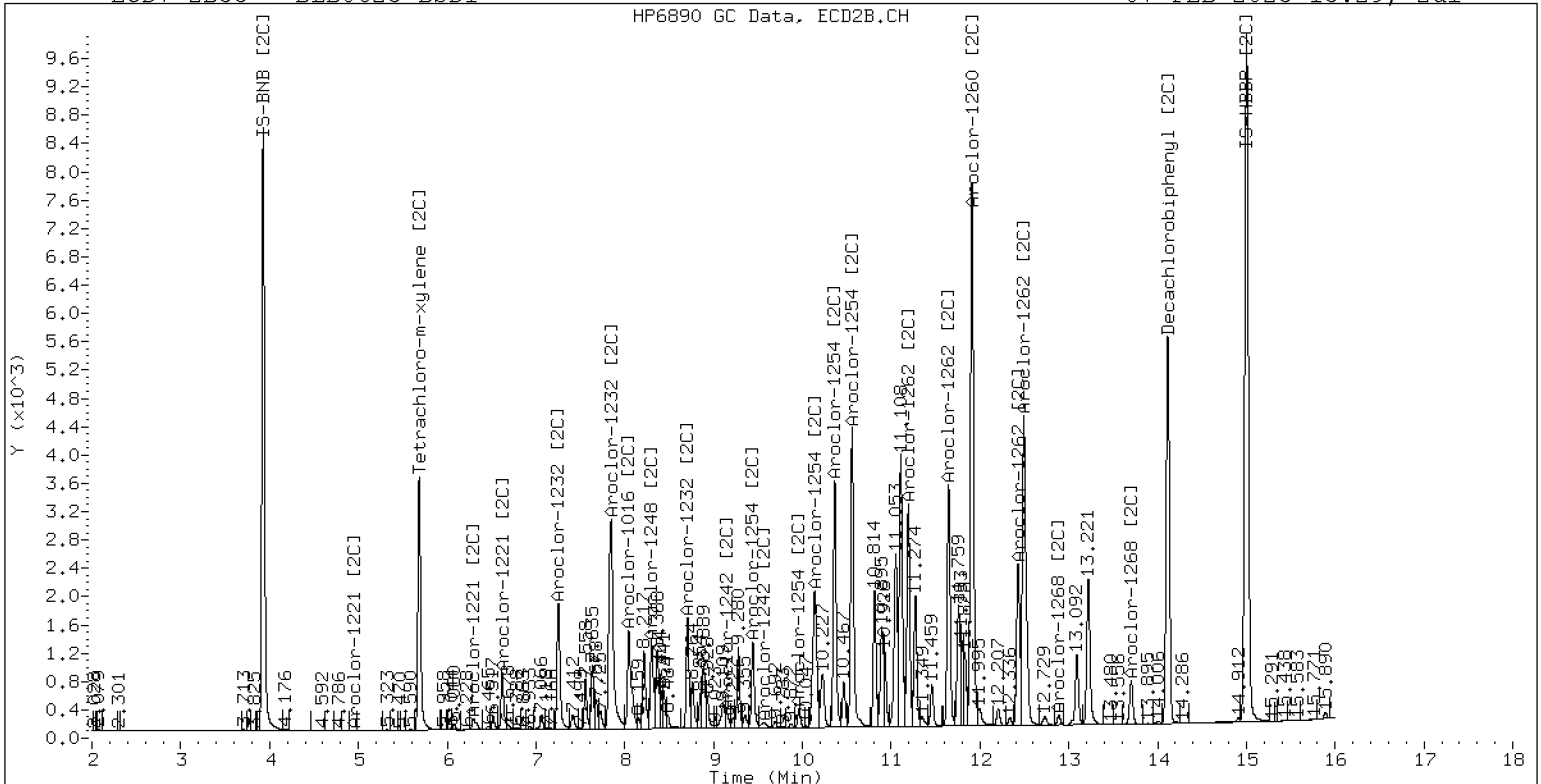
07-FEB-2023 15:29, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0625-BSD1

07-FEB-2023 15:29, 2u1



ZB-35 Manual Integration: NO



**MS / MS DUPLICATE RECOVERY**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>02/07/23 18:39</u>
Batch:	<u>BLA0625</u>	Laboratory ID:	<u>BLA0625-MS1</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>Matrix Spike</u>
Initial/Final:	<u>20.77 g / 2.5 mL</u>	Source Sample:	<u>LDW23-SS1139</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	78.3		77.7	56 - 120
Aroclor 1260 [2C]	101	29.7		97.5		67.1	58 - 120

\* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.



**MS / MS DUPLICATE RECOVERY**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>02/07/23 19:00</u>
Batch:	<u>BLA0625</u>	Laboratory ID:	<u>BLA0625-MSD1</u>
Preparation:	<u>EPA 3546 (Microwave)</u>	Sequence Name:	<u>Matrix Spike Dup</u>
Initial/Final:	<u>20.77 g / 2.5 mL</u>	Source Sample:	<u>LDW23-SS1139</u>

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	80.0		79.3	2.10	30	56 - 120
Aroclor 1260 [2C]	101	94.4		64.1	3.16	30	58 - 120

\* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

BLA

Data file 1: /230207.b/02072318ECD7.D  
Data file 2: /230207.b/230207.b/02072318ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: ~~BLA~~0625-MS1  
Client ID:  
Injection Date: 07-FEB-2023 18:39  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	ZB5 Col Response	RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.807	-0.001	160745	5.682	-0.002	140105	27.5	29.9	8.5	Tetrachloro-m-xylene
13.885	-0.004	123844	14.113	-0.004	159946	29.2	29.0	0.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	414182	-17.7
Hexabromobiphenyl	647433	395986	-38.8
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	346569	2.9
Hexabromobiphenyl	382032	347759	-9.0

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.266	-0.004	59706	387.9	1	7.250	-0.003	76814	408.6
Aroclor-1016	2	7.642	-0.009	207287	406.5	2	7.840	-0.009	179362	435.4
Aroclor-1016	3	7.780	-0.009	75480	321.7	3	8.040	-0.008	65547	389.9
Aroclor-1016	4	8.396	-0.008	67961	450.3	4	8.298	-0.005	59762	453.5
Total CollAve (4 peaks):				391.6		Total Col2Ave (4 peaks):				421.9 RPD = 7
Corrected Ave (3 peaks):				372.0		Corrected Ave (3 peaks):				411.3 RPD = 10
Aroclor-1221	1	4.732	-0.001	575	18.8	1	4.943	-0.016	1310	51.6
Aroclor-1221	2	6.129	-0.005	7793	124.5	2	6.294	-0.004	9831	176.6
Aroclor-1221	3	6.379	-0.005	40466	278.5	3	6.617	-0.005	34855	370.9
Total CollAve (3 peaks):				140.6		Total Col2Ave (3 peaks):				199.7 RPD = 35
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	575	30.1	1	4.943	-0.016	1310	85.0
Aroclor-1232	2	6.129	-0.004	7793	180.9	2	7.250	-0.006	76814	890.7
Aroclor-1232	3	7.642	-0.017	207287	962.3	3	7.840	-0.015	179362	1021.2
Aroclor-1232	4	8.565	-0.019	66219	718.2	4	8.704	-0.009	63092	1292.9
Total CollAve (4 peaks):				472.9		Total Col2Ave (4 peaks):				822.5 RPD = 54*
Corrected Ave (3 peaks):				309.7		Corrected Ave (3 peaks):				665.7 RPD = 73*
Aroclor-1242	1	7.266	-0.005	59706	470.8	1	7.250	-0.003	76814	506.8
Aroclor-1242	2	7.642	-0.013	207287	499.4	2	7.840	-0.010	179362	532.8
Aroclor-1242	3	8.396	-0.010	67961	551.1	3	9.136	-0.015	39567	375.3
Aroclor-1242	4	8.565	-0.016	66219	355.5	4	9.533	-0.042	46075	329.7
Total CollAve (4 peaks):				469.2		Total Col2Ave (4 peaks):				436.1 RPD = 7
Corrected Ave (3 peaks):				441.9		Corrected Ave (3 peaks):				403.9 RPD = 9
Aroclor-1248	1	8.396	-0.005	67961	328.0	1	8.298	-0.005	59762	381.5
Aroclor-1248	2	8.565	-0.009	66219	250.5	2	8.704	-0.005	63092	374.2
Aroclor-1248	3	8.984	-0.010	84439	167.0	3	9.136	-0.015	39567	192.0
Aroclor-1248	4	9.285	-0.007	94463	377.5	4	9.533	-0.042	46075	180.8
Total CollAve (4 peaks):				280.8		Total Col2Ave (4 peaks):				282.1 RPD = 0
Corrected Ave (3 peaks):				248.5		Corrected Ave (3 peaks):				249.0 RPD = 0
Aroclor-1254	1	9.285	-0.014	94463	223.8	1	9.437	-0.007	78218	311.1
Aroclor-1254	2	9.361	-0.016	24245	134.5	2	9.955	-0.008	31065	152.9
Aroclor-1254	3	9.655	-0.014	51679	191.1	3	10.105	-0.009	149401	337.0
Aroclor-1254	4	9.785	-0.024	137986	260.4	4	10.358	-0.004	194215	438.1
Aroclor-1254	5	10.241	0.064	32611	94.6	5	10.554	-0.009	183839	744.5
Total CollAve (5 peaks):				180.9		Total Col2Ave (5 peaks):				396.7 RPD = 75*
Corrected Ave (4 peaks):				161.0		Corrected Ave (4 peaks):				309.8 RPD = 63*
Aroclor-1260	1	11.033	-0.011	106138	477.7	1	11.643	-0.006	118442	472.1
Aroclor-1260	2	11.348	-0.013	101958	446.4	2	11.904	-0.008	285029	449.1
Aroclor-1260	3	11.719	-0.015	268824	447.1	3	12.424	-0.008	90248	570.4
Aroclor-1260	4	12.119	-0.021	143750	462.7	4	12.487	-0.009	187904	457.4
Aroclor-1260	5	12.233	-0.011	57388	423.8	NS	---			----
Total CollAve (5 peaks):				451.6		Total Col2Ave (4 peaks):				487.3 RPD = 8
Corrected Ave (4 peaks):				445.0		Corrected Ave (3 peaks):				459.5 RPD = 3
Aroclor-1262	1	10.806	-0.026	268021	1673.7	1	11.189	-0.011	101905	299.4
Aroclor-1262	2	12.233	-0.012	57388	227.1	2	11.643	-0.010	118442	409.2
Aroclor-1262	3	12.307	-0.014	68353	249.1	3	12.424	-0.011	90248	292.8
Aroclor-1262	4	12.972	-0.017	65711	262.8	4	12.487	-0.017	187904	380.7
Total CollAve (4 peaks):				603.2		Total Col2Ave (4 peaks):				345.5 RPD = 54*
Corrected Ave (3 peaks):				246.3		Corrected Ave (3 peaks):				324.3 RPD = 27
Aroclor-1268	1	12.233	-0.012	57388	87.7	1	12.424	-0.010	90248	111.1
Aroclor-1268	2	12.307	-0.011	68353	104.8	2	12.487	-0.015	187904	217.4
Aroclor-1268	3	12.708	0.009	34096	63.1	3	12.886	-0.007	7449	10.4
Aroclor-1268	4	13.477	-0.012	21897	13.7	4	13.699	-0.010	27052	12.2
Total CollAve (4 peaks):				67.3		Total Col2Ave (4 peaks):				87.8 RPD = 26

Corrected Ave (3 peaks): 54.8      Corrected Ave (3 peaks): 44.6      RPD = 21

Total PCB Area Col1 (5.908 - 13.788) = 3805141      Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 3559227      Col2 Total PCB = 1.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

BLA

Data file 1: /230207.b/02072319ECD7.D  
Data file 2: /230207.b/230207.b/02072319ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: ~~BLA~~0625-MSD1  
Client ID:  
Injection Date: 07-FEB-2023 19:00  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.806	-0.002	157816	5.682	-0.002	140090	27.2	30.1	10.0	Tetrachloro-m-xylene
13.884	-0.004	121903	14.111	-0.006	156715	29.3	28.5	2.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	410112	-18.5
Hexabromobiphenyl	647433	388357	-40.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344317	2.2
Hexabromobiphenyl	382032	346230	-9.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.265	-0.004	60293	395.6	1	7.250	-0.003	78505	420.4
Aroclor-1016	2	7.641	-0.009	212262	420.4	2	7.840	-0.008	182490	445.9
Aroclor-1016	3	7.780	-0.008	75389	324.5	3	8.040	-0.008	66517	398.3
Aroclor-1016	4	8.396	-0.008	68614	459.1	4	8.298	-0.005	61067	466.4
Total CollAve (4 peaks):				399.9		Total Col2Ave (4 peaks):				432.8 RPD = 8
Corrected Ave (3 peaks):				380.2		Corrected Ave (3 peaks):				421.5 RPD = 10
Aroclor-1221	1	4.731	-0.002	711	23.5	1	4.944	-0.015	2740	108.6
Aroclor-1221	2	6.129	-0.005	7759	125.2	2	6.294	-0.004	9834	177.8
Aroclor-1221	3	6.379	-0.005	41493	288.4	3	6.618	-0.005	39643	424.6
Total CollAve (3 peaks):				145.7		Total Col2Ave (3 peaks):				237.0 RPD = 48*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.731	-0.002	711	37.6	1	4.944	-0.016	2740	179.0
Aroclor-1232	2	6.129	-0.005	7759	181.9	2	7.250	-0.007	78505	916.3
Aroclor-1232	3	7.641	-0.017	212262	995.2	3	7.840	-0.014	182490	1045.8
Aroclor-1232	4	8.564	-0.020	67970	744.5	4	8.704	-0.010	64485	1330.1
Total CollAve (4 peaks):				489.8		Total Col2Ave (4 peaks):				867.8 RPD = 56*
Corrected Ave (3 peaks):				321.3		Corrected Ave (3 peaks):				713.7 RPD = 76*
Aroclor-1242	1	7.265	-0.005	60293	480.1	1	7.250	-0.004	78505	521.3
Aroclor-1242	2	7.641	-0.014	212262	516.5	2	7.840	-0.009	182490	545.6
Aroclor-1242	3	8.396	-0.011	68614	561.9	3	9.136	-0.015	41660	397.7
Aroclor-1242	4	8.564	-0.017	67970	368.5	4	9.612	0.036	3289	23.7
Total CollAve (4 peaks):				481.8		Total Col2Ave (4 peaks):				372.1 RPD = 26
Corrected Ave (3 peaks):				455.0		Corrected Ave (3 peaks):				314.2 RPD = 37
Aroclor-1248	1	8.396	-0.006	68614	334.4	1	8.298	-0.005	61067	392.4
Aroclor-1248	2	8.564	-0.010	67970	259.7	2	8.704	-0.006	64485	384.9
Aroclor-1248	3	8.983	-0.010	87894	175.6	3	9.136	-0.015	41660	203.5
Aroclor-1248	4	9.285	-0.007	96249	388.4	4	9.612	0.037	3289	13.0
Total CollAve (4 peaks):				289.5		Total Col2Ave (4 peaks):				248.4 RPD = 15
Corrected Ave (3 peaks):				256.6		Corrected Ave (3 peaks):				200.5 RPD = 25
Aroclor-1254	1	9.285	-0.014	96249	230.3	1	9.436	-0.007	79692	319.0
Aroclor-1254	2	9.361	-0.017	25437	142.5	2	9.954	-0.009	32022	158.6
Aroclor-1254	3	9.655	-0.015	54055	201.8	3	10.104	-0.010	150460	341.6
Aroclor-1254	4	9.784	-0.024	121139	230.8	4	10.358	-0.005	192709	437.5
Aroclor-1254	5	10.240	0.063	33386	97.8	5	10.552	-0.010	178554	727.9
Total CollAve (5 peaks):				180.7		Total Col2Ave (5 peaks):				396.9 RPD = 75*
Corrected Ave (4 peaks):				168.1		Corrected Ave (4 peaks):				314.2 RPD = 61*
Aroclor-1260	1	11.032	-0.012	101227	464.6	1	11.642	-0.007	114697	459.2
Aroclor-1260	2	11.347	-0.014	96234	429.6	2	11.903	-0.009	271868	430.2
Aroclor-1260	3	11.717	-0.017	255136	432.7	3	12.423	-0.009	87940	558.3
Aroclor-1260	4	12.119	-0.021	135098	443.4	4	12.487	-0.009	180203	440.6
Aroclor-1260	5	12.233	-0.011	55868	420.7	NS	---			----
Total CollAve (5 peaks):				438.2		Total Col2Ave (4 peaks):				472.1 RPD = 7
Corrected Ave (4 peaks):				431.6		Corrected Ave (3 peaks):				443.3 RPD = 3
Aroclor-1262	1	10.806	-0.026	262461	1671.1	1	11.189	-0.011	99569	293.8
Aroclor-1262	2	12.233	-0.012	55868	225.4	2	11.642	-0.011	114697	398.0
Aroclor-1262	3	12.305	-0.016	66491	247.1	3	12.423	-0.012	87940	286.6
Aroclor-1262	4	12.972	-0.017	62765	255.9	4	12.487	-0.016	180203	366.7
Total CollAve (4 peaks):				599.9		Total Col2Ave (4 peaks):				336.3 RPD = 56*
Corrected Ave (3 peaks):				242.8		Corrected Ave (3 peaks):				315.7 RPD = 26
Aroclor-1268	1	12.233	-0.012	55868	87.1	1	12.423	-0.011	87940	108.8
Aroclor-1268	2	12.305	-0.013	66491	103.9	2	12.487	-0.014	180203	209.4
Aroclor-1268	3	12.707	0.008	32020	60.4	3	12.885	-0.008	7796	10.9
Aroclor-1268	4	13.477	-0.012	22356	14.2	4	13.698	-0.010	28563	12.9
Total CollAve (4 peaks):				66.4		Total Col2Ave (4 peaks):				85.5 RPD = 25

Corrected Ave (3 peaks): 53.9      Corrected Ave (3 peaks): 44.2      RPD = 20

Total PCB Area Col1 (5.908 - 13.788) = 3753808      Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 3520834      Col2 Total PCB = 1.0 ppm\*

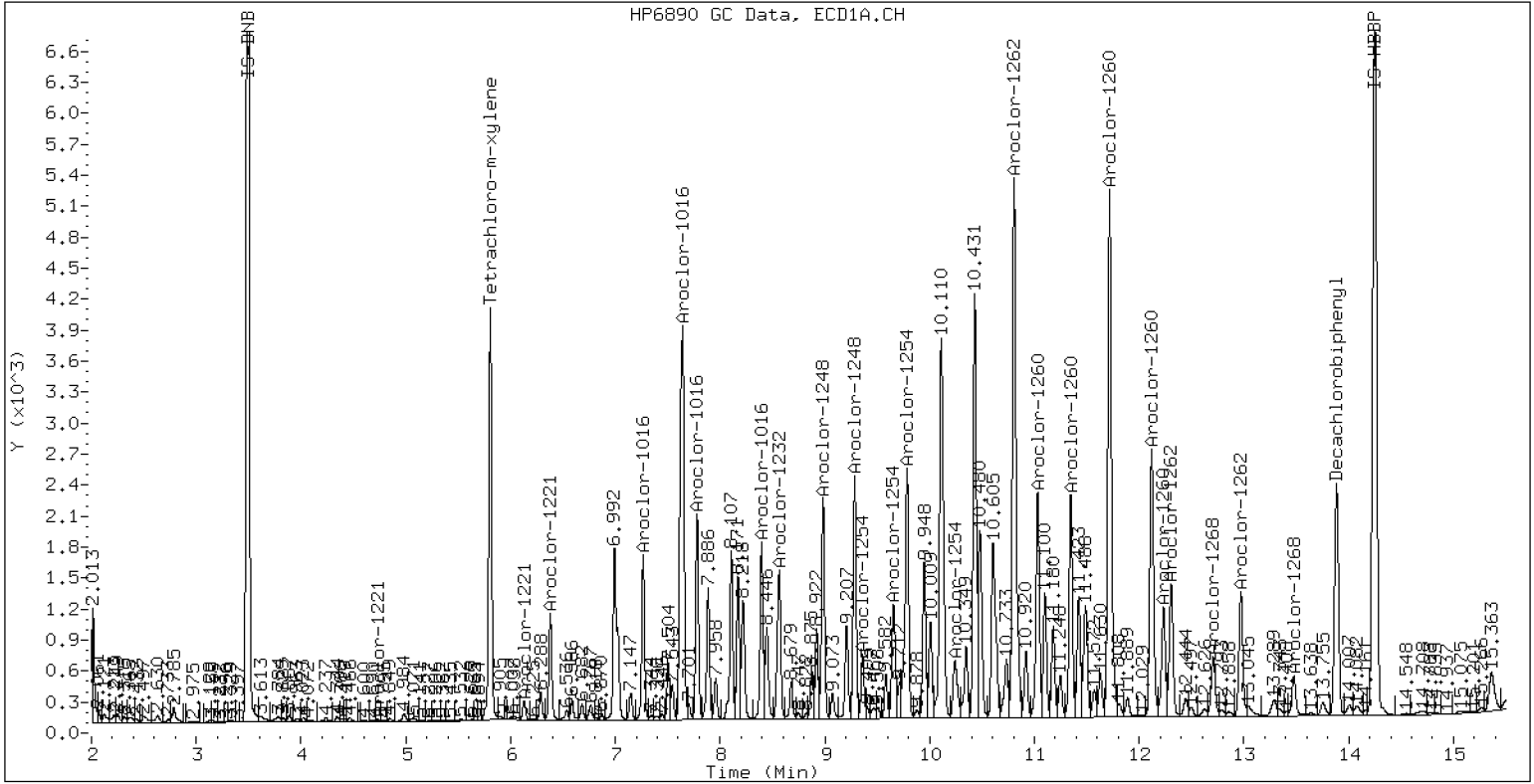
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 BLB0625-MSD1

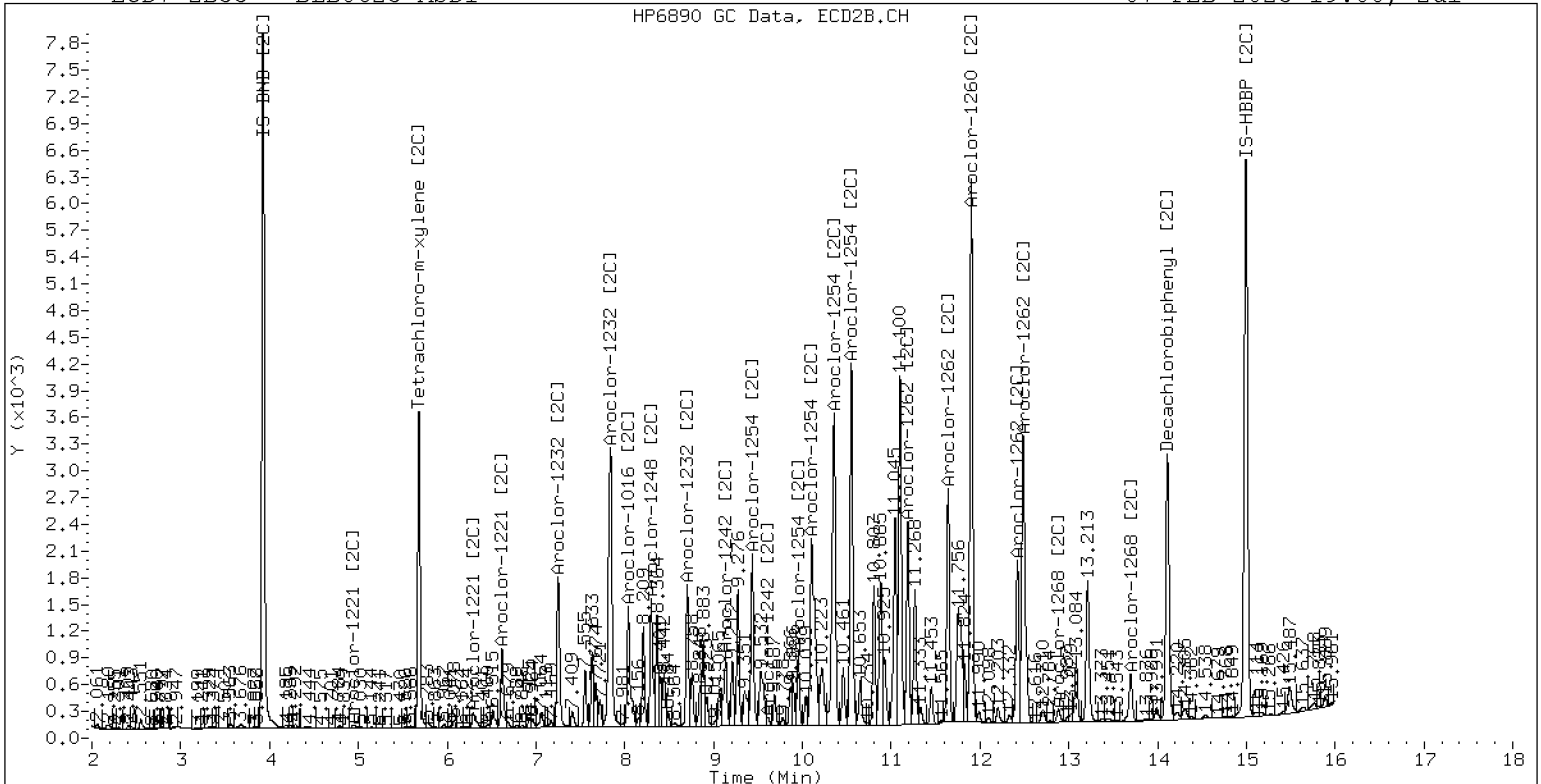
07-FEB-2023 19:00, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0625-MSD1

07-FEB-2023 19:00, 2u1



ZB-35 Manual Integration: NO



## STANDARD REFERENCE MATERIAL RECOVERY

### EPA 8082A

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Matrix:** Solid

**Laboratory ID:** BLA0625-SRM1

**Batch:** BLA0625

**Initial/Final:** 2.5 g / 2.5 mL

**Preparation:** EPA 3546 (Microwave)

**Analyzed:** 02/07/2023 15:50

**Standard ID:** K011478

**Expires:** 06/11/2023

**Standard Lot#:** PSRM0169

**Description:** Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	78.5	2.9	20.0		72.7	38 - 167
Aroclor 1260 [2C]	108.00	92.9	2.9	20.0		86.0	38 - 167

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072310ECD7.D  
Data file 2: /230207.b/230207.b/02072310ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

**BLA**  
ARI ID: ~~BLA~~0625-SRM1  
Client ID:  
Injection Date: 07-FEB-2023 15:50  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.807	-0.001	183497	5.685	-0.000	157320	30.0	32.0	6.2	Tetrachloro-m-xylene
13.885	-0.004	178142	14.113	-0.004	202846	28.0	27.2	3.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	432242	-14.1
Hexabromobiphenyl	647433	594095	-8.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	364053	8.1
Hexabromobiphenyl	382032	470732	23.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.302	0.032	1007	6.3	1	7.256	0.002	5481	27.8	
Aroclor-1016	2	7.644	-0.006	6723	12.6	2	7.841	-0.008	12839	29.7	
Aroclor-1016	3	7.787	-0.002	2880	11.8	3	8.044	-0.003	2521	14.3	
Aroclor-1016	4	8.398	-0.005	5766	36.6	4	8.300	-0.003	7286	52.6	
Total CollAve (4 peaks):				16.8	Total Col2Ave (4 peaks):				31.1	RPD = 60*	
Corrected Ave (3 peaks):				10.2	Corrected Ave (3 peaks):				23.9	RPD = 80*	
Aroclor-1221	1	4.688	-0.044	254	8.0	1	4.943	-0.016	622	23.3	
Aroclor-1221	2	6.223	0.089	743	11.4	2	6.338	0.040	5153	88.1	
Aroclor-1221	3	6.387	0.003	1128	7.4	3	6.635	0.012	1717	17.4	
Total CollAve (3 peaks):				8.9	Total Col2Ave (3 peaks):				42.9	RPD = 131*	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	4.688	-0.045	254	12.7	1	4.943	-0.016	622	38.4	
Aroclor-1232	2	6.223	0.090	743	16.5	2	7.256	-0.001	5481	60.5	
Aroclor-1232	3	7.644	-0.014	6723	29.9	3	7.841	-0.014	12839	69.6	
Aroclor-1232	4	8.567	-0.017	4098	42.6	4	8.706	-0.007	6014	117.3	
Total CollAve (4 peaks):				25.4	Total Col2Ave (4 peaks):				71.5	RPD = 95*	
Corrected Ave (3 peaks):				19.7	Corrected Ave (3 peaks):				56.2	RPD = 96*	
Aroclor-1242	1	7.302	0.031	1007	7.6	1	7.256	0.002	5481	34.4	
Aroclor-1242	2	7.644	-0.011	6723	15.5	2	7.841	-0.009	12839	36.3	
Aroclor-1242	3	8.398	-0.008	5766	44.8	3	9.142	-0.009	7550	68.2	
Aroclor-1242	4	8.567	-0.014	4098	21.1	4	9.535	-0.040	12306	83.8	
Total CollAve (4 peaks):				22.3	Total Col2Ave (4 peaks):				55.7	RPD = 86*	
Corrected Ave (3 peaks):				14.7	Corrected Ave (3 peaks):				46.3	RPD = 103*	
Aroclor-1248	1	8.398	-0.003	5766	26.7	1	8.300	-0.003	7286	44.3	
Aroclor-1248	2	8.567	-0.007	4098	14.9	2	8.706	-0.003	6014	34.0	
Aroclor-1248	3	8.987	-0.006	16462	31.2	3	9.142	-0.009	7550	34.9	
Aroclor-1248	4	9.288	-0.004	23617	90.4	4	9.535	-0.040	12306	46.0	
Total CollAve (4 peaks):				40.8	Total Col2Ave (4 peaks):				39.8	RPD = 3	
Corrected Ave (3 peaks):				24.2	Corrected Ave (3 peaks):				37.7	RPD = 43*	
Aroclor-1254	1	9.288	-0.010	23617	53.6	1	9.440	-0.004	19886	75.3	
Aroclor-1254	2	9.364	-0.014	6813	36.2	2	9.958	-0.005	9296	43.5	
Aroclor-1254	3	9.658	-0.012	13747	48.7	3	10.109	-0.005	36811	79.0	
Aroclor-1254	4	9.789	-0.020	30844	55.8	4	10.360	-0.002	47141	101.2	
Aroclor-1254	5	10.112	-0.066	50053	139.2	5	10.555	-0.007	46402	178.9	
Total CollAve (5 peaks):				66.7	Total Col2Ave (5 peaks):				95.6	RPD = 36	
Corrected Ave (4 peaks):				48.6	Corrected Ave (4 peaks):				74.8	RPD = 42*	
Aroclor-1260	1	11.034	-0.010	28344	85.0	1	11.644	-0.004	30579	90.0	
Aroclor-1260	2	11.347	-0.014	23484	68.5	2	11.905	-0.007	69999	81.5	
Aroclor-1260	3	11.719	-0.016	72561	80.4	3	12.424	-0.008	24907	116.3	
Aroclor-1260	4	12.120	-0.019	37409	80.3	4	12.489	-0.007	46612	83.8	
Aroclor-1260	5	12.233	-0.011	15875	78.1	NS	---			----	
Total CollAve (5 peaks):				78.5	Total Col2Ave (4 peaks):				92.9	RPD = 17	
Corrected Ave (4 peaks):				76.8	Corrected Ave (3 peaks):				85.1	RPD = 10	
Aroclor-1262	1	10.809	-0.023	66496	276.8	1	11.191	-0.010	28083	61.0	
Aroclor-1262	2	12.233	-0.012	15875	41.9	2	11.644	-0.009	30579	78.1	
Aroclor-1262	3	12.306	-0.015	18782	45.6	3	12.424	-0.011	24907	59.7	
Aroclor-1262	4	12.973	-0.016	19913	53.1	4	12.489	-0.014	46612	69.8	
Total CollAve (4 peaks):				104.3	Total Col2Ave (4 peaks):				67.1	RPD = 43*	
Corrected Ave (3 peaks):				46.9	Corrected Ave (3 peaks):				63.5	RPD = 30	
Aroclor-1268	1	12.233	-0.012	15875	16.2	1	12.424	-0.010	24907	22.7	
Aroclor-1268	2	12.306	-0.012	18782	19.2	2	12.489	-0.012	46612	39.8	
Aroclor-1268	3	12.711	0.012	9177	11.3	3	12.887	-0.006	1871	1.9	
Aroclor-1268	4	13.476	-0.013	3014	1.3	4	13.699	-0.010	7927	2.6	
Total CollAve (4 peaks):				12.0	Total Col2Ave (4 peaks):				16.8	RPD = 33	



Corrected Ave (3 peaks): 9.6 Corrected Ave (3 peaks): 9.1 RPD = 5

Total PCB Area Col1 (5.908 - 13.788) = 824342 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 813878 Col2 Total PCB = 0.2 ppm\*

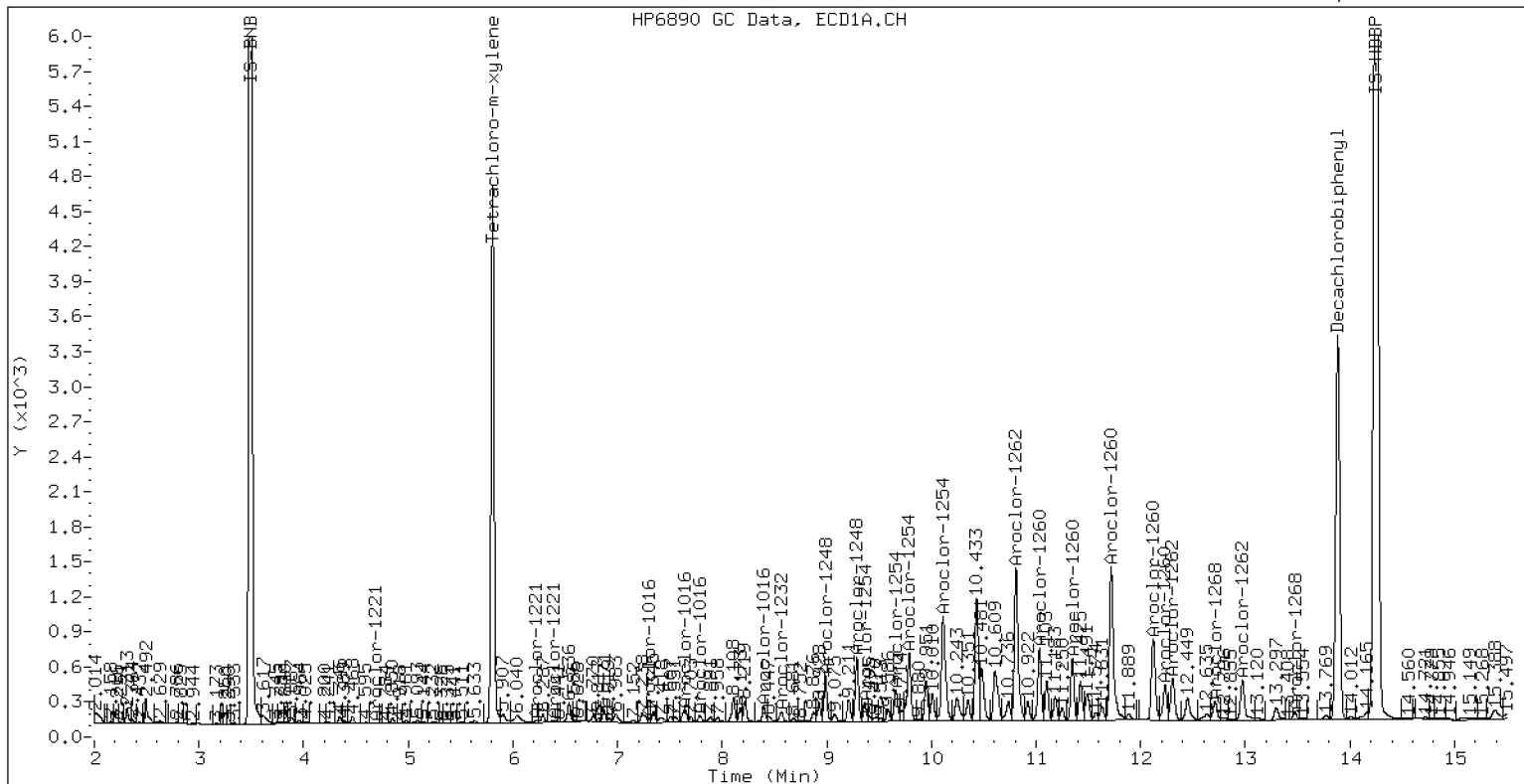
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 BLB0625-SRM1

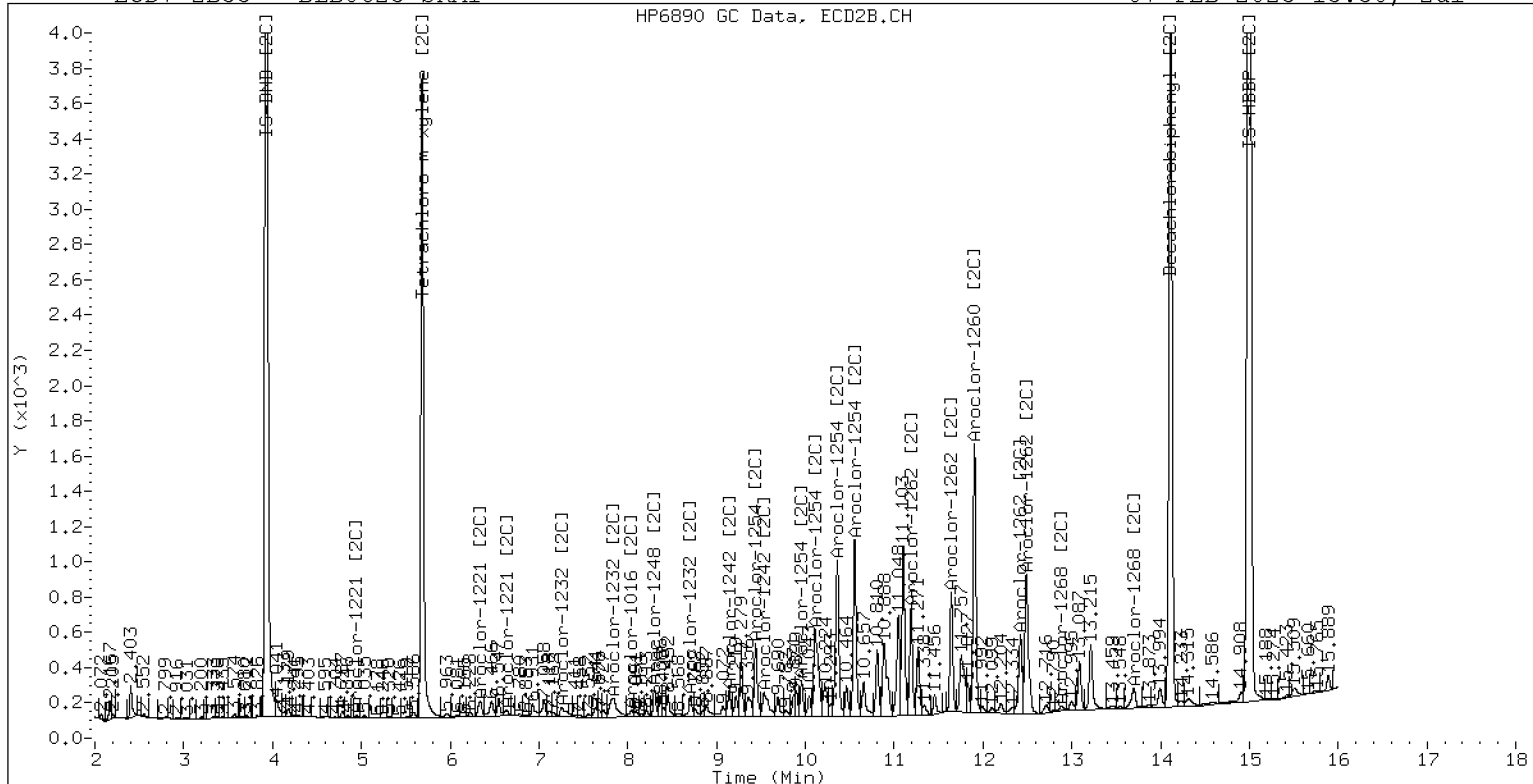
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ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0625-SRM1

07-FEB-2023 15:50, 2u1



ZB-35 Manual Integration: NO



**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	5.167707E-02	20	4.942809E-02	50	5.153925E-02	1000	4.662732E-02	100	5.549196E-02	500	4.928929E-02
Aroclor-1016 (1)	250	3.017861E-02	20	2.947465E-02	50	3.102226E-02	1000	2.635254E-02	100	3.309682E-02	500	2.824148E-02
Aroclor-1016 (2)	250	0.1020346	20	9.270426E-02	50	9.811961E-02	1000	9.356138E-02	100	0.1059789	500	0.0986114
Aroclor-1016 (3)	250	4.399859E-02	20	4.877736E-02	50	4.899883E-02	1000	3.795541E-02	100	0.0512744	500	4.091133E-02
Aroclor-1016 (4)	250	3.049651E-02	20	2.675607E-02	50	2.801628E-02	1000	2.863996E-02	100	3.161774E-02	500	2.939295E-02
Aroclor 1260	250	6.608884E-02	20	6.779653E-02	50	6.325495E-02	1000	5.469674E-02	100	5.850835E-02	500	5.278897E-02
Aroclor-1260 (1)	250	5.181373E-02	20	4.727423E-02	50	4.542797E-02	1000	0.0403981	100	0.0442757	500	0.0401323
Aroclor-1260 (2)	250	5.350015E-02	20	4.939797E-02	50	4.636355E-02	1000	4.208491E-02	100	4.449674E-02	500	4.100371E-02
Aroclor-1260 (3)	250	0.1331674	20	0.1373712	50	0.1282887	1000	0.1078965	100	0.1173998	500	0.1046798
Aroclor-1260 (4)	250	6.473121E-02	20	7.197922E-02	50	0.0663805	1000	5.863707E-02	100	5.997377E-02	500	5.485394E-02
Aroclor-1260 (5)	250	2.723173E-02	20	3.295998E-02	50	2.981405E-02	1000	2.446709E-02	100	2.639578E-02	500	2.327509E-02
Decachlorobiphenyl	40	0.8481341	3.2	0.8644195	8	0.9030151	160	0.7914512	16	0.9308139	80	0.7957625
Tetrachlorometaxylene	40	1.149655	3.2	1.100393	8	1.102173	160	1.094607	16	1.219974	80	1.117921



**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GA00061

Instrument: ECD7

Calibration Date: 01/24/2023

Column (1): ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	0.0153579				
Aroclor-1221 (1)							250	5.913051E-03				
Aroclor-1221 (2)							250	1.209121E-02				
Aroclor-1221 (3)							250	2.806945E-02				
Aroclor 1232									250	1.785602E-02		
Aroclor-1232 (1)									250	3.691407E-03		
Aroclor-1232 (2)									250	8.319285E-03		
Aroclor-1232 (3)									250	4.160486E-02		
Aroclor-1232 (4)									250	1.780851E-02		
Aroclor 1242	250	0.0411165										
Aroclor-1242 (1)	250	2.449677E-02										
Aroclor-1242 (2)	250	8.016926E-02										
Aroclor-1242 (3)	250	2.381903E-02										
Aroclor-1242 (4)	250	3.598092E-02										
Aroclor 1248			250	0.0592639								
Aroclor-1248 (1)			250	4.001993E-02								
Aroclor-1248 (2)			250	5.105008E-02								
Aroclor-1248 (3)			250	9.765126E-02								
Aroclor-1248 (4)			250	4.833435E-02								
Aroclor 1254					250	6.750332E-02						
Aroclor-1254 (1)					250	8.153293E-02						
Aroclor-1254 (2)					250	0.0348121						
Aroclor-1254 (3)					250	5.224052E-02						
Aroclor-1254 (4)					250	0.1023658						
Aroclor-1254 (5)					250	6.656523E-02						
Aroclor-1262 (1)							250	3.235265E-02				
Aroclor-1262 (2)							250	5.106336E-02				
Aroclor-1262 (3)							250	5.543866E-02				





## INITIAL CALIBRATION DATA

### EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0506755	5.9			RSD (20)	
Aroclor-1016 (1)	2.972773E-02	7.8			RSD (20)	
Aroclor-1016 (2)	9.850169E-02	5.1			RSD (20)	
Aroclor-1016 (3)	4.531932E-02	11.5			RSD (20)	
Aroclor-1016 (4)	2.915325E-02	6.0			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	0.0605224	10.2			RSD (20)	



**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	0.044887	9.8			RSD (20)	
Aroclor-1260 (2)	4.614117E-02	10.2			RSD (20)	
Aroclor-1260 (3)	0.1214672	11.2			RSD (20)	
Aroclor-1260 (4)	6.275928E-02	9.8			RSD (20)	
Aroclor-1260 (5)	2.735729E-02	13.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.8555994	6.6			RSD (20)	
Tetrachlorometaxylene	1.130787	4.2			RSD (20)	



**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016 [2C]	250	5.292579E-02	20	4.676037E-02	50	5.470557E-02	1000	4.853417E-02	100	5.747899E-02	500	5.114174E-02
Aroclor-1016 (1) [2C]	250	4.314113E-02	20	4.423802E-02	50	4.724251E-02	1000	3.795138E-02	100	4.677646E-02	500	4.099489E-02
Aroclor-1016 (2) [2C]	250	9.823746E-02	20	8.511696E-02	50	9.615173E-02	1000	9.129912E-02	100	0.1041709	500	9.554107E-02
Aroclor-1016 (3) [2C]	250	4.028886E-02	20	2.918885E-02	50	0.0416533	1000	3.764267E-02	100	4.478001E-02	500	3.925449E-02
Aroclor-1016 (4) [2C]	250	3.003571E-02	20	2.849763E-02	50	3.377476E-02	1000	2.724351E-02	100	3.418865E-02	500	0.0287764
Aroclor 1260 [2C]	250	0.0868269	20	8.456297E-02	50	8.682148E-02	1000	7.954321E-02	100	8.639013E-02	500	7.778218E-02
Aroclor-1260 (1) [2C]	250	6.129497E-02	20	6.075052E-02	50	5.973709E-02	1000	5.307059E-02	100	5.911734E-02	500	5.231082E-02
Aroclor-1260 (2) [2C]	250	0.1536701	20	0.147481	50	0.1510614	1000	0.1380864	100	0.1518107	500	0.1339581
Aroclor-1260 (3) [2C]	250	3.647192E-02	20	3.683006E-02	50	3.729426E-02	1000	3.693906E-02	100	3.582131E-02	500	3.500995E-02
Aroclor-1260 (4) [2C]	250	0.0958705	20	9.319031E-02	50	9.919317E-02	1000	9.007677E-02	100	9.881117E-02	500	8.984983E-02
Decachlorobiphenyl [2C]	40	1.292085	3.2	1.209146	8	1.271224	160	1.30389	16	1.311901	80	1.229614
Tetrachlorometaxylene [2C]	40	1.096753	3.2	1.043423	8	1.105211	160	1.038509	16	1.153217	80	1.051873





**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Calibration: GA00061  
Calibration Date: 01/24/2023

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Column (2): ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.346872E-02				
Aroclor-1221 (1) [2C]							250	5.864614E-03				
Aroclor-1221 (2) [2C]							250	1.285084E-02				
Aroclor-1221 (3) [2C]							250	2.169068E-02				
Aroclor 1232 [2C]									250	0.0188178		
Aroclor-1232 (1) [2C]									250	3.556924E-03		
Aroclor-1232 (2) [2C]									250	1.990636E-02		
Aroclor-1232 (3) [2C]									250	4.054321E-02		
Aroclor-1232 (4) [2C]									250	1.126471E-02		
Aroclor 1242 [2C]	250	4.232355E-02										
Aroclor-1242 (1) [2C]	250	3.498756E-02										
Aroclor-1242 (2) [2C]	250	7.771274E-02										
Aroclor-1242 (3) [2C]	250	2.433789E-02										
Aroclor-1242 (4) [2C]	250	3.225599E-02										
Aroclor 1248 [2C]			250	4.536727E-02								
Aroclor-1248 (1) [2C]			250	0.036162								
Aroclor-1248 (2) [2C]			250	3.892353E-02								
Aroclor-1248 (3) [2C]			250	4.756205E-02								
Aroclor-1248 (4) [2C]			250	5.882148E-02								
Aroclor 1254 [2C]					250	7.332193E-02						
Aroclor-1254 (1) [2C]					250	5.803883E-02						
Aroclor-1254 (2) [2C]					250	4.691175E-02						
Aroclor-1254 (3) [2C]					250	0.1023304						
Aroclor-1254 (4) [2C]					250	0.1023323						
Aroclor-1254 (5) [2C]					250	5.699633E-02						
Aroclor-1262 (1) [2C]							250	7.829705E-02				
Aroclor-1262 (2) [2C]							250	6.658267E-02				
Aroclor-1262 (3) [2C]							250	7.090313E-02				





**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.192444E-02	7.6			RSD (20)	
Aroclor-1016 (1) [2C]	4.339073E-02	8.1			RSD (20)	
Aroclor-1016 (2) [2C]	9.508621E-02	6.8			RSD (20)	
Aroclor-1016 (3) [2C]	3.880136E-02	13.6			RSD (20)	
Aroclor-1016 (4) [2C]	3.041944E-02	9.5			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	8.365448E-02	4.8			RSD (20)	



**INITIAL CALIBRATION DATA**  
**EPA 8082A**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	5.771356E-02	6.9			RSD (20)	
Aroclor-1260 (2) [2C]	0.1460113	5.5			RSD (20)	
Aroclor-1260 (3) [2C]	3.639443E-02	2.3			RSD (20)	
Aroclor-1260 (4) [2C]	9.449863E-02	4.4			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.269643	3.3			RSD (20)	
Tetrachlorometaxylene [2C]	1.081498	4.2			RSD (20)	



## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	24-JAN-2023	15:39	01242312ECD7.D	1	IB	
2	24-JAN-2023	16:00	01242313ECD7.D	1	0.25PPM	AR1660
3	24-JAN-2023	16:21	01242314ECD7.D	1	0.02PPM	AR1660
4	24-JAN-2023	16:42	01242315ECD7.D	1	0.05PPM	AR1660
5	24-JAN-2023	17:03	01242316ECD7.D	1	1.0PPM	AR1660
6	24-JAN-2023	17:24	01242317ECD7.D	1	0.1PPM	AR1660
7	24-JAN-2023	17:45	01242318ECD7.D	1	0.5PPM	AR1660
8	24-JAN-2023	18:06	01242319ECD7.D	1	0.25PPM	1242
9	24-JAN-2023	18:27	01242320ECD7.D	1	0.25PPM	1248
10	24-JAN-2023	18:48	01242321ECD7.D	1	0.25PPM	1254
11	24-JAN-2023	19:09	01242322ECD7.D	1	0.25PPM	2162
12	24-JAN-2023	19:30	01242323ECD7.D	1	0.25PPM	3268
13	24-JAN-2023	19:51	01242324ECD7.D	1	AR1660	SCV
14	24-JAN-2023	20:12	01242325ECD7.D	1	AR1242	SCV
15	24-JAN-2023	20:33	01242326ECD7.D	1	AR1248	SCV
16	24-JAN-2023	20:54	01242327ECD7.D	1	AR1254	SCV
17	24-JAN-2023	21:15	01242328ECD7.D	1	AR2162	SCV
18	24-JAN-2023	21:36	01242329ECD7.D	1	AR3268	SCV
19	24-JAN-2023	21:57	01242330ECD7.D	1	DDTS	
20	24-JAN-2023	22:18	01242331ECD7.D	1	DDT	BD

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1539	01242312ECD7.D	IB		1	NO MANUAL INTEGRATION
1600	01242313ECD7.D	0.25PPM	AR1660	1	NO MANUAL INTEGRATION
1621	01242314ECD7.D	0.02PPM	AR1660	1	NO MANUAL INTEGRATION
1642	01242315ECD7.D	0.05PPM	AR1660	1	NO MANUAL INTEGRATION
1703	01242316ECD7.D	1.0PPM	AR1660	1	NO MANUAL INTEGRATION
1724	01242317ECD7.D	0.1PPM	AR1660	1	NO MANUAL INTEGRATION
1745	01242318ECD7.D	0.5PPM	AR1660	1	NO MANUAL INTEGRATION
1806	01242319ECD7.D	0.25PPM	1242	1	NO MANUAL INTEGRATION
1827	01242320ECD7.D	0.25PPM	1248	1	NO MANUAL INTEGRATION
1848	01242321ECD7.D	0.25PPM	1254	1	NO MANUAL INTEGRATION
1909	01242322ECD7.D	0.25PPM	2162	1	NO MANUAL INTEGRATION
1930	01242323ECD7.D	0.25PPM	3268	1	NO MANUAL INTEGRATION
1951	01242324ECD7.D	AR1660	SCV	1	NO MANUAL INTEGRATION
2012	01242325ECD7.D	AR1242	SCV	1	NO MANUAL INTEGRATION
2033	01242326ECD7.D	AR1248	SCV	1	NO MANUAL INTEGRATION
2054	01242327ECD7.D	AR1254	SCV	1	NO MANUAL INTEGRATION
2115	01242328ECD7.D	AR2162	SCV	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2136	01242329ECD7.D	AR3268	SCV	1	NO MANUAL INTEGRATION
2157	01242330ECD7.D	DDTS		1	NO MANUAL INTEGRATION
2218	01242331ECD7.D	DDT	BD	1	NO MANUAL INTEGRATION



Security Status Report

Date: 26-Jan-2023 11:55

01242301ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242302ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242303ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242304ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242305ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242306ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242307ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242308ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242309ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242310ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242311ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242312ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242313ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242314ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242315ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242316ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242317ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242318ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242319ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242320ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242321ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242322ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242323ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242324ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242325ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242326ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242327ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242328ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242329ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Last Edit : 25-Jan-2023 10:02 JoshuaR  
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem4\ecd7.i\230124.b\01242314ECD7.D  
 Level 2: \\target\share\chem4\ecd7.i\230124.b\01242315ECD7.D  
 Level 3: \\target\share\chem4\ecd7.i\230124.b\01242317ECD7.D  
 Level 4: \\target\share\chem4\ecd7.i\230124.b\01242313ECD7.D  
 Level 5: \\target\share\chem4\ecd7.i\230124.b\01242318ECD7.D  
 Level 6: \\target\share\chem4\ecd7.i\230124.b\01242316ECD7.D  
 Level 7: \\target\share\chem4\ecd7.i\230124.b\01242323ECD7.D  
 Level 8: \\target\share\chem4\ecd7.i\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Aroclor-1221(1)	0.00591	0.000e+00					0.00591	0.000
(2)	0.01209						0.01209	0.000
(3)	0.02807						0.02807	0.000
3 Aroclor-1242(1)	0.02450						0.02450	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08017	+++++						0.08017	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02382	+++++						0.02382	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03598	+++++						0.03598	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00369	+++++						0.00369	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Last Edit : 25-Jan-2023 10:02 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00832	0.000
	0.00832	+++++						
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04160	0.000
	0.04160	+++++						
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01781	0.000
	0.01781	+++++						
7 Aroclor-1016(1)	0.02947	0.03102	0.03310	0.03018	0.02824	0.02635	0.02973	7.802
	+++++	+++++						
(2)	0.09270	0.09812	0.10598	0.10203	0.09861	0.09356	0.09850	5.108
	+++++	+++++						
(3)	0.04878	0.04900	0.05127	0.04400	0.04091	0.03796	0.04532	11.523
	+++++	+++++						
(4)	0.02676	0.02802	0.03162	0.03050	0.02939	0.02864	0.02915	5.988
	+++++	+++++						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.04002	+++++					0.04002	0.000
-----								
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05105	+++++					0.05105	0.000
-----								
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09765	+++++					0.09765	0.000
-----								
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04833	+++++					0.04833	0.000
-----								
-----								

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Last Edit : 25-Jan-2023 10:02 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
8 Aroclor-1254(1)	0.08153	0.000e+00					0.08153	0.000
(2)	0.03481						0.03481	0.000
(3)	0.05224						0.05224	0.000
(4)	0.10237						0.10237	0.000
(5)	0.06657						0.06657	0.000
9 Aroclor-1260(1)	0.04727	0.04543	0.04428	0.05181	0.04013	0.04040	0.04489	9.818
(2)	0.04940	0.04636	0.04450	0.05350	0.04100	0.04208	0.04614	10.182
(3)	0.13737	0.12829	0.11740	0.13317	0.10468	0.10790		

	+++++	+++++					0.12147	11.161
(4)	0.07198	0.06638	0.05997	0.06473	0.05485	0.05864		
	+++++	+++++					0.06276	9.803
(5)	0.03296	0.02981	0.02640	0.02723	0.02328	0.02447		
	+++++	+++++					0.02736	13.015
10 Aroclor-1262 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03235	+++++					0.03235	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Last Edit : 25-Jan-2023 10:02 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05106	0.000
	0.05106	+++++						
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05544	0.000
	0.05544	+++++						
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05052	0.000
	0.05052	+++++						
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13216	0.000
	0.13216	+++++						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13180	0.000
	0.13180	+++++						
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10919	0.000
	0.10919	+++++						
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.32374	0.000
	0.32374	+++++						
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		



	+++++	904					904	0.000
-----								
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1034					1034	0.000
-----								
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	2557					2557	0.000
-----								
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1539					1539	0.000
-----								
-----								

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Last Edit : 25-Jan-2023 10:02 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	1484					1484	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 1 Tetrachloro-m-xylene	1.10039	1.10217	1.21997	1.14965	1.11792	1.09461	1.13079	4.246
\$ 13 Decachlorobiphenyl	0.86442	0.90302	0.93081	0.84813	0.79576	0.79145	0.85560	6.556

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Last Edit : 25-Jan-2023 09:58 JoshuaR  
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242314ECD7.D  
 Level 2: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242315ECD7.D  
 Level 3: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242317ECD7.D  
 Level 4: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242313ECD7.D  
 Level 5: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242318ECD7.D  
 Level 6: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242316ECD7.D  
 Level 7: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242323ECD7.D  
 Level 8: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
1 Aroclor-1221 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00586	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01285	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02169	0.000
4 Aroclor-1232 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00356	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01991	+++++						0.01991	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04054	+++++						0.04054	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01126	+++++						0.01126	0.000
3 Aroclor-1242 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03499	+++++						0.03499	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Last Edit : 25-Jan-2023 09:58 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07771	0.000
(3)	0.02434	+++++					0.02434	0.000
(4)	0.03226	+++++					0.03226	0.000
6 Aroclor-1248 [2C] (1)	0.03616	+++++					0.03616	0.000
(2)	0.03892	+++++					0.03892	0.000
(3)	0.04756	+++++					0.04756	0.000
(4)	0.05882	+++++					0.05882	0.000
7 Aroclor-1016 [2C] (1)	0.04424	0.04724	0.04678	0.04314	0.04099	0.03795		

	+++++	+++++					0.04339	8.142
(2)	0.08512	0.09615	0.10417	0.09824	0.09554	0.09130		
	+++++	+++++					0.09509	6.775
(3)	0.02919	0.04165	0.04478	0.04029	0.03925	0.03764		
	+++++	+++++					0.03880	13.639
(4)	0.02850	0.03377	0.03419	0.03004	0.02878	0.02724		
	+++++	+++++					0.03042	9.538

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Last Edit : 25-Jan-2023 09:58 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
8 Aroclor-1254 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05804	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04691	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10233	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10233	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05700	0.000
10 Aroclor-1262 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07830	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06658	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.07090	+++++					0.07090	0.000
-----								
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11355	+++++					0.11355	0.000
-----								
9 Aroclor-1260 [2C] (1)	0.06075	0.05974	0.05912	0.06129	0.05231	0.05307		
	+++++	+++++					0.05771	6.881
-----								
(2)	0.14748	0.15106	0.15181	0.15367	0.13396	0.13809		
	+++++	+++++					0.14601	5.547
-----								
-----								



ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Last Edit : 25-Jan-2023 09:58 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000	0.000e+00						
	Level 7	Level 8						
(3)	0.03683	0.03729	0.03582	0.03647	0.03501	0.03694	0.03639	2.314
	+++++	+++++						
(4)	0.09319	0.09919	0.09881	0.09587	0.08985	0.09008	0.09450	4.373
	+++++	+++++						
11 Aroclor-1268 [2C] (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18682	+++++					0.18682	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19880	+++++					0.19880	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16548	+++++					0.16548	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.51118	+++++					0.51118	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1528					1528	0.000
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++		

	+++++	866					866	0.000
-----								
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	863					863	0.000
-----								
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1162					1162	0.000
-----								
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1277					1277	0.000
-----								
-----								

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00  
 End Cal Date : 24-JAN-2023 21:57  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 4.14  
 Integrator : HP Genie  
 Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Last Edit : 25-Jan-2023 09:58 JoshuaR  
 Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 2 Tetrachloro-m-xylene [2C]	1.04342	1.10521	1.15322	1.09675	1.05187	1.03851	1.08150	4.159
\$ 13 Decachlorobiphenyl [2C]	1.20915	1.27122	1.31190	1.29209	1.22961	1.30389	1.26964	3.291

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230124.b
Inst ID: ecd7.i

ID: RT01 RT02 RT03 RT04 RT05 RT06
FILENAME: 01242313ECD7 01242314ECD7 01242315ECD7 01242316ECD7 01242317ECD7 01242318ECD7
INJ. DATE: 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023
INJ. TIME: 16:00 16:21 16:42 17:03 17:24 17:45

Table with 11 columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include various chemical compounds like IS-BNB, Aroclor-1221, Aroclor-1242, etc.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Batch File: \\target\share\chem4\ecd7.i\230124.b  
 Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.281	10.181-10.381	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.758	10.658-10.858	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b
Inst ID: ecd7.i

ID: RT01 RT02 RT03 RT04 RT05 RT06
FILENAME: 01242313ECD7 01242314ECD7 01242315ECD7 01242316ECD7 01242317ECD7 01242318ECD7
INJ. DATE: 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023 24-JAN-2023
INJ. TIME: 16:00 16:21 16:42 17:03 17:24 17:45

Table with 11 columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, EXPEC RT, RT WINDOW, AVG RT, STD DEV. Rows include various chemical compounds like Aroclor-1221, Aroclor-1232, etc., with their respective retention times and standard deviations.

Reviewer 1 \_\_\_\_\_ Date: \_\_\_\_\_
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

ARI Labs, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m  
 Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b  
 Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.095	10.995-11.195	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242312ECD7.D  
Data file 2: /230124.b/230124.b/01242312ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: IB  
Client ID:  
Injection Date: 24-JAN-2023 15:39  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.822	0.013	272340	5.680	-0.007	171573	36.5	36.4	0.1	Tetrachloro-m-xylene
13.900	0.008	252989	14.120	-0.000	223176	37.3	38.6	3.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	528068	4.9
Hexabromobiphenyl	647433	634177	-2.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348301	3.4
Hexabromobiphenyl	382032	364259	-4.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)



ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	---			0.0	1	---			0.0	
Aroclor-1016	2	---			0.0	2	---			0.0	
Aroclor-1016	3	7.852	0.064	162	0.5	3	---			0.0	
Aroclor-1016	4	8.431	0.027	495	2.6	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	6.317	0.019	1908	34.1	
Aroclor-1221	3	---			0.0	3	6.630	0.007	299	3.2	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	7.208	-0.049	26	0.3	
Aroclor-1232	3	---			0.0	3	---			0.0	
Aroclor-1232	4	---			0.0	4	8.730	0.017	33	0.7	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	---			0.0	1	7.208	-0.048	26	0.2	
Aroclor-1242	2	---			0.0	2	---			0.0	
Aroclor-1242	3	8.431	0.024	495	3.1	3	9.151	-0.008	93	0.9	
Aroclor-1242	4	8.630	0.049	1101	4.6	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1248	1	8.431	0.025	495	1.9	1	---			0.0	
Aroclor-1248	2	8.630	0.050	1101	3.3	2	8.730	0.018	33	0.2	
Aroclor-1248	3	---			0.0	3	9.151	-0.005	93	0.4	
Aroclor-1248	4	---			0.0	4	---			0.0	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1254	1	---			0.0	1	9.474	0.026	9010	35.7	
Aroclor-1254	2	---			0.0	2	---			0.0	
Aroclor-1254	3	9.571	-0.099	114	0.3	3	---			0.0	
Aroclor-1254	4	9.770	-0.038	104	0.2	4	---			0.0	
Aroclor-1254	5	---			0.0	5	10.525	-0.044	482	1.9	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1260	1	11.066	0.023	262	0.7	1	11.703	0.050	189	0.7	
Aroclor-1260	2	---			0.0	2	11.832	-0.086	97	0.1	
Aroclor-1260	3	11.803	0.069	4470	4.6	3	12.414	-0.022	2209	13.3	
Aroclor-1260	4	12.089	-0.051	661	1.3	4	---			0.0	
Aroclor-1260	5	12.282	0.038	5183	23.9	NS	---			----	
Total CollAve (4 peaks):				7.7	Total Col2Ave (3 peaks):				4.7	RPD = 47*	
Corrected Ave (3 peaks):				2.2	Corrected Ave: < 3 Peaks						
Aroclor-1262	1	10.789	-0.043	941	3.7	1	---			0.0	
Aroclor-1262	2	12.282	0.036	5183	12.8	2	11.703	0.051	189	0.6	
Aroclor-1262	3	---			0.0	3	12.414	-0.020	2209	6.8	
Aroclor-1262	4	12.982	-0.007	2811	7.0	4	---			0.0	
Total CollAve (3 peaks):				7.8	Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	12.282	0.037	5183	4.9	1	12.414	-0.020	2209	2.6	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	12.705	0.006	3092	3.6	3	12.894	0.001	724	1.0	
Aroclor-1268	4	13.500	0.011	13310	5.2	4	13.708	-0.000	2974	1.3	
Total CollAve (3 peaks):				4.6	Total Col2Ave (3 peaks):				1.6	RPD = 96*	
Corrected Ave: < 3 Peaks				Corrected Ave: < 3 Peaks							

Total PCB Area Col1 (5.909 - 13.792) = 89790 Col1 Total PCB = 0.0 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 40020 Col2 Total PCB = 0.0 ppm\*

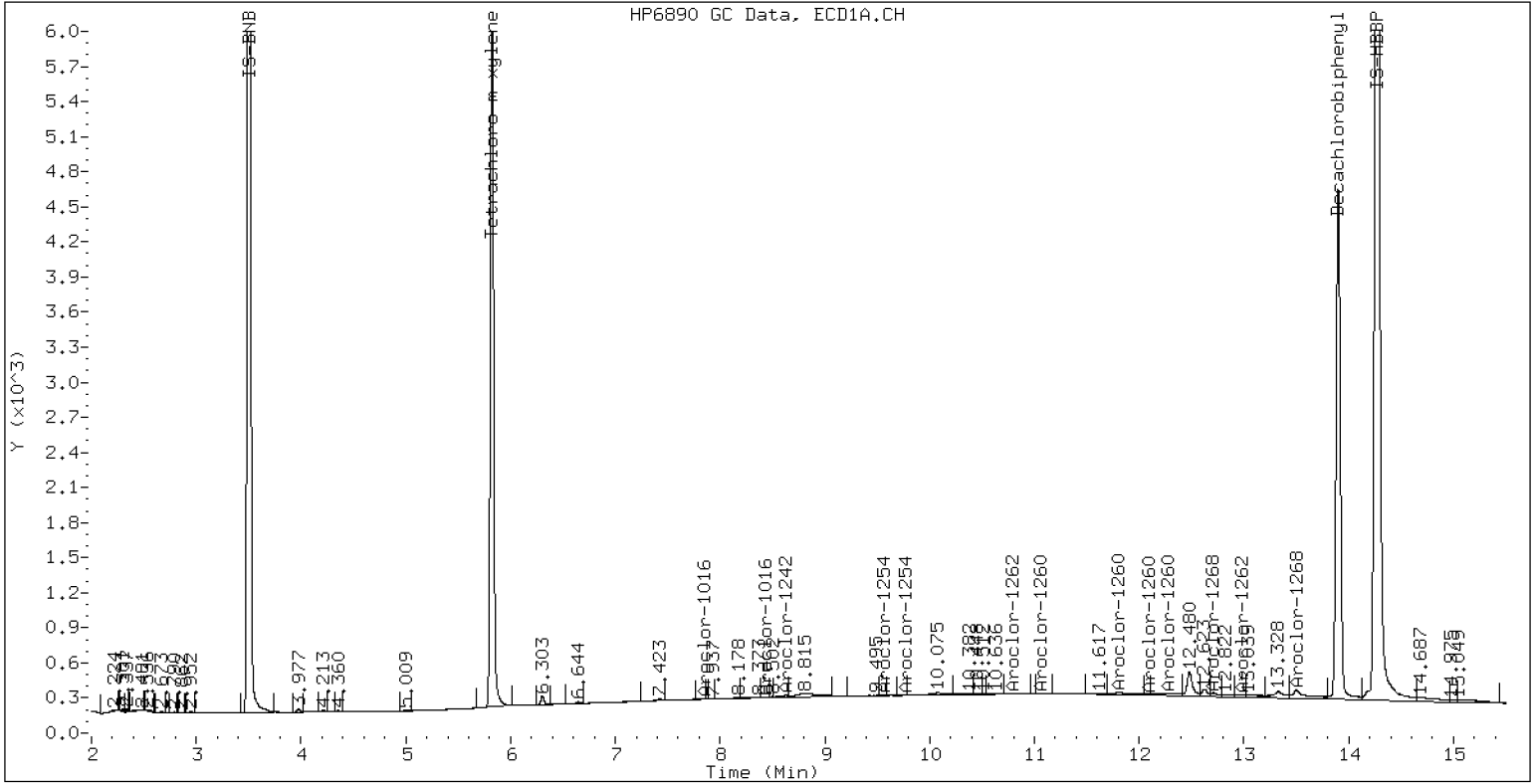
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 IB

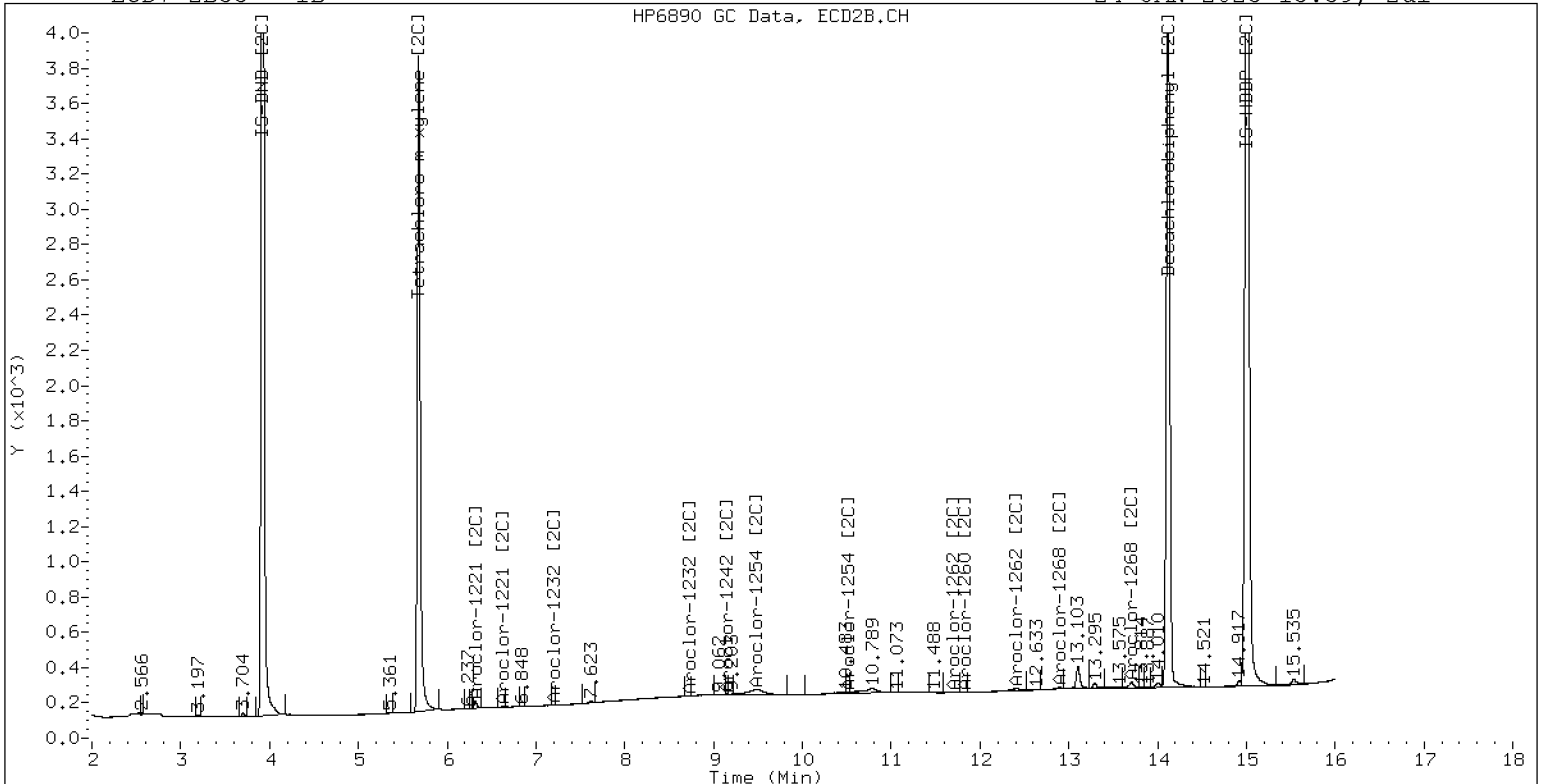
24-JAN-2023 15:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB

24-JAN-2023 15:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242313ECD7.D  
Data file 2: /230124.b/230124.b/01242313ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.25PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 16:00  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.810	0.001	289321	5.685	-0.002	184754	40.7	40.6	0.3	Tetrachloro-m-xylene
13.894	0.002	274555	14.120	0.000	246809	39.7	40.7	2.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503318	0.0
Hexabromobiphenyl	647433	647433	0.0
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	336911	0.0
Hexabromobiphenyl	382032	382032	0.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	47467	253.8	1	7.255	0.000	45421	248.6	
Aroclor-1016	2	7.654	0.004	160487	259.0	2	7.851	0.000	103429	258.3	
Aroclor-1016	3	7.791	0.003	69204	242.7	3	8.050	0.000	42418	259.6	
Aroclor-1016	4	8.406	0.003	47967	261.5	4	8.305	0.000	31623	246.8	
Total CollAve (4 peaks):				254.2		Total Col2Ave (4 peaks):				253.3	RPD = 0
Corrected Ave (3 peaks):				251.8		Corrected Ave (3 peaks):				251.2	RPD = 0

CalAmt %D: 1.7

CalAmt %D: 1.3

Aroclor-1260	1	11.047	0.003	104831	288.6	1	11.653	0.000	73177	265.5	
Aroclor-1260	2	11.362	0.002	108243	289.9	2	11.918	0.000	183459	263.1	
Aroclor-1260	3	11.738	0.004	269428	274.1	3	12.436	0.000	43542	250.5	
Aroclor-1260	4	12.142	0.002	130966	257.9	4	12.502	0.000	114455	253.6	
Aroclor-1260	5	12.246	0.002	55096	248.9	NS	---			----	
Total CollAve (5 peaks):				271.8		Total Col2Ave (4 peaks):				258.2	RPD = 5
Corrected Ave (4 peaks):				267.3		Corrected Ave (3 peaks):				255.8	RPD = 4

CalAmt %D: 8.7

CalAmt %D: 3.3

Total PCB Area Coll (5.909 - 13.792) = 2930230 Coll Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1777050 Col2 Total PCB = 0.5 ppm\*

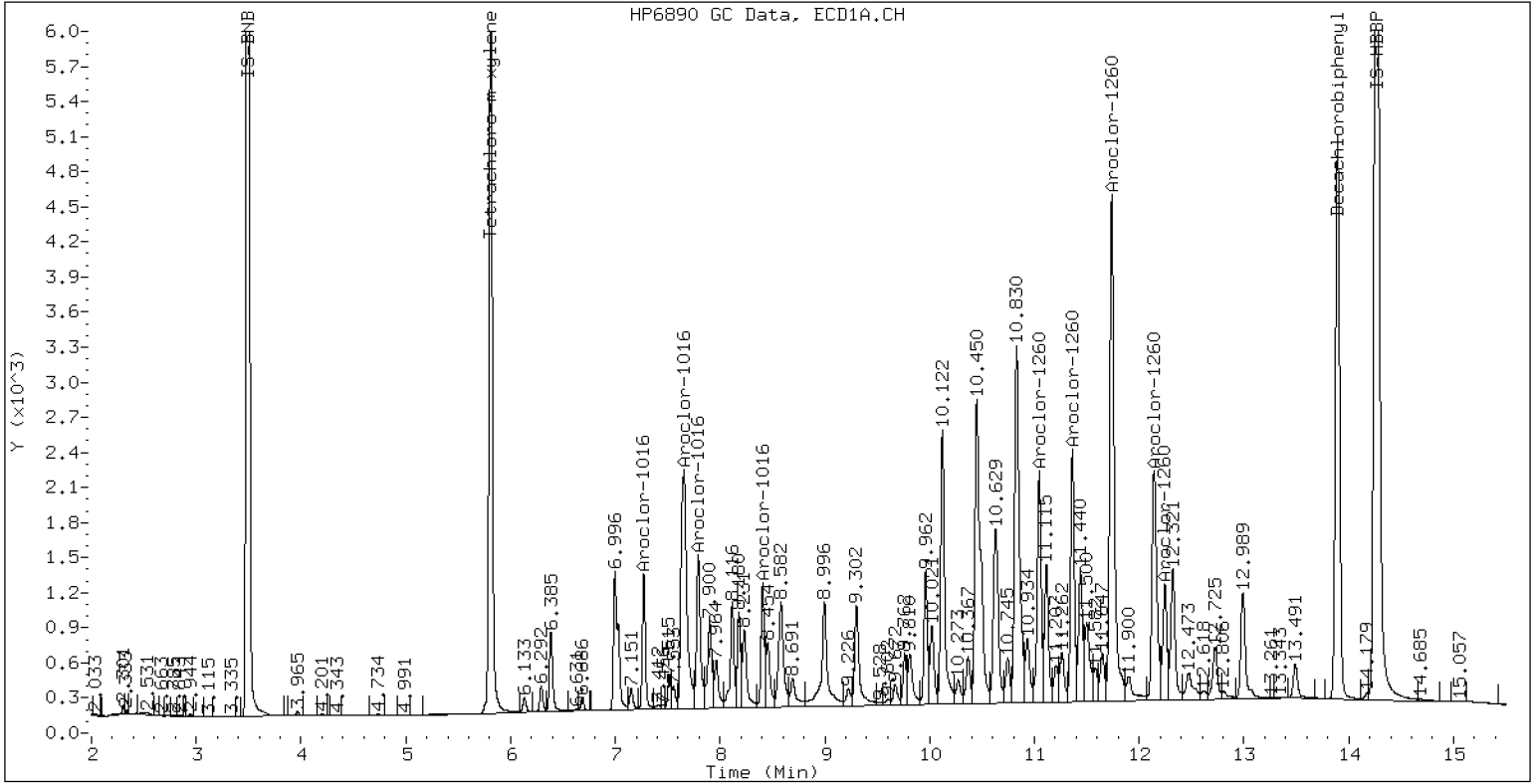
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM AR1660

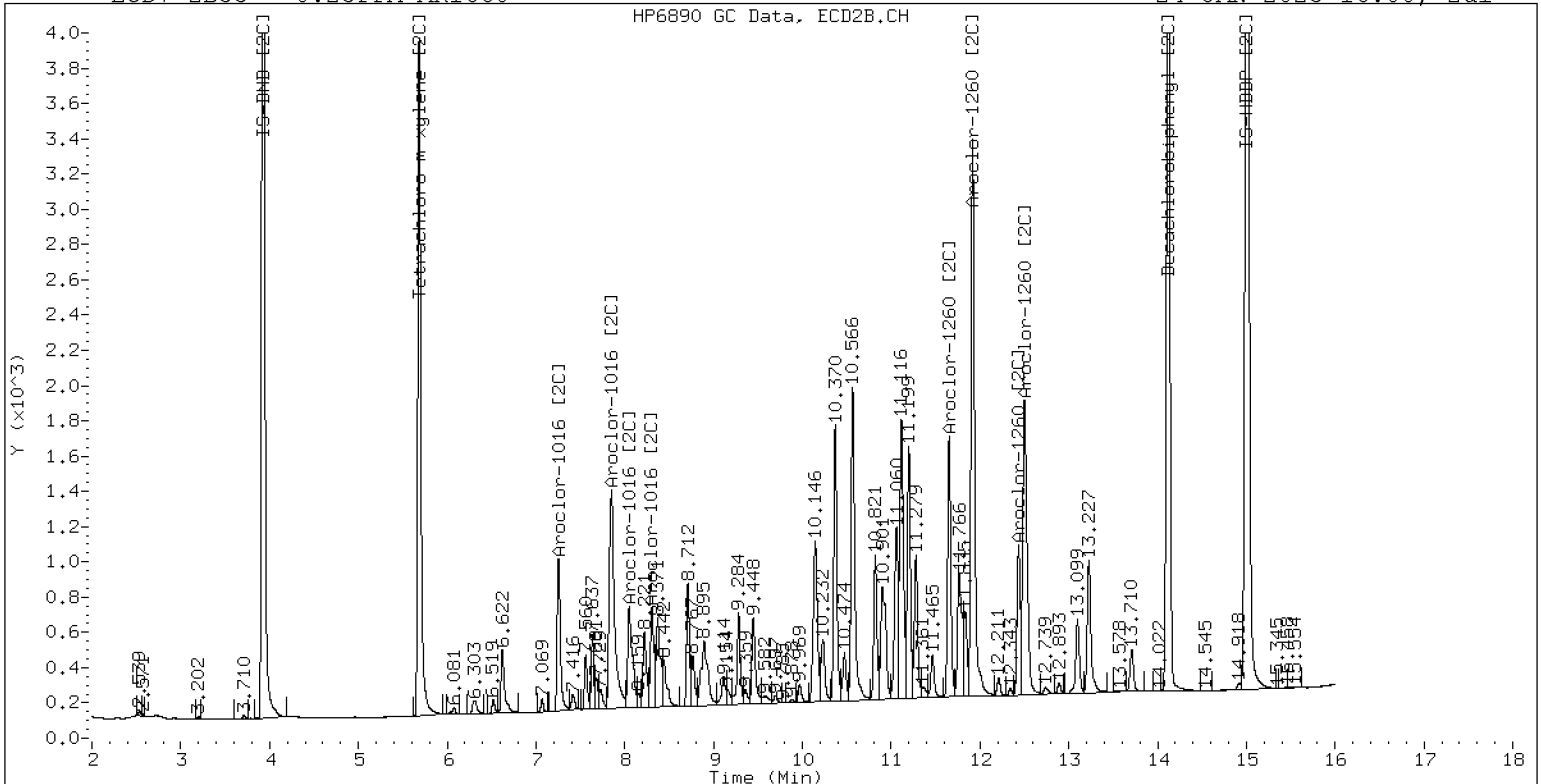
24-JAN-2023 16:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM AR1660

24-JAN-2023 16:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242314ECD7.D  
Data file 2: /230124.b/230124.b/01242314ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.02PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 16:21  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	21307	5.686	-0.000	13767	3.1	3.1	0.9	Tetrachloro-m-xylene
13.892	0.000	23054	14.121	0.001	19257	3.2	3.0	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	484077	-3.8
Hexabromobiphenyl	647433	666748	3.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	329852	-2.1
Hexabromobiphenyl	382032	398153	4.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col ZB35 Col

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	3567	19.8	1	7.257	0.002	3648	20.4	
Aroclor-1016	2	7.663	0.012	11219	18.8	2	7.858	0.007	7019	17.9	
Aroclor-1016	3	7.796	0.008	5903	21.5	3	8.058	0.007	2407	15.0	
Aroclor-1016	4	8.410	0.006	3238	18.4	4	8.308	0.003	2350	18.7	
Total CollAve (4 peaks):				19.6	Total Col2Ave (4 peaks):				18.0	RPD = 9	
Corrected Ave (3 peaks):				19.0	Corrected Ave (3 peaks):				17.2	RPD = 10	

CalAmt %D: -1.8 CalAmt %D: -9.9

Aroclor-1260	1	11.049	0.005	7880	21.1	1	11.655	0.002	6047	21.1	
Aroclor-1260	2	11.365	0.005	8234	21.4	2	11.923	0.005	14680	20.2	
Aroclor-1260	3	11.742	0.008	22898	22.6	3	12.438	0.002	3666	20.2	
Aroclor-1260	4	12.149	0.009	11998	22.9	4	12.506	0.004	9276	19.7	
Aroclor-1260	5	12.247	0.003	5494	24.1	NS	---			----	
Total CollAve (5 peaks):				22.4	Total Col2Ave (4 peaks):				20.3	RPD = 10	
Corrected Ave (4 peaks):				22.0	Corrected Ave (3 peaks):				20.1	RPD = 9	

CalAmt %D: 12.1 CalAmt %D: 1.5

Total PCB Area Col1 (5.909 - 13.792) = 256211 Col1 Total PCB = 0.0 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 146434 Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

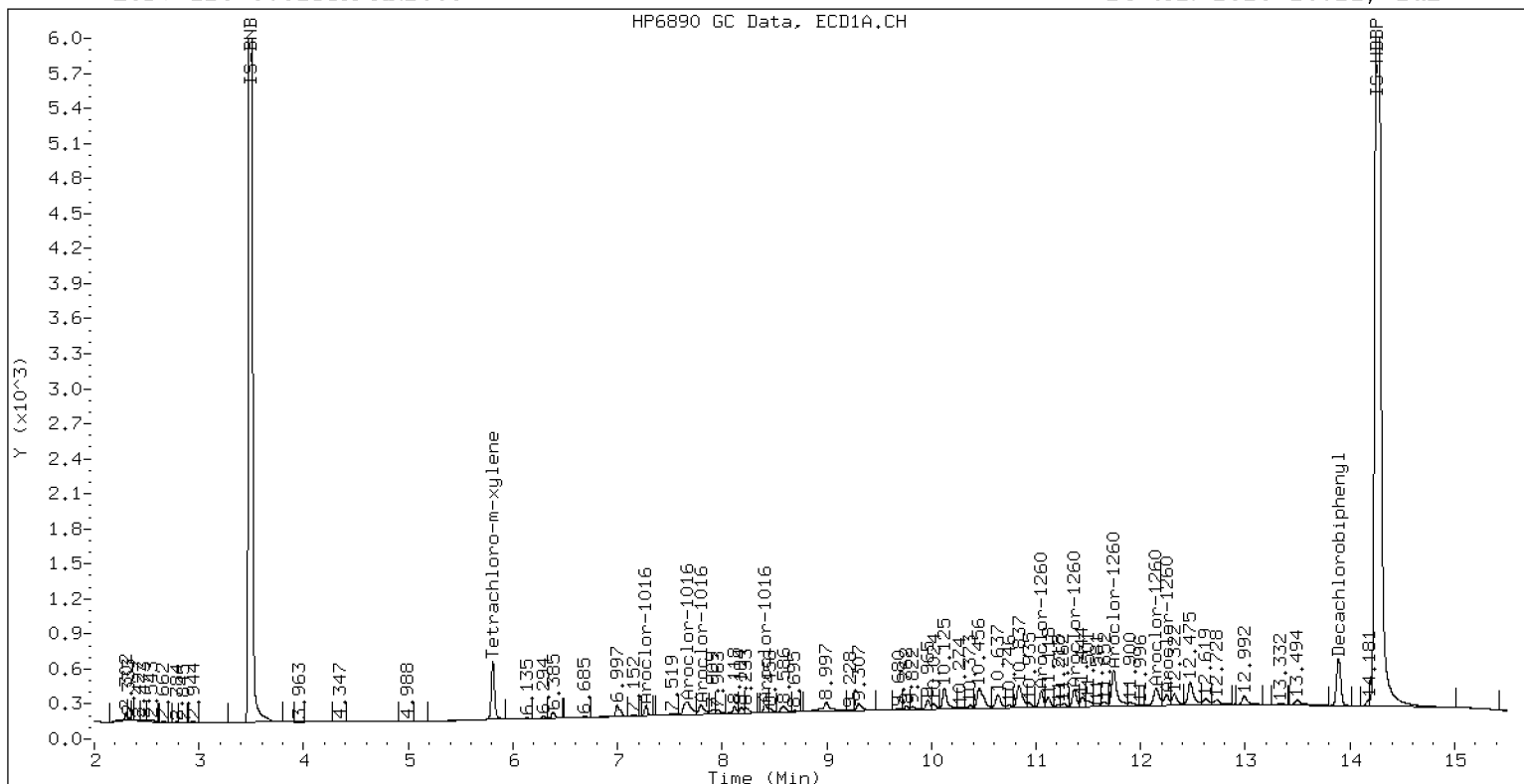
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPM AR1660

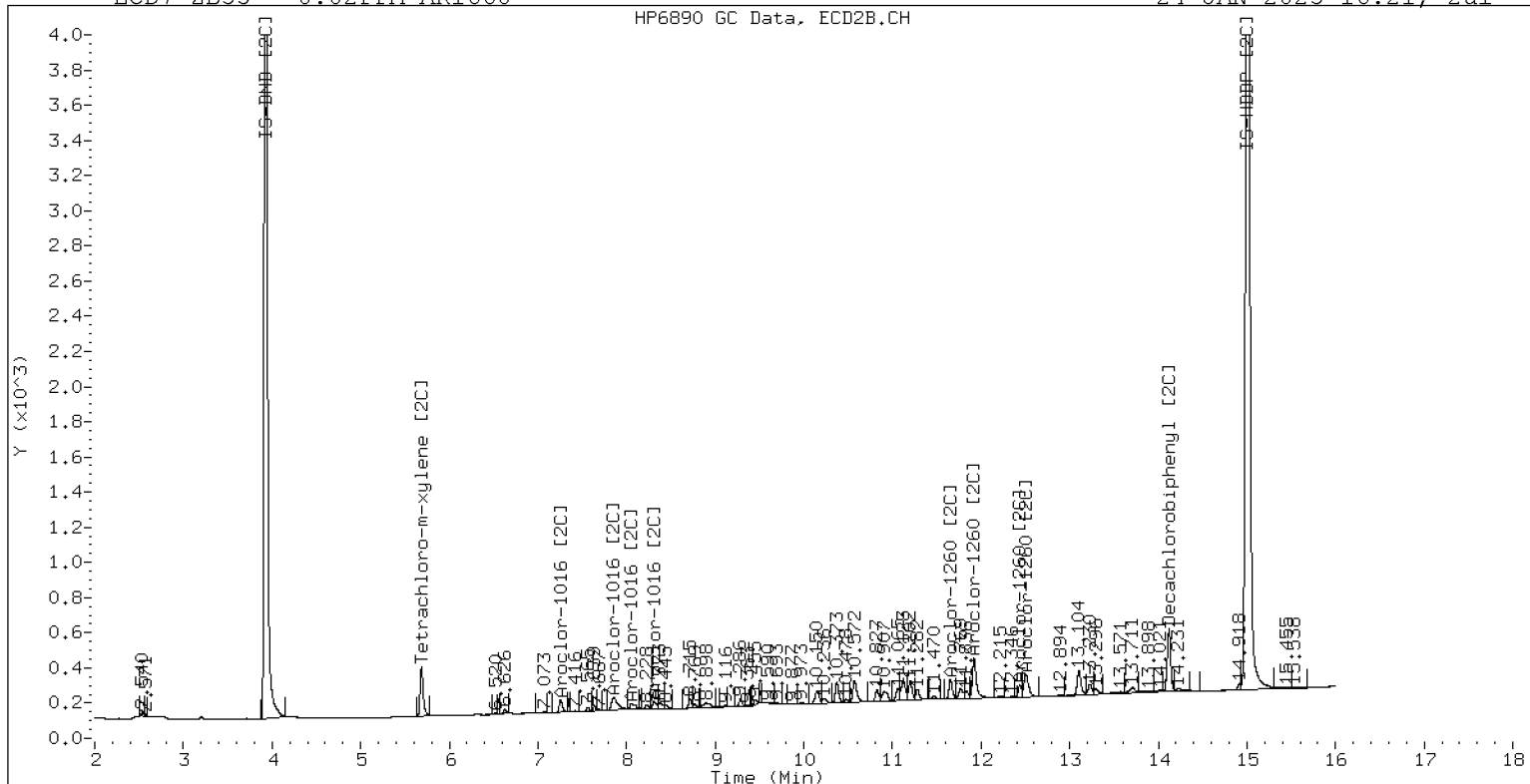
24-JAN-2023 16:21, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPM AR1660

24-JAN-2023 16:21, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242315ECD7.D  
Data file 2: /230124.b/230124.b/01242315ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.05PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 16:42  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	53503	5.687	-0.000	36922	7.8	8.2	4.7	Tetrachloro-m-xylene
13.893	0.001	62544	14.120	-0.000	52782	8.4	8.0	5.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	485432	-3.6
Hexabromobiphenyl	647433	692613	7.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334072	-0.8
Hexabromobiphenyl	382032	415206	8.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col ZB35 Col

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.271	0.002	9412	52.2	1	7.256	0.001	9864	54.4	
Aroclor-1016	2	7.657	0.007	29769	49.8	2	7.855	0.004	20076	50.6	
Aroclor-1016	3	7.795	0.006	14866	54.1	3	8.055	0.004	8697	53.7	
Aroclor-1016	4	8.409	0.005	8500	48.1	4	8.308	0.003	7052	55.5	
Total CollAve (4 peaks):				51.0	Total Col2Ave (4 peaks):				53.5	RPD = 5	
Corrected Ave (3 peaks):				50.0	Corrected Ave (3 peaks):				52.9	RPD = 6	

CalAmt %D: 2.0 CalAmt %D: 7.1

Aroclor-1260	1	11.048	0.005	19665	50.6	1	11.655	0.002	15502	51.8	
Aroclor-1260	2	11.364	0.003	20070	50.2	2	11.921	0.003	39201	51.7	
Aroclor-1260	3	11.740	0.006	55534	52.8	3	12.439	0.003	9678	51.2	
Aroclor-1260	4	12.145	0.006	28735	52.9	4	12.506	0.004	25741	52.5	
Aroclor-1260	5	12.246	0.002	12906	54.5	NS	---			----	
Total CollAve (5 peaks):				52.2	Total Col2Ave (4 peaks):				51.8	RPD = 1	
Corrected Ave (4 peaks):				51.6	Corrected Ave (3 peaks):				51.6	RPD = 0	

CalAmt %D: 4.4 CalAmt %D: 3.6

Total PCB Area Coll (5.909 - 13.792) = 600311 Coll Total PCB = 0.1 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 383666 Col2 Total PCB = 0.1 ppm\*

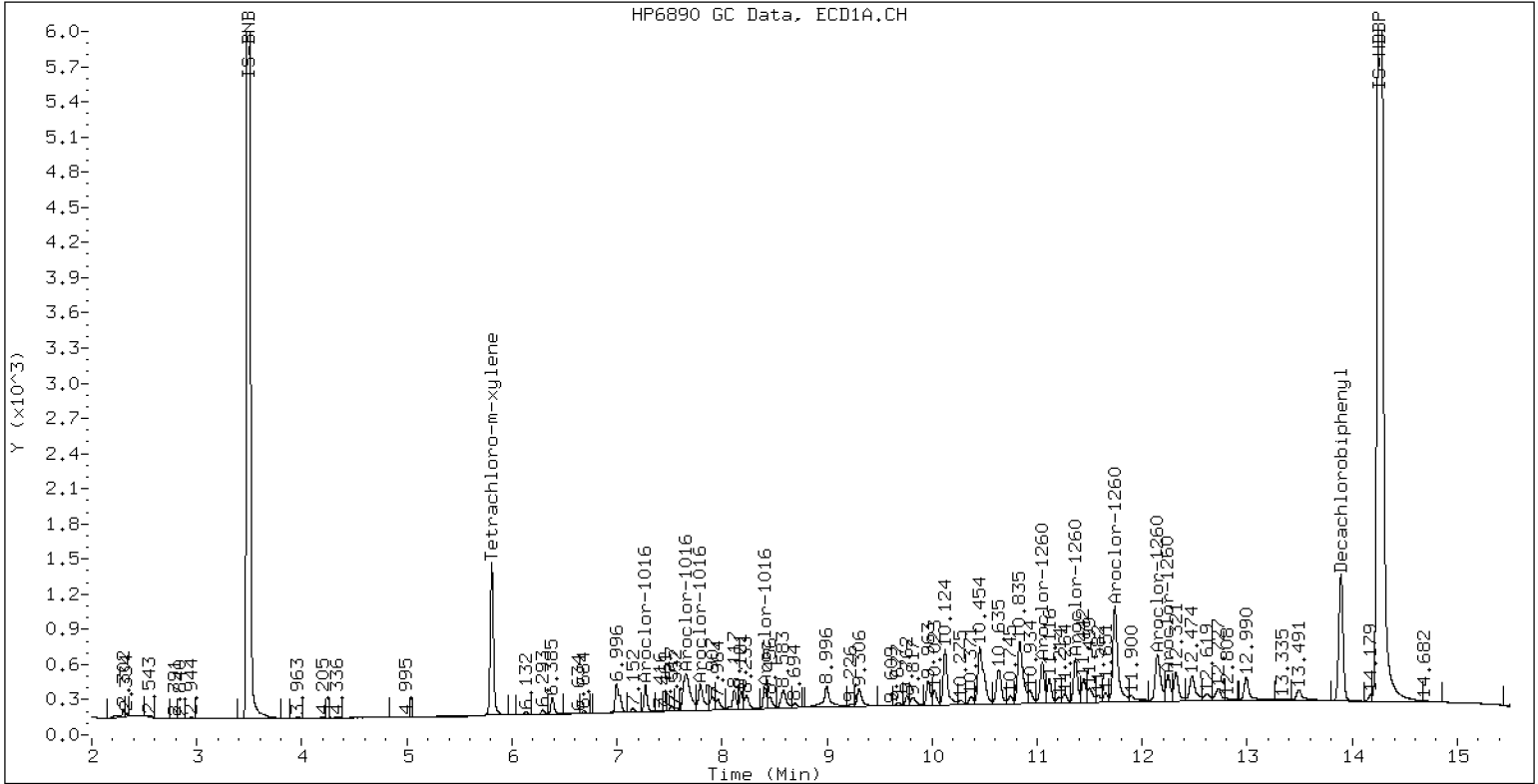
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPM AR1660

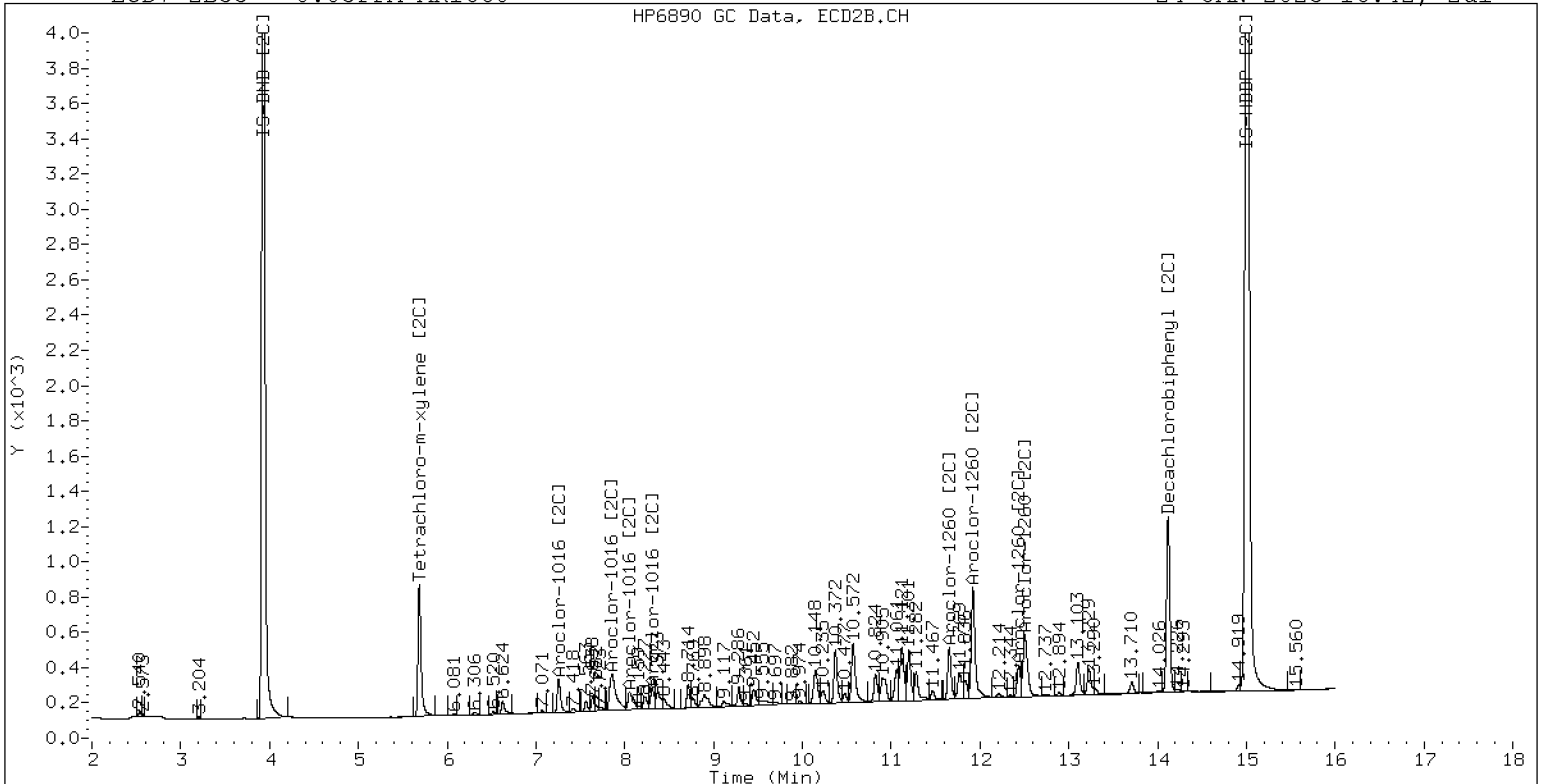
24-JAN-2023 16:42, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPM AR1660

24-JAN-2023 16:42, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242316ECD7.D  
Data file 2: /230124.b/230124.b/01242316ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 1.0PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 17:03  
Report Date: 01/25/2023 11:34  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	ZB5 Col Response	RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	1033475	5.685	-0.002	672800	154.9	153.6	0.8	Tetrachloro-m-xylene
13.892	0.000	1125556	14.122	0.002	1078539	148.0	164.3	10.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	472076	-6.2
Hexabromobiphenyl	647433	711071	9.8

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	323926	-3.9
Hexabromobiphenyl	382032	413585	8.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	155505	886.5	1	7.254	-0.001	153668	874.6
Aroclor-1016	2	7.649	-0.001	552101	949.8	2	7.849	-0.002	369677	960.2
Aroclor-1016	3	7.786	-0.002	223973	837.5	3	8.048	-0.003	152418	970.1
Aroclor-1016	4	8.402	-0.001	169003	982.4	4	8.304	-0.001	110311	895.6
Total CollAve (4 peaks):				914.1		Total Col2Ave (4 peaks):				925.1 RPD = 1
Corrected Ave (3 peaks):				891.3		Corrected Ave (3 peaks):				910.1 RPD = 2

CalAmt %D: -8.6

CalAmt %D: -7.5

Aroclor-1260	1	11.043	-0.001	359074	900.0	1	11.653	-0.001	274365	919.6
Aroclor-1260	2	11.360	-0.000	374067	912.1	2	11.917	-0.000	713881	945.7
Aroclor-1260	3	11.733	-0.001	959026	888.3	3	12.436	-0.000	190968	1015.0
Aroclor-1260	4	12.137	-0.002	521189	934.3	4	12.502	-0.000	465680	953.2
Aroclor-1260	5	12.242	-0.002	217473	894.4	NS	---			----
Total CollAve (5 peaks):				905.8		Total Col2Ave (4 peaks):				958.4 RPD = 6
Corrected Ave (4 peaks):				898.7		Corrected Ave (3 peaks):				939.5 RPD = 4

CalAmt %D: -9.4

CalAmt %D: -4.2

Total PCB Area Coll (5.909 - 13.792) = 10234908 Coll Total PCB = 1.9 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 6685547 Col2 Total PCB = 2.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242317ECD7.D  
Data file 2: /230124.b/230124.b/01242317ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.1PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 17:24  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col		ZB5	ZB35	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col			
5.808	-0.001	117058	5.686 -0.001	76340	17.3	17.1	1.2	Tetrachloro-m-xylene
13.892	0.000	140818	14.119 -0.001	113773	17.4	16.5	5.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	479756	-4.7
Hexabromobiphenyl	647433	756424	16.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	330987	-1.8
Hexabromobiphenyl	382032	433619	13.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)



ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	19848	111.3	1	7.255	0.000	19353	107.8
Aroclor-1016	2	7.656	0.005	63555	107.6	2	7.853	0.002	43099	109.6
Aroclor-1016	3	7.793	0.004	30749	113.1	3	8.053	0.003	18527	115.4
Aroclor-1016	4	8.406	0.003	18961	108.5	4	8.307	0.002	14145	112.4
Total CollAve (4 peaks):				110.1		Total Col2Ave (4 peaks):				111.3 RPD = 1
Corrected Ave (3 peaks):				109.1		Corrected Ave (3 peaks):				109.9 RPD = 1
CalAmt %D:				10.1		CalAmt %D:				11.3
Aroclor-1260	1	11.046	0.002	41864	98.6	1	11.655	0.001	32043	102.4
Aroclor-1260	2	11.362	0.001	42073	96.4	2	11.920	0.002	82285	104.0
Aroclor-1260	3	11.739	0.004	111005	96.7	3	12.437	0.001	19416	98.4
Aroclor-1260	4	12.144	0.004	56707	95.6	4	12.504	0.002	53558	104.6
Aroclor-1260	5	12.245	0.001	24958	96.5	NS	---			----
Total CollAve (5 peaks):				96.8		Total Col2Ave (4 peaks):				102.3 RPD = 6
Corrected Ave (4 peaks):				96.3		Corrected Ave (3 peaks):				101.6 RPD = 5
CalAmt %D:				-3.2		CalAmt %D:				2.3

Total PCB Area Coll (5.909 - 13.792) = 1238855 Coll Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 777713 Col2 Total PCB = 0.2 ppm\*

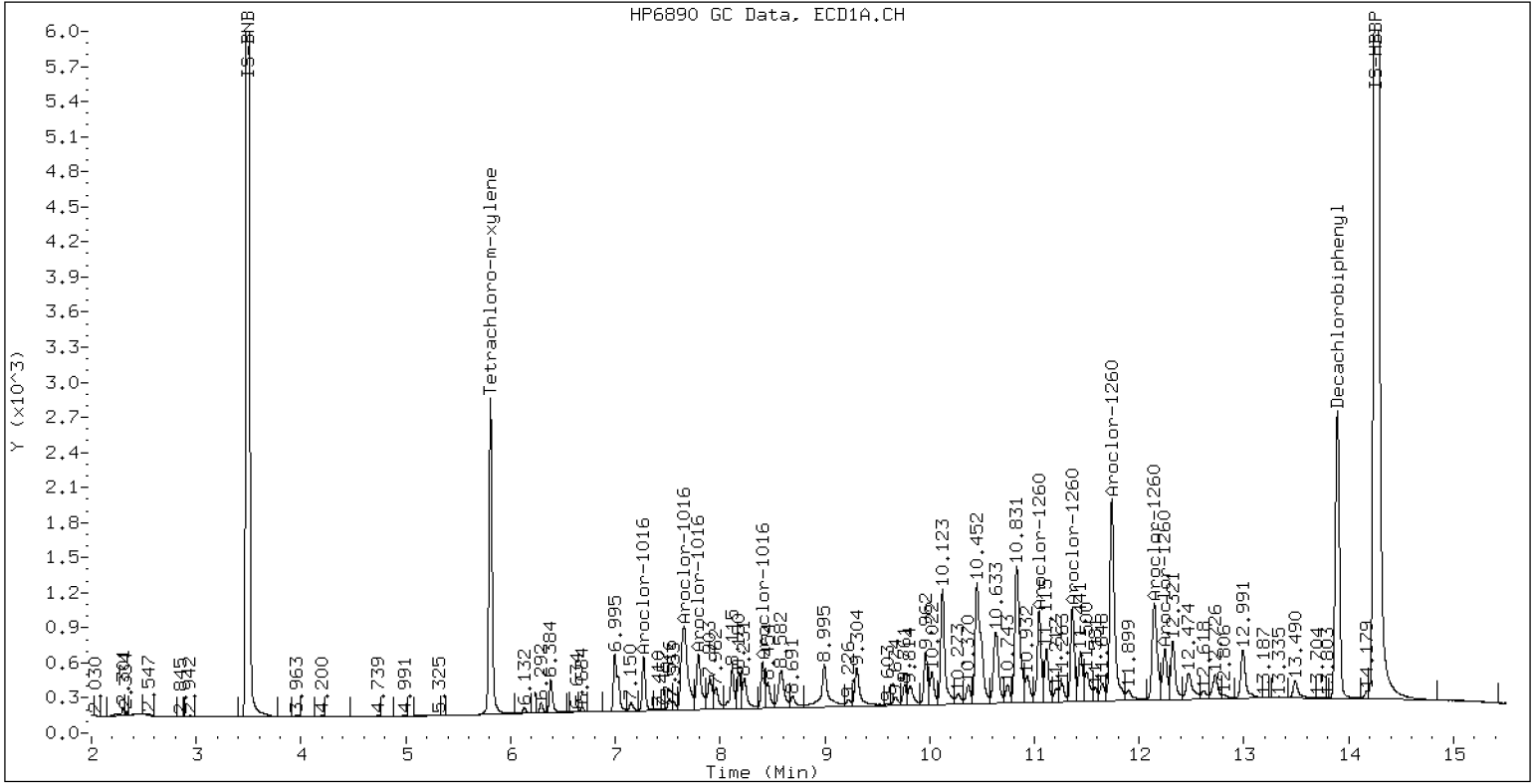
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPM AR1660

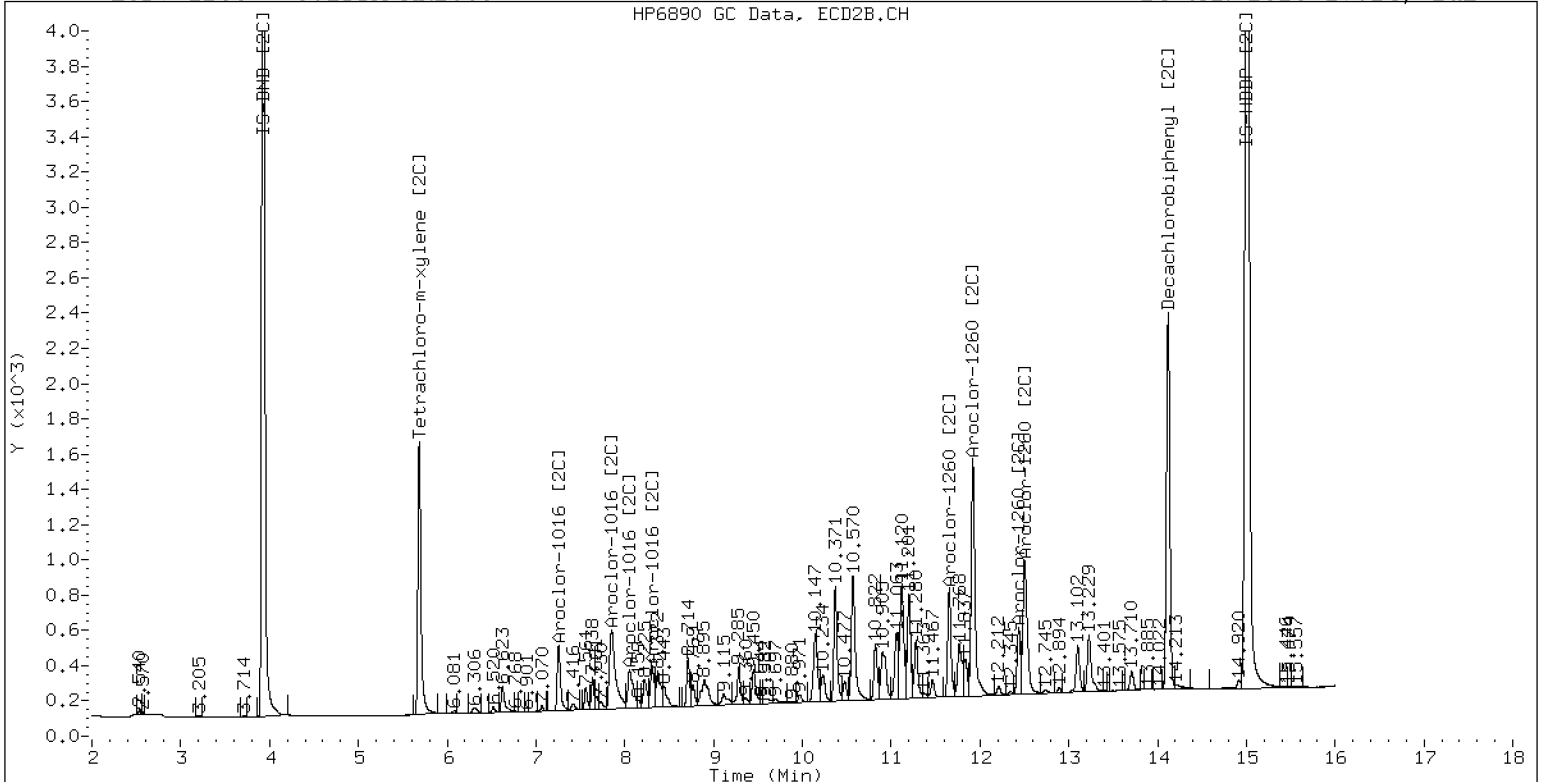
24-JAN-2023 17:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPM AR1660

24-JAN-2023 17:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242318ECD7.D  
Data file 2: /230124.b/230124.b/01242318ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.5PPM AR1660  
Client ID:  
Injection Date: 24-JAN-2023 17:45  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	534053	5.686	-0.000	348900	79.1	77.8	1.6	Tetrachloro-m-xylene
13.891	-0.001	614978	14.120	0.000	552784	74.4	77.5	4.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	477720	-5.1
Hexabromobiphenyl	647433	772816	19.4
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331694	-1.5
Hexabromobiphenyl	382032	449559	17.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	84322	475.0	1	7.254	-0.000	84986	472.4
Aroclor-1016	2	7.650	0.000	294429	500.6	2	7.850	-0.001	198065	502.4
Aroclor-1016	3	7.789	0.000	122151	451.4	3	8.050	-0.000	81378	505.8
Aroclor-1016	4	8.404	0.000	87760	504.1	4	8.305	-0.000	59656	473.0
Total CollAve (4 peaks):				482.8		Total Col2Ave (4 peaks):				488.4 RPD = 1
Corrected Ave (3 peaks):				475.6		Corrected Ave (3 peaks):				482.6 RPD = 1
CalAmt %D:				-3.4		CalAmt %D:				-2.3
Aroclor-1260	1	11.044	0.000	193843	447.0	1	11.653	-0.000	146980	453.2
Aroclor-1260	2	11.361	0.000	198052	444.3	2	11.917	-0.001	376388	458.7
Aroclor-1260	3	11.734	0.000	505614	430.9	3	12.436	-0.000	98369	481.0
Aroclor-1260	4	12.139	0.000	264950	437.0	4	12.501	-0.001	252455	475.4
Aroclor-1260	5	12.244	0.000	112421	425.4	NS	---			----
Total CollAve (5 peaks):				436.9		Total Col2Ave (4 peaks):				467.1 RPD = 7
Corrected Ave (4 peaks):				434.4		Corrected Ave (3 peaks):				462.4 RPD = 6
CalAmt %D:				-12.6		CalAmt %D:				-6.6

Total PCB Area Coll (5.909 - 13.792) = 5412241 Coll Total PCB = 1.0 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 3551064 Col2 Total PCB = 1.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242319ECD7.D  
 Data file 2: /230124.b/230124.b/01242319ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Compound Sublist: AR1242.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: 0.25PPM 1242  
 Client ID:  
 Injection Date: 24-JAN-2023 18:06  
 Report Date: 01/25/2023 10:53  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	317773	5.686	-0.000	205627	47.7	46.6	2.2	Tetrachloro-m-xylene
13.892	-0.000	322814	14.121	0.001	269935	36.0	36.5	1.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	471690	-6.3
Hexabromobiphenyl	647433	839322	29.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	326260	-3.2
Hexabromobiphenyl	382032	466396	22.1

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col ZB35 Col

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.271	0.000	36109	250.0	1	7.256	0.000	35672	250.0	
Aroclor-1242	2	7.655	0.000	118172	250.0	2	7.853	0.000	79233	250.0	
Aroclor-1242	3	8.407	0.000	35110	250.0	3	9.160	0.000	24814	250.0	
Aroclor-1242	4	8.581	0.000	53037	250.0	4	9.587	0.000	32887	250.0	
Total Col1Ave (4 peaks):				250.0	Total Col2Ave (4 peaks):				250.0	RPD = 0	
Corrected Ave (3 peaks):				250.0	Corrected Ave (3 peaks):				250.0	RPD = 0	

Total PCB Area Col1 (5.909 - 13.792) = 930958 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 567613 Col2 Total PCB = 0.2 ppm\*

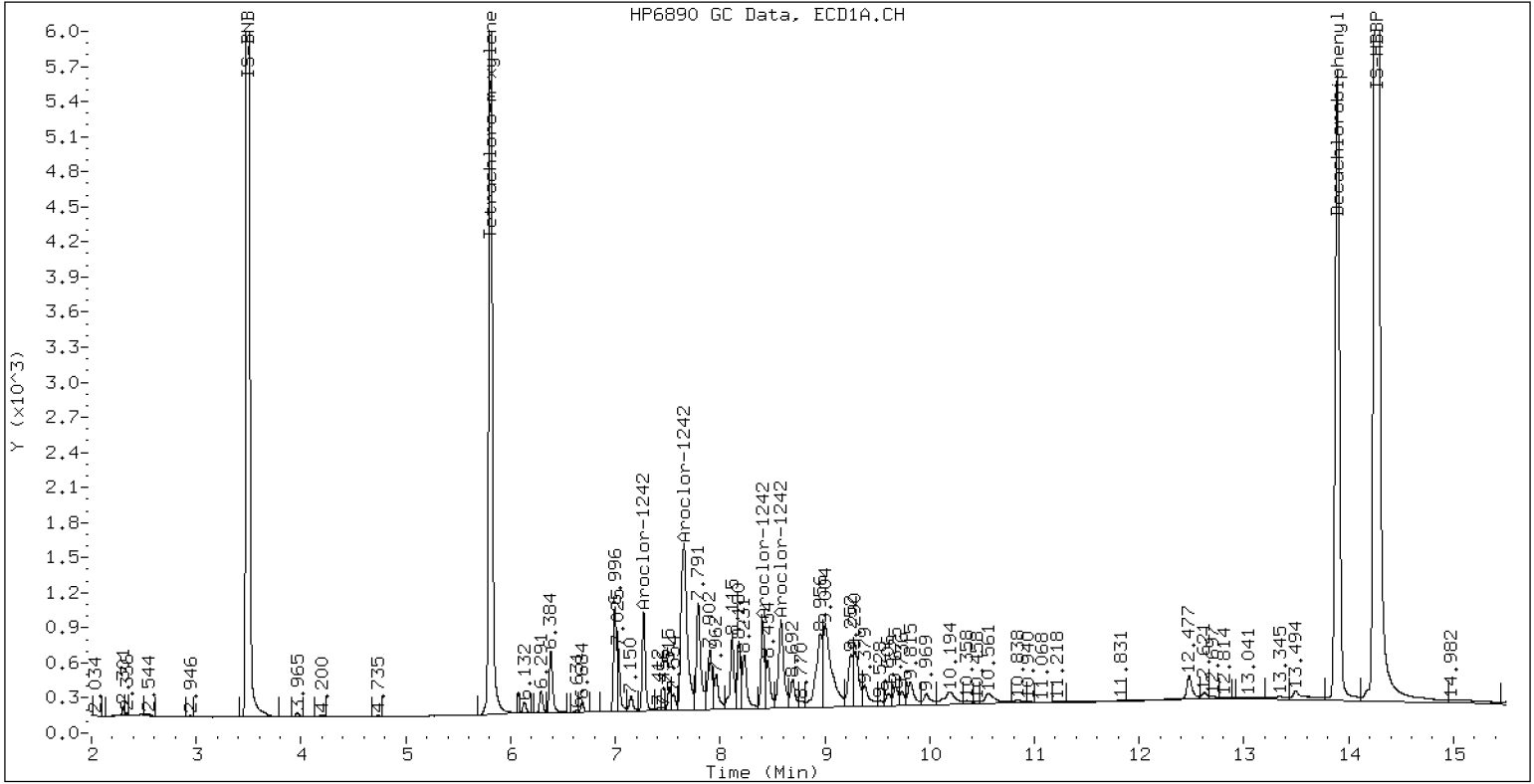
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1242

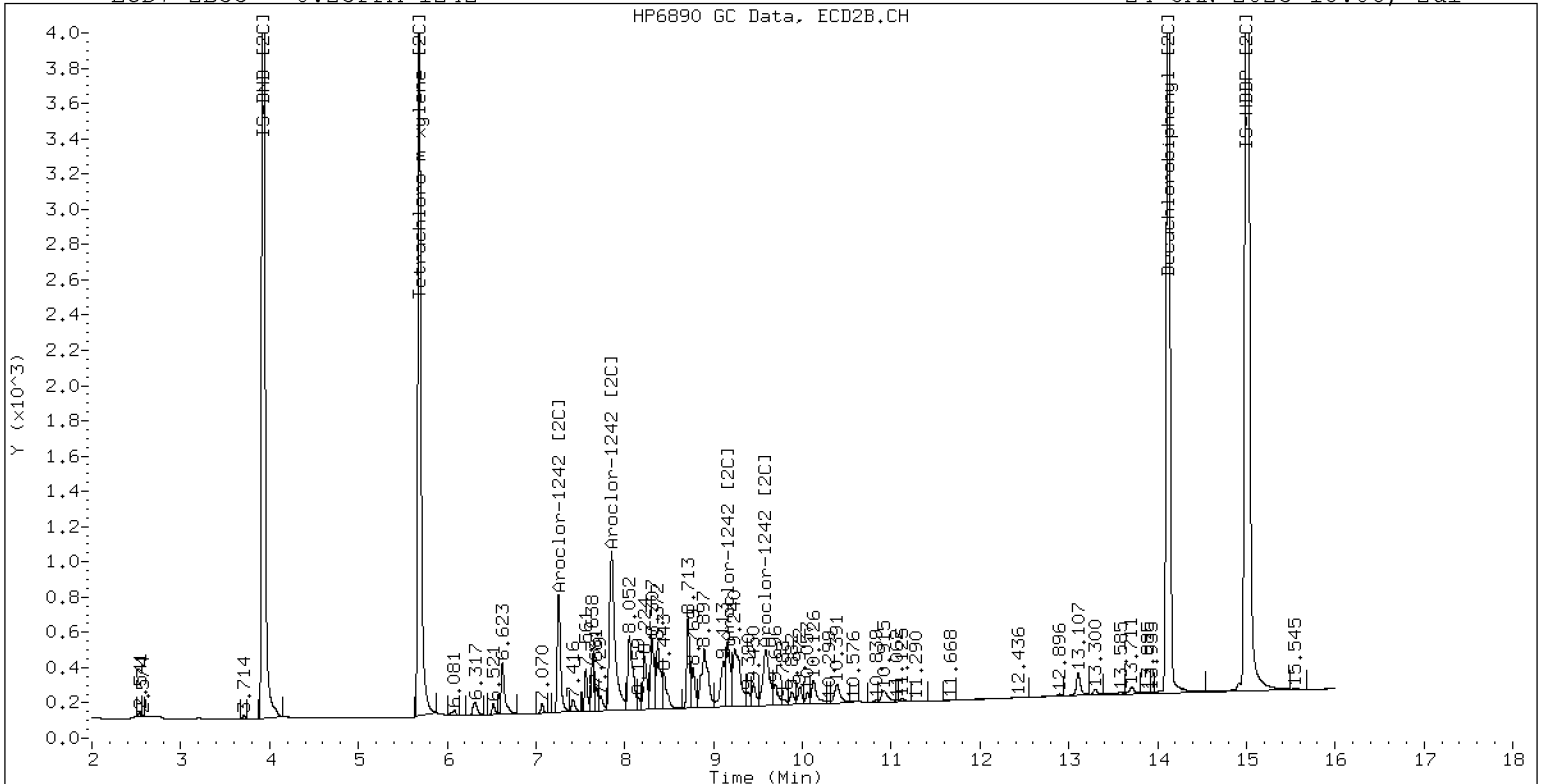
24-JAN-2023 18:06, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1242

24-JAN-2023 18:06, 2u1



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242320ECD7.D  
Data file 2: /230124.b/230124.b/01242320ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.25PPM 1248  
Client ID:  
Injection Date: 24-JAN-2023 18:27  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	266561	5.686	-0.001	171841	38.5	38.0	1.3	Tetrachloro-m-xylene
13.892	0.001	334524	14.120	0.000	281569	36.6	37.7	3.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	489828	-2.7
Hexabromobiphenyl	647433	855612	32.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334539	-0.7
Hexabromobiphenyl	382032	470415	23.1

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.406	0.000	61259	250.0	1	8.305	0.000	37805	250.0
Aroclor-1248	2	8.580	0.000	78143	250.0	2	8.712	0.000	40692	250.0
Aroclor-1248	3	8.999	0.000	149476	250.0	3	9.156	0.000	49723	250.0
Aroclor-1248	4	9.294	0.000	73986	250.0	4	9.582	0.000	61494	250.0
Total CollAve (4 peaks):				250.0		Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Coll (5.909 - 13.792) = 1237662 Coll Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 773955 Col2 Total PCB = 0.2 ppm\*

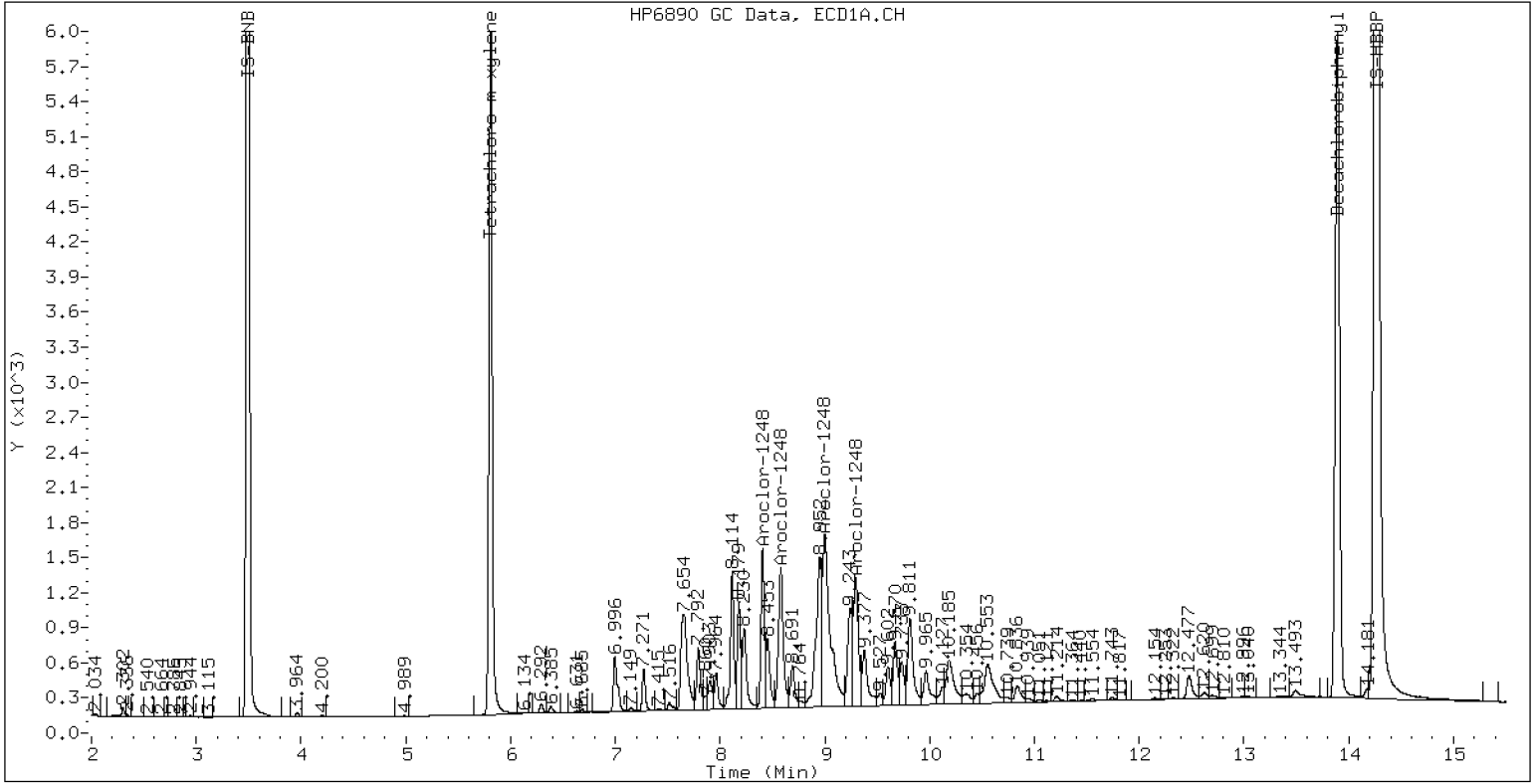
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1248

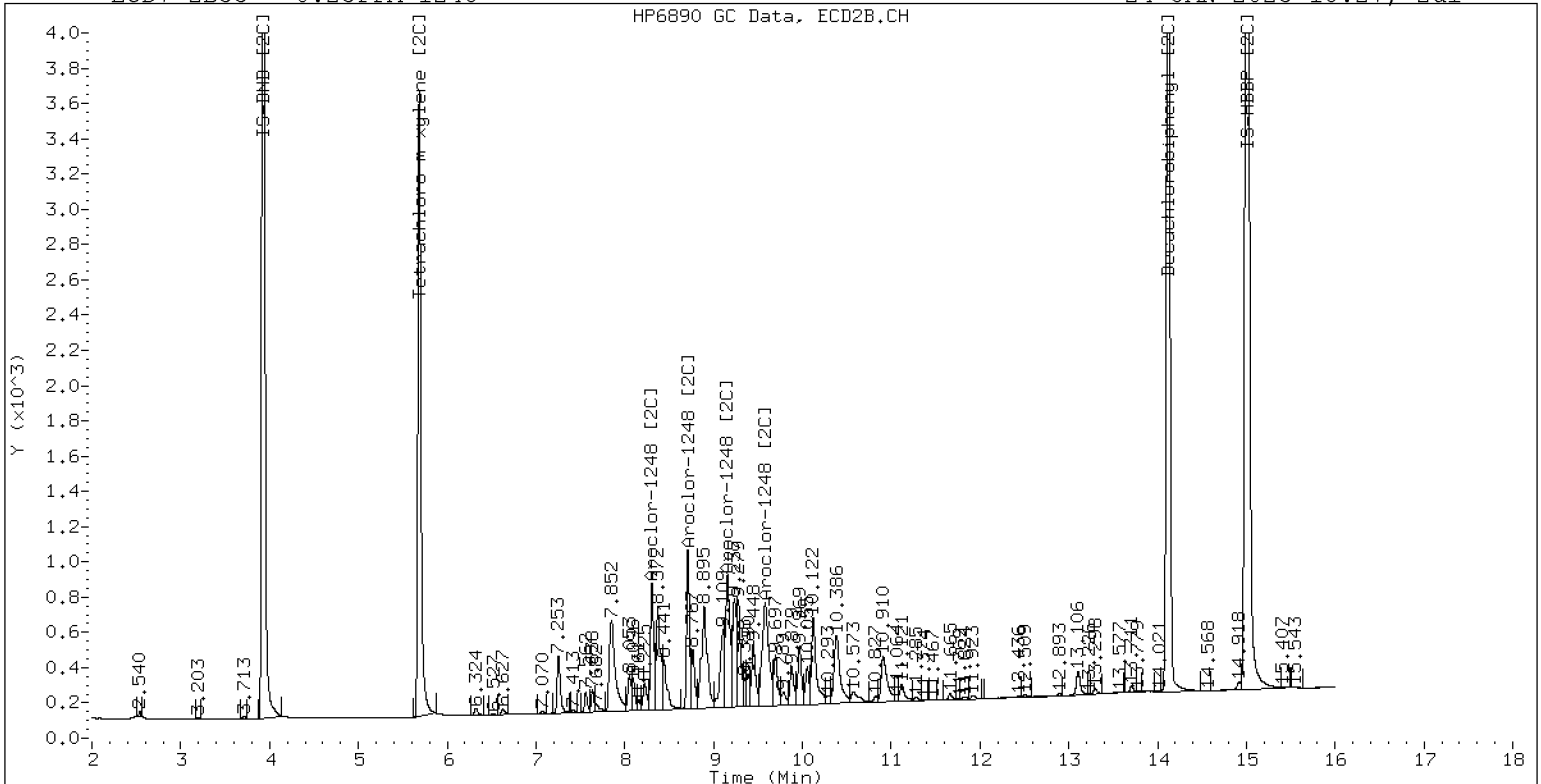
24-JAN-2023 18:27, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1248

24-JAN-2023 18:27, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242321ECD7.D  
 Data file 2: /230124.b/230124.b/01242321ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
 Compound Sublist: AR1254.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: 0.25PPM 1254  
 Client ID:  
 Injection Date: 24-JAN-2023 18:48  
 Report Date: 01/25/2023 10:53  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.001	258819	5.684	-0.002	171764	37.7	38.1	1.1	Tetrachloro-m-xylene
13.893	0.001	343162	14.119	-0.001	283996	36.8	37.9	2.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	486231	-3.4
Hexabromobiphenyl	647433	871523	34.6

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	333658	-1.0
Hexabromobiphenyl	382032	471925	23.5

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	123887	250.0	1	9.448	0.000	60516	250.0
Aroclor-1254	2	9.378	0.000	52896	250.0	2	9.969	0.000	48914	250.0
Aroclor-1254	3	9.669	0.000	79378	250.0	3	10.121	0.000	106698	250.0
Aroclor-1254	4	9.808	0.000	155542	250.0	4	10.372	0.000	106700	250.0
Aroclor-1254	5	10.177	0.000	101144	250.0	5	10.569	0.000	59429	250.0
Total CollAve (5 peaks):				250.0		Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):				250.0		Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Coll (5.909 - 13.792) = 1659821 Coll Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1016659 Col2 Total PCB = 0.3 ppm\*

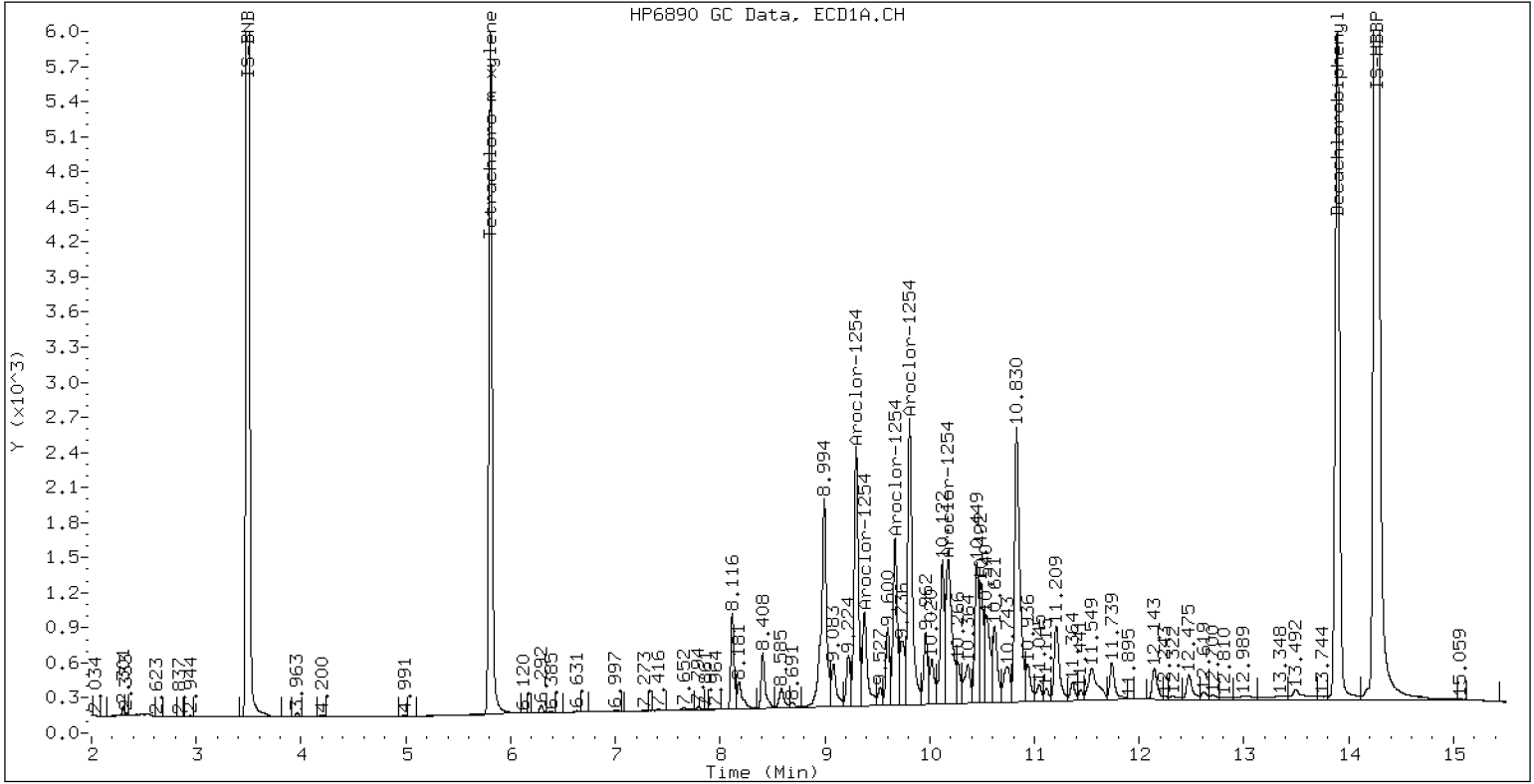
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1254

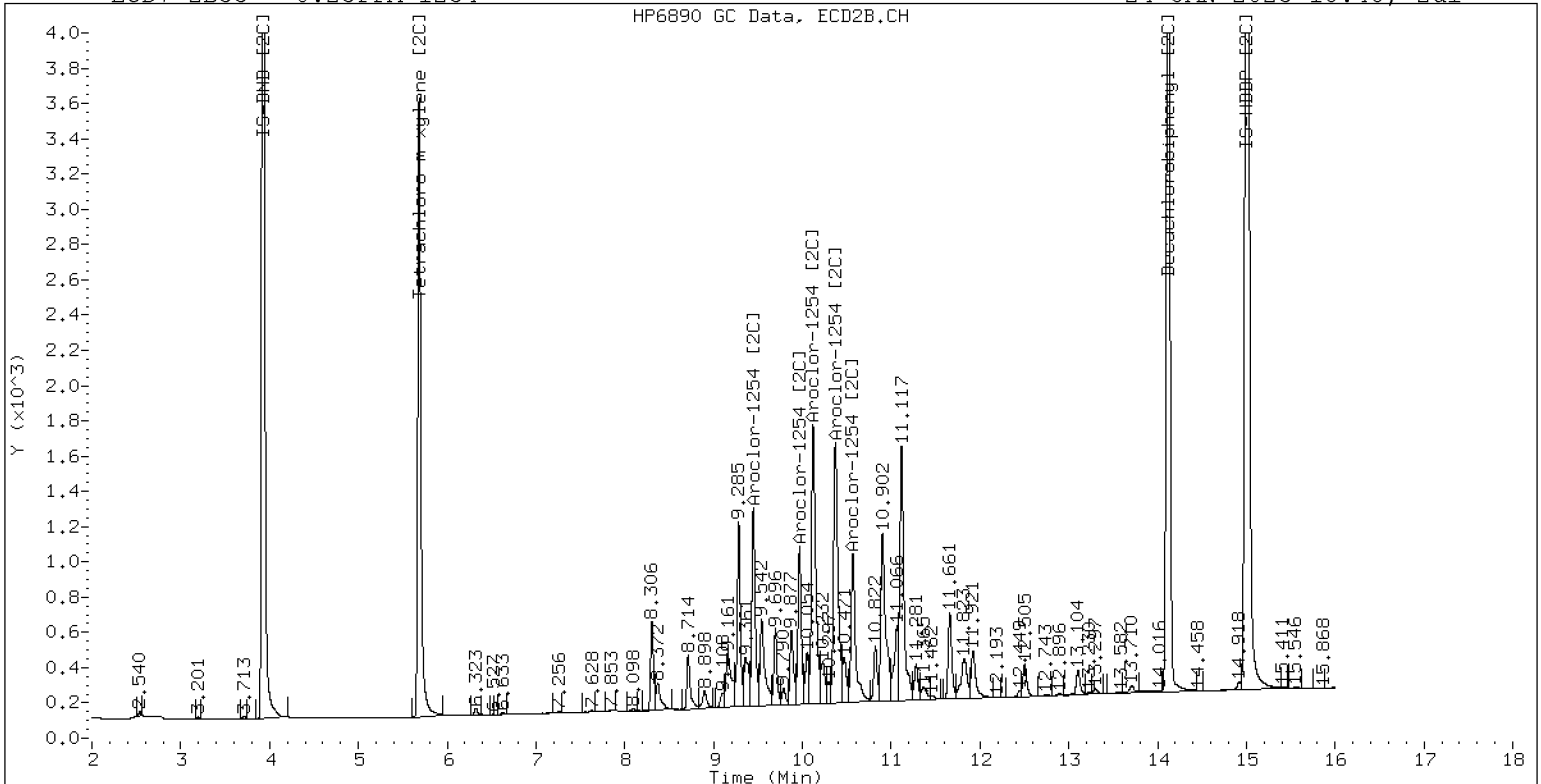
24-JAN-2023 18:48, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1254

24-JAN-2023 18:48, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242322ECD7.D  
Data file 2: /230124.b/230124.b/01242322ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR2162.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.25PPM 2162  
Client ID:  
Injection Date: 24-JAN-2023 19:09  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	272296	5.686	-0.001	173237	39.1	38.6	1.3	Tetrachloro-m-xylene
13.893	0.001	347331	14.120	-0.000	282892	36.8	37.2	1.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	492470	-2.2
Hexabromobiphenyl	647433	883652	36.5

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331807	-1.5
Hexabromobiphenyl	382032	479356	25.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.733	0.000	9100	250.0	1	4.959	0.000	6081	250.0
Aroclor-1221	2	6.134	0.000	18608	250.0	2	6.298	0.000	13325	250.0
Aroclor-1221	3	6.384	0.000	43198	250.0	3	6.623	0.000	22491	250.0
Total CollAve (3 peaks):				250.0		Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Aroclor-1262	1	10.832	0.000	89339	250.0	1	11.200	0.000	117288	250.0
Aroclor-1262	2	12.246	0.000	141007	250.0	2	11.653	0.000	99740	250.0
Aroclor-1262	3	12.321	0.000	153089	250.0	3	12.434	0.000	106212	250.0
Aroclor-1262	4	12.989	0.000	139497	250.0	4	12.504	0.000	170096	250.0
Total CollAve (4 peaks):				250.0		Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Coll (5.909 - 13.792) = 2446612 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1558387 Col2 Total PCB = 0.4 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

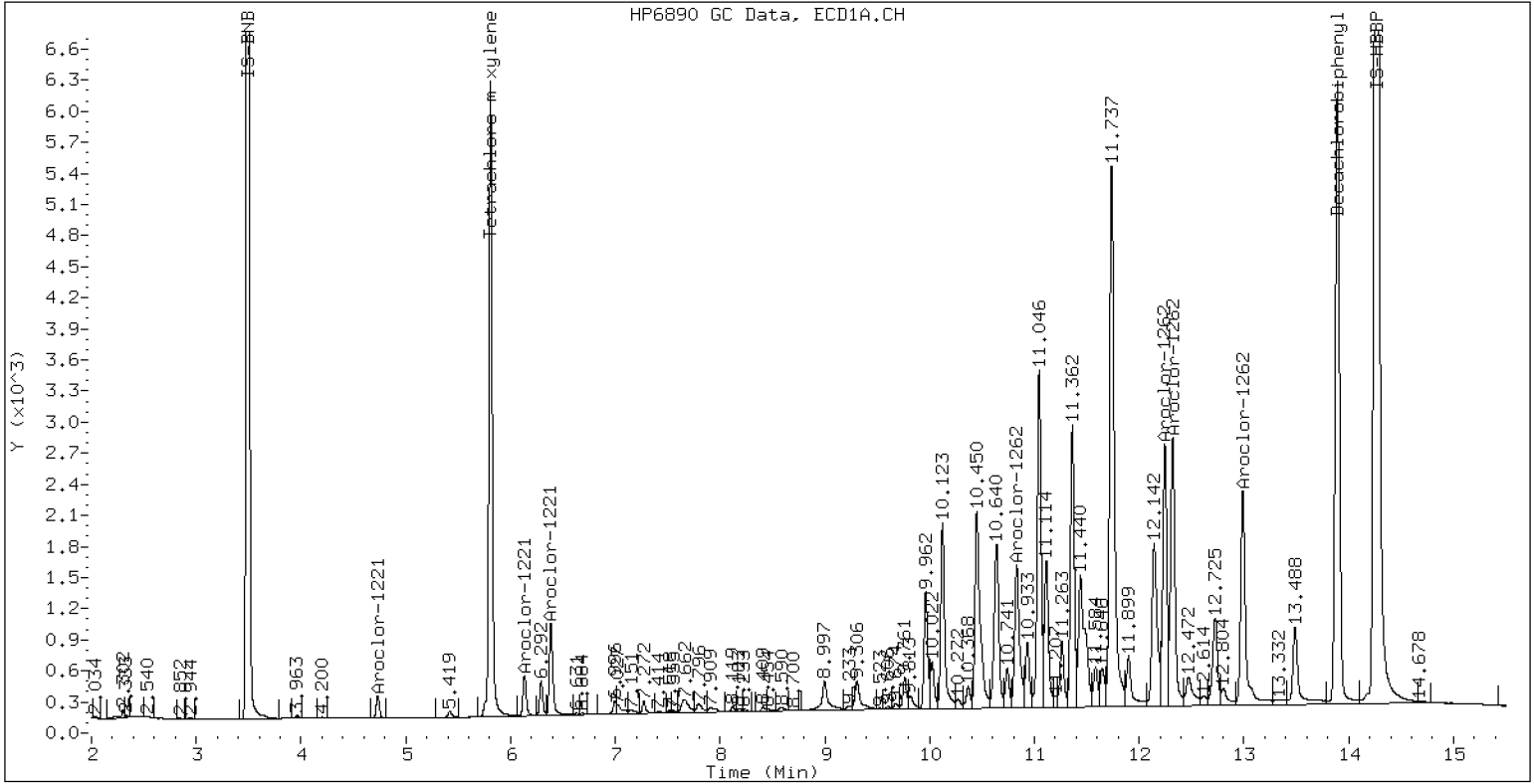
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 2162

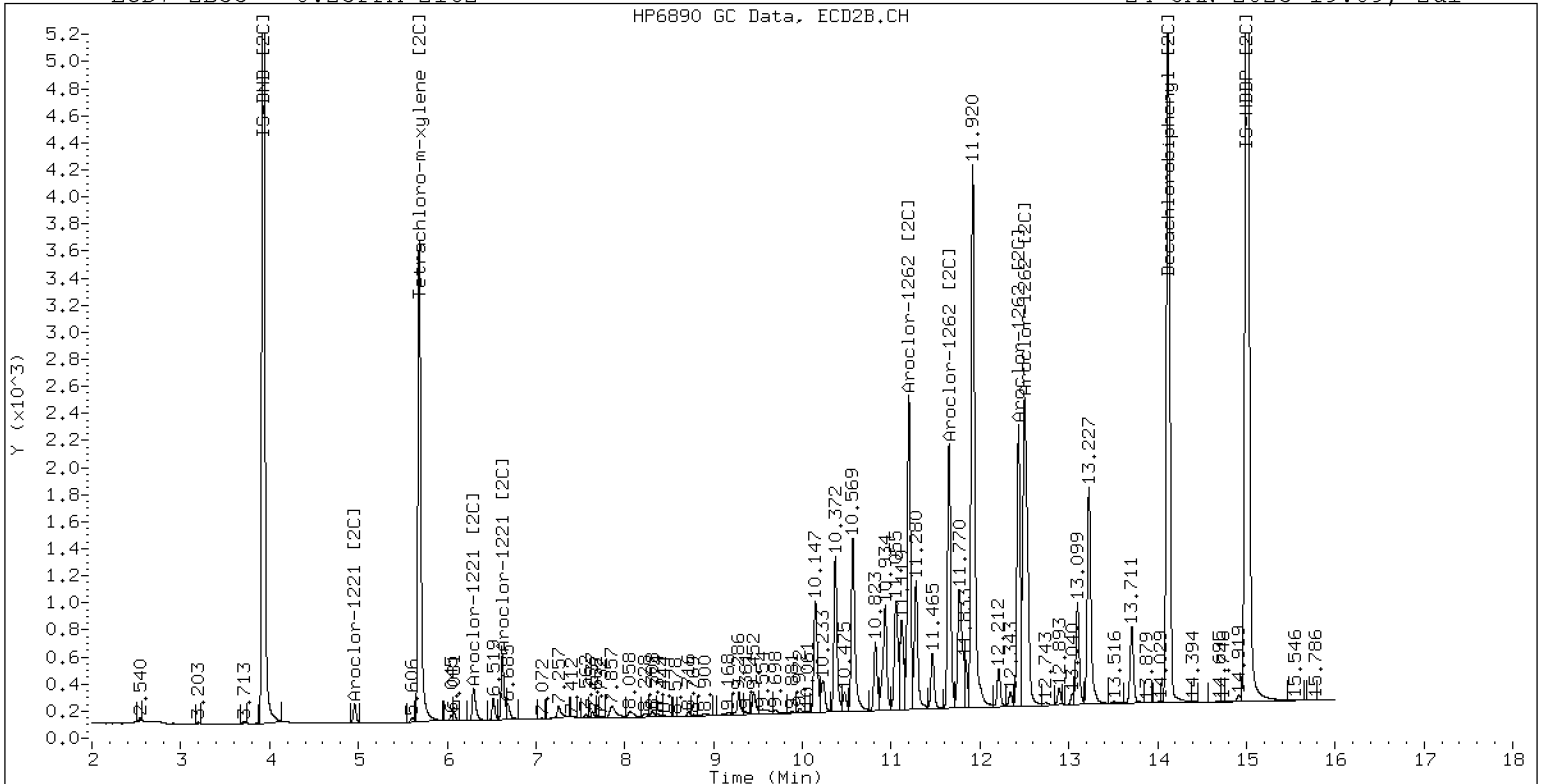
24-JAN-2023 19:09, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 2162

24-JAN-2023 19:09, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242323ECD7.D  
Data file 2: /230124.b/230124.b/01242323ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: AR3268.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.25PPM 3268  
Client ID:  
Injection Date: 24-JAN-2023 19:30  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	277108	5.687	0.000	177359	39.7	39.1	1.5	Tetrachloro-m-xylene
13.892	0.000	525503	14.120	0.000	438987	53.8	57.7	7.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	493427	-2.0
Hexabromobiphenyl	647433	913614	41.1

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335121	-0.5
Hexabromobiphenyl	382032	479458	25.5

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.733	0.000	5692	250.0	1	4.960	0.000	3725	250.0
Aroclor-1232	2	6.133	0.000	12828	250.0	2	7.257	0.000	20847	250.0
Aroclor-1232	3	7.658	0.000	64153	250.0	3	7.854	0.000	42459	250.0
Aroclor-1232	4	8.584	0.000	27460	250.0	4	8.714	0.000	11797	250.0
Total CollAve (4 peaks):				250.0		Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.245	0.000	377314	250.0	1	12.434	0.000	279910	250.0
Aroclor-1268	2	12.318	0.000	376282	250.0	2	12.501	0.000	297867	250.0
Aroclor-1268	3	12.699	0.000	311753	250.0	3	12.893	0.000	247943	250.0
Aroclor-1268	4	13.489	0.000	924293	250.0	4	13.709	0.000	765898	250.0
Total CollAve (4 peaks):				250.0		Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 3136879 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2269104 Col2 Total PCB = 0.6 ppm\*

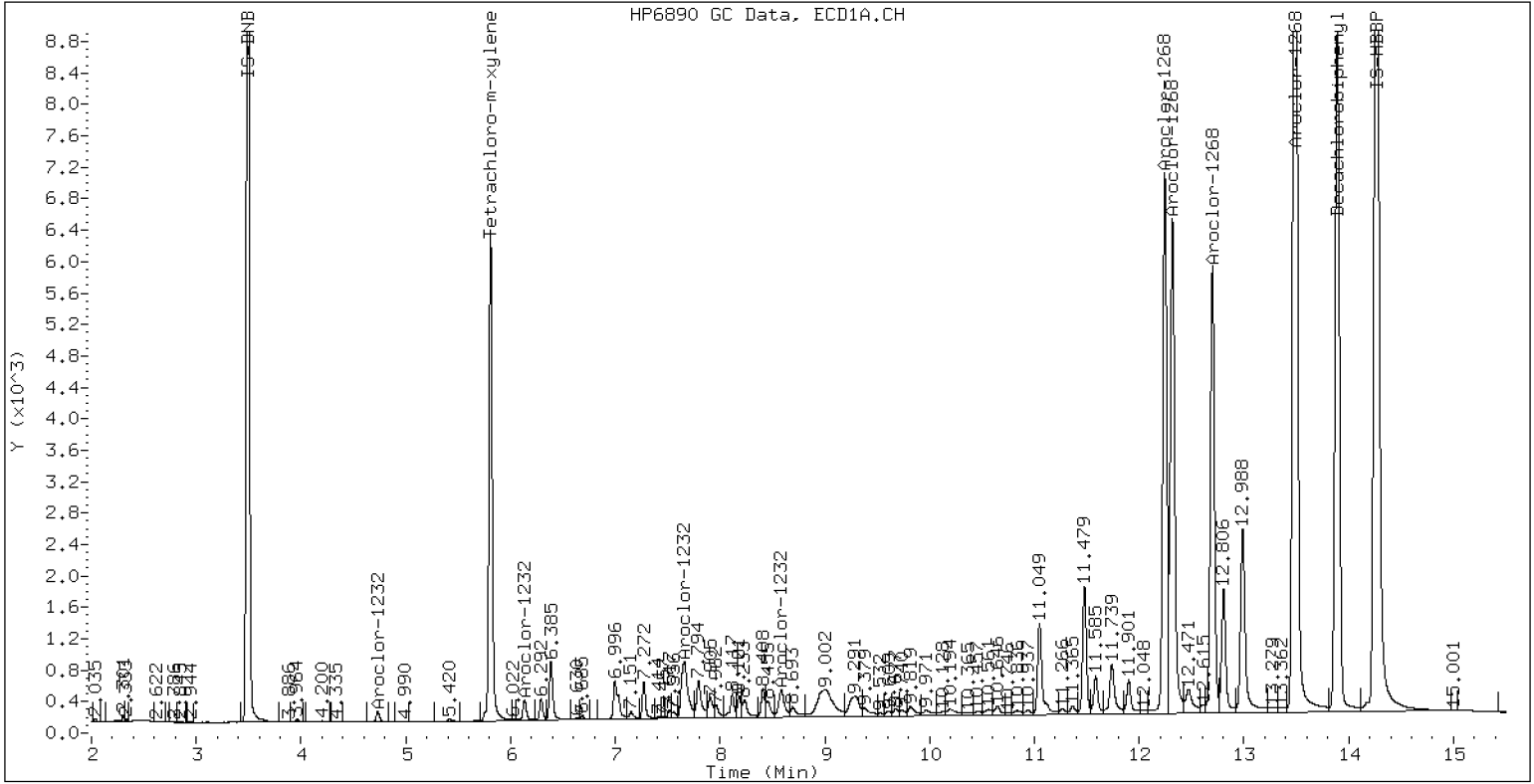
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 3268

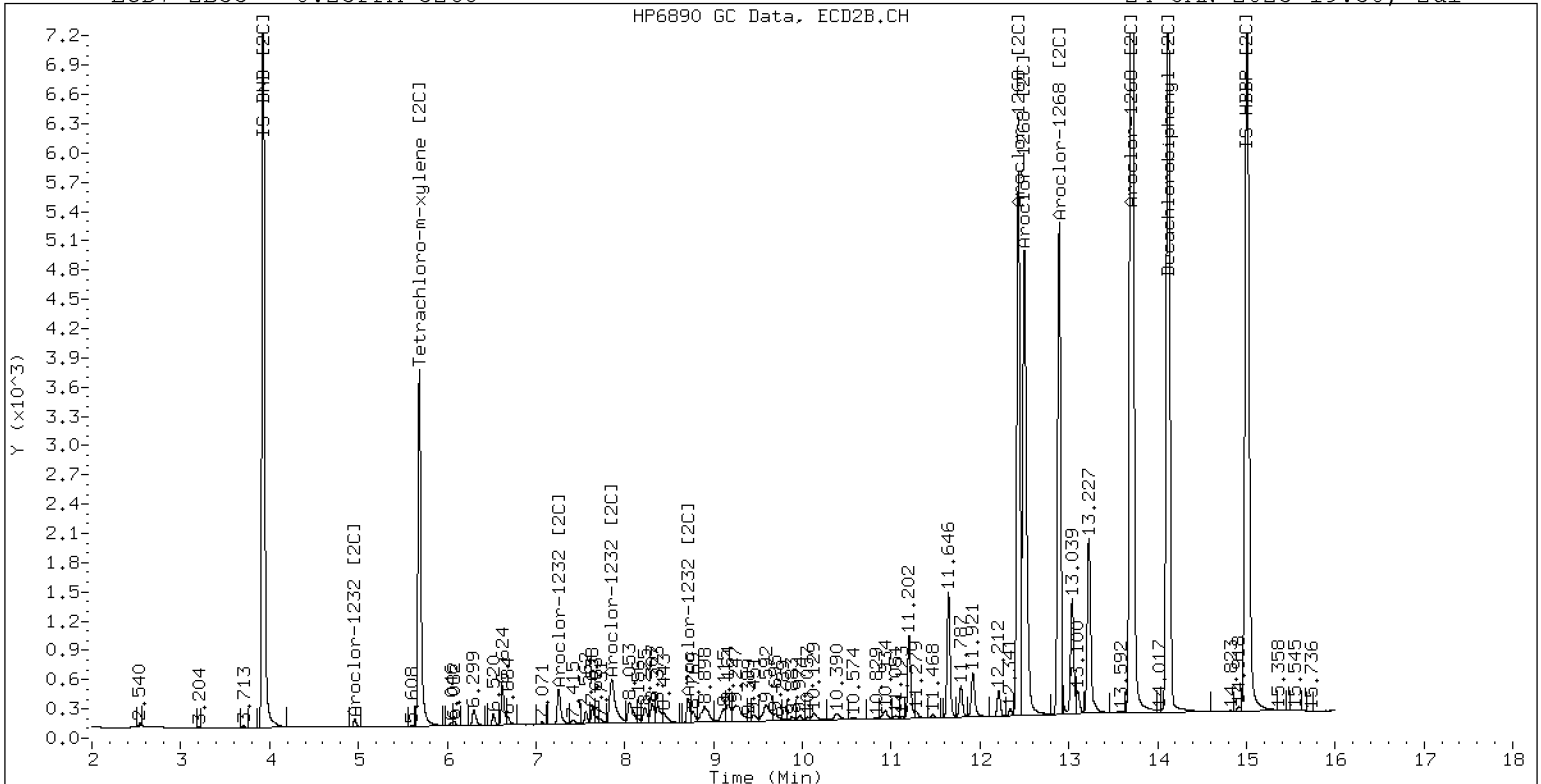
24-JAN-2023 19:30, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 3268

24-JAN-2023 19:30, 2u1

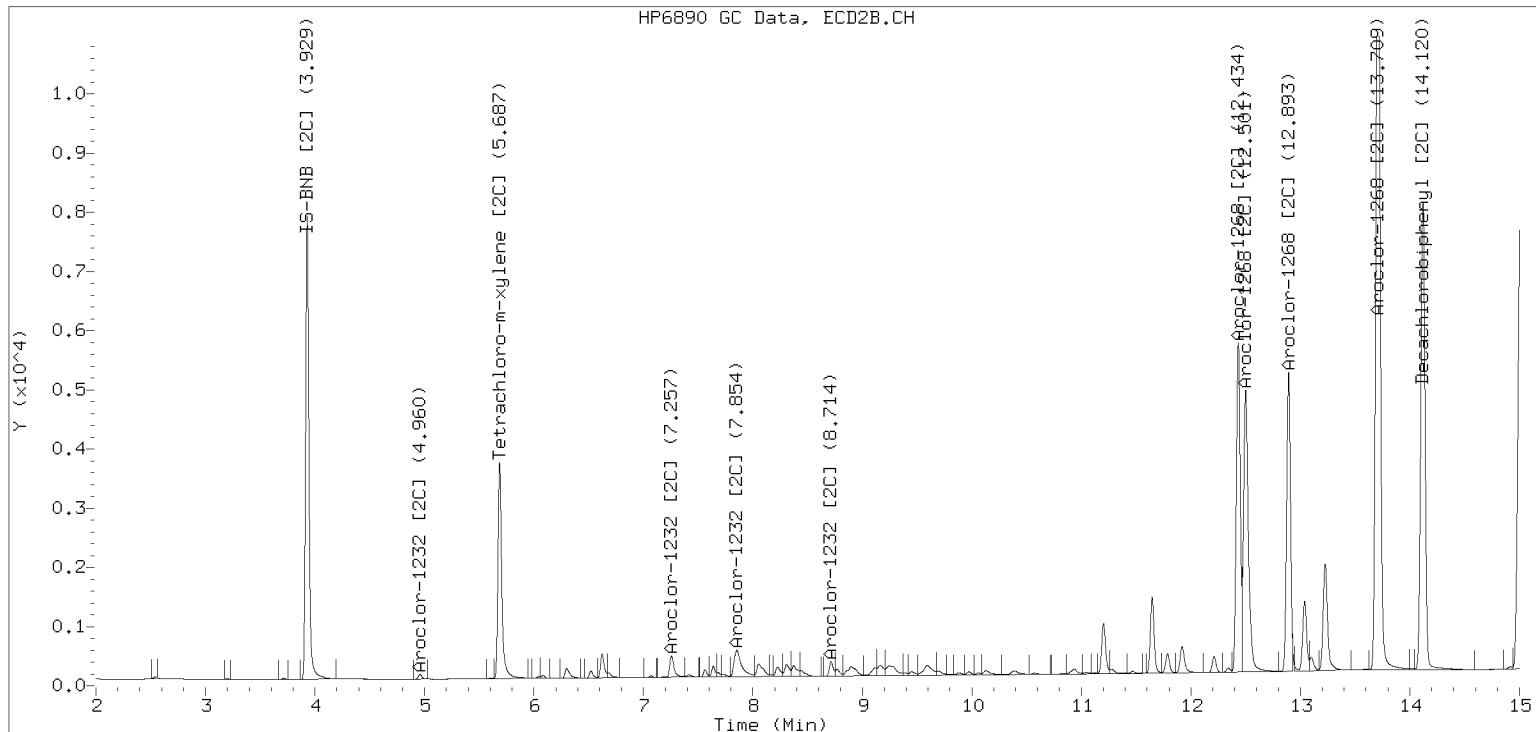


ZB-35 Manual Integration: YES

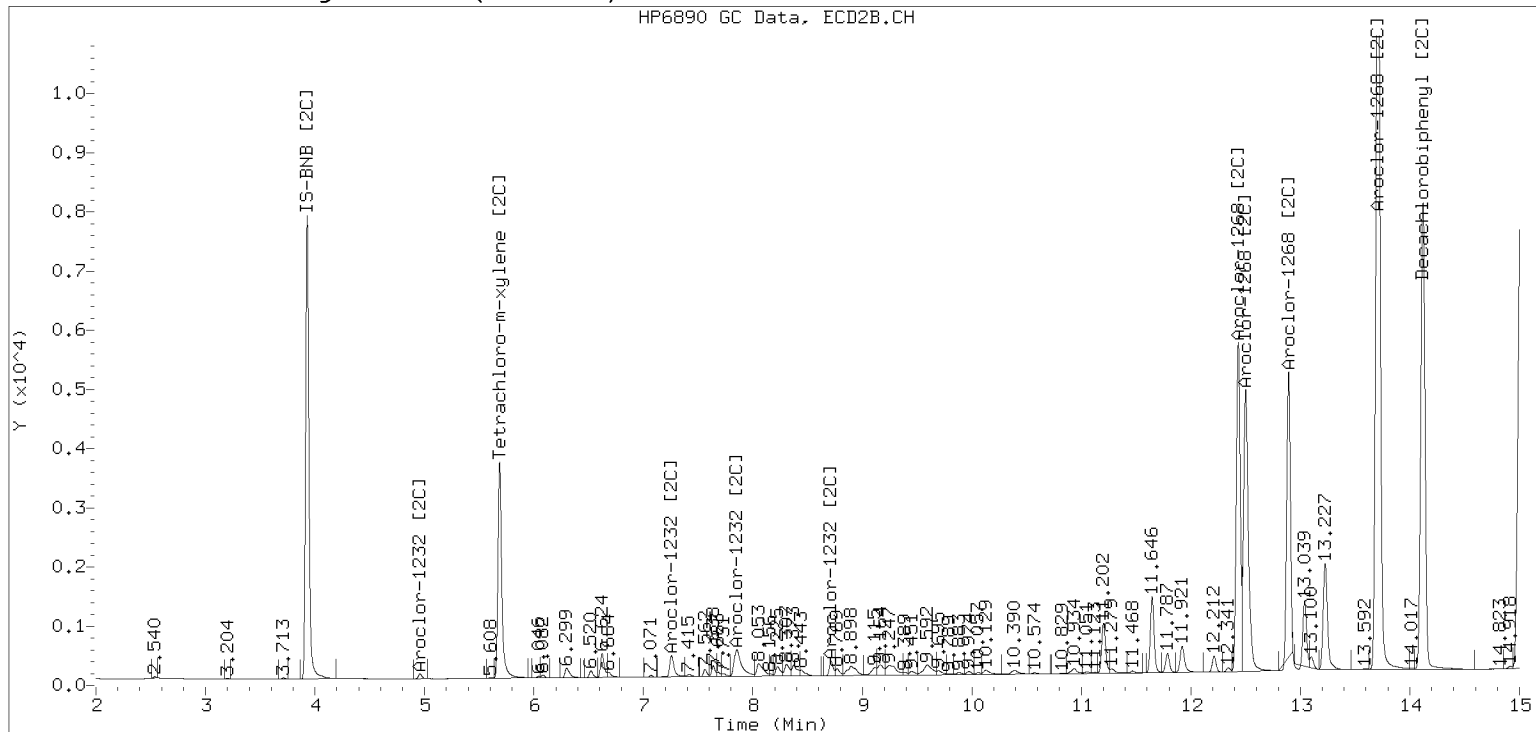
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242323ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D  
Data file 2: /230124.b/230124.b/01242324ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660 SCV  
Client ID:  
Injection Date: 24-JAN-2023 19:51  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total CollAve (4 peaks):				216.9		Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):				216.3		Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total CollAve (3 peaks):				74.4		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total CollAve (4 peaks):				279.8		Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):				202.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total CollAve (4 peaks):				262.0		Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):				260.1		Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total CollAve (4 peaks):				137.3		Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):				124.4		Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total CollAve (4 peaks):				97.4		Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):				35.3		Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total CollAve (5 peaks):				210.7		Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):				208.2		Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total CollAve (4 peaks):				205.3		Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):				124.9		Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total CollAve (4 peaks):				32.1		Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D  
Data file 2: /230124.b/230124.b/01242325ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:12  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total CollAve (4 peaks):				167.7		Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):				163.7		Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total CollAve (3 peaks):				57.3		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total CollAve (4 peaks):				254.6		Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):				162.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total CollAve (4 peaks):				222.6		Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):				209.0		Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total CollAve (4 peaks):				131.8		Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):				113.9		Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total CollAve (5 peaks):				42.7		Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):				39.6		Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total CollAve (4 peaks):				1.2		Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):				0.9		Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total CollAve (3 peaks):				11.0		Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total CollAve (3 peaks):				1.9		Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm\*

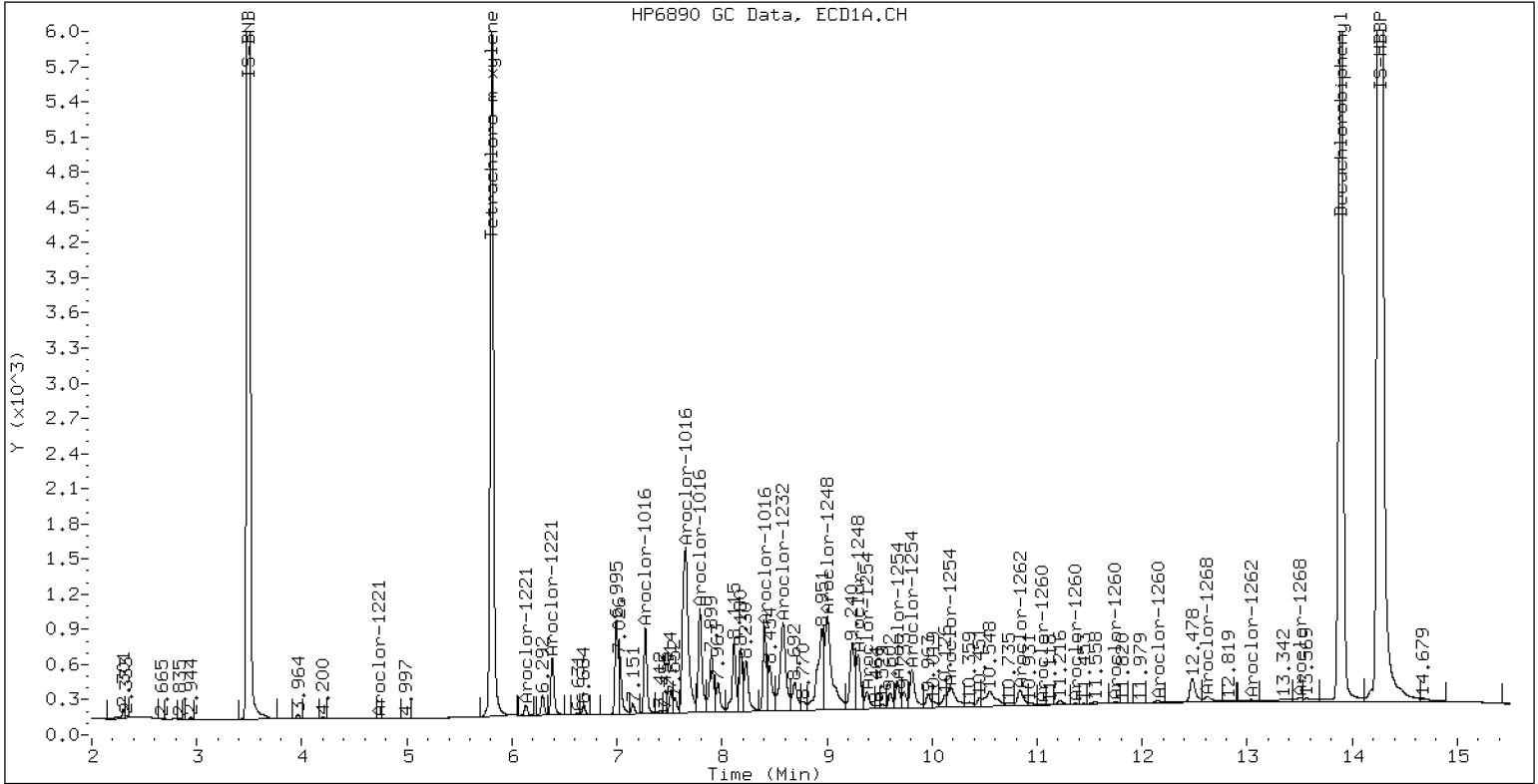
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV

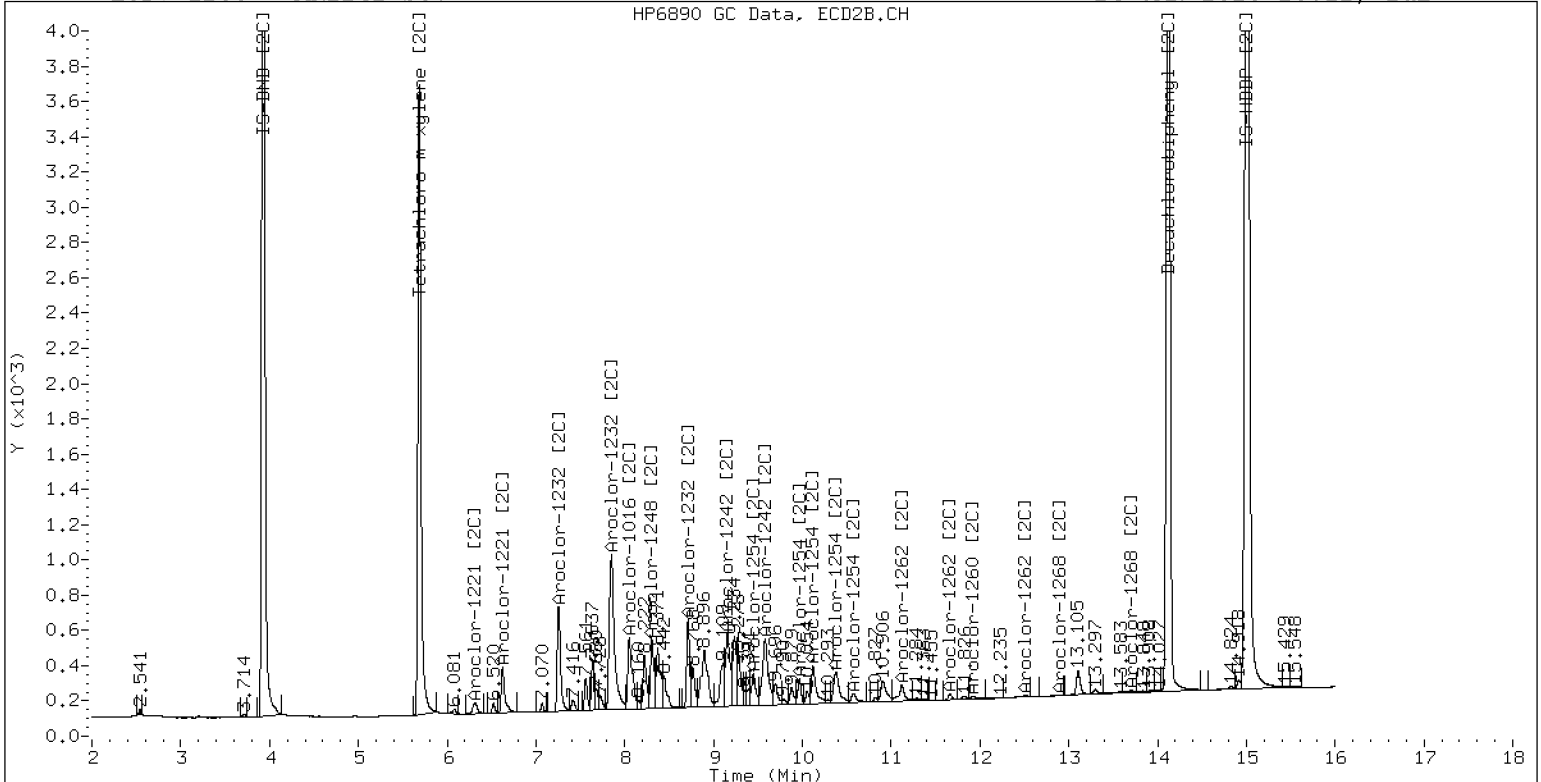
24-JAN-2023 20:12, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV

24-JAN-2023 20:12, 2u1



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D  
Data file 2: /230124.b/230124.b/01242326ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:33  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total CollAve (4 peaks):				152.0		Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):				94.9		Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total CollAve (3 peaks):				316.9		Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total CollAve (4 peaks):				240.5		Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):				188.8		Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total CollAve (4 peaks):				237.2		Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):				236.3		Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total CollAve (5 peaks):				115.3		Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):				102.7		Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total CollAve (5 peaks):				2.2		Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):				1.9		Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total CollAve (4 peaks):				8.9		Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):				1.2		Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total CollAve (4 peaks):				0.6		Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):				0.5		Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

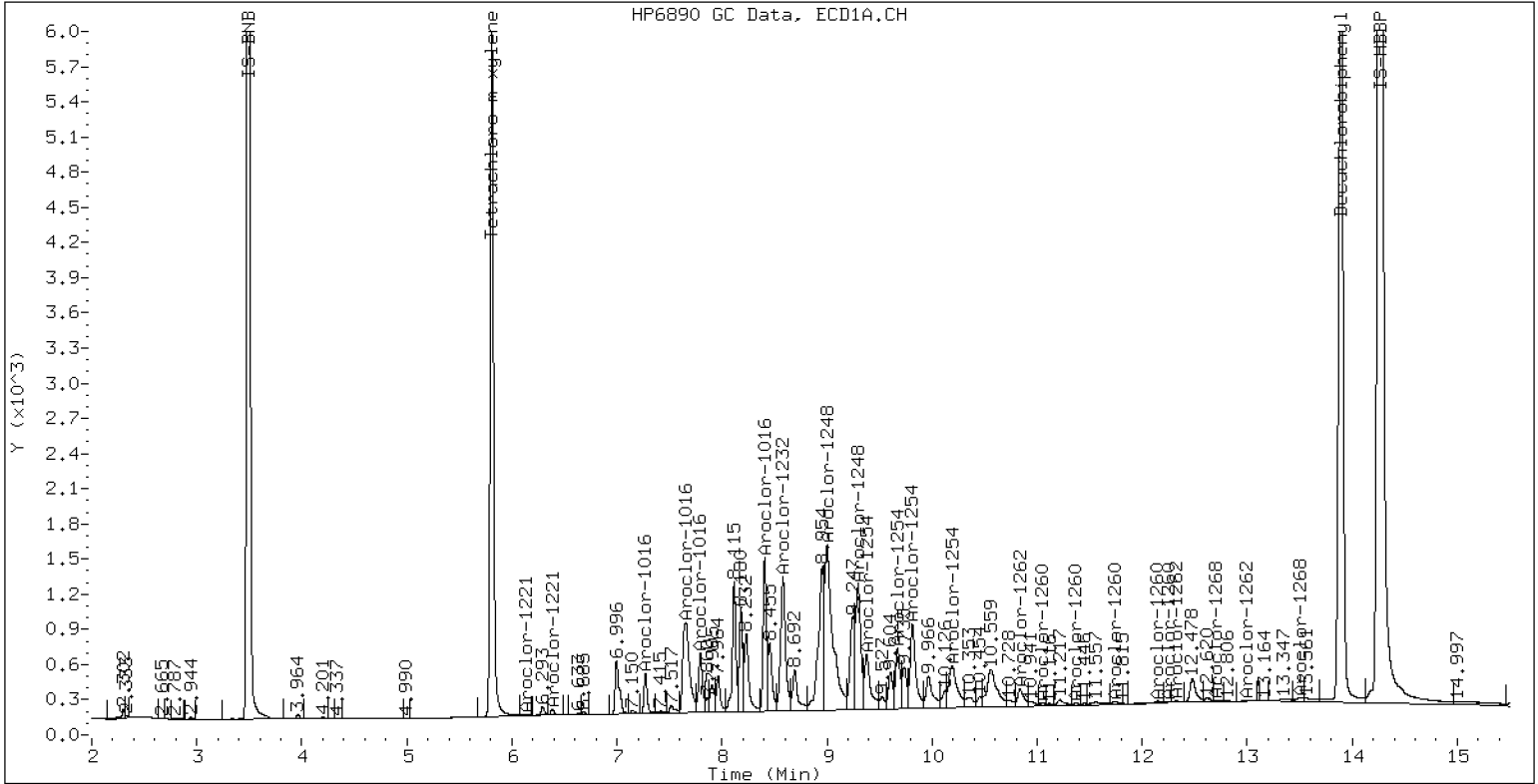
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV

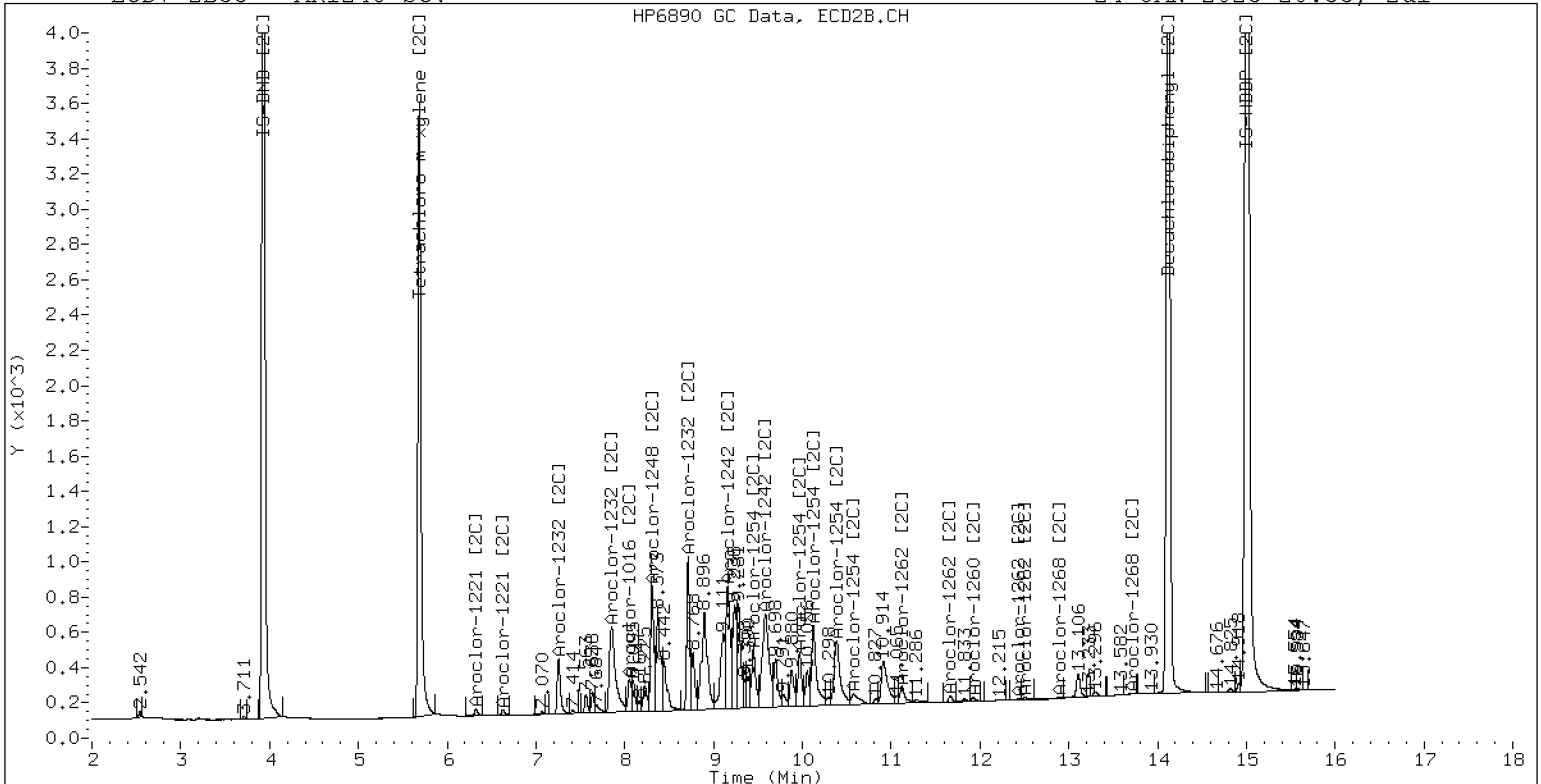
24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV

24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D  
Data file 2: /230124.b/230124.b/01242327ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:54  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8	
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0	
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1	
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8	
Total CollAve (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9	RPD = 55*	
Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7	
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9	
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0	
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2	
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0	
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9	
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7	
Total CollAve (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6	RPD = 114*	
Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks						
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9	
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1	
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4	
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4	
Total CollAve (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7	RPD = 31	
Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks): 115.5 RPD = 17						
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9	
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4	
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2	
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2	
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0	
Total CollAve (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5	RPD = 3	
Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks): 224.7 RPD = 2						
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6	
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2	
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3	
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0	
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			---	
Total CollAve (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0	RPD = 105*	
Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks						
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3	
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0	
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9	
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0	
Total CollAve (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7	RPD = 39	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2	
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3	
Total CollAve (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8	RPD = 130*	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm\*

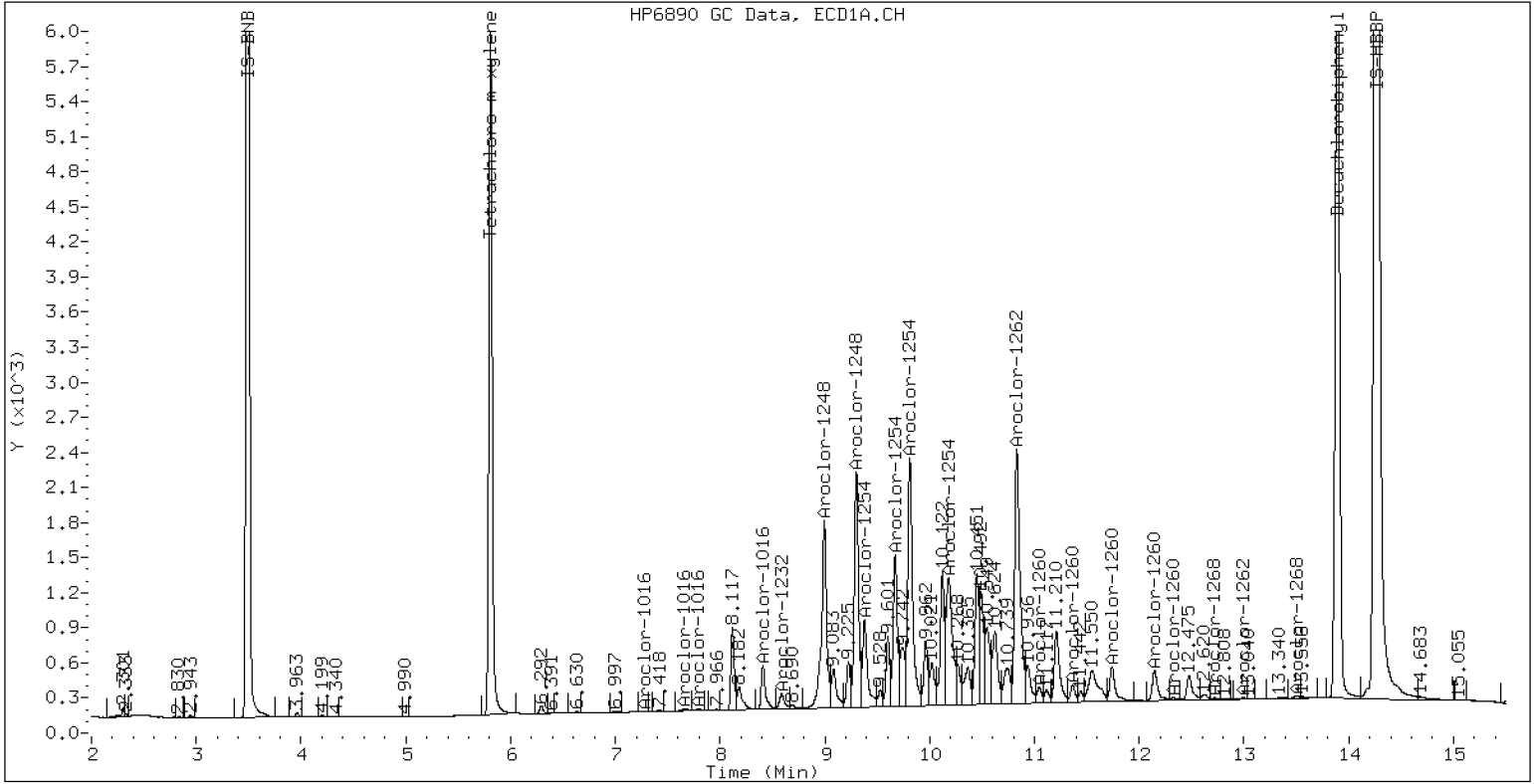
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV

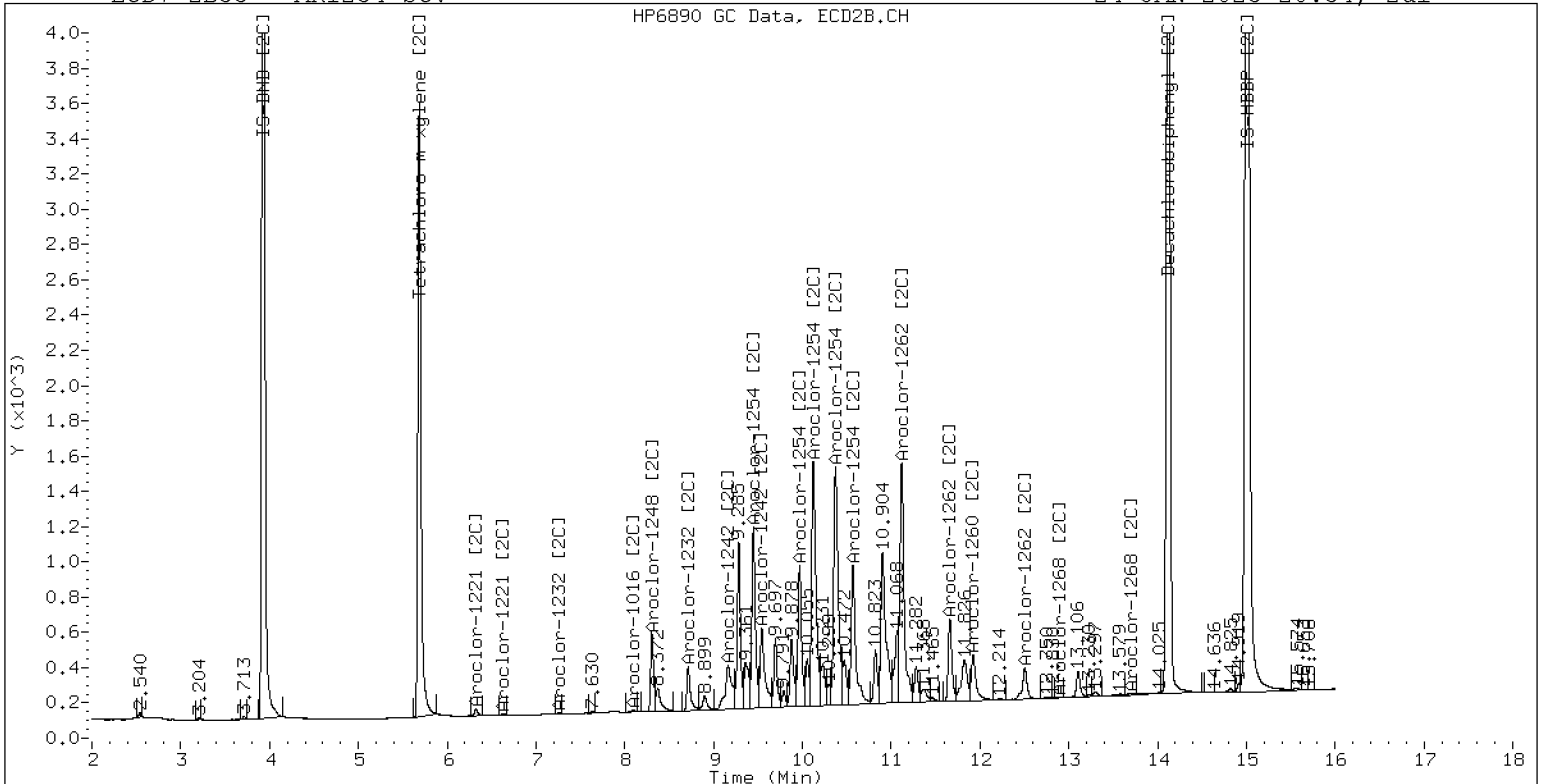
24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV

24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D  
Data file 2: /230124.b/230124.b/01242328ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR2162 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:15  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3	
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9	
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2	
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0	
Total CollAve (4 peaks):				22.4	Total Col2Ave (4 peaks):				22.1	RPD = 1	
Corrected Ave (3 peaks):				20.3	Corrected Ave (3 peaks):				17.3	RPD = 16	
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8	
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2	
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2	
Total CollAve (3 peaks):				228.1	Total Col2Ave (3 peaks):				238.7	RPD = 5	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9	
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2	
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9	
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0	
Total CollAve (4 peaks):				192.6	Total Col2Ave (4 peaks):				141.7	RPD = 30	
Corrected Ave (3 peaks):				126.3	Corrected Ave (3 peaks):				53.4	RPD = 81*	
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1	
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9	
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9	
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6	
Total CollAve (4 peaks):				24.0	Total Col2Ave (4 peaks):				32.3	RPD = 30	
Corrected Ave (3 peaks):				20.5	Corrected Ave (3 peaks):				28.1	RPD = 31	
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4	
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3	
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7	
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9	
Total CollAve (4 peaks):				46.0	Total Col2Ave (4 peaks):				14.6	RPD = 104*	
Corrected Ave (3 peaks):				27.5	Corrected Ave (3 peaks):				11.5	RPD = 82*	
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3	
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3	
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5	
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9	
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5	
Total CollAve (5 peaks):				110.8	Total Col2Ave (5 peaks):				223.7	RPD = 68*	
Corrected Ave (4 peaks):				31.0	Corrected Ave (4 peaks):				133.5	RPD = 125*	
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4	
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0	
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7	
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5	
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---		---	---	
Total CollAve (5 peaks):				499.5	Total Col2Ave (4 peaks):				592.1	RPD = 17	
Corrected Ave (4 peaks):				426.6	Corrected Ave (3 peaks):				500.3	RPD = 16	
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1	
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0	
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4	
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6	
Total CollAve (4 peaks):				421.5	Total Col2Ave (4 peaks):				437.0	RPD = 4	
Corrected Ave (3 peaks):				419.8	Corrected Ave (3 peaks):				434.3	RPD = 3	
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0	
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7	
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3	
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8	
Total CollAve (4 peaks):				111.6	Total Col2Ave (4 peaks):				112.0	RPD = 0	

Corrected Ave (3 peaks): 89.3      Corrected Ave (3 peaks): 65.4      RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992      Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2874073      Col2 Total PCB = 0.8 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

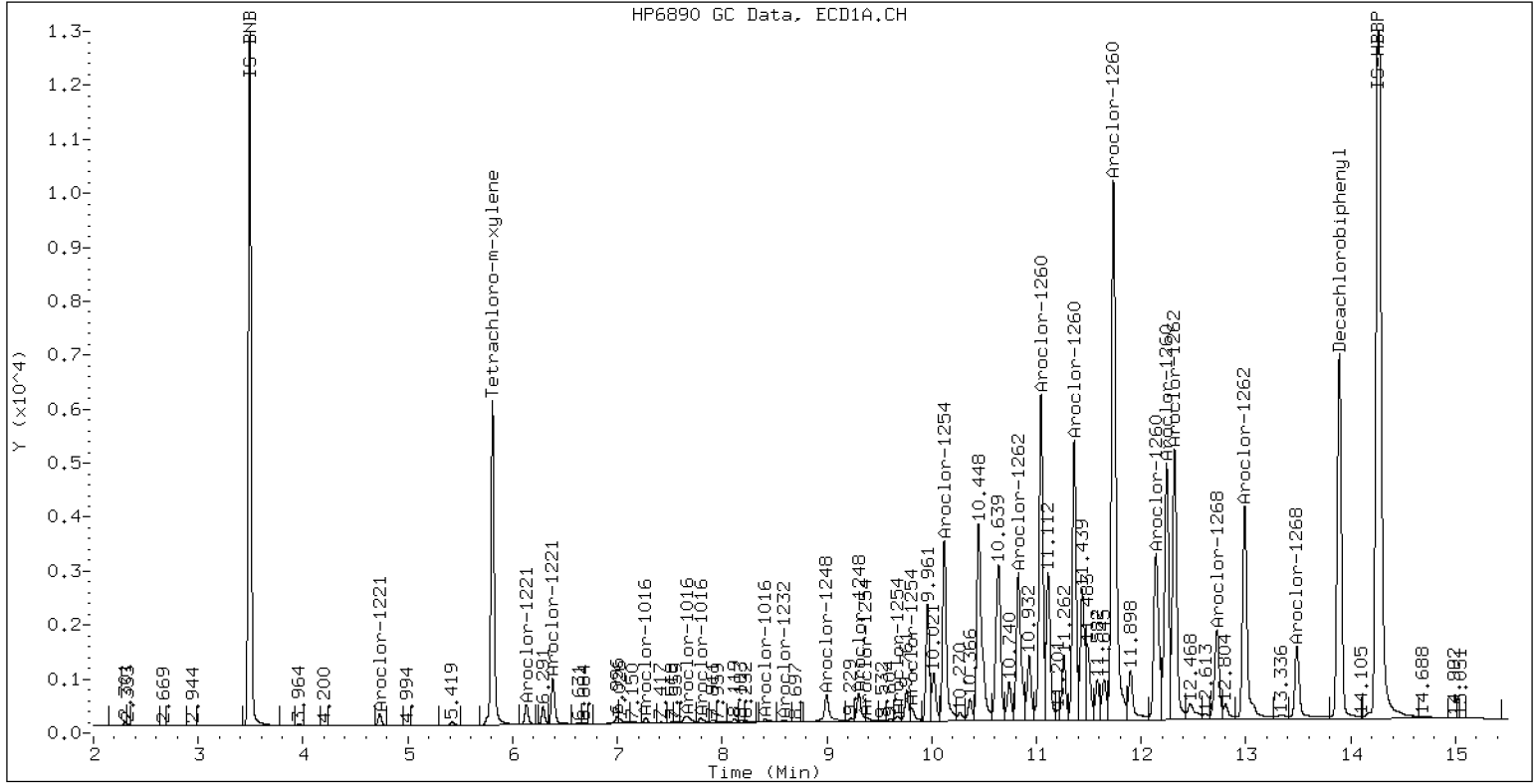
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV

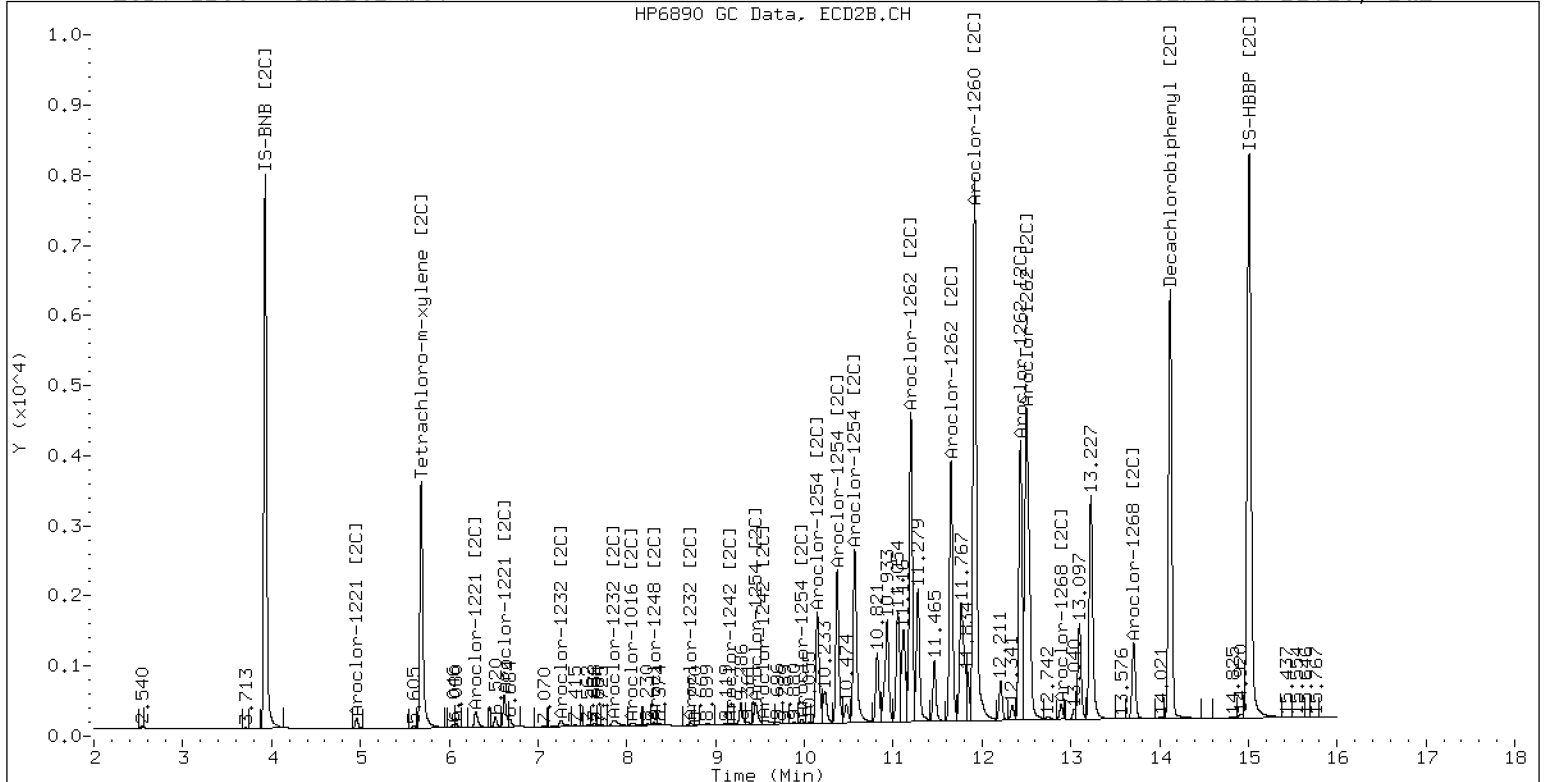
24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV

24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D  
Data file 2: /230124.b/230124.b/01242329ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR3268 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:36  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total CollAve (4 peaks):				101.3		Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):				99.4		Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total CollAve (3 peaks):				144.5		Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total CollAve (4 peaks):				215.7		Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):				210.5		Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total CollAve (4 peaks):				121.0		Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):				118.0		Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total CollAve (4 peaks):				92.7		Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):				85.7		Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total CollAve (5 peaks):				31.1		Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):				23.3		Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total CollAve (5 peaks):				250.2		Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):				42.5		Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total CollAve (4 peaks):				340.7		Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):				261.2		Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total CollAve (4 peaks):				223.7		Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4      Corrected Ave (3 peaks): 215.4      RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2084481      Col2 Total PCB = 0.6 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.



Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: /230124.b/01242330ECD7.D

ARI ID: DDTS

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	RT	ZB5 on col	ZB35 on col	RPD	Compound/Flag
9.263	0.000	519078	9.912	0.100	0.100	0.0	2,4-DDE
10.296	0.000	1468204	10.666	0.100	0.200#	66.7*	2,4-DDT
9.687	0.000	883988	10.211	0.100	0.100	0.0	4,4-DDE
0.000	-10.281	0	10.666	0.000	0.200#	----	4,4-DDD

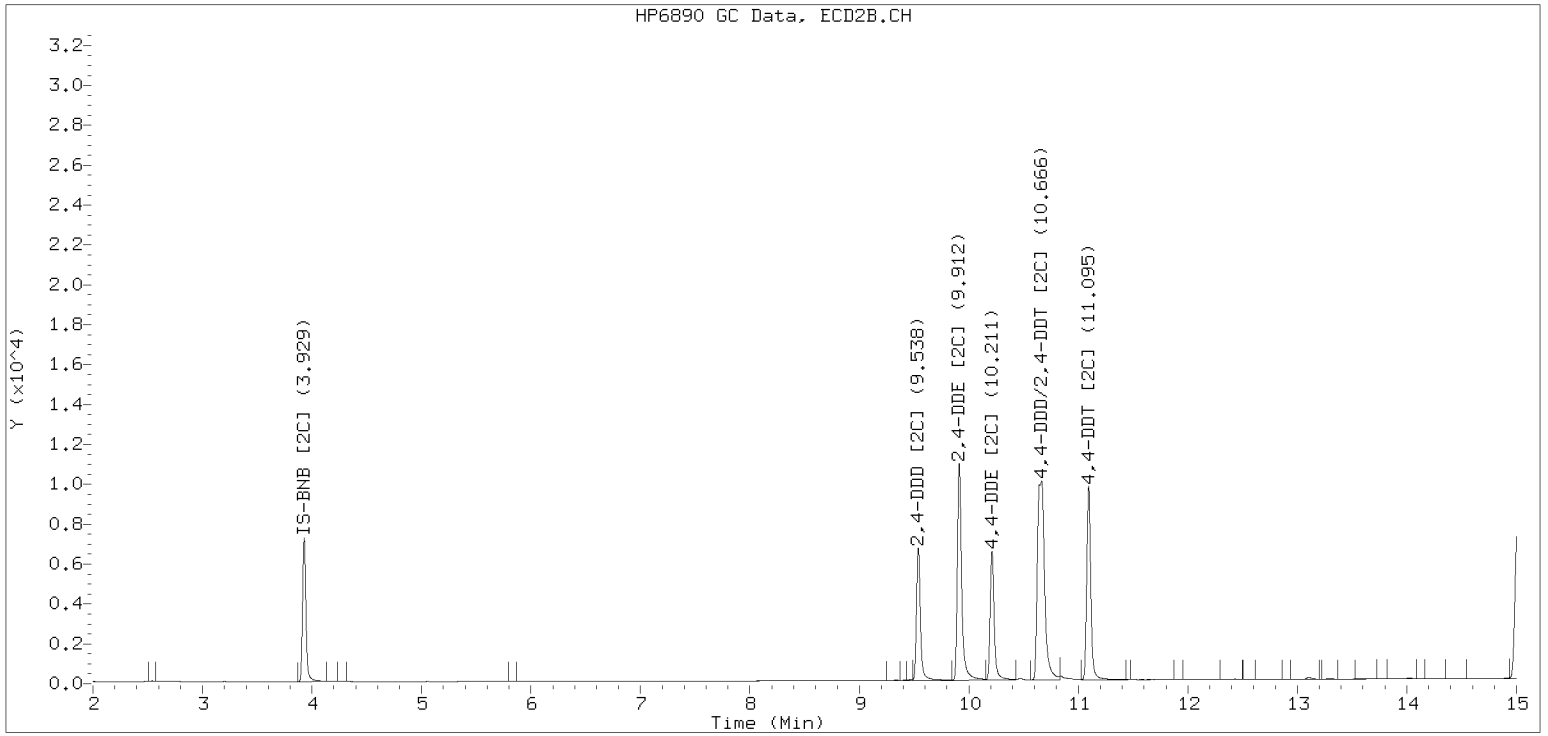
# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

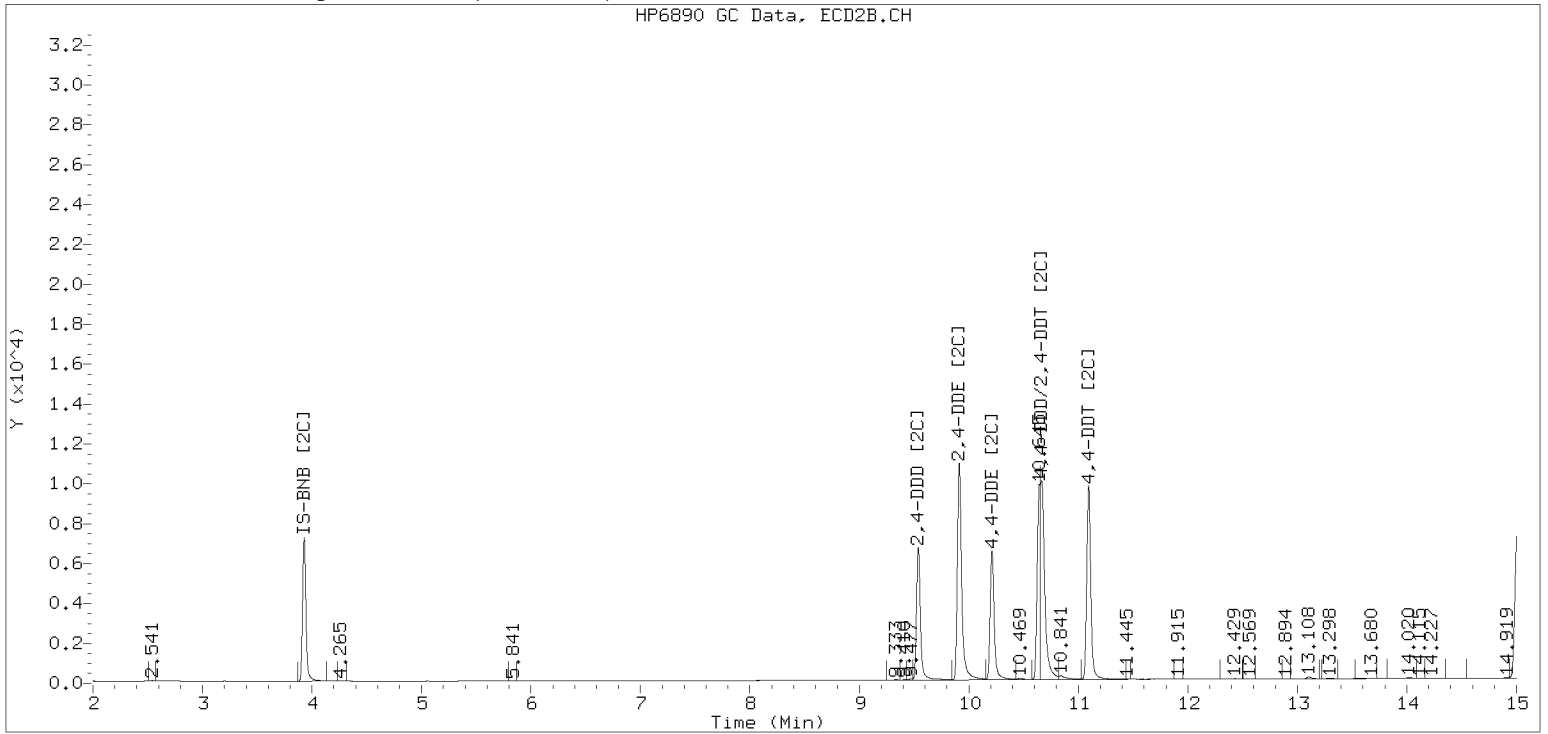
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242330ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242331ECD7.D  
Data file 2: /230124.b/230124.b/01242331ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: DDT BD  
Client ID:  
Injection Date: 24-JAN-2023 22:18  
Report Date: 01/25/2023 10:54  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	249607	0.000	0.000	0	36.2	0.1	198.6*	Tetrachloro-m-xylene
13.893	0.001	342925	0.000	0.000	0	33.3	0.1	198.4*	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	488086	-3.0
Hexabromobiphenyl	647433	963404	48.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334787	-0.6
Hexabromobiphenyl	382032	334787	-12.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)



ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	3.929	-0.000	334787	80.0
Aroclor-1016	2	---			0.0	NS	---			----
Aroclor-1016	3	---			0.0	NS	---			----
Aroclor-1016	4	---			0.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	9.924	0.012	8335	0.0
Aroclor-1221	2	---			0.0	NS	---			----
Aroclor-1221	3	---			0.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	NS	---			----
Aroclor-1232	3	---			0.0	NS	---			----
Aroclor-1232	4	---			0.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	NS	---			----
Aroclor-1242	3	---			0.0	NS	---			----
Aroclor-1242	4	---			0.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	10.681	0.016	29738	0.0
Aroclor-1248	2	---			0.0	NS	---			----
Aroclor-1248	3	8.973	-0.026	2304	3.9	NS	---			----
Aroclor-1248	4	9.235	-0.059	1484	5.0	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.235	-0.064	1484	3.0	1	11.098	0.003	696435	0.1
Aroclor-1254	2	9.378	-0.000	295	1.4	NS	---			----
Aroclor-1254	3	9.703	0.034	11396	35.8	NS	---			----
Aroclor-1254	4	---			0.0	NS	---			----
Aroclor-1254	5	10.272	0.095	32481	80.0	NS	---			----
Total CollAve (4 peaks):				30.0		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.115	0.071	9308	17.2	1	---			0.0
Aroclor-1260	2	11.344	-0.016	232461	418.4	NS	---			----
Aroclor-1260	3	11.698	-0.036	294	0.2	NS	---			----
Aroclor-1260	4	---			0.0	NS	---			----
Aroclor-1260	5	---			0.0	NS	---			----
Total CollAve (3 peaks):				145.3		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.763	-0.070	892438	2290.6	1	---			0.0
Aroclor-1262	2	---			0.0	NS	---			----
Aroclor-1262	3	---			0.0	NS	---			----
Aroclor-1262	4	12.990	0.001	748	1.2	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	NS	---			----
Aroclor-1268	3	12.620	-0.079	4678	3.6	NS	---			----
Aroclor-1268	4	13.510	0.021	3115	0.8	NS	---			----
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Coll1 (5.909 - 13.792) = 1961348

Coll1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.909 - 13.792) = 1177441 Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV1

**Sequence:** SLA0281

**Sequence Name:** AR1660SCV1

**Standard ID:** K007655

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1016	250.00	217	-13.2	20.00
Aroclor 1016 [2C]	250.00	220	-11.9	20.00
Aroclor 1260	250.00	211	-15.7	20.00
Aroclor 1260 [2C]	250.00	238	-4.9	20.00
Decachlorobiphenyl	40.000	37.9	-5.1	20.00
Tetrachlorometaxylene	40.000	37.5	-6.2	20.00
Decachlorobiphenyl [2C]	40.000	40.2	0.6	20.00
Tetrachlorometaxylene [2C]	40.000	37.3	-6.8	20.00

\* Indicates values outside of QC limits  
[2C] indicates second-column analyte.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D  
Data file 2: /230124.b/230124.b/01242324ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660 SCV  
Client ID:  
Injection Date: 24-JAN-2023 19:51  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total CollAve (4 peaks):				216.9		Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):				216.3		Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total CollAve (3 peaks):				74.4		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total CollAve (4 peaks):				279.8		Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):				202.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total CollAve (4 peaks):				262.0		Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):				260.1		Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total CollAve (4 peaks):				137.3		Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):				124.4		Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total CollAve (4 peaks):				97.4		Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):				35.3		Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total CollAve (5 peaks):				210.7		Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):				208.2		Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total CollAve (4 peaks):				205.3		Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):				124.9		Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total CollAve (4 peaks):				32.1		Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm\*

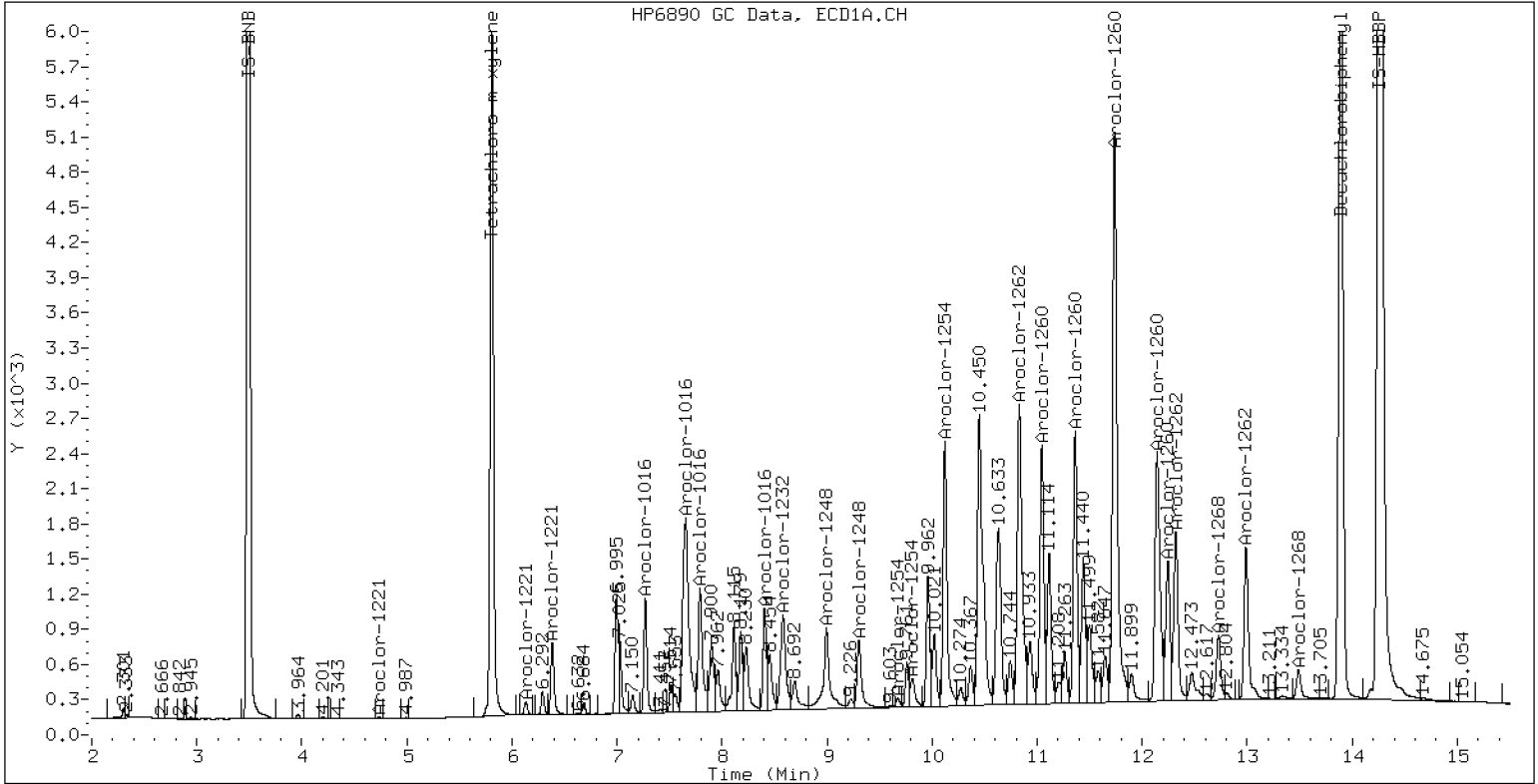
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV

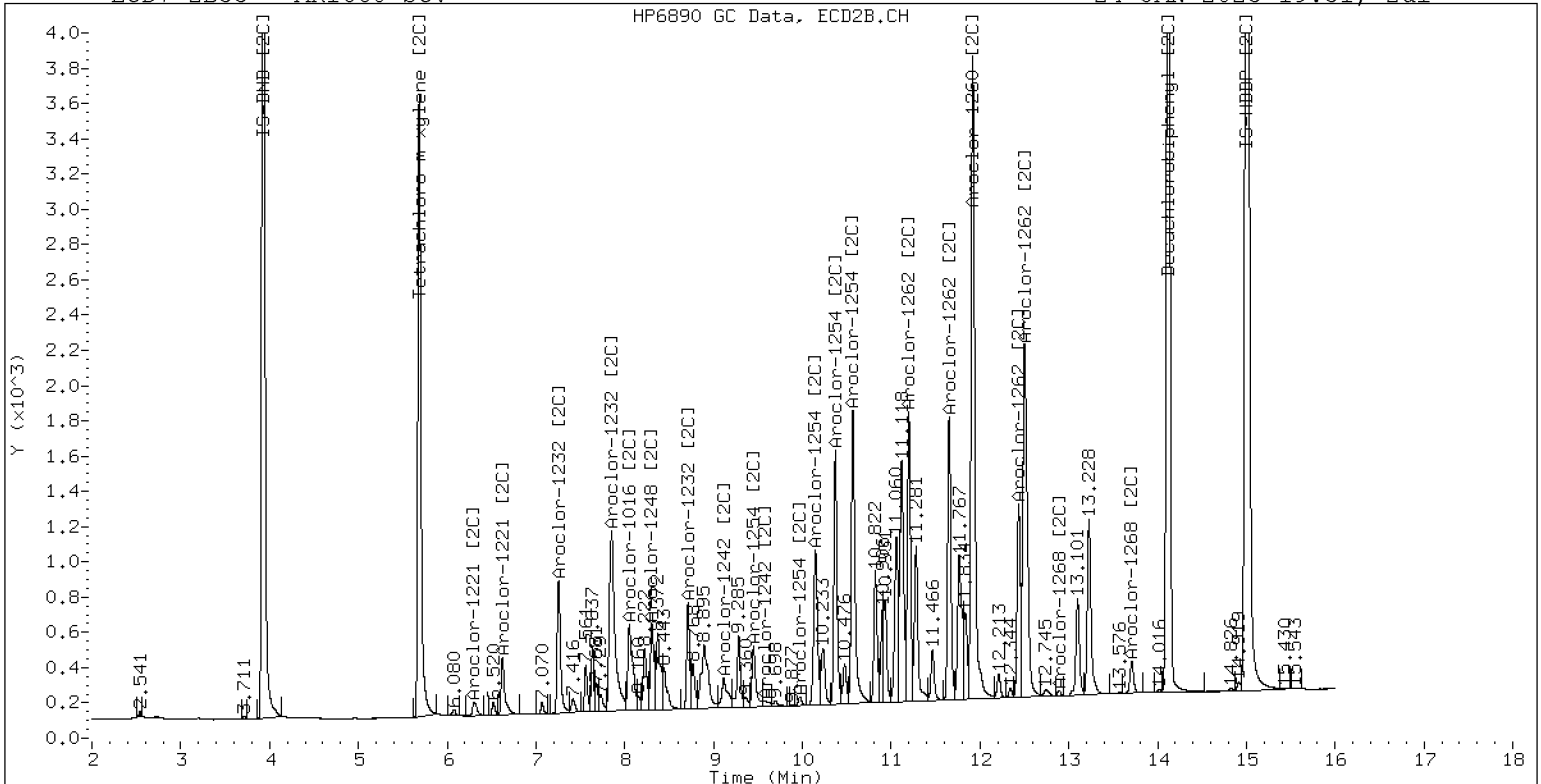
24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV

24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO





**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV2

**Sequence:** SLA0281

**Sequence Name:** AR1242SCV2

**Standard ID:** K007656

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1242	250.00	223	-10.9	20.00
Aroclor 1242 [2C]	250.00	235	-5.9	20.00
Decachlorobiphenyl	40.000	38.5	-3.6	20.00
Tetrachlorometaxylene	40.000	37.8	-5.6	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.9	20.00
Tetrachlorometaxylene [2C]	40.000	37.4	-6.6	20.00

\* Indicates values outside of QC limits

[2C] indicates second-column analyte.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D  
Data file 2: /230124.b/230124.b/01242325ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:12  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total CollAve (4 peaks):				167.7		Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):				163.7		Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total CollAve (3 peaks):				57.3		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total CollAve (4 peaks):				254.6		Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):				162.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total CollAve (4 peaks):				222.6		Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):				209.0		Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total CollAve (4 peaks):				131.8		Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):				113.9		Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total CollAve (5 peaks):				42.7		Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):				39.6		Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total CollAve (4 peaks):				1.2		Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):				0.9		Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total CollAve (3 peaks):				11.0		Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total CollAve (3 peaks):				1.9		Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV3

**Sequence:** SLA0281

**Sequence Name:** AR1248SCV3

**Standard ID:** K007657

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1248	250.00	237	-5.1	20.00
Aroclor 1248 [2C]	250.00	231	-7.6	20.00
Decachlorobiphenyl	40.000	38.3	-4.3	20.00
Tetrachlorometaxylene	40.000	36.8	-8.1	20.00
Decachlorobiphenyl [2C]	40.000	39.6	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.5	-8.6	20.00

\* Indicates values outside of QC limits

[2C] indicates second-column analyte.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D  
Data file 2: /230124.b/230124.b/01242326ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:33  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total CollAve (4 peaks):				152.0		Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):				94.9		Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total CollAve (3 peaks):				316.9		Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total CollAve (4 peaks):				240.5		Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):				188.8		Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total CollAve (4 peaks):				237.2		Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):				236.3		Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total CollAve (5 peaks):				115.3		Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):				102.7		Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total CollAve (5 peaks):				2.2		Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):				1.9		Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total CollAve (4 peaks):				8.9		Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):				1.2		Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total CollAve (4 peaks):				0.6		Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):				0.5		Corrected Ave (3 peaks):				0.2 RPD = 83*



Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm\*

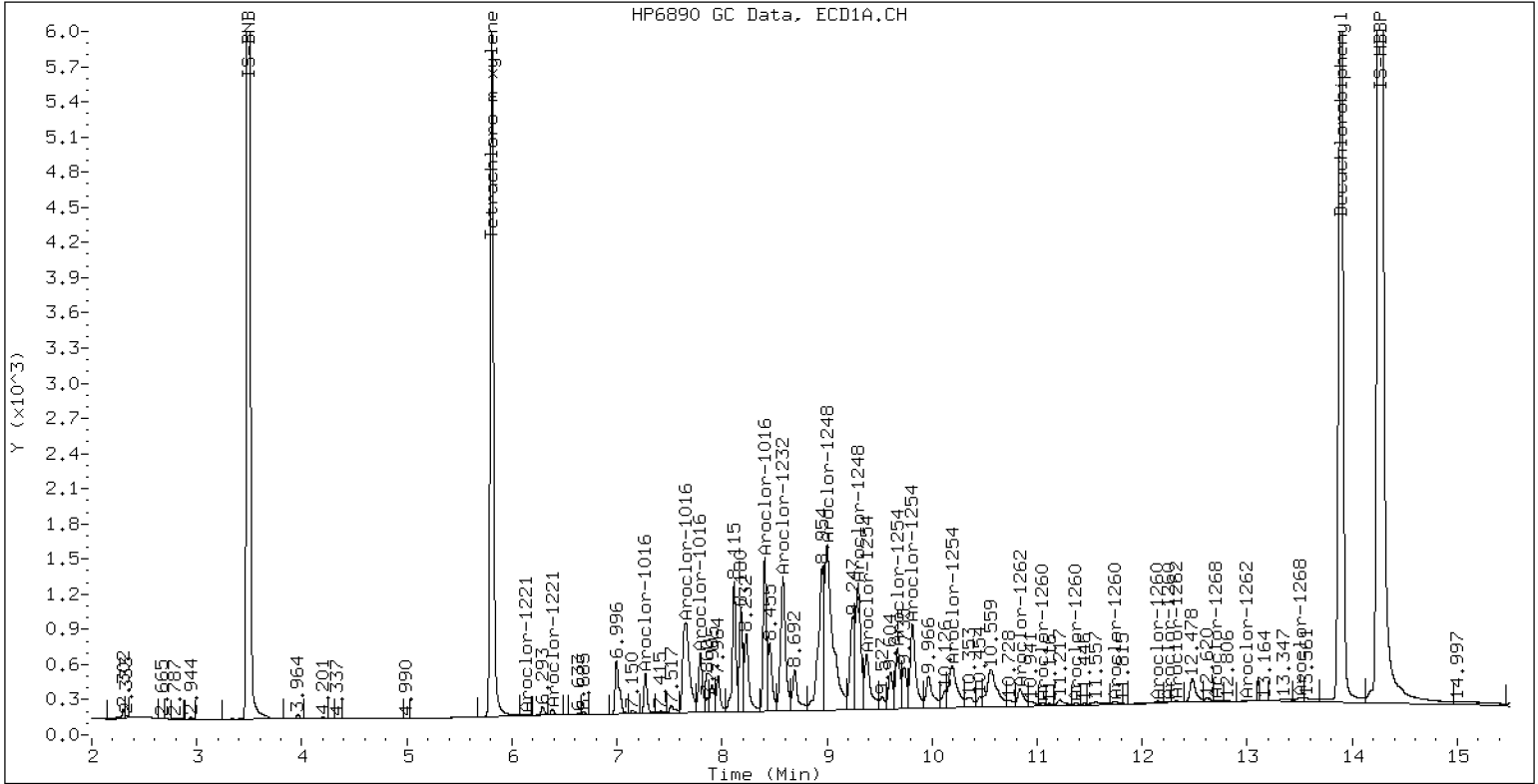
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV

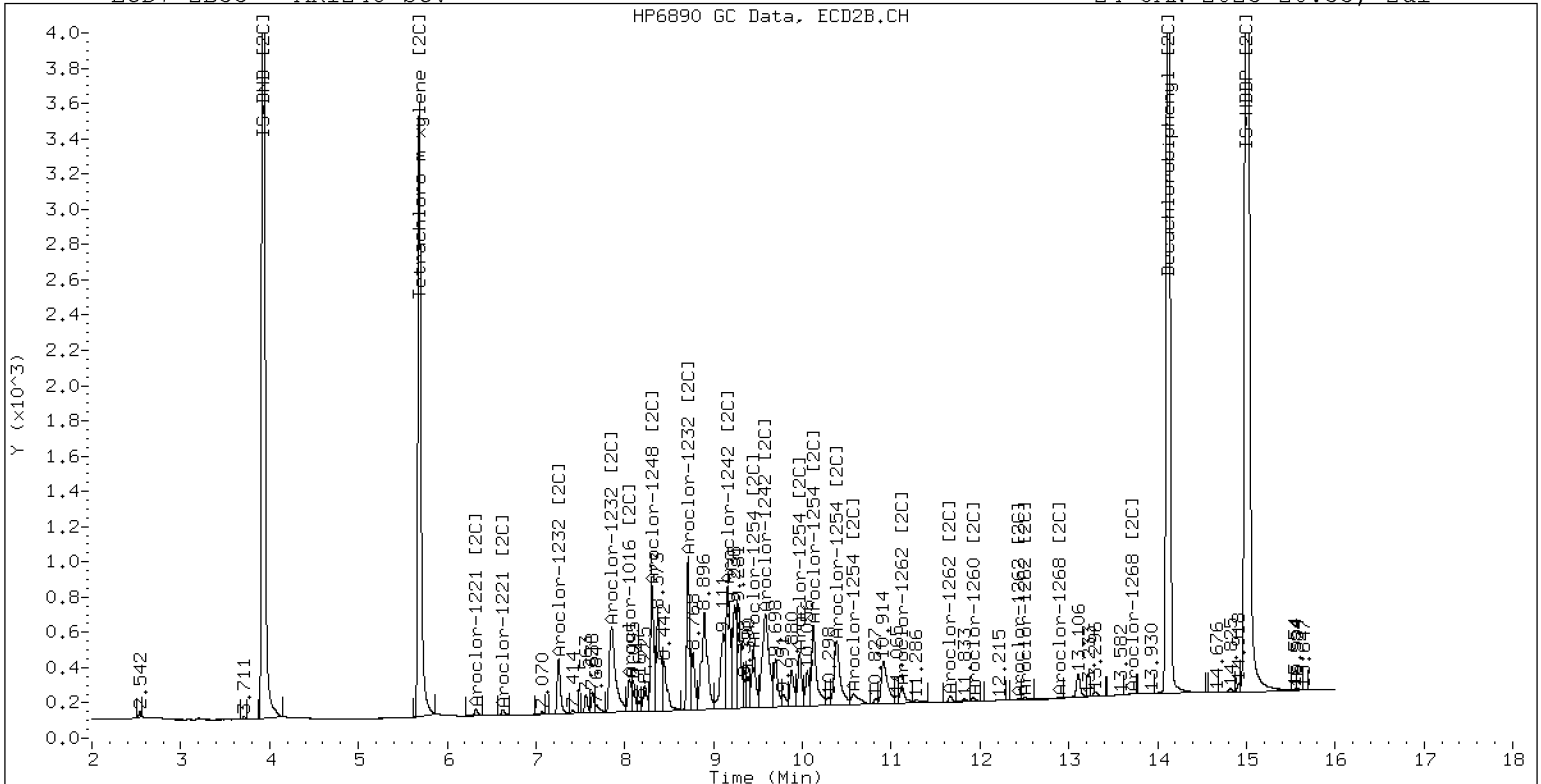
24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV

24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV4

**Sequence:** SLA0281

**Sequence Name:** AR1254SCV4

**Standard ID:** K007658

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1254	250.00	221	-11.7	20.00
Aroclor 1254 [2C]	250.00	227	-9.4	20.00
Decachlorobiphenyl	40.000	37.1	-7.3	20.00
Tetrachlorometaxylene	40.000	36.7	-8.3	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.6	-8.4	20.00

\* Indicates values outside of QC limits

[2C] indicates second-column analyte.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D  
Data file 2: /230124.b/230124.b/01242327ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:54  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8	
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0	
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1	
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8	
Total CollAve (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9	RPD = 55*	
Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7	
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9	
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0	
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2	
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0	
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9	
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7	
Total CollAve (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6	RPD = 114*	
Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks						
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9	
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1	
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4	
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4	
Total CollAve (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7	RPD = 31	
Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks): 115.5 RPD = 17						
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9	
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4	
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2	
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2	
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0	
Total CollAve (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5	RPD = 3	
Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks): 224.7 RPD = 2						
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6	
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2	
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3	
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0	
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			---	
Total CollAve (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0	RPD = 105*	
Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks						
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3	
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0	
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9	
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0	
Total CollAve (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7	RPD = 39	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2	
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3	
Total CollAve (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8	RPD = 130*	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm\*

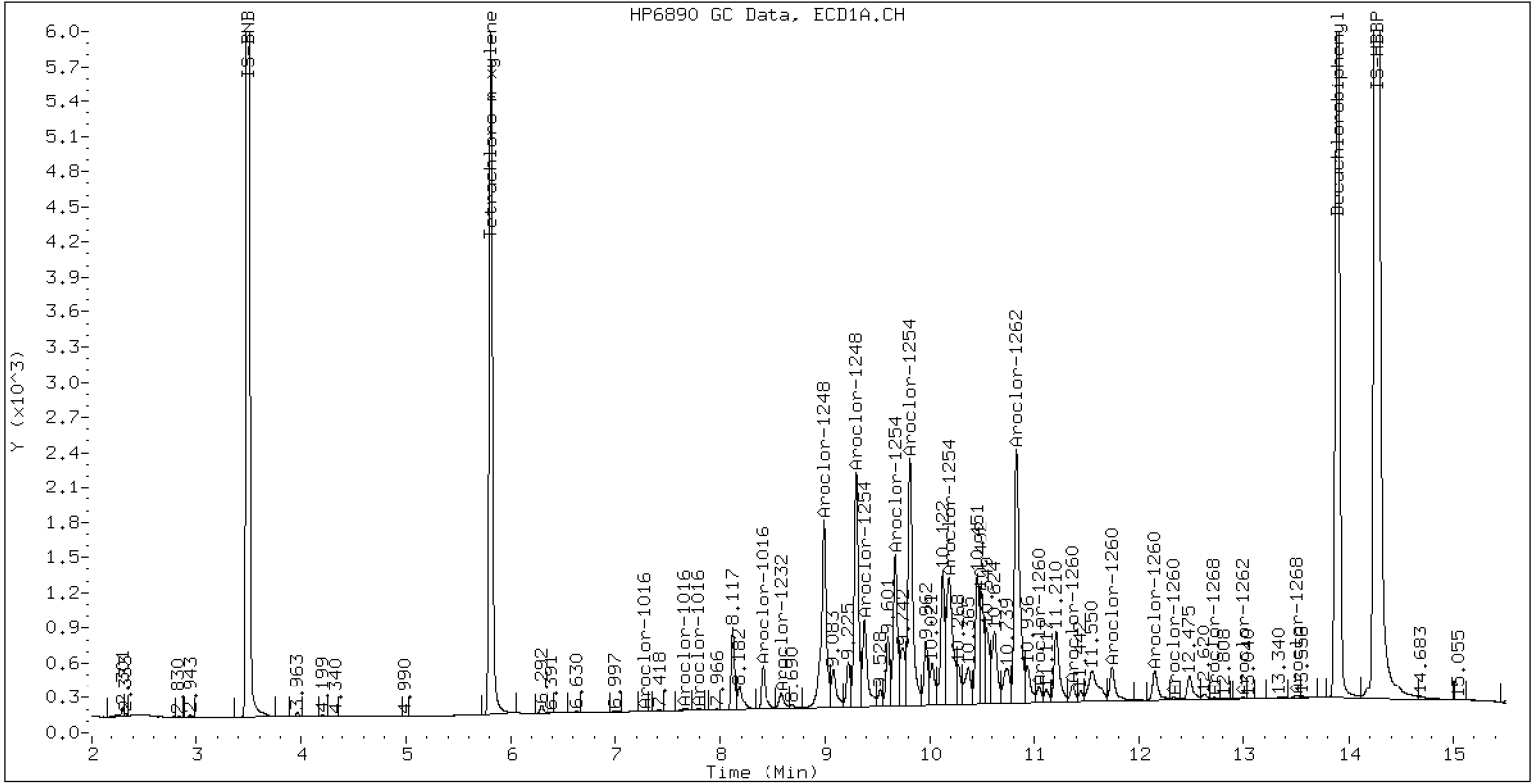
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV

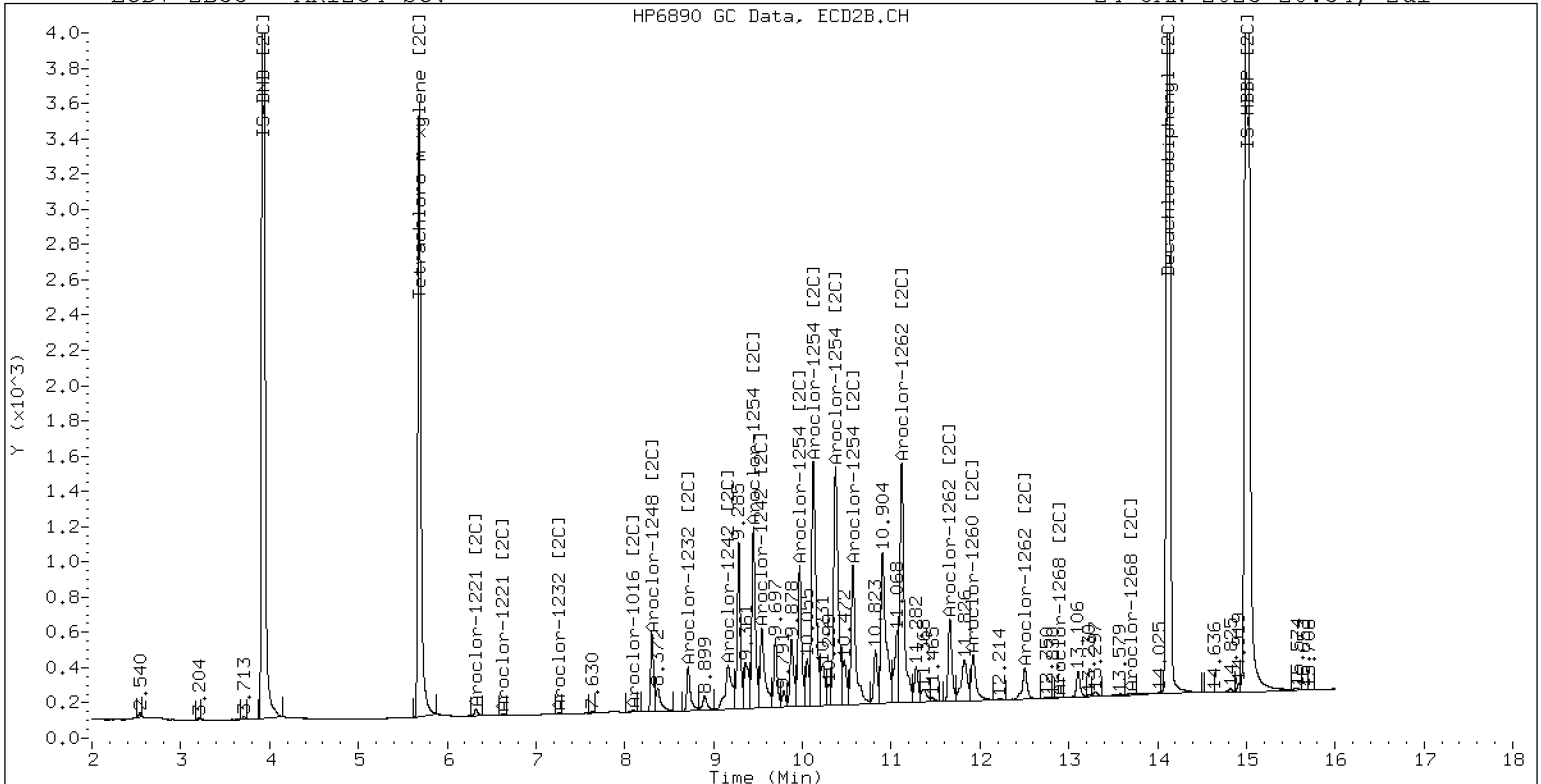
24-JAN-2023 20:54, 2u1



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV

24-JAN-2023 20:54, 2u1



ZB-35 Manual Integration: NO



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV5

**Sequence:** SLA0281

**Sequence Name:** AR2162SCV5

**Standard ID:** K007659

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1221	250.00	228	-8.8	20.00
Aroclor 1221 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	37.5	-6.4	20.00
Tetrachlorometaxylene	40.000	37.3	-6.8	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.3	20.00
Tetrachlorometaxylene [2C]	40.000	37.2	-7.1	20.00

\* Indicates values outside of QC limits

[2C] indicates second-column analyte.



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D  
Data file 2: /230124.b/230124.b/01242328ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR2162 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:15  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3	
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9	
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2	
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0	
Total CollAve (4 peaks):				22.4	Total Col2Ave (4 peaks):				22.1	RPD = 1	
Corrected Ave (3 peaks):				20.3	Corrected Ave (3 peaks):				17.3	RPD = 16	
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8	
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2	
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2	
Total CollAve (3 peaks):				228.1	Total Col2Ave (3 peaks):				238.7	RPD = 5	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9	
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2	
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9	
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0	
Total CollAve (4 peaks):				192.6	Total Col2Ave (4 peaks):				141.7	RPD = 30	
Corrected Ave (3 peaks):				126.3	Corrected Ave (3 peaks):				53.4	RPD = 81*	
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1	
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9	
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9	
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6	
Total CollAve (4 peaks):				24.0	Total Col2Ave (4 peaks):				32.3	RPD = 30	
Corrected Ave (3 peaks):				20.5	Corrected Ave (3 peaks):				28.1	RPD = 31	
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4	
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3	
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7	
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9	
Total CollAve (4 peaks):				46.0	Total Col2Ave (4 peaks):				14.6	RPD = 104*	
Corrected Ave (3 peaks):				27.5	Corrected Ave (3 peaks):				11.5	RPD = 82*	
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3	
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3	
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5	
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9	
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5	
Total CollAve (5 peaks):				110.8	Total Col2Ave (5 peaks):				223.7	RPD = 68*	
Corrected Ave (4 peaks):				31.0	Corrected Ave (4 peaks):				133.5	RPD = 125*	
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4	
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0	
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7	
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5	
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----	
Total CollAve (5 peaks):				499.5	Total Col2Ave (4 peaks):				592.1	RPD = 17	
Corrected Ave (4 peaks):				426.6	Corrected Ave (3 peaks):				500.3	RPD = 16	
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1	
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0	
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4	
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6	
Total CollAve (4 peaks):				421.5	Total Col2Ave (4 peaks):				437.0	RPD = 4	
Corrected Ave (3 peaks):				419.8	Corrected Ave (3 peaks):				434.3	RPD = 3	
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0	
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7	
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3	
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8	
Total CollAve (4 peaks):				111.6	Total Col2Ave (4 peaks):				112.0	RPD = 0	

Corrected Ave (3 peaks): 89.3      Corrected Ave (3 peaks): 65.4      RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992      Col1 Total PCB = 0.8 ppm\*  
Total PCB Area Col2 (5.787 - 14.020) = 2874073      Col2 Total PCB = 0.8 ppm\*

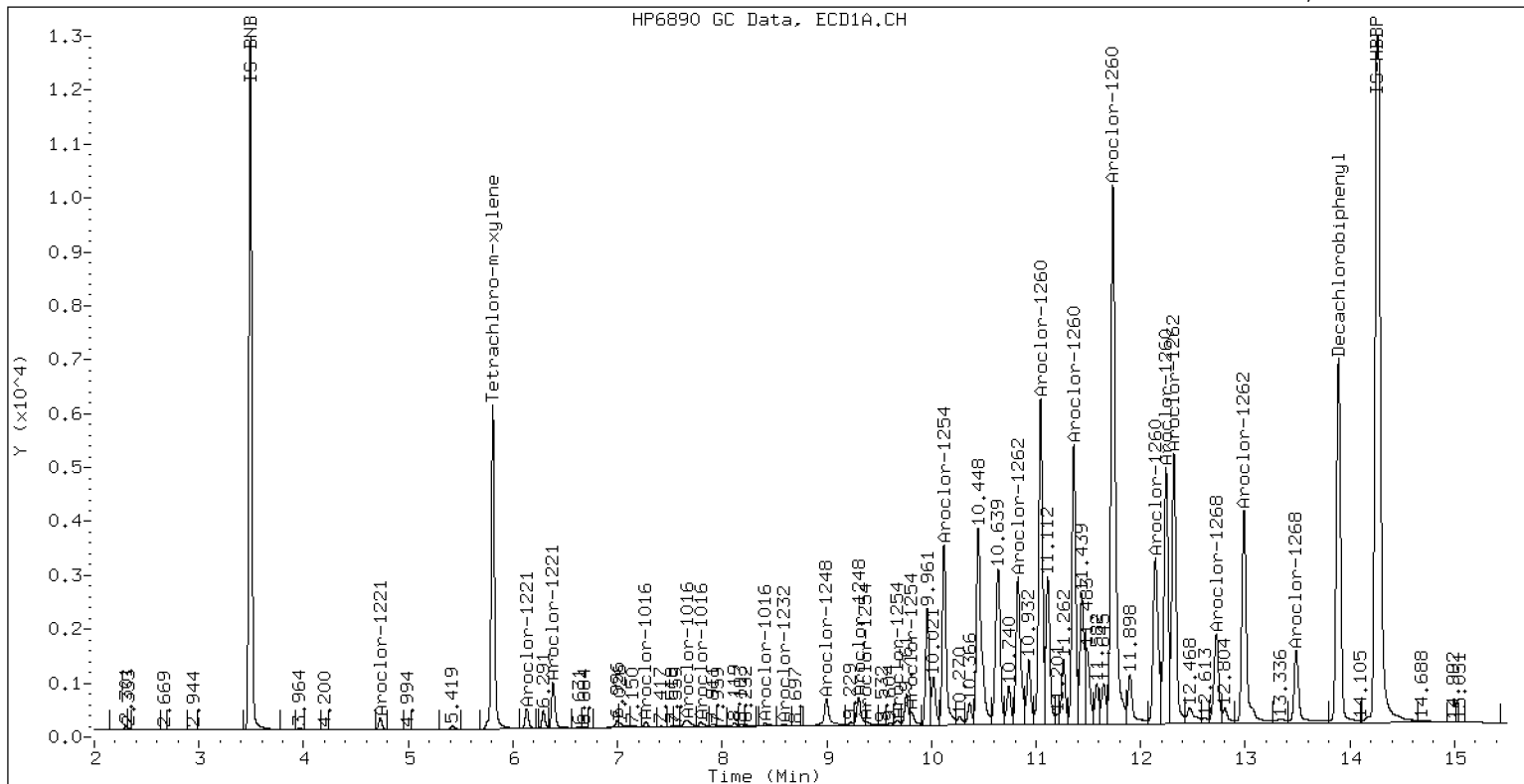
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV

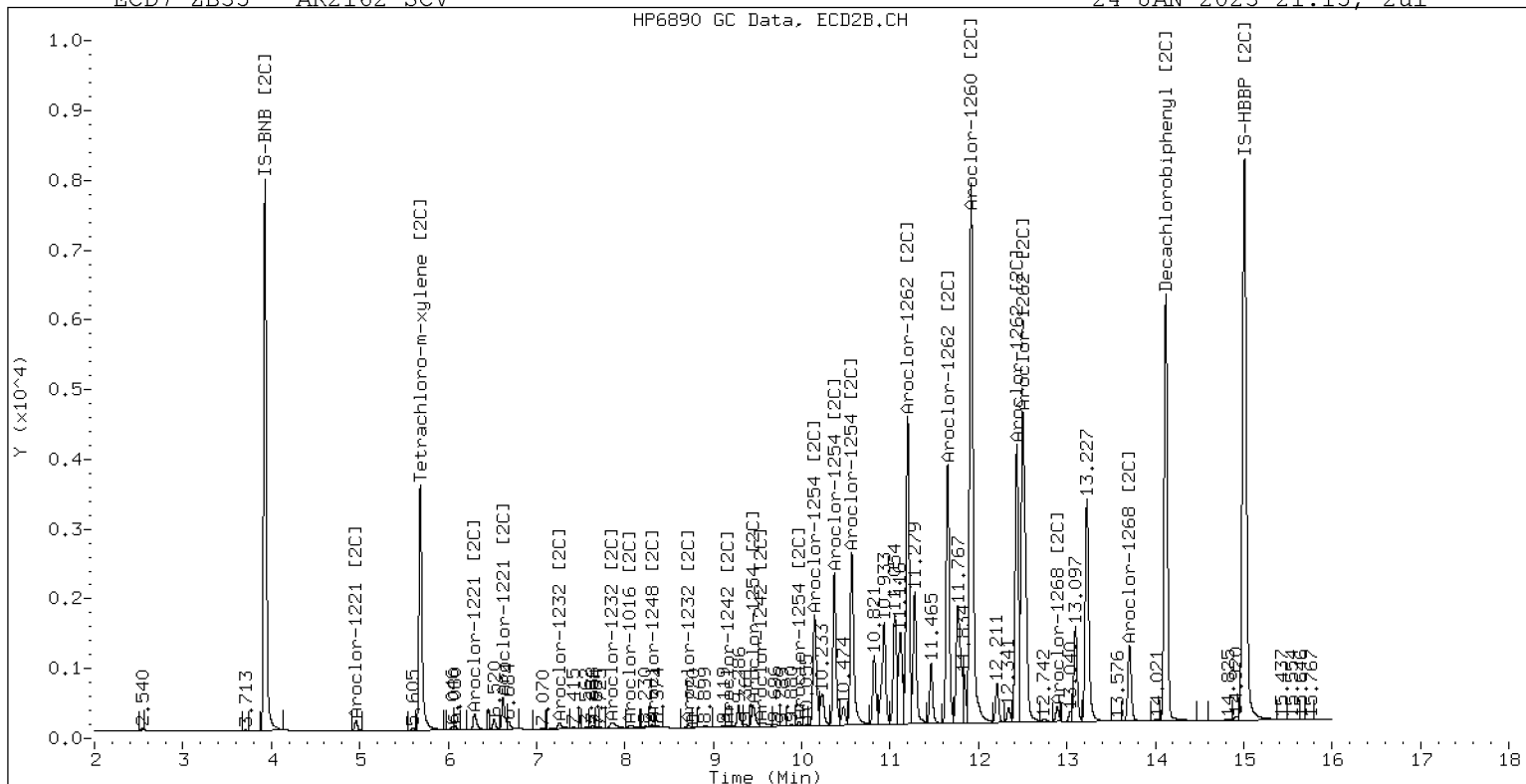
24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV

24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 8082A**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GA00061

**Laboratory ID:** SLA0281-SCV6

**Sequence:** SLA0281

**Sequence Name:** AR3268SCV6

**Standard ID:** K007660

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Aroclor 1232	250.00	216	-13.7	20.00
Aroclor 1232 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	54.6	36.5	20.00
Tetrachlorometaxylene	40.000	36.4	-9.1	20.00
Decachlorobiphenyl [2C]	40.000	57.9	44.8	20.00
Tetrachlorometaxylene [2C]	40.000	36.3	-9.2	20.00

\* Indicates values outside of QC limits

[2C] indicates second-column analyte.

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D  
Data file 2: /230124.b/230124.b/01242329ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR3268 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:36  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0	
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8	
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2	
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8	
Total CollAve (4 peaks):				101.3	Total Col2Ave (4 peaks):				103.7	RPD = 2	
Corrected Ave (3 peaks):				99.4	Corrected Ave (3 peaks):				101.6	RPD = 2	
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2	
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1	
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1	
Total CollAve (3 peaks):				144.5	Total Col2Ave (3 peaks):				154.8	RPD = 7	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1	
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8	
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8	
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7	
Total CollAve (4 peaks):				215.7	Total Col2Ave (4 peaks):				238.8	RPD = 10	
Corrected Ave (3 peaks):				210.5	Corrected Ave (3 peaks):				236.6	RPD = 12	
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4	
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6	
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1	
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7	
Total CollAve (4 peaks):				121.0	Total Col2Ave (4 peaks):				125.4	RPD = 4	
Corrected Ave (3 peaks):				118.0	Corrected Ave (3 peaks):				121.8	RPD = 3	
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8	
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1	
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9	
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9	
Total CollAve (4 peaks):				92.7	Total Col2Ave (4 peaks):				69.7	RPD = 28	
Corrected Ave (3 peaks):				85.7	Corrected Ave (3 peaks):				66.3	RPD = 26	
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6	
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6	
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1	
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0	
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7	
Total CollAve (5 peaks):				31.1	Total Col2Ave (5 peaks):				11.2	RPD = 94*	
Corrected Ave (4 peaks):				23.3	Corrected Ave (4 peaks):				10.1	RPD = 79*	
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9	
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7	
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4	
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9	
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----	
Total CollAve (5 peaks):				250.2	Total Col2Ave (4 peaks):				449.7	RPD = 57*	
Corrected Ave (4 peaks):				42.5	Corrected Ave (3 peaks):				217.5	RPD = 135*	
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5	
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9	
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4	
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5	
Total CollAve (4 peaks):				340.7	Total Col2Ave (4 peaks):				299.1	RPD = 13	
Corrected Ave (3 peaks):				261.2	Corrected Ave (3 peaks):				202.6	RPD = 25	
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3	
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9	
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0	
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1	
Total CollAve (4 peaks):				223.7	Total Col2Ave (4 peaks):				218.1	RPD = 3	

Corrected Ave (3 peaks): 223.4      Corrected Ave (3 peaks): 215.4      RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2084481      Col2 Total PCB = 0.6 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

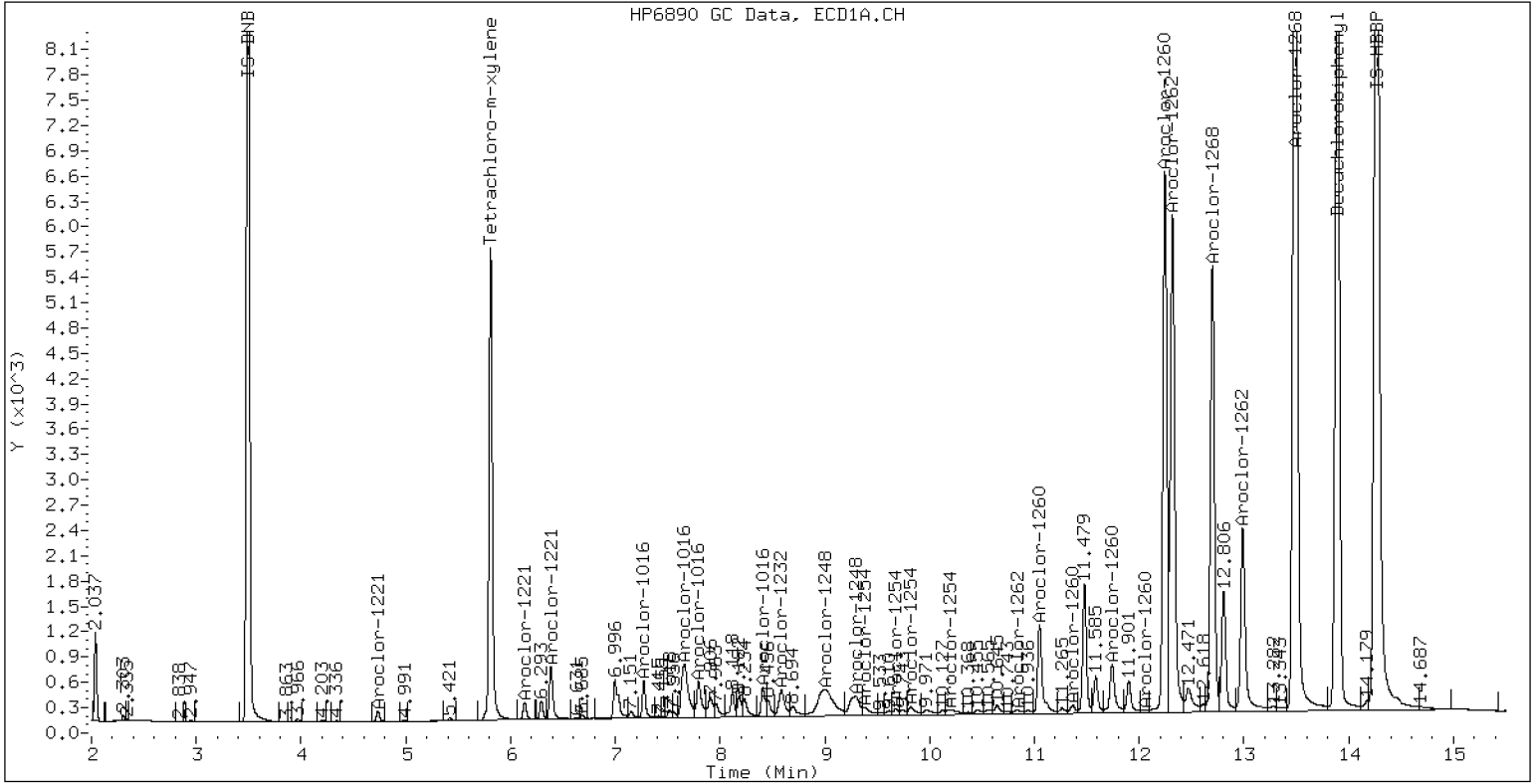
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV

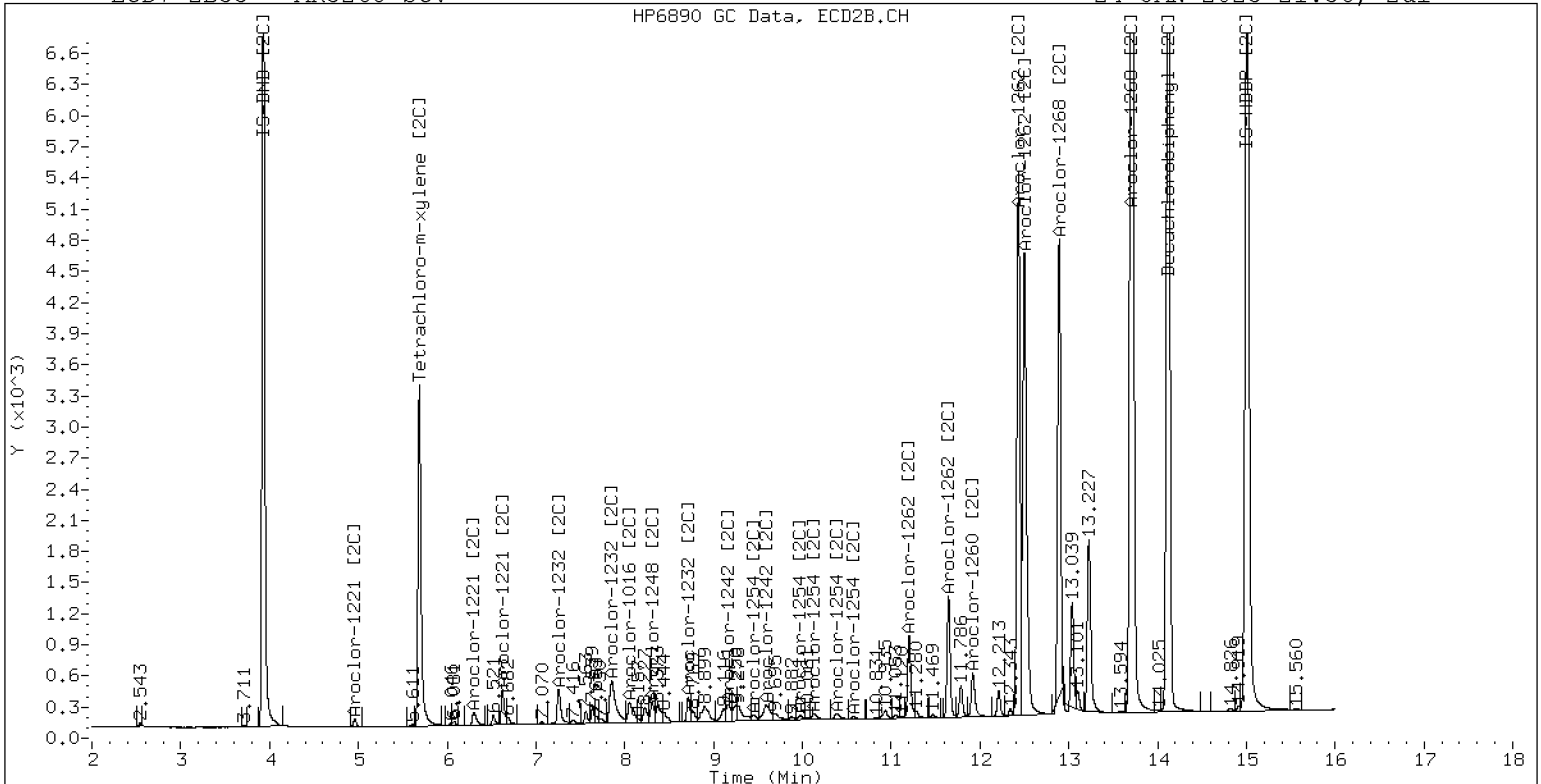
24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV

24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO



**INITIAL CALIBRATION CHECK**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02072302ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0109

Injection Date: 02/07/23

Lab Sample ID: SLB0109-ICV1

Injection Time: 13:02

Sequence Name: AR1254ICV1

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	231	0.0675033	0.0630402		-7.8	+/-20
Aroclor-1254 (1)	A	250.00	223	0.0815329	0.0727313			
Aroclor-1254 (2)	A	250.00	219	0.0348121	0.0305349			
Aroclor-1254 (3)	A	250.00	229	0.0522405	0.0477727			
Aroclor-1254 (4)	A	250.00	248	0.1023658	0.1017797			
Aroclor-1254 (5)	A	250.00	234	0.0665652	0.0623825			
Aroclor 1254 [2C]	A	250.00	237	0.0733219	0.0699178		-5.2	+/-20
Aroclor-1254 (1) [2C]	A	250.00	242	0.0580388	0.0561510			
Aroclor-1254 (2) [2C]	A	250.00	240	0.0469118	0.0450229			
Aroclor-1254 (3) [2C]	A	250.00	230	0.1023304	0.0942905			
Aroclor-1254 (4) [2C]	A	250.00	255	0.1023323	0.1043545			
Aroclor-1254 (5) [2C]	A	250.00	218	0.0569963	0.0497702			
Decachlorobiphenyl	A	40.000	40.9	0.8555994	0.8759160		2.3	+/-20
Tetrachlorometaxylene	A	40.000	40.2	1.1307870	1.1371960		0.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.7	1.2696430	1.1977660		-5.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.0	1.0814980	1.0819800		0.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072302ECD7.D  
Data file 2: /230207.b/230207.b/02072302ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254ICV1  
Client ID:  
Injection Date: 07-FEB-2023 13:02  
Report Date: 02/08/2023 11:47  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.001	213462	5.685	-0.000	176024	40.2	40.0	0.5	Tetrachloro-m-xylene
13.891	0.003	252280	14.117	-0.000	260217	40.9	37.7	8.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	375418	-25.4
Hexabromobiphenyl	647433	576037	-11.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	325374	-3.4
Hexabromobiphenyl	382032	434504	13.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.295	-0.004	85327	223.0	1	9.444	0.001	57094	241.9	
Aroclor-1254	2	9.371	-0.007	35823	219.3	2	9.963	0.000	45779	239.9	
Aroclor-1254	3	9.662	-0.007	56046	228.6	3	10.116	0.002	95874	230.4	
Aroclor-1254	4	9.798	-0.010	119406	248.6	4	10.364	0.001	106107	254.9	
Aroclor-1254	5	10.157	-0.020	73186	234.3	5	10.562	0.000	50606	218.3	
Total CollAve (5 peaks):				230.8		Total Col2Ave (5 peaks):				237.1	RPD = 3
Corrected Ave (4 peaks):				226.3		Corrected Ave (4 peaks):				232.6	RPD = 3
CalAmt %D:				-7.7		CalAmt %D:				-5.2	

Total PCB Area Col1 (5.908 - 13.788) = 1220590      Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 968129      Col2 Total PCB = 0.3 ppm\*

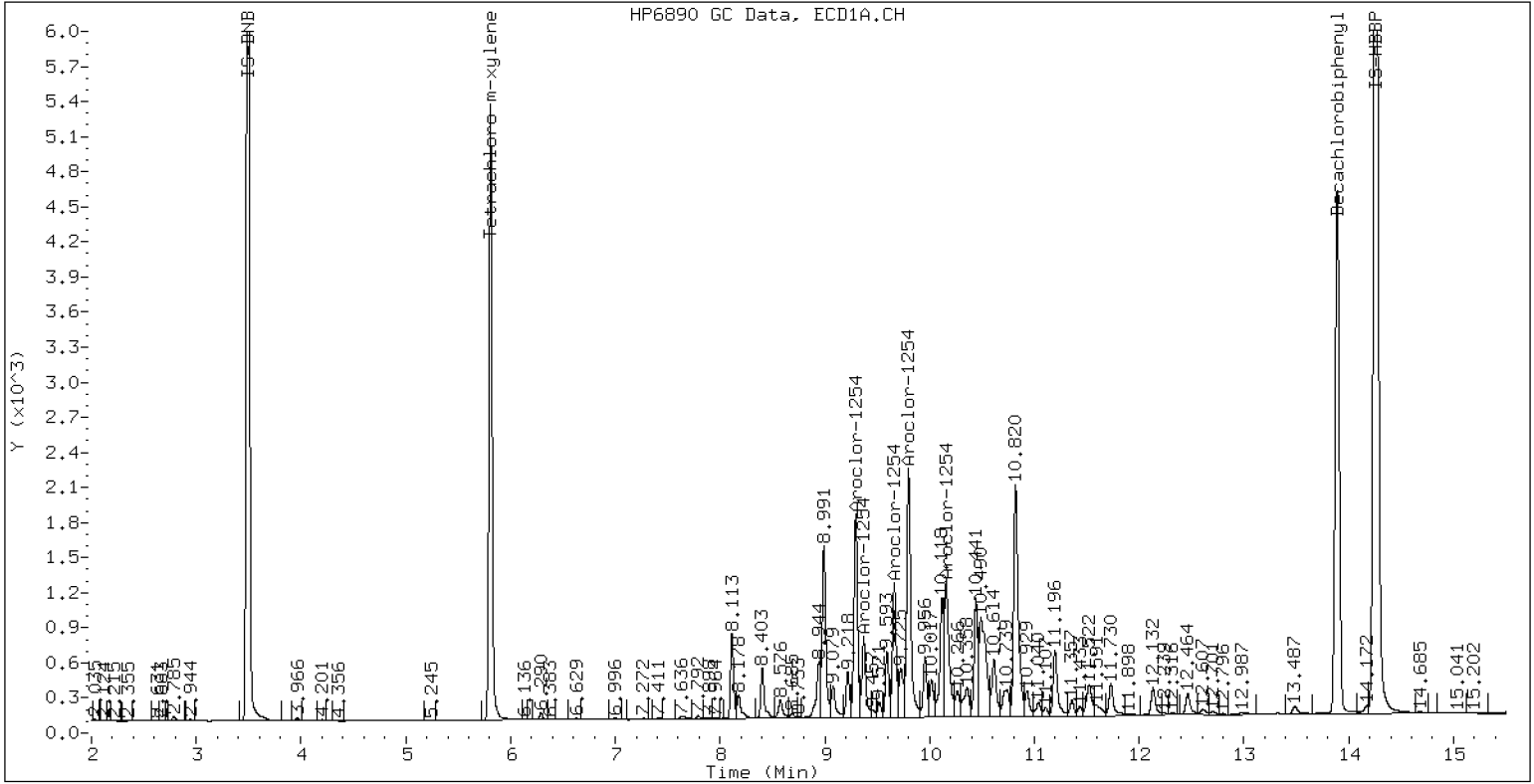
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1

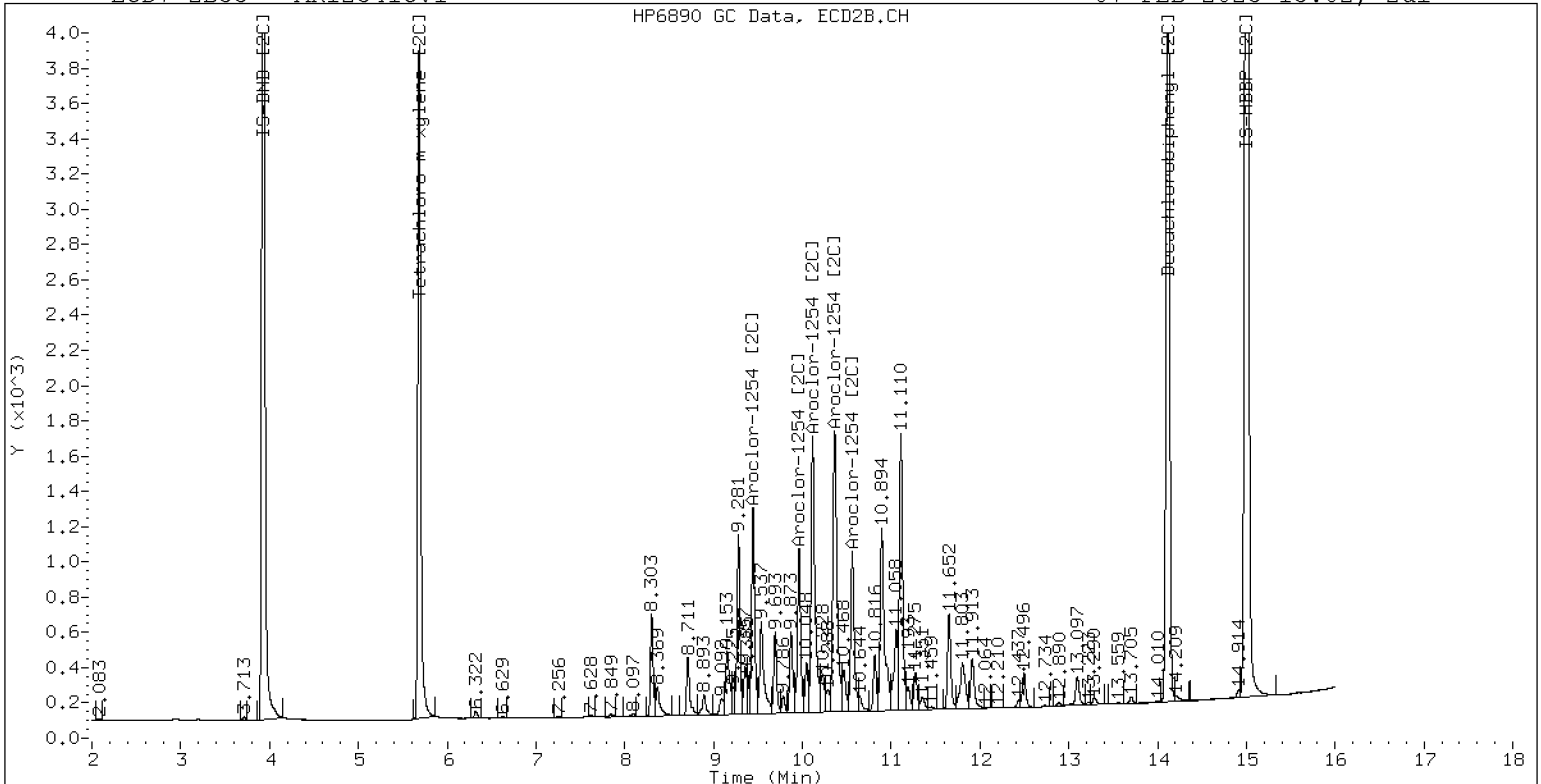
07-FEB-2023 13:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1

07-FEB-2023 13:02, 2ul



ZB-35 Manual Integration: NO



**INITIAL CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072303ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/07/23</u>
Lab Sample ID:	<u>SLB0109-ICV2</u>	Injection Time:	<u>13:23</u>
Sequence Name:	<u>AR1660ICV2</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	258	0.0506755	0.0522609		3.1	+/-20
Aroclor-1016 (1)	A	250.00	264	0.0297277	0.0314375		5.6	
Aroclor-1016 (2)	A	250.00	262	0.0985017	0.1031797		4.8	
Aroclor-1016 (3)	A	250.00	239	0.0453193	0.0433553		-4.4	
Aroclor-1016 (4)	A	250.00	266	0.0291533	0.0310711		6.4	
Aroclor 1016 [2C]	A	250.00	266	0.0519244	0.0550127		6.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	267	0.0433907	0.0462810		6.8	
Aroclor-1016 (2) [2C]	A	250.00	262	0.0950862	0.0996866		4.8	
Aroclor-1016 (3) [2C]	A	250.00	274	0.0388014	0.0424505		9.6	
Aroclor-1016 (4) [2C]	A	250.00	260	0.0304194	0.0316328		4.0	
Aroclor 1260	A	250.00	193	0.0605224	0.0470229		-22.6	+/-20 *
Aroclor-1260 (1)	A	250.00	200	0.0448870	0.0359695		-20.0	
Aroclor-1260 (2)	A	250.00	200	0.0461412	0.0368563		-20.0	
Aroclor-1260 (3)	A	250.00	193	0.1214672	0.0939904		-22.8	
Aroclor-1260 (4)	A	250.00	193	0.0627593	0.0484522		-22.8	
Aroclor-1260 (5)	A	250.00	181	0.0273573	0.0198460		-27.6	
Aroclor 1260 [2C]	A	250.00	227	0.0836545	0.0746535		-9.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	229	0.0577136	0.0528728		-8.4	
Aroclor-1260 (2) [2C]	A	250.00	218	0.1460113	0.1271135		-12.8	
Aroclor-1260 (3) [2C]	A	250.00	237	0.0363944	0.0345727		-5.2	
Aroclor-1260 (4) [2C]	A	250.00	222	0.0944986	0.0840551		-11.2	
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8109155		-5.3	+/-20
Tetrachlorometaxylene	A	40.000	42.8	1.1307870	1.2098980		7.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.8	1.2696430	1.2648940		-0.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.9	1.0814980	1.1611500		7.3	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072303ECD7.D  
Data file 2: /230207.b/230207.b/02072303ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660ICV2  
Client ID:  
Injection Date: 07-FEB-2023 13:23  
Report Date: 02/08/2023 11:47  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.001	198119	5.686	0.001	164906	42.8	42.9	0.3	Tetrachloro-m-xylene
13.890	0.001	238337	14.116	-0.001	247061	37.9	39.9	5.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	327497	-34.9
Hexabromobiphenyl	647433	587822	-9.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	284039	-15.7
Hexabromobiphenyl	382032	390643	2.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	32174	264.4	1	7.254	0.001	41080	266.7
Aroclor-1016	2	7.649	-0.001	105597	261.9	2	7.850	0.001	88484	262.1
Aroclor-1016	3	7.788	-0.001	44371	239.2	3	8.049	0.002	37680	273.5
Aroclor-1016	4	8.402	-0.001	31799	266.4	4	8.304	0.001	28078	260.0
Total CollAve (4 peaks):				258.0		Total Col2Ave (4 peaks):				265.6 RPD = 3
Corrected Ave (3 peaks):				255.1		Corrected Ave (3 peaks):				262.9 RPD = 3
CalAmt %D:				3.2		CalAmt %D:				6.2
Aroclor-1260	1	11.040	-0.004	66074	200.3	1	11.649	0.000	64545	229.0
Aroclor-1260	2	11.357	-0.004	67703	199.7	2	11.912	-0.000	155175	217.6
Aroclor-1260	3	11.729	-0.005	172655	193.4	3	12.431	-0.001	42205	237.5
Aroclor-1260	4	12.132	-0.007	89004	193.0	4	12.496	0.000	102611	222.4
Aroclor-1260	5	12.240	-0.004	36456	181.4	NS	---			----
Total CollAve (5 peaks):				193.6		Total Col2Ave (4 peaks):				226.6 RPD = 16
Corrected Ave (4 peaks):				191.9		Corrected Ave (3 peaks):				223.0 RPD = 15
CalAmt %D:				-22.6		CalAmt %D:				-9.3

Total PCB Area Coll (5.908 - 13.788) = 1886021 Coll Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1541709 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

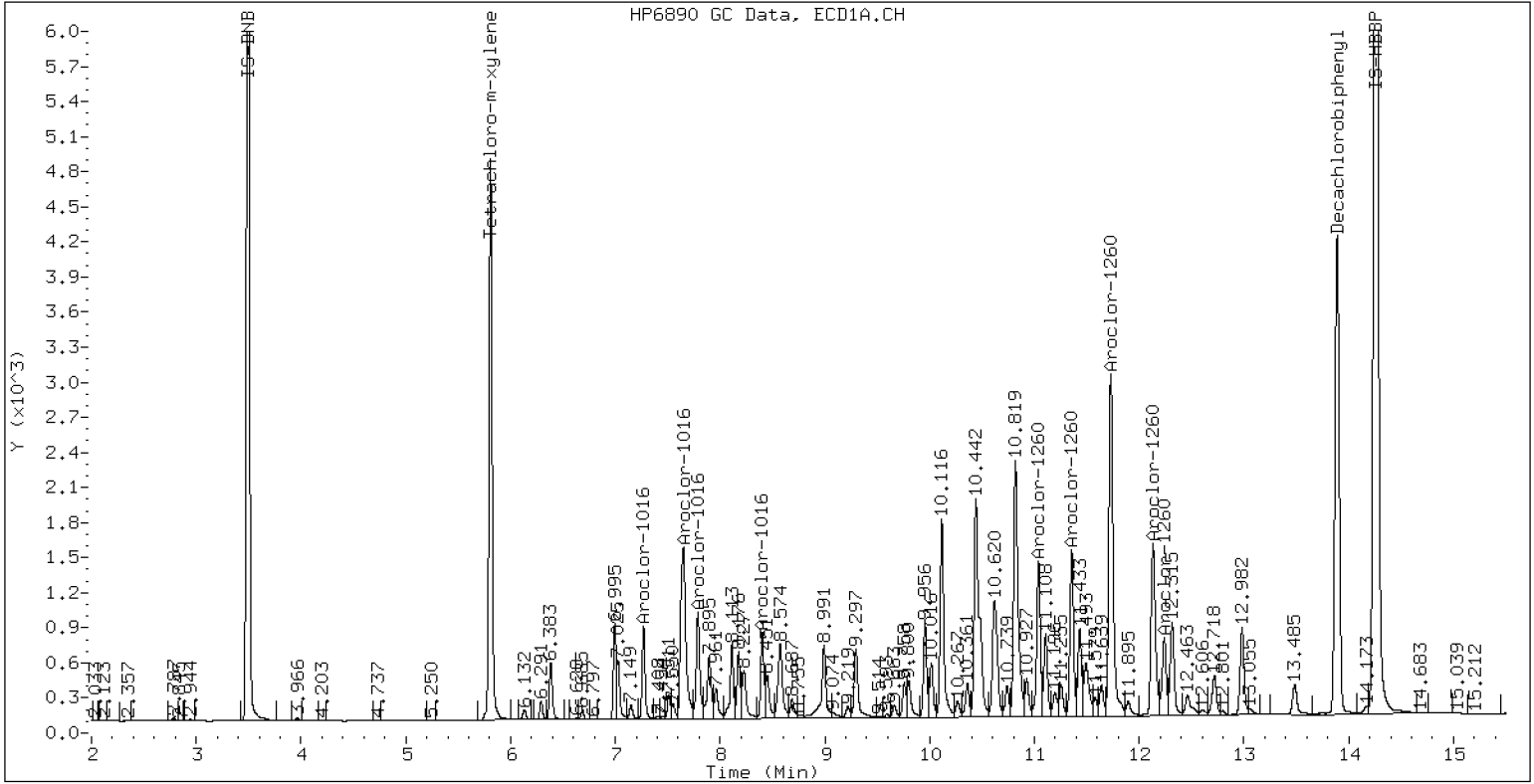
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2

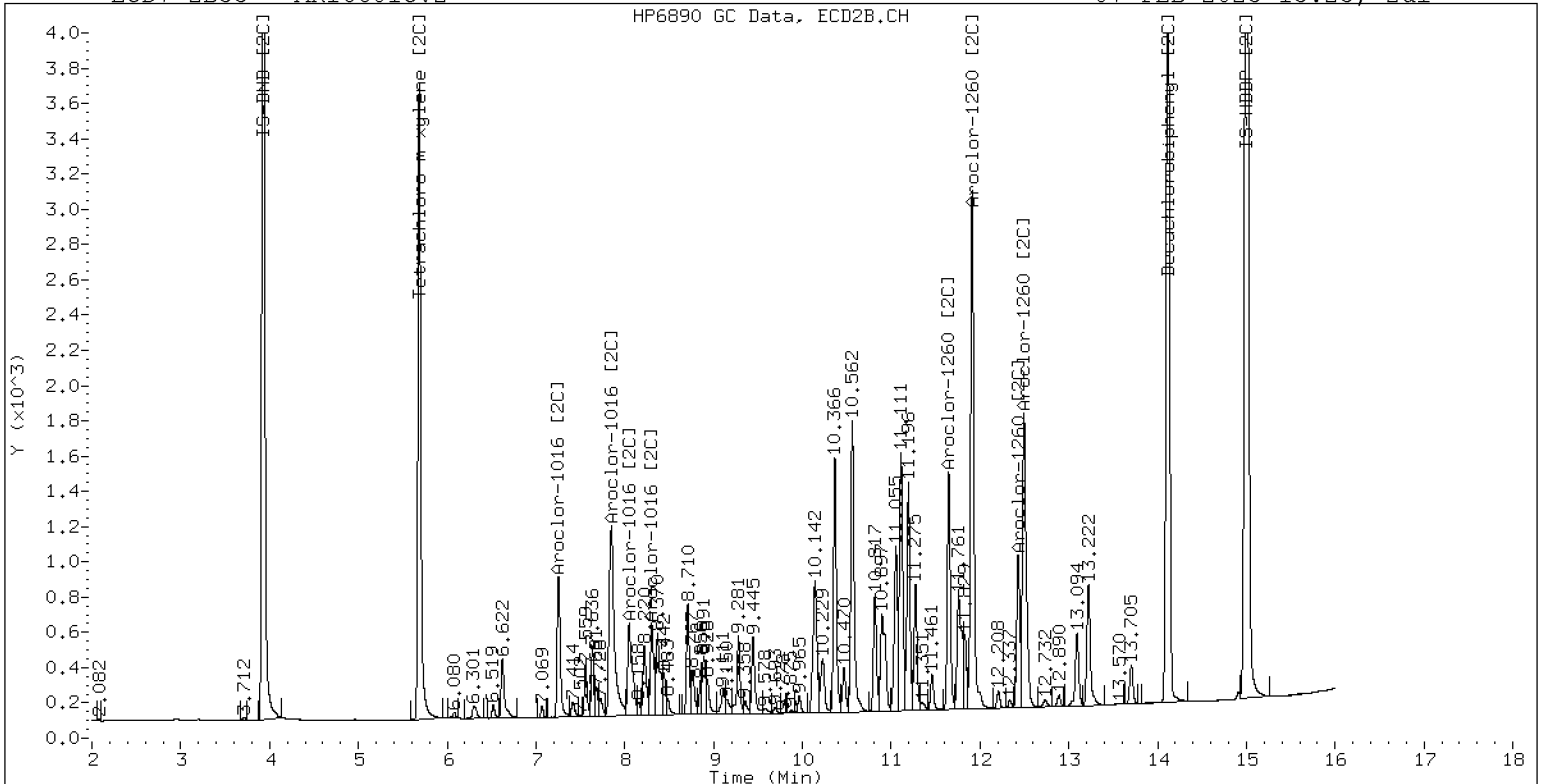
07-FEB-2023 13:23, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2

07-FEB-2023 13:23, 2ul



ZB-35 Manual Integration: NO



**INITIAL CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02082307ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0127</u>	Injection Date:	<u>02/08/23</u>
Lab Sample ID:	<u>SLB0127-ICV1</u>	Injection Time:	<u>11:44</u>
Sequence Name:	<u>AR1254ICV1</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	229	0.0675033	0.0618626		-8.6	+/-20
Aroclor-1254 (1)	A	250.00	230	0.0815329	0.0750215			
Aroclor-1254 (2)	A	250.00	227	0.0348121	0.0316098			
Aroclor-1254 (3)	A	250.00	230	0.0522405	0.0480873			
Aroclor-1254 (4)	A	250.00	232	0.1023658	0.0948310			
Aroclor-1254 (5)	A	250.00	224	0.0665652	0.0597634			
Aroclor 1254 [2C]	A	250.00	232	0.0733219	0.0685475		-7.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	240	0.0580388	0.0557336			
Aroclor-1254 (2) [2C]	A	250.00	239	0.0469118	0.0449119			
Aroclor-1254 (3) [2C]	A	250.00	237	0.1023304	0.0969773			
Aroclor-1254 (4) [2C]	A	250.00	240	0.1023323	0.0983998			
Aroclor-1254 (5) [2C]	A	250.00	205	0.0569963	0.0467151			
Decachlorobiphenyl	A	40.000	35.8	0.8555994	0.7664067		-10.5	+/-20
Tetrachlorometaxylene	A	40.000	38.2	1.1307870	1.0806080		-4.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	33.7	1.2696430	1.0711880		-15.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.3	1.0814980	1.0365250		-4.3	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082307ECD7.D  
Data file 2: /230208.b/230208.b/02082307ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254ICV1  
Client ID:  
Injection Date: 08-FEB-2023 11:44  
Report Date: 02/09/2023 10:55  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.000	203458	5.685	-0.000	176867	38.2	38.3	0.3	Tetrachloro-m-xylene
13.890	0.002	168967	14.117	0.000	199099	35.8	33.7	6.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	376562	-25.2
Hexabromobiphenyl	647433	440933	-31.9
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341269	1.3
Hexabromobiphenyl	382032	371735	-2.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col ZB35 Col

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.293	0.000	88282	230.0	1	9.444	0.000	59438	240.1	
Aroclor-1254	2	9.371	0.000	37197	227.0	2	9.964	-0.000	47897	239.3	
Aroclor-1254	3	9.662	0.000	56587	230.1	3	10.116	0.000	103423	236.9	
Aroclor-1254	4	9.798	0.000	111593	231.6	4	10.366	0.000	104940	240.4	
Aroclor-1254	5	10.157	0.000	70327	224.5	5	10.563	-0.000	49820	204.9	
Total CollAve (5 peaks):				228.6		Total Col2Ave (5 peaks):				232.3	RPD = 2
Corrected Ave (4 peaks):				227.9		Corrected Ave (4 peaks):				230.3	RPD = 1

CalAmt %D: -8.5

CalAmt %D: -7.1

Total PCB Area Col1 (5.908 - 13.789) = 1111550 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 977998 Col2 Total PCB = 0.3 ppm\*

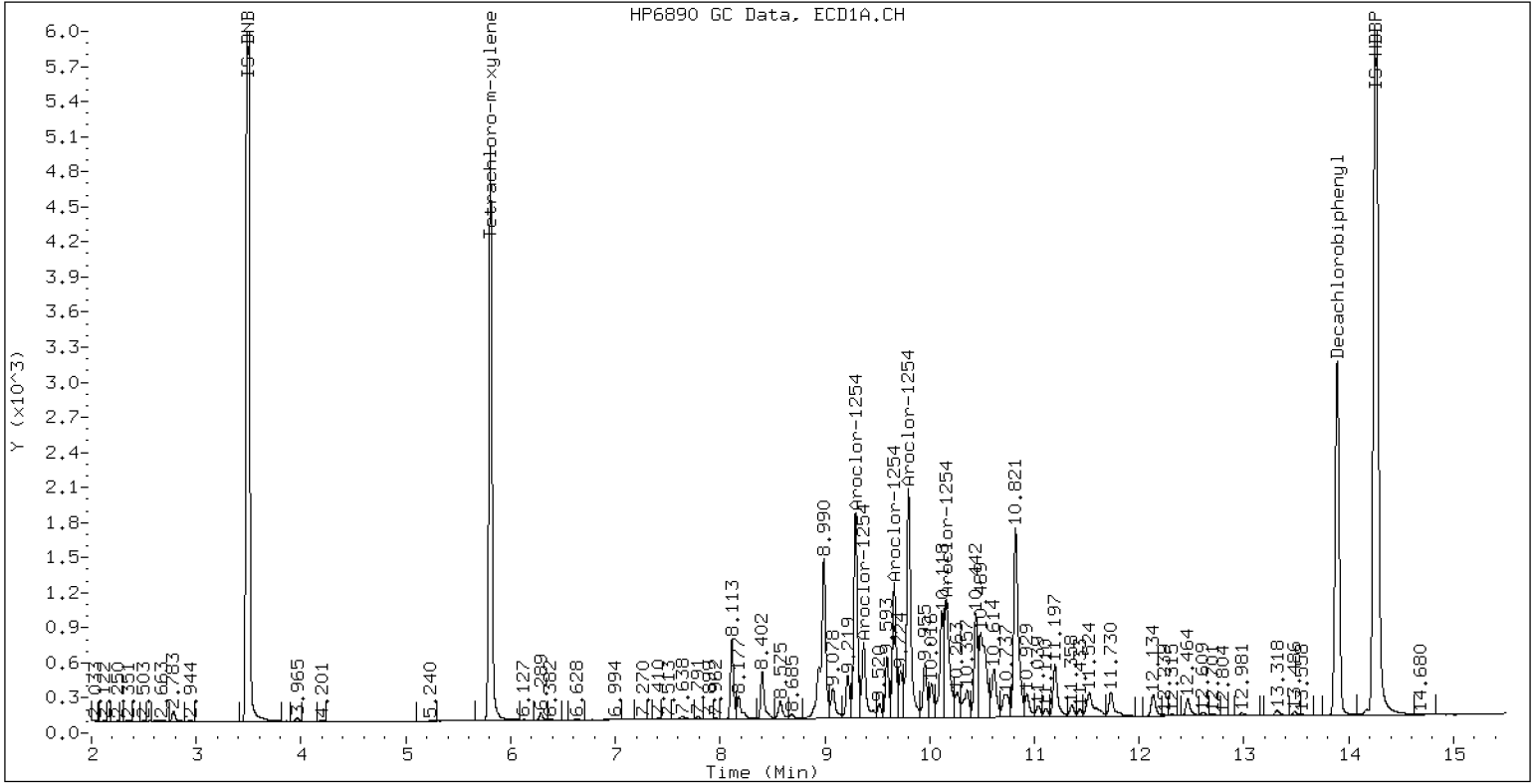
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1

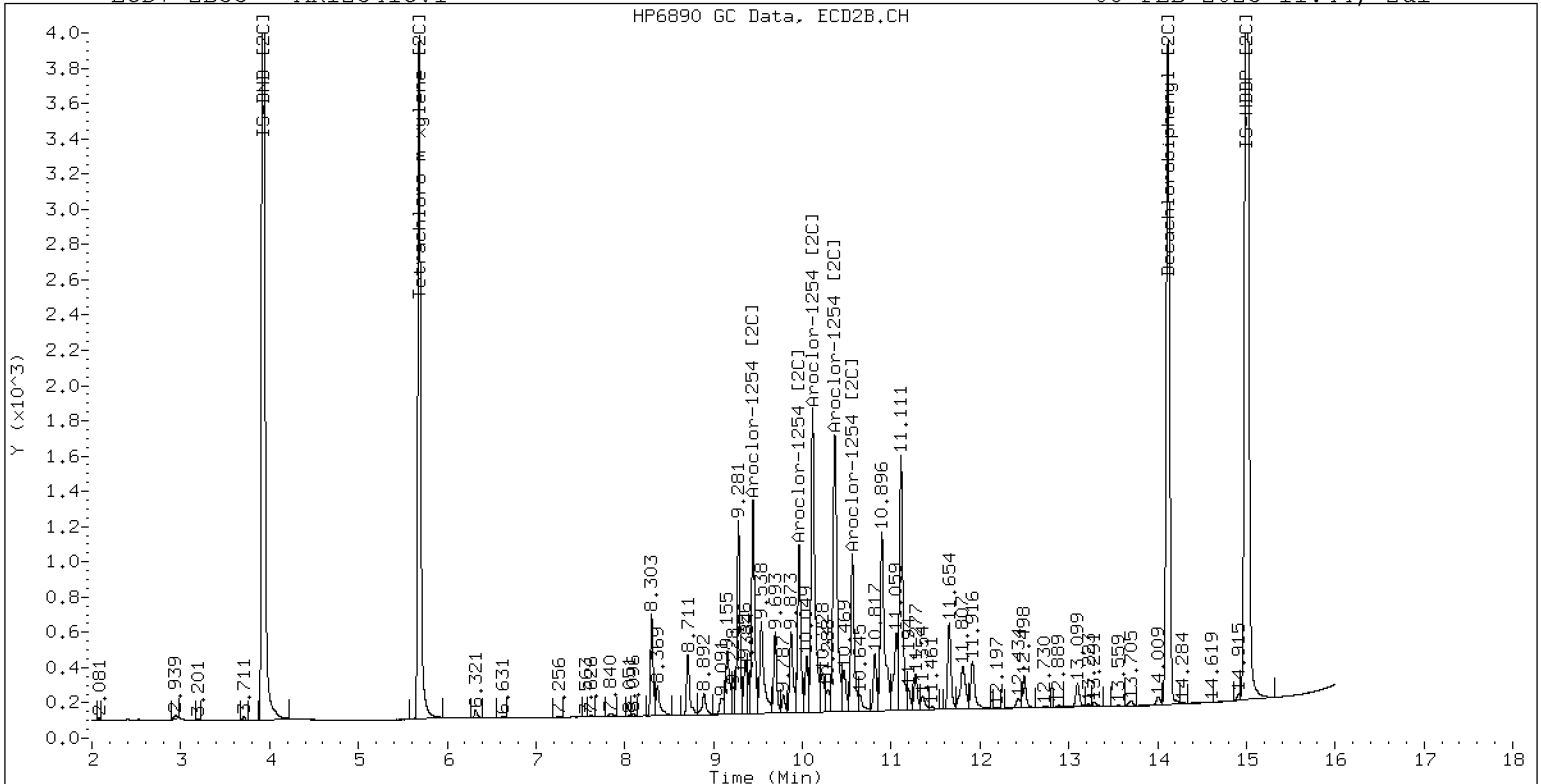
08-FEB-2023 11:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1

08-FEB-2023 11:44, 2ul



ZB-35 Manual Integration: NO



INITIAL CALIBRATION CHECK  
EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02082308ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0127

Injection Date: 02/08/23

Lab Sample ID: SLB0127-ICV2

Injection Time: 12:05

Sequence Name: AR1660ICV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	234	0.0506755	0.0475020		-6.4	+/-20
Aroclor-1016 (1)	A	250.00	239	0.0297277	0.0284165		-4.4	
Aroclor-1016 (2)	A	250.00	239	0.0985017	0.0941642		-4.4	
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0392036		-13.6	
Aroclor-1016 (4)	A	250.00	242	0.0291533	0.0282237		-3.2	
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0511697		-1.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	243	0.0433907	0.0421376		-2.8	
Aroclor-1016 (2) [2C]	A	250.00	248	0.0950862	0.0943809		-0.8	
Aroclor-1016 (3) [2C]	A	250.00	251	0.0388014	0.0390328		0.4	
Aroclor-1016 (4) [2C]	A	250.00	239	0.0304194	0.0291275		-4.4	
Aroclor 1260	A	250.00	199	0.0605224	0.0478827		-20.5	+/-20 *
Aroclor-1260 (1)	A	250.00	220	0.0448870	0.0394552		-12.0	
Aroclor-1260 (2)	A	250.00	206	0.0461412	0.0379696		-17.6	
Aroclor-1260 (3)	A	250.00	193	0.1214672	0.0936536		-22.8	
Aroclor-1260 (4)	A	250.00	192	0.0627593	0.0483287		-23.2	
Aroclor-1260 (5)	A	250.00	183	0.0273573	0.0200062		-26.8	
Aroclor 1260 [2C]	A	250.00	242	0.0836545	0.0800784		-3.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	240	0.0577136	0.0554773		-4.0	
Aroclor-1260 (2) [2C]	A	250.00	238	0.1460113	0.1392976		-4.8	
Aroclor-1260 (3) [2C]	A	250.00	254	0.0363944	0.0369775		1.6	
Aroclor-1260 (4) [2C]	A	250.00	234	0.0944986	0.0885613		-6.4	
Decachlorobiphenyl	A	40.000	33.5	0.8555994	0.7175636		-16.3	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.1307870	1.1137980		-1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.4	1.2696430	1.0906170		-14.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.5	1.0814980	1.0692810		-1.3	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082308ECD7.D  
Data file 2: /230208.b/230208.b/02082308ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660ICV2  
Client ID:  
Injection Date: 08-FEB-2023 12:05  
Report Date: 02/09/2023 10:55  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	214434	5.685	0.000	185208	39.4	39.5	0.4	Tetrachloro-m-xylene
13.889	0.000	179444	14.117	0.000	213551	33.5	34.4	2.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	385050	-23.5
Hexabromobiphenyl	647433	500148	-22.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	346416	2.8
Hexabromobiphenyl	382032	391615	2.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	0.000	34193	239.0	1	7.253	-0.000	45616	242.8
Aroclor-1016	2	7.649	0.000	113306	239.0	2	7.849	0.001	102172	248.1
Aroclor-1016	3	7.787	0.000	47173	216.3	3	8.049	0.000	42255	251.5
Aroclor-1016	4	8.401	0.000	33961	242.0	4	8.303	-0.000	31532	239.4
Total CollAve (4 peaks):				234.1		Total Col2Ave (4 peaks):				245.4 RPD = 5
Corrected Ave (3 peaks):				231.4		Corrected Ave (3 peaks):				243.4 RPD = 5

CalAmt %D: -6.4

CalAmt %D: -1.8

Aroclor-1260	1	11.040	0.000	61667	219.7	1	11.649	0.000	67893	240.3
Aroclor-1260	2	11.356	0.000	59345	205.7	2	11.913	0.001	170472	238.5
Aroclor-1260	3	11.728	0.000	146377	192.8	3	12.431	0.000	45253	254.0
Aroclor-1260	4	12.131	0.000	75536	192.5	4	12.497	0.002	108381	234.3
Aroclor-1260	5	12.239	0.000	31269	182.8	NS	---			----
Total CollAve (5 peaks):				198.7		Total Col2Ave (4 peaks):				241.8 RPD = 20
Corrected Ave (4 peaks):				193.5		Corrected Ave (3 peaks):				237.7 RPD = 21

CalAmt %D: -20.5

CalAmt %D: -3.3

Total PCB Area Coll (5.908 - 13.789) = 1821238 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1716136 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

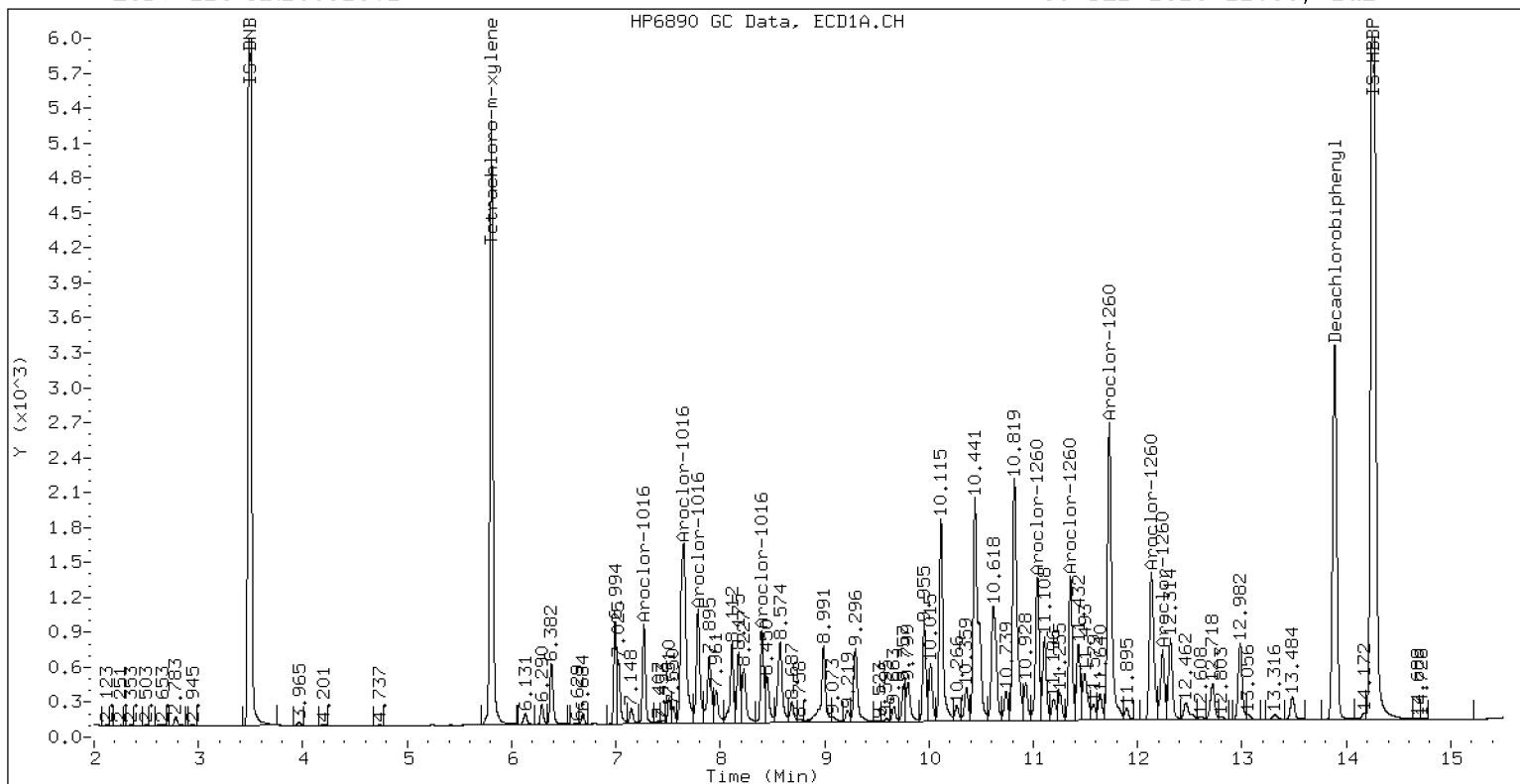
PCB-Form 10 Mod.



# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2

08-FEB-2023 12:05, 2ul





**INITIAL CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092306ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/09/23</u>
Lab Sample ID:	<u>SLB0148-ICV1</u>	Injection Time:	<u>13:59</u>
Sequence Name:	<u>AR1254ICV1</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	224	0.0675033	0.0609094		-10.5	+/-20
Aroclor-1254 (1)	A	250.00	228	0.0815329	0.0745149			
Aroclor-1254 (2)	A	250.00	213	0.0348121	0.0296052			
Aroclor-1254 (3)	A	250.00	228	0.0522405	0.0477492			
Aroclor-1254 (4)	A	250.00	229	0.1023658	0.0937434			
Aroclor-1254 (5)	A	250.00	221	0.0665652	0.0589343			
Aroclor 1254 [2C]	A	250.00	233	0.0733219	0.0684929		-7.0	+/-20
Aroclor-1254 (1) [2C]	A	250.00	239	0.0580388	0.0554127			
Aroclor-1254 (2) [2C]	A	250.00	239	0.0469118	0.0449159			
Aroclor-1254 (3) [2C]	A	250.00	234	0.1023304	0.0958714			
Aroclor-1254 (4) [2C]	A	250.00	239	0.1023323	0.0978462			
Aroclor-1254 (5) [2C]	A	250.00	212	0.0569963	0.0484183			
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8099570		-5.3	+/-20
Tetrachlorometaxylene	A	40.000	38.0	1.1307870	1.0757870		-5.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.6	1.2696430	1.1307770		-11.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.9	1.0814980	1.0241290		-5.3	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092306ECD7.D  
Data file 2: /230209.b/230209.b/02092306ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254ICV1  
Client ID:  
Injection Date: 09-FEB-2023 13:59  
Report Date: 02/10/2023 12:57  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.003	198224	5.682	-0.003	173339	38.1	37.9	0.5	Tetrachloro-m-xylene
13.890	-0.002	207643	14.116	0.001	268806	37.9	35.6	6.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	368519	-26.8
Hexabromobiphenyl	647433	512726	-20.8

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338510	0.5
Hexabromobiphenyl	382032	475436	24.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.293	-0.006	85813	228.5	1	9.444	-0.001	58618	238.7	
Aroclor-1254	2	9.372	-0.006	34094	212.6	2	9.963	-0.001	47514	239.4	
Aroclor-1254	3	9.662	-0.007	54989	228.5	3	10.115	-0.001	101417	234.2	
Aroclor-1254	4	9.800	-0.009	107957	228.9	4	10.366	-0.001	103506	239.0	
Aroclor-1254	5	10.162	-0.015	67870	221.3	5	10.563	-0.001	51219	212.4	
Total CollAve (5 peaks):				224.0	Total Col2Ave (5 peaks):				232.7	RPD = 4	
Corrected Ave (4 peaks):				222.7	Corrected Ave (4 peaks):				231.1	RPD = 4	
CalAmt %D:				-10.4	CalAmt %D:				-6.9		

Total PCB Area Col1 (5.909 - 13.792) = 1136674 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 993557 Col2 Total PCB = 0.3 ppm\*

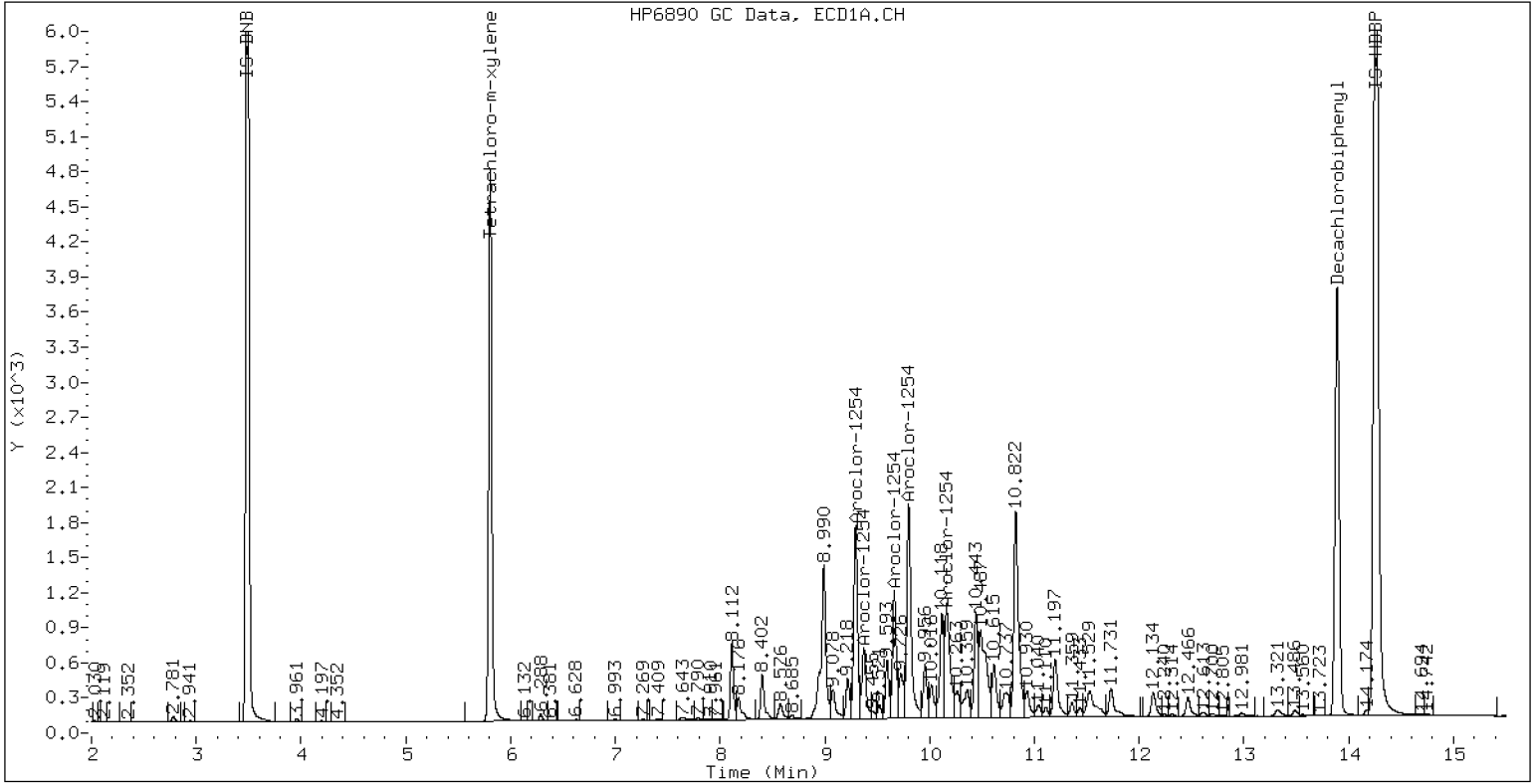
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1

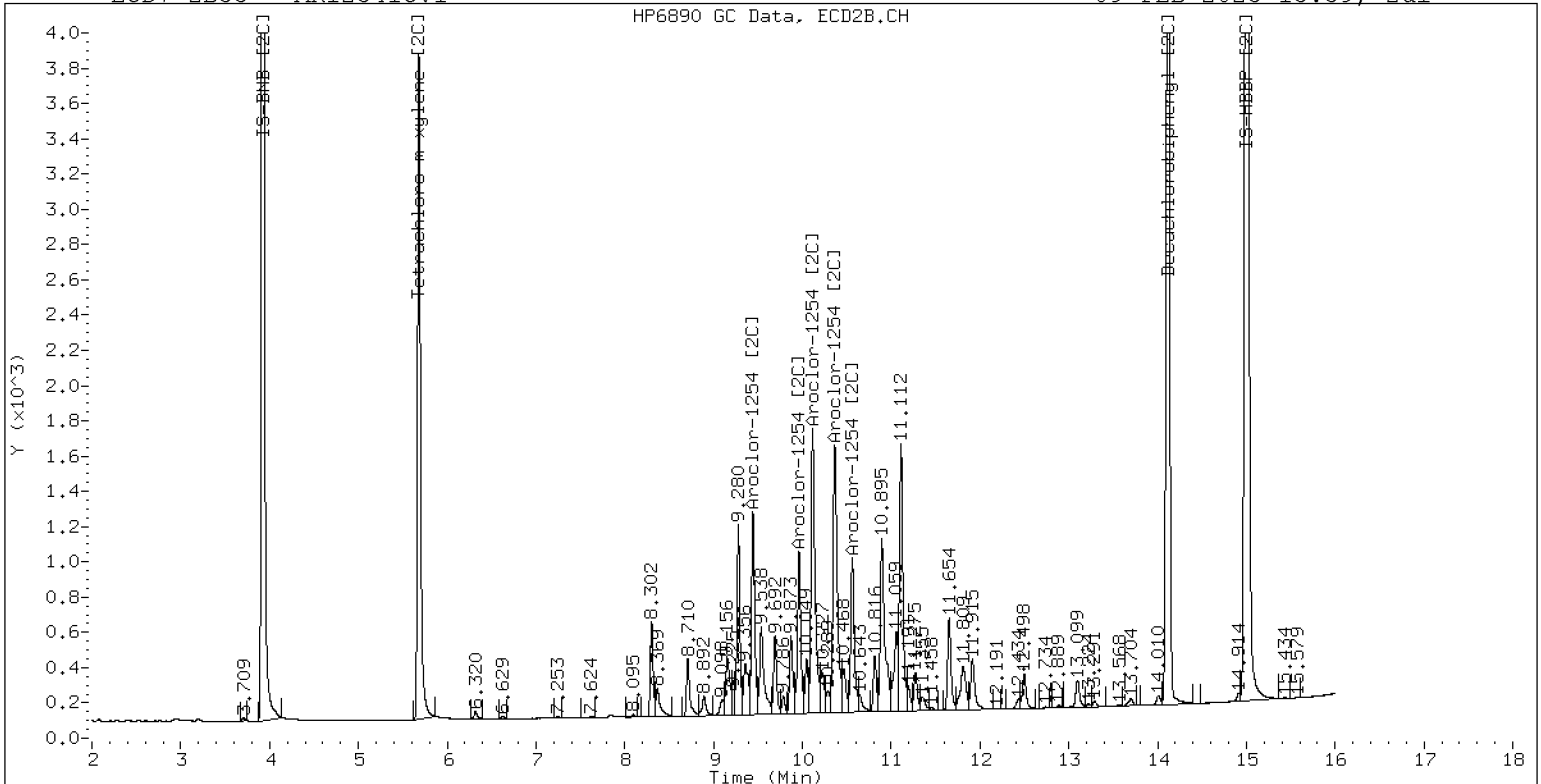
09-FEB-2023 13:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1

09-FEB-2023 13:59, 2ul



ZB-35 Manual Integration: NO



INITIAL CALIBRATION CHECK  
EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02092307ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0148

Injection Date: 02/09/23

Lab Sample ID: SLB0148-ICV2

Injection Time: 14:20

Sequence Name: AR1660ICV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	233	0.0506755	0.0472033		-6.8	+/-20
Aroclor-1016 (1)	A	250.00	240	0.0297277	0.0285872		-4.0	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0927611		-6.0	
Aroclor-1016 (3)	A	250.00	218	0.0453193	0.0396233		-12.8	
Aroclor-1016 (4)	A	250.00	239	0.0291533	0.0278418		-4.4	
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0506971		-2.0	+/-20
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0419321		-3.2	
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0922932		-2.8	
Aroclor-1016 (3) [2C]	A	250.00	251	0.0388014	0.0388997		0.4	
Aroclor-1016 (4) [2C]	A	250.00	244	0.0304194	0.0296635		-2.4	
Aroclor 1260	A	250.00	193	0.0605224	0.0471968		-22.6	+/-20 *
Aroclor-1260 (1)	A	250.00	198	0.0448870	0.0354910		-20.8	
Aroclor-1260 (2)	A	250.00	198	0.0461412	0.0366336		-20.8	
Aroclor-1260 (3)	A	250.00	197	0.1214672	0.0957022		-21.2	
Aroclor-1260 (4)	A	250.00	192	0.0627593	0.0482645		-23.2	
Aroclor-1260 (5)	A	250.00	182	0.0273573	0.0198928		-27.2	
Aroclor 1260 [2C]	A	250.00	213	0.0836545	0.0706119		-15.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	208	0.0577136	0.0479563		-16.8	
Aroclor-1260 (2) [2C]	A	250.00	209	0.1460113	0.1222471		-16.4	
Aroclor-1260 (3) [2C]	A	250.00	222	0.0363944	0.0323908		-11.2	
Aroclor-1260 (4) [2C]	A	250.00	211	0.0944986	0.0798534		-15.6	
Decachlorobiphenyl	A	40.000	33.8	0.8555994	0.7232482		-15.5	+/-20
Tetrachlorometaxylene	A	40.000	39.8	1.1307870	1.1243980		-0.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1438630		-10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.9	1.0814980	1.0528570		-2.8	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092307ECD7.D  
Data file 2: /230209.b/230209.b/02092307ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660ICV2  
Client ID:  
Injection Date: 09-FEB-2023 14:20  
Report Date: 02/10/2023 12:57  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.805	-0.004	201274	5.684	-0.002	174491	39.8	38.9	2.1	Tetrachloro-m-xylene
13.889	-0.002	211472	14.117	0.003	272526	33.8	36.0	6.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	358012	-28.9
Hexabromobiphenyl	647433	584784	-9.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331462	-1.6
Hexabromobiphenyl	382032	476501	24.7

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 24-JAN-2023

<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.267	-0.003	31983	240.4	1	7.252	-0.001	43434	241.6	
Aroclor-1016	2	7.649	-0.001	103780	235.4	2	7.850	-0.000	95599	242.7	
Aroclor-1016	3	7.786	-0.002	44330	218.6	3	8.048	-0.000	40293	250.6	
Aroclor-1016	4	8.401	-0.003	31149	238.8	4	8.302	-0.001	30726	243.8	
Total CollAve (4 peaks):				233.3		Total Col2Ave (4 peaks):				244.7	RPD = 5
Corrected Ave (3 peaks):				230.9		Corrected Ave (3 peaks):				242.7	RPD = 5

CalAmt %D: -6.7

CalAmt %D: -2.1

Aroclor-1260	1	11.039	-0.004	64858	197.7	1	11.649	-0.001	71410	207.7	
Aroclor-1260	2	11.356	-0.004	66946	198.5	2	11.913	-0.000	182034	209.3	
Aroclor-1260	3	11.729	-0.006	174891	197.0	3	12.432	0.001	48232	222.5	
Aroclor-1260	4	12.133	-0.007	88201	192.3	4	12.497	0.000	118907	211.3	
Aroclor-1260	5	12.239	-0.005	36353	181.8	NS	---			----	
Total CollAve (5 peaks):				193.4		Total Col2Ave (4 peaks):				212.7	RPD = 9
Corrected Ave (4 peaks):				192.2		Corrected Ave (3 peaks):				209.4	RPD = 9

CalAmt %D: -22.6

CalAmt %D: -14.9

Total PCB Area Coll (5.909 - 13.792) = 1847926 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1719768 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.







**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory: Analytical Resources, LLC                      SDG: 23A0206  
Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
Instrument ID: ECD7    Calibration: GA00061  
Lab File ID: 01242324ECD7.D                                      Calibration Date: 01/24/2023  
Sequence: SLA0281    Injection Date: 01/24/23  
Lab Sample ID: SLA0281-SCV1                                      Injection Time: 19:51  
Sequence Name: AR1660SCV1

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	217	0.0506755	0.0439293		-13.2	+/-20
Aroclor 1016 [2C]	A	250.00	220	0.0519244	0.0458194		-11.9	+/-20
Aroclor 1260	A	250.00	211	0.0605224	0.0508252		-15.7	+/-20
Aroclor 1260 [2C]	A	250.00	238	0.0836545	0.0795027		-4.9	+/-20
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8115673		-5.1	+/-20
Tetrachlorometaxylene	A	40.000	37.5	1.1307870	1.0610020		-6.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.2	1.2696430	1.2773160		0.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.0814980	1.0082190		-6.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D  
Data file 2: /230124.b/230124.b/01242324ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660 SCV  
Client ID:  
Injection Date: 24-JAN-2023 19:51  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total CollAve (4 peaks):				216.9		Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):				216.3		Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total CollAve (3 peaks):				74.4		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total CollAve (4 peaks):				279.8		Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):				202.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total CollAve (4 peaks):				262.0		Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):				260.1		Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total CollAve (4 peaks):				137.3		Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):				124.4		Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total CollAve (4 peaks):				97.4		Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):				35.3		Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total CollAve (5 peaks):				210.7		Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):				208.2		Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total CollAve (4 peaks):				205.3		Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):				124.9		Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total CollAve (4 peaks):				32.1		Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):				24.7		Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm\*

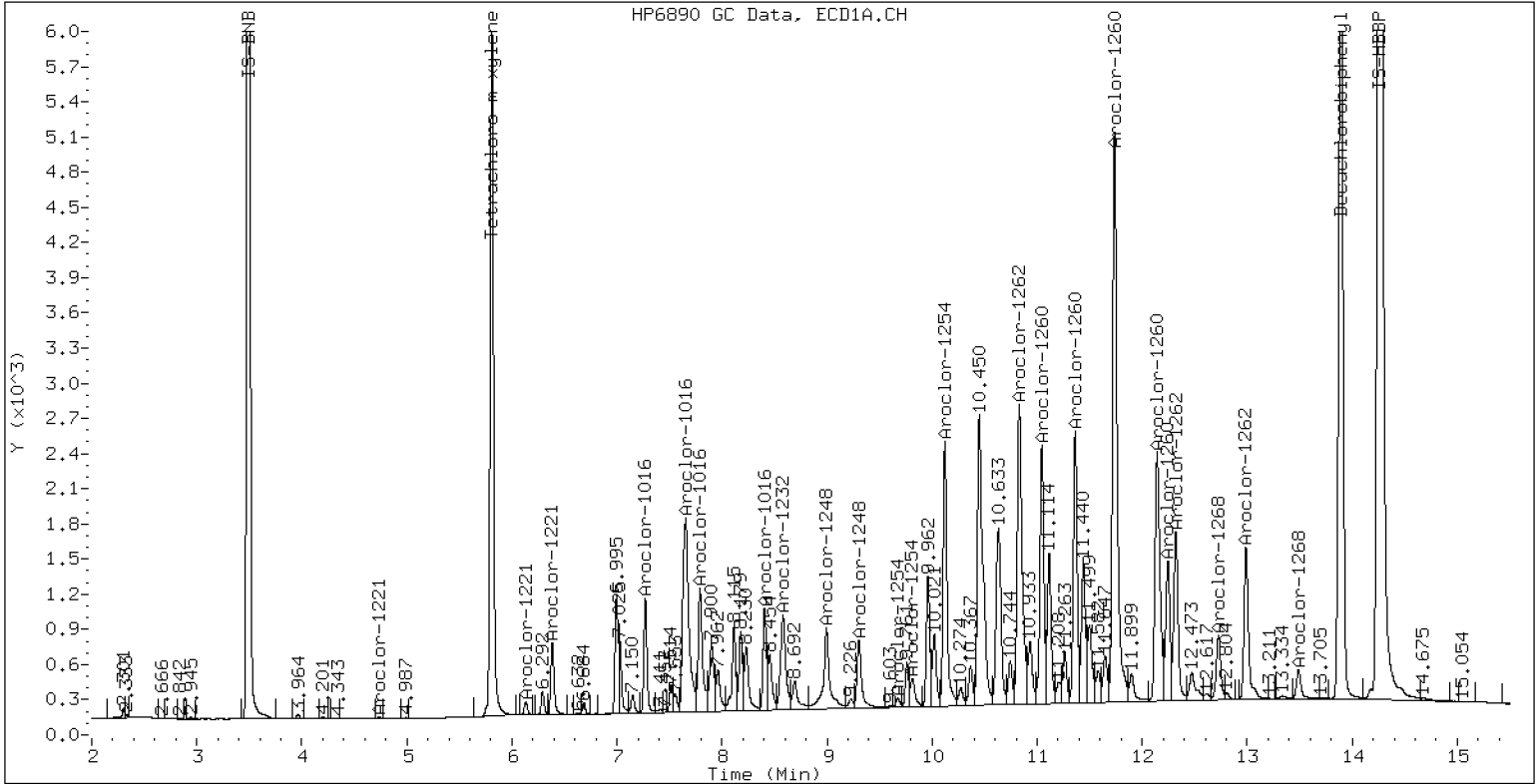
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV

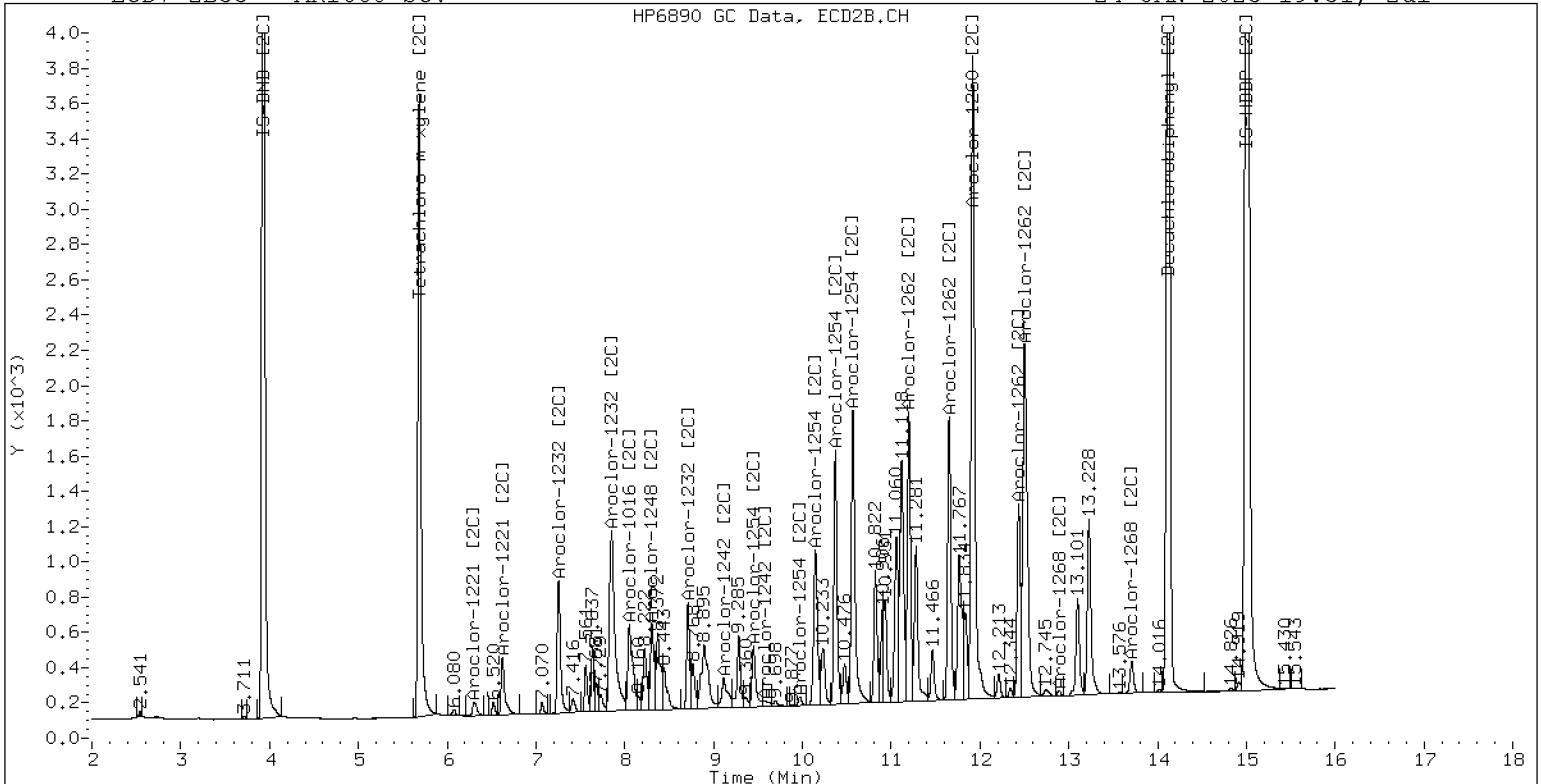
24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV

24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>01242325ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLA0281</u>	Injection Date:	<u>01/24/23</u>
Lab Sample ID:	<u>SLA0281-SCV2</u>	Injection Time:	<u>20:12</u>
Sequence Name:	<u>AR1242SCV2</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	223	0.0411165	0.0365437		-10.9	+/-20
Aroclor 1242 [2C]	A	250.00	235	0.0423236	0.0386405		-5.9	+/-20
Decachlorobiphenyl	A	40.000	38.5	0.8555994	0.8244733		-3.6	+/-20
Tetrachlorometaxylene	A	40.000	37.8	1.1307870	1.0677240		-5.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.2696430	1.2804690		0.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.4	1.0814980	1.0101840		-6.6	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D  
Data file 2: /230124.b/230124.b/01242325ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:12  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)



ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total CollAve (4 peaks):				167.7		Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):				163.7		Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total CollAve (3 peaks):				57.3		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total CollAve (4 peaks):				254.6		Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):				162.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total CollAve (4 peaks):				222.6		Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):				209.0		Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total CollAve (4 peaks):				131.8		Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):				113.9		Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total CollAve (5 peaks):				42.7		Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):				39.6		Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total CollAve (4 peaks):				1.2		Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):				0.9		Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total CollAve (3 peaks):				11.0		Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total CollAve (3 peaks):				1.9		Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>01242326ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLA0281</u>	Injection Date:	<u>01/24/23</u>
Lab Sample ID:	<u>SLA0281-SCV3</u>	Injection Time:	<u>20:33</u>
Sequence Name:	<u>AR1248SCV3</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	237	0.0592639	0.0563710		-5.1	+/-20
Aroclor 1248 [2C]	A	250.00	231	0.0453673	0.0417577		-7.6	+/-20
Decachlorobiphenyl	A	40.000	38.3	0.8555994	0.8184425		-4.3	+/-20
Tetrachlorometaxylene	A	40.000	36.8	1.1307870	1.0389130		-8.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.2696430	1.2561970		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.5	1.0814980	0.9880182		-8.6	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D  
Data file 2: /230124.b/230124.b/01242326ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:33  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total CollAve (4 peaks):				152.0		Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):				94.9		Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total CollAve (3 peaks):				316.9		Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total CollAve (4 peaks):				240.5		Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):				188.8		Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total CollAve (4 peaks):				237.2		Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):				236.3		Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total CollAve (5 peaks):				115.3		Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):				102.7		Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total CollAve (5 peaks):				2.2		Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):				1.9		Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total CollAve (4 peaks):				8.9		Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):				1.2		Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total CollAve (4 peaks):				0.6		Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):				0.5		Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm\*

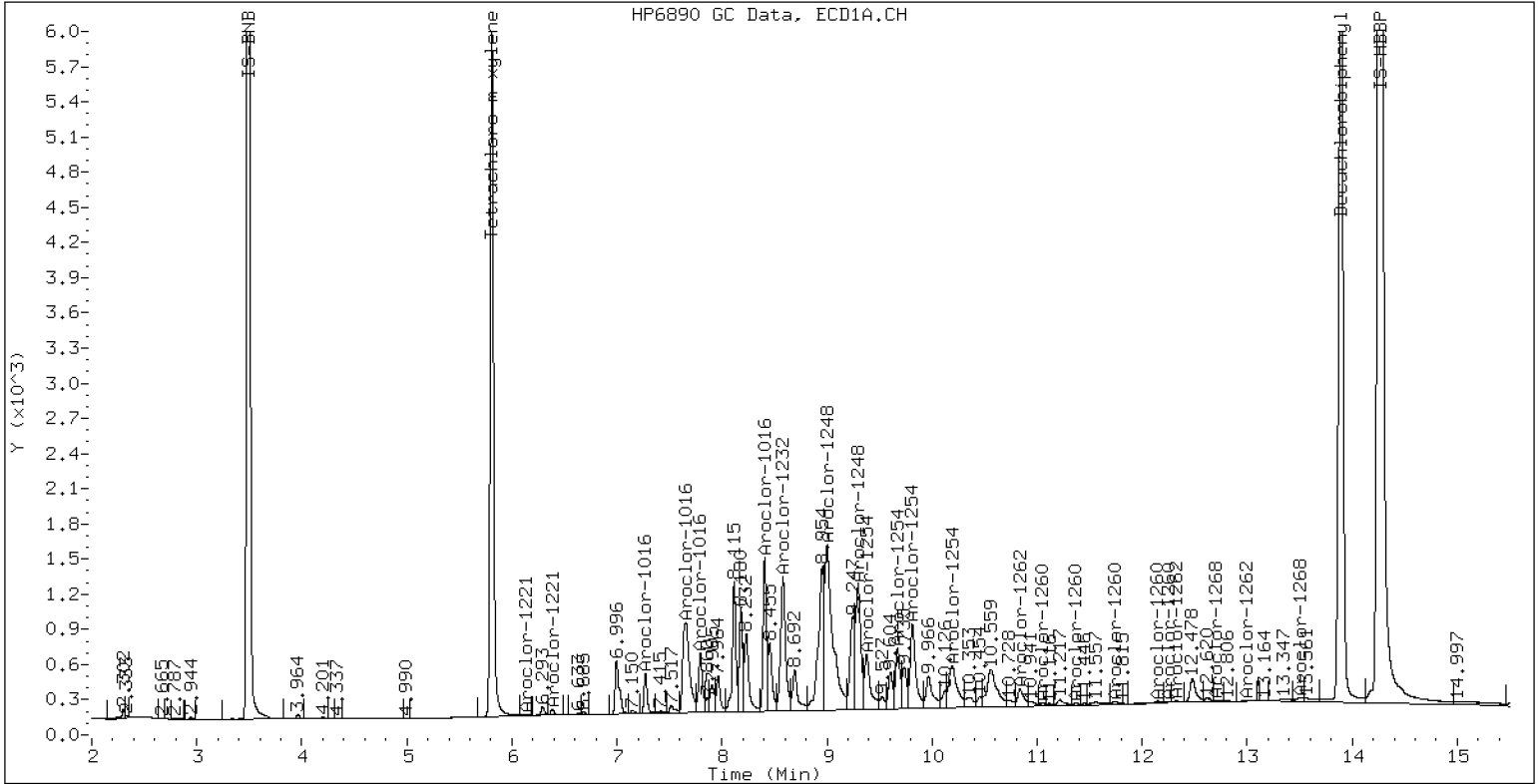
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV

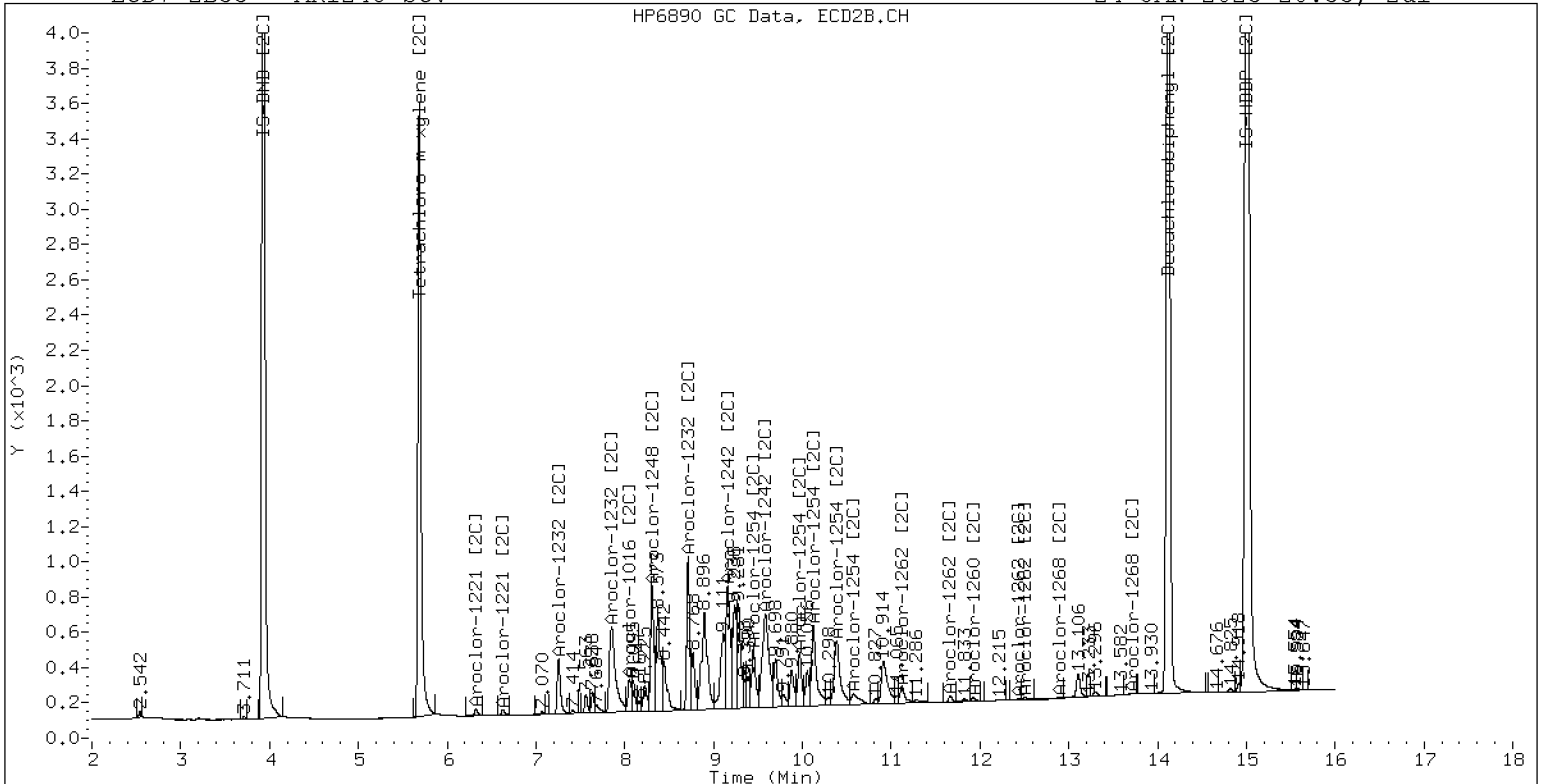
24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV

24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO





**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>01242327ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLA0281</u>	Injection Date:	<u>01/24/23</u>
Lab Sample ID:	<u>SLA0281-SCV4</u>	Injection Time:	<u>20:54</u>
Sequence Name:	<u>AR1254SCV4</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	221	0.0675033	0.0594048		-11.7	+/-20
Aroclor 1254 [2C]	A	250.00	227	0.0733219	0.0662023		-9.4	+/-20
Decachlorobiphenyl	A	40.000	37.1	0.8555994	0.7930764		-7.3	+/-20
Tetrachlorometaxylene	A	40.000	36.7	1.1307870	1.0364220		-8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2551640		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0814980	0.9904044		-8.4	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D  
Data file 2: /230124.b/230124.b/01242327ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254 SCV  
Client ID:  
Injection Date: 24-JAN-2023 20:54  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8	
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0	
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1	
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8	
Total CollAve (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9	RPD = 55*	
Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks						
Aroclor-1221	1	---			0.0	1	---			0.0	
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7	
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	---			0.0	1	---			0.0	
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9	
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0	
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5	
CollAve: <3 Quant Peaks					Col2Ave: <3 Quant Peaks						
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2	
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0	
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9	
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7	
Total CollAve (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6	RPD = 114*	
Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks						
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9	
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1	
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4	
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4	
Total CollAve (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7	RPD = 31	
Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks): 115.5 RPD = 17						
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9	
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4	
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2	
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2	
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0	
Total CollAve (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5	RPD = 3	
Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks): 224.7 RPD = 2						
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6	
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2	
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3	
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0	
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			---	
Total CollAve (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0	RPD = 105*	
Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks						
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3	
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0	
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9	
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0	
Total CollAve (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7	RPD = 39	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0	
Aroclor-1268	2	---			0.0	2	---			0.0	
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2	
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3	
Total CollAve (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8	RPD = 130*	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm\*

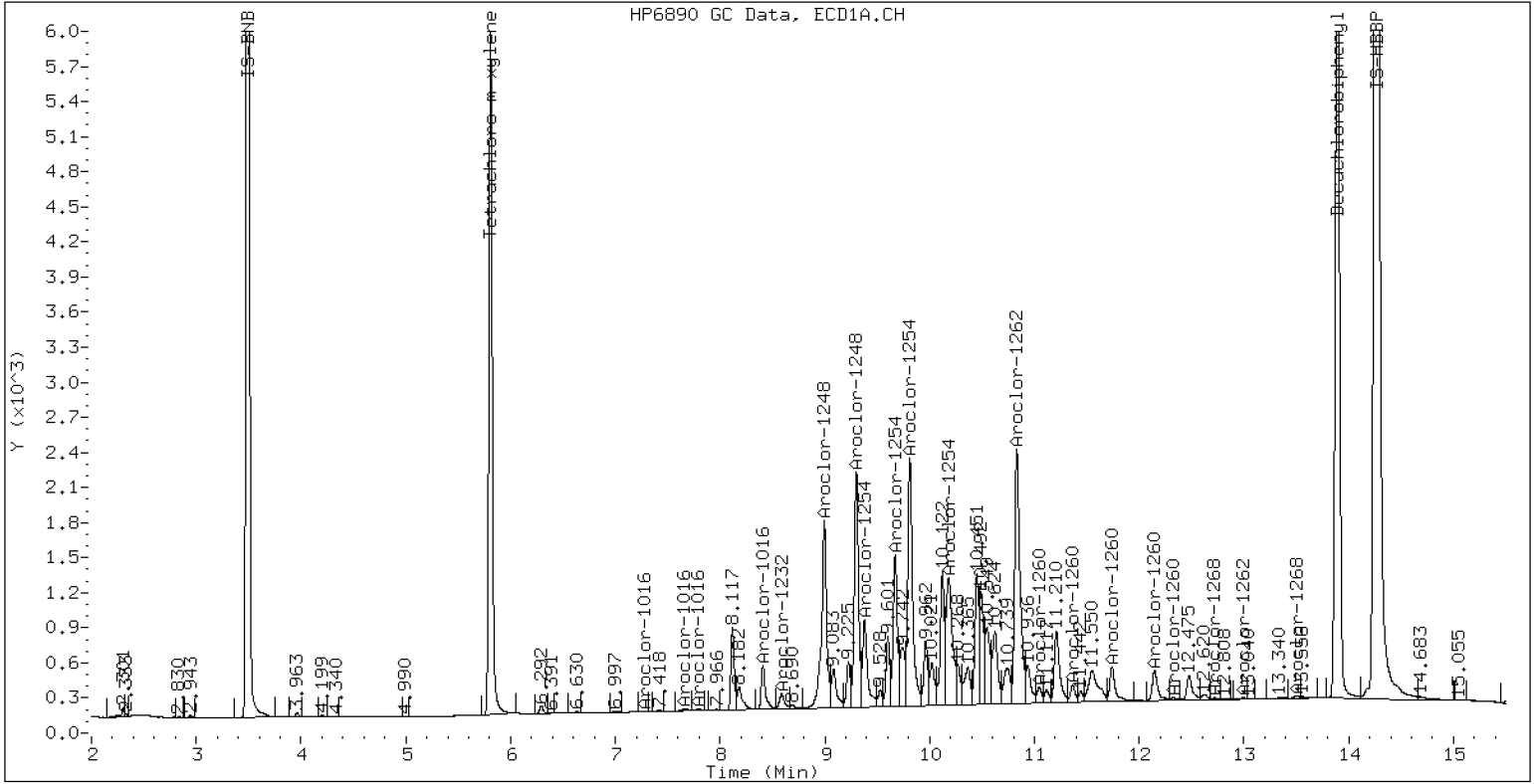
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV

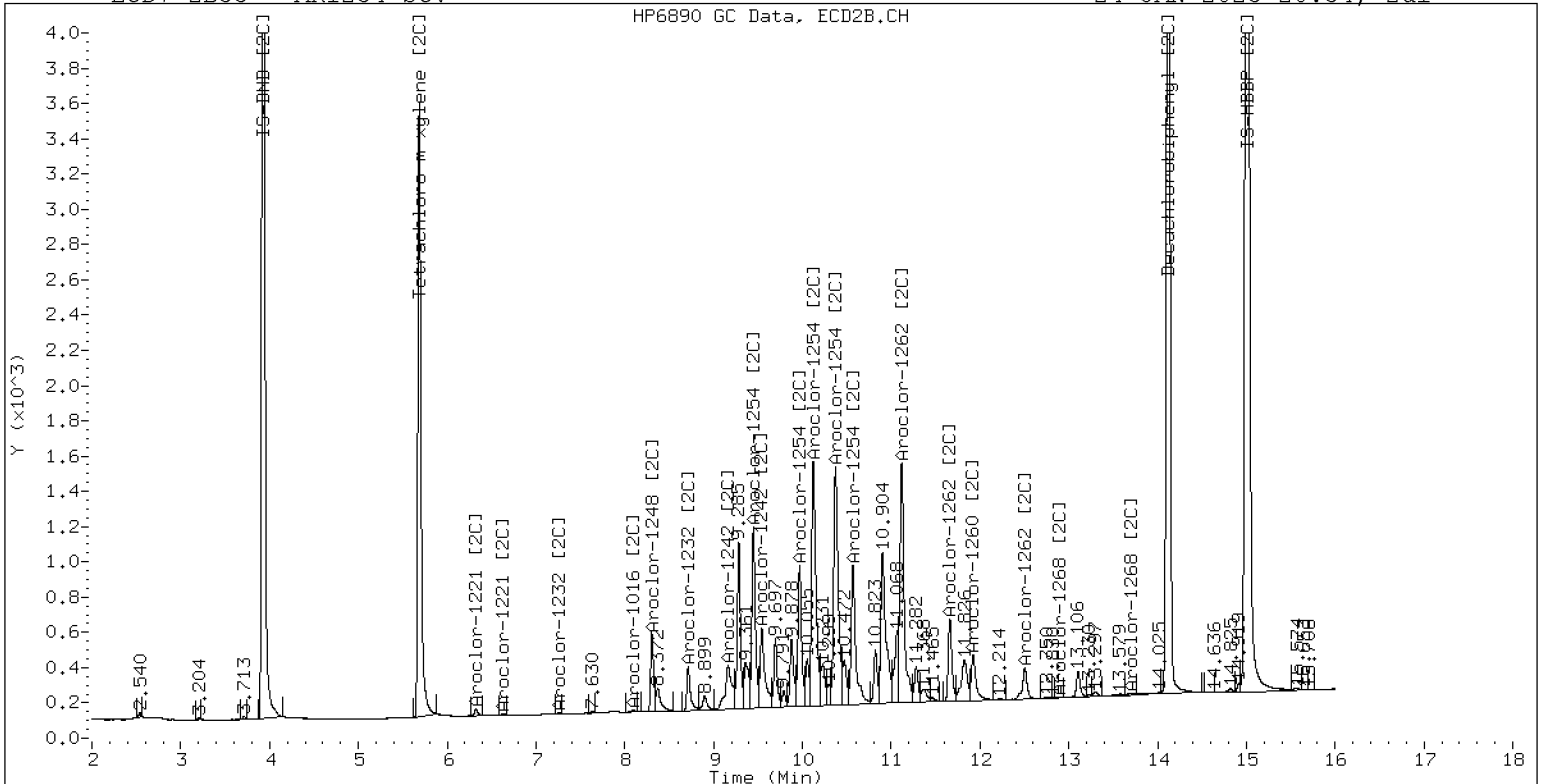
24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV

24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>01242328ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLA0281</u>	Injection Date:	<u>01/24/23</u>
Lab Sample ID:	<u>SLA0281-SCV5</u>	Injection Time:	<u>21:15</u>
Sequence Name:	<u>AR2162SCV5</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	228	0.0153579	0.0138791		-8.8	+/-20
Aroclor 1221 [2C]	A	250.00	239	0.0134687	0.0127460		-4.5	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8555994	0.8010750		-6.4	+/-20
Tetrachlorometaxylene	A	40.000	37.3	1.1307870	1.0541060		-6.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2528610		-1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.2	1.0814980	1.0047210		-7.1	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D  
Data file 2: /230124.b/230124.b/01242328ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR2162 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:15  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3	
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9	
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2	
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0	
Total CollAve (4 peaks):				22.4	Total Col2Ave (4 peaks):				22.1	RPD = 1	
Corrected Ave (3 peaks):				20.3	Corrected Ave (3 peaks):				17.3	RPD = 16	
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8	
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2	
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2	
Total CollAve (3 peaks):				228.1	Total Col2Ave (3 peaks):				238.7	RPD = 5	
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks						
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9	
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2	
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9	
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0	
Total CollAve (4 peaks):				192.6	Total Col2Ave (4 peaks):				141.7	RPD = 30	
Corrected Ave (3 peaks):				126.3	Corrected Ave (3 peaks):				53.4	RPD = 81*	
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1	
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9	
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9	
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6	
Total CollAve (4 peaks):				24.0	Total Col2Ave (4 peaks):				32.3	RPD = 30	
Corrected Ave (3 peaks):				20.5	Corrected Ave (3 peaks):				28.1	RPD = 31	
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4	
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3	
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7	
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9	
Total CollAve (4 peaks):				46.0	Total Col2Ave (4 peaks):				14.6	RPD = 104*	
Corrected Ave (3 peaks):				27.5	Corrected Ave (3 peaks):				11.5	RPD = 82*	
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3	
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3	
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5	
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9	
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5	
Total CollAve (5 peaks):				110.8	Total Col2Ave (5 peaks):				223.7	RPD = 68*	
Corrected Ave (4 peaks):				31.0	Corrected Ave (4 peaks):				133.5	RPD = 125*	
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4	
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0	
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7	
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5	
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----	
Total CollAve (5 peaks):				499.5	Total Col2Ave (4 peaks):				592.1	RPD = 17	
Corrected Ave (4 peaks):				426.6	Corrected Ave (3 peaks):				500.3	RPD = 16	
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1	
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0	
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4	
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6	
Total CollAve (4 peaks):				421.5	Total Col2Ave (4 peaks):				437.0	RPD = 4	
Corrected Ave (3 peaks):				419.8	Corrected Ave (3 peaks):				434.3	RPD = 3	
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0	
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7	
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3	
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8	
Total CollAve (4 peaks):				111.6	Total Col2Ave (4 peaks):				112.0	RPD = 0	



Corrected Ave (3 peaks): 89.3      Corrected Ave (3 peaks): 65.4      RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992      Col1 Total PCB = 0.8 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2874073      Col2 Total PCB = 0.8 ppm\*

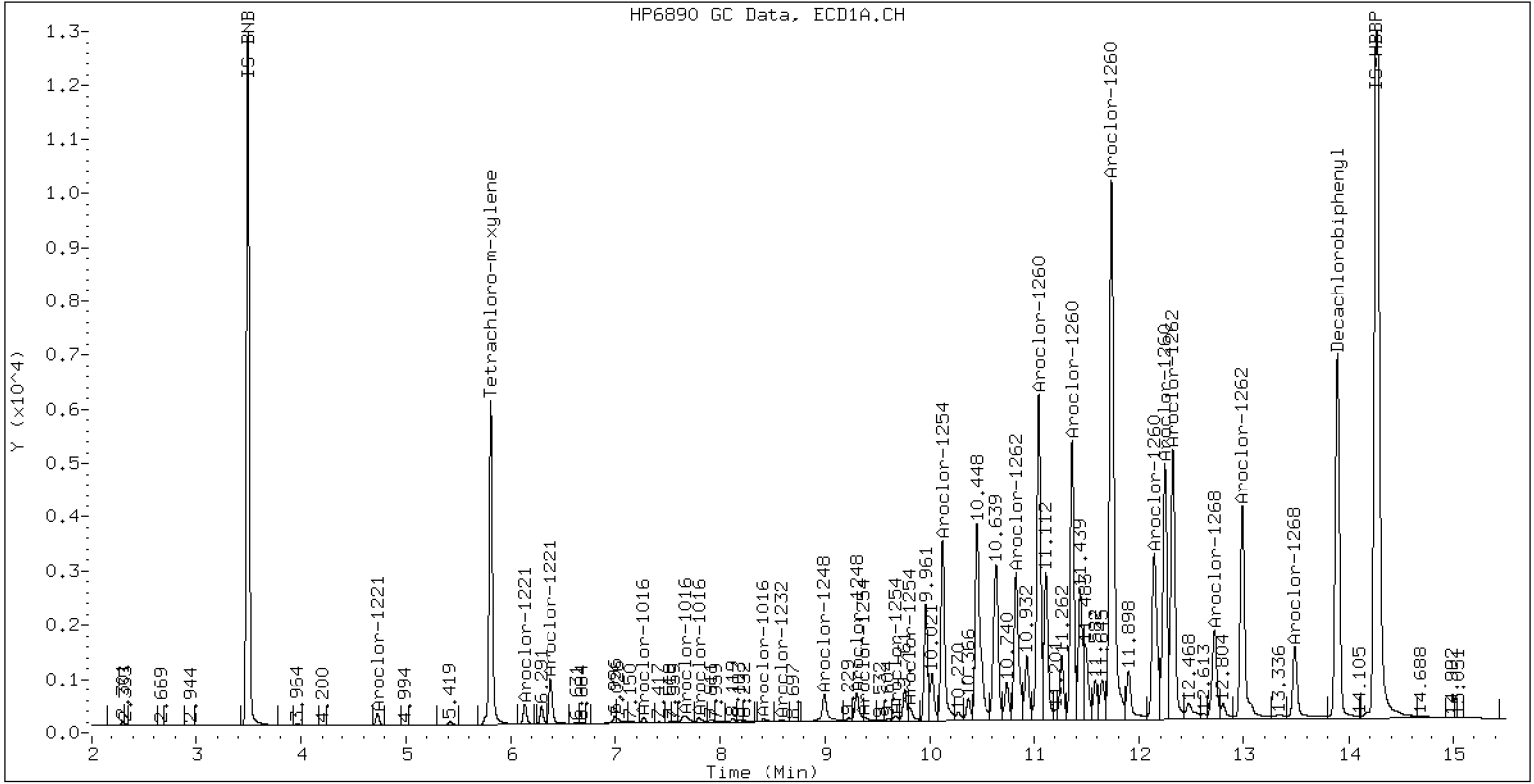
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV

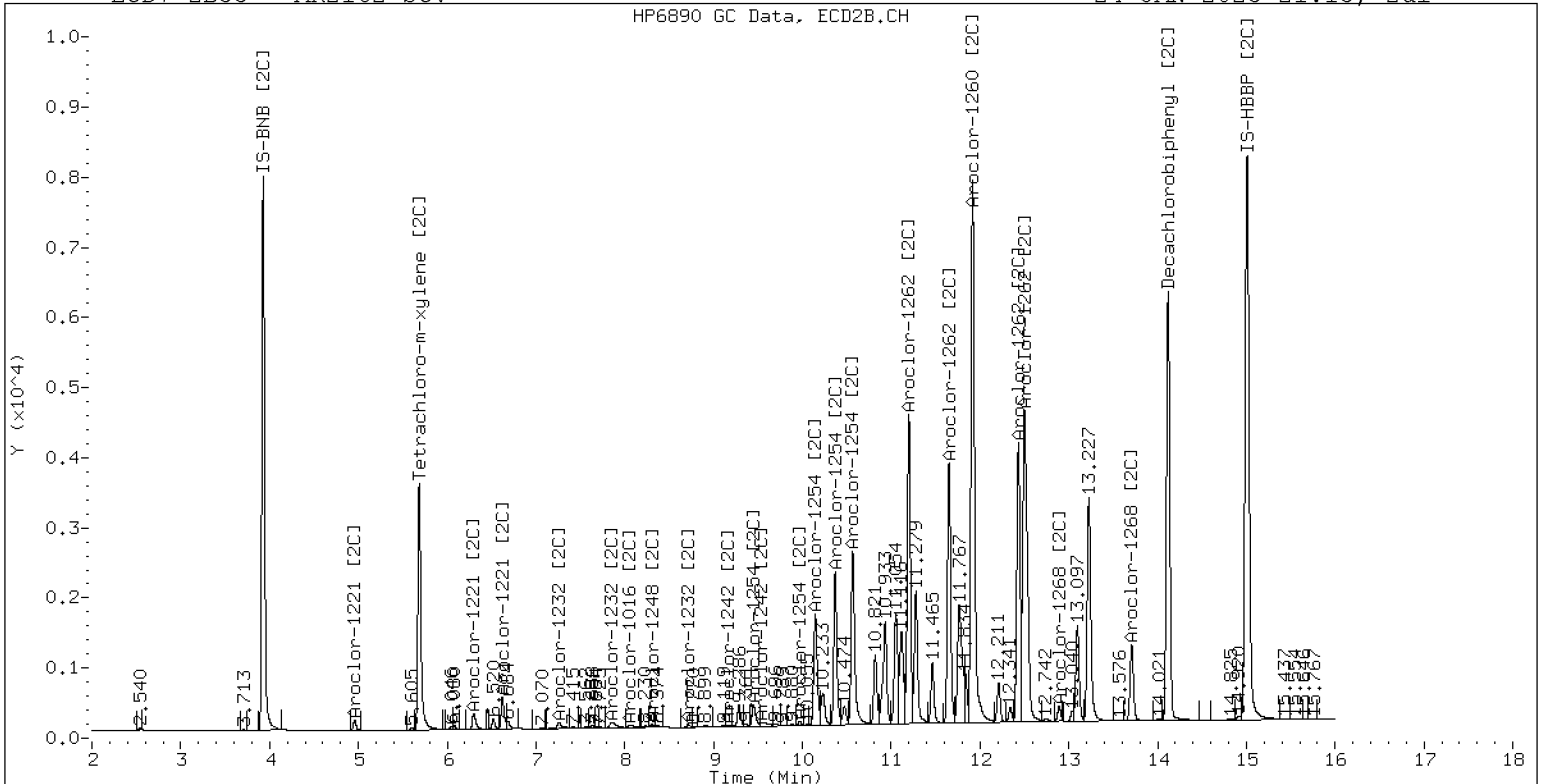
24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV

24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>01242329ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLA0281</u>	Injection Date:	<u>01/24/23</u>
Lab Sample ID:	<u>SLA0281-SCV6</u>	Injection Time:	<u>21:36</u>
Sequence Name:	<u>AR3268SCV6</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	216	0.0178560	0.0160358		-13.7	+/-20
Aroclor 1232 [2C]	A	250.00	239	0.0188178	0.0180429		-4.5	+/-20
Decachlorobiphenyl	A	40.000	54.6	0.8555994	1.1682210		36.5	+/-20
Tetrachlorometaxylene	A	40.000	36.4	1.1307870	1.0284340		-9.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	57.9	1.2696430	1.8387740		44.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.3	1.0814980	0.9815176		-9.2	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D  
Data file 2: /230124.b/230124.b/01242329ECD7.D  
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m  
Compound Sublist: PCB.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR3268 SCV  
Client ID:  
Injection Date: 24-JAN-2023 21:36  
Report Date: 01/25/2023 10:53  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total CollAve (4 peaks):				101.3		Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):				99.4		Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total CollAve (3 peaks):				144.5		Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total CollAve (4 peaks):				215.7		Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):				210.5		Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total CollAve (4 peaks):				121.0		Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):				118.0		Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total CollAve (4 peaks):				92.7		Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):				85.7		Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total CollAve (5 peaks):				31.1		Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):				23.3		Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total CollAve (5 peaks):				250.2		Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):				42.5		Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total CollAve (4 peaks):				340.7		Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):				261.2		Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total CollAve (4 peaks):				223.7		Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4      Corrected Ave (3 peaks): 215.4      RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.787 - 14.020) = 2084481      Col2 Total PCB = 0.6 ppm\*

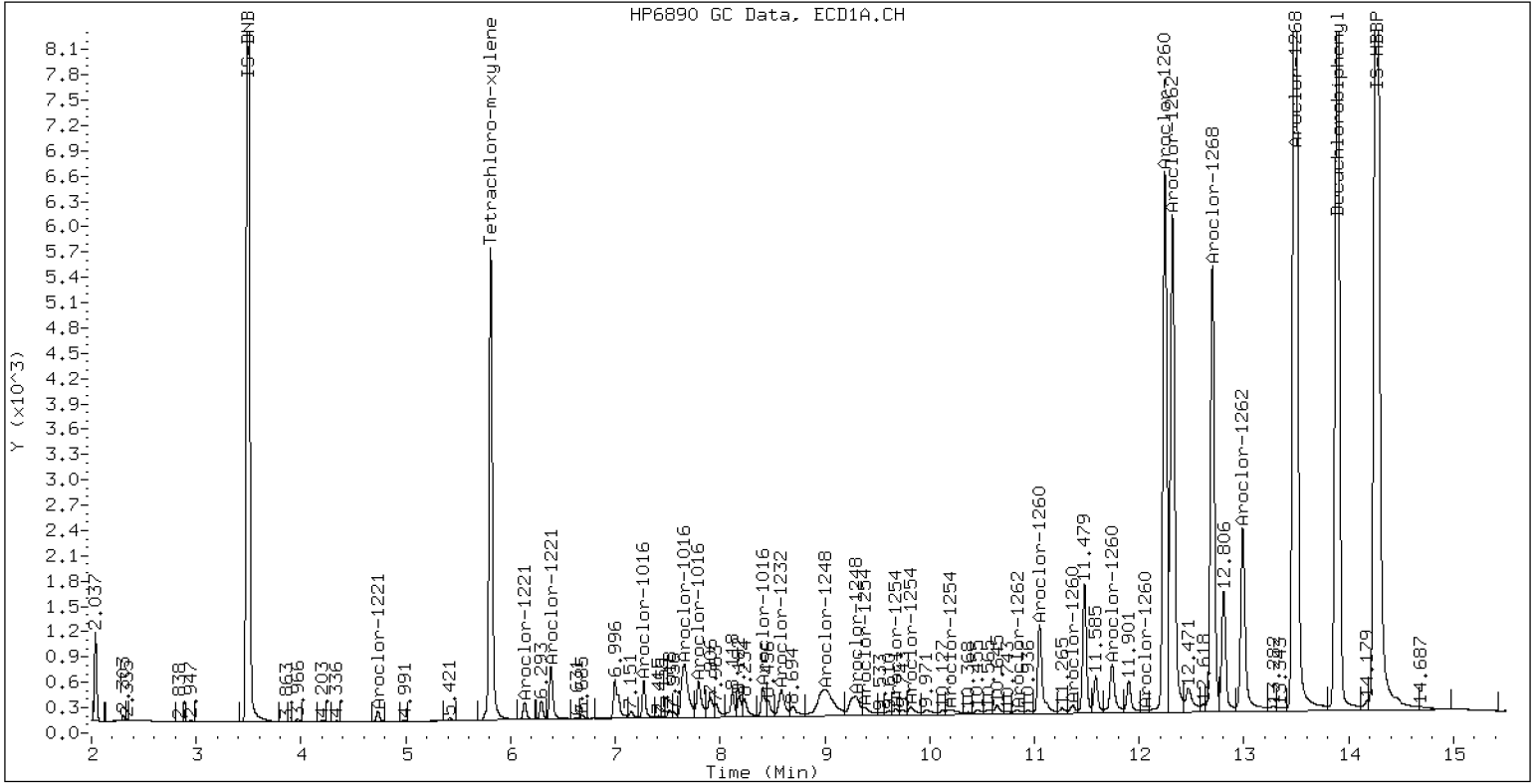
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV

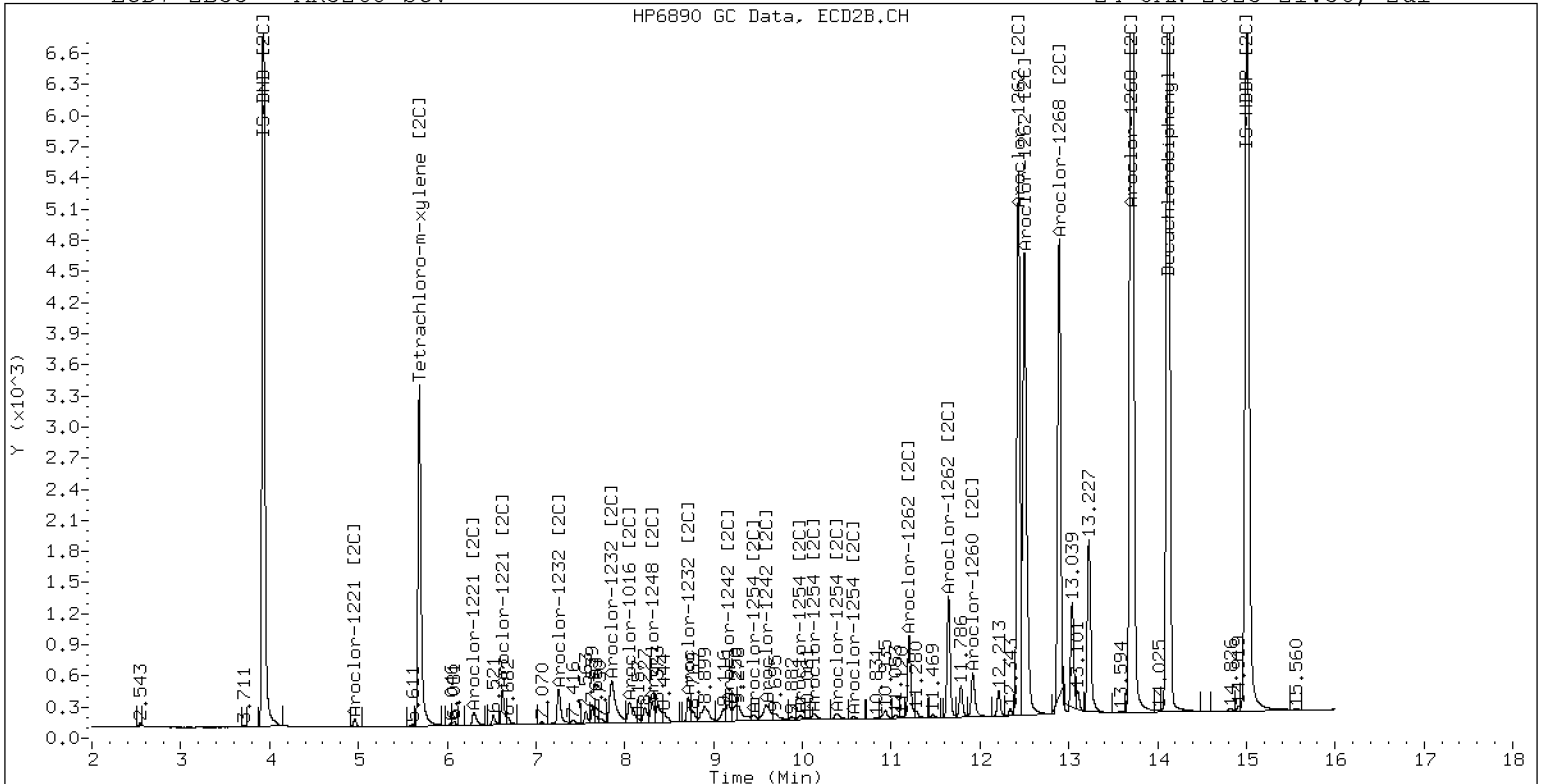
24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV

24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072305ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/07/23</u>
Lab Sample ID:	<u>SLB0109-CCV1</u>	Injection Time:	<u>14:05</u>
Sequence Name:	<u>AR1248CCV1</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	234	0.0592639	0.0552170		-6.3	+/-20
Aroclor-1248 (1)	A	250.00	264		0.0422431			
Aroclor-1248 (2)	A	250.00	257		0.0524809			
Aroclor-1248 (3)	A	250.00	231		0.0903932			
Aroclor-1248 (4)	A	250.00	185		0.0357508			
Aroclor 1248 [2C]	A	250.00	253	0.0453673	0.0457379		1.0	+/-20
Aroclor-1248 (1) [2C]	A	250.00	264		0.0382591			
Aroclor-1248 (2) [2C]	A	250.00	243		0.0378548			
Aroclor-1248 (3) [2C]	A	250.00	257		0.0488982			
Aroclor-1248 (4) [2C]	A	250.00	246		0.0579395			
Decachlorobiphenyl	A	40.000	35.5	0.8555994	0.7586242		-11.3	+/-20
Tetrachlorometaxylene	A	40.000	41.5	1.1307870	1.1743470		3.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.0	1.2696430	1.2064340		-5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.0	1.0814980	1.1361780		5.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072305ECD7.D  
Data file 2: /230207.b/230207.b/02072305ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248CCV1  
Client ID:  
Injection Date: 07-FEB-2023 14:05  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	214107	5.686	0.001	178505	41.5	42.0	1.2	Tetrachloro-m-xylene
13.888	0.000	231776	14.115	-0.002	247988	35.5	38.0	6.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	364640	-27.6
Hexabromobiphenyl	647433	611043	-5.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	314220	-6.7
Hexabromobiphenyl	382032	411109	7.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.401	0.000	48136	263.9	1	8.303	0.000	37568	264.5	
Aroclor-1248	2	8.574	0.000	59802	257.0	2	8.710	0.001	37171	243.1	
Aroclor-1248	3	8.994	0.000	103003	231.4	3	9.151	0.000	48015	257.0	
Aroclor-1248	4	9.292	0.000	40738	184.9	4	9.575	0.001	56893	246.3	
Total CollAve (4 peaks):				234.3	Total Col2Ave (4 peaks):				252.7	RPD = 8	
Corrected Ave (3 peaks):				224.4	Corrected Ave (3 peaks):				248.8	RPD = 10	
CalAmt %D:				-6.3	CalAmt %D:				1.1		

Total PCB Area Col1 (5.908 - 13.788) = 949355 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 726378 Col2 Total PCB = 0.2 ppm\*

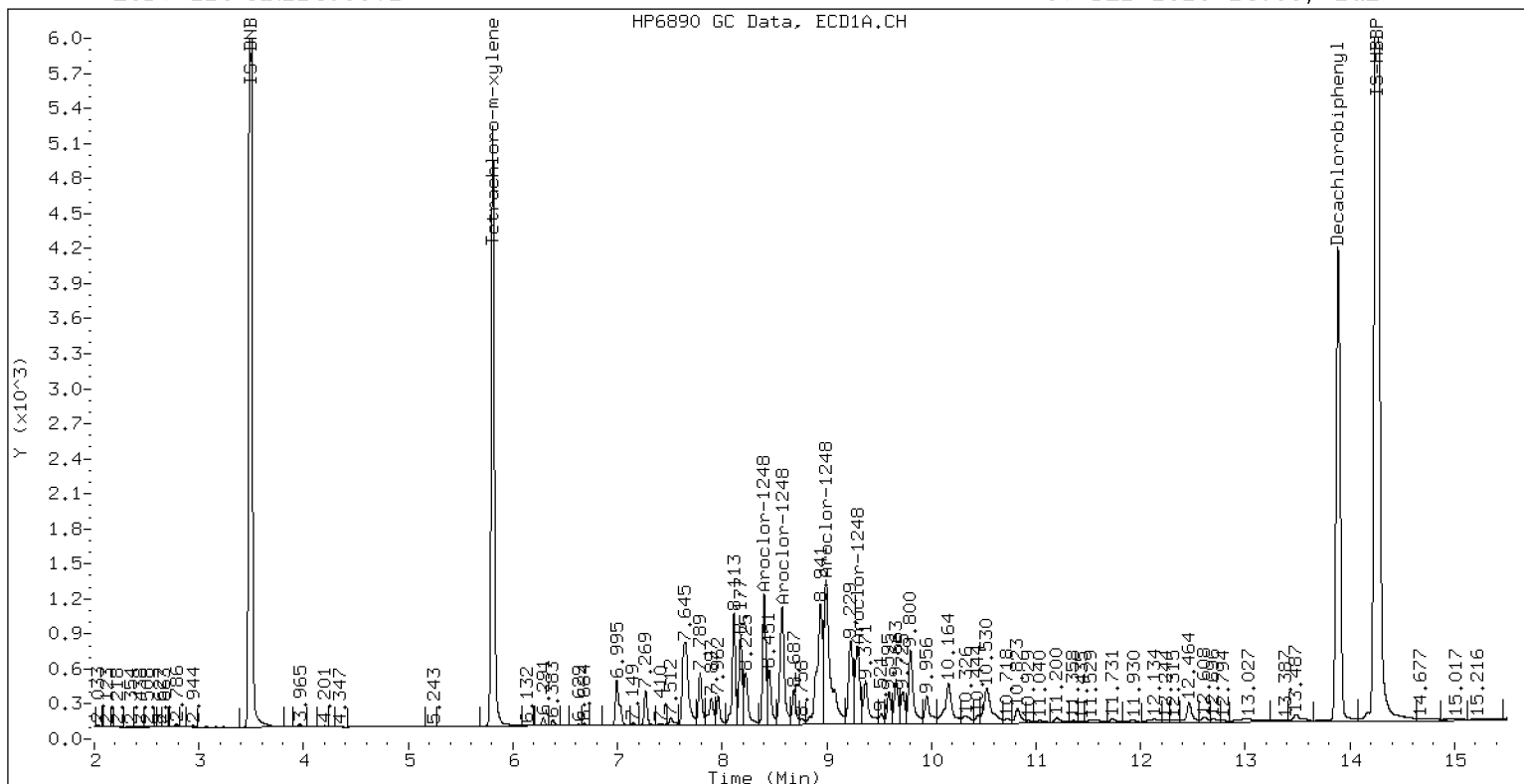
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1

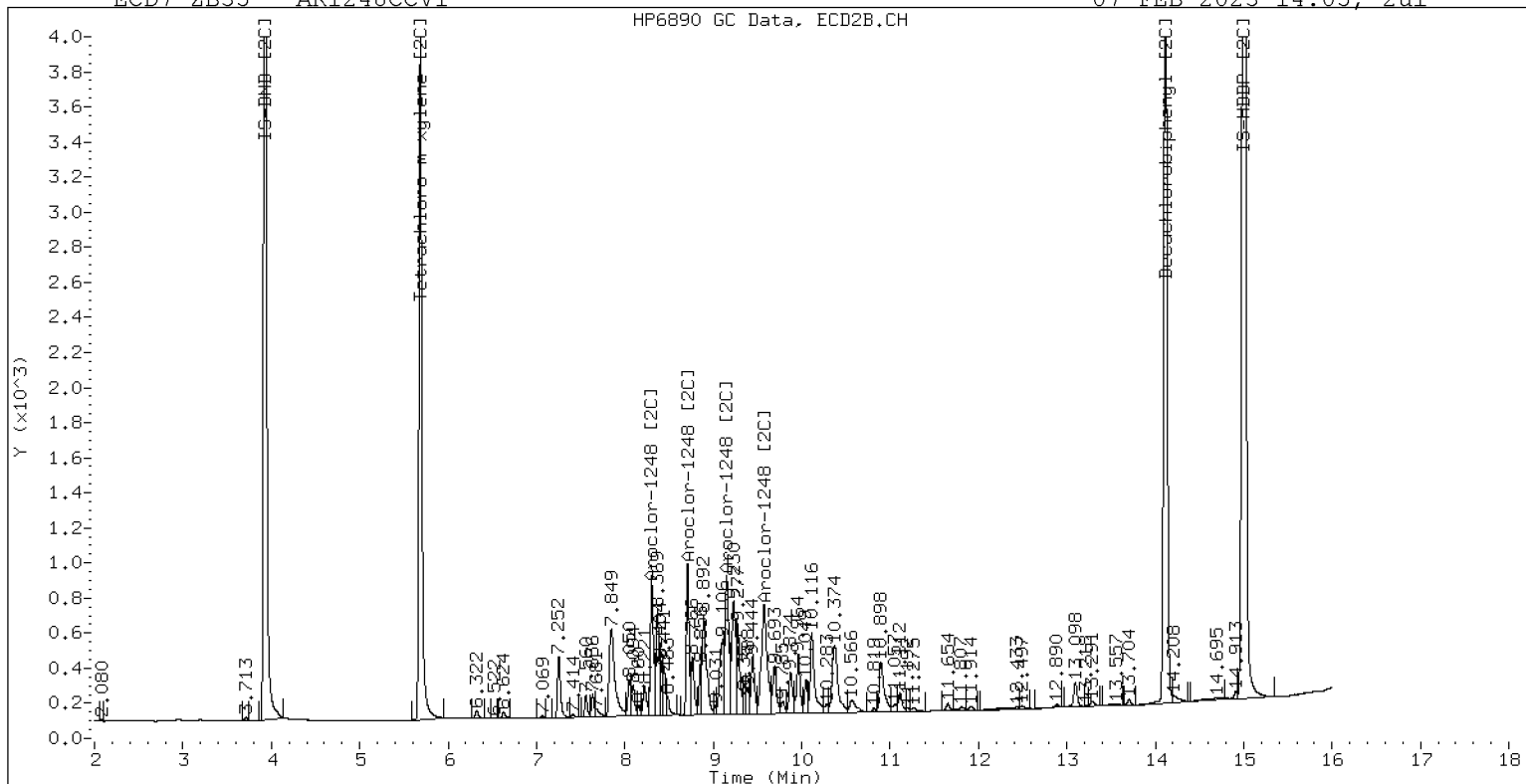
07-FEB-2023 14:05, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV1

07-FEB-2023 14:05, 2ul



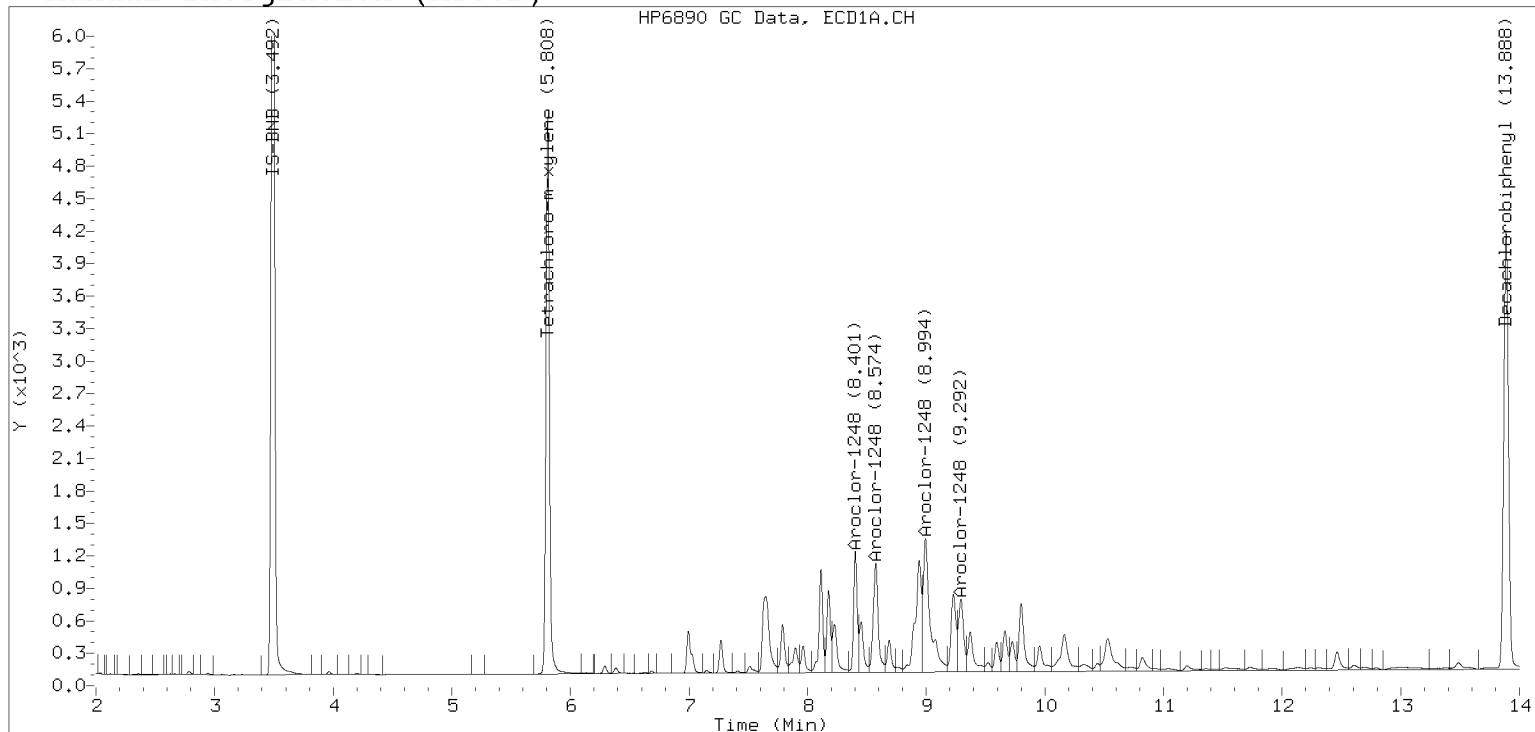
ZB-35 Manual Integration: NO

# Manual Peak Adjustment, ZB-5

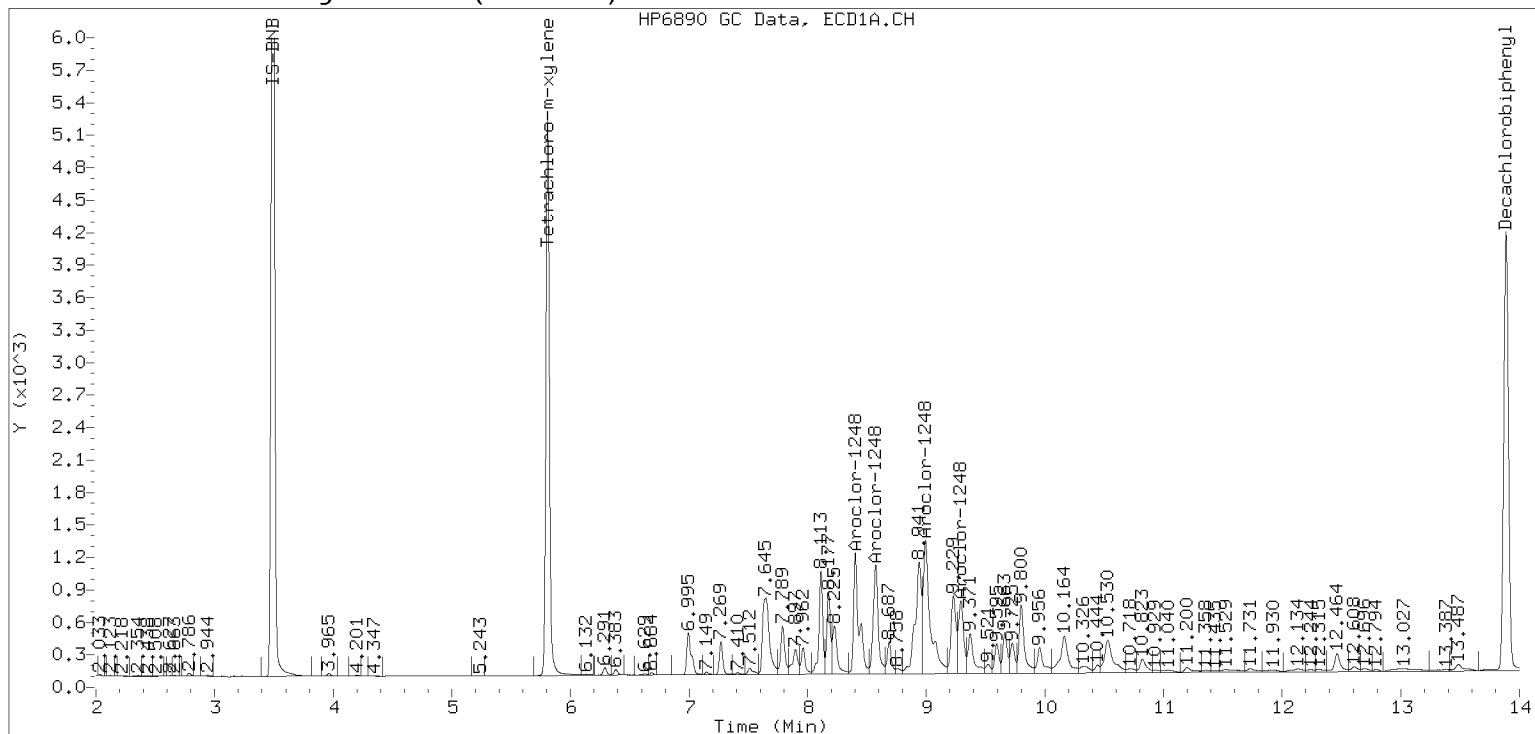
Datafile: ecd7.i/230207.b/02072305ECD7.D

Injection Date: 07-FEB-2023 14:05

## Manual Integration (After)



## Processed Integration (Before)





CONTINUING CALIBRATION CHECK  
EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02072306ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0109

Injection Date: 02/07/23

Lab Sample ID: SLB0109-CCV2

Injection Time: 14:26

Sequence Name: AR1660CCV2

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	257	0.0506755	0.0521174		2.8	+/-20
Aroclor-1016 (1)	A	250.00	262	0.0297277	0.0311321		4.8	
Aroclor-1016 (2)	A	250.00	261	0.0985017	0.1029475		4.4	
Aroclor-1016 (3)	A	250.00	240	0.0453193	0.0434881		-4.0	
Aroclor-1016 (4)	A	250.00	265	0.0291533	0.0309021		6.0	
Aroclor 1016 [2C]	A	250.00	263	0.0519244	0.0544738		5.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	262	0.0433907	0.0455144		4.8	
Aroclor-1016 (2) [2C]	A	250.00	260	0.0950862	0.0987456		4.0	
Aroclor-1016 (3) [2C]	A	250.00	271	0.0388014	0.0420521		8.4	
Aroclor-1016 (4) [2C]	A	250.00	260	0.0304194	0.0315829		4.0	
Aroclor 1260	A	250.00	195	0.0605224	0.0474744		-22.0	+/-20 *
Aroclor-1260 (1)	A	250.00	202	0.0448870	0.0363071		-19.2	
Aroclor-1260 (2)	A	250.00	202	0.0461412	0.0372722		-19.2	
Aroclor-1260 (3)	A	250.00	196	0.1214672	0.0953514		-21.6	
Aroclor-1260 (4)	A	250.00	194	0.0627593	0.0485836		-22.4	
Aroclor-1260 (5)	A	250.00	181	0.0273573	0.0198574		-27.6	
Aroclor 1260 [2C]	A	250.00	224	0.0836545	0.0739661		-10.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	224	0.0577136	0.0518395		-10.4	
Aroclor-1260 (2) [2C]	A	250.00	217	0.1460113	0.1265161		-13.2	
Aroclor-1260 (3) [2C]	A	250.00	234	0.0363944	0.0340222		-6.4	
Aroclor-1260 (4) [2C]	A	250.00	221	0.0944986	0.0834866		-11.6	
Decachlorobiphenyl	A	40.000	37.4	0.8555994	0.7998979		-6.5	+/-20
Tetrachlorometaxylene	A	40.000	43.0	1.1307870	1.2160070		7.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2544580		-1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.5	1.0814980	1.1480750		6.3	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072306ECD7.D  
 Data file 2: /230207.b/230207.b/02072306ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
 Compound Sublist: AR1660.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: AR1660CCV2  
 Client ID:  
 Injection Date: 07-FEB-2023 14:26  
 Report Date: 02/08/2023 11:48  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.000	198735	5.685	0.001	162510	43.0	42.5	1.3	Tetrachloro-m-xylene
13.888	-0.000	230343	14.116	-0.001	246097	37.4	39.5	5.5	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	326865	-35.1
Hexabromobiphenyl	647433	575931	-11.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	283100	-16.0
Hexabromobiphenyl	382032	392356	2.7

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	31800	261.8	1	7.254	0.000	40266	262.2
Aroclor-1016	2	7.649	-0.001	105156	261.3	2	7.850	0.002	87359	259.6
Aroclor-1016	3	7.787	-0.001	44421	239.9	3	8.049	0.001	37203	270.9
Aroclor-1016	4	8.402	-0.002	31565	265.0	4	8.303	0.000	27941	259.6
Total CollAve (4 peaks):				257.0		Total Col2Ave (4 peaks):				263.1 RPD = 2
Corrected Ave (3 peaks):				254.3		Corrected Ave (3 peaks):				260.5 RPD = 2
CalAmt %D:				2.8		CalAmt %D:				5.2
Aroclor-1260	1	11.040	-0.003	65345	202.2	1	11.650	0.001	63561	224.6
Aroclor-1260	2	11.356	-0.005	67082	201.9	2	11.912	-0.000	155123	216.6
Aroclor-1260	3	11.729	-0.005	171612	196.2	3	12.431	-0.001	41715	233.7
Aroclor-1260	4	12.132	-0.007	87440	193.5	4	12.496	0.000	102364	220.9
Aroclor-1260	5	12.239	-0.005	35739	181.5	NS	---			----
Total CollAve (5 peaks):				195.1		Total Col2Ave (4 peaks):				223.9 RPD = 14
Corrected Ave (4 peaks):				193.3		Corrected Ave (3 peaks):				220.7 RPD = 13
CalAmt %D:				-22.0		CalAmt %D:				-10.4

Total PCB Area Col1 (5.908 - 13.788) = 1871210 Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1526856 Col2 Total PCB = 0.5 ppm\*

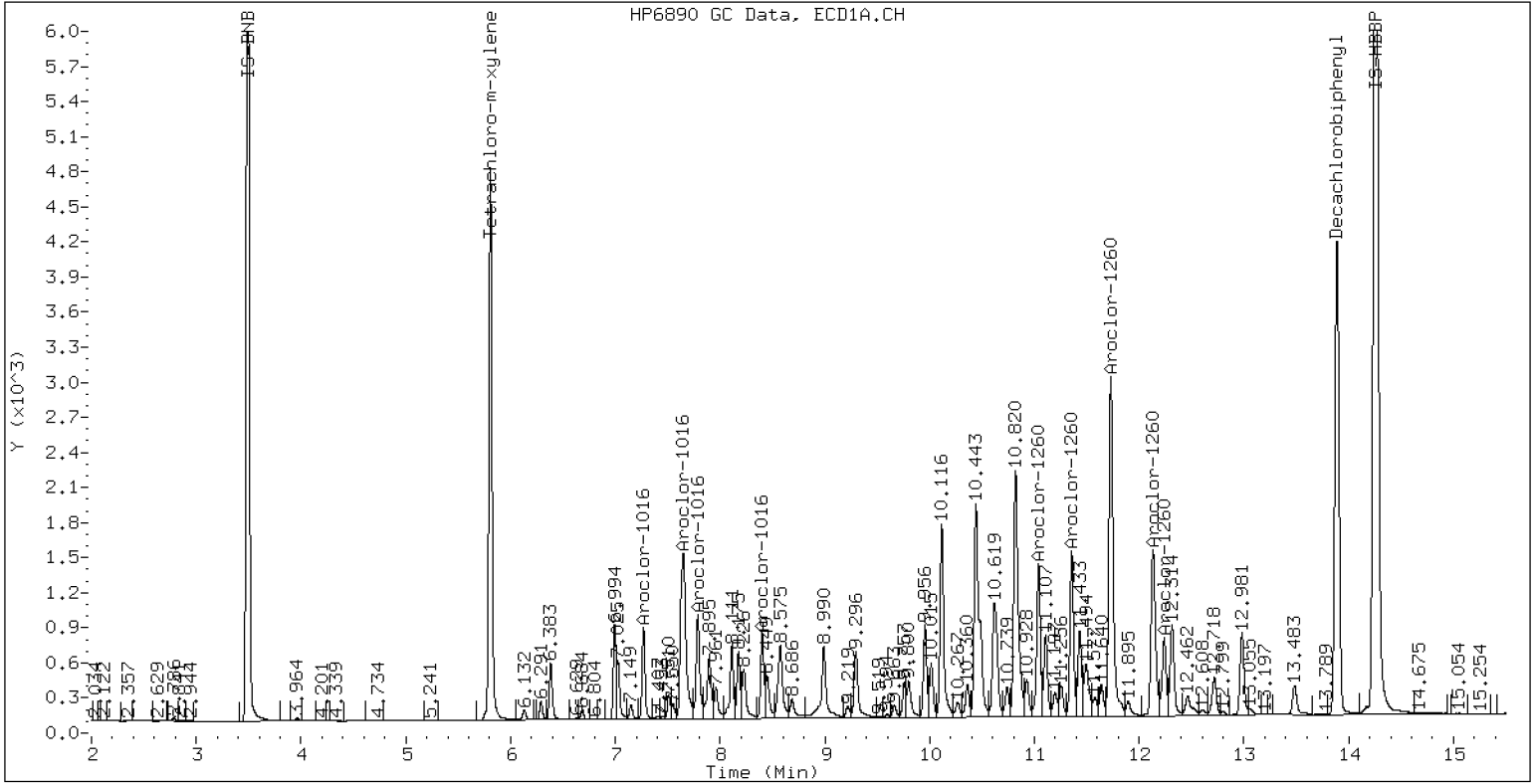
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2

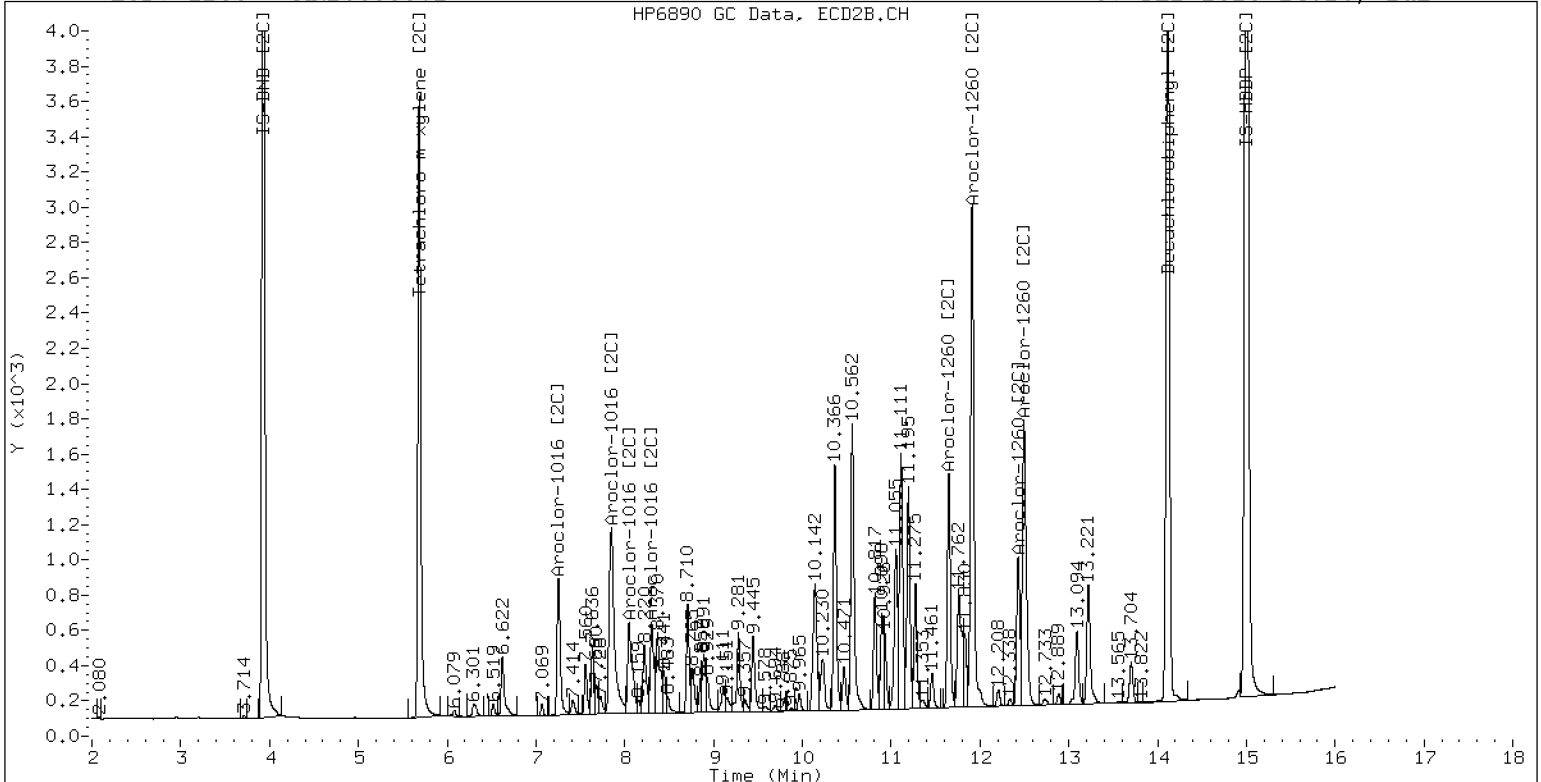
07-FEB-2023 14:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2

07-FEB-2023 14:26, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072320ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/07/23</u>
Lab Sample ID:	<u>SLB0109-CCV3</u>	Injection Time:	<u>19:21</u>
Sequence Name:	<u>AR1242CCV3</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	252	0.0411165	0.0415590		0.6	+/-20
Aroclor-1242 (1)	A	250.00	258		0.0252677			
Aroclor-1242 (2)	A	250.00	256		0.0822019			
Aroclor-1242 (3)	A	250.00	248		0.0236390			
Aroclor-1242 (4)	A	250.00	244		0.0351274			
Aroclor 1242 [2C]	A	250.00	253	0.0423236	0.0429888		1.1	+/-20
Aroclor-1242 (1) [2C]	A	250.00	270		0.0378492			
Aroclor-1242 (2) [2C]	A	250.00	255		0.0794201			
Aroclor-1242 (3) [2C]	A	250.00	254		0.0247068			
Aroclor-1242 (4) [2C]	A	250.00	232		0.0299789			
Decachlorobiphenyl	A	40.000	35.7	0.8555994	0.7630345		-10.8	+/-20
Tetrachlorometaxylene	A	40.000	50.6	1.1307870	1.4304890		26.5	+/-20 *
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2696430	1.2033350		-5.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	50.8	1.0814980	1.3732900		27.0	+/-20 *

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072320ECD7.D  
Data file 2: /230207.b/230207.b/02072320ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1242.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242CCV3  
Client ID:  
Injection Date: 07-FEB-2023 19:21  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.000	256463	5.685	0.001	215139	50.6	50.8	0.4	Tetrachloro-m-xylene
13.889	0.001	152803	14.116	-0.001	194983	35.7	37.9	6.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	358567	-28.8
Hexabromobiphenyl	647433	400514	-38.1

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	313319	-7.0
Hexabromobiphenyl	382032	324071	-15.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.270	-0.001	28313	257.9	1	7.253	0.000	37059	270.4	
Aroclor-1242	2	7.650	-0.005	92109	256.3	2	7.850	0.000	77762	255.5	
Aroclor-1242	3	8.403	-0.004	26488	248.1	3	9.153	0.002	24191	253.8	
Aroclor-1242	4	8.575	-0.006	39361	244.1	4	9.578	0.003	29353	232.4	
Total Col1Ave (4 peaks):				251.6	Total Col2Ave (4 peaks):				253.0	RPD = 1	
Corrected Ave (3 peaks):				249.5	Corrected Ave (3 peaks):				247.2	RPD = 1	
CalAmt %D:				0.6	CalAmt %D:				1.2		

Total PCB Area Col1 (5.908 - 13.788) = 654543 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 549624 Col2 Total PCB = 0.2 ppm\*

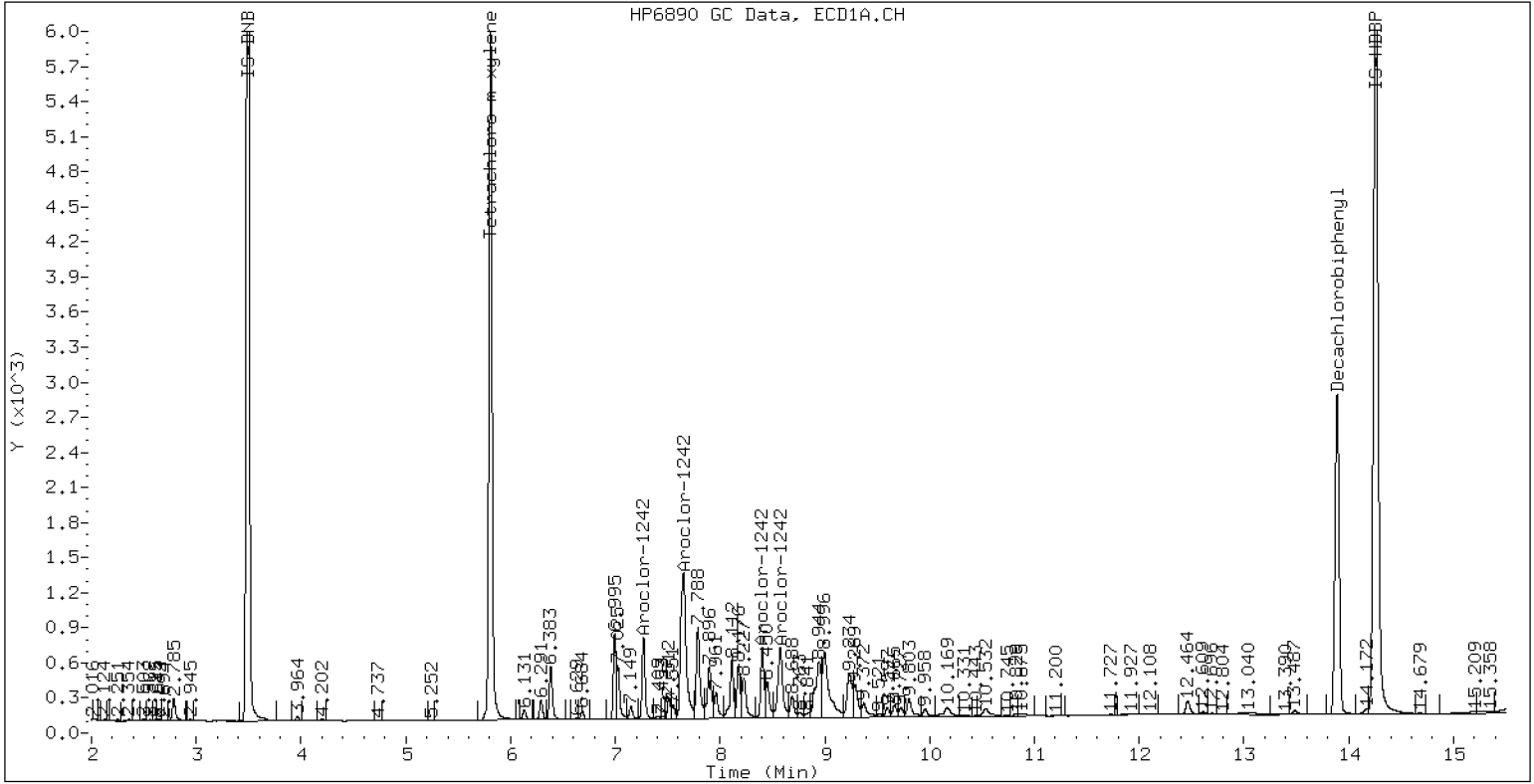
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3

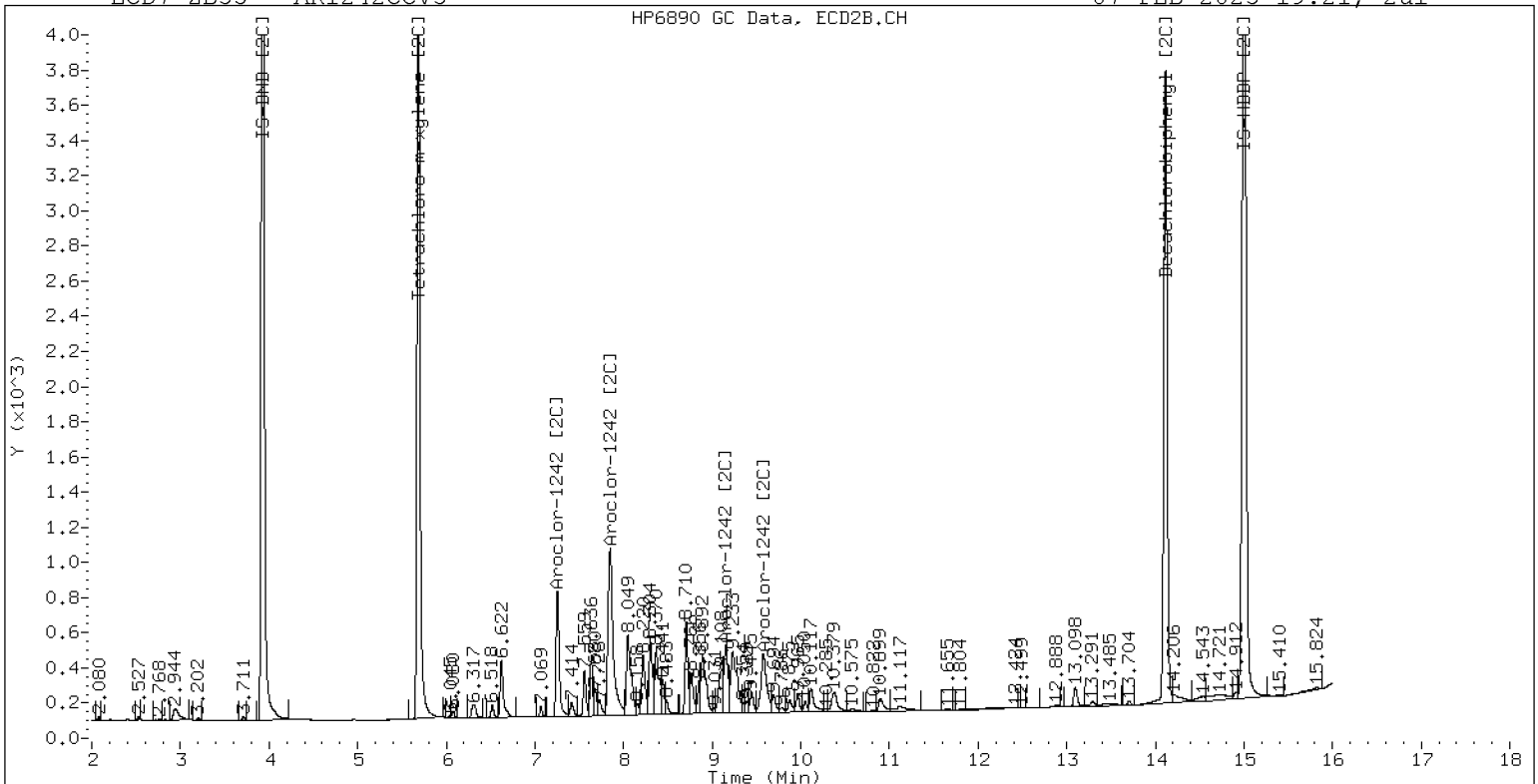
07-FEB-2023 19:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3

07-FEB-2023 19:21, 2ul



ZB-35 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072321ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/07/23</u>
Lab Sample ID:	<u>SLB0109-CCV4</u>	Injection Time:	<u>19:42</u>
Sequence Name:	<u>AR1660CCV4</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	258	0.0506755	0.0523503		3.1	+/-20
Aroclor-1016 (1)	A	250.00	264	0.0297277	0.0314324		5.6	
Aroclor-1016 (2)	A	250.00	263	0.0985017	0.1036056		5.2	
Aroclor-1016 (3)	A	250.00	241	0.0453193	0.0436915		-3.6	
Aroclor-1016 (4)	A	250.00	263	0.0291533	0.0306715		5.2	
Aroclor 1016 [2C]	A	250.00	262	0.0519244	0.0542726		4.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	263	0.0433907	0.0456468		5.2	
Aroclor-1016 (2) [2C]	A	250.00	259	0.0950862	0.0985512		3.6	
Aroclor-1016 (3) [2C]	A	250.00	268	0.0388014	0.0416728		7.2	
Aroclor-1016 (4) [2C]	A	250.00	256	0.0304194	0.0312195		2.4	
Aroclor 1260	A	250.00	234	0.0605224	0.0569870		-6.2	+/-20
Aroclor-1260 (1)	A	250.00	245	0.0448870	0.0440586		-2.0	
Aroclor-1260 (2)	A	250.00	242	0.0461412	0.0447015		-3.2	
Aroclor-1260 (3)	A	250.00	234	0.1214672	0.1138760		-6.4	
Aroclor-1260 (4)	A	250.00	232	0.0627593	0.0583725		-7.2	
Aroclor-1260 (5)	A	250.00	219	0.0273573	0.0239265		-12.4	
Aroclor 1260 [2C]	A	250.00	242	0.0836545	0.0800300		-3.4	+/-20
Aroclor-1260 (1) [2C]	A	250.00	242	0.0577136	0.0559182		-3.2	
Aroclor-1260 (2) [2C]	A	250.00	236	0.1460113	0.1381574		-5.6	
Aroclor-1260 (3) [2C]	A	250.00	252	0.0363944	0.0366294		0.8	
Aroclor-1260 (4) [2C]	A	250.00	236	0.0944986	0.0894148		-5.6	
Decachlorobiphenyl	A	40.000	39.0	0.8555994	0.8352066		-2.5	+/-20
Tetrachlorometaxylene	A	40.000	43.0	1.1307870	1.2152580		7.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.8	1.2696430	1.2645890		-0.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.5	1.0814980	1.1493570		6.3	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072321ECD7.D  
Data file 2: /230207.b/230207.b/02072321ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV4  
Client ID:  
Injection Date: 07-FEB-2023 19:42  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	199072	5.685	-0.000	164927	43.0	42.5	1.1	Tetrachloro-m-xylene
13.888	-0.000	179194	14.116	-0.001	212805	39.0	39.8	2.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	327621	-34.9
Hexabromobiphenyl	647433	429101	-33.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	286990	-14.8
Hexabromobiphenyl	382032	336560	-11.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	32181	264.3	1	7.253	0.000	40938	263.0
Aroclor-1016	2	7.650	-0.001	106073	263.0	2	7.848	-0.000	88385	259.1
Aroclor-1016	3	7.787	-0.001	44732	241.0	3	8.049	0.001	37374	268.5
Aroclor-1016	4	8.402	-0.002	31402	263.0	4	8.304	0.001	27999	256.6
Total CollAve (4 peaks):				257.8		Total Col2Ave (4 peaks):				261.8 RPD = 2
Corrected Ave (3 peaks):				255.7		Corrected Ave (3 peaks):				259.6 RPD = 2
CalAmt %D:				3.1		CalAmt %D:				4.7
Aroclor-1260	1	11.040	-0.003	59080	245.4	1	11.648	-0.000	58812	242.2
Aroclor-1260	2	11.356	-0.004	59942	242.2	2	11.912	0.000	145307	236.6
Aroclor-1260	3	11.729	-0.005	152701	234.4	3	12.431	-0.001	38525	251.6
Aroclor-1260	4	12.131	-0.008	78274	232.5	4	12.496	0.000	94042	236.6
Aroclor-1260	5	12.239	-0.004	32084	218.6	NS	---			----
Total CollAve (5 peaks):				234.6		Total Col2Ave (4 peaks):				241.7 RPD = 3
Corrected Ave (4 peaks):				231.9		Corrected Ave (3 peaks):				238.4 RPD = 3
CalAmt %D:				-6.1		CalAmt %D:				-3.3

Total PCB Area Coll (5.908 - 13.788) = 1751866 Coll Total PCB = 0.5 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1468456 Col2 Total PCB = 0.5 ppm\*

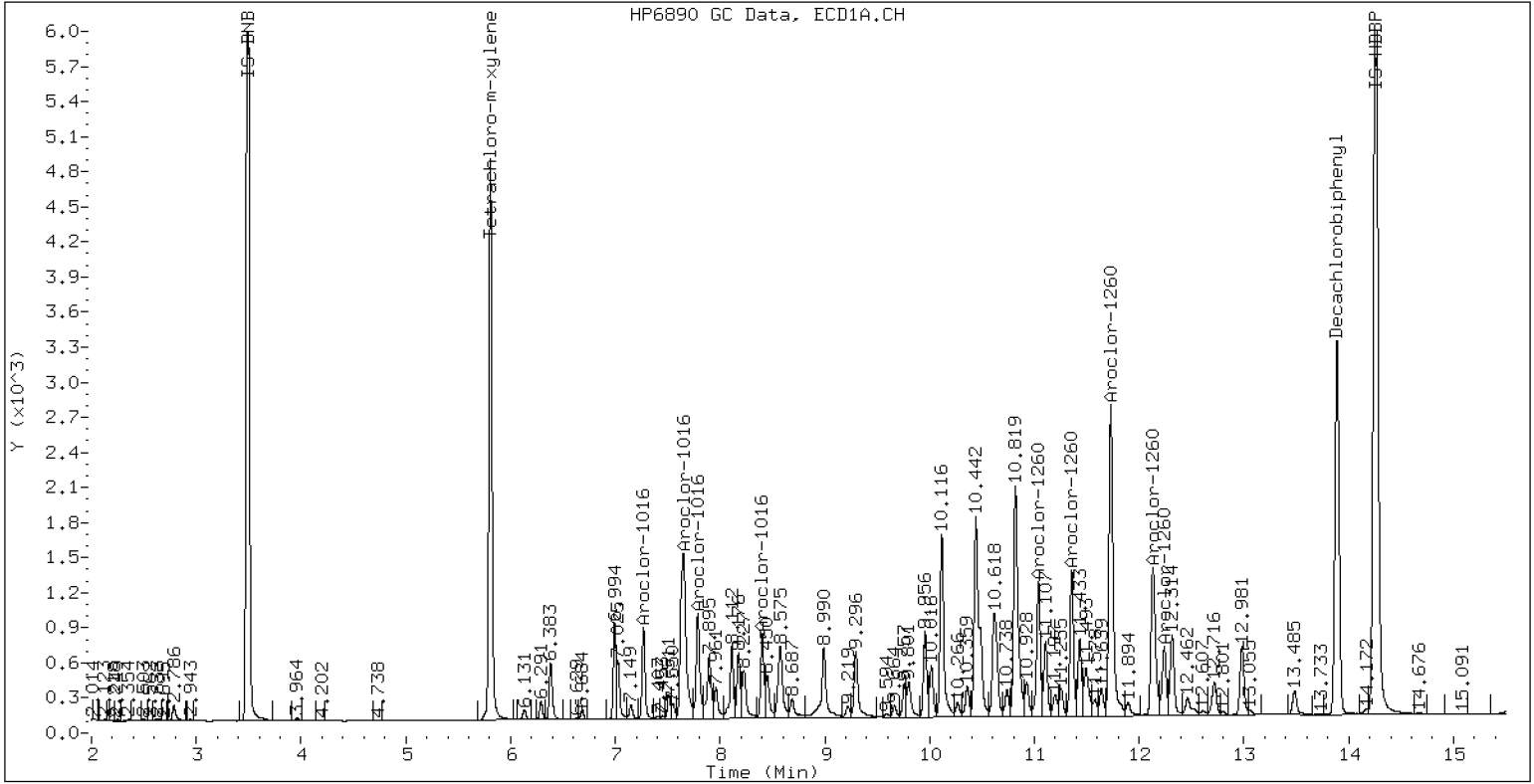
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4

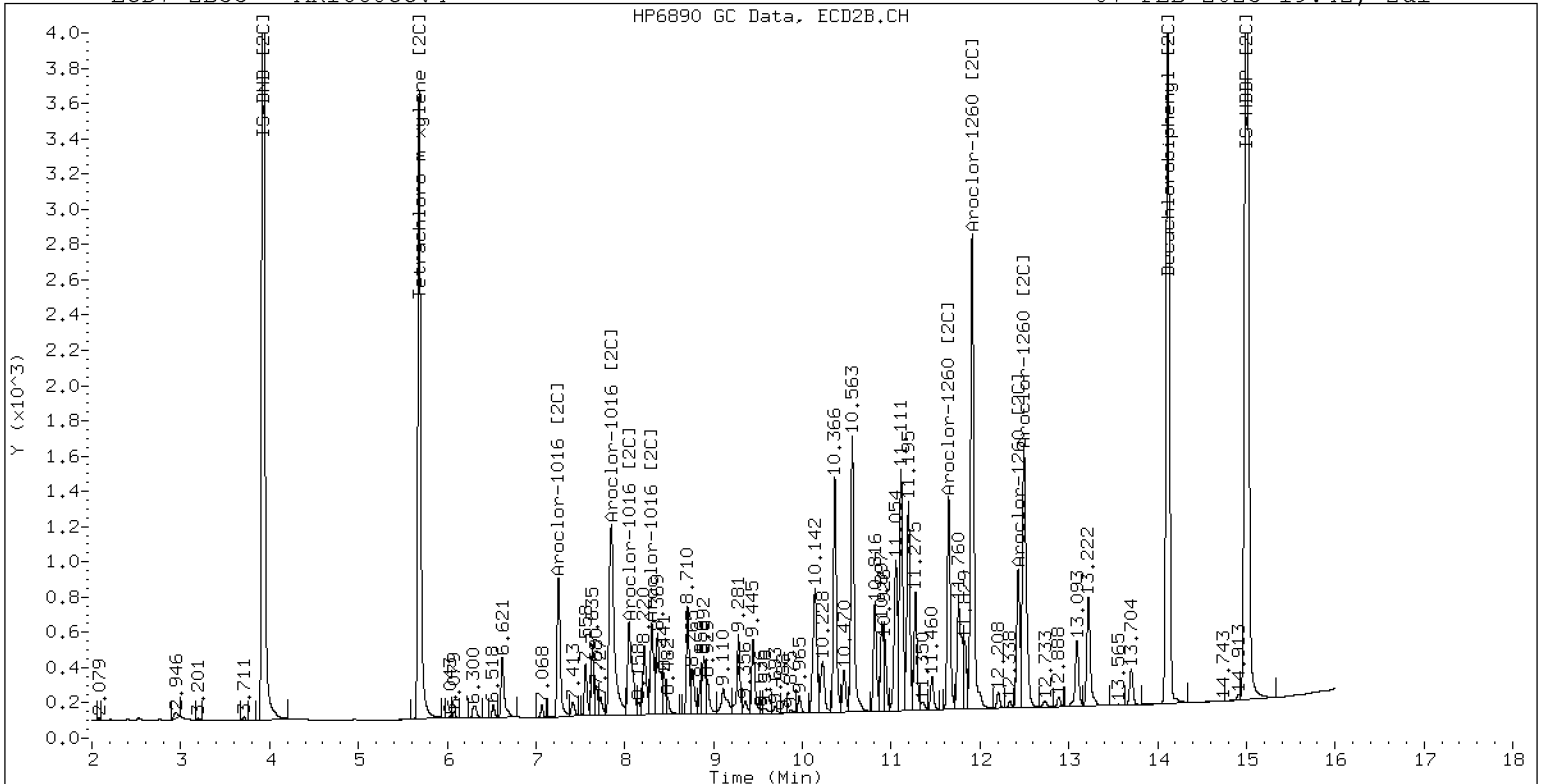
07-FEB-2023 19:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4

07-FEB-2023 19:42, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072329ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/07/23</u>
Lab Sample ID:	<u>SLB0109-CCV5</u>	Injection Time:	<u>22:30</u>
Sequence Name:	<u>AR1254CCV5</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	180	0.0675033	0.0488407		-28.2	+/-20 *
Aroclor-1254 (1)	A	250.00	182		0.0592856			
Aroclor-1254 (2)	A	250.00	175		0.0244228			
Aroclor-1254 (3)	A	250.00	177		0.0370253			
Aroclor-1254 (4)	A	250.00	186		0.0759859			
Aroclor-1254 (5)	A	250.00	178		0.0474837			
Aroclor 1254 [2C]	A	250.00	194	0.0733219	0.0568654		-22.6	+/-20 *
Aroclor-1254 (1) [2C]	A	250.00	207		0.0480235			
Aroclor-1254 (2) [2C]	A	250.00	204		0.0383911			
Aroclor-1254 (3) [2C]	A	250.00	190		0.0775730			
Aroclor-1254 (4) [2C]	A	250.00	201		0.0823897			
Aroclor-1254 (5) [2C]	A	250.00	166		0.0379500			
Decachlorobiphenyl	A	40.000	34.5	0.8555994	0.7383214		-13.8	+/-20
Tetrachlorometaxylene	A	40.000	39.3	1.1307870	1.1100930		-1.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.2	1.2696430	1.1794900		-7.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.0	1.0814980	1.0829330		0.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072329ECD7.D  
Data file 2: /230207.b/230207.b/02072329ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254CCV5  
Client ID:  
Injection Date: 07-FEB-2023 22:30  
Report Date: 02/08/2023 11:48  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.001	204765	5.684	-0.001	176374	39.3	40.1	2.0	Tetrachloro-m-xylene
13.888	-0.001	126140	14.115	-0.002	165506	34.5	37.2	7.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	368915	-26.7
Hexabromobiphenyl	647433	341694	-47.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	325734	-3.3
Hexabromobiphenyl	382032	280640	-26.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.294	-0.005	68348	181.8	1	9.444	0.000	48884	206.9	
Aroclor-1254	2	9.371	-0.007	28156	175.4	2	9.963	0.000	39079	204.6	
Aroclor-1254	3	9.661	-0.009	42685	177.2	3	10.114	0.000	78963	189.5	
Aroclor-1254	4	9.798	-0.010	87601	185.6	4	10.363	0.000	83866	201.3	
Aroclor-1254	5	10.157	-0.020	54742	178.3	5	10.562	0.000	38630	166.5	
Total CollAve (5 peaks):				179.7		Total Col2Ave (5 peaks):				193.7	RPD = 8
Corrected Ave (4 peaks):				178.2		Corrected Ave (4 peaks):				190.5	RPD = 7
CalAmt %D:				-28.1		CalAmt %D:				-22.5	

Total PCB Area Col1 (5.908 - 13.788) = 876248 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 789304 Col2 Total PCB = 0.2 ppm\*

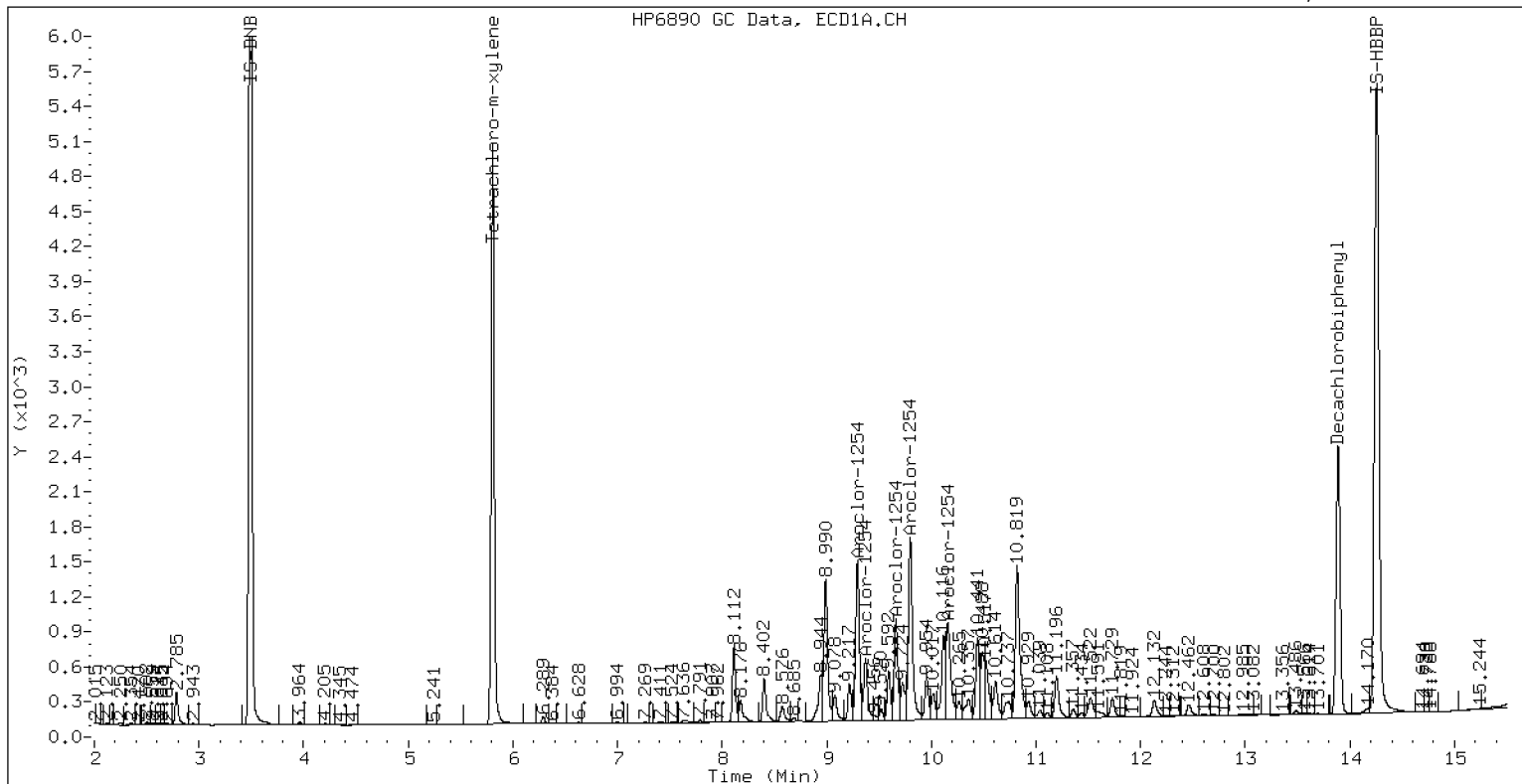
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5

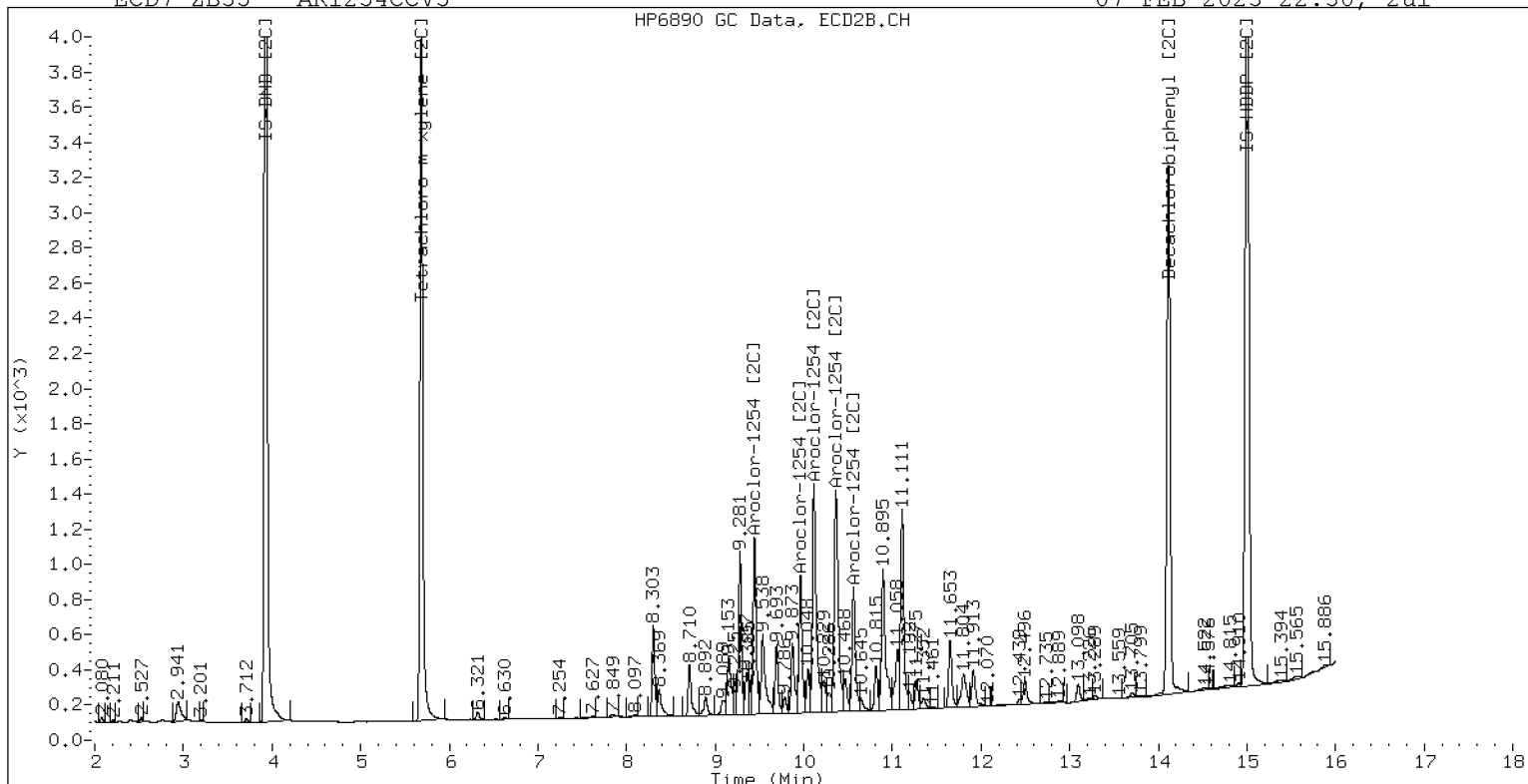
07-FEB-2023 22:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5

07-FEB-2023 22:30, 2ul



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072330ECD7.D  
 Data file 2: /230207.b/230207.b/02072330ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
 Compound Sublist: AR1660.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: AR1660CCV6  
 Client ID:  
 Injection Date: 07-FEB-2023 22:51  
 Report Date: 02/08/2023 11:48  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.000	199053	5.685	-0.000	166054	43.0	42.4	1.4	Tetrachloro-m-xylene
13.888	-0.001	150584	14.116	-0.001	185036	38.7	39.5	2.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	327658	-34.9
Hexabromobiphenyl	647433	363841	-43.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	289849	-14.0
Hexabromobiphenyl	382032	295463	-22.7

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	-0.001	31578	259.4	1	7.253	0.000	41259	262.4	
Aroclor-1016	2	7.650	-0.001	104220	258.3	2	7.850	0.001	88735	257.6	
Aroclor-1016	3	7.787	-0.001	43421	233.9	3	8.048	0.000	37624	267.6	
Aroclor-1016	4	8.402	-0.002	30601	256.3	4	8.303	0.000	28018	254.2	
Total CollAve (4 peaks):				252.0		Total Col2Ave (4 peaks):				260.5	RPD = 3
Corrected Ave (3 peaks):				249.5		Corrected Ave (3 peaks):				258.1	RPD = 3
CalAmt %D:				0.8		CalAmt %D:				4.2	
Aroclor-1260	1	11.040	-0.003	54153	265.3	1	11.649	0.000	55028	258.2	
Aroclor-1260	2	11.357	-0.004	54070	257.7	2	11.912	-0.000	133895	248.3	
Aroclor-1260	3	11.728	-0.006	134087	242.7	3	12.432	-0.000	35431	263.6	
Aroclor-1260	4	12.132	-0.008	66334	232.4	4	12.496	-0.000	85524	245.0	
Aroclor-1260	5	12.240	-0.004	26956	216.7	NS	---			----	
Total CollAve (5 peaks):				242.9		Total Col2Ave (4 peaks):				253.8	RPD = 4
Corrected Ave (4 peaks):				237.4		Corrected Ave (3 peaks):				250.5	RPD = 5
CalAmt %D:				-2.8		CalAmt %D:				1.5	

Total PCB Area Coll (5.908 - 13.788) = 1618375 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1408252 Col2 Total PCB = 0.5 ppm\*

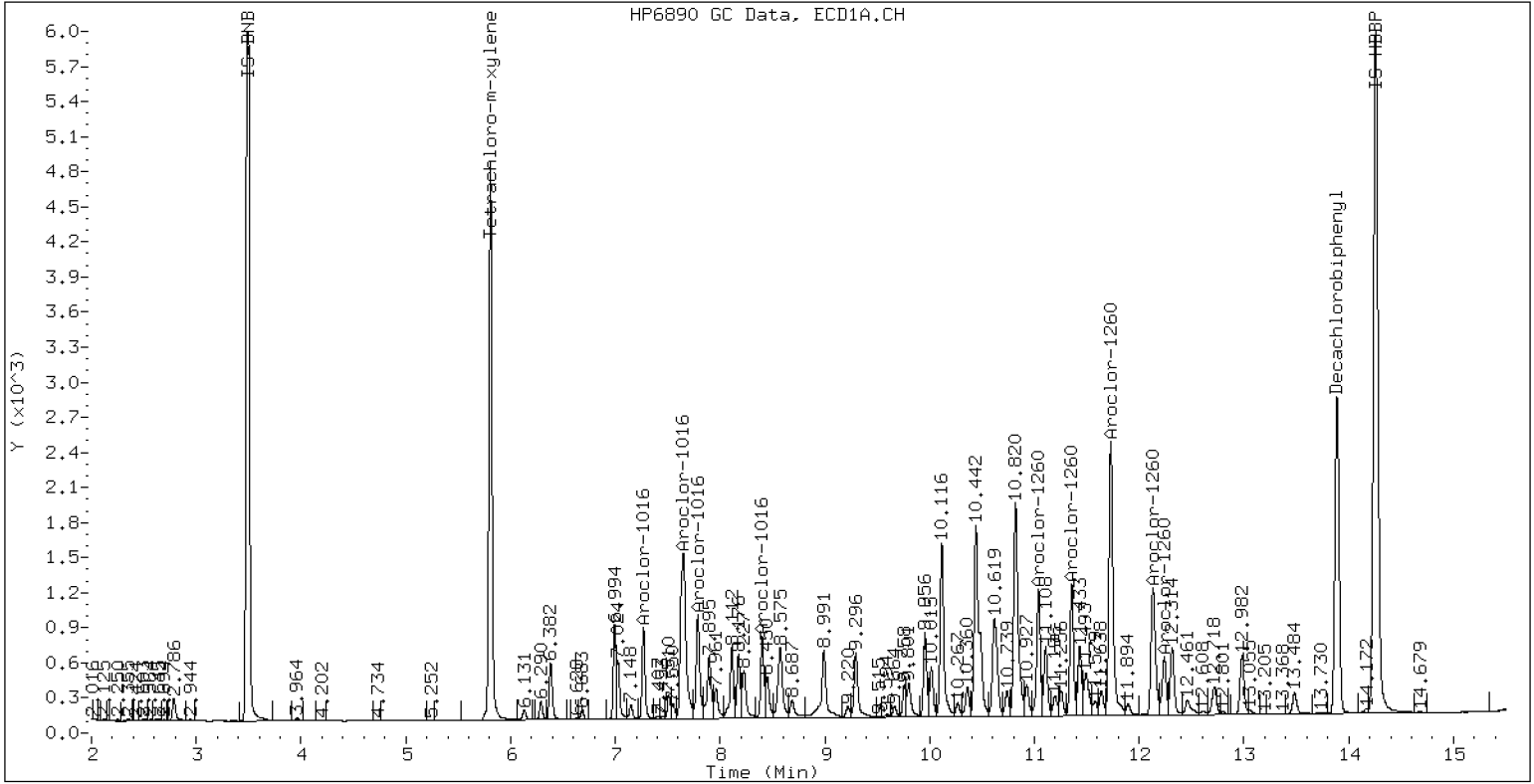
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6

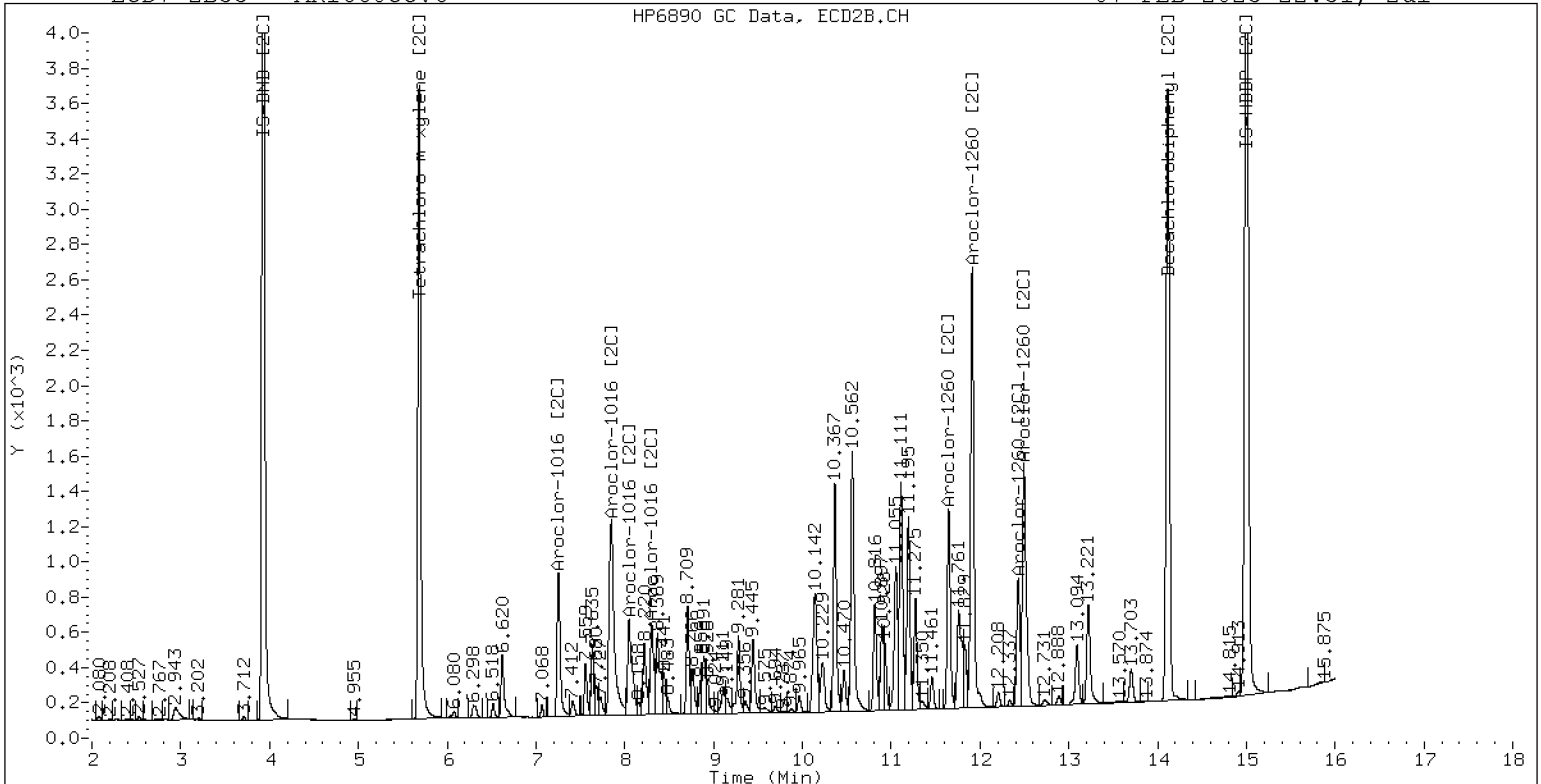
07-FEB-2023 22:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6

07-FEB-2023 22:51, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072346ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/08/23</u>
Lab Sample ID:	<u>SLB0109-CCV7</u>	Injection Time:	<u>04:27</u>
Sequence Name:	<u>AR1248CCV7</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	185	0.0592639	0.0417826		-26.0	+/-20 *
Aroclor-1248 (1)	A	250.00	224		0.0358743			
Aroclor-1248 (2)	A	250.00	217		0.0442434			
Aroclor-1248 (3)	A	250.00	149		0.0580966			
Aroclor-1248 (4)	A	250.00	150		0.0289162			
Aroclor 1248 [2C]	A	250.00	223	0.0453673	0.0402688		-11.0	+/-20
Aroclor-1248 (1) [2C]	A	250.00	235		0.0340014			
Aroclor-1248 (2) [2C]	A	250.00	214		0.0333799			
Aroclor-1248 (3) [2C]	A	250.00	224		0.0425488			
Aroclor-1248 (4) [2C]	A	250.00	217		0.0511452			
Decachlorobiphenyl	A	40.000	35.5	0.8555994	0.7595303		-11.3	+/-20
Tetrachlorometaxylene	A	40.000	39.8	1.1307870	1.1241490		-0.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.4	1.2696430	1.1542670		-9.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.8	1.0814980	1.1045820		2.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072346ECD7.D  
 Data file 2: /230207.b/230207.b/02072346ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
 Compound Sublist: AR1248.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: AR1248CCV7  
 Client ID:  
 Injection Date: 08-FEB-2023 04:27  
 Report Date: 02/08/2023 11:49  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.001	205608	5.684	-0.001	180302	39.8	40.9	2.7	Tetrachloro-m-xylene
13.889	0.001	125343	14.115	-0.002	162694	35.5	36.4	2.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365802	-27.3
Hexabromobiphenyl	647433	330054	-49.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	326462	-3.1
Hexabromobiphenyl	382032	281900	-26.2

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.401	-0.000	41009	224.1	1	8.303	0.000	34688	235.1	
Aroclor-1248	2	8.574	-0.000	50576	216.7	2	8.710	0.000	34054	214.4	
Aroclor-1248	3	8.993	-0.001	66412	148.7	3	9.151	0.000	43408	223.6	
Aroclor-1248	4	9.292	-0.000	33055	149.6	4	9.575	0.000	52178	217.4	
Total CollAve (4 peaks):				184.8		Total Col2Ave (4 peaks):				222.6	RPD = 19
Corrected Ave (3 peaks):				171.7		Corrected Ave (3 peaks):				218.5	RPD = 24
CalAmt %D:				-26.1		CalAmt %D:				-11.0	

Total PCB Area Col1 (5.908 - 13.788) = 736348 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 655812 Col2 Total PCB = 0.2 ppm\*

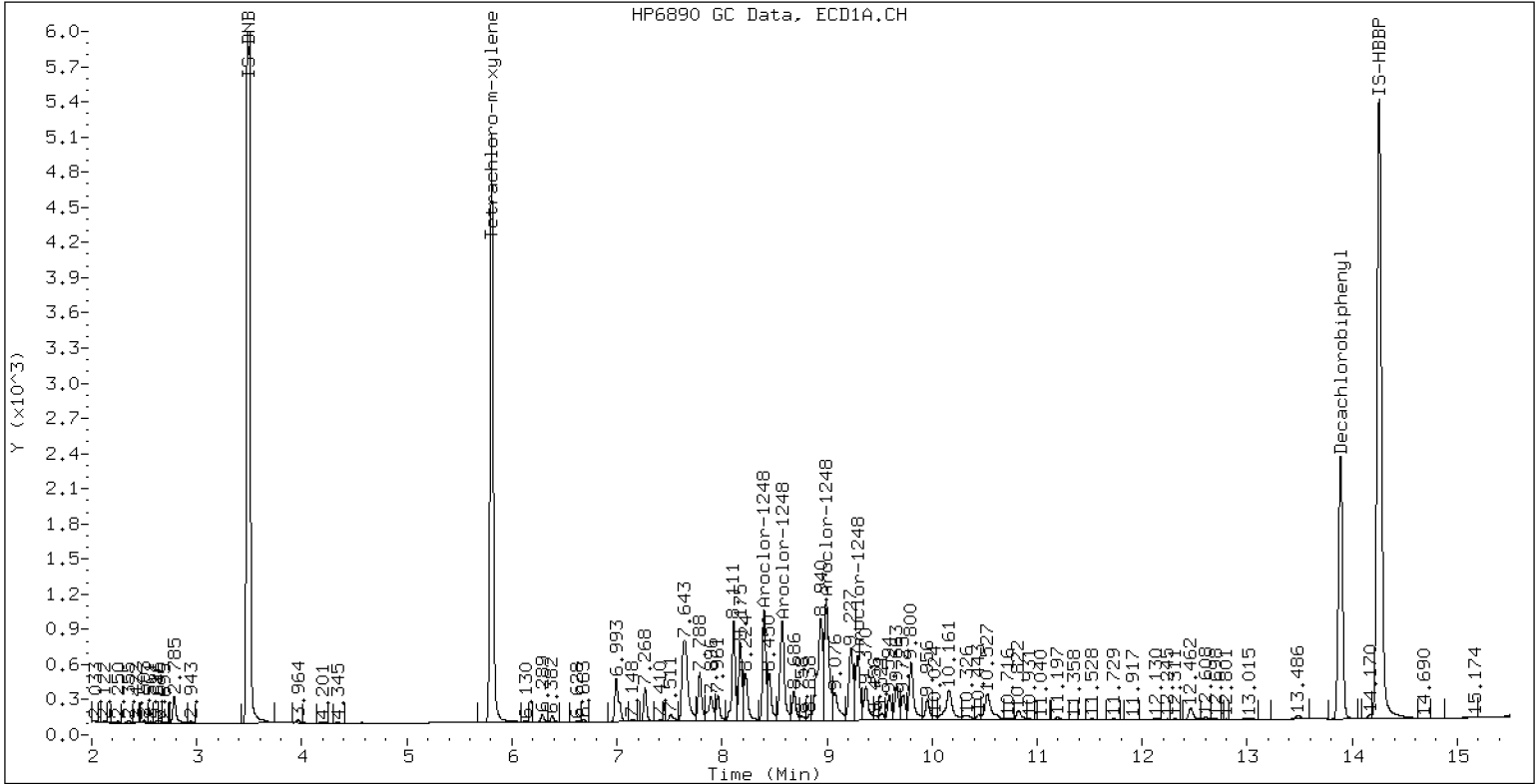
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7

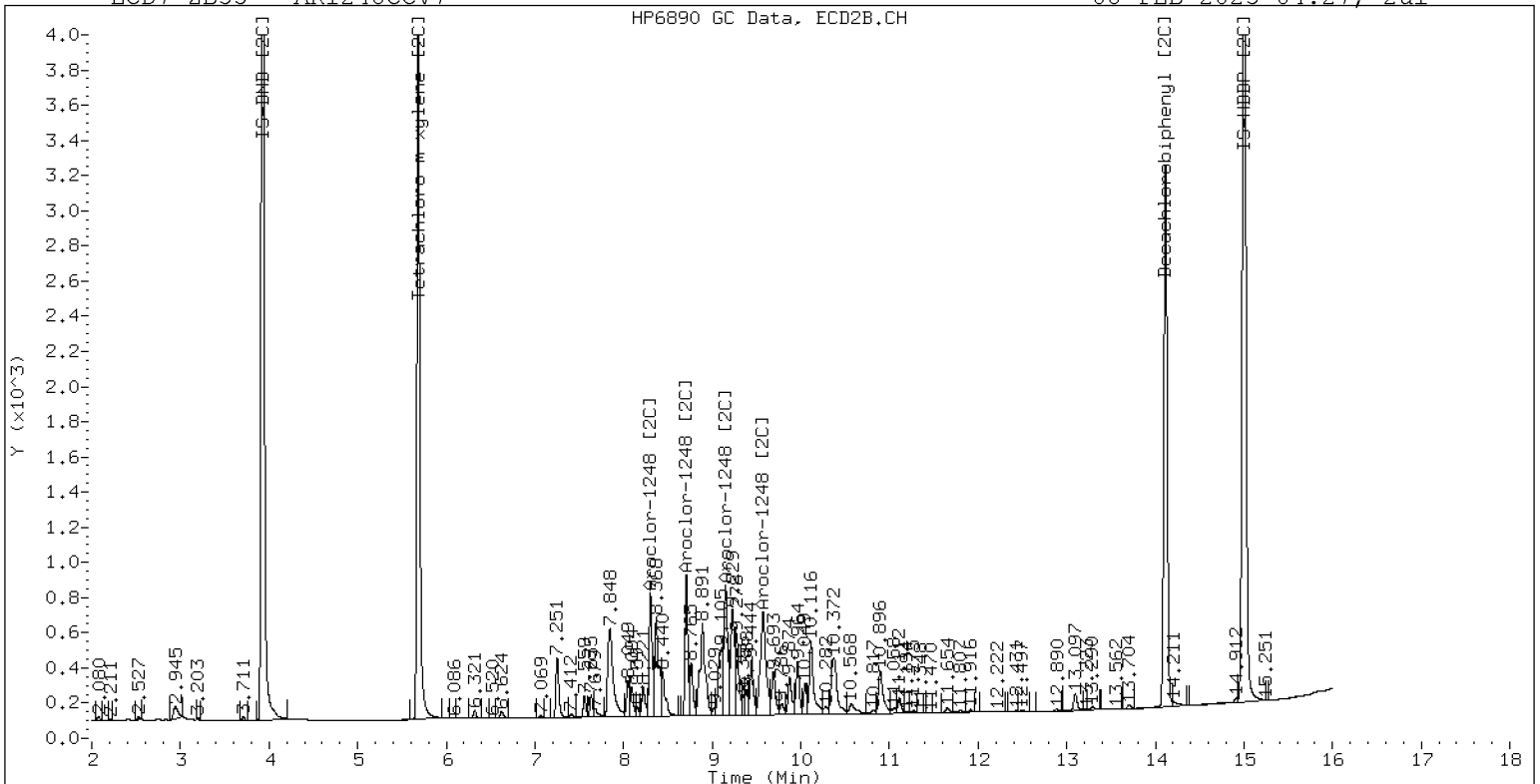
08-FEB-2023 04:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7

08-FEB-2023 04:27, 2ul



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072347ECD7.D  
Data file 2: /230207.b/230207.b/02072347ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV8  
Client ID:  
Injection Date: 08-FEB-2023 04:48  
Report Date: 02/08/2023 11:49  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	195227	5.686	0.001	166568	42.7	42.9	0.4	Tetrachloro-m-xylene
13.888	0.000	149027	14.117	-0.000	184330	38.2	39.4	3.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	323476	-35.7
Hexabromobiphenyl	647433	364889	-43.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	287489	-14.7
Hexabromobiphenyl	382032	294677	-22.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	31152	259.2	1	7.253	0.000	40946	262.6
Aroclor-1016	2	7.649	-0.001	102010	256.1	2	7.849	0.001	87929	257.3
Aroclor-1016	3	7.787	-0.001	42793	233.5	3	8.049	0.001	37191	266.7
Aroclor-1016	4	8.402	-0.002	30087	255.2	4	8.304	0.001	27736	253.7
Total CollAve (4 peaks):				251.0	Total Col2Ave (4 peaks):				260.1	RPD = 4
Corrected Ave (3 peaks):				248.3	Corrected Ave (3 peaks):				257.9	RPD = 4
CalAmt %D:				0.4	CalAmt %D:				4.0	
Aroclor-1260	1	11.040	-0.004	52878	258.3	1	11.650	0.001	56036	263.6
Aroclor-1260	2	11.356	-0.004	53037	252.0	2	11.913	0.001	136850	254.4
Aroclor-1260	3	11.728	-0.006	132039	238.3	3	12.432	0.000	36119	269.4
Aroclor-1260	4	12.132	-0.007	66385	231.9	4	12.497	0.001	87473	251.3
Aroclor-1260	5	12.240	-0.004	26906	215.6	NS	---			----
Total CollAve (5 peaks):				239.2	Total Col2Ave (4 peaks):				259.7	RPD = 8
Corrected Ave (4 peaks):				234.5	Corrected Ave (3 peaks):				256.4	RPD = 9
CalAmt %D:				-4.3	CalAmt %D:				3.9	

Total PCB Area Coll (5.908 - 13.788) = 1606300 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1413734 Col2 Total PCB = 0.5 ppm\*

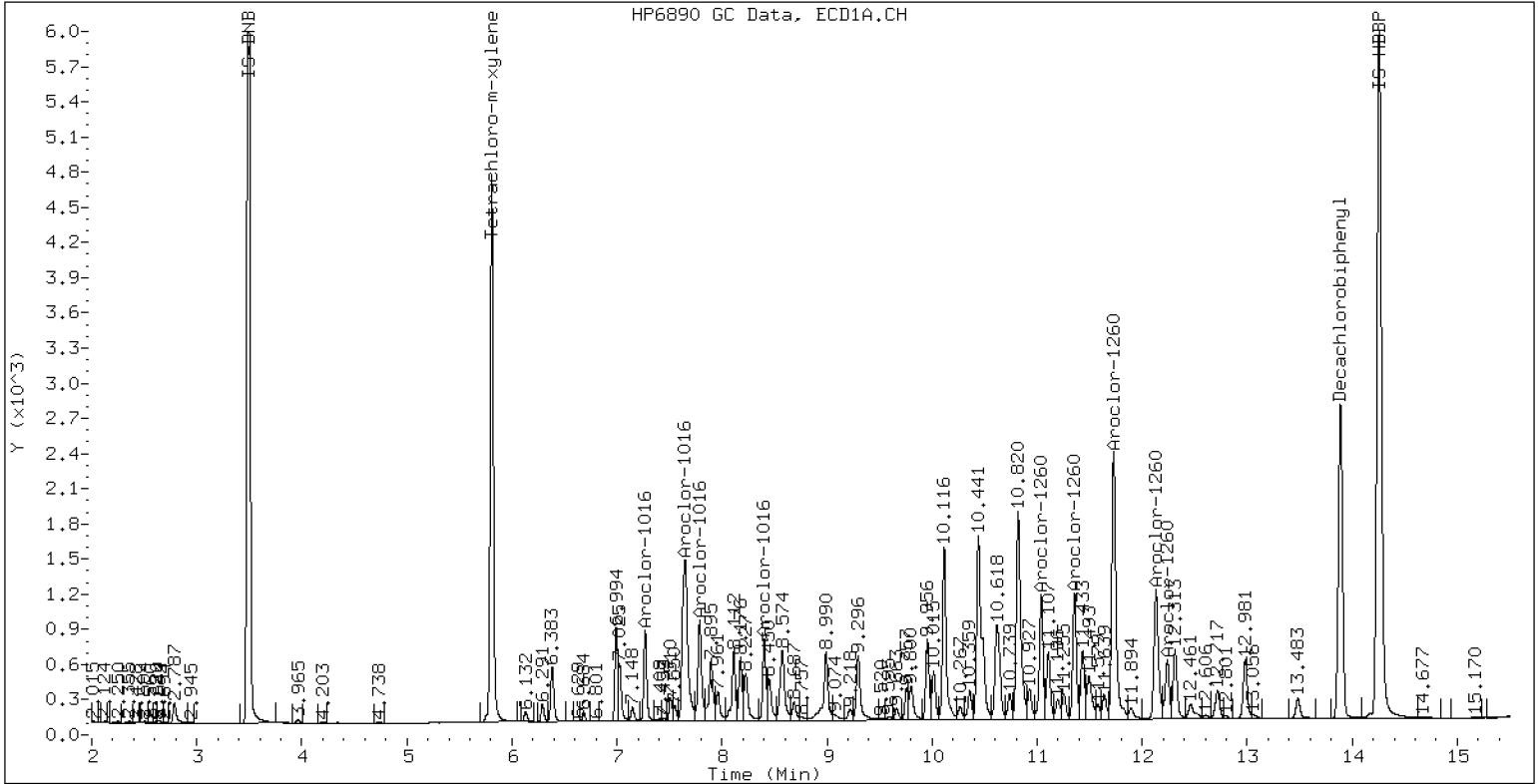
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8

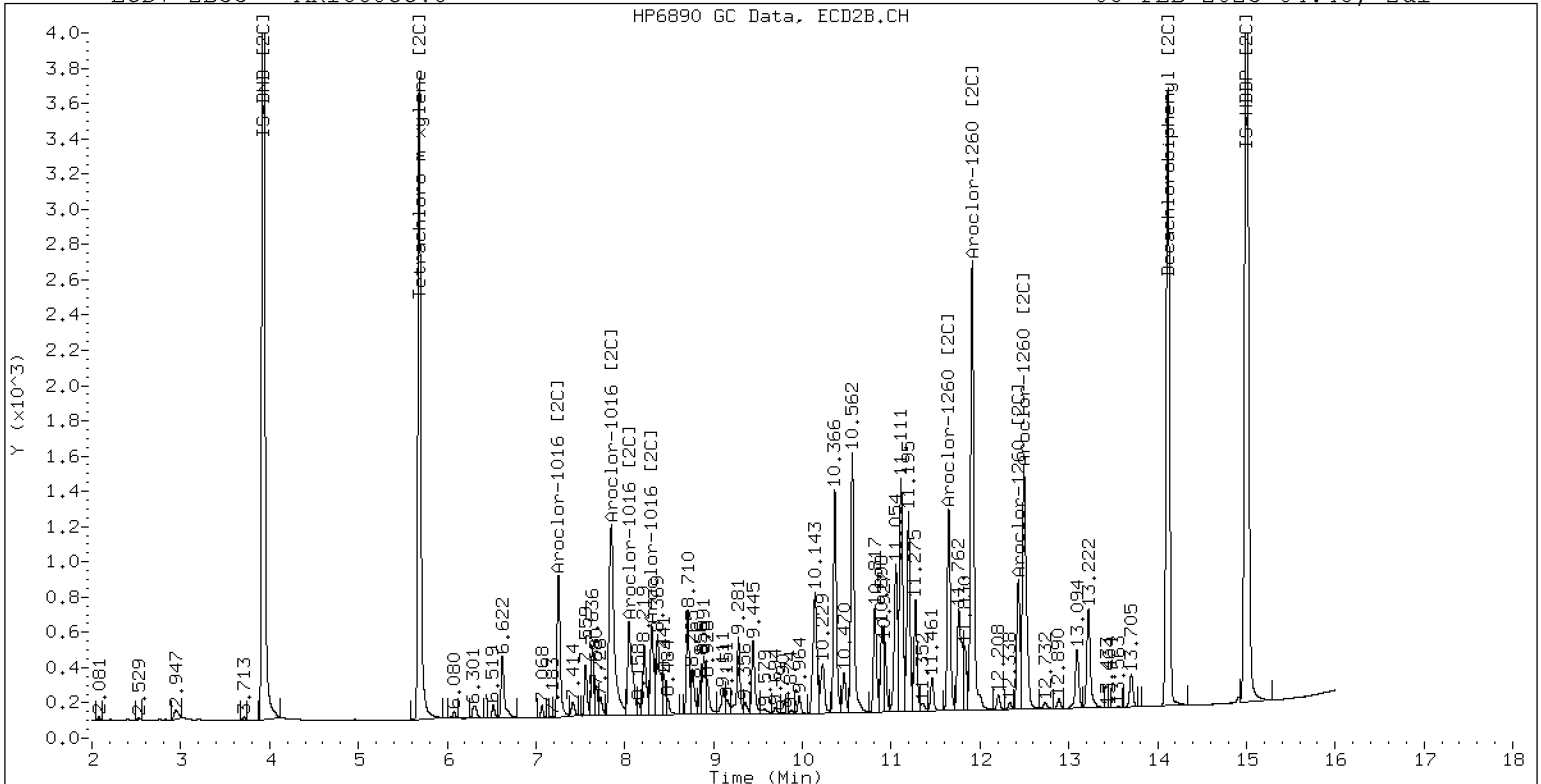
08-FEB-2023 04:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8

08-FEB-2023 04:48, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02072357ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0109</u>	Injection Date:	<u>02/08/23</u>
Lab Sample ID:	<u>SLB0109-CCV9</u>	Injection Time:	<u>08:18</u>
Sequence Name:	<u>AR1242CCV9</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	208	0.0411165	0.0346757		-16.9	+/-20
Aroclor-1242 (1)	A	250.00	230		0.0225720			
Aroclor-1242 (2)	A	250.00	222		0.0710807			
Aroclor-1242 (3)	A	250.00	194		0.0184485			
Aroclor-1242 (4)	A	250.00	185		0.0266017			
Aroclor 1242 [2C]	A	250.00	213	0.0423236	0.0368640		-14.8	+/-20
Aroclor-1242 (1) [2C]	A	250.00	249		0.0347996			
Aroclor-1242 (2) [2C]	A	250.00	227		0.0705196			
Aroclor-1242 (3) [2C]	A	250.00	200		0.0194305			
Aroclor-1242 (4) [2C]	A	250.00	176		0.0227062			
Decachlorobiphenyl	A	40.000	37.3	0.8555994	0.7987917		-6.8	+/-20
Tetrachlorometaxylene	A	40.000	49.1	1.1307870	1.3871540		22.8	+/-20 *
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2696430	1.2041490		-5.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	49.5	1.0814980	1.3397050		23.8	+/-20 *

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072357ECD7.D  
 Data file 2: /230207.b/230207.b/02072357ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
 Compound Sublist: AR1242.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: AR1242CCV9  
 Client ID:  
 Injection Date: 08-FEB-2023 08:18  
 Report Date: 02/08/2023 11:49  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	243990	5.685	0.000	214965	49.1	49.5	1.0	Tetrachloro-m-xylene
13.888	-0.001	111455	14.117	0.000	137291	37.3	37.9	1.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	351785	-30.1
Hexabromobiphenyl	647433	279059	-56.9 <-

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	320914	-4.7
Hexabromobiphenyl	382032	228030	-40.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.269	-0.001	24814	230.4	1	7.253	0.000	34899	248.7	
Aroclor-1242	2	7.649	-0.006	78141	221.7	2	7.850	0.000	70721	226.9	
Aroclor-1242	3	8.402	-0.005	20281	193.6	3	9.151	0.000	19486	199.6	
Aroclor-1242	4	8.574	-0.007	29244	184.8	4	9.575	0.000	22771	176.0	
Total Col1Ave (4 peaks):				207.6	Total Col2Ave (4 peaks):				212.8	RPD = 2	
Corrected Ave (3 peaks):				200.0	Corrected Ave (3 peaks):				200.8	RPD = 0	
CalAmt %D:				-17.0	CalAmt %D:				-14.9		

Total PCB Area Col1 (5.908 - 13.788) = 576432 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 462737 Col2 Total PCB = 0.1 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02072358ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0109

Injection Date: 02/08/23

Lab Sample ID: SLB0109-CCVA

Injection Time: 08:39

Sequence Name: AR1660CCVA

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	236	0.0506755	0.0484036		-5.8	+/-20
Aroclor-1016 (1)	A	250.00	252	0.0297277	0.0299296		0.8	
Aroclor-1016 (2)	A	250.00	248	0.0985017	0.0977593		-0.8	
Aroclor-1016 (3)	A	250.00	220	0.0453193	0.0399775		-12.0	
Aroclor-1016 (4)	A	250.00	222	0.0291533	0.0259481		-11.2	
Aroclor 1016 [2C]	A	250.00	254	0.0519244	0.0527094		1.5	+/-20
Aroclor-1016 (1) [2C]	A	250.00	259	0.0433907	0.0448979		3.6	
Aroclor-1016 (2) [2C]	A	250.00	252	0.0950862	0.0959593		0.8	
Aroclor-1016 (3) [2C]	A	250.00	260	0.0388014	0.0402830		4.0	
Aroclor-1016 (4) [2C]	A	250.00	244	0.0304194	0.0296975		-2.4	
Aroclor 1260	A	250.00	255	0.0605224	0.0611063		2.1	+/-20
Aroclor-1260 (1)	A	250.00	272	0.0448870	0.0487980		8.8	
Aroclor-1260 (2)	A	250.00	266	0.0461412	0.0491050		6.4	
Aroclor-1260 (3)	A	250.00	241	0.1214672	0.1169200		-3.6	
Aroclor-1260 (4)	A	250.00	256	0.0627593	0.0643769		2.4	
Aroclor-1260 (5)	A	250.00	241	0.0273573	0.0263315		-3.6	
Aroclor 1260 [2C]	A	250.00	257	0.0836545	0.0845231		2.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	260	0.0577136	0.0601229		4.0	
Aroclor-1260 (2) [2C]	A	250.00	248	0.1460113	0.1451179		-0.8	
Aroclor-1260 (3) [2C]	A	250.00	274	0.0363944	0.0399011		9.6	
Aroclor-1260 (4) [2C]	A	250.00	246	0.0944986	0.0929504		-1.6	
Decachlorobiphenyl	A	40.000	49.0	0.8555994	1.0472210		22.5	+/-20 *
Tetrachlorometaxylene	A	40.000	42.6	1.1307870	1.2054180		6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.3	1.2696430	1.1841730		-6.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.1	1.0814980	1.1384420		5.3	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230207.b/02072358ECD7.D  
Data file 2: /230207.b/230207.b/02072358ECD7.D  
Method: \\target\share\chem4\ecd7.i\230207.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCVA  
Client ID:  
Injection Date: 08-FEB-2023 08:39  
Report Date: 02/08/2023 11:49  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	197110	5.685	0.000	168893	42.6	42.1	1.3	Tetrachloro-m-xylene
13.889	0.000	149563	14.117	0.000	141826	49.0	37.3	27.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	327040	-35.0
Hexabromobiphenyl	647433	285638	-55.9 <-
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	296709	-11.9
Hexabromobiphenyl	382032	239536	-37.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	30588	251.7	1	7.253	0.000	41630	258.7
Aroclor-1016	2	7.649	-0.001	99910	248.1	2	7.848	0.000	88975	252.3
Aroclor-1016	3	7.787	-0.002	40857	220.5	3	8.048	0.000	37351	259.5
Aroclor-1016	4	8.402	-0.002	26519	222.5	4	8.303	0.000	27536	244.1
Total CollAve (4 peaks):				235.7		Total Col2Ave (4 peaks):				253.6 RPD = 7
Corrected Ave (3 peaks):				230.4		Corrected Ave (3 peaks):				251.7 RPD = 9
CalAmt %D:				-5.7		CalAmt %D:				1.5
Aroclor-1260	1	11.039	-0.004	43558	271.8	1	11.649	0.000	45005	260.4
Aroclor-1260	2	11.355	-0.005	43832	266.1	2	11.912	0.000	108628	248.5
Aroclor-1260	3	11.728	-0.007	104365	240.6	3	12.432	0.000	29868	274.1
Aroclor-1260	4	12.131	-0.009	57464	256.4	4	12.496	0.000	69578	245.9
Aroclor-1260	5	12.239	-0.004	23504	240.6	NS	---			----
Total CollAve (5 peaks):				255.1		Total Col2Ave (4 peaks):				257.2 RPD = 1
Corrected Ave (4 peaks):				250.9		Corrected Ave (3 peaks):				251.6 RPD = 0
CalAmt %D:				2.0		CalAmt %D:				2.9

Total PCB Area Coll (5.908 - 13.788) = 1539273 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.017) = 1239065 Col2 Total PCB = 0.4 ppm\*

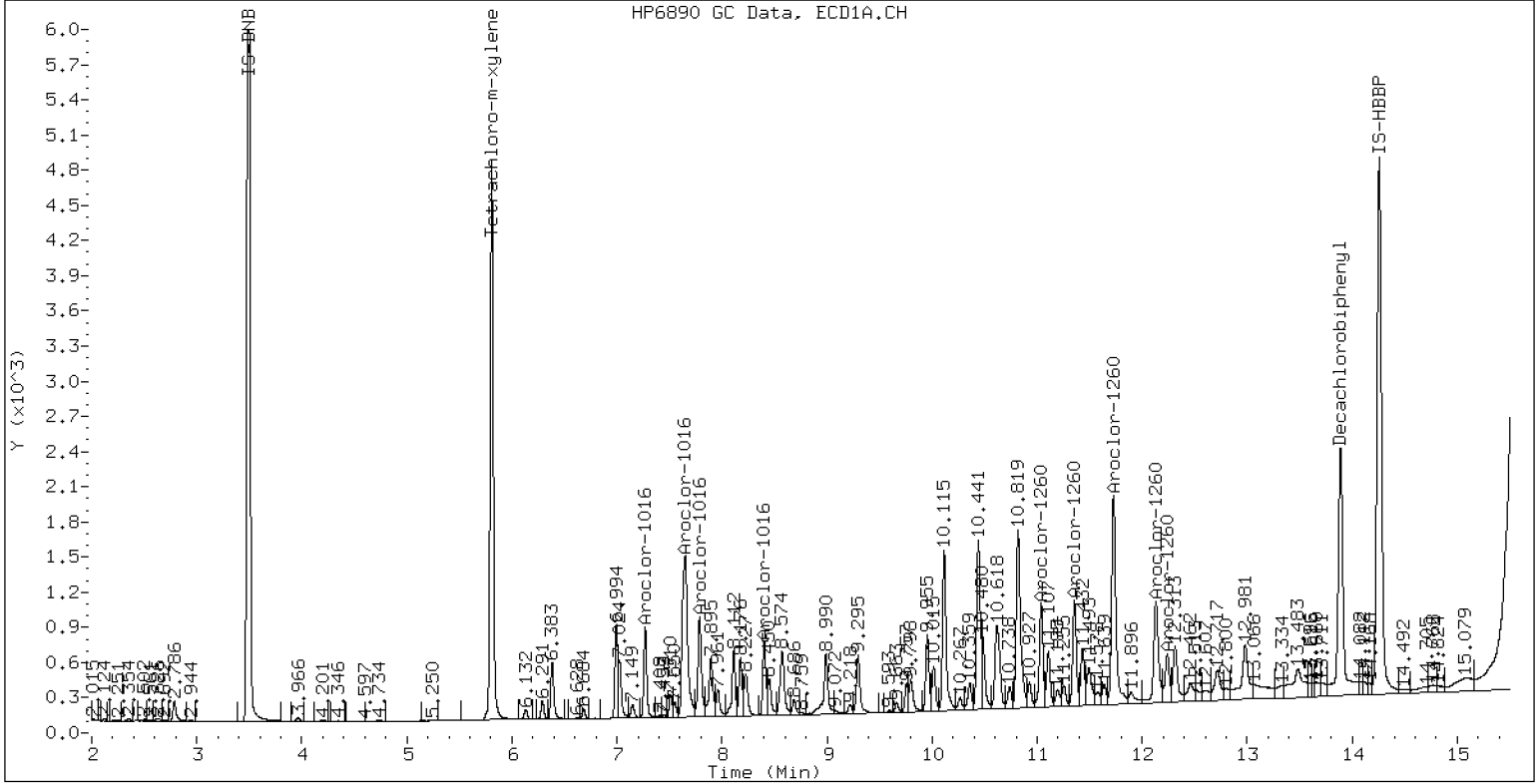
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA

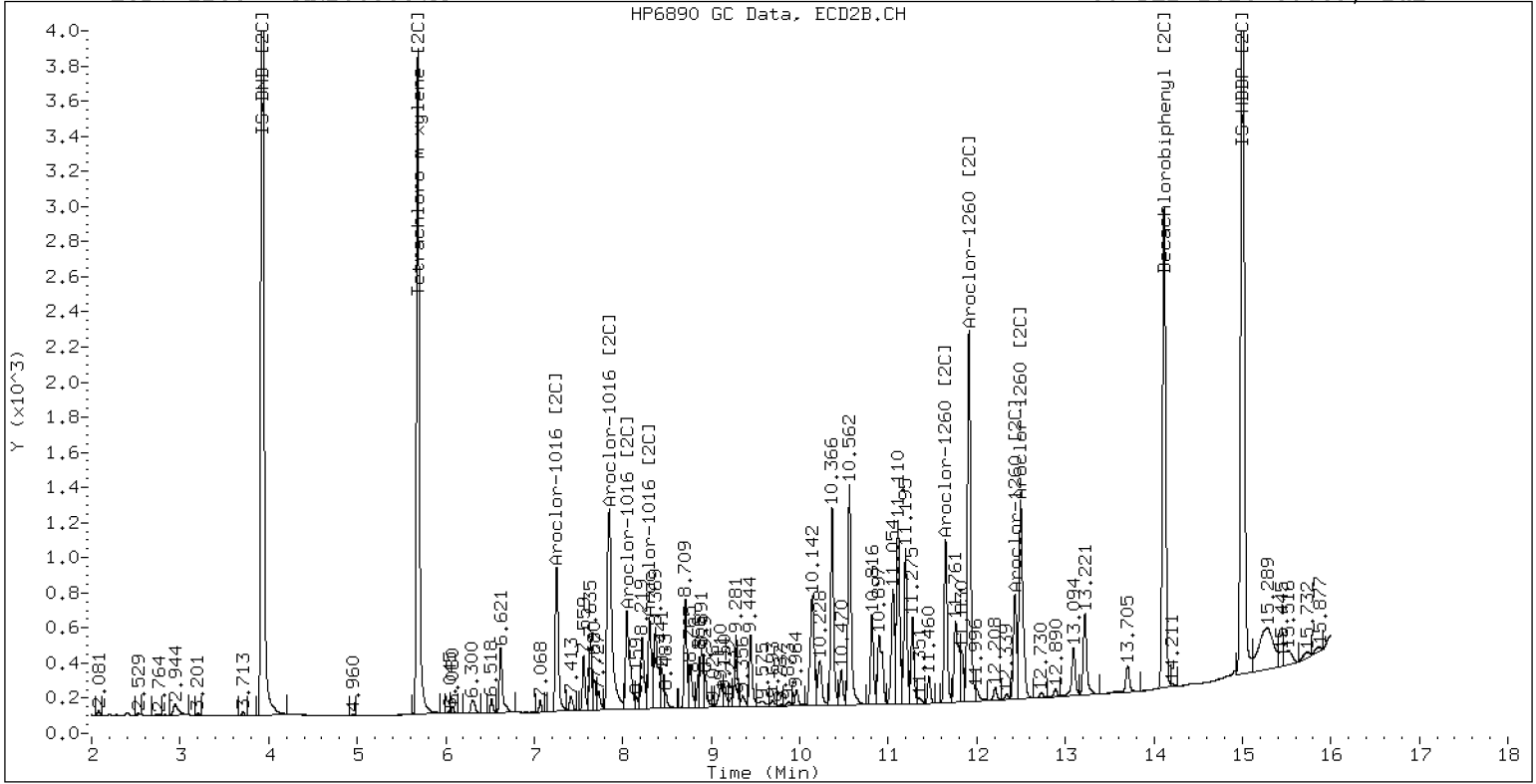
08-FEB-2023 08:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA

08-FEB-2023 08:39, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02082316ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0127</u>	Injection Date:	<u>02/08/23</u>
Lab Sample ID:	<u>SLB0127-CCV1</u>	Injection Time:	<u>14:53</u>
Sequence Name:	<u>AR1248CCV1</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	178	0.0592639	0.0401779		-28.8	+/-20 *
Aroclor-1248 (1)	A	250.00	211		0.0338016			
Aroclor-1248 (2)	A	250.00	204		0.0416906			
Aroclor-1248 (3)	A	250.00	141		0.0549680			
Aroclor-1248 (4)	A	250.00	156		0.0302512			
Aroclor 1248 [2C]	A	250.00	214	0.0453673	0.0385442		-14.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	222		0.0320711			
Aroclor-1248 (2) [2C]	A	250.00	217		0.0338539			
Aroclor-1248 (3) [2C]	A	250.00	212		0.0402827			
Aroclor-1248 (4) [2C]	A	250.00	204		0.0479690			
Decachlorobiphenyl	A	40.000	31.3	0.8555994	0.6697117		-21.8	+/-20 *
Tetrachlorometaxylene	A	40.000	36.1	1.1307870	1.0218100		-9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	33.8	1.2696430	1.0746470		-15.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.9	1.0814980	0.9986607		-7.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082316ECD7.D  
Data file 2: /230208.b/230208.b/02082316ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248CCV1  
Client ID:  
Injection Date: 08-FEB-2023 14:53  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	193726	5.685	-0.000	175225	36.1	36.9	2.2	Tetrachloro-m-xylene
13.889	0.001	131373	14.116	-0.000	174426	31.3	33.9	7.8	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	379182	-24.7
Hexabromobiphenyl	647433	392327	-39.4

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	350920	4.2
Hexabromobiphenyl	382032	324620	-15.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.402	-0.003	40053	211.2	1	8.304	0.000	35170	221.7	
Aroclor-1248	2	8.574	-0.006	49401	204.2	2	8.710	0.000	37125	217.4	
Aroclor-1248	3	8.994	-0.005	65134	140.7	3	9.152	0.000	44175	211.7	
Aroclor-1248	4	9.291	-0.003	35846	156.5	4	9.575	0.000	52604	203.9	
Total CollAve (4 peaks):				178.1		Total Col2Ave (4 peaks):				213.7	RPD = 18
Corrected Ave (3 peaks):				167.1		Corrected Ave (3 peaks):				211.0	RPD = 23
CalAmt %D:				-28.7		CalAmt %D:				-14.5	

Total PCB Area Col1 (5.908 - 13.789) = 736684 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 681751 Col2 Total PCB = 0.2 ppm\*

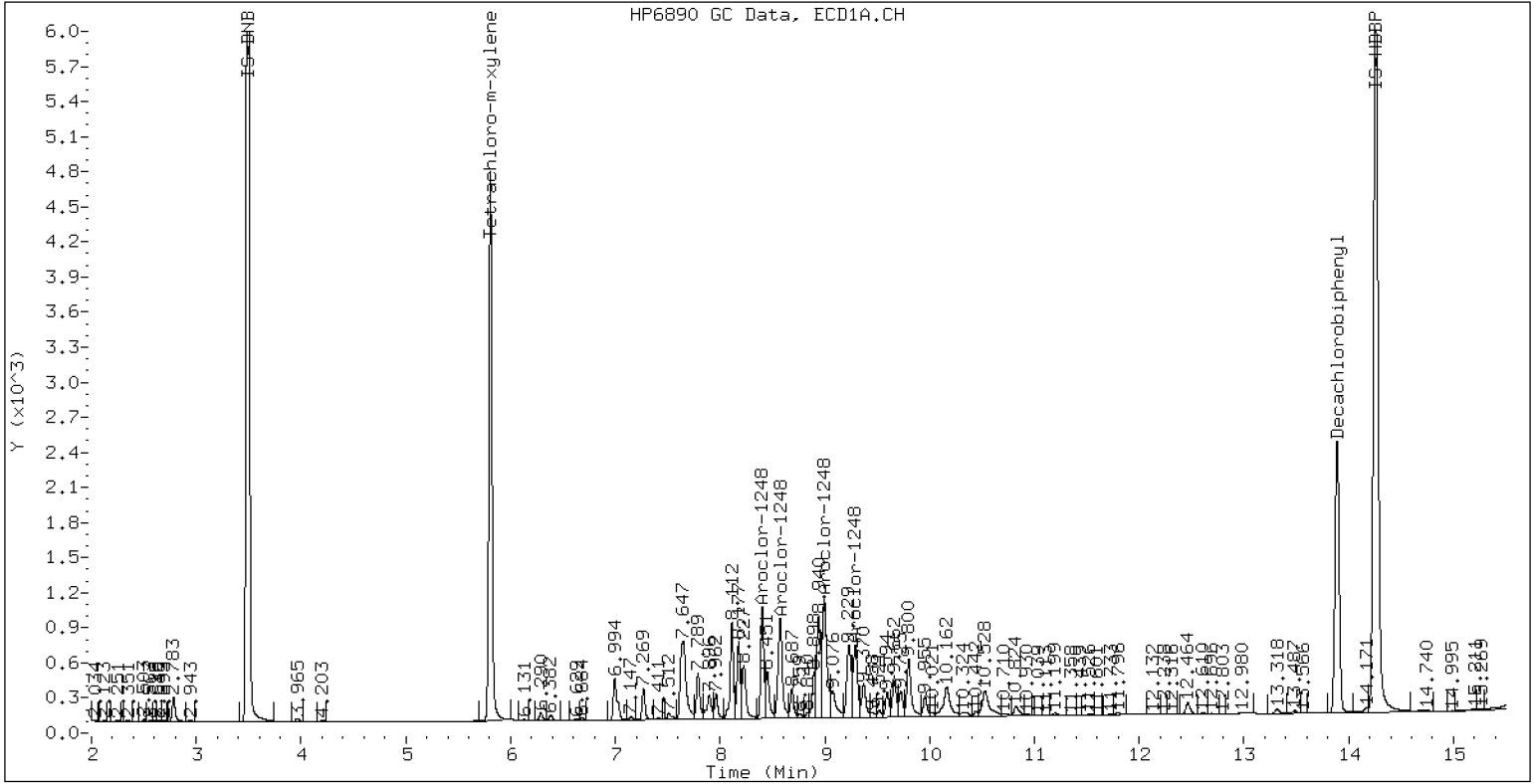
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1

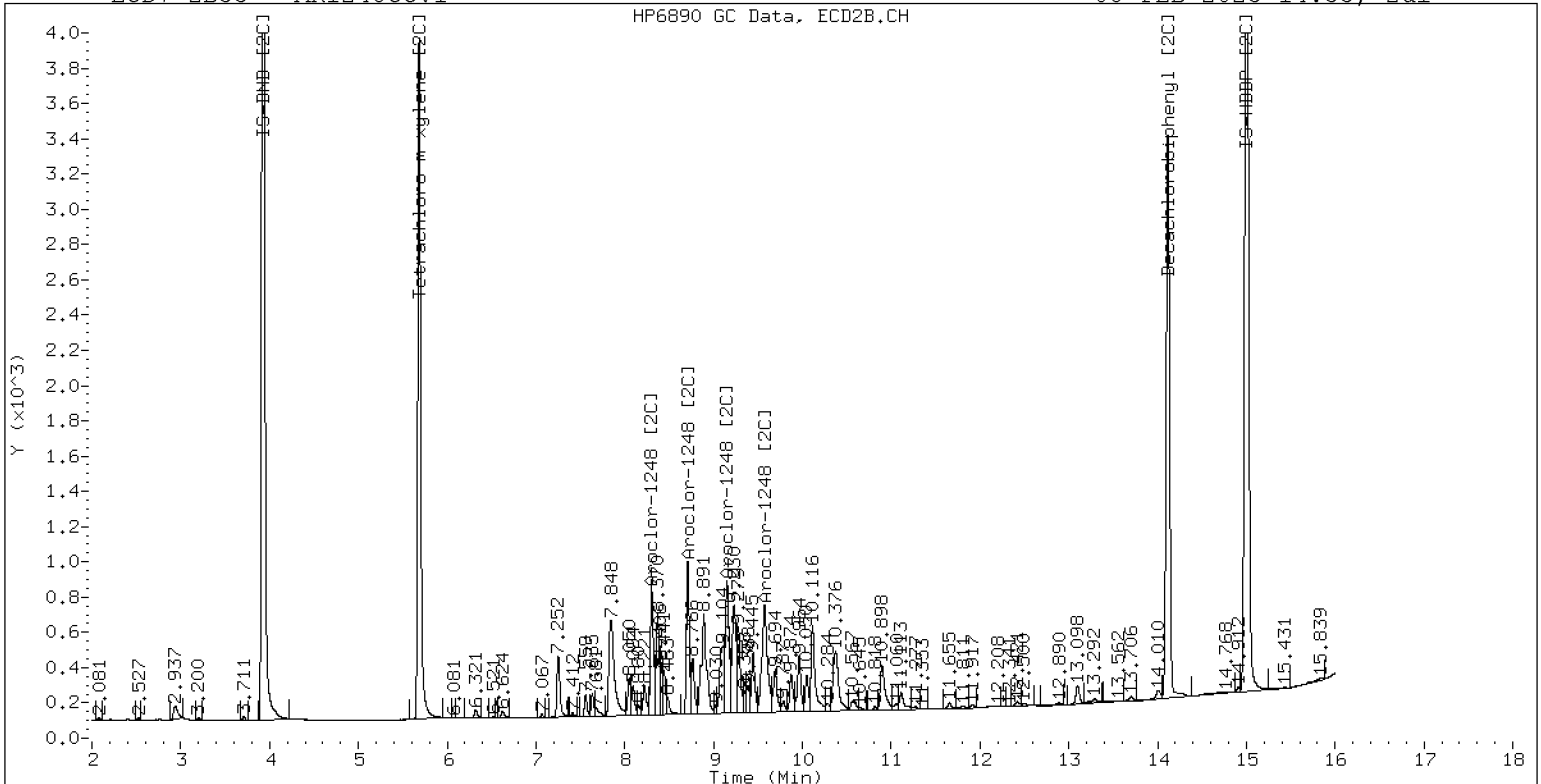
08-FEB-2023 14:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1

08-FEB-2023 14:53, 2ul



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082317ECD7.D  
Data file 2: /230208.b/230208.b/02082317ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV2  
Client ID:  
Injection Date: 08-FEB-2023 15:14  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.809	0.002	211128	5.686	0.001	182528	39.2	38.7	1.2	Tetrachloro-m-xylene
13.889	0.000	164839	14.117	0.001	210258	34.1	36.6	7.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	381264	-24.2
Hexabromobiphenyl	647433	452188	-30.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348949	3.6
Hexabromobiphenyl	382032	361781	-5.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.001	33438	236.0	1	7.254	0.000	45547	240.7
Aroclor-1016	2	7.649	0.000	110675	235.8	2	7.848	0.000	101543	244.8
Aroclor-1016	3	7.788	0.001	45878	212.4	3	8.049	0.001	41743	246.6
Aroclor-1016	4	8.402	0.001	32191	231.7	4	8.304	0.000	31414	236.8
Total CollAve (4 peaks):				229.0		Total Col2Ave (4 peaks):				242.2 RPD = 6
Corrected Ave (3 peaks):				226.6		Corrected Ave (3 peaks):				240.7 RPD = 6

CalAmt %D: -8.4

CalAmt %D: -3.1

Aroclor-1260	1	11.040	0.000	59869	236.0	1	11.650	0.001	65990	252.8
Aroclor-1260	2	11.356	-0.000	59996	230.0	2	11.913	0.001	162756	246.5
Aroclor-1260	3	11.729	0.002	150999	219.9	3	12.431	0.001	42013	255.3
Aroclor-1260	4	12.132	0.001	72728	205.0	4	12.497	0.001	100172	234.4
Aroclor-1260	5	12.240	0.001	29265	189.3	NS	---			----
Total CollAve (5 peaks):				216.0		Total Col2Ave (4 peaks):				247.2 RPD = 13
Corrected Ave (4 peaks):				211.1		Corrected Ave (3 peaks):				244.6 RPD = 15

CalAmt %D: -13.6

CalAmt %D: -1.1

Total PCB Area Coll (5.908 - 13.789) = 1742169 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1648399 Col2 Total PCB = 0.4 ppm\*

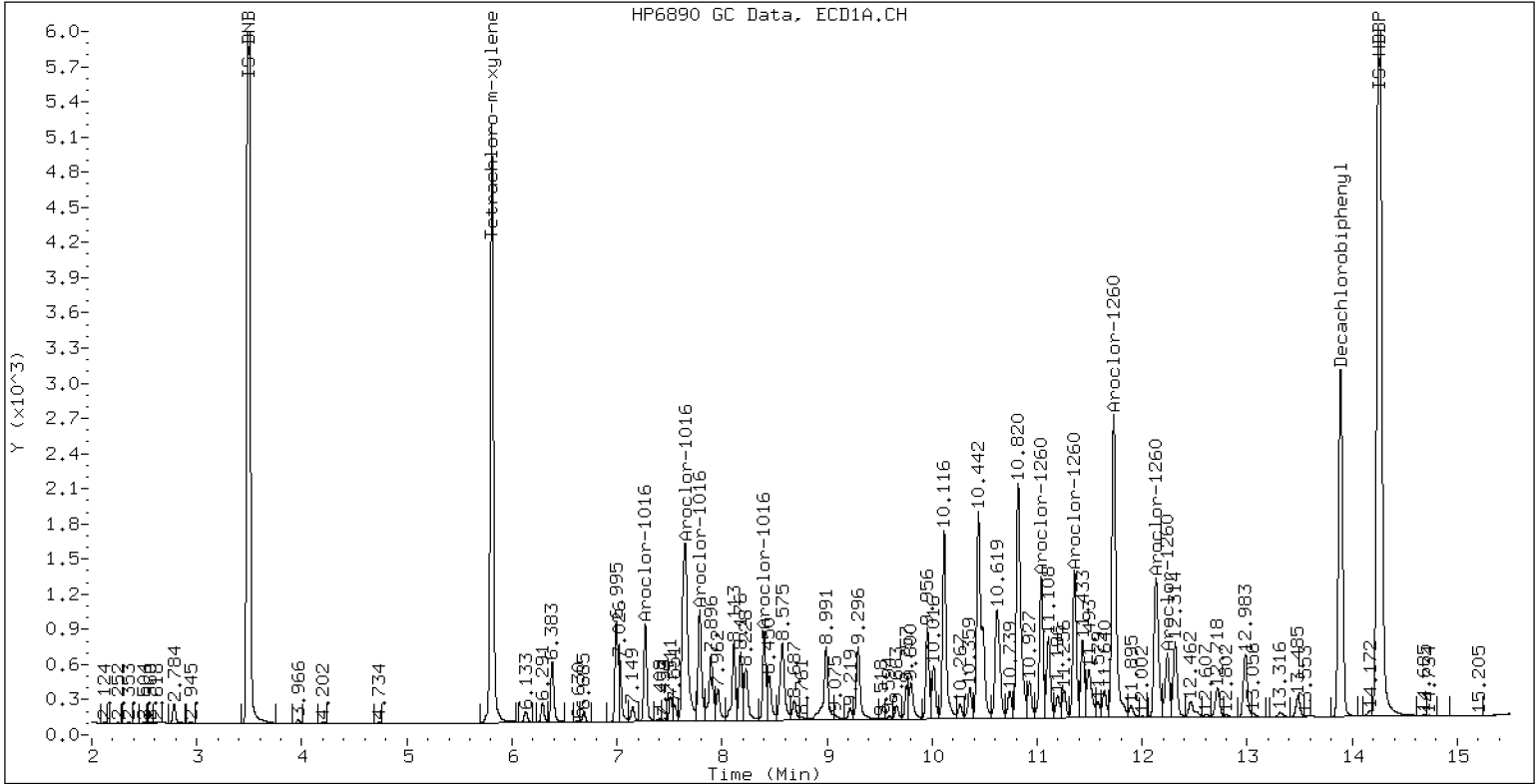
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2

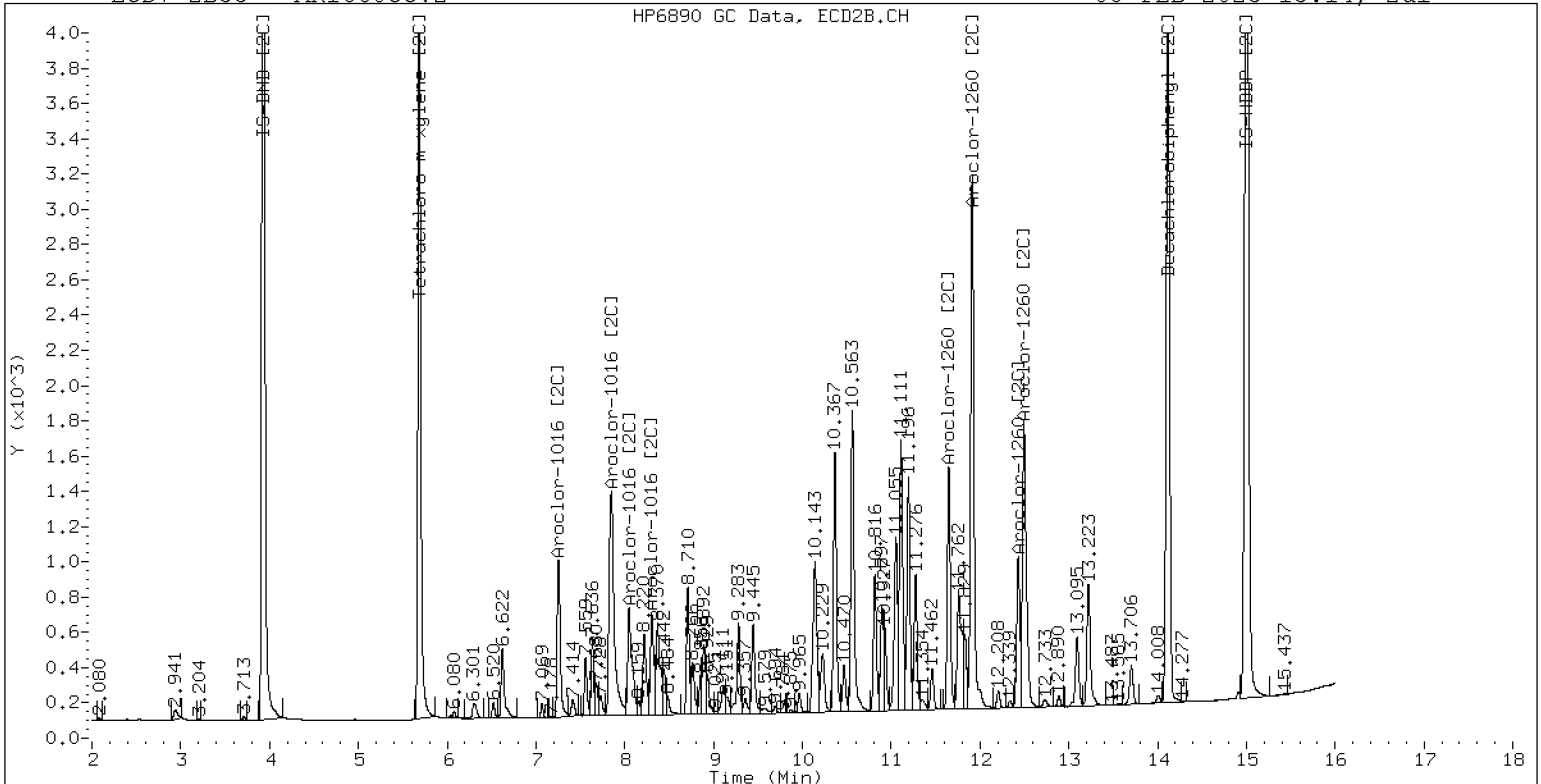
08-FEB-2023 15:14, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2

08-FEB-2023 15:14, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02082330ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0127

Injection Date: 02/08/23

Lab Sample ID: SLB0127-CCV3

Injection Time: 19:47

Sequence Name: AR1242CCV3

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	215	0.0411165	0.0356465		-14.0	+/-20
Aroclor-1242 (1)	A	250.00	227		0.0222108			
Aroclor-1242 (2)	A	250.00	223		0.0714984			
Aroclor-1242 (3)	A	250.00	208		0.0198520			
Aroclor-1242 (4)	A	250.00	202		0.0290249			
Aroclor 1242 [2C]	A	250.00	215	0.0423236	0.0367460		-13.9	+/-20
Aroclor-1242 (1) [2C]	A	250.00	230		0.0322239			
Aroclor-1242 (2) [2C]	A	250.00	220		0.0683912			
Aroclor-1242 (3) [2C]	A	250.00	213		0.0207524			
Aroclor-1242 (4) [2C]	A	250.00	198		0.0256167			
Decachlorobiphenyl	A	40.000	30.8	0.8555994	0.6592090		-23.0	+/-20 *
Tetrachlorometaxylene	A	40.000	43.9	1.1307870	1.2418250		9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	31.5	1.2696430	0.9993356		-21.3	+/-20 *
Tetrachlorometaxylene [2C]	A	40.000	44.7	1.0814980	1.2088600		11.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082330ECD7.D  
Data file 2: /230208.b/230208.b/02082330ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1242.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242CCV3  
Client ID:  
Injection Date: 08-FEB-2023 19:47  
Report Date: 02/09/2023 10:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.000	240909	5.684	-0.001	216305	43.9	44.7	1.8	Tetrachloro-m-xylene
13.888	-0.000	118211	14.117	0.000	160931	30.8	31.5	2.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	387992	-22.9
Hexabromobiphenyl	647433	358645	-44.6

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	357866	6.2
Hexabromobiphenyl	382032	322076	-15.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.268	-0.002	26930	226.7	1	7.252	0.000	36037	230.3	
Aroclor-1242	2	7.649	-0.006	86690	223.0	2	7.849	0.000	76484	220.0	
Aroclor-1242	3	8.402	-0.005	24070	208.4	3	9.152	0.000	23208	213.2	
Aroclor-1242	4	8.574	-0.008	35192	201.7	4	9.577	0.000	28648	198.5	
Total Col1Ave (4 peaks):				214.9	Total Col2Ave (4 peaks):				215.5	RPD = 0	
Corrected Ave (3 peaks):				211.0	Corrected Ave (3 peaks):				210.6	RPD = 0	
CalAmt %D:				-14.0	CalAmt %D:				-13.8		

Total PCB Area Col1 (5.908 - 13.789) = 595563 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 523367 Col2 Total PCB = 0.1 ppm\*

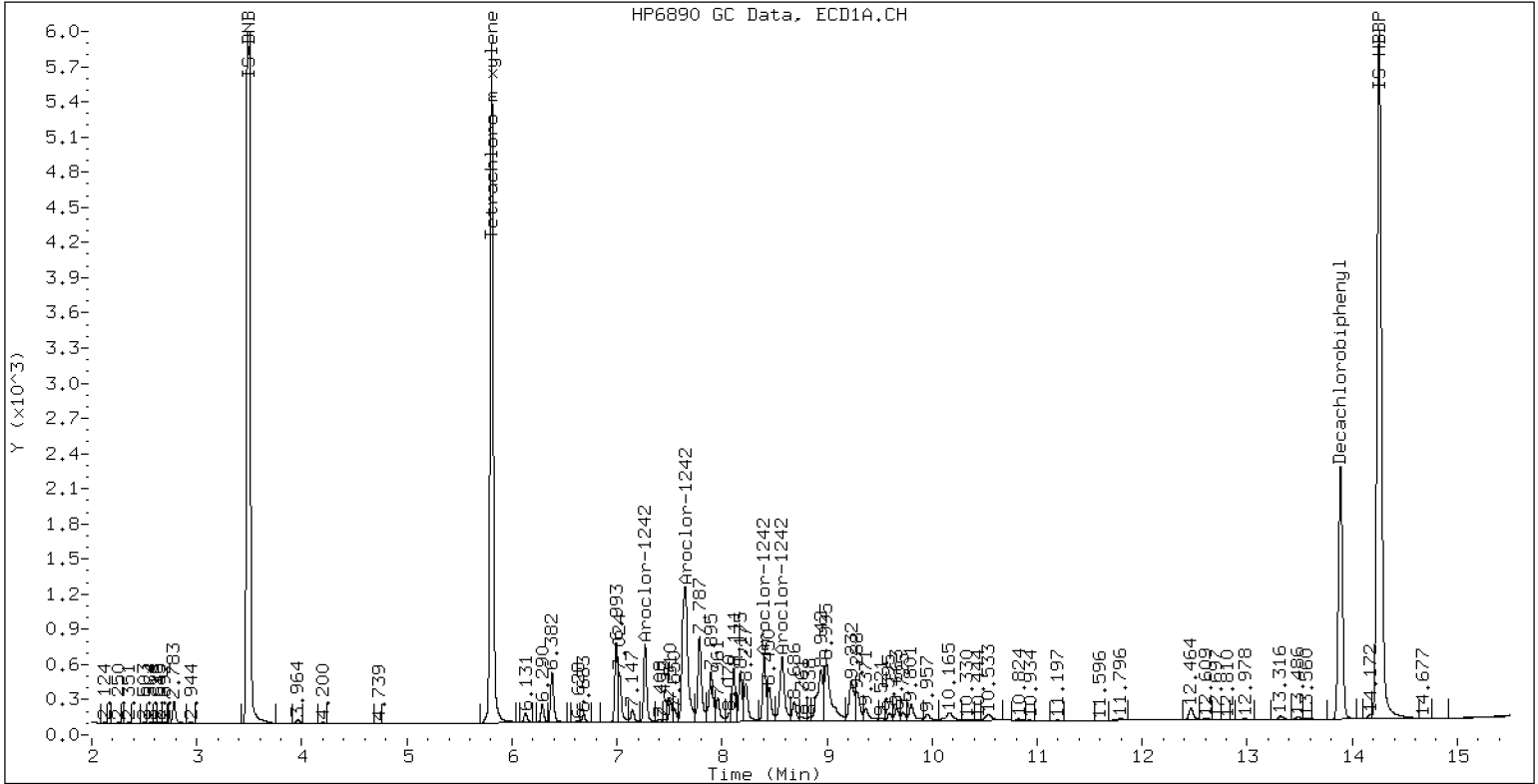
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3

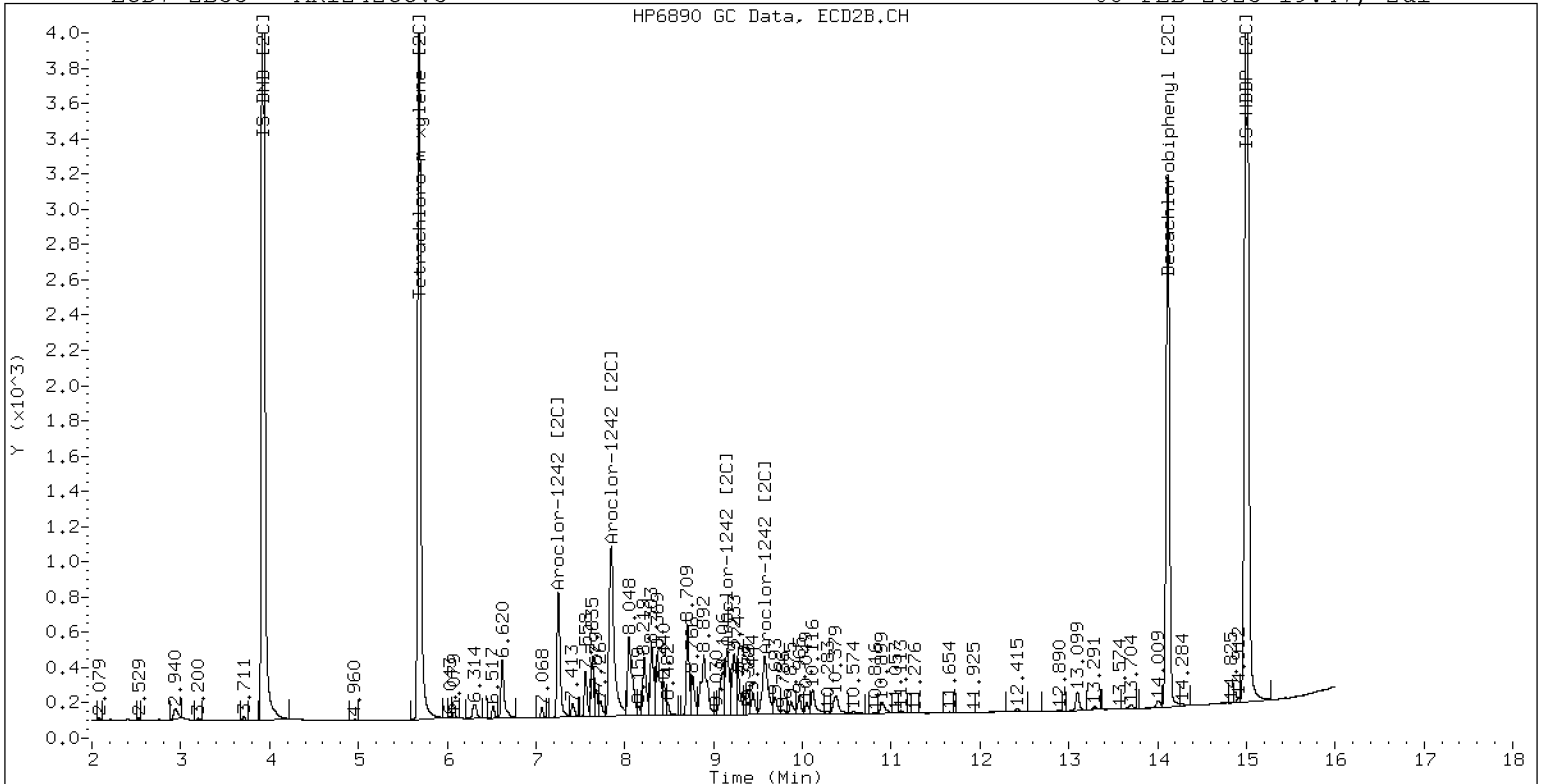
08-FEB-2023 19:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3

08-FEB-2023 19:47, 2ul



ZB-35 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02082331ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0127

Injection Date: 02/08/23

Lab Sample ID: SLB0127-CCV4

Injection Time: 20:08

Sequence Name: AR1660CCV4

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	229	0.0506755	0.0465417		-8.4	+/-20
Aroclor-1016 (1)	A	250.00	236	0.0297277	0.0280782		-5.6	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925244		-6.0	
Aroclor-1016 (3)	A	250.00	211	0.0453193	0.0382972		-15.6	
Aroclor-1016 (4)	A	250.00	234	0.0291533	0.0272672		-6.4	
Aroclor 1016 [2C]	A	250.00	239	0.0519244	0.0499739		-4.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	240	0.0433907	0.0416748		-4.0	
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0923167		-2.8	
Aroclor-1016 (3) [2C]	A	250.00	243	0.0388014	0.0377861		-2.8	
Aroclor-1016 (4) [2C]	A	250.00	231	0.0304194	0.0281179		-7.6	
Aroclor 1260	A	250.00	222	0.0605224	0.0540817		-11.0	+/-20
Aroclor-1260 (1)	A	250.00	243	0.0448870	0.0436227		-2.8	
Aroclor-1260 (2)	A	250.00	234	0.0461412	0.0432981		-6.4	
Aroclor-1260 (3)	A	250.00	223	0.1214672	0.1083021		-10.8	
Aroclor-1260 (4)	A	250.00	213	0.0627593	0.0533981		-14.8	
Aroclor-1260 (5)	A	250.00	199	0.0273573	0.0217874		-20.4	
Aroclor 1260 [2C]	A	250.00	246	0.0836545	0.0814468		-1.5	+/-20
Aroclor-1260 (1) [2C]	A	250.00	247	0.0577136	0.0570864		-1.2	
Aroclor-1260 (2) [2C]	A	250.00	243	0.1460113	0.1419334		-2.8	
Aroclor-1260 (3) [2C]	A	250.00	259	0.0363944	0.0376512		3.6	
Aroclor-1260 (4) [2C]	A	250.00	236	0.0944986	0.0891160		-5.6	
Decachlorobiphenyl	A	40.000	34.4	0.8555994	0.7367650		-14.0	+/-20
Tetrachlorometaxylene	A	40.000	39.6	1.1307870	1.1199620		-1.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.3	1.2696430	1.1194660		-11.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.3	1.0814980	1.0616470		-1.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082331ECD7.D  
 Data file 2: /230208.b/230208.b/02082331ECD7.D  
 Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
 Compound Sublist: AR1660.sub  
 Instrument, Inj. Vol.: ecd7.i, 2ul  
 Quant Method: Internal Std

ARI ID: AR1660CCV4  
 Client ID:  
 Injection Date: 08-FEB-2023 20:08  
 Report Date: 02/09/2023 10:56  
 Matrix: NONE  
 Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift Response	RT	Shift Response	on col	on col				
5.807	-0.000	219386	5.684	-0.001	190452	39.6	39.3	0.9	Tetrachloro-m-xylene
13.888	-0.000	161966	14.116	0.000	208023	34.4	35.3	2.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	391774	-22.2
Hexabromobiphenyl	647433	439668	-32.1

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358786	6.5
Hexabromobiphenyl	382032	371647	-2.7

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 24-JAN-2023  
 <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.001	34376	236.1	1	7.253	-0.001	46726	240.1
Aroclor-1016	2	7.650	0.001	113277	234.8	2	7.848	-0.000	103506	242.7
Aroclor-1016	3	7.787	0.000	46887	211.3	3	8.048	-0.000	42366	243.5
Aroclor-1016	4	8.401	0.000	33383	233.8	4	8.303	-0.001	31526	231.1
Total CollAve (4 peaks):				229.0		Total Col2Ave (4 peaks):				239.3 RPD = 4
Corrected Ave (3 peaks):				226.6		Corrected Ave (3 peaks):				238.0 RPD = 5

CalAmt %D: -8.4

CalAmt %D: -4.3

Aroclor-1260	1	11.040	0.000	59936	243.0	1	11.649	0.000	66300	247.3
Aroclor-1260	2	11.356	0.000	59490	234.6	2	11.912	0.000	164841	243.0
Aroclor-1260	3	11.729	0.001	148803	222.9	3	12.431	0.000	43728	258.6
Aroclor-1260	4	12.133	0.001	73367	212.7	4	12.496	0.000	103499	235.8
Aroclor-1260	5	12.240	0.000	29935	199.1	NS	---			----
Total CollAve (5 peaks):				222.5		Total Col2Ave (4 peaks):				246.2 RPD = 10
Corrected Ave (4 peaks):				217.3		Corrected Ave (3 peaks):				242.0 RPD = 11

CalAmt %D: -11.0

CalAmt %D: -1.5

Total PCB Area Coll (5.908 - 13.789) = 1789147 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1669067 Col2 Total PCB = 0.4 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.







**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02082348ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0127</u>	Injection Date:	<u>02/09/23</u>
Lab Sample ID:	<u>SLB0127-CCV5</u>	Injection Time:	<u>02:04</u>
Sequence Name:	<u>AR1254CCV5</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	205	0.0675033	0.0560074		-17.9	+/-20
Aroclor-1254 (1)	A	250.00	213		0.0694783			
Aroclor-1254 (2)	A	250.00	190		0.0265151			
Aroclor-1254 (3)	A	250.00	209		0.0436777			
Aroclor-1254 (4)	A	250.00	208		0.0853791			
Aroclor-1254 (5)	A	250.00	206		0.0549868			
Aroclor 1254 [2C]	A	250.00	225	0.0733219	0.0661746		-10.2	+/-20
Aroclor-1254 (1) [2C]	A	250.00	235		0.0544865			
Aroclor-1254 (2) [2C]	A	250.00	232		0.0435154			
Aroclor-1254 (3) [2C]	A	250.00	229		0.0936295			
Aroclor-1254 (4) [2C]	A	250.00	230		0.0943233			
Aroclor-1254 (5) [2C]	A	250.00	197		0.0449183			
Decachlorobiphenyl	A	40.000	33.0	0.8555994	0.7070340		-17.5	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.1307870	1.0560610		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.8	1.2696430	1.1354700		-10.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.1	1.0814980	1.0298160		-4.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082348ECD7.D  
Data file 2: /230208.b/230208.b/02082348ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254CCV5  
Client ID:  
Injection Date: 09-FEB-2023 02:04  
Report Date: 02/09/2023 10:57  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.001	205962	5.686	0.001	183107	37.4	38.1	1.9	Tetrachloro-m-xylene
13.889	0.001	168039	14.116	-0.000	218742	33.1	35.8	7.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	390057	-22.5
Hexabromobiphenyl	647433	475335	-26.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	355611	5.6
Hexabromobiphenyl	382032	385289	0.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.293	0.001	84689	213.0	1	9.444	0.000	60550	234.7	
Aroclor-1254	2	9.370	-0.000	32320	190.4	2	9.964	0.000	48358	231.9	
Aroclor-1254	3	9.661	-0.000	53240	209.0	3	10.116	0.000	104049	228.7	
Aroclor-1254	4	9.799	0.000	104071	208.5	4	10.365	0.000	104820	230.4	
Aroclor-1254	5	10.158	0.001	67025	206.5	5	10.563	0.000	49917	197.0	
Total CollAve (5 peaks):				205.5		Total Col2Ave (5 peaks):				224.6	RPD = 9
Corrected Ave (4 peaks):				203.6		Corrected Ave (4 peaks):				222.0	RPD = 9
CalAmt %D:				-17.8		CalAmt %D:				-10.2	

Total PCB Area Col1 (5.908 - 13.789) = 1075015 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 984600 Col2 Total PCB = 0.3 ppm\*

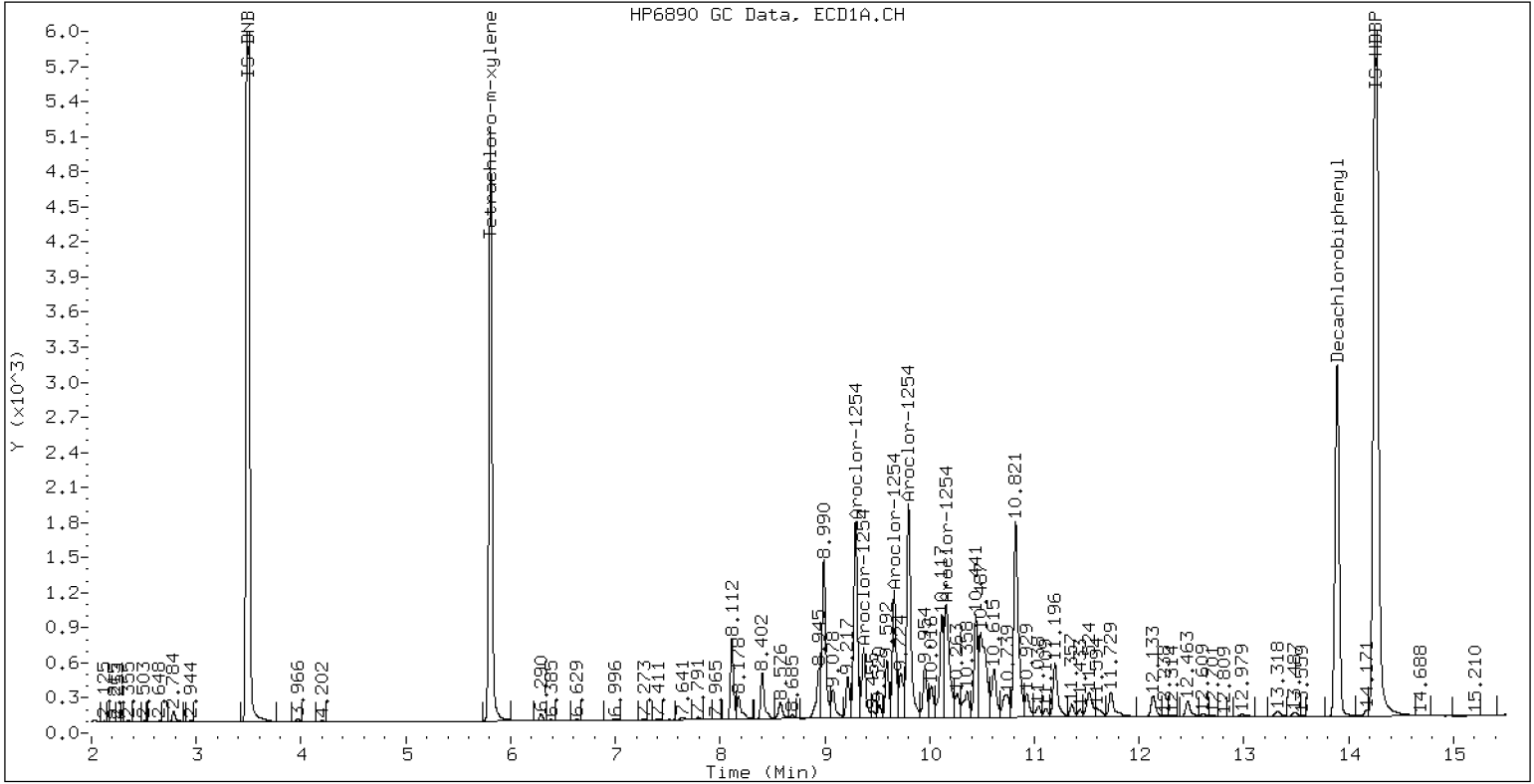
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5

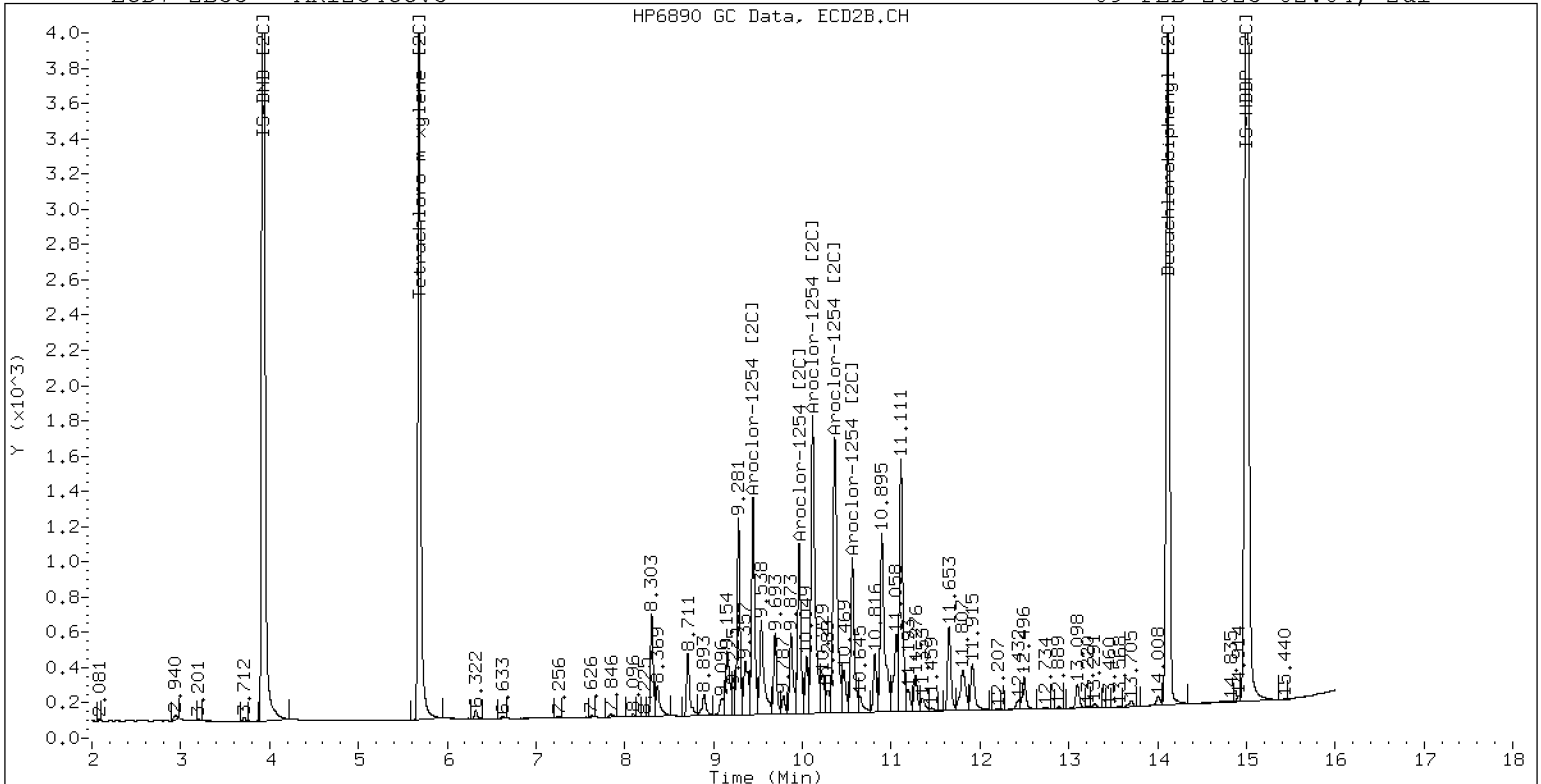
09-FEB-2023 02:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5

09-FEB-2023 02:04, 2ul



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082349ECD7.D  
Data file 2: /230208.b/230208.b/02082349ECD7.D  
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV6  
Client ID:  
Injection Date: 09-FEB-2023 02:26  
Report Date: 02/09/2023 10:57  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.807	-0.001	219544	5.685	-0.000	190741	39.0	38.9	0.3	Tetrachloro-m-xylene
13.890	0.001	192804	14.117	0.000	239643	34.6	35.6	2.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	398532	-20.8
Hexabromobiphenyl	647433	521444	-19.5
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	363116	7.8
Hexabromobiphenyl	382032	424080	11.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	34949	236.0	1	7.252	-0.001	47158	239.4
Aroclor-1016	2	7.649	0.000	115654	235.7	2	7.849	0.001	105337	244.1
Aroclor-1016	3	7.787	0.000	48438	214.6	3	8.048	-0.000	43679	248.0
Aroclor-1016	4	8.402	0.000	34364	236.6	4	8.303	-0.000	32623	236.3
Total CollAve (4 peaks):				230.7		Total Col2Ave (4 peaks):				241.9 RPD = 5
Corrected Ave (3 peaks):				228.7		Corrected Ave (3 peaks):				239.9 RPD = 5

CalAmt %D: -7.7

CalAmt %D: -3.2

Aroclor-1260	1	11.039	-0.000	66457	227.1	1	11.649	-0.000	71258	232.9
Aroclor-1260	2	11.356	0.000	67213	223.5	2	11.913	0.001	175916	227.3
Aroclor-1260	3	11.729	0.001	169133	213.6	3	12.431	0.000	46295	240.0
Aroclor-1260	4	12.132	0.000	84624	206.9	4	12.496	0.001	111070	221.7
Aroclor-1260	5	12.240	0.000	34601	194.0	NS	---			----
Total CollAve (5 peaks):				213.0		Total Col2Ave (4 peaks):				230.5 RPD = 8
Corrected Ave (4 peaks):				209.5		Corrected Ave (3 peaks):				227.3 RPD = 8

CalAmt %D: -14.8

CalAmt %D: -7.8

Total PCB Area Coll (5.908 - 13.789) = 1904573 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1775667 Col2 Total PCB = 0.5 ppm\*

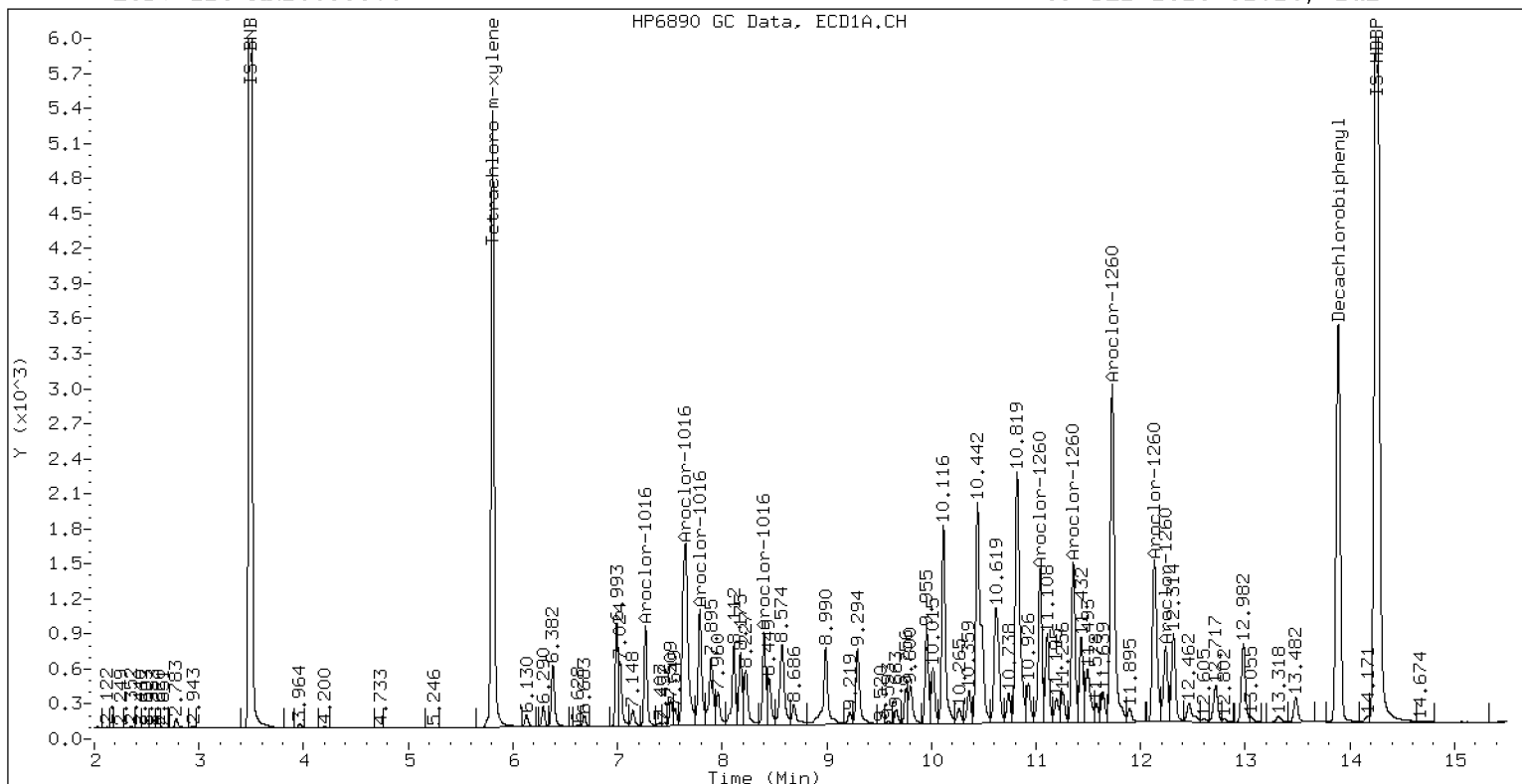
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6

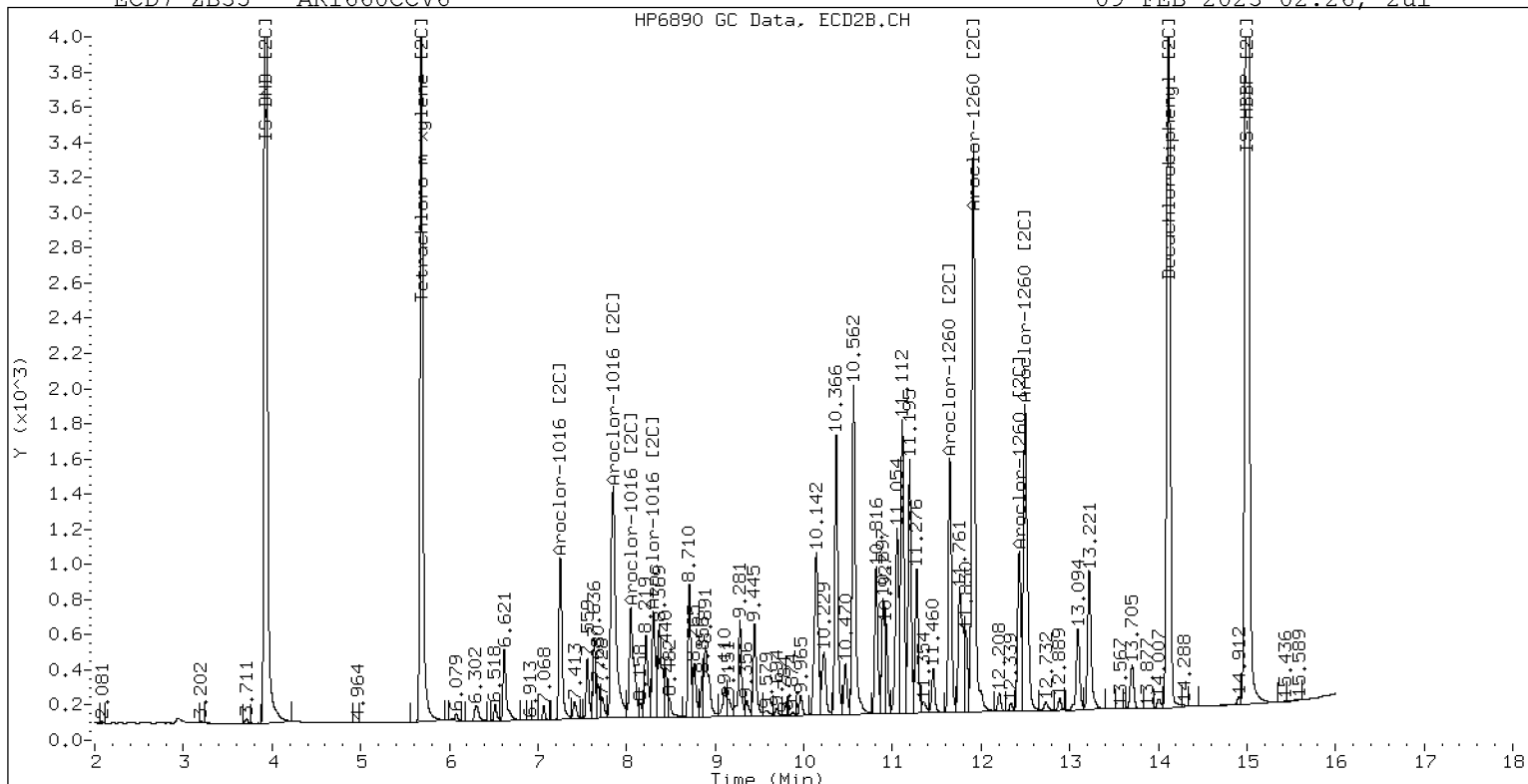
09-FEB-2023 02:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6

09-FEB-2023 02:26, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092317ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/09/23</u>
Lab Sample ID:	<u>SLB0148-CCV1</u>	Injection Time:	<u>17:51</u>
Sequence Name:	<u>AR1248CCV1</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	172	0.0592639	0.0389220		-31.1	+/-20 *
Aroclor-1248 (1)	A	250.00	203		0.0324482			
Aroclor-1248 (2)	A	250.00	196		0.0401208			
Aroclor-1248 (3)	A	250.00	138		0.0537376			
Aroclor-1248 (4)	A	250.00	152		0.0293812			
Aroclor 1248 [2C]	A	250.00	211	0.0453673	0.0378875		-15.8	+/-20
Aroclor-1248 (1) [2C]	A	250.00	226		0.0327212			
Aroclor-1248 (2) [2C]	A	250.00	211		0.0329152			
Aroclor-1248 (3) [2C]	A	250.00	208		0.0395753			
Aroclor-1248 (4) [2C]	A	250.00	197		0.0463384			
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6870908		-19.8	+/-20
Tetrachlorometaxylene	A	40.000	36.3	1.1307870	1.0271480		-9.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.2	1.2696430	1.0848250		-14.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0814980	0.9893007		-8.5	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092317ECD7.D  
Data file 2: /230209.b/230209.b/02092317ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248CCV1  
Client ID:  
Injection Date: 09-FEB-2023 17:51  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.805	-0.004	187869	5.682	-0.003	170550	36.3	36.6	0.7	Tetrachloro-m-xylene
13.889	-0.003	116376	14.117	0.002	165770	32.1	34.2	6.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365807	-27.3
Hexabromobiphenyl	647433	338750	-47.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344789	2.3
Hexabromobiphenyl	382032	305616	-20.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.400	-0.005	37093	202.7	1	8.302	-0.001	35256	226.2	
Aroclor-1248	2	8.573	-0.007	45864	196.5	2	8.708	-0.001	35465	211.4	
Aroclor-1248	3	8.992	-0.006	61430	137.6	3	9.151	-0.001	42641	208.0	
Aroclor-1248	4	9.291	-0.003	33587	152.0	4	9.576	-0.000	49928	196.9	
Total CollAve (4 peaks):				172.2		Total Col2Ave (4 peaks):				210.6	RPD = 20
Corrected Ave (3 peaks):				162.0		Corrected Ave (3 peaks):				205.5	RPD = 24
CalAmt %D:				-31.1		CalAmt %D:				-15.7	

Total PCB Area Col1 (5.909 - 13.792) = 699031 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 661379 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092318ECD7.D  
Data file 2: /230209.b/230209.b/02092318ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV2  
Client ID:  
Injection Date: 09-FEB-2023 18:12  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.806	-0.003	201479	5.683	-0.002	178440	39.0	38.5	1.5	Tetrachloro-m-xylene
13.888	-0.004	142944	14.116	0.001	191278	34.8	36.6	5.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365169	-27.4
Hexabromobiphenyl	647433	384100	-40.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343156	1.9
Hexabromobiphenyl	382032	329176	-13.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.003	32232	237.5	1	7.251	-0.002	44364	238.4
Aroclor-1016	2	7.648	-0.002	105098	233.7	2	7.848	-0.002	98379	241.2
Aroclor-1016	3	7.786	-0.002	44311	214.2	3	8.048	-0.000	40991	246.3
Aroclor-1016	4	8.400	-0.003	30498	229.2	4	8.302	-0.001	30963	237.3
Total CollAve (4 peaks):				228.7		Total Col2Ave (4 peaks):				240.8 RPD = 5
Corrected Ave (3 peaks):				225.7		Corrected Ave (3 peaks):				239.0 RPD = 6
CalAmt %D:				-8.5		CalAmt %D:				-3.7
Aroclor-1260	1	11.039	-0.004	54333	252.1	1	11.648	-0.001	54554	229.7
Aroclor-1260	2	11.356	-0.005	52282	236.0	2	11.912	-0.002	138243	230.1
Aroclor-1260	3	11.729	-0.006	131979	226.3	3	12.430	-0.001	38599	257.8
Aroclor-1260	4	12.132	-0.007	63781	211.7	4	12.496	-0.001	93045	239.3
Aroclor-1260	5	12.239	-0.005	26031	198.2	NS	---			----
Total CollAve (5 peaks):				224.9		Total Col2Ave (4 peaks):				239.2 RPD = 6
Corrected Ave (4 peaks):				218.0		Corrected Ave (3 peaks):				233.0 RPD = 7
CalAmt %D:				-10.1		CalAmt %D:				-4.3

Total PCB Area Coll (5.909 - 13.792) = 1598137 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1509152 Col2 Total PCB = 0.4 ppm\*

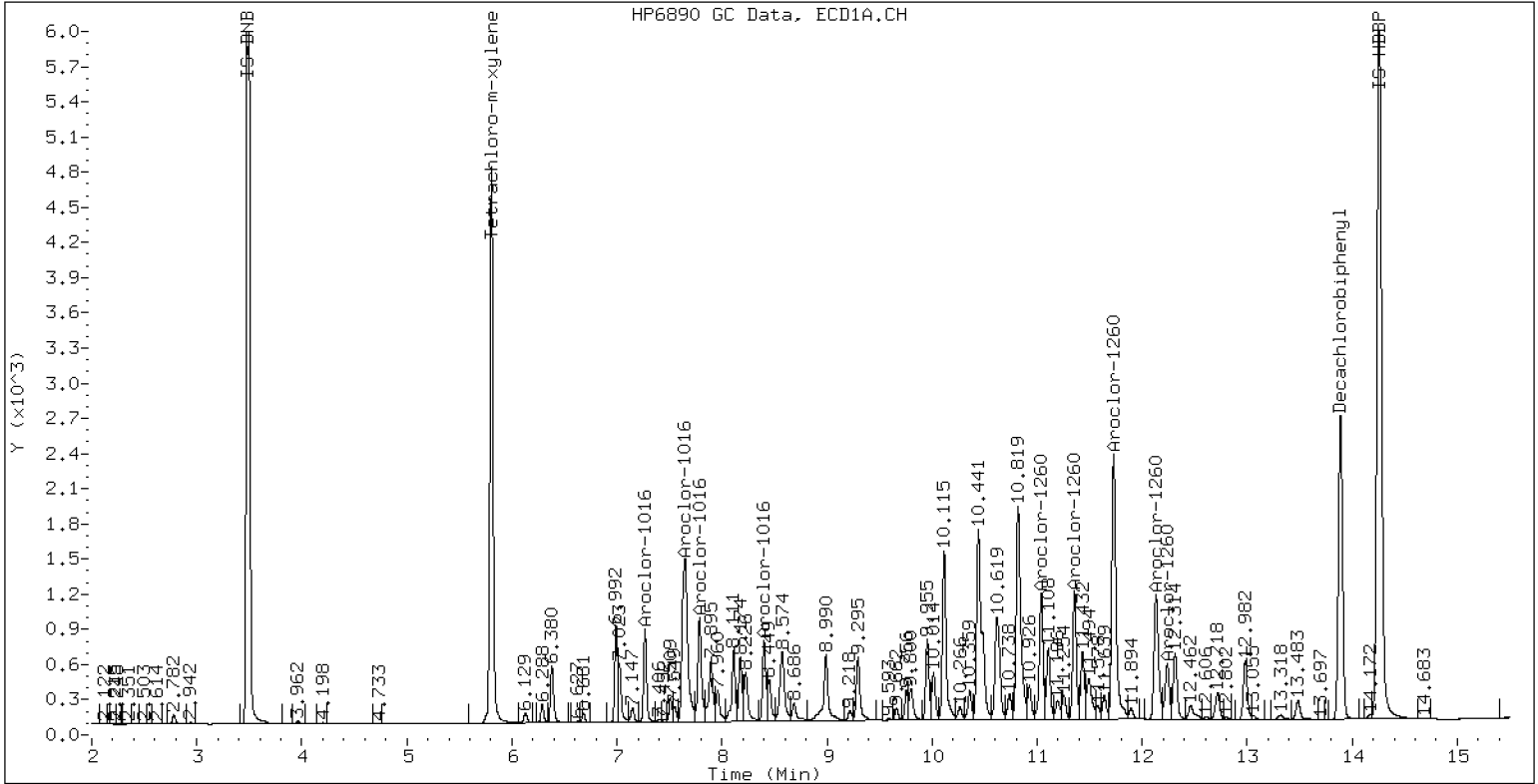
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2

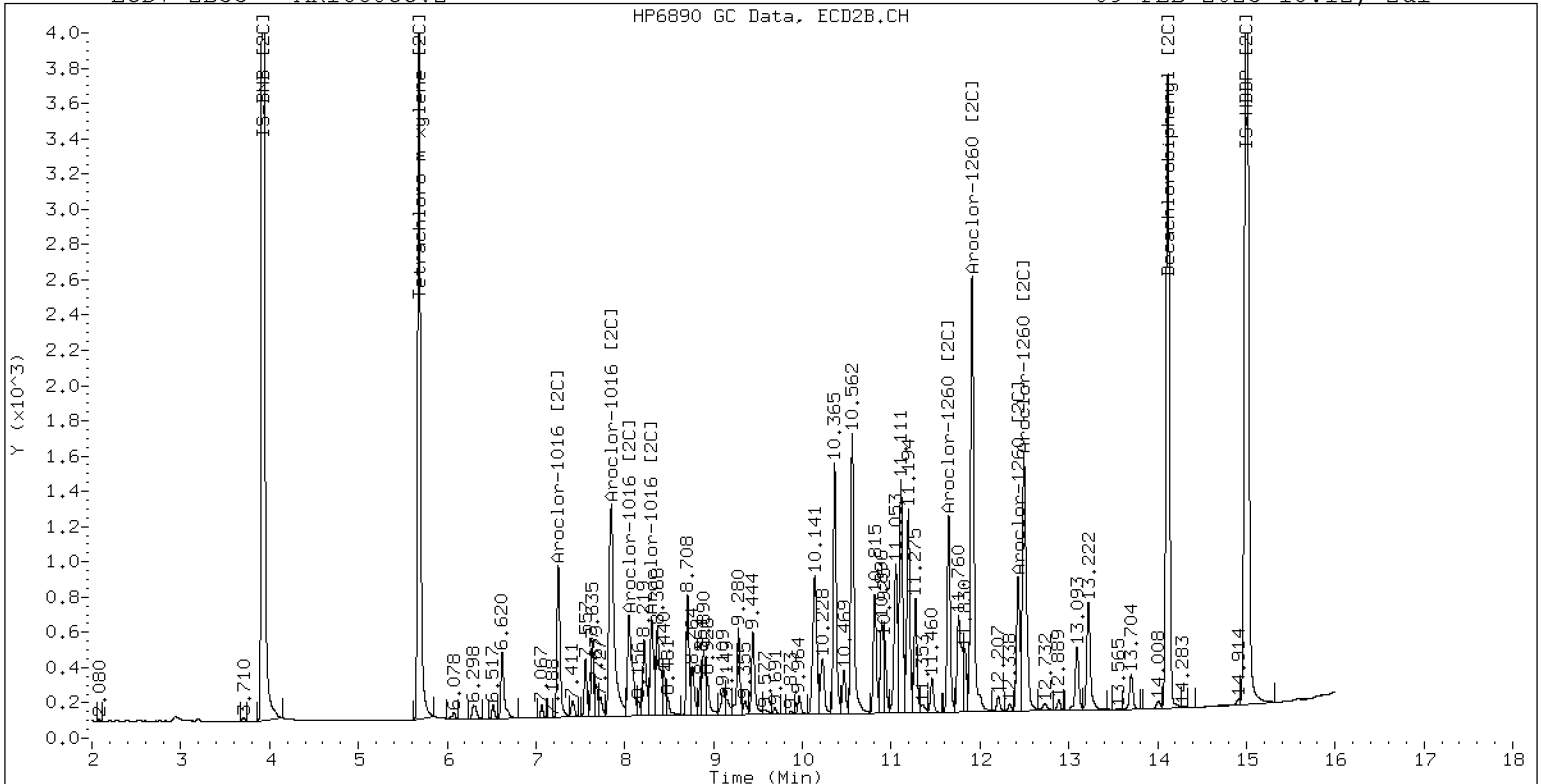
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ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2

09-FEB-2023 18:12, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092333ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/09/23</u>
Lab Sample ID:	<u>SLB0148-CCV3</u>	Injection Time:	<u>23:27</u>
Sequence Name:	<u>AR1242CCV3</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	228	0.0411165	0.0372608		-9.0	+/-20
Aroclor-1242 (1)	A	250.00	232		0.0226989			
Aroclor-1242 (2)	A	250.00	226		0.0725037			
Aroclor-1242 (3)	A	250.00	230		0.0219169			
Aroclor-1242 (4)	A	250.00	222		0.0319237			
Aroclor 1242 [2C]	A	250.00	231	0.0423236	0.0392141		-7.5	+/-20
Aroclor-1242 (1) [2C]	A	250.00	240		0.0335298			
Aroclor-1242 (2) [2C]	A	250.00	233		0.0723536			
Aroclor-1242 (3) [2C]	A	250.00	234		0.0227749			
Aroclor-1242 (4) [2C]	A	250.00	218		0.0281982			
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6872062		-19.8	+/-20
Tetrachlorometaxylene	A	40.000	44.9	1.1307870	1.2695840		12.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.3	1.2696430	1.0898700		-14.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.9	1.0814980	1.2131990		12.3	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092333ECD7.D  
Data file 2: /230209.b/230209.b/02092333ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1242.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242CCV3  
Client ID:  
Injection Date: 09-FEB-2023 23:27  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.001	236917	5.685	-0.000	207417	44.9	44.9	0.1	Tetrachloro-m-xylene
13.889	-0.002	222449	14.117	0.002	258164	32.1	34.3	6.6	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	373220	-25.8
Hexabromobiphenyl	647433	647401	-0.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341934	1.5
Hexabromobiphenyl	382032	473752	24.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.269	-0.002	26474	231.7	1	7.253	0.001	35828	239.6	
Aroclor-1242	2	7.651	-0.005	84562	226.1	2	7.850	0.001	77313	232.8	
Aroclor-1242	3	8.402	-0.005	25562	230.0	3	9.155	0.001	24336	233.9	
Aroclor-1242	4	8.575	-0.006	37233	221.8	4	9.579	-0.001	30131	218.6	
Total CollAve (4 peaks):				227.4	Total Col2Ave (4 peaks):				231.2	RPD = 2	
Corrected Ave (3 peaks):				226.0	Corrected Ave (3 peaks):				228.4	RPD = 1	
CalAmt %D:				-9.0	CalAmt %D:				-7.5		

Total PCB Area Col1 (5.909 - 13.792) = 635361 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 554766 Col2 Total PCB = 0.2 ppm\*

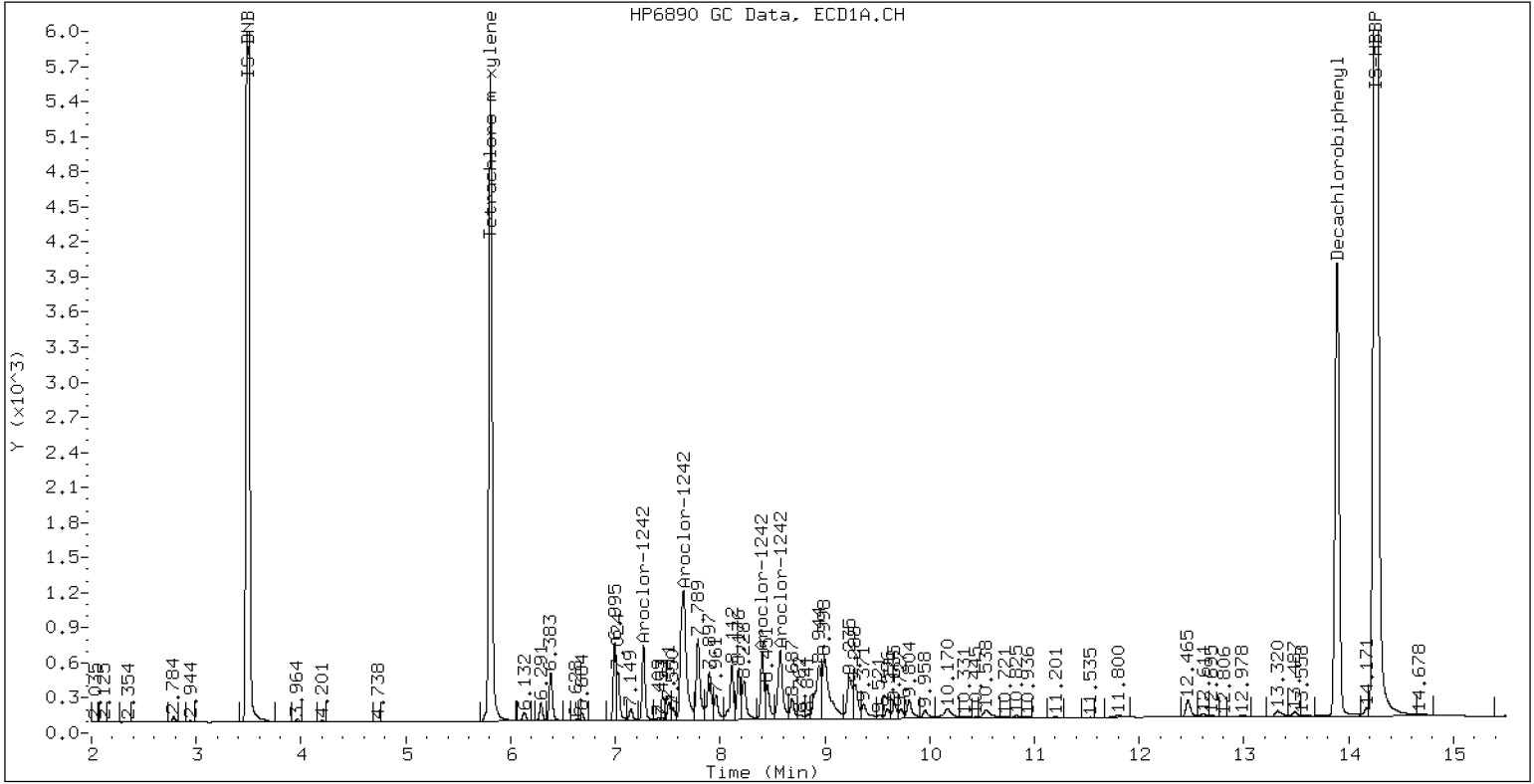
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3

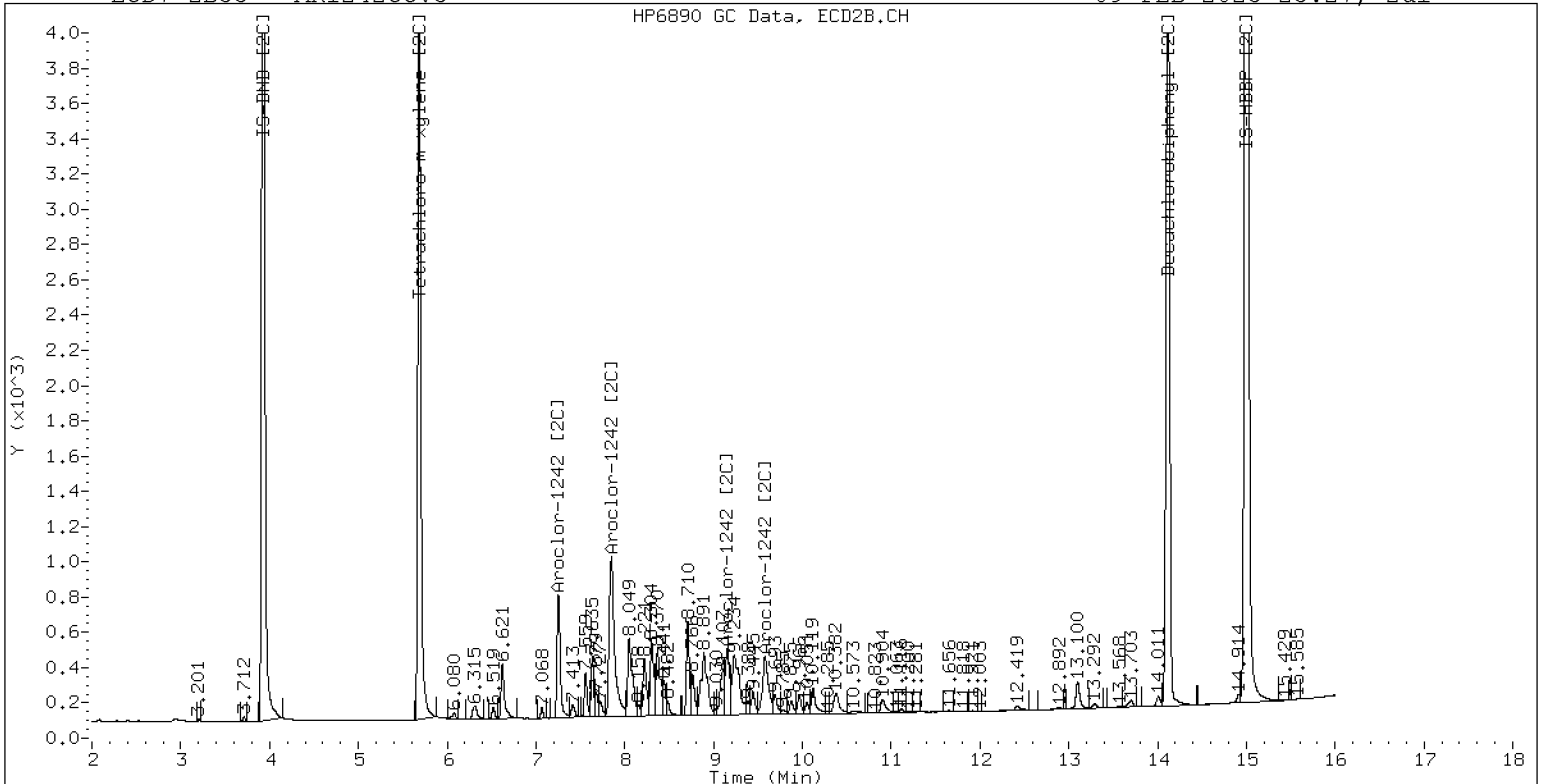
09-FEB-2023 23:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3

09-FEB-2023 23:27, 2ul



ZB-35 Manual Integration: NO



CONTINUING CALIBRATION CHECK  
EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02092334ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0148

Injection Date: 02/09/23

Lab Sample ID: SLB0148-CCV4

Injection Time: 23:48

Sequence Name: AR1660CCV4

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	231	0.0506755	0.0466777		-7.8	+/-20
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0281490		-5.2	
Aroclor-1016 (2)	A	250.00	233	0.0985017	0.0919524		-6.8	
Aroclor-1016 (3)	A	250.00	215	0.0453193	0.0390053		-14.0	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0276039		-5.2	
Aroclor 1016 [2C]	A	250.00	241	0.0519244	0.0499836		-3.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	237	0.0433907	0.0412210		-5.2	
Aroclor-1016 (2) [2C]	A	250.00	240	0.0950862	0.0914284		-4.0	
Aroclor-1016 (3) [2C]	A	250.00	247	0.0388014	0.0383015		-1.2	
Aroclor-1016 (4) [2C]	A	250.00	238	0.0304194	0.0289832		-4.8	
Aroclor 1260	A	250.00	176	0.0605224	0.0428881		-29.5	+/-20 *
Aroclor-1260 (1)	A	250.00	183	0.0448870	0.0328900		-26.8	
Aroclor-1260 (2)	A	250.00	182	0.0461412	0.0335995		-27.2	
Aroclor-1260 (3)	A	250.00	178	0.1214672	0.0863229		-28.8	
Aroclor-1260 (4)	A	250.00	174	0.0627593	0.0436846		-30.4	
Aroclor-1260 (5)	A	250.00	164	0.0273573	0.0179434		-34.4	
Aroclor 1260 [2C]	A	250.00	215	0.0836545	0.0712942		-14.2	+/-20
Aroclor-1260 (1) [2C]	A	250.00	211	0.0577136	0.0487914		-15.6	
Aroclor-1260 (2) [2C]	A	250.00	212	0.1460113	0.1239490		-15.2	
Aroclor-1260 (3) [2C]	A	250.00	224	0.0363944	0.0325395		-10.4	
Aroclor-1260 (4) [2C]	A	250.00	211	0.0944986	0.0798968		-15.6	
Decachlorobiphenyl	A	40.000	34.1	0.8555994	0.7285648		-14.8	+/-20
Tetrachlorometaxylene	A	40.000	38.6	1.1307870	1.0925330		-3.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.3	1.2696430	1.1838700		-6.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.5	1.0814980	1.0405680		-3.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092334ECD7.D  
Data file 2: /230209.b/230209.b/02092334ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV4  
Client ID:  
Injection Date: 09-FEB-2023 23:48  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.001	204284	5.685	-0.000	178099	38.6	38.5	0.4	Tetrachloro-m-xylene
13.889	-0.003	238872	14.116	0.001	280937	34.1	37.3	9.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	373964	-25.7
Hexabromobiphenyl	647433	655733	1.3

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342311	1.6
Hexabromobiphenyl	382032	474608	24.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	-0.001	32896	236.7	1	7.253	0.000	44095	237.5	
Aroclor-1016	2	7.650	-0.000	107459	233.4	2	7.849	-0.001	97803	240.4	
Aroclor-1016	3	7.787	-0.001	45583	215.2	3	8.050	0.001	40972	246.8	
Aroclor-1016	4	8.403	-0.001	32259	236.7	4	8.304	0.000	31004	238.2	
Total CollAve (4 peaks):				230.5		Total Col2Ave (4 peaks):				240.7	RPD = 4
Corrected Ave (3 peaks):				228.4		Corrected Ave (3 peaks):				238.7	RPD = 4
CalAmt %D:				-7.8		CalAmt %D:				-3.7	
Aroclor-1260	1	11.041	-0.003	67397	183.2	1	11.649	-0.000	72365	211.4	
Aroclor-1260	2	11.357	-0.003	68851	182.0	2	11.913	-0.000	183835	212.2	
Aroclor-1260	3	11.729	-0.005	176890	177.7	3	12.431	-0.000	48261	223.5	
Aroclor-1260	4	12.134	-0.006	89517	174.0	4	12.497	0.001	118499	211.4	
Aroclor-1260	5	12.241	-0.003	36769	164.0	NS	---			----	
Total CollAve (5 peaks):				176.2		Total Col2Ave (4 peaks):				214.6	RPD = 20
Corrected Ave (4 peaks):				174.4		Corrected Ave (3 peaks):				211.6	RPD = 19
CalAmt %D:				-29.5		CalAmt %D:				-14.2	

Total PCB Area Coll (5.909 - 13.792) = 1918206 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1747789 Col2 Total PCB = 0.5 ppm\*

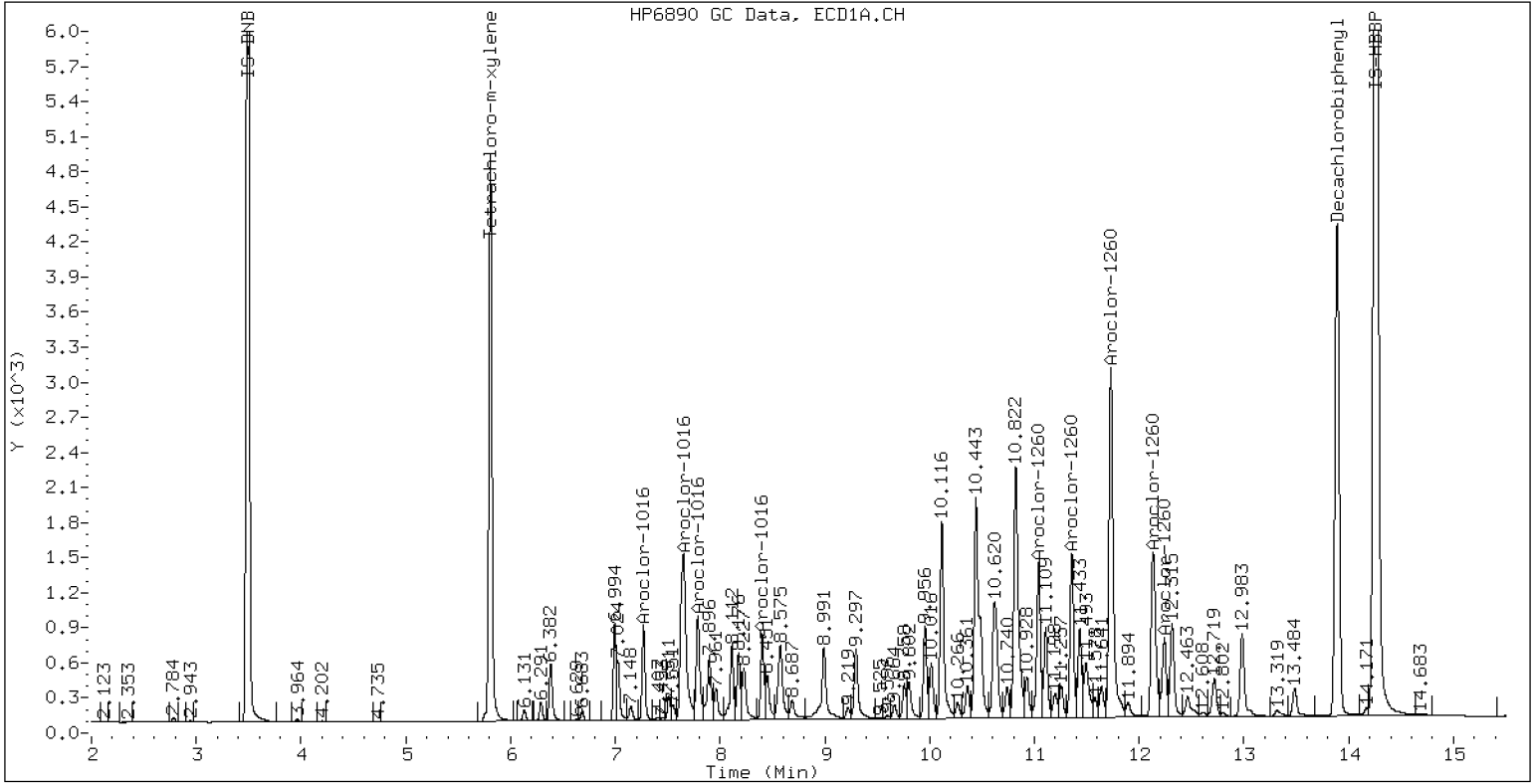
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4

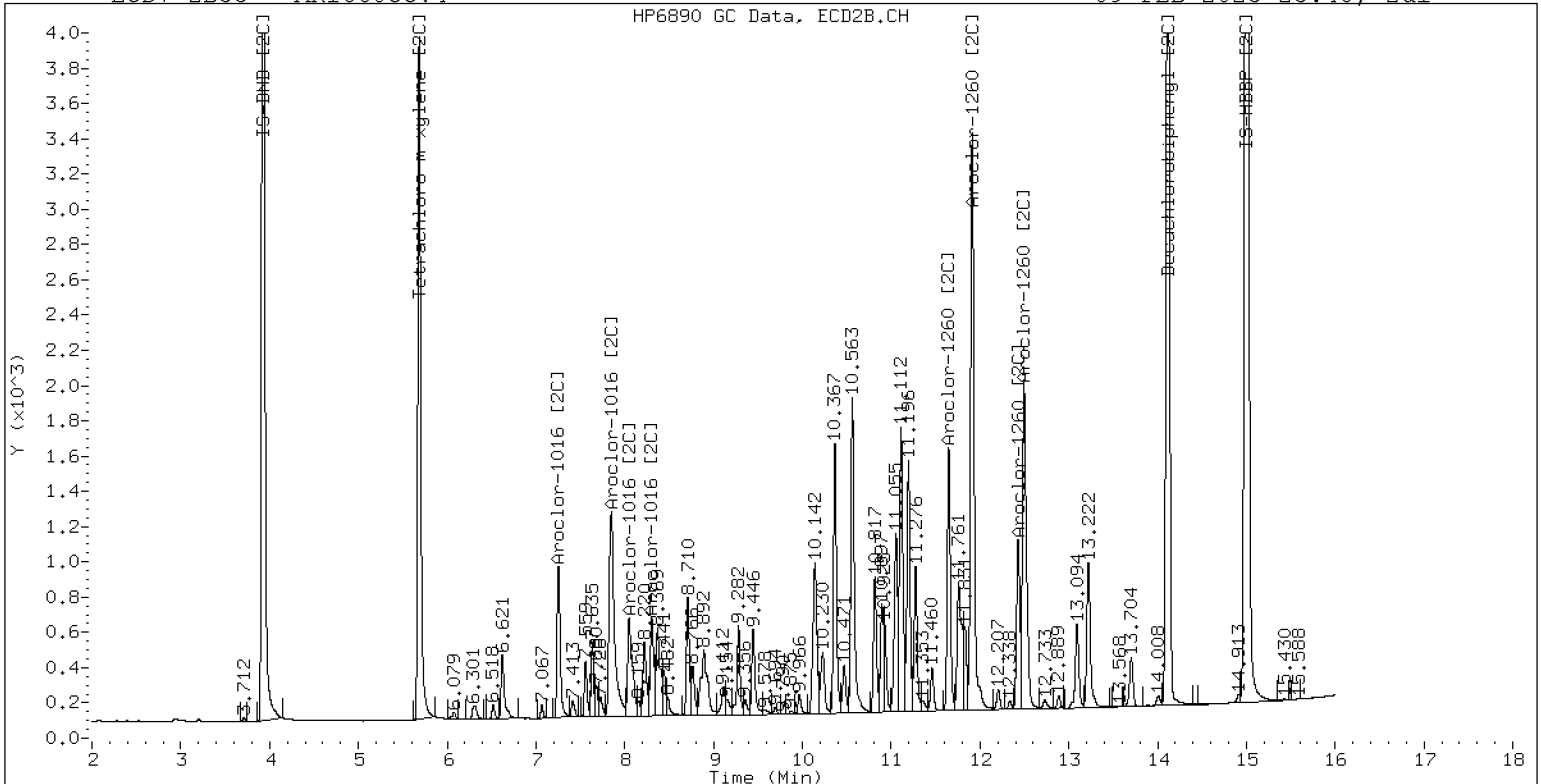
09-FEB-2023 23:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4

09-FEB-2023 23:48, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092339ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCV5</u>	Injection Time:	<u>01:34</u>
Sequence Name:	<u>AR1254CCV5</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	211	0.0675033	0.0575565		-15.4	+/-20
Aroclor-1254 (1)	A	250.00	220		0.0716728			
Aroclor-1254 (2)	A	250.00	201		0.0280088			
Aroclor-1254 (3)	A	250.00	216		0.0452387			
Aroclor-1254 (4)	A	250.00	215		0.0881637			
Aroclor-1254 (5)	A	250.00	205		0.0546985			
Aroclor 1254 [2C]	A	250.00	224	0.0733219	0.0659154		-10.5	+/-20
Aroclor-1254 (1) [2C]	A	250.00	231		0.0537428			
Aroclor-1254 (2) [2C]	A	250.00	232		0.0434960			
Aroclor-1254 (3) [2C]	A	250.00	225		0.0922822			
Aroclor-1254 (4) [2C]	A	250.00	230		0.0942442			
Aroclor-1254 (5) [2C]	A	250.00	201		0.0458117			
Decachlorobiphenyl	A	40.000	31.2	0.8555994	0.6686030		-22.0	+/-20 *
Tetrachlorometaxylene	A	40.000	37.4	1.1307870	1.0588640		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.8	1.2696430	1.1375630		-10.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.4	1.0814980	1.0380320		-4.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092339ECD7.D  
Data file 2: /230209.b/230209.b/02092339ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254CCV5  
Client ID:  
Injection Date: 10-FEB-2023 01:34  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.001	201514	5.686	0.000	181244	37.5	38.4	2.5	Tetrachloro-m-xylene
13.888	-0.004	204182	14.116	0.001	263864	31.3	35.8	13.7	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	380623	-24.4
Hexabromobiphenyl	647433	610772	-5.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	349207	3.6
Hexabromobiphenyl	382032	463911	21.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.294	-0.005	85251	219.8	1	9.445	0.000	58648	231.5	
Aroclor-1254	2	9.371	-0.006	33315	201.1	2	9.964	0.000	47466	231.8	
Aroclor-1254	3	9.662	-0.007	53809	216.5	3	10.116	0.000	100705	225.5	
Aroclor-1254	4	9.800	-0.009	104866	215.3	4	10.366	0.000	102846	230.2	
Aroclor-1254	5	10.161	-0.016	65061	205.4	5	10.564	0.000	49993	200.9	
Total CollAve (5 peaks):				211.6		Total Col2Ave (5 peaks):				224.0	RPD = 6
Corrected Ave (4 peaks):				209.6		Corrected Ave (4 peaks):				222.0	RPD = 6
CalAmt %D:				-15.3		CalAmt %D:				-10.4	

Total PCB Area Col1 (5.909 - 13.792) = 1092394      Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 985256      Col2 Total PCB = 0.3 ppm\*

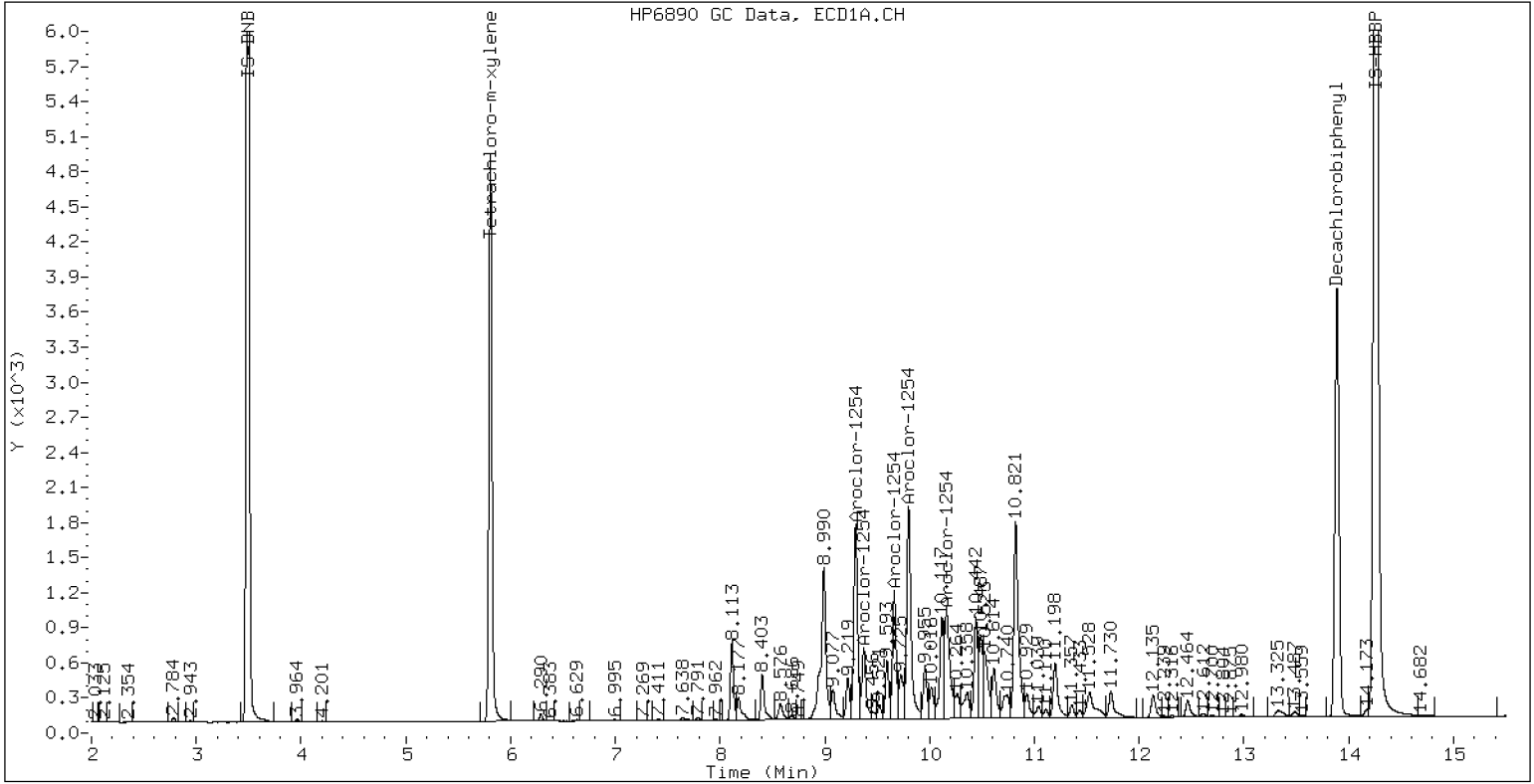
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5

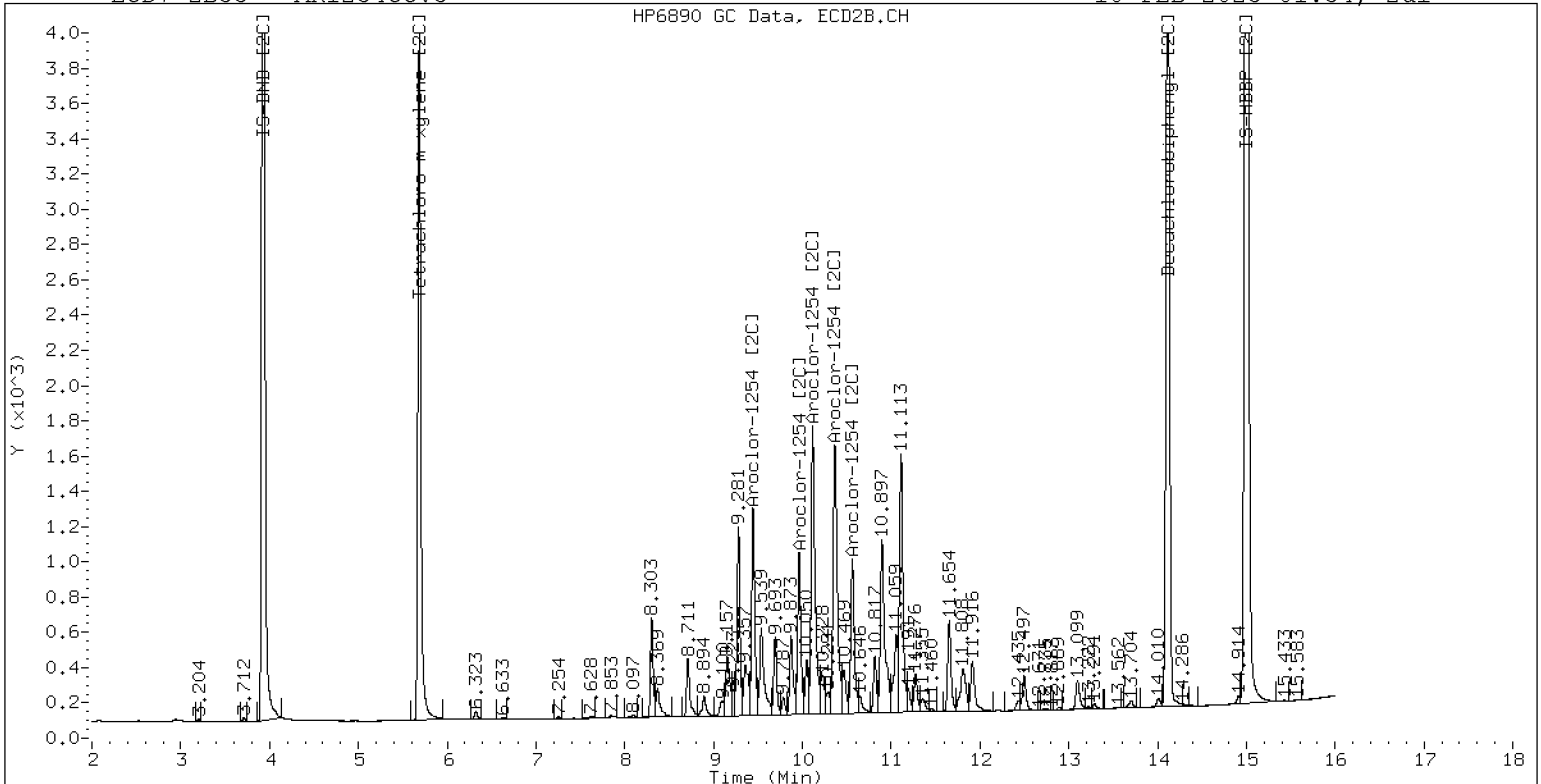
10-FEB-2023 01:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5

10-FEB-2023 01:34, 2ul



ZB-35 Manual Integration: NO



CONTINUING CALIBRATION CHECK  
EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02092340ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0148

Injection Date: 02/10/23

Lab Sample ID: SLB0148-CCV6

Injection Time: 01:55

Sequence Name: AR1660CCV6

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	230	0.0506755	0.0466399		-8.0	+/-20
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0282369		-5.2	
Aroclor-1016 (2)	A	250.00	233	0.0985017	0.0918239		-6.8	
Aroclor-1016 (3)	A	250.00	215	0.0453193	0.0390615		-14.0	
Aroclor-1016 (4)	A	250.00	235	0.0291533	0.0274373		-6.0	
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0509918		-1.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0420638		-3.2	
Aroclor-1016 (2) [2C]	A	250.00	245	0.0950862	0.0933147		-2.0	
Aroclor-1016 (3) [2C]	A	250.00	252	0.0388014	0.0391620		0.8	
Aroclor-1016 (4) [2C]	A	250.00	242	0.0304194	0.0294266		-3.2	
Aroclor 1260	A	250.00	178	0.0605224	0.0433932		-29.0	+/-20 *
Aroclor-1260 (1)	A	250.00	184	0.0448870	0.0330727		-26.4	
Aroclor-1260 (2)	A	250.00	184	0.0461412	0.0338905		-26.4	
Aroclor-1260 (3)	A	250.00	181	0.1214672	0.0880074		-27.6	
Aroclor-1260 (4)	A	250.00	175	0.0627593	0.0439948		-30.0	
Aroclor-1260 (5)	A	250.00	164	0.0273573	0.0180004		-34.4	
Aroclor 1260 [2C]	A	250.00	210	0.0836545	0.0698484		-16.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	204	0.0577136	0.0472141		-18.4	
Aroclor-1260 (2) [2C]	A	250.00	207	0.1460113	0.1211670		-17.2	
Aroclor-1260 (3) [2C]	A	250.00	220	0.0363944	0.0320698		-12.0	
Aroclor-1260 (4) [2C]	A	250.00	209	0.0944986	0.0789427		-16.4	
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6861333		-19.8	+/-20
Tetrachlorometaxylene	A	40.000	39.1	1.1307870	1.1056930		-2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.7	1.2696430	1.1660440		-8.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.8	1.0814980	1.0479890		-3.0	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092340ECD7.D  
Data file 2: /230209.b/230209.b/02092340ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV6  
Client ID:  
Injection Date: 10-FEB-2023 01:55  
Report Date: 02/10/2023 12:58  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.807	-0.002	209735	5.686	0.001	181037	39.1	38.8	0.9	Tetrachloro-m-xylene
13.890	-0.002	221772	14.116	0.001	284355	32.1	36.7	13.5	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	379373	-24.6
Hexabromobiphenyl	647433	646440	-0.2
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	345494	2.5
Hexabromobiphenyl	382032	487726	27.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.268	-0.001	33476	237.5	1	7.253	0.000	45415	242.4	
Aroclor-1016	2	7.650	0.000	108861	233.1	2	7.851	0.001	100749	245.3	
Aroclor-1016	3	7.787	-0.001	46309	215.5	3	8.050	0.001	42282	252.3	
Aroclor-1016	4	8.402	-0.002	32528	235.3	4	8.304	0.000	31771	241.8	
Total CollAve (4 peaks):				230.3		Total Col2Ave (4 peaks):				245.5	RPD = 6
Corrected Ave (3 peaks):				227.9		Corrected Ave (3 peaks):				243.2	RPD = 6
CalAmt %D:				-7.9		CalAmt %D:				-1.8	
Aroclor-1260	1	11.040	-0.003	66811	184.2	1	11.649	-0.000	71961	204.5	
Aroclor-1260	2	11.356	-0.005	68463	183.6	2	11.914	0.000	184676	207.5	
Aroclor-1260	3	11.729	-0.006	177786	181.1	3	12.431	0.000	48879	220.3	
Aroclor-1260	4	12.132	-0.008	88875	175.3	4	12.497	0.000	120320	208.8	
Aroclor-1260	5	12.239	-0.005	36363	164.5	NS	---			----	
Total CollAve (5 peaks):				177.7		Total Col2Ave (4 peaks):				210.3	RPD = 17
Corrected Ave (4 peaks):				176.1		Corrected Ave (3 peaks):				206.9	RPD = 16
CalAmt %D:				-28.9		CalAmt %D:				-15.9	

Total PCB Area Coll (5.909 - 13.792) = 1913242 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1762253 Col2 Total PCB = 0.5 ppm\*

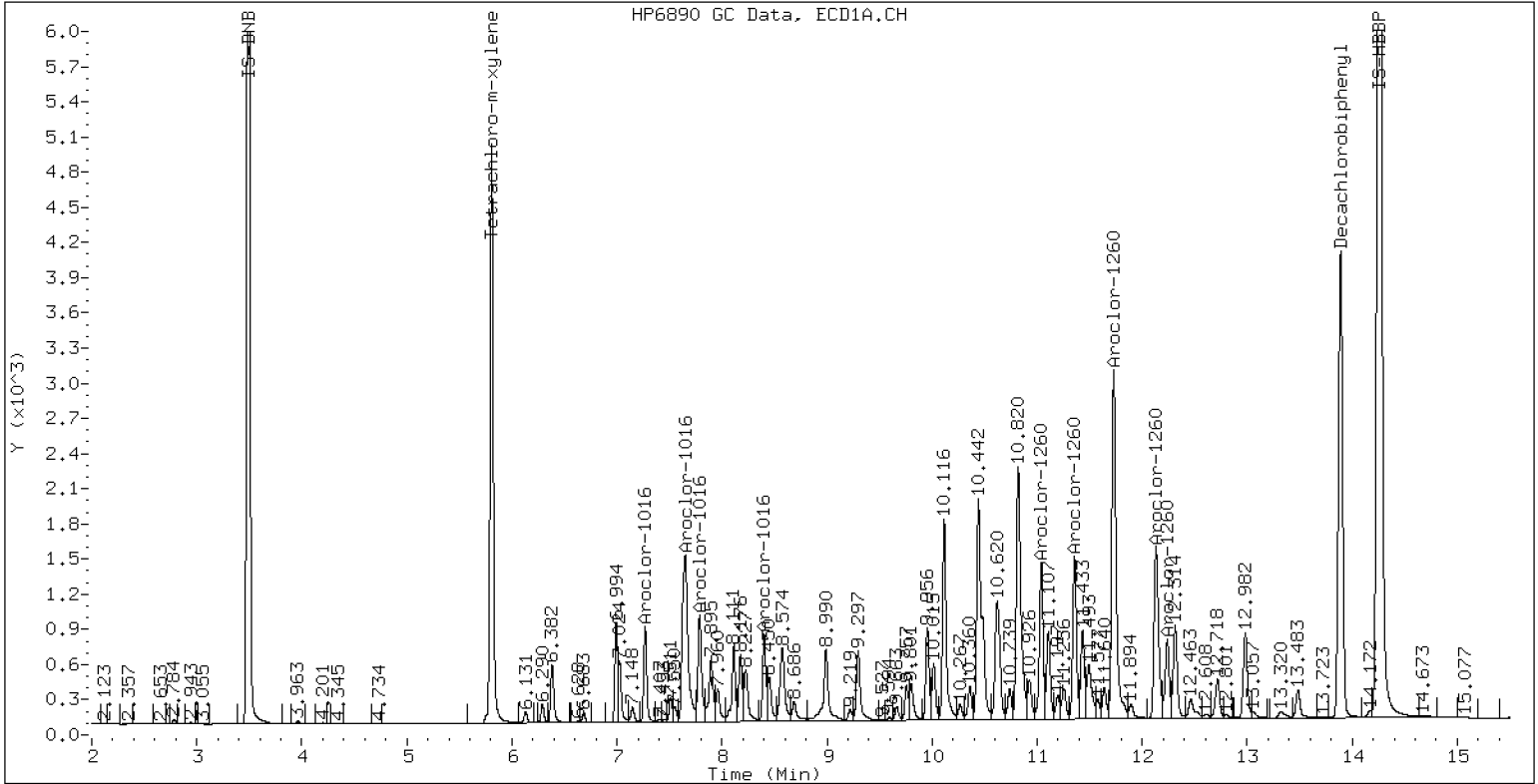
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6

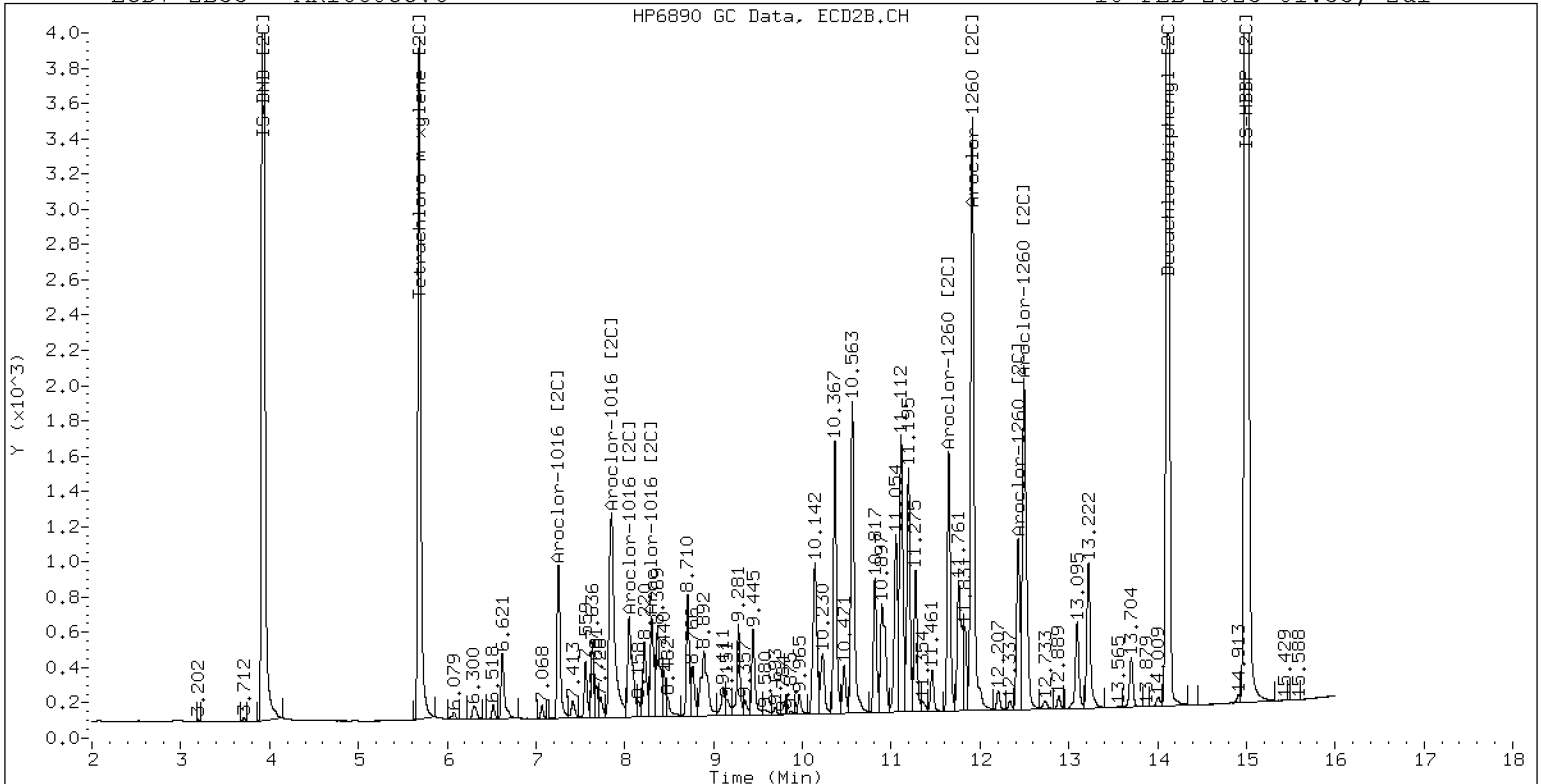
10-FEB-2023 01:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6

10-FEB-2023 01:55, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092357ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCV7</u>	Injection Time:	<u>07:52</u>
Sequence Name:	<u>AR1248CCV7</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	193	0.0592639	0.0437568		-23.0	+/-20 *
Aroclor-1248 (1)	A	250.00	223		0.0357726			
Aroclor-1248 (2)	A	250.00	219		0.0446968			
Aroclor-1248 (3)	A	250.00	158		0.0616303			
Aroclor-1248 (4)	A	250.00	170		0.0329275			
Aroclor 1248 [2C]	A	250.00	222	0.0453673	0.0399082		-11.4	+/-20
Aroclor-1248 (1) [2C]	A	250.00	234		0.0338204			
Aroclor-1248 (2) [2C]	A	250.00	220		0.0342472			
Aroclor-1248 (3) [2C]	A	250.00	222		0.0421468			
Aroclor-1248 (4) [2C]	A	250.00	210		0.0494183			
Decachlorobiphenyl	A	40.000	33.2	0.8555994	0.7095181		-17.0	+/-20
Tetrachlorometaxylene	A	40.000	37.2	1.1307870	1.0520370		-7.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1431620		-10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.4	1.0814980	1.0123010		-6.5	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092357ECD7.D  
Data file 2: /230209.b/230209.b/02092357ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248CCV7  
Client ID:  
Injection Date: 10-FEB-2023 07:52  
Report Date: 02/10/2023 12:59  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col			ZB5	ZB35	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response	on col			on col
5.808	-0.001	197784	5.685	-0.000	181003	37.2	37.4	0.6	Tetrachloro-m-xylene
13.890	-0.002	150150	14.116	0.001	203947	33.2	36.0	8.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	376002	-25.3
Hexabromobiphenyl	647433	423245	-34.6

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	357607	6.1
Hexabromobiphenyl	382032	356812	-6.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.402	-0.003	42033	223.5	1	8.302	0.000	37795	233.8	
Aroclor-1248	2	8.574	-0.006	52519	218.9	2	8.709	0.000	38272	220.0	
Aroclor-1248	3	8.993	-0.006	72416	157.8	3	9.152	0.000	47100	221.5	
Aroclor-1248	4	9.291	-0.003	38690	170.3	4	9.576	0.000	55226	210.0	
Total CollAve (4 peaks):				192.6		Total Col2Ave (4 peaks):				221.3	RPD = 14
Corrected Ave (3 peaks):				182.3		Corrected Ave (3 peaks):				217.2	RPD = 17
CalAmt %D:				-23.0		CalAmt %D:				-11.5	

Total PCB Area Col1 (5.909 - 13.792) = 798026 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 722431 Col2 Total PCB = 0.2 ppm\*

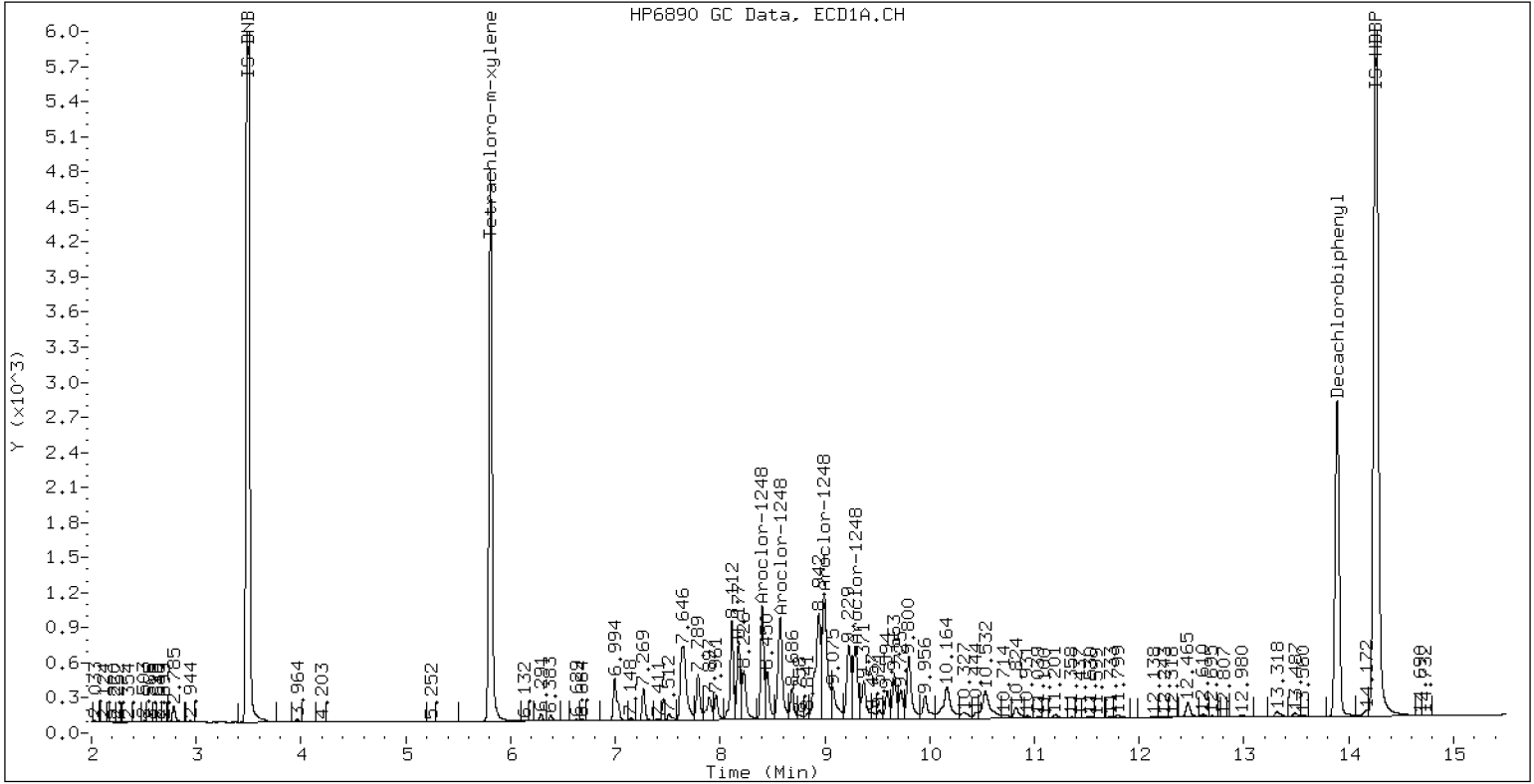
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7

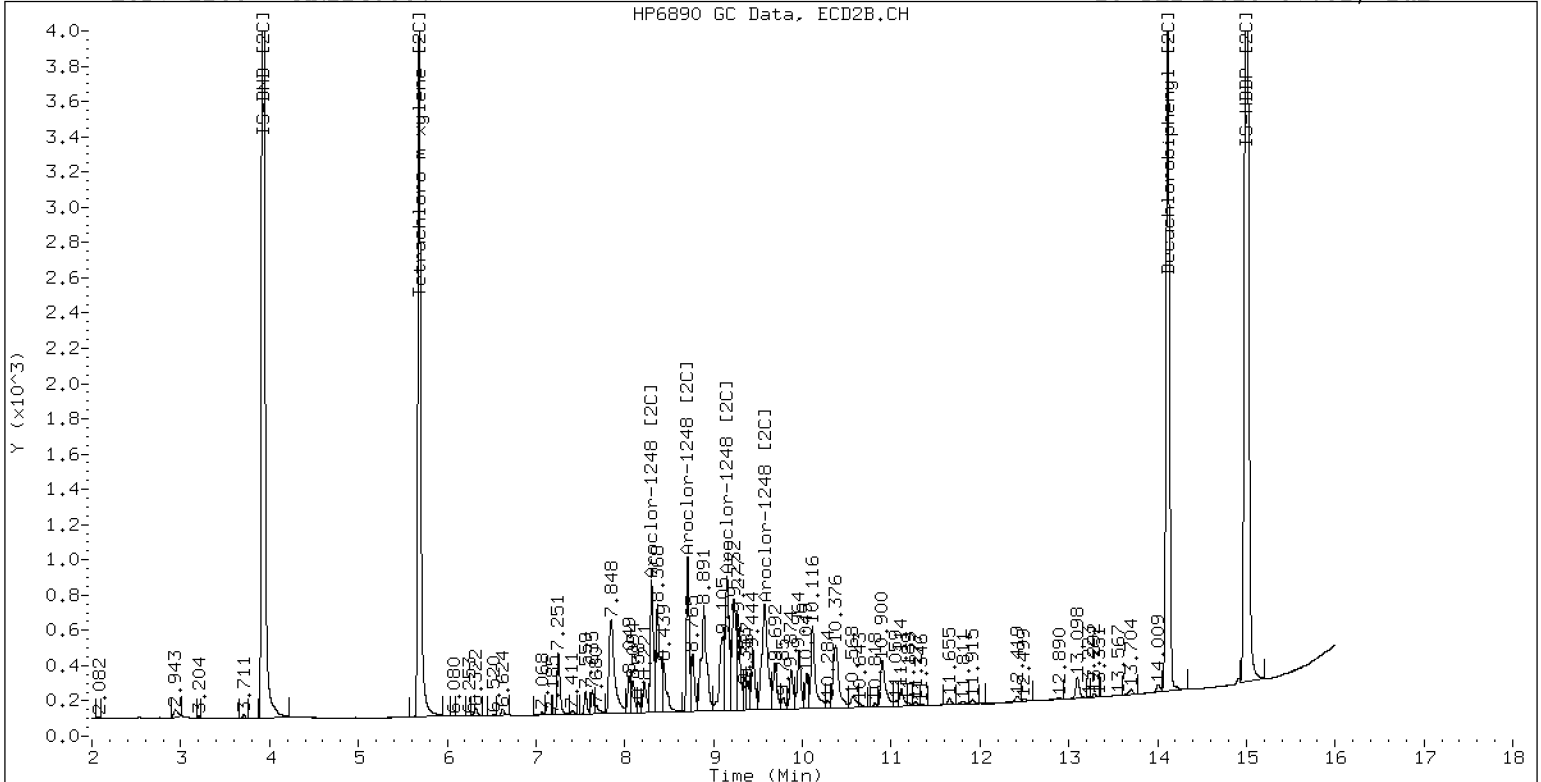
10-FEB-2023 07:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7

10-FEB-2023 07:52, 2ul



ZB-35 Manual Integration: NO



Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092358ECD7.D  
Data file 2: /230209.b/230209.b/02092358ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCV8  
Client ID:  
Injection Date: 10-FEB-2023 08:13  
Report Date: 02/10/2023 12:59  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.001	209027	5.686	0.000	187887	39.4	39.1	0.8	Tetrachloro-m-xylene
13.890	-0.002	172096	14.116	0.001	225826	35.4	36.9	4.1	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	374977	-25.5
Hexabromobiphenyl	647433	454542	-29.8

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	355193	5.4
Hexabromobiphenyl	382032	385831	1.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	-0.001	33387	239.6	1	7.253	0.000	46596	241.9	
Aroclor-1016	2	7.650	-0.001	109232	236.6	2	7.850	0.000	102193	242.1	
Aroclor-1016	3	7.787	-0.002	46019	216.6	3	8.048	0.000	42116	244.5	
Aroclor-1016	4	8.402	-0.002	32424	237.3	4	8.303	0.000	31567	233.7	
Total CollAve (4 peaks):				232.5		Total Col2Ave (4 peaks):				240.5	RPD = 3
Corrected Ave (3 peaks):				230.2		Corrected Ave (3 peaks):				239.2	RPD = 4

CalAmt %D: -7.0

CalAmt %D: -3.8

Aroclor-1260	1	11.040	-0.004	58765	230.4	1	11.649	0.000	65321	234.7	
Aroclor-1260	2	11.356	-0.004	58554	223.3	2	11.913	0.000	165528	235.1	
Aroclor-1260	3	11.730	-0.005	149263	216.3	3	12.431	0.000	43583	248.3	
Aroclor-1260	4	12.133	-0.006	76564	214.7	4	12.496	0.000	104948	230.3	
Aroclor-1260	5	12.239	-0.005	31525	202.8	NS	---			----	
Total CollAve (5 peaks):				217.5		Total Col2Ave (4 peaks):				237.1	RPD = 9
Corrected Ave (4 peaks):				214.3		Corrected Ave (3 peaks):				233.3	RPD = 9

CalAmt %D: -13.0

CalAmt %D: -5.2

Total PCB Area Coll (5.909 - 13.792) = 1763561 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1649567 Col2 Total PCB = 0.4 ppm\*

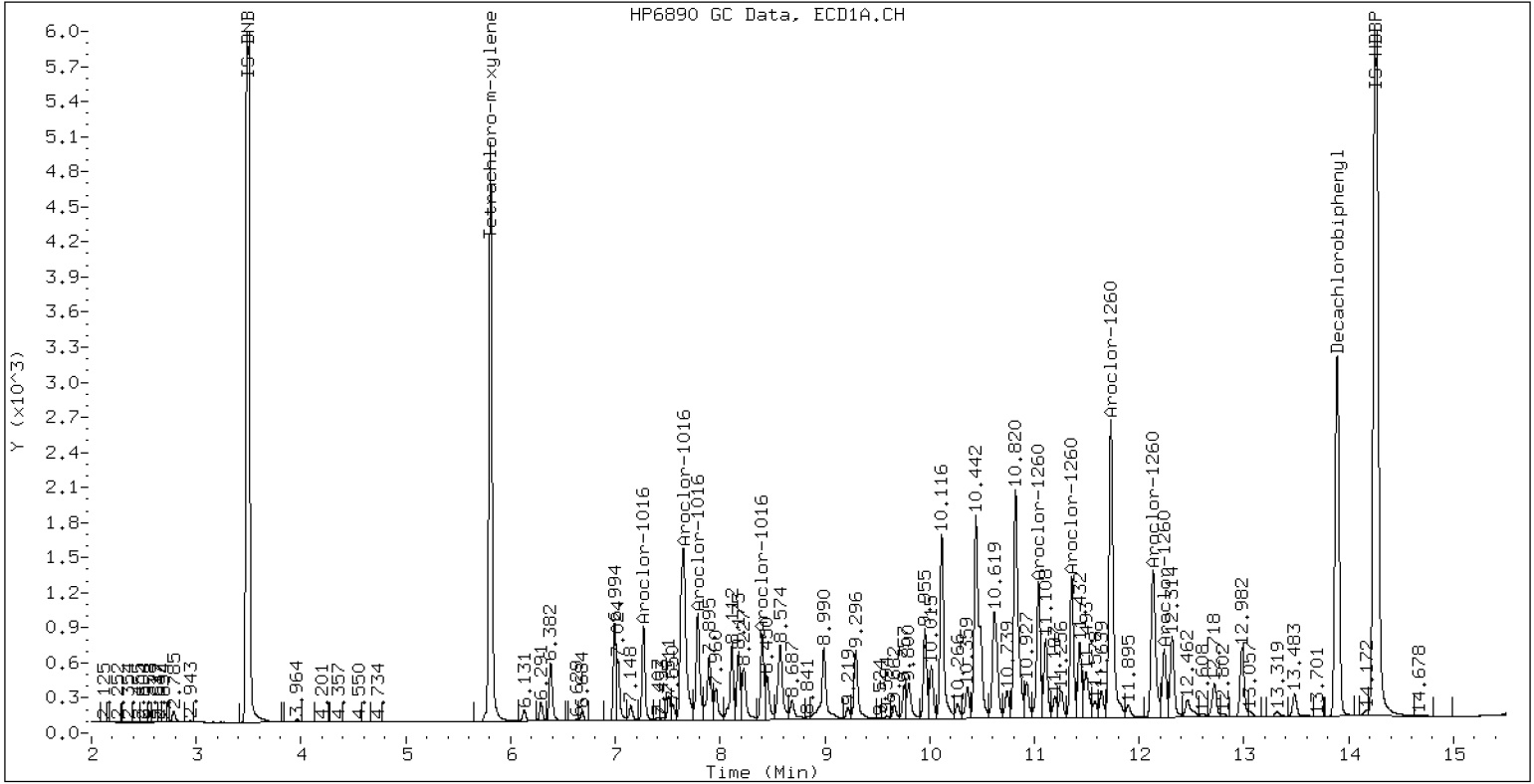
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8

10-FEB-2023 08:13, 2ul







**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092369ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCV9</u>	Injection Time:	<u>12:04</u>
Sequence Name:	<u>AR1242CCV9</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	226	0.0411165	0.0372043		-9.5	+/-20
Aroclor-1242 (1)	A	250.00	231		0.0226053			
Aroclor-1242 (2)	A	250.00	226		0.0726338			
Aroclor-1242 (3)	A	250.00	226		0.0215802			
Aroclor-1242 (4)	A	250.00	222		0.0319980			
Aroclor 1242 [2C]	A	250.00	229	0.0423236	0.0388297		-8.6	+/-20
Aroclor-1242 (1) [2C]	A	250.00	238		0.0333665			
Aroclor-1242 (2) [2C]	A	250.00	232		0.0720093			
Aroclor-1242 (3) [2C]	A	250.00	231		0.0225089			
Aroclor-1242 (4) [2C]	A	250.00	213		0.0274338			
Decachlorobiphenyl	A	40.000	32.2	0.8555994	0.6878324		-19.5	+/-20
Tetrachlorometaxylene	A	40.000	45.0	1.1307870	1.2731900		12.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.4	1.2696430	1.0936260		-14.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.1	1.0814980	1.2193430		12.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092369ECD7.D  
Data file 2: /230209.b/230209.b/02092369ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1242.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242CCV9  
Client ID:  
Injection Date: 10-FEB-2023 12:04  
Report Date: 02/10/2023 14:32  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	236898	5.685	0.000	218749	45.0	45.1	0.1	Tetrachloro-m-xylene
13.889	-0.001	166571	14.115	0.000	214851	32.2	34.5	6.9	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	372133	-26.1
Hexabromobiphenyl	647433	484336	-25.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358798	6.5
Hexabromobiphenyl	382032	392915	2.8

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1242	1	7.268	-0.000	26288	230.7	1	7.252	0.000	37412	238.4	
Aroclor-1242	2	7.651	0.000	84467	226.5	2	7.849	0.000	80740	231.7	
Aroclor-1242	3	8.402	-0.000	25096	226.5	3	9.154	0.000	25238	231.2	
Aroclor-1242	4	8.575	-0.001	37211	222.3	4	9.580	0.000	30760	212.6	
Total Col1Ave (4 peaks):				226.5	Total Col2Ave (4 peaks):				228.5	RPD = 1	
Corrected Ave (3 peaks):				225.1	Corrected Ave (3 peaks):				225.2	RPD = 0	
CalAmt %D:				-9.4	CalAmt %D:				-8.6		

Total PCB Area Col1 (5.908 - 13.790) = 624107 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 564529 Col2 Total PCB = 0.1 ppm\*

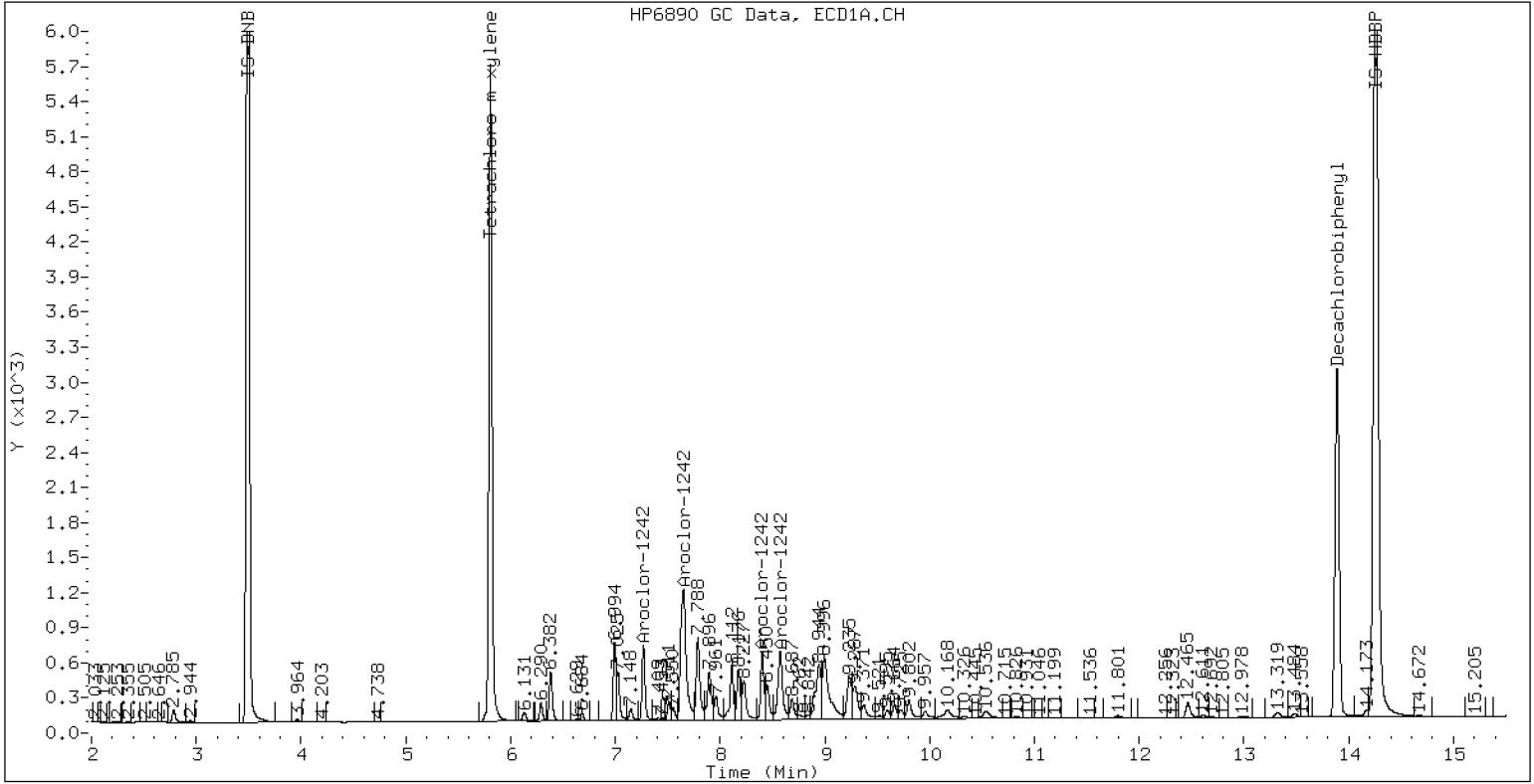
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9

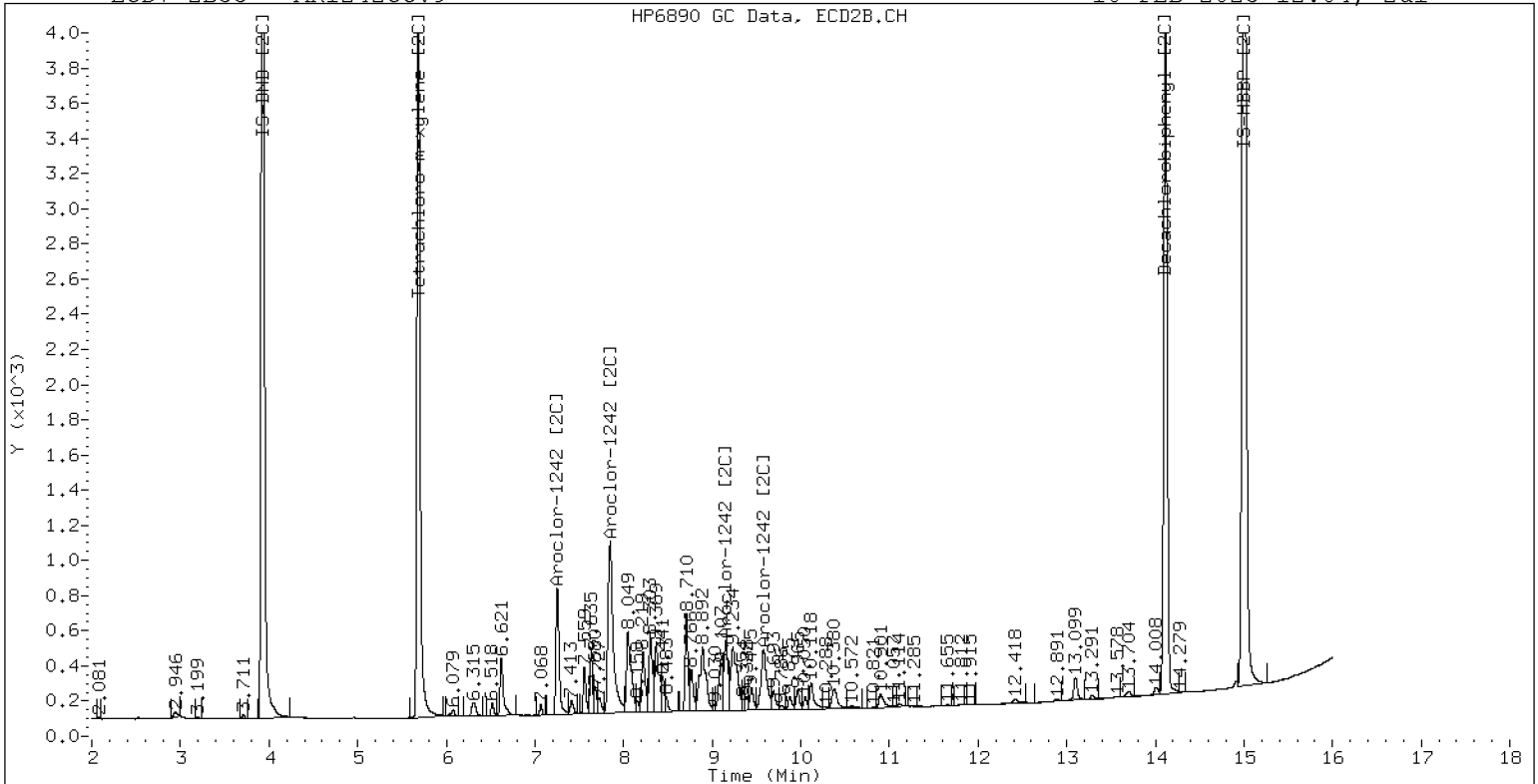
10-FEB-2023 12:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9

10-FEB-2023 12:04, 2ul



ZB-35 Manual Integration: NO



## CONTINUING CALIBRATION CHECK EPA 8082A

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Instrument ID: <u>ECD7</u>	Calibration: <u>GA00061</u>
Lab File ID: <u>02092370ECD7.D</u>	Calibration Date: <u>01/24/2023</u>
Sequence: <u>SLB0148</u>	Injection Date: <u>02/10/23</u>
Lab Sample ID: <u>SLB0148-CCVA</u>	Injection Time: <u>12:25</u>
Sequence Name: <u>AR1660CCVA</u>	

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	232	0.0506755	0.0469565		-7.3	+/-20
Aroclor-1016 (1)	A	250.00	238	0.0297277	0.0282644		-4.8	
Aroclor-1016 (2)	A	250.00	236	0.0985017	0.0928469		-5.6	
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0391186		-13.6	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0275962		-5.2	
Aroclor 1016 [2C]	A	250.00	246	0.0519244	0.0511188		-1.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0420679		-3.2	
Aroclor-1016 (2) [2C]	A	250.00	247	0.0950862	0.0938336		-1.2	
Aroclor-1016 (3) [2C]	A	250.00	252	0.0388014	0.0391986		0.8	
Aroclor-1016 (4) [2C]	A	250.00	241	0.0304194	0.0293751		-3.6	
Aroclor 1260	A	250.00	200	0.0605224	0.0487281		-20.0	+/-20
Aroclor-1260 (1)	A	250.00	213	0.0448870	0.0382742		-14.8	
Aroclor-1260 (2)	A	250.00	209	0.0461412	0.0386046		-16.4	
Aroclor-1260 (3)	A	250.00	202	0.1214672	0.0980069		-19.2	
Aroclor-1260 (4)	A	250.00	195	0.0627593	0.0489153		-22.0	
Aroclor-1260 (5)	A	250.00	181	0.0273573	0.0198395		-27.6	
Aroclor 1260 [2C]	A	250.00	235	0.0836545	0.0781344		-6.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	234	0.0577136	0.0541531		-6.4	
Aroclor-1260 (2) [2C]	A	250.00	234	0.1460113	0.1369726		-6.4	
Aroclor-1260 (3) [2C]	A	250.00	245	0.0363944	0.0356233		-2.0	
Aroclor-1260 (4) [2C]	A	250.00	227	0.0944986	0.0857887		-9.2	
Decachlorobiphenyl	A	40.000	34.7	0.8555994	0.7431611		-13.3	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1023980		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.4	1.2696430	1.1871290		-6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.6	1.0814980	1.0450140		-3.5	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092370ECD7.D  
Data file 2: /230209.b/230209.b/02092370ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCVA  
Client ID:  
Injection Date: 10-FEB-2023 12:25  
Report Date: 02/10/2023 14:32  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

ZB5 Col		ZB35 Col		ZB5	ZB35	RPD	Compound/Flag
RT	Shift Response	RT	Shift Response	on col	on col		
5.808	0.000	207209	0.000	39.0	38.7	0.9	Tetrachloro-m-xylene
13.889	-0.001	191471	0.001	34.7	37.4	7.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	375924	-25.3
Hexabromobiphenyl	647433	515288	-20.4

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358780	6.5
Hexabromobiphenyl	382032	416644	9.1

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	0.000	33204	237.7	1	7.254	0.000	47166	242.4	
Aroclor-1016	2	7.650	0.001	109073	235.6	2	7.850	0.000	105205	246.7	
Aroclor-1016	3	7.788	0.001	45955	215.8	3	8.049	0.001	43949	252.6	
Aroclor-1016	4	8.402	0.001	32419	236.6	4	8.304	0.000	32935	241.4	
Total CollAve (4 peaks):				231.4		Total Col2Ave (4 peaks):				245.8	RPD = 6
Corrected Ave (3 peaks):				229.4		Corrected Ave (3 peaks):				243.5	RPD = 6
CalAmt %D:				-7.4		CalAmt %D:				-1.7	
Aroclor-1260	1	11.041	0.001	61632	213.2	1	11.649	-0.000	70508	234.6	
Aroclor-1260	2	11.356	0.000	62164	209.2	2	11.914	0.000	178340	234.5	
Aroclor-1260	3	11.729	-0.000	157818	201.7	3	12.432	0.001	46382	244.7	
Aroclor-1260	4	12.133	0.000	78767	194.9	4	12.497	0.001	111698	227.0	
Aroclor-1260	5	12.240	0.001	31947	181.3	NS	---			----	
Total CollAve (5 peaks):				200.0		Total Col2Ave (4 peaks):				235.2	RPD = 16
Corrected Ave (4 peaks):				196.8		Corrected Ave (3 peaks):				232.0	RPD = 16
CalAmt %D:				-20.0		CalAmt %D:				-5.9	

Total PCB Area Coll (5.908 - 13.790) = 1797916 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.015) = 1759656 Col2 Total PCB = 0.5 ppm\*

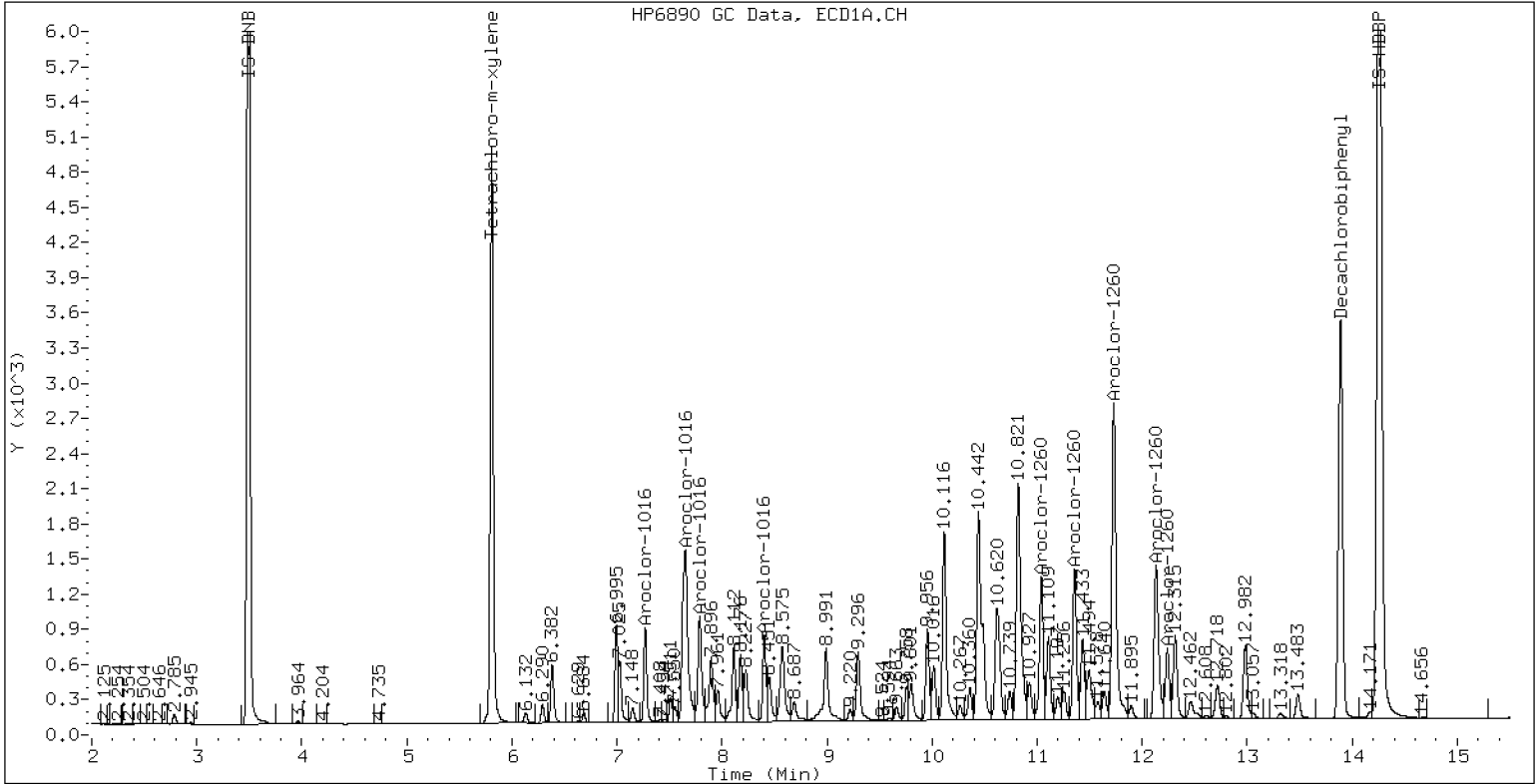
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA

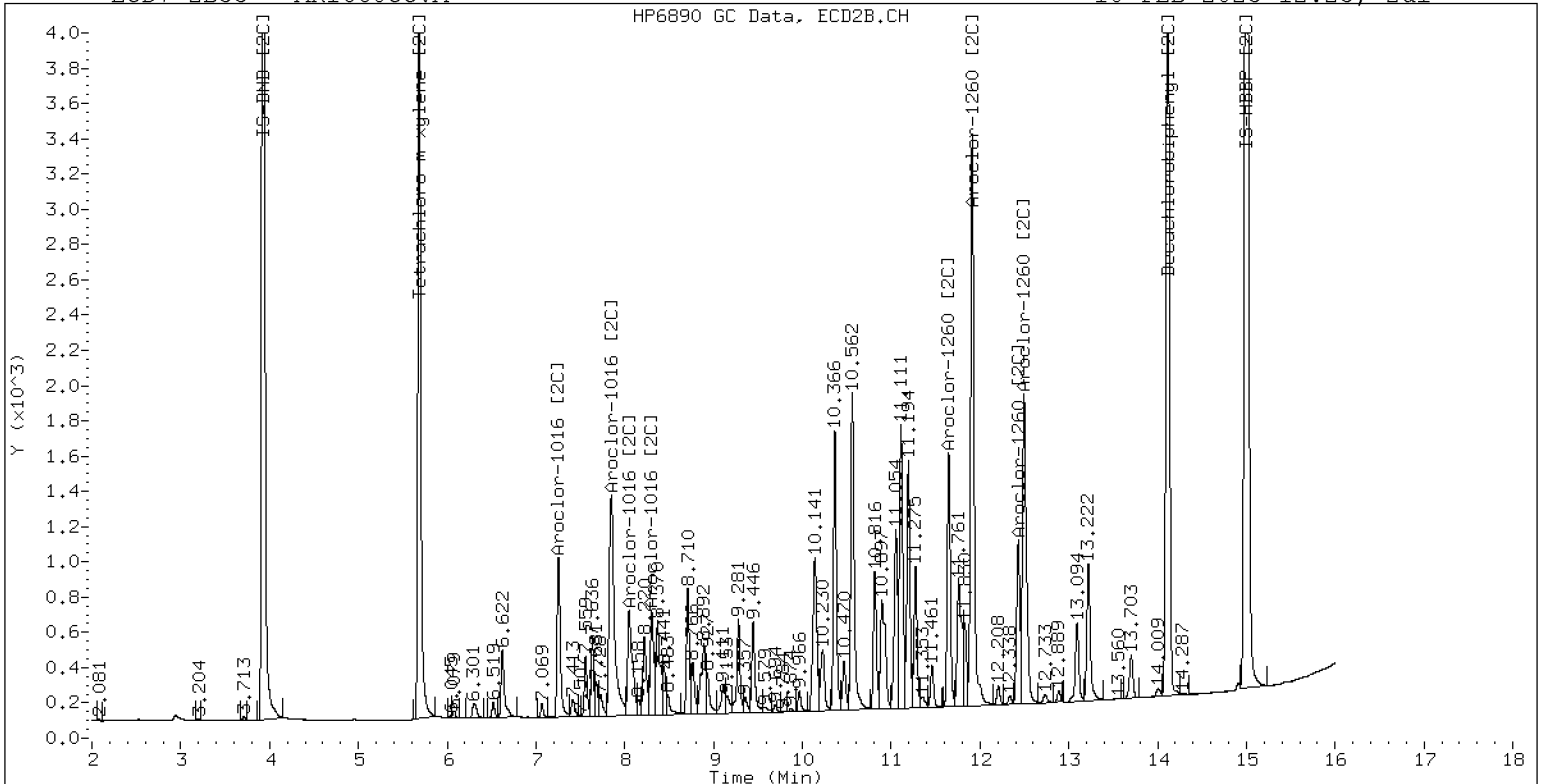
10-FEB-2023 12:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA

10-FEB-2023 12:25, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092381ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCVB</u>	Injection Time:	<u>16:17</u>
Sequence Name:	<u>AR1254CCVB</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	189	0.0675033	0.0514221		-24.3	+/-20 *
Aroclor-1254 (1)	A	250.00	202		0.0658000			
Aroclor-1254 (2)	A	250.00	181		0.0252013			
Aroclor-1254 (3)	A	250.00	190		0.0396093			
Aroclor-1254 (4)	A	250.00	190		0.0776735			
Aroclor-1254 (5)	A	250.00	183		0.0488263			
Aroclor 1254 [2C]	A	250.00	205	0.0733219	0.0601935		-18.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	219		0.0508970			
Aroclor-1254 (2) [2C]	A	250.00	215		0.0403362			
Aroclor-1254 (3) [2C]	A	250.00	205		0.0840644			
Aroclor-1254 (4) [2C]	A	250.00	208		0.0852686			
Aroclor-1254 (5) [2C]	A	250.00	177		0.0404016			
Decachlorobiphenyl	A	40.000	32.4	0.8555994	0.6937162		-19.0	+/-20
Tetrachlorometaxylene	A	40.000	38.0	1.1307870	1.0742460		-5.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.9	1.2696430	1.1397600		-10.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.6	1.0814980	1.0445970		-3.5	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092381ECD7.D  
Data file 2: /230209.b/230209.b/02092381ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1254.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254CCVB  
Client ID:  
Injection Date: 10-FEB-2023 16:17  
Report Date: 02/10/2023 16:56  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	0.000	204458	5.685	0.000	191669	38.0	38.6	1.7	Tetrachloro-m-xylene
13.890	0.001	142225	14.116	0.000	204767	32.4	35.9	10.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	380654	-24.4
Hexabromobiphenyl	647433	410038	-36.7
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366972	8.9
Hexabromobiphenyl	382032	359316	-5.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	9.293	-0.001	78272	201.8	1	9.444	0.000	58368	219.2	
Aroclor-1254	2	9.371	-0.000	29978	181.0	2	9.965	0.000	46257	215.0	
Aroclor-1254	3	9.662	-0.000	47117	189.6	3	10.116	0.000	96404	205.4	
Aroclor-1254	4	9.800	0.000	92396	189.7	4	10.365	0.000	97785	208.3	
Aroclor-1254	5	10.160	-0.001	58081	183.4	5	10.563	0.000	46332	177.2	
Total CollAve (5 peaks):				189.1		Total Col2Ave (5 peaks):				205.0	RPD = 8
Corrected Ave (4 peaks):				185.9		Corrected Ave (4 peaks):				201.5	RPD = 8
CalAmt %D:				-24.4		CalAmt %D:				-18.0	

Total PCB Area Col1 (5.908 - 13.789) = 943912 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 932790 Col2 Total PCB = 0.2 ppm\*

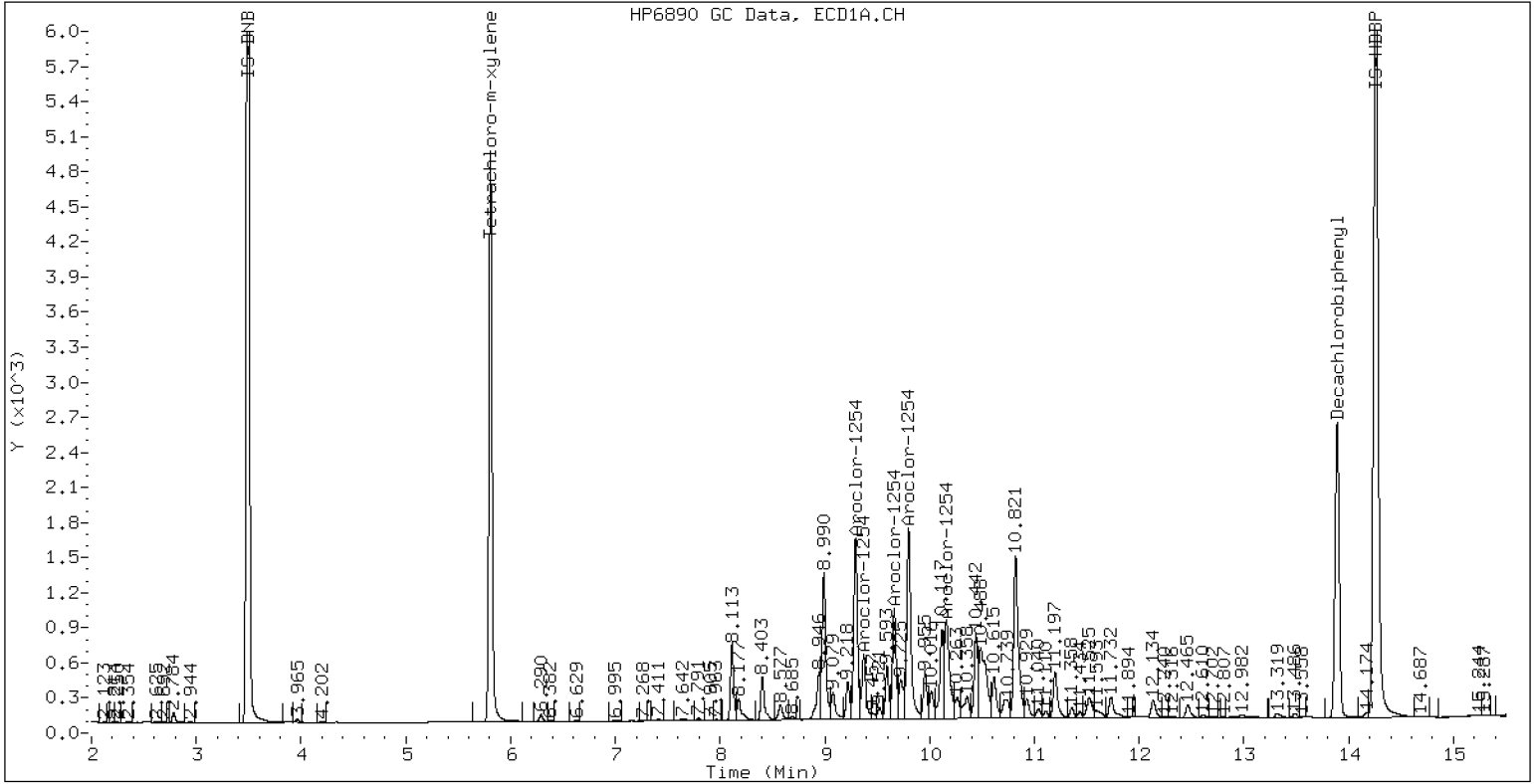
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCVB

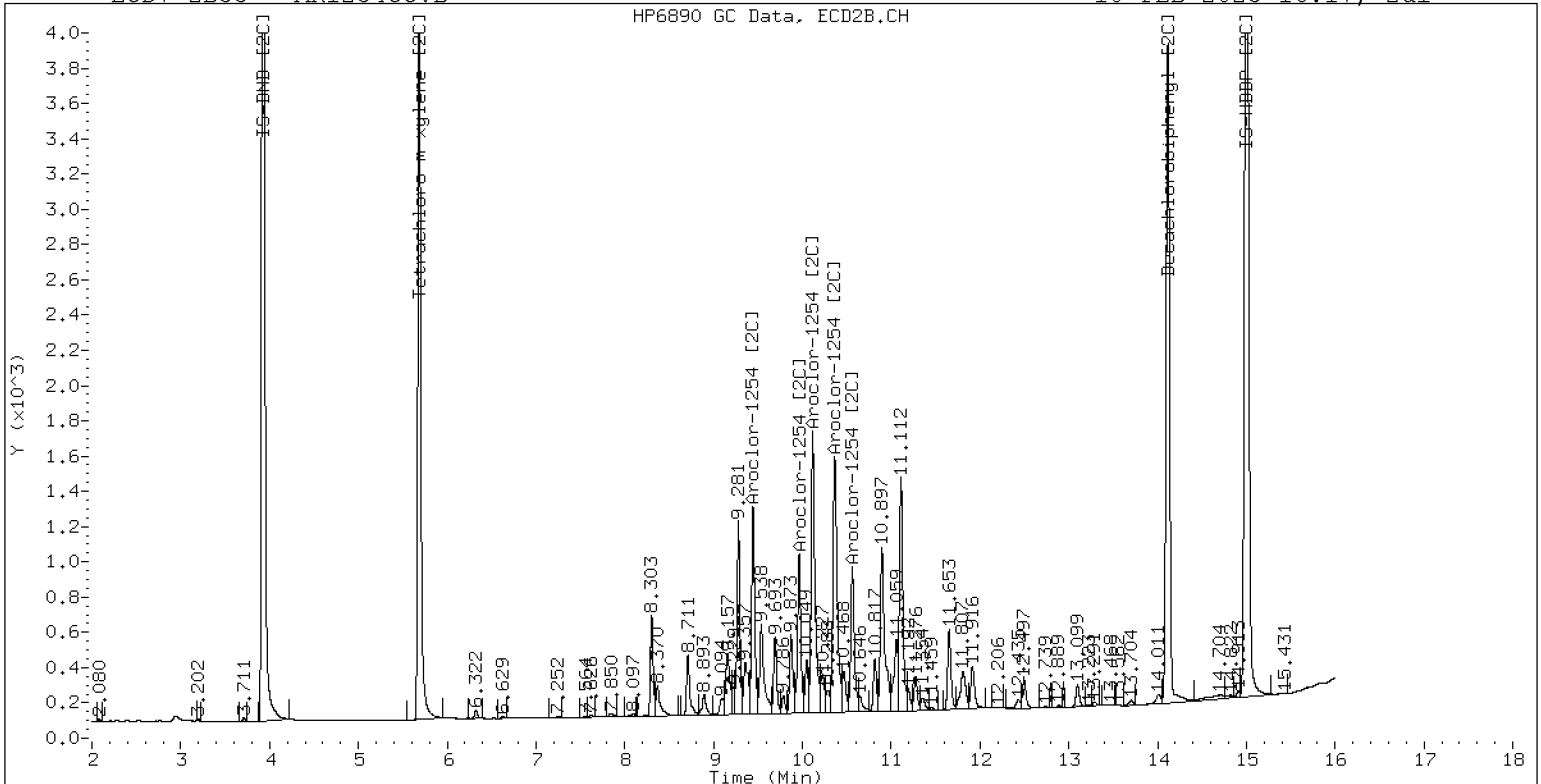
10-FEB-2023 16:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCVB

10-FEB-2023 16:17, 2ul



ZB-35 Manual Integration: NO



**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092382ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCVC</u>	Injection Time:	<u>16:38</u>
Sequence Name:	<u>AR1660CCVC</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	230	0.0506755	0.0467373		-7.9	+/-20
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0281745		-5.2	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925543		-6.0	
Aroclor-1016 (3)	A	250.00	214	0.0453193	0.0387630		-14.4	
Aroclor-1016 (4)	A	250.00	235	0.0291533	0.0274572		-6.0	
Aroclor 1016 [2C]	A	250.00	247	0.0519244	0.0513336		-1.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	244	0.0433907	0.0424353		-2.4	
Aroclor-1016 (2) [2C]	A	250.00	248	0.0950862	0.0941725		-0.8	
Aroclor-1016 (3) [2C]	A	250.00	253	0.0388014	0.0392901		1.2	
Aroclor-1016 (4) [2C]	A	250.00	242	0.0304194	0.0294365		-3.2	
Aroclor 1260	A	250.00	212	0.0605224	0.0515890		-15.4	+/-20
Aroclor-1260 (1)	A	250.00	226	0.0448870	0.0406367		-9.6	
Aroclor-1260 (2)	A	250.00	222	0.0461412	0.0409774		-11.2	
Aroclor-1260 (3)	A	250.00	215	0.1214672	0.1042948		-14.0	
Aroclor-1260 (4)	A	250.00	204	0.0627593	0.0511549		-18.4	
Aroclor-1260 (5)	A	250.00	191	0.0273573	0.0208812		-23.6	
Aroclor 1260 [2C]	A	250.00	240	0.0836545	0.0795185		-4.1	+/-20
Aroclor-1260 (1) [2C]	A	250.00	240	0.0577136	0.0553727		-4.0	
Aroclor-1260 (2) [2C]	A	250.00	238	0.1460113	0.1388974		-4.8	
Aroclor-1260 (3) [2C]	A	250.00	250	0.0363944	0.0364418		0.0	
Aroclor-1260 (4) [2C]	A	250.00	231	0.0944986	0.0873621		-7.6	
Decachlorobiphenyl	A	40.000	34.2	0.8555994	0.7310562		-14.5	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.1307870	1.1142210		-1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.1	1.2696430	1.1778000		-7.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.9	1.0814980	1.0524790		-2.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092382ECD7.D  
Data file 2: /230209.b/230209.b/02092382ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCVC  
Client ID:  
Injection Date: 10-FEB-2023 16:38  
Report Date: 02/10/2023 17:00  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	210492	5.686	0.001	189852	39.4	38.9	1.2	Tetrachloro-m-xylene
13.889	-0.002	170301	14.117	0.001	231691	34.2	37.1	8.2	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	377828	-24.9
Hexabromobiphenyl	647433	465904	-28.0

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	360771	7.1
Hexabromobiphenyl	382032	393430	3.0

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	-0.000	33266	236.9	1	7.253	-0.000	47842	244.5	
Aroclor-1016	2	7.650	-0.000	109280	234.9	2	7.850	0.000	106171	247.6	
Aroclor-1016	3	7.787	-0.000	45768	213.8	3	8.049	0.001	44296	253.1	
Aroclor-1016	4	8.402	-0.000	32419	235.5	4	8.304	0.000	33187	241.9	
Total CollAve (4 peaks):				230.3		Total Col2Ave (4 peaks):				246.8	RPD = 7
Corrected Ave (3 peaks):				228.1		Corrected Ave (3 peaks):				244.7	RPD = 7

CalAmt %D: -7.9

CalAmt %D: -1.3

Aroclor-1260	1	11.040	-0.001	59165	226.3	1	11.650	0.000	68079	239.9	
Aroclor-1260	2	11.356	0.000	59661	222.0	2	11.913	0.000	170770	237.8	
Aroclor-1260	3	11.730	0.000	151848	214.7	3	12.432	0.001	44804	250.3	
Aroclor-1260	4	12.133	0.000	74479	203.8	4	12.496	0.000	107409	231.1	
Aroclor-1260	5	12.240	0.000	30402	190.8	NS	---			----	
Total CollAve (5 peaks):				211.5		Total Col2Ave (4 peaks):				239.8	RPD = 13
Corrected Ave (4 peaks):				207.8		Corrected Ave (3 peaks):				236.3	RPD = 13

CalAmt %D: -15.4

CalAmt %D: -4.1

Total PCB Area Coll (5.908 - 13.790) = 1751626 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.785 - 14.016) = 1724666 Col2 Total PCB = 0.5 ppm\*

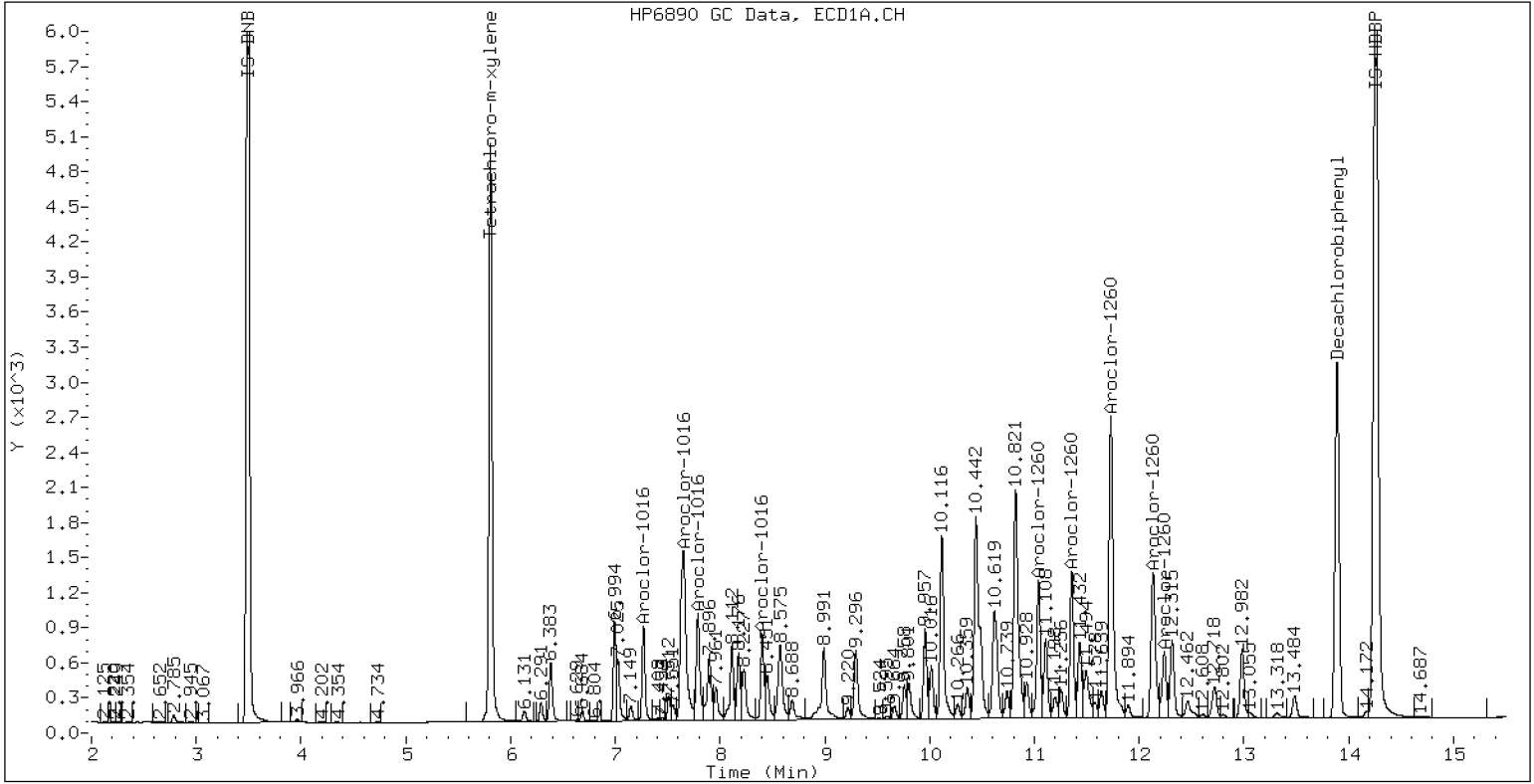
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVC

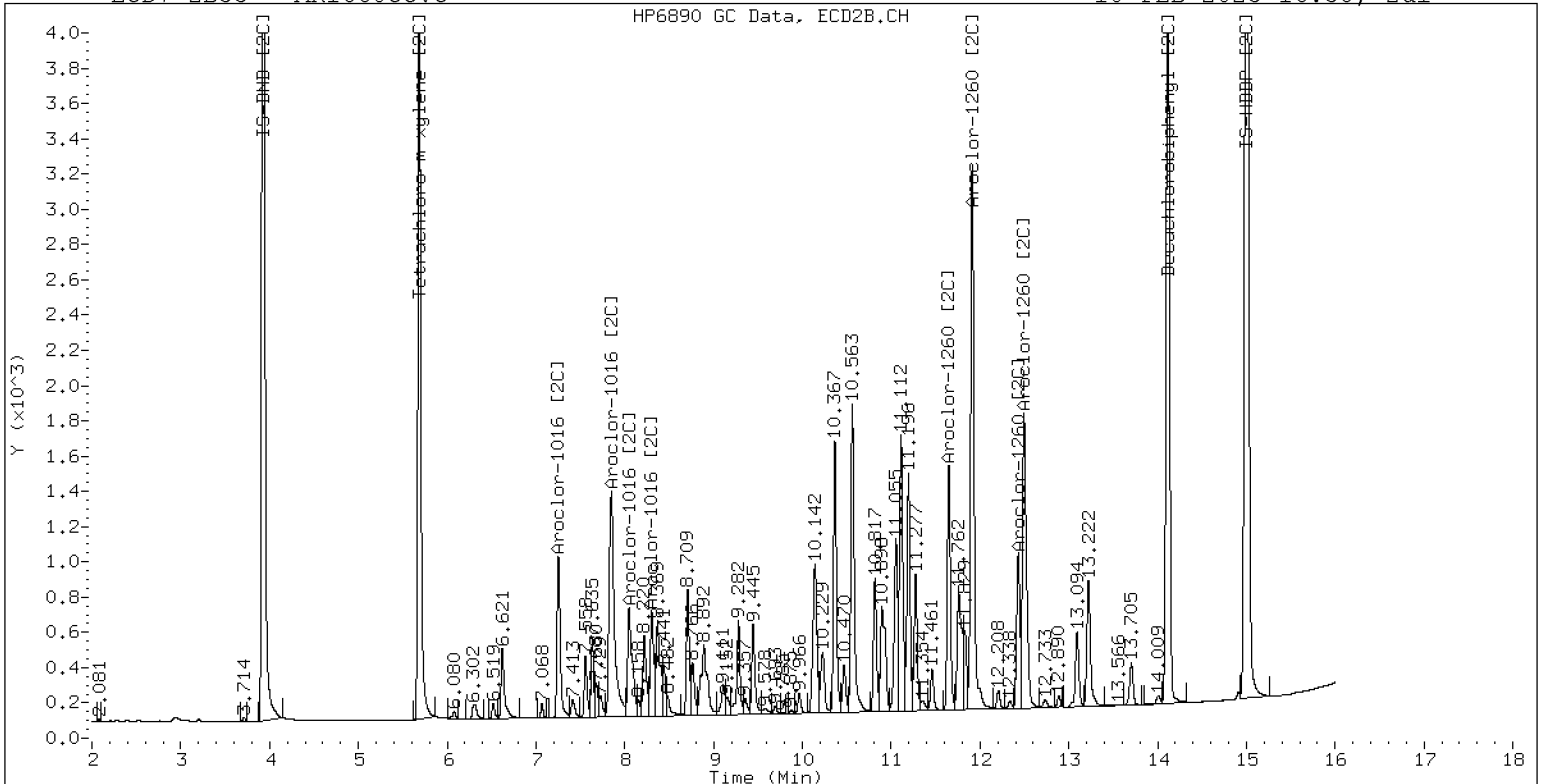
10-FEB-2023 16:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVC

10-FEB-2023 16:38, 2ul



ZB-35 Manual Integration: NO





**CONTINUING CALIBRATION CHECK**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>ECD7</u>	Calibration:	<u>GA00061</u>
Lab File ID:	<u>02092385ECD7.D</u>	Calibration Date:	<u>01/24/2023</u>
Sequence:	<u>SLB0148</u>	Injection Date:	<u>02/10/23</u>
Lab Sample ID:	<u>SLB0148-CCVD</u>	Injection Time:	<u>17:41</u>
Sequence Name:	<u>AR1248CCVD</u>		

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	195	0.0592639	0.0442892		-22.0	+/-20 *
Aroclor-1248 (1)	A	250.00	227		0.0363764			
Aroclor-1248 (2)	A	250.00	223		0.0455804			
Aroclor-1248 (3)	A	250.00	160		0.0624010			
Aroclor-1248 (4)	A	250.00	170		0.0327989			
Aroclor 1248 [2C]	A	250.00	224	0.0453673	0.0405441		-10.3	+/-20
Aroclor-1248 (1) [2C]	A	250.00	234		0.0339333			
Aroclor-1248 (2) [2C]	A	250.00	221		0.0344301			
Aroclor-1248 (3) [2C]	A	250.00	224		0.0425855			
Aroclor-1248 (4) [2C]	A	250.00	218		0.0512276			
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6868434		-19.8	+/-20
Tetrachlorometaxylene	A	40.000	37.1	1.1307870	1.0484900		-7.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.6	1.2696430	1.0973150		-13.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.0814980	1.0093900		-6.8	+/-20

\* Values outside of QC limits

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092385ECD7.D  
Data file 2: /230209.b/230209.b/02092385ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1248.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248CCVD  
Client ID:  
Injection Date: 10-FEB-2023 17:41  
Report Date: 02/13/2023 08:47  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	205342	5.685	-0.000	189515	37.1	37.3	0.7	Tetrachloro-m-xylene
13.890	-0.000	183857	14.116	-0.001	246514	32.1	34.6	7.4	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	391691	-22.2
Hexabromobiphenyl	647433	535368	-17.3

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	375504	11.5
Hexabromobiphenyl	382032	449304	17.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.402	0.000	44526	227.2	1	8.304	0.000	39819	234.6	
Aroclor-1248	2	8.574	-0.000	55792	223.2	2	8.710	0.000	40402	221.1	
Aroclor-1248	3	8.994	0.001	76381	159.8	3	9.154	0.000	49972	223.8	
Aroclor-1248	4	9.292	0.001	40147	169.6	4	9.577	0.000	60113	217.7	
Total CollAve (4 peaks):				195.0	Total Col2Ave (4 peaks):				224.3	RPD = 14	
Corrected Ave (3 peaks):				184.2	Corrected Ave (3 peaks):				220.9	RPD = 18	
CalAmt %D:				-22.0	CalAmt %D:				-10.3		

Total PCB Area Col1 (5.908 - 13.790) = 843897 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (5.786 - 14.017) = 777787 Col2 Total PCB = 0.2 ppm\*

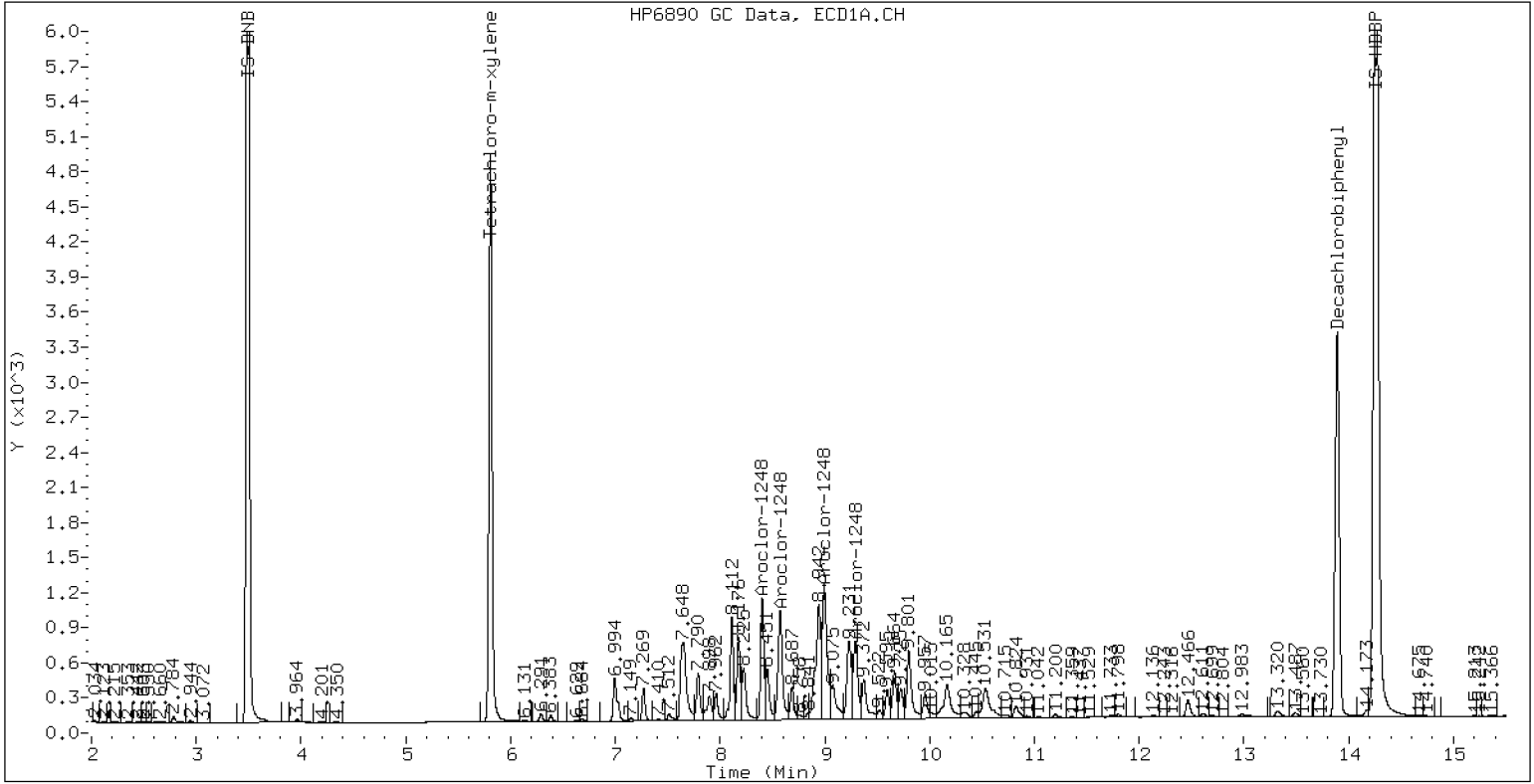
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCVD

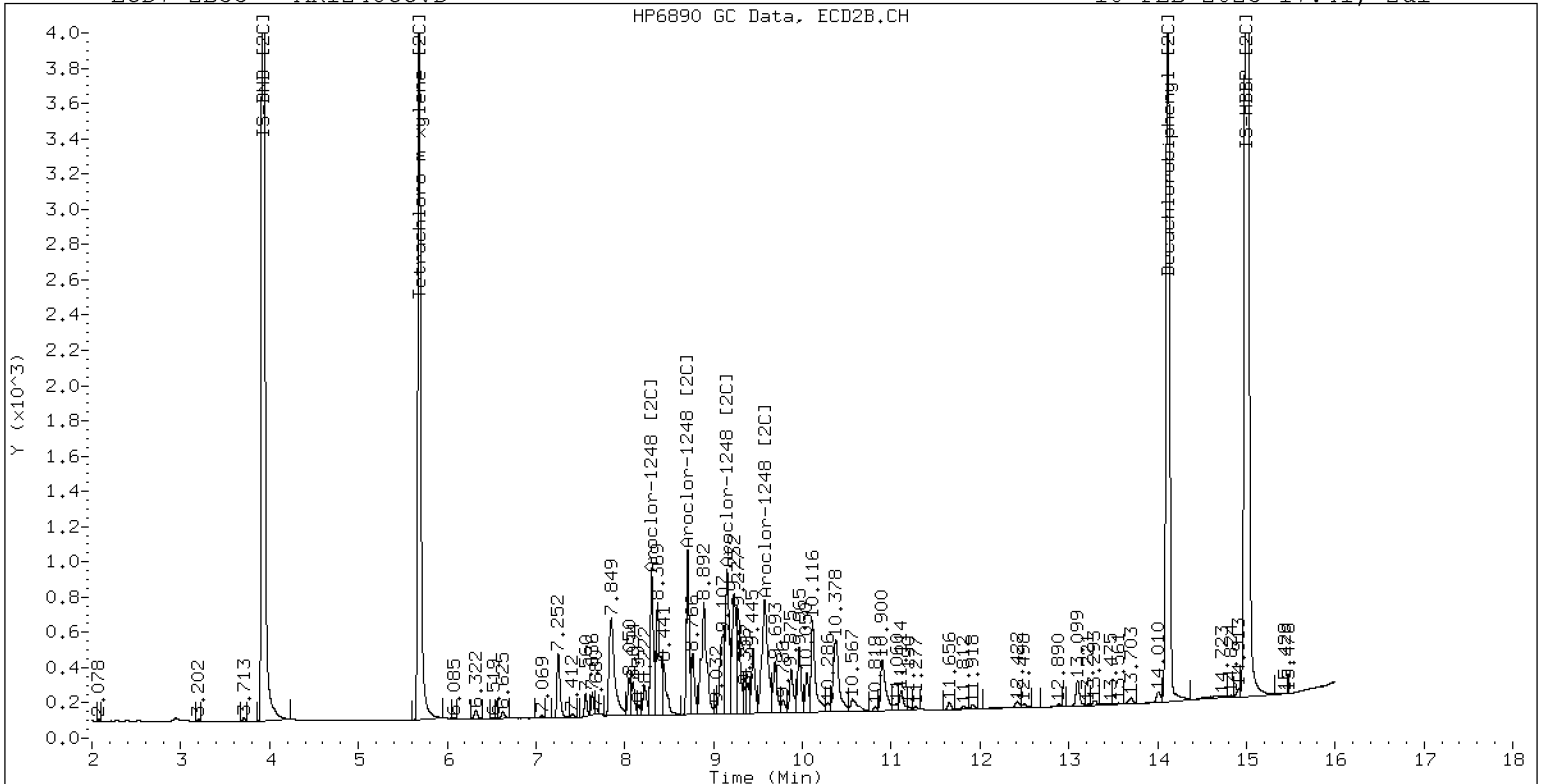
10-FEB-2023 17:41, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCVD

10-FEB-2023 17:41, 2ul



ZB-35 Manual Integration: NO



## CONTINUING CALIBRATION CHECK EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ECD7

Calibration: GA00061

Lab File ID: 02092386ECD7.D

Calibration Date: 01/24/2023

Sequence: SLB0148

Injection Date: 02/10/23

Lab Sample ID: SLB0148-CCVE

Injection Time: 18:02

Sequence Name: AR1660CCVE

COMPOUND	TYPE	CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	232	0.0506755	0.0469060		-7.4	+/-20
Aroclor-1016 (1)	A	250.00	238	0.0297277	0.0282654		-4.8	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925920		-6.0	
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0390933		-13.6	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0276734		-5.2	
Aroclor 1016 [2C]	A	250.00	243	0.0519244	0.0505114		-2.9	+/-20
Aroclor-1016 (1) [2C]	A	250.00	240	0.0433907	0.0417063		-4.0	
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0925077		-2.8	
Aroclor-1016 (3) [2C]	A	250.00	249	0.0388014	0.0386903		-0.4	
Aroclor-1016 (4) [2C]	A	250.00	239	0.0304194	0.0291412		-4.4	
Aroclor 1260	A	250.00	199	0.0605224	0.0485304		-20.3	+/-20 *
Aroclor-1260 (1)	A	250.00	208	0.0448870	0.0373919		-16.8	
Aroclor-1260 (2)	A	250.00	206	0.0461412	0.0379718		-17.6	
Aroclor-1260 (3)	A	250.00	201	0.1214672	0.0977558		-19.6	
Aroclor-1260 (4)	A	250.00	197	0.0627593	0.0493582		-21.2	
Aroclor-1260 (5)	A	250.00	184	0.0273573	0.0201745		-26.4	
Aroclor 1260 [2C]	A	250.00	226	0.0836545	0.0749746		-9.6	+/-20
Aroclor-1260 (1) [2C]	A	250.00	223	0.0577136	0.0515378		-10.8	
Aroclor-1260 (2) [2C]	A	250.00	224	0.1460113	0.1306585		-10.4	
Aroclor-1260 (3) [2C]	A	250.00	237	0.0363944	0.0345505		-5.2	
Aroclor-1260 (4) [2C]	A	250.00	220	0.0944986	0.0831513		-12.0	
Decachlorobiphenyl	A	40.000	34.2	0.8555994	0.7310019		-14.5	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1023390		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.9	1.2696430	1.1398760		-10.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.2	1.0814980	1.0597820		-2.0	+/-20

\* Values outside of QC limits

Analytical Resources Inc.  
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092386ECD7.D  
Data file 2: /230209.b/230209.b/02092386ECD7.D  
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m  
Compound Sublist: AR1660.sub  
Instrument, Inj. Vol.: ecd7.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660CCVE  
Client ID:  
Injection Date: 10-FEB-2023 18:02  
Report Date: 02/13/2023 08:47  
Matrix: NONE  
Dilution Factor: 1.0

SURROGATES

RT	ZB5 Col Shift	Response	RT	ZB35 Col Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.808	-0.000	212439	5.686	0.000	194247	39.0	39.2	0.5	Tetrachloro-m-xylene
13.889	-0.001	200887	14.117	0.000	262856	34.2	35.9	5.0	Decachlorobiphenyl

\* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	385433	-23.4
Hexabromobiphenyl	647433	549621	-15.1

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366579	8.8
Hexabromobiphenyl	382032	461201	20.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 24-JAN-2023  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	34045	237.7	1	7.254	0.000	47777	240.3
Aroclor-1016	2	7.651	0.001	111525	235.0	2	7.850	0.000	105973	243.2
Aroclor-1016	3	7.788	0.000	47087	215.7	3	8.049	0.000	44322	249.3
Aroclor-1016	4	8.403	0.000	33332	237.3	4	8.303	0.000	33383	239.5
Total CollAve (4 peaks):				231.4		Total Col2Ave (4 peaks):				243.1 RPD = 5
Corrected Ave (3 peaks):				229.3		Corrected Ave (3 peaks):				241.0 RPD = 5

CalAmt %D: -7.4

CalAmt %D: -2.8

Aroclor-1260	1	11.040	-0.001	64223	208.3	1	11.649	0.000	74279	223.2
Aroclor-1260	2	11.356	-0.000	65219	205.7	2	11.914	0.000	188312	223.7
Aroclor-1260	3	11.729	-0.000	167902	201.2	3	12.431	0.000	49796	237.3
Aroclor-1260	4	12.133	-0.000	84776	196.6	4	12.498	0.000	119842	220.0
Aroclor-1260	5	12.241	0.000	34651	184.4	NS	---			----
Total CollAve (5 peaks):				199.2		Total Col2Ave (4 peaks):				226.1 RPD = 13
Corrected Ave (4 peaks):				197.0		Corrected Ave (3 peaks):				222.3 RPD = 12

CalAmt %D: -20.3

CalAmt %D: -9.6

Total PCB Area Coll (5.908 - 13.790) = 1876791 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (5.786 - 14.017) = 1828576 Col2 Total PCB = 0.5 ppm\*

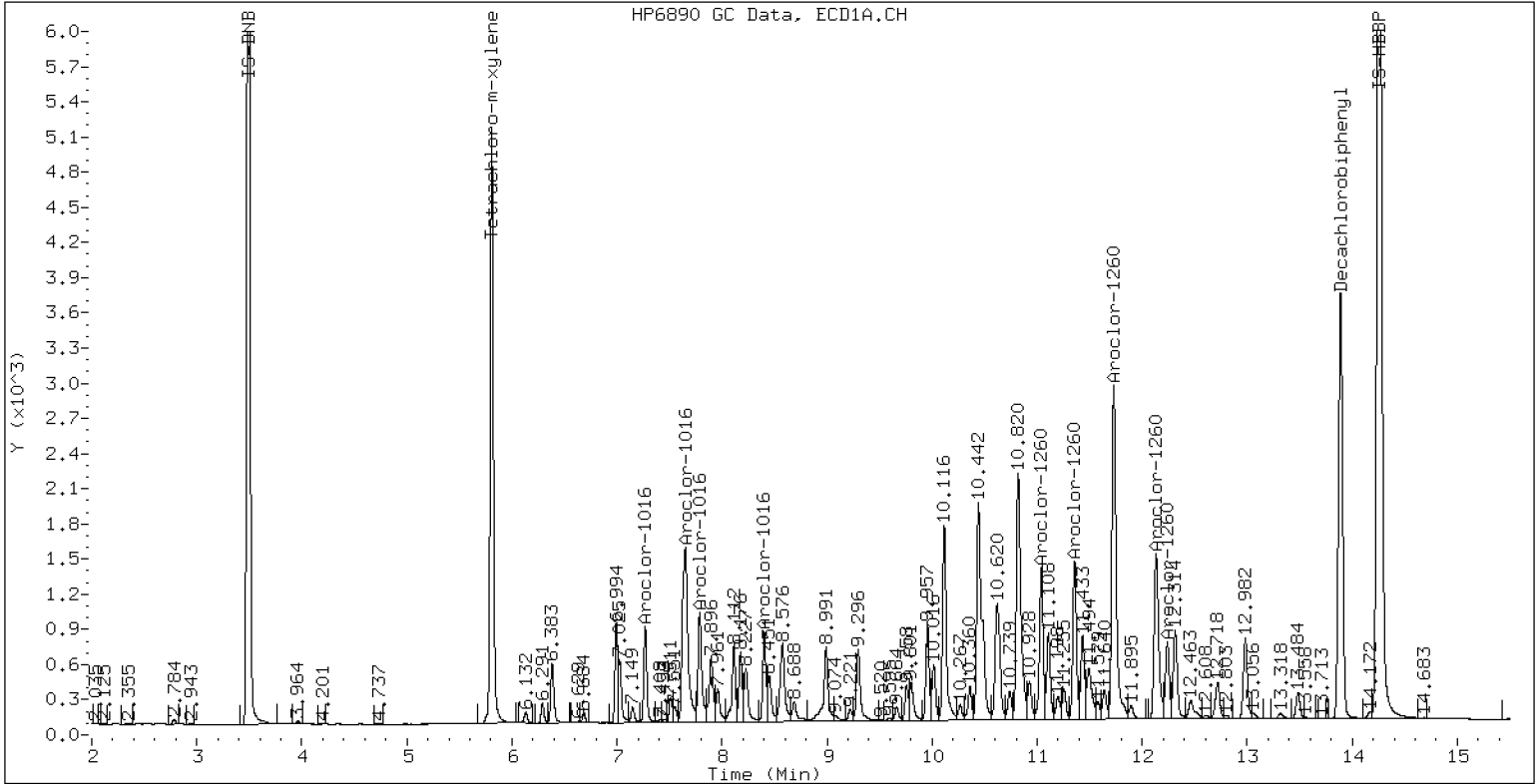
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

# PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVE

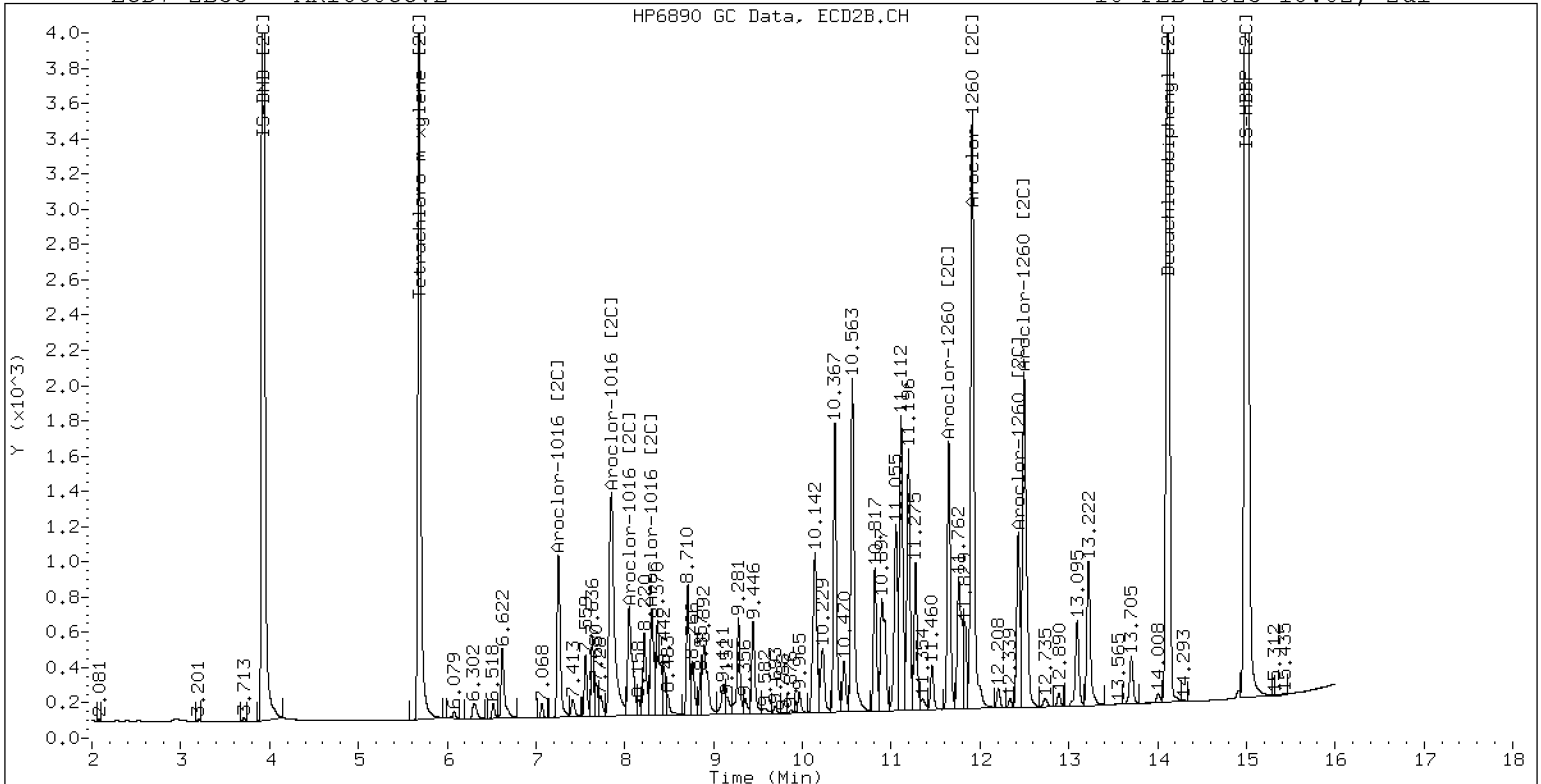
10-FEB-2023 18:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVE

10-FEB-2023 18:02, 2ul



ZB-35 Manual Integration: NO





**Dual Column**  
**ANALYSIS BATCH (SEQUENCE) SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLA0281

Instrument: ECD7

Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLA0281-CAL1	01242313ECD7.D	01242313ECD7.D	NA	01/24/23 16:00
Cal Standard	SLA0281-CAL2	01242314ECD7.D	01242314ECD7.D	NA	01/24/23 16:21
Cal Standard	SLA0281-CAL3	01242315ECD7.D	01242315ECD7.D	NA	01/24/23 16:42
Cal Standard	SLA0281-CAL4	01242316ECD7.D	01242316ECD7.D	NA	01/24/23 17:03
Cal Standard	SLA0281-CAL5	01242317ECD7.D	01242317ECD7.D	NA	01/24/23 17:24
Cal Standard	SLA0281-CAL6	01242318ECD7.D	01242318ECD7.D	NA	01/24/23 17:45
Cal Standard	SLA0281-CAL7	01242319ECD7.D	01242319ECD7.D	NA	01/24/23 18:06
Cal Standard	SLA0281-CAL8	01242320ECD7.D	01242320ECD7.D	NA	01/24/23 18:27
Cal Standard	SLA0281-CAL9	01242321ECD7.D	01242321ECD7.D	NA	01/24/23 18:48
Cal Standard	SLA0281-CALA	01242322ECD7.D	01242322ECD7.D	NA	01/24/23 19:09
Cal Standard	SLA0281-CALB	01242323ECD7.D	01242323ECD7.D	NA	01/24/23 19:30
Secondary Cal Check	SLA0281-SCV1	01242324ECD7.D	01242324ECD7.D	NA	01/24/23 19:51
Secondary Cal Check	SLA0281-SCV2	01242325ECD7.D	01242325ECD7.D	NA	01/24/23 20:12
Secondary Cal Check	SLA0281-SCV3	01242326ECD7.D	01242326ECD7.D	NA	01/24/23 20:33
Secondary Cal Check	SLA0281-SCV4	01242327ECD7.D	01242327ECD7.D	NA	01/24/23 20:54
Secondary Cal Check	SLA0281-SCV5	01242328ECD7.D	01242328ECD7.D	NA	01/24/23 21:15
Secondary Cal Check	SLA0281-SCV6	01242329ECD7.D	01242329ECD7.D	NA	01/24/23 21:36

Security Status Report

Date: 26-Jan-2023 15:41

01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242332ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242333ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242334ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242335ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242336ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242337ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242338ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242339ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242340ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242341ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242342ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242343ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242344ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242345ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242346ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242347ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242348ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242349ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242350ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242351ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242352ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242353ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242354ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242355ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242356ECD7.D	Data Locked	richardl, 26-Jan-2023 15:41
01242357ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242358ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242359ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242360ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242361ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242362ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242363ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242364ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242365ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242366ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242367ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242368ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242369ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242370ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242371ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242372ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242373ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19

01242374ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242375ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242376ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242377ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242378ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242379ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242380ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242381ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242382ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242383ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242384ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242385ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242386ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242387ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242388ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242389ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242390ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242391ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19



**Dual Column**  
**ANALYSIS BATCH (SEQUENCE) SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0109

Instrument: ECD7

Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0109-ICV1	02072302ECD7.D	02072302ECD7.D	NA	02/07/23 13:02
Initial Cal Check	SLB0109-ICV2	02072303ECD7.D	02072303ECD7.D	NA	02/07/23 13:23
Calibration Check	SLB0109-CCV1	02072305ECD7.D	02072305ECD7.D	NA	02/07/23 14:05
Calibration Check	SLB0109-CCV2	02072306ECD7.D	02072306ECD7.D	NA	02/07/23 14:26
Blank	BLA0625-BLK1	02072307ECD7.D	02072307ECD7.D	Solid	02/07/23 14:47
LCS	BLA0625-BS1	02072308ECD7.D	02072308ECD7.D	Solid	02/07/23 15:08
LCS Dup	BLA0625-BSD1	02072309ECD7.D	02072309ECD7.D	Solid	02/07/23 15:29
Reference	BLA0625-SRM1	02072310ECD7.D	02072310ECD7.D	Solid	02/07/23 15:50
LDW23-SS1021	23A0206-01	02072311ECD7.D	02072311ECD7.D	Solid	02/07/23 16:11
LDW23-SS1015	23A0206-02	02072312ECD7.D	02072312ECD7.D	Solid	02/07/23 16:32
LDW23-SS1164	23A0206-03	02072313ECD7.D	02072313ECD7.D	Solid	02/07/23 16:53
LDW23-SS1158	23A0206-04	02072314ECD7.D	02072314ECD7.D	Solid	02/07/23 17:14
LDW23-SS1151	23A0206-05	02072315ECD7.D	02072315ECD7.D	Solid	02/07/23 17:35
LDW23-SS1145	23A0206-06	02072316ECD7.D	02072316ECD7.D	Solid	02/07/23 17:57
LDW23-SS1139	23A0206-07	02072317ECD7.D	02072317ECD7.D	Solid	02/07/23 18:18
LDW23-SS1139	BLA0625-MS1	02072318ECD7.D	02072318ECD7.D	Solid	02/07/23 18:39
LDW23-SS1139	BLA0625-MSD1	02072319ECD7.D	02072319ECD7.D	Solid	02/07/23 19:00
Calibration Check	SLB0109-CCV3	02072320ECD7.D	02072320ECD7.D	NA	02/07/23 19:21
Calibration Check	SLB0109-CCV4	02072321ECD7.D	02072321ECD7.D	NA	02/07/23 19:42
Calibration Check	SLB0109-CCV5	02072329ECD7.D	02072329ECD7.D	NA	02/07/23 22:30
Calibration Check	SLB0109-CCV6	02072330ECD7.D	02072330ECD7.D	NA	02/07/23 22:51
Calibration Check	SLB0109-CCV7	02072346ECD7.D	02072346ECD7.D	NA	02/08/23 04:27
Calibration Check	SLB0109-CCV8	02072347ECD7.D	02072347ECD7.D	NA	02/08/23 04:48
Calibration Check	SLB0109-CCV9	02072357ECD7.D	02072357ECD7.D	NA	02/08/23 08:18
Calibration Check	SLB0109-CCVA	02072358ECD7.D	02072358ECD7.D	NA	02/08/23 08:39



ANALYSIS SEQUENCE

SLB0109

Instrument: ECD7  
Calibration ID: GA00061

Printed: 2/8/2023 12:28:16PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0109-ICV1	QC		1		L000862	L000844		
SLB0109-ICV2	QC		2		L000856	L000844		
23A0180-06	8082A PCB Solid 4	A 01	3			L000844	Anchor QEA, LLC	
SLB0109-CCV1	QC		4		L000861	L000844		
SLB0109-CCV2	QC		5		L000856	L000844		
BLA0625-BLK1	QC		6			L000844		
BLA0625-BS1	QC		7			L000844		
BLA0625-BSD1	QC		8			L000844		
BLA0625-SRM1	QC		9			L000844		
23A0206-01	8082A PCB Solid 4	B 03	10			L000844	Anchor QEA, LLC	
23A0206-02	8082A PCB Solid 4	B 03	11			L000844	Anchor QEA, LLC	
23A0206-03	8082A PCB Solid 4	B 03	12			L000844	Anchor QEA, LLC	
23A0206-04	8082A PCB Solid 4	B 03	13			L000844	Anchor QEA, LLC	
23A0206-05	8082A PCB Solid 4	B 03	14			L000844	Anchor QEA, LLC	
23A0206-06	8082A PCB Solid 4	B 03	15			L000844	Anchor QEA, LLC	
23A0206-07	8082A PCB Solid 4	B 03	16			L000844	Anchor QEA, LLC	
BLA0625-MS1	QC		17			L000844		
BLA0625-MSD1	QC		18			L000844		
SLB0109-CCV3	QC		19		L000860	L000844		
SLB0109-CCV4	QC		20		L000856	L000844		
SLB0109-CCV5	QC		21		L000862	L000844		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**ANALYSIS SEQUENCE**

**SLB0109**

Instrument: ECD7  
Calibration ID: GA00061

**Printed: 2/8/2023 12:28:16PM**

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0109-CCV6	QC		22		L000856	L000844		
BLA0555-BLK1	QC		23			L000844		
BLA0555-BS1	QC		24			L000844		
BLA0555-BSD1	QC		25			L000844		
BLA0555-SRM1	QC		26			L000844		
SLB0109-CCV7	QC		27		L000861	L000844		
SLB0109-CCV8	QC		28		L000856	L000844		
23A0158-11	8082A PCB Solid 4	A 03	29			L000844	Anchor QEA, LLC	
23A0158-12	8082A PCB Solid 4	A 03	30			L000844	Anchor QEA, LLC	
23A0158-13	8082A PCB Solid 4	A 03	31			L000844	Anchor QEA, LLC	
23A0158-14	8082A PCB Solid 4	A 03	32			L000844	Anchor QEA, LLC	
23A0158-15	8082A PCB Solid 4	A 03	33			L000844	Anchor QEA, LLC	
23A0158-16	8082A PCB Solid 4	A 03	34			L000844	Anchor QEA, LLC	
23A0198-01	8082A PCB Solid 4	A 01	35			L000844	Washington State Dept of Ecology	
SLB0109-CCV9	QC		36		L000860	L000844		
SLB0109-CCVA	QC		37		L000856	L000844		

\_\_\_\_\_  
Samples Loaded By Date

\_\_\_\_\_  
Data Processed By Date

## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	07-FEB-2023	12:41	02072301ECD7.D	1	DDTS	
2	07-FEB-2023	13:02	02072302ECD7.D	1	AR1254ICV1	
3	07-FEB-2023	13:23	02072303ECD7.D	1	AR1660ICV2	
4	07-FEB-2023	13:44	02072304ECD7.D	5	23A0180-06RE1	
5	07-FEB-2023	14:05	02072305ECD7.D	1	AR1248CCV1	
6	07-FEB-2023	14:26	02072306ECD7.D	1	AR1660CCV2	
7	07-FEB-2023	14:47	02072307ECD7.D	1	BLB0625-BLK1	
8	07-FEB-2023	15:08	02072308ECD7.D	1	BLB0625-BS1	
9	07-FEB-2023	15:29	02072309ECD7.D	1	BLB0625-BSD1	
10	07-FEB-2023	15:50	02072310ECD7.D	1	BLB0625-SRM1	
11	07-FEB-2023	16:11	02072311ECD7.D	1	23A0206-01	
12	07-FEB-2023	16:32	02072312ECD7.D	1	23A0206-02	
13	07-FEB-2023	16:53	02072313ECD7.D	1	23A0206-03	
14	07-FEB-2023	17:14	02072314ECD7.D	1	23A0206-04	
15	07-FEB-2023	17:35	02072315ECD7.D	1	23A0206-05	
16	07-FEB-2023	17:57	02072316ECD7.D	1	23A0206-06	
17	07-FEB-2023	18:18	02072317ECD7.D	1	23A0206-07	
18	07-FEB-2023	18:39	02072318ECD7.D	1	BLB0625-MS1	
19	07-FEB-2023	19:00	02072319ECD7.D	1	BLB0625-MSD1	
20	07-FEB-2023	19:21	02072320ECD7.D	1	AR1242CCV3	
21	07-FEB-2023	19:42	02072321ECD7.D	1	AR1660CCV4	
22	07-FEB-2023	20:03	02072322ECD7.D	1	23A0206-08	
23	07-FEB-2023	20:24	02072323ECD7.D	1	23A0206-09	
24	07-FEB-2023	20:45	02072324ECD7.D	1	23A0206-10	
25	07-FEB-2023	21:06	02072325ECD7.D	1	23A0206-11	
26	07-FEB-2023	21:27	02072326ECD7.D	1	23A0206-12	
27	07-FEB-2023	21:48	02072327ECD7.D	1	23A0206-13	
28	07-FEB-2023	22:09	02072328ECD7.D	1	23A0206-14	
29	07-FEB-2023	22:30	02072329ECD7.D	1	AR1254CCV5	
30	07-FEB-2023	22:51	02072330ECD7.D	1	AR1660CCV6	
31	07-FEB-2023	23:12	02072331ECD7.D	1	BLA0555-BLK1	
32	07-FEB-2023	23:33	02072332ECD7.D	1	BLA0555-BS1	
33	07-FEB-2023	23:54	02072333ECD7.D	1	BLA0555-BSD1	
34	08-FEB-2023	00:15	02072334ECD7.D	1	BLA0555-SRM1	
35	08-FEB-2023	00:36	02072335ECD7.D	1	23A0158-01	
36	08-FEB-2023	00:57	02072336ECD7.D	1	23A0158-02	
37	08-FEB-2023	01:18	02072337ECD7.D	1	23A0158-03	
38	08-FEB-2023	01:39	02072338ECD7.D	1	23A0158-04	
39	08-FEB-2023	02:00	02072339ECD7.D	1	23A0158-05	
40	08-FEB-2023	02:21	02072340ECD7.D	1	23A0158-06	
41	08-FEB-2023	02:42	02072341ECD7.D	1	23A0158-07	
42	08-FEB-2023	03:03	02072342ECD7.D	1	23A0158-08	
43	08-FEB-2023	03:24	02072343ECD7.D	1	BLA0555-MS1	
44	08-FEB-2023	03:45	02072344ECD7.D	1	BLA0555-MSD1	
45	08-FEB-2023	04:06	02072345ECD7.D	1	23A0158-09	
46	08-FEB-2023	04:27	02072346ECD7.D	1	AR1248CCV7	
47	08-FEB-2023	04:48	02072347ECD7.D	1	AR1660CCV8	
48	08-FEB-2023	05:09	02072348ECD7.D	1	23A0158-10	
49	08-FEB-2023	05:30	02072349ECD7.D	1	23A0158-11	
50	08-FEB-2023	05:51	02072350ECD7.D	1	23A0158-12	

	Inject	Date/Time	Filename	DF	LabID	ClientID
51	08-FEB-2023	06:12	02072351ECD7.D	1	23A0158-13	
52	08-FEB-2023	06:33	02072352ECD7.D	1	23A0158-14	
53	08-FEB-2023	06:54	02072353ECD7.D	1	23A0158-15	
54	08-FEB-2023	07:15	02072354ECD7.D	1	23A0158-16	
55	08-FEB-2023	07:36	02072355ECD7.D	1	23A0196-01	
56	08-FEB-2023	07:57	02072356ECD7.D	5	23A0196-01RE1	
57	08-FEB-2023	08:18	02072357ECD7.D	1	AR1242CCV9	



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 07-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1241	02072301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1302	02072302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1323	02072303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1344	02072304ECD7.D	23A0180-06RE1		5	NO MANUAL INTEGRATION
1405	02072305ECD7.D	AR1248CCV1		1	Aroclor-1248,
1426	02072306ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1447	02072307ECD7.D	BLB0625-BLK1		1	NO MANUAL INTEGRATION
1508	02072308ECD7.D	BLB0625-BS1		1	NO MANUAL INTEGRATION
1529	02072309ECD7.D	BLB0625-BSD1		1	NO MANUAL INTEGRATION
1550	02072310ECD7.D	BLB0625-SRM1		1	NO MANUAL INTEGRATION
1611	02072311ECD7.D	23A0206-01		1	NO MANUAL INTEGRATION
1632	02072312ECD7.D	23A0206-02		1	Aroclor-1254,
1653	02072313ECD7.D	23A0206-03		1	Aroclor-1254,
1714	02072314ECD7.D	23A0206-04		1	Aroclor-1254,
1735	02072315ECD7.D	23A0206-05		1	Aroclor-1254,
1757	02072316ECD7.D	23A0206-06		1	Aroclor-1254,
1818	02072317ECD7.D	23A0206-07		1	Aroclor-1254,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1839	02072318ECD7.D	BLB0625-MS1		1	NO MANUAL INTEGRATION
1900	02072319ECD7.D	BLB0625-MSD1		1	NO MANUAL INTEGRATION
1921	02072320ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1942	02072321ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
2003	02072322ECD7.D	23A0206-08		1	NO MANUAL INTEGRATION
2024	02072323ECD7.D	23A0206-09		1	NO MANUAL INTEGRATION
2045	02072324ECD7.D	23A0206-10		1	NO MANUAL INTEGRATION
2106	02072325ECD7.D	23A0206-11		1	NO MANUAL INTEGRATION
2127	02072326ECD7.D	23A0206-12		1	NO MANUAL INTEGRATION
2148	02072327ECD7.D	23A0206-13		1	NO MANUAL INTEGRATION
2209	02072328ECD7.D	23A0206-14		1	NO MANUAL INTEGRATION
2230	02072329ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2251	02072330ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2312	02072331ECD7.D	BLA0555-BLK1		1	NO MANUAL INTEGRATION
2333	02072332ECD7.D	BLA0555-BS1		1	NO MANUAL INTEGRATION
2354	02072333ECD7.D	BLA0555-BSD1		1	NO MANUAL INTEGRATION
0015	02072334ECD7.D	BLA0555-SRM1		1	NO MANUAL INTEGRATION
0036	02072335ECD7.D	23A0158-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0057	02072336ECD7.D	23A0158-02		1	NO MANUAL INTEGRATION
0118	02072337ECD7.D	23A0158-03		1	NO MANUAL INTEGRATION
0139	02072338ECD7.D	23A0158-04		1	NO MANUAL INTEGRATION
0200	02072339ECD7.D	23A0158-05		1	NO MANUAL INTEGRATION
0221	02072340ECD7.D	23A0158-06		1	NO MANUAL INTEGRATION
0242	02072341ECD7.D	23A0158-07		1	NO MANUAL INTEGRATION
0303	02072342ECD7.D	23A0158-08		1	NO MANUAL INTEGRATION
0324	02072343ECD7.D	BLA0555-MS1		1	NO MANUAL INTEGRATION
0345	02072344ECD7.D	BLA0555-MSD1		1	NO MANUAL INTEGRATION
0406	02072345ECD7.D	23A0158-09		1	NO MANUAL INTEGRATION
0427	02072346ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0448	02072347ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0509	02072348ECD7.D	23A0158-10		1	NO MANUAL INTEGRATION
0530	02072349ECD7.D	23A0158-11		1	Aroclor-1254, Aroclor-1260,
0551	02072350ECD7.D	23A0158-12		1	Aroclor-1260,
0612	02072351ECD7.D	23A0158-13		1	Aroclor-1254, Aroclor-1260,
0633	02072352ECD7.D	23A0158-14		1	Aroclor-1254,
0654	02072353ECD7.D	23A0158-15		1	Aroclor-1254, Aroclor-1260,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0715	02072354ECD7.D	23A0158-16		1	NO MANUAL INTEGRATION
0736	02072355ECD7.D	23A0196-01		1	Aroclor-1254, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,
0757	02072356ECD7.D	23A0196-01RE1		5	NO MANUAL INTEGRATION
0818	02072357ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
0839	02072358ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1241	02072301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1302	02072302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1323	02072303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1344	02072304ECD7.D	23A0180-06RE1		5	Aroclor-1248 [2C],
1405	02072305ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1426	02072306ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1447	02072307ECD7.D	BLB0625-BLK1		1	NO MANUAL INTEGRATION
1508	02072308ECD7.D	BLB0625-BS1		1	NO MANUAL INTEGRATION
1529	02072309ECD7.D	BLB0625-BSD1		1	NO MANUAL INTEGRATION
1550	02072310ECD7.D	BLB0625-SRM1		1	NO MANUAL INTEGRATION
1611	02072311ECD7.D	23A0206-01		1	Aroclor-1248 [2C],
1632	02072312ECD7.D	23A0206-02		1	Aroclor-1248 [2C],
1653	02072313ECD7.D	23A0206-03		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1714	02072314ECD7.D	23A0206-04		1	Aroclor-1248 [2C],
1735	02072315ECD7.D	23A0206-05		1	Aroclor-1248 [2C],
1757	02072316ECD7.D	23A0206-06		1	Aroclor-1248 [2C],
1818	02072317ECD7.D	23A0206-07		1	Aroclor-1248 [2C],
1839	02072318ECD7.D	BLB0625-MS1		1	NO MANUAL INTEGRATION
1900	02072319ECD7.D	BLB0625-MSD1		1	NO MANUAL INTEGRATION
1921	02072320ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1942	02072321ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
2003	02072322ECD7.D	23A0206-08		1	NO MANUAL INTEGRATION
2024	02072323ECD7.D	23A0206-09		1	NO MANUAL INTEGRATION
2045	02072324ECD7.D	23A0206-10		1	NO MANUAL INTEGRATION
2106	02072325ECD7.D	23A0206-11		1	NO MANUAL INTEGRATION
2127	02072326ECD7.D	23A0206-12		1	NO MANUAL INTEGRATION
2148	02072327ECD7.D	23A0206-13		1	NO MANUAL INTEGRATION
2209	02072328ECD7.D	23A0206-14		1	NO MANUAL INTEGRATION
2230	02072329ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
2251	02072330ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
2312	02072331ECD7.D	BLA0555-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2333	02072332ECD7.D	BLA0555-BS1		1	NO MANUAL INTEGRATION
2354	02072333ECD7.D	BLA0555-BSD1		1	NO MANUAL INTEGRATION
0015	02072334ECD7.D	BLA0555-SRM1		1	NO MANUAL INTEGRATION
0036	02072335ECD7.D	23A0158-01		1	NO MANUAL INTEGRATION
0057	02072336ECD7.D	23A0158-02		1	NO MANUAL INTEGRATION
0118	02072337ECD7.D	23A0158-03		1	NO MANUAL INTEGRATION
0139	02072338ECD7.D	23A0158-04		1	NO MANUAL INTEGRATION
0200	02072339ECD7.D	23A0158-05		1	NO MANUAL INTEGRATION
0221	02072340ECD7.D	23A0158-06		1	NO MANUAL INTEGRATION
0242	02072341ECD7.D	23A0158-07		1	NO MANUAL INTEGRATION
0303	02072342ECD7.D	23A0158-08		1	NO MANUAL INTEGRATION
0324	02072343ECD7.D	BLA0555-MS1		1	NO MANUAL INTEGRATION
0345	02072344ECD7.D	BLA0555-MSD1		1	NO MANUAL INTEGRATION
0406	02072345ECD7.D	23A0158-09		1	NO MANUAL INTEGRATION
0427	02072346ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0448	02072347ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0509	02072348ECD7.D	23A0158-10		1	NO MANUAL INTEGRATION
0530	02072349ECD7.D	23A0158-11		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230207.b\230207.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	02072350ECD7.D	23A0158-12		1	Aroclor-1248 [2C],
0612	02072351ECD7.D	23A0158-13		1	Aroclor-1248 [2C],
0633	02072352ECD7.D	23A0158-14		1	Aroclor-1248 [2C],
0654	02072353ECD7.D	23A0158-15		1	Aroclor-1248 [2C],
0715	02072354ECD7.D	23A0158-16		1	NO MANUAL INTEGRATION
0736	02072355ECD7.D	23A0196-01		1	NO MANUAL INTEGRATION
0757	02072356ECD7.D	23A0196-01RE1		5	NO MANUAL INTEGRATION
0818	02072357ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
0839	02072358ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION

Security Status Report

Date: 08-Feb-2023 12:17

02072301ECD7.D	Data Locked	richardl, 08-Feb-2023 12:16
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02072332ECD7.D	Data Locked	richardl, 08-Feb-2023 12:16
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02072356ECD7.D	Data Locked	richardl, 08-Feb-2023 12:16
02072357ECD7.D	Data Locked	richardl, 08-Feb-2023 12:16
02072358ECD7.D	Data Locked	richardl, 08-Feb-2023 12:16



**Dual Column**  
**ANALYSIS BATCH (SEQUENCE) SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0127

Instrument: ECD7

Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0127-ICV1	02082307ECD7.D	02082307ECD7.D	NA	02/08/23 11:44
Initial Cal Check	SLB0127-ICV2	02082308ECD7.D	02082308ECD7.D	NA	02/08/23 12:05
LDW23-SS1117	23A0206-08	02082309ECD7.D	02082309ECD7.D	Solid	02/08/23 12:26
LDW23-SS1103	23A0206-09	02082310ECD7.D	02082310ECD7.D	Solid	02/08/23 12:47
LDW23-SS1100	23A0206-10	02082311ECD7.D	02082311ECD7.D	Solid	02/08/23 13:08
LDW23-SS1096	23A0206-11	02082312ECD7.D	02082312ECD7.D	Solid	02/08/23 13:29
LDW23-SS1094	23A0206-12	02082313ECD7.D	02082313ECD7.D	Solid	02/08/23 13:50
LDW23-SS1061	23A0206-14	02082315ECD7.D	02082315ECD7.D	Solid	02/08/23 14:32
Calibration Check	SLB0127-CCV1	02082316ECD7.D	02082316ECD7.D	NA	02/08/23 14:53
Calibration Check	SLB0127-CCV2	02082317ECD7.D	02082317ECD7.D	NA	02/08/23 15:14
Calibration Check	SLB0127-CCV3	02082330ECD7.D	02082330ECD7.D	NA	02/08/23 19:47
Calibration Check	SLB0127-CCV4	02082331ECD7.D	02082331ECD7.D	NA	02/08/23 20:08
Calibration Check	SLB0127-CCV5	02082348ECD7.D	02082348ECD7.D	NA	02/09/23 02:04
Calibration Check	SLB0127-CCV6	02082349ECD7.D	02082349ECD7.D	NA	02/09/23 02:26



**Dual Column**

**ANALYSIS BATCH (SEQUENCE) SUMMARY**

**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0148

Instrument: ECD7

Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0148-ICV1	02092306ECD7.D	02092306ECD7.D	NA	02/09/23 13:59
Initial Cal Check	SLB0148-ICV2	02092307ECD7.D	02092307ECD7.D	NA	02/09/23 14:20
LDW23-SS1066	23A0206-13	02092308ECD7.D	02092308ECD7.D	Solid	02/09/23 14:41
Calibration Check	SLB0148-CCV1	02092317ECD7.D	02092317ECD7.D	NA	02/09/23 17:51
Calibration Check	SLB0148-CCV2	02092318ECD7.D	02092318ECD7.D	NA	02/09/23 18:12
Calibration Check	SLB0148-CCV3	02092333ECD7.D	02092333ECD7.D	NA	02/09/23 23:27
Calibration Check	SLB0148-CCV4	02092334ECD7.D	02092334ECD7.D	NA	02/09/23 23:48
Calibration Check	SLB0148-CCV5	02092339ECD7.D	02092339ECD7.D	NA	02/10/23 01:34
Calibration Check	SLB0148-CCV6	02092340ECD7.D	02092340ECD7.D	NA	02/10/23 01:55
Calibration Check	SLB0148-CCV7	02092357ECD7.D	02092357ECD7.D	NA	02/10/23 07:52
Calibration Check	SLB0148-CCV8	02092358ECD7.D	02092358ECD7.D	NA	02/10/23 08:13
Calibration Check	SLB0148-CCV9	02092369ECD7.D	02092369ECD7.D	NA	02/10/23 12:04
Calibration Check	SLB0148-CCVA	02092370ECD7.D	02092370ECD7.D	NA	02/10/23 12:25
Calibration Check	SLB0148-CCVB	02092381ECD7.D	02092381ECD7.D	NA	02/10/23 16:17
Calibration Check	SLB0148-CCVC	02092382ECD7.D	02092382ECD7.D	NA	02/10/23 16:38
Calibration Check	SLB0148-CCVD	02092385ECD7.D	02092385ECD7.D	NA	02/10/23 17:41
Calibration Check	SLB0148-CCVE	02092386ECD7.D	02092386ECD7.D	NA	02/10/23 18:02



**ANALYSIS SEQUENCE**

**SLB0148**

Instrument: ECD7  
Calibration ID: FL00010

**Printed: 2/10/2023 5:27:44PM**

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0148-ICV1	QC		1		L000862	L000844		
SLB0148-ICV2	QC		2		L000856	L000844		
23A0206-13	8082A PCB Solid 4	B 03	3			L000844	Anchor QEA, LLC	
23A0207-10	8082A PCB Solid 4	A 01	4			L000844	Anchor QEA, LLC	
23A0207-11	8082A PCB Solid 4	A 01	5			L000844	Anchor QEA, LLC	
23A0207-12	8082A PCB Solid 4	A 01	6			L000844	Anchor QEA, LLC	
23A0207-13	8082A PCB Solid 4	A 01	7			L000844	Anchor QEA, LLC	
23A0207-14	8082A PCB Solid 4	A 01	8			L000844	Anchor QEA, LLC	
23A0207-15	8082A PCB Solid 4	A 01	9			L000844	Anchor QEA, LLC	
23A0207-16	8082A PCB Solid 4	A 01	10			L000844	Anchor QEA, LLC	
23A0207-17	8082A PCB Solid 4	A 01	11			L000844	Anchor QEA, LLC	
SLB0148-CCV1	QC		12		L000861	L000844		
SLB0148-CCV2	QC		13		L000856	L000844		
BLB0100-BLK1	QC		14			L000844		
BLB0100-BS1	QC		15			L000844		
23B0067-02	8082A PCB	A 01	16			L000844	The Boeing Company [Auburn]	
23B0067-03	8082A PCB	A 01	17			L000844	The Boeing Company [Auburn]	
BLB0090-BLK1	QC		18			L000844		
BLB0090-BS1	QC		19			L000844		
23B0067-01	082A PCB Medium Level Oil	A 01	20			L000844	The Boeing Company [Auburn]	
23B0069-01	082A PCB Medium Level Oil	A 01	21			L000844	The Boeing Company [Auburn]	RL must be at or below 1 PPM

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**ANALYSIS SEQUENCE**

**SLB0148**

Instrument: ECD7  
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLB0126-BLK1	QC		22			L000844		
BLB0126-BS1	QC		23			L000844		
BLB0126-BSD1	QC		24			L000844		
23B0044-01	PCB (20 ug/kg) or (MTCA 0.	D 01	25			L000844	The Boeing Company [NBF - Central Puget S	
23B0096-01	PCB (20 ug/kg) or (MTCA 0.	A 01	26			L000844	The Boeing Company [NBF - Central Puget S	
SLB0148-CCV3	QC		27		L000860	L000844		
SLB0148-CCV4	QC		28		L000856	L000844		
BLB0188-BLK1	QC		29			L000844		
BLB0188-BS1	QC		30			L000844		
23B0112-01	082A PCB Medium Level Oil	A 01	31			L000844	Seattle Public Utilities [Solid Waste Field Op]	See Version Comment
SLB0148-CCV5	QC		32		L000862	L000844		
SLB0148-CCV6	QC		33		L000856	L000844		
BLA0674-BLK1	QC		34			L000844		
BLA0674-BS1	QC		35			L000844		
BLA0674-BSD1	QC		36			L000844		
BLA0674-SRM1	QC		37			L000844		
23A0249-02	8082A PCB Solid 4	A 03	38			L000844	Anchor QEA, LLC	
23A0249-03	8082A PCB Solid 4	A 03	39			L000844	Anchor QEA, LLC	
23A0249-04	8082A PCB Solid 4	A 03	40			L000844	Anchor QEA, LLC	
23A0249-06	8082A PCB Solid 4	A 03	41			L000844	Anchor QEA, LLC	
23A0249-07	8082A PCB Solid 4	A 03	42			L000844	Anchor QEA, LLC	

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**ANALYSIS SEQUENCE**

**SLB0148**

Instrument: ECD7  
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLA0674-MS1	QC		43			L000844		
BLA0674-MSD1	QC		44			L000844		
23A0249-11	8082A PCB Solid 4	A 03	45			L000844	Anchor QEA, LLC	
SLB0148-CCV7	QC		46		L000861	L000844		
SLB0148-CCV8	QC		47		L000856	L000844		
23A0295-03	8082A PCB Solid 4	A 03	48			L000844	Anchor QEA, LLC	
23A0295-07	8082A PCB Solid 4	A 03	49			L000844	Anchor QEA, LLC	
23A0295-08	8082A PCB Solid 4	A 03	50			L000844	Anchor QEA, LLC	
23A0295-09	8082A PCB Solid 4	A 03	51			L000844	Anchor QEA, LLC	
23A0295-10	8082A PCB Solid 4	A 03	52			L000844	Anchor QEA, LLC	
SLB0148-CCV9	QC		53		L000860	L000844		
SLB0148-CCVA	QC		54		L000856	L000844		
23B0064-01	8082A PCB Medium Level Oil	A 01	55			L000844	Seattle Public Utilities [Solid Waste Field Op]	See Version Comment
23A0249-05	8082A PCB Solid 4	A 03	56			L000844	Anchor QEA, LLC	
23A0249-08	8082A PCB Solid 4	A 03	57			L000844	Anchor QEA, LLC	
23A0249-09	8082A PCB Solid 4	A 03	58			L000844	Anchor QEA, LLC	
23A0249-10	8082A PCB Solid 4	A 03	59			L000844	Anchor QEA, LLC	
23A0295-04	8082A PCB Solid 4	A 03	60			L000844	Anchor QEA, LLC	
23A0295-05	8082A PCB Solid 4	A 03	61			L000844	Anchor QEA, LLC	
23A0295-06	8082A PCB Solid 4	A 03	62			L000844	Anchor QEA, LLC	
SLB0148-CCVB	QC		63		L000862	L000844		

Samples Loaded By \_\_\_\_\_ Date \_\_\_\_\_

Data Processed By \_\_\_\_\_ Date \_\_\_\_\_



**ANALYSIS SEQUENCE**

**SLB0148**

Instrument: ECD7  
Calibration ID: FL00010

**Printed: 2/10/2023 5:27:44PM**

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0148-CCVC	QC		64		L000856	L000844		
23A0295-01	8082A PCB Solid 4	A 03	65			L000844	Anchor QEA, LLC	
23A0295-02	8082A PCB Solid 4	A 03	66			L000844	Anchor QEA, LLC	
SLB0148-CCVD	QC		67		L000861	L000844		
SLB0148-CCVE	QC		68		L000856	L000844		

\_\_\_\_\_  
Samples Loaded By    Date

\_\_\_\_\_  
Data Processed By    Date

## GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

	Inject	Date/Time	Filename	DF	LabID	ClientID
1	09-FEB-2023	11:58	02092301ECD7.D	1	DCM RINSE	
2	09-FEB-2023	12:19	02092302ECD7.D	1	AR1254TEST	
3	09-FEB-2023	12:40	02092303ECD7.D	1	AR1248TEST	
4	09-FEB-2023	13:01	02092304ECD7.D	1	AR1242TEST	
5	09-FEB-2023	13:38	02092305ECD7.D	1	DDTS	
6	09-FEB-2023	13:59	02092306ECD7.D	1	AR1254ICV1	
7	09-FEB-2023	14:20	02092307ECD7.D	1	AR1660ICV2	
8	09-FEB-2023	14:41	02092308ECD7.D	50	23A0206-13RE3	
9	09-FEB-2023	15:02	02092309ECD7.D	1	23A0207-10	
10	09-FEB-2023	15:23	02092310ECD7.D	1	23A0207-11	
11	09-FEB-2023	15:44	02092311ECD7.D	1	23A0207-12	
12	09-FEB-2023	16:05	02092312ECD7.D	1	23A0207-13	
13	09-FEB-2023	16:27	02092313ECD7.D	1	23A0207-14	
14	09-FEB-2023	16:48	02092314ECD7.D	1	23A0207-15	
15	09-FEB-2023	17:09	02092315ECD7.D	1	23A0207-16	
16	09-FEB-2023	17:30	02092316ECD7.D	5	23A0207-17RE1	
17	09-FEB-2023	17:51	02092317ECD7.D	1	AR1248CCV1	
18	09-FEB-2023	18:12	02092318ECD7.D	1	AR1660CCV2	
19	09-FEB-2023	18:33	02092319ECD7.D	1	BLB0100-BLK1	
20	09-FEB-2023	18:54	02092320ECD7.D	1	BLB0100-BS1	
21	09-FEB-2023	19:15	02092321ECD7.D	1	23B0067-02	
22	09-FEB-2023	19:36	02092322ECD7.D	1	23B0067-03	
23	09-FEB-2023	19:57	02092323ECD7.D	1	BLB0090-BLK1	
24	09-FEB-2023	20:18	02092324ECD7.D	1	BLB0090-BS1	
25	09-FEB-2023	20:39	02092325ECD7.D	5	23B0064-01RE1	
26	09-FEB-2023	21:00	02092326ECD7.D	5	23B0067-01RE1	
27	09-FEB-2023	21:21	02092327ECD7.D	5	23B0069-01RE1	
28	09-FEB-2023	21:42	02092328ECD7.D	1	BLB0126-BLK1	
29	09-FEB-2023	22:03	02092329ECD7.D	1	BLB0126-BS1	
30	09-FEB-2023	22:24	02092330ECD7.D	1	BLB0126-BSD1	
31	09-FEB-2023	22:45	02092331ECD7.D	1	23B0044-01	
32	09-FEB-2023	23:06	02092332ECD7.D	1	23B0096-01	
33	09-FEB-2023	23:27	02092333ECD7.D	1	AR1242CCV3	
34	09-FEB-2023	23:48	02092334ECD7.D	1	AR1660CCV4	
35	10-FEB-2023	00:09	02092335ECD7.D	1	BLB0188-BLK1	
36	10-FEB-2023	00:31	02092336ECD7.D	1	BLB0188-BS1	
37	10-FEB-2023	00:52	02092337ECD7.D	1	23B0112-01	
38	10-FEB-2023	01:13	02092338ECD7.D	5	23B0112-01RE1	
39	10-FEB-2023	01:34	02092339ECD7.D	1	AR1254CCV5	
40	10-FEB-2023	01:55	02092340ECD7.D	1	AR1660CCV6	
41	10-FEB-2023	02:16	02092341ECD7.D	1	BLA0674-BLK1	
42	10-FEB-2023	02:37	02092342ECD7.D	1	BLA0674-BS1	
43	10-FEB-2023	02:58	02092343ECD7.D	1	BLA0674-BSD1	
44	10-FEB-2023	03:19	02092344ECD7.D	1	BLA0674-SRM1	
45	10-FEB-2023	03:40	02092345ECD7.D	1	23A0249-02	
46	10-FEB-2023	04:01	02092346ECD7.D	1	23A0249-03	
47	10-FEB-2023	04:22	02092347ECD7.D	1	23A0249-04	
48	10-FEB-2023	04:43	02092348ECD7.D	1	23A0249-05	
49	10-FEB-2023	05:04	02092349ECD7.D	1	23A0249-06	
50	10-FEB-2023	05:25	02092350ECD7.D	1	23A0249-07	



	Inject	Date/Time	Filename	DF	LabID	ClientID
51	10-FEB-2023	05:46	02092351ECD7.D	1	BLA0674-MS1	
52	10-FEB-2023	06:07	02092352ECD7.D	1	BLA0674-MSD1	
53	10-FEB-2023	06:28	02092353ECD7.D	1	23A0249-08	
54	10-FEB-2023	06:49	02092354ECD7.D	1	23A0249-09	
55	10-FEB-2023	07:10	02092355ECD7.D	1	23A0249-10	
56	10-FEB-2023	07:31	02092356ECD7.D	1	23A0249-11	
57	10-FEB-2023	07:52	02092357ECD7.D	1	AR1248CCV7	
58	10-FEB-2023	08:13	02092358ECD7.D	1	AR1660CCV8	
59	10-FEB-2023	08:34	02092359ECD7.D	1	23A0295-01	
60	10-FEB-2023	08:55	02092360ECD7.D	1	23A0295-02	
61	10-FEB-2023	09:16	02092361ECD7.D	1	23A0295-03	
62	10-FEB-2023	09:37	02092362ECD7.D	1	23A0295-04	
63	10-FEB-2023	09:58	02092363ECD7.D	1	23A0295-05	
64	10-FEB-2023	10:19	02092364ECD7.D	1	23A0295-06	
65	10-FEB-2023	10:40	02092365ECD7.D	1	23A0295-07	
66	10-FEB-2023	11:01	02092366ECD7.D	1	23A0295-08	
67	10-FEB-2023	11:22	02092367ECD7.D	1	23A0295-09	
68	10-FEB-2023	11:43	02092368ECD7.D	1	23A0295-10	
69	10-FEB-2023	12:04	02092369ECD7.D	1	AR1242CCV9	
70	10-FEB-2023	12:25	02092370ECD7.D	1	AR1660CCVA	
71	10-FEB-2023	12:46	02092371ECD7.D	1	23B0064-01	
72	10-FEB-2023	13:07	02092372ECD7.D	1	23A0249-05	
73	10-FEB-2023	13:29	02092373ECD7.D	1	23A0249-08	
74	10-FEB-2023	13:50	02092374ECD7.D	1	23A0249-09	
75	10-FEB-2023	14:11	02092375ECD7.D	1	23A0249-10	
76	10-FEB-2023	14:32	02092376ECD7.D	1	23A0295-01	
77	10-FEB-2023	14:53	02092377ECD7.D	1	23A0295-02	
78	10-FEB-2023	15:14	02092378ECD7.D	1	23A0295-04	
79	10-FEB-2023	15:35	02092379ECD7.D	1	23A0295-05	
80	10-FEB-2023	15:56	02092380ECD7.D	1	23A0295-06	
81	10-FEB-2023	16:17	02092381ECD7.D	1	AR1254CCVB	
82	10-FEB-2023	16:38	02092382ECD7.D	1	AR1660CCVC	
83	10-FEB-2023	16:59	02092383ECD7.D	5	23A0295-01RE1	
84	10-FEB-2023	17:20	02092384ECD7.D	5	23A0295-02RE1	
85	10-FEB-2023	17:41	02092385ECD7.D	1	AR1248CCVD	
86	10-FEB-2023	18:02	02092386ECD7.D	1	AR1660CCVE	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

ARI Job No.: DCM Method: PCB.m Instrument: ecd7.i Date: 09-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1158	02092301ECD7.D	DCM RINSE		1	NO MANUAL INTEGRATION
1219	02092302ECD7.D	AR1254TEST		1	NO MANUAL INTEGRATION
1240	02092303ECD7.D	AR1248TEST		1	NO MANUAL INTEGRATION
1301	02092304ECD7.D	AR1242TEST		1	NO MANUAL INTEGRATION
1338	02092305ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1359	02092306ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1420	02092307ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1441	02092308ECD7.D	23A0206-13RE3		50	Aroclor-1254,
1502	02092309ECD7.D	23A0207-10		1	Aroclor-1260,
1523	02092310ECD7.D	23A0207-11		1	Aroclor-1254,
1544	02092311ECD7.D	23A0207-12		1	Aroclor-1254,
1605	02092312ECD7.D	23A0207-13		1	Aroclor-1254,
1627	02092313ECD7.D	23A0207-14		1	Aroclor-1254,
1648	02092314ECD7.D	23A0207-15		1	Aroclor-1254,
1709	02092315ECD7.D	23A0207-16		1	NO MANUAL INTEGRATION
1730	02092316ECD7.D	23A0207-17RE1		5	NO MANUAL INTEGRATION
1751	02092317ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1812	02092318ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1833	02092319ECD7.D	BLB0100-BLK1		1	NO MANUAL INTEGRATION
1854	02092320ECD7.D	BLB0100-BS1		1	NO MANUAL INTEGRATION
1915	02092321ECD7.D	23B0067-02		1	NO MANUAL INTEGRATION
1936	02092322ECD7.D	23B0067-03		1	NO MANUAL INTEGRATION
1957	02092323ECD7.D	BLB0090-BLK1		1	NO MANUAL INTEGRATION
2018	02092324ECD7.D	BLB0090-BS1		1	NO MANUAL INTEGRATION
2039	02092325ECD7.D	23B0064-01RE1		5	NO MANUAL INTEGRATION
2100	02092326ECD7.D	23B0067-01RE1		5	IS-HBBP, Decachlorobiphenyl,
2121	02092327ECD7.D	23B0069-01RE1		5	NO MANUAL INTEGRATION
2142	02092328ECD7.D	BLB0126-BLK1		1	NO MANUAL INTEGRATION
2203	02092329ECD7.D	BLB0126-BS1		1	NO MANUAL INTEGRATION
2224	02092330ECD7.D	BLB0126-BS1		1	NO MANUAL INTEGRATION
2245	02092331ECD7.D	23B0044-01		1	NO MANUAL INTEGRATION
2306	02092332ECD7.D	23B0096-01		1	NO MANUAL INTEGRATION
2327	02092333ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
2348	02092334ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0009	02092335ECD7.D	BLB0188-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0031	02092336ECD7.D	BLB0188-BS1		1	NO MANUAL INTEGRATION
0052	02092337ECD7.D	23B0112-01		1	NO MANUAL INTEGRATION
0113	02092338ECD7.D	23B0112-01RE1		5	NO MANUAL INTEGRATION
0134	02092339ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0155	02092340ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0216	02092341ECD7.D	BLA0674-BLK1		1	NO MANUAL INTEGRATION
0237	02092342ECD7.D	BLA0674-BS1		1	NO MANUAL INTEGRATION
0258	02092343ECD7.D	BLA0674-BSD1		1	NO MANUAL INTEGRATION
0319	02092344ECD7.D	BLA0674-SRM1		1	NO MANUAL INTEGRATION
0340	02092345ECD7.D	23A0249-02		1	Aroclor-1254,
0401	02092346ECD7.D	23A0249-03		1	Aroclor-1248, Aroclor-1254, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,
0422	02092347ECD7.D	23A0249-04		1	NO MANUAL INTEGRATION
0443	02092348ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
0504	02092349ECD7.D	23A0249-06		1	NO MANUAL INTEGRATION
0525	02092350ECD7.D	23A0249-07		1	NO MANUAL INTEGRATION
0546	02092351ECD7.D	BLA0674-MS1		1	NO MANUAL INTEGRATION
0607	02092352ECD7.D	BLA0674-MSD1		1	NO MANUAL INTEGRATION
0628	02092353ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	02092354ECD7.D	23A0249-09		1	NO MANUAL INTEGRATION
0710	02092355ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
0731	02092356ECD7.D	23A0249-11		1	NO MANUAL INTEGRATION
0752	02092357ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0813	02092358ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0834	02092359ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
0855	02092360ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
0916	02092361ECD7.D	23A0295-03		1	NO MANUAL INTEGRATION
0937	02092362ECD7.D	23A0295-04		1	NO MANUAL INTEGRATION
0958	02092363ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1019	02092364ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1040	02092365ECD7.D	23A0295-07		1	NO MANUAL INTEGRATION
1101	02092366ECD7.D	23A0295-08		1	Aroclor-1254,
1122	02092367ECD7.D	23A0295-09		1	NO MANUAL INTEGRATION
1143	02092368ECD7.D	23A0295-10		1	Aroclor-1254, Aroclor-1260,
1204	02092369ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1225	02092370ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1246	02092371ECD7.D	23B0064-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1307	02092372ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
1329	02092373ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION
1350	02092374ECD7.D	23A0249-09		1	Aroclor-1254,
1411	02092375ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
1432	02092376ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
1453	02092377ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
1514	02092378ECD7.D	23A0295-04		1	Aroclor-1254,
1535	02092379ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1556	02092380ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1617	02092381ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION
1638	02092382ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION
1659	02092383ECD7.D	23A0295-01RE1		5	Aroclor-1254,
1720	02092384ECD7.D	23A0295-02RE1		5	Aroclor-1254, Aroclor-1260,
1741	02092385ECD7.D	AR1248CCVD		1	NO MANUAL INTEGRATION
1802	02092386ECD7.D	AR1660CCVE		1	NO MANUAL INTEGRATION
1158	02092301ECD7.D	DCM RINSE		1	NO MANUAL INTEGRATION
1219	02092302ECD7.D	AR1254TEST		1	NO MANUAL INTEGRATION
1240	02092303ECD7.D	AR1248TEST		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1301	02092304ECD7.D	AR1242TEST		1	NO MANUAL INTEGRATION
1338	02092305ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1359	02092306ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1420	02092307ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1441	02092308ECD7.D	23A0206-13RE3		50	NO MANUAL INTEGRATION
1502	02092309ECD7.D	23A0207-10		1	Aroclor-1248 [2C],
1523	02092310ECD7.D	23A0207-11		1	Aroclor-1248 [2C],
1544	02092311ECD7.D	23A0207-12		1	Aroclor-1248 [2C],
1605	02092312ECD7.D	23A0207-13		1	Aroclor-1248 [2C],
1627	02092313ECD7.D	23A0207-14		1	Aroclor-1248 [2C],
1648	02092314ECD7.D	23A0207-15		1	Aroclor-1248 [2C],
1709	02092315ECD7.D	23A0207-16		1	Aroclor-1248 [2C],
1730	02092316ECD7.D	23A0207-17RE1		5	Aroclor-1248 [2C], IS-HBBP [2C], Decachlorobiphenyl [2C],
1751	02092317ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1812	02092318ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1833	02092319ECD7.D	BLB0100-BLK1		1	NO MANUAL INTEGRATION
1854	02092320ECD7.D	BLB0100-BS1		1	NO MANUAL INTEGRATION
1915	02092321ECD7.D	23B0067-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1936	02092322ECD7.D	23B0067-03		1	NO MANUAL INTEGRATION
1957	02092323ECD7.D	BLB0090-BLK1		1	NO MANUAL INTEGRATION
2018	02092324ECD7.D	BLB0090-BS1		1	NO MANUAL INTEGRATION
2039	02092325ECD7.D	23B0064-01RE1		5	NO MANUAL INTEGRATION
2100	02092326ECD7.D	23B0067-01RE1		5	NO MANUAL INTEGRATION
2121	02092327ECD7.D	23B0069-01RE1		5	NO MANUAL INTEGRATION
2142	02092328ECD7.D	BLB0126-BLK1		1	NO MANUAL INTEGRATION
2203	02092329ECD7.D	BLB0126-BS1		1	NO MANUAL INTEGRATION
2224	02092330ECD7.D	BLB0126-BSD1		1	NO MANUAL INTEGRATION
2245	02092331ECD7.D	23B0044-01		1	NO MANUAL INTEGRATION
2306	02092332ECD7.D	23B0096-01		1	NO MANUAL INTEGRATION
2327	02092333ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
2348	02092334ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0009	02092335ECD7.D	BLB0188-BLK1		1	NO MANUAL INTEGRATION
0031	02092336ECD7.D	BLB0188-BS1		1	NO MANUAL INTEGRATION
0052	02092337ECD7.D	23B0112-01		1	NO MANUAL INTEGRATION
0113	02092338ECD7.D	23B0112-01RE1		5	NO MANUAL INTEGRATION
0134	02092339ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0155	02092340ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0216	02092341ECD7.D	BLA0674-BLK1		1	NO MANUAL INTEGRATION
0237	02092342ECD7.D	BLA0674-BS1		1	NO MANUAL INTEGRATION
0258	02092343ECD7.D	BLA0674-BSD1		1	NO MANUAL INTEGRATION
0319	02092344ECD7.D	BLA0674-SRM1		1	NO MANUAL INTEGRATION
0340	02092345ECD7.D	23A0249-02		1	Aroclor-1248 [2C],
0401	02092346ECD7.D	23A0249-03		1	Aroclor-1248 [2C],
0422	02092347ECD7.D	23A0249-04		1	Aroclor-1248 [2C],
0443	02092348ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
0504	02092349ECD7.D	23A0249-06		1	NO MANUAL INTEGRATION
0525	02092350ECD7.D	23A0249-07		1	Aroclor-1248 [2C],
0546	02092351ECD7.D	BLA0674-MS1		1	NO MANUAL INTEGRATION
0607	02092352ECD7.D	BLA0674-MSD1		1	NO MANUAL INTEGRATION
0628	02092353ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION
0649	02092354ECD7.D	23A0249-09		1	NO MANUAL INTEGRATION
0710	02092355ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
0731	02092356ECD7.D	23A0249-11		1	NO MANUAL INTEGRATION
0752	02092357ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0813	02092358ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0834	02092359ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
0855	02092360ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
0916	02092361ECD7.D	23A0295-03		1	Aroclor-1248 [2C],
0937	02092362ECD7.D	23A0295-04		1	NO MANUAL INTEGRATION
0958	02092363ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1019	02092364ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1040	02092365ECD7.D	23A0295-07		1	Aroclor-1248 [2C],
1101	02092366ECD7.D	23A0295-08		1	NO MANUAL INTEGRATION
1122	02092367ECD7.D	23A0295-09		1	Aroclor-1248 [2C],
1143	02092368ECD7.D	23A0295-10		1	NO MANUAL INTEGRATION
1204	02092369ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1225	02092370ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1246	02092371ECD7.D	23B0064-01		1	NO MANUAL INTEGRATION
1307	02092372ECD7.D	23A0249-05		1	Aroclor-1248 [2C],
1329	02092373ECD7.D	23A0249-08		1	Aroclor-1248 [2C],
1350	02092374ECD7.D	23A0249-09		1	Aroclor-1248 [2C],
1411	02092375ECD7.D	23A0249-10		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1432	02092376ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
1453	02092377ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
1514	02092378ECD7.D	23A0295-04		1	Aroclor-1248 [2C],
1535	02092379ECD7.D	23A0295-05		1	Aroclor-1248 [2C],
1556	02092380ECD7.D	23A0295-06		1	Aroclor-1248 [2C],
1617	02092381ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION
1638	02092382ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION
1659	02092383ECD7.D	23A0295-01RE1		5	Aroclor-1248 [2C],
1720	02092384ECD7.D	23A0295-02RE1		5	Aroclor-1248 [2C],
1741	02092385ECD7.D	AR1248CCVD		1	NO MANUAL INTEGRATION
1802	02092386ECD7.D	AR1660CCVE		1	NO MANUAL INTEGRATION
1823	02092387.D	AR1254		1	NO MANUAL INTEGRATION
1844	02092388.D	AR1660		1	NO MANUAL INTEGRATION
1905	02092389.D	AR1248		1	NO MANUAL INTEGRATION
1926	02092390.D	AR1660		1	NO MANUAL INTEGRATION
1947	02092391.D	AR1242		1	NO MANUAL INTEGRATION
2008	02092392.D	AR1660		1	NO MANUAL INTEGRATION

Security Status Report

Date: 13-Feb-2023 08:54

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**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLA0281  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLA0281-SCV1 (Solid)</b> Lab File ID: 01242324ECD7.D Analyzed: 01/24/23 19:51								
Decachlorobiphenyl	40.000	94.9	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	93.8	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	93.2	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLA0281-SCV2 (Solid)</b> Lab File ID: 01242325ECD7.D Analyzed: 01/24/23 20:12								
Decachlorobiphenyl	40.000	96.4	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	94.4	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	93.4	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLA0281-SCV3 (Solid)</b> Lab File ID: 01242326ECD7.D Analyzed: 01/24/23 20:33								
Decachlorobiphenyl	40.000	95.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	91.4	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLA0281-SCV4 (Solid)</b> Lab File ID: 01242327ECD7.D Analyzed: 01/24/23 20:54								
Decachlorobiphenyl	40.000	92.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.7	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLA0281-SCV5 (Solid)</b> Lab File ID: 01242328ECD7.D Analyzed: 01/24/23 21:15								
Decachlorobiphenyl	40.000	93.6	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	93.2	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.7	80 - 120	14.119	14.12017	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	92.9	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLA0281-SCV6 (Solid)</b> Lab File ID: 01242329ECD7.D Analyzed: 01/24/23 21:36								
Decachlorobiphenyl	40.000	137	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	90.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	145	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	90.8	80 - 120	5.686	5.685333	0.0007	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG/WO:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLB0109</u>	Instrument:	<u>ECD7</u>
Calibration:	<u>GA00061</u>	Calibration Date:	<u>01/24/2023</u>

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0109-ICV1 (Solid)</b> Lab File ID: 02072302ECD7.D Analyzed: 02/07/23 13:02								
Decachlorobiphenyl	40.000	102	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	94.3	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	100	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0109-ICV2 (Solid)</b> Lab File ID: 02072303ECD7.D Analyzed: 02/07/23 13:23								
Decachlorobiphenyl	40.000	94.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	99.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0109-CCV1 (Solid)</b> Lab File ID: 02072305ECD7.D Analyzed: 02/07/23 14:05								
Decachlorobiphenyl	40.000	88.8	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0109-CCV2 (Solid)</b> Lab File ID: 02072306ECD7.D Analyzed: 02/07/23 14:26								
Decachlorobiphenyl	40.000	93.5	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	98.8	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>BLA0625-BLK1 (Solid)</b> Lab File ID: 02072307ECD7.D Analyzed: 02/07/23 14:47								
Decachlorobiphenyl	8.0000	73.8	40 - 126	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	8.0000	81.9	44 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	8.0000	78.3	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	80.5	44 - 120	5.685	5.685333	-0.0003	N/A	
<b>BLA0625-BS1 (Solid)</b> Lab File ID: 02072308ECD7.D Analyzed: 02/07/23 15:08								
Decachlorobiphenyl	8.0000	74.1	40 - 126	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	8.0000	84.1	44 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	8.0000	81.2	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	79.9	44 - 120	5.685	5.685333	-0.0003	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0109  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>BLA0625-BSD1 (Solid)</b> Lab File ID: 02072309ECD7.D Analyzed: 02/07/23 15:29								
Decachlorobiphenyl	8.0000	74.6	40 - 126	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	8.0000	84.2	44 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	8.0000	80.8	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	80.4	44 - 120	5.685	5.685333	-0.0003	N/A	
<b>BLA0625-SRM1 (Solid)</b> Lab File ID: 02072310ECD7.D Analyzed: 02/07/23 15:50								
Decachlorobiphenyl	40.000	70.1	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	40.000	75.1	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	67.9	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	40.000	79.9	44 - 120	5.684	5.685333	-0.0013	N/A	
<b>23A0206-01 (Solid)</b> Lab File ID: 02072311ECD7.D Analyzed: 02/07/23 16:11								
Decachlorobiphenyl	7.9888	71.9	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9888	68.3	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9888	69.7	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9888	72.4	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-02 (Solid)</b> Lab File ID: 02072312ECD7.D Analyzed: 02/07/23 16:32								
Decachlorobiphenyl	7.9891	71.8	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9891	66.5	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9891	70.9	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9891	71.2	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-03 (Solid)</b> Lab File ID: 02072313ECD7.D Analyzed: 02/07/23 16:53								
Decachlorobiphenyl	7.9903	73.4	40 - 126	13.882	13.892	-0.0100	N/A	
Tetrachlorometaxylene	7.9903	68.8	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9903	72.4	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9903	77.2	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-04 (Solid)</b> Lab File ID: 02072314ECD7.D Analyzed: 02/07/23 17:14								
Decachlorobiphenyl	7.9919	72.3	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9919	67.8	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9919	71.5	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9919	72.8	44 - 120	5.682	5.685333	-0.0033	N/A	





**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0109  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-05 (Solid)</b> Lab File ID: 02072315ECD7.D Analyzed: 02/07/23 17:35								
Decachlorobiphenyl	7.9870	74.0	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9870	68.7	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9870	72.2	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9870	75.7	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-06 (Solid)</b> Lab File ID: 02072316ECD7.D Analyzed: 02/07/23 17:57								
Decachlorobiphenyl	7.9969	71.2	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9969	64.8	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9969	70.6	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9969	72.4	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-07 (Solid)</b> Lab File ID: 02072317ECD7.D Analyzed: 02/07/23 18:18								
Decachlorobiphenyl	7.9940	69.5	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9940	67.6	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9940	68.1	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9940	74.3	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>BLA0625-MS1 (Solid)</b> Lab File ID: 02072318ECD7.D Analyzed: 02/07/23 18:39								
Decachlorobiphenyl	8.0017	73.1	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	8.0017	68.6	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0017	72.5	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0017	74.8	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>BLA0625-MSD1 (Solid)</b> Lab File ID: 02072319ECD7.D Analyzed: 02/07/23 19:00								
Decachlorobiphenyl	8.0017	73.4	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	8.0017	68.1	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0017	71.3	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	8.0017	75.2	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>SLB0109-CCV3 (Solid)</b> Lab File ID: 02072320ECD7.D Analyzed: 02/07/23 19:21								
Decachlorobiphenyl	40.000	89.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	127	80 - 120	5.808	5.808667	-0.0007	N/A	*
Decachlorobiphenyl [2C]	40.000	94.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	127	80 - 120	5.685	5.685333	-0.0003	N/A	*



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0109  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0109-CCV4 (Solid)</b> Lab File ID: 02072321ECD7.D Analyzed: 02/07/23 19:42								
Decachlorobiphenyl	40.000	97.5	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	99.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0109-CCV5 (Solid)</b> Lab File ID: 02072329ECD7.D Analyzed: 02/07/23 22:30								
Decachlorobiphenyl	40.000	86.3	80 - 120	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	40.000	98.3	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	93.0	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	100	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0109-CCV6 (Solid)</b> Lab File ID: 02072330ECD7.D Analyzed: 02/07/23 22:51								
Decachlorobiphenyl	40.000	96.8	80 - 120	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	40.000	108	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	98.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0109-CCV7 (Solid)</b> Lab File ID: 02072346ECD7.D Analyzed: 02/08/23 04:27								
Decachlorobiphenyl	40.000	88.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	99.5	80 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	91.0	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	102	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0109-CCV8 (Solid)</b> Lab File ID: 02072347ECD7.D Analyzed: 02/08/23 04:48								
Decachlorobiphenyl	40.000	95.5	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.686	5.685333	0.0007	N/A	
<b>SLB0109-CCV9 (Solid)</b> Lab File ID: 02072357ECD7.D Analyzed: 02/08/23 08:18								
Decachlorobiphenyl	40.000	93.3	80 - 120	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	40.000	123	80 - 120	5.808	5.808667	-0.0007	N/A	*
Decachlorobiphenyl [2C]	40.000	94.8	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	124	80 - 120	5.685	5.685333	-0.0003	N/A	*





**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0127  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0127-ICV1 (Solid)</b> Lab File ID: 02082307ECD7.D Analyzed: 02/08/23 11:44								
Decachlorobiphenyl	40.000	89.5	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	95.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	84.3	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	95.8	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0127-ICV2 (Solid)</b> Lab File ID: 02082308ECD7.D Analyzed: 02/08/23 12:05								
Decachlorobiphenyl	40.000	83.8	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	86.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	98.8	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>23A0206-08 (Solid)</b> Lab File ID: 02082309ECD7.D Analyzed: 02/08/23 12:26								
Decachlorobiphenyl	7.9842	70.4	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9842	65.3	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9842	67.5	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9842	71.8	44 - 120	5.681	5.685333	-0.0043	N/A	
<b>23A0206-09 (Solid)</b> Lab File ID: 02082310ECD7.D Analyzed: 02/08/23 12:47								
Decachlorobiphenyl	7.9859	70.8	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9859	64.3	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9859	68.3	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9859	69.3	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-10 (Solid)</b> Lab File ID: 02082311ECD7.D Analyzed: 02/08/23 13:08								
Decachlorobiphenyl	7.9929	70.2	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9929	61.9	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9929	68.9	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9929	66.9	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-11 (Solid)</b> Lab File ID: 02082312ECD7.D Analyzed: 02/08/23 13:29								
Decachlorobiphenyl	8.0010	69.5	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	8.0010	63.2	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0010	68.3	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0010	70.2	44 - 120	5.683	5.685333	-0.0023	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0127  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>23A0206-12 (Solid)</b> Lab File ID: 02082313ECD7.D Analyzed: 02/08/23 13:50								
Decachlorobiphenyl	7.9830	68.2	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9830	62.2	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9830	68.2	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9830	67.6	44 - 120	5.682	5.685333	-0.0033	N/A	
<b>23A0206-14 (Solid)</b> Lab File ID: 02082315ECD7.D Analyzed: 02/08/23 14:32								
Decachlorobiphenyl	7.9848	71.9	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9848	62.2	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9848	68.2	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9848	68.8	44 - 120	5.681	5.685333	-0.0043	N/A	
<b>SLB0127-CCV1 (Solid)</b> Lab File ID: 02082316ECD7.D Analyzed: 02/08/23 14:53								
Decachlorobiphenyl	40.000	78.3	80 - 120	13.889	13.892	-0.0030	N/A	*
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	84.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	92.3	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0127-CCV2 (Solid)</b> Lab File ID: 02082317ECD7.D Analyzed: 02/08/23 15:14								
Decachlorobiphenyl	40.000	85.3	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	91.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	96.8	80 - 120	5.686	5.685333	0.0007	N/A	
<b>SLB0127-CCV3 (Solid)</b> Lab File ID: 02082330ECD7.D Analyzed: 02/08/23 19:47								
Decachlorobiphenyl	40.000	77.0	80 - 120	13.888	13.892	-0.0040	N/A	*
Tetrachlorometaxylene	40.000	110	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	78.8	80 - 120	14.116	14.12017	-0.0042	N/A	*
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.683	5.685333	-0.0023	N/A	
<b>SLB0127-CCV4 (Solid)</b> Lab File ID: 02082331ECD7.D Analyzed: 02/08/23 20:08								
Decachlorobiphenyl	40.000	86.0	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	99.0	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	88.3	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	98.3	80 - 120	5.684	5.685333	-0.0013	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC SDG/WO: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Sequence: SLB0127 Instrument: ECD7  
Calibration: GA00061 Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0127-CCV5 (Solid)</b>		Lab File ID: 02082348ECD7.D			Analyzed: 02/09/23 02:04			
Decachlorobiphenyl	40.000	82.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	95.3	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0127-CCV6 (Solid)</b>		Lab File ID: 02082349ECD7.D			Analyzed: 02/09/23 02:26			
Decachlorobiphenyl	40.000	86.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.0	80 - 120	5.684	5.685333	-0.0013	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0148  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0148-ICV1 (Solid)</b> Lab File ID: 02092306ECD7.D Analyzed: 02/09/23 13:59								
Decachlorobiphenyl	40.000	94.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	95.0	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	94.8	80 - 120	5.682	5.685333	-0.0033	N/A	
<b>SLB0148-ICV2 (Solid)</b> Lab File ID: 02092307ECD7.D Analyzed: 02/09/23 14:20								
Decachlorobiphenyl	40.000	84.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	99.5	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	97.3	80 - 120	5.683	5.685333	-0.0023	N/A	
<b>23A0206-13 (Solid)</b> Lab File ID: 02092308ECD7.D Analyzed: 02/09/23 14:41								
Decachlorobiphenyl	7.9993	88.7	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9993	83.7	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9993	80.3	40 - 126	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	7.9993	76.7	44 - 120	5.683	5.685333	-0.0023	N/A	
<b>SLB0148-CCV1 (Solid)</b> Lab File ID: 02092317ECD7.D Analyzed: 02/09/23 17:51								
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	90.8	80 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	85.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	91.5	80 - 120	5.681	5.685333	-0.0043	N/A	
<b>SLB0148-CCV2 (Solid)</b> Lab File ID: 02092318ECD7.D Analyzed: 02/09/23 18:12								
Decachlorobiphenyl	40.000	87.0	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	91.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.3	80 - 120	5.682	5.685333	-0.0033	N/A	
<b>SLB0148-CCV3 (Solid)</b> Lab File ID: 02092333ECD7.D Analyzed: 02/09/23 23:27								
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	112	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	85.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.685	5.685333	-0.0003	N/A	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0148  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0148-CCV4 (Solid)</b> Lab File ID: 02092334ECD7.D Analyzed: 02/09/23 23:48								
Decachlorobiphenyl	40.000	85.3	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	96.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	93.3	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.3	80 - 120	5.684	5.685333	-0.0013	N/A	
<b>SLB0148-CCV5 (Solid)</b> Lab File ID: 02092339ECD7.D Analyzed: 02/10/23 01:34								
Decachlorobiphenyl	40.000	78.0	80 - 120	13.888	13.892	-0.0040	N/A	*
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	89.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.0	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCV6 (Solid)</b> Lab File ID: 02092340ECD7.D Analyzed: 02/10/23 01:55								
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.8	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	91.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.0	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCV7 (Solid)</b> Lab File ID: 02092357ECD7.D Analyzed: 02/10/23 07:52								
Decachlorobiphenyl	40.000	83.0	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	93.0	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	93.5	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCV8 (Solid)</b> Lab File ID: 02092358ECD7.D Analyzed: 02/10/23 08:13								
Decachlorobiphenyl	40.000	88.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	92.3	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	97.8	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCV9 (Solid)</b> Lab File ID: 02092369ECD7.D Analyzed: 02/10/23 12:04								
Decachlorobiphenyl	40.000	80.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	86.0	80 - 120	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	40.000	113	80 - 120	5.685	5.685333	-0.0003	N/A	





**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0148  
Calibration: GA00061

SDG/WO: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
<b>SLB0148-CCVA (Solid)</b> Lab File ID: 02092370ECD7.D Analyzed: 02/10/23 12:25								
Decachlorobiphenyl	40.000	86.8	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	93.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.5	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCVB (Solid)</b> Lab File ID: 02092381ECD7.D Analyzed: 02/10/23 16:17								
Decachlorobiphenyl	40.000	81.0	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	95.0	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	96.5	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCVC (Solid)</b> Lab File ID: 02092382ECD7.D Analyzed: 02/10/23 16:38								
Decachlorobiphenyl	40.000	85.5	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	92.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.3	80 - 120	5.686	5.685333	0.0007	N/A	
<b>SLB0148-CCVD (Solid)</b> Lab File ID: 02092385ECD7.D Analyzed: 02/10/23 17:41								
Decachlorobiphenyl	40.000	80.3	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	92.8	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	86.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	93.3	80 - 120	5.685	5.685333	-0.0003	N/A	
<b>SLB0148-CCVE (Solid)</b> Lab File ID: 02092386ECD7.D Analyzed: 02/10/23 18:02								
Decachlorobiphenyl	40.000	85.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.8	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	5.685	5.685333	-0.0003	N/A	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLA0281

Instrument: ECD7

Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Secondary Cal Check (SLA0281-SCV1)</b>		(Solid)	Lab File ID: 01242324ECD7.D			Analyzed: 01/24/23 19:51			
1-Bromo-2-Nitrobenzene	506576	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	940129	14.264	647433	14.266	145	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	343102	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	501702	15.008	382032	15.008	131	50 - 200	0.000	+/-0.50	
<b>Secondary Cal Check (SLA0281-SCV2)</b>		(Solid)	Lab File ID: 01242325ECD7.D			Analyzed: 01/24/23 20:12			
1-Bromo-2-Nitrobenzene	503089	3.492	503318	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	953137	14.265	647433	14.266	147	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341704	3.929	336911	3.928	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	505860	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
<b>Secondary Cal Check (SLA0281-SCV3)</b>		(Solid)	Lab File ID: 01242326ECD7.D			Analyzed: 01/24/23 20:33			
1-Bromo-2-Nitrobenzene	508189	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	979067	14.265	647433	14.266	151	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344105	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	503378	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
<b>Secondary Cal Check (SLA0281-SCV4)</b>		(Solid)	Lab File ID: 01242327ECD7.D			Analyzed: 01/24/23 20:54			
1-Bromo-2-Nitrobenzene	504424	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	968338	14.265	647433	14.266	150	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	342969	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	515045	15.01	382032	15.008	135	50 - 200	0.002	+/-0.50	
<b>Secondary Cal Check (SLA0281-SCV5)</b>		(Solid)	Lab File ID: 01242328ECD7.D			Analyzed: 01/24/23 21:15			
1-Bromo-2-Nitrobenzene	503473	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	991997	14.264	647433	14.266	153	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340361	3.928	336911	3.928	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	521975	15.008	382032	15.008	137	50 - 200	0.000	+/-0.50	
<b>Secondary Cal Check (SLA0281-SCV6)</b>		(Solid)	Lab File ID: 01242329ECD7.D			Analyzed: 01/24/23 21:36			
1-Bromo-2-Nitrobenzene	487061	3.494	503318	3.492	97	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	944934	14.266	647433	14.266	146	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331721	3.93	336911	3.928	98	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	502401	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0109

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLB0109-ICV1)</b>		(Solid)	Lab File ID: 02072302ECD7.D			Analyzed: 02/07/23 13:02			
1-Bromo-2-Nitrobenzene	375418	3.492	375418	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	576037	14.259	576037	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	325374	3.929	325374	3.929	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	434504	15.003	434504	15.003	100	50 - 200	0.000	+/-0.50	
<b>Initial Cal Check (SLB0109-ICV2)</b>		(Solid)	Lab File ID: 02072303ECD7.D			Analyzed: 02/07/23 13:23			
1-Bromo-2-Nitrobenzene	327497	3.492	327497	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	587822	14.259	587822	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	284039	3.928	284039	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	390643	15.001	390643	15.001	100	50 - 200	0.000	+/-0.50	
<b>Blank (BLA0625-BLK1)</b>		(Solid)	Lab File ID: 02072307ECD7.D			Analyzed: 02/07/23 14:47			
1-Bromo-2-Nitrobenzene	442112	3.492	327497	3.492	135	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	802836	14.257	587822	14.259	137	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	381916	3.928	284039	3.928	134	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	562484	15.002	390643	15.001	144	50 - 200	0.001	+/-0.50	
<b>LCS (BLA0625-BS1)</b>		(Solid)	Lab File ID: 02072308ECD7.D			Analyzed: 02/07/23 15:08			
1-Bromo-2-Nitrobenzene	427305	3.492	327497	3.492	130	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	805958	14.256	587822	14.259	137	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	370346	3.928	284039	3.928	130	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	550881	15.004	390643	15.001	141	50 - 200	0.003	+/-0.50	
<b>LCS Dup (BLA0625-BSD1)</b>		(Solid)	Lab File ID: 02072309ECD7.D			Analyzed: 02/07/23 15:29			
1-Bromo-2-Nitrobenzene	428864	3.491	327497	3.492	131	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	815759	14.257	587822	14.259	139	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	369826	3.928	284039	3.928	130	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	561182	15.002	390643	15.001	144	50 - 200	0.001	+/-0.50	
<b>Reference (BLA0625-SRM1)</b>		(Solid)	Lab File ID: 02072310ECD7.D			Analyzed: 02/07/23 15:50			
1-Bromo-2-Nitrobenzene	432242	3.492	327497	3.492	132	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	594095	14.25	587822	14.259	101	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	364053	3.929	284039	3.928	128	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	470732	14.997	390643	15.001	121	50 - 200	-0.004	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0109

Instrument: ECD7

Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1021 (23A0206-01 )</b>		(Solid)	Lab File ID: 02072311ECD7.D			Analyzed: 02/07/23 16:11			
1-Bromo-2-Nitrobenzene	398665	3.491	327497	3.492	122	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	408571	14.247	587822	14.259	70	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	335643	3.929	284039	3.928	118	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	356942	14.996	390643	15.001	91	50 - 200	-0.005	+/-0.50	
<b>LDW23-SS1015 (23A0206-02 )</b>		(Solid)	Lab File ID: 02072312ECD7.D			Analyzed: 02/07/23 16:32			
1-Bromo-2-Nitrobenzene	403127	3.491	327497	3.492	123	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	387392	14.247	587822	14.259	66	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	339511	3.928	284039	3.928	120	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	339755	14.996	390643	15.001	87	50 - 200	-0.005	+/-0.50	
<b>LDW23-SS1164 (23A0206-03 )</b>		(Solid)	Lab File ID: 02072313ECD7.D			Analyzed: 02/07/23 16:53			
1-Bromo-2-Nitrobenzene	397235	3.491	327497	3.492	121	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	372711	14.247	587822	14.259	63	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	323261	3.927	284039	3.928	114	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	331316	14.996	390643	15.001	85	50 - 200	-0.005	+/-0.50	
<b>LDW23-SS1158 (23A0206-04 )</b>		(Solid)	Lab File ID: 02072314ECD7.D			Analyzed: 02/07/23 17:14			
1-Bromo-2-Nitrobenzene	392736	3.491	327497	3.492	120	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	375508	14.247	587822	14.259	64	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	333801	3.927	284039	3.928	118	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	332971	14.996	390643	15.001	85	50 - 200	-0.005	+/-0.50	
<b>LDW23-SS1151 (23A0206-05 )</b>		(Solid)	Lab File ID: 02072315ECD7.D			Analyzed: 02/07/23 17:35			
1-Bromo-2-Nitrobenzene	404707	3.49	327497	3.492	124	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	370906	14.247	587822	14.259	63	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	335326	3.927	284039	3.928	118	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	328179	14.996	390643	15.001	84	50 - 200	-0.005	+/-0.50	
<b>LDW23-SS1145 (23A0206-06 )</b>		(Solid)	Lab File ID: 02072316ECD7.D			Analyzed: 02/07/23 17:57			
1-Bromo-2-Nitrobenzene	404891	3.491	327497	3.492	124	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	378032	14.248	587822	14.259	64	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	338531	3.928	284039	3.928	119	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	337373	14.995	390643	15.001	86	50 - 200	-0.006	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0109

Instrument: ECD7

Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1139 (23A0206-07 )</b>		(Solid)	Lab File ID: 02072317ECD7.D			Analyzed: 02/07/23 18:18			
1-Bromo-2-Nitrobenzene	422258	3.491	327497	3.492	129	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	403465	14.248	587822	14.259	69	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	356412	3.927	284039	3.928	125	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	363469	14.996	390643	15.001	93	50 - 200	-0.005	+/-0.50	
<b>Matrix Spike (BLA0625-MS1 )</b>		(Solid)	Lab File ID: 02072318ECD7.D			Analyzed: 02/07/23 18:39			
1-Bromo-2-Nitrobenzene	414182	3.491	327497	3.492	126	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	395986	14.248	587822	14.259	67	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	346569	3.928	284039	3.928	122	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	347759	14.996	390643	15.001	89	50 - 200	-0.005	+/-0.50	
<b>Matrix Spike Dup (BLA0625-MSD1 )</b>		(Solid)	Lab File ID: 02072319ECD7.D			Analyzed: 02/07/23 19:00			
1-Bromo-2-Nitrobenzene	410112	3.49	327497	3.492	125	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	388357	14.249	587822	14.259	66	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344317	3.927	284039	3.928	121	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	346230	14.996	390643	15.001	89	50 - 200	-0.005	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Sequence: SLB0127

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Instrument: ECD7  
Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLB0127-ICV1)</b>		(Solid)	Lab File ID: 02082307ECD7.D			Analyzed: 02/08/23 11:44			
1-Bromo-2-Nitrobenzene	376562	3.492	376562	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	440933	14.259	440933	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341269	3.928	341269	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	371735	15.004	371735	15.004	100	50 - 200	0.000	+/-0.50	
<b>Initial Cal Check (SLB0127-ICV2)</b>		(Solid)	Lab File ID: 02082308ECD7.D			Analyzed: 02/08/23 12:05			
1-Bromo-2-Nitrobenzene	385050	3.491	385050	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	500148	14.257	500148	14.257	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	346416	3.927	346416	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	391615	15.003	391615	15.003	100	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1117 (23A0206-08)</b>		(Solid)	Lab File ID: 02082309ECD7.D			Analyzed: 02/08/23 12:26			
1-Bromo-2-Nitrobenzene	361969	3.491	385050	3.491	94	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	367872	14.248	500148	14.257	74	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	315547	3.928	346416	3.927	91	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	334698	14.997	391615	15.003	85	50 - 200	-0.006	+/-0.50	
<b>LDW23-SS1103 (23A0206-09)</b>		(Solid)	Lab File ID: 02082310ECD7.D			Analyzed: 02/08/23 12:47			
1-Bromo-2-Nitrobenzene	356256	3.492	385050	3.491	93	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	341408	14.248	500148	14.257	68	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	312008	3.928	346416	3.927	90	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	315918	14.997	391615	15.003	81	50 - 200	-0.006	+/-0.50	
<b>LDW23-SS1100 (23A0206-10)</b>		(Solid)	Lab File ID: 02082311ECD7.D			Analyzed: 02/08/23 13:08			
1-Bromo-2-Nitrobenzene	360991	3.492	385050	3.491	94	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	335243	14.247	500148	14.257	67	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	313533	3.928	346416	3.927	91	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	307587	14.997	391615	15.003	79	50 - 200	-0.006	+/-0.50	
<b>LDW23-SS1096 (23A0206-11)</b>		(Solid)	Lab File ID: 02082312ECD7.D			Analyzed: 02/08/23 13:29			
1-Bromo-2-Nitrobenzene	357277	3.492	385050	3.491	93	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	333760	14.247	500148	14.257	67	50 - 200	-0.010	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	302729	3.928	346416	3.927	87	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	311144	14.997	391615	15.003	79	50 - 200	-0.006	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor OEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0127

Instrument: ECD7

Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>LDW23-SS1094 (23A0206-12 )</b>		(Solid)	Lab File ID: 02082313ECD7.D			Analyzed: 02/08/23 13:50			
1-Bromo-2-Nitrobenzene	358933	3.492	385050	3.491	93	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	329330	14.248	500148	14.257	66	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	315166	3.927	346416	3.927	91	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	307157	14.996	391615	15.003	78	50 - 200	-0.007	+/-0.50	
<b>LDW23-SS1061 (23A0206-14 )</b>		(Solid)	Lab File ID: 02082315ECD7.D			Analyzed: 02/08/23 14:32			
1-Bromo-2-Nitrobenzene	364130	3.492	385050	3.491	95	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	340776	14.248	500148	14.257	68	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	309005	3.928	346416	3.927	89	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	316187	14.997	391615	15.003	81	50 - 200	-0.006	+/-0.50	



**INTERNAL STANDARD AREA AND RT SUMMARY**  
**EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLB0148

Instrument: ECD7

Calibration: GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (SLB0148-ICV1 )</b>		(Solid)	Lab File ID: 02092306ECD7.D			Analyzed: 02/09/23 13:59			
1-Bromo-2-Nitrobenzene	368519	3.488	368519	3.488	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	512726	14.259	512726	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	338510	3.924	338510	3.924	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	475436	15.003	475436	15.003	100	50 - 200	0.000	+/-0.50	
<b>Initial Cal Check (SLB0148-ICV2 )</b>		(Solid)	Lab File ID: 02092307ECD7.D			Analyzed: 02/09/23 14:20			
1-Bromo-2-Nitrobenzene	358012	3.489	358012	3.489	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	584784	14.259	584784	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331462	3.926	331462	3.926	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	476501	15.003	476501	15.003	100	50 - 200	0.000	+/-0.50	
<b>LDW23-SS1066 (23A0206-13 )</b>		(Solid)	Lab File ID: 02092308ECD7.D			Analyzed: 02/09/23 14:41			
1-Bromo-2-Nitrobenzene	365472	3.488	358012	3.489	102	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	537870	14.254	584784	14.259	92	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	335153	3.925	331462	3.926	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	464929	15.001	476501	15.003	98	50 - 200	-0.002	+/-0.50	





### DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor OEA, LLC Project: AOC5 MR Phase 1  
 Matrix: Sediment Laboratory ID: 23A0206-01 File ID: 02072311ECD7.D  
 Sampled: 01/11/23 08:25 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 16:11  
 Solids: 48.20 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
 Batch: BLA0625 Sequence: SLB0109  
 GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.405	0.011	50748	35.5	11.6
	2	8.297	8.305	0.008	29643.5	31.6	
Aroclor 1254	1	9.284	9.298	0.014	84560	42.5	24.6
	* 2	9.436	9.447	0.011	85210.2	54.4	
Aroclor 1260	1	11.03	11.04533	0.0153	46664.4	30.3	12.1
	* 2	11.641	11.65333	0.0123	57572.25	34.2	

\* Column used for quantitation





### DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Sediment</u>	Laboratory ID:	<u>23A0206-03</u>
Sampled:	<u>01/11/23 09:18</u>	Prepared:	<u>01/28/23 12:01</u>
Solids:	<u>48.34</u>	Preparation:	<u>EPA 3546 (Microwave)</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0109</u>
GC Column(1):	<u>ZB5</u>	GC Column(2):	<u>ZB35</u>

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.405	0.011	50263	35.2	6.8
	2	8.297	8.305	0.008	29712.25	32.9	
Aroclor 1254	1	9.284	9.298	0.014	68891	41.8	31.5
	* 2	9.436	9.447	0.011	86658.4	57.4	
Aroclor 1260	1	11.03	11.04533	0.0153	47943.6	34.6	13.
	* 2	11.641	11.65333	0.0123	62098.5	39.4	

\* Column used for quantitation



## DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>		
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>		
Matrix:	<u>Sediment</u>	Laboratory ID:	<u>23A0206-04</u>	File ID:	<u>02072314ECD7.D</u>
Sampled:	<u>01/11/23 09:35</u>	Prepared:	<u>01/28/23 12:01</u>	Analyzed:	<u>02/07/23 17:14</u>
Solids:	<u>49.34</u>	Preparation:	<u>EPA 3546 (Microwave)</u>	Instrument:	<u>ECD7</u>
Batch:	<u>BLA0625</u>	Sequence:	<u>SLB0109</u>		
GC Column(1):	<u>ZB5</u>	GC Column(2):	<u>ZB35</u>		

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	45179.25	32.2	11.8
	2	8.297	8.305	0.008	26648.25	28.6	
Aroclor 1254	1	9.284	9.298	0.014	63204.4	38.3	27.3
	* 2	9.436	9.447	0.011	78516	50.4	
Aroclor 1260	1	11.031	11.04533	0.0143	45536.8	32.4	11.4
	* 2	11.641	11.65333	0.0123	57250	36.3	

\* Column used for quantitation



## DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Matrix: Sediment Laboratory ID: 23A0206-05 File ID: 02072315ECD7.D  
Sampled: 01/11/23 09:50 Prepared: 01/28/23 12:01 Analyzed: 02/07/23 17:35  
Solids: 52.94 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
Batch: BLA0625 Sequence: SLB0109  
GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	46829.75	32.2	8.4
	2	8.298	8.305	0.007	27712	29.6	
Aroclor 1254	1	9.284	9.298	0.014	76472.2	37.3	29.5
	* 2	9.436	9.447	0.011	78737.4	50.2	
Aroclor 1260	1	11.032	11.04533	0.0133	45577	33.0	10.6
	* 2	11.641	11.65333	0.0123	57732	36.7	

\* Column used for quantitation







### DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor OEA, LLC Project: AOC5 MR Phase 1  
 Matrix: Sediment Laboratory ID: 23A0206-08 File ID: 02082309ECD7.D  
 Sampled: 01/11/23 10:40 Prepared: 01/28/23 12:01 Analyzed: 02/08/23 12:26  
 Solids: 51.97 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
 Batch: BLA0625 Sequence: SLB0127  
 GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	39032.25	30.2	6.1
	* 2	8.298	8.305	0.007	24982.75	28.4	
Aroclor 1254	1	9.285	9.298	0.013	68384	44.7	7.1
	* 2	9.437	9.447	0.01	70585.4	48.0	
Aroclor 1260	1	11.031	11.04533	0.0143	38802.6	28.5	15.2
	* 2	11.642	11.65333	0.0113	51949	33.2	

\* Column used for quantitation









## DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Matrix: Sediment Laboratory ID: 23A0206-11 File ID: 02082312ECD7.D  
Sampled: 01/11/23 11:43 Prepared: 01/28/23 12:01 Analyzed: 02/08/23 13:29  
Solids: 42.95 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
Batch: BLA0625 Sequence: SLB0127  
GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.396	8.405	0.009	44176.5	34.5	3.5
	* 2	8.298	8.305	0.007	28082.5	33.3	
Aroclor 1254	1	9.285	9.298	0.013	71953.6	47.8	15.4
	* 2	9.437	9.447	0.01	78779.8	55.8	
Aroclor 1260	1	11.032	11.04533	0.0133	46205.2	36.6	17.7
	* 2	11.643	11.65333	0.0103	64280.75	43.7	

\* Column used for quantitation



### DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC    SDG: 23A0206  
 Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
 Matrix: Sediment    Laboratory ID: 23A0206-12    File ID: 02082313ECD7.D  
 Sampled: 01/11/23 12:19    Prepared: 01/28/23 12:01    Analyzed: 02/08/23 13:50  
 Solids: 48.05    Preparation: EPA 3546 (Microwave)    Instrument: ECD7  
 Batch: BLA0625    Sequence: SLB0127  
 GC Column(1): ZB5    GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	55667.25	43.4	11.7
	* 2	8.298	8.305	0.007	43585.75	48.8	
Aroclor 1254	1	9.285	9.298	0.013	84503.4	55.5	11.2
	* 2	9.436	9.447	0.011	91788.2	62.1	
Aroclor 1260	1	11.031	11.04533	0.0143	41794.8	34.1	13.9
	* 2	11.642	11.65333	0.0113	56945.25	39.2	

\* Column used for quantitation



## DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
 Matrix: Sediment Laboratory ID: 23A0206-14 File ID: 02082315ECD7.D  
 Sampled: 01/11/23 13:03 Prepared: 01/28/23 12:01 Analyzed: 02/08/23 14:32  
 Solids: 51.18 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
 Batch: BLA0625 Sequence: SLB0127  
 GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	90229.5	70.9	28.8
	* 2	8.298	8.305	0.007	79731.5	94.8	
Aroclor 1254	1	9.284	9.298	0.014	81937.6	52.5	27.4
	* 2	9.436	9.447	0.011	100500.4	69.2	
Aroclor 1260	1	11.031	11.04533	0.0143	48436.2	39.5	19.4
	* 2	11.642	11.65333	0.0113	68954.5	48.0	

\* Column used for quantitation



## DUAL COLUMN CONFIRMATION SUMMARY

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor OEA, LLC Project: AOC5 MR Phase 1  
Matrix: Sediment Laboratory ID: 23A0206-13 File ID: 02092308ECD7.D  
Sampled: 01/11/23 12:40 Prepared: 01/28/23 12:01 Analyzed: 02/09/23 14:41  
Solids: 60.13 Preparation: EPA 3546 (Microwave) Instrument: ECD7  
Batch: BLA0625 Sequence: SLB0148  
GC Column(1): ZB5 GC Column(2): ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1242	* 1	7.264	7.27	0.006	101364.8	5000	3.
	2	7.251	7.255	0.004	96887.75	4850	
Aroclor 1254	1	9.287	9.298	0.011	22904.4	727	9.7
	* 2	9.44	9.447	0.007	25895.6	801	
Aroclor 1260	1	11.035	11.04533	0.0103	18292	478	1.2
	* 2	11.646	11.65333	0.00733	21825	484	

\* Column used for quantitation



## HOLDING TIME SUMMARY

**Analysis: EPA 8082A**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 16:11	10	40	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 16:32	10	40	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 16:53	10	40	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 17:14	10	40	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 17:35	10	40	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 17:57	10	40	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 18:18	10	40	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/28/23 12:01	17	365	02/08/23 12:26	11	40	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/28/23 12:01	17	365	02/08/23 12:47	11	40	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/28/23 12:01	17	365	02/08/23 13:08	11	40	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/28/23 12:01	17	365	02/08/23 13:29	11	40	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/28/23 12:01	16	365	02/08/23 13:50	11	40	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/28/23 12:01	16	365	02/09/23 14:41	12	40	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/28/23 12:01	16	365	02/08/23 14:32	11	40	
Matrix Spike BLA0625-MS1	01/11/23 10:20	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 18:39	10	40	
Matrix Spike Dup BLA0625-MSD1	01/11/23 10:20	01/11/23 17:05	01/28/23 12:01	17	365	02/07/23 19:00	10	40	

\* Indicates hold time exceedance.



## METHOD DETECTION AND REPORTING LIMITS

### EPA 8082A

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg



# CERTIFICATE OF ANALYSIS

**Catalog No:** S-279N  
**Description:** Tetrachloro-m-xylene  
**Lot:** 0052481B-1  
**Solvent:** N/A  
**Hazards:** Refer to SDS for complete safety information

**Date Certified:** Jul 28, 2005  
**Expiration:** Jul 28, 2015  
**Sample Size:** 100 mg  
**Components:** 1  
**Storage Condition:** Ambient (>5 °C)



Signal Word: Warning

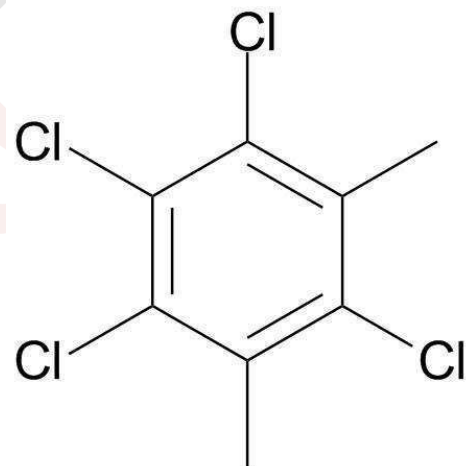
Certified Reference Material



Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration <sup>1</sup>
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

**Identification:**

Molecular formula: C<sub>8</sub>H<sub>6</sub>Cl<sub>4</sub>  
Molecular weight: 243.94



**C000147**

tetrachlorometaxylene

Expires 1/15/2020

Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

<sup>1</sup> The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:

Larry Decker, Organic QC Manager



# AccuStandard

125 Market Street  
New Haven, CT 06513  
(203) 786-5290

## CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N

EXPIRATION: Jul 28, 2015

DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl

LOT #: 990521LB-AC

SOLVENT: N/A

This product is guaranteed accurate to  $\pm 0.5\%$  of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration <sup>1</sup>	Certified Analyte Concentration <sup>2</sup>
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

2;

**C000148**

decachlorobiphenyl  
Expires 1/15/2020

Prepared By Joshua Rains 1/15/2014

*\* I 1768 A*

Certified by: *R. Cooper*

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.  
A period (.) is used as a decimal place marker.

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480  
 2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is  $\pm 0.5\%$  which is the Combined Uncertainty  $U_c(y)$ . It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is  $U$  which is  $U_c(y) * K$  where  $K$  is the coverage factor at the 95% confidence level ( $K=2$ ).  
 3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

*\* Recertified ~ 4-6-09 (S)*



**Analytical Standard Record**  
**Standard ID: C000148**

Printed: 4/23/2015 11:54:44AM

Description:	decachlorobiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	9905211b-ac
Vendor Catalog #:			

**Comments**

see i1768a  
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By

Date

# Certificate of Analysis



Phenova Certified Reference Materials are sold by Phenomenex.

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Access your MSDS and digital C of A at [www.phenomenex.com/mysupport](http://www.phenomenex.com/mysupport). Re-order at [www.phenomenex.com/standards](http://www.phenomenex.com/standards)

## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101461

**Lot Number:** CL13053

**Description:** Aroclor 1254

**Certification Date:** November 29, 2018

**Storage:** 4 °C

**Expiration Date:** November 30, 2026

**Provided As:** 1 mL in 2 mL Ampoule in Hexane

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I 09808  
Recd.   
02/24/20



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Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC-MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.



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Certificate No. 2427.03

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101462

**Lot Number:** CL16516

**Description:** Aroclor 1260

**Certification Date:** March 4, 2021

**Storage:** 4 °C

**Expiration Date:** February 28, 2029

**Provided As:** 1 mL in 2 mL Ampoule in Hexane

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

J006465



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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101468

**Lot Number:** CL14017

**Description:** Aroclor 1221

**Certification Date:** August 20, 2019

**Storage:** 4 °C

**Expiration Date:** August 31, 2027

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J006466  
Recd of  
06/18/21



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = k \sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.

<sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101469

**Lot Number:** CL14914

**Description:** Aroclor 1232

**Certification Date:** January 31, 2020

**Storage:** 4 °C

**Expiration Date:** January 31, 2028

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J 006467  
reed  
06/18/21



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101470

**Lot Number:** CL14018

**Description:** Aroclor 1242

**Certification Date:** August 20, 2019

**Storage:** 4 °C

**Expiration Date:** August 31, 2027

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

*Andrea Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468  
feed JR  
06/18/21



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Chemical Testing Laboratory  
Certificate No. 2427.03

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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2  $\mu$ L.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty ( $u_{CRM}$ ) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing ( $u_M$ ), homogeneity analysis ( $u_H$ ) and long-term stability testing ( $u_{LTS}$ ). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor ( $k=2$ ).

$$u_{CRM} = k\sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.

<sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101471

**Lot Number:** CL15384

**Description:** Aroclor 1248

**Certification Date:** June 19, 2020

**Storage:** 4 °C

**Expiration Date:** June 30, 2028

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

*Andrea L Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

*# J006469  
Reed, JR  
06/18/21*



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- 1. Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
- 2. Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
- 3. Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
- 4. Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
- 5. Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
- 6. Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
- 7. Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
- 8. Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
- 9. Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).  
$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
- 10. Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
- 11. Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
- 12. Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101474

**Lot Number:** CL11330

**Description:** Aroclor 1262

**Certification Date:** May 15, 2015

**Storage:** 4 °C

**Expiration Date:** April 30, 2023

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

**Revision Date:** April 2, 2018



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

J 00647H  
Reed JK  
06/18/21



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
  2. **Quality Standards:** Phenova is accredited by A2LA to ISO Guide 34<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
  3. **Intended Use:** The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.
  4. **Instruction:** Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.
  5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at [www.phenomenex.com/mysupport](http://www.phenomenex.com/mysupport).
  6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
  7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
  8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
  9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).  
$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$
- Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
  11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.
  12. **Period of Validity:** The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101475

**Lot Number:** CL11331

**Description:** Aroclor 1268

**Certification Date:** May 15, 2015

**Storage:** 4 °C

**Expiration Date:** April 30, 2023

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

**Revision Date:** April 2, 2018

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

J006472  
Rec'd. JK  
06/18/21



Reference Material Producer  
Certificate No. 2427.02



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO Guide 34<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.
4. **Instruction:** Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at [www.phenomenex.com/mysupport](http://www.phenomenex.com/mysupport).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k \cdot \sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.
12. **Period of Validity:** The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.

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## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101467

**Lot Number:** CL16555

**Description:** Aroclor 1016

**Certification Date:** June 22, 2021

**Storage:** 4 °C

**Expiration Date:** February 28, 2029

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

**J012591**

AROCLOR 1016

Expires 2/28/2029

Prepared By Joshua Rains 11/26/2021



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.310%

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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
4. **Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
12. **Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



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# Certificate of Analysis

## Aroclor 1016 Solution

Product Number: PP-282

Page: 1 of 1

Lot Number: CR-0761

Lot Issue Date: 28-Feb-2017

Expiration Date: 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

*K1254  
Recd JP  
02/05/17*

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.



ISO 9001  
Registered  
TUV USA, Inc.

John Russo  
President

Monica Bourgeois  
Director of QA/RA



# Certificate of Analysis

**Product Name:** Aroclor 1260 Standard

**Product Number:** PP-362-1

**Lot Issue Date:** 20-Jan-2021

**Lot Number:** 0006582048

**Expiration Date:** 28-Feb-2025

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

**Matrix:** isooctane (2,2,4-trimethylpentane)

K 1255

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Hazards:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this RM.

**Expiration of Certification:**

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

**Sample lot approver:**

Monica Bourgeois

QMS Representative



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 1

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CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937





# Certificate of Analysis ISO Guide 34

## Aroclor 1242 Solution

**Product Number:** PP-312

**Page:** 1 of 1

**Lot Number:** CS-6293

**Lot Issue Date:** 04-Jan-2019

**Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

**Matrix:** isooctane (2,2,4-trimethylpentane)

**Storage:** Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative



ISO Guide 34 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO17025 Cert No.  
AT-1937

ISO 17034



Agilent

Trusted Answers

## Reference Material Certificate

**Product Name:** Aroclor 1248 Standard **Lot Number:** 0006626997  
**Product Number:** PP-342-1 **Lot Issue Date:** 17-Aug-2021  
**Storage Conditions:** Store at Room Temperature (15° to 30°C). **Expiration Date:** 30-Sep-2025

Component Name	CERTIFIED VALUES			CAS#	Analyte Lot
	Concentration	Expanded Uncertainty			
Aroclor 1248	100.3	± 0.5 µg/mL		012672-29-6	NT01582

**Matrix:** isooctane (2,2,4-trimethylpentane)

K1257

**Description:**

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Safety:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this analytical reference material.

**Intended Use:**

This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Expiration of Certification:**

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.



# Certificate of Analysis

## Aroclor 1254 Solution

Product Number: PP-352

Page: 1 of 1

Lot Number: CS-2321

Lot Issue Date: 04-May-2018

Expiration Date: 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

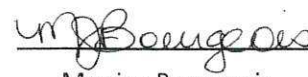
K-1250

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.



ISO 9001  
Registered  
TUV USA, Inc.

  
John Russo  
President

  
Monica Bourgeois  
Director of QA/RA





# Certificate of Analysis

**Product Name:** Aroclor 1221 Standard

**Product Number:** PP-292-1

**Lot Issue Date:** 28-Apr-2020

**Lot Number:** 0006535333

**Expiration Date:** 31-May-2024

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

**Matrix:** isooctane (2,2,4-trimethylpentane)

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

K1259

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Hazards:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this RM.

**Expiration of Certification:**

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

**Sample lot approver:**

Monica Bourgeois  
QMS Representative



ISO 17034 Cert No.  
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 1

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937



# Certificate of Analysis ISO 17034

## Aroclor 1262 Standard

Product Number: PP-372-1

Page: 1 of 1

Lot Number: 0006499800

Lot Issue Date: 04-Nov-2019

Expiration Date: 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative



ISO 17034 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO 17025 Cert No.  
AT-1937



# Certificate of Analysis ISO 17034

## Aroclor 1232 Standard

**Product Number:** PP-302-1

**Page:** 1 of 1

**Lot Number:** CF-2197A

**Lot Issue Date:** 05-Jul-2016

**Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

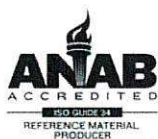
**Matrix:** isooctane (2,2,4-trimethylpentane)

**Storage:** Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

  
Monica Bourgeois  
QMS Representative



ISO 17034 Cert No.  
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System



ISO17025 Cert No.  
AT-1937



# Certificate of Analysis

**Product Name:** Aroclor 1268 Standard

**Product Number:** PP-382-1

**Lot Issue Date:** 09-Feb-2021

**Lot Number:** 0006587800

**Expiration Date:** 31-Mar-2029

**Description:**

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

**Matrix:** isooctane (2,2,4-trimethylpentane)

**Storage Conditions:** Store at Room Temperature (15° to 30°C).

K1262

**Traceability:**

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

**Homogeneity:**

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

**Intended Use:**

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

**Instructions for Use:**

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

**Hazards:**

Refer to the Safety Data Sheet on [www.agilent.com](http://www.agilent.com) for information regarding this RM.

**Expiration of Certification:**

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

**Maintenance of Certification:**

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

**Sample lot approver:**

Monica Bourgeois  
QMS Representative



ISO 17034 Cert  
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

Page: 1 of 1

[www.agilent.com/quality/](http://www.agilent.com/quality/)  
CSD-QA-015.1



ISO 17025 Cert  
No. AT-1937



# Certificate of Analysis



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## Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

**Catalog No.:** AL0-101467

**Lot Number:** CL12975

**Description:** Aroclor 1016

**Certification Date:** November 19, 2018

**Storage:** 4 °C

**Expiration Date:** October 31, 2026

**Provided As:** 1 mL in 2 mL Ampoule in Isooctane

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

125829



Reference Material Producer  
Certificate No. 2427.02



Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC-MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03



# Certificate of Analysis



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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
2. **Quality Standards:** Phenova is accredited by A2LA to ISO Guide 34<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
3. **Intended Use:** The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.
4. **Instruction:** Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.
5. **Hazardous Situation:** The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at [www.phenomenex.com/mysupport](http://www.phenomenex.com/mysupport).
6. **Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
7. **Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
8. **Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
9. **Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = k \sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. **Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
11. **Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.
12. **Period of Validity:** The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

<sup>1</sup> ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.

<sup>2</sup> ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.

<sup>3</sup> ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.

<sup>4</sup> ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.

<sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

IL111063\_US

# Certificate of Analysis

**Produced by Phenova**

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Access your Safety Data Sheets and digital Certificates at [www.phenova.com/documents](http://www.phenova.com/documents).

## Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

**Catalog No.:** AL0-101462

**Lot Number:** CL18021

**Description:** Aroclor 1260

**Certification Date:** February 14, 2022

**Storage:** 4 °C

**Expiration Date:** February 28, 2030

**Provided As:** 1 mL in 2 mL Ampoule in Hexane

*Andrea L Gill*

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03

# Certificate of Analysis



Page 2 of 2

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Access your Safety Data Sheets and digital Certificates at [www.phenova.com/documents](http://www.phenova.com/documents).

- Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31<sup>1</sup> and ISO Guide 35.<sup>2</sup>
- Quality Standards:** Phenova is accredited by A2LA to ISO 17034<sup>3</sup> and ISO/IEC 17025<sup>4</sup> as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.
- Intended Use:** The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.
- Handling and Usage Notes:** Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.
- Hazardous Situation:** The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at [www.phenova.com/documents](http://www.phenova.com/documents).
- Level of Homogeneity:** The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.
- Certified Value:** Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.
- Raw Materials and Purity:** Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.
- Expanded Uncertainty:** The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98<sup>5</sup> and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).
$$u_{CRM} = k\sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.
- Metrological Traceability:** The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.
- Values Obtained During Product Testing:** This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.
- Period of Validity:** The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

## References:

- <sup>1</sup> ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
- <sup>2</sup> ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
- <sup>3</sup> ISO 17034 – General Requirements for the Competence of Reference Material Producers.
- <sup>4</sup> ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
- <sup>5</sup> ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)



Reference Material Producer  
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material  
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory  
Certificate No. 2427.03



Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15570

Order Number: CB014985

Date Shipped: 12/12/2022

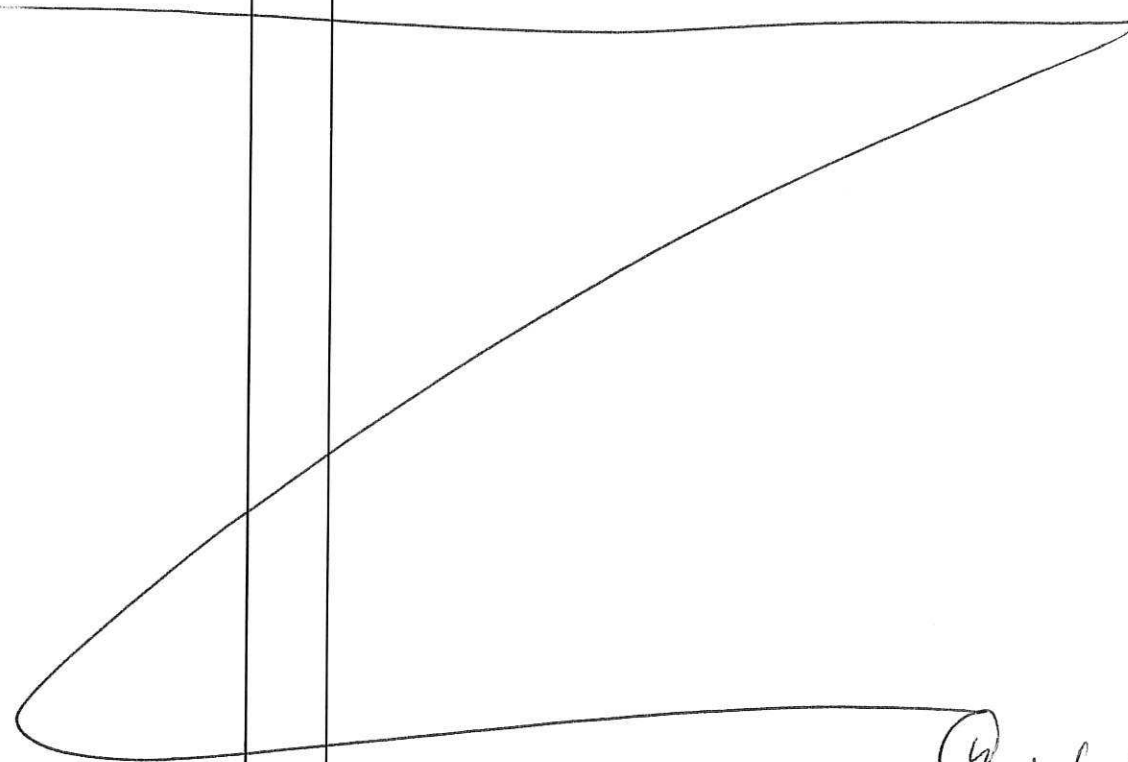
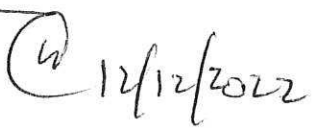
AirBill No(s):

From: QATS LABORATORY  
2700 CHANDLER AVENUE, BLDG. B  
LAS VEGAS, NV 89120  
PHONE: 1-702-895-8712

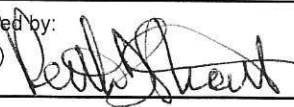

To: SUE DUNNIHOO  
ANALYTICAL RESOURCES INC.  
4611 S. 134TH PLACE SUITE 100  
TUKWILA WA 98168  
250-695-6207

519204142631

K011477  
K011478  
K011479

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0168	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0169	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0171	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
				
				
PUGET SOUND SRM FOR DUWAMISH AOC4 PROJECT.				

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature) 	Date/Time (1400) 12/12/2022	Received by: (Signature) 	Date/Time 12/12/2022 11:15
Custody Seal(s): <u>Present</u> /Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time



Form 1  
ORGANIC ANALYSIS DATA SHEET  
EPA 1613B  
Dioxins/Furans by HRGC/HRMS

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment Laboratory ID: 23A0206-13 C File ID: 23031710  
 Sampled: 01/11/23 12:40 Prepared: 03/07/23 14:50 Analyzed: 03/17/23 17:42  
 % Solids: 60.59 Preparation: EPA 1613 Initial/Final: 16.51 g Wet / 20 uL  
 Result Basis: Dry Sequence: SLC0258 Calibration: GC00015  
 Batch: BLC0136 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.809	0.655-0.886	0.209	1.00	9.60	ng/kg	X
1746-01-6	2,3,7,8-TCDD	1	0.598	0.655-0.886	0.150	1.00	0.590	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.666	1.318-1.783	0.236	1.00	4.36	ng/kg	
57117-31-4	2,3,4,7,8-PeCDF	1	1.485	1.318-1.783	0.215	1.00	25.0	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.567	1.318-1.783	0.222	1.00	3.21	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.247	1.054-1.426	0.107	1.00	20.6	ng/kg	
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.303	1.054-1.426	0.109	1.00	6.41	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.140	1.054-1.426	0.112	1.00	4.12	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.200	1.054-1.426	0.118	1.00	1.56	ng/kg	
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.237	1.054-1.426	0.182	1.00	2.35	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.149	1.054-1.426	0.175	1.00	10.2	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.227	1.054-1.426	0.196	1.00	7.06	ng/kg	
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.021	0.893-1.208	0.187	1.00	44.4	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.872	0.893-1.208	0.269	1.00	3.66	ng/kg	EMPC
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.011	0.893-1.208	0.310	2.50	213	ng/kg	B
39001-02-0	OCDF	1	0.912	0.757-1.024	0.344	2.50	113	ng/kg	
3268-87-9	OCDD	1	0.868	0.757-1.024	0.391	10.0	1660	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	894	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	16.1	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	459	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	19.8	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	103	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	75.6	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	136	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	451	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 20.76  
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 20.76



**Form 2**  
**ORGANIC ANALYSIS DATA SHEET**  
**EPA 1613B**  
**Dioxins/Furans by HRGC/HRMS**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Sediment</u>	Laboratory ID:	<u>23A0206-13</u>
Sampled:	<u>01/11/23 12:40</u>	Prepared:	<u>03/07/23 14:50</u>
Solids Wt%:	<u>60.59</u>	Preparation:	<u>EPA 1613</u>
Result Basis:	<u>Dry</u>	Sequence:	<u>SLC0258</u>
Batch:	<u>BLC0136</u>	Instrument:	<u>AUTOSPEC01</u>
		File ID:	<u>23031710</u>
		Analyzed:	<u>03/17/23 17:42</u>
		Initial/Final:	<u>16.51 g / 20 uL</u>
		Calibration:	<u>GC00015</u>
		Column:	<u>RTX-Dioxin2</u>

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.759	0.655-0.886	0.190	96.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.771	0.655-0.886	0.212	113	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.512	1.318-1.783	0.253	120	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.541	1.318-1.783	0.280	127	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.620	1.318-1.783	0.259	123	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.510	0.434-0.587	0.139	92.0	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.512	0.434-0.587	0.117	84.9	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.514	0.434-0.587	0.144	93.0	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.507	0.434-0.587	0.174	99.5	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.246	1.054-1.426	0.135	111	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.248	1.054-1.426	0.116	102	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.443	0.374-0.506	0.170	74.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.435	0.374-0.506	0.198	73.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.098	0.893-1.208	0.150	77.2	23 - 140 %	
13C12-OCDD		0.897	0.757-1.024	0.212	85.1	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000		0.091	94.6	35 - 197 %	

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.591	1.001	1.009e4	1.247e4	0.702	0.809	0.770	946	1524	1.50e5	2.03e5	158.8	133.1	NO	dd	bd	4.803
12378-PeCDF	29.758	1.000	5.934e3	3.561e3	0.679	1.666	1.550	1360	1279	8.49e4	5.57e4	62.4	43.6	NO	bb	bb	2.182
23478-PeCDF	31.095	1.001	3.599e4	2.424e4	0.786	1.485	1.550	1360	1279	5.17e5	3.51e5	380.1	274.3	NO	db	db	12.528
123478-HxCDF	34.750	1.000	4.059e4	3.254e4	1.166	1.247	1.240	1199	769	6.24e5	4.90e5	520.3	637.5	NO	dd	dd	10.326
234678-HxCDF	35.775	1.000	7.433e3	6.518e3	1.140	1.140	1.240	1199	769	7.57e4	6.55e4	63.1	85.2	NO	bb	bb	2.063
123678-HxCDF	34.895	1.001	1.314e4	1.009e4	1.091	1.303	1.240	1199	769	1.84e5	1.44e5	153.6	186.7	NO	dd	dd	3.204
123789-HxCDF	36.755	1.000	2.532e3	2.111e3	1.137	1.200	1.240	1199	769	3.80e4	3.35e4	31.7	43.5	NO	bb	bb	0.779
1234678-HpCDF	38.649	1.000	4.225e4	4.139e4	1.003	1.021	1.050	979	1019	6.67e5	6.89e5	681.3	676.3	NO	bb	bb	22.185
1234789-HpCDF	40.855	1.000	2.603e3	2.984e3	0.953	0.872	1.050	979	1019	3.87e4	4.43e4	39.5	43.5	YES	bb	bb	1.831
OCDF	45.085	1.005	7.763e4	8.512e4	0.778	0.912	0.890	977	1029	9.12e5	1.01e6	933.4	982.1	NO	bd	bb	56.723
2378-TCDD	26.226	1.001	7.072e2	1.183e3	1.149	0.598	0.770	1155	1297	1.18e4	2.00e4	10.2	15.4	YES	bd	bd	0.295
12378-PeCDD	31.351	1.001	4.387e3	2.799e3	1.022	1.567	1.550	1280	1191	5.28e4	3.58e4	41.3	30.0	NO	bb	bb	1.605
123478-HxCDD	35.886	1.000	4.019e3	3.248e3	0.996	1.237	1.240	1674	1340	6.76e4	5.57e4	40.4	41.6	NO	bd	bd	1.174
123678-HxCDD	36.008	1.001	1.816e4	1.580e4	1.001	1.149	1.240	1674	1340	2.90e5	2.41e5	173.2	180.2	NO	dd	dd	5.082
123789-HxCDD	36.387	1.011	1.137e4	9.271e3	0.907	1.227	1.240	1674	1340	1.82e5	1.44e5	109.0	107.1	NO	bb	bb	3.530
1234678-HpCDD	40.131	1.000	2.033e5	2.011e5	1.039	1.011	1.050	1555	1369	3.11e6	3.06e6	2001.3	2232.7	NO	bb	bb	106.305
OCDD	44.865	1.000	1.306e6	1.504e6	0.920	0.868	0.890	1369	1331	1.57e7	1.83e7	11490.4	13739.3	NO	bb	bb	827.803
13C-2378-TCDF	25.577	1.007	2.890e5	3.806e5	1.620	0.759	0.770	1932	1407	4.36e6	5.77e6	2256.2	4102.4	NO	bb	bb	96.250
13C-12378-PeCDF	29.747	1.171	3.856e5	2.550e5	1.240	1.512	1.550	1356	2047	5.95e6	3.93e6	4385.1	1921.9	NO	bb	bb	120.279
13C-23478-PeCDF	31.073	1.224	3.708e5	2.406e5	1.118	1.541	1.550	1356	2047	5.67e6	3.72e6	4183.4	1818.7	NO	bb	bb	127.414
13C-123478-HxCDF	34.738	0.955	2.052e5	4.022e5	1.168	0.510	0.510	1130	1365	3.18e6	6.22e6	2816.7	4554.5	NO	bd	bd	92.045
13C-123678-HxCDF	34.872	0.959	2.251e5	4.396e5	1.386	0.512	0.510	1130	1365	3.35e6	6.57e6	2966.8	4810.5	NO	dd	dd	84.878
13C-234678-HxCDF	35.764	0.983	2.015e5	3.918e5	1.129	0.514	0.510	1130	1365	3.15e6	6.11e6	2786.2	4477.9	NO	bb	bb	93.024
13C-123789-HxCDF	36.766	1.011	1.762e5	3.476e5	0.932	0.507	0.510	1130	1365	2.96e6	5.78e6	2618.8	4234.5	NO	bb	bb	99.529
13C-1234678-HpCDF	38.638	1.062	1.153e5	2.605e5	0.895	0.443	0.440	1244	1090	1.97e6	4.38e6	1580.3	4014.7	NO	bb	bb	74.337
13C-1234789-HpCDF	40.844	1.123	9.699e4	2.231e5	0.770	0.435	0.440	1244	1090	1.42e6	3.23e6	1140.0	2966.3	NO	bb	bb	73.623
13C-1234-TCDD	25.393	0.000	1.893e5	2.401e5	1.000	0.789	0.770	1637	1016	2.87e6	3.68e6	1754.8	3623.2	NO	bb	bb	100.000
13C-2378-TCDD	26.212	1.032	2.427e5	3.146e5	1.152	0.771	0.770	1637	1016	3.71e6	4.75e6	2268.2	4670.2	NO	bb	bb	112.624
13C-12378-PeCDD	31.329	1.234	2.708e5	1.672e5	0.829	1.620	1.550	1228	1107	4.04e6	2.56e6	3292.9	2317.3	NO	bb	bb	123.100
13C-123478-HxCDD	35.875	0.986	3.448e5	2.767e5	0.995	1.246	1.240	1027	1029	5.52e6	4.40e6	5375.7	4269.7	NO	bd	bd	110.590
13C-123678-HxCDD	35.986	0.989	3.706e5	2.971e5	1.157	1.248	1.240	1027	1029	5.74e6	4.60e6	5591.4	4471.5	NO	db	db	102.206
13C-1234678-HpCDD	40.120	1.103	1.916e5	1.745e5	0.840	1.098	1.050	1011	926	2.85e6	2.62e6	2816.8	2827.1	NO	bb	bb	77.155
13C-OCDD	44.847	1.233	3.488e5	3.890e5	0.767	0.897	0.890	1381	1111	4.25e6	4.66e6	3080.2	4190.8	NO	bb	bb	170.193
13C-123789-HxCDD	36.376	0.000	3.116e5	2.532e5	1.000	1.231	1.240	1027	1029	5.08e6	4.15e6	4945.7	4030.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.226	1.033	2.092e5		1.288			1271		3.25e6		2561.2			bb		37.837

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.088	0.864	1.760e4	2.446e4	0.802	0.719	0.770	946	1524	2.85e5	3.88e5	301.3	254.5	NO	bb	bb	7.836
1289-TCDF	27.074	1.059	1.054e3	1.186e3	0.678	0.889	0.770	946	1524	1.05e4	2.12e4	11.1	13.9	YES	bd	bd	0.493
13468-PECDF					1.246		1.550	989	879								
12389-PECDF					0.496		1.550	1360	1279								
123468-HXCDF	33.078	0.952	1.220e4	9.571e3	1.169	1.275	1.240	1199	769	1.96e5	1.49e5	163.9	193.1	NO	bb	bb	3.067
1368-TCDD	23.345	0.891	6.592e3	8.285e3	1.015	0.796	0.770	1155	1297	1.03e5	1.31e5	89.6	100.8	NO	bb	bb	2.629
1289-TCDD					0.909		0.770	1155	1297								
12479-PECDD	28.677	0.915	1.754e4	1.168e4	2.301	1.502	1.550	1280	1191	1.86e5	1.22e5	145.4	102.3	NO	bb	bb	2.898
12389-PECDD	31.742	1.013	1.094e3	8.337e2	1.184	1.312	1.550	1280	1191	1.81e4	1.17e4	14.1	9.8	YES	bb	bb	0.372
124679-HXCDD	33.858	0.944	3.374e4	2.807e4	1.115	1.202	1.240	1674	1340	4.95e5	4.21e5	296.0	314.3	NO	bb	bb	8.916
1234679-HPCDD	39.095	0.974	2.504e5	2.466e5	1.137	1.016	1.050	1555	1369	4.22e6	4.11e6	2714.0	3004.3	NO	bb	bb	119.410
Total-tetrafurans			9.358e5		0.727			946		1.37e7							447.350
Total-penta1			4.839e4					989		5.91e5							13.888
Total-pentafurans			5.414e5		0.654			1360		7.25e6							215.799
Total-hexafurans			1.976e5		1.141			1199		2.88e6							51.396
Total-heptafurans			1.207e5		0.978			979		1.92e6							68.148
Total-Furans			1.921e6		0.922			946		2.72e7							853.304
Total-tetradioxins			2.019e4		1.024			1155		3.14e5							8.049
Total-pentadioxins			4.363e4		1.502			1280		5.69e5							9.892
Total-hexadioxins			1.357e5		1.005			1674		1.85e6							37.827
Total-heptadioxins			4.537e5		1.088			1555		7.33e6							225.715
Total-Dioxins			1.959e6		1.130			1155		2.58e7							1109.286
Total-TEQ			3.880e6					1155		5.30e7							1962.590
FUNCTION1 PFK			9.923e5					460054		2.15e7							
FUNCTION2 PFK			3.011e4					177840		7.61e5							0.000
FUNCTION3 PFK			2.457e6					517367		2.25e7							0.000
FUNCTION4 PFK			4.648e5					195735		1.21e7							
FUNCTION5 PFK			6.326e4					265383		3.11e6							
FUNCTION1 HXCD...			2.918e3					961		4.94e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.909e2					762		8.16e3							0.000
FUNCTION3 OCDPE			7.030e1					539		1.27e3							0.000
FUNCTION4 NCDPE			2.399e4					759		4.09e5							0.000
FUNCTION5 DCDPE			0.000e0					670		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	6.693e4	8.752e4	0.727	0.76	0.77	874.4	YES	NO	dd	dd	31.730
2	Total-tetrafurans	24.07	2.846e2	4.312e2	0.727	0.66	0.77	6.6	YES	NO	bd	dd	0.147
3	Total-tetrafurans	23.83	2.919e4	3.982e4	0.727	0.73	0.77	485.4	YES	NO	dd	dd	14.177
4	Total-tetrafurans	23.68	2.327e4	3.175e4	0.727	0.73	0.77	407.5	YES	NO	dd	dd	11.305
5	Total-tetrafurans	23.58	4.245e4	5.868e4	0.727	0.72	0.77	683.5	YES	NO	dd	dd	20.777
6	Total-tetrafurans	23.42	1.055e4	1.371e4	0.727	0.77	0.77	221.3	YES	NO	dd	dd	4.984
7	Total-tetrafurans	23.33	1.076e5	1.417e5	0.727	0.76	0.77	1781.1	YES	NO	dd	dd	51.206
8	Total-tetrafurans	23.23	2.855e5	3.772e5	0.727	0.76	0.77	4174.3	YES	NO	dd	dd	136.140
9	Total-tetrafurans	23.05	6.721e4	9.699e4	0.727	0.69	0.77	1077.7	YES	NO	dd	dd	33.733
10	Total-tetrafurans	22.34	3.764e4	5.059e4	0.727	0.74	0.77	668.6	YES	NO	bb	bb	18.126
11	1368-TCDF	22.09	1.760e4	2.446e4	0.802	0.72	0.77	301.3	YES	NO	bb	bb	7.836
12	Total-tetrafurans	25.82	1.727e4	2.187e4	0.727	0.79	0.77	267.5	YES	NO	db	db	8.041
13	Total-tetrafurans	25.72	7.815e3	9.550e3	0.727	0.82	0.77	132.4	YES	NO	dd	dd	3.567
14	2378-TCDF	25.59	1.009e4	1.247e4	0.702	0.81	0.77	158.8	YES	NO	dd	bd	4.803
15	Total-tetrafurans	25.35	9.646e4	1.256e5	0.727	0.77	0.77	1313.8	YES	NO	bd	bb	45.629
16	Total-tetrafurans	25.08	8.711e3	1.062e4	0.727	0.82	0.77	119.6	YES	NO	db	dd	3.970
17	Total-tetrafurans	24.90	2.305e4	3.111e4	0.727	0.74	0.77	393.1	YES	NO	bd	dd	11.127
18	Total-tetrafurans	24.67	3.657e4	4.859e4	0.727	0.75	0.77	597.4	YES	NO	db	dd	17.495
19	Total-tetrafurans	24.49	4.768e4	6.211e4	0.727	0.77	0.77	796.4	YES	NO	dd	dd	22.555

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.03	4.839e4	3.319e4		1.46	1.55	598.2	YES	NO	bb	bb	13.888

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.18	8.796e3	5.867e3	0.654	1.50	1.55	106.6	YES	NO	bd	bd	3.582
2	Total-pentafurans	28.71	1.702e5	1.082e5	0.654	1.57	1.55	1459.2	YES	NO	db	db	67.996
3	Total-pentafurans	28.52	1.252e5	8.148e4	0.654	1.54	1.55	1263.5	YES	NO	dd	dd	50.493
4	Total-pentafurans	28.41	2.093e4	1.403e4	0.654	1.49	1.55	242.2	YES	NO	bd	bd	8.539
5	23478-PeCDF	31.10	3.599e4	2.424e4	0.786	1.48	1.55	380.1	YES	NO	db	db	12.528
6	Total-pentafurans	30.94	5.207e3	3.170e3	0.654	1.64	1.55	63.4	YES	NO	dd	dd	2.046
7	Total-pentafurans	30.84	2.705e4	1.827e4	0.654	1.48	1.55	309.4	YES	NO	bd	bd	11.070
8	Total-pentafurans	30.06	4.260e3	2.936e3	0.654	1.45	1.55	46.2	YES	NO	db	db	1.758
9	Total-pentafurans	29.96	3.183e4	1.986e4	0.654	1.60	1.55	362.8	YES	NO	bd	bd	12.625
10	12378-PeCDF	29.76	5.934e3	3.561e3	0.679	1.67	1.55	62.4	YES	NO	bb	bb	2.182
11	Total-pentafurans	29.44	1.060e5	6.993e4	0.654	1.52	1.55	1037.1	YES	NO	db	db	42.979

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexafurans	34.59	2.781e4	2.177e4	1.141	1.28	1.24	367.1	YES	NO	bd	bd	7.279
2	Total-hexafurans	34.11	4.334e4	3.475e4	1.141	1.25	1.24	556.9	YES	NO	bb	bb	11.462
3	Total-hexafurans	33.29	4.972e4	3.888e4	1.141	1.28	1.24	536.0	YES	NO	bb	bb	13.006
4	123468-HxCDF	33.08	1.220e4	9.571e3	1.169	1.27	1.24	163.9	YES	NO	bb	bb	3.067
5	123789-HxCDF	36.76	2.532e3	2.111e3	1.137	1.20	1.24	31.7	YES	NO	bb	bb	0.779
6	234678-HxCDF	35.77	7.433e3	6.518e3	1.140	1.14	1.24	63.1	YES	NO	bb	bb	2.063
7	Total-hexafurans	35.07	7.963e2	6.353e2	1.141	1.25	1.24	9.2	YES	NO	dd	dd	0.210
8	123678-HxCDF	34.89	1.314e4	1.009e4	1.091	1.30	1.24	153.6	YES	NO	dd	dd	3.204
9	123478-HxCDF	34.75	4.059e4	3.254e4	1.166	1.25	1.24	520.3	YES	NO	dd	dd	10.326

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	39.30	7.841e4	7.802e4	0.978	1.00	1.05	1280.8	YES	NO	bb	bb	45.963
2	1234678-HpCDF	38.65	4.225e4	4.139e4	1.003	1.02	1.05	681.3	YES	NO	bb	bb	22.185



## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

## Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	6.693e4	8.752e4	0.727	0.76	0.77	874.4	YES	NO	dd	dd	31.730
2	Total-tetrafurans	24.07	2.846e2	4.312e2	0.727	0.66	0.77	6.6	YES	NO	bd	dd	0.147
3	Total-tetrafurans	23.83	2.919e4	3.982e4	0.727	0.73	0.77	485.4	YES	NO	dd	dd	14.177
4	Total-tetrafurans	23.68	2.327e4	3.175e4	0.727	0.73	0.77	407.5	YES	NO	dd	dd	11.305
5	Total-tetrafurans	23.58	4.245e4	5.868e4	0.727	0.72	0.77	683.5	YES	NO	dd	dd	20.777
6	Total-tetrafurans	23.42	1.055e4	1.371e4	0.727	0.77	0.77	221.3	YES	NO	dd	dd	4.984
7	Total-tetrafurans	23.33	1.076e5	1.417e5	0.727	0.76	0.77	1781.1	YES	NO	dd	dd	51.206
8	Total-tetrafurans	23.23	2.855e5	3.772e5	0.727	0.76	0.77	4174.3	YES	NO	dd	dd	136.140
9	Total-tetrafurans	23.05	6.721e4	9.699e4	0.727	0.69	0.77	1077.7	YES	NO	dd	dd	33.733
10	Total-tetrafurans	22.34	3.764e4	5.059e4	0.727	0.74	0.77	668.6	YES	NO	bb	bb	18.126
11	1368-TCDF	22.09	1.760e4	2.446e4	0.802	0.72	0.77	301.3	YES	NO	bb	bb	7.836
12	Total-tetrafurans	25.82	1.727e4	2.187e4	0.727	0.79	0.77	267.5	YES	NO	db	db	8.041
13	Total-tetrafurans	25.72	7.815e3	9.550e3	0.727	0.82	0.77	132.4	YES	NO	dd	dd	3.567
14	2378-TCDF	25.59	1.009e4	1.247e4	0.702	0.81	0.77	158.8	YES	NO	dd	bd	4.803
15	Total-tetrafurans	25.35	9.646e4	1.256e5	0.727	0.77	0.77	1313.8	YES	NO	bd	bb	45.629
16	Total-tetrafurans	25.08	8.711e3	1.062e4	0.727	0.82	0.77	119.6	YES	NO	db	dd	3.970
17	Total-tetrafurans	24.90	2.305e4	3.111e4	0.727	0.74	0.77	393.1	YES	NO	bd	dd	11.127
18	Total-tetrafurans	24.67	3.657e4	4.859e4	0.727	0.75	0.77	597.4	YES	NO	db	dd	17.495
19	Total-tetrafurans	24.49	4.768e4	6.211e4	0.727	0.77	0.77	796.4	YES	NO	dd	dd	22.555
20	Total-pentafurans	29.18	8.796e3	5.867e3	0.654	1.50	1.55	106.6	YES	NO	bd	bd	3.582
21	Total-pentafurans	28.71	1.702e5	1.082e5	0.654	1.57	1.55	1459.2	YES	NO	db	db	67.996
22	Total-pentafurans	28.52	1.252e5	8.148e4	0.654	1.54	1.55	1263.5	YES	NO	dd	dd	50.493
23	Total-pentafurans	28.41	2.093e4	1.403e4	0.654	1.49	1.55	242.2	YES	NO	bd	bd	8.539
24	23478-PeCDF	31.10	3.599e4	2.424e4	0.786	1.48	1.55	380.1	YES	NO	db	db	12.528
25	Total-pentafurans	30.94	5.207e3	3.170e3	0.654	1.64	1.55	63.4	YES	NO	dd	dd	2.046
26	Total-pentafurans	30.84	2.705e4	1.827e4	0.654	1.48	1.55	309.4	YES	NO	bd	bd	11.070
27	Total-pentafurans	30.06	4.260e3	2.936e3	0.654	1.45	1.55	46.2	YES	NO	db	db	1.758
28	Total-pentafurans	29.96	3.183e4	1.986e4	0.654	1.60	1.55	362.8	YES	NO	bd	bd	12.625
29	12378-PeCDF	29.76	5.934e3	3.561e3	0.679	1.67	1.55	62.4	YES	NO	bb	bb	2.182
30	Total-pentafurans	29.44	1.060e5	6.993e4	0.654	1.52	1.55	1037.1	YES	NO	db	db	42.979
31	Total-hexafurans	34.59	2.781e4	2.177e4	1.141	1.28	1.24	367.1	YES	NO	bd	bd	7.279
32	Total-hexafurans	34.11	4.334e4	3.475e4	1.141	1.25	1.24	556.9	YES	NO	bb	bb	11.462
33	Total-hexafurans	33.29	4.972e4	3.888e4	1.141	1.28	1.24	536.0	YES	NO	bb	bb	13.006
34	123468-HXCDF	33.08	1.220e4	9.571e3	1.169	1.27	1.24	163.9	YES	NO	bb	bb	3.067
35	123789-HxCDF	36.76	2.532e3	2.111e3	1.137	1.20	1.24	31.7	YES	NO	bb	bb	0.779
36	234678-HxCDF	35.77	7.433e3	6.518e3	1.140	1.14	1.24	63.1	YES	NO	bb	bb	2.063
37	Total-hexafurans	35.07	7.963e2	6.353e2	1.141	1.25	1.24	9.2	YES	NO	dd	dd	0.210



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123678-HxCDF	34.89	1.314e4	1.009e4	1.091	1.30	1.24	153.6	YES	NO	dd	dd	3.204
39	123478-HxCDF	34.75	4.059e4	3.254e4	1.166	1.25	1.24	520.3	YES	NO	dd	dd	10.326
40	Total-heptafurans	39.30	7.841e4	7.802e4	0.978	1.00	1.05	1280.8	YES	NO	bb	bb	45.963
41	1234678-HpCDF	38.65	4.225e4	4.139e4	1.003	1.02	1.05	681.3	YES	NO	bb	bb	22.185
42	OCDF	45.08	7.763e4	8.512e4	0.778	0.91	0.89	933.4	YES	NO	bd	bb	56.723
43	Total-penta1	27.03	4.839e4	3.319e4		1.46	1.55	598.2	YES	NO	bb	bb	13.888

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradoxins	25.20	1.473e3	1.785e3	1.024	0.83	0.77	24.1	YES	NO	bb	db	0.571
2	Total-tetradoxins	25.08	2.386e2	2.876e2	1.024	0.83	0.77	4.2	YES	NO	bb	dd	0.092
3	Total-tetradoxins	24.83	3.544e3	4.789e3	1.024	0.74	0.77	45.3	YES	NO	bb	bd	1.460
4	Total-tetradoxins	24.55	2.345e3	2.913e3	1.024	0.81	0.77	27.0	YES	NO	db	bb	0.921
5	Total-tetradoxins	23.84	7.640e2	1.007e3	1.024	0.76	0.77	10.4	YES	NO	bb	db	0.310
6	Total-tetradoxins	23.63	5.231e3	6.560e3	1.024	0.80	0.77	71.0	YES	NO	bb	bd	2.066
7	1368-TCDD	23.34	6.592e3	8.285e3	1.015	0.80	0.77	89.6	YES	NO	bb	bb	2.629

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.35	4.387e3	2.799e3	1.022	1.57	1.55	41.3	YES	NO	bb	bb	1.605
2	Total-pentadoxins	30.28	3.250e3	1.916e3	1.502	1.70	1.55	28.8	YES	NO	db	db	0.785
3	Total-pentadoxins	30.10	5.712e3	3.522e3	1.502	1.62	1.55	69.5	YES	NO	dd	dd	1.403
4	Total-pentadoxins	29.96	3.985e3	2.416e3	1.502	1.65	1.55	47.6	YES	NO	bd	bd	0.973
5	Total-pentadoxins	29.75	7.448e3	5.029e3	1.502	1.48	1.55	93.9	YES	NO	bb	bb	1.896
6	Total-pentadoxins	29.13	1.311e3	8.722e2	1.502	1.50	1.55	17.6	YES	NO	bb	bb	0.332
7	12479-PECDD	28.68	1.754e4	1.168e4	2.301	1.50	1.55	145.4	YES	NO	bb	bb	2.898

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk****HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.39	1.137e4	9.271e3	0.907	1.23	1.24	109.0	YES	NO	bb	bb	3.530
2	Total-hexadioxins	36.16	2.451e3	1.957e3	1.005	1.25	1.24	23.7	YES	NO	db	db	0.681
3	123678-HxCDD	36.01	1.816e4	1.580e4	1.001	1.15	1.24	173.2	YES	NO	dd	dd	5.082
4	123478-HxCDD	35.89	4.019e3	3.248e3	0.996	1.24	1.24	40.4	YES	NO	bd	bd	1.174
5	Total-hexadioxins	35.10	3.476e3	2.734e3	1.005	1.27	1.24	35.7	YES	NO	db	db	0.959
6	Total-hexadioxins	34.99	5.108e4	4.136e4	1.005	1.23	1.24	321.2	YES	NO	bd	bd	14.272
7	Total-hexadioxins	34.63	1.142e4	9.398e3	1.005	1.21	1.24	104.3	YES	NO	bb	bb	3.214
8	124679-HXCDD	33.86	3.374e4	2.807e4	1.115	1.20	1.24	296.0	YES	NO	bb	bb	8.916

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.13	2.033e5	2.011e5	1.039	1.01	1.05	2001.3	YES	NO	bb	bb	106.305
2	1234679-HPCDD	39.09	2.504e5	2.466e5	1.137	1.02	1.05	2714.0	YES	NO	bb	bb	119.410

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk**

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradoxins	25.20	1.473e3	1.785e3	1.024	0.83	0.77	24.1	YES	NO	bb	db	0.571
2	Total-tetradoxins	25.08	2.386e2	2.876e2	1.024	0.83	0.77	4.2	YES	NO	bb	dd	0.092
3	Total-tetradoxins	24.83	3.544e3	4.789e3	1.024	0.74	0.77	45.3	YES	NO	bb	bd	1.460
4	Total-tetradoxins	24.55	2.345e3	2.913e3	1.024	0.81	0.77	27.0	YES	NO	db	bb	0.921
5	Total-tetradoxins	23.84	7.640e2	1.007e3	1.024	0.76	0.77	10.4	YES	NO	bb	db	0.310
6	Total-tetradoxins	23.63	5.231e3	6.560e3	1.024	0.80	0.77	71.0	YES	NO	bb	bd	2.066
7	1368-TCDD	23.34	6.592e3	8.285e3	1.015	0.80	0.77	89.6	YES	NO	bb	bb	2.629
8	12378-PeCDD	31.35	4.387e3	2.799e3	1.022	1.57	1.55	41.3	YES	NO	bb	bb	1.605
9	Total-pentadoxins	30.28	3.250e3	1.916e3	1.502	1.70	1.55	28.8	YES	NO	db	db	0.785
10	Total-pentadoxins	30.10	5.712e3	3.522e3	1.502	1.62	1.55	69.5	YES	NO	dd	dd	1.403
11	Total-pentadoxins	29.96	3.985e3	2.416e3	1.502	1.65	1.55	47.6	YES	NO	bd	bd	0.973
12	Total-pentadoxins	29.75	7.448e3	5.029e3	1.502	1.48	1.55	93.9	YES	NO	bb	bb	1.896
13	Total-pentadoxins	29.13	1.311e3	8.722e2	1.502	1.50	1.55	17.6	YES	NO	bb	bb	0.332
14	12479-PECDD	28.68	1.754e4	1.168e4	2.301	1.50	1.55	145.4	YES	NO	bb	bb	2.898
15	123789-HxCDD	36.39	1.137e4	9.271e3	0.907	1.23	1.24	109.0	YES	NO	bb	bb	3.530
16	Total-hexadoxins	36.16	2.451e3	1.957e3	1.005	1.25	1.24	23.7	YES	NO	db	db	0.681
17	123678-HxCDD	36.01	1.816e4	1.580e4	1.001	1.15	1.24	173.2	YES	NO	dd	dd	5.082
18	123478-HxCDD	35.89	4.019e3	3.248e3	0.996	1.24	1.24	40.4	YES	NO	bd	bd	1.174
19	Total-hexadoxins	35.10	3.476e3	2.734e3	1.005	1.27	1.24	35.7	YES	NO	db	db	0.959
20	Total-hexadoxins	34.99	5.108e4	4.136e4	1.005	1.23	1.24	321.2	YES	NO	bd	bd	14.272
21	Total-hexadoxins	34.63	1.142e4	9.398e3	1.005	1.21	1.24	104.3	YES	NO	bb	bb	3.214
22	124679-HXCDD	33.86	3.374e4	2.807e4	1.115	1.20	1.24	296.0	YES	NO	bb	bb	8.916
23	1234678-HpCDD	40.13	2.033e5	2.011e5	1.039	1.01	1.05	2001.3	YES	NO	bb	bb	106.305
24	1234679-HPCDD	39.09	2.504e5	2.466e5	1.137	1.02	1.05	2714.0	YES	NO	bb	bb	119.410
25	OCDD	44.87	1.306e6	1.504e6	0.920	0.87	0.89	11490.4	YES	NO	bb	bb	827.803

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	6.693e4	8.752e4	0.727	0.76	0.77	874.4	YES	NO	dd	dd	31.730
2	Total-tetrafurans	24.07	2.846e2	4.312e2	0.727	0.66	0.77	6.6	YES	NO	bd	dd	0.147
3	Total-tetrafurans	23.83	2.919e4	3.982e4	0.727	0.73	0.77	485.4	YES	NO	dd	dd	14.177
4	Total-tetrafurans	23.68	2.327e4	3.175e4	0.727	0.73	0.77	407.5	YES	NO	dd	dd	11.305
5	Total-tetrafurans	23.58	4.245e4	5.868e4	0.727	0.72	0.77	683.5	YES	NO	dd	dd	20.777
6	Total-tetrafurans	23.42	1.055e4	1.371e4	0.727	0.77	0.77	221.3	YES	NO	dd	dd	4.984
7	Total-tetrafurans	23.33	1.076e5	1.417e5	0.727	0.76	0.77	1781.1	YES	NO	dd	dd	51.206
8	Total-tetrafurans	23.23	2.855e5	3.772e5	0.727	0.76	0.77	4174.3	YES	NO	dd	dd	136.140
9	Total-tetrafurans	23.05	6.721e4	9.699e4	0.727	0.69	0.77	1077.7	YES	NO	dd	dd	33.733
10	Total-tetrafurans	22.34	3.764e4	5.059e4	0.727	0.74	0.77	668.6	YES	NO	bb	bb	18.126
11	1368-TCDF	22.09	1.760e4	2.446e4	0.802	0.72	0.77	301.3	YES	NO	bb	bb	7.836
12	Total-tetrafurans	25.82	1.727e4	2.187e4	0.727	0.79	0.77	267.5	YES	NO	db	db	8.041
13	Total-tetrafurans	25.72	7.815e3	9.550e3	0.727	0.82	0.77	132.4	YES	NO	dd	dd	3.567
14	2378-TCDF	25.59	1.009e4	1.247e4	0.702	0.81	0.77	158.8	YES	NO	dd	bd	4.803
15	Total-tetrafurans	25.35	9.646e4	1.256e5	0.727	0.77	0.77	1313.8	YES	NO	bd	bb	45.629
16	Total-tetrafurans	25.08	8.711e3	1.062e4	0.727	0.82	0.77	119.6	YES	NO	db	dd	3.970
17	Total-tetrafurans	24.90	2.305e4	3.111e4	0.727	0.74	0.77	393.1	YES	NO	bd	dd	11.127
18	Total-tetrafurans	24.67	3.657e4	4.859e4	0.727	0.75	0.77	597.4	YES	NO	db	dd	17.495
19	Total-tetrafurans	24.49	4.768e4	6.211e4	0.727	0.77	0.77	796.4	YES	NO	dd	dd	22.555
20	Total-pentafurans	29.18	8.796e3	5.867e3	0.654	1.50	1.55	106.6	YES	NO	bd	bd	3.582
21	Total-pentafurans	28.71	1.702e5	1.082e5	0.654	1.57	1.55	1459.2	YES	NO	db	db	67.996
22	Total-pentafurans	28.52	1.252e5	8.148e4	0.654	1.54	1.55	1263.5	YES	NO	dd	dd	50.493
23	Total-pentafurans	28.41	2.093e4	1.403e4	0.654	1.49	1.55	242.2	YES	NO	bd	bd	8.539
24	23478-PeCDF	31.10	3.599e4	2.424e4	0.786	1.48	1.55	380.1	YES	NO	db	db	12.528
25	Total-pentafurans	30.94	5.207e3	3.170e3	0.654	1.64	1.55	63.4	YES	NO	dd	dd	2.046
26	Total-pentafurans	30.84	2.705e4	1.827e4	0.654	1.48	1.55	309.4	YES	NO	bd	bd	11.070
27	Total-pentafurans	30.06	4.260e3	2.936e3	0.654	1.45	1.55	46.2	YES	NO	db	db	1.758
28	Total-pentafurans	29.96	3.183e4	1.986e4	0.654	1.60	1.55	362.8	YES	NO	bd	bd	12.625
29	12378-PeCDF	29.76	5.934e3	3.561e3	0.679	1.67	1.55	62.4	YES	NO	bb	bb	2.182
30	Total-pentafurans	29.44	1.060e5	6.993e4	0.654	1.52	1.55	1037.1	YES	NO	db	db	42.979
31	Total-hexafurans	34.59	2.781e4	2.177e4	1.141	1.28	1.24	367.1	YES	NO	bd	bd	7.279
32	Total-hexafurans	34.11	4.334e4	3.475e4	1.141	1.25	1.24	556.9	YES	NO	bb	bb	11.462
33	Total-hexafurans	33.29	4.972e4	3.888e4	1.141	1.28	1.24	536.0	YES	NO	bb	bb	13.006
34	123468-HXCDF	33.08	1.220e4	9.571e3	1.169	1.27	1.24	163.9	YES	NO	bb	bb	3.067
35	123789-HxCDF	36.76	2.532e3	2.111e3	1.137	1.20	1.24	31.7	YES	NO	bb	bb	0.779
36	234678-HxCDF	35.77	7.433e3	6.518e3	1.140	1.14	1.24	63.1	YES	NO	bb	bb	2.063
37	Total-hexafurans	35.07	7.963e2	6.353e2	1.141	1.25	1.24	9.2	YES	NO	dd	dd	0.210

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123678-HxCDF	34.89	1.314e4	1.009e4	1.091	1.30	1.24	153.6	YES	NO	dd	dd	3.204
39	123478-HxCDF	34.75	4.059e4	3.254e4	1.166	1.25	1.24	520.3	YES	NO	dd	dd	10.326
40	Total-heptafurans	39.30	7.841e4	7.802e4	0.978	1.00	1.05	1280.8	YES	NO	bb	bb	45.963
41	1234678-HpCDF	38.65	4.225e4	4.139e4	1.003	1.02	1.05	681.3	YES	NO	bb	bb	22.185
42	OCDF	45.08	7.763e4	8.512e4	0.778	0.91	0.89	933.4	YES	NO	bd	bb	56.723
43	Total-penta1	27.03	4.839e4	3.319e4		1.46	1.55	598.2	YES	NO	bb	bb	13.888
44	Total-tetradioxins	25.20	1.473e3	1.785e3	1.024	0.83	0.77	24.1	YES	NO	bb	db	0.571
45	Total-tetradioxins	25.08	2.386e2	2.876e2	1.024	0.83	0.77	4.2	YES	NO	bb	dd	0.092
46	Total-tetradioxins	24.83	3.544e3	4.789e3	1.024	0.74	0.77	45.3	YES	NO	bb	bd	1.460
47	Total-tetradioxins	24.55	2.345e3	2.913e3	1.024	0.81	0.77	27.0	YES	NO	db	bb	0.921
48	Total-tetradioxins	23.84	7.640e2	1.007e3	1.024	0.76	0.77	10.4	YES	NO	bb	db	0.310
49	Total-tetradioxins	23.63	5.231e3	6.560e3	1.024	0.80	0.77	71.0	YES	NO	bb	bd	2.066
50	1368-TCDD	23.34	6.592e3	8.285e3	1.015	0.80	0.77	89.6	YES	NO	bb	bb	2.629
51	12378-PeCDD	31.35	4.387e3	2.799e3	1.022	1.57	1.55	41.3	YES	NO	bb	bb	1.605
52	Total-pentadioxins	30.28	3.250e3	1.916e3	1.502	1.70	1.55	28.8	YES	NO	db	db	0.785
53	Total-pentadioxins	30.10	5.712e3	3.522e3	1.502	1.62	1.55	69.5	YES	NO	dd	dd	1.403
54	Total-pentadioxins	29.96	3.985e3	2.416e3	1.502	1.65	1.55	47.6	YES	NO	bd	bd	0.973
55	Total-pentadioxins	29.75	7.448e3	5.029e3	1.502	1.48	1.55	93.9	YES	NO	bb	bb	1.896
56	Total-pentadioxins	29.13	1.311e3	8.722e2	1.502	1.50	1.55	17.6	YES	NO	bb	bb	0.332
57	12479-PECDD	28.68	1.754e4	1.168e4	2.301	1.50	1.55	145.4	YES	NO	bb	bb	2.898
58	123789-HxCDD	36.39	1.137e4	9.271e3	0.907	1.23	1.24	109.0	YES	NO	bb	bb	3.530
59	Total-hexadioxins	36.16	2.451e3	1.957e3	1.005	1.25	1.24	23.7	YES	NO	db	db	0.681
60	123678-HxCDD	36.01	1.816e4	1.580e4	1.001	1.15	1.24	173.2	YES	NO	dd	dd	5.082
61	123478-HxCDD	35.89	4.019e3	3.248e3	0.996	1.24	1.24	40.4	YES	NO	bd	bd	1.174
62	Total-hexadioxins	35.10	3.476e3	2.734e3	1.005	1.27	1.24	35.7	YES	NO	db	db	0.959
63	Total-hexadioxins	34.99	5.108e4	4.136e4	1.005	1.23	1.24	321.2	YES	NO	bd	bd	14.272
64	Total-hexadioxins	34.63	1.142e4	9.398e3	1.005	1.21	1.24	104.3	YES	NO	bb	bb	3.214
65	124679-HXCDD	33.86	3.374e4	2.807e4	1.115	1.20	1.24	296.0	YES	NO	bb	bb	8.916
66	1234678-HpCDD	40.13	2.033e5	2.011e5	1.039	1.01	1.05	2001.3	YES	NO	bb	bb	106.305
67	1234679-HPCDD	39.09	2.504e5	2.466e5	1.137	1.02	1.05	2714.0	YES	NO	bb	bb	119.410
68	OCDD	44.87	1.306e6	1.504e6	0.920	0.87	0.89	11490.4	YES	NO	bb	bb	827.803

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.79	1.898e4					1.5	NO		db		
2	FUNCTION1 PFK	22.75	4.426e4					1.7	NO		dd		
3	FUNCTION1 PFK	22.67	1.427e4					1.0	NO		dd		
4	FUNCTION1 PFK	22.62	1.148e4					1.0	NO		dd		
5	FUNCTION1 PFK	22.58	1.977e4					1.1	NO		bd		
6	FUNCTION1 PFK	22.47	2.700e4					0.9	NO		bb		
7	FUNCTION1 PFK	21.65	9.532e4					2.2	NO		bb		
8	FUNCTION1 PFK	21.42	1.058e4					0.9	NO		bb		
9	FUNCTION1 PFK	21.30	4.508e3					0.6	NO		db		
10	FUNCTION1 PFK	21.25	3.365e4					1.8	NO		dd		
11	FUNCTION1 PFK	21.18	9.666e4					3.6	YES		bd		
12	FUNCTION1 PFK	21.07	1.550e5					6.9	YES		bb		
13	FUNCTION1 PFK	26.45	4.880e4					1.5	NO		dd		
14	FUNCTION1 PFK	26.40	1.265e4					1.0	NO		bd		
15	FUNCTION1 PFK	26.21	6.899e4					1.1	NO		bb		
16	FUNCTION1 PFK	26.07	2.289e4					1.4	NO		bb		
17	FUNCTION1 PFK	25.52	6.684e3					0.6	NO		bb		
18	FUNCTION1 PFK	25.25	1.052e4					0.9	NO		db		
19	FUNCTION1 PFK	25.20	1.079e4					0.8	NO		bd		
20	FUNCTION1 PFK	25.07	1.756e4					1.3	NO		bb		
21	FUNCTION1 PFK	24.49	1.068e4					0.6	NO		bb		
22	FUNCTION1 PFK	24.02	3.676e3					0.6	NO		bb		
23	FUNCTION1 PFK	23.98	4.439e3					0.6	NO		db		
24	FUNCTION1 PFK	23.94	1.797e4					0.9	NO		bd		
25	FUNCTION1 PFK	23.53	3.801e4					1.4	NO		db		
26	FUNCTION1 PFK	23.44	1.542e4					1.2	NO		bd		
27	FUNCTION1 PFK	23.25	2.525e3					0.4	NO		bb		
28	FUNCTION1 PFK	23.08	2.780e3					0.4	NO		bb		
29	FUNCTION1 PFK	27.34	1.215e4					1.0	NO		db		
30	FUNCTION1 PFK	27.30	1.024e4					0.9	NO		dd		
31	FUNCTION1 PFK	27.26	1.143e4					0.9	NO		dd		
32	FUNCTION1 PFK	27.22	2.332e4					1.4	NO		bd		
33	FUNCTION1 PFK	26.86	2.933e4					1.3	NO		bb		
34	FUNCTION1 PFK	26.64	2.593e4					1.6	NO		db		
35	FUNCTION1 PFK	26.59	5.398e4					1.5	NO		dd		

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## PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.19	3.011e4					4.3	YES		bb		0.000

## PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.47	2.428e4					1.1	NO		bb		0.000
2	FUNCTION3 PFK	34.28	5.474e3					0.7	NO		bb		0.000
3	FUNCTION3 PFK	34.24	3.716e3					0.6	NO		bb		0.000
4	FUNCTION3 PFK	33.65	5.310e3					0.7	NO		bb		0.000
5	FUNCTION3 PFK	33.13	7.741e3					0.8	NO		bb		0.000
6	FUNCTION3 PFK	32.79	1.457e4					1.2	NO		bb		0.000
7	FUNCTION3 PFK	37.37	1.226e4					1.0	NO		bb		0.000
8	FUNCTION3 PFK	37.16	3.891e4					1.9	NO		db		0.000
9	FUNCTION3 PFK	37.09	4.759e4					3.0	YES		dd		0.000
10	FUNCTION3 PFK	36.88	5.489e5					7.4	YES		dd		0.000
11	FUNCTION3 PFK	36.77	4.989e5					8.9	YES		bd		0.000
12	FUNCTION3 PFK	36.40	1.057e6					3.6	YES		bb		0.000
13	FUNCTION3 PFK	36.12	2.938e4					1.7	NO		bb		0.000
14	FUNCTION3 PFK	35.85	1.466e4					1.2	NO		bb		0.000
15	FUNCTION3 PFK	35.79	1.304e4					1.1	NO		bb		0.000
16	FUNCTION3 PFK	35.66	1.484e4					1.0	NO		bb		0.000
17	FUNCTION3 PFK	35.59	3.330e4					1.6	NO		db		0.000
18	FUNCTION3 PFK	35.52	1.222e4					1.0	NO		dd		0.000
19	FUNCTION3 PFK	35.49	1.993e4					1.3	NO		dd		0.000
20	FUNCTION3 PFK	35.43	4.545e4					2.5	NO		bd		0.000
21	FUNCTION3 PFK	35.38	3.598e3					0.6	NO		bb		0.000
22	FUNCTION3 PFK	35.05	5.744e3					0.6	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk****PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.08	8.820e3					1.3	NO		bb		
2	FUNCTION4 PFK	38.87	7.606e3					1.1	NO		bb		
3	FUNCTION4 PFK	38.77	2.269e3					0.6	NO		bb		
4	FUNCTION4 PFK	38.48	1.599e3					0.7	NO		bb		
5	FUNCTION4 PFK	38.44	4.738e3					1.2	NO		bb		
6	FUNCTION4 PFK	38.36	3.695e3					0.8	NO		bb		
7	FUNCTION4 PFK	38.28	9.385e3					1.2	NO		db		
8	FUNCTION4 PFK	38.24	8.813e3					1.6	NO		bd		
9	FUNCTION4 PFK	38.15	2.394e4					1.9	NO		db		
10	FUNCTION4 PFK	38.05	7.426e3					1.2	NO		bd		
11	FUNCTION4 PFK	37.95	3.142e3					0.7	NO		bb		
12	FUNCTION4 PFK	37.86	3.038e4					2.5	NO		db		
13	FUNCTION4 PFK	37.78	1.840e4					2.4	NO		dd		
14	FUNCTION4 PFK	37.71	1.884e4					2.7	NO		dd		
15	FUNCTION4 PFK	37.68	1.274e4					2.9	NO		bd		
16	FUNCTION4 PFK	41.51	3.579e4					2.1	NO		bd		
17	FUNCTION4 PFK	41.38	5.216e3					1.1	NO		bb		
18	FUNCTION4 PFK	40.78	3.994e3					0.7	NO		bb		
19	FUNCTION4 PFK	40.67	5.188e3					1.0	NO		bb		
20	FUNCTION4 PFK	40.49	1.207e4					1.7	NO		bb		
21	FUNCTION4 PFK	40.28	1.031e3					0.5	NO		bb		
22	FUNCTION4 PFK	40.14	5.078e3					0.9	NO		bb		
23	FUNCTION4 PFK	40.04	7.709e3					1.7	NO		bb		
24	FUNCTION4 PFK	39.99	6.598e3					1.3	NO		db		
25	FUNCTION4 PFK	39.95	1.960e3					0.6	NO		bd		
26	FUNCTION4 PFK	39.71	2.694e3					0.7	NO		db		
27	FUNCTION4 PFK	39.67	1.468e4					1.4	NO		dd		
28	FUNCTION4 PFK	39.60	1.417e4					1.8	NO		bd		
29	FUNCTION4 PFK	39.36	2.872e4					2.5	NO		bb		
30	FUNCTION4 PFK	39.28	9.550e3					1.1	NO		db		
31	FUNCTION4 PFK	39.16	3.227e4					2.3	NO		bd		
32	FUNCTION4 PFK	42.45	7.819e3					1.7	NO		bb		
33	FUNCTION4 PFK	42.35	1.018e4					1.9	NO		db		
34	FUNCTION4 PFK	42.30	4.447e3					0.9	NO		bd		
35	FUNCTION4 PFK	42.26	5.213e3					1.2	NO		db		
36	FUNCTION4 PFK	42.23	7.770e3					1.4	NO		bd		
37	FUNCTION4 PFK	42.18	8.998e2					0.4	NO		bb		



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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.96	6.889e3					1.1	NO		db		
39	FUNCTION4 PFK	41.91	1.012e4					1.9	NO		bd		
40	FUNCTION4 PFK	41.84	1.210e4					1.7	NO		db		
41	FUNCTION4 PFK	41.77	7.780e3					1.1	NO		dd		
42	FUNCTION4 PFK	41.70	2.501e4					2.3	NO		dd		
43	FUNCTION4 PFK	41.60	1.809e4					2.3	NO		dd		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.73	1.371e3					0.6	NO		bb		
2	FUNCTION5 PFK	42.70	1.733e3					0.7	NO		bb		
3	FUNCTION5 PFK	42.63	1.277e4					1.3	NO		bb		
4	FUNCTION5 PFK	45.74	3.325e3					0.8	NO		bb		
5	FUNCTION5 PFK	45.69	4.483e3					1.0	NO		bb		
6	FUNCTION5 PFK	45.59	1.638e3					0.7	NO		bb		
7	FUNCTION5 PFK	45.09	1.132e4					1.2	NO		bb		
8	FUNCTION5 PFK	45.05	7.280e3					1.4	NO		bb		
9	FUNCTION5 PFK	44.83	3.124e3					0.7	NO		bb		
10	FUNCTION5 PFK	44.73	1.239e3					0.5	NO		bb		
11	FUNCTION5 PFK	43.03	7.825e3					1.5	NO		bb		
12	FUNCTION5 PFK	42.83	7.145e3					1.3	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	24.29	8.181e1					2.0	NO		bb		0.000
2	FUNCTION1 HXCD...	23.57	1.021e2					1.4	NO		bb		0.000
3	FUNCTION1 HXCD...	23.43	1.648e2					3.8	YES		db		0.000
4	FUNCTION1 HXCD...	23.34	9.352e1					2.0	NO		bd		0.000
5	FUNCTION1 HXCD...	22.12	5.505e2					9.8	YES		bb		0.000
6	FUNCTION1 HXCD...	21.93	4.857e2					9.2	YES		bb		0.000
7	FUNCTION1 HXCD...	27.46	1.259e2					2.0	NO		bb		0.000
8	FUNCTION1 HXCD...	25.93	3.091e2					3.8	YES		db		0.000
9	FUNCTION1 HXCD...	25.82	7.295e1					1.7	NO		dd		0.000
10	FUNCTION1 HXCD...	25.70	7.033e2					11.1	YES		dd		0.000
11	FUNCTION1 HXCD...	25.56	1.156e2					2.2	NO		bd		0.000
12	FUNCTION1 HXCD...	24.62	1.130e2					2.4	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.98	9.502e1					2.8	NO		bb		0.000
2	FUNCTION2 HPCD...	29.69	1.302e2					3.9	YES		bb		0.000
3	FUNCTION2 HPCD...	29.13	8.417e1					1.7	NO		bb		0.000
4	FUNCTION2 HPCD...	28.76	8.154e1					2.3	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.98	7.030e1					2.4	NO		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.25	2.399e4					538.0	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
Printed: Monday, March 20, 2023 11:43:51 Pacific Daylight Time

**ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk**

**ETHERS6**

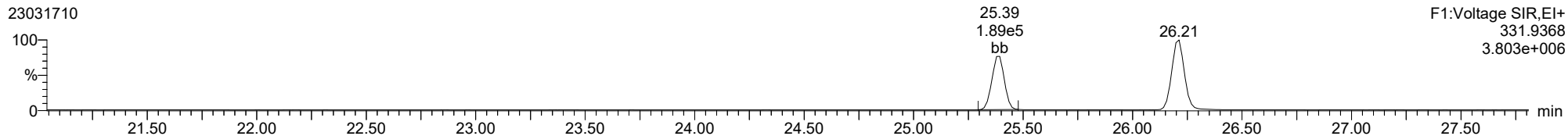
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

**13C-1234-TCDD**

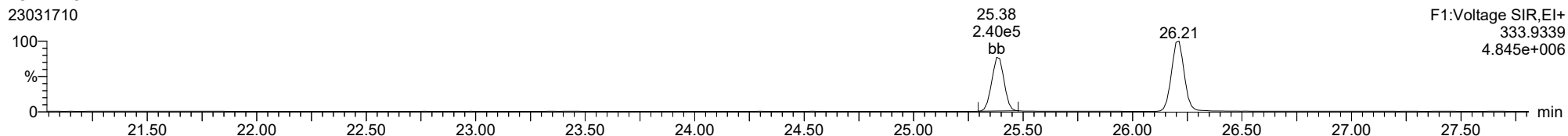
23031710



F1:Voltage SIR,El+  
331.9368  
3.803e+006

**13C-1234-TCDD**

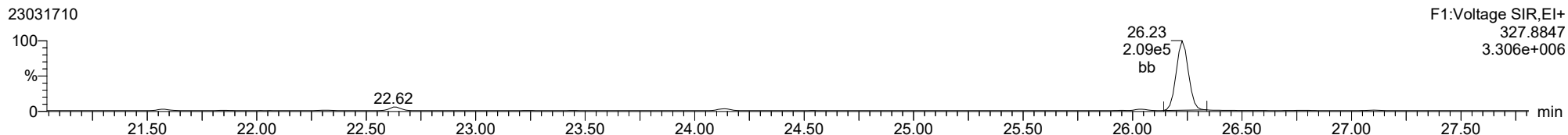
23031710



F1:Voltage SIR,El+  
333.9339  
4.845e+006

**37CL-2378-TCDD**

23031710

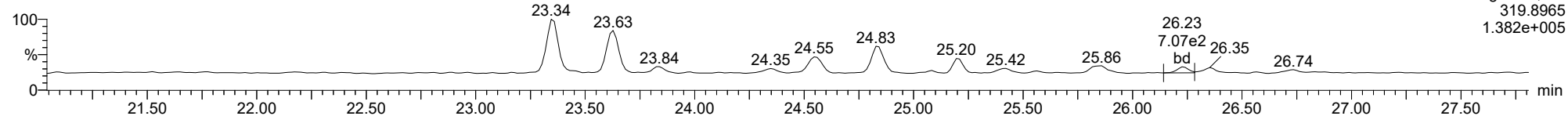


F1:Voltage SIR,El+  
327.8847  
3.306e+006

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

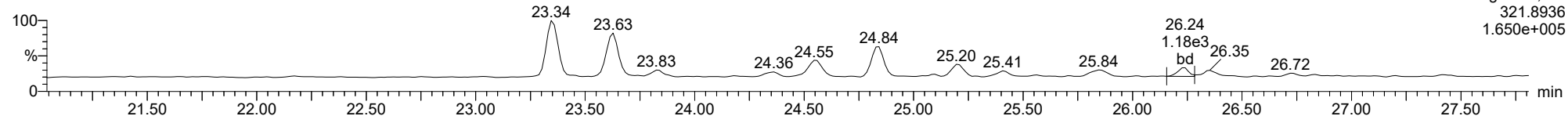
**2378-TCDD**

23031710



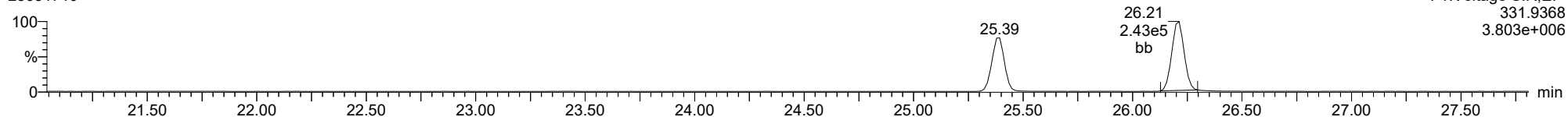
**2378-TCDD**

23031710



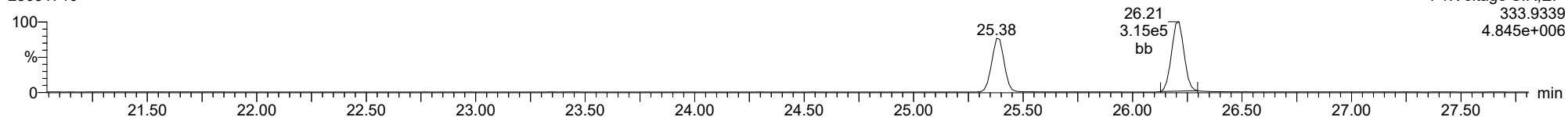
**13C-2378-TCDD**

23031710



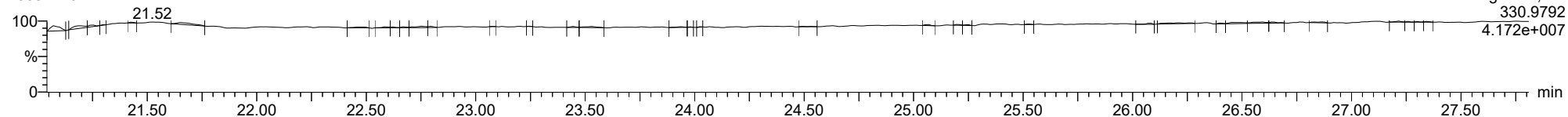
**13C-2378-TCDD**

23031710



**FUNCTION1 PFK**

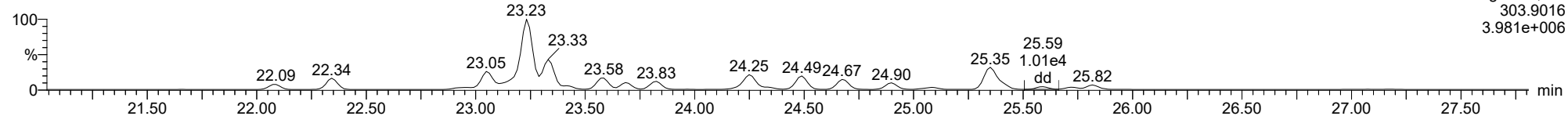
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

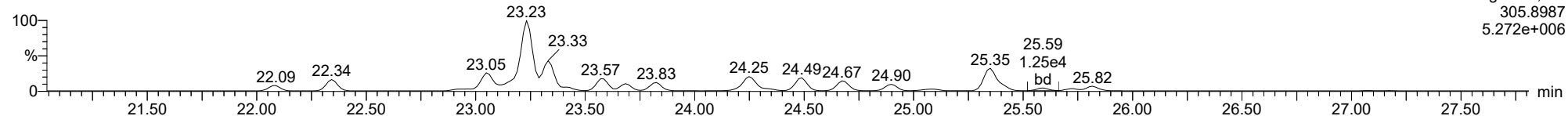
2378-TCDF

23031710



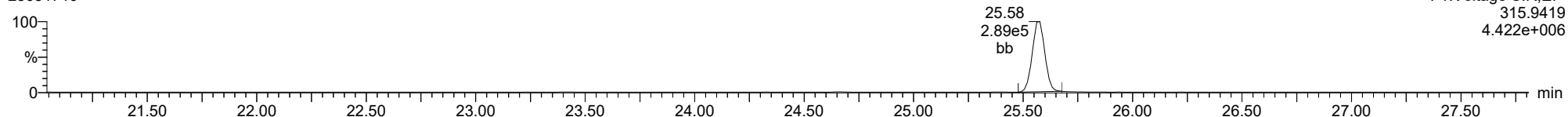
2378-TCDF

23031710



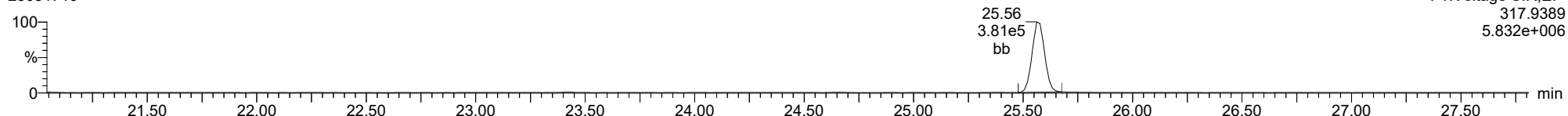
13C-2378-TCDF

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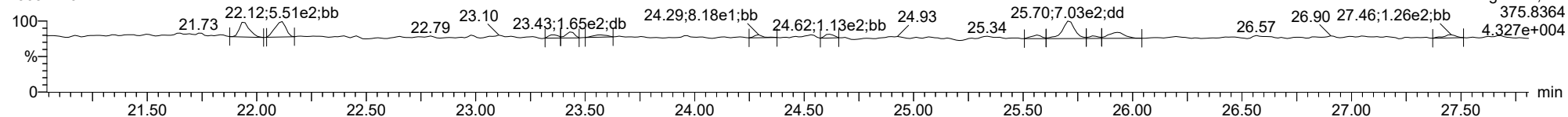
13C-2378-TCDF

23031710



FUNCTION1 HXCDPE

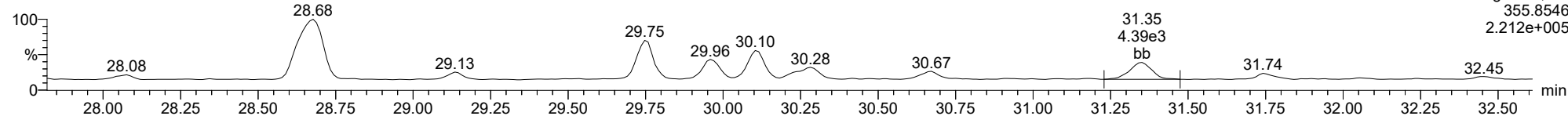
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

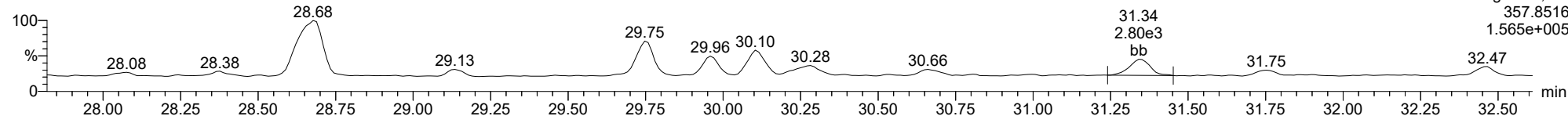
12378-PeCDD

23031710



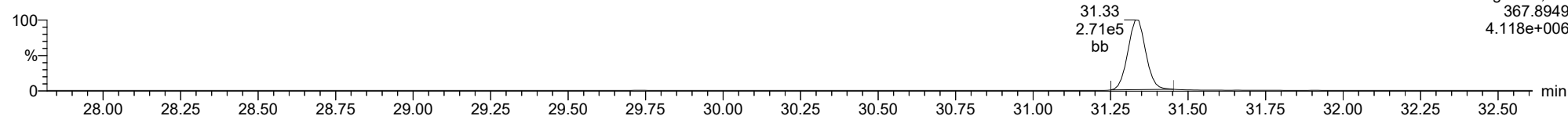
12378-PeCDD

23031710



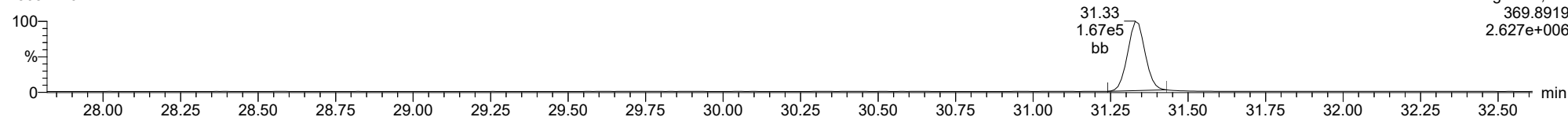
13C-12378-PeCDD

23031710



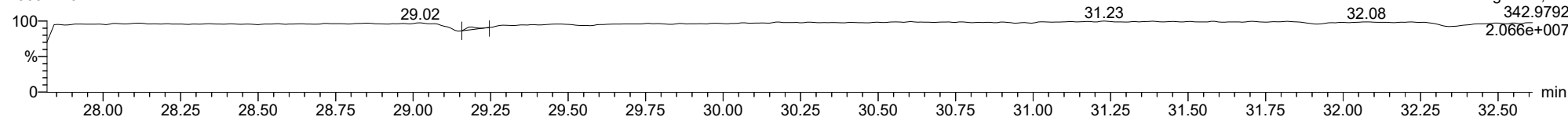
13C-12378-PeCDD

23031710



FUNCTION2 PFK

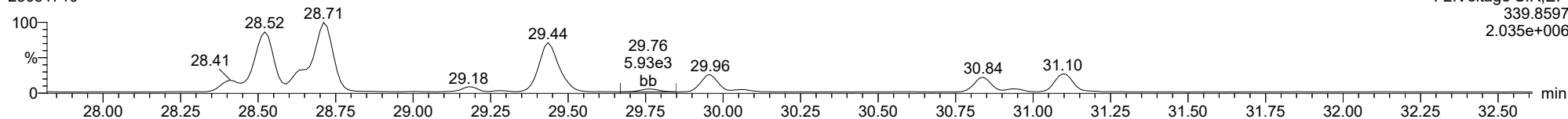
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

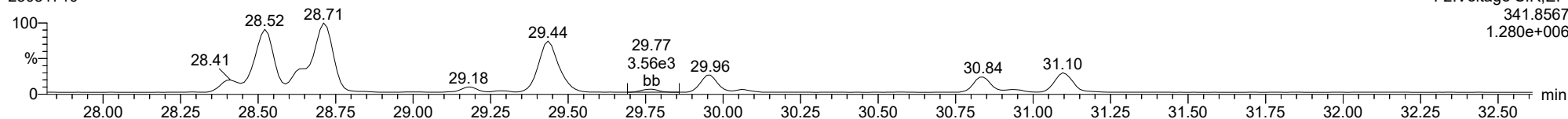
12378-PeCDF

23031710



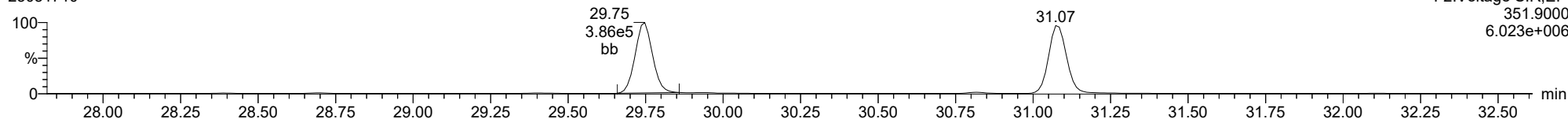
12378-PeCDF

23031710



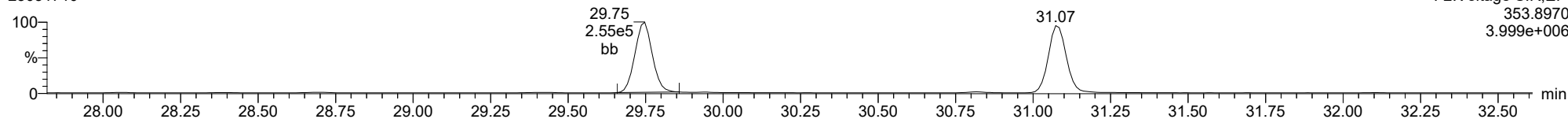
13C-12378-PeCDF

23031710



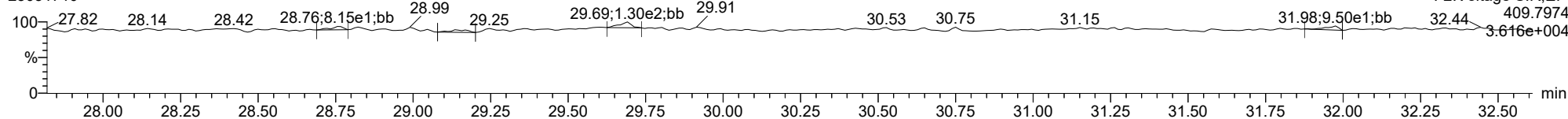
13C-12378-PeCDF

23031710



FUNCTION2 HPCDPE

23031710

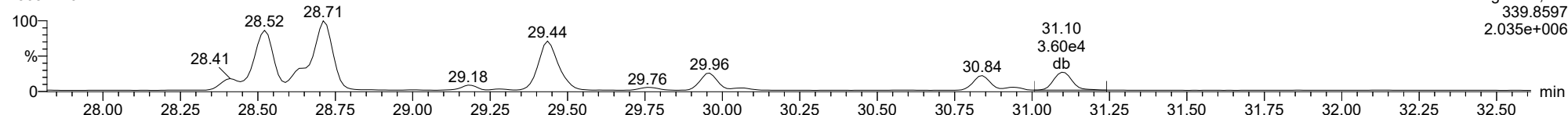




ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

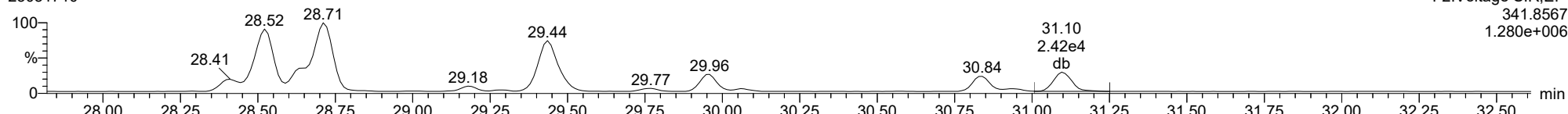
**23478-PeCDF**

23031710



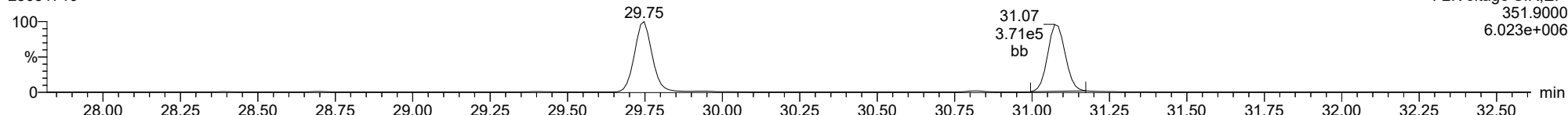
**23478-PeCDF**

23031710



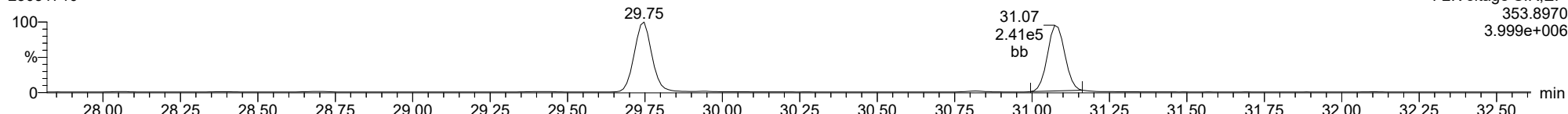
**13C-23478-PeCDF**

23031710



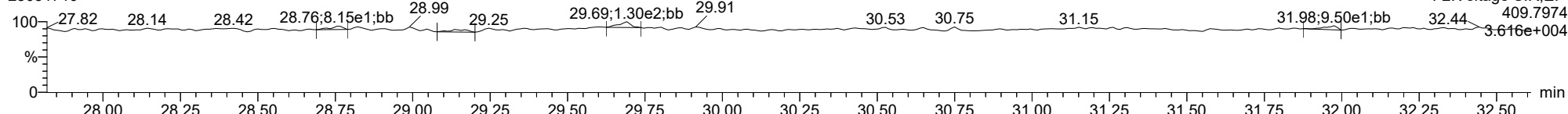
**13C-23478-PeCDF**

23031710



**FUNCTION2 HPCDPE**

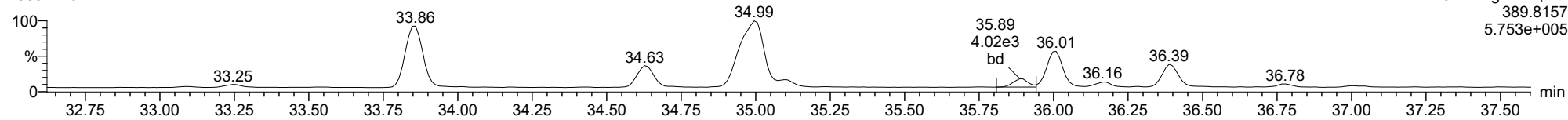
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

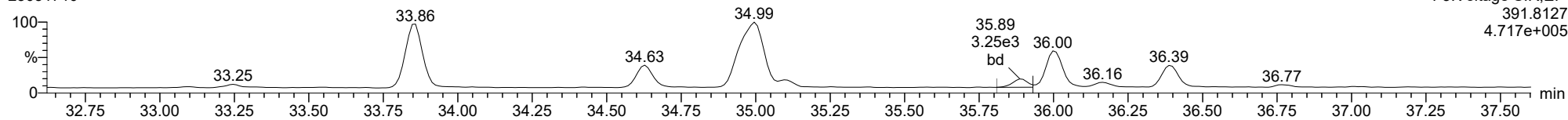
123478-HxCDD

23031710



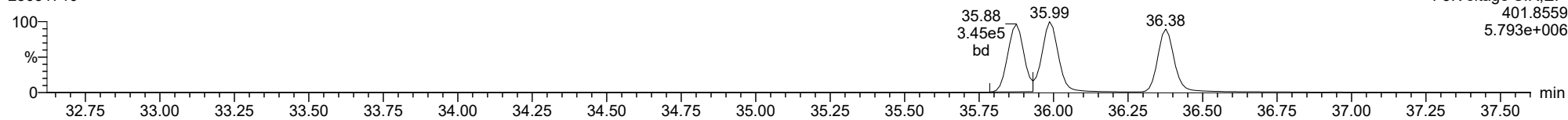
123478-HxCDD

23031710



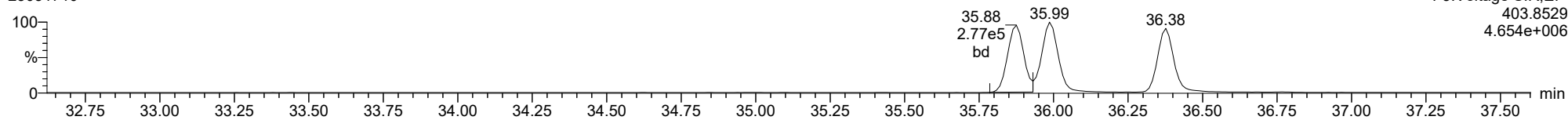
13C-123478-HxCDD

23031710



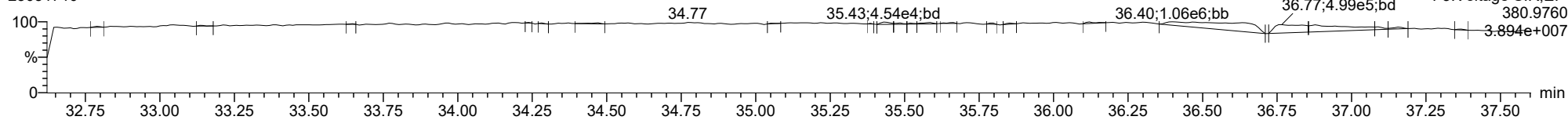
13C-123478-HxCDD

23031710



FUNCTION3 PFK

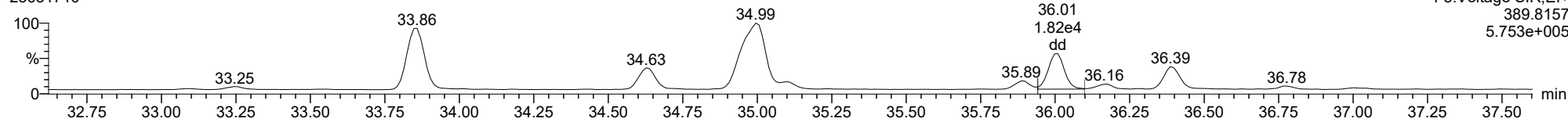
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

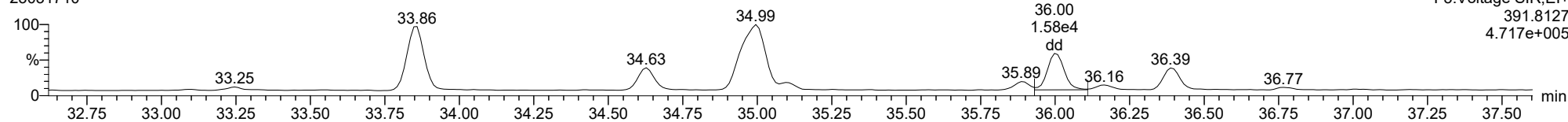
**123678-HxCDD**

23031710



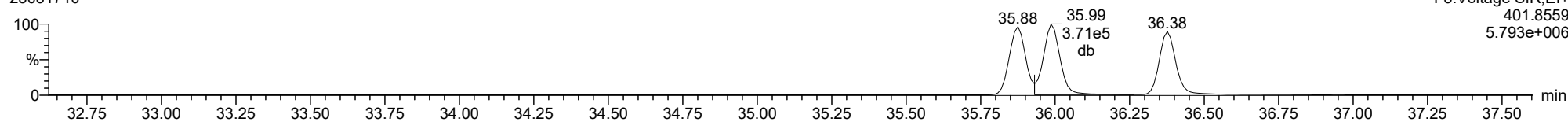
**123678-HxCDD**

23031710



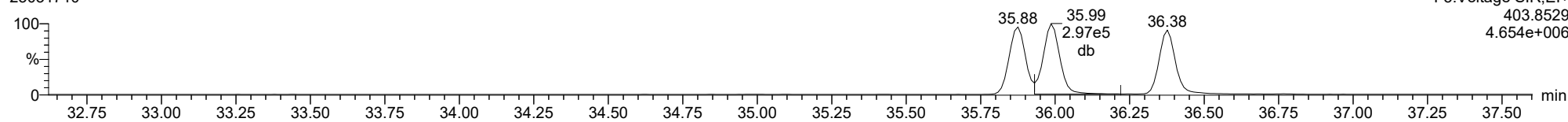
**13C-123678-HxCDD**

23031710



**13C-123678-HxCDD**

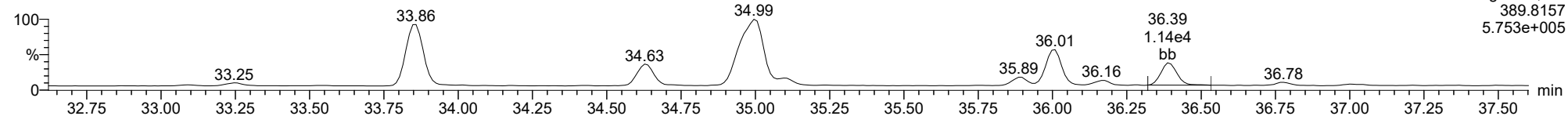
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

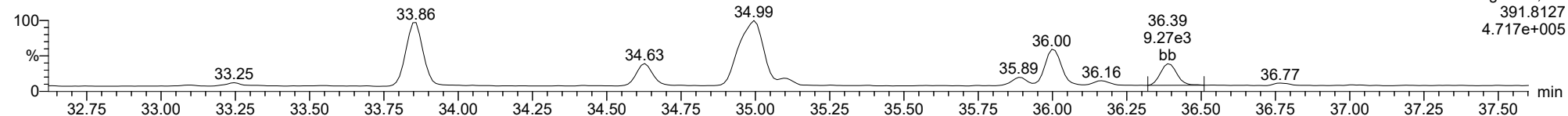
**123789-HxCDD**

23031710



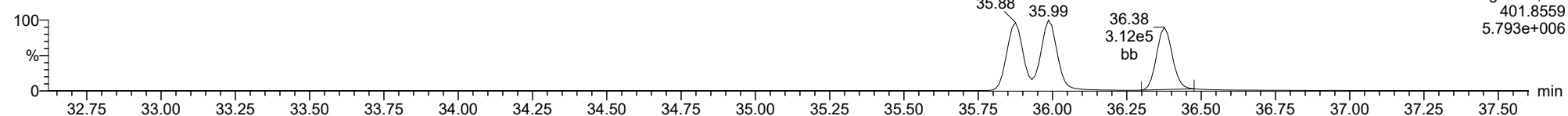
**123789-HxCDD**

23031710



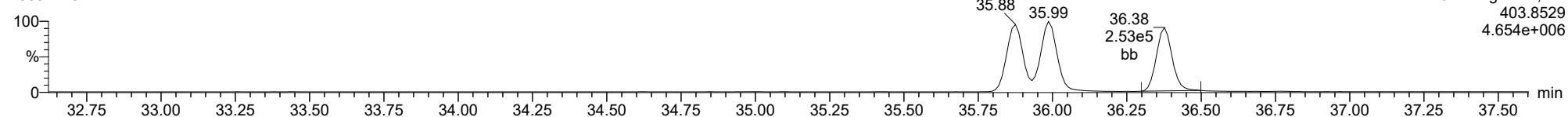
**13C-123789-HxCDD**

23031710



**13C-123789-HxCDD**

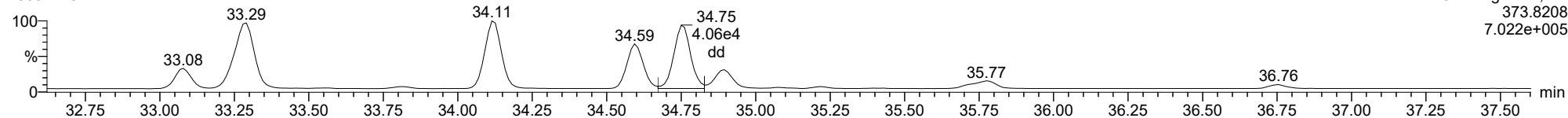
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

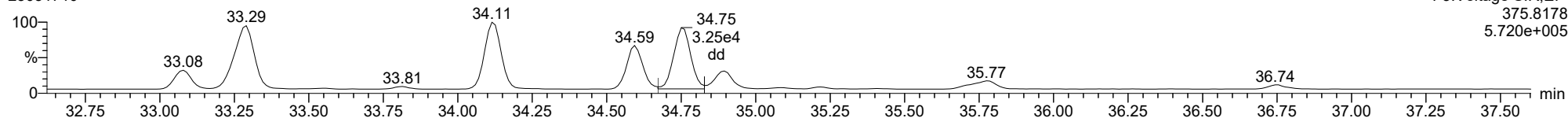
123478-HxCDF

23031710



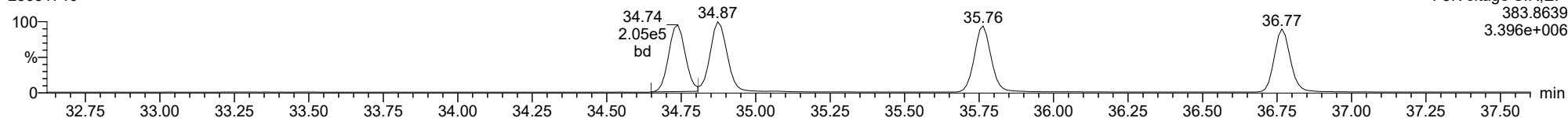
123478-HxCDF

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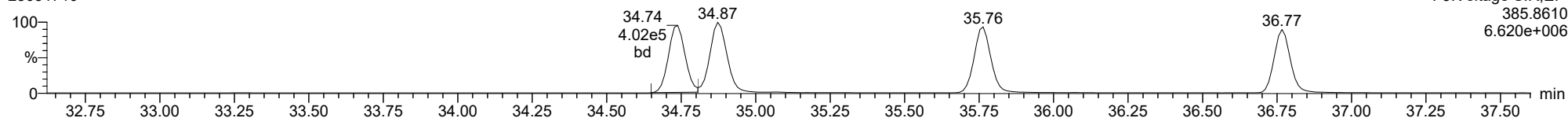
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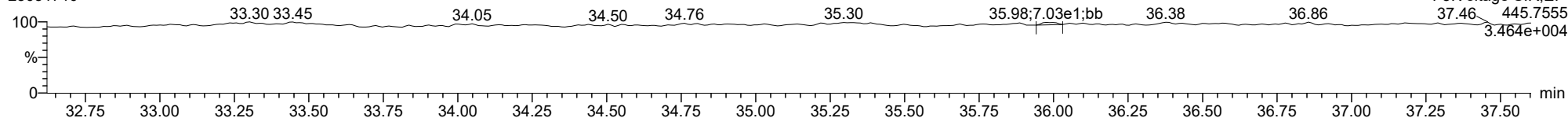
13C-123478-HxCDF

23031710



FUNCTION3 OCDPE

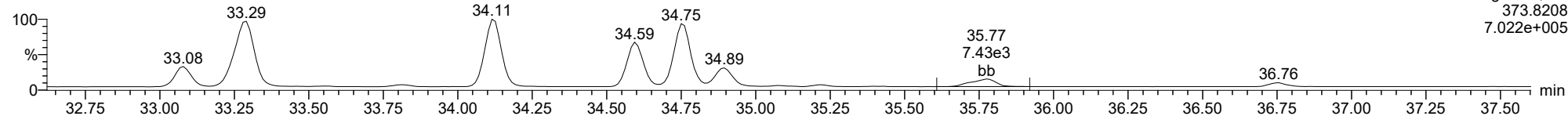
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

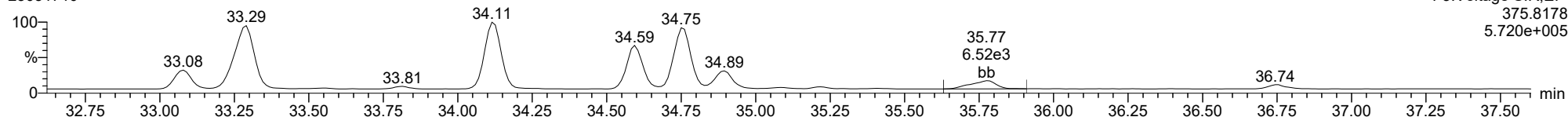
234678-HxCDF

23031710



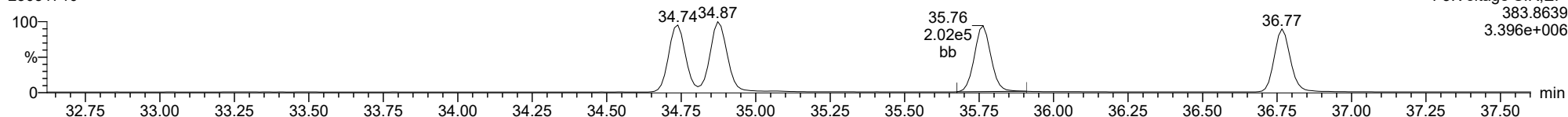
234678-HxCDF

23031710



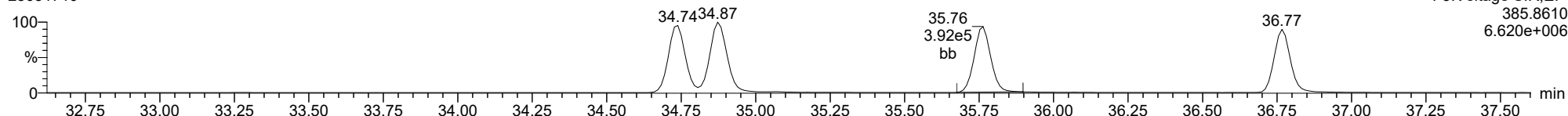
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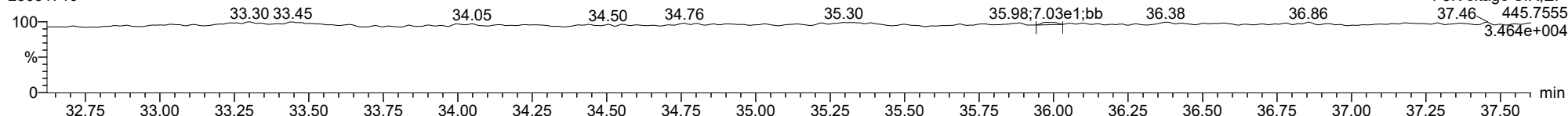
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23031710



FUNCTION3 OCDPE

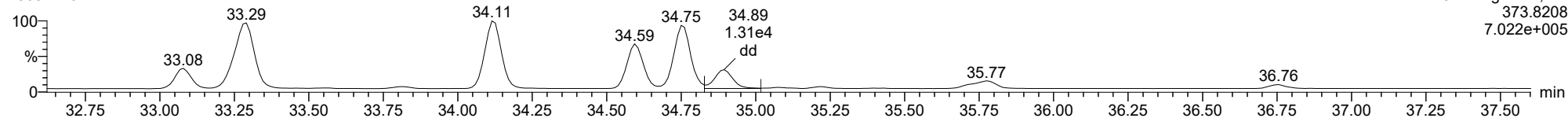
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

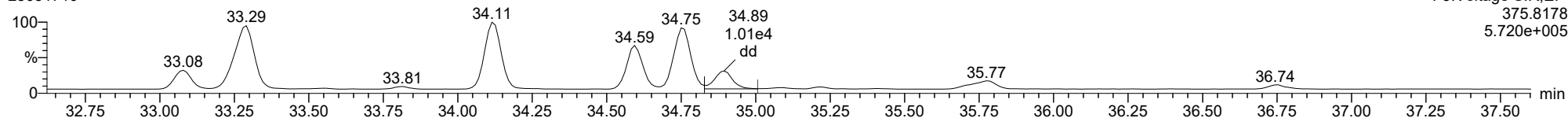
123678-HxCDF

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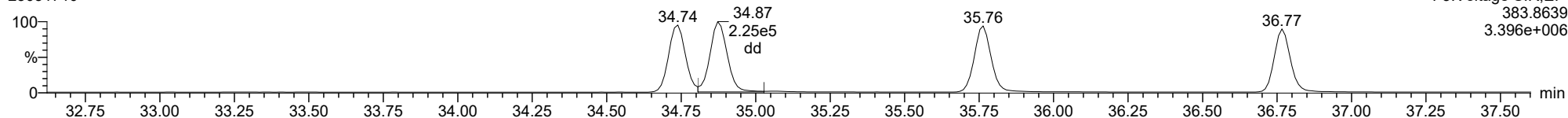
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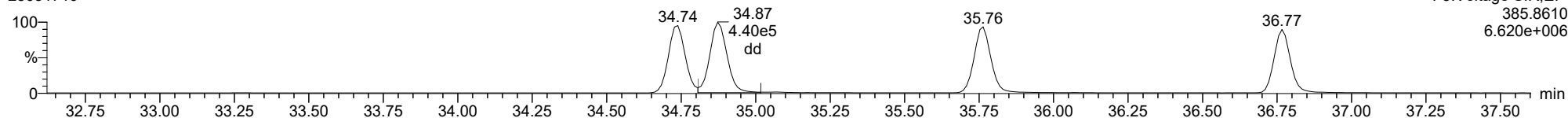
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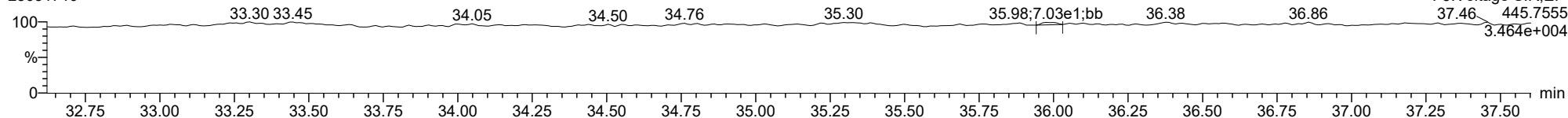
13C-123678-HxCDF

23031710



FUNCTION3 OCDPE

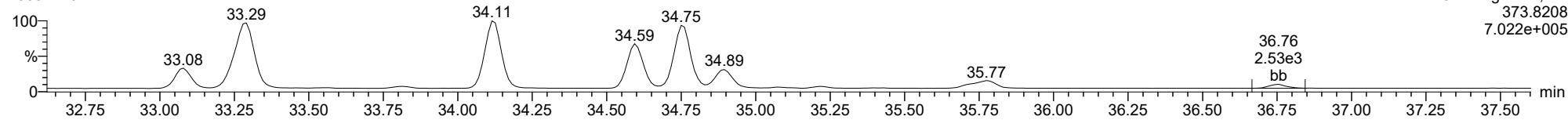
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

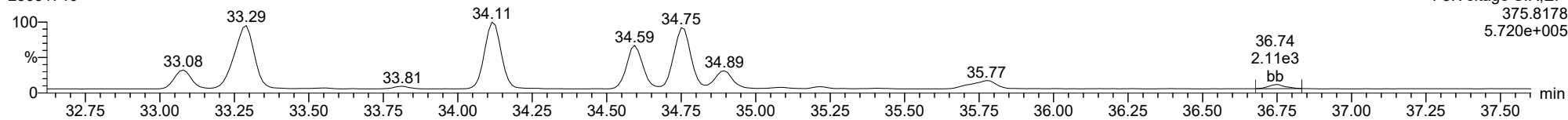
123789-HxCDF

23031710



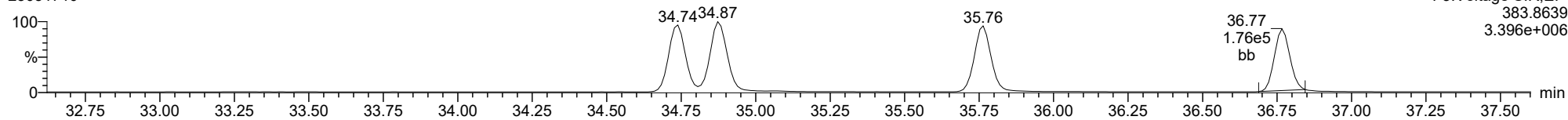
123789-HxCDF

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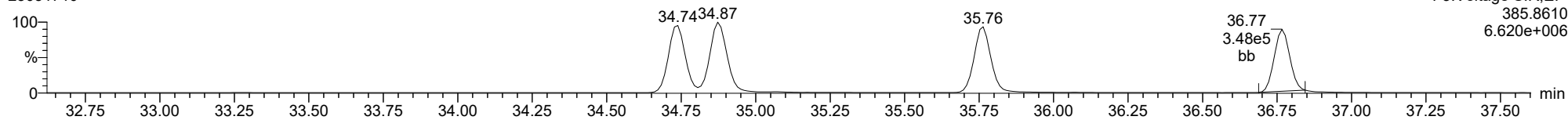
13C-123789-HxCDF

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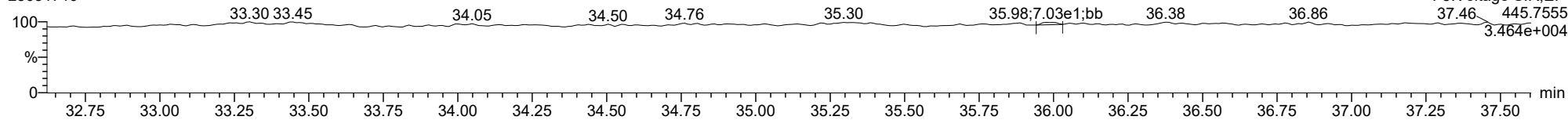
13C-123789-HxCDF

23031710



FUNCTION3 OCDPE

23031710

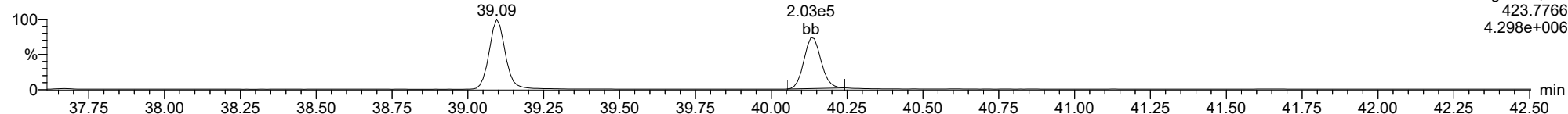




ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

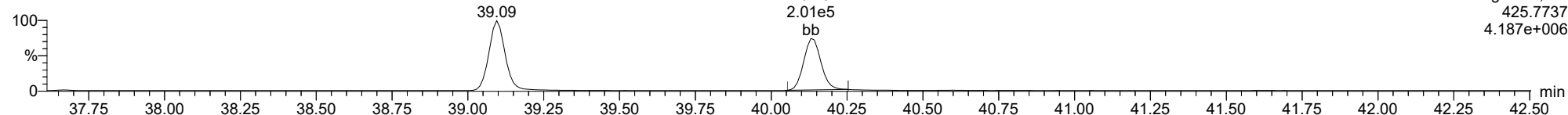
23031710



F4:Voltage SIR,El+  
423.7766  
4.298e+006

**1234678-HpCDD**

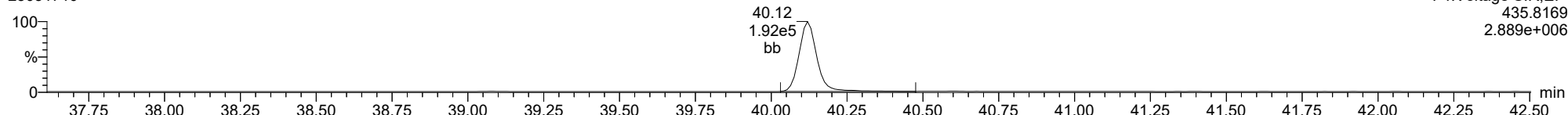
23031710



F4:Voltage SIR,El+  
425.7737  
4.187e+006

**13C-1234678-HpCDD**

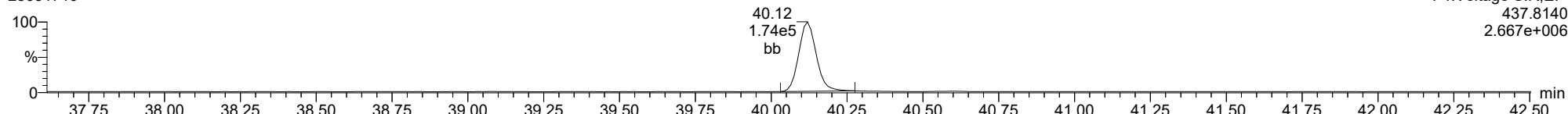
23031710



F4:Voltage SIR,El+  
435.8169  
2.889e+006

**13C-1234678-HpCDD**

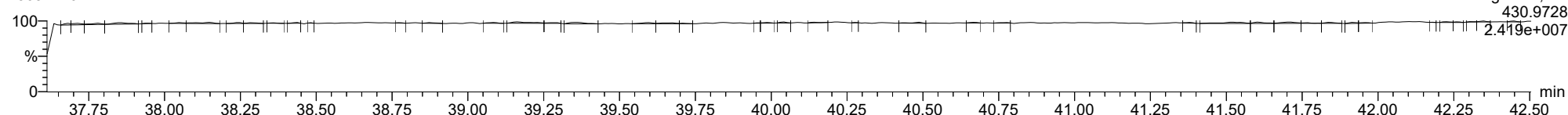
23031710



F4:Voltage SIR,El+  
437.8140  
2.667e+006

**FUNCTION4 PFK**

23031710

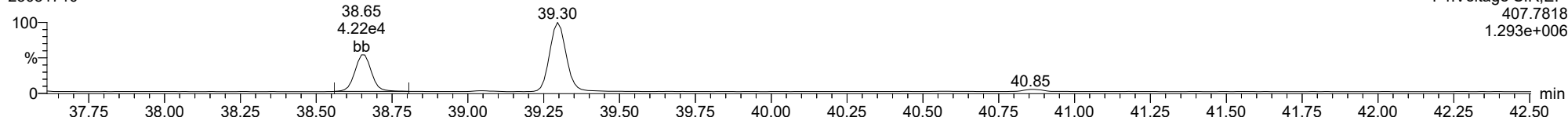


F4:Voltage SIR,El+  
430.9728  
2.419e+007

ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

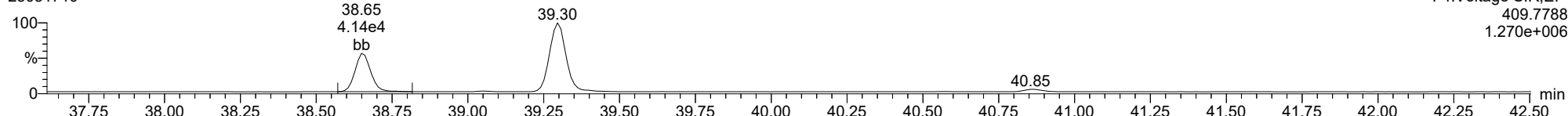
1234678-HpCDF

23031710



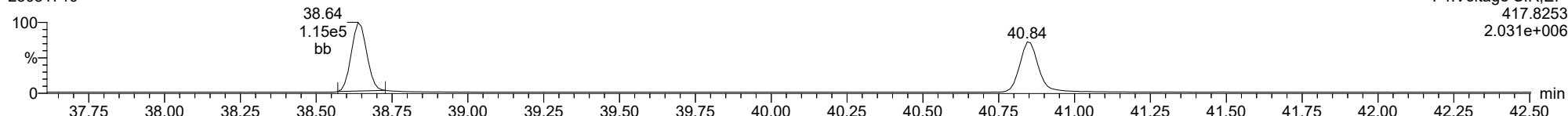
1234678-HpCDF

23031710



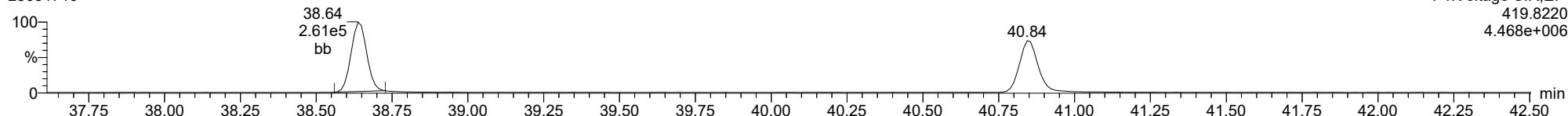
13C-1234678-HpCDF

23031710



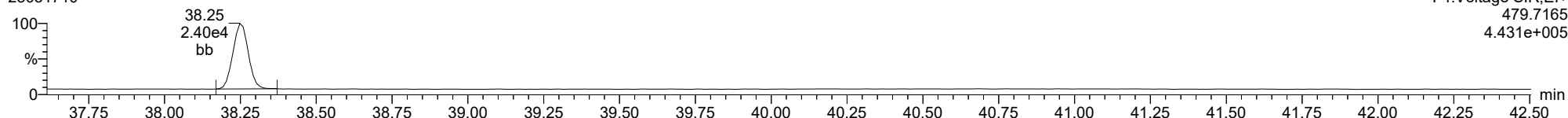
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23031710



FUNCTION4 NCDPE

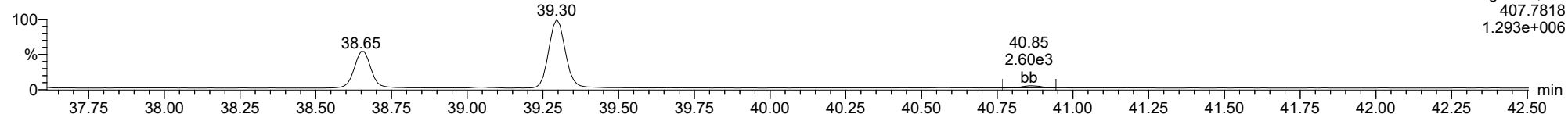
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ID: 23A0206-13, Name: 23031710, Date: 17-Mar-2023, Time: 17:42:20, Conditions: AUTOSPEC01, User: pk

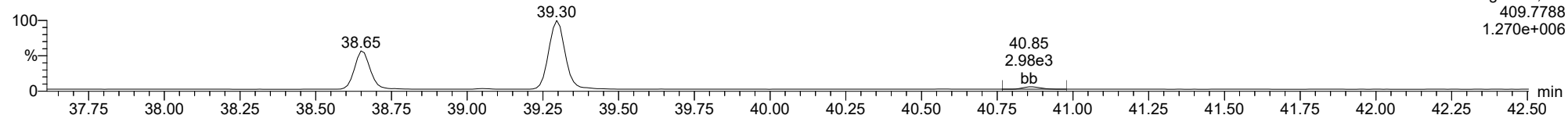
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23031710



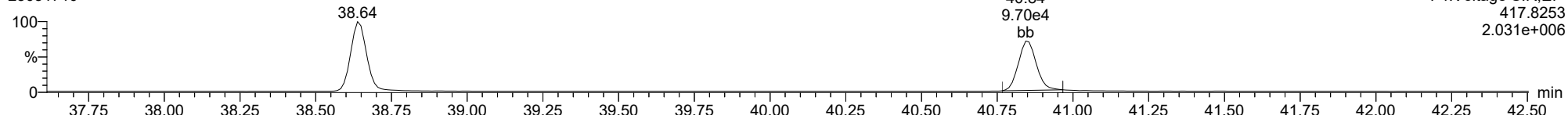
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23031710



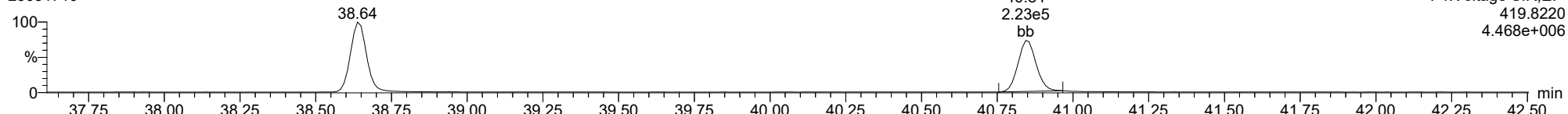
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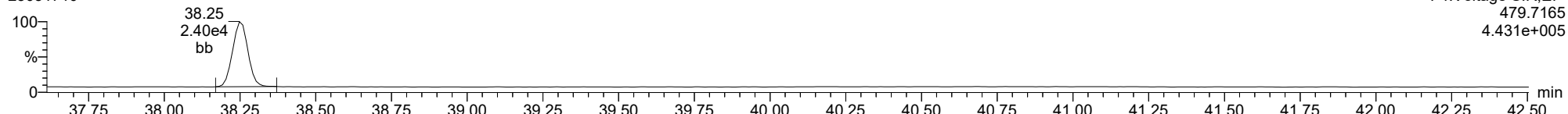
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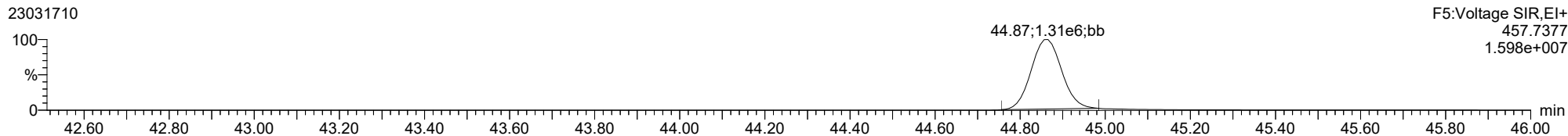
**FUNCTION4 NCDPE**

23031710

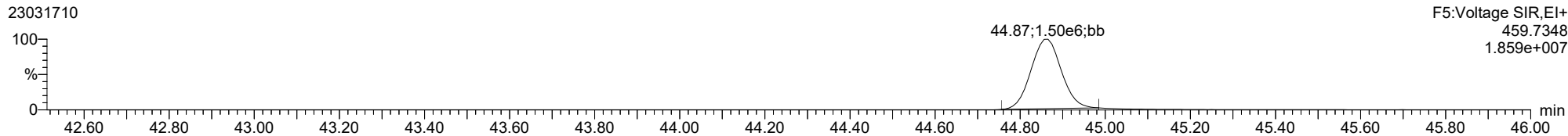


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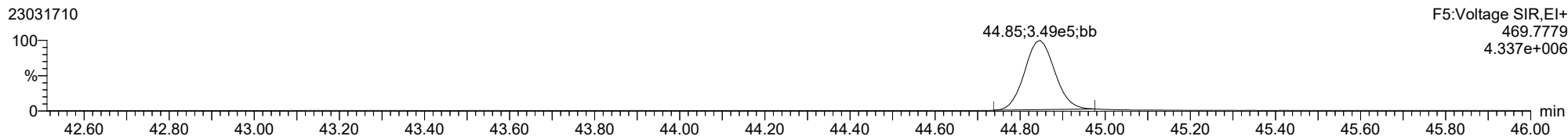
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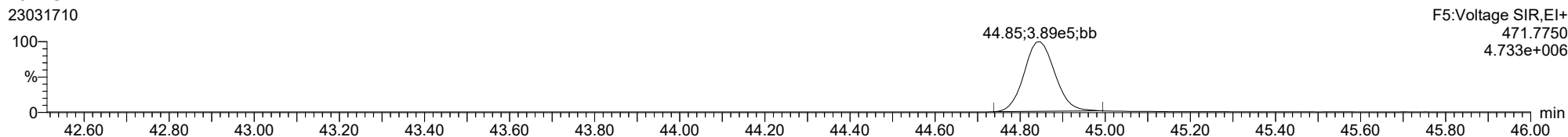
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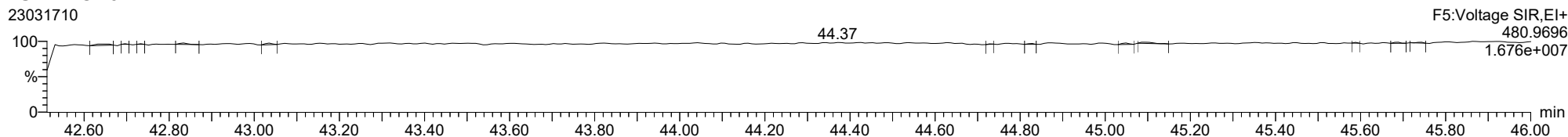
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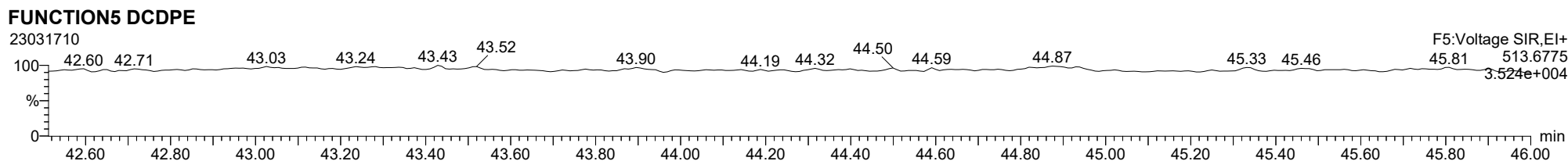
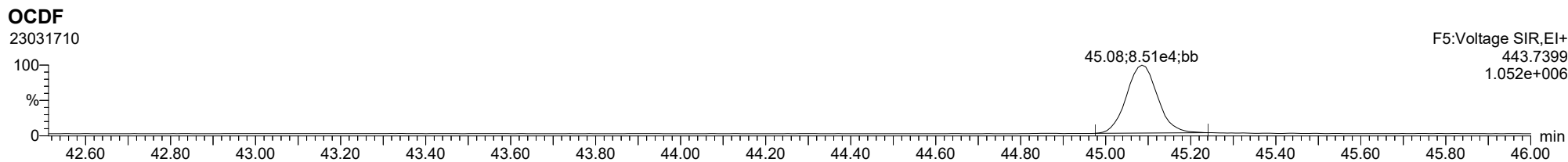
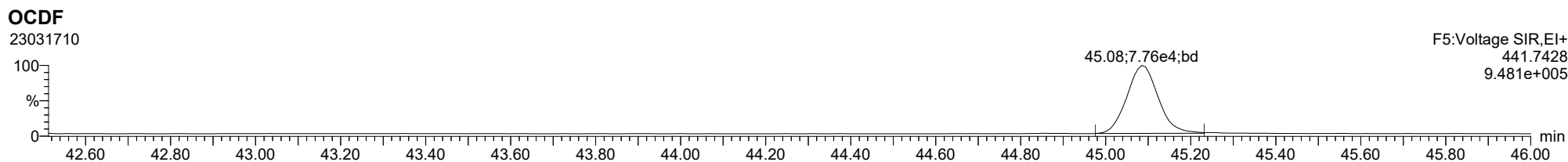
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**FUNCTIONS PFK**



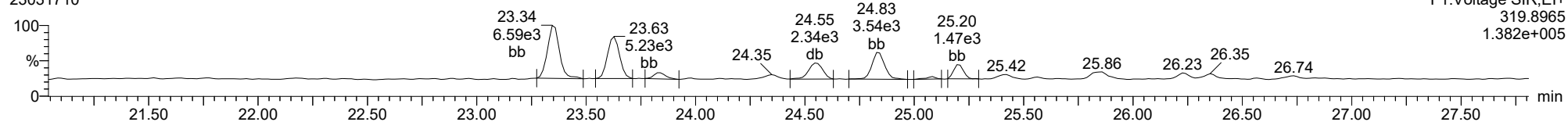
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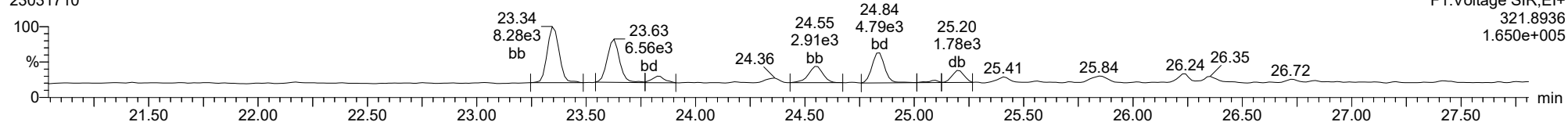
**Total-tetradioxins**

23031710



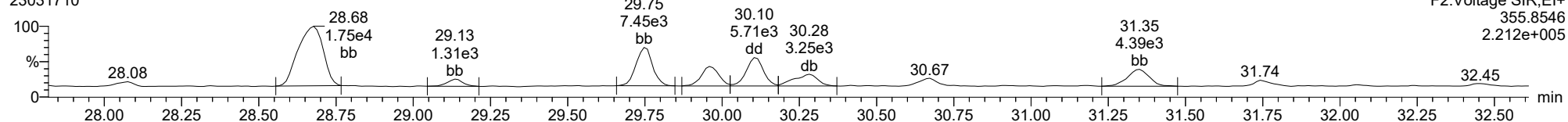
**Total-tetradioxins**

23031710



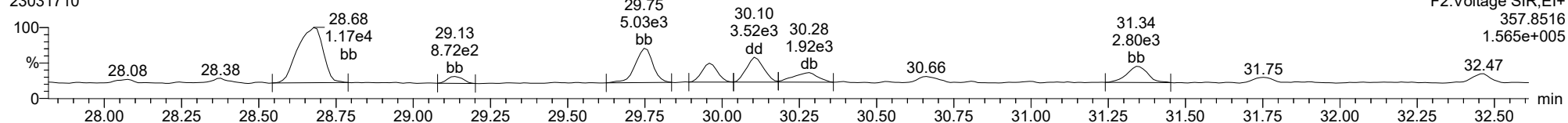
**Total-pentadioxins**

23031710



**Total-pentadioxins**

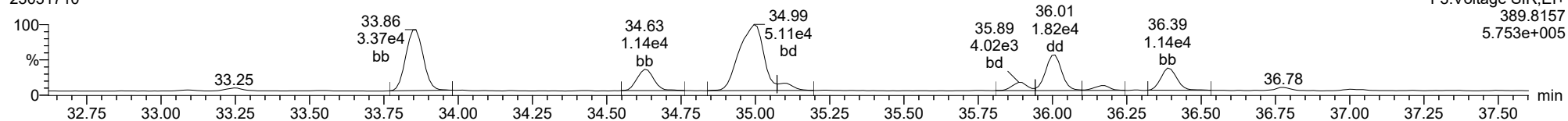
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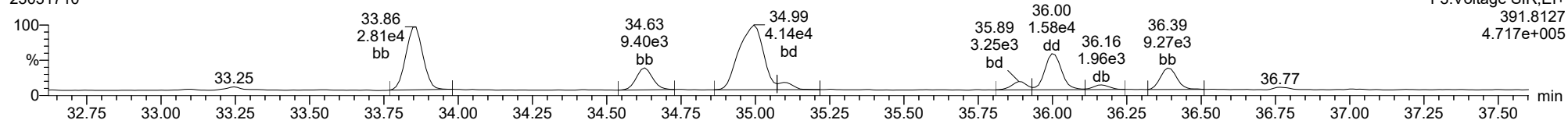
### Total-hexadioxins

23031710



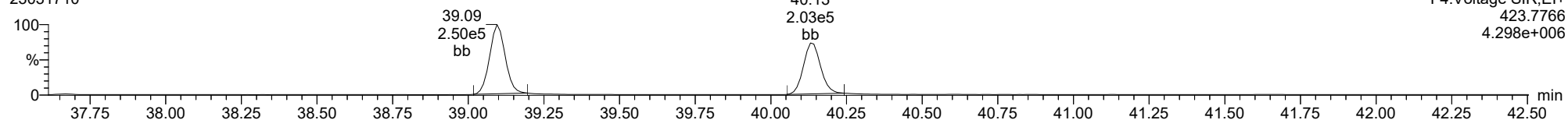
### Total-hexadioxins

23031710



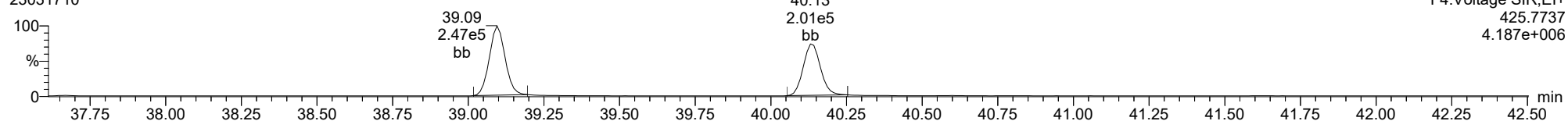
### Total-heptadioxins

23031710



### Total-heptadioxins

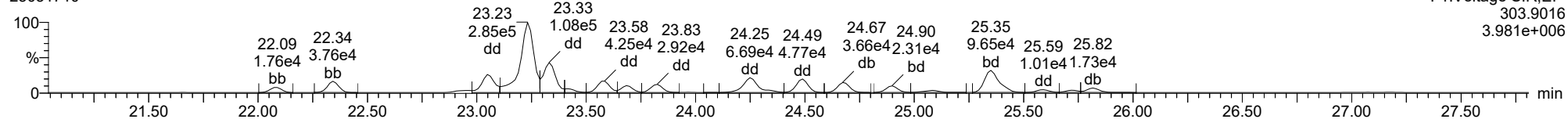
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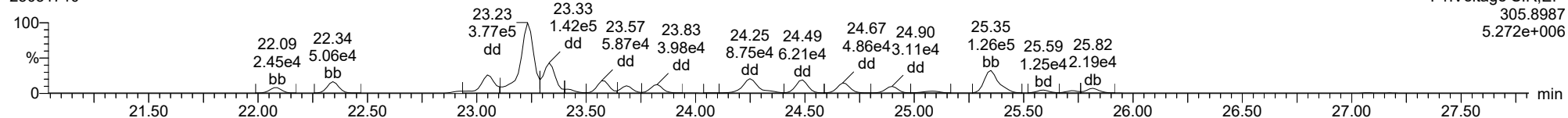
**Total-tetrafurans**

23031710



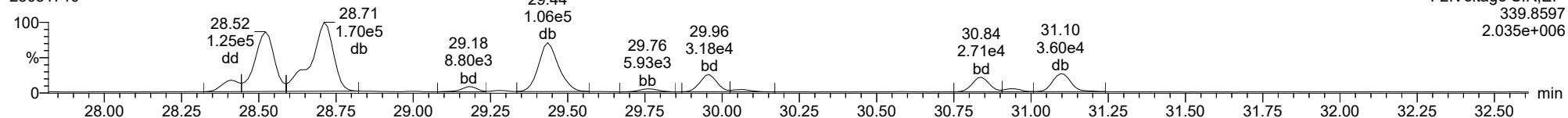
**Total-tetrafurans**

23031710



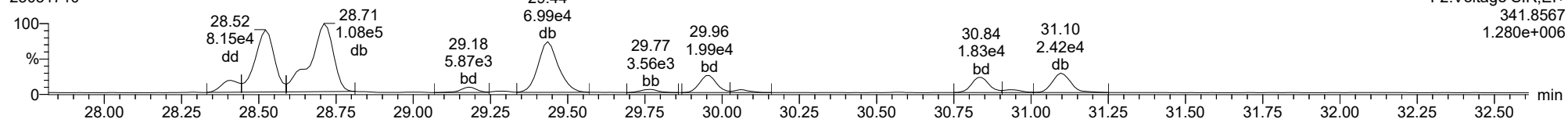
**Total-pentafurans**

23031710



**Total-pentafurans**

23031710

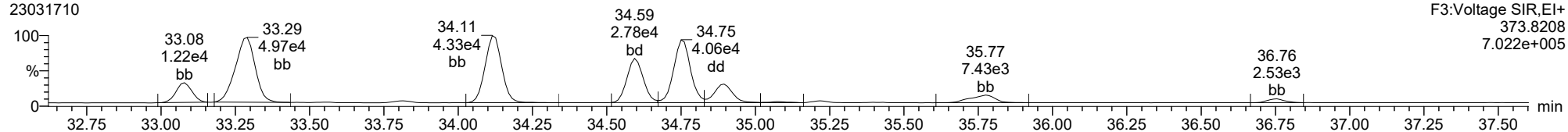




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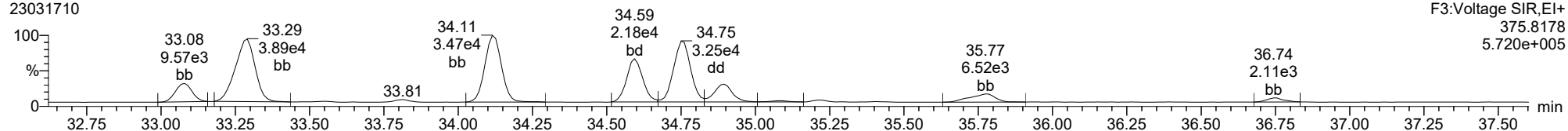
**Total-hexafluorans**

23031710



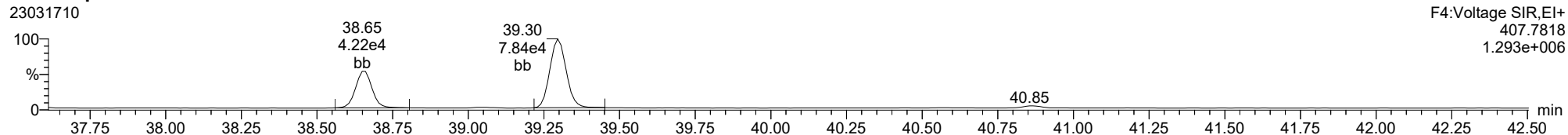
**Total-hexafluorans**

23031710



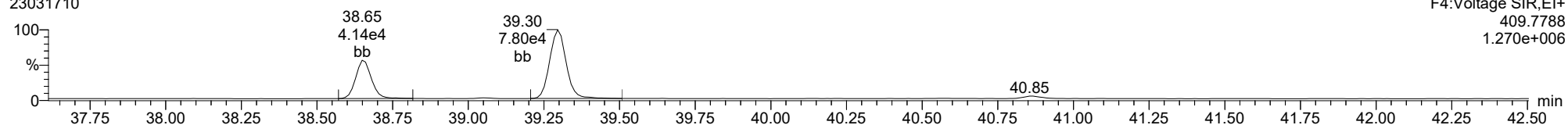
**Total-heptafluorans**

23031710



**Total-heptafluorans**

23031710





**PREPARATION BATCH SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLC0136 Batch Matrix: Solid Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13	23031710	03/07/23 14:50	From BLA0400 by NPL on 07-Mar-2023
Blank	BLC0136-BLK1	23031512	03/07/23 07:38	
LCS	BLC0136-BS1	23031513	03/07/23 07:38	
Reference	BLC0136-SRM1	23031515	03/07/23 07:38	



Analytical Resources, LLC  
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Method 8290A or 1613B

Batch: BLC0136

Solid Samples

From BLA0400 on 07-Mar-2023 by NPL

ARI Work Orders: 23A0158, 23A0171, 23A0206

Matrix (circle one)  Soil  Sediment  Oil  Tissue

Extraction Method Start Date/Time: 3/7/23 14:50 End Date/Time: 3/8/23 4:05

Soxhlet Sepf Shake out

Reagents/Equipment Used NA ID / Lot Number Initials Date

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Glasswool		2012850	TW	3/9/23
Basic Silica		1000710	TW	3/9/23
Acid Silica		1001728	TW	3/9/23
Activated Florisil		1005956	TW	3/9/23
Balance		24650344	TW	3/7/23
Toluene		1011233	TW	3/7/23
Hexane		1004889	TW	3/8/23
CH2Cl2		1005941	TW	3/9/23
H2SO4		1001033	TW	3/9/23
Na2SO4		1001285	TW	3/7/23
Other ( RM )		1001274	TW	3/7/23
0% Silica		1011054	TW	3/9/23
Nonane		1006032	TW	3/10/23

Lab Number & Container	Sample Name	% Solids	Sample Weight Equal to dry (g) (Target Dry)	Actual	ReboVap °C	Water Trap (ml)	Final Vol. (ul)
23A0158-06 C	LDW23-SS1222	56.9	17.58	17.60	112	5.5	20
23A0158-07 C	LDW23-SS1215	58.29	17.16	17.17	112	7.0	20
23A0158-09 C	LDW23-SS1077	78.04	12.81	12.81	112	2.5	20
23A0158-10 C	LDW23-SS1070	47.26	21.16	21.19	112	10.0	20
23A0158-11 C	LDW23-SS1065	54.63	18.31	18.31	112	7.5	20
23A0158-12 C	LDW23-SS1064	57.39	17.43	17.43	112	7.0	20
23A0158-13 C	LDW23-SS1060	52.67	19.99	19.01	112	7.5	20
23A0158-14 C	LDW23-SS1059	53.17	18.81	18.84	112	8.0	20
23A0158-15 C	LDW23-SS1053	52.28	19.13	19.13	112	8.0	20
23A0171-02 A	LDW23-SS1257	42.41	23.58	23.61	112	12.0	20
23A0171-04 A	LDW23-SS1245	47.05	21.25	21.26	112	9.0	20
23A0206-13 C	LDW23-SS1066	60.59	16.50	16.51	112	6.0	20
Prep Analyst / Date:							

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	1011158	2/4 ng/mL	12/2/23	TW	TW	3/7/23
OPR	1.0 mL	1000046	0.2/1.0/2.0 ng/mL	6/30/23	TW	TW	3/7/23
Q13 Standard	1.0 mL	1013213	0.07/0.07/0.14/0.14/0.28/0.28 ng/mL	3/9/23	TW	TW	3/9/23
Clean-up Standard	1.0 mL	1001332	0.8 ng/mL	2/8/24	TW	DP	3/9/23

Verify Client ID	Acid Clean	Silica-Florisil Clean
Analyst / Date: TW 3/7/23	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Analyst / Date: TW 3/9/23	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Analyst / Date: TW 3/9/23	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Supervisor Review By [Signature] Date 3/13/23





Analytical Resources, Incorporated  
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BLCD136 Work Order: 23AD158, 23AD171, 23AD246 Extraction Parameter: Dioxin ARI Analyst: TW

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLCD136 -	BK1	12	18	21	13	191	68	4				4	4	A1
	BS1	60	74	35	9	94	16	48				4	4	A2
	Dmp1	44			3	6	40	7				4	4	A3
	SRM1	48	19	59	46	68	170	38				4	4	A5
	dkc	16		49	4	56	20	150	16			4	4	A6
	dkc	26			8	35	35	29	29			4	4	B1
	dkc	47	6		23	31	198	8	61			4	4	B2
	dkc	79		65	239	58	217	49	62			4	4	B3
	11C	6		2	138	52	31	16	68			4	4	B4
	12C	43		71	22	65	38	6	46			4	4	B5
13C	29		23	245	94	36	37	70			4	4	B6	
14C	68		3	41	64	225	58	6			4	4	C1	
15C	11		28	11	54	2	115	2			4	4	C2	
23AD171 -	dk2A	20		31	19	9	120	66				4	4	C3
	dk4A	87		25	43	62	77	72				4	4	C4
23AD246 -	13C	2	28	32	93	14	7	50				4	4	C5
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLA0187

Cleanup Type: Sulfuric Acid

Cleanup Method: EPA 3665 Sulfuric Acid Cleanup - uL

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13	23031710	01/19/2023	



## CLEANUP BENCH SHEET

CLA0187

Matrix: Solid      Cleanup using: HRGCMS - EPA 3665 Sulfuric Acid Cleanup - uL

Printed: 1/20/2023 4:21:07PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-07	C	LDW23-SS1215	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-09	C	LDW23-SS1077	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-10	C	LDW23-SS1070	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-11	C	LDW23-SS1065	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-12	C	LDW23-SS1064	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-13	C	LDW23-SS1060	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-14	C	LDW23-SS1059	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0158-15	C	LDW23-SS1053	C 01	20	20	1613B Dioxin	1/19/2023	TW	
23A0171-02	A	LDW23-SS1257	A 04	20	20	1613B Dioxin	1/19/2023	TW	
23A0171-04	A	LDW23-SS1245	A 04	20	20	1613B Dioxin	1/19/2023	TW	
23A0206-13	C	LDW23-SS1066	C 01	20	20	1613B Dioxin	1/19/2023	TW	
BLA0400-BLK1	-	Blank	-	20	20	-	1/19/2023	TW	
BLA0400-BS1	-	LCS	-	20	20	-	1/19/2023	TW	
BLA0400-DUP1	-	Duplicate	-	20	20	-	1/19/2023	TW	
BLA0400-SRM1	-	Reference	-	20	20	-	1/19/2023	TW	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLA0188

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup - uL

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13	23031710	01/20/2023	



## CLEANUP BENCH SHEET

CLA0188

Matrix: Solid

Cleanup using: HRGCMS - EPA 3660C Silica Gel Cleanup - uL

Printed: 1/20/2023 4:21:29PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-07	C	LDW23-SS1215	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-09	C	LDW23-SS1077	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-10	C	LDW23-SS1070	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-11	C	LDW23-SS1065	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-12	C	LDW23-SS1064	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-13	C	LDW23-SS1060	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-14	C	LDW23-SS1059	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-15	C	LDW23-SS1053	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0171-02	A	LDW23-SS1257	A 04	20	20	1613B Dioxin	1/20/2023	TW	
23A0171-04	A	LDW23-SS1245	A 04	20	20	1613B Dioxin	1/20/2023	TW	
23A0206-13	C	LDW23-SS1066	C 01	20	20	1613B Dioxin	1/20/2023	TW	
BLA0400-BLK1	-	Blank	-	20	20	-	1/20/2023	TW	
BLA0400-BS1	-	LCS	-	20	20	-	1/20/2023	TW	
BLA0400-DUP1	-	Duplicate	-	20	20	-	1/20/2023	TW	
BLA0400-SRM1	-	Reference	-	20	20	-	1/20/2023	TW	





## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC  
Client: Anchor QEA, LLC  
Cleanup Batch: CLA0189  
Cleanup Method: EPA 3620B Florisil Cleanup (uL)

SDG: 23A0206  
Project: AOC5 MR Phase 1  
Cleanup Type: Florisil  
Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13	23031710	01/20/2023	



### CLEANUP BENCH SHEET

CLA0189

Matrix: Solid

Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup (uL)

Check Standard: CKK0015-FLO1

Printed: 1/20/2023 4:21:44PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-07	C	LDW23-SS1215	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-09	C	LDW23-SS1077	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-10	C	LDW23-SS1070	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-11	C	LDW23-SS1065	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-12	C	LDW23-SS1064	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-13	C	LDW23-SS1060	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-14	C	LDW23-SS1059	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0158-15	C	LDW23-SS1053	C 01	20	20	1613B Dioxin	1/20/2023	TW	
23A0171-02	A	LDW23-SS1257	A 04	20	20	1613B Dioxin	1/20/2023	TW	
23A0171-04	A	LDW23-SS1245	A 04	20	20	1613B Dioxin	1/20/2023	TW	
23A0206-13	C	LDW23-SS1066	C 01	20	20	1613B Dioxin	1/20/2023	TW	
BLA0400-BLK1	-	Blank	-	20	20	-	1/20/2023	TW	
BLA0400-BS1	-	LCS	-	20	20	-	1/20/2023	TW	
BLA0400-DUP1	-	Duplicate	-	20	20	-	1/20/2023	TW	
BLA0400-SRM1	-	Reference	-	20	20	-	1/20/2023	TW	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLC0084

Cleanup Type: Sulfuric Acid

Cleanup Method: EPA 3665 Sulfuric Acid Cleanup - uL

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13	23031710	03/09/2023	
LCS	BLC0136-BS1	23031513	03/09/2023	
Reference	BLC0136-SRM1	23031515	03/09/2023	
Blank	BLC0136-BLK1	23031512	03/09/2023	



## CLEANUP BENCH SHEET

CLC0084

Matrix: Solid      Cleanup using: HRGCMS - EPA 3665 Sulfuric Acid Cleanup - uL

Printed: 3/10/2023 10:14:44AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-07	C	LDW23-SS1215	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-09	C	LDW23-SS1077	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-10	C	LDW23-SS1070	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-11	C	LDW23-SS1065	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-12	C	LDW23-SS1064	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-13	C	LDW23-SS1060	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-14	C	LDW23-SS1059	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-15	C	LDW23-SS1053	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-02	A	LDW23-SS1257	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-04	A	LDW23-SS1245	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0206-13	C	LDW23-SS1066	C 02	20	20	1613B Dioxin	3/9/2023	TW	
BLC0136-BLK1	-	Blank	-	20	20	-	3/9/2023	TW	
BLC0136-BS1	-	LCS	-	20	20	-	3/9/2023	TW	
BLC0136-DUP1	-	Duplicate	-	20	20	-	3/9/2023	TW	
BLC0136-SRM1	-	Reference	-	20	20	-	3/9/2023	TW	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLC0085

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup - uL

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLC0136-SRM1	23031515	03/09/2023	
LCS	BLC0136-BS1	23031513	03/09/2023	
Blank	BLC0136-BLK1	23031512	03/09/2023	
LDW23-SS1066	23A0206-13	23031710	03/09/2023	



## CLEANUP BENCH SHEET

CLC0085

Matrix: Solid

Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup - uL

Printed: 3/10/2023 10:15:43AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-07	C	LDW23-SS1215	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-09	C	LDW23-SS1077	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-10	C	LDW23-SS1070	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-11	C	LDW23-SS1065	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-12	C	LDW23-SS1064	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-13	C	LDW23-SS1060	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-14	C	LDW23-SS1059	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-15	C	LDW23-SS1053	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-02	A	LDW23-SS1257	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-04	A	LDW23-SS1245	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0206-13	C	LDW23-SS1066	C 02	20	20	1613B Dioxin	3/9/2023	TW	
BLC0136-BLK1	-	Blank	-	20	20	-	3/9/2023	TW	
BLC0136-BS1	-	LCS	-	20	20	-	3/9/2023	TW	
BLC0136-DUP1	-	Duplicate	-	20	20	-	3/9/2023	TW	
BLC0136-SRM1	-	Reference	-	20	20	-	3/9/2023	TW	



## CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Cleanup Batch: CLC0086

Cleanup Type: Florisil

Cleanup Method: EPA 3620B Florisil Cleanup (uL)

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLC0136-SRM1	23031515	03/09/2023	
LCS	BLC0136-BS1	23031513	03/09/2023	
Blank	BLC0136-BLK1	23031512	03/09/2023	
LDW23-SS1066	23A0206-13	23031710	03/09/2023	



## CLEANUP BENCH SHEET

CLC0086

Matrix: Solid

Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup (uL)

Check Standard: CKK0015-FLO1

Printed: 3/10/2023 10:16:27AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0158-06	C	LDW23-SS1222	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-07	C	LDW23-SS1215	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-09	C	LDW23-SS1077	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-10	C	LDW23-SS1070	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-11	C	LDW23-SS1065	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-12	C	LDW23-SS1064	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-13	C	LDW23-SS1060	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-14	C	LDW23-SS1059	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0158-15	C	LDW23-SS1053	C 02	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-02	A	LDW23-SS1257	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0171-04	A	LDW23-SS1245	A 05	20	20	1613B Dioxin	3/9/2023	TW	
23A0206-13	C	LDW23-SS1066	C 02	20	20	1613B Dioxin	3/9/2023	TW	
BLC0136-BLK1	-	Blank	-	20	20	-	3/9/2023	TW	
BLC0136-BS1	-	LCS	-	20	20	-	3/9/2023	TW	
BLC0136-DUP1	-	Duplicate	-	20	20	-	3/9/2023	TW	
BLC0136-SRM1	-	Reference	-	20	20	-	3/9/2023	TW	





Blank

**Form 1**  
**METHOD BLANK DATA SHEET**  
**EPA 1613B**  
**Dioxins/Furans by HRGC/HRMS**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Laboratory ID:	<u>BLC0136-BLK1</u>
Sampled:	<u>N/A</u>	File ID:	<u>23031512</u>
Solids Wt%:		Prepared:	<u>03/07/23 07:38</u>
Result Basis:	<u>Dry</u>	Analyzed:	<u>03/15/23 19:33</u>
Batch:	<u>BLC0136</u>	Preparation:	<u>EPA 1613</u>
		Initial/Final:	<u>10 g / 20 uL</u>
		Sequence:	<u>SLC0176</u>
		Calibration:	<u>GC00015</u>
		Instrument:	<u>AUTOSPEC01</u>
		Column:	<u>RTX-Dioxin2</u>

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	0.191	1.00	ND	ng/kg	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.153	1.00	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.217	1.00	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.199	1.00	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.181	1.00	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.094	1.00	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.095	1.00	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.098	1.00	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.126	1.00	ND	ng/kg	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.121	1.00	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.121	1.00	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.133	1.00	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.188	1.00	ND	ng/kg	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.264	1.00	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.143	0.893-1.208	0.185	2.50	0.350	ng/kg	J
39001-02-0	OCDF	1	0.000	0.757-1.024	0.391	2.50	ND	ng/kg	U
3268-87-9	OCDD	1	1.005	0.757-1.024	0.276	10.0	2.18	ng/kg	J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	ND	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	ND	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	ND	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	ND	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	0.350	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):	0.004
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):	0.256



Blank

**Form 2**  
**METHOD BLANK DATA SHEET**  
**EPA 1613B**  
**Dioxins/Furans by HRGC/HRMS**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	Solid	Laboratory ID:	<u>BLC0136-BLK1</u>
Sampled:	<u>N/A</u>	Prepared:	<u>03/07/23 07:38</u>
Solids Wt%:	<u>0.00</u>	Preparation:	<u>EPA 1613</u>
Result Basis:	<u>Dry</u>	Sequence:	<u>SLC0176</u>
Batch:	<u>BLC0136</u>	Instrument:	<u>AUTOSPEC01</u>
		Column:	<u>RTX-Dioxin2</u>
		File ID:	<u>23031512</u>
		Analyzed:	<u>03/15/23 19:33</u>
		Initial/Final:	<u>10 g / 20 uL</u>
		Calibration:	<u>GC00015</u>

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.757	0.655-0.886	0.30	102	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.777	0.655-0.886	0.39	131	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.507	1.318-1.783	0.38	115	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.472	1.318-1.783	0.42	119	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.603	1.318-1.783	0.28	130	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.504	0.434-0.587	0.30	101	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.518	0.434-0.587	0.25	97.7	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.506	0.434-0.587	0.31	101	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.504	0.434-0.587	0.38	94.7	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.239	1.054-1.426	0.24	128	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.254	1.054-1.426	0.21	120	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.451	0.374-0.506	0.27	69.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.432	0.374-0.506	0.31	68.4	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.051	0.893-1.208	0.23	76.9	23 - 140 %	
13C12-OCDD	1	0.901	0.757-1.024	0.35	80.2	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.14	102	35 - 197 %	

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.702		0.770	491	772								
12378-PeCDF					0.679		1.550	555	640								
23478-PeCDF					0.786		1.550	555	640								
123478-HxCDF					1.166		1.240	522	428								
234678-HxCDF					1.140		1.240	522	428								
123678-HxCDF					1.091		1.240	522	428								
123789-HxCDF					1.137		1.240	522	428								
1234678-HpCDF					1.003		1.050	457	488								
1234789-HpCDF					0.953		1.050	457	488								
OCDF					0.778		0.890	563	573								
2378-TCDD					1.149		0.770	890	637								
12378-PeCDD					1.022		1.550	545	586								
123478-HxCDD					0.996		1.240	653	558								
123678-HxCDD					1.001		1.240	653	558								
123789-HxCDD					0.907		1.240	653	558								
1234678-HpCDD	40.086	1.001	1.783e2	1.560e2	1.039	1.143	1.050	423	491	2.75e3	2.19e3	6.5	4.4	NO	bb	bb	0.175
OCDD	44.801	1.001	8.806e2	8.761e2	0.920	1.005	0.890	460	488	8.99e3	1.00e4	19.5	20.6	NO	bb	bb	1.089
13C-2378-TCDF	25.534	1.007	1.599e5	2.113e5	1.620	0.757	0.770	1683	1257	2.44e6	3.29e6	1447.4	2613.9	NO	bb	bb	101.545
13C-12378-PeCDF	29.702	1.172	1.928e5	1.280e5	1.240	1.507	1.550	1768	1046	2.93e6	1.95e6	1656.6	1866.3	NO	bb	bb	114.604
13C-23478-PeCDF	31.028	1.224	1.785e5	1.213e5	1.118	1.472	1.550	1768	1046	2.72e6	1.82e6	1540.6	1738.1	NO	bb	bb	118.883
13C-123478-HxCDF	34.682	0.955	1.129e5	2.238e5	1.168	0.504	0.510	1046	1613	1.75e6	3.41e6	1673.5	2116.1	NO	bd	bd	101.126
13C-123678-HxCDF	34.816	0.959	1.317e5	2.542e5	1.386	0.518	0.510	1046	1613	1.87e6	3.66e6	1787.0	2268.8	NO	db	dd	97.670
13C-234678-HxCDF	35.696	0.983	1.089e5	2.152e5	1.129	0.506	0.510	1046	1613	1.72e6	3.33e6	1642.4	2066.1	NO	bb	bb	100.714
13C-123789-HxCDF	36.722	1.011	8.424e4	1.672e5	0.932	0.504	0.510	1046	1613	1.33e6	2.69e6	1271.8	1666.8	NO	bb	bb	94.693
13C-1234678-HpCDF	38.593	1.063	5.531e4	1.226e5	0.895	0.451	0.440	878	959	9.37e5	2.10e6	1067.0	2188.6	NO	bb	bb	69.733
13C-1234789-HpCDF	40.799	1.124	4.525e4	1.047e5	0.770	0.432	0.440	878	959	6.80e5	1.54e6	774.6	1607.6	NO	bb	bb	68.370
13C-1234-TCDD	25.351	0.000	9.933e4	1.263e5	1.000	0.786	0.770	1812	878	1.60e6	2.00e6	881.4	2279.8	NO	bb	bb	100.000
13C-2378-TCDD	26.170	1.032	1.490e5	1.916e5	1.152	0.777	0.770	1812	878	2.29e6	2.96e6	1262.2	3371.5	NO	bb	bb	130.984
13C-12378-PeCDD	31.285	1.234	1.495e5	9.323e4	0.829	1.603	1.550	774	636	2.25e6	1.45e6	2910.2	2286.3	NO	bb	bb	129.771
13C-123478-HxCDD	35.808	0.986	2.016e5	1.627e5	0.995	1.239	1.240	927	886	3.33e6	2.64e6	3593.9	2974.4	NO	bd	bd	128.470
13C-123678-HxCDD	35.919	0.989	2.197e5	1.752e5	1.157	1.254	1.240	927	886	3.33e6	2.69e6	3593.2	3031.7	NO	db	db	119.803
13C-1234678-HpCDD	40.064	1.103	9.434e4	8.980e4	0.840	1.051	1.050	692	761	1.46e6	1.40e6	2116.6	1835.0	NO	bb	bb	76.905
13C-OCDD	44.764	1.233	1.663e5	1.845e5	0.767	0.901	0.890	966	1061	2.12e6	2.35e6	2195.9	2214.3	NO	bb	bb	160.369
13C-123789-HxCDD	36.309	0.000	1.579e5	1.271e5	1.000	1.242	1.240	927	886	2.52e6	2.05e6	2720.2	2312.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.184	1.033	1.180e5		1.288			1096		1.74e6		1590.3			bb		40.617

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	491	772								
1289-TCDF					0.678		0.770	491	772								
13468-PECDF					1.246		1.550	533	679								
12389-PECDF					0.496		1.550	555	640								
123468-HXCDF					1.169		1.240	522	428								
1368-TCDD					1.015		0.770	890	637								
1289-TCDD					0.909		0.770	890	637								
12479-PECDD					2.301		1.550	545	586								
12389-PECDD					1.184		1.550	545	586								
124679-HXCDD					1.115		1.240	653	558								
1234679-HPCDD	39.028	0.974	2.192e2	2.809e2	1.137	0.780	1.050	423	491	3.61e3	5.22e3	8.5	10.6	YES	bb	bb	0.239
Total-tetrafurans			0.000e0		0.727			491		0.00e0							
Total-penta1			0.000e0					533		0.00e0							
Total-pentafurans			0.000e0		0.654			555		0.00e0							
Total-hexafurans			0.000e0		1.141			522		0.00e0							
Total-heptafurans			0.000e0		0.978			457		0.00e0							
Total-Furans			0.000e0		0.922			491		0.00e0							
Total-tetradoxins			0.000e0		1.024			890		0.00e0							
Total-pentadoxins			0.000e0		1.502			545		0.00e0							
Total-hexadoxins			0.000e0		1.005			653		0.00e0							
Total-heptadoxins			1.783e2		1.088			423		2.75e3							0.175
Total-Dioxins			1.059e3		1.130			890		1.17e4							1.264
Total-TEQ			1.059e3					890		1.17e4							1.264
FUNCTION1 PFK			3.830e5					606742		8.20e6							
FUNCTION2 PFK			1.060e5					219892		3.26e6							0.000
FUNCTION3 PFK			3.262e6					541417		1.11e6							0.000
FUNCTION4 PFK			1.181e6					303769		2.59e7							
FUNCTION5 PFK			1.581e5					189206		5.76e6							
FUNCTION1 HXCD...			6.491e2					512		5.89e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.923e2					564		5.53e3							0.000
FUNCTION3 OCDPE			1.557e2					510		2.87e3							0.000
FUNCTION4 NCDPE			8.353e1					468		2.07e3							0.000
FUNCTION5 DCDPE			0.000e0					571		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23****Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27****ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.09	1.783e2	1.560e2	1.039	1.14	1.05	6.5	YES	NO	bb	bb	0.175

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	44.80	8.806e2	8.761e2	0.920	1.01	0.89	19.5	YES	NO	bb	bb	1.089
2	1234678-HpCDD	40.09	1.783e2	1.560e2	1.039	1.14	1.05	6.5	YES	NO	bb	bb	0.175

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.54	1.316e4					0.6	NO		bb		
2	FUNCTION1 PFK	27.36	4.522e4					1.4	NO		bb		
3	FUNCTION1 PFK	26.65	2.138e4					0.3	NO		bb		
4	FUNCTION1 PFK	26.10	1.091e4					0.8	NO		bb		
5	FUNCTION1 PFK	25.75	1.365e4					0.8	NO		bb		
6	FUNCTION1 PFK	25.05	9.101e4					1.8	NO		bb		
7	FUNCTION1 PFK	23.77	3.730e3					0.4	NO		bb		
8	FUNCTION1 PFK	23.40	3.913e3					0.5	NO		bb		
9	FUNCTION1 PFK	22.81	1.728e4					1.2	NO		bb		
10	FUNCTION1 PFK	22.72	2.958e4					1.2	NO		bb		
11	FUNCTION1 PFK	22.31	1.546e4					0.7	NO		bb		
12	FUNCTION1 PFK	21.41	6.108e3					0.7	NO		bb		
13	FUNCTION1 PFK	21.28	2.823e4					0.8	NO		bb		
14	FUNCTION1 PFK	21.17	8.333e4					2.4	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.00	8.298e3					1.5	NO		bb		0.000
2	FUNCTION2 PFK	32.21	6.225e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	31.92	3.843e3					0.8	NO		bb		0.000
4	FUNCTION2 PFK	31.88	6.841e3					1.2	NO		bb		0.000
5	FUNCTION2 PFK	31.05	3.966e3					0.9	NO		bb		0.000
6	FUNCTION2 PFK	30.95	2.817e4					2.0	NO		bb		0.000
7	FUNCTION2 PFK	30.79	3.428e3					0.7	NO		db		0.000
8	FUNCTION2 PFK	30.76	2.418e3					0.8	NO		bd		0.000
9	FUNCTION2 PFK	30.44	1.381e3					0.6	NO		bb		0.000
10	FUNCTION2 PFK	29.66	1.988e4					1.8	NO		bb		0.000
11	FUNCTION2 PFK	29.23	5.883e3					0.9	NO		bb		0.000
12	FUNCTION2 PFK	29.03	9.522e3					1.5	NO		bb		0.000
13	FUNCTION2 PFK	28.38	6.128e3					1.3	NO		bb		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.84	3.262e6					2.0	NO		bb		0.000

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

## PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.67	1.009e5					5.2	YES		bd		
2	FUNCTION4 PFK	39.52	1.236e4					1.2	NO		bd		
3	FUNCTION4 PFK	39.28	5.935e3					0.7	NO		bb		
4	FUNCTION4 PFK	39.11	4.703e3					0.6	NO		db		
5	FUNCTION4 PFK	39.04	2.632e4					1.2	NO		bd		
6	FUNCTION4 PFK	38.92	3.970e4					1.6	NO		db		
7	FUNCTION4 PFK	38.72	6.719e4					1.6	NO		dd		
8	FUNCTION4 PFK	38.54	6.356e4					1.9	NO		dd		
9	FUNCTION4 PFK	38.49	2.190e4					1.9	NO		bd		
10	FUNCTION4 PFK	38.43	1.021e3					0.3	NO		bb		
11	FUNCTION4 PFK	38.16	1.098e4					1.2	NO		db		
12	FUNCTION4 PFK	38.10	1.384e4					1.4	NO		dd		
13	FUNCTION4 PFK	38.06	7.882e3					1.2	NO		bd		
14	FUNCTION4 PFK	37.96	2.424e4					2.0	NO		db		
15	FUNCTION4 PFK	37.82	1.180e5					4.0	YES		dd		
16	FUNCTION4 PFK	37.77	6.682e4					4.7	YES		dd		
17	FUNCTION4 PFK	37.74	7.586e4					4.4	YES		dd		
18	FUNCTION4 PFK	41.02	2.517e4					1.7	NO		bd		
19	FUNCTION4 PFK	40.91	3.650e4					1.9	NO		bb		
20	FUNCTION4 PFK	40.82	6.122e3					0.7	NO		db		
21	FUNCTION4 PFK	40.79	7.379e3					0.8	NO		bd		
22	FUNCTION4 PFK	40.59	1.192e4					1.2	NO		bb		
23	FUNCTION4 PFK	40.39	6.582e3					0.8	NO		bb		
24	FUNCTION4 PFK	40.33	8.353e3					1.0	NO		bb		
25	FUNCTION4 PFK	40.06	1.406e4					1.2	NO		db		
26	FUNCTION4 PFK	39.99	1.490e4					1.5	NO		dd		
27	FUNCTION4 PFK	39.94	1.191e4					1.3	NO		bd		
28	FUNCTION4 PFK	39.89	9.830e3					1.1	NO		db		
29	FUNCTION4 PFK	39.85	5.434e3					1.0	NO		dd		
30	FUNCTION4 PFK	39.82	5.595e3					0.9	NO		bd		
31	FUNCTION4 PFK	39.64	1.334e3					0.3	NO		db		
32	FUNCTION4 PFK	39.61	8.392e3					1.1	NO		bd		
33	FUNCTION4 PFK	39.55	1.186e4					1.3	NO		db		
34	FUNCTION4 PFK	42.00	6.016e3					0.7	NO		dd		
35	FUNCTION4 PFK	41.89	2.261e4					1.3	NO		bd		
36	FUNCTION4 PFK	41.77	5.811e3					0.9	NO		bb		
37	FUNCTION4 PFK	41.71	2.091e4					2.0	NO		db		



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.65	2.341e4					1.6	NO		dd		
39	FUNCTION4 PFK	41.59	1.536e4					1.6	NO		bd		
40	FUNCTION4 PFK	41.52	8.941e3					1.1	NO		bb		
41	FUNCTION4 PFK	41.43	6.394e3					0.6	NO		bb		
42	FUNCTION4 PFK	41.39	1.281e4					1.2	NO		db		
43	FUNCTION4 PFK	41.31	2.555e4					1.9	NO		dd		
44	FUNCTION4 PFK	41.27	1.858e4					1.8	NO		dd		
45	FUNCTION4 PFK	41.22	1.325e4					1.7	NO		dd		
46	FUNCTION4 PFK	41.19	1.873e4					1.6	NO		dd		
47	FUNCTION4 PFK	41.16	1.088e4					1.3	NO		dd		
48	FUNCTION4 PFK	41.12	8.938e3					1.3	NO		dd		
49	FUNCTION4 PFK	41.08	1.778e4					2.1	NO		dd		
50	FUNCTION4 PFK	42.46	1.006e4					1.2	NO		bb		
51	FUNCTION4 PFK	42.41	4.285e3					0.8	NO		bb		
52	FUNCTION4 PFK	42.34	2.086e4					1.4	NO		db		
53	FUNCTION4 PFK	42.27	8.886e3					0.8	NO		bd		
54	FUNCTION4 PFK	42.17	1.456e4					1.2	NO		db		
55	FUNCTION4 PFK	42.12	1.168e4					1.1	NO		dd		
56	FUNCTION4 PFK	42.08	1.741e4					1.6	NO		dd		
57	FUNCTION4 PFK	42.05	1.052e4					1.5	NO		dd		

**Quantify Totals Report MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.37	1.291e4					1.9	NO		bb		
2	FUNCTION5 PFK	43.31	3.619e3					1.0	NO		db		
3	FUNCTION5 PFK	43.25	9.658e3					1.4	NO		dd		
4	FUNCTION5 PFK	43.22	8.203e3					1.6	NO		bd		
5	FUNCTION5 PFK	42.80	6.899e3					1.1	NO		bb		
6	FUNCTION5 PFK	42.72	1.366e4					1.4	NO		bb		
7	FUNCTION5 PFK	42.60	1.047e4					1.1	NO		bb		
8	FUNCTION5 PFK	45.68	2.762e3					0.9	NO		bb		
9	FUNCTION5 PFK	45.55	8.659e3					1.7	NO		bb		
10	FUNCTION5 PFK	45.47	2.398e3					0.7	NO		db		
11	FUNCTION5 PFK	45.43	7.716e3					1.6	NO		bd		
12	FUNCTION5 PFK	45.29	5.188e3					1.0	NO		bb		
13	FUNCTION5 PFK	45.19	8.429e3					1.1	NO		bb		
14	FUNCTION5 PFK	45.09	4.899e3					1.4	NO		bb		
15	FUNCTION5 PFK	44.68	5.341e3					0.9	NO		bb		
16	FUNCTION5 PFK	44.33	8.875e3					1.5	NO		db		
17	FUNCTION5 PFK	44.28	5.152e3					1.3	NO		bd		
18	FUNCTION5 PFK	44.24	3.823e3					0.9	NO		bb		
19	FUNCTION5 PFK	44.08	2.524e3					0.8	NO		bb		
20	FUNCTION5 PFK	43.90	4.964e3					1.1	NO		bb		
21	FUNCTION5 PFK	43.47	2.415e3					0.7	NO		db		
22	FUNCTION5 PFK	43.44	2.000e3					0.6	NO		dd		
23	FUNCTION5 PFK	43.41	9.261e2					0.5	NO		bd		
24	FUNCTION5 PFK	45.90	3.559e3					1.0	NO		bb		
25	FUNCTION5 PFK	45.84	7.560e3					1.6	NO		db		
26	FUNCTION5 PFK	45.79	4.764e3					0.9	NO		dd		
27	FUNCTION5 PFK	45.76	7.431e2					0.4	NO		bd		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.71	1.213e2					2.6	NO		bb		0.000
2	FUNCTION1 HXCD...	24.84	1.886e2					2.4	NO		bb		0.000
3	FUNCTION1 HXCD...	23.66	9.220e1					2.8	NO		bb		0.000
4	FUNCTION1 HXCD...	22.84	7.743e1					1.5	NO		bb		0.000
5	FUNCTION1 HXCD...	21.17	1.696e2					2.3	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:10 Pacific Daylight Time

**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk****ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.70	1.020e2					2.3	NO		bb		0.000
2	FUNCTION2 HPCD...	31.18	1.145e2					5.5	YES		bb		0.000
3	FUNCTION2 HPCD...	30.99	7.578e1					2.1	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.83	7.311e1					2.5	NO		bb		0.000
2	FUNCTION3 OCDPE	36.30	8.257e1					3.1	YES		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.66	8.353e1					4.4	YES		bb		0.000

**ETHERS6**

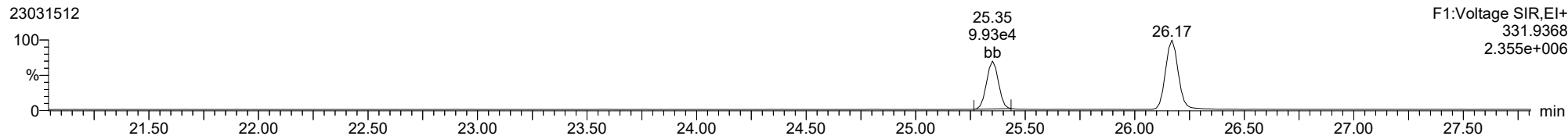
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

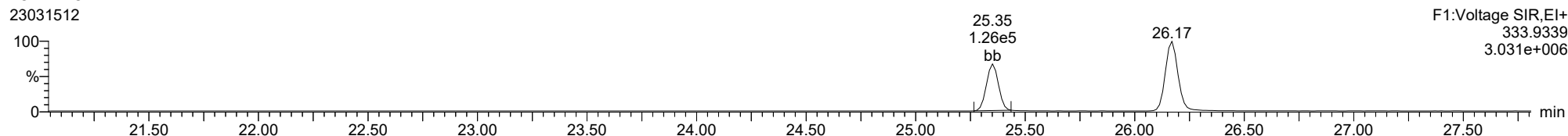
**13C-1234-TCDD**

23031512



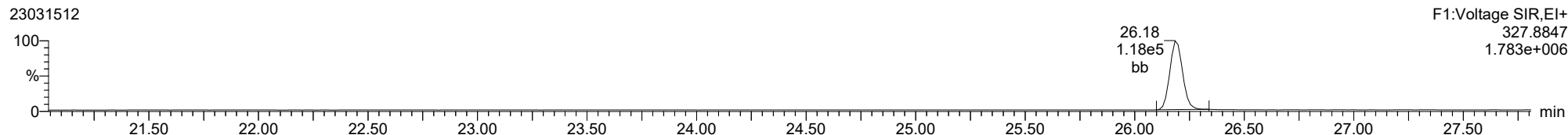
**13C-1234-TCDD**

23031512



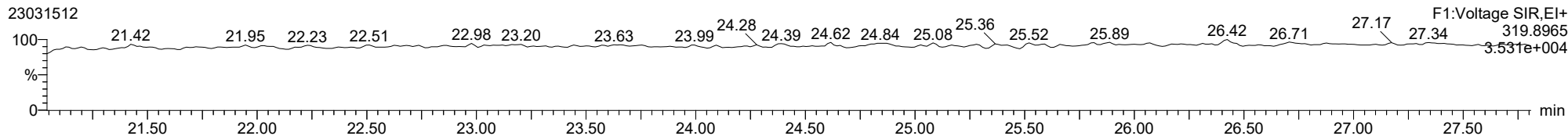
**37CL-2378-TCDD**

23031512

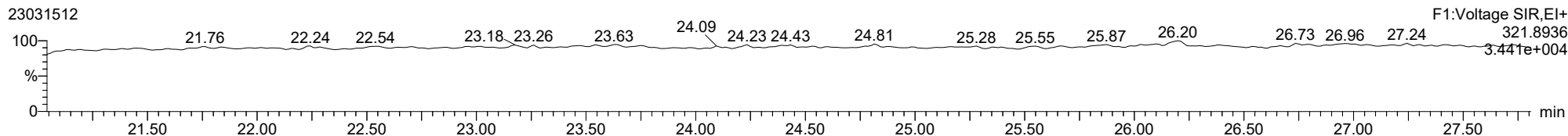


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

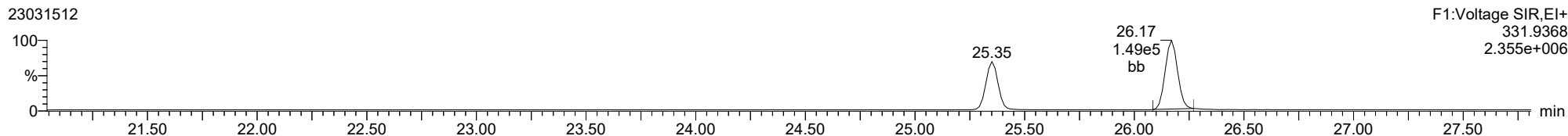
**2378-TCDD**



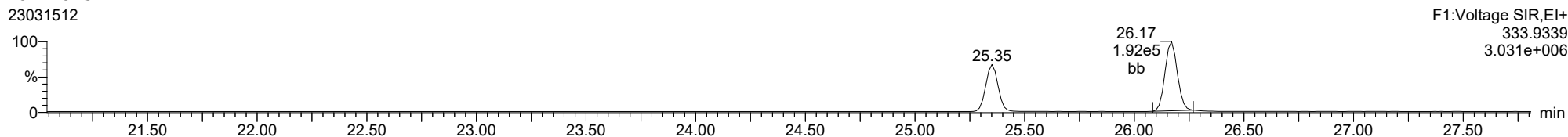
**2378-TCDD**



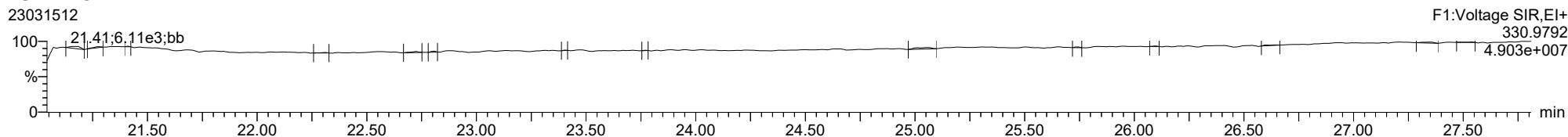
**13C-2378-TCDD**



**13C-2378-TCDD**

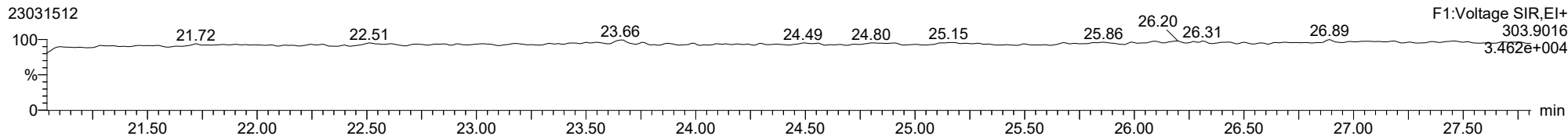


**FUNCTION1 PFK**

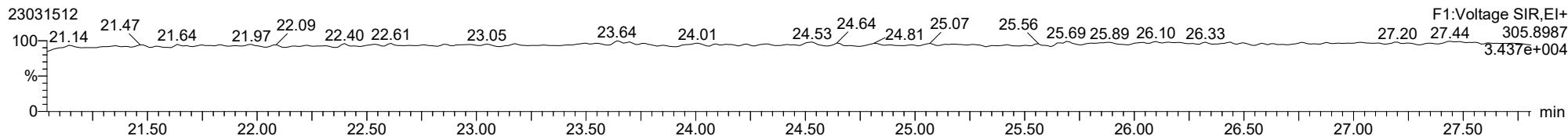


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

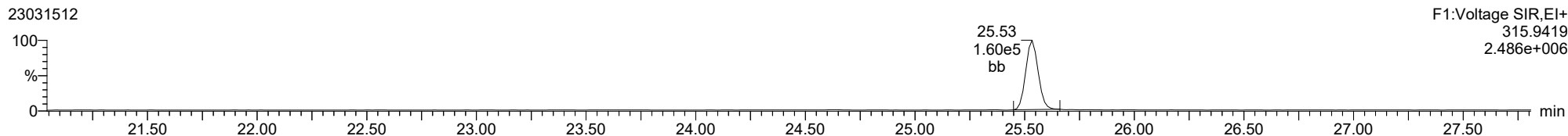
**2378-TCDF**



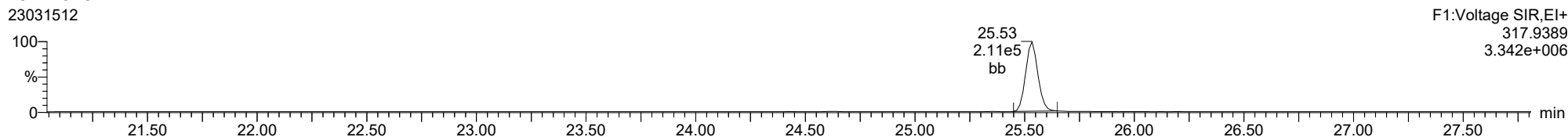
**2378-TCDF**



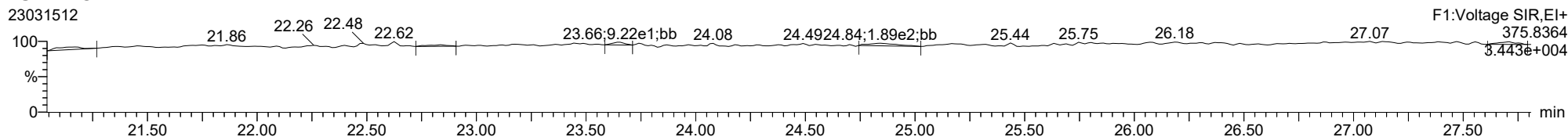
**13C-2378-TCDF**



**13C-2378-TCDF**

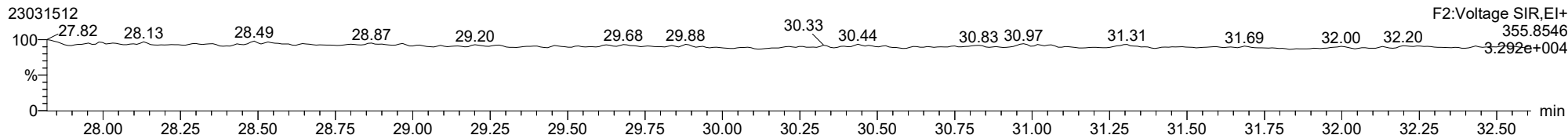


**FUNCTION1 HXCDPE**

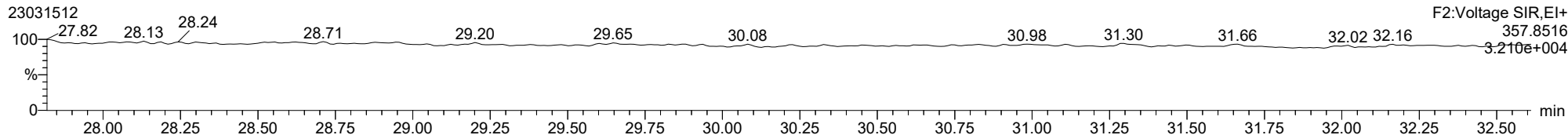


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

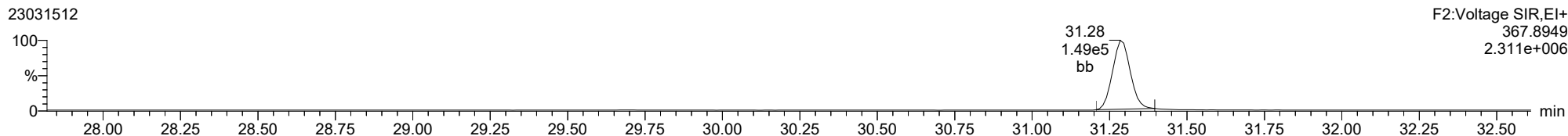
**12378-PeCDD**



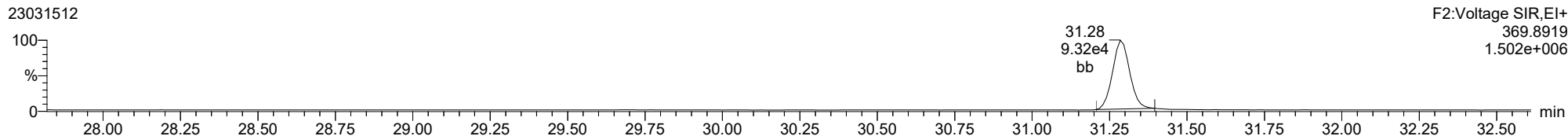
**12378-PeCDD**



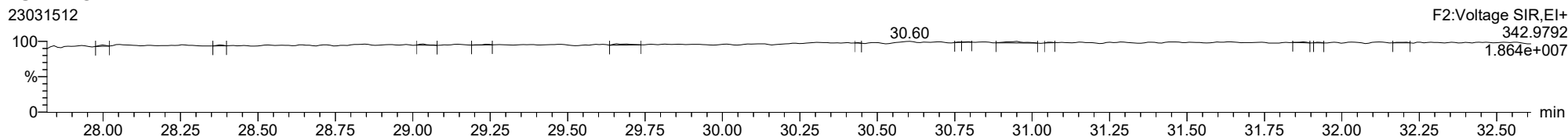
**13C-12378-PeCDD**



**13C-12378-PeCDD**

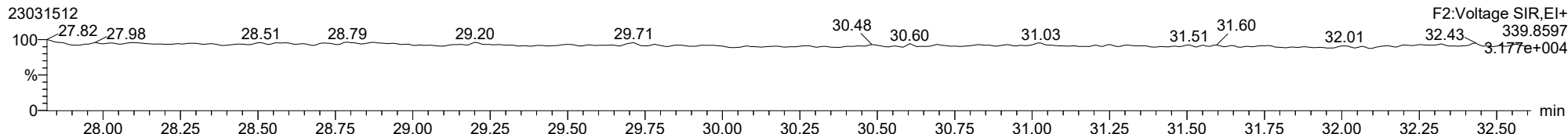


**FUNCTION2 PFK**

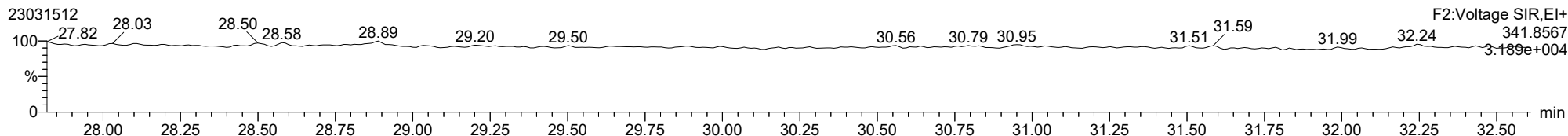


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

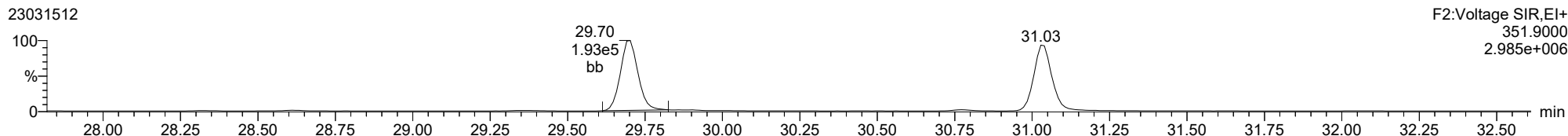
12378-PeCDF



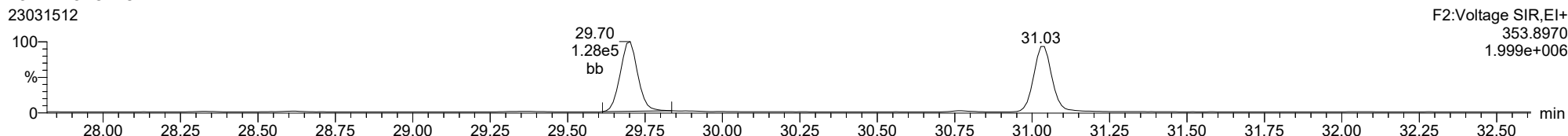
12378-PeCDF



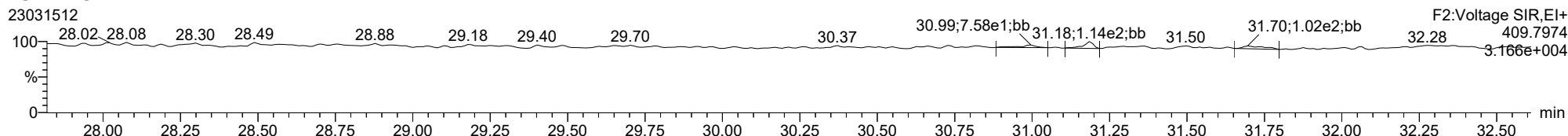
13C-12378-PeCDF



13C-12378-PeCDF



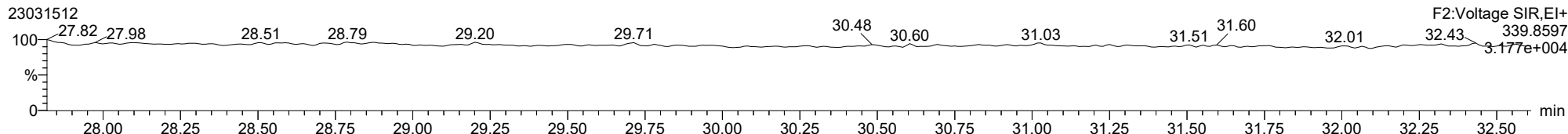
FUNCTION2 HPCDPE



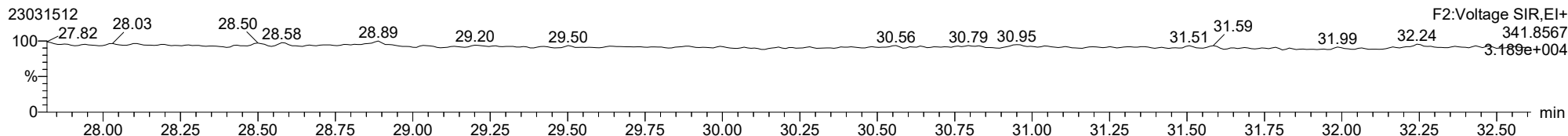


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

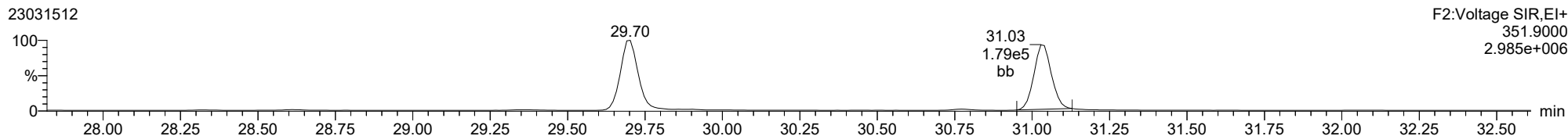
**23478-PeCDF**



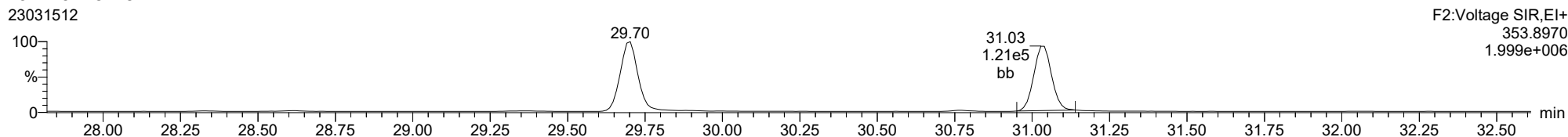
**23478-PeCDF**



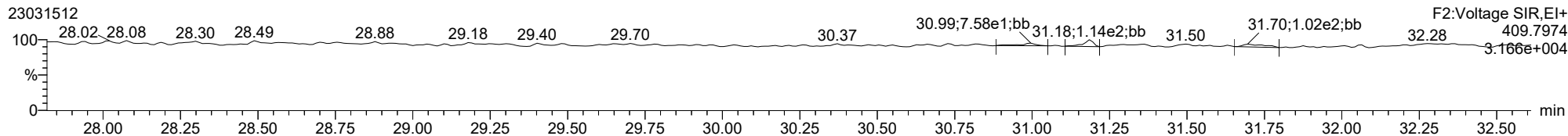
**13C-23478-PeCDF**



**13C-23478-PeCDF**



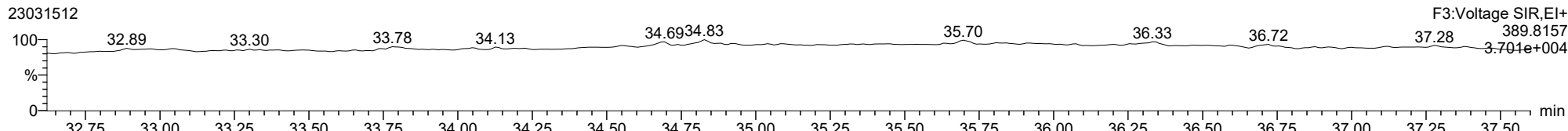
**FUNCTION2 HPCDPE**



ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

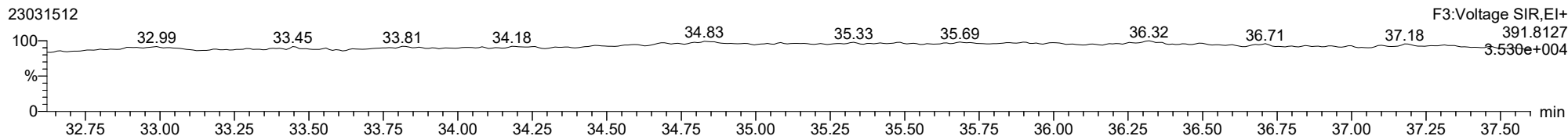
**123478-HxCDD**

23031512



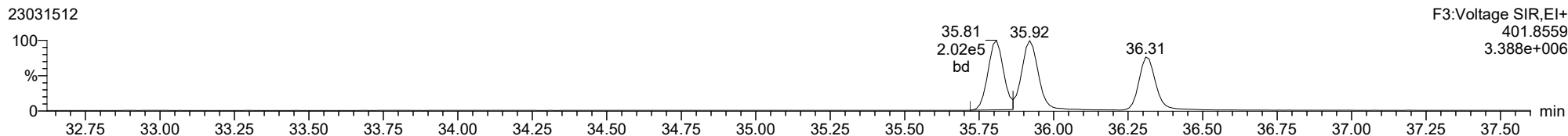
**123478-HxCDD**

23031512



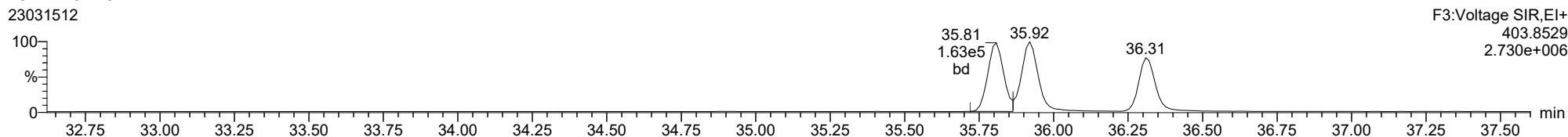
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23031512



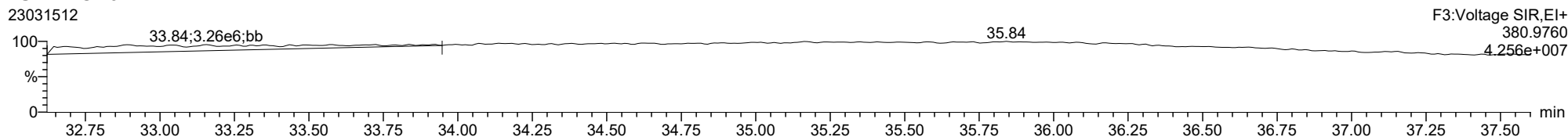
**13C-123478-HxCDD**

23031512



**FUNCTION3 PFK**

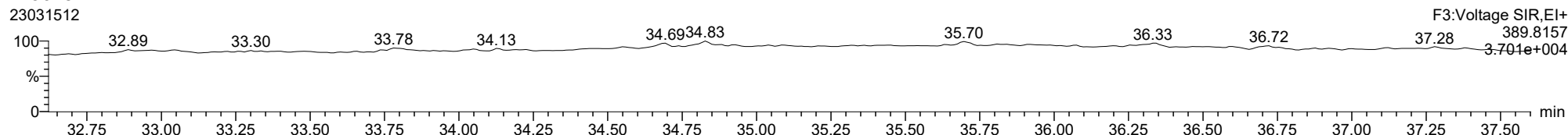
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ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

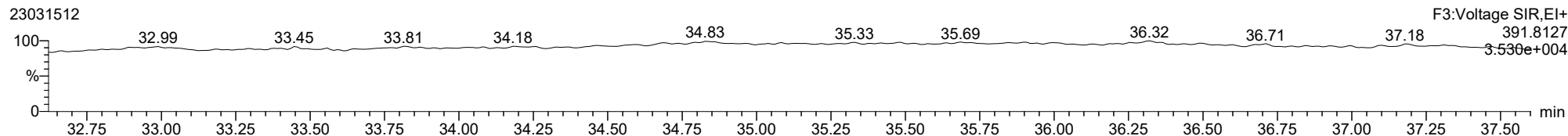
123678-HxCDD

23031512



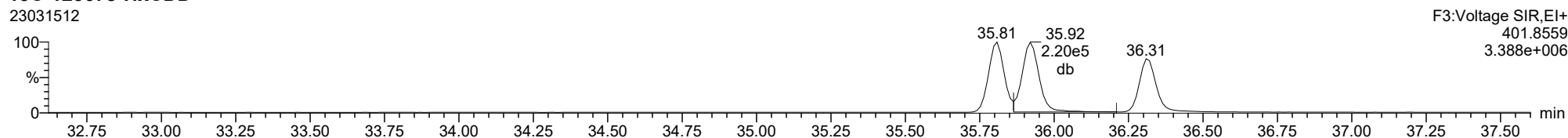
123678-HxCDD

23031512



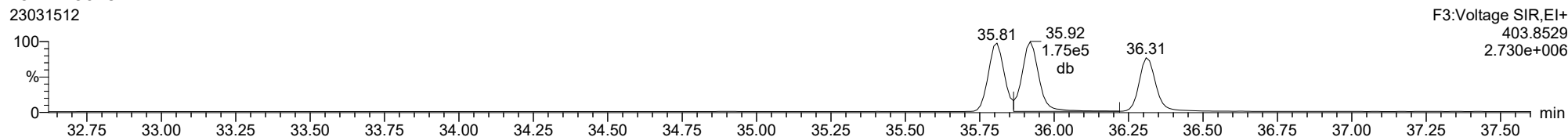
13C-123678-HxCDD

23031512



13C-123678-HxCDD

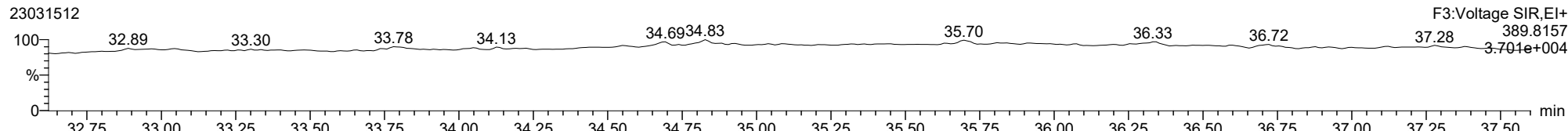
23031512



ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

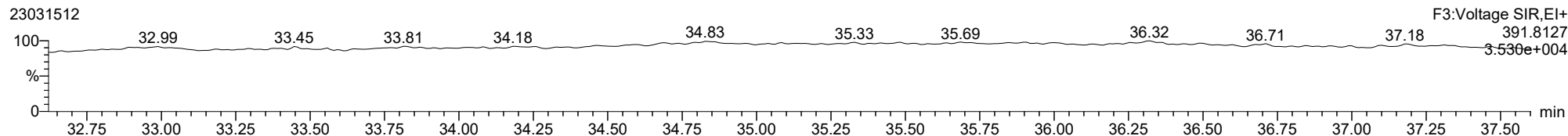
123789-HxCDD

23031512



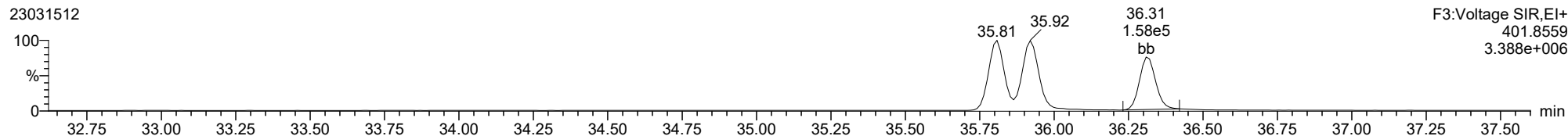
123789-HxCDD

23031512



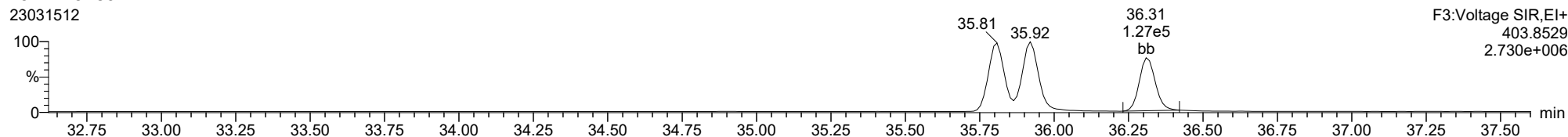
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23031512



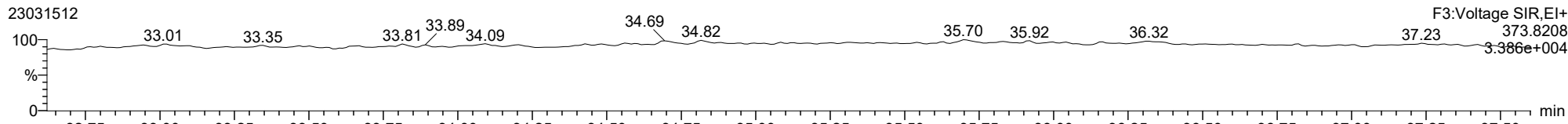
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23031512

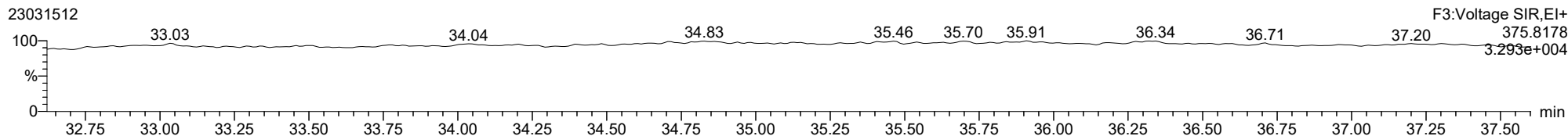


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

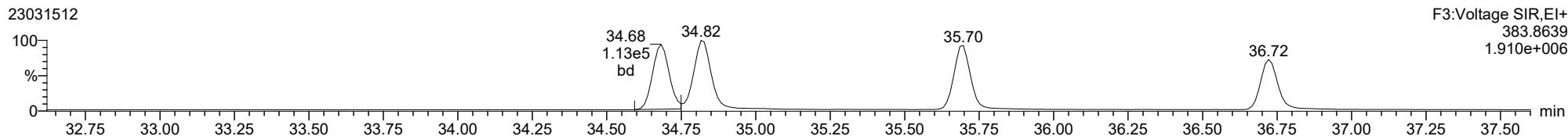
123478-HxCDF



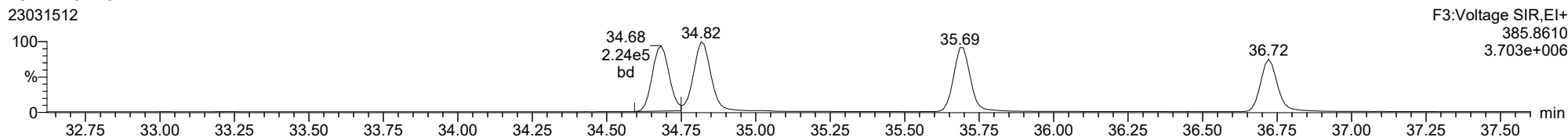
123478-HxCDF



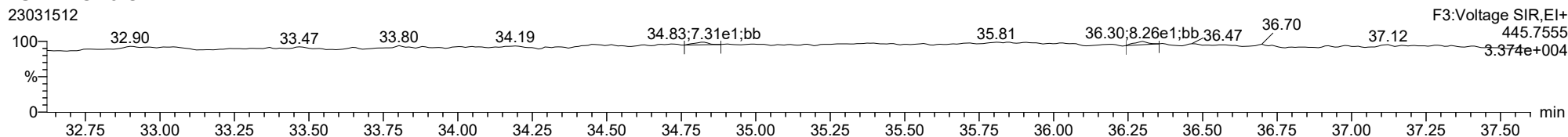
13C-123478-HxCDF



13C-123478-HxCDF

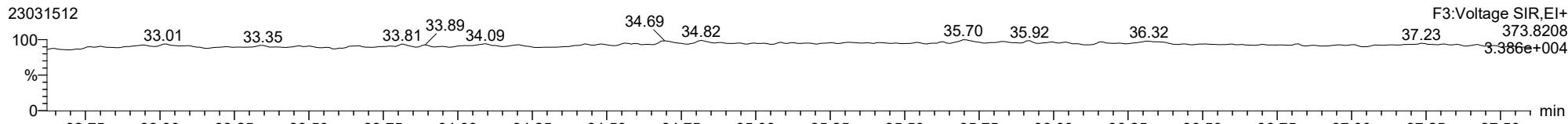


FUNCTION3 OCDPE

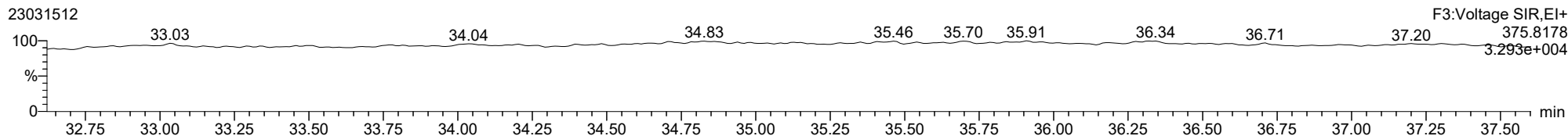


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

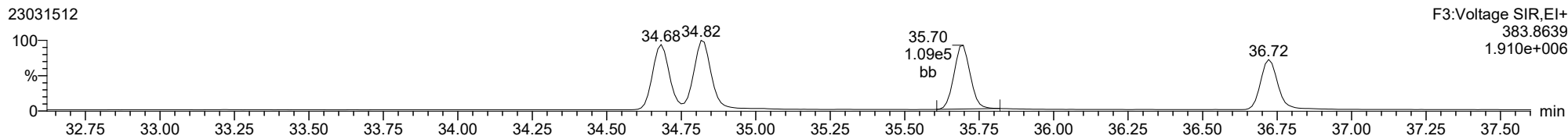
**234678-HxCDF**



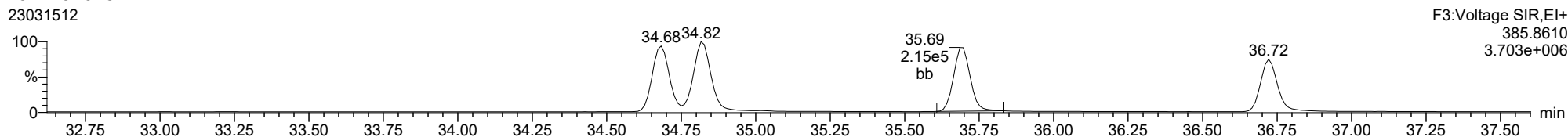
**234678-HxCDF**



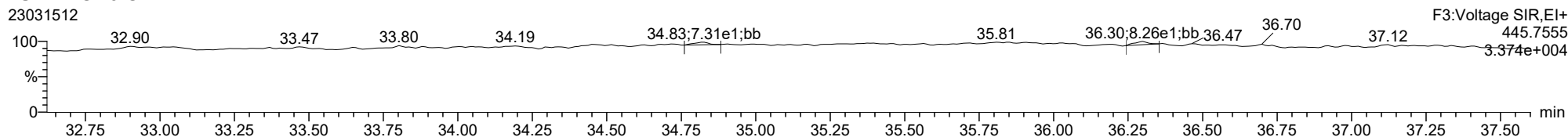
**13C-234678-HxCDF**



**13C-234678-HxCDF**

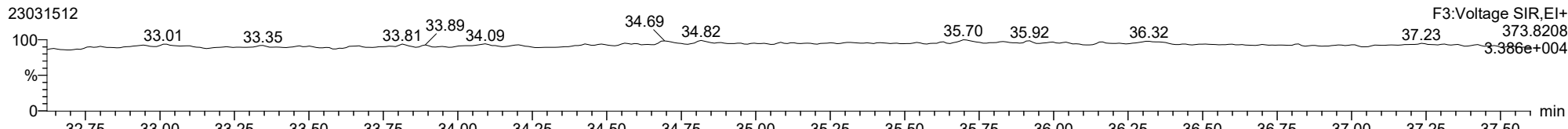


**FUNCTION3 OCDPE**

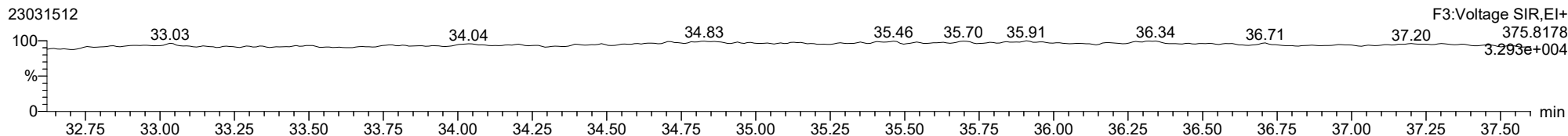


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

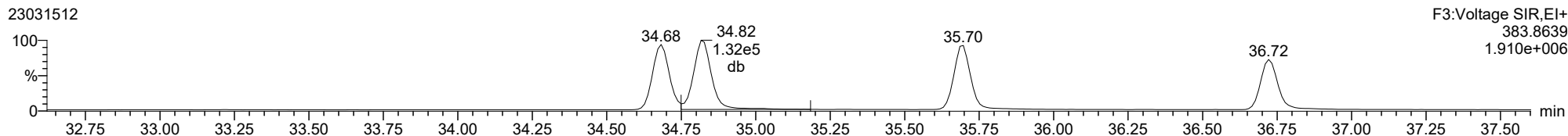
123678-HxCDF



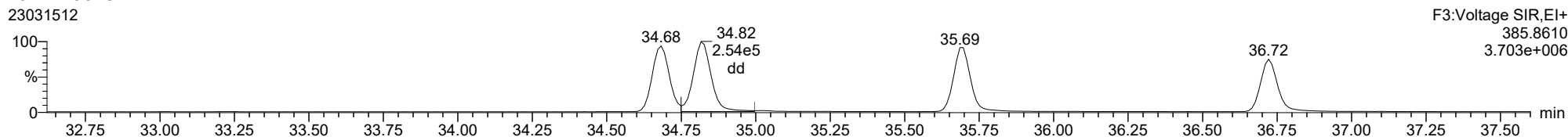
123678-HxCDF



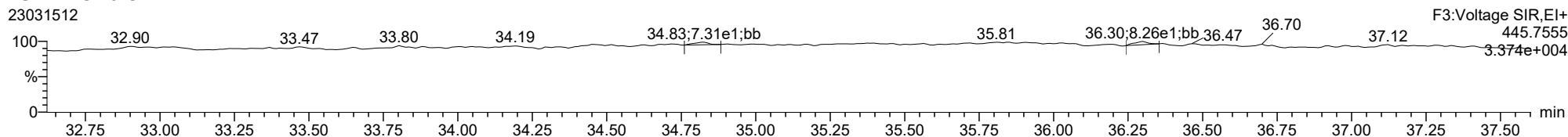
13C-123678-HxCDF



13C-123678-HxCDF

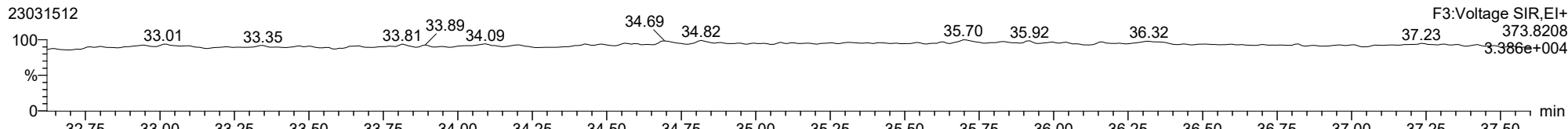


FUNCTION3 OCDPE

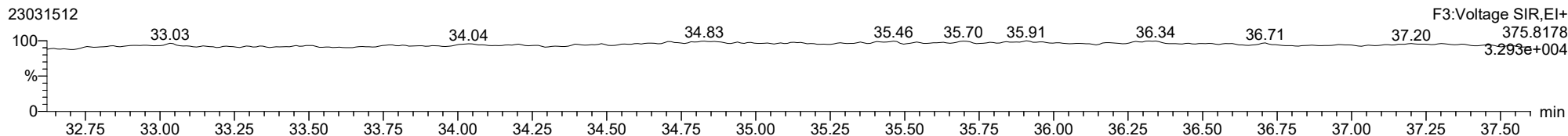


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

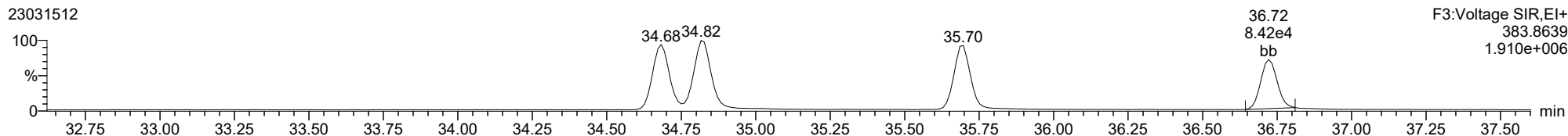
123789-HxCDF



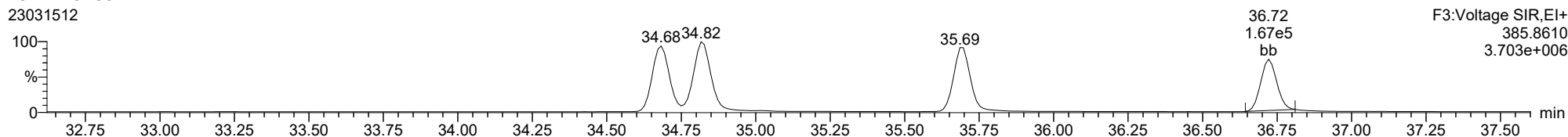
123789-HxCDF



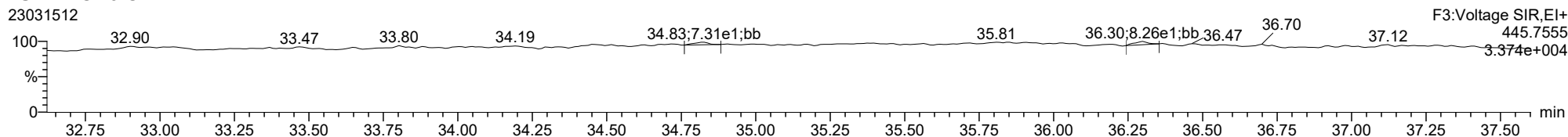
13C-123789-HxCDF



13C-123789-HxCDF



FUNCTION3 OCDPE

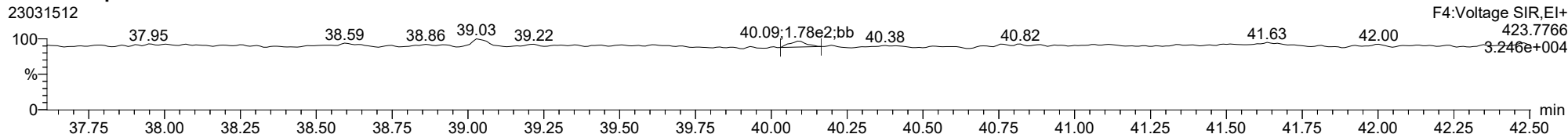




ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

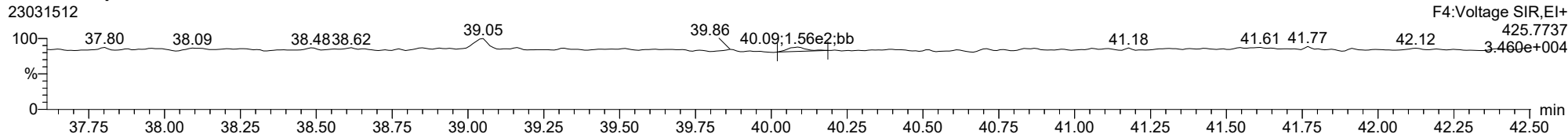
**1234678-HpCDD**

23031512



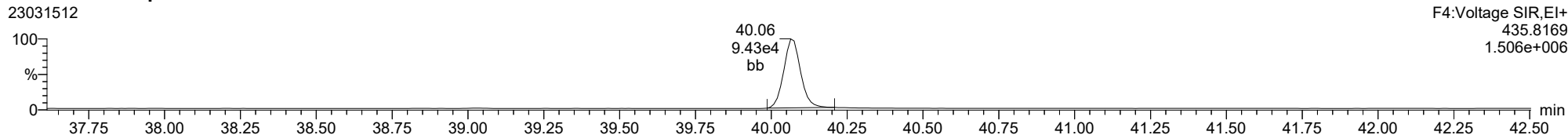
**1234678-HpCDD**

23031512



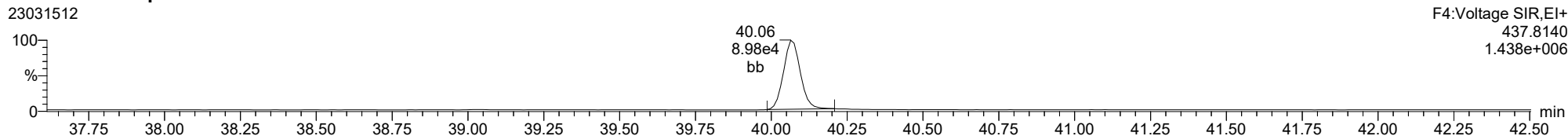
**13C-1234678-HpCDD**

23031512



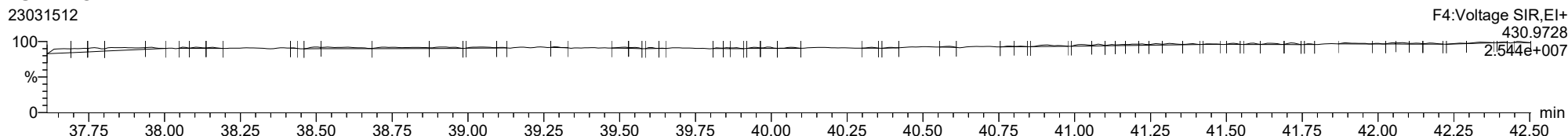
**13C-1234678-HpCDD**

23031512



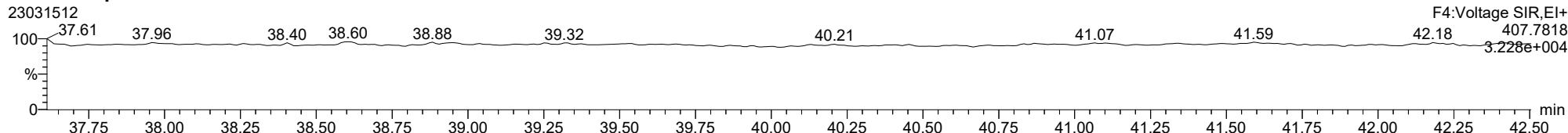
**FUNCTION4 PFK**

23031512

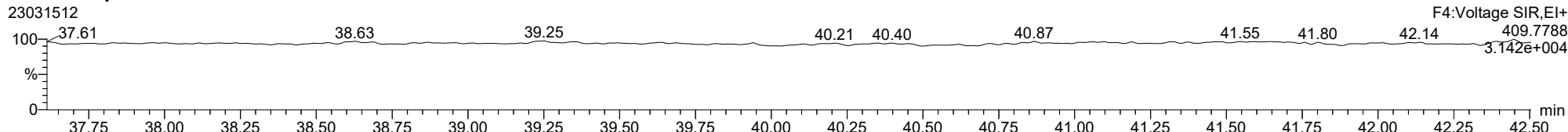


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

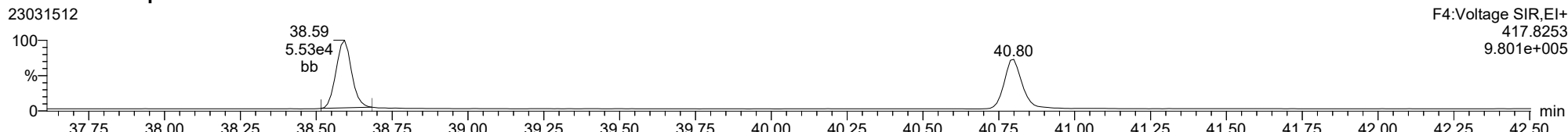
1234678-HpCDF



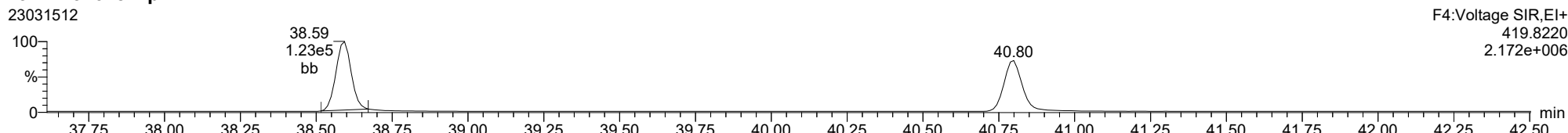
1234678-HpCDF



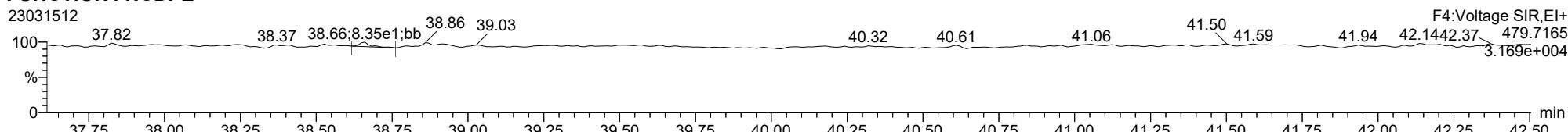
13C-1234678-HpCDF



13C-1234678-HpCDF

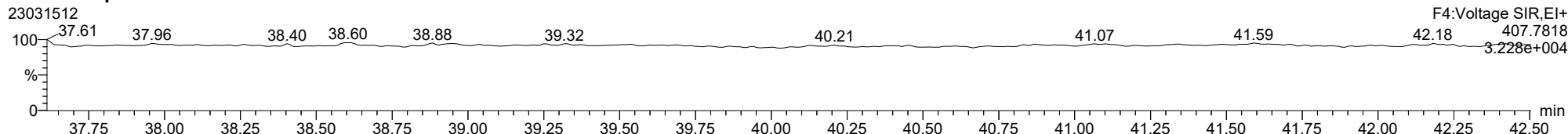


FUNCTION4 NCDPE

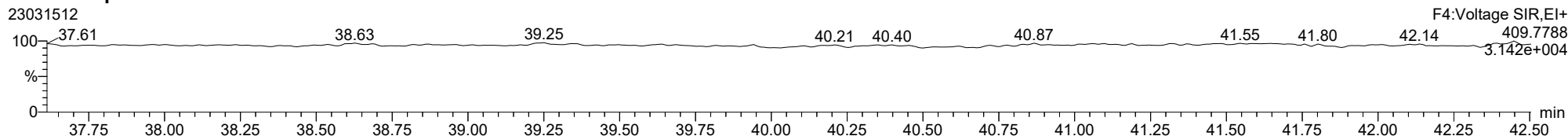


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

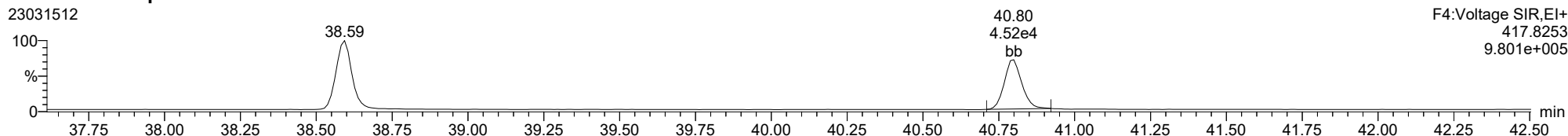
1234789-HpCDF



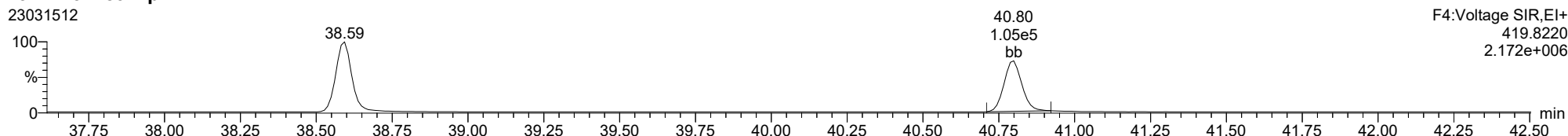
1234789-HpCDF



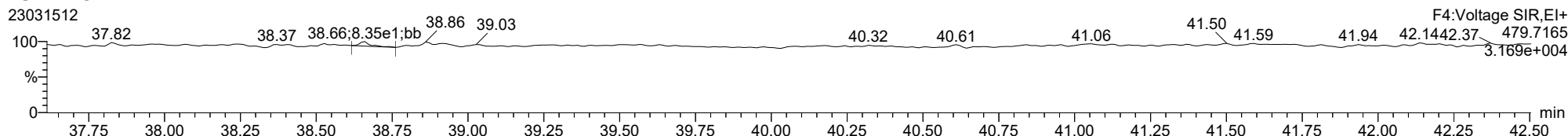
13C-1234789-HpCDF



13C-1234789-HpCDF

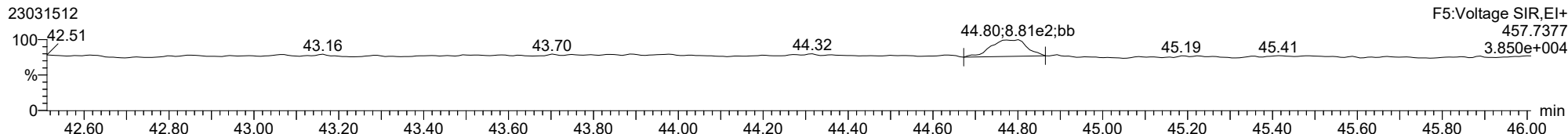


FUNCTION4 NCDPE

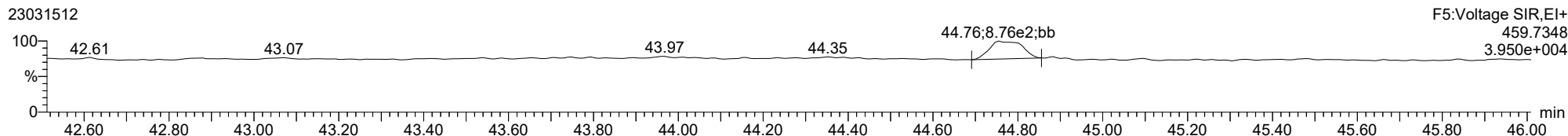


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

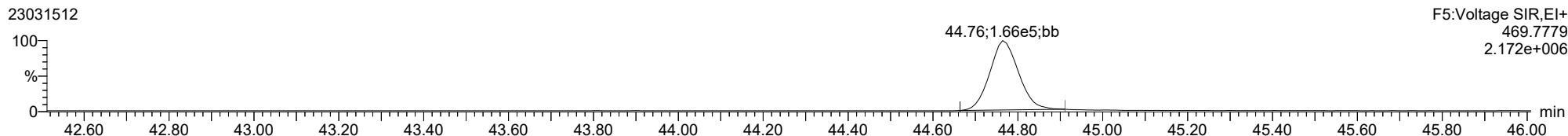
**OCDD**



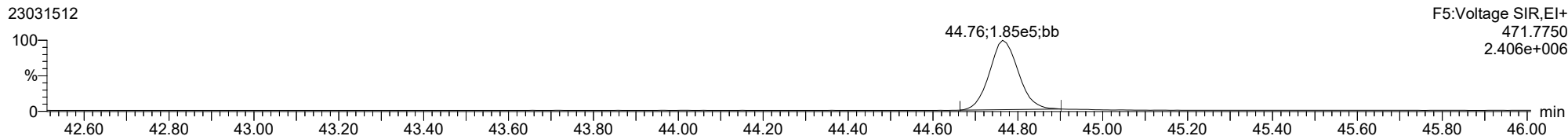
**OCDD**



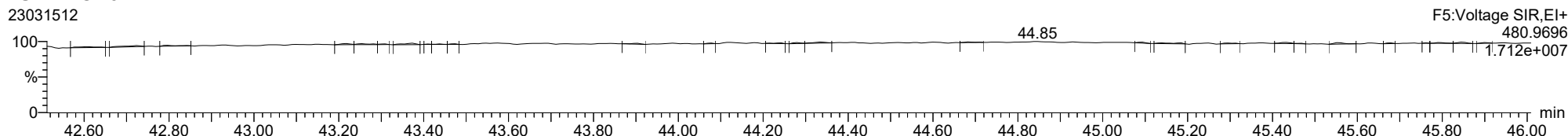
**13C-OCDD**



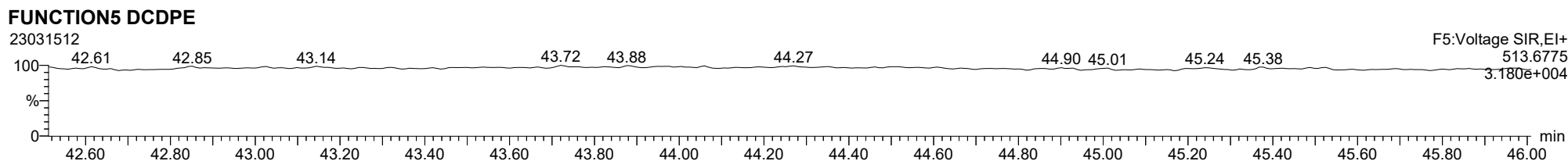
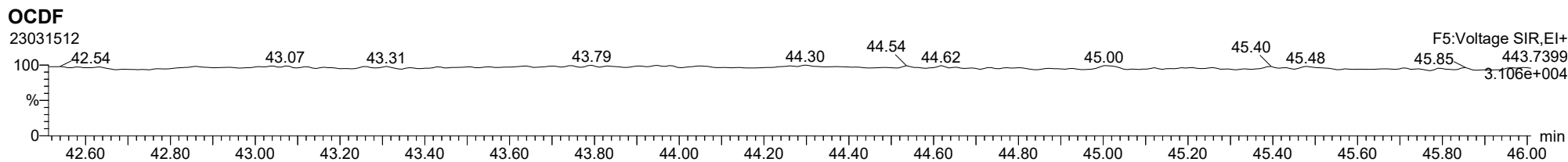
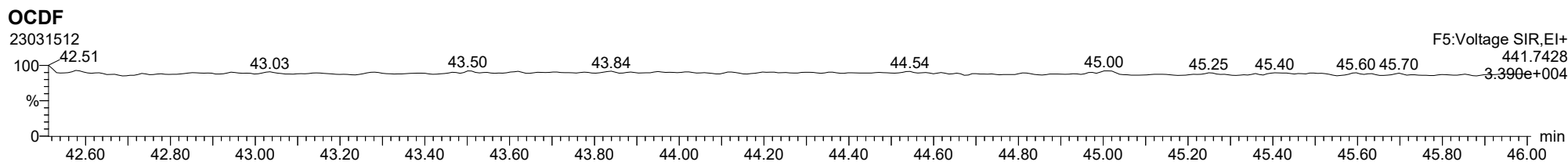
**13C-OCDD**



**FUNCTION5 PFK**

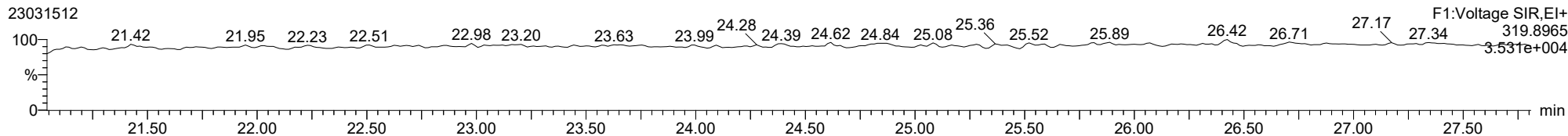


**ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk**

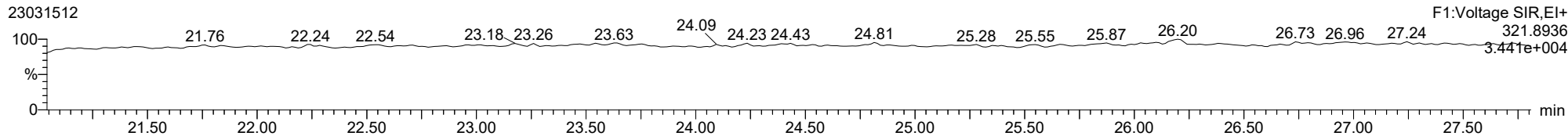


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

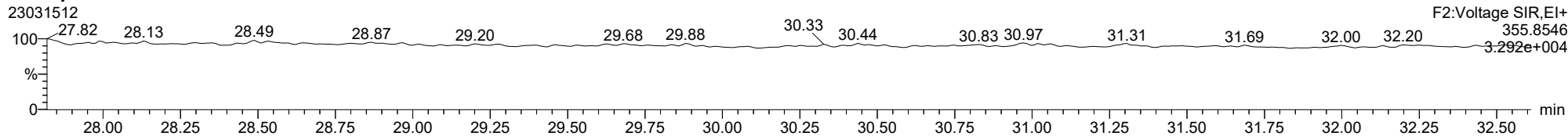
**Total-tetradioxins**



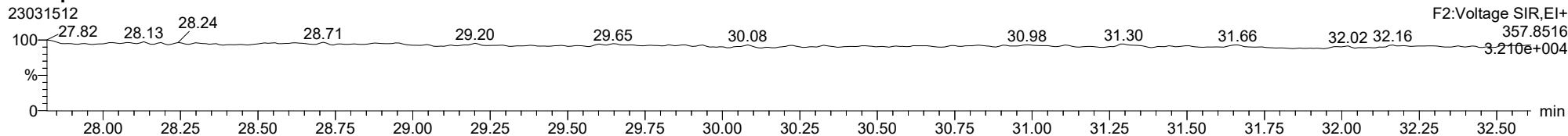
**Total-tetradioxins**



**Total-pentadioxins**



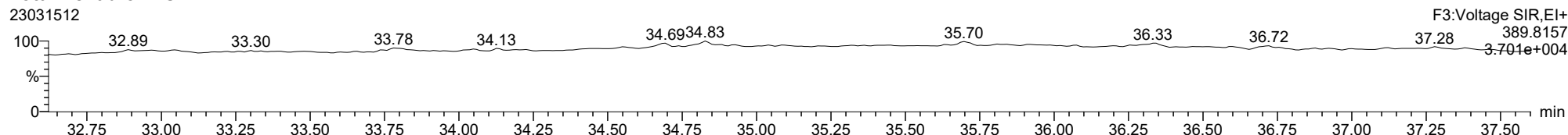
**Total-pentadioxins**



ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

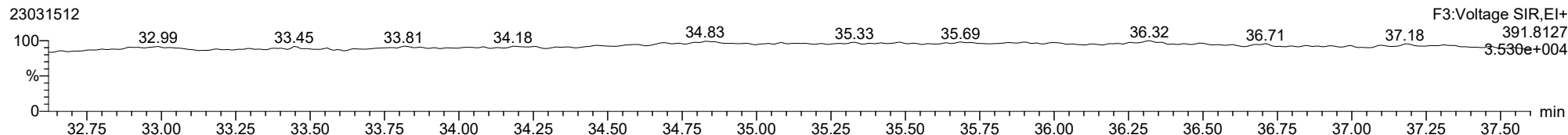
**Total-hexadioxins**

23031512



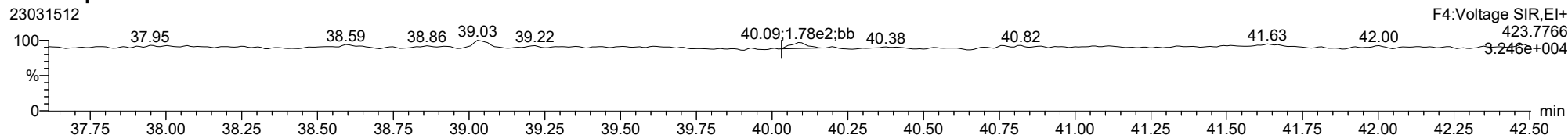
**Total-hexadioxins**

23031512



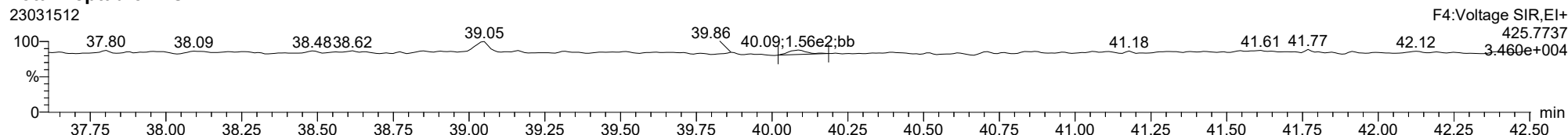
**Total-heptadioxins**

23031512



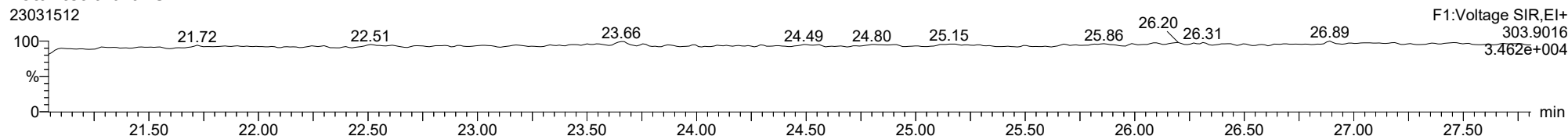
**Total-heptadioxins**

23031512

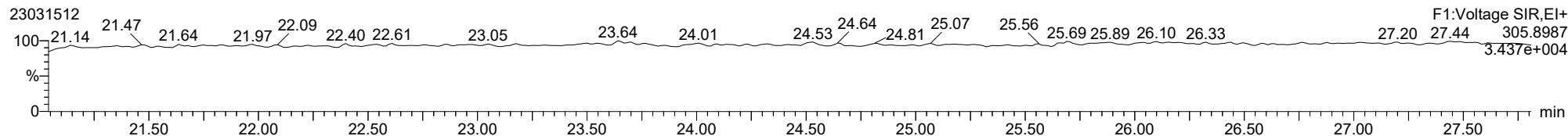


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

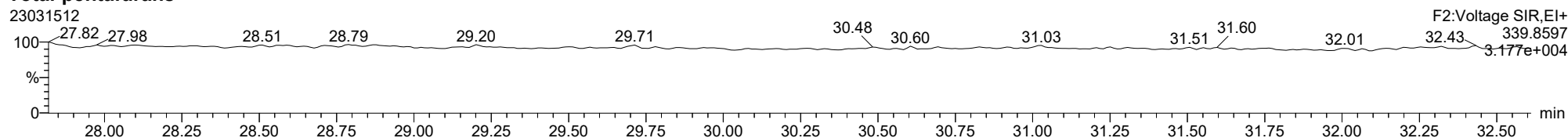
**Total-tetrafurans**



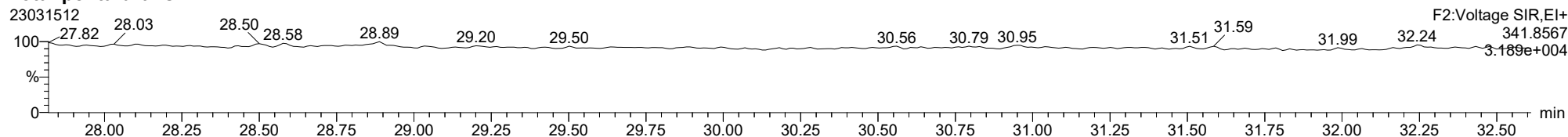
**Total-tetrafurans**



**Total-pentafurans**



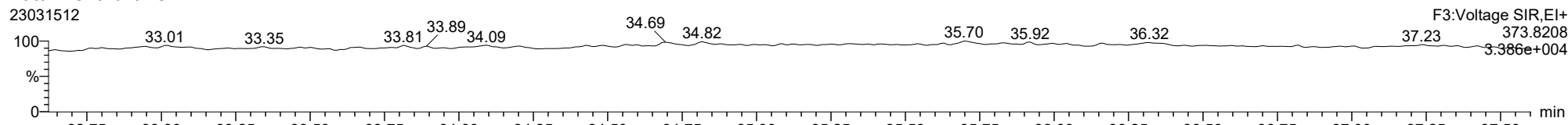
**Total-pentafurans**



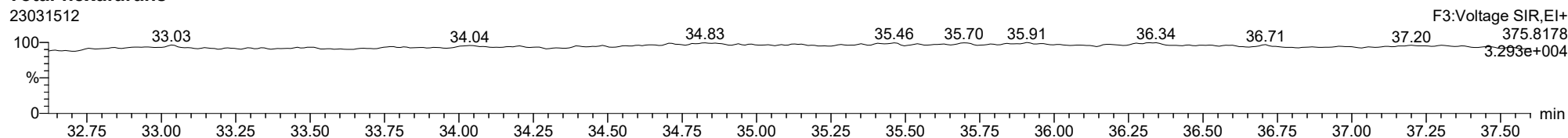


ID: BLC0136-BLK1, Name: 23031512, Date: 15-Mar-2023, Time: 19:33:06, Conditions: AUTOSPEC01, User: pk

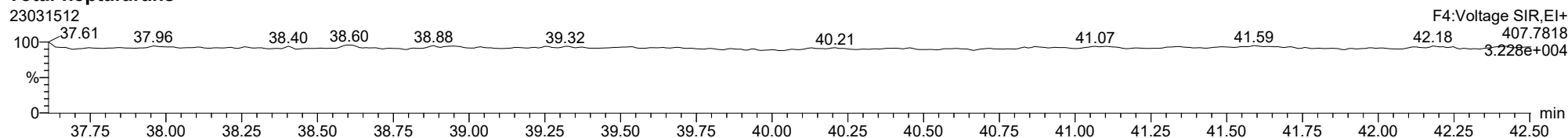
**Total-hexafurans**



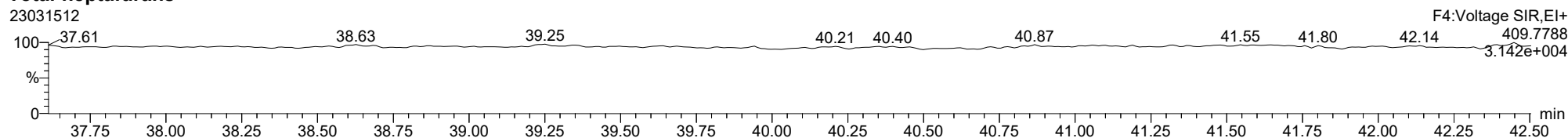
**Total-hexafurans**



**Total-heptafurans**



**Total-heptafurans**





**LCS RECOVERY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Analyzed: 03/15/23 20:22

Batch: BLC0136

Laboratory ID: BLC0136-BS1

Preparation: EPA 1613

Sequence Name: LCS

Initial/Final: 10 g / 20 uL

COMPOUND	SPIKE ADDED (ng/kg wet)	LCS CONCENTRATION (ng/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	20.0	17.1		85.4	75 - 158
2,3,7,8-TCDD	20.0	16.2		80.8	67 - 158
1,2,3,7,8-PeCDF	100	87.0		87.0	80 - 134
2,3,4,7,8-PeCDF	100	82.6		82.6	68 - 160
1,2,3,7,8-PeCDD	100	87.8		87.8	70 - 142
1,2,3,4,7,8-HxCDF	100	81.7		81.7	72 - 134
1,2,3,6,7,8-HxCDF	100	85.7		85.7	84 - 130
2,3,4,6,7,8-HxCDF	100	88.7		88.7	70 - 156
1,2,3,7,8,9-HxCDF	100	88.4		88.4	78 - 130
1,2,3,4,7,8-HxCDD	100	82.7		82.7	70 - 164
1,2,3,6,7,8-HxCDD	100	82.7		82.7	76 - 134
1,2,3,7,8,9-HxCDD	100	87.0		87.0	64 - 162
1,2,3,4,6,7,8-HpCDF	100	84.9		84.9	82 - 122
1,2,3,4,7,8,9-HpCDF	100	92.2		92.2	78 - 138
1,2,3,4,6,7,8-HpCDD	100	82.1	B	82.1	70 - 140
OCDF	200	147		73.5	63 - 170
OCDD	200	169	B	84.3	78 - 144

\* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**Method:** T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

**ID:** BLC0136-BS1, **Name:** 23031513, **Date:** 15-Mar-2023, **Time:** 20:22:11, **Conditions:** AUTOSPEC01, **User:** pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.548	1.001	1.201e4	1.629e4	0.702	0.737	0.770	605	876	1.82e5	2.38e5	301.3	272.2	NO	bb	bb	8.541
12378-PeCDF	29.713	1.001	6.631e4	4.428e4	0.679	1.497	1.550	1105	918	1.00e6	6.66e5	908.0	725.3	NO	bb	bb	43.500
23478-PeCDF	31.050	1.001	6.708e4	4.452e4	0.786	1.507	1.550	1105	918	9.99e5	6.61e5	904.3	719.9	NO	bb	bb	41.297
123478-HxCDF	34.693	1.001	8.823e4	7.204e4	1.166	1.225	1.240	1121	915	1.37e6	1.12e6	1219.9	1228.4	NO	bd	bd	40.833
234678-HxCDF	35.707	1.001	8.531e4	6.798e4	1.140	1.255	1.240	1121	915	1.29e6	1.02e6	1154.6	1116.5	NO	bd	bd	44.362
123678-HxCDF	34.827	1.000	9.737e4	7.688e4	1.091	1.266	1.240	1121	915	1.38e6	1.10e6	1227.0	1200.2	NO	dd	dd	42.855
123789-HxCDF	36.732	1.000	7.228e4	5.741e4	1.137	1.259	1.240	1121	915	1.08e6	8.53e5	958.9	932.4	NO	bd	bd	44.207
1234678-HpCDF	38.593	1.000	4.519e4	4.600e4	1.003	0.982	1.050	848	978	7.28e5	7.34e5	858.4	751.0	NO	bb	bd	42.426
1234789-HpCDF	40.799	1.000	3.935e4	4.032e4	0.953	0.976	1.050	848	978	5.61e5	5.79e5	661.7	591.8	NO	bd	bb	46.112
OCDF	45.002	1.005	5.540e4	6.437e4	0.778	0.861	0.890	966	614	6.68e5	7.78e5	691.2	1267.7	NO	bb	bd	73.535
2378-TCDD	26.184	1.000	1.593e4	2.190e4	1.149	0.727	0.770	956	702	2.38e5	3.29e5	249.4	468.6	NO	bb	bd	8.075
12378-PeCDD	31.295	1.000	7.288e4	4.820e4	1.022	1.512	1.550	634	657	1.13e6	7.25e5	1786.3	1104.2	NO	bb	bb	43.910
123478-HxCDD	35.819	1.001	7.444e4	6.168e4	0.996	1.207	1.240	750	819	1.20e6	9.89e5	1602.6	1208.8	NO	bd	bd	41.350
123678-HxCDD	35.930	1.000	8.202e4	6.774e4	1.001	1.211	1.240	750	819	1.26e6	1.04e6	1672.9	1273.7	NO	db	dd	41.344
123789-HxCDD	36.320	1.011	7.468e4	6.194e4	0.907	1.206	1.240	750	819	1.18e6	9.85e5	1569.3	1203.6	NO	bb	bb	43.496
1234678-HpCDD	40.075	1.000	5.228e4	4.900e4	1.039	1.067	1.050	866	1197	7.80e5	7.60e5	900.6	634.5	NO	bb	bb	41.074
OCDD	44.773	1.000	7.227e4	9.012e4	0.920	0.802	0.890	716	750	9.10e5	1.09e6	1270.3	1448.2	NO	bb	bd	84.294
13C-2378-TCDF	25.520	1.007	2.027e5	2.696e5	1.620	0.752	0.770	1574	1355	3.03e6	4.03e6	1924.8	2975.5	NO	bb	bb	96.318
13C-12378-PeCDF	29.691	1.171	2.230e5	1.514e5	1.240	1.473	1.550	2900	988	3.41e6	2.29e6	1176.3	2322.9	NO	bb	bb	99.692
13C-23478-PeCDF	31.028	1.224	2.062e5	1.376e5	1.118	1.499	1.550	2900	988	3.15e6	2.11e6	1087.5	2137.6	NO	bb	bb	101.593
13C-123478-HxCDF	34.671	0.955	1.129e5	2.237e5	1.168	0.505	0.510	1222	1206	1.74e6	3.48e6	1421.9	2887.5	NO	bd	bd	100.236
13C-123678-HxCDF	34.816	0.959	1.242e5	2.486e5	1.386	0.500	0.510	1222	1206	1.81e6	3.62e6	1480.1	2999.5	NO	dd	db	93.531
13C-234678-HxCDF	35.685	0.983	1.026e5	2.006e5	1.129	0.511	0.510	1222	1206	1.60e6	3.14e6	1306.2	2606.5	NO	bb	bb	93.405
13C-123789-HxCDF	36.721	1.011	8.493e4	1.731e5	0.932	0.491	0.510	1222	1206	1.36e6	2.71e6	1112.2	2250.5	NO	bb	bb	96.332
13C-1234678-HpCDF	38.582	1.063	6.365e4	1.507e5	0.895	0.423	0.440	1027	1620	1.06e6	2.48e6	1036.6	1528.7	NO	bb	bb	83.282
13C-1234789-HpCDF	40.787	1.123	5.796e4	1.233e5	0.770	0.470	0.440	1027	1620	8.10e5	1.85e6	789.4	1139.2	NO	bb	bb	81.925
13C-1234-TCDD	25.350	0.000	1.322e5	1.705e5	1.000	0.775	0.770	1611	799	2.07e6	2.64e6	1283.0	3308.3	NO	bb	bb	100.000
13C-2378-TCDD	26.170	1.032	1.774e5	2.304e5	1.152	0.770	0.770	1611	799	2.64e6	3.43e6	1636.2	4290.3	NO	bb	bb	116.909
13C-12378-PeCDD	31.284	1.234	1.648e5	1.050e5	0.829	1.570	1.550	946	738	2.46e6	1.55e6	2599.8	2101.1	NO	bb	bb	107.562
13C-123478-HxCDD	35.796	0.986	1.874e5	1.433e5	0.995	1.308	1.240	1112	1074	2.96e6	2.33e6	2661.1	2169.0	NO	bd	bd	115.606
13C-123678-HxCDD	35.919	0.989	1.977e5	1.642e5	1.157	1.204	1.240	1112	1074	2.96e6	2.42e6	2662.0	2251.7	NO	db	db	108.841
13C-1234678-HpCDD	40.063	1.103	1.219e5	1.154e5	0.840	1.056	1.050	998	639	1.78e6	1.70e6	1788.1	2663.0	NO	bd	bd	98.269
13C-OCDD	44.755	1.233	1.982e5	2.206e5	0.767	0.899	0.890	1159	1123	2.41e6	2.73e6	2077.8	2433.4	NO	bb	bb	189.838
13C-123789-HxCDD	36.309	0.000	1.609e5	1.266e5	1.000	1.271	1.240	1112	1074	2.53e6	2.02e6	2279.5	1877.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.184	1.033	1.397e5		1.288			1010		2.12e6		2100.6			bb		35.837

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	605	876								
1289-TCDF					0.678		0.770	605	876								
13468-PECDF					1.246		1.550	513	754								
12389-PECDF	32.075	1.080	4.757e2	2.376e2	0.496	2.002	1.550	1105	918	7.32e3	4.60e3	6.6	5.0	YES	bb	db	0.384
123468-HXCDF					1.169		1.240	1121	915								
1368-TCDD					1.015		0.770	956	702								
1289-TCDD					0.909		0.770	956	702								
12479-PECDD					2.301		1.550	634	657								
12389-PECDD					1.184		1.550	634	657								
124679-HXCDD					1.115		1.240	750	819								
1234679-HPCDD	39.038	0.974	4.283e2	4.828e2	1.137	0.887	1.050	866	1197	7.84e3	8.00e3	9.1	6.7	YES	bb	bb	0.338
Total-tetrafurans			1.201e4		0.727			605		1.82e5							8.541
Total-penta1			0.000e0					513		0.00e0							
Total-pentafurans			1.334e5		0.654			1105		2.00e6							84.797
Total-hexafurans			3.432e5		1.141			1121		5.11e6							172.258
Total-heptafurans			8.478e4		0.978			848		1.29e6							88.799
Total-Furans			6.288e5		0.922			605		9.26e6							427.929
Total-tetradoxins			1.593e4		1.024			956		2.38e5							8.075
Total-pentadoxins			7.288e4		1.502			634		1.13e6							43.910
Total-hexadoxins			2.311e5		1.005			750		3.63e6							126.190
Total-heptadoxins			5.228e4		1.088			866		7.80e5							41.074
Total-Dioxins			4.445e5		1.130			956		6.69e6							303.544
Total-TEQ			1.073e6					956		1.60e7							731.472
FUNCTION1 PFK			0.000e0					614412		0.00e0							
FUNCTION2 PFK			2.181e5					212672		6.87e6							0.000
FUNCTION3 PFK			2.862e6					462183		4.47e7							0.000
FUNCTION4 PFK			3.297e5					299169		1.00e7							
FUNCTION5 PFK			1.314e5					170286		4.86e6							
FUNCTION1 HXCD...			1.318e2					457		1.08e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			0.000e0					549		0.00e0							
FUNCTION3 OCDPE			0.000e0					568		0.00e0							
FUNCTION4 NCDPE			1.634e2					490		2.22e3							0.000
FUNCTION5 DCDPE			0.000e0					505		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23****Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27****ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.55	1.201e4	1.629e4	0.702	0.74	0.77	301.3	YES	NO	bb	bb	8.541

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.05	6.708e4	4.452e4	0.786	1.51	1.55	904.3	YES	NO	bb	bb	41.297
2	12378-PeCDF	29.71	6.631e4	4.428e4	0.679	1.50	1.55	908.0	YES	NO	bb	bb	43.500

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.73	7.228e4	5.741e4	1.137	1.26	1.24	958.9	YES	NO	bd	bd	44.207
2	234678-HxCDF	35.71	8.531e4	6.798e4	1.140	1.25	1.24	1154.6	YES	NO	bd	bd	44.362
3	123678-HxCDF	34.83	9.737e4	7.688e4	1.091	1.27	1.24	1227.0	YES	NO	dd	dd	42.855
4	123478-HxCDF	34.69	8.823e4	7.204e4	1.166	1.22	1.24	1219.9	YES	NO	bd	bd	40.833

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.80	3.935e4	4.032e4	0.953	0.98	1.05	661.7	YES	NO	bd	bb	46.112
2	Total-heptafurans	39.24	2.394e2	2.655e2	0.978	0.90	1.05	4.8	YES	NO	bb	bb	0.261
3	1234678-HpCDF	38.59	4.519e4	4.600e4	1.003	0.98	1.05	858.4	YES	NO	bb	bd	42.426

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.55	1.201e4	1.629e4	0.702	0.74	0.77	301.3	YES	NO	bb	bb	8.541
2	23478-PeCDF	31.05	6.708e4	4.452e4	0.786	1.51	1.55	904.3	YES	NO	bb	bb	41.297
3	12378-PeCDF	29.71	6.631e4	4.428e4	0.679	1.50	1.55	908.0	YES	NO	bb	bb	43.500
4	123789-HxCDF	36.73	7.228e4	5.741e4	1.137	1.26	1.24	958.9	YES	NO	bd	bd	44.207
5	234678-HxCDF	35.71	8.531e4	6.798e4	1.140	1.25	1.24	1154.6	YES	NO	bd	bd	44.362
6	123678-HxCDF	34.83	9.737e4	7.688e4	1.091	1.27	1.24	1227.0	YES	NO	dd	dd	42.855
7	123478-HxCDF	34.69	8.823e4	7.204e4	1.166	1.22	1.24	1219.9	YES	NO	bd	bd	40.833
8	OCDF	45.00	5.540e4	6.437e4	0.778	0.86	0.89	691.2	YES	NO	bb	bd	73.535
9	1234789-HpCDF	40.80	3.935e4	4.032e4	0.953	0.98	1.05	661.7	YES	NO	bd	bb	46.112
10	Total-heptafurans	39.24	2.394e2	2.655e2	0.978	0.90	1.05	4.8	YES	NO	bb	bb	0.261
11	1234678-HpCDF	38.59	4.519e4	4.600e4	1.003	0.98	1.05	858.4	YES	NO	bb	bd	42.426

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.18	1.593e4	2.190e4	1.149	0.73	0.77	249.4	YES	NO	bb	bd	8.075

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.30	7.288e4	4.820e4	1.022	1.51	1.55	1786.3	YES	NO	bb	bb	43.910

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.32	7.468e4	6.194e4	0.907	1.21	1.24	1569.3	YES	NO	bb	bb	43.496
2	123678-HxCDD	35.93	8.202e4	6.774e4	1.001	1.21	1.24	1672.9	YES	NO	db	dd	41.344
3	123478-HxCDD	35.82	7.444e4	6.168e4	0.996	1.21	1.24	1602.6	YES	NO	bd	bd	41.350

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.07	5.228e4	4.900e4	1.039	1.07	1.05	900.6	YES	NO	bb	bb	41.074

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.30	7.288e4	4.820e4	1.022	1.51	1.55	1786.3	YES	NO	bb	bb	43.910
2	2378-TCDD	26.18	1.593e4	2.190e4	1.149	0.73	0.77	249.4	YES	NO	bb	bd	8.075
3	123789-HxCDD	36.32	7.468e4	6.194e4	0.907	1.21	1.24	1569.3	YES	NO	bb	bb	43.496
4	123678-HxCDD	35.93	8.202e4	6.774e4	1.001	1.21	1.24	1672.9	YES	NO	db	dd	41.344
5	123478-HxCDD	35.82	7.444e4	6.168e4	0.996	1.21	1.24	1602.6	YES	NO	bd	bd	41.350
6	OCDD	44.77	7.227e4	9.012e4	0.920	0.80	0.89	1270.3	YES	NO	bb	bd	84.294
7	1234678-HpCDD	40.07	5.228e4	4.900e4	1.039	1.07	1.05	900.6	YES	NO	bb	bb	41.074

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.55	1.201e4	1.629e4	0.702	0.74	0.77	301.3	YES	NO	bb	bb	8.541
2	23478-PeCDF	31.05	6.708e4	4.452e4	0.786	1.51	1.55	904.3	YES	NO	bb	bb	41.297
3	12378-PeCDF	29.71	6.631e4	4.428e4	0.679	1.50	1.55	908.0	YES	NO	bb	bb	43.500
4	123789-HxCDF	36.73	7.228e4	5.741e4	1.137	1.26	1.24	958.9	YES	NO	bd	bd	44.207
5	234678-HxCDF	35.71	8.531e4	6.798e4	1.140	1.25	1.24	1154.6	YES	NO	bd	bd	44.362
6	123678-HxCDF	34.83	9.737e4	7.688e4	1.091	1.27	1.24	1227.0	YES	NO	dd	dd	42.855
7	123478-HxCDF	34.69	8.823e4	7.204e4	1.166	1.22	1.24	1219.9	YES	NO	bd	bd	40.833
8	OCDF	45.00	5.540e4	6.437e4	0.778	0.86	0.89	691.2	YES	NO	bb	bd	73.535
9	1234789-HpCDF	40.80	3.935e4	4.032e4	0.953	0.98	1.05	661.7	YES	NO	bd	bb	46.112
10	Total-heptafurans	39.24	2.394e2	2.655e2	0.978	0.90	1.05	4.8	YES	NO	bb	bb	0.261
11	1234678-HpCDF	38.59	4.519e4	4.600e4	1.003	0.98	1.05	858.4	YES	NO	bb	bd	42.426
12	12378-PeCDD	31.30	7.288e4	4.820e4	1.022	1.51	1.55	1786.3	YES	NO	bb	bb	43.910
13	2378-TCDD	26.18	1.593e4	2.190e4	1.149	0.73	0.77	249.4	YES	NO	bb	bd	8.075
14	123789-HxCDD	36.32	7.468e4	6.194e4	0.907	1.21	1.24	1569.3	YES	NO	bb	bb	43.496
15	123678-HxCDD	35.93	8.202e4	6.774e4	1.001	1.21	1.24	1672.9	YES	NO	db	dd	41.344
16	123478-HxCDD	35.82	7.444e4	6.168e4	0.996	1.21	1.24	1602.6	YES	NO	bd	bd	41.350
17	OCDD	44.77	7.227e4	9.012e4	0.920	0.80	0.89	1270.3	YES	NO	bb	bd	84.294
18	1234678-HpCDD	40.07	5.228e4	4.900e4	1.039	1.07	1.05	900.6	YES	NO	bb	bb	41.074

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.17	3.865e3					0.8	NO		bb		0.000
2	FUNCTION2 PFK	28.92	9.871e3					1.6	NO		bb		0.000
3	FUNCTION2 PFK	28.77	1.615e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	28.41	8.554e3					1.6	NO		db		0.000
5	FUNCTION2 PFK	28.33	7.736e3					0.9	NO		bd		0.000
6	FUNCTION2 PFK	27.99	3.169e3					0.7	NO		bb		0.000
7	FUNCTION2 PFK	27.94	1.414e4					1.9	NO		db		0.000
8	FUNCTION2 PFK	27.86	2.051e4					2.2	NO		bd		0.000
9	FUNCTION2 PFK	32.42	7.017e3					1.3	NO		db		0.000
10	FUNCTION2 PFK	32.38	1.010e4					1.8	NO		bd		0.000
11	FUNCTION2 PFK	32.24	4.743e3					0.9	NO		bb		0.000
12	FUNCTION2 PFK	32.01	8.055e3					1.3	NO		bb		0.000
13	FUNCTION2 PFK	31.84	9.090e3					1.5	NO		bb		0.000
14	FUNCTION2 PFK	31.35	6.242e3					1.3	NO		bb		0.000
15	FUNCTION2 PFK	31.26	7.212e3					1.2	NO		bb		0.000
16	FUNCTION2 PFK	31.11	9.312e3					1.2	NO		bb		0.000
17	FUNCTION2 PFK	30.97	1.457e4					1.5	NO		bb		0.000
18	FUNCTION2 PFK	30.65	3.193e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	30.60	1.097e3					0.5	NO		bb		0.000
20	FUNCTION2 PFK	30.30	9.014e3					1.5	NO		db		0.000
21	FUNCTION2 PFK	30.23	1.395e4					1.4	NO		bd		0.000
22	FUNCTION2 PFK	30.13	4.272e3					0.9	NO		bb		0.000
23	FUNCTION2 PFK	29.89	8.296e3					1.3	NO		bb		0.000
24	FUNCTION2 PFK	29.45	1.509e4					1.8	NO		bb		0.000
25	FUNCTION2 PFK	32.55	2.880e3					0.8	NO		bb		0.000



## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

## PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.82	9.497e4					3.9	YES		dd		0.000
2	FUNCTION3 PFK	33.65	3.402e5					5.1	YES		dd		0.000
3	FUNCTION3 PFK	33.61	8.258e4					4.6	YES		dd		0.000
4	FUNCTION3 PFK	33.53	1.711e5					5.0	YES		dd		0.000
5	FUNCTION3 PFK	33.46	1.097e5					4.8	YES		dd		0.000
6	FUNCTION3 PFK	33.41	6.420e4					4.8	YES		dd		0.000
7	FUNCTION3 PFK	33.38	1.403e5					4.7	YES		dd		0.000
8	FUNCTION3 PFK	33.28	2.084e5					5.2	YES		dd		0.000
9	FUNCTION3 PFK	33.14	3.225e5					5.5	YES		dd		0.000
10	FUNCTION3 PFK	33.03	1.448e5					5.2	YES		dd		0.000
11	FUNCTION3 PFK	32.98	2.725e5					5.0	YES		dd		0.000
12	FUNCTION3 PFK	32.84	2.128e5					6.2	YES		dd		0.000
13	FUNCTION3 PFK	32.72	8.943e4					3.8	YES		dd		0.000
14	FUNCTION3 PFK	32.69	1.120e5					3.8	YES		bd		0.000
15	FUNCTION3 PFK	36.14	6.332e4					1.6	NO		db		0.000
16	FUNCTION3 PFK	35.97	3.001e4					1.7	NO		bd		0.000
17	FUNCTION3 PFK	35.91	2.089e4					1.6	NO		bb		0.000
18	FUNCTION3 PFK	35.81	3.257e4					2.1	NO		bb		0.000
19	FUNCTION3 PFK	35.66	3.023e4					1.0	NO		bb		0.000
20	FUNCTION3 PFK	35.51	3.642e3					0.5	NO		bb		0.000
21	FUNCTION3 PFK	35.14	2.263e4					1.4	NO		bb		0.000
22	FUNCTION3 PFK	35.04	3.412e4					0.9	NO		bb		0.000
23	FUNCTION3 PFK	34.64	2.027e4					1.1	NO		bb		0.000
24	FUNCTION3 PFK	34.56	1.449e3					0.3	NO		bb		0.000
25	FUNCTION3 PFK	34.48	4.241e3					0.5	NO		bb		0.000
26	FUNCTION3 PFK	34.35	7.812e3					0.7	NO		bb		0.000
27	FUNCTION3 PFK	34.29	2.663e4					1.4	NO		db		0.000
28	FUNCTION3 PFK	34.25	1.665e4					1.1	NO		bd		0.000
29	FUNCTION3 PFK	34.02	4.200e3					0.5	NO		bb		0.000
30	FUNCTION3 PFK	33.91	2.991e4					1.6	NO		db		0.000
31	FUNCTION3 PFK	37.57	8.871e3					0.6	NO		bb		0.000
32	FUNCTION3 PFK	37.52	2.178e3					0.4	NO		bb		0.000
33	FUNCTION3 PFK	37.14	9.615e3					0.8	NO		bb		0.000
34	FUNCTION3 PFK	37.09	1.114e4					0.9	NO		bb		0.000
35	FUNCTION3 PFK	37.00	4.685e3					0.6	NO		bb		0.000
36	FUNCTION3 PFK	36.87	1.369e4					1.2	NO		bb		0.000
37	FUNCTION3 PFK	36.63	8.251e3					0.9	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.55	2.646e4					1.9	NO		db		0.000
39	FUNCTION3 PFK	36.51	1.195e4					0.9	NO		dd		0.000
40	FUNCTION3 PFK	36.45	1.306e4					0.9	NO		bd		0.000
41	FUNCTION3 PFK	36.30	1.842e3					0.4	NO		bb		0.000
42	FUNCTION3 PFK	36.22	3.664e4					1.7	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

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**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.85	2.694e4					1.7	NO		db		
2	FUNCTION4 PFK	37.77	1.828e4					2.5	NO		bd		
3	FUNCTION4 PFK	37.67	2.097e4					1.3	NO		bb		
4	FUNCTION4 PFK	40.99	1.144e4					1.7	NO		bb		
5	FUNCTION4 PFK	40.64	1.667e4					1.4	NO		bb		
6	FUNCTION4 PFK	40.41	2.544e3					0.5	NO		bb		
7	FUNCTION4 PFK	40.17	7.479e3					0.9	NO		db		
8	FUNCTION4 PFK	40.13	7.572e3					1.0	NO		bd		
9	FUNCTION4 PFK	40.01	3.289e4					1.8	NO		db		
10	FUNCTION4 PFK	39.96	4.175e3					0.7	NO		bd		
11	FUNCTION4 PFK	39.78	2.267e4					1.9	NO		bb		
12	FUNCTION4 PFK	39.52	1.142e4					1.3	NO		bb		
13	FUNCTION4 PFK	39.29	1.420e3					0.4	NO		bb		
14	FUNCTION4 PFK	39.25	1.201e3					0.4	NO		bb		
15	FUNCTION4 PFK	38.83	6.162e3					1.0	NO		bb		
16	FUNCTION4 PFK	38.73	7.892e3					0.6	NO		bb		
17	FUNCTION4 PFK	38.47	1.027e4					1.4	NO		bb		
18	FUNCTION4 PFK	38.34	6.857e3					1.0	NO		bb		
19	FUNCTION4 PFK	38.02	5.540e3					0.9	NO		bb		
20	FUNCTION4 PFK	42.38	7.644e3					0.9	NO		bb		
21	FUNCTION4 PFK	41.99	4.774e3					0.6	NO		db		
22	FUNCTION4 PFK	41.95	6.925e3					0.7	NO		bd		
23	FUNCTION4 PFK	41.80	8.097e3					1.0	NO		bb		
24	FUNCTION4 PFK	41.73	6.931e3					1.0	NO		bb		
25	FUNCTION4 PFK	41.42	2.733e4					2.2	NO		db		
26	FUNCTION4 PFK	41.34	8.716e3					1.0	NO		bd		
27	FUNCTION4 PFK	41.23	4.841e3					0.6	NO		bb		
28	FUNCTION4 PFK	41.14	6.227e3					1.0	NO		bb		
29	FUNCTION4 PFK	41.09	2.587e4					2.0	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk****PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.92	2.428e3					0.9	NO		bb		
2	FUNCTION5 PFK	42.82	8.261e2					0.5	NO		bb		
3	FUNCTION5 PFK	42.72	4.106e4					2.9	NO		bb		
4	FUNCTION5 PFK	42.61	1.029e4					2.5	NO		db		
5	FUNCTION5 PFK	42.59	7.823e3					2.1	NO		bd		
6	FUNCTION5 PFK	44.78	2.822e3					1.0	NO		bb		
7	FUNCTION5 PFK	44.72	2.430e3					1.0	NO		bb		
8	FUNCTION5 PFK	44.57	3.849e3					1.3	NO		bb		
9	FUNCTION5 PFK	44.53	8.812e2					0.6	NO		bb		
10	FUNCTION5 PFK	44.40	2.008e3					0.7	NO		bb		
11	FUNCTION5 PFK	44.28	9.085e3					1.1	NO		bb		
12	FUNCTION5 PFK	44.18	3.627e3					0.9	NO		bb		
13	FUNCTION5 PFK	43.95	9.078e2					0.6	NO		bb		
14	FUNCTION5 PFK	43.91	4.553e3					1.5	NO		bb		
15	FUNCTION5 PFK	43.86	5.357e3					1.5	NO		bb		
16	FUNCTION5 PFK	43.47	1.189e3					0.8	NO		bb		
17	FUNCTION5 PFK	43.45	7.688e2					0.5	NO		bb		
18	FUNCTION5 PFK	43.41	3.895e3					1.1	NO		bb		
19	FUNCTION5 PFK	43.26	9.795e2					0.6	NO		bb		
20	FUNCTION5 PFK	43.22	6.585e3					1.6	NO		bb		
21	FUNCTION5 PFK	42.94	3.326e3					1.3	NO		bb		
22	FUNCTION5 PFK	45.20	1.077e4					1.8	NO		bb		
23	FUNCTION5 PFK	44.84	5.915e3					1.8	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.69	1.318e2					2.4	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:00:22 Pacific Daylight Time

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.77	9.142e1					2.4	NO		bb		0.000
2	FUNCTION4 NCDPE	38.92	7.197e1					2.1	NO		bb		0.000

**ETHERS6**

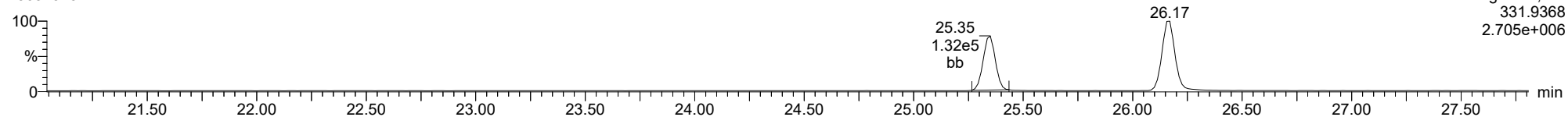
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1													

**Method:** T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

**ID:** BLC0136-BS1, **Name:** 23031513, **Date:** 15-Mar-2023, **Time:** 20:22:11, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234-TCDD**

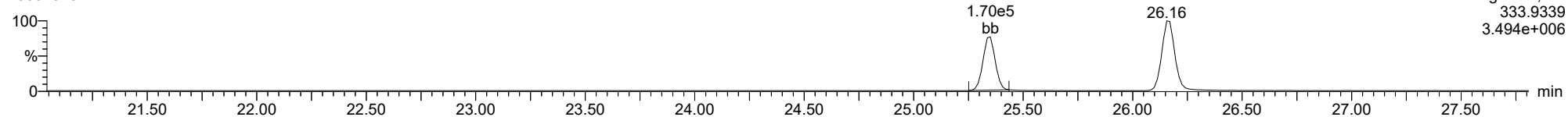
23031513



F1:Voltage SIR,El+  
331.9368  
2.705e+006

**13C-1234-TCDD**

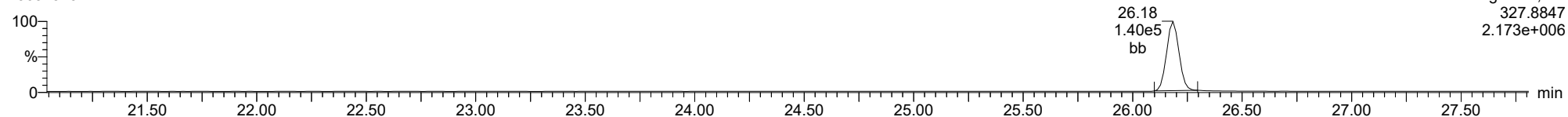
23031513



F1:Voltage SIR,El+  
333.9339  
3.494e+006

**37CL-2378-TCDD**

23031513

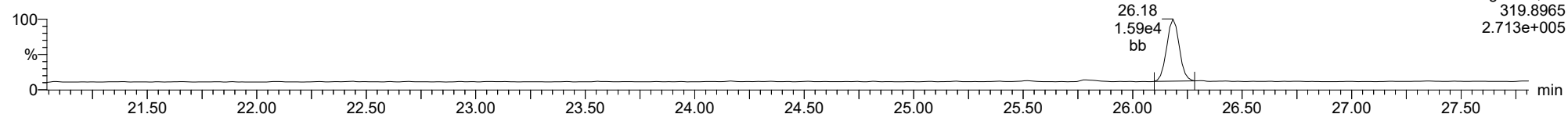


F1:Voltage SIR,El+  
327.8847  
2.173e+006

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

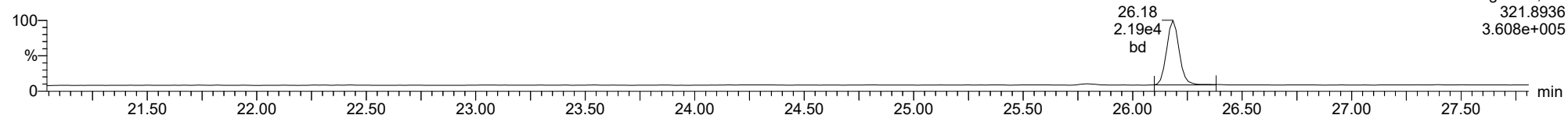
**2378-TCDD**

23031513



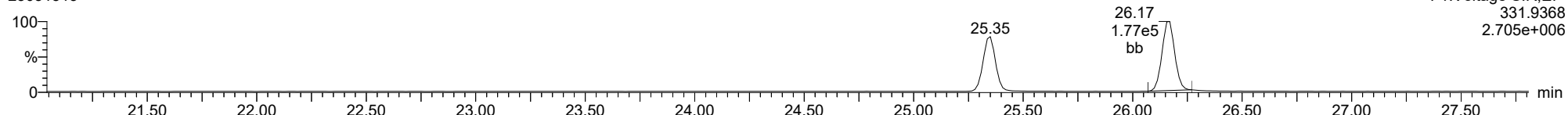
**2378-TCDD**

23031513



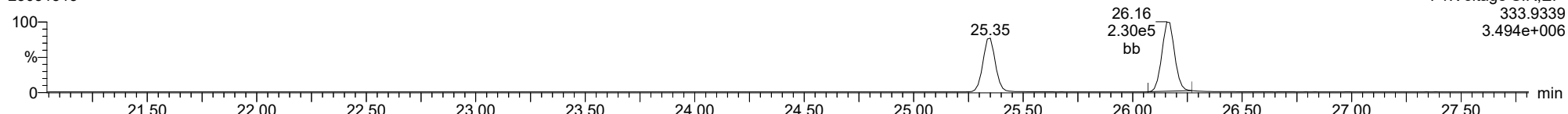
**13C-2378-TCDD**

23031513



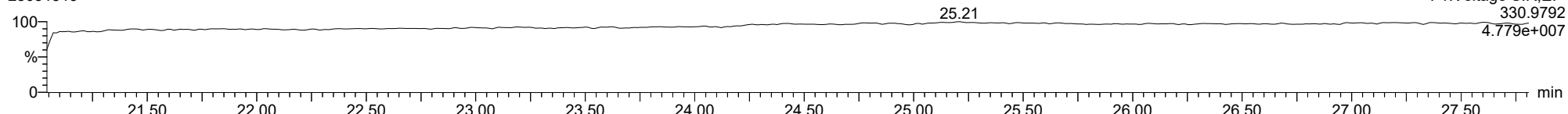
**13C-2378-TCDD**

23031513



**FUNCTION1 PFK**

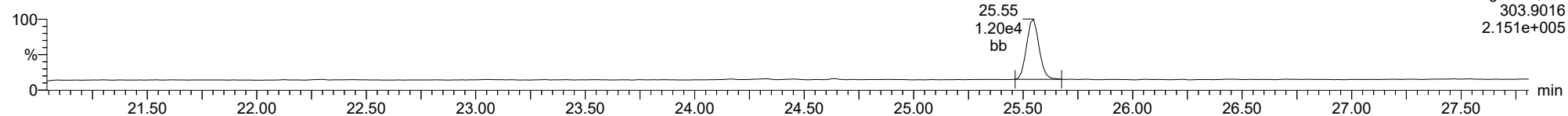
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**2378-TCDF**

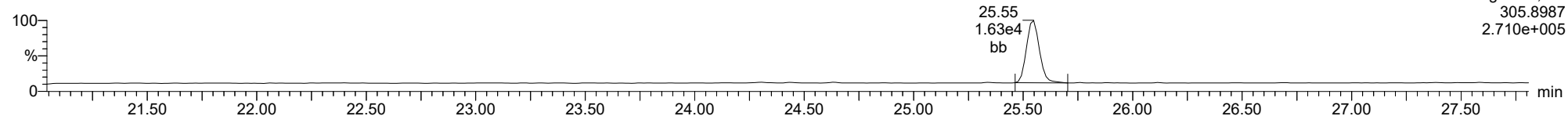
23031513



F1:Voltage SIR,El+  
303.9016  
2.151e+005

**2378-TCDF**

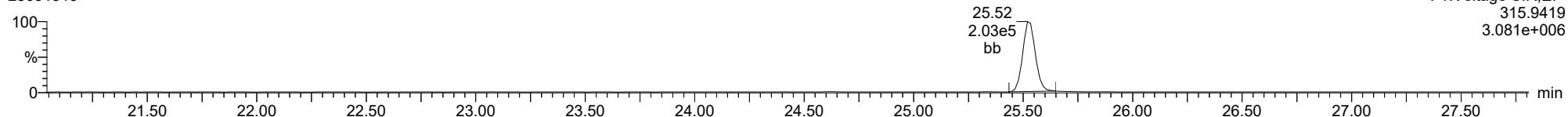
23031513



F1:Voltage SIR,El+  
305.8987  
2.710e+005

**13C-2378-TCDF**

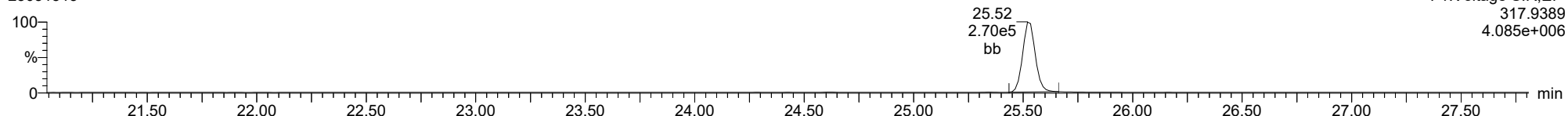
23031513



F1:Voltage SIR,El+  
315.9419  
3.081e+006

**13C-2378-TCDF**

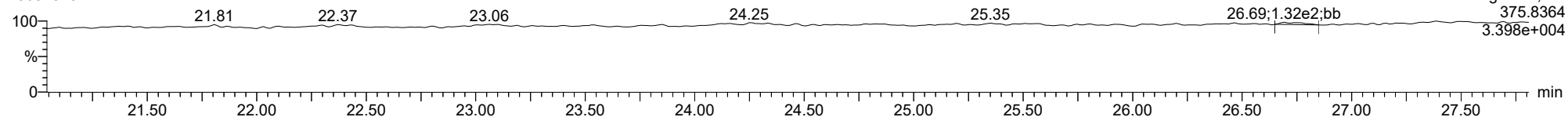
23031513



F1:Voltage SIR,El+  
317.9389  
4.085e+006

**FUNCTION1 HXCDPE**

23031513



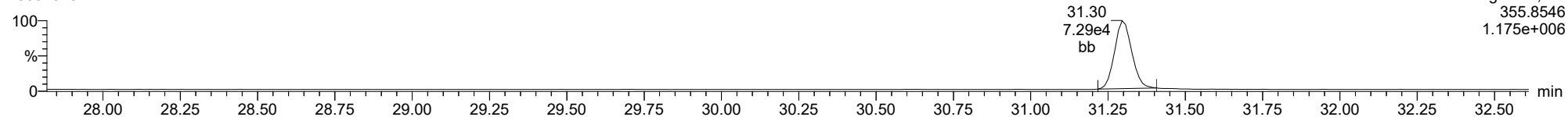
F1:Voltage SIR,El+  
375.8364  
3.398e+004



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

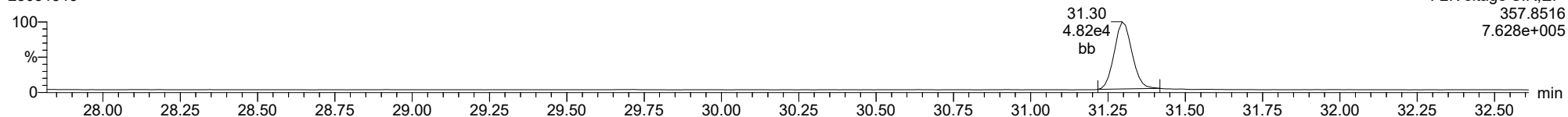
**12378-PeCDD**

23031513



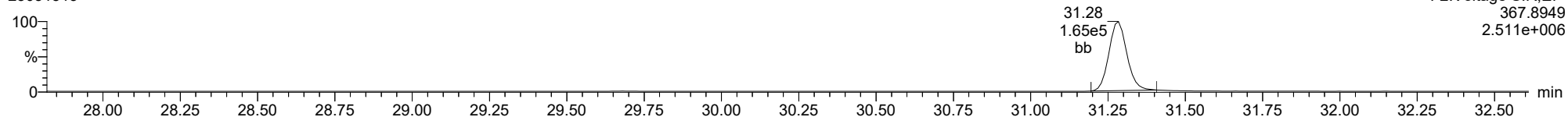
**12378-PeCDD**

23031513



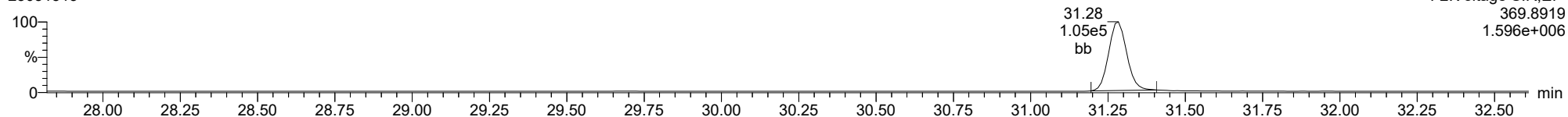
**13C-12378-PeCDD**

23031513



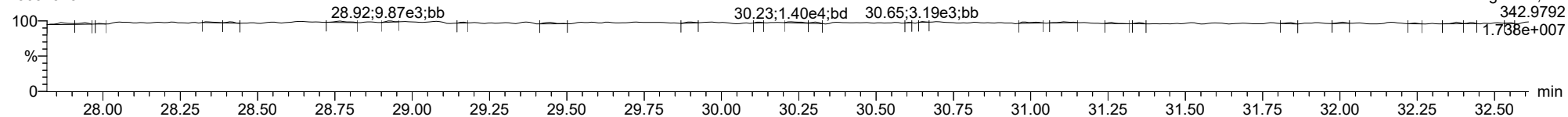
**13C-12378-PeCDD**

23031513



**FUNCTION2 PFK**

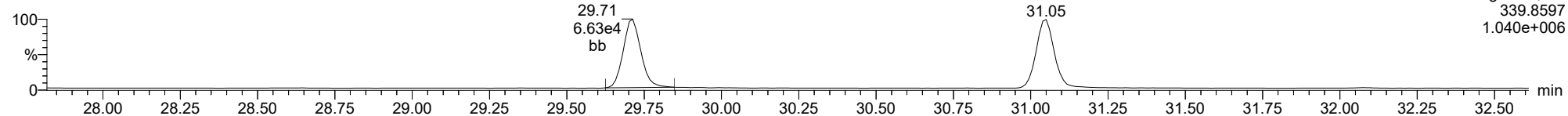
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**12378-PeCDF**

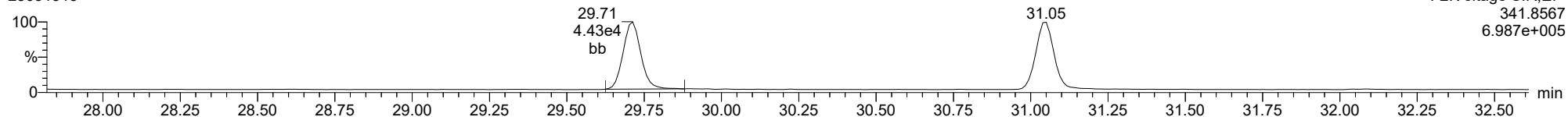
23031513



F2:Voltage SIR,EI+  
339.8597  
1.040e+006

**12378-PeCDF**

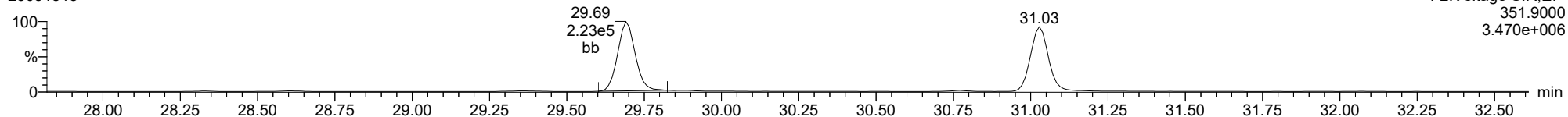
23031513



F2:Voltage SIR,EI+  
341.8567  
6.987e+005

**13C-12378-PeCDF**

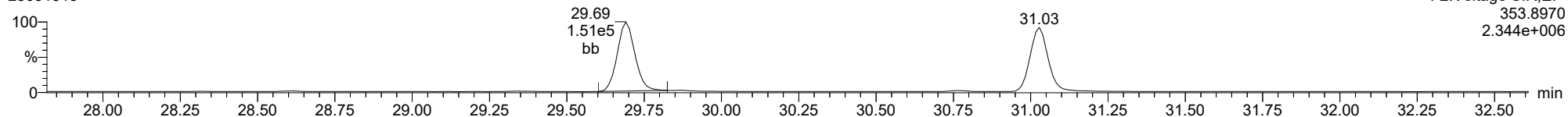
23031513



F2:Voltage SIR,EI+  
351.9000  
3.470e+006

**13C-12378-PeCDF**

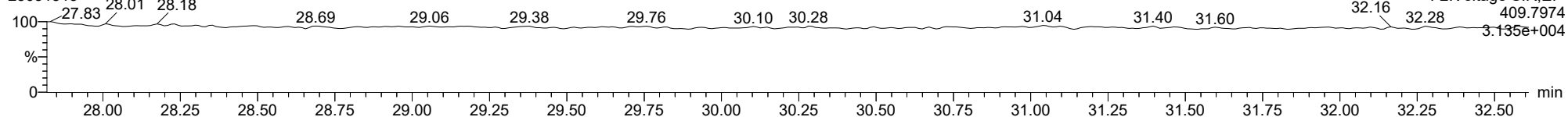
23031513



F2:Voltage SIR,EI+  
353.8970  
2.344e+006

**FUNCTION2 HPCDPE**

23031513

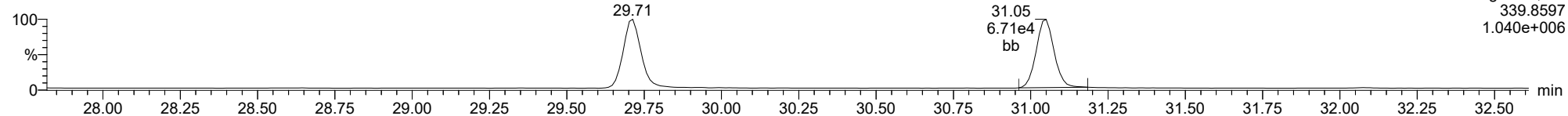


F2:Voltage SIR,EI+  
409.7974  
3.135e+004

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

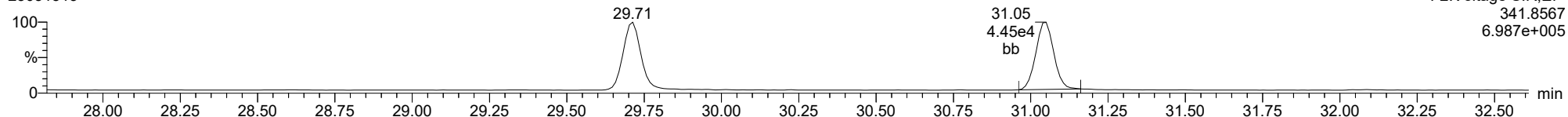
**23478-PeCDF**

23031513



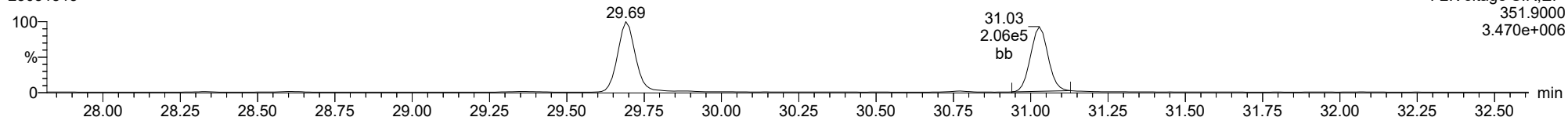
**23478-PeCDF**

23031513



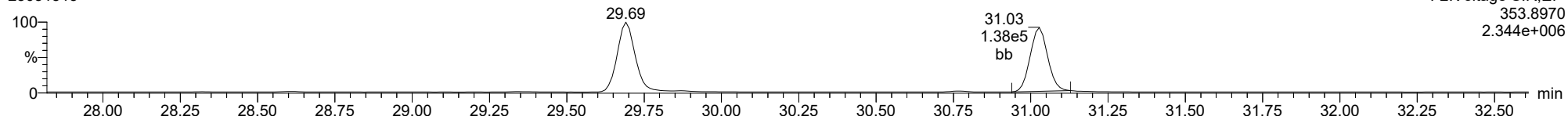
**13C-23478-PeCDF**

23031513



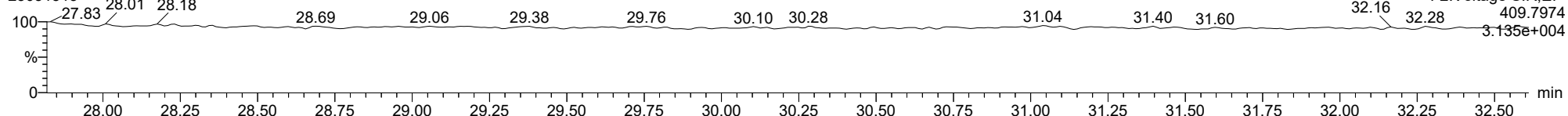
**13C-23478-PeCDF**

23031513



**FUNCTION2 HPCDPE**

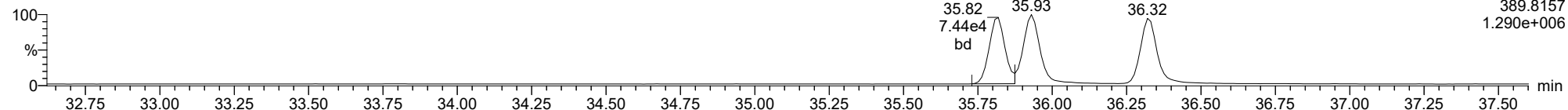
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

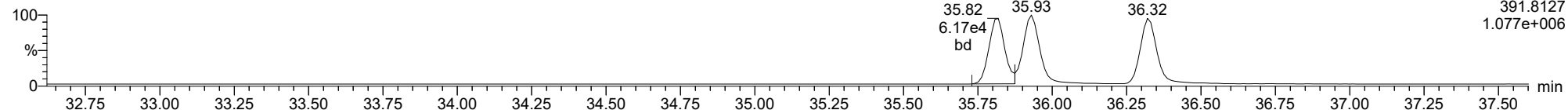
**123478-HxCDD**

23031513



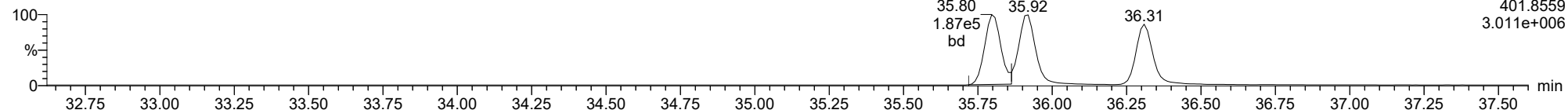
**123478-HxCDD**

23031513



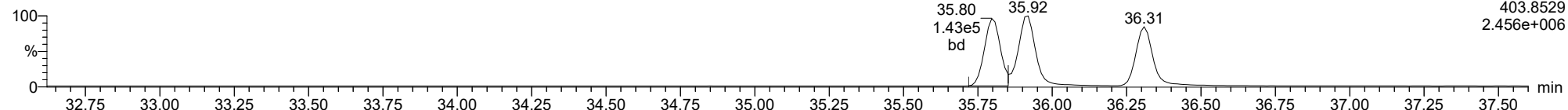
**13C-123478-HxCDD**

23031513



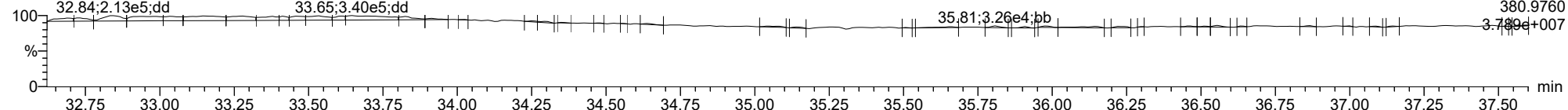
**13C-123478-HxCDD**

23031513



**FUNCTION3 PFK**

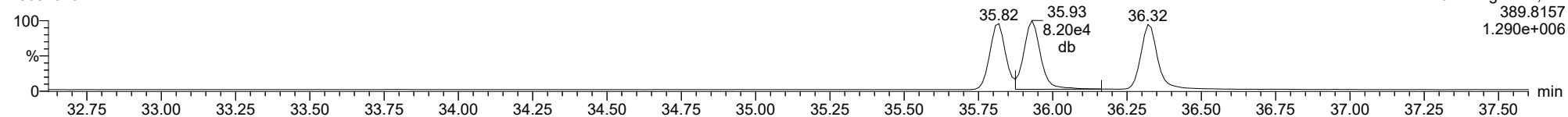
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

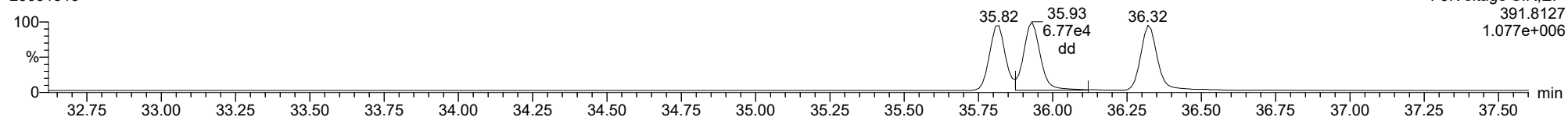
**123678-HxCDD**

23031513



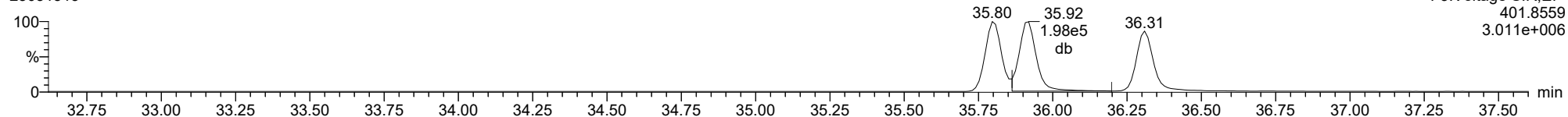
**123678-HxCDD**

23031513



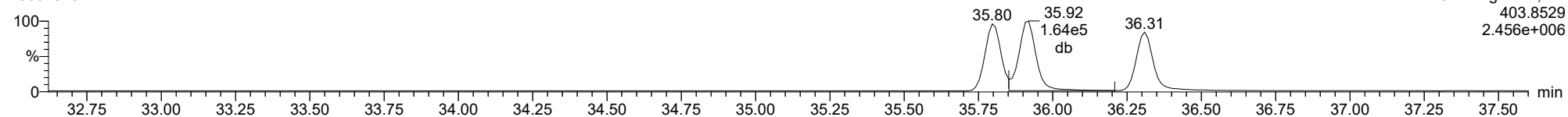
**13C-123678-HxCDD**

23031513



**13C-123678-HxCDD**

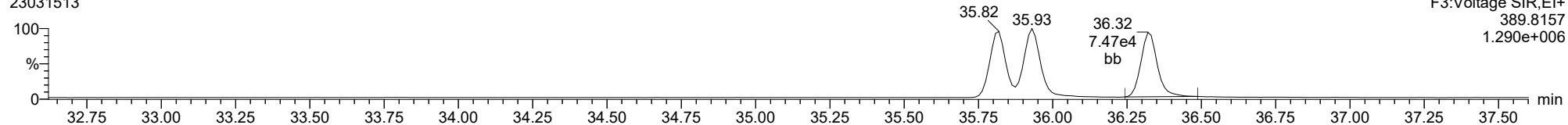
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

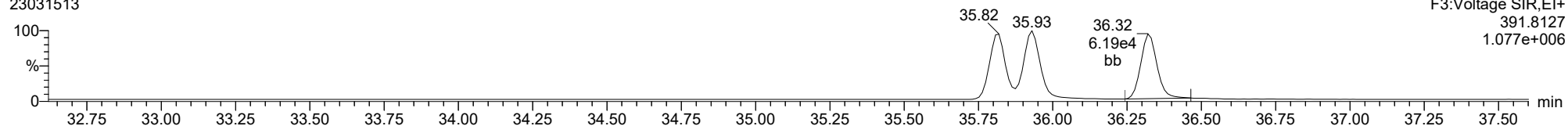
**123789-HxCDD**

23031513



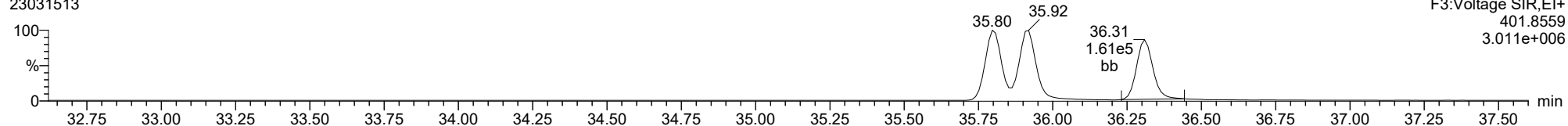
**123789-HxCDD**

23031513



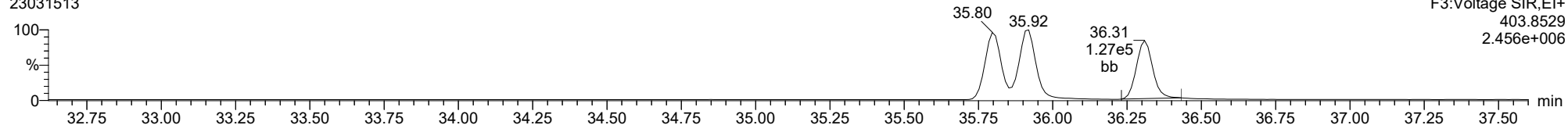
**13C-123789-HxCDD**

23031513



**13C-123789-HxCDD**

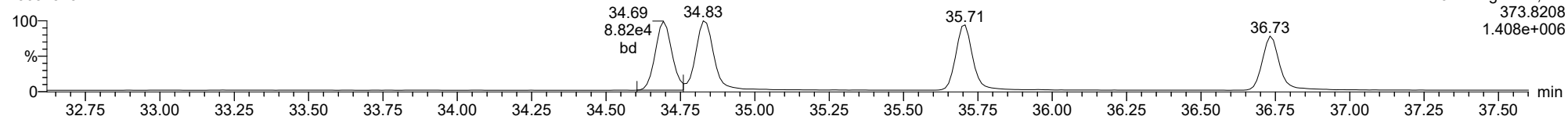
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

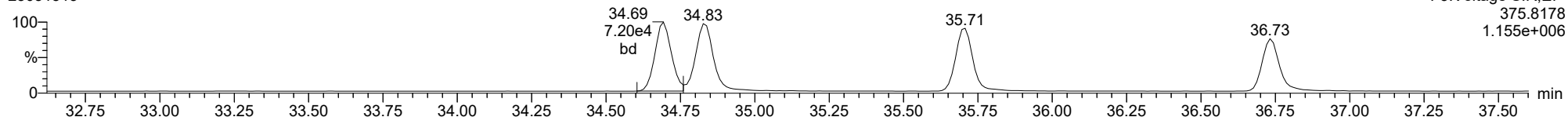
**123478-HxCDF**

23031513



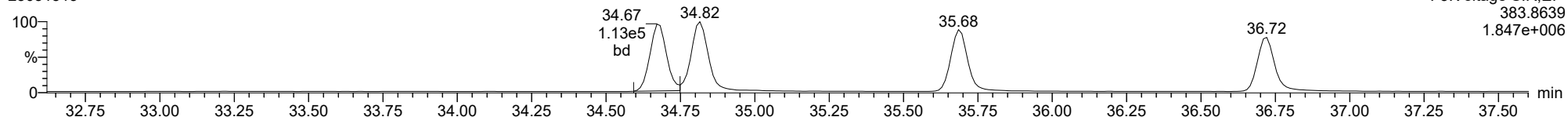
**123478-HxCDF**

23031513



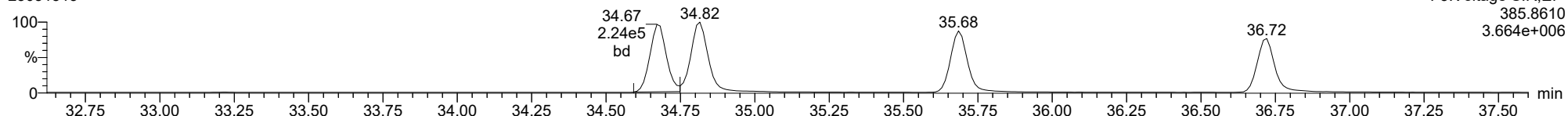
**13C-123478-HxCDF**

23031513



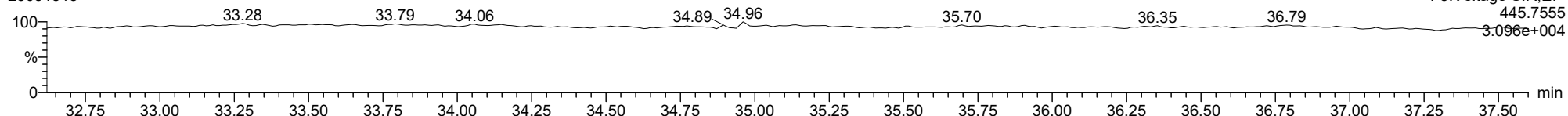
**13C-123478-HxCDF**

23031513



**FUNCTION3 OCDPE**

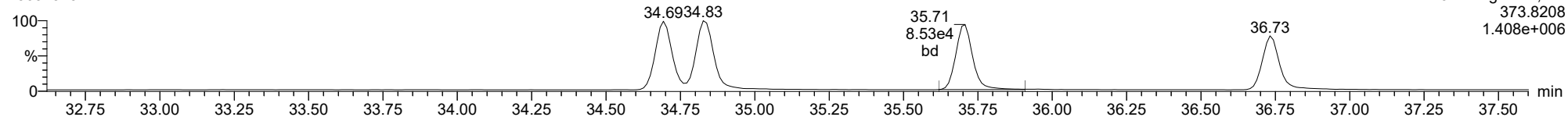
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

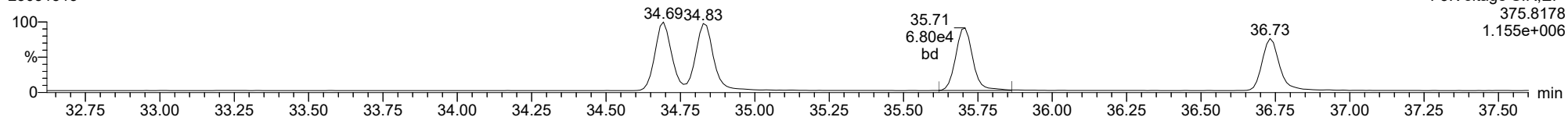
**234678-HxCDF**

23031513



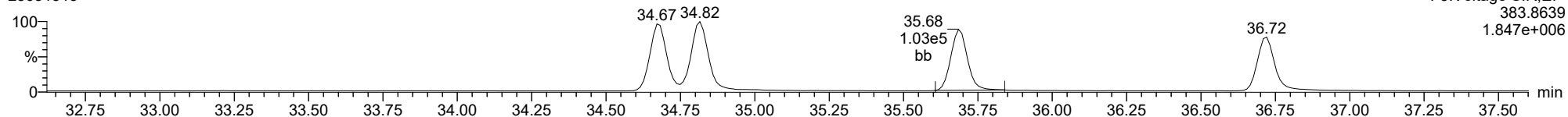
**234678-HxCDF**

23031513



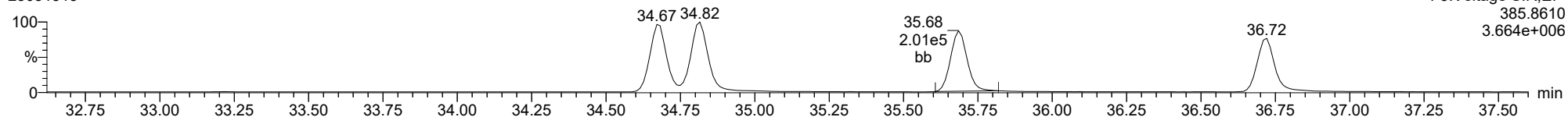
**13C-234678-HxCDF**

23031513



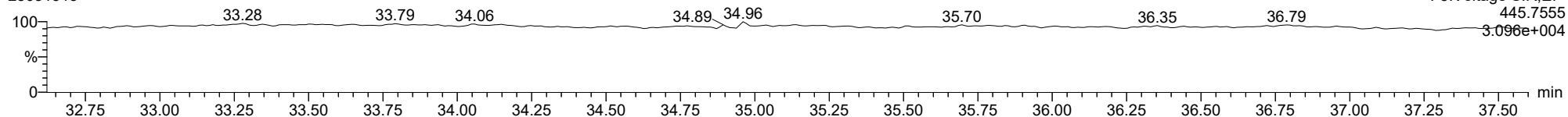
**13C-234678-HxCDF**

23031513



**FUNCTION3 OCDPE**

23031513

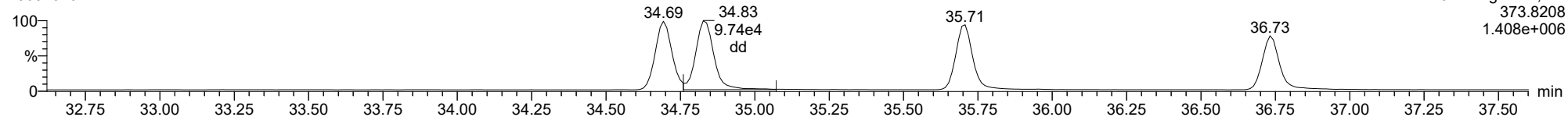




ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

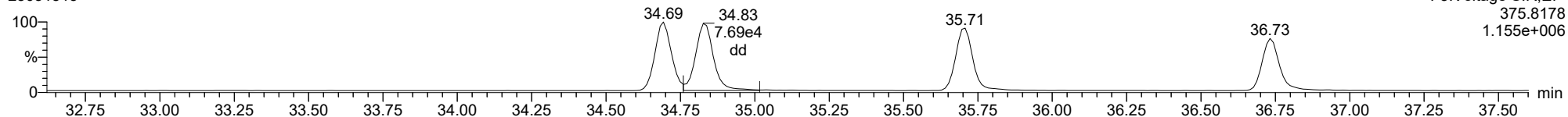
**123678-HxCDF**

23031513



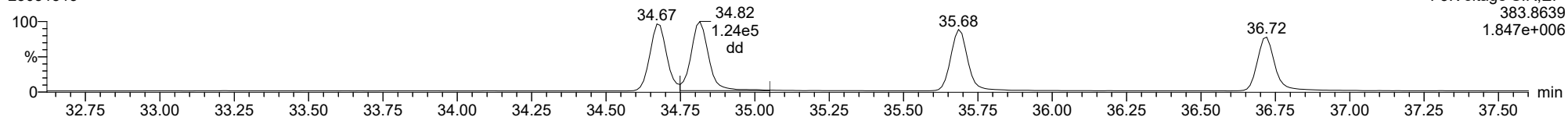
**123678-HxCDF**

23031513



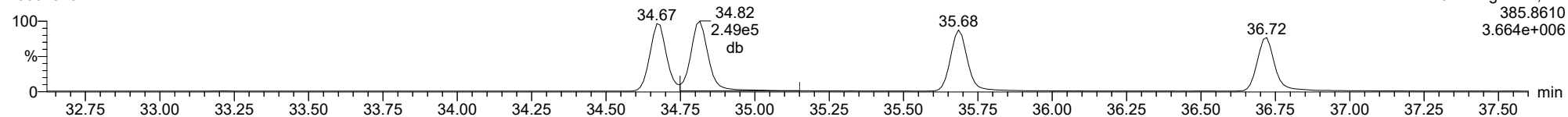
**13C-123678-HxCDF**

23031513



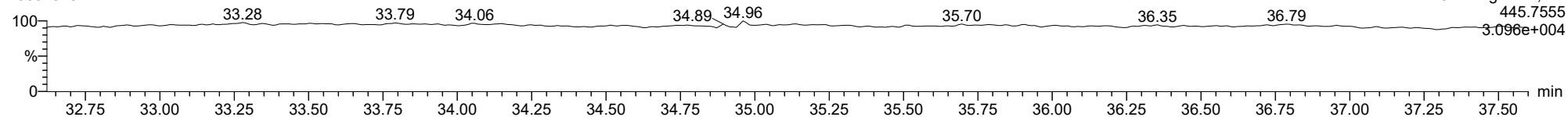
**13C-123678-HxCDF**

23031513



**FUNCTION3 OCDPE**

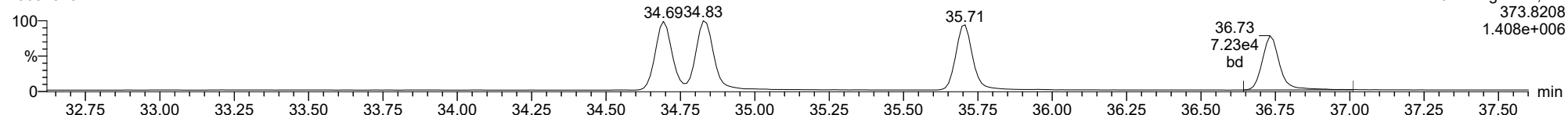
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ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

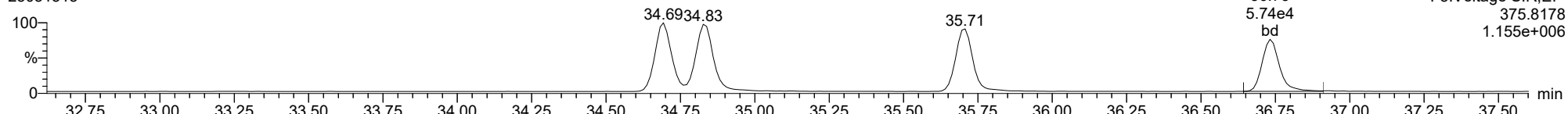
**123789-HxCDF**

23031513



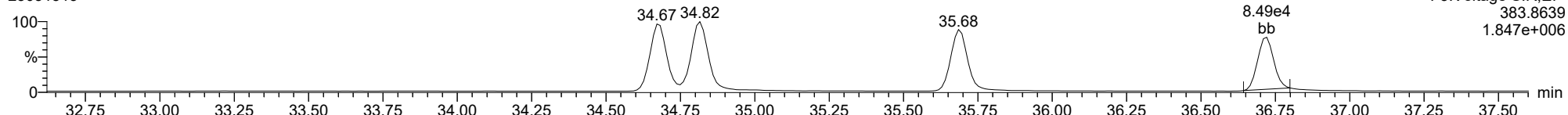
**123789-HxCDF**

23031513



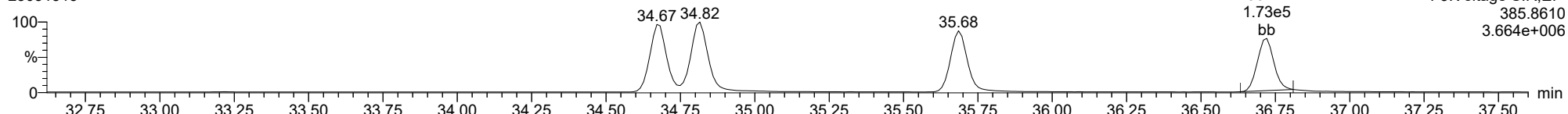
**13C-123789-HxCDF**

23031513



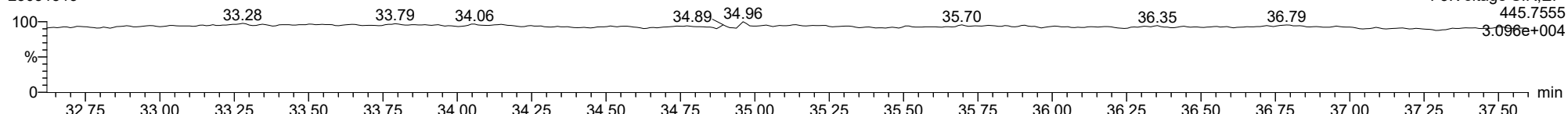
**13C-123789-HxCDF**

23031513



**FUNCTION3 OCDPE**

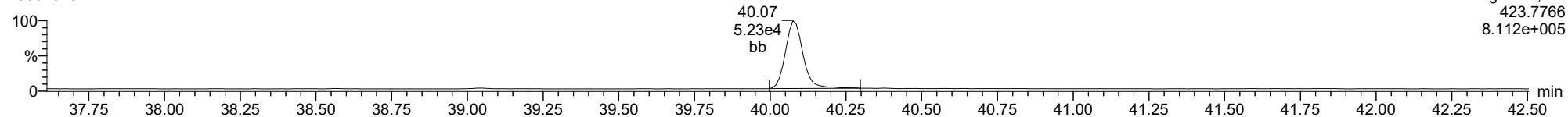
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

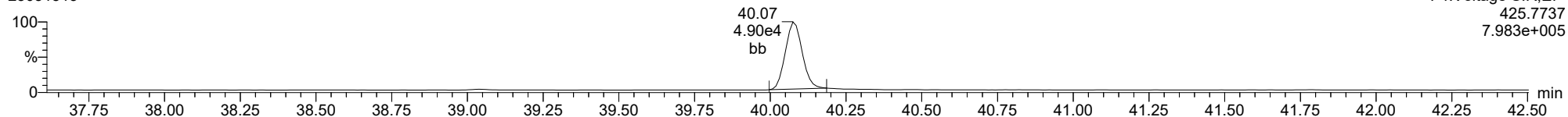
23031513



F4:Voltage SIR,EI+  
423.7766  
8.112e+005

**1234678-HpCDD**

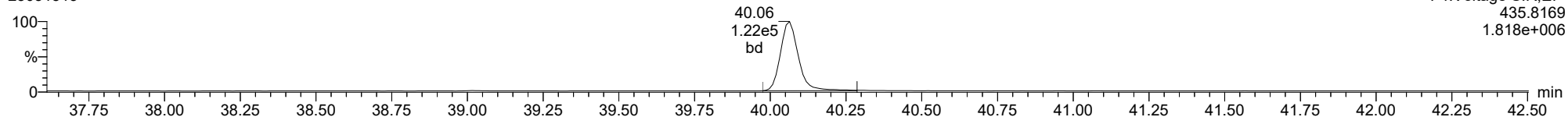
23031513



F4:Voltage SIR,EI+  
425.7737  
7.983e+005

**13C-1234678-HpCDD**

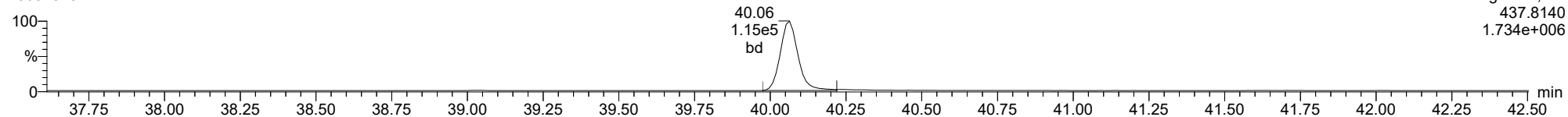
23031513



F4:Voltage SIR,EI+  
435.8169  
1.818e+006

**13C-1234678-HpCDD**

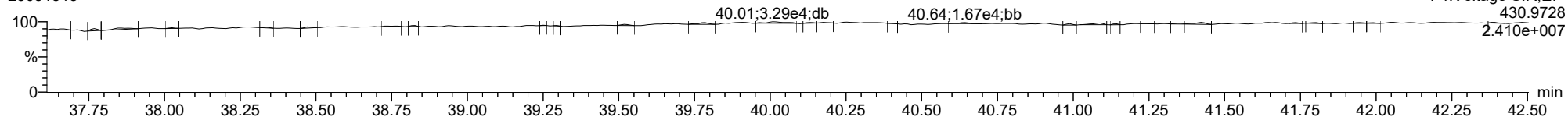
23031513



F4:Voltage SIR,EI+  
437.8140  
1.734e+006

**FUNCTION4 PFK**

23031513

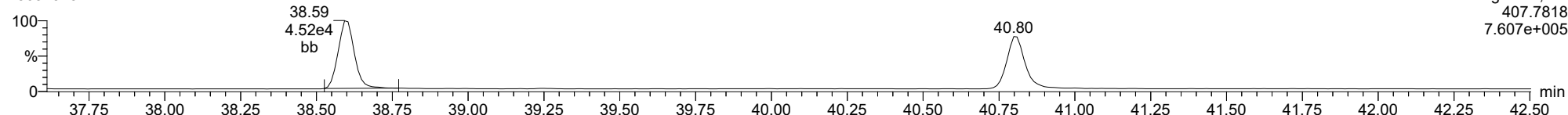


F4:Voltage SIR,EI+  
430.9728  
2.410e+007

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDF**

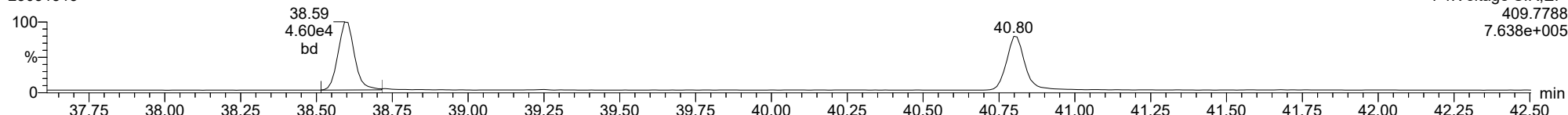
23031513



F4:Voltage SIR,EI+  
407.7818  
7.607e+005

**1234678-HpCDF**

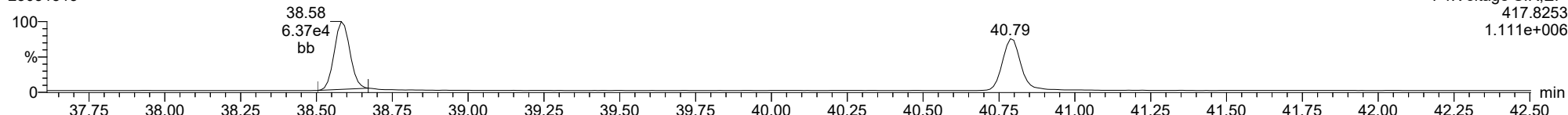
23031513



F4:Voltage SIR,EI+  
409.7788  
7.638e+005

**13C-1234678-HpCDF**

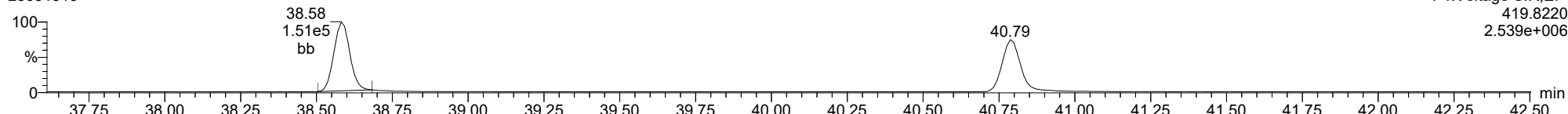
23031513



F4:Voltage SIR,EI+  
417.8253  
1.111e+006

**13C-1234678-HpCDF**

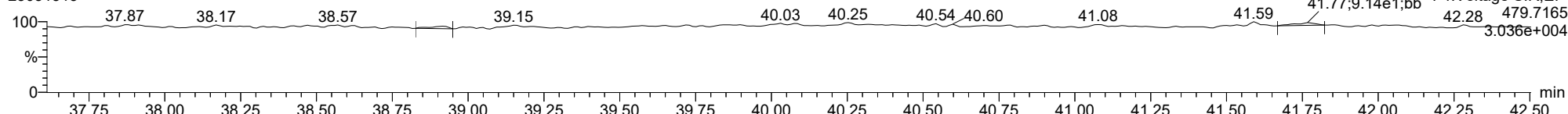
23031513



F4:Voltage SIR,EI+  
419.8220  
2.539e+006

**FUNCTION4 NCDPE**

23031513

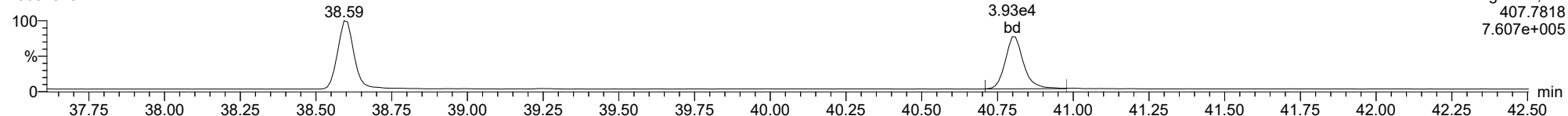


F4:Voltage SIR,EI+  
42.28 479.7165  
3.036e+004

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

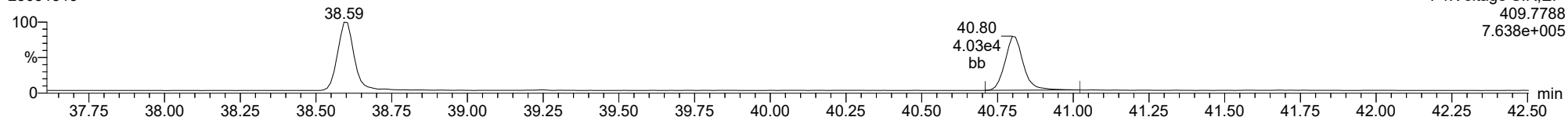
23031513



F4:Voltage SIR,EI+  
407.7818  
7.607e+005

**1234789-HpCDF**

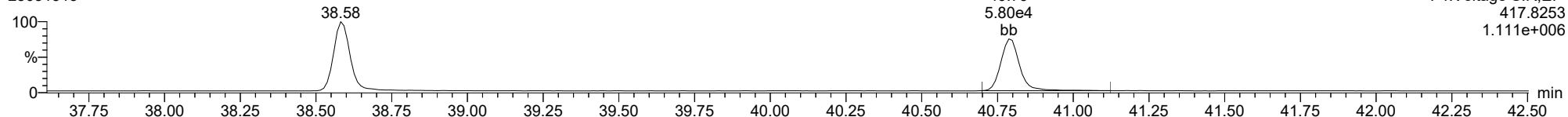
23031513



F4:Voltage SIR,EI+  
409.7788  
7.638e+005

**13C-1234789-HpCDF**

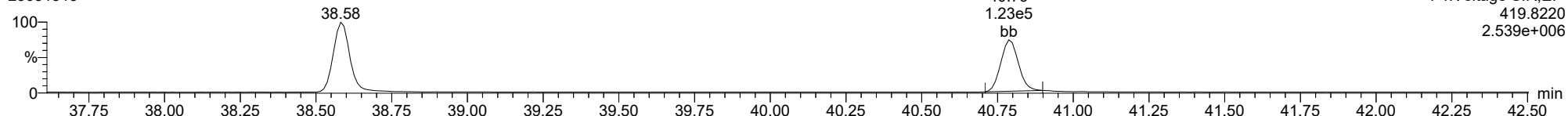
23031513



F4:Voltage SIR,EI+  
417.8253  
1.111e+006

**13C-1234789-HpCDF**

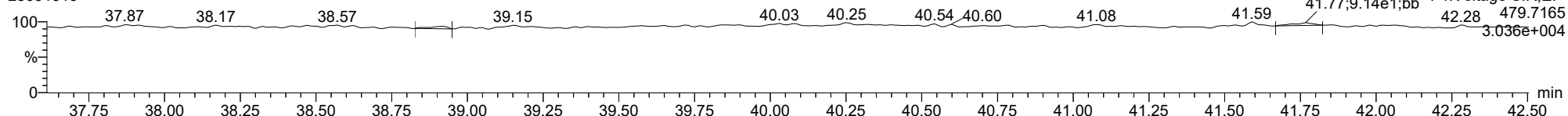
23031513



F4:Voltage SIR,EI+  
419.8220  
2.539e+006

**FUNCTION4 NCDPE**

23031513

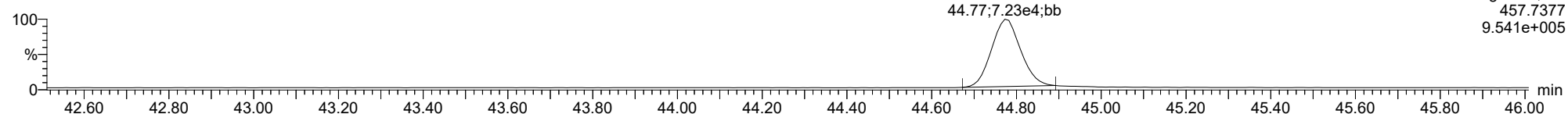


F4:Voltage SIR,EI+  
42.28 479.7165  
3.036e+004

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

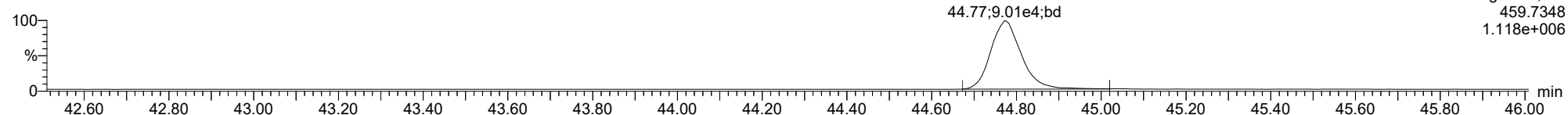
**OCDD**

23031513



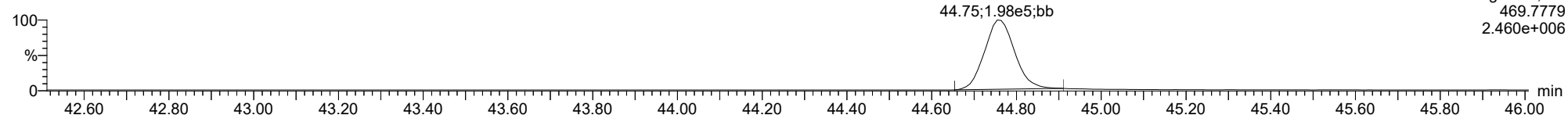
**OCDD**

23031513



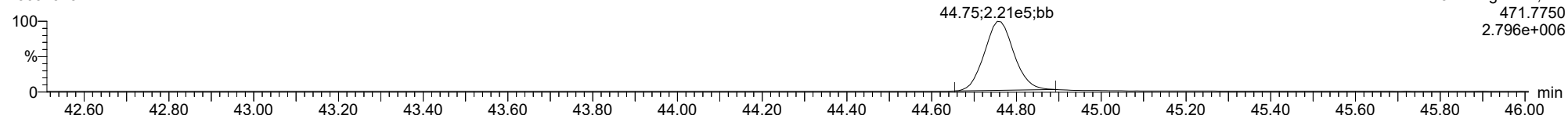
**13C-OCDD**

23031513



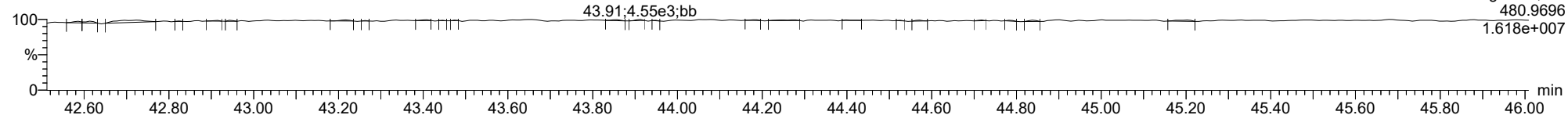
**13C-OCDD**

23031513



**FUNCTION5 PFK**

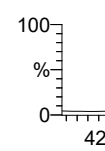
23031513



**ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk**

**OCDF**

23031513

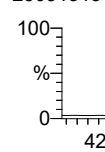


45.00;5.54e4;bb

F5:Voltage SIR,EI+  
441.7428  
7.013e+005

**OCDF**

23031513

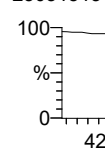


45.00;6.44e4;bd

F5:Voltage SIR,EI+  
443.7399  
8.095e+005

**FUNCTION5 DCDPE**

23031513



43.24

43.39

43.93

44.65

45.23

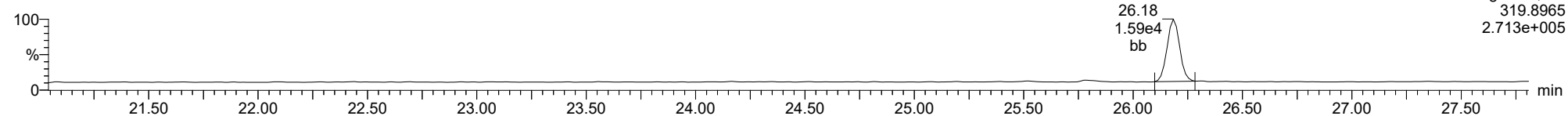
45.54

F5:Voltage SIR,EI+  
513.6775  
3.005e+004

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

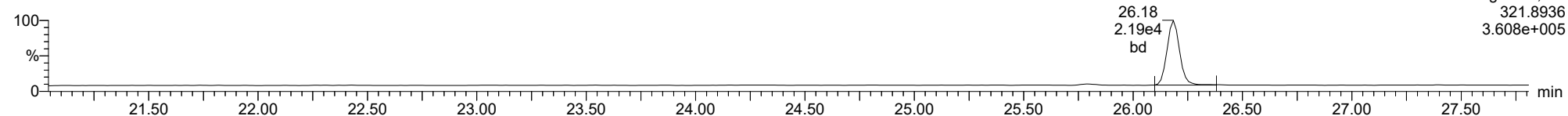
**Total-tetradioxins**

23031513



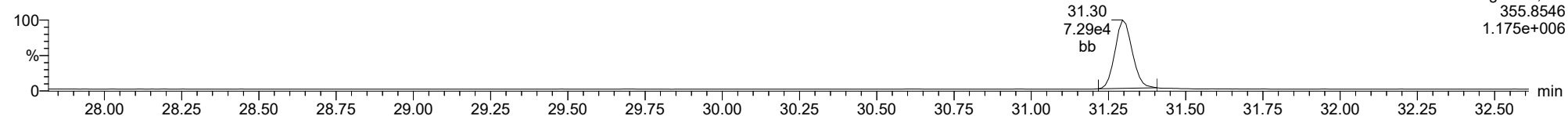
**Total-tetradioxins**

23031513



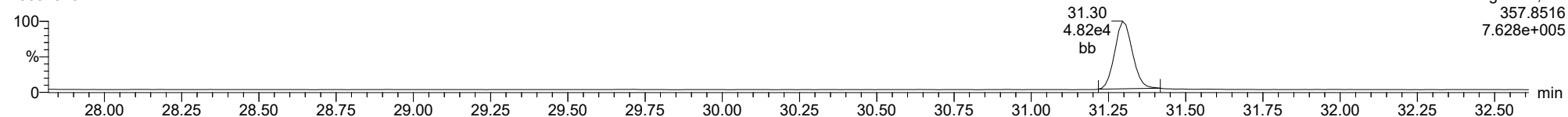
**Total-pentadioxins**

23031513



**Total-pentadioxins**

23031513

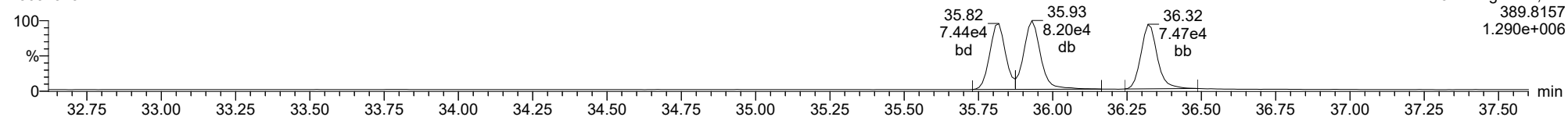




ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

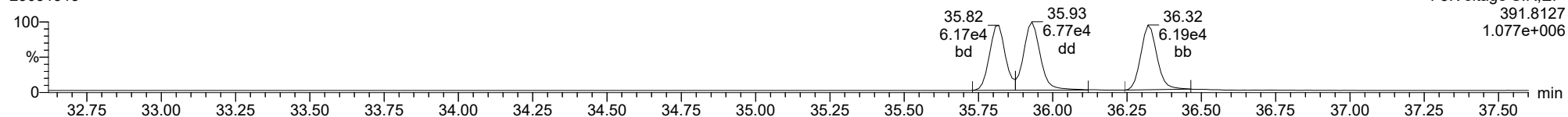
**Total-hexadioxins**

23031513



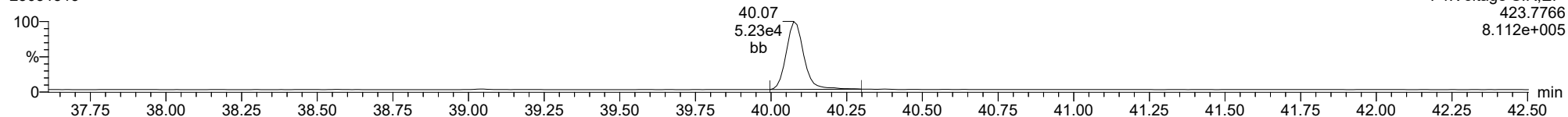
**Total-hexadioxins**

23031513



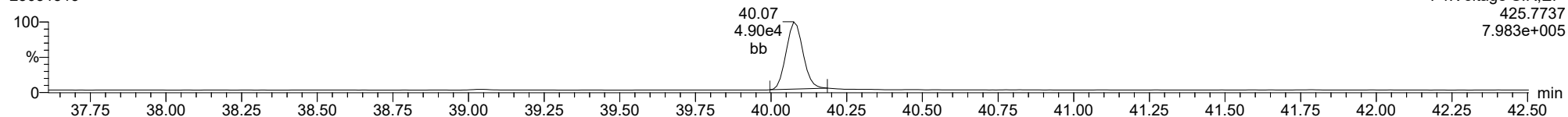
**Total-heptadioxins**

23031513



**Total-heptadioxins**

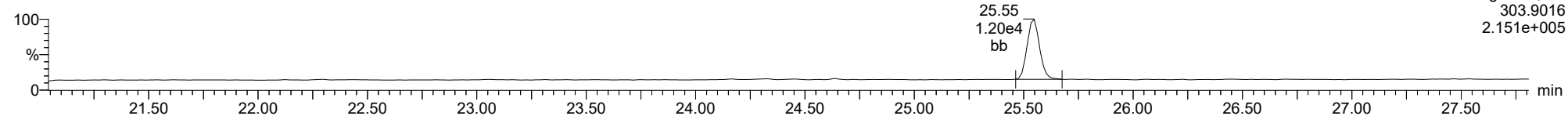
23031513



ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

**Total-tetrafurans**

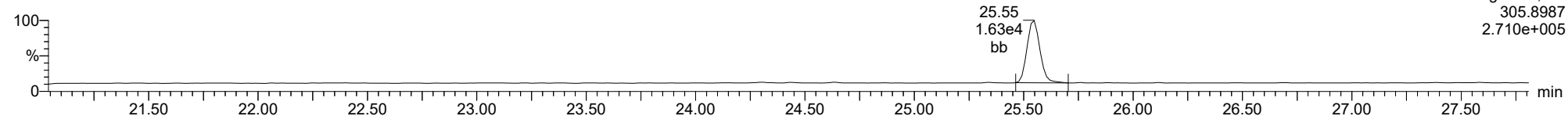
23031513



F1:Voltage SIR,EI+  
303.9016  
2.151e+005

**Total-tetrafurans**

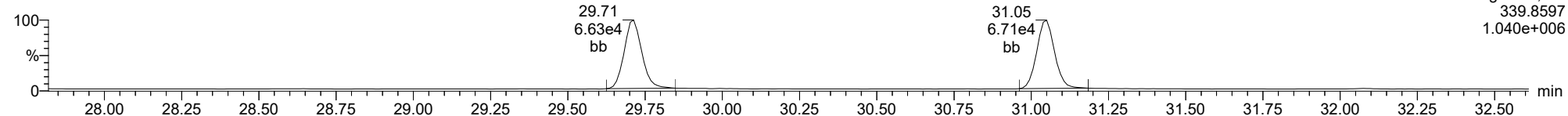
23031513



F1:Voltage SIR,EI+  
305.8987  
2.710e+005

**Total-pentafurans**

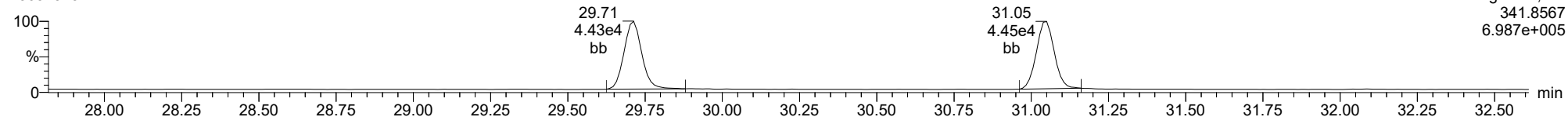
23031513



F2:Voltage SIR,EI+  
339.8597  
1.040e+006

**Total-pentafurans**

23031513

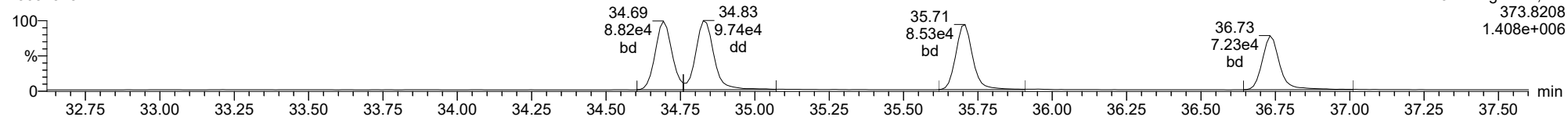


F2:Voltage SIR,EI+  
341.8567  
6.987e+005

ID: BLC0136-BS1, Name: 23031513, Date: 15-Mar-2023, Time: 20:22:11, Conditions: AUTOSPEC01, User: pk

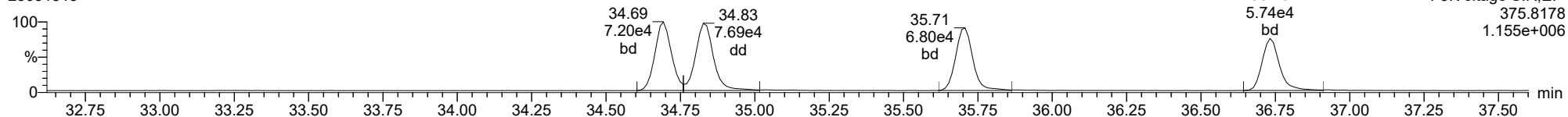
**Total-hexafurans**

23031513



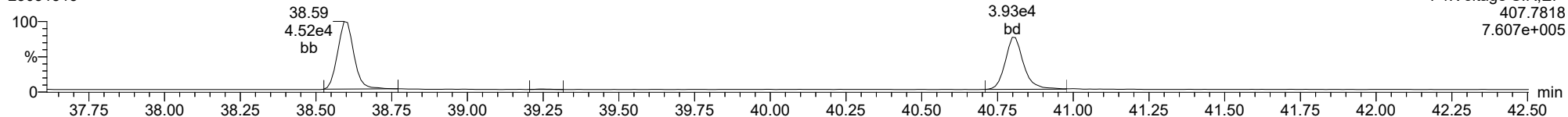
**Total-hexafurans**

23031513



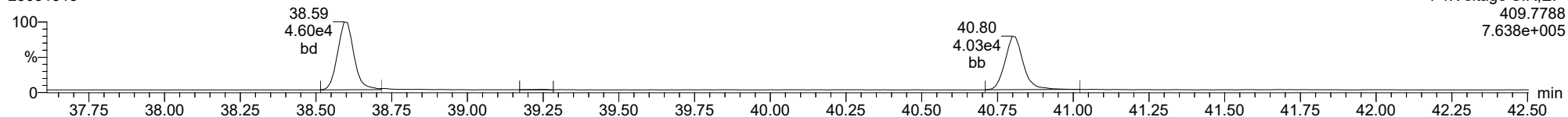
**Total-heptafurans**

23031513



**Total-heptafurans**

23031513





**STANDARD REFERENCE MATERIAL RECOVERY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLC0136-SRM1

Batch: BLC0136

Initial/Final: 10.03 g / 20 uL

Preparation: EPA 1613

Analyzed: 03/15/2023 22:00

Standard ID: L001274

Expires: 08/05/2023

Standard Lot#: PSRM0173

Description: Puget Sound reference-SRM

ANALYTE	TRUE (ng/kg wet)	FOUND (ng/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,3,7,8-TCDF	1.1100	0.554	0.221	0.997	*, EMPC, J	49.9*	50 - 150
2,3,7,8-TCDD	1.0500	0.712	0.150	0.997	EMPC, J	67.8	50 - 150
1,2,3,7,8-PeCDF	1.2300	0.768	0.319	0.997	J	62.5	50 - 150
2,3,4,7,8-PeCDF	1.0700	0.739	0.273	0.997	J	69.1	50 - 150
1,2,3,7,8-PeCDD	1.0800	1.04	0.267	0.997	EMPC	96.5	50 - 150
1,2,3,4,7,8-HxCDF	3.0200	2.15	0.279	0.997		71.1	50 - 150
1,2,3,6,7,8-HxCDF	1.0900	0.772	0.199	0.997	J	70.9	50 - 150
2,3,4,6,7,8-HxCDF	1.8300	1.71	0.169	0.997		93.4	50 - 150
1,2,3,7,8,9-HxCDF	0.51100	0.475	0.189	0.997	EMPC, J	93.0	50 - 150
1,2,3,4,7,8-HxCDD	1.5900	0.977	0.169	0.997	J	61.4	50 - 150
1,2,3,6,7,8-HxCDD	3.8800	2.66	0.179	0.997		68.5	50 - 150
1,2,3,7,8,9-HxCDD	3.0400	2.08	0.219	0.997		68.4	50 - 150
1,2,3,4,6,7,8-HpCDF	18.700	16.5	0.259	0.997		88.3	50 - 150
1,2,3,4,7,8,9-HpCDF	1.6300	1.12	0.400	0.997		68.9	50 - 150
1,2,3,4,6,7,8-HpCDD	90.600	77.5	0.558	2.49	B	85.5	50 - 150
OCDF	58.400	40.1	1.10	2.49		68.7	50 - 150
OCDD	811.00	705	4.59	9.97	B	87.0	50 - 150

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.562	1.001	2.895e2	5.659e2	0.702	0.512	0.770	954	761	5.02e3	8.56e3	5.3	11.2	YES	bd	dd	0.278
12378-PeCDF	29.713	1.000	5.467e2	3.779e2	0.679	1.447	1.550	861	1056	8.10e3	7.70e3	9.4	7.3	NO	bb	bb	0.385
23478-PeCDF	31.061	1.001	6.145e2	3.842e2	0.786	1.600	1.550	861	1056	6.83e3	5.77e3	7.9	5.5	NO	db	dd	0.371
123478-HxCDF	34.704	1.000	2.736e3	2.002e3	1.166	1.367	1.240	587	615	4.33e4	3.06e4	73.7	49.7	NO	dd	bd	1.076
234678-HxCDF	35.729	1.001	2.169e3	1.567e3	1.140	1.384	1.240	587	615	2.31e4	1.86e4	39.4	30.2	NO	bb	bb	0.857
123678-HxCDF	34.849	1.001	1.027e3	7.914e2	1.091	1.298	1.240	587	615	1.49e4	1.33e4	25.4	21.6	NO	db	db	0.387
123789-HxCDF	36.699	0.999	5.826e2	3.833e2	1.137	1.520	1.240	587	615	6.21e3	4.72e3	10.6	7.7	YES	bb	bb	0.238
1234678-HpCDF	38.615	1.000	9.235e3	8.721e3	1.003	1.059	1.050	1069	566	1.52e5	1.51e5	142.7	267.0	NO	bb	bd	8.281
1234789-HpCDF	40.832	1.001	5.222e2	4.447e2	0.953	1.174	1.050	1069	566	8.19e3	7.13e3	7.7	12.6	NO	bb	bb	0.563
OCDF	45.020	1.005	1.457e4	1.610e4	0.778	0.905	0.890	814	571	1.68e5	2.10e5	206.4	368.2	NO	bb	bb	20.125
2378-TCDD	26.198	1.001	5.593e2	9.637e2	1.149	0.580	0.770	843	683	9.55e3	1.49e4	11.3	21.8	YES	bd	bb	0.357
12378-PeCDD	31.306	1.000	8.331e2	6.562e2	1.022	1.270	1.550	891	996	1.27e4	8.67e3	14.2	8.7	YES	bb	bb	0.522
123478-HxCDD	35.841	1.000	1.084e3	9.574e2	0.996	1.132	1.240	939	725	2.07e4	1.65e4	22.1	22.8	NO	bd	bd	0.490
123678-HxCDD	35.952	1.000	3.214e3	2.695e3	1.001	1.193	1.240	939	725	4.94e4	4.48e4	52.7	61.8	NO	dd	dd	1.333
123789-HxCDD	36.342	1.011	2.100e3	1.977e3	0.907	1.062	1.240	939	725	3.25e4	3.32e4	34.6	45.7	NO	bb	bb	1.044
1234678-HpCDD	40.097	1.001	4.829e4	4.864e4	1.039	0.993	1.050	878	1175	7.50e5	7.32e5	854.6	623.6	NO	bb	bb	38.860
OCDD	44.800	1.000	2.845e5	3.534e5	0.920	0.805	0.890	1454	780	3.51e6	4.13e6	2411.9	5299.5	NO	bb	bd	353.780
13C-2378-TCDF	25.534	1.007	1.877e5	2.515e5	1.620	0.746	0.770	1571	1218	2.83e6	3.77e6	1799.5	3093.5	NO	bb	bb	95.737
13C-12378-PeCDF	29.702	1.171	2.125e5	1.408e5	1.240	1.509	1.550	1317	1711	3.18e6	2.12e6	2417.3	1238.8	NO	bb	bb	100.576
13C-23478-PeCDF	31.039	1.224	2.069e5	1.359e5	1.118	1.523	1.550	1317	1711	3.22e6	2.13e6	2445.8	1245.9	NO	bb	bb	108.325
13C-123478-HxCDF	34.693	0.955	1.257e5	2.517e5	1.168	0.500	0.510	714	1019	1.98e6	3.93e6	2774.5	3862.4	NO	bd	bd	87.287
13C-123678-HxCDF	34.827	0.959	1.444e5	2.861e5	1.386	0.505	0.510	714	1019	2.09e6	4.16e6	2923.6	4088.8	NO	dd	dd	83.879
13C-234678-HxCDF	35.707	0.983	1.275e5	2.551e5	1.129	0.500	0.510	714	1019	2.02e6	4.02e6	2828.7	3942.3	NO	bb	bb	91.524
13C-123789-HxCDF	36.732	1.011	1.190e5	2.373e5	0.932	0.501	0.510	714	1019	1.91e6	3.88e6	2674.2	3809.8	NO	bb	bb	103.305
13C-1234678-HpCDF	38.604	1.063	6.491e4	1.513e5	0.895	0.429	0.440	761	1087	1.13e6	2.60e6	1482.0	2389.2	NO	bb	bb	65.241
13C-1234789-HpCDF	40.810	1.123	5.546e4	1.247e5	0.770	0.445	0.440	761	1087	7.89e5	1.83e6	1035.8	1685.6	NO	bd	bb	63.241
13C-1234-TCDD	25.365	0.000	1.211e5	1.620e5	1.000	0.748	0.770	1646	998	1.89e6	2.49e6	1148.9	2493.0	NO	bb	bb	100.000
13C-2378-TCDD	26.170	1.032	1.619e5	2.093e5	1.152	0.774	0.770	1646	998	2.43e6	3.11e6	1478.2	3117.4	NO	bb	bb	113.750
13C-12378-PeCDD	31.295	1.234	1.713e5	1.077e5	0.829	1.592	1.550	629	716	2.54e6	1.62e6	4041.5	2265.8	NO	bb	bb	118.880
13C-123478-HxCDD	35.830	0.986	2.309e5	1.876e5	0.995	1.231	1.240	820	873	3.61e6	2.97e6	4401.4	3398.3	NO	bd	bd	113.623
13C-123678-HxCDD	35.941	0.989	2.459e5	1.970e5	1.157	1.249	1.240	820	873	3.72e6	2.97e6	4536.6	3397.3	NO	db	db	103.440
13C-1234678-HpCDD	40.074	1.103	1.258e5	1.142e5	0.840	1.102	1.050	856	687	1.90e6	1.77e6	2220.5	2570.1	NO	bd	bb	77.196
13C-OCDD	44.782	1.233	1.841e5	2.078e5	0.767	0.886	0.890	1069	703	2.30e6	2.61e6	2155.6	3717.0	NO	bb	bb	137.974
13C-123789-HxCDD	36.331	0.000	2.071e5	1.630e5	1.000	1.270	1.240	820	873	3.34e6	2.66e6	4067.4	3052.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.198	1.033	1.289e5		1.288			873		1.98e6		2264.7			bb		35.339

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.087	0.865	1.199e2	2.502e2	0.802	0.479	0.770	954	761	1.91e3	3.99e3	2.0	5.2	YES	bb	bb	0.105
1289-TCDF					0.678		0.770	954	761								
13468-PECDF	26.862	0.904	3.675e2	4.029e2	1.246	0.912	1.550	845	605	5.54e3	4.97e3	6.6	8.2	YES	bd	bd	0.175
12389-PECDF					0.496		1.550	861	1056								
123468-HXCDF	33.033	0.952	2.730e3	2.165e3	1.169	1.261	1.240	587	615	4.23e4	3.37e4	72.0	54.7	NO	bd	bd	1.109
1368-TCDD	23.316	0.891	5.558e2	7.946e2	1.015	0.699	0.770	843	683	9.79e3	1.24e4	11.6	18.2	NO	bb	bb	0.358
1289-TCDD					0.909		0.770	843	683								
12479-PECDD	28.632	0.915	7.062e2	2.711e2	2.301	2.605	1.550	891	996	1.18e4	6.19e3	13.3	6.2	YES	db	db	0.152
12389-PECDD					1.184		1.550	891	996								
124679-HXCDD	33.813	0.944	8.756e3	6.924e3	1.115	1.265	1.240	939	725	1.33e5	1.05e5	141.8	144.8	NO	bd	bb	3.359
1234679-HPCDD	39.049	0.974	7.459e4	7.593e4	1.137	0.982	1.050	878	1175	1.21e6	1.25e6	1376.6	1060.4	NO	bb	bb	55.150
Total-tetrafurans			2.763e3		0.727			954		4.07e4							2.109
Total-penta1			6.598e3					845		8.98e4							3.316
Total-pentafurans			2.045e3		0.654			861		2.86e4							1.392
Total-hexafurans			2.805e4		1.141			587		4.06e5							11.571
Total-heptafurans			2.838e4		0.978			1069		4.54e5							28.468
Total-Furans			8.241e4		0.922			954		1.19e6							66.981
Total-tetradoxins			1.507e3		1.024			843		2.57e4							0.939
Total-pentadoxins			4.501e2		1.502			891		7.87e3							0.172
Total-hexadoxins			2.765e4		1.005			939		3.79e5							11.628
Total-heptadoxins			1.229e5		1.088			878		1.96e6							94.010
Total-Dioxins			4.369e5		1.130			843		5.88e6							460.528
Total-TEQ			5.194e5					843		7.06e6							527.510
FUNCTION1 PFK			1.096e7					588394		3.79e6							
FUNCTION2 PFK			0.000e0					182146		0.00e0							
FUNCTION3 PFK			1.560e6					481702		3.45e7							0.000
FUNCTION4 PFK			1.187e6					248935		3.56e6							
FUNCTION5 PFK			2.599e5					157948		9.07e6							
FUNCTION1 HXCD...			1.216e3					548		1.69e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.254e2					498		3.74e3							0.000
FUNCTION3 OCDPE			7.311e1					499		1.13e3							0.000
FUNCTION4 NCDPE			6.993e3					628		1.23e5							0.000
FUNCTION5 DCDPE			0.000e0					435		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.80	5.285e2	7.534e2	0.727	0.70	0.77	8.1	YES	NO	dd	bd	0.401
2	Total-tetrafurans	23.64	3.505e2	5.288e2	0.727	0.66	0.77	6.8	YES	NO	dd	db	0.275
3	Total-tetrafurans	22.88	6.752e2	9.845e2	0.727	0.69	0.77	8.8	YES	NO	bd	bd	0.520
4	Total-tetrafurans	24.64	7.039e2	9.821e2	0.727	0.72	0.77	10.0	YES	NO	bd	bd	0.528
5	Total-tetrafurans	24.45	5.046e2	7.239e2	0.727	0.70	0.77	8.9	YES	NO	db	db	0.385

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	26.99	6.598e3	4.142e3		1.59	1.55	106.2	YES	NO	db	db	3.316

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.25	4.970e2	2.873e2	0.654	1.73	1.55	9.7	YES	NO	db	db	0.345
2	23478-PeCDF	31.06	6.145e2	3.842e2	0.786	1.60	1.55	7.9	YES	NO	db	dd	0.371
3	Total-pentafurans	30.91	3.865e2	2.781e2	0.654	1.39	1.55	6.2	YES	NO	dd	dd	0.292
4	12378-PeCDF	29.71	5.467e2	3.779e2	0.679	1.45	1.55	9.4	YES	NO	bb	bb	0.385

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexa-furans	33.24	8.615e3	7.387e3	1.141	1.17	1.24	205.5	YES	NO	dd	db	3.628
2	123468-HxCDF	33.03	2.730e3	2.165e3	1.169	1.26	1.24	72.0	YES	NO	bd	bd	1.109
3	234678-HxCDF	35.73	2.169e3	1.567e3	1.140	1.38	1.24	39.4	YES	NO	bb	bb	0.857
4	123678-HxCDF	34.85	1.027e3	7.914e2	1.091	1.30	1.24	25.4	YES	NO	db	db	0.387
5	123478-HxCDF	34.70	2.736e3	2.002e3	1.166	1.37	1.24	73.7	YES	NO	dd	bd	1.076
6	Total-hexa-furans	34.08	1.077e4	9.130e3	1.141	1.18	1.24	275.5	YES	NO	bb	bb	4.513

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.83	5.222e2	4.447e2	0.953	1.17	1.05	7.7	YES	NO	bb	bb	0.563
2	Total-hepta-furans	39.26	1.862e4	1.942e4	0.978	0.96	1.05	274.2	YES	NO	bb	bb	19.624
3	1234678-HpCDF	38.61	9.235e3	8.721e3	1.003	1.06	1.05	142.7	YES	NO	bb	bd	8.281

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.80	5.285e2	7.534e2	0.727	0.70	0.77	8.1	YES	NO	dd	bd	0.401
2	Total-tetrafurans	23.64	3.505e2	5.288e2	0.727	0.66	0.77	6.8	YES	NO	dd	db	0.275
3	Total-tetrafurans	22.88	6.752e2	9.845e2	0.727	0.69	0.77	8.8	YES	NO	bd	bd	0.520
4	Total-tetrafurans	24.64	7.039e2	9.821e2	0.727	0.72	0.77	10.0	YES	NO	bd	bd	0.528
5	Total-tetrafurans	24.45	5.046e2	7.239e2	0.727	0.70	0.77	8.9	YES	NO	db	db	0.385
6	Total-pentafurans	28.25	4.970e2	2.873e2	0.654	1.73	1.55	9.7	YES	NO	db	db	0.345
7	23478-PeCDF	31.06	6.145e2	3.842e2	0.786	1.60	1.55	7.9	YES	NO	db	dd	0.371
8	Total-pentafurans	30.91	3.865e2	2.781e2	0.654	1.39	1.55	6.2	YES	NO	dd	dd	0.292
9	12378-PeCDF	29.71	5.467e2	3.779e2	0.679	1.45	1.55	9.4	YES	NO	bb	bb	0.385
10	Total-hexafurans	33.24	8.615e3	7.387e3	1.141	1.17	1.24	205.5	YES	NO	dd	db	3.628
11	123468-HxCDF	33.03	2.730e3	2.165e3	1.169	1.26	1.24	72.0	YES	NO	bd	bd	1.109
12	234678-HxCDF	35.73	2.169e3	1.567e3	1.140	1.38	1.24	39.4	YES	NO	bb	bb	0.857
13	123678-HxCDF	34.85	1.027e3	7.914e2	1.091	1.30	1.24	25.4	YES	NO	db	db	0.387
14	123478-HxCDF	34.70	2.736e3	2.002e3	1.166	1.37	1.24	73.7	YES	NO	dd	bd	1.076
15	Total-hexafurans	34.08	1.077e4	9.130e3	1.141	1.18	1.24	275.5	YES	NO	bb	bb	4.513
16	1234789-HpCDF	40.83	5.222e2	4.447e2	0.953	1.17	1.05	7.7	YES	NO	bb	bb	0.563
17	Total-heptafurans	39.26	1.862e4	1.942e4	0.978	0.96	1.05	274.2	YES	NO	bb	bb	19.624
18	1234678-HpCDF	38.61	9.235e3	8.721e3	1.003	1.06	1.05	142.7	YES	NO	bb	bd	8.281
19	OCDF	45.02	1.457e4	1.610e4	0.778	0.90	0.89	206.4	YES	NO	bb	bb	20.125
20	Total-penta1	26.99	6.598e3	4.142e3		1.59	1.55	106.2	YES	NO	db	db	3.316

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.38	6.267e2	8.151e2	1.024	0.77	0.77	12.2	YES	NO	bb	bb	0.379
2	Total-tetradioxins	23.60	3.241e2	4.424e2	1.024	0.73	0.77	6.7	YES	NO	bb	bb	0.202
3	1368-TCDD	23.32	5.558e2	7.946e2	1.015	0.70	0.77	11.6	YES	NO	bb	bb	0.358

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	29.10	4.501e2	2.689e2	1.502	1.67	1.55	8.8	YES	NO	bb	bb	0.172



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	35.04	1.027e3	9.280e2	1.005	1.11	1.24	17.9	YES	NO	db	db	0.452
2	Total-hexadioxins	34.95	9.492e3	8.485e3	1.005	1.12	1.24	102.2	YES	NO	bd	bd	4.154
3	Total-hexadioxins	34.58	1.972e3	1.475e3	1.005	1.34	1.24	32.8	YES	NO	bb	bb	0.796
4	124679-HxCDD	33.81	8.756e3	6.924e3	1.115	1.26	1.24	141.8	YES	NO	bd	bb	3.359
5	123789-HxCDD	36.34	2.100e3	1.977e3	0.907	1.06	1.24	34.6	YES	NO	bb	bb	1.044
6	123678-HxCDD	35.95	3.214e3	2.695e3	1.001	1.19	1.24	52.7	YES	NO	dd	dd	1.333
7	123478-HxCDD	35.84	1.084e3	9.574e2	0.996	1.13	1.24	22.1	YES	NO	bd	bd	0.490

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.10	4.829e4	4.864e4	1.039	0.99	1.05	854.6	YES	NO	bb	bb	38.860
2	1234679-HPCDD	39.05	7.459e4	7.593e4	1.137	0.98	1.05	1376.6	YES	NO	bb	bb	55.150

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.38	6.267e2	8.151e2	1.024	0.77	0.77	12.2	YES	NO	bb	bb	0.379
2	Total-tetradioxins	23.60	3.241e2	4.424e2	1.024	0.73	0.77	6.7	YES	NO	bb	bb	0.202
3	1368-TCDD	23.32	5.558e2	7.946e2	1.015	0.70	0.77	11.6	YES	NO	bb	bb	0.358
4	Total-pentadioxins	29.10	4.501e2	2.689e2	1.502	1.67	1.55	8.8	YES	NO	bb	bb	0.172
5	Total-hexadioxins	35.04	1.027e3	9.280e2	1.005	1.11	1.24	17.9	YES	NO	db	db	0.452
6	Total-hexadioxins	34.95	9.492e3	8.485e3	1.005	1.12	1.24	102.2	YES	NO	bd	bd	4.154
7	Total-hexadioxins	34.58	1.972e3	1.475e3	1.005	1.34	1.24	32.8	YES	NO	bb	bb	0.796
8	124679-HxCDD	33.81	8.756e3	6.924e3	1.115	1.26	1.24	141.8	YES	NO	bd	bb	3.359
9	123789-HxCDD	36.34	2.100e3	1.977e3	0.907	1.06	1.24	34.6	YES	NO	bb	bb	1.044
10	123678-HxCDD	35.95	3.214e3	2.695e3	1.001	1.19	1.24	52.7	YES	NO	dd	dd	1.333
11	123478-HxCDD	35.84	1.084e3	9.574e2	0.996	1.13	1.24	22.1	YES	NO	bd	bd	0.490
12	1234678-HpCDD	40.10	4.829e4	4.864e4	1.039	0.99	1.05	854.6	YES	NO	bb	bb	38.860
13	1234679-HPCDD	39.05	7.459e4	7.593e4	1.137	0.98	1.05	1376.6	YES	NO	bb	bb	55.150
14	OCDD	44.80	2.845e5	3.534e5	0.920	0.80	0.89	2411.9	YES	NO	bb	bd	353.780

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.80	5.285e2	7.534e2	0.727	0.70	0.77	8.1	YES	NO	dd	bd	0.401
2	Total-tetrafurans	23.64	3.505e2	5.288e2	0.727	0.66	0.77	6.8	YES	NO	dd	db	0.275
3	Total-tetrafurans	22.88	6.752e2	9.845e2	0.727	0.69	0.77	8.8	YES	NO	bd	bd	0.520
4	Total-tetrafurans	24.64	7.039e2	9.821e2	0.727	0.72	0.77	10.0	YES	NO	bd	bd	0.528
5	Total-tetrafurans	24.45	5.046e2	7.239e2	0.727	0.70	0.77	8.9	YES	NO	db	db	0.385
6	Total-pentafurans	28.25	4.970e2	2.873e2	0.654	1.73	1.55	9.7	YES	NO	db	db	0.345
7	23478-PeCDF	31.06	6.145e2	3.842e2	0.786	1.60	1.55	7.9	YES	NO	db	dd	0.371
8	Total-pentafurans	30.91	3.865e2	2.781e2	0.654	1.39	1.55	6.2	YES	NO	dd	dd	0.292
9	12378-PeCDF	29.71	5.467e2	3.779e2	0.679	1.45	1.55	9.4	YES	NO	bb	bb	0.385
10	Total-hexafurans	33.24	8.615e3	7.387e3	1.141	1.17	1.24	205.5	YES	NO	dd	db	3.628
11	123468-HXCDF	33.03	2.730e3	2.165e3	1.169	1.26	1.24	72.0	YES	NO	bd	bd	1.109
12	234678-HxCDF	35.73	2.169e3	1.567e3	1.140	1.38	1.24	39.4	YES	NO	bb	bb	0.857
13	123678-HxCDF	34.85	1.027e3	7.914e2	1.091	1.30	1.24	25.4	YES	NO	db	db	0.387
14	123478-HxCDF	34.70	2.736e3	2.002e3	1.166	1.37	1.24	73.7	YES	NO	dd	bd	1.076
15	Total-hexafurans	34.08	1.077e4	9.130e3	1.141	1.18	1.24	275.5	YES	NO	bb	bb	4.513
16	1234789-HpCDF	40.83	5.222e2	4.447e2	0.953	1.17	1.05	7.7	YES	NO	bb	bb	0.563
17	Total-heptafurans	39.26	1.862e4	1.942e4	0.978	0.96	1.05	274.2	YES	NO	bb	bb	19.624
18	1234678-HpCDF	38.61	9.235e3	8.721e3	1.003	1.06	1.05	142.7	YES	NO	bb	bd	8.281
19	OCDF	45.02	1.457e4	1.610e4	0.778	0.90	0.89	206.4	YES	NO	bb	bb	20.125
20	Total-penta1	26.99	6.598e3	4.142e3		1.59	1.55	106.2	YES	NO	db	db	3.316
21	Total-tetradioxins	25.38	6.267e2	8.151e2	1.024	0.77	0.77	12.2	YES	NO	bb	bb	0.379
22	Total-tetradioxins	23.60	3.241e2	4.424e2	1.024	0.73	0.77	6.7	YES	NO	bb	bb	0.202
23	1368-TCDD	23.32	5.558e2	7.946e2	1.015	0.70	0.77	11.6	YES	NO	bb	bb	0.358
24	Total-pentadioxins	29.10	4.501e2	2.689e2	1.502	1.67	1.55	8.8	YES	NO	bb	bb	0.172
25	Total-hexadioxins	35.04	1.027e3	9.280e2	1.005	1.11	1.24	17.9	YES	NO	db	db	0.452
26	Total-hexadioxins	34.95	9.492e3	8.485e3	1.005	1.12	1.24	102.2	YES	NO	bd	bd	4.154
27	Total-hexadioxins	34.58	1.972e3	1.475e3	1.005	1.34	1.24	32.8	YES	NO	bb	bb	0.796
28	124679-HXCDD	33.81	8.756e3	6.924e3	1.115	1.26	1.24	141.8	YES	NO	bd	bb	3.359
29	123789-HxCDD	36.34	2.100e3	1.977e3	0.907	1.06	1.24	34.6	YES	NO	bb	bb	1.044
30	123678-HxCDD	35.95	3.214e3	2.695e3	1.001	1.19	1.24	52.7	YES	NO	dd	dd	1.333
31	123478-HxCDD	35.84	1.084e3	9.574e2	0.996	1.13	1.24	22.1	YES	NO	bd	bd	0.490
32	1234678-HpCDD	40.10	4.829e4	4.864e4	1.039	0.99	1.05	854.6	YES	NO	bb	bb	38.860
33	1234679-HPCDD	39.05	7.459e4	7.593e4	1.137	0.98	1.05	1376.6	YES	NO	bb	bb	55.150
34	OCDD	44.80	2.845e5	3.534e5	0.920	0.80	0.89	2411.9	YES	NO	bb	bd	353.780

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.12	4.257e5					3.4	YES		bb		
2	FUNCTION1 PFK	22.54	1.054e7					3.0	YES		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

## Quantify Totals Report MassLynx V4.1 SCN909

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## PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.22	2.784e4					1.6	NO		bb		0.000
2	FUNCTION3 PFK	33.03	1.328e4					1.2	NO		bb		0.000
3	FUNCTION3 PFK	32.69	1.518e4					1.4	NO		db		0.000
4	FUNCTION3 PFK	32.65	1.692e4					1.4	NO		bd		0.000
5	FUNCTION3 PFK	35.04	4.594e4					1.8	NO		dd		0.000
6	FUNCTION3 PFK	34.97	3.148e4					2.1	NO		dd		0.000
7	FUNCTION3 PFK	34.93	2.726e4					1.7	NO		dd		0.000
8	FUNCTION3 PFK	34.89	2.634e4					2.0	NO		bd		0.000
9	FUNCTION3 PFK	34.76	1.447e5					2.5	NO		db		0.000
10	FUNCTION3 PFK	34.64	4.475e4					2.1	NO		dd		0.000
11	FUNCTION3 PFK	34.58	3.407e4					2.0	NO		dd		0.000
12	FUNCTION3 PFK	34.53	3.443e4					1.5	NO		dd		0.000
13	FUNCTION3 PFK	34.43	2.135e4					1.5	NO		bd		0.000
14	FUNCTION3 PFK	34.35	3.503e4					2.0	NO		db		0.000
15	FUNCTION3 PFK	34.26	2.303e4					1.2	NO		bd		0.000
16	FUNCTION3 PFK	34.09	1.904e4					1.1	NO		db		0.000
17	FUNCTION3 PFK	33.97	3.766e4					1.4	NO		bd		0.000
18	FUNCTION3 PFK	33.53	3.241e4					1.8	NO		bb		0.000
19	FUNCTION3 PFK	33.37	2.911e4					1.9	NO		db		0.000
20	FUNCTION3 PFK	33.30	1.932e4					1.4	NO		bd		0.000
21	FUNCTION3 PFK	36.59	4.813e4					2.4	NO		db		0.000
22	FUNCTION3 PFK	36.56	1.333e5					3.8	YES		dd		0.000
23	FUNCTION3 PFK	36.45	1.506e4					1.1	NO		bd		0.000
24	FUNCTION3 PFK	36.33	1.499e4					1.4	NO		bb		0.000
25	FUNCTION3 PFK	36.28	1.421e4					0.7	NO		bb		0.000
26	FUNCTION3 PFK	36.11	1.693e4					1.4	NO		bb		0.000
27	FUNCTION3 PFK	36.05	3.711e4					1.6	NO		db		0.000
28	FUNCTION3 PFK	35.97	9.214e3					0.9	NO		bd		0.000
29	FUNCTION3 PFK	35.77	6.450e3					0.6	NO		db		0.000
30	FUNCTION3 PFK	35.74	7.532e3					0.8	NO		bd		0.000
31	FUNCTION3 PFK	35.64	5.308e4					2.2	NO		db		0.000
32	FUNCTION3 PFK	35.58	4.275e4					1.9	NO		dd		0.000
33	FUNCTION3 PFK	35.54	1.372e4					1.3	NO		dd		0.000
34	FUNCTION3 PFK	35.48	1.936e4					1.2	NO		bd		0.000
35	FUNCTION3 PFK	35.25	7.953e3					0.6	NO		bb		0.000
36	FUNCTION3 PFK	35.08	8.719e3					0.9	NO		db		0.000
37	FUNCTION3 PFK	37.52	2.057e4					1.1	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld

Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk****PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.92	9.526e4					3.7	YES		db		0.000
39	FUNCTION3 PFK	36.85	8.346e4					3.4	YES		dd		0.000
40	FUNCTION3 PFK	36.79	1.699e5					4.3	YES		dd		0.000
41	FUNCTION3 PFK	36.71	6.314e4					3.0	NO		bd		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.95	4.001e5					5.1	YES		bb		
2	FUNCTION4 PFK	39.88	5.877e5					5.4	YES		bb		
3	FUNCTION4 PFK	37.88	1.993e5					3.8	YES		bb		

**Quantify Totals Report MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.92	7.978e3					1.7	NO		dd		
2	FUNCTION5 PFK	42.82	1.672e4					2.1	NO		dd		
3	FUNCTION5 PFK	42.79	1.717e4					2.4	NO		dd		
4	FUNCTION5 PFK	42.73	1.142e4					2.3	NO		dd		
5	FUNCTION5 PFK	42.70	9.465e3					2.2	NO		bd		
6	FUNCTION5 PFK	42.58	8.305e3					2.8	NO		bb		
7	FUNCTION5 PFK	44.16	7.354e3					1.9	NO		bb		
8	FUNCTION5 PFK	44.10	1.709e3					0.8	NO		bb		
9	FUNCTION5 PFK	44.07	6.347e2					0.4	NO		bb		
10	FUNCTION5 PFK	44.02	1.839e3					0.7	NO		bb		
11	FUNCTION5 PFK	43.97	8.933e2					0.5	NO		db		
12	FUNCTION5 PFK	43.94	2.925e3					0.8	NO		bd		
13	FUNCTION5 PFK	43.88	3.966e3					1.0	NO		bb		
14	FUNCTION5 PFK	43.81	6.399e3					1.3	NO		bb		
15	FUNCTION5 PFK	43.74	7.001e3					1.8	NO		db		
16	FUNCTION5 PFK	43.69	4.900e3					1.0	NO		dd		
17	FUNCTION5 PFK	43.66	3.918e3					1.4	NO		bd		
18	FUNCTION5 PFK	43.56	4.758e3					1.2	NO		bb		
19	FUNCTION5 PFK	43.50	6.604e3					1.4	NO		bb		
20	FUNCTION5 PFK	43.42	8.378e3					1.2	NO		bb		
21	FUNCTION5 PFK	42.97	1.265e3					0.6	NO		db		
22	FUNCTION5 PFK	42.95	3.271e3					1.0	NO		dd		
23	FUNCTION5 PFK	45.61	9.660e3					1.7	NO		bd		
24	FUNCTION5 PFK	45.52	1.446e4					1.6	NO		bb		
25	FUNCTION5 PFK	45.27	6.008e3					1.4	NO		db		
26	FUNCTION5 PFK	45.22	7.428e3					1.5	NO		bd		
27	FUNCTION5 PFK	45.18	5.746e3					1.9	NO		bb		
28	FUNCTION5 PFK	45.07	6.369e3					1.3	NO		bb		
29	FUNCTION5 PFK	44.85	1.701e3					0.5	NO		bb		
30	FUNCTION5 PFK	44.80	8.252e3					2.0	NO		bb		
31	FUNCTION5 PFK	44.72	1.315e3					0.9	NO		bb		
32	FUNCTION5 PFK	44.65	2.152e3					0.7	NO		bb		
33	FUNCTION5 PFK	44.46	8.502e2					0.6	NO		bb		
34	FUNCTION5 PFK	44.38	1.112e4					2.2	NO		db		
35	FUNCTION5 PFK	44.35	5.260e3					1.7	NO		dd		
36	FUNCTION5 PFK	44.30	7.560e3					1.5	NO		bd		
37	FUNCTION5 PFK	44.26	2.577e3					0.9	NO		db		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
 Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	44.22	2.598e3					0.8	NO		bd		
39	FUNCTION5 PFK	45.95	2.506e3					0.8	NO		bb		
40	FUNCTION5 PFK	45.90	8.283e3					1.7	NO		bb		
41	FUNCTION5 PFK	45.83	1.894e3					0.7	NO		bb		
42	FUNCTION5 PFK	45.72	1.374e4					1.4	NO		db		
43	FUNCTION5 PFK	45.65	3.549e3					1.1	NO		dd		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.29	7.459e1					2.3	NO		bb		0.000
2	FUNCTION1 HXCD...	26.79	1.533e2					1.6	NO		bb		0.000
3	FUNCTION1 HXCD...	25.69	4.767e2					16.5	YES		bb		0.000
4	FUNCTION1 HXCD...	24.19	7.701e1					1.7	NO		bb		0.000
5	FUNCTION1 HXCD...	22.09	2.268e2					4.0	YES		db		0.000
6	FUNCTION1 HXCD...	21.90	1.328e2					3.1	YES		bd		0.000
7	FUNCTION1 HXCD...	21.21	7.473e1					1.5	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.46	1.237e2					3.4	YES		bb		0.000
2	FUNCTION2 HPCD...	29.66	1.017e2					4.1	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.28	7.311e1					2.3	NO		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.22	6.993e3					195.8	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**  
Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld  
Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time  
Printed: Thursday, March 16, 2023 09:37:25 Pacific Daylight Time

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

**ETHERS6**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

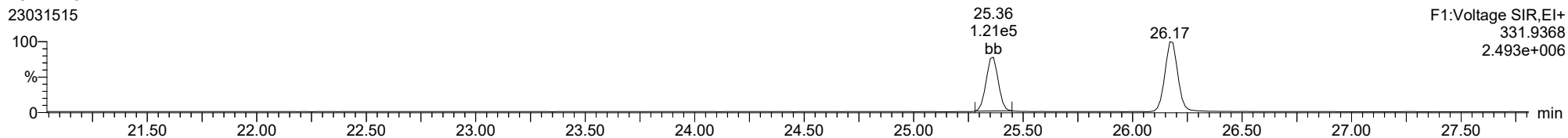


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Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

**13C-1234-TCDD**

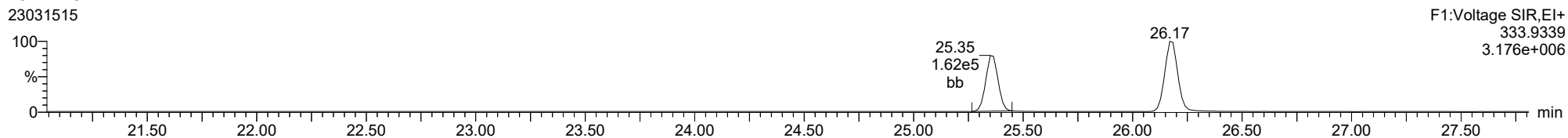
23031515



F1:Voltage SIR,El+  
331.9368  
2.493e+006

**13C-1234-TCDD**

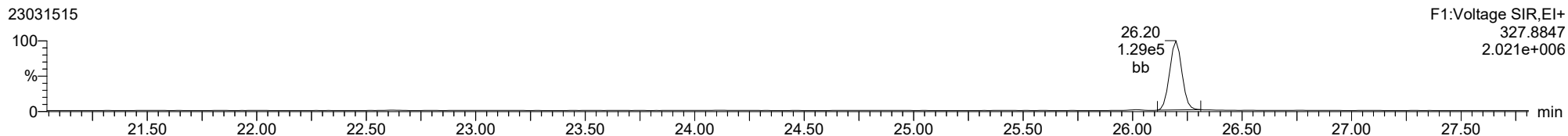
23031515



F1:Voltage SIR,El+  
333.9339  
3.176e+006

**37CL-2378-TCDD**

23031515

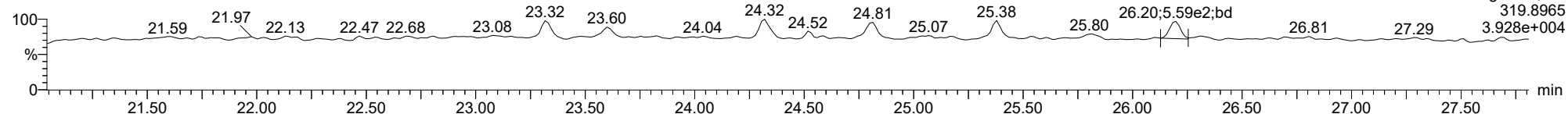


F1:Voltage SIR,El+  
327.8847  
2.021e+006

**ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk**

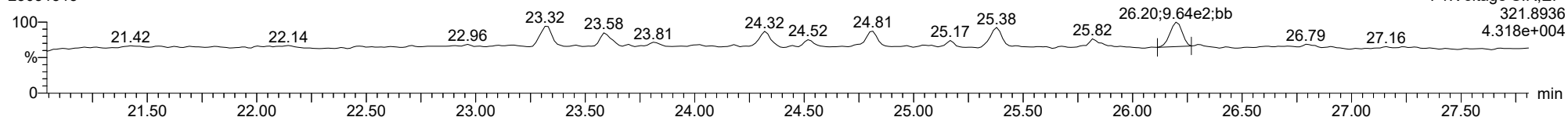
**2378-TCDD**

23031515



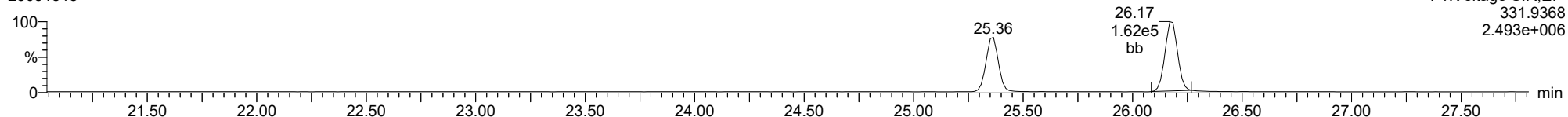
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23031515



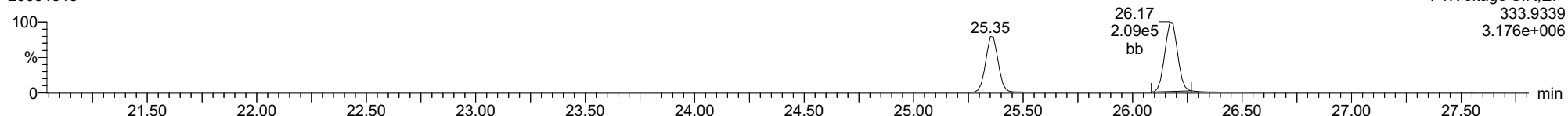
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23031515



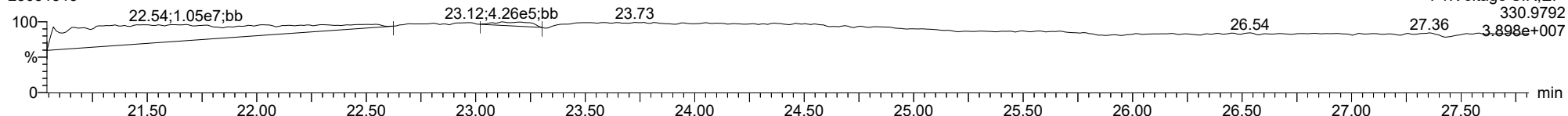
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23031515



**FUNCTION1 PFK**

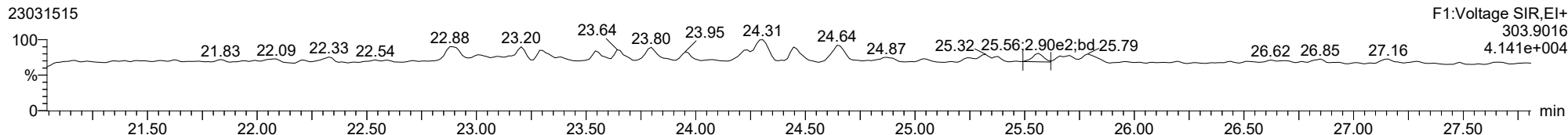
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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

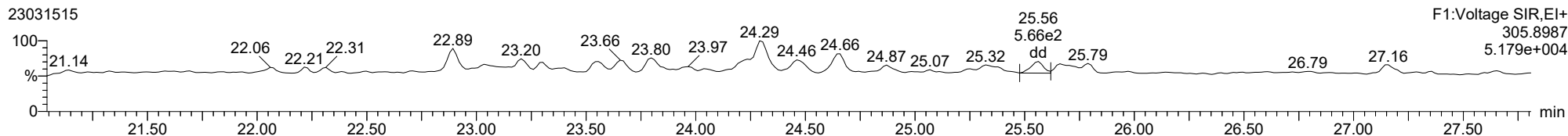
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23031515



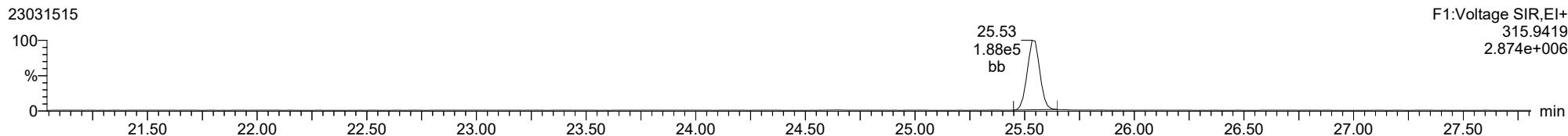
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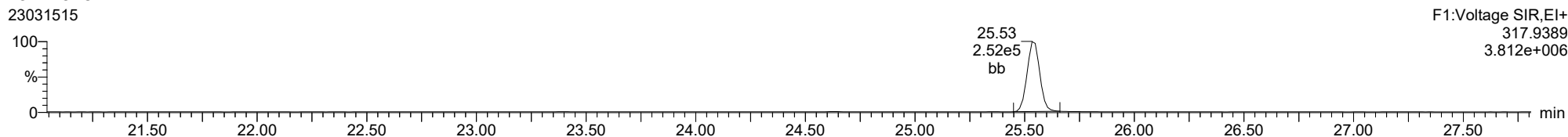
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23031515



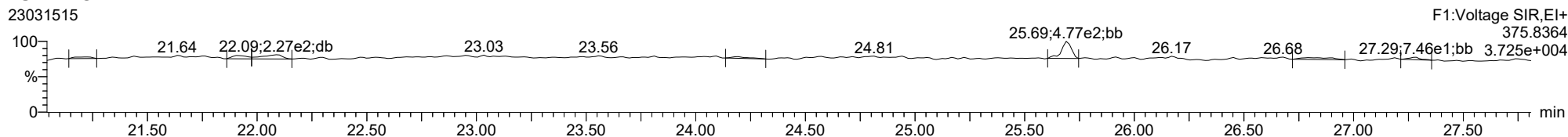
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23031515



**FUNCTION1 HXCDPE**

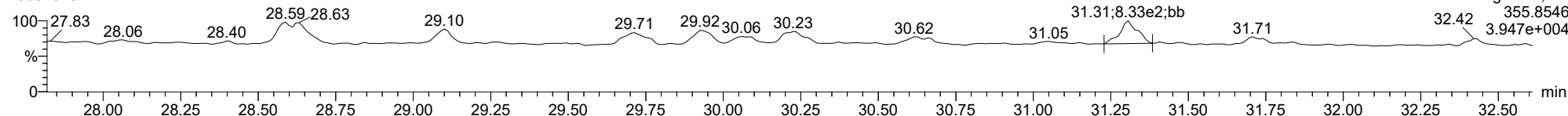
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

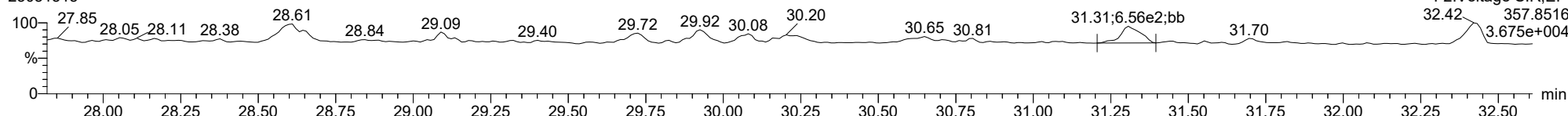
**12378-PeCDD**

23031515



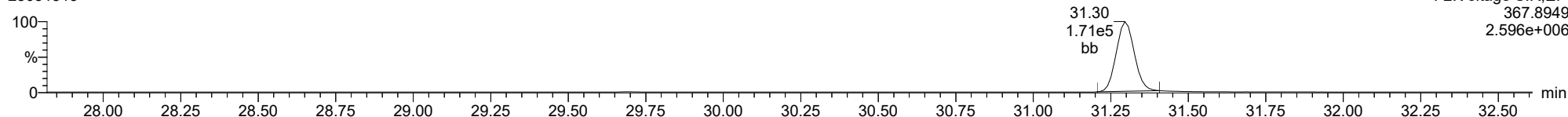
**12378-PeCDD**

23031515



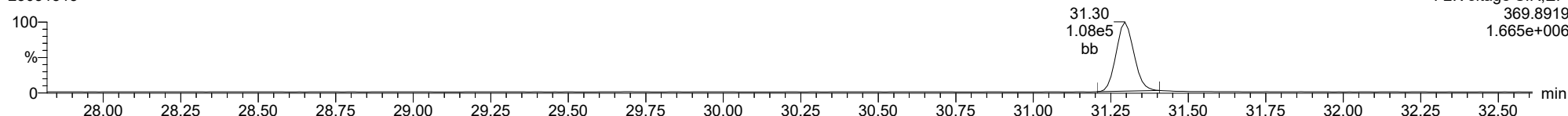
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23031515



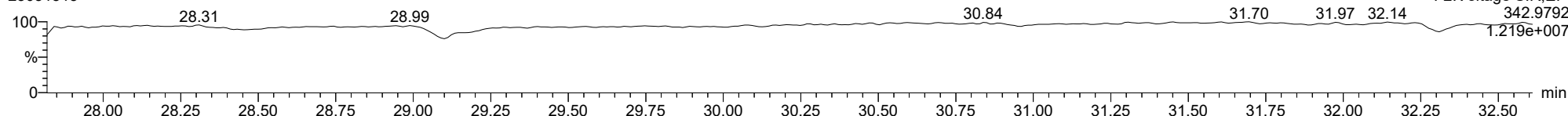
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23031515



**FUNCTION2 PFK**

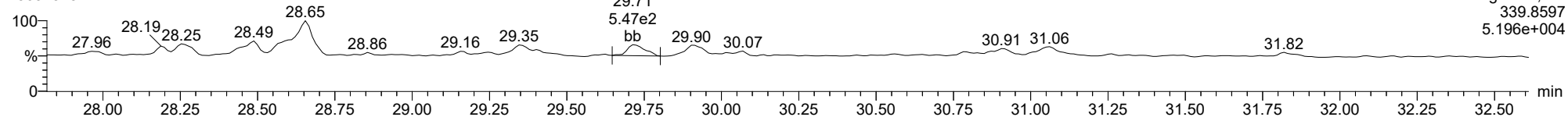
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

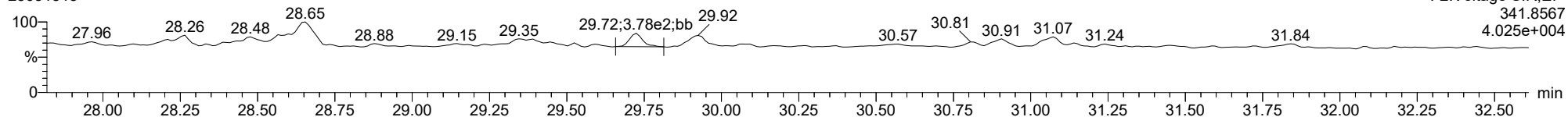
**12378-PeCDF**

23031515



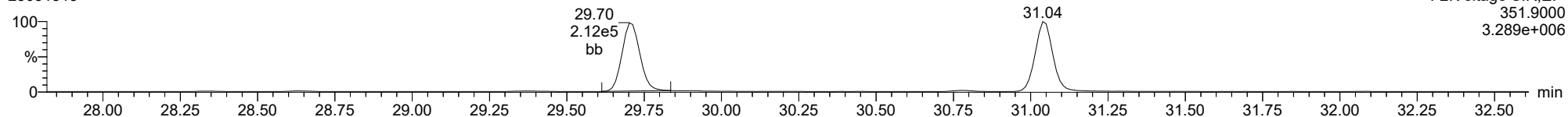
**12378-PeCDF**

23031515



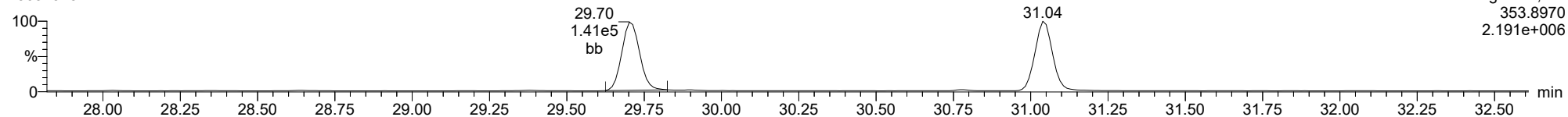
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23031515



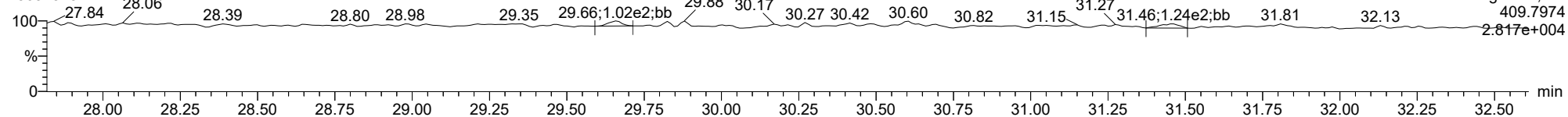
**13C-12378-PeCDF**

23031515



**FUNCTION2 HPCDPE**

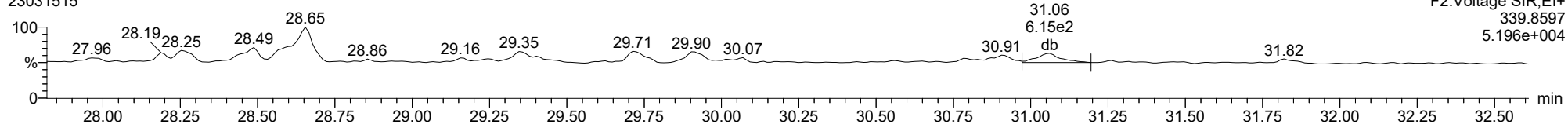
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

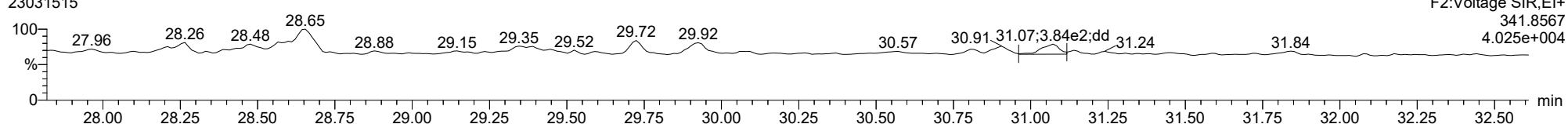
**23478-PeCDF**

23031515



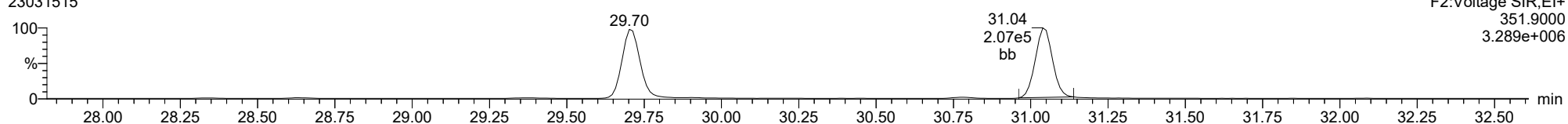
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23031515



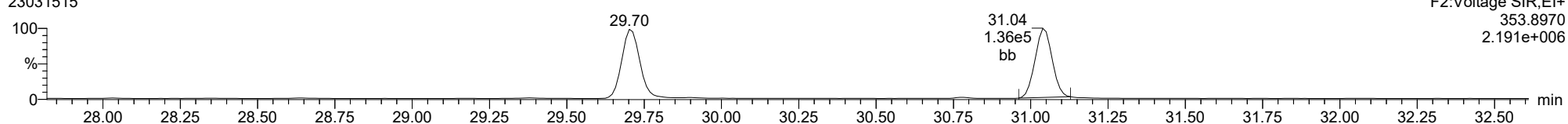
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23031515



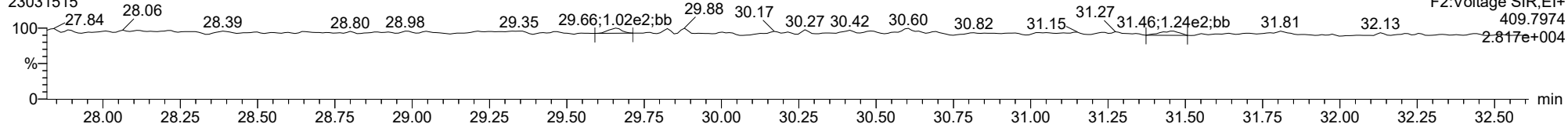
**13C-23478-PeCDF**

23031515



**FUNCTION2 HPCDPE**

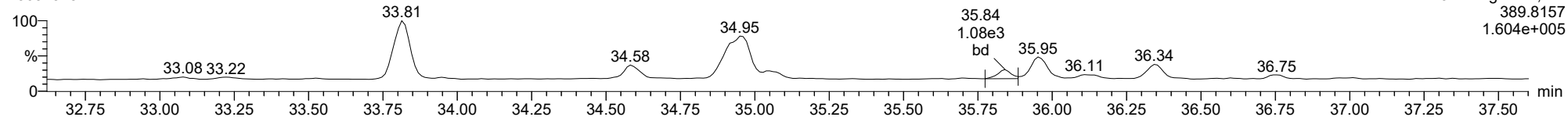
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

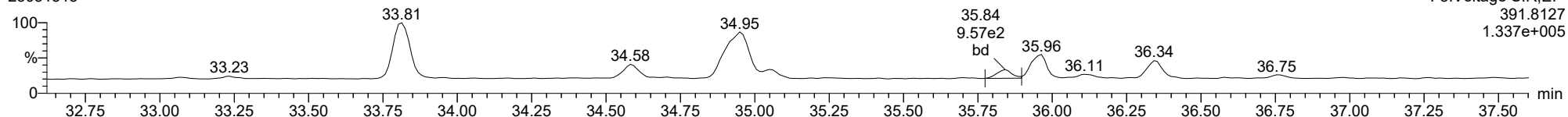
**123478-HxCDD**

23031515



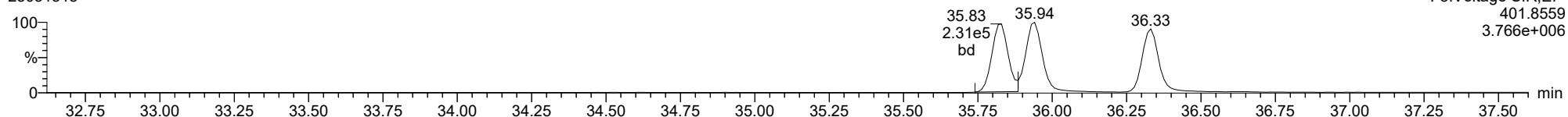
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23031515



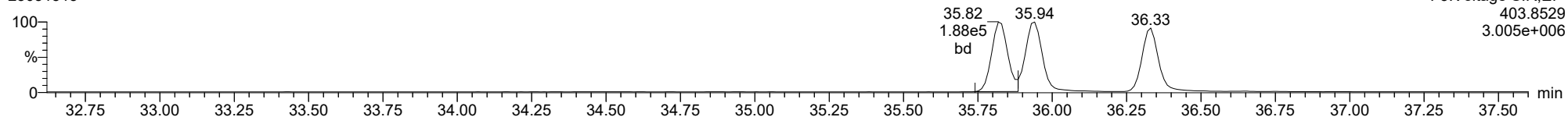
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23031515



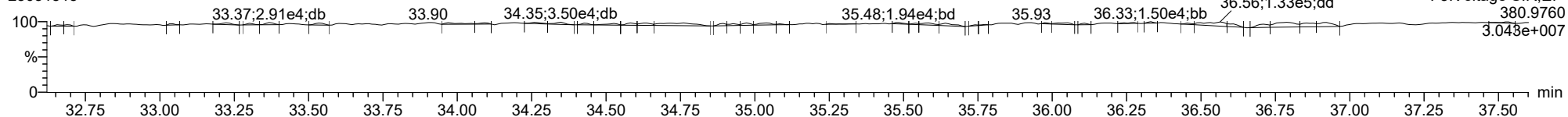
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23031515



**FUNCTION3 PFK**

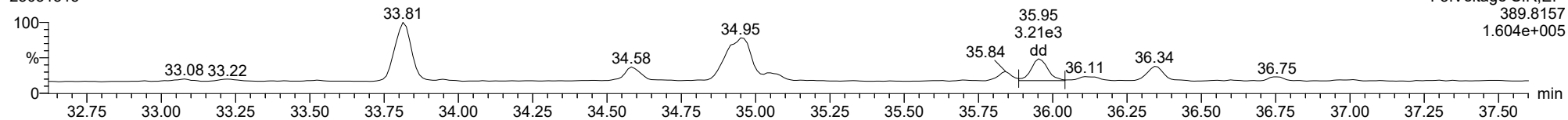
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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

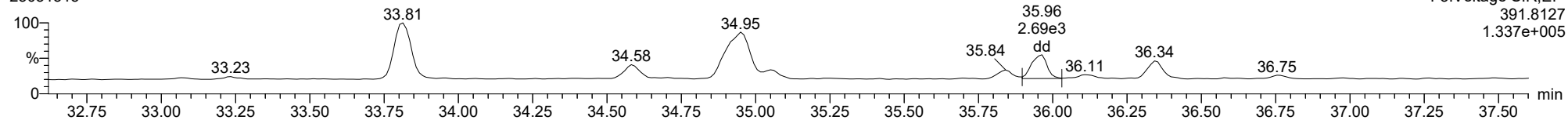
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23031515



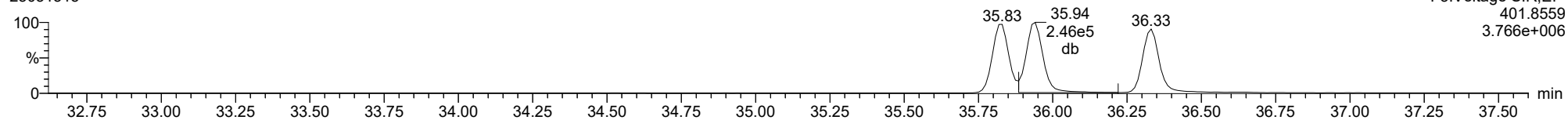
**123678-HxCDD**

23031515



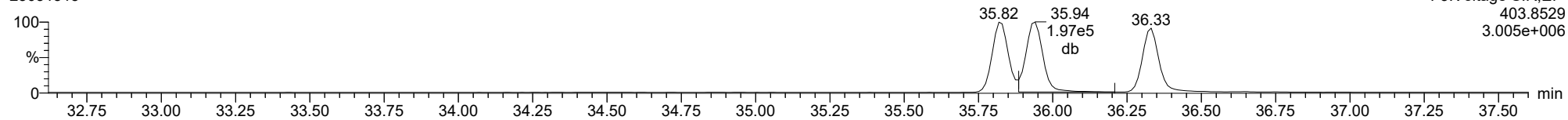
**13C-123678-HxCDD**

23031515



**13C-123678-HxCDD**

23031515

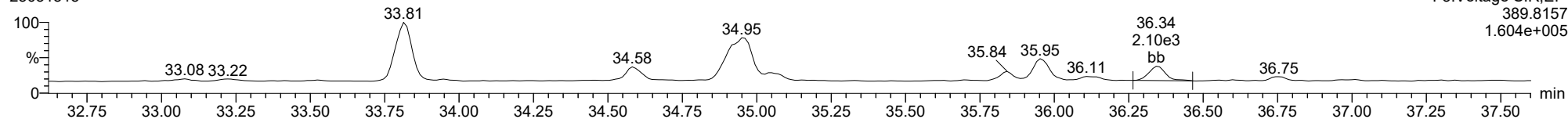




ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

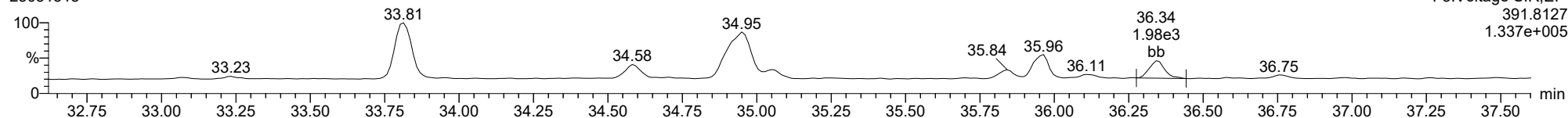
**123789-HxCDD**

23031515



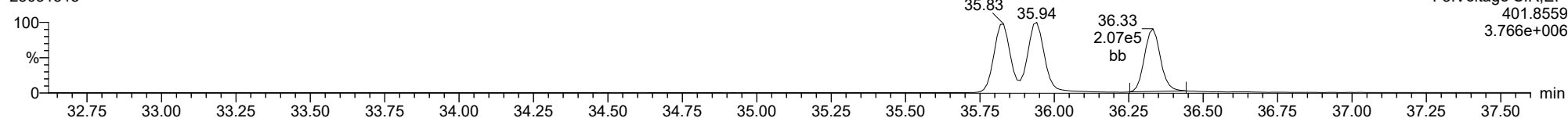
**123789-HxCDD**

23031515



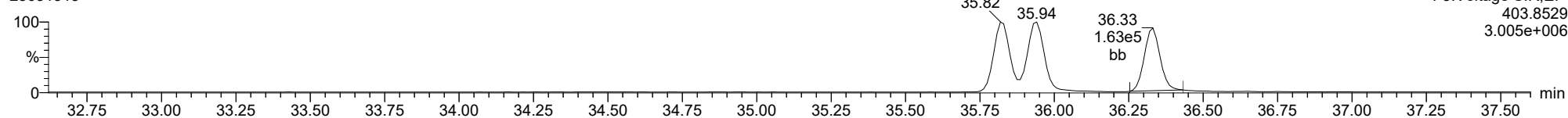
**13C-123789-HxCDD**

23031515



**13C-123789-HxCDD**

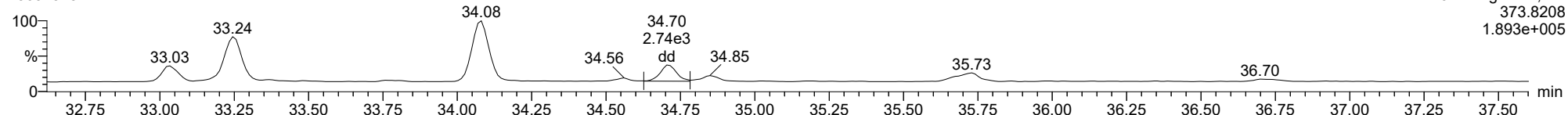
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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

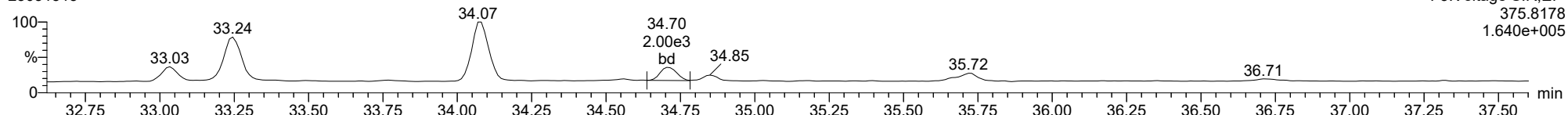
**123478-HxCDF**

23031515



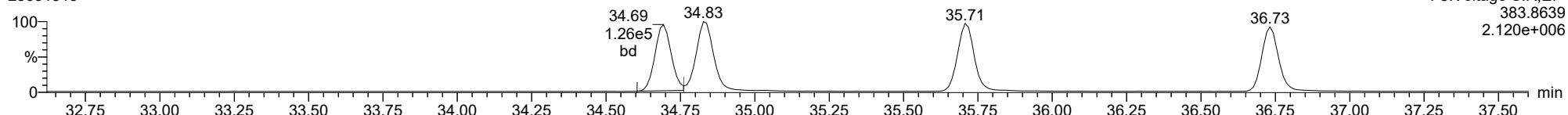
**123478-HxCDF**

23031515



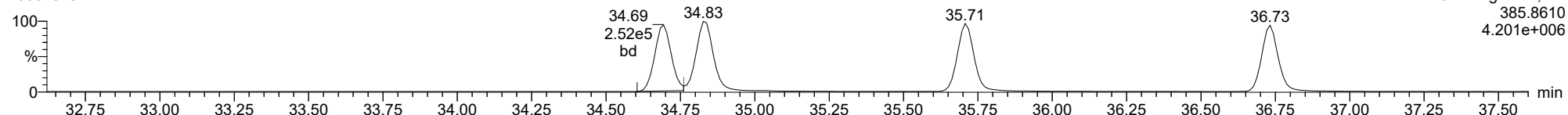
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23031515



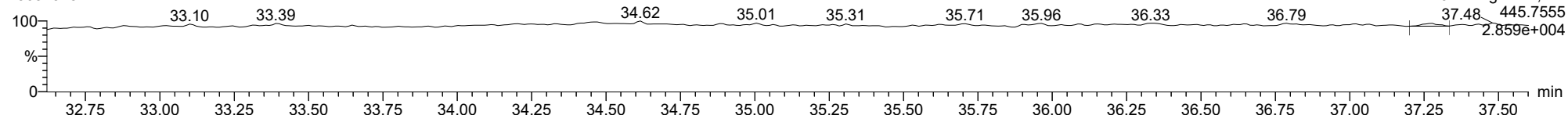
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23031515



**FUNCTION3 OCDPE**

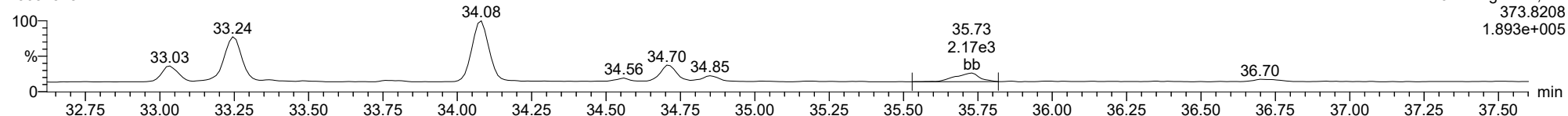
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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

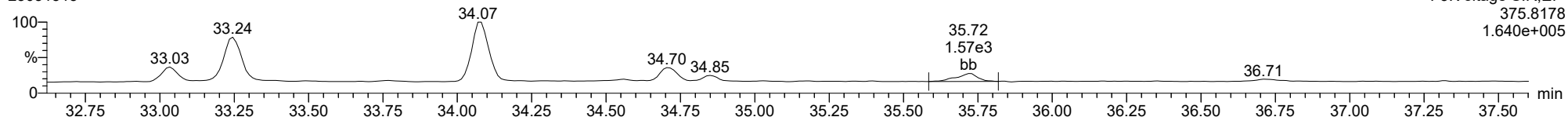
**234678-HxCDF**

23031515



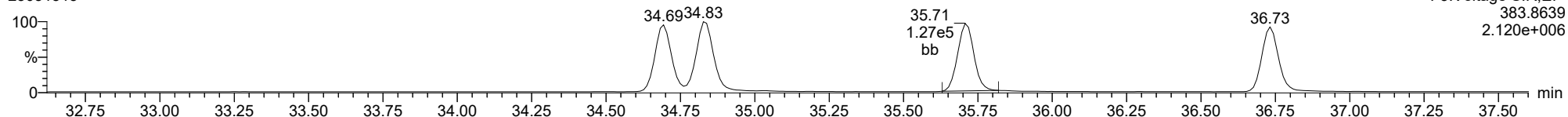
**234678-HxCDF**

23031515



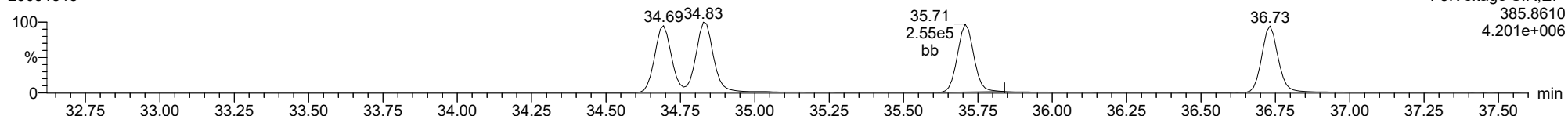
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23031515



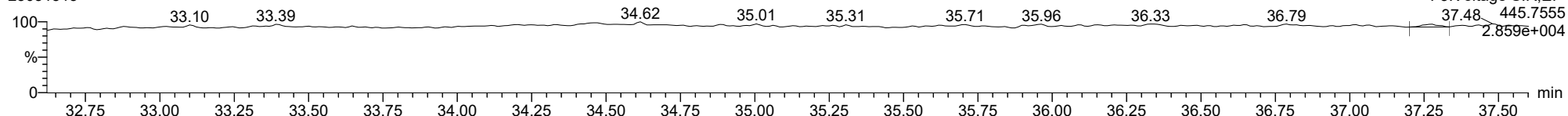
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23031515



**FUNCTION3 OCDPE**

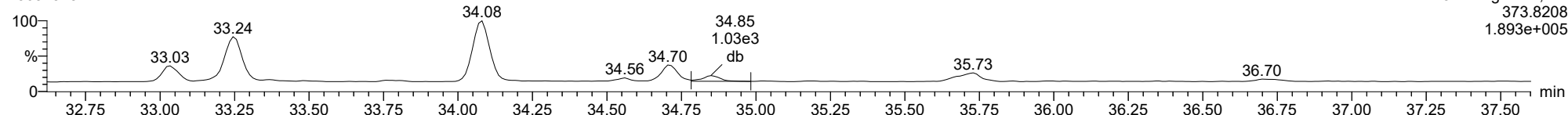
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

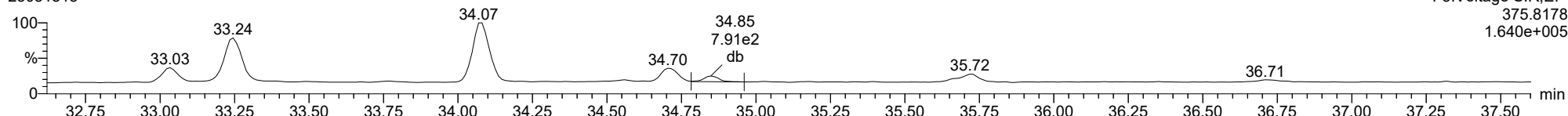
123678-HxCDF

23031515



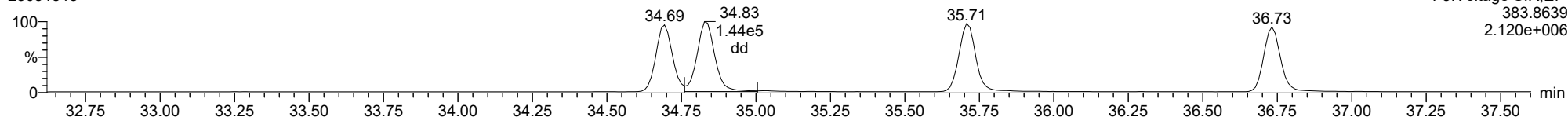
123678-HxCDF

23031515



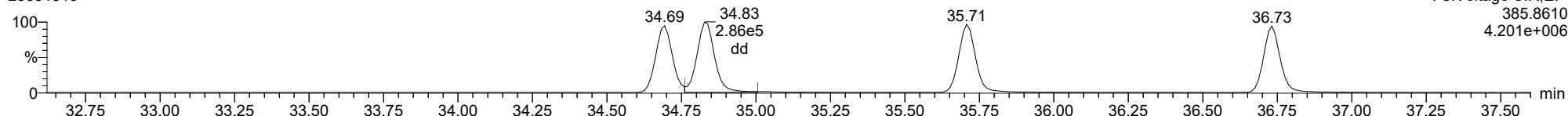
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23031515



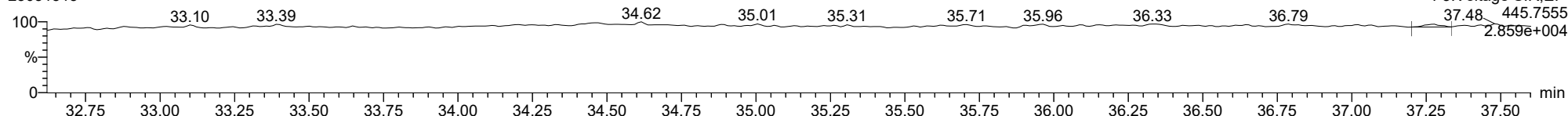
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FUNCTION3 OCDPE

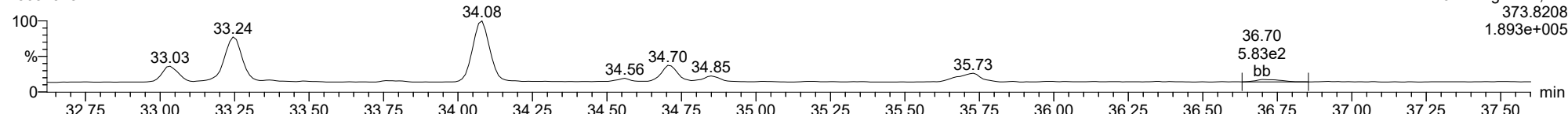
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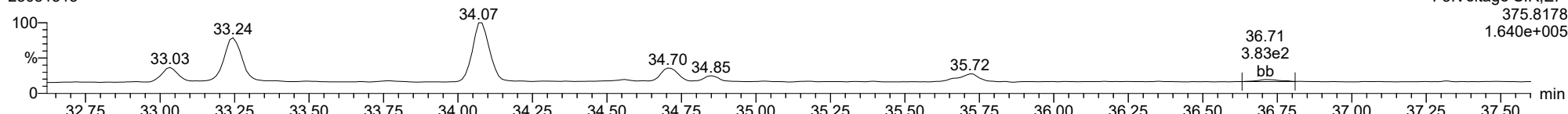
**123789-HxCDF**

23031515



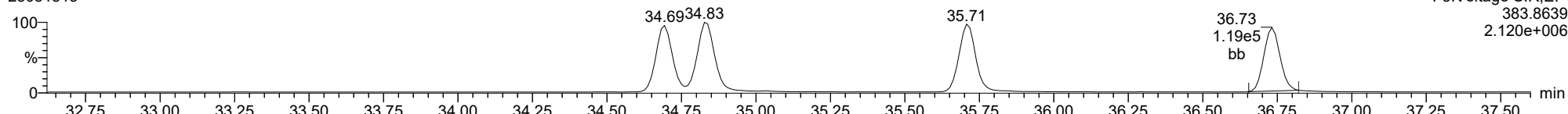
**123789-HxCDF**

23031515



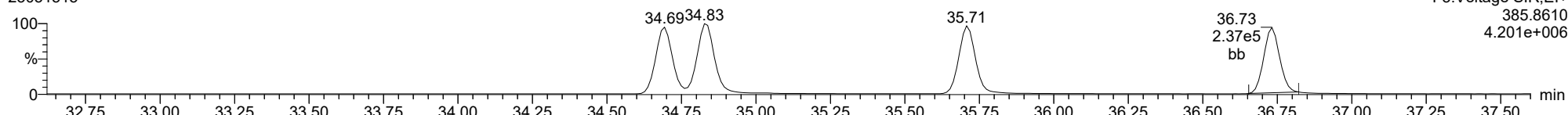
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23031515



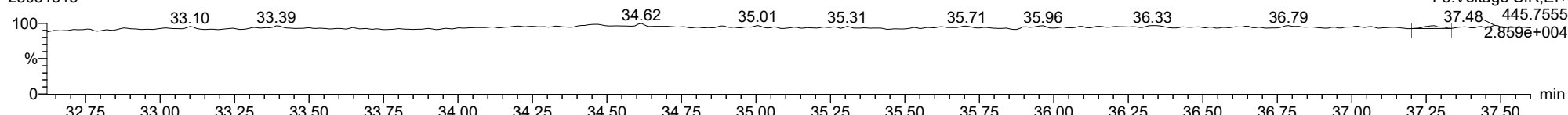
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23031515



**FUNCTION3 OCDPE**

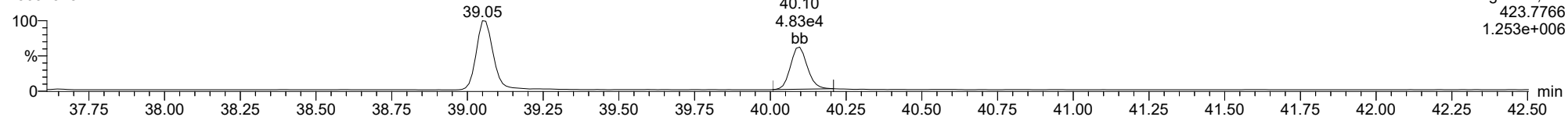
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

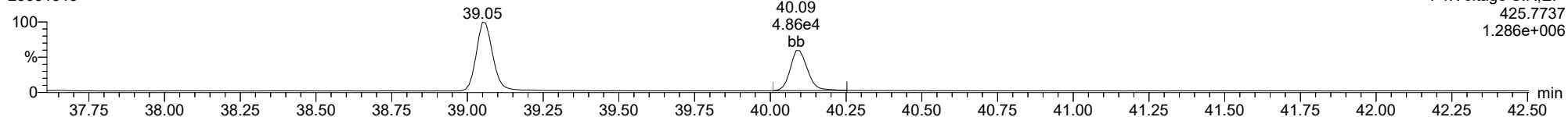
23031515



F4:Voltage SIR,EI+  
423.7766  
1.253e+006

**1234678-HpCDD**

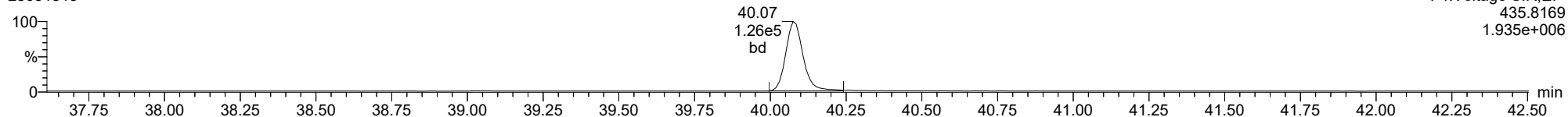
23031515



F4:Voltage SIR,EI+  
425.7737  
1.286e+006

**13C-1234678-HpCDD**

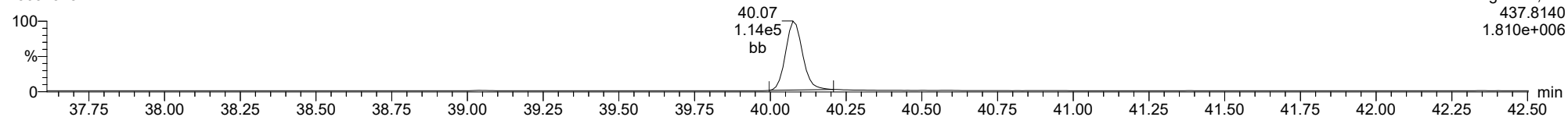
23031515



F4:Voltage SIR,EI+  
435.8169  
1.935e+006

**13C-1234678-HpCDD**

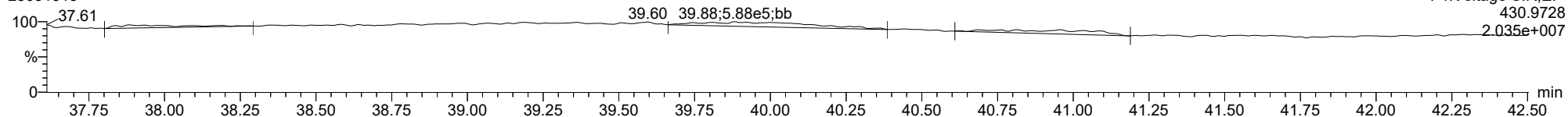
23031515



F4:Voltage SIR,EI+  
437.8140  
1.810e+006

**FUNCTION4 PFK**

23031515

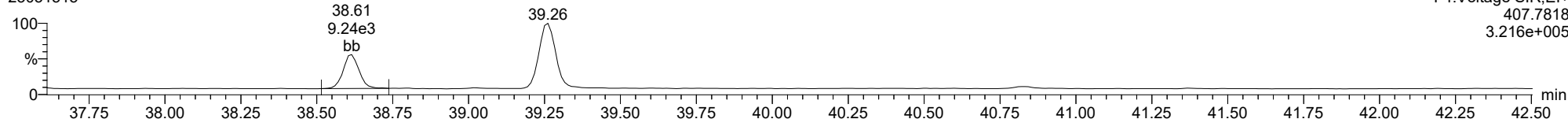


F4:Voltage SIR,EI+  
430.9728  
2.035e+007

ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

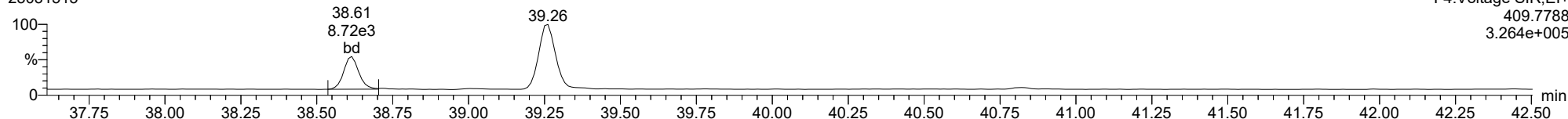
**1234678-HpCDF**

23031515



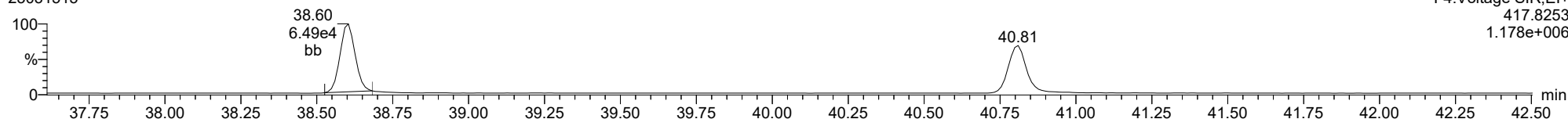
**1234678-HpCDF**

23031515



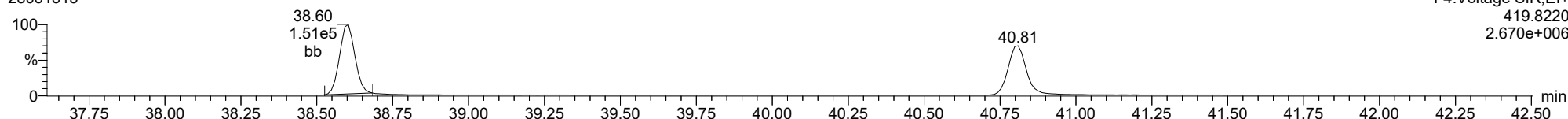
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23031515



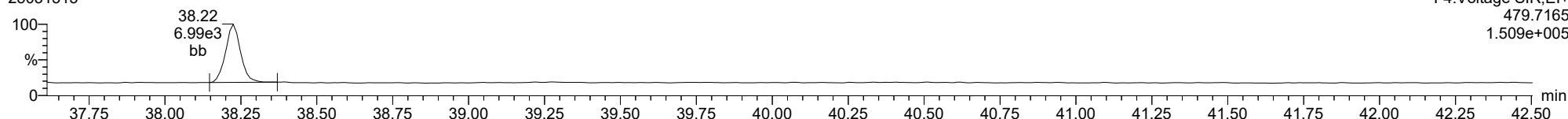
**13C-1234678-HpCDF**

23031515



**FUNCTION4 NCDPE**

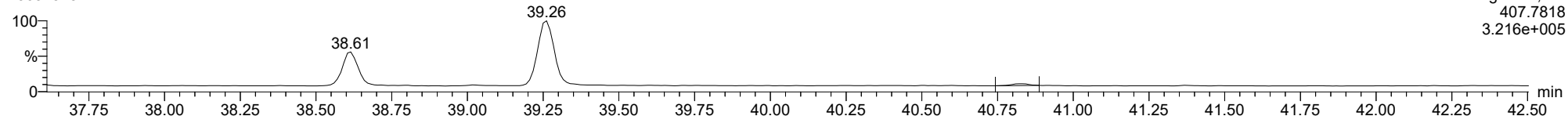
23031515



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

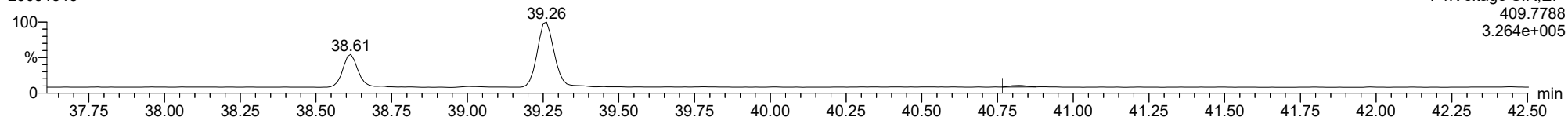
23031515



F4:Voltage SIR,El+  
407.7818  
3.216e+005

**1234789-HpCDF**

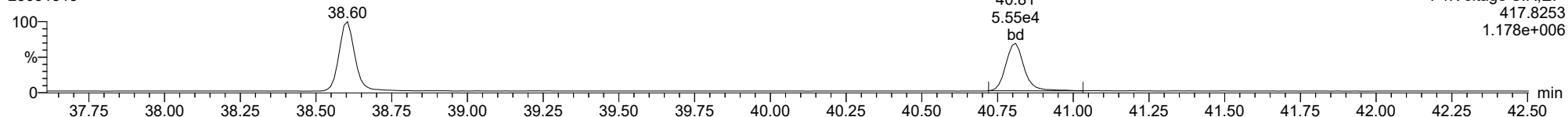
23031515



F4:Voltage SIR,El+  
409.7788  
3.264e+005

**13C-1234789-HpCDF**

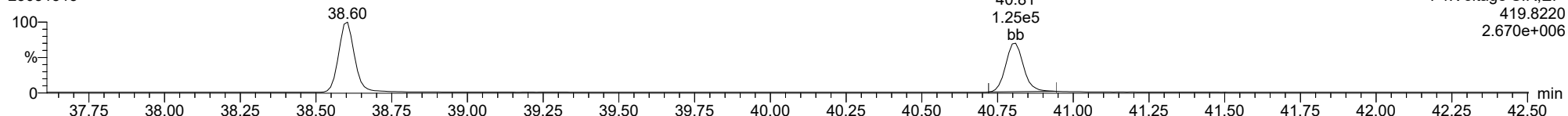
23031515



F4:Voltage SIR,El+  
417.8253  
1.178e+006

**13C-1234789-HpCDF**

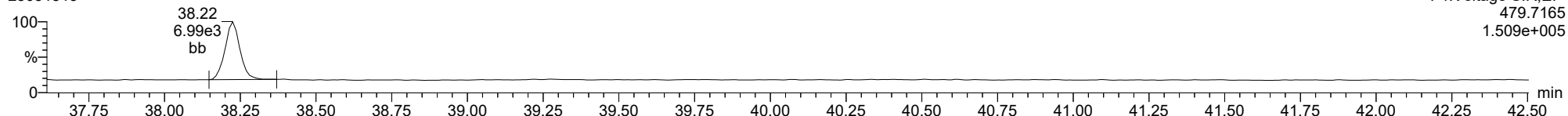
23031515



F4:Voltage SIR,El+  
419.8220  
2.670e+006

**FUNCTION4 NCDPE**

23031515



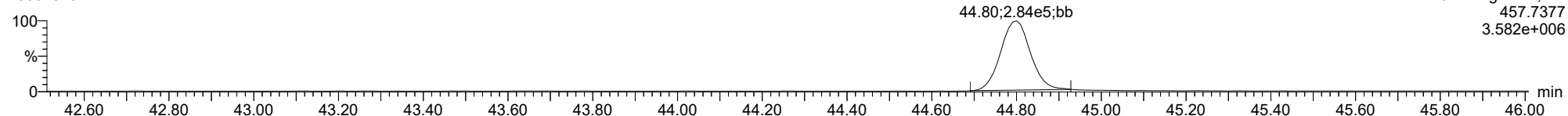
F4:Voltage SIR,El+  
479.7165  
1.509e+005



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

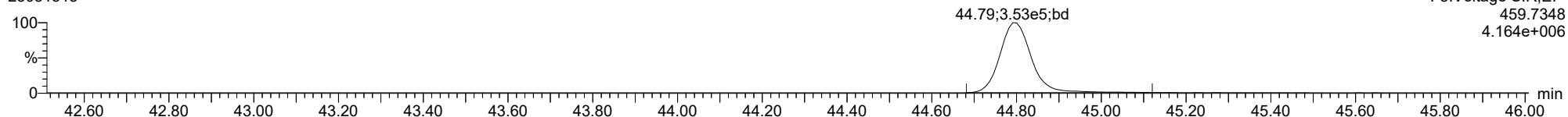
**OCDD**

23031515



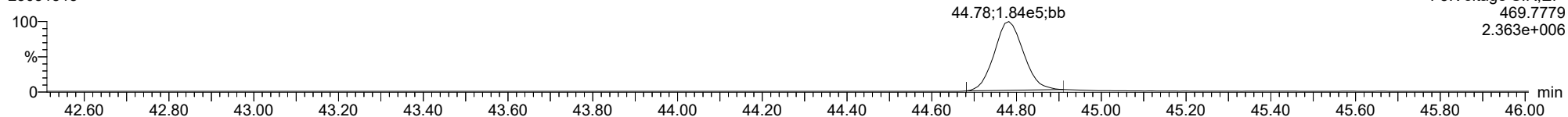
**OCDD**

23031515



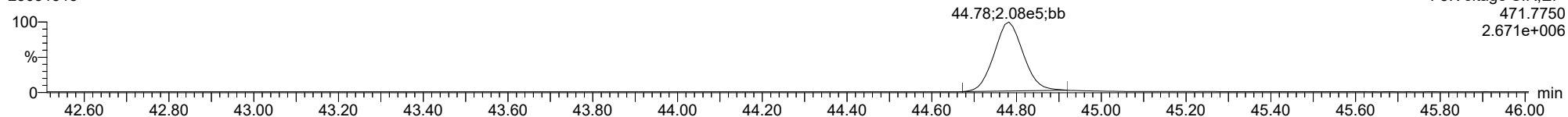
**13C-OCDD**

23031515



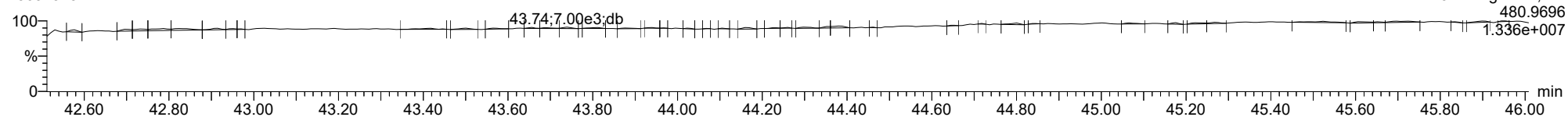
**13C-OCDD**

23031515

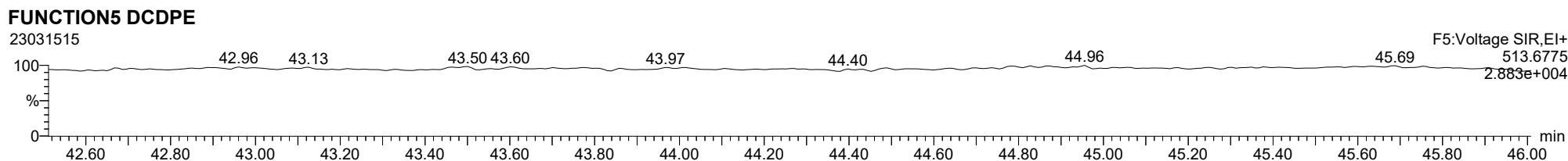
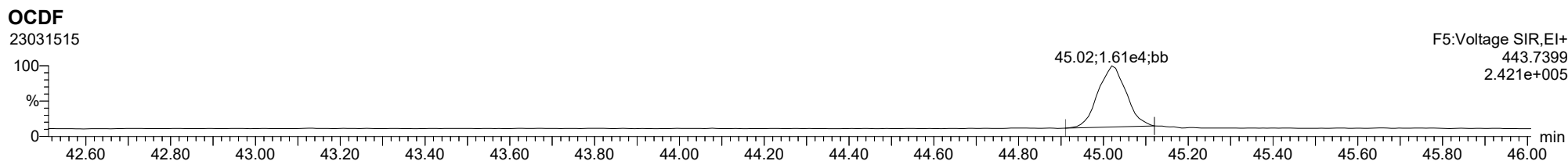
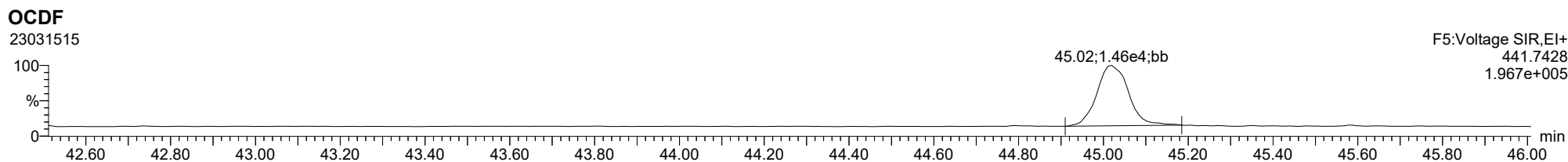


**FUNCTION5 PFK**

23031515

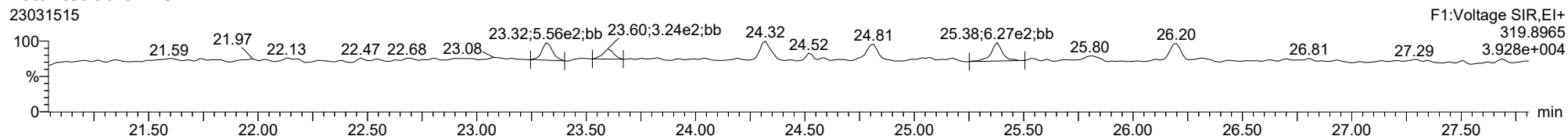


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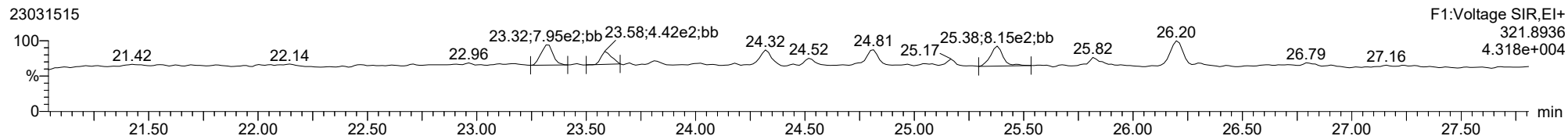


ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

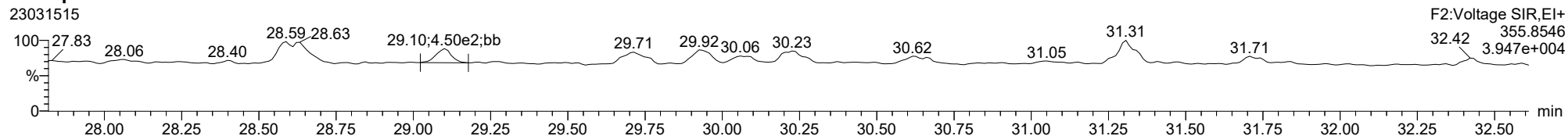
**Total-tetradioxins**



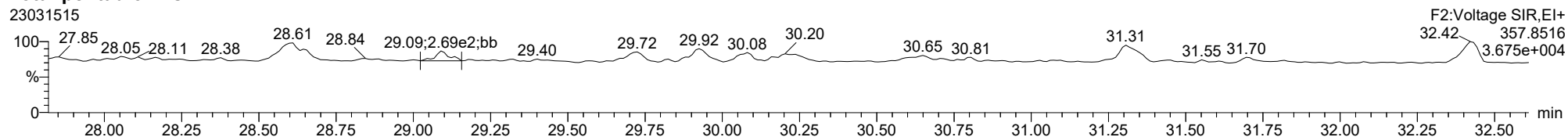
**Total-tetradioxins**



**Total-pentadioxins**



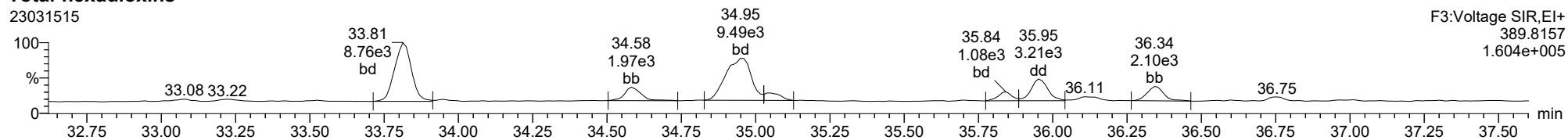
**Total-pentadioxins**



ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

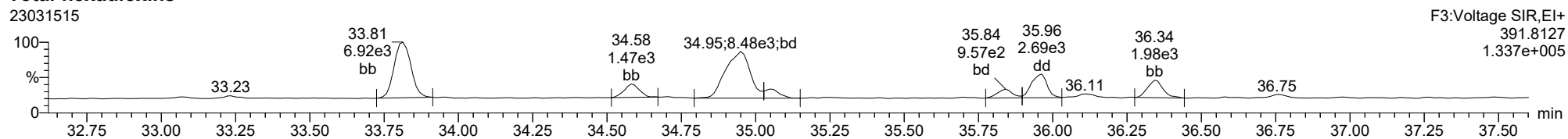
### Total-hexadioxins

23031515



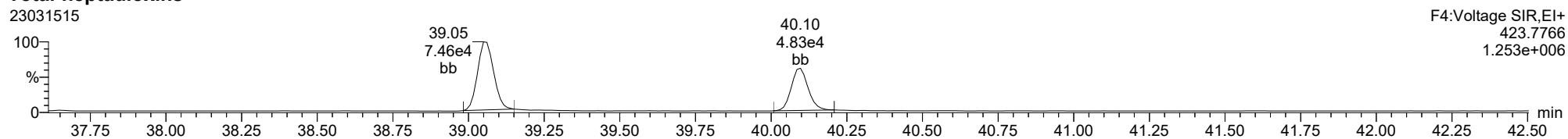
### Total-hexadioxins

23031515



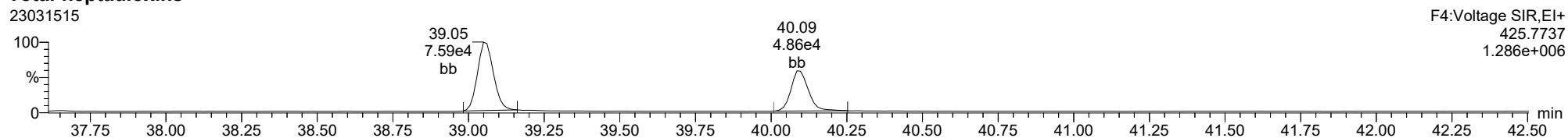
### Total-heptadioxins

23031515



### Total-heptadioxins

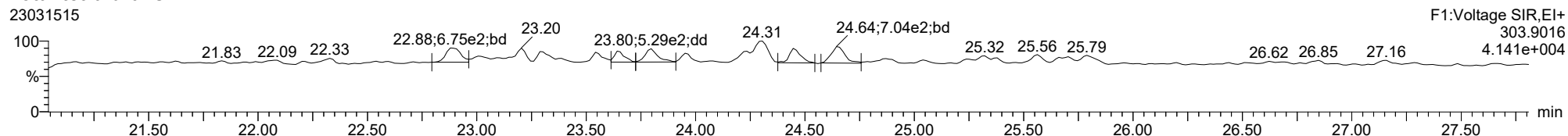
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ID: BLC0136-SRM1, Name: 23031515, Date: 15-Mar-2023, Time: 22:00:09, Conditions: AUTOSPEC01, User: pk

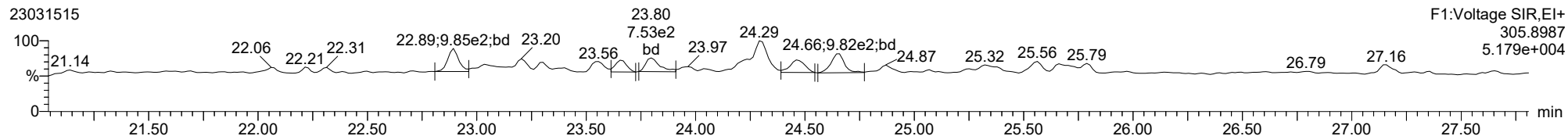
**Total-tetrafurans**

23031515



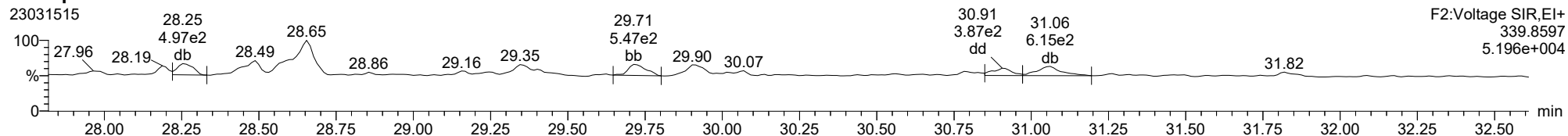
**Total-tetrafurans**

23031515



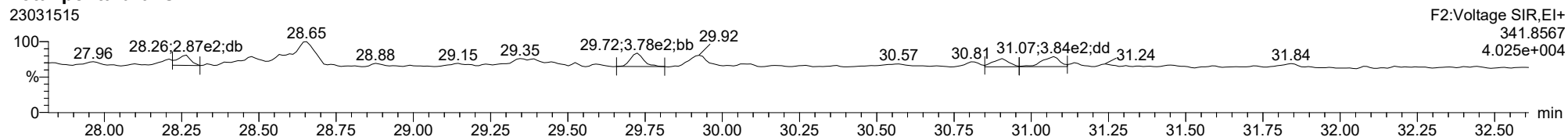
**Total-pentafurans**

23031515



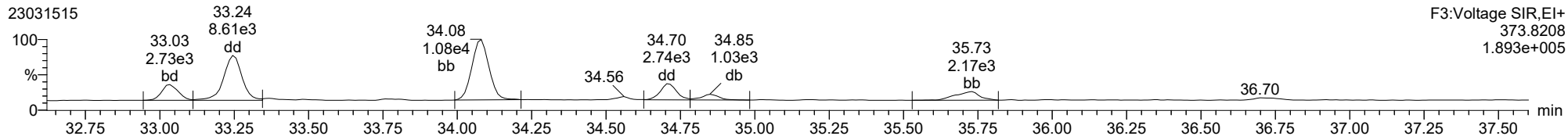
**Total-pentafurans**

23031515

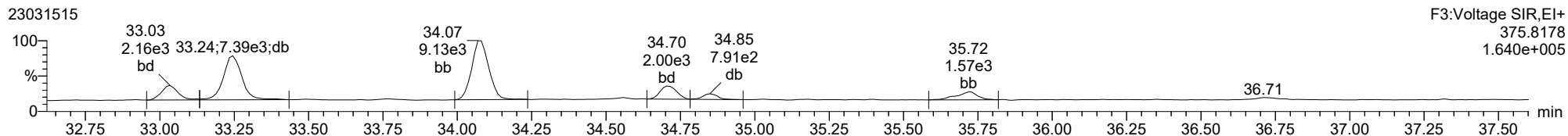


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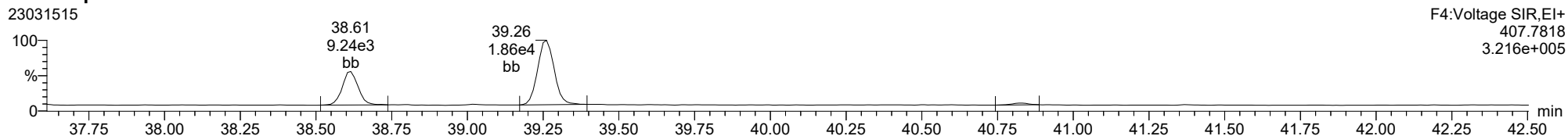
**Total-hexafurans**



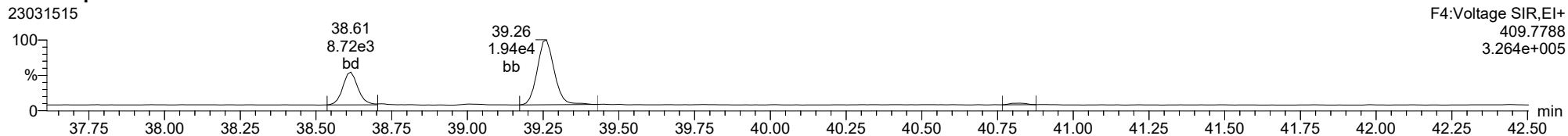
**Total-hexafurans**



**Total-heptafurans**



**Total-heptafurans**





**INITIAL CALIBRATION DATA**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GC00015

Instrument: AUTOSPEC01

Calibration Date: 03/03/2023

Column (1): RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,3,7,8-TCDF			0.5	0.6926363	2	0.6813225	10	0.7107923	40	0.719723	200	0.703162
2,3,7,8-TCDD			0.5	1.116738	2	1.187915	10	1.134128	40	1.147736	200	1.156792
1,2,3,7,8-PeCDF	0.5	0.7064839	2.5	0.5889757	10	0.710829	50	0.6668491	200	0.6891968	1000	0.7130453
2,3,4,7,8-PeCDF	0.5	0.7979673	2.5	0.750268	10	0.8092124	50	0.7777683	200	0.7907891	1000	0.7910175
1,2,3,7,8-PeCDD	0.5	1.103364	2.5	0.959607	10	1.01992	50	1.019473	200	1.01999	1000	1.008719
1,2,3,4,7,8-HxCDF	0.5	1.217557	2.5	1.181192	10	1.149885	50	1.142227	200	1.15269	1000	1.152678
1,2,3,6,7,8-HxCDF	0.5	1.080855	2.5	1.053928	10	1.175308	50	1.102076	200	1.035098	1000	1.097184
2,3,4,6,7,8-HxCDF	0.5	1.045907	2.5	1.140857	10	1.199347	50	1.11691	200	1.197861	1000	1.13731
1,2,3,7,8,9-HxCDF	0.5	1.190403	2.5	1.119796	10	1.130872	50	1.147742	200	1.139146	1000	1.094601
1,2,3,4,7,8-HxCDD	0.5	1.079554	2.5	0.961704	10	0.973768	50	0.967789	200	0.9862736	1000	1.004325
1,2,3,6,7,8-HxCDD	0.5	0.9586431	2.5	0.9983677	10	0.9838912	50	1.030566	200	1.022077	1000	1.012084
1,2,3,7,8,9-HxCDD	0.5	0.930997	2.5	0.8854269	10	0.8092562	50	0.9267543	200	0.9251392	1000	0.9651099
1,2,3,4,6,7,8-HpCDF	0.5	0.934103	2.5	1.075239	10	1.011687	50	0.9661089	200	1.026311	1000	1.004508
1,2,3,4,7,8,9-HpCDF	0.5	0.8861422	2.5	0.8930411	10	1.006144	50	0.9387033	200	0.9934576	1000	1.001203
1,2,3,4,6,7,8-HpCDD	0.5	1.103772	2.5	0.971421	10	1.040117	50	1.038088	200	1.030577	1000	1.050103
OCDF	1	0.8118871	5	0.7091624	20	0.7657645	100	0.7266152	400	0.8162858	2000	0.8371317
OCDD			5	1.012935	20	0.8906655	100	0.878436	400	0.9061913	2000	0.9115405
13C12-2,3,7,8-TCDF	100	1.631571	100	1.588495	100	1.670669	100	1.492829	100	1.645068	100	1.692541
13C12-2,3,7,8-TCDD	100	1.103543	100	1.165686	100	1.103763	100	1.147762	100	1.181831	100	1.211872
13C12-1,2,3,7,8-PeCDF	100	1.373516	100	0.8861478	100	1.254697	100	1.157546	100	1.425701	100	1.345107
13C12-2,3,4,7,8-PeCDF	100	1.219579	100	0.8983995	100	1.113808	100	0.8611233	100	1.32733	100	1.286474
13C12-1,2,3,7,8-PeCDD	100	0.9177021	100	0.7002528	100	0.8365419	100	0.5962156	100	0.9821822	100	0.939983
13C12-1,2,3,4,7,8-HxCDF	100	1.152029	100	1.095885	100	1.513935	100	1.121285	100	1.094572	100	1.032122
13C12-1,2,3,6,7,8-HxCDF	100	1.353853	100	1.348693	100	1.689158	100	1.367383	100	1.37092	100	1.188788
13C12-2,3,4,6,7,8-HxCDF	100	1.092029	100	1.127896	100	1.240354	100	1.126074	100	1.087409	100	1.101774
13C12-1,2,3,7,8,9-HxCDF	100	0.8958406	100	0.9493947	100	0.9152119	100	0.9630403	100	0.8996667	100	0.9673701
13C12-1,2,3,4,7,8-HxCDD	100	0.9718531	100	0.9656819	100	1.113686	100	0.9864835	100	0.9766715	100	0.95586
13C12-1,2,3,6,7,8-HxCDD	100	1.184228	100	1.157253	100	1.278683	100	1.163318	100	1.111106	100	1.045546



## INITIAL CALIBRATION DATA EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
13C12-1,2,3,4,6,7,8-HpCDF	100	0.7396157	100	0.9023055	100	1.063192	100	0.9589237	100	0.7622694	100	0.9449039
13C12-1,2,3,4,7,8,9-HpCDF	100	0.6488087	100	0.8119515	100	0.8176949	100	0.8667001	100	0.665459	100	0.8078955
13C12-1,2,3,4,6,7,8-HpCDD	100	0.724191	100	0.8737196	100	0.9555336	100	0.9094052	100	0.7229358	100	0.8549505
13C12-OCDD	200	0.701507	200	0.6312376	200	0.823691	200	0.8980531	200	0.7066522	200	0.8436876
37C14-2,3,7,8-TCDD	0.1	1.576039	0.5	1.320077	2	1.177166	10	1.132717	40	1.2366	200	1.284223
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1





**INITIAL CALIBRATION DATA**  
**EPA 1613B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.7015272	2.1			RSD ()	
2,3,7,8-TCDD	1.148662	2.3			RSD ()	
1,2,3,7,8-PeCDF	0.67923	7.0			RSD ()	
2,3,4,7,8-PeCDF	0.7861704	2.6			RSD ()	
1,2,3,7,8-PeCDD	1.021845	4.5			RSD ()	
1,2,3,4,7,8-HxCDF	1.166038	2.4			RSD ()	
1,2,3,6,7,8-HxCDF	1.090741	4.5			RSD ()	
2,3,4,6,7,8-HxCDF	1.139699	5.0			RSD ()	
1,2,3,7,8,9-HxCDF	1.137093	2.8			RSD ()	
1,2,3,4,7,8-HxCDD	0.9955689	4.4			RSD ()	
1,2,3,6,7,8-HxCDD	1.000938	2.7			RSD ()	
1,2,3,7,8,9-HxCDD	0.9071139	6.0			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.002993	4.9			RSD ()	
1,2,3,4,7,8,9-HpCDF	0.9531152	5.8			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.039013	4.1			RSD ()	
OCDF	0.7778078	6.7			RSD ()	
OCDD	0.9199537	5.8			RSD ()	
13C12-2,3,7,8-TCDF	1.620196	4.4			RSD ()	
13C12-2,3,7,8-TCDD	1.152409	3.8			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.240452	15.9			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.117786	17.7			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.8288129	18.3			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.168305	14.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.386466	11.8			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.129256	5.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9317541	3.4			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9950393	5.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	1.156689	6.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	0.8952017	13.8			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.7697516	11.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.8401226	11.5			RSD ()	



**INITIAL CALIBRATION DATA**  
**EPA 1613B**

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.7674714	13.4			RSD ()	
37C14-2,3,7,8-TCDD	1.287804	12.2			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	



ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01      HRGCMS Column ID: K2310  
Calibration ID: GC00015      Tune File: FEB0923\_1-5  
EM Voltage: 350      Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Dataset: T:\Autospec\Processed Data Batch\2303031CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 10:58:44 Pacific Standard Time

3/6/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030304, Compound:TD, RT:26.410	1
Peak deleted	Sample:23030304, Compound:OD, RT:44.990	1
Peak deleted	Sample:23030304, Compound:TF, RT:25.774	1
Pre modification peak	Sample:23030305, Compound:TF, RT:25.774	2
Peak modified	Sample:23030305, Compound:TF, RT:25.774	2
Pre modification peak	Sample:23030304, Compound:HPD, RT:40.261	1
Peak modified	Sample:23030304, Compound:HPD, RT:40.261	1
Peak deleted	Sample:23030308, Compound:PF, RT:32.328	5
Peak deleted	Sample:23030309, Compound:PF, RT:32.307	6
Peak deleted	Sample:23030309, Compound:HF, RT:33.220	6
Peak deleted	Sample:23030309, Compound:TD, RT:27.017	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.995	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.917	6
Peak deleted	Sample:23030308, Compound:HD, RT:34.000	5
Peak deleted	Sample:23030308, Compound:HPD, RT:39.225	5
Peak deleted	Sample:23030309, Compound:HPD, RT:39.214	6
Pre modification peak	Sample:23030305, Compound:OF, RT:45.237	2
Peak modified	Sample:23030305, Compound:OF, RT:45.237	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\2303031CIH.qld'	

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
 Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	4.469e4	5.839e4	0.702	0.765	0.770	894	1638	6.87e5	9.09e5	769.3	554.8	NO	bb	bb	9.550
12378-PeCDF	29.956	1.001	2.355e5	1.540e5	0.679	1.529	1.550	2187	1572	3.61e6	2.40e6	1652.4	1526.9	NO	bb	bb	49.641
23478-PeCDF	31.293	1.001	2.214e5	1.482e5	0.786	1.494	1.550	2187	1572	3.41e6	2.30e6	1560.8	1464.8	NO	bb	bb	47.528
123478-HxCDF	34.914	1.001	2.600e5	2.102e5	1.166	1.237	1.240	1592	1910	4.13e6	3.31e6	2594.2	1730.9	NO	bd	bd	47.118
234678-HxCDF	35.917	1.001	2.733e5	2.175e5	1.140	1.257	1.240	1592	1910	4.33e6	3.47e6	2719.2	1818.9	NO	bb	bb	49.341
123678-HxCDF	35.048	1.000	2.727e5	2.151e5	1.091	1.268	1.240	1592	1910	4.23e6	3.33e6	2659.9	1743.3	NO	db	db	49.569
123789-HxCDF	36.941	1.000	2.420e5	1.912e5	1.137	1.266	1.240	1592	1910	3.95e6	3.13e6	2482.2	1637.3	NO	bb	bb	46.959
1234678-HpCDF	38.780	1.000	1.767e5	1.776e5	1.003	0.995	1.050	1849	2300	2.99e6	3.02e6	1618.0	1311.0	NO	bb	bb	47.490
1234789-HpCDF	41.019	1.000	1.595e5	1.575e5	0.953	1.013	1.050	1849	2300	2.36e6	2.33e6	1274.2	1012.6	NO	bb	bb	50.221
OCDF	45.246	1.005	2.326e5	2.612e5	0.778	0.891	0.890	910	1225	2.82e6	3.14e6	3100.2	2559.9	NO	bb	bb	88.591
2378-TCDD	26.438	1.001	5.709e4	7.150e4	1.149	0.798	0.770	1506	757	9.09e5	1.12e6	603.1	1485.0	NO	bb	bb	9.450
12378-PeCDD	31.549	1.001	2.156e5	1.424e5	1.022	1.514	1.550	2044	1419	3.32e6	2.17e6	1626.0	1530.4	NO	bb	bb	49.654
123478-HxCDD	36.028	1.000	2.225e5	1.815e5	0.996	1.226	1.240	1845	1377	3.65e6	2.93e6	1979.4	2130.4	NO	bd	bd	50.053
123678-HxCDD	36.150	1.000	2.361e5	1.995e5	1.001	1.184	1.240	1845	1377	3.83e6	3.15e6	2076.5	2285.7	NO	db	db	49.648
123789-HxCDD	36.529	1.011	2.267e5	1.883e5	0.907	1.204	1.240	1845	1377	3.65e6	3.02e6	1979.8	2191.3	NO	bb	bb	54.229
1234678-HpCDD	40.284	1.001	1.918e5	1.891e5	1.039	1.015	1.050	2026	1655	2.99e6	2.92e6	1477.4	1764.9	NO	bb	bb	47.619
OCDD	45.008	1.000	3.015e5	3.475e5	0.920	0.868	0.890	1418	1100	3.70e6	4.29e6	2606.9	3904.9	NO	bb	bb	98.432
13C-2378-TCDF	25.774	1.007	6.611e5	8.775e5	1.620	0.753	0.770	2458	1918	1.00e7	1.34e7	4080.0	6997.2	NO	bb	bb	94.015
13C-12378-PeCDF	29.934	1.169	6.937e5	4.618e5	1.240	1.502	1.550	2176	1857	1.07e7	7.10e6	4925.2	3826.5	NO	bb	bb	92.213
13C-23478-PeCDF	31.271	1.221	5.928e5	3.963e5	1.118	1.496	1.550	2176	1857	9.20e6	6.25e6	4229.1	3368.5	NO	bb	bb	87.601
13C-123478-HxCDF	34.891	0.955	2.871e5	5.687e5	1.168	0.505	0.510	1657	1593	4.56e6	9.04e6	2750.7	5674.1	NO	bd	bd	84.013
13C-123678-HxCDF	35.036	0.959	3.069e5	5.954e5	1.386	0.515	0.510	1657	1593	4.75e6	9.14e6	2868.0	5738.5	NO	db	db	74.642
13C-234678-HxCDF	35.894	0.983	2.954e5	5.775e5	1.129	0.512	0.510	1657	1593	4.85e6	9.48e6	2926.1	5951.0	NO	bb	bb	88.651
13C-123789-HxCDF	36.930	1.011	2.724e5	5.390e5	0.932	0.505	0.510	1657	1593	4.39e6	8.57e6	2648.2	5379.8	NO	bb	bb	99.871
13C-1234678-HpCDF	38.769	1.062	2.262e5	5.177e5	0.895	0.437	0.440	2036	2545	3.83e6	8.70e6	1881.8	3416.5	NO	bb	bb	95.295
13C-1234789-HpCDF	41.008	1.123	1.995e5	4.627e5	0.770	0.431	0.440	2036	2545	2.95e6	6.70e6	1450.8	2632.3	NO	bb	bb	98.667
13C-1234-TCDD	25.605	0.000	4.500e5	5.601e5	1.000	0.803	0.770	1910	1117	7.08e6	8.81e6	3705.2	7891.1	NO	bb	bb	100.000
13C-2378-TCDD	26.424	1.032	5.241e5	6.605e5	1.152	0.794	0.770	1910	1117	7.92e6	9.96e6	4144.8	8917.7	NO	bb	bb	101.762
13C-12378-PeCDD	31.527	1.231	4.348e5	2.708e5	0.829	1.606	1.550	951	872	6.72e6	4.16e6	7062.4	4771.1	NO	bb	bb	84.283
13C-123478-HxCDD	36.017	0.986	4.575e5	3.533e5	0.995	1.295	1.240	1714	1036	7.67e6	5.90e6	4475.1	5696.2	NO	bd	bd	93.458
13C-123678-HxCDD	36.139	0.990	4.929e5	3.835e5	1.157	1.285	1.240	1714	1036	7.72e6	6.07e6	4504.9	5859.4	NO	db	db	86.905
13C-1234678-HpCDD	40.262	1.103	3.870e5	3.828e5	0.840	1.011	1.050	1736	1260	5.92e6	5.62e6	3411.3	4462.2	NO	bb	bb	105.085
13C-OCDD	44.999	1.232	6.781e5	7.554e5	0.767	0.898	0.890	1440	1232	8.22e6	9.13e6	5710.3	7413.0	NO	bb	bb	214.218
13C-123789-HxCDD	36.518	0.000	4.889e5	3.830e5	1.000	1.277	1.240	1714	1036	7.91e6	6.13e6	4618.2	5918.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.438	1.033	1.177e5		1.288			2053		1.80e6		877.6			bb		9.046

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
 Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.285	0.865	4.825e4	6.619e4	0.802	0.729	0.770	894	1638	7.69e5	1.08e6	860.8	657.5	NO	bb	bb	9.280
1289-TCDF	27.286	1.059	4.233e4	5.922e4	0.678	0.715	0.770	894	1638	6.48e5	8.96e5	725.0	547.0	NO	db	db	9.735
13468-PECDF	27.145	0.907	4.529e5	2.964e5	1.246	1.528	1.550	639	866	7.07e6	4.64e6	11052.6	5356.5	NO	bb	bb	52.031
12389-PECDF	32.329	1.080	1.727e5	1.137e5	0.496	1.519	1.550	2187	1572	2.66e6	1.70e6	1217.2	1080.5	NO	bb	bb	49.938
123468-HXCDF	33.243	0.953	2.450e5	1.964e5	1.169	1.248	1.240	1592	1910	3.71e6	2.99e6	2333.1	1567.3	NO	bb	bb	44.113
1368-TCDD	23.571	0.892	5.082e4	6.674e4	1.015	0.761	0.770	1506	757	8.30e5	1.09e6	551.2	1438.0	NO	bb	bb	9.774
1289-TCDD	27.031	1.023	4.817e4	6.482e4	0.909	0.743	0.770	1506	757	7.39e5	9.76e5	490.7	1289.2	NO	bb	bb	10.496
12479-PECDD	28.831	0.914	4.117e5	2.743e5	2.301	1.501	1.550	2044	1419	3.99e6	2.64e6	1950.7	1862.6	NO	bb	bb	42.238
12389-PECDD	31.939	1.013	2.280e5	1.502e5	1.184	1.518	1.550	2044	1419	3.50e6	2.32e6	1711.4	1633.6	NO	bb	bb	45.288
124679-HXCDD	34.022	0.945	2.111e5	1.738e5	1.115	1.214	1.240	1845	1377	3.36e6	2.72e6	1819.4	1971.8	NO	bb	bb	42.563
1234679-HPCDD	39.236	0.975	2.063e5	2.043e5	1.137	1.010	1.050	2026	1655	3.38e6	3.38e6	1668.0	2041.4	NO	bb	bb	46.924
Total-tetrafurans			1.368e5		0.727			894		2.13e6							28.888
Total-penta1			4.529e5					639		7.07e6							52.031
Total-pentafurans			6.685e5		0.654			2187		1.03e7							156.333
Total-hexafurans			1.293e6		1.141			1592		2.04e7							237.100
Total-heptafurans			3.381e5		0.978			1849		5.38e6							98.217
Total-Furans			3.122e6		0.922			894		4.80e7							661.160
Total-tetradoxins			2.626e5		1.024			1506		3.74e6							49.711
Total-pentadoxins			8.563e5		1.502			2044		1.08e7							137.339
Total-hexadoxins			8.975e5		1.005			1845		1.45e7							196.701
Total-heptadoxins			3.982e5		1.088			2026		6.38e6							94.566
Total-Dioxins			2.716e6		1.130			1506		3.92e7							576.750
Total-TEQ			5.838e6					1506		8.72e7							1237.909
FUNCTION1 PFK			0.000e0					705807		0.00e0							
FUNCTION2 PFK			1.098e6					272509		2.65e6							0.000
FUNCTION3 PFK			8.030e5					419872		3.44e6							0.000
FUNCTION4 PFK			2.346e5					346452		6.90e6							
FUNCTION5 PFK			5.429e4					176842		2.44e6							
FUNCTION1 HXCD...			8.708e2					511		1.38e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.374e3					1181		2.70e4							0.000
FUNCTION3 OCDPE			4.232e2					570		6.10e3							0.000
FUNCTION4 NCDPE			7.938e2					683		4.57e3							0.000
FUNCTION5 DCDPE			0.000e0					526		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
 Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDFF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
2	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
3	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
4	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
2	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
3	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
4	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
5	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
2	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
3	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
4	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
5	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280
7	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
8	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
9	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
10	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528
11	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
12	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
13	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
14	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
15	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113
16	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
17	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
18	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
19	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
20	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490
21	OCDF	45.25	2.326e5	2.612e5	0.778	0.89	0.89	3100.2	YES	NO	bb	bb	88.591
22	13468-PECDF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031



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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
2	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
3	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
4	Total-tetradoxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
5	Total-tetradoxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
2	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
3	Total-pentadoxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
4	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
2	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
3	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
4	Total-hexadoxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
5	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924
2	Total-heptadoxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
3	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
2	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
3	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
4	Total-tetradoxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
5	Total-tetradoxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660
6	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
7	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
8	Total-pentadoxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
9	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238
10	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
11	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
12	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
13	Total-hexadoxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
14	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563
15	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924
16	Total-heptadoxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
17	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619
18	OCDD	45.01	3.015e5	3.475e5	0.920	0.87	0.89	2606.9	YES	NO	bb	bb	98.432

## Quantify Totals Report MassLynx V4.1 SCN909

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## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280
7	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
8	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
9	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
10	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528
11	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
12	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
13	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
14	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
15	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113
16	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
17	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
18	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
19	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
20	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490
21	OCDF	45.25	2.326e5	2.612e5	0.778	0.89	0.89	3100.2	YES	NO	bb	bb	88.591
22	13468-PECDF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031
23	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
24	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
25	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
26	Total-tetradioxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
27	Total-tetradioxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660
28	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
29	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
30	Total-pentadioxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
31	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238
32	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
33	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
34	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
35	Total-hexadioxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
36	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563
37	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
 Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

**ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk**

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-heptadioxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
39	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619
40	OCDD	45.01	3.015e5	3.475e5	0.920	0.87	0.89	2606.9	YES	NO	bb	bb	98.432

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.96	1.058e5					1.1	NO		bb		0.000
2	FUNCTION2 PFK	30.15	5.471e5					3.7	YES		bb		0.000
3	FUNCTION2 PFK	28.28	4.455e5					4.9	YES		bb		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.89	2.667e5					4.7	YES		bb		0.000
2	FUNCTION3 PFK	33.03	5.362e5					3.5	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
 Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
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**ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk**

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	4.905e4					2.0	NO		db		
2	FUNCTION4 PFK	37.96	1.071e4					1.3	NO		bd		
3	FUNCTION4 PFK	37.89	4.848e3					0.7	NO		bb		
4	FUNCTION4 PFK	42.18	1.359e4					1.2	NO		bb		
5	FUNCTION4 PFK	41.91	8.056e3					0.9	NO		db		
6	FUNCTION4 PFK	41.83	2.292e4					1.6	NO		bd		
7	FUNCTION4 PFK	41.77	1.673e4					1.5	NO		bb		
8	FUNCTION4 PFK	41.48	1.418e4					1.4	NO		bb		
9	FUNCTION4 PFK	41.32	2.104e3					0.5	NO		bb		
10	FUNCTION4 PFK	41.13	8.695e3					1.0	NO		bb		
11	FUNCTION4 PFK	40.63	8.163e3					0.8	NO		bb		
12	FUNCTION4 PFK	40.08	1.008e4					1.1	NO		db		
13	FUNCTION4 PFK	40.04	1.572e4					1.4	NO		bd		
14	FUNCTION4 PFK	39.51	7.181e3					1.0	NO		bb		
15	FUNCTION4 PFK	39.44	5.021e3					0.7	NO		bb		
16	FUNCTION4 PFK	38.96	9.511e3					1.3	NO		db		
17	FUNCTION4 PFK	38.92	2.806e4					1.5	NO		bd		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.57	1.411e3					0.9	NO		bb		
2	FUNCTION5 PFK	45.95	2.307e4					3.9	YES		bb		
3	FUNCTION5 PFK	45.69	1.018e3					0.6	NO		bb		
4	FUNCTION5 PFK	45.54	1.146e3					0.7	NO		bb		
5	FUNCTION5 PFK	45.12	9.805e3					2.3	NO		bb		
6	FUNCTION5 PFK	44.83	5.276e3					1.3	NO		bb		
7	FUNCTION5 PFK	44.58	5.554e3					1.4	NO		bb		
8	FUNCTION5 PFK	44.38	2.760e3					0.9	NO		db		
9	FUNCTION5 PFK	44.35	3.252e3					1.1	NO		bd		
10	FUNCTION5 PFK	42.99	9.959e2					0.6	NO		bb		

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.01	7.970e1					3.2	YES		bb		0.000
2	FUNCTION1 HXCD...	23.47	8.919e1					3.0	YES		db		0.000
3	FUNCTION1 HXCD...	23.40	8.065e1					2.9	NO		dd		0.000
4	FUNCTION1 HXCD...	23.32	1.305e2					3.4	YES		dd		0.000
5	FUNCTION1 HXCD...	23.22	1.146e2					2.8	NO		bd		0.000
6	FUNCTION1 HXCD...	22.41	7.936e1					4.3	YES		bb		0.000
7	FUNCTION1 HXCD...	27.40	7.698e1					2.2	NO		bb		0.000
8	FUNCTION1 HXCD...	27.14	1.376e2					3.3	YES		bb		0.000
9	FUNCTION1 HXCD...	25.79	8.222e1					1.9	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.53	2.999e2					2.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.17	3.219e2					4.5	YES		bb		0.000
3	FUNCTION2 HPCD...	29.58	8.369e1					1.2	NO		db		0.000
4	FUNCTION2 HPCD...	29.50	8.185e1					1.4	NO		bd		0.000
5	FUNCTION2 HPCD...	29.43	9.066e1					2.2	NO		bb		0.000
6	FUNCTION2 HPCD...	28.26	1.049e2					2.5	NO		db		0.000
7	FUNCTION2 HPCD...	28.22	1.658e2					2.8	NO		bd		0.000
8	FUNCTION2 HPCD...	28.15	1.360e2					3.3	YES		db		0.000
9	FUNCTION2 HPCD...	28.11	8.921e1					2.1	NO		bd		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.53	2.562e2					6.2	YES		bb		0.000
2	FUNCTION3 OCDPE	36.14	1.671e2					4.5	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld  
Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time  
Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	8.282e1					2.4	NO		bb		0.000
2	FUNCTION4 NCDPE	38.07	5.777e2					4.3	YES		bb		0.000
3	FUNCTION4 NCDPE	37.82	1.333e2					0.0	NO		bb		0.000

**ETHERS6**

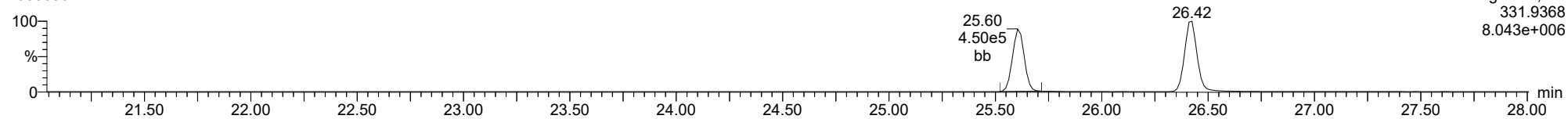
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** CS3W1, **Name:** 23030302, **Date:** 03-Mar-2023, **Time:** 09:51:40, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234-TCDD**

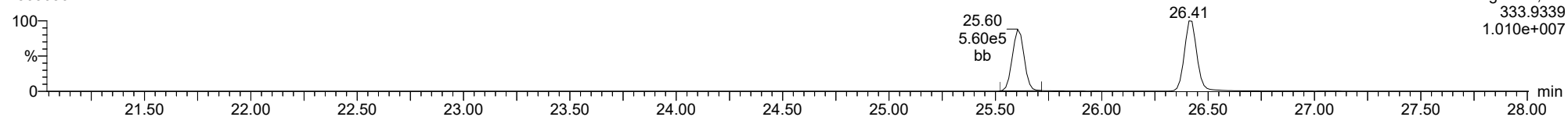
23030302



F1:Voltage SIR,El+  
331.9368  
8.043e+006

**13C-1234-TCDD**

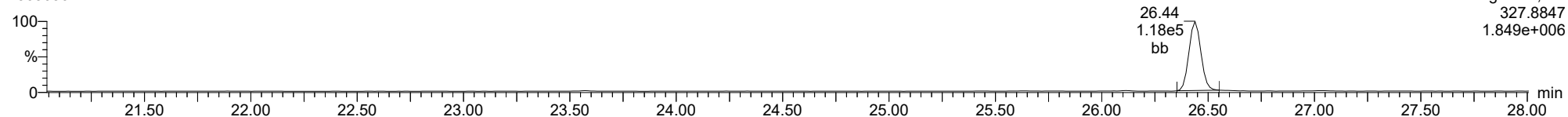
23030302



F1:Voltage SIR,El+  
333.9339  
1.010e+007

**37CL-2378-TCDD**

23030302



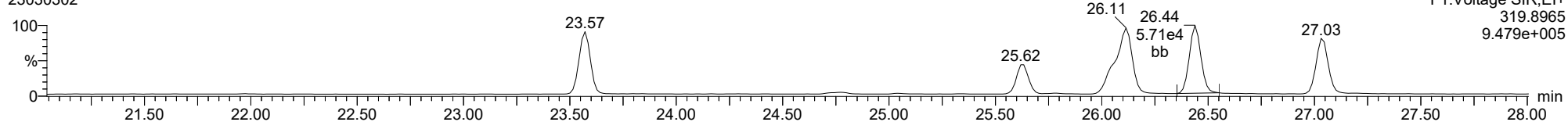
F1:Voltage SIR,El+  
327.8847  
1.849e+006



ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

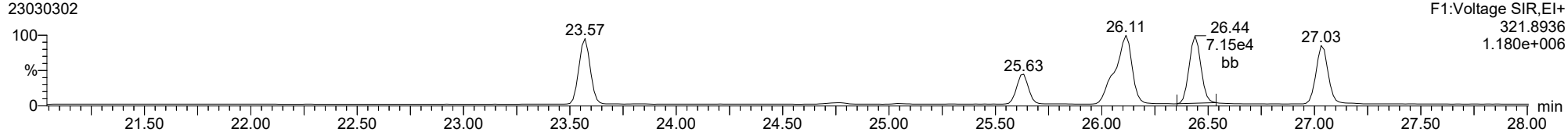
**2378-TCDD**

23030302



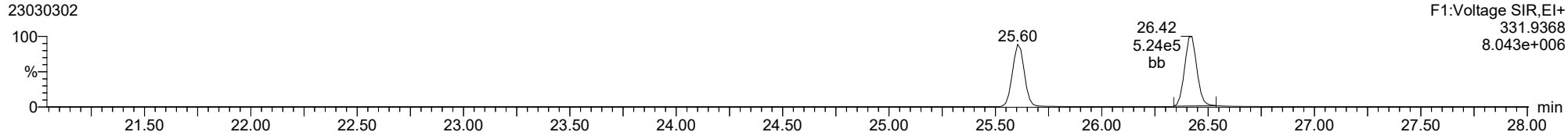
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23030302



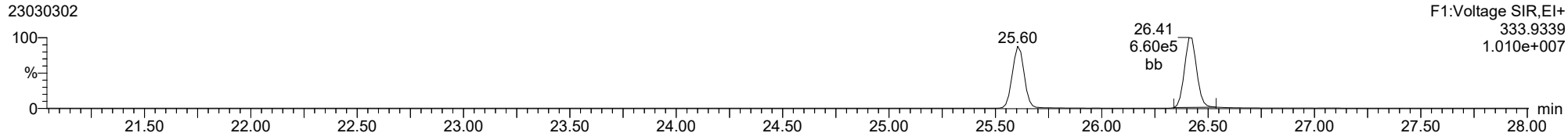
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23030302



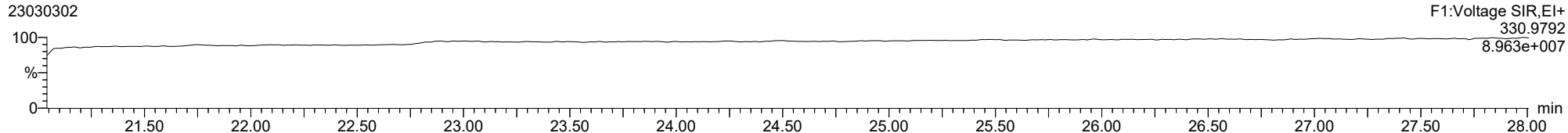
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23030302



**FUNCTION1 PFK**

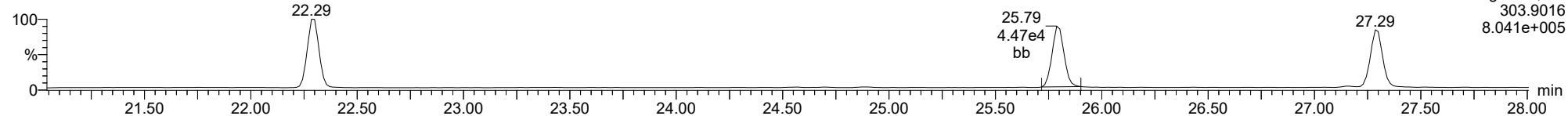
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

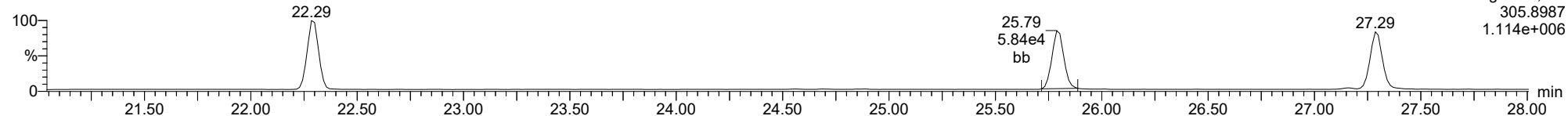
**2378-TCDF**

23030302



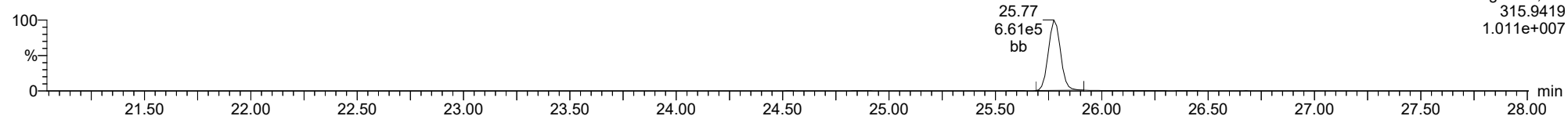
**2378-TCDF**

23030302



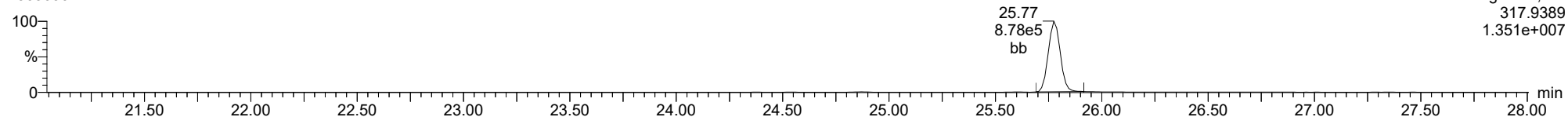
**13C-2378-TCDF**

23030302



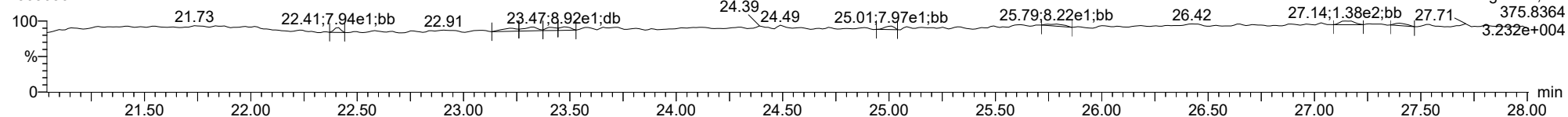
**13C-2378-TCDF**

23030302



**FUNCTION1 HXCDPE**

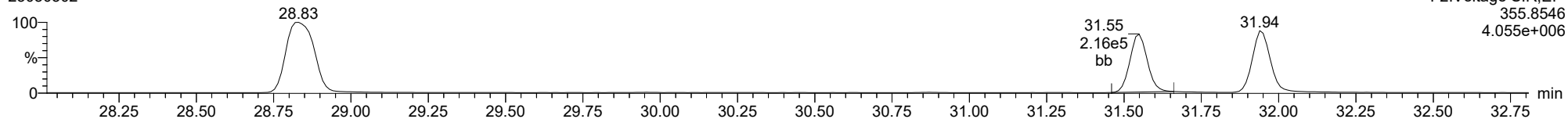
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

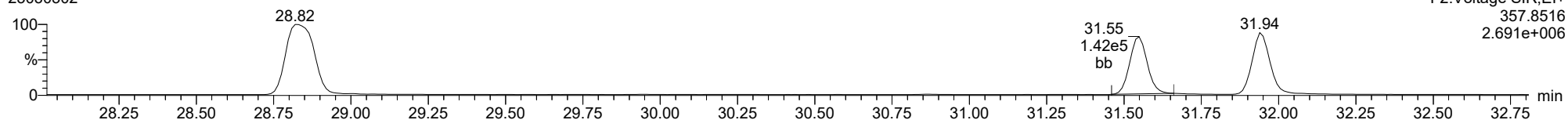
12378-PeCDD

23030302



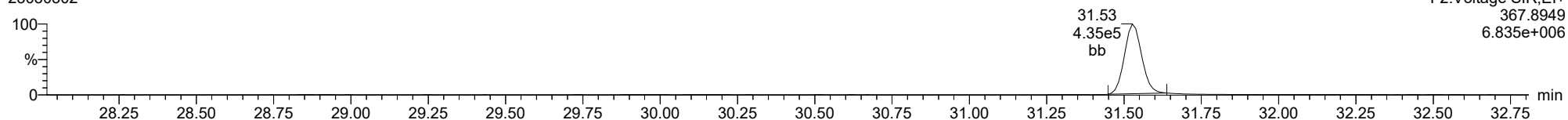
12378-PeCDD

23030302



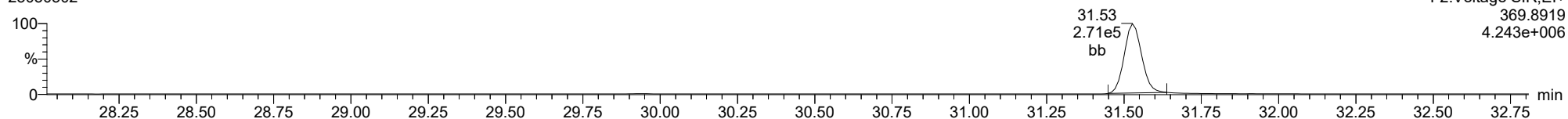
13C-12378-PeCDD

23030302



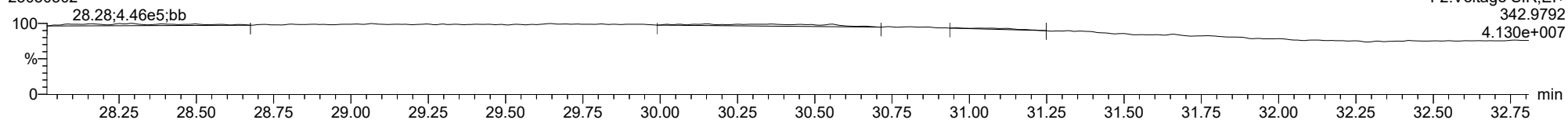
13C-12378-PeCDD

23030302



FUNCTION2 PFK

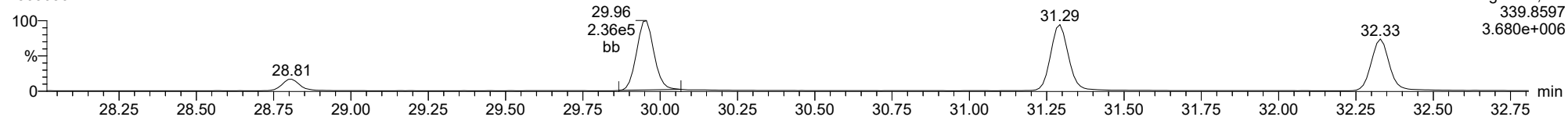
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

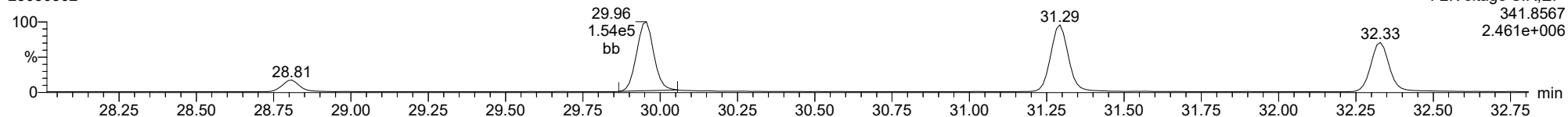
**12378-PeCDF**

23030302



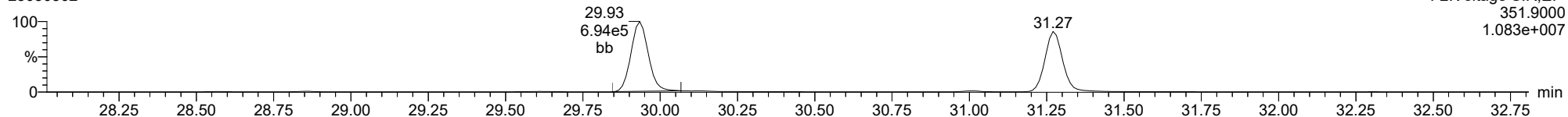
**12378-PeCDF**

23030302



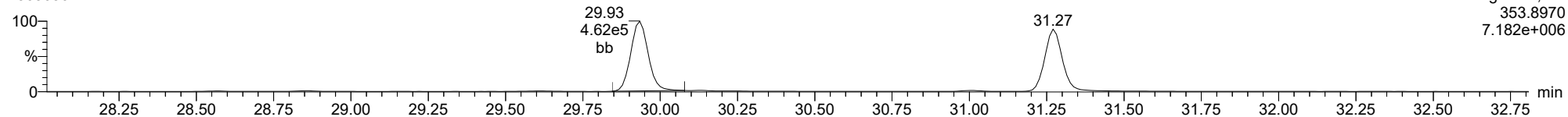
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23030302



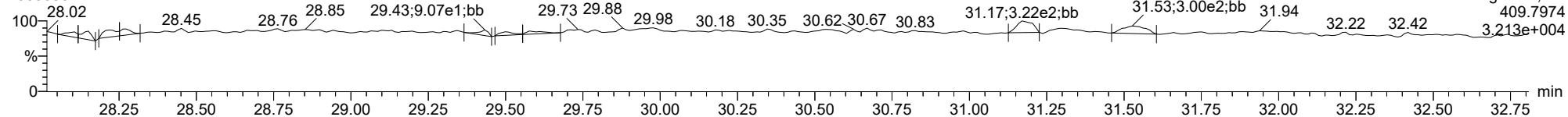
**13C-12378-PeCDF**

23030302



**FUNCTION2 HPCDPE**

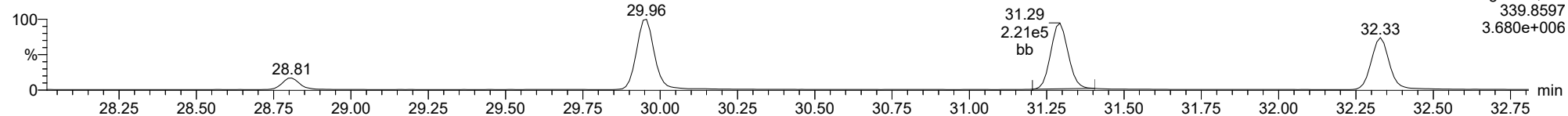
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**23478-PeCDF**

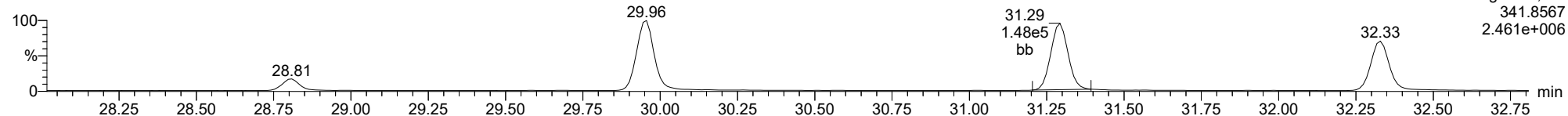
23030302



F2:Voltage SIR,EI+  
339.8597  
3.680e+006

**23478-PeCDF**

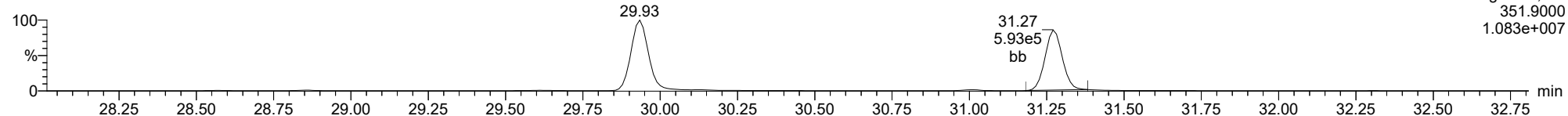
23030302



F2:Voltage SIR,EI+  
341.8567  
2.461e+006

**13C-23478-PeCDF**

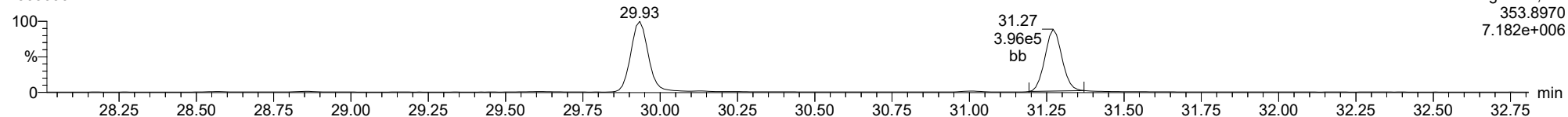
23030302



F2:Voltage SIR,EI+  
351.9000  
1.083e+007

**13C-23478-PeCDF**

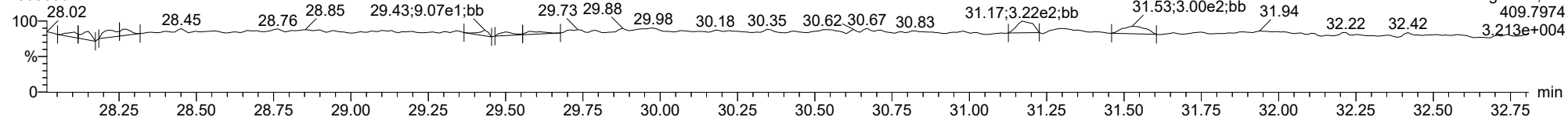
23030302



F2:Voltage SIR,EI+  
353.8970  
7.182e+006

**FUNCTION2 HPCDPE**

23030302

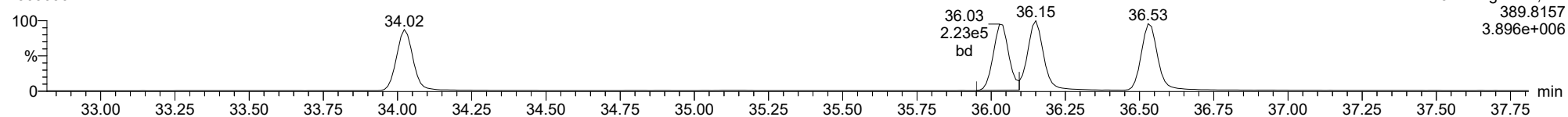


F2:Voltage SIR,EI+  
409.7974  
3.213e+004

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

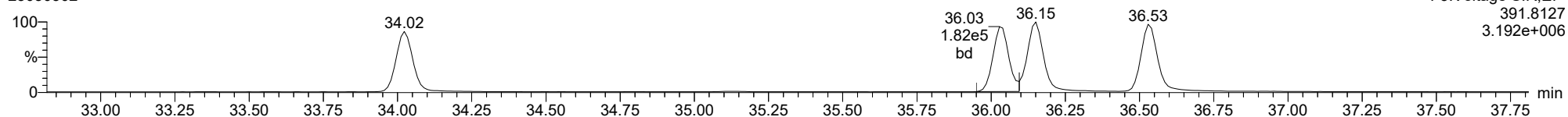
**123478-HxCDD**

23030302



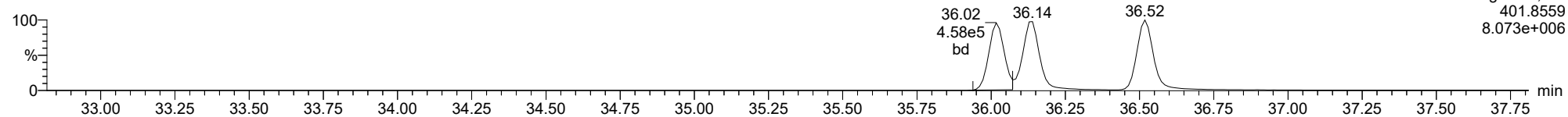
**123478-HxCDD**

23030302



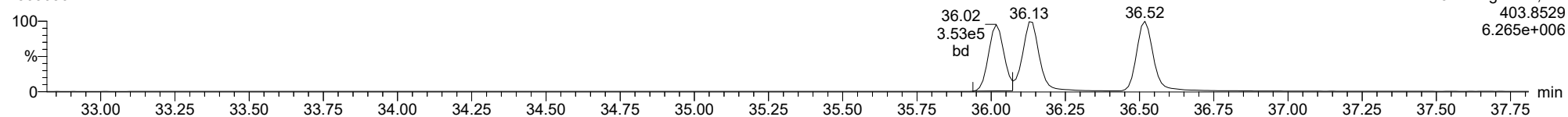
**13C-123478-HxCDD**

23030302



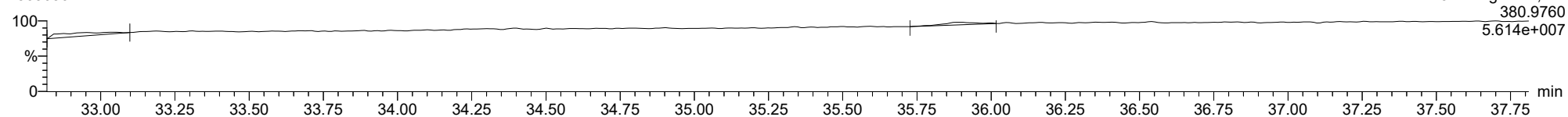
**13C-123478-HxCDD**

23030302



**FUNCTION3 PFK**

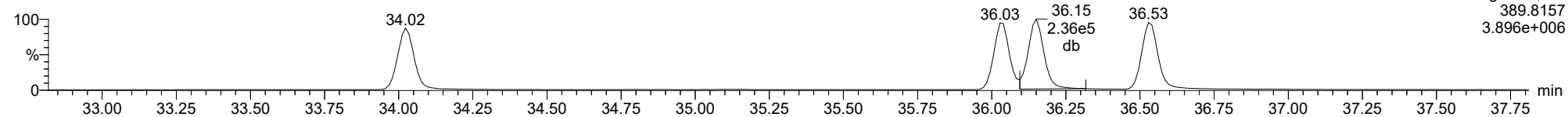
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

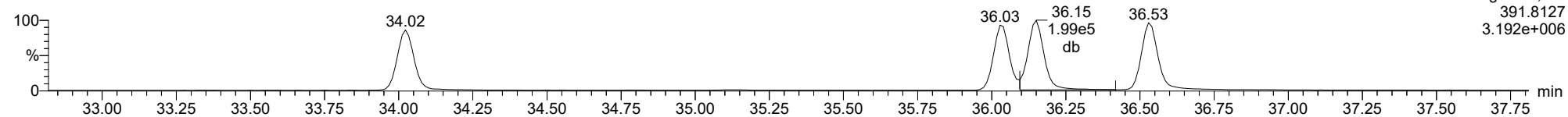
23030302



F3:Voltage SIR,EI+  
389.8157  
3.896e+006

**123678-HxCDD**

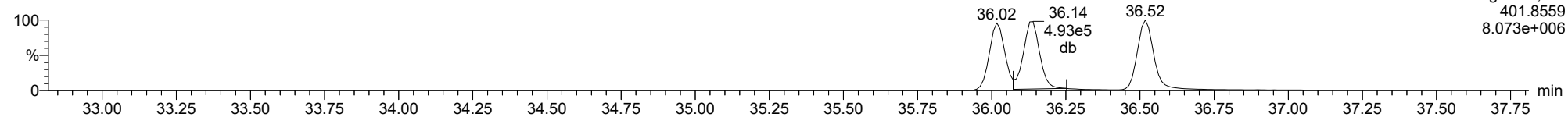
23030302



F3:Voltage SIR,EI+  
391.8127  
3.192e+006

**13C-123678-HxCDD**

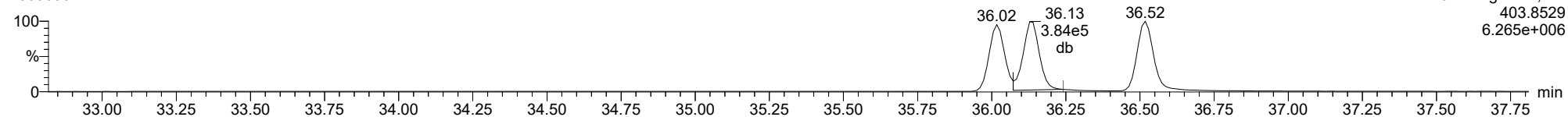
23030302



F3:Voltage SIR,EI+  
401.8559  
8.073e+006

**13C-123678-HxCDD**

23030302

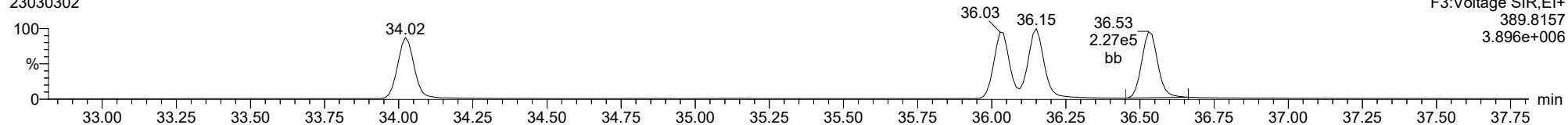


F3:Voltage SIR,EI+  
403.8529  
6.265e+006

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

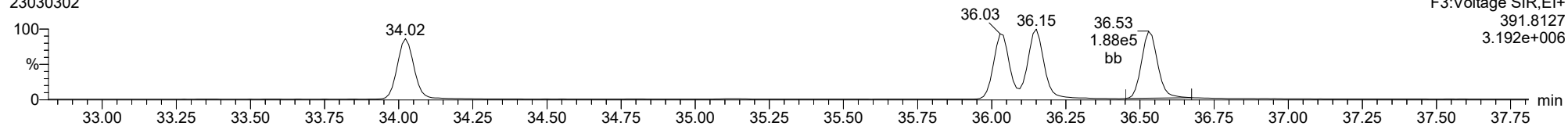
**123789-HxCDD**

23030302



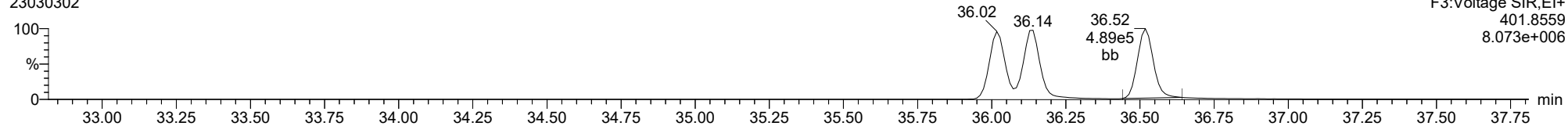
**123789-HxCDD**

23030302



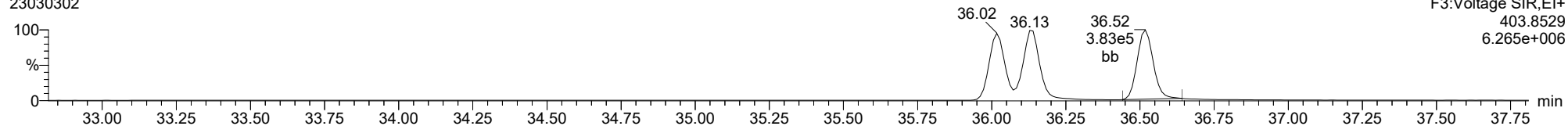
**13C-123789-HxCDD**

23030302



**13C-123789-HxCDD**

23030302

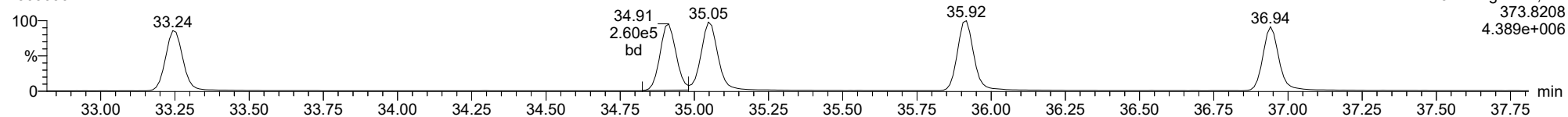




ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

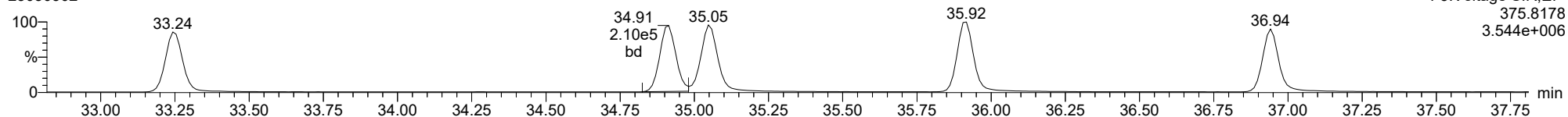
123478-HxCDF

23030302



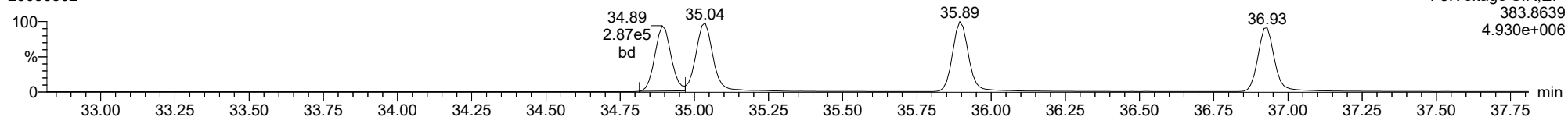
123478-HxCDF

23030302



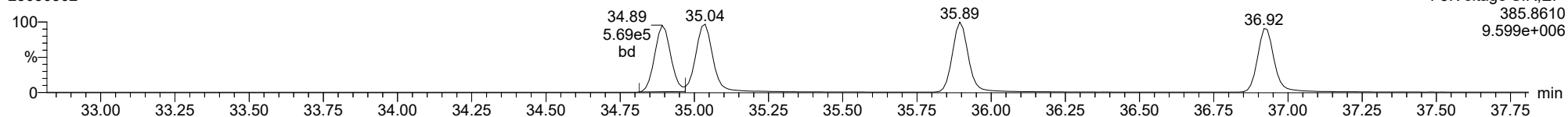
13C-123478-HxCDF

23030302



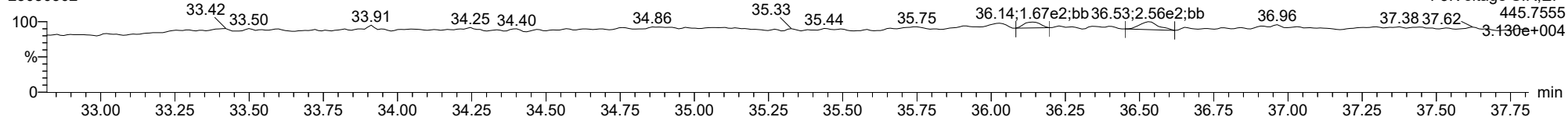
13C-123478-HxCDF

23030302



FUNCTION3 OCDPE

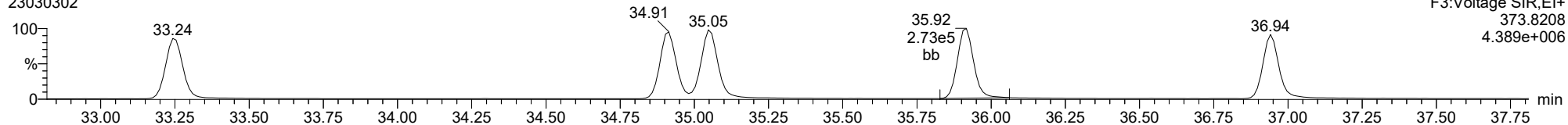
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

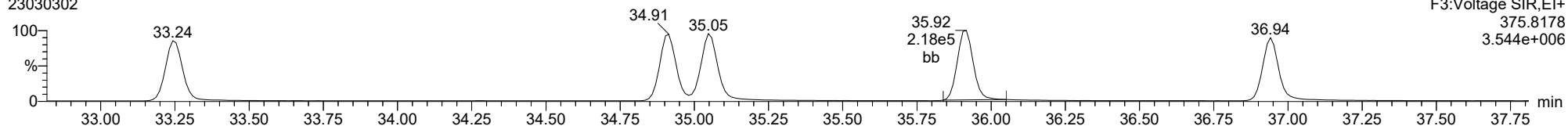
**234678-HxCDF**

23030302



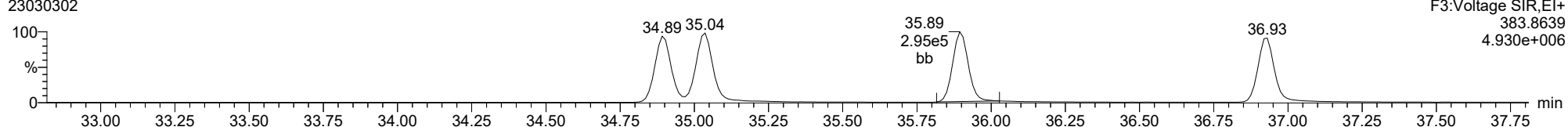
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23030302



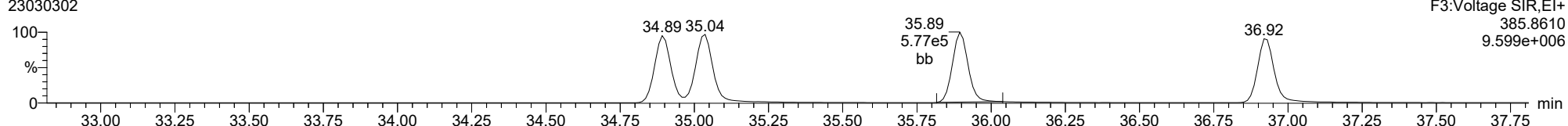
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23030302



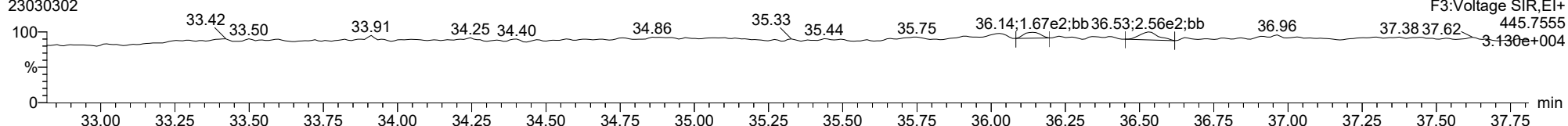
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23030302



**FUNCTION3 OCDPE**

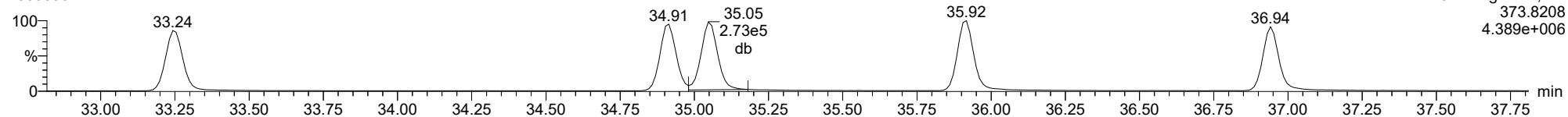
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

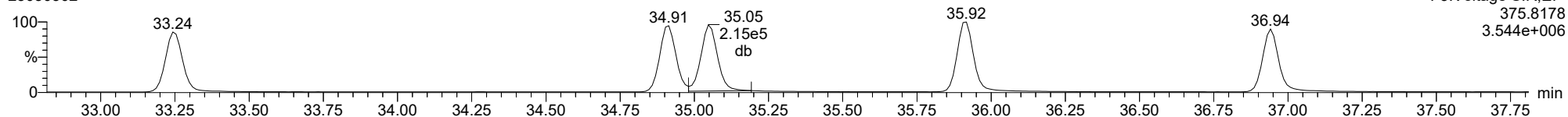
123678-HxCDF

23030302



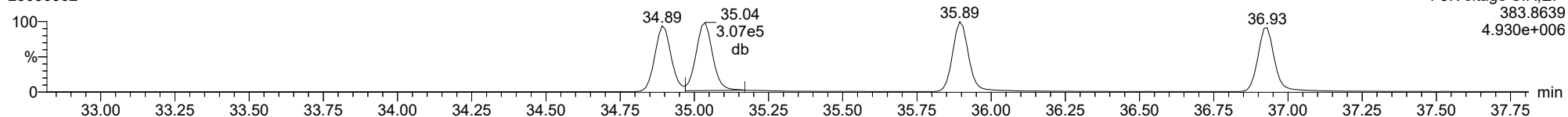
123678-HxCDF

23030302



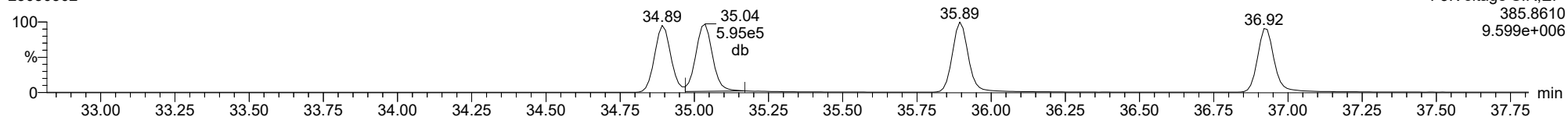
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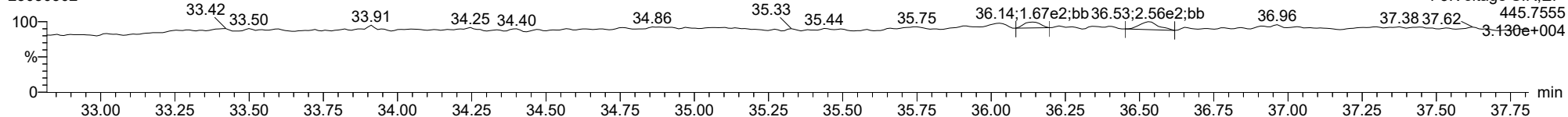
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FUNCTION3 OCDPE

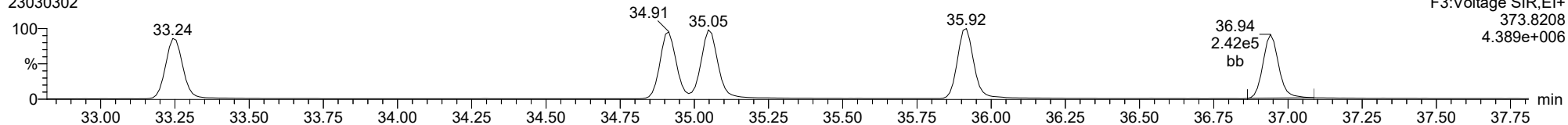
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

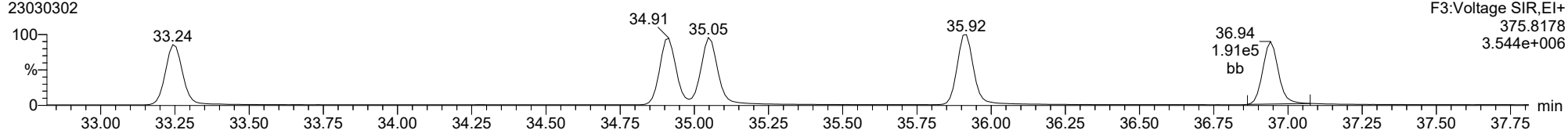
123789-HxCDF

23030302



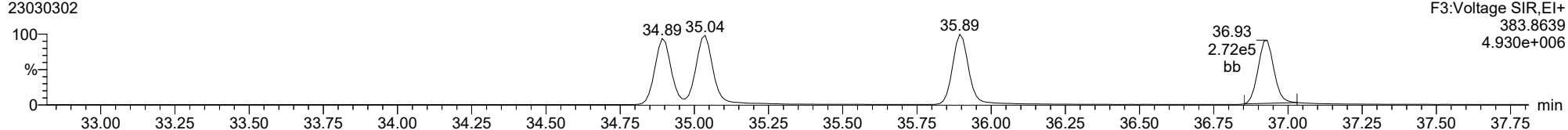
123789-HxCDF

23030302



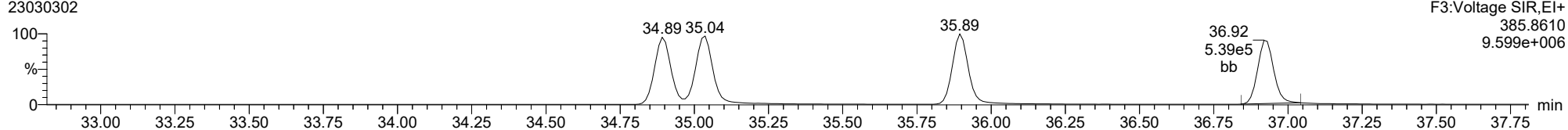
13C-123789-HxCDF

23030302



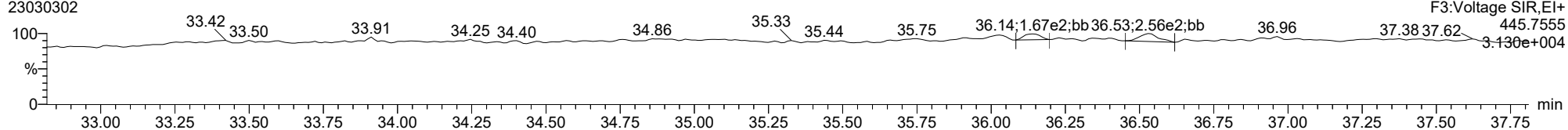
13C-123789-HxCDF

23030302



FUNCTION3 OCDPE

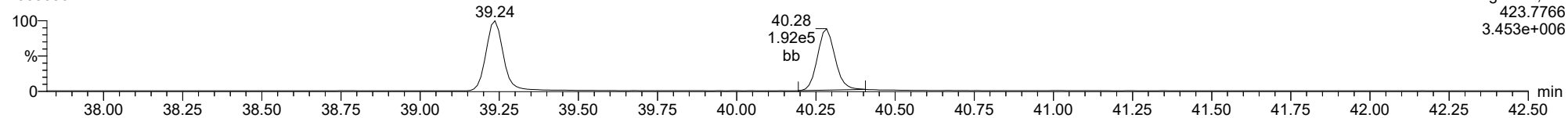
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

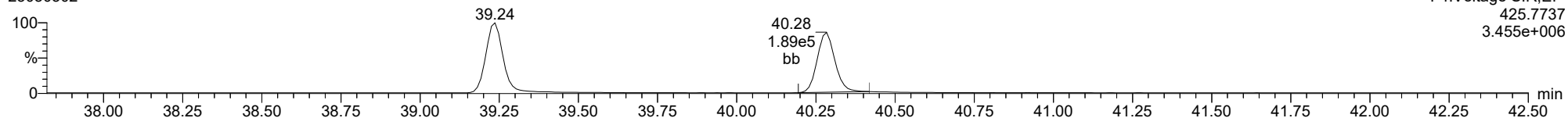
23030302



F4:Voltage SIR,EI+  
423.7766  
3.453e+006

**1234678-HpCDD**

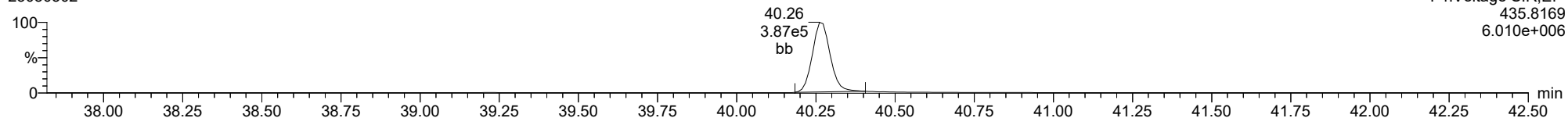
23030302



F4:Voltage SIR,EI+  
425.7737  
3.455e+006

**13C-1234678-HpCDD**

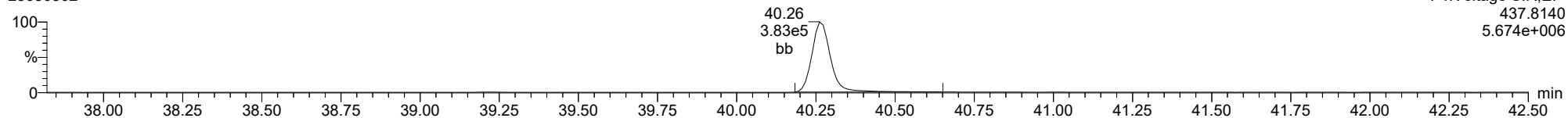
23030302



F4:Voltage SIR,EI+  
435.8169  
6.010e+006

**13C-1234678-HpCDD**

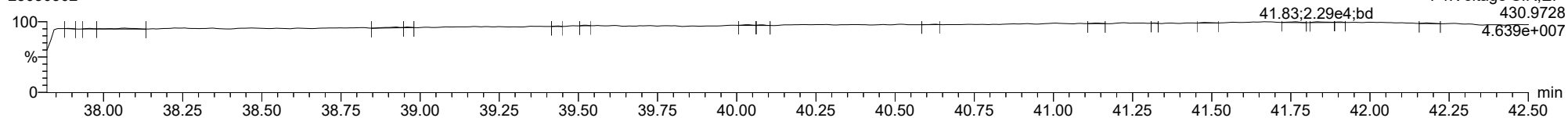
23030302



F4:Voltage SIR,EI+  
437.8140  
5.674e+006

**FUNCTION4 PFK**

23030302

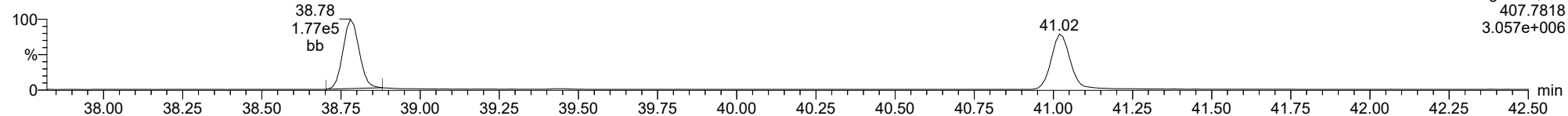


F4:Voltage SIR,EI+  
430.9728  
4.639e+007

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

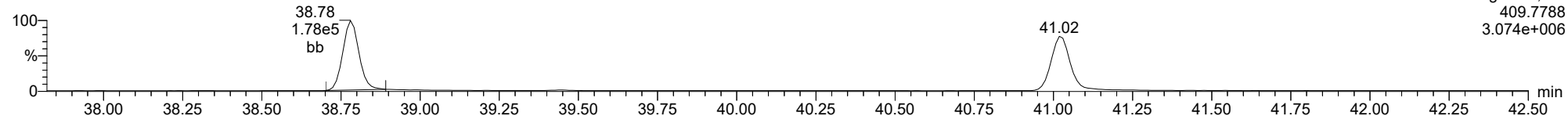
23030302



F4:Voltage SIR,EI+  
407.7818  
3.057e+006

1234678-HpCDF

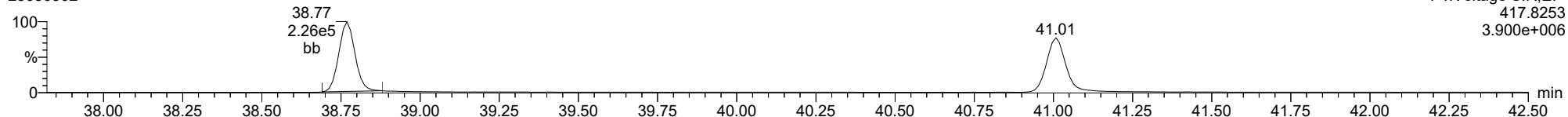
23030302



F4:Voltage SIR,EI+  
409.7788  
3.074e+006

13C-1234678-HpCDF

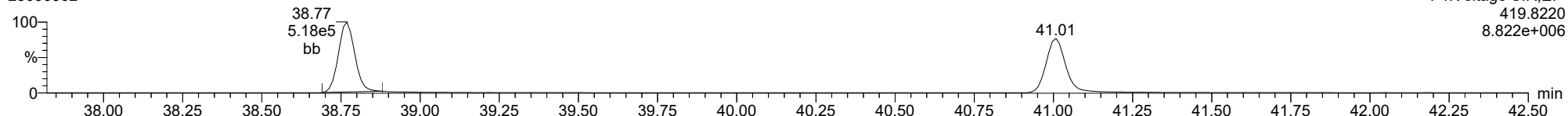
23030302



F4:Voltage SIR,EI+  
417.8253  
3.900e+006

13C-1234678-HpCDF

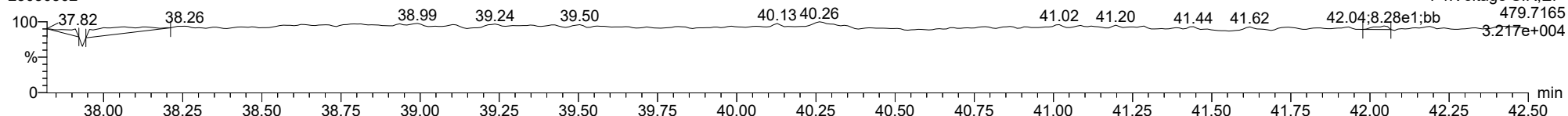
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F4:Voltage SIR,EI+  
419.8220  
8.822e+006

FUNCTION4 NCDPE

23030302

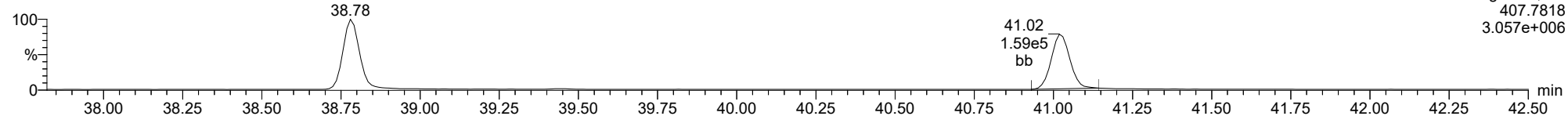


F4:Voltage SIR,EI+  
479.7165  
3.217e+004

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

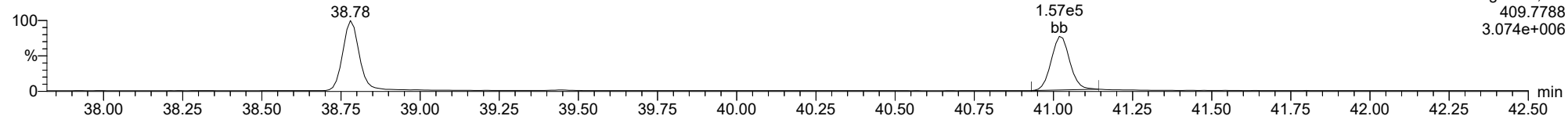
23030302



F4:Voltage SIR,EI+  
407.7818  
3.057e+006

**1234789-HpCDF**

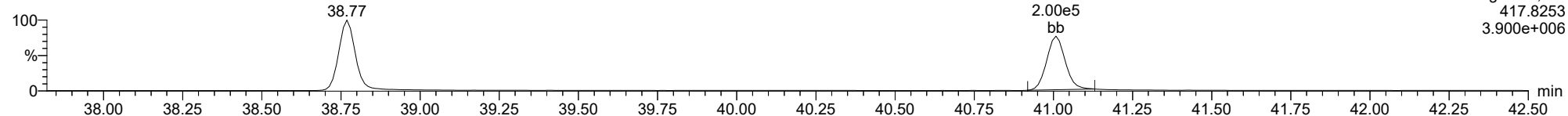
23030302



F4:Voltage SIR,EI+  
409.7788  
3.074e+006

**13C-1234789-HpCDF**

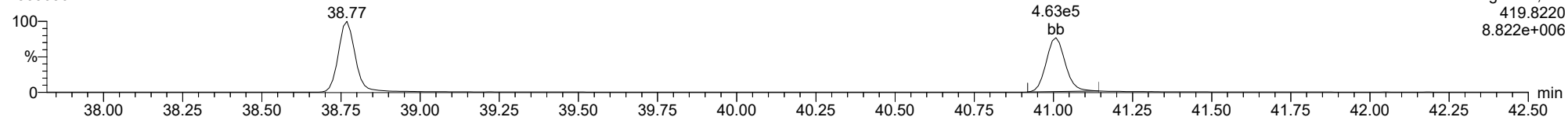
23030302



F4:Voltage SIR,EI+  
417.8253  
3.900e+006

**13C-1234789-HpCDF**

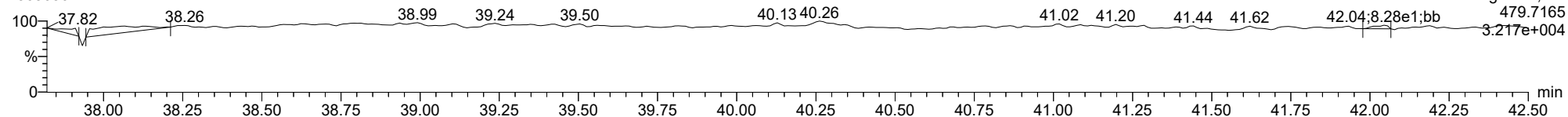
23030302



F4:Voltage SIR,EI+  
419.8220  
8.822e+006

**FUNCTION4 NCDPE**

23030302

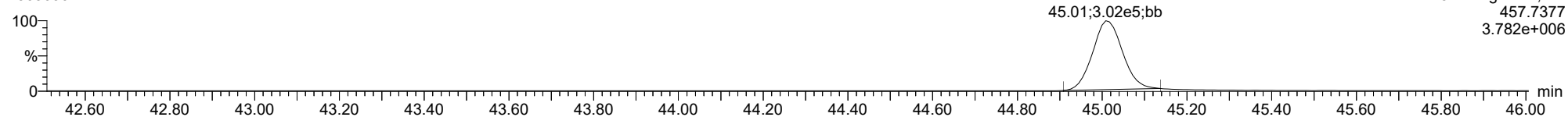


F4:Voltage SIR,EI+  
479.7165  
3.217e+004

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

**OCDD**

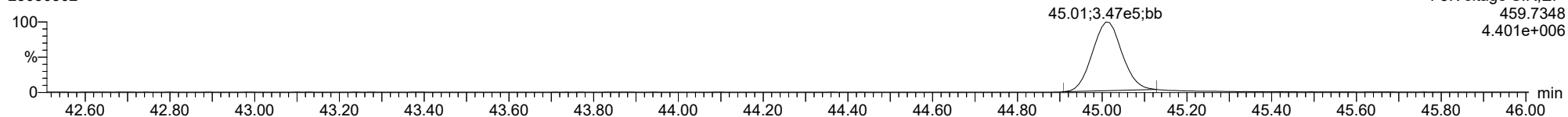
23030302



F5:Voltage SIR,EI+  
457.7377  
3.782e+006

**OCDD**

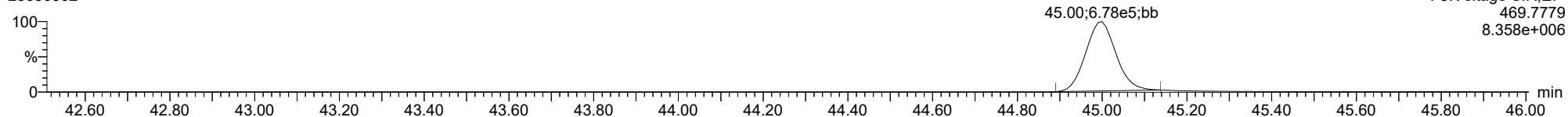
23030302



F5:Voltage SIR,EI+  
459.7348  
4.401e+006

**13C-OCDD**

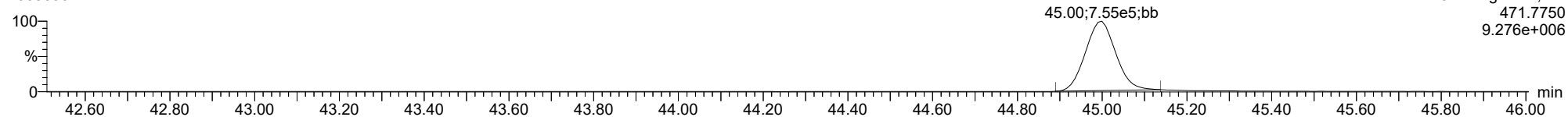
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F5:Voltage SIR,EI+  
469.7779  
8.358e+006

**13C-OCDD**

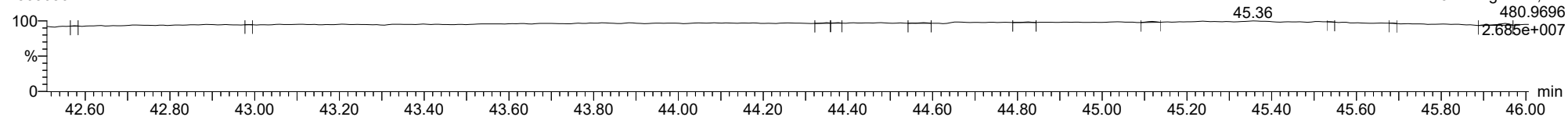
23030302



F5:Voltage SIR,EI+  
471.7750  
9.276e+006

**FUNCTION5 PFK**

23030302



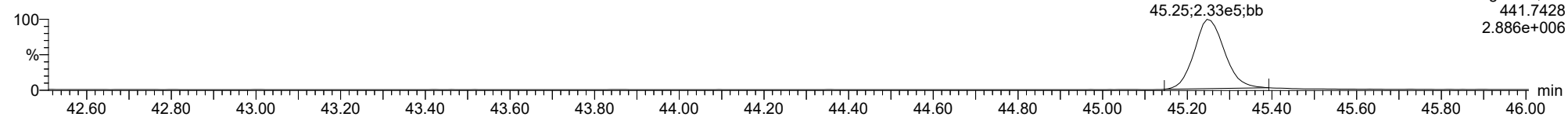
F5:Voltage SIR,EI+  
480.9696  
2.685e+007



ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

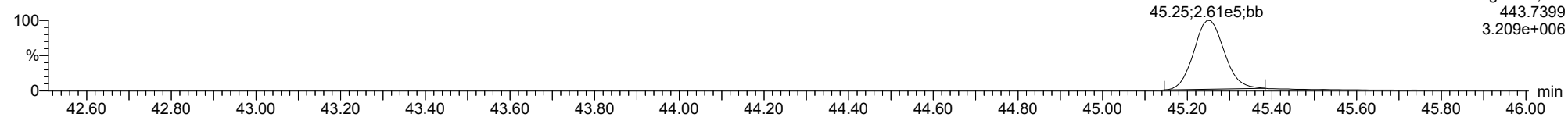
**OCDF**

23030302



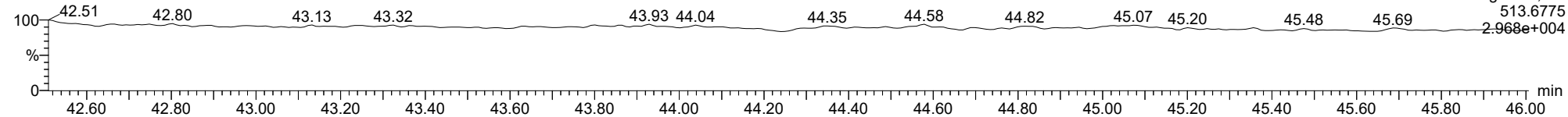
**OCDF**

23030302



**FUNCTION5 DCDPE**

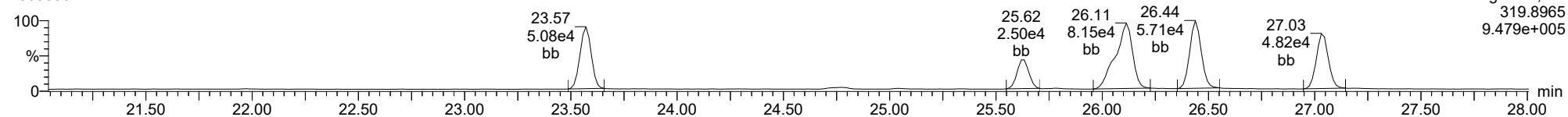
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

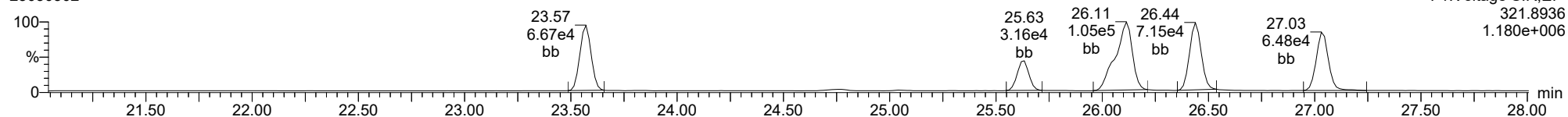
**Total-tetradioxins**

23030302



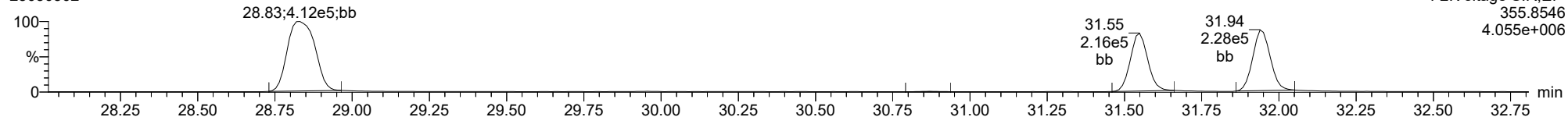
**Total-tetradioxins**

23030302



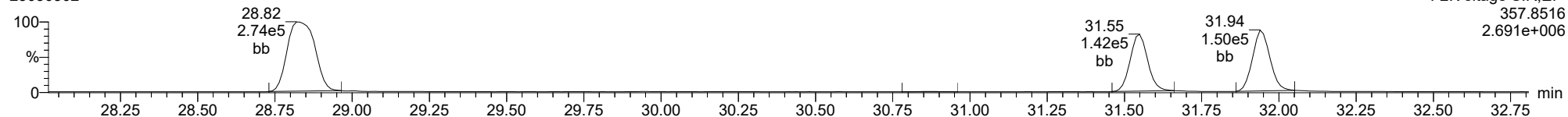
**Total-pentadioxins**

23030302



**Total-pentadioxins**

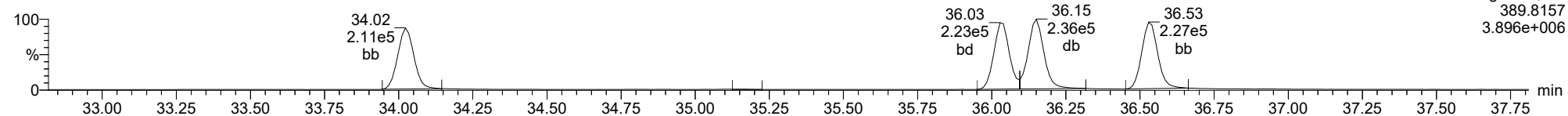
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

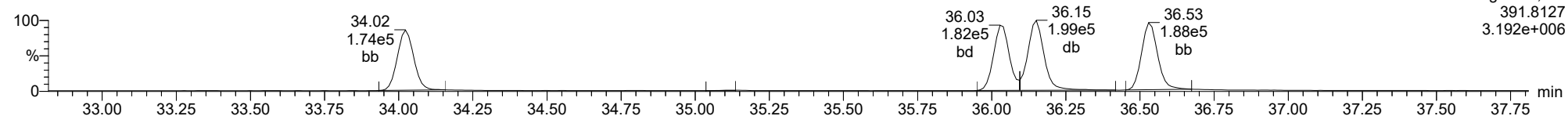
**Total-hexadioxins**

23030302



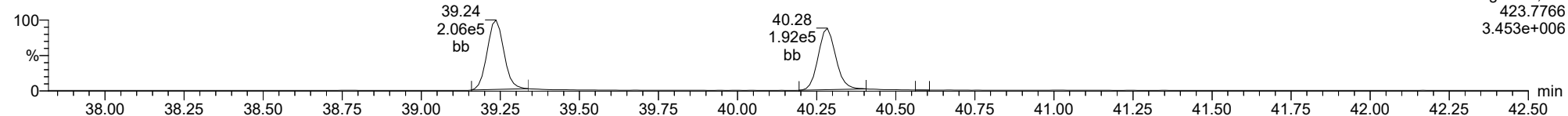
**Total-hexadioxins**

23030302



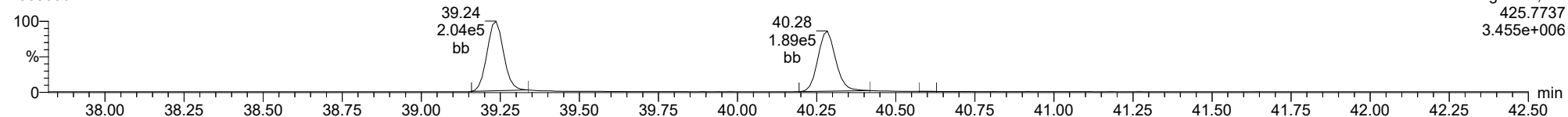
**Total-heptadioxins**

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**Total-heptadioxins**

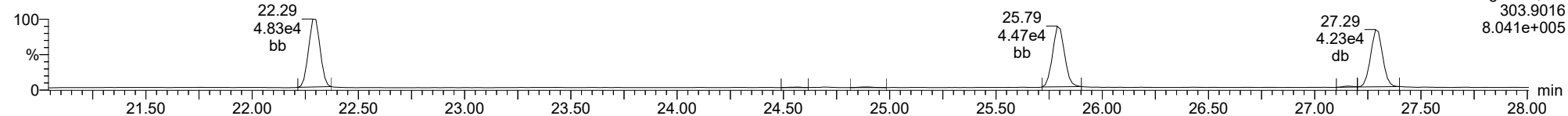
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

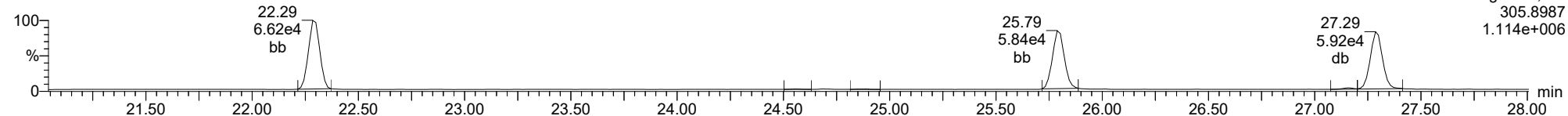
**Total-tetrafurans**

23030302



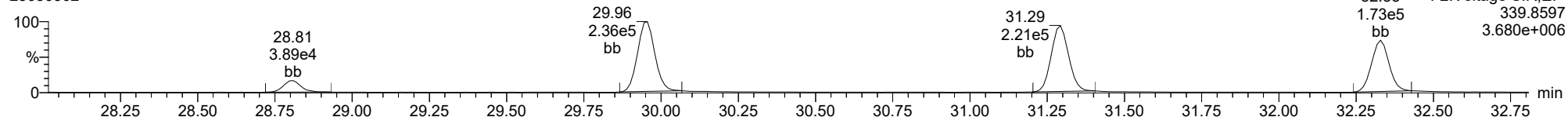
**Total-tetrafurans**

23030302



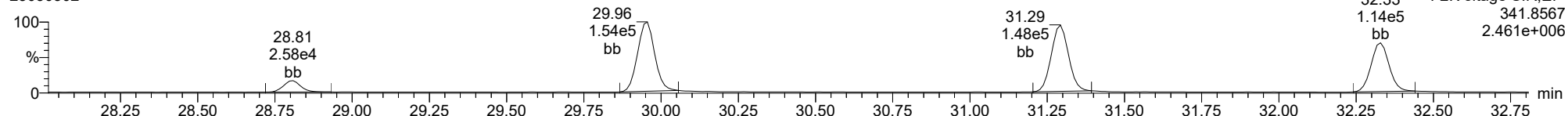
**Total-pentafurans**

23030302



**Total-pentafurans**

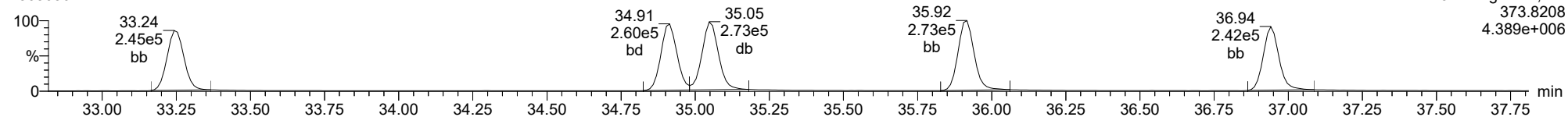
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ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

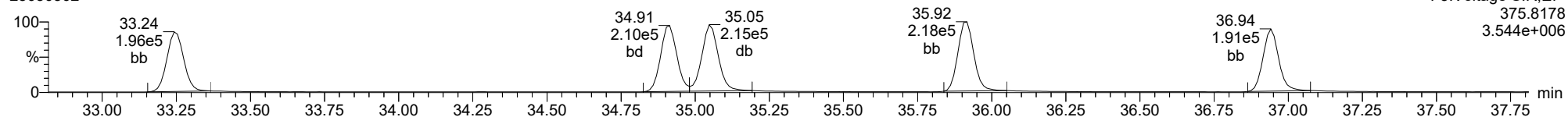
**Total-hexafurans**

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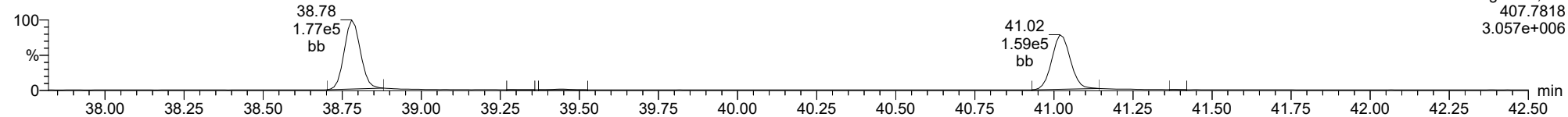
**Total-hexafurans**

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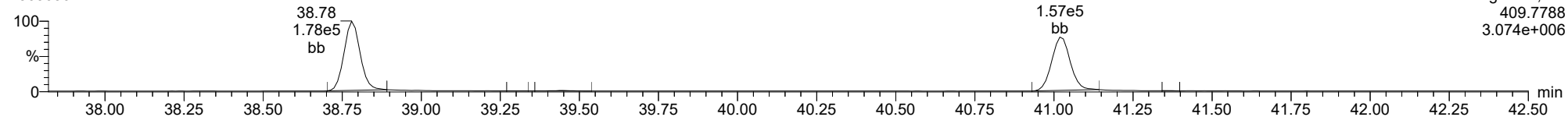
**Total-heptafurans**

23030302



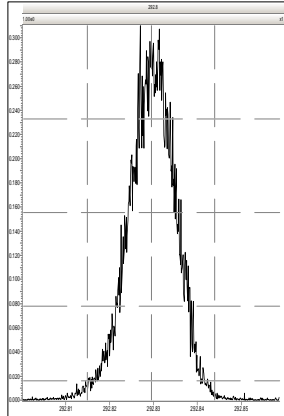
**Total-heptafurans**

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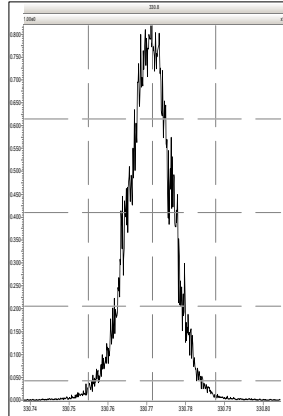


Printed: Friday, March 03, 2023 09:51:10 Pacific Standard Time

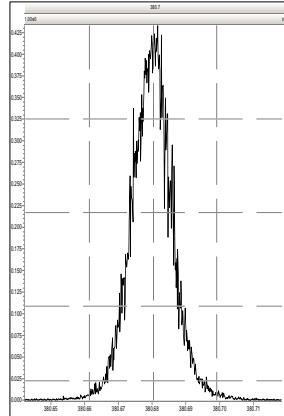
M 292.9824 R 11554



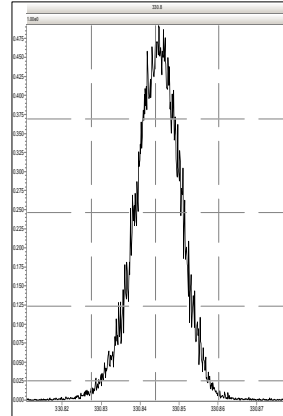
M 330.9792 R 12378



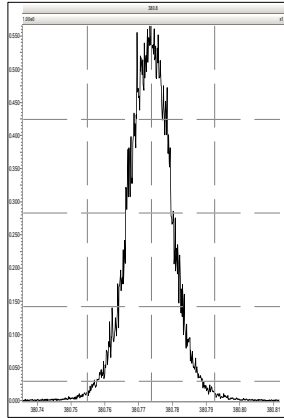
M 380.9760 R 13750



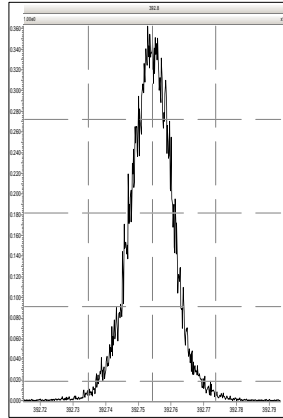
M 330.9792 R 11876



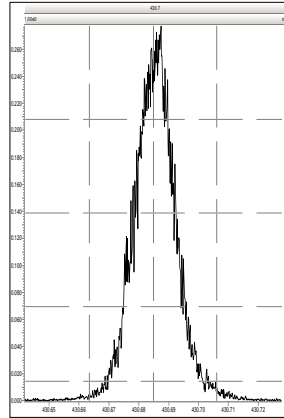
M 380.9760 R 12255



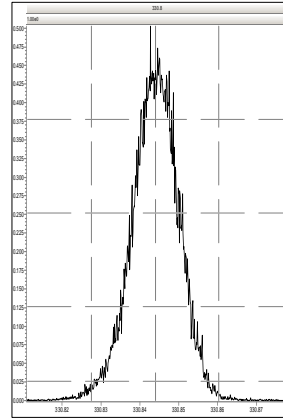
M 392.9760 R 12762



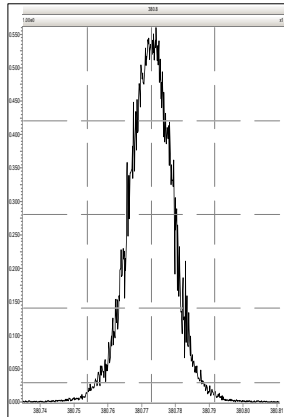
M 430.9728 R 13440



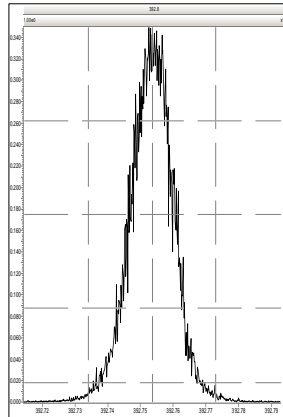
M 330.9792 R 11574



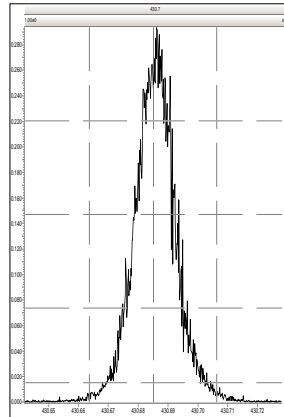
M 380.9760 R 12376



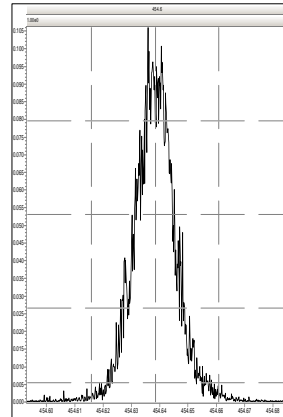
M 392.9760 R 13122



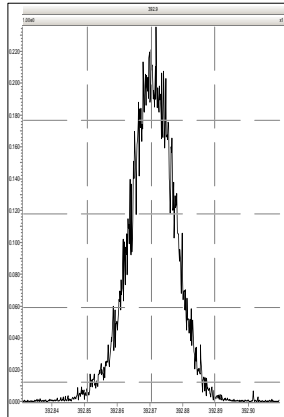
M 430.9728 R 12938



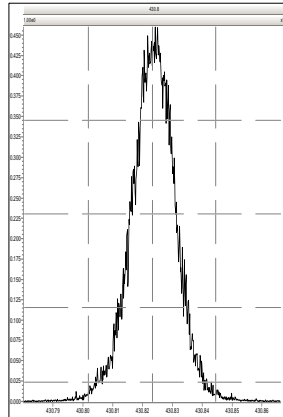
M 454.9728 R 14513



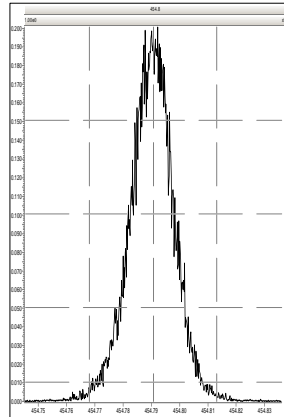
M 392.9760 R 12109



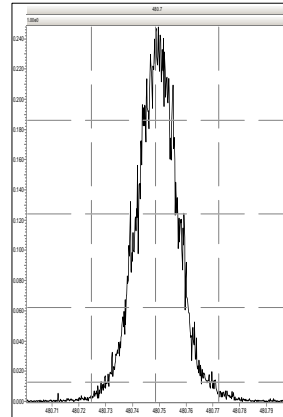
M 430.9728 R 12594



M 454.9728 R 12801

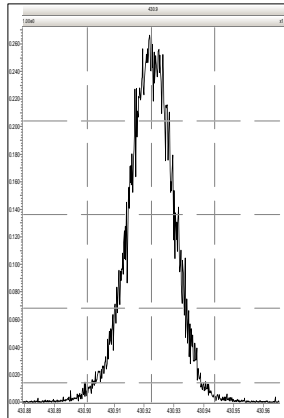


M 480.9696 R 12854

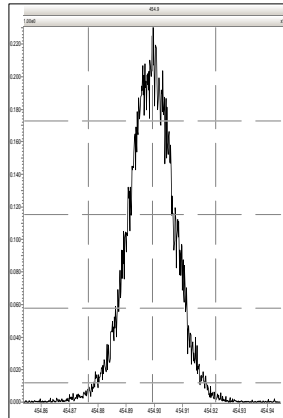


Printed: Friday, March 03, 2023 09:51:10 Pacific Standard Time

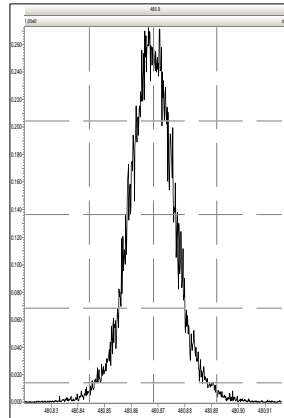
M 430.9728 R 12109



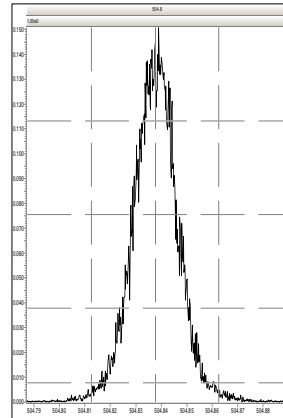
M 454.9728 R 12077



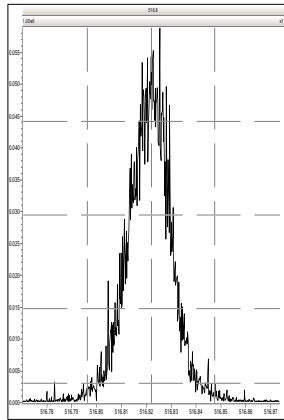
M 480.9696 R 11443



M 504.9696 R 12722



M 516.9697 R 14005

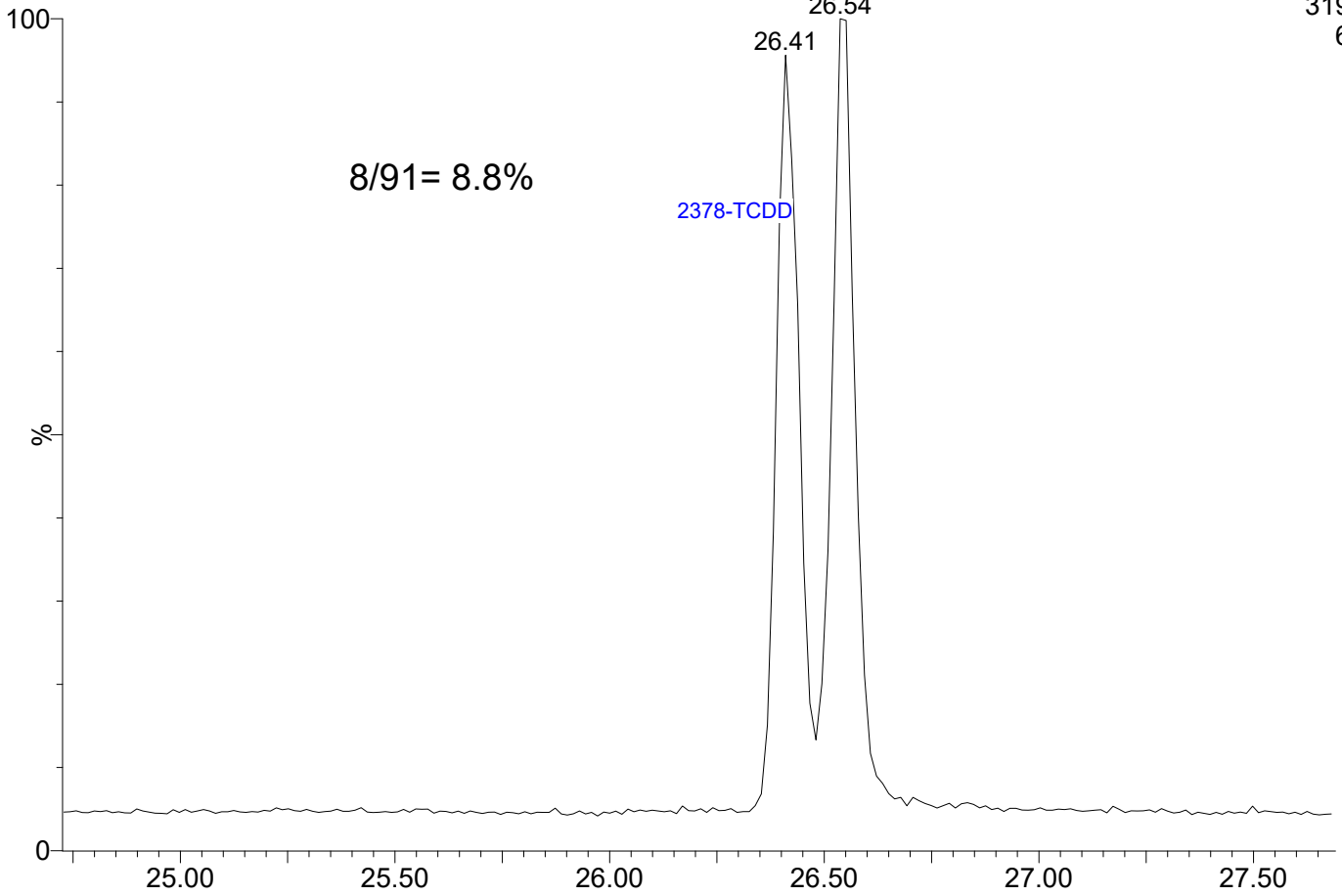


23030303

1: Voltage SIR 14 Channels EI+

319.8965

6.27e5

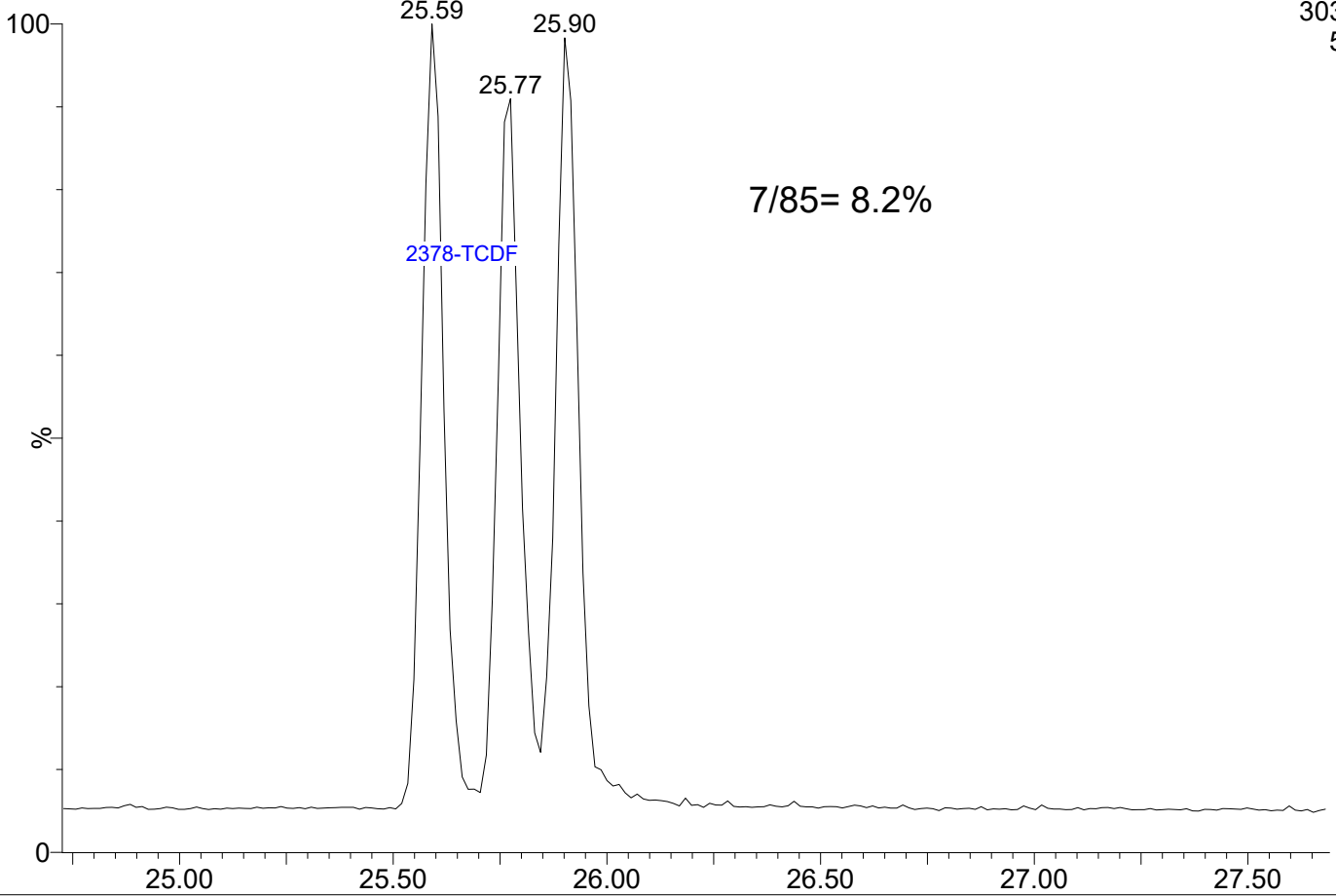


23030303

1: Voltage SIR 14 Channels EI+

303.9016

5.62e5





Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.702		0.770	1141	1568								
12378-PeCDF	29.922	1.000	2.331e3	1.631e3	0.679	1.429	1.550	717	1165	3.89e4	2.49e4	54.3	21.4	NO	bb	bd	0.520
23478-PeCDF	31.270	1.001	2.446e3	1.527e3	0.786	1.602	1.550	717	1165	3.60e4	2.25e4	50.1	19.4	NO	bb	bb	0.508
123478-HxCDF	34.891	1.001	2.740e3	2.578e3	1.166	1.063	1.240	675	706	4.36e4	3.63e4	64.6	51.5	NO	bd	bd	0.522
234678-HxCDF	35.894	1.001	2.363e3	1.967e3	1.140	1.201	1.240	675	706	3.52e4	3.17e4	52.2	44.9	NO	bb	bb	0.459
123678-HxCDF	35.025	1.000	2.955e3	2.593e3	1.091	1.140	1.240	675	706	3.97e4	3.71e4	58.8	52.6	NO	db	dd	0.495
123789-HxCDF	36.919	1.000	2.292e3	1.751e3	1.137	1.309	1.240	675	706	3.51e4	2.45e4	52.0	34.7	NO	bd	bb	0.523
1234678-HpCDF	38.769	1.001	1.264e3	1.356e3	1.003	0.932	1.050	1176	1150	2.17e4	2.11e4	18.4	18.3	NO	bd	bb	0.466
1234789-HpCDF	40.997	1.000	1.144e3	1.036e3	0.953	1.105	1.050	1176	1150	1.78e4	1.51e4	15.1	13.1	NO	bb	bd	0.465
OCDF	45.228	1.006	2.105e3	2.214e3	0.778	0.951	0.890	762	984	2.31e4	2.16e4	30.2	22.0	NO	bb	bb	1.044
2378-TCDD					1.149		0.770	1186	741								
12378-PeCDD	31.527	1.001	2.628e3	1.506e3	1.022	1.745	1.550	935	615	3.66e4	1.58e4	39.1	25.7	NO	bb	bb	0.540
123478-HxCDD	36.016	1.001	2.113e3	1.865e3	0.996	1.133	1.240	725	812	3.30e4	2.93e4	45.6	36.1	NO	dd	bd	0.542
123678-HxCDD	36.128	1.001	2.428e3	1.876e3	1.001	1.294	1.240	725	812	3.70e4	2.39e4	51.1	29.5	NO	db	db	0.479
123789-HxCDD	36.507	1.011	2.154e3	1.651e3	0.907	1.304	1.240	725	812	3.30e4	2.34e4	45.5	28.9	NO	bd	bb	0.513
1234678-HpCDD	40.261	1.000	1.634e3	1.397e3	1.039	1.170	1.050	985	1205	2.31e4	2.24e4	23.5	18.6	NO	MM	bb	0.531
OCDD					0.920		0.890	1090	941								
13C-2378-TCDF	25.746	1.007	5.730e5	7.592e5	1.620	0.755	0.770	2498	2006	8.42e6	1.11e7	3371.3	5556.4	NO	bb	bb	100.702
13C-12378-PeCDF	29.911	1.169	6.805e5	4.409e5	1.240	1.543	1.550	2678	2220	9.20e6	6.10e6	3433.8	2749.3	NO	bb	bd	110.727
13C-23478-PeCDF	31.248	1.222	6.001e5	3.956e5	1.118	1.517	1.550	2678	2220	8.66e6	5.74e6	3235.2	2585.6	NO	bb	bb	109.107
13C-123478-HxCDF	34.869	0.955	2.965e5	5.770e5	1.168	0.514	0.510	1558	3112	4.38e6	8.54e6	2813.2	2745.5	NO	bd	bd	98.607
13C-123678-HxCDF	35.014	0.959	3.446e5	6.820e5	1.386	0.505	0.510	1558	3112	4.56e6	9.02e6	2927.1	2898.6	NO	db	dd	97.648
13C-234678-HxCDF	35.872	0.983	2.821e5	5.460e5	1.129	0.517	0.510	1558	3112	4.13e6	8.00e6	2652.6	2572.0	NO	bb	bb	96.703
13C-123789-HxCDF	36.908	1.011	2.282e5	4.511e5	0.932	0.506	0.510	1558	3112	3.31e6	6.47e6	2122.2	2079.8	NO	bb	bb	96.146
13C-1234678-HpCDF	38.746	1.062	1.794e5	3.814e5	0.895	0.470	0.440	2435	3572	2.60e6	5.93e6	1069.0	1659.1	NO	bd	bb	82.620
13C-1234789-HpCDF	40.986	1.123	1.404e5	3.516e5	0.770	0.399	0.440	2435	3572	1.98e6	4.51e6	813.8	1262.1	NO	bb	bb	84.288
13C-1234-TCDD	25.576	0.000	3.640e5	4.524e5	1.000	0.805	0.770	1931	1352	5.55e6	6.91e6	2875.2	5114.0	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.032	4.012e5	4.998e5	1.152	0.803	0.770	1931	1352	5.75e6	7.10e6	2979.4	5249.9	NO	bb	bb	95.760
13C-12378-PeCDD	31.504	1.232	4.613e5	2.880e5	0.829	1.602	1.550	1401	1533	6.70e6	4.14e6	4781.1	2700.1	NO	bb	bb	110.725
13C-123478-HxCDD	35.994	0.986	4.133e5	3.236e5	0.995	1.277	1.240	1744	1461	6.55e6	5.10e6	3756.0	3493.2	NO	bd	bd	97.670
13C-123678-HxCDD	36.106	0.989	5.195e5	3.785e5	1.157	1.372	1.240	1744	1461	6.84e6	5.29e6	3920.0	3622.3	NO	db	db	102.381
13C-1234678-HpCDD	40.250	1.103	2.785e5	2.707e5	0.840	1.029	1.050	1497	2275	3.82e6	3.65e6	2553.8	1605.5	NO	bb	bd	86.201
13C-OCDD	44.972	1.232	5.210e5	5.429e5	0.767	0.960	0.890	2989	1436	5.87e6	6.48e6	1964.2	4513.5	NO	bd	bb	182.810
13C-123789-HxCDD	36.496	0.000	4.181e5	3.402e5	1.000	1.229	1.240	1744	1461	6.11e6	4.85e6	3503.9	3317.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	1.287e3		1.288			1959		1.53e4		7.8			db		0.122

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1141	1568								
1289-TCDF					0.678		0.770	1141	1568								
13468-PECDF					1.246		1.550	669	893								
12389-PECDF					0.496		1.550	717	1165								
123468-HXCDF					1.169		1.240	675	706								
1368-TCDD					1.015		0.770	1186	741								
1289-TCDD					0.909		0.770	1186	741								
12479-PECDD					2.301		1.550	935	615								
12389-PECDD					1.184		1.550	935	615								
124679-HXCDD					1.115		1.240	725	812								
1234679-HPCDD					1.137		1.050	985	1205								
Total-tetrafurans			0.000e0		0.727			1141		0.00e0							
Total-penta1			0.000e0					669		0.00e0							
Total-pentafurans			4.777e3		0.654			717		7.49e4							1.028
Total-hexafurans			1.035e4		1.141			675		1.54e5							2.000
Total-heptafurans			2.408e3		0.978			1176		3.94e4							0.931
Total-Furans			1.971e4		0.922			1141		2.93e5							5.016
Total-tetradioxins			0.000e0		1.024			1186		0.00e0							
Total-pentadioxins			2.628e3		1.502			935		3.66e4							0.540
Total-hexadioxins			6.694e3		1.005			725		1.03e5							1.534
Total-heptadioxins			1.634e3		1.088			985		2.31e4							0.531
Total-Dioxins			1.096e4		1.130			1186		1.63e5							2.605
Total-TEQ			3.067e4					1186		4.55e5							7.621
FUNCTION1 PFK			3.116e6					620464		1.62e6							
FUNCTION2 PFK			1.698e6					301200		2.24e6							0.000
FUNCTION3 PFK			5.380e7					450736		2.93e7							0.000
FUNCTION4 PFK			1.391e7					291095		1.60e7							
FUNCTION5 PFK			7.208e4					238350		2.59e6							
FUNCTION1 HXCD...			4.809e2					559		5.84e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.084e2					933		1.50e4							0.000
FUNCTION3 OCDPE			0.000e0					494		0.00e0							
FUNCTION4 NCDPE			6.931e2					845		1.26e4							0.000
FUNCTION5 DCDPE			7.511e2					821		1.86e4							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50**

**Calibration: T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27**

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
2	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
2	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
3	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
4	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
2	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.68	7.033e1	1.021e2	0.922	0.69	0.77	1.5	NO	NO	bb	bb	0.014
2	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
3	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
4	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
5	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522
6	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
7	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520
8	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
9	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465
10	OCDF	45.23	2.105e3	2.214e3	0.778	0.95	0.89	30.2	YES	NO	bb	bb	1.044

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
2	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
3	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540
2	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
3	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
4	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542
5	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.68	7.033e1	1.021e2	0.922	0.69	0.77	1.5	NO	NO	bb	bb	0.014
2	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
3	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
4	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
5	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522
6	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
7	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520
8	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
9	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465
10	OCDF	45.23	2.105e3	2.214e3	0.778	0.95	0.89	30.2	YES	NO	bb	bb	1.044
11	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540
12	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
13	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
14	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542
15	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.18	3.116e6					2.6	NO		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.19	1.560e6					3.1	YES		bb		0.000
2	FUNCTION2 PFK	28.13	1.376e5					4.3	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.12	2.560e6					15.7	YES		db		0.000
2	FUNCTION3 PFK	36.37	7.058e6					24.4	YES		dd		0.000
3	FUNCTION3 PFK	36.11	4.418e7					24.8	YES		bd		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.43	1.404e5					1.6	NO		bb		
2	FUNCTION4 PFK	37.89	1.377e7					53.2	YES		bb		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.15	7.152e3					1.1	NO		bb		
2	FUNCTION5 PFK	45.07	1.178e3					0.5	NO		bb		
3	FUNCTION5 PFK	44.98	1.177e3					0.5	NO		bb		
4	FUNCTION5 PFK	44.19	7.772e3					0.8	NO		bb		
5	FUNCTION5 PFK	43.72	7.921e3					1.3	NO		bb		
6	FUNCTION5 PFK	43.60	4.474e3					0.7	NO		bb		
7	FUNCTION5 PFK	43.17	6.636e3					1.2	NO		bb		
8	FUNCTION5 PFK	43.01	5.001e3					0.7	NO		bb		
9	FUNCTION5 PFK	42.76	1.253e4					1.4	NO		bb		
10	FUNCTION5 PFK	45.91	8.220e3					0.4	NO		bb		
11	FUNCTION5 PFK	45.75	6.523e3					1.4	NO		bb		
12	FUNCTION5 PFK	45.25	3.501e3					0.7	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.60	9.542e1					2.4	NO		bb		0.000
2	FUNCTION1 HXCD...	26.42	7.837e1					1.9	NO		bb		0.000
3	FUNCTION1 HXCD...	25.58	1.709e2					3.5	YES		bb		0.000
4	FUNCTION1 HXCD...	23.40	1.362e2					2.7	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

**ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk**

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.36	1.308e2					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	31.75	8.377e1					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.30	1.170e2					2.2	NO		db		0.000
4	FUNCTION2 HPCD...	31.24	1.138e2					2.6	NO		bd		0.000
5	FUNCTION2 HPCD...	30.92	1.786e2					3.2	YES		bb		0.000
6	FUNCTION2 HPCD...	30.04	8.034e1					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	29.47	1.041e2					2.9	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	9.826e1					2.2	NO		bb		0.000
2	FUNCTION4 NCDPE	41.83	1.085e2					2.1	NO		bb		0.000
3	FUNCTION4 NCDPE	41.67	8.318e1					2.8	NO		db		0.000
4	FUNCTION4 NCDPE	41.58	1.047e2					2.5	NO		bd		0.000
5	FUNCTION4 NCDPE	41.32	1.741e2					2.4	NO		bb		0.000
6	FUNCTION4 NCDPE	41.15	1.244e2					2.8	NO		bb		0.000

**ETHERS6**

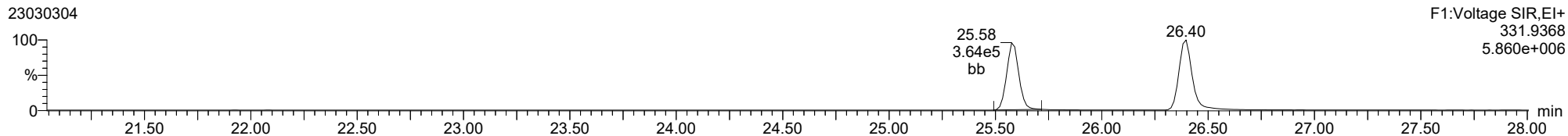
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.53	7.557e1					1.5	NO		bb		0.000
2	FUNCTION5 DCDPE	43.39	1.767e2					2.9	NO		bb		0.000
3	FUNCTION5 DCDPE	43.31	8.303e1					2.9	NO		db		0.000
4	FUNCTION5 DCDPE	43.27	1.217e2					4.5	YES		bd		0.000
5	FUNCTION5 DCDPE	43.04	1.550e2					3.9	YES		bb		0.000
6	FUNCTION5 DCDPE	42.73	1.390e2					7.0	YES		bb		0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
Calibration: T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

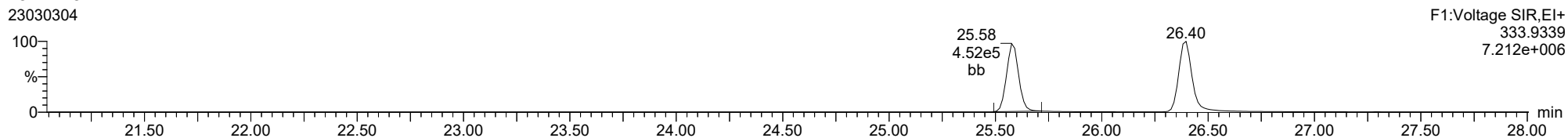
13C-1234-TCDD

23030304



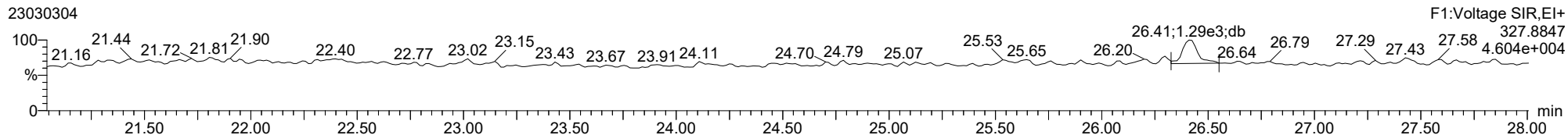
13C-1234-TCDD

23030304



37CL-2378-TCDD

23030304

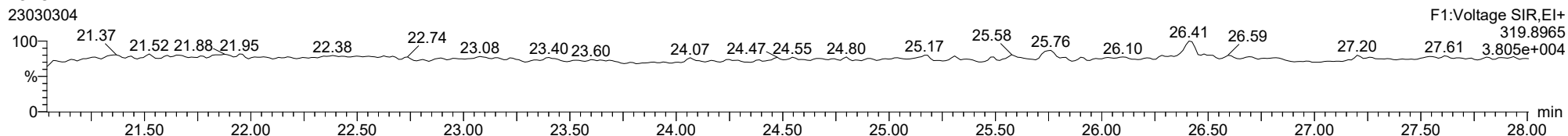




ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

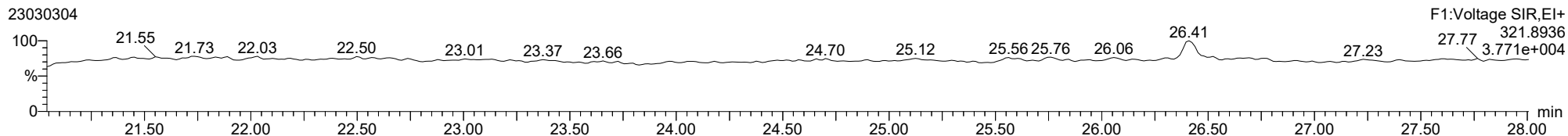
**2378-TCDD**

23030304



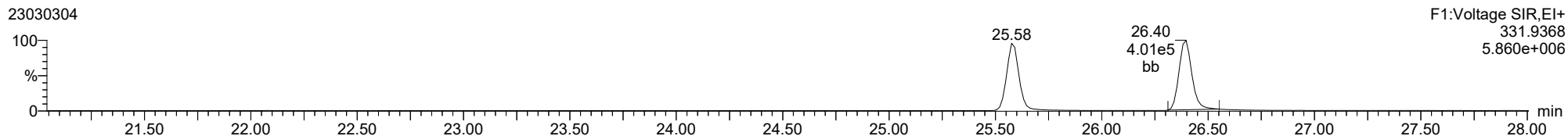
**2378-TCDD**

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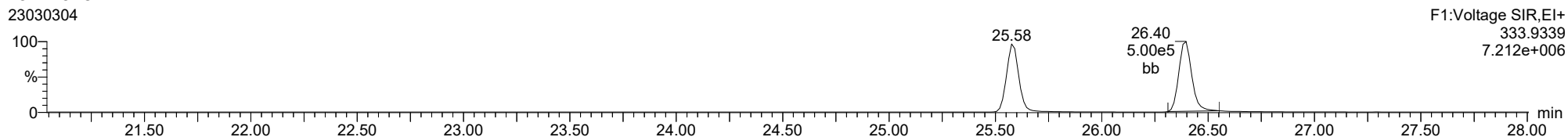
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23030304



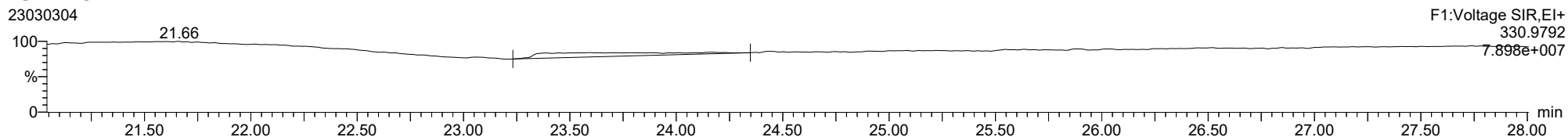
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23030304



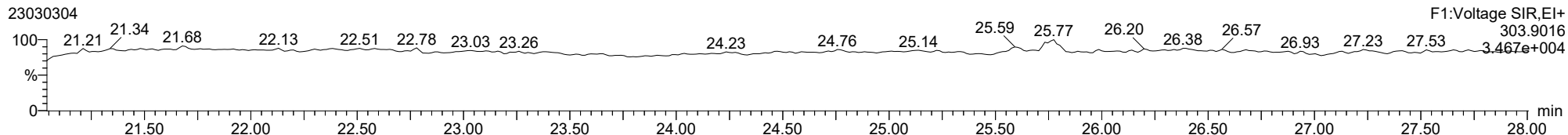
**FUNCTION1 PFK**

23030304

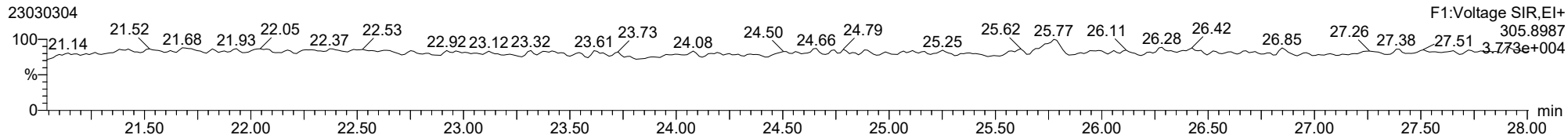


ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

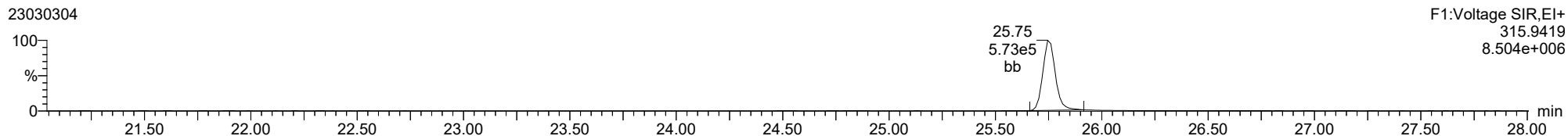
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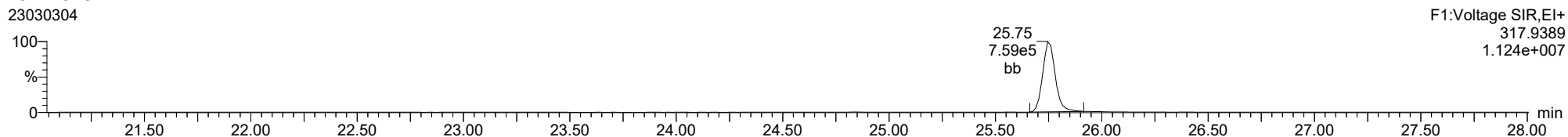
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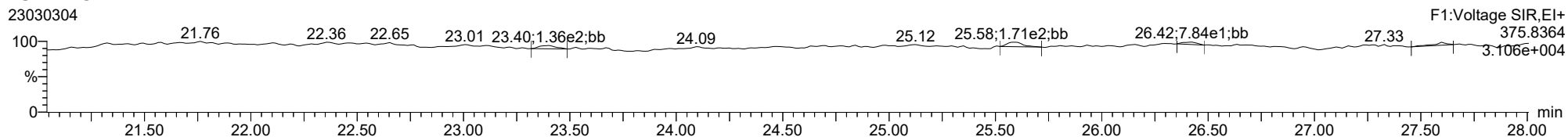
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**13C-2378-TCDF**



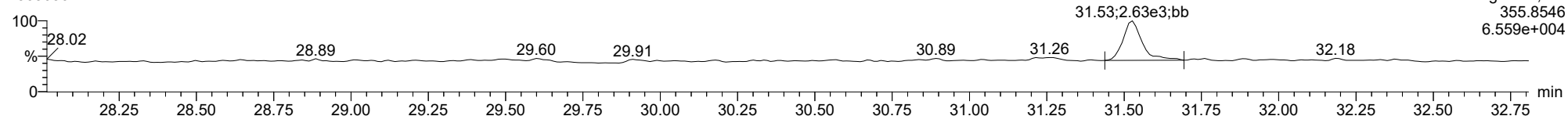
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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

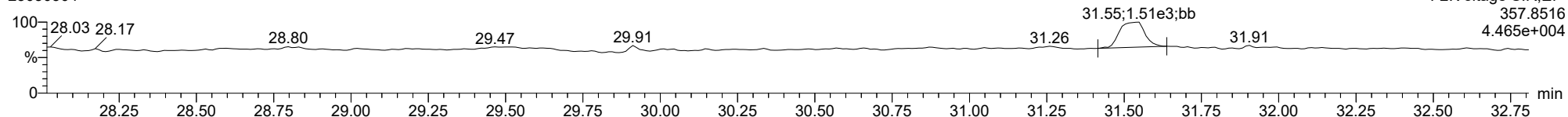
**12378-PeCDD**

23030304



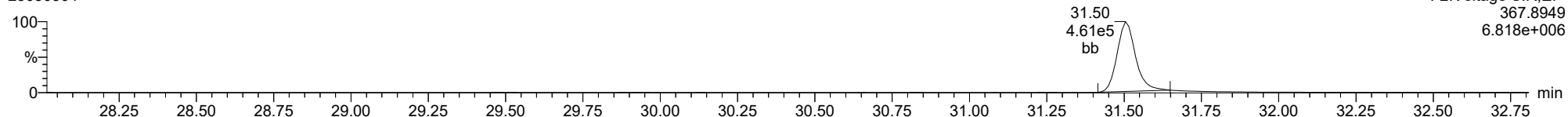
**12378-PeCDD**

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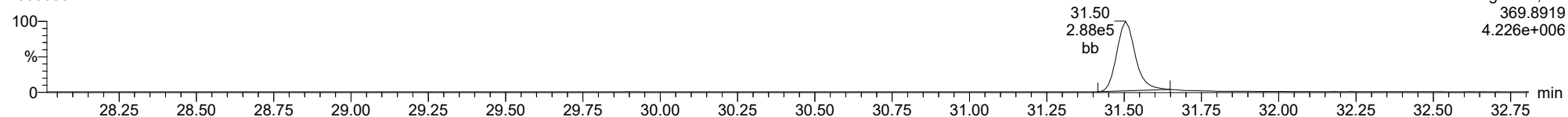
**13C-12378-PeCDD**

23030304



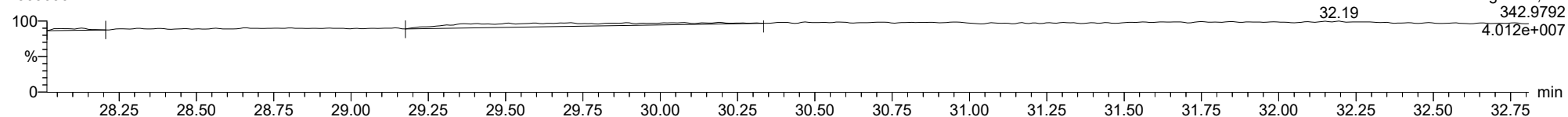
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23030304



**FUNCTION2 PFK**

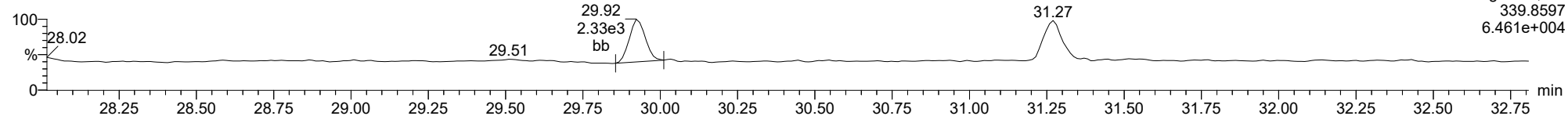
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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

**12378-PeCDF**

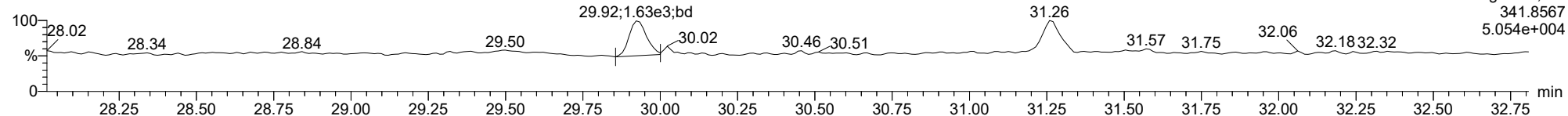
23030304



F2:Voltage SIR,EI+  
339.8597  
6.461e+004

**12378-PeCDF**

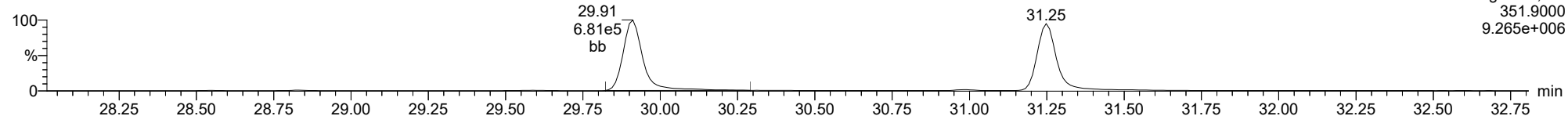
23030304



F2:Voltage SIR,EI+  
341.8567  
5.054e+004

**13C-12378-PeCDF**

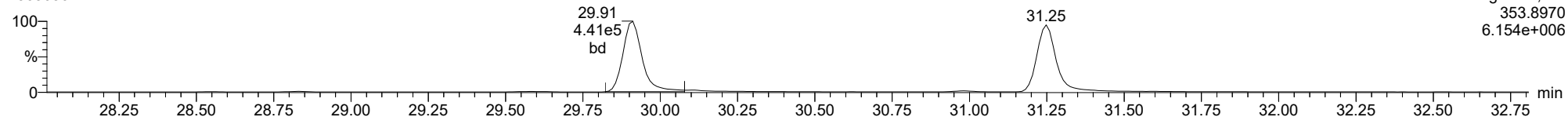
23030304



F2:Voltage SIR,EI+  
351.9000  
9.265e+006

**13C-12378-PeCDF**

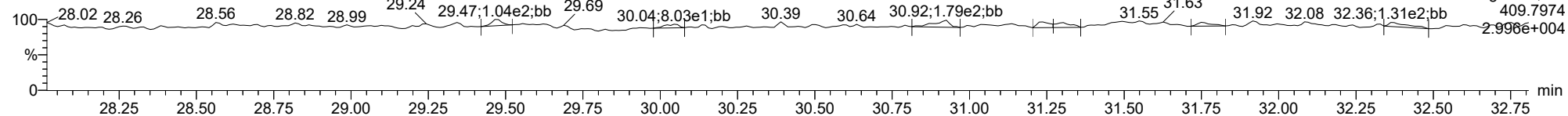
23030304



F2:Voltage SIR,EI+  
353.8970  
6.154e+006

**FUNCTION2 HPCDPE**

23030304

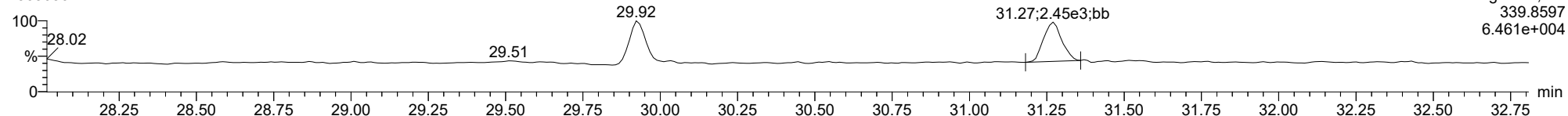


F2:Voltage SIR,EI+  
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2.990e+004

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

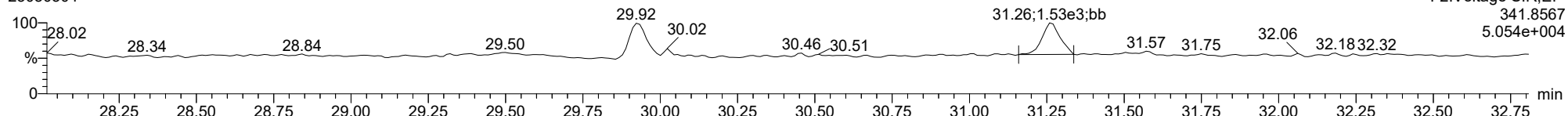
**23478-PeCDF**

23030304



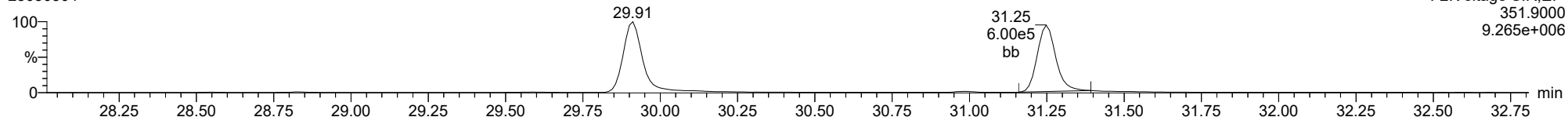
**23478-PeCDF**

23030304



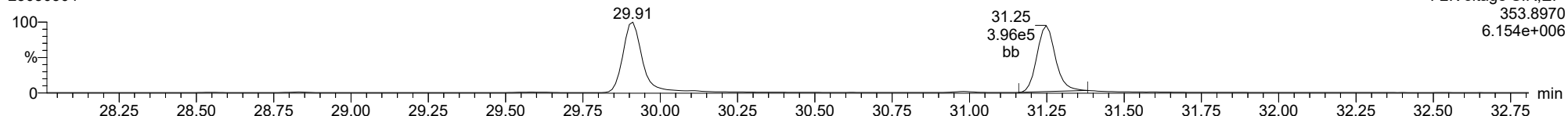
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23030304



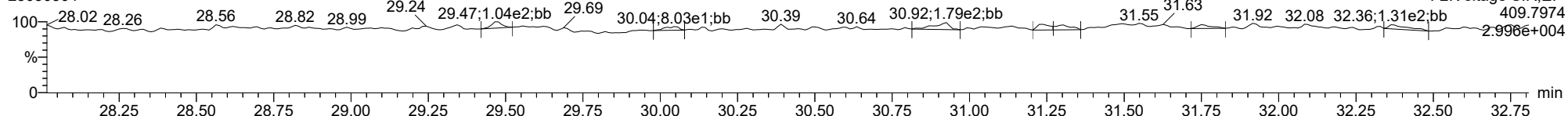
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23030304



**FUNCTION2 HPCDPE**

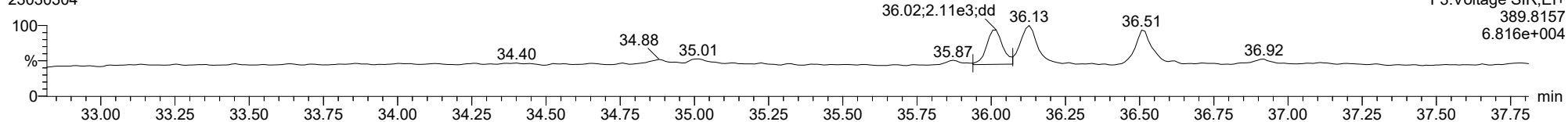
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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

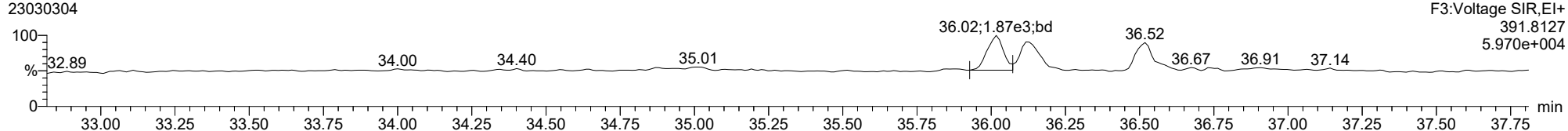
**123478-HxCDD**

23030304



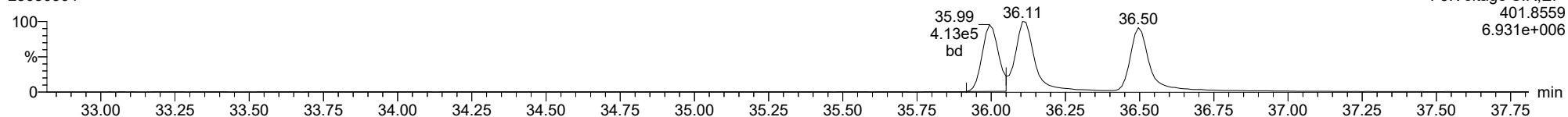
**123478-HxCDD**

23030304



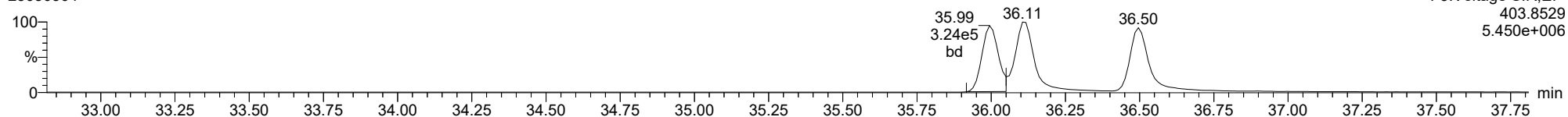
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23030304



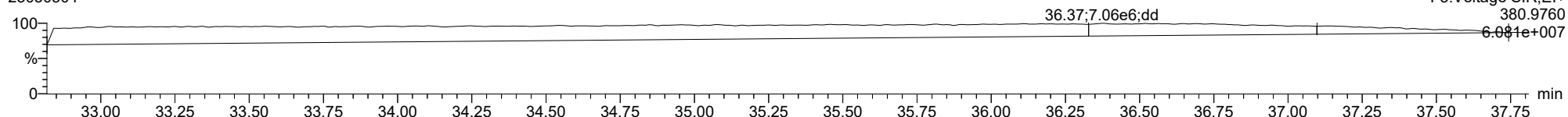
**13C-123478-HxCDD**

23030304



**FUNCTION3 PFK**

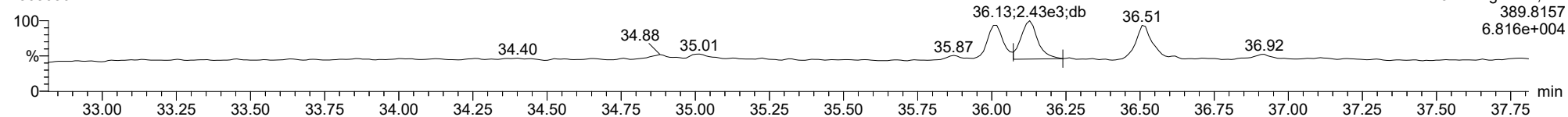
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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

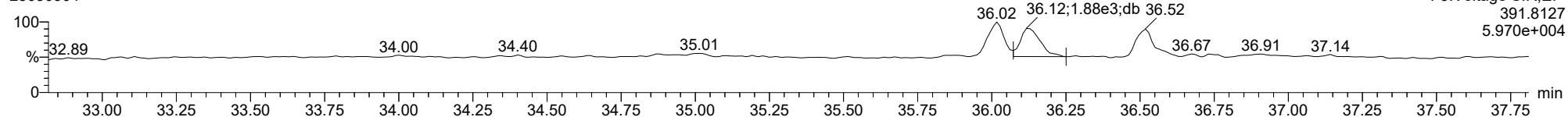
**123678-HxCDD**

23030304



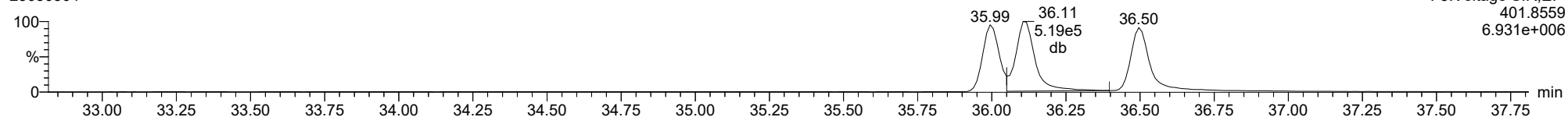
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23030304



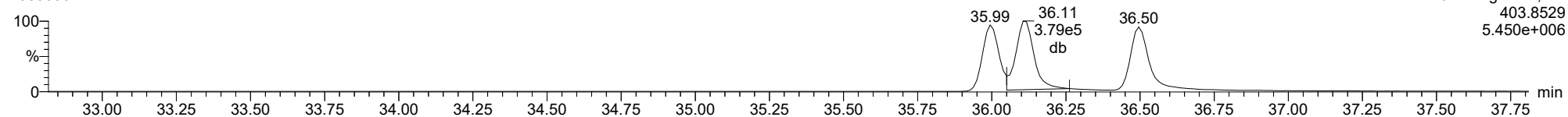
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23030304



**13C-123678-HxCDD**

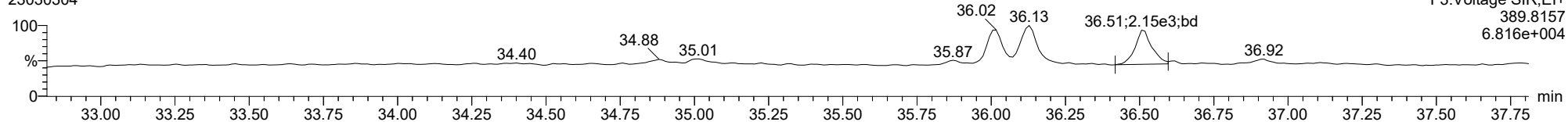
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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

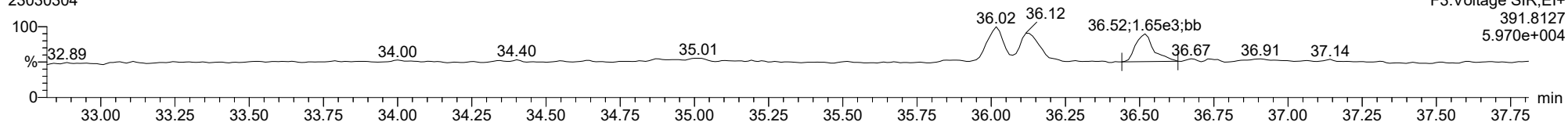
**123789-HxCDD**

23030304



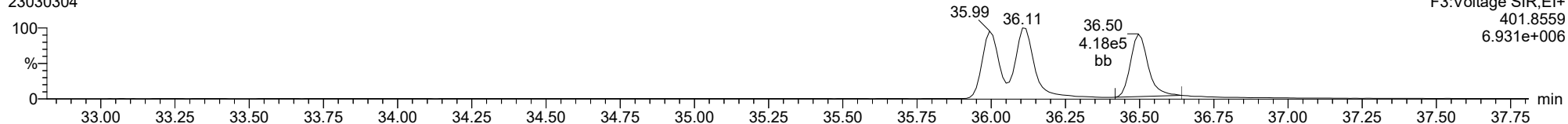
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23030304



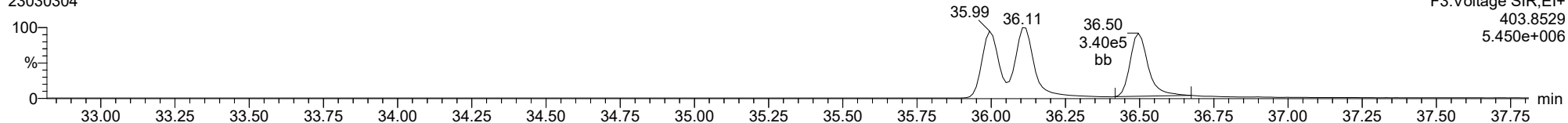
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23030304



**13C-123789-HxCDD**

23030304

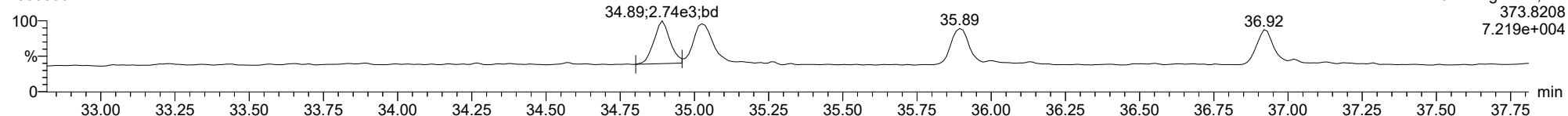




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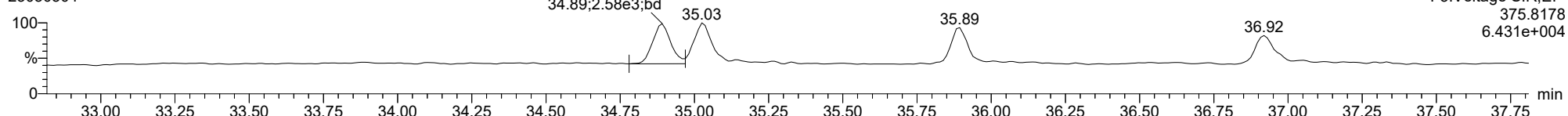
123478-HxCDF

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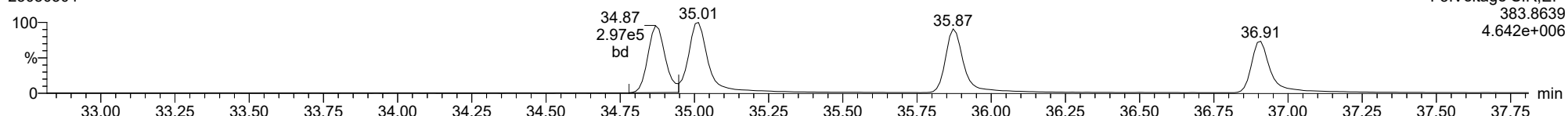
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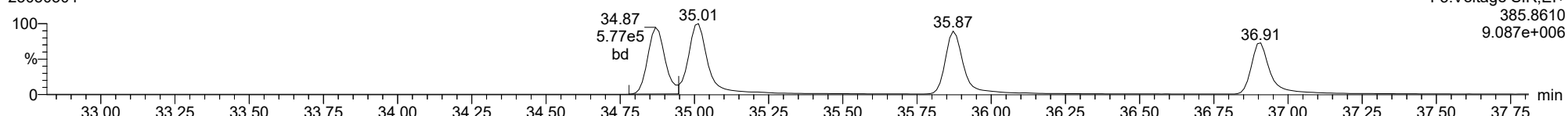
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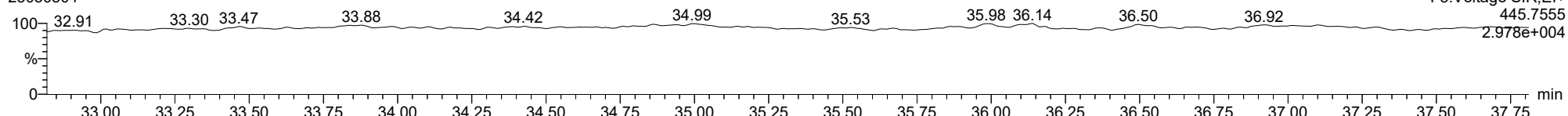
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23030304



FUNCTION3 OCDPE

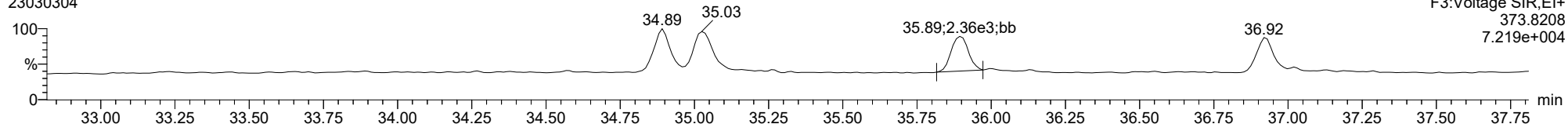
23030304



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

**234678-HxCDF**

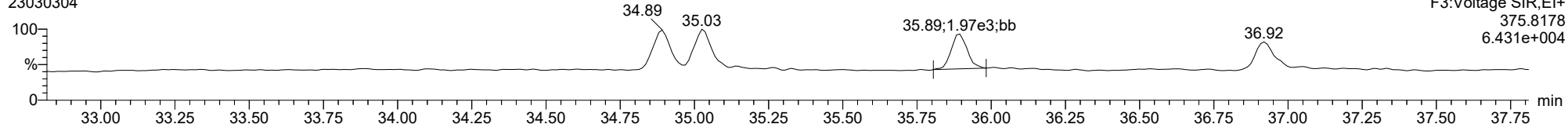
23030304



F3:Voltage SIR,EI+  
373.8208  
7.219e+004

**234678-HxCDF**

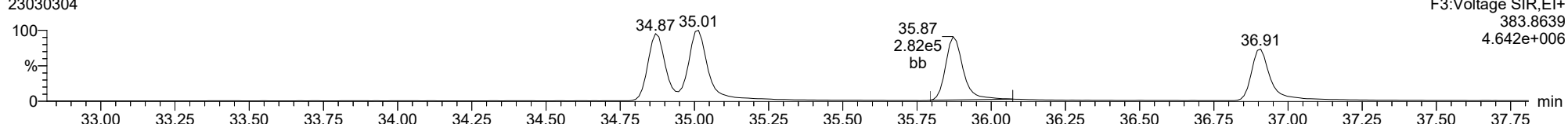
23030304



F3:Voltage SIR,EI+  
375.8178  
6.431e+004

**13C-234678-HxCDF**

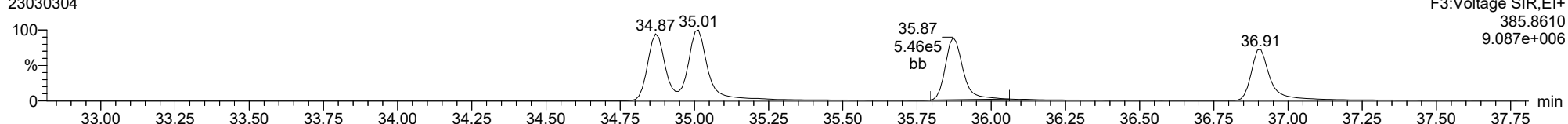
23030304



F3:Voltage SIR,EI+  
383.8639  
4.642e+006

**13C-234678-HxCDF**

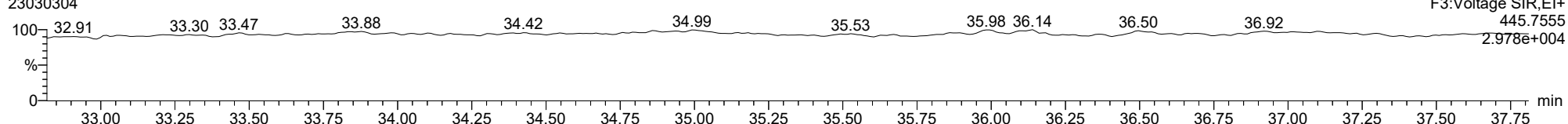
23030304



F3:Voltage SIR,EI+  
385.8610  
9.087e+006

**FUNCTION3 OCDPE**

23030304

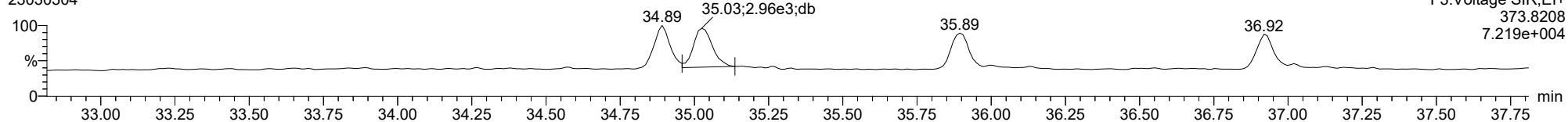


F3:Voltage SIR,EI+  
445.7555  
2.978e+004

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

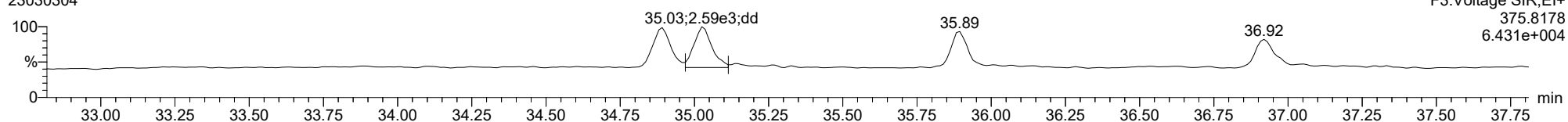
**123678-HxCDF**

23030304



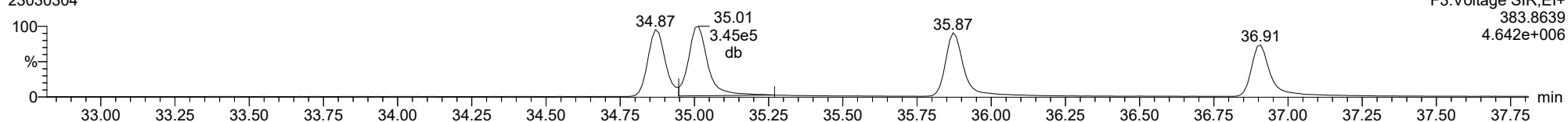
**123678-HxCDF**

23030304



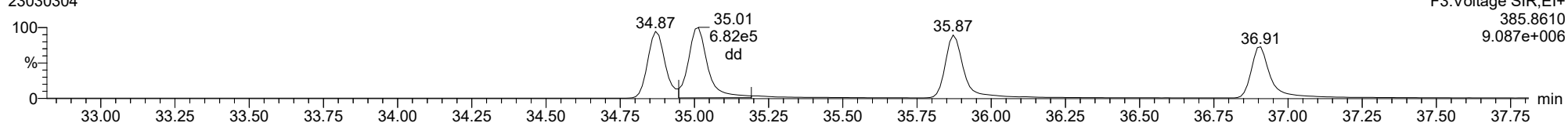
**13C-123678-HxCDF**

23030304



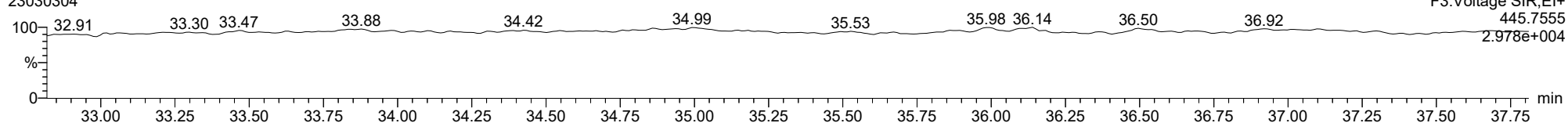
**13C-123678-HxCDF**

23030304



**FUNCTION3 OCDPE**

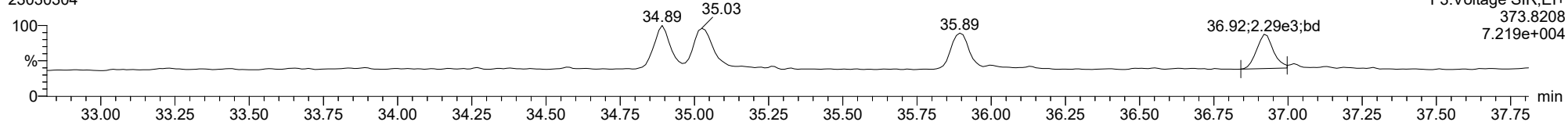
23030304



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

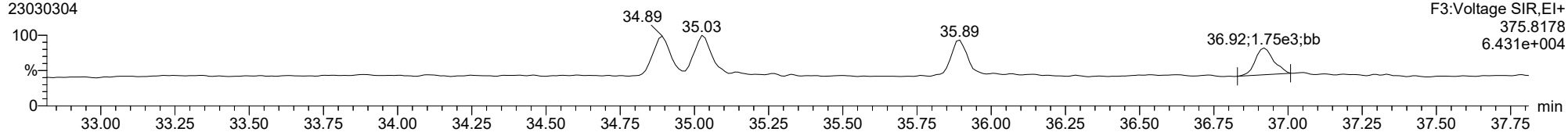
**123789-HxCDF**

23030304



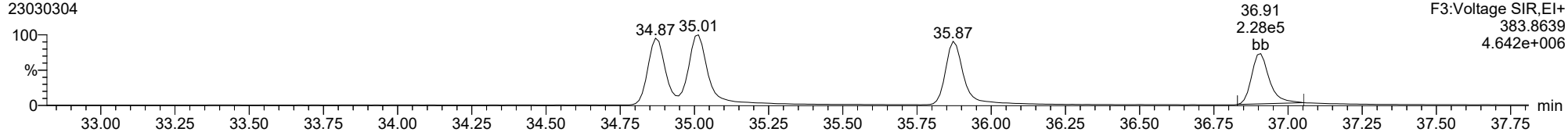
**123789-HxCDF**

23030304



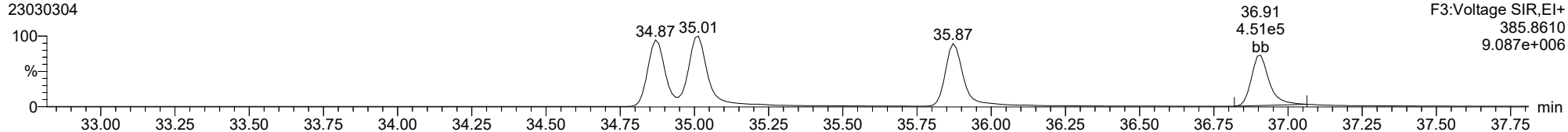
**13C-123789-HxCDF**

23030304



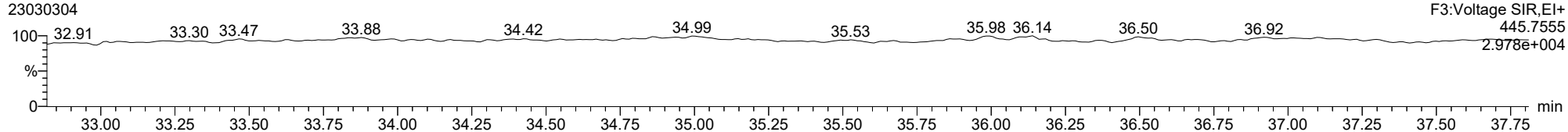
**13C-123789-HxCDF**

23030304



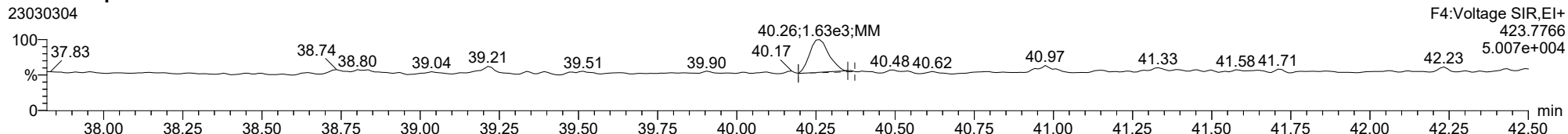
**FUNCTION3 OCDPE**

23030304

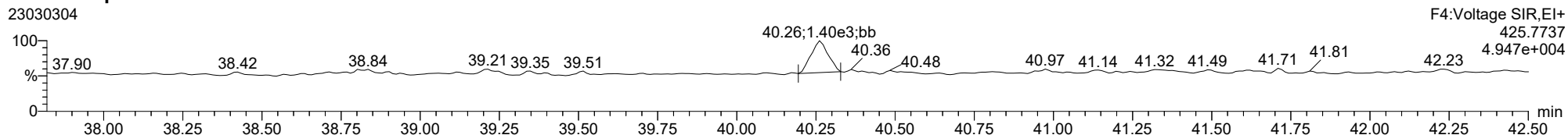


ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

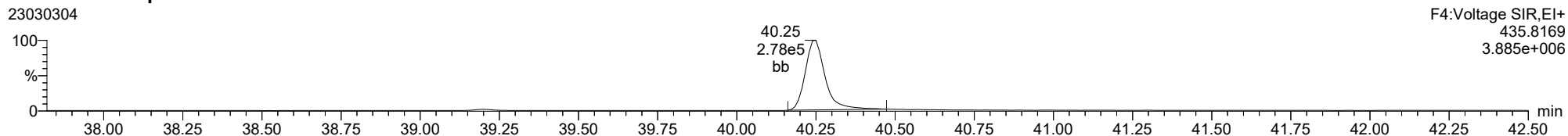
**1234678-HpCDD**



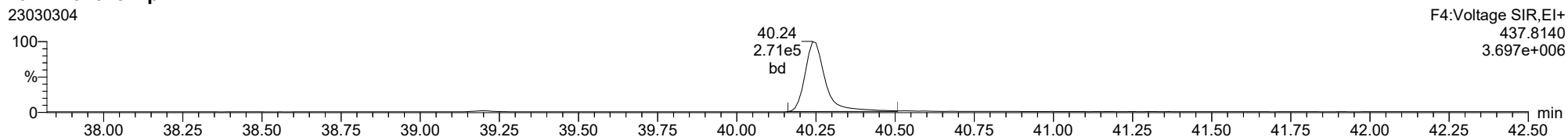
**1234678-HpCDD**



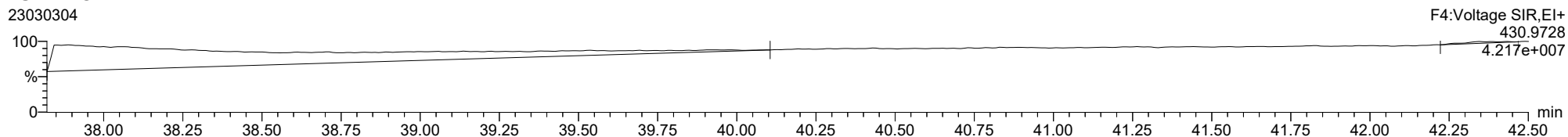
**13C-1234678-HpCDD**



**13C-1234678-HpCDD**



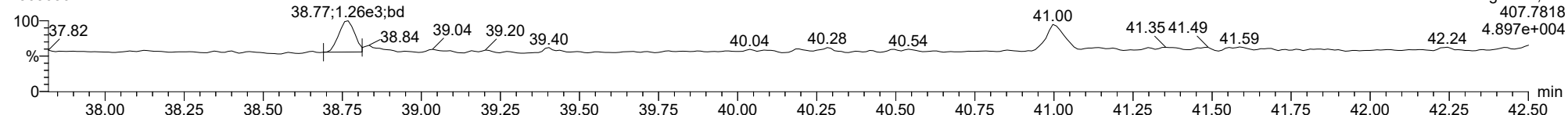
**FUNCTION4 PFK**



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

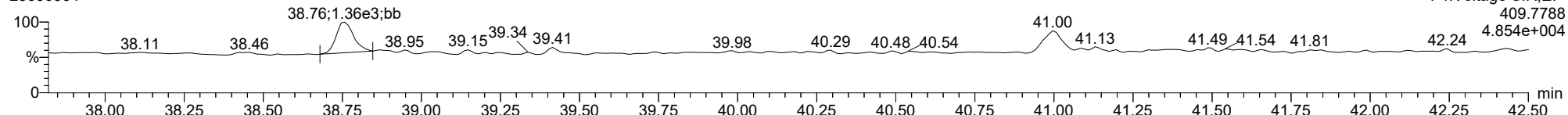
**1234678-HpCDF**

23030304



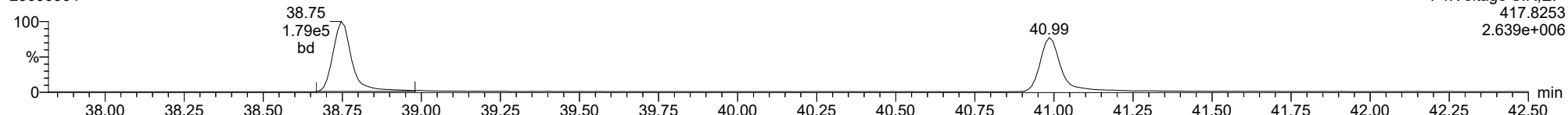
**1234678-HpCDF**

23030304



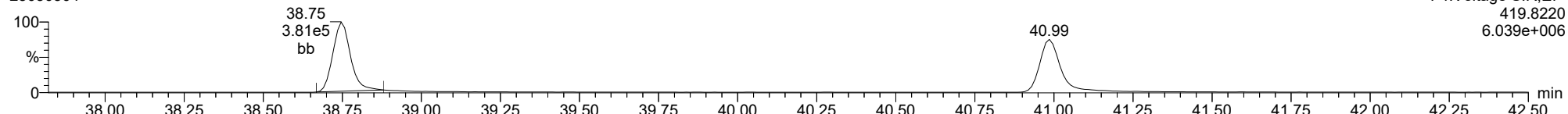
**13C-1234678-HpCDF**

23030304



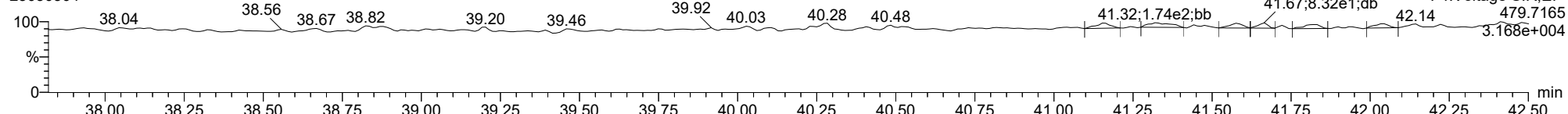
**13C-1234678-HpCDF**

23030304



**FUNCTION4 NCDPE**

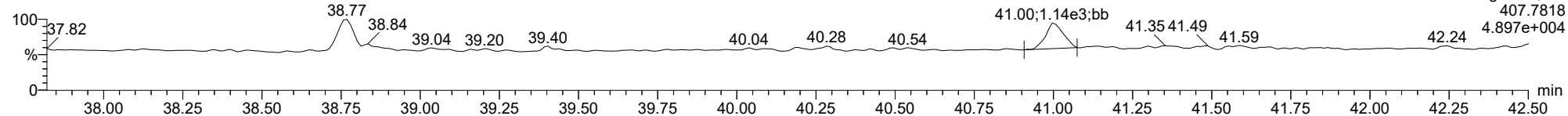
23030304



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

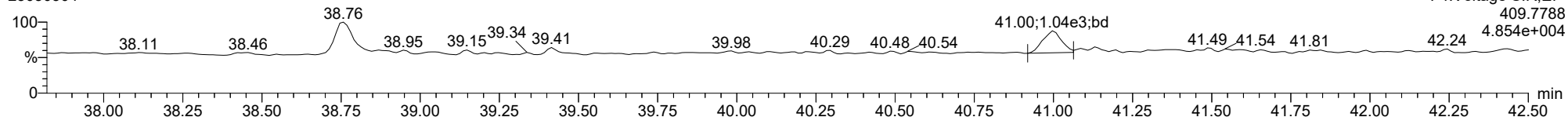
**1234789-HpCDF**

23030304



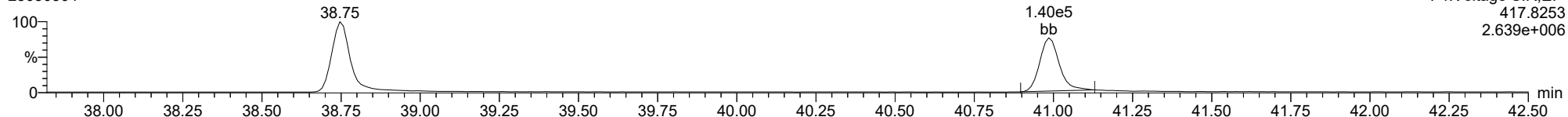
**1234789-HpCDF**

23030304



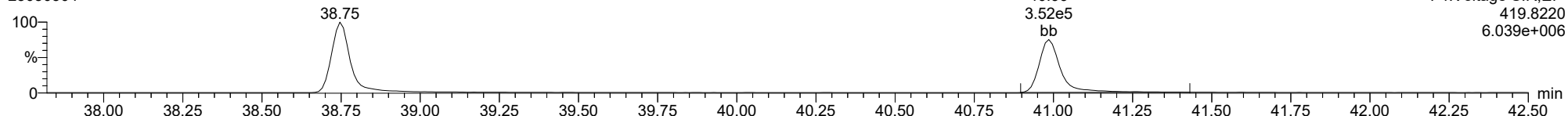
**13C-1234789-HpCDF**

23030304



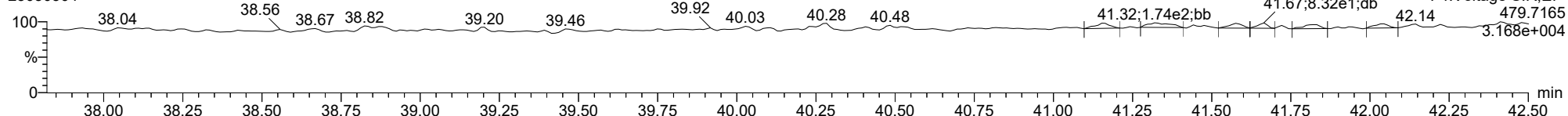
**13C-1234789-HpCDF**

23030304



**FUNCTION4 NCDPE**

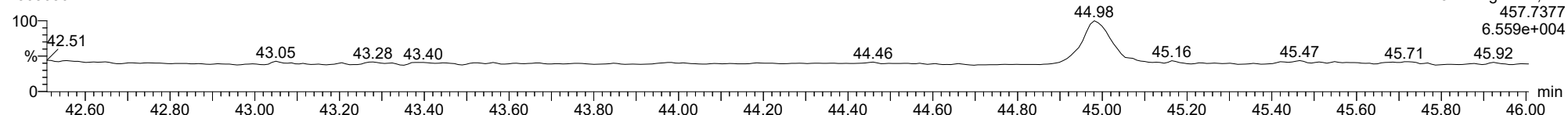
23030304



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

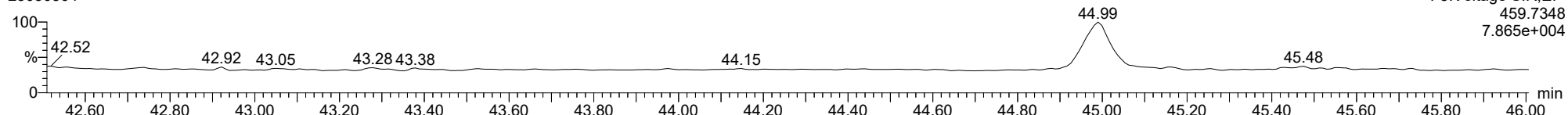
**OCDD**

23030304



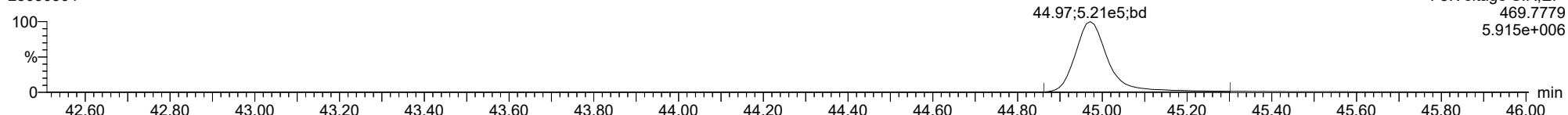
**OCDD**

23030304



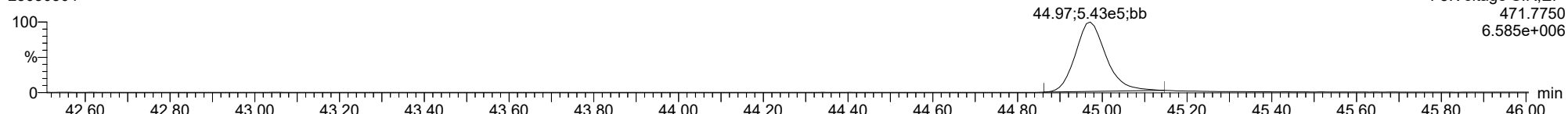
**13C-OCDD**

23030304



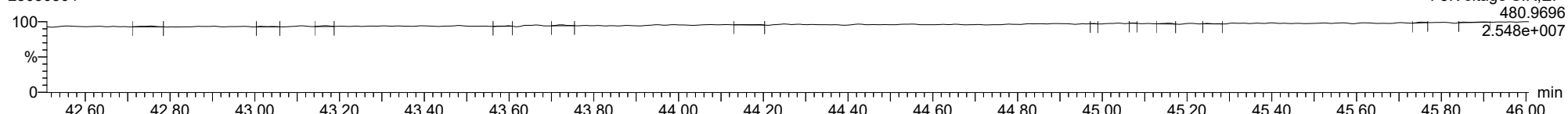
**13C-OCDD**

23030304



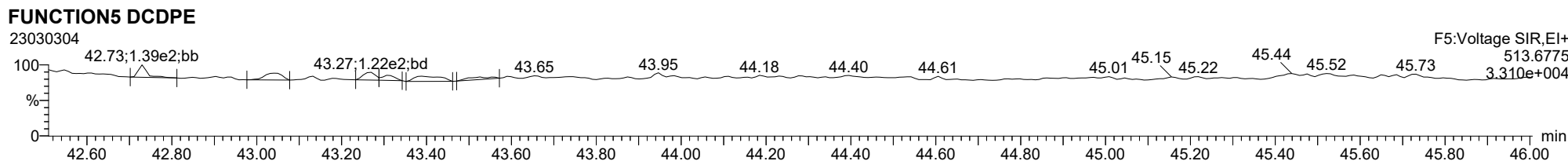
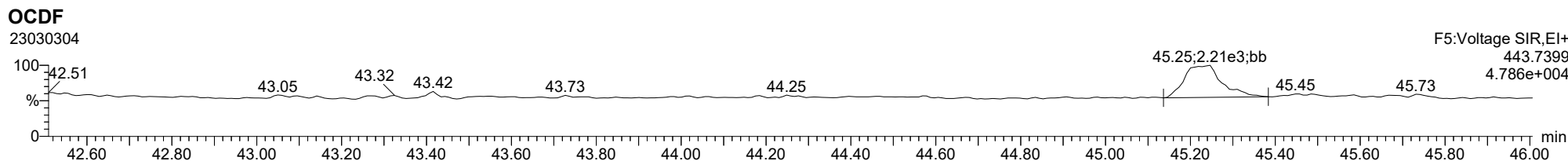
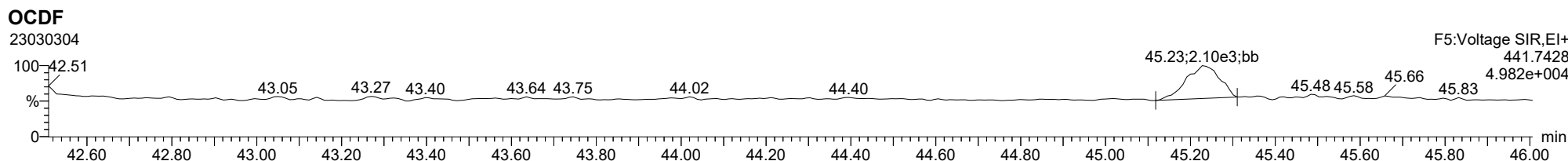
**FUNCTION5 PFK**

23030304





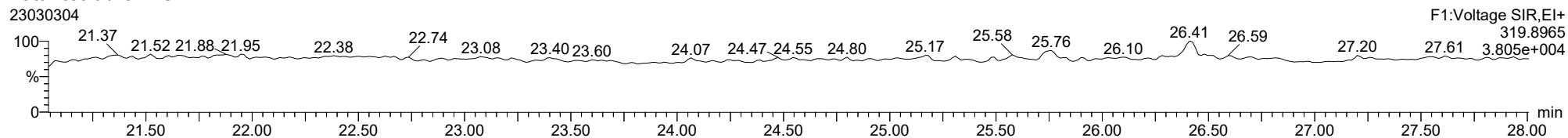
ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

**Total-tetradioxins**

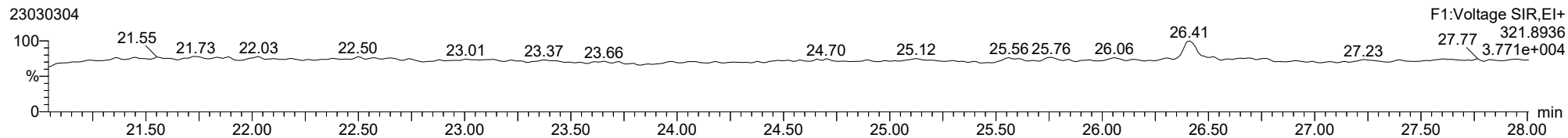
23030304



F1:Voltage SIR,EI+  
319.8965

**Total-tetradioxins**

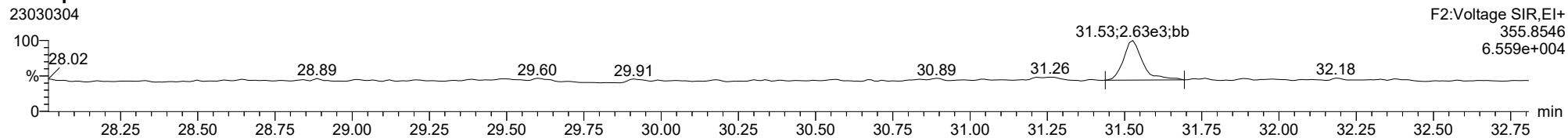
23030304



F1:Voltage SIR,EI+  
321.8936

**Total-pentadioxins**

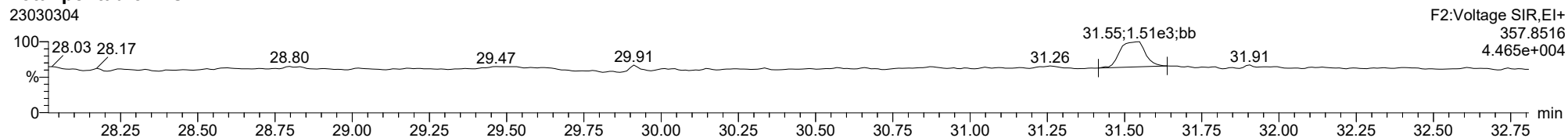
23030304



F2:Voltage SIR,EI+  
355.8546  
6.559e+004

**Total-pentadioxins**

23030304

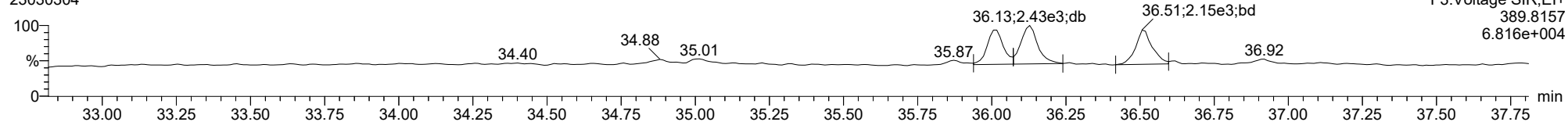


F2:Voltage SIR,EI+  
357.8516  
4.465e+004

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

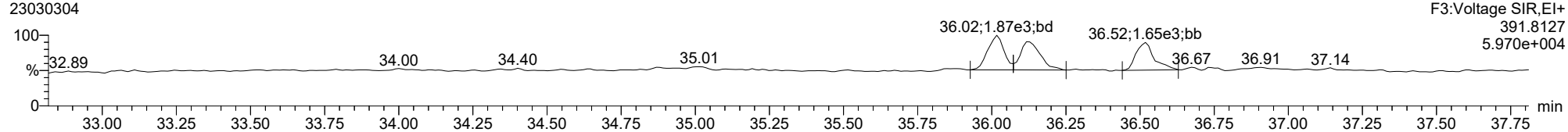
**Total-hexadioxins**

23030304



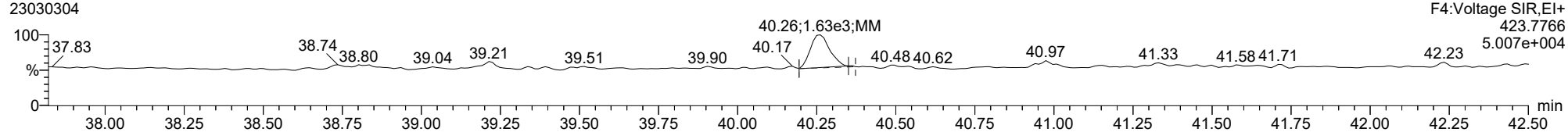
**Total-hexadioxins**

23030304



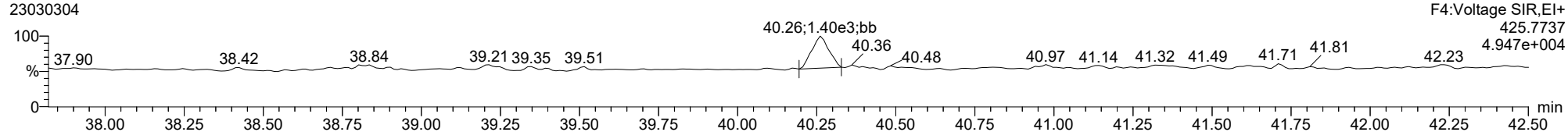
**Total-heptadioxins**

23030304



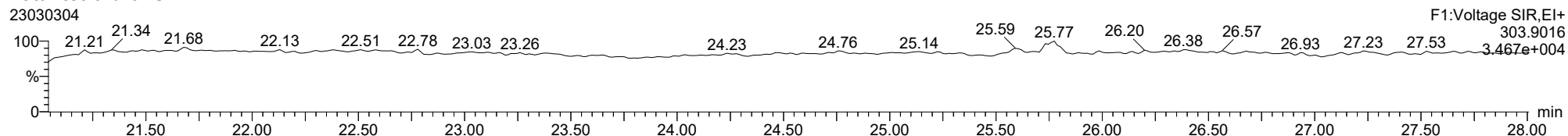
**Total-heptadioxins**

23030304

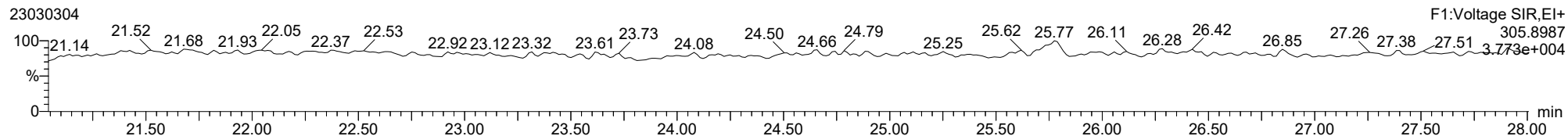


ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

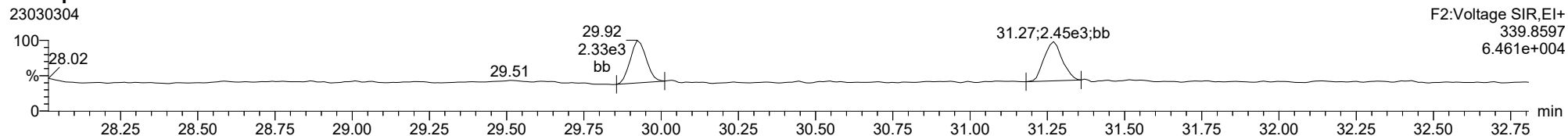
**Total-tetrafurans**



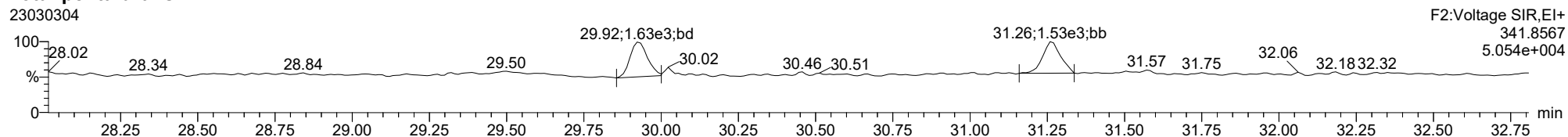
**Total-tetrafurans**



**Total-pentafurans**



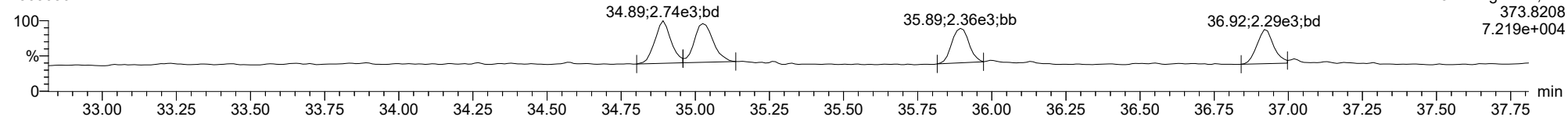
**Total-pentafurans**



ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

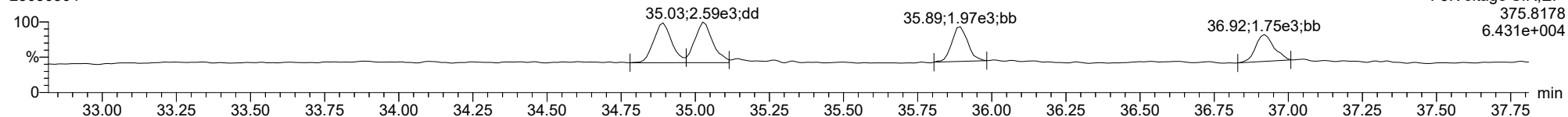
**Total-hexafurans**

23030304



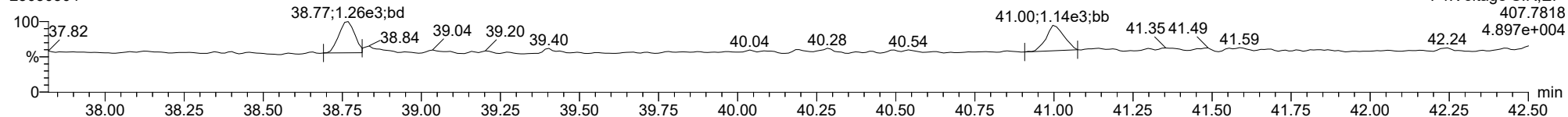
**Total-hexafurans**

23030304



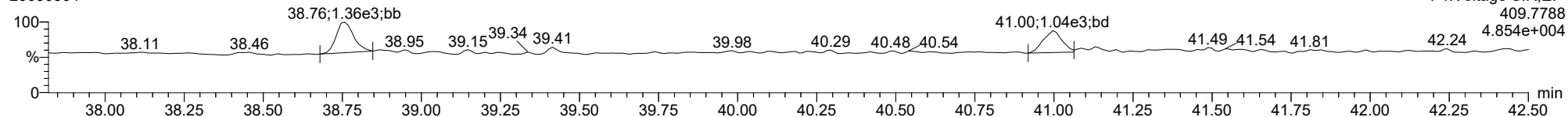
**Total-heptafurans**

23030304



**Total-heptafurans**

23030304



Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:10 Pacific Standard Time

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** CS1CW, **Name:** 23030305, **Date:** 03-Mar-2023, **Time:** 12:23:58, **Conditions:** AUTOSPEC01, **User:** pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	1.705e3	2.516e3	0.702	0.678	0.770	886	1799	2.34e4	3.87e4	26.4	21.5	NO	bb	MM	0.494
12378-PeCDF	29.933	1.000	5.914e3	4.099e3	0.679	1.442	1.550	1151	1276	9.10e4	6.48e4	79.1	50.8	NO	bb	bb	2.168
23478-PeCDF	31.270	1.000	7.974e3	4.958e3	0.786	1.608	1.550	1151	1276	1.22e5	6.97e4	106.1	54.6	NO	bb	bb	2.386
123478-HxCDF	34.891	1.000	1.063e4	7.851e3	1.166	1.354	1.240	1046	1170	1.58e5	1.17e5	151.4	100.1	NO	bd	bd	2.532
234678-HxCDF	35.894	1.000	1.057e4	7.802e3	1.140	1.354	1.240	1046	1170	1.51e5	1.18e5	143.9	100.6	NO	bb	bb	2.503
123678-HxCDF	35.036	1.001	1.161e4	8.676e3	1.091	1.339	1.240	1046	1170	1.53e5	1.27e5	146.1	108.8	NO	dd	dd	2.416
123789-HxCDF	36.930	1.001	8.482e3	6.693e3	1.137	1.267	1.240	1046	1170	1.18e5	8.92e4	112.7	76.2	NO	bd	bb	2.462
1234678-HpCDF	38.768	1.000	7.253e3	6.596e3	1.003	1.100	1.050	811	627	1.05e5	9.73e4	128.9	155.1	NO	bb	bb	2.680
1234789-HpCDF	41.008	1.000	5.116e3	5.234e3	0.953	0.978	1.050	811	627	7.22e4	7.17e4	89.0	114.3	NO	bb	bb	2.342
OCDF	45.237	1.006	5.981e3	6.798e3	0.778	0.880	0.890	709	890	6.92e4	8.13e4	97.6	91.3	NO	MM	bd	4.559
2378-TCDD	26.424	1.001	2.272e3	2.723e3	1.149	0.834	0.770	1286	820	3.35e4	3.73e4	26.0	45.5	NO	bb	bb	0.486
12378-PeCDD	31.538	1.001	7.831e3	5.061e3	1.022	1.548	1.550	902	618	1.00e5	7.05e4	111.4	114.0	NO	bb	bd	2.348
123478-HxCDD	36.016	1.000	7.381e3	5.875e3	0.996	1.256	1.240	655	843	1.17e5	9.68e4	178.2	114.9	NO	bd	bd	2.415
123678-HxCDD	36.139	1.001	9.152e3	7.340e3	1.001	1.247	1.240	655	843	1.26e5	9.90e4	192.8	117.4	NO	db	dd	2.494
123789-HxCDD	36.518	1.011	7.480e3	5.936e3	0.907	1.260	1.240	655	843	1.06e5	8.62e4	162.4	102.3	NO	bd	bd	2.440
1234678-HpCDD	40.272	1.001	6.283e3	5.832e3	1.039	1.077	1.050	694	917	8.98e4	8.16e4	129.4	89.0	NO	bb	bd	2.337
OCDD	44.999	1.000	8.578e3	9.676e3	0.920	0.887	0.890	635	634	9.84e4	1.12e5	154.9	175.9	NO	bd	bb	5.505
13C-2378-TCDF	25.760	1.007	5.230e5	6.960e5	1.620	0.752	0.770	2566	1723	7.68e6	1.02e7	2994.2	5911.4	NO	bb	bb	98.043
13C-12378-PeCDF	29.922	1.169	4.082e5	2.718e5	1.240	1.502	1.550	3092	2294	5.44e6	3.64e6	1758.1	1584.9	NO	bd	bb	71.437
13C-23478-PeCDF	31.259	1.222	4.106e5	2.788e5	1.118	1.473	1.550	3092	2294	5.91e6	4.02e6	1912.5	1751.3	NO	bb	bb	80.373
13C-123478-HxCDF	34.880	0.955	2.117e5	4.140e5	1.168	0.511	0.510	1778	2186	3.18e6	6.21e6	1786.5	2841.3	NO	bd	bd	93.801
13C-123678-HxCDF	35.014	0.959	2.754e5	4.947e5	1.386	0.557	0.510	1778	2186	3.40e6	6.43e6	1911.3	2941.0	NO	db	db	97.276
13C-234678-HxCDF	35.882	0.983	2.122e5	4.318e5	1.129	0.491	0.510	1778	2186	3.04e6	5.98e6	1709.4	2734.1	NO	bb	bd	99.880
13C-123789-HxCDF	36.908	1.011	1.853e5	3.568e5	0.932	0.519	0.510	1778	2186	2.62e6	5.01e6	1471.0	2293.6	NO	bb	bb	101.893
13C-1234678-HpCDF	38.757	1.062	1.579e5	3.573e5	0.895	0.442	0.440	2049	3174	2.36e6	5.45e6	1151.3	1718.3	NO	bb	bb	100.794
13C-1234789-HpCDF	40.997	1.123	1.372e5	3.264e5	0.770	0.420	0.440	2049	3174	1.74e6	3.92e6	851.0	1236.7	NO	bd	bd	105.482
13C-1234-TCDD	25.591	0.000	3.429e5	4.245e5	1.000	0.808	0.770	2519	1748	5.22e6	6.49e6	2072.6	3712.2	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	3.982e5	4.964e5	1.152	0.802	0.770	2519	1748	5.51e6	6.93e6	2188.2	3962.8	NO	bb	bb	101.152
13C-12378-PeCDD	31.515	1.232	3.242e5	2.131e5	0.829	1.521	1.550	1586	877	4.46e6	2.78e6	2809.5	3168.1	NO	bb	bd	84.489
13C-123478-HxCDD	36.005	0.986	3.100e5	2.413e5	0.995	1.285	1.240	2517	1649	4.83e6	3.77e6	1920.9	2283.3	NO	bd	bd	97.050
13C-123678-HxCDD	36.117	0.989	3.700e5	2.908e5	1.157	1.273	1.240	2517	1649	5.06e6	4.03e6	2012.2	2442.3	NO	db	db	100.049
13C-1234678-HpCDD	40.250	1.102	2.556e5	2.433e5	0.840	1.051	1.050	2183	1602	3.48e6	3.29e6	1594.9	2052.3	NO	bb	bb	103.999
13C-OCDD	44.980	1.232	3.386e5	3.823e5	0.767	0.886	0.890	3187	1733	3.80e6	4.27e6	1193.7	2462.5	NO	bb	bb	164.498
13C-123789-HxCDD	36.507	0.000	3.194e5	2.515e5	1.000	1.270	1.240	2517	1649	4.46e6	3.59e6	1770.5	2177.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	5.065e3		1.288			2040		7.28e4		35.7			bb		0.513

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:10 Pacific Standard Time

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	886	1799								
1289-TCDF					0.678		0.770	886	1799								
13468-PECDF					1.246		1.550	811	1221								
12389-PECDF					0.496		1.550	1151	1276								
123468-HXCDF					1.169		1.240	1046	1170								
1368-TCDD					1.015		0.770	1286	820								
1289-TCDD					0.909		0.770	1286	820								
12479-PECDD					2.301		1.550	902	618								
12389-PECDD					1.184		1.550	902	618								
124679-HXCDD					1.115		1.240	655	843								
1234679-HPCDD					1.137		1.050	694	917								
Total-tetrafurans			1.705e3		0.727			886		2.34e4							0.494
Total-penta1			0.000e0					811		0.00e0							
Total-pentafurans			1.389e4		0.654			1151		2.13e5							4.554
Total-hexafurans			4.139e4		1.141			1046		5.82e5							9.938
Total-heptafurans			1.237e4		0.978			811		1.77e5							5.023
Total-Furans			7.533e4		0.922			886		1.06e6							24.566
Total-tetradoxins			2.272e3		1.024			1286		3.35e4							0.486
Total-pentadoxins			7.831e3		1.502			902		1.00e5							2.348
Total-hexadoxins			2.401e4		1.005			655		3.49e5							7.349
Total-heptadoxins			6.283e3		1.088			694		8.98e4							2.337
Total-Dioxins			4.898e4		1.130			1286		6.72e5							18.025
Total-TEQ			1.243e5					1286		1.74e6							42.592
FUNCTION1 PFK			0.000e0					501375		0.00e0							
FUNCTION2 PFK			7.687e6					300953		7.99e6							0.000
FUNCTION3 PFK			1.081e7					473463		1.95e7							0.000
FUNCTION4 PFK			1.035e7					332160		2.87e6							
FUNCTION5 PFK			6.101e5					195111		8.38e5							
FUNCTION1 HXCD...			6.739e2					611		6.36e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			7.361e2					923		1.83e4							0.000
FUNCTION3 OCDPE			2.008e2					596		2.61e3							0.000
FUNCTION4 NCDPE			9.397e1					539		1.40e3							0.000
FUNCTION5 DCDPE			1.677e2					561		3.39e3							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:10 Pacific Standard Time

**Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50**

**Calibration: T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27**

**ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk**

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
2	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
3	Total-hexafurans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
4	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
5	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
2	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168
3	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494
4	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
5	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
6	Total-hexa-furans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
7	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
8	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532
9	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
10	OCDF	45.24	5.981e3	6.798e3	0.778	0.88	0.89	97.6	YES	NO	MM	bd	4.559
11	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
2	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
3	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:10 Pacific Standard Time

**ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk**

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486
2	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
3	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
4	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415
5	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348
6	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337
7	OCDD	45.00	8.578e3	9.676e3	0.920	0.89	0.89	154.9	YES	NO	bd	bb	5.505

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168
3	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494
4	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
5	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
6	Total-hexafurans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
7	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
8	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532
9	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
10	OCDF	45.24	5.981e3	6.798e3	0.778	0.88	0.89	97.6	YES	NO	MM	bd	4.559
11	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342
12	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486
13	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
14	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
15	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415
16	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348
17	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337
18	OCDD	45.00	8.578e3	9.676e3	0.920	0.89	0.89	154.9	YES	NO	bd	bb	5.505

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
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### PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.41	6.929e5					4.3	YES		bb		0.000
2	FUNCTION2 PFK	28.05	6.994e6					22.3	YES		bb		0.000

### PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.60	1.788e4					1.3	NO		bb		0.000
2	FUNCTION3 PFK	36.61	1.585e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	36.53	6.942e3					0.8	NO		bb		0.000
4	FUNCTION3 PFK	33.99	9.502e3					0.9	NO		bb		0.000
5	FUNCTION3 PFK	33.78	4.298e6					7.0	YES		db		0.000
6	FUNCTION3 PFK	33.15	6.467e6					29.8	YES		bd		0.000

### PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.85	1.035e7					8.6	YES		bb		

### PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.97	6.101e5					4.3	YES		bb		

### ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.27	8.033e1					1.9	NO		bb		0.000
2	FUNCTION1 HXCD...	24.98	2.706e2					3.4	YES		bb		0.000
3	FUNCTION1 HXCD...	22.17	1.286e2					2.0	NO		bb		0.000
4	FUNCTION1 HXCD...	21.47	8.089e1					1.9	NO		bb		0.000
5	FUNCTION1 HXCD...	21.17	1.135e2					1.3	NO		bb		0.000

### ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
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**ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk**

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.66	1.045e2					4.3	YES		db		0.000
2	FUNCTION2 HPCD...	32.58	1.134e2					3.0	NO		bd		0.000
3	FUNCTION2 HPCD...	31.88	7.272e1					1.9	NO		bb		0.000
4	FUNCTION2 HPCD...	30.71	7.070e1					1.8	NO		bb		0.000
5	FUNCTION2 HPCD...	30.13	1.134e2					2.5	NO		bb		0.000
6	FUNCTION2 HPCD...	28.92	7.142e1					2.0	NO		bb		0.000
7	FUNCTION2 HPCD...	28.66	9.983e1					2.2	NO		bb		0.000
8	FUNCTION2 HPCD...	28.24	9.016e1					2.1	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.50	2.008e2					4.4	YES		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.59	9.397e1					2.6	NO		bb		0.000

**ETHERS6**

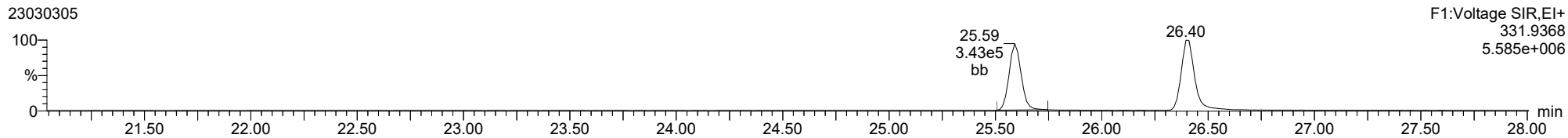
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.72	7.355e1					2.5	NO		bb		0.000
2	FUNCTION5 DCDPE	44.30	9.416e1					3.6	YES		bb		0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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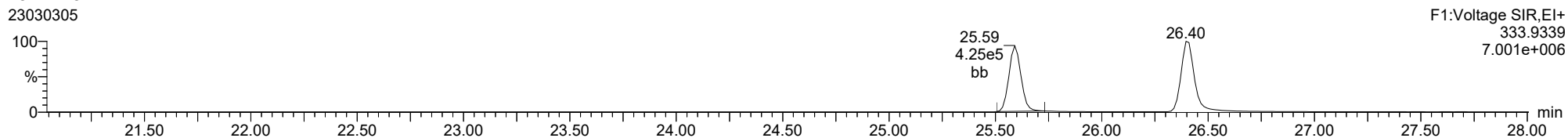
**13C-1234-TCDD**

23030305



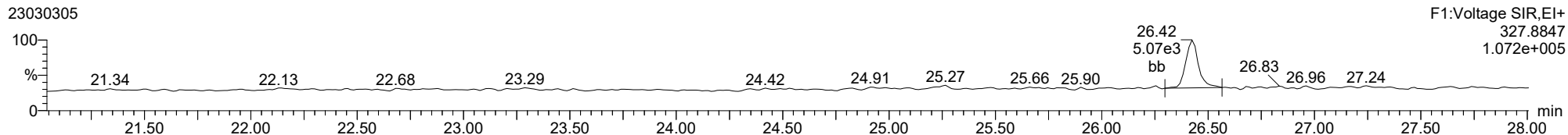
**13C-1234-TCDD**

23030305



**37CL-2378-TCDD**

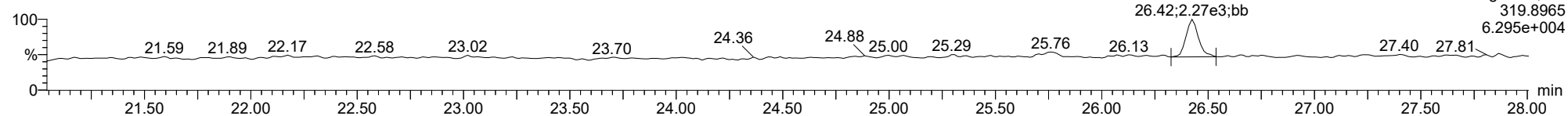
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

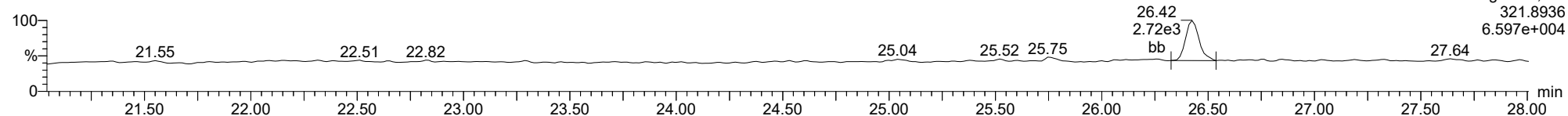
**2378-TCDD**

23030305



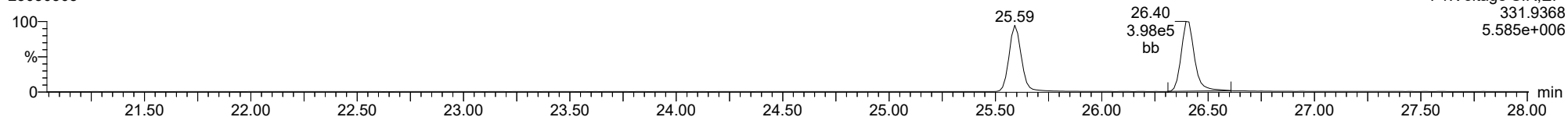
**2378-TCDD**

23030305



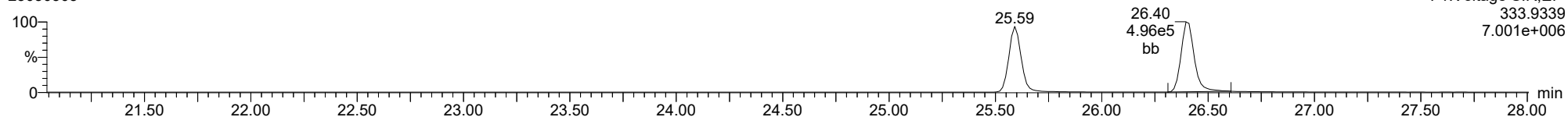
**13C-2378-TCDD**

23030305



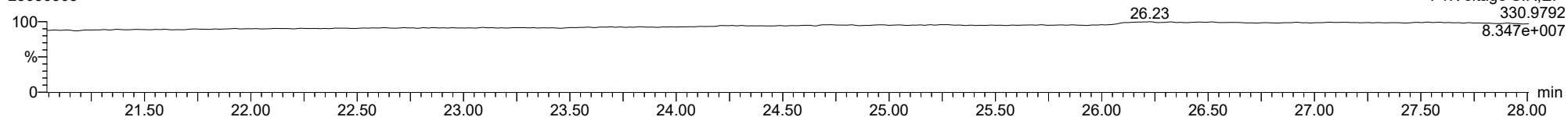
**13C-2378-TCDD**

23030305



**FUNCTION1 PFK**

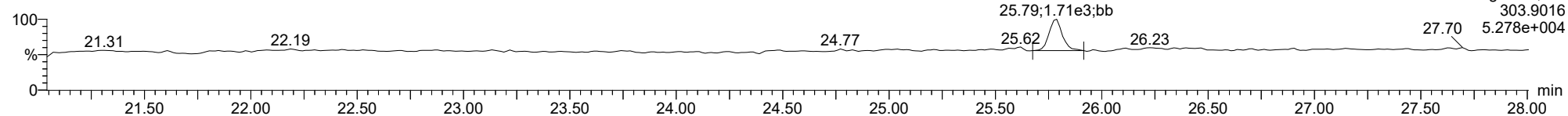
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

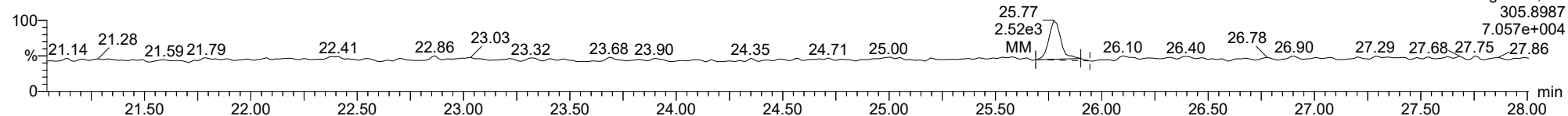
**2378-TCDF**

23030305



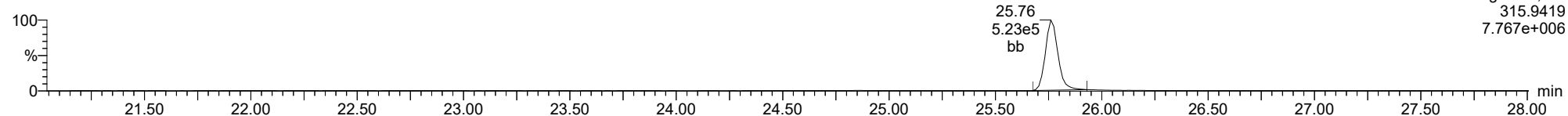
**2378-TCDF**

23030305



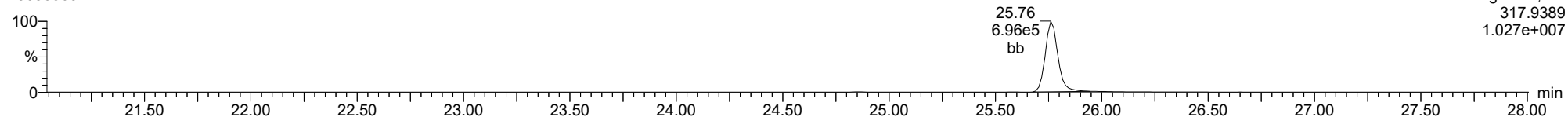
**13C-2378-TCDF**

23030305



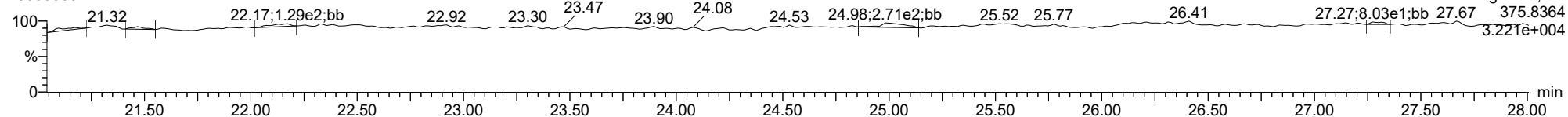
**13C-2378-TCDF**

23030305



**FUNCTION1 HXCDPE**

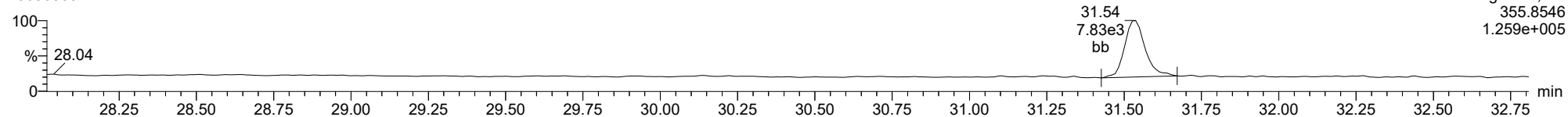
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

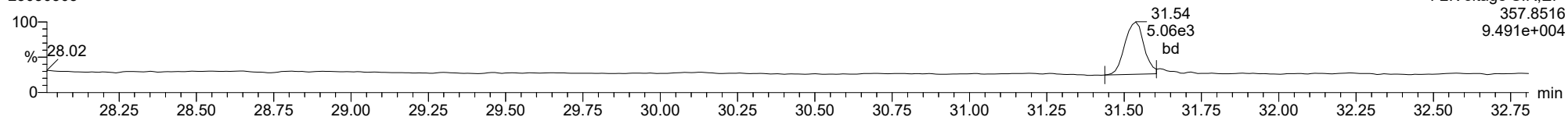
**12378-PeCDD**

23030305



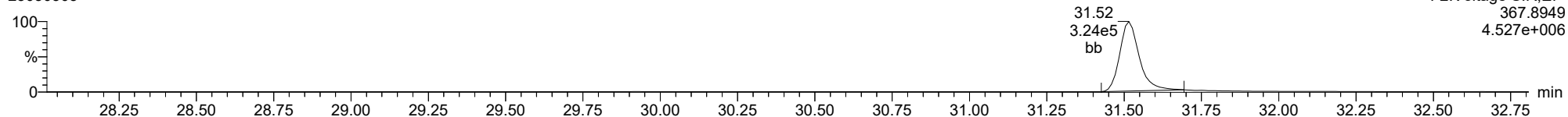
**12378-PeCDD**

23030305



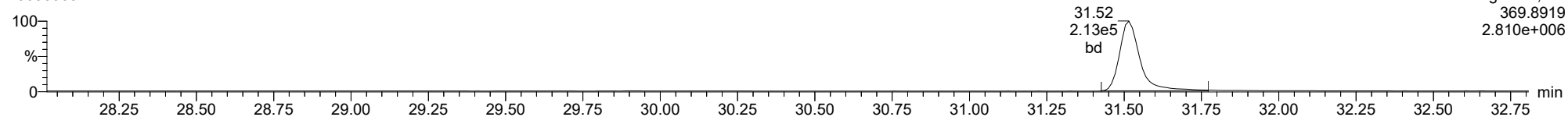
**13C-12378-PeCDD**

23030305



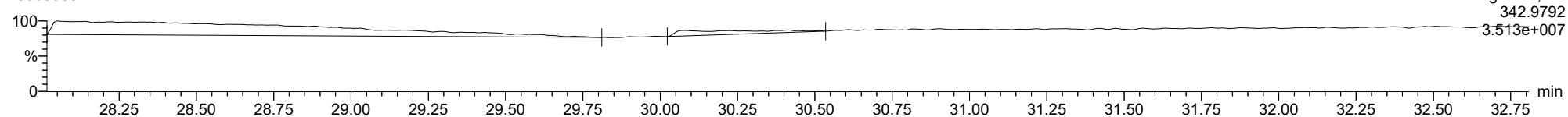
**13C-12378-PeCDD**

23030305



**FUNCTION2 PFK**

23030305

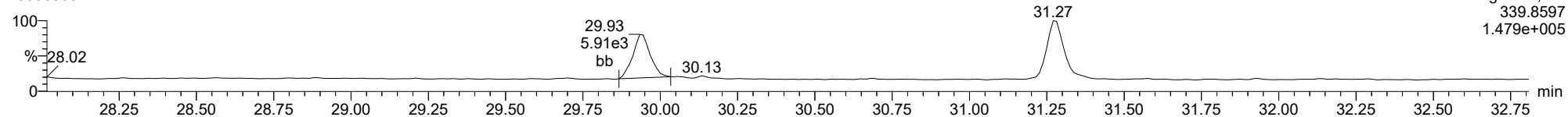




ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

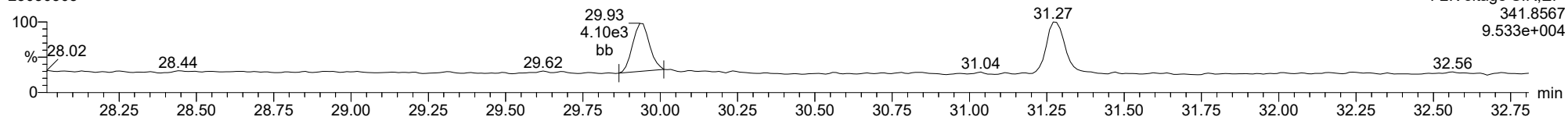
**12378-PeCDF**

23030305



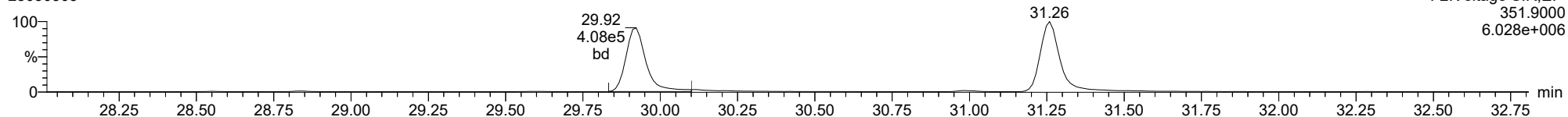
**12378-PeCDF**

23030305



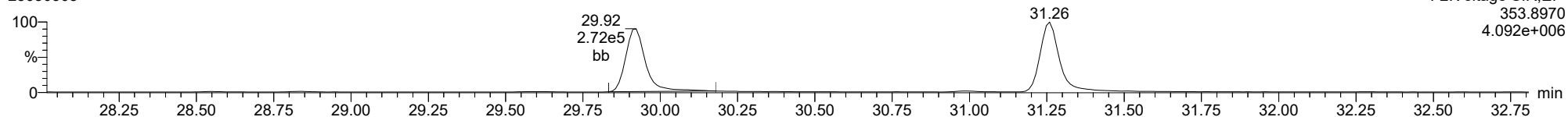
**13C-12378-PeCDF**

23030305



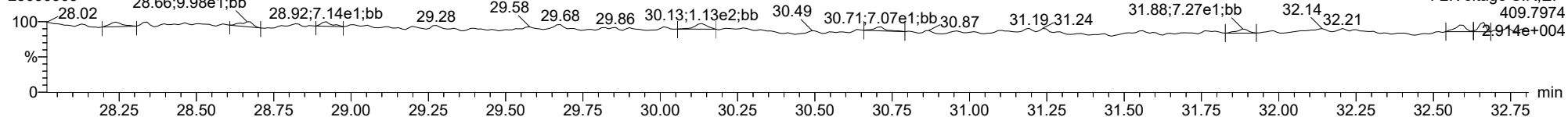
**13C-12378-PeCDF**

23030305



**FUNCTION2 HPCDPE**

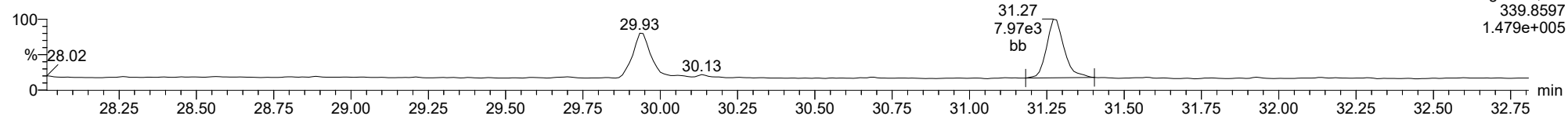
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

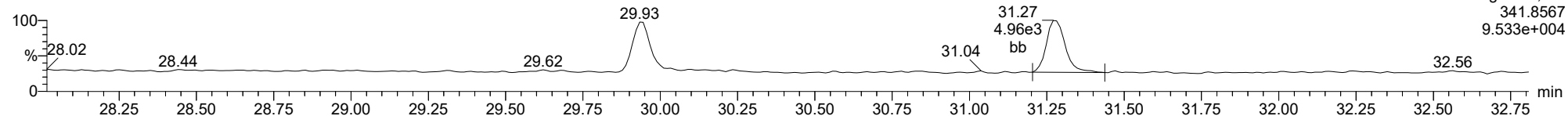
**23478-PeCDF**

23030305



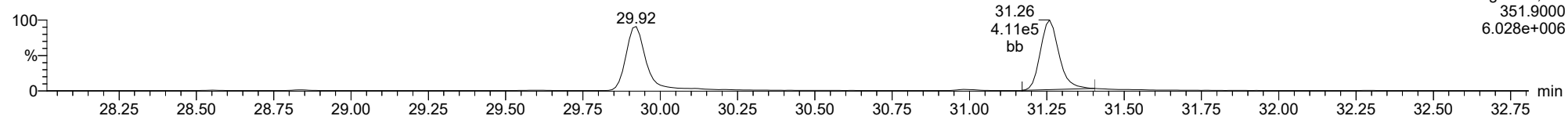
**23478-PeCDF**

23030305



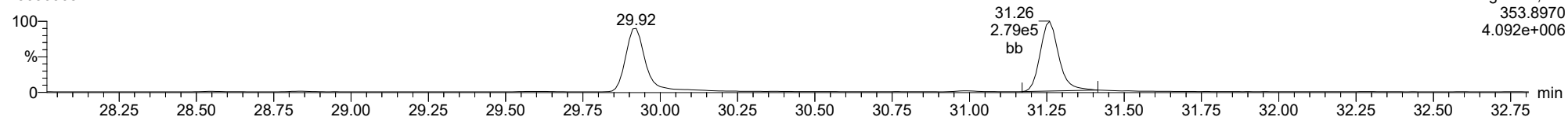
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23030305



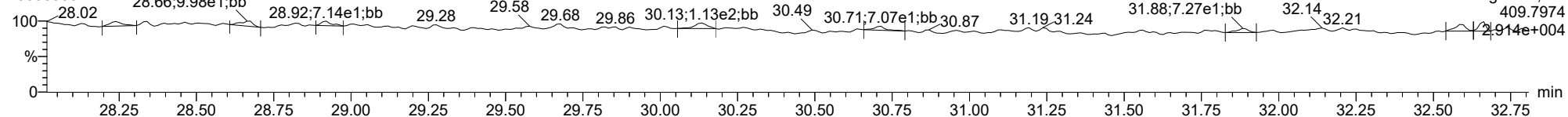
**13C-23478-PeCDF**

23030305



**FUNCTION2 HPCDPE**

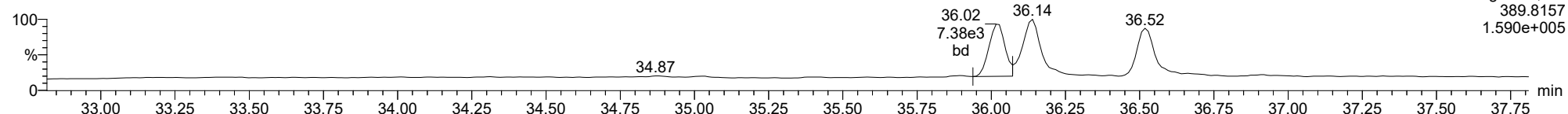
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

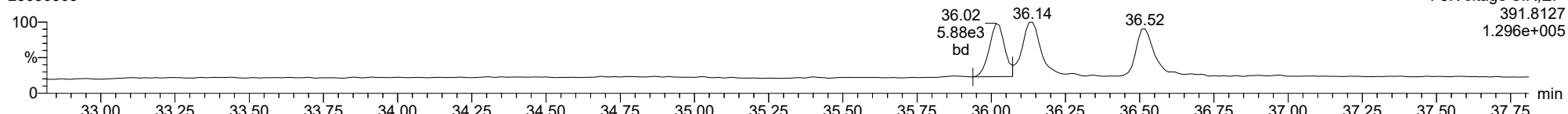
**123478-HxCDD**

23030305



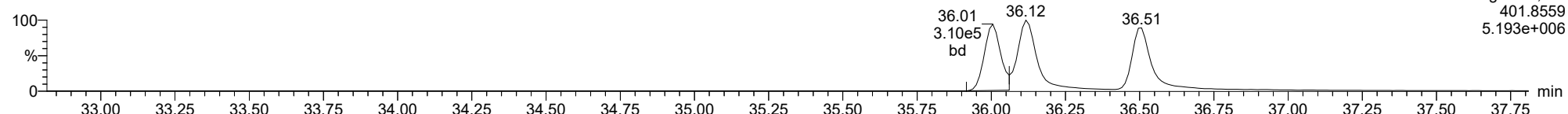
**123478-HxCDD**

23030305



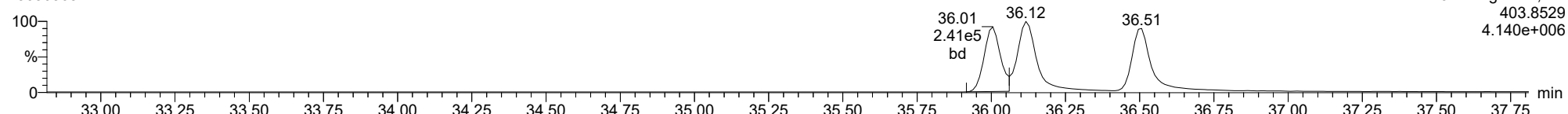
**13C-123478-HxCDD**

23030305



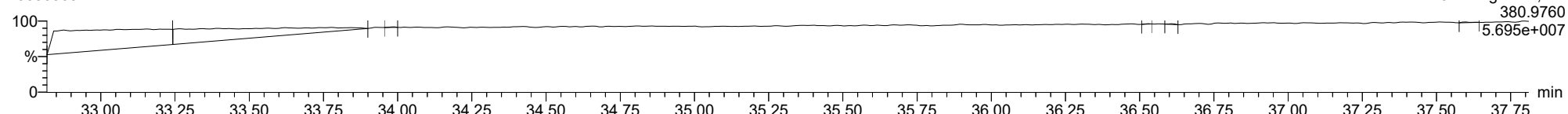
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23030305



**FUNCTION3 PFK**

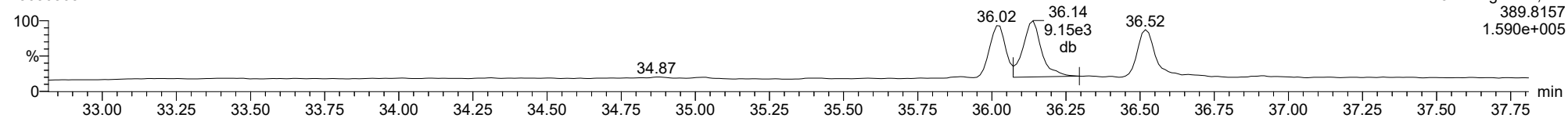
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

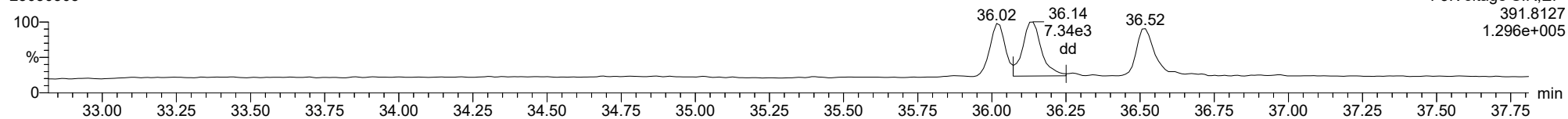
**123678-HxCDD**

23030305



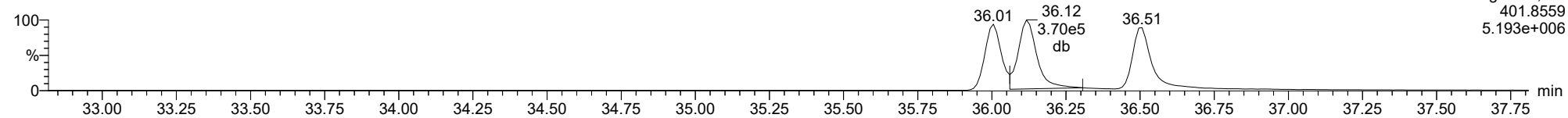
**123678-HxCDD**

23030305



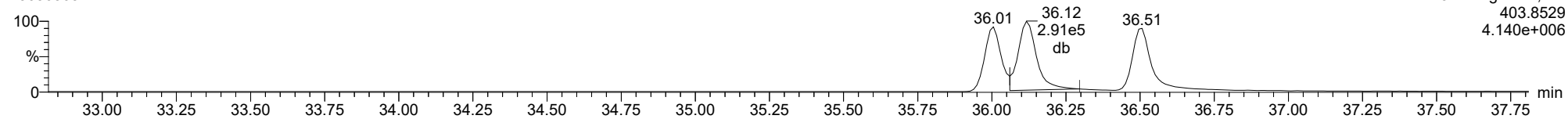
**13C-123678-HxCDD**

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**13C-123678-HxCDD**

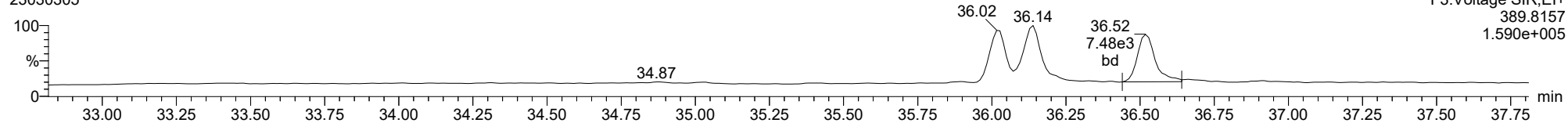
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

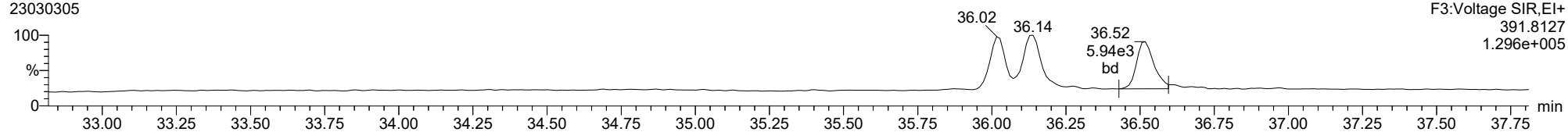
**123789-HxCDD**

23030305



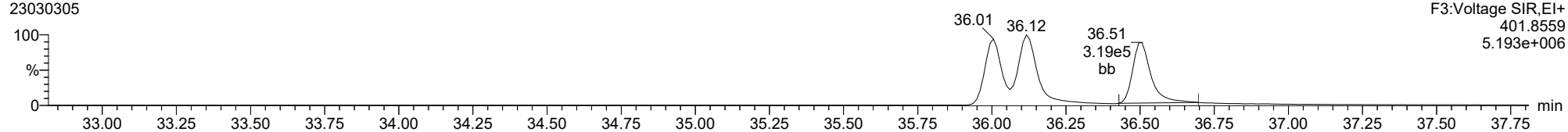
**123789-HxCDD**

23030305



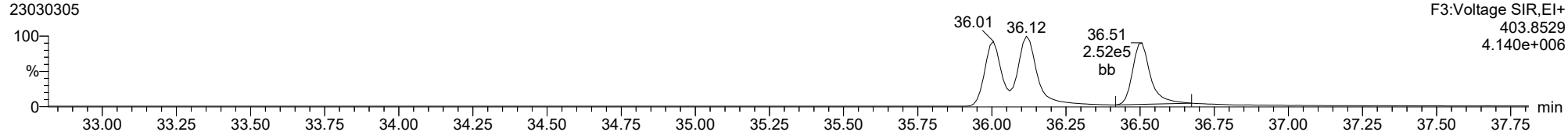
**13C-123789-HxCDD**

23030305



**13C-123789-HxCDD**

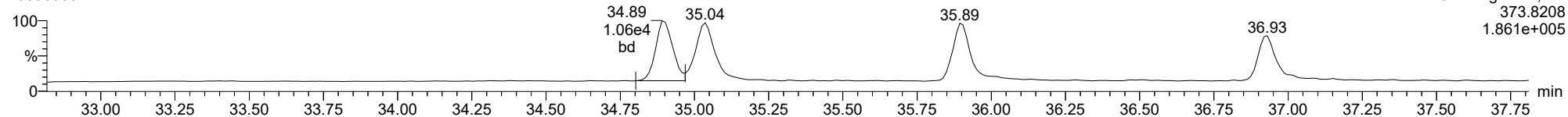
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

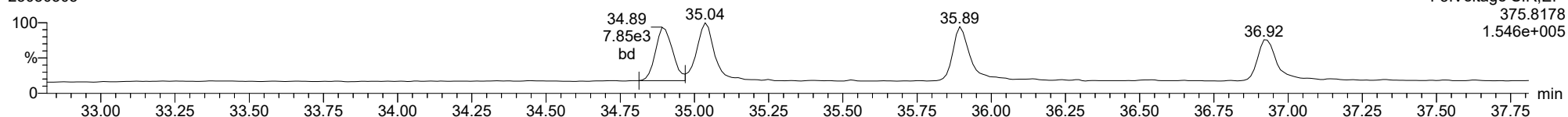
**123478-HxCDF**

23030305



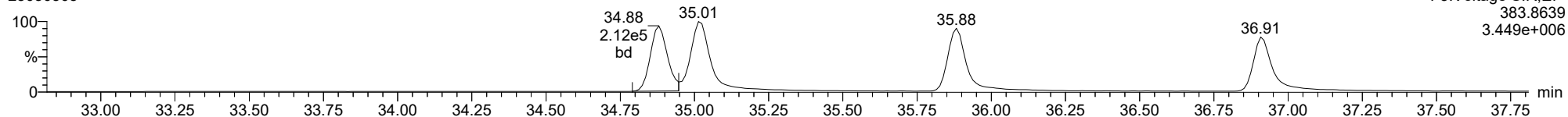
**123478-HxCDF**

23030305



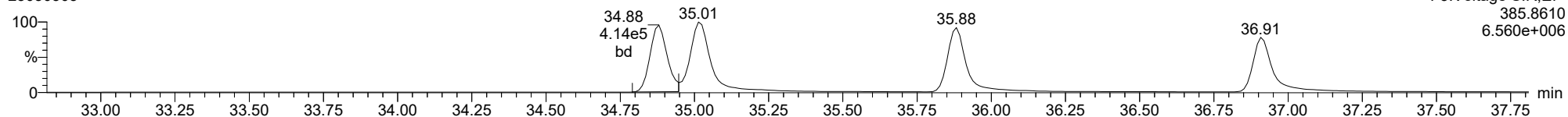
**13C-123478-HxCDF**

23030305



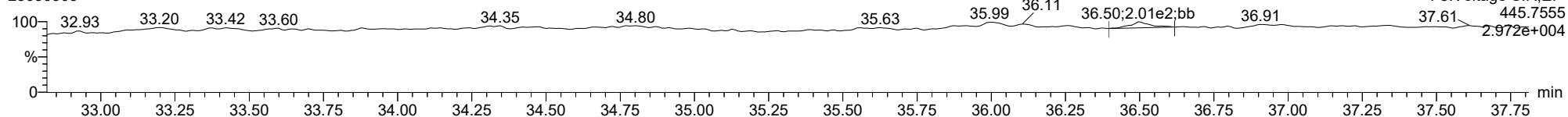
**13C-123478-HxCDF**

23030305



**FUNCTION3 OCDPE**

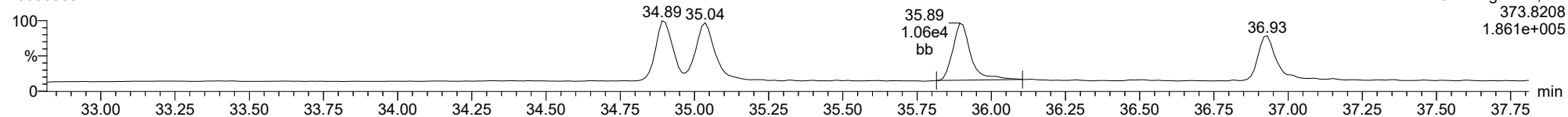
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

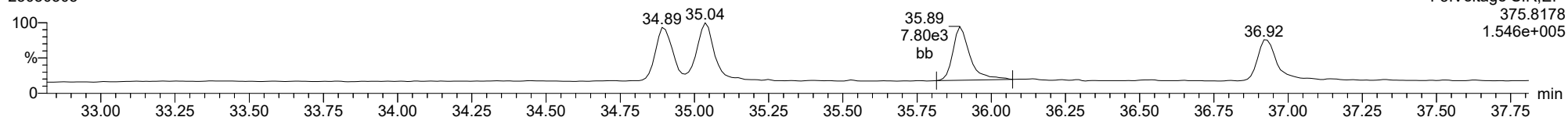
**234678-HxCDF**

23030305



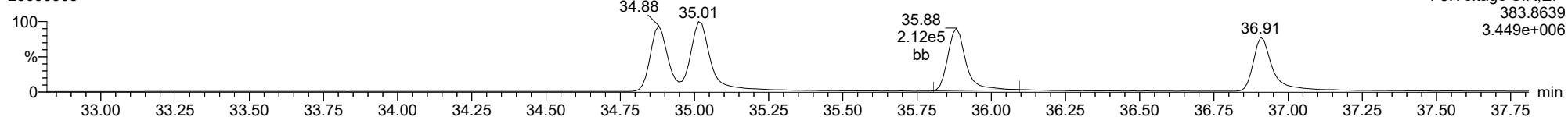
**234678-HxCDF**

23030305



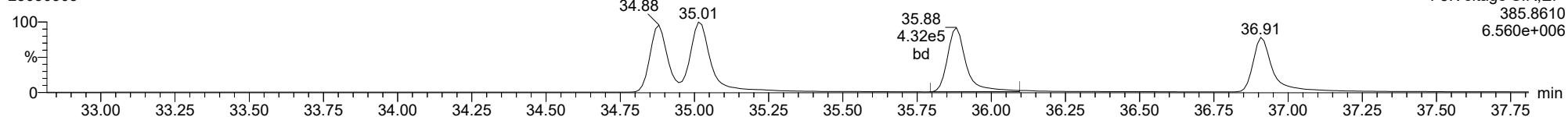
**13C-234678-HxCDF**

23030305



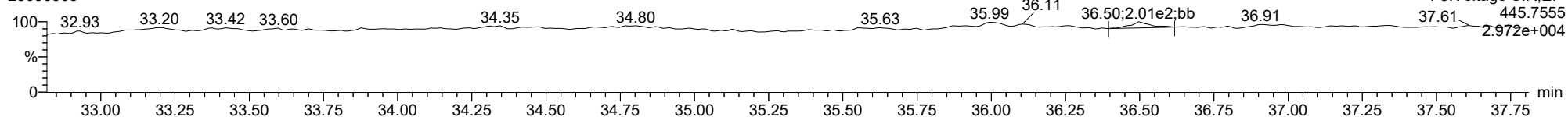
**13C-234678-HxCDF**

23030305



**FUNCTION3 OCDPE**

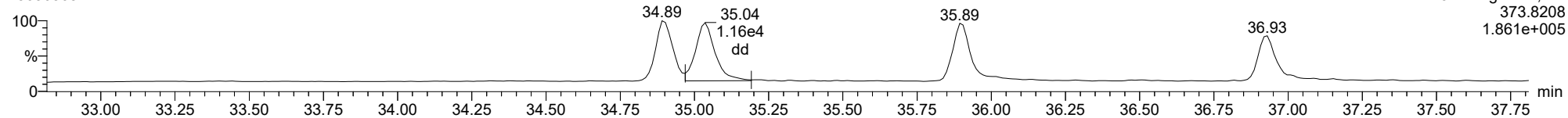
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

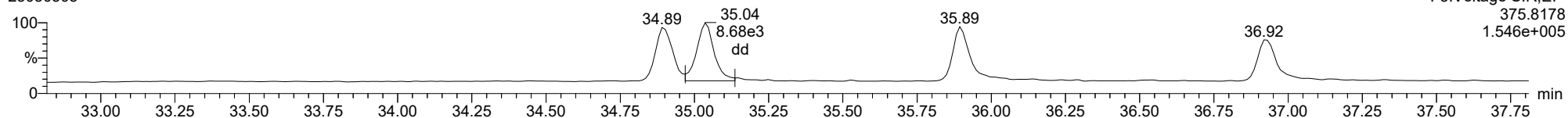
**123678-HxCDF**

23030305



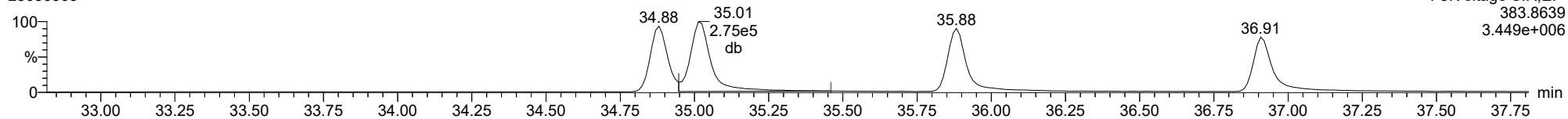
**123678-HxCDF**

23030305



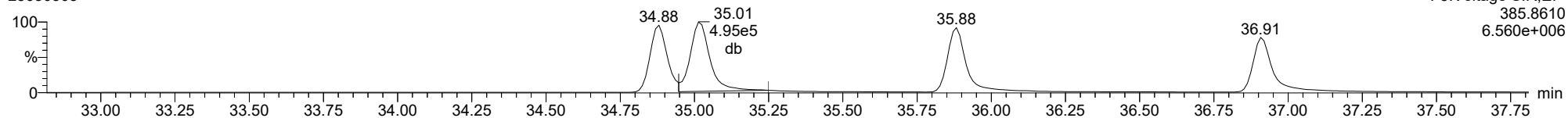
**13C-123678-HxCDF**

23030305



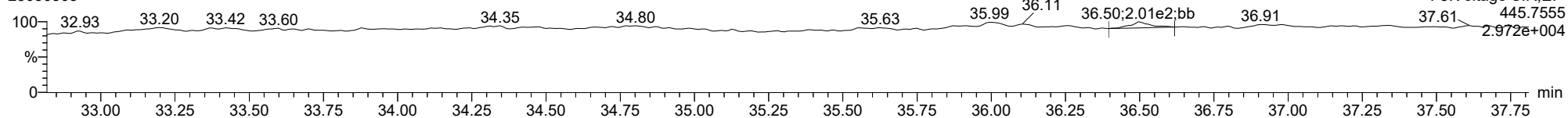
**13C-123678-HxCDF**

23030305



**FUNCTION3 OCDPE**

23030305

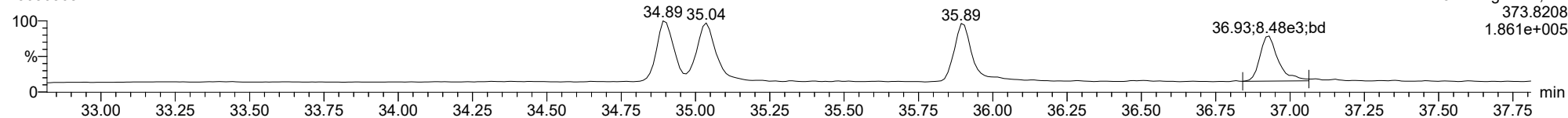




ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

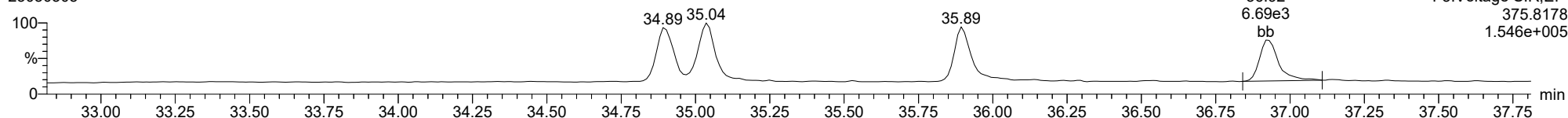
**123789-HxCDF**

23030305



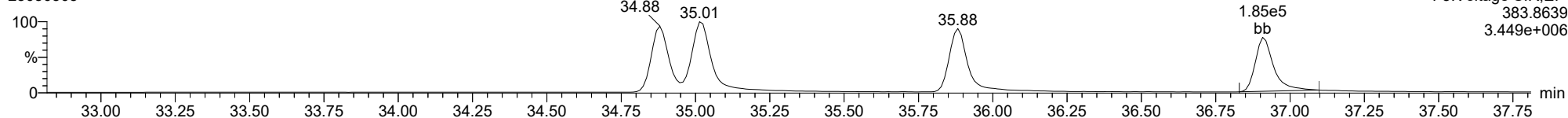
**123789-HxCDF**

23030305



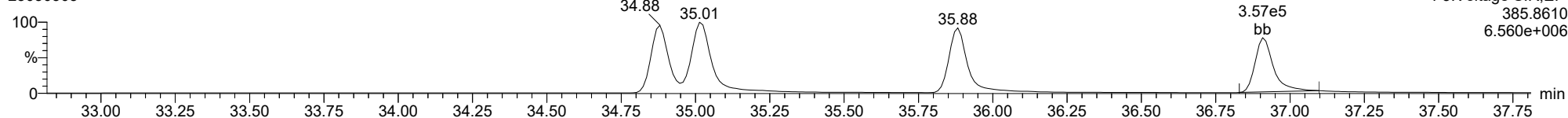
**13C-123789-HxCDF**

23030305



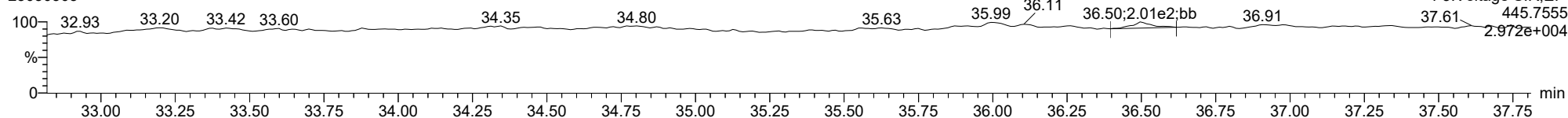
**13C-123789-HxCDF**

23030305



**FUNCTION3 OCDPE**

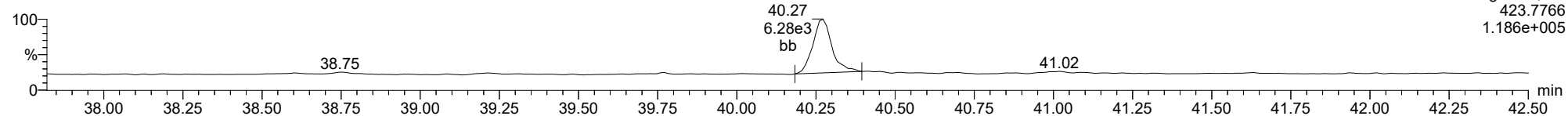
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

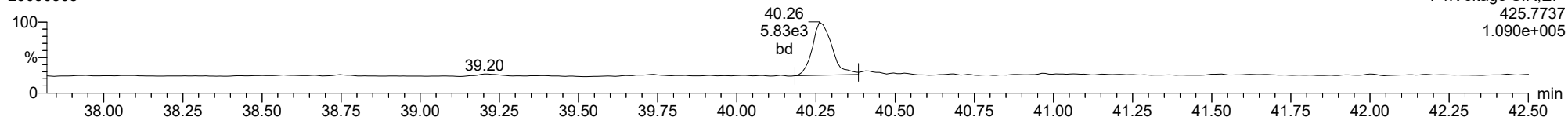
**1234678-HpCDD**

23030305



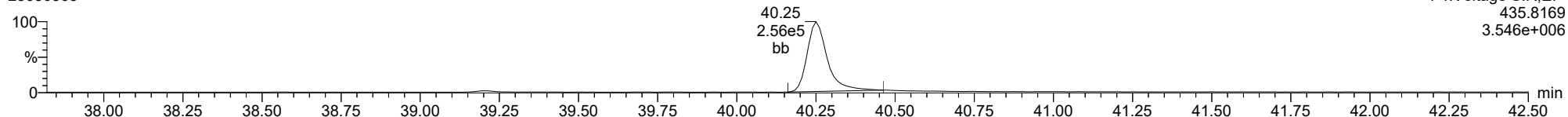
**1234678-HpCDD**

23030305



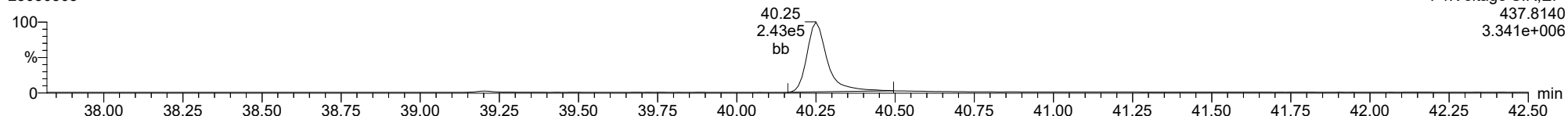
**13C-1234678-HpCDD**

23030305



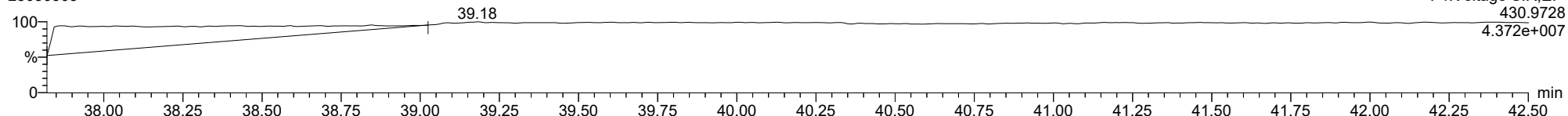
**13C-1234678-HpCDD**

23030305



**FUNCTION4 PFK**

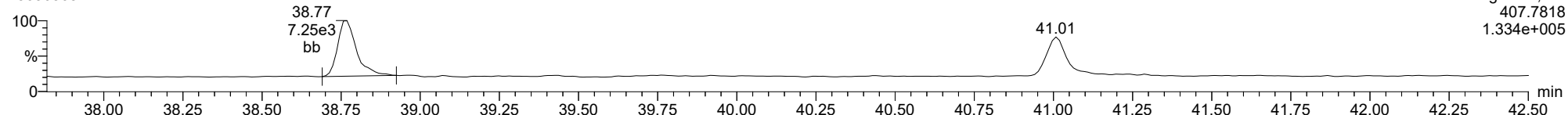
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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

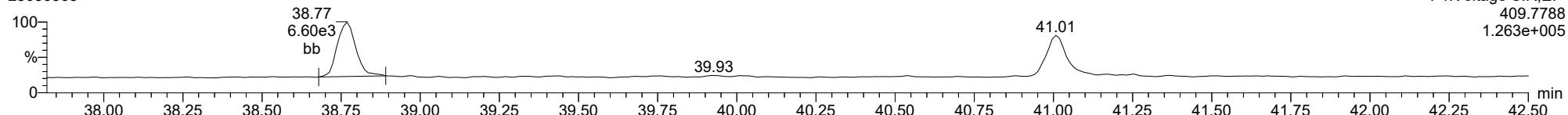
23030305



F4:Voltage SIR,EI+  
407.7818  
1.334e+005

1234678-HpCDF

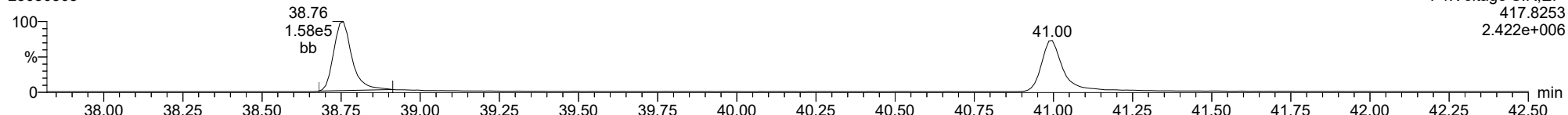
23030305



F4:Voltage SIR,EI+  
409.7788  
1.263e+005

13C-1234678-HpCDF

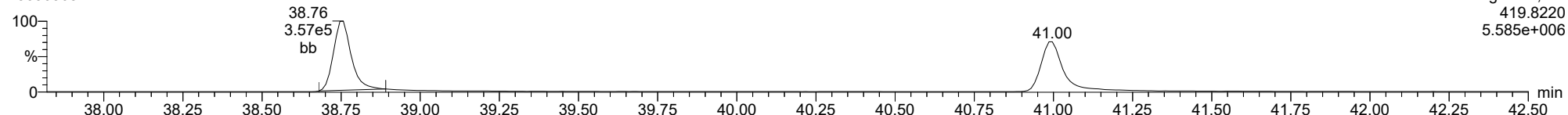
23030305



F4:Voltage SIR,EI+  
417.8253  
2.422e+006

13C-1234678-HpCDF

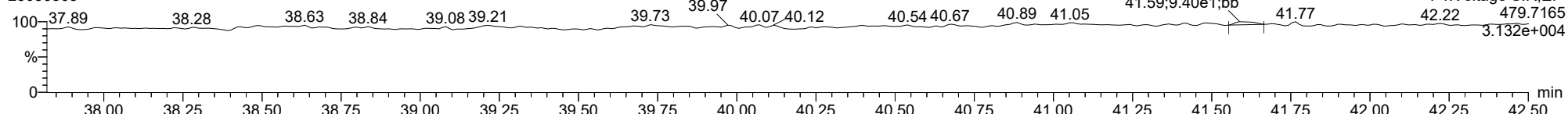
23030305



F4:Voltage SIR,EI+  
419.8220  
5.585e+006

FUNCTION4 NCDPE

23030305

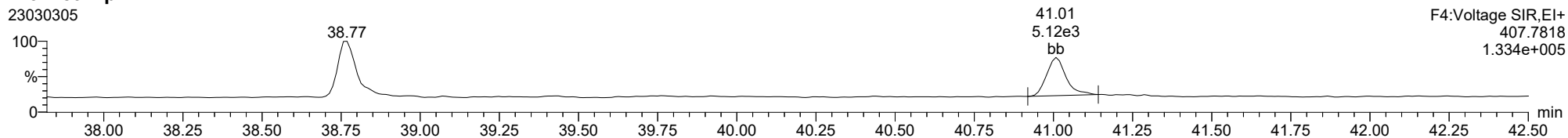


F4:Voltage SIR,EI+  
479.7165  
3.132e+004

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF

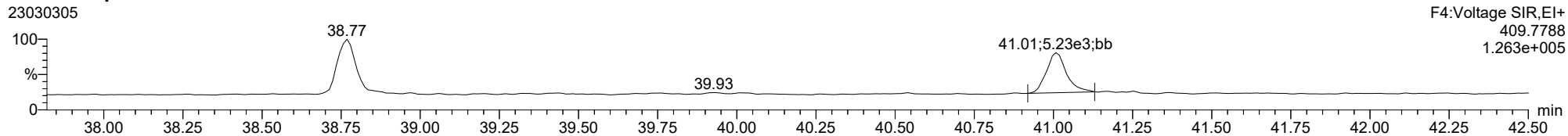
23030305



F4:Voltage SIR,EI+  
409.7818  
1.334e+005

1234789-HpCDF

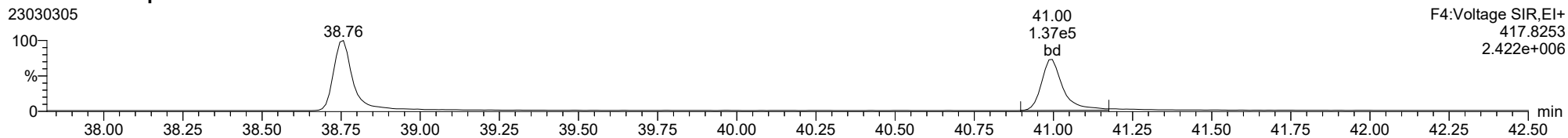
23030305



F4:Voltage SIR,EI+  
409.7788  
1.263e+005

13C-1234789-HpCDF

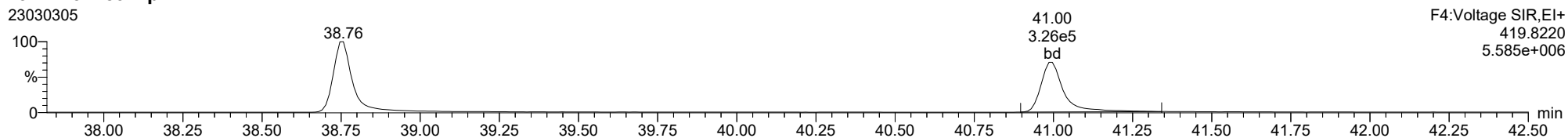
23030305



F4:Voltage SIR,EI+  
417.8253  
2.422e+006

13C-1234789-HpCDF

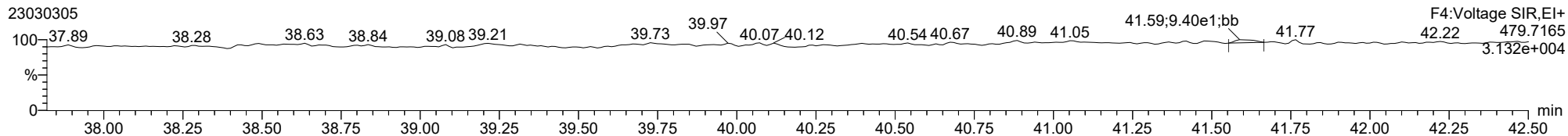
23030305



F4:Voltage SIR,EI+  
419.8220  
5.585e+006

FUNCTION4 NCDPE

23030305



F4:Voltage SIR,EI+  
479.7165  
3.132e+004

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

**OCDD**

23030305

100  
%  
0

45.00;8.58e3;bd

F5:Voltage SIR,EI+  
457.7377  
1.243e+005

42.51  
42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00 min

**OCDD**

23030305

100  
%  
0

45.00;9.68e3;bb

F5:Voltage SIR,EI+  
459.7348  
1.384e+005

42.51  
42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00 min

**13C-OCDD**

23030305

100  
%  
0

44.98;3.39e5;bb

F5:Voltage SIR,EI+  
469.7779  
3.894e+006

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00 min

**13C-OCDD**

23030305

100  
%  
0

44.98;3.82e5;bb

F5:Voltage SIR,EI+  
471.7750  
4.349e+006

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00 min

**FUNCTIONS PFK**

23030305

100  
%  
0

43.52

F5:Voltage SIR,EI+  
480.9696  
2.456e+007

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00 min

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

**OCDF**

23030305

F5:Voltage SIR,EI+

441.7428

9.546e+004

100

%

42.51

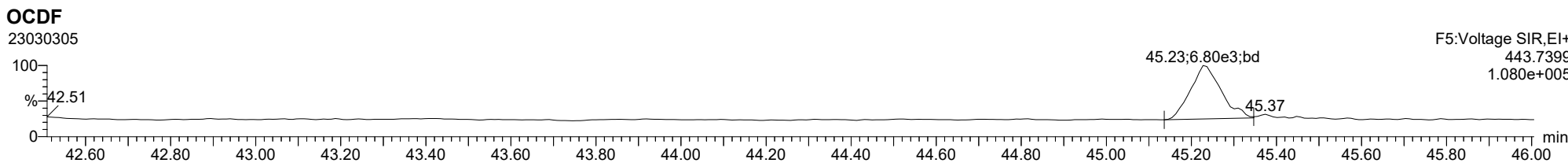
42.90

0

min

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00

45.24;5.98e3;MM



**OCDF**

23030305

F5:Voltage SIR,EI+

443.7399

1.080e+005

100

%

42.51

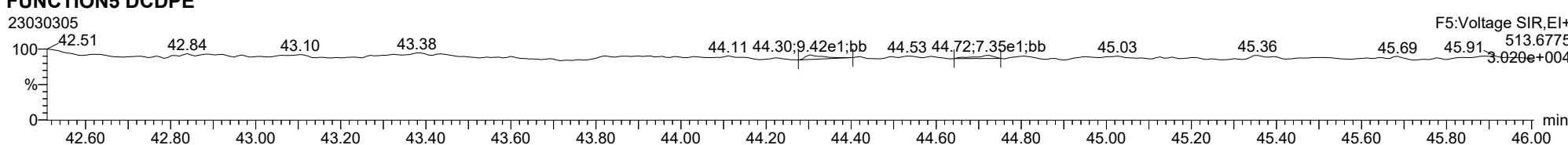
0

min

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00

45.23;6.80e3;bd

45.37



**FUNCTION5 DCDPE**

23030305

F5:Voltage SIR,EI+

513.6775

3.020e+004

100

%

0

min

42.60 42.80 43.00 43.20 43.40 43.60 43.80 44.00 44.20 44.40 44.60 44.80 45.00 45.20 45.40 45.60 45.80 46.00

42.51

42.84

43.10

43.38

44.11

44.30;9.42e1;bb

44.53

44.72;7.35e1;bb

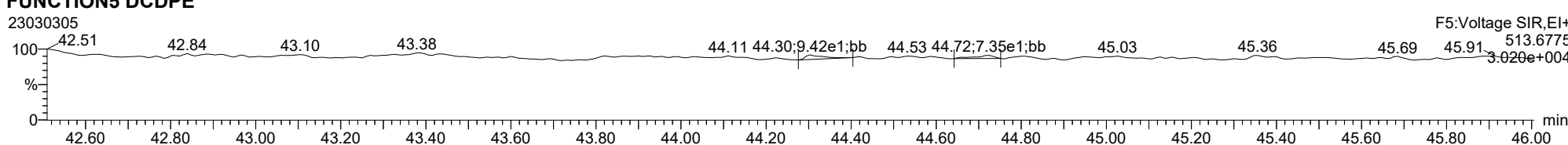
45.03

45.36

45.69

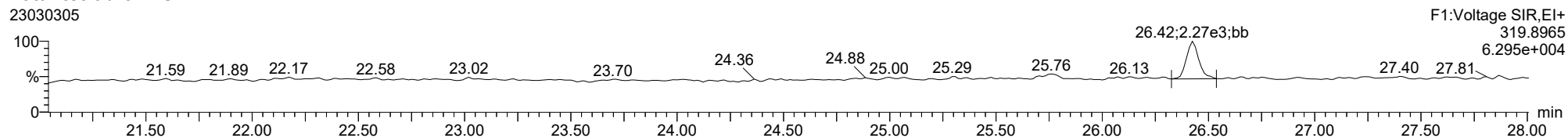
45.91

45.91

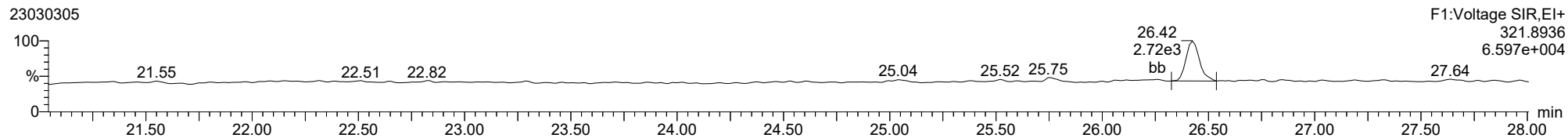


ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

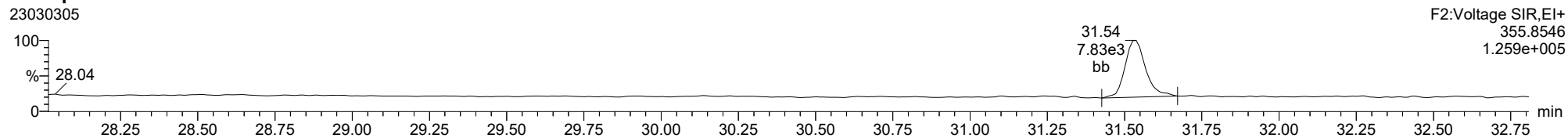
**Total-tetradioxins**



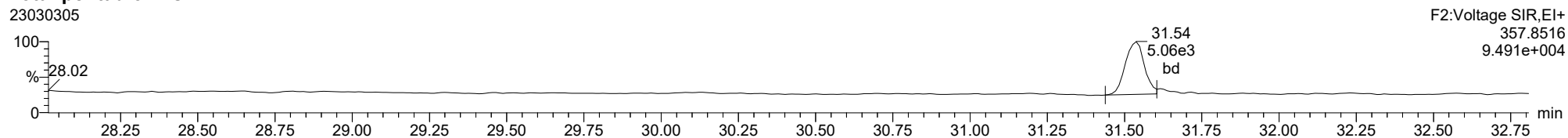
**Total-tetradioxins**



**Total-pentadioxins**



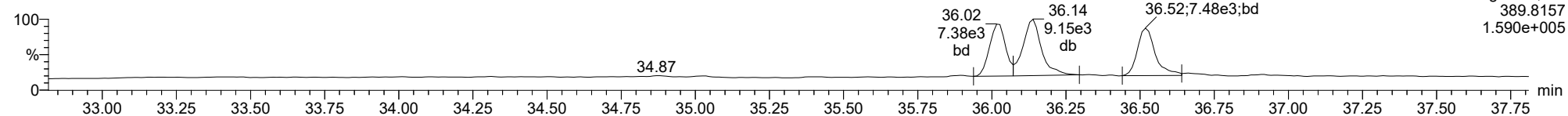
**Total-pentadioxins**



ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

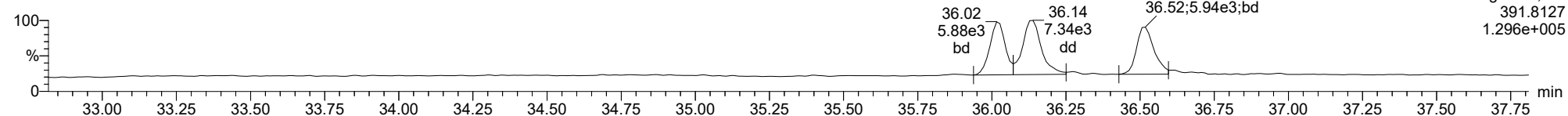
**Total-hexadioxins**

23030305



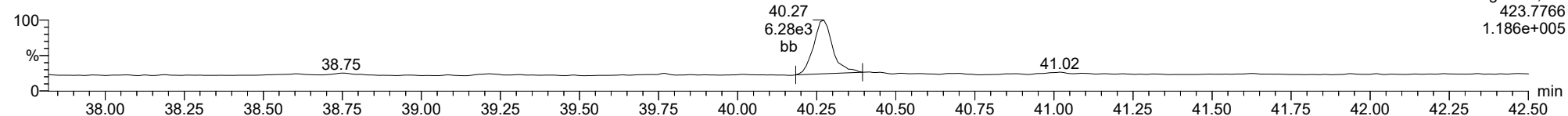
**Total-hexadioxins**

23030305



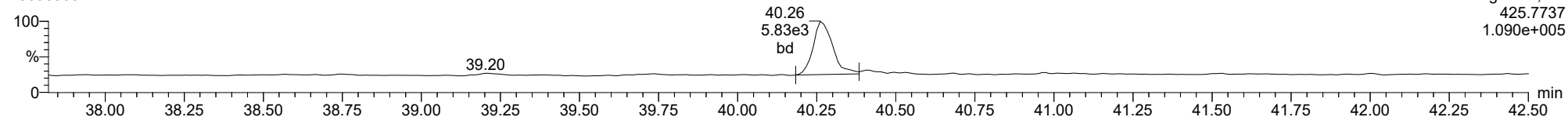
**Total-heptadioxins**

23030305



**Total-heptadioxins**

23030305

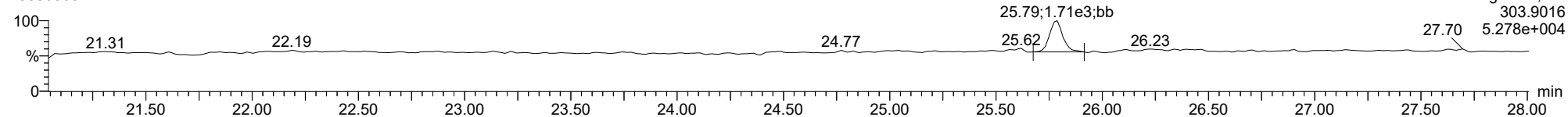




ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

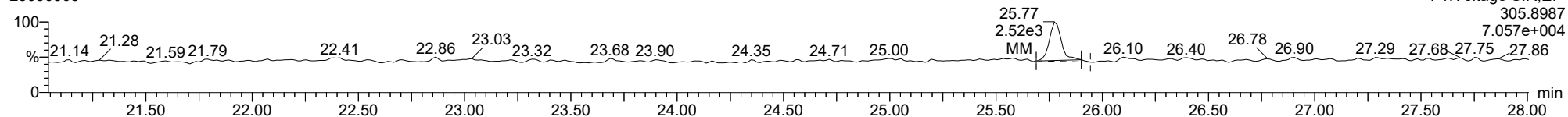
**Total-tetrafurans**

23030305



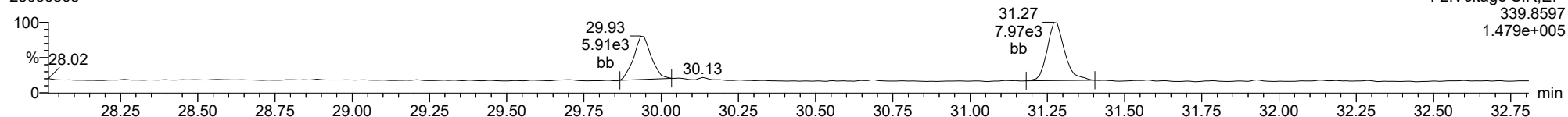
**Total-tetrafurans**

23030305



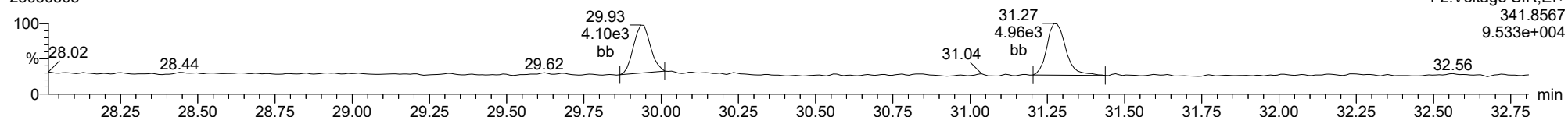
**Total-pentafurans**

23030305



**Total-pentafurans**

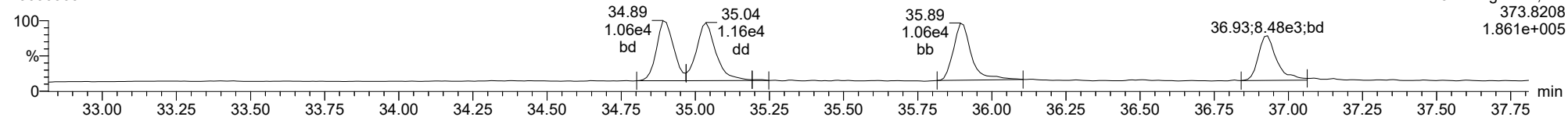
23030305



ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

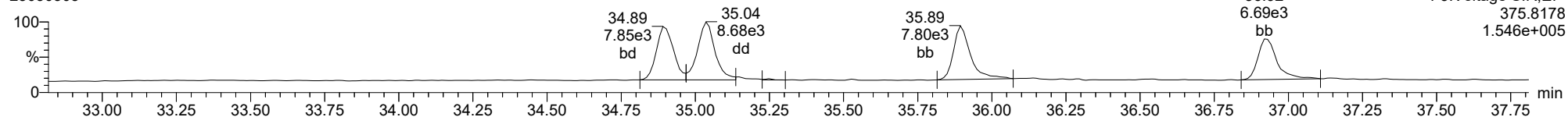
**Total-hexafurans**

23030305



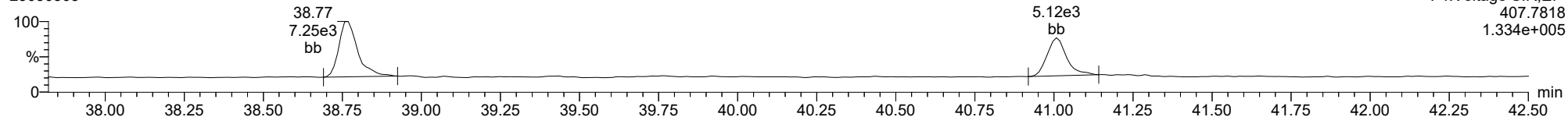
**Total-hexafurans**

23030305



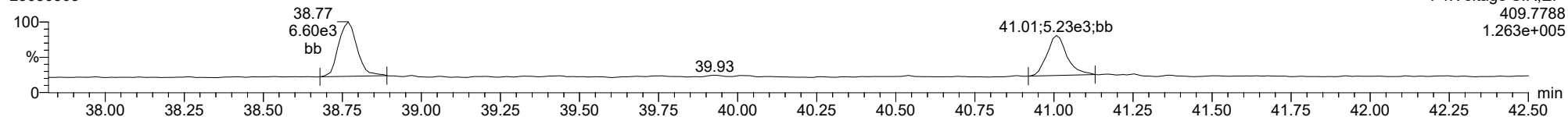
**Total-heptafurans**

23030305



**Total-heptafurans**

23030305



Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.789	1.001	8.311e3	1.080e4	0.702	0.769	0.770	1017	2375	1.17e5	1.59e5	114.9	67.2	NO	bd	bb	1.942
12378-PeCDF	29.945	1.001	4.669e4	2.820e4	0.679	1.656	1.550	1114	1452	6.51e5	4.26e5	583.9	293.2	NO	bd	bb	10.465
23478-PeCDF	31.282	1.000	4.676e4	2.892e4	0.786	1.617	1.550	1114	1452	6.63e5	4.21e5	595.0	289.8	NO	bb	bb	10.293
123478-HxCDF	34.903	1.000	5.097e4	3.855e4	1.166	1.322	1.240	1081	974	7.67e5	5.88e5	709.2	604.2	NO	bd	bd	9.861
234678-HxCDF	35.906	1.000	4.287e4	3.364e4	1.140	1.274	1.240	1081	974	6.16e5	4.95e5	570.0	508.0	NO	bd	bb	10.523
123678-HxCDF	35.048	1.001	5.830e4	4.380e4	1.091	1.331	1.240	1081	974	7.78e5	6.16e5	719.4	632.0	NO	dd	db	10.775
123789-HxCDF	36.942	1.001	3.050e4	2.273e4	1.137	1.342	1.240	1081	974	4.14e5	3.24e5	383.3	332.2	NO	bb	bb	9.945
1234678-HpCDF	38.780	1.001	2.871e4	2.660e4	1.003	1.079	1.050	1234	1299	4.33e5	4.29e5	350.5	330.3	NO	bd	bb	10.087
1234789-HpCDF	41.020	1.000	2.198e4	2.032e4	0.953	1.082	1.050	1234	1299	3.09e5	2.76e5	250.5	212.3	NO	bb	bb	10.556
OCDF	45.247	1.006	3.160e4	3.327e4	0.778	0.950	0.890	832	1108	3.53e5	3.88e5	424.8	350.5	NO	bd	bb	19.690
2378-TCDD	26.438	1.001	9.033e3	1.299e4	1.149	0.696	0.770	1078	937	1.34e5	1.84e5	124.1	196.6	NO	bb	bb	2.068
12378-PeCDD	31.538	1.000	4.287e4	2.877e4	1.022	1.490	1.550	1012	882	6.26e5	3.88e5	618.4	440.6	NO	bb	bb	9.981
123478-HxCDD	36.028	1.001	3.011e4	2.566e4	0.996	1.173	1.240	1087	1355	4.81e5	4.17e5	442.1	307.5	NO	bd	bd	9.781
123678-HxCDD	36.140	1.000	3.660e4	2.810e4	1.001	1.303	1.240	1087	1355	5.13e5	3.98e5	471.9	293.4	NO	dd	db	9.830
123789-HxCDD	36.530	1.011	2.694e4	2.285e4	0.907	1.179	1.240	1087	1355	3.87e5	3.22e5	355.7	237.4	NO	bb	bb	8.921
1234678-HpCDD	40.273	1.000	2.448e4	2.664e4	1.039	0.919	1.050	853	881	3.43e5	3.58e5	402.1	405.9	NO	bb	bd	10.011
OCDD	45.009	1.000	3.531e4	4.015e4	0.920	0.879	0.890	1050	1012	4.08e5	4.99e5	388.3	492.6	NO	bb	bb	19.363
13C-2378-TCDF	25.774	1.007	6.035e5	7.993e5	1.620	0.755	0.770	2457	1835	8.64e6	1.14e7	3516.1	6186.3	NO	bb	bb	103.115
13C-12378-PeCDF	29.923	1.169	6.526e5	4.010e5	1.240	1.628	1.550	3002	2090	8.73e6	5.82e6	2907.1	2783.7	NO	bb	bb	101.148
13C-23478-PeCDF	31.271	1.221	5.554e5	3.799e5	1.118	1.462	1.550	3002	2090	8.01e6	5.41e6	2667.8	2586.4	NO	bb	bb	99.644
13C-123478-HxCDF	34.892	0.956	2.641e5	5.144e5	1.168	0.513	0.510	1857	2488	3.90e6	7.62e6	2100.8	3063.0	NO	bd	bd	129.584
13C-123678-HxCDF	35.026	0.959	2.932e5	5.755e5	1.386	0.510	0.510	1857	2488	4.18e6	8.13e6	2249.4	3269.5	NO	db	db	121.832
13C-234678-HxCDF	35.895	0.983	2.180e5	4.199e5	1.129	0.519	0.510	1857	2488	3.14e6	6.08e6	1689.2	2442.9	NO	bb	bb	109.838
13C-123789-HxCDF	36.920	1.011	1.570e5	3.137e5	0.932	0.501	0.510	1857	2488	2.29e6	4.45e6	1232.1	1790.1	NO	bb	bb	98.225
13C-1234678-HpCDF	38.758	1.062	1.644e5	3.823e5	0.895	0.430	0.440	2012	3375	2.57e6	5.95e6	1277.0	1763.6	NO	bb	bb	118.766
13C-1234789-HpCDF	40.998	1.123	1.271e5	2.934e5	0.770	0.433	0.440	2012	3375	1.71e6	4.02e6	850.7	1191.4	NO	bb	bb	106.228
13C-1234-TCDD	25.605	0.000	3.763e5	4.634e5	1.000	0.812	0.770	2552	2183	5.75e6	7.05e6	2254.8	3231.1	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	4.085e5	5.183e5	1.152	0.788	0.770	2552	2183	5.98e6	7.56e6	2342.4	3461.2	NO	bb	bb	95.779
13C-12378-PeCDD	31.527	1.231	4.337e5	2.688e5	0.829	1.614	1.550	1077	1542	6.15e6	3.74e6	5715.6	2425.2	NO	bb	bb	100.933
13C-123478-HxCDD	36.006	0.986	3.223e5	2.505e5	0.995	1.287	1.240	2237	1883	4.87e6	3.76e6	2175.2	1999.6	NO	bd	bd	111.924
13C-123678-HxCDD	36.129	0.990	3.608e5	2.967e5	1.157	1.216	1.240	2237	1883	5.10e6	4.02e6	2277.5	2137.4	NO	db	db	110.547
13C-1234678-HpCDD	40.262	1.103	2.573e5	2.341e5	0.840	1.099	1.050	2349	1481	3.41e6	3.22e6	1450.8	2172.3	NO	bd	bb	113.737
13C-OCDD	44.991	1.232	4.017e5	4.455e5	0.767	0.902	0.890	2278	1800	4.53e6	5.05e6	1990.6	2807.7	NO	bb	bb	214.651
13C-123789-HxCDD	36.507	0.000	2.902e5	2.240e5	1.000	1.296	1.240	2237	1883	4.20e6	3.27e6	1878.6	1737.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.032	1.977e4		1.288			2484		2.93e5		117.9			bb		1.828

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1017	2375								
1289-TCDF					0.678		0.770	1017	2375								
13468-PECDF					1.246		1.550	633	1159								
12389-PECDF					0.496		1.550	1114	1452								
123468-HXCDF					1.169		1.240	1081	974								
1368-TCDD					1.015		0.770	1078	937								
1289-TCDD					0.909		0.770	1078	937								
12479-PECDD					2.301		1.550	1012	882								
12389-PECDD					1.184		1.550	1012	882								
124679-HXCDD					1.115		1.240	1087	1355								
1234679-HPCDD					1.137		1.050	853	881								
Total-tetrafurans			8.311e3		0.727			1017		1.17e5							1.942
Total-penta1			0.000e0					633		0.00e0							
Total-pentafurans			9.345e4		0.654			1114		1.31e6							20.758
Total-hexafurans			1.826e5		1.141			1081		2.58e6							41.105
Total-heptafurans			5.070e4		0.978			1234		7.42e5							20.643
Total-Furans			3.667e5		0.922			1017		5.10e6							104.140
Total-tetradoxins			9.033e3		1.024			1078		1.34e5							2.068
Total-pentadoxins			4.287e4		1.502			1012		6.26e5							9.981
Total-hexadoxins			9.364e4		1.005			1087		1.38e6							28.532
Total-heptadoxins			2.448e4		1.088			853		3.43e5							10.011
Total-Dioxins			2.053e5		1.130			1078		2.89e6							69.955
Total-TEQ			5.720e5					1078		7.99e6							174.095
FUNCTION1 PFK			1.995e6					567717		7.69e6							
FUNCTION2 PFK			1.258e5					282093		4.74e6							0.000
FUNCTION3 PFK			4.711e7					382868		3.34e7							0.000
FUNCTION4 PFK			2.092e7					278389		1.32e7							
FUNCTION5 PFK			6.777e4					239180		2.68e6							
FUNCTION1 HXCD...			0.000e0					613		0.00e0							
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.408e2					965		2.85e3							0.000
FUNCTION3 OCDPE			0.000e0					571		0.00e0							
FUNCTION4 NCDPE			3.810e2					638		4.39e3							0.000
FUNCTION5 DCDPE			0.000e0					603		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

Calibration: T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
2	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
3	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
4	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
2	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

**ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465
3	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942
4	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
5	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
6	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
7	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861
8	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
9	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087
10	OCDF	45.25	3.160e4	3.327e4	0.778	0.95	0.89	424.8	YES	NO	bd	bb	19.690

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
2	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
3	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

**ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk**

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981
2	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068
3	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
4	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
5	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781
6	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011
7	OCDD	45.01	3.531e4	4.015e4	0.920	0.88	0.89	388.3	YES	NO	bb	bb	19.363

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465
3	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942
4	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
5	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
6	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
7	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861
8	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
9	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087
10	OCDF	45.25	3.160e4	3.327e4	0.778	0.95	0.89	424.8	YES	NO	bd	bb	19.690
11	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981
12	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068
13	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
14	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
15	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781
16	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011
17	OCDD	45.01	3.531e4	4.015e4	0.920	0.88	0.89	388.3	YES	NO	bb	bb	19.363

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.73	8.333e5					6.7	YES		bb		
2	FUNCTION1 PFK	21.10	1.162e6					6.9	YES		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

**ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk**

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.61	1.110e4					1.3	NO		bb		0.000
2	FUNCTION2 PFK	28.31	1.183e4					1.5	NO		bb		0.000
3	FUNCTION2 PFK	31.85	7.066e3					1.3	NO		bb		0.000
4	FUNCTION2 PFK	31.75	1.168e4					1.4	NO		bb		0.000
5	FUNCTION2 PFK	30.95	1.613e4					2.1	NO		bb		0.000
6	FUNCTION2 PFK	30.06	7.806e3					1.3	NO		bb		0.000
7	FUNCTION2 PFK	29.77	1.198e4					1.4	NO		bb		0.000
8	FUNCTION2 PFK	29.47	1.476e4					2.1	NO		bb		0.000
9	FUNCTION2 PFK	29.28	1.360e4					2.0	NO		db		0.000
10	FUNCTION2 PFK	29.22	1.980e4					2.4	NO		bd		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.30	3.856e7					44.6	YES		db		0.000
2	FUNCTION3 PFK	33.18	8.558e6					42.7	YES		bd		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.24	1.285e7					8.2	YES		db		
2	FUNCTION4 PFK	38.41	8.070e6					39.3	YES		bd		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.68	1.647e4					1.8	NO		bb		
2	FUNCTION5 PFK	45.75	3.282e3					1.0	NO		bb		
3	FUNCTION5 PFK	45.28	6.957e3					1.1	NO		bb		
4	FUNCTION5 PFK	44.90	6.364e3					1.0	NO		bb		
5	FUNCTION5 PFK	44.84	1.531e3					0.5	NO		bb		
6	FUNCTION5 PFK	44.40	6.282e3					1.0	NO		bb		
7	FUNCTION5 PFK	44.21	4.626e3					1.1	NO		bb		
8	FUNCTION5 PFK	44.03	7.842e3					1.2	NO		bb		
9	FUNCTION5 PFK	43.96	6.415e3					1.4	NO		bb		
10	FUNCTION5 PFK	43.84	7.992e3					1.2	NO		bb		



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**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.54	1.408e2					3.0	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.65	1.069e2					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	40.25	1.358e2					2.2	NO		bb		0.000
3	FUNCTION4 NCDPE	41.02	1.383e2					2.8	NO		bb		0.000

**ETHERS6**

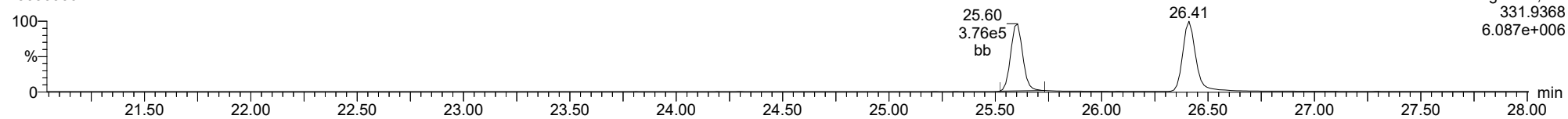
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1													

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

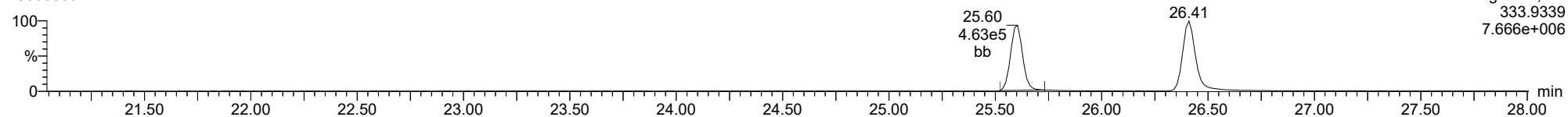
**13C-1234-TCDD**

23030306



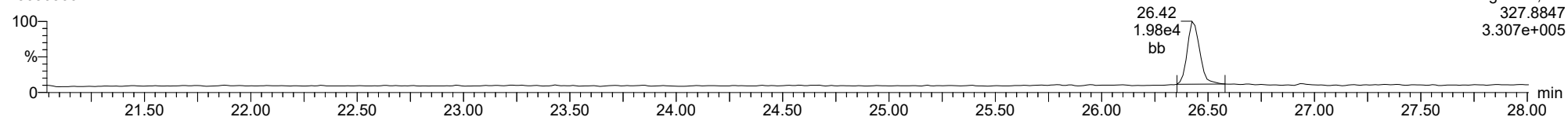
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23030306



**37CL-2378-TCDD**

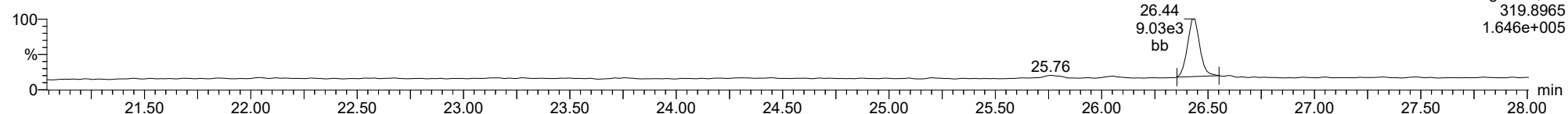
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ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**2378-TCDD**

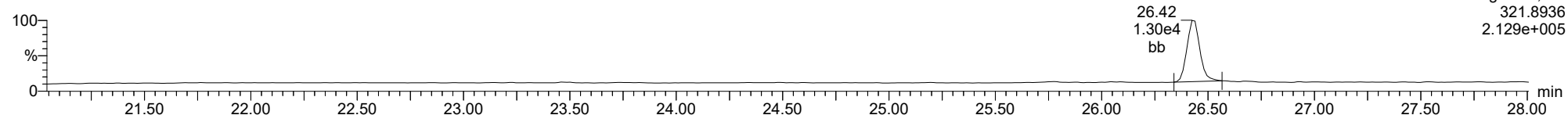
23030306



F1:Voltage SIR,EI+  
319.8965  
1.646e+005

**2378-TCDD**

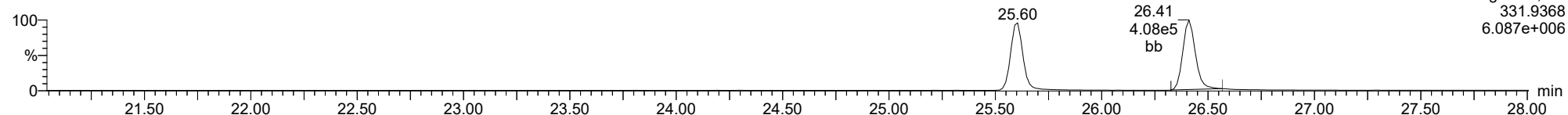
23030306



F1:Voltage SIR,EI+  
321.8936  
2.129e+005

**13C-2378-TCDD**

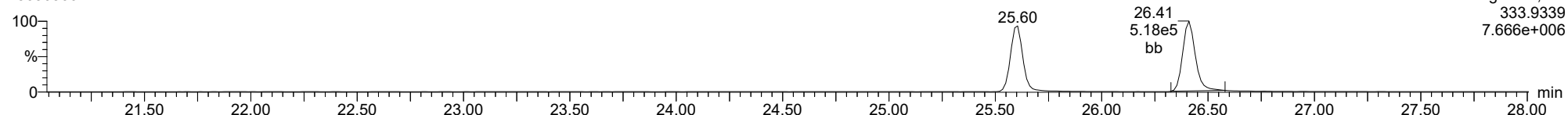
23030306



F1:Voltage SIR,EI+  
331.9368  
6.087e+006

**13C-2378-TCDD**

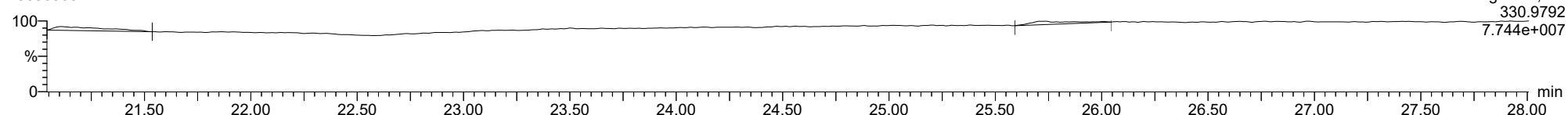
23030306



F1:Voltage SIR,EI+  
333.9339  
7.666e+006

**FUNCTION1 PFK**

23030306

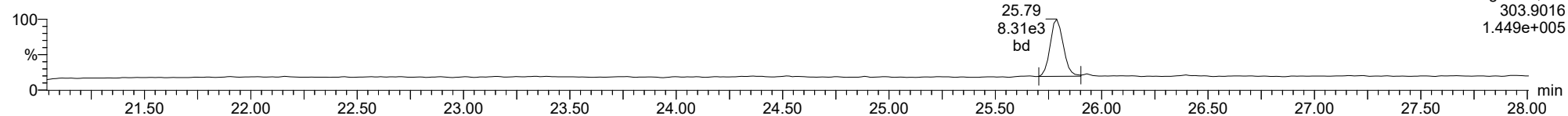


F1:Voltage SIR,EI+  
330.9792  
7.744e+007

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

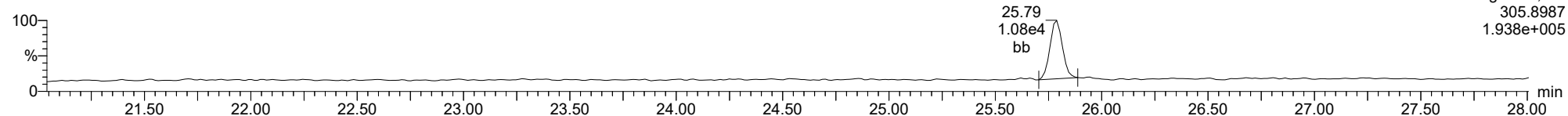
**2378-TCDF**

23030306



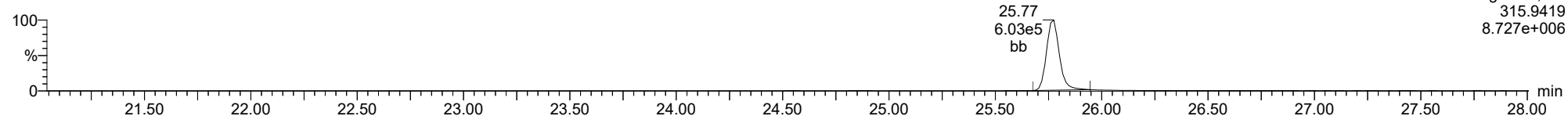
**2378-TCDF**

23030306



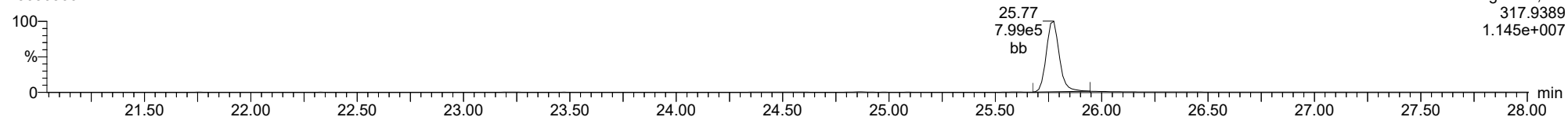
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23030306



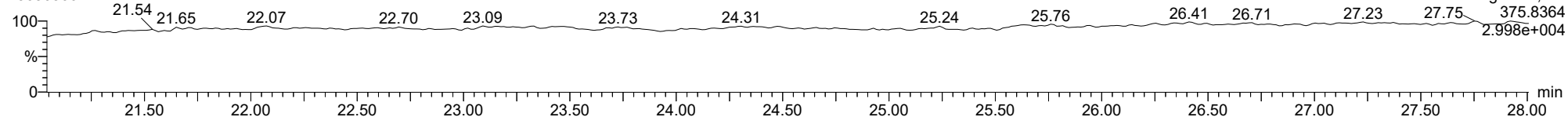
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23030306



**FUNCTION1 HXCDFE**

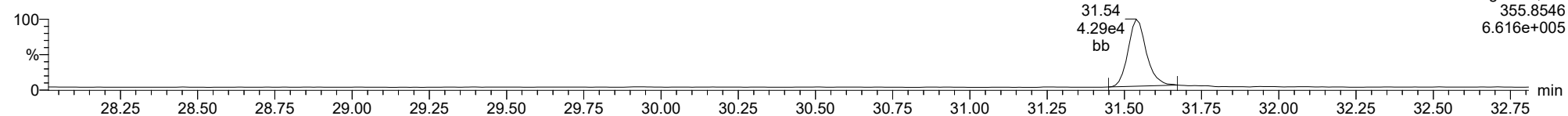
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ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

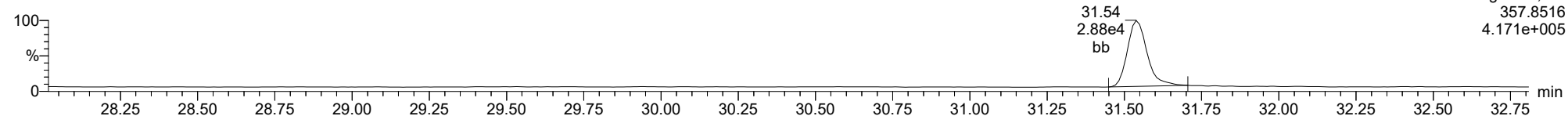
**12378-PeCDD**

23030306



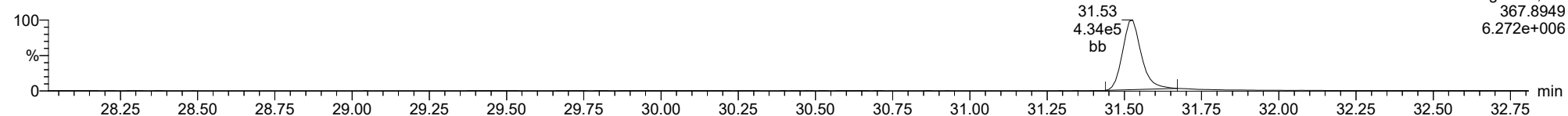
**12378-PeCDD**

23030306



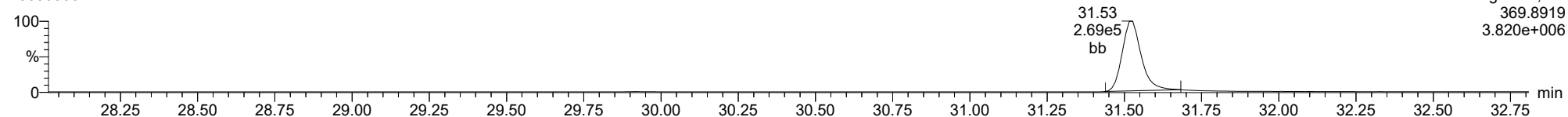
**13C-12378-PeCDD**

23030306



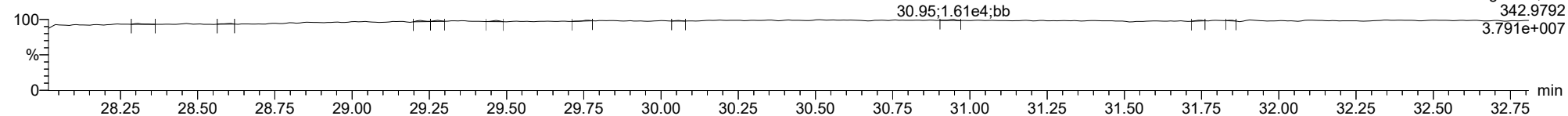
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23030306



**FUNCTION2 PFK**

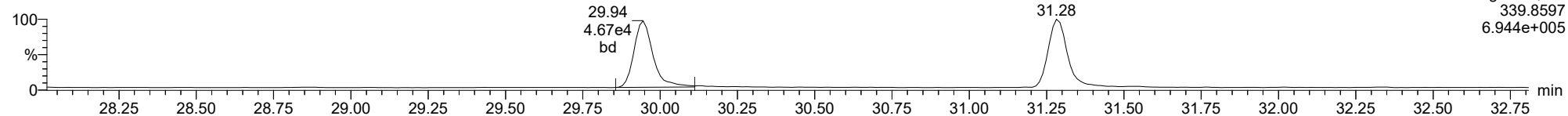
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ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**12378-PeCDF**

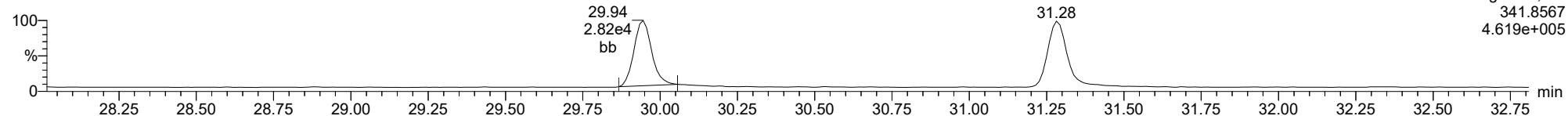
23030306



F2:Voltage SIR,EI+  
339.8597  
6.944e+005

**12378-PeCDF**

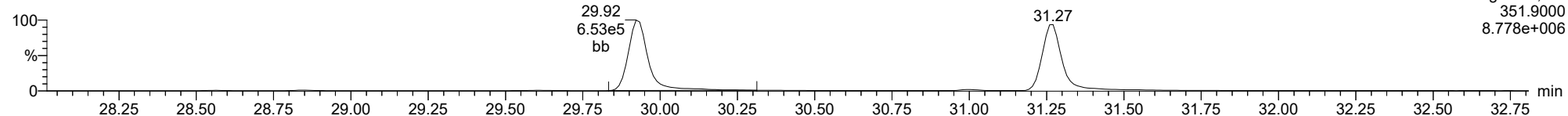
23030306



F2:Voltage SIR,EI+  
341.8567  
4.619e+005

**13C-12378-PeCDF**

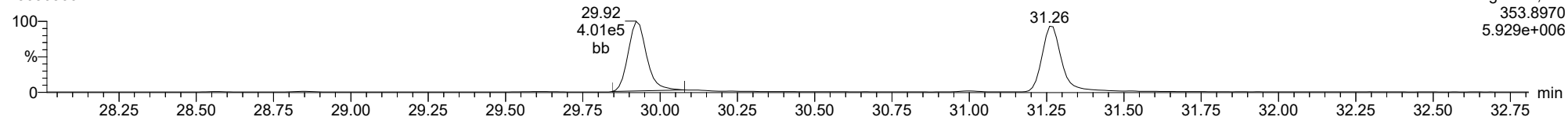
23030306



F2:Voltage SIR,EI+  
351.9000  
8.778e+006

**13C-12378-PeCDF**

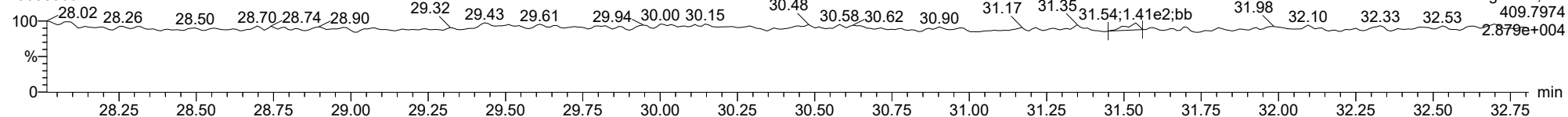
23030306



F2:Voltage SIR,EI+  
353.8970  
5.929e+006

**FUNCTION2 HPCDPE**

23030306

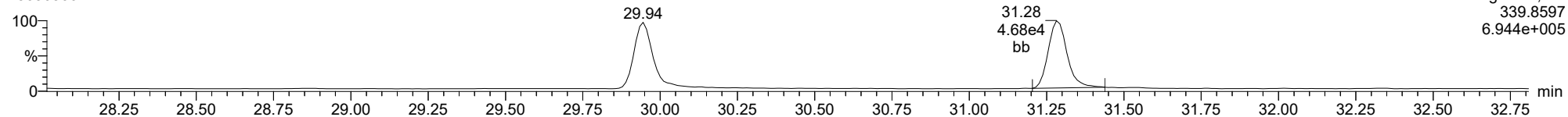


F2:Voltage SIR,EI+  
409.7974  
2.879e+004

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

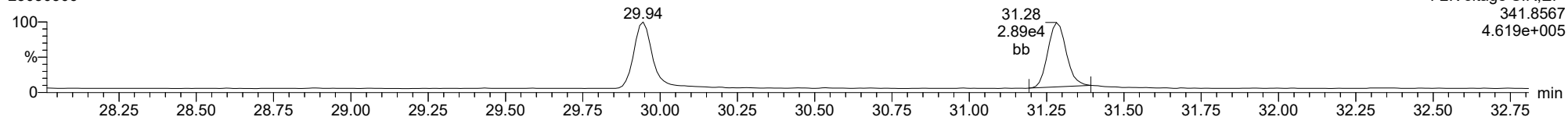
**23478-PeCDF**

23030306



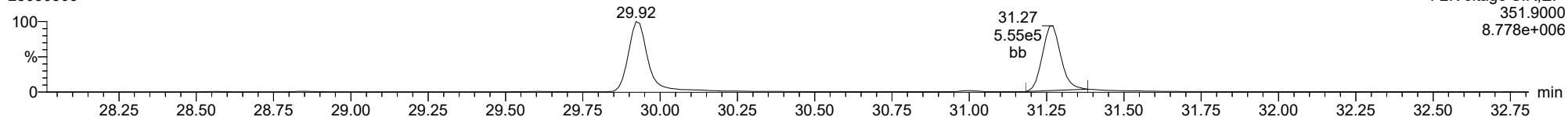
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23030306



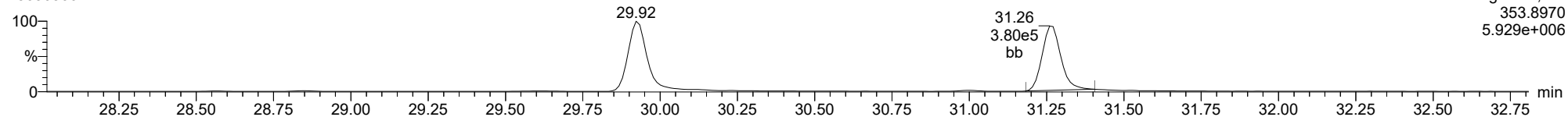
**13C-23478-PeCDF**

23030306



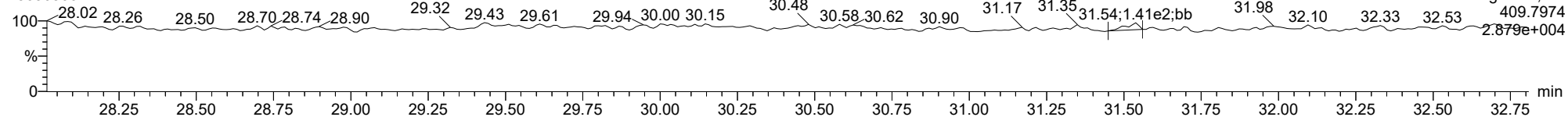
**13C-23478-PeCDF**

23030306



**FUNCTION2 HPCDPE**

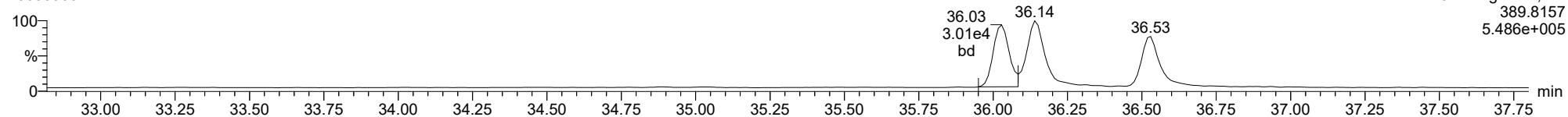
23030306



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**123478-HxCDD**

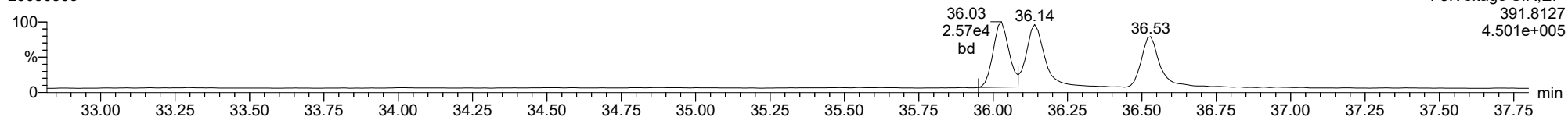
23030306



F3:Voltage SIR,EI+  
389.8157  
5.486e+005

**123478-HxCDD**

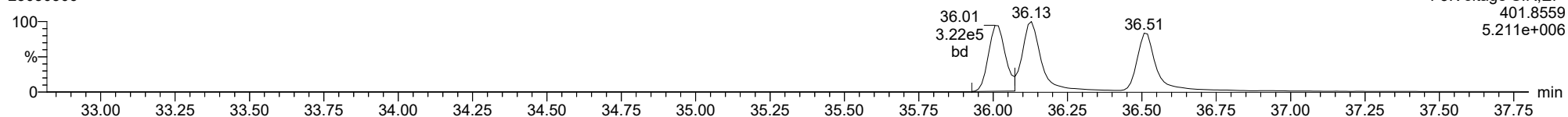
23030306



F3:Voltage SIR,EI+  
391.8127  
4.501e+005

**13C-123478-HxCDD**

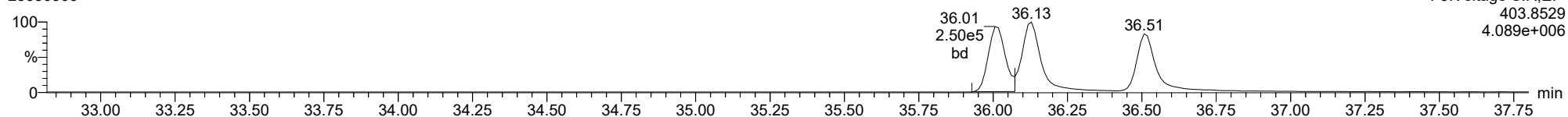
23030306



F3:Voltage SIR,EI+  
401.8559  
5.211e+006

**13C-123478-HxCDD**

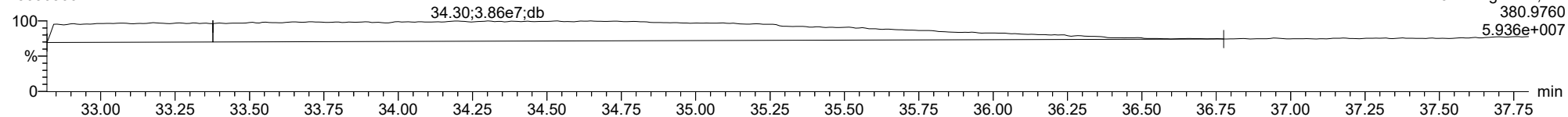
23030306



F3:Voltage SIR,EI+  
403.8529  
4.089e+006

**FUNCTION3 PFK**

23030306



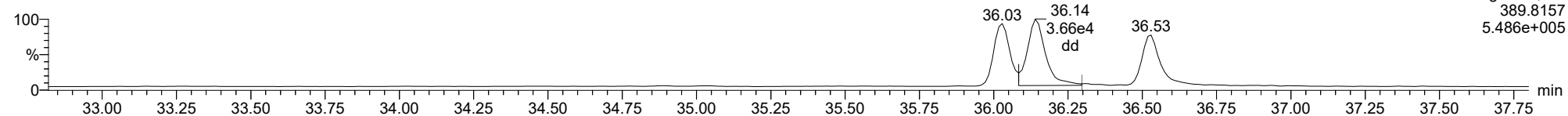
F3:Voltage SIR,EI+  
380.9760  
5.936e+007



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

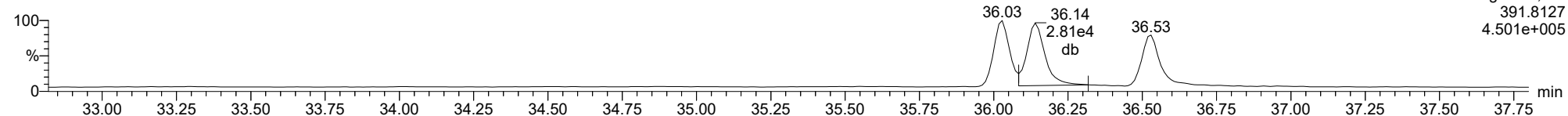
**123678-HxCDD**

23030306



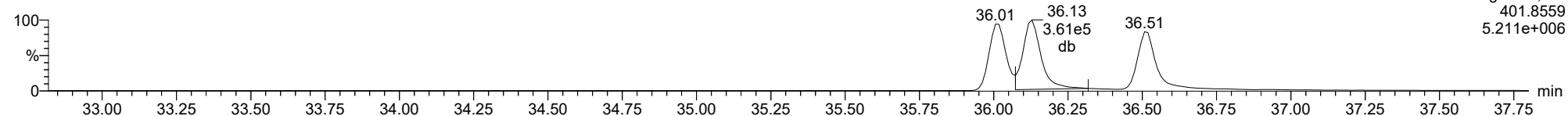
**123678-HxCDD**

23030306



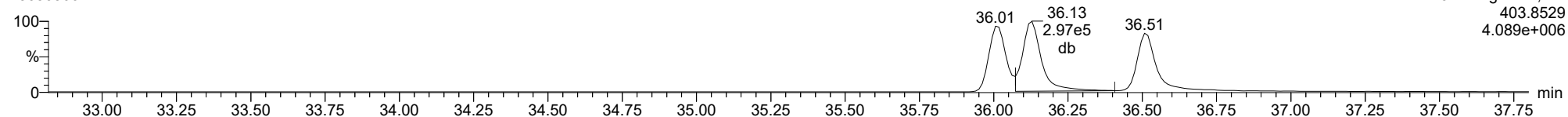
**13C-123678-HxCDD**

23030306



**13C-123678-HxCDD**

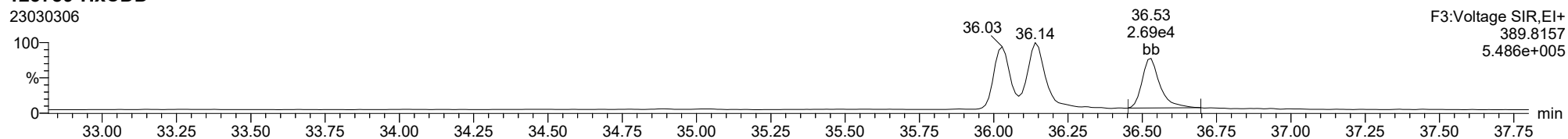
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**123789-HxCDD**

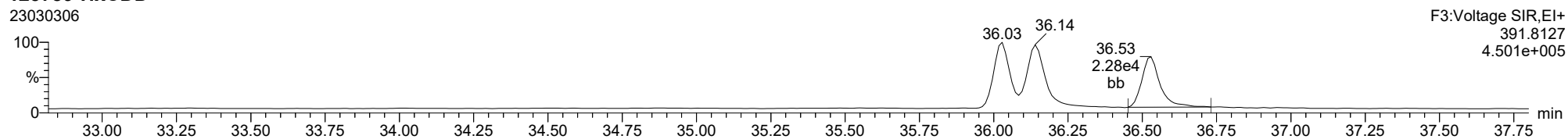
23030306



F3:Voltage SIR,EI+  
389.8157  
5.486e+005

**123789-HxCDD**

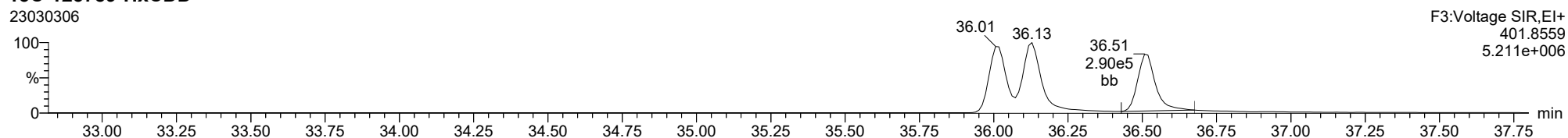
23030306



F3:Voltage SIR,EI+  
391.8127  
4.501e+005

**13C-123789-HxCDD**

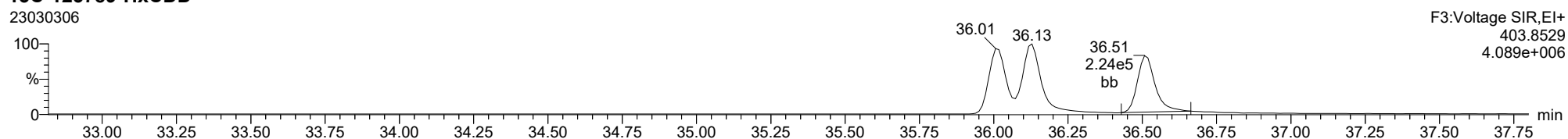
23030306



F3:Voltage SIR,EI+  
401.8559  
5.211e+006

**13C-123789-HxCDD**

23030306

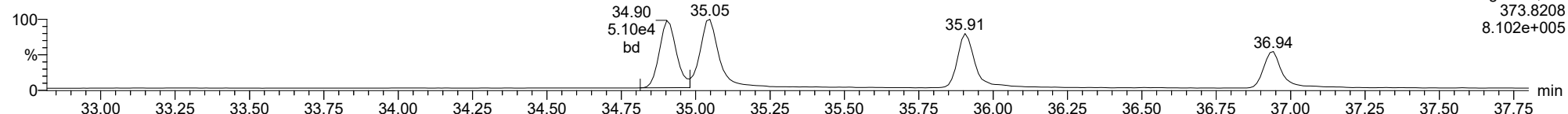


F3:Voltage SIR,EI+  
403.8529  
4.089e+006

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

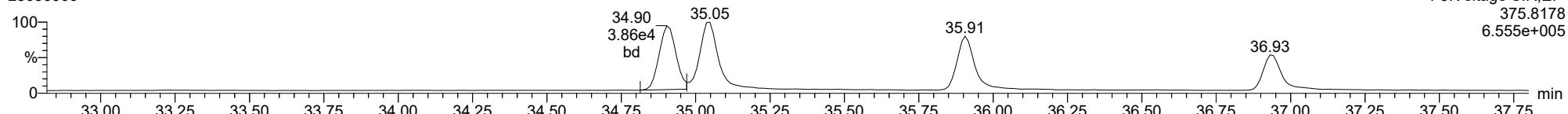
**123478-HxCDF**

23030306



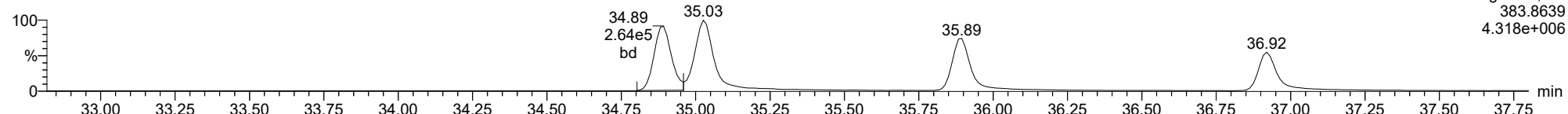
**123478-HxCDF**

23030306



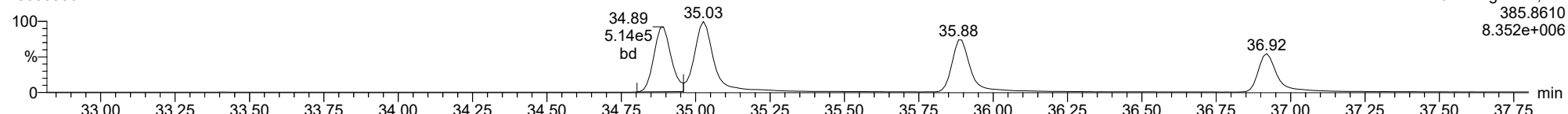
**13C-123478-HxCDF**

23030306



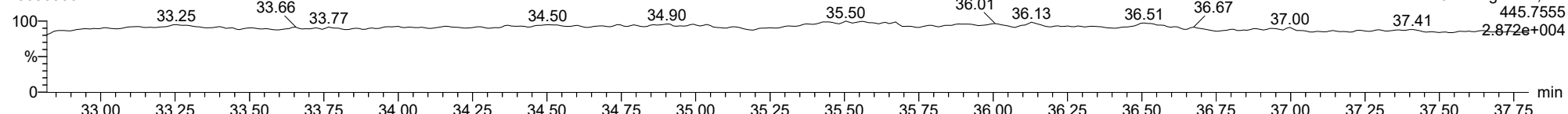
**13C-123478-HxCDF**

23030306



**FUNCTION3 OCDPE**

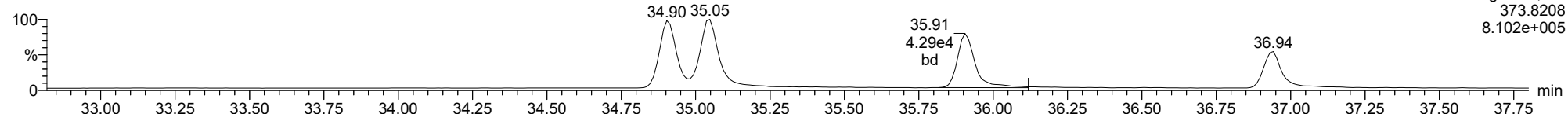
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

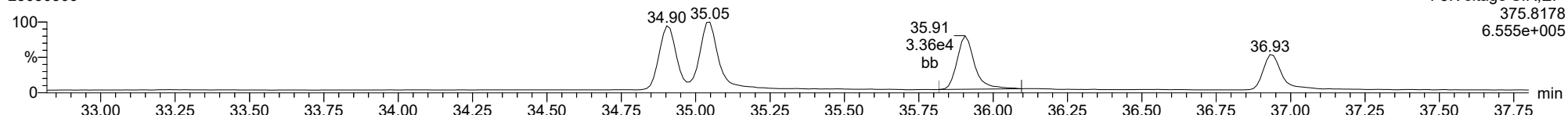
**234678-HxCDF**

23030306



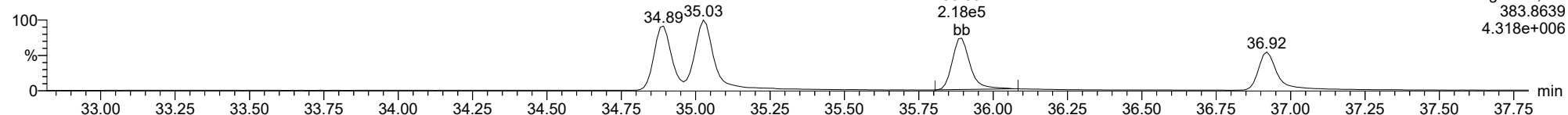
**234678-HxCDF**

23030306



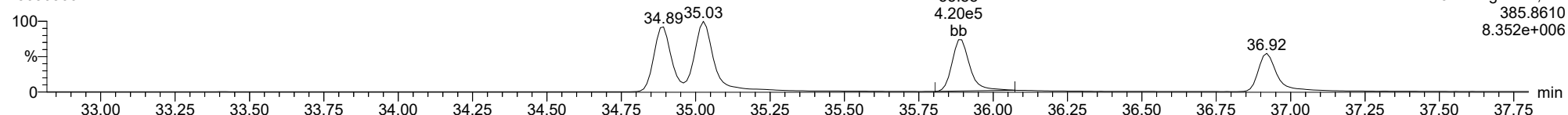
**13C-234678-HxCDF**

23030306



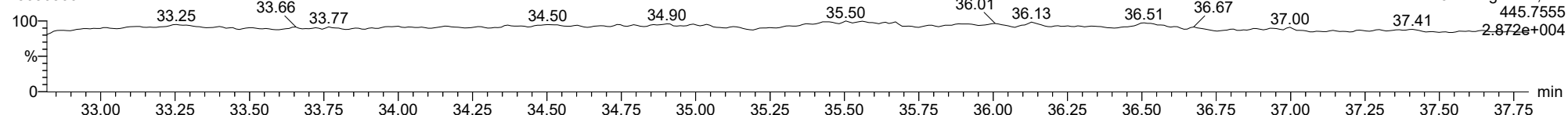
**13C-234678-HxCDF**

23030306



**FUNCTION3 OCDPE**

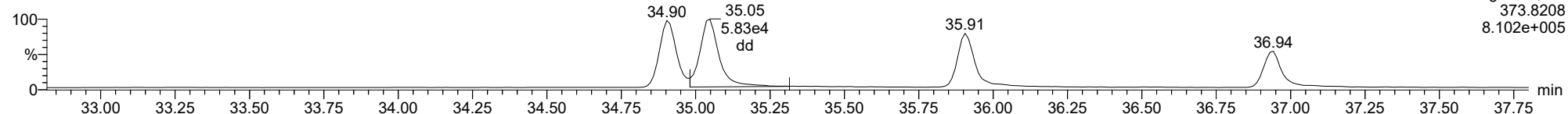
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

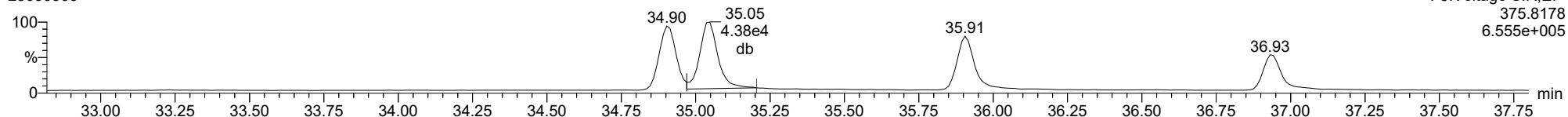
**123678-HxCDF**

23030306



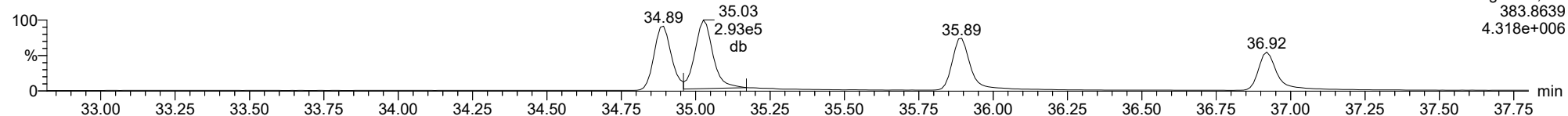
**123678-HxCDF**

23030306



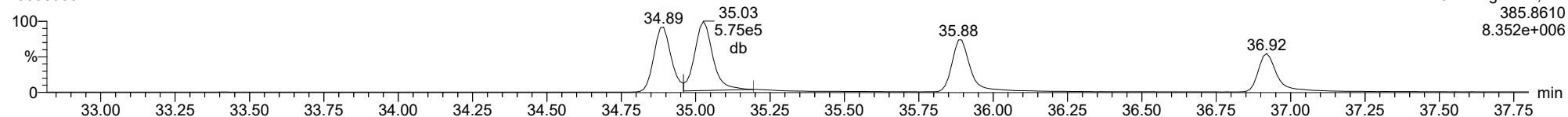
**13C-123678-HxCDF**

23030306



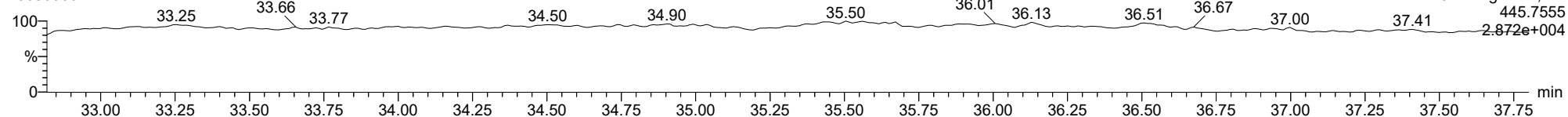
**13C-123678-HxCDF**

23030306



**FUNCTION3 OCDPE**

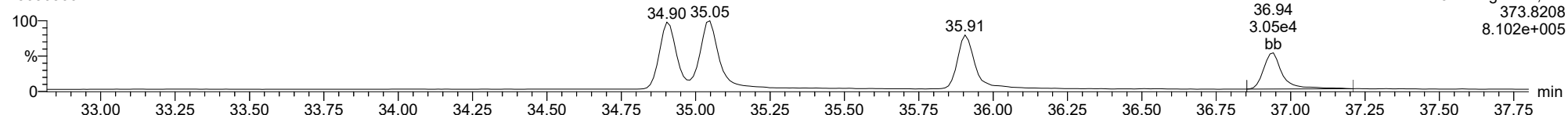
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

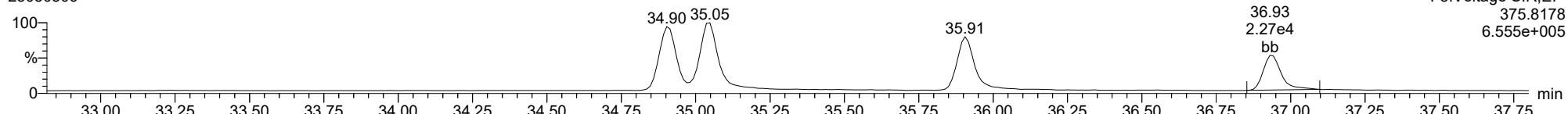
**123789-HxCDF**

23030306



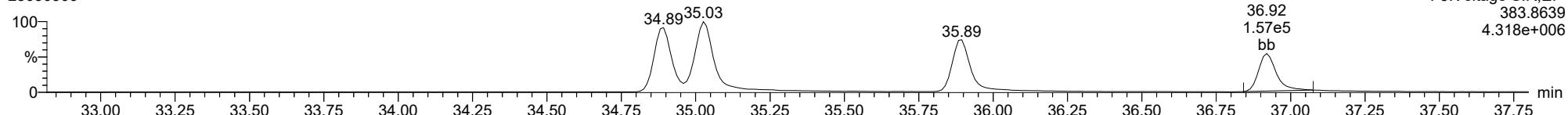
**123789-HxCDF**

23030306



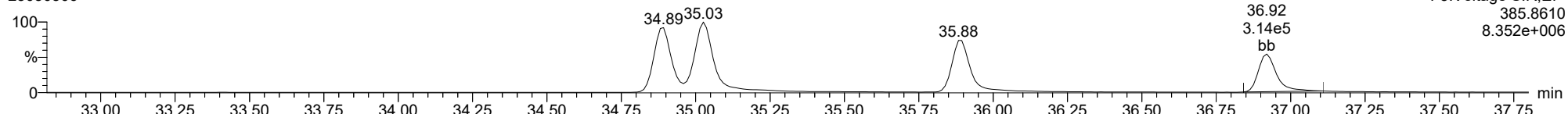
**13C-123789-HxCDF**

23030306



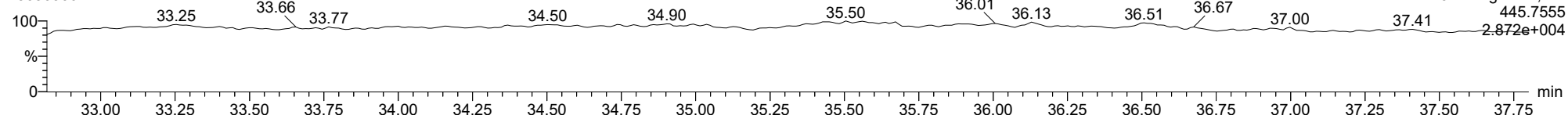
**13C-123789-HxCDF**

23030306



**FUNCTION3 OCDPE**

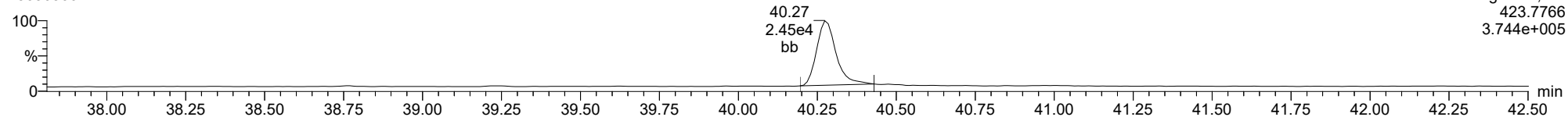
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

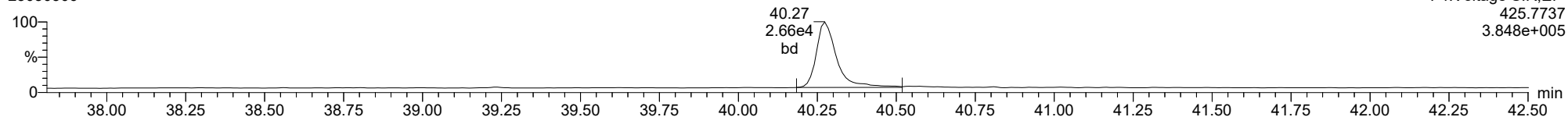
**1234678-HpCDD**

23030306



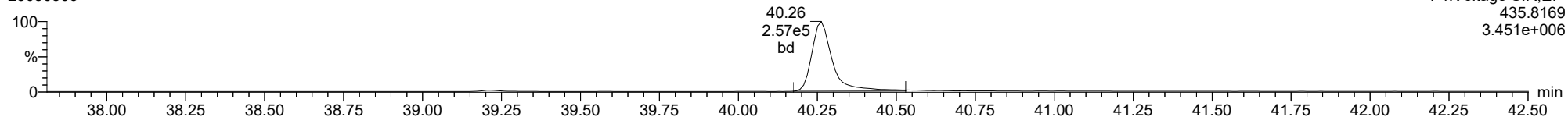
**1234678-HpCDD**

23030306



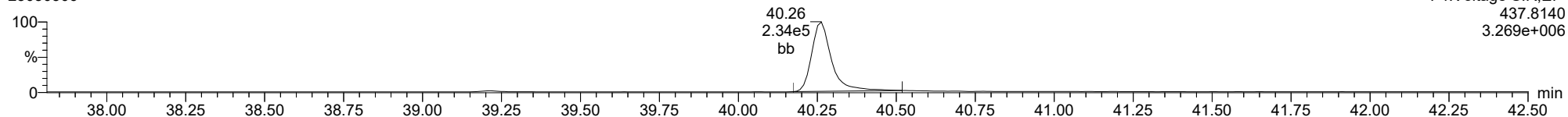
**13C-1234678-HpCDD**

23030306



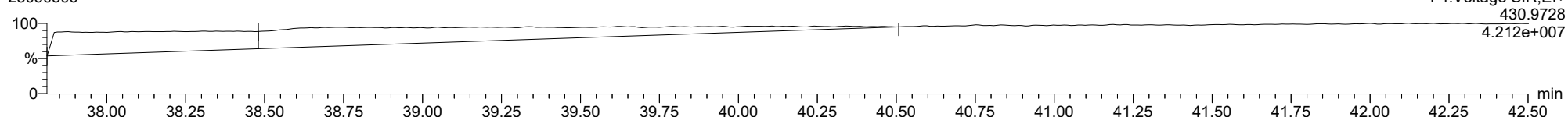
**13C-1234678-HpCDD**

23030306



**FUNCTION4 PFK**

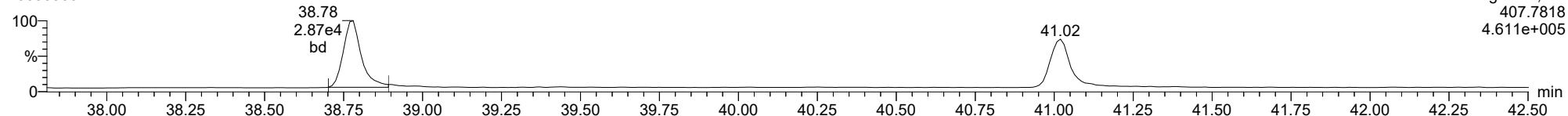
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ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

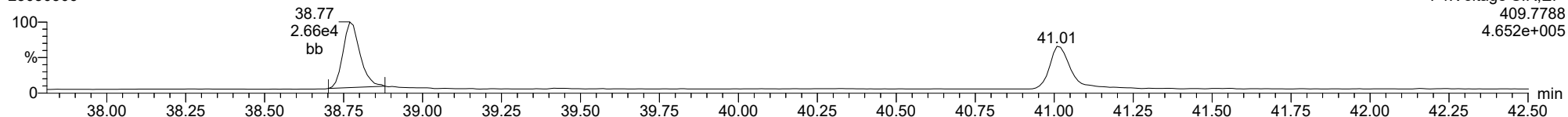
23030306



F4:Voltage SIR,El+  
407.7818  
4.611e+005

1234678-HpCDF

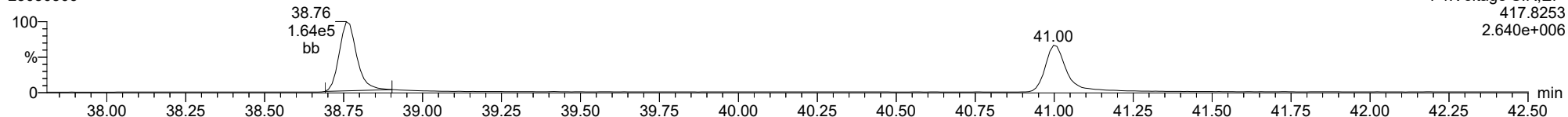
23030306



F4:Voltage SIR,El+  
409.7788  
4.652e+005

13C-1234678-HpCDF

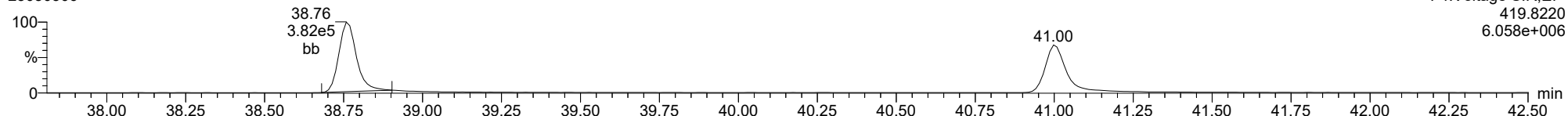
23030306



F4:Voltage SIR,El+  
417.8253  
2.640e+006

13C-1234678-HpCDF

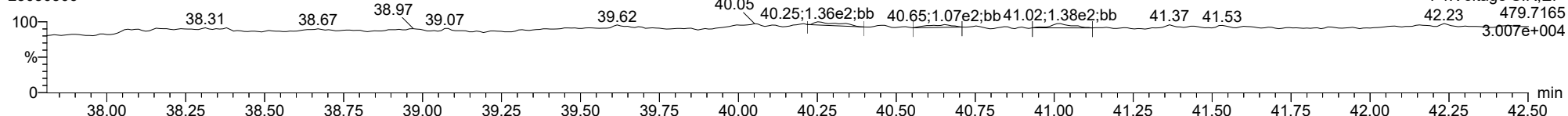
23030306



F4:Voltage SIR,El+  
419.8220  
6.058e+006

FUNCTION4 NCDPE

23030306



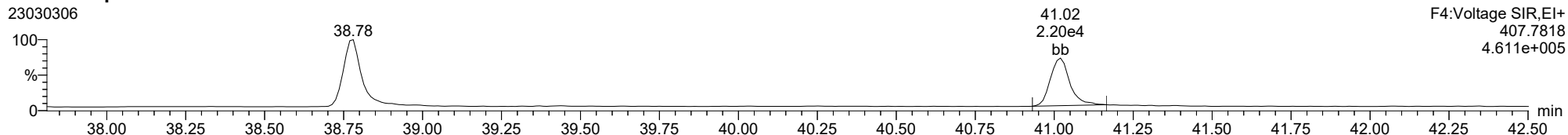
F4:Voltage SIR,El+  
42.23 479.7165  
3.007e+004



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF

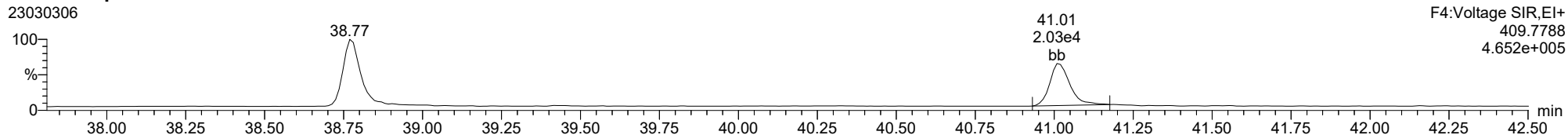
23030306



F4:Voltage SIR,EI+  
407.7818  
4.611e+005

1234789-HpCDF

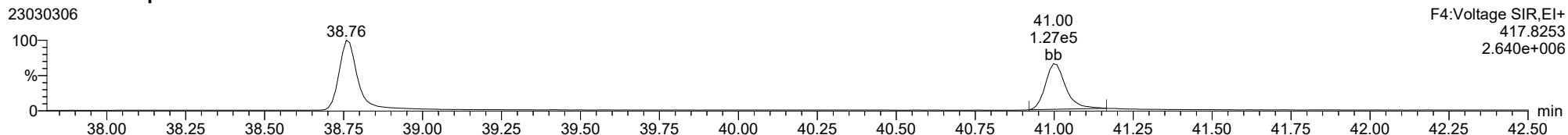
23030306



F4:Voltage SIR,EI+  
409.7788  
4.652e+005

13C-1234789-HpCDF

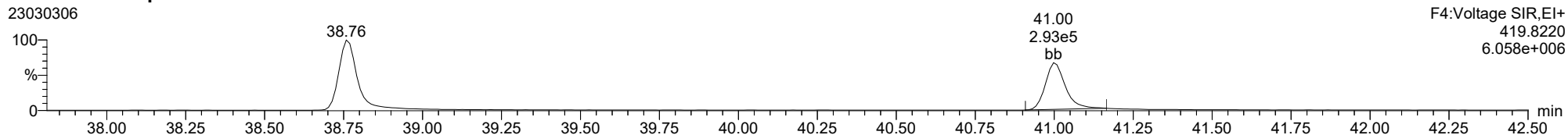
23030306



F4:Voltage SIR,EI+  
417.8253  
2.640e+006

13C-1234789-HpCDF

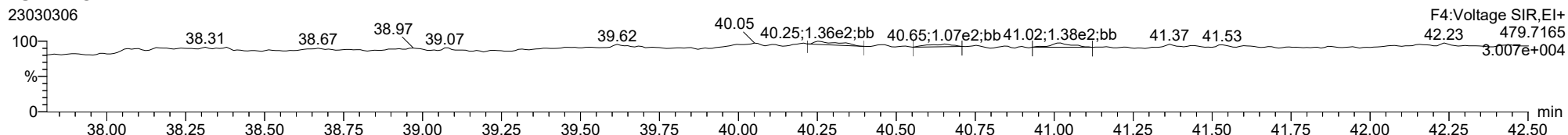
23030306



F4:Voltage SIR,EI+  
419.8220  
6.058e+006

FUNCTION4 NCDPE

23030306

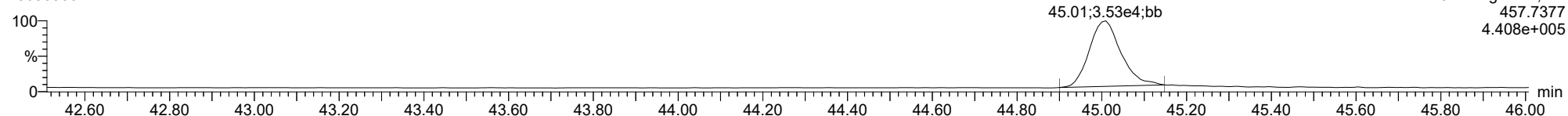


F4:Voltage SIR,EI+  
479.7165  
3.007e+004

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**OCDD**

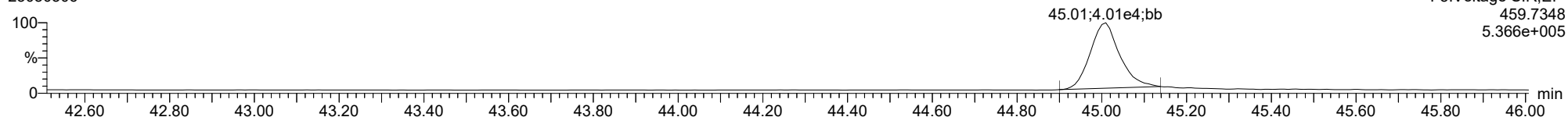
23030306



F5:Voltage SIR,EI+  
457.7377  
4.408e+005

**OCDD**

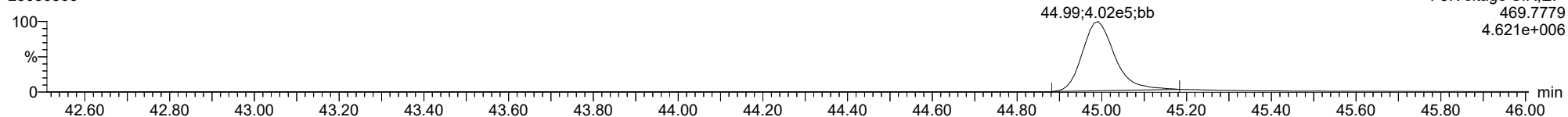
23030306



F5:Voltage SIR,EI+  
459.7348  
5.366e+005

**13C-OCDD**

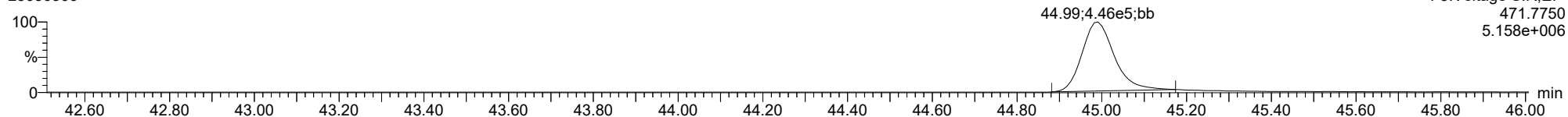
23030306



F5:Voltage SIR,EI+  
469.7779  
4.621e+006

**13C-OCDD**

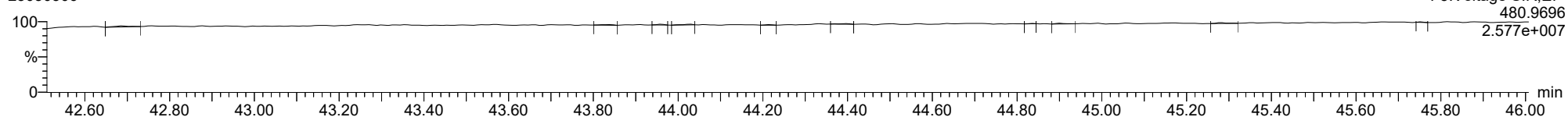
23030306



F5:Voltage SIR,EI+  
471.7750  
5.158e+006

**FUNCTION5 PFK**

23030306

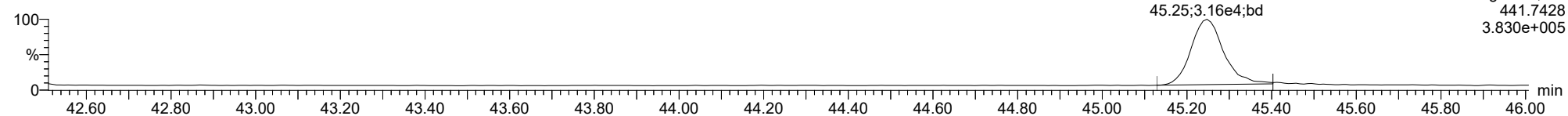


F5:Voltage SIR,EI+  
480.9696  
2.577e+007

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

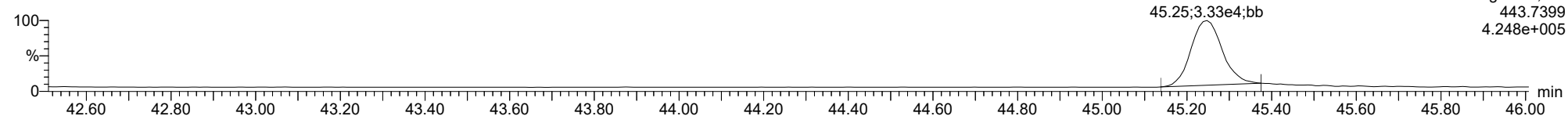
**OCDF**

23030306



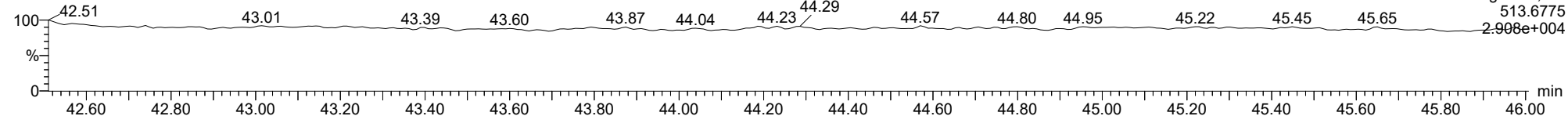
**OCDF**

23030306



**FUNCTION5 DCDPE**

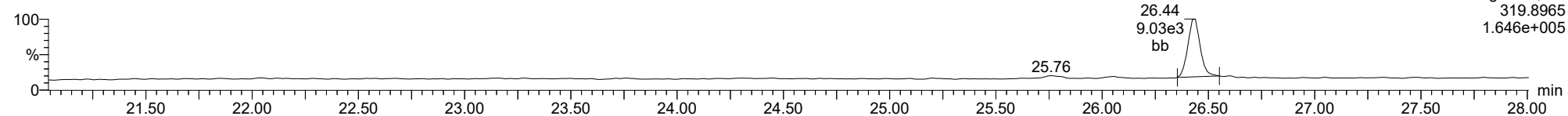
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

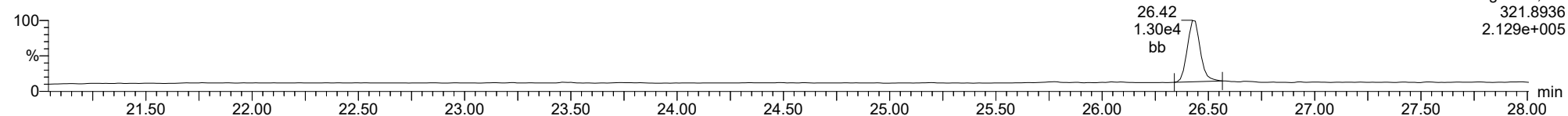
**Total-tetradioxins**

23030306



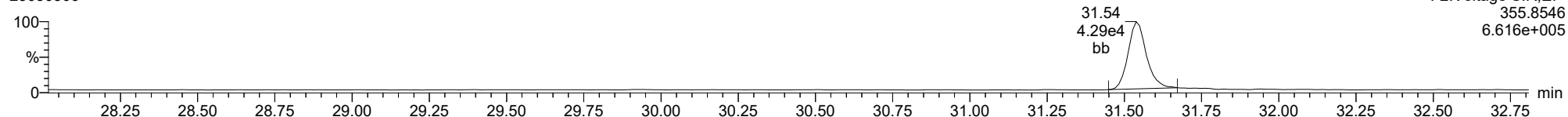
**Total-tetradioxins**

23030306



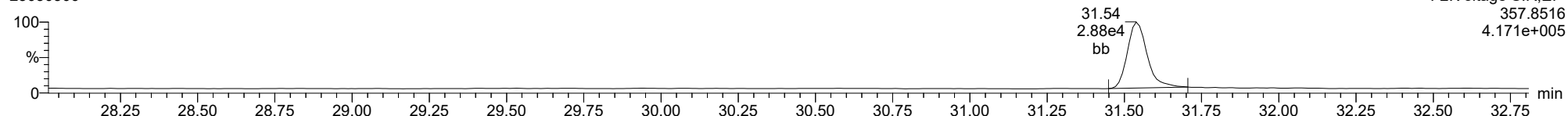
**Total-pentadioxins**

23030306



**Total-pentadioxins**

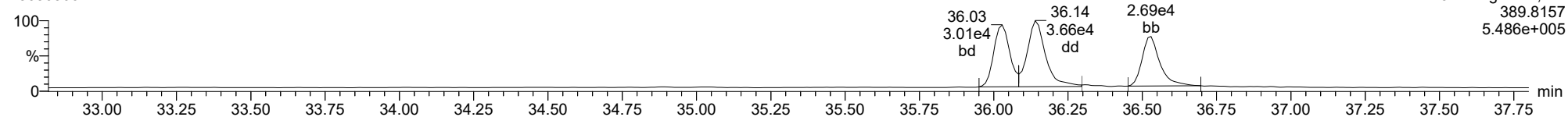
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

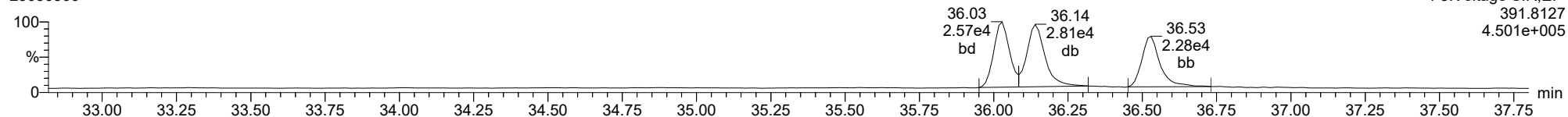
**Total-hexadioxins**

23030306



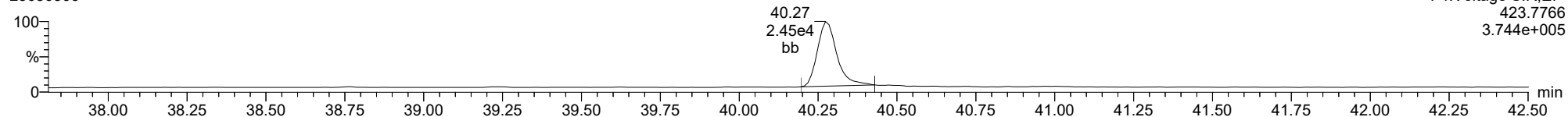
**Total-hexadioxins**

23030306



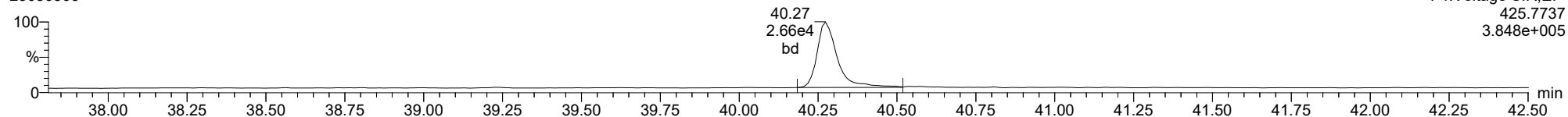
**Total-heptadioxins**

23030306



**Total-heptadioxins**

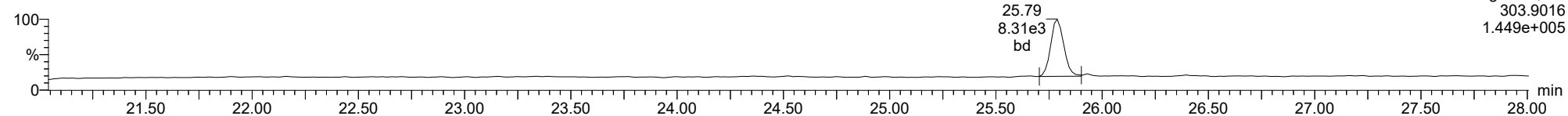
23030306



ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

**Total-tetrafurans**

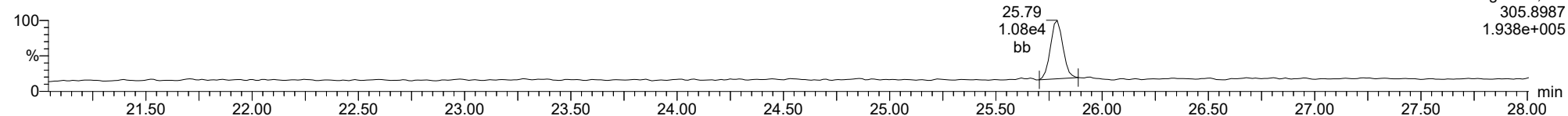
23030306



F1:Voltage SIR,EI+  
303.9016  
1.449e+005

**Total-tetrafurans**

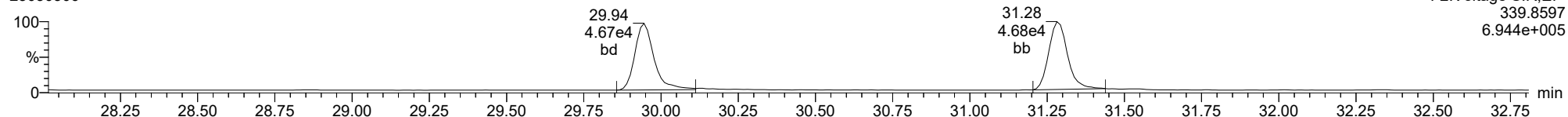
23030306



F1:Voltage SIR,EI+  
305.8987  
1.938e+005

**Total-pentafurans**

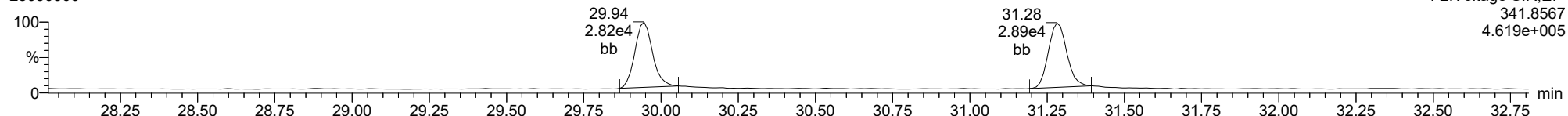
23030306



F2:Voltage SIR,EI+  
339.8597  
6.944e+005

**Total-pentafurans**

23030306

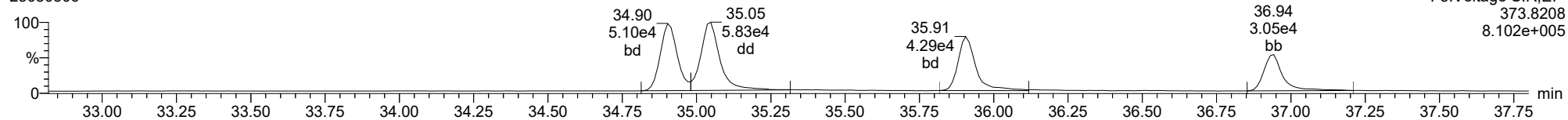


F2:Voltage SIR,EI+  
341.8567  
4.619e+005

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

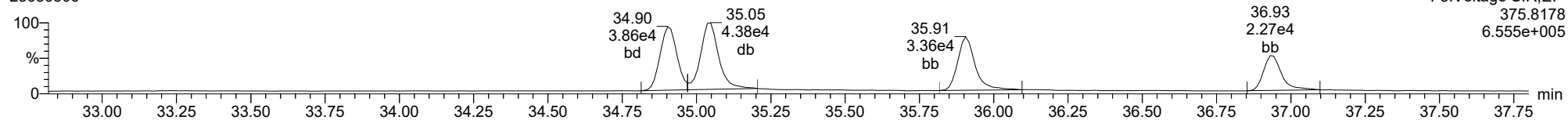
**Total-hexafurans**

23030306



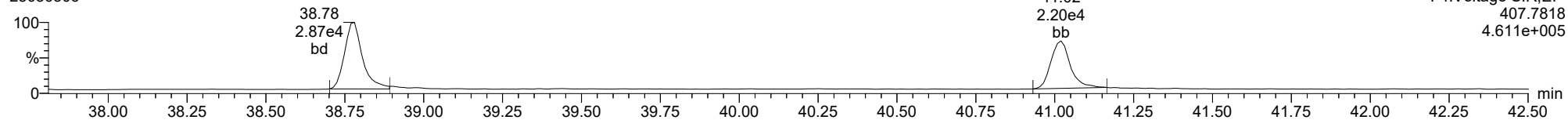
**Total-hexafurans**

23030306



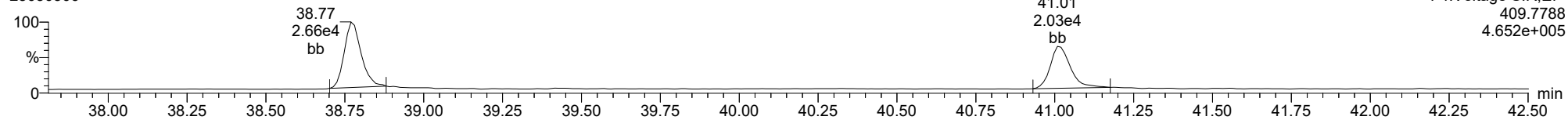
**Total-heptafurans**

23030306



**Total-heptafurans**

23030306



Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	4.563e4	6.298e4	0.702	0.724	0.770	1455	2151	7.03e5	9.46e5	483.4	440.0	NO	bb	bb	10.132
12378-PeCDF	29.945	1.001	2.374e5	1.577e5	0.679	1.505	1.550	2714	2519	3.51e6	2.28e6	1294.3	903.8	NO	bb	bb	49.089
23478-PeCDF	31.282	1.001	2.063e5	1.364e5	0.786	1.512	1.550	2714	2519	3.03e6	1.99e6	1118.0	788.5	NO	bb	bb	49.466
123478-HxCDF	34.903	1.000	2.473e5	1.941e5	1.166	1.275	1.240	3008	2708	3.76e6	2.98e6	1248.4	1099.9	NO	bd	bd	48.979
234678-HxCDF	35.905	1.000	2.404e5	1.930e5	1.140	1.246	1.240	3008	2708	3.53e6	2.85e6	1172.2	1053.8	NO	bb	bb	49.000
123678-HxCDF	35.048	1.001	2.970e5	2.223e5	1.091	1.336	1.240	3008	2708	3.95e6	3.09e6	1312.5	1142.3	NO	db	db	50.520
123789-HxCDF	36.942	1.001	2.103e5	1.706e5	1.137	1.233	1.240	3008	2708	2.89e6	2.30e6	959.2	849.3	NO	bd	bd	50.468
1234678-HpCDF	38.780	1.000	1.592e5	1.601e5	1.003	0.994	1.050	2672	2189	2.51e6	2.53e6	939.2	1157.5	NO	bb	bb	48.161
1234789-HpCDF	41.019	1.000	1.361e5	1.443e5	0.953	0.943	1.050	2672	2189	1.84e6	1.86e6	689.1	851.7	NO	bb	bd	49.244
OCDF	45.247	1.006	2.019e5	2.478e5	0.778	0.815	0.890	1393	1380	2.32e6	2.62e6	1663.0	1900.3	NO	bb	bd	93.418
2378-TCDD	26.424	1.000	5.877e4	7.446e4	1.149	0.789	0.770	1483	1021	8.00e5	1.03e6	539.5	1013.7	NO	bd	bb	9.873
12378-PeCDD	31.538	1.000	1.890e5	1.221e5	1.022	1.548	1.550	1651	2172	2.74e6	1.77e6	1662.3	815.6	NO	bb	bb	49.884
123478-HxCDD	36.028	1.000	1.812e5	1.479e5	0.996	1.225	1.240	1690	2600	2.90e6	2.38e6	1717.5	913.7	NO	bd	bd	48.605
123678-HxCDD	36.139	1.000	2.270e5	1.862e5	1.001	1.219	1.240	1690	2600	3.05e6	2.54e6	1803.3	977.3	NO	db	db	51.480
123789-HxCDD	36.529	1.011	1.887e5	1.546e5	0.907	1.221	1.240	1690	2600	2.71e6	2.20e6	1606.4	846.3	NO	bb	bb	51.083
1234678-HpCDD	40.273	1.000	1.573e5	1.681e5	1.039	0.936	1.050	2523	2313	2.21e6	2.22e6	874.4	957.9	NO	bb	bd	49.956
OCDD	45.009	1.000	2.508e5	2.930e5	0.920	0.856	0.890	1279	1652	2.91e6	3.41e6	2272.5	2065.6	NO	bb	bb	95.487
13C-2378-TCDF	25.774	1.007	6.575e5	8.705e5	1.620	0.755	0.770	2127	1667	9.70e6	1.27e7	4562.2	7600.8	NO	bb	bb	92.139
13C-12378-PeCDF	29.922	1.169	7.106e5	4.742e5	1.240	1.498	1.550	3150	3257	9.76e6	6.54e6	3098.5	2009.5	NO	bd	bd	93.316
13C-23478-PeCDF	31.259	1.221	5.241e5	3.573e5	1.118	1.467	1.550	3150	3257	7.68e6	5.27e6	2437.6	1617.5	NO	bb	bb	77.038
13C-123478-HxCDF	34.891	0.956	2.605e5	5.124e5	1.168	0.508	0.510	2130	2302	3.94e6	7.71e6	1851.1	3349.5	NO	bd	bd	95.975
13C-123678-HxCDF	35.025	0.959	3.029e5	6.396e5	1.386	0.474	0.510	2130	2302	4.25e6	8.39e6	1994.1	3646.7	NO	db	db	98.624
13C-234678-HxCDF	35.894	0.983	2.705e5	5.057e5	1.129	0.535	0.510	2130	2302	3.77e6	7.17e6	1772.4	3115.7	NO	bd	bb	99.718
13C-123789-HxCDF	36.919	1.011	2.253e5	4.385e5	0.932	0.514	0.510	2130	2302	3.30e6	6.48e6	1548.0	2814.2	NO	bb	bb	103.358
13C-1234678-HpCDF	38.769	1.062	2.032e5	4.578e5	0.895	0.444	0.440	2209	3025	3.15e6	7.13e6	1428.1	2357.0	NO	bb	bb	107.118
13C-1234789-HpCDF	41.008	1.123	1.757e5	4.217e5	0.770	0.417	0.440	2209	3025	2.29e6	5.20e6	1036.4	1717.4	NO	bb	bb	112.595
13C-1234-TCDD	25.605	0.000	4.555e5	5.681e5	1.000	0.802	0.770	2485	1606	6.85e6	8.57e6	2757.9	5335.2	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	5.228e5	6.520e5	1.152	0.802	0.770	2485	1606	7.70e6	9.63e6	3097.5	5999.3	NO	bb	bb	99.597
13C-12378-PeCDD	31.527	1.231	3.747e5	2.356e5	0.829	1.590	1.550	1413	1348	5.28e6	3.29e6	3736.6	2437.5	NO	bb	bb	71.936
13C-123478-HxCDD	36.017	0.986	3.837e5	2.963e5	0.995	1.295	1.240	1796	1719	5.91e6	4.54e6	3293.9	2638.3	NO	bd	bd	99.140
13C-123678-HxCDD	36.128	0.989	4.675e5	3.344e5	1.157	1.398	1.240	1796	1719	6.38e6	4.87e6	3554.2	2831.4	NO	db	db	100.573
13C-1234678-HpCDD	40.262	1.102	3.210e5	3.059e5	0.840	1.049	1.050	2165	1959	4.38e6	4.15e6	2024.2	2117.7	NO	bb	bb	108.247
13C-OCDD	44.990	1.232	6.075e5	6.305e5	0.767	0.963	0.890	2629	1930	6.50e6	7.26e6	2473.3	3761.0	NO	bd	bb	234.029
13C-123789-HxCDD	36.518	0.000	3.849e5	3.043e5	1.000	1.265	1.240	1796	1719	5.52e6	4.36e6	3076.5	2537.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.032	1.159e5		1.288			2383		1.68e6		703.2			bb		8.796



Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:37 Pacific Standard Time

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.285	0.865	5.143e4	7.104e4	0.802	0.724	0.770	1455	2151	8.64e5	1.17e6	593.7	544.2	NO	bb	bb	10.000
1289-TCDF	27.286	1.059	4.449e4	5.910e4	0.678	0.753	0.770	1455	2151	6.41e5	8.65e5	440.8	402.3	NO	bb	db	10.000
13468-PECDF	27.144	0.907	4.471e5	2.913e5	1.246	1.535	1.550	765	1431	6.85e6	4.42e6	8952.4	3092.4	NO	bb	bb	50.000
12389-PECDF	32.318	1.080	1.756e5	1.185e5	0.496	1.482	1.550	2714	2519	2.46e6	1.67e6	905.1	663.5	NO	bb	bb	50.000
123468-HXCDF	33.243	0.953	2.474e5	2.044e5	1.169	1.210	1.240	3008	2708	3.57e6	2.89e6	1187.3	1066.9	NO	bb	bd	50.000
1368-TCDD	23.557	0.892	5.333e4	6.596e4	1.015	0.808	0.770	1483	1021	8.25e5	1.09e6	556.5	1064.4	NO	bb	bb	10.000
1289-TCDD	27.031	1.023	4.649e4	6.027e4	0.909	0.771	0.770	1483	1021	6.71e5	8.87e5	452.4	868.9	NO	bb	bb	10.000
12479-PECDD	28.830	0.914	4.152e5	2.870e5	2.301	1.447	1.550	1651	2172	3.89e6	2.64e6	2354.1	1214.5	NO	bb	bd	50.000
12389-PECDD	31.939	1.013	2.202e5	1.409e5	1.184	1.563	1.550	1651	2172	2.97e6	1.93e6	1798.8	887.7	NO	bd	bd	50.000
124679-HXCDD	34.011	0.944	2.133e5	1.659e5	1.115	1.286	1.240	1690	2600	2.98e6	2.42e6	1762.3	930.8	NO	bd	bb	50.000
1234679-HPCDD	39.225	0.974	1.868e5	1.696e5	1.137	1.101	1.050	2523	2313	2.68e6	2.60e6	1062.7	1125.2	NO	bd	bb	50.000
Total-tetrafurans			1.415e5		0.727			1455		2.21e6							30.132
Total-penta1			4.471e5					765		6.85e6							50.000
Total-pentafurans			6.595e5		0.654			2714		9.58e6							158.378
Total-hexafurans			1.243e6		1.141			3008		1.77e7							249.074
Total-heptafurans			2.965e5		0.978			2672		4.37e6							97.824
Total-Furans			2.990e6		0.922			1455		4.30e7							678.826
Total-tetradoxins			2.666e5		1.024			1483		3.52e6							50.252
Total-pentadoxins			8.253e5		1.502			1651		9.61e6							150.025
Total-hexadoxins			8.102e5		1.005			1690		1.16e7							201.167
Total-heptadoxins			3.440e5		1.088			2523		4.89e6							99.956
Total-Dioxins			2.497e6		1.130			1483		3.26e7							596.887
Total-TEQ			5.487e6					1483		7.56e7							1275.713
FUNCTION1 PFK			2.078e5					640846		4.44e6							
FUNCTION2 PFK			1.544e7					302960		1.17e7							0.000
FUNCTION3 PFK			6.335e6					441696		3.43e7							0.000
FUNCTION4 PFK			1.606e7					302692		2.36e6							
FUNCTION5 PFK			3.357e4					240421		1.60e6							
FUNCTION1 HXCD...			1.444e3					587		1.68e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			9.034e2					1003		1.66e4							0.000
FUNCTION3 OCDPE			5.560e2					494		8.57e3							0.000
FUNCTION4 NCDPE			9.205e2					776		1.78e4							0.000
FUNCTION5 DCDPE			9.291e1					548		1.29e3							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDFF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
2	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
3	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
4	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
5	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
2	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
3	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
4	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
5	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
6	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
2	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
3	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:37 Pacific Standard Time

**ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000
4	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
5	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
6	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
7	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
8	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712
9	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
10	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
11	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
12	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
13	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
14	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000
15	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
16	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
17	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161
18	OCDF	45.25	2.019e5	2.478e5	0.778	0.81	0.89	1663.0	YES	NO	bb	bd	93.418
19	13468-PECDF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
2	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
3	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
4	Total-tetradoxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
5	Total-tetradoxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
6	Total-tetradoxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
2	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
3	Total-pentadoxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
4	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
2	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
3	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
4	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
2	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
2	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
3	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
4	Total-tetradoxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
5	Total-tetradoxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
6	Total-tetradoxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108
7	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
8	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
9	Total-pentadoxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
10	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000
11	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
12	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
13	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
14	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000
15	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
16	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000
17	OCDD	45.01	2.508e5	2.930e5	0.920	0.86	0.89	2272.5	YES	NO	bb	bb	95.487

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000
4	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
5	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
6	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
7	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
8	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712
9	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
10	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
11	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
12	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
13	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
14	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000
15	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
16	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
17	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161
18	OCDF	45.25	2.019e5	2.478e5	0.778	0.81	0.89	1663.0	YES	NO	bb	bd	93.418
19	13468-PECDF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000
20	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
21	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
22	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
23	Total-tetradiioxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
24	Total-tetradiioxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
25	Total-tetradiioxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108
26	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
27	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
28	Total-pentadiioxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
29	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000
30	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
31	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
32	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
33	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000
34	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
35	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000
36	OCDD	45.01	2.508e5	2.930e5	0.920	0.86	0.89	2272.5	YES	NO	bb	bb	95.487

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.24	1.621e5					3.0	YES		bb		
2	FUNCTION1 PFK	26.04	7.004e3					0.8	NO		bb		
3	FUNCTION1 PFK	25.20	1.505e4					1.0	NO		bb		
4	FUNCTION1 PFK	24.33	1.235e4					0.8	NO		bb		
5	FUNCTION1 PFK	23.94	5.589e3					0.6	NO		bb		
6	FUNCTION1 PFK	23.61	5.711e3					0.6	NO		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.40	1.216e5					2.2	NO		bb		0.000
2	FUNCTION2 PFK	29.43	1.324e7					19.8	YES		db		0.000
3	FUNCTION2 PFK	28.41	2.080e6					16.6	YES		bd		0.000

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## PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.64	4.177e4					1.9	NO		bb		0.000
2	FUNCTION3 PFK	33.49	1.199e5					5.0	YES		db		0.000
3	FUNCTION3 PFK	33.44	2.654e6					7.0	YES		dd		0.000
4	FUNCTION3 PFK	33.06	2.958e6					23.7	YES		bd		0.000
5	FUNCTION3 PFK	35.38	2.169e4					1.0	NO		bb		0.000
6	FUNCTION3 PFK	35.25	5.928e3					0.6	NO		bb		0.000
7	FUNCTION3 PFK	35.11	7.037e3					0.7	NO		bb		0.000
8	FUNCTION3 PFK	34.99	1.627e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	34.92	1.103e4					1.1	NO		db		0.000
10	FUNCTION3 PFK	34.86	1.305e4					1.0	NO		bd		0.000
11	FUNCTION3 PFK	34.80	9.642e3					0.9	NO		bb		0.000
12	FUNCTION3 PFK	34.66	1.233e4					0.9	NO		db		0.000
13	FUNCTION3 PFK	34.64	7.688e3					0.8	NO		bd		0.000
14	FUNCTION3 PFK	34.57	9.132e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	34.47	7.208e3					0.8	NO		bb		0.000
16	FUNCTION3 PFK	34.31	1.503e4					1.0	NO		bb		0.000
17	FUNCTION3 PFK	34.22	2.675e4					1.4	NO		bb		0.000
18	FUNCTION3 PFK	34.01	3.007e4					2.1	NO		db		0.000
19	FUNCTION3 PFK	33.97	1.328e4					1.1	NO		bd		0.000
20	FUNCTION3 PFK	33.91	6.249e3					0.6	NO		bb		0.000
21	FUNCTION3 PFK	36.99	2.219e4					1.1	NO		bd		0.000
22	FUNCTION3 PFK	36.87	2.133e3					0.4	NO		bb		0.000
23	FUNCTION3 PFK	36.83	5.225e3					0.6	NO		bb		0.000
24	FUNCTION3 PFK	36.70	4.929e4					1.7	NO		bb		0.000
25	FUNCTION3 PFK	36.43	1.980e4					1.2	NO		bb		0.000
26	FUNCTION3 PFK	36.38	7.184e3					0.9	NO		bb		0.000
27	FUNCTION3 PFK	36.27	4.220e3					0.5	NO		bb		0.000
28	FUNCTION3 PFK	36.24	2.102e3					0.4	NO		bb		0.000
29	FUNCTION3 PFK	36.19	3.748e3					0.5	NO		bb		0.000
30	FUNCTION3 PFK	35.87	3.133e4					1.6	NO		db		0.000
31	FUNCTION3 PFK	35.83	1.912e4					1.5	NO		bd		0.000
32	FUNCTION3 PFK	35.78	2.675e3					0.4	NO		db		0.000
33	FUNCTION3 PFK	35.74	3.023e4					1.5	NO		dd		0.000
34	FUNCTION3 PFK	35.67	1.673e4					1.4	NO		bd		0.000
35	FUNCTION3 PFK	35.58	2.145e4					1.4	NO		db		0.000
36	FUNCTION3 PFK	35.53	1.268e4					1.1	NO		bd		0.000
37	FUNCTION3 PFK	37.67	2.243e4					1.6	NO		bb		0.000

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**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	37.45	8.583e3					0.7	NO		db		0.000
39	FUNCTION3 PFK	37.43	4.891e3					0.7	NO		bd		0.000
40	FUNCTION3 PFK	37.30	6.956e3					0.6	NO		bb		0.000
41	FUNCTION3 PFK	37.23	5.682e3					0.7	NO		db		0.000
42	FUNCTION3 PFK	37.20	9.815e3					0.9	NO		dd		0.000
43	FUNCTION3 PFK	37.15	5.475e3					0.6	NO		dd		0.000
44	FUNCTION3 PFK	37.11	7.631e3					0.8	NO		bd		0.000
45	FUNCTION3 PFK	37.06	2.709e4					1.4	NO		db		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.40	1.889e5					2.4	NO		bb		
2	FUNCTION4 PFK	39.68	1.587e7					5.4	YES		bb		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.63	9.422e3					1.5	NO		bb		
2	FUNCTION5 PFK	43.24	1.576e3					0.7	NO		bb		
3	FUNCTION5 PFK	43.00	1.263e4					1.7	NO		bb		
4	FUNCTION5 PFK	45.90	6.371e3					1.4	NO		bb		
5	FUNCTION5 PFK	45.34	1.310e3					0.6	NO		bb		
6	FUNCTION5 PFK	43.79	2.270e3					0.7	NO		bb		



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.16	2.360e2					3.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.52	1.410e2					3.2	YES		db		0.000
3	FUNCTION1 HXCD...	26.41	1.480e2					3.3	YES		bd		0.000
4	FUNCTION1 HXCD...	26.16	8.707e1					1.9	NO		db		0.000
5	FUNCTION1 HXCD...	26.10	7.515e1					2.1	NO		bd		0.000
6	FUNCTION1 HXCD...	25.79	8.971e1					2.2	NO		bb		0.000
7	FUNCTION1 HXCD...	25.63	1.156e2					2.5	NO		bb		0.000
8	FUNCTION1 HXCD...	24.52	1.119e2					2.7	NO		db		0.000
9	FUNCTION1 HXCD...	24.43	1.844e2					3.5	YES		bd		0.000
10	FUNCTION1 HXCD...	23.75	1.728e2					2.1	NO		bb		0.000
11	FUNCTION1 HXCD...	21.31	8.251e1					1.7	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.95	1.010e2					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	31.18	4.333e2					5.6	YES		bb		0.000
3	FUNCTION2 HPCD...	30.70	7.244e1					2.1	NO		bb		0.000
4	FUNCTION2 HPCD...	30.31	7.131e1					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.76	7.422e1					1.6	NO		bb		0.000
6	FUNCTION2 HPCD...	29.04	7.307e1					1.9	NO		bb		0.000
7	FUNCTION2 HPCD...	28.55	7.813e1					2.1	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	1.400e2					5.4	YES		bb		0.000
2	FUNCTION3 OCDPE	35.04	1.909e2					5.6	YES		db		0.000
3	FUNCTION3 OCDPE	34.94	2.251e2					6.4	YES		bd		0.000

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**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.60	9.374e1					3.5	YES		bb		0.000
2	FUNCTION4 NCDPE	40.25	1.903e2					3.2	YES		bb		0.000
3	FUNCTION4 NCDPE	39.09	7.390e1					1.9	NO		bb		0.000
4	FUNCTION4 NCDPE	38.97	7.768e1					2.4	NO		bb		0.000
5	FUNCTION4 NCDPE	41.21	8.604e1					3.3	YES		bb		0.000
6	FUNCTION4 NCDPE	41.01	1.089e2					3.1	YES		bb		0.000
7	FUNCTION4 NCDPE	40.86	1.930e2					2.9	NO		db		0.000
8	FUNCTION4 NCDPE	40.74	9.692e1					2.6	NO		bd		0.000

**ETHERS6**

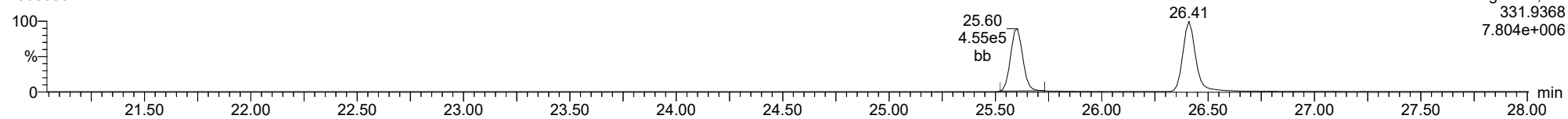
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.90	9.291e1					2.4	NO		bb		0.000

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** CS3CW, **Name:** 23030307, **Date:** 03-Mar-2023, **Time:** 14:06:39, **Conditions:** AUTOSPEC01, **User:** pk

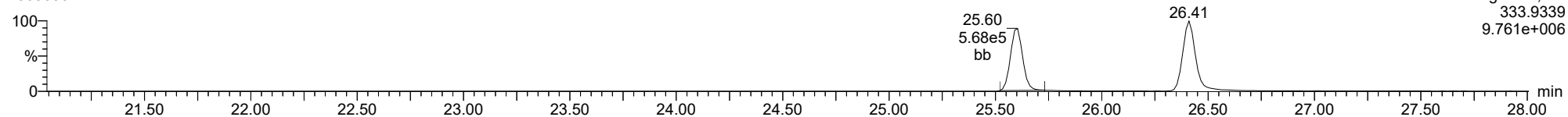
**13C-1234-TCDD**

23030307



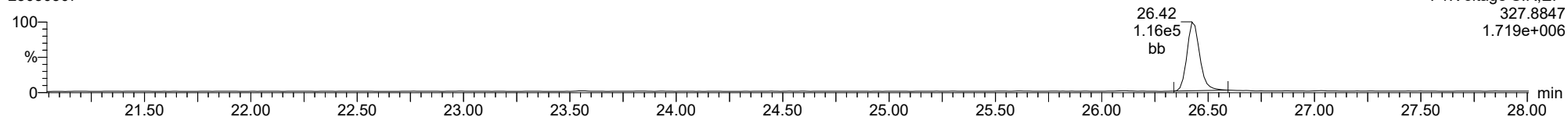
**13C-1234-TCDD**

23030307



**37CL-2378-TCDD**

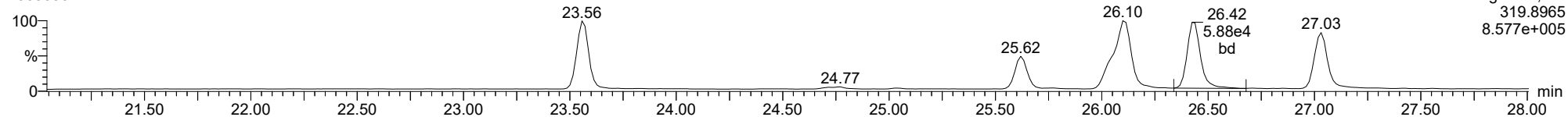
23030307



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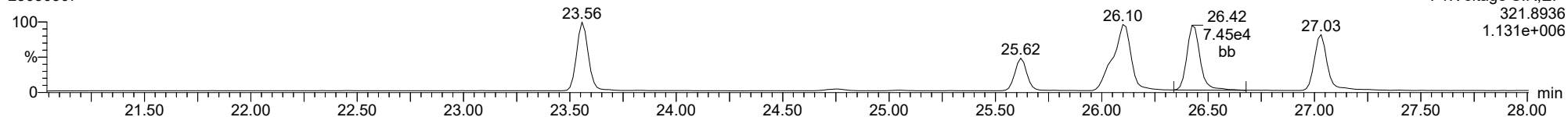
**2378-TCDD**

23030307



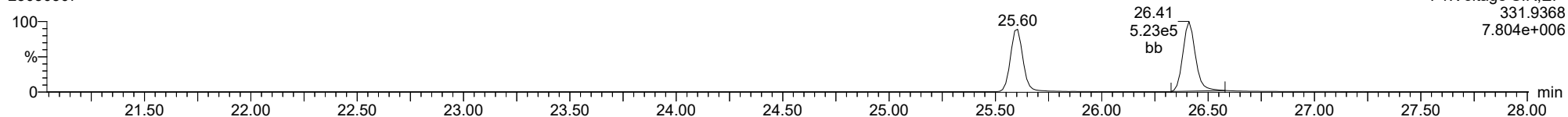
**2378-TCDD**

23030307



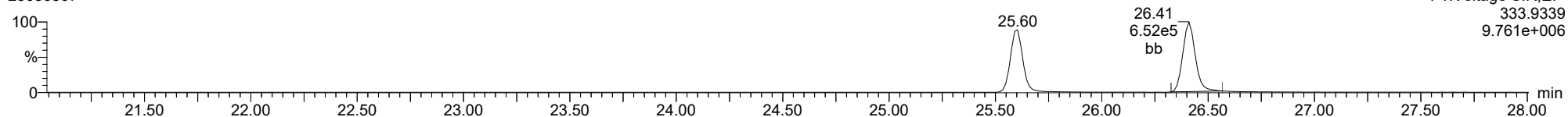
**13C-2378-TCDD**

23030307



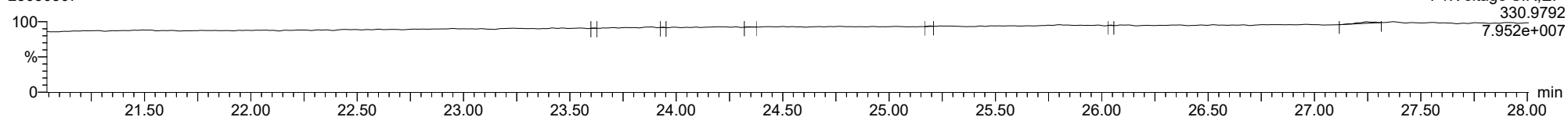
**13C-2378-TCDD**

23030307



**FUNCTION1 PFK**

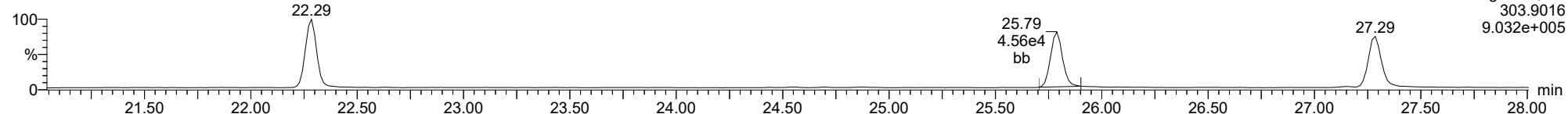
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

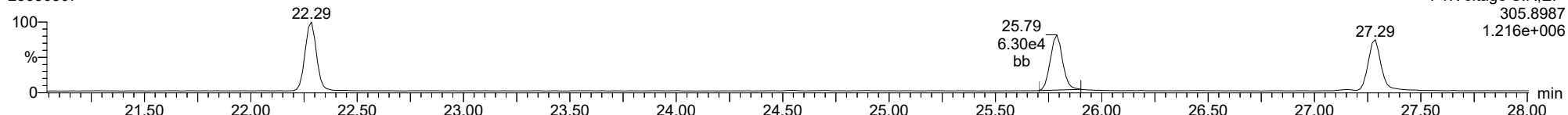
**2378-TCDF**

23030307



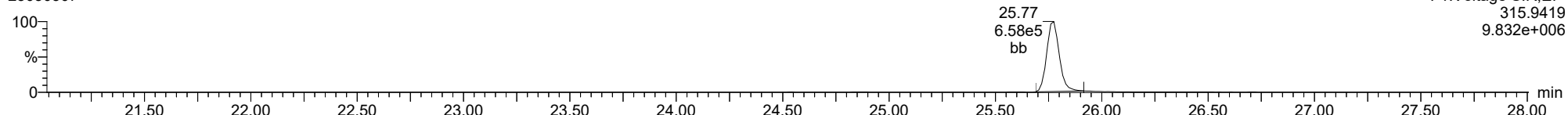
**2378-TCDF**

23030307



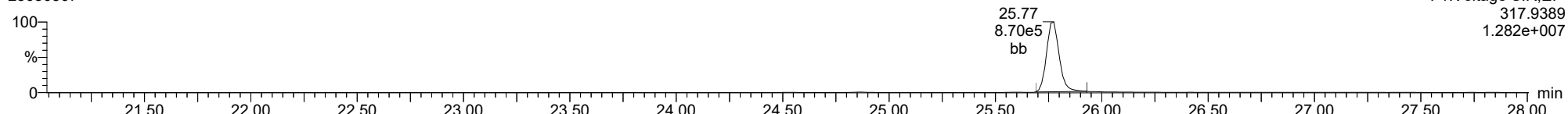
**13C-2378-TCDF**

23030307



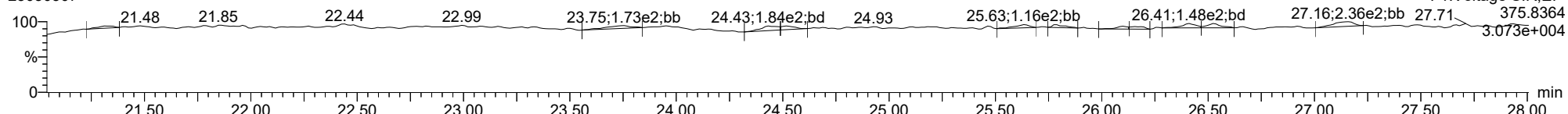
**13C-2378-TCDF**

23030307



**FUNCTION1 HXCDPE**

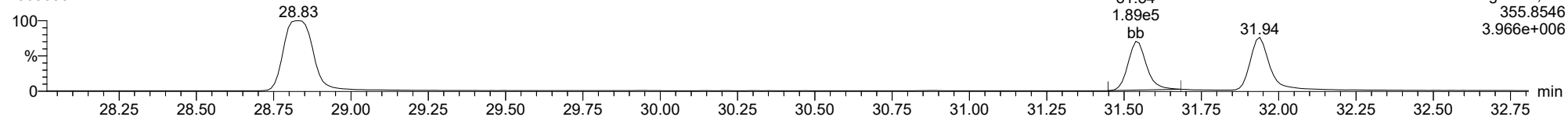
23030307



ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

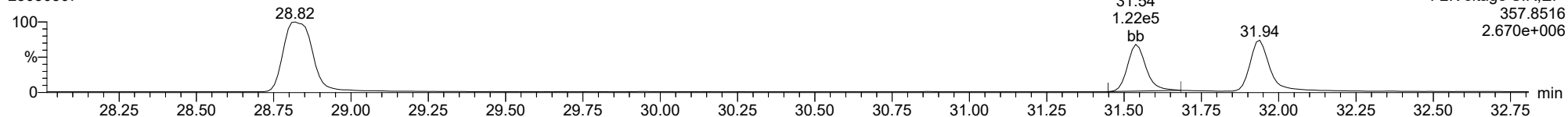
23030307



F2:Voltage SIR,EI+  
357.8516  
3.966e+006

**12378-PeCDD**

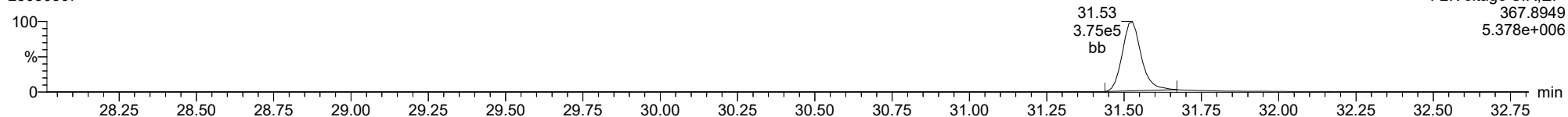
23030307



F2:Voltage SIR,EI+  
357.8516  
2.670e+006

**13C-12378-PeCDD**

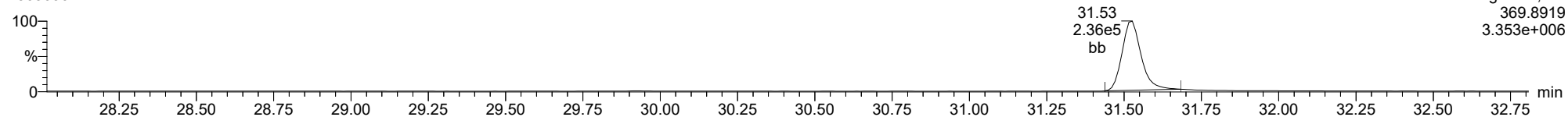
23030307



F2:Voltage SIR,EI+  
367.8949  
5.378e+006

**13C-12378-PeCDD**

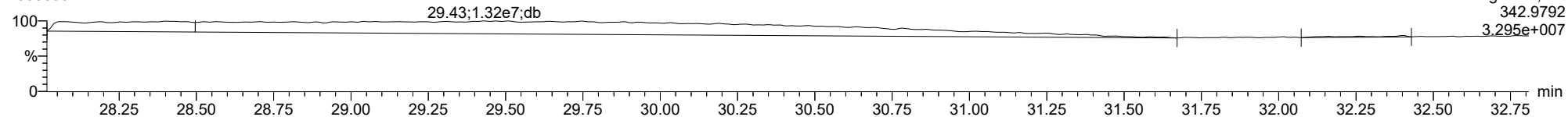
23030307



F2:Voltage SIR,EI+  
369.8919  
3.353e+006

**FUNCTION2 PFK**

23030307

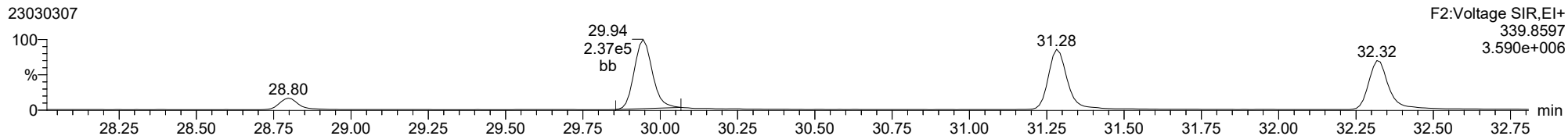


F2:Voltage SIR,EI+  
342.9792  
3.295e+007

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

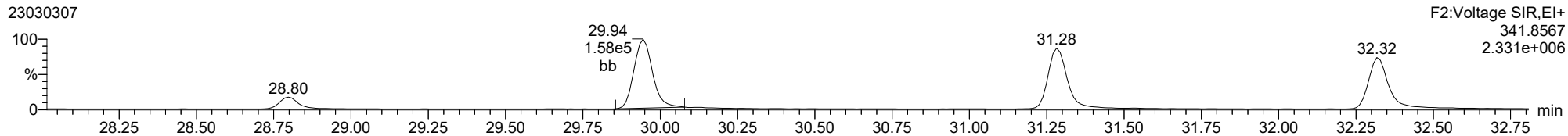
**12378-PeCDF**

23030307



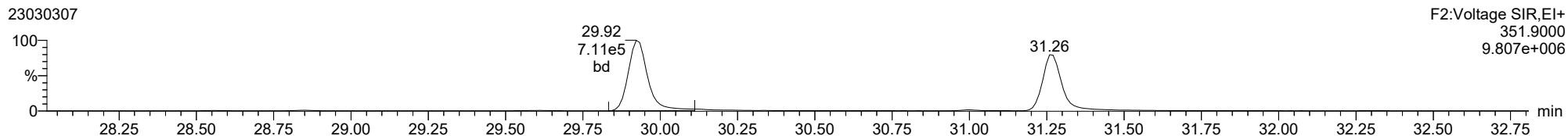
**12378-PeCDF**

23030307



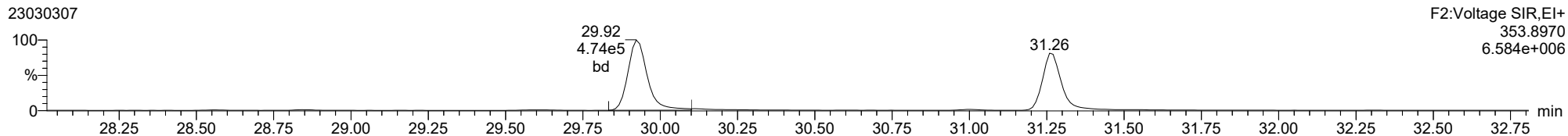
**13C-12378-PeCDF**

23030307



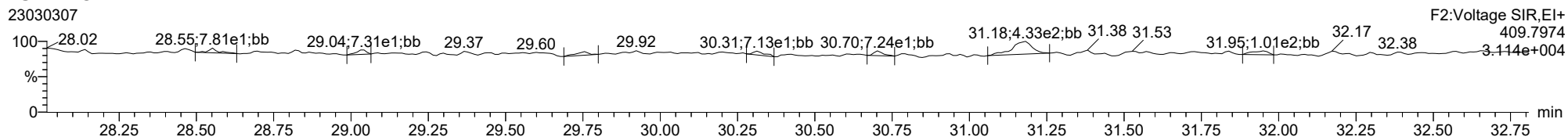
**13C-12378-PeCDF**

23030307



**FUNCTION2 HPCDPE**

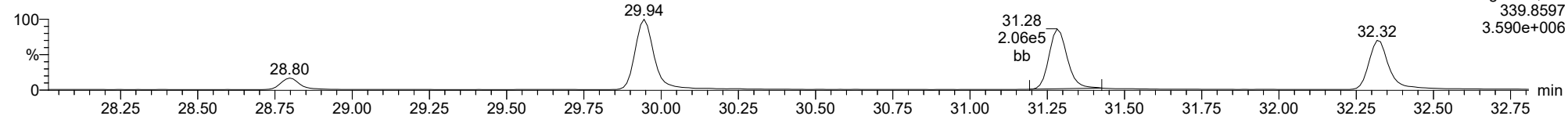
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

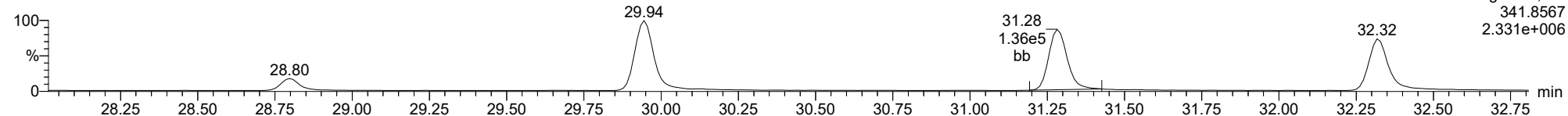
**23478-PeCDF**

23030307



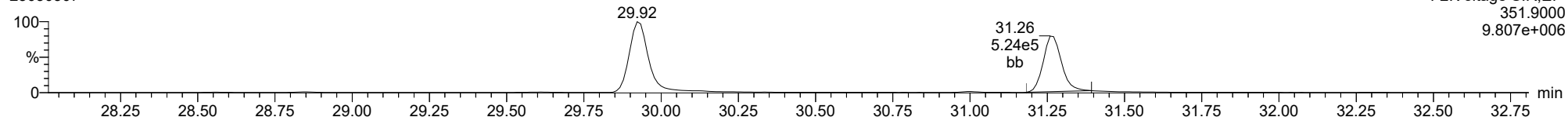
**23478-PeCDF**

23030307



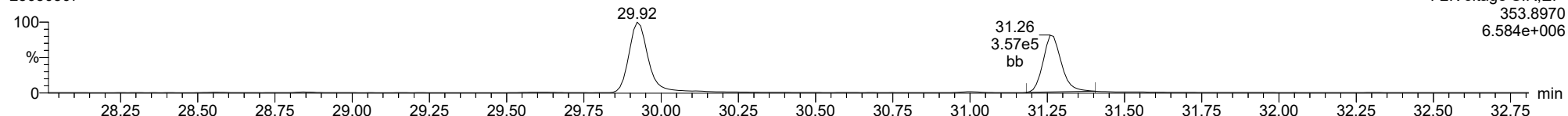
**13C-23478-PeCDF**

23030307



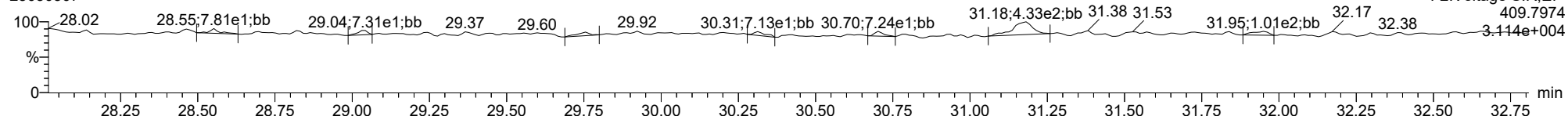
**13C-23478-PeCDF**

23030307



**FUNCTION2 HPCDPE**

23030307

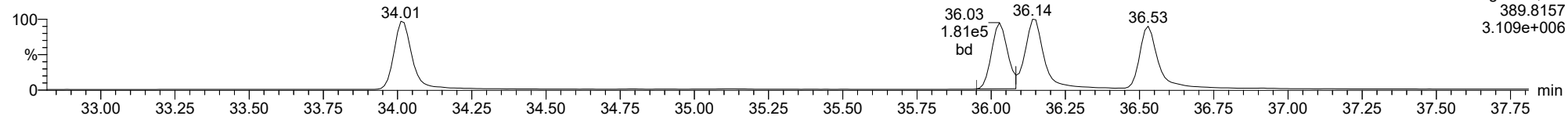




ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

**123478-HxCDD**

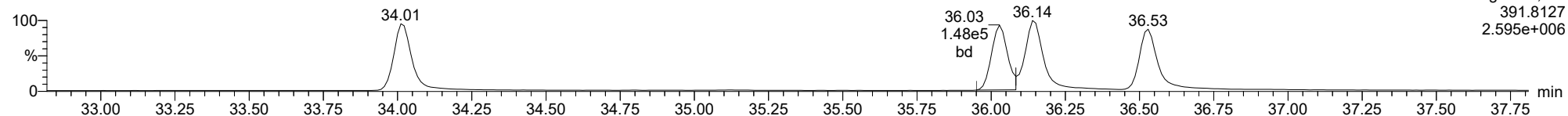
23030307



F3:Voltage SIR,EI+  
389.8157  
3.109e+006

**123478-HxCDD**

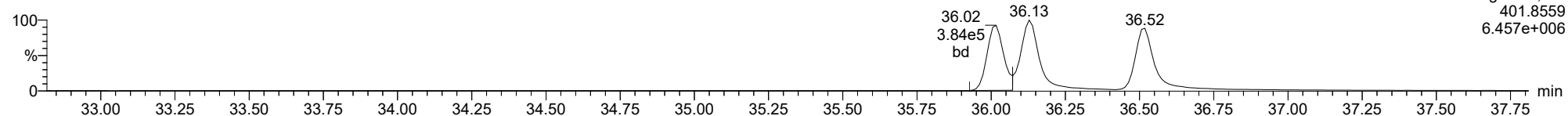
23030307



F3:Voltage SIR,EI+  
391.8127  
2.595e+006

**13C-123478-HxCDD**

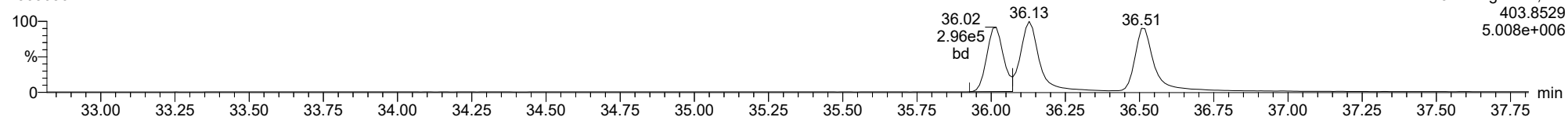
23030307



F3:Voltage SIR,EI+  
401.8559  
6.457e+006

**13C-123478-HxCDD**

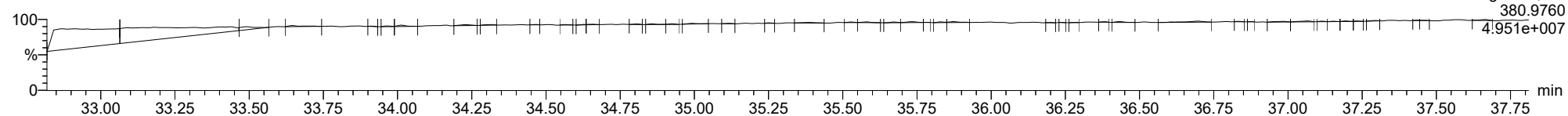
23030307



F3:Voltage SIR,EI+  
403.8529  
5.008e+006

**FUNCTION3 PFK**

23030307

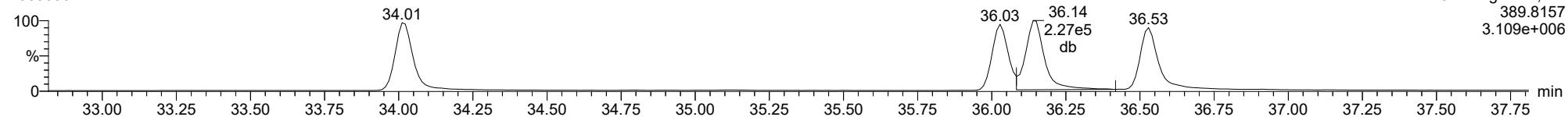


F3:Voltage SIR,EI+  
380.9760  
4.951e+007

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

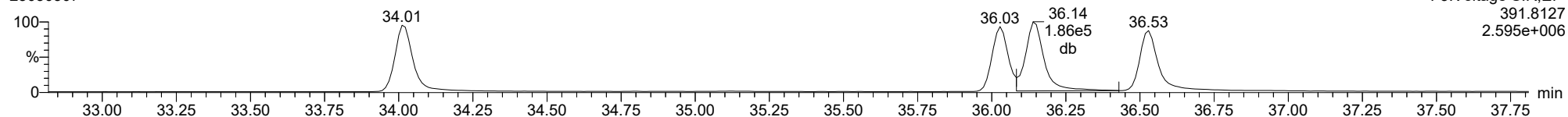
**123678-HxCDD**

23030307



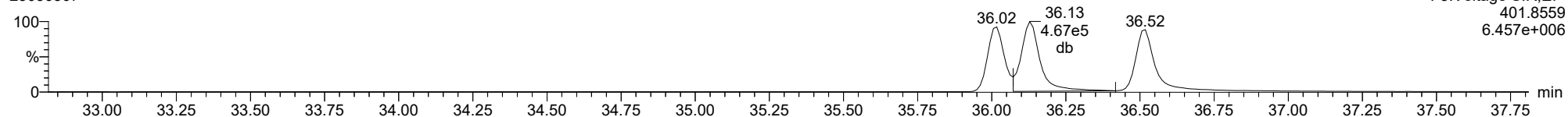
**123678-HxCDD**

23030307



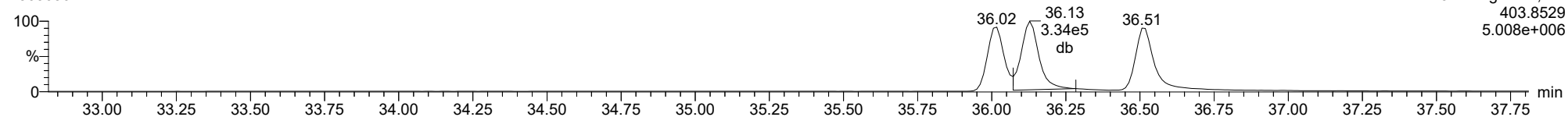
**13C-123678-HxCDD**

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**13C-123678-HxCDD**

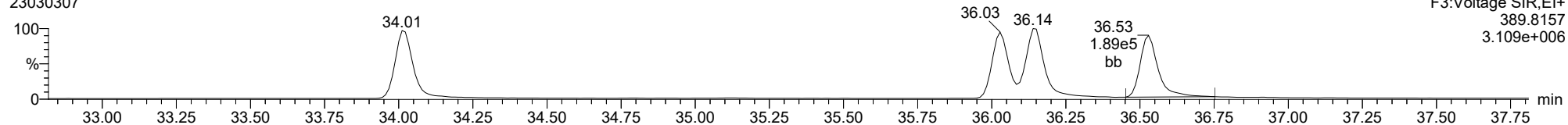
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

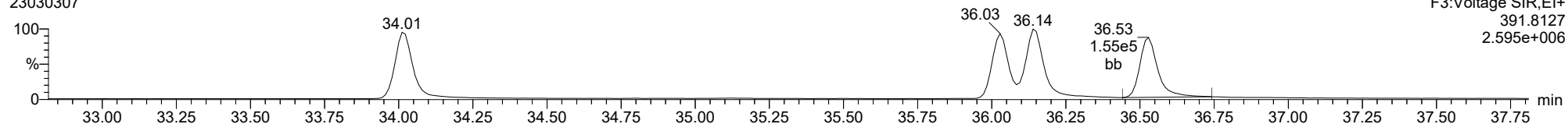
**123789-HxCDD**

23030307



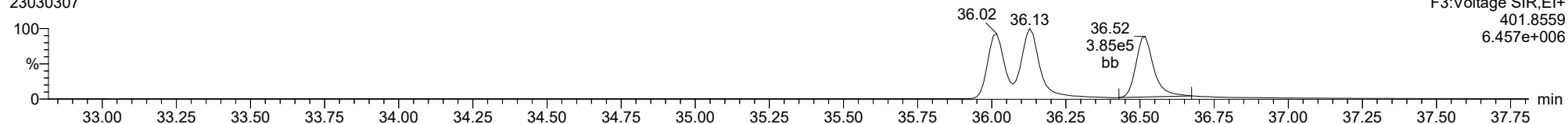
**123789-HxCDD**

23030307



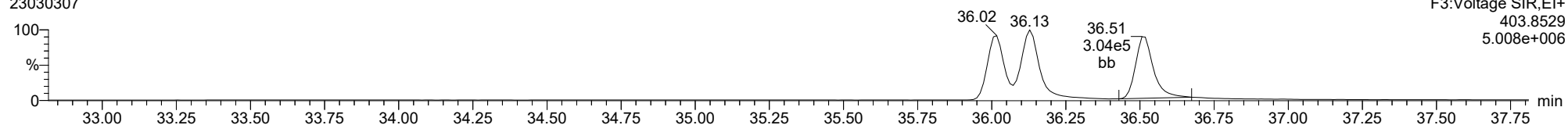
**13C-123789-HxCDD**

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**13C-123789-HxCDD**

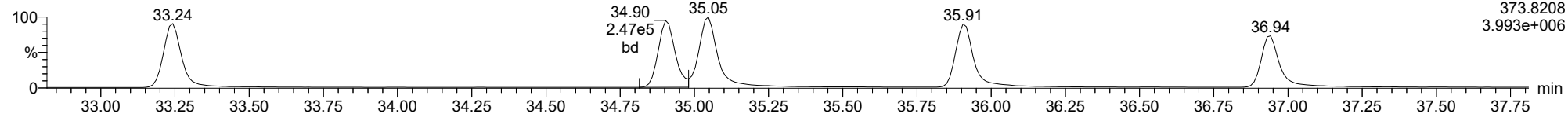
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

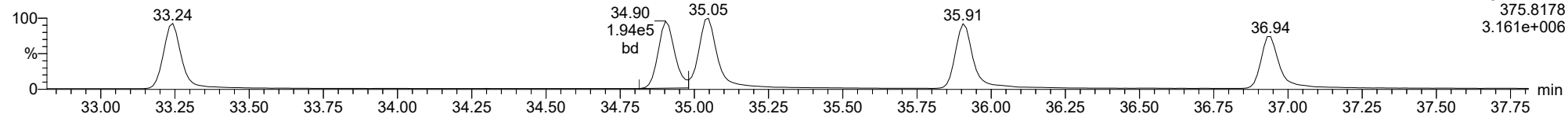
**123478-HxCDF**

23030307



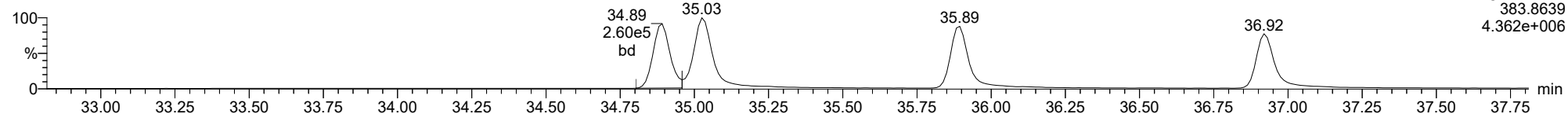
**123478-HxCDF**

23030307



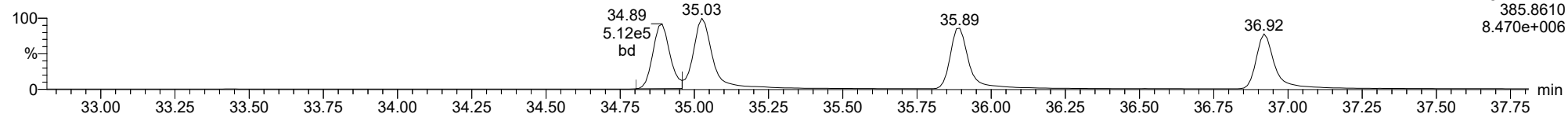
**13C-123478-HxCDF**

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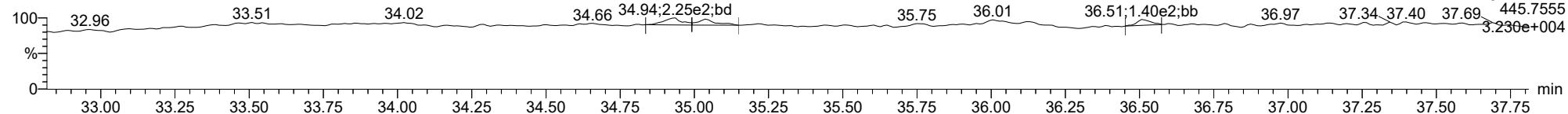
**13C-123478-HxCDF**

23030307



**FUNCTION3 OCDPE**

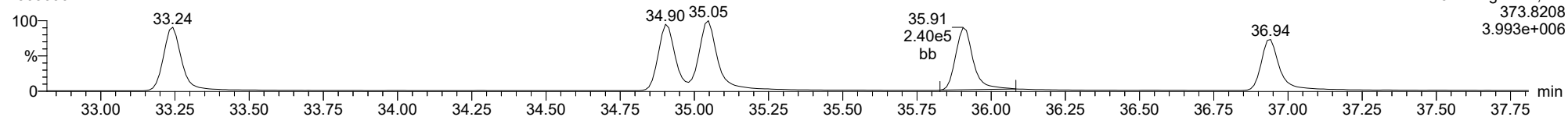
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

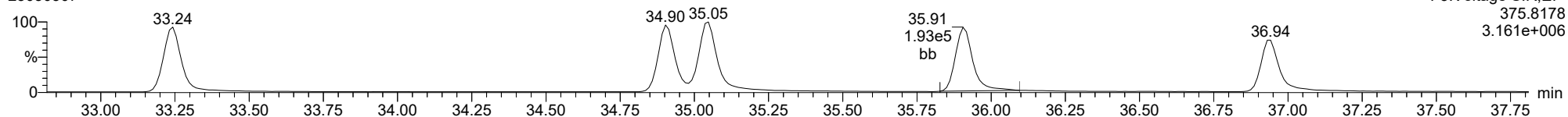
**234678-HxCDF**

23030307



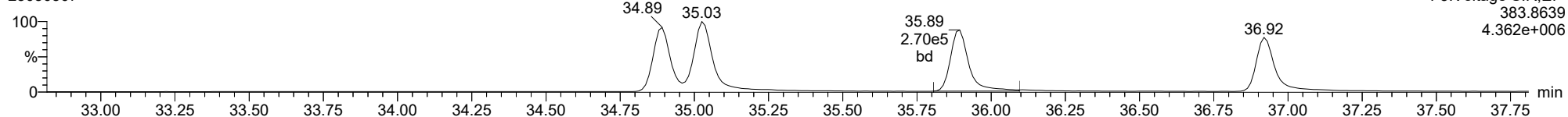
**234678-HxCDF**

23030307



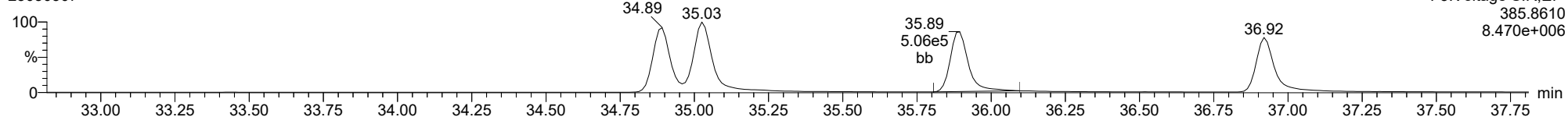
**13C-234678-HxCDF**

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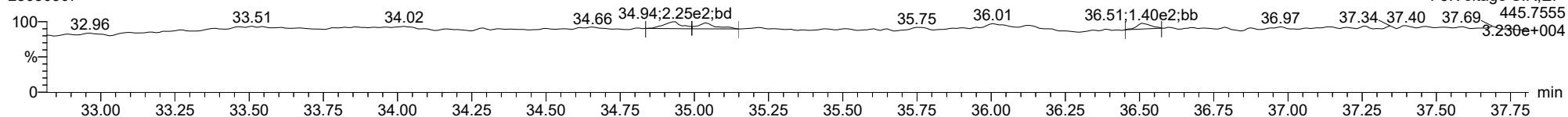
**13C-234678-HxCDF**

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**FUNCTION3 OCDPE**

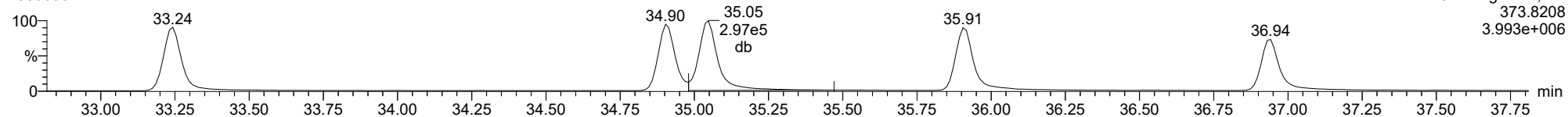
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

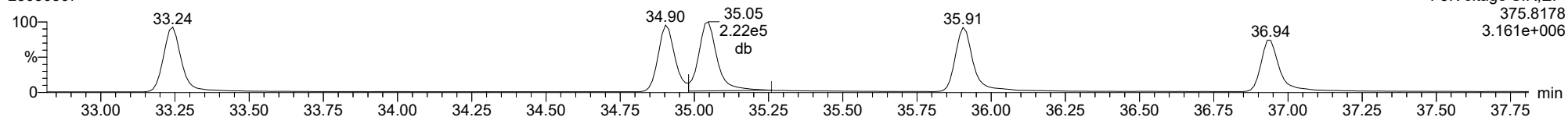
**123678-HxCDF**

23030307



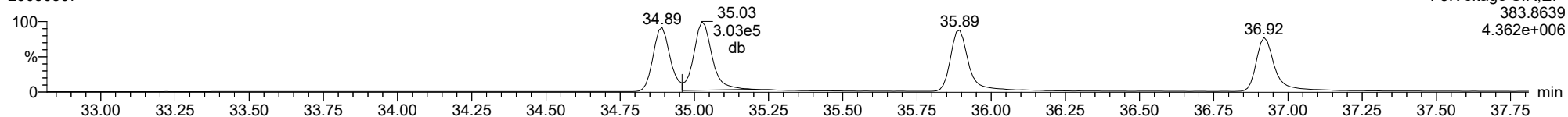
**123678-HxCDF**

23030307



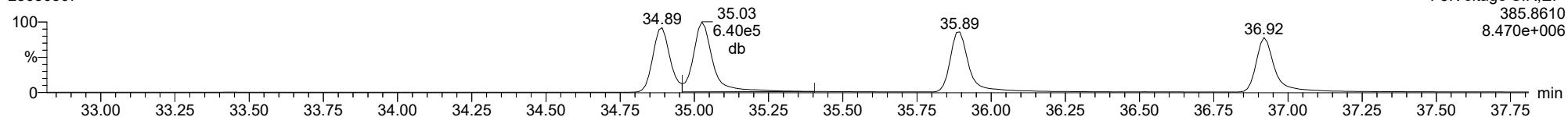
**13C-123678-HxCDF**

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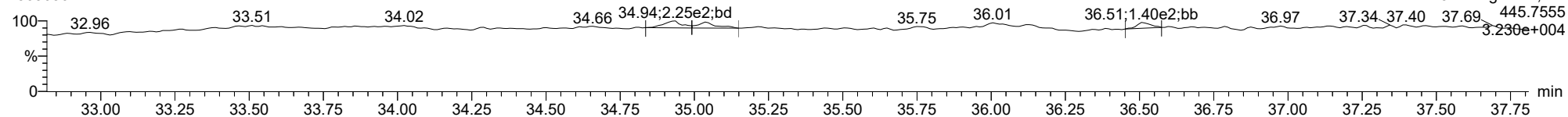
**13C-123678-HxCDF**

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**FUNCTION3 OCDPE**

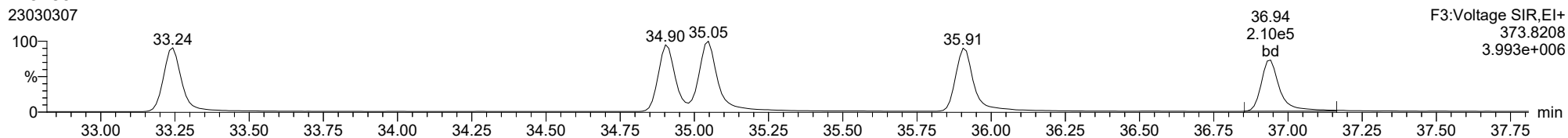
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

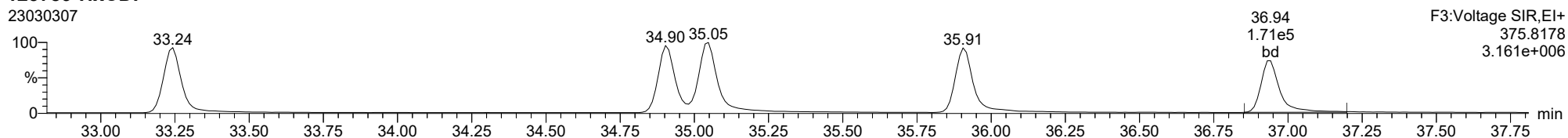
123789-HxCDF

23030307



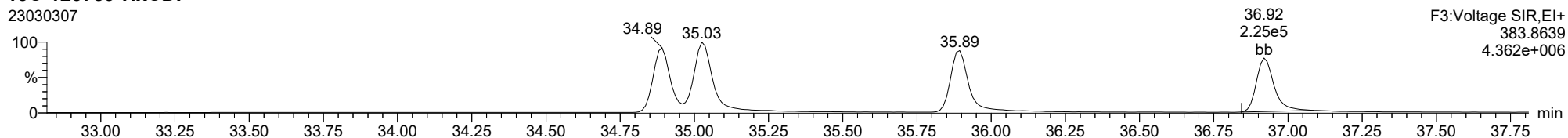
123789-HxCDF

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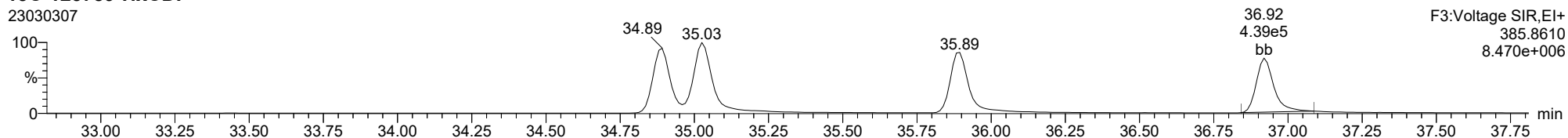
13C-123789-HxCDF

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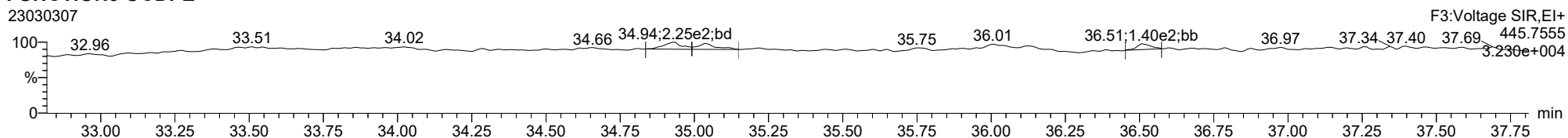
13C-123789-HxCDF

23030307



FUNCTION3 OCDPE

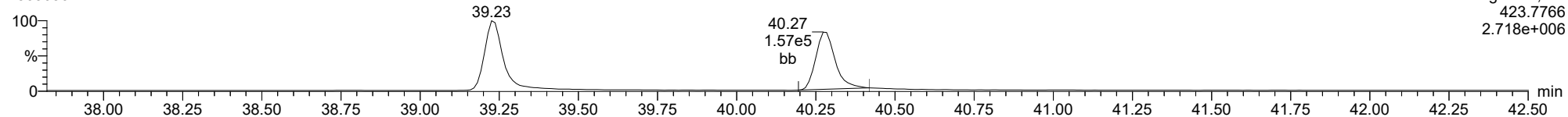
23030307



ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

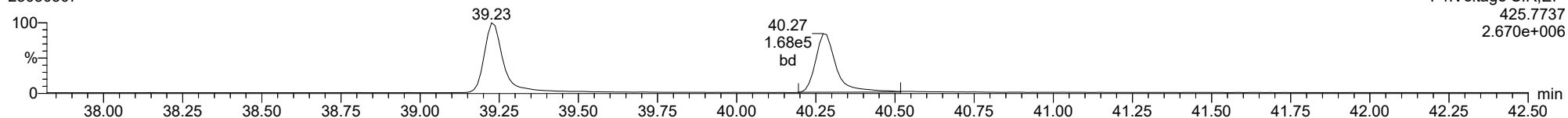
23030307



F4:Voltage SIR,EI+  
423.7766  
2.718e+006

**1234678-HpCDD**

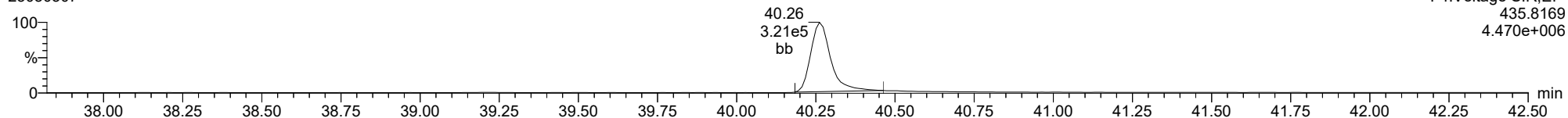
23030307



F4:Voltage SIR,EI+  
425.7737  
2.670e+006

**13C-1234678-HpCDD**

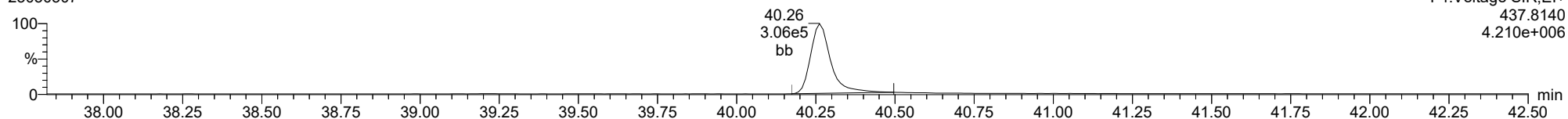
23030307



F4:Voltage SIR,EI+  
435.8169  
4.470e+006

**13C-1234678-HpCDD**

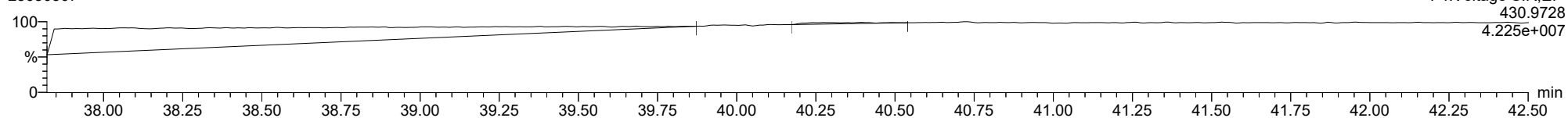
23030307



F4:Voltage SIR,EI+  
437.8140  
4.210e+006

**FUNCTION4 PFK**

23030307



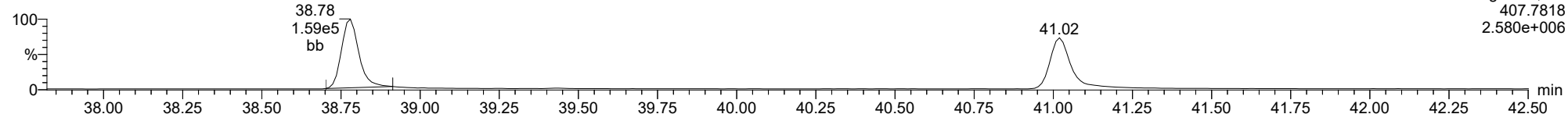
F4:Voltage SIR,EI+  
430.9728  
4.225e+007



ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

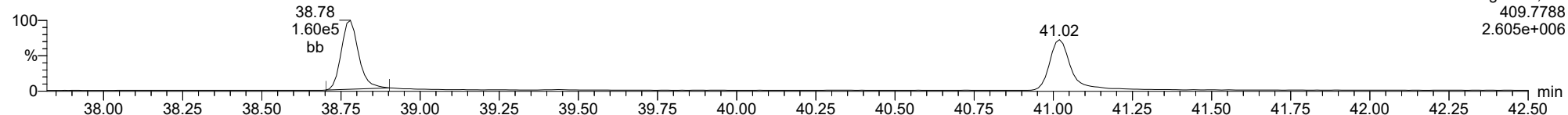
23030307



F4:Voltage SIR,EI+  
407.7818  
2.580e+006

1234678-HpCDF

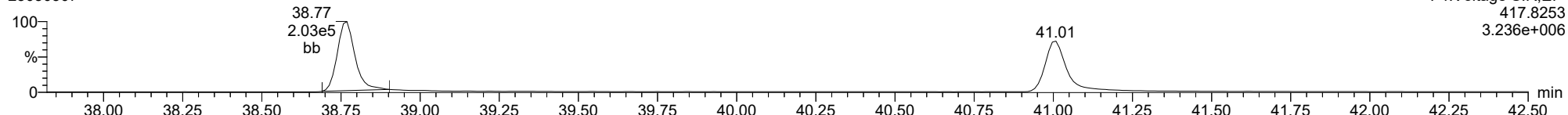
23030307



F4:Voltage SIR,EI+  
409.7788  
2.605e+006

13C-1234678-HpCDF

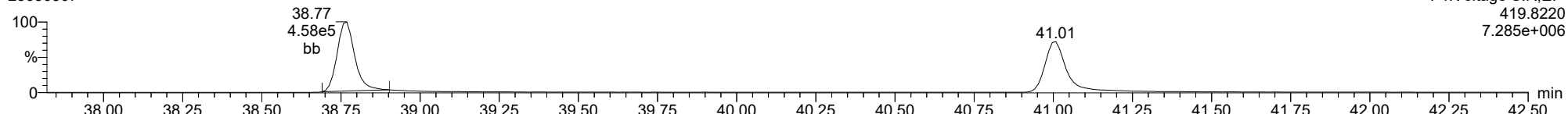
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F4:Voltage SIR,EI+  
417.8253  
3.236e+006

13C-1234678-HpCDF

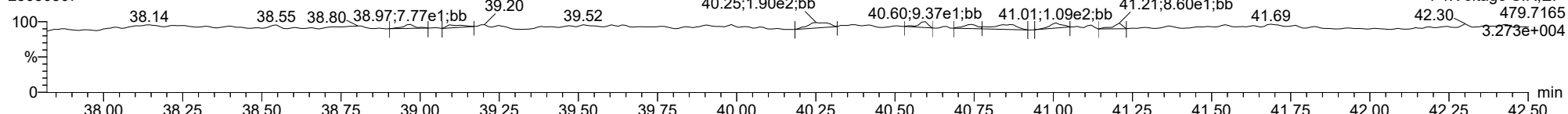
23030307



F4:Voltage SIR,EI+  
419.8220  
7.285e+006

FUNCTION4 NCDPE

23030307

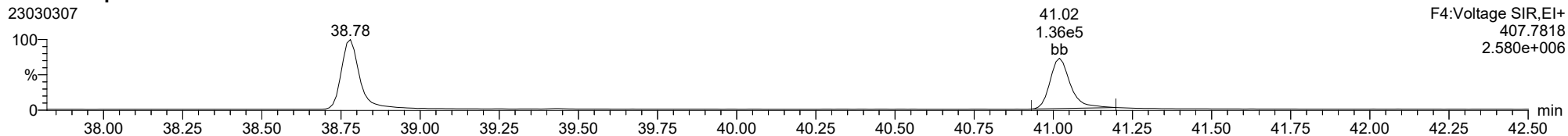


F4:Voltage SIR,EI+  
479.7165  
3.273e+004

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF

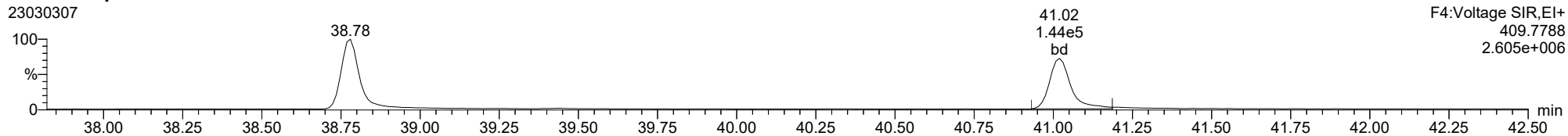
23030307



F4:Voltage SIR,El+  
407.7818  
2.580e+006

1234789-HpCDF

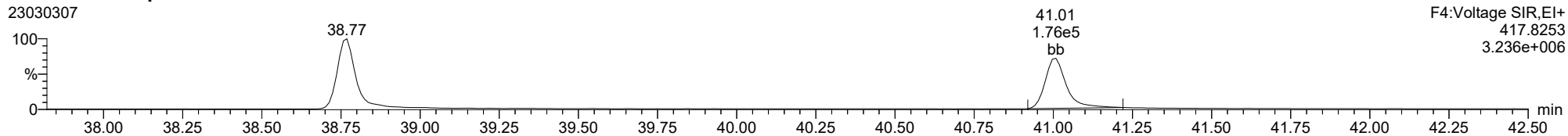
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F4:Voltage SIR,El+  
409.7788  
2.605e+006

13C-1234789-HpCDF

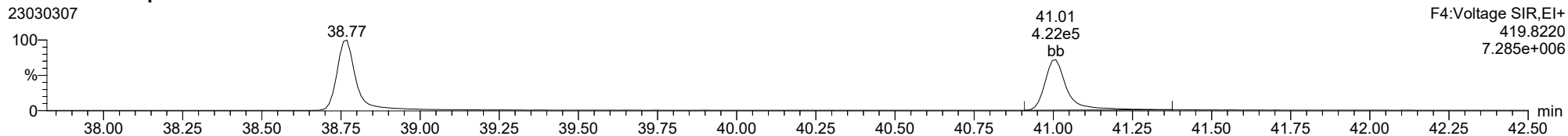
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F4:Voltage SIR,El+  
417.8253  
3.236e+006

13C-1234789-HpCDF

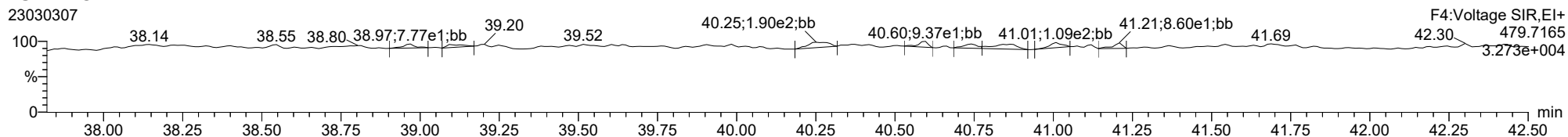
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F4:Voltage SIR,El+  
419.8220  
7.285e+006

FUNCTION4 NCDPE

23030307

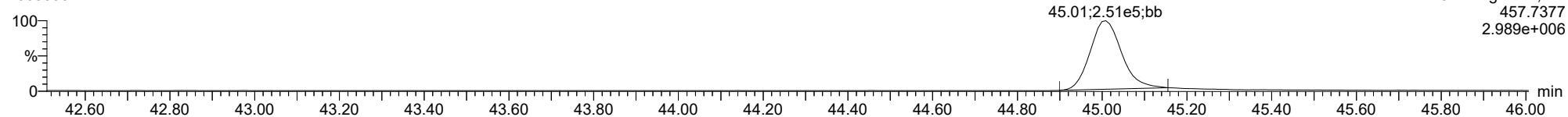


F4:Voltage SIR,El+  
479.7165  
3.273e+004

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

**OCDD**

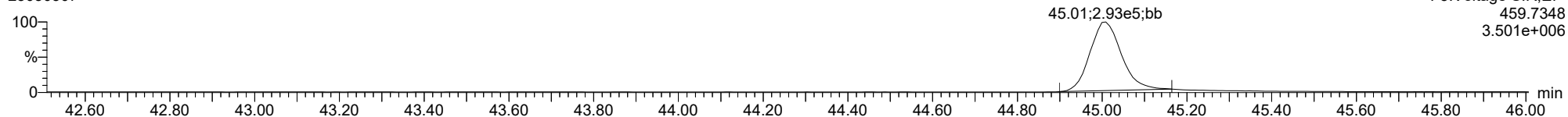
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F5:Voltage SIR,EI+  
457.7377  
2.989e+006

**OCDD**

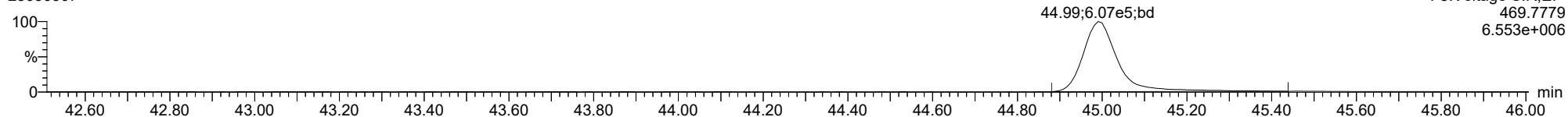
23030307



F5:Voltage SIR,EI+  
459.7348  
3.501e+006

**13C-OCDD**

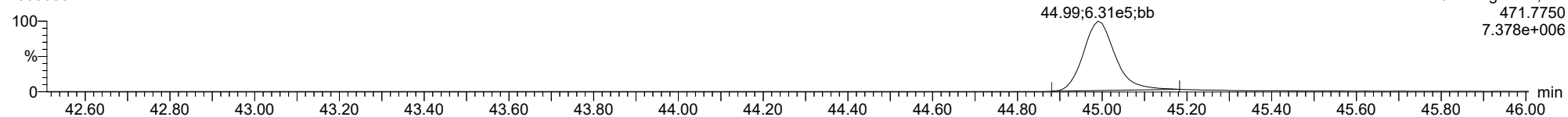
23030307



F5:Voltage SIR,EI+  
469.7779  
6.553e+006

**13C-OCDD**

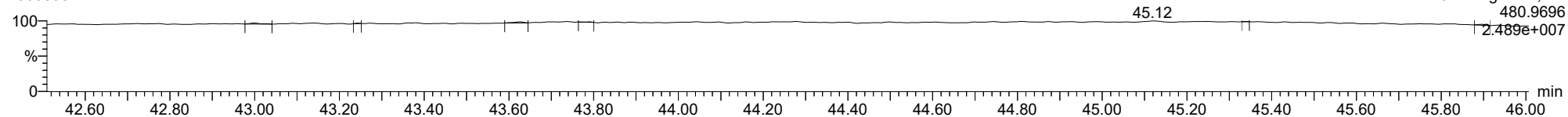
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F5:Voltage SIR,EI+  
471.7750  
7.378e+006

**FUNCTION5 PFK**

23030307

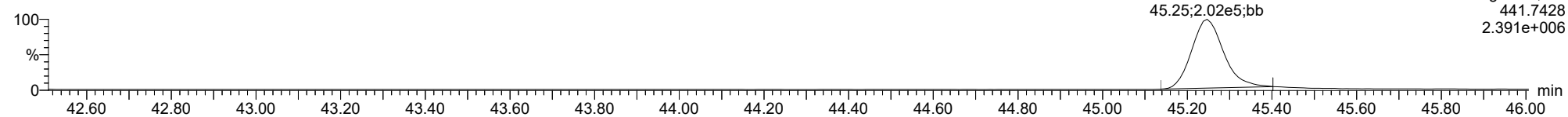


F5:Voltage SIR,EI+  
480.9696  
2.489e+007

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

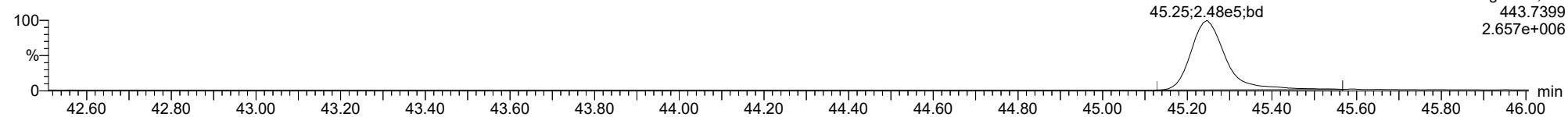
**OCDF**

23030307



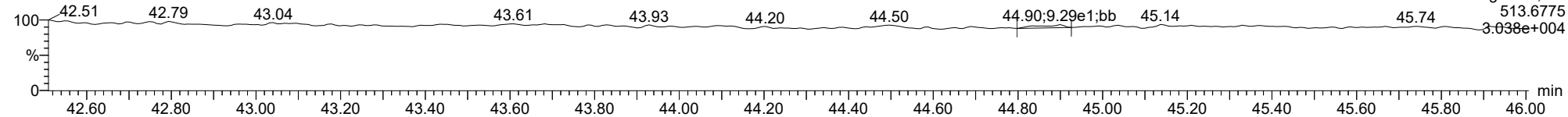
**OCDF**

23030307



**FUNCTION5 DCDPE**

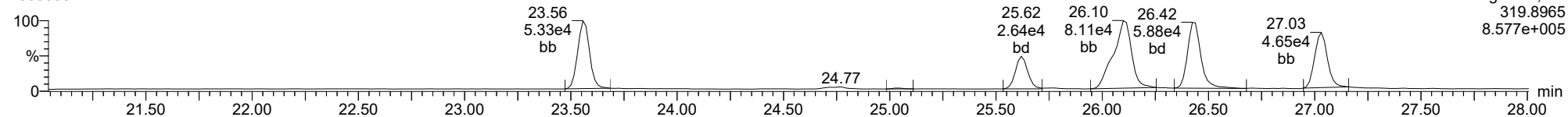
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

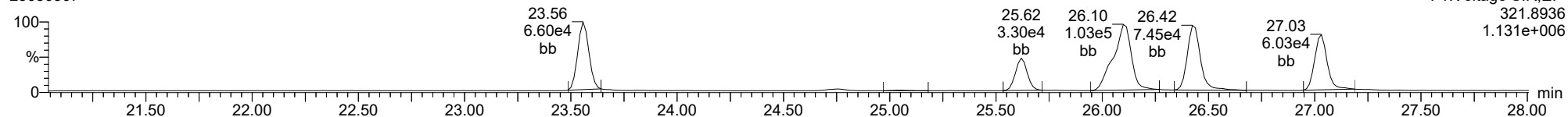
**Total-tetradioxins**

23030307



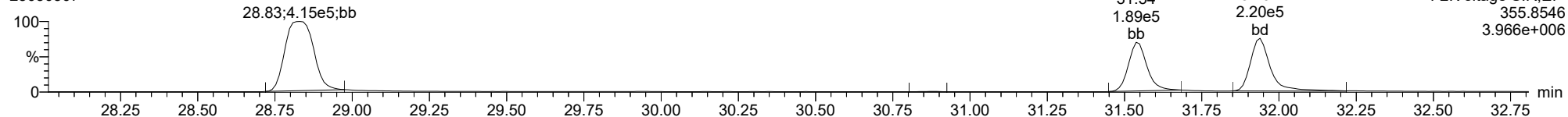
**Total-tetradioxins**

23030307



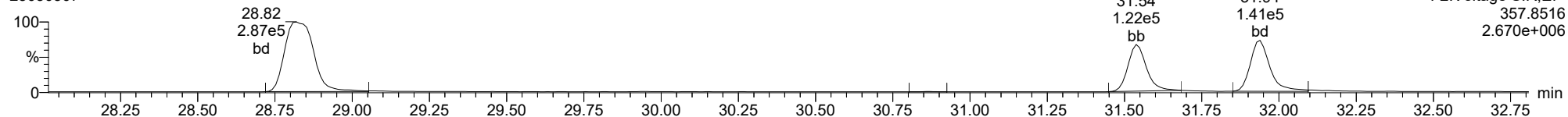
**Total-pentadioxins**

23030307



**Total-pentadioxins**

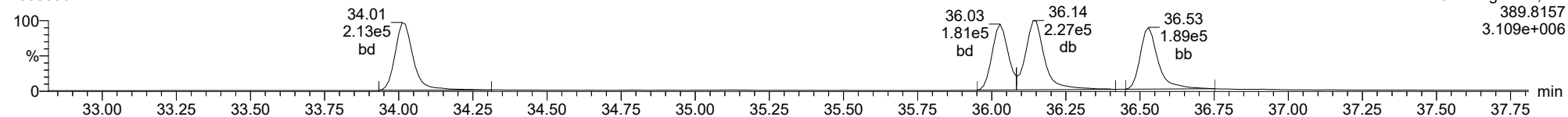
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

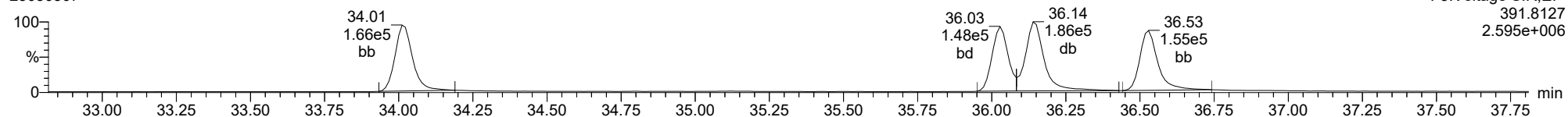
**Total-hexadioxins**

23030307



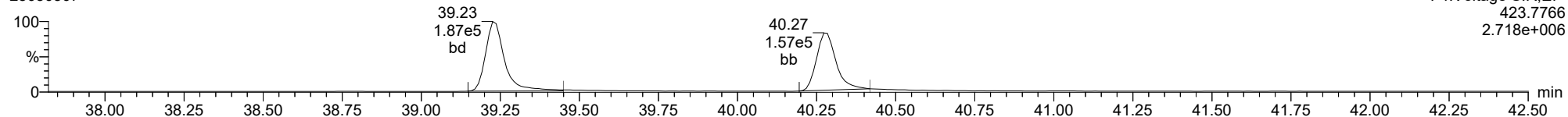
**Total-hexadioxins**

23030307



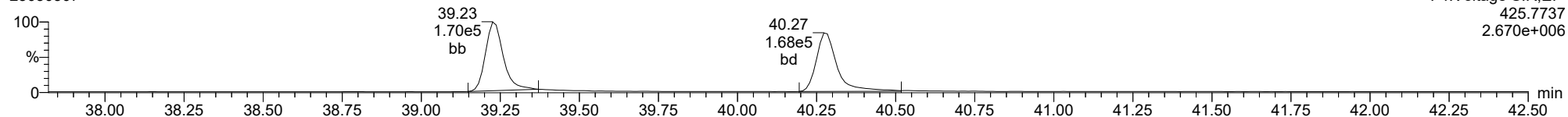
**Total-heptadioxins**

23030307



**Total-heptadioxins**

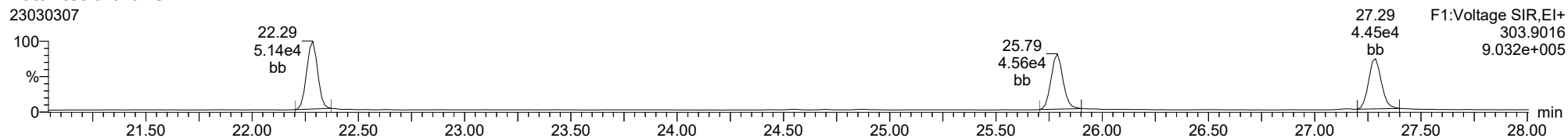
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

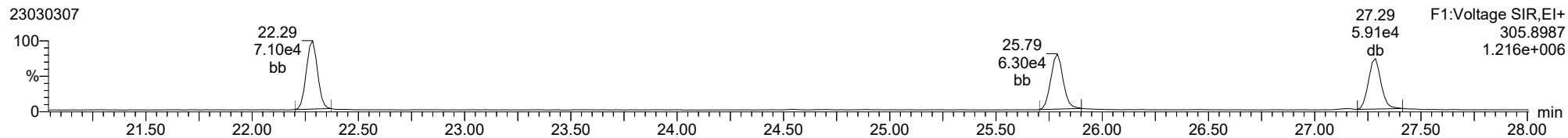
**Total-tetrafurans**

23030307



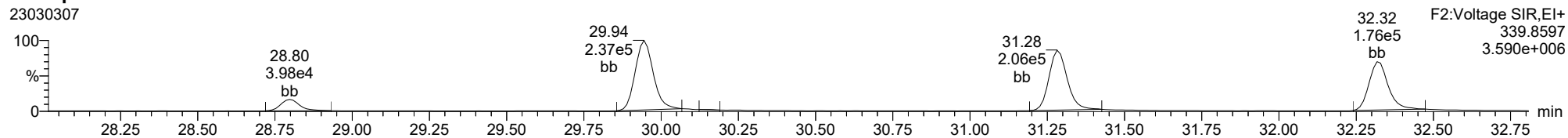
**Total-tetrafurans**

23030307



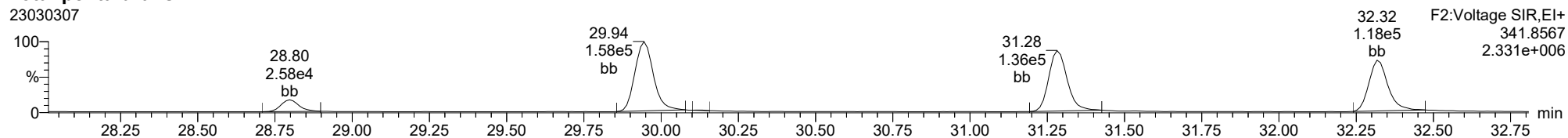
**Total-pentafurans**

23030307



**Total-pentafurans**

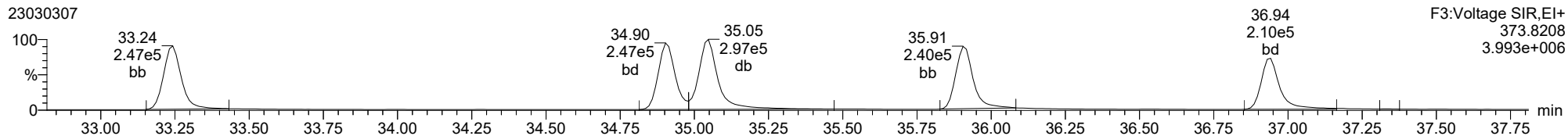
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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

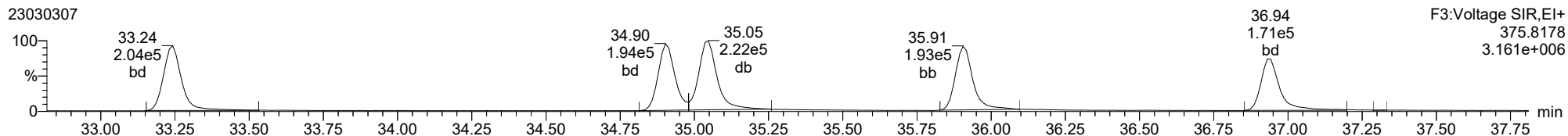
**Total-hexafurans**

23030307



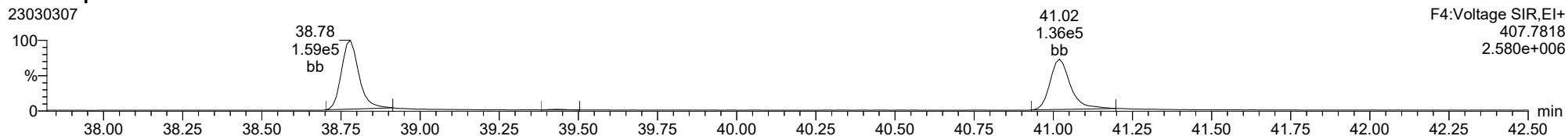
**Total-hexafurans**

23030307



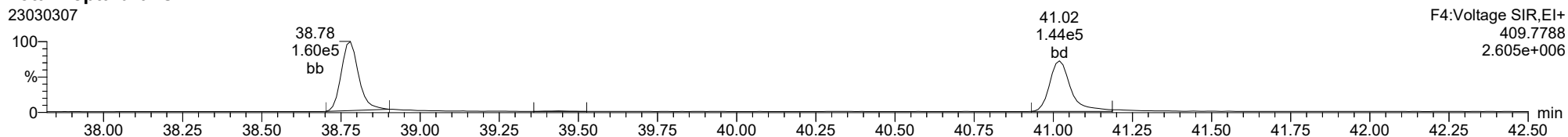
**Total-heptafurans**

23030307



**Total-heptafurans**

23030307





Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** CS4CW, **Name:** 23030308, **Date:** 03-Mar-2023, **Time:** 14:59:53, **Conditions:** AUTOSPEC01, **User:** pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	2.145e5	2.910e5	0.702	0.737	0.770	1085	2356	3.19e6	4.36e6	2939.3	1849.8	NO	bb	bb	41.038
12378-PeCDF	29.944	1.000	1.256e6	8.416e5	0.679	1.492	1.550	4273	3650	1.86e7	1.25e7	4360.5	3425.9	NO	bb	bb	202.935
23478-PeCDF	31.292	1.001	1.346e6	8.943e5	0.786	1.505	1.550	4273	3650	2.02e7	1.34e7	4738.5	3680.0	NO	bb	bb	201.175
123478-HxCDF	34.913	1.001	1.546e6	1.218e6	1.166	1.269	1.240	1919	2508	2.36e7	1.86e7	12323.4	7421.9	NO	bd	bd	197.711
234678-HxCDF	35.916	1.001	1.547e6	1.307e6	1.140	1.184	1.240	1919	2508	2.33e7	1.85e7	12125.4	7387.3	NO	bb	bd	210.207
123678-HxCDF	35.047	1.000	1.740e6	1.369e6	1.091	1.271	1.240	1919	2508	2.57e7	2.04e7	13394.0	8153.6	NO	db	db	189.797
123789-HxCDF	36.941	1.000	1.209e6	1.036e6	1.137	1.167	1.240	1919	2508	1.81e7	1.44e7	9441.6	5749.5	NO	bb	bd	200.361
1234678-HpCDF	38.779	1.000	8.720e5	8.418e5	1.003	1.036	1.050	3326	3780	1.44e7	1.42e7	4339.3	3745.4	NO	bb	bb	204.650
1234789-HpCDF	41.019	1.000	7.221e5	7.262e5	0.953	0.994	1.050	3326	3780	1.01e7	1.02e7	3041.3	2689.4	NO	bb	bb	208.465
OCDF	45.255	1.006	1.195e6	1.333e6	0.778	0.897	0.890	1809	2070	1.43e7	1.59e7	7923.8	7701.9	NO	bb	bb	419.788
2378-TCDD	26.438	1.001	2.573e5	3.218e5	1.149	0.799	0.770	1559	1107	3.81e6	4.84e6	2446.0	4371.1	NO	bb	bb	39.968
12378-PeCDD	31.549	1.001	1.294e6	8.446e5	1.022	1.532	1.550	1566	1736	1.89e7	1.24e7	12077.0	7164.9	NO	bb	bb	199.637
123478-HxCDD	36.027	1.000	1.162e6	9.482e5	0.996	1.225	1.240	1816	1276	1.93e7	1.57e7	10622.2	12327.7	NO	bd	bd	198.133
123678-HxCDD	36.150	1.001	1.363e6	1.125e6	1.001	1.212	1.240	1816	1276	1.97e7	1.61e7	10823.8	12618.8	NO	db	db	204.224
123789-HxCDD	36.528	1.011	1.168e6	9.477e5	0.907	1.232	1.240	1816	1276	1.77e7	1.44e7	9764.9	11291.0	NO	bb	bb	203.974
1234678-HpCDD	40.283	1.001	8.284e5	8.038e5	1.039	1.031	1.050	3177	2938	1.22e7	1.19e7	3841.2	4046.8	NO	bb	bb	198.376
OCDD	45.008	1.000	1.293e6	1.512e6	0.920	0.855	0.890	1475	2373	1.59e7	1.85e7	10744.0	7810.6	NO	bb	bb	394.016
13C-2378-TCDF	25.774	1.007	7.645e5	9.914e5	1.620	0.771	0.770	1843	2282	1.15e7	1.49e7	6238.3	6526.6	NO	bb	bb	101.535
13C-12378-PeCDF	29.933	1.169	9.119e5	6.098e5	1.240	1.495	1.550	3738	4574	1.28e7	8.50e6	3418.3	1857.5	NO	bd	bd	114.934
13C-23478-PeCDF	31.270	1.221	8.522e5	5.645e5	1.118	1.510	1.550	3738	4574	1.28e7	8.47e6	3423.2	1851.3	NO	bb	bb	118.746
13C-123478-HxCDF	34.891	0.956	4.043e5	7.946e5	1.168	0.509	0.510	3379	2646	6.26e6	1.23e7	1851.5	4643.3	NO	bd	bd	93.689
13C-123678-HxCDF	35.036	0.959	5.122e5	9.895e5	1.386	0.518	0.510	3379	2646	6.72e6	1.32e7	1988.7	4975.1	NO	db	dd	98.879
13C-234678-HxCDF	35.894	0.983	4.066e5	7.845e5	1.129	0.518	0.510	3379	2646	6.03e6	1.18e7	1785.1	4452.3	NO	bb	bb	96.294
13C-123789-HxCDF	36.930	1.011	3.312e5	6.542e5	0.932	0.506	0.510	3379	2646	4.85e6	9.52e6	1434.9	3598.2	NO	bb	bb	96.556
13C-1234678-HpCDF	38.768	1.062	2.524e5	5.825e5	0.895	0.433	0.440	1935	3511	4.16e6	9.49e6	2148.5	2703.4	NO	bb	bb	85.151
13C-1234789-HpCDF	41.007	1.123	2.205e5	5.084e5	0.770	0.434	0.440	1935	3511	3.02e6	6.92e6	1559.8	1971.4	NO	bb	bb	86.451
13C-1234-TCDD	25.605	0.000	4.743e5	5.931e5	1.000	0.800	0.770	2271	1813	7.33e6	9.12e6	3228.4	5028.5	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	5.640e5	6.974e5	1.152	0.809	0.770	2271	1813	8.09e6	1.01e7	3563.4	5571.0	NO	bb	bb	102.553
13C-12378-PeCDD	31.526	1.231	6.480e5	4.003e5	0.829	1.619	1.550	1212	1529	9.47e6	5.85e6	7814.9	3827.1	NO	bb	bb	118.505
13C-123478-HxCDD	36.016	0.986	6.052e5	4.646e5	0.995	1.303	1.240	1807	1475	9.78e6	7.54e6	5412.5	5108.2	NO	bd	bd	98.154
13C-123678-HxCDD	36.127	0.989	6.753e5	5.418e5	1.157	1.246	1.240	1807	1475	1.01e7	8.01e6	5594.1	5426.8	NO	db	db	96.059
13C-1234678-HpCDD	40.261	1.102	3.968e5	3.950e5	0.840	1.005	1.050	2357	2248	5.68e6	5.37e6	2408.3	2387.8	NO	bb	bb	86.051
13C-OCDD	44.999	1.232	7.332e5	8.149e5	0.767	0.900	0.890	1459	1173	8.67e6	9.61e6	5943.8	8191.6	NO	bb	bb	184.151
13C-123789-HxCDD	36.518	0.000	6.173e5	4.781e5	1.000	1.291	1.240	1807	1475	9.34e6	7.24e6	5171.1	4908.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.438	1.033	5.280e5		1.288			2576		7.74e6		3003.1			bb		38.410

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1085	2356								
1289-TCDF					0.678		0.770	1085	2356								
13468-PECDF					1.246		1.550	728	1112								
12389-PECDF					0.496		1.550	4273	3650								
123468-HXCDF					1.169		1.240	1919	2508								
1368-TCDD					1.015		0.770	1559	1107								
1289-TCDD					0.909		0.770	1559	1107								
12479-PECDD					2.301		1.550	1566	1736								
12389-PECDD					1.184		1.550	1566	1736								
124679-HXCDD					1.115		1.240	1816	1276								
1234679-HPCDD					1.137		1.050	3177	2938								
Total-tetrafurans			2.178e5		0.727			1085		3.24e6							41.692
Total-penta1			0.000e0					728		0.00e0							
Total-pentafurans			2.604e6		0.654			4273		3.89e7							404.382
Total-hexafurans			6.043e6		1.141			1919		9.07e7							798.266
Total-heptafurans			1.594e6		0.978			3326		2.45e7							413.115
Total-Furans			1.165e7		0.922			1085		1.72e8							2077.243
Total-tetradoxins			2.634e5		1.024			1559		3.88e6							41.026
Total-pentadoxins			1.295e6		1.502			1566		1.89e7							199.743
Total-hexadoxins			3.693e6		1.005			1816		5.67e7							606.331
Total-heptadoxins			8.286e5		1.088			3177		1.22e7							198.425
Total-Dioxins			7.373e6		1.130			1559		1.08e8							1439.540
Total-TEQ			1.903e7					1559		2.79e8							3516.783
FUNCTION1 PFK			2.654e6					566854		2.19e6							
FUNCTION2 PFK			2.398e5					242860		6.75e6							0.000
FUNCTION3 PFK			5.441e7					394639		2.11e7							0.000
FUNCTION4 PFK			0.000e0					306708		0.00e0							
FUNCTION5 PFK			3.395e4					230570		1.65e6							
FUNCTION1 HXCD...			4.934e2					625		6.74e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.574e3					915		2.35e4							0.000
FUNCTION3 OCDPE			8.696e2					844		1.47e4							0.000
FUNCTION4 NCDPE			3.767e2					925		5.85e3							0.000
FUNCTION5 DCDPE			0.000e0					629		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

**Calibration:** T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27

**ID:** CS4CW, **Name:** 23030308, **Date:** 03-Mar-2023, **Time:** 14:59:53, **Conditions:** AUTOSPEC01, **User:** pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
2	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
3	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
2	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
3	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
4	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
5	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
6	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
2	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352
4	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
5	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
6	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175
7	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
8	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
9	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
10	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
11	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
12	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169
13	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
14	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465
15	OCDF	45.26	1.195e6	1.333e6	0.778	0.90	0.89	7923.8	YES	NO	bb	bb	419.788

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
2	Total-tetradoxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
2	Total-pentadoxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
2	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
3	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk**

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptadioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
2	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
2	Total-tetradioxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059
3	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
4	Total-pentadioxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106
5	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
6	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
7	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133
8	Total-heptadioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
9	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376
10	OCDD	45.01	1.293e6	1.512e6	0.920	0.86	0.89	10744.0	YES	NO	bb	bb	394.016

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk**

**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352
4	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
5	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
6	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175
7	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
8	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
9	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
10	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
11	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
12	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169
13	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
14	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465
15	OCDF	45.26	1.195e6	1.333e6	0.778	0.90	0.89	7923.8	YES	NO	bb	bb	419.788
16	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
17	Total-tetradiioxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059
18	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
19	Total-pentadiioxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106
20	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
21	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
22	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133
23	Total-heptadiioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
24	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376
25	OCDD	45.01	1.293e6	1.512e6	0.920	0.86	0.89	10744.0	YES	NO	bb	bb	394.016

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.75	1.219e6					0.4	NO		bb		
2	FUNCTION1 PFK	21.17	1.435e6					3.4	YES		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk**

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.26	4.048e3					0.9	NO		bb		0.000
2	FUNCTION2 PFK	28.22	4.511e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	28.09	1.180e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	32.40	7.400e3					1.4	NO		bd		0.000
5	FUNCTION2 PFK	31.78	3.780e3					0.8	NO		db		0.000
6	FUNCTION2 PFK	31.75	1.880e3					0.6	NO		bd		0.000
7	FUNCTION2 PFK	31.70	9.648e3					1.7	NO		db		0.000
8	FUNCTION2 PFK	31.63	2.054e4					2.2	NO		bd		0.000
9	FUNCTION2 PFK	31.52	5.247e4					2.4	NO		db		0.000
10	FUNCTION2 PFK	31.37	1.454e4					1.4	NO		bd		0.000
11	FUNCTION2 PFK	31.10	7.031e3					1.1	NO		bb		0.000
12	FUNCTION2 PFK	30.32	1.036e4					1.3	NO		bb		0.000
13	FUNCTION2 PFK	30.01	2.058e3					0.8	NO		bb		0.000
14	FUNCTION2 PFK	29.82	6.711e3					1.2	NO		db		0.000
15	FUNCTION2 PFK	29.78	1.288e4					1.7	NO		bd		0.000
16	FUNCTION2 PFK	29.02	5.997e3					0.8	NO		bb		0.000
17	FUNCTION2 PFK	28.82	2.827e4					1.7	NO		bb		0.000
18	FUNCTION2 PFK	28.47	4.519e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	28.42	5.823e3					1.1	NO		bb		0.000
20	FUNCTION2 PFK	32.71	1.137e4					1.6	NO		bb		0.000
21	FUNCTION2 PFK	32.44	1.418e4					1.8	NO		db		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.64	7.406e6					25.3	YES		db		0.000
2	FUNCTION3 PFK	36.25	4.701e7					28.1	YES		bd		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.68	7.516e3					1.5	NO		bb		
2	FUNCTION5 PFK	45.50	5.255e3					1.2	NO		bb		
3	FUNCTION5 PFK	43.66	5.108e3					1.2	NO		bb		
4	FUNCTION5 PFK	43.06	3.867e3					1.1	NO		bb		
5	FUNCTION5 PFK	42.63	1.220e4					2.1	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.64	8.072e1					1.8	NO		bb		0.000
2	FUNCTION1 HXCD...	21.44	1.165e2					2.1	NO		db		0.000
3	FUNCTION1 HXCD...	21.34	7.544e1					2.3	NO		bd		0.000
4	FUNCTION1 HXCD...	26.42	1.399e2					2.7	NO		bb		0.000
5	FUNCTION1 HXCD...	21.99	8.086e1					2.0	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.18	1.574e3					25.7	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.15	3.227e2					5.7	YES		db		0.000
2	FUNCTION3 OCDPE	36.03	2.331e2					4.4	YES		bd		0.000
3	FUNCTION3 OCDPE	35.36	1.234e2					4.0	YES		bb		0.000
4	FUNCTION3 OCDPE	35.06	1.904e2					3.3	YES		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.00	2.677e2					3.2	YES		bb		0.000
2	FUNCTION4 NCDPE	38.18	1.090e2					3.1	YES		bb		0.000



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk**

**ETHERS6**

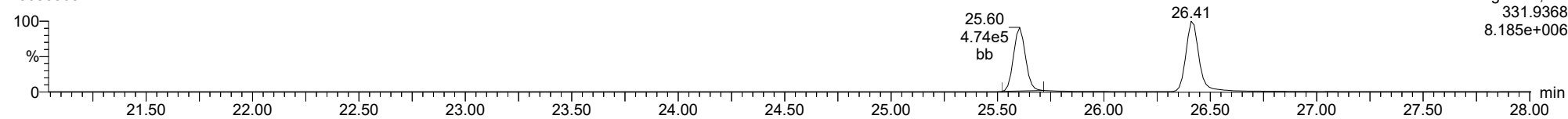
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1													

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

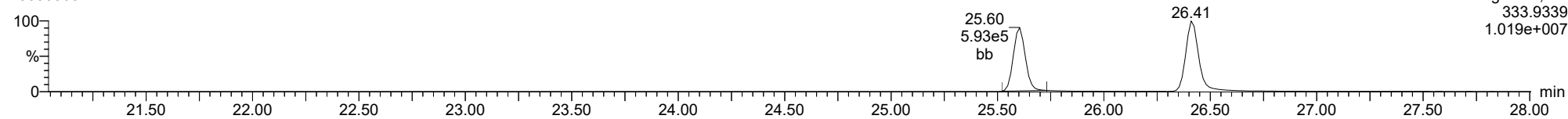
**13C-1234-TCDD**

23030308



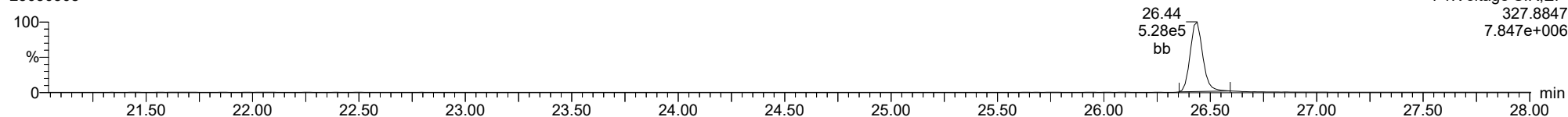
**13C-1234-TCDD**

23030308



**37CL-2378-TCDD**

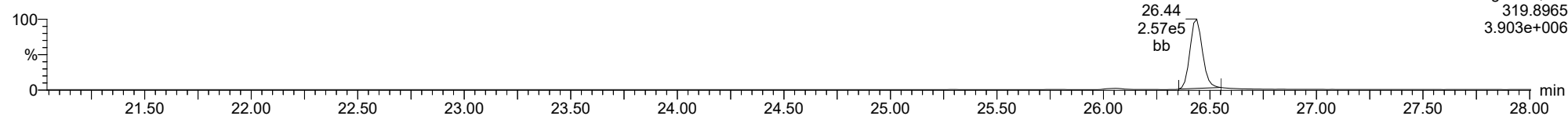
23030308



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**2378-TCDD**

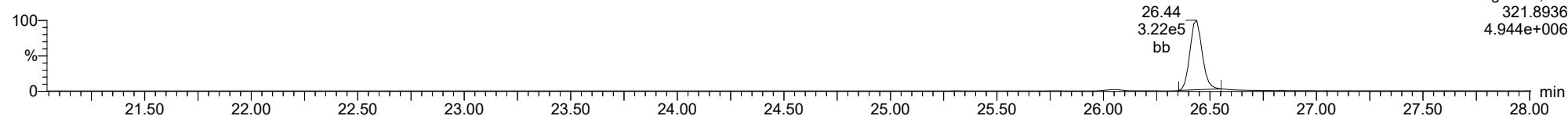
23030308



F1:Voltage SIR,EI+  
319.8965  
3.903e+006

**2378-TCDD**

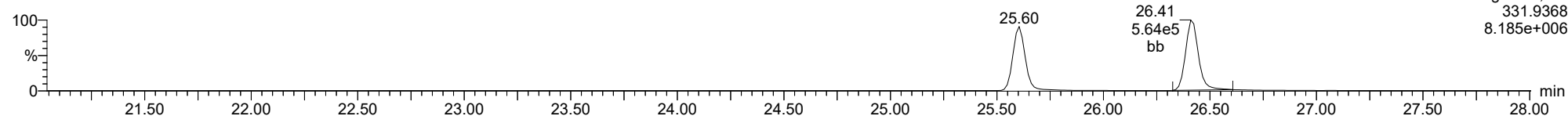
23030308



F1:Voltage SIR,EI+  
321.8936  
4.944e+006

**13C-2378-TCDD**

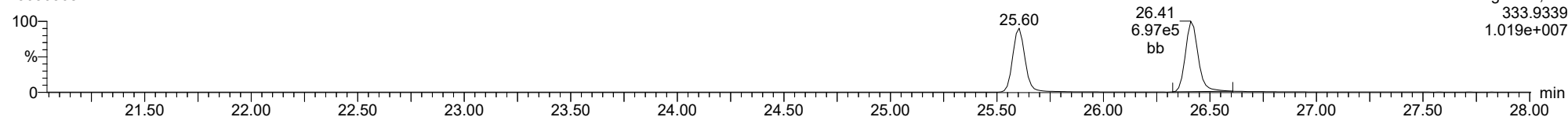
23030308



F1:Voltage SIR,EI+  
331.9368  
8.185e+006

**13C-2378-TCDD**

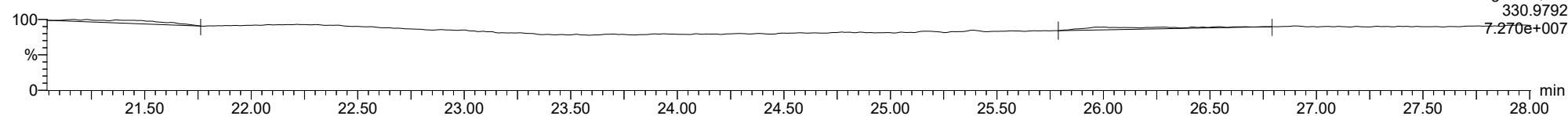
23030308



F1:Voltage SIR,EI+  
333.9339  
1.019e+007

**FUNCTION1 PFK**

23030308

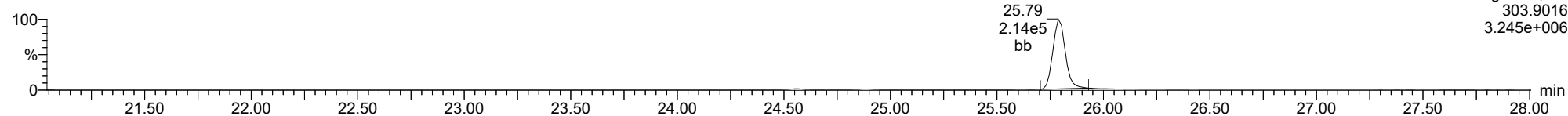


F1:Voltage SIR,EI+  
330.9792  
7.270e+007

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**2378-TCDF**

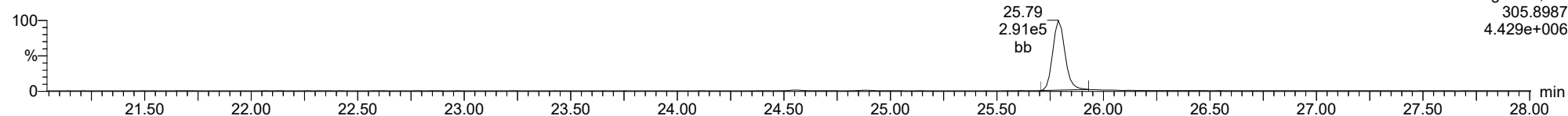
23030308



F1:Voltage SIR,EI+  
303.9016  
3.245e+006

**2378-TCDF**

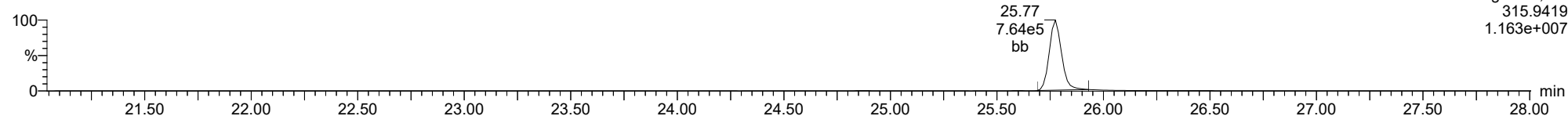
23030308



F1:Voltage SIR,EI+  
305.8987  
4.429e+006

**13C-2378-TCDF**

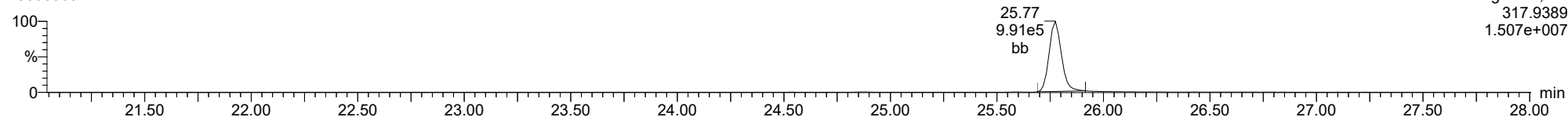
23030308



F1:Voltage SIR,EI+  
315.9419  
1.163e+007

**13C-2378-TCDF**

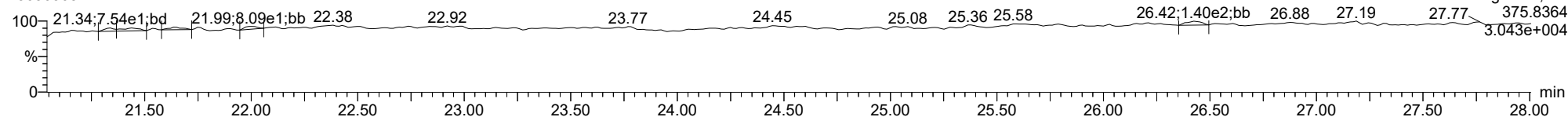
23030308



F1:Voltage SIR,EI+  
317.9389  
1.507e+007

**FUNCTION1 HXCDPE**

23030308

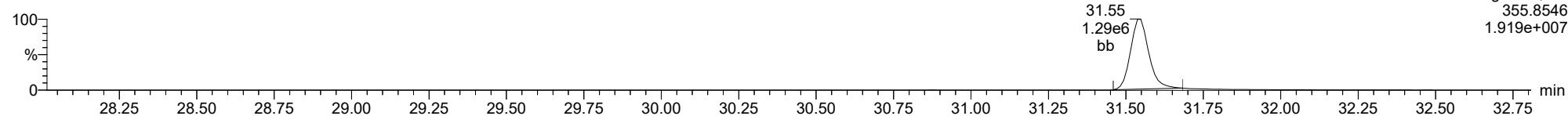


F1:Voltage SIR,EI+  
375.8364  
3.043e+004

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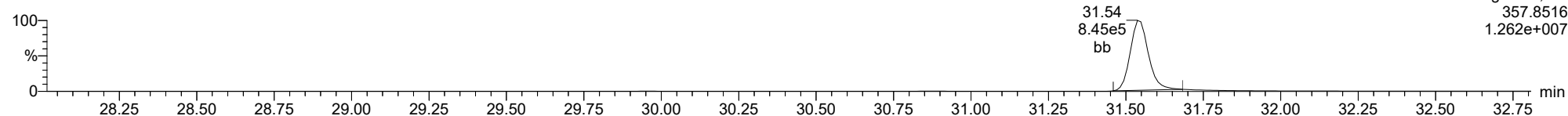
**12378-PeCDD**

23030308



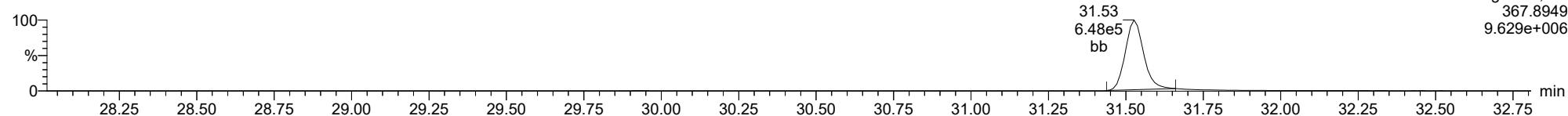
**12378-PeCDD**

23030308



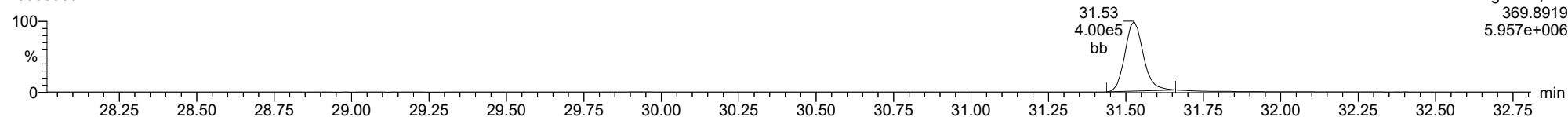
**13C-12378-PeCDD**

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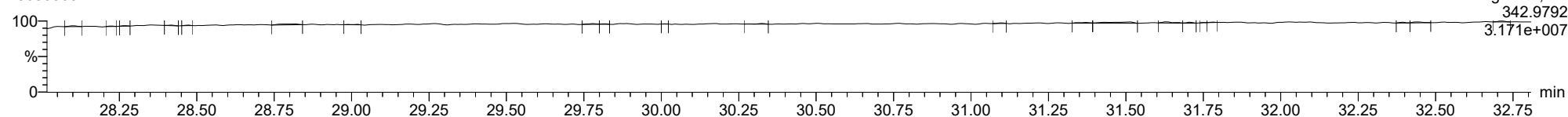
**13C-12378-PeCDD**

23030308



**FUNCTION2 PFK**

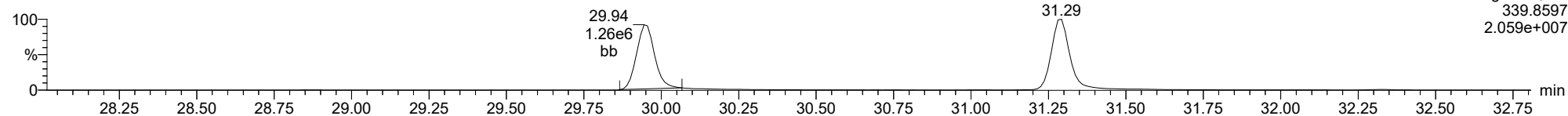
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

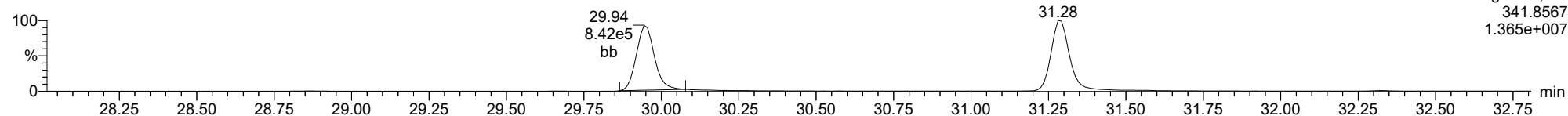
**12378-PeCDF**

23030308



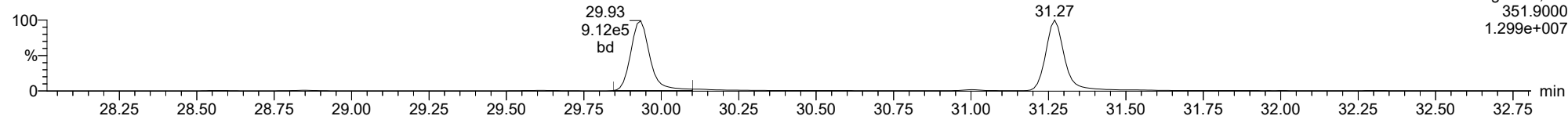
**12378-PeCDF**

23030308



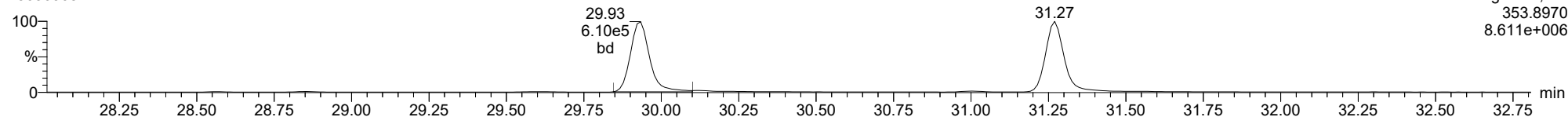
**13C-12378-PeCDF**

23030308



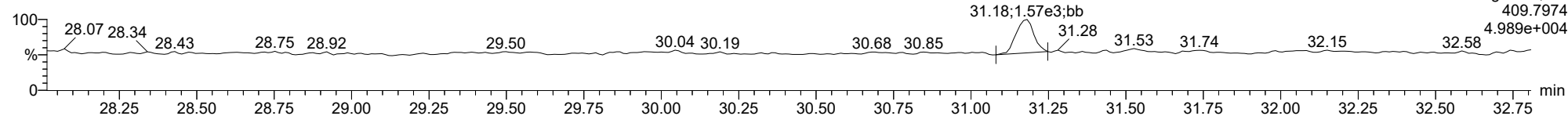
**13C-12378-PeCDF**

23030308



**FUNCTION2 HPCDPE**

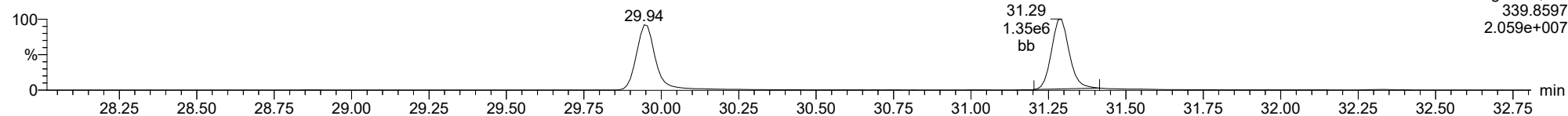
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

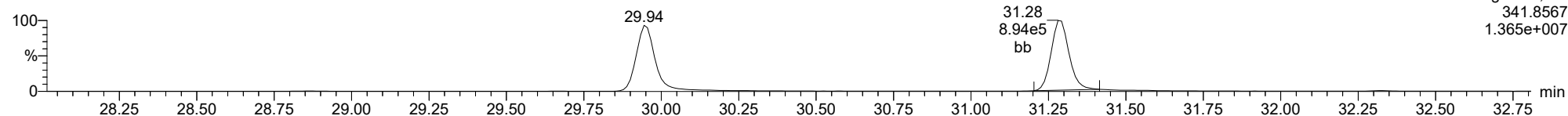
**23478-PeCDF**

23030308



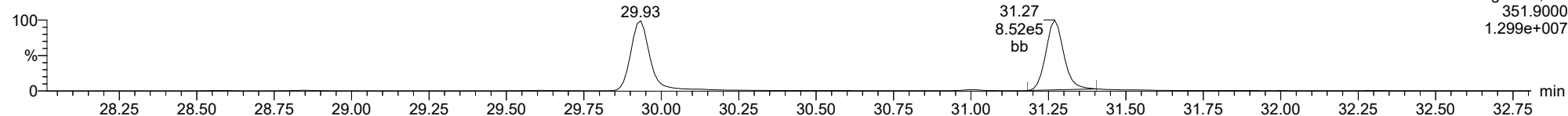
**23478-PeCDF**

23030308



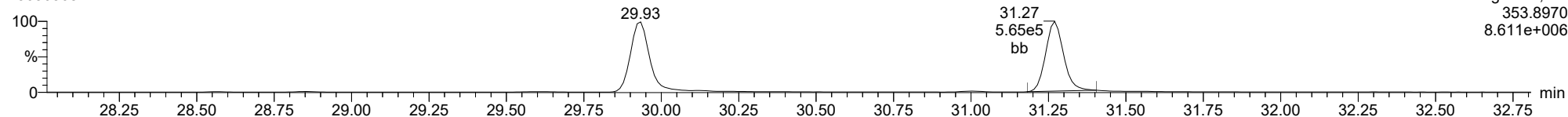
**13C-23478-PeCDF**

23030308



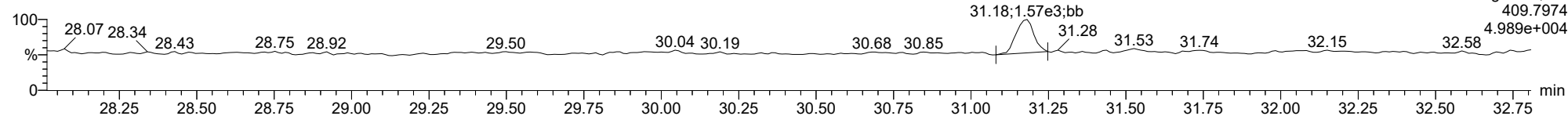
**13C-23478-PeCDF**

23030308



**FUNCTION2 HPCDPE**

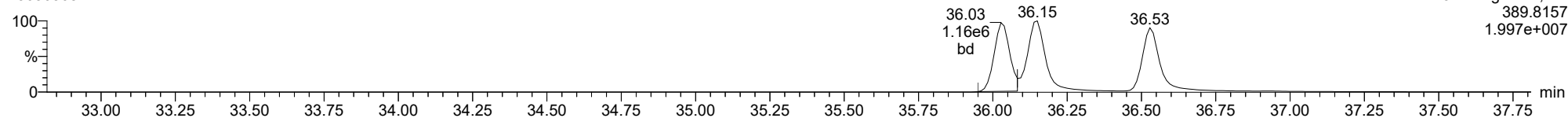
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

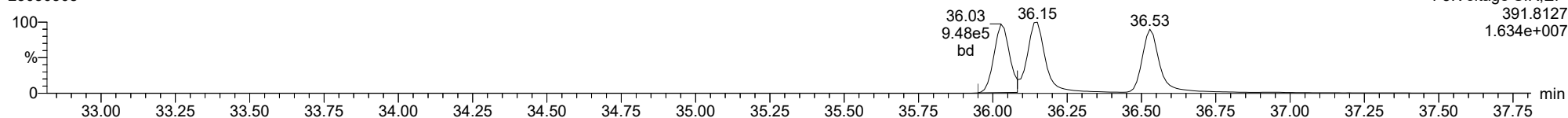
**123478-HxCDD**

23030308



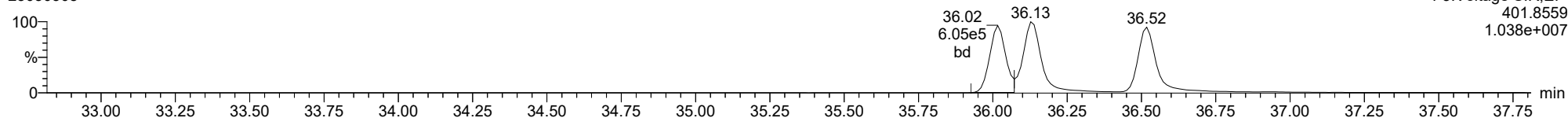
**123478-HxCDD**

23030308



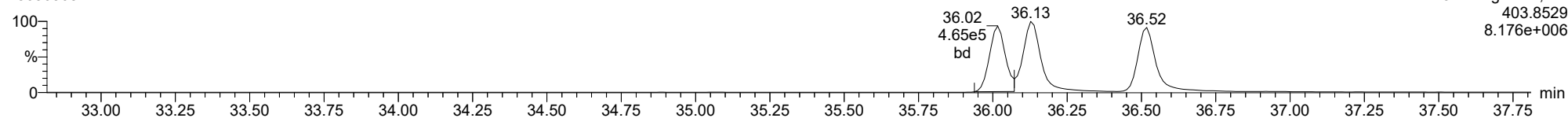
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23030308



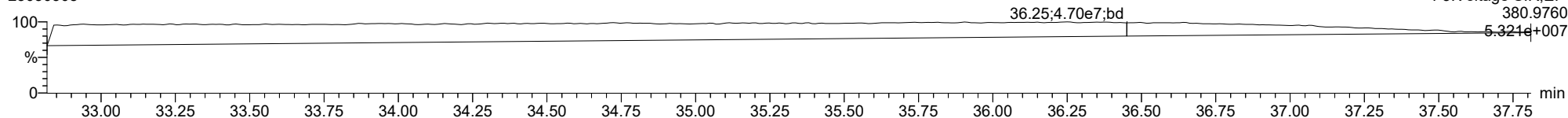
**13C-123478-HxCDD**

23030308



**FUNCTION3 PFK**

23030308

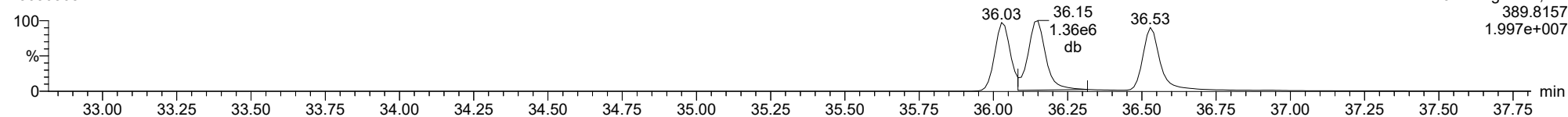




ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

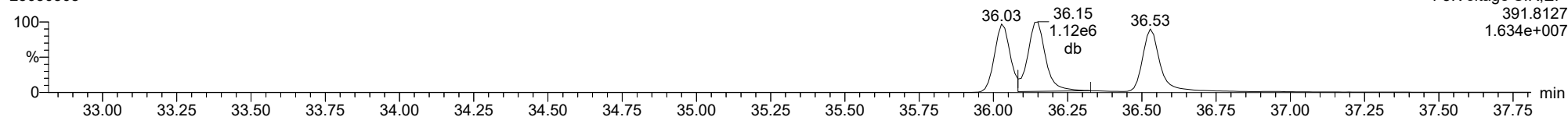
**123678-HxCDD**

23030308



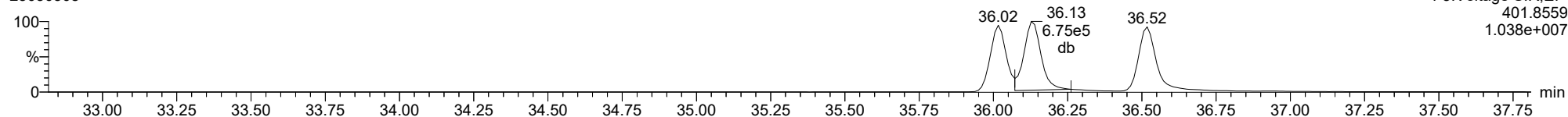
**123678-HxCDD**

23030308



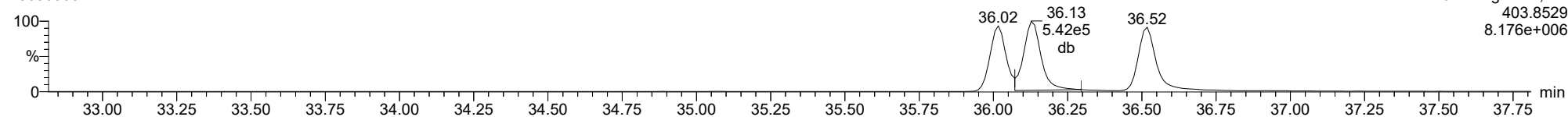
**13C-123678-HxCDD**

23030308



**13C-123678-HxCDD**

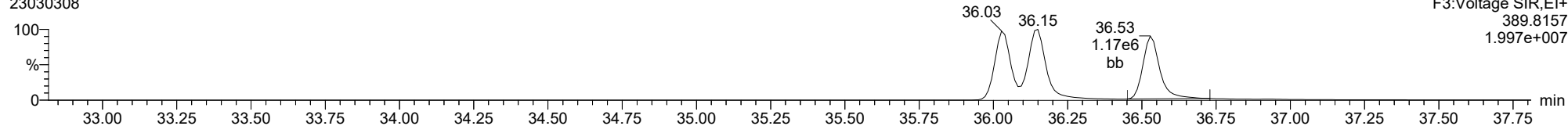
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

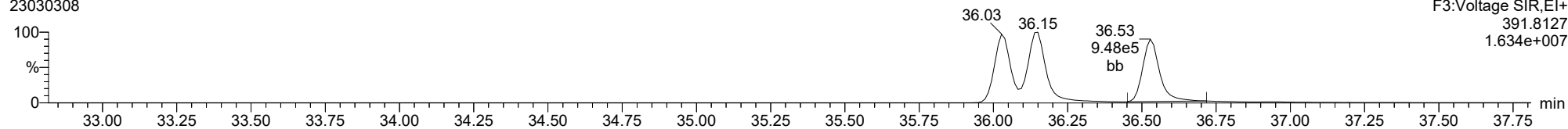
**123789-HxCDD**

23030308



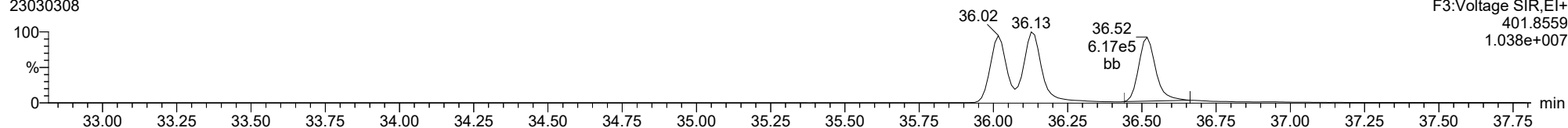
**123789-HxCDD**

23030308



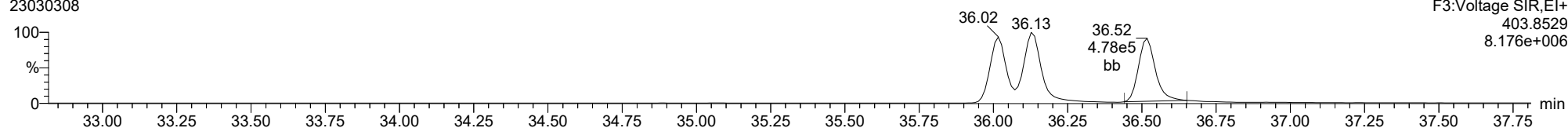
**13C-123789-HxCDD**

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**13C-123789-HxCDD**

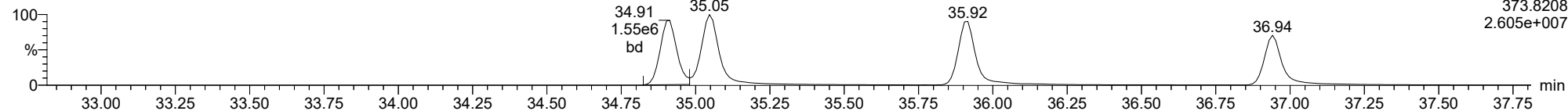
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

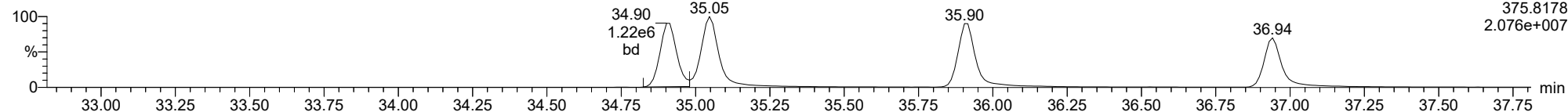
123478-HxCDF

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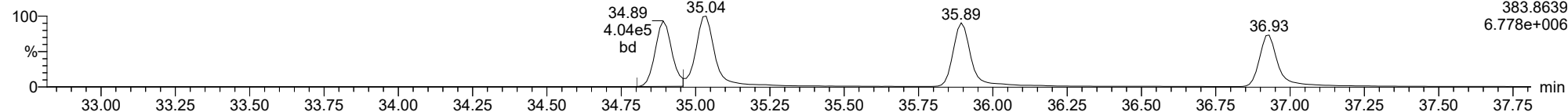
123478-HxCDF

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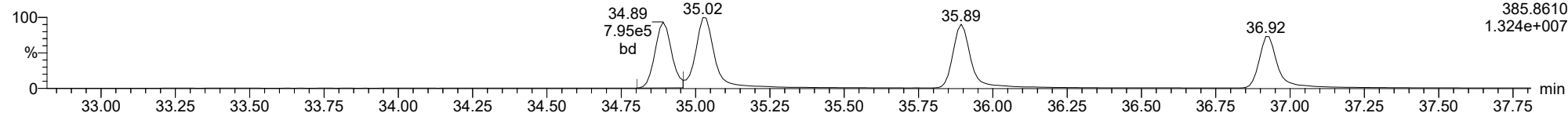
13C-123478-HxCDF

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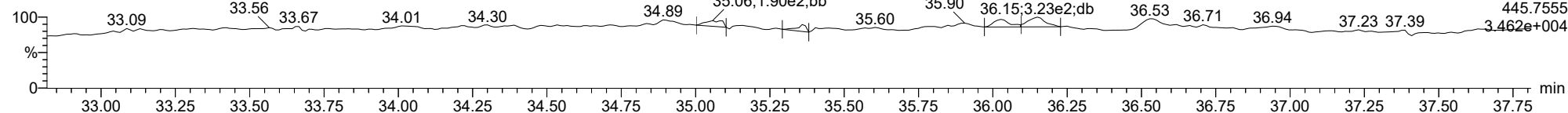
13C-123478-HxCDF

23030308



FUNCTION3 OCDPE

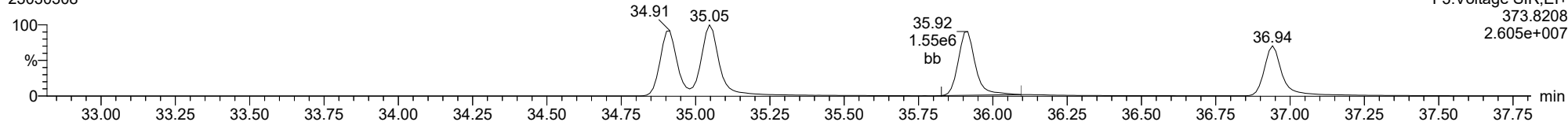
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

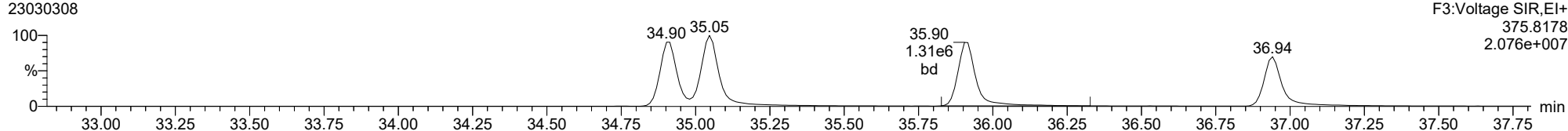
**234678-HxCDF**

23030308



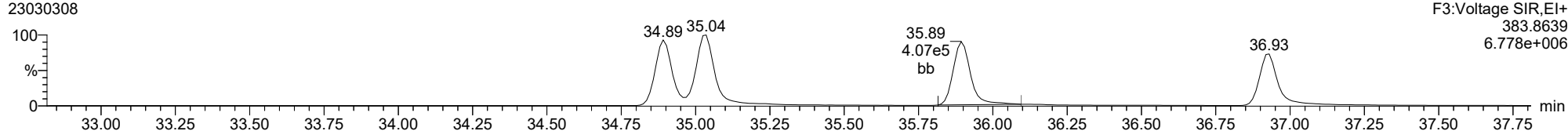
**234678-HxCDF**

23030308



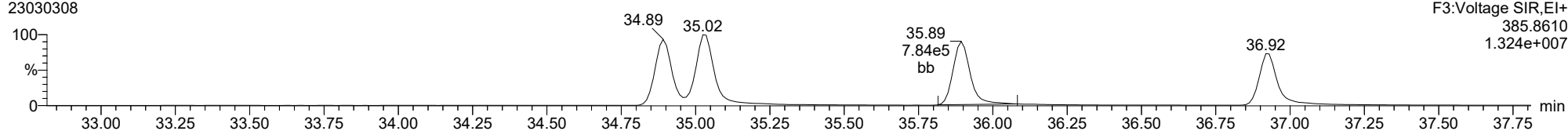
**13C-234678-HxCDF**

23030308



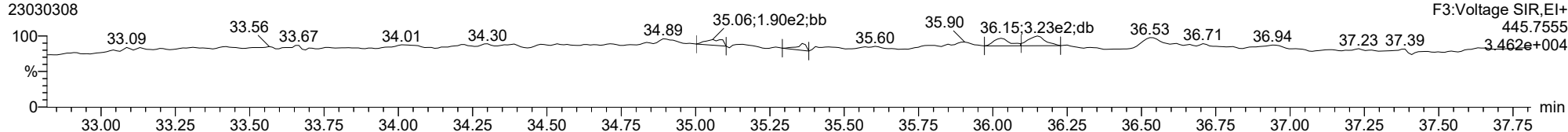
**13C-234678-HxCDF**

23030308



**FUNCTION3 OCDPE**

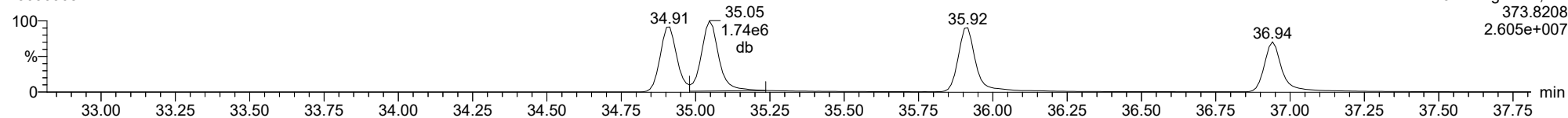
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

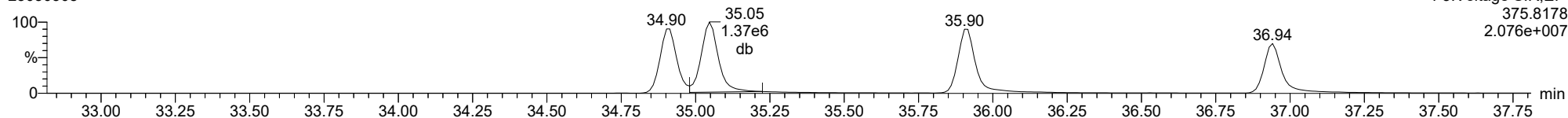
123678-HxCDF

23030308



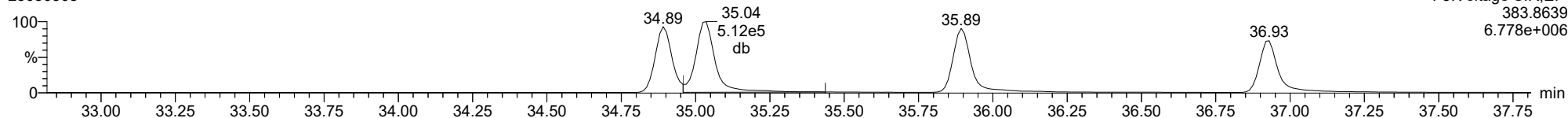
123678-HxCDF

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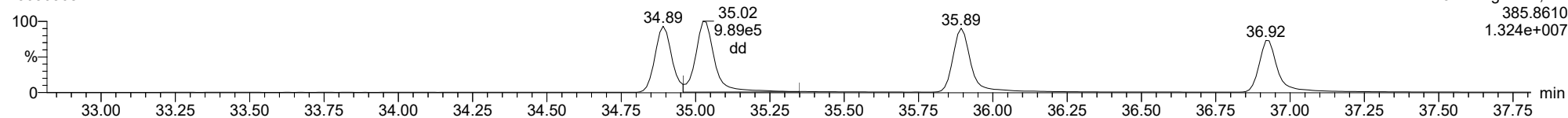
13C-123678-HxCDF

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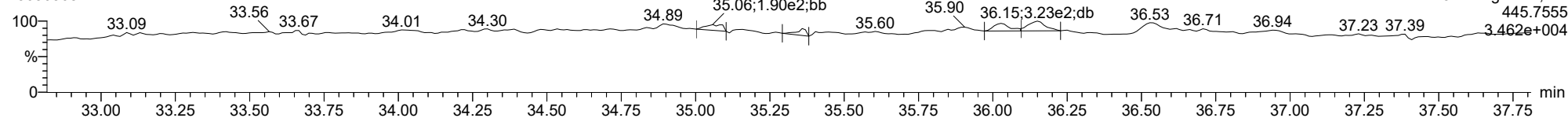
13C-123678-HxCDF

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FUNCTION3 OCDPE

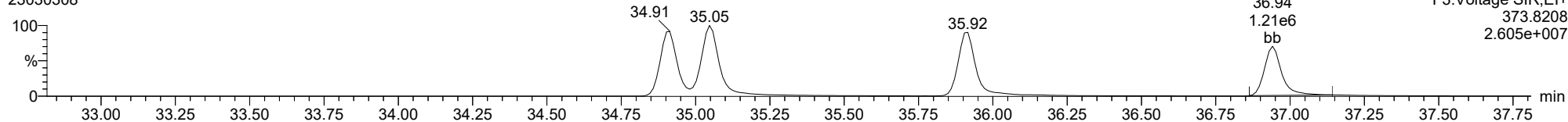
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

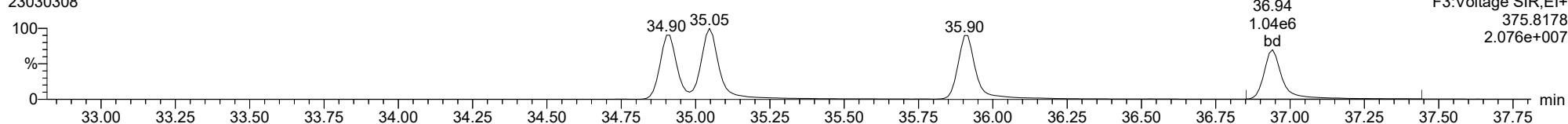
**123789-HxCDF**

23030308



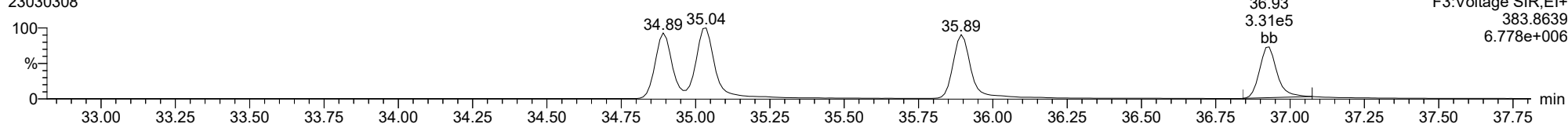
**123789-HxCDF**

23030308



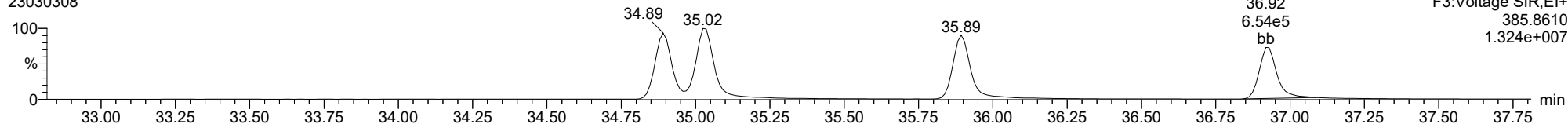
**13C-123789-HxCDF**

23030308



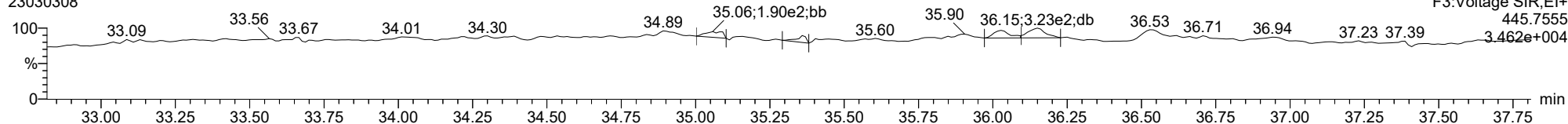
**13C-123789-HxCDF**

23030308



**FUNCTION3 OCDPE**

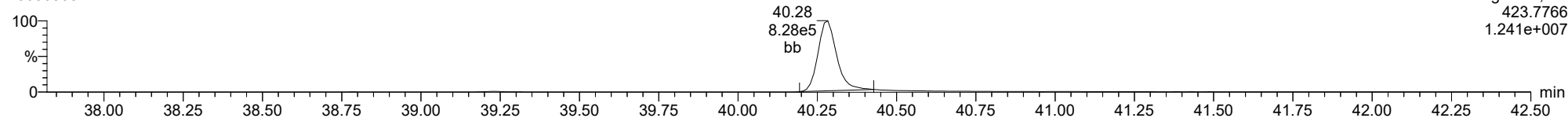
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

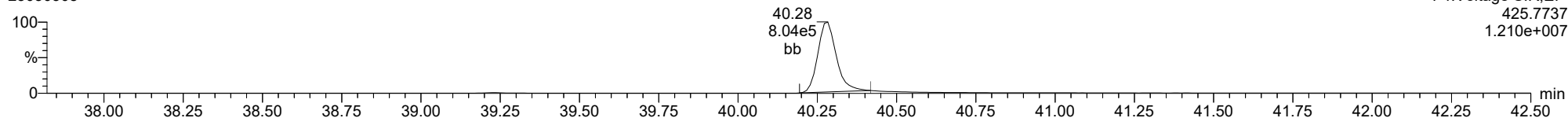
**1234678-HpCDD**

23030308



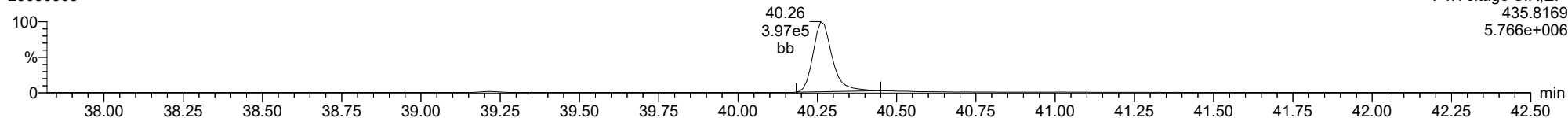
**1234678-HpCDD**

23030308



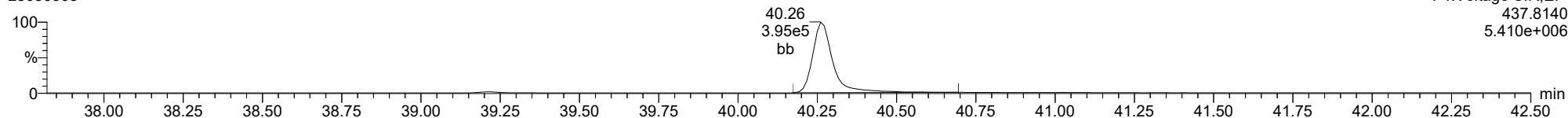
**13C-1234678-HpCDD**

23030308



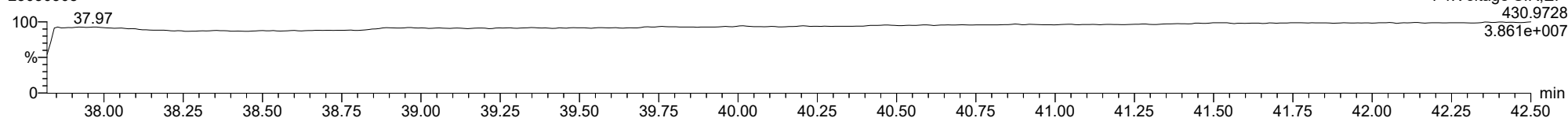
**13C-1234678-HpCDD**

23030308



**FUNCTION4 PFK**

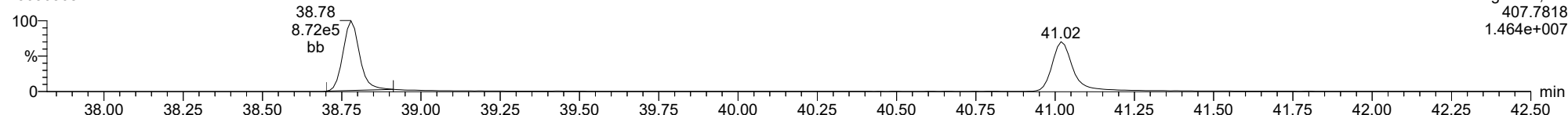
23030308



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

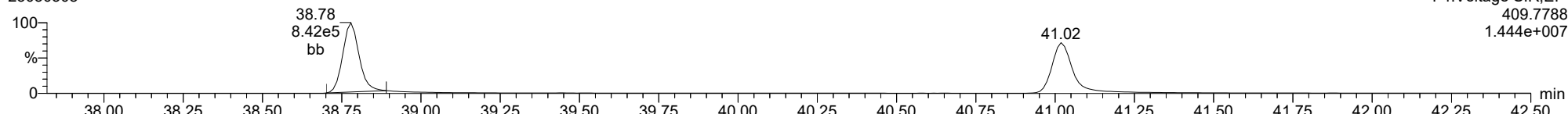
**1234678-HpCDF**

23030308



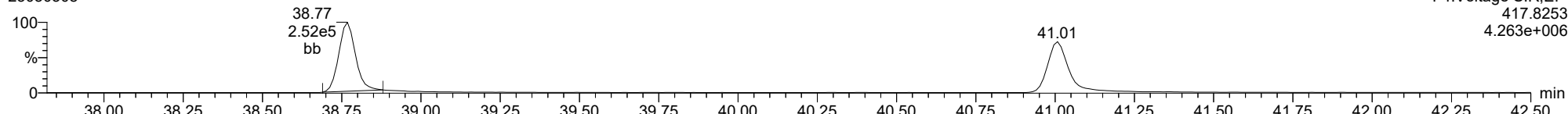
**1234678-HpCDF**

23030308



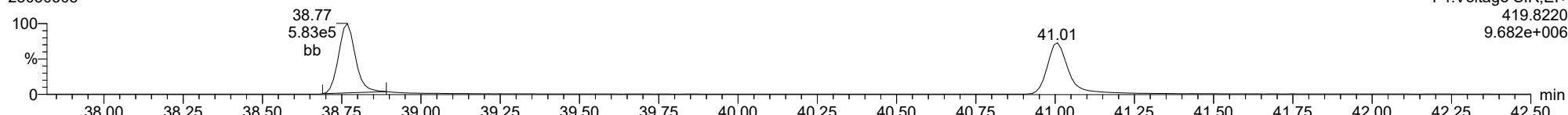
**13C-1234678-HpCDF**

23030308



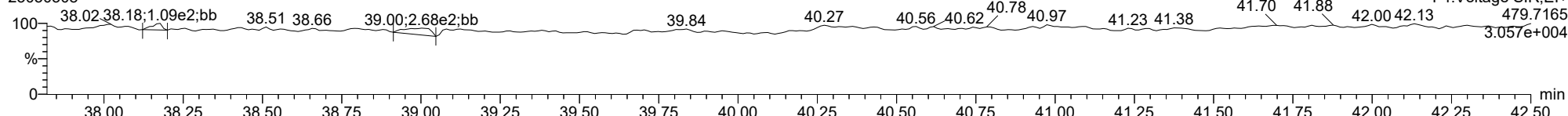
**13C-1234678-HpCDF**

23030308



**FUNCTION4 NCDPE**

23030308

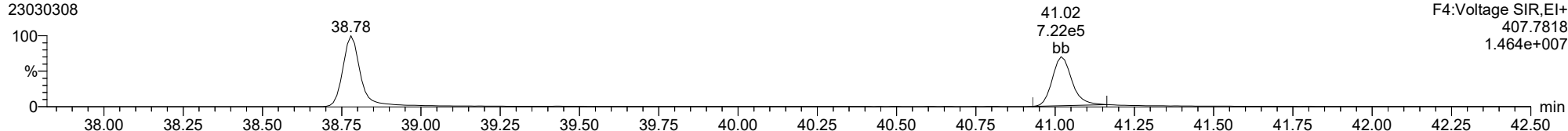




ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

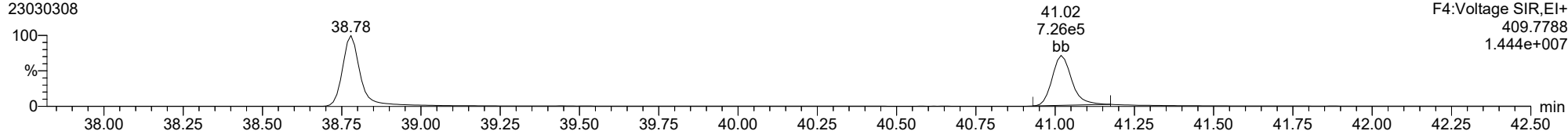
**1234789-HpCDF**

23030308



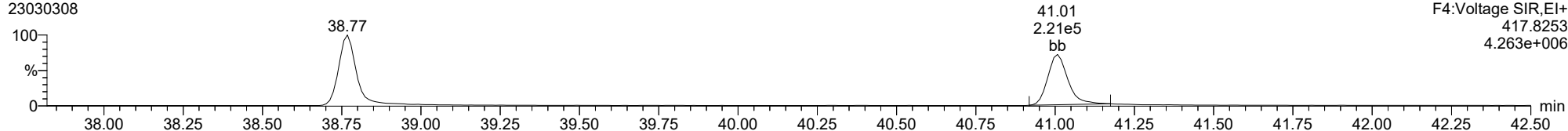
**1234789-HpCDF**

23030308



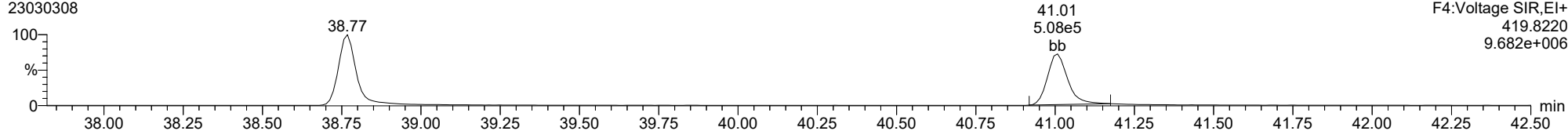
**13C-1234789-HpCDF**

23030308



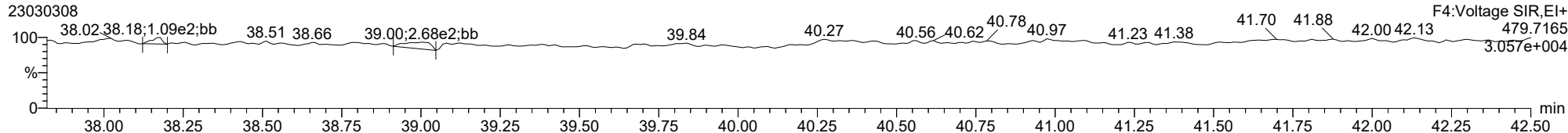
**13C-1234789-HpCDF**

23030308



**FUNCTION4 NCDPE**

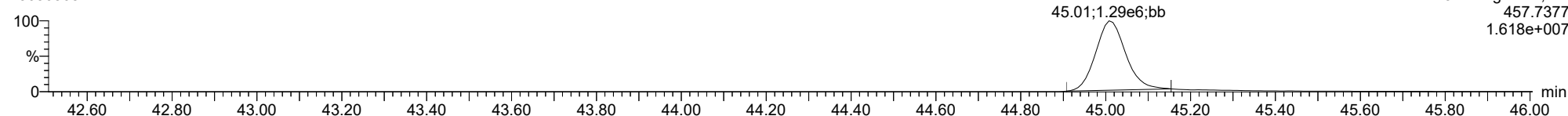
23030308



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

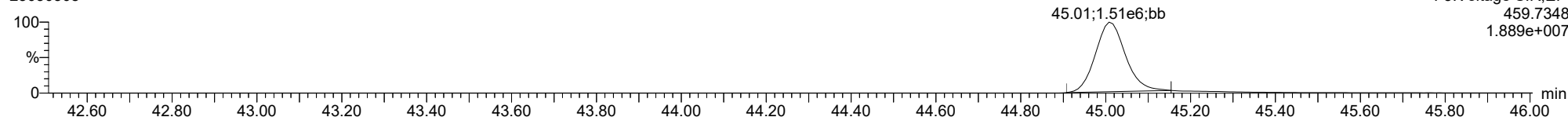
**OCDD**

23030308



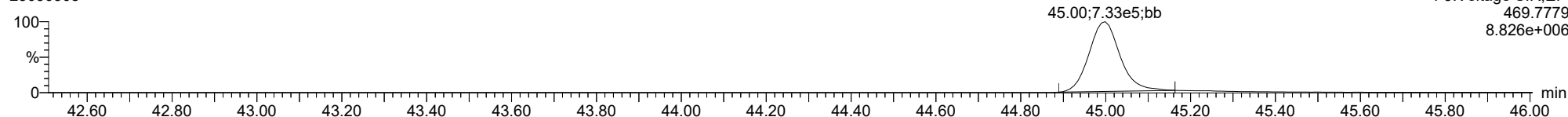
**OCDD**

23030308



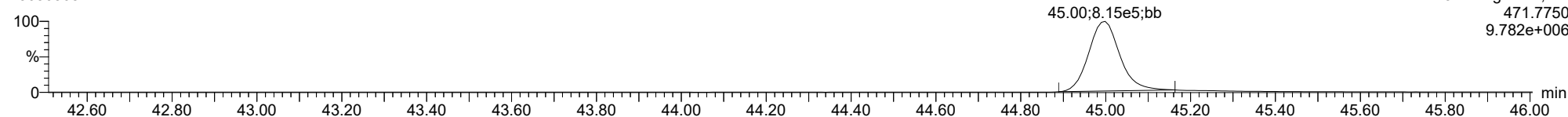
**13C-OCDD**

23030308



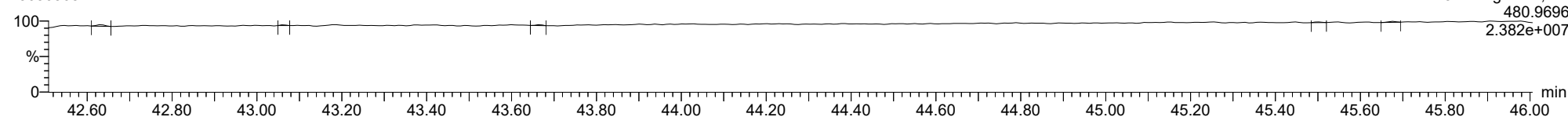
**13C-OCDD**

23030308

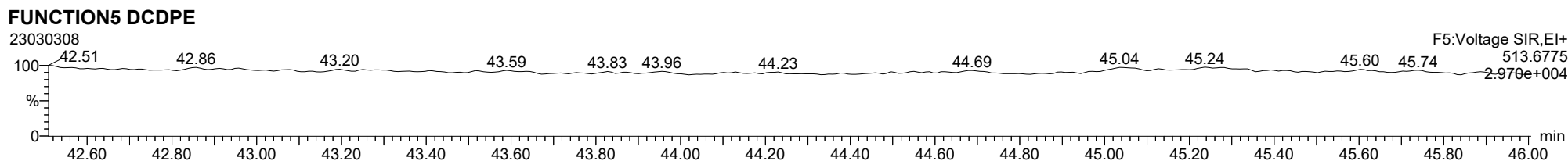
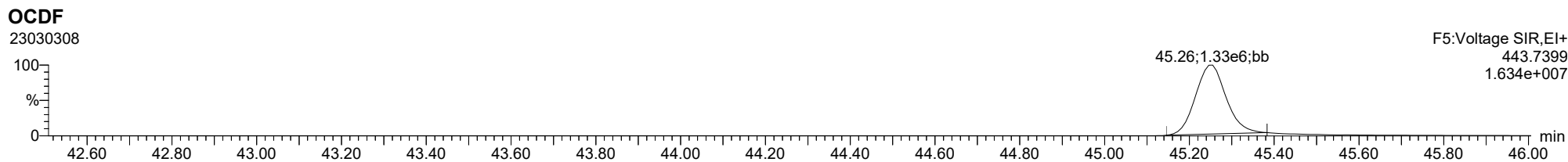
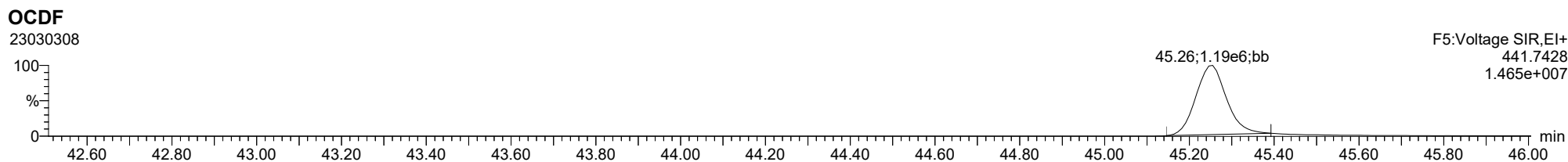


**FUNCTION5 PFK**

23030308



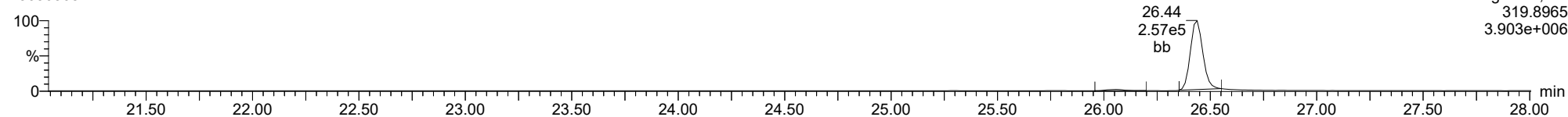
ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

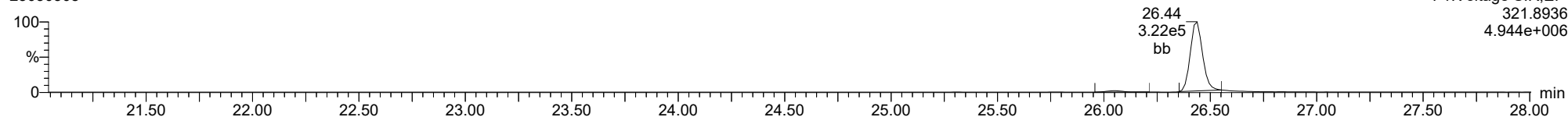
**Total-tetradioxins**

23030308



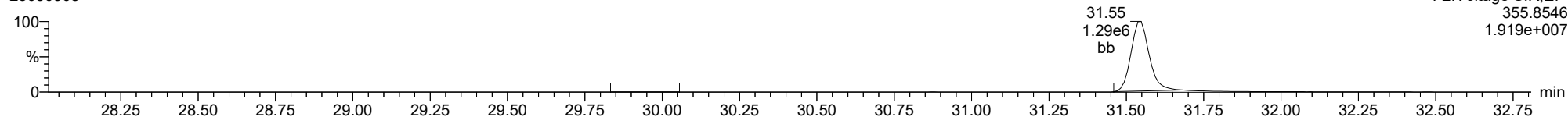
**Total-tetradioxins**

23030308



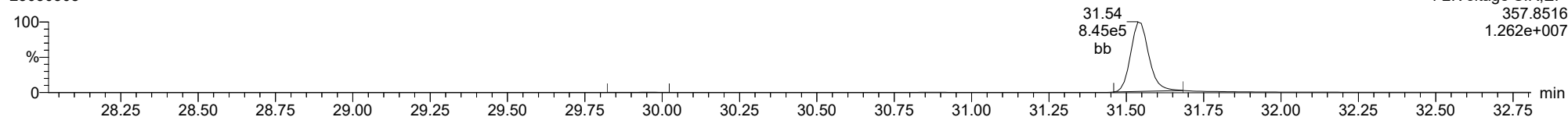
**Total-pentadioxins**

23030308



**Total-pentadioxins**

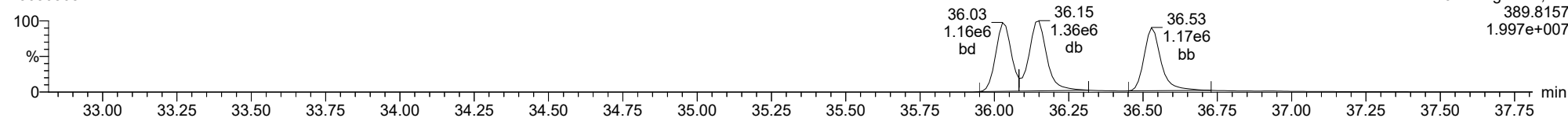
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ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

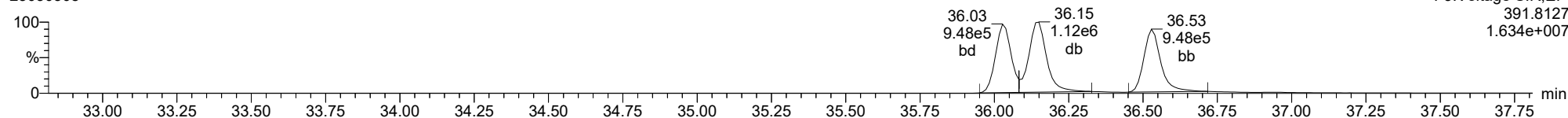
**Total-hexadioxins**

23030308



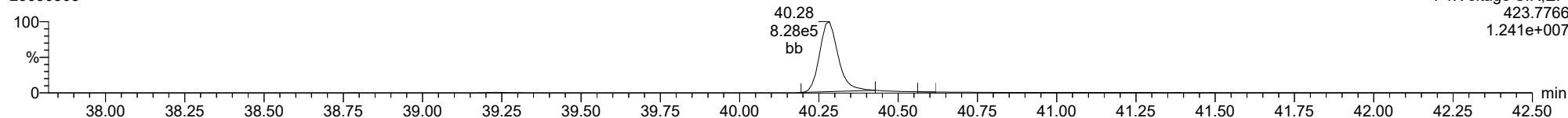
**Total-hexadioxins**

23030308



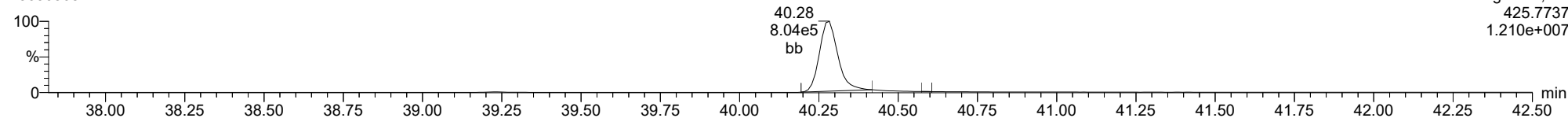
**Total-heptadioxins**

23030308



**Total-heptadioxins**

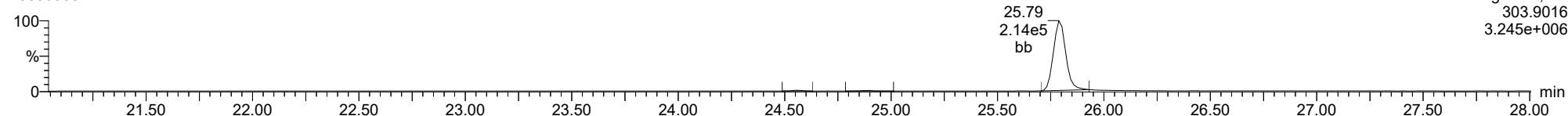
23030308



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

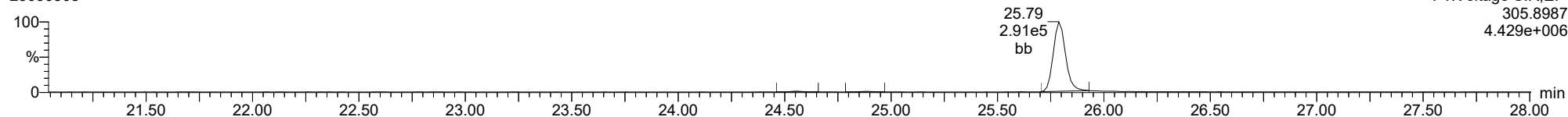
**Total-tetrafurans**

23030308



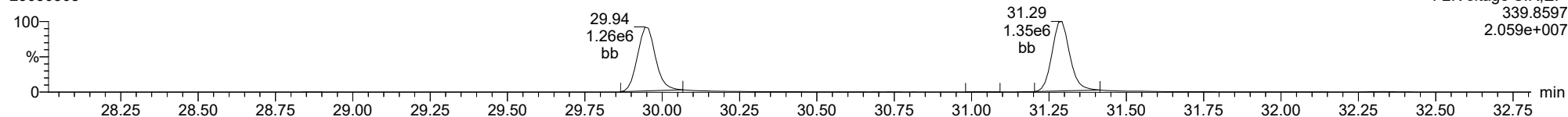
**Total-tetrafurans**

23030308



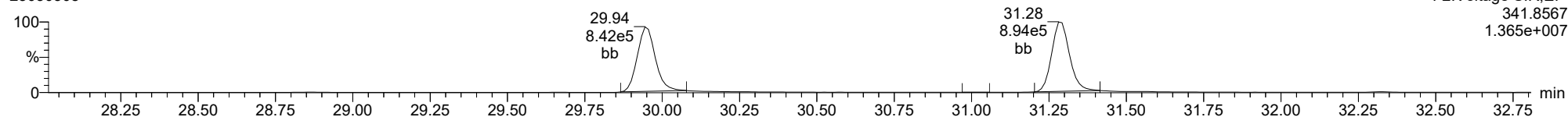
**Total-pentafurans**

23030308



**Total-pentafurans**

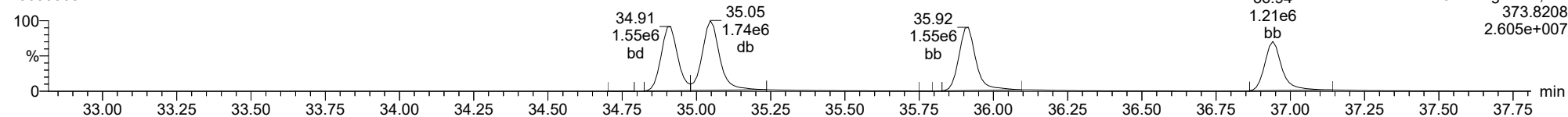
23030308



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

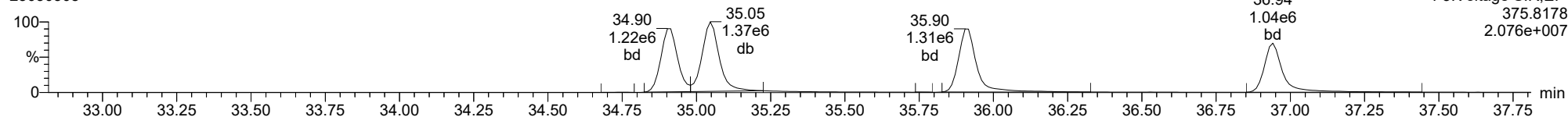
**Total-hexafurans**

23030308



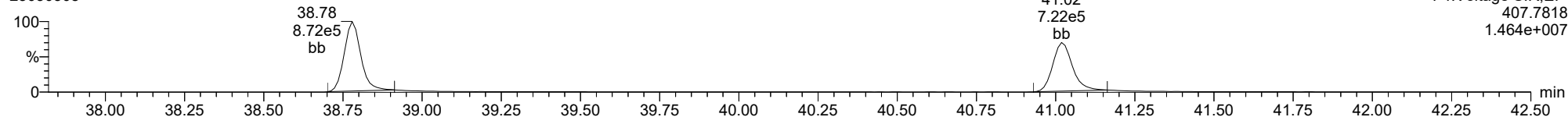
**Total-hexafurans**

23030308



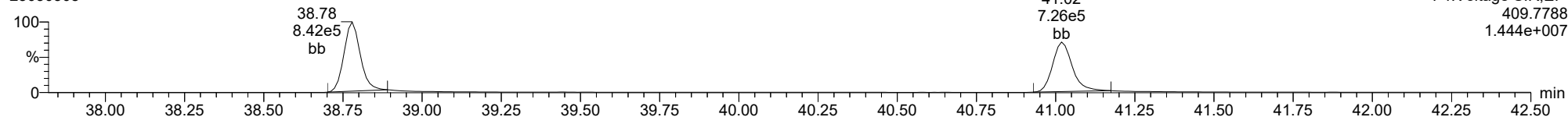
**Total-heptafurans**

23030308



**Total-heptafurans**

23030308



Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

**Method:** T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** CS5CW, **Name:** 23030309, **Date:** 03-Mar-2023, **Time:** 15:47:43, **Conditions:** AUTOSPEC01, **User:** pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	1.334e6	1.787e6	0.702	0.746	0.770	1816	2705	2.07e7	2.78e7	11389.3	10270.6	NO	bb	bb	200.466
12378-PeCDF	29.934	1.000	7.598e6	4.979e6	0.679	1.526	1.550	4787	5694	1.20e8	7.84e7	24983.0	13764.4	NO	bb	bb	1049.785
23478-PeCDF	31.271	1.000	8.034e6	5.310e6	0.786	1.513	1.550	4787	5694	1.23e8	8.18e7	25734.3	14361.4	NO	bb	bb	1006.165
123478-HxCDF	34.903	1.001	7.954e6	6.371e6	1.166	1.248	1.240	1657	3079	1.28e8	1.02e8	76946.6	33145.2	NO	bd	bd	988.542
234678-HxCDF	35.894	1.000	8.440e6	6.648e6	1.140	1.270	1.240	1657	3079	1.32e8	1.04e8	79492.3	33730.7	NO	bd	bd	997.904
123678-HxCDF	35.036	1.000	8.729e6	6.976e6	1.091	1.251	1.240	1657	3079	1.37e8	1.09e8	82564.4	35544.8	NO	db	db	1005.907
123789-HxCDF	36.930	1.000	7.107e6	5.643e6	1.137	1.259	1.240	1657	3079	1.15e8	9.05e7	69330.3	29396.1	NO	bb	bb	962.631
1234678-HpCDF	38.769	1.000	5.729e6	5.700e6	1.003	1.005	1.050	5984	6276	9.87e7	9.77e7	16498.3	15567.0	NO	bb	bb	1001.511
1234789-HpCDF	41.008	1.000	4.891e6	4.848e6	0.953	1.009	1.050	5984	6276	7.31e7	7.29e7	12213.8	11617.0	NO	bb	bb	1050.453
OCDF	45.246	1.006	8.007e6	9.001e6	0.778	0.890	0.890	617	1698	1.01e8	1.14e8	163878.0	67066.1	NO	bb	bb	2152.541
2378-TCDD	26.424	1.001	1.623e6	2.053e6	1.149	0.791	0.770	1583	1421	2.49e7	3.15e7	15719.4	22173.2	NO	bb	bb	201.416
12378-PeCDD	31.527	1.000	7.500e6	4.933e6	1.022	1.520	1.550	3207	3258	1.15e8	7.59e7	35906.6	23308.0	NO	bb	bb	987.154
123478-HxCDD	36.017	1.000	6.446e6	5.113e6	0.996	1.261	1.240	1269	1319	1.05e8	8.63e7	82869.7	65420.3	NO	bd	bd	1008.795
123678-HxCDD	36.139	1.001	6.944e6	5.798e6	1.001	1.198	1.240	1269	1319	1.11e8	8.98e7	87214.8	68064.1	NO	db	db	1011.135
123789-HxCDD	36.518	1.011	6.387e6	5.242e6	0.907	1.218	1.240	1269	1319	1.04e8	8.52e7	81996.1	64539.0	NO	bb	bb	1063.935
1234678-HpCDD	40.273	1.000	5.468e6	5.342e6	1.039	1.023	1.050	4639	3285	8.81e7	8.56e7	19002.3	26055.7	NO	bb	bb	1010.673
OCDD	45.008	1.000	8.523e6	9.997e6	0.920	0.853	0.890	1224	2738	1.09e8	1.28e8	89206.2	46574.8	NO	bb	bb	1981.710
13C-2378-TCDF	25.760	1.007	9.657e5	1.254e6	1.620	0.770	0.770	2759	1757	1.47e7	1.88e7	5325.4	10693.5	NO	bb	bb	104.465
13C-12378-PeCDF	29.923	1.169	1.058e6	7.059e5	1.240	1.499	1.550	2137	2181	1.59e7	1.06e7	7426.1	4845.6	NO	bb	bb	108.437
13C-23478-PeCDF	31.259	1.222	1.010e6	6.768e5	1.118	1.492	1.550	2137	2181	1.54e7	1.03e7	7192.1	4709.7	NO	bb	bb	115.091
13C-123478-HxCDF	34.880	0.955	4.197e5	8.230e5	1.168	0.510	0.510	2074	3087	6.86e6	1.33e7	3308.7	4323.9	NO	bd	bd	88.344
13C-123678-HxCDF	35.025	0.959	4.843e5	9.471e5	1.386	0.511	0.510	2074	3087	7.37e6	1.42e7	3551.0	4614.4	NO	db	db	85.742
13C-234678-HxCDF	35.883	0.983	4.483e5	8.783e5	1.129	0.510	0.510	2074	3087	6.95e6	1.37e7	3352.7	4438.0	NO	bd	bd	97.566
13C-123789-HxCDF	36.919	1.011	3.958e5	7.690e5	0.932	0.515	0.510	2074	3087	6.35e6	1.23e7	3061.9	3979.7	NO	bb	bb	103.822
13C-1234678-HpCDF	38.757	1.062	3.445e5	7.933e5	0.895	0.434	0.440	2404	3556	5.77e6	1.33e7	2401.1	3732.0	NO	bb	bb	105.552
13C-1234789-HpCDF	40.997	1.123	2.963e5	6.765e5	0.770	0.438	0.440	2404	3556	4.35e6	9.96e6	1811.4	2800.3	NO	bb	bb	104.955
13C-1234-TCDD	25.591	0.000	5.845e5	7.267e5	1.000	0.804	0.770	2994	1335	8.98e6	1.11e7	2999.9	8316.3	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	7.030e5	8.860e5	1.152	0.794	0.770	2994	1335	1.05e7	1.32e7	3492.1	9847.6	NO	bb	bb	105.160
13C-12378-PeCDD	31.515	1.232	7.626e5	4.699e5	0.829	1.623	1.550	1207	1205	1.17e7	7.16e6	9657.3	5939.7	NO	bb	bb	113.413
13C-123478-HxCDD	36.006	0.986	6.492e5	5.017e5	0.995	1.294	1.240	1422	1281	1.08e7	8.26e6	7562.7	6444.6	NO	bd	bd	96.063
13C-123678-HxCDD	36.117	0.989	7.072e5	5.517e5	1.157	1.282	1.240	1422	1281	1.11e7	8.74e6	7828.3	6824.3	NO	db	db	90.391
13C-1234678-HpCDD	40.262	1.103	5.341e5	4.953e5	0.840	1.078	1.050	2026	1583	8.10e6	7.45e6	3998.5	4702.7	NO	bb	bb	101.765
13C-OCDD	44.990	1.232	9.650e5	1.067e6	0.767	0.905	0.890	1467	1005	1.21e7	1.35e7	8264.7	13401.8	NO	bb	bb	219.862
13C-123789-HxCDD	36.507	0.000	6.722e5	5.319e5	1.000	1.264	1.240	1422	1281	1.10e7	8.62e6	7719.2	6727.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	3.368e6		1.288			2667		5.07e7		19022.1			bb		199.444



Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1816	2705								
1289-TCDF					0.678		0.770	1816	2705								
13468-PECDF					1.246		1.550	665	1133								
12389-PECDF					0.496		1.550	4787	5694								
123468-HXCDF					1.169		1.240	1657	3079								
1368-TCDD					1.015		0.770	1583	1421								
1289-TCDD					0.909		0.770	1583	1421								
12479-PECDD					2.301		1.550	3207	3258								
12389-PECDD					1.184		1.550	3207	3258								
124679-HXCDD					1.115		1.240	1269	1319								
1234679-HPCDD					1.137		1.050	4639	3285								
Total-tetrafurans			1.355e6		0.727			1816		2.10e7							203.619
Total-penta1			0.000e0					665		0.00e0							
Total-pentafurans			1.567e7		0.654			4787		2.43e8							2061.969
Total-hexafurans			3.237e7		1.141			1657		5.13e8							3971.633
Total-heptafurans			1.063e7		0.978			5984		1.72e8							2053.620
Total-Furans			6.803e7		0.922			1816		1.05e9							10443.382
Total-tetradoxins			1.660e6		1.024			1583		2.53e7							206.551
Total-pentadoxins			7.518e6		1.502			3207		1.15e8							988.757
Total-hexadoxins			1.981e7		1.005			1269		3.20e8							3089.249
Total-heptadoxins			5.468e6		1.088			4639		8.81e7							1010.701
Total-Dioxins			4.298e7		1.130			1583		6.58e8							7276.969
Total-TEQ			1.110e8					1583		1.71e9							17720.350
FUNCTION1 PFK			8.364e4					590794		3.29e6							
FUNCTION2 PFK			1.452e7					287139		1.24e7							0.000
FUNCTION3 PFK			2.904e5					447834		7.86e6							0.000
FUNCTION4 PFK			1.983e5					258971		5.49e6							
FUNCTION5 PFK			1.360e5					213310		3.56e6							
FUNCTION1 HXCD...			9.848e2					660		1.37e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			9.974e3					875		1.52e5							0.000
FUNCTION3 OCDPE			5.118e3					487		5.72e4							0.000
FUNCTION4 NCDPE			1.842e3					616		1.81e4							0.000
FUNCTION5 DCDPE			3.423e3					534		2.47e4							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

Calibration: T:\Autospec\Curves\230303\CIH.cdb 06 Mar 2023 10:57:27

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
2	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
3	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
4	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
5	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
6	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
2	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
3	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
4	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
5	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
6	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
7	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
8	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

**ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk**

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
2	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
3	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731
5	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
6	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
7	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
8	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
9	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
10	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415
11	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
12	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
13	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
14	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
15	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
16	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
17	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
18	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904
19	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
20	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
21	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...
22	OCDF	45.25	8.007e6	9.001e6	0.778	0.89	0.89	16387...	YES	NO	bb	bb	2152.5...

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
2	Total-tetradioxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
3	Total-tetradioxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
4	Total-tetradioxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
2	Total-pentadioxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
3	Total-pentadioxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
4	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
5	Total-pentadioxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
2	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
3	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
4	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptadioxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
2	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk**

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
2	Total-tetradoxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
3	Total-tetradoxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
4	Total-tetradoxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199
5	Total-pentadoxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
6	Total-pentadoxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
7	Total-pentadoxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
8	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
9	Total-pentadoxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776
10	Total-hexadoxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
11	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
12	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
13	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...
14	Total-heptadoxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
15	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...
16	OCDD	45.01	8.523e6	9.997e6	0.920	0.85	0.89	89206.2	YES	NO	bb	bb	1981.7...

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731
5	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
6	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
7	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
8	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
9	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
10	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415
11	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
12	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
13	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
14	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
15	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
16	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
17	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
18	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904
19	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
20	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
21	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...
22	OCDF	45.25	8.007e6	9.001e6	0.778	0.89	0.89	16387...	YES	NO	bb	bb	2152.5...
23	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
24	Total-tetradiioxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
25	Total-tetradiioxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
26	Total-tetradiioxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199
27	Total-pentadiioxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
28	Total-pentadiioxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
29	Total-pentadiioxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
30	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
31	Total-pentadiioxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776
32	Total-hexadiioxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
33	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
34	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
35	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...
36	Total-heptadiioxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
37	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**TotalTEQ,Furans,Dioxins**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	OCDD	45.01	8.523e6	9.997e6	0.920	0.85	0.89	89206.2	YES	NO	bb	bb	1981.7...

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.64	6.068e3					0.7	NO		bb		
2	FUNCTION1 PFK	21.78	2.376e4					1.4	NO		bb		
3	FUNCTION1 PFK	26.65	6.322e3					0.8	NO		bb		
4	FUNCTION1 PFK	26.20	6.018e3					0.7	NO		bb		
5	FUNCTION1 PFK	24.62	4.147e4					1.9	NO		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.96	1.329e6					11.3	YES		db		0.000
2	FUNCTION2 PFK	29.68	9.729e6					13.1	YES		dd		0.000
3	FUNCTION2 PFK	29.12	3.197e6					12.0	YES		dd		0.000
4	FUNCTION2 PFK	28.11	2.639e5					6.8	YES		bd		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.58	5.268e3					0.6	NO		bb		0.000
2	FUNCTION3 PFK	35.20	2.459e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	34.94	1.904e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	34.64	1.893e4					1.6	NO		bb		0.000
5	FUNCTION3 PFK	34.45	3.091e4					1.7	NO		bb		0.000
6	FUNCTION3 PFK	34.20	2.876e3					0.6	NO		bb		0.000
7	FUNCTION3 PFK	34.01	8.291e4					2.8	NO		bb		0.000
8	FUNCTION3 PFK	37.45	2.878e4					1.5	NO		bb		0.000
9	FUNCTION3 PFK	37.14	1.025e4					1.2	NO		bb		0.000
10	FUNCTION3 PFK	36.92	2.201e4					1.4	NO		bb		0.000
11	FUNCTION3 PFK	36.82	6.882e3					0.7	NO		bb		0.000
12	FUNCTION3 PFK	36.27	2.697e4					1.6	NO		bb		0.000
13	FUNCTION3 PFK	35.83	1.096e4					1.2	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.36	1.487e4					2.2	NO		db		
2	FUNCTION4 PFK	40.28	5.399e4					2.8	NO		bd		
3	FUNCTION4 PFK	39.84	7.632e3					1.3	NO		bb		
4	FUNCTION4 PFK	39.63	5.817e3					1.3	NO		bb		
5	FUNCTION4 PFK	39.58	2.233e4					2.4	NO		bb		
6	FUNCTION4 PFK	39.26	1.840e3					0.6	NO		bb		
7	FUNCTION4 PFK	39.15	1.821e4					2.0	NO		bb		
8	FUNCTION4 PFK	38.75	4.539e3					0.9	NO		bb		
9	FUNCTION4 PFK	38.40	3.735e3					0.9	NO		bb		
10	FUNCTION4 PFK	42.22	2.101e4					1.9	NO		bb		
11	FUNCTION4 PFK	41.91	9.871e3					1.2	NO		bb		
12	FUNCTION4 PFK	41.56	2.609e4					2.3	NO		bb		
13	FUNCTION4 PFK	40.96	8.343e3					1.4	NO		bb		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.55	1.986e4					1.8	NO		bb		
2	FUNCTION5 PFK	44.84	1.038e4					2.0	NO		bb		
3	FUNCTION5 PFK	44.32	5.641e3					1.1	NO		bb		
4	FUNCTION5 PFK	44.16	5.508e3					1.3	NO		bb		
5	FUNCTION5 PFK	43.92	3.533e3					1.2	NO		bb		
6	FUNCTION5 PFK	43.74	1.099e4					1.6	NO		bb		
7	FUNCTION5 PFK	43.65	5.197e4					3.3	YES		db		
8	FUNCTION5 PFK	43.53	1.828e4					2.1	NO		bd		
9	FUNCTION5 PFK	42.94	8.618e3					1.5	NO		bb		
10	FUNCTION5 PFK	42.73	1.271e3					0.6	NO		bb		



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
 Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

**ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk**

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.02	8.181e1					1.9	NO		bb		0.000
2	FUNCTION1 HXCD...	26.42	2.971e2					5.1	YES		bb		0.000
3	FUNCTION1 HXCD...	25.83	8.848e1					2.3	NO		db		0.000
4	FUNCTION1 HXCD...	25.77	1.170e2					2.5	NO		dd		0.000
5	FUNCTION1 HXCD...	25.59	1.285e2					2.6	NO		bd		0.000
6	FUNCTION1 HXCD...	24.84	1.183e2					1.2	NO		bb		0.000
7	FUNCTION1 HXCD...	24.11	7.501e1					1.5	NO		bb		0.000
8	FUNCTION1 HXCD...	22.26	7.865e1					3.6	YES		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.55	8.739e2					12.4	YES		bb		0.000
2	FUNCTION2 HPCD...	31.16	9.100e3					161.2	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.02	1.011e3					23.2	YES		dd		0.000
2	FUNCTION3 OCDPE	35.92	4.171e2					12.8	YES		bd		0.000
3	FUNCTION3 OCDPE	35.05	6.001e2					12.0	YES		db		0.000
4	FUNCTION3 OCDPE	34.90	4.386e2					11.4	YES		bd		0.000
5	FUNCTION3 OCDPE	36.94	5.713e2					12.4	YES		bb		0.000
6	FUNCTION3 OCDPE	36.52	9.647e2					21.7	YES		bb		0.000
7	FUNCTION3 OCDPE	36.14	1.116e3					24.0	YES		db		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.03	4.935e2					7.5	YES		bb		0.000
2	FUNCTION4 NCDPE	40.28	7.486e2					12.2	YES		bb		0.000
3	FUNCTION4 NCDPE	38.78	6.004e2					9.6	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld  
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time  
Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**ETHERS6**

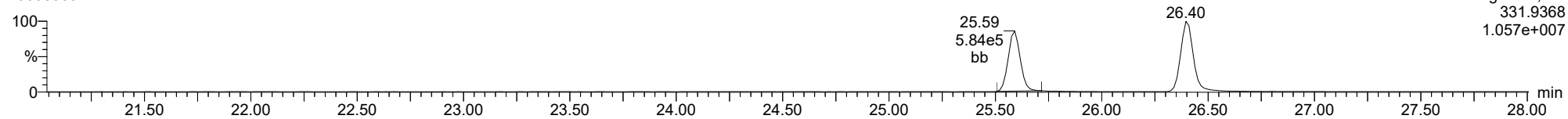
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.26	1.761e3					22.2	YES		db		0.000
2	FUNCTION5 DCDPE	45.02	1.661e3					24.0	YES		bd		0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

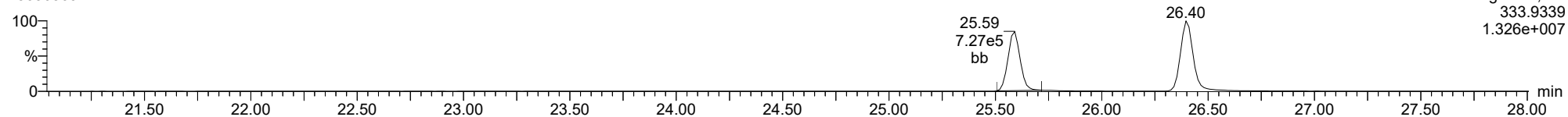
**13C-1234-TCDD**

23030309



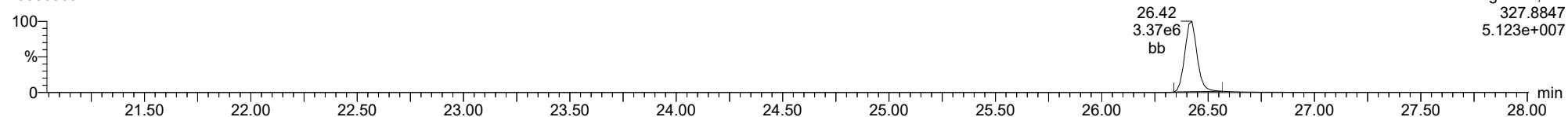
**13C-1234-TCDD**

23030309



**37CL-2378-TCDD**

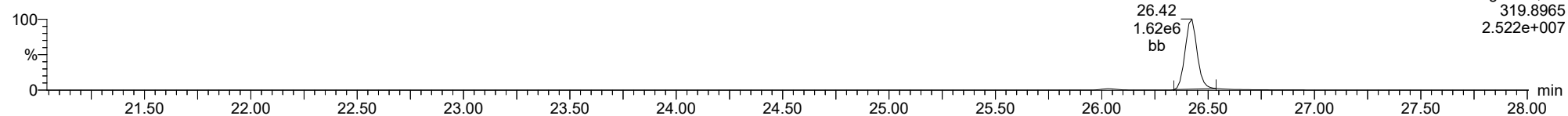
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**2378-TCDD**

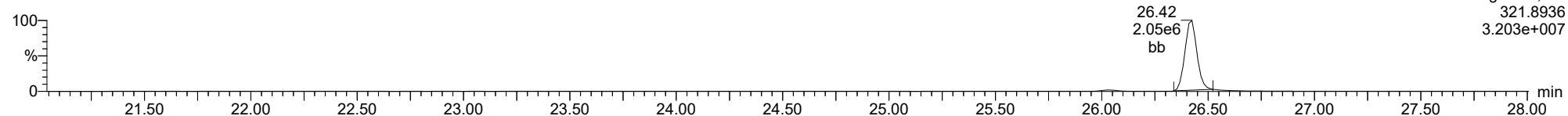
23030309



F1:Voltage SIR,EI+  
319.8965  
2.522e+007

**2378-TCDD**

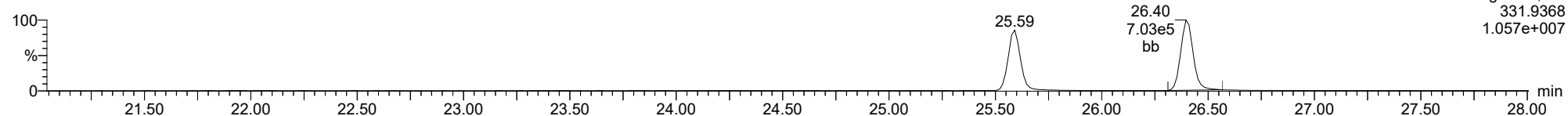
23030309



F1:Voltage SIR,EI+  
321.8936  
3.203e+007

**13C-2378-TCDD**

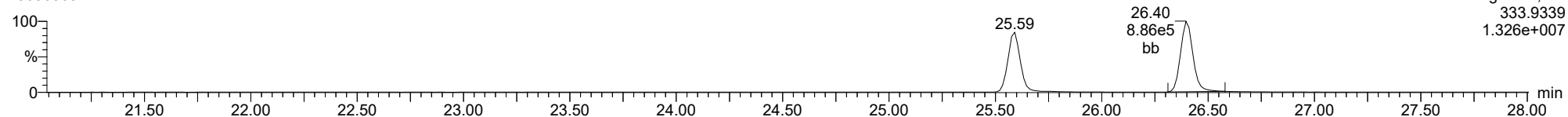
23030309



F1:Voltage SIR,EI+  
331.9368  
1.057e+007

**13C-2378-TCDD**

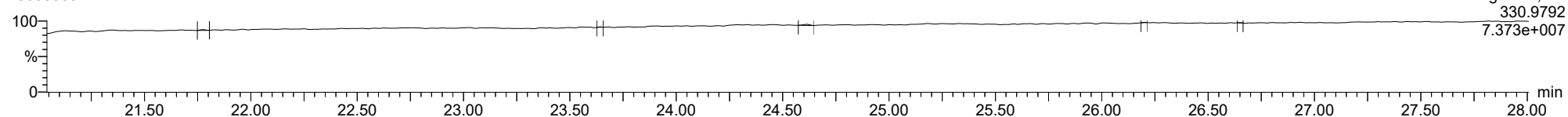
23030309



F1:Voltage SIR,EI+  
333.9339  
1.326e+007

**FUNCTION1 PFK**

23030309

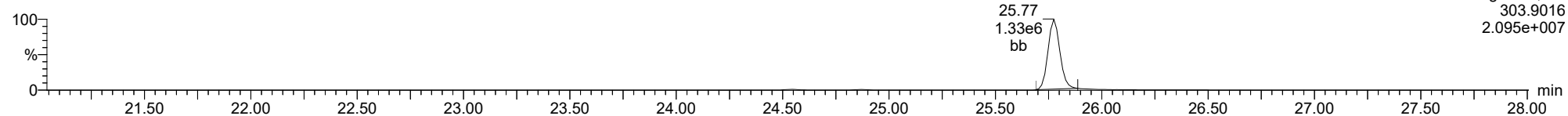


F1:Voltage SIR,EI+  
330.9792  
7.373e+007

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

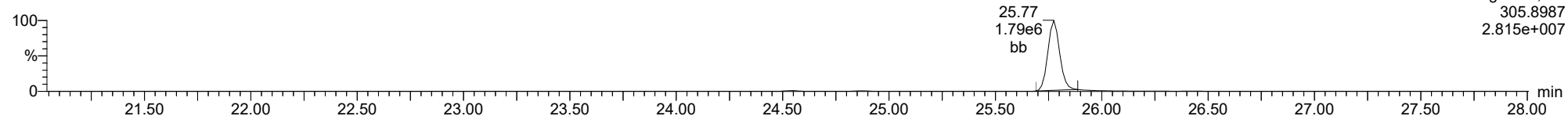
**2378-TCDF**

23030309



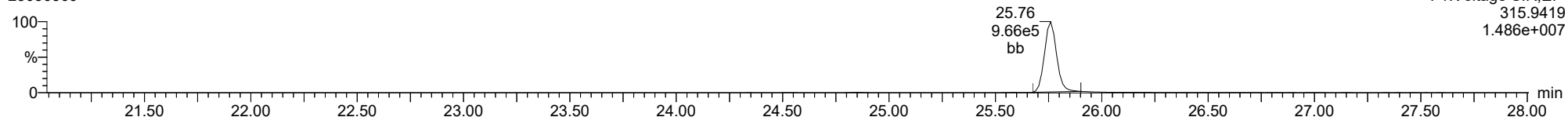
**2378-TCDF**

23030309



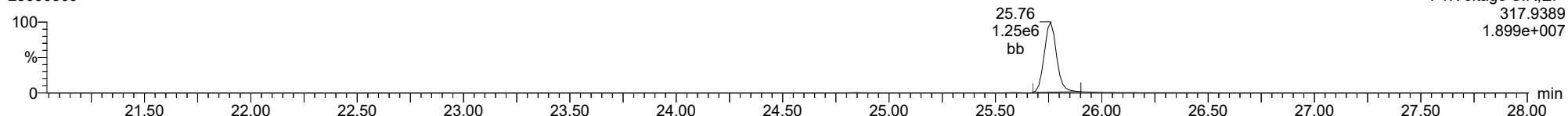
**13C-2378-TCDF**

23030309



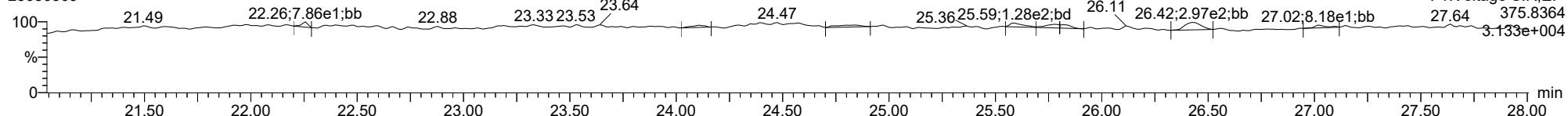
**13C-2378-TCDF**

23030309



**FUNCTION1 HXCDPE**

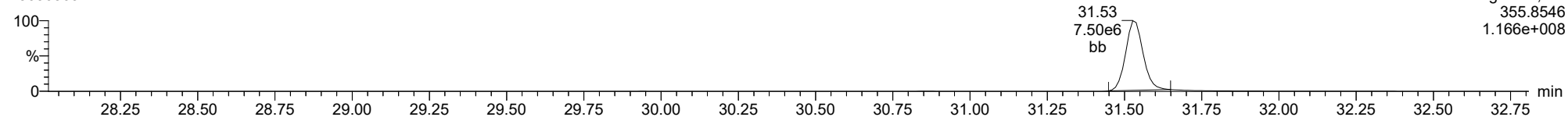
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

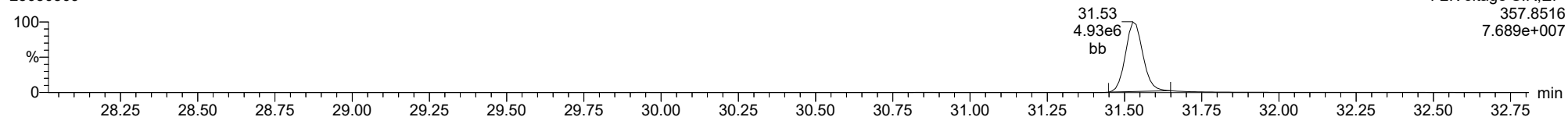
**12378-PeCDD**

23030309



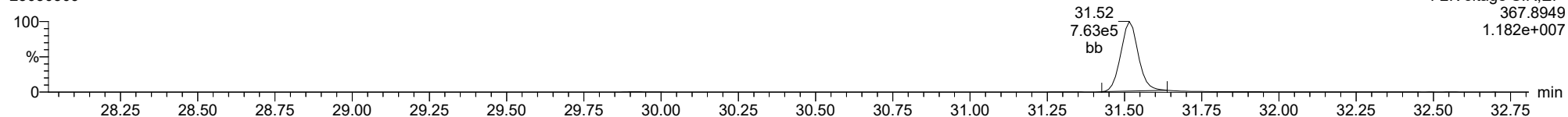
**12378-PeCDD**

23030309



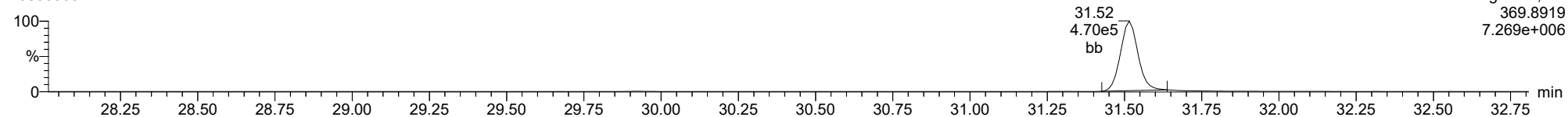
**13C-12378-PeCDD**

23030309



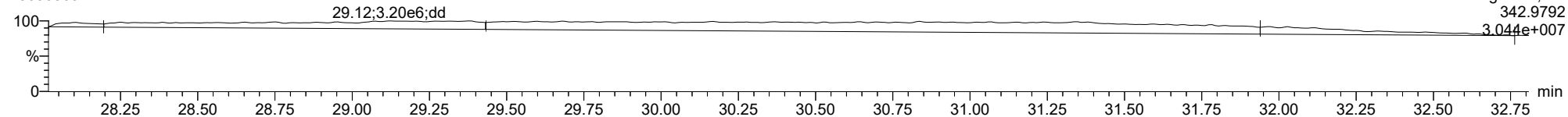
**13C-12378-PeCDD**

23030309



**FUNCTION2 PFK**

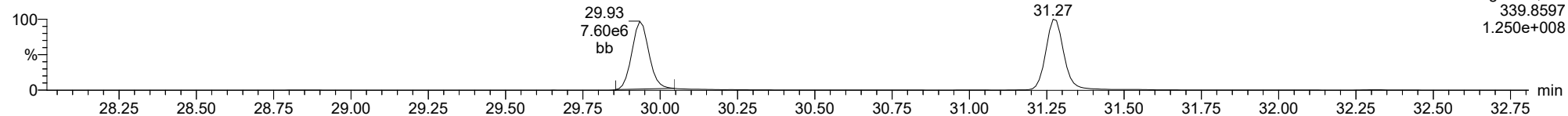
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**12378-PeCDF**

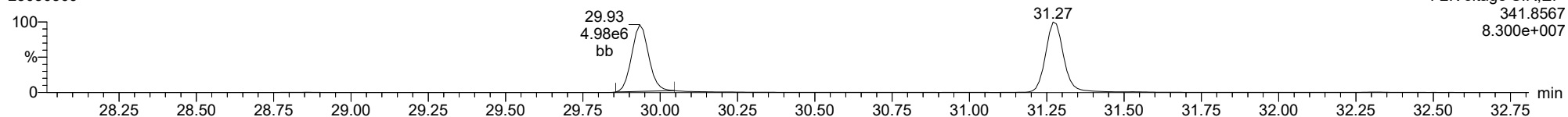
23030309



F2:Voltage SIR,EI+  
339.8597  
1.250e+008

**12378-PeCDF**

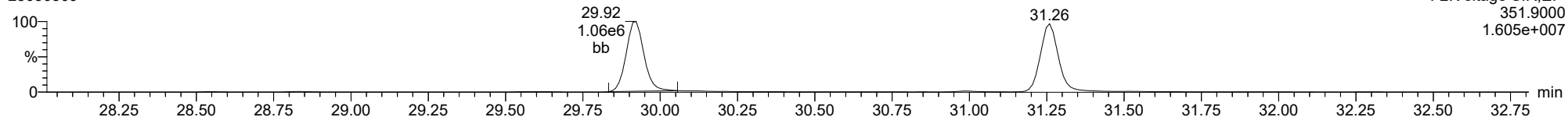
23030309



F2:Voltage SIR,EI+  
341.8567  
8.300e+007

**13C-12378-PeCDF**

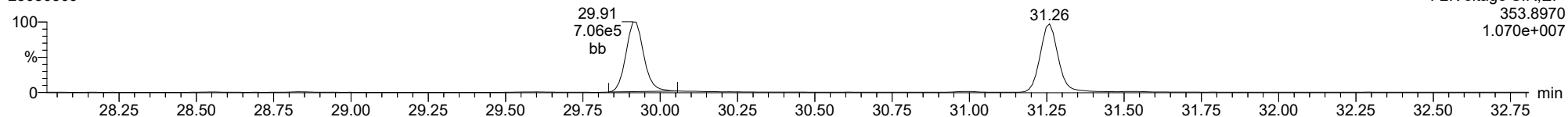
23030309



F2:Voltage SIR,EI+  
351.9000  
1.605e+007

**13C-12378-PeCDF**

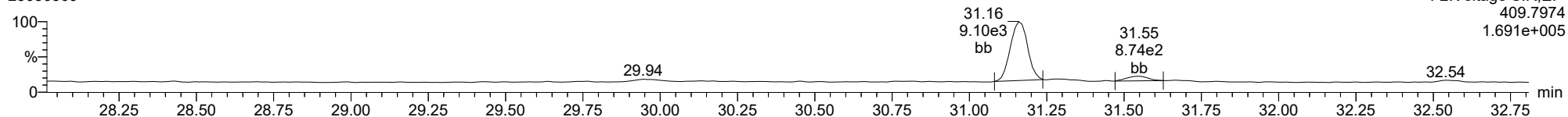
23030309



F2:Voltage SIR,EI+  
353.8970  
1.070e+007

**FUNCTION2 HPCDPE**

23030309

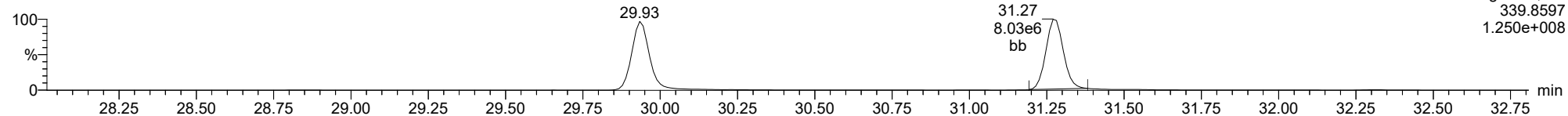


F2:Voltage SIR,EI+  
409.7974  
1.691e+005

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

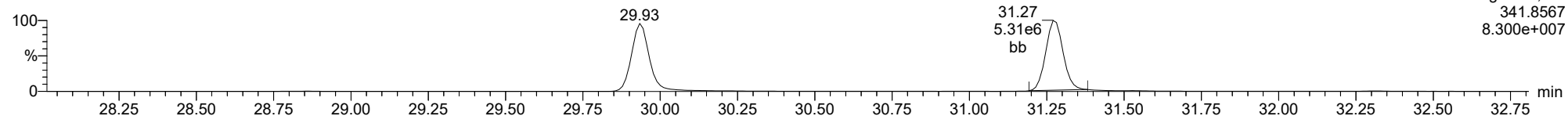
**23478-PeCDF**

23030309



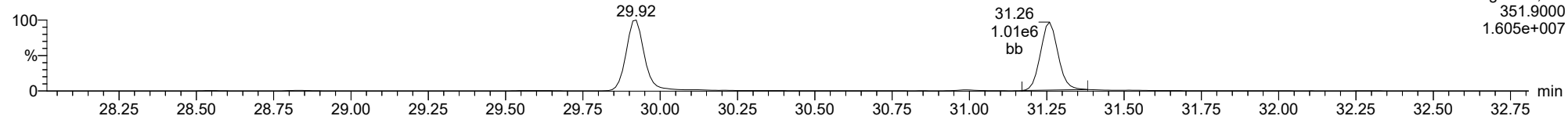
**23478-PeCDF**

23030309



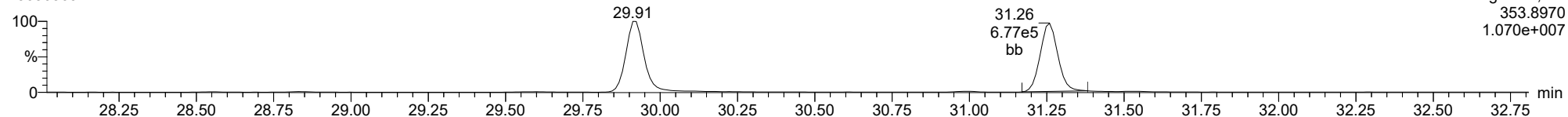
**13C-23478-PeCDF**

23030309



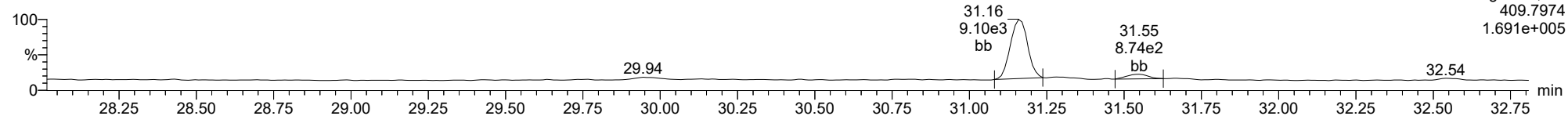
**13C-23478-PeCDF**

23030309



**FUNCTION2 HPCDPE**

23030309

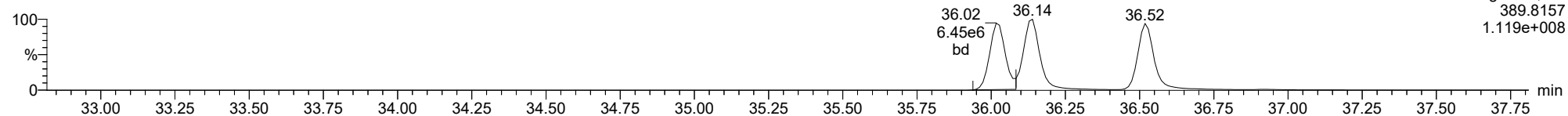




ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

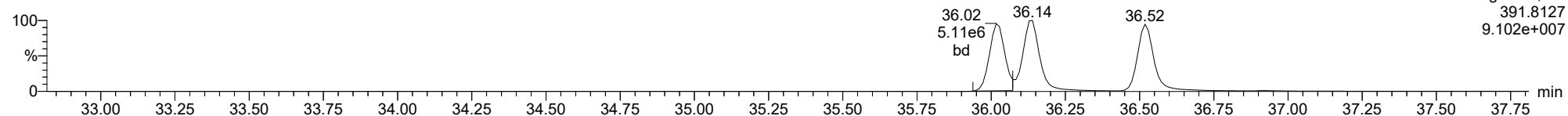
**123478-HxCDD**

23030309



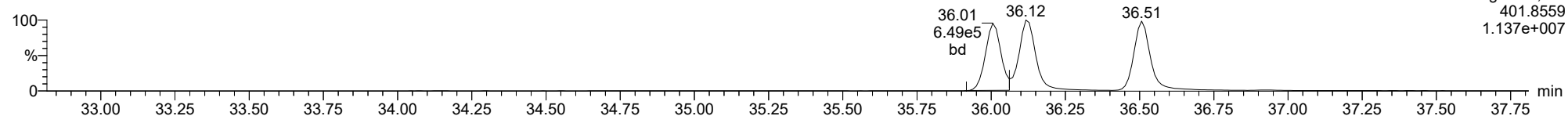
**123478-HxCDD**

23030309



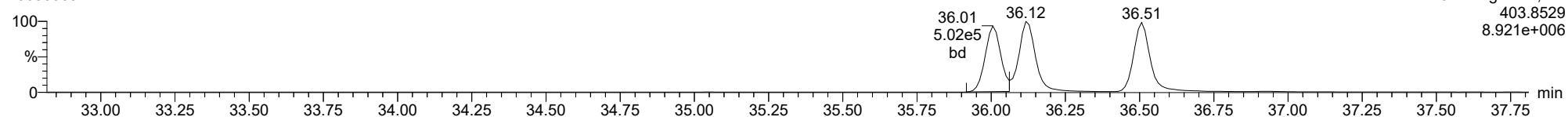
**13C-123478-HxCDD**

23030309



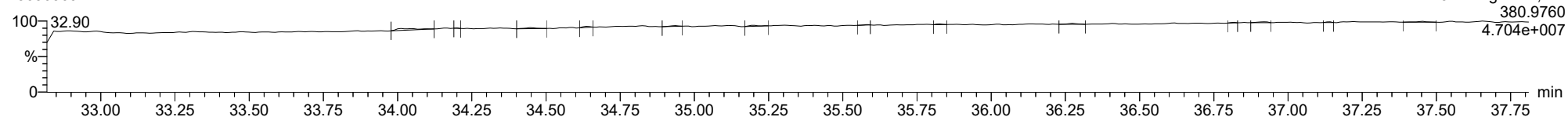
**13C-123478-HxCDD**

23030309



**FUNCTION3 PFK**

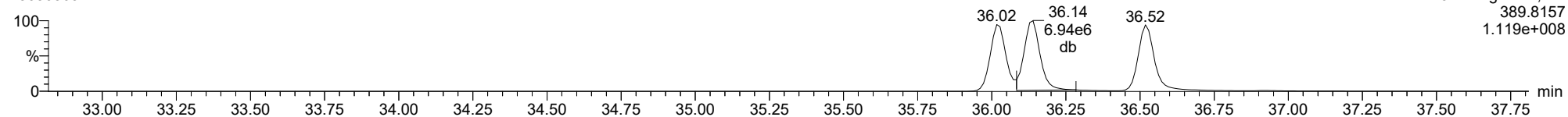
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

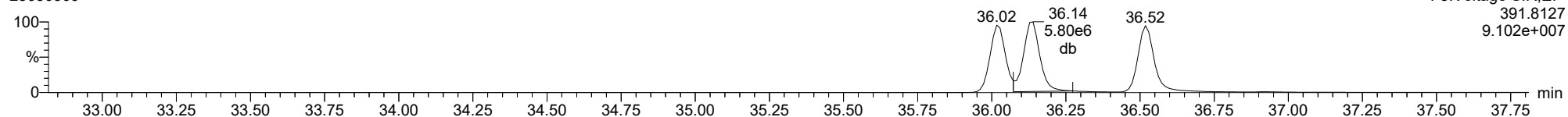
**123678-HxCDD**

23030309



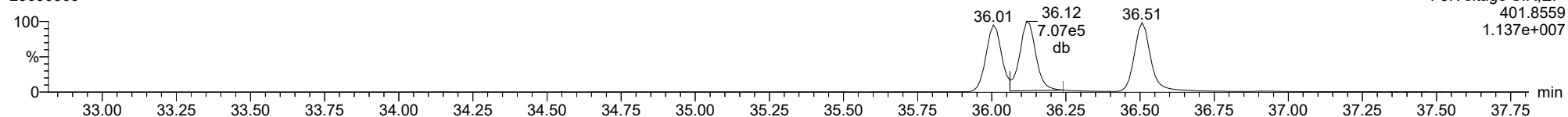
**123678-HxCDD**

23030309



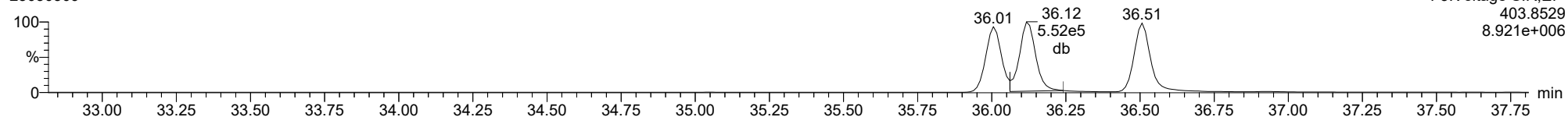
**13C-123678-HxCDD**

23030309



**13C-123678-HxCDD**

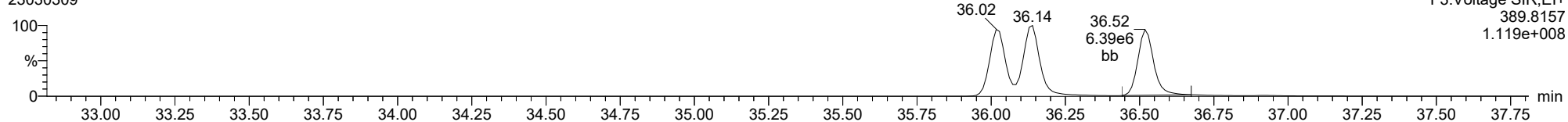
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

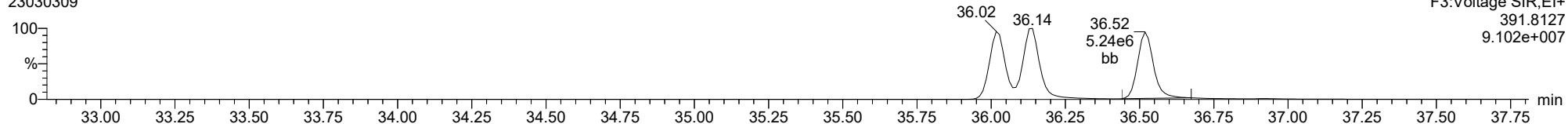
**123789-HxCDD**

23030309



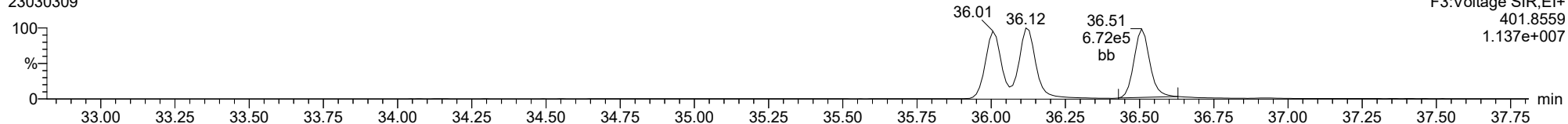
**123789-HxCDD**

23030309



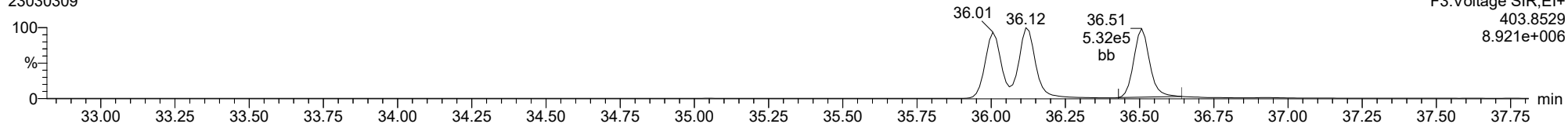
**13C-123789-HxCDD**

23030309



**13C-123789-HxCDD**

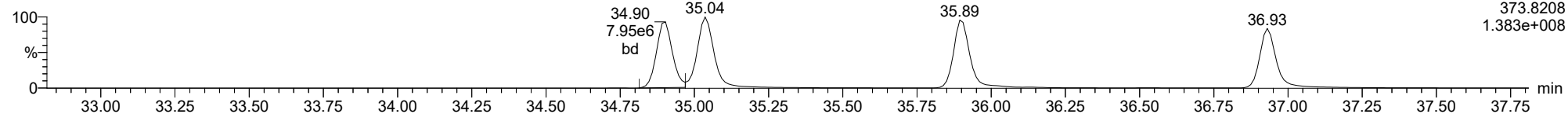
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

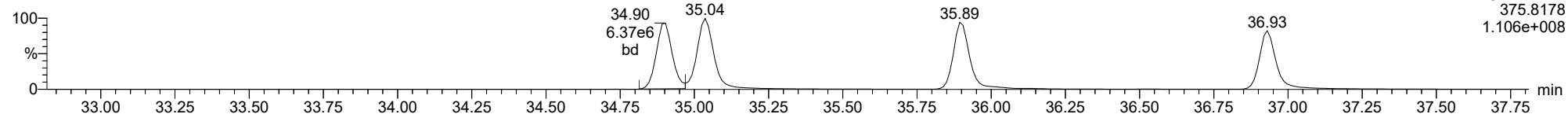
123478-HxCDF

23030309



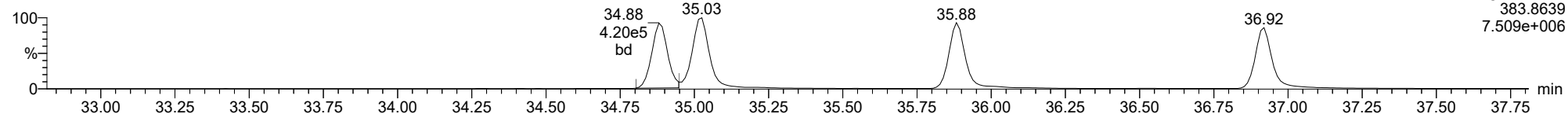
123478-HxCDF

23030309



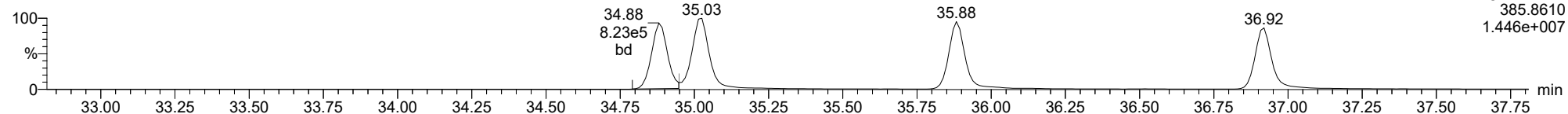
13C-123478-HxCDF

23030309



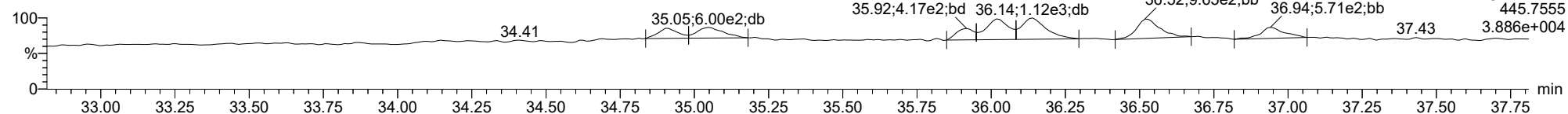
13C-123478-HxCDF

23030309



FUNCTION3 OCDPE

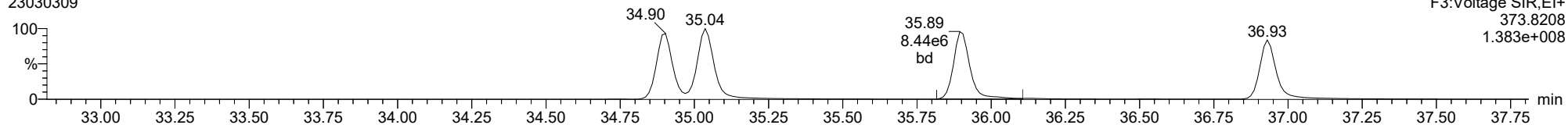
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

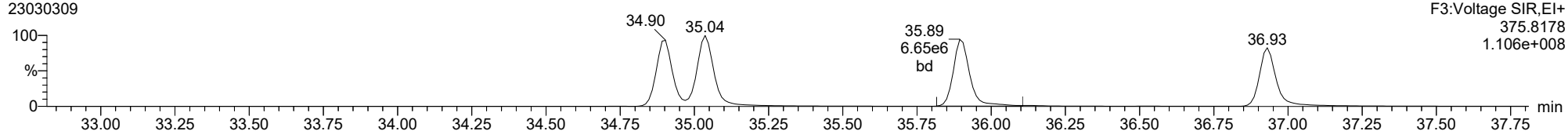
**234678-HxCDF**

23030309



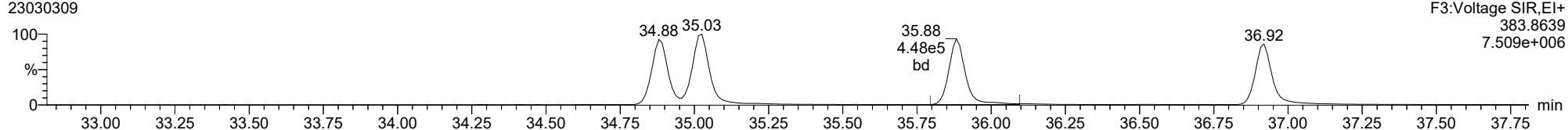
**234678-HxCDF**

23030309



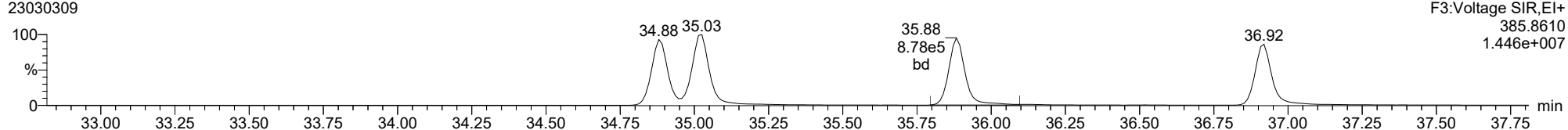
**13C-234678-HxCDF**

23030309



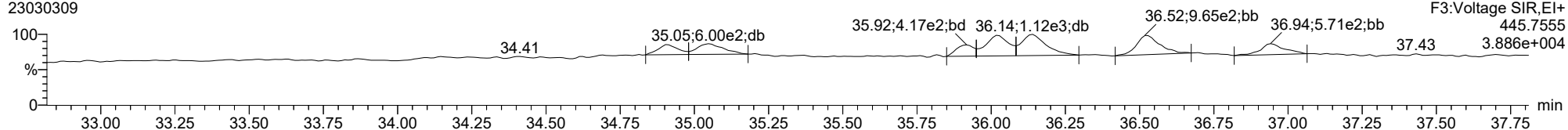
**13C-234678-HxCDF**

23030309



**FUNCTION3 OCDPE**

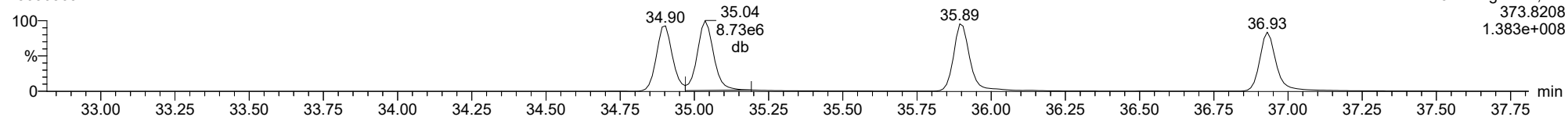
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

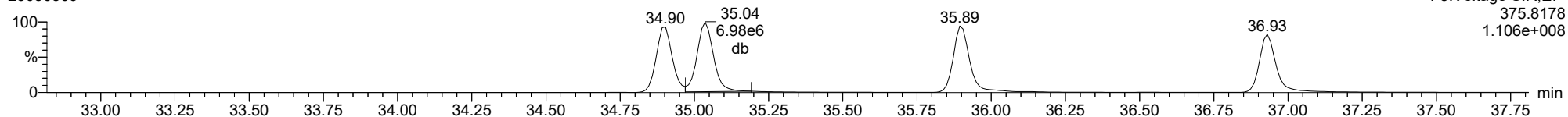
123678-HxCDF

23030309



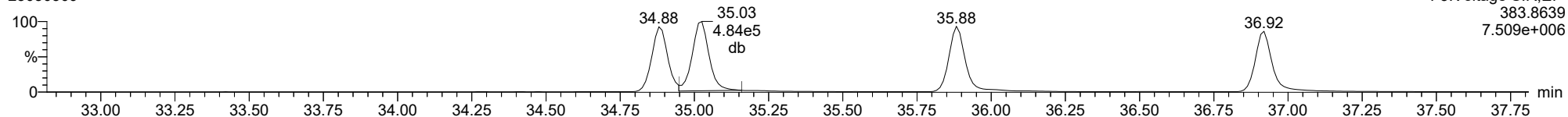
123678-HxCDF

23030309



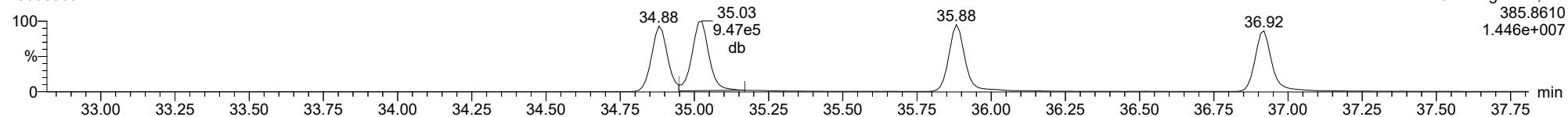
13C-123678-HxCDF

23030309



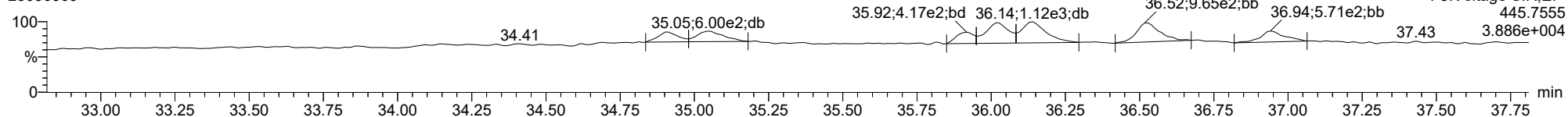
13C-123678-HxCDF

23030309



FUNCTION3 OCDPE

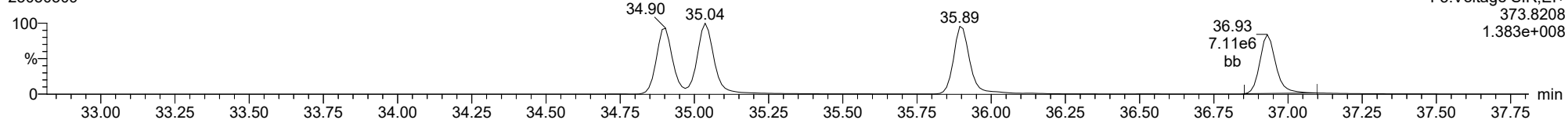
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

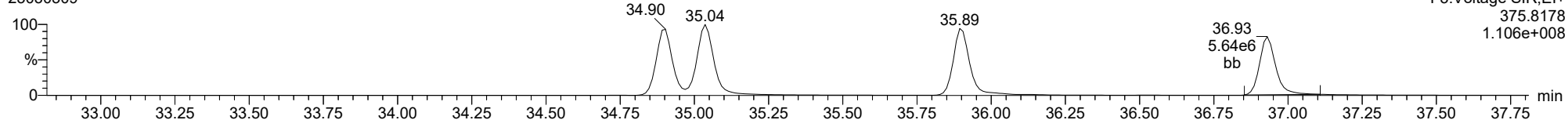
123789-HxCDF

23030309



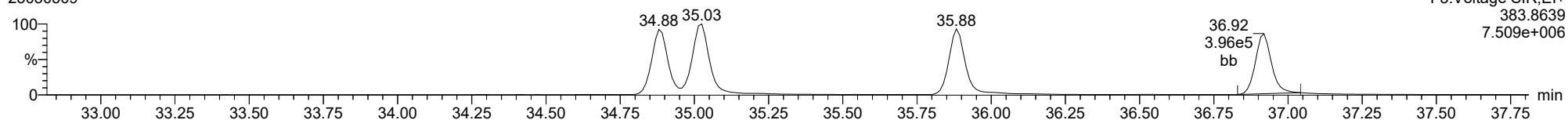
123789-HxCDF

23030309



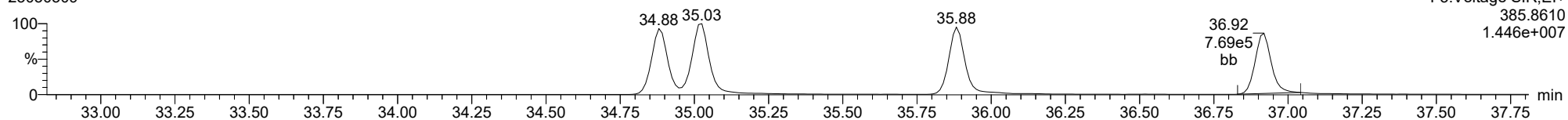
13C-123789-HxCDF

23030309



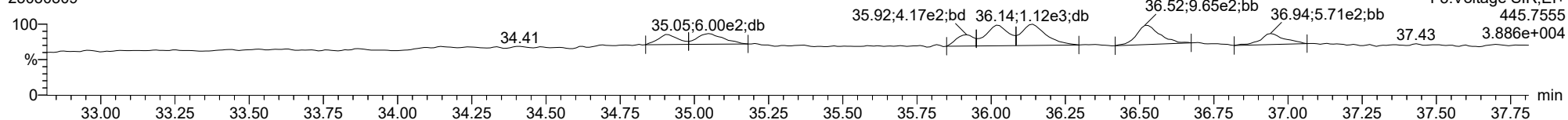
13C-123789-HxCDF

23030309



FUNCTION3 OCDPE

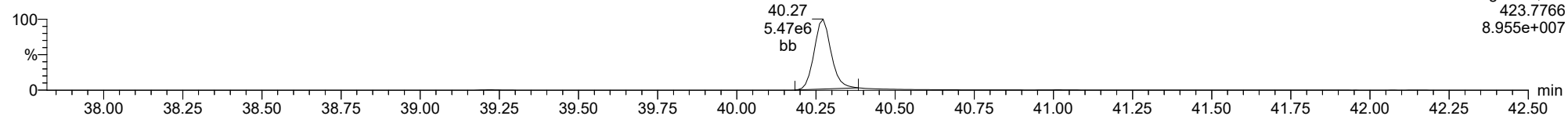
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

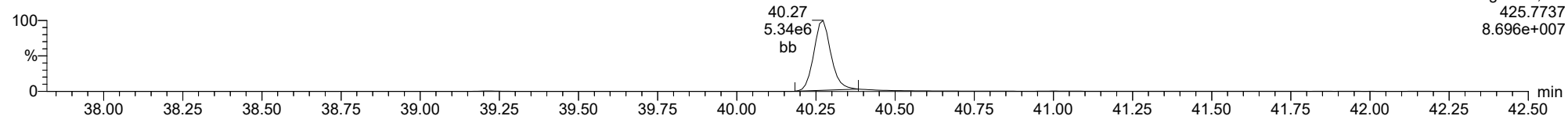
**1234678-HpCDD**

23030309



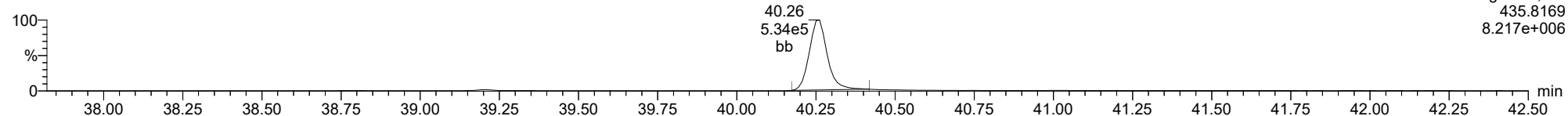
**1234678-HpCDD**

23030309



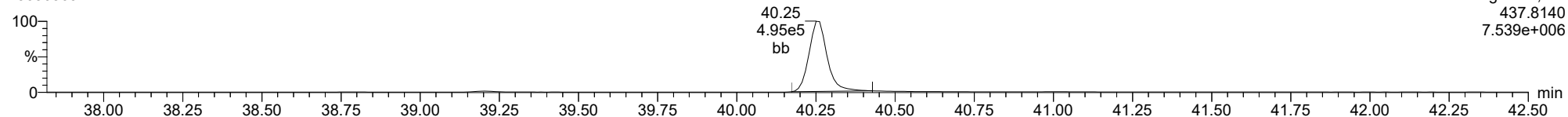
**13C-1234678-HpCDD**

23030309



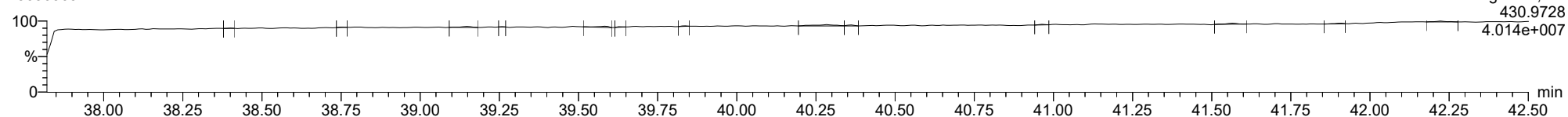
**13C-1234678-HpCDD**

23030309



**FUNCTION4 PFK**

23030309

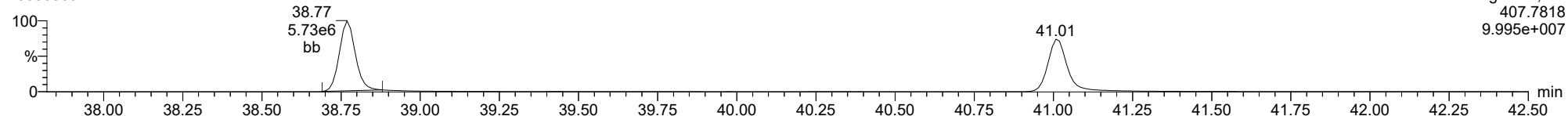




ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

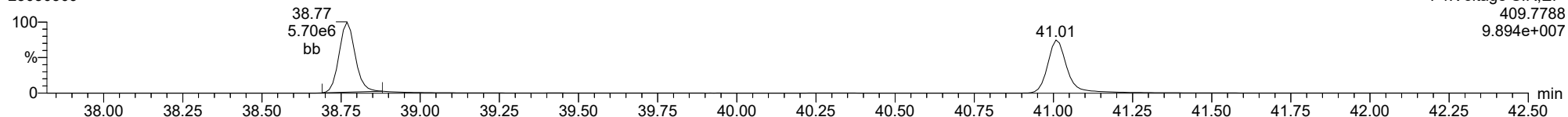
23030309



F4:Voltage SIR,EI+  
407.7818  
9.995e+007

1234678-HpCDF

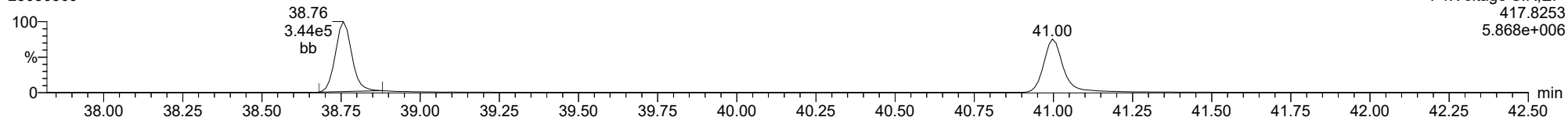
23030309



F4:Voltage SIR,EI+  
409.7788  
9.894e+007

13C-1234678-HpCDF

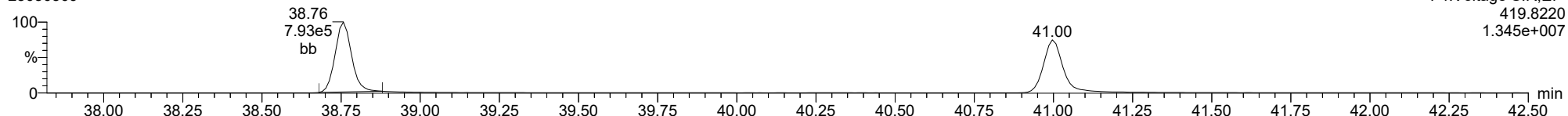
23030309



F4:Voltage SIR,EI+  
417.8253  
5.868e+006

13C-1234678-HpCDF

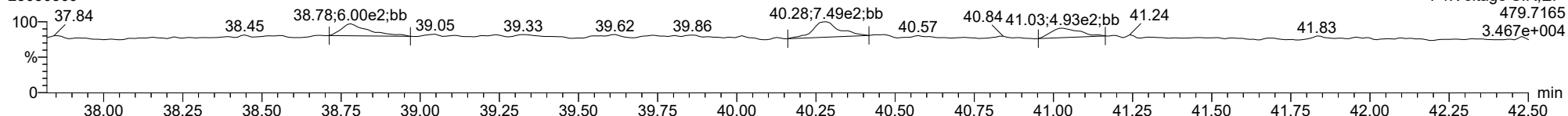
23030309



F4:Voltage SIR,EI+  
419.8220  
1.345e+007

FUNCTION4 NCDPE

23030309

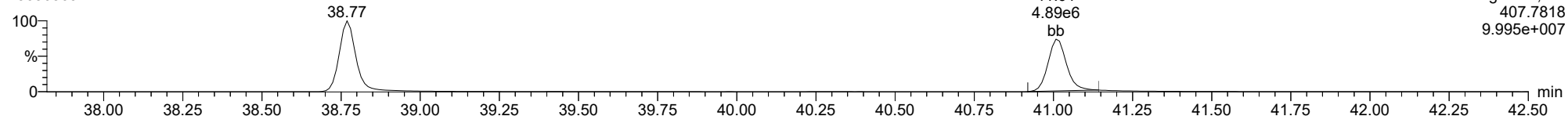


F4:Voltage SIR,EI+  
479.7165  
3.467e+004

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

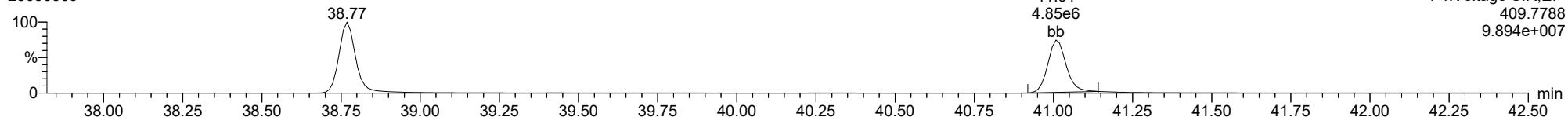
23030309



F4:Voltage SIR,EI+  
407.7818  
9.995e+007

**1234789-HpCDF**

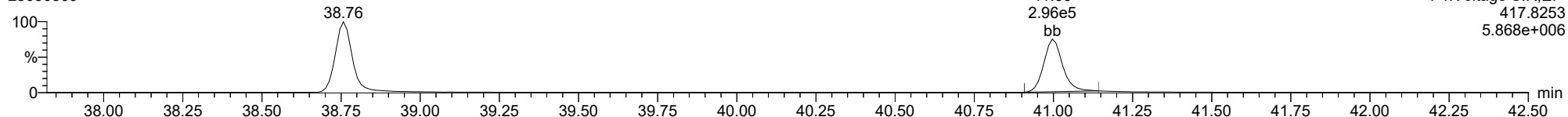
23030309



F4:Voltage SIR,EI+  
409.7788  
9.894e+007

**13C-1234789-HpCDF**

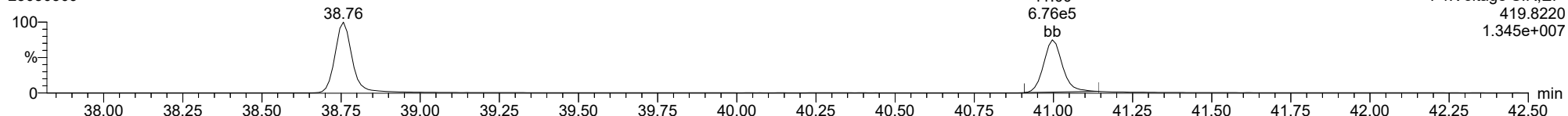
23030309



F4:Voltage SIR,EI+  
417.8253  
5.868e+006

**13C-1234789-HpCDF**

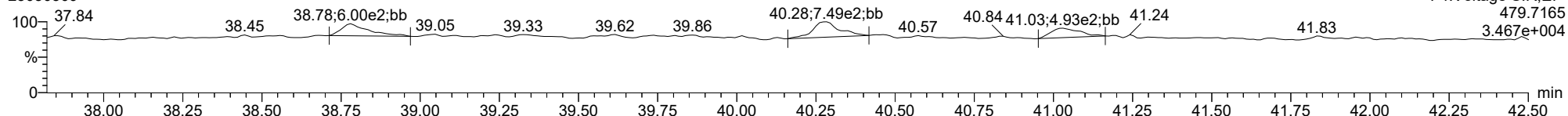
23030309



F4:Voltage SIR,EI+  
419.8220  
1.345e+007

**FUNCTION4 NCDPE**

23030309

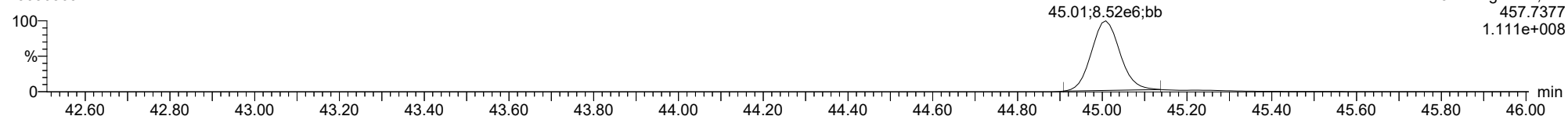


F4:Voltage SIR,EI+  
479.7165  
3.467e+004

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**OCDD**

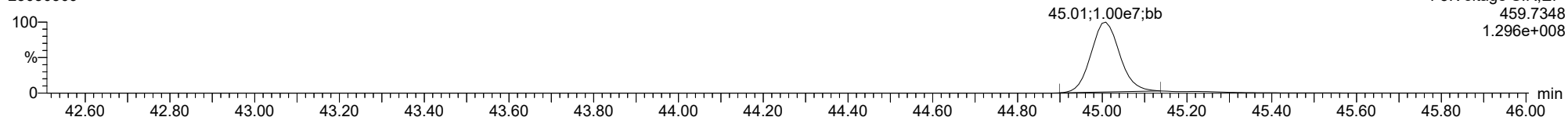
23030309



F5:Voltage SIR,EI+  
457.7377  
1.111e+008

**OCDD**

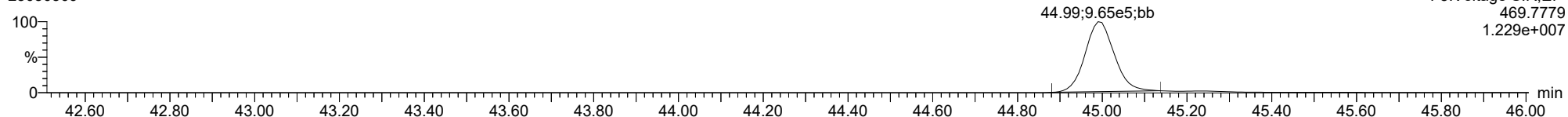
23030309



F5:Voltage SIR,EI+  
459.7348  
1.296e+008

**13C-OCDD**

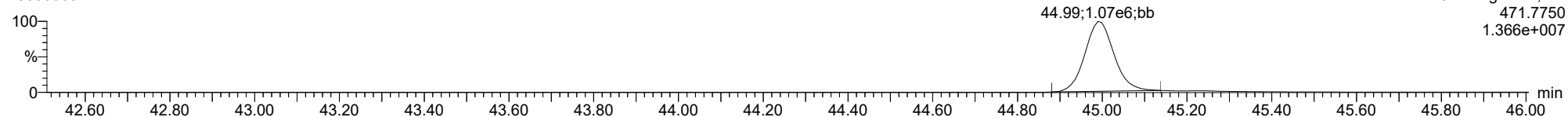
23030309



F5:Voltage SIR,EI+  
469.7779  
1.229e+007

**13C-OCDD**

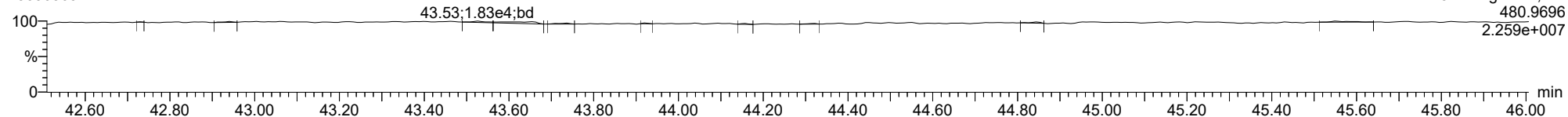
23030309



F5:Voltage SIR,EI+  
471.7750  
1.366e+007

**FUNCTION5 PFK**

23030309

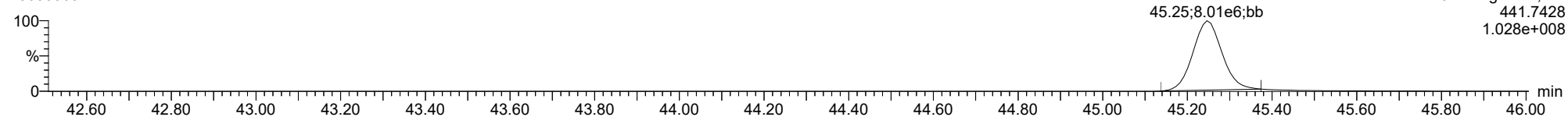


F5:Voltage SIR,EI+  
480.9696  
2.259e+007

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

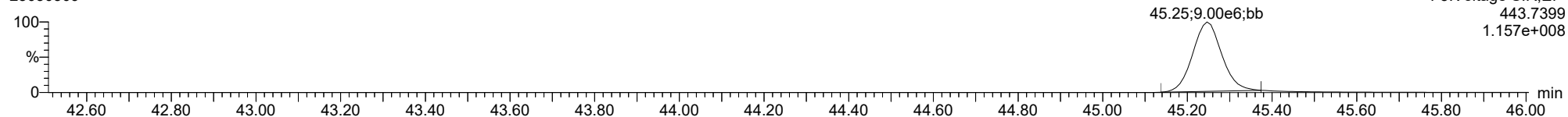
**OCDF**

23030309



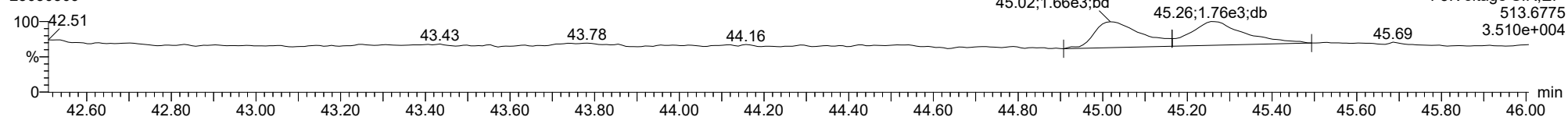
**OCDF**

23030309



**FUNCTION5 DCDPE**

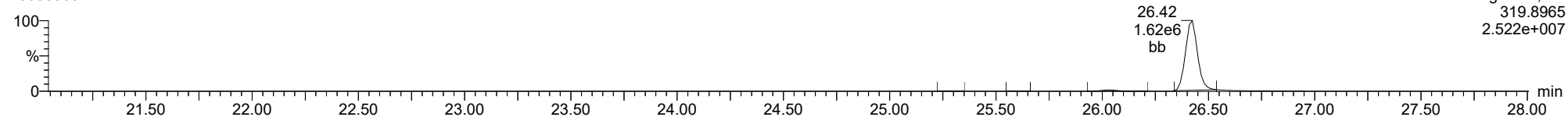
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**Total-tetradioxins**

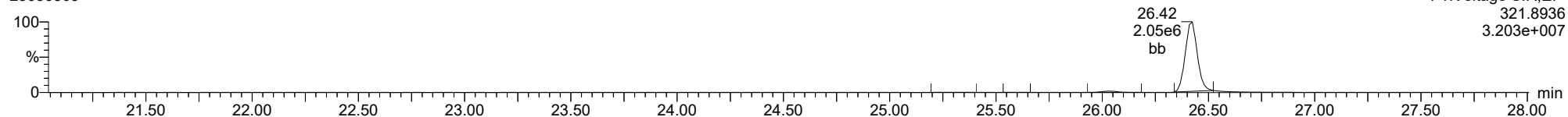
23030309



F1:Voltage SIR,EI+  
319.8965  
2.522e+007

**Total-tetradioxins**

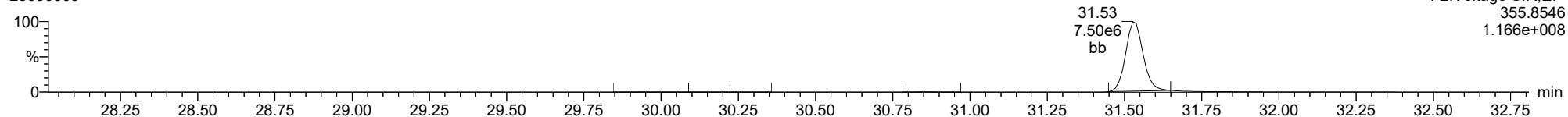
23030309



F1:Voltage SIR,EI+  
321.8936  
3.203e+007

**Total-pentadioxins**

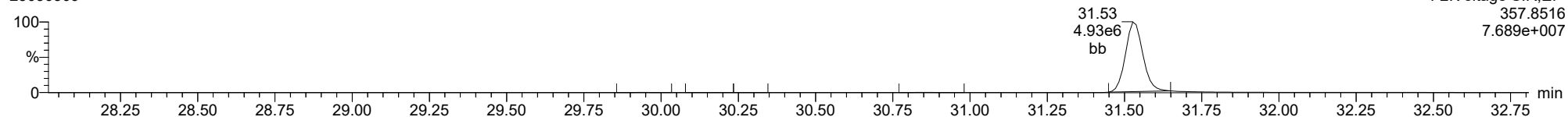
23030309



F2:Voltage SIR,EI+  
355.8546  
1.166e+008

**Total-pentadioxins**

23030309

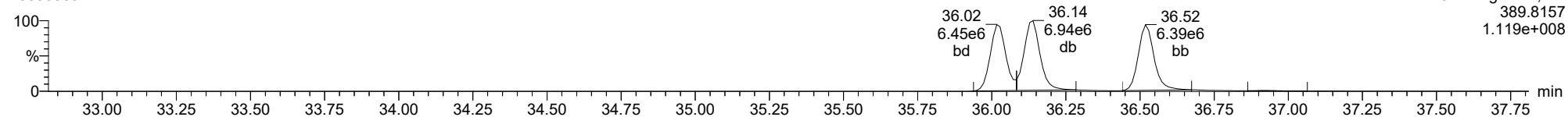


F2:Voltage SIR,EI+  
357.8516  
7.689e+007

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

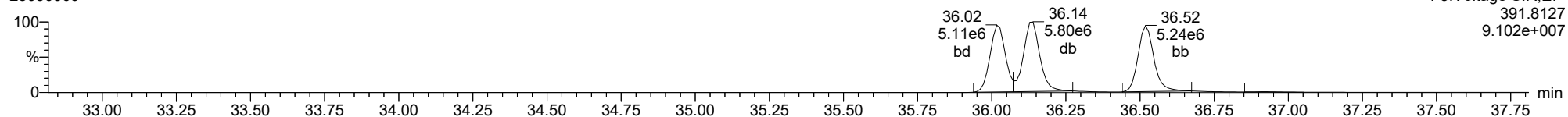
**Total-hexadioxins**

23030309



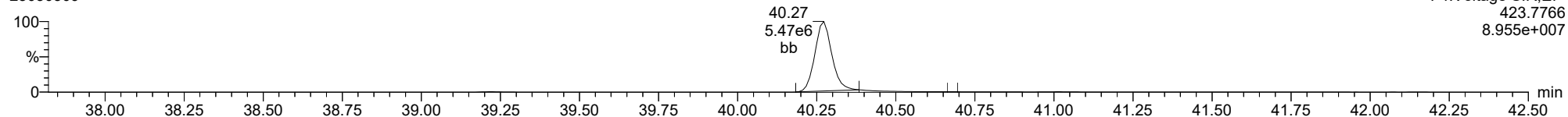
**Total-hexadioxins**

23030309



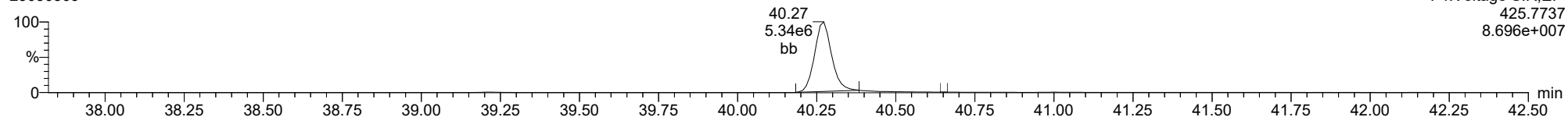
**Total-heptadioxins**

23030309



**Total-heptadioxins**

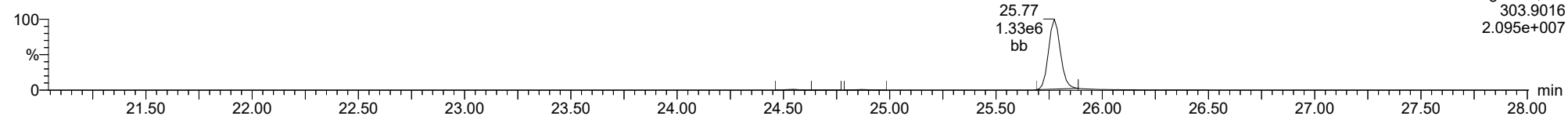
23030309



ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

**Total-tetrafurans**

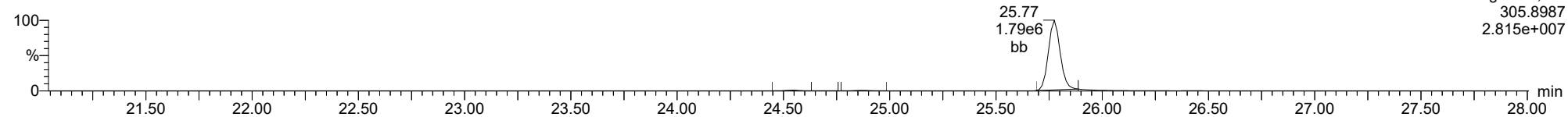
23030309



F1:Voltage SIR,EI+  
303.9016  
2.095e+007

**Total-tetrafurans**

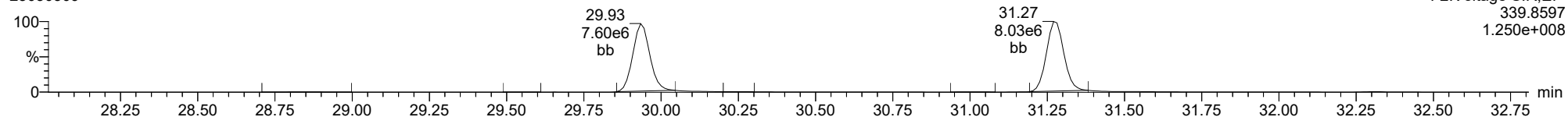
23030309



F1:Voltage SIR,EI+  
305.8987  
2.815e+007

**Total-pentafurans**

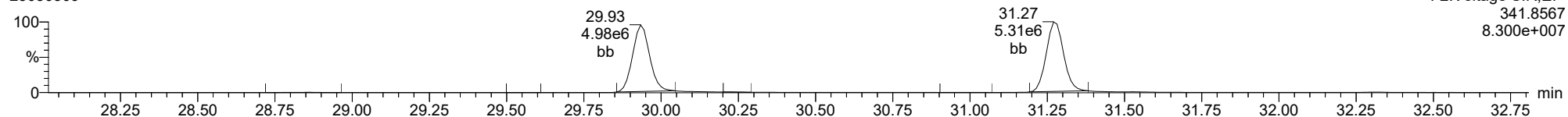
23030309



F2:Voltage SIR,EI+  
339.8597  
1.250e+008

**Total-pentafurans**

23030309

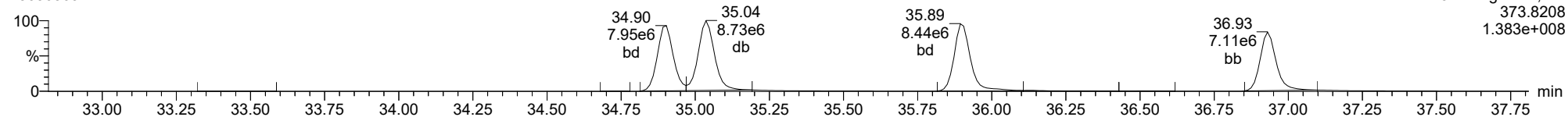


F2:Voltage SIR,EI+  
341.8567  
8.300e+007

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

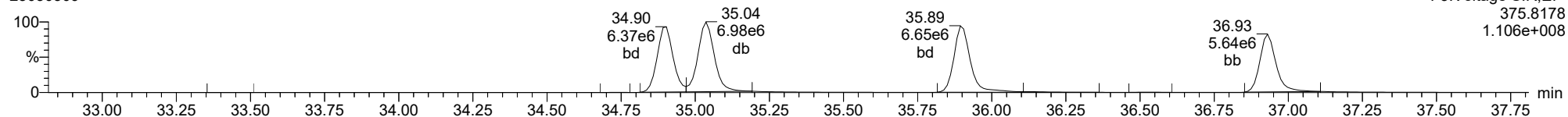
**Total-hexafurans**

23030309



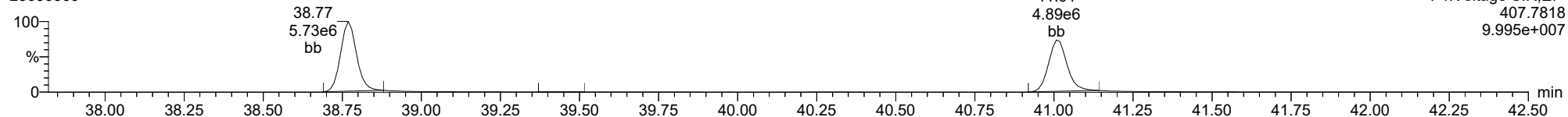
**Total-hexafurans**

23030309



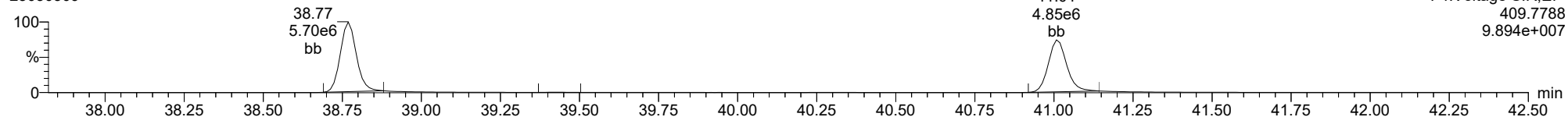
**Total-heptafurans**

23030309



**Total-heptafurans**

23030309





Dataset: T:\Autospec\Processed Data Batch\230303IHCIV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	5.338e4	7.452e4	0.702	0.716	0.770	1163	2029	8.36e5	1.13e6	718.7	556.3	NO	bb	bb	9.838
12378-PeCDF	29.934	1.000	2.214e5	1.526e5	0.679	1.451	1.550	3022	2812	3.24e6	2.15e6	1073.8	764.7	NO	bb	bd	51.391
23478-PeCDF	31.271	1.000	2.350e5	1.508e5	0.786	1.559	1.550	3022	2812	3.42e6	2.23e6	1131.6	792.3	NO	bb	bb	48.980
123478-HxCDF	34.903	1.001	2.903e5	2.325e5	1.166	1.248	1.240	3142	2543	4.30e6	3.42e6	1370.1	1344.7	NO	bd	bd	48.245
234678-HxCDF	35.905	1.001	2.873e5	2.291e5	1.140	1.254	1.240	3142	2543	4.27e6	3.38e6	1358.7	1330.7	NO	bb	bb	50.224
123678-HxCDF	35.036	1.001	3.271e5	2.812e5	1.091	1.163	1.240	3142	2543	4.70e6	3.76e6	1497.0	1479.3	NO	db	db	47.992
123789-HxCDF	36.930	1.001	2.403e5	1.952e5	1.137	1.231	1.240	3142	2543	3.49e6	2.77e6	1110.7	1088.1	NO	bb	bb	49.077
1234678-HpCDF	38.769	1.000	2.051e5	2.017e5	1.003	1.017	1.050	2774	2508	3.29e6	3.29e6	1185.4	1309.8	NO	bb	bb	51.838
1234789-HpCDF	41.008	1.000	1.584e5	1.578e5	0.953	1.004	1.050	2774	2508	2.19e6	2.22e6	790.9	884.0	NO	bb	bb	48.461
OCDF	45.237	1.006	2.094e5	2.177e5	0.778	0.962	0.890	1876	1660	2.24e6	2.46e6	1194.3	1483.7	NO	bd	bb	103.506
2378-TCDD	26.424	1.001	6.583e4	8.225e4	1.149	0.800	0.770	1514	1206	9.92e5	1.24e6	654.9	1028.2	NO	bb	bb	9.815
12378-PeCDD	31.538	1.001	2.257e5	1.459e5	1.022	1.547	1.550	2000	2144	3.28e6	2.13e6	1638.2	994.7	NO	bb	bb	48.547
123478-HxCDD	36.016	1.000	2.316e5	1.815e5	0.996	1.276	1.240	2983	1710	3.62e6	3.01e6	1214.5	1762.3	NO	bd	bd	50.799
123678-HxCDD	36.139	1.001	2.694e5	2.159e5	1.001	1.248	1.240	2983	1710	3.76e6	3.05e6	1260.5	1785.9	NO	db	db	50.174
123789-HxCDD	36.518	1.011	2.330e5	1.844e5	0.907	1.263	1.240	2983	1710	3.29e6	2.69e6	1104.0	1571.7	NO	bd	bb	51.608
1234678-HpCDD	40.272	1.001	1.962e5	1.803e5	1.039	1.088	1.050	2922	2339	2.72e6	2.60e6	932.5	1113.0	NO	bd	bb	49.199
OCDD	44.999	1.000	2.234e5	2.618e5	0.920	0.853	0.890	1774	1393	2.65e6	3.06e6	1496.5	2199.2	NO	bb	bb	99.422
13C-2378-TCDF	25.760	1.007	7.988e5	1.054e6	1.620	0.758	0.770	2799	1492	1.21e7	1.60e7	4320.8	10737.9	NO	bb	bb	96.925
13C-12378-PeCDF	29.923	1.169	6.425e5	4.290e5	1.240	1.498	1.550	3398	4585	8.78e6	5.86e6	2583.4	1278.4	NO	bd	bd	73.193
13C-23478-PeCDF	31.259	1.222	6.035e5	3.982e5	1.118	1.515	1.550	3398	4585	8.73e6	5.79e6	2568.3	1261.6	NO	bb	bb	75.943
13C-123478-HxCDF	34.880	0.955	3.186e5	6.107e5	1.168	0.522	0.510	2913	2215	4.74e6	9.25e6	1627.4	4175.4	NO	bd	bd	92.972
13C-123678-HxCDF	35.014	0.959	3.885e5	7.735e5	1.386	0.502	0.510	2913	2215	5.29e6	1.03e7	1816.0	4636.7	NO	dd	db	97.958
13C-234678-HxCDF	35.883	0.983	3.009e5	6.013e5	1.129	0.500	0.510	2913	2215	4.56e6	8.94e6	1567.0	4037.6	NO	bb	bb	93.371
13C-123789-HxCDF	36.908	1.011	2.634e5	5.171e5	0.932	0.509	0.510	2913	2215	3.83e6	7.41e6	1313.2	3346.2	NO	bb	bb	97.906
13C-1234678-HpCDF	38.757	1.062	2.395e5	5.428e5	0.895	0.441	0.440	2666	4327	3.79e6	8.70e6	1422.6	2009.5	NO	bb	bb	102.148
13C-1234789-HpCDF	40.997	1.123	1.971e5	4.875e5	0.770	0.404	0.440	2666	4327	2.64e6	6.15e6	990.0	1422.1	NO	bb	bb	103.953
13C-1234-TCDD	25.591	0.000	5.239e5	6.562e5	1.000	0.798	0.770	2541	1448	8.13e6	1.01e7	3200.8	6994.1	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	5.859e5	7.277e5	1.152	0.805	0.770	2541	1448	8.48e6	1.06e7	3338.5	7327.1	NO	bb	bb	96.583
13C-12378-PeCDD	31.515	1.232	4.640e5	2.850e5	0.829	1.628	1.550	1690	813	6.82e6	4.16e6	4037.7	5122.1	NO	bb	bb	76.570
13C-123478-HxCDD	36.005	0.986	4.566e5	3.601e5	0.995	1.268	1.240	2230	1571	7.33e6	5.72e6	3288.3	3642.7	NO	bd	bd	95.938
13C-123678-HxCDD	36.117	0.989	5.277e5	4.388e5	1.157	1.203	1.240	2230	1571	7.53e6	5.98e6	3378.3	3806.0	NO	db	db	97.660
13C-1234678-HpCDD	40.250	1.102	3.788e5	3.578e5	0.840	1.059	1.050	1327	2781	5.06e6	4.73e6	3813.0	1700.4	NO	bd	bb	102.476
13C-OCDD	44.981	1.232	5.015e5	5.594e5	0.767	0.896	0.890	2228	1562	5.65e6	6.37e6	2536.4	4080.5	NO	bb	bb	161.563
13C-123789-HxCDD	36.507	0.000	4.814e5	3.742e5	1.000	1.287	1.240	2230	1571	7.02e6	5.48e6	3149.1	3490.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	1.324e5		1.288			2249		1.92e6		853.0			bb		8.714

Dataset: T:\Autospec\Processed Data Batch\230303\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

**ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.271	0.865	6.666e4	8.755e4	0.802	0.761	0.770	1163	2029	1.09e6	1.45e6	933.7	713.4	NO	bb	bb	10.382
1289-TCDF	27.272	1.059	5.306e4	7.400e4	0.678	0.717	0.770	1163	2029	8.00e5	1.11e6	688.3	549.0	NO	bb	db	10.112
13468-PECDF	27.130	0.907	5.428e5	3.536e5	1.246	1.535	1.550	921	1306	8.56e6	5.56e6	9287.8	4254.6	NO	bb	bb	67.124
12389-PECDF	32.307	1.080	2.363e5	1.551e5	0.496	1.524	1.550	3022	2812	3.29e6	2.19e6	1088.1	777.6	NO	bb	bb	73.589
123468-HXCDF	33.231	0.953	3.102e5	2.472e5	1.169	1.255	1.240	3142	2543	4.60e6	3.67e6	1465.3	1443.2	NO	bb	bb	51.304
1368-TCDD	23.557	0.892	6.641e4	8.365e4	1.015	0.794	0.770	1514	1206	1.07e6	1.32e6	704.3	1092.4	NO	bb	bb	11.251
1289-TCDD	27.017	1.023	6.055e4	8.062e4	0.909	0.751	0.770	1514	1206	8.59e5	1.12e6	567.6	932.6	NO	bd	bd	11.826
12479-PECDD	28.819	0.914	4.776e5	3.067e5	2.301	1.557	1.550	2000	2144	4.46e6	2.89e6	2227.8	1348.6	NO	bb	bb	45.504
12389-PECDD	31.928	1.013	2.675e5	1.746e5	1.184	1.532	1.550	2000	2144	3.96e6	2.51e6	1980.6	1171.6	NO	bb	bb	49.870
124679-HXCDD	34.011	0.945	2.545e5	2.054e5	1.115	1.239	1.240	2983	1710	3.72e6	3.05e6	1245.7	1780.9	NO	bb	bb	50.484
1234679-HPCDD	39.225	0.975	2.082e5	2.022e5	1.137	1.029	1.050	2922	2339	3.21e6	3.09e6	1099.8	1322.5	NO	bb	bb	49.010
Total-tetrafurans			1.731e5		0.727			1163		2.72e6							30.332
Total-penta1			5.428e5					921		8.56e6							67.124
Total-penta-furans			7.375e5		0.654			3022		1.06e7							184.995
Total-hexa-furans			1.455e6		1.141			3142		2.14e7							246.841
Total-hepta-furans			3.635e5		0.978			2774		5.48e6							100.299
Total-Furans			3.482e6		0.922			1163		5.10e7							733.097
Total-tetradiioxins			3.292e5		1.024			1514		4.53e6							56.345
Total-pentadiioxins			9.708e5		1.502			2000		1.17e7							143.922
Total-hexadiioxins			9.885e5		1.005			2983		1.44e7							203.065
Total-heptadiioxins			4.044e5		1.088			2922		5.94e6							98.208
Total-Dioxins			2.916e6		1.130			1514		3.92e7							600.962
Total-TEQ			6.398e6					1514		9.02e7							1334.059
FUNCTION1 PFK			0.000e0					539943		0.00e0							
FUNCTION2 PFK			2.253e6					228820		1.84e6							0.000
FUNCTION3 PFK			3.977e4					386595		8.75e5							0.000
FUNCTION4 PFK			7.296e4					280107		2.70e6							
FUNCTION5 PFK			1.323e3					209307		1.46e5							
FUNCTION1 HXCD...			6.633e2					708		9.34e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			5.152e2					1165		9.44e3							0.000
FUNCTION3 OCDPE			5.246e2					459		6.83e3							0.000
FUNCTION4 NCDPE			4.889e2					641		6.04e3							0.000
FUNCTION5 DCDPE			0.000e0					644		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\IHICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

**Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50**

**Calibration: T:\Autospec\Curves\230303\ICIH.cdb 06 Mar 2023 10:57:27**

**ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk**

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
2	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
3	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
4	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
2	123468-HxCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
3	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
4	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
5	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
2	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
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**ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382
4	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
5	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
6	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
7	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035
8	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
9	123468-HxCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
10	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
11	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
12	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992
13	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
14	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461
15	OCDF	45.24	2.094e5	2.177e5	0.778	0.96	0.89	1194.3	YES	NO	bd	bb	103.506
16	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradoxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
2	Total-tetradoxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
3	Total-tetradoxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
4	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
5	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
6	Total-tetradoxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
7	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
8	Total-tetradoxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
2	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
3	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\2303031\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

**ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk**

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HxCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
2	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
3	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
4	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
2	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradoxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
2	Total-tetradoxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
3	Total-tetradoxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
4	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
5	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
6	Total-tetradoxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
7	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
8	Total-tetradoxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347
9	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
10	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
11	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504
12	124679-HxCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
13	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
14	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
15	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799
16	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
17	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199
18	OCDD	45.00	2.234e5	2.618e5	0.920	0.85	0.89	1496.5	YES	NO	bb	bb	99.422

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382
4	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
5	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
6	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
7	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035
8	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
9	123468-HxCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
10	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
11	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
12	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992
13	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
14	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461
15	OCDF	45.24	2.094e5	2.177e5	0.778	0.96	0.89	1194.3	YES	NO	bd	bb	103.506
16	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124
17	Total-tetradioxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
18	Total-tetradioxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
19	Total-tetradioxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
20	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
21	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
22	Total-tetradioxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
23	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
24	Total-tetradioxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347
25	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
26	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
27	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504
28	124679-HXCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
29	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
30	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
31	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799
32	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
33	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199
34	OCDD	45.00	2.234e5	2.618e5	0.920	0.85	0.89	1496.5	YES	NO	bb	bb	99.422

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.14	2.253e6					8.0	YES		bb		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.08	3.977e4					2.3	NO		bb		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.32	4.162e3					0.8	NO		bb		
2	FUNCTION4 PFK	40.68	1.340e4					1.2	NO		bb		
3	FUNCTION4 PFK	40.50	1.024e4					1.3	NO		bb		
4	FUNCTION4 PFK	40.07	1.056e4					1.2	NO		bb		
5	FUNCTION4 PFK	39.50	1.007e4					1.4	NO		bb		
6	FUNCTION4 PFK	42.14	1.085e4					1.0	NO		bb		
7	FUNCTION4 PFK	42.10	6.400e3					1.1	NO		bb		
8	FUNCTION4 PFK	41.87	1.885e3					0.6	NO		bb		
9	FUNCTION4 PFK	41.61	5.389e3					0.9	NO		bb		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.23	1.323e3					0.7	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\2303031\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

**ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk**

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.55	1.589e2					2.0	NO		db		0.000
2	FUNCTION1 HXCD...	26.42	1.755e2					3.2	YES		bd		0.000
3	FUNCTION1 HXCD...	25.59	9.854e1					1.9	NO		bb		0.000
4	FUNCTION1 HXCD...	23.87	7.096e1					1.9	NO		bb		0.000
5	FUNCTION1 HXCD...	23.56	8.003e1					2.4	NO		bb		0.000
6	FUNCTION1 HXCD...	22.40	7.940e1					1.8	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.33	1.101e2					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	28.89	7.875e1					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.17	3.263e2					4.7	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	1.586e2					5.0	YES		bb		0.000
2	FUNCTION3 OCDPE	36.13	1.909e2					4.9	YES		db		0.000
3	FUNCTION3 OCDPE	35.99	1.751e2					5.1	YES		bd		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.06	1.247e2					2.2	NO		db		0.000
2	FUNCTION4 NCDPE	40.94	7.187e1					1.7	NO		bd		0.000
3	FUNCTION4 NCDPE	40.37	7.003e1					1.7	NO		db		0.000
4	FUNCTION4 NCDPE	40.26	2.223e2					3.8	YES		bd		0.000

**ETHERS6**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

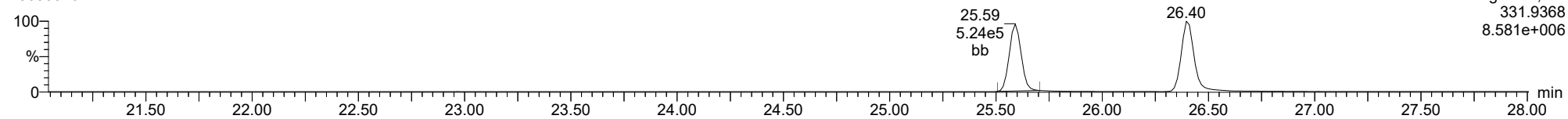


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**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

**ID:** ICVCW, **Name:** 23030310, **Date:** 03-Mar-2023, **Time:** 16:36:24, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234-TCDD**

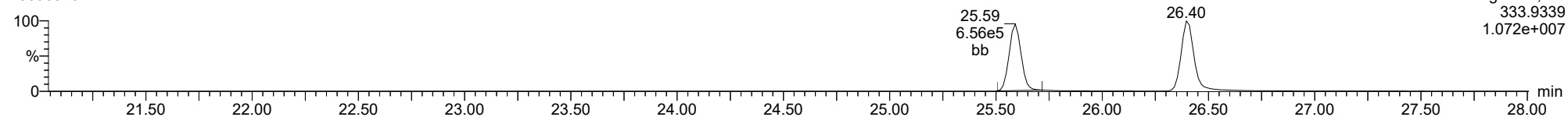
23030310



F1:Voltage SIR,El+  
331.9368  
8.581e+006

**13C-1234-TCDD**

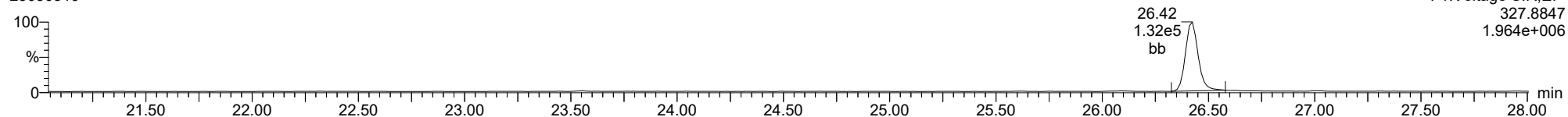
23030310



F1:Voltage SIR,El+  
333.9339  
1.072e+007

**37CL-2378-TCDD**

23030310

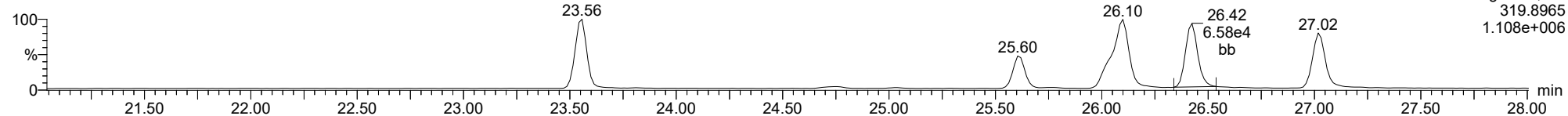


F1:Voltage SIR,El+  
327.8847  
1.964e+006

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

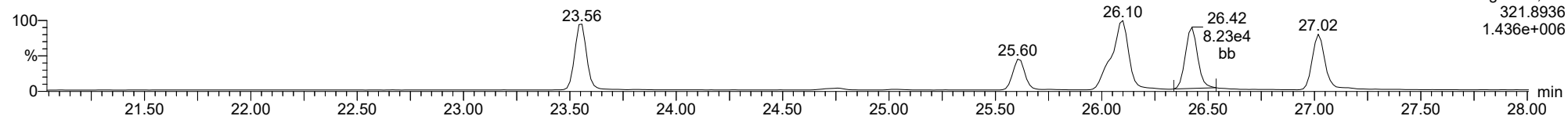
**2378-TCDD**

23030310



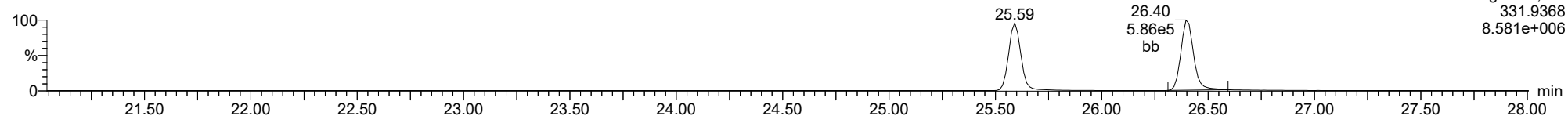
**2378-TCDD**

23030310



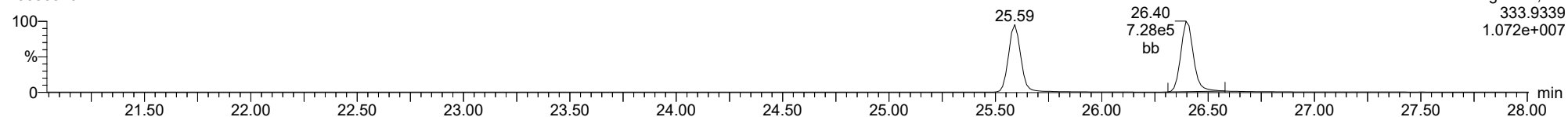
**13C-2378-TCDD**

23030310



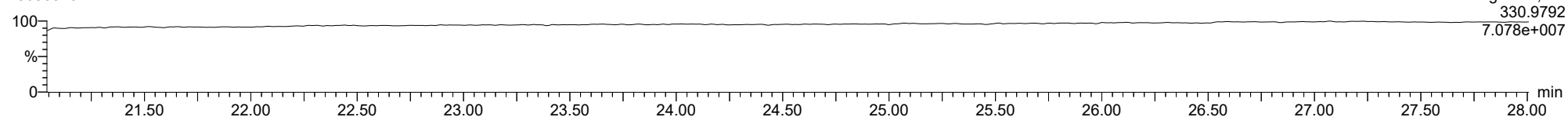
**13C-2378-TCDD**

23030310



**FUNCTION1 PFK**

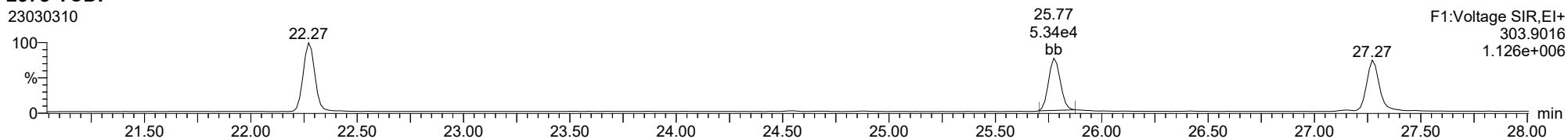
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

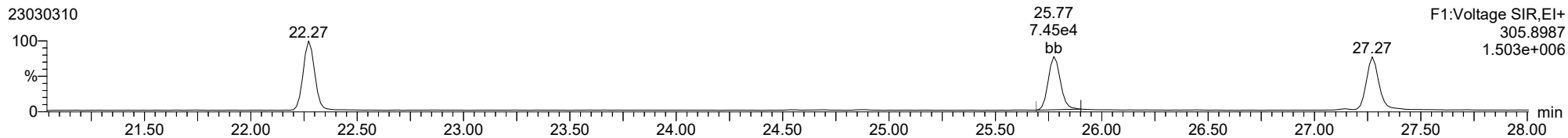
**2378-TCDF**

23030310



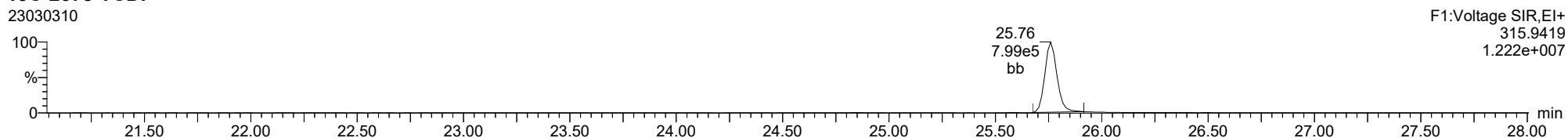
**2378-TCDF**

23030310



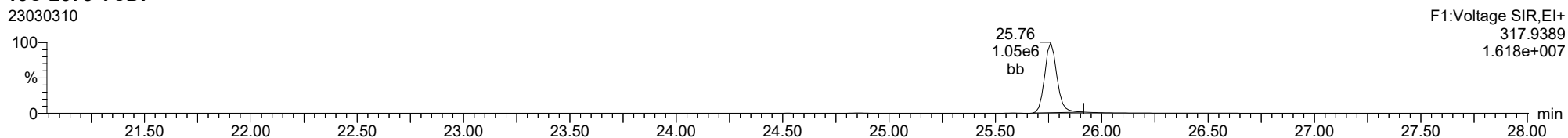
**13C-2378-TCDF**

23030310



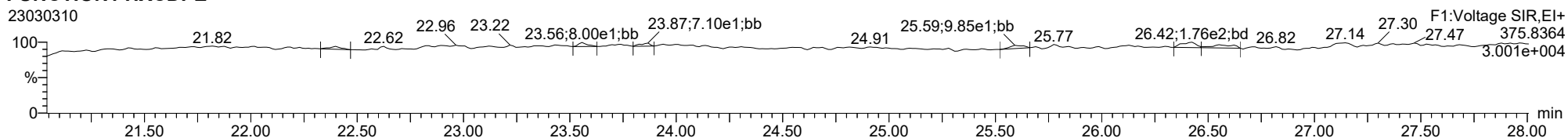
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23030310



**FUNCTION1 HXCDPE**

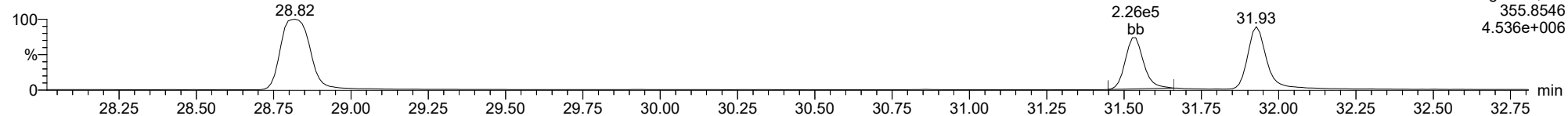
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

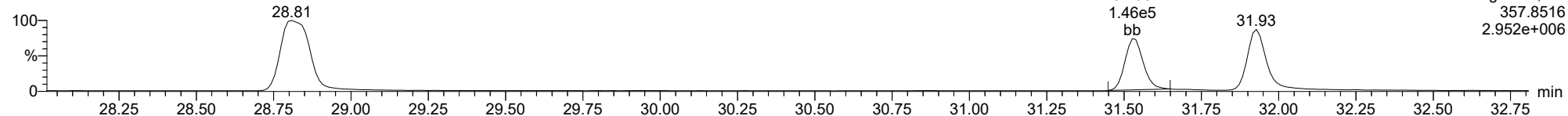
23030310



F2:Voltage SIR,EI+  
355.8516  
4.536e+006

**12378-PeCDD**

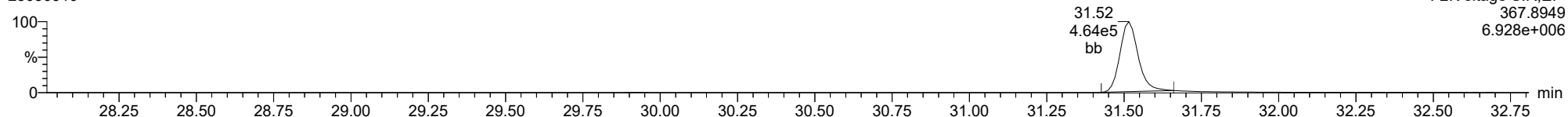
23030310



F2:Voltage SIR,EI+  
357.8516  
2.952e+006

**13C-12378-PeCDD**

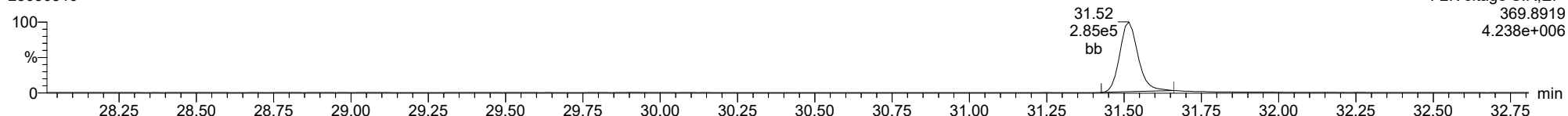
23030310



F2:Voltage SIR,EI+  
367.8949  
6.928e+006

**13C-12378-PeCDD**

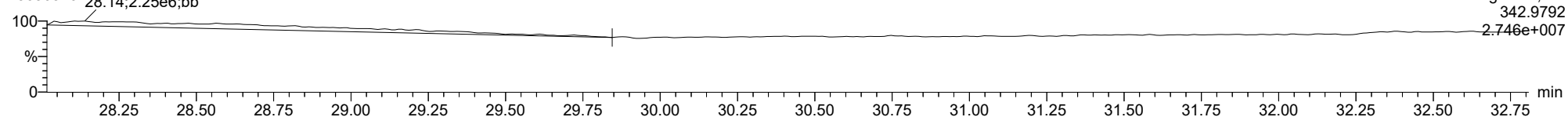
23030310



F2:Voltage SIR,EI+  
369.8919  
4.238e+006

**FUNCTION2 PFK**

23030310

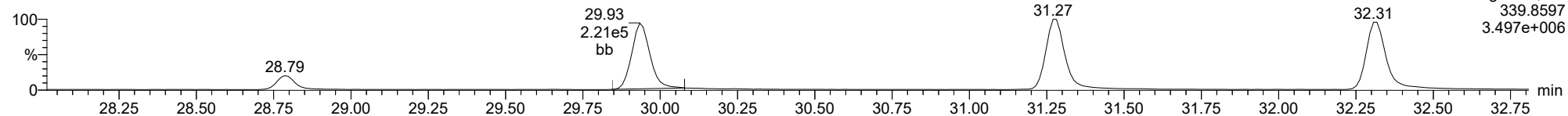


F2:Voltage SIR,EI+  
342.9792  
2.746e+007

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

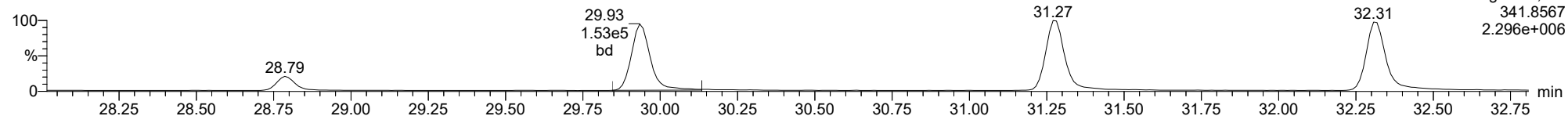
**12378-PeCDF**

23030310



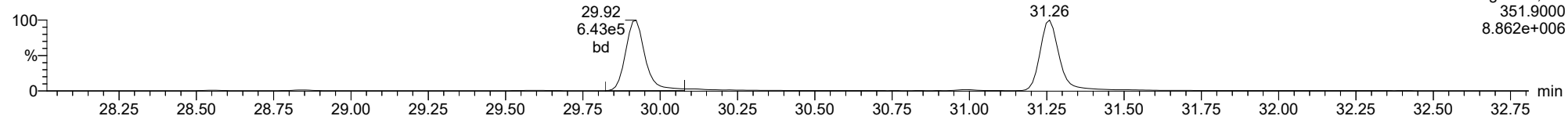
**12378-PeCDF**

23030310



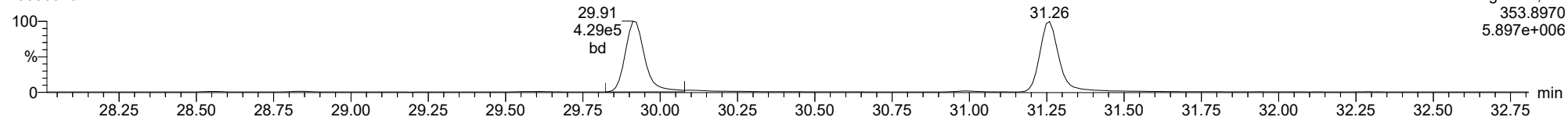
**13C-12378-PeCDF**

23030310



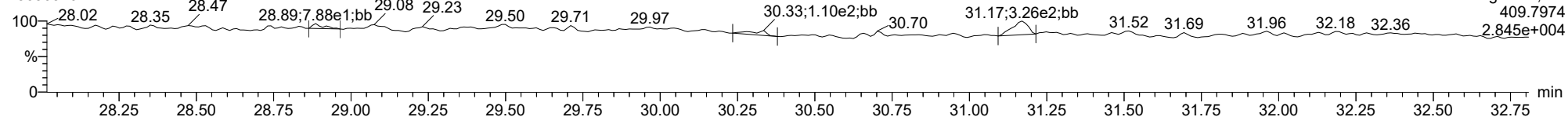
**13C-12378-PeCDF**

23030310



**FUNCTION2 HPCDPE**

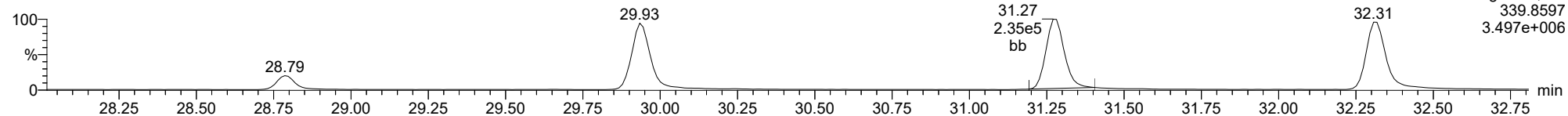
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

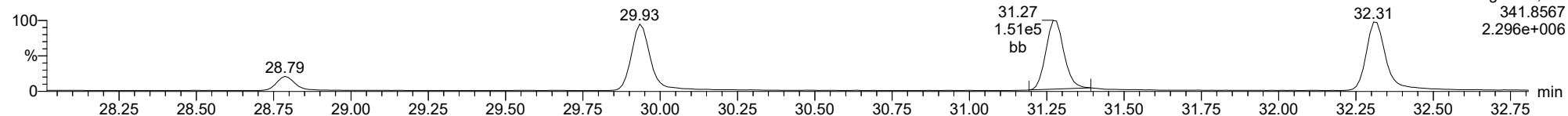
**23478-PeCDF**

23030310



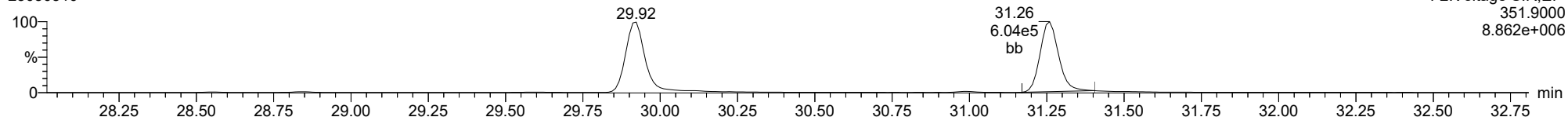
**23478-PeCDF**

23030310



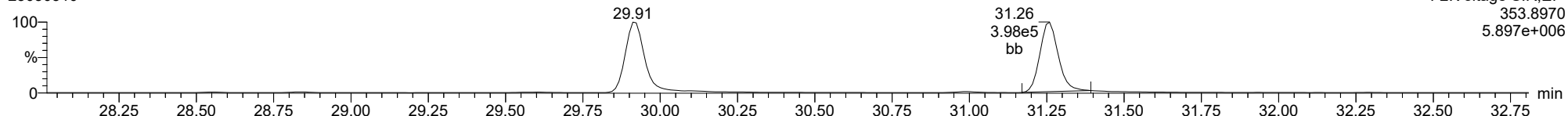
**13C-23478-PeCDF**

23030310



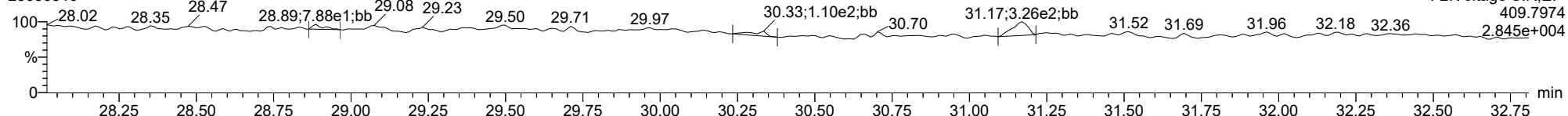
**13C-23478-PeCDF**

23030310



**FUNCTION2 HPCDPE**

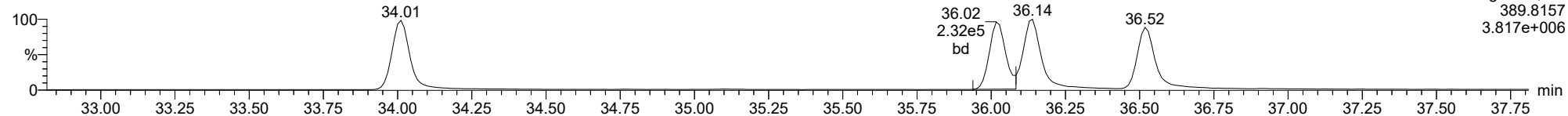
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

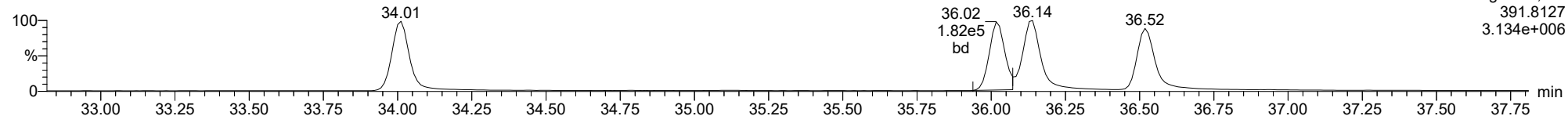
**123478-HxCDD**

23030310



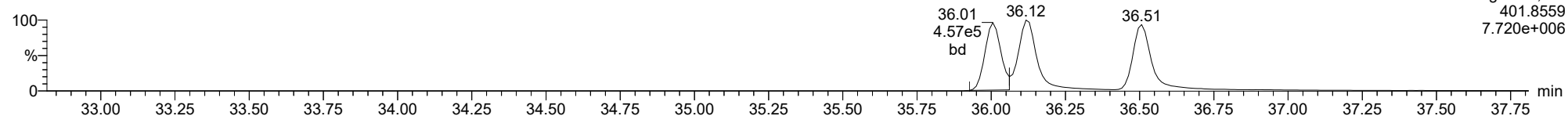
**123478-HxCDD**

23030310



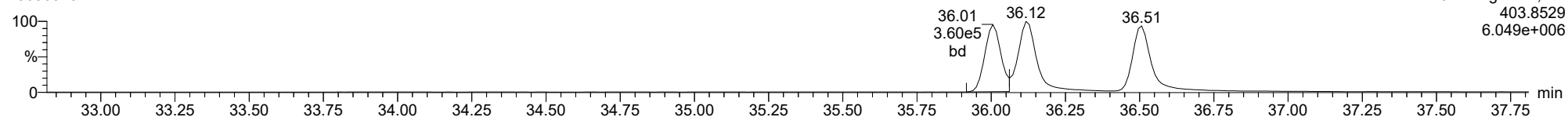
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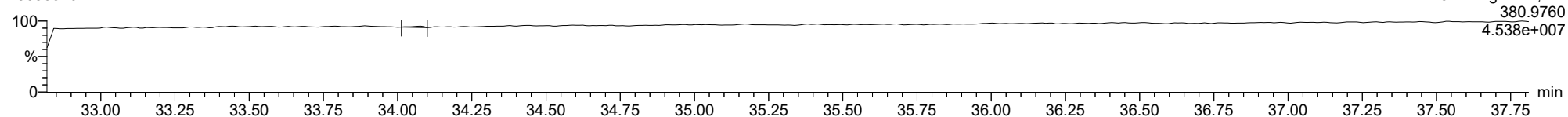
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23030310



**FUNCTION3 PFK**

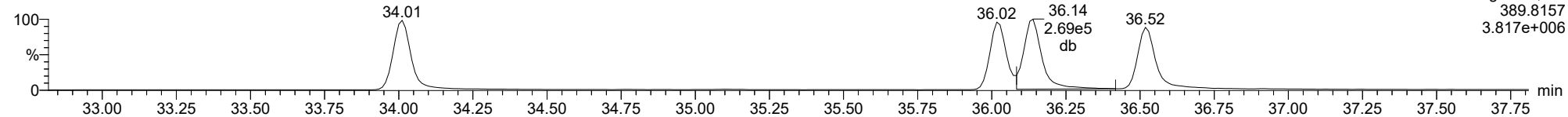
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

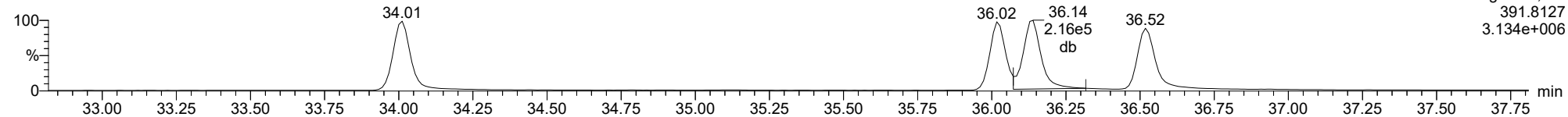
**123678-HxCDD**

23030310



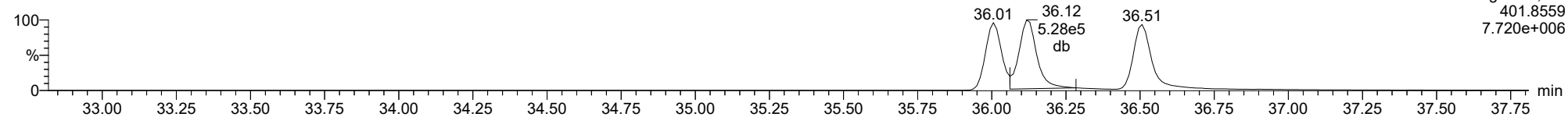
**123678-HxCDD**

23030310



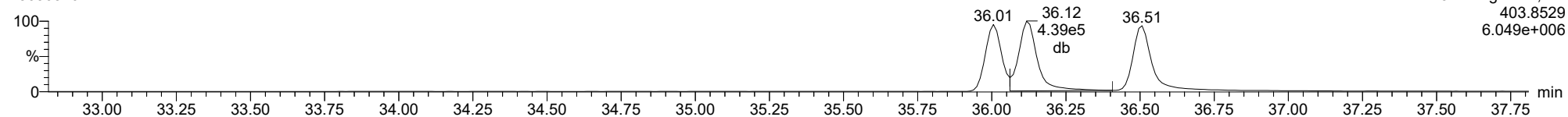
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23030310



**13C-123678-HxCDD**

23030310

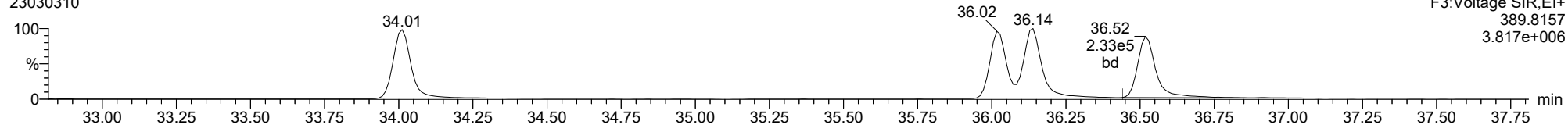




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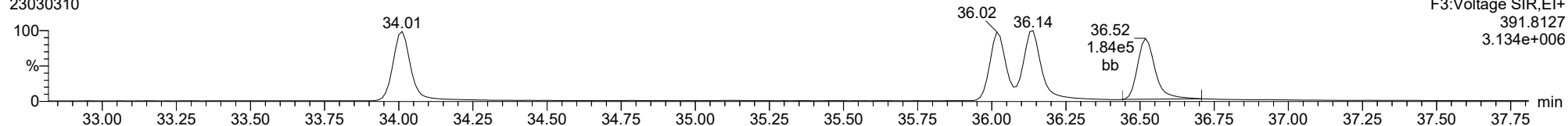
**123789-HxCDD**

23030310



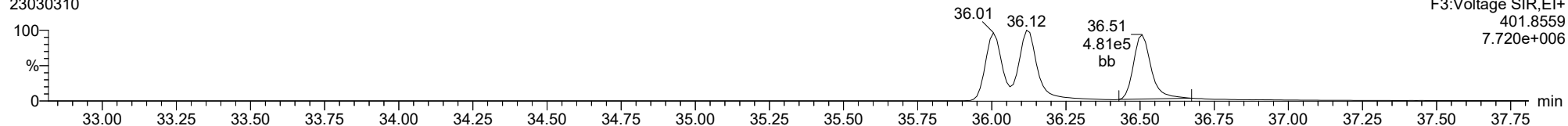
**123789-HxCDD**

23030310



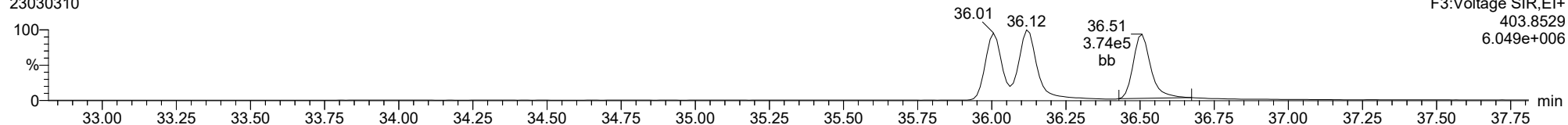
**13C-123789-HxCDD**

23030310



**13C-123789-HxCDD**

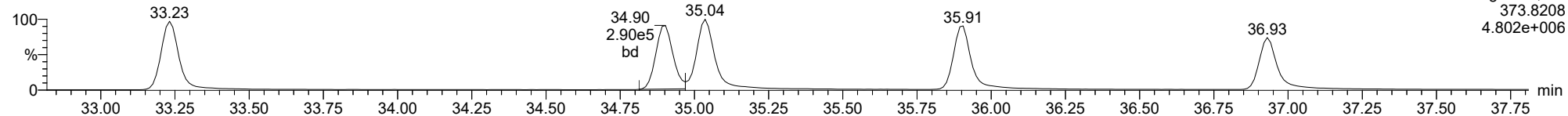
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

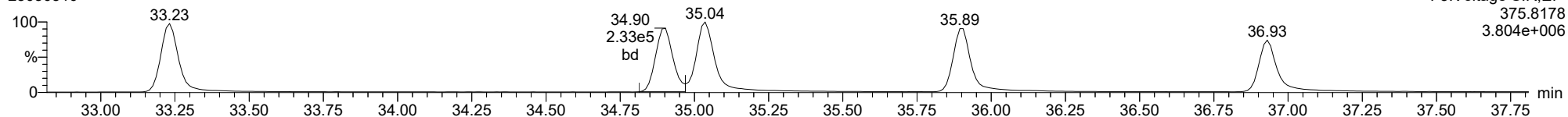
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23030310



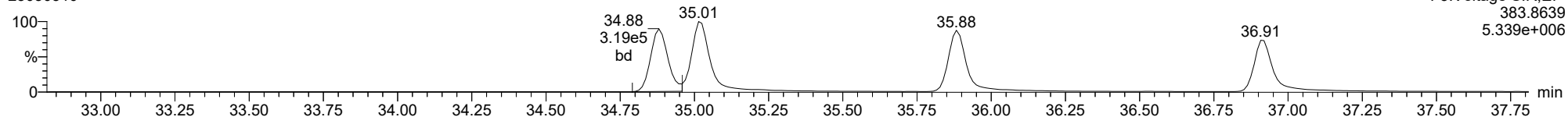
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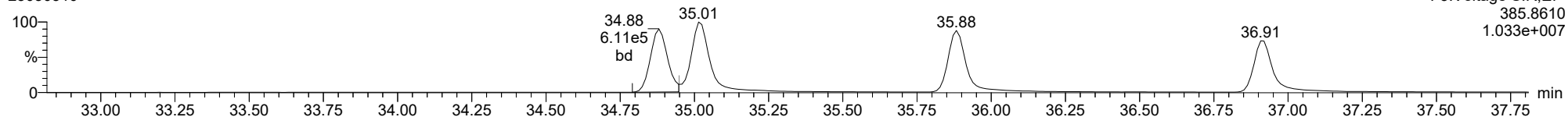
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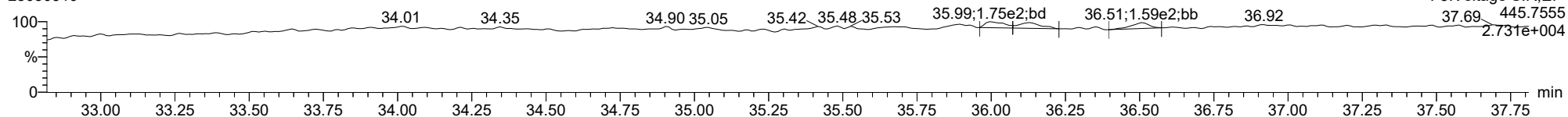
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23030310



**FUNCTION3 OCDPE**

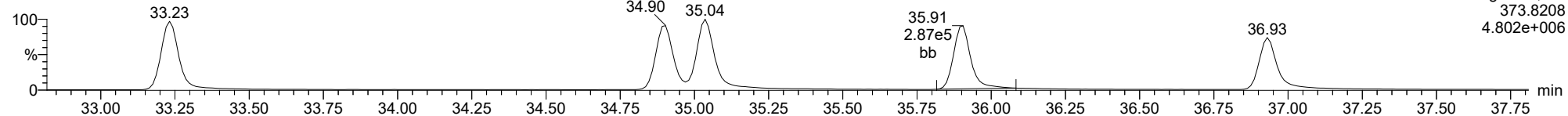
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

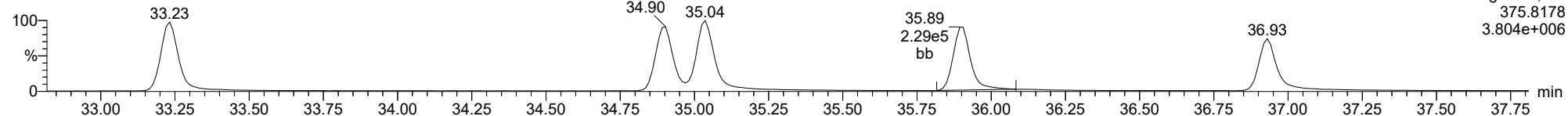
**234678-HxCDF**

23030310



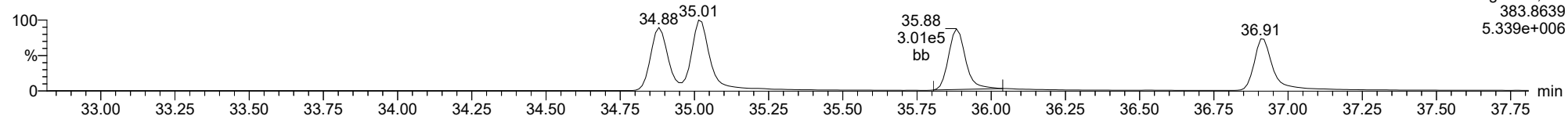
**234678-HxCDF**

23030310



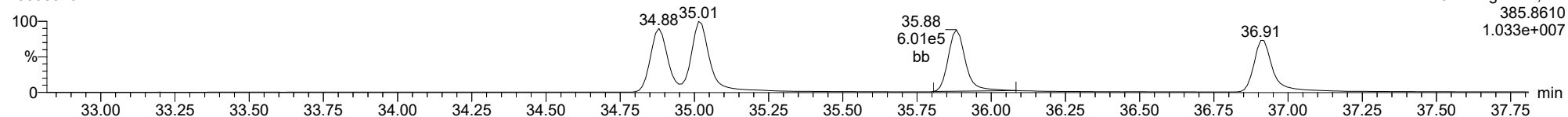
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23030310



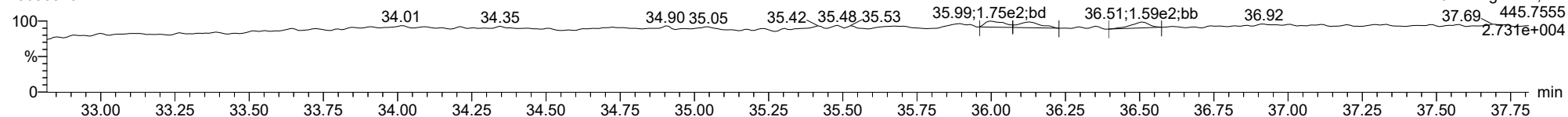
**13C-234678-HxCDF**

23030310



**FUNCTION3 OCDPE**

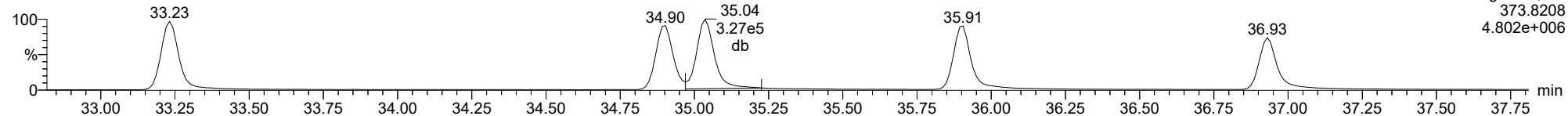
23030310



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

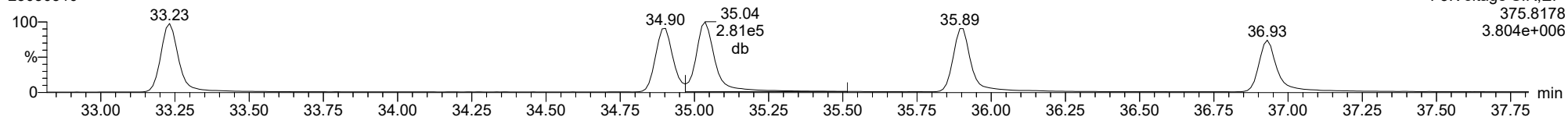
123678-HxCDF

23030310



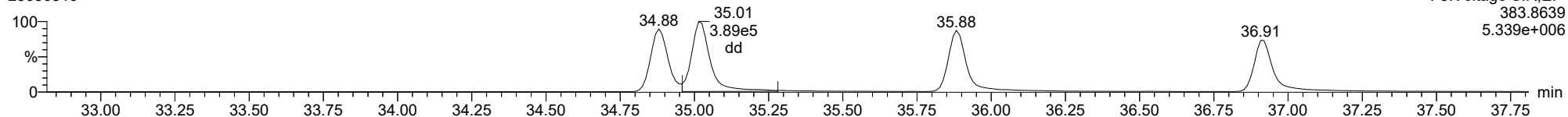
123678-HxCDF

23030310



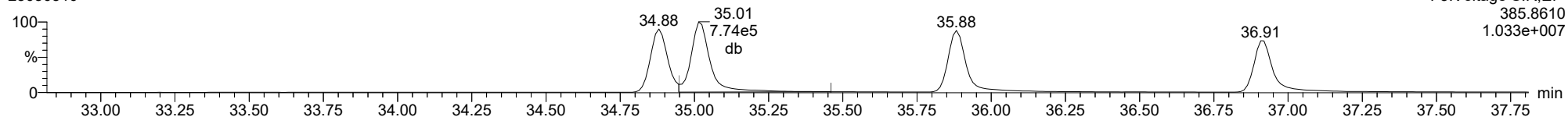
13C-123678-HxCDF

23030310



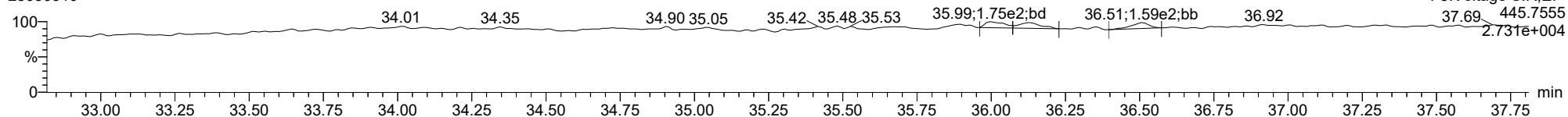
13C-123678-HxCDF

23030310



FUNCTION3 OCDPE

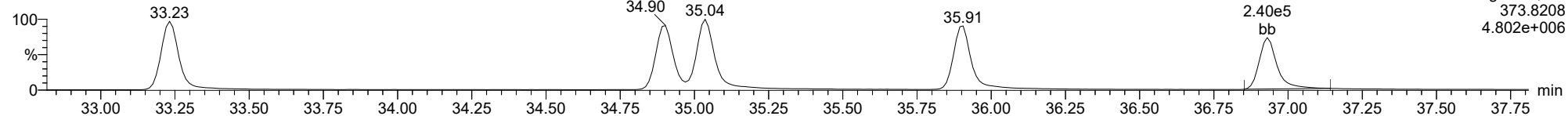
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

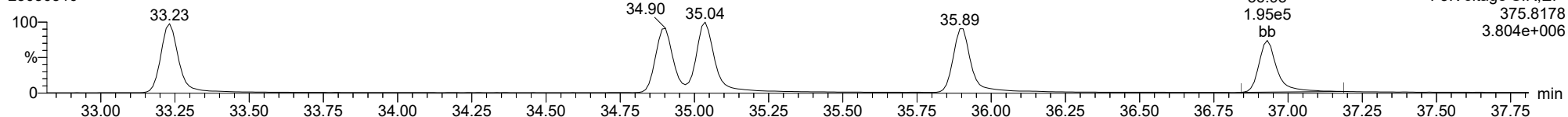
123789-HxCDF

23030310



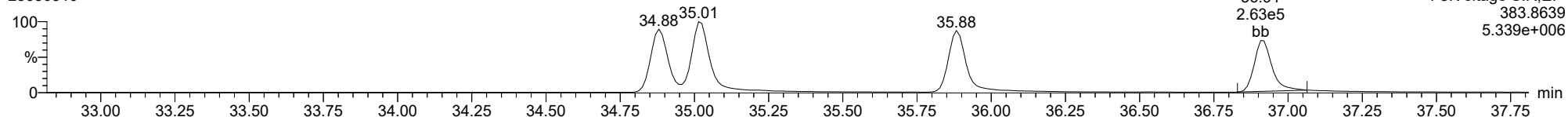
123789-HxCDF

23030310



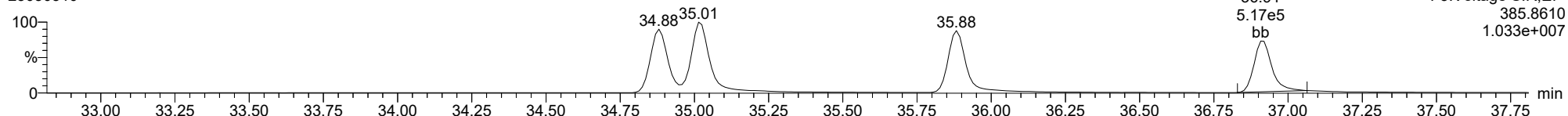
13C-123789-HxCDF

23030310



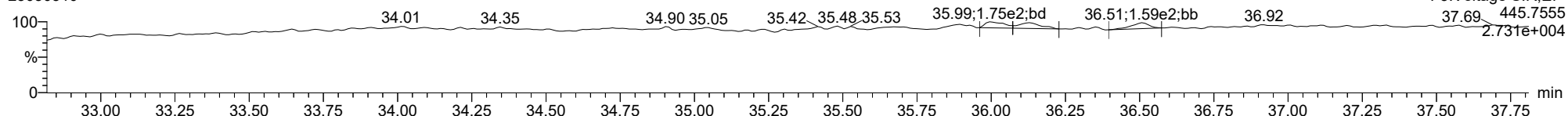
13C-123789-HxCDF

23030310



FUNCTION3 OCDPE

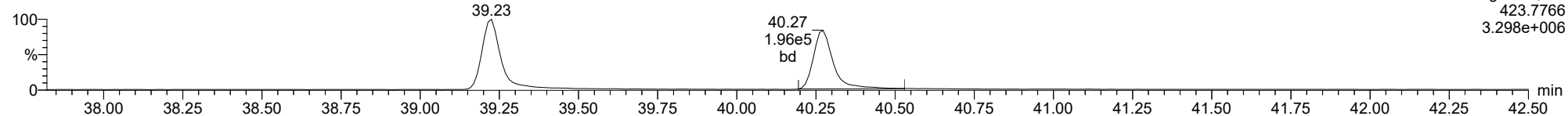
23030310



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

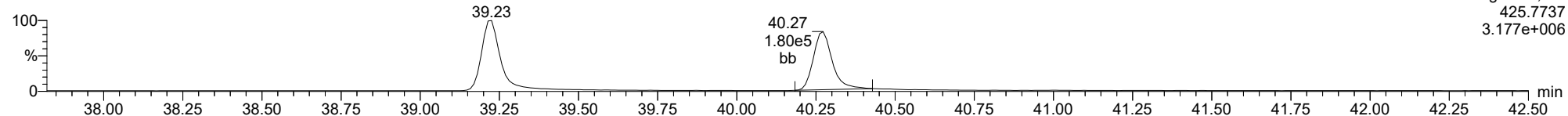
23030310



F4:Voltage SIR,EI+  
423.7766  
3.298e+006

**1234678-HpCDD**

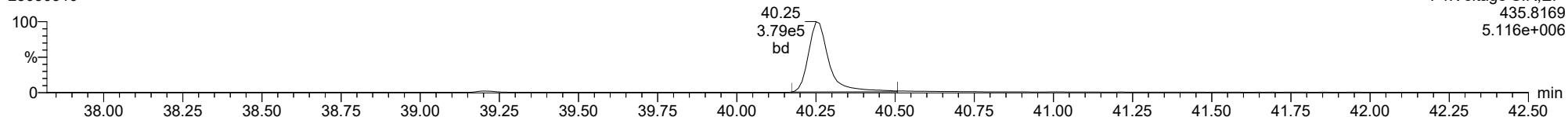
23030310



F4:Voltage SIR,EI+  
425.7737  
3.177e+006

**13C-1234678-HpCDD**

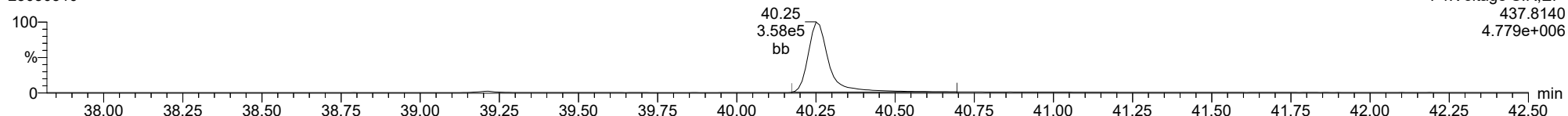
23030310



F4:Voltage SIR,EI+  
435.8169  
5.116e+006

**13C-1234678-HpCDD**

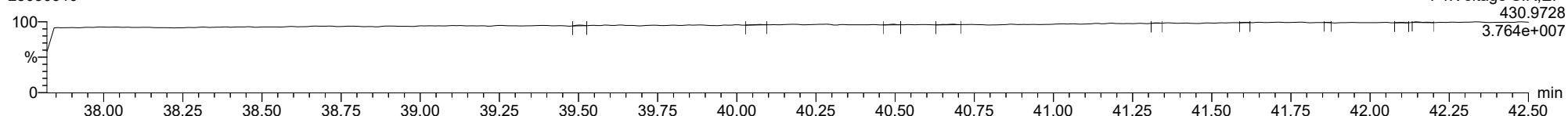
23030310



F4:Voltage SIR,EI+  
437.8140  
4.779e+006

**FUNCTION4 PFK**

23030310

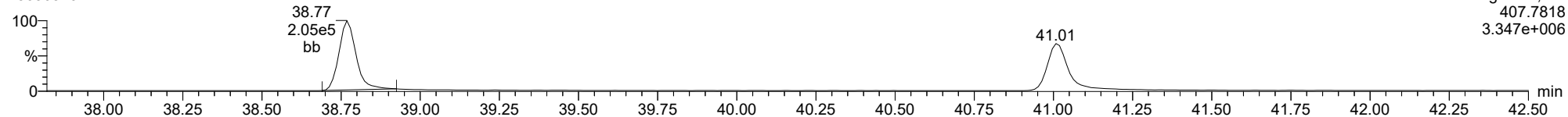


F4:Voltage SIR,EI+  
430.9728  
3.764e+007

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

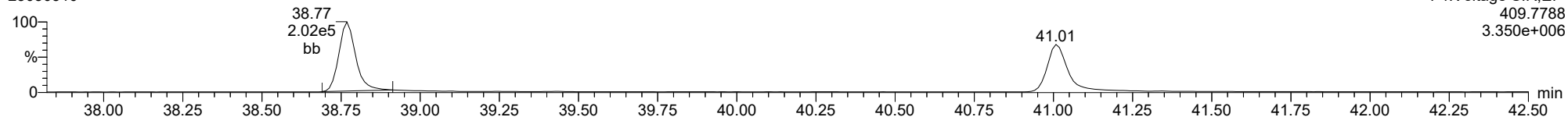
23030310



F4:Voltage SIR,EI+  
407.7818  
3.347e+006

1234678-HpCDF

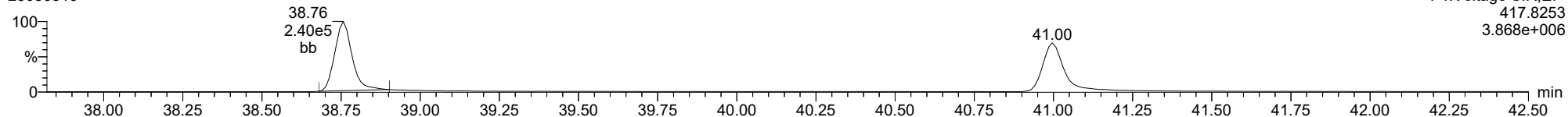
23030310



F4:Voltage SIR,EI+  
409.7788  
3.350e+006

13C-1234678-HpCDF

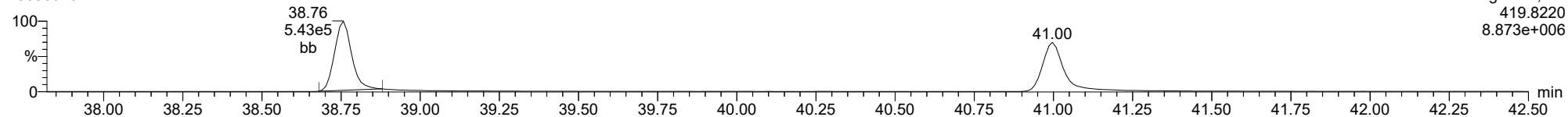
23030310



F4:Voltage SIR,EI+  
417.8253  
3.868e+006

13C-1234678-HpCDF

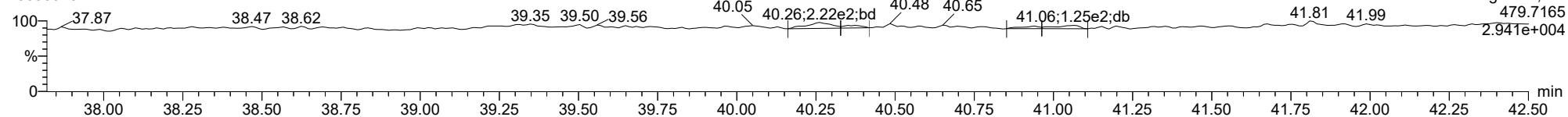
23030310



F4:Voltage SIR,EI+  
419.8220  
8.873e+006

FUNCTION4 NCDPE

23030310

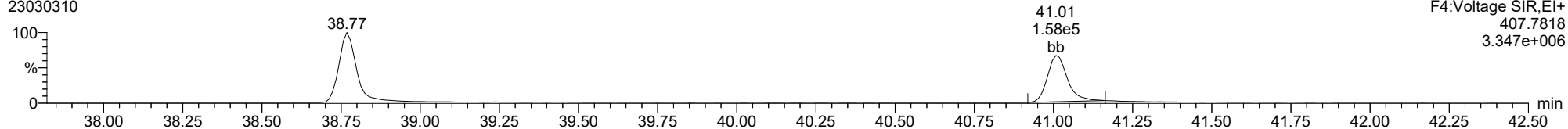


F4:Voltage SIR,EI+  
479.7165  
2.941e+004

ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF

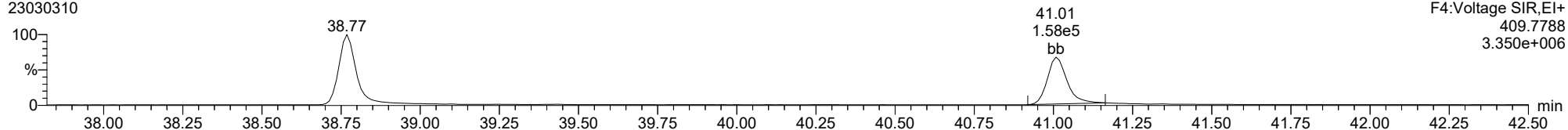
23030310



F4:Voltage SIR,EI+  
407.7818  
3.347e+006

1234789-HpCDF

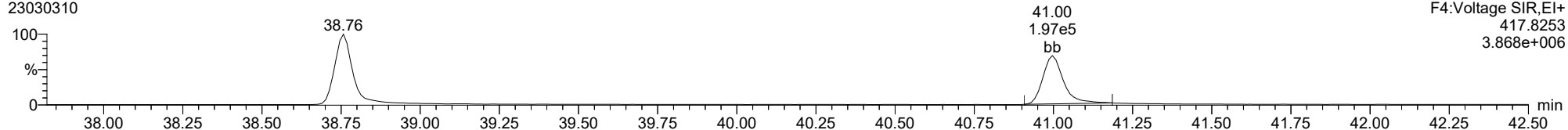
23030310



F4:Voltage SIR,EI+  
409.7788  
3.350e+006

13C-1234789-HpCDF

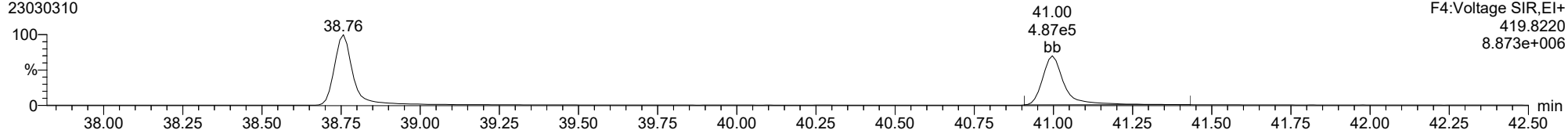
23030310



F4:Voltage SIR,EI+  
417.8253  
3.868e+006

13C-1234789-HpCDF

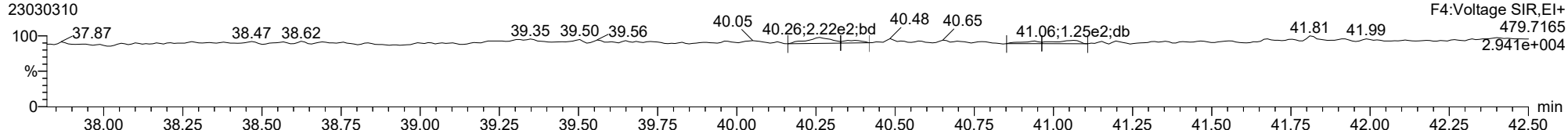
23030310



F4:Voltage SIR,EI+  
419.8220  
8.873e+006

FUNCTION4 NCDPE

23030310



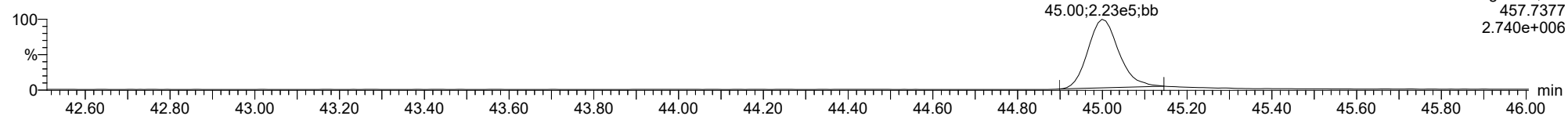
F4:Voltage SIR,EI+  
479.7165  
2.941e+004



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

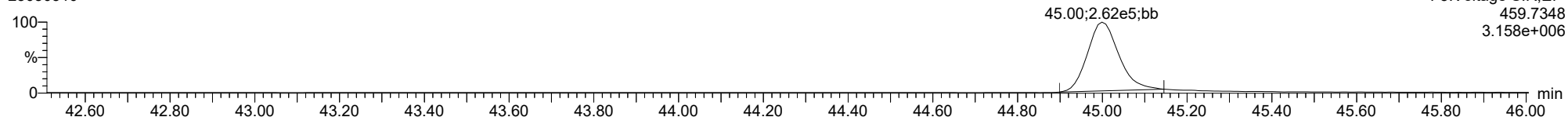
**OCDD**

23030310



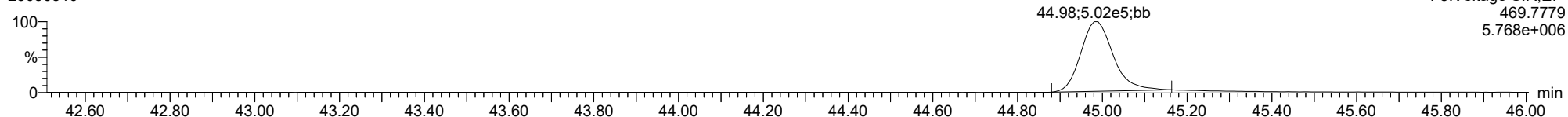
**OCDD**

23030310



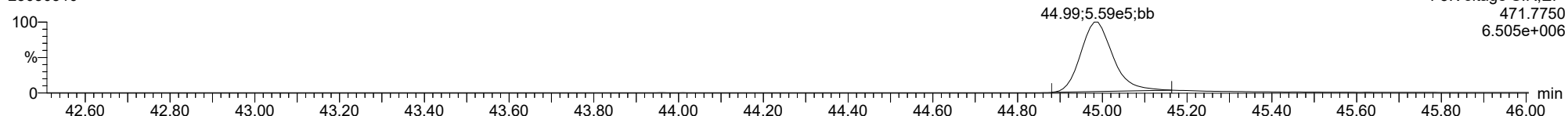
**13C-OCDD**

23030310



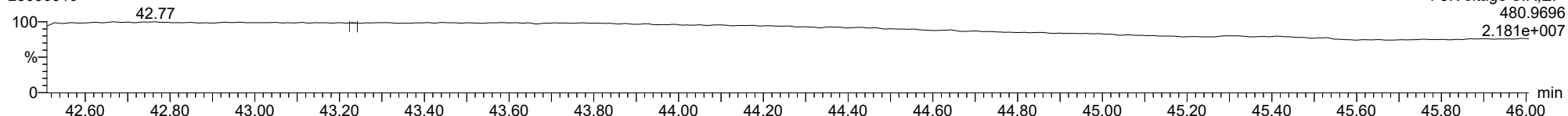
**13C-OCDD**

23030310



**FUNCTION5 PFK**

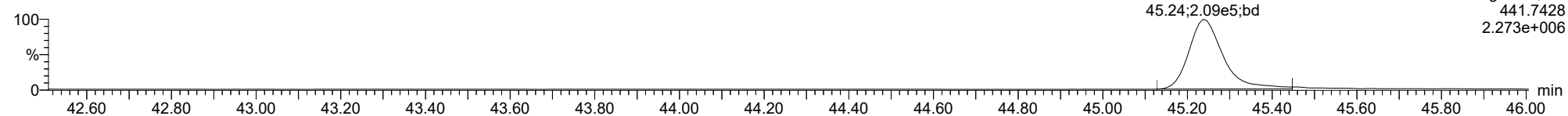
23030310



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

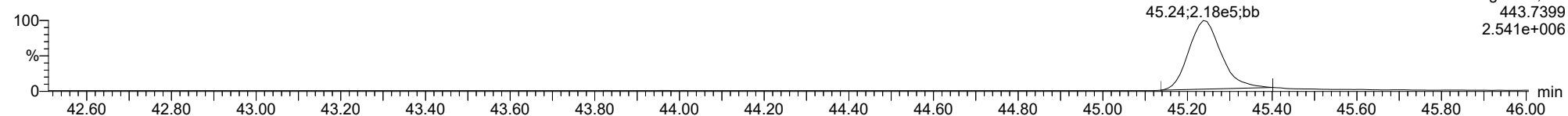
**OCDF**

23030310



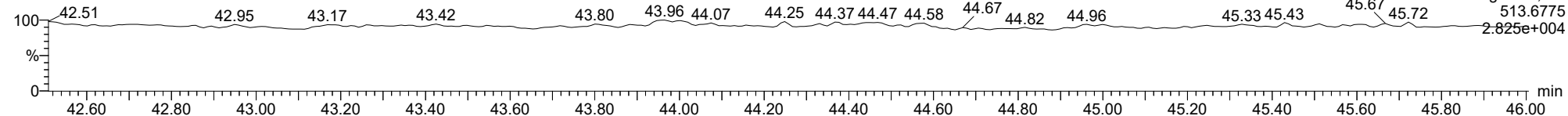
**OCDF**

23030310



**FUNCTION5 DCDPE**

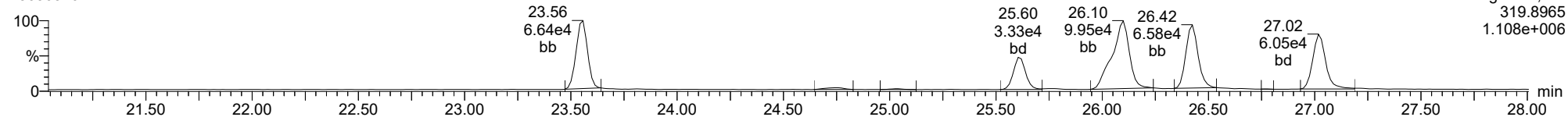
23030310



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

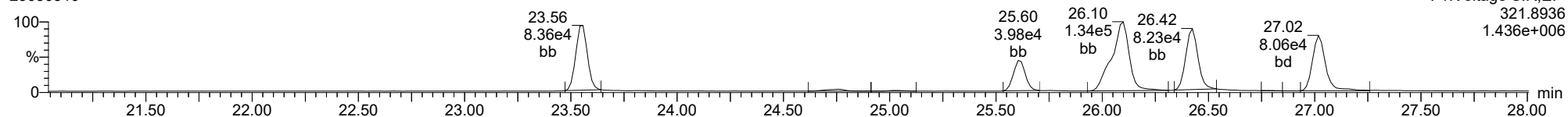
**Total-tetradioxins**

23030310



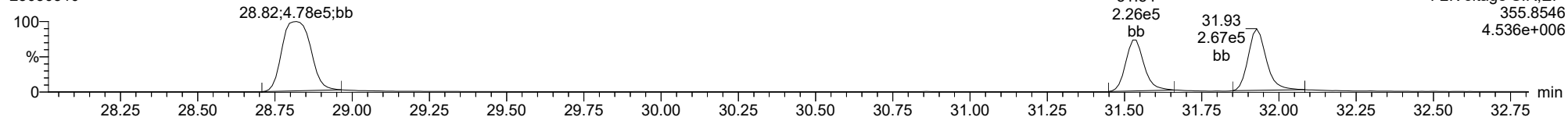
**Total-tetradioxins**

23030310



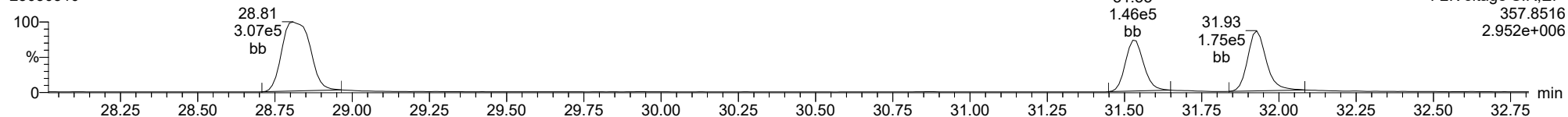
**Total-pentadioxins**

23030310



**Total-pentadioxins**

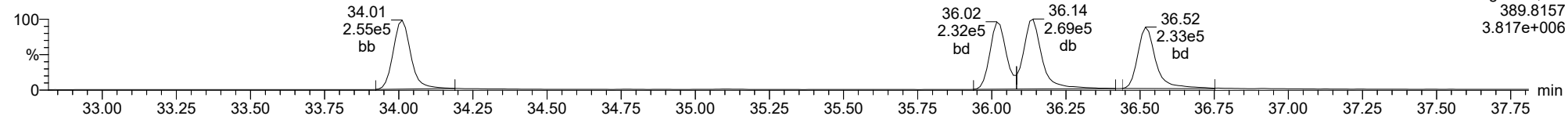
23030310



ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

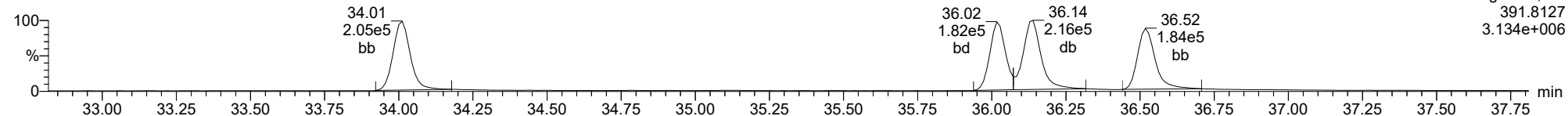
**Total-hexadioxins**

23030310



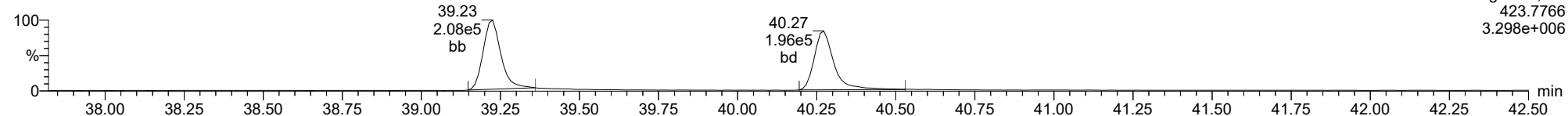
**Total-hexadioxins**

23030310



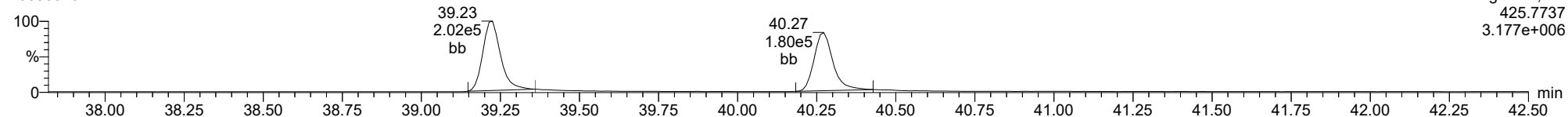
**Total-heptadioxins**

23030310



**Total-heptadioxins**

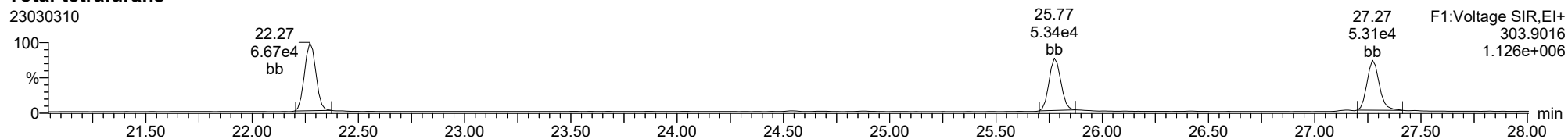
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

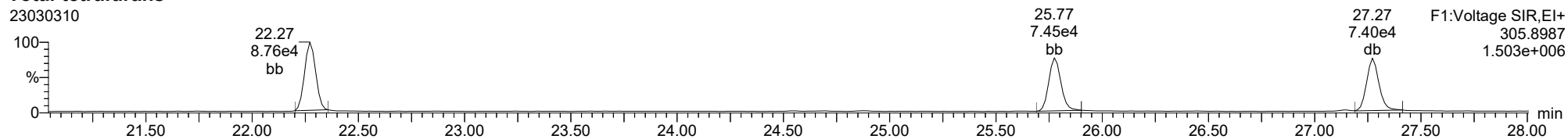
**Total-tetrafurans**

23030310



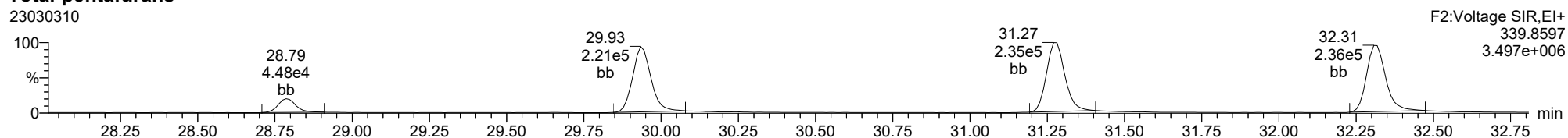
**Total-tetrafurans**

23030310



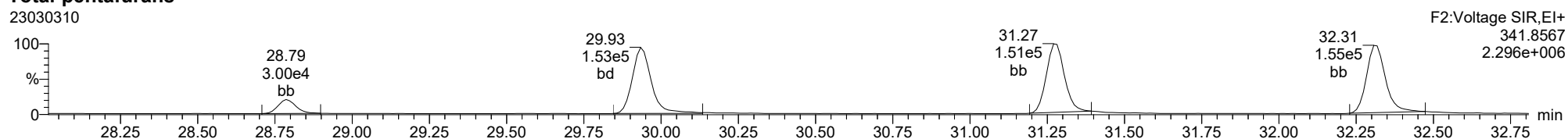
**Total-pentafurans**

23030310



**Total-pentafurans**

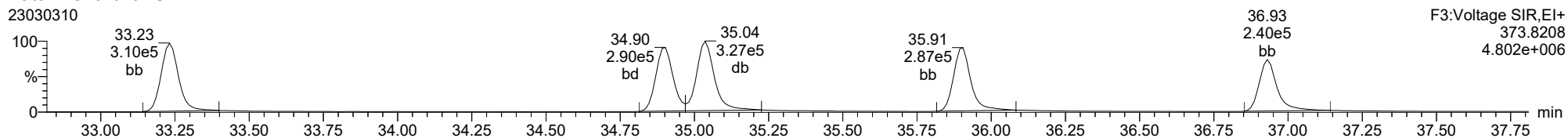
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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

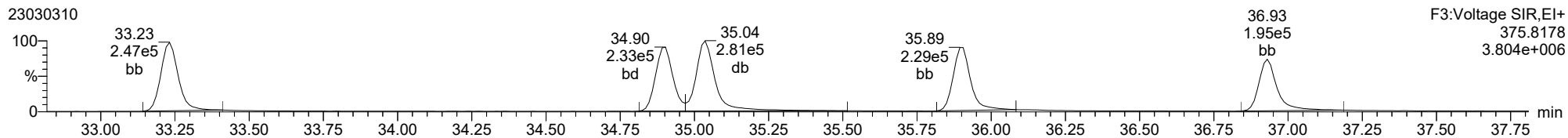
**Total-hexafurans**

23030310



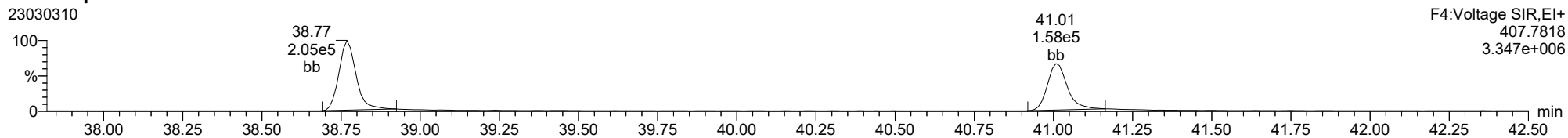
**Total-hexafurans**

23030310



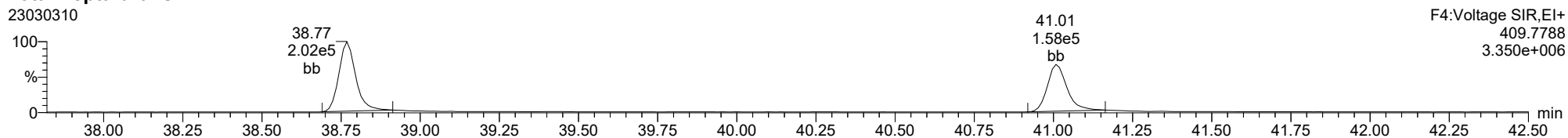
**Total-heptafurans**

23030310



**Total-heptafurans**

23030310



Dataset: T:\Autospec\Processed Data Batch\230303IHCIV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	4.131e4	5.488e4	0.702	0.753	0.770	1493	2220	6.02e5	8.13e5	403.0	366.2	NO	bb	bb	10.126
12378-PeCDF	29.934	1.000	2.094e5	1.387e5	0.679	1.510	1.550	3237	2768	3.10e6	2.08e6	956.2	750.8	NO	bb	bb	47.721
23478-PeCDF	31.282	1.001	2.189e5	1.466e5	0.786	1.493	1.550	3237	2768	3.25e6	2.13e6	1004.6	769.0	NO	bb	bb	48.580
123478-HxCDF	34.903	1.001	2.702e5	2.168e5	1.166	1.247	1.240	2948	2161	4.14e6	3.34e6	1404.3	1544.7	NO	bd	bd	47.304
234678-HxCDF	35.905	1.001	2.808e5	2.345e5	1.140	1.198	1.240	2948	2161	4.05e6	3.23e6	1375.6	1495.3	NO	bb	bd	52.050
123678-HxCDF	35.036	1.000	3.125e5	2.496e5	1.091	1.252	1.240	2948	2161	4.44e6	3.55e6	1506.3	1641.4	NO	db	db	51.387
123789-HxCDF	36.931	1.000	2.304e5	1.857e5	1.137	1.240	1.240	2948	2161	3.37e6	2.68e6	1143.7	1240.6	NO	bb	bb	48.904
1234678-HpCDF	38.769	1.000	1.725e5	1.737e5	1.003	0.993	1.050	2044	2260	2.71e6	2.74e6	1326.3	1210.9	NO	bb	bb	47.690
1234789-HpCDF	41.008	1.000	1.395e5	1.236e5	0.953	1.128	1.050	2044	2260	1.71e6	1.64e6	836.3	725.6	NO	bd	bb	53.601
OCDF	45.237	1.005	1.863e5	1.970e5	0.778	0.946	0.890	1162	1746	2.03e6	2.27e6	1745.6	1302.8	NO	bd	bb	95.021
2378-TCDD	26.424	1.001	4.111e4	5.488e4	1.149	0.749	0.770	1210	797	6.31e5	8.06e5	521.2	1010.5	NO	bb	bb	9.017
12378-PeCDD	31.538	1.001	2.212e5	1.442e5	1.022	1.534	1.550	2794	1649	3.14e6	2.05e6	1124.1	1244.9	NO	bb	bb	50.849
123478-HxCDD	36.017	1.000	2.147e5	1.744e5	0.996	1.231	1.240	3133	1871	3.31e6	2.68e6	1055.8	1434.4	NO	bd	bd	50.696
123678-HxCDD	36.139	1.001	2.532e5	2.091e5	1.001	1.211	1.240	3133	1871	3.49e6	2.85e6	1112.6	1520.4	NO	db	db	51.126
123789-HxCDD	36.518	1.011	2.114e5	1.814e5	0.907	1.166	1.240	3133	1871	3.08e6	2.54e6	982.1	1355.5	NO	bb	bd	51.723
1234678-HpCDD	40.273	1.000	1.700e5	1.663e5	1.039	1.022	1.050	1948	2105	2.22e6	2.15e6	1138.4	1022.1	NO	bd	bd	52.721
OCDD	45.000	1.000	2.152e5	2.483e5	0.920	0.867	0.890	885	1554	2.46e6	2.84e6	2785.0	1828.9	NO	bb	bb	97.150
13C-2378-TCDF	25.760	1.007	5.853e5	7.688e5	1.620	0.761	0.770	1921	2018	8.54e6	1.13e7	4445.5	5599.2	NO	bb	bb	89.420
13C-12378-PeCDF	29.923	1.169	6.466e5	4.272e5	1.240	1.513	1.550	2442	3390	8.85e6	5.90e6	3622.7	1739.1	NO	bb	bd	92.612
13C-23478-PeCDF	31.259	1.222	5.702e5	3.869e5	1.118	1.474	1.550	2442	3390	8.42e6	5.62e6	3447.3	1659.1	NO	bb	bb	91.616
13C-123478-HxCDF	34.881	0.955	2.992e5	5.837e5	1.168	0.513	0.510	2430	2952	4.46e6	8.67e6	1835.4	2935.2	NO	bd	bd	95.179
13C-123678-HxCDF	35.025	0.959	3.347e5	6.682e5	1.386	0.501	0.510	2430	2952	4.76e6	9.19e6	1958.9	3111.9	NO	db	db	91.102
13C-234678-HxCDF	35.883	0.983	2.956e5	5.730e5	1.129	0.516	0.510	2430	2952	4.27e6	8.35e6	1756.5	2829.2	NO	bb	bb	96.885
13C-123789-HxCDF	36.919	1.011	2.519e5	4.965e5	0.932	0.507	0.510	2430	2952	3.69e6	7.15e6	1518.9	2421.6	NO	bb	bb	101.167
13C-1234678-HpCDF	38.758	1.062	2.307e5	4.931e5	0.895	0.468	0.440	2487	3339	3.35e6	7.56e6	1347.2	2263.7	NO	bd	bb	101.839
13C-1234789-HpCDF	40.997	1.123	1.602e5	3.548e5	0.770	0.452	0.440	2487	3339	2.05e6	4.72e6	823.7	1413.6	NO	bb	bb	84.268
13C-1234-TCDD	25.591	0.000	4.152e5	5.195e5	1.000	0.799	0.770	2224	1360	6.53e6	8.14e6	2938.6	5984.1	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	4.083e5	5.184e5	1.152	0.788	0.770	2224	1360	5.76e6	7.36e6	2588.5	5411.0	NO	bb	bb	86.032
13C-12378-PeCDD	31.516	1.232	4.323e5	2.709e5	0.829	1.595	1.550	1217	913	6.32e6	3.99e6	5187.9	4362.9	NO	bb	bb	90.774
13C-123478-HxCDD	36.006	0.986	4.338e5	3.372e5	0.995	1.286	1.240	3851	1371	6.85e6	5.33e6	1778.6	3884.7	NO	bd	bd	97.589
13C-123678-HxCDD	36.117	0.989	5.114e5	3.919e5	1.157	1.305	1.240	3851	1371	7.20e6	5.65e6	1870.4	4120.3	NO	db	db	98.370
13C-1234678-HpCDD	40.262	1.103	3.166e5	2.972e5	0.840	1.065	1.050	1699	1520	4.20e6	3.95e6	2473.2	2598.3	NO	bb	bb	92.030
13C-OCDD	44.990	1.232	5.160e5	5.214e5	0.767	0.990	0.890	2001	1870	5.29e6	5.84e6	2645.0	3123.1	NO	bd	bb	170.247
13C-123789-HxCDD	36.507	0.000	4.452e5	3.487e5	1.000	1.277	1.240	3851	1371	6.49e6	5.07e6	1686.5	3694.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	9.071e4		1.288			1721		1.34e6		776.4			bb		7.536

Dataset: T:\Autospec\Processed Data Batch\230303\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.271	0.865	5.764e4	7.805e4	0.802	0.738	0.770	1493	2220	9.22e5	1.25e6	617.6	564.2	NO	bb	bb	12.503
1289-TCDF	27.272	1.059	3.446e4	4.665e4	0.678	0.739	0.770	1493	2220	5.07e5	6.62e5	339.5	298.3	NO	bb	db	8.835
13468-PECDF	27.130	0.907	3.611e5	2.330e5	1.246	1.550	1.550	743	1090	5.44e6	3.55e6	7323.2	3255.0	NO	bb	bb	44.390
12389-PECDF	32.318	1.080	2.101e5	1.516e5	0.496	1.387	1.550	3237	2768	2.95e6	1.97e6	910.6	713.0	NO	bb	bd	67.866
123468-HXCDF	33.231	0.953	2.880e5	2.384e5	1.169	1.208	1.240	2948	2161	4.12e6	3.25e6	1397.4	1503.0	NO	bb	bb	51.002
1368-TCDD	23.557	0.892	5.668e4	7.180e4	1.015	0.789	0.770	1210	797	9.15e5	1.16e6	755.8	1460.4	NO	bb	bb	13.654
1289-TCDD	27.017	1.023	3.648e4	4.783e4	0.909	0.763	0.770	1210	797	5.40e5	6.90e5	445.8	865.4	NO	bb	bb	10.012
12479-PECDD	28.819	0.914	3.593e5	2.367e5	2.301	1.518	1.550	2794	1649	3.42e6	2.21e6	1224.5	1341.7	NO	bb	bb	36.832
12389-PECDD	31.928	1.013	2.423e5	1.700e5	1.184	1.426	1.550	2794	1649	3.48e6	2.31e6	1246.0	1399.4	NO	bb	bd	49.543
124679-HXCDD	34.011	0.945	2.330e5	1.909e5	1.115	1.220	1.240	3133	1871	3.38e6	2.76e6	1078.1	1473.6	NO	bb	bb	49.292
1234679-HPCDD	39.225	0.974	2.020e5	1.832e5	1.137	1.103	1.050	1948	2105	2.83e6	2.72e6	1451.0	1293.3	NO	bd	bb	55.196
Total-tetrafurans			1.346e5		0.727			1493		2.05e6							31.724
Total-penta1			3.611e5					743		5.44e6							44.390
Total-pentafurans			6.730e5		0.654			3237		9.80e6							172.856
Total-hexafurans			1.382e6		1.141			2948		2.01e7							250.647
Total-heptafurans			3.120e5		0.978			2044		4.42e6							101.291
Total-Furans			3.049e6		0.922			1493		4.39e7							695.930
Total-tetradoxins			2.249e5		1.024			1210		3.13e6							54.516
Total-pentadoxins			8.229e5		1.502			2794		1.00e7							137.223
Total-hexadoxins			9.123e5		1.005			3133		1.32e7							202.837
Total-heptadoxins			3.720e5		1.088			1948		5.04e6							107.918
Total-Dioxins			2.547e6		1.130			1210		3.39e7							599.643
Total-TEQ			5.596e6					1210		7.78e7							1295.573
FUNCTION1 PFK			7.521e6					557945		8.00e6							
FUNCTION2 PFK			4.110e5					226700		1.13e7							0.000
FUNCTION3 PFK			8.443e6					414812		2.82e6							0.000
FUNCTION4 PFK			2.598e7					304689		2.22e7							
FUNCTION5 PFK			7.163e4					189891		2.74e6							
FUNCTION1 HXCD...			3.794e2					593		5.61e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.042e2					818		1.73e4							0.000
FUNCTION3 OCDPE			9.563e1					429		1.87e3							0.000
FUNCTION4 NCDPE			0.000e0					545		0.00e0							
FUNCTION5 DCDPE			0.000e0					542		0.00e0							



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303\IHICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50

Calibration: T:\Autospec\Curves\230303\ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
2	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
3	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
4	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
2	123468-HxCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
3	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
4	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
5	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
2	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\2303031HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

**ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk**

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503
6	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
7	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
8	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
9	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688
10	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
11	123468-HXCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
12	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
13	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
14	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387
15	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
16	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690
17	OCDF	45.24	1.863e5	1.970e5	0.778	0.95	0.89	1745.6	YES	NO	bd	bb	95.021
18	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
2	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
3	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
4	Total-tetradoxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
5	Total-tetradoxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
2	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
3	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\2303031\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

**ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk**

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HxCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
2	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
3	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
4	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
2	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
2	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
3	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
4	Total-tetradoxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
5	Total-tetradoxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591
6	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
7	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
8	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832
9	124679-HxCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
10	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
11	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
12	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696
13	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
14	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196
15	OCDD	45.00	2.152e5	2.483e5	0.920	0.87	0.89	2785.0	YES	NO	bb	bb	97.150

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\2303031HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503
6	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
7	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
8	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
9	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688
10	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
11	123468-HxCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
12	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
13	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
14	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387
15	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
16	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690
17	OCDF	45.24	1.863e5	1.970e5	0.778	0.95	0.89	1745.6	YES	NO	bd	bb	95.021
18	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390
19	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
20	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
21	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
22	Total-tetradiioxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
23	Total-tetradiioxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591
24	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
25	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
26	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832
27	124679-HXCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
28	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
29	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
30	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696
31	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
32	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196
33	OCDD	45.00	2.152e5	2.483e5	0.920	0.87	0.89	2785.0	YES	NO	bb	bb	97.150

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHICV.qld  
Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

**ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk**

**PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.45	3.397e6					9.1	YES		db		
2	FUNCTION1 PFK	22.00	4.124e6					5.2	YES		bd		

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230303\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

## PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.25	2.674e4					2.5	NO		db		0.000
2	FUNCTION2 PFK	28.20	5.558e3					1.1	NO		dd		0.000
3	FUNCTION2 PFK	28.15	1.333e4					1.7	NO		bd		0.000
4	FUNCTION2 PFK	28.11	4.408e3					0.8	NO		bb		0.000
5	FUNCTION2 PFK	30.52	5.287e3					0.9	NO		bd		0.000
6	FUNCTION2 PFK	30.38	1.568e4					1.4	NO		bb		0.000
7	FUNCTION2 PFK	30.23	2.380e4					1.5	NO		db		0.000
8	FUNCTION2 PFK	30.10	2.694e4					1.7	NO		bd		0.000
9	FUNCTION2 PFK	29.99	2.076e3					0.5	NO		bb		0.000
10	FUNCTION2 PFK	29.89	7.421e3					1.2	NO		bb		0.000
11	FUNCTION2 PFK	29.80	6.022e3					0.5	NO		bb		0.000
12	FUNCTION2 PFK	29.62	1.101e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	29.52	2.200e4					2.0	NO		bb		0.000
14	FUNCTION2 PFK	29.42	7.036e3					1.0	NO		bb		0.000
15	FUNCTION2 PFK	29.29	2.309e4					2.2	NO		bb		0.000
16	FUNCTION2 PFK	29.03	1.036e4					1.7	NO		db		0.000
17	FUNCTION2 PFK	29.00	8.382e3					1.3	NO		bd		0.000
18	FUNCTION2 PFK	28.80	5.680e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	28.70	1.413e4					1.3	NO		bb		0.000
20	FUNCTION2 PFK	28.60	2.690e3					0.7	NO		bb		0.000
21	FUNCTION2 PFK	32.35	9.362e3					1.3	NO		bd		0.000
22	FUNCTION2 PFK	32.28	5.282e3					0.9	NO		bb		0.000
23	FUNCTION2 PFK	31.94	5.478e3					0.6	NO		bb		0.000
24	FUNCTION2 PFK	31.86	9.539e3					1.3	NO		bb		0.000
25	FUNCTION2 PFK	31.70	8.598e3					0.9	NO		bb		0.000
26	FUNCTION2 PFK	31.56	1.164e4					1.5	NO		bb		0.000
27	FUNCTION2 PFK	31.44	9.870e3					1.2	NO		bb		0.000
28	FUNCTION2 PFK	31.37	5.651e3					1.2	NO		bb		0.000
29	FUNCTION2 PFK	31.16	3.906e3					0.7	NO		db		0.000
30	FUNCTION2 PFK	31.10	5.259e3					1.0	NO		bd		0.000
31	FUNCTION2 PFK	31.00	2.220e3					0.5	NO		bb		0.000
32	FUNCTION2 PFK	30.93	4.197e3					0.6	NO		bb		0.000
33	FUNCTION2 PFK	30.84	1.813e4					1.7	NO		bb		0.000
34	FUNCTION2 PFK	30.68	6.046e3					1.3	NO		db		0.000
35	FUNCTION2 PFK	30.64	6.706e3					1.2	NO		dd		0.000
36	FUNCTION2 PFK	30.58	1.475e4					1.4	NO		dd		0.000
37	FUNCTION2 PFK	32.74	9.704e3					1.1	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230303IHICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.61	1.975e3					0.6	NO		bb		0.000
39	FUNCTION2 PFK	32.55	1.171e3					0.5	NO		bb		0.000
40	FUNCTION2 PFK	32.51	7.325e3					1.0	NO		db		0.000
41	FUNCTION2 PFK	32.45	9.340e3					1.3	NO		dd		0.000
42	FUNCTION2 PFK	32.41	1.322e4					1.9	NO		dd		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.70	5.175e4					1.9	NO		bb		0.000
2	FUNCTION3 PFK	35.52	3.681e5					3.3	YES		bb		0.000
3	FUNCTION3 PFK	34.42	8.023e6					1.5	NO		bb		0.000

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.67	5.668e6					23.1	YES		db		
2	FUNCTION4 PFK	39.84	1.814e7					26.9	YES		dd		
3	FUNCTION4 PFK	38.09	2.173e6					22.8	YES		bd		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.82	4.953e3					1.4	NO		bb		
2	FUNCTION5 PFK	45.79	4.078e3					1.3	NO		db		
3	FUNCTION5 PFK	45.76	2.296e3					0.8	NO		bd		
4	FUNCTION5 PFK	45.37	1.499e4					1.8	NO		bb		
5	FUNCTION5 PFK	45.31	3.040e3					1.0	NO		bb		
6	FUNCTION5 PFK	44.94	1.866e3					0.7	NO		bb		
7	FUNCTION5 PFK	44.62	4.342e3					1.3	NO		bb		
8	FUNCTION5 PFK	43.85	4.909e3					1.2	NO		bb		
9	FUNCTION5 PFK	43.55	9.698e3					1.7	NO		bb		
10	FUNCTION5 PFK	43.31	1.818e4					2.2	NO		bb		
11	FUNCTION5 PFK	43.18	3.274e3					1.0	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\2303031\HICV.qld  
 Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time  
 Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

**ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk**

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.14	7.703e1					2.6	NO		bb		0.000
2	FUNCTION1 HXCD...	25.58	1.369e2					3.0	NO		bb		0.000
3	FUNCTION1 HXCD...	24.29	7.654e1					1.4	NO		bb		0.000
4	FUNCTION1 HXCD...	23.49	8.895e1					2.4	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.41	1.026e2					2.4	NO		db		0.000
2	FUNCTION2 HPCD...	32.32	1.299e2					2.2	NO		bd		0.000
3	FUNCTION2 HPCD...	31.19	1.035e2					3.9	YES		db		0.000
4	FUNCTION2 HPCD...	31.15	2.274e2					6.9	YES		bd		0.000
5	FUNCTION2 HPCD...	29.21	1.504e2					2.9	NO		bb		0.000
6	FUNCTION2 HPCD...	28.77	9.035e1					2.8	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	9.563e1					4.4	YES		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS6**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

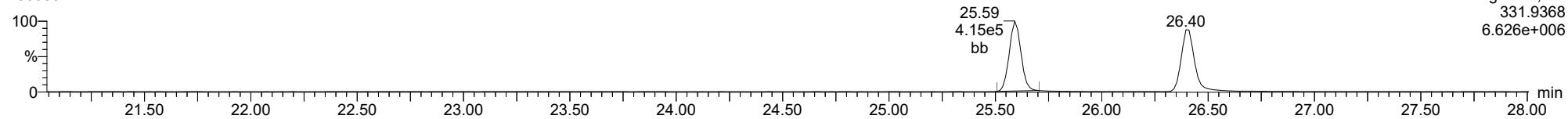


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**ID:** CS3W2, **Name:** 23030311, **Date:** 03-Mar-2023, **Time:** 17:25:01, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234-TCDD**

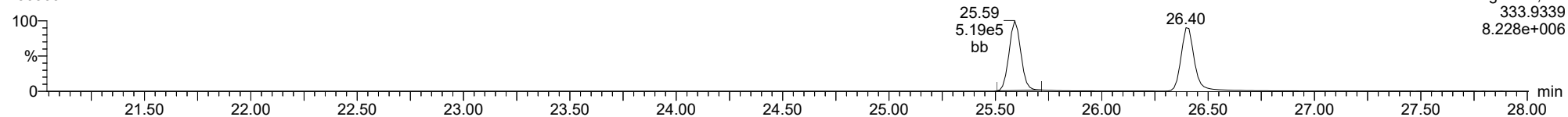
23030311



F1:Voltage SIR,El+  
331.9368  
6.626e+006

**13C-1234-TCDD**

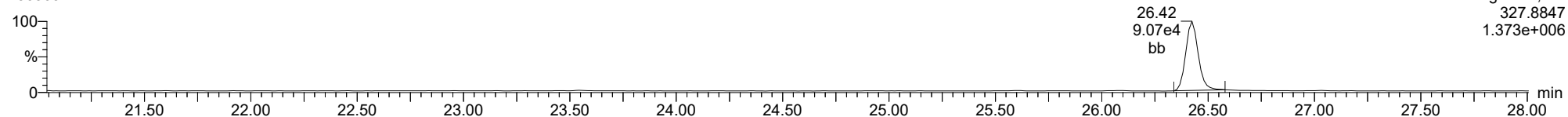
23030311



F1:Voltage SIR,El+  
333.9339  
8.228e+006

**37CL-2378-TCDD**

23030311

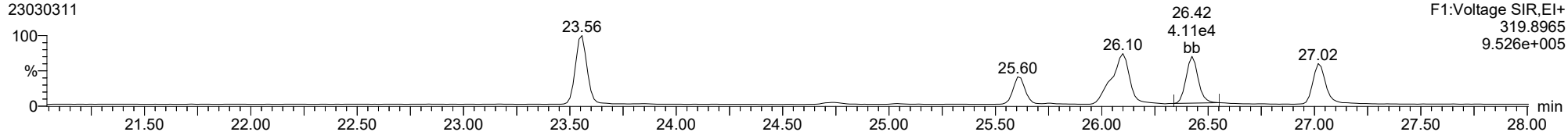


F1:Voltage SIR,El+  
327.8847  
1.373e+006

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

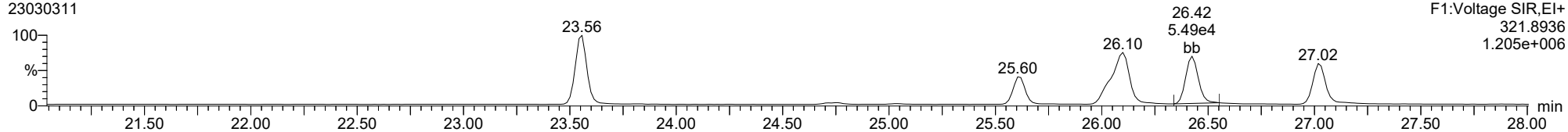
**2378-TCDD**

23030311



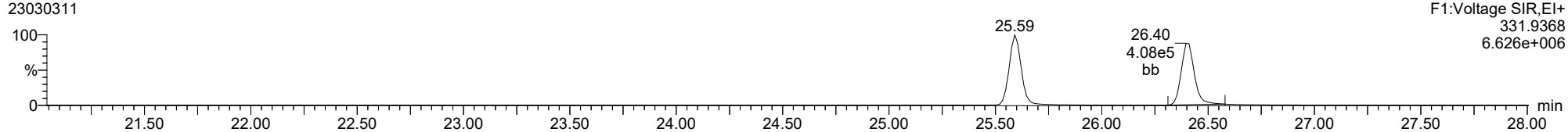
**2378-TCDD**

23030311



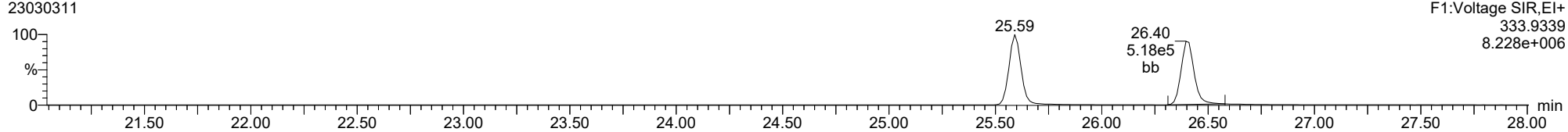
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23030311



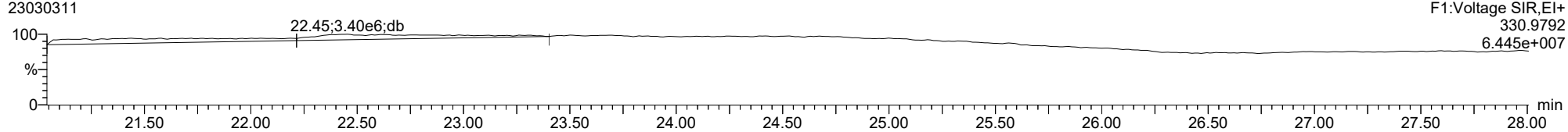
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23030311



**FUNCTION1 PFK**

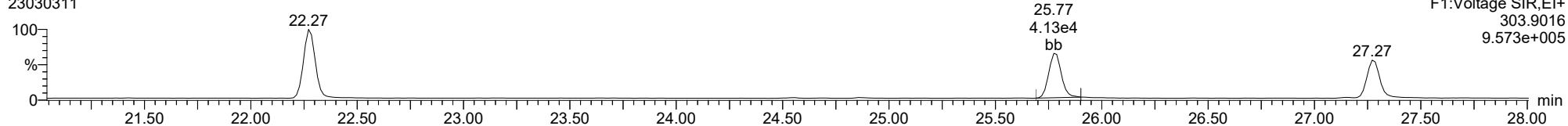
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

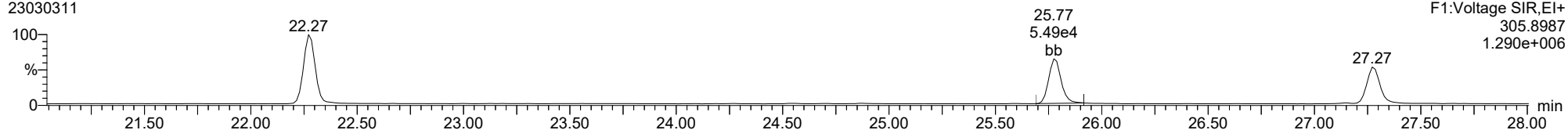
**2378-TCDF**

23030311



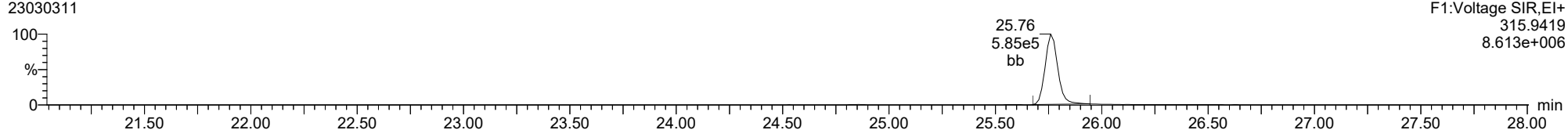
**2378-TCDF**

23030311



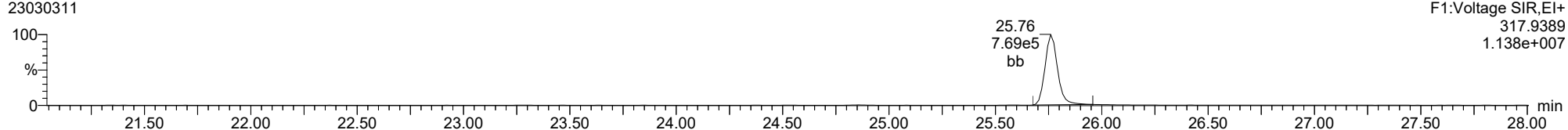
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23030311



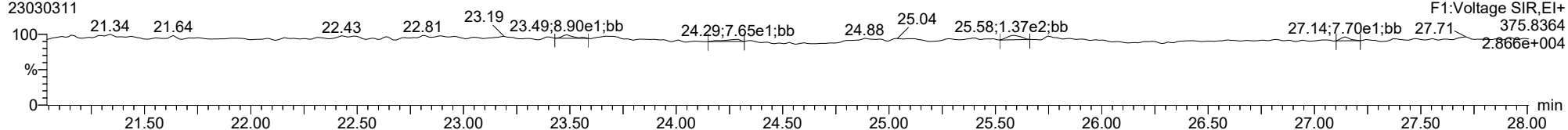
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23030311



**FUNCTION1 HXCDPE**

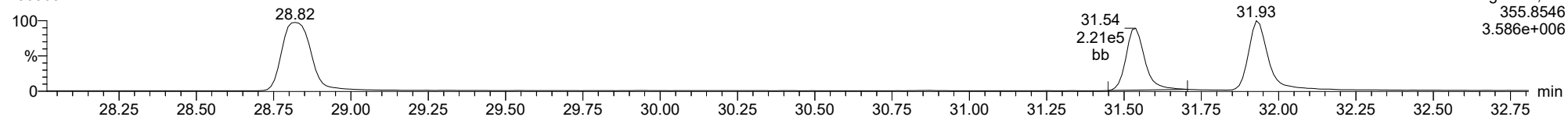
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

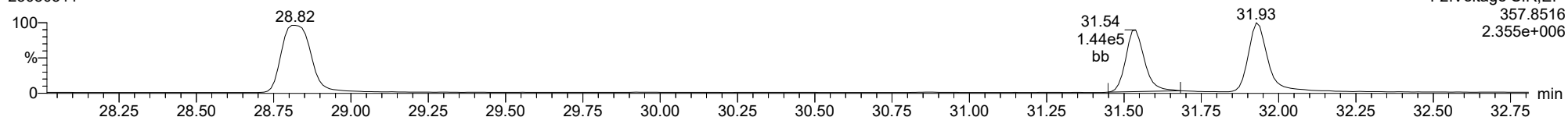
**12378-PeCDD**

23030311



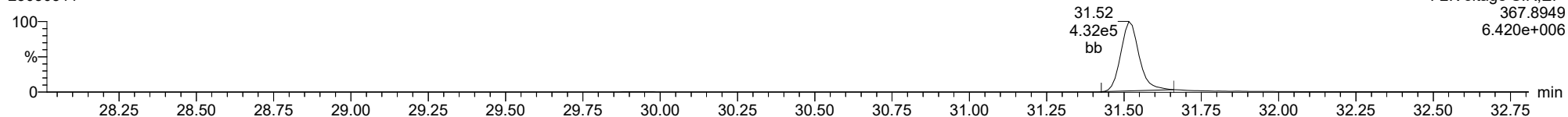
**12378-PeCDD**

23030311



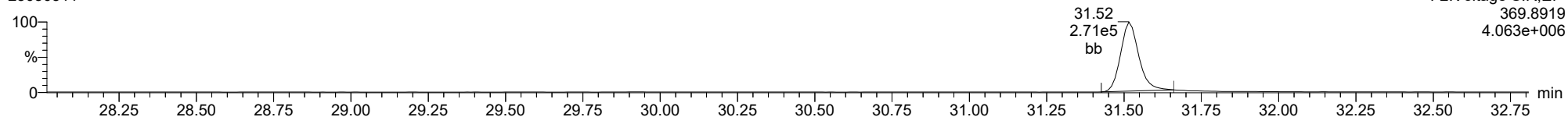
**13C-12378-PeCDD**

23030311



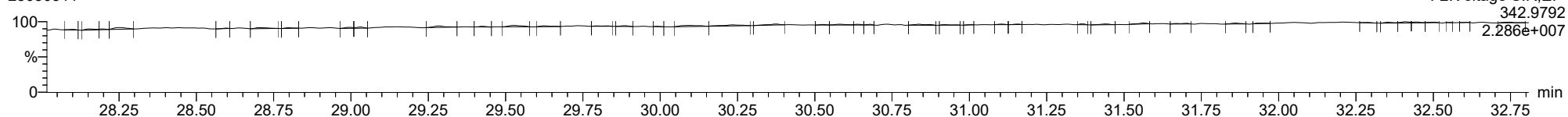
**13C-12378-PeCDD**

23030311



**FUNCTION2 PFK**

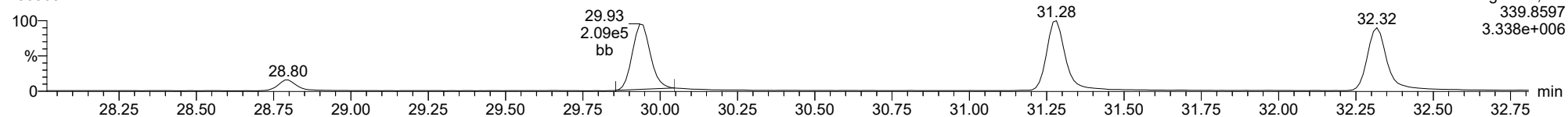
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

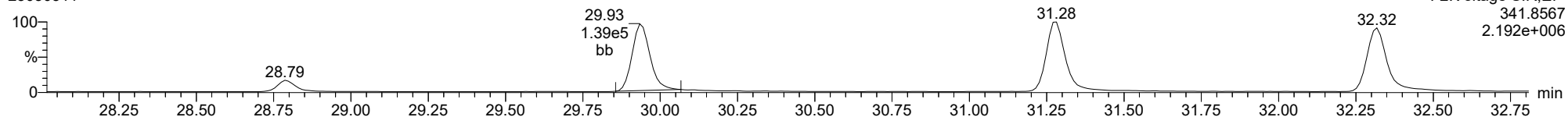
**12378-PeCDF**

23030311



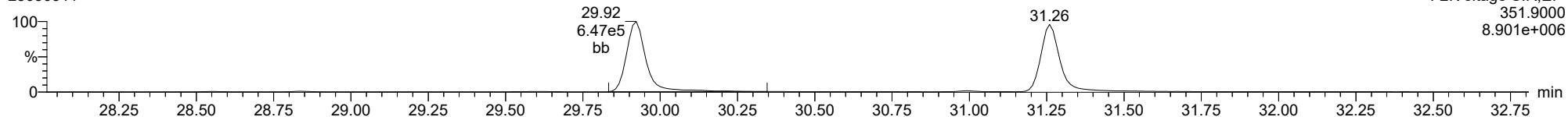
**12378-PeCDF**

23030311



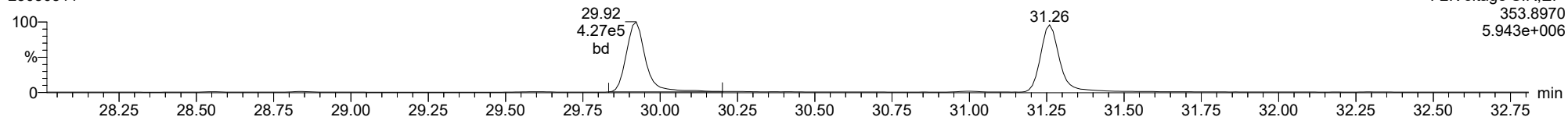
**13C-12378-PeCDF**

23030311



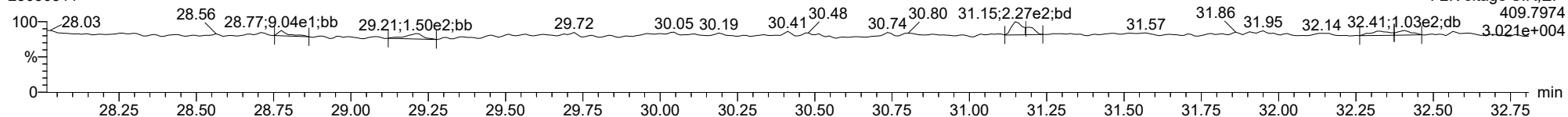
**13C-12378-PeCDF**

23030311



**FUNCTION2 HPCDPE**

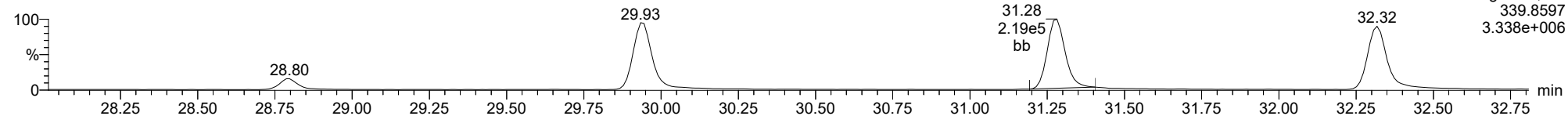
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

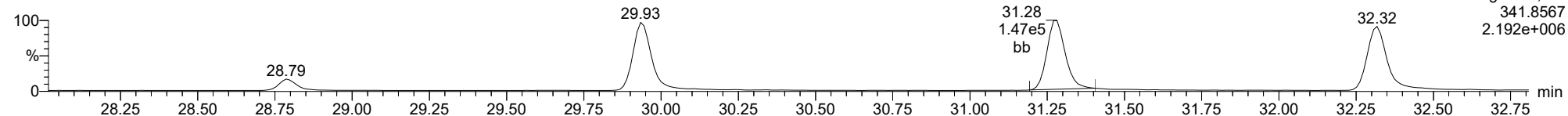
**23478-PeCDF**

23030311



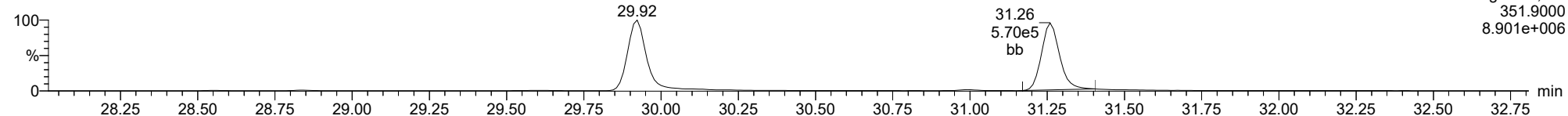
**23478-PeCDF**

23030311



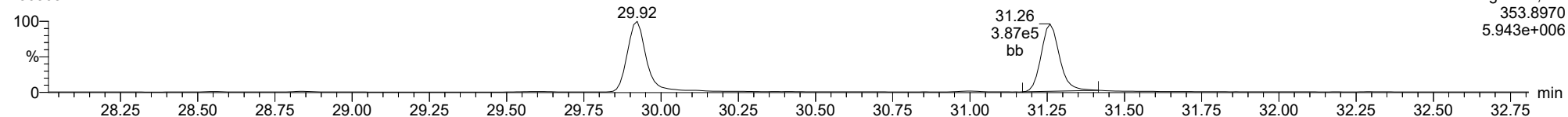
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23030311



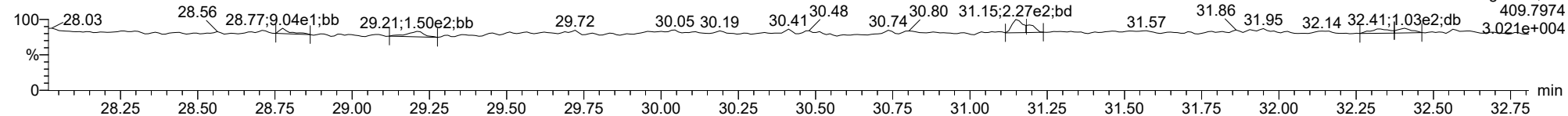
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23030311



**FUNCTION2 HPCDPE**

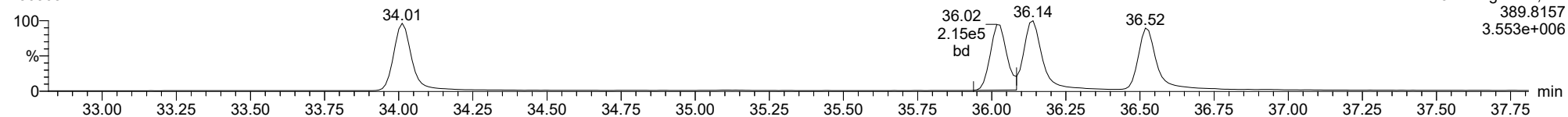
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

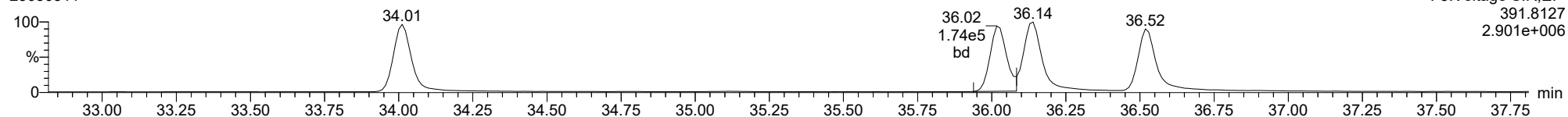
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23030311



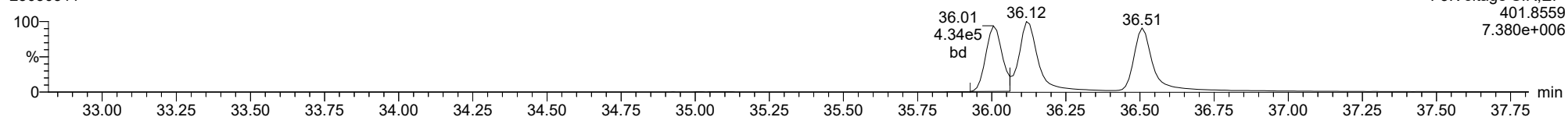
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23030311



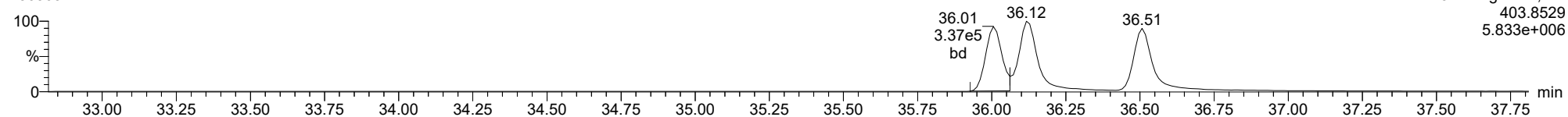
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23030311



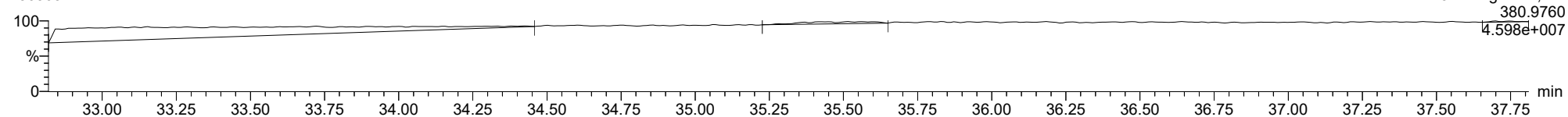
**13C-123478-HxCDD**

23030311



**FUNCTION3 PFK**

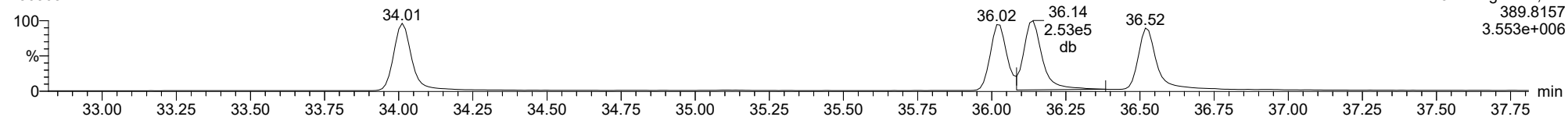
23030311



ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

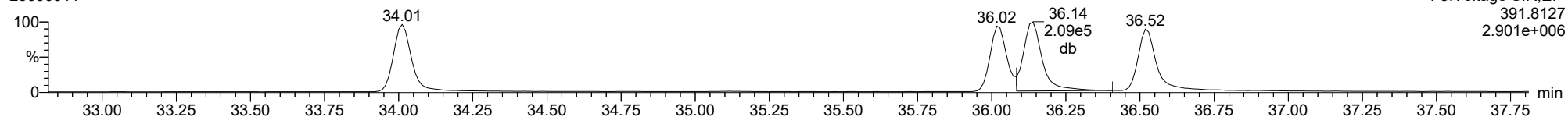
23030311



F3:Voltage SIR,EI+  
389.8157  
3.553e+006

**123678-HxCDD**

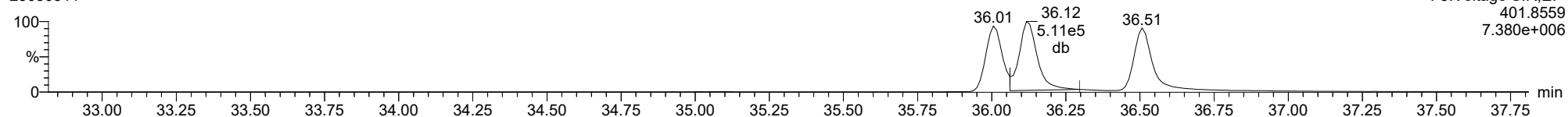
23030311



F3:Voltage SIR,EI+  
391.8127  
2.901e+006

**13C-123678-HxCDD**

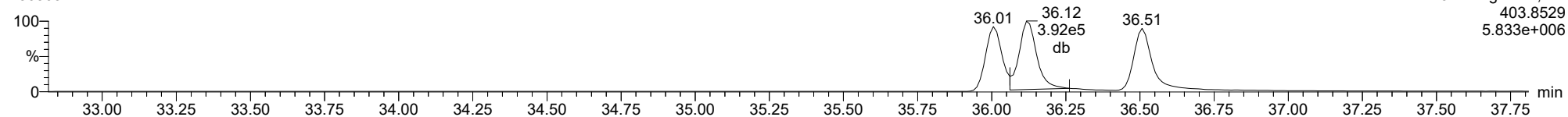
23030311



F3:Voltage SIR,EI+  
401.8559  
7.380e+006

**13C-123678-HxCDD**

23030311



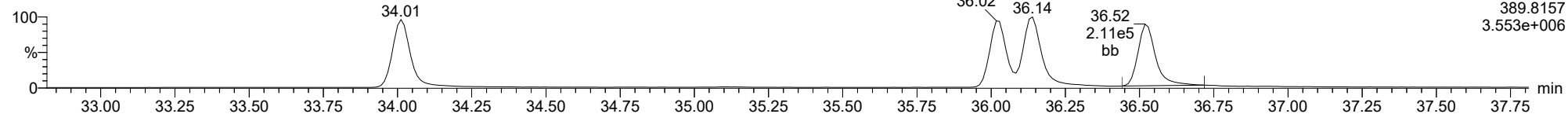
F3:Voltage SIR,EI+  
403.8529  
5.833e+006



ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

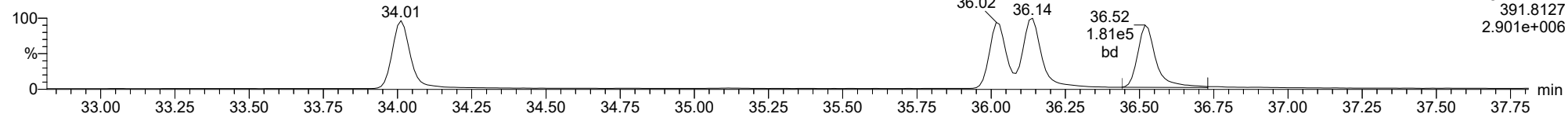
**123789-HxCDD**

23030311



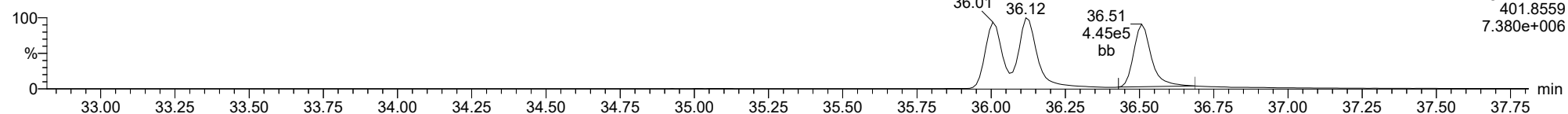
**123789-HxCDD**

23030311



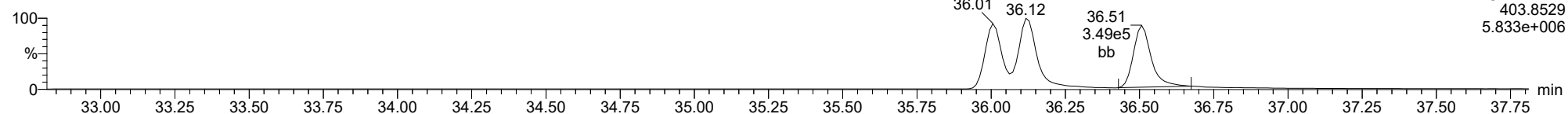
**13C-123789-HxCDD**

23030311



**13C-123789-HxCDD**

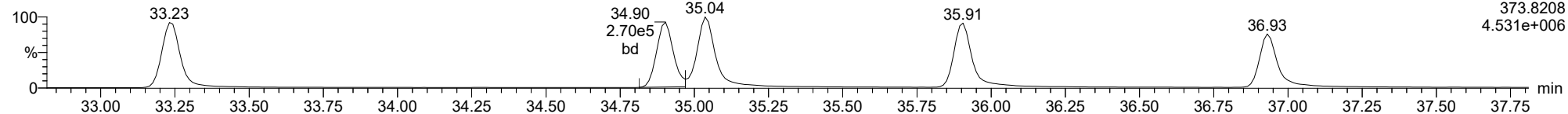
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

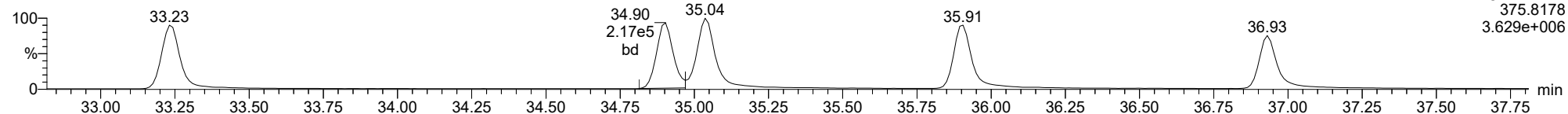
123478-HxCDF

23030311



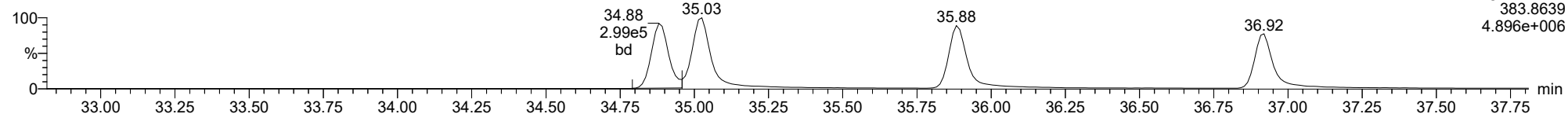
123478-HxCDF

23030311



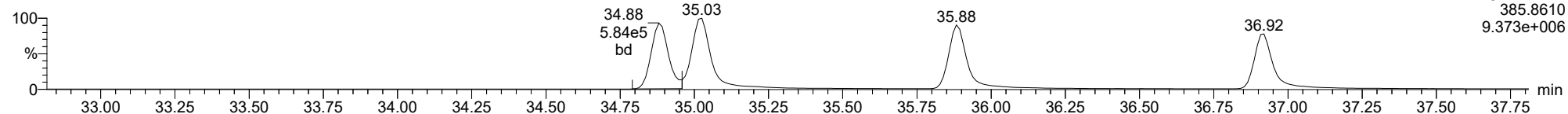
13C-123478-HxCDF

23030311



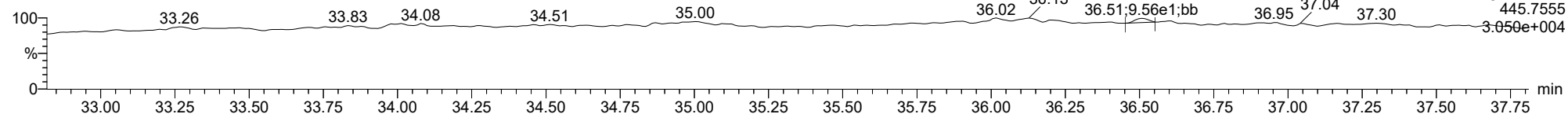
13C-123478-HxCDF

23030311



FUNCTION3 OCDPE

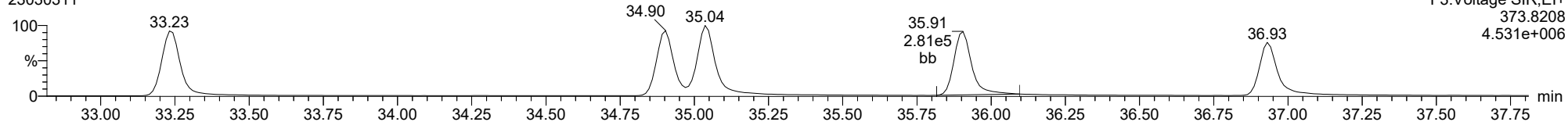
23030311



ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

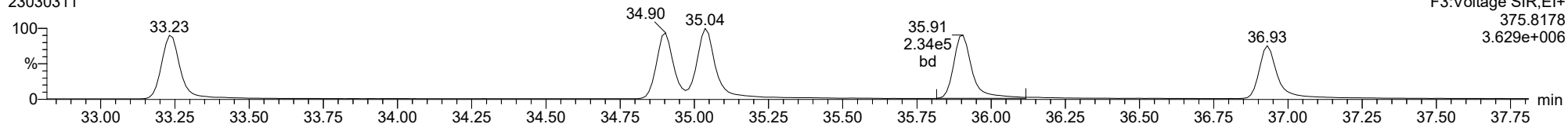
**234678-HxCDF**

23030311



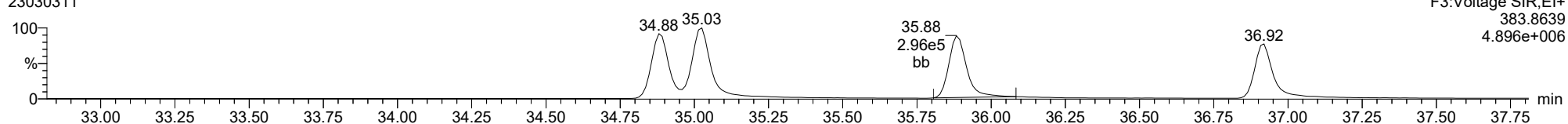
**234678-HxCDF**

23030311



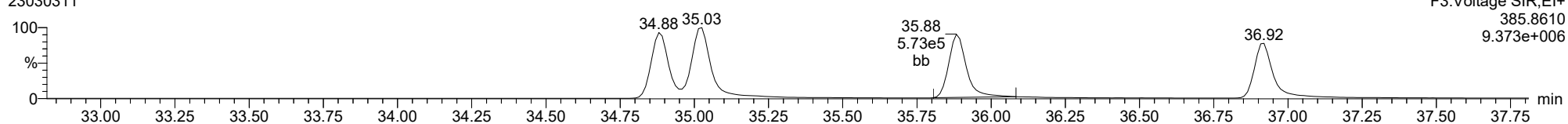
**13C-234678-HxCDF**

23030311



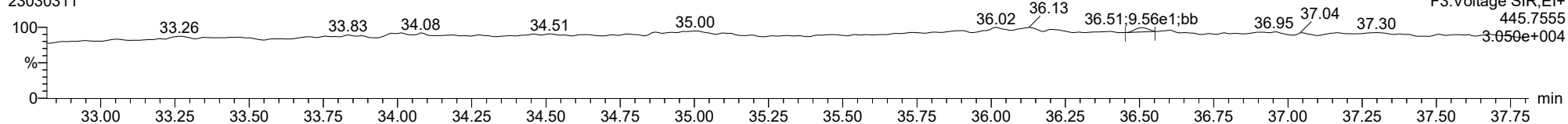
**13C-234678-HxCDF**

23030311



**FUNCTION3 OCDPE**

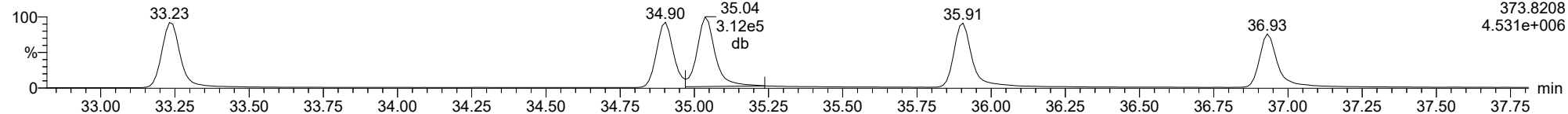
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

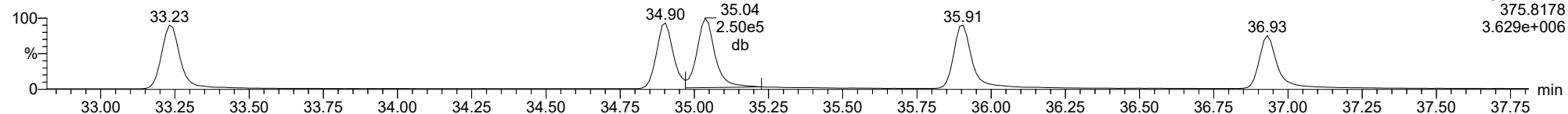
**123678-HxCDF**

23030311



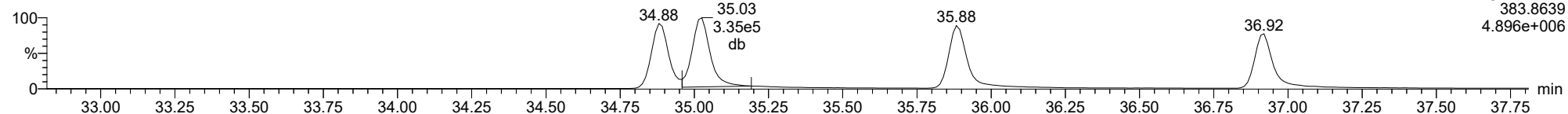
**123678-HxCDF**

23030311



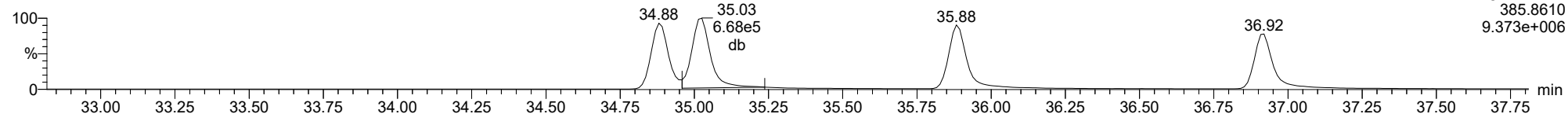
**13C-123678-HxCDF**

23030311



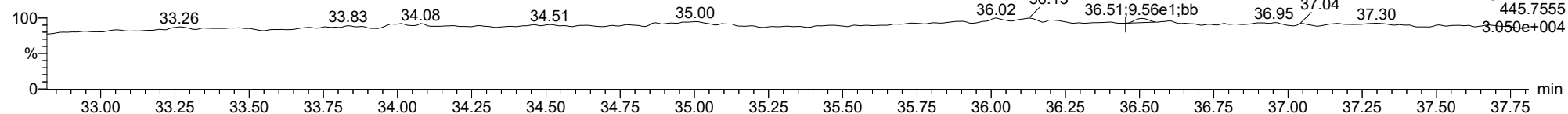
**13C-123678-HxCDF**

23030311



**FUNCTION3 OCDPE**

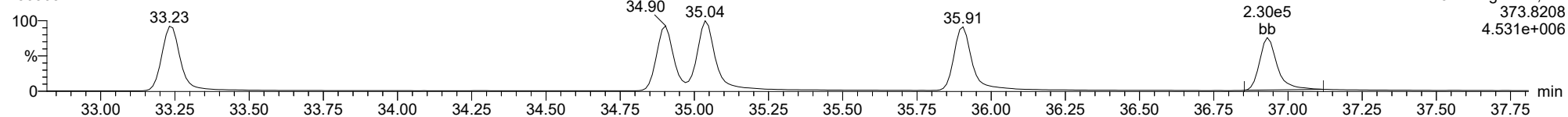
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

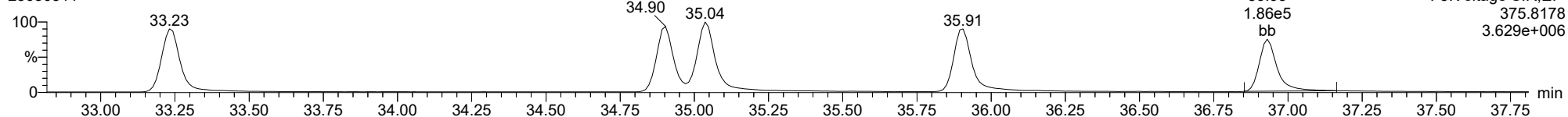
123789-HxCDF

23030311



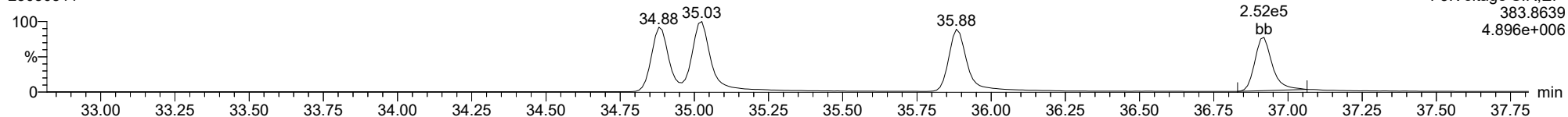
123789-HxCDF

23030311



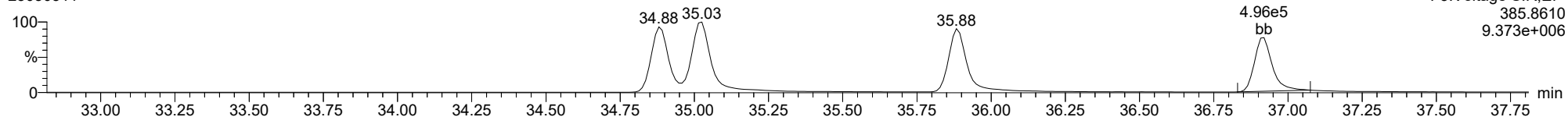
13C-123789-HxCDF

23030311



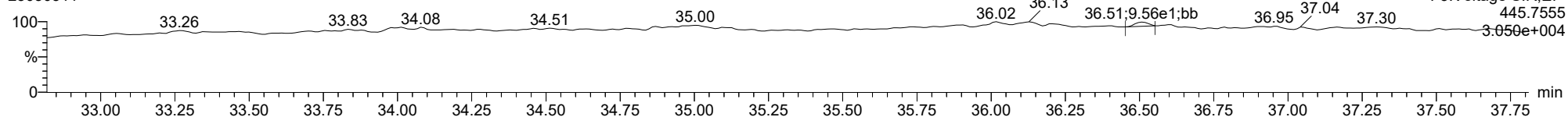
13C-123789-HxCDF

23030311



FUNCTION3 OCDPE

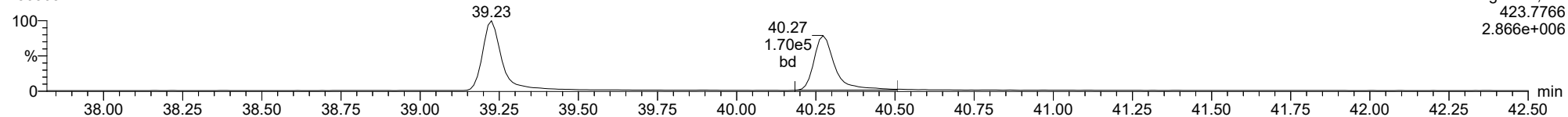
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

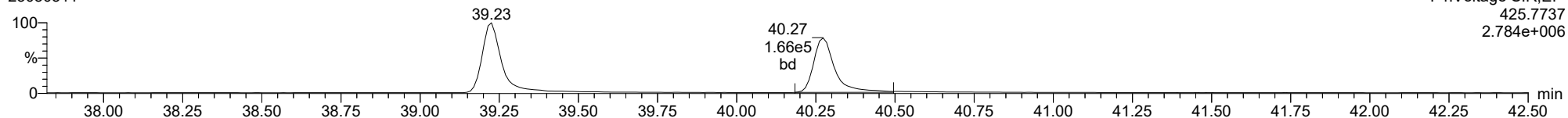
23030311



F4:Voltage SIR,EI+  
423.7766  
2.866e+006

**1234678-HpCDD**

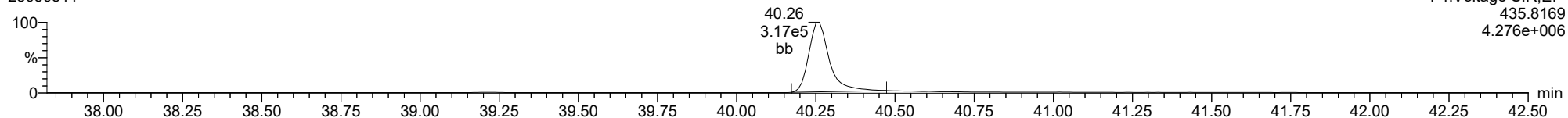
23030311



F4:Voltage SIR,EI+  
425.7737  
2.784e+006

**13C-1234678-HpCDD**

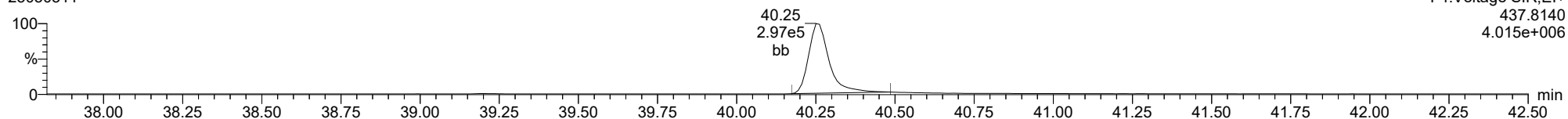
23030311



F4:Voltage SIR,EI+  
435.8169  
4.276e+006

**13C-1234678-HpCDD**

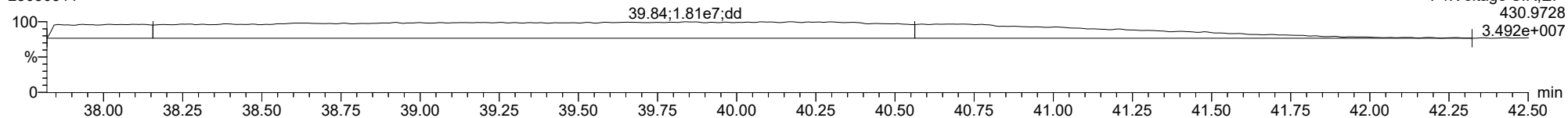
23030311



F4:Voltage SIR,EI+  
437.8140  
4.015e+006

**FUNCTION4 PFK**

23030311

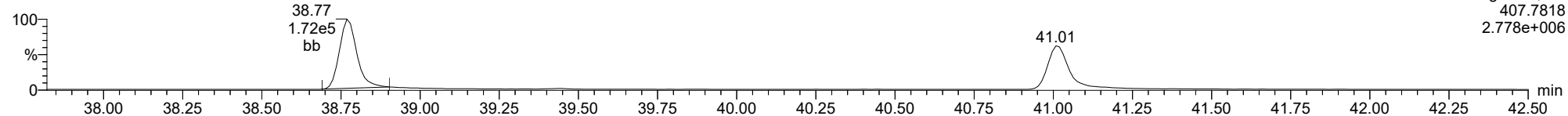


F4:Voltage SIR,EI+  
430.9728  
3.492e+007

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

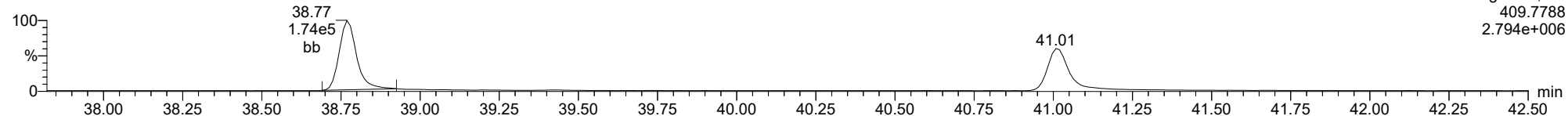
23030311



F4:Voltage SIR,El+  
407.7818  
2.778e+006

1234678-HpCDF

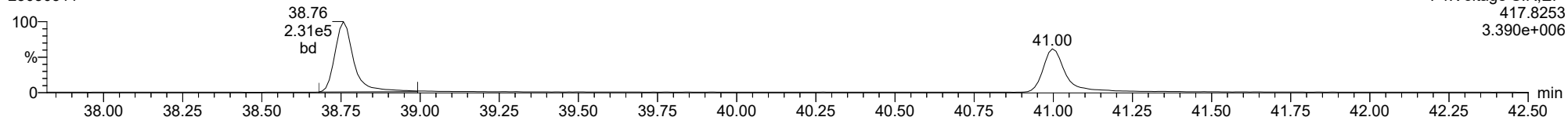
23030311



F4:Voltage SIR,El+  
409.7788  
2.794e+006

13C-1234678-HpCDF

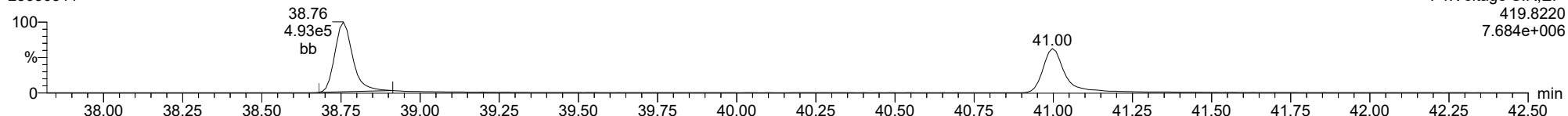
23030311



F4:Voltage SIR,El+  
417.8253  
3.390e+006

13C-1234678-HpCDF

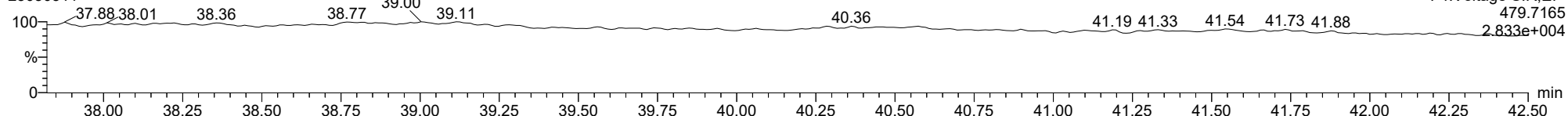
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F4:Voltage SIR,El+  
419.8220  
7.684e+006

FUNCTION4 NCDPE

23030311

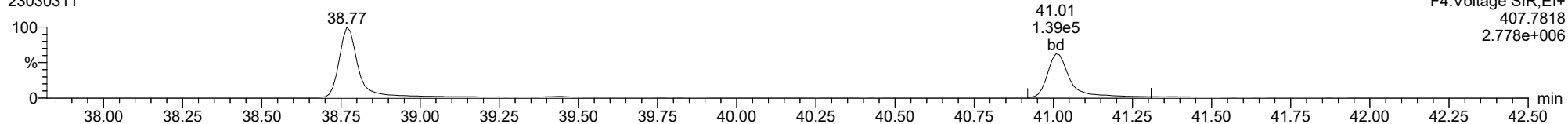


F4:Voltage SIR,El+  
479.7165  
2.833e+004

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF

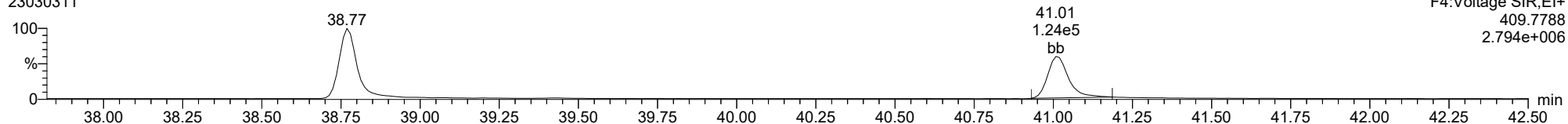
23030311



F4:Voltage SIR,El+  
407.7818  
2.778e+006

1234789-HpCDF

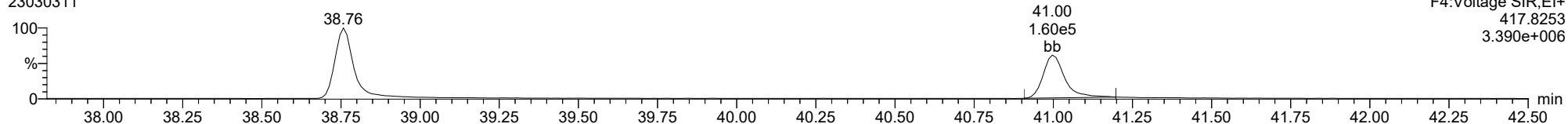
23030311



F4:Voltage SIR,El+  
409.7788  
2.794e+006

13C-1234789-HpCDF

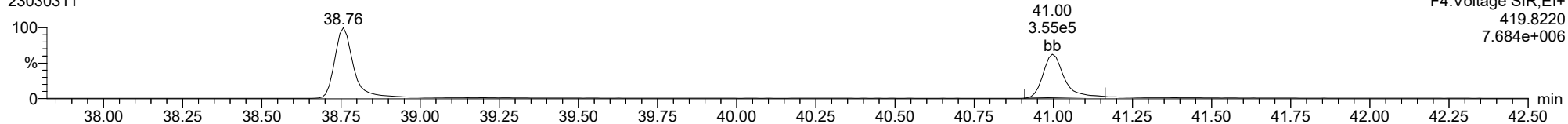
23030311



F4:Voltage SIR,El+  
417.8253  
3.390e+006

13C-1234789-HpCDF

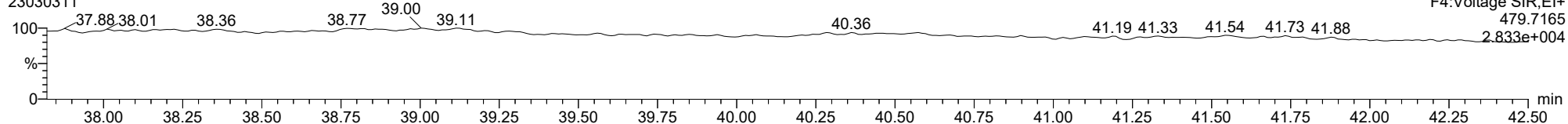
23030311



F4:Voltage SIR,El+  
419.8220  
7.684e+006

FUNCTION4 NCDPE

23030311



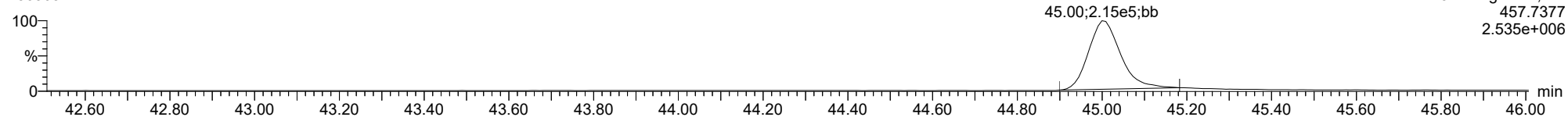
F4:Voltage SIR,El+  
479.7165  
2.833e+004



ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

**OCDD**

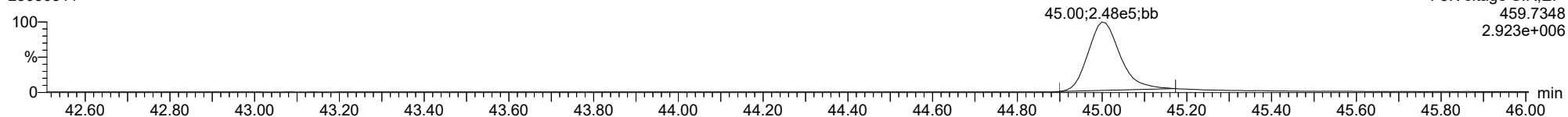
23030311



F5:Voltage SIR,EI+  
457.7377  
2.535e+006

**OCDD**

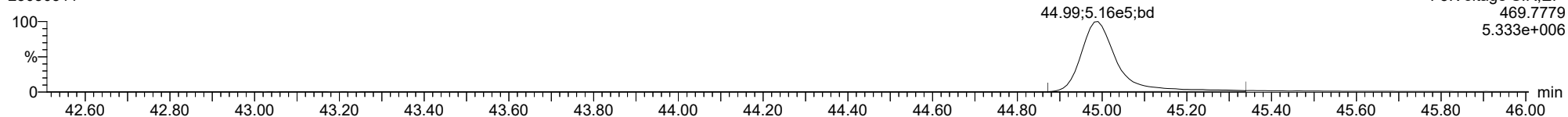
23030311



F5:Voltage SIR,EI+  
459.7348  
2.923e+006

**13C-OCDD**

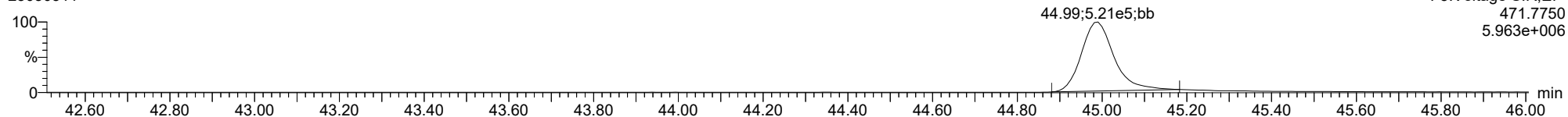
23030311



F5:Voltage SIR,EI+  
469.7779  
5.333e+006

**13C-OCDD**

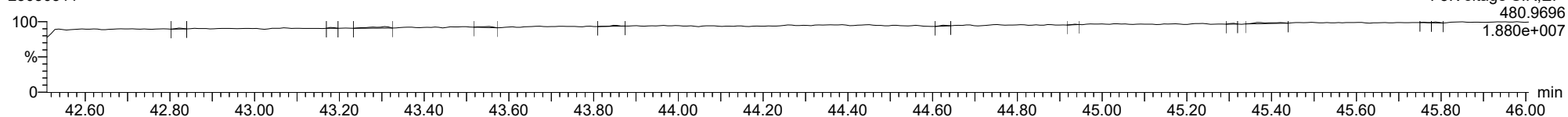
23030311



F5:Voltage SIR,EI+  
471.7750  
5.963e+006

**FUNCTION5 PFK**

23030311

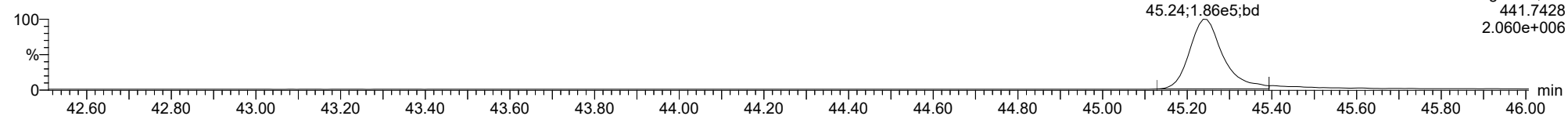


F5:Voltage SIR,EI+  
480.9696  
1.880e+007

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

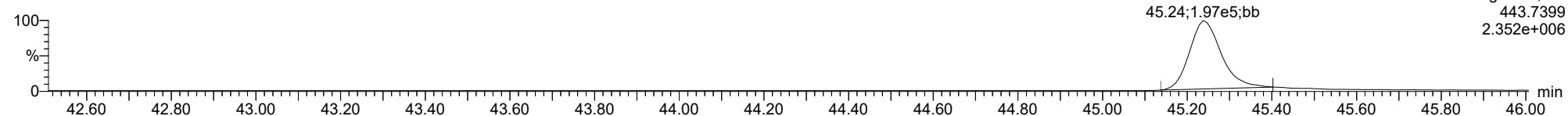
**OCDF**

23030311



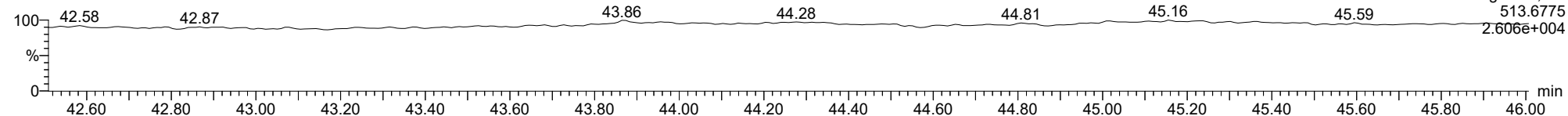
**OCDF**

23030311



**FUNCTION5 DCDPE**

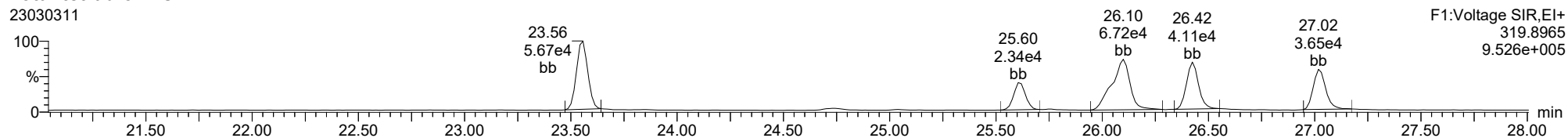
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

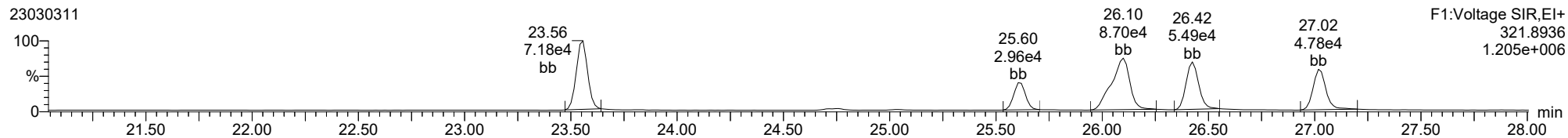
**Total-tetradioxins**

23030311



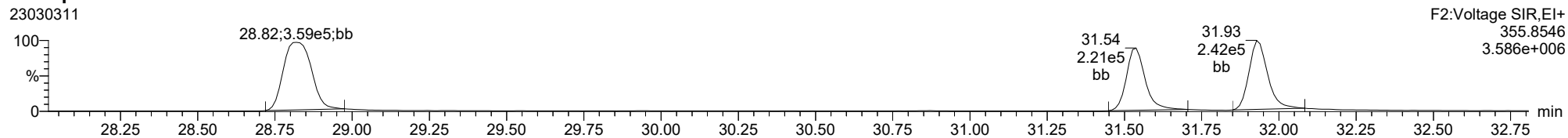
**Total-tetradioxins**

23030311



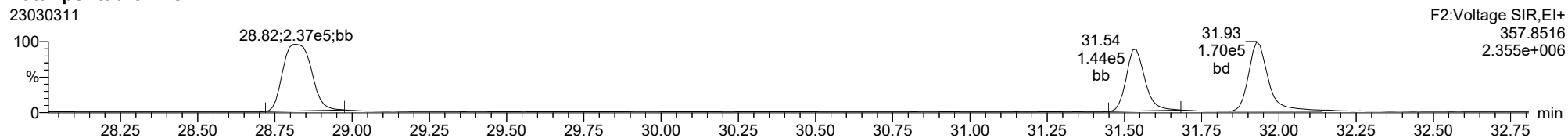
**Total-pentadioxins**

23030311



**Total-pentadioxins**

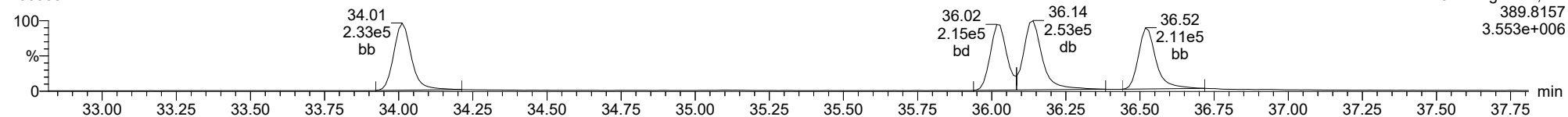
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

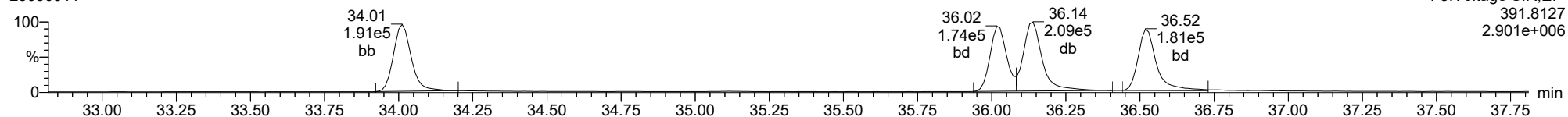
**Total-hexadioxins**

23030311



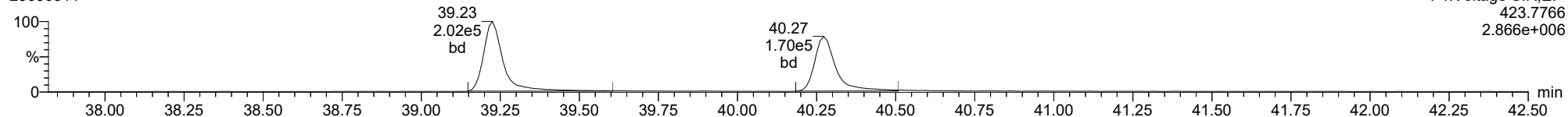
**Total-hexadioxins**

23030311



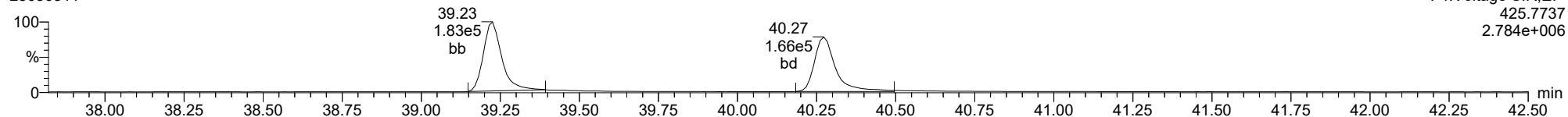
**Total-heptadioxins**

23030311



**Total-heptadioxins**

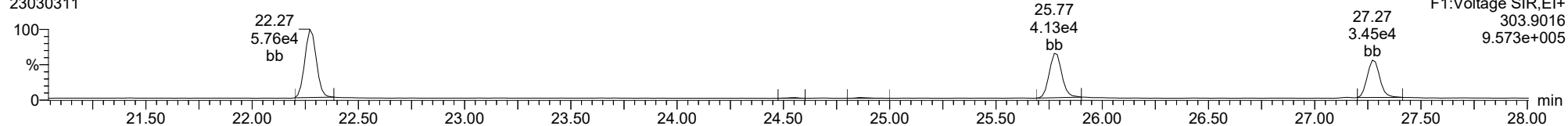
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

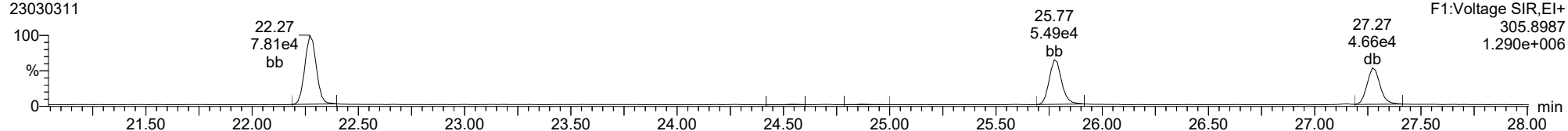
**Total-tetrafurans**

23030311



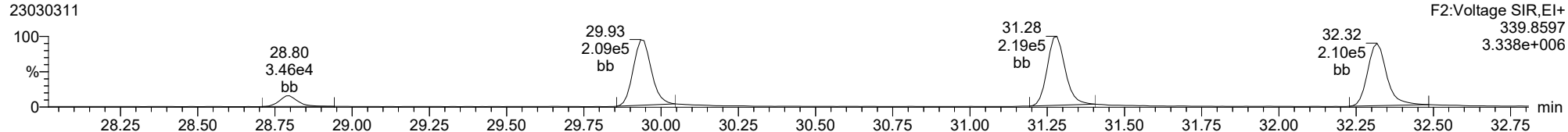
**Total-tetrafurans**

23030311



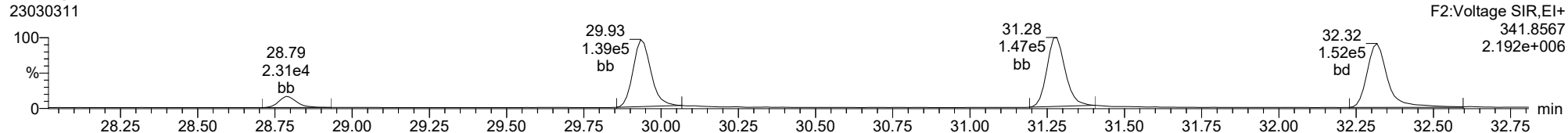
**Total-pentafurans**

23030311



**Total-pentafurans**

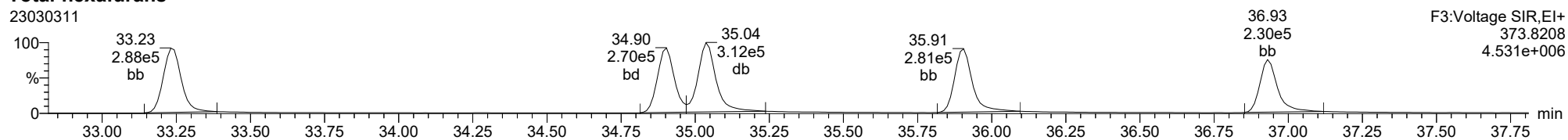
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

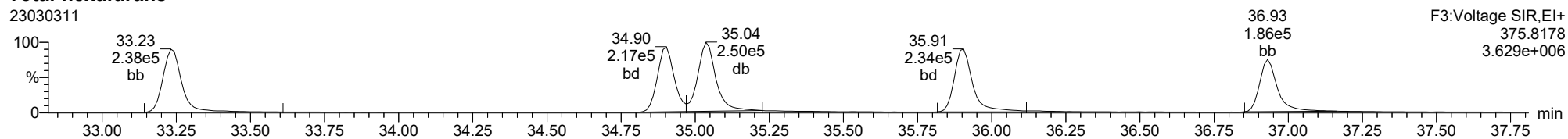
**Total-hexafurans**

23030311



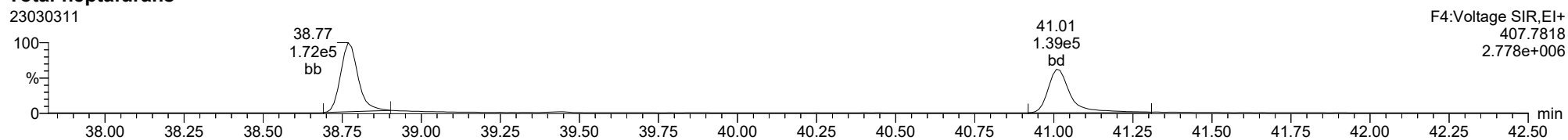
**Total-hexafurans**

23030311



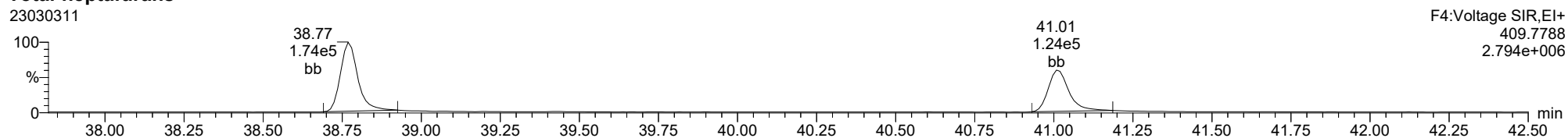
**Total-heptafurans**

23030311



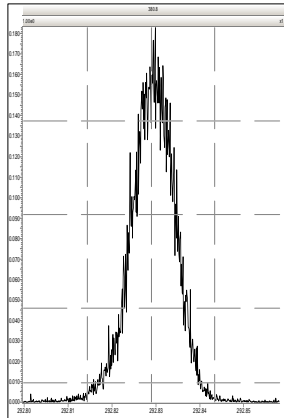
**Total-heptafurans**

23030311

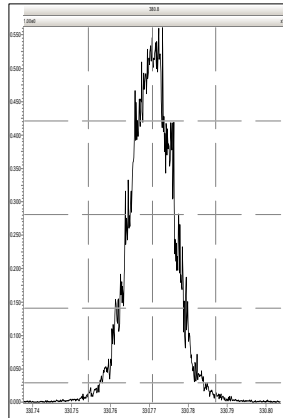


Printed: Friday, March 03, 2023 18:18:18 Pacific Standard Time

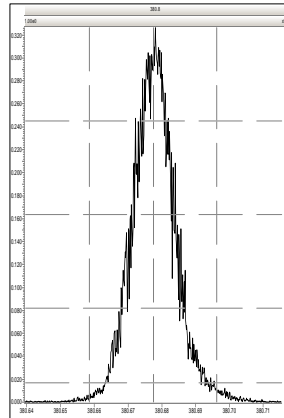
M 292.9824 R 13158



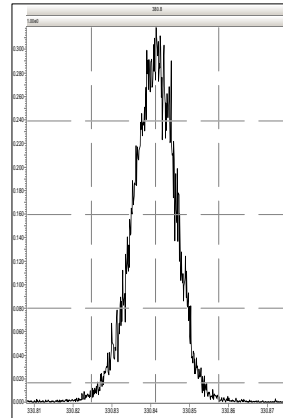
M 330.9792 R 12771



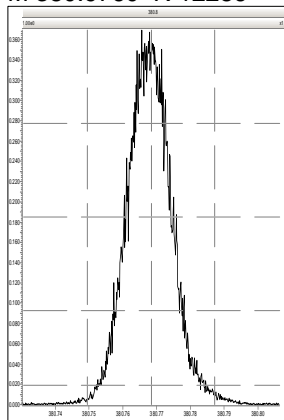
M 380.9760 R 12507



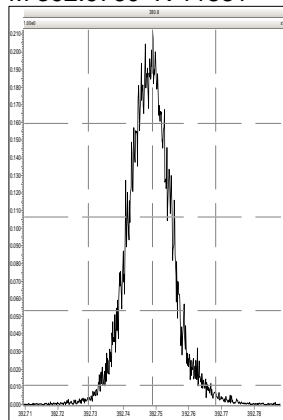
M 330.9792 R 13122



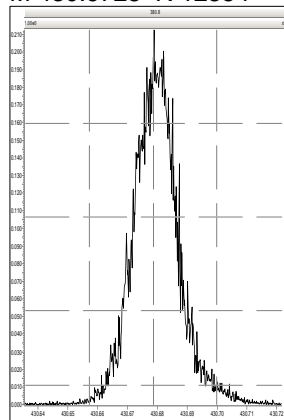
M 380.9760 R 12286



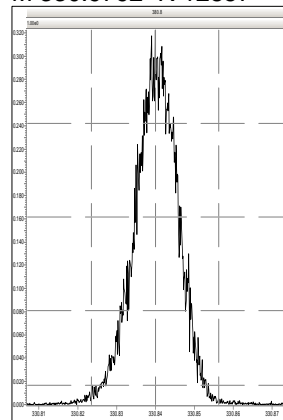
M 392.9760 R 11881



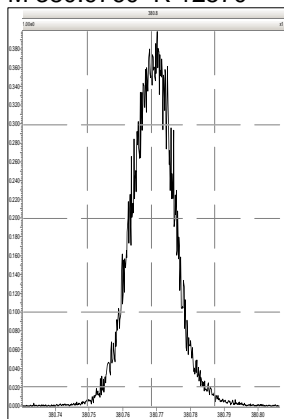
M 430.9728 R 12354



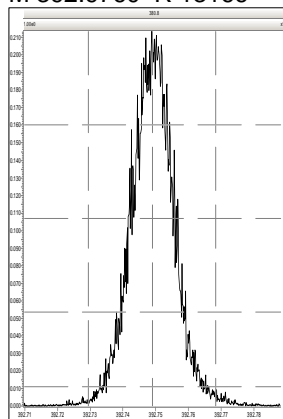
M 330.9792 R 12857



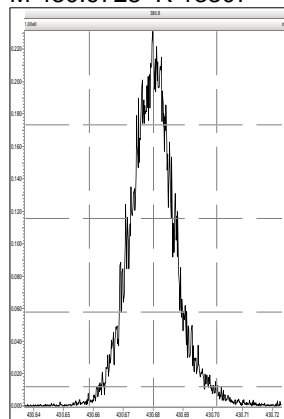
M 380.9760 R 12570



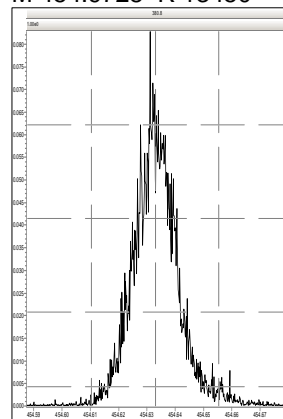
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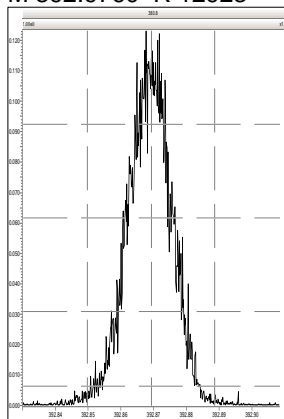
M 430.9728 R 13307



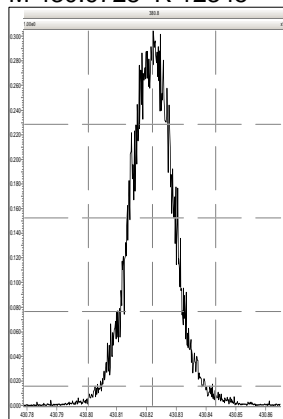
M 454.9728 R 13450



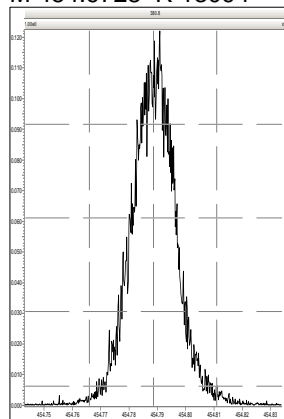
M 392.9760 R 12923



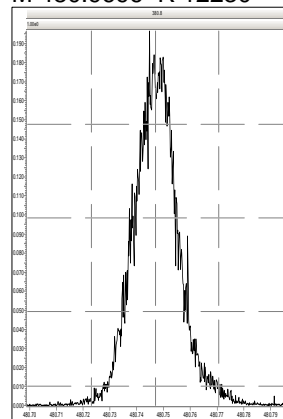
M 430.9728 R 12345



M 454.9728 R 13094

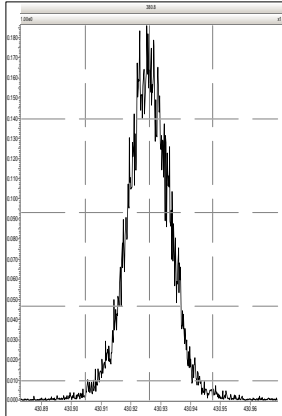


M 480.9696 R 12230

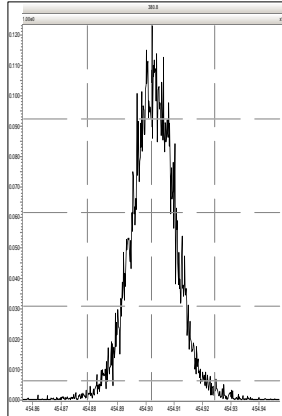


Printed: Friday, March 03, 2023 18:18:18 Pacific Standard Time

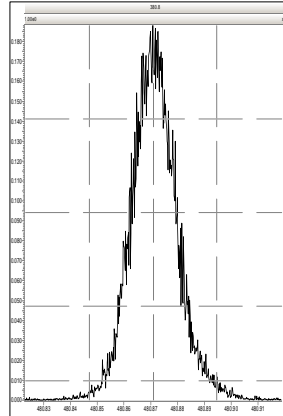
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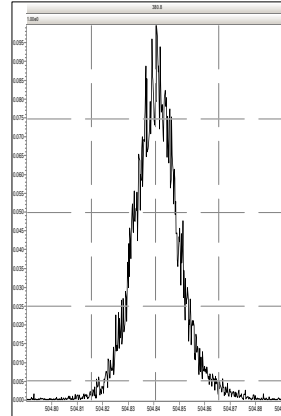
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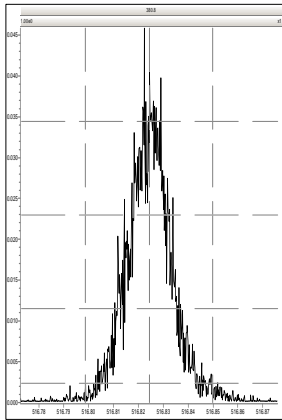
M 480.9696 R 11904



M 504.9696 R 12168



M 516.9697 R 13193



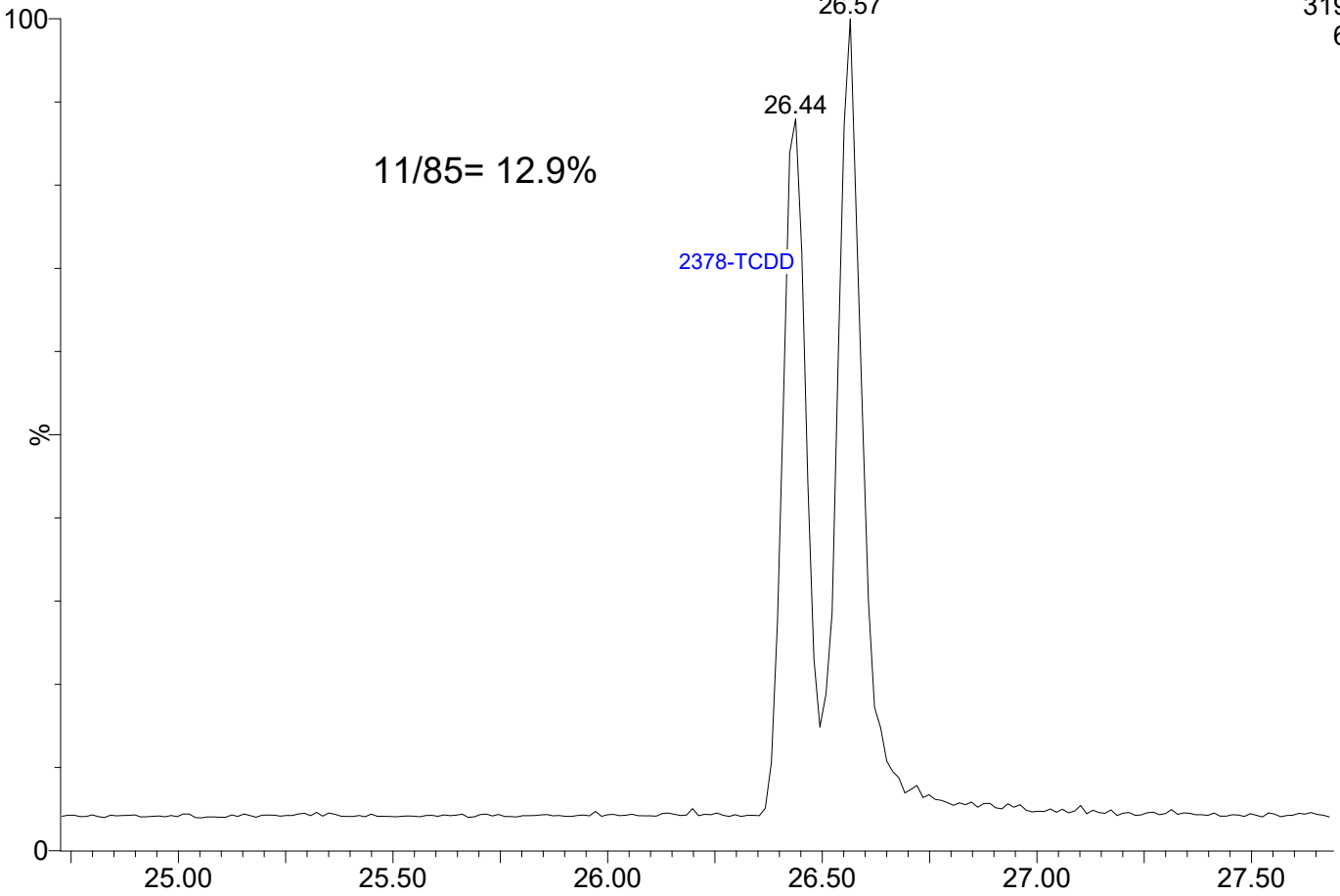


23030312

1: Voltage SIR 14 Channels EI+

319.8965

6.52e5

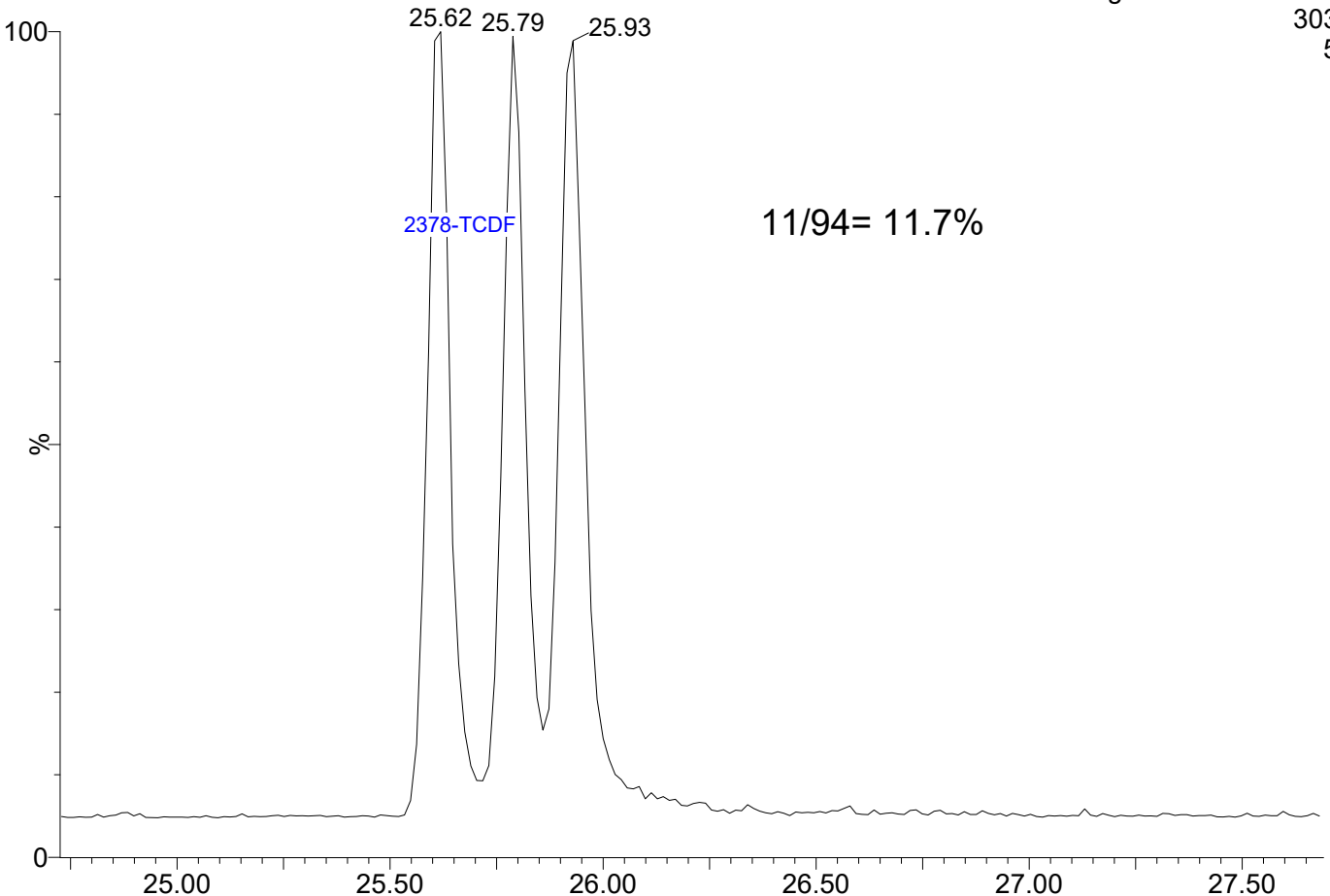


23030312

1: Voltage SIR 14 Channels EI+

303.9016

5.59e5





**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 1613B**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00015

**Laboratory ID:** SLC0045-SCV1

**Sequence:** SLC0045

**Sequence Name:** ICVCW

**Standard ID:** H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.84	-1.6	
2,3,7,8-TCDD	10.000	9.81	-1.9	
1,2,3,7,8-PeCDF	50.000	51.4	2.8	
2,3,4,7,8-PeCDF	50.000	49.0	-2.0	
1,2,3,7,8-PeCDD	50.000	48.5	-2.9	
1,2,3,4,7,8-HxCDF	50.000	48.2	-3.5	
1,2,3,6,7,8-HxCDF	50.000	48.0	-4.0	
2,3,4,6,7,8-HxCDF	50.000	50.2	0.4	
1,2,3,7,8,9-HxCDF	50.000	49.1	-1.8	
1,2,3,4,7,8-HxCDD	50.000	50.8	1.6	
1,2,3,6,7,8-HxCDD	50.000	50.2	0.3	
1,2,3,7,8,9-HxCDD	50.000	51.6	3.2	
1,2,3,4,6,7,8-HpCDF	50.000	51.8	3.7	
1,2,3,4,7,8,9-HpCDF	50.000	48.5	-3.1	
1,2,3,4,6,7,8-HpCDD	50.000	49.2	-1.6	
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	



**SECOND-SOURCE CALIBRATION VERIFICATION**  
**EPA 1613B**

**Laboratory:** Analytical Resources, LLC

**Client:** Anchor QEA, LLC

**Calibration:** GC00015

**Sequence:** SLC0045

**SDG:** 23A0206

**Project:** AOC5 MR Phase 1

**Laboratory ID:** SLC0045-SCV1

**Sequence Name:** ICVCW

**Standard ID:** H008219

\* Indicates values outside of QC limits



**SECOND-SOURCE  
CALIBRATION VERIFICATION**

**EPA 1613B**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GC00015

**Laboratory ID:** SLC0045-SCV1

**Sequence:** SLC0045

**Standard ID:** H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	

\* Values outside of QC limits



INITIAL CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23030302

Calibration Date: 03/03/2023

Sequence: SLC0045

Injection Date: 03/03/23

Lab Sample ID: SLC0045-ICV1

Injection Time: 09:51

Sequence Name: CS3W1

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	9.55	0.7015272	0.6699659		-4.5	+/-16
2,3,7,8-TCDD	A	10.000	9.45	1.1486620	1.0855020		-5.5	+/-22
1,2,3,7,8-PeCDF	A	50.000	49.6	0.6792300	0.6743560		-0.7	+/-18
2,3,4,7,8-PeCDF	A	50.000	47.5	0.7861704	0.7472986		-4.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0218450	1.0147700		-0.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.1	1.1660380	1.0988190		-5.8	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	49.6	1.0907410	1.0813380		-0.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.3	1.1396990	1.1246750		-1.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	47.0	1.1370930	1.0679460		-6.1	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.1	0.9955689	0.9966266		0.1	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	49.6	1.0009380	0.9938861		-0.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	54.2	0.9071139	0.9838286		8.5	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.5	1.0029930	0.9526502		-5.0	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	50.2	0.9531152	0.9573187		0.4	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	47.6	1.0390130	0.9895371		-4.8	+/-14
OCDF	A	100.00	88.6	0.7778078	0.6890651		-11.4	+/-37
OCDD	A	100.00	98.4	0.9199537	0.9055309		-1.6	+/-21
13C12-2,3,7,8-TCDF	A	100.00	94.0	1.6201960	1.5232274		-6.0	+/-29
13C12-2,3,7,8-TCDD	A	100.00	102	1.1524090	1.1727116		1.8	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.2	1.2404520	1.1438587		-7.8	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	87.6	1.1177860	0.9791895		-12.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	84.3	0.8288129	0.6985475		-15.7	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	84.0	1.1683050	0.9815313		-16.0	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	74.6	1.3864660	1.0348865		-25.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.1292560	1.0010969		-11.3	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	99.9	0.9317541	0.9305560		-0.1	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.5	0.9950393	0.9299453		-6.5	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.9	1.1566890	1.0052205		-13.1	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	95.3	0.8952017	0.8530837		-4.7	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	98.7	0.7697516	0.7594900		-1.3	+/-23

\* Values outside of QC limits



**INITIAL CALIBRATION CHECK**  
**EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Instrument ID:	<u>AUTOSPEC01</u>	Calibration:	<u>GC00015</u>
Lab File ID:	<u>23030302</u>	Calibration Date:	<u>03/03/2023</u>
Sequence:	<u>SLC0045</u>	Injection Date:	<u>03/03/23</u>
Lab Sample ID:	<u>SLC0045-ICV1</u>	Injection Time:	<u>09:51</u>
Sequence Name:	<u>CS3W1</u>		

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	105	0.8401226	0.8828452		5.1	+/-28
13C12-OCDD	A	200.00	214	0.7674714	0.8220320		7.1	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.05	1.2878040	1.1649542		-9.5	

\* Values outside of QC limits



INITIAL CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23031502

Calibration Date: 03/03/2023

Sequence: SLC0176

Injection Date: 03/15/23

Lab Sample ID: SLC0176-ICV1

Injection Time: 11:02

Sequence Name: CS3Z4

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	10.7	0.7015272	0.7491013		6.8	+/-16
2,3,7,8-TCDD	A	10.000	9.14	1.1486620	1.0495520		-8.6	+/-22
1,2,3,7,8-PeCDF	A	50.000	52.0	0.6792300	0.7069506		4.1	+/-18
2,3,4,7,8-PeCDF	A	50.000	49.9	0.7861704	0.7847233		-0.2	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.1	1.0218450	1.0243230		0.2	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	48.3	1.1660380	1.1273660		-3.3	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	49.0	1.0907410	1.0690270		-2.0	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	50.7	1.1396990	1.1564260		1.5	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.0	1.1370930	1.0907050		-4.1	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	48.1	0.9955689	0.9568005		-3.9	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	47.3	1.0009380	0.9466622		-5.4	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	52.4	0.9071139	0.9499178		4.7	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.3	1.0029930	0.9680206		-3.5	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	52.0	0.9531152	0.9907253		3.9	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	50.2	1.0390130	1.0435310		0.4	+/-14
OCDF	A	100.00	95.3	0.7778078	0.7408728		-4.7	+/-37
OCDD	A	100.00	103	0.9199537	0.9435841		2.6	+/-21
13C12-2,3,7,8-TCDF	A	100.00	85.8	1.6201960	1.3896086		-14.2	+/-29
13C12-2,3,7,8-TCDD	A	100.00	100	1.1524090	1.1576123		0.5	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	80.0	1.2404520	0.9919367		-20.0	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	81.5	1.1177860	0.9107706		-18.5	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	83.2	0.8288129	0.6894064		-16.8	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	80.3	1.1683050	0.9384741		-19.7	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	71.8	1.3864660	0.9954735		-28.2	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	82.7	1.1292560	0.9343331		-17.3	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	90.8	0.9317541	0.8461563		-9.2	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.1	0.9950393	0.9661449		-2.9	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	85.9	1.1566890	0.9936743		-14.1	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	83.7	0.8952017	0.7490321		-16.3	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	83.0	0.7697516	0.6387781		-17.0	+/-23

\* Values outside of QC limits



## INITIAL CALIBRATION CHECK EPA 1613B

Laboratory: Analytical Resources, LLC                                  SDG: 23A0206  
Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
Instrument ID: AUTOSPEC01    Calibration: GC00015  
Lab File ID: 23031502    Calibration Date: 03/03/2023  
Sequence: SLC0176    Injection Date: 03/15/23  
Lab Sample ID: SLC0176-ICV1    Injection Time: 11:02  
Sequence Name: CS3Z4

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	84.3	0.8401226	0.7086402		-15.7	+/-28
13C12-OCDD	A	200.00	151	0.7674714	0.5811518		-24.3	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.61	1.2878040	1.1090972		-13.9	

\* Values outside of QC limits



Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.576	1.001	2.816e4	3.691e4	0.702	0.763	0.770	684	849	4.43e5	5.84e5	647.3	687.9	NO	bb	bb	10.678
12378-PeCDF	29.747	1.001	1.315e5	8.767e4	0.679	1.500	1.550	962	866	2.09e6	1.36e6	2175.8	1571.2	NO	bb	bb	52.041
23478-PeCDF	31.084	1.001	1.351e5	8.831e4	0.786	1.529	1.550	962	866	2.13e6	1.40e6	2215.9	1619.7	NO	bb	bb	49.908
123478-HxCDF	34.716	1.000	1.914e5	1.534e5	1.166	1.248	1.240	919	907	3.19e6	2.55e6	3473.9	2807.4	NO	bd	bd	48.342
234678-HxCDF	35.730	1.001	1.962e5	1.559e5	1.140	1.258	1.240	919	907	3.34e6	2.67e6	3633.5	2948.3	NO	bb	bb	50.734
123678-HxCDF	34.861	1.001	1.927e5	1.541e5	1.091	1.250	1.240	919	907	3.13e6	2.51e6	3407.8	2763.2	NO	db	dd	49.005
123789-HxCDF	36.755	1.000	1.661e5	1.346e5	1.137	1.234	1.240	919	907	2.73e6	2.17e6	2967.7	2396.5	NO	bd	bd	47.960
1234678-HpCDF	38.615	1.000	1.185e5	1.178e5	1.003	1.007	1.050	1014	1030	2.06e6	2.09e6	2027.8	2028.8	NO	bb	bb	48.257
1234789-HpCDF	40.832	1.000	1.034e5	1.028e5	0.953	1.006	1.050	1014	1030	1.61e6	1.58e6	1588.5	1537.0	NO	bb	bb	51.973
OCDF	45.029	1.005	1.325e5	1.481e5	0.778	0.895	0.890	657	818	1.68e6	1.88e6	2564.8	2297.2	NO	bb	bb	95.251
2378-TCDD	26.226	1.001	3.319e4	4.276e4	1.149	0.776	0.770	942	804	5.09e5	6.59e5	540.5	820.0	NO	bb	bd	9.137
12378-PeCDD	31.329	1.000	1.327e5	8.802e4	1.022	1.508	1.550	835	994	2.09e6	1.39e6	2499.8	1400.8	NO	bb	bb	50.121
123478-HxCDD	35.841	1.000	1.657e5	1.356e5	0.996	1.222	1.240	706	774	2.83e6	2.30e6	4009.0	2969.2	NO	bd	bd	48.053
123678-HxCDD	35.953	1.000	1.680e5	1.385e5	1.001	1.213	1.240	706	774	2.84e6	2.33e6	4015.9	3004.4	NO	db	db	47.289
123789-HxCDD	36.354	1.012	1.666e5	1.367e5	0.907	1.219	1.240	706	774	2.80e6	2.28e6	3965.6	2938.5	NO	bb	bb	52.359
1234678-HpCDD	40.097	1.000	1.225e5	1.185e5	1.039	1.034	1.050	816	836	2.05e6	2.00e6	2509.8	2392.0	NO	bb	bb	50.217
OCDD	44.801	1.000	1.673e5	1.901e5	0.920	0.880	0.890	1003	1039	2.16e6	2.46e6	2157.1	2369.8	NO	bb	bb	102.569
13C-2378-TCDF	25.562	1.007	3.751e5	4.935e5	1.620	0.760	0.770	1851	952	6.02e6	7.90e6	3251.0	8298.5	NO	bb	bb	85.768
13C-12378-PeCDF	29.725	1.171	3.752e5	2.449e5	1.240	1.532	1.550	1410	980	5.98e6	3.87e6	4245.1	3945.4	NO	bb	bb	79.966
13C-23478-PeCDF	31.062	1.224	3.438e5	2.255e5	1.118	1.524	1.550	1410	980	5.49e6	3.54e6	3897.5	3608.3	NO	bb	bb	81.480
13C-123478-HxCDF	34.705	0.955	1.950e5	4.167e5	1.168	0.468	0.510	1024	1263	3.45e6	6.94e6	3364.4	5492.7	NO	bb	bd	80.328
13C-123678-HxCDF	34.839	0.959	2.202e5	4.287e5	1.386	0.514	0.510	1024	1263	3.55e6	6.92e6	3462.5	5477.9	NO	dd	dd	71.799
13C-234678-HxCDF	35.708	0.983	2.059e5	4.031e5	1.129	0.511	0.510	1024	1263	3.40e6	6.71e6	3325.1	5310.7	NO	bb	bb	82.739
13C-123789-HxCDF	36.743	1.011	1.867e5	3.648e5	0.932	0.512	0.510	1024	1263	3.20e6	6.20e6	3124.8	4909.7	NO	bb	bb	90.813
13C-1234678-HpCDF	38.604	1.063	1.480e5	3.402e5	0.895	0.435	0.440	814	1216	2.65e6	6.09e6	3259.7	5007.9	NO	bb	bb	83.672
13C-1234789-HpCDF	40.810	1.123	1.283e5	2.881e5	0.770	0.445	0.440	814	1216	2.00e6	4.60e6	2457.4	3781.2	NO	bb	bb	82.985
13C-1234-TCDD	25.379	0.000	2.756e5	3.495e5	1.000	0.789	0.770	1244	696	4.42e6	5.62e6	3551.9	8078.4	NO	bb	bb	100.000
13C-2378-TCDD	26.198	1.032	3.197e5	4.039e5	1.152	0.792	0.770	1244	696	5.13e6	6.45e6	4126.0	9263.9	NO	bb	bb	100.452
13C-12378-PeCDD	31.318	1.234	2.672e5	1.637e5	0.829	1.632	1.550	892	567	4.14e6	2.51e6	4638.5	4432.4	NO	bb	bb	83.180
13C-123478-HxCDD	35.830	0.986	3.533e5	2.764e5	0.995	1.278	1.240	996	896	5.96e6	4.59e6	5985.3	5123.1	NO	bd	bd	97.096
13C-123678-HxCDD	35.942	0.989	3.644e5	2.833e5	1.157	1.286	1.240	996	896	6.19e6	4.85e6	6216.7	5415.0	NO	db	dd	85.907
13C-1234678-HpCDD	40.086	1.103	2.385e5	2.233e5	0.840	1.068	1.050	733	846	4.00e6	3.75e6	5462.9	4431.8	NO	bb	bb	84.350
13C-OCDD	44.783	1.233	3.606e5	3.970e5	0.767	0.908	0.890	880	1180	4.76e6	5.23e6	5410.1	4433.1	NO	bb	bb	151.446
13C-123789-HxCDD	36.332	0.000	3.679e5	2.838e5	1.000	1.296	1.240	996	896	6.22e6	4.75e6	6245.5	5298.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.212	1.033	6.933e4		1.288			742		1.07e6		1444.8			bb		8.612

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.073	0.863	2.997e4	3.989e4	0.802	0.751	0.770	684	849	4.75e5	6.45e5	694.2	759.5	NO	bb	bb	10.034
1289-TCDF	27.074	1.059	2.668e4	3.495e4	0.678	0.763	0.770	684	849	4.02e5	5.33e5	588.1	627.5	NO	db	db	10.465
13468-PECDF	26.933	0.906	2.592e5	1.716e5	1.246	1.510	1.550	584	577	4.04e6	2.70e6	6920.4	4681.1	NO	bb	bb	55.741
12389-PECDF	32.109	1.080	1.343e5	8.957e4	0.496	1.499	1.550	962	866	2.10e6	1.43e6	2181.6	1657.7	NO	bb	bb	72.733
123468-HXCDF	33.045	0.952	1.758e5	1.388e5	1.169	1.267	1.240	919	907	2.77e6	2.21e6	3020.5	2435.0	NO	bb	bb	43.981
1368-TCDD	23.345	0.891	3.001e4	3.792e4	1.015	0.791	0.770	942	804	4.84e5	6.16e5	513.1	766.3	NO	bb	bb	9.246
1289-TCDD	26.819	1.024	3.035e4	3.755e4	0.909	0.808	0.770	942	804	4.69e5	5.85e5	497.6	728.5	NO	bb	bb	10.326
12479-PECDD	28.599	0.913	2.111e5	1.365e5	2.301	1.547	1.550	835	994	2.09e6	1.33e6	2496.6	1340.4	NO	bb	bb	35.046
12389-PECDD	31.730	1.013	1.562e5	1.002e5	1.184	1.559	1.550	835	994	2.47e6	1.58e6	2961.6	1585.9	NO	bb	bb	50.274
124679-HXCDD	33.825	0.944	1.596e5	1.323e5	1.115	1.207	1.240	706	774	2.61e6	2.14e6	3692.7	2763.6	NO	bb	bb	41.554
1234679-HPCDD	39.061	0.974	1.352e5	1.299e5	1.137	1.040	1.050	816	836	2.32e6	2.25e6	2850.1	2687.7	NO	bb	bb	50.485
Total-tetrafurans			8.635e4		0.727			684		1.34e6							31.755
Total-penta1			2.592e5					584		4.04e6							55.741
Total-pentafurans			4.208e5		0.654			962		6.64e6							183.245
Total-hexafurans			9.222e5		1.141			919		1.52e7							240.022
Total-heptafurans			2.231e5		0.978			1014		3.68e6							100.771
Total-Furans			2.044e6		0.922			684		3.26e7							706.785
Total-tetradoxins			1.586e5		1.024			942		2.24e6							48.667
Total-pentadoxins			5.000e5		1.502			835		6.65e6							135.441
Total-hexadoxins			6.599e5		1.005			706		1.11e7							189.255
Total-heptadoxins			2.576e5		1.088			816		4.37e6							100.702
Total-Dioxins			1.743e6		1.130			942		2.65e7							576.633
Total-TEQ			3.788e6					942		5.91e7							1283.418
FUNCTION1 PFK			8.159e4					342903		1.14e6							
FUNCTION2 PFK			3.495e5					203889		9.85e6							0.000
FUNCTION3 PFK			0.000e0					282294		0.00e0							
FUNCTION4 PFK			2.479e7					196557		6.98e6							
FUNCTION5 PFK			5.267e4					120149		1.99e6							
FUNCTION1 HXCD...			6.392e2					622		9.03e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.906e2					612		8.69e3							0.000
FUNCTION3 OCDPE			0.000e0					457		0.00e0							
FUNCTION4 NCDPE			8.503e1					621		1.93e3							0.000
FUNCTION5 DCDPE			7.719e1					682		1.34e3							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23****Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27****ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.668e4	3.495e4	0.678	0.76	0.77	588.1	YES	NO	db	db	10.465
2	Total-tetrafurans	26.95	9.768e2	1.368e3	0.727	0.71	0.77	21.2	YES	NO	bd	bd	0.371
3	2378-TCDF	25.58	2.816e4	3.691e4	0.702	0.76	0.77	647.3	YES	NO	bb	bb	10.678
4	Total-tetrafurans	24.69	2.943e2	4.181e2	0.727	0.70	0.77	6.6	YES	NO	bb	bb	0.113
5	Total-tetrafurans	24.35	2.742e2	3.185e2	0.727	0.86	0.77	8.4	YES	NO	bb	bb	0.094
6	1368-TCDF	22.07	2.997e4	3.989e4	0.802	0.75	0.77	694.2	YES	NO	bb	bb	10.034

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.93	2.592e5	1.716e5	1.246	1.51	1.55	6920.4	YES	NO	bb	bb	55.741

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.11	1.343e5	8.957e4	0.496	1.50	1.55	2181.6	YES	NO	bb	bb	72.733
2	23478-PeCDF	31.08	1.351e5	8.831e4	0.786	1.53	1.55	2215.9	YES	NO	bb	bb	49.908
3	12378-PeCDF	29.75	1.315e5	8.767e4	0.679	1.50	1.55	2175.8	YES	NO	bb	bb	52.041
4	Total-pentafurans	28.60	2.001e4	1.329e4	0.654	1.51	1.55	326.6	YES	NO	bb	bb	8.563

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.73	1.962e5	1.559e5	1.140	1.26	1.24	3633.5	YES	NO	bb	bb	50.734
2	123678-HxCDF	34.86	1.927e5	1.541e5	1.091	1.25	1.24	3407.8	YES	NO	db	dd	49.005
3	123478-HxCDF	34.72	1.914e5	1.534e5	1.166	1.25	1.24	3473.9	YES	NO	bd	bd	48.342
4	123468-HxCDF	33.04	1.758e5	1.388e5	1.169	1.27	1.24	3020.5	YES	NO	bb	bb	43.981
5	123789-HxCDF	36.75	1.661e5	1.346e5	1.137	1.23	1.24	2967.7	YES	NO	bd	bd	47.960

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	40.99	7.195e1	7.350e1	0.978	0.98	1.05	0.0	NO	NO	bb	bb	0.033
2	1234789-HpCDF	40.83	1.034e5	1.028e5	0.953	1.01	1.05	1588.5	YES	NO	bb	bb	51.973
3	Total-heptafurans	39.26	1.085e3	1.165e3	0.978	0.93	1.05	17.9	YES	NO	bb	bb	0.509
4	1234678-HpCDF	38.62	1.185e5	1.178e5	1.003	1.01	1.05	2027.8	YES	NO	bb	bb	48.257

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.668e4	3.495e4	0.678	0.76	0.77	588.1	YES	NO	db	db	10.465
2	Total-tetrafurans	26.95	9.768e2	1.368e3	0.727	0.71	0.77	21.2	YES	NO	bd	bd	0.371
3	2378-TCDF	25.58	2.816e4	3.691e4	0.702	0.76	0.77	647.3	YES	NO	bb	bb	10.678
4	Total-tetrafurans	24.69	2.943e2	4.181e2	0.727	0.70	0.77	6.6	YES	NO	bb	bb	0.113
5	Total-tetrafurans	24.35	2.742e2	3.185e2	0.727	0.86	0.77	8.4	YES	NO	bb	bb	0.094
6	1368-TCDF	22.07	2.997e4	3.989e4	0.802	0.75	0.77	694.2	YES	NO	bb	bb	10.034
7	12389-PECDF	32.11	1.343e5	8.957e4	0.496	1.50	1.55	2181.6	YES	NO	bb	bb	72.733
8	23478-PeCDF	31.08	1.351e5	8.831e4	0.786	1.53	1.55	2215.9	YES	NO	bb	bb	49.908
9	12378-PeCDF	29.75	1.315e5	8.767e4	0.679	1.50	1.55	2175.8	YES	NO	bb	bb	52.041
10	Total-pentafurans	28.60	2.001e4	1.329e4	0.654	1.51	1.55	326.6	YES	NO	bb	bb	8.563
11	234678-HxCDF	35.73	1.962e5	1.559e5	1.140	1.26	1.24	3633.5	YES	NO	bb	bb	50.734
12	123678-HxCDF	34.86	1.927e5	1.541e5	1.091	1.25	1.24	3407.8	YES	NO	db	dd	49.005
13	123478-HxCDF	34.72	1.914e5	1.534e5	1.166	1.25	1.24	3473.9	YES	NO	bd	bd	48.342
14	123468-HXCDF	33.04	1.758e5	1.388e5	1.169	1.27	1.24	3020.5	YES	NO	bb	bb	43.981
15	123789-HxCDF	36.75	1.661e5	1.346e5	1.137	1.23	1.24	2967.7	YES	NO	bd	bd	47.960
16	Total-heptafurans	40.99	7.195e1	7.350e1	0.978	0.98	1.05	0.0	NO	NO	bb	bb	0.033
17	1234789-HpCDF	40.83	1.034e5	1.028e5	0.953	1.01	1.05	1588.5	YES	NO	bb	bb	51.973
18	Total-heptafurans	39.26	1.085e3	1.165e3	0.978	0.93	1.05	17.9	YES	NO	bb	bb	0.509
19	1234678-HpCDF	38.62	1.185e5	1.178e5	1.003	1.01	1.05	2027.8	YES	NO	bb	bb	48.257
20	OCDF	45.03	1.325e5	1.481e5	0.778	0.89	0.89	2564.8	YES	NO	bb	bb	95.251
21	13468-PECDF	26.93	2.592e5	1.716e5	1.246	1.51	1.55	6920.4	YES	NO	bb	bb	55.741

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.23	3.319e4	4.276e4	1.149	0.78	0.77	540.5	YES	NO	bb	bd	9.137
2	Total-tetradoxins	25.90	4.919e4	6.319e4	1.024	0.78	0.77	542.7	YES	NO	bb	bb	15.163
3	Total-tetradoxins	25.41	1.541e4	1.912e4	1.024	0.81	0.77	271.6	YES	NO	bb	bb	4.659
4	Total-tetradoxins	24.83	4.333e2	5.728e2	1.024	0.76	0.77	7.3	YES	NO	bb	bb	0.136
5	1368-TCDD	23.34	3.001e4	3.792e4	1.015	0.79	0.77	513.1	YES	NO	bb	bb	9.246
6	1289-TCDD	26.82	3.035e4	3.755e4	0.909	0.81	0.77	497.6	YES	NO	bb	bb	10.326

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	28.60	2.111e5	1.365e5	2.301	1.55	1.55	2496.6	YES	NO	bb	bb	35.046
2	12389-PECDD	31.73	1.562e5	1.002e5	1.184	1.56	1.55	2961.6	YES	NO	bb	bb	50.274
3	12378-PeCDD	31.33	1.327e5	8.802e4	1.022	1.51	1.55	2499.8	YES	NO	bb	bb	50.121

**HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDD	35.84	1.657e5	1.356e5	0.996	1.22	1.24	4009.0	YES	NO	bd	bd	48.053
2	124679-HXCDD	33.82	1.596e5	1.323e5	1.115	1.21	1.24	3692.7	YES	NO	bb	bb	41.554
3	123789-HxCDD	36.35	1.666e5	1.367e5	0.907	1.22	1.24	3965.6	YES	NO	bb	bb	52.359
4	123678-HxCDD	35.95	1.680e5	1.385e5	1.001	1.21	1.24	4015.9	YES	NO	db	db	47.289

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.10	1.225e5	1.185e5	1.039	1.03	1.05	2509.8	YES	NO	bb	bb	50.217
2	1234679-HPCDD	39.06	1.352e5	1.299e5	1.137	1.04	1.05	2850.1	YES	NO	bb	bb	50.485

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.23	3.319e4	4.276e4	1.149	0.78	0.77	540.5	YES	NO	bb	bd	9.137
2	Total-tetradoxins	25.90	4.919e4	6.319e4	1.024	0.78	0.77	542.7	YES	NO	bb	bb	15.163
3	Total-tetradoxins	25.41	1.541e4	1.912e4	1.024	0.81	0.77	271.6	YES	NO	bb	bb	4.659
4	Total-tetradoxins	24.83	4.333e2	5.728e2	1.024	0.76	0.77	7.3	YES	NO	bb	bb	0.136
5	1368-TCDD	23.34	3.001e4	3.792e4	1.015	0.79	0.77	513.1	YES	NO	bb	bb	9.246
6	12479-PECDD	28.60	2.111e5	1.365e5	2.301	1.55	1.55	2496.6	YES	NO	bb	bb	35.046
7	1289-TCDD	26.82	3.035e4	3.755e4	0.909	0.81	0.77	497.6	YES	NO	bb	bb	10.326
8	123478-HxCDD	35.84	1.657e5	1.356e5	0.996	1.22	1.24	4009.0	YES	NO	bd	bd	48.053
9	124679-HxCDD	33.82	1.596e5	1.323e5	1.115	1.21	1.24	3692.7	YES	NO	bb	bb	41.554
10	12389-PECDD	31.73	1.562e5	1.002e5	1.184	1.56	1.55	2961.6	YES	NO	bb	bb	50.274
11	12378-PeCDD	31.33	1.327e5	8.802e4	1.022	1.51	1.55	2499.8	YES	NO	bb	bb	50.121
12	123789-HxCDD	36.35	1.666e5	1.367e5	0.907	1.22	1.24	3965.6	YES	NO	bb	bb	52.359
13	123678-HxCDD	35.95	1.680e5	1.385e5	1.001	1.21	1.24	4015.9	YES	NO	db	db	47.289
14	OCDD	44.80	1.673e5	1.901e5	0.920	0.88	0.89	2157.1	YES	NO	bb	bb	102.569
15	1234678-HpCDD	40.10	1.225e5	1.185e5	1.039	1.03	1.05	2509.8	YES	NO	bb	bb	50.217
16	1234679-HPCDD	39.06	1.352e5	1.299e5	1.137	1.04	1.05	2850.1	YES	NO	bb	bb	50.485

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.668e4	3.495e4	0.678	0.76	0.77	588.1	YES	NO	db	db	10.465
2	Total-tetrafurans	26.95	9.768e2	1.368e3	0.727	0.71	0.77	21.2	YES	NO	bd	bd	0.371
3	2378-TCDF	25.58	2.816e4	3.691e4	0.702	0.76	0.77	647.3	YES	NO	bb	bb	10.678
4	Total-tetrafurans	24.69	2.943e2	4.181e2	0.727	0.70	0.77	6.6	YES	NO	bb	bb	0.113
5	Total-tetrafurans	24.35	2.742e2	3.185e2	0.727	0.86	0.77	8.4	YES	NO	bb	bb	0.094
6	1368-TCDF	22.07	2.997e4	3.989e4	0.802	0.75	0.77	694.2	YES	NO	bb	bb	10.034
7	12389-PECDF	32.11	1.343e5	8.957e4	0.496	1.50	1.55	2181.6	YES	NO	bb	bb	72.733
8	23478-PeCDF	31.08	1.351e5	8.831e4	0.786	1.53	1.55	2215.9	YES	NO	bb	bb	49.908
9	12378-PeCDF	29.75	1.315e5	8.767e4	0.679	1.50	1.55	2175.8	YES	NO	bb	bb	52.041
10	Total-pentafurans	28.60	2.001e4	1.329e4	0.654	1.51	1.55	326.6	YES	NO	bb	bb	8.563
11	234678-HxCDF	35.73	1.962e5	1.559e5	1.140	1.26	1.24	3633.5	YES	NO	bb	bb	50.734
12	123678-HxCDF	34.86	1.927e5	1.541e5	1.091	1.25	1.24	3407.8	YES	NO	db	dd	49.005
13	123478-HxCDF	34.72	1.914e5	1.534e5	1.166	1.25	1.24	3473.9	YES	NO	bd	bd	48.342
14	123468-HXCDF	33.04	1.758e5	1.388e5	1.169	1.27	1.24	3020.5	YES	NO	bb	bb	43.981
15	123789-HxCDF	36.75	1.661e5	1.346e5	1.137	1.23	1.24	2967.7	YES	NO	bd	bd	47.960
16	Total-heptafurans	40.99	7.195e1	7.350e1	0.978	0.98	1.05	0.0	NO	NO	bb	bb	0.033
17	1234789-HpCDF	40.83	1.034e5	1.028e5	0.953	1.01	1.05	1588.5	YES	NO	bb	bb	51.973
18	Total-heptafurans	39.26	1.085e3	1.165e3	0.978	0.93	1.05	17.9	YES	NO	bb	bb	0.509
19	1234678-HpCDF	38.62	1.185e5	1.178e5	1.003	1.01	1.05	2027.8	YES	NO	bb	bb	48.257
20	OCDF	45.03	1.325e5	1.481e5	0.778	0.89	0.89	2564.8	YES	NO	bb	bb	95.251
21	13468-PECDF	26.93	2.592e5	1.716e5	1.246	1.51	1.55	6920.4	YES	NO	bb	bb	55.741
22	2378-TCDD	26.23	3.319e4	4.276e4	1.149	0.78	0.77	540.5	YES	NO	bb	bd	9.137
23	Total-tetradioxins	25.90	4.919e4	6.319e4	1.024	0.78	0.77	542.7	YES	NO	bb	bb	15.163
24	Total-tetradioxins	25.41	1.541e4	1.912e4	1.024	0.81	0.77	271.6	YES	NO	bb	bb	4.659
25	Total-tetradioxins	24.83	4.333e2	5.728e2	1.024	0.76	0.77	7.3	YES	NO	bb	bb	0.136
26	1368-TCDD	23.34	3.001e4	3.792e4	1.015	0.79	0.77	513.1	YES	NO	bb	bb	9.246
27	12479-PECDD	28.60	2.111e5	1.365e5	2.301	1.55	1.55	2496.6	YES	NO	bb	bb	35.046
28	1289-TCDD	26.82	3.035e4	3.755e4	0.909	0.81	0.77	497.6	YES	NO	bb	bb	10.326
29	123478-HxCDD	35.84	1.657e5	1.356e5	0.996	1.22	1.24	4009.0	YES	NO	bd	bd	48.053
30	124679-HXCDD	33.82	1.596e5	1.323e5	1.115	1.21	1.24	3692.7	YES	NO	bb	bb	41.554
31	12389-PECDD	31.73	1.562e5	1.002e5	1.184	1.56	1.55	2961.6	YES	NO	bb	bb	50.274
32	12378-PeCDD	31.33	1.327e5	8.802e4	1.022	1.51	1.55	2499.8	YES	NO	bb	bb	50.121
33	123789-HxCDD	36.35	1.666e5	1.367e5	0.907	1.22	1.24	3965.6	YES	NO	bb	bb	52.359
34	123678-HxCDD	35.95	1.680e5	1.385e5	1.001	1.21	1.24	4015.9	YES	NO	db	db	47.289
35	OCDD	44.80	1.673e5	1.901e5	0.920	0.88	0.89	2157.1	YES	NO	bb	bb	102.569
36	1234678-HpCDD	40.10	1.225e5	1.185e5	1.039	1.03	1.05	2509.8	YES	NO	bb	bb	50.217
37	1234679-HPCDD	39.06	1.352e5	1.299e5	1.137	1.04	1.05	2850.1	YES	NO	bb	bb	50.485

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.92	8.159e4					3.3	YES		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.25	4.722e3					0.9	NO		db		0.000
2	FUNCTION2 PFK	30.20	1.048e4					1.8	NO		bd		0.000
3	FUNCTION2 PFK	30.16	5.443e3					1.5	NO		bb		0.000
4	FUNCTION2 PFK	29.99	4.735e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	29.85	8.188e3					1.6	NO		bb		0.000
6	FUNCTION2 PFK	28.86	3.376e4					1.8	NO		bb		0.000
7	FUNCTION2 PFK	28.37	7.243e3					1.4	NO		bb		0.000
8	FUNCTION2 PFK	28.23	1.434e3					0.6	NO		bb		0.000
9	FUNCTION2 PFK	28.15	1.876e4					1.4	NO		bb		0.000
10	FUNCTION2 PFK	28.08	2.293e4					3.0	NO		bb		0.000
11	FUNCTION2 PFK	27.92	1.627e4					3.3	YES		db		0.000
12	FUNCTION2 PFK	27.89	4.523e4					5.3	YES		bd		0.000
13	FUNCTION2 PFK	32.33	1.903e4					2.3	NO		dd		0.000
14	FUNCTION2 PFK	32.26	2.502e4					2.3	NO		dd		0.000
15	FUNCTION2 PFK	32.16	2.870e4					2.2	NO		dd		0.000
16	FUNCTION2 PFK	32.12	1.464e4					2.2	NO		bd		0.000
17	FUNCTION2 PFK	31.88	3.558e3					0.9	NO		db		0.000
18	FUNCTION2 PFK	31.84	3.277e3					0.6	NO		bd		0.000
19	FUNCTION2 PFK	31.43	5.894e3					1.1	NO		bb		0.000
20	FUNCTION2 PFK	31.28	4.211e3					1.1	NO		bb		0.000
21	FUNCTION2 PFK	31.08	6.813e3					1.3	NO		bb		0.000
22	FUNCTION2 PFK	30.95	1.061e3					0.5	NO		bb		0.000
23	FUNCTION2 PFK	30.83	5.301e3					1.1	NO		bb		0.000
24	FUNCTION2 PFK	30.77	6.751e3					1.0	NO		bb		0.000
25	FUNCTION2 PFK	30.63	5.403e3					1.1	NO		bb		0.000
26	FUNCTION2 PFK	30.53	1.851e3					0.8	NO		bb		0.000
27	FUNCTION2 PFK	30.48	2.038e3					0.9	NO		bb		0.000
28	FUNCTION2 PFK	30.43	6.557e3					1.2	NO		bb		0.000
29	FUNCTION2 PFK	32.54	1.021e4					1.7	NO		bb		0.000
30	FUNCTION2 PFK	32.40	1.997e4					2.2	NO		db		0.000



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.28	2.479e7					35.5	YES		bb		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.27	3.769e3					1.3	NO		bb		
2	FUNCTION5 PFK	44.64	5.896e2					0.5	NO		bb		
3	FUNCTION5 PFK	44.58	4.275e3					1.5	NO		db		
4	FUNCTION5 PFK	44.54	4.461e3					1.5	NO		bd		
5	FUNCTION5 PFK	44.36	4.981e3					2.2	NO		bb		
6	FUNCTION5 PFK	44.30	1.159e3					0.7	NO		bb		
7	FUNCTION5 PFK	44.24	4.783e3					1.4	NO		bb		
8	FUNCTION5 PFK	44.12	5.458e3					1.6	NO		bb		
9	FUNCTION5 PFK	43.94	1.051e4					2.3	NO		bb		
10	FUNCTION5 PFK	43.33	4.153e3					1.4	NO		bb		
11	FUNCTION5 PFK	45.76	6.520e2					0.6	NO		bb		
12	FUNCTION5 PFK	45.58	7.881e3					1.6	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.72	1.042e2					1.8	NO		bb		0.000
2	FUNCTION1 HXCD...	26.47	7.762e1					4.4	YES		bb		0.000
3	FUNCTION1 HXCD...	24.91	1.528e2					2.3	NO		bb		0.000
4	FUNCTION1 HXCD...	23.78	1.417e2					2.5	NO		db		0.000
5	FUNCTION1 HXCD...	23.61	7.094e1					1.6	NO		bd		0.000
6	FUNCTION1 HXCD...	22.88	9.197e1					1.9	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:57:12 Pacific Daylight Time

**ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk****ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.92	2.534e2					9.2	YES		bb		0.000
2	FUNCTION2 HPCD...	30.62	1.372e2					5.0	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.84	8.503e1					3.1	YES		bb		0.000

**ETHERS6**

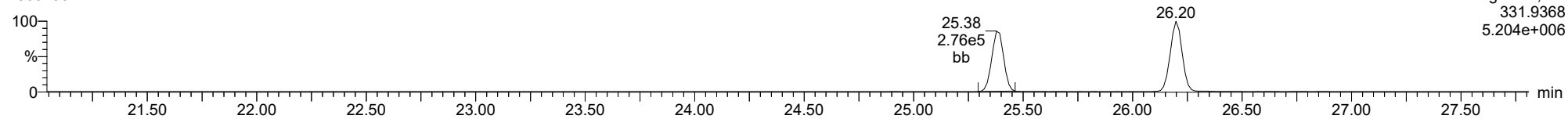
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1	FUNCTION5 DCDPE	44.78	7.719e1					2.0	NO		bb		0.000

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

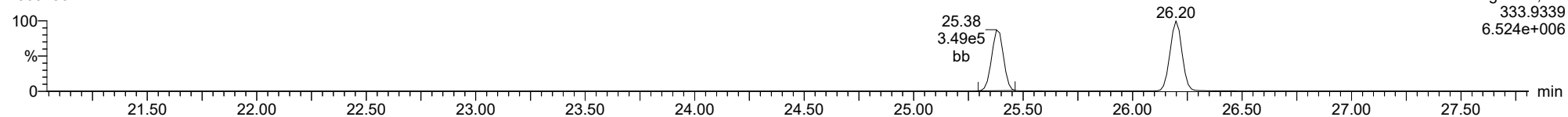
**13C-1234-TCDD**

23031502



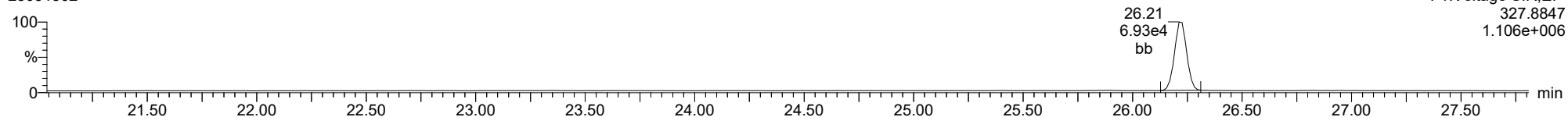
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23031502



**37CL-2378-TCDD**

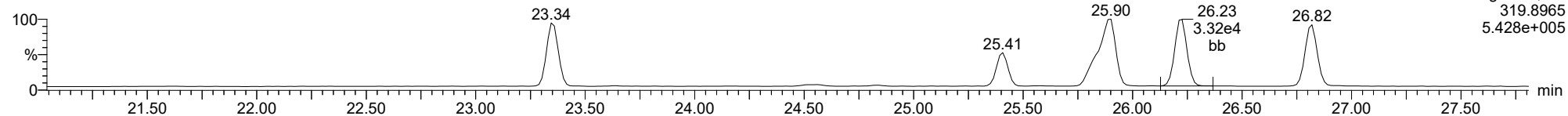
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ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**2378-TCDD**

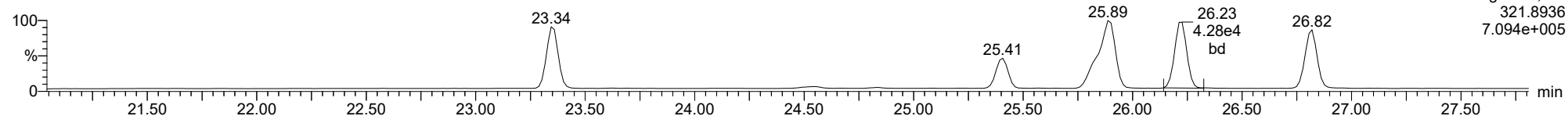
23031502



F1:Voltage SIR,EI+  
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5.428e+005

**2378-TCDD**

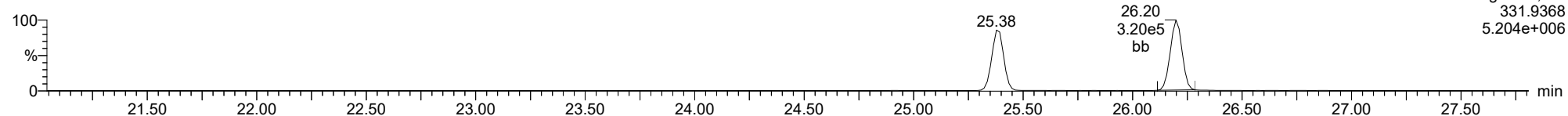
23031502



F1:Voltage SIR,EI+  
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**13C-2378-TCDD**

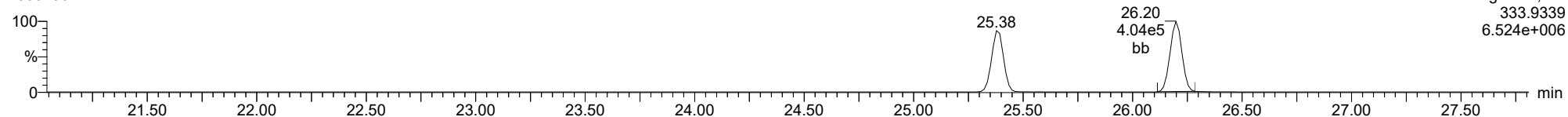
23031502



F1:Voltage SIR,EI+  
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**13C-2378-TCDD**

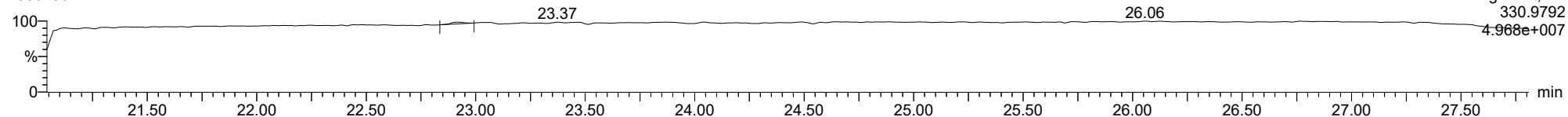
23031502



F1:Voltage SIR,EI+  
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6.524e+006

**FUNCTION1 PFK**

23031502

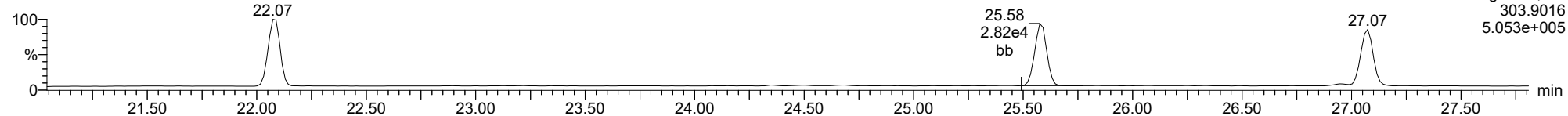


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4.968e+007

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

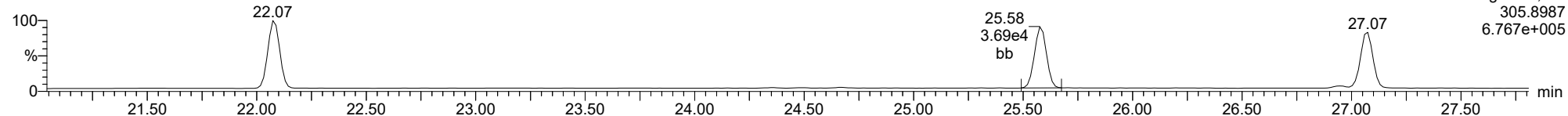
**2378-TCDF**

23031502



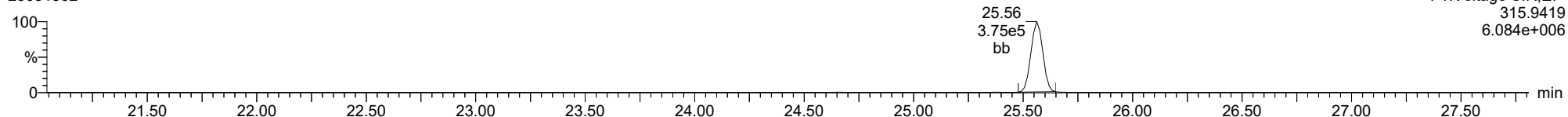
**2378-TCDF**

23031502



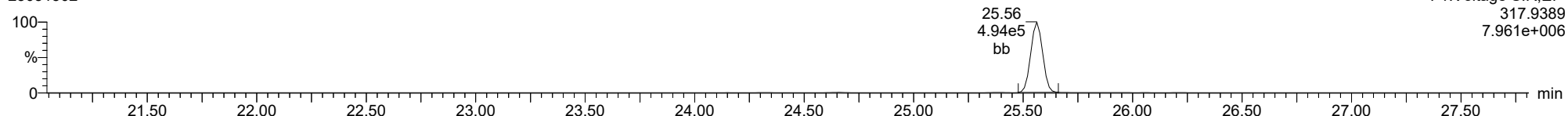
**13C-2378-TCDF**

23031502



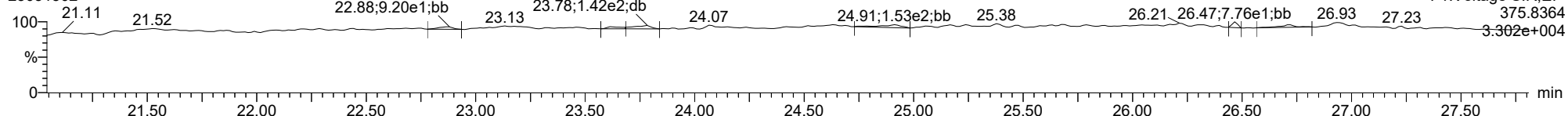
**13C-2378-TCDF**

23031502



**FUNCTION1 HXCDE**

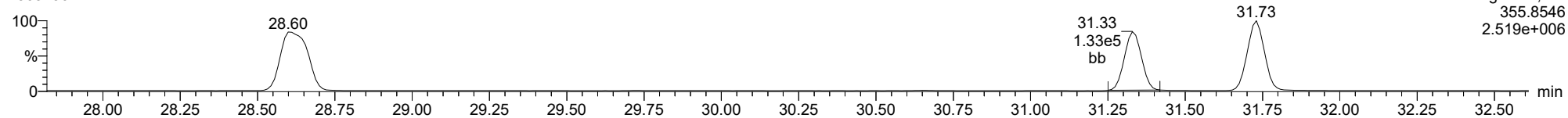
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

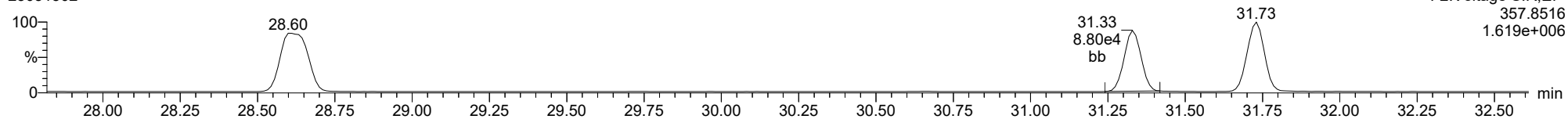
23031502



F2:Voltage SIR,EI+  
355.8546  
2.519e+006

**12378-PeCDD**

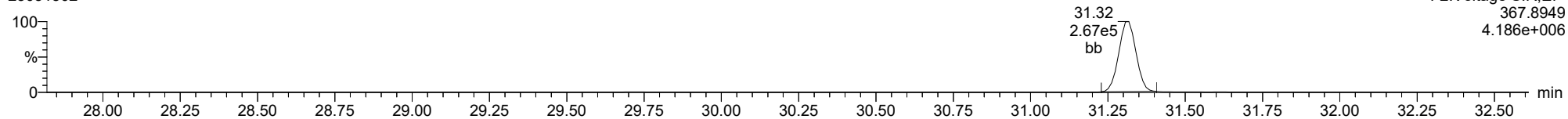
23031502



F2:Voltage SIR,EI+  
357.8516  
1.619e+006

**13C-12378-PeCDD**

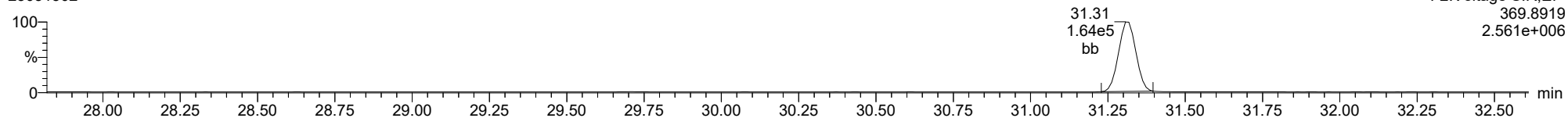
23031502



F2:Voltage SIR,EI+  
367.8949  
4.186e+006

**13C-12378-PeCDD**

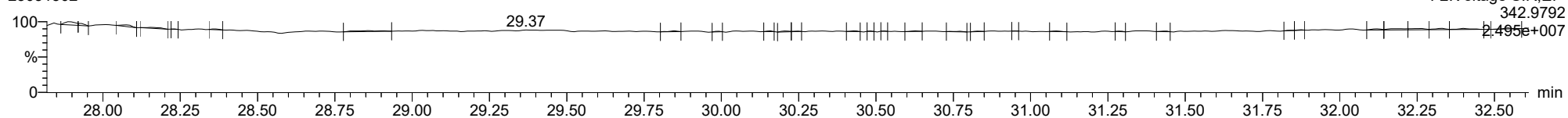
23031502



F2:Voltage SIR,EI+  
369.8919  
2.561e+006

**FUNCTION2 PFK**

23031502

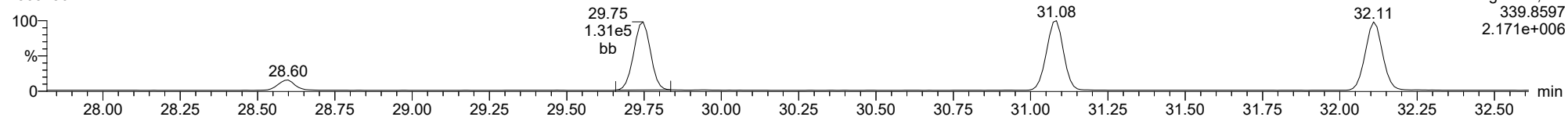


F2:Voltage SIR,EI+  
342.9792  
2.495e+007

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

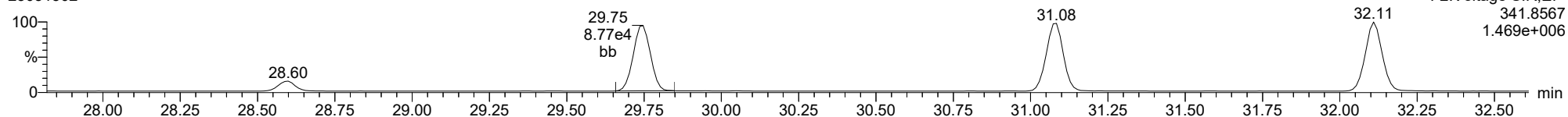
**12378-PeCDF**

23031502



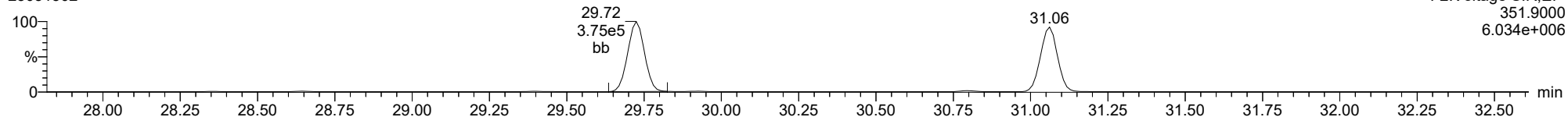
**12378-PeCDF**

23031502



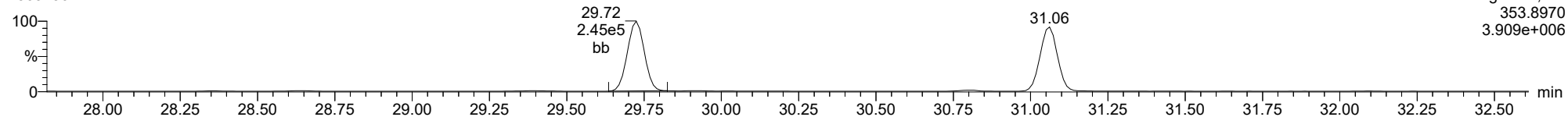
**13C-12378-PeCDF**

23031502



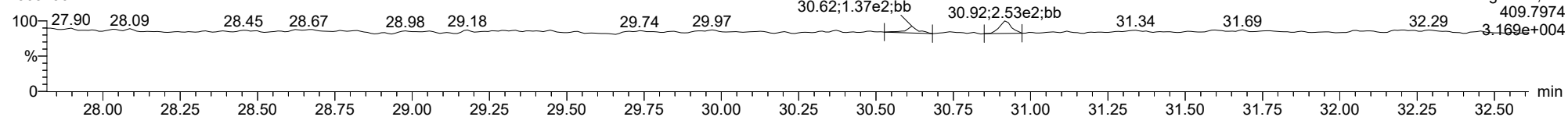
**13C-12378-PeCDF**

23031502



**FUNCTION2 HPCDPE**

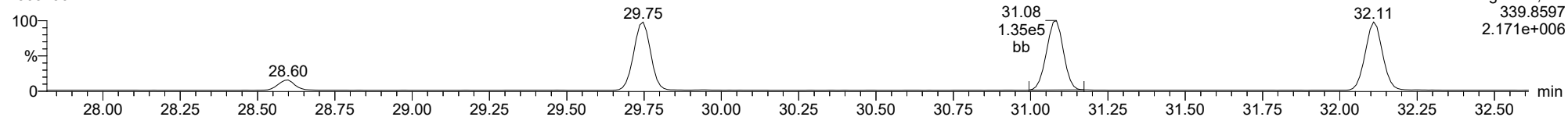
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

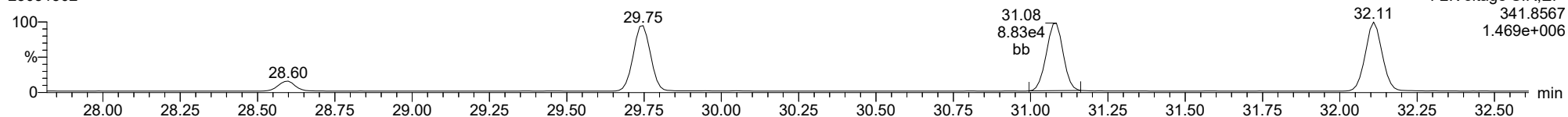
**23478-PeCDF**

23031502



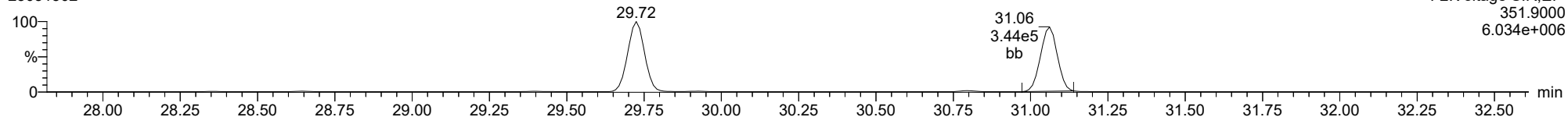
**23478-PeCDF**

23031502



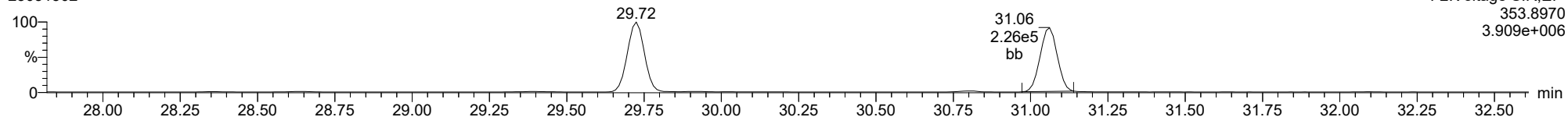
**13C-23478-PeCDF**

23031502



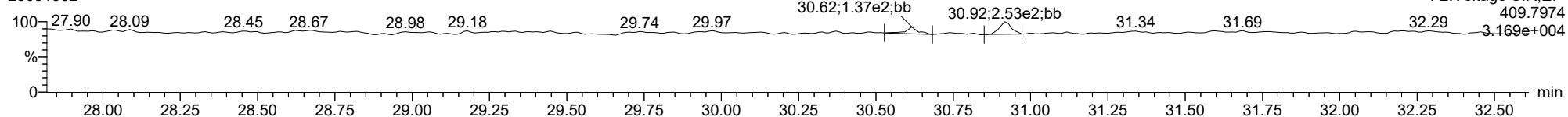
**13C-23478-PeCDF**

23031502



**FUNCTION2 HPCDPE**

23031502

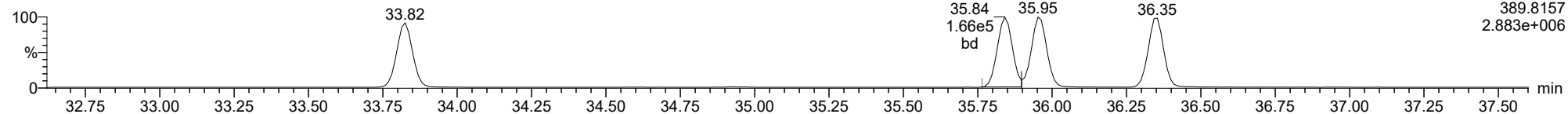




ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

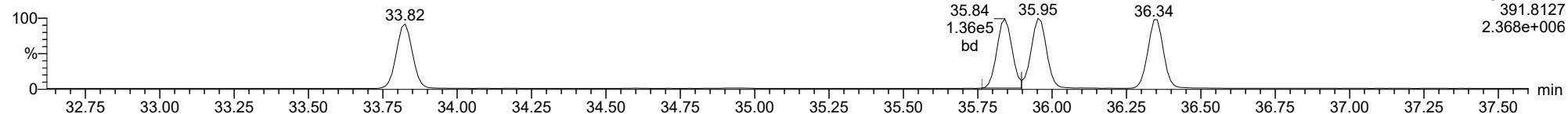
**123478-HxCDD**

23031502



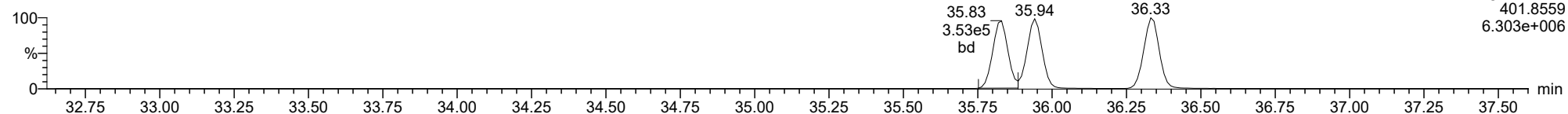
**123478-HxCDD**

23031502



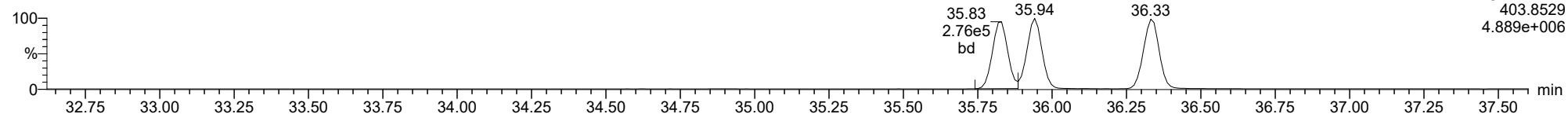
**13C-123478-HxCDD**

23031502



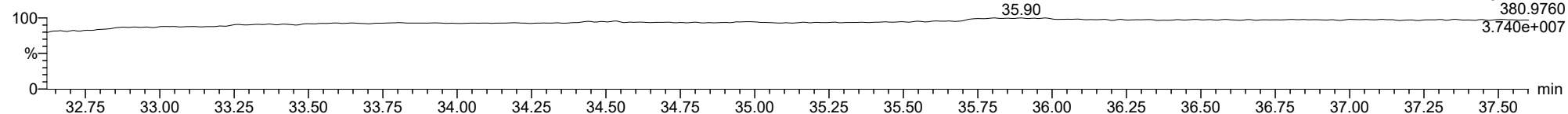
**13C-123478-HxCDD**

23031502



**FUNCTION3 PFK**

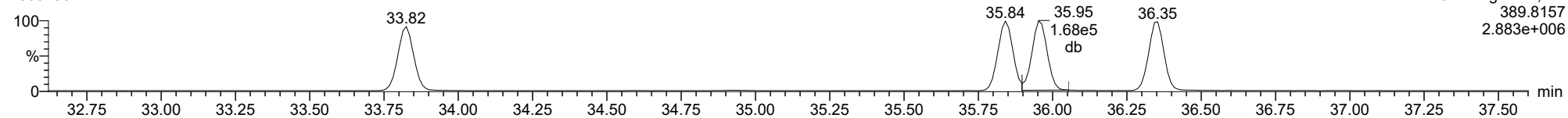
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

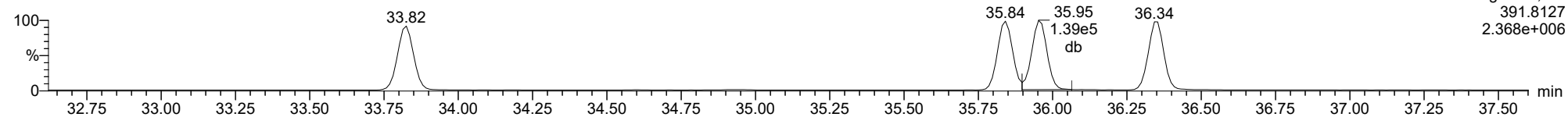
23031502



F3:Voltage SIR,EI+  
389.8157  
2.883e+006

**123678-HxCDD**

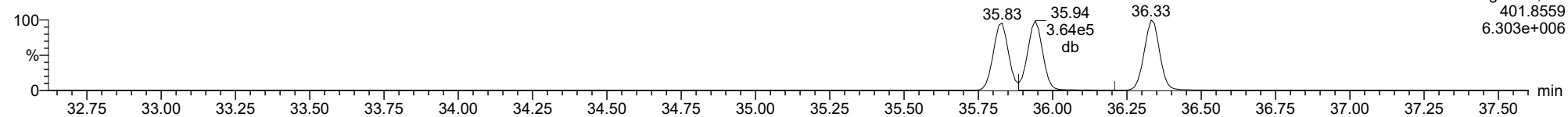
23031502



F3:Voltage SIR,EI+  
391.8127  
2.368e+006

**13C-123678-HxCDD**

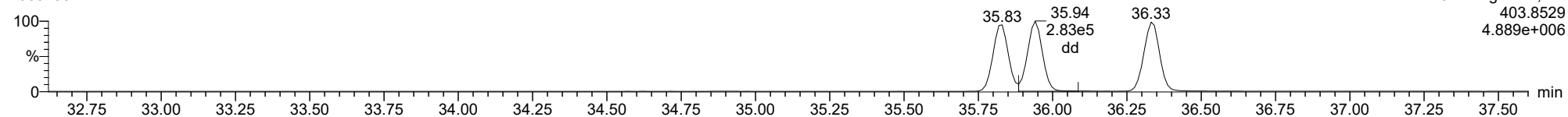
23031502



F3:Voltage SIR,EI+  
401.8559  
6.303e+006

**13C-123678-HxCDD**

23031502

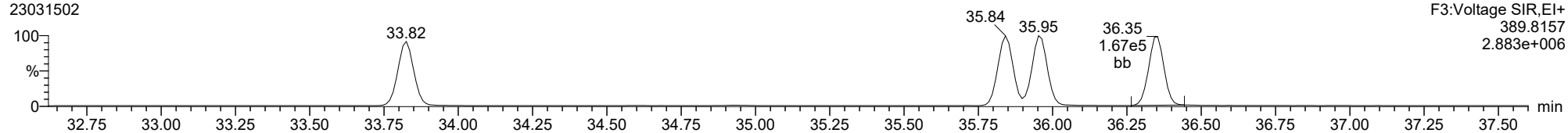


F3:Voltage SIR,EI+  
403.8529  
4.889e+006

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

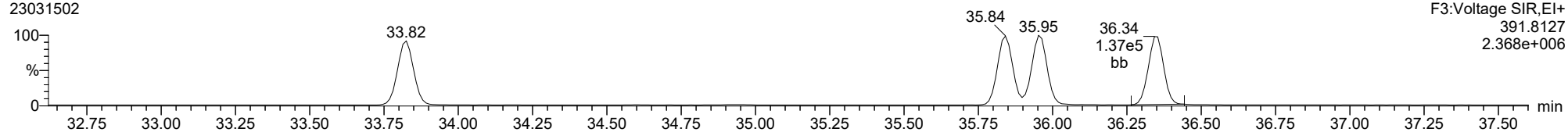
**123789-HxCDD**

23031502



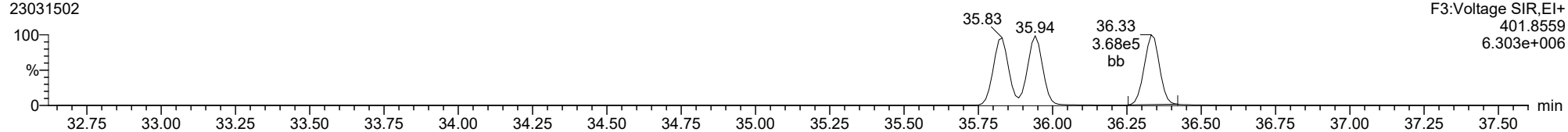
**123789-HxCDD**

23031502



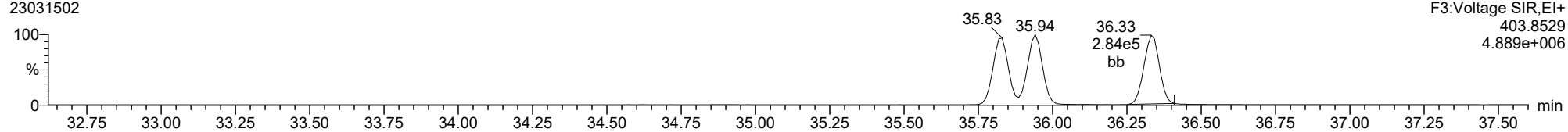
**13C-123789-HxCDD**

23031502



**13C-123789-HxCDD**

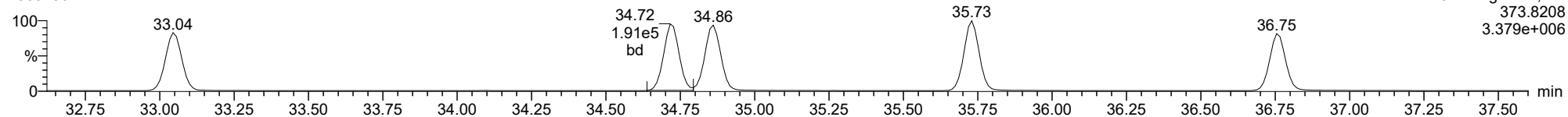
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

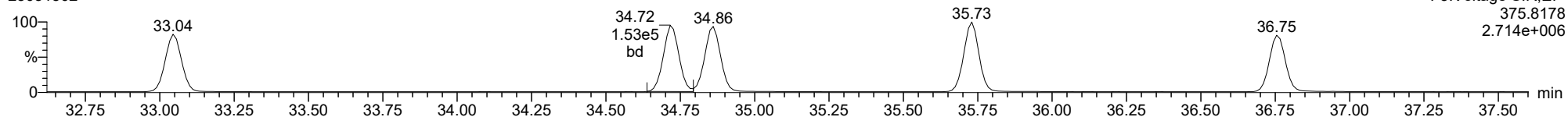
123478-HxCDF

23031502



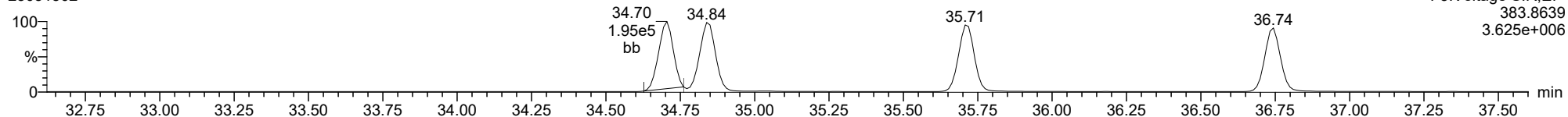
123478-HxCDF

23031502



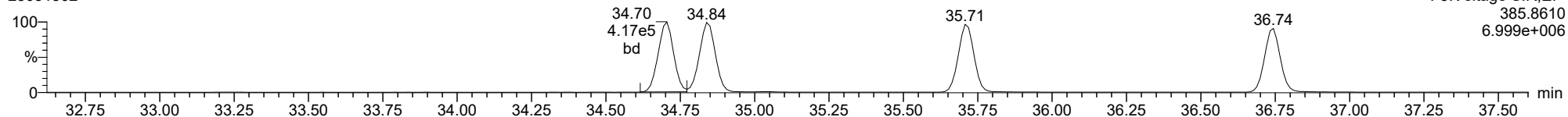
13C-123478-HxCDF

23031502



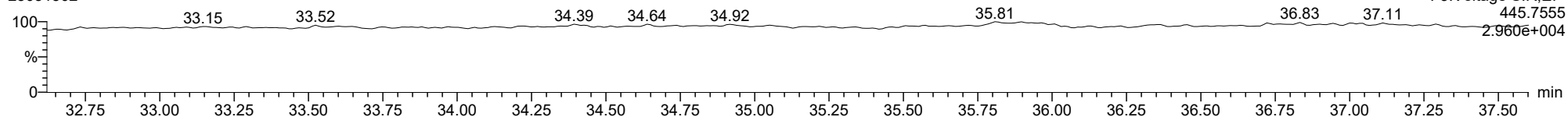
13C-123478-HxCDF

23031502



FUNCTION3 OCDPE

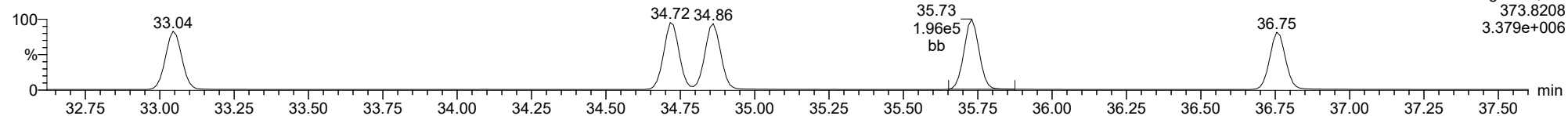
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

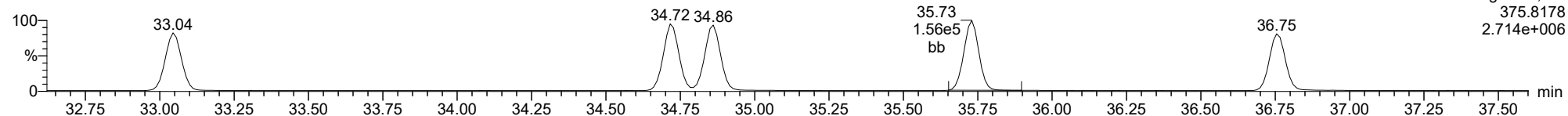
**234678-HxCDF**

23031502



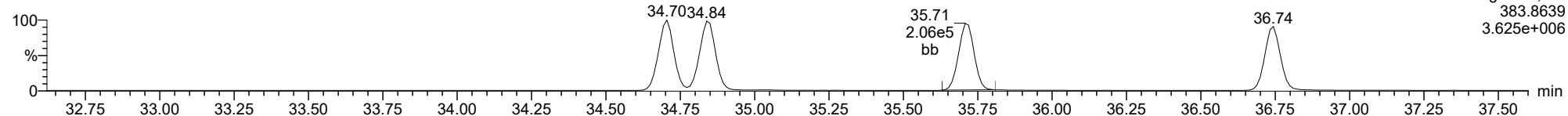
**234678-HxCDF**

23031502



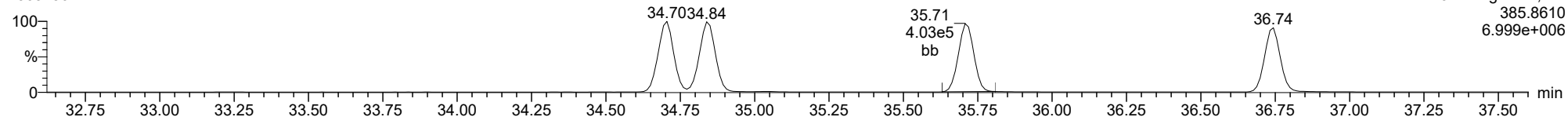
**13C-234678-HxCDF**

23031502



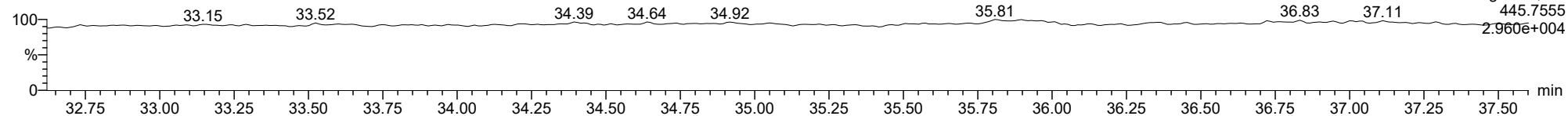
**13C-234678-HxCDF**

23031502



**FUNCTION3 OCDPE**

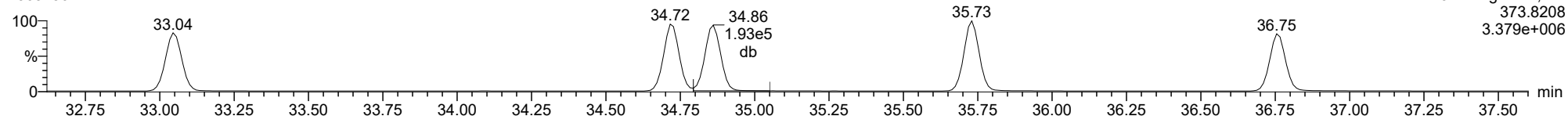
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

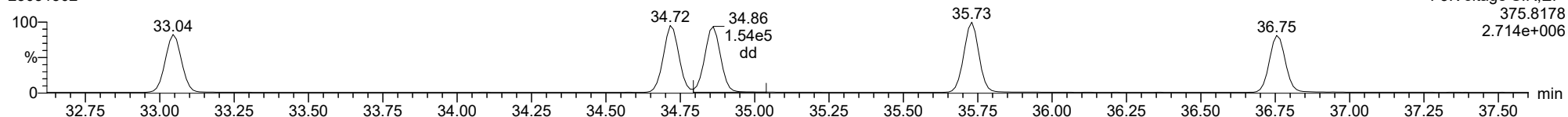
**123678-HxCDF**

23031502



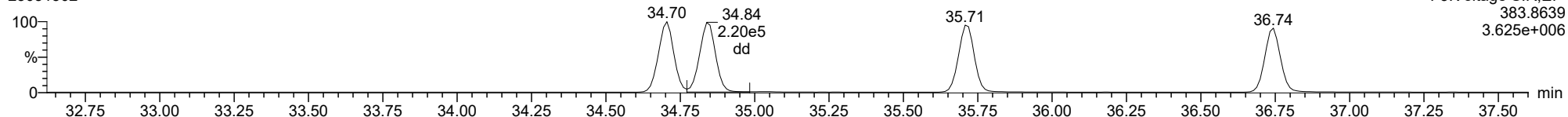
**123678-HxCDF**

23031502



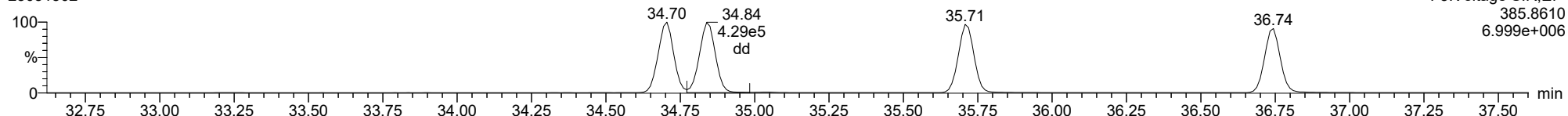
**13C-123678-HxCDF**

23031502



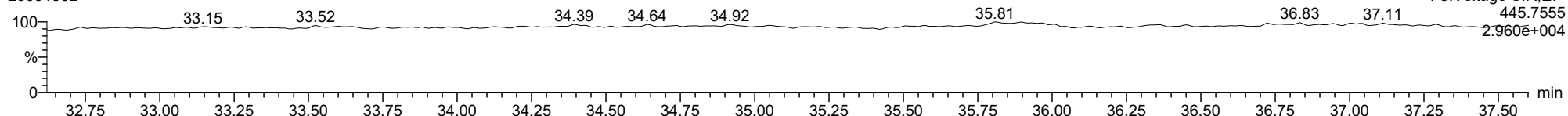
**13C-123678-HxCDF**

23031502



**FUNCTION3 OCDPE**

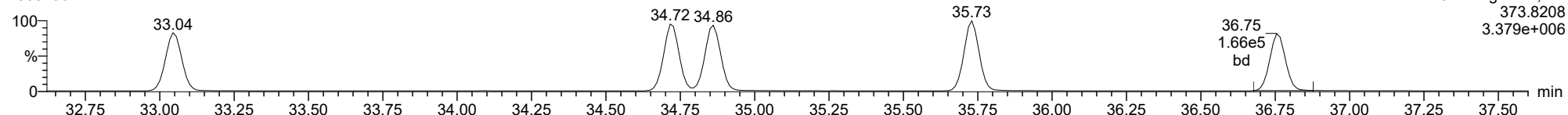
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

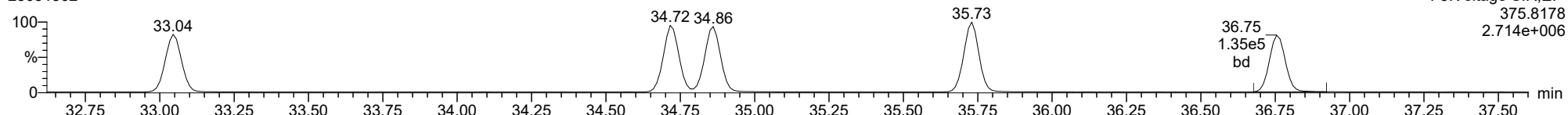
**123789-HxCDF**

23031502



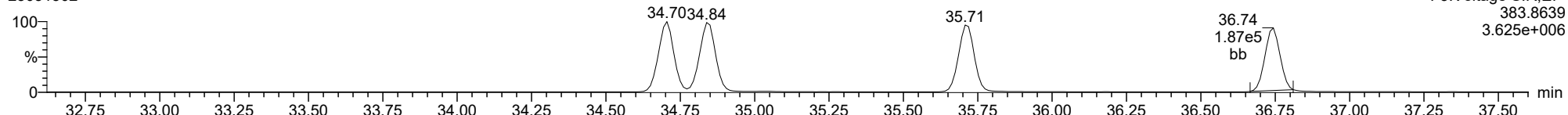
**123789-HxCDF**

23031502



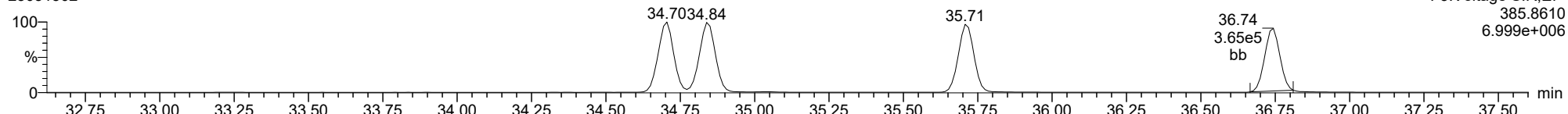
**13C-123789-HxCDF**

23031502



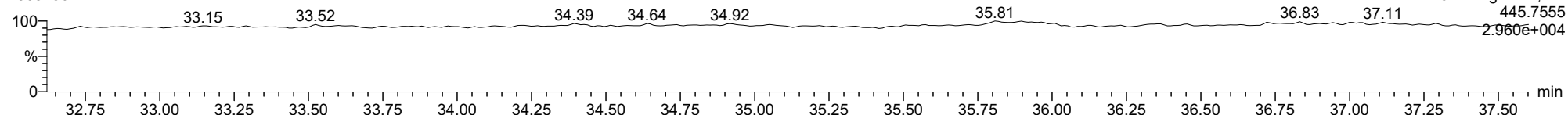
**13C-123789-HxCDF**

23031502



**FUNCTION3 OCDPE**

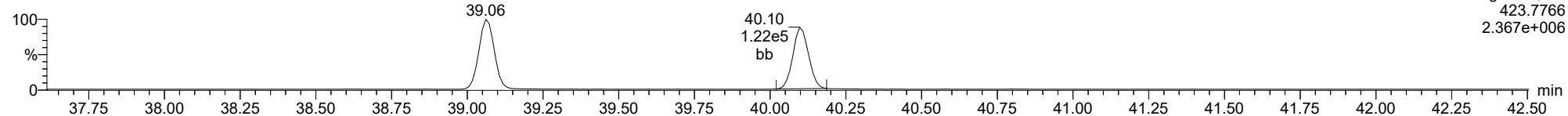
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

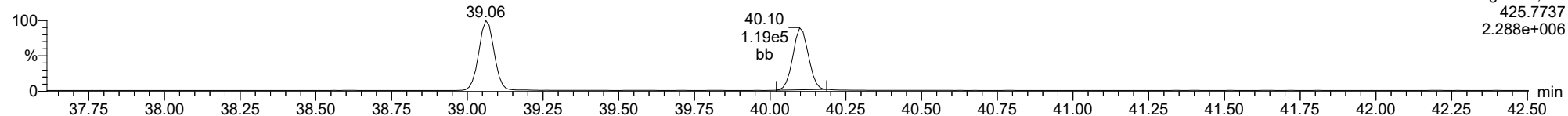
23031502



F4:Voltage SIR,El+  
423.7766  
2.367e+006

**1234678-HpCDD**

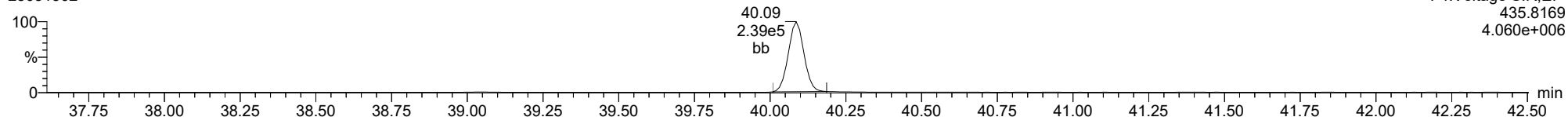
23031502



F4:Voltage SIR,El+  
425.7737  
2.288e+006

**13C-1234678-HpCDD**

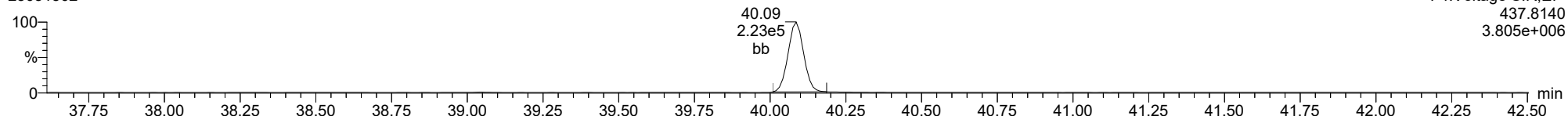
23031502



F4:Voltage SIR,El+  
435.8169  
4.060e+006

**13C-1234678-HpCDD**

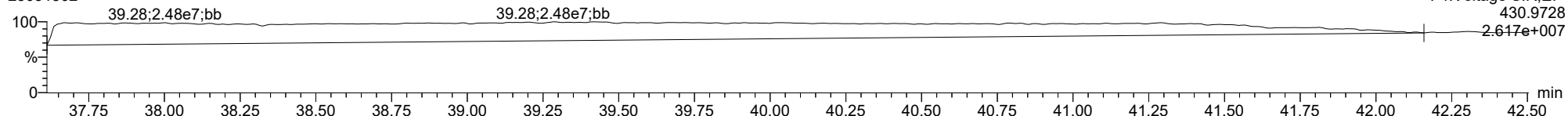
23031502



F4:Voltage SIR,El+  
437.8140  
3.805e+006

**FUNCTION4 PFK**

23031502



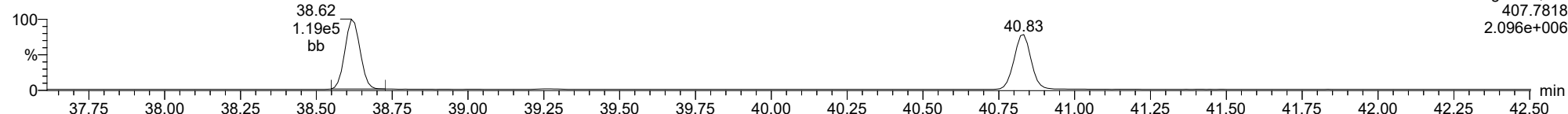
F4:Voltage SIR,El+  
430.9728  
2.617e+007



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

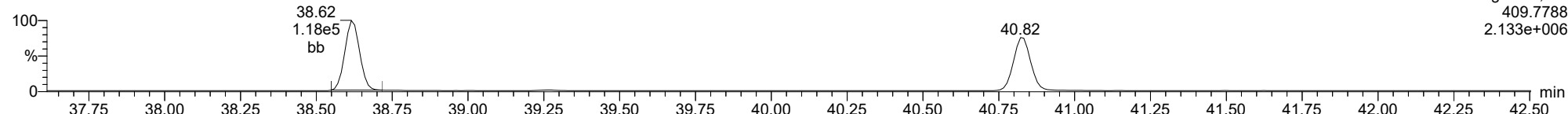
**1234678-HpCDF**

23031502



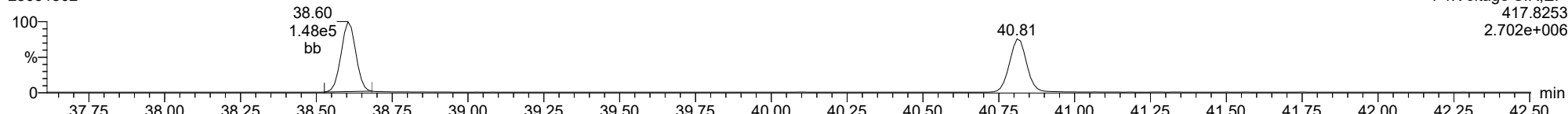
**1234678-HpCDF**

23031502



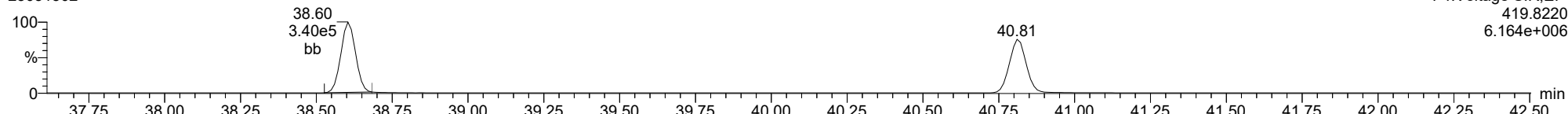
**13C-1234678-HpCDF**

23031502



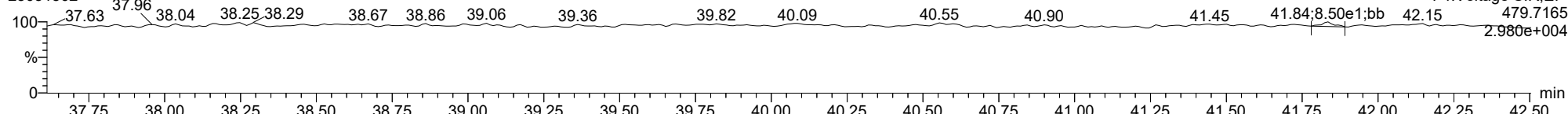
**13C-1234678-HpCDF**

23031502



**FUNCTION4 NCDPE**

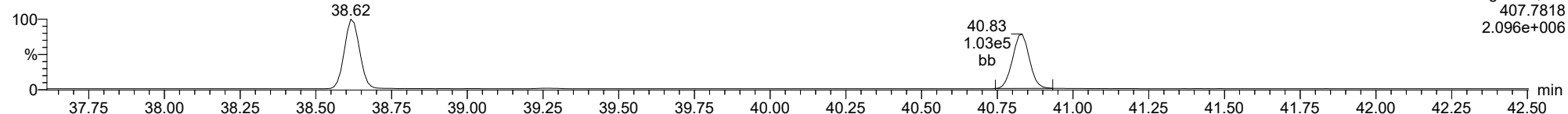
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

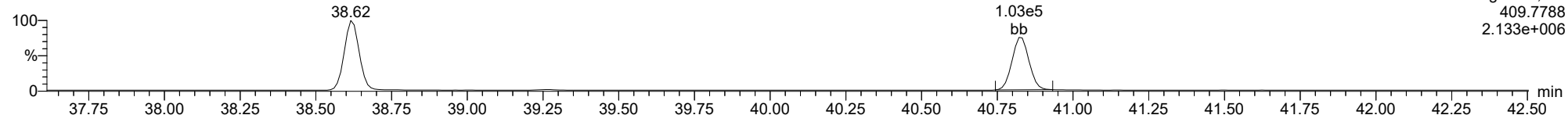
23031502



F4:Voltage SIR,EI+  
407.7818  
2.096e+006

**1234789-HpCDF**

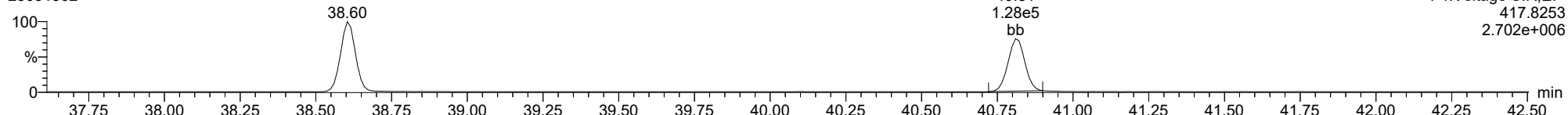
23031502



F4:Voltage SIR,EI+  
409.7788  
2.133e+006

**13C-1234789-HpCDF**

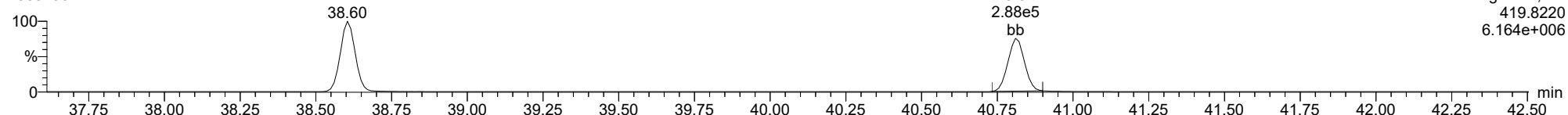
23031502



F4:Voltage SIR,EI+  
417.8253  
2.702e+006

**13C-1234789-HpCDF**

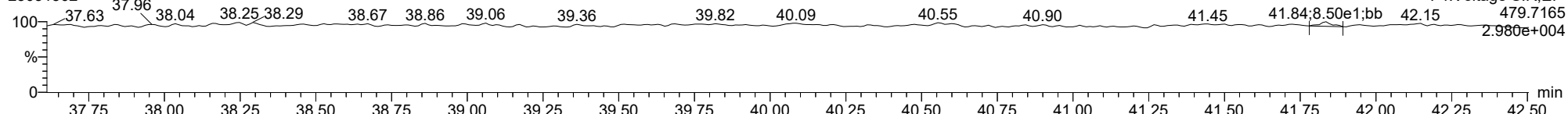
23031502



F4:Voltage SIR,EI+  
419.8220  
6.164e+006

**FUNCTION4 NCDPE**

23031502

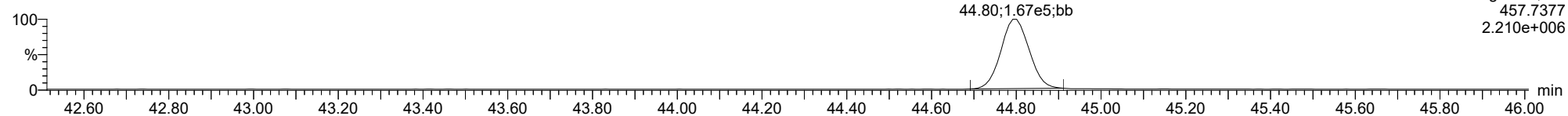


F4:Voltage SIR,EI+  
479.7165  
2.980e+004

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

**OCDD**

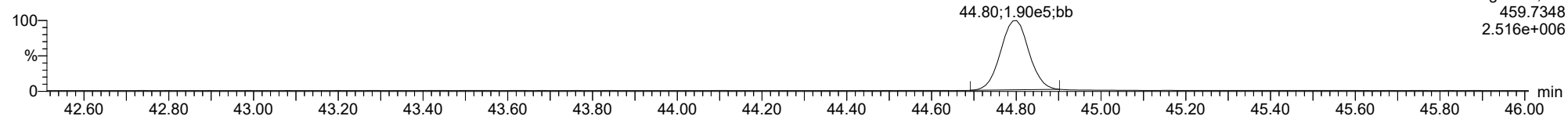
23031502



F5:Voltage SIR,El+  
457.7377  
2.210e+006

**OCDD**

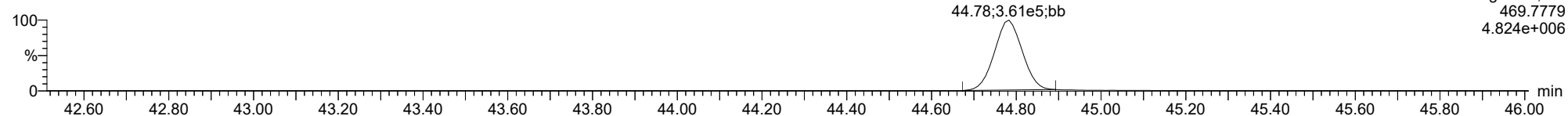
23031502



F5:Voltage SIR,El+  
459.7348  
2.516e+006

**13C-OCDD**

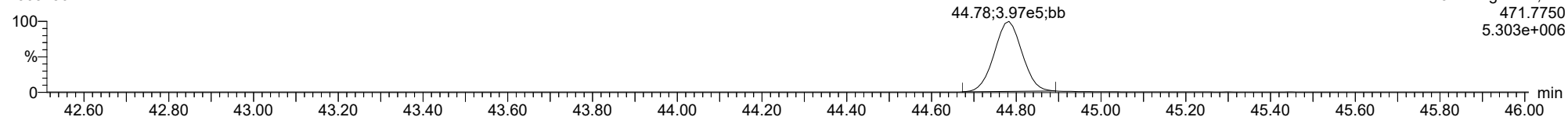
23031502



F5:Voltage SIR,El+  
469.7779  
4.824e+006

**13C-OCDD**

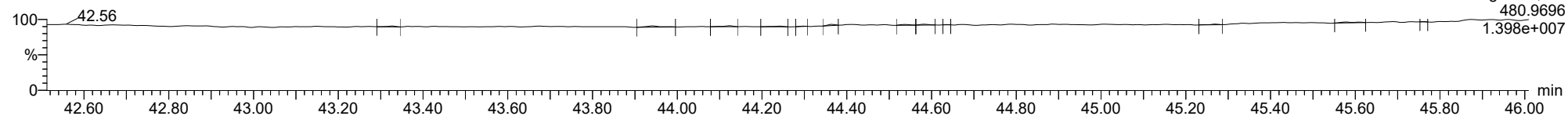
23031502



F5:Voltage SIR,El+  
471.7750  
5.303e+006

**FUNCTION5 PFK**

23031502

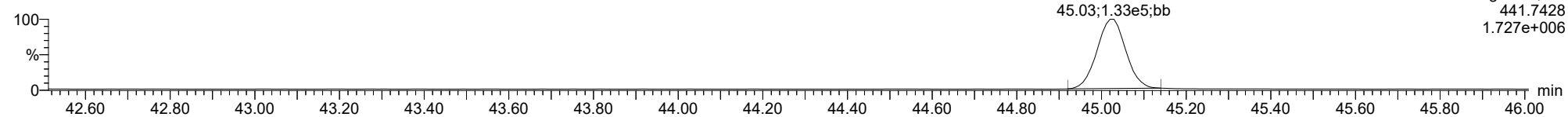


F5:Voltage SIR,El+  
480.9696  
1.398e+007

ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

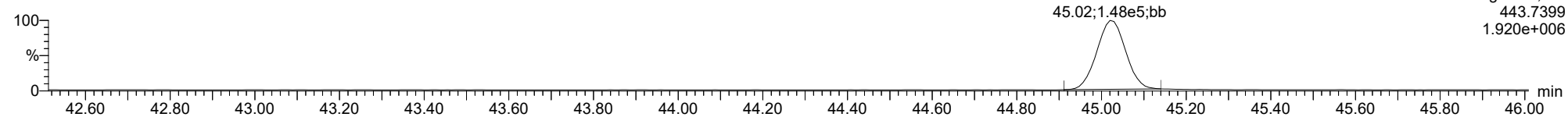
**OCDF**

23031502



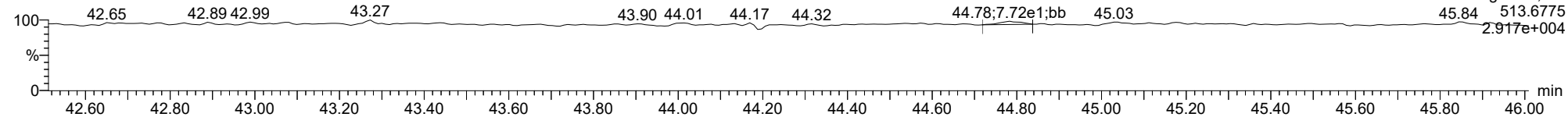
**OCDF**

23031502



**FUNCTION5 DCDPE**

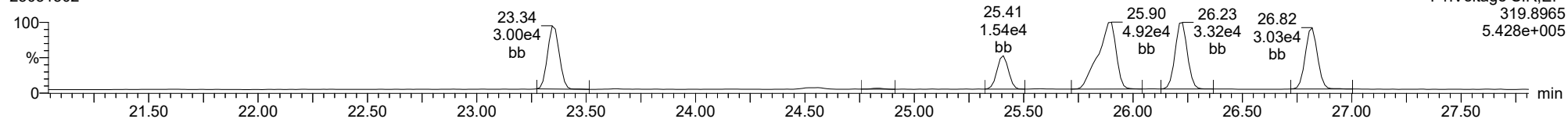
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

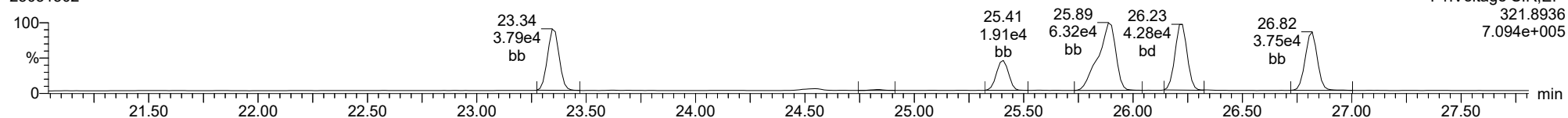
**Total-tetradioxins**

23031502



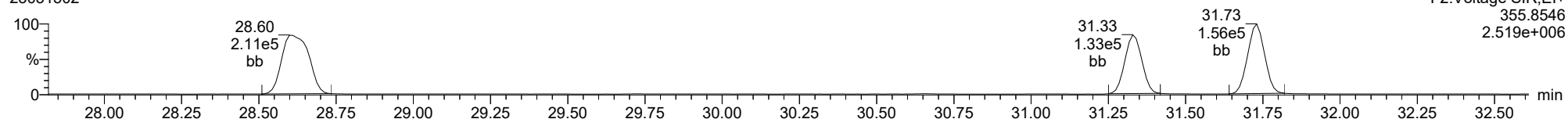
**Total-tetradioxins**

23031502



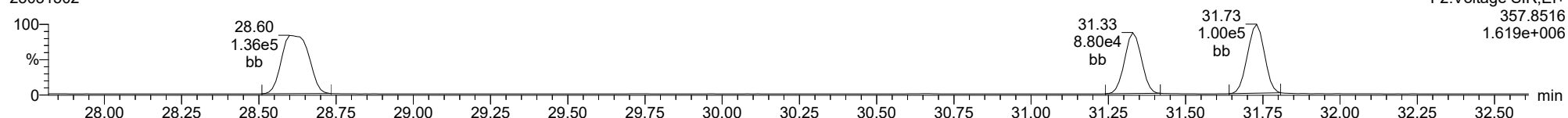
**Total-pentadioxins**

23031502



**Total-pentadioxins**

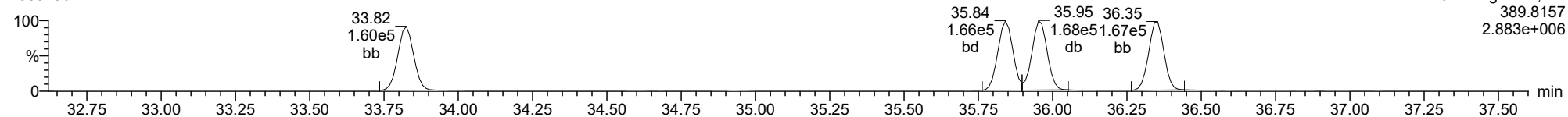
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

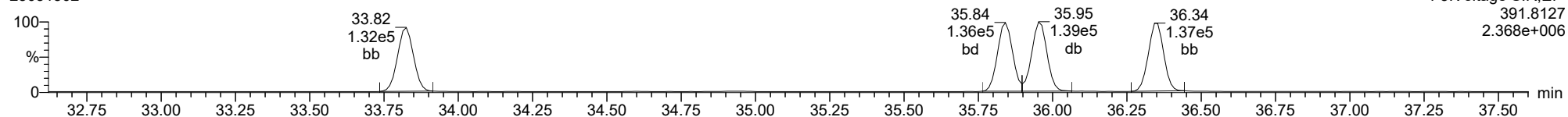
**Total-hexadioxins**

23031502



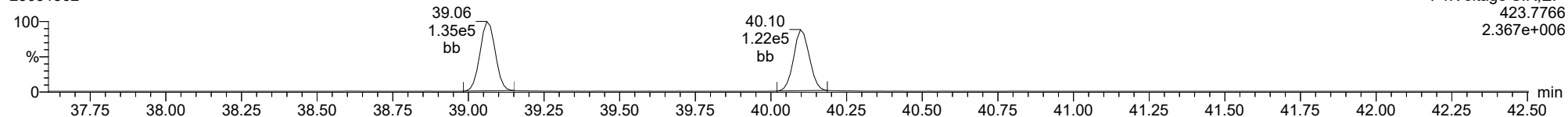
**Total-hexadioxins**

23031502



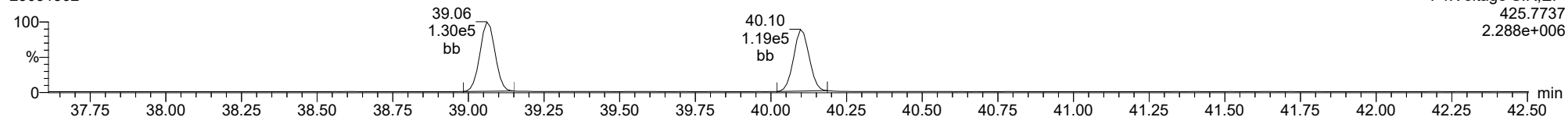
**Total-heptadioxins**

23031502



**Total-heptadioxins**

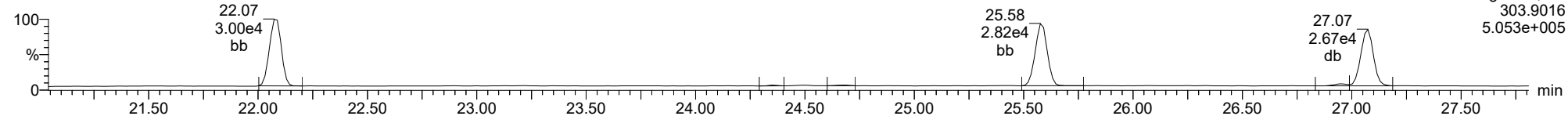
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

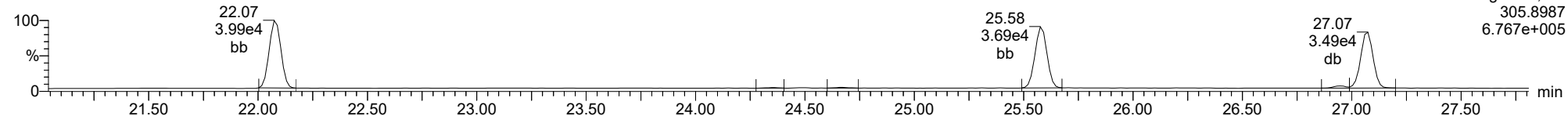
**Total-tetrafurans**

23031502



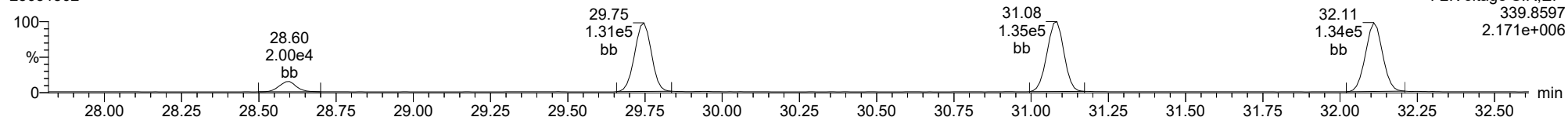
**Total-tetrafurans**

23031502



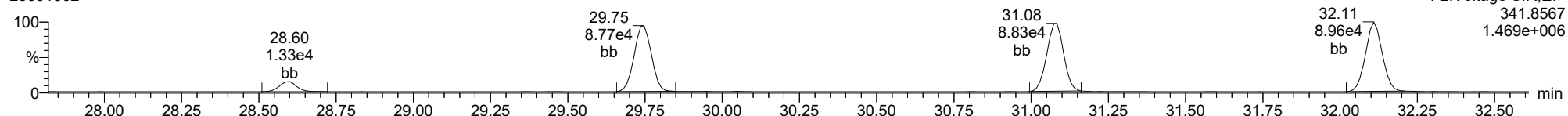
**Total-pentafurans**

23031502



**Total-pentafurans**

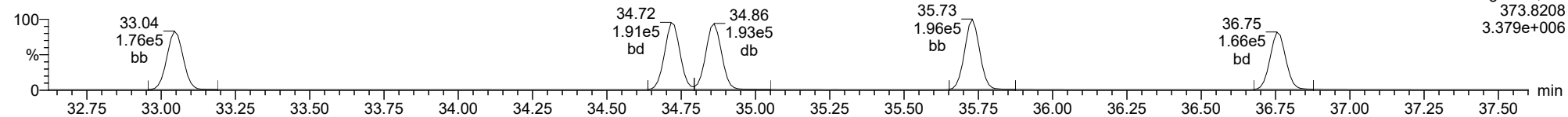
23031502



ID: CS3Z4, Name: 23031502, Date: 15-Mar-2023, Time: 11:02:56, Conditions: AUTOSPEC01, User: pk

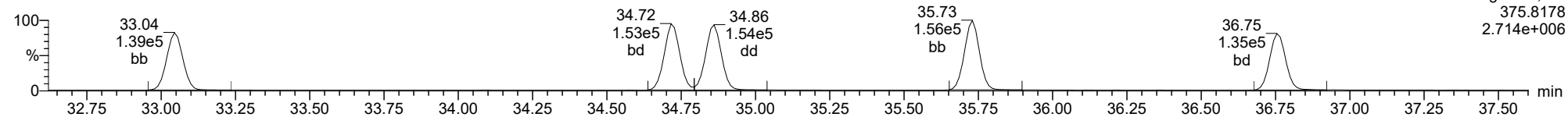
**Total-hexafurans**

23031502



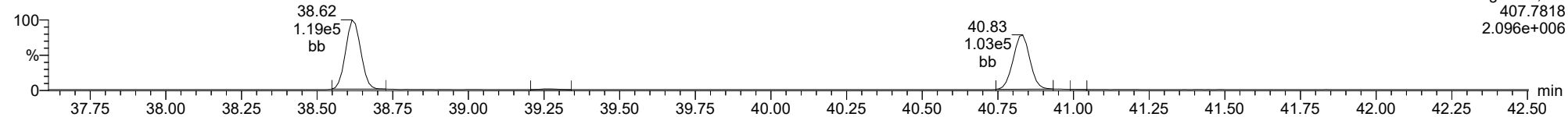
**Total-hexafurans**

23031502



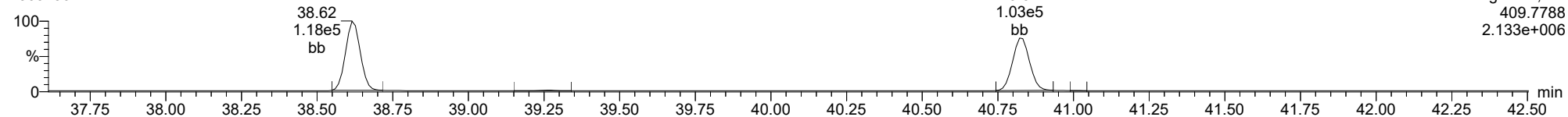
**Total-heptafurans**

23031502



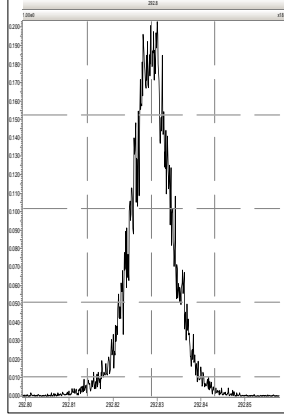
**Total-heptafurans**

23031502

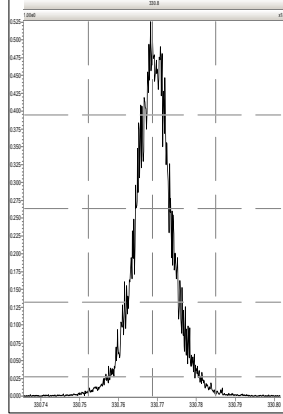




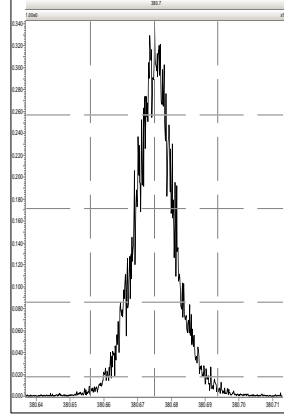
M 292.9824 R 13670



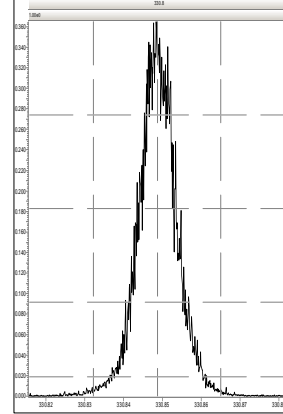
M 330.9792 R 13973



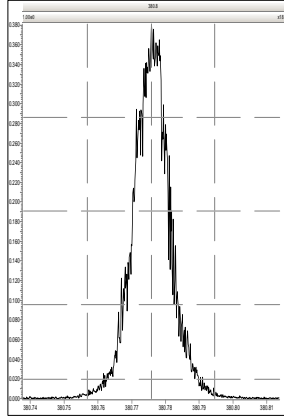
M 380.9760 R 13263



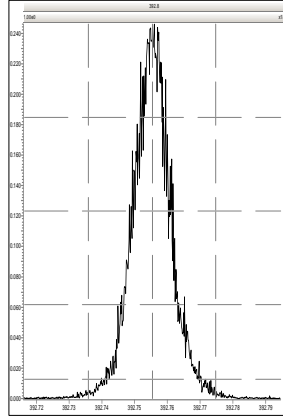
M 330.9792 R 14547



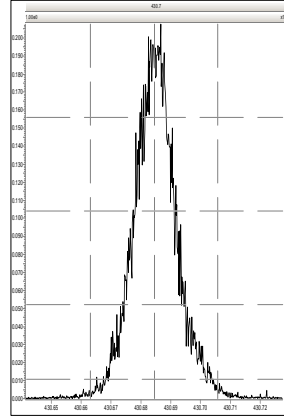
M 380.9760 R 13927



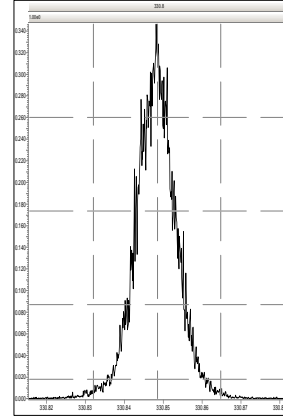
M 392.9760 R 14384



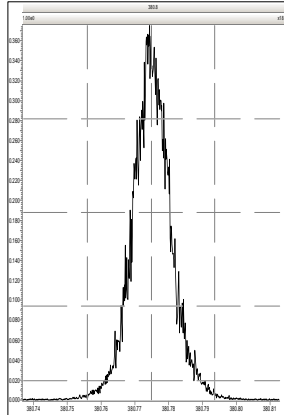
M 430.9728 R 12993



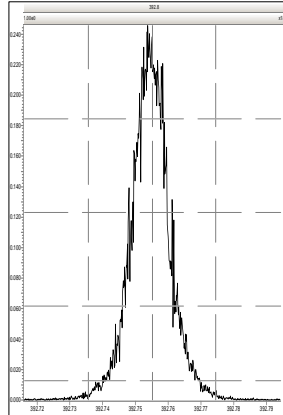
M 330.9792 R 13409



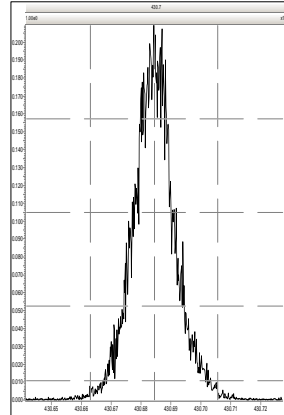
M 380.9760 R 13698



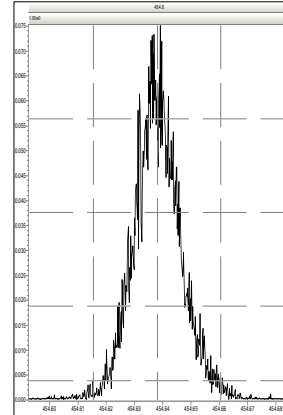
M 392.9760 R 13516



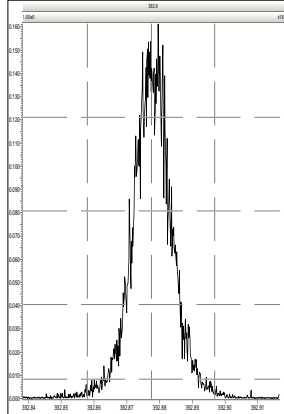
M 430.9728 R 12791



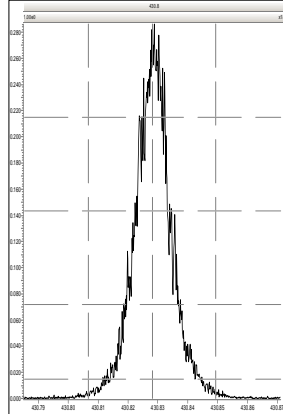
M 454.9728 R 12362



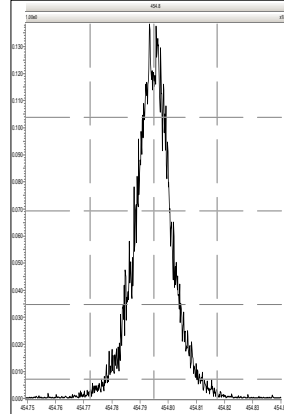
M 392.9760 R 13928



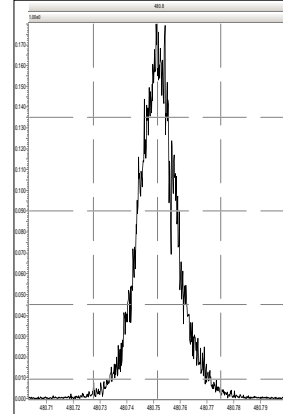
M 430.9728 R 14084



M 454.9728 R 13818

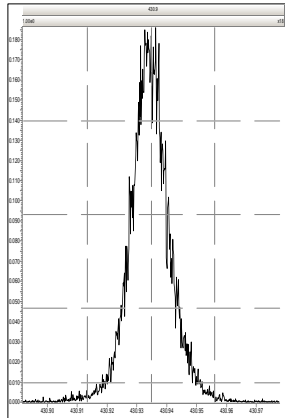


M 480.9696 R 14173

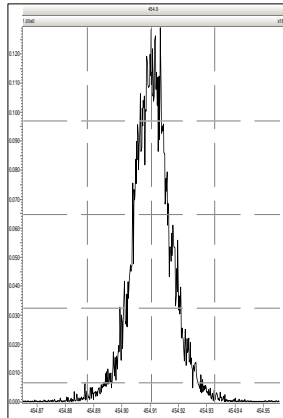


Printed: Wednesday, March 15, 2023 11:02:27 Pacific Daylight Time

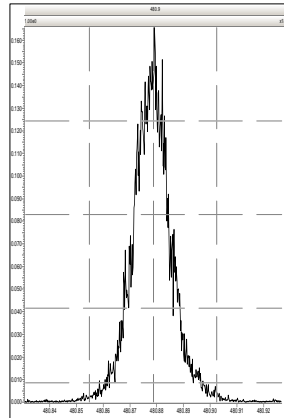
M 430.9728 R 13935



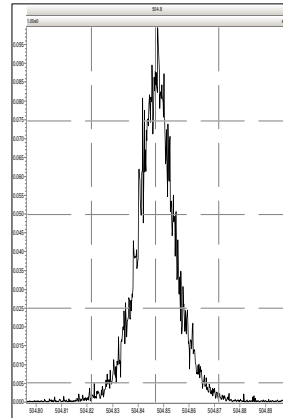
M 454.9728 R 15351



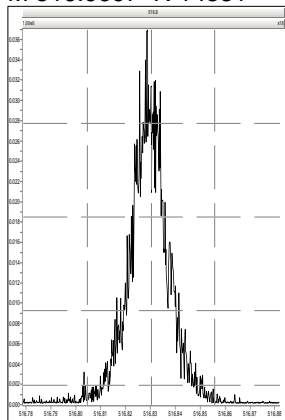
M 480.9696 R 13778



M 504.9696 R 13850



M 516.9697 R 14331

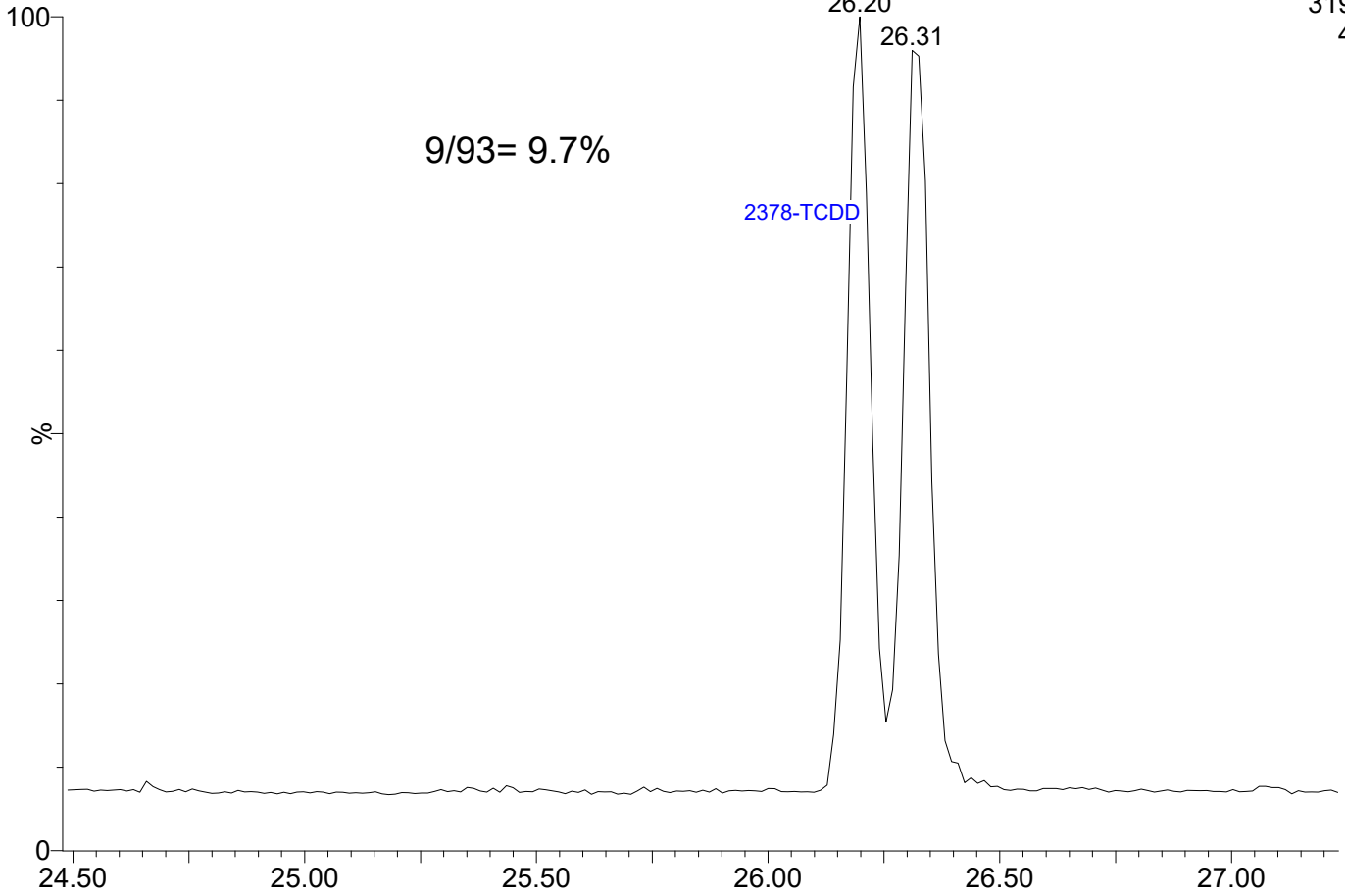


23031503

1: Voltage SIR 14 Channels EI+

319.8965

4.04e5

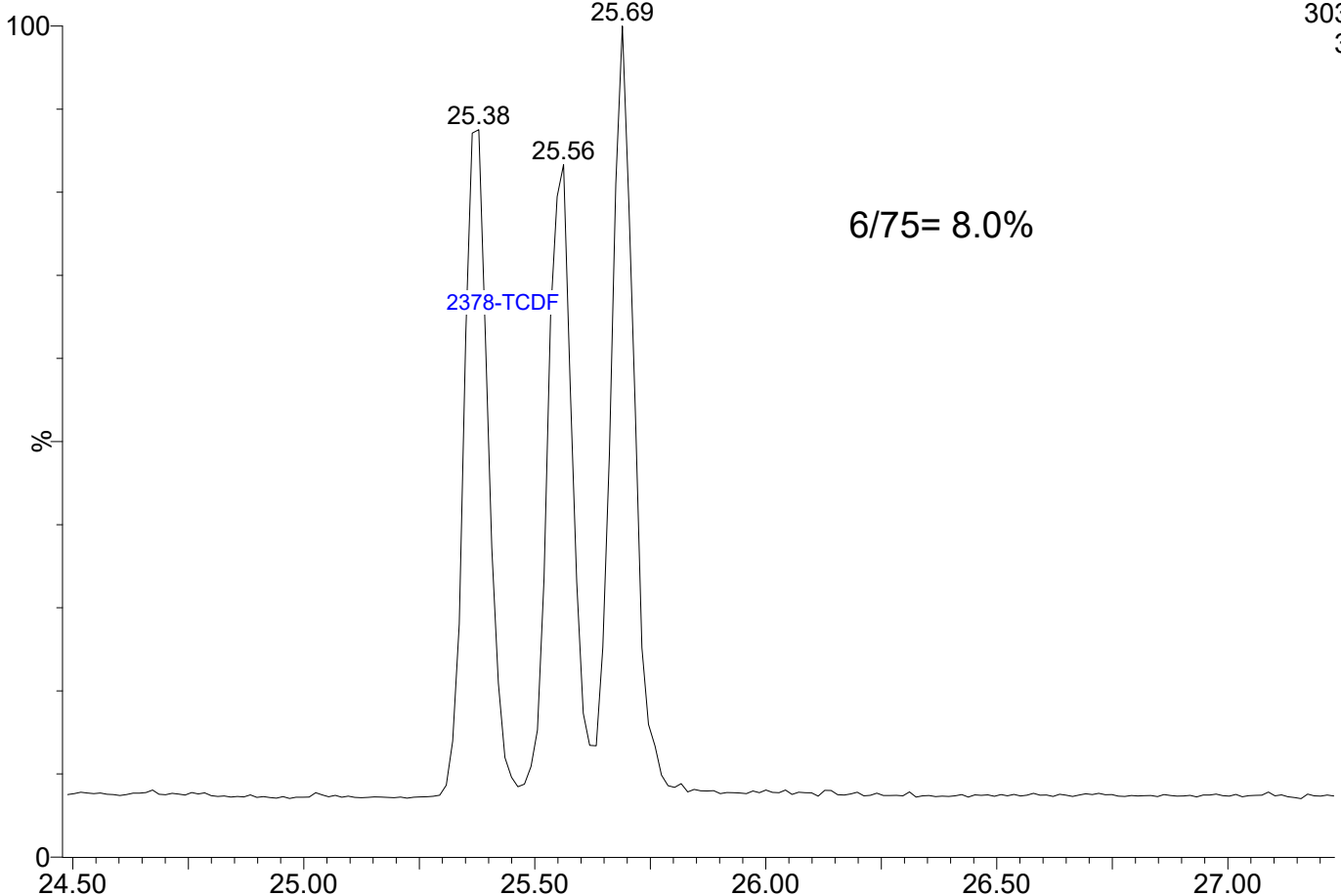


23031503

1: Voltage SIR 14 Channels EI+

303.9016

3.87e5





INITIAL CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23031702

Calibration Date: 03/03/2023

Sequence: SLC0258

Injection Date: 03/17/23

Lab Sample ID: SLC0258-ICV1

Injection Time: 10:40

Sequence Name: CS3A1

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	11.0	0.7015272	0.7691466		9.6	+/-16
2,3,7,8-TCDD	A	10.000	8.82	1.1486620	1.0126970		-11.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	52.4	0.6792300	0.7122400		4.9	+/-18
2,3,4,7,8-PeCDF	A	50.000	52.8	0.7861704	0.8298405		5.6	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.3	1.0218450	1.0274310		0.5	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	45.4	1.1660380	1.0581770		-9.3	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	46.0	1.0907410	1.0036840		-8.0	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	47.7	1.1396990	1.0862290		-4.7	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.8	1.1370930	1.1108820		-2.3	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	47.4	0.9955689	0.9430088		-5.3	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	43.9	1.0009380	0.8781711		-12.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	49.9	0.9071139	0.9054246		-0.2	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	51.0	1.0029930	1.0237760		2.1	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	55.2	0.9531152	1.0530360		10.5	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	48.2	1.0390130	1.0023460		-3.5	+/-14
OCDF	A	100.00	103	0.7778078	0.8021057		3.1	+/-37
OCDD	A	100.00	105	0.9199537	0.9686315		5.3	+/-21
13C12-2,3,7,8-TCDF	A	100.00	85.7	1.6201960	1.3885753		-14.3	+/-29
13C12-2,3,7,8-TCDD	A	100.00	103	1.1524090	1.1908720		3.3	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	90.6	1.2404520	1.1237245		-9.4	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	91.4	1.1177860	1.0215180		-8.6	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	92.1	0.8288129	0.7634633		-7.9	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	80.3	1.1683050	0.9381353		-19.7	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	78.1	1.3864660	1.0830936		-21.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	82.2	1.1292560	0.9283671		-17.8	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	87.0	0.9317541	0.8105234		-13.0	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.6	0.9950393	0.9312862		-6.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	96.2	1.1566890	1.1130053		-3.8	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	78.1	0.8952017	0.6995307		-21.9	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	77.8	0.7697516	0.5991133		-22.2	+/-23

\* Values outside of QC limits



## INITIAL CALIBRATION CHECK

### EPA 1613B

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Instrument ID: <u>AUTOSPEC01</u>	Calibration: <u>GC00015</u>
Lab File ID: <u>23031702</u>	Calibration Date: <u>03/03/2023</u>
Sequence: <u>SLC0258</u>	Injection Date: <u>03/17/23</u>
Lab Sample ID: <u>SLC0258-ICV1</u>	Injection Time: <u>10:40</u>
Sequence Name: <u>CS3A1</u>	

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	79.4	0.8401226	0.6669764		-20.6	+/-28
13C12-OCDD	A	200.00	161	0.7674714	0.6186550		-19.4	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.65	1.2878040	1.1140309		-13.5	

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:41:42 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.590	1.001	3.088e4	4.193e4	0.702	0.736	0.770	660	1216	4.56e5	6.02e5	689.9	495.4	NO	bb	bb	10.964
12378-PeCDF	29.747	1.000	1.630e5	1.098e5	0.679	1.484	1.550	1844	1416	2.37e6	1.60e6	1287.7	1127.1	NO	bb	bd	52.430
23478-PeCDF	31.083	1.001	1.740e5	1.150e5	0.786	1.513	1.550	1844	1416	2.63e6	1.72e6	1429.1	1211.8	NO	bb	bb	52.777
123478-HxCDF	34.727	1.000	2.140e5	1.719e5	1.166	1.245	1.240	1634	1598	3.32e6	2.65e6	2033.6	1655.6	NO	bd	bd	45.375
234678-HxCDF	35.741	1.001	2.183e5	1.737e5	1.140	1.257	1.240	1634	1598	3.29e6	2.61e6	2011.6	1635.5	NO	bb	bd	47.654
123678-HxCDF	34.871	1.001	2.319e5	1.906e5	1.091	1.217	1.240	1634	1598	3.32e6	2.67e6	2030.9	1670.2	NO	dd	db	46.009
123789-HxCDF	36.765	1.000	1.941e5	1.559e5	1.137	1.245	1.240	1634	1598	2.87e6	2.31e6	1759.3	1445.2	NO	bb	bd	48.847
1234678-HpCDF	38.626	1.000	1.376e5	1.408e5	1.003	0.977	1.050	1191	1376	2.24e6	2.27e6	1882.7	1650.1	NO	bb	bd	51.036
1234789-HpCDF	40.843	1.001	1.224e5	1.228e5	0.953	0.997	1.050	1191	1376	1.72e6	1.67e6	1446.7	1215.8	NO	bd	bd	55.242
OCDF	45.047	1.005	1.844e5	2.014e5	0.778	0.916	0.890	841	1068	2.08e6	2.29e6	2469.6	2146.5	NO	bd	bb	103.124
2378-TCDD	26.226	1.001	3.625e4	4.597e4	1.149	0.789	0.770	1306	1120	5.33e5	6.83e5	408.3	610.0	NO	bb	bb	8.816
12378-PeCDD	31.340	1.001	1.632e5	1.042e5	1.022	1.567	1.550	1497	1076	2.41e6	1.55e6	1610.9	1439.9	NO	bb	bb	50.273
123478-HxCDD	35.852	1.001	1.875e5	1.538e5	0.996	1.219	1.240	1643	1279	3.01e6	2.46e6	1833.8	1924.2	NO	bd	bd	47.360
123678-HxCDD	35.963	1.000	2.104e5	1.695e5	1.001	1.242	1.240	1643	1279	3.12e6	2.60e6	1900.4	2029.6	NO	db	db	43.867
123789-HxCDD	36.353	1.011	2.013e5	1.584e5	0.907	1.271	1.240	1643	1279	2.96e6	2.43e6	1802.3	1897.6	NO	bd	bb	49.907
1234678-HpCDD	40.108	1.000	1.309e5	1.290e5	1.039	1.015	1.050	1040	1230	1.98e6	1.94e6	1899.0	1578.0	NO	bb	bb	48.235
OCDD	44.819	1.000	2.192e5	2.467e5	0.920	0.888	0.890	963	1826	2.70e6	3.06e6	2798.1	1676.8	NO	bb	bb	105.291
13C-2378-TCDF	25.562	1.007	4.121e5	5.346e5	1.620	0.771	0.770	2041	1162	6.13e6	8.09e6	3004.7	6963.7	NO	bb	bb	85.704
13C-12378-PeCDF	29.736	1.172	4.666e5	2.995e5	1.240	1.558	1.550	3053	1463	6.78e6	4.45e6	2219.6	3042.2	NO	bd	bb	90.590
13C-23478-PeCDF	31.061	1.224	4.220e5	2.744e5	1.118	1.538	1.550	3053	1463	6.36e6	4.18e6	2084.7	2853.9	NO	bb	bb	91.388
13C-123478-HxCDF	34.715	0.955	2.452e5	4.841e5	1.168	0.507	0.510	1286	1836	3.83e6	7.44e6	2978.7	4049.8	NO	bd	bd	80.299
13C-123678-HxCDF	34.849	0.959	2.825e5	5.595e5	1.386	0.505	0.510	1286	1836	4.02e6	7.92e6	3122.7	4312.1	NO	db	db	78.119
13C-234678-HxCDF	35.718	0.983	2.410e5	4.807e5	1.129	0.501	0.510	1286	1836	3.78e6	7.54e6	2939.4	4105.6	NO	bb	bb	82.211
13C-123789-HxCDF	36.754	1.011	2.099e5	4.202e5	0.932	0.499	0.510	1286	1836	3.36e6	6.63e6	2611.9	3608.5	NO	bb	bb	86.989
13C-1234678-HpCDF	38.615	1.063	1.657e5	3.781e5	0.895	0.438	0.440	1222	1872	2.82e6	6.50e6	2305.1	3471.6	NO	bb	bb	78.142
13C-1234789-HpCDF	40.821	1.123	1.437e5	3.220e5	0.770	0.446	0.440	1222	1872	2.09e6	4.73e6	1712.1	2527.7	NO	bb	bb	77.832
13C-1234-TCDD	25.379	0.000	3.000e5	3.818e5	1.000	0.786	0.770	1525	993	4.74e6	6.04e6	3110.6	6088.2	NO	bb	bb	100.000
13C-2378-TCDD	26.198	1.032	3.556e5	4.563e5	1.152	0.779	0.770	1525	993	5.45e6	7.00e6	3571.7	7057.6	NO	bb	bb	103.338
13C-12378-PeCDD	31.317	1.234	3.205e5	2.000e5	0.829	1.603	1.550	1397	898	4.74e6	2.94e6	3391.4	3275.7	NO	bb	bb	92.115
13C-123478-HxCDD	35.829	0.986	4.064e5	3.175e5	0.995	1.280	1.240	1412	1325	6.60e6	5.15e6	4672.5	3888.6	NO	bd	bd	93.593
13C-123678-HxCDD	35.952	0.989	4.833e5	3.820e5	1.157	1.265	1.240	1412	1325	6.94e6	5.49e6	4912.8	4145.3	NO	db	db	96.223
13C-1234678-HpCDD	40.097	1.103	2.665e5	2.520e5	0.840	1.058	1.050	982	989	3.97e6	3.71e6	4041.3	3746.9	NO	bb	bb	79.390
13C-OCDD	44.809	1.233	4.557e5	5.061e5	0.767	0.900	0.890	1559	1613	5.53e6	6.15e6	3546.1	3813.3	NO	bb	bb	161.219
13C-123789-HxCDD	36.342	0.000	4.335e5	3.439e5	1.000	1.260	1.240	1412	1325	6.64e6	5.22e6	4699.5	3938.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.226	1.033	7.595e4		1.288			1044		1.11e6		1061.5			bb		8.651

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
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ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.073	0.864	3.685e4	4.877e4	0.802	0.756	0.770	660	1216	5.75e5	7.74e5	871.2	636.2	NO	bb	bb	11.284
1289-TCDF	27.074	1.059	2.828e4	4.024e4	0.678	0.703	0.770	660	1216	4.10e5	5.62e5	621.5	462.5	NO	bb	dd	10.676
13468-PECDF	26.947	0.906	3.183e5	2.081e5	1.246	1.530	1.550	696	678	4.90e6	3.19e6	7048.4	4703.9	NO	bb	bb	55.128
12389-PECDF	32.120	1.080	1.708e5	1.110e5	0.496	1.539	1.550	1844	1416	2.44e6	1.60e6	1321.6	1126.8	NO	bb	bb	74.110
123468-HXCDF	33.056	0.952	2.209e5	1.773e5	1.169	1.246	1.240	1634	1598	3.15e6	2.51e6	1929.2	1568.5	NO	bd	bb	46.712
1368-TCDD	23.345	0.891	3.357e4	4.340e4	1.015	0.774	0.770	1306	1120	5.38e5	6.94e5	412.2	619.8	NO	bb	bb	9.337
1289-TCDD	26.819	1.024	3.196e4	4.038e4	0.909	0.792	0.770	1306	1120	4.58e5	5.84e5	350.8	522.0	NO	bd	bb	9.805
12479-PECDD	28.632	0.914	2.679e5	1.738e5	2.301	1.541	1.550	1497	1076	2.53e6	1.66e6	1690.0	1540.3	NO	bb	bb	36.877
12389-PECDD	31.730	1.013	1.874e5	1.201e5	1.184	1.561	1.550	1497	1076	2.73e6	1.76e6	1824.9	1638.5	NO	bb	bb	49.919
124679-HXCDD	33.835	0.944	1.934e5	1.604e5	1.115	1.206	1.240	1643	1279	2.87e6	2.41e6	1743.8	1886.0	NO	bb	bb	43.805
1234679-HPCDD	39.072	0.974	1.446e5	1.407e5	1.137	1.028	1.050	1040	1230	2.34e6	2.29e6	2247.4	1863.3	NO	bb	bb	48.405
Total-tetrafurans			9.632e4		0.727			660		1.45e6							33.033
Total-penta1			3.183e5					696		4.90e6							55.128
Total-pentafurans			5.347e5		0.654			1844		7.85e6							188.736
Total-hexafurans			1.079e6		1.141			1634		1.60e7							234.598
Total-heptafurans			2.600e5		0.978			1191		3.97e6							106.278
Total-Furans			2.473e6		0.922			660		3.62e7							720.897
Total-tetradoxins			1.690e5		1.024			1306		2.30e6							46.439
Total-pentadoxins			6.193e5		1.502			1497		7.68e6							137.212
Total-hexadoxins			7.943e5		1.005			1643		1.20e7							185.313
Total-heptadoxins			2.755e5		1.088			1040		4.31e6							96.641
Total-Dioxins			2.077e6		1.130			1306		2.90e7							570.896
Total-TEQ			4.550e6					1306		6.52e7							1291.793
FUNCTION1 PFK			2.257e7					421044		9.03e6							
FUNCTION2 PFK			4.311e5					311405		1.21e7							0.000
FUNCTION3 PFK			7.791e5					379964		1.82e7							0.000
FUNCTION4 PFK			0.000e0					253018		0.00e0							
FUNCTION5 PFK			7.522e4					163509		2.41e6							
FUNCTION1 HXCD...			7.964e2					601		1.19e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			5.288e2					588		6.63e3							0.000
FUNCTION3 OCDPE			4.965e2					524		7.80e3							0.000
FUNCTION4 NCDPE			5.970e2					634		7.17e3							0.000
FUNCTION5 DCDPE			0.000e0					529		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.828e4	4.024e4	0.678	0.70	0.77	621.5	YES	NO	bb	dd	10.676
2	2378-TCDF	25.59	3.088e4	4.193e4	0.702	0.74	0.77	689.9	YES	NO	bb	bb	10.964
3	Total-tetrafurans	24.49	3.047e2	4.456e2	0.727	0.68	0.77	6.8	YES	NO	dd	db	0.109
4	1368-TCDF	22.07	3.685e4	4.877e4	0.802	0.76	0.77	871.2	YES	NO	bb	bb	11.284

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.95	3.183e5	2.081e5	1.246	1.53	1.55	7048.4	YES	NO	bb	bb	55.128

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.12	1.708e5	1.110e5	0.496	1.54	1.55	1321.6	YES	NO	bb	bb	74.110
2	Total-pentafurans	31.28	2.397e2	1.620e2	0.654	1.48	1.55	2.5	NO	NO	bb	bb	0.084
3	23478-PeCDF	31.08	1.740e5	1.150e5	0.786	1.51	1.55	1429.1	YES	NO	bb	bb	52.777
4	12378-PeCDF	29.75	1.630e5	1.098e5	0.679	1.48	1.55	1287.7	YES	NO	bb	bd	52.430
5	Total-pentafurans	28.60	2.668e4	1.796e4	0.654	1.49	1.55	215.6	YES	NO	bb	bb	9.335

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	34.87	2.319e5	1.906e5	1.091	1.22	1.24	2030.9	YES	NO	dd	db	46.009
2	123478-HxCDF	34.73	2.140e5	1.719e5	1.166	1.24	1.24	2033.6	YES	NO	bd	bd	45.375
3	123468-HxCDF	33.06	2.209e5	1.773e5	1.169	1.25	1.24	1929.2	YES	NO	bd	bb	46.712
4	123789-HxCDF	36.77	1.941e5	1.559e5	1.137	1.25	1.24	1759.3	YES	NO	bb	bd	48.847
5	234678-HxCDF	35.74	2.183e5	1.737e5	1.140	1.26	1.24	2011.6	YES	NO	bb	bd	47.654

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.84	1.224e5	1.228e5	0.953	1.00	1.05	1446.7	YES	NO	bd	bd	55.242
2	1234678-HpCDF	38.63	1.376e5	1.408e5	1.003	0.98	1.05	1882.7	YES	NO	bb	bd	51.036



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.828e4	4.024e4	0.678	0.70	0.77	621.5	YES	NO	bb	dd	10.676
2	2378-TCDF	25.59	3.088e4	4.193e4	0.702	0.74	0.77	689.9	YES	NO	bb	bb	10.964
3	Total-tetrafurans	24.49	3.047e2	4.456e2	0.727	0.68	0.77	6.8	YES	NO	dd	db	0.109
4	1368-TCDF	22.07	3.685e4	4.877e4	0.802	0.76	0.77	871.2	YES	NO	bb	bb	11.284
5	12389-PECDF	32.12	1.708e5	1.110e5	0.496	1.54	1.55	1321.6	YES	NO	bb	bb	74.110
6	Total-pentafurans	31.28	2.397e2	1.620e2	0.654	1.48	1.55	2.5	NO	NO	bb	bb	0.084
7	23478-PeCDF	31.08	1.740e5	1.150e5	0.786	1.51	1.55	1429.1	YES	NO	bb	bb	52.777
8	12378-PeCDF	29.75	1.630e5	1.098e5	0.679	1.48	1.55	1287.7	YES	NO	bb	bd	52.430
9	Total-pentafurans	28.60	2.668e4	1.796e4	0.654	1.49	1.55	215.6	YES	NO	bb	bb	9.335
10	123678-HxCDF	34.87	2.319e5	1.906e5	1.091	1.22	1.24	2030.9	YES	NO	dd	db	46.009
11	123478-HxCDF	34.73	2.140e5	1.719e5	1.166	1.24	1.24	2033.6	YES	NO	bd	bd	45.375
12	123468-HxCDF	33.06	2.209e5	1.773e5	1.169	1.25	1.24	1929.2	YES	NO	bd	bb	46.712
13	123789-HxCDF	36.77	1.941e5	1.559e5	1.137	1.25	1.24	1759.3	YES	NO	bb	bd	48.847
14	234678-HxCDF	35.74	2.183e5	1.737e5	1.140	1.26	1.24	2011.6	YES	NO	bb	bd	47.654
15	1234789-HpCDF	40.84	1.224e5	1.228e5	0.953	1.00	1.05	1446.7	YES	NO	bd	bd	55.242
16	1234678-HpCDF	38.63	1.376e5	1.408e5	1.003	0.98	1.05	1882.7	YES	NO	bb	bd	51.036
17	OCDF	45.05	1.844e5	2.014e5	0.778	0.92	0.89	2469.6	YES	NO	bd	bb	103.124
18	13468-PECDF	26.95	3.183e5	2.081e5	1.246	1.53	1.55	7048.4	YES	NO	bb	bb	55.128

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.34	3.357e4	4.340e4	1.015	0.77	0.77	412.2	YES	NO	bb	bb	9.337
2	1289-TCDD	26.82	3.196e4	4.038e4	0.909	0.79	0.77	350.8	YES	NO	bd	bb	9.805
3	2378-TCDD	26.23	3.625e4	4.597e4	1.149	0.79	0.77	408.3	YES	NO	bb	bb	8.816
4	Total-tetradoxins	25.89	5.118e4	6.601e4	1.024	0.78	0.77	401.0	YES	NO	bb	bb	14.093
5	Total-tetradoxins	25.41	1.605e4	2.044e4	1.024	0.79	0.77	185.7	YES	NO	bb	bb	4.388

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.73	1.874e5	1.201e5	1.184	1.56	1.55	1824.9	YES	NO	bb	bb	49.919
2	12378-PeCDD	31.34	1.632e5	1.042e5	1.022	1.57	1.55	1610.9	YES	NO	bb	bb	50.273
3	Total-pentadoxins	30.66	6.611e2	4.513e2	1.502	1.46	1.55	6.4	YES	NO	bb	bb	0.142
4	12479-PECDD	28.63	2.679e5	1.738e5	2.301	1.54	1.55	1690.0	YES	NO	bb	bb	36.877

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk****HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.35	2.013e5	1.584e5	0.907	1.27	1.24	1802.3	YES	NO	bd	bb	49.907
2	123678-HxCDD	35.96	2.104e5	1.695e5	1.001	1.24	1.24	1900.4	YES	NO	db	db	43.867
3	123478-HxCDD	35.85	1.875e5	1.538e5	0.996	1.22	1.24	1833.8	YES	NO	bd	bd	47.360
4	Total-hexadioxins	34.96	1.594e3	1.384e3	1.005	1.15	1.24	9.5	YES	NO	bb	bb	0.373
5	124679-HxCDD	33.84	1.934e5	1.604e5	1.115	1.21	1.24	1743.8	YES	NO	bb	bb	43.805

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.07	1.446e5	1.407e5	1.137	1.03	1.05	2247.4	YES	NO	bb	bb	48.405
2	1234678-HpCDD	40.11	1.309e5	1.290e5	1.039	1.01	1.05	1899.0	YES	NO	bb	bb	48.235

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.34	3.357e4	4.340e4	1.015	0.77	0.77	412.2	YES	NO	bb	bb	9.337
2	1289-TCDD	26.82	3.196e4	4.038e4	0.909	0.79	0.77	350.8	YES	NO	bd	bb	9.805
3	2378-TCDD	26.23	3.625e4	4.597e4	1.149	0.79	0.77	408.3	YES	NO	bb	bb	8.816
4	Total-tetradioxins	25.89	5.118e4	6.601e4	1.024	0.78	0.77	401.0	YES	NO	bb	bb	14.093
5	Total-tetradioxins	25.41	1.605e4	2.044e4	1.024	0.79	0.77	185.7	YES	NO	bb	bb	4.388
6	12389-PECDD	31.73	1.874e5	1.201e5	1.184	1.56	1.55	1824.9	YES	NO	bb	bb	49.919
7	12378-PeCDD	31.34	1.632e5	1.042e5	1.022	1.57	1.55	1610.9	YES	NO	bb	bb	50.273
8	Total-pentadioxins	30.66	6.611e2	4.513e2	1.502	1.46	1.55	6.4	YES	NO	bb	bb	0.142
9	12479-PECDD	28.63	2.679e5	1.738e5	2.301	1.54	1.55	1690.0	YES	NO	bb	bb	36.877
10	123789-HxCDD	36.35	2.013e5	1.584e5	0.907	1.27	1.24	1802.3	YES	NO	bd	bb	49.907
11	123678-HxCDD	35.96	2.104e5	1.695e5	1.001	1.24	1.24	1900.4	YES	NO	db	db	43.867
12	123478-HxCDD	35.85	1.875e5	1.538e5	0.996	1.22	1.24	1833.8	YES	NO	bd	bd	47.360
13	Total-hexadioxins	34.96	1.594e3	1.384e3	1.005	1.15	1.24	9.5	YES	NO	bb	bb	0.373
14	124679-HxCDD	33.84	1.934e5	1.604e5	1.115	1.21	1.24	1743.8	YES	NO	bb	bb	43.805
15	1234679-HPCDD	39.07	1.446e5	1.407e5	1.137	1.03	1.05	2247.4	YES	NO	bb	bb	48.405
16	1234678-HpCDD	40.11	1.309e5	1.290e5	1.039	1.01	1.05	1899.0	YES	NO	bb	bb	48.235
17	OCDD	44.82	2.192e5	2.467e5	0.920	0.89	0.89	2798.1	YES	NO	bb	bb	105.291

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:41:42 Pacific Daylight Time

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.07	2.828e4	4.024e4	0.678	0.70	0.77	621.5	YES	NO	bb	dd	10.676
2	2378-TCDF	25.59	3.088e4	4.193e4	0.702	0.74	0.77	689.9	YES	NO	bb	bb	10.964
3	Total-tetrafurans	24.49	3.047e2	4.456e2	0.727	0.68	0.77	6.8	YES	NO	dd	db	0.109
4	1368-TCDF	22.07	3.685e4	4.877e4	0.802	0.76	0.77	871.2	YES	NO	bb	bb	11.284
5	12389-PECDF	32.12	1.708e5	1.110e5	0.496	1.54	1.55	1321.6	YES	NO	bb	bb	74.110
6	Total-pentafurans	31.28	2.397e2	1.620e2	0.654	1.48	1.55	2.5	NO	NO	bb	bb	0.084
7	23478-PeCDF	31.08	1.740e5	1.150e5	0.786	1.51	1.55	1429.1	YES	NO	bb	bb	52.777
8	12378-PeCDF	29.75	1.630e5	1.098e5	0.679	1.48	1.55	1287.7	YES	NO	bb	bd	52.430
9	Total-pentafurans	28.60	2.668e4	1.796e4	0.654	1.49	1.55	215.6	YES	NO	bb	bb	9.335
10	123678-HxCDF	34.87	2.319e5	1.906e5	1.091	1.22	1.24	2030.9	YES	NO	dd	db	46.009
11	123478-HxCDF	34.73	2.140e5	1.719e5	1.166	1.24	1.24	2033.6	YES	NO	bd	bd	45.375
12	123468-HXCDF	33.06	2.209e5	1.773e5	1.169	1.25	1.24	1929.2	YES	NO	bd	bb	46.712
13	123789-HxCDF	36.77	1.941e5	1.559e5	1.137	1.25	1.24	1759.3	YES	NO	bb	bd	48.847
14	234678-HxCDF	35.74	2.183e5	1.737e5	1.140	1.26	1.24	2011.6	YES	NO	bb	bd	47.654
15	1234789-HpCDF	40.84	1.224e5	1.228e5	0.953	1.00	1.05	1446.7	YES	NO	bd	bd	55.242
16	1234678-HpCDF	38.63	1.376e5	1.408e5	1.003	0.98	1.05	1882.7	YES	NO	bb	bd	51.036
17	OCDF	45.05	1.844e5	2.014e5	0.778	0.92	0.89	2469.6	YES	NO	bd	bb	103.124
18	13468-PECDF	26.95	3.183e5	2.081e5	1.246	1.53	1.55	7048.4	YES	NO	bb	bb	55.128
19	1368-TCDD	23.34	3.357e4	4.340e4	1.015	0.77	0.77	412.2	YES	NO	bb	bb	9.337
20	1289-TCDD	26.82	3.196e4	4.038e4	0.909	0.79	0.77	350.8	YES	NO	bd	bb	9.805
21	2378-TCDD	26.23	3.625e4	4.597e4	1.149	0.79	0.77	408.3	YES	NO	bb	bb	8.816
22	Total-tetradiioxins	25.89	5.118e4	6.601e4	1.024	0.78	0.77	401.0	YES	NO	bb	bb	14.093
23	Total-tetradiioxins	25.41	1.605e4	2.044e4	1.024	0.79	0.77	185.7	YES	NO	bb	bb	4.388
24	12389-PECDD	31.73	1.874e5	1.201e5	1.184	1.56	1.55	1824.9	YES	NO	bb	bb	49.919
25	12378-PeCDD	31.34	1.632e5	1.042e5	1.022	1.57	1.55	1610.9	YES	NO	bb	bb	50.273
26	Total-pentadiioxins	30.66	6.611e2	4.513e2	1.502	1.46	1.55	6.4	YES	NO	bb	bb	0.142
27	12479-PECDD	28.63	2.679e5	1.738e5	2.301	1.54	1.55	1690.0	YES	NO	bb	bb	36.877
28	123789-HxCDD	36.35	2.013e5	1.584e5	0.907	1.27	1.24	1802.3	YES	NO	bd	bb	49.907
29	123678-HxCDD	35.96	2.104e5	1.695e5	1.001	1.24	1.24	1900.4	YES	NO	db	db	43.867
30	123478-HxCDD	35.85	1.875e5	1.538e5	0.996	1.22	1.24	1833.8	YES	NO	bd	bd	47.360
31	Total-hexadiioxins	34.96	1.594e3	1.384e3	1.005	1.15	1.24	9.5	YES	NO	bb	bb	0.373
32	124679-HXCDD	33.84	1.934e5	1.604e5	1.115	1.21	1.24	1743.8	YES	NO	bb	bb	43.805
33	1234679-HPCDD	39.07	1.446e5	1.407e5	1.137	1.03	1.05	2247.4	YES	NO	bb	bb	48.405
34	1234678-HpCDD	40.11	1.309e5	1.290e5	1.039	1.01	1.05	1899.0	YES	NO	bb	bb	48.235
35	OCDD	44.82	2.192e5	2.467e5	0.920	0.89	0.89	2798.1	YES	NO	bb	bb	105.291

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:41:42 Pacific Daylight Time

**ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.29	2.257e7					21.5	YES		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.79	1.448e4					1.5	NO		bb		0.000
2	FUNCTION2 PFK	28.72	1.104e4					1.3	NO		bb		0.000
3	FUNCTION2 PFK	28.44	1.568e4					1.3	NO		bb		0.000
4	FUNCTION2 PFK	28.39	3.013e3					0.5	NO		bb		0.000
5	FUNCTION2 PFK	28.20	8.876e3					1.2	NO		db		0.000
6	FUNCTION2 PFK	28.14	5.349e4					3.0	YES		dd		0.000
7	FUNCTION2 PFK	28.06	8.126e4					3.4	YES		bd		0.000
8	FUNCTION2 PFK	27.99	3.105e3					0.9	NO		bb		0.000
9	FUNCTION2 PFK	27.92	1.189e4					1.6	NO		bb		0.000
10	FUNCTION2 PFK	31.72	1.248e4					1.4	NO		bd		0.000
11	FUNCTION2 PFK	31.58	1.604e4					2.2	NO		db		0.000
12	FUNCTION2 PFK	31.53	1.701e4					1.6	NO		bd		0.000
13	FUNCTION2 PFK	31.17	5.654e3					0.6	NO		bb		0.000
14	FUNCTION2 PFK	31.12	3.963e3					0.8	NO		bb		0.000
15	FUNCTION2 PFK	31.02	1.049e4					1.2	NO		bb		0.000
16	FUNCTION2 PFK	30.84	1.658e4					1.7	NO		bb		0.000
17	FUNCTION2 PFK	30.64	2.776e4					2.1	NO		bb		0.000
18	FUNCTION2 PFK	30.57	2.166e3					0.6	NO		bb		0.000
19	FUNCTION2 PFK	29.95	1.880e4					1.2	NO		bb		0.000
20	FUNCTION2 PFK	29.57	1.269e4					1.4	NO		bb		0.000
21	FUNCTION2 PFK	29.41	2.290e4					1.1	NO		bb		0.000
22	FUNCTION2 PFK	29.10	2.399e3					0.5	NO		bb		0.000
23	FUNCTION2 PFK	29.03	7.599e3					1.3	NO		bb		0.000
24	FUNCTION2 PFK	28.99	8.445e3					1.1	NO		bb		0.000
25	FUNCTION2 PFK	28.89	1.186e4					1.2	NO		bb		0.000
26	FUNCTION2 PFK	32.44	6.230e3					1.0	NO		bb		0.000
27	FUNCTION2 PFK	32.40	7.517e3					0.8	NO		bb		0.000
28	FUNCTION2 PFK	32.08	1.450e3					0.4	NO		bb		0.000
29	FUNCTION2 PFK	31.91	4.180e3					0.6	NO		bb		0.000
30	FUNCTION2 PFK	31.77	1.205e4					1.2	NO		db		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

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**ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk****PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.86	1.488e4					1.6	NO		db		0.000
2	FUNCTION3 PFK	33.81	8.915e3					0.9	NO		bd		0.000
3	FUNCTION3 PFK	33.38	6.712e3					1.0	NO		bb		0.000
4	FUNCTION3 PFK	33.27	2.161e4					2.3	NO		db		0.000
5	FUNCTION3 PFK	33.23	4.945e4					2.9	NO		dd		0.000
6	FUNCTION3 PFK	33.18	2.572e4					2.1	NO		dd		0.000
7	FUNCTION3 PFK	33.13	1.368e4					1.3	NO		bd		0.000
8	FUNCTION3 PFK	33.08	5.842e3					0.9	NO		bb		0.000
9	FUNCTION3 PFK	32.89	3.125e4					0.4	NO		bb		0.000
10	FUNCTION3 PFK	32.78	1.407e4					1.3	NO		bb		0.000
11	FUNCTION3 PFK	36.40	1.373e4					1.3	NO		bd		0.000
12	FUNCTION3 PFK	36.21	1.884e3					0.4	NO		bb		0.000
13	FUNCTION3 PFK	36.11	2.575e4					1.3	NO		bb		0.000
14	FUNCTION3 PFK	35.84	1.785e3					0.4	NO		bb		0.000
15	FUNCTION3 PFK	35.80	1.083e4					1.1	NO		bb		0.000
16	FUNCTION3 PFK	35.56	8.647e3					0.7	NO		bb		0.000
17	FUNCTION3 PFK	35.26	1.233e4					1.1	NO		db		0.000
18	FUNCTION3 PFK	35.22	1.633e4					1.5	NO		bd		0.000
19	FUNCTION3 PFK	34.87	2.124e3					0.5	NO		bb		0.000
20	FUNCTION3 PFK	34.64	8.993e3					1.1	NO		db		0.000
21	FUNCTION3 PFK	34.60	1.045e4					0.9	NO		dd		0.000
22	FUNCTION3 PFK	34.55	1.584e4					1.5	NO		bd		0.000
23	FUNCTION3 PFK	34.45	3.076e4					2.0	NO		bb		0.000
24	FUNCTION3 PFK	34.25	8.256e3					0.7	NO		bb		0.000
25	FUNCTION3 PFK	34.10	3.139e4					1.7	NO		bb		0.000
26	FUNCTION3 PFK	34.04	2.307e4					1.8	NO		bb		0.000
27	FUNCTION3 PFK	37.31	1.960e4					1.4	NO		bb		0.000
28	FUNCTION3 PFK	37.09	9.012e4					2.9	NO		db		0.000
29	FUNCTION3 PFK	36.97	8.790e4					3.4	YES		dd		0.000
30	FUNCTION3 PFK	36.85	6.551e4					2.1	NO		bd		0.000
31	FUNCTION3 PFK	36.60	3.886e3					0.9	NO		bb		0.000
32	FUNCTION3 PFK	36.55	6.957e4					2.9	NO		db		0.000
33	FUNCTION3 PFK	36.46	2.819e4					1.8	NO		dd		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

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ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.44	7.499e3					1.5	NO		bb		
2	FUNCTION5 PFK	44.38	2.267e4					2.0	NO		bb		
3	FUNCTION5 PFK	44.20	2.141e3					0.9	NO		bb		
4	FUNCTION5 PFK	43.67	7.599e2					0.5	NO		bb		
5	FUNCTION5 PFK	43.52	1.229e4					2.3	NO		bb		
6	FUNCTION5 PFK	42.96	5.571e3					1.5	NO		bb		
7	FUNCTION5 PFK	42.78	9.218e3					1.2	NO		bb		
8	FUNCTION5 PFK	45.68	2.351e3					0.9	NO		bb		
9	FUNCTION5 PFK	45.47	8.478e2					0.6	NO		bb		
10	FUNCTION5 PFK	45.25	3.786e3					1.1	NO		bb		
11	FUNCTION5 PFK	44.84	3.641e3					1.2	NO		bb		
12	FUNCTION5 PFK	44.63	4.451e3					1.1	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.92	1.090e2					2.5	NO		bb		0.000
2	FUNCTION1 HXCD...	26.21	1.366e2					2.8	NO		bb		0.000
3	FUNCTION1 HXCD...	25.53	8.172e1					1.7	NO		bb		0.000
4	FUNCTION1 HXCD...	24.66	1.095e2					2.1	NO		bb		0.000
5	FUNCTION1 HXCD...	24.31	1.193e2					2.9	NO		bb		0.000
6	FUNCTION1 HXCD...	23.87	1.625e2					4.5	YES		bb		0.000
7	FUNCTION1 HXCD...	22.47	7.781e1					3.5	YES		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:41:42 Pacific Daylight Time

**ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk****ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.89	4.549e2					9.2	YES		bb		0.000
2	FUNCTION2 HPCD...	30.54	7.382e1					2.0	NO		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.74	1.123e2					2.7	NO		bb		0.000
2	FUNCTION3 OCDPE	36.33	1.645e2					4.1	YES		bb		0.000
3	FUNCTION3 OCDPE	35.95	8.057e1					3.2	YES		bb		0.000
4	FUNCTION3 OCDPE	35.84	1.391e2					4.8	YES		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.50	2.480e2					2.5	NO		bb		0.000
2	FUNCTION4 NCDPE	40.39	8.399e1					2.5	NO		bb		0.000
3	FUNCTION4 NCDPE	39.92	7.223e1					2.9	NO		bb		0.000
4	FUNCTION4 NCDPE	39.17	1.051e2					1.7	NO		bb		0.000
5	FUNCTION4 NCDPE	38.95	8.767e1					1.7	NO		bb		0.000

**ETHERS6**

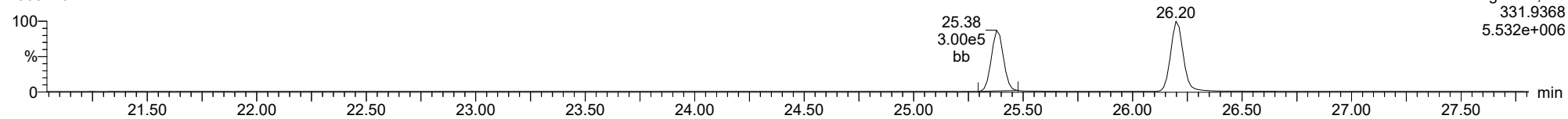
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1													

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

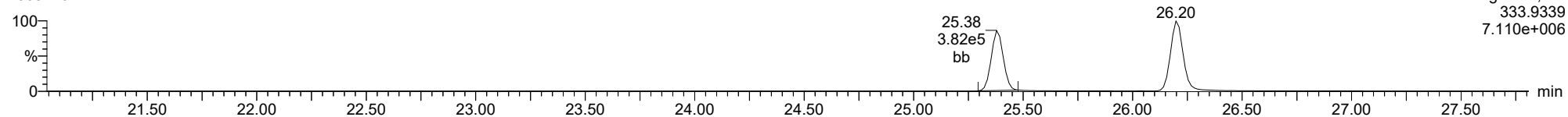
**13C-1234-TCDD**

23031702



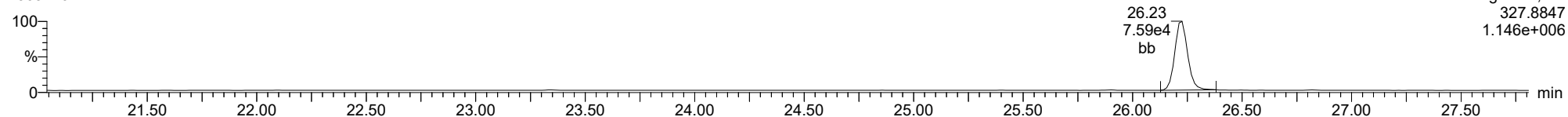
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23031702



**37CL-2378-TCDD**

23031702

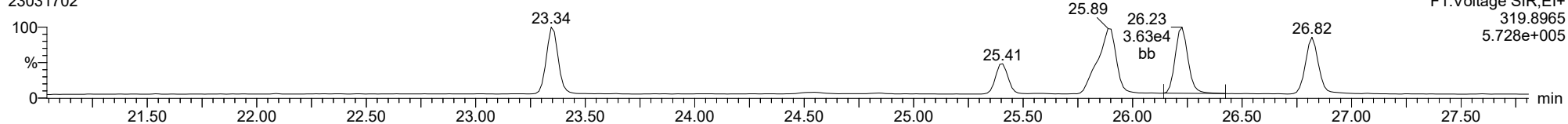




ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**2378-TCDD**

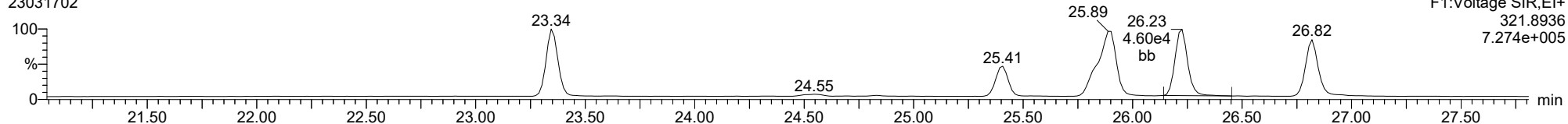
23031702



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319.8965  
5.728e+005

**2378-TCDD**

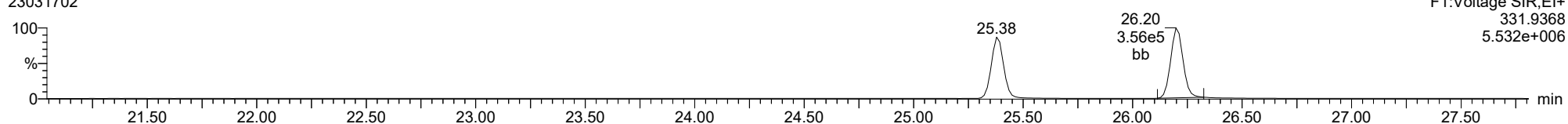
23031702



F1:Voltage SIR,EI+  
321.8936  
7.274e+005

**13C-2378-TCDD**

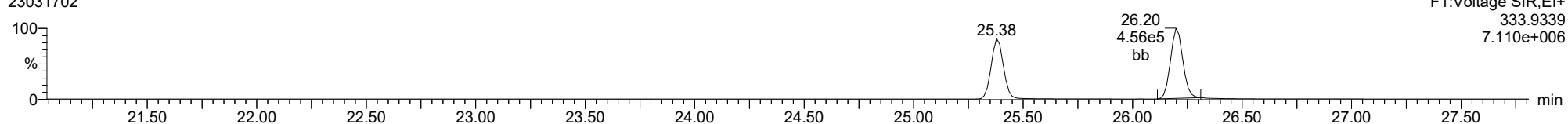
23031702



F1:Voltage SIR,EI+  
331.9368  
5.532e+006

**13C-2378-TCDD**

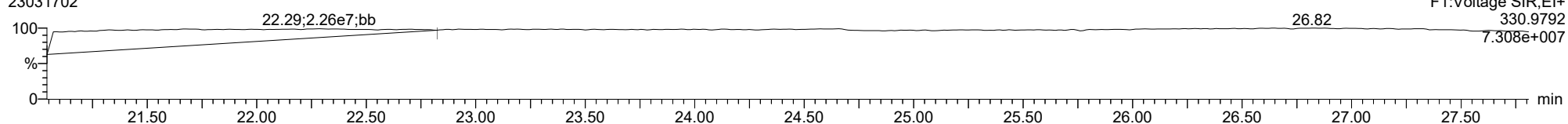
23031702



F1:Voltage SIR,EI+  
333.9339  
7.110e+006

**FUNCTION1 PFK**

23031702

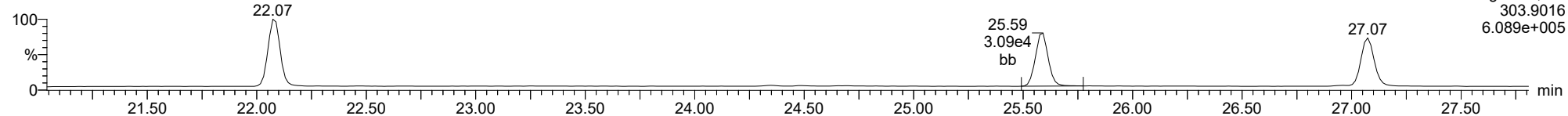


F1:Voltage SIR,EI+  
330.9792  
7.308e+007

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

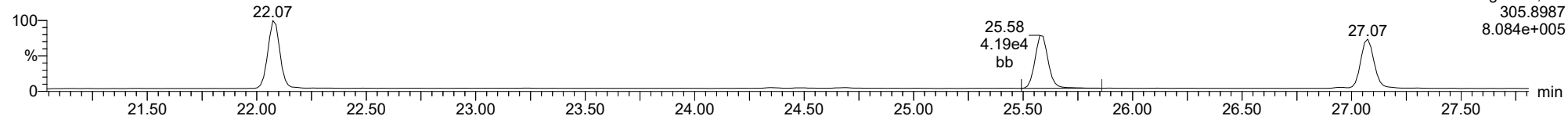
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23031702



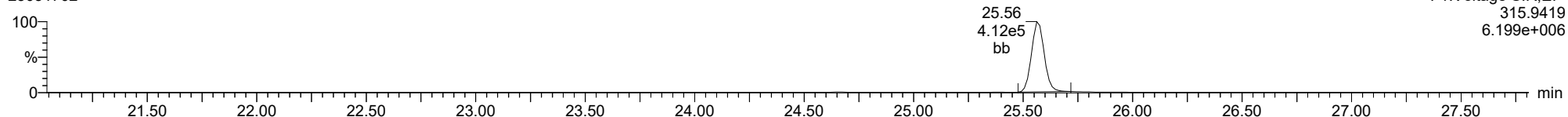
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23031702



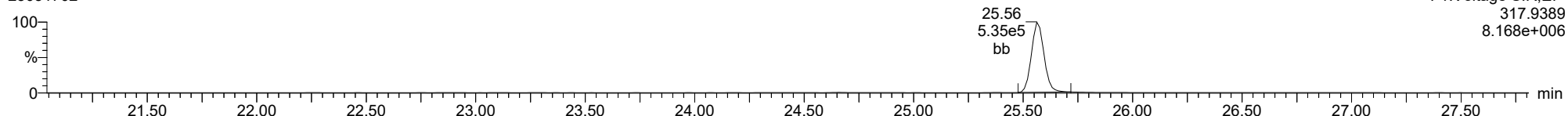
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23031702



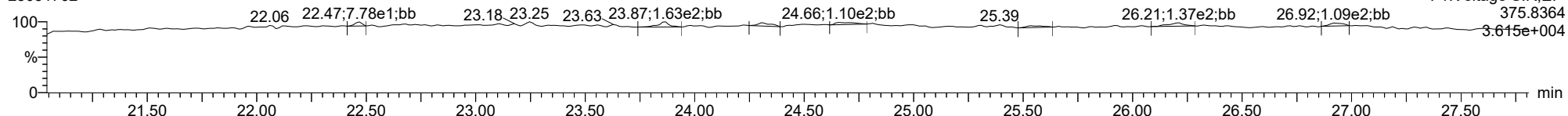
**13C-2378-TCDF**

23031702



**FUNCTION1 HXCDPE**

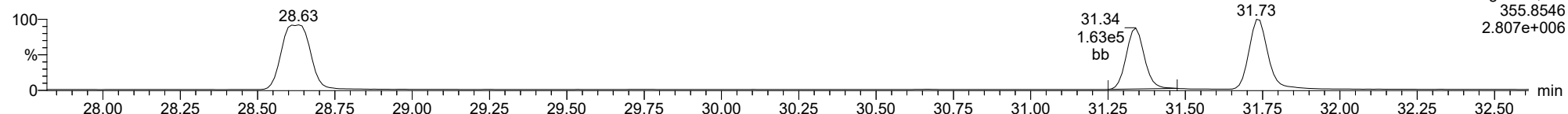
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

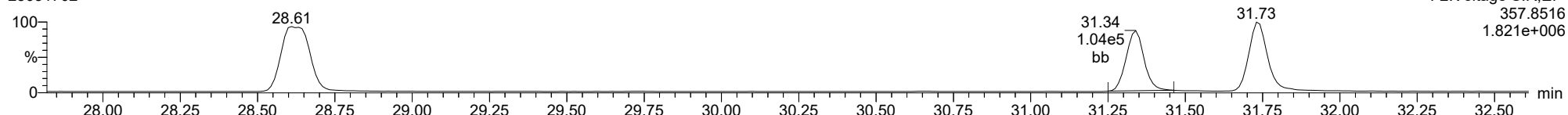
23031702



F2:Voltage SIR,El+  
357.8546  
2.807e+006

**12378-PeCDD**

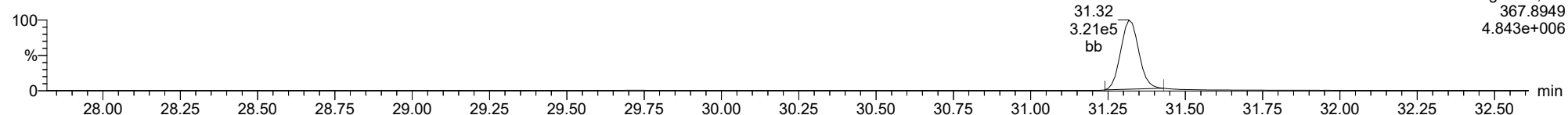
23031702



F2:Voltage SIR,El+  
357.8516  
1.821e+006

**13C-12378-PeCDD**

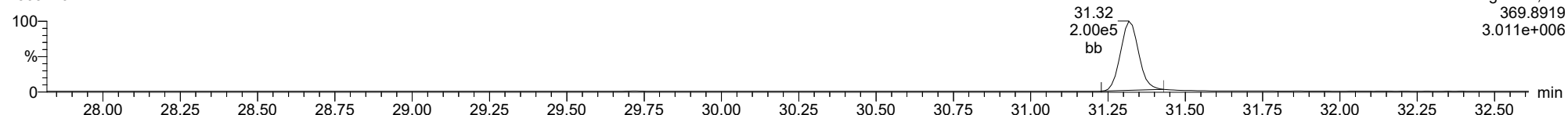
23031702



F2:Voltage SIR,El+  
367.8949  
4.843e+006

**13C-12378-PeCDD**

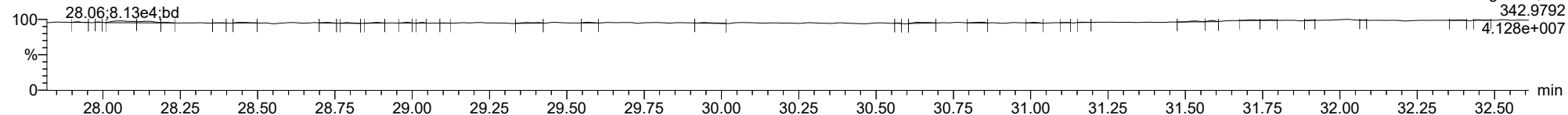
23031702



F2:Voltage SIR,El+  
369.8919  
3.011e+006

**FUNCTION2 PFK**

23031702

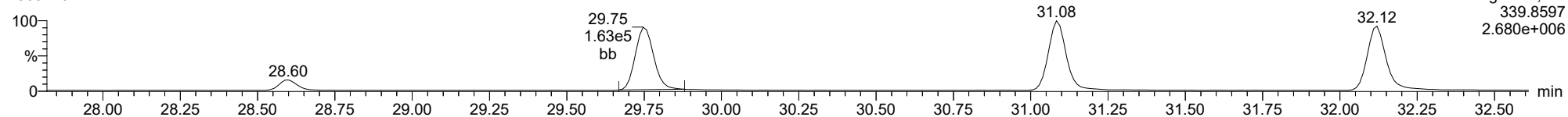


F2:Voltage SIR,El+  
342.9792  
4.128e+007

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

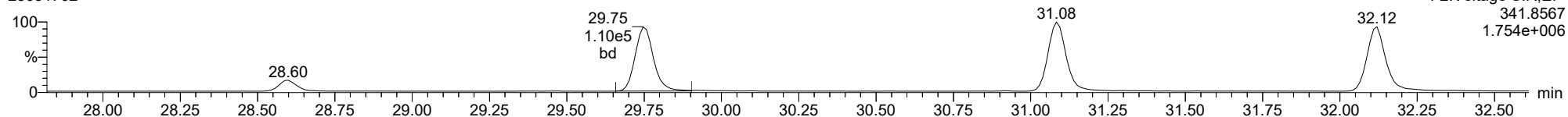
**12378-PeCDF**

23031702



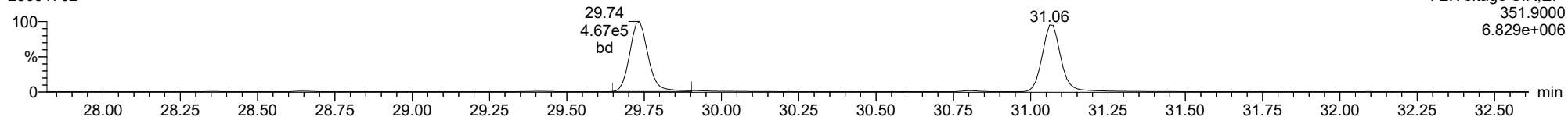
**12378-PeCDF**

23031702



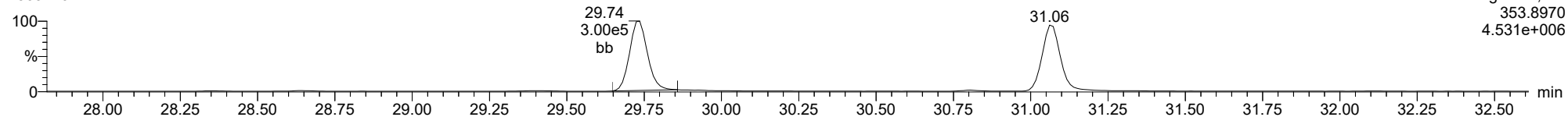
**13C-12378-PeCDF**

23031702



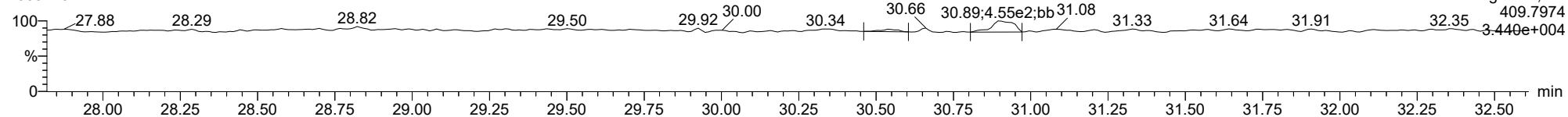
**13C-12378-PeCDF**

23031702



**FUNCTION2 HPCDPE**

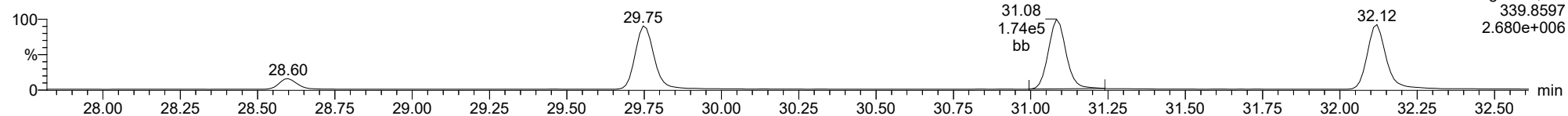
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

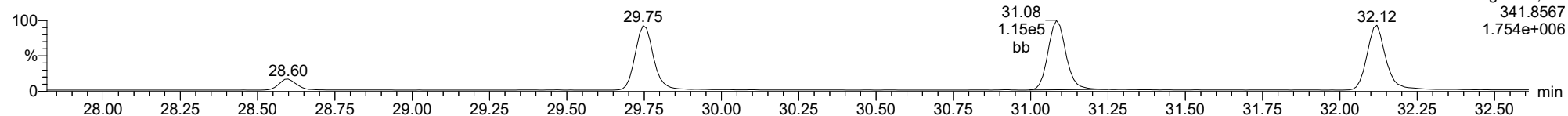
**23478-PeCDF**

23031702



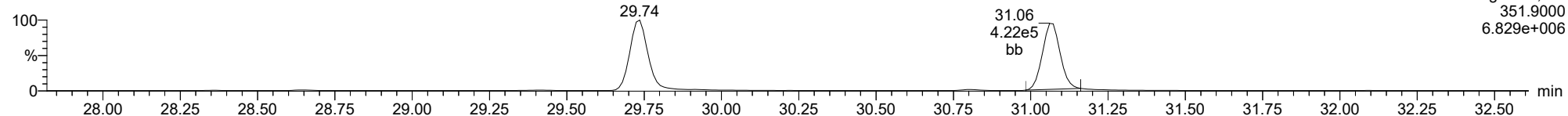
**23478-PeCDF**

23031702



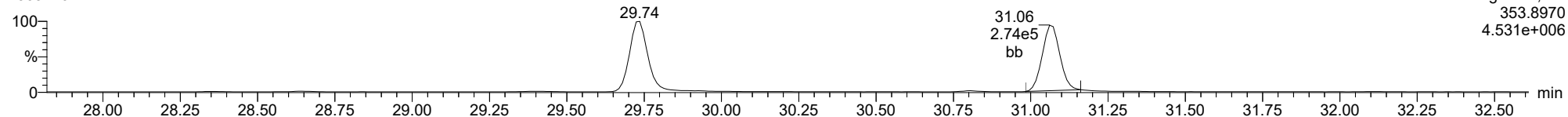
**13C-23478-PeCDF**

23031702



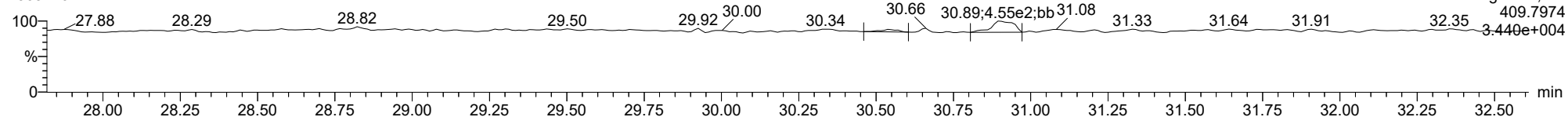
**13C-23478-PeCDF**

23031702



**FUNCTION2 HPCDPE**

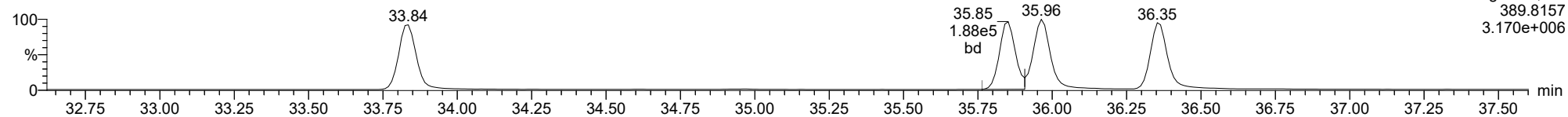
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

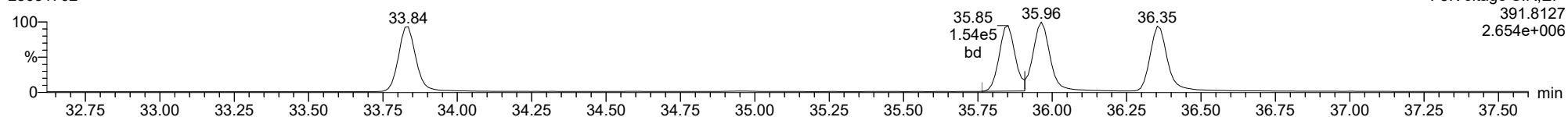
**123478-HxCDD**

23031702



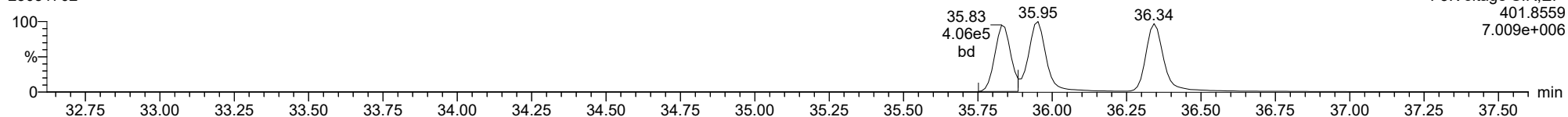
**123478-HxCDD**

23031702



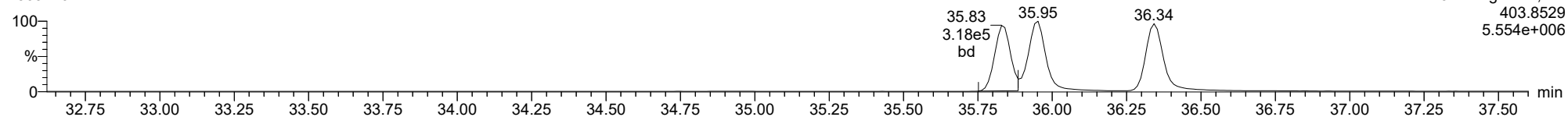
**13C-123478-HxCDD**

23031702



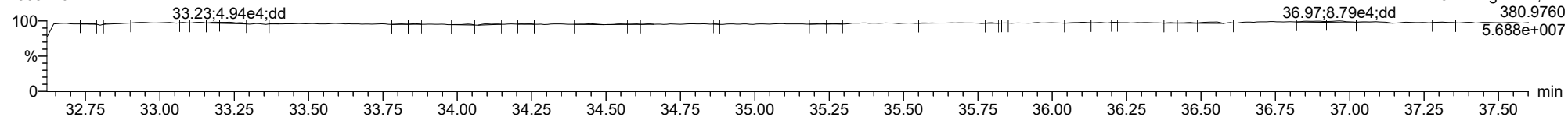
**13C-123478-HxCDD**

23031702



**FUNCTION3 PFK**

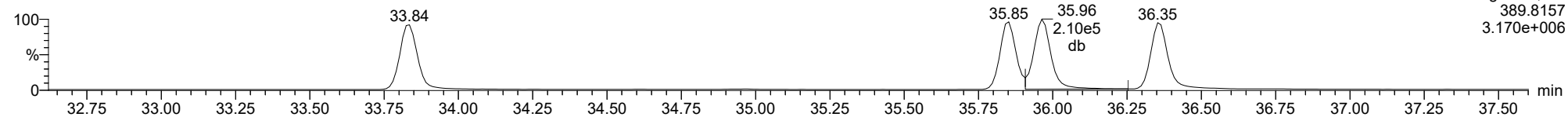
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

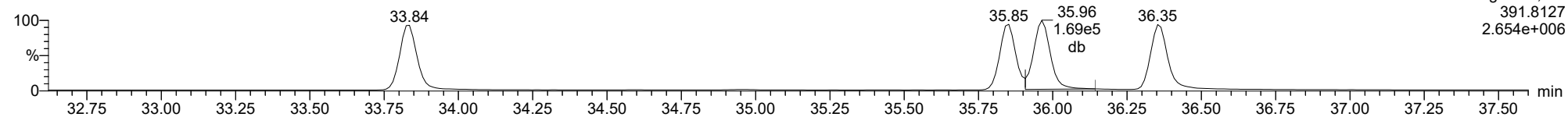
23031702



F3:Voltage SIR,EI+  
389.8157  
3.170e+006

**123678-HxCDD**

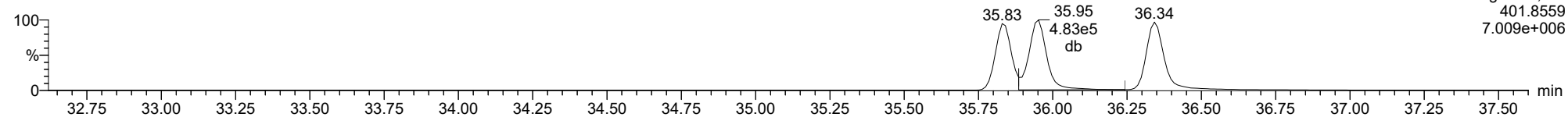
23031702



F3:Voltage SIR,EI+  
391.8127  
2.654e+006

**13C-123678-HxCDD**

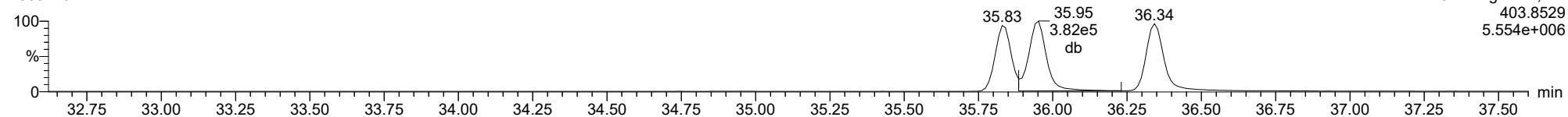
23031702



F3:Voltage SIR,EI+  
401.8559  
7.009e+006

**13C-123678-HxCDD**

23031702

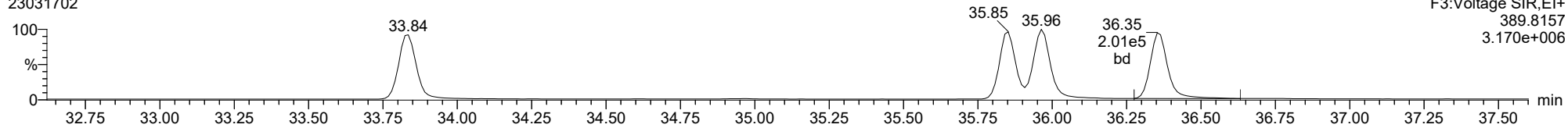


F3:Voltage SIR,EI+  
403.8529  
5.554e+006

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**123789-HxCDD**

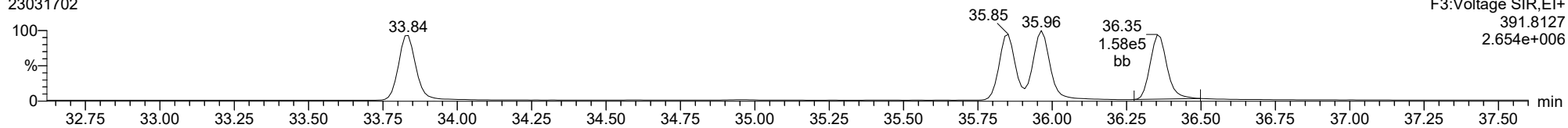
23031702



F3:Voltage SIR,EI+  
389.8157  
3.170e+006

**123789-HxCDD**

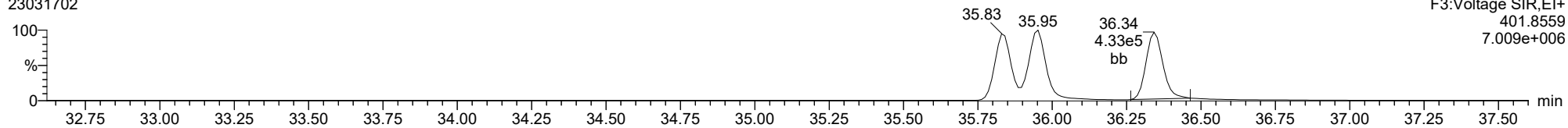
23031702



F3:Voltage SIR,EI+  
391.8127  
2.654e+006

**13C-123789-HxCDD**

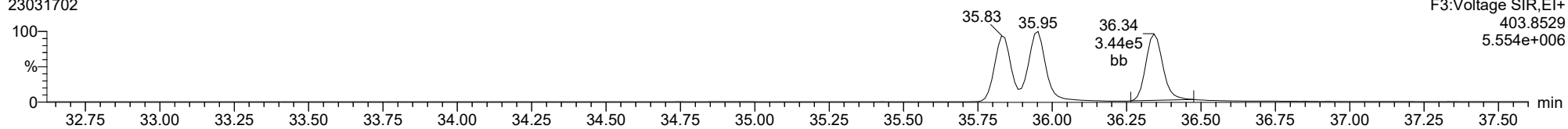
23031702



F3:Voltage SIR,EI+  
401.8559  
7.009e+006

**13C-123789-HxCDD**

23031702



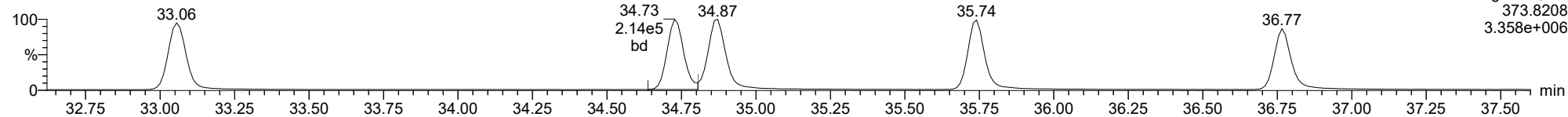
F3:Voltage SIR,EI+  
403.8529  
5.554e+006



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

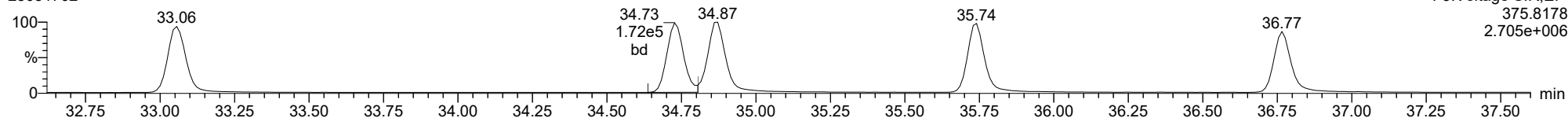
**123478-HxCDF**

23031702



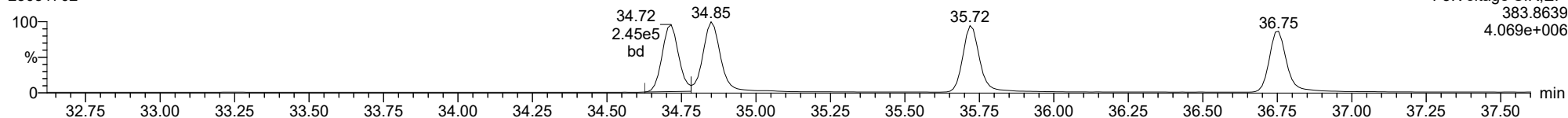
**123478-HxCDF**

23031702



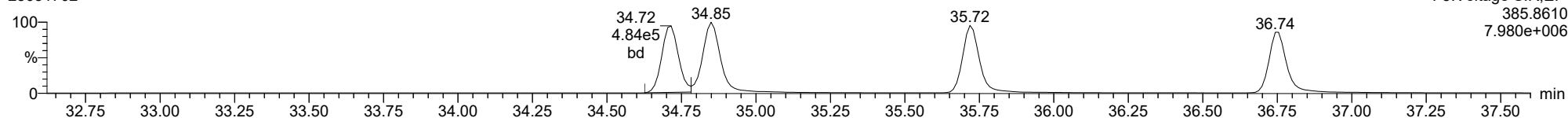
**13C-123478-HxCDF**

23031702



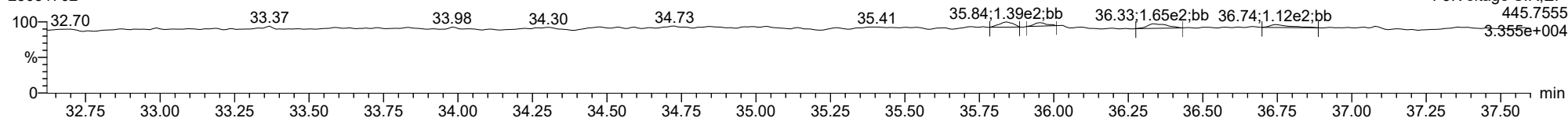
**13C-123478-HxCDF**

23031702



**FUNCTION3 OCDPE**

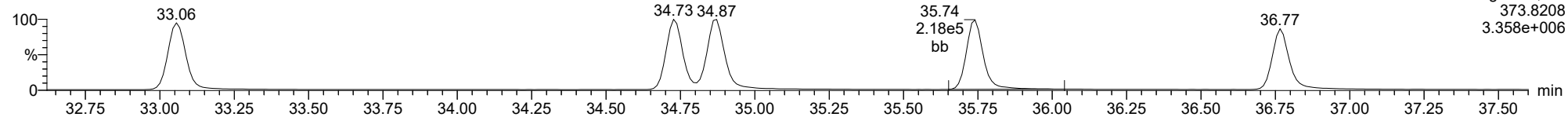
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

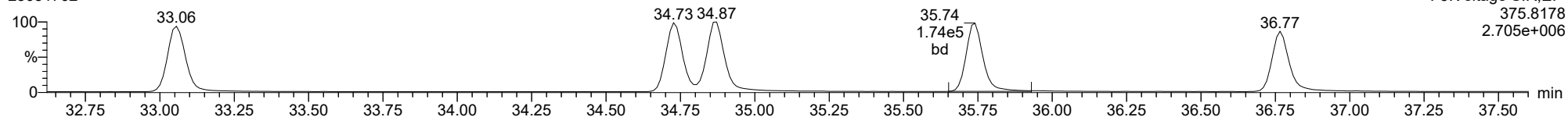
**234678-HxCDF**

23031702



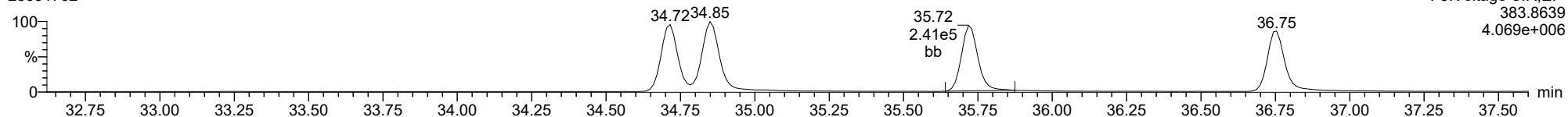
**234678-HxCDF**

23031702



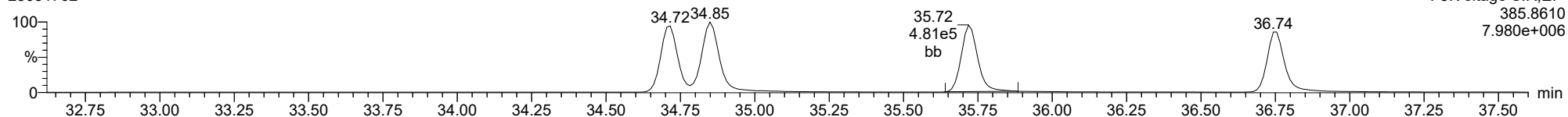
**13C-234678-HxCDF**

23031702



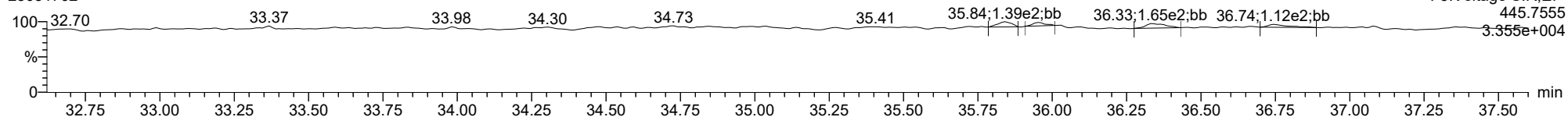
**13C-234678-HxCDF**

23031702



**FUNCTION3 OCDPE**

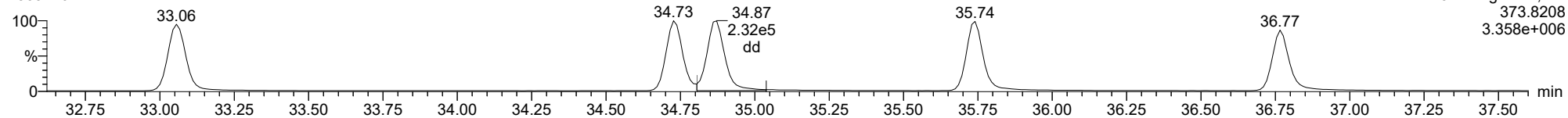
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

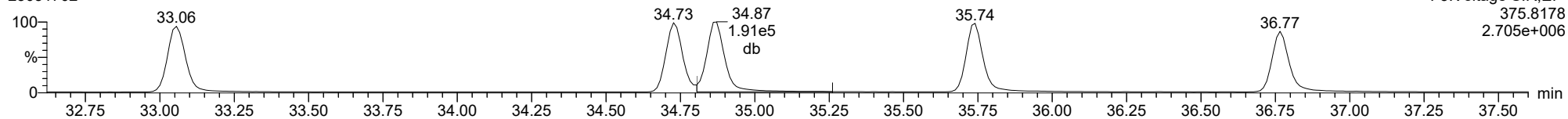
**123678-HxCDF**

23031702



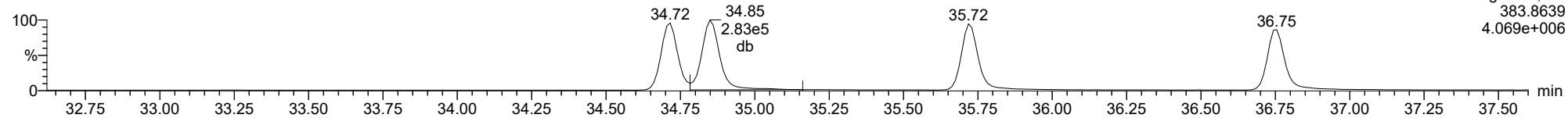
**123678-HxCDF**

23031702



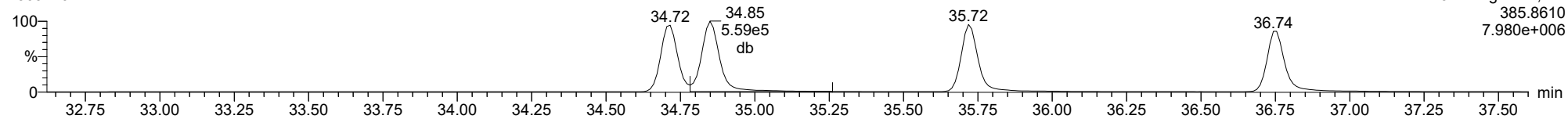
**13C-123678-HxCDF**

23031702



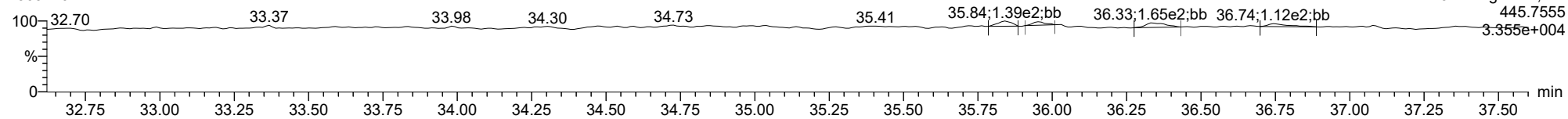
**13C-123678-HxCDF**

23031702



**FUNCTION3 OCDPE**

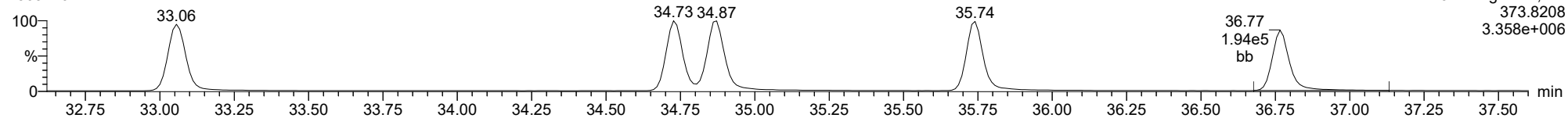
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**123789-HxCDF**

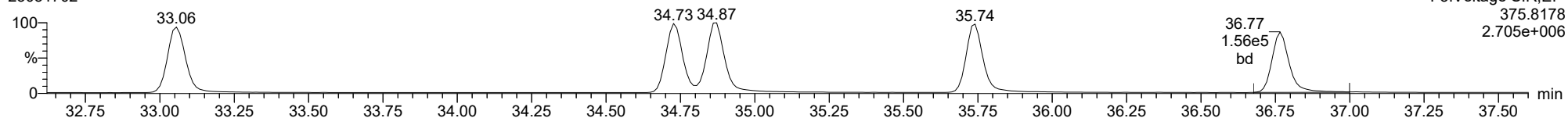
23031702



F3:Voltage SIR,El+  
373.8208  
3.358e+006

**123789-HxCDF**

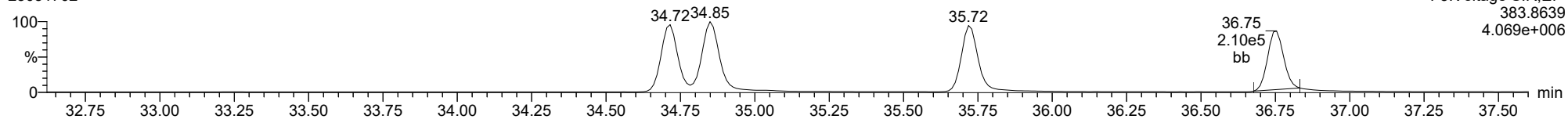
23031702



F3:Voltage SIR,El+  
375.8178  
2.705e+006

**13C-123789-HxCDF**

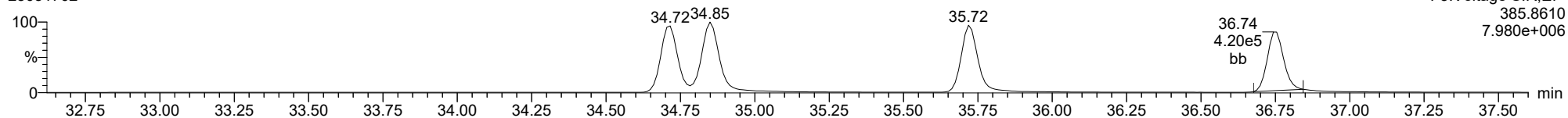
23031702



F3:Voltage SIR,El+  
383.8639  
4.069e+006

**13C-123789-HxCDF**

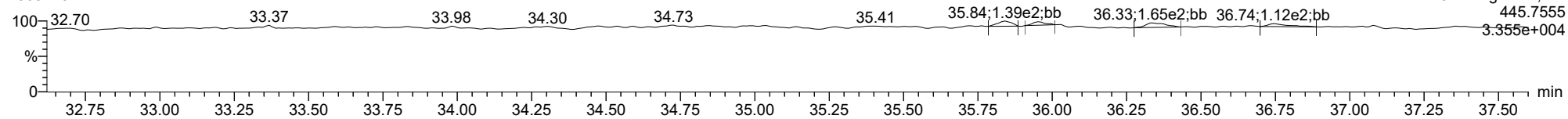
23031702



F3:Voltage SIR,El+  
385.8610  
7.980e+006

**FUNCTION3 OCDPE**

23031702

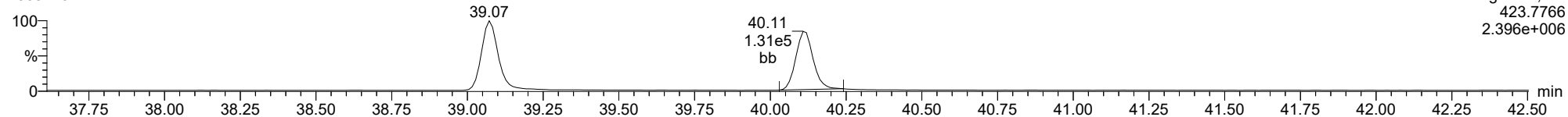


F3:Voltage SIR,El+  
445.7555  
3.355e+004

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

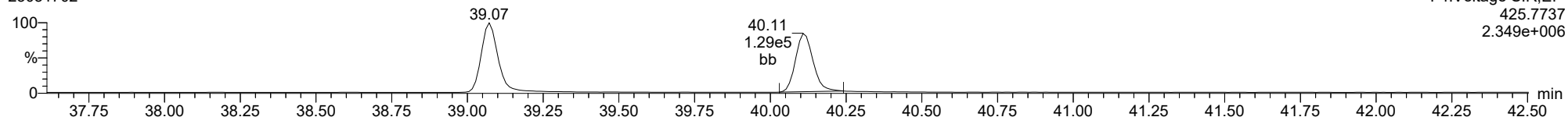
**1234678-HpCDD**

23031702



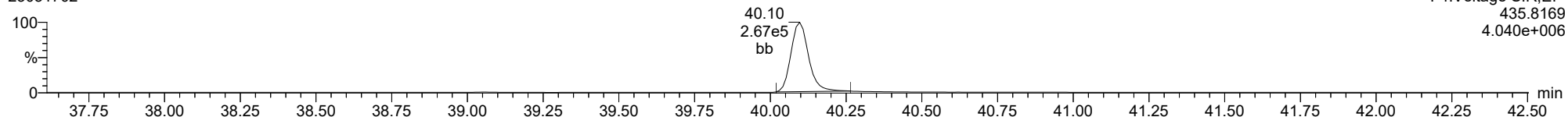
**1234678-HpCDD**

23031702



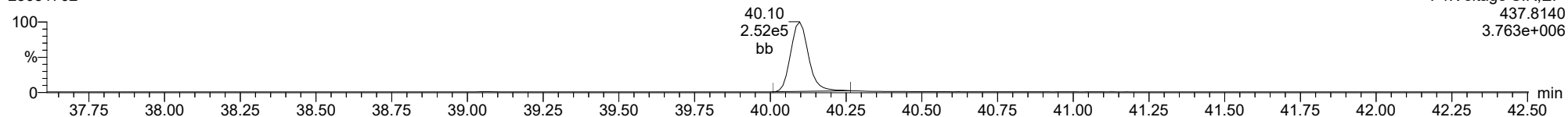
**13C-1234678-HpCDD**

23031702



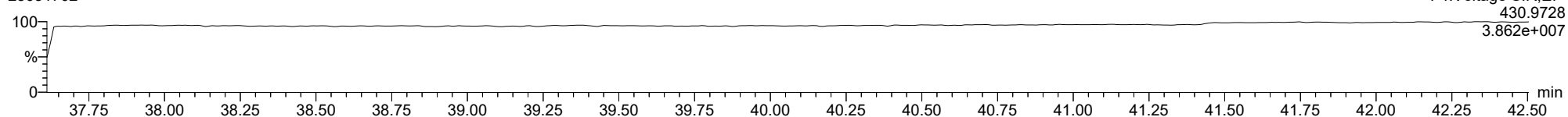
**13C-1234678-HpCDD**

23031702



**FUNCTION4 PFK**

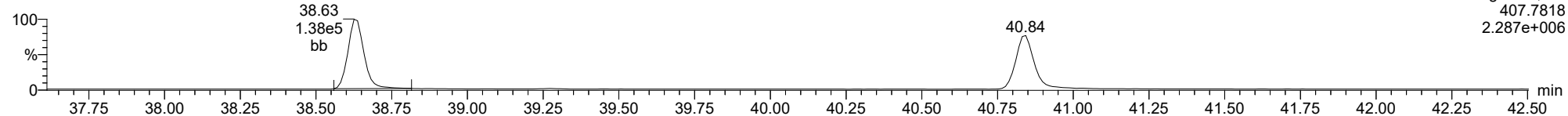
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ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDF**

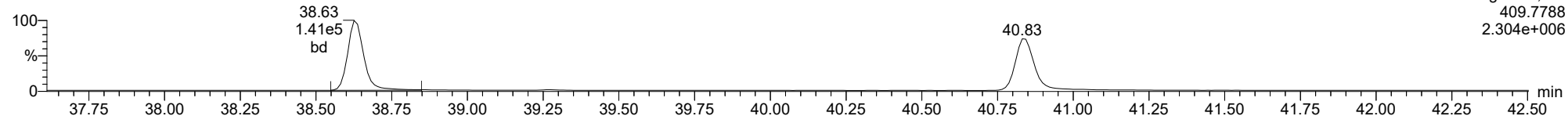
23031702



F4:Voltage SIR,EI+  
407.7818  
2.287e+006

**1234678-HpCDF**

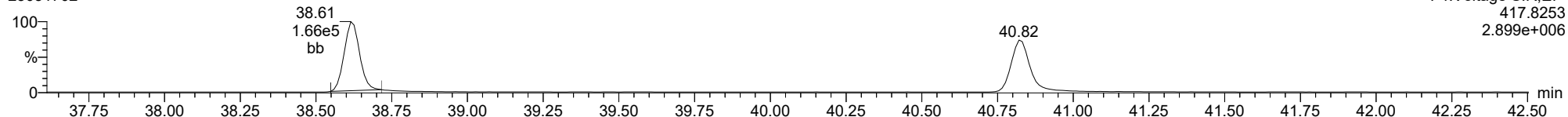
23031702



F4:Voltage SIR,EI+  
409.7788  
2.304e+006

**13C-1234678-HpCDF**

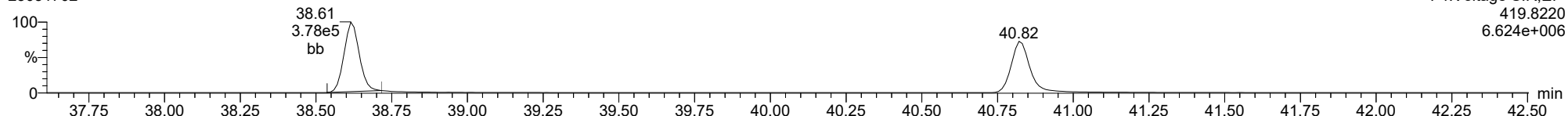
23031702



F4:Voltage SIR,EI+  
417.8253  
2.899e+006

**13C-1234678-HpCDF**

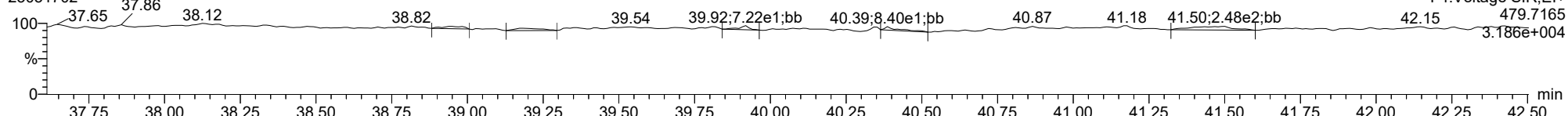
23031702



F4:Voltage SIR,EI+  
419.8220  
6.624e+006

**FUNCTION4 NCDPE**

23031702

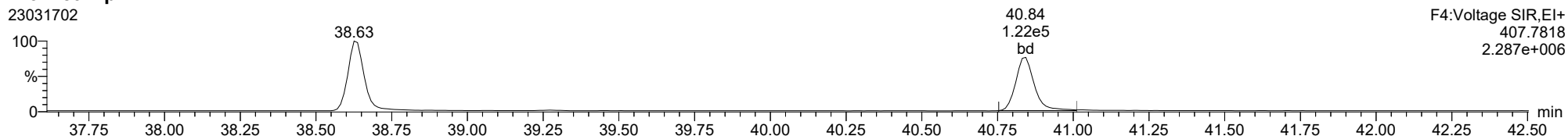


F4:Voltage SIR,EI+  
479.7165  
3.186e+004

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

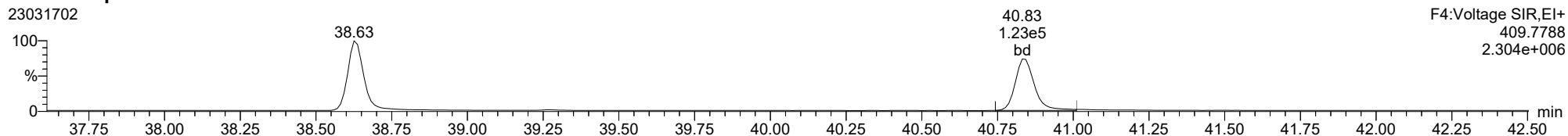
23031702



F4:Voltage SIR,EI+  
407.7818  
2.287e+006

**1234789-HpCDF**

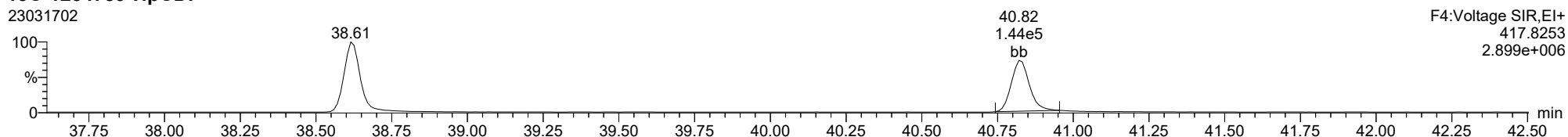
23031702



F4:Voltage SIR,EI+  
409.7788  
2.304e+006

**13C-1234789-HpCDF**

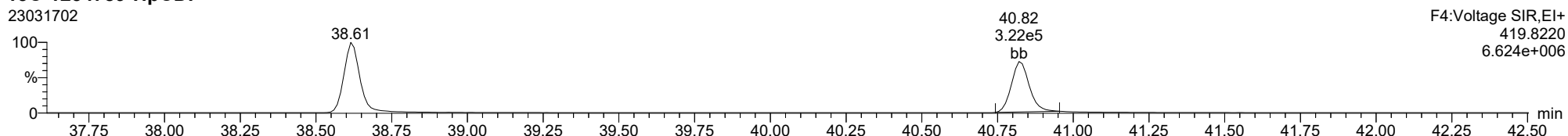
23031702



F4:Voltage SIR,EI+  
417.8253  
2.899e+006

**13C-1234789-HpCDF**

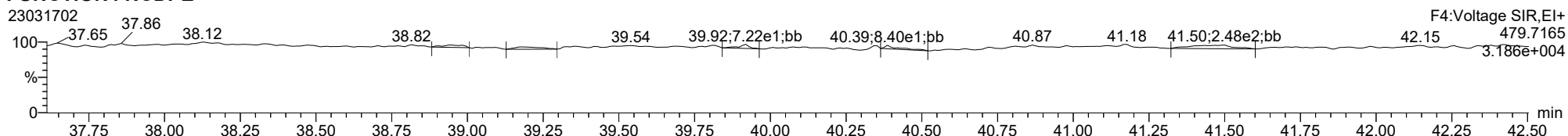
23031702



F4:Voltage SIR,EI+  
419.8220  
6.624e+006

**FUNCTION4 NCDPE**

23031702

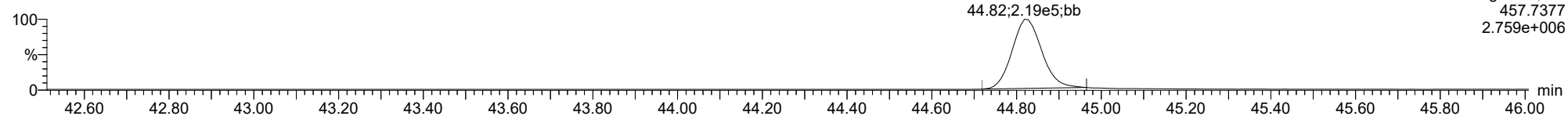


F4:Voltage SIR,EI+  
479.7165  
3.186e+004

ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

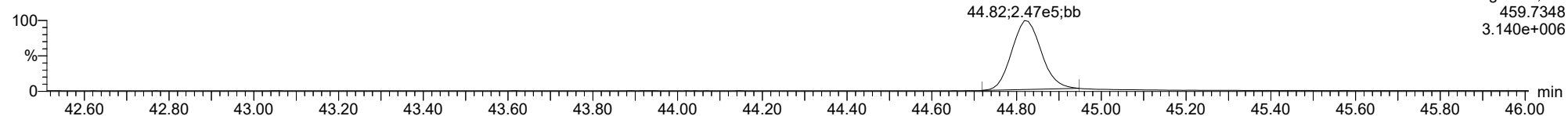
**OCDD**

23031702



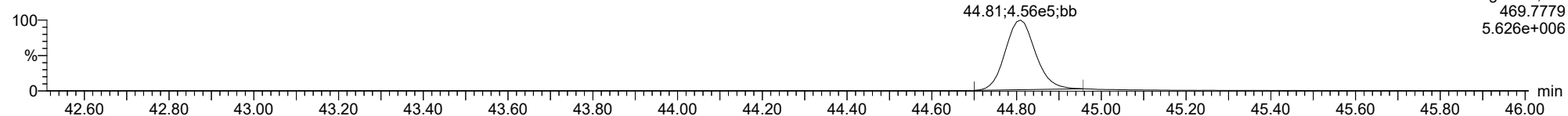
**OCDD**

23031702



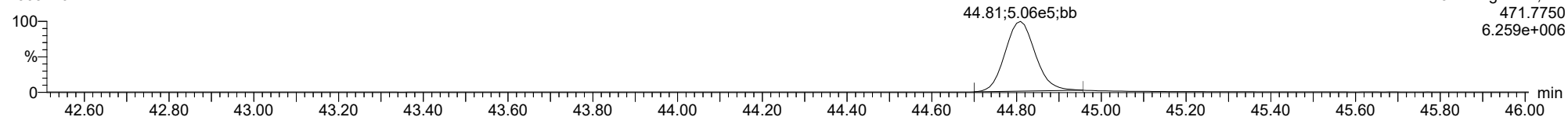
**13C-OCDD**

23031702



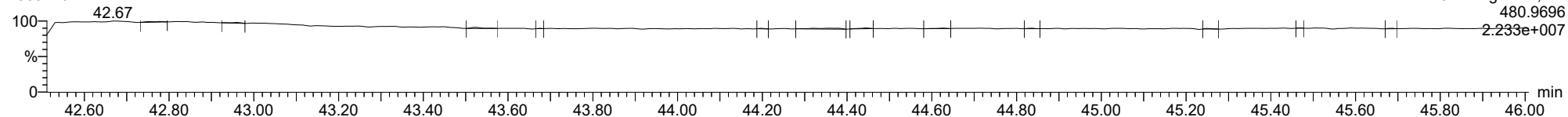
**13C-OCDD**

23031702



**FUNCTION5 PFK**

23031702

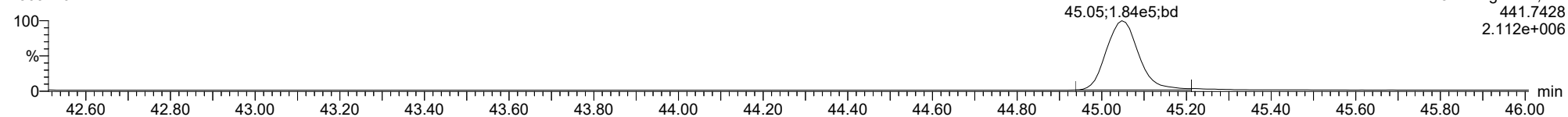




ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

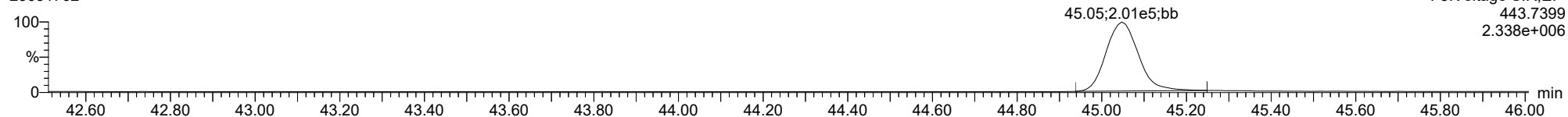
**OCDF**

23031702



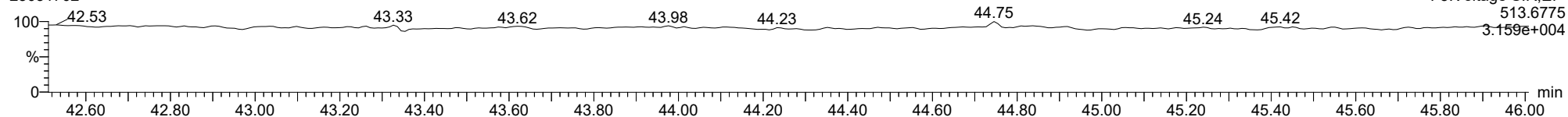
**OCDF**

23031702



**FUNCTION5 DCDPE**

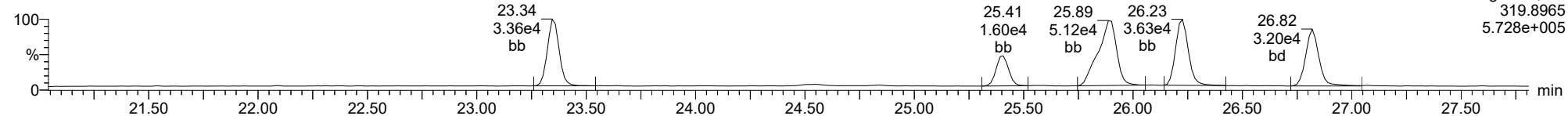
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

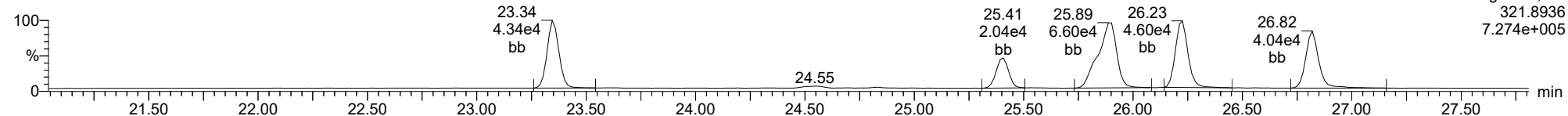
**Total-tetradioxins**

23031702



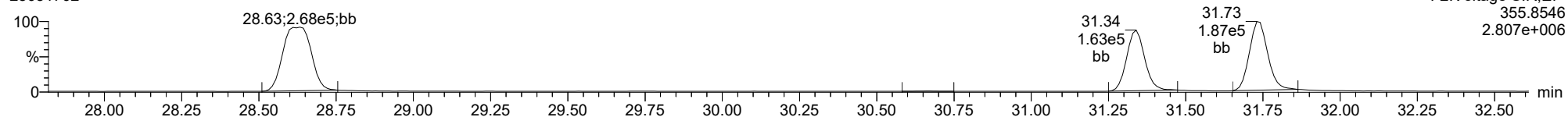
**Total-tetradioxins**

23031702



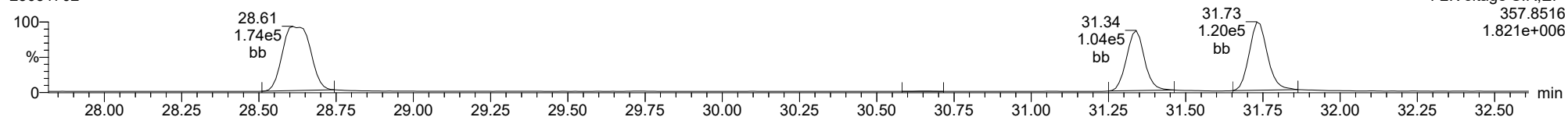
**Total-pentadioxins**

23031702



**Total-pentadioxins**

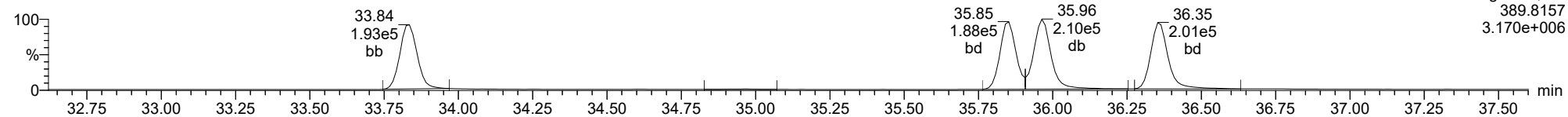
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

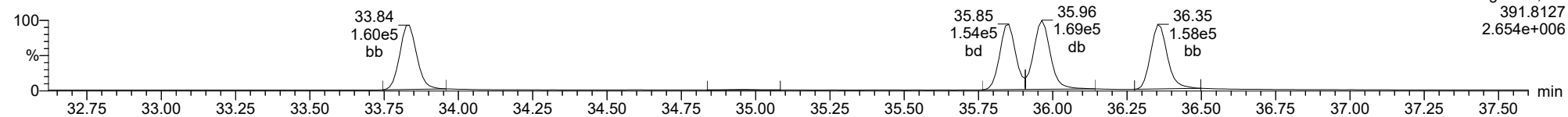
**Total-hexadioxins**

23031702



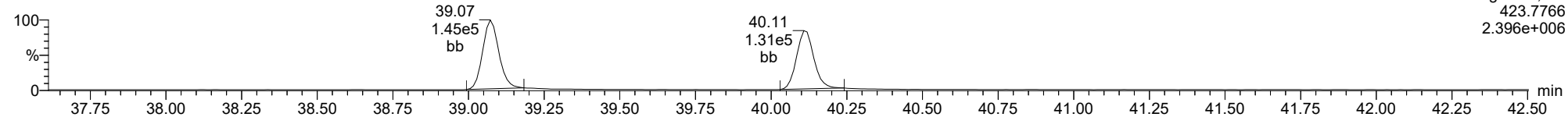
**Total-hexadioxins**

23031702



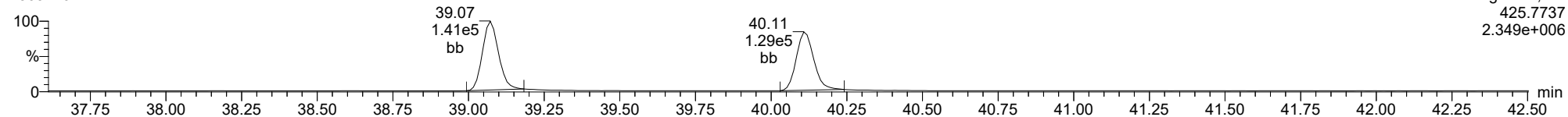
**Total-heptadioxins**

23031702



**Total-heptadioxins**

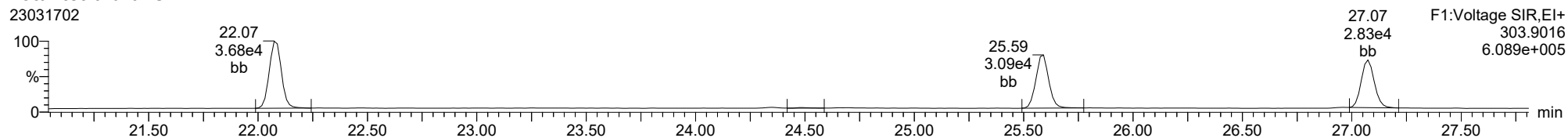
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

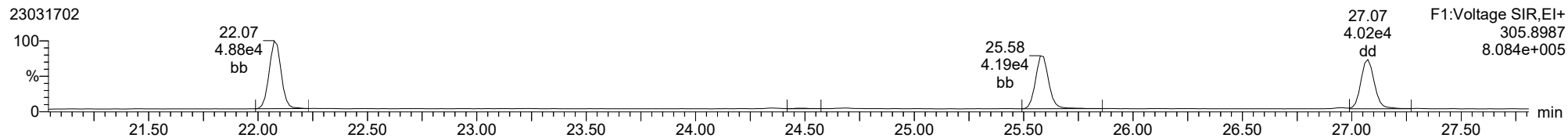
**Total-tetrafurans**

23031702



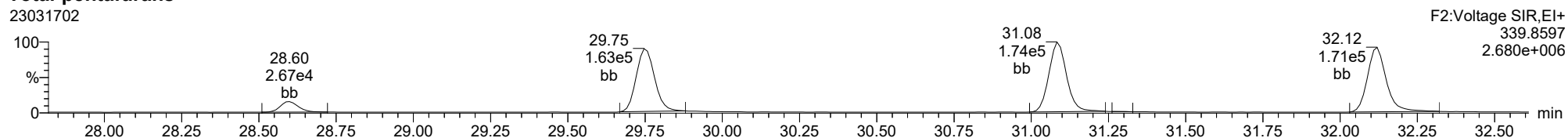
**Total-tetrafurans**

23031702



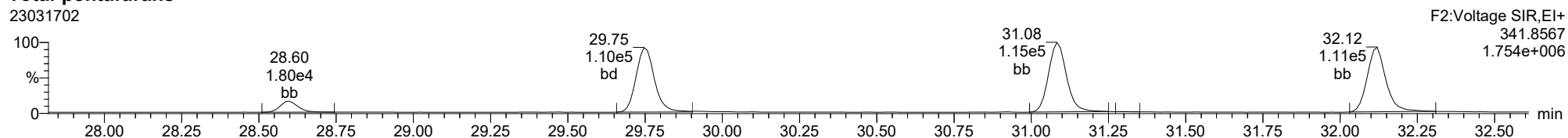
**Total-pentafurans**

23031702



**Total-pentafurans**

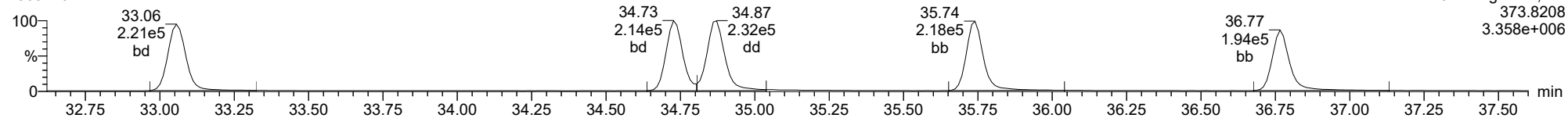
23031702



ID: CS3A1, Name: 23031702, Date: 17-Mar-2023, Time: 10:40:34, Conditions: AUTOSPEC01, User: pk

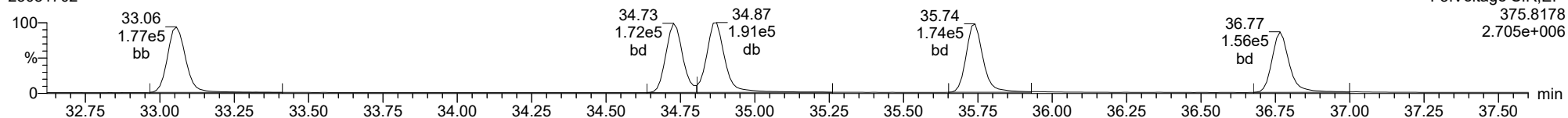
**Total-hexafurans**

23031702



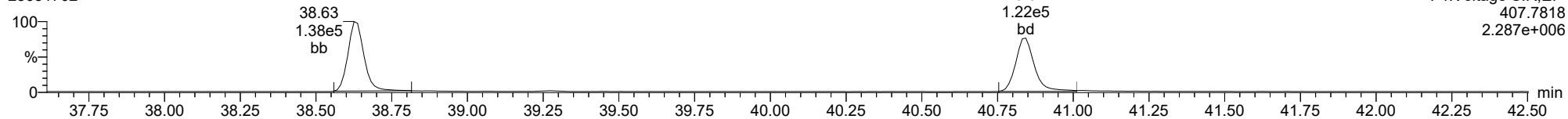
**Total-hexafurans**

23031702



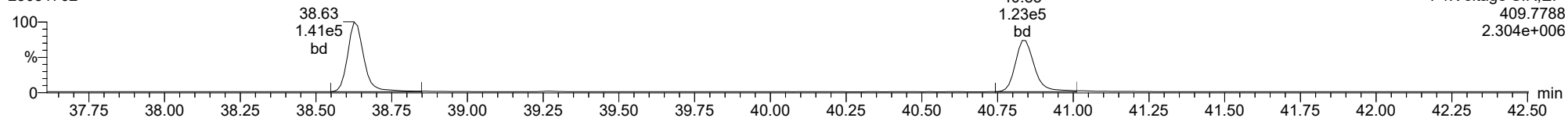
**Total-heptafurans**

23031702



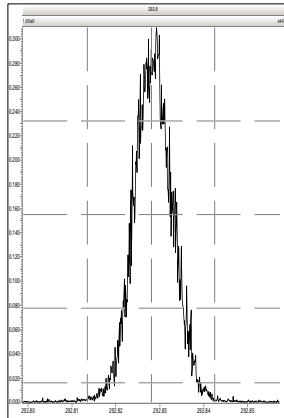
**Total-heptafurans**

23031702

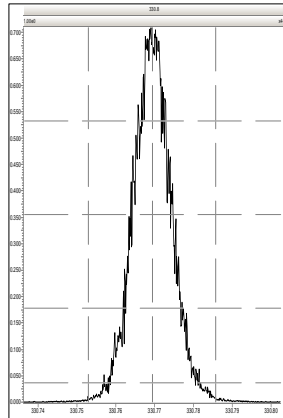


Printed: Friday, March 17, 2023 10:35:13 Pacific Daylight Time

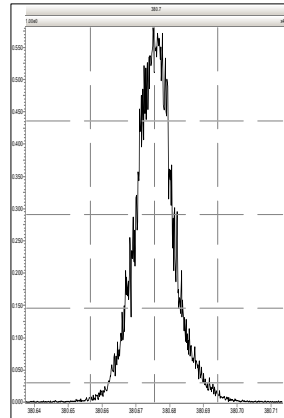
M 292.9824 R 14852



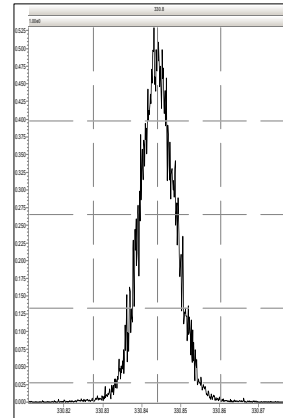
M 330.9792 R 14637



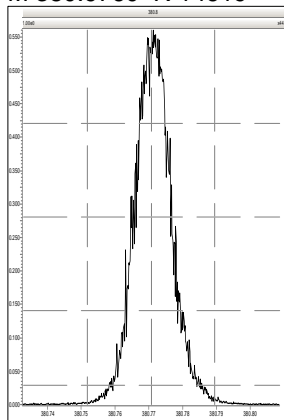
M 380.9760 R 13161



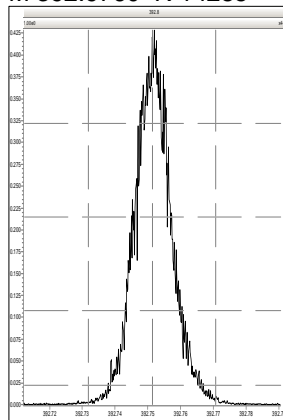
M 330.9792 R 15728



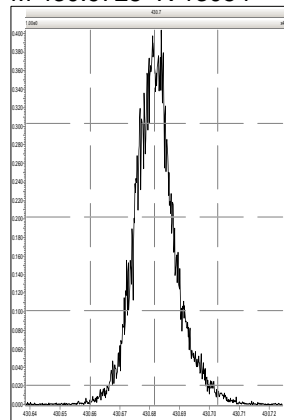
M 380.9760 R 14619



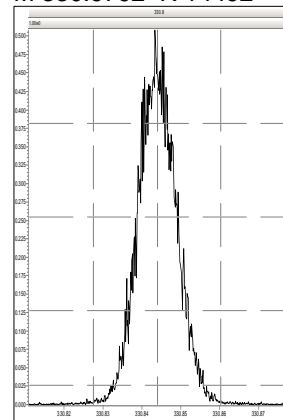
M 392.9760 R 14285



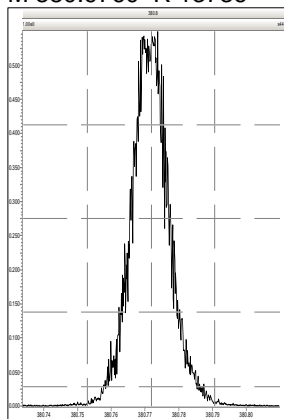
M 430.9728 R 13054



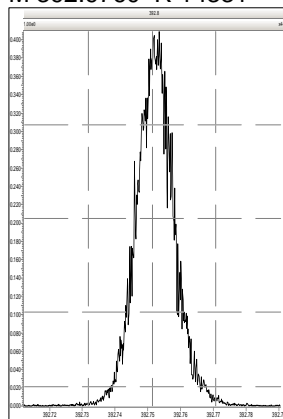
M 330.9792 R 14492



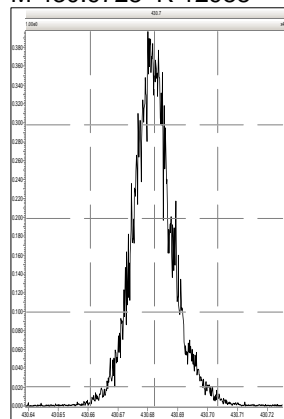
M 380.9760 R 13736



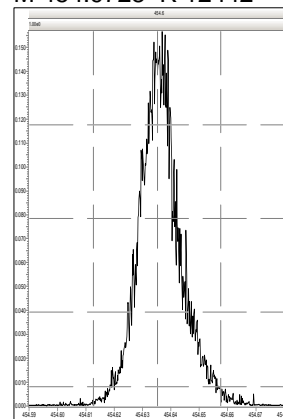
M 392.9760 R 14331



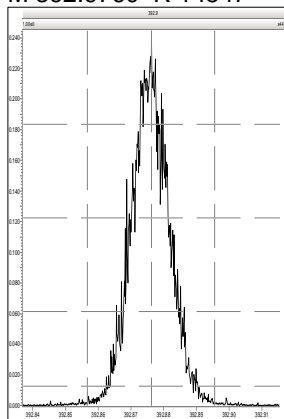
M 430.9728 R 12988



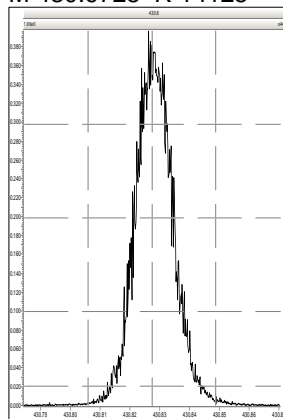
M 454.9728 R 12442



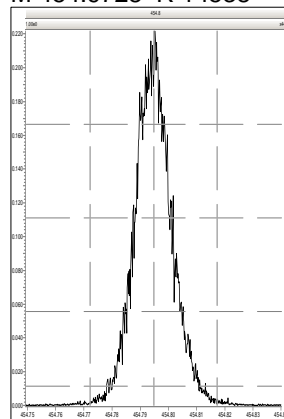
M 392.9760 R 14547



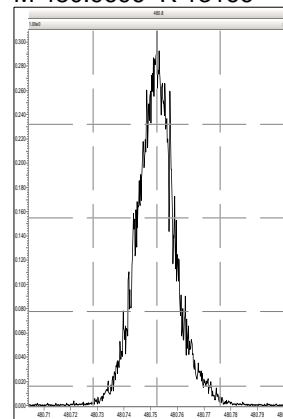
M 430.9728 R 14125



M 454.9728 R 14538

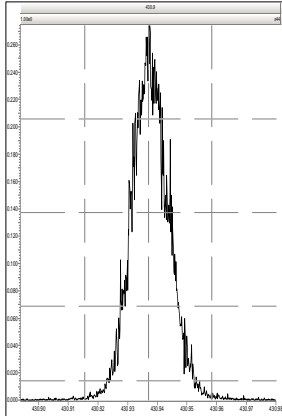


M 480.9696 R 13166

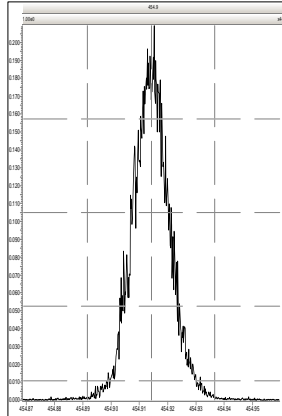


Printed: Friday, March 17, 2023 10:35:13 Pacific Daylight Time

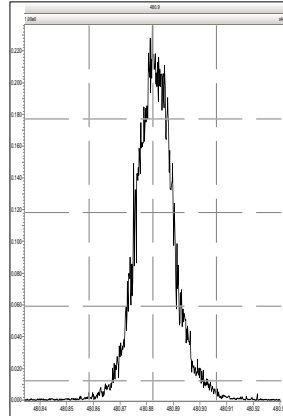
M 430.9728 R 14983



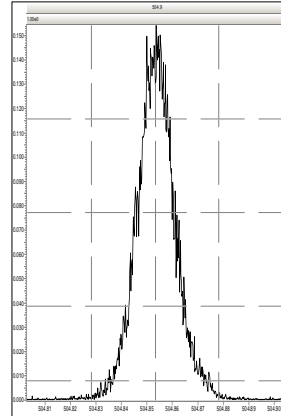
M 454.9728 R 14542



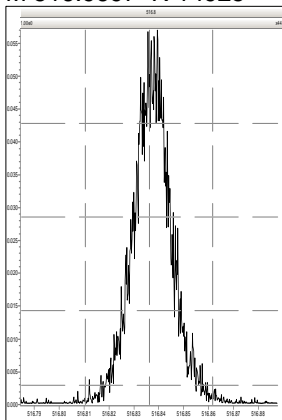
M 480.9696 R 14125



M 504.9696 R 14169



M 516.9697 R 14925

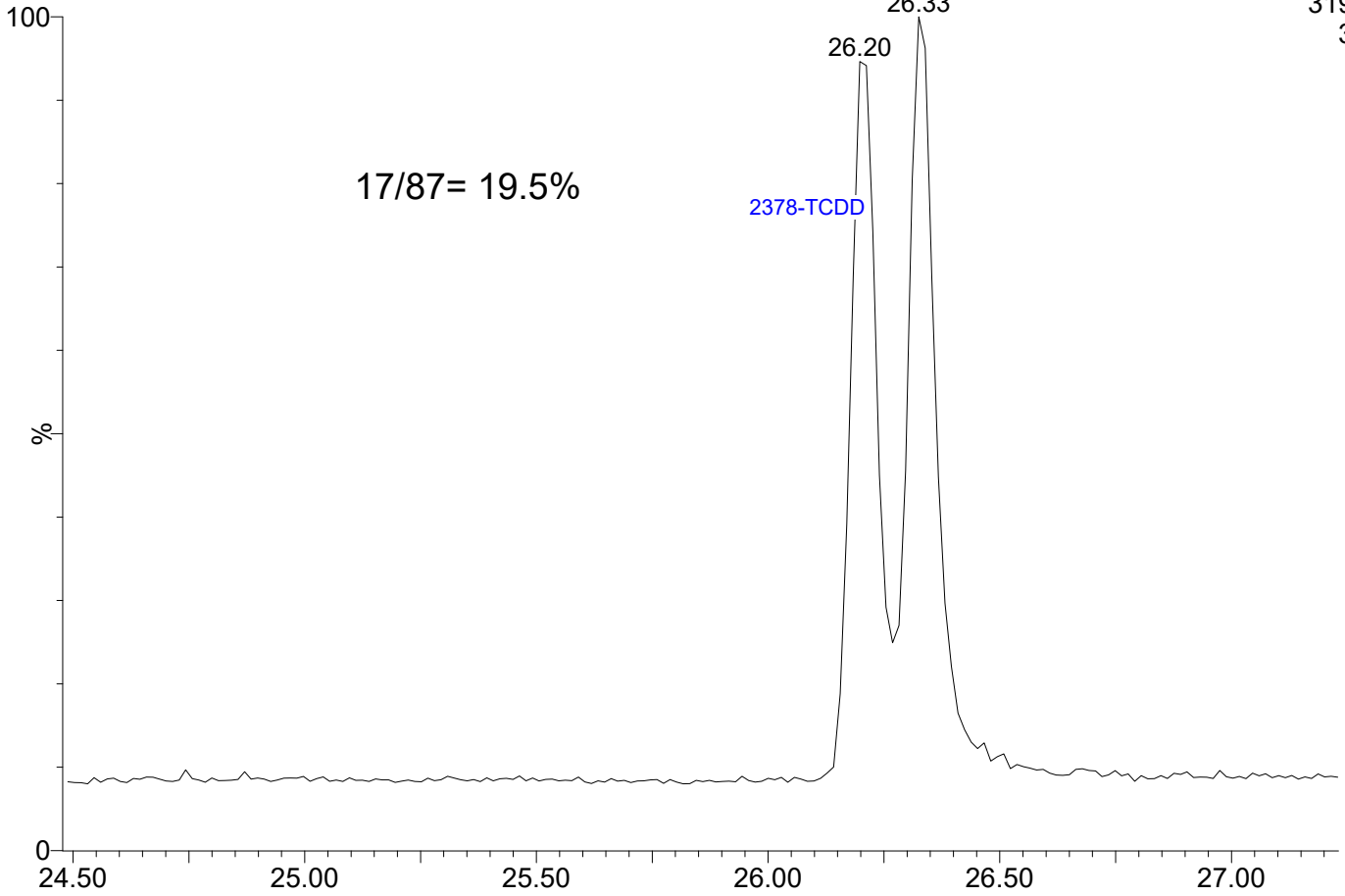


23031703

1: Voltage SIR 14 Channels EI+

319.8965

3.77e5

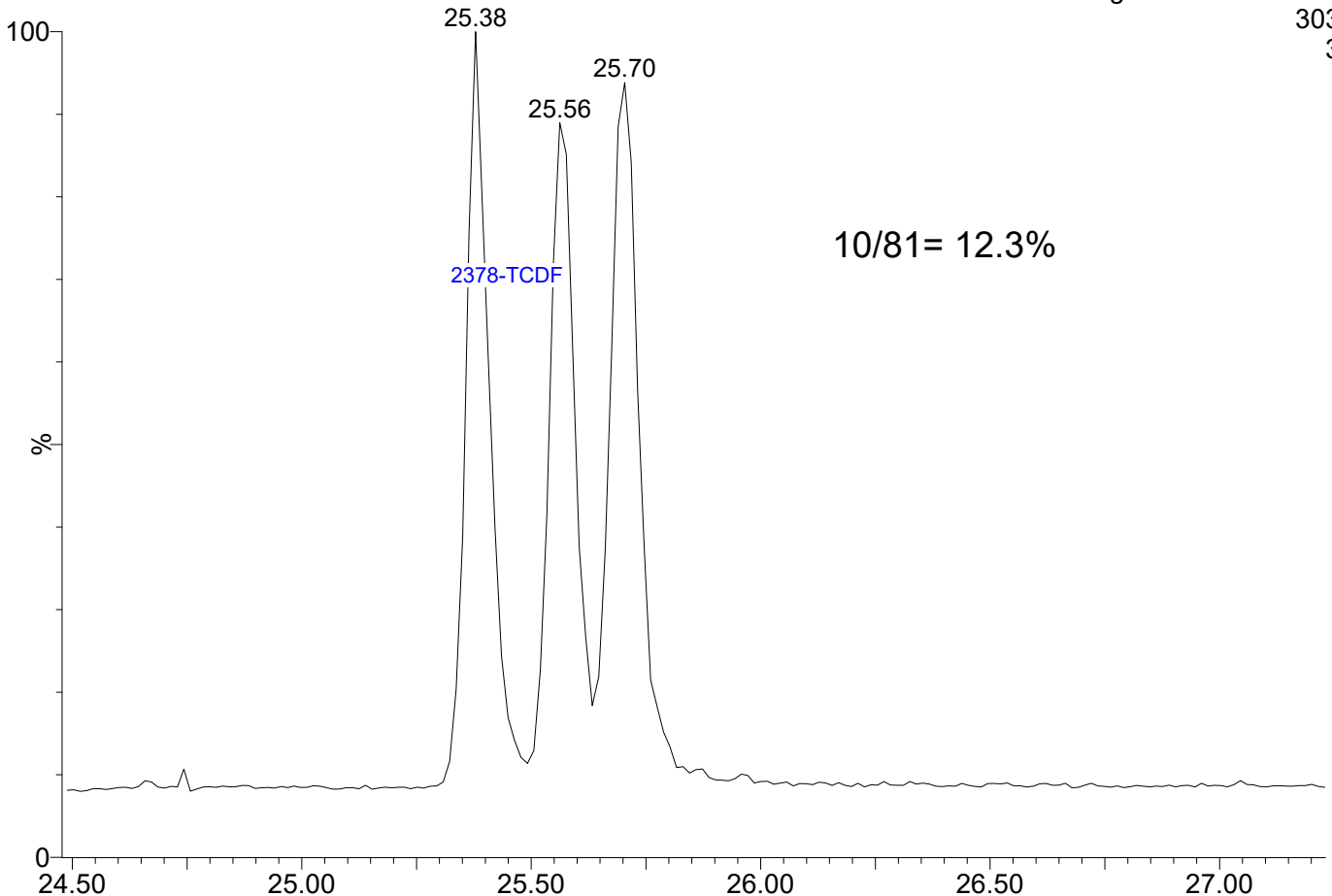


23031703

1: Voltage SIR 14 Channels EI+

303.9016

3.82e5







CONTINUING CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23030311

Calibration Date: 03/03/2023

Sequence: SLC0045

Injection Date: 03/03/23

Lab Sample ID: SLC0045-CCV1

Injection Time: 17:25

Sequence Name: CS3V4

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.1	0.7015272	0.7103909		1.3	+/-16
2,3,7,8-TCDD	A	10.000	9.02	1.1486620	1.0358000		-9.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	47.7	0.6792300	0.6482723		-4.6	+/-18
2,3,4,7,8-PeCDF	A	50.000	48.6	0.7861704	0.7638484		-2.8	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.8	1.0218450	1.0391930		1.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.3	1.1660380	1.1031690		-5.4	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	51.4	1.0907410	1.1209930		2.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.1	1.1396990	1.1864330		4.1	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.9	1.1370930	1.1121660		-2.2	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.7	0.9955689	1.0094320		1.4	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.1	1.0009380	1.0234880		2.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.7	0.9071139	0.9383686		3.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.7	1.0029930	0.9566603		-4.6	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.6	0.9531152	1.0217610		7.2	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	52.7	1.0390130	1.0955650		5.4	+/-14
OCDF	A	100.00	95.0	0.7778078	0.7390842		-5.0	+/-37
OCDD	A	100.00	97.1	0.9199537	0.8937318		-2.9	+/-21
13C12-2,3,7,8-TCDF	A	100.00	89.4	1.6201960	1.4487738		-10.6	+/-29
13C12-2,3,7,8-TCDD	A	100.00	86.0	1.1524090	0.9914363		-14.0	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.6	1.2404520	1.1488109		-7.4	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	91.6	1.1177860	1.0240744		-8.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	90.8	0.8288129	0.7523463		-9.2	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	95.2	1.1683050	1.1119828		-4.8	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	91.1	1.3864660	1.2630996		-8.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	96.9	1.1292560	1.0940819		-3.1	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	101	0.9317541	0.9426254		1.2	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.6	0.9950393	0.9710534		-2.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	98.4	1.1566890	1.1378328		-1.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9116661		1.8	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	84.3	0.7697516	0.6486548		-15.7	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	92.0	0.8401226	0.7731635		-8.0	+/-28
13C12-OCDD	A	200.00	170	0.7674714	0.6532994		-14.9	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	7.54	1.2878040	0.9705402		-24.6	

\* Values outside of QC limits

\* Values outside of QC limits

\* Values outside of QC limits



**SECOND-SOURCE  
CONTINUING CALIBRATION CHECK  
EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23030310

Calibration Date: 03/03/2023

Sequence: SLC0045

Injection Date: 03/03/23

Lab Sample ID: SLC0045-SCV1

Injection Time: 16:36

Sequence Name: ICVCW

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.84	0.7015272	0.6901560		-1.6	
2,3,7,8-TCDD	A	10.000	9.81	1.1486620	1.1273700		-1.9	
1,2,3,7,8-PeCDF	A	50.000	51.4	0.6792300	0.6981249		2.8	
2,3,4,7,8-PeCDF	A	50.000	49.0	0.7861704	0.7701368		-2.0	
1,2,3,7,8-PeCDD	A	50.000	48.5	1.0218450	0.9921504		-2.9	
1,2,3,4,7,8-HxCDF	A	50.000	48.2	1.1660380	1.1251100		-3.5	
1,2,3,6,7,8-HxCDF	A	50.000	48.0	1.0907410	1.0469270		-4.0	
2,3,4,6,7,8-HxCDF	A	50.000	50.2	1.1396990	1.1448090		0.4	
1,2,3,7,8,9-HxCDF	A	50.000	49.1	1.1370930	1.1161010		-1.8	
1,2,3,4,7,8-HxCDD	A	50.000	50.8	0.9955689	1.0114830		1.6	
1,2,3,6,7,8-HxCDD	A	50.000	50.2	1.0009380	1.0044310		0.3	
1,2,3,7,8,9-HxCDD	A	50.000	51.6	0.9071139	8347.938		3.2	
1,2,3,4,6,7,8-HpCDF	A	50.000	51.8	1.0029930	1.0398620		3.7	
1,2,3,4,7,8,9-HpCDF	A	50.000	48.5	0.9531152	0.9237809		-3.1	
1,2,3,4,6,7,8-HpCDD	A	50.000	49.2	1.0390130	1.0223590		-1.6	
OCDF	A	100.00	104	0.7778078	0.8050743		3.5	
OCDD	A	100.00	99.4	0.9199537	0.9146365		-0.6	
13C12-2,3,7,8-TCDF	A	100.00	96.9	1.6201960	1.5703703		-3.1	
13C12-2,3,7,8-TCDD	A	100.00	96.6	1.1524090	1.1130294		-3.4	
13C12-1,2,3,7,8-PeCDF	A	100.00	73.2	1.2404520	0.9079224		-26.8	
13C12-2,3,4,7,8-PeCDF	A	100.00	75.9	1.1177860	0.8488817		-24.1	
13C12-1,2,3,7,8-PeCDD	A	100.00	76.6	0.8288129	0.6346243		-23.4	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	93.0	1.1683050	1.0861993		-7.0	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.0	1.3864660	1.3581552		-2.0	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	93.4	1.1292560	1.0544008		-6.6	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.9	0.9317541	0.9122440		-2.1	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.9	0.9950393	0.9546162		-4.1	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.7	1.1566890	1.1296183		-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9144345		2.1	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	104	0.7697516	0.8001798		4.0	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	102	0.8401226	0.8609226		2.5	
13C12-OCDD	A	200.00	162	0.7674714	0.6199758		-19.2	
37C14-2,3,7,8-TCDD	A	10.000	8.71	1.2878040	1.1221835		-12.9	

\* Values outside of QC limits



CONTINUING CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23031510

Calibration Date: 03/03/2023

Sequence: SLC0176

Injection Date: 03/15/23

Lab Sample ID: SLC0176-CCV1

Injection Time: 17:48

Sequence Name: CS3Z5

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.19	0.7015272	0.6449612		-8.1	+/-16
2,3,7,8-TCDD	A	10.000	8.62	1.1486620	0.9904082		-13.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	46.8	0.6792300	0.6359218		-6.4	+/-18
2,3,4,7,8-PeCDF	A	50.000	44.3	0.7861704	0.6964221		-11.4	+/-18
1,2,3,7,8-PeCDD	A	50.000	46.8	1.0218450	0.9568295		-6.4	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	44.5	1.1660380	1.0380760		-11.0	+/-10 *
1,2,3,6,7,8-HxCDF	A	50.000	47.2	1.0907410	1.0286120		-5.7	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	46.7	1.1396990	1.0646360		-6.6	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	45.7	1.1370930	1.0384750		-8.7	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	45.7	0.9955689	0.9098876		-8.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	43.2	1.0009380	0.8641645		-13.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	46.3	0.9071139	0.8399319		-7.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	45.1	1.0029930	0.9046625		-9.8	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	47.7	0.9531152	0.9094624		-4.6	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	45.8	1.0390130	0.9507112		-8.5	+/-14
OCDF	A	100.00	77.9	0.7778078	0.6058564		-22.1	+/-37
OCDD	A	100.00	94.4	0.9199537	0.8682801		-5.6	+/-21
13C12-2,3,7,8-TCDF	A	100.00	81.2	1.6201960	1.3150040		-18.8	+/-29
13C12-2,3,7,8-TCDD	A	100.00	109	1.1524090	1.2608664		9.4	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	89.8	1.2404520	1.1144953		-10.2	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	91.7	1.1177860	1.0244712		-8.3	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	104	0.8288129	0.8582641		3.6	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	92.3	1.1683050	1.0787790		-7.7	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	82.6	1.3864660	1.1455117		-17.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	81.0	1.1292560	0.9150105		-19.0	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	81.1	0.9317541	0.7557350		-18.9	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	99.3	0.9950393	0.9879157		-0.7	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	89.4	1.1566890	1.0336339		-10.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	67.1	0.8952017	0.6010170		-32.9	+/-22 *
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	73.7	0.7697516	0.5674264		-26.3	+/-23 *
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	81.9	0.8401226	0.6882668		-18.1	+/-28
13C12-OCDD	A	200.00	183	0.7674714	0.7035644		-8.3	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.23	1.2878040	1.1889283		-7.7	

\* Values outside of QC limits

\* Values outside of QC limits

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.548	1.000	1.979e4	2.712e4	0.702	0.730	0.770	701	853	3.10e5	4.12e5	442.7	483.7	NO	bb	bb	9.194
12378-PeCDF	29.725	1.001	1.171e5	7.894e4	0.679	1.483	1.550	942	813	1.85e6	1.23e6	1964.1	1511.5	NO	bb	bb	46.812
23478-PeCDF	31.062	1.001	1.184e5	7.896e4	0.786	1.499	1.550	942	813	1.86e6	1.22e6	1971.7	1505.9	NO	bb	bb	44.292
123478-HxCDF	34.705	1.001	2.097e5	1.702e5	1.166	1.233	1.240	1442	1122	3.41e6	2.75e6	2367.3	2452.8	NO	bd	bd	44.513
234678-HxCDF	35.718	1.001	1.827e5	1.478e5	1.140	1.236	1.240	1442	1122	2.94e6	2.38e6	2042.3	2122.8	NO	bb	bd	46.707
123678-HxCDF	34.838	1.000	2.211e5	1.786e5	1.091	1.238	1.240	1442	1122	3.45e6	2.83e6	2393.2	2521.5	NO	dd	db	47.152
123789-HxCDF	36.743	1.000	1.458e5	1.204e5	1.137	1.211	1.240	1442	1122	2.39e6	1.96e6	1656.1	1748.5	NO	bd	bd	45.664
1234678-HpCDF	38.604	1.000	9.033e4	9.412e4	1.003	0.960	1.050	900	854	1.56e6	1.60e6	1729.7	1872.8	NO	bb	bd	45.098
1234789-HpCDF	40.821	1.000	8.807e4	8.700e4	0.953	1.012	1.050	900	854	1.30e6	1.29e6	1449.3	1509.5	NO	bb	bb	47.710
OCDF	45.020	1.005	1.357e5	1.535e5	0.778	0.884	0.890	736	1056	1.69e6	1.88e6	2288.4	1785.3	NO	bb	bb	77.893
2378-TCDD	26.198	1.001	2.973e4	3.935e4	1.149	0.756	0.770	1171	720	4.67e5	6.03e5	398.6	838.0	NO	bb	bb	8.622
12378-PeCDD	31.306	1.000	1.355e5	9.163e4	1.022	1.479	1.550	1155	1038	2.14e6	1.46e6	1853.3	1405.8	NO	bb	bb	46.819
123478-HxCDD	35.830	1.001	1.678e5	1.372e5	0.996	1.223	1.240	1077	867	2.74e6	2.24e6	2540.5	2584.3	NO	bd	bd	45.697
123678-HxCDD	35.941	1.000	1.666e5	1.365e5	1.001	1.221	1.240	1077	867	2.87e6	2.31e6	2668.2	2667.0	NO	db	db	43.168
123789-HxCDD	36.331	1.011	1.574e5	1.306e5	0.907	1.206	1.240	1077	867	2.66e6	2.22e6	2472.9	2562.2	NO	bb	bb	46.297
1234678-HpCDD	40.086	1.000	1.123e5	1.097e5	1.039	1.023	1.050	1057	905	1.78e6	1.74e6	1688.2	1925.9	NO	bb	bb	45.751
OCDD	44.792	1.000	1.918e5	2.227e5	0.920	0.861	0.890	780	1028	2.48e6	2.85e6	3176.6	2774.7	NO	bb	bb	94.383
13C-2378-TCDF	25.534	1.007	3.124e5	4.150e5	1.620	0.753	0.770	1758	1133	4.89e6	6.59e6	2779.0	5815.4	NO	bb	bb	81.163
13C-12378-PeCDF	29.702	1.172	3.679e5	2.485e5	1.240	1.480	1.550	965	2263	5.78e6	3.94e6	5989.3	1739.0	NO	bb	bb	89.846
13C-23478-PeCDF	31.039	1.224	3.353e5	2.314e5	1.118	1.449	1.550	965	2263	5.43e6	3.68e6	5620.6	1628.2	NO	bb	bb	91.652
13C-123478-HxCDF	34.682	0.955	2.451e5	4.869e5	1.168	0.503	0.510	1041	1477	3.94e6	7.90e6	3784.8	5348.4	NO	bd	bd	92.337
13C-123678-HxCDF	34.827	0.959	2.610e5	5.163e5	1.386	0.506	0.510	1041	1477	4.14e6	8.18e6	3973.1	5538.5	NO	dd	dd	82.621
13C-234678-HxCDF	35.696	0.983	2.088e5	4.120e5	1.129	0.507	0.510	1041	1477	3.50e6	6.86e6	3364.7	4643.7	NO	bb	bb	81.028
13C-123789-HxCDF	36.732	1.011	1.728e5	3.400e5	0.932	0.508	0.510	1041	1477	2.86e6	5.64e6	2751.4	3821.1	NO	bb	bb	81.109
13C-1234678-HpCDF	38.593	1.063	1.238e5	2.840e5	0.895	0.436	0.440	925	1132	2.18e6	5.02e6	2354.9	4433.9	NO	bb	bb	67.138
13C-1234789-HpCDF	40.799	1.123	1.177e5	2.673e5	0.770	0.440	0.440	925	1132	1.79e6	4.11e6	1940.3	3630.9	NO	bb	bb	73.716
13C-1234-TCDD	25.351	0.000	2.407e5	3.125e5	1.000	0.770	0.770	1552	897	3.85e6	5.00e6	2479.5	5575.6	NO	bb	bb	100.000
13C-2378-TCDD	26.170	1.032	3.039e5	3.935e5	1.152	0.772	0.770	1552	897	4.67e6	6.13e6	3008.3	6840.5	NO	bb	bb	109.411
13C-12378-PeCDD	31.295	1.235	2.922e5	1.825e5	0.829	1.601	1.550	834	829	4.51e6	2.85e6	5406.3	3438.8	NO	bb	bb	103.553
13C-123478-HxCDD	35.808	0.986	3.744e5	2.959e5	0.995	1.265	1.240	1512	1015	6.36e6	5.02e6	4209.5	4952.1	NO	bd	bd	99.284
13C-123678-HxCDD	35.930	0.989	3.913e5	3.100e5	1.157	1.262	1.240	1512	1015	6.38e6	5.07e6	4220.0	4994.1	NO	db	db	89.361
13C-1234678-HpCDD	40.075	1.103	2.390e5	2.280e5	0.840	1.048	1.050	796	743	3.82e6	3.66e6	4801.3	4925.7	NO	bb	bb	81.925
13C-OCDD	44.773	1.233	4.481e5	5.066e5	0.767	0.885	0.890	935	896	5.68e6	6.49e6	6078.9	7247.3	NO	bb	bb	183.346
13C-123789-HxCDD	36.320	0.000	3.763e5	3.022e5	1.000	1.245	1.240	1512	1015	6.39e6	5.15e6	4230.2	5077.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.198	1.033	6.576e4		1.288			1066		1.04e6		975.6			bb		9.232

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.045	0.863	2.008e4	2.842e4	0.802	0.706	0.770	701	853	3.19e5	4.58e5	455.0	536.8	NO	bb	bb	8.320
1289-TCDF	27.045	1.059	1.921e4	2.611e4	0.678	0.736	0.770	701	853	2.97e5	3.96e5	424.5	464.2	NO	db	db	9.190
13468-PECDF	26.918	0.906	2.773e5	1.834e5	1.246	1.512	1.550	810	839	4.38e6	2.88e6	5412.4	3431.5	NO	bb	bb	59.957
12389-PECDF	32.086	1.080	1.181e5	8.079e4	0.496	1.462	1.550	942	813	1.77e6	1.21e6	1874.1	1489.7	NO	bb	bb	65.009
123468-HXCDF	33.022	0.952	2.009e5	1.592e5	1.169	1.262	1.240	1442	1122	3.01e6	2.41e6	2090.1	2150.2	NO	bb	bb	42.092
1368-TCDD	23.316	0.891	2.305e4	3.108e4	1.015	0.742	0.770	1171	720	3.60e5	4.86e5	307.6	675.4	NO	bb	bb	7.644
1289-TCDD	26.791	1.024	2.446e4	3.167e4	0.909	0.772	0.770	1171	720	3.72e5	4.90e5	317.6	680.7	NO	bd	bb	8.857
12479-PECDD	28.588	0.914	2.164e5	1.433e5	2.301	1.510	1.550	1155	1038	2.15e6	1.42e6	1857.9	1365.9	NO	bb	bb	32.930
12389-PECDD	31.708	1.013	1.582e5	1.067e5	1.184	1.482	1.550	1155	1038	2.48e6	1.65e6	2145.7	1593.6	NO	bb	bb	47.149
124679-HXCDD	33.802	0.944	1.872e5	1.529e5	1.115	1.224	1.240	1077	867	2.93e6	2.42e6	2721.0	2788.5	NO	bb	bb	45.484
1234679-HPCDD	39.050	0.974	1.142e5	1.125e5	1.137	1.015	1.050	1057	905	1.99e6	1.95e6	1880.7	2157.7	NO	bb	bb	42.686
Total-tetrafurans			5.962e4		0.727			701		9.35e5							26.932
Total-penta1			2.773e5					810		4.38e6							59.957
Total-pentafurans			3.714e5		0.654			942		5.75e6							163.906
Total-hexafurans			9.602e5		1.141			1442		1.52e7							226.127
Total-heptafurans			1.793e5		0.978			900		2.88e6							93.232
Total-Furans			1.984e6		0.922			701		3.08e7							648.046
Total-tetradioxins			1.332e5		1.024			1171		1.86e6							43.066
Total-pentadioxins			5.101e5		1.502			1155		6.77e6							126.898
Total-hexadioxins			6.794e5		1.005			1077		1.12e7							180.765
Total-heptadioxins			2.264e5		1.088			1057		3.77e6							88.436
Total-Dioxins			1.741e6		1.130			1171		2.61e7							533.548
Total-TEQ			3.724e6					1171		5.69e7							1181.594
FUNCTION1 PFK			1.175e5					507385		2.52e6							
FUNCTION2 PFK			2.802e5					225143		5.89e6							0.000
FUNCTION3 PFK			3.346e7					405815		3.32e7							0.000
FUNCTION4 PFK			3.611e5					318803		9.28e6							
FUNCTION5 PFK			5.312e5					203453		1.20e7							
FUNCTION1 HXCD...			8.615e2					632		1.32e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			7.138e2					680		1.05e4							0.000
FUNCTION3 OCDPE			8.617e2					657		1.23e4							0.000
FUNCTION4 NCDPE			2.097e2					548		3.07e3							0.000
FUNCTION5 DCDPE			9.336e1					585		1.54e3							0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

**Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23****Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27****ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.921e4	2.611e4	0.678	0.74	0.77	424.5	YES	NO	db	db	9.190
2	Total-tetrafurans	26.93	5.407e2	6.669e2	0.727	0.81	0.77	12.1	YES	NO	bd	bd	0.228
3	2378-TCDF	25.55	1.979e4	2.712e4	0.702	0.73	0.77	442.7	YES	NO	bb	bb	9.194
4	1368-TCDF	22.05	2.008e4	2.842e4	0.802	0.71	0.77	455.0	YES	NO	bb	bb	8.320

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDFF	26.92	2.773e5	1.834e5	1.246	1.51	1.55	5412.4	YES	NO	bb	bb	59.957

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.09	1.181e5	8.079e4	0.496	1.46	1.55	1874.1	YES	NO	bb	bb	65.009
2	23478-PeCDF	31.06	1.184e5	7.896e4	0.786	1.50	1.55	1971.7	YES	NO	bb	bb	44.292
3	Total-pentafurans	30.91	2.336e2	1.696e2	0.654	1.38	1.55	5.0	YES	NO	bb	bb	0.104
4	12378-PeCDF	29.72	1.171e5	7.894e4	0.679	1.48	1.55	1964.1	YES	NO	bb	bb	46.812
5	Total-pentafurans	28.58	1.763e4	1.212e4	0.654	1.45	1.55	284.2	YES	NO	bb	bb	7.689

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.74	1.458e5	1.204e5	1.137	1.21	1.24	1656.1	YES	NO	bd	bd	45.664
2	234678-HxCDF	35.72	1.827e5	1.478e5	1.140	1.24	1.24	2042.3	YES	NO	bb	bd	46.707
3	123678-HxCDF	34.84	2.211e5	1.786e5	1.091	1.24	1.24	2393.2	YES	NO	dd	db	47.152
4	123478-HxCDF	34.70	2.097e5	1.702e5	1.166	1.23	1.24	2367.3	YES	NO	bd	bd	44.513
5	123468-HxCDF	33.02	2.009e5	1.592e5	1.169	1.26	1.24	2090.1	YES	NO	bb	bb	42.092

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.82	8.807e4	8.700e4	0.953	1.01	1.05	1449.3	YES	NO	bb	bb	47.710
2	Total-heptafurans	39.25	8.749e2	7.667e2	0.978	1.14	1.05	18.1	YES	NO	bb	bb	0.423
3	1234678-HpCDF	38.60	9.033e4	9.412e4	1.003	0.96	1.05	1729.7	YES	NO	bb	bd	45.098



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

**ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.921e4	2.611e4	0.678	0.74	0.77	424.5	YES	NO	db	db	9.190
2	Total-tetrafurans	26.93	5.407e2	6.669e2	0.727	0.81	0.77	12.1	YES	NO	bd	bd	0.228
3	2378-TCDF	25.55	1.979e4	2.712e4	0.702	0.73	0.77	442.7	YES	NO	bb	bb	9.194
4	1368-TCDF	22.05	2.008e4	2.842e4	0.802	0.71	0.77	455.0	YES	NO	bb	bb	8.320
5	12389-PECDF	32.09	1.181e5	8.079e4	0.496	1.46	1.55	1874.1	YES	NO	bb	bb	65.009
6	23478-PeCDF	31.06	1.184e5	7.896e4	0.786	1.50	1.55	1971.7	YES	NO	bb	bb	44.292
7	Total-pentafurans	30.91	2.336e2	1.696e2	0.654	1.38	1.55	5.0	YES	NO	bb	bb	0.104
8	12378-PeCDF	29.72	1.171e5	7.894e4	0.679	1.48	1.55	1964.1	YES	NO	bb	bb	46.812
9	Total-pentafurans	28.58	1.763e4	1.212e4	0.654	1.45	1.55	284.2	YES	NO	bb	bb	7.689
10	123789-HxCDF	36.74	1.458e5	1.204e5	1.137	1.21	1.24	1656.1	YES	NO	bd	bd	45.664
11	234678-HxCDF	35.72	1.827e5	1.478e5	1.140	1.24	1.24	2042.3	YES	NO	bb	bd	46.707
12	123678-HxCDF	34.84	2.211e5	1.786e5	1.091	1.24	1.24	2393.2	YES	NO	dd	db	47.152
13	123478-HxCDF	34.70	2.097e5	1.702e5	1.166	1.23	1.24	2367.3	YES	NO	bd	bd	44.513
14	123468-HXCDF	33.02	2.009e5	1.592e5	1.169	1.26	1.24	2090.1	YES	NO	bb	bb	42.092
15	1234789-HpCDF	40.82	8.807e4	8.700e4	0.953	1.01	1.05	1449.3	YES	NO	bb	bb	47.710
16	Total-heptafurans	39.25	8.749e2	7.667e2	0.978	1.14	1.05	18.1	YES	NO	bb	bb	0.423
17	1234678-HpCDF	38.60	9.033e4	9.412e4	1.003	0.96	1.05	1729.7	YES	NO	bb	bd	45.098
18	OCDF	45.02	1.357e5	1.535e5	0.778	0.88	0.89	2288.4	YES	NO	bb	bb	77.893
19	13468-PECDF	26.92	2.773e5	1.834e5	1.246	1.51	1.55	5412.4	YES	NO	bb	bb	59.957

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.79	2.446e4	3.167e4	0.909	0.77	0.77	317.6	YES	NO	bd	bb	8.857
2	2378-TCDD	26.20	2.973e4	3.935e4	1.149	0.76	0.77	398.6	YES	NO	bb	bb	8.622
3	Total-tetradioxins	25.86	4.154e4	5.400e4	1.024	0.77	0.77	377.0	YES	NO	bb	bd	13.374
4	Total-tetradioxins	25.38	1.310e4	1.653e4	1.024	0.79	0.77	177.2	YES	NO	bd	bd	4.148
5	Total-tetradioxins	24.52	1.356e3	1.639e3	1.024	0.83	0.77	12.1	YES	NO	bb	bb	0.419
6	1368-TCDD	23.32	2.305e4	3.108e4	1.015	0.74	0.77	307.6	YES	NO	bb	bb	7.644

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.71	1.582e5	1.067e5	1.184	1.48	1.55	2145.7	YES	NO	bb	bb	47.149
2	12378-PeCDD	31.31	1.355e5	9.163e4	1.022	1.48	1.55	1853.3	YES	NO	bb	bb	46.819
3	12479-PECDD	28.59	2.164e5	1.433e5	2.301	1.51	1.55	1857.9	YES	NO	bb	bb	32.930

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

**ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HxCDD	33.80	1.872e5	1.529e5	1.115	1.22	1.24	2721.0	YES	NO	bb	bb	45.484
2	123789-HxCDD	36.33	1.574e5	1.306e5	0.907	1.21	1.24	2472.9	YES	NO	bb	bb	46.297
3	123678-HxCDD	35.94	1.666e5	1.365e5	1.001	1.22	1.24	2668.2	YES	NO	db	db	43.168
4	123478-HxCDD	35.83	1.678e5	1.372e5	0.996	1.22	1.24	2540.5	YES	NO	bd	bd	45.697
5	Total-hexadioxins	34.58	4.486e2	3.746e2	1.005	1.20	1.24	6.5	YES	NO	bd	bb	0.119

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.09	1.123e5	1.097e5	1.039	1.02	1.05	1688.2	YES	NO	bb	bb	45.751
2	1234679-HPCDD	39.05	1.142e5	1.125e5	1.137	1.01	1.05	1880.7	YES	NO	bb	bb	42.686

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.79	2.446e4	3.167e4	0.909	0.77	0.77	317.6	YES	NO	bd	bb	8.857
2	2378-TCDD	26.20	2.973e4	3.935e4	1.149	0.76	0.77	398.6	YES	NO	bb	bb	8.622
3	Total-tetradioxins	25.86	4.154e4	5.400e4	1.024	0.77	0.77	377.0	YES	NO	bb	bd	13.374
4	Total-tetradioxins	25.38	1.310e4	1.653e4	1.024	0.79	0.77	177.2	YES	NO	bd	bd	4.148
5	Total-tetradioxins	24.52	1.356e3	1.639e3	1.024	0.83	0.77	12.1	YES	NO	bb	bb	0.419
6	1368-TCDD	23.32	2.305e4	3.108e4	1.015	0.74	0.77	307.6	YES	NO	bb	bb	7.644
7	124679-HxCDD	33.80	1.872e5	1.529e5	1.115	1.22	1.24	2721.0	YES	NO	bb	bb	45.484
8	12389-PECDD	31.71	1.582e5	1.067e5	1.184	1.48	1.55	2145.7	YES	NO	bb	bb	47.149
9	12378-PeCDD	31.31	1.355e5	9.163e4	1.022	1.48	1.55	1853.3	YES	NO	bb	bb	46.819
10	12479-PECDD	28.59	2.164e5	1.433e5	2.301	1.51	1.55	1857.9	YES	NO	bb	bb	32.930
11	123789-HxCDD	36.33	1.574e5	1.306e5	0.907	1.21	1.24	2472.9	YES	NO	bb	bb	46.297
12	123678-HxCDD	35.94	1.666e5	1.365e5	1.001	1.22	1.24	2668.2	YES	NO	db	db	43.168
13	123478-HxCDD	35.83	1.678e5	1.372e5	0.996	1.22	1.24	2540.5	YES	NO	bd	bd	45.697
14	Total-hexadioxins	34.58	4.486e2	3.746e2	1.005	1.20	1.24	6.5	YES	NO	bd	bb	0.119
15	1234678-HpCDD	40.09	1.123e5	1.097e5	1.039	1.02	1.05	1688.2	YES	NO	bb	bb	45.751
16	1234679-HPCDD	39.05	1.142e5	1.125e5	1.137	1.01	1.05	1880.7	YES	NO	bb	bb	42.686
17	OCDD	44.79	1.918e5	2.227e5	0.920	0.86	0.89	3176.6	YES	NO	bb	bb	94.383

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

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ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.921e4	2.611e4	0.678	0.74	0.77	424.5	YES	NO	db	db	9.190
2	Total-tetrafurans	26.93	5.407e2	6.669e2	0.727	0.81	0.77	12.1	YES	NO	bd	bd	0.228
3	2378-TCDF	25.55	1.979e4	2.712e4	0.702	0.73	0.77	442.7	YES	NO	bb	bb	9.194
4	1368-TCDF	22.05	2.008e4	2.842e4	0.802	0.71	0.77	455.0	YES	NO	bb	bb	8.320
5	12389-PECDF	32.09	1.181e5	8.079e4	0.496	1.46	1.55	1874.1	YES	NO	bb	bb	65.009
6	23478-PeCDF	31.06	1.184e5	7.896e4	0.786	1.50	1.55	1971.7	YES	NO	bb	bb	44.292
7	Total-pentafurans	30.91	2.336e2	1.696e2	0.654	1.38	1.55	5.0	YES	NO	bb	bb	0.104
8	12378-PeCDF	29.72	1.171e5	7.894e4	0.679	1.48	1.55	1964.1	YES	NO	bb	bb	46.812
9	Total-pentafurans	28.58	1.763e4	1.212e4	0.654	1.45	1.55	284.2	YES	NO	bb	bb	7.689
10	123789-HxCDF	36.74	1.458e5	1.204e5	1.137	1.21	1.24	1656.1	YES	NO	bd	bd	45.664
11	234678-HxCDF	35.72	1.827e5	1.478e5	1.140	1.24	1.24	2042.3	YES	NO	bb	bd	46.707
12	123678-HxCDF	34.84	2.211e5	1.786e5	1.091	1.24	1.24	2393.2	YES	NO	dd	db	47.152
13	123478-HxCDF	34.70	2.097e5	1.702e5	1.166	1.23	1.24	2367.3	YES	NO	bd	bd	44.513
14	123468-HXCDF	33.02	2.009e5	1.592e5	1.169	1.26	1.24	2090.1	YES	NO	bb	bb	42.092
15	1234789-HpCDF	40.82	8.807e4	8.700e4	0.953	1.01	1.05	1449.3	YES	NO	bb	bb	47.710
16	Total-heptafurans	39.25	8.749e2	7.667e2	0.978	1.14	1.05	18.1	YES	NO	bb	bb	0.423
17	1234678-HpCDF	38.60	9.033e4	9.412e4	1.003	0.96	1.05	1729.7	YES	NO	bb	bd	45.098
18	OCDF	45.02	1.357e5	1.535e5	0.778	0.88	0.89	2288.4	YES	NO	bb	bb	77.893
19	13468-PECDF	26.92	2.773e5	1.834e5	1.246	1.51	1.55	5412.4	YES	NO	bb	bb	59.957
20	1289-TCDD	26.79	2.446e4	3.167e4	0.909	0.77	0.77	317.6	YES	NO	bd	bb	8.857
21	2378-TCDD	26.20	2.973e4	3.935e4	1.149	0.76	0.77	398.6	YES	NO	bb	bb	8.622
22	Total-tetradioxins	25.86	4.154e4	5.400e4	1.024	0.77	0.77	377.0	YES	NO	bb	bd	13.374
23	Total-tetradioxins	25.38	1.310e4	1.653e4	1.024	0.79	0.77	177.2	YES	NO	bd	bd	4.148
24	Total-tetradioxins	24.52	1.356e3	1.639e3	1.024	0.83	0.77	12.1	YES	NO	bb	bb	0.419
25	1368-TCDD	23.32	2.305e4	3.108e4	1.015	0.74	0.77	307.6	YES	NO	bb	bb	7.644
26	124679-HXCDD	33.80	1.872e5	1.529e5	1.115	1.22	1.24	2721.0	YES	NO	bb	bb	45.484
27	12389-PECDD	31.71	1.582e5	1.067e5	1.184	1.48	1.55	2145.7	YES	NO	bb	bb	47.149
28	12378-PeCDD	31.31	1.355e5	9.163e4	1.022	1.48	1.55	1853.3	YES	NO	bb	bb	46.819
29	12479-PECDD	28.59	2.164e5	1.433e5	2.301	1.51	1.55	1857.9	YES	NO	bb	bb	32.930
30	123789-HxCDD	36.33	1.574e5	1.306e5	0.907	1.21	1.24	2472.9	YES	NO	bb	bb	46.297
31	123678-HxCDD	35.94	1.666e5	1.365e5	1.001	1.22	1.24	2668.2	YES	NO	db	db	43.168
32	123478-HxCDD	35.83	1.678e5	1.372e5	0.996	1.22	1.24	2540.5	YES	NO	bd	bd	45.697
33	Total-hexadioxins	34.58	4.486e2	3.746e2	1.005	1.20	1.24	6.5	YES	NO	bd	bb	0.119
34	1234678-HpCDD	40.09	1.123e5	1.097e5	1.039	1.02	1.05	1688.2	YES	NO	bb	bb	45.751
35	1234679-HPCDD	39.05	1.142e5	1.125e5	1.137	1.01	1.05	1880.7	YES	NO	bb	bb	42.686
36	OCDD	44.79	1.918e5	2.227e5	0.920	0.86	0.89	3176.6	YES	NO	bb	bb	94.383

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.03	9.098e4					3.1	YES		bb		
2	FUNCTION1 PFK	23.12	2.655e4					1.8	NO		bb		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.47	1.411e4					2.2	NO		bd		0.000
2	FUNCTION2 PFK	31.27	7.740e3					1.1	NO		bb		0.000
3	FUNCTION2 PFK	31.12	6.984e3					1.3	NO		bb		0.000
4	FUNCTION2 PFK	30.63	1.860e3					0.7	NO		bb		0.000
5	FUNCTION2 PFK	28.84	1.543e3					0.6	NO		bb		0.000
6	FUNCTION2 PFK	28.37	2.093e4					2.1	NO		db		0.000
7	FUNCTION2 PFK	28.29	8.837e3					1.8	NO		dd		0.000
8	FUNCTION2 PFK	28.21	3.579e4					2.6	NO		dd		0.000
9	FUNCTION2 PFK	28.04	8.404e4					3.2	YES		bd		0.000
10	FUNCTION2 PFK	32.41	8.720e3					1.6	NO		db		0.000
11	FUNCTION2 PFK	32.35	8.681e3					1.7	NO		bd		0.000
12	FUNCTION2 PFK	31.82	2.245e4					2.2	NO		bb		0.000
13	FUNCTION2 PFK	31.63	2.457e4					2.6	NO		bb		0.000
14	FUNCTION2 PFK	31.57	3.395e4					2.4	NO		db		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.97	8.636e6					26.0	YES		db		0.000
2	FUNCTION3 PFK	34.54	4.685e6					26.8	YES		dd		0.000
3	FUNCTION3 PFK	33.76	2.014e7					29.1	YES		bd		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.45	7.650e4					2.4	NO		bd		
2	FUNCTION4 PFK	39.13	1.144e4					0.9	NO		bb		
3	FUNCTION4 PFK	39.05	1.229e4					1.6	NO		bb		
4	FUNCTION4 PFK	38.51	3.008e4					1.7	NO		bb		
5	FUNCTION4 PFK	38.23	1.118e4					0.8	NO		bb		
6	FUNCTION4 PFK	38.05	6.338e3					0.9	NO		bb		
7	FUNCTION4 PFK	41.82	2.005e3					0.6	NO		bb		
8	FUNCTION4 PFK	41.71	3.645e3					0.7	NO		bb		
9	FUNCTION4 PFK	41.09	9.682e3					1.2	NO		bb		
10	FUNCTION4 PFK	40.97	2.867e4					1.9	NO		bb		
11	FUNCTION4 PFK	40.88	1.667e4					1.9	NO		db		
12	FUNCTION4 PFK	40.83	6.646e3					1.0	NO		bd		
13	FUNCTION4 PFK	40.63	1.060e4					1.3	NO		bb		
14	FUNCTION4 PFK	40.44	1.107e4					1.0	NO		db		
15	FUNCTION4 PFK	40.40	5.822e3					0.9	NO		bd		
16	FUNCTION4 PFK	40.28	1.400e3					0.4	NO		bb		
17	FUNCTION4 PFK	40.22	7.290e3					0.9	NO		bb		
18	FUNCTION4 PFK	40.16	2.657e4					2.1	NO		db		
19	FUNCTION4 PFK	40.12	1.255e4					1.5	NO		bd		
20	FUNCTION4 PFK	39.86	5.868e3					0.9	NO		db		
21	FUNCTION4 PFK	39.83	6.548e3					1.0	NO		bd		
22	FUNCTION4 PFK	39.60	2.265e4					1.4	NO		db		
23	FUNCTION4 PFK	42.19	3.256e4					1.6	NO		bb		
24	FUNCTION4 PFK	41.97	2.975e3					0.5	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.57	7.714e3					1.6	NO		dd		
2	FUNCTION5 PFK	43.52	1.166e4					2.2	NO		bd		
3	FUNCTION5 PFK	43.46	5.463e3					1.3	NO		bb		
4	FUNCTION5 PFK	43.41	2.975e3					0.8	NO		bb		
5	FUNCTION5 PFK	43.31	4.615e3					1.1	NO		bb		
6	FUNCTION5 PFK	43.15	7.483e3					1.1	NO		bb		
7	FUNCTION5 PFK	42.94	5.587e2					0.3	NO		bb		
8	FUNCTION5 PFK	42.89	1.144e4					1.9	NO		db		
9	FUNCTION5 PFK	42.82	2.831e4					2.7	NO		dd		
10	FUNCTION5 PFK	42.79	3.996e4					3.8	YES		dd		
11	FUNCTION5 PFK	42.71	4.542e4					4.6	YES		dd		
12	FUNCTION5 PFK	42.68	8.908e4					5.2	YES		dd		
13	FUNCTION5 PFK	42.56	1.260e5					8.0	YES		bd		
14	FUNCTION5 PFK	45.20	3.646e3					0.9	NO		db		
15	FUNCTION5 PFK	45.17	1.181e4					1.6	NO		bd		
16	FUNCTION5 PFK	44.97	7.051e3					1.0	NO		db		
17	FUNCTION5 PFK	44.93	8.984e3					1.7	NO		dd		
18	FUNCTION5 PFK	44.84	2.140e4					1.7	NO		dd		
19	FUNCTION5 PFK	44.81	4.182e3					1.1	NO		dd		
20	FUNCTION5 PFK	44.77	2.664e3					0.8	NO		dd		
21	FUNCTION5 PFK	44.75	4.345e3					1.0	NO		dd		
22	FUNCTION5 PFK	44.72	5.279e3					1.1	NO		bd		
23	FUNCTION5 PFK	44.40	4.431e3					0.9	NO		bb		
24	FUNCTION5 PFK	44.22	5.649e3					1.1	NO		bb		
25	FUNCTION5 PFK	43.98	3.284e3					0.9	NO		db		
26	FUNCTION5 PFK	43.95	1.620e4					1.5	NO		bd		
27	FUNCTION5 PFK	43.86	7.936e3					1.6	NO		db		
28	FUNCTION5 PFK	43.79	9.367e3					0.9	NO		bd		
29	FUNCTION5 PFK	43.62	3.408e3					0.8	NO		db		
30	FUNCTION5 PFK	45.92	2.035e3					0.6	NO		db		
31	FUNCTION5 PFK	45.87	4.010e3					0.8	NO		bd		
32	FUNCTION5 PFK	45.83	3.737e3					1.2	NO		bb		
33	FUNCTION5 PFK	45.79	9.499e3					1.2	NO		bb		
34	FUNCTION5 PFK	45.64	2.065e3					0.6	NO		bb		
35	FUNCTION5 PFK	45.53	9.559e3					1.2	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

**ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.43	1.258e2					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	27.27	8.085e1					2.0	NO		bb		0.000
3	FUNCTION1 HXCD...	26.90	1.461e2					4.0	YES		bb		0.000
4	FUNCTION1 HXCD...	25.53	8.349e1					1.6	NO		bb		0.000
5	FUNCTION1 HXCD...	23.68	7.671e1					2.7	NO		bb		0.000
6	FUNCTION1 HXCD...	23.44	9.696e1					2.2	NO		bb		0.000
7	FUNCTION1 HXCD...	22.21	8.301e1					2.1	NO		bb		0.000
8	FUNCTION1 HXCD...	21.88	9.170e1					1.6	NO		db		0.000
9	FUNCTION1 HXCD...	21.71	7.685e1					1.8	NO		bd		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.28	1.760e2					2.6	NO		bb		0.000
2	FUNCTION2 HPCD...	31.06	8.334e1					2.5	NO		bb		0.000
3	FUNCTION2 HPCD...	30.88	4.544e2					10.3	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.72	1.340e2					2.4	NO		bb		0.000
2	FUNCTION3 OCDPE	36.33	1.439e2					3.1	YES		bb		0.000
3	FUNCTION3 OCDPE	35.93	2.094e2					3.9	YES		db		0.000
4	FUNCTION3 OCDPE	35.81	1.864e2					3.6	YES		dd		0.000
5	FUNCTION3 OCDPE	35.72	9.432e1					3.1	YES		bd		0.000
6	FUNCTION3 OCDPE	34.69	9.370e1					2.6	NO		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.70	1.149e2					2.8	NO		bb		0.000
2	FUNCTION4 NCDPE	38.01	9.486e1					2.8	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:59:13 Pacific Daylight Time

**ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk****ETHERS6**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.40	9.336e1					2.6	NO		bb		0.000

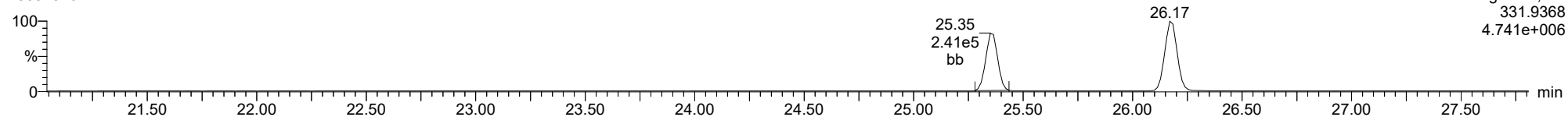


**Method:** T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

**ID:** CS3Z5, **Name:** 23031510, **Date:** 15-Mar-2023, **Time:** 17:48:31, **Conditions:** AUTOSPEC01, **User:** pk

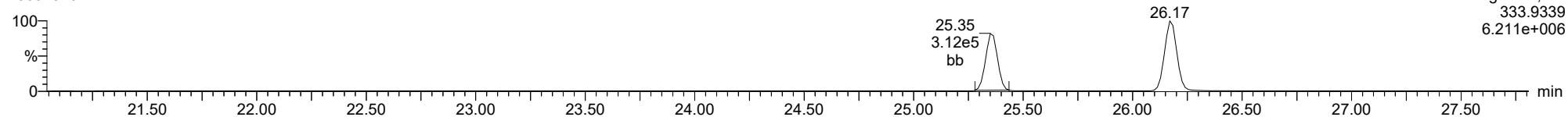
**13C-1234-TCDD**

23031510



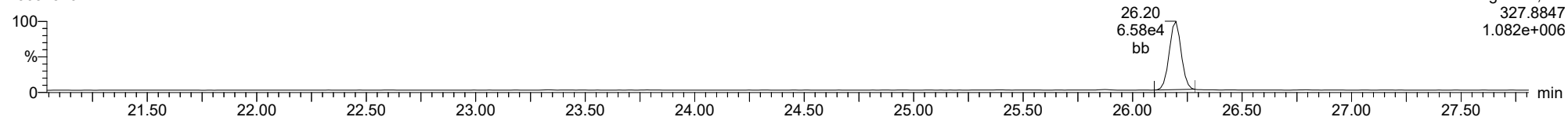
**13C-1234-TCDD**

23031510



**37CL-2378-TCDD**

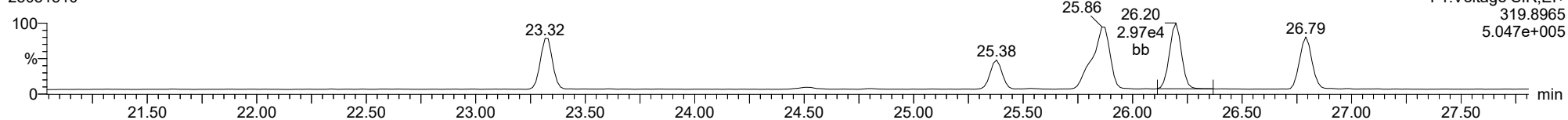
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

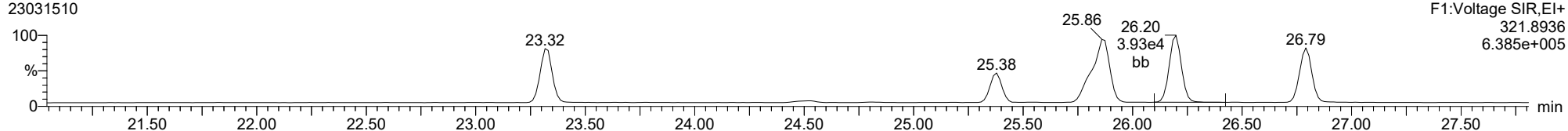
**2378-TCDD**

23031510



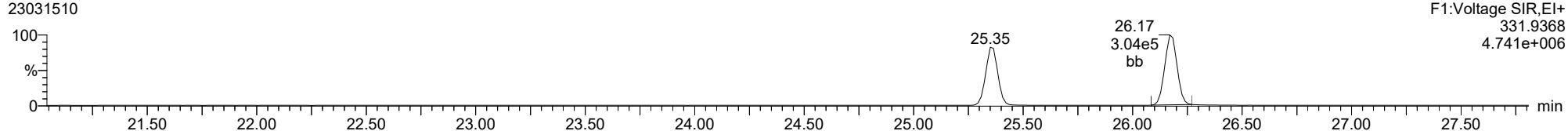
**2378-TCDD**

23031510



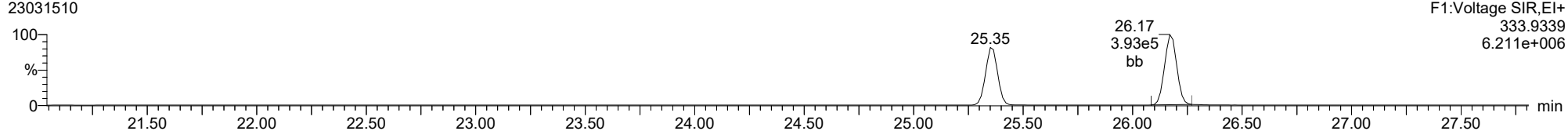
**13C-2378-TCDD**

23031510



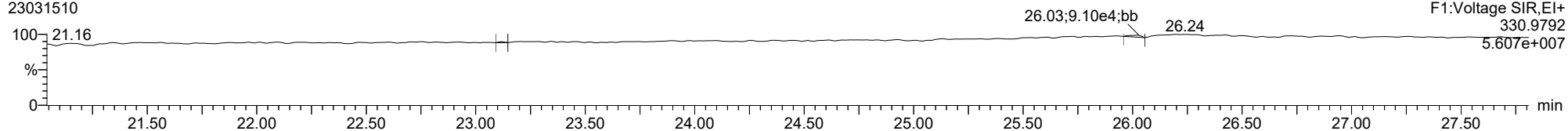
**13C-2378-TCDD**

23031510



**FUNCTION1 PFK**

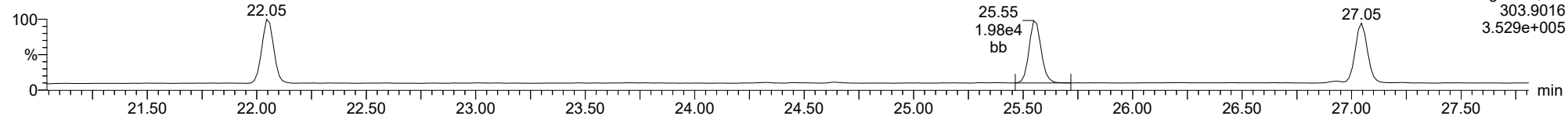
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

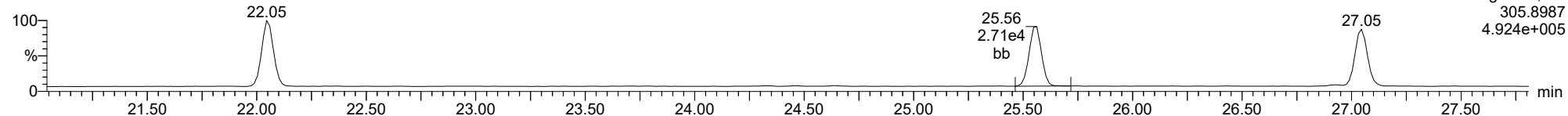
**2378-TCDF**

23031510



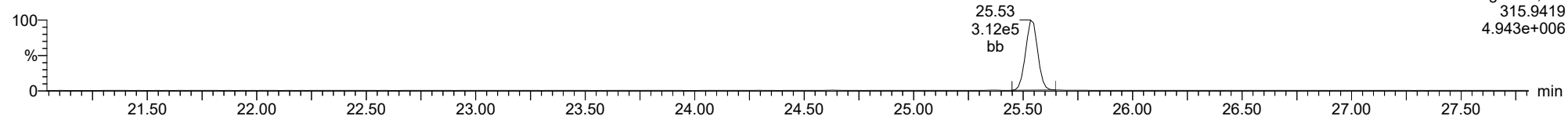
**2378-TCDF**

23031510



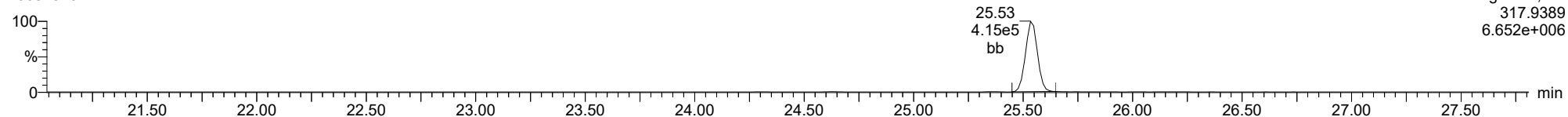
**13C-2378-TCDF**

23031510



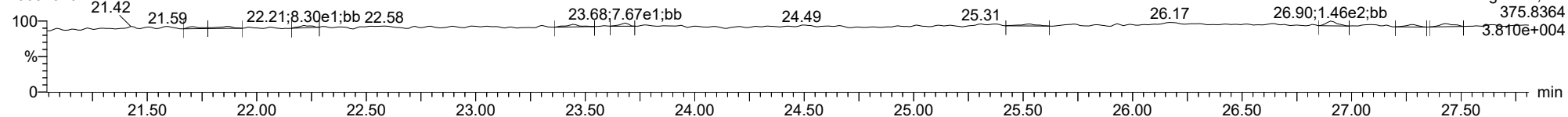
**13C-2378-TCDF**

23031510



**FUNCTION1 HXCDPE**

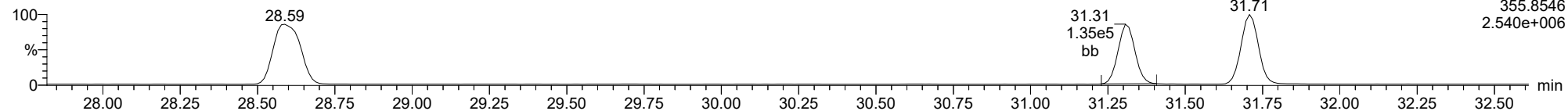
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

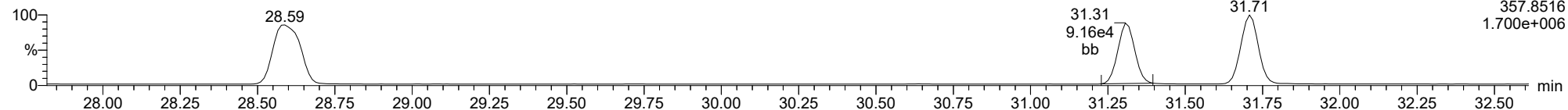
23031510



F2:Voltage SIR,EI+  
357.8516  
2.540e+006

**12378-PeCDD**

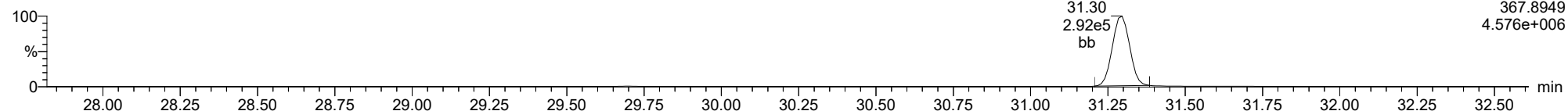
23031510



F2:Voltage SIR,EI+  
357.8516  
1.700e+006

**13C-12378-PeCDD**

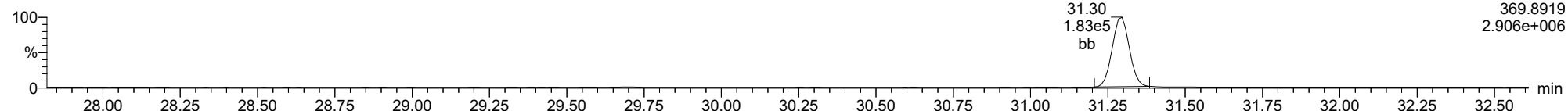
23031510



F2:Voltage SIR,EI+  
367.8949  
4.576e+006

**13C-12378-PeCDD**

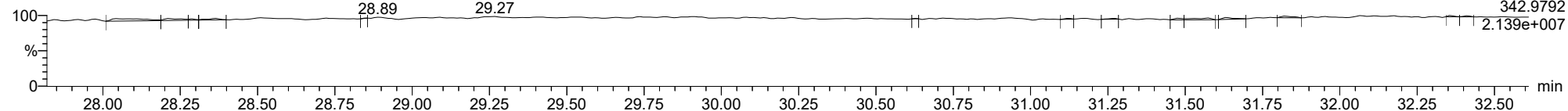
23031510



F2:Voltage SIR,EI+  
369.8919  
2.906e+006

**FUNCTION2 PFK**

23031510

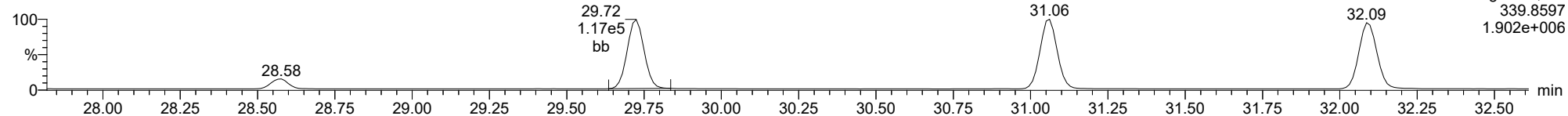


F2:Voltage SIR,EI+  
342.9792  
2.139e+007

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

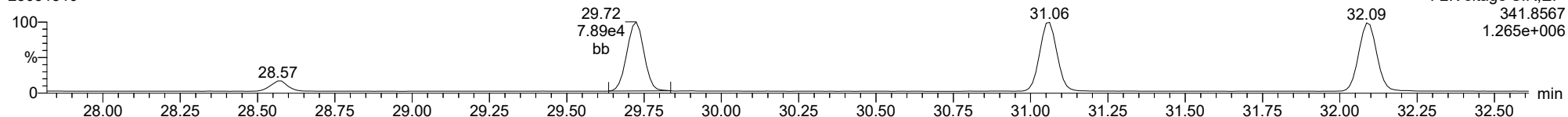
**12378-PeCDF**

23031510



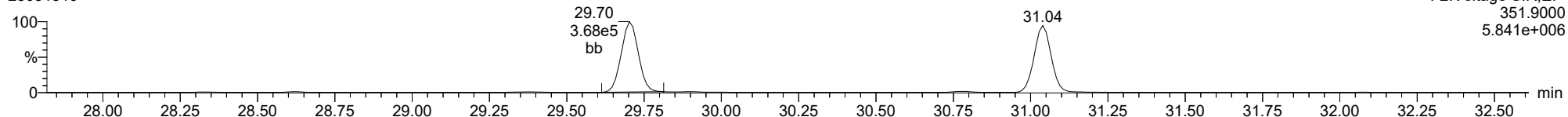
**12378-PeCDF**

23031510



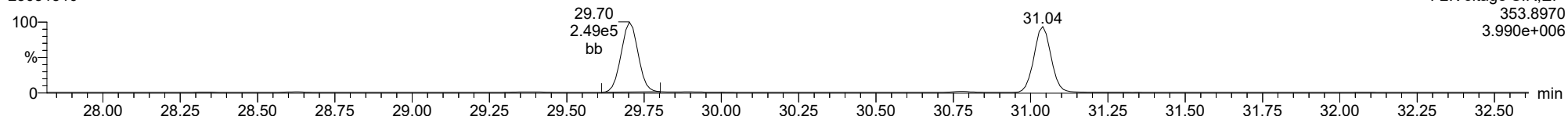
**13C-12378-PeCDF**

23031510



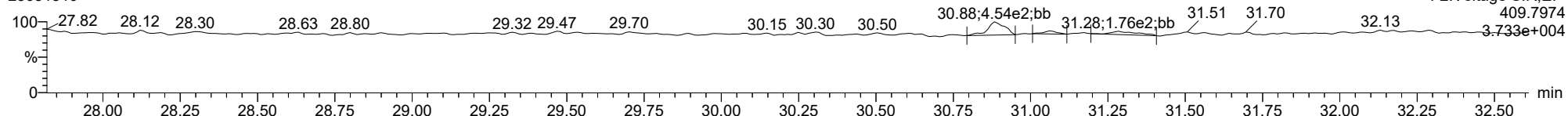
**13C-12378-PeCDF**

23031510



**FUNCTION2 HPCDPE**

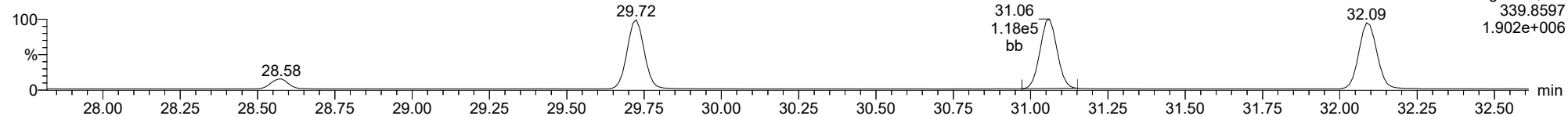
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

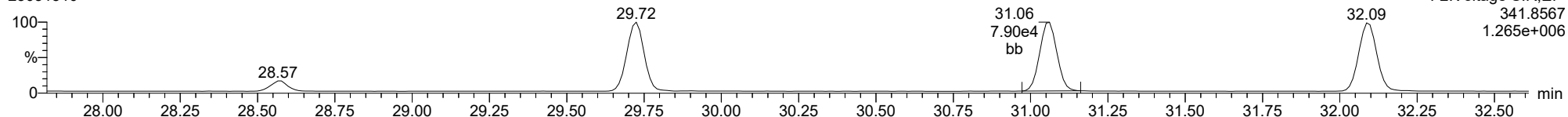
**23478-PeCDF**

23031510



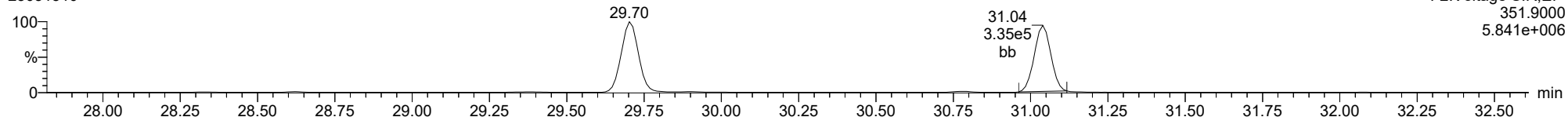
**23478-PeCDF**

23031510



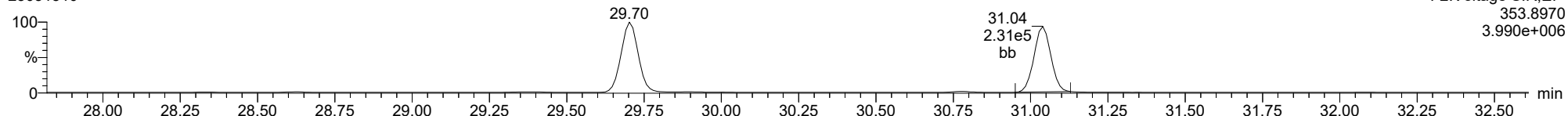
**13C-23478-PeCDF**

23031510



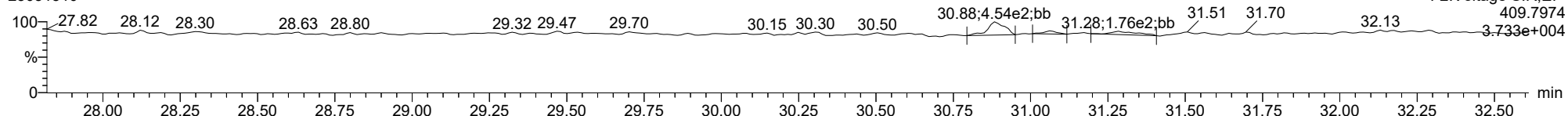
**13C-23478-PeCDF**

23031510



**FUNCTION2 HPCDPE**

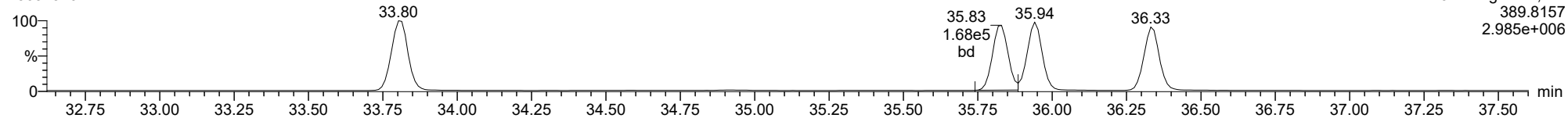
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

**123478-HxCDD**

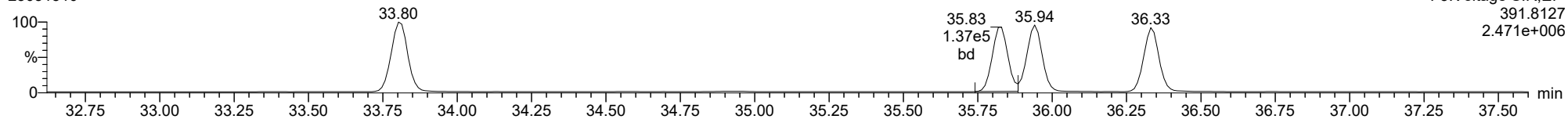
23031510



F3:Voltage SIR,El+  
389.8157  
2.985e+006

**123478-HxCDD**

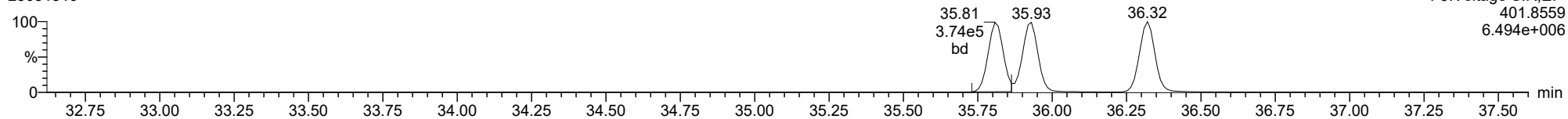
23031510



F3:Voltage SIR,El+  
391.8127  
2.471e+006

**13C-123478-HxCDD**

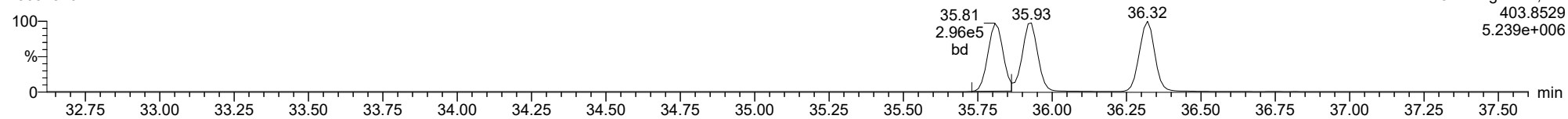
23031510



F3:Voltage SIR,El+  
401.8559  
6.494e+006

**13C-123478-HxCDD**

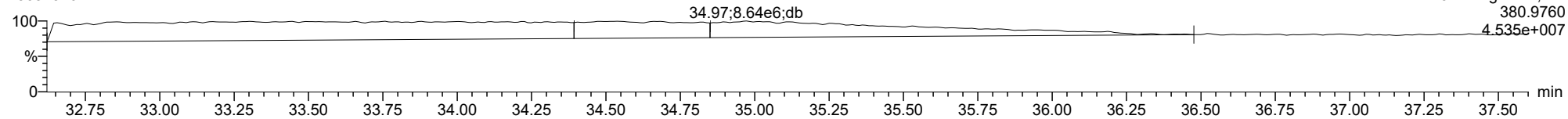
23031510



F3:Voltage SIR,El+  
403.8529  
5.239e+006

**FUNCTION3 PFK**

23031510

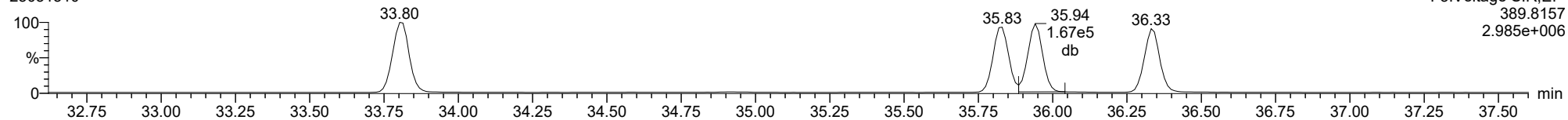


F3:Voltage SIR,El+  
380.9760  
4.535e+007

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

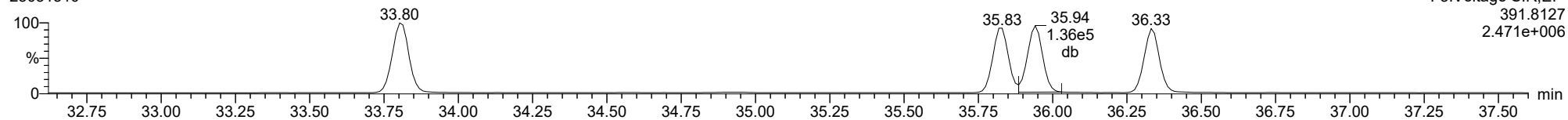
23031510



F3:Voltage SIR,EI+  
389.8157  
2.985e+006

**123678-HxCDD**

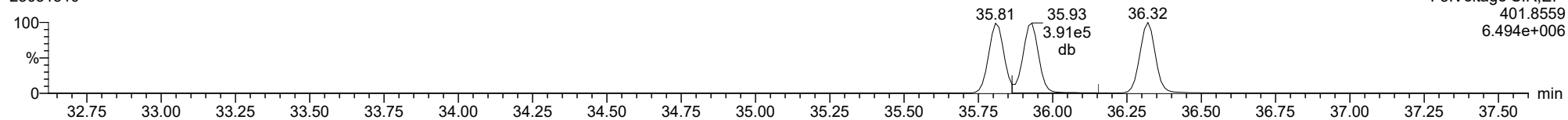
23031510



F3:Voltage SIR,EI+  
391.8127  
2.471e+006

**13C-123678-HxCDD**

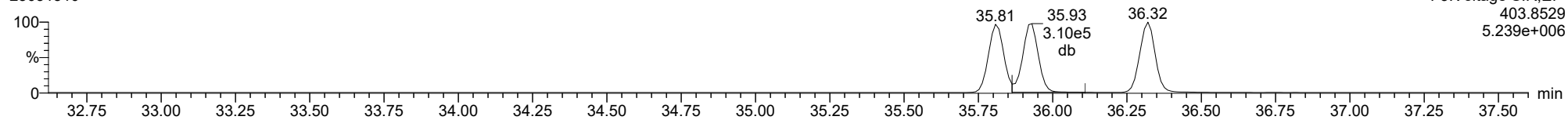
23031510



F3:Voltage SIR,EI+  
401.8559  
6.494e+006

**13C-123678-HxCDD**

23031510



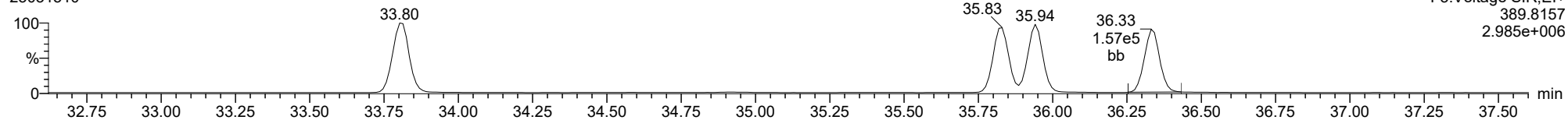
F3:Voltage SIR,EI+  
403.8529  
5.239e+006



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

**123789-HxCDD**

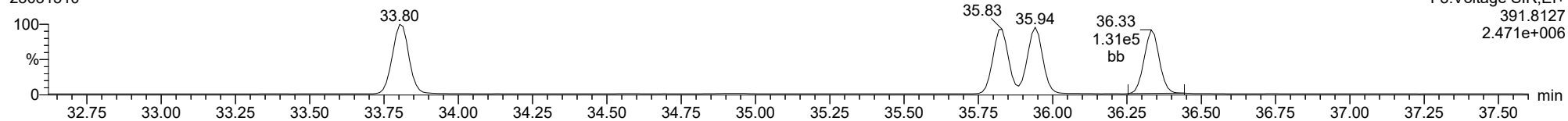
23031510



F3:Voltage SIR,EI+  
389.8157  
2.985e+006

**123789-HxCDD**

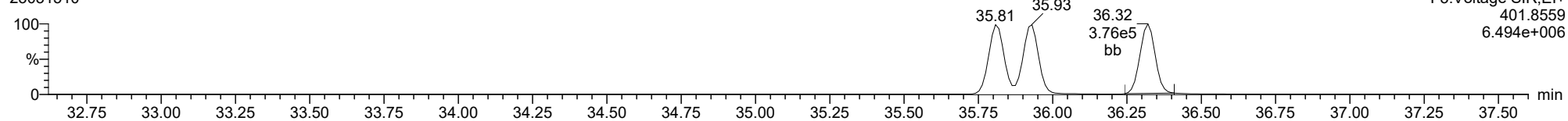
23031510



F3:Voltage SIR,EI+  
391.8127  
2.471e+006

**13C-123789-HxCDD**

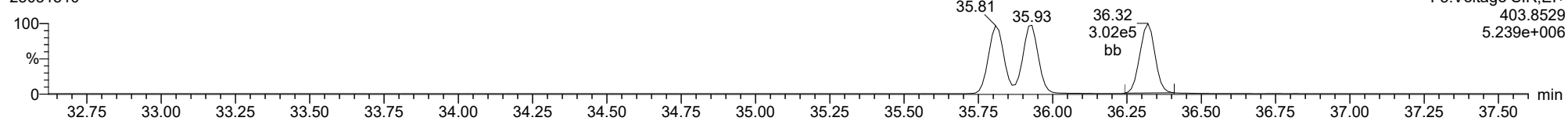
23031510



F3:Voltage SIR,EI+  
401.8559  
6.494e+006

**13C-123789-HxCDD**

23031510

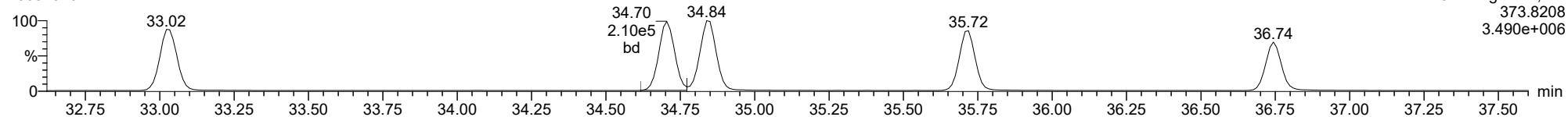


F3:Voltage SIR,EI+  
403.8529  
5.239e+006

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

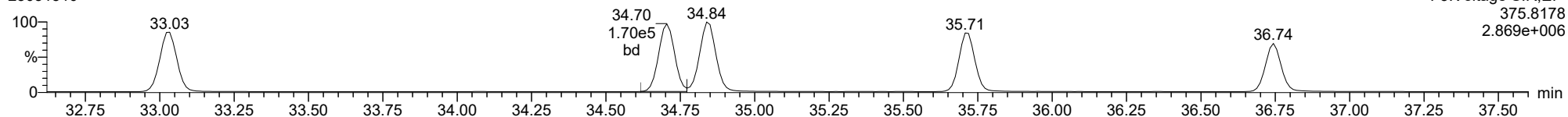
**123478-HxCDF**

23031510



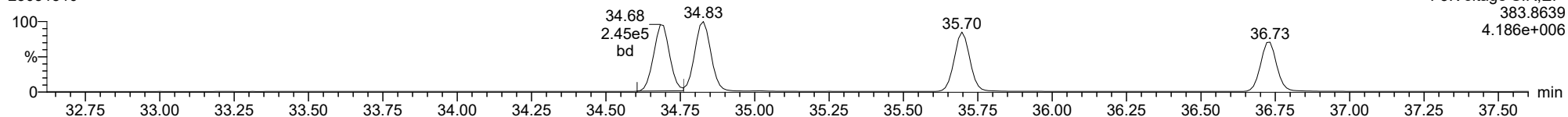
**123478-HxCDF**

23031510



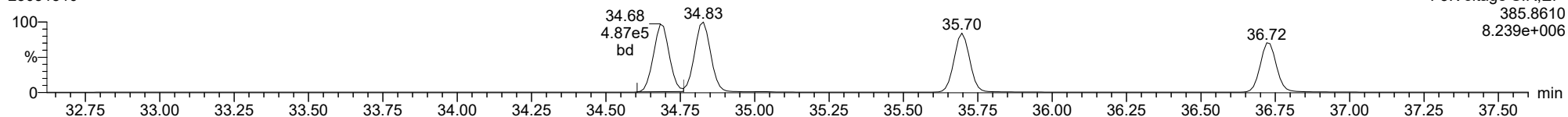
**13C-123478-HxCDF**

23031510



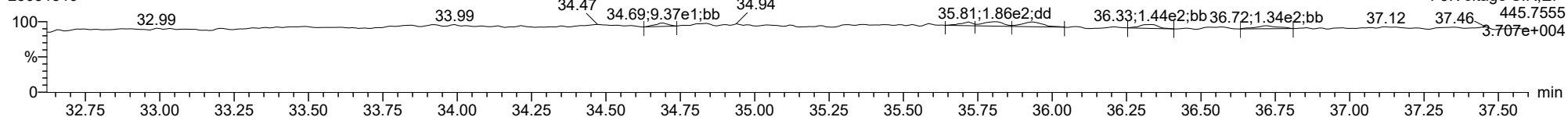
**13C-123478-HxCDF**

23031510



**FUNCTION3 OCDPE**

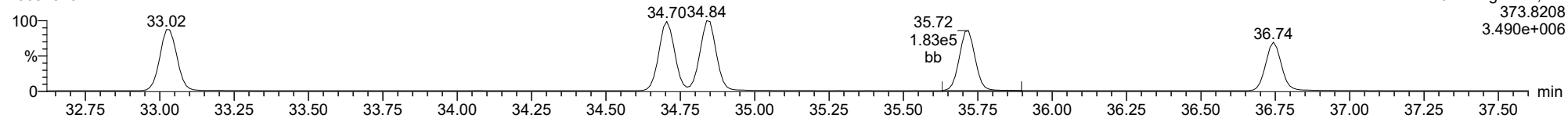
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

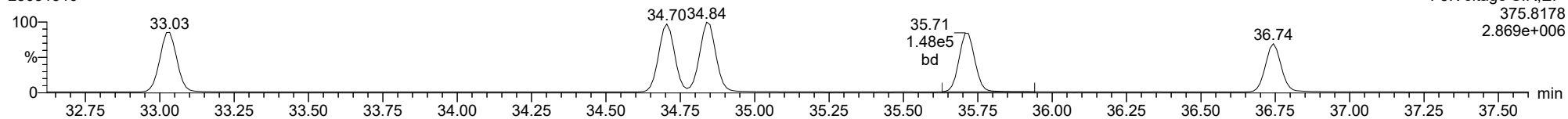
234678-HxCDF

23031510



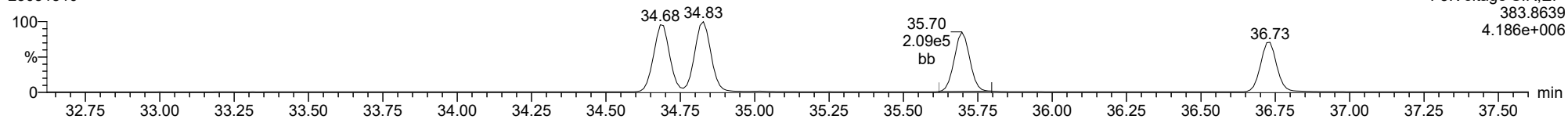
234678-HxCDF

23031510



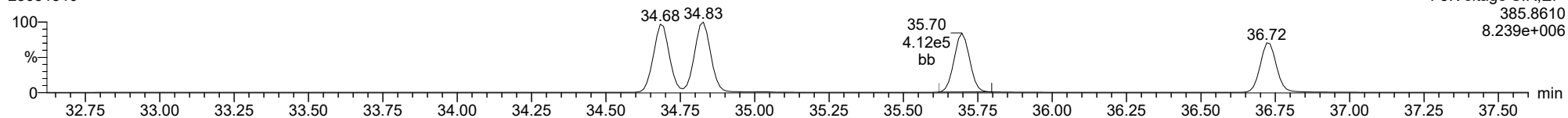
13C-234678-HxCDF

23031510



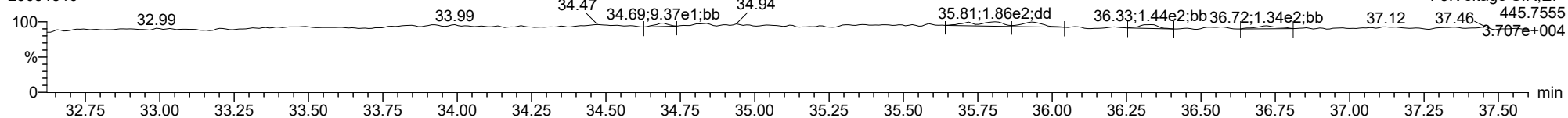
13C-234678-HxCDF

23031510



FUNCTION3 OCDPE

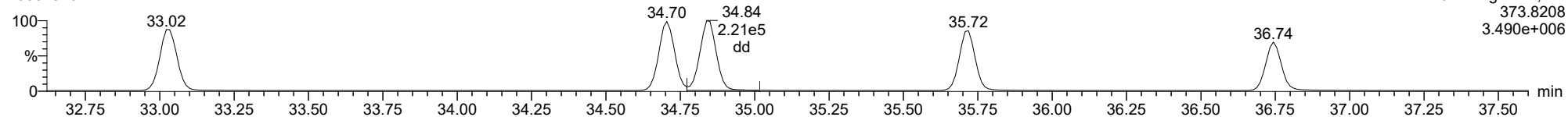
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ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

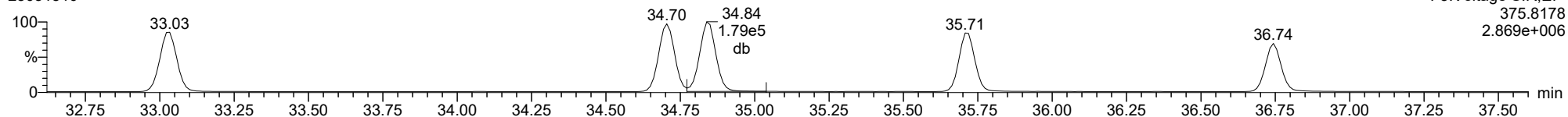
**123678-HxCDF**

23031510



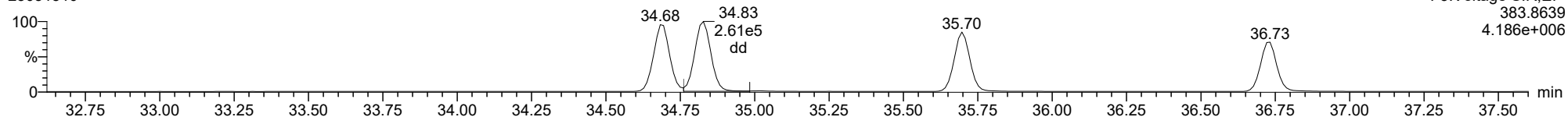
**123678-HxCDF**

23031510



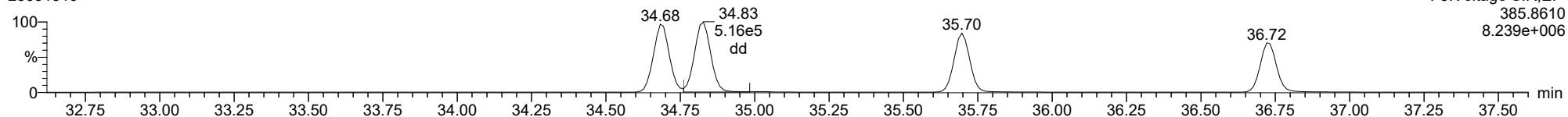
**13C-123678-HxCDF**

23031510



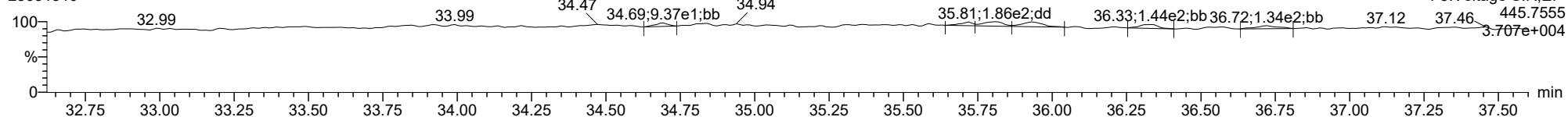
**13C-123678-HxCDF**

23031510



**FUNCTION3 OCDPE**

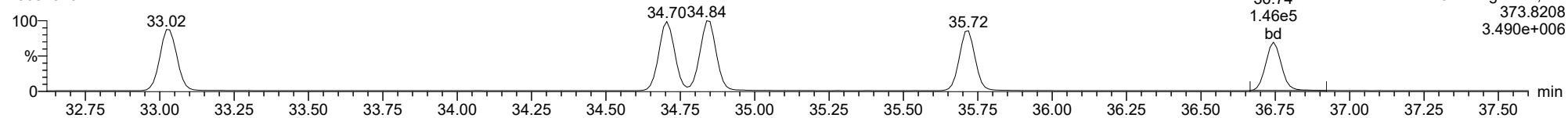
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

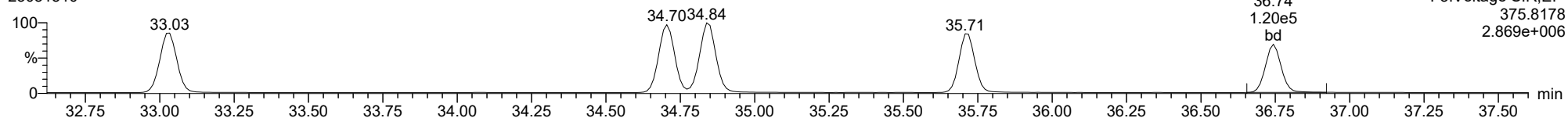
**123789-HxCDF**

23031510



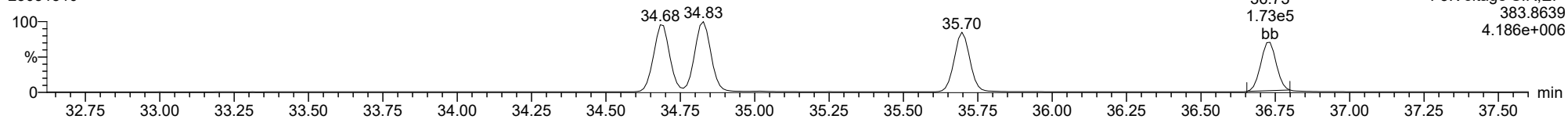
**123789-HxCDF**

23031510



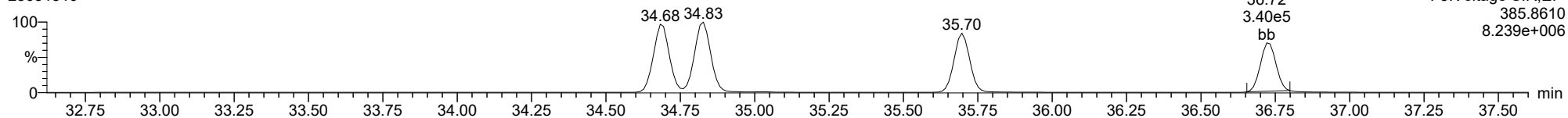
**13C-123789-HxCDF**

23031510



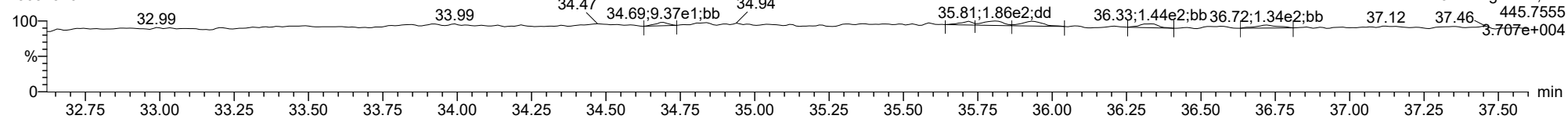
**13C-123789-HxCDF**

23031510



**FUNCTION3 OCDPE**

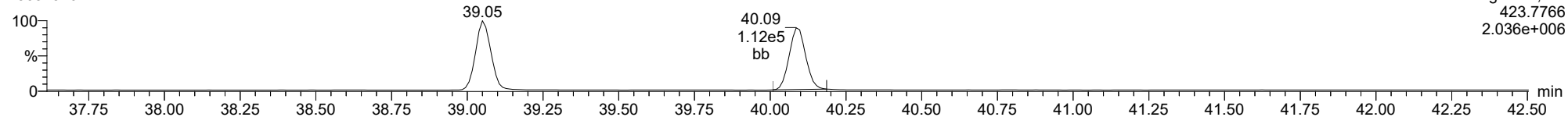
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ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

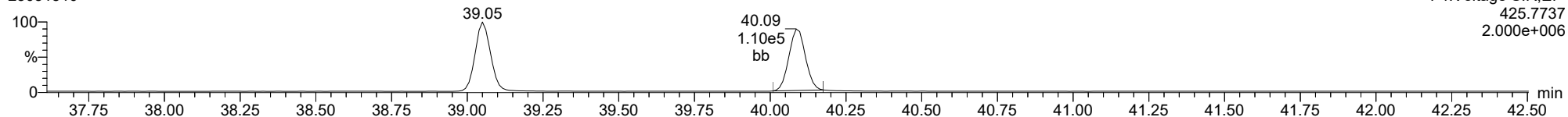
**1234678-HpCDD**

23031510



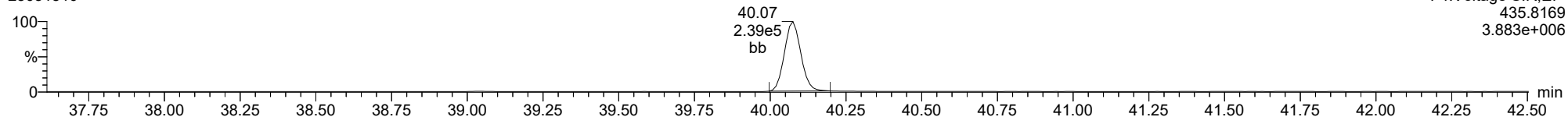
**1234678-HpCDD**

23031510



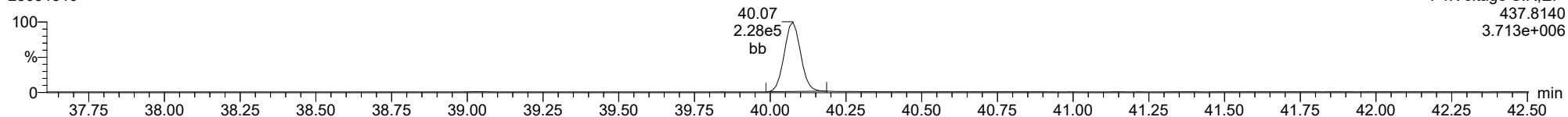
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23031510



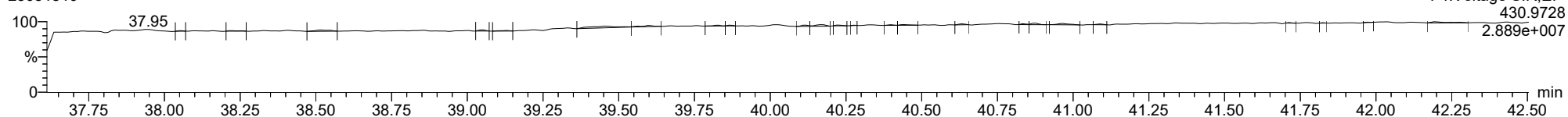
**13C-1234678-HpCDD**

23031510



**FUNCTION4 PFK**

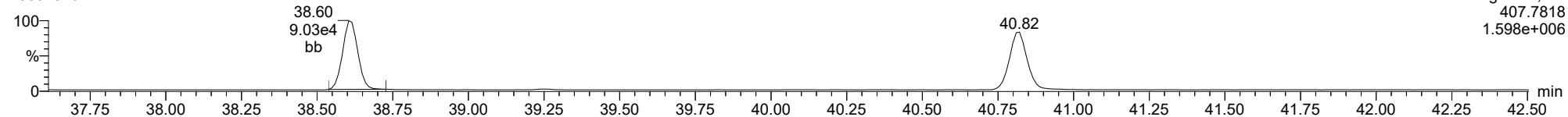
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

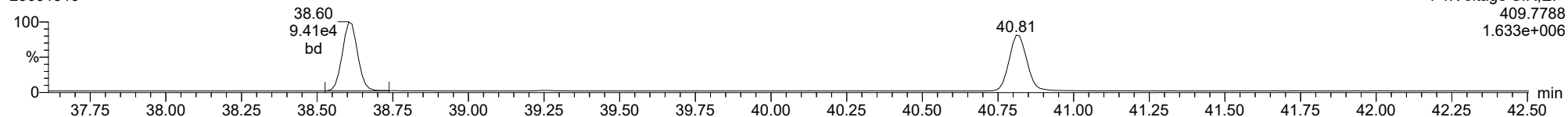
23031510



F4:Voltage SIR,EI+  
407.7818  
1.598e+006

1234678-HpCDF

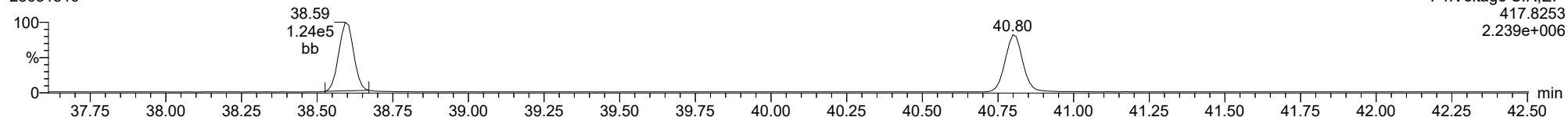
23031510



F4:Voltage SIR,EI+  
409.7788  
1.633e+006

13C-1234678-HpCDF

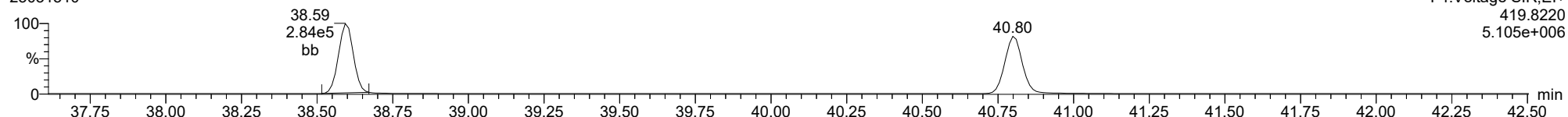
23031510



F4:Voltage SIR,EI+  
417.8253  
2.239e+006

13C-1234678-HpCDF

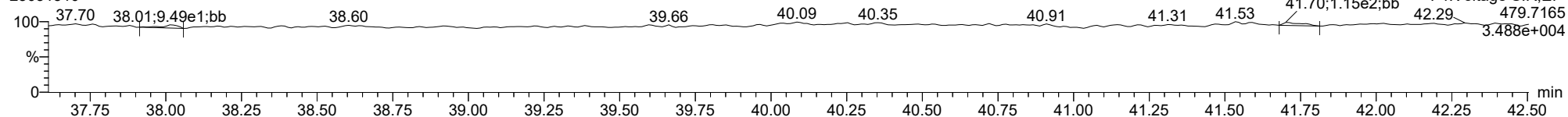
23031510



F4:Voltage SIR,EI+  
419.8220  
5.105e+006

FUNCTION4 NCDPE

23031510

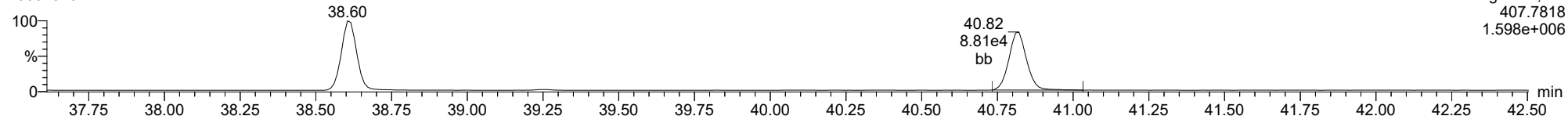


F4:Voltage SIR,EI+  
479.7165  
3.488e+004

ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

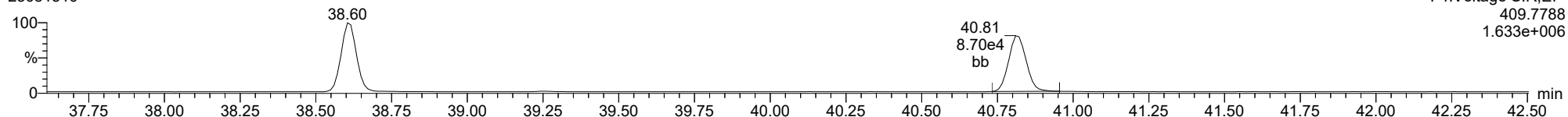
**1234789-HpCDF**

23031510



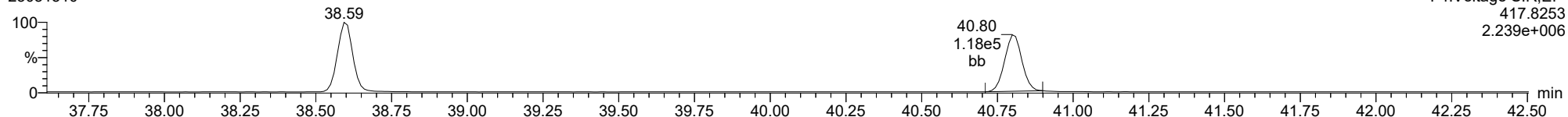
**1234789-HpCDF**

23031510



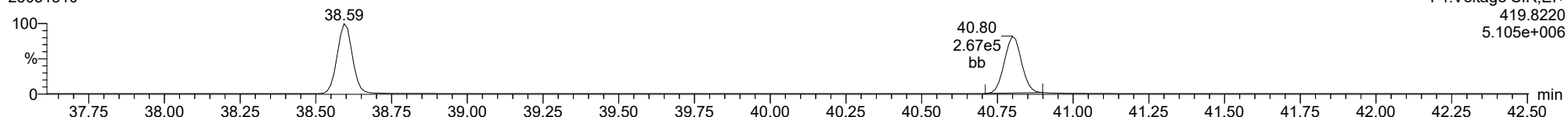
**13C-1234789-HpCDF**

23031510



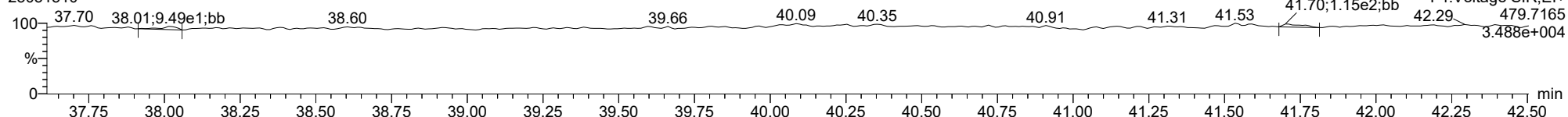
**13C-1234789-HpCDF**

23031510



**FUNCTION4 NCDPE**

23031510

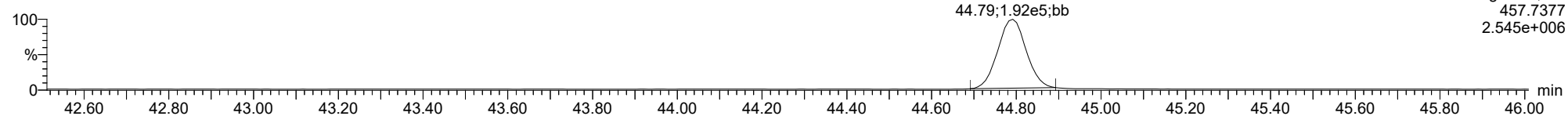




ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

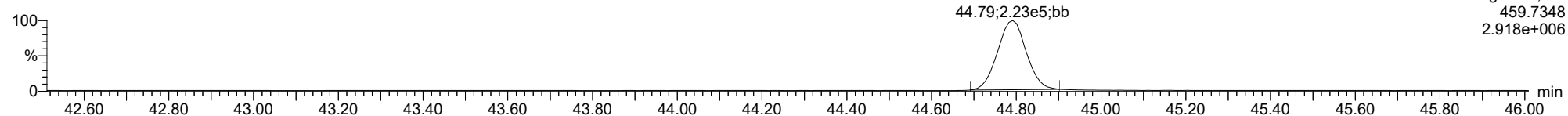
**OCDD**

23031510



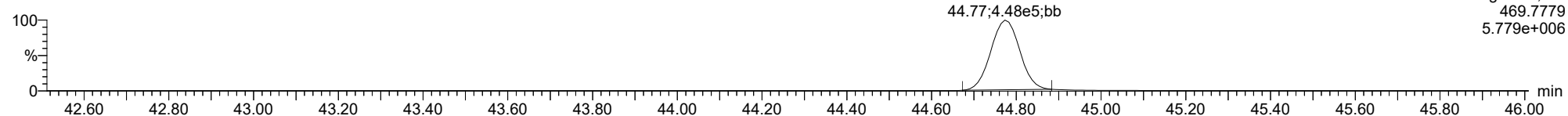
**OCDD**

23031510



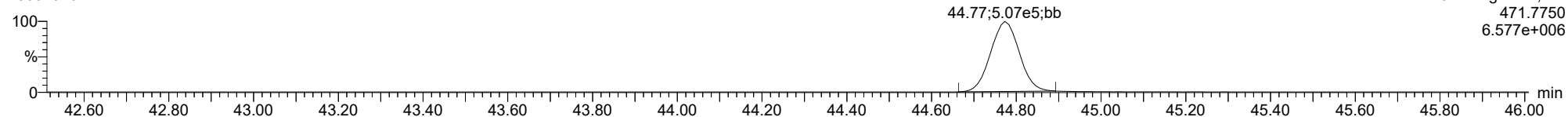
**13C-OCDD**

23031510



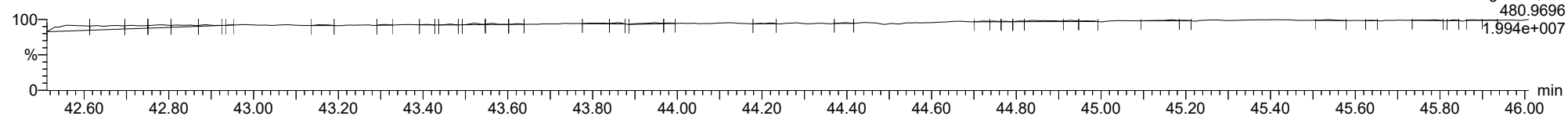
**13C-OCDD**

23031510



**FUNCTION5 PFK**

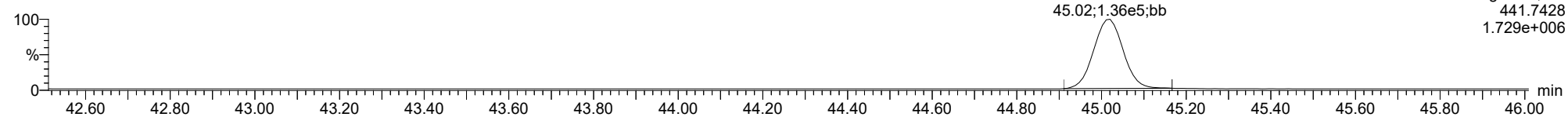
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ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

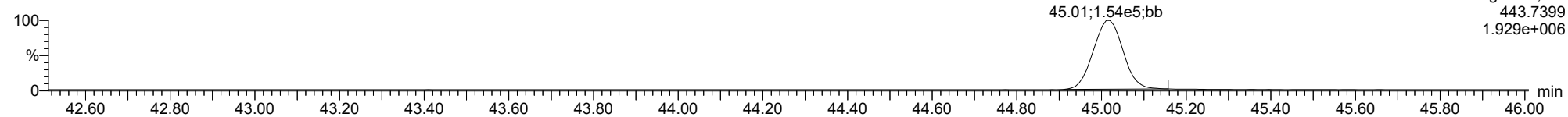
**OCDF**

23031510



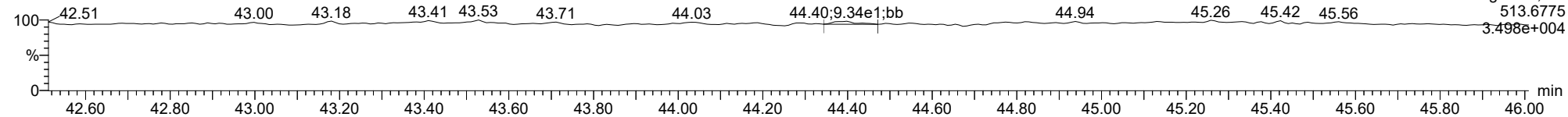
**OCDF**

23031510



**FUNCTION5 DCDPE**

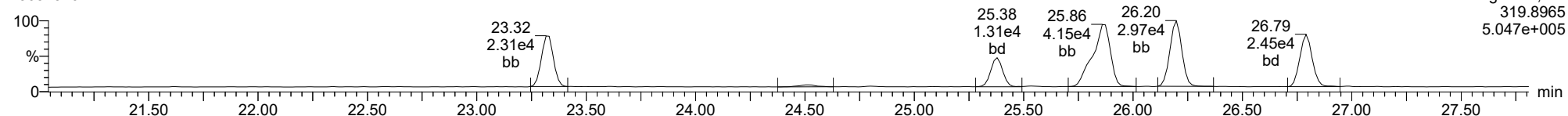
23031510



ID: CS3Z5, Name: 23031510, Date: 15-Mar-2023, Time: 17:48:31, Conditions: AUTOSPEC01, User: pk

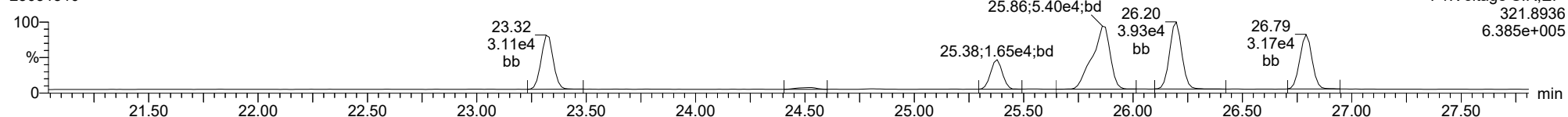
**Total-tetradioxins**

23031510



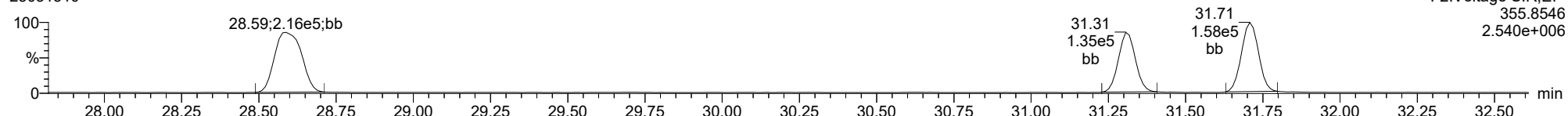
**Total-tetradioxins**

23031510



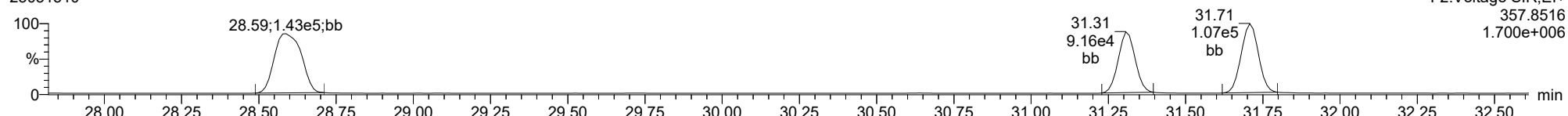
**Total-pentadioxins**

23031510



**Total-pentadioxins**

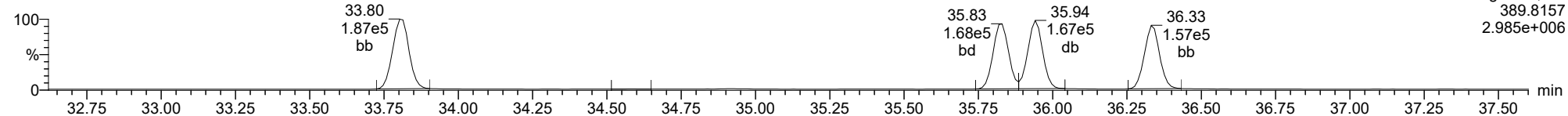
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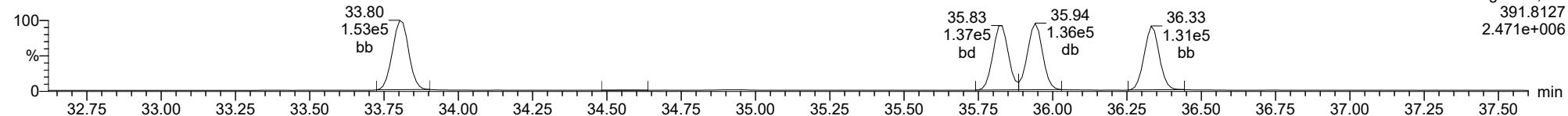
**Total-hexadioxins**

23031510



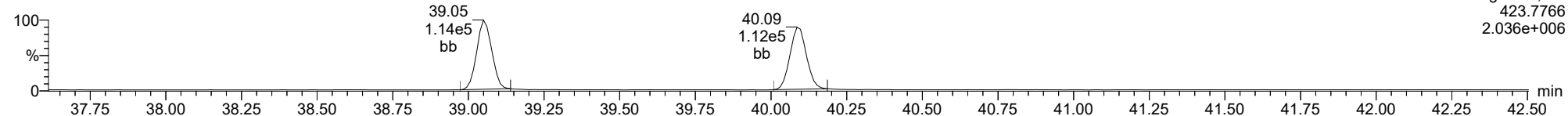
**Total-hexadioxins**

23031510



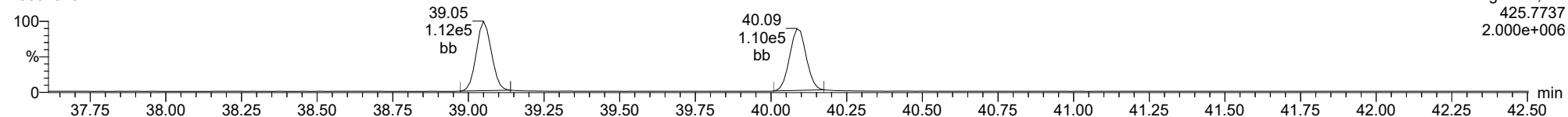
**Total-heptadioxins**

23031510



**Total-heptadioxins**

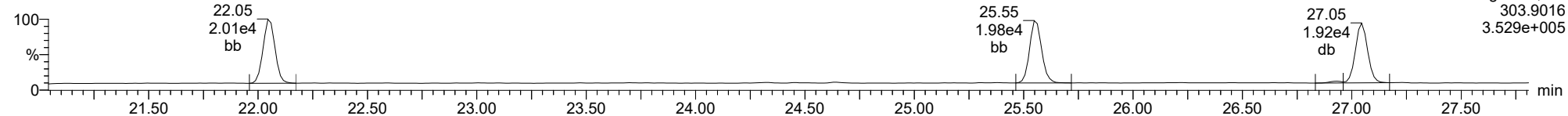
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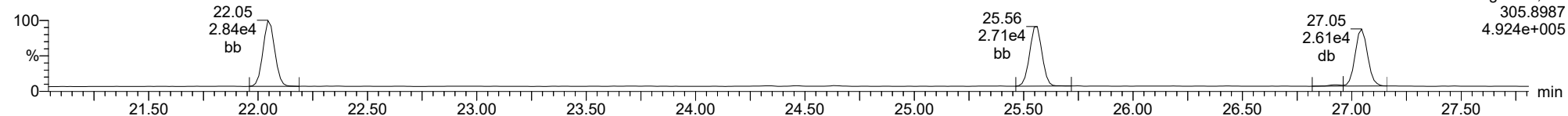
**Total-tetrafurans**

23031510



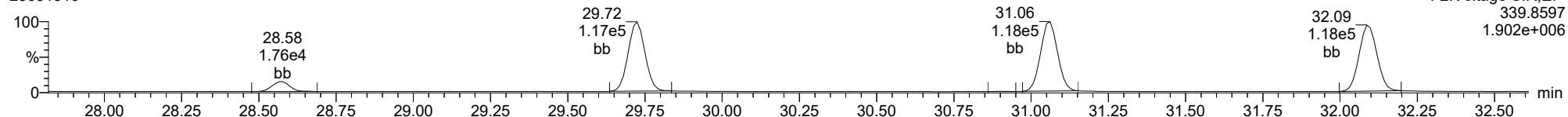
**Total-tetrafurans**

23031510



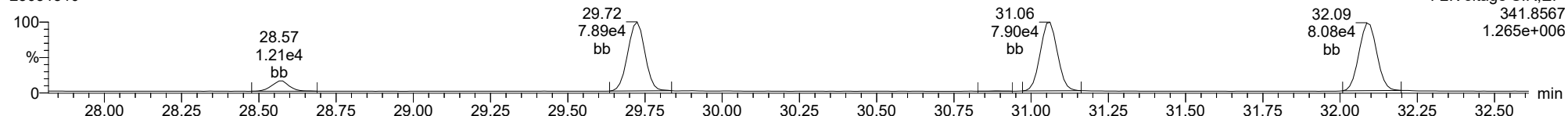
**Total-pentafurans**

23031510



**Total-pentafurans**

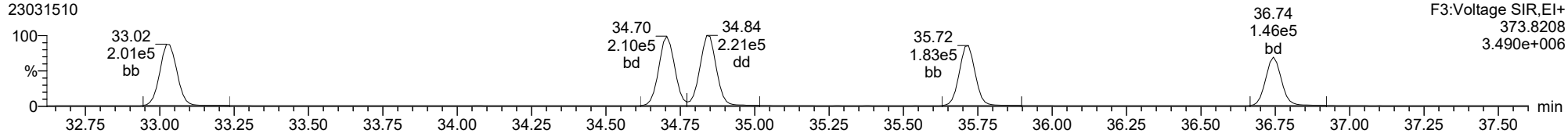
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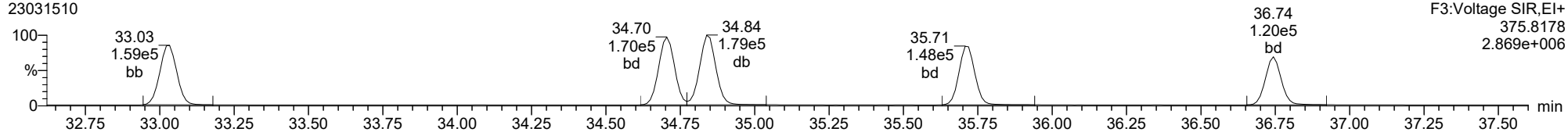
**Total-hexafurans**

23031510



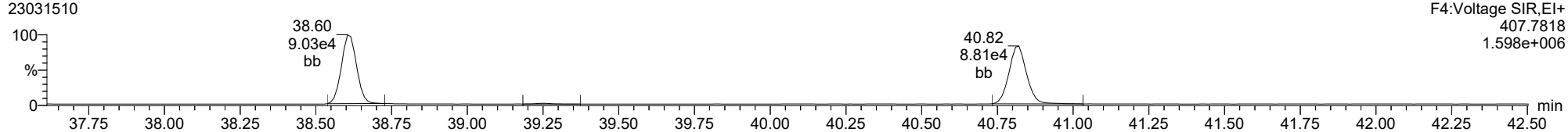
**Total-hexafurans**

23031510



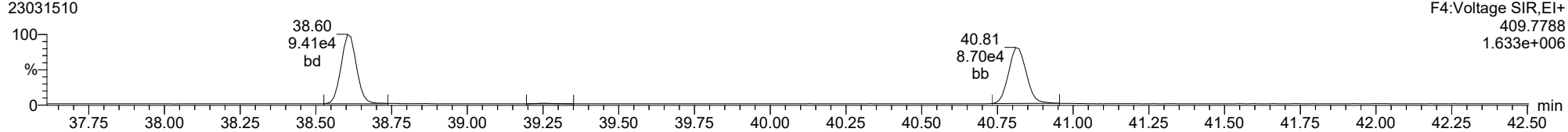
**Total-heptafurans**

23031510



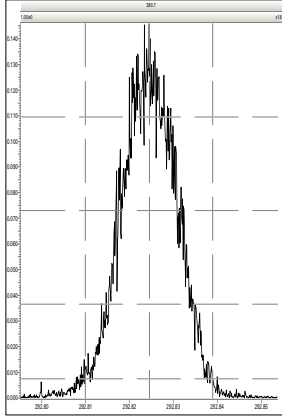
**Total-heptafurans**

23031510

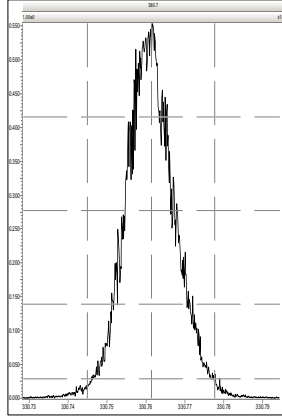


Printed: Wednesday, March 15, 2023 18:41:35 Pacific Daylight Time

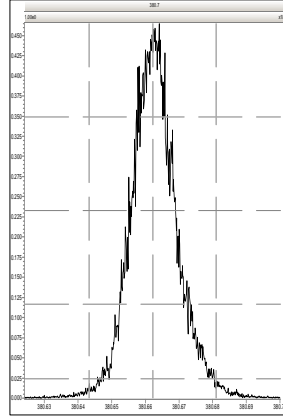
M 292.9824 R 10593



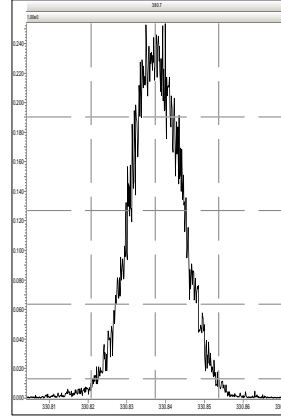
M 330.9792 R 10619



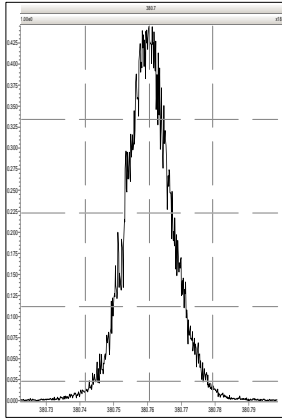
M 380.9760 R 11740



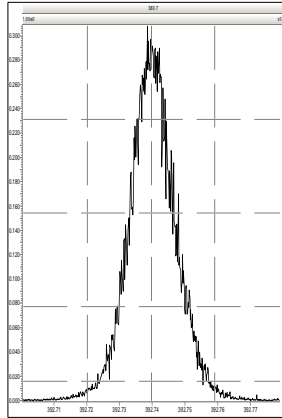
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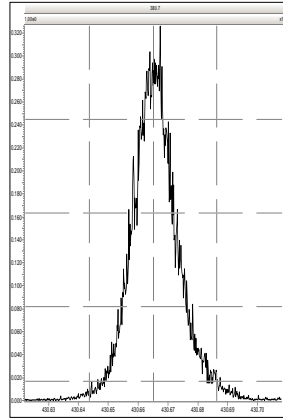
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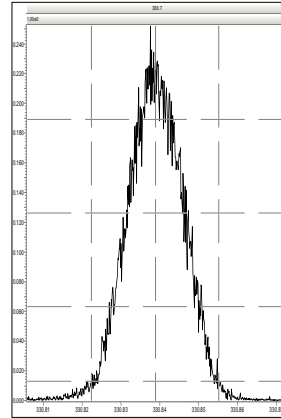
M 392.9760 R 12056



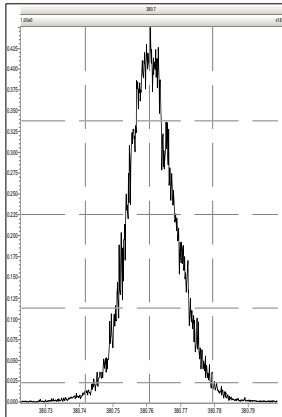
M 430.9728 R 11363



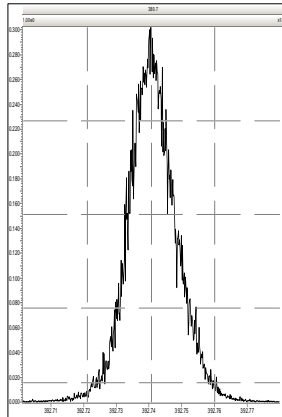
M 330.9792 R 10710



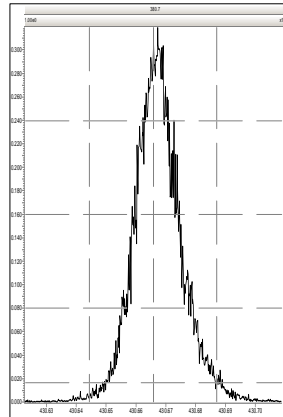
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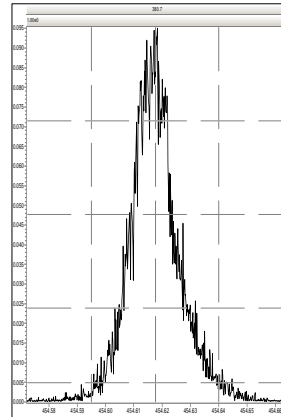
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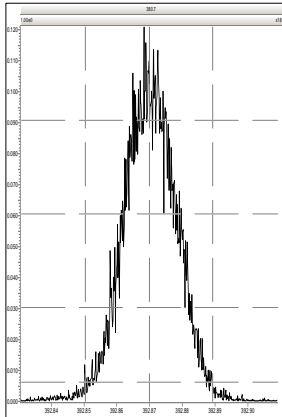
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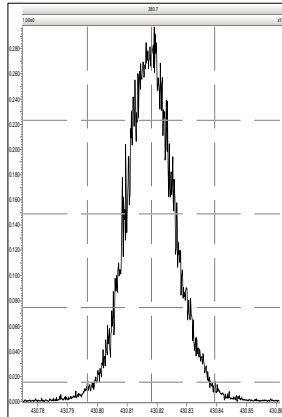
M 454.9728 R 11236



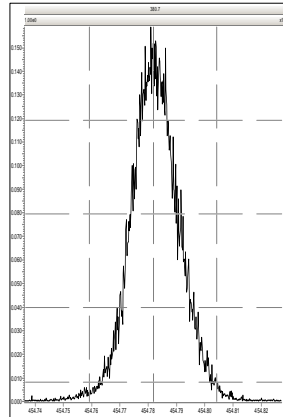
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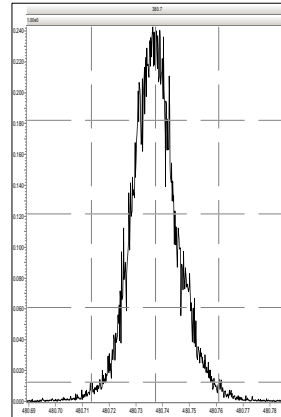
M 430.9728 R 11340



M 454.9728 R 11603

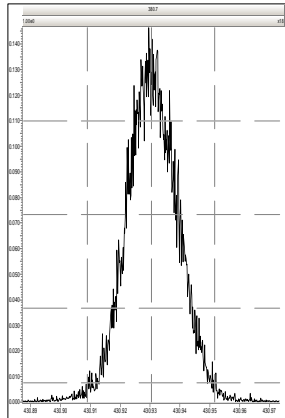


M 480.9696 R 12032

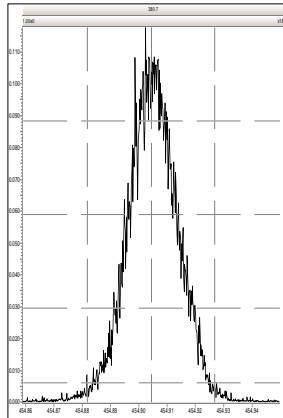


Printed: Wednesday, March 15, 2023 18:41:35 Pacific Daylight Time

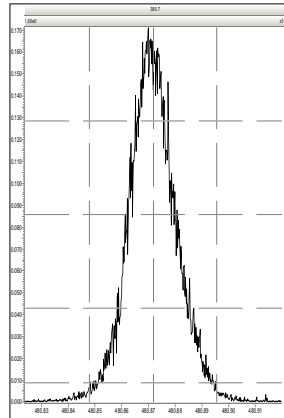
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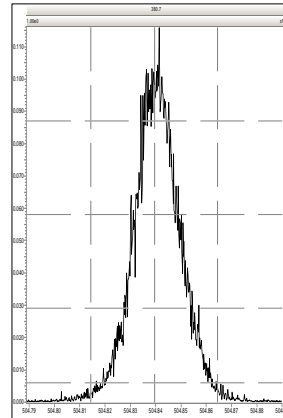
M 454.9728 R 11573



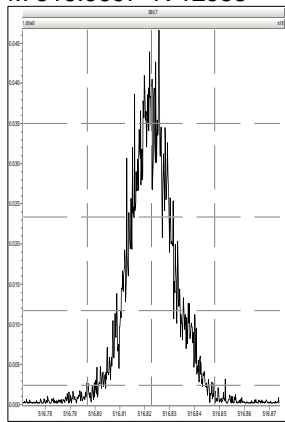
M 480.9696 R 10940



M 504.9696 R 12036



M 516.9697 R 12958



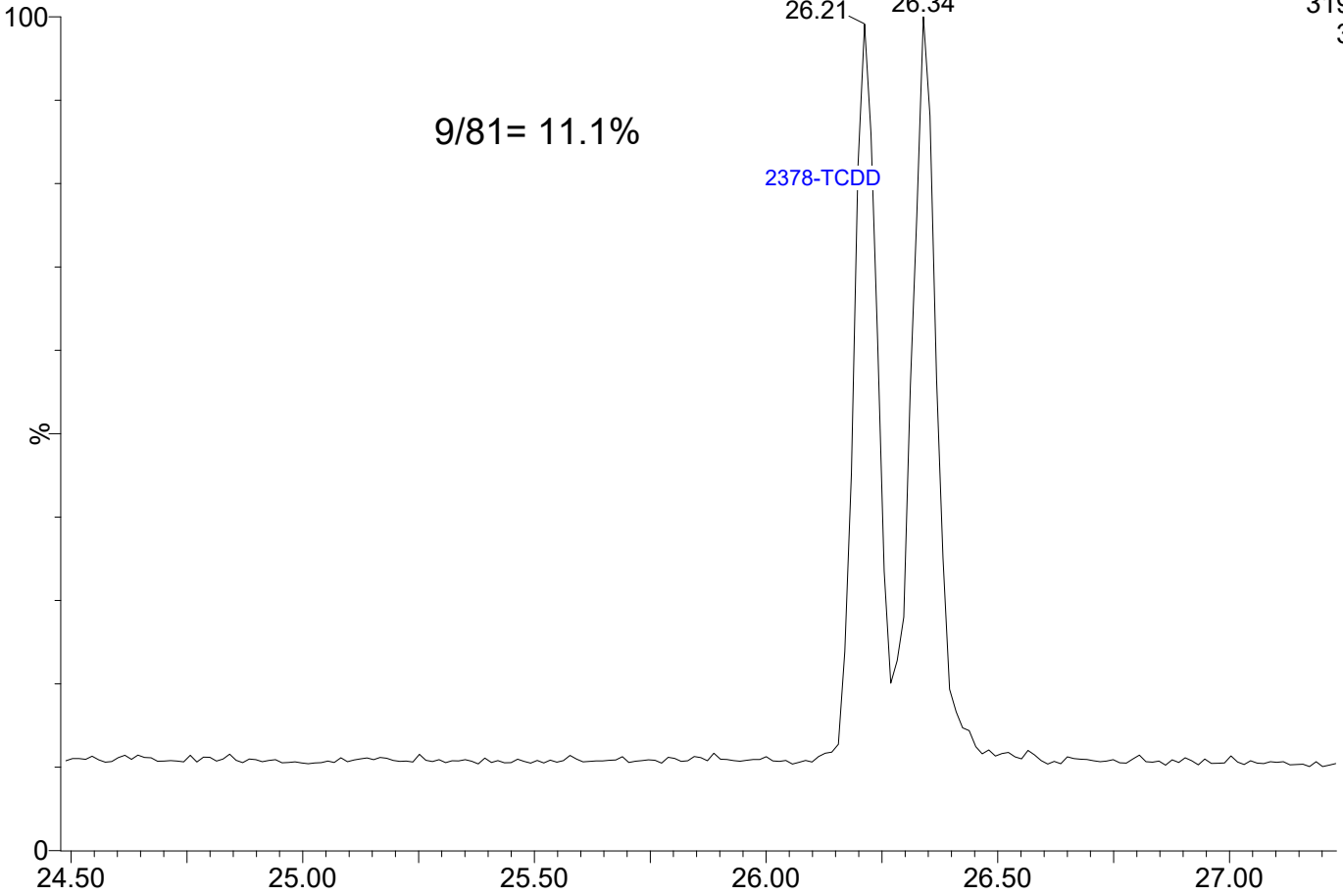


23031511

1: Voltage SIR 14 Channels EI+

319.8965

3.16e5

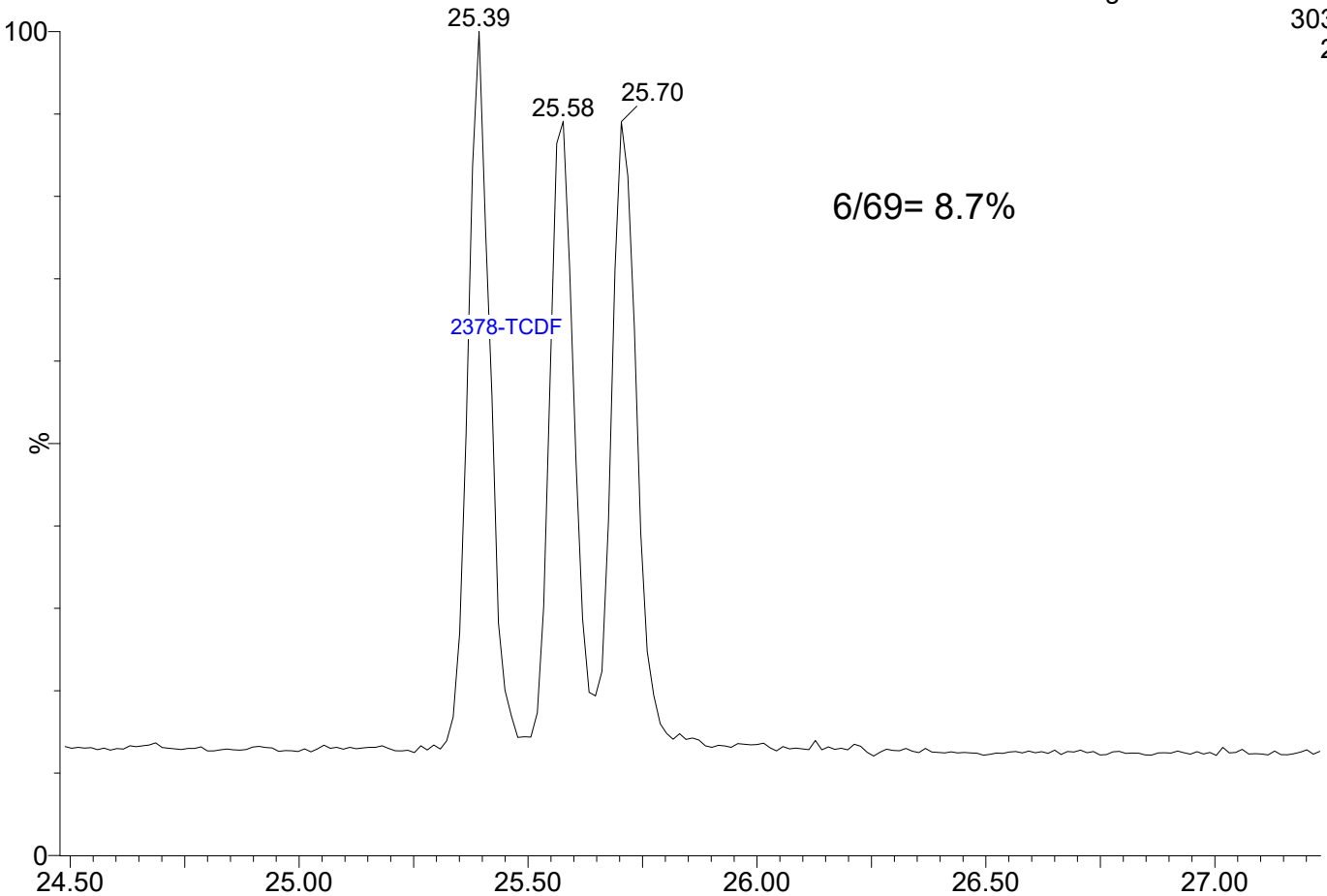


23031511

1: Voltage SIR 14 Channels EI+

303.9016

2.69e5





CONTINUING CALIBRATION CHECK  
EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23031521

Calibration Date: 03/03/2023

Sequence: SLC0176

Injection Date: 03/16/23

Lab Sample ID: SLC0176-CCV2

Injection Time: 02:54

Sequence Name: CS3Z6

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.22	0.7015272	0.6469883		-7.8	+/-16
2,3,7,8-TCDD	A	10.000	9.14	1.1486620	1.0495420		-8.6	+/-22
1,2,3,7,8-PeCDF	A	50.000	46.4	0.6792300	0.6308803		-7.1	+/-18
2,3,4,7,8-PeCDF	A	50.000	44.2	0.7861704	0.6949475		-11.6	+/-18
1,2,3,7,8-PeCDD	A	50.000	48.9	1.0218450	0.9993182		-2.2	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	45.4	1.1660380	1.0584400		-9.2	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	47.1	1.0907410	1.0268190		-5.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	46.7	1.1396990	1.0645230		-6.6	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	46.2	1.1370930	1.0513660		-7.5	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	44.0	0.9955689	0.8762757		-12.0	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	42.3	1.0009380	0.8475773		-15.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	48.8	0.9071139	0.8846149		-2.5	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	45.1	1.0029930	0.9052528		-9.7	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	48.9	0.9531152	0.9317902		-2.2	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	47.6	1.0390130	0.9889239		-4.8	+/-14
OCDF	A	100.00	79.4	0.7778078	0.6178842		-20.6	+/-37
OCDD	A	100.00	96.0	0.9199537	0.8831553		-4.0	+/-21
13C12-2,3,7,8-TCDF	A	100.00	84.0	1.6201960	1.3617259		-16.0	+/-29
13C12-2,3,7,8-TCDD	A	100.00	101	1.1524090	1.1654504		1.1	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	89.0	1.2404520	1.1037280		-11.0	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	95.3	1.1177860	1.0656872		-4.7	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	98.2	0.8288129	0.8142999		-1.8	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	74.3	1.1683050	0.8681265		-25.7	+/-24 *
13C12-1,2,3,6,7,8-HxCDF	A	100.00	67.8	1.3864660	0.9407065		-32.2	+/-30 *
13C12-2,3,4,6,7,8-HxCDF	A	100.00	77.5	1.1292560	0.8753166		-22.5	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	85.5	0.9317541	0.7963141		-14.5	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	91.3	0.9950393	0.9085762		-8.7	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.4	1.1566890	0.9995953		-13.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	76.1	0.8952017	0.6813698		-23.9	+/-22 *
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	79.4	0.7697516	0.6112471		-20.6	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	83.7	0.8401226	0.7034531		-16.3	+/-28
13C12-OCDD	A	200.00	201	0.7674714	0.7719532		0.6	+/-52
37C14-2,3,7,8-TCDD	A	10.000	8.52	1.2878040	1.0966729		-14.8	

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.548	1.001	1.260e4	1.712e4	0.702	0.736	0.770	641	655	1.97e5	2.67e5	306.9	407.7	NO	bb	bb	9.223
12378-PeCDF	29.713	1.000	7.069e4	4.677e4	0.679	1.512	1.550	952	848	1.08e6	7.23e5	1139.5	852.2	NO	bb	bb	46.441
23478-PeCDF	31.050	1.000	7.424e4	5.068e4	0.786	1.465	1.550	952	848	1.16e6	7.99e5	1216.9	941.7	NO	bb	bb	44.198
123478-HxCDF	34.704	1.001	1.027e5	8.457e4	1.166	1.215	1.240	1021	1060	1.62e6	1.31e6	1582.4	1240.1	NO	bd	bd	45.386
234678-HxCDF	35.707	1.000	1.045e5	8.547e4	1.140	1.222	1.240	1021	1060	1.64e6	1.36e6	1608.2	1285.0	NO	bb	bd	46.702
123678-HxCDF	34.838	1.000	1.083e5	8.859e4	1.091	1.222	1.240	1021	1060	1.62e6	1.34e6	1584.9	1266.9	NO	db	dd	47.070
123789-HxCDF	36.743	1.001	9.405e4	7.661e4	1.137	1.228	1.240	1021	1060	1.41e6	1.16e6	1384.1	1092.4	NO	bd	bd	46.230
1234678-HpCDF	38.604	1.000	6.306e4	6.268e4	1.003	1.006	1.050	763	992	1.01e6	1.03e6	1322.1	1043.7	NO	bd	bb	45.128
1234789-HpCDF	40.810	1.000	5.680e4	5.930e4	0.953	0.958	1.050	763	992	8.10e5	8.52e5	1062.2	858.8	NO	bd	bd	48.881
OCDF	45.020	1.005	8.945e4	1.050e5	0.778	0.852	0.890	1123	593	1.06e6	1.23e6	946.0	2080.5	NO	bd	bd	79.439
2378-TCDD	26.184	1.000	1.804e4	2.322e4	1.149	0.777	0.770	536	530	2.66e5	3.38e5	495.9	637.1	NO	dd	db	9.137
12378-PeCDD	31.306	1.001	8.330e4	5.396e4	1.022	1.544	1.550	1001	648	1.31e6	8.31e5	1307.9	1283.6	NO	bb	bb	48.898
123478-HxCDD	35.819	1.000	9.000e4	7.229e4	0.996	1.245	1.240	1107	1075	1.53e6	1.22e6	1380.4	1139.0	NO	bd	bd	44.009
123678-HxCDD	35.941	1.001	9.463e4	7.808e4	1.001	1.212	1.240	1107	1075	1.49e6	1.24e6	1349.5	1149.8	NO	db	db	42.339
123789-HxCDD	36.331	1.012	9.389e4	7.815e4	0.907	1.201	1.240	1107	1075	1.51e6	1.28e6	1365.8	1191.3	NO	bb	bb	48.760
1234678-HpCDD	40.085	1.000	7.137e4	7.044e4	1.039	1.013	1.050	1309	801	1.10e6	1.11e6	842.9	1391.1	NO	bb	bb	47.590
OCDD	44.791	1.000	1.277e5	1.503e5	0.920	0.850	0.890	763	929	1.63e6	1.90e6	2130.6	2046.2	NO	bb	bb	96.000
13C-2378-TCDF	25.534	1.007	1.978e5	2.615e5	1.620	0.757	0.770	1257	771	3.03e6	4.00e6	2412.7	5187.6	NO	bb	bb	84.047
13C-12378-PeCDF	29.702	1.172	2.219e5	1.504e5	1.240	1.475	1.550	909	1108	3.42e6	2.29e6	3755.7	2064.1	NO	bb	bb	88.978
13C-23478-PeCDF	31.039	1.224	2.146e5	1.449e5	1.118	1.481	1.550	909	1108	3.35e6	2.30e6	3688.1	2072.8	NO	bb	bb	95.339
13C-123478-HxCDF	34.682	0.955	1.216e5	2.324e5	1.168	0.523	0.510	1306	1636	1.94e6	3.70e6	1488.0	2259.7	NO	bd	bd	74.307
13C-123678-HxCDF	34.827	0.959	1.267e5	2.568e5	1.386	0.493	0.510	1306	1636	1.89e6	3.87e6	1446.2	2364.1	NO	dd	dd	67.849
13C-234678-HxCDF	35.696	0.983	1.216e5	2.353e5	1.129	0.517	0.510	1306	1636	1.95e6	3.80e6	1491.7	2321.6	NO	bd	bb	77.513
13C-123789-HxCDF	36.721	1.011	1.082e5	2.164e5	0.932	0.500	0.510	1306	1636	1.73e6	3.54e6	1327.7	2161.8	NO	bb	bb	85.464
13C-1234678-HpCDF	38.593	1.063	8.559e4	1.922e5	0.895	0.445	0.440	875	1359	1.42e6	3.24e6	1628.0	2387.1	NO	bb	bb	76.114
13C-1234789-HpCDF	40.799	1.123	7.426e4	1.749e5	0.770	0.424	0.440	875	1359	1.12e6	2.65e6	1283.2	1948.7	NO	bb	bb	79.408
13C-1234-TCDD	25.351	0.000	1.457e5	1.917e5	1.000	0.760	0.770	1304	665	2.36e6	3.14e6	1807.8	4717.4	NO	bb	bb	100.000
13C-2378-TCDD	26.170	1.032	1.701e5	2.231e5	1.152	0.762	0.770	1304	665	2.59e6	3.43e6	1989.2	5161.5	NO	bb	bb	101.132
13C-12378-PeCDD	31.284	1.234	1.680e5	1.067e5	0.829	1.576	1.550	524	545	2.54e6	1.64e6	4838.3	3008.5	NO	bb	bb	98.249
13C-123478-HxCDD	35.807	0.986	2.049e5	1.655e5	0.995	1.238	1.240	816	822	3.41e6	2.81e6	4177.6	3416.9	NO	bd	bd	91.311
13C-123678-HxCDD	35.919	0.989	2.260e5	1.815e5	1.157	1.245	1.240	816	822	3.48e6	2.81e6	4268.6	3421.6	NO	db	db	86.419
13C-1234678-HpCDD	40.074	1.103	1.446e5	1.422e5	0.840	1.016	1.050	746	735	2.21e6	2.18e6	2954.7	2967.3	NO	bb	bb	83.732
13C-OCDD	44.782	1.233	2.973e5	3.322e5	0.767	0.895	0.890	991	1276	3.64e6	4.08e6	3671.2	3197.7	NO	bb	bb	201.168
13C-123789-HxCDD	36.320	0.000	2.252e5	1.824e5	1.000	1.235	1.240	816	822	3.73e6	2.98e6	4566.0	3627.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.184	1.033	3.700e4		1.288			1019		5.60e5		549.6			bb		8.516

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
 Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
 Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.045	0.863	1.368e4	1.897e4	0.802	0.721	0.770	641	655	2.20e5	3.07e5	342.6	469.0	NO	bb	bb	8.869
1289-TCDF	27.045	1.059	1.183e4	1.657e4	0.678	0.714	0.770	641	655	1.69e5	2.40e5	264.3	366.3	NO	db	dd	9.116
13468-PECDF	26.904	0.906	1.715e5	1.157e5	1.246	1.482	1.550	404	631	2.66e6	1.80e6	6593.9	2845.4	NO	bb	bb	61.889
12389-PECDF	32.086	1.080	6.556e4	4.453e4	0.496	1.472	1.550	952	848	9.59e5	6.61e5	1008.0	779.4	NO	bb	bb	59.567
123468-HXCDF	33.022	0.952	1.017e5	8.177e4	1.169	1.243	1.240	1021	1060	1.52e6	1.21e6	1490.6	1137.4	NO	bb	bb	44.334
1368-TCDD	23.316	0.891	1.595e4	2.068e4	1.015	0.771	0.770	536	530	2.60e5	3.35e5	485.4	631.5	NO	bd	bb	9.175
1289-TCDD	26.791	1.024	1.483e4	1.920e4	0.909	0.773	0.770	536	530	2.14e5	2.75e5	399.8	519.0	NO	bd	bb	9.525
12479-PECDD	28.577	0.914	1.274e5	8.605e4	2.301	1.480	1.550	1001	648	1.24e6	8.41e5	1235.7	1298.3	NO	bb	bb	33.762
12389-PECDD	31.708	1.013	8.978e4	6.045e4	1.184	1.485	1.550	1001	648	1.36e6	9.04e5	1355.8	1394.9	NO	bb	bb	46.206
124679-HXCDD	33.802	0.944	8.984e4	7.451e4	1.115	1.206	1.240	1107	1075	1.37e6	1.16e6	1238.7	1076.2	NO	bb	bb	39.778
1234679-HPCDD	39.049	0.974	7.683e4	7.411e4	1.137	1.037	1.050	1309	801	1.29e6	1.24e6	983.0	1542.6	NO	bb	bb	46.294
Total-tetrafurans			3.843e4		0.727			641		5.92e5							27.413
Total-penta1			1.715e5					404		2.66e6							61.889
Total-pentafurans			2.212e5		0.654			952		3.37e6							157.654
Total-hexafurans			5.112e5		1.141			1021		7.81e6							229.722
Total-heptafurans			1.201e5		0.978			763		1.82e6							94.211
Total-Furans			1.152e6		0.922			641		1.73e7							650.328
Total-tetradoxins			8.222e4		1.024			536		1.12e6							46.566
Total-pentadoxins			3.005e5		1.502			1001		3.91e6							128.866
Total-hexadoxins			3.684e5		1.005			1107		5.91e6							174.885
Total-heptadoxins			1.483e5		1.088			1309		2.39e6							93.944
Total-Dioxins			1.027e6		1.130			536		1.49e7							540.261
Total-TEQ			2.179e6					536		3.23e7							1190.589
FUNCTION1 PFK			2.552e5					474245		8.94e6							
FUNCTION2 PFK			3.735e5					89985		8.57e5							0.000
FUNCTION3 PFK			3.371e5					383880		9.65e6							0.000
FUNCTION4 PFK			3.037e5					235386		8.78e6							
FUNCTION5 PFK			2.619e4					163055		1.03e6							
FUNCTION1 HXCD...			8.257e1					328		8.96e2							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.190e2					658		5.45e3							0.000
FUNCTION3 OCDPE			0.000e0					297		0.00e0							
FUNCTION4 NCDPE			8.932e1					530		3.08e3							0.000
FUNCTION5 DCDPE			0.000e0					328		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

**Method: T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23****Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27****ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk****TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.183e4	1.657e4	0.678	0.71	0.77	264.3	YES	NO	db	dd	9.116
2	Total-tetrafurans	26.92	3.193e2	3.673e2	0.727	0.87	0.77	10.0	YES	NO	bd	bd	0.206
3	2378-TCDF	25.55	1.260e4	1.712e4	0.702	0.74	0.77	306.9	YES	NO	bb	bb	9.223
4	1368-TCDF	22.05	1.368e4	1.897e4	0.802	0.72	0.77	342.6	YES	NO	bb	bb	8.869

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.90	1.715e5	1.157e5	1.246	1.48	1.55	6593.9	YES	NO	bb	bb	61.889

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.09	6.556e4	4.453e4	0.496	1.47	1.55	1008.0	YES	NO	bb	bb	59.567
2	23478-PeCDF	31.05	7.424e4	5.068e4	0.786	1.46	1.55	1216.9	YES	NO	bb	bb	44.198
3	12378-PeCDF	29.71	7.069e4	4.677e4	0.679	1.51	1.55	1139.5	YES	NO	bb	bb	46.441
4	Total-pentafurans	28.57	1.066e4	7.159e3	0.654	1.49	1.55	179.2	YES	NO	bb	bb	7.448

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.74	9.405e4	7.661e4	1.137	1.23	1.24	1384.1	YES	NO	bd	bd	46.230
2	234678-HxCDF	35.71	1.045e5	8.547e4	1.140	1.22	1.24	1608.2	YES	NO	bb	bd	46.702
3	123678-HxCDF	34.84	1.083e5	8.859e4	1.091	1.22	1.24	1584.9	YES	NO	db	dd	47.070
4	123478-HxCDF	34.70	1.027e5	8.457e4	1.166	1.21	1.24	1582.4	YES	NO	bd	bd	45.386
5	123468-HXCDF	33.02	1.017e5	8.177e4	1.169	1.24	1.24	1490.6	YES	NO	bb	bb	44.334

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.60	6.306e4	6.268e4	1.003	1.01	1.05	1322.1	YES	NO	bd	bb	45.128
2	Total-heptafurans	41.05	2.461e2	2.744e2	0.978	0.90	1.05	6.1	YES	NO	dd	dd	0.202
3	1234789-HpCDF	40.81	5.680e4	5.930e4	0.953	0.96	1.05	1062.2	YES	NO	bd	bd	48.881

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.183e4	1.657e4	0.678	0.71	0.77	264.3	YES	NO	db	dd	9.116
2	Total-tetrafurans	26.92	3.193e2	3.673e2	0.727	0.87	0.77	10.0	YES	NO	bd	bd	0.206
3	2378-TCDF	25.55	1.260e4	1.712e4	0.702	0.74	0.77	306.9	YES	NO	bb	bb	9.223
4	1368-TCDF	22.05	1.368e4	1.897e4	0.802	0.72	0.77	342.6	YES	NO	bb	bb	8.869
5	12389-PECDF	32.09	6.556e4	4.453e4	0.496	1.47	1.55	1008.0	YES	NO	bb	bb	59.567
6	23478-PeCDF	31.05	7.424e4	5.068e4	0.786	1.46	1.55	1216.9	YES	NO	bb	bb	44.198
7	12378-PeCDF	29.71	7.069e4	4.677e4	0.679	1.51	1.55	1139.5	YES	NO	bb	bb	46.441
8	Total-pentafurans	28.57	1.066e4	7.159e3	0.654	1.49	1.55	179.2	YES	NO	bb	bb	7.448
9	123789-HxCDF	36.74	9.405e4	7.661e4	1.137	1.23	1.24	1384.1	YES	NO	bd	bd	46.230
10	234678-HxCDF	35.71	1.045e5	8.547e4	1.140	1.22	1.24	1608.2	YES	NO	bb	bd	46.702
11	123678-HxCDF	34.84	1.083e5	8.859e4	1.091	1.22	1.24	1584.9	YES	NO	db	dd	47.070
12	123478-HxCDF	34.70	1.027e5	8.457e4	1.166	1.21	1.24	1582.4	YES	NO	bd	bd	45.386
13	123468-HXCDF	33.02	1.017e5	8.177e4	1.169	1.24	1.24	1490.6	YES	NO	bb	bb	44.334
14	1234678-HpCDF	38.60	6.306e4	6.268e4	1.003	1.01	1.05	1322.1	YES	NO	bd	bb	45.128
15	Total-heptafurans	41.05	2.461e2	2.744e2	0.978	0.90	1.05	6.1	YES	NO	dd	dd	0.202
16	1234789-HpCDF	40.81	5.680e4	5.930e4	0.953	0.96	1.05	1062.2	YES	NO	bd	bd	48.881
17	OCDF	45.02	8.945e4	1.050e5	0.778	0.85	0.89	946.0	YES	NO	bd	bd	79.439
18	13468-PECDF	26.90	1.715e5	1.157e5	1.246	1.48	1.55	6593.9	YES	NO	bb	bb	61.889

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.18	1.804e4	2.322e4	1.149	0.78	0.77	495.9	YES	NO	dd	db	9.137
2	Total-tetradioxins	25.86	2.536e4	3.228e4	1.024	0.79	0.77	481.6	YES	NO	bd	bd	14.315
3	Total-tetradioxins	25.36	8.032e3	9.746e3	1.024	0.82	0.77	223.6	YES	NO	bb	bb	4.415
4	1368-TCDD	23.32	1.595e4	2.068e4	1.015	0.77	0.77	485.4	YES	NO	bd	bb	9.175
5	1289-TCDD	26.79	1.483e4	1.920e4	0.909	0.77	0.77	399.8	YES	NO	bd	bb	9.525

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.31	8.330e4	5.396e4	1.022	1.54	1.55	1307.9	YES	NO	bb	bb	48.898
2	12479-PECDD	28.58	1.274e5	8.605e4	2.301	1.48	1.55	1235.7	YES	NO	bb	bb	33.762
3	12389-PECDD	31.71	8.978e4	6.045e4	1.184	1.49	1.55	1355.8	YES	NO	bb	bb	46.206

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

**ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk****HD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDD	35.94	9.463e4	7.808e4	1.001	1.21	1.24	1349.5	YES	NO	db	db	42.339
2	123478-HxCDD	35.82	9.000e4	7.229e4	0.996	1.24	1.24	1380.4	YES	NO	bd	bd	44.009
3	124679-HXCDD	33.80	8.984e4	7.451e4	1.115	1.21	1.24	1238.7	YES	NO	bb	bb	39.778
4	123789-HxCDD	36.33	9.389e4	7.815e4	0.907	1.20	1.24	1365.8	YES	NO	bb	bb	48.760

**HPD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.09	7.137e4	7.044e4	1.039	1.01	1.05	842.9	YES	NO	bb	bb	47.590
2	Total-heptadioxins	39.18	9.125e1	9.648e1	1.088	0.95	1.05	0.0	NO	NO	bb	bb	0.060
3	1234679-HPCDD	39.05	7.683e4	7.411e4	1.137	1.04	1.05	983.0	YES	NO	bb	bb	46.294

**Dioxins,TD,PD,HD,HPD,OD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.18	1.804e4	2.322e4	1.149	0.78	0.77	495.9	YES	NO	dd	db	9.137
2	Total-tetradioxins	25.86	2.536e4	3.228e4	1.024	0.79	0.77	481.6	YES	NO	bd	bd	14.315
3	Total-tetradioxins	25.36	8.032e3	9.746e3	1.024	0.82	0.77	223.6	YES	NO	bb	bb	4.415
4	1368-TCDD	23.32	1.595e4	2.068e4	1.015	0.77	0.77	485.4	YES	NO	bd	bb	9.175
5	12378-PeCDD	31.31	8.330e4	5.396e4	1.022	1.54	1.55	1307.9	YES	NO	bb	bb	48.898
6	12479-PECDD	28.58	1.274e5	8.605e4	2.301	1.48	1.55	1235.7	YES	NO	bb	bb	33.762
7	1289-TCDD	26.79	1.483e4	1.920e4	0.909	0.77	0.77	399.8	YES	NO	bd	bb	9.525
8	123678-HxCDD	35.94	9.463e4	7.808e4	1.001	1.21	1.24	1349.5	YES	NO	db	db	42.339
9	123478-HxCDD	35.82	9.000e4	7.229e4	0.996	1.24	1.24	1380.4	YES	NO	bd	bd	44.009
10	124679-HXCDD	33.80	8.984e4	7.451e4	1.115	1.21	1.24	1238.7	YES	NO	bb	bb	39.778
11	12389-PECDD	31.71	8.978e4	6.045e4	1.184	1.49	1.55	1355.8	YES	NO	bb	bb	46.206
12	123789-HxCDD	36.33	9.389e4	7.815e4	0.907	1.20	1.24	1365.8	YES	NO	bb	bb	48.760
13	OCDD	44.79	1.277e5	1.503e5	0.920	0.85	0.89	2130.6	YES	NO	bb	bb	96.000
14	1234678-HpCDD	40.09	7.137e4	7.044e4	1.039	1.01	1.05	842.9	YES	NO	bb	bb	47.590
15	Total-heptadioxins	39.18	9.125e1	9.648e1	1.088	0.95	1.05	0.0	NO	NO	bb	bb	0.060
16	1234679-HPCDD	39.05	7.683e4	7.411e4	1.137	1.04	1.05	983.0	YES	NO	bb	bb	46.294

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.05	1.183e4	1.657e4	0.678	0.71	0.77	264.3	YES	NO	db	dd	9.116
2	Total-tetrafurans	26.92	3.193e2	3.673e2	0.727	0.87	0.77	10.0	YES	NO	bd	bd	0.206
3	2378-TCDF	25.55	1.260e4	1.712e4	0.702	0.74	0.77	306.9	YES	NO	bb	bb	9.223
4	1368-TCDF	22.05	1.368e4	1.897e4	0.802	0.72	0.77	342.6	YES	NO	bb	bb	8.869
5	12389-PECDF	32.09	6.556e4	4.453e4	0.496	1.47	1.55	1008.0	YES	NO	bb	bb	59.567
6	23478-PeCDF	31.05	7.424e4	5.068e4	0.786	1.46	1.55	1216.9	YES	NO	bb	bb	44.198
7	12378-PeCDF	29.71	7.069e4	4.677e4	0.679	1.51	1.55	1139.5	YES	NO	bb	bb	46.441
8	Total-pentafurans	28.57	1.066e4	7.159e3	0.654	1.49	1.55	179.2	YES	NO	bb	bb	7.448
9	123789-HxCDF	36.74	9.405e4	7.661e4	1.137	1.23	1.24	1384.1	YES	NO	bd	bd	46.230
10	234678-HxCDF	35.71	1.045e5	8.547e4	1.140	1.22	1.24	1608.2	YES	NO	bb	bd	46.702
11	123678-HxCDF	34.84	1.083e5	8.859e4	1.091	1.22	1.24	1584.9	YES	NO	db	dd	47.070
12	123478-HxCDF	34.70	1.027e5	8.457e4	1.166	1.21	1.24	1582.4	YES	NO	bd	bd	45.386
13	123468-HXCDF	33.02	1.017e5	8.177e4	1.169	1.24	1.24	1490.6	YES	NO	bb	bb	44.334
14	1234678-HpCDF	38.60	6.306e4	6.268e4	1.003	1.01	1.05	1322.1	YES	NO	bd	bb	45.128
15	Total-heptafurans	41.05	2.461e2	2.744e2	0.978	0.90	1.05	6.1	YES	NO	dd	dd	0.202
16	1234789-HpCDF	40.81	5.680e4	5.930e4	0.953	0.96	1.05	1062.2	YES	NO	bd	bd	48.881
17	OCDF	45.02	8.945e4	1.050e5	0.778	0.85	0.89	946.0	YES	NO	bd	bd	79.439
18	13468-PECDF	26.90	1.715e5	1.157e5	1.246	1.48	1.55	6593.9	YES	NO	bb	bb	61.889
19	2378-TCDD	26.18	1.804e4	2.322e4	1.149	0.78	0.77	495.9	YES	NO	dd	db	9.137
20	Total-tetradioxins	25.86	2.536e4	3.228e4	1.024	0.79	0.77	481.6	YES	NO	bd	bd	14.315
21	Total-tetradioxins	25.36	8.032e3	9.746e3	1.024	0.82	0.77	223.6	YES	NO	bb	bb	4.415
22	1368-TCDD	23.32	1.595e4	2.068e4	1.015	0.77	0.77	485.4	YES	NO	bd	bb	9.175
23	12378-PeCDD	31.31	8.330e4	5.396e4	1.022	1.54	1.55	1307.9	YES	NO	bb	bb	48.898
24	12479-PECDD	28.58	1.274e5	8.605e4	2.301	1.48	1.55	1235.7	YES	NO	bb	bb	33.762
25	1289-TCDD	26.79	1.483e4	1.920e4	0.909	0.77	0.77	399.8	YES	NO	bd	bb	9.525
26	123678-HxCDD	35.94	9.463e4	7.808e4	1.001	1.21	1.24	1349.5	YES	NO	db	db	42.339
27	123478-HxCDD	35.82	9.000e4	7.229e4	0.996	1.24	1.24	1380.4	YES	NO	bd	bd	44.009
28	124679-HXCDD	33.80	8.984e4	7.451e4	1.115	1.21	1.24	1238.7	YES	NO	bb	bb	39.778
29	12389-PECDD	31.71	8.978e4	6.045e4	1.184	1.49	1.55	1355.8	YES	NO	bb	bb	46.206
30	123789-HxCDD	36.33	9.389e4	7.815e4	0.907	1.20	1.24	1365.8	YES	NO	bb	bb	48.760
31	OCDD	44.79	1.277e5	1.503e5	0.920	0.85	0.89	2130.6	YES	NO	bb	bb	96.000
32	1234678-HpCDD	40.09	7.137e4	7.044e4	1.039	1.01	1.05	842.9	YES	NO	bb	bb	47.590
33	Total-heptadioxins	39.18	9.125e1	9.648e1	1.088	0.95	1.05	0.0	NO	NO	bb	bb	0.060
34	1234679-HPCDD	39.05	7.683e4	7.411e4	1.137	1.04	1.05	983.0	YES	NO	bb	bb	46.294



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

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Printed: Thursday, March 16, 2023 10:02:15 Pacific Daylight Time

**ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.11	3.757e3					0.6	NO		bd		
2	FUNCTION1 PFK	24.76	3.994e3					0.6	NO		bb		
3	FUNCTION1 PFK	24.56	9.886e3					0.8	NO		db		
4	FUNCTION1 PFK	24.52	4.594e3					0.6	NO		bd		
5	FUNCTION1 PFK	24.15	4.921e3					0.7	NO		bb		
6	FUNCTION1 PFK	23.71	1.957e4					1.2	NO		bb		
7	FUNCTION1 PFK	23.20	3.542e3					0.5	NO		bb		
8	FUNCTION1 PFK	22.89	1.118e4					1.0	NO		bb		
9	FUNCTION1 PFK	22.82	3.333e4					1.4	NO		db		
10	FUNCTION1 PFK	22.75	2.314e4					1.2	NO		bd		
11	FUNCTION1 PFK	22.65	1.267e4					0.9	NO		bb		
12	FUNCTION1 PFK	22.21	2.008e4					1.0	NO		bb		
13	FUNCTION1 PFK	22.09	9.710e3					0.7	NO		bb		
14	FUNCTION1 PFK	21.24	1.536e4					1.1	NO		bb		
15	FUNCTION1 PFK	27.64	3.607e3					0.5	NO		bb		
16	FUNCTION1 PFK	27.60	3.982e3					0.6	NO		bb		
17	FUNCTION1 PFK	27.41	6.708e3					0.8	NO		bb		
18	FUNCTION1 PFK	27.36	1.669e4					1.2	NO		bb		
19	FUNCTION1 PFK	26.38	1.041e4					0.9	NO		bb		
20	FUNCTION1 PFK	25.63	8.797e3					0.9	NO		bb		
21	FUNCTION1 PFK	25.55	3.725e3					0.6	NO		bb		
22	FUNCTION1 PFK	25.20	2.553e4					1.0	NO		db		

**PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.01	3.135e4					1.5	NO		bb		0.000
2	FUNCTION2 PFK	31.30	2.224e5					4.0	YES		bb		0.000
3	FUNCTION2 PFK	29.91	1.198e5					4.0	YES		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk****PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.08	8.575e3					0.9	NO		bb		0.000
2	FUNCTION3 PFK	32.97	8.354e3					1.1	NO		bb		0.000
3	FUNCTION3 PFK	32.70	7.395e3					0.9	NO		bb		0.000
4	FUNCTION3 PFK	36.91	4.136e4					1.7	NO		bb		0.000
5	FUNCTION3 PFK	36.55	7.253e3					0.9	NO		bb		0.000
6	FUNCTION3 PFK	35.85	2.558e4					2.0	NO		bb		0.000
7	FUNCTION3 PFK	35.62	1.169e4					1.1	NO		bb		0.000
8	FUNCTION3 PFK	35.57	7.075e3					0.9	NO		bb		0.000
9	FUNCTION3 PFK	35.04	1.698e4					1.2	NO		bb		0.000
10	FUNCTION3 PFK	34.89	1.376e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	34.60	1.774e4					1.3	NO		db		0.000
12	FUNCTION3 PFK	34.53	1.127e4					1.1	NO		bd		0.000
13	FUNCTION3 PFK	34.21	2.220e3					0.5	NO		bb		0.000
14	FUNCTION3 PFK	34.14	4.065e3					0.6	NO		bb		0.000
15	FUNCTION3 PFK	34.04	3.839e3					0.7	NO		bb		0.000
16	FUNCTION3 PFK	33.85	3.503e4					2.1	NO		bb		0.000
17	FUNCTION3 PFK	33.45	1.051e4					1.1	NO		db		0.000
18	FUNCTION3 PFK	33.40	2.729e4					1.6	NO		dd		0.000
19	FUNCTION3 PFK	33.32	3.465e4					1.8	NO		bd		0.000
20	FUNCTION3 PFK	37.41	9.963e3					1.1	NO		bb		0.000
21	FUNCTION3 PFK	37.13	3.251e4					1.6	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.23	1.088e4					1.3	NO		db		
2	FUNCTION4 PFK	39.18	1.430e4					1.3	NO		bd		
3	FUNCTION4 PFK	39.04	4.917e3					1.1	NO		bb		
4	FUNCTION4 PFK	38.99	1.451e3					0.6	NO		bb		
5	FUNCTION4 PFK	38.94	2.358e4					1.9	NO		bb		
6	FUNCTION4 PFK	38.51	1.721e4					1.6	NO		bb		
7	FUNCTION4 PFK	38.31	7.894e3					1.3	NO		bb		
8	FUNCTION4 PFK	38.24	5.849e3					1.1	NO		db		
9	FUNCTION4 PFK	38.19	7.592e3					1.3	NO		bd		
10	FUNCTION4 PFK	38.14	6.944e3					0.7	NO		bb		
11	FUNCTION4 PFK	37.99	1.253e4					1.4	NO		bb		
12	FUNCTION4 PFK	37.89	3.032e3					0.6	NO		bb		
13	FUNCTION4 PFK	37.78	3.159e3					0.5	NO		bb		
14	FUNCTION4 PFK	42.28	5.355e3					1.0	NO		bb		
15	FUNCTION4 PFK	42.12	2.248e4					1.5	NO		db		
16	FUNCTION4 PFK	42.05	1.480e4					1.8	NO		dd		
17	FUNCTION4 PFK	41.96	2.330e4					2.0	NO		bd		
18	FUNCTION4 PFK	41.18	8.394e3					1.3	NO		bb		
19	FUNCTION4 PFK	40.88	8.104e3					1.2	NO		bb		
20	FUNCTION4 PFK	40.78	2.482e4					2.0	NO		db		
21	FUNCTION4 PFK	40.69	7.245e3					1.3	NO		bd		
22	FUNCTION4 PFK	40.58	7.510e3					1.3	NO		bb		
23	FUNCTION4 PFK	40.50	6.216e3					0.7	NO		bb		
24	FUNCTION4 PFK	39.94	1.490e4					1.7	NO		db		
25	FUNCTION4 PFK	39.91	9.594e3					1.4	NO		bd		
26	FUNCTION4 PFK	39.84	5.271e3					0.8	NO		db		
27	FUNCTION4 PFK	39.80	5.967e3					1.1	NO		dd		
28	FUNCTION4 PFK	39.76	8.318e3					1.2	NO		bd		
29	FUNCTION4 PFK	39.39	1.007e3					0.4	NO		bb		
30	FUNCTION4 PFK	42.44	1.611e3					0.6	NO		bb		
31	FUNCTION4 PFK	42.35	9.507e3					1.4	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.82	9.281e3					1.9	NO		bb		
2	FUNCTION5 PFK	45.67	9.930e2					0.7	NO		bb		
3	FUNCTION5 PFK	43.67	4.997e3					1.7	NO		bb		
4	FUNCTION5 PFK	42.62	1.092e4					2.1	NO		bb		

**ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.51	8.257e1					2.7	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.88	7.548e1					2.5	NO		bb		0.000
2	FUNCTION2 HPCD...	30.74	7.206e1					2.2	NO		bb		0.000
3	FUNCTION2 HPCD...	29.72	7.145e1					3.6	YES		bb		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.93	8.932e1					5.8	YES		bb		0.000

**ETHERS6**

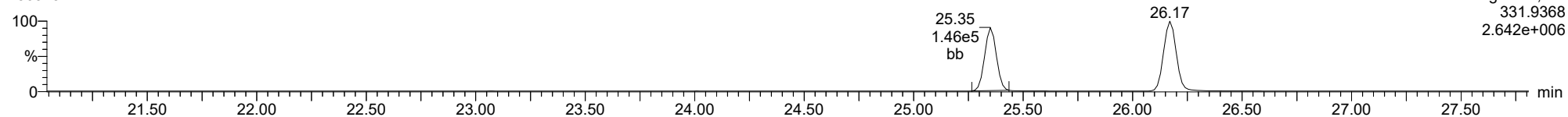
	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**Method:** T:\Autospec\Methods\Dioxin230315.mdb 16 Mar 2023 08:38:23  
**Calibration:** T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

**ID:** CS3Z6, **Name:** 23031521, **Date:** 16-Mar-2023, **Time:** 02:54:10, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234-TCDD**

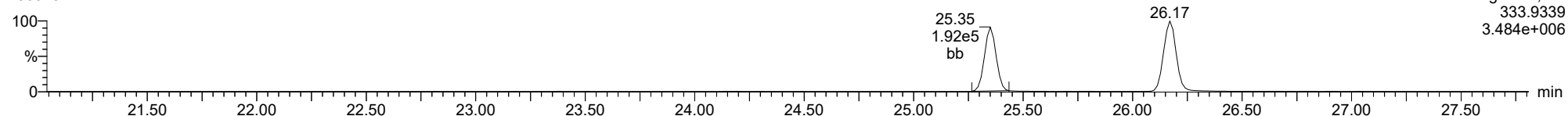
23031521



F1:Voltage SIR,El+  
331.9368  
2.642e+006

**13C-1234-TCDD**

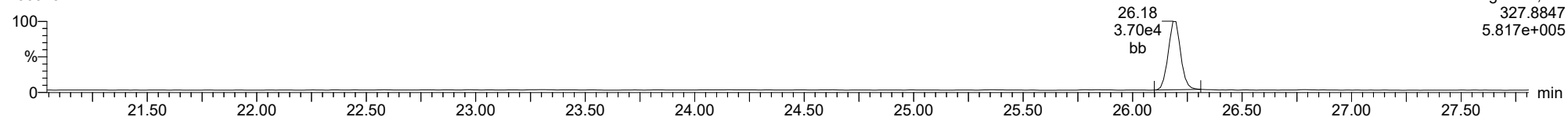
23031521



F1:Voltage SIR,El+  
333.9339  
3.484e+006

**37CL-2378-TCDD**

23031521

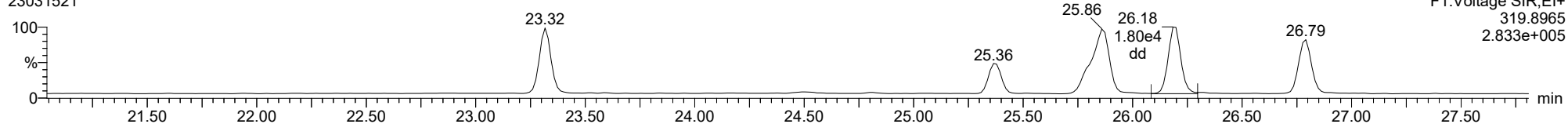


F1:Voltage SIR,El+  
327.8847  
5.817e+005

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

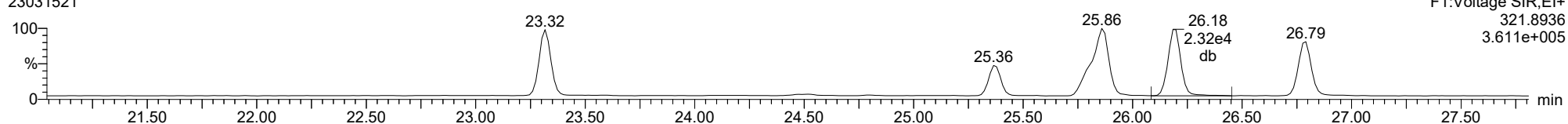
**2378-TCDD**

23031521



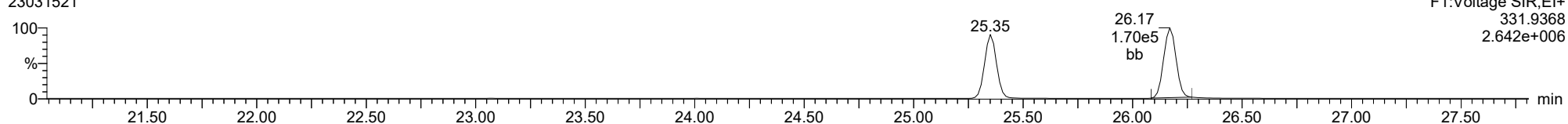
**2378-TCDD**

23031521



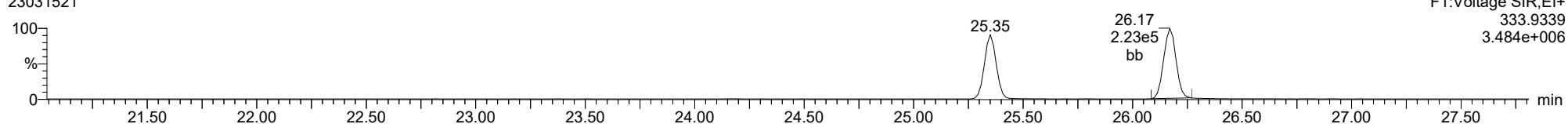
**13C-2378-TCDD**

23031521



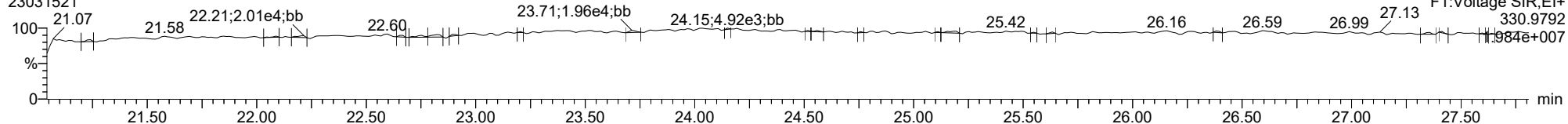
**13C-2378-TCDD**

23031521



**FUNCTION1 PFK**

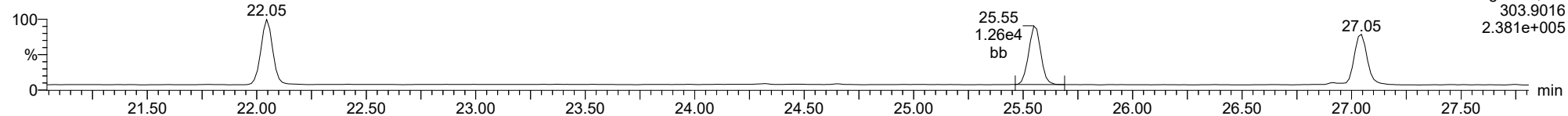
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

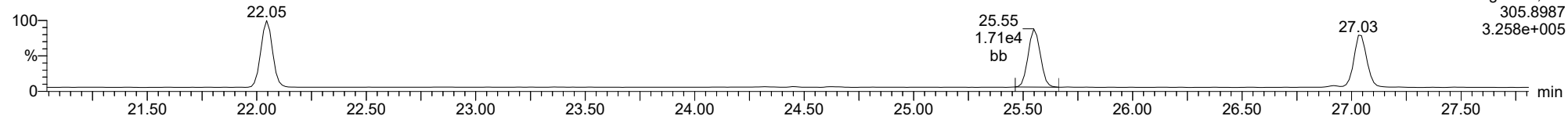
**2378-TCDF**

23031521



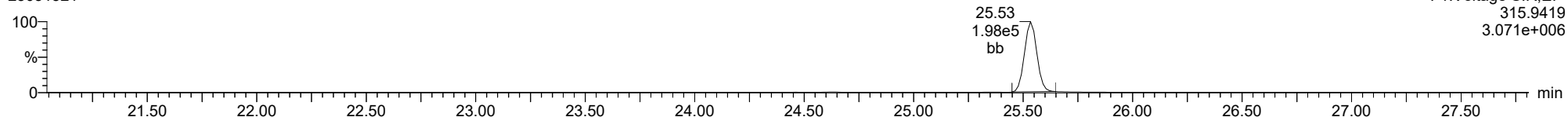
**2378-TCDF**

23031521



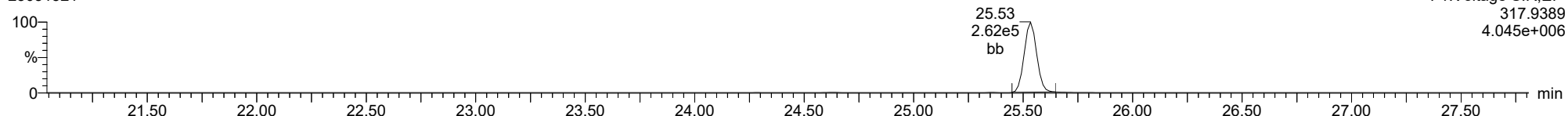
**13C-2378-TCDF**

23031521



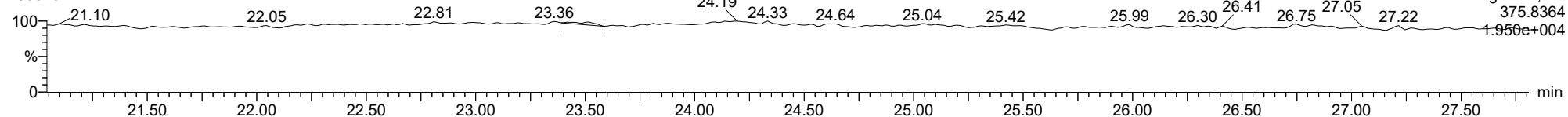
**13C-2378-TCDF**

23031521



**FUNCTION1 HXCDPE**

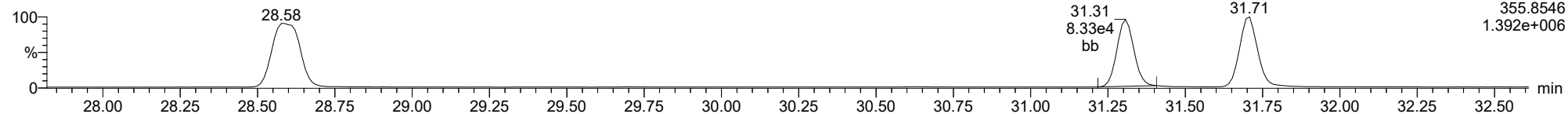
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**12378-PeCDD**

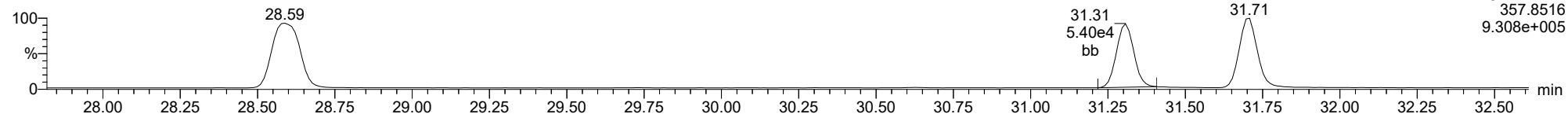
23031521



F2:Voltage SIR,EI+  
357.8546  
1.392e+006

**12378-PeCDD**

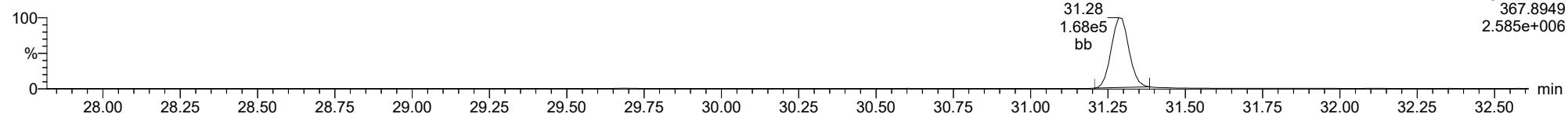
23031521



F2:Voltage SIR,EI+  
357.8516  
9.308e+005

**13C-12378-PeCDD**

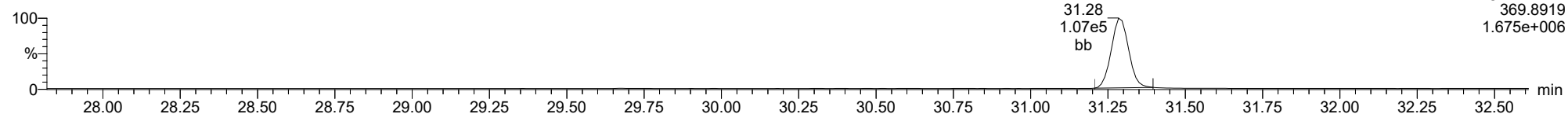
23031521



F2:Voltage SIR,EI+  
367.8949  
2.585e+006

**13C-12378-PeCDD**

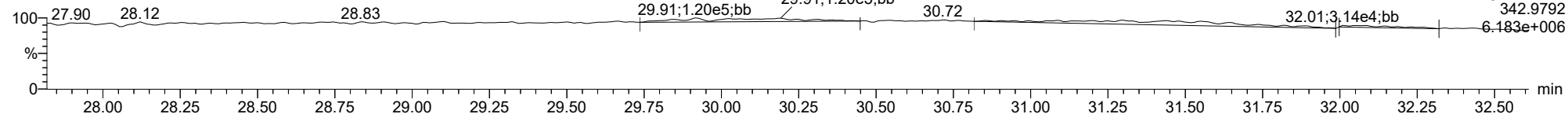
23031521



F2:Voltage SIR,EI+  
369.8919  
1.675e+006

**FUNCTION2 PFK**

23031521



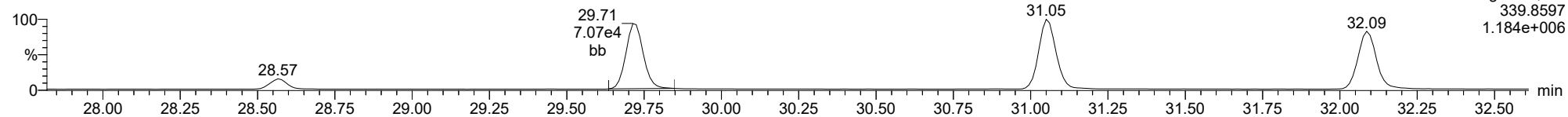
F2:Voltage SIR,EI+  
342.9792  
6.183e+006



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

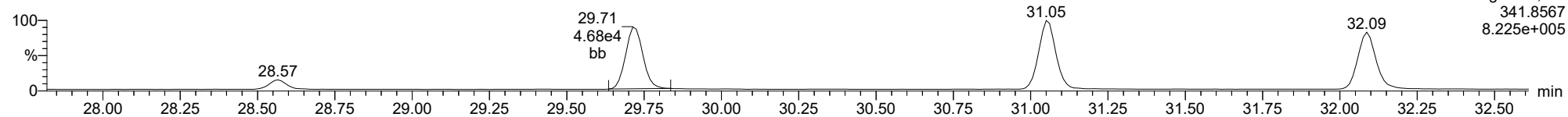
**12378-PeCDF**

23031521



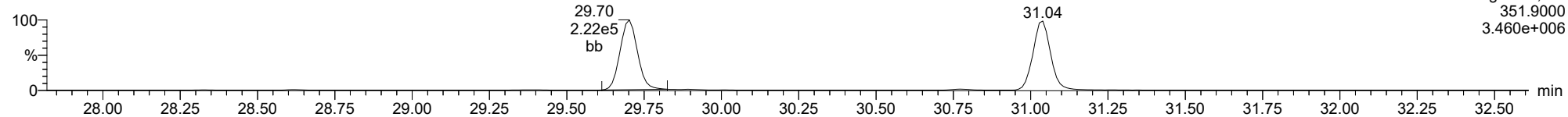
**12378-PeCDF**

23031521



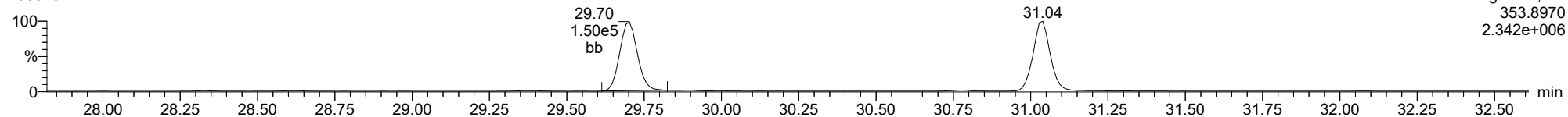
**13C-12378-PeCDF**

23031521



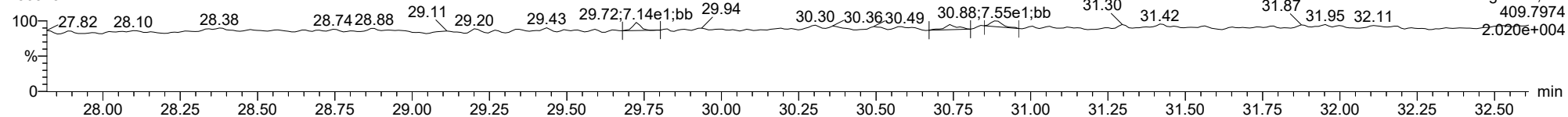
**13C-12378-PeCDF**

23031521



**FUNCTION2 HPCDPE**

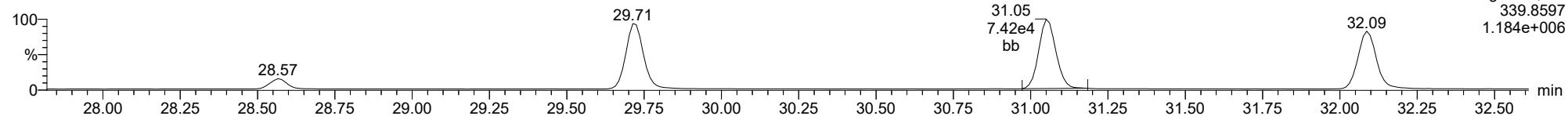
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

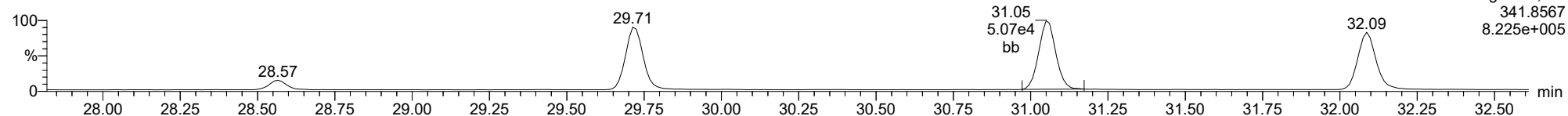
**23478-PeCDF**

23031521



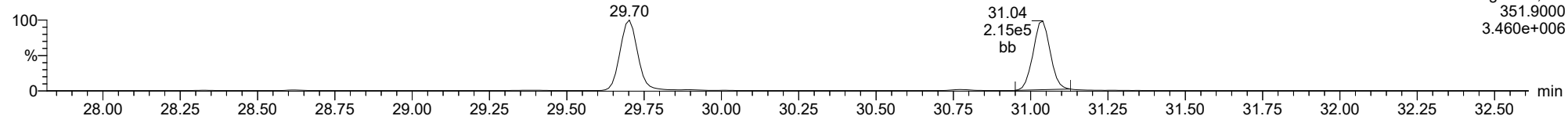
**23478-PeCDF**

23031521



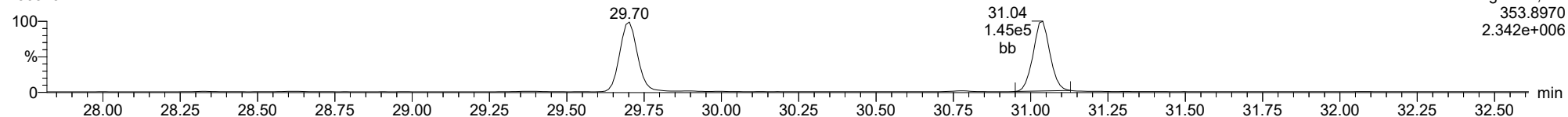
**13C-23478-PeCDF**

23031521



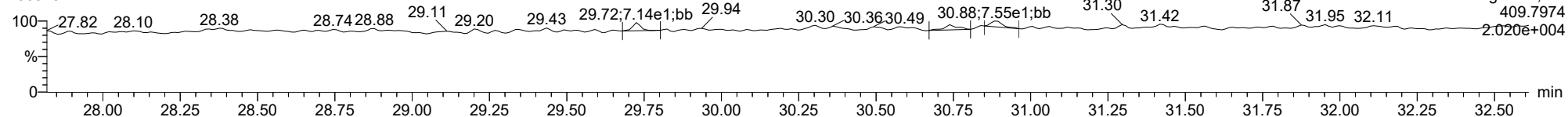
**13C-23478-PeCDF**

23031521



**FUNCTION2 HPCDPE**

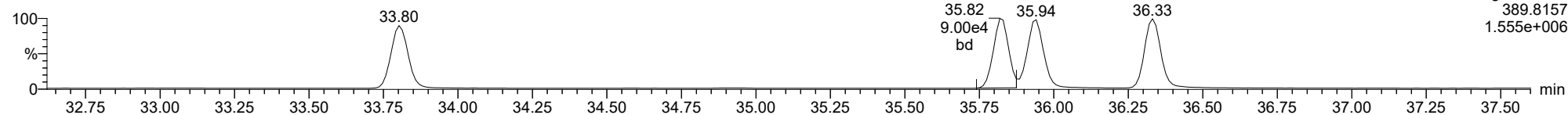
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**123478-HxCDD**

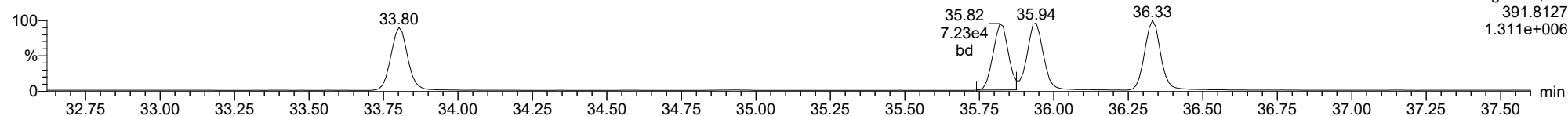
23031521



F3:Voltage SIR,El+  
389.8157  
1.555e+006

**123478-HxCDD**

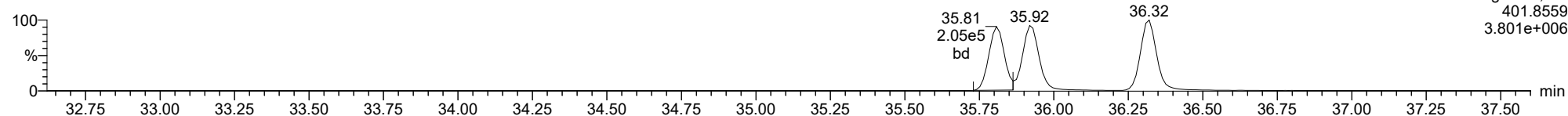
23031521



F3:Voltage SIR,El+  
391.8127  
1.311e+006

**13C-123478-HxCDD**

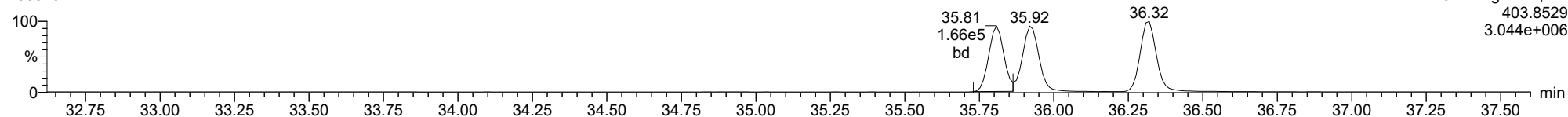
23031521



F3:Voltage SIR,El+  
401.8559  
3.801e+006

**13C-123478-HxCDD**

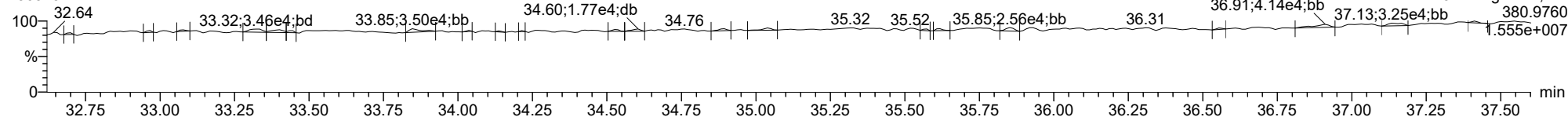
23031521



F3:Voltage SIR,El+  
403.8529  
3.044e+006

**FUNCTION3 PFK**

23031521

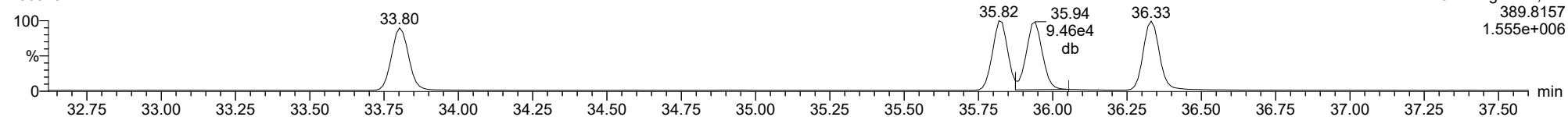


F3:Voltage SIR,El+  
380.9760  
1.555e+007

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

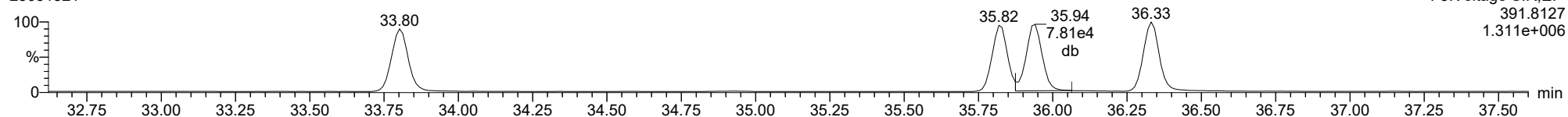
23031521



F3:Voltage SIR,EI+  
389.8157  
1.555e+006

**123678-HxCDD**

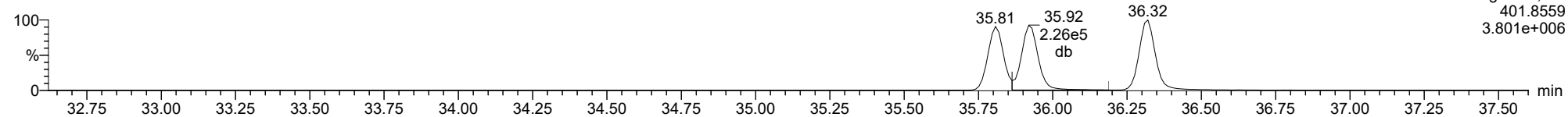
23031521



F3:Voltage SIR,EI+  
391.8127  
1.311e+006

**13C-123678-HxCDD**

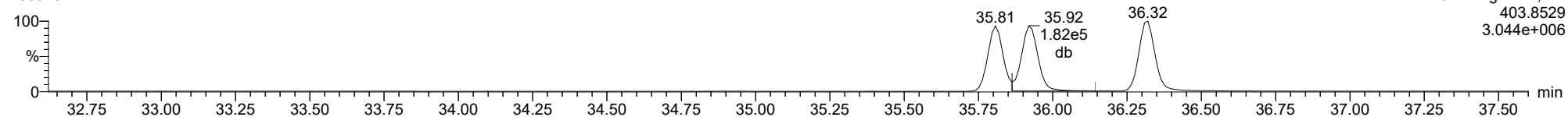
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F3:Voltage SIR,EI+  
401.8559  
3.801e+006

**13C-123678-HxCDD**

23031521

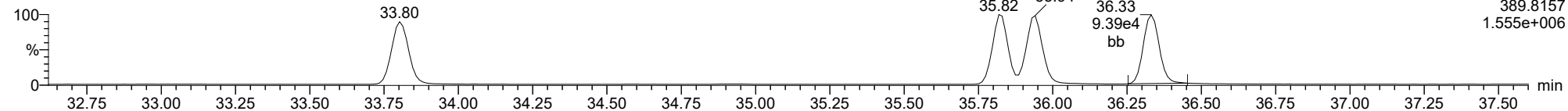


F3:Voltage SIR,EI+  
403.8529  
3.044e+006

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

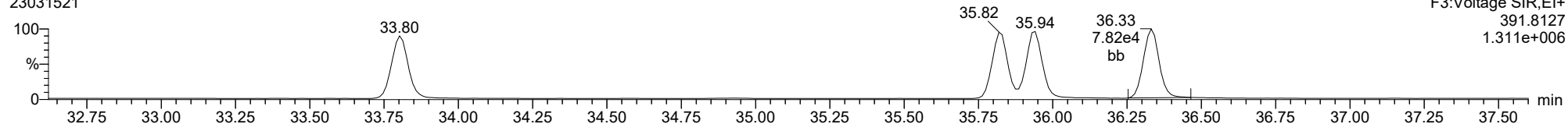
**123789-HxCDD**

23031521



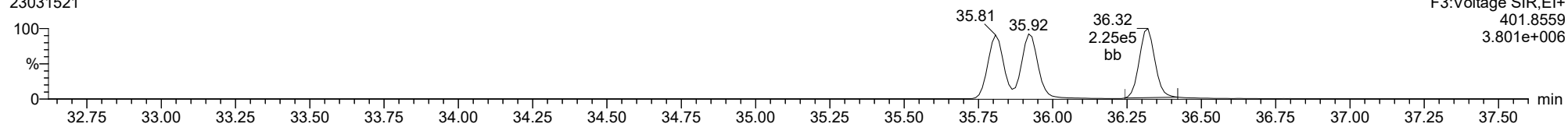
**123789-HxCDD**

23031521



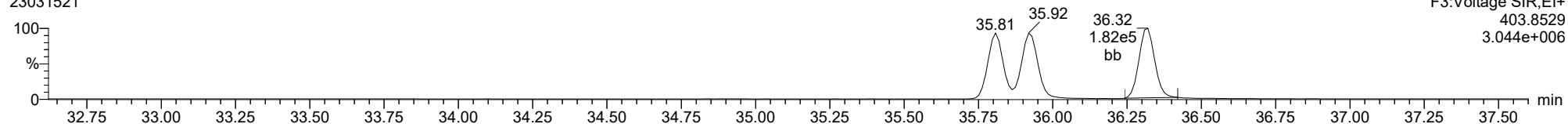
**13C-123789-HxCDD**

23031521



**13C-123789-HxCDD**

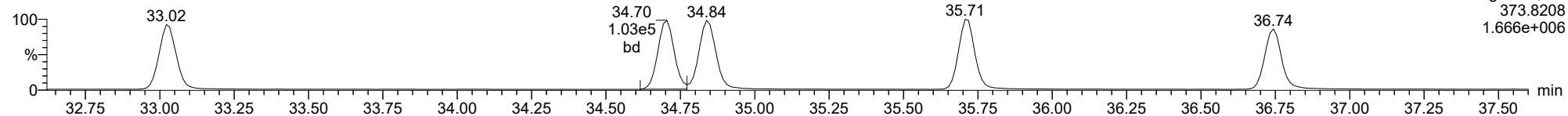
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ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

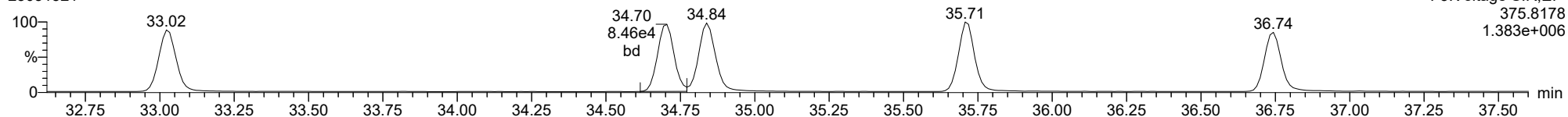
**123478-HxCDF**

23031521



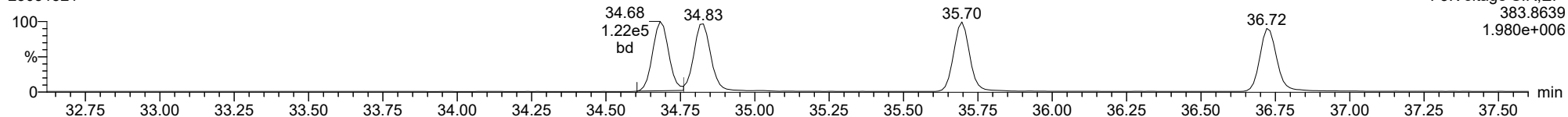
**123478-HxCDF**

23031521



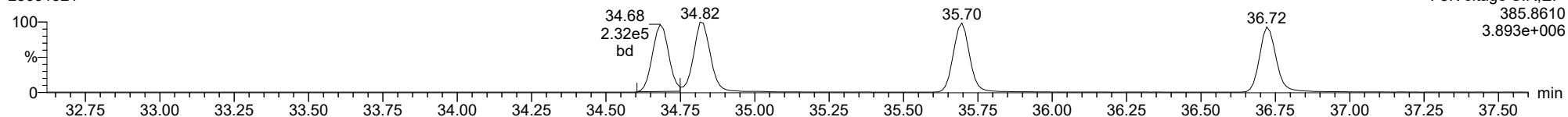
**13C-123478-HxCDF**

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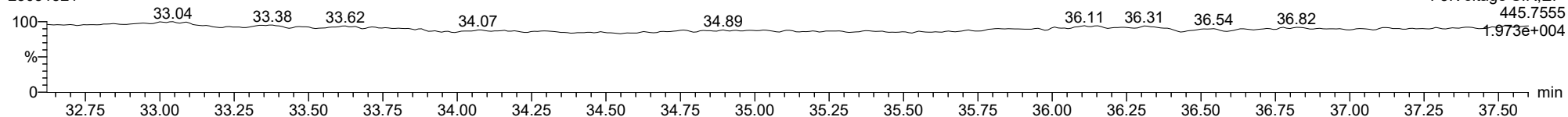
**13C-123478-HxCDF**

23031521



**FUNCTION3 OCDPE**

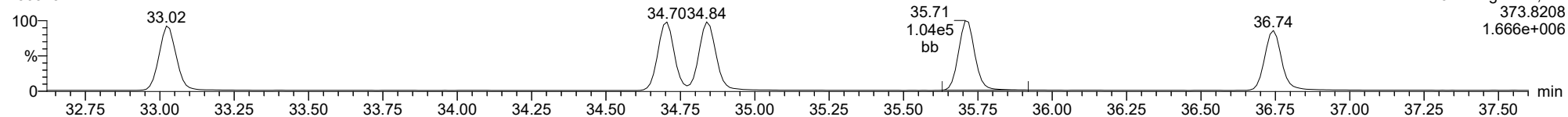
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ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

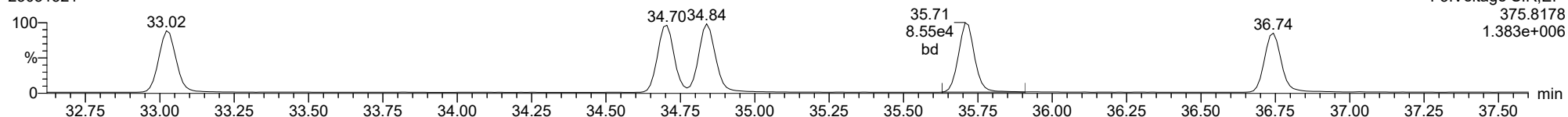
**234678-HxCDF**

23031521



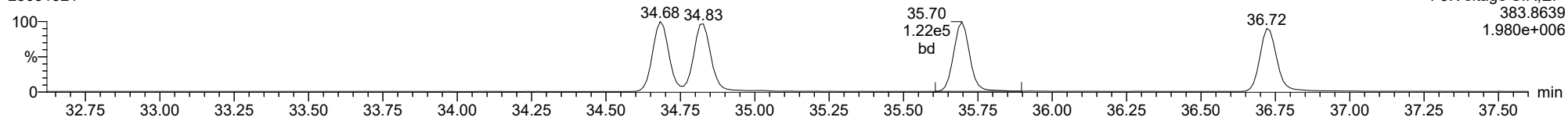
**234678-HxCDF**

23031521



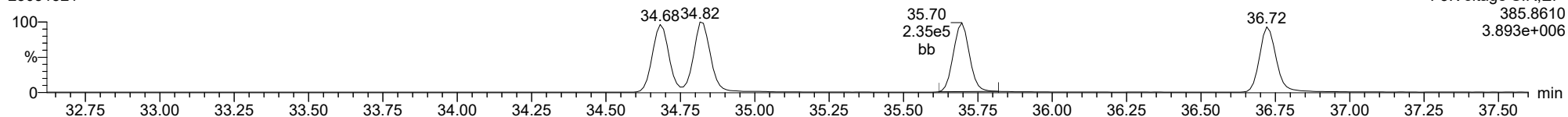
**13C-234678-HxCDF**

23031521



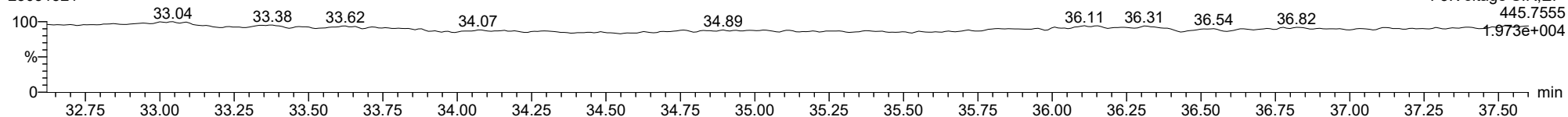
**13C-234678-HxCDF**

23031521



**FUNCTION3 OCDPE**

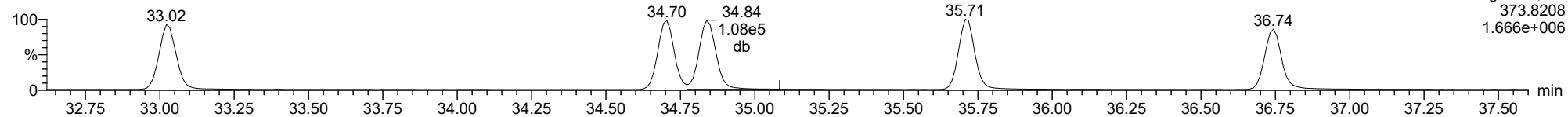
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

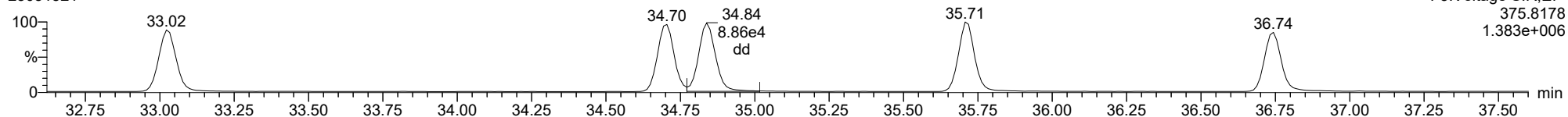
**123678-HxCDF**

23031521



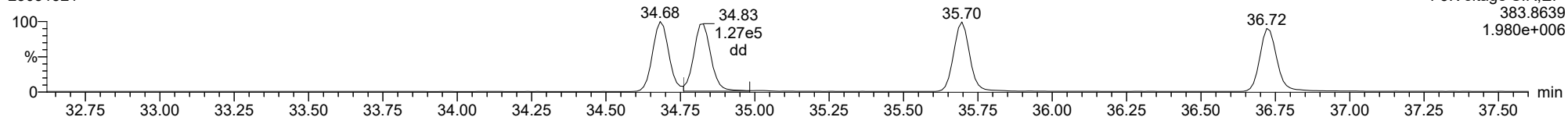
**123678-HxCDF**

23031521



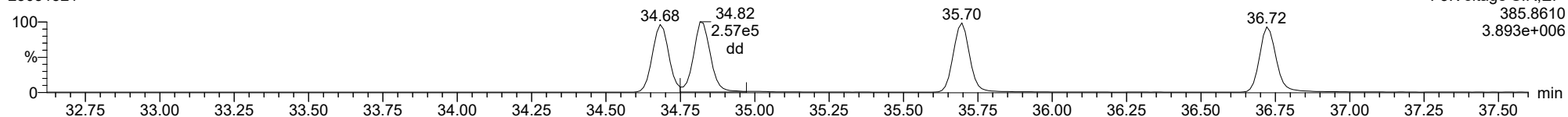
**13C-123678-HxCDF**

23031521



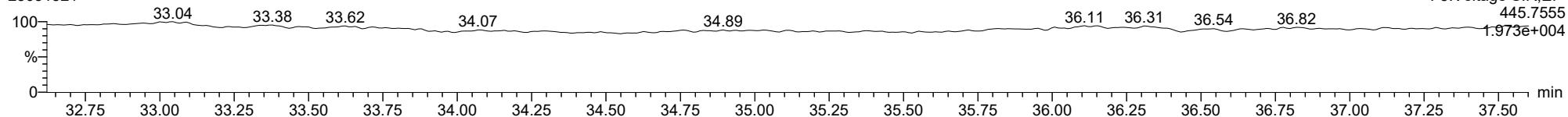
**13C-123678-HxCDF**

23031521



**FUNCTION3 OCDPE**

23031521

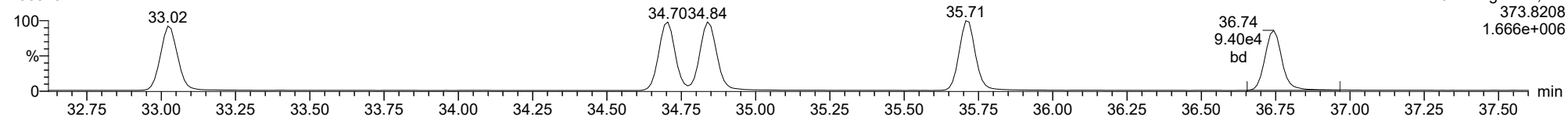




ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

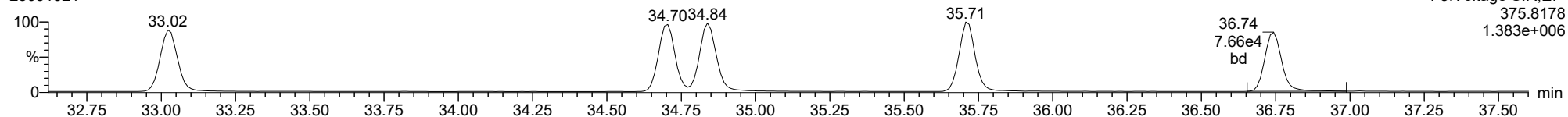
**123789-HxCDF**

23031521



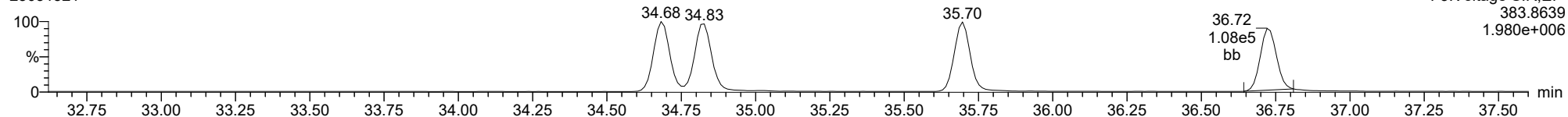
**123789-HxCDF**

23031521



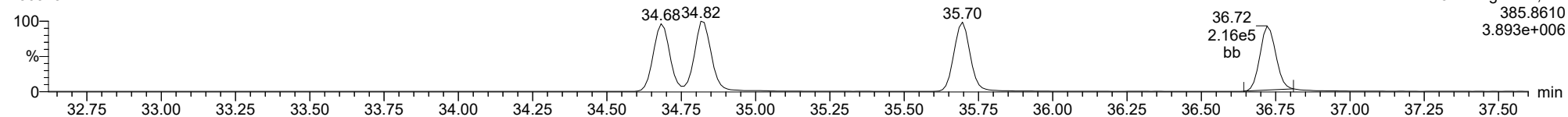
**13C-123789-HxCDF**

23031521



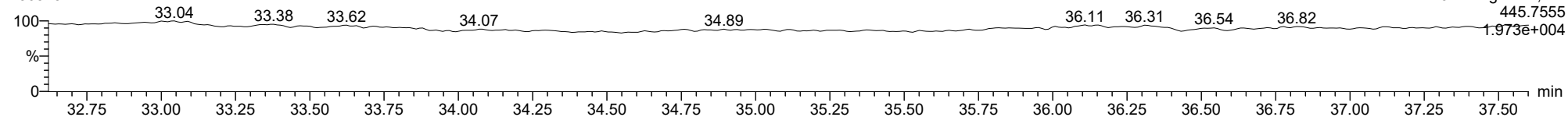
**13C-123789-HxCDF**

23031521



**FUNCTION3 OCDPE**

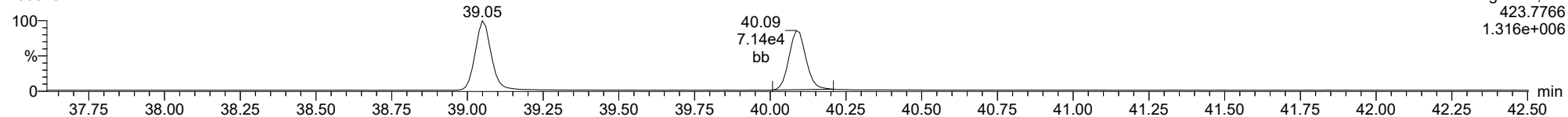
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

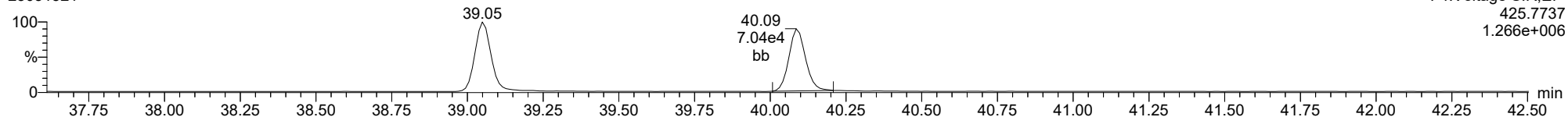
23031521



F4:Voltage SIR,El+  
423.7766  
1.316e+006

**1234678-HpCDD**

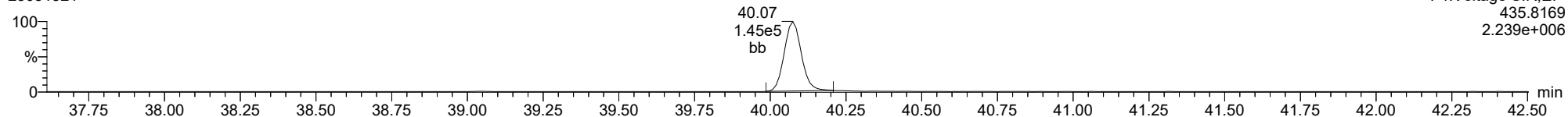
23031521



F4:Voltage SIR,El+  
425.7737  
1.266e+006

**13C-1234678-HpCDD**

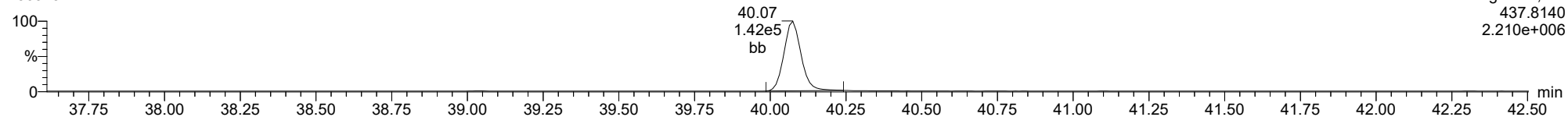
23031521



F4:Voltage SIR,El+  
435.8169  
2.239e+006

**13C-1234678-HpCDD**

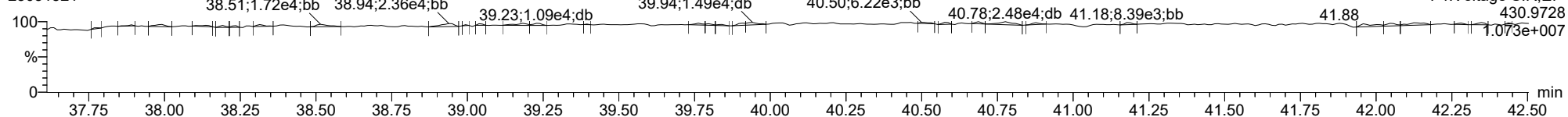
23031521



F4:Voltage SIR,El+  
437.8140  
2.210e+006

**FUNCTION4 PFK**

23031521

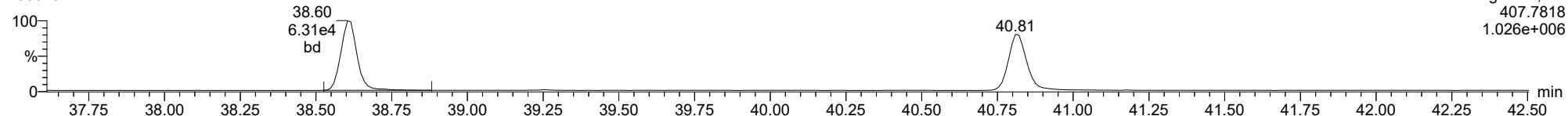


F4:Voltage SIR,El+  
430.9728  
1.073e+007

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF

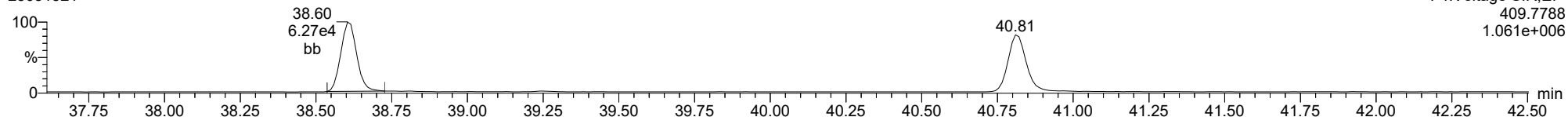
23031521



F4:Voltage SIR,EI+  
407.7818  
1.026e+006

1234678-HpCDF

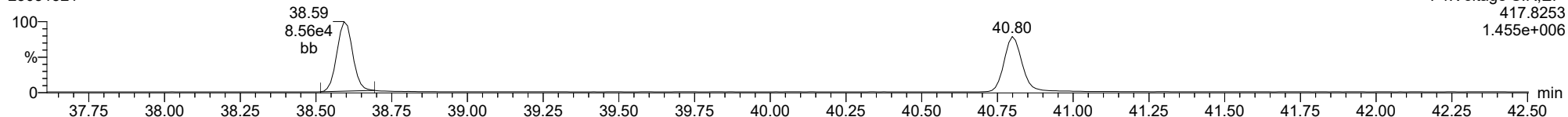
23031521



F4:Voltage SIR,EI+  
409.7788  
1.061e+006

13C-1234678-HpCDF

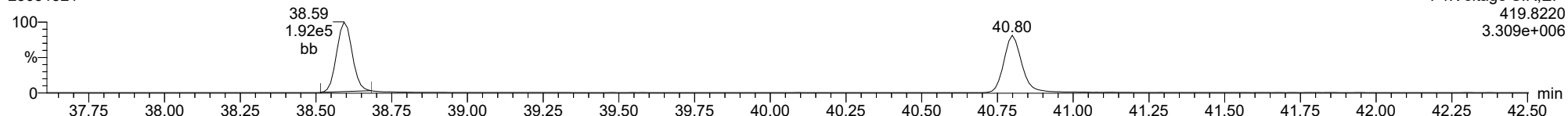
23031521



F4:Voltage SIR,EI+  
417.8253  
1.455e+006

13C-1234678-HpCDF

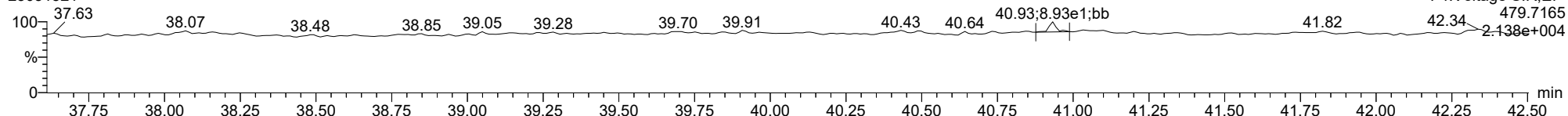
23031521



F4:Voltage SIR,EI+  
419.8220  
3.309e+006

FUNCTION4 NCDPE

23031521

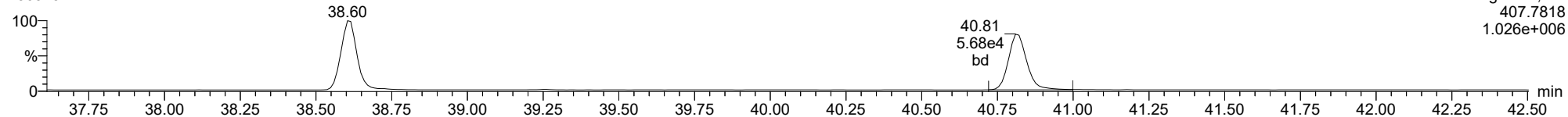


F4:Voltage SIR,EI+  
479.7165  
2.138e+004

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

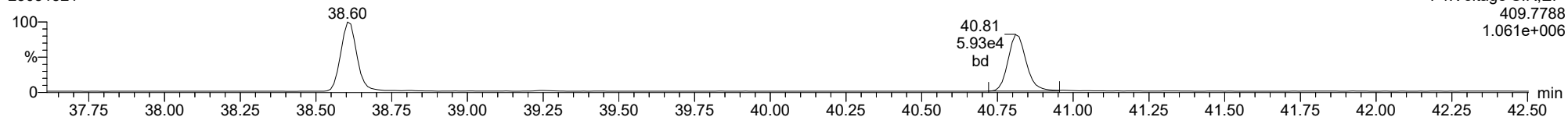
23031521



F4:Voltage SIR,EI+  
407.7818  
1.026e+006

**1234789-HpCDF**

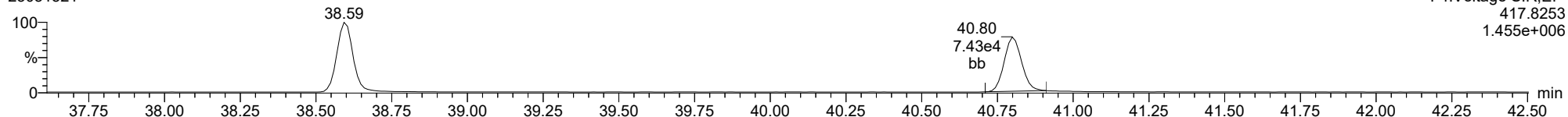
23031521



F4:Voltage SIR,EI+  
409.7788  
1.061e+006

**13C-1234789-HpCDF**

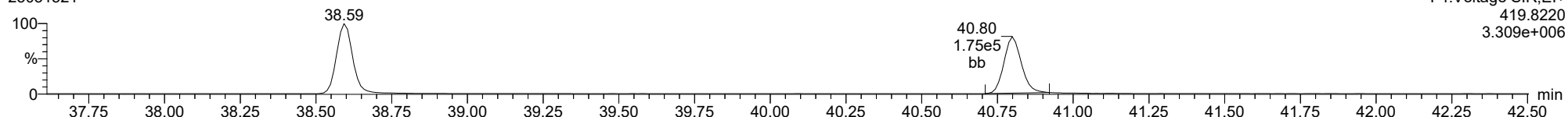
23031521



F4:Voltage SIR,EI+  
417.8253  
1.455e+006

**13C-1234789-HpCDF**

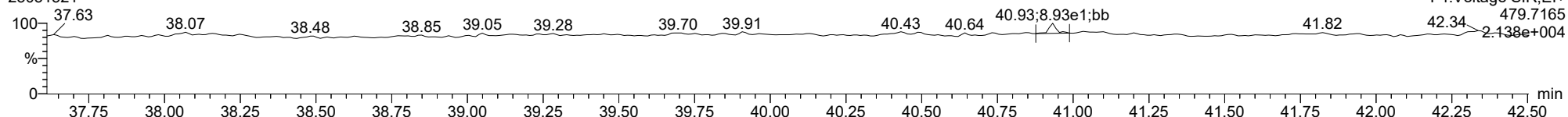
23031521



F4:Voltage SIR,EI+  
419.8220  
3.309e+006

**FUNCTION4 NCDPE**

23031521

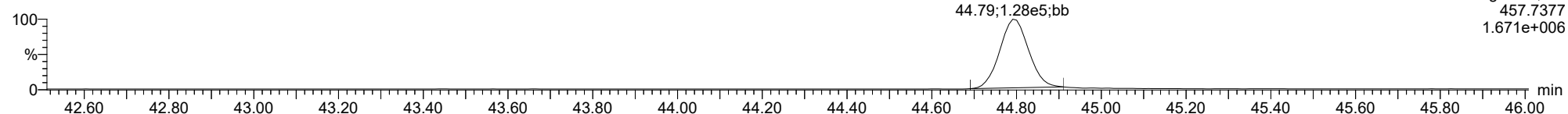


F4:Voltage SIR,EI+  
479.7165  
2.138e+004

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

**OCDD**

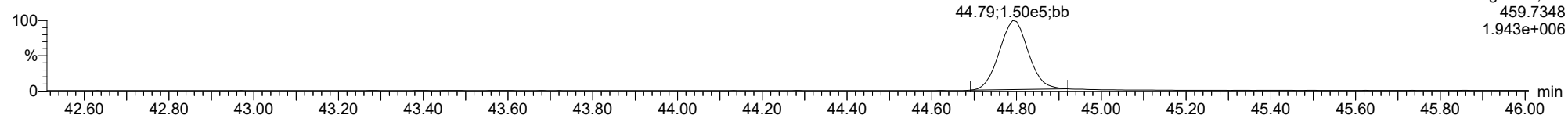
23031521



F5:Voltage SIR,EI+  
457.7377  
1.671e+006

**OCDD**

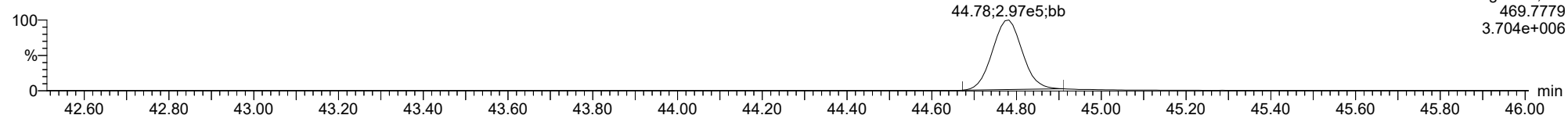
23031521



F5:Voltage SIR,EI+  
459.7348  
1.943e+006

**13C-OCDD**

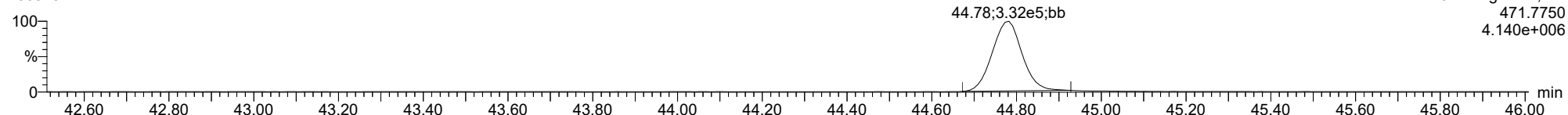
23031521



F5:Voltage SIR,EI+  
469.7779  
3.704e+006

**13C-OCDD**

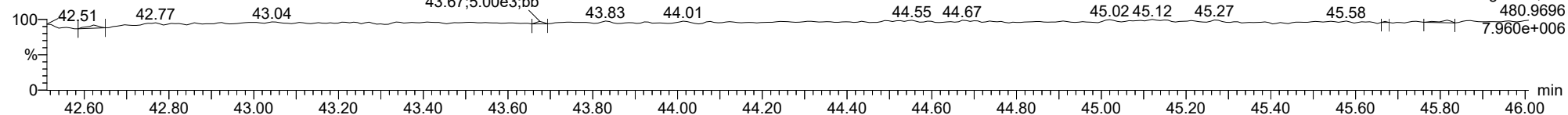
23031521



F5:Voltage SIR,EI+  
471.7750  
4.140e+006

**FUNCTION5 PFK**

23031521

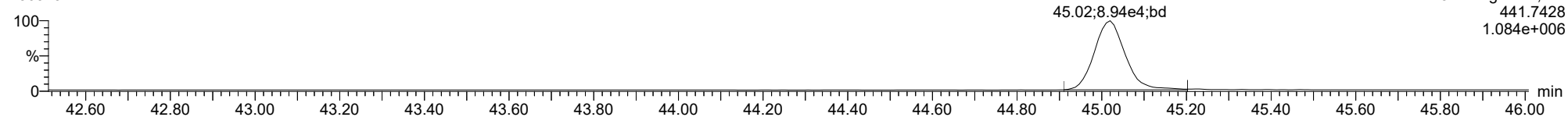


F5:Voltage SIR,EI+  
480.9696  
7.960e+006

ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

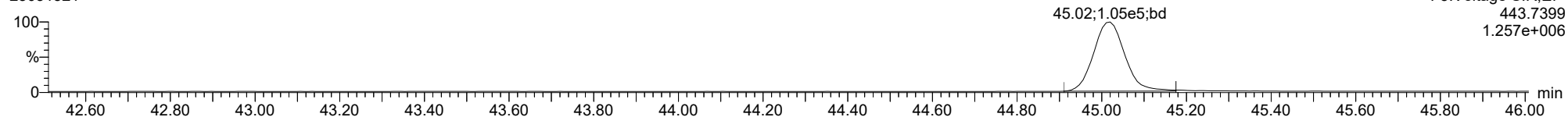
**OCDF**

23031521



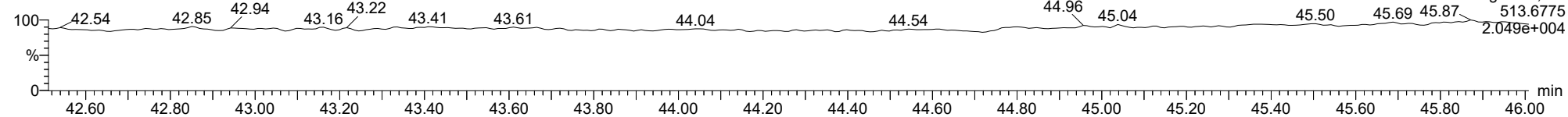
**OCDF**

23031521



**FUNCTION5 DCDPE**

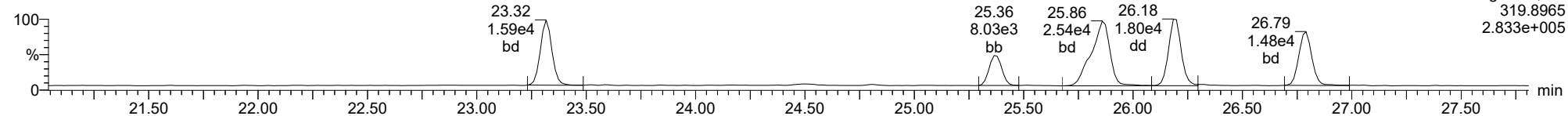
23031521



ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

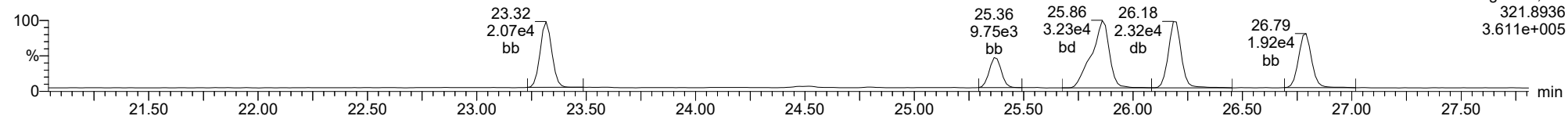
**Total-tetradioxins**

23031521



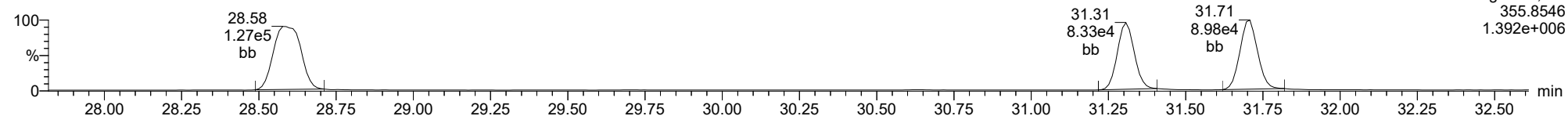
**Total-tetradioxins**

23031521



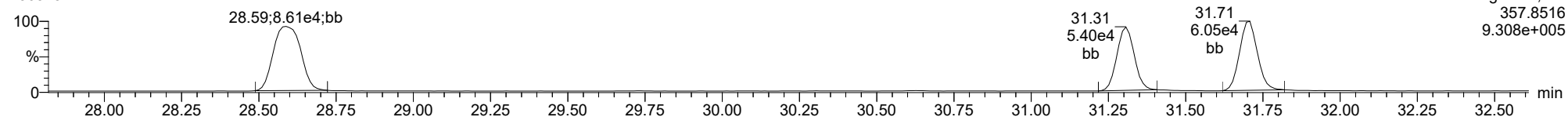
**Total-pentadioxins**

23031521



**Total-pentadioxins**

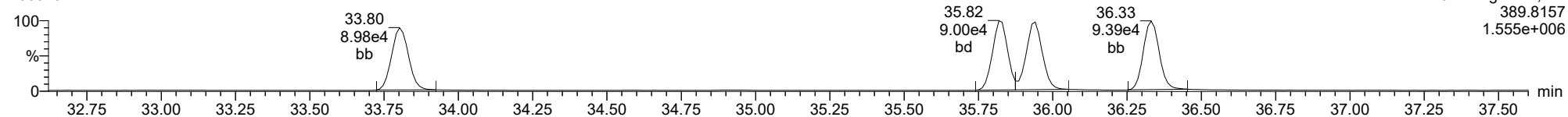
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ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

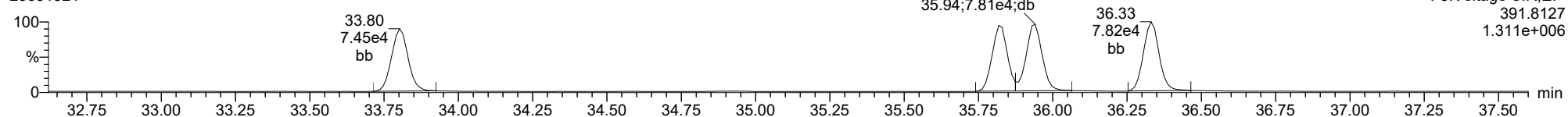
**Total-hexadioxins**

23031521



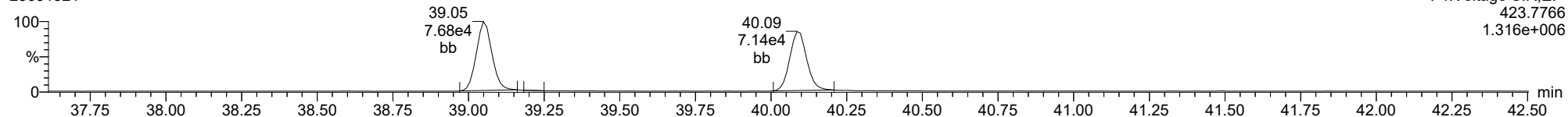
**Total-hexadioxins**

23031521



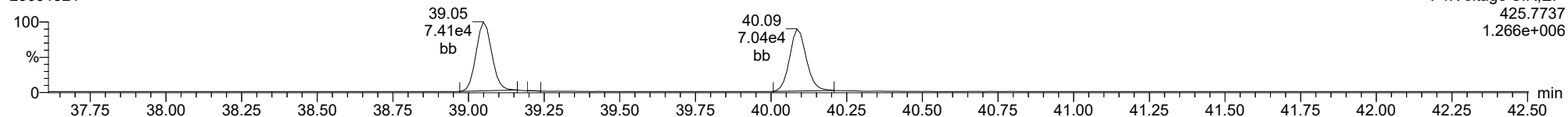
**Total-heptadioxins**

23031521



**Total-heptadioxins**

23031521

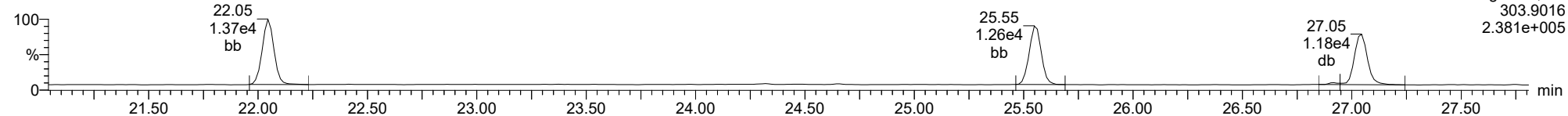




ID: CS3Z6, Name: 23031521, Date: 16-Mar-2023, Time: 02:54:10, Conditions: AUTOSPEC01, User: pk

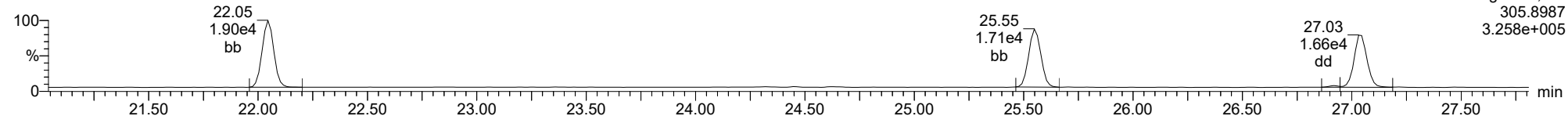
**Total-tetrafurans**

23031521



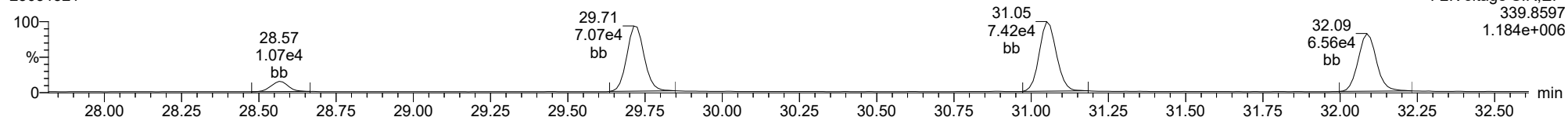
**Total-tetrafurans**

23031521



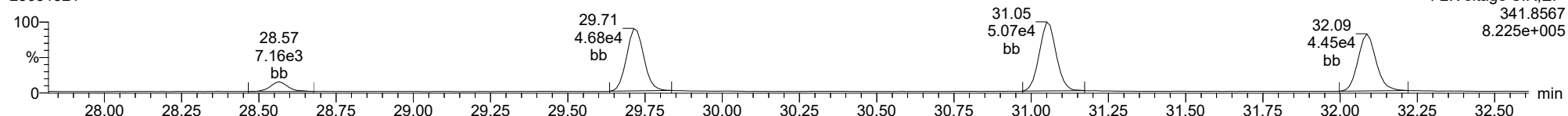
**Total-pentafurans**

23031521



**Total-pentafurans**

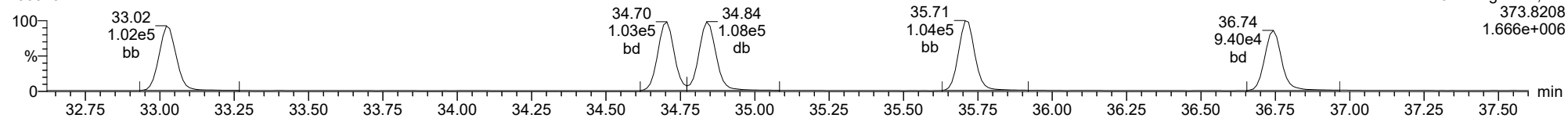
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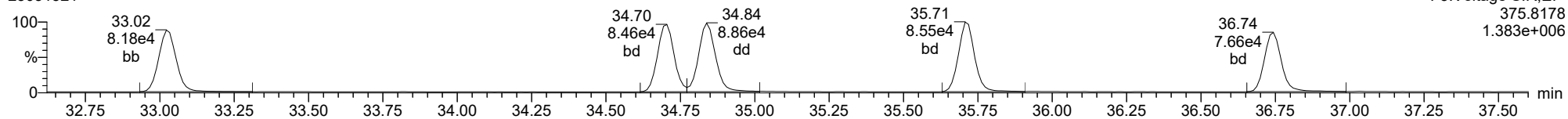
**Total-hexafurans**

23031521



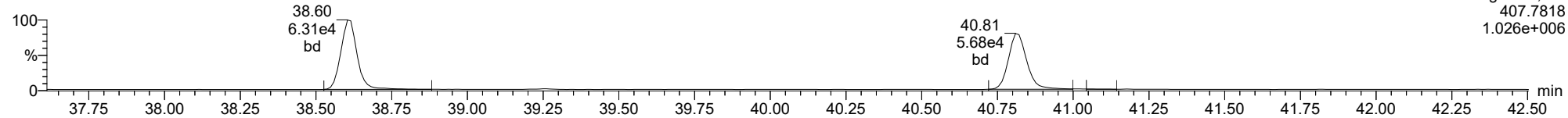
**Total-hexafurans**

23031521



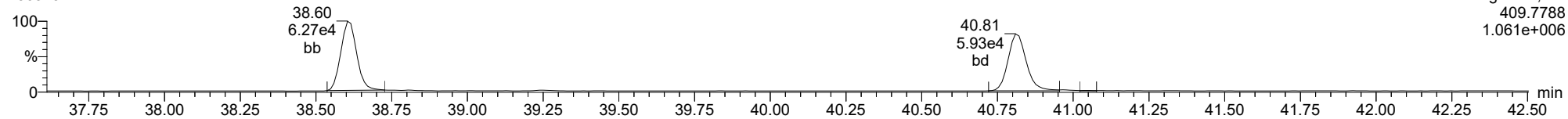
**Total-heptafurans**

23031521



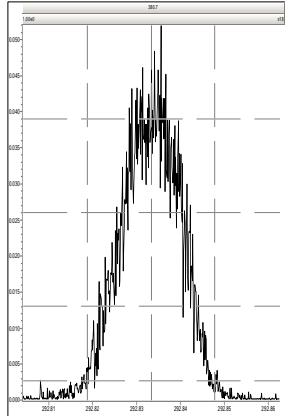
**Total-heptafurans**

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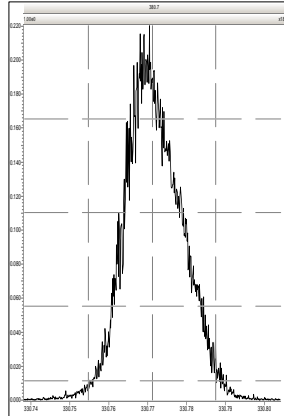


Printed: Thursday, March 16, 2023 03:47:00 Pacific Daylight Time

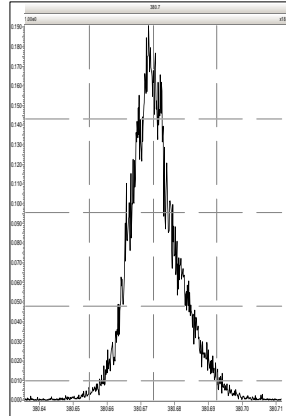
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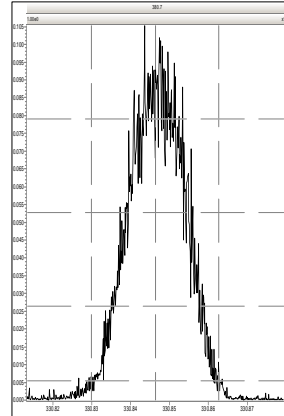
M 330.9792 R 10000



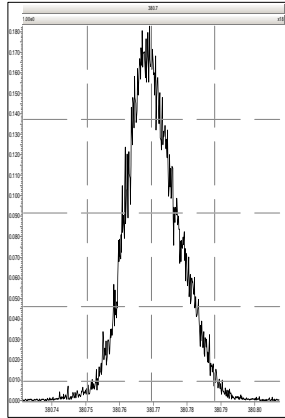
M 380.9760 R 11079



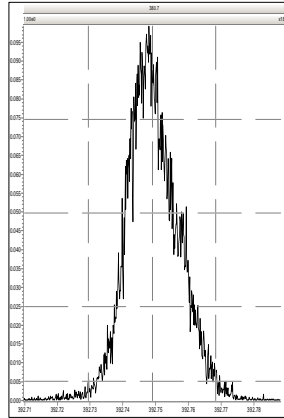
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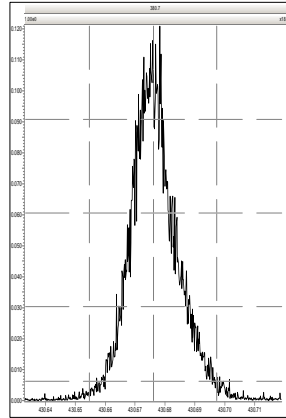
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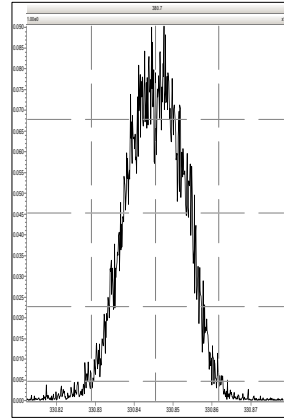
M 392.9760 R 10952



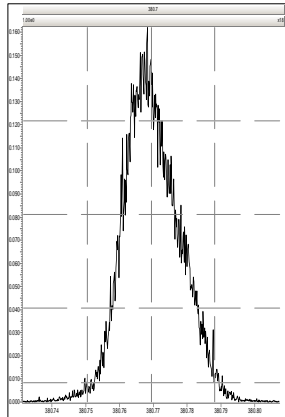
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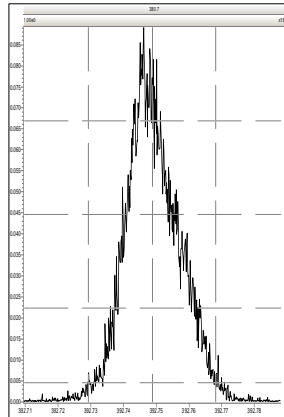
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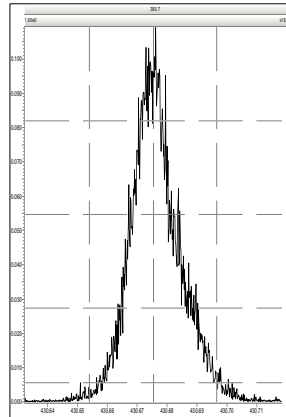
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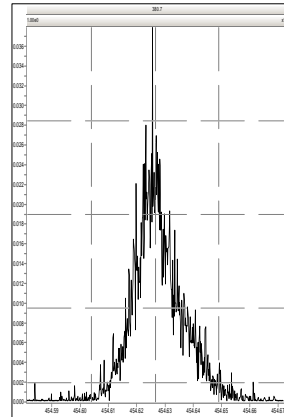
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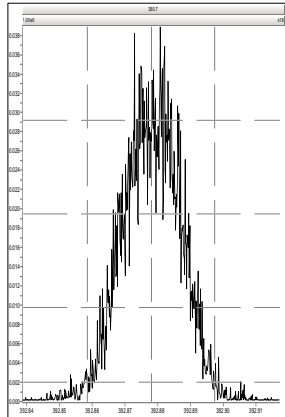
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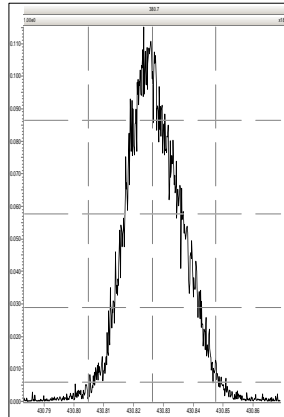
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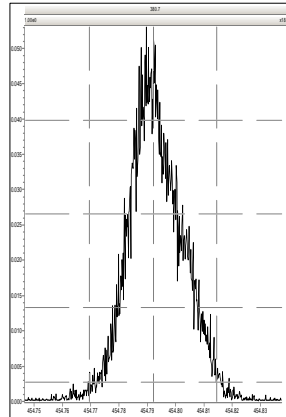
M 392.9760 R 10617



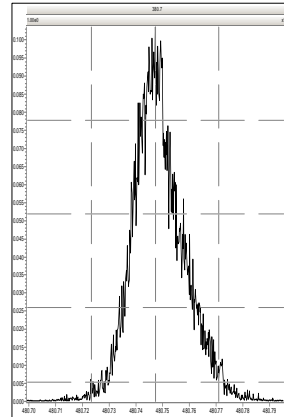
M 430.9728 R 10090



M 454.9728 R 10551

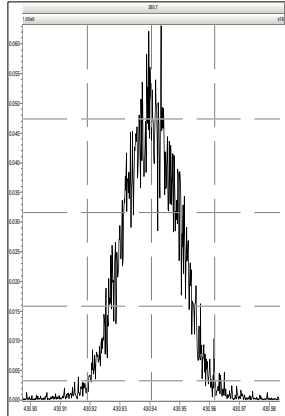


M 480.9696 R 10965

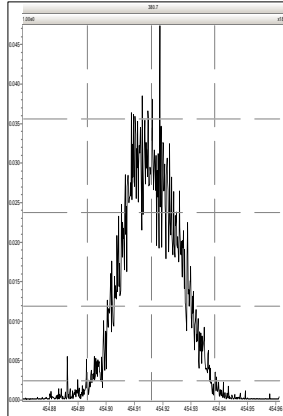


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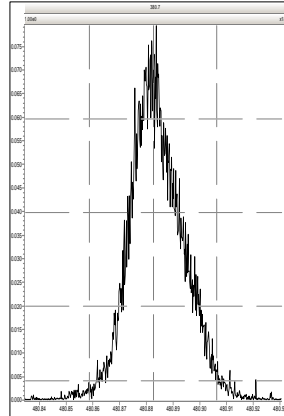
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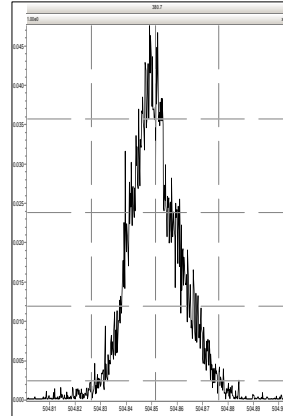
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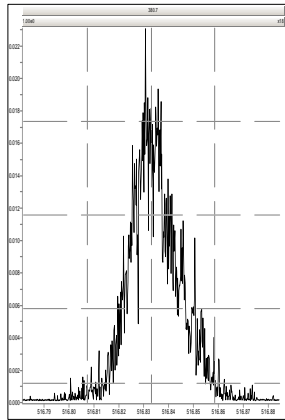
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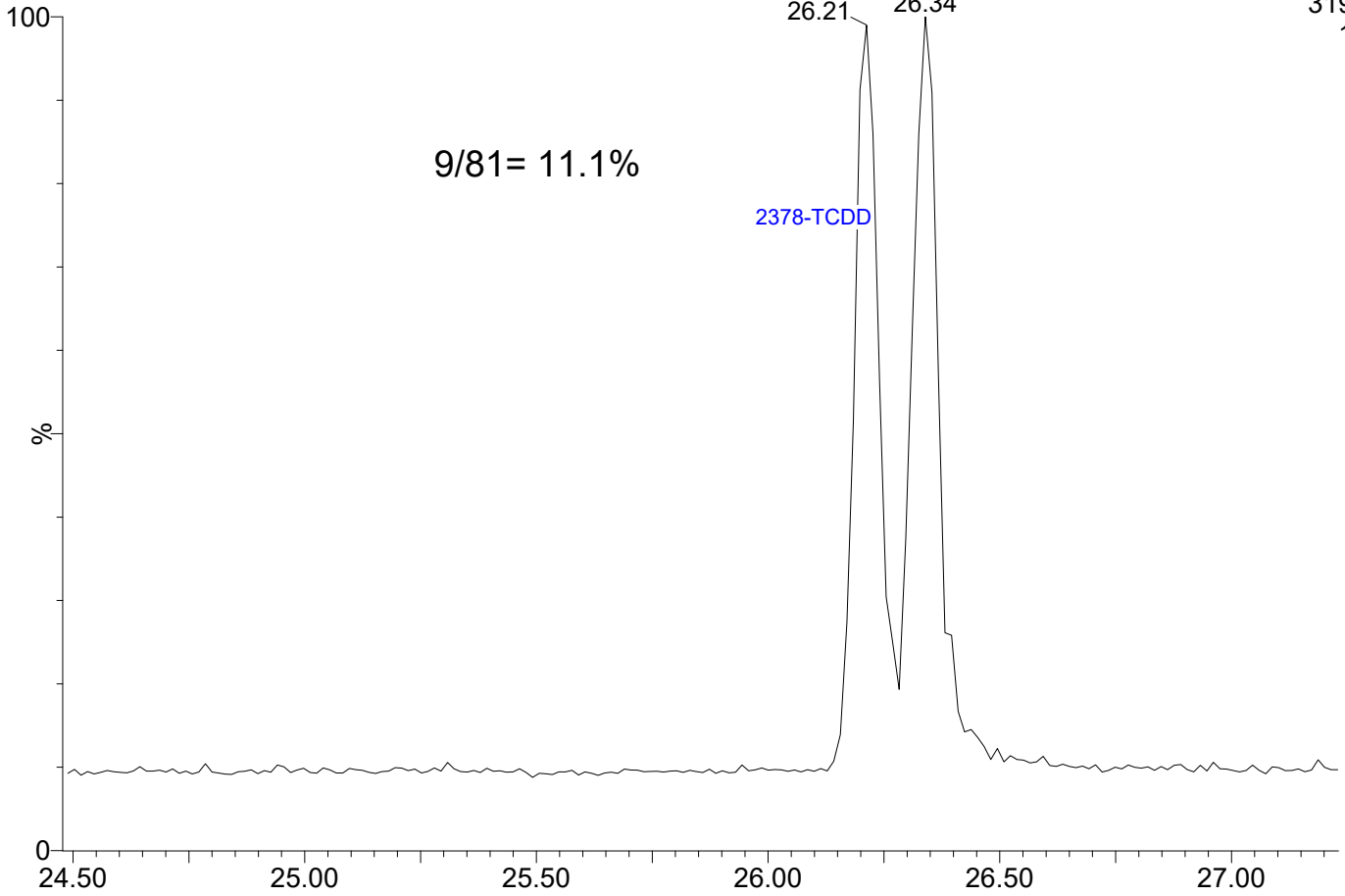


23031522

1: Voltage SIR 14 Channels EI+

319.8965

1.84e5

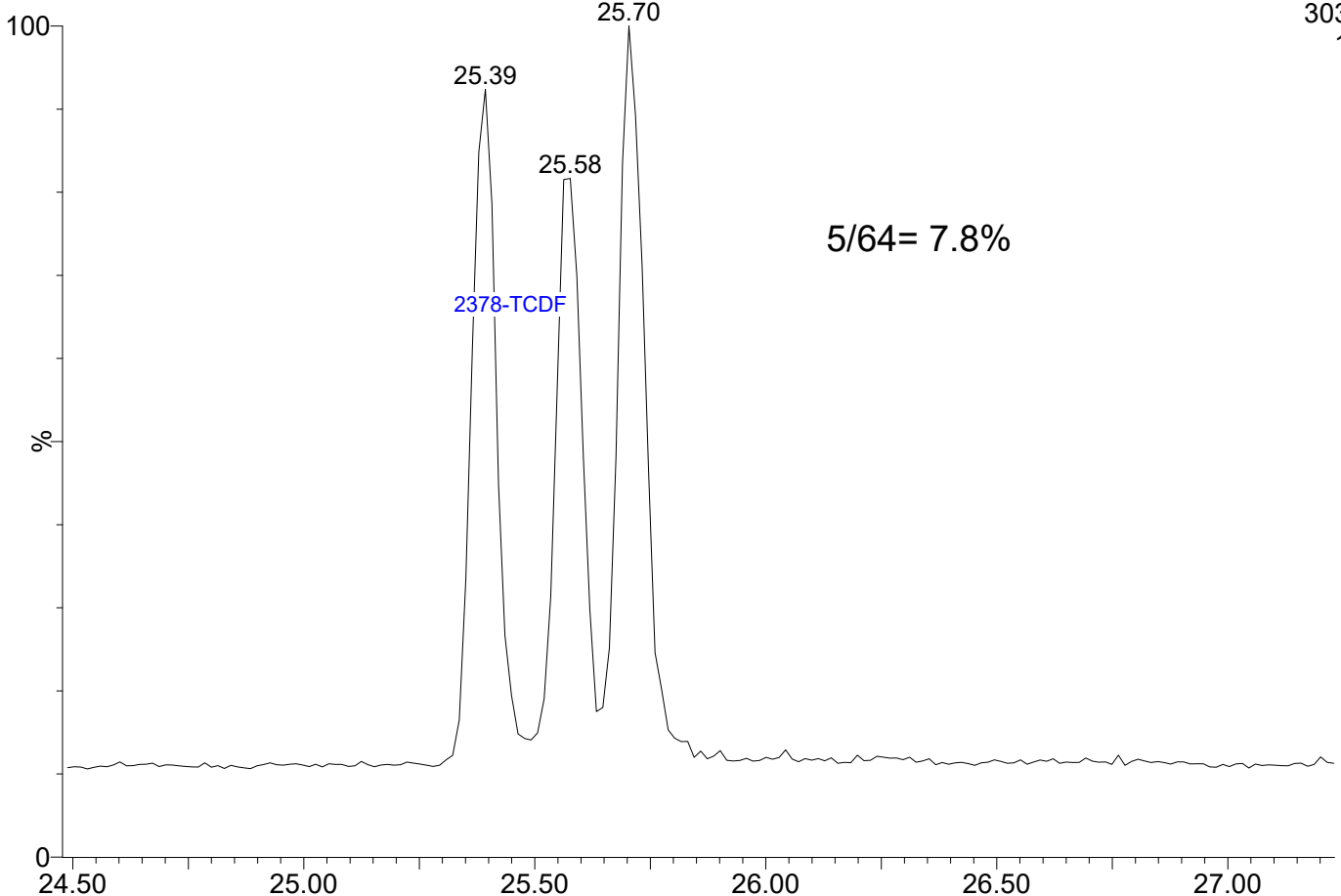


23031522

1: Voltage SIR 14 Channels EI+

303.9016

1.58e5





**CONTINUING CALIBRATION CHECK**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: AUTOSPEC01

Calibration: GC00015

Lab File ID: 23031711

Calibration Date: 03/03/2023

Sequence: SLC0258

Injection Date: 03/17/23

Lab Sample ID: SLC0258-CCV1

Injection Time: 18:31

Sequence Name: CS3A2

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.5	0.7015272	0.7343627		4.7	+/-16
2,3,7,8-TCDD	A	10.000	9.47	1.1486620	1.0874810		-5.3	+/-22
1,2,3,7,8-PeCDF	A	50.000	56.2	0.6792300	0.7639047		12.5	+/-18
2,3,4,7,8-PeCDF	A	50.000	54.0	0.7861704	0.8485577		7.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	53.3	1.0218450	1.0901250		6.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.4	1.1660380	1.1048400		-5.2	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	47.9	1.0907410	1.0446890		-4.2	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.1	1.1396990	1.1181500		-1.9	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.2	1.1370930	1.0971480		-3.5	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	46.7	0.9955689	0.9300809		-6.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	44.3	1.0009380	0.8868115		-11.4	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.7	0.9071139	0.9377058		3.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	51.3	1.0029930	1.0296570		2.7	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	54.3	0.9531152	1.0341630		8.5	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	49.6	1.0390130	1.0296620		-0.9	+/-14
OCDF	A	100.00	101	0.7778078	0.7854134		1.0	+/-37
OCDD	A	100.00	99.8	0.9199537	0.9178852		-0.2	+/-21
13C12-2,3,7,8-TCDF	A	100.00	89.3	1.6201960	1.4469520		-10.7	+/-29
13C12-2,3,7,8-TCDD	A	100.00	102	1.1524090	1.1756270		2.0	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	103	1.2404520	1.2761662		2.9	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	109	1.1177860	1.2196392		9.1	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	103	0.8288129	0.8516406		2.8	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	82.9	1.1683050	0.9679616		-17.1	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	75.4	1.3864660	1.0456094		-24.6	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	81.6	1.1292560	0.9212308		-18.4	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	89.1	0.9317541	0.8301927		-10.9	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.8	0.9950393	0.9329793		-6.2	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.8	1.1566890	1.0044224		-13.2	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	85.0	0.8952017	0.7606883		-15.0	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	88.4	0.7697516	0.6802011		-11.6	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	87.1	0.8401226	0.7320299		-12.9	+/-28
13C12-OCDD	A	200.00	208	0.7674714	0.7973666		3.9	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.91	1.2878040	1.1472358		-10.9	

\* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
 Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.577	1.001	2.228e4	2.860e4	0.702	0.779	0.770	832	1054	3.33e5	4.34e5	399.6	412.2	NO	bb	bb	10.468
12378-PeCDF	29.747	1.001	1.402e5	9.316e4	0.679	1.505	1.550	1584	1172	2.12e6	1.37e6	1335.8	1172.9	NO	bb	bb	56.233
23478-PeCDF	31.084	1.001	1.495e5	9.829e4	0.786	1.521	1.550	1584	1172	2.28e6	1.49e6	1439.6	1273.4	NO	bb	bb	53.968
123478-HxCDF	34.727	1.000	1.656e5	1.316e5	1.166	1.258	1.240	1369	1022	2.56e6	2.03e6	1868.7	1983.1	NO	bd	bd	47.376
234678-HxCDF	35.741	1.001	1.588e5	1.274e5	1.140	1.247	1.240	1369	1022	2.57e6	2.03e6	1881.5	1989.2	NO	bb	bd	49.055
123678-HxCDF	34.872	1.001	1.690e5	1.346e5	1.091	1.255	1.240	1369	1022	2.58e6	2.03e6	1883.4	1991.0	NO	dd	db	47.889
123789-HxCDF	36.766	1.000	1.392e5	1.140e5	1.137	1.221	1.240	1369	1022	2.09e6	1.72e6	1527.5	1681.9	NO	bb	bd	48.244
1234678-HpCDF	38.638	1.000	1.105e5	1.072e5	1.003	1.030	1.050	1014	1127	1.82e6	1.75e6	1796.2	1556.8	NO	bb	bb	51.329
1234789-HpCDF	40.844	1.000	9.807e4	9.743e4	0.953	1.007	1.050	1014	1127	1.35e6	1.35e6	1333.4	1199.2	NO	bb	bd	54.252
OCDF	45.057	1.005	1.645e5	1.836e5	0.778	0.896	0.890	1175	1193	1.89e6	2.09e6	1608.8	1755.2	NO	bd	bd	100.978
2378-TCDD	26.212	1.001	2.745e4	3.377e4	1.149	0.813	0.770	835	1086	3.99e5	5.11e5	478.1	470.5	NO	bb	bb	9.467
12378-PeCDD	31.329	1.000	1.342e5	8.811e4	1.022	1.523	1.550	1497	982	2.00e6	1.32e6	1334.1	1345.3	NO	bb	bb	53.341
123478-HxCDD	35.853	1.001	1.333e5	1.079e5	0.996	1.235	1.240	1127	1551	2.18e6	1.73e6	1930.3	1113.4	NO	bd	bd	46.711
123678-HxCDD	35.964	1.000	1.368e5	1.108e5	1.001	1.234	1.240	1127	1551	2.20e6	1.77e6	1949.6	1143.0	NO	db	db	44.299
123789-HxCDD	36.354	1.011	1.386e5	1.139e5	0.907	1.217	1.240	1127	1551	2.24e6	1.82e6	1984.3	1172.6	NO	bb	bb	51.686
1234678-HpCDD	40.120	1.001	1.056e5	1.039e5	1.039	1.016	1.050	1185	1075	1.66e6	1.59e6	1400.5	1480.8	NO	bb	bb	49.550
OCDD	44.838	1.000	1.883e5	2.185e5	0.920	0.861	0.890	919	854	2.30e6	2.64e6	2505.4	3092.7	NO	bb	bb	99.775
13C-2378-TCDF	25.563	1.007	2.975e5	3.953e5	1.620	0.752	0.770	1807	1495	4.44e6	5.87e6	2456.1	3927.7	NO	bb	bb	89.307
13C-12378-PeCDF	29.725	1.171	3.678e5	2.432e5	1.240	1.513	1.550	1454	1528	5.38e6	3.60e6	3699.4	2356.5	NO	bb	bb	102.879
13C-23478-PeCDF	31.062	1.224	3.522e5	2.318e5	1.118	1.520	1.550	1454	1528	5.54e6	3.63e6	3809.6	2376.3	NO	bb	bb	109.112
13C-123478-HxCDF	34.716	0.955	1.812e5	3.568e5	1.168	0.508	0.510	1144	1226	2.82e6	5.52e6	2462.9	4506.7	NO	bd	bd	82.852
13C-123678-HxCDF	34.850	0.959	1.945e5	3.867e5	1.386	0.503	0.510	1144	1226	2.91e6	5.82e6	2545.4	4752.1	NO	dd	dd	75.415
13C-234678-HxCDF	35.719	0.983	1.727e5	3.393e5	1.129	0.509	0.510	1144	1226	2.75e6	5.45e6	2403.4	4446.5	NO	bb	bb	81.579
13C-123789-HxCDF	36.755	1.011	1.553e5	3.061e5	0.932	0.507	0.510	1144	1226	2.47e6	4.86e6	2157.2	3962.2	NO	bb	bb	89.100
13C-1234678-HpCDF	38.627	1.063	1.313e5	2.915e5	0.895	0.450	0.440	956	1405	2.20e6	4.91e6	2298.8	3494.2	NO	bb	bb	84.974
13C-1234789-HpCDF	40.833	1.124	1.150e5	2.630e5	0.770	0.437	0.440	956	1405	1.67e6	3.79e6	1750.5	2695.8	NO	bb	bb	88.366
13C-1234-TCDD	25.379	0.000	2.117e5	2.671e5	1.000	0.792	0.770	1880	900	3.30e6	4.17e6	1756.0	4632.2	NO	bb	bb	100.000
13C-2378-TCDD	26.198	1.032	2.449e5	3.180e5	1.152	0.770	0.770	1880	900	3.67e6	4.79e6	1952.9	5322.1	NO	bb	bb	102.015
13C-12378-PeCDD	31.318	1.234	2.522e5	1.555e5	0.829	1.622	1.550	938	686	3.84e6	2.34e6	4090.5	3408.1	NO	bb	bb	102.754
13C-123478-HxCDD	35.830	0.986	2.911e5	2.275e5	0.995	1.280	1.240	1540	962	4.63e6	3.71e6	3004.6	3855.3	NO	bd	bd	93.763
13C-123678-HxCDD	35.953	0.989	3.081e5	2.502e5	1.157	1.232	1.240	1540	962	4.79e6	3.78e6	3110.3	3926.9	NO	db	db	86.836
13C-1234678-HpCDD	40.097	1.103	2.107e5	1.961e5	0.840	1.074	1.050	1138	940	3.16e6	2.99e6	2777.2	3183.4	NO	bb	bb	87.134
13C-OCDD	44.819	1.233	4.167e5	4.697e5	0.767	0.887	0.890	1421	791	4.93e6	5.59e6	3471.3	7073.9	NO	bb	bb	207.791
13C-123789-HxCDD	36.343	0.000	3.057e5	2.501e5	1.000	1.222	1.240	1540	962	4.98e6	4.04e6	3230.6	4201.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.212	1.033	5.493e4		1.288			1383		8.26e5		597.1			bb		8.908



Dataset: T:\Autospec\Processed Data Batch\230317.qld  
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**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk**

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.073	0.864	2.452e4	3.328e4	0.802	0.737	0.770	832	1054	3.77e5	5.08e5	453.0	481.9	NO	bb	bb	10.409
1289-TCDF	27.060	1.059	2.172e4	2.848e4	0.678	0.763	0.770	832	1054	3.05e5	4.02e5	366.4	381.5	NO	db	db	10.686
13468-PECDF	26.933	0.906	2.331e5	1.555e5	1.246	1.500	1.550	597	847	3.52e6	2.39e6	5902.0	2817.3	NO	bb	bb	51.018
12389-PECDF	32.120	1.081	1.431e5	9.364e4	0.496	1.528	1.550	1584	1172	2.02e6	1.28e6	1273.3	1094.1	NO	bb	bd	78.039
123468-HXCDF	33.056	0.952	1.768e5	1.416e5	1.169	1.248	1.240	1369	1022	2.51e6	2.04e6	1834.1	1994.2	NO	bb	bb	50.627
1368-TCDD	23.345	0.891	2.391e4	3.066e4	1.015	0.780	0.770	835	1086	3.67e5	4.62e5	440.1	426.0	NO	bb	bd	9.548
1289-TCDD	26.806	1.023	2.360e4	3.023e4	0.909	0.780	0.770	835	1086	3.36e5	4.24e5	402.6	390.2	NO	bb	bd	10.524
12479-PECDD	28.611	0.914	2.210e5	1.426e5	2.301	1.550	1.550	1497	982	2.17e6	1.38e6	1449.1	1410.4	NO	bb	bb	38.741
12389-PECDD	31.730	1.013	1.573e5	1.030e5	1.184	1.528	1.550	1497	982	2.32e6	1.54e6	1547.2	1565.7	NO	bb	bb	53.936
124679-HXCDD	33.836	0.944	1.512e5	1.250e5	1.115	1.209	1.240	1127	1551	2.25e6	1.85e6	1993.2	1193.5	NO	bb	bb	47.740
1234679-HPCDD	39.072	0.974	1.149e5	1.136e5	1.137	1.011	1.050	1185	1075	1.82e6	1.76e6	1532.2	1640.7	NO	bb	bb	49.411
Total-tetrafurans			6.851e4		0.727			832		1.01e6							31.563
Total-penta1			2.331e5					597		3.52e6							51.018
Total-pentafurans			4.554e5		0.654			1584		6.74e6							197.841
Total-hexafurans			8.094e5		1.141			1369		1.23e7							243.190
Total-heptafurans			2.094e5		0.978			1014		3.19e6							106.005
Total-Furans			1.940e6		0.922			832		2.87e7							730.596
Total-tetradiioxins			1.247e5		1.024			835		1.68e6							49.146
Total-pentadiioxins			5.124e5		1.502			1497		6.48e6							146.018
Total-hexadiioxins			5.597e5		1.005			1127		8.86e6							190.436
Total-heptadiioxins			2.205e5		1.088			1185		3.48e6							98.961
Total-Dioxins			1.606e6		1.130			835		2.28e7							584.337
Total-TEQ			3.546e6					835		5.15e7							1314.933
FUNCTION1 PFK			5.443e5					383997		1.34e7							
FUNCTION2 PFK			1.756e6					156173		1.35e7							0.000
FUNCTION3 PFK			3.803e7					521904		2.74e7							0.000
FUNCTION4 PFK			2.083e5					266064		6.54e6							
FUNCTION5 PFK			4.170e4					208376		1.88e6							
FUNCTION1 HXCD...			9.450e2					664		1.45e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.357e2					957		1.90e4							0.000
FUNCTION3 OCDPE			1.937e2					640		2.99e3							0.000
FUNCTION4 NCDPE			9.084e1					587		1.11e3							0.000
FUNCTION5 DCDPE			0.000e0					733		0.00e0							

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
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Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09

Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**TF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.06	2.172e4	2.848e4	0.678	0.76	0.77	366.4	YES	NO	db	db	10.686
2	2378-TCDF	25.58	2.228e4	2.860e4	0.702	0.78	0.77	399.6	YES	NO	bb	bb	10.468
3	1368-TCDF	22.07	2.452e4	3.328e4	0.802	0.74	0.77	453.0	YES	NO	bb	bb	10.409

**PP**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.93	2.331e5	1.555e5	1.246	1.50	1.55	5902.0	YES	NO	bb	bb	51.018

**PF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.12	1.431e5	9.364e4	0.496	1.53	1.55	1273.3	YES	NO	bb	bd	78.039
2	23478-PeCDF	31.08	1.495e5	9.829e4	0.786	1.52	1.55	1439.6	YES	NO	bb	bb	53.968
3	Total-pentafurans	30.04	2.046e2	1.397e2	0.654	1.46	1.55	1.8	NO	NO	bb	bb	0.088
4	12378-PeCDF	29.75	1.402e5	9.316e4	0.679	1.51	1.55	1335.8	YES	NO	bb	bb	56.233
5	Total-pentafurans	28.59	2.245e4	1.471e4	0.654	1.53	1.55	208.7	YES	NO	bb	bb	9.513

**HF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.77	1.392e5	1.140e5	1.137	1.22	1.24	1527.5	YES	NO	bb	bd	48.244
2	234678-HxCDF	35.74	1.588e5	1.274e5	1.140	1.25	1.24	1881.5	YES	NO	bb	bd	49.055
3	123678-HxCDF	34.87	1.690e5	1.346e5	1.091	1.26	1.24	1883.4	YES	NO	dd	db	47.889
4	123478-HxCDF	34.73	1.656e5	1.316e5	1.166	1.26	1.24	1868.7	YES	NO	bd	bd	47.376
5	123468-HXCDF	33.06	1.768e5	1.416e5	1.169	1.25	1.24	1834.1	YES	NO	bb	bb	50.627

**HPF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.84	9.807e4	9.743e4	0.953	1.01	1.05	1333.4	YES	NO	bb	bd	54.252
2	Total-heptafurans	39.27	8.311e2	8.309e2	0.978	1.00	1.05	12.1	YES	NO	bb	bb	0.424
3	1234678-HpCDF	38.64	1.105e5	1.072e5	1.003	1.03	1.05	1796.2	YES	NO	bb	bb	51.329

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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**Furans,TF,PP,PF,HF,HPF,OF**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.06	2.172e4	2.848e4	0.678	0.76	0.77	366.4	YES	NO	db	db	10.686
2	2378-TCDF	25.58	2.228e4	2.860e4	0.702	0.78	0.77	399.6	YES	NO	bb	bb	10.468
3	1368-TCDF	22.07	2.452e4	3.328e4	0.802	0.74	0.77	453.0	YES	NO	bb	bb	10.409
4	12389-PECDF	32.12	1.431e5	9.364e4	0.496	1.53	1.55	1273.3	YES	NO	bb	bd	78.039
5	23478-PeCDF	31.08	1.495e5	9.829e4	0.786	1.52	1.55	1439.6	YES	NO	bb	bb	53.968
6	Total-pentafurans	30.04	2.046e2	1.397e2	0.654	1.46	1.55	1.8	NO	NO	bb	bb	0.088
7	12378-PeCDF	29.75	1.402e5	9.316e4	0.679	1.51	1.55	1335.8	YES	NO	bb	bb	56.233
8	Total-pentafurans	28.59	2.245e4	1.471e4	0.654	1.53	1.55	208.7	YES	NO	bb	bb	9.513
9	123789-HxCDF	36.77	1.392e5	1.140e5	1.137	1.22	1.24	1527.5	YES	NO	bb	bd	48.244
10	234678-HxCDF	35.74	1.588e5	1.274e5	1.140	1.25	1.24	1881.5	YES	NO	bb	bd	49.055
11	123678-HxCDF	34.87	1.690e5	1.346e5	1.091	1.26	1.24	1883.4	YES	NO	dd	db	47.889
12	123478-HxCDF	34.73	1.656e5	1.316e5	1.166	1.26	1.24	1868.7	YES	NO	bd	bd	47.376
13	123468-HXCDF	33.06	1.768e5	1.416e5	1.169	1.25	1.24	1834.1	YES	NO	bb	bb	50.627
14	1234789-HpCDF	40.84	9.807e4	9.743e4	0.953	1.01	1.05	1333.4	YES	NO	bb	bd	54.252
15	Total-heptafurans	39.27	8.311e2	8.309e2	0.978	1.00	1.05	12.1	YES	NO	bb	bb	0.424
16	1234678-HpCDF	38.64	1.105e5	1.072e5	1.003	1.03	1.05	1796.2	YES	NO	bb	bb	51.329
17	OCDF	45.06	1.645e5	1.836e5	0.778	0.90	0.89	1608.8	YES	NO	bd	bd	100.978
18	13468-PECDF	26.93	2.331e5	1.555e5	1.246	1.50	1.55	5902.0	YES	NO	bb	bb	51.018

**TD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.34	2.391e4	3.066e4	1.015	0.78	0.77	440.1	YES	NO	bb	bd	9.548
2	1289-TCDD	26.81	2.360e4	3.023e4	0.909	0.78	0.77	402.6	YES	NO	bb	bd	10.524
3	2378-TCDD	26.21	2.745e4	3.377e4	1.149	0.81	0.77	478.1	YES	NO	bb	bb	9.467
4	Total-tetradoxins	25.89	3.810e4	4.891e4	1.024	0.78	0.77	471.7	YES	NO	bb	bd	15.092
5	Total-tetradoxins	25.39	1.162e4	1.441e4	1.024	0.81	0.77	215.6	YES	NO	bb	bb	4.515

**PD**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.73	1.573e5	1.030e5	1.184	1.53	1.55	1547.2	YES	NO	bb	bb	53.936
2	12378-PeCDD	31.33	1.342e5	8.811e4	1.022	1.52	1.55	1334.1	YES	NO	bb	bb	53.341
3	12479-PECDD	28.61	2.210e5	1.426e5	2.301	1.55	1.55	1449.1	YES	NO	bb	bb	38.741

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## HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.35	1.386e5	1.139e5	0.907	1.22	1.24	1984.3	YES	NO	bb	bb	51.686
2	123678-HxCDD	35.96	1.368e5	1.108e5	1.001	1.23	1.24	1949.6	YES	NO	db	db	44.299
3	123478-HxCDD	35.85	1.333e5	1.079e5	0.996	1.23	1.24	1930.3	YES	NO	bd	bd	46.711
4	124679-HXCDD	33.84	1.512e5	1.250e5	1.115	1.21	1.24	1993.2	YES	NO	bb	bb	47.740

## HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.12	1.056e5	1.039e5	1.039	1.02	1.05	1400.5	YES	NO	bb	bb	49.550
2	1234679-HPCDD	39.07	1.149e5	1.136e5	1.137	1.01	1.05	1532.2	YES	NO	bb	bb	49.411

## Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.34	2.391e4	3.066e4	1.015	0.78	0.77	440.1	YES	NO	bb	bd	9.548
2	1289-TCDD	26.81	2.360e4	3.023e4	0.909	0.78	0.77	402.6	YES	NO	bb	bd	10.524
3	2378-TCDD	26.21	2.745e4	3.377e4	1.149	0.81	0.77	478.1	YES	NO	bb	bb	9.467
4	Total-tetradoxins	25.89	3.810e4	4.891e4	1.024	0.78	0.77	471.7	YES	NO	bb	bd	15.092
5	Total-tetradoxins	25.39	1.162e4	1.441e4	1.024	0.81	0.77	215.6	YES	NO	bb	bb	4.515
6	12389-PECDD	31.73	1.573e5	1.030e5	1.184	1.53	1.55	1547.2	YES	NO	bb	bb	53.936
7	12378-PeCDD	31.33	1.342e5	8.811e4	1.022	1.52	1.55	1334.1	YES	NO	bb	bb	53.341
8	12479-PECDD	28.61	2.210e5	1.426e5	2.301	1.55	1.55	1449.1	YES	NO	bb	bb	38.741
9	123789-HxCDD	36.35	1.386e5	1.139e5	0.907	1.22	1.24	1984.3	YES	NO	bb	bb	51.686
10	123678-HxCDD	35.96	1.368e5	1.108e5	1.001	1.23	1.24	1949.6	YES	NO	db	db	44.299
11	123478-HxCDD	35.85	1.333e5	1.079e5	0.996	1.23	1.24	1930.3	YES	NO	bd	bd	46.711
12	124679-HXCDD	33.84	1.512e5	1.250e5	1.115	1.21	1.24	1993.2	YES	NO	bb	bb	47.740
13	OCDD	44.84	1.883e5	2.185e5	0.920	0.86	0.89	2505.4	YES	NO	bb	bb	99.775
14	1234678-HpCDD	40.12	1.056e5	1.039e5	1.039	1.02	1.05	1400.5	YES	NO	bb	bb	49.550
15	1234679-HPCDD	39.07	1.149e5	1.136e5	1.137	1.01	1.05	1532.2	YES	NO	bb	bb	49.411

## Quantify Totals Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
 Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
 Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.06	2.172e4	2.848e4	0.678	0.76	0.77	366.4	YES	NO	db	db	10.686
2	2378-TCDF	25.58	2.228e4	2.860e4	0.702	0.78	0.77	399.6	YES	NO	bb	bb	10.468
3	1368-TCDF	22.07	2.452e4	3.328e4	0.802	0.74	0.77	453.0	YES	NO	bb	bb	10.409
4	12389-PECDF	32.12	1.431e5	9.364e4	0.496	1.53	1.55	1273.3	YES	NO	bb	bd	78.039
5	23478-PeCDF	31.08	1.495e5	9.829e4	0.786	1.52	1.55	1439.6	YES	NO	bb	bb	53.968
6	Total-pentafurans	30.04	2.046e2	1.397e2	0.654	1.46	1.55	1.8	NO	NO	bb	bb	0.088
7	12378-PeCDF	29.75	1.402e5	9.316e4	0.679	1.51	1.55	1335.8	YES	NO	bb	bb	56.233
8	Total-pentafurans	28.59	2.245e4	1.471e4	0.654	1.53	1.55	208.7	YES	NO	bb	bb	9.513
9	123789-HxCDF	36.77	1.392e5	1.140e5	1.137	1.22	1.24	1527.5	YES	NO	bb	bd	48.244
10	234678-HxCDF	35.74	1.588e5	1.274e5	1.140	1.25	1.24	1881.5	YES	NO	bb	bd	49.055
11	123678-HxCDF	34.87	1.690e5	1.346e5	1.091	1.26	1.24	1883.4	YES	NO	dd	db	47.889
12	123478-HxCDF	34.73	1.656e5	1.316e5	1.166	1.26	1.24	1868.7	YES	NO	bd	bd	47.376
13	123468-HXCDF	33.06	1.768e5	1.416e5	1.169	1.25	1.24	1834.1	YES	NO	bb	bb	50.627
14	1234789-HpCDF	40.84	9.807e4	9.743e4	0.953	1.01	1.05	1333.4	YES	NO	bb	bd	54.252
15	Total-heptafurans	39.27	8.311e2	8.309e2	0.978	1.00	1.05	12.1	YES	NO	bb	bb	0.424
16	1234678-HpCDF	38.64	1.105e5	1.072e5	1.003	1.03	1.05	1796.2	YES	NO	bb	bb	51.329
17	OCDF	45.06	1.645e5	1.836e5	0.778	0.90	0.89	1608.8	YES	NO	bd	bd	100.978
18	13468-PECDF	26.93	2.331e5	1.555e5	1.246	1.50	1.55	5902.0	YES	NO	bb	bb	51.018
19	1368-TCDD	23.34	2.391e4	3.066e4	1.015	0.78	0.77	440.1	YES	NO	bb	bd	9.548
20	1289-TCDD	26.81	2.360e4	3.023e4	0.909	0.78	0.77	402.6	YES	NO	bb	bd	10.524
21	2378-TCDD	26.21	2.745e4	3.377e4	1.149	0.81	0.77	478.1	YES	NO	bb	bb	9.467
22	Total-tetradiioxins	25.89	3.810e4	4.891e4	1.024	0.78	0.77	471.7	YES	NO	bb	bd	15.092
23	Total-tetradiioxins	25.39	1.162e4	1.441e4	1.024	0.81	0.77	215.6	YES	NO	bb	bb	4.515
24	12389-PECDD	31.73	1.573e5	1.030e5	1.184	1.53	1.55	1547.2	YES	NO	bb	bb	53.936
25	12378-PeCDD	31.33	1.342e5	8.811e4	1.022	1.52	1.55	1334.1	YES	NO	bb	bb	53.341
26	12479-PECDD	28.61	2.210e5	1.426e5	2.301	1.55	1.55	1449.1	YES	NO	bb	bb	38.741
27	123789-HxCDD	36.35	1.386e5	1.139e5	0.907	1.22	1.24	1984.3	YES	NO	bb	bb	51.686
28	123678-HxCDD	35.96	1.368e5	1.108e5	1.001	1.23	1.24	1949.6	YES	NO	db	db	44.299
29	123478-HxCDD	35.85	1.333e5	1.079e5	0.996	1.23	1.24	1930.3	YES	NO	bd	bd	46.711
30	124679-HXCDD	33.84	1.512e5	1.250e5	1.115	1.21	1.24	1993.2	YES	NO	bb	bb	47.740
31	OCDD	44.84	1.883e5	2.185e5	0.920	0.86	0.89	2505.4	YES	NO	bb	bb	99.775
32	1234678-HpCDD	40.12	1.056e5	1.039e5	1.039	1.02	1.05	1400.5	YES	NO	bb	bb	49.550
33	1234679-HPCDD	39.07	1.149e5	1.136e5	1.137	1.01	1.05	1532.2	YES	NO	bb	bb	49.411

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk****PFK1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.91	1.577e4					1.3	NO		db		
2	FUNCTION1 PFK	23.87	5.647e3					0.7	NO		bd		
3	FUNCTION1 PFK	23.49	3.108e3					0.6	NO		bb		
4	FUNCTION1 PFK	23.40	1.748e4					1.4	NO		bb		
5	FUNCTION1 PFK	23.23	3.655e4					1.9	NO		bb		
6	FUNCTION1 PFK	23.12	1.788e4					1.2	NO		bb		
7	FUNCTION1 PFK	22.44	5.871e3					0.8	NO		db		
8	FUNCTION1 PFK	22.40	2.784e4					1.3	NO		dd		
9	FUNCTION1 PFK	22.31	1.120e4					1.1	NO		dd		
10	FUNCTION1 PFK	22.27	9.590e3					1.0	NO		bd		
11	FUNCTION1 PFK	22.21	2.187e4					1.5	NO		bb		
12	FUNCTION1 PFK	21.55	1.234e4					1.0	NO		db		
13	FUNCTION1 PFK	21.49	2.261e4					1.3	NO		bd		
14	FUNCTION1 PFK	21.13	7.163e3					0.8	NO		bb		
15	FUNCTION1 PFK	27.58	2.507e4					1.4	NO		bb		
16	FUNCTION1 PFK	27.10	7.380e4					2.6	NO		bb		
17	FUNCTION1 PFK	26.66	6.166e4					1.6	NO		bb		
18	FUNCTION1 PFK	26.58	1.454e4					1.2	NO		bb		
19	FUNCTION1 PFK	26.52	5.919e3					0.9	NO		db		
20	FUNCTION1 PFK	26.48	8.169e3					0.9	NO		bd		
21	FUNCTION1 PFK	26.25	1.649e4					1.4	NO		bb		
22	FUNCTION1 PFK	26.20	1.901e4					1.2	NO		bb		
23	FUNCTION1 PFK	25.84	4.485e4					2.1	NO		bb		
24	FUNCTION1 PFK	25.70	9.516e3					1.1	NO		bb		
25	FUNCTION1 PFK	25.66	6.214e3					0.7	NO		bb		
26	FUNCTION1 PFK	25.24	1.622e4					1.3	NO		bb		
27	FUNCTION1 PFK	25.05	4.572e3					0.8	NO		bb		
28	FUNCTION1 PFK	24.36	3.719e3					0.7	NO		bb		
29	FUNCTION1 PFK	24.28	1.965e4					1.2	NO		bb		

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk****PFK2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.53	5.005e3					1.1	NO		bb		0.000
2	FUNCTION2 PFK	30.48	8.016e2					0.5	NO		bb		0.000
3	FUNCTION2 PFK	30.29	2.997e3					0.8	NO		bb		0.000
4	FUNCTION2 PFK	30.05	1.890e3					0.7	NO		bb		0.000
5	FUNCTION2 PFK	29.95	4.452e3					1.2	NO		db		0.000
6	FUNCTION2 PFK	29.89	1.303e4					2.2	NO		bd		0.000
7	FUNCTION2 PFK	29.81	3.168e3					0.9	NO		bb		0.000
8	FUNCTION2 PFK	29.68	1.625e4					1.5	NO		bb		0.000
9	FUNCTION2 PFK	29.00	8.978e2					0.5	NO		bb		0.000
10	FUNCTION2 PFK	28.89	9.353e2					0.5	NO		bb		0.000
11	FUNCTION2 PFK	28.82	5.077e3					1.2	NO		db		0.000
12	FUNCTION2 PFK	28.77	3.341e3					0.9	NO		bd		0.000
13	FUNCTION2 PFK	28.71	3.025e3					1.0	NO		bb		0.000
14	FUNCTION2 PFK	28.33	1.384e5					9.0	YES		db		0.000
15	FUNCTION2 PFK	28.12	1.004e6					18.0	YES		dd		0.000
16	FUNCTION2 PFK	27.89	4.291e5					29.1	YES		bd		0.000
17	FUNCTION2 PFK	32.41	3.665e3					1.0	NO		db		0.000
18	FUNCTION2 PFK	32.31	1.695e4					1.7	NO		bd		0.000
19	FUNCTION2 PFK	32.16	8.289e3					1.3	NO		bb		0.000
20	FUNCTION2 PFK	31.95	1.772e3					0.6	NO		bb		0.000
21	FUNCTION2 PFK	31.82	4.094e3					1.2	NO		db		0.000
22	FUNCTION2 PFK	31.77	7.367e3					1.3	NO		dd		0.000
23	FUNCTION2 PFK	31.72	2.198e4					2.5	NO		dd		0.000
24	FUNCTION2 PFK	31.59	3.840e3					1.0	NO		bd		0.000
25	FUNCTION2 PFK	31.18	1.838e4					1.8	NO		db		0.000
26	FUNCTION2 PFK	31.14	3.848e3					1.1	NO		bd		0.000
27	FUNCTION2 PFK	30.93	2.423e4					2.7	NO		bb		0.000
28	FUNCTION2 PFK	30.84	9.732e3					1.5	NO		bb		0.000

**PFK3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.99	1.823e7					25.7	YES		db		0.000
2	FUNCTION3 PFK	33.88	1.980e7					26.9	YES		bd		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

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**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk****PFK4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.63	1.326e3					0.4	NO		bb		
2	FUNCTION4 PFK	40.58	1.016e4					1.2	NO		bb		
3	FUNCTION4 PFK	40.43	7.005e3					1.0	NO		bb		
4	FUNCTION4 PFK	40.11	1.645e3					0.6	NO		bb		
5	FUNCTION4 PFK	40.01	1.281e3					0.4	NO		bb		
6	FUNCTION4 PFK	39.75	1.786e4					1.4	NO		db		
7	FUNCTION4 PFK	39.69	1.635e4					1.7	NO		dd		
8	FUNCTION4 PFK	39.65	1.044e4					1.7	NO		bd		
9	FUNCTION4 PFK	39.55	3.446e4					1.5	NO		bb		
10	FUNCTION4 PFK	39.42	3.625e3					0.7	NO		bb		
11	FUNCTION4 PFK	39.08	3.845e3					0.7	NO		bb		
12	FUNCTION4 PFK	38.94	8.730e3					1.3	NO		bb		
13	FUNCTION4 PFK	38.88	6.574e3					1.1	NO		bb		
14	FUNCTION4 PFK	38.65	1.359e3					0.5	NO		bb		
15	FUNCTION4 PFK	38.60	8.158e3					1.2	NO		bb		
16	FUNCTION4 PFK	37.92	3.142e3					0.7	NO		bb		
17	FUNCTION4 PFK	41.72	2.251e4					1.7	NO		bb		
18	FUNCTION4 PFK	41.62	1.080e4					1.4	NO		bb		
19	FUNCTION4 PFK	41.53	2.087e3					0.7	NO		bb		
20	FUNCTION4 PFK	41.23	1.143e4					1.3	NO		bb		
21	FUNCTION4 PFK	41.17	3.125e3					0.7	NO		bb		
22	FUNCTION4 PFK	41.09	1.767e3					0.5	NO		db		
23	FUNCTION4 PFK	41.04	2.064e4					2.2	NO		bd		

**PFK5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.68	1.270e4					1.5	NO		bb		
2	FUNCTION5 PFK	44.43	1.015e3					0.5	NO		bb		
3	FUNCTION5 PFK	44.36	9.536e2					0.5	NO		bb		
4	FUNCTION5 PFK	44.26	8.331e3					1.4	NO		bb		
5	FUNCTION5 PFK	43.79	3.103e3					1.0	NO		bb		
6	FUNCTION5 PFK	43.18	8.910e3					1.5	NO		bb		
7	FUNCTION5 PFK	43.00	1.025e3					0.5	NO		bb		
8	FUNCTION5 PFK	42.61	2.932e3					1.0	NO		bb		
9	FUNCTION5 PFK	45.91	9.530e2					0.5	NO		bb		
10	FUNCTION5 PFK	45.64	1.774e3					0.6	NO		bb		



**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

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Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk****ETHERS1**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.41	1.265e2					4.1	YES		bb		0.000
2	FUNCTION1 HXCD...	26.25	9.971e1					2.0	NO		bb		0.000
3	FUNCTION1 HXCD...	24.49	1.002e2					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	24.12	9.905e1					2.4	NO		db		0.000
5	FUNCTION1 HXCD...	24.05	9.238e1					2.6	NO		bd		0.000
6	FUNCTION1 HXCD...	23.77	1.367e2					1.9	NO		db		0.000
7	FUNCTION1 HXCD...	23.60	1.006e2					2.4	NO		bd		0.000
8	FUNCTION1 HXCD...	22.34	8.474e1					2.1	NO		bb		0.000
9	FUNCTION1 HXCD...	21.13	1.051e2					2.1	NO		bb		0.000

**ETHERS2**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

**ETHERS3**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.26	9.590e1					1.5	NO		bb		0.000
2	FUNCTION2 HPCD...	28.22	2.330e2					4.9	YES		bb		0.000
3	FUNCTION2 HPCD...	27.99	8.838e1					2.0	NO		bb		0.000
4	FUNCTION2 HPCD...	30.97	7.727e1					2.0	NO		db		0.000
5	FUNCTION2 HPCD...	30.91	9.260e1					2.9	NO		dd		0.000
6	FUNCTION2 HPCD...	30.88	7.639e1					3.0	NO		bd		0.000
7	FUNCTION2 HPCD...	30.03	8.520e1					2.0	NO		db		0.000
8	FUNCTION2 HPCD...	29.97	8.702e1					1.5	NO		bd		0.000

**ETHERS4**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	33.65	8.874e1					2.2	NO		bb		0.000
2	FUNCTION3 OCDPE	33.33	1.049e2					2.5	NO		bb		0.000

**ETHERS5**

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.22	9.084e1					1.9	NO		bb		0.000

**Quantify Totals Report MassLynx MassLynx V4.1 SCN909**

Dataset: T:\Autospec\Processed Data Batch\230317.qld  
Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time  
Printed: Monday, March 20, 2023 11:44:07 Pacific Daylight Time

**ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk**

**ETHERS6**

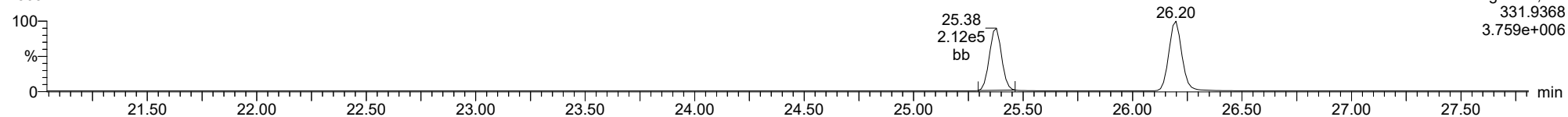
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1													

Method: T:\Autospec\Methods\Dioxin230315.mdb 20 Mar 2023 10:42:09  
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**13C-1234-TCDD**

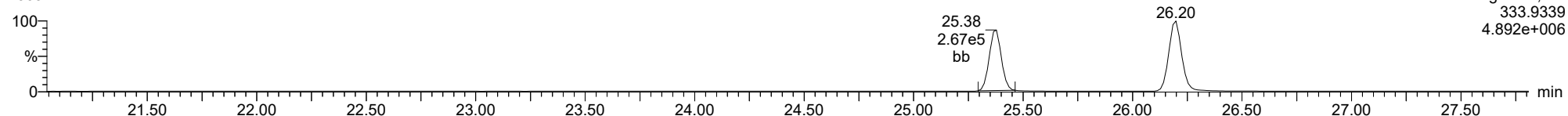
23031711



F1:Voltage SIR,El+  
331.9368  
3.759e+006

**13C-1234-TCDD**

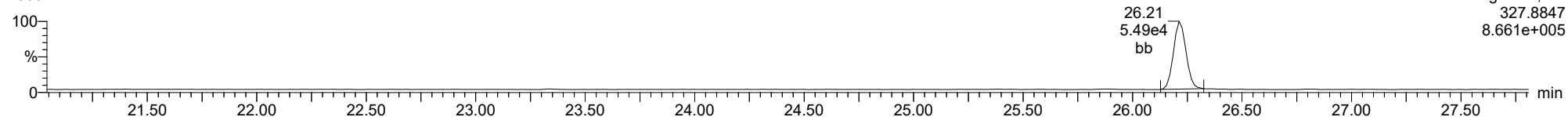
23031711



F1:Voltage SIR,El+  
333.9339  
4.892e+006

**37CL-2378-TCDD**

23031711

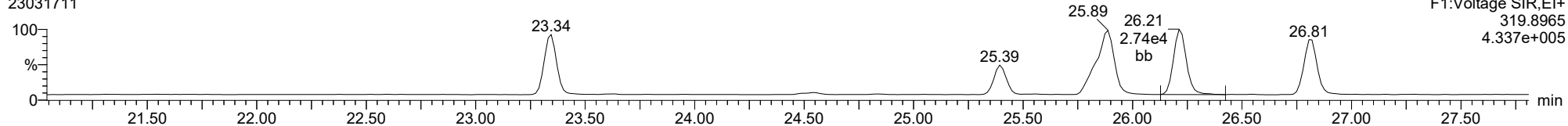


F1:Voltage SIR,El+  
327.8847  
8.661e+005

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

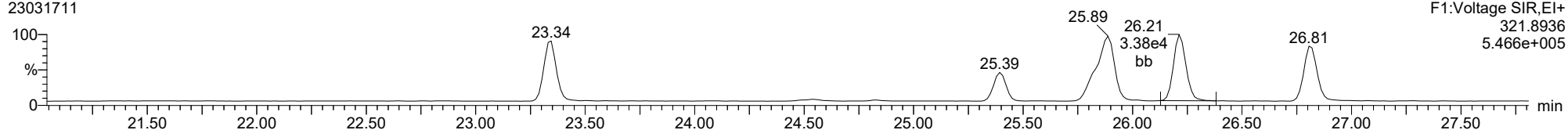
**2378-TCDD**

23031711



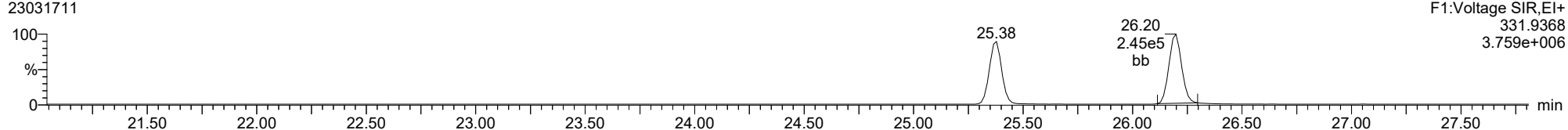
**2378-TCDD**

23031711



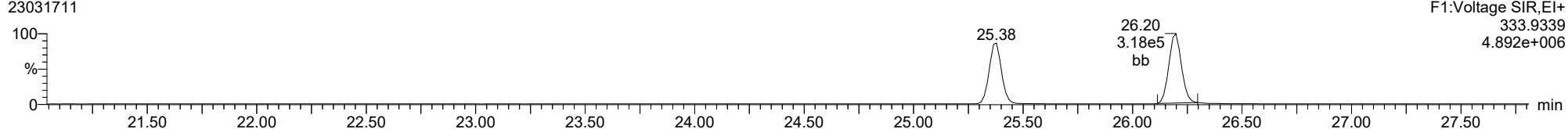
**13C-2378-TCDD**

23031711



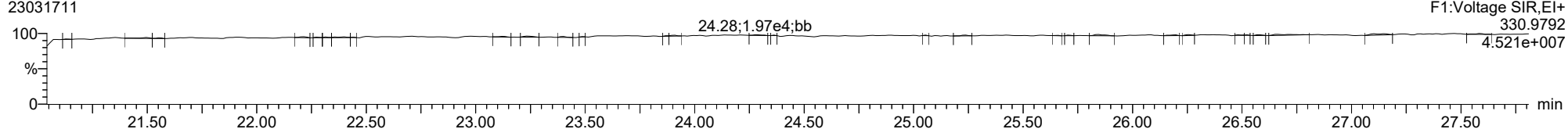
**13C-2378-TCDD**

23031711



**FUNCTION1 PFK**

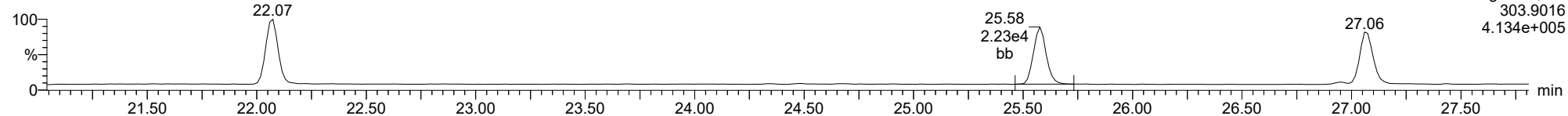
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

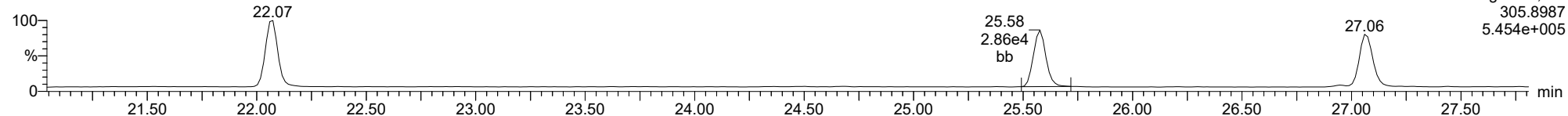
**2378-TCDF**

23031711



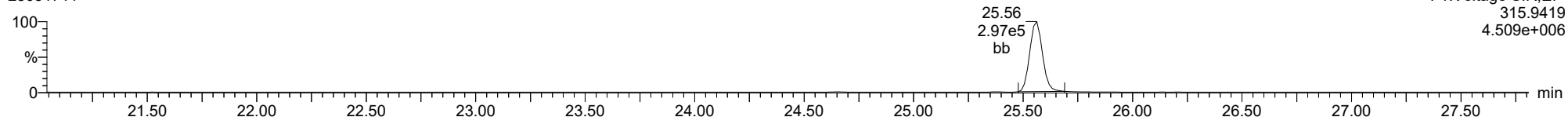
**2378-TCDF**

23031711



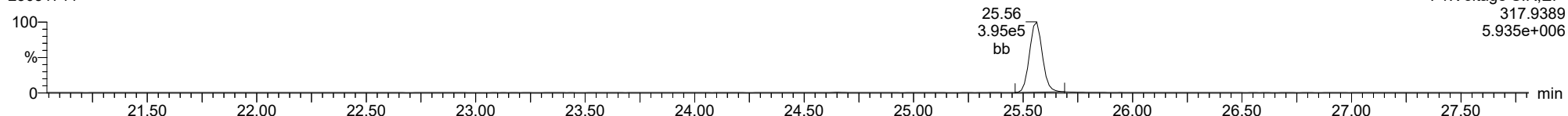
**13C-2378-TCDF**

23031711



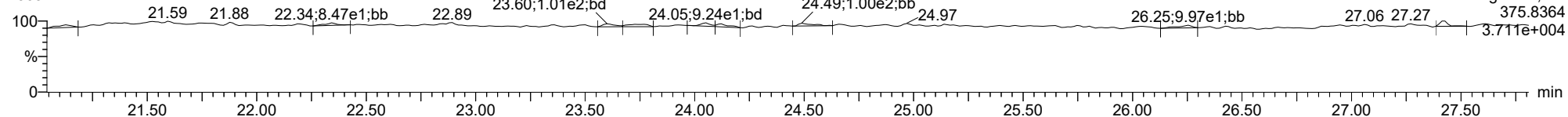
**13C-2378-TCDF**

23031711



**FUNCTION1 HXCDPE**

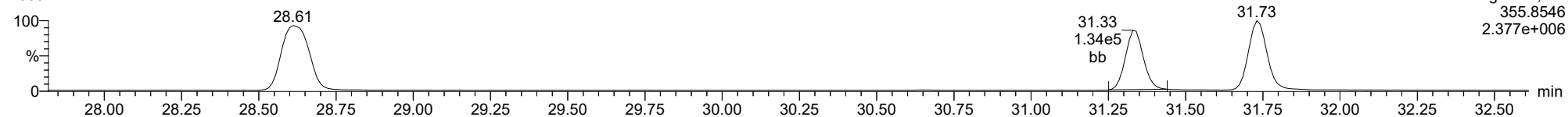
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

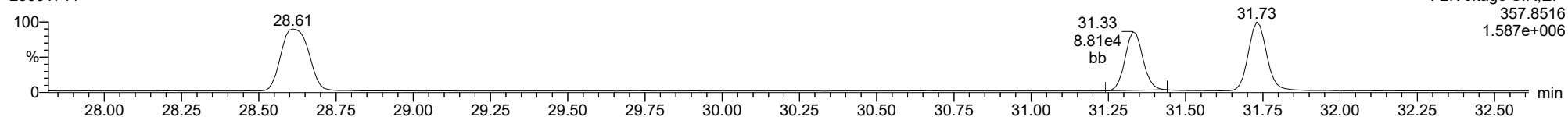
**12378-PeCDD**

23031711



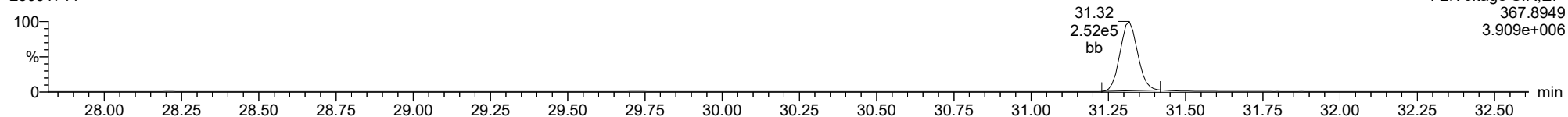
**12378-PeCDD**

23031711



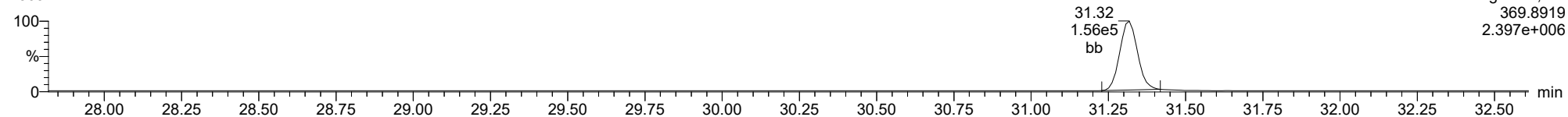
**13C-12378-PeCDD**

23031711



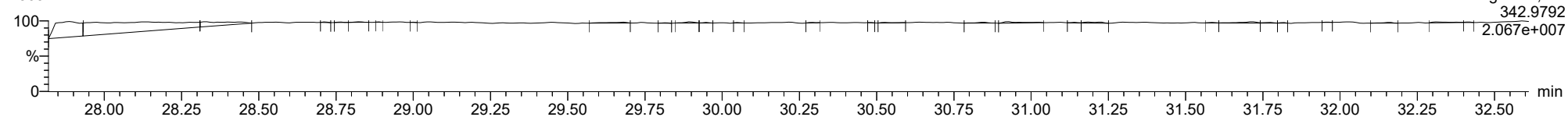
**13C-12378-PeCDD**

23031711



**FUNCTION2 PFK**

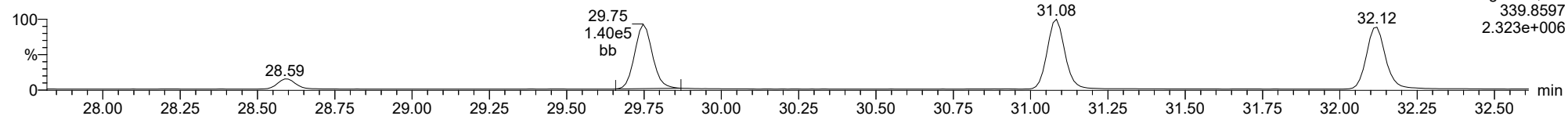
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

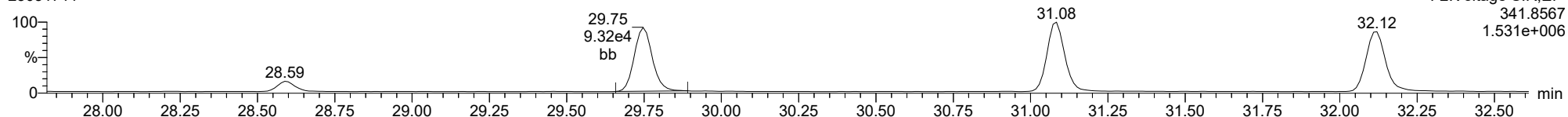
**12378-PeCDF**

23031711



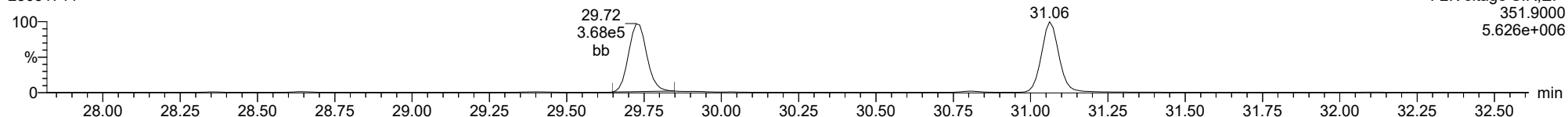
**12378-PeCDF**

23031711



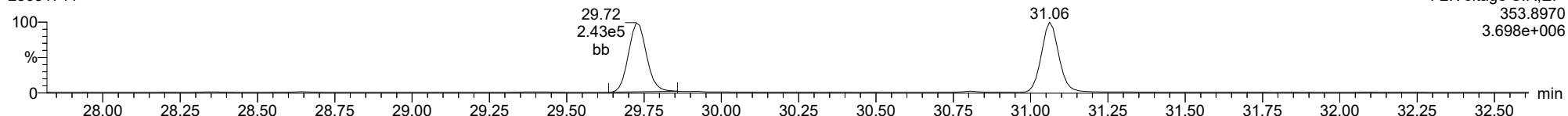
**13C-12378-PeCDF**

23031711



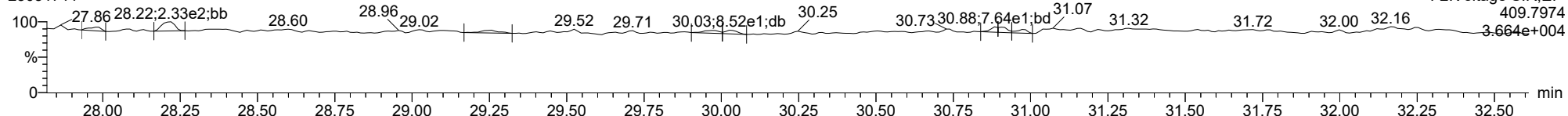
**13C-12378-PeCDF**

23031711



**FUNCTION2 HPCDPE**

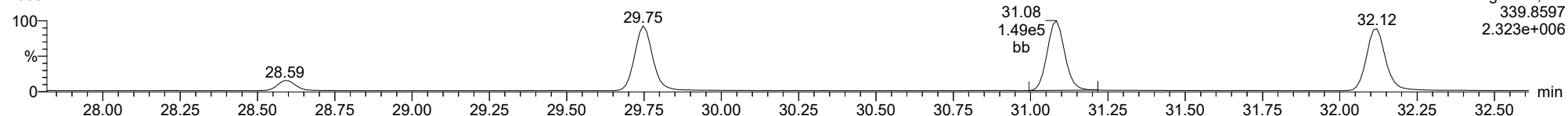
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**23478-PeCDF**

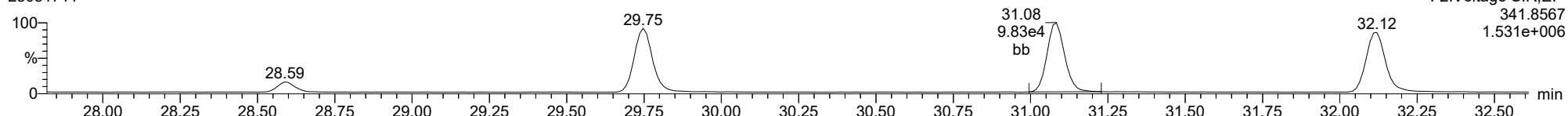
23031711



F2:Voltage SIR,EI+  
339.8597  
2.323e+006

**23478-PeCDF**

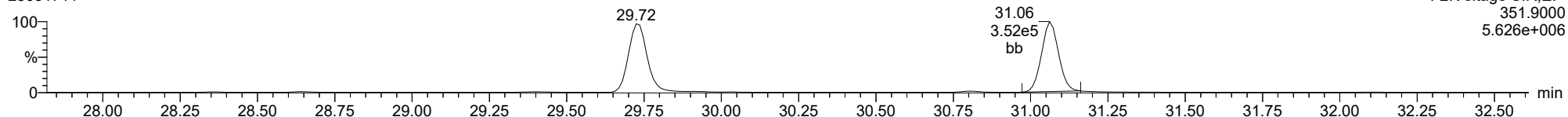
23031711



F2:Voltage SIR,EI+  
341.8567  
1.531e+006

**13C-23478-PeCDF**

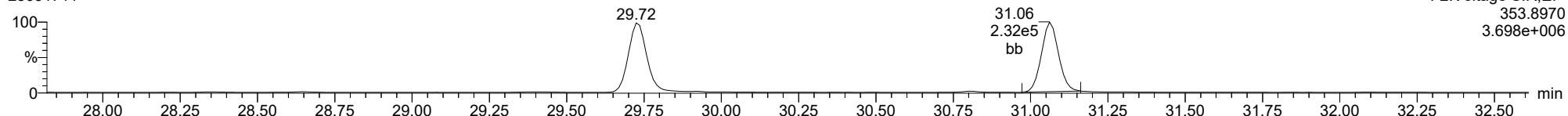
23031711



F2:Voltage SIR,EI+  
351.9000  
5.626e+006

**13C-23478-PeCDF**

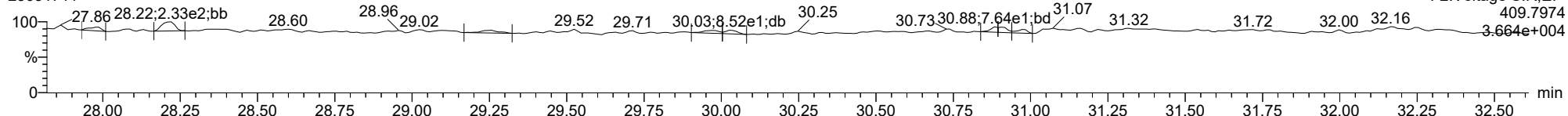
23031711



F2:Voltage SIR,EI+  
353.8970  
3.698e+006

**FUNCTION2 HPCDPE**

23031711



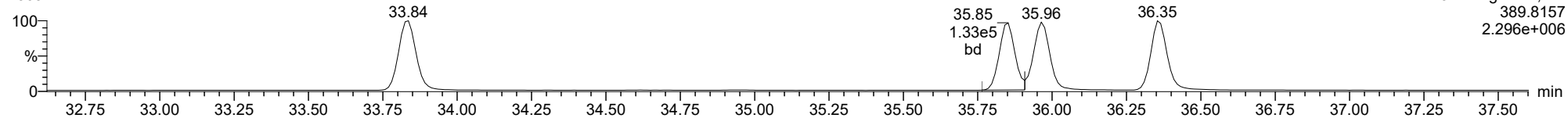
F2:Voltage SIR,EI+  
409.7974  
3.664e+004



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

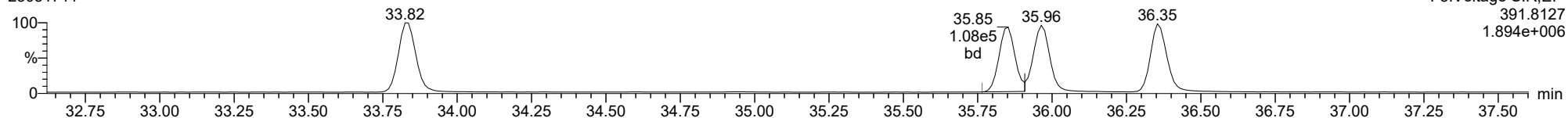
**123478-HxCDD**

23031711



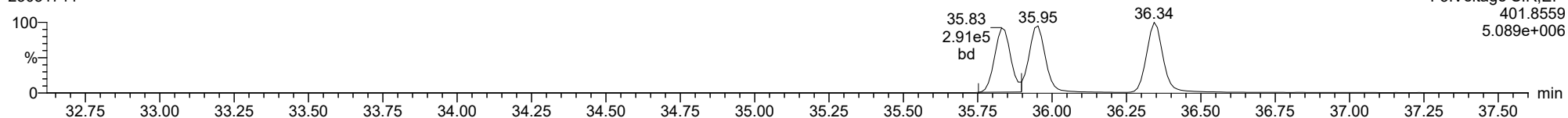
**123478-HxCDD**

23031711



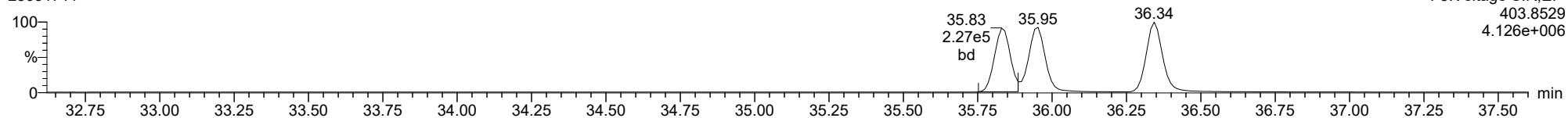
**13C-123478-HxCDD**

23031711



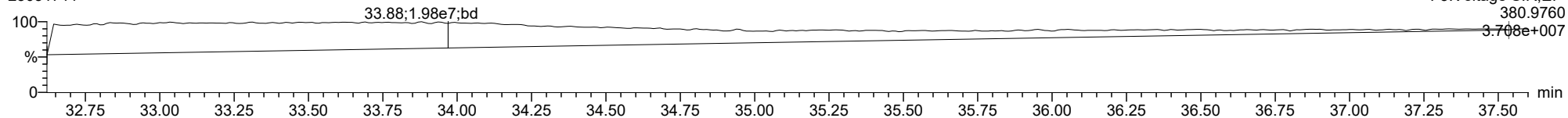
**13C-123478-HxCDD**

23031711



**FUNCTION3 PFK**

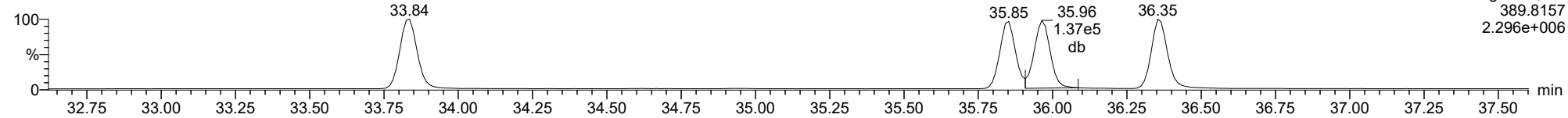
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**123678-HxCDD**

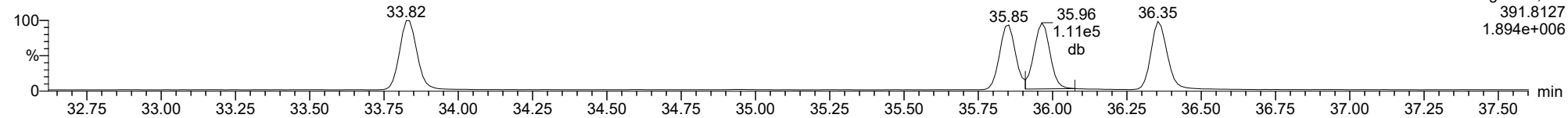
23031711



F3:Voltage SIR,EI+  
389.8157  
2.296e+006

**123678-HxCDD**

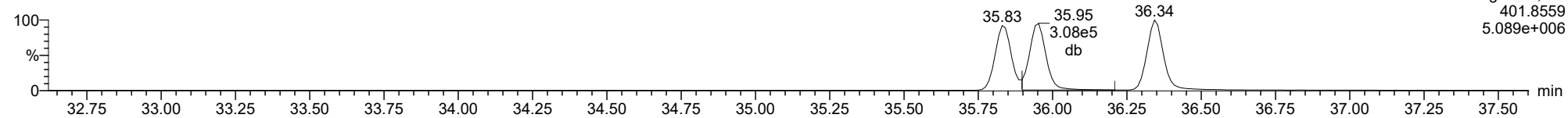
23031711



F3:Voltage SIR,EI+  
391.8127  
1.894e+006

**13C-123678-HxCDD**

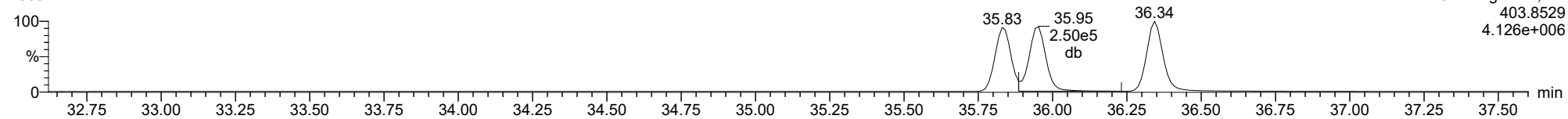
23031711



F3:Voltage SIR,EI+  
401.8559  
5.089e+006

**13C-123678-HxCDD**

23031711

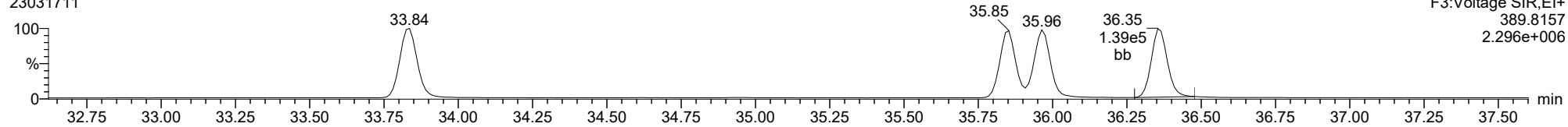


F3:Voltage SIR,EI+  
403.8529  
4.126e+006

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**123789-HxCDD**

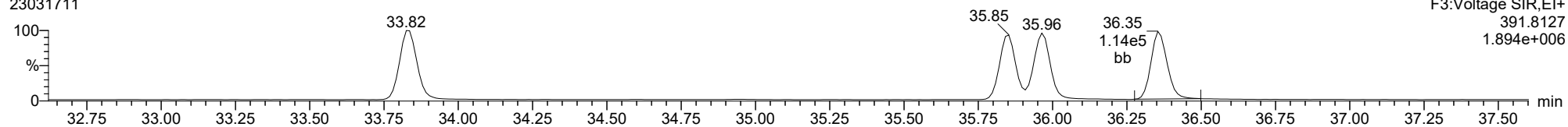
23031711



F3:Voltage SIR,EI+  
389.8157  
2.296e+006

**123789-HxCDD**

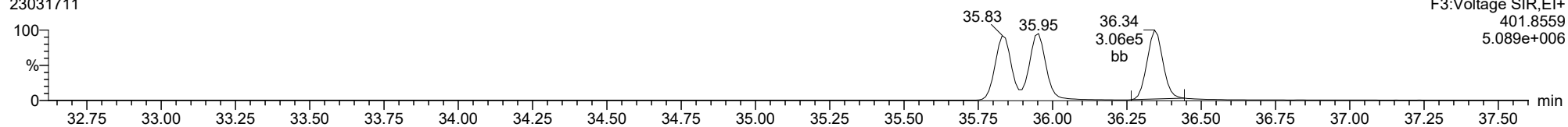
23031711



F3:Voltage SIR,EI+  
391.8127  
1.894e+006

**13C-123789-HxCDD**

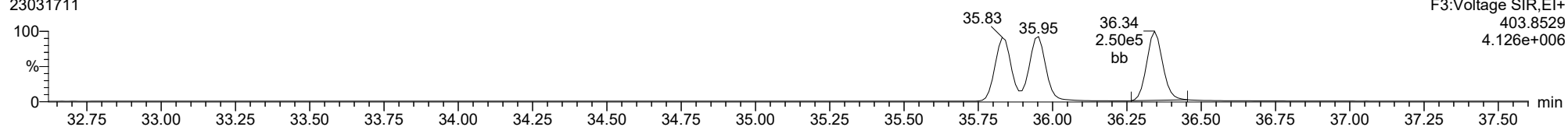
23031711



F3:Voltage SIR,EI+  
401.8559  
5.089e+006

**13C-123789-HxCDD**

23031711

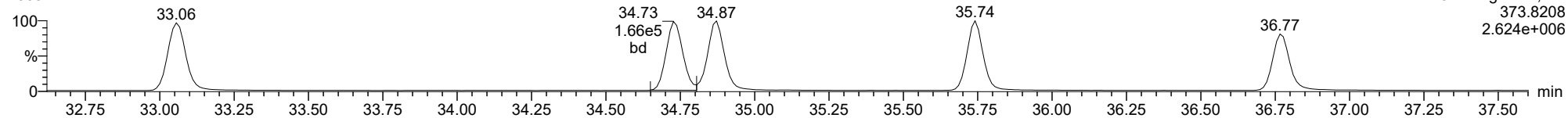


F3:Voltage SIR,EI+  
403.8529  
4.126e+006

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

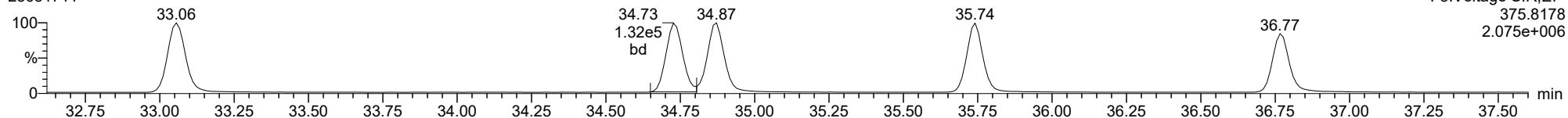
123478-HxCDF

23031711



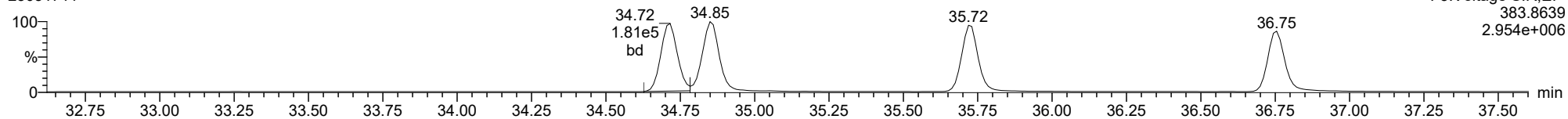
123478-HxCDF

23031711



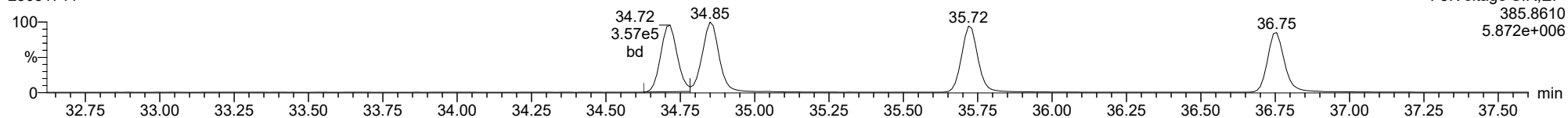
13C-123478-HxCDF

23031711



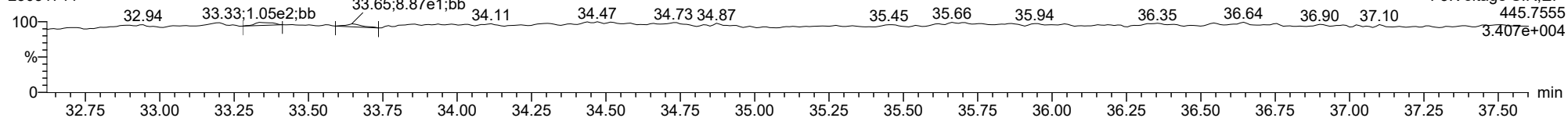
13C-123478-HxCDF

23031711



FUNCTION3 OCDPE

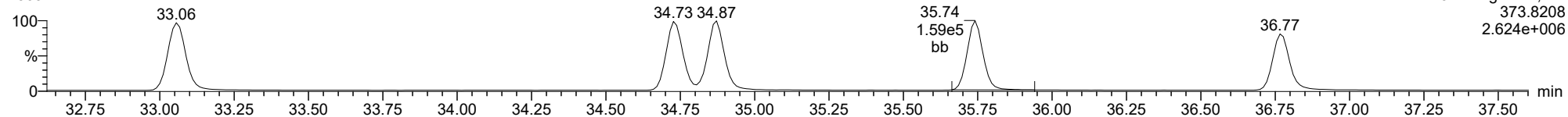
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

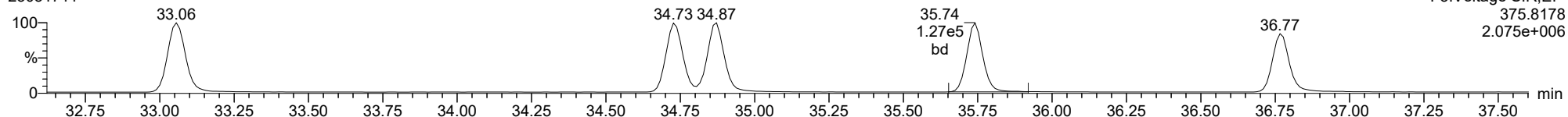
**234678-HxCDF**

23031711



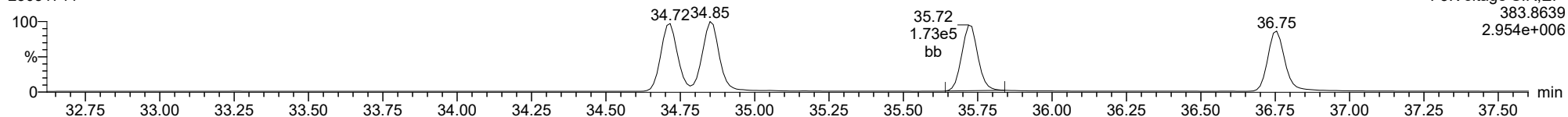
**234678-HxCDF**

23031711



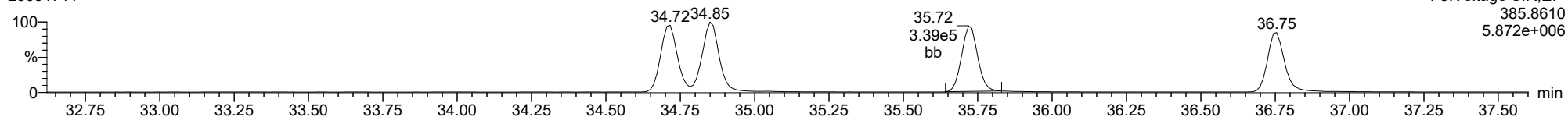
**13C-234678-HxCDF**

23031711



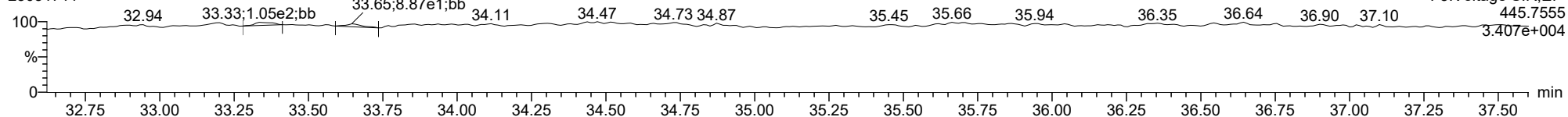
**13C-234678-HxCDF**

23031711



**FUNCTION3 OCDPE**

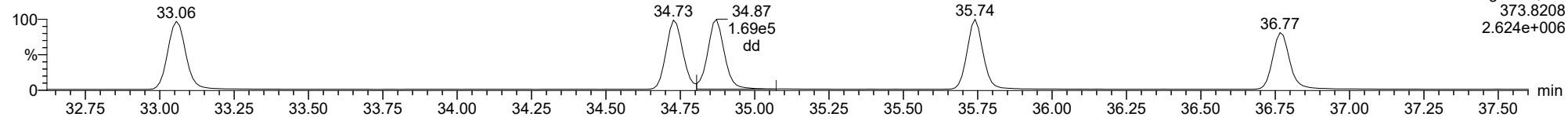
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

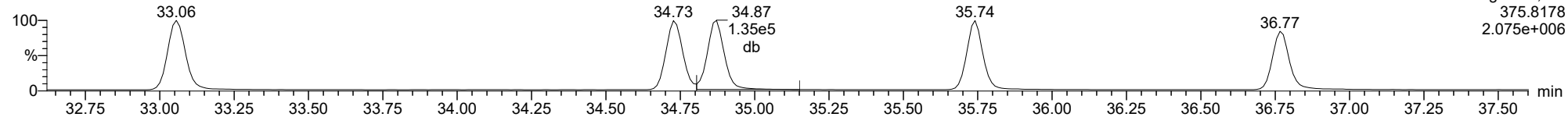
123678-HxCDF

23031711



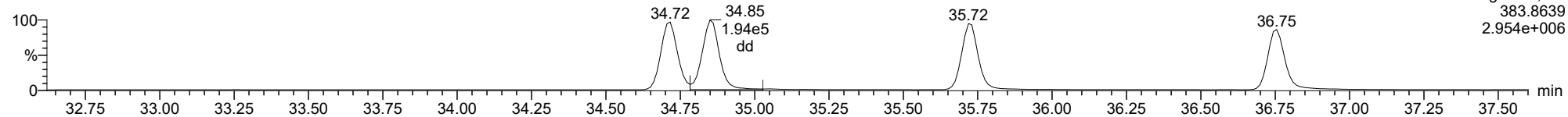
123678-HxCDF

23031711



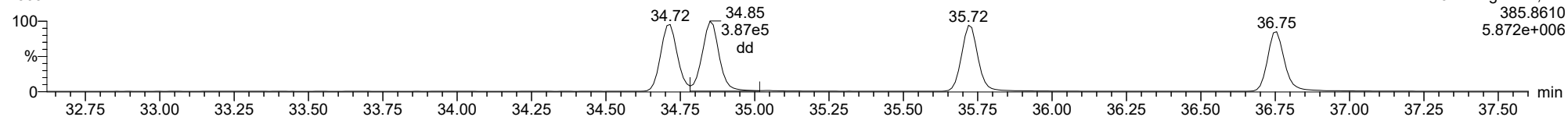
13C-123678-HxCDF

23031711



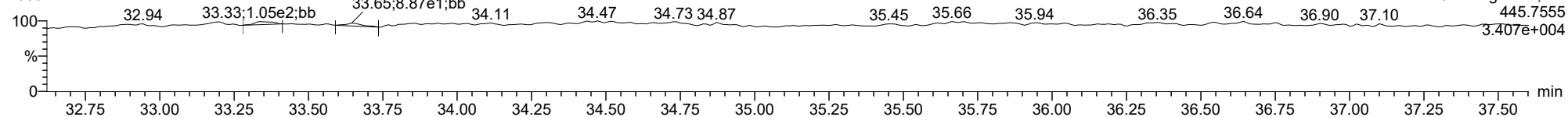
13C-123678-HxCDF

23031711



FUNCTION3 OCDPE

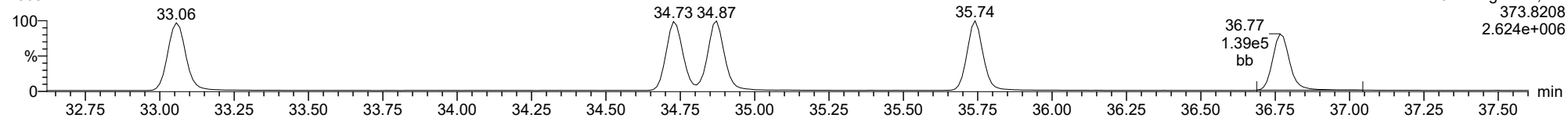
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

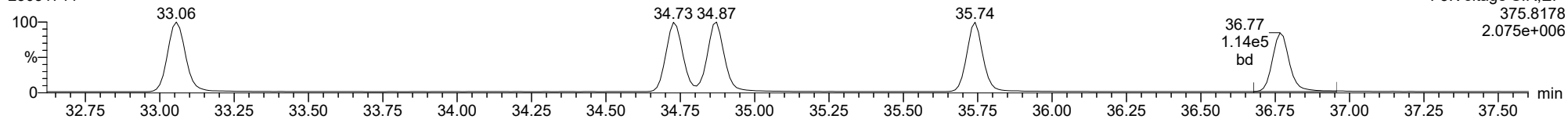
**123789-HxCDF**

23031711



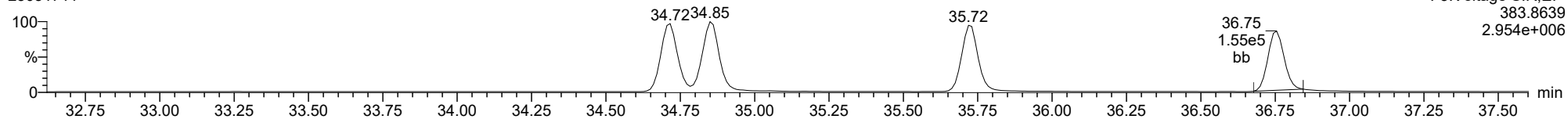
**123789-HxCDF**

23031711



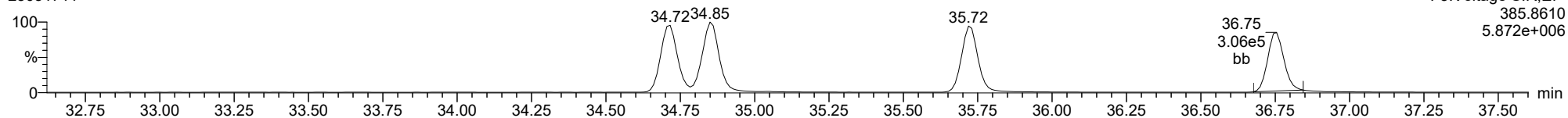
**13C-123789-HxCDF**

23031711



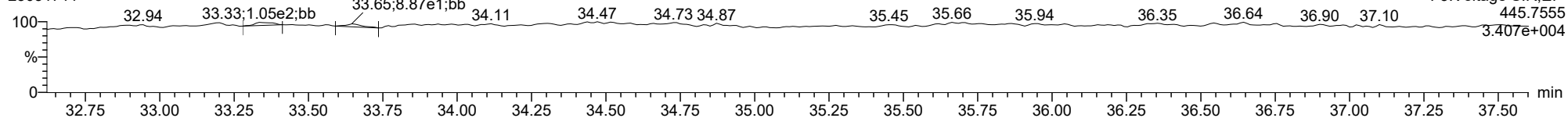
**13C-123789-HxCDF**

23031711



**FUNCTION3 OCDPE**

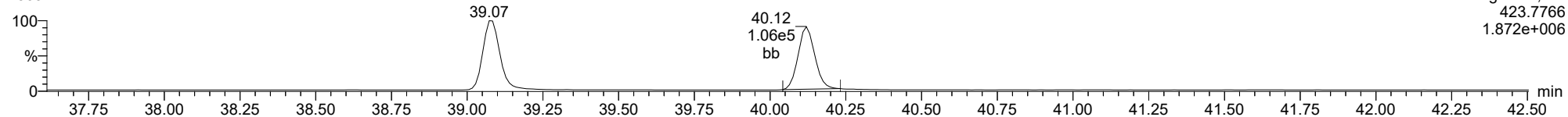
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDD**

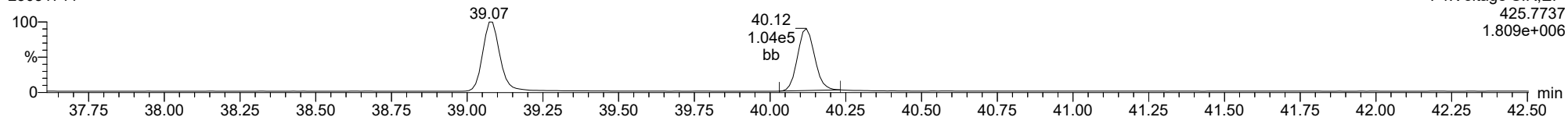
23031711



F4:Voltage SIR,EI+  
423.7766  
1.872e+006

**1234678-HpCDD**

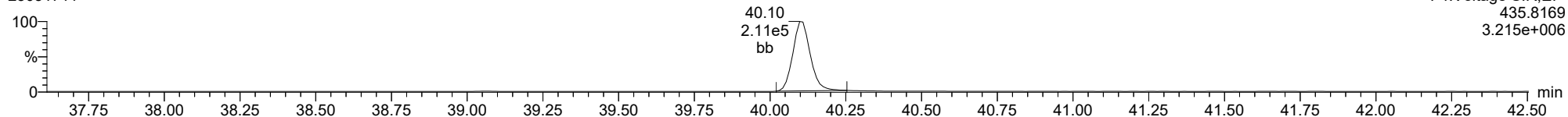
23031711



F4:Voltage SIR,EI+  
425.7737  
1.809e+006

**13C-1234678-HpCDD**

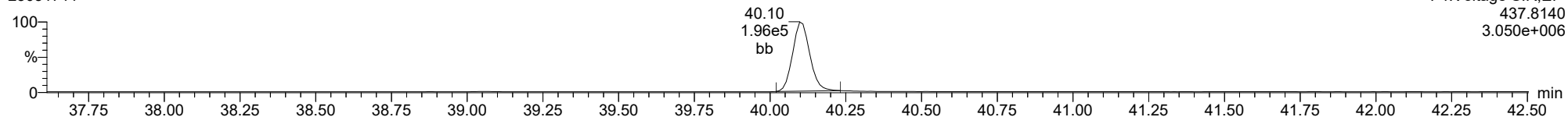
23031711



F4:Voltage SIR,EI+  
435.8169  
3.215e+006

**13C-1234678-HpCDD**

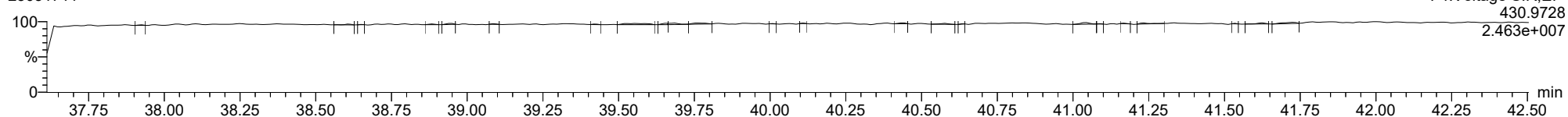
23031711



F4:Voltage SIR,EI+  
437.8140  
3.050e+006

**FUNCTION4 PFK**

23031711



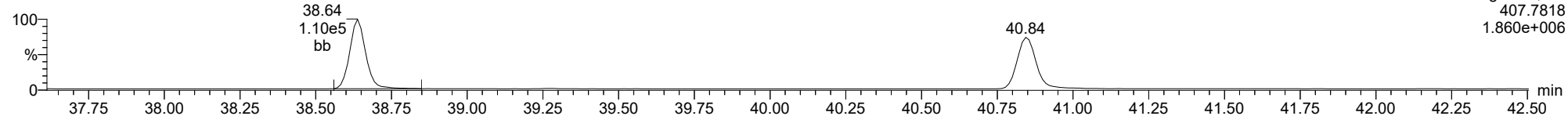
F4:Voltage SIR,EI+  
430.9728  
2.463e+007



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**1234678-HpCDF**

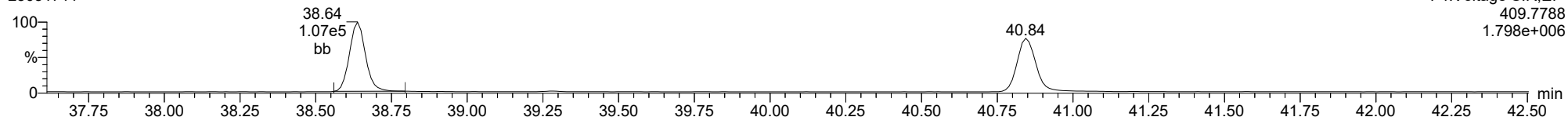
23031711



F4:Voltage SIR,EI+  
407.7818  
1.860e+006

**1234678-HpCDF**

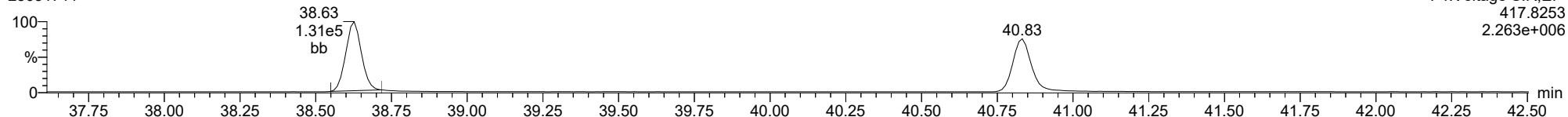
23031711



F4:Voltage SIR,EI+  
409.7788  
1.798e+006

**13C-1234678-HpCDF**

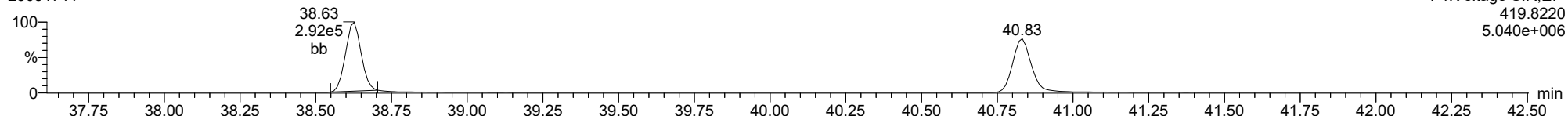
23031711



F4:Voltage SIR,EI+  
417.8253  
2.263e+006

**13C-1234678-HpCDF**

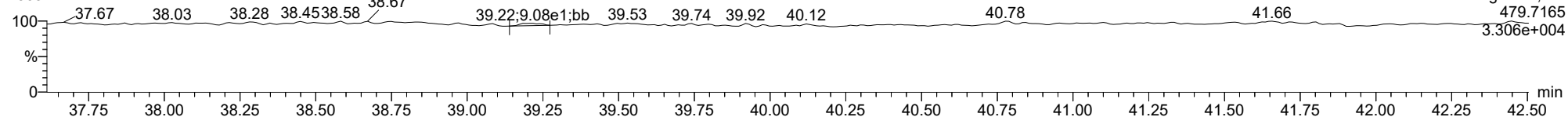
23031711



F4:Voltage SIR,EI+  
419.8220  
5.040e+006

**FUNCTION4 NCDPE**

23031711

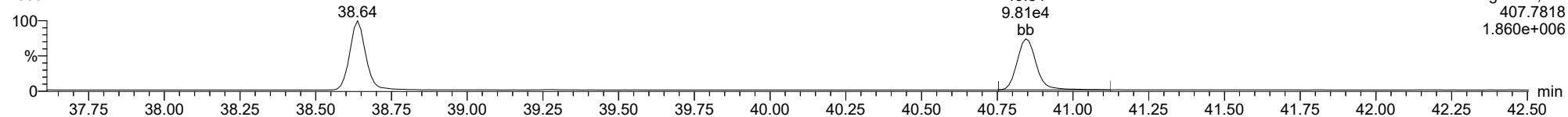


F4:Voltage SIR,EI+  
479.7165  
3.306e+004

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**1234789-HpCDF**

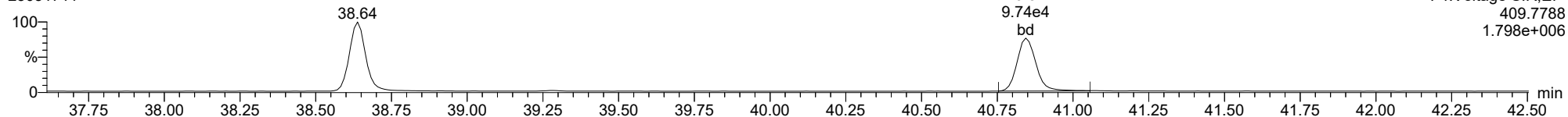
23031711



F4:Voltage SIR,EI+  
407.7818  
1.860e+006

**1234789-HpCDF**

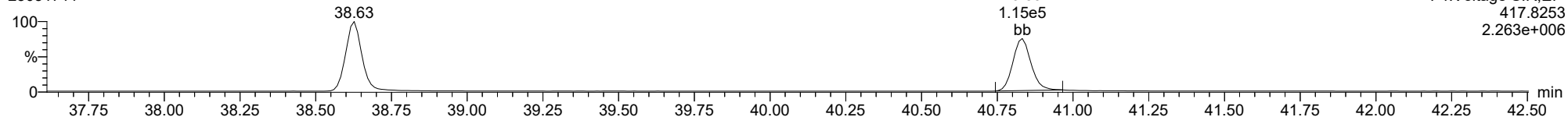
23031711



F4:Voltage SIR,EI+  
409.7788  
1.798e+006

**13C-1234789-HpCDF**

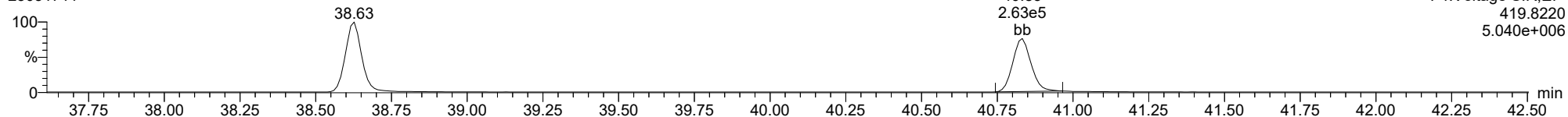
23031711



F4:Voltage SIR,EI+  
417.8253  
2.263e+006

**13C-1234789-HpCDF**

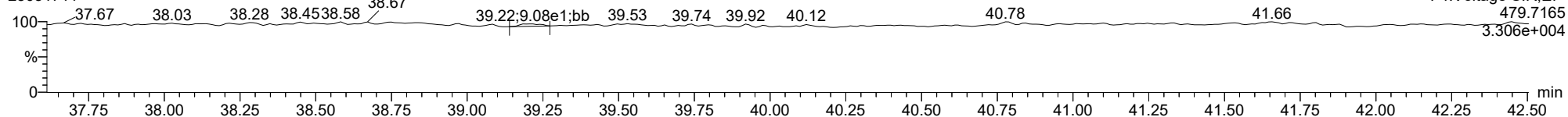
23031711



F4:Voltage SIR,EI+  
419.8220  
5.040e+006

**FUNCTION4 NCDPE**

23031711

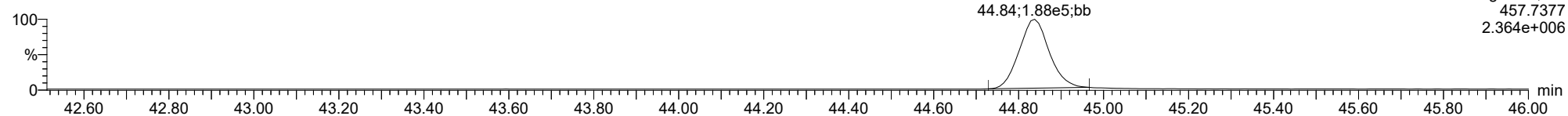


F4:Voltage SIR,EI+  
479.7165  
3.306e+004

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

**OCDD**

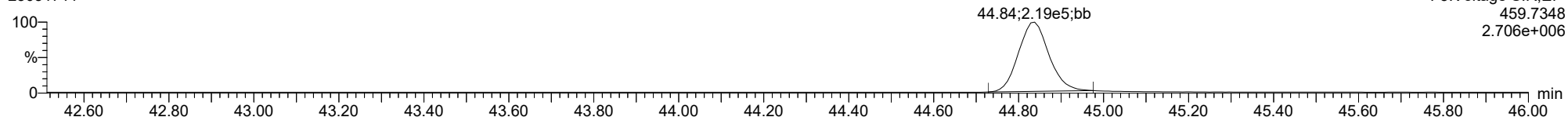
23031711



F5:Voltage SIR,EI+  
457.7377  
2.364e+006

**OCDD**

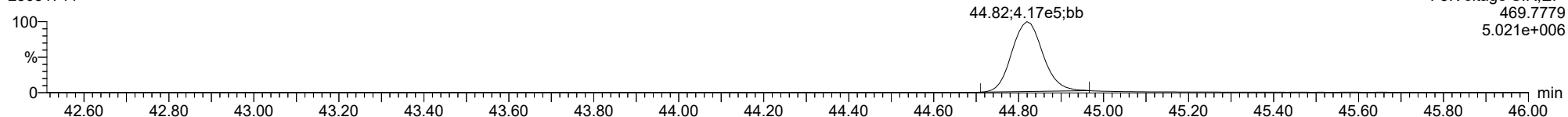
23031711



F5:Voltage SIR,EI+  
459.7348  
2.706e+006

**13C-OCDD**

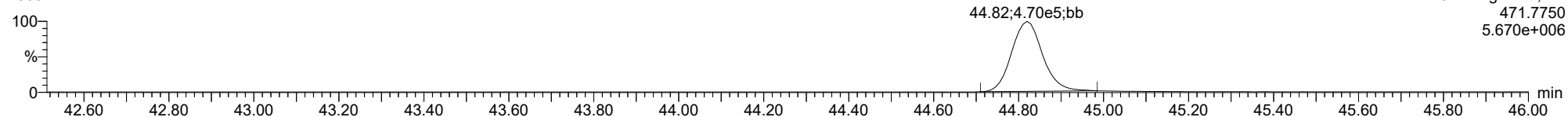
23031711



F5:Voltage SIR,EI+  
469.7779  
5.021e+006

**13C-OCDD**

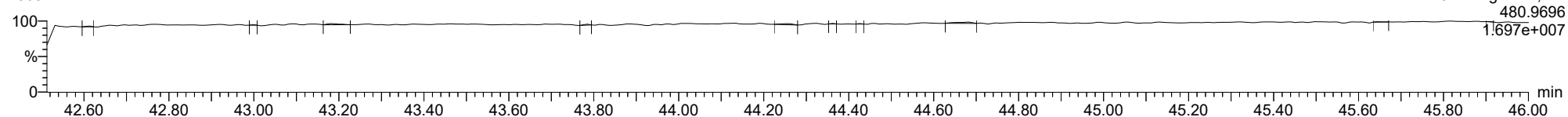
23031711



F5:Voltage SIR,EI+  
471.7750  
5.670e+006

**FUNCTION5 PFK**

23031711

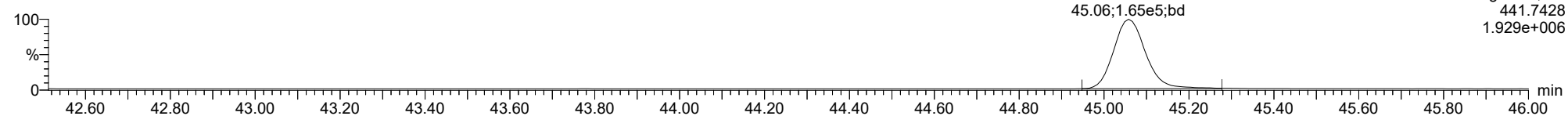


F5:Voltage SIR,EI+  
480.9696  
1.697e+007

ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

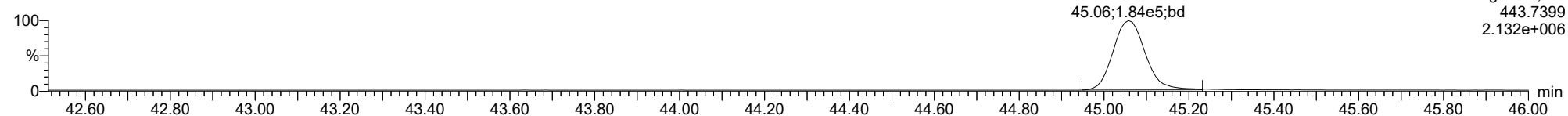
**OCDF**

23031711



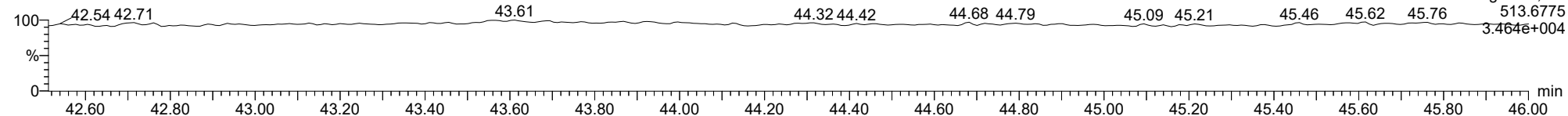
**OCDF**

23031711



**FUNCTION5 DCDPE**

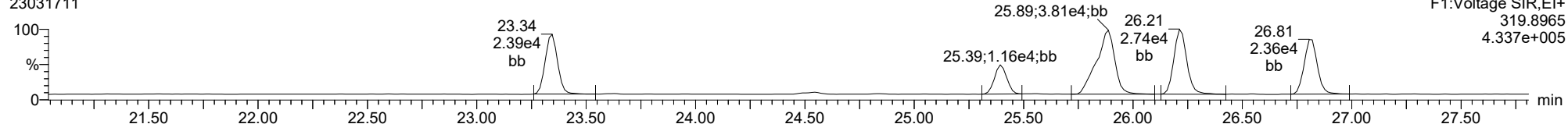
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

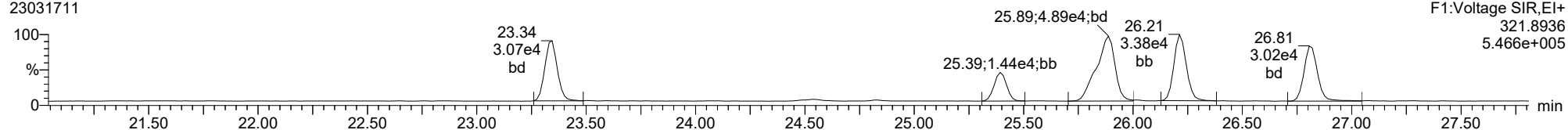
**Total-tetradioxins**

23031711



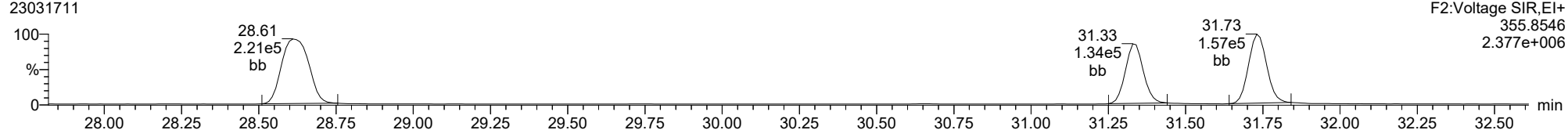
**Total-tetradioxins**

23031711



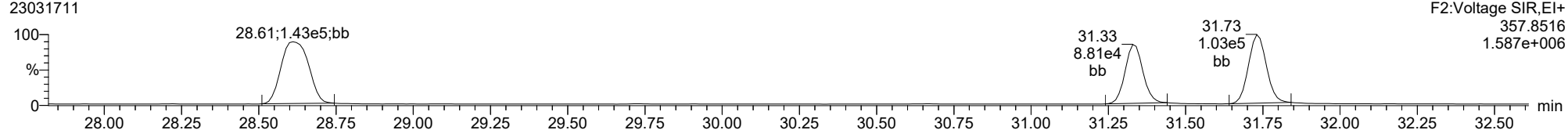
**Total-pentadioxins**

23031711



**Total-pentadioxins**

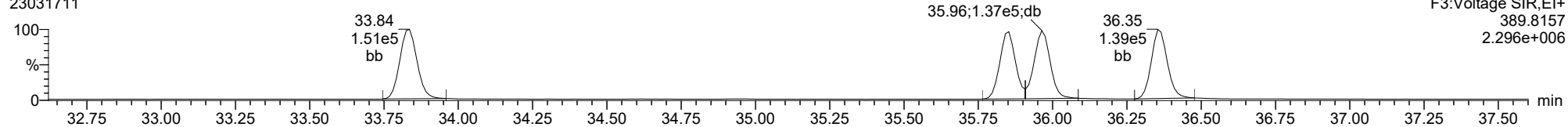
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

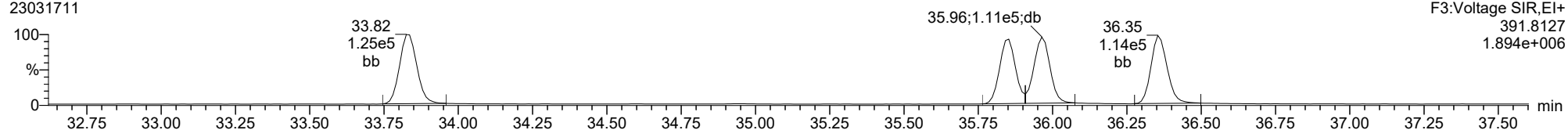
**Total-hexadioxins**

23031711



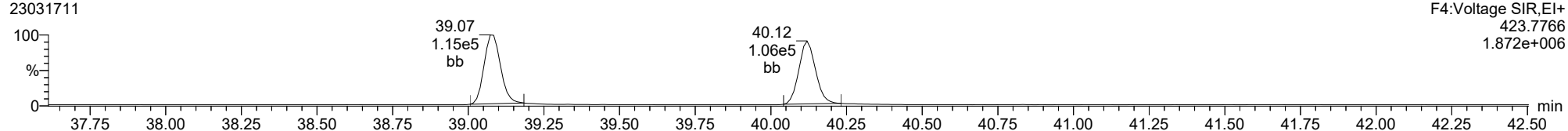
**Total-hexadioxins**

23031711



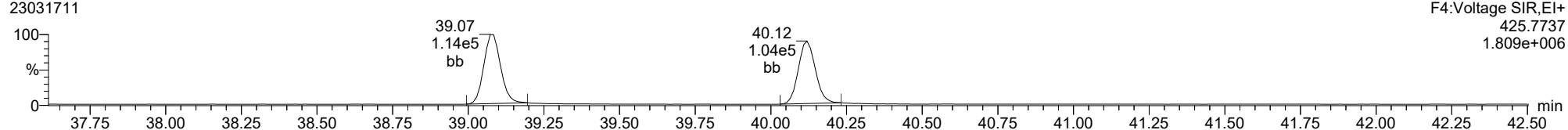
**Total-heptadioxins**

23031711



**Total-heptadioxins**

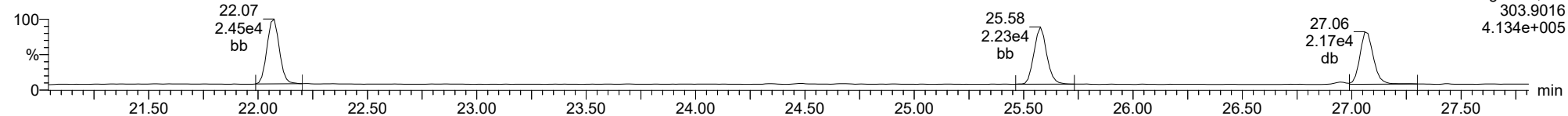
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

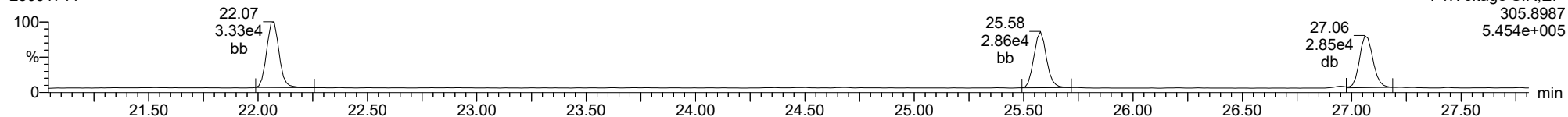
**Total-tetrafurans**

23031711



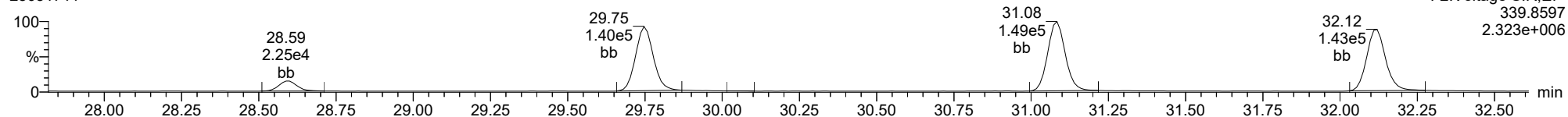
**Total-tetrafurans**

23031711



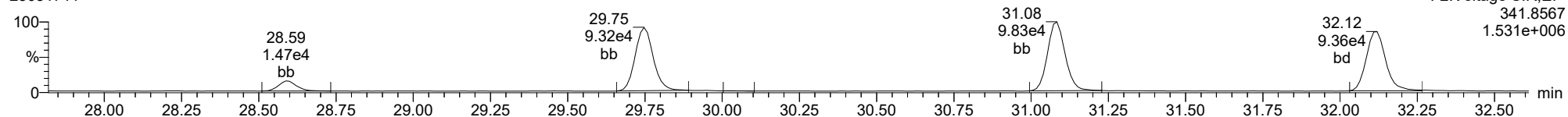
**Total-pentafurans**

23031711



**Total-pentafurans**

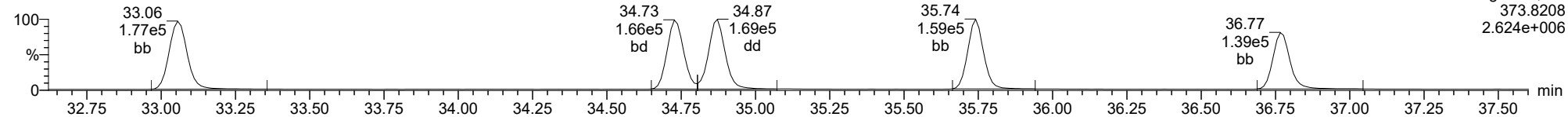
23031711



ID: CS3A2, Name: 23031711, Date: 17-Mar-2023, Time: 18:31:26, Conditions: AUTOSPEC01, User: pk

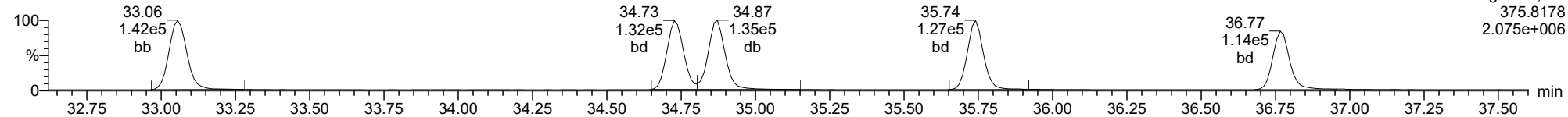
**Total-hexafurans**

23031711



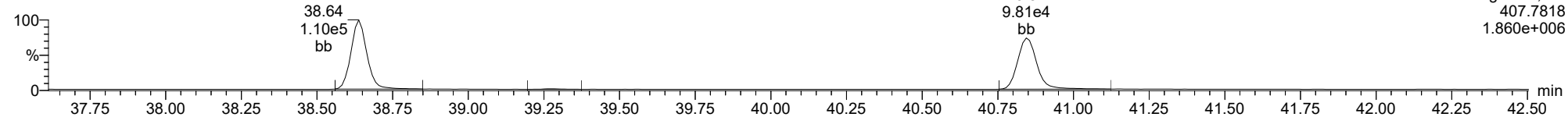
**Total-hexafurans**

23031711



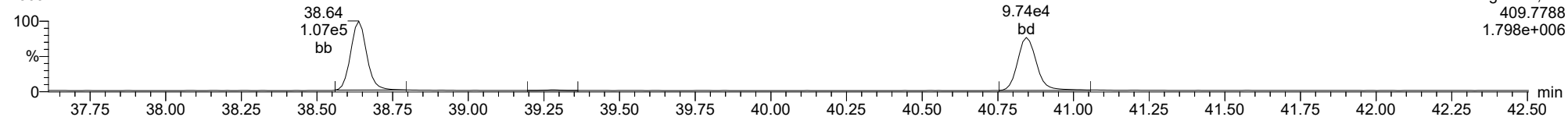
**Total-heptafurans**

23031711



**Total-heptafurans**

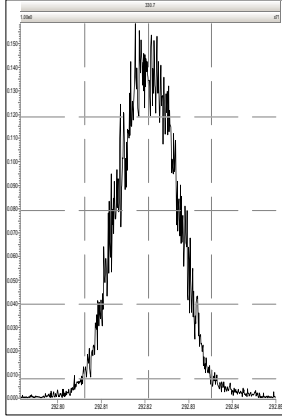
23031711



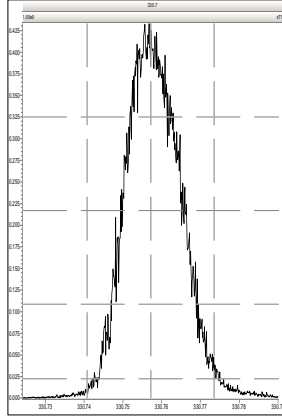


Printed: Friday, March 17, 2023 19:24:24 Pacific Daylight Time

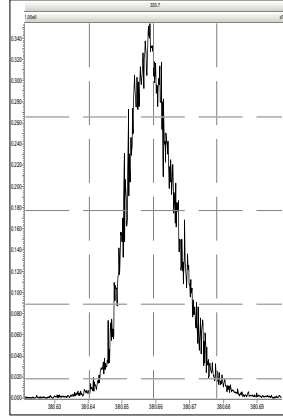
M 292.9824 R 10122



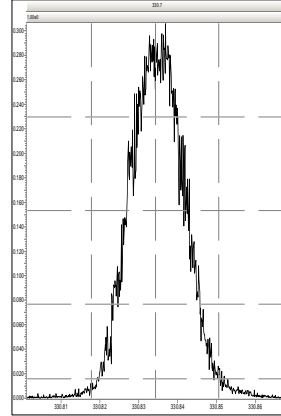
M 330.9792 R 10549



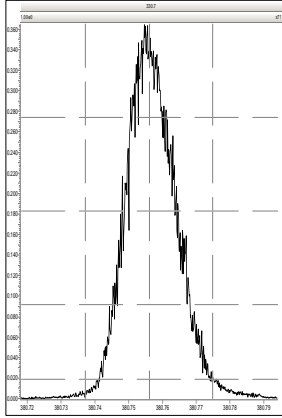
M 380.9760 R 10801



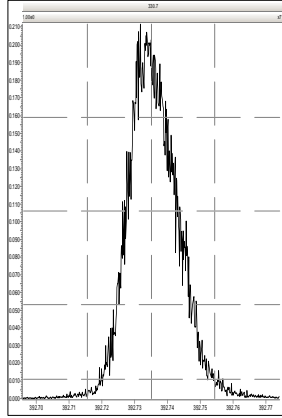
M 330.9792 R 10597



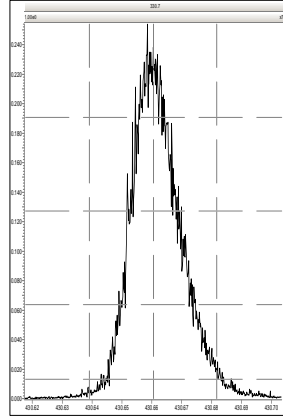
M 380.9760 R 11469



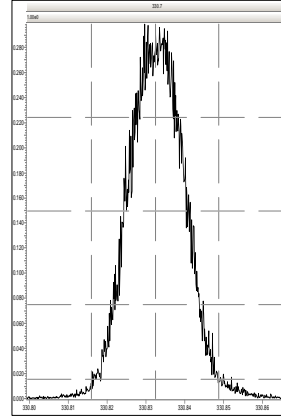
M 392.9760 R 11602



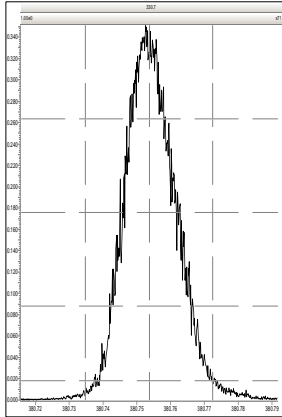
M 430.9728 R 11237



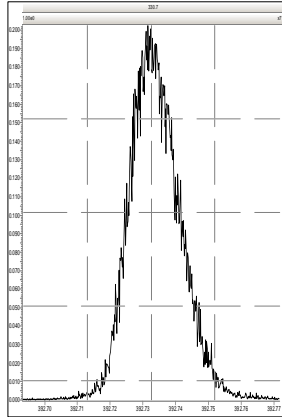
M 330.9792 R 10576



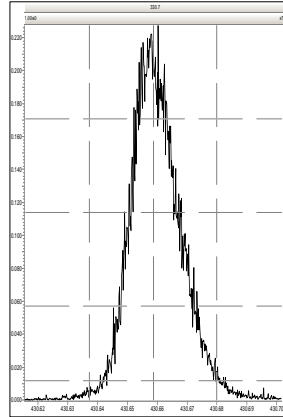
M 380.9760 R 11415



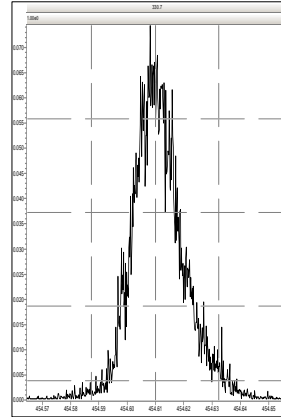
M 392.9760 R 11416



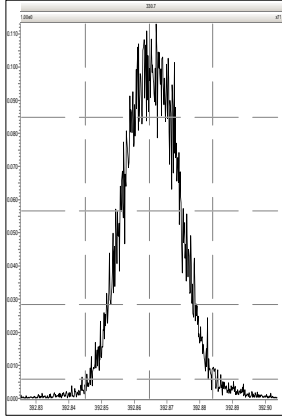
M 430.9728 R 11585



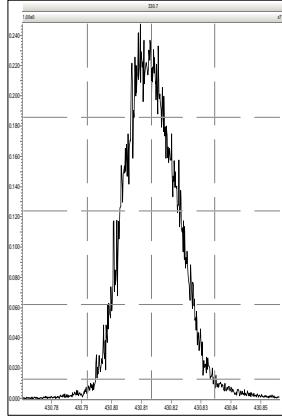
M 454.9728 R 10921



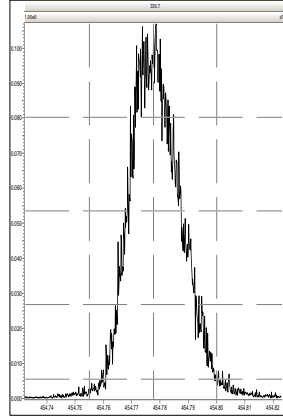
M 392.9760 R 10893



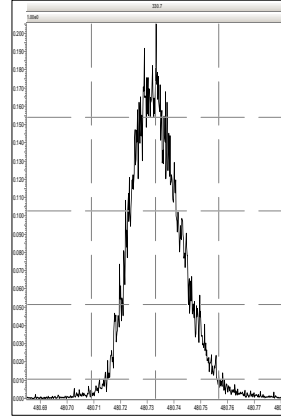
M 430.9728 R 10893



M 454.9728 R 11547

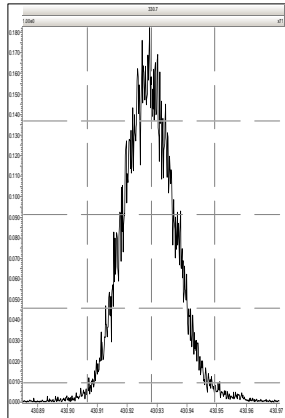


M 480.9696 R 11711

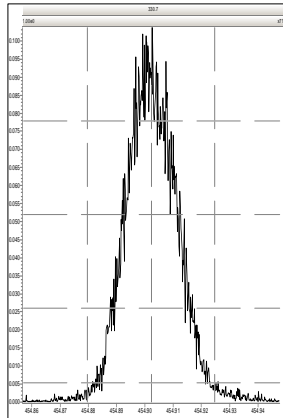


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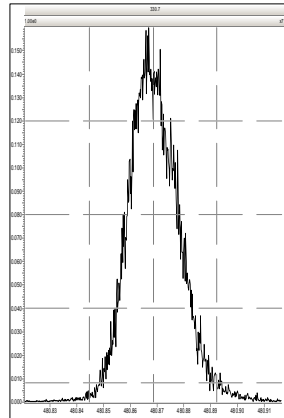
M 430.9728 R 11188



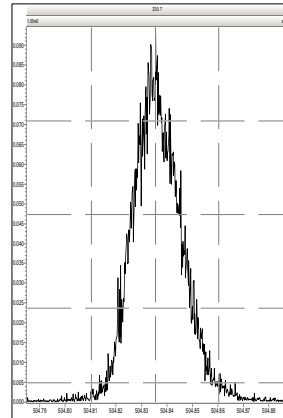
M 454.9728 R 11557



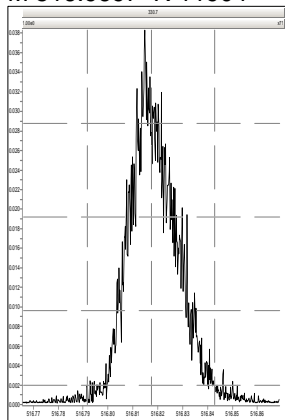
M 480.9696 R 11720



M 504.9696 R 12317



M 516.9697 R 11904

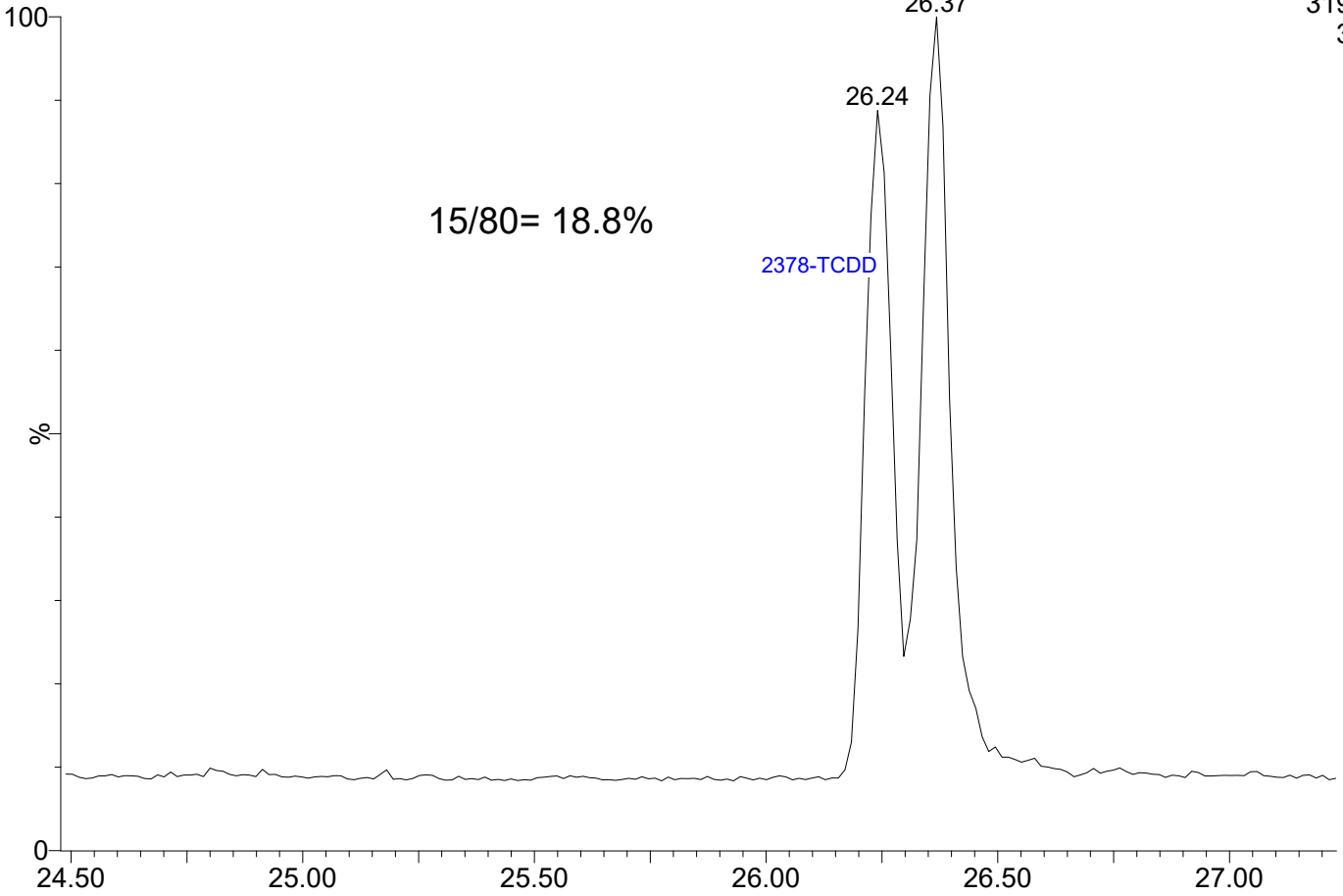


23031712

1: Voltage SIR 14 Channels EI+

319.8965

3.60e5

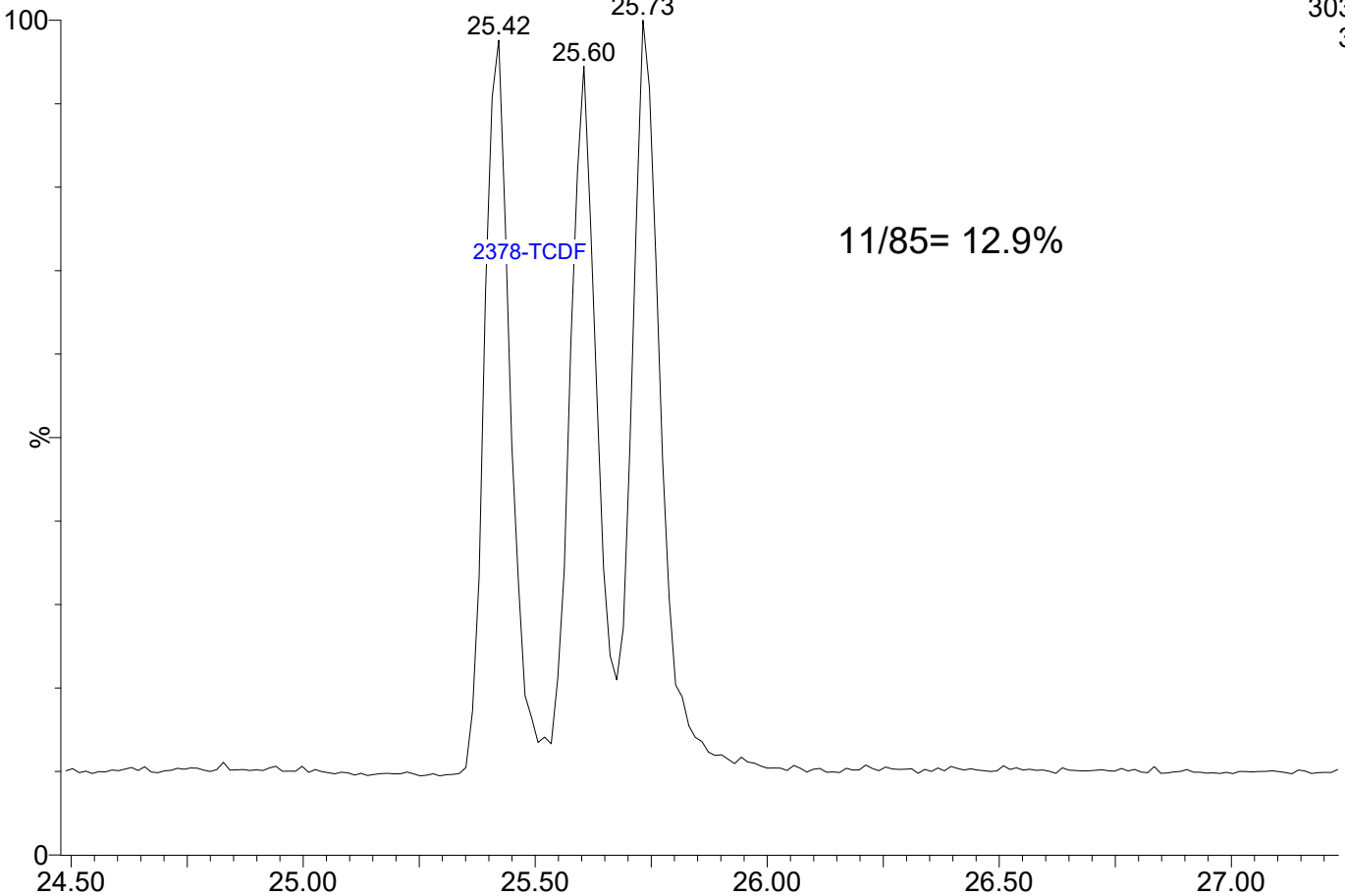


23031712

1: Voltage SIR 14 Channels EI+

303.9016

3.20e5





**CDD/CDF CHROMATOGRAPHIC  
RESOLUTION SUMMARY  
EPA 1613B**

Lab Name: Analytical Resources, LLC SDG: 23A0206  
Instrument .ID: AUTOSPEC01 Lab File ID: 23030303  
Date Analyzed: 03/03/23 Time Analyzed: 10:39  
Lab Sample ID: SLC0045-RES1 Sequence: SLC0045

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 8.8

3467-TCDF/2378-TCDF: 8.2

Quality Control (QC) Limits:  $\leq 25\%$

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18



**CDD/CDF CHROMATOGRAPHIC  
RESOLUTION SUMMARY  
EPA 1613B**

Lab Name:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Instrument .ID:	<u>AUTOSPEC01</u>	Lab File ID:	<u>23030312</u>
Date Analyzed:	<u>03/03/23</u>	Time Analyzed:	<u>18:18</u>
Lab Sample ID:	<u>SLC0045-RES2</u>	Sequence:	<u>SLC0045</u>

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.9

3467-TCDF/2378-TCDF: 11.7

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18



**CDD/CDF CHROMATOGRAPHIC  
RESOLUTION SUMMARY  
EPA 1613B**

Lab Name: Analytical Resources, LLC                                      SDG: 23A0206  
Instrument .ID: AUTOSPEC01    Lab File ID: 23031503  
Date Analyzed: 03/15/23    Time Analyzed: 11:54  
Lab Sample ID: SLC0176-RES1    Sequence: SLC0176

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 9.7

3467-TCDF/2378-TCDF: 8

Quality Control (QC) Limits:  $\leq 25\%$

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0176-ICV1	CS3Z4	23031502	03/15/2023	11:02
SLC0176-RES1	ISCZ4	23031503	03/15/2023	11:54
SLC0176-CCV1	CS3Z5	23031510	03/15/2023	17:48
SLC0176-RES2	ISCZ5	23031511	03/15/2023	18:41
BLC0136-BLK1	Blank	23031512	03/15/2023	19:33
BLC0136-BS1	LCS	23031513	03/15/2023	20:22
BLC0136-SRM1	Reference	23031515	03/15/2023	22:00
SLC0176-CCV2	CS3Z6	23031521	03/16/2023	02:54
SLC0176-RES3	ISCZ6	23031522	03/16/2023	03:47





**CDD/CDF CHROMATOGRAPHIC  
RESOLUTION SUMMARY  
EPA 1613B**

Lab Name: Analytical Resources, LLC    SDG: 23A0206  
 Instrument ID: AUTOSPEC01    Lab File ID: 23031522  
 Date Analyzed: 03/16/23    Time Analyzed: 03:47  
 Lab Sample ID: SLC0176-RES3    Sequence: SLC0176

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 11.1  
 3467-TCDF/2378-TCDF: 7.8

Quality Control (QC) Limits:  $\leq 25\%$

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0176-ICV1	CS3Z4	23031502	03/15/2023	11:02
SLC0176-RES1	ISCZ4	23031503	03/15/2023	11:54
SLC0176-CCV1	CS3Z5	23031510	03/15/2023	17:48
SLC0176-RES2	ISCZ5	23031511	03/15/2023	18:41
BLC0136-BLK1	Blank	23031512	03/15/2023	19:33
BLC0136-BS1	LCS	23031513	03/15/2023	20:22
BLC0136-SRM1	Reference	23031515	03/15/2023	22:00
SLC0176-CCV2	CS3Z6	23031521	03/16/2023	02:54
SLC0176-RES3	ISCZ6	23031522	03/16/2023	03:47





**CDD/CDF CHROMATOGRAPHIC  
 RESOLUTION SUMMARY  
 EPA 1613B**

Lab Name:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Instrument .ID:	<u>AUTOSPEC01</u>	Lab File ID:	<u>23031703</u>
Date Analyzed:	<u>03/17/23</u>	Time Analyzed:	<u>11:30</u>
Lab Sample ID:	<u>SLC0258-RES1</u>	Sequence:	<u>SLC0258</u>

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 19.5

3467-TCDF/2378-TCDF: 12.3

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0258-ICV1	CS3A1	23031702	03/17/2023	10:40
SLC0258-RES1	ISCA1	23031703	03/17/2023	11:30
23A0206-13	LDW23-SS1066	23031710	03/17/2023	17:42
SLC0258-CCV1	CS3A2	23031711	03/17/2023	18:31
SLC0258-RES2	ISCA2	23031712	03/17/2023	19:24



**CDD/CDF CHROMATOGRAPHIC  
RESOLUTION SUMMARY  
EPA 1613B**

Lab Name: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Instrument .ID: <u>AUTOSPEC01</u>	Lab File ID: <u>23031712</u>
Date Analyzed: <u>03/17/23</u>	Time Analyzed: <u>19:24</u>
Lab Sample ID: <u>SLC0258-RES2</u>	Sequence: <u>SLC0258</u>

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD:	<u>18.8</u>
3467-TCDF/2378-TCDF:	<u>12.9</u>

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0258-ICV1	CS3A1	23031702	03/17/2023	10:40
SLC0258-RES1	ISCA1	23031703	03/17/2023	11:30
23A0206-13	LDW23-SS1066	23031710	03/17/2023	17:42
SLC0258-CCV1	CS3A2	23031711	03/17/2023	18:31
SLC0258-RES2	ISCA2	23031712	03/17/2023	19:24



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0045

Instrument: AUTOSPEC01

Calibration: GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3W1	SLC0045-ICV1	23030302	NA	03/03/23 09:51
ISCW1	SLC0045-RES1	23030303	NA	03/03/23 10:39
CSLCW	SLC0045-CAL1	23030304	NA	03/03/23 11:28
CS1CW	SLC0045-CAL2	23030305	NA	03/03/23 12:23
CS2CW	SLC0045-CAL3	23030306	NA	03/03/23 13:16
CS3CW	SLC0045-CAL4	23030307	NA	03/03/23 14:06
CS4CW	SLC0045-CAL5	23030308	NA	03/03/23 14:59
CS5CW	SLC0045-CAL6	23030309	NA	03/03/23 15:47
ICVCW	SLC0045-SCV1	23030310	NA	03/03/23 16:36
CS3V4	SLC0045-CCV1	23030311	NA	03/03/23 17:25
ISCV4	SLC0045-RES2	23030312	NA	03/03/23 18:18



ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310  
Calibration ID: GC00015 Tune File: FEB0923\_1-5  
EM Voltage: 350 Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Dataset: T:\Autospec\Processed Data Batch\230303\CIH.qld

Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time

Printed: Monday, March 06, 2023 10:58:44 Pacific Standard Time

3/6/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030304, Compound:TD, RT:26.410	1
Peak deleted	Sample:23030304, Compound:OD, RT:44.990	1
Peak deleted	Sample:23030304, Compound:TF, RT:25.774	1
Pre modification peak	Sample:23030305, Compound:TF, RT:25.774	2
Peak modified	Sample:23030305, Compound:TF, RT:25.774	2
Pre modification peak	Sample:23030304, Compound:HPD, RT:40.261	1
Peak modified	Sample:23030304, Compound:HPD, RT:40.261	1
Peak deleted	Sample:23030308, Compound:PF, RT:32.328	5
Peak deleted	Sample:23030309, Compound:PF, RT:32.307	6
Peak deleted	Sample:23030309, Compound:HF, RT:33.220	6
Peak deleted	Sample:23030309, Compound:TD, RT:27.017	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.995	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.917	6
Peak deleted	Sample:23030308, Compound:HD, RT:34.000	5
Peak deleted	Sample:23030308, Compound:HPD, RT:39.225	5
Peak deleted	Sample:23030309, Compound:HPD, RT:39.214	6
Pre modification peak	Sample:23030305, Compound:OF, RT:45.237	2
Peak modified	Sample:23030305, Compound:OF, RT:45.237	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230303\CIH.qld'	



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0176

Instrument: AUTOSPEC01

Calibration: GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3Z4	SLC0176-ICV1	23031502	NA	03/15/23 11:02
ISCZ4	SLC0176-RES1	23031503	NA	03/15/23 11:54
CS3Z5	SLC0176-CCV1	23031510	NA	03/15/23 17:48
ISCZ5	SLC0176-RES2	23031511	NA	03/15/23 18:41
Blank	BLC0136-BLK1	23031512	Solid	03/15/23 19:33
LCS	BLC0136-BS1	23031513	Solid	03/15/23 20:22
Reference	BLC0136-SRM1	23031515	Solid	03/15/23 22:00
CS3Z6	SLC0176-CCV2	23031521	NA	03/16/23 02:54
ISCZ6	SLC0176-RES3	23031522	NA	03/16/23 03:47



ANALYSIS SEQUENCE

SLC0176

Instrument: AUTOSPEC01      HRGCMS Column ID: K2310  
 Calibration ID: GC00015      Tune File: FEB0923\_1-5  
 EM Voltage: 345      Resolution check times : 11:02, 18:41, 03:47

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0176-ICV1	CS3Z4	QC		1	K009821		03/15/2023 11:02	23031502	PK	
SLC0176-RES1	ISCZ4	QC		2	L002084		03/15/2023 11:54	23031503	PK	
23A0420-08	LDW23-SC1004	1613B Dioxin	C 01	3		K011414	03/15/2023 12:48	23031504	PK	
23A0455-03	LDW23-SS1031	1613B Dioxin	B 01	4		K011414	03/15/2023 13:37	23031505	PK	
23A0455-08	LDW23-SS1023	1613B Dioxin	B 01	5		K011414	03/15/2023 14:33	23031506	PK	
23A0455-15	LDW23-SS1051	1613B Dioxin	B 01	6		K011414	03/15/2023 15:21	23031507	PK	
23A0455-16	LDW23-SS1052	1613B Dioxin	B 01	7		K011414	03/15/2023 16:10	23031508	PK	
23A0295-04	LDW23-SC1023B	1613B Dioxin	A 04	8		K011414	03/15/2023 16:59	23031509	PK	
SLC0176-CCV1	CS3Z5	QC		9	K009821		03/15/2023 17:48	23031510	PK	
SLC0176-RES2	ISCZ5	QC		10	L002084		03/15/2023 18:41	23031511	PK	
BLC0136-BLK1	Blank	QC		11		K011414	03/15/2023 19:33	23031512	PK	
BLC0136-BS1	LCS	QC		12		K011414	03/15/2023 20:22	23031513	PK	
BLC0136-SRM1	Reference	QC		13		K011414	03/15/2023 22:00	23031515	PK	
BLC0136-DUP1	Duplicate	QC		14		K011414	03/15/2023 21:11	23031514	PK	
23A0158-06	LDW23-SS1222	1613B Dioxin	C 02	15		K011414	03/15/2023 22:49	23031516	PK	
23A0158-07	LDW23-SS1215	1613B Dioxin	C 02	16		K011414	03/15/2023 23:38	23031517	PK	
23A0158-09	LDW23-SS1077	1613B Dioxin	C 02	17		K011414	03/16/2023 00:27	23031518	PK	
23A0158-10	LDW23-SS1070	1613B Dioxin	C 02	18		K011414	03/16/2023 01:16	23031519	PK	
23A0158-11	LDW23-SS1065	1613B Dioxin	C 02	19		K011414	03/16/2023 02:05	23031520	PK	
SLC0176-CCV2	CS3Z6	QC		20	K009821		03/16/2023 02:54	23031521	PK	
SLC0176-RES3	ISCZ6	QC		21	K003933		03/16/2023 03:47	23031522	PK	
23A0158-12	LDW23-SS1064	1613B Dioxin	C 02	22		K011414				



ANALYSIS SEQUENCE

SLC0176

Instrument: AUTOSPEC01      HRGCMS Column ID: K2310  
Calibration ID: GC00015      Tune File: FEB0923\_1-5  
EM Voltage: 345      Resolution check times : 11:02, 18:41, 03:47

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
23A0158-13	LDW23-SS1060	1613B Dioxin	C 02	23		K011414				
23A0158-14	LDW23-SS1059	1613B Dioxin	C 02	24		K011414				
23A0158-15	LDW23-SS1053	1613B Dioxin	C 02	25		K011414				
23A0171-02	LDW23-SS1257	1613B Dioxin	A 05	26		K011414				
23A0171-04	LDW23-SS1245	1613B Dioxin	A 05	27		K011414				
23A0206-13	LDW23-SS1066	1613B Dioxin	C 02	28		K011414				
SLC0176-CCV3	CS3Z7	QC		29	K009821					
SLC0176-RES4	ISCZ7	QC		30	K003933					



Dataset: T:\Autospec\Processed Data Batch\230315D1.qld

Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:13:35 Pacific Daylight Time 3/16/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23031503, Compound:13C-1234-TCDD, RT:25.351	2
Peak deleted	Sample:23031503, Compound:13C-123789-HxCDD, RT:36.309	2
Peak deleted	Sample:23031511, Compound:13C-123789-HxCDD, RT:36.343	10
Peak deleted	Sample:23031511, Compound:13C-1234-TCDD, RT:25.379	10
Peak deleted	Sample:23031522, Compound:13C-123789-HxCDD, RT:36.331	21
Pre modification peak	Sample:23031504, Compound:PF, RT:29.736	3
Peak modified	Sample:23031504, Compound:PF, RT:29.736	3
Pre modification peak	Sample:23031505, Compound:PF, RT:29.735	4
Peak modified	Sample:23031505, Compound:PF, RT:29.735	4
Pre modification peak	Sample:23031505, Compound:PF, RT:31.072	4
Peak modified	Sample:23031505, Compound:PF, RT:31.072	4
Pre modification peak	Sample:23031505, Compound:PF, RT:31.072	4
Peak modified	Sample:23031505, Compound:PF, RT:31.072	4
Pre modification peak	Sample:23031505, Compound:HF, RT:35.740	4
Peak modified	Sample:23031505, Compound:HF, RT:35.740	4
Pre modification peak	Sample:23031505, Compound:HF, RT:35.707	4
Peak modified	Sample:23031505, Compound:HF, RT:35.707	4
Peak added	Sample:23031505, Compound:HF, RT:35.740	4
Peak added	Sample:23031505, Compound:HF, RT:35.718	4
Peak deleted	Sample:23031506, Compound:PF, RT:29.747	5
Pre modification peak	Sample:23031506, Compound:HF, RT:35.741	5
Peak modified	Sample:23031506, Compound:HF, RT:35.741	5
Pre modification peak	Sample:23031506, Compound:HF, RT:35.719	5
Peak modified	Sample:23031506, Compound:HF, RT:35.719	5
Peak deleted	Sample:23031506, Compound:TD, RT:26.212	5
Pre modification peak	Sample:23031507, Compound:HF, RT:35.786	6
Peak modified	Sample:23031507, Compound:HF, RT:35.786	6
Pre modification peak	Sample:23031507, Compound:HPF, RT:40.899	6
Peak modified	Sample:23031507, Compound:HPF, RT:40.899	6
Peak deleted	Sample:23031508, Compound:TD, RT:26.212	7
Pre modification peak	Sample:23031509, Compound:PF, RT:29.747	8
Peak modified	Sample:23031509, Compound:PF, RT:29.747	8
Peak deleted	Sample:23031512, Compound:PD, RT:31.296	11
Pre modification peak	Sample:23031517, Compound:PF, RT:31.062	16
Peak modified	Sample:23031517, Compound:PF, RT:31.062	16
Pre modification peak	Sample:23031517, Compound:HF, RT:35.708	16
Peak modified	Sample:23031517, Compound:HF, RT:35.708	16
Peak deleted	Sample:23031517, Compound:HPF, RT:40.833	16
Pre modification peak	Sample:23031517, Compound:PD, RT:31.318	16
Peak modified	Sample:23031517, Compound:PD, RT:31.318	16
Pre modification peak	Sample:23031517, Compound:PD, RT:31.318	16
Peak modified	Sample:23031517, Compound:PD, RT:31.318	16
Pre modification peak	Sample:23031518, Compound:HF, RT:36.722	17
Peak modified	Sample:23031518, Compound:HF, RT:36.722	17
Pre modification peak	Sample:23031518, Compound:HF, RT:36.710	17
Peak modified	Sample:23031518, Compound:HF, RT:36.710	17
Pre modification peak	Sample:23031519, Compound:TD, RT:26.198	18
Peak modified	Sample:23031519, Compound:TD, RT:26.198	18
Pre modification peak	Sample:23031519, Compound:PD, RT:31.307	18
Peak modified	Sample:23031519, Compound:PD, RT:31.307	18
Pre modification peak	Sample:23031520, Compound:HF, RT:35.740	18

Dataset: T:\Autospec\Processed Data Batch\230315D1.qld  
Last Altered: Thursday, March 16, 2023 09:12:10 Pacific Daylight Time  
Printed: Thursday, March 16, 2023 09:13:35 Pacific Daylight Time

Event	Details	Sample ID
Peak modified	Sample:23031520, Compound:HF, RT:35.741	19
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230315D1.qld'	
Peak deleted	Sample:23031504, Compound:TF, RT:27.356	3
Pre modification peak	Sample:23031505, Compound:PF, RT:28.677	4
Peak modified	Sample:23031505, Compound:PF, RT:28.677	4
Pre modification peak	Sample:23031505, Compound:PF, RT:28.666	4
Peak modified	Sample:23031505, Compound:PF, RT:28.666	4
Pre modification peak	Sample:23031505, Compound:PF, RT:28.666	4
Peak modified	Sample:23031505, Compound:PF, RT:28.666	4
Peak added	Sample:23031505, Compound:HF, RT:35.685	4
Peak added	Sample:23031505, Compound:HF, RT:35.685	4
Peak deleted	Sample:23031506, Compound:TD, RT:25.407	5
Peak deleted	Sample:23031506, Compound:PD, RT:30.649	5
Peak deleted	Sample:23031507, Compound:TF, RT:27.187	6
Peak deleted	Sample:23031507, Compound:PF, RT:29.479	6
Peak deleted	Sample:23031507, Compound:PF, RT:28.310	6
Pre modification peak	Sample:23031507, Compound:PD, RT:28.655	6
Peak modified	Sample:23031507, Compound:PD, RT:28.655	6
Pre modification peak	Sample:23031507, Compound:PD, RT:28.644	6
Peak modified	Sample:23031507, Compound:PD, RT:28.644	6
Peak deleted	Sample:23031507, Compound:HD, RT:36.788	6
Peak added	Sample:23031508, Compound:HF, RT:35.696	7
Peak added	Sample:23031508, Compound:HF, RT:35.696	7
Peak deleted	Sample:23031508, Compound:TD, RT:25.379	7
Peak deleted	Sample:23031508, Compound:HD, RT:36.766	7
Peak deleted	Sample:23031516, Compound:TF, RT:24.051	15
Peak deleted	Sample:23031516, Compound:TD, RT:26.791	15
Peak added	Sample:23031516, Compound:TD, RT:23.330	15
Peak added	Sample:23031516, Compound:TD, RT:23.330	15
Peak deleted	Sample:23031517, Compound:TF, RT:25.336	16
Peak deleted	Sample:23031518, Compound:TF, RT:22.073	17
Peak deleted	Sample:23031518, Compound:TD, RT:26.791	17
Peak deleted	Sample:23031518, Compound:TD, RT:25.817	17
Peak deleted	Sample:23031518, Compound:TD, RT:25.379	17
Peak deleted	Sample:23031518, Compound:HD, RT:36.755	17
Peak added	Sample:23031519, Compound:PF, RT:28.655	18
Peak added	Sample:23031519, Compound:PF, RT:28.666	18
Peak deleted	Sample:23031519, Compound:PF, RT:28.956	18
Pre modification peak	Sample:23031520, Compound:PF, RT:28.655	19
Peak modified	Sample:23031520, Compound:PF, RT:28.655	19
Peak deleted	Sample:23031520, Compound:PF, RT:28.265	19
Pre modification peak	Sample:23031520, Compound:PF, RT:28.677	19
Peak modified	Sample:23031520, Compound:PF, RT:28.677	19
Peak added	Sample:23031520, Compound:HF, RT:35.685	19
Peak added	Sample:23031520, Compound:HF, RT:35.674	19
Peak deleted	Sample:23031520, Compound:TD, RT:23.811	19
Peak deleted	Sample:23031520, Compound:PD, RT:30.638	19
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230315D1.qld'	

Dataset: T:\Autospec\Processed Data Batch\230315SRM.qld

Last Altered: Thursday, March 16, 2023 09:35:30 Pacific Daylight Time

Printed: Thursday, March 16, 2023 09:36:30 Pacific Daylight Time

3/16/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23031514, Compound:TF, RT:24.065	1
Peak added	Sample:23031514, Compound:PF, RT:28.655	1
Peak added	Sample:23031514, Compound:PF, RT:28.655	1
Peak added	Sample:23031514, Compound:TD, RT:23.345	1
Peak added	Sample:23031514, Compound:TD, RT:23.345	1
Peak deleted	Sample:23031515, Compound:TF, RT:25.251	2
Peak deleted	Sample:23031515, Compound:TF, RT:24.870	2
Peak deleted	Sample:23031515, Compound:PD, RT:31.696	2
Peak deleted	Sample:23031515, Compound:HD, RT:36.754	2
Peak deleted	Sample:23031515, Compound:HPD, RT:39.205	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230315SRM.qld'	



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 1613B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLC0258

Instrument: AUTOSPEC01

Calibration: GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3A1	SLC0258-ICV1	23031702	NA	03/17/23 10:40
ISCA1	SLC0258-RES1	23031703	NA	03/17/23 11:30
LDW23-SS1066	23A0206-13	23031710	Solid	03/17/23 17:42
CS3A2	SLC0258-CCV1	23031711	NA	03/17/23 18:31
ISCA2	SLC0258-RES2	23031712	NA	03/17/23 19:24



ANALYSIS SEQUENCE

SLC0258

Instrument: AUTOSPEC01      HRGCMS Column ID: K2310  
Calibration ID: GC00015      Tune File: FEB0923\_1-5  
EM Voltage: 345      Resolution check times : 10:35, 19:24

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0258-ICV1	CS3A1	QC		1	K009821		03/17/2023 10:40	23031702	PK	
SLC0258-RES1	ISCA1	QC		2	L002084		03/17/2023 11:30	23031703	PK	
23A0158-12	LDW23-SS1064	1613B Dioxin	C 02	3		K011414	03/17/2023 12:22	23031704	PK	
23A0158-13	LDW23-SS1060	1613B Dioxin	C 02	4		K011414	03/17/2023 13:10	23031705	PK	
23A0158-14	LDW23-SS1059	1613B Dioxin	C 02	5		K011414	03/17/2023 14:06	23031706	PK	
23A0158-15	LDW23-SS1053	1613B Dioxin	C 02	6		K011414	03/17/2023 14:54	23031707	PK	
23A0171-02	LDW23-SS1257	1613B Dioxin	A 05	7		K011414	03/17/2023 16:05	23031708	PK	
23A0171-04	LDW23-SS1245	1613B Dioxin	A 05	8		K011414	03/17/2023 16:53	23031709	PK	
23A0206-13	LDW23-SS1066	1613B Dioxin	C 02	9		K011414	03/17/2023 17:42	23031710	PK	
SLC0258-CCV1	CS3A2	QC		10	K009821		03/17/2023 18:31	23031711	PK	
SLC0258-RES2	ISCA2	QC		11	L002084		03/17/2023 19:24	23031712	PK	

Dataset: T:\Autospec\Processed Data Batch\230317.qld

Last Altered: Monday, March 20, 2023 11:38:42 Pacific Daylight Time

Printed: Monday, March 20, 2023 11:39:39 Pacific Daylight Time 3/20/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23031703, Compound:13C-123789-HxCDD, RT:36.342	2
Peak deleted	Sample:23031712, Compound:13C-123789-HxCDD, RT:36.354	11
Peak deleted	Sample:23031712, Compound:13C-123789-HxCDD, RT:36.388	11
Pre modification peak	Sample:23031704, Compound:PF, RT:29.747	3
Peak modified	Sample:23031704, Compound:PF, RT:29.747	3
Pre modification peak	Sample:23031704, Compound:PF, RT:31.095	3
Peak modified	Sample:23031704, Compound:PF, RT:31.095	3
Pre modification peak	Sample:23031704, Compound:TD, RT:26.226	3
Peak modified	Sample:23031704, Compound:TD, RT:26.226	3
Pre modification peak	Sample:23031705, Compound:HF, RT:35.741	4
Peak modified	Sample:23031705, Compound:HF, RT:35.741	4
Pre modification peak	Sample:23031706, Compound:HPF, RT:40.866	5
Peak modified	Sample:23031706, Compound:HPF, RT:40.866	5
Pre modification peak	Sample:23031707, Compound:TF, RT:25.591	6
Peak modified	Sample:23031707, Compound:TF, RT:25.591	6
Pre modification peak	Sample:23031708, Compound:HF, RT:35.719	7
Peak modified	Sample:23031708, Compound:HF, RT:35.719	7
Pre modification peak	Sample:23031709, Compound:HF, RT:35.719	8
Peak modified	Sample:23031709, Compound:HF, RT:35.719	8
Pre modification peak	Sample:23031709, Compound:PD, RT:31.340	8
Peak modified	Sample:23031709, Compound:PD, RT:31.340	8
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230317.qld'	
Peak added	Sample:23031704, Compound:HF, RT:35.730	3
Peak added	Sample:23031704, Compound:HF, RT:35.708	3
Peak added	Sample:23031704, Compound:HF, RT:35.741	3
Peak added	Sample:23031704, Compound:HF, RT:35.752	3
Peak deleted	Sample:23031704, Compound:HD, RT:36.777	3
Peak deleted	Sample:23031705, Compound:HD, RT:36.777	4
Peak added	Sample:23031706, Compound:HF, RT:35.719	5
Peak added	Sample:23031706, Compound:HF, RT:35.719	5
Peak added	Sample:23031706, Compound:PD, RT:28.667	5
Peak added	Sample:23031706, Compound:PD, RT:28.677	5
Peak deleted	Sample:23031706, Compound:HD, RT:36.789	5
Peak deleted	Sample:23031707, Compound:HPF, RT:41.122	6
Peak deleted	Sample:23031707, Compound:HPF, RT:41.021	6
Peak deleted	Sample:23031707, Compound:HD, RT:36.777	6
Peak deleted	Sample:23031708, Compound:TF, RT:27.074	7
Peak deleted	Sample:23031708, Compound:PF, RT:28.321	7
Peak deleted	Sample:23031708, Compound:TD, RT:25.562	7
Peak added	Sample:23031708, Compound:TD, RT:23.373	7
Peak added	Sample:23031708, Compound:TD, RT:23.373	7
Peak deleted	Sample:23031708, Compound:HD, RT:36.788	7
Peak deleted	Sample:23031709, Compound:TF, RT:25.096	8
Peak deleted	Sample:23031709, Compound:TD, RT:25.195	8
Peak deleted	Sample:23031709, Compound:HD, RT:36.777	8
Peak deleted	Sample:23031710, Compound:TD, RT:25.563	9
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230317.qld'	



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0045</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>SLC0045-ICV1</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23030302</u>	Analyzed:	<u>03/03/23 09:51</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	94.0	71 - 129	25.7745	25.76487	0.0096	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.4242	26.40287	0.0213	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.2	76 - 124	29.9337	29.92235	0.0114	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	87.6	77 - 123	31.2707	31.2611	0.0096	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	84.3	62 - 138	31.5268	31.5192	0.0076	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	84.0	76 - 124	34.8915	34.88393	0.0076	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	74.6	70 - 130	35.0363	35.02318	0.0131	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.8942	35.88653	0.0077	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	99.9	74 - 126	36.9303	36.91718	0.0131	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.5	85 - 115	36.0167	36.00728	0.0094	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.9	85 - 115	36.1393	36.12053	0.0188	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	95.3	78 - 122	38.7685	38.7593	0.0092	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	98.7	77 - 123	41.008	40.99867	0.0093	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	105	72 - 128	40.2615	40.25773	0.0038	N/A	
13C12-OCDD	200.00	107	48 - 152	44.9993	44.98705	0.0122	N/A	
37Cl4-2,3,7,8-TCDD	10.000	90.5	0 - 200	26.4383	26.42402	0.0143	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
 Sequence: SLC0045 Instrument: AUTOSPEC01  
 Sample ID: SLC0045-SCV1 Calibration: GC00015  
 File ID: 23030310 Analyzed: 03/03/23 16:36

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	96.9	0 - 200	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	96.6	0 - 200	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	0 - 200	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	0 - 200	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	0 - 200	31.5155	31.5192	-0.0037	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	0 - 200	34.8802	34.88393	-0.0037	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	0 - 200	35.014	35.02318	-0.0092	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	0 - 200	35.8828	35.88653	-0.0037	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	0 - 200	36.9078	36.91718	-0.0094	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	0 - 200	36.0053	36.00728	-0.0020	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	0 - 200	36.1168	36.12053	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	0 - 200	38.7573	38.7593	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	0 - 200	40.9967	40.99867	-0.0020	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	0 - 200	40.2502	40.25773	-0.0075	N/A	
13C12-OCDD	200.00	80.8	0 - 200	44.9807	44.98705	-0.0064	N/A	
37C14-2,3,7,8-TCDD	10.000	87.1	0 - 200	26.4242	26.42402	0.0002	N/A	

\* Values outside of QC limits





**SURROGATE RECOVERY AND RT SUMMARY  
EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0045</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>SLC0045-CCV1</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23030311</u>	Analyzed:	<u>03/03/23 17:25</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	89.4	71 - 129	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	86.0	82 - 118	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.6	76 - 124	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.6	77 - 123	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	90.8	62 - 138	31.5157	31.5192	-0.0035	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	95.2	76 - 124	34.8805	34.88393	-0.0034	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	91.1	70 - 130	35.0253	35.02318	0.0021	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	96.9	73 - 127	35.883	35.88653	-0.0035	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	101	74 - 126	36.9193	36.91718	0.0021	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.6	85 - 115	36.0057	36.00728	-0.0016	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	98.4	85 - 115	36.117	36.12053	-0.0035	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	78 - 122	38.7577	38.7593	-0.0016	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	84.3	77 - 123	40.997	40.99867	-0.0017	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	92.0	72 - 128	40.2617	40.25773	0.0040	N/A	
13C12-OCDD	200.00	85.1	48 - 152	44.9903	44.98705	0.0032	N/A	
37C14-2,3,7,8-TCDD	10.000	75.4	0 - 200	26.424	26.42402	0.0000	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0176</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>SLC0176-ICV1</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23031502</u>	Analyzed:	<u>03/15/23 11:02</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	85.8	71 - 129	25.5623	25.76487	-0.2026	N/A	
13C12-2,3,7,8-TCDD	100.00	100	82 - 118	26.198	26.40287	-0.2049	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	80.0	76 - 124	29.7247	29.92235	-0.1977	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	81.5	77 - 123	31.0617	31.2611	-0.1994	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	83.2	62 - 138	31.3178	31.5192	-0.2014	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	80.3	76 - 124	34.7048	34.88393	-0.1791	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	71.8	70 - 130	34.8385	35.02318	-0.1847	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	82.7	73 - 127	35.7075	35.88653	-0.1790	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	90.8	74 - 126	36.7435	36.91718	-0.1737	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.1	85 - 115	35.8302	36.00728	-0.1771	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	85.9	85 - 115	35.9415	36.12053	-0.1790	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	83.7	78 - 122	38.6042	38.7593	-0.1551	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	83.0	77 - 123	40.8102	40.99867	-0.1885	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	84.3	72 - 128	40.086	40.25773	-0.1717	N/A	
13C12-OCDD	200.00	75.7	48 - 152	44.7825	44.98705	-0.2046	N/A	
37Cl4-2,3,7,8-TCDD	10.000	86.1	0 - 200	26.2122	26.42402	-0.2118	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC                          SDG: 23A0206  
Client: Anchor OEA, LLC    Project: AOC5 MR Phase 1  
Sequence: SLC0176    Instrument: AUTOSPEC01  
Sample ID: SLC0176-CCV1    Calibration: GC00015  
File ID: 23031510    Analyzed: 03/15/23 17:48

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	81.2	71 - 129	25.5342	25.76487	-0.2307	N/A	
13C12-2,3,7,8-TCDD	100.00	109	82 - 118	26.1697	26.40287	-0.2332	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	89.8	76 - 124	29.7023	29.92235	-0.2201	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.7	77 - 123	31.0392	31.2611	-0.2219	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	104	62 - 138	31.2955	31.5192	-0.2237	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	92.3	76 - 124	34.6825	34.88393	-0.2014	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	82.6	70 - 130	34.8273	35.02318	-0.1959	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	81.0	73 - 127	35.6963	35.88653	-0.1902	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	81.1	74 - 126	36.7323	36.91718	-0.1849	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	99.3	85 - 115	35.8077	36.00728	-0.1996	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	89.4	85 - 115	35.9303	36.12053	-0.1902	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	67.1	78 - 122	38.593	38.7593	-0.1663	N/A	*
13C12-1,2,3,4,7,8,9-HpCDF	100.00	73.7	77 - 123	40.799	40.99867	-0.1997	N/A	*
13C12-1,2,3,4,6,7,8-HpCDD	100.00	81.9	72 - 128	40.0748	40.25773	-0.1829	N/A	
13C12-OCDD	200.00	91.7	48 - 152	44.7732	44.98705	-0.2139	N/A	
37Cl4-2,3,7,8-TCDD	10.000	92.3	0 - 200	26.198	26.42402	-0.2260	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Sequence: SLC0176 Instrument: AUTOSPEC01  
Sample ID: BLC0136-BLK1 Calibration: GC00015  
File ID: 23031512 Analyzed: 03/15/23 19:33

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	102	24 - 169	25.5342	25.76487	-0.2307	N/A	
13C12-2,3,7,8-TCDD	200.00	131	25 - 164	26.1698	26.40287	-0.2331	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	115	24 - 185	29.7023	29.92235	-0.2201	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	119	21 - 178	31.0282	31.2611	-0.2329	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	130	25 - 181	31.2845	31.5192	-0.2347	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	101	26 - 152	34.6825	34.88393	-0.2014	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	97.7	26 - 123	34.8163	35.02318	-0.2069	N/A	
13C12-2,3,4,6,7,8-HxCDF	200.00	101	28 - 136	35.6965	35.88653	-0.1900	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	94.7	29 - 147	36.7215	36.91718	-0.1957	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	128	32 - 141	35.808	36.00728	-0.1993	N/A	
13C12-1,2,3,6,7,8-HxCDD	200.00	120	28 - 130	35.9193	36.12053	-0.2012	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	200.00	69.7	28 - 143	38.5932	38.7593	-0.1661	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.00	68.4	26 - 138	40.799	40.99867	-0.1997	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	76.9	23 - 140	40.0638	40.25773	-0.1939	N/A	
13C12-OCDD	400.00	80.2	17 - 157	44.7642	44.98705	-0.2229	N/A	
37C14-2,3,7,8-TCDD	80.000	102	35 - 197	26.184	26.42402	-0.2400	N/A	

\* Values outside of QC limits



## SURROGATE RECOVERY AND RT SUMMARY

### EPA 1613B

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Sequence: <u>SLC0176</u>	Instrument: <u>AUTOSPEC01</u>
Sample ID: <u>BLC0136-BS1</u>	Calibration: <u>GC00015</u>
File ID: <u>23031513</u>	Analyzed: <u>03/15/23 20:22</u>

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	96.3	24 - 169	25.5198	25.76487	-0.2451	N/A	
13C12-2,3,7,8-TCDD	200.00	117	25 - 164	26.1697	26.40287	-0.2332	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	99.7	24 - 185	29.691	29.92235	-0.2314	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	102	21 - 178	31.0278	31.2611	-0.2333	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	108	25 - 181	31.284	31.5192	-0.2352	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	100	26 - 152	34.6708	34.88393	-0.2131	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	93.5	26 - 123	34.8157	35.02318	-0.2075	N/A	
13C12-2,3,4,6,7,8-HxCDF	200.00	93.4	28 - 136	35.6848	35.88653	-0.2017	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	96.3	29 - 147	36.7208	36.91718	-0.1964	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	116	32 - 141	35.7962	36.00728	-0.2111	N/A	
13C12-1,2,3,6,7,8-HxCDD	200.00	109	28 - 130	35.9188	36.12053	-0.2017	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	200.00	83.3	28 - 143	38.5815	38.7593	-0.1778	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.00	81.9	26 - 138	40.7873	40.99867	-0.2114	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	98.3	23 - 140	40.0633	40.25773	-0.1944	N/A	
13C12-OCDD	400.00	94.9	17 - 157	44.7545	44.98705	-0.2326	N/A	
37Cl4-2,3,7,8-TCDD	80.000	89.6	35 - 197	26.1838	26.42402	-0.2402	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
 Sequence: SLC0176 Instrument: AUTOSPEC01  
 Sample ID: BLC0136-SRM1 Calibration: GC00015  
 File ID: 23031515 Analyzed: 03/15/23 22:00

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.40	95.7	24 - 169	25.534	25.76487	-0.2309	N/A	
13C12-2,3,7,8-TCDD	199.40	114	25 - 164	26.1697	26.40287	-0.2332	N/A	
13C12-1,2,3,7,8-PeCDF	199.40	101	24 - 185	29.7022	29.92235	-0.2202	N/A	
13C12-2,3,4,7,8-PeCDF	199.40	108	21 - 178	31.039	31.2611	-0.2221	N/A	
13C12-1,2,3,7,8-PeCDD	199.40	119	25 - 181	31.2952	31.5192	-0.2240	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.40	87.3	26 - 152	34.6933	34.88393	-0.1906	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.40	83.9	26 - 123	34.827	35.02318	-0.1962	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.40	91.5	28 - 136	35.7072	35.88653	-0.1793	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.40	103	29 - 147	36.7322	36.91718	-0.1850	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.40	114	32 - 141	35.8297	36.00728	-0.1776	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.40	103	28 - 130	35.9412	36.12053	-0.1793	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.40	65.2	28 - 143	38.6037	38.7593	-0.1556	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.40	63.2	26 - 138	40.8097	40.99867	-0.1890	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.40	77.2	23 - 140	40.0743	40.25773	-0.1834	N/A	
13C12-OCDD	398.80	69.0	17 - 157	44.7818	44.98705	-0.2053	N/A	
37C14-2,3,7,8-TCDD	79.761	88.3	35 - 197	26.1978	26.42402	-0.2262	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
 Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
 Sequence: SLC0176 Instrument: AUTOSPEC01  
 Sample ID: SLC0176-CCV2 Calibration: GC00015  
 File ID: 23031521 Analyzed: 03/16/23 02:54

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	84.0	71 - 129	25.5342	25.76487	-0.2307	N/A	
13C12-2,3,7,8-TCDD	100.00	101	82 - 118	26.1697	26.40287	-0.2332	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	89.0	76 - 124	29.7023	29.92235	-0.2201	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	95.3	77 - 123	31.0392	31.2611	-0.2219	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	98.2	62 - 138	31.2842	31.5192	-0.2350	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	74.3	76 - 124	34.6822	34.88393	-0.2017	N/A	*
13C12-1,2,3,6,7,8-HxCDF	100.00	67.8	70 - 130	34.827	35.02318	-0.1962	N/A	*
13C12-2,3,4,6,7,8-HxCDF	100.00	77.5	73 - 127	35.696	35.88653	-0.1905	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	85.5	74 - 126	36.721	36.91718	-0.1962	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	91.3	85 - 115	35.8075	36.00728	-0.1998	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.4	85 - 115	35.9188	36.12053	-0.2017	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	76.1	78 - 122	38.5927	38.7593	-0.1666	N/A	*
13C12-1,2,3,4,7,8,9-HpCDF	100.00	79.4	77 - 123	40.7985	40.99867	-0.2002	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	83.7	72 - 128	40.0743	40.25773	-0.1834	N/A	
13C12-OCDD	200.00	101	48 - 152	44.782	44.98705	-0.2051	N/A	
37C14-2,3,7,8-TCDD	10.000	85.2	0 - 200	26.1838	26.42402	-0.2402	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY  
EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0258</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>SLC0258-ICV1</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23031702</u>	Analyzed:	<u>03/17/23 10:40</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	85.7	71 - 129	25.5623	25.76487	-0.2026	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.1978	26.40287	-0.2051	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	90.6	76 - 124	29.7355	29.92235	-0.1869	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.4	77 - 123	31.0613	31.2611	-0.1998	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	92.1	62 - 138	31.3175	31.5192	-0.2017	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	80.3	76 - 124	34.7155	34.88393	-0.1684	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	78.1	70 - 130	34.8492	35.02318	-0.1740	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	82.2	73 - 127	35.7182	35.88653	-0.1683	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	87.0	74 - 126	36.7542	36.91718	-0.1630	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.6	85 - 115	35.8295	36.00728	-0.1778	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	96.2	85 - 115	35.9522	36.12053	-0.1683	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	78.1	78 - 122	38.6148	38.7593	-0.1445	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	77.8	77 - 123	40.8207	40.99867	-0.1780	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	79.4	72 - 128	40.0967	40.25773	-0.1610	N/A	
13C12-OCDD	200.00	80.6	48 - 152	44.8093	44.98705	-0.1778	N/A	
37Cl4-2,3,7,8-TCDD	10.000	86.5	0 - 200	26.2262	26.42402	-0.1978	N/A	

\* Values outside of QC limits





## SURROGATE RECOVERY AND RT SUMMARY

### EPA 1613B

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0258</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>23A0206-13</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23031710</u>	Analyzed:	<u>03/17/23 17:42</u>

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.93	96.3	24 - 169	25.5767	25.76487	-0.1882	N/A	
13C12-2,3,7,8-TCDD	199.93	113	25 - 164	26.2123	26.40287	-0.1906	N/A	
13C12-1,2,3,7,8-PeCDF	199.93	120	24 - 185	29.7472	29.92235	-0.1752	N/A	
13C12-2,3,4,7,8-PeCDF	199.93	127	21 - 178	31.073	31.2611	-0.1881	N/A	
13C12-1,2,3,7,8-PeCDD	199.93	123	25 - 181	31.3293	31.5192	-0.1899	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.93	92.0	26 - 152	34.7385	34.88393	-0.1454	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.93	84.9	26 - 123	34.8722	35.02318	-0.1510	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.93	93.0	28 - 136	35.7635	35.88653	-0.1230	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.93	99.5	29 - 147	36.7662	36.91718	-0.1510	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.93	111	32 - 141	35.875	36.00728	-0.1323	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.93	102	28 - 130	35.9863	36.12053	-0.1342	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.93	74.3	28 - 143	38.638	38.7593	-0.1213	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.93	73.6	26 - 138	40.8438	40.99867	-0.1549	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.93	77.2	23 - 140	40.1197	40.25773	-0.1380	N/A	
13C12-OCDD	399.86	85.1	17 - 157	44.847	44.98705	-0.1401	N/A	
37C14-2,3,7,8-TCDD	79.973	94.6	35 - 197	26.2265	26.42402	-0.1975	N/A	

\* Values outside of QC limits



**SURROGATE RECOVERY AND RT SUMMARY**  
**EPA 1613B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Sequence:	<u>SLC0258</u>	Instrument:	<u>AUTOSPEC01</u>
Sample ID:	<u>SLC0258-CCV1</u>	Calibration:	<u>GC00015</u>
File ID:	<u>23031711</u>	Analyzed:	<u>03/17/23 18:31</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	89.3	71 - 129	25.5625	25.76487	-0.2024	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.1982	26.40287	-0.2047	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	103	76 - 124	29.7247	29.92235	-0.1977	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	109	77 - 123	31.0617	31.2611	-0.1994	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	103	62 - 138	31.3178	31.5192	-0.2014	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	82.9	76 - 124	34.716	34.88393	-0.1679	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	75.4	70 - 130	34.8497	35.02318	-0.1735	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	81.6	73 - 127	35.7187	35.88653	-0.1678	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	89.1	74 - 126	36.7548	36.91718	-0.1624	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.8	85 - 115	35.8302	36.00728	-0.1771	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.8	85 - 115	35.9527	36.12053	-0.1678	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	85.0	78 - 122	38.6267	38.7593	-0.1326	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	88.4	77 - 123	40.8327	40.99867	-0.1660	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	87.1	72 - 128	40.0973	40.25773	-0.1604	N/A	
13C12-OCDD	200.00	104	48 - 152	44.8195	44.98705	-0.1676	N/A	
37C14-2,3,7,8-TCDD	10.000	89.1	0 - 200	26.2123	26.42402	-0.2117	N/A	

\* Values outside of QC limits



## HOLDING TIME SUMMARY

**Analysis: EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	03/07/23 14:50	55	365	03/17/23 17:42	10	365	

\* Indicates hold time exceedance.



**METHOD DETECTION  
AND REPORTING LIMITS**  
**EPA 1613B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.058	1.00	ng/kg
2,3,7,8-TCDD	0.150	1.00	ng/kg
1,2,3,7,8-PeCDF	0.240	1.00	ng/kg
2,3,4,7,8-PeCDF	0.220	1.00	ng/kg
1,2,3,7,8-PeCDD	0.170	1.00	ng/kg
1,2,3,4,7,8-HxCDF	0.280	1.00	ng/kg
1,2,3,6,7,8-HxCDF	0.200	1.00	ng/kg
2,3,4,6,7,8-HxCDF	0.170	1.00	ng/kg
1,2,3,7,8,9-HxCDF	0.190	1.00	ng/kg
1,2,3,4,7,8-HxCDD	0.170	1.00	ng/kg
1,2,3,6,7,8-HxCDD	0.180	1.00	ng/kg
1,2,3,7,8,9-HxCDD	0.220	1.00	ng/kg
1,2,3,4,6,7,8-HpCDF	0.210	1.00	ng/kg
1,2,3,4,7,8,9-HpCDF	0.240	1.00	ng/kg
1,2,3,4,6,7,8-HpCDD	0.560	2.50	ng/kg
OCDF	1.10	2.50	ng/kg
OCDD	4.60	10.0	ng/kg
Total TCDF		1.00	ng/kg
Total TCDD		1.00	ng/kg
Total PeCDF		1.00	ng/kg
Total PeCDD		1.00	ng/kg
Total HxCDF		1.00	ng/kg
Total HxCDD		1.00	ng/kg
Total HpCDF		1.00	ng/kg
Total HpCDD		1.00	ng/kg



**CS3WT**

**Calibration and Verification Solution (EPA-1613CS3)  
combined with Window Defining and 2,3,7,8-TCDD  
Resolution Testing Congeners**

**PRODUCT CODE:** CS3WT  
**LOT NUMBER:** CS3WT0918  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 10/24/2018  
**LAST TESTED:** (mm/dd/yyyy) 10/29/2018  
**EXPIRY DATE:** (mm/dd/yyyy) 10/29/2025  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DESCRIPTION:**

CS3WT is a solution/mixture of native and  $^{13}\text{C}_{12}$ -labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS30918). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual  $^{13}\text{C}$ -labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of  $\geq 99\%$ . The 2,3,7,8- $^{37}\text{Cl}_4$ -tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic ( $^{37}\text{Cl}$ ) purity of  $\geq 95\%$ . The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

<b><u>PRODUCT CODE</u></b>	<b><u>LOT NUMBER</u></b>
EPA-1613CS1	13CS10918
EPA-1613CS2	13CS20918
EPA-1613CS3	13CS30918
EPA-1613CS4	13CS40918
EPA-1613CS5	13CS50918
EPA-1613CSL	13CSL0918
EPA-1613CS0.5	13CS0.50918

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture  
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.
- Only the 2,3,7,8-substituted PCDDs and PCDFs should be used for quantitation. The other congeners (window defining and 2378-TCDD resolution testing) should be considered semi-quantitative (within  $\pm 20\%$  of their design value). Impurities have been identified where possible.

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: CS3WT; Components and Concentrations (ng/ml, in nonane/4.5% toluene)**

**QUANTITATIVE ANALYTES (ng/ml, ±5%)**

**Native PCDDs & PCDFs:**

2,3,7,8-TCDD	10
2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50
1,2,3,7,8-PeCDF	50
2,3,4,7,8-PeCDF	50
1,2,3,4,7,8-HxCDD	50
1,2,3,6,7,8-HxCDD	50
1,2,3,7,8,9-HxCDD	50
1,2,3,4,7,8-HxCDF	50
1,2,3,6,7,8-HxCDF	50
1,2,3,7,8,9-HxCDF	50
2,3,4,6,7,8-HxCDF	50
1,2,3,4,6,7,8-HpCDD (WD)	50
1,2,3,4,6,7,8-HpCDF (WD)	50
1,2,3,4,7,8,9-HpCDF (WD)	50
OCDD	100
OCDF	100

**Labelled PCDDs & PCDFs:**

<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100
<sup>13</sup> C <sub>12</sub> -OCDD	200

**Cleanup Standard:**

<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	10
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**Internal Standards:**

<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100

**SEMI-QUANTITATIVE ANALYTES (ng/ml, ±20%)**

**Window Definers:\***

1,3,6,8-TCDD	10
1,2,8,9-TCDD	10
1,3,6,8-TCDF	10
1,2,8,9-TCDF	10
1,2,4,6,8/1,2,4,7,9-PeCDD	50
1,2,3,8,9-PeCDD	50
1,3,4,6,8-PeCDF	50
1,2,3,8,9-PeCDF	50
1,2,4,6,7,9-HxCDD	50
1,2,3,4,6,8-HxCDF	50
1,2,3,4,6,7,9-HpCDD	50

**2378-TCDD Resolution Testing Isomers:**

1,2,3,4-TCDD	5
1,2,3,7/1,2,3,8-TCDD	5
1,2,3,9-TCDD	10

---

\* 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD. Use 1,2,3,4,6,7,9-HpCDD to set window.

\* 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF. Use 1,2,3,4,6,7,8-HpCDF to set window.

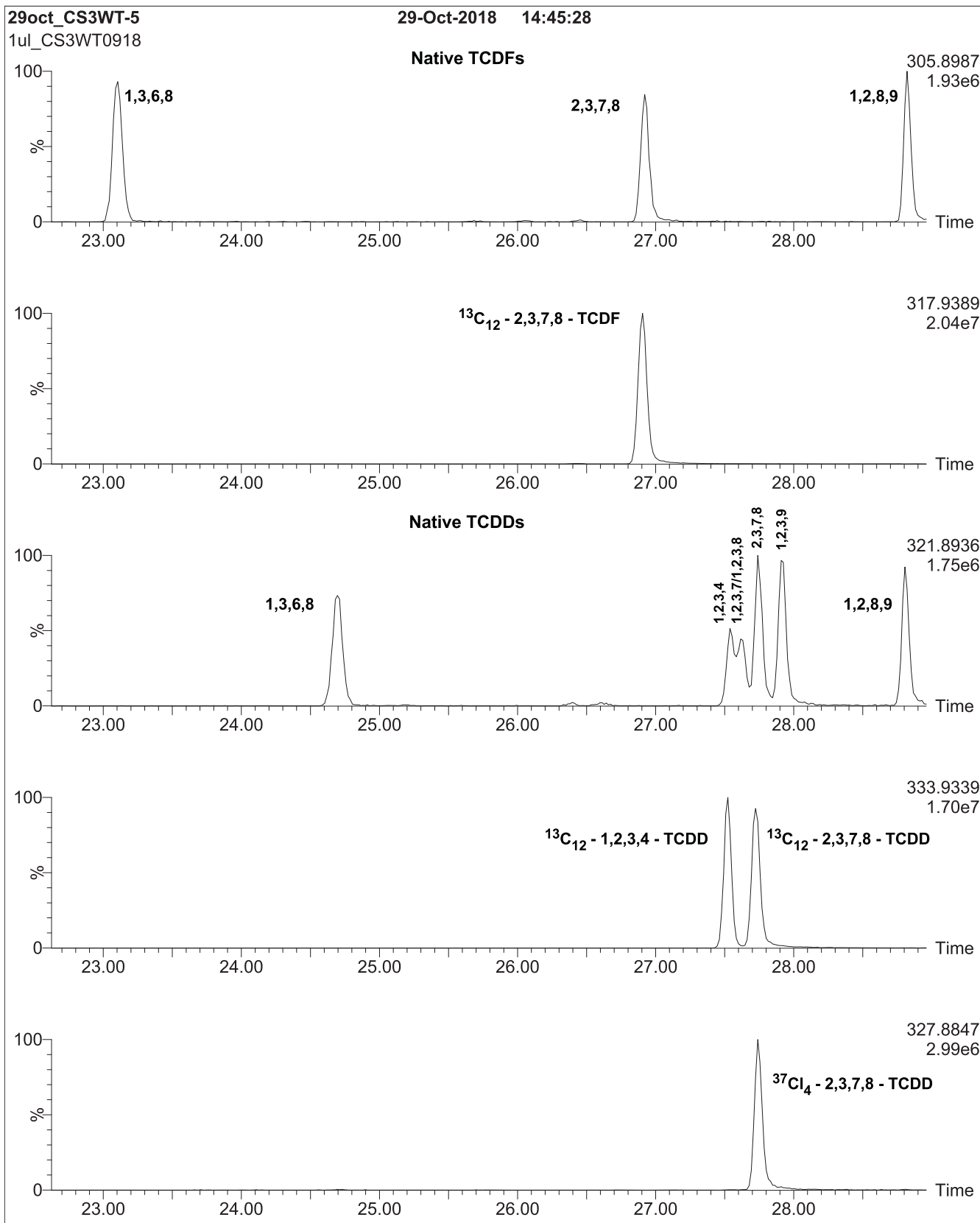
WD – Window Definer

Certified By:   
B.G. Chittim, General Manager

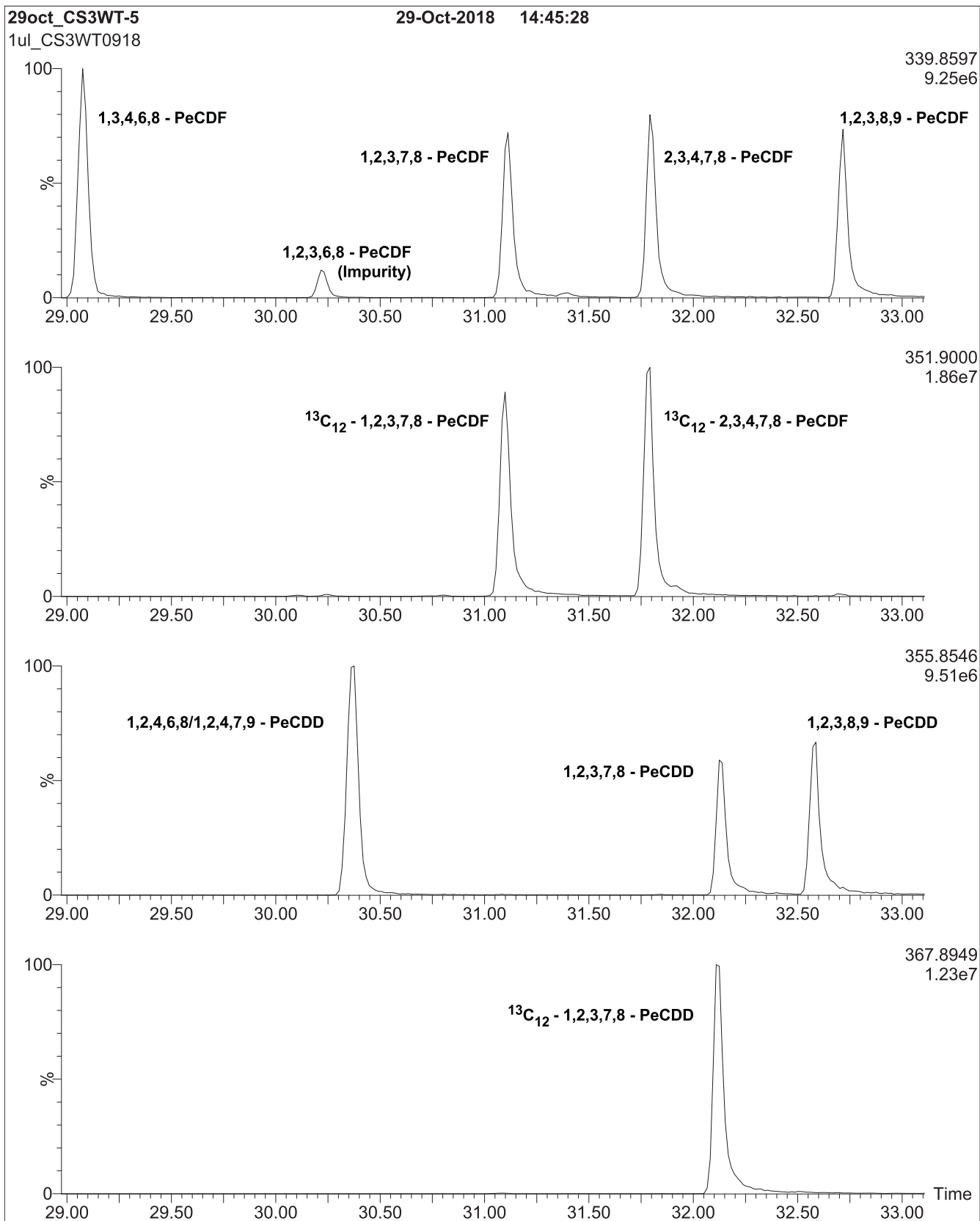
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(mm/dd/yyyy)



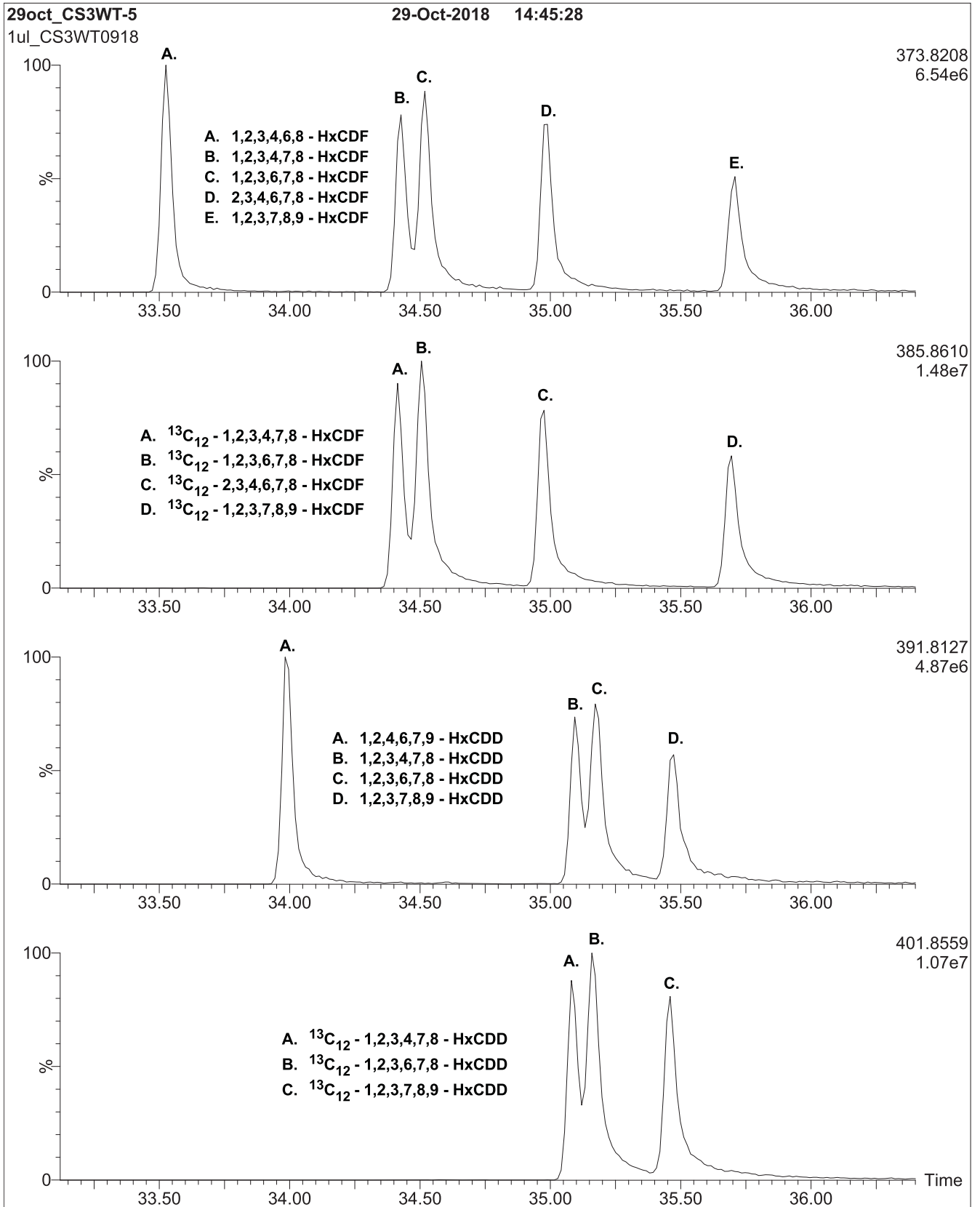
**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



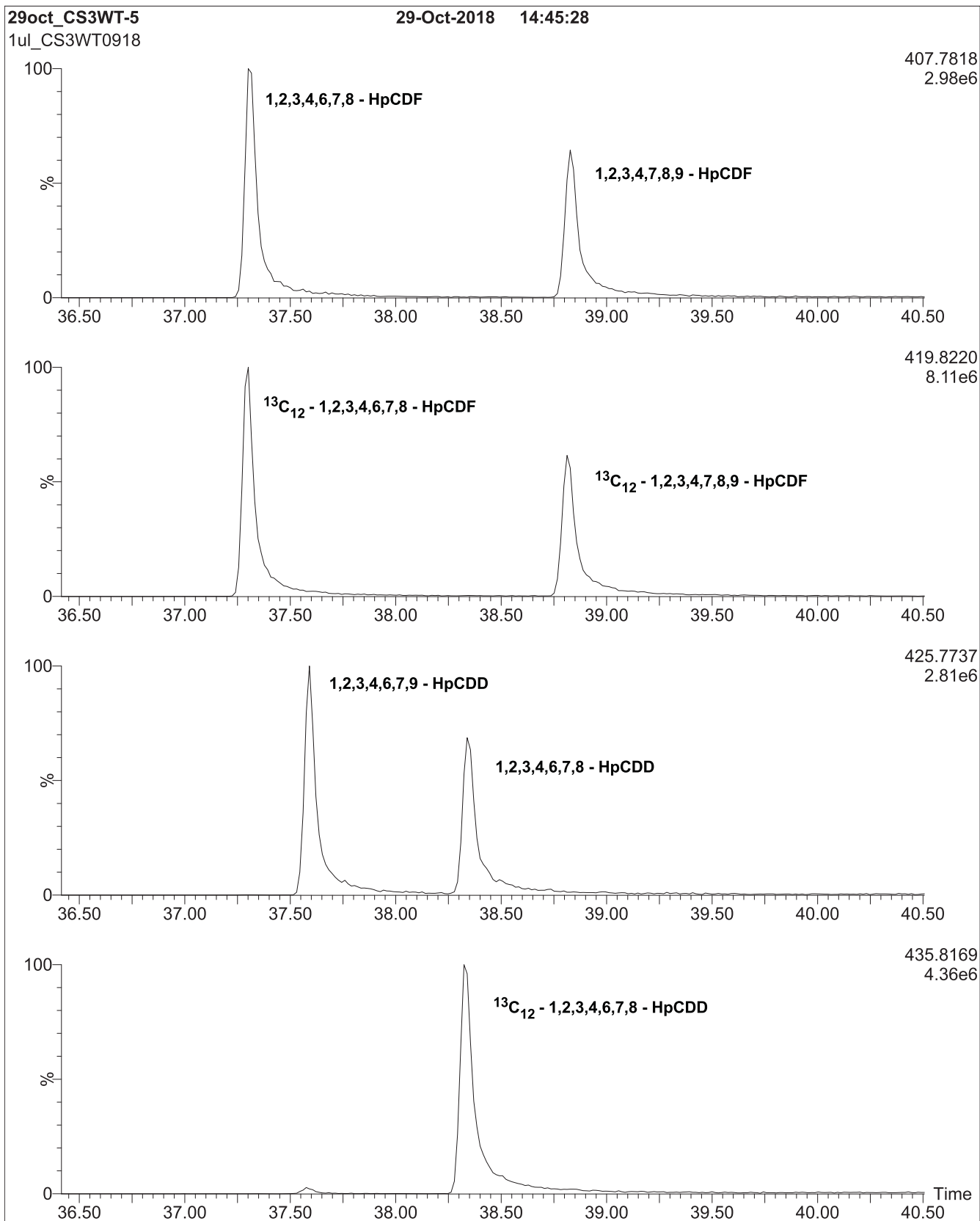
**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



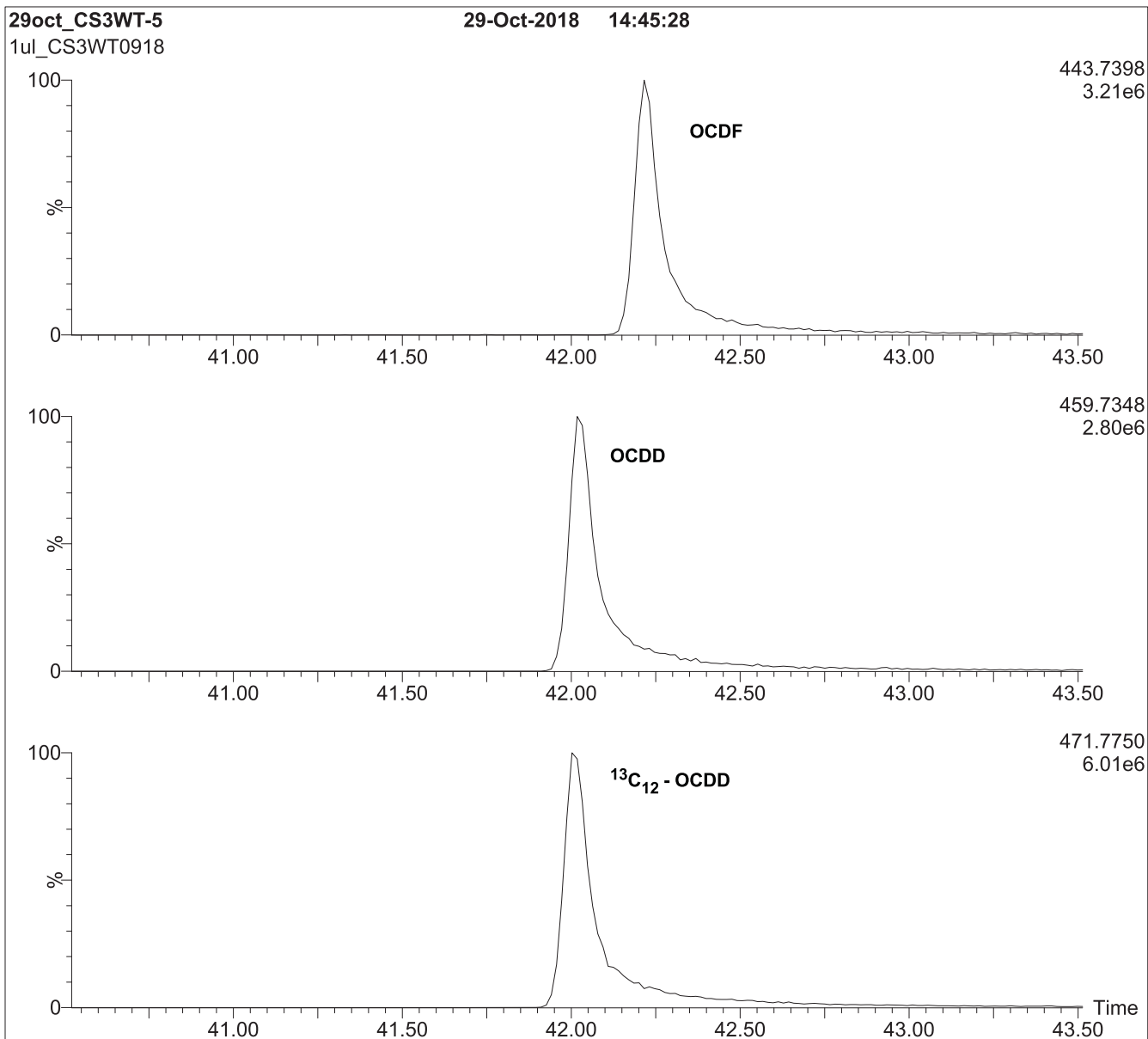
**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)



**EPA-1613CVS**

**U.S. EPA Method 1613 Calibration and Verification Solutions  
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5**

<b><u>PRODUCT CODES:</u></b>	EPA-1613CVS	<b><u>LOT NUMBERS:</u></b>	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

<b><u>SOLVENT(S):</u></b>	Nonane/Toluene
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/22/2019
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/24/2019
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/24/2026
<b><u>RECOMMENDED STORAGE:</u></b>	Store ampoules in a cool, dark place

<b>I005456</b>
1613 CS1 CAL STD
Expires 10/24/2026
<i>Prepared By Joshua Rains 6/23/2020</i>

**DESCRIPTION:**

EPA-1613CVS is a series of 5 calibration solutions containing native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub> and <sup>37</sup>Cl<sub>4</sub>) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-<sup>37</sup>Cl<sub>4</sub>-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations

Table B: 5-point HRGC/HRMS Calibration and RRF Summary

Table C: 7-point HRGC/HRMS Calibration and RRF Summary

Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

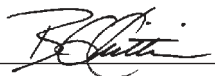


\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*



**Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
<b>Native PCDDs and PCDFs:</b>							
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
<b>Labelled PCDDs and PCDFs:</b>							
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD	200	200	200	200	200	200	200
<b>Cleanup Standard:</b>							
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
<b>Internal Standards:</b>							
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:   
B.G. Chittim, General Manager

Date: 10/25/2019  
(mm/dd/yyyy)

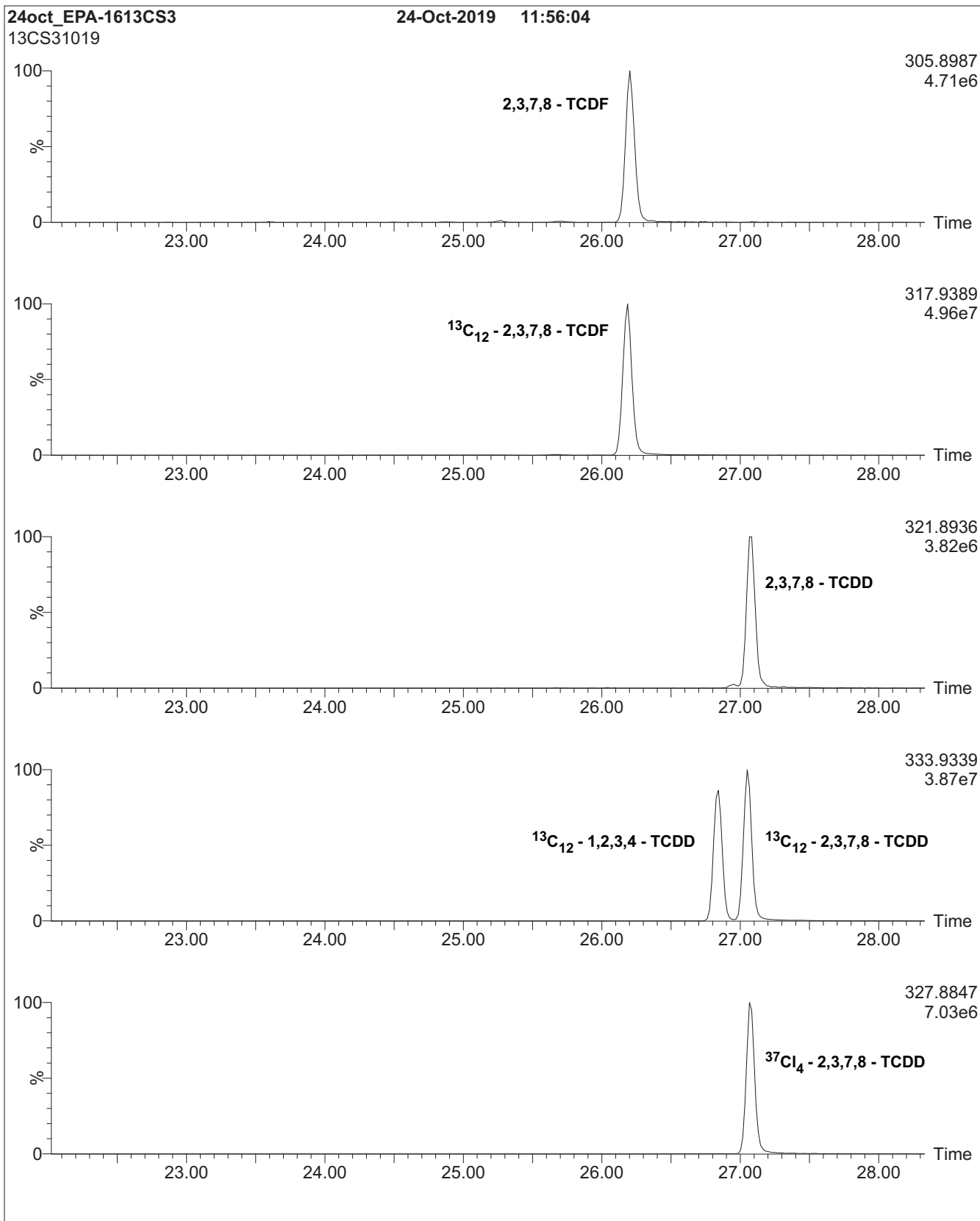
**Table B: EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

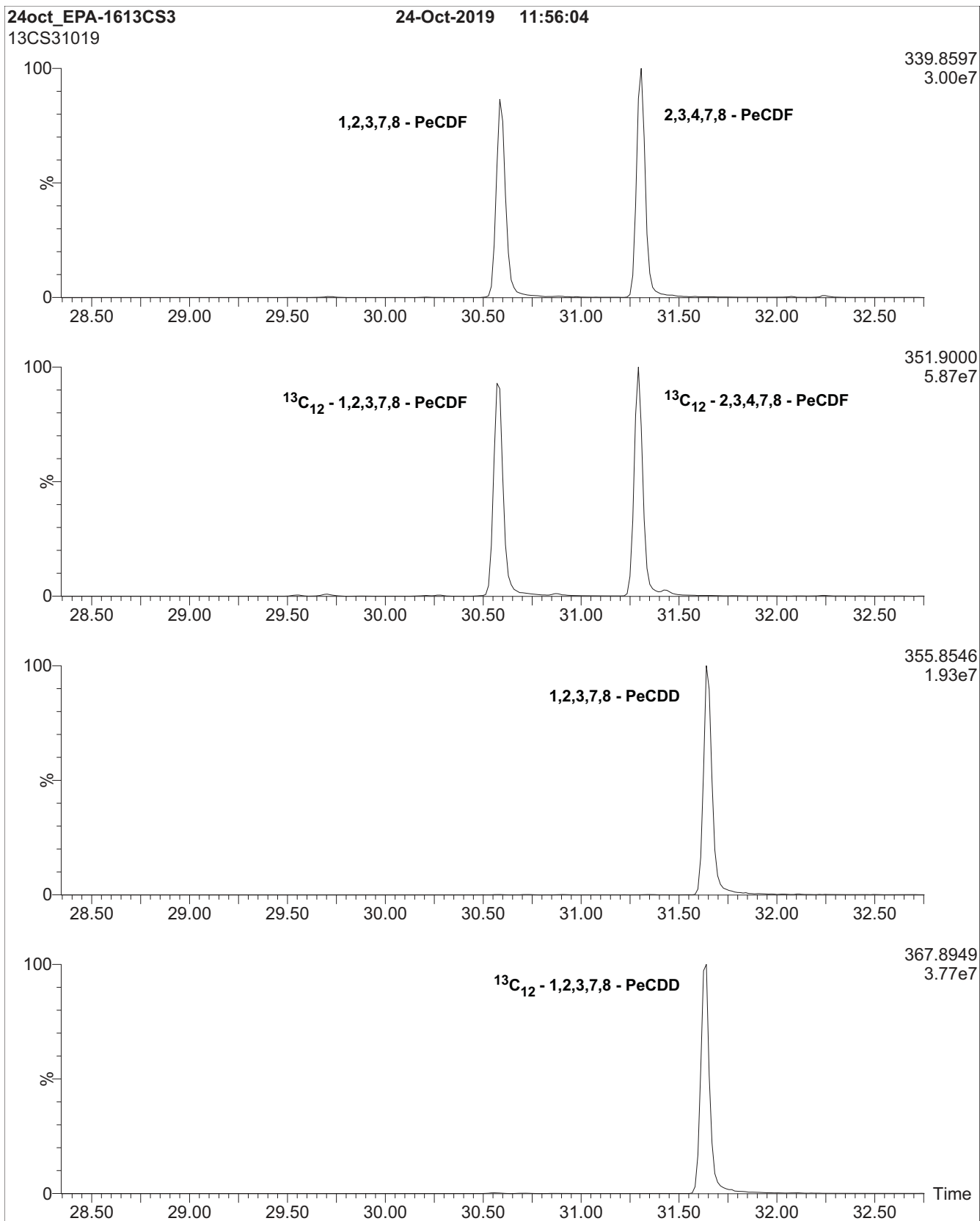
**Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

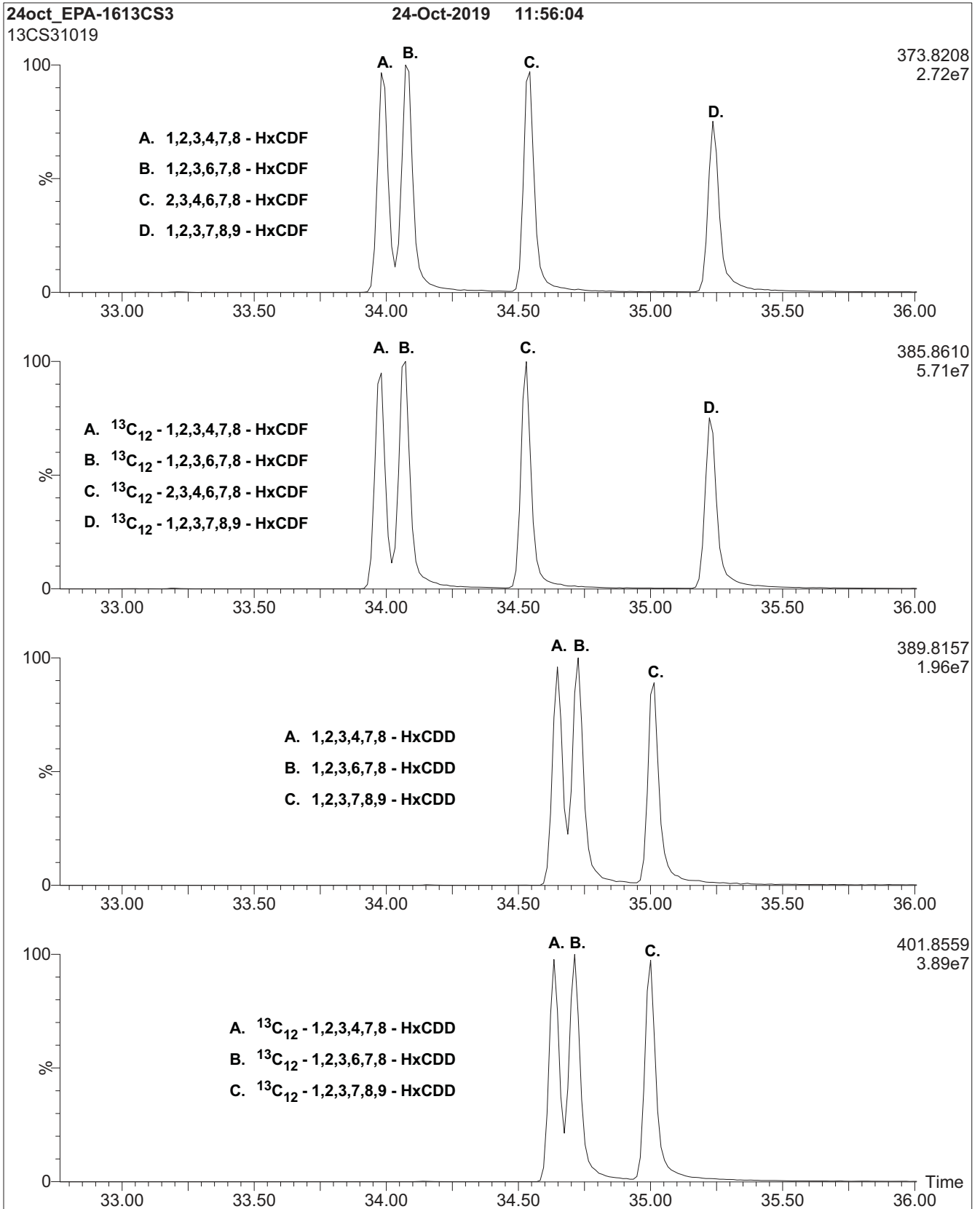
**Figure 1:** EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



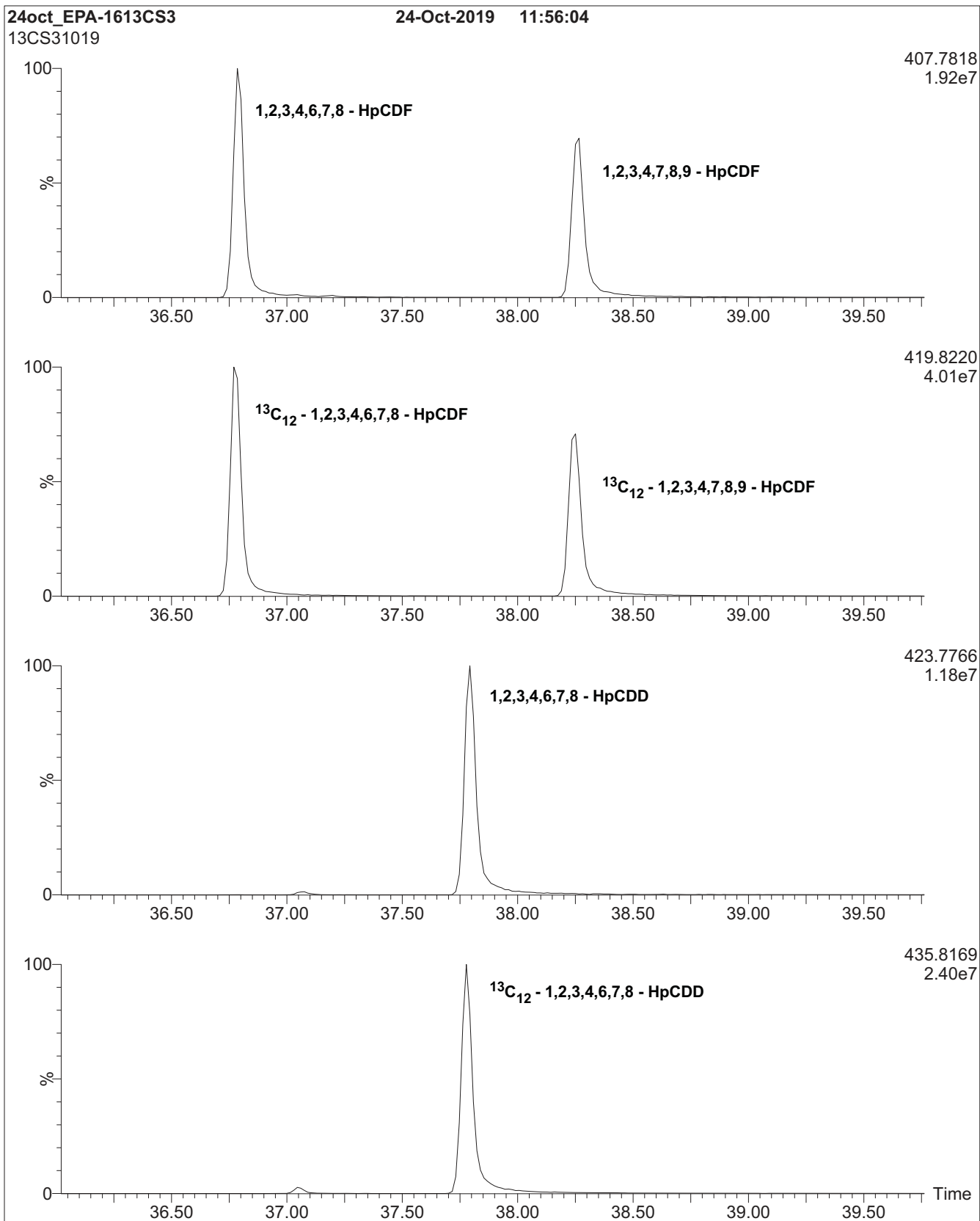
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



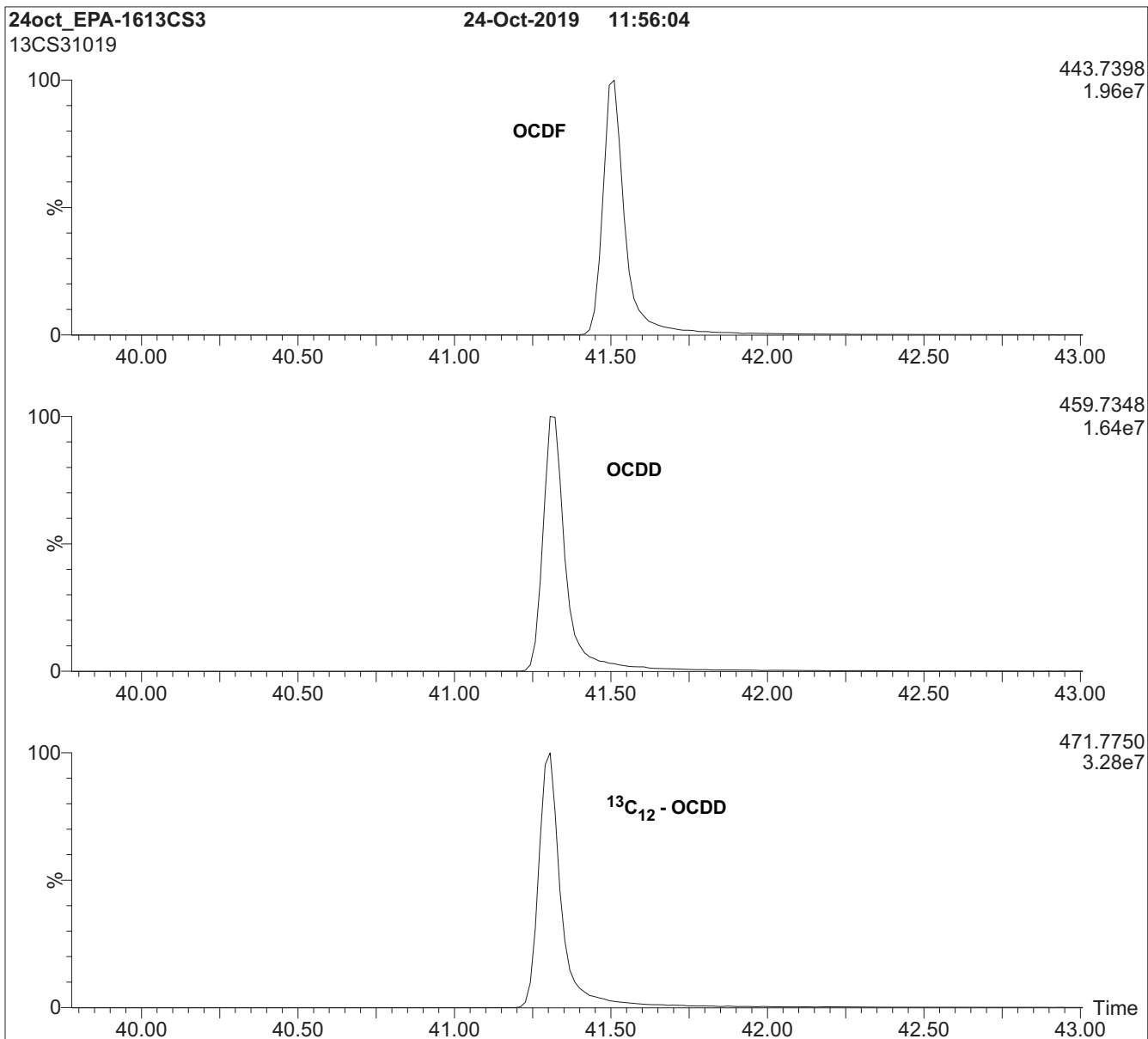
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)





**EPA-1613CVS**

**U.S. EPA Method 1613 Calibration and Verification Solutions  
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5**

<b><u>PRODUCT CODES:</u></b>	EPA-1613CVS	<b><u>LOT NUMBERS:</u></b>	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

<b><u>SOLVENT(S):</u></b>	Nonane/Toluene
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/22/2019
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/24/2019
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/24/2026
<b><u>RECOMMENDED STORAGE:</u></b>	Store ampoules in a cool, dark place

<b>1005457</b>
1613 CS2 CAL STD
Expires 10/24/2026
<i>Prepared By Joshua Rains 6/23/2020</i>

**DESCRIPTION:**

EPA-1613CVS is a series of 5 calibration solutions containing native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub> and <sup>37</sup>Cl<sub>4</sub>) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-<sup>37</sup>Cl<sub>4</sub>-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations

Table B: 5-point HRGC/HRMS Calibration and RRF Summary

Table C: 7-point HRGC/HRMS Calibration and RRF Summary

Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
<b>Native PCDDs and PCDFs:</b>							
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
<b>Labelled PCDDs and PCDFs:</b>							
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD	200	200	200	200	200	200	200
<b>Cleanup Standard:</b>							
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
<b>Internal Standards:</b>							
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:   
B.G. Chittim, General Manager

Date: 10/25/2019  
(mm/dd/yyyy)

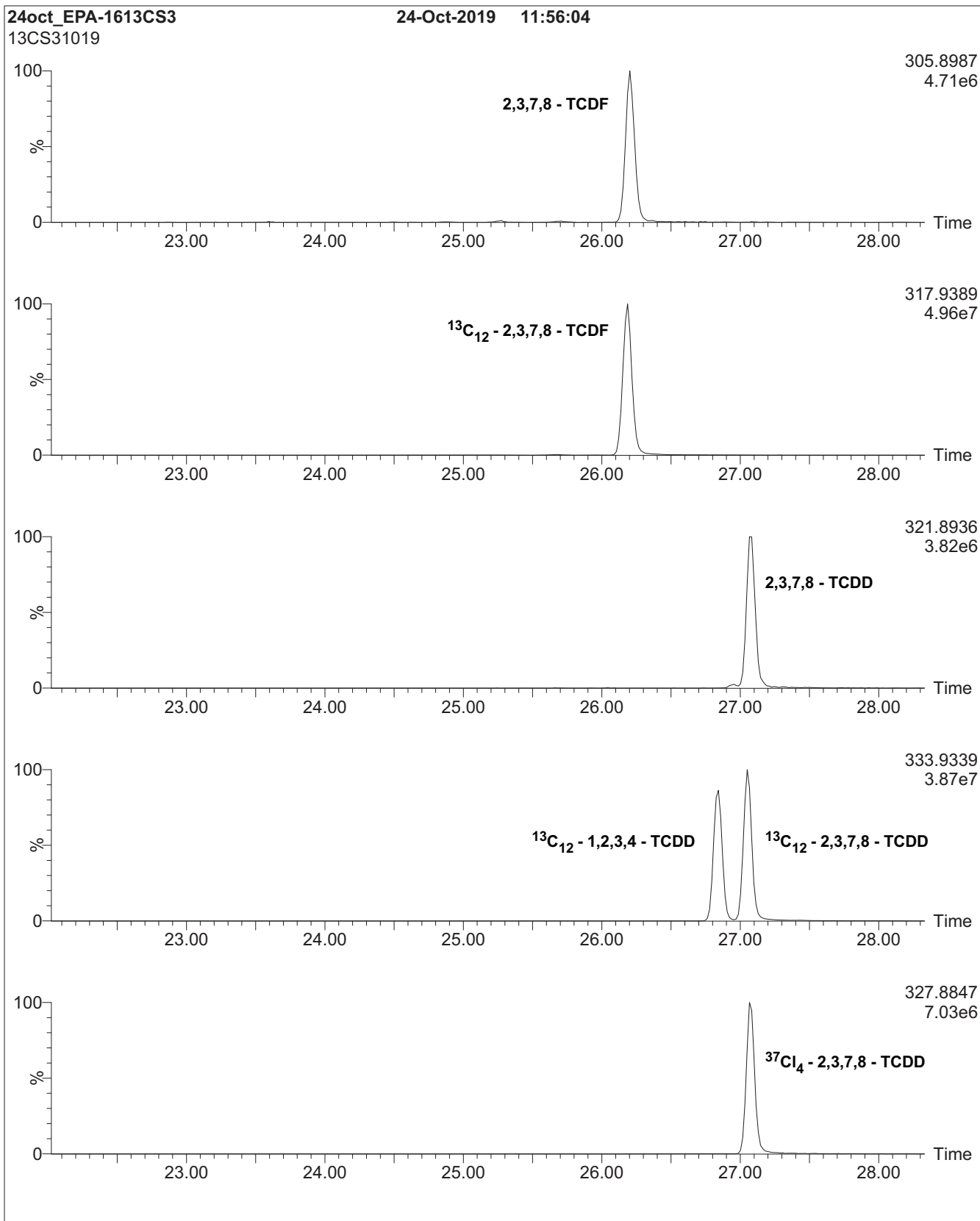
**Table B: EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

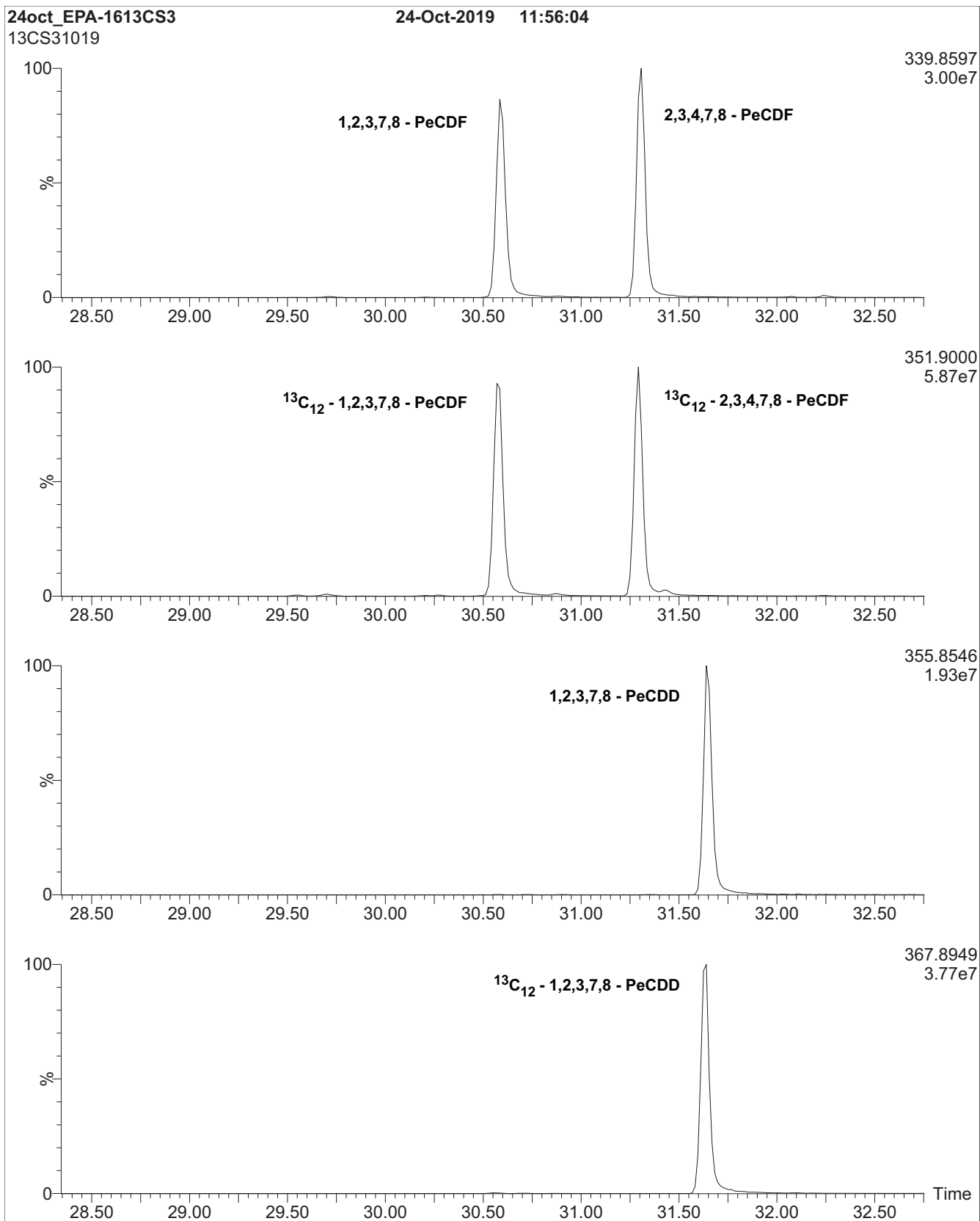
**Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

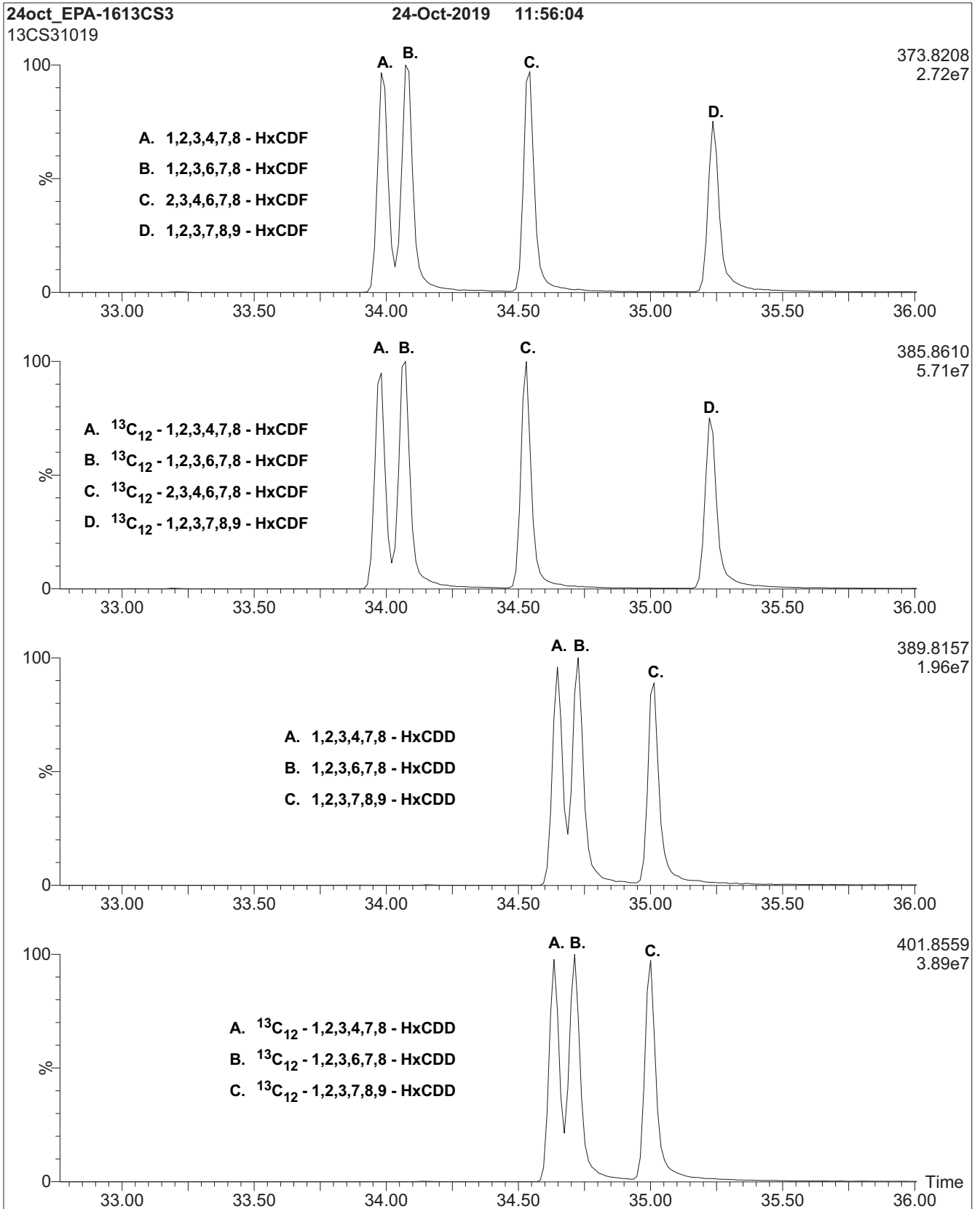


**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

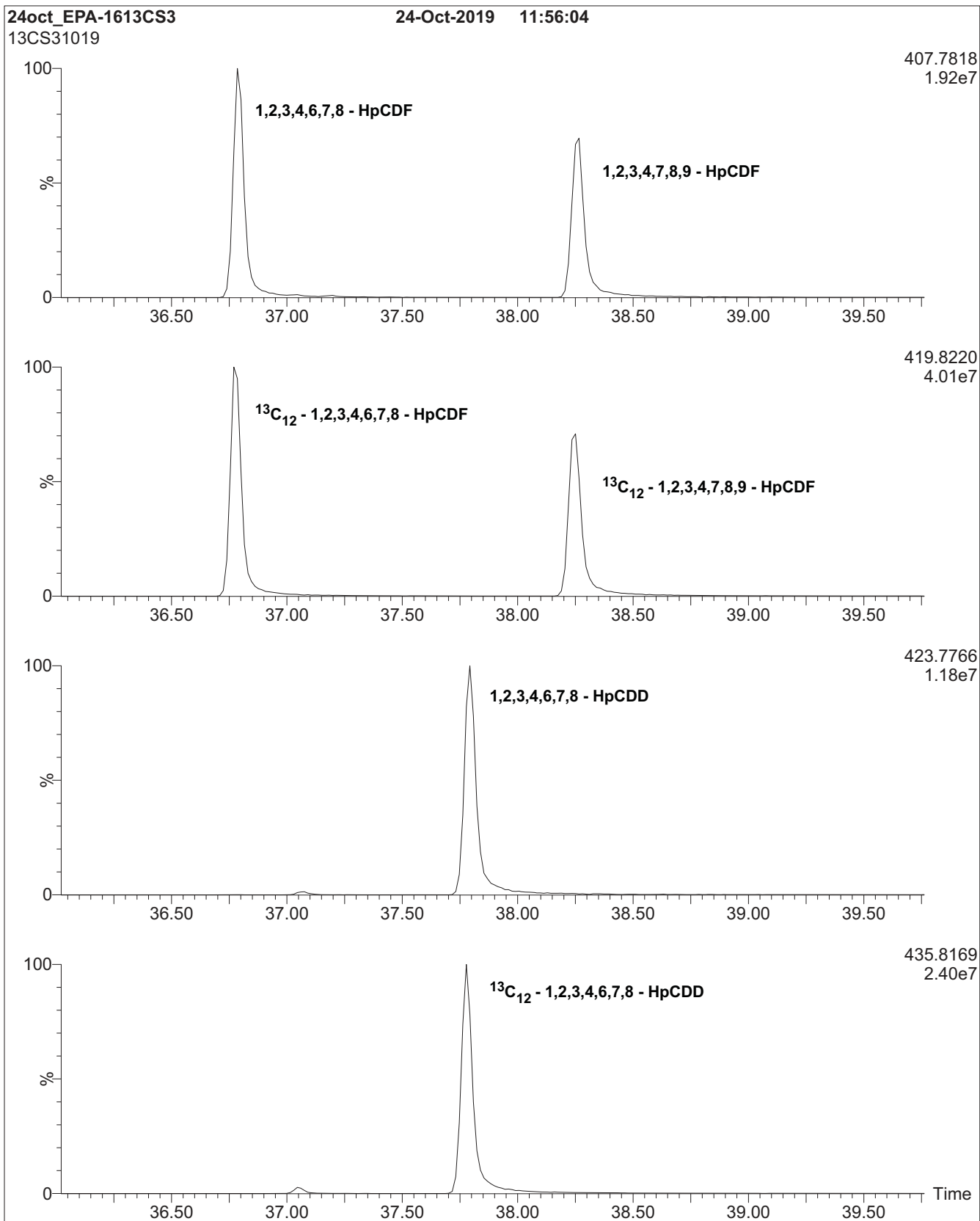




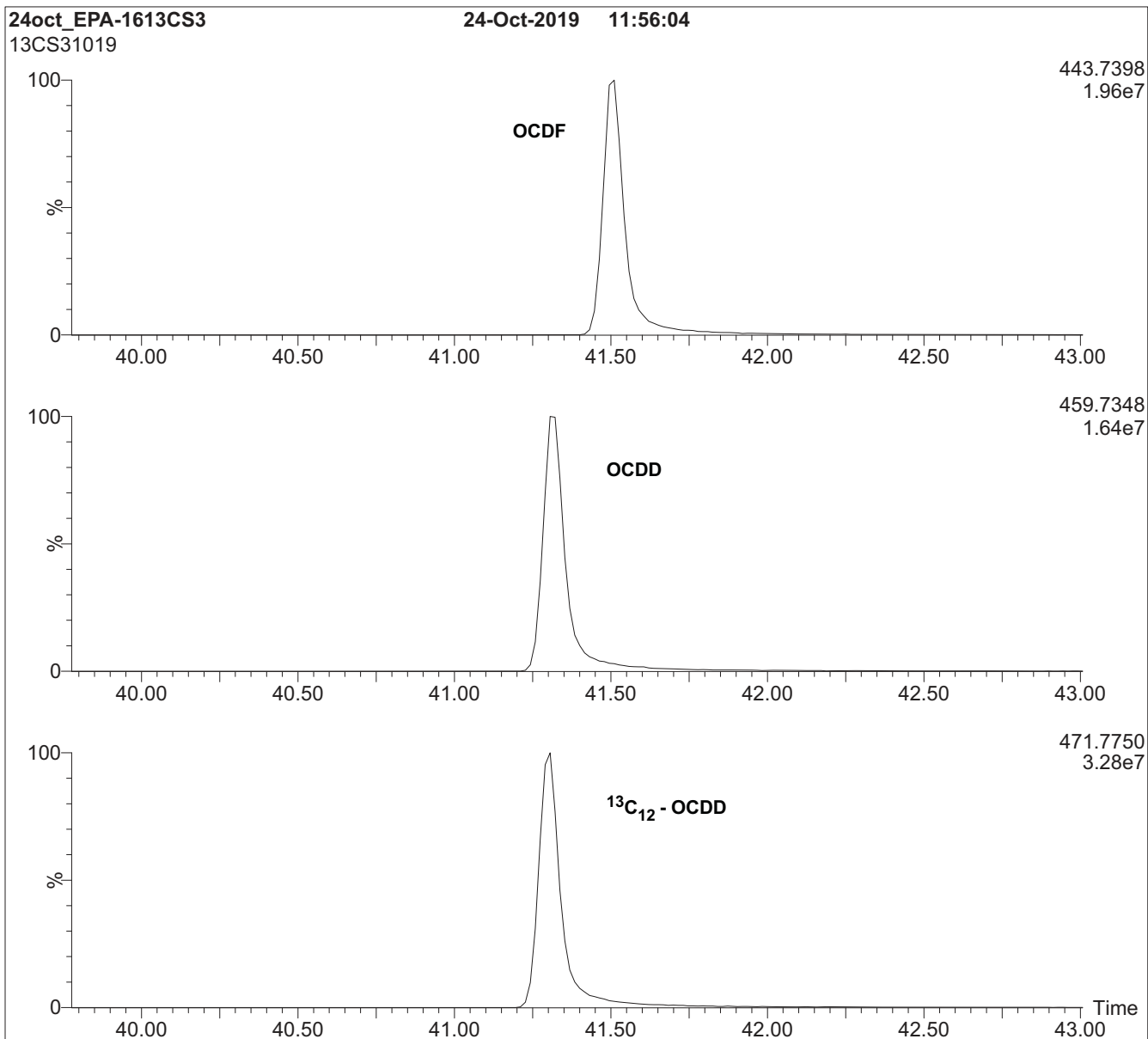
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)



**EPA-1613CVS**

**U.S. EPA Method 1613 Calibration and Verification Solutions  
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5**

<b><u>PRODUCT CODES:</u></b>	EPA-1613CVS	<b><u>LOT NUMBERS:</u></b>	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

<b><u>SOLVENT(S):</u></b>	Nonane/Toluene
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/22/2019
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/24/2019
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/24/2026
<b><u>RECOMMENDED STORAGE:</u></b>	Store ampoules in a cool, dark place

<b>1005458</b>
1613 CS4 CAL STD
Expires 10/24/2026
<i>Prepared By Joshua Rains 6/23/2020</i>

**DESCRIPTION:**

EPA-1613CVS is a series of 5 calibration solutions containing native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub> and <sup>37</sup>Cl<sub>4</sub>) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-<sup>37</sup>Cl<sub>4</sub>-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations

Table B: 5-point HRGC/HRMS Calibration and RRF Summary

Table C: 7-point HRGC/HRMS Calibration and RRF Summary

Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
<b>Native PCDDs and PCDFs:</b>							
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
<b>Labelled PCDDs and PCDFs:</b>							
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD	200	200	200	200	200	200	200
<b>Cleanup Standard:</b>							
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
<b>Internal Standards:</b>							
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:   
B.G. Chittim, General Manager

Date: 10/25/2019  
(mm/dd/yyyy)

**Table B: EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

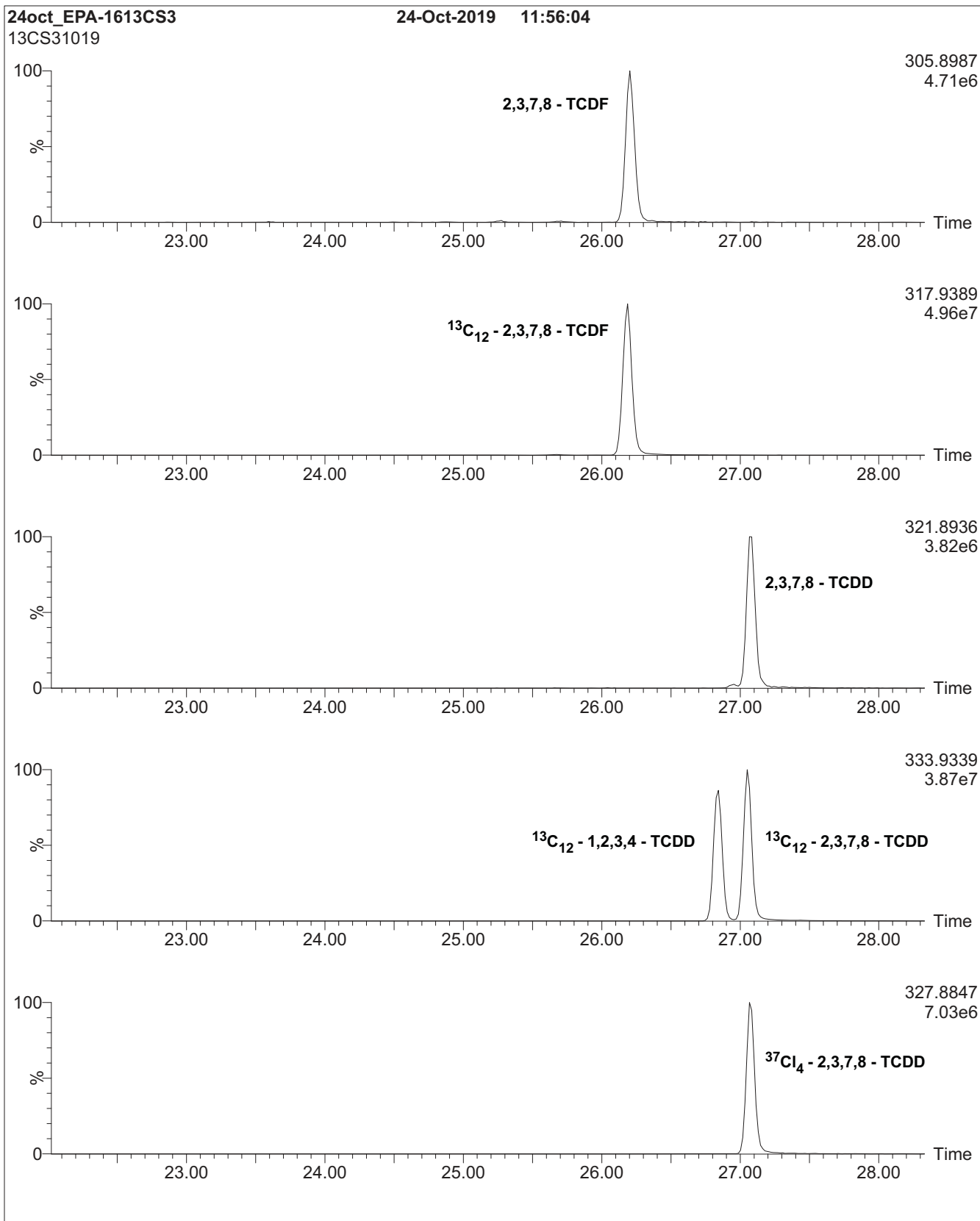
Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99



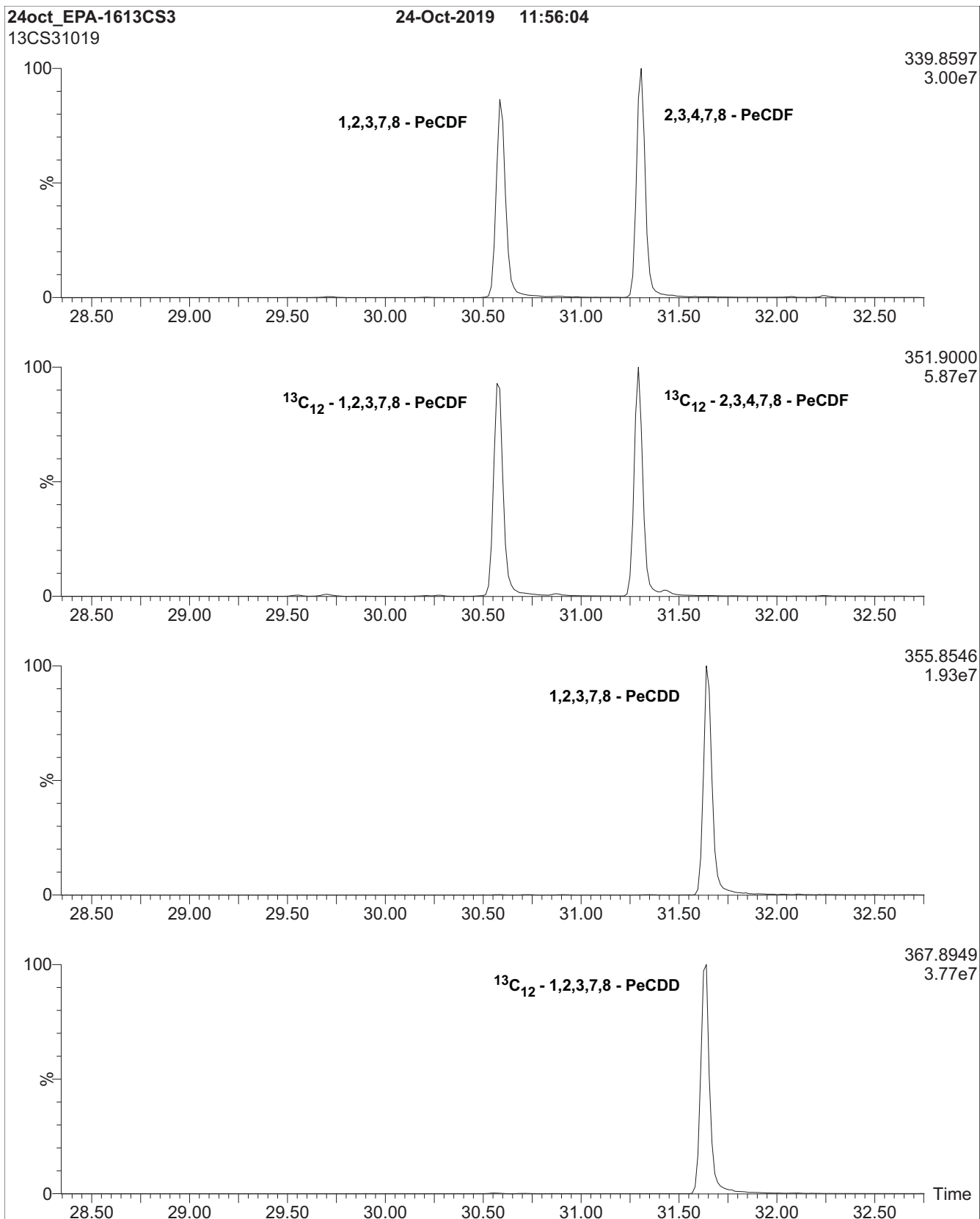
**Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

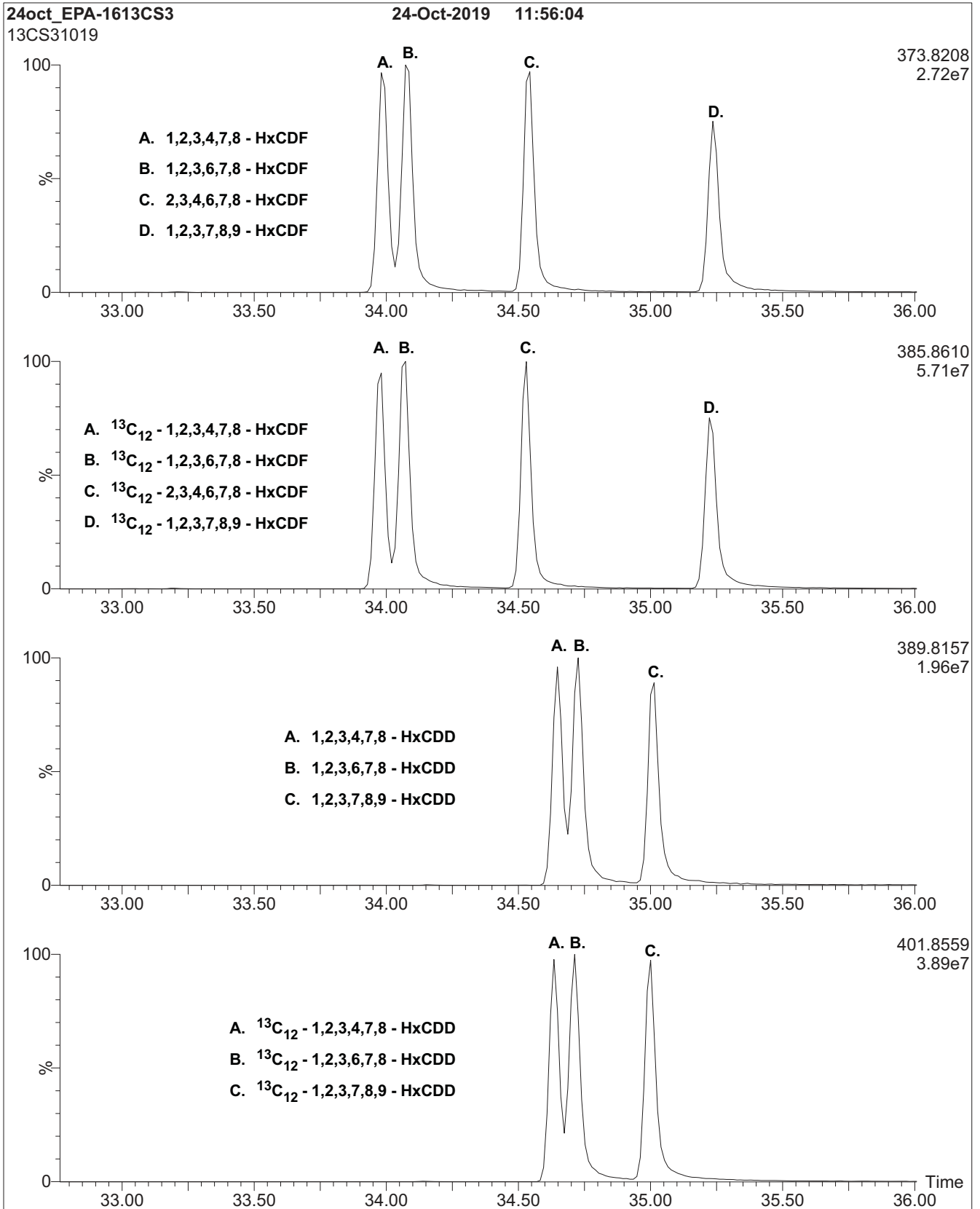
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



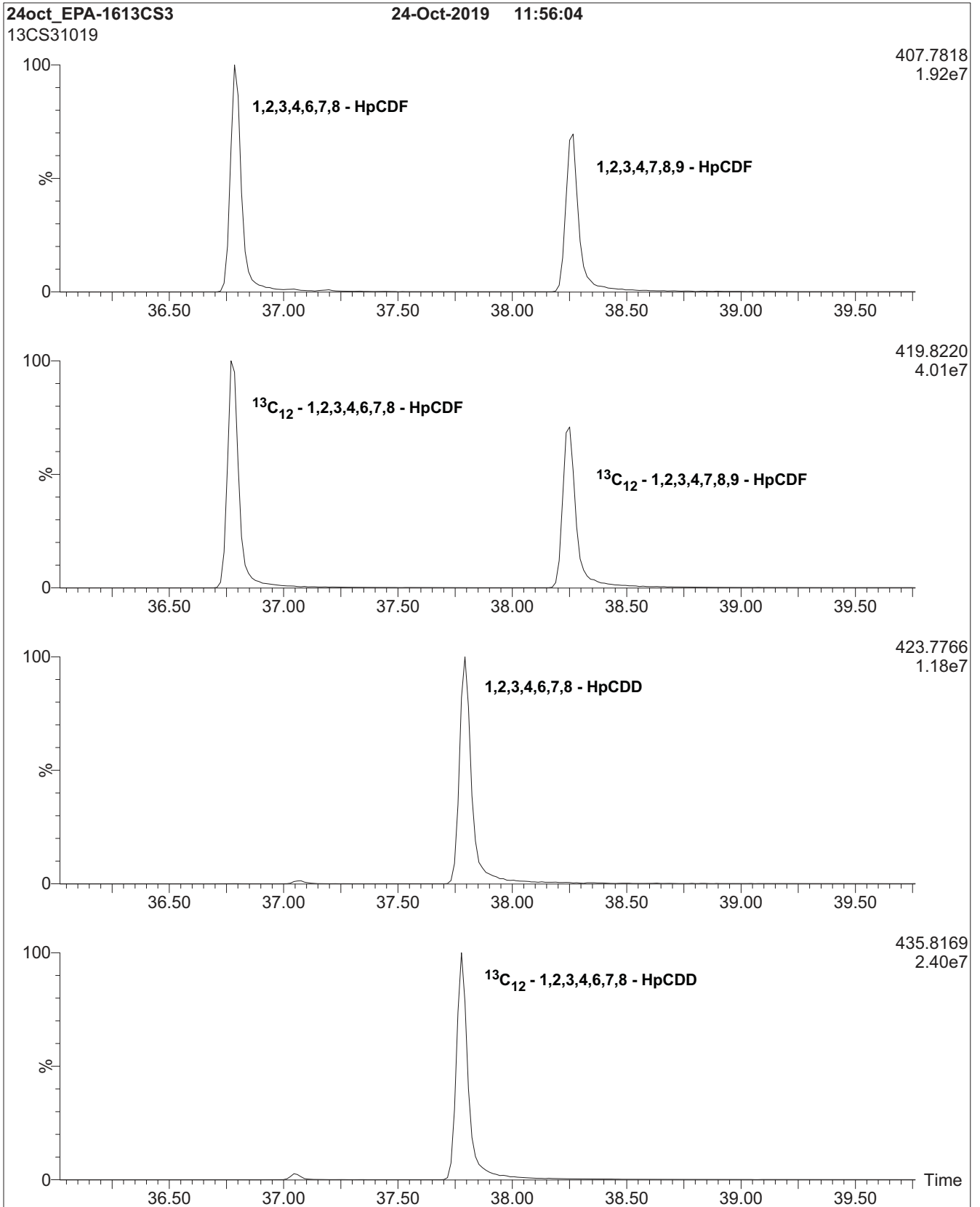
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



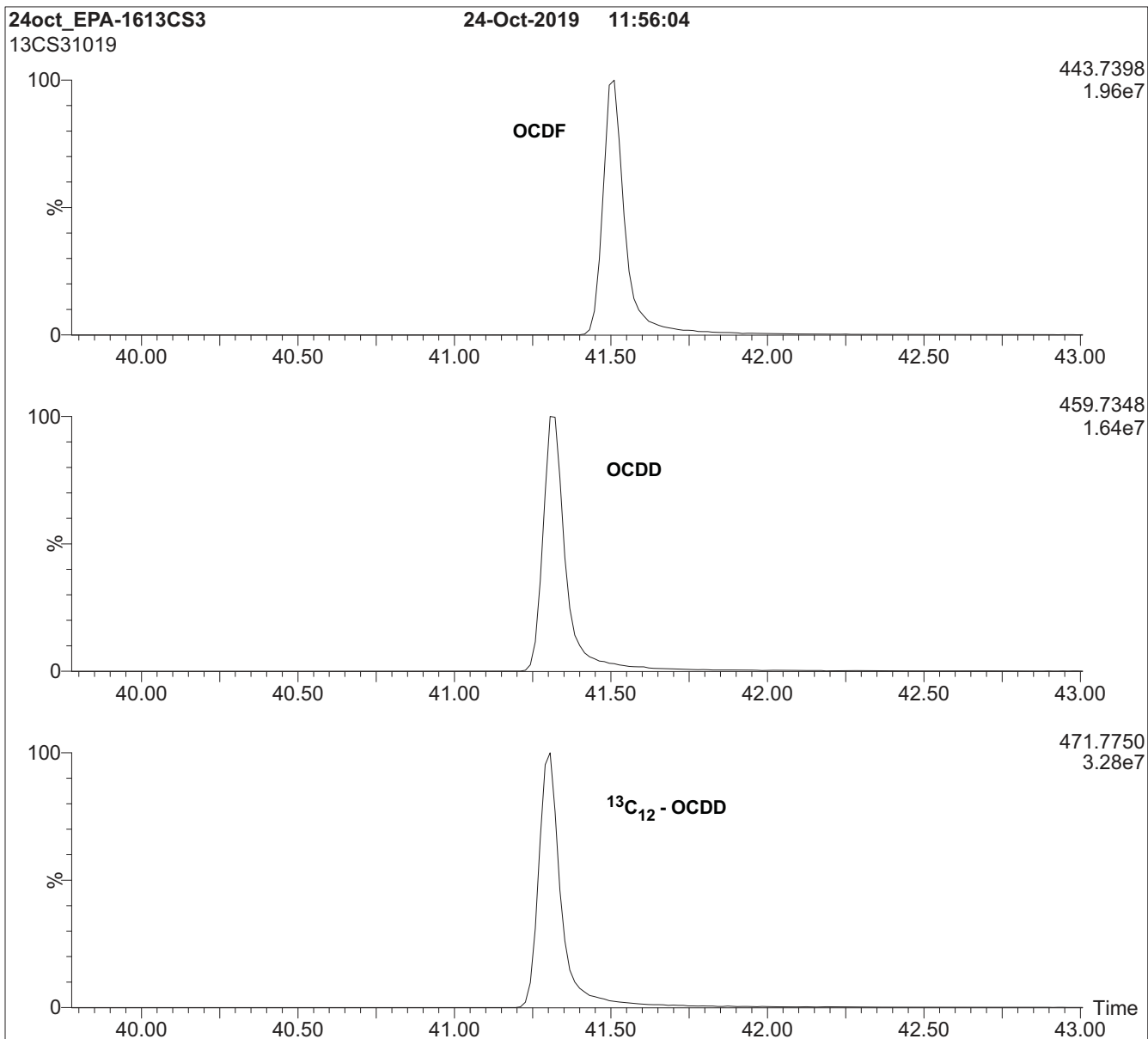
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)



**EPA-1613CVS**

**U.S. EPA Method 1613 Calibration and Verification Solutions  
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5**

<b><u>PRODUCT CODES:</u></b>	EPA-1613CVS	<b><u>LOT NUMBERS:</u></b>	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

<b><u>SOLVENT(S):</u></b>	Nonane/Toluene
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/22/2019
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/24/2019
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/24/2026
<b><u>RECOMMENDED STORAGE:</u></b>	Store ampoules in a cool, dark place

<b>I005459</b>
1613 CS5 CAL STD
Expires 10/24/2026
<i>Prepared By Joshua Rains 6/23/2020</i>

**DESCRIPTION:**

EPA-1613CVS is a series of 5 calibration solutions containing native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub> and <sup>37</sup>Cl<sub>4</sub>) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-<sup>37</sup>Cl<sub>4</sub>-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations

Table B: 5-point HRGC/HRMS Calibration and RRF Summary

Table C: 7-point HRGC/HRMS Calibration and RRF Summary

Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.



### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
<b>Native PCDDs and PCDFs:</b>							
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
<b>Labelled PCDDs and PCDFs:</b>							
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD	200	200	200	200	200	200	200
<b>Cleanup Standard:</b>							
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
<b>Internal Standards:</b>							
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:   
B.G. Chittim, General Manager

Date: 10/25/2019  
(mm/dd/yyyy)

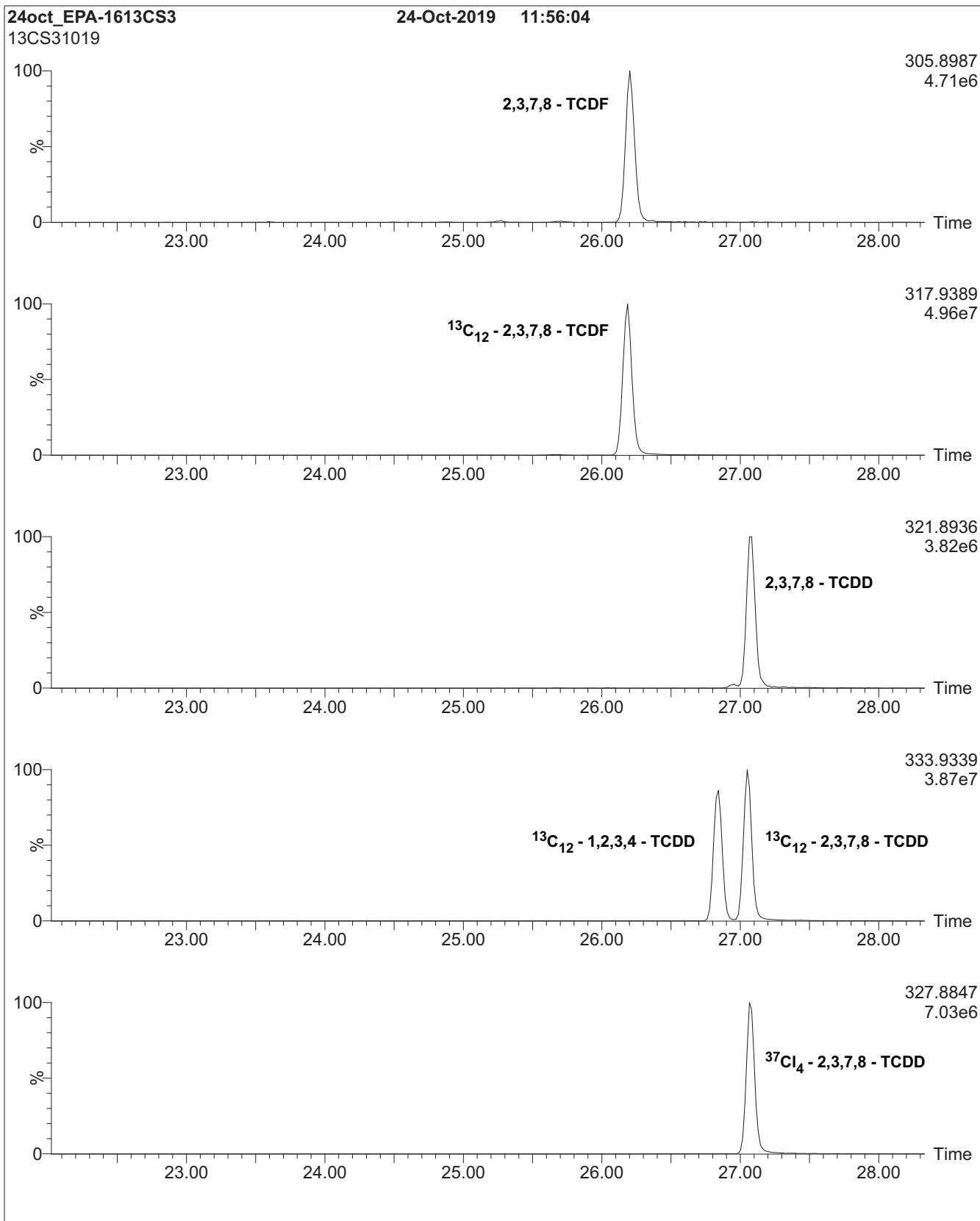
**Table B: EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

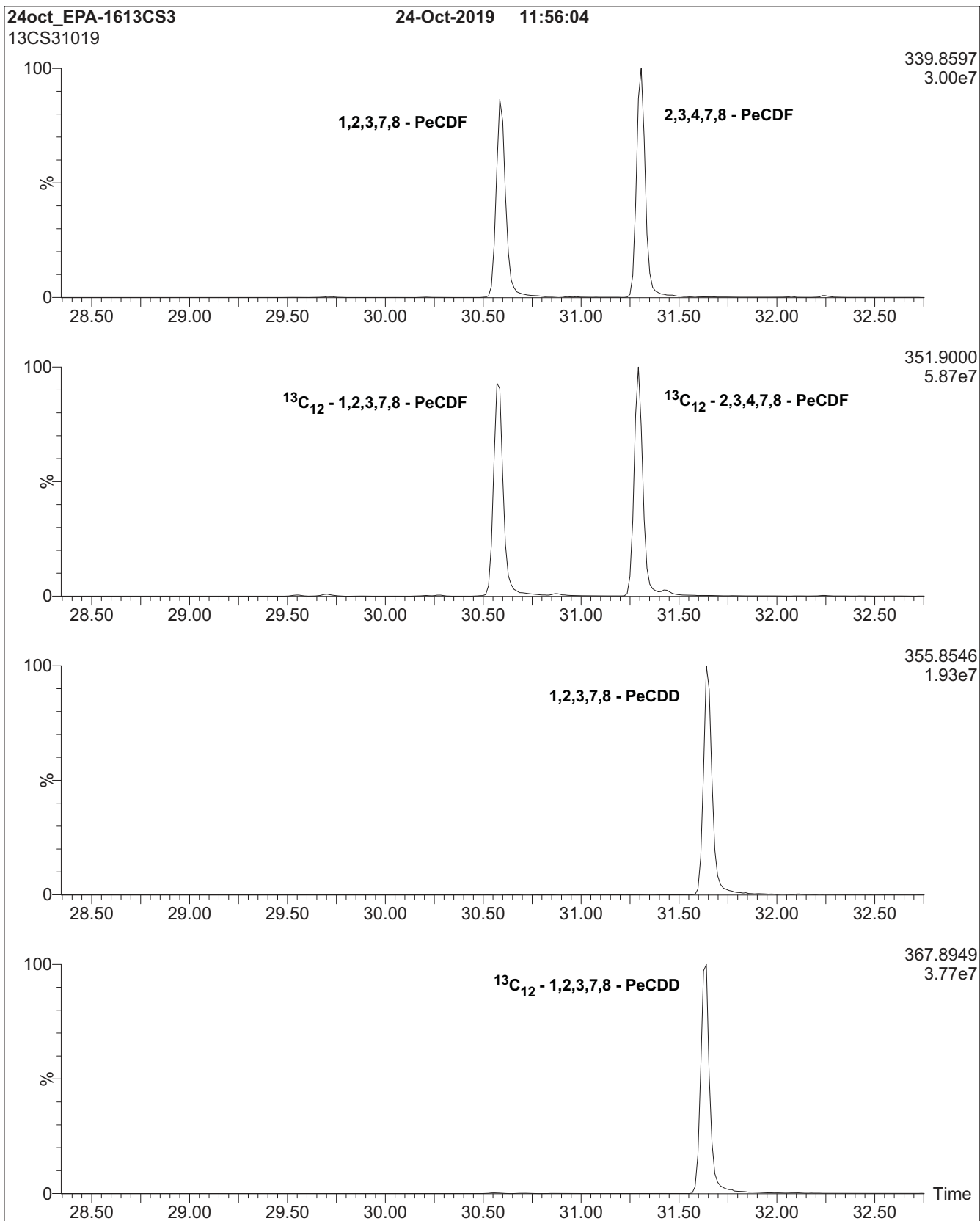
**Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

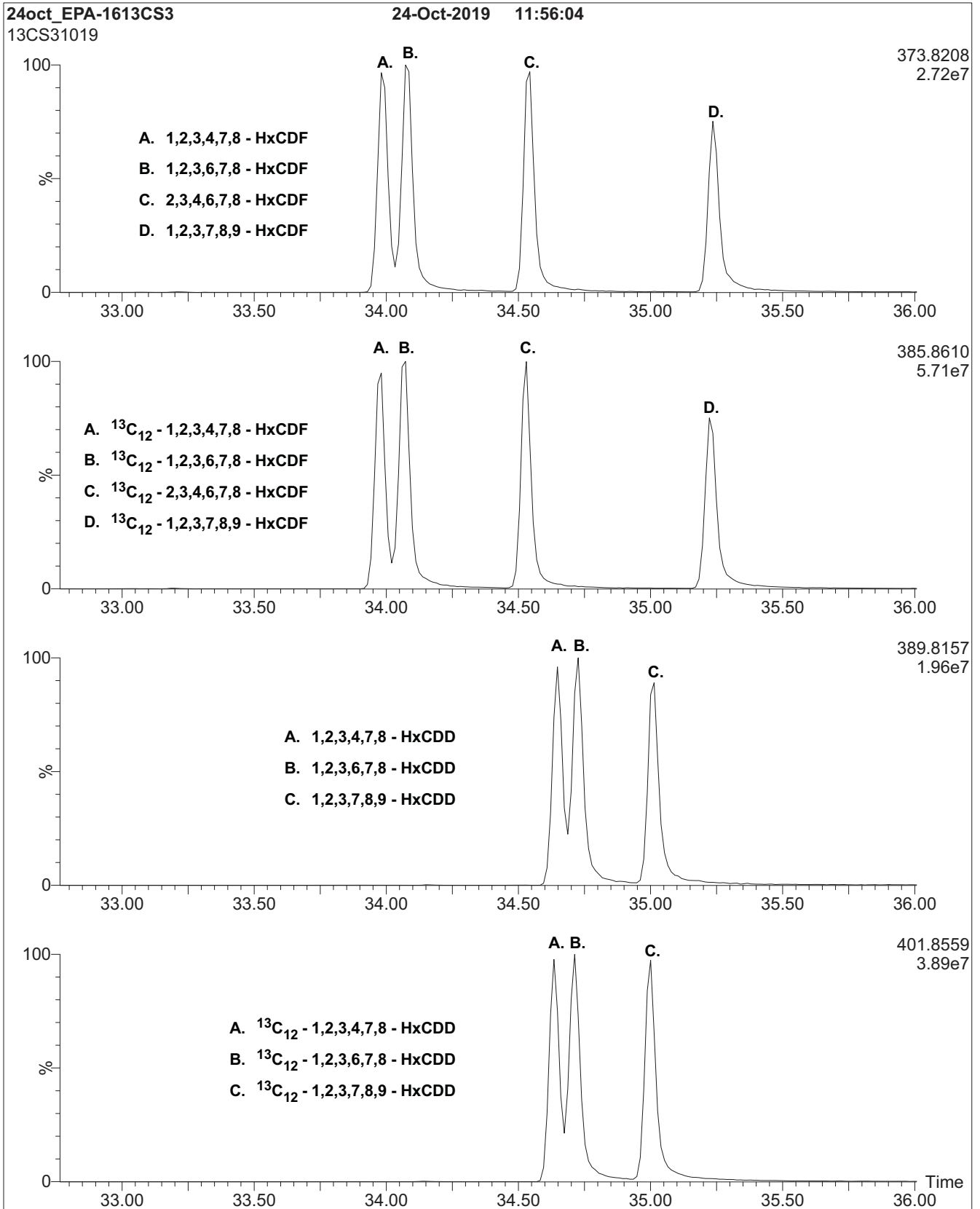
**Figure 1:** EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



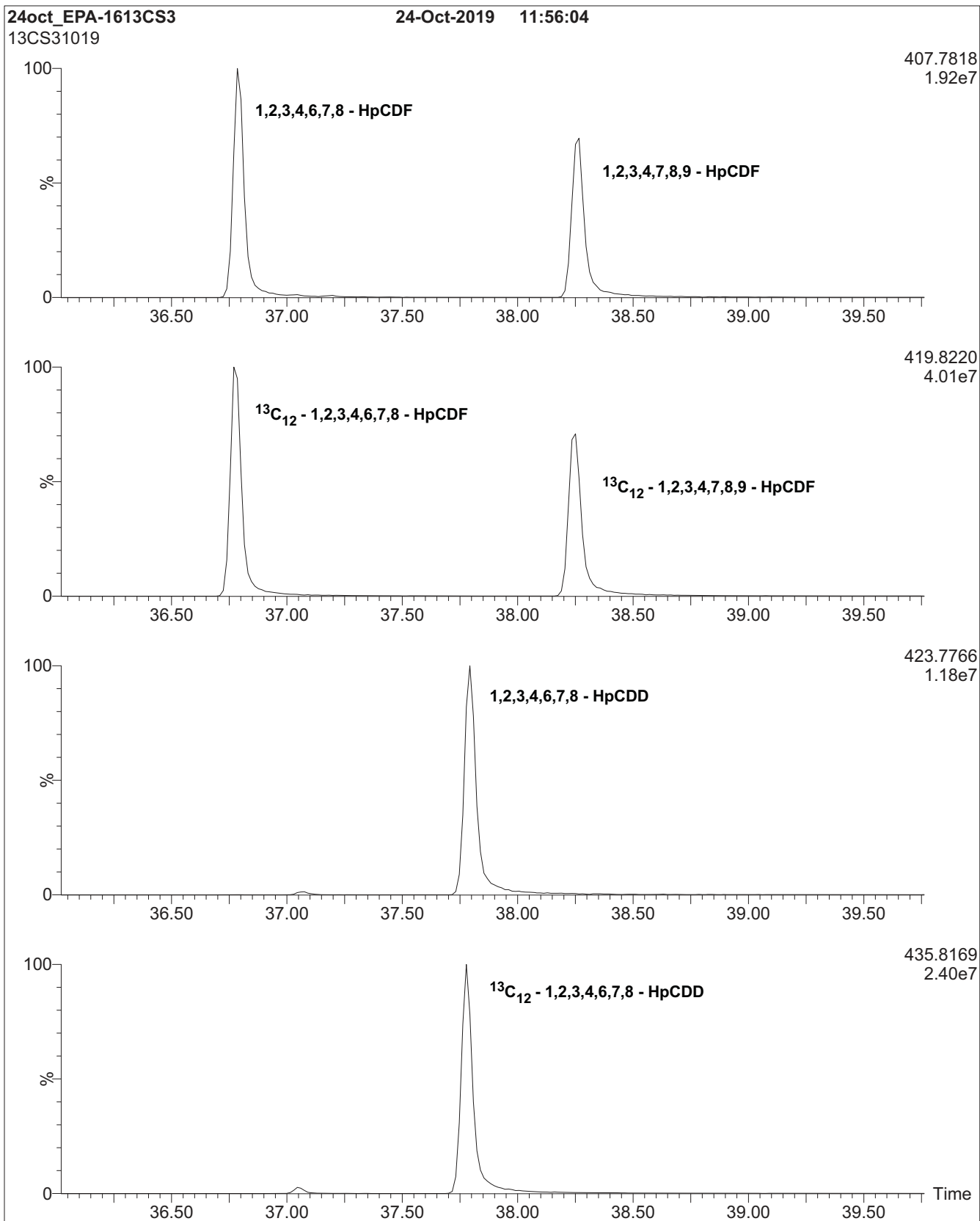
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

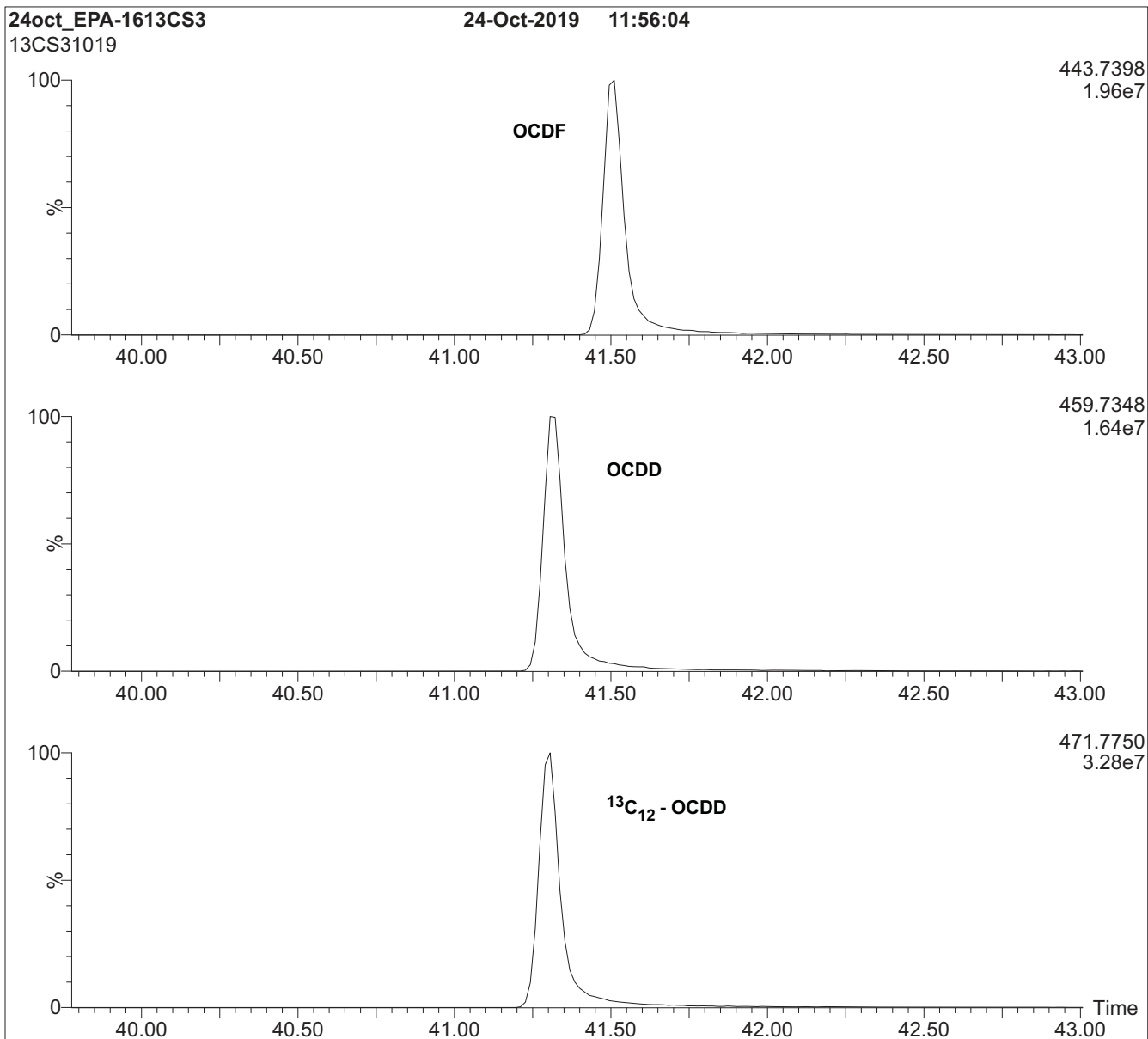


**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**





**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)



**EPA-1613CVS**

**U.S. EPA Method 1613 Calibration and Verification Solutions  
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5**

<b><u>PRODUCT CODES:</u></b>	EPA-1613CVS	<b><u>LOT NUMBERS:</u></b>	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

<b><u>SOLVENT(S):</u></b>	Nonane/Toluene
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/22/2019
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/24/2019
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/24/2026
<b><u>RECOMMENDED STORAGE:</u></b>	Store ampoules in a cool, dark place

<b>I005460</b>
1613 CSL CAL STD
Expires 10/24/2026
<i>Prepared By Joshua Rains 6/23/2020</i>

**DESCRIPTION:**

EPA-1613CVS is a series of 5 calibration solutions containing native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub> and <sup>37</sup>Cl<sub>4</sub>) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-<sup>37</sup>Cl<sub>4</sub>-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations

Table B: 5-point HRGC/HRMS Calibration and RRF Summary

Table C: 7-point HRGC/HRMS Calibration and RRF Summary

Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 3 for further details.

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
<b>Native PCDDs and PCDFs:</b>							
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
<b>Labelled PCDDs and PCDFs:</b>							
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD	200	200	200	200	200	200	200
<b>Cleanup Standard:</b>							
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
<b>Internal Standards:</b>							
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	100	100	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:   
B.G. Chittim, General Manager

Date: 10/25/2019  
(mm/dd/yyyy)

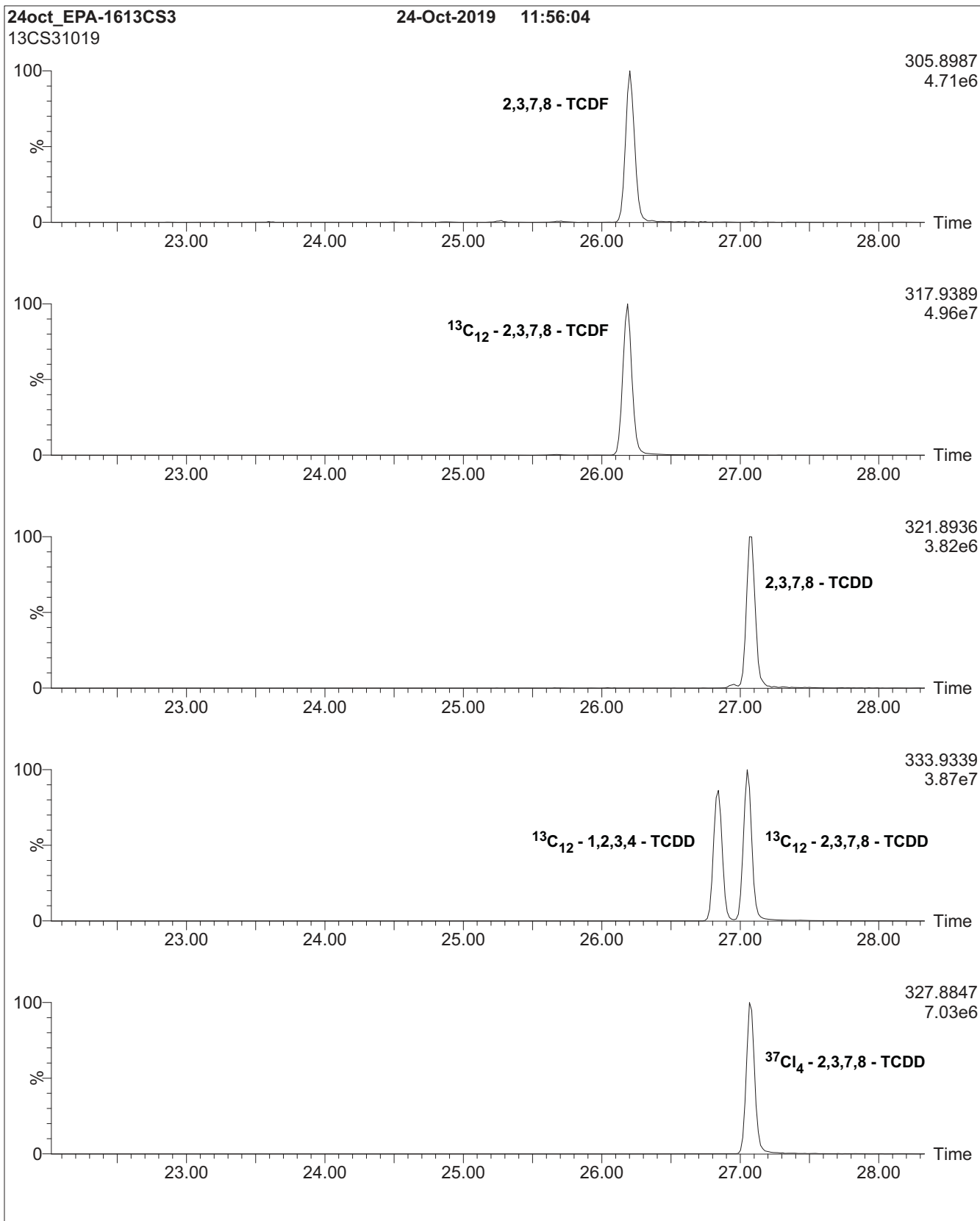
**Table B: EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

**Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5);  
7-point HRGC/HRMS Calibration and RRF Summary**

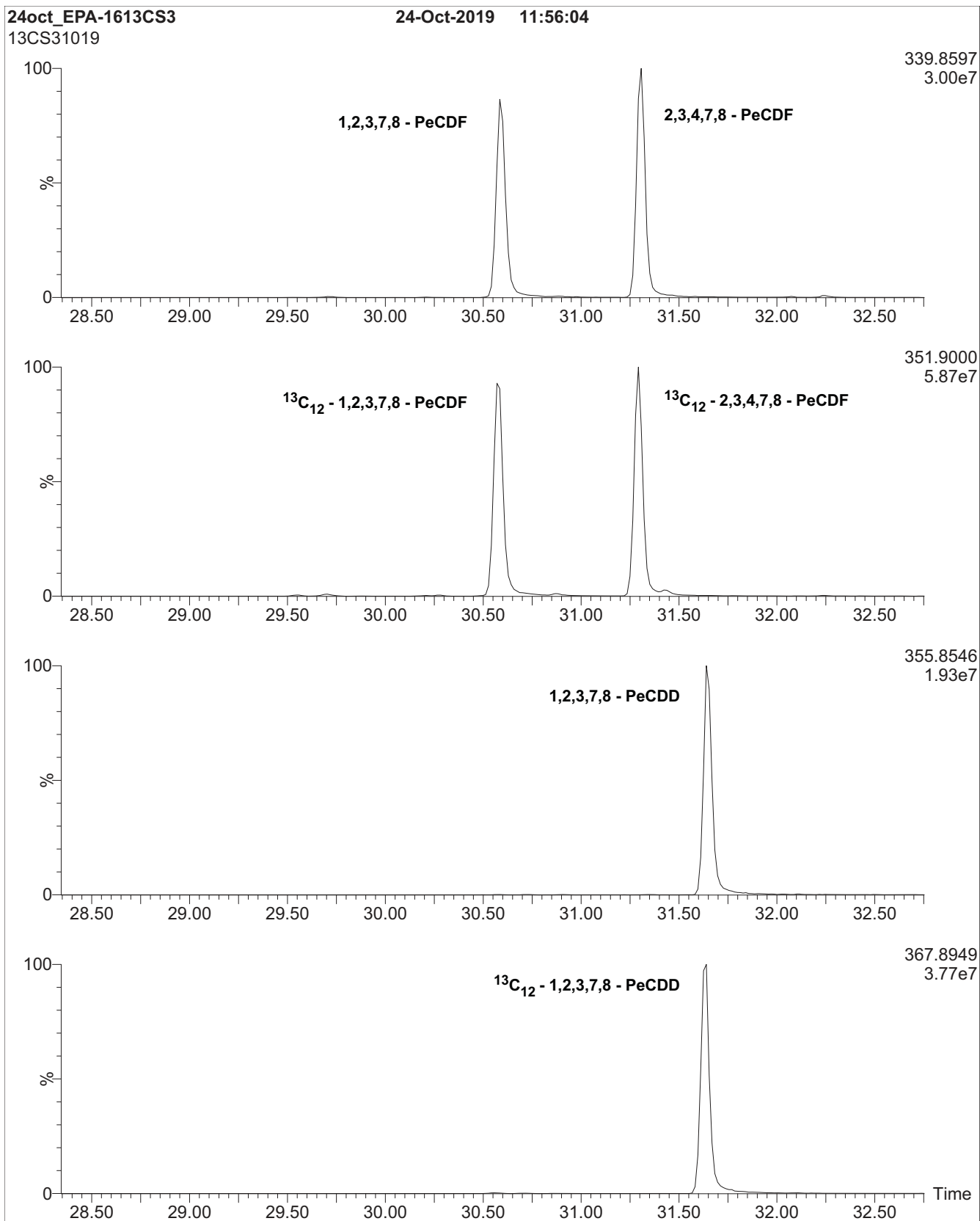
Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
<sup>13</sup> C <sub>12</sub> -OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

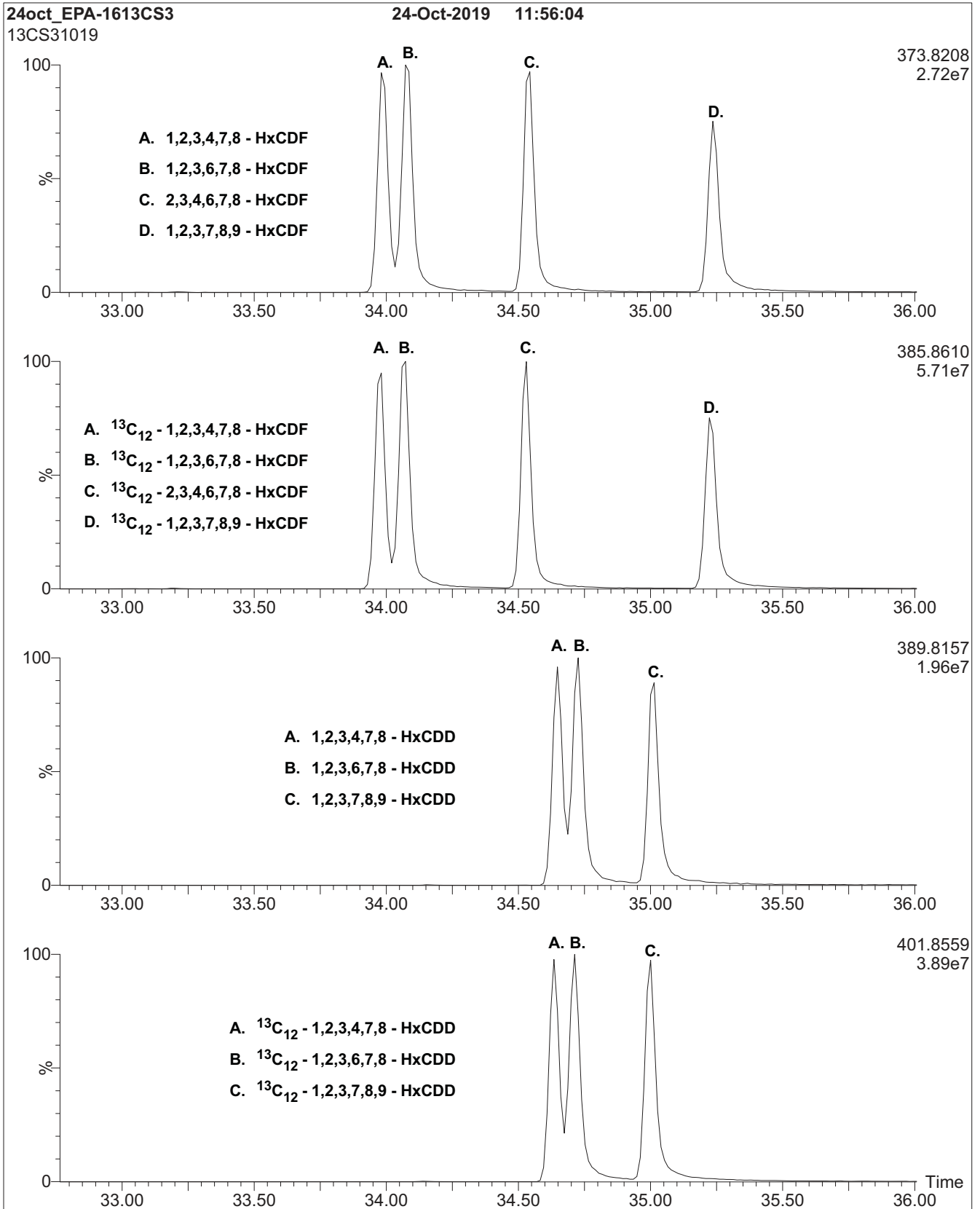




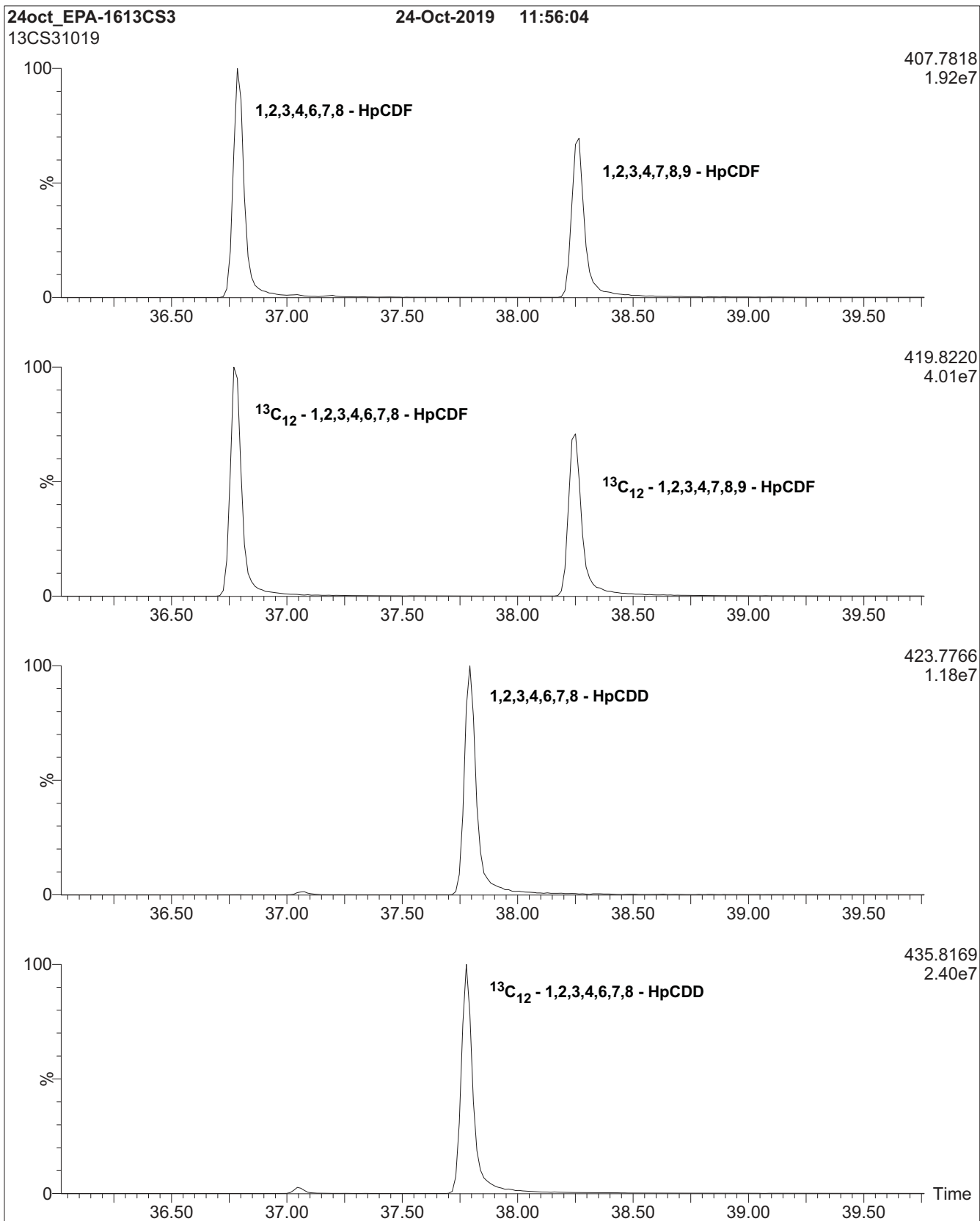
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



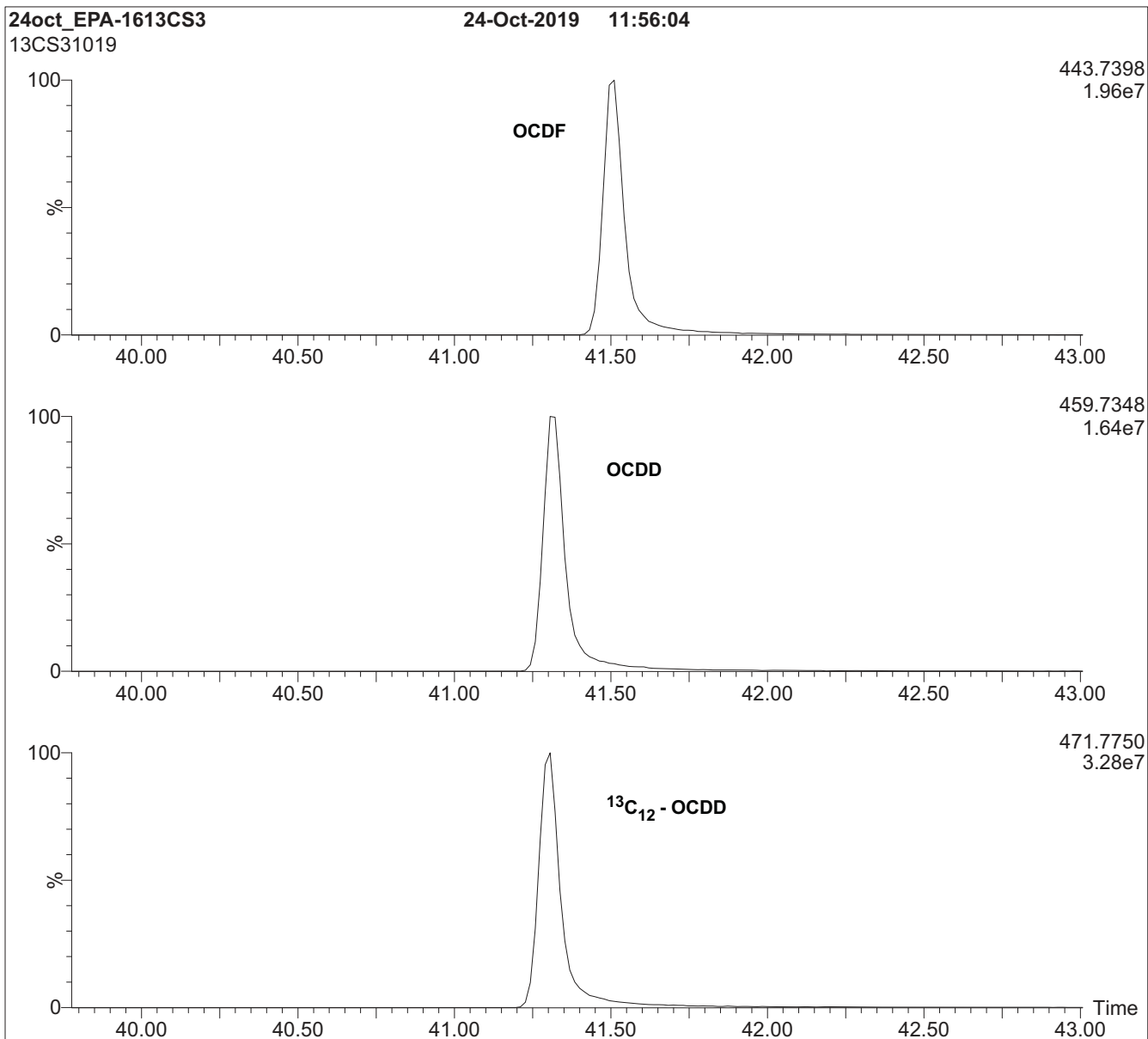
**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



**HRGC/HRMS:**

Agilent 6890N (HRGC)  
Autospec Ultima (HRMS)

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min

Injector: 280 °C (Splitless Injection)

Ionization: EI+

Detector: 280 °C

SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)

12 °C/min to 200 °C

3 °C/min to 235 °C

235 °C (8 min)

8 °C/min to 310 °C

310 °C (8 min)



**EPA-1613PAR**

**U.S. EPA Method 1613 Native PCDD/PCDF  
Precision and Recovery Stock Solution**

**PRODUCT CODE:** EPA-1613PAR  
**LOT NUMBER:** 13PAR1021  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 10/25/2021  
**LAST TESTED:** (mm/dd/yyyy) 11/03/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 11/03/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

J013397  
Rec'd. JR  
12/20/21

**DESCRIPTION:**

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture  
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

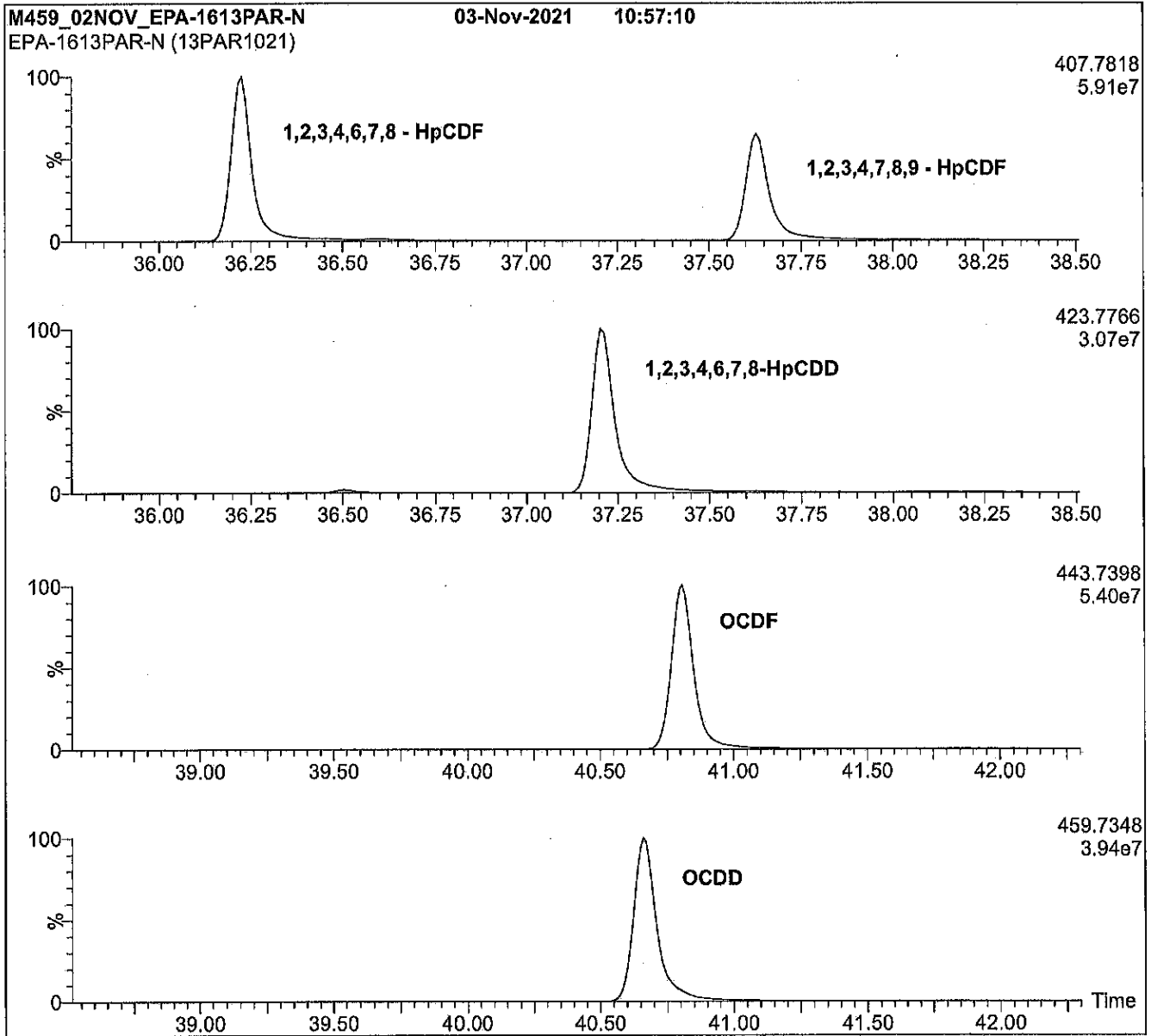
**Table A: EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
<b>PCDDs:</b>			
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo- <i>p</i> -dioxin	OCDD	3268-87-9	400
<b>PCDFs:</b>			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By:   
 B.G. Chittim, General Manager

Date: 11/05/2021  
(mm/dd/yyyy)

**Figure 1: EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W	
Flow:	Constant at 1.4 mL/min	Oven:
Injector:	280°C (Splitless Injection)	150°C (1 min)
Ionization:	EI+	12°C/min to 200°C
Detector:	280°C	3°C/min to 235°C
	SIR at 10,000 mass resolving power	235°C (8 min)
		8°C/min to 310°C
		310°C (8 min)



**EPA-1613PAR**

**U.S. EPA Method 1613 Native PCDD/PCDF  
Precision and Recovery Stock Solution**

**PRODUCT CODE:** EPA-1613PAR  
**LOT NUMBER:** 13PAR1021  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 10/25/2021  
**LAST TESTED:** (mm/dd/yyyy) 11/03/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 11/03/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

J013397  
Rec'd. JR  
12/20/21

**DESCRIPTION:**

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture  
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**



### **INTENDED USE:**

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### **HANDLING:**

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### **SYNTHESIS / CHARACTERIZATION:**

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### **HOMOGENEITY:**

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### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

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### **EXPIRY DATE / PERIOD OF VALIDITY:**

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### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).



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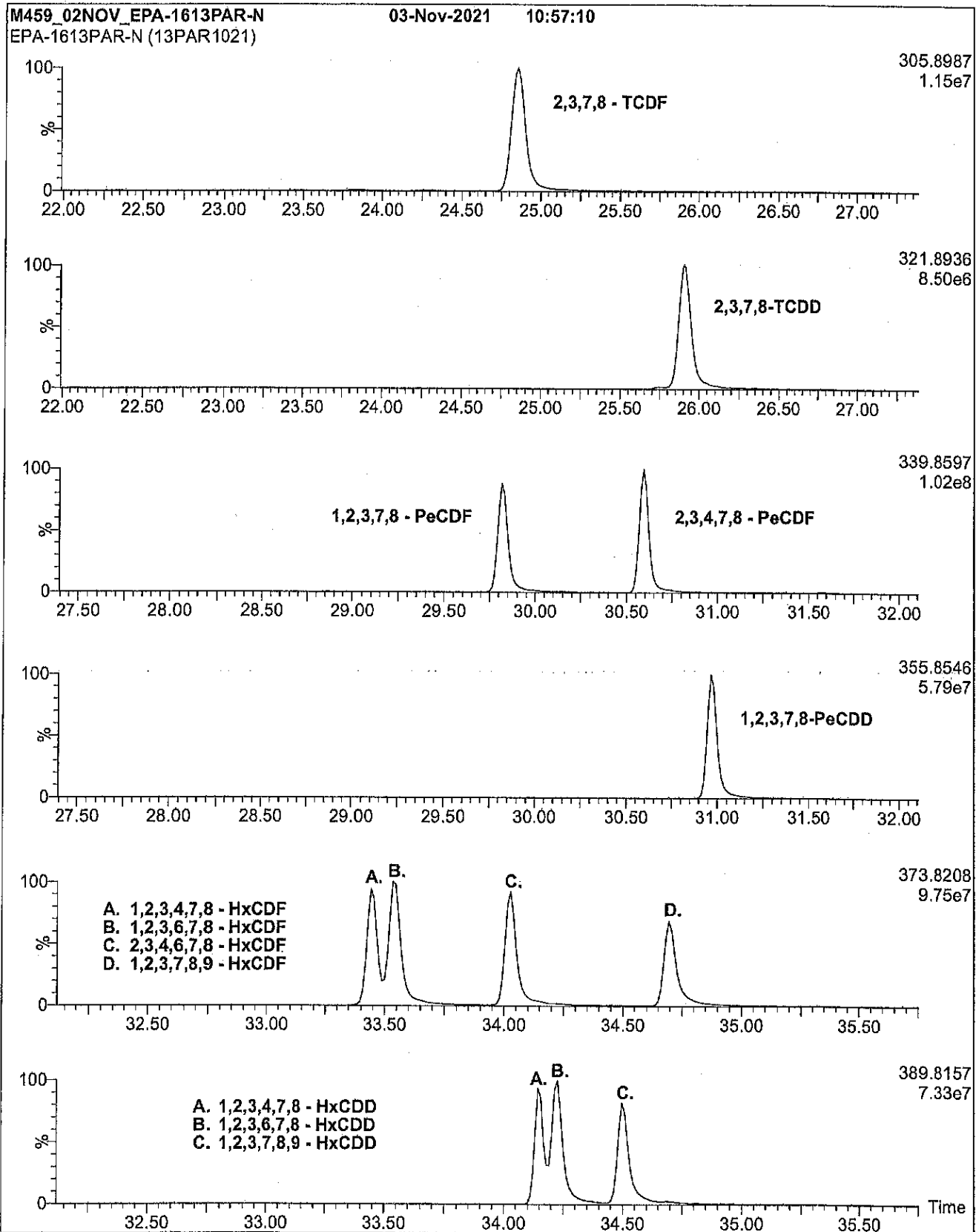
**Table A: EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
<b>PCDDs:</b>			
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo- <i>p</i> -dioxin	OCDD	3268-87-9	400
<b>PCDFs:</b>			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

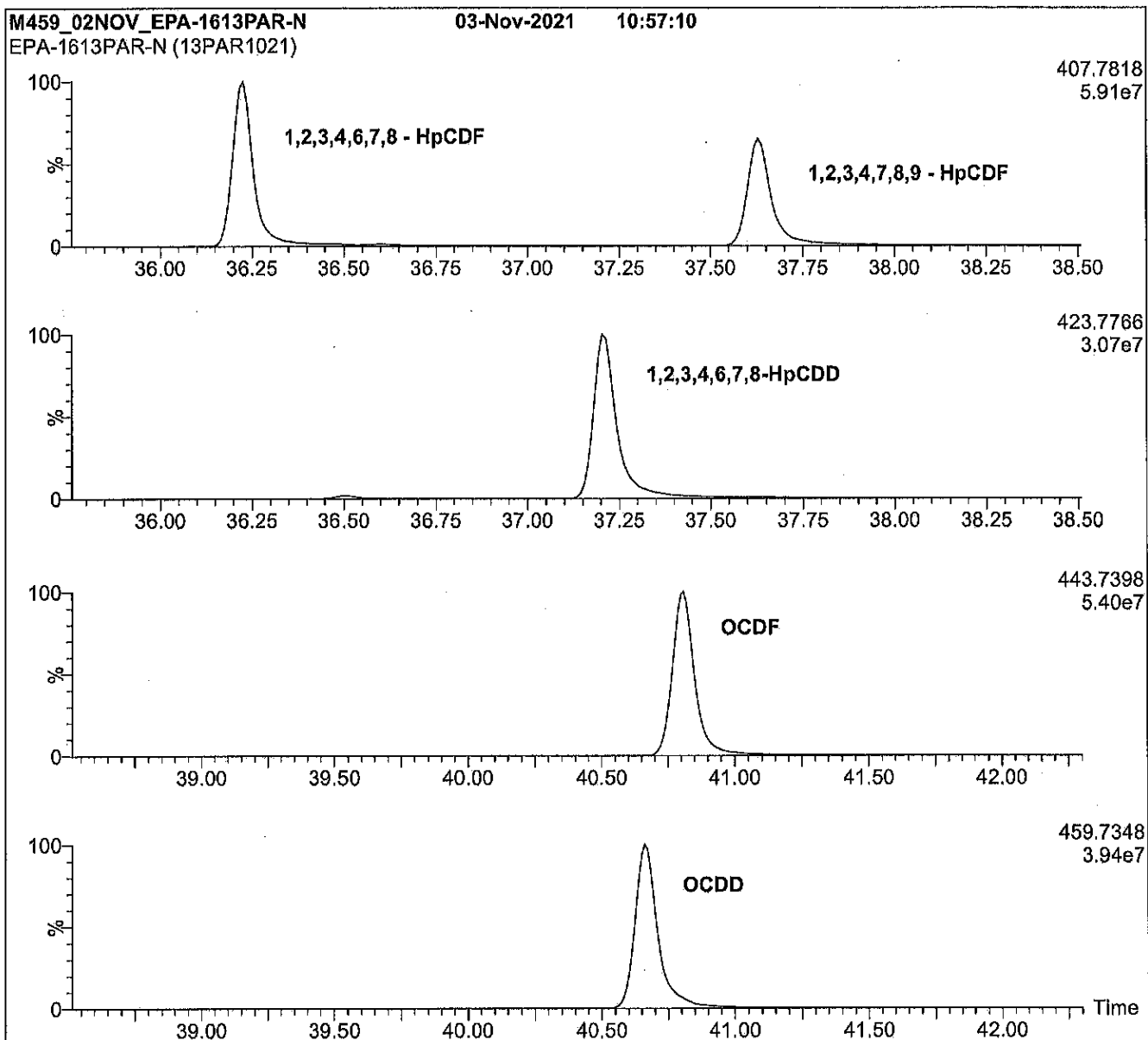
Certified By:   
 B.G. Chittim, General Manager

Date: 11/05/2021  
(mm/dd/yyyy)

**Figure 1: EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W	
Flow:	Constant at 1.4 mL/min	Oven: 150°C (1 min)
Injector:	280°C (Splitless Injection)	12°C/min to 200°C
Ionization:	EI+	3°C/min to 235°C
Detector:	280°C	235°C (8 min)
	SIR at 10,000 mass resolving power	8°C/min to 310°C
		310°C (8 min)



**EPA-1613CSS**

**U.S. EPA Method 1613 Cleanup Standard  
Spiking Solution**

**PRODUCT CODE:** EPA-1613CSS  
**LOT NUMBER:** 13CSS1021  
**SOLVENT(S):** Nonane  
**DATE PREPARED:** (mm/dd/yyyy) 10/29/2021  
**LAST TESTED:** (mm/dd/yyyy) 10/31/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 10/31/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DESCRIPTION:**

K003104

EPA-1613CSS contains 2,3,7,8-(<sup>37</sup>Cl<sub>4</sub>)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.  
 EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.  
 2,3,7,8-(<sup>37</sup>Cl<sub>4</sub>)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution  
 Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

**Table A: EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-( <sup>37</sup> Cl <sub>4</sub> )Tetrachlorodibenzo- <i>p</i> -dioxin	<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	85508-50-5	40.0

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Certified By:**   
 B.G. Chittim, General Manager  
**Date:** 11/05/2021  
 (mm/dd/yyyy)

### **INTENDED USE:**

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### **HANDLING:**

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### **SYNTHESIS / CHARACTERIZATION:**

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### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

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where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

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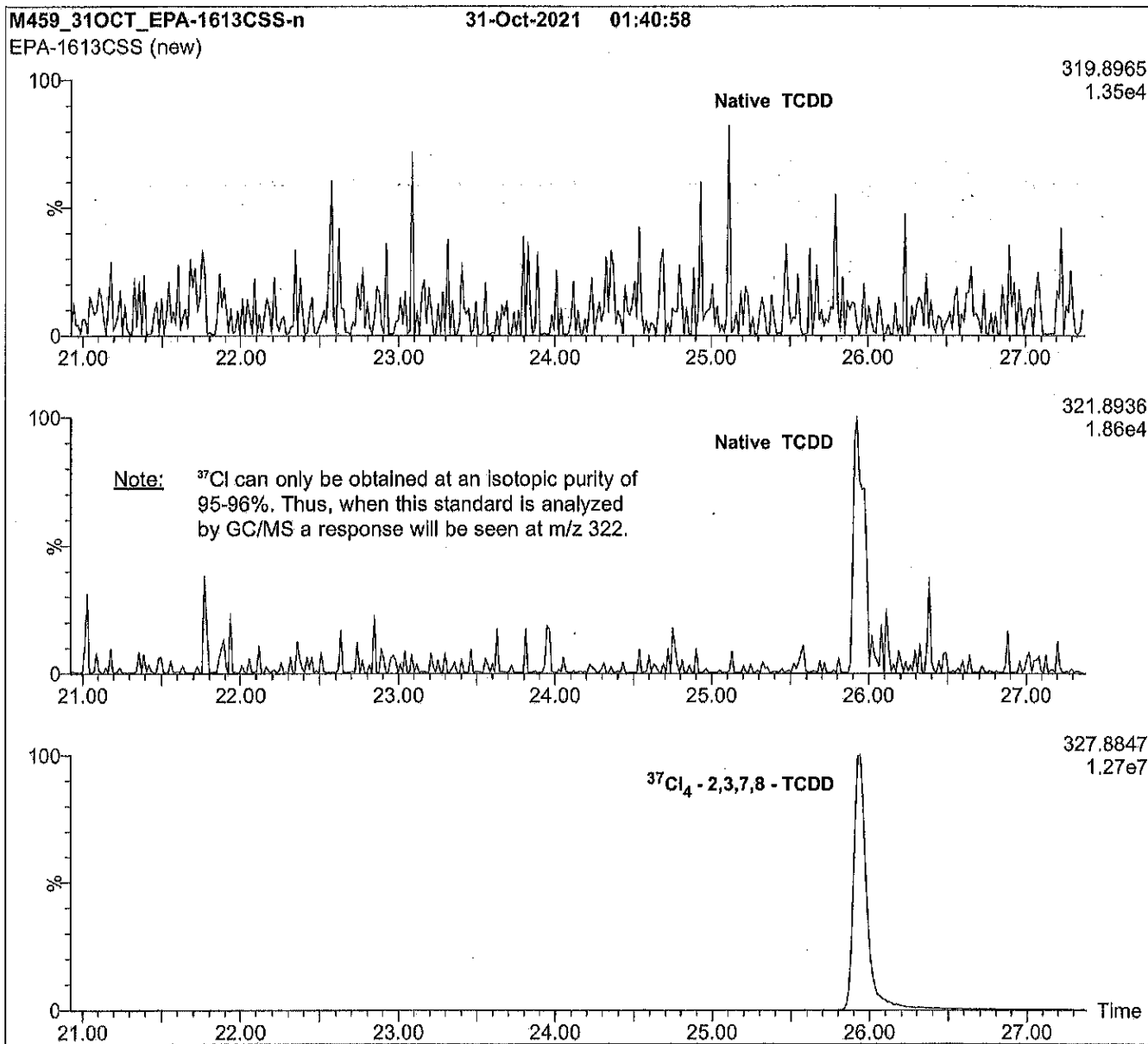
### **QUALITY MANAGEMENT:**

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**Figure 1: EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 μm film thickness) Agilent J&W	
Flow:	Constant at 1.4 mL/min	Oven:
Injector:	280°C (Splitless Injection)	150°C (1 min)
Ionization:	EI+	12°C/min to 200°C
Detector:	280°C	3°C/min to 235°C
	SIR at 10,000 mass resolving power	235°C (8 min)
		8°C/min to 310°C
		310°C (8 min)



**EPA-1613LCS**

**U.S. EPA Method 1613**  
**Labelled Compound Stock Solution**

**PRODUCT CODE:** EPA-1613LCS  
**LOT NUMBER:** 13LCS1021  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 10/29/2021  
**LAST TESTED:** (mm/dd/yyyy) 10/31/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 10/31/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DESCRIPTION:**

K3105

EPA-1613LCS is a solution/mixture of mass-labelled ( $^{13}\text{C}_{12}$ ) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual  $^{13}\text{C}$ -labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of  $\geq 99\%$ .

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations  
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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### **QUALITY MANAGEMENT:**

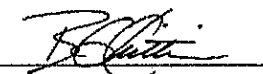
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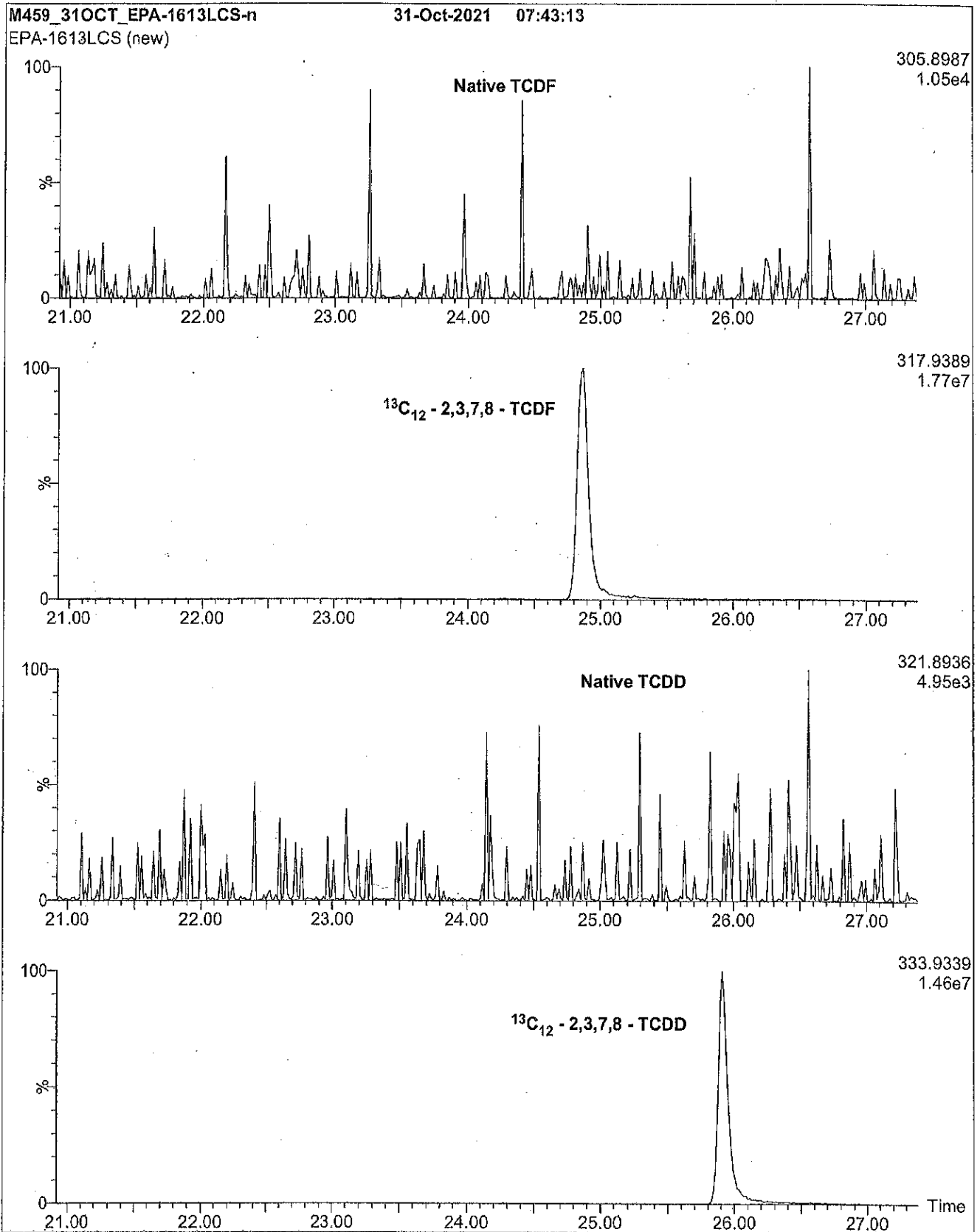
**Table A: EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
<b>Mass-Labelled PCDDs:</b>			
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -OCDD	114423-97-1	200
<b>Mass-Labelled PCDFs:</b>			
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	109719-94-0	100

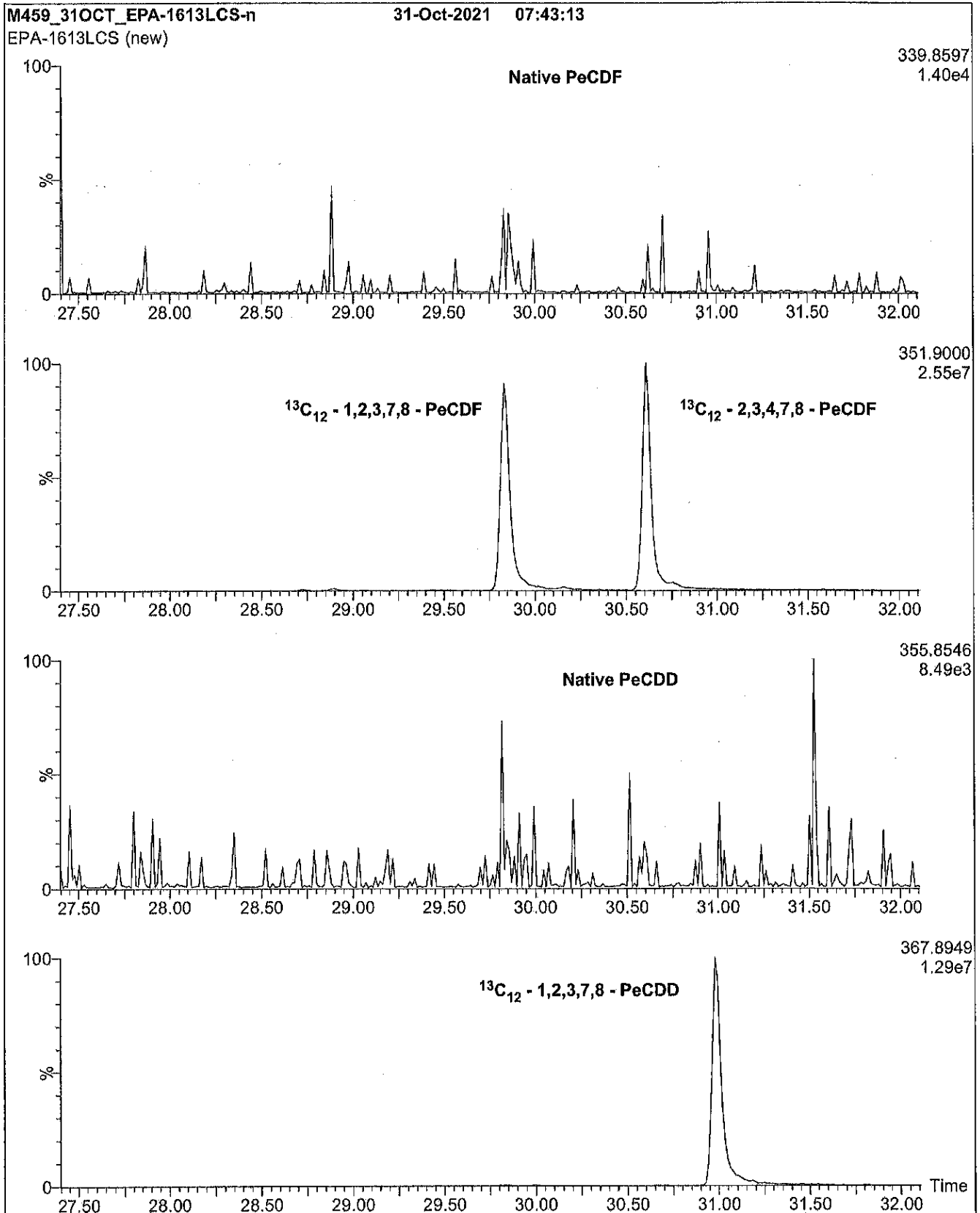
Certified By:   
 B.G. Chittim, General Manager

Date: 11/05/2021  
(mm/dd/yyyy)

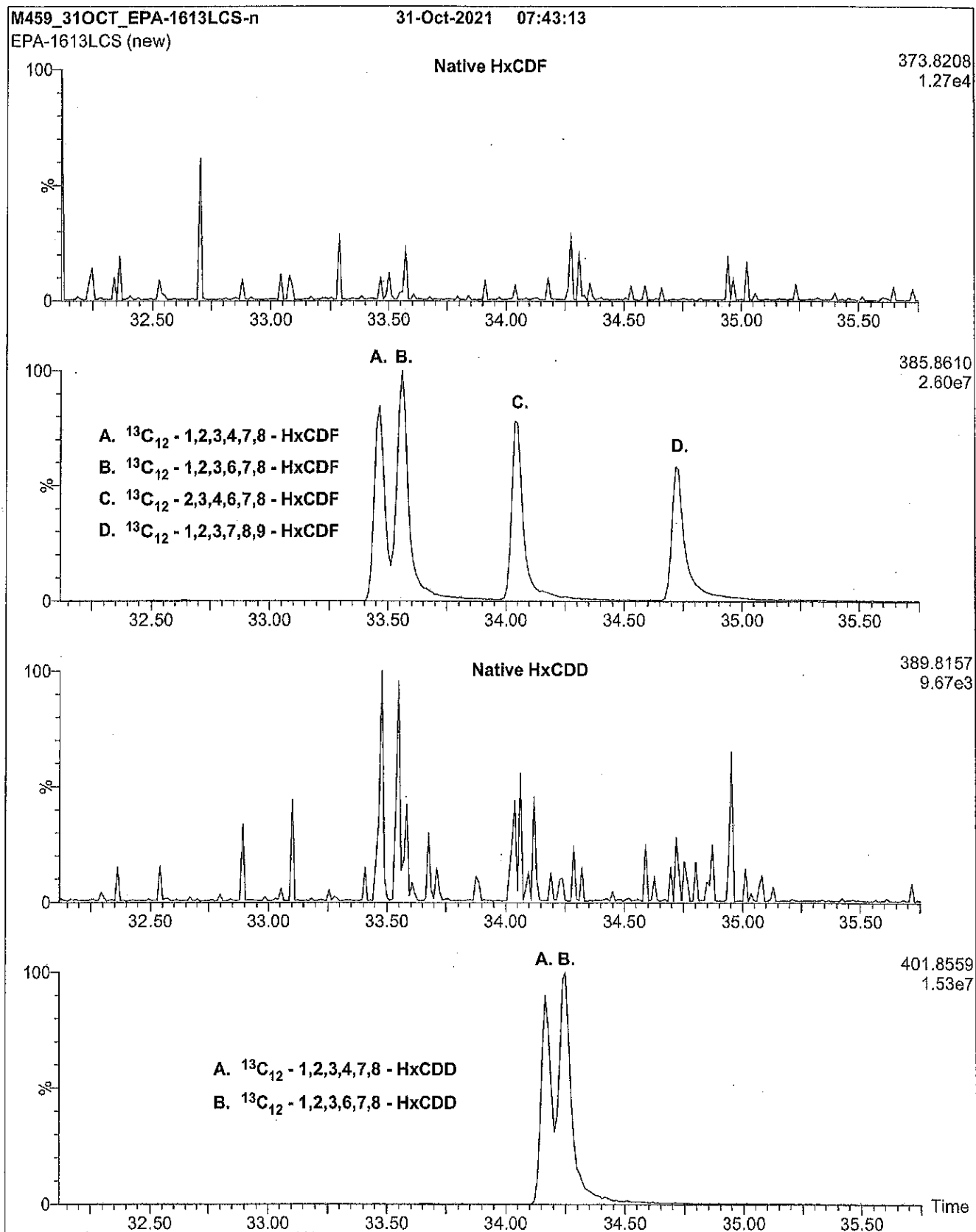
**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



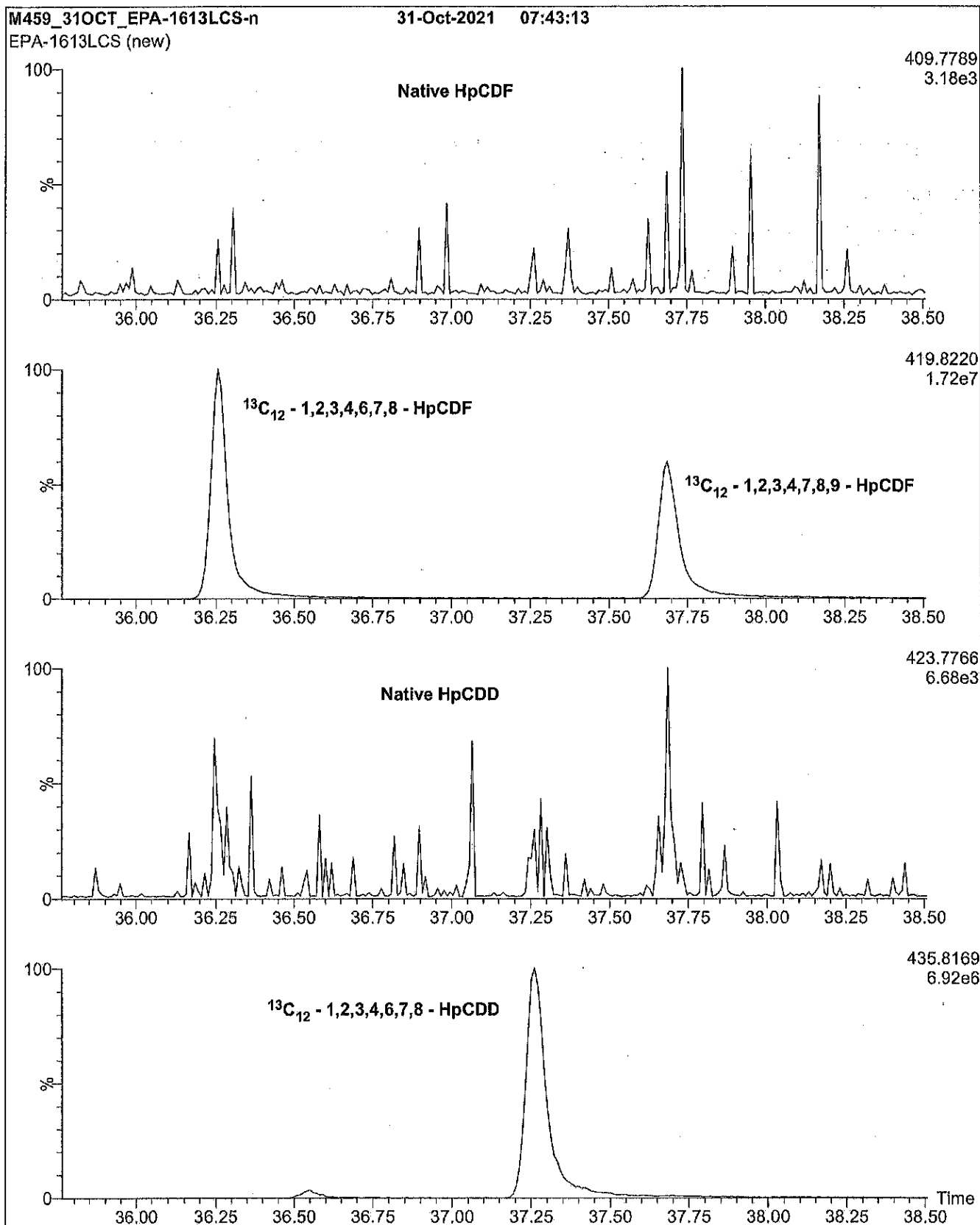
**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



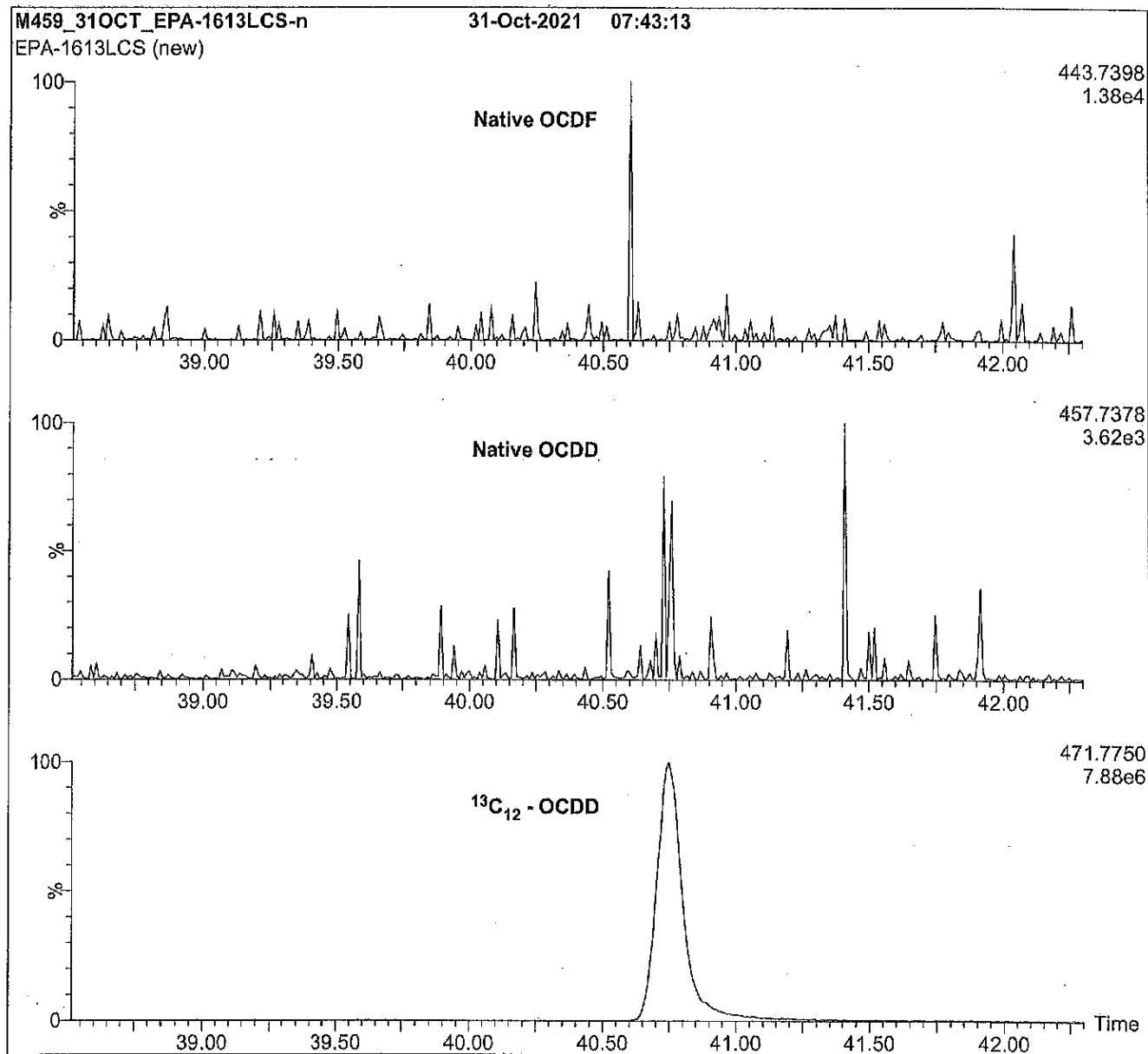
**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 μm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)



K9821

**CS3WT**

**Calibration and Verification Solution (EPA-1613CS3)  
combined with Window Defining and 2,3,7,8-TCDD  
Resolution Testing Congeners**

**PRODUCT CODE:** CS3WT  
**LOT NUMBER:** CS3WT1021  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 11/01/2021  
**LAST TESTED:** (mm/dd/yyyy) 11/02/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 11/02/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DESCRIPTION:**

CS3WT is a solution/mixture of native (<sup>12</sup>C<sub>12</sub>) and mass-labelled (<sup>13</sup>C<sub>12</sub>) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Tables A and B.

CS3WT is an HRGC/HRMS calibration solution that was designed and prepared to be used according to U.S. EPA Method 1613, Revision B, in place of EPA-1613CS3 (lot: 13CS31021). Additionally, it contains the PCDD and PCDF isomers required to set retention time windows as well as test and establish isomer specificity for 2,3,7,8-TCDD on a DB-5 (or equivalent) capillary column.

The individual <sup>13</sup>C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-(<sup>37</sup>Cl<sub>4</sub>)tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

<b><u>PRODUCT CODE</u></b>	<b><u>LOT NUMBER</u></b>
EPA-1613CS1	13CS11021
EPA-1613CS2	13CS21021
EPA-1613CS3	13CS31021
EPA-1613CS4	13CS41021
EPA-1613CS5	13CS51021
EPA-1613CSL	13CSL1021
EPA-1613CS0.5	13CS0.51021

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
**519-822-2436 • Fax: 519-822-2849 • info@well-labs.com**



### INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

### HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) has been assigned to the quantitative components in this product. A maximum combined percent relative uncertainty of  $\pm 20\%$  has been assigned to the semi-quantitative components in this product.

### TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

### LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Table A: CS3WT; Quantitative Components and Concentrations (ng/mL, ± 5%, in nonane/4.5% toluene)**

Compound	Designation <sup>a</sup>	Acronym	CAS #	Concentration (ng/mL)
<b>Native PCDDs:</b>				
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin		2,3,7,8-TCDD	1746-01-6	10.0
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin		1,2,3,7,8-PeCDD	40321-76-4	50.0
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin		1,2,3,4,7,8-HxCDD	39227-28-6	50.0
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin		1,2,3,6,7,8-HxCDD	57653-85-7	50.0
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin	Last HxCDD <sup>b</sup>	1,2,3,7,8,9-HxCDD	19408-74-3	50.0
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin	Last HpCDD	1,2,3,4,6,7,8-HpCDD	35822-46-9	50.0
Octachlorodibenzo- <i>p</i> -dioxin		OCDD	3268-87-9	100
<b>Native PCDFs:</b>				
<b>Designation<sup>a</sup></b>				
2,3,7,8-Tetrachlorodibenzofuran		2,3,7,8-TCDF	51207-31-9	10.0
1,2,3,7,8-Pentachlorodibenzofuran		1,2,3,7,8-PeCDF	57117-41-6	50.0
2,3,4,7,8-Pentachlorodibenzofuran		2,3,4,7,8-PeCDF	57117-31-4	50.0
1,2,3,4,7,8-Hexachlorodibenzofuran		1,2,3,4,7,8-HxCDF	70648-26-9	50.0
1,2,3,6,7,8-Hexachlorodibenzofuran		1,2,3,6,7,8-HxCDF	57117-44-9	50.0
1,2,3,7,8,9-Hexachlorodibenzofuran		1,2,3,7,8,9-HxCDF	72918-21-9	50.0
2,3,4,6,7,8-Hexachlorodibenzofuran		2,3,4,6,7,8-HxCDF	60851-34-5	50.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran	First HpCDF <sup>c</sup>	1,2,3,4,6,7,8-HpCDF	67562-39-4	50.0
1,2,3,4,7,8,9-Heptachlorodibenzofuran	Last HpCDF	1,2,3,4,7,8,9-HpCDF	55673-89-7	50.0
Octachlorodibenzofuran		OCDF	39001-02-0	100
<b>Mass-Labelled PCDDs:</b>				
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -OCDD	114423-97-1	200
<b>Mass-Labelled PCDFs:</b>				
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran		<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	109719-94-0	100
<b>Cleanup Standard:</b>				
2,3,7,8-( <sup>37</sup> Cl <sub>4</sub> )Tetrachlorodibenzo- <i>p</i> -dioxin		<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	85508-50-5	10.0
<b>Internal Standards:</b>				
1,2,3,4-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	114423-99-3	100
1,2,3,7,8,9-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin		<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	109719-82-6	100

<sup>a</sup> First/Last eluting isomer for the specified homologue group (see Table B for additional Window Definers).

<sup>b,c</sup> – see Table B for footnote.

**Table B: CS3WT; Semi-Quantitative Components and Concentrations (ng/mL, ± 20%, in nonane/4.5% toluene)**

Compound	Designation <sup>a</sup>	Acronym	CAS #	Concentration (ng/mL)
<b>PCDD Window Definers:</b>				
1,3,6,8-Tetrachlorodibenzo- <i>p</i> -dioxin	First TCDD	1,3,6,8-TCDD	33423-92-6	10.0
1,2,8,9-Tetrachlorodibenzo- <i>p</i> -dioxin	Last TCDD	1,2,8,9-TCDD	62470-54-6	10.0
1,2,4,6,8-/1,2,4,7,9-Pentachlorodibenzo- <i>p</i> -dioxin	First PeCDD	1,2,4,6,8-PeCDD	71998-76-0	50.0 <sup>d</sup>
		1,2,4,7,9-PeCDD	82291-37-0	
1,2,3,8,9-Pentachlorodibenzo- <i>p</i> -dioxin	Last PeCDD	1,2,3,8,9-PeCDD	71925-18-3	50.0
1,2,4,6,7,9-Hexachlorodibenzo- <i>p</i> -dioxin	First HxCDD	1,2,4,6,7,9-HxCDD	39227-62-8	50.0
1,2,3,4,6,7,9-Heptachlorodibenzo- <i>p</i> -dioxin	First HpCDD	1,2,3,4,6,7,9-HpCDD	58200-70-7	50.0
<b>PCDF Window Definers:</b>				
1,3,6,8-Tetrachlorodibenzofuran	First TCDF	1,3,6,8-TCDF	71998-72-6	10.0
1,2,8,9-Tetrachlorodibenzofuran	Last TCDF	1,2,8,9-TCDF	70648-22-5	10.0
1,3,4,6,8-Pentachlorodibenzofuran	First PeCDF	1,3,4,6,8-PeCDF	83704-55-6	50.0
1,2,3,8,9-Pentachlorodibenzofuran	Last PeCDF	1,2,3,8,9-PeCDF	83704-54-5	50.0
1,2,3,4,6,8-Hexachlorodibenzofuran	First HxCDF	1,2,3,4,6,8-HxCDF	69698-60-8	50.0
<b>2,3,7,8-TCDD Resolution Testing Isomers:</b>				
1,2,3,4-Tetrachlorodibenzo- <i>p</i> -dioxin		1,2,3,4-TCDD	30746-58-8	5.00
1,2,3,7-/1,2,3,8-Tetrachlorodibenzo- <i>p</i> -dioxin		1,2,3,7-TCDD	67028-18-6	5.00 <sup>d</sup>
		1,2,3,8-TCDD	53555-02-5	
1,2,3,9-Tetrachlorodibenzo- <i>p</i> -dioxin		1,2,3,9-TCDD	71669-26-6	10.0

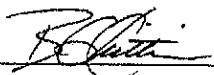
<sup>a</sup> First/Last eluting isomer for the specified homologue group (see Table A for additional Window Definers).

<sup>b</sup> 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD on a 60 m DB-5 column. Use 1,2,3,7,8,9-HxCDD (see Table A) and 1,2,3,4,6,7,9-HpCDD to approximate the end of the HxCDD window.

<sup>c</sup> 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF on a 60 m DB-5 column. Use 1,2,3,4,6,7,8-HpCDF (see Table A) to approximate the end of the HxCDF window.

<sup>d</sup> Total concentration of isomers.

Certified By: \_\_\_\_\_



B.G. Chittim, General Manager

Date: 11/05/2021

(mm/dd/yyyy)

**Figure 1:** CS3WT; HRGC/HRMS Data (60 m DB-5 Column)

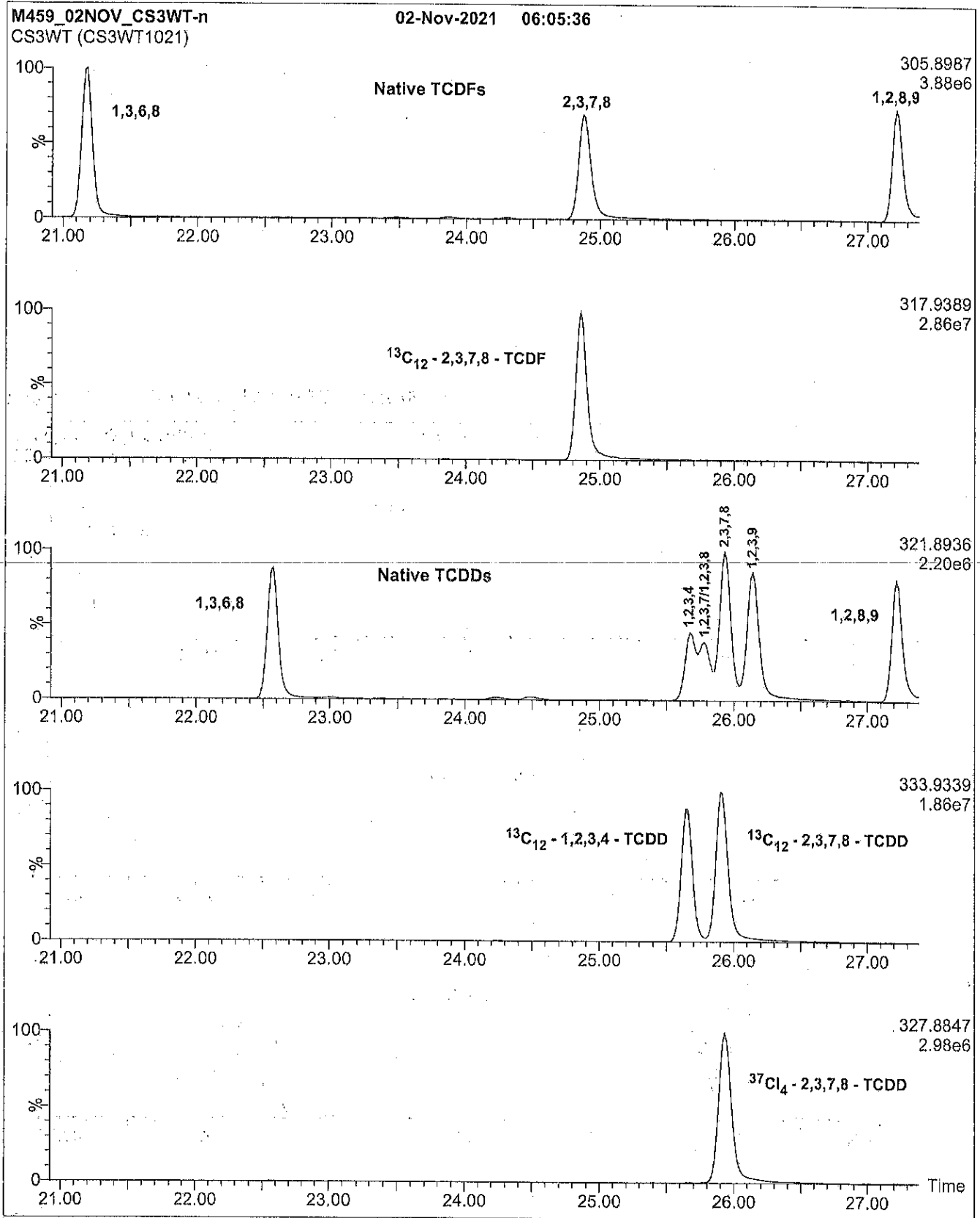
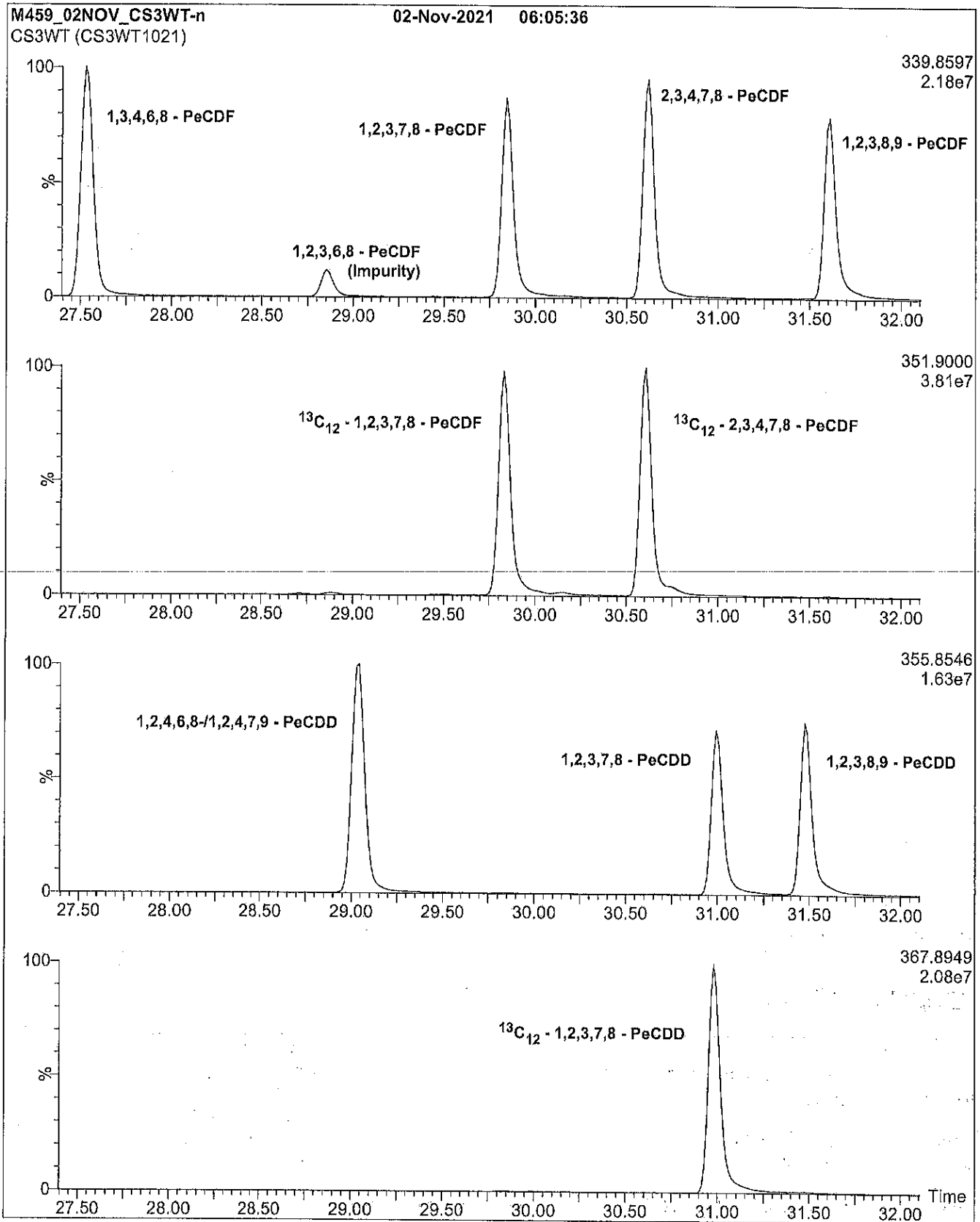


Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)



**Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

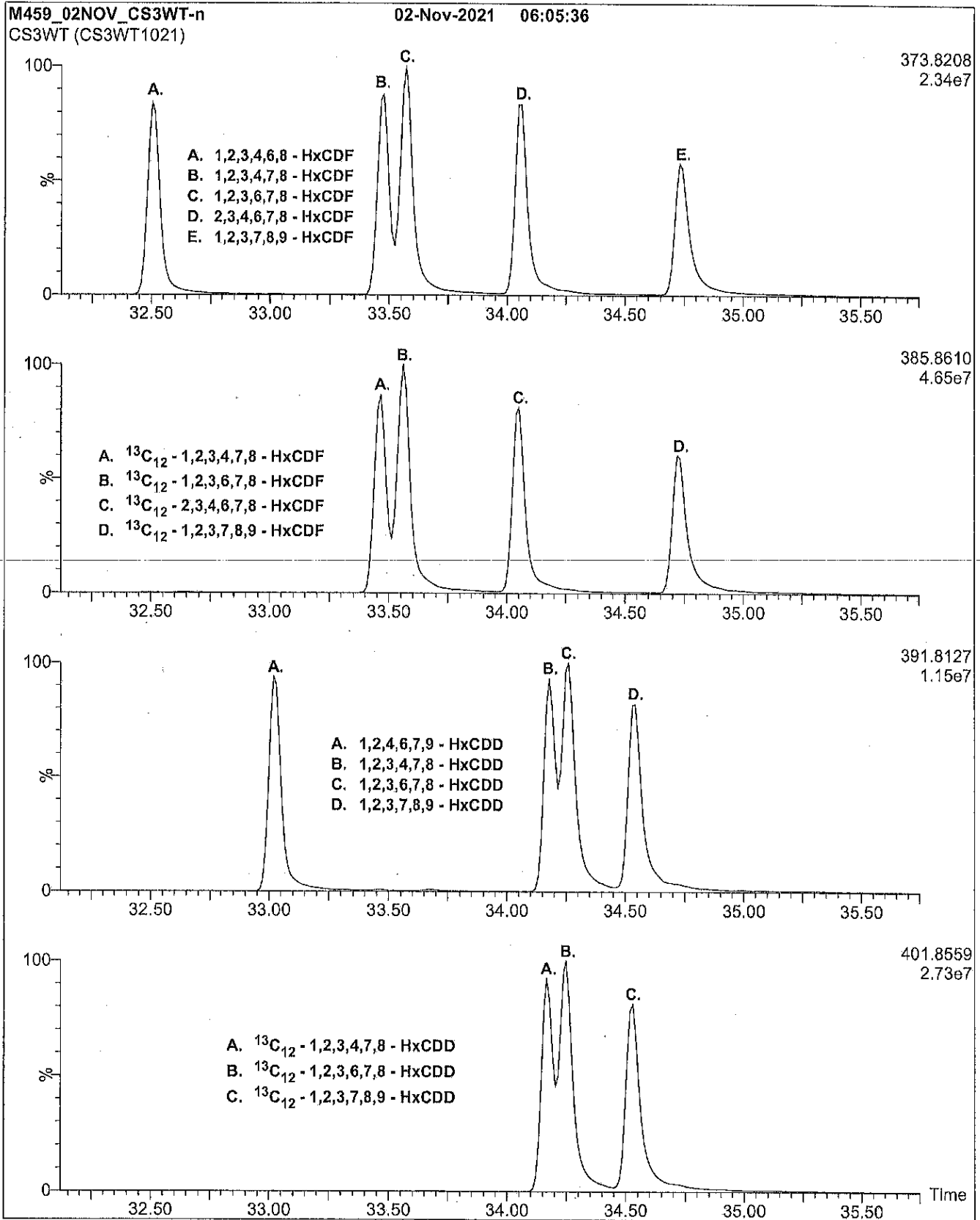
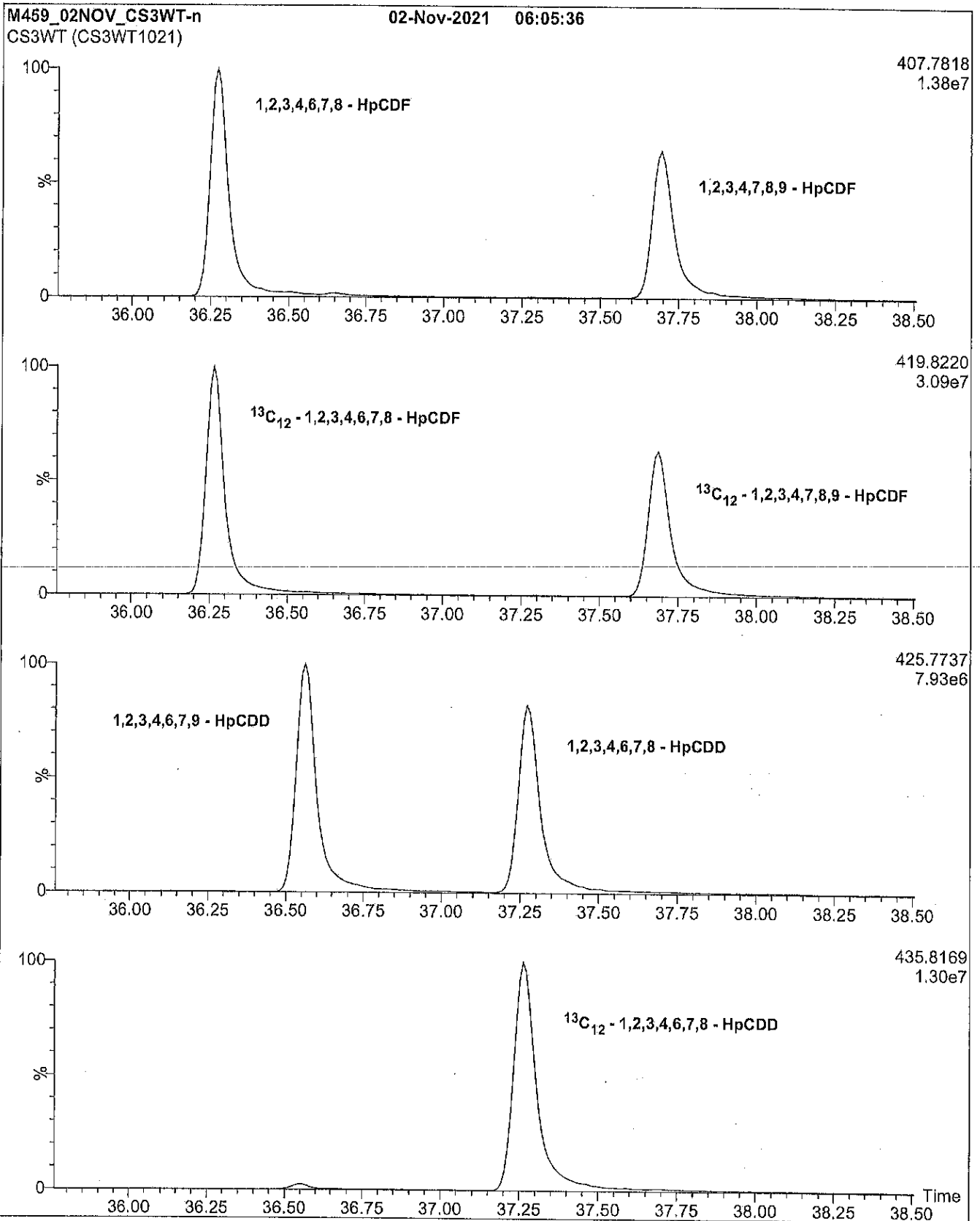
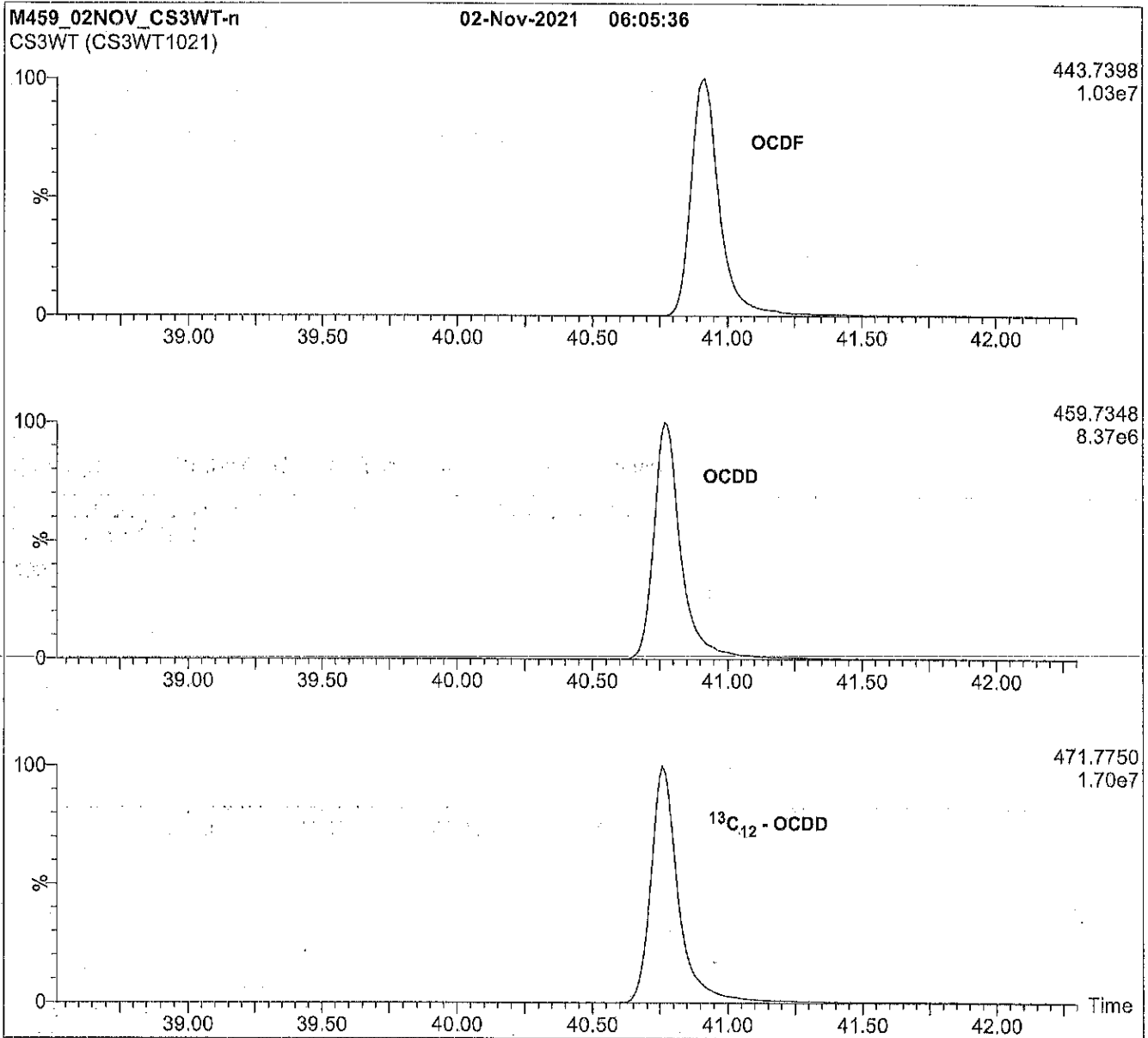


Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)



**Figure 1:** CS3WT; HRGC/HRMS Data (60 m DB-5 Column)



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1.4 mL/min  
Injector: 280°C (Splitless Injection)

Ionization: EI+  
Detector: 280°C

SIR at 10,000 mass resolving power

Oven: 150°C (1 min)  
12°C/min to 200°C  
3°C/min to 235°C  
235°C (8 min)  
8°C/min to 310°C  
310°C (8 min)





**EPA-1613LCS**

**U.S. EPA Method 1613  
Labelled Compound Stock Solution**

**PRODUCT CODE:** EPA-1613LCS  
**LOT NUMBER:** 13LCS1021  
**SOLVENT(S):** Nonane/Toluene  
**DATE PREPARED:** (mm/dd/yyyy) 10/29/2021  
**LAST TESTED:** (mm/dd/yyyy) 10/31/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 10/31/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

K 9985  
JK Reed  
10/27/22

**DESCRIPTION:**

EPA-1613LCS is a solution/mixture of mass-labelled ( $^{13}\text{C}_{12}$ ) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual  $^{13}\text{C}$ -labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of  $\geq 99\%$ .

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations  
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters

$x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

### **QUALITY MANAGEMENT:**

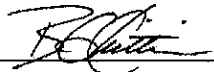
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

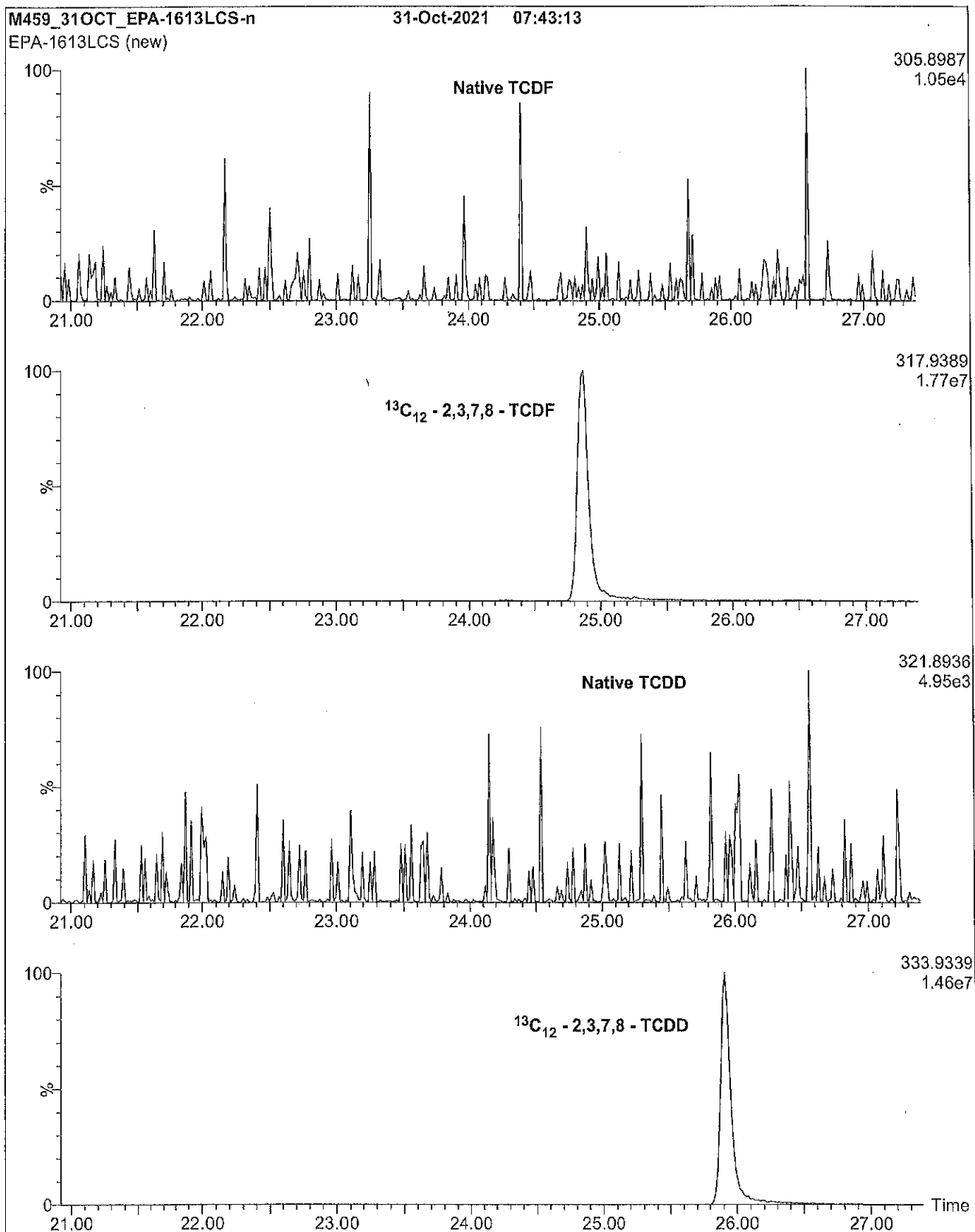
**Table A: EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
<b>Mass-Labelled PCDDs:</b>			
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro( <sup>13</sup> C <sub>12</sub> )dibenzo- <i>p</i> -dioxin	<sup>13</sup> C <sub>12</sub> -OCDD	114423-97-1	200
<b>Mass-Labelled PCDFs:</b>			
2,3,7,8-Tetrachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro( <sup>13</sup> C <sub>12</sub> )dibenzofuran	<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By:   
 B.G. Chittim, General Manager

Date: 11/05/2021  
(mm/dd/yyyy)

**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

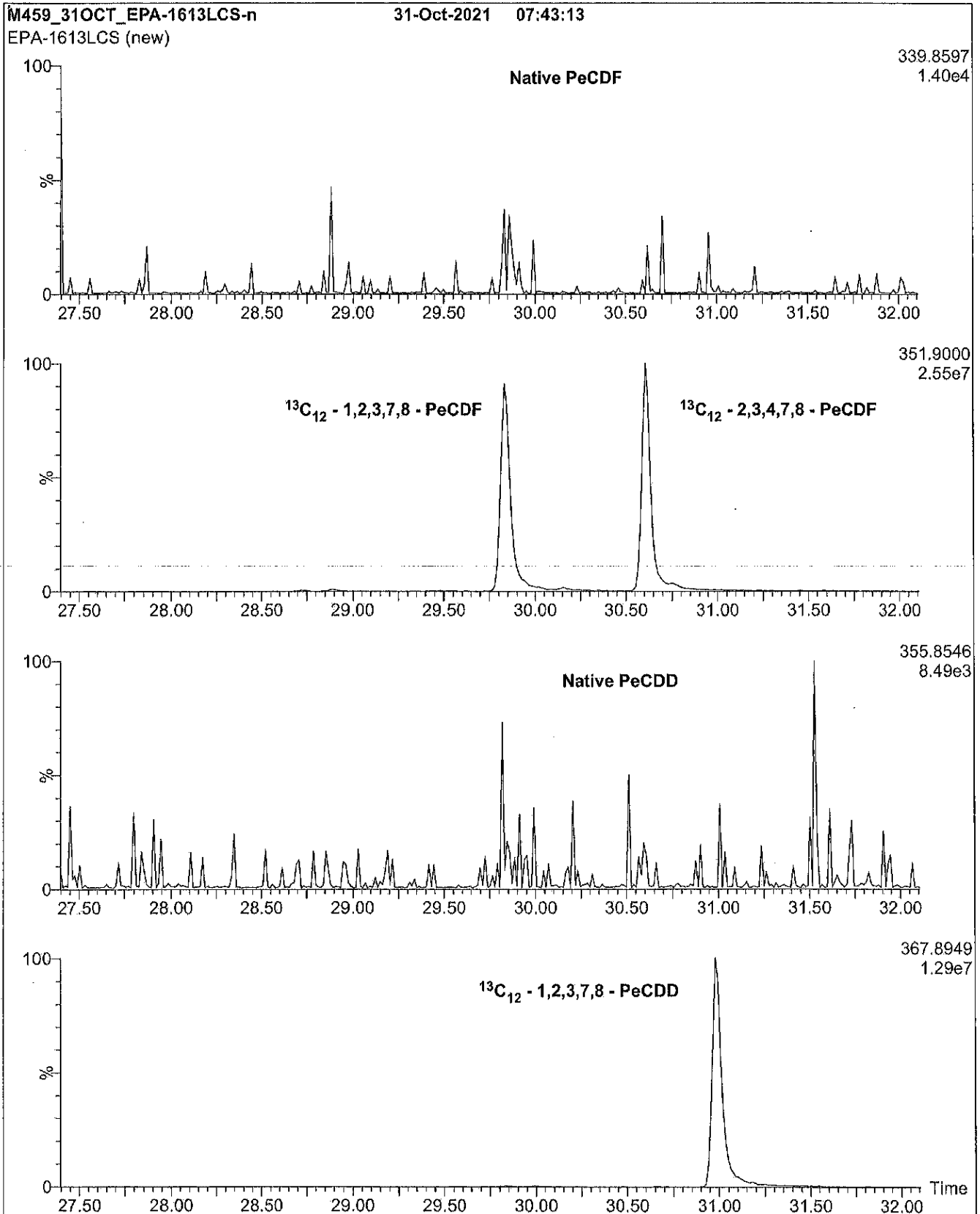
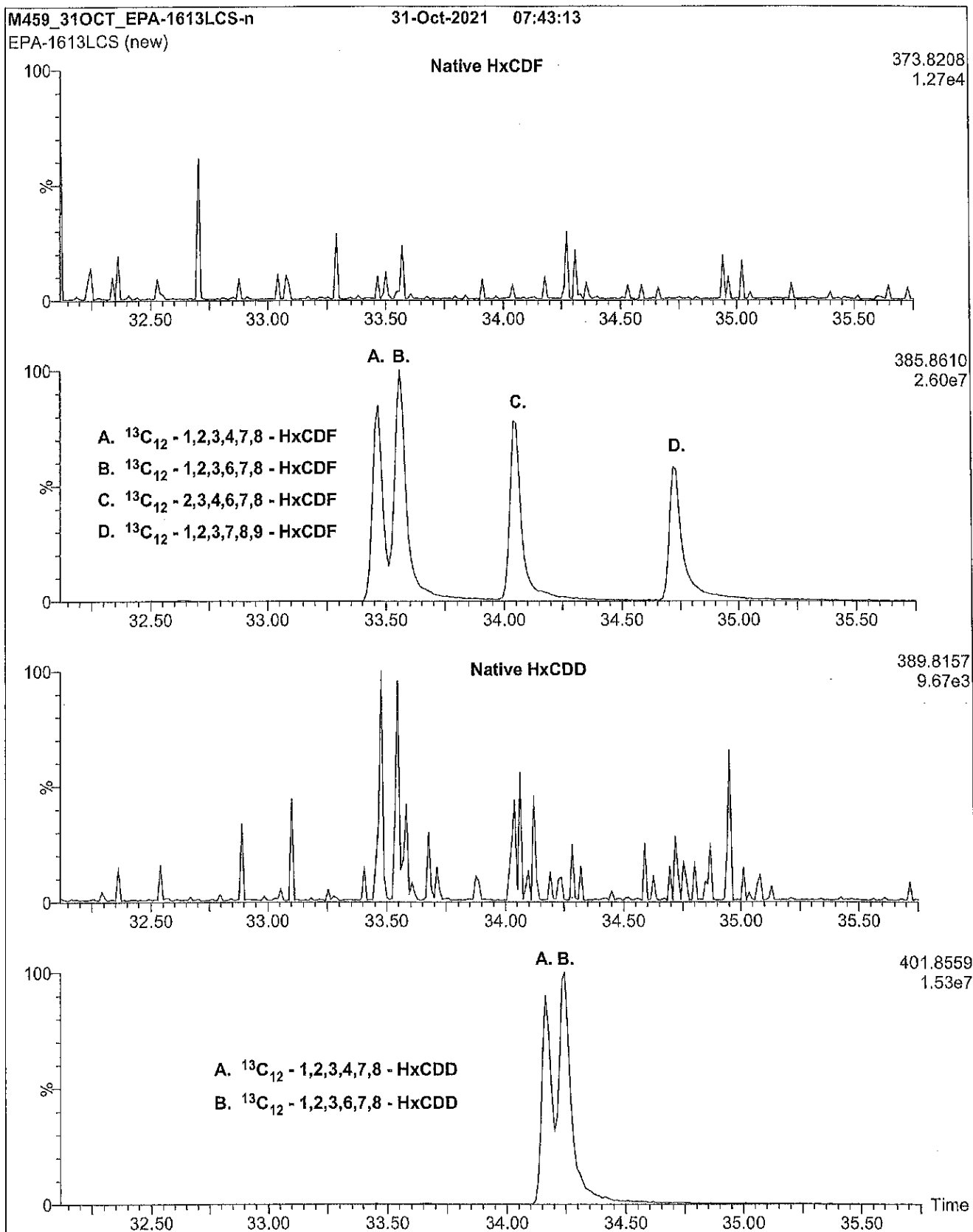
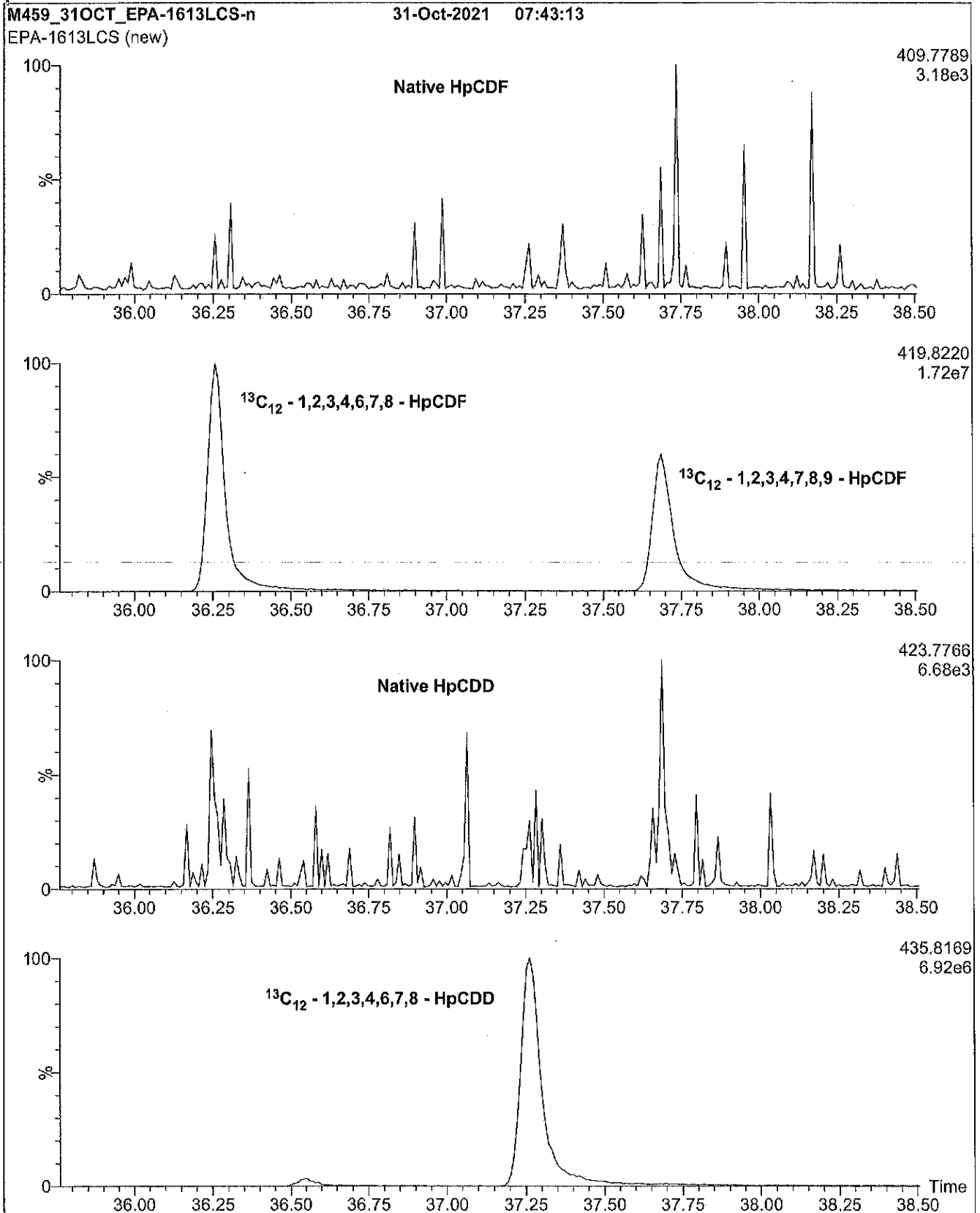


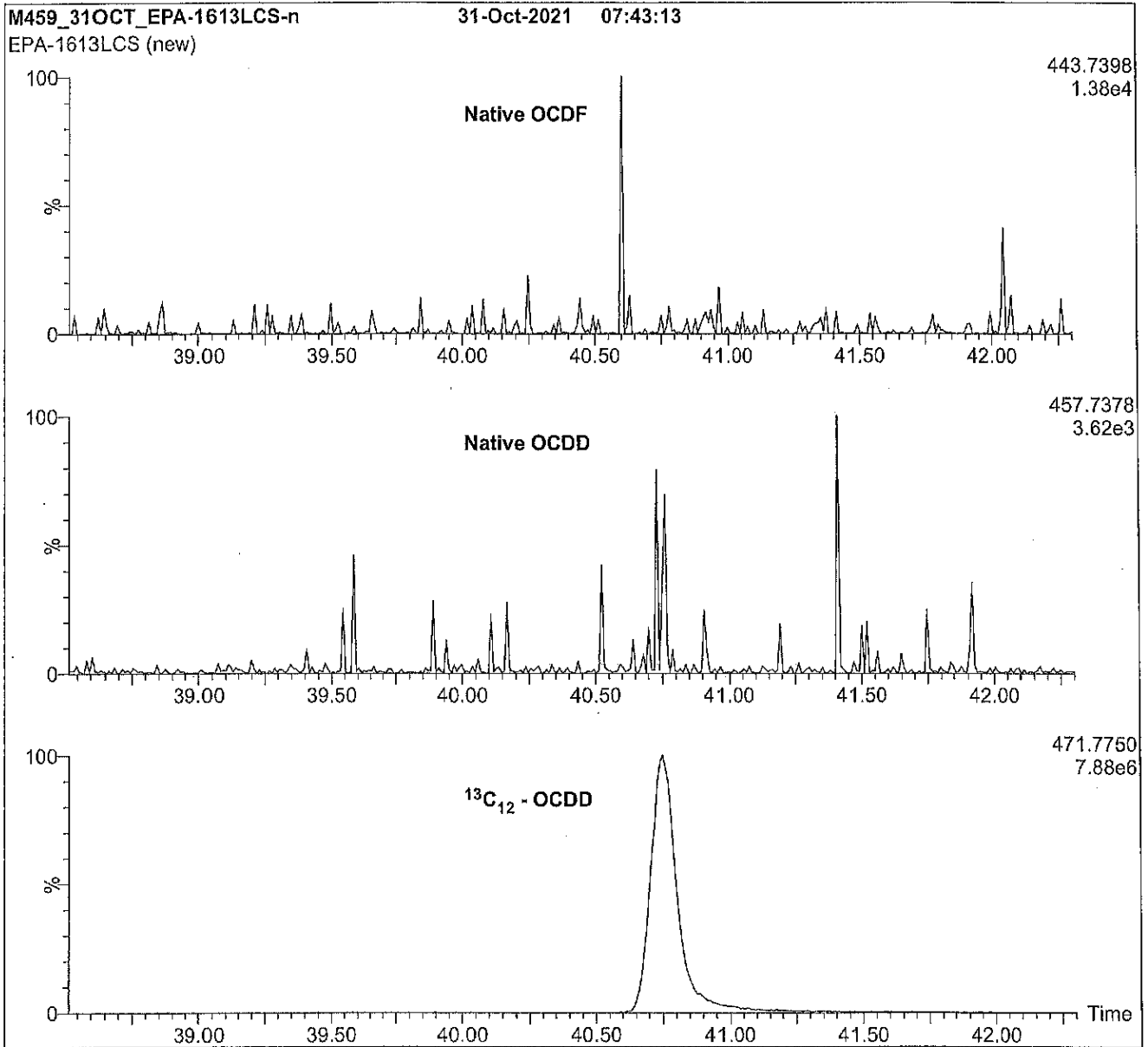
Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)



**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
 Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 μm film thickness) Agilent J&W	
Flow:	Constant at 1.4 mL/min	Oven: 150°C (1 min)
Injector:	280°C (Splitless Injection)	12°C/min to 200°C
Ionization:	Ei+	3°C/min to 235°C
Detector:	280°C	235°C (8 min)
	SIR at 10,000 mass resolving power	8°C/min to 310°C
		310°C (8 min)





**EPA-1613CSS**

**U.S. EPA Method 1613 Cleanup Standard  
Spiking Solution**

**PRODUCT CODE:** EPA-1613CSS  
**LOT NUMBER:** 13CSS1021  
**SOLVENT(S):** Nonane  
**DATE PREPARED:** (mm/dd/yyyy) 10/29/2021  
**LAST TESTED:** (mm/dd/yyyy) 10/31/2021  
**EXPIRY DATE:** (mm/dd/yyyy) 10/31/2028  
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

*K 9986  
Recd. JK  
10/27/22*

**DESCRIPTION:**

EPA-1613CSS contains 2,3,7,8-(<sup>37</sup>Cl<sub>4</sub>)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.  
 EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.  
 2,3,7,8-(<sup>37</sup>Cl<sub>4</sub>)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (<sup>37</sup>Cl) purity of ≥95%.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution  
 Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

**Table A: EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-( <sup>37</sup> Cl <sub>4</sub> )Tetrachlorodibenzo- <i>p</i> -dioxin	<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	85508-50-5	40.0

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

**Certified By:**   
 B.G. Chittim, General Manager  
**Date:** 11/05/2021  
(mm/dd/yyyy)

### **INTENDED USE:**

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

### **HANDLING:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

### **SYNTHESIS / CHARACTERIZATION:**

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

### **HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_c(y)$ , of a value  $y$  and the uncertainty of the independent parameters  $x_1, x_2, \dots, x_n$  on which it depends is:

$$u_c(y(x_1, x_2, \dots, x_n)) = \sqrt{\sum_{i=1}^n u(y, x_i)^2}$$

where  $x$  is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of  $\pm 5\%$  (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

### **TRACEABILITY:**

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

### **LIMITED WARRANTY:**

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

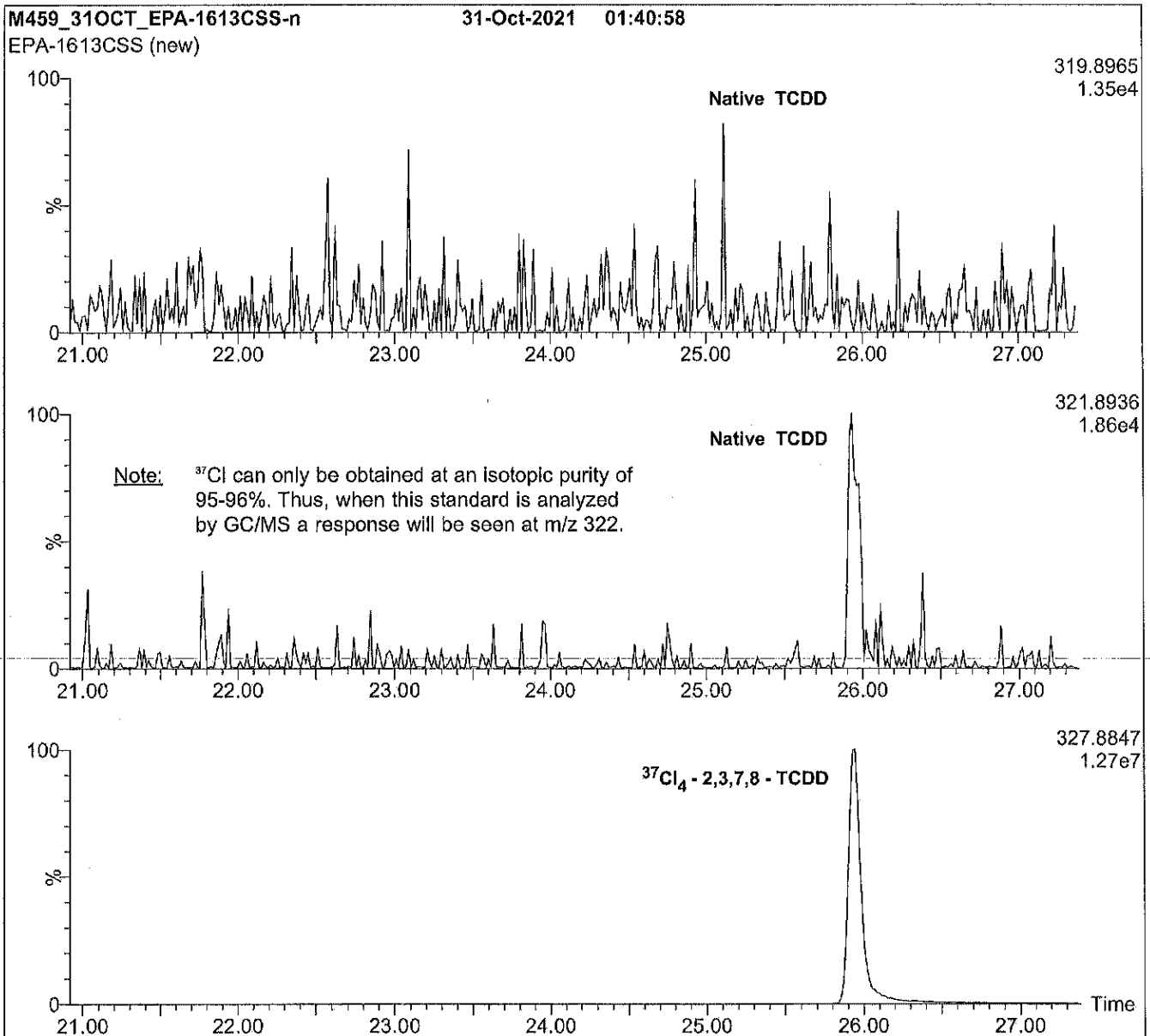
### **QUALITY MANAGEMENT:**

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

**Figure 1: EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



**Conditions for Figure 1:**

Agilent 6890N HRGC  
Autospec Ultima HRMS

**Chromatographic Conditions:**

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W	
Flow:	Constant at 1.4 mL/min	Oven:
Injector:	280°C (Splitless Injection)	150°C (1 min)
Ionization:	EI+	12°C/min to 200°C
Detector:	280°C	3°C/min to 235°C
	SIR at 10,000 mass resolving power	235°C (8 min)
		8°C/min to 310°C
		310°C (8 min)

# Recipient Copy

## CHAIN-OF-CUSTODY RECORD

COC No. 15600

Order Number: CB015015

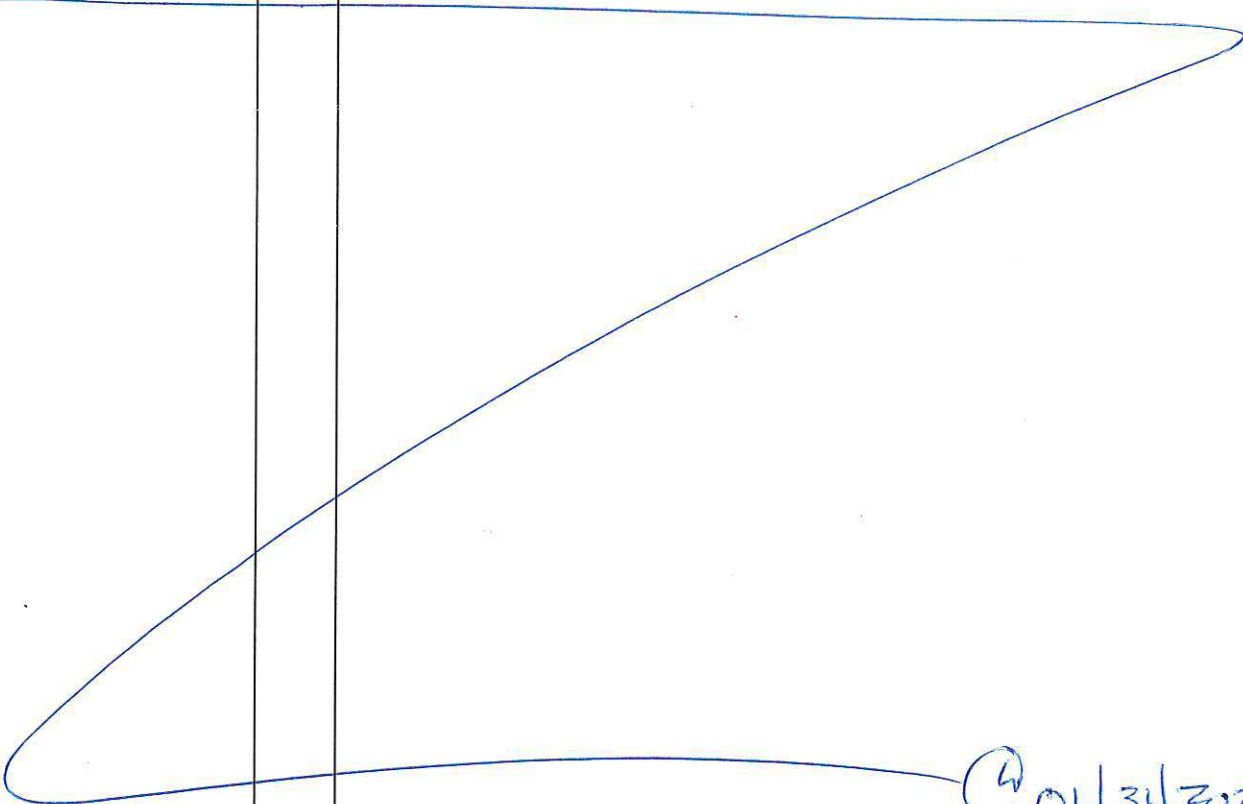
Date Shipped: 1/31/2023

AirBill No(s):


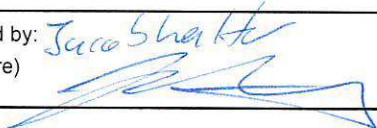
From: QATS LABORATORY  
2700 CHANDLER AVENUE, BLDG. B  
LAS VEGAS, NV 89120  
PHONE: 1-702-895-8712

To: SUE DUNNIHOO  
ANALYTICAL RESOURCES INC.  
4611 S. 134TH PLACE SUITE 100  
TUKWILA WA 98168  
250-695-6207

633163298570

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0172 - L&A1273	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0173 - L&A1274	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0174 - <del>L&amp;A1274</del> <sup>ISS</sup> L&A1275	1	PUGET SOUND SEDIMENT RM	PS-SRM
			
④ 01/31/2023 PUGET SOUND SRM FOR THE DUWAMISH AOC5 PROJECT			

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature) 	Date/Time (1400) 01/31/2023	Received by: 	Date/Time 02/06/23 1415
Custody Seal(s): <u>Present</u> /Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time



Analytical Standard Record  
Standard ID: L002084

Printed: 3/2/2023 8:59:18AM

Description:	Dioxin ISC Mix	Expires:	24-Feb-2024
Standard Type:	Other	Prepared:	24-Feb-2023
Solvent:	Nonane	Prepared By:	Peter Kepler
Final Volume (mls):	1	Department:	HRGCMS
Vials:	1	Last Edit:	24-Feb-2023 11:19 by PK
Vendor:	NA	Lot #:	1234
Vendor Catalog #:			

**Comments**

Stock: H9902: 2378-TCDF, 3467-TCDF, 2348-TCDF, 1278-TCDD, 2378-TCDD. each @ 1000 ng/mL

10 ul to 1 mL FV in Nonane. Final Conc = 10 ng/mL. Analytes and units not available in Element.

Analyte	CAS Number	Concentration	Units
2,3,7,8-TCDF	51207-31-9	10	ug/mL
2,3,7,8-TCDD	1746-01-6	10	ug/mL



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1021
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-01 D      SDG: 23A0206  
 Sampled: 01/11/23 08:25      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-058  
 % Solids: 47.26      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 19:07  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.064 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.6	20	0.52	0.99	
7439-92-1	Lead	29.2	20	0.10	0.20	
7440-22-4	Silver	0.30	20	0.04	0.40	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1015
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-02 D      SDG: 23A0206  
 Sampled: 01/11/23 08:37      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-057  
 % Solids: 47.15      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 19:02  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.014 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.4	20	0.54	1.05	
7439-92-1	Lead	30.1	20	0.11	0.21	
7440-22-4	Silver	0.30	20	0.05	0.42	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1164
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-03 D      SDG: 23A0206  
 Sampled: 01/11/23 09:18      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-084  
 % Solids: 49.38      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:15  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.076 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	26.1	20	0.49	0.94	
7439-92-1	Lead	26.5	20	0.10	0.19	
7440-22-4	Silver	0.25	20	0.04	0.38	J





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1158
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-04 D      SDG: 23A0206  
 Sampled: 01/11/23 09:35      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-085  
 % Solids: 48.66      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:20  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.01 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	25.6	20	0.53	1.02	
7439-92-1	Lead	23.4	20	0.11	0.20	
7440-22-4	Silver	0.22	20	0.04	0.41	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1151
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-05 D      SDG: 23A0206  
 Sampled: 01/11/23 09:50      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-086  
 % Solids: 52.44      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:25  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.075 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	25.3	20	0.46	0.89	
7439-92-1	Lead	23.3	20	0.09	0.18	
7440-22-4	Silver	0.22	20	0.04	0.35	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1145
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-06 D      SDG: 23A0206  
 Sampled: 01/11/23 10:07      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-090  
 % Solids: 53.98      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:46  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.054 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	24.0	20	0.46	0.88	
7439-92-1	Lead	24.4	20	0.09	0.18	
7440-22-4	Silver	0.26	20	0.04	0.35	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1139
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-07 D      SDG: 23A0206  
 Sampled: 01/11/23 10:20      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-091  
 % Solids: 58.12      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:51  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.043 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	20.6	20	0.43	0.82	
7439-92-1	Lead	18.4	20	0.09	0.16	
7440-22-4	Silver	0.16	20	0.04	0.33	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1117
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-08 D      SDG: 23A0206  
 Sampled: 01/11/23 10:40      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-092  
 % Solids: 51.15      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:56  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.002 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	25.3	20	0.51	0.98	
7439-92-1	Lead	22.3	20	0.10	0.20	
7440-22-4	Silver	0.21	20	0.04	0.39	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1103
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-09 D      SDG: 23A0206  
 Sampled: 01/11/23 11:15      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-093  
 % Solids: 40.33      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:00  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.078 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	30.0	20	0.60	1.15	
7439-92-1	Lead	31.5	20	0.12	0.23	
7440-22-4	Silver	0.31	20	0.05	0.46	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

<b>LDW23-SS1100</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206  
 Sampled: 01/11/23 11:28      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-094  
 % Solids: 39.49      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:05  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.072 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	32.0	20	0.61	1.18	
7439-92-1	Lead	34.2	20	0.12	0.24	
7440-22-4	Silver	0.35	20	0.05	0.47	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1096
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-11 D      SDG: 23A0206  
 Sampled: 01/11/23 11:43      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-095  
 % Solids: 38.38      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:10  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.014 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	31.0	20	0.67	1.28	
7439-92-1	Lead	34.5	20	0.13	0.26	
7440-22-4	Silver	0.34	20	0.06	0.51	J





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

LDW23-SS1094
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-12 D

SDG: 23A0206

Sampled: 01/11/23 12:19

Prepared: 04/06/23 16:05

File ID: XDT\_m2230407-096

% Solids: 45.91

Preparation: SWN EPA 3050B

Analyzed: 04/07/23 22:15

Batch: BLD0123

Sequence: SLD0127

Initial/Final: 1.034 g Wet / 50 mL

Instrument: ICPMS2

Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	27.8	20	0.55	1.05	
7439-92-1	Lead	28.6	20	0.11	0.21	
7440-22-4	Silver	0.28	20	0.05	0.42	J



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

<b>LDW23-SS1066</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206  
 Sampled: 01/11/23 12:40      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-097  
 % Solids: 57.96      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:19  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.052 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	40.7	20	0.43	0.82	
7439-92-1	Lead	102	20	0.09	0.16	
7440-22-4	Silver	1.51	20	0.04	0.33	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B**  
Total Metals

<b>LDW23-SS1061</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-14 D      SDG: 23A0206  
 Sampled: 01/11/23 13:03      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-098  
 % Solids: 48.61      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:24  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.043 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	29.2	20	0.51	0.99	
7439-92-1	Lead	31.7	20	0.10	0.20	
7440-22-4	Silver	0.42	20	0.04	0.39	



**PREPARATION BATCH SUMMARY**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLD0123 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	XDT_m2230407-058	04/06/23 16:05	
LDW23-SS1015	23A0206-02	XDT_m2230407-057	04/06/23 16:05	
LDW23-SS1164	23A0206-03	XDT_m2230407-084	04/06/23 16:05	
LDW23-SS1158	23A0206-04	XDT_m2230407-085	04/06/23 16:05	
LDW23-SS1151	23A0206-05	XDT_m2230407-086	04/06/23 16:05	
LDW23-SS1145	23A0206-06	XDT_m2230407-090	04/06/23 16:05	
LDW23-SS1139	23A0206-07	XDT_m2230407-091	04/06/23 16:05	
LDW23-SS1117	23A0206-08	XDT_m2230407-092	04/06/23 16:05	
LDW23-SS1103	23A0206-09	XDT_m2230407-093	04/06/23 16:05	
LDW23-SS1100	23A0206-10	XDT_m2230407-094	04/06/23 16:05	
LDW23-SS1096	23A0206-11	XDT_m2230407-095	04/06/23 16:05	
LDW23-SS1094	23A0206-12	XDT_m2230407-096	04/06/23 16:05	
LDW23-SS1066	23A0206-13	XDT_m2230407-097	04/06/23 16:05	
LDW23-SS1061	23A0206-14	XDT_m2230407-098	04/06/23 16:05	
Blank	BLD0123-BLK1	XDT_m2230407-044	04/06/23 16:05	
LCS	BLD0123-BS1	XDT_m2230407-045	04/06/23 16:05	
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	04/06/23 16:05	
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	04/06/23 16:05	
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	04/06/23 16:05	



### Digestion Log

Analyst: ARZ Date: 4/6/23 Time: 1040-1605 Balance ID: BAL10

Matrix: soil Block ID: 3 Block Temp: 96c Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SWN</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
23A206-01	D		1.064	50			
-02			1.014				
-03			1.076				
-04			1.010				
-05			1.075				
-06			1.054				
-07			1.043				
-08			1.002				
-09			1.078				
-10			1.072				
-11			1.014				
-12			1.034				
-13			1.052				
-14			1.043				
BLD123-blk	-		—				23A206-01
-bs	-		—				
-dup	-		1.067				
-MS	-		1.067				
-MSD	-		1.064				
ARZ 4/5/23							

Chemical/Reagent ID:

HNO<sub>3</sub>: L2678 1:1 HNO<sub>3</sub>: L3305 HCl: — H<sub>2</sub>O<sub>2</sub>: K11056  
 Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)



**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 6020B**  
Total Metals

<b>Blank</b>
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Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLD0123

Laboratory ID: BLD0123-BLK1

Prepared: 04/06/23 16:05

Matrix: Solid

Preparation: SWN EPA 3050B

Analyzed: 04/07/23 17:55

Sequence: SLD0127

Calibration: GD00024

Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium-52	ND	20	0.26	0.50	U
7439-92-1	Lead-208	ND	20	0.05	0.10	U
7440-22-4	Silver-107	ND	20	0.02	0.20	U



**LCS / LCS DUPLICATE RECOVERY**

**EPA 6020B**

Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/07/23 18:00</u>
Batch:	<u>BLD0123</u>	Laboratory ID:	<u>BLD0123-BS1</u>
Preparation:	<u>SWN EPA 3050B</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>1 g / 50 mL</u>		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Chromium-52	25.0	26.9		108	80 - 120
Lead-208	25.0	26.6		106	80 - 120
Silver-107	25.0	27.8		111	80 - 120

\* Indicates values outside of QC limits



**DUPLICATES**

**EPA 6020B**

Total Metals

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLD0123-DUP1

Batch: BLD0123

Lab Source ID: 23A0206-01

Preparation: SWN EPA 3050B

Initial/Final: 1.067 g / 50 mL

Source Sample Name: LDW23-SS1021

% Solids: 47.26

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Chromium-52	20	28.6	27.9	2.54	
Lead-208	20	29.2	29.7	1.84	
Silver-107	-0.02 - 0.77	0.30	0.37	22.9	L

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/-RL instead of 20% RPD





**MS / MS DUPLICATE RECOVERY**  
**EPA 6020B**  
Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/07/23 19:16</u>
Batch:	<u>BLD0123</u>	Laboratory ID:	<u>BLD0123-MS1</u>
Preparation:	<u>SWN EPA 3050B</u>	Sequence Name:	<u>Matrix Spike</u>
Initial/Final:	<u>1.067 g / 50 mL</u>	Source Sample:	<u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Chromium-52	49.6	28.6		72.3		88.3	75 - 125
Lead-208	49.6	29.2		78.9		100	75 - 125
Silver-107	49.6	0.30	J	38.3		76.6	75 - 125

\* Values outside of QC limits



**MS / MS DUPLICATE RECOVERY**  
**EPA 6020B**  
Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/07/23 19:21</u>
Batch:	<u>BLD0123</u>	Laboratory ID:	<u>BLD0123-MSD1</u>
Preparation:	<u>SWN EPA 3050B</u>	Sequence Name:	<u>Matrix Spike Dup</u>
Initial/Final:	<u>1.064 g / 50 mL</u>	Source Sample:	<u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Chromium-52	49.7	70.8		85.0	2.10	20	75 - 125
Lead-208	49.7	78.9		100	0.0373	20	75 - 125
Silver-107	49.7	41.4		82.7	7.89	20	75 - 125

\* Values outside of QC limits



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-ICV1	Chromium-52	50.000	52.1	104	ug/L	EPA 6020B
	Chromium-53	50.000	51.8	104	ug/L	EPA 6020B
	Lead-208	50.000	50.5	101	ug/L	EPA 6020B
	Silver-107	50.000	53.0	106	ug/L	EPA 6020B
SLD0127-CCV1	Chromium-52	50.000	50.9	102	ug/L	EPA 6020B
	Chromium-53	50.000	51.5	103	ug/L	EPA 6020B
	Lead-208	50.000	49.3	98.5	ug/L	EPA 6020B
	Silver-107	50.000	50.2	100	ug/L	EPA 6020B
SLD0127-CCV2	Chromium-52	50.000	51.0	102	ug/L	EPA 6020B
	Chromium-53	50.000	52.2	104	ug/L	EPA 6020B
	Lead-208	50.000	48.5	96.9	ug/L	EPA 6020B
	Silver-107	50.000	51.6	103	ug/L	EPA 6020B
SLD0127-CCV3	Chromium-52	50.000	51.3	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.3	103	ug/L	EPA 6020B
	Lead-208	50.000	51.7	103	ug/L	EPA 6020B
	Silver-107	50.000	51.8	104	ug/L	EPA 6020B
SLD0127-CCV4	Chromium-52	50.000	49.9	99.8	ug/L	EPA 6020B
	Chromium-53	50.000	51.4	103	ug/L	EPA 6020B
	Lead-208	50.000	49.0	97.9	ug/L	EPA 6020B
	Silver-107	50.000	52.1	104	ug/L	EPA 6020B
SLD0127-CCV5	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	51.8	104	ug/L	EPA 6020B
	Lead-208	50.000	49.1	98.3	ug/L	EPA 6020B
	Silver-107	50.000	50.7	101	ug/L	EPA 6020B
SLD0127-CCV6	Chromium-52	50.000	50.4	101	ug/L	EPA 6020B
	Chromium-53	50.000	51.1	102	ug/L	EPA 6020B
	Lead-208	50.000	49.1	98.2	ug/L	EPA 6020B
	Silver-107	50.000	52.4	105	ug/L	EPA 6020B
SLD0127-CCV7	Chromium-52	50.000	51.2	102	ug/L	EPA 6020B
	Chromium-53	50.000	51.9	104	ug/L	EPA 6020B
	Lead-208	50.000	50.3	101	ug/L	EPA 6020B
	Silver-107	50.000	52.0	104	ug/L	EPA 6020B
SLD0127-CCV8	Chromium-52	50.000	51.4	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.2	102	ug/L	EPA 6020B



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-CCV8	Lead-208	50.000	50.3	101	ug/L	EPA 6020B
	Silver-107	50.000	50.0	100	ug/L	EPA 6020B
SLD0127-CCV9	Chromium-52	50.000	50.3	101	ug/L	EPA 6020B
	Chromium-53	50.000	51.6	103	ug/L	EPA 6020B
	Lead-208	50.000	49.9	99.8	ug/L	EPA 6020B
	Silver-107	50.000	50.4	101	ug/L	EPA 6020B
SLD0127-CCVA	Chromium-52	50.000	50.6	101	ug/L	EPA 6020B
	Chromium-53	50.000	50.7	101	ug/L	EPA 6020B
	Lead-208	50.000	50.5	101	ug/L	EPA 6020B
	Silver-107	50.000	50.0	100	ug/L	EPA 6020B
SLD0127-CCVB	Chromium-52	50.000	51.4	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.7	103	ug/L	EPA 6020B
	Lead-208	50.000	50.8	102	ug/L	EPA 6020B
	Silver-107	50.000	51.4	103	ug/L	EPA 6020B
SLD0127-CCVC	Chromium-52	50.000	50.7	101	ug/L	EPA 6020B
	Chromium-53	50.000	51.1	102	ug/L	EPA 6020B
	Lead-208	50.000	50.7	101	ug/L	EPA 6020B
	Silver-107	50.000	52.2	104	ug/L	EPA 6020B
SLD0127-CCVD	Chromium-52	50.000	52.5	105	ug/L	EPA 6020B
	Chromium-53	50.000	52.5	105	ug/L	EPA 6020B
	Lead-208	50.000	52.6	105	ug/L	EPA 6020B
	Silver-107	50.000	51.1	102	ug/L	EPA 6020B
SLD0127-CCVE	Chromium-52	50.000	49.9	99.7	ug/L	EPA 6020B
	Chromium-53	50.000	51.4	103	ug/L	EPA 6020B
	Lead-208	50.000	51.1	102	ug/L	EPA 6020B
	Silver-107	50.000	50.9	102	ug/L	EPA 6020B
SLD0127-CCVF	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	50.5	101	ug/L	EPA 6020B
	Lead-208	50.000	51.0	102	ug/L	EPA 6020B
	Silver-107	50.000	50.6	101	ug/L	EPA 6020B
SLD0127-CCVG	Chromium-52	50.000	51.2	102	ug/L	EPA 6020B
	Chromium-53	50.000	51.6	103	ug/L	EPA 6020B
	Lead-208	50.000	51.6	103	ug/L	EPA 6020B
	Silver-107	50.000	50.8	102	ug/L	EPA 6020B



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-CCVH	Chromium-52	50.000	51.4	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.6	103	ug/L	EPA 6020B
	Lead-208	50.000	52.0	104	ug/L	EPA 6020B
	Silver-107	50.000	50.7	101	ug/L	EPA 6020B
SLD0127-CCVI	Chromium-52	50.000	50.1	100	ug/L	EPA 6020B
	Chromium-53	50.000	51.4	103	ug/L	EPA 6020B
	Lead-208	50.000	52.3	105	ug/L	EPA 6020B
	Silver-107	50.000	50.7	101	ug/L	EPA 6020B
SLD0127-CCVJ	Chromium-52	50.000	50.9	102	ug/L	EPA 6020B
	Chromium-53	50.000	50.9	102	ug/L	EPA 6020B
	Lead-208	50.000	52.5	105	ug/L	EPA 6020B
	Silver-107	50.000	51.1	102	ug/L	EPA 6020B

\* Values outside of QC limits



**INSTRUMENT BLANKS**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 14:35

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBL1	Chromium-52	-0.00200	0.26	0.500	ug/L	
SLD0127-IBL1	Chromium-53	-0.0110	0.239	0.500	ug/L	
SLD0127-IBL1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0127-IBL1	Silver-107	-0.00200	0.022	0.200	ug/L	
SLD0127-ICB1	Chromium-52	-0.0120	0.26	0.500	ug/L	
SLD0127-ICB1	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLD0127-ICB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-ICB1	Silver-107	-0.00400	0.022	0.200	ug/L	
SLD0127-CCB1	Chromium-52	-0.0140	0.26	0.500	ug/L	
SLD0127-CCB1	Chromium-53	-0.0160	0.239	0.500	ug/L	
SLD0127-CCB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB1	Silver-107	-0.00500	0.022	0.200	ug/L	
SLD0127-IBL2	Chromium-52	0.0110	0.26	0.500	ug/L	
SLD0127-IBL2	Chromium-53	0.0350	0.239	0.500	ug/L	
SLD0127-IBL2	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0127-IBL2	Silver-107	-0.00400	0.022	0.200	ug/L	
SLD0127-IBL3	Chromium-52	0.0460	0.26	0.500	ug/L	
SLD0127-IBL3	Chromium-53	0.0800	0.239	0.500	ug/L	
SLD0127-IBL3	Lead-208	0.0620	0.0513	0.100	ug/L	
SLD0127-IBL3	Silver-107	0.0290	0.022	0.200	ug/L	
SLD0127-CCB2	Chromium-52	0.00700	0.26	0.500	ug/L	
SLD0127-CCB2	Chromium-53	0.00900	0.239	0.500	ug/L	
SLD0127-CCB2	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB2	Silver-107	-0.00900	0.022	0.200	ug/L	
SLD0127-CCB3	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLD0127-CCB3	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLD0127-CCB3	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB3	Silver-107	-0.00100	0.022	0.200	ug/L	
SLD0127-IBL4	Chromium-52	0.0370	0.26	0.500	ug/L	
SLD0127-IBL4	Chromium-53	0.0520	0.239	0.500	ug/L	
SLD0127-IBL4	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0127-IBL4	Silver-107	-0.00300	0.022	0.200	ug/L	
SLD0127-CCB4	Chromium-52	0.00700	0.26	0.500	ug/L	
SLD0127-CCB4	Chromium-53	0.0280	0.239	0.500	ug/L	
SLD0127-CCB4	Lead-208	0.00100	0.0513	0.100	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 17:38

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCB4	Silver-107	-0.00200	0.022	0.200	ug/L	
SLD0127-IBL5	Chromium-52	0.00400	0.26	0.500	ug/L	
SLD0127-IBL5	Chromium-53	0.0110	0.239	0.500	ug/L	
SLD0127-IBL5	Lead-208	0.0150	0.0513	0.100	ug/L	
SLD0127-IBL5	Silver-107	0.00600	0.022	0.200	ug/L	
SLD0127-CCB5	Chromium-52	0.00800	0.26	0.500	ug/L	
SLD0127-CCB5	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLD0127-CCB5	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0127-CCB5	Silver-107	-0.00200	0.022	0.200	ug/L	
SLD0127-IBL6	Chromium-52	-0.0310	0.26	0.500	ug/L	
SLD0127-IBL6	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLD0127-IBL6	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-IBL6	Silver-107	-0.00100	0.022	0.200	ug/L	
SLD0127-CCB6	Chromium-52	-0.0260	0.26	0.500	ug/L	
SLD0127-CCB6	Chromium-53	-0.0250	0.239	0.500	ug/L	
SLD0127-CCB6	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB6	Silver-107	-0.00100	0.022	0.200	ug/L	
SLD0127-IBL7	Chromium-52	-0.0300	0.26	0.500	ug/L	
SLD0127-IBL7	Chromium-53	-0.0230	0.239	0.500	ug/L	
SLD0127-IBL7	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0127-IBL7	Silver-107	-0.00400	0.022	0.200	ug/L	
SLD0127-CCB7	Chromium-52	0.00300	0.26	0.500	ug/L	
SLD0127-CCB7	Chromium-53	-0.0230	0.239	0.500	ug/L	
SLD0127-CCB7	Lead-208	0.00300	0.0513	0.100	ug/L	
SLD0127-CCB7	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0127-IBL8	Chromium-52	0.00700	0.26	0.500	ug/L	
SLD0127-IBL8	Chromium-53	-0.0220	0.239	0.500	ug/L	
SLD0127-IBL8	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0127-IBL8	Silver-107	-0.00400	0.022	0.200	ug/L	
SLD0127-CCB8	Chromium-52	-0.0300	0.26	0.500	ug/L	
SLD0127-CCB8	Chromium-53	-0.0280	0.239	0.500	ug/L	
SLD0127-CCB8	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB8	Silver-107	-0.00200	0.022	0.200	ug/L	
SLD0127-IBL9	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLD0127-IBL9	Chromium-53	-0.0310	0.239	0.500	ug/L	
SLD0127-IBL9	Lead-208	-0.00100	0.0513	0.100	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 22:29

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBL9	Silver-107	-0.00300	0.022	0.200	ug/L	
SLD0127-CCB9	Chromium-52	0.00100	0.26	0.500	ug/L	
SLD0127-CCB9	Chromium-53	-0.0240	0.239	0.500	ug/L	
SLD0127-CCB9	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCB9	Silver-107	-0.00200	0.022	0.200	ug/L	
SLD0127-IBLA	Chromium-52	-0.0310	0.26	0.500	ug/L	
SLD0127-IBLA	Chromium-53	-0.0320	0.239	0.500	ug/L	
SLD0127-IBLA	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0127-IBLA	Silver-107	-0.00300	0.022	0.200	ug/L	
SLD0127-CCBA	Chromium-52	-0.0110	0.26	0.500	ug/L	
SLD0127-CCBA	Chromium-53	-0.0350	0.239	0.500	ug/L	
SLD0127-CCBA	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCBA	Silver-107	-0.00100	0.022	0.200	ug/L	
SLD0127-CCBB	Chromium-52	-0.0290	0.26	0.500	ug/L	
SLD0127-CCBB	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLD0127-CCBB	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-CCBB	Silver-107	0.00100	0.022	0.200	ug/L	
SLD0127-IBLC	Chromium-52	-0.0240	0.26	0.500	ug/L	
SLD0127-IBLC	Chromium-53	0.00600	0.239	0.500	ug/L	
SLD0127-IBLC	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLD0127-IBLC	Silver-107	-0.00100	0.022	0.200	ug/L	
SLD0127-CCBC	Chromium-52	-0.0440	0.26	0.500	ug/L	
SLD0127-CCBC	Chromium-53	0.00400	0.239	0.500	ug/L	
SLD0127-CCBC	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0127-CCBC	Silver-107	0.00400	0.022	0.200	ug/L	
SLD0127-IBLD	Chromium-52	0.00500	0.26	0.500	ug/L	
SLD0127-IBLD	Chromium-53	0.0290	0.239	0.500	ug/L	
SLD0127-IBLD	Lead-208	0.00	0.0513	0.100	ug/L	
SLD0127-IBLD	Silver-107	0.0300	0.022	0.200	ug/L	
SLD0127-CCBD	Chromium-52	-0.0360	0.26	0.500	ug/L	
SLD0127-CCBD	Chromium-53	0.00	0.239	0.500	ug/L	
SLD0127-CCBD	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBD	Silver-107	0.0360	0.022	0.200	ug/L	
SLD0127-IBLE	Chromium-52	0.0150	0.26	0.500	ug/L	
SLD0127-IBLE	Chromium-53	0.00600	0.239	0.500	ug/L	
SLD0127-IBLE	Lead-208	-0.00100	0.0513	0.100	ug/L	





**INSTRUMENT BLANKS**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/08/23 02:48

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBLE	Silver-107	0.0160	0.022	0.200	ug/L	
SLD0127-CCBE	Chromium-52	-0.00200	0.26	0.500	ug/L	
SLD0127-CCBE	Chromium-53	0.00800	0.239	0.500	ug/L	
SLD0127-CCBE	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBE	Silver-107	0.0140	0.022	0.200	ug/L	
SLD0127-IBLF	Chromium-52	-0.0250	0.26	0.500	ug/L	
SLD0127-IBLF	Chromium-53	0.0460	0.239	0.500	ug/L	
SLD0127-IBLF	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0127-IBLF	Silver-107	0.00200	0.022	0.200	ug/L	
SLD0127-CCBF	Chromium-52	-0.0190	0.26	0.500	ug/L	
SLD0127-CCBF	Chromium-53	0.0240	0.239	0.500	ug/L	
SLD0127-CCBF	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBF	Silver-107	0.00500	0.022	0.200	ug/L	
SLD0127-CCBG	Chromium-52	-0.00200	0.26	0.500	ug/L	
SLD0127-CCBG	Chromium-53	-0.0190	0.239	0.500	ug/L	
SLD0127-CCBG	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBG	Silver-107	0.00100	0.022	0.200	ug/L	
SLD0127-IBLH	Chromium-52	0.0230	0.26	0.500	ug/L	
SLD0127-IBLH	Chromium-53	0.0530	0.239	0.500	ug/L	
SLD0127-IBLH	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0127-IBLH	Silver-107	-0.00300	0.022	0.200	ug/L	
SLD0127-CCBH	Chromium-52	0.0150	0.26	0.500	ug/L	
SLD0127-CCBH	Chromium-53	0.0120	0.239	0.500	ug/L	
SLD0127-CCBH	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBH	Silver-107	0.00	0.022	0.200	ug/L	
SLD0127-IBLI	Chromium-52	-0.00100	0.26	0.500	ug/L	
SLD0127-IBLI	Chromium-53	-0.0250	0.239	0.500	ug/L	
SLD0127-IBLI	Lead-208	0.00100	0.0513	0.100	ug/L	
SLD0127-IBLI	Silver-107	-0.00400	0.022	0.200	ug/L	
SLD0127-CCBI	Chromium-52	0.0200	0.26	0.500	ug/L	
SLD0127-CCBI	Chromium-53	-0.0200	0.239	0.500	ug/L	
SLD0127-CCBI	Lead-208	0.00200	0.0513	0.100	ug/L	
SLD0127-CCBI	Silver-107	0.00400	0.022	0.200	ug/L	
SLD0127-IBLJ	Chromium-52	-0.00100	0.26	0.500	ug/L	
SLD0127-IBLJ	Chromium-53	0.107	0.239	0.500	ug/L	
SLD0127-IBLJ	Lead-208	0.00200	0.0513	0.100	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/08/23 07:08

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBLJ	Silver-107	-0.00300	0.022	0.200	ug/L	
SLD0127-CCBJ	Chromium-52	-0.00900	0.26	0.500	ug/L	
SLD0127-CCBJ	Chromium-53	0.0590	0.239	0.500	ug/L	
SLD0127-CCBJ	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLD0127-CCBJ	Silver-107	-0.00300	0.022	0.200	ug/L	



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0127-CAL1	XDT_m2230407-006	NA	04/07/23 14:00
CAL 1 - LOW CHECK	SLD0127-CAL2	XDT_m2230407-007	NA	04/07/23 14:05
CAL 2	SLD0127-CAL3	XDT_m2230407-008	NA	04/07/23 14:10
CAL 3	SLD0127-CAL4	XDT_m2230407-009	NA	04/07/23 14:15
CAL 4	SLD0127-CAL5	XDT_m2230407-010	NA	04/07/23 14:20
CAL 5	SLD0127-CAL6	XDT_m2230407-011	NA	04/07/23 14:27
RINSE	SLD0127-IBL1	XDT_m2230407-012	NA	04/07/23 14:35
Initial Cal Check	SLD0127-ICV1	XDT_m2230407-014	NA	04/07/23 14:43
Initial Cal Blank	SLD0127-ICB1	XDT_m2230407-015	NA	04/07/23 14:51
Calibration Check	SLD0127-CCV1	XDT_m2230407-016	NA	04/07/23 14:56
Calibration Blank	SLD0127-CCB1	XDT_m2230407-017	NA	04/07/23 15:05
Instrument RL Check	SLD0127-CRL1	XDT_m2230407-018	NA	04/07/23 15:11
Interference Check A	SLD0127-IFA1	XDT_m2230407-019	NA	04/07/23 15:19
Interference Check B	SLD0127-IFB1	XDT_m2230407-020	NA	04/07/23 15:24
LR200	SLD0127-HCV1	XDT_m2230407-021	NA	04/07/23 15:28
LR300	SLD0127-HCV2	XDT_m2230407-022	NA	04/07/23 15:33
Instrument Blank	SLD0127-IBL2	XDT_m2230407-023	NA	04/07/23 15:41
Instrument Blank	SLD0127-IBL3	XDT_m2230407-024	NA	04/07/23 15:47
Calibration Check	SLD0127-CCV2	XDT_m2230407-025	NA	04/07/23 15:52
Calibration Blank	SLD0127-CCB2	XDT_m2230407-026	NA	04/07/23 16:00
Calibration Check	SLD0127-CCV3	XDT_m2230407-028	NA	04/07/23 16:14
Calibration Blank	SLD0127-CCB3	XDT_m2230407-029	NA	04/07/23 16:21
ZZZZZ	BLD0180-BLK1	XDT_m2230407-030	Water	04/07/23 16:27
ZZZZZ	BLD0180-BS1	XDT_m2230407-031	Water	04/07/23 16:32
Instrument Blank	SLD0127-IBL4	XDT_m2230407-039	NA	04/07/23 17:25
Calibration Check	SLD0127-CCV4	XDT_m2230407-040	NA	04/07/23 17:30
Calibration Blank	SLD0127-CCB4	XDT_m2230407-041	NA	04/07/23 17:38
ZZZZZ	BLD0055-BLK1	XDT_m2230407-042	Solid	04/07/23 17:46
ZZZZZ	BLD0055-BS1	XDT_m2230407-043	Solid	04/07/23 17:51



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Blank	BLD0123-BLK1	XDT_m2230407-044	Solid	04/07/23 17:55
LCS	BLD0123-BS1	XDT_m2230407-045	Solid	04/07/23 18:00
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	BLD0055-DUP1	XDT_m2230407-047	Solid	04/07/23 18:10
ZZZZZ	BLD0055-MS1	XDT_m2230407-048	Solid	04/07/23 18:14
ZZZZZ	BLD0055-MSD1	XDT_m2230407-049	Solid	04/07/23 18:19
ZZZZZ	BLD0055-PS1	XDT_m2230407-050	Solid	04/07/23 18:24
Instrument Blank	SLD0127-IBL5	XDT_m2230407-051	NA	04/07/23 18:28
Calibration Check	SLD0127-CCV5	XDT_m2230407-052	NA	04/07/23 18:33
Calibration Blank	SLD0127-CCB5	XDT_m2230407-053	NA	04/07/23 18:41
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
Instrument Blank	SLD0127-IBL6	XDT_m2230407-063	NA	04/07/23 19:30
Calibration Check	SLD0127-CCV6	XDT_m2230407-064	NA	04/07/23 19:35
Calibration Blank	SLD0127-CCB6	XDT_m2230407-065	NA	04/07/23 19:42
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
Instrument Blank	SLD0127-IBL7	XDT_m2230407-075	NA	04/07/23 20:30
Calibration Check	SLD0127-CCV7	XDT_m2230407-076	NA	04/07/23 20:34
Calibration Blank	SLD0127-CCB7	XDT_m2230407-077	NA	04/07/23 20:42
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
Instrument Blank	SLD0127-IBL8	XDT_m2230407-087	NA	04/07/23 21:29
Calibration Check	SLD0127-CCV8	XDT_m2230407-088	NA	04/07/23 21:34
Calibration Blank	SLD0127-CCB8	XDT_m2230407-089	NA	04/07/23 21:42
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
Instrument Blank	SLD0127-IBL9	XDT_m2230407-099	NA	04/07/23 22:29
Calibration Check	SLD0127-CCV9	XDT_m2230407-100	NA	04/07/23 22:34
Calibration Blank	SLD0127-CCB9	XDT_m2230407-101	NA	04/07/23 22:41
ZZZZZ	23A0158-05	XDT_m2230407-102	Solid	04/07/23 22:46
ZZZZZ	23A0158-06	XDT_m2230407-103	Solid	04/07/23 22:51
ZZZZZ	23A0158-07	XDT_m2230407-104	Solid	04/07/23 22:55
ZZZZZ	23A0158-10	XDT_m2230407-105	Solid	04/07/23 23:00





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0157-01	XDT_m2230407-106	Solid	04/07/23 23:05
ZZZZZ	BLD0030-DUP2	XDT_m2230407-107	Solid	04/07/23 23:09
ZZZZZ	BLD0030-MS2	XDT_m2230407-108	Solid	04/07/23 23:14
ZZZZZ	BLD0030-MSD2	XDT_m2230407-109	Solid	04/07/23 23:19
Instrument Blank	SLD0127-IBLA	XDT_m2230407-111	NA	04/07/23 23:28
Calibration Check	SLD0127-CCVA	XDT_m2230407-112	NA	04/07/23 23:33
Calibration Blank	SLD0127-CCBA	XDT_m2230407-113	NA	04/07/23 23:41
Calibration Check	SLD0127-CCVB	XDT_m2230407-115	NA	04/07/23 23:50
Calibration Blank	SLD0127-CCBB	XDT_m2230407-116	NA	04/07/23 23:58
ZZZZZ	23A0157-06	XDT_m2230407-119	Solid	04/08/23 00:12
ZZZZZ	23A0157-07	XDT_m2230407-120	Solid	04/08/23 00:17
ZZZZZ	23A0157-08	XDT_m2230407-121	Solid	04/08/23 00:21
ZZZZZ	23A0157-10	XDT_m2230407-122	Solid	04/08/23 00:26
ZZZZZ	23A0157-12	XDT_m2230407-123	Solid	04/08/23 00:31
ZZZZZ	23A0157-13	XDT_m2230407-124	Solid	04/08/23 00:35
Instrument Blank	SLD0127-IBLC	XDT_m2230407-126	NA	04/08/23 00:45
Calibration Check	SLD0127-CCVC	XDT_m2230407-127	NA	04/08/23 00:50
Calibration Blank	SLD0127-CCBC	XDT_m2230407-128	NA	04/08/23 00:57
Instrument Blank	SLD0127-IBLD	XDT_m2230407-138	NA	04/08/23 01:46
Calibration Check	SLD0127-CCVD	XDT_m2230407-139	NA	04/08/23 01:50
Calibration Blank	SLD0127-CCBD	XDT_m2230407-140	NA	04/08/23 01:58
Instrument Blank	SLD0127-IBLE	XDT_m2230407-150	NA	04/08/23 02:48
Calibration Check	SLD0127-CCVE	XDT_m2230407-151	NA	04/08/23 02:53
Calibration Blank	SLD0127-CCBE	XDT_m2230407-152	NA	04/08/23 03:00
Instrument Blank	SLD0127-IBLF	XDT_m2230407-162	NA	04/08/23 03:48
Calibration Check	SLD0127-CCVF	XDT_m2230407-163	NA	04/08/23 03:53
Calibration Blank	SLD0127-CCBF	XDT_m2230407-164	NA	04/08/23 04:00
Calibration Check	SLD0127-CCVG	XDT_m2230407-166	NA	04/08/23 04:10
Calibration Blank	SLD0127-CCBG	XDT_m2230407-167	NA	04/08/23 04:17



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Instrument Blank	SLD0127-IBLH	XDT_m2230407-177	NA	04/08/23 05:05
Calibration Check	SLD0127-CCVH	XDT_m2230407-178	NA	04/08/23 05:10
Calibration Blank	SLD0127-CCBH	XDT_m2230407-179	NA	04/08/23 05:18
Instrument Blank	SLD0127-IBLI	XDT_m2230407-189	NA	04/08/23 06:05
Calibration Check	SLD0127-CCVI	XDT_m2230407-190	NA	04/08/23 06:10
Calibration Blank	SLD0127-CCBI	XDT_m2230407-191	NA	04/08/23 06:17
Instrument Blank	SLD0127-IBLJ	XDT_m2230407-201	NA	04/08/23 07:08
Calibration Check	SLD0127-CCVJ	XDT_m2230407-202	NA	04/08/23 07:13
Calibration Blank	SLD0127-CCBJ	XDT_m2230407-203	NA	04/08/23 07:20



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0127-IFA1	Chromium-52	0	0.7960		ug/L
	Chromium-53	0	3.9970		ug/L
	Lead-208	0	0.0360		ug/L
	Silver-107	0	0.0090		ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0127-IFB1	Chromium-52	20.000	20.588	103	ug/L
	Chromium-53	20.000	24.112	121	ug/L
	Lead-208	0	0.0270		ug/L
	Silver-107	20.000	19.253	96.3	ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**DETECTION LEVEL STANDARD**  
**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Lab Sample ID: SLD0127-CRL1

Analyte	True	Found	%R	Units	QC Limits
Chromium-52	0.50000	0.544	109	ug/L	50 - 150
Chromium-53	0.50000	0.527	105	ug/L	50 - 150
Lead-208	0.10000	0.109	109	ug/L	50 - 150
Silver-107	0.20000	0.198	99.0	ug/L	50 - 150

\* Values outside of QC limits



**HIGH-CONCENTRATION  
CALIBRATION VERIFICATION  
EPA 6020B**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00024

**Laboratory ID:** SLD0127-HCV1

**Sequence:** SLD0127

**Standard ID:** L003671

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Chromium-52	200.00	203	1.5	10.00
Chromium-53	200.00	202	1.1	10.00
Lead-208	200.00	197	-1.6	10.00
Silver-107	200.00	201	0.6	10.00

\* Values outside of QC limits



**HIGH-CONCENTRATION  
CALIBRATION VERIFICATION**

**EPA 6020B**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00024

**Laboratory ID:** SLD0127-HCV2

**Sequence:** SLD0127

**Standard ID:** L003672

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Chromium-52	300.00	300	-0.2	10.00
Chromium-53	300.00	305	1.5	10.00
Lead-208	300.00	297	-1.2	10.00
Silver-107	300.00	304	1.3	10.00

\* Values outside of QC limits



## HOLDING TIME SUMMARY

**Analysis: EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:07	86	180	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:02	86	180	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:15	86	180	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:20	86	180	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:25	86	180	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:46	86	180	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:51	86	180	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:56	86	180	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:00	86	180	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:05	86	180	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:10	86	180	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:15	86	180	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:19	86	180	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:24	86	180	
Duplicate BLD0123-DUP1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:11	86	180	
Matrix Spike BLD0123-MS1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:16	86	180	
Matrix Spike Dup BLD0123-MSD1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:21	86	180	

\* Indicates hold time exceedance.





**METHOD DETECTION  
AND REPORTING LIMITS**

**EPA 6020B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: ICPMS2

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Chromium-52	0.26	0.50	mg/kg
Chromium-53	0.24	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGCU10  
 Lot Number: P2-CU682108  
 Matrix: 3% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s): 10 000 µg/mL ea:  
                                   Copper  
 Starting Material: Cu Metal  
 Starting Material Lot#: 2095  
 Starting Material Purity: 99.9996%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10013 ± 30 µg/mL  
**Density:** 1.032 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9977 ± 50 µg/mL</b> ICP Assay NIST SRM 3114 Lot Number: 121207
<b>Assay Method #2</b>	<b>10024 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10007 ± 46 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.007542	M Eu < 0.000942	O Na < 0.001434	M Se < 0.016971	M Zn < 0.005657
O Al < 0.000609	O Fe < 0.008700	M Nb < 0.000942	O Si < 0.003052	M Zr < 0.000942
M As < 0.010371	M Ga < 0.000942	M Nd < 0.000942	M Sm < 0.000942	
M Au < 0.001885	M Gd < 0.000942	M Ni < 0.003781	M Sn < 0.005657	
O B < 0.003663	M Ge < 0.005657	M Os < 0.000942	M Sr < 0.000942	
M Ba < 0.004253	M Hf < 0.000942	O P < 0.031668	M Ta < 0.000942	
M Be < 0.000942	O Hg < 0.007064	M Pb < 0.005789	M Tb < 0.000942	
M Bi < 0.000942	M Ho < 0.000942	M Pd < 0.000942	M Te < 0.004714	
O Ca < 0.002304	M In < 0.000942	M Pr < 0.000942	M Th < 0.000942	
M Cd < 0.000942	M Ir < 0.000942	M Pt < 0.000942	O Ti < 0.002801	
M Ce < 0.000942	O K < 0.000763	M Rb < 0.000942	M Tl < 0.000942	
M Co < 0.001890	M La < 0.000942	M Re < 0.000942	M Tm < 0.000942	
M Cr < 0.005657	O Li < 0.000243	i Rh <	M U < 0.000942	
M Cs < 0.000942	M Lu < 0.000942	M Ru < 0.039588	M V < 0.003771	
s Cu <	O Mg < 0.000320	O S < 0.007174	M W < 0.005657	
M Dy < 0.000942	O Mn < 0.000793	M Sb < 0.001885	M Y < 0.000942	
M Er < 0.000942	M Mo < 0.005657	M Sc < 0.000942	M Yb < 0.000942	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 63.55 +2 6 Cu(H<sub>2</sub>O)<sub>6</sub>2+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Cu Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub> ); Oxides ( Soluble in HCl ); Ores ( Dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGPB10  
Lot Number: S2-PB713228  
Matrix: 0.5% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Lead  
Starting Material: Lead Nitrate  
Starting Material Lot#: 2343  
Starting Material Purity: 99.9995%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10042 ± 31 µg/mL  
**Density:** 1.015 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10024 ± 41 µg/mL**  
ICP Assay NIST SRM 3128 Lot Number: 101026

**Assay Method #2**      **10054 ± 32 µg/mL**  
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000310	M Eu < 0.000310	M Na < 0.001470	M Se < 0.009100	O Zn < 0.006155
O Al < 0.017098	O Fe < 0.002496	M Nb < 0.000310	O Si < 0.003761	O Zr < 0.001700
M As < 0.003100	M Ga < 0.000310	M Nd < 0.000310	M Sm < 0.000310	
M Au < 0.000910	M Gd < 0.000310	O Ni < 0.001709	M Sn < 0.001300	
O B < 0.005600	M Ge < 0.002200	M Os < 0.000310	O Sr < 0.000444	
O Ba < 0.007865	M Hf < 0.000310	O P < 0.038000	M Ta < 0.000310	
O Be < 0.000320	M Hg < 0.002200	s Pb < 0.000610	M Tb < 0.000610	
M Bi < 0.028000	M Ho < 0.000310	M Pd < 0.000610	M Te < 0.000310	
O Ca < 0.019834	M In < 0.000310	M Pr < 0.000310	M Th < 0.000310	
O Cd < 0.000630	M Ir < 0.000310	M Pt < 0.000910	O Ti < 0.005129	
M Ce < 0.004787	O K < 0.008207	M Rb < 0.006700	M Tl < 0.016000	
M Co < 0.000610	M La < 0.001900	M Re < 0.000310	M Tm < 0.000310	
O Cr < 0.001500	O Li < 0.000110	O Rh < 0.007700	M U < 0.000310	
M Cs < 0.006100	M Lu < 0.000310	M Ru < 0.001300	M V < 0.001600	
M Cu < 0.001600	O Mg < 0.003317	O S < 0.052000	M W < 0.000910	
M Dy < 0.000310	O Mn < 0.001600	O Sb < 0.015000	M Y < 0.000310	
M Er < 0.000310	M Mo < 0.000610	O Sc < 0.000630	M Yb < 0.000310	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 207.20 +2 6 Pb(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl, HF and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Pb Containing Samples (Preparation and Solution)** -Metal (Best dissolved in 1:1 H<sub>2</sub>O / HNO<sub>3</sub> ); Oxides (The many different Pb oxides are soluble in HNO<sub>3</sub> with the exception of PbO<sub>2</sub> which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H<sub>2</sub>O / HNO<sub>3</sub> ); Organic Matrices (Dry ash and dissolve in dilute HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<u>Technique/Line</u>	<u>Estimated D.L.</u>	<u>Order</u>	<u>Interferences</u> (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

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F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGZN10  
Lot Number: S2-ZN711249  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Zinc  
Starting Material: Zinc Metal  
Starting Material Lot#: 2349  
Starting Material Purity: 99.9988%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL  
**Density:** 1.029 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9981 ± 56 µg/mL</b> ICP Assay NIST SRM 3168a Lot Number: 120629
<b>Assay Method #2</b>	<b>9987 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10002 ± 32 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.002000	M Eu < 0.000500	O Na < 0.008713	M Se < 0.048000	s Zn <
O Al < 0.011000	O Fe < 0.015467	M Nb < 0.000500	O Si < 0.007842	M Zr < 0.000500
O As < 0.012000	M Ga < 0.004900	M Nd < 0.000500	M Sm < 0.000500	
M Au < 0.006500	M Gd < 0.000500	O Ni < 0.003049	M Sn < 0.002614	
O B < 0.019000	M Ge < 0.009100	M Os < 0.000500	M Sr < 0.000500	
M Ba < 0.000500	M Hf < 0.000500	O P < 0.059000	M Ta < 0.000500	
O Be < 0.000230	O Hg < 0.003800	M Pb < 0.016774	M Tb < 0.000500	
M Bi < 0.002400	M Ho < 0.000500	M Pd < 0.001000	M Te < 0.017000	
O Ca < 0.052283	M In < 0.003500	M Pr < 0.000500	M Th < 0.000500	
O Cd < 0.000588	M Ir < 0.001000	M Pt < 0.000500	M Ti < 0.002000	
M Ce < 0.000500	O K < 0.017209	M Rb < 0.002500	M Tl < 0.000500	
M Co < 0.000653	M La < 0.000500	M Re < 0.000500	M Tm < 0.000500	
O Cr < 0.001089	O Li < 0.000230	M Rh < 0.000500	M U < 0.000500	
M Cs < 0.000500	M Lu < 0.000500	M Ru < 0.005000	M V < 0.000500	
O Cu < 0.001938	O Mg < 0.000871	O S < 0.048000	M W < 0.001000	
M Dy < 0.000500	O Mn < 0.000172	M Sb < 0.004300	M Y < 0.000500	
M Er < 0.000500	M Mo < 0.001500	O Sc < 0.000900	M Yb < 0.000500	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 65.39 +2 4 Zn(OH)(aq)1+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Zn Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO<sub>3</sub>); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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Christiansburg, VA 24073 USA  
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F: 540-585-3012  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGSE10  
Lot Number: S2-SE711004  
Matrix: 3% (v/v) HNO3  
Value / Analyte(s): 10 000 µg/mL ea:  
Selenium  
Starting Material: Se Metal  
Starting Material Lot#: 1962  
Starting Material Purity: 99.9991%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9955 ± 61 µg/mL  
**Density:** 1.035 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **9955 ± 50 µg/mL**  
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2  
 $u_{char}$  =  $[\sum((w_i)^2 (u_{char i})^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2  
 $u_{char a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.002242	M	Eu <	0.000373	O Na	0.013654	s	Se <		O Zn	0.002374
M Al	0.004450	M	Fe	0.008478	O Nb <	0.002975	O Si	0.006249	M Zr <	0.001868	
O As <	0.022040	M	Ga <	0.000373	M Nd <	0.000373	M Sm <	0.000373			
M Au <	0.000373	M	Gd <	0.000373	O Ni	0.001843	M Sn	0.000847			
O B <	0.007714	M	Ge <	0.002616	M Os <	0.000373	M Sr <	0.001121			
M Ba <	0.001495	M	Hf <	0.000373	O P <	0.022040	M Ta <	0.000373			
M Be <	0.001495	M	Hg <	0.002240	M Pb	0.006358	M Tb <	0.006353			
M Bi <	0.000373	M	Ho <	0.000373	M Pd <	0.000373	M Te <	0.012707			
O Ca	0.006530	M	In <	0.000373	M Pr <	0.001495	M Th <	0.002990			
M Cd	0.001165	M	Ir <	0.000373	M Pt <	0.000373	M Ti <	0.003363			
M Ce <	0.000373	O	K	0.001999	M Rb <	0.001868	M Tl	0.008584			
M Co <	0.000373	M	La <	0.001121	M Re <	0.000373	M Tm <	0.000373			
M Cr	0.002861	O	Li	0.000062	M Rh <	0.000373	M U <	0.000373			
M Cs <	0.001121	M	Lu <	0.000373	M Ru <	0.001493	M V <	0.000747			
M Cu <	0.000747	O	Mg	0.001156	O S	0.024591	M W <	0.002242			
M Dy <	0.000373	M	Mn <	0.000373	M Sb <	0.002242	M Y <	0.000373			
M Er <	0.000373	O	Mo <	0.003195	M Sc <	0.001121	M Yb <	0.000373			

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 78.96 +4 6 H<sub>2</sub>SeO<sub>3</sub>

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>,H<sub>3</sub>PO<sub>4</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

**Stability** - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Se Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides ( readily soluble in water); Minerals and alloys (acid digestion with HNO<sub>3</sub>or HNO<sub>3</sub> / HF ); Organic Matrices (acid digestion with hot concentrated H<sub>2</sub>SO<sub>4</sub> accompanied by the careful dropwise addition of H<sub>2</sub>O<sub>2</sub> until clear).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Uyen Truong  
Supervisor, Product Documentation



**Certificate Approved By:**

Michael Booth  
Director, Technical



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMO10  
Lot Number: S2-MO706255  
Matrix: H2O  
tr. NH4OH  
Value / Analyte(s): 10 000 µg/mL ea:  
Molybdenum  
Starting Material: Ammonium Molybdate  
Starting Material Lot#: 2361  
Starting Material Purity: 99.9893%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10026 ± 47 µg/mL  
**Density:** 1.011 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10032 ± 68 µg/mL**  
ICP Assay NIST SRM 3134 Lot Number: 130418

**Assay Method #2**      **10020 ± 65 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000590	M Eu < 0.000300	M Na < 0.008739	M Se < 0.008000	M Zn < 0.005942
M Al < 0.005592	M Fe < 0.006500	M Nb < 0.029000	i Si < 0.001800	M Zr < 0.001800
M As < 0.002100	M Ga < 0.000300	i Nd < 0.000300	M Sm < 0.000300	
M Au < 0.000300	M Gd < 0.000300	M Ni < 0.008000	M Sn < 0.008900	
M B < 0.003300	M Ge < 0.000300	M Os < 0.000590	M Sr < 0.001747	
M Ba < 0.016778	M Hf < 0.001800	i P < 0.004200	M Ta < 0.004200	
M Be < 0.000890	M Hg < 0.003300	M Pb < 0.000300	M Tb < 0.000300	
M Bi < 0.000890	M Ho < 0.000300	M Pd < 0.001800	M Te < 0.021000	
O Ca < 0.062920	M In < 0.032000	M Pr < 0.013000	M Th < 0.000300	
O Cd < 0.026000	M Ir < 0.000300	M Pt < 0.000300	O Ti < 0.032000	
M Ce < 0.008300	M K < 1.293372	M Rb < 0.045442	M Tl < 0.012584	
M Co < 0.005942	M La < 0.000300	M Re < 0.000300	M Tm < 0.000300	
M Cr < 0.005243	O Li < 0.000594	M Rh < 0.000300	M U < 0.005300	
M Cs < 0.005243	M Lu < 0.000300	M Ru < 0.079000	M V < 0.000890	
M Cu < 0.022371	M Mg < 0.005592	i S < 0.873900	M W < 0.873900	
M Dy < 0.000300	M Mn < 0.005900	M Sb < 0.015031	M Y < 0.000300	
M Er < 0.000300	s Mo < 0.000300	M Sc < 0.001200	M Yb < 0.000300	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 95.94 +6 6,7,8,9

[MoO4]-2(chemical form as received)

**Chemical Compatibility** -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

**Stability** - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

**Mo Containing Samples (Preparation and Solution)** -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl ).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGTL10  
Lot Number: T2-TL714687  
Matrix: 5% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Thallium  
Starting Material: TINO<sub>3</sub>  
Starting Material Lot#: 2118  
Starting Material Purity: 99.9998%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10030 ± 42 µg/mL  
**Density:** 1.036 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10040 ± 43 µg/mL**  
ICP Assay NIST SRM 3158 Lot Number: 151215

**Assay Method #2**      **10010 ± 65 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i^2 (u_{char i}^2))]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000200	M Eu < 0.000200	O Na < 0.002489	M Se < 0.011019	O Zn < 0.002298
O Al < 0.004184	O Fe < 0.002824	M Nb < 0.000200	O Si < 0.003760	M Zr < 0.000200
M As < 0.002003	M Ga < 0.000200	M Nd < 0.000200	M Sm < 0.000200	
O Au < 0.002824	M Gd < 0.000200	M Ni < 0.001724	M Sn < 0.000601	
O B < 0.004184	M Ge < 0.000801	M Os < 0.000198	O Sr < 0.000313	
M Ba < 0.000400	M Hf < 0.000200	O P < 0.010460	M Ta < 0.000200	
O Be < 0.000104	M Hg < 0.000794	M Pb < 0.000811	M Tb < 0.000200	
M Bi < 0.005209	M Ho < 0.000200	M Pd < 0.000400	M Te < 0.005008	
O Ca < 0.002436	M In < 0.000200	M Pr < 0.000200	M Th < 0.000200	
M Cd < 0.001318	M Ir < 0.000198	M Pt < 0.000801	O Ti < 0.001255	
M Ce < 0.000200	O K < 0.006175	M Rb < 0.000200	s Tl <	
M Co < 0.000601	M La < 0.000200	M Re < 0.000200	M Tm < 0.000200	
M Cr < 0.000801	O Li < 0.000177	M Rh < 0.000200	M U < 0.000200	
M Cs < 0.003606	M Lu < 0.000200	M Ru < 0.000397	M V < 0.002203	
M Cu < 0.001001	O Mg < 0.000529	O S < 0.015690	M W < 0.000601	
M Dy < 0.000200	M Mn < 0.000801	M Sb < 0.000400	M Y < 0.000200	
M Er < 0.000200	M Mo < 0.001202	O Sc < 0.000711	M Yb < 0.000200	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 204.38 +1 6 Ti(H<sub>2</sub>O)<sub>6</sub>+  
**Chemical Compatibility** - Soluble in HCl, HNO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub>. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Ti Containing Samples )Preparation and Solution)** -Metal (Best dissolved in HNO<sub>3</sub> which forms chiefly the Ti<sup>3+</sup> ion.); Oxide (The thallic oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt<sub>0</sub> followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCD10  
Lot Number: S2-CD710508  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Cadmium  
Starting Material: Cd Metal  
Starting Material Lot#: 1953  
Starting Material Purity: 99.9995%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10008 ± 30 µg/mL  
**Density:** 1.029 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10010 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #2</b>	<b>10011 ± 30 µg/mL</b> ICP Assay NIST SRM 3108 Lot Number: 130116
<b>Assay Method #3</b>	<b>10003 ± 30 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i})^2 / (\sum(1/(u_{char\ j})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

O Ag < 0.003200	O Eu < 0.002500	O Na < 0.005499	M Se < 0.005700	O Zn < 0.001100
O Al < 0.008903	O Fe < 0.000602	M Nb < 0.000400	O Si < 0.016758	O Zr < 0.002600
M As < 0.003600	M Ga < 0.001200	M Nd < 0.000800	M Sm < 0.000400	
M Au < 0.000810	M Gd < 0.000400	M Ni < 0.003600	M Sn < 0.003200	
O B < 0.004189	O Ge < 0.012000	M Os < 0.000810	O Sr < 0.000330	
M Ba < 0.002400	M Hf < 0.000400	O P < 0.022000	M Ta < 0.000800	
M Be < 0.000400	M Hg < 0.001700	M Pb < 0.002400	M Tb < 0.000400	
M Bi < 0.000400	M Ho < 0.000400	M Pd < 0.001200	M Te < 0.008000	
O Ca < 0.011259	O In < 0.013000	M Pr < 0.000400	M Th < 0.000400	
s Cd < 0.000400	M Ir < 0.000410	M Pt < 0.000400	O Ti < 0.000602	
M Ce < 0.000400	O K < 0.005237	M Rb < 0.004400	M Tl < 0.000523	
M Co < 0.000400	M La < 0.000400	M Re < 0.000400	M Tm < 0.000400	
O Cr < 0.005100	O Li < 0.000054	M Rh < 0.000400	M U < 0.000400	
M Cs < 0.002400	M Lu < 0.000400	M Ru < 0.002500	M V < 0.002000	
O Cu < 0.004800	O Mg < 0.000288	O S < 0.022000	M W < 0.000400	
M Dy < 0.000400	O Mn < 0.000860	O Sb < 0.018000	M Y < 0.000400	
M Er < 0.000400	M Mo < 0.001600	O Sc < 0.000430	M Yb < 0.000400	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 112.41 +2 4 Cd<sub>2</sub>(OH)(aq)<sub>3+</sub> and Cd(OH)(aq)

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, and HF. Avoid basic media forming insoluble carbonate and hydroxide.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO<sub>3</sub> / LDPE container.

**Cd Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides (soluble in HCl or HNO<sub>3</sub>); Ores (dissolve in HCl /HNO<sub>3</sub> then take to fumes with H<sub>2</sub>SO<sub>4</sub>. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMN10  
Lot Number: S2-MN704240  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Manganese  
Starting Material: Mn Metal  
Starting Material Lot#: 2275  
Starting Material Purity: 99.9909%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10011 ± 30 µg/mL  
**Density:** 1.035 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9989 ± 69 µg/mL</b> ICP Assay NIST SRM 3132 Lot Number: 050429
<b>Assay Method #2</b>	<b>10011 ± 25 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10024 ± 47 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.001500	M Eu < 0.000730	O Na 0.176097	M Se < 0.006600	M Zn 0.009925
O Al 0.004322	M Fe < 0.650000	M Nb < 0.000730	O Si 0.097654	M Zr < 0.000730
M As < 0.008000	M Ga 0.004322	M Nd < 0.001500	M Sm < 0.000730	
M Au < 0.000730	M Gd < 0.000730	M Ni 0.024013	M Sn < 0.002200	
M B 0.068838	M Ge < 0.004400	M Os < 0.000730	O Sr 0.000928	
M Ba < 0.001500	M Hf < 0.000730	i P <	M Ta < 0.000730	
M Be < 0.000730	M Hg < 0.002200	M Pb 0.007364	M Tb < 0.000730	
M Bi < 0.003000	M Ho < 0.000730	M Pd < 0.000730	M Te < 0.019000	
O Ca 0.062434	M In < 0.003000	M Pr < 0.000730	M Th < 0.000730	
M Cd < 0.001500	M Ir < 0.000730	M Pt < 0.000730	O Ti < 0.006500	
M Ce < 0.007300	O K 0.006403	M Rb < 0.006600	M Tl < 0.000730	
O Co 0.014728	M La < 0.003000	M Re < 0.000730	M Tm < 0.000730	
O Cr 0.272151	O Li 0.000416	M Rh < 0.003000	M U < 0.001500	
M Cs < 0.000730	M Lu < 0.000730	M Ru < 0.004400	M V < 0.000730	
O Cu 0.007684	O Mg 0.320177	i S <	M W < 0.004400	
M Dy < 0.001500	s Mn <	M Sb < 0.021000	O Y 0.001360	
M Er < 0.001500	M Mo 0.010245	O Sc < 0.004100	M Yb < 0.000730	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 54.94 +2 6 Mn(H<sub>2</sub>O)<sub>6</sub>2+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO<sub>3</sub>/LDPE container.

**Mn Containing Samples (Preparation and Solution)** -Metal (Soluble in dilute acids ); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H<sub>2</sub>SO<sub>4</sub> and heat to SO<sub>3</sub> fumes - dense white fumes).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16 O,37Cl18O,40Ar15 N,38Ar17O,36Ar18O 1H ,38Ar16O1H,37Cl17 O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)



**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



**1.0 ACCREDITATION / REGISTRATION**

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



**2.0 PRODUCT DESCRIPTION**

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGSB10  
 Lot Number: R2-SB688559  
 Matrix: 3% (v/v) HNO3  
 3% (w/v) tartaric acid  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Antimony  
 Starting Material: Antimony Metal  
 Starting Material Lot#: 1857  
 Starting Material Purity: 99.9894%

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

**Certified Value:** 10003 ± 47 µg/mL  
**Density:** 1.061 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

**Assay Method #1 10003 ± 41 µg/mL**  
 ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

**Characterization of CRM/RM by Two or More Methods**

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char} = [\sum((w_i)^2 (u_{char i}^2))]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

**Characterization of CRM/RM by One Method**

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.000200	M Eu <	0.000300	O Na	0.140000	M Se <	0.007300	O Zn	0.005000
M Al	0.003200	O Fe	0.060000	M Nb <	0.000100	O Si	0.150000	O Zr <	0.006300
M As <	0.004400	M Ga <	0.000400	M Nd <	0.000100	M Sm <	0.000100		
M Au <	0.000210	M Gd <	0.000100	O Ni	0.004800	M Sn <	0.001800		
M B <	0.011000	M Ge <	0.000600	M Os <	0.000110	O Sr	0.000750		
O Ba <	0.004900	M Hf <	0.000100	O P	0.540000	M Ta	0.003300		
M Be <	0.000400	M Hg <	0.000110	M Pb <	0.000400	M Tb <	0.000100		
M Bi <	0.000200	M Ho <	0.000100	M Pd <	0.000210	M Te <	0.000600		
O Ca	0.110000	M In <	0.000100	M Pr <	0.001600	M Th <	0.000100		
M Cd <	0.000200	M Ir <	0.000110	M Pt <	0.000600	M Ti <	0.002800		
M Ce	0.006500	O K	0.020000	M Rb <	0.001000	M Tl <	0.000100		
M Co <	0.000200	O La <	0.016000	M Re <	0.000100	M Tm <	0.000100		
M Cr	0.006900	O Li <	0.000430	M Rh <	0.000300	M U <	0.000100		
M Cs <	0.000200	M Lu <	0.000100	M Ru <	0.000310	M V <	0.000800		
M Cu <	0.000600	O Mg	0.021000	n S <		M W <	0.000200		
M Dy <	0.000100	O Mn	0.001900	s Sb <		M Y <	0.000100		
M Er <	0.000100	M Mo <	0.000500	O Sc <	0.002300	M Yb <	0.000100		

M - Checked by ICP-MS      O - Checked by ICP-OES      i - Spectral Interference  
n - Not Checked For      s - Solution Standard Element

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 121.75 +3 6 Sb(O)C4H4O6-1

**Chemical Compatibility** - Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

**Stability** - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

**Sb Containing Samples (Preparation and Solution)** - Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides ( Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences (underlined indicates severe)</b>
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAS10  
Lot Number: T2-AS718260  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Arsenic  
Starting Material: As Metal  
Starting Material Lot#: 2208  
Starting Material Purity: 99.9971%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10060 ± 40 µg/mL  
**Density:** 1.037 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10062 ± 46 µg/mL**  
ICP Assay NIST SRM 3103a Lot Number: 100818

**Assay Method #2**      **10055 ± 76 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.003200	M Eu < 0.000530	O Na < 0.032544	M Se < 0.006300	O Zn < 0.001952
M Al < 0.007593	O Fe < 0.001475	O Nb < 0.012000	O Si < 0.238658	O Zr < 0.004100
s As < 0.000530	M Ga < 0.000530	M Nd < 0.000530	M Sm < 0.000530	
M Au < 0.003100	M Gd < 0.000530	M Ni < 0.002100	M Sn < 0.000530	
M B < 0.026035	M Ge < 0.001600	M Os < 0.000520	M Sr < 0.000530	
M Ba < 0.000530	M Hf < 0.000530	O P < 0.043000	M Ta < 0.000530	
O Be < 0.000360	M Hg < 0.001600	M Pb < 0.002100	M Tb < 0.000530	
M Bi < 0.000530	M Ho < 0.000530	M Pd < 0.001100	M Te < 0.004700	
O Ca < 0.004339	M In < 0.023000	M Pr < 0.005300	M Th < 0.000530	
M Cd < 0.001100	M Ir < 0.000520	M Pt < 0.000530	O Ti < 0.002300	
M Ce < 0.000530	O K < 0.002061	M Rb < 0.000530	M Tl < 0.000530	
M Co < 0.000530	M La < 0.001100	M Re < 0.000530	M Tm < 0.000530	
O Cr < 0.001800	O Li < 0.000120	M Rh < 0.000530	M U < 0.000530	
M Cs < 0.005300	M Lu < 0.000530	M Ru < 0.000520	M V < 0.002700	
M Cu < 0.001600	O Mg < 0.000154	O S < 0.028205	M W < 0.012000	
M Dy < 0.000530	O Mn < 0.000154	M Sb < 0.000530	M Y < 0.000530	
M Er < 0.000530	M Mo < 0.000530	O Sc < 0.001700	M Yb < 0.000530	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

**Chemical Compatibility** - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3, H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

**Stability** - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

**As Containing Samples (Preparation and Solution)** - Metal (soluble in 1:1 H2O / HNO3 ); Oxides (the oxide exists in crystalline and amorphous forms where the amorphous form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powdered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37C I,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034



## 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

## 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Prepared By:

Uyen Truong  
Supervisor, Product Documentation



### Certificate Approved By:

Michael Booth  
Director, Technical



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGBA10  
 Lot Number: R2-BA692576  
 Matrix: 2% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s): 10 000 µg/mL ea:  
                                   Barium  
 Starting Material: Barium Nitrate  
 Starting Material Lot#: 1969  
 Starting Material Purity: 99.9982%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10022 ± 30 µg/mL  
**Density:** 1.025 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10018 ± 50 µg/mL</b> ICP Assay NIST SRM 3104a Lot Number: 140909
<b>Assay Method #2</b>	<b>10023 ± 31 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #3</b>	<b>10023 ± 30 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UPLA-Filtered Clean Room. An UPLA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000410	O Eu < 0.005200	O Na < 0.004610	M Se < 0.003700	O Zn < 0.000658
M Al < 0.003100	O Fe < 0.015707	M Nb < 0.000210	O Si < 0.005573	M Zr < 0.001300
M As < 0.001300	M Ga < 0.000210	M Nd < 0.000210	O Sm < 0.021000	
M Au < 0.001300	M Gd < 0.000210	M Ni < 0.000810	M Sn < 0.000410	
O B < 0.005200	M Ge < 0.002500	M Os < 0.000410	O Sr < 0.003850	
s Ba < 0.000320	M Hf < 0.000810	O P < 0.026000	M Ta < 0.000410	
O Be < 0.000320	M Hg < 0.000210	M Pb < 0.002300	M Tb < 0.000210	
M Bi < 0.000210	M Ho < 0.000210	M Pd < 0.000210	M Te < 0.001900	
O Ca < 0.007093	M In < 0.000210	M Pr < 0.000210	M Th < 0.000210	
M Cd < 0.000210	M Ir < 0.000210	M Pt < 0.000210	M Ti < 0.002100	
M Ce < 0.001300	O K < 0.035467	M Rb < 0.002100	M Tl < 0.000210	
M Co < 0.000410	O La < 0.005200	M Re < 0.000210	M Tm < 0.000410	
M Cr < 0.001700	O Li < 0.000630	M Rh < 0.000210	M U < 0.000210	
M Cs < 0.003300	M Lu < 0.001700	M Ru < 0.000210	O V < 0.005200	
M Cu < 0.001300	O Mg < 0.000861	O S < 0.268539	M W < 0.000410	
M Dy < 0.000210	M Mn < 0.000410	M Sb < 0.001300	O Y < 0.005200	
M Er < 0.001300	M Mo < 0.000410	M Sc < 0.000410	M Yb < 0.001300	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 137.33 +2 6 Ba(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl, and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO<sub>3</sub> / LDPE container.

**Ba Containing Samples (Preparation and Solution)** -Metal(is best dissolved in diluted HNO<sub>3</sub> ); Ores( Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent BaSO<sub>4</sub> precipitate ); Organic Matrices (dry ash and dissolve in dilute HCl.)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences (underlined indicates severe)</b>
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGBE10  
Lot Number: R2-BE692992  
Matrix: 6% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Beryllium  
Starting Material: Beryllium Acetate  
Starting Material Lot#: 2281  
Starting Material Purity: 99.9998%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10032 ± 41 µg/mL  
**Density:** 1.128 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10042 ± 67 µg/mL**  
ICP Assay NIST SRM 3105a Lot Number: 090514

**Assay Method #2**      **10025 ± 51 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char}$  =  $[\sum(w_i)^2 (u_{char\ i}^2)]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.001100	M Eu < 0.000270	O Na < 0.040962	M Se < 0.005000	M Zn < 0.013054
O Al < 0.016205	O Fe < 0.015754	M Nb < 0.000270	O Si < 0.024307	O Zr < 0.001900
M As < 0.002900	M Ga < 0.000270	M Nd < 0.000270	M Sm < 0.000270	
M Au < 0.000520	M Gd < 0.000270	M Ni < 0.003700	M Sn < 0.000790	
M B < 0.091000	M Ge < 0.000270	M Os < 0.000260	M Sr < 0.000630	
M Ba < 0.002700	M Hf < 0.000270	O P < 0.066000	M Ta < 0.000270	
s Be < 0.000530	M Hg < 0.000520	M Pb < 0.000270	M Tb < 0.000270	
M Bi < 0.072022	M Ho < 0.000270	M Pd < 0.000520	M Te < 0.003700	
O Ca < 0.000790	M In < 0.000790	M Pr < 0.000270	M Th < 0.000270	
M Cd < 0.000270	M Ir < 0.000260	M Pt < 0.000270	O Ti < 0.000400	
M Ce < 0.000270	O K < 0.045014	M Rb < 0.000270	M Tl < 0.000790	
O Co < 0.003200	M La < 0.000270	M Re < 0.000270	M Tm < 0.000270	
O Cr < 0.001800	O Li < 0.000660	M Rh < 0.001100	M U < 0.000270	
M Cs < 0.001440	M Lu < 0.000270	M Ru < 0.000260	M V < 0.000790	
M Cu < 0.002100	O Mg < 0.016205	i S < 0.000270	M W < 0.000530	
M Dy < 0.000270	M Mn < 0.001215	M Sb < 0.000270	M Y < 0.000270	
M Er < 0.000270	M Mo < 0.000530	O Sc < 0.000930	M Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 9.01 +2 4 Be(H<sub>2</sub>O)<sub>4</sub>+2

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability** - 2-100 ppb levels stable for months in 1 % HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO<sub>3</sub> / LDPE container.

**Be Containing Samples (Preparation and Solution)** - Meta I(is best dissolved in diluted H<sub>2</sub>SO<sub>4</sub> ); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO<sub>4</sub> fusion); Ores (H<sub>2</sub>SO<sub>4</sub>/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY



**11.1 Certification Issue Date**

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**11.4 Revision Status**

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGCO10  
 Lot Number: R2-CO695285  
 Matrix: 3% (v/v) HNO3  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Cobalt  
 Starting Material: Co Metal  
 Starting Material Lot#: 2326  
 Starting Material Purity: 99.9934%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10012 ± 31 µg/mL  
**Density:** 1.056 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10031 ± 67 µg/mL</b> ICP Assay NIST SRM 3113 Lot Number: 190630
<b>Assay Method #2</b>	<b>10019 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10000 ± 35 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/CRM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i})^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UPLA-Filtered Clean Room. An UPLA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	0.014660	M Eu	<	0.000590	O Na	0.007534	M Se	<	0.019000	M Zn	0.003461	
M Al	<	0.024000	M Fe	0.050905	M Nb	<	0.000590	O Si	0.075340	M Zr	<	0.001200
i As	<		M Ga	<	0.000590	M Nd	<	0.000590	M Sm	<	0.000590	
M Au	<	0.004100	M Gd	<	0.000590	O Ni	0.427608	M Sn	<	0.001200		
M B	<	0.031000	M Ge	<	0.003000	M Os	<	0.000590	O Sr	<	0.000260	
M Ba	<	0.000590	M Hf	<	0.000590	n P	<		M Ta	<	0.001200	
O Be	<	0.001300	M Hg	<	0.001800	M Pb	0.003257	M Tb	<	0.000590		
M Bi	<	0.003000	M Ho	<	0.000590	M Pd	<	0.000590	M Te	<	0.005300	
O Ca	0.010588	M In	<	0.001200	M Pr	<	0.000590	M Th	<	0.000590		
M Cd	<	0.004700	M Ir	<	0.001200	M Pt	<	0.002400	M Ti	<	0.014000	
M Ce	<	0.000590	O K	0.008144	M Rb	<	0.000590	M Tl	0.002647			
s Co	<		M La	<	0.000590	M Re	<	0.000590	M Tm	<	0.000590	
M Cr	<	0.021000	O Li	<	0.000130	M Rh	<	0.000590	M U	<	0.000590	
M Cs	<	0.002400	M Lu	<	0.000590	M Ru	<	0.007100	O V	<	0.000880	
M Cu	0.189369	O Mg	0.001893	n S	<			M W	<	0.000590		
M Dy	<	0.000590	M Mn	<	0.001800	M Sb	<	0.003600	M Y	<	0.000590	
M Er	<	0.000590	M Mo	<	0.002400	O Sc	<	0.001600	M Yb	<	0.000590	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 58.93 +2 6 Co(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup>

**Chemical Compatibility** - Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Co Containing Samples (Preparation and Solution)** - Metal (soluble in HNO<sub>3</sub>); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAG10  
Lot Number: S2-AG712977  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Silver  
Starting Material: Ag Shot  
Starting Material Lot#: 2289  
Starting Material Purity: 99.9951%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10051 ± 30 µg/mL  
**Density:** 1.056 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10051 ± 52 µg/mL</b> ICP Assay NIST SRM 3151 Lot Number: 160729
<b>Assay Method #2</b>	<b>10051 ± 19 µg/mL</b> Volhard NIST SRM 999c Lot Number: 999c
<b>Assay Method #3</b>	<b>10049 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s Ag <	M Eu <	0.000260	O Na	0.003811	M Se <	0.003900	O Zn	0.048146	
M Al	0.002688	O Fe	0.006419	M Nb <	0.000260	O Si	0.005215	M Zr <	0.000260
M As <	0.001100	M Ga <	0.000260	M Nd <	0.000260	M Sm <	0.000260		
M Au <	0.000260	M Gd <	0.000260	O Ni	0.001765	M Sn	0.020060		
O B <	0.004300	M Ge <	0.002300	M Os <	0.001100	O Sr <	0.000110		
M Ba <	0.000520	M Hf <	0.000260	O P <	0.017000	M Ta <	0.000260		
O Be <	0.001100	M Hg <	0.000770	M Pb <	0.003600	M Tb <	0.000260		
M Bi	0.004814	M Ho <	0.000260	M Pd	0.044134	M Te <	0.009000		
O Ca	0.005215	M In	0.003691	M Pr <	0.000260	M Th <	0.000260		
M Cd <	0.000260	M Ir <	0.000520	M Pt <	0.001100	O Ti <	0.000440		
M Ce <	0.002100	O K <	0.008700	M Rb <	0.001100	M Tl <	0.004100		
O Co <	0.000330	M La <	0.000260	M Re <	0.000260	M Tm <	0.000260		
O Cr <	0.002500	O Li <	0.000110	M Rh <	0.000520	M U <	0.000260		
M Cs <	0.002600	M Lu <	0.000260	M Ru <	0.000260	M V <	0.000260		
O Cu	0.357085	O Mg	0.001203	O S <	0.017000	M W <	0.000260		
M Dy <	0.000260	O Mn <	0.000220	M Sb <	0.014000	M Y <	0.000260		
M Er <	0.000260	M Mo <	0.000260	O Sc <	0.000220	M Yb <	0.000260		

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 107.87 +1 6 Ag(H<sub>2</sub>O)<sub>6</sub><sup>+</sup>  
**Chemical Compatibility** - Stable in HNO<sub>3</sub>, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [ AgCl<sub>x</sub>1-x] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite, bromide, chloride, iodide, carbonate, chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

**Stability** - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Ag Containing Samples (Preparation and Solution)** - Metal (Soluble in HNO<sub>3</sub>); Oxides (Soluble in HNO<sub>3</sub>); Ores (Digestion with conc. HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Uyen Truong  
Supervisor, Product Documentation



**Certificate Approved By:**

Michael Booth  
Director, Technical



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCR(3)10  
Lot Number: S2-CR709784  
Matrix: 10% (v/v) HNO3  
Value / Analyte(s): 10 000 µg/mL ea:  
Chromium  
Starting Material: Cr Metal  
Starting Material Lot#: 2328  
Starting Material Purity: 99.9951%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10027 ± 41 µg/mL  
**Density:** 1.072 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10027 ± 40 µg/mL**  
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char\ i}^2) / (\sum(1/(u_{char\ i}^2)))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2  
 $u_{char}$  =  $[\sum((w_i)^2 (u_{char\ i})^2)]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2  
 $u_{char\ a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.001700	M	Eu <	0.003400	O	Na	0.090372	M	Se <	0.012000	O	Zn <	0.006100
M Al	0.034916	O	Fe	0.246471	M	Nb <	0.017000	n	Si <		M	Zr <	0.007800
M As <	0.028000	O	Ga <	0.013000	M	Nd <	0.013000	M	Sm <	0.006900			
M Au <	0.001700	M	Gd <	0.000560	M	Ni	0.016020	M	Sn	0.006983			
O B <	0.025000	O	Ge <	0.014000	M	Os <	0.000560	M	Sr	0.006367			
M Ba <	0.008900	M	Hf <	0.000560	i	P <		M	Ta <	0.000560			
M Be <	0.013000	M	Hg <	0.001700	M	Pb	0.010064	M	Tb <	0.000560			
M Bi <	0.002300	M	Ho <	0.000560	M	Pd <	0.021000	M	Te <	0.010000			
O Ca	0.075995	M	In <	0.000560	M	Pr <	0.001700	M	Th <	0.000560			
M Cd <	0.000560	M	Ir <	0.000560	M	Pt <	0.001200	O	Ti	0.013555			
M Ce <	0.001200	O	K	0.043132	i	Rb <		M	Tl <	0.000560			
M Co <	0.002600	M	La <	0.001200	M	Re <	0.001200	O	Tm <	0.013000			
s Cr <		O	Li	0.000390	M	Rh <	0.095000	M	U <	0.000560			
M Cs <	0.007800	M	Lu <	0.000560	M	Ru <	0.087000	O	V	0.014993			
O Cu	0.007599	O	Mg	0.000883	i	S <		M	W <	0.049000			
M Dy <	0.000560	M	Mn	0.008626	M	Sb <	0.003400	M	Y <	0.001700			
M Er <	0.019000	M	Mo <	0.032000	M	Sc	0.003080	M	Yb <	0.000560			

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 52.00 +3 6 Cr(H<sub>2</sub>O)<sub>6</sub>3+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Cr<sub>3</sub> Containing Samples (Preparation and Solution)** -Metal (soluble in HCl ); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with KHSO<sub>4</sub> and extraction with hot KCl. The residue fused with Na<sub>2</sub>CO<sub>3</sub> and KClO<sub>3</sub>, 3:1. B. Fusion with NaKSO<sub>4</sub> and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na<sub>2</sub>O<sub>2</sub> or NaOH and KNO<sub>3</sub> or NaOH and Na<sub>2</sub>O<sub>2</sub>. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGNI10  
Lot Number: P2-NI686384  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Nickel  
Starting Material: Ni Metal  
Starting Material Lot#: 2277 and 2282  
Starting Material Purity: 99.9992%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9979 ± 30 µg/mL  
**Density:** 1.038 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9971 ± 54 µg/mL</b> ICP Assay NIST SRM 3136 Lot Number: 120619
<b>Assay Method #2</b>	<b>9970 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>9993 ± 33 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	0.002606	M Eu	<	0.001100	O Na	0.004965	O Se	<	0.067000	M Zn	0.006578	
M Al	<	0.013000	O Fe	0.018618	M Nb	<	0.001100	O Si	0.010923	M Zr	<	0.001100
O As	<	0.067000	M Ga	<	0.001100	M Nd	<	0.001100	M Sm	<	0.001100	
M Au	<	0.002100	M Gd	<	0.001100	s Ni	<		M Sn	<	0.016000	
M B	<	0.017000	M Ge	<	0.004200	M Os	0.002110	O Sr	<	0.000940		
M Ba	<	0.001100	M Hf	<	0.001100	i P	<		M Ta	<	0.001100	
O Be	<	0.000410	M Hg	0.014895	M Pb	0.006578	M Tb	<	0.001100			
M Bi	<	0.004200	M Ho	<	0.001100	M Pd	<	0.001100	M Te	<	0.015000	
O Ca	0.003351	M In	<	0.001100	M Pr	<	0.001100	M Th	<	0.001100		
M Cd	0.001365	M Ir	0.004716	M Pt	<	0.001100	M Ti	<	0.004200			
M Ce	<	0.001100	O K	0.004716	M Rb	<	0.001100	M Tl	<	0.001100		
O Co	0.017377	M La	<	0.001100	M Re	0.001737	M Tm	<	0.001100			
O Cr	<	0.006700	O Li	<	0.000140	M Rh	<	0.006300	M U	<	0.001100	
M Cs	<	0.007300	M Lu	<	0.001100	M Ru	<	0.019000	M V	<	0.002100	
M Cu	0.004096	O Mg	0.000372	i S	<		M W	<	0.006300			
M Dy	<	0.001100	O Mn	<	0.001900	M Sb	0.005833	O Y	<	0.000540		
M Er	<	0.001100	M Mo	<	0.008400	M Sc	<	0.002100	M Yb	<	0.001100	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 58.69 +2 6 Ni(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup>

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Ni Containing Samples (Preparation and Solution)** -Metal (Soluble in HNO<sub>3</sub>); Oxides ( Soluble in HCl ); Ores (Dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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F: 540-585-3012  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGV10  
Lot Number: S2-V711005  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Vanadium  
Starting Material: Vanadium Pentoxide  
Starting Material Lot#: 1782  
Starting Material Purity: 99.9877%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10014 ± 30 µg/mL  
**Density:** 1.104 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10017 ± 42 µg/mL**  
ICP Assay NIST SRM 3165 Lot Number: 160906

**Assay Method #2**      **10013 ± 30 µg/mL**  
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000110	M Eu < 0.000110	O Na 0.120000	M Se < 0.009400	M Zn 0.009400
O Al 0.120000	O Fe 0.460000	M Nb < 0.001300	O Si 0.270000	M Zr < 0.002900
M As < 0.000210	M Ga < 0.009300	M Nd < 0.000610	M Sm < 0.000110	
M Au < 0.004700	M Gd < 0.000110	M Ni 0.012000	M Sn 0.003900	
M B 0.051000	M Ge < 0.000410	M Os < 0.000110	O Sr 0.007100	
M Ba 0.003600	M Hf < 0.000110	O P < 0.034000	M Ta < 0.000110	
O Be < 0.000560	M Hg < 0.000410	M Pb 0.001400	M Tb < 0.000110	
M Bi < 0.000210	M Ho < 0.000110	M Pd < 0.000410	M Te < 0.000110	
O Ca 0.730000	M In < 0.000110	M Pr < 0.000110	M Th < 0.000210	
M Cd < 0.000610	M Ir < 0.000110	M Pt < 0.000110	M Ti 0.017000	
M Ce < 0.000610	M K 0.052000	M Rb < 0.000310	M Tl < 0.000110	
M Co < 0.001300	M La < 0.000410	M Re 0.001700	M Tm < 0.000110	
O Cr 0.170000	M Li < 0.000810	M Rh < 0.000110	M U < 0.000410	
M Cs 0.005600	M Lu < 0.000110	M Ru < 0.000110	s V <	
M Cu < 0.001300	M Mg 0.053000	i S <	M W 0.002000	
M Dy < 0.000110	M Mn 0.007900	M Sb 0.078000	M Y < 0.000110	
M Er < 0.000110	M Mo 0.094000	M Sc < 0.000410	M Yb < 0.000110	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 50.94 +5 6 H<sub>2</sub>V<sub>10</sub>O<sub>28</sub>4-

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub> and strong basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**V Containing Samples (Preparation and Solution)** -Metal (Fusion with NaOH or KOH in NiO or Na<sub>2</sub>CO<sub>3</sub> / KNO<sub>3</sub>); Oxides (V<sub>2</sub>O<sub>3</sub> - use HCl, V<sub>2</sub>O<sub>4</sub> - use HCl or HNO<sub>3</sub>, V<sub>2</sub>O<sub>5</sub> - use concentrated acids); Ores (Na<sub>2</sub>CO<sub>3</sub> / KNO<sub>3</sub> in PtO caution - nitrates attack PtO followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V<sub>2</sub>O<sub>5</sub> above) .

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Approved By:

Thomas Kozikowski  
Manager, Quality Control



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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F: 540-585-3012  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAL10  
Lot Number: T2-AL716102  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Aluminum  
Starting Material: Aluminum Nitrate Nonahydrate  
Starting Material Lot#: 2460  
Starting Material Purity: 99.9938%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10049 ± 31 µg/mL  
**Density:** 1.087 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10059 ± 40 µg/mL</b> ICP Assay NIST SRM 3101a Lot Number: 140903
<b>Assay Method #2</b>	<b>10044 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10049 ± 35 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.002100	M Eu < 0.002100	O Na < 0.352819	M Se < 0.005200	M Zn < 0.006018
s Al < 0.002100	O Fe < 0.074714	M Nb < 0.000520	O Si < 0.017848	O Zr < 0.004358
M As < 0.008716	O Ga < 0.112072	M Nd < 0.000520	M Sm < 0.000520	
M Au < 0.008400	M Gd < 0.001100	O Ni < 0.006000	M Sn < 0.000747	
O B < 0.014000	M Ge < 0.005200	M Os < 0.000650	O Sr < 0.000518	
O Ba < 0.012867	M Hf < 0.004100	n P < 0.000520	M Ta < 0.000520	
O Be < 0.000270	M Hg < 0.002000	M Pb < 0.002282	M Tb < 0.000520	
M Bi < 0.001930	M Ho < 0.000520	M Pd < 0.000520	M Te < 0.001100	
O Ca < 0.076790	M In < 0.002100	M Pr < 0.000520	M Th < 0.000520	
M Cd < 0.000520	M Ir < 0.000650	M Pt < 0.000520	O Ti < 0.001930	
M Ce < 0.001100	O K < 0.043583	M Rb < 0.000520	M Tl < 0.000520	
O Co < 0.005400	M La < 0.002100	M Re < 0.000520	M Tm < 0.000520	
O Cr < 0.006018	O Li < 0.000112	M Rh < 0.000520	M U < 0.000520	
M Cs < 0.000643	M Lu < 0.000520	M Ru < 0.002000	M V < 0.001286	
O Cu < 0.008300	O Mg < 0.068488	i S < 0.003100	M W < 0.009800	
M Dy < 0.002100	O Mn < 0.000913	M Sb < 0.003100	M Y < 0.001100	
M Er < 0.000520	M Mo < 0.005396	O Sc < 0.000950	M Yb < 0.000520	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 26.98 +3 6 Al(H<sub>2</sub>O)<sub>6</sub>+3

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, vF and v<sub>2</sub>SO<sub>4</sub>. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub><sup>-</sup> species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Al Containing Samples (Preparation and Solution)** -Metal (Best dissolved in HCl / HNO<sub>3</sub> ); a- Al<sub>2</sub>O<sub>3</sub> (Na<sub>2</sub>CO<sub>3</sub> fusion in PtO);

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr <sup>2+</sup> , 54Fe <sup>2+</sup>
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGK10  
Lot Number: S2-K711973  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Potassium  
Starting Material: KNO<sub>3</sub>  
Starting Material Lot#: 2313  
Starting Material Purity: 99.9971%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL  
**Density:** 1.024 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9987 ± 24 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #2</b>	<b>10004 ± 84 µg/mL</b> ICP Assay NIST SRM 3141a Lot Number: 140813
<b>Assay Method #3</b>	<b>10007 ± 45 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.001400	M Eu < 0.000660	O Na 0.246220	M Se < 0.007900	O Zn 0.018056
O Al 0.001592	O Fe 0.005909	M Nb < 0.000660	O Si 0.011490	O Zr < 0.001600
M As < 0.005300	M Ga < 0.000660	M Nd < 0.000660	M Sm < 0.000660	
M Au < 0.002000	M Gd < 0.000660	O Ni < 0.004900	M Sn < 0.000660	
O B < 0.005600	M Ge < 0.002000	M Os < 0.003300	O Sr 0.000055	
O Ba < 0.000860	M Hf < 0.000660	O P < 0.032000	M Ta < 0.000660	
O Be < 0.000082	M Hg < 0.002000	M Pb < 0.002300	M Tb < 0.000660	
M Bi < 0.006600	M Ho < 0.000660	M Pd < 0.000660	M Te < 0.017000	
O Ca 0.031187	M In < 0.000660	M Pr < 0.000660	M Th < 0.000660	
O Cd < 0.000450	M Ir < 0.000660	M Pt < 0.002700	M Ti < 0.000660	
M Ce < 0.000660	s K <	M Rb 0.476026	M Tl < 0.000660	
O Co < 0.000780	M La < 0.000660	M Re < 0.000660	M Tm < 0.000660	
O Cr 0.000541	O Li < 0.000084	M Rh < 0.000660	M U < 0.000660	
M Cs < 0.000660	M Lu < 0.000660	M Ru < 0.000660	O V < 0.001100	
M Cu < 0.002700	O Mg 0.006237	O S 0.027905	M W < 0.000660	
M Dy < 0.000660	O Mn 0.000476	M Sb < 0.000660	M Y < 0.000660	
M Er < 0.000660	M Mo < 0.000660	O Sc < 0.000340	O Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 39.10 +1 (6) K+(aq)

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Avoid use of HClO<sub>4</sub> due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO<sub>4</sub><sup>-</sup>.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**K Containing Samples (Preparation and Solution)** - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion )

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMG10  
Lot Number: S2-MG704239  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Magnesium  
Starting Material: Magnesium Metal  
Starting Material Lot#: 2168  
Starting Material Purity: 99.9984%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10053 ± 30 µg/mL  
**Density:** 1.053 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10022 ± 62 µg/mL</b> ICP Assay NIST SRM 3131a Lot Number: 140110
<b>Assay Method #2</b>	<b>10078 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10033 ± 26 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag	0.002106	M	Eu <	0.000910	O Na	0.071075	O Se <	0.048000	O Zn	0.003299
M Al	0.003553	M	Fe	0.002538	M Nb <	0.000460	O Si <	0.032000	O Zr <	0.002700
M As <	0.001400	M	Ga <	0.000460	M Nd <	0.000910	M Sm <	0.000460		
M Au <	0.001400	M	Gd <	0.000460	O Ni <	0.001600	M Sn <	0.002300		
O B	0.006853	M	Ge <	0.001400	M Os <	0.000460	O Sr	0.000279		
O Ba	0.000964	M	Hf <	0.000460	O P	0.015230	M Ta <	0.000460		
O Be <	0.000120	M	Hg <	0.000460	M Pb <	0.000460	M Tb <	0.000460		
M Bi <	0.000460	M	Ho <	0.000460	M Pd <	0.003200	M Te <	0.007300		
O Ca	0.053306	M	In <	0.000460	M Pr <	0.000460	M Th <	0.000460		
O Cd <	0.000360	M	Ir <	0.000460	M Pt <	0.001900	O Ti <	0.001700		
M Ce <	0.002300	M	K	0.048229	M Rb	0.002411	M Tl	0.003046		
M Co <	0.000910	M	La <	0.002800	M Re <	0.000460	M Tm <	0.000460		
M Cr <	0.002300	O	Li	0.027922	M Rh <	0.000460	M U <	0.000460		
M Cs	0.001040	M	Lu <	0.000460	M Ru <	0.000460	M V <	0.000460		
O Cu <	0.003000	s	Mg <		O S <	0.190000	M W <	0.000460		
M Dy <	0.000460	O	Mn	0.015230	M Sb	0.020814	O Y <	0.000720		
M Er <	0.000460	M	Mo <	0.000910	O Sc <	0.000480	M Yb <	0.000460		

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 24.31 +2 6 Mg(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub> avoid HF, H<sub>3</sub>PO<sub>4</sub> and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO<sub>3</sub> / LDPE container.

**Mg Containing Samples (Preparation and Solution)** -Metal (Best dissolved in diluted HNO<sub>3</sub> ); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCA10  
Lot Number: T2-CA716103  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Calcium  
Starting Material: CaCO<sub>3</sub>  
Starting Material Lot#: 2472  
Starting Material Purity: 99.9950%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10005 ± 30 µg/mL  
**Density:** 1.039 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10005 ± 45 µg/mL</b> ICP Assay NIST SRM 3109a Lot Number: 130213
<b>Assay Method #2</b>	<b>10005 ± 25 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10005 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.001200	M Eu < 0.001200	O Na < 0.006112	M Se < 0.024000	M Zn < 0.005362
M Al < 0.065419	O Fe < 0.009115	M Nb < 0.001200	O Si < 0.139417	O Zr < 0.006700
O As < 0.013000	M Ga < 0.015000	M Nd < 0.020000	M Sm < 0.001200	
M Au < 0.017000	M Gd < 0.004800	O Ni < 0.000793	M Sn < 0.003600	
O B < 0.001179	M Ge < 0.003600	M Os < 0.001200	M Sr < 0.081505	
O Ba < 0.002788	M Hf < 0.001200	O P < 0.041000	M Ta < 0.001200	
O Be < 0.000410	M Hg < 0.004800	M Pb < 0.001608	M Tb < 0.001200	
M Bi < 0.001608	M Ho < 0.001200	M Pd < 0.001200	M Te < 0.003600	
s Ca <	M In < 0.001200	M Pr < 0.000257	M Th < 0.001200	
O Cd < 0.001300	M Ir < 0.001200	M Pt < 0.003600	O Ti < 0.001900	
M Ce < 0.001029	O K < 0.009759	M Rb < 0.001200	M Tl < 0.001200	
O Co < 0.000418	M La < 0.001823	M Re < 0.001200	M Tm < 0.001200	
O Cr < 0.003324	O Li < 0.007300	M Rh < 0.001200	M U < 0.002144	
M Cs < 0.007399	M Lu < 0.000128	M Ru < 0.001200	M V < 0.001286	
O Cu < 0.011000	M Mg < 1.286934	O S < 0.055767	O W < 0.024000	
M Dy < 0.002400	O Mn < 0.004611	M Sb < 0.009600	O Y < 0.000536	
M Er < 0.002400	M Mo < 0.003539	O Sc < 0.001400	M Yb < 0.001200	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 40.08 +2 6 Ca(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>, vF, v3PO<sub>4</sub> and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO<sub>3</sub> / LDPE container.

**Ca Containing Samples )Preparation and Solution** -Metal ( best dissolved in diluted HNO<sub>3</sub> ); Ores ( Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO<sub>2</sub>). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO<sub>3</sub>. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na<sub>2</sub>CO<sub>3</sub> followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences (underlined indicates severe)</b>
ICP-MS 44 amu	1200 ppt	n/a	16O <sup>2</sup> 12C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGNA10  
Lot Number: T2-NA717221  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Sodium  
Starting Material: Na<sub>2</sub>CO<sub>3</sub>  
Starting Material Lot#: 2358 and 2453  
Starting Material Purity: 99.9977%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9977 ± 30 µg/mL  
**Density:** 1.033 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9974 ± 18 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #2</b>	<b>9977 ± 34 µg/mL</b> ICP Assay NIST SRM 3152a Lot Number: 200413
<b>Assay Method #3</b>	<b>9987 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000930	M Eu < 0.000930	s Na <	M Se < 0.003800	O Zn < 0.000138
M Al < 0.004409	O Fe < 0.002393	M Nb < 0.000930	O Si < 0.056696	O Zr < 0.003200
O As < 0.023000	M Ga < 0.000930	M Nd < 0.000930	M Sm < 0.000930	
O Au < 0.004100	M Gd < 0.000930	O Ni < 0.003000	M Sn < 0.002800	
O B < 0.001385	M Ge < 0.004700	M Os < 0.000930	O Sr < 0.000251	
M Ba < 0.004031	M Hf < 0.000930	O P < 0.010205	M Ta < 0.000930	
O Be < 0.000130	M Hg < 0.000930	M Pb < 0.000930	M Tb < 0.000930	
M Bi < 0.000930	M Ho < 0.000930	M Pd < 0.000930	M Te < 0.001900	
O Ca < 0.176388	M In < 0.000930	M Pr < 0.000930	M Th < 0.000352	
O Cd < 0.000860	M Ir < 0.000930	M Pt < 0.000930	O Ti < 0.000592	
M Ce < 0.001900	O K < 0.302380	M Rb < 0.000930	M Tl < 0.000930	
O Co < 0.001800	O La < 0.002100	M Re < 0.000930	M Tm < 0.000930	
M Cr < 0.002800	O Li < 0.000031	M Rh < 0.000930	M U < 0.000930	
M Cs < 0.000930	M Lu < 0.000930	M Ru < 0.001900	O V < 0.001600	
O Cu < 0.003900	O Mg < 0.026458	O S < 0.040317	O W < 0.028000	
M Dy < 0.000930	O Mn < 0.000740	M Sb < 0.000930	O Y < 0.000860	
M Er < 0.000930	O Mo < 0.003600	O Sc < 0.000610	O Yb < 0.000250	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 22.99 +1 (6) Na+(aq) largely ionic in nature

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Na Containing Samples (Preparation and Solution)** - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)



**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGU1  
Lot Number: S2-U707914  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 1 000 µg/mL ea:  
Uranium  
Starting Material: Uranyl Nitrate Hexahydrate  
Starting Material Lot#: P2-2322  
Starting Material Purity: 99.9997%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 999 ± 5 µg/mL  
**Density:** 1.010 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **998 ± 5 µg/mL**  
ICP Assay NIST SRM 3164 Lot Number: 080521

**Assay Method #2**      **1001 ± 6 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Certified Abundance:

#### IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000270	M Eu < 0.000270	M Na < 0.011000	M Se < 0.009300	M Zn < 0.002358
M Al < 0.011000	M Fe < 0.003222	M Nb < 0.000270	M Si < 0.160000	M Zr < 0.001100
M As < 0.002400	M Ga < 0.000270	M Nd < 0.000270	M Sm < 0.000270	
M Au < 0.000270	M Gd < 0.000270	M Ni < 0.020000	M Sn < 0.011000	
M B < 0.000270	M Ge < 0.000800	M Os < 0.001900	M Sr < 0.000270	
M Ba < 0.003800	M Hf < 0.000270	i P <	M Ta < 0.000270	
M Be < 0.000270	M Hg < 0.000540	M Pb < 0.002200	M Tb < 0.000270	
M Bi < 0.000270	M Ho < 0.000270	M Pd < 0.000540	M Te < 0.003800	
M Ca < 0.140000	M In < 0.000270	M Pr < 0.000270	M Th < 0.000129	
M Cd < 0.000270	M Ir < 0.000270	M Pt < 0.000270	M Ti < 0.002700	
M Ce < 0.000540	O K < 0.250000	M Rb < 0.000800	M Tl < 0.000270	
M Co < 0.000800	M La < 0.000117	M Re < 0.064000	M Tm < 0.000270	
M Cr < 0.000943	M Li < 0.003000	M Rh < 0.000270	s U <	
M Cs < 0.000106	M Lu < 0.000270	M Ru < 0.000540	M V < 0.000540	
M Cu < 0.001100	M Mg < 0.003000	i S <	M W < 0.000540	
M Dy < 0.000270	M Mn < 0.006900	M Sb < 0.000270	M Y < 0.000270	
M Er < 0.000270	M Mo < 0.006400	M Sc < 0.000540	M Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 238.03 +6 8 UO<sub>2</sub><sup>2+</sup>(uranyl)

**Chemical Compatibility** - Soluble in HCl and HNO<sub>3</sub>. Avoid H<sub>3</sub>PO<sub>4</sub>. H<sub>2</sub>SO<sub>4</sub> and HF matrices should not be a problem depending upon [U]. Although the UO<sub>2</sub><sup>2+</sup> ion is distinctly basic, any U+4 will precipitate in basic media. UO<sub>2</sub><sup>2+</sup>salts are generally soluble in water and UO<sub>2</sub><sup>2+</sup> is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF<sub>4</sub> and UF<sub>6</sub> are water soluble.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**U Containing Samples (Preparation and Solution)** -Metal (Dissolves rapidly in HCl and HNO<sub>3</sub>); Oxide (Soluble in HNO<sub>3</sub>); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO<sub>3</sub>. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H<sub>2</sub>SO<sub>4</sub>.)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: AR-ICVMS-2  
Lot Number: T2-MEB719895  
Matrix: 3% (v/v) HNO3  
tr. HF  
Value / Analyte(s): 2.5 µg/mL ea:  
Molybdenum, Antimony

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	2.499 ± 0.015 µg/mL	Molybdenum, Mo	2.500 ± 0.017 µg/mL

Density: 1.014 g/mL (measured at 20 ± 4 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i})^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20°  $\pm$  4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

#### 10.0 QUALITY STANDARD DOCUMENTATION

##### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

##### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director





300 Technology Drive  
Christiansburg, VA 24073 USA  
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P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution	
Catalog Number:	AR-ICVMS-3	
Lot Number:	T2-MEB719896	
Matrix:	7% (v/v) HNO <sub>3</sub>	
Value / Analyte(s):	250 µg/mL ea:	
	Aluminum,	Calcium,
	Iron,	Potassium,
	Magnesium,	Sodium,
	4 µg/mL ea:	
	Selenium,	
	2.5 µg/mL ea:	
	Thorium,	Thallium,
	Uranium,	Vanadium,
	Zinc,	Manganese,
	Cadmium,	Cobalt,
	Chromium,	Copper,
	Arsenic,	Barium,
	Beryllium,	Nickel,
	Lead,	Silver

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>	<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

**Density:** 1.042 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } j}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Certified Abundance:

##### IV's Certified Abundance

<u>Isotope</u>	<u>Atom %</u>
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Note:** This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

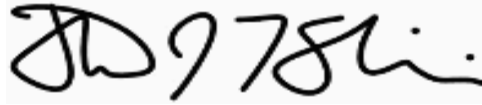
- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
 Catalog Number: AR-6020ICS-0A10  
 Lot Number: T2-MEB719898  
 Matrix: 1.4% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s):  
 1 000 µg/mL ea:  
 Chloride,  
 200 µg/mL ea:  
 Carbon,  
 100 µg/mL ea:  
 Calcium, Aluminum,  
 Iron, Potassium,  
 Magnesium, Sodium,  
 Phosphorus, Sulfur,  
 2 µg/mL ea:  
 Titanium, Molybdenum

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Calcium, Ca	100.0 ± 0.5 µg/mL
Carbon, C	200.1 ± 0.5 µg/mL	Chloride, Cl	1 000 ± 5 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Magnesium, Mg	100.0 ± 0.5 µg/mL
Molybdenum, Mo	2.001 ± 0.014 µg/mL	Phosphorus, P	100.0 ± 0.6 µg/mL
Potassium, K	100.0 ± 0.5 µg/mL	Sodium, Na	100.0 ± 0.5 µg/mL
Sulfur, S	100.0 ± 0.5 µg/mL	Titanium, Ti	2.001 ± 0.015 µg/mL

**Density:** 1.009 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A



## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

### 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

#### Certificate Approved By:

Thomas Kozikowski  
Manager, Quality Control



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1021
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-01 D      SDG: 23A0206  
 Sampled: 01/11/23 08:25      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-058  
 % Solids: 47.26      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 19:07  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.064 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.9	20	0.08	0.40	
7440-43-9	Cadmium	0.42	20	0.06	0.20	
7440-50-8	Copper	62.7	20	0.35	0.99	
7440-66-6	Zinc	120	20	5.8	11.9	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1015
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-02 D      SDG: 23A0206  
 Sampled: 01/11/23 08:37      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-057  
 % Solids: 47.15      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 19:02  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.014 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.4	20	0.08	0.42	
7440-43-9	Cadmium	0.50	20	0.06	0.21	
7440-50-8	Copper	63.7	20	0.36	1.05	
7440-66-6	Zinc	123	20	6.1	12.6	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1164
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-03 D      SDG: 23A0206  
 Sampled: 01/11/23 09:18      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-084  
 % Solids: 49.38      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:15  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.076 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	12.1	20	0.07	0.38	
7440-43-9	Cadmium	0.35	20	0.06	0.19	
7440-50-8	Copper	55.7	20	0.33	0.94	
7440-66-6	Zinc	109	20	5.5	11.3	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**

LDW23-SS1158
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Total Metals

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-04 D      SDG: 23A0206  
 Sampled: 01/11/23 09:35      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-085  
 % Solids: 48.66      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:20  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.01 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	12.5	20	0.08	0.41	
7440-43-9	Cadmium	0.34	20	0.06	0.20	
7440-50-8	Copper	51.4	20	0.35	1.02	
7440-66-6	Zinc	105	20	5.9	12.2	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**

LDW23-SS1151
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Total Metals

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-05 D      SDG: 23A0206  
 Sampled: 01/11/23 09:50      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-086  
 % Solids: 52.44      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:25  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.075 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.85	20	0.07	0.35	
7440-43-9	Cadmium	0.32	20	0.05	0.18	
7440-50-8	Copper	49.9	20	0.31	0.89	
7440-66-6	Zinc	101	20	5.2	10.6	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**

LDW23-SS1145
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Total Metals

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-06 D

SDG: 23A0206

Sampled: 01/11/23 10:07

Prepared: 04/06/23 16:05

File ID: XDT\_m2230407-090

% Solids: 53.98

Preparation: SWN EPA 3050B

Analyzed: 04/07/23 21:46

Batch: BLD0123

Sequence: SLD0127

Initial/Final: 1.054 g Wet / 50 mL

Instrument: ICPMS2

Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.39	20	0.07	0.35	
7440-43-9	Cadmium	0.33	20	0.05	0.18	
7440-50-8	Copper	45.2	20	0.31	0.88	
7440-66-6	Zinc	98.9	20	5.1	10.5	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1139
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-07 D      SDG: 23A0206  
 Sampled: 01/11/23 10:20      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-091  
 % Solids: 58.12      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:51  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.043 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.88	20	0.06	0.33	
7440-43-9	Cadmium	0.24	20	0.05	0.16	
7440-50-8	Copper	40.9	20	0.29	0.82	
7440-66-6	Zinc	89.8	20	4.8	9.9	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1117
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-08 D      SDG: 23A0206  
 Sampled: 01/11/23 10:40      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-092  
 % Solids: 51.15      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 21:56  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.002 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	13.4	20	0.07	0.39	
7440-43-9	Cadmium	0.35	20	0.06	0.20	
7440-50-8	Copper	48.8	20	0.68	0.98	
7440-66-6	Zinc	99.1	20	5.7	11.7	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1103
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-09 D      SDG: 23A0206  
 Sampled: 01/11/23 11:15      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-093  
 % Solids: 40.33      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:00  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.078 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	19.8	20	0.09	0.46	
7440-43-9	Cadmium	0.44	20	0.07	0.23	
7440-50-8	Copper	67.6	20	0.40	1.15	
7440-66-6	Zinc	122	20	6.7	13.8	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

<b>LDW23-SS1100</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206  
 Sampled: 01/11/23 11:28      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-094  
 % Solids: 39.49      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:05  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.072 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	19.9	20	0.09	0.47	
7440-43-9	Cadmium	0.48	20	0.07	0.24	
7440-50-8	Copper	76.3	20	0.41	1.18	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

<b>LDW23-SS1100</b>
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206

Sampled: 01/11/23 11:28      Prepared: 04/06/23 16:05      File ID: XDT\_m2230411-047

% Solids: 39.49      Preparation: SWN EPA 3050B      Analyzed: 04/11/23 21:24

Batch: BLD0123      Sequence: SLD0147      Initial/Final: 1.072 g Wet / 50 mL

Instrument: ICPMS2      Calibration: GD00029

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-66-6	Zinc	1240	100	11.1	70.9	D



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**

<b>LDW23-SS1096</b>
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Total Metals

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-11 D      SDG: 23A0206  
 Sampled: 01/11/23 11:43      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-095  
 % Solids: 38.38      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:10  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.014 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	20.1	20	0.10	0.51	
7440-43-9	Cadmium	0.44	20	0.08	0.26	
7440-50-8	Copper	70.3	20	0.45	1.28	
7440-66-6	Zinc	125	20	7.5	15.4	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1094
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment

Laboratory ID: 23A0206-12 D

SDG: 23A0206

Sampled: 01/11/23 12:19

Prepared: 04/06/23 16:05

File ID: XDT\_m2230407-096

% Solids: 45.91

Preparation: SWN EPA 3050B

Analyzed: 04/07/23 22:15

Batch: BLD0123

Sequence: SLD0127

Initial/Final: 1.034 g Wet / 50 mL

Instrument: ICPMS2

Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	12.3	20	0.08	0.42	
7440-43-9	Cadmium	0.43	20	0.06	0.21	
7440-50-8	Copper	63.9	20	0.37	1.05	
7440-66-6	Zinc	125	20	6.2	12.6	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1066
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206  
 Sampled: 01/11/23 12:40      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-097  
 % Solids: 57.96      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:19  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.052 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	10.2	20	0.06	0.33	
7440-50-8	Copper	71.9	20	0.29	0.82	
7440-66-6	Zinc	146	20	1.5	9.8	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1066
--------------

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206

Sampled: 01/11/23 12:40      Prepared: 04/06/23 16:05      File ID: XDT\_m2230411-046

% Solids: 57.96      Preparation: SWN EPA 3050B      Analyzed: 04/11/23 21:20

Batch: BLD0123      Sequence: SLD0147      Initial/Final: 1.052 g Wet / 50 mL

Instrument: ICPMS2      Calibration: GD00029

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-43-9	Cadmium	1.95	50	0.12	0.41	D



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 6020B UCT-KED**  
Total Metals

LDW23-SS1061
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-14 D      SDG: 23A0206  
 Sampled: 01/11/23 13:03      Prepared: 04/06/23 16:05      File ID: XDT\_m2230407-098  
 % Solids: 48.61      Preparation: SWN EPA 3050B      Analyzed: 04/07/23 22:24  
 Batch: BLD0123      Sequence: SLD0127      Initial/Final: 1.043 g Wet / 50 mL  
 Instrument: ICPMS2      Calibration: GD00024

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	12.4	20	0.07	0.39	
7440-43-9	Cadmium	0.55	20	0.06	0.20	
7440-50-8	Copper	70.7	20	0.34	0.99	
7440-66-6	Zinc	150	20	5.8	11.8	



**PREPARATION BATCH SUMMARY**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLD0123 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	XDT_m2230407-058	04/06/23 16:05	
LDW23-SS1015	23A0206-02	XDT_m2230407-057	04/06/23 16:05	
LDW23-SS1164	23A0206-03	XDT_m2230407-084	04/06/23 16:05	
LDW23-SS1158	23A0206-04	XDT_m2230407-085	04/06/23 16:05	
LDW23-SS1151	23A0206-05	XDT_m2230407-086	04/06/23 16:05	
LDW23-SS1145	23A0206-06	XDT_m2230407-090	04/06/23 16:05	
LDW23-SS1139	23A0206-07	XDT_m2230407-091	04/06/23 16:05	
LDW23-SS1117	23A0206-08	XDT_m2230407-092	04/06/23 16:05	
LDW23-SS1103	23A0206-09	XDT_m2230407-093	04/06/23 16:05	
LDW23-SS1100	23A0206-10	XDT_m2230411-047	04/06/23 16:05	
LDW23-SS1100	23A0206-10	XDT_m2230407-094	04/06/23 16:05	
LDW23-SS1096	23A0206-11	XDT_m2230407-095	04/06/23 16:05	
LDW23-SS1094	23A0206-12	XDT_m2230407-096	04/06/23 16:05	
LDW23-SS1066	23A0206-13	XDT_m2230411-046	04/06/23 16:05	
LDW23-SS1066	23A0206-13	XDT_m2230407-097	04/06/23 16:05	
LDW23-SS1061	23A0206-14	XDT_m2230407-098	04/06/23 16:05	
Blank	BLD0123-BLK1	XDT_m2230407-044	04/06/23 16:05	
LCS	BLD0123-BS1	XDT_m2230407-045	04/06/23 16:05	
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	04/06/23 16:05	
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	04/06/23 16:05	
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	04/06/23 16:05	



### Digestion Log

Analyst: ARZ Date: 4/6/23 Time: 1040-1605 Balance ID: BAL10  
Matrix: soil Block ID: 3 Block Temp: 96c Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SWN</u>		Prep Code:		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
23A206-01	D		1.064	50			
-02			1.014				
-03			1.076				
-04			1.010				
-05			1.075				
-06			1.054				
-07			1.043				
-08			1.002				
-09			1.078				
-10			1.072				
-11			1.014				
-12			1.034				
-13			1.052				
-14			1.043				
BLD123-blk	-		—				23A206-01
-bs	-		—				
-dup	-		1.067				
-MS	-		1.067				
-MSD	-		1.064				
ARZ 4/5/23							

Chemical/Reagent ID:

HNO<sub>3</sub>: L2678 1:1 HNO<sub>3</sub>: L3305 HCl: — H<sub>2</sub>O<sub>2</sub>: K11056  
Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)



Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLD0123

Laboratory ID: BLD0123-BLK1

Prepared: 04/06/23 16:05

Matrix: Solid

Preparation: SWN EPA 3050B

Analyzed: 04/07/23 17:55

Sequence: SLD0127

Calibration: GD00024

Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U
7440-43-9	Cadmium-111	ND	20	0.03	0.10	U
7440-50-8	Copper-63	ND	20	0.17	0.50	U
7440-50-8	Copper-65	ND	20	0.35	0.50	U
7440-66-6	Zinc-66	ND	20	2.9	6.0	U
7440-66-6	Zinc-67	ND	20	0.9	6.0	U



**LCS / LCS DUPLICATE RECOVERY**  
**EPA 6020B UCT-KED**  
Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/07/23 18:00</u>
Batch:	<u>BLD0123</u>	Laboratory ID:	<u>BLD0123-BS1</u>
Preparation:	<u>SWN EPA 3050B</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>1 g / 50 mL</u>		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	24.9		99.4	80 - 120
Cadmium-111	25.0	25.0		100	80 - 120
Copper-63	25.0	26.1		104	80 - 120
Copper-65	25.0	25.5		102	80 - 120
Zinc-66	80.0	78.8		98.5	80 - 120
Zinc-67	80.0	74.5		93.2	80 - 120

\* Indicates values outside of QC limits



**DUPLICATES**  
**EPA 6020B UCT-KED**  
Total Metals

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLD0123-DUP1

Batch: BLD0123

Lab Source ID: 23A0206-01

Preparation: SWN EPA 3050B

Initial/Final: 1.067 g / 50 mL

Source Sample Name: LDW23-SS1021

% Solids: 47.26

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	14.9	14.7	1.30	
Cadmium-111	20	0.42	0.50	15.7	
Copper-63	20	62.7	63.5	1.33	
Zinc-66	20	120	118	1.36	

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/-RL instead of 20% RPD



**MS / MS DUPLICATE RECOVERY**  
**EPA 6020B UCT-KED**  
Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/07/23 19:16</u>
Batch:	<u>BLD0123</u>	Laboratory ID:	<u>BLD0123-MS1</u>
Preparation:	<u>SWN EPA 3050B</u>	Sequence Name:	<u>Matrix Spike</u>
Initial/Final:	<u>1.067 g / 50 mL</u>	Source Sample:	<u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	49.6	14.9		62.7		96.4	75 - 125
Cadmium-111	49.6	0.42		49.4		98.9	75 - 125
Copper-63	49.6	62.7		112		99.6	75 - 125
Zinc-66	159	120		277		98.9	75 - 125

\* Values outside of QC limits





**MS / MS DUPLICATE RECOVERY**  
**EPA 6020B UCT-KED**  
Total Metals

Laboratory: <u>Analytical Resources, LLC</u>	SDG: <u>23A0206</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>AOC5 MR Phase 1</u>
Matrix: <u>Solid</u>	Analyzed: <u>04/07/23 19:21</u>
Batch: <u>BLD0123</u>	Laboratory ID: <u>BLD0123-MSD1</u>
Preparation: <u>SWN EPA 3050B</u>	Sequence Name: <u>Matrix Spike Dup</u>
Initial/Final: <u>1.064 g / 50 mL</u>	Source Sample: <u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Arsenic-75a	49.7	60.9		92.5	2.93	20	75 - 125
Cadmium-111	49.7	49.8		99.4	0.794	20	75 - 125
Copper-63	49.7	113		101	0.751	20	75 - 125
Zinc-66	159	276		98.5	0.0997	20	75 - 125

\* Values outside of QC limits



## INITIAL CALIBRATION DATA

### EPA 6020B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GD00024

Instrument: ICPMS2

Calibration Date: 04/07/2023 14:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0.2	16310	10	15589.4	20	15081.25	50	14400.16	100	14033.47	0	0
Chromium-52	0.5	52134	10	21521	20	19752.9	50	18456.64	100	18475.77	0	0
Chromium-53	0.5	2536	10	2311.2	20	2169.55	50	2118.54	100	2108.75	0	0
Lead-208	0.1	47640	10	47767.4	20	46615.15	50	45078.5	100	44753.11	0	0



## INITIAL CALIBRATION DATA

### EPA 6020B

Laboratory: Analytical Resources, LLC

Instrument: ICPMS2

Calibration: GD00024

Calibration Date: 4/7/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	12569.05	49.4	0.9997		0.998	
Chromium-52	21723.39	77.6	0.9999		0.998	
Chromium-53	1874.007	49.7	0.9999		0.998	
Lead-208	38642.36	49.1	0.9999		0.998	



**INITIAL CALIBRATION DATA**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GD00024

Instrument: ICPMS2

Calibration Date: 04/07/2023 14:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0.2	255	10	242.1	20	235.1	50	222.9	100	216.58	0	0
Cadmium-111	0.1	330	10	267.8	20	255.05	50	249.64	100	240.43	0	0
Cadmium-114	0.1	660	10	662.4	20	637	50	616.14	100	590.73	0	0
Copper-63	0.5	3814	10	3710	20	3554.4	50	3381.02	100	3282.01	0	0
Copper-65	0.5	1812	10	1780	20	1773.15	50	1678.22	100	1618.2	0	0
Zinc-66	6	471	10	482.3	20	460.05	50	430.06	100	414.84	0	0
Zinc-67	6	70.33334	10	79.4	20	78.95	50	70.1	100	69.36	0	0



**INITIAL CALIBRATION DATA**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

Instrument: ICPMS2

Calibration: GD00024

Calibration Date: 4/7/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	195.28	49.5	0.9996		0.998	
Cadmium-111	223.82	51.0	0.9996		0.998	
Cadmium-114	527.7117	49.3	0.9994		0.998	
Copper-63	2956.905	49.4	0.9996		0.998	
Copper-65	1443.595	49.2	0.9994		0.998	
Zinc-66	376.375	49.4	0.9994		0.998	
Zinc-67	61.35722	49.5	0.9992		0.998	



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# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence: SLD0127 Cal: GD00024

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L3725		
		-CAL2	L3295		
		-CAL3	L3296		
		-CAL4	L3297		
		-CAL5	L3722		
		-CAL6	L3298		
		-IBU1	-		
		-ICV1	L3575		
		-ICB1	L3725		Ge st. noisy - %R & analytes OK
		-CCV1	L3722		
		-CCB1	L3725		
		-CHI1	L3295		
		-IFA1	L3578		Cr <sup>53</sup> ↑
		-IFB1	L3579		↓
		-HCV1	L3671		
		-HCV2	L3672		
		-IBL2			
		-IBL3			
		-CCV2			
		-CCB2			
		-CAU1			
		-CCV3			In st. noisy - %R & analytes OK
		↓ -CCB3			
		BLD0180-BLK1	REN		





Analysis Date: 4/7/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLD0180-BSI	PEN		
		23D0087-01	↓	2	
		23D0001-01	↓		
		23C0770-01	↓	20	
		23C0539-01REI	PEN	5	
		BLD0101-DUP3	↓	↓	
		↓ -MS3	↓	↓	Ba STL
		↓ -MSD3	↓	↓	↓
		SEQ-IBL4			
		↓ -CCV4			
		↓ -CCB4			
		BLD0055-BLK1	SWN	20	
		↓ -BSI	↓	↓	
		BLD0123-BLK1			
		↓ -BSI			
		23A0179-01			
		BLD0055-DUPI			Pb PPD
		↓ -MS1			Ag% P↓
		↓ -MSD1			↓
		↓ -PS1	↓	↓	
		SEQ-IBL5			
		↓ -CCV5			
		↓ -CCB5			
		23A0158-14	SWN	20	



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# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23A0158-15	SWN	20	
		↓ -16			
		23A0206-02			
		↓ -01			
		BLDD123-DUP1			
		↓ -MS1			
		↓ -MSD1			
		↓ -PS1			
		SEQ-IBL6			
		↓ -CCV6			
		↓ -CCB6			
		23A0179-02	SWN	20	
		↓ -03			
		↓ -04			
		↓ -05			
		↓ -06			
		↓ -07			
		↓ -08			
		↓ -09			
		↓ -10			
		SEQ-IBL7			
		↓ -CCV7			
		↓ -CCB7			Sc+Tb sl. noisy - %P&amlytes OK
		23A0179-11	SWN	20	





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# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/17/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23A0179-12	SWN	20	
		23A0180-01	↓	↓	
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		↓ -04	↓	↓	
		23A0206-03	↓	↓	
		↓ -04	↓	↓	
		↓ -05	↓	↓	
		SEQ-IBL8			
		↓ -CCV8			
		↓ -CCB8			
		23A0206-06	SWN	20	
		↓ -07	↓	↓	
		↓ -08	↓	↓	
		↓ -09	↓	↓	
		↓ -10	↓	↓	Zn↑ No Zn
		↓ -11	↓	↓	
		↓ -12	↓	↓	
		↓ -13	↓	↓	Cd noisy No Cd
		↓ -14	↓	↓	
		SEQ-IBL9			
		↓ -CCV9			
		↓ -CCB9			
		23A0158-05	SWN	50	



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# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence:      Cal:     

All corrections made by analyst unless otherwise noted. SD 4/7/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23A0158-06	SWN	50	
		↓ -07	↓	↓	
		↓ -10	↓	↓	
		23A0157-01			
		BLD0030-DUP2			
		↓ -MSZ	↓	↓	
		↓ -MSDL	↓	↓	
	✓	↓ -PSZ	↓	↓	C <sup>100</sup> P↓ - NOT NEEDED
		SEQ-IBLA			
		↓ -CCVA			
		↓ -CCBA			
	✓	↓ -CALI			
		↓ -CCVB			
		↓ -CCBB			
		BLD0022-BLK3	REN		
		↓ -BS3	↓		
		23A0157-06	SWN	50	
		↓ -07	↓	↓	
		↓ -08	↓	↓	
		↓ -10	↓	↓	
		↓ -12	↓	↓	
		↓ -13	↓	↓	
		23C0644-01	REN	20	In-1 noisy - %R & analytes OK
		SEQ-IBLC			





Analysis Date: 4/7/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted. 8D4/7/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVC			
		↓ -CCBC			
		23C0591-01RE1	REN	50	
		23C0527-06	<del>REPHN</del>	2	SCF-NOT NEEDED
		↓ -02	↓		↓
		↓ -04			
		↓ -08			
		↓ -10			
		↓ -12			
		BLD0094-DUP1			
		↓ -MS1	↓		↓
		SEQ-IBLD			
		↓ -CCVD			
		↓ -CCBD			
		23C0530-01	REN	2	
		↓ -02	↓	↓	
		23C0513-01		5	
		BLD0022-DUP3		↓	
		↓ -MS3		↓	
		23C0539-01			Ba↑ Ba NR
		BLD0101-DUP2			↓ ↓
		↓ -MS2			
		↓ -MSD2	↓		↓ ↓
		SEQ-IBLE			



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# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence:      Cal:     

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVE			
		↓ -CCBE			
		23C0591-04	REN	5	
		↓ -02	↓	2	
		↓ -05	↓	↓	
		↓ -06	↓	↓	
		↓ -07	↓	↓	
		↓ -08	↓	↓	
		↓ -03RE1	↓	10	
		↓ -03	↓	2	
		↓ -01	↓		Mn↑ MnNR
		SEQ-TBLE			
		↓ -CCVF			
		↓ -CCBF			
	✓	↓ -CALI			
		↓ -CCVG			
		↓ -CCBG			
		23C0540-05	REN		SC↑-NOT NEEDED
		↓ -04RE1	↓	10	
		↓ -02RE1	↓	100	
		↓ -19RE1	↓	↓	
		↓ -03RE1	↓	↓	
		BLDD0102-DUP3			
		↓ -MS3	↓	↓	NI STL





# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLD0102-MSD3	REN	100	Ni STL
		23C0540-04	↓		SCP-NOT NEEDED Ni↑ Ni NR
		SEQ-IBLH			
		↓ -CCVH			
		↓ -CCBH			
		23C0512-07	REN		
		↓ -08	↓		
		↓ -09			SCP-NOT NEEDED
		↓ -10			
		↓ -11			
		23C0539-07			
		↓ -03			
		↓ -04			
		↓ -05			
		SEQ-IBLT			
		↓ -CCVI			
		↓ -CCBT			
		23C0544-01	REN	10	
		↓ -02	↓	↓	
		↓ -03			
		23C0540-02			Ni↑ Ni NR
		↓ -19			↓ ↓
		↓ -03			Ni↑ Ni NR
		BLD0102-DUPZ	↓	↓	↓ ↓



# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/7/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BDD0102-MSZ	REN	10	NI↑ NI NR
		↓ -MSDZ	↓	↓	↓
		SEQ-IBLT			
		↓ -CCWT			
		↓ -CCBT			
		RINSE/DT			
4/7/23					

## Performance Check Report

### Sample ID: STD Performance Check

Sample Date/Time: Friday, April 07, 2023 12:51:06

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\DataSet\Default\STD Performance Check.5627

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		8480.7		8480.717		148.670		1.8	Standard	
In	114.9		64753.0		64753.034		657.403		1.0	Standard	
U	238.1		53723.2		53723.184		918.660		1.7	Standard	
[	CeO	155.9		1106.4		0.016		0.000		2.7	Standard
>	Ce	139.9		67268.8		67268.821		723.369		1.1	Standard
[	Ce++	70.0		1518.9		0.023		0.000		1.9	Standard
	Bkgd	220.0		0.1		0.100		0.091		91.3	Standard

### Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: STD Performance Check

Report Date/Time: Friday, April 07, 2023 12:53:10

Page 1



## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/7/2023 12:50:55 PM

End Time: 4/7/2023 12:59:45 PM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 8480.72

Obtained Intensity (In 115): 64753.03

Obtained Intensity (U 238): 53723.18

Obtained Intensity (Bkgd 220): 0.10

Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=1518.95 / 67268.82)

Obtained Formula (CeO 156 / Ce 140): 0.016 (=1106.44 / 67268.82)

Obtained RSD (Be 9): 0.0175

Obtained RSD (In 115): 0.0102

Obtained RSD (U 238): 0.0171

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.66 mm	0.43 mm	69237.38

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.04

Obtained Intensity (In 115): 66297.48

Obtained Formula (CeO 156 / Ce 140): 0.0209 (=1277.06 / 61240.99)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)

Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.705)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.711)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.988; Intercept = -11.87

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -12.77



## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/7/2023 12:50:55 PM

### STD Performance Check

#### Optimization Settings:

Method: STD Performance Check.mth.  
Intensity Criterion: Be 9 > 2000  
Intensity Criterion: In 115 > 40000  
Intensity Criterion: U 238 > 30000  
Intensity Criterion: Bkgd 220 <= 1  
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03  
Formula Criterion: CeO 156 / Ce 140 <= 0.025  
RSD Criterion: Be 9.0122 < 0.05  
RSD Criterion: In 114.904 < 0.05  
RSD Criterion: U 238.05 < 0.05

#### Optimization Results:

##### Initial Try

Obtained Intensity (Be 9): 8480.72  
Obtained Intensity (In 115): 64753.03  
Obtained Intensity (U 238): 53723.18  
Obtained Intensity (Bkgd 220): 0.10  
Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=1518.95 / 67268.82)  
Obtained Formula (CeO 156 / Ce 140): 0.016 (=1106.44 / 67268.82)  
Obtained RSD (Be 9): 0.0175  
Obtained RSD (In 115): 0.0102  
Obtained RSD (U 238): 0.0171

[Passed] Optimum value(s): N/A

### Torch Alignment

#### Optimization Settings:

Method: Torch Alignment.mth.  
Intensity Criterion: In 115 Maximum

#### Optimization Results:

	Vertical	Horizontal	Intensity
[Passed]	0.66 mm	0.43 mm	69237.38

### Nebulizer Gas Flow STD/KED [NEB]

#### Optimization Settings:

Method: Optimize.mth.  
Initial Try - Start/End/Step: 1.02/1.06/0.01.  
Intensity Criterion: In 115 Maximum  
Formula Criterion: CeO 156 / Ce 140 <= 0.025

#### Optimization Results:

##### Initial Try

Obtained Intensity (In 115): 66297.48  
Obtained Formula (CeO 156 / Ce 140): 0.0209 (=1277.06 / 61240.99)

[Passed] Optimum value(s): 1.04

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.  
MassCal File: Default.tun  
Iterations: 6  
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution  
Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)  
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)  
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.705)  
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.711)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.  
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.988; Intercept = -11.87

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-12.5	39398.3
Mg	24	41	-13	44685.8
In	115	41	-10.5	69171.1
Ce	140	41	-8.5	68258.7
Pb	208	41	-7.5	33543.3
U	238	41	-7.5	56338.9

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.  
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.997; Intercept = -12.77

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	27069.6
Mg	24	41	-13	27270
In	115	41	-10.5	47117.6
Ce	140	41	-9	54507.8
Pb	208	41	-7	25971.6
U	238	41	-6	41295.6

End Time: 4/7/2023 12:59:45 PM

## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/7/2023 12:59:52 PM

End Time: 4/7/2023 1:00:59 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -11.92

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/7/2023 12:59:52 PM

### QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.997; Intercept = -11.92

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-12.5	39474.5
Mg	24	41	-13	45701
In	115	41	-9.5	69343.9
Ce	140	41	-8	67643.8
Pb	208	41	-7.5	33178.5
U	238	41	-7.5	57411.1

End Time: 4/7/2023 1:00:59 PM

## Performance Check Report

### Sample ID: STD Performance Check

Sample Date/Time: Friday, April 07, 2023 13:01:07

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\DataSet\Default\STD Performance Check.5634

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		9166.8		9166.807		83.229		0.9	Standard	
In	114.9		67155.9		67155.884		495.955		0.7	Standard	
U	238.1		57143.0		57142.998		482.159		0.8	Standard	
[	CeO	155.9		1363.4		0.020		0.001		4.1	Standard
>	Ce	139.9		68912.0		68911.954		620.844		0.9	Standard
[	Ce++	70.0		1683.9		0.024		0.001		2.5	Standard
	Bkgd	220.0		0.1		0.067		0.091		136.9	Standard

### Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: STD Performance Check

Report Date/Time: Friday, April 07, 2023 13:03:11

Page 1

## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/7/2023 1:01:05 PM

End Time: 4/7/2023 1:03:11 PM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 9166.81

Obtained Intensity (In 115): 67155.88

Obtained Intensity (U 238): 57143.00

Obtained Intensity (Bkgd 220): 0.07

Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1683.90 / 68911.95)

Obtained Formula (CeO 156 / Ce 140): 0.020 (=1363.40 / 68911.95)

Obtained RSD (Be 9): 0.0091

Obtained RSD (In 115): 0.0074

Obtained RSD (U 238): 0.0084

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/7/2023 1:01:05 PM

### STD Performance Check

#### Optimization Settings:

Method: STD Performance Check.mth.  
Intensity Criterion: Be 9 > 2000  
Intensity Criterion: In 115 > 40000  
Intensity Criterion: U 238 > 30000  
Intensity Criterion: Bkgd 220 <= 1  
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03  
Formula Criterion: CeO 156 / Ce 140 <= 0.025  
RSD Criterion: Be 9.0122 < 0.05  
RSD Criterion: In 114.904 < 0.05  
RSD Criterion: U 238.05 < 0.05

#### Optimization Results:

##### Initial Try

Obtained Intensity (Be 9): 9166.81  
Obtained Intensity (In 115): 67155.88  
Obtained Intensity (U 238): 57143.00  
Obtained Intensity (Bkgd 220): 0.07  
Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1683.90 / 68911.95)  
Obtained Formula (CeO 156 / Ce 140): 0.020 (=1363.40 / 68911.95)  
Obtained RSD (Be 9): 0.0091  
Obtained RSD (In 115): 0.0074  
Obtained RSD (U 238): 0.0084

[Passed] Optimum value(s): N/A

End Time: 4/7/2023 1:03:11 PM

## ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**

**Sample Dil Factor:**

**Comments:**

**Sample Date/Time: Friday, April 07, 2023 14:00:57**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L				29859	0	Standard
Cl	37	ug/L				4319739	0	Standard
[> Sc	45	ug/L				534549	1	Standard
Cr	52	ug/L				16833	1	Standard
Cr	53	ug/L				189	4	Standard
Mn	55	ug/L				1126	0	Standard
[> Ge	72	ug/L				30905	2	KED
Ni	60	ug/L				128	10	KED
Ni	62	ug/L				22	28	KED
Cu	63	ug/L				58	26	KED
Cu	65	ug/L				30	12	KED
Zn	66	ug/L				22	17	KED
Zn	67	ug/L				4	65	KED
As	75	ug/L				6	4	KED
Se	78	ug/L				18	12	KED
Y	89	ug/L				304032	2	Standard
Kr	83	ug/L				53	12	Standard
[> In-1	115	ug/L				8638	3	KED
Cd	111	ug/L				2	88	KED
Cd	114	ug/L				5	69	KED
[> In	115	ug/L				433939	1	Standard
Ag	107	ug/L				219	4	Standard
Sb	121	ug/L				54	26	Standard
Sb	123	ug/L				38	24	Standard
Ba	135	ug/L				13	14	Standard
Ba	137	ug/L				22	25	Standard
[> Tb	159	ug/L				730524	0	Standard
Tl	205	ug/L				951	3	Standard
Pb	208	ug/L				86	13	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:05:47

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L			29859	35617	3	Standard
Cl	37	ug/L			4319739	4462923	1	Standard
[> Sc	45	ug/L			534549	540241	1	Standard
Cr	52	0.500	0.030	5	16833	26067	1	Standard
Cr	53	0.500	0.009	1	189	1268	2	Standard
Mn	55	0.500	0.010	1	1126	14562	0	Standard
[> Ge	72	ug/L			30905	31278	1	KED
Ni	60	0.500	0.025	5	128	751	3	KED
Ni	62	0.500	0.062	12	22	120	9	KED
Cu	63	0.500	0.040	8	58	1907	8	KED
Cu	65	0.500	0.047	9	30	906	8	KED
Zn	66	6.000	0.149	2	22	2826	1	KED
Zn	67	6.000	0.570	9	4	422	8	KED
As	75	0.200	0.021	10	6	51	8	KED
[ Se	78	0.500	0.212	42	18	34	20	KED
Y	89	ug/L			304032	309057	2	Standard
Kr	83	ug/L			53	54	2	Standard
[> In-1	115	ug/L			8638	8360	4	KED
Cd	111	0.100	0.022	21	2	33	16	KED
Cd	114	0.100	0.027	26	5	66	22	KED
[> In	115	ug/L			433939	431866	0	Standard
Ag	107	0.200	0.003	1	219	3262	2	Standard
Sb	121	0.200	0.004	2	54	2285	1	Standard
Sb	123	0.200	0.006	2	38	1733	3	Standard
Ba	135	0.500	0.013	2	13	1915	2	Standard
[ Ba	137	0.500	0.006	1	22	3282	1	Standard
[> Tb	159	ug/L			730524	717017	0	Standard
Tl	205	0.200	0.002	1	951	7798	0	Standard
[ Pb	208	0.100	0.003	2	86	4764	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:10:38

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L			29859	64012	0	Standard
Cl	37	ug/L			4319739	4362622	0	Standard
[> Sc	45	ug/L			534549	562925	0	Standard
Cr	52	10.001	0.325	3	16833	215210	2	Standard
Cr	53	10.001	0.184	1	189	23112	1	Standard
Mn	55	9.999	0.213	2	1126	272905	1	Standard
[> Ge	72	ug/L			30905	32013	0	KED
Ni	60	10.000	0.099	0	128	12630	0	KED
Ni	62	10.000	0.416	4	22	2047	4	KED
Cu	63	9.999	0.086	0	58	37100	1	KED
Cu	65	10.000	0.098	0	30	17800	1	KED
Zn	66	10.008	0.251	2	22	4823	2	KED
Zn	67	10.260	0.474	4	4	794	4	KED
As	75	10.000	0.124	1	6	2421	1	KED
[ Se	78	9.996	0.192	1	18	287	1	KED
Y	89	ug/L			304032	317526	1	Standard
Kr	83	ug/L			53	45	12	Standard
[> In-1	115	ug/L			8638	8720	0	KED
Cd	111	10.000	0.247	2	2	2678	2	KED
Cd	114	10.000	0.121	1	5	6624	1	KED
[> In	115	ug/L			433939	443145	1	Standard
Ag	107	10.000	0.162	1	219	155894	0	Standard
Sb	121	10.000	0.175	1	54	119554	0	Standard
Sb	123	10.000	0.148	1	38	89634	0	Standard
Ba	135	9.999	0.240	2	13	38214	1	Standard
[ Ba	137	10.000	0.115	1	22	68215	1	Standard
[> Tb	159	ug/L			730524	755356	0	Standard
Tl	205	10.000	0.190	1	951	364034	1	Standard
[ Pb	208	10.000	0.034	0	86	477674	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:15:42

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L			29859	67136	1	Standard
Cl	37	ug/L			4319739	4417547	1	Standard
[> Sc	45	ug/L			534549	559321	0	Standard
Cr	52	19.842	0.213	1	16833	395058	1	Standard
Cr	53	19.785	0.063	0	189	43391	0	Standard
Mn	55	19.933	0.244	1	1126	532347	1	Standard
[> Ge	72				30905	31773	1	KED
Ni	60	19.934	0.498	2	128	24532	1	KED
Ni	62	19.956	0.389	1	22	3996	2	KED
Cu	63	19.860	0.132	0	58	71088	2	KED
Cu	65	20.019	0.259	1	30	35463	0	KED
Zn	66	19.812	0.145	0	22	9201	1	KED
Zn	67	20.156	0.811	4	4	1579	2	KED
As	75	19.917	0.155	0	6	4702	0	KED
Se	78	20.004	0.526	2	18	552	3	KED
Y	89				304032	318436	2	Standard
Kr	83				53	66	20	Standard
[> In-1	115				8638	8670	1	KED
Cd	111	19.829	0.230	1	2	5101	0	KED
Cd	114	19.868	0.536	2	5	12740	1	KED
[> In	115				433939	436330	1	Standard
Ag	107	19.931	0.018	0	219	301625	1	Standard
Sb	121	19.919	0.448	2	54	230711	1	Standard
Sb	123	19.930	0.078	0	38	173429	1	Standard
Ba	135	19.877	0.352	1	13	72989	0	Standard
Ba	137	19.870	0.108	0	22	130072	0	Standard
[> Tb	159				730524	742527	1	Standard
Tl	205	19.963	0.204	1	951	708107	0	Standard
Pb	208	19.972	0.245	1	86	932303	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:20:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	30200	1	Standard
Cl	37		ug/L			4319739	4457519	2	Standard
[> Sc	45		ug/L			534549	567055	0	Standard
Cr	52	49.459	ug/L	0.439	0	16833	922832	1	Standard
Cr	53	49.614	ug/L	1.037	2	189	105927	1	Standard
Mn	55	49.634	ug/L	0.306	0	1126	1294836	0	Standard
[> Ge	72		ug/L			30905	31187	1	KED
Ni	60	49.584	ug/L	0.768	1	128	57336	1	KED
Ni	62	49.510	ug/L	0.364	0	22	9244	1	KED
Cu	63	49.681	ug/L	1.424	2	58	169051	2	KED
Cu	65	49.704	ug/L	0.196	0	30	83911	1	KED
Zn	66	49.490	ug/L	0.495	0	22	21503	1	KED
Zn	67	49.167	ug/L	1.184	2	4	3505	2	KED
As	75	49.678	ug/L	0.677	1	6	11145	0	KED
Se	78	49.597	ug/L	0.550	1	18	1266	1	KED
Y	89		ug/L			304032	311796	1	Standard
Kr	83		ug/L			53	69	23	Standard
[> In-1	115		ug/L			8638	8425	0	KED
Cd	111	49.990	ug/L	0.203	0	2	12482	0	KED
Cd	114	49.906	ug/L	0.519	1	5	30807	1	KED
[> In	115		ug/L			433939	429730	0	Standard
Ag	107	49.716	ug/L	1.985	3	219	720008	3	Standard
Sb	121	49.636	ug/L	0.368	0	54	546326	0	Standard
Sb	123	49.793	ug/L	0.646	1	38	418006	0	Standard
Ba	135	49.931	ug/L	0.604	1	13	179343	0	Standard
Ba	137	49.861	ug/L	0.822	1	22	317019	1	Standard
[> Tb	159		ug/L			730524	729522	3	Standard
Tl	205	49.846	ug/L	2.423	4	951	1707888	1	Standard
Pb	208	49.859	ug/L	1.273	2	86	2253925	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:27:50

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L			29859	51185	1	Standard
Cl	37	ug/L			4319739	4496501	1	Standard
[> Sc	45	ug/L			534549	555515	2	Standard
Cr	52	100.487	2.599	2	16833	1847577	0	Standard
Cr	53	100.217	2.012	2	189	210875	0	Standard
Mn	55	100.066	3.786	3	1126	2560267	1	Standard
[> Ge	72	ug/L			30905	29504	2	KED
Ni	60	100.780	2.186	2	128	113030	0	KED
Ni	62	101.066	1.407	1	22	18484	1	KED
Cu	63	100.450	1.914	1	58	328201	1	KED
Cu	65	100.315	2.637	2	30	161820	0	KED
Zn	66	100.231	2.113	2	22	41484	1	KED
Zn	67	100.657	1.920	1	4	6936	4	KED
As	75	100.474	1.466	1	6	21658	0	KED
Se	78	100.479	1.476	1	18	2448	1	KED
Y	89	ug/L			304032	315624	2	Standard
Kr	83	ug/L			53	78	6	Standard
[> In-1	115	ug/L			8638	8150	2	KED
Cd	111	99.901	1.886	1	2	24043	0	KED
Cd	114	99.759	2.192	2	5	59073	0	KED
[> In	115	ug/L			433939	422511	1	Standard
Ag	107	99.668	3.866	3	219	1403347	2	Standard
Sb	121	100.200	2.245	2	54	1091404	1	Standard
Sb	123	100.288	1.204	1	38	835711	0	Standard
Ba	135	100.004	0.926	0	13	353194	0	Standard
Ba	137	100.085	2.045	2	22	627335	0	Standard
[> Tb	159	ug/L			730524	722656	0	Standard
Tl	205	100.343	1.401	1	951	3447378	1	Standard
Pb	208	99.975	0.698	0	86	4475311	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:35:25

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	35213	4	Standard
Cl	37		ug/L			4319739	4395062	0	Standard
[> Sc	45		ug/L			534549	544449	2	Standard
Cr	52	-0.002	ug/L	0.037	1561	16833	17097	3	Standard
Cr	53	-0.011	ug/L	0.003	29	189	170	3	Standard
Mn	55	-0.002	ug/L	0.002	132	1126	1100	3	Standard
[> Ge	72		ug/L			30905	30530	0	KED
Ni	60	0.046	ug/L	0.024	50	128	180	15	KED
Ni	62	0.049	ug/L	0.082	168	22	31	48	KED
Cu	63	0.000	ug/L	0.001	291	58	59	6	KED
Cu	65	-0.000	ug/L	0.005	2893	30	29	25	KED
Zn	66	0.005	ug/L	0.007	133	22	24	12	KED
Zn	67	0.010	ug/L	0.062	641	4	5	86	KED
As	75	0.011	ug/L	0.014	129	6	8	37	KED
Se	78	0.060	ug/L	0.110	184	18	19	14	KED
Y	89		ug/L			304032	304236	1	Standard
Kr	83		ug/L			53	55	21	Standard
[> In-1	115		ug/L			8638	8362	1	KED
Cd	111	0.002	ug/L	0.012	785	2	3	96	KED
Cd	114	-0.003	ug/L	0.006	224	5	3	102	KED
[> In	115		ug/L			433939	428781	0	Standard
Ag	107	-0.002	ug/L	0.002	81	219	187	12	Standard
Sb	121	0.027	ug/L	0.002	8	54	354	8	Standard
Sb	123	0.027	ug/L	0.004	13	38	269	12	Standard
Ba	135	0.006	ug/L	0.002	35	13	34	22	Standard
Ba	137	0.005	ug/L	0.001	13	22	55	8	Standard
[> Tb	159		ug/L			730524	724374	1	Standard
Tl	205	0.002	ug/L	0.000	26	951	1003	0	Standard
Pb	208	0.001	ug/L	0.000	37	86	125	9	Standard

## Sample Information

Sample Date/Time: Friday, April 07, 2023 14:27:50

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED

Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

## Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	<b>0.9999</b>	0.033	0.50	10	20	50	100
Cr	53	<b>0.9999</b>	0.004	0.50	10	20	50	100
Mn	55	<b>1.0000</b>	0.046	0.50	10	20	50	100
Ge	72							
Ni	60	<b>0.9999</b>	0.038	0.50	10	20	50	100
Ni	62	<b>0.9998</b>	0.006	0.50	10	20	50	100
Cu	63	<b>0.9999</b>	0.111	0.50	10	20	50	100
Cu	65	<b>1.0000</b>	0.055	0.50	10	20	50	100
Zn	66	<b>0.9999</b>	0.014	6.00	10	20	50	100
Zn	67	<b>0.9998</b>	0.002	6.00	10	20	50	100
As	75	<b>0.9999</b>	0.007	0.20	10	20	50	100
Se	78	<b>0.9999</b>	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	<b>1.0000</b>	0.030	0.10	10	20	50	100
Cd	114	<b>1.0000</b>	0.073	0.10	10	20	50	100
In	115							
Ag	107	<b>1.0000</b>	0.033	0.20	10	20	50	100
Sb	121	<b>1.0000</b>	0.026	0.20	10	20	50	100
Sb	123	<b>1.0000</b>	0.020	0.20	10	20	50	100
Ba	135	<b>1.0000</b>	0.008	0.50	10	20	50	100
Ba	137	<b>1.0000</b>	0.015	0.50	10	20	50	100
Tb	159							
Tl	205	<b>1.0000</b>	0.048	0.20	10	20	50	100
Pb	208	<b>1.0000</b>	0.062	0.10	10	20	50	100

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:43:40

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	37305	2	Standard
Cl	37		ug/L			4319739	4491368	1	Standard
[> Sc	45		ug/L			534549	561289	1	Standard
Cr	52	52.146	ug/L	0.355	0	16833	977670	2	Standard
Cr	53	51.788	ug/L	0.775	1	189	110218	0	Standard
Mn	55	52.586	ug/L	0.701	1	1126	1360607	0	Standard
[> Ge	72		ug/L			30905	31696	1	KED
Ni	60	49.861	ug/L	0.416	0	128	60162	1	KED
Ni	62	50.468	ug/L	0.353	0	22	9928	1	KED
Cu	63	50.087	ug/L	0.608	1	58	175863	1	KED
Cu	65	50.247	ug/L	0.678	1	30	87116	1	KED
Zn	66	48.554	ug/L	0.359	0	22	21604	1	KED
Zn	67	48.627	ug/L	2.221	4	4	3599	3	KED
As	75	46.543	ug/L	0.426	0	6	10783	0	KED
[ Se	78	75.021	ug/L	1.069	1	18	1968	1	KED
Y	89		ug/L			304032	320562	1	Standard
Kr	83		ug/L			53	57	21	Standard
[> In-1	115		ug/L			8638	8630	1	KED
Cd	111	49.740	ug/L	0.082	0	2	12681	1	KED
Cd	114	48.943	ug/L	0.325	0	5	30703	1	KED
[> In	115		ug/L			433939	424855	0	Standard
Ag	107	53.018	ug/L	0.788	1	219	750954	1	Standard
Sb	121	50.624	ug/L	0.270	0	54	554572	0	Standard
Sb	123	50.427	ug/L	0.589	1	38	422607	1	Standard
Ba	135	51.698	ug/L	1.115	2	13	183604	1	Standard
[ Ba	137	52.157	ug/L	0.455	0	22	328810	1	Standard
[> Tb	159		ug/L			730524	740859	0	Standard
Tl	205	50.079	ug/L	0.311	0	951	1764382	0	Standard
[ Pb	208	50.539	ug/L	0.422	0	86	2319372	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:51:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	30607	1	Standard
Cl	37		ug/L			4319739	4343618	0	Standard
[> Sc	45		ug/L			534549	546372	2	Standard
Cr	52	-0.012	ug/L	0.039	337	16833	16986	2	Standard
Cr	53	-0.010	ug/L	0.005	46	189	173	4	Standard
Mn	55	-0.004	ug/L	0.000	1	1126	1039	2	Standard
[> Ge	72		ug/L			30905	30563	6	KED
Ni	60	0.041	ug/L	0.010	23	128	173	1	KED
Ni	62	0.065	ug/L	0.076	117	22	34	34	KED
Cu	63	-0.001	ug/L	0.006	1016	58	55	34	KED
Cu	65	-0.000	ug/L	0.006	1403	30	29	37	KED
Zn	66	-0.005	ug/L	0.006	104	22	19	14	KED
Zn	67	0.027	ug/L	0.015	53	4	6	17	KED
As	75	0.004	ug/L	0.004	95	6	6	10	KED
Se	78	-0.083	ug/L	0.090	108	18	16	8	KED
Y	89		ug/L			304032	301477	2	Standard
Kr	83		ug/L			53	55	5	Standard
[> In-1	115		ug/L			8638	8418	1	KED
Cd	111	0.010	ug/L	0.008	74	2	5	36	KED
Cd	114	-0.003	ug/L	0.006	222	5	3	103	KED
[> In	115		ug/L			433939	421024	1	Standard
Ag	107	-0.004	ug/L	0.001	39	219	163	12	Standard
Sb	121	0.029	ug/L	0.002	7	54	362	5	Standard
Sb	123	0.029	ug/L	0.003	11	38	276	9	Standard
Ba	135	-0.001	ug/L	0.001	115	13	9	40	Standard
Ba	137	0.001	ug/L	0.001	82	22	26	11	Standard
[> Tb	159		ug/L			730524	726082	0	Standard
Tl	205	0.001	ug/L	0.002	127	951	994	6	Standard
Pb	208	-0.000	ug/L	0.000	412	86	82	15	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 14:56:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	30745	1	Standard
Cl	37		ug/L			4319739	4484893	0	Standard
[> Sc	45		ug/L			534549	557260	1	Standard
Cr	52	50.894	ug/L	0.679	1	16833	947632	0	Standard
Cr	53	51.496	ug/L	0.843	1	189	108813	0	Standard
Mn	55	51.245	ug/L	0.199	0	1126	1316569	1	Standard
[> Ge	72		ug/L			30905	30859	0	KED
Ni	60	49.356	ug/L	0.298	0	128	57977	0	KED
Ni	62	49.766	ug/L	1.766	3	22	9530	2	KED
Cu	63	50.136	ug/L	0.332	0	58	171398	1	KED
Cu	65	50.177	ug/L	0.934	1	30	84715	2	KED
Zn	66	50.668	ug/L	1.170	2	22	21949	2	KED
Zn	67	50.589	ug/L	0.258	0	4	3647	0	KED
As	75	49.645	ug/L	0.364	0	6	11198	1	KED
Se	78	49.309	ug/L	0.451	0	18	1266	1	KED
Y	89		ug/L			304032	313290	2	Standard
Kr	83		ug/L			53	67	8	Standard
[> In-1	115		ug/L			8638	8624	0	KED
Cd	111	49.474	ug/L	0.740	1	2	12604	1	KED
Cd	114	49.749	ug/L	1.248	2	5	31188	2	KED
[> In	115		ug/L			433939	429153	1	Standard
Ag	107	50.232	ug/L	1.014	2	219	718593	1	Standard
Sb	121	49.858	ug/L	0.954	1	54	551578	0	Standard
Sb	123	49.609	ug/L	1.242	2	38	419827	0	Standard
Ba	135	50.635	ug/L	1.000	1	13	181617	0	Standard
Ba	137	50.164	ug/L	0.431	0	22	319419	1	Standard
[> Tb	159		ug/L			730524	736459	0	Standard
Tl	205	49.542	ug/L	0.992	2	951	1735100	1	Standard
Pb	208	49.250	ug/L	0.448	0	86	2246818	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:05:32

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	31350	1	Standard
Cl	37		ug/L			4319739	4360766	0	Standard
[> Sc	45		ug/L			534549	541607	2	Standard
Cr	52	-0.014	ug/L	0.012	82	16833	16804	1	Standard
Cr	53	-0.016	ug/L	0.012	72	189	158	12	Standard
Mn	55	-0.007	ug/L	0.001	17	1126	976	1	Standard
[> Ge	72		ug/L			30905	30370	0	KED
Ni	60	0.042	ug/L	0.022	52	128	174	14	KED
Ni	62	0.039	ug/L	0.005	13	22	29	3	KED
Cu	63	0.001	ug/L	0.003	224	58	61	15	KED
Cu	65	0.004	ug/L	0.003	76	30	36	13	KED
Zn	66	-0.005	ug/L	0.019	375	22	19	40	KED
Zn	67	0.010	ug/L	0.041	411	4	5	57	KED
As	75	0.007	ug/L	0.008	122	6	7	25	KED
Se	78	0.190	ug/L	0.066	34	18	22	7	KED
Y	89		ug/L			304032	300302	1	Standard
Kr	83		ug/L			53	51	23	Standard
[> In-1	115		ug/L			8638	8547	2	KED
Cd	111	0.004	ug/L	0.000	10	2	3	0	KED
Cd	114	-0.003	ug/L	0.003	118	5	3	53	KED
[> In	115		ug/L			433939	429772	0	Standard
Ag	107	-0.005	ug/L	0.001	13	219	144	6	Standard
Sb	121	0.044	ug/L	0.002	4	54	539	3	Standard
Sb	123	0.045	ug/L	0.001	3	38	418	2	Standard
Ba	135	-0.000	ug/L	0.002	1697	13	12	60	Standard
Ba	137	-0.001	ug/L	0.001	102	22	17	26	Standard
[> Tb	159		ug/L			730524	713009	0	Standard
Tl	205	0.001	ug/L	0.002	287	951	950	6	Standard
Pb	208	0.000	ug/L	0.000	918	86	85	15	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:11:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	35819	1	Standard
Cl	37		ug/L			4319739	4376045	1	Standard
[> Sc	45		ug/L			534549	540381	0	Standard
Cr	52	0.544	ug/L	0.037	6	16833	26657	1	Standard
Cr	53	0.527	ug/L	0.031	5	189	1270	4	Standard
Mn	55	0.518	ug/L	0.013	2	1126	14038	1	Standard
[> Ge	72		ug/L			30905	30747	1	KED
Ni	60	0.552	ug/L	0.032	5	128	772	5	KED
Ni	62	0.624	ug/L	0.028	4	22	141	5	KED
Cu	63	0.503	ug/L	0.027	5	58	1770	4	KED
Cu	65	0.538	ug/L	0.014	2	30	935	3	KED
Zn	66	6.133	ug/L	0.163	2	22	2666	3	KED
Zn	67	5.584	ug/L	0.170	3	4	405	3	KED
As	75	0.219	ug/L	0.005	2	6	55	1	KED
[ Se	78	0.425	ug/L	0.113	26	18	28	9	KED
Y	89		ug/L			304032	309901	1	Standard
Kr	83		ug/L			53	59	5	Standard
[> In-1	115		ug/L			8638	8467	1	KED
Cd	111	0.113	ug/L	0.004	3	2	31	1	KED
Cd	114	0.112	ug/L	0.008	6	5	74	5	KED
[> In	115		ug/L			433939	431090	2	Standard
Ag	107	0.198	ug/L	0.016	7	219	3060	4	Standard
Sb	121	0.207	ug/L	0.005	2	54	2360	4	Standard
Sb	123	0.207	ug/L	0.011	5	38	1799	4	Standard
Ba	135	0.503	ug/L	0.030	6	13	1824	5	Standard
[ Ba	137	0.505	ug/L	0.025	5	22	3249	2	Standard
[> Tb	159		ug/L			730524	716653	0	Standard
Tl	205	0.202	ug/L	0.010	5	951	7818	4	Standard
[ Pb	208	0.109	ug/L	0.002	2	86	4911	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:19:12

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	137501	1	Standard
Cl	37		ug/L			4319739	11319280	5	Standard
[> Sc	45		ug/L			534549	573507	2	Standard
Cr	52	0.796	ug/L	0.071	8	16833	33011	2	Standard
Cr	53	3.997	ug/L	0.165	4	189	8874	1	Standard
Mn	55	0.089	ug/L	0.003	3	1126	3558	3	Standard
[> Ge	72		ug/L			30905	29098	0	KED
Ni	60	0.161	ug/L	0.021	12	128	299	7	KED
Ni	62	0.215	ug/L	0.009	4	22	60	1	KED
Cu	63	0.063	ug/L	0.004	5	58	257	3	KED
Cu	65	0.062	ug/L	0.011	18	30	126	15	KED
Zn	66	0.243	ug/L	0.013	5	22	120	4	KED
Zn	67	0.200	ug/L	0.114	57	4	17	44	KED
As	75	0.025	ug/L	0.015	61	6	10	30	KED
Se	78	0.298	ug/L	0.151	50	18	24	15	KED
Y	89		ug/L			304032	320724	2	Standard
Kr	83		ug/L			53	146	17	Standard
[> In-1	115		ug/L			8638	8124	3	KED
Cd	111	0.061	ug/L	0.014	23	2	17	22	KED
Cd	114	0.053	ug/L	0.011	19	5	36	15	KED
[> In	115		ug/L			433939	418518	2	Standard
Ag	107	0.009	ug/L	0.001	15	219	332	3	Standard
Sb	121	0.044	ug/L	0.004	8	54	522	7	Standard
Sb	123	0.042	ug/L	0.001	2	38	383	0	Standard
Ba	135	0.118	ug/L	0.003	2	13	424	0	Standard
Ba	137	0.117	ug/L	0.008	6	22	748	6	Standard
[> Tb	159		ug/L			730524	731305	1	Standard
Tl	205	0.014	ug/L	0.002	14	951	1445	4	Standard
Pb	208	0.036	ug/L	0.001	3	86	1704	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:24:02

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	141947	1	Standard
Cl	37		ug/L			4319739	11664664	2	Standard
> Sc	45		ug/L			534549	588772	0	Standard
Cr	52	20.588	ug/L	0.455	2	16833	416123	2	Standard
Cr	53	24.112	ug/L	0.225	0	189	53948	0	Standard
Mn	55	19.664	ug/L	0.153	0	1126	534577	1	Standard
> Ge	72		ug/L			30905	29954	0	KED
Ni	60	19.772	ug/L	0.439	2	128	22621	2	KED
Ni	62	20.453	ug/L	0.515	2	22	3815	2	KED
Cu	63	19.582	ug/L	0.523	2	58	65014	2	KED
Cu	65	19.715	ug/L	0.234	1	30	32323	1	KED
Zn	66	18.334	ug/L	0.309	1	22	7723	1	KED
Zn	67	16.308	ug/L	0.733	4	4	1144	4	KED
As	75	18.948	ug/L	0.170	0	6	4152	0	KED
Se	78	0.172	ug/L	0.132	76	18	22	14	KED
Y	89		ug/L			304032	321934	0	Standard
Kr	83		ug/L			53	134	7	Standard
> In-1	115		ug/L			8638	8118	2	KED
Cd	111	19.241	ug/L	0.662	3	2	4614	2	KED
Cd	114	18.956	ug/L	0.188	0	5	11188	1	KED
> In	115		ug/L			433939	417920	1	Standard
Ag	107	19.253	ug/L	0.301	1	219	268382	1	Standard
Sb	121	0.029	ug/L	0.001	3	54	366	3	Standard
Sb	123	0.035	ug/L	0.004	11	38	325	9	Standard
Ba	135	0.118	ug/L	0.005	4	13	425	5	Standard
Ba	137	0.115	ug/L	0.002	1	22	732	2	Standard
> Tb	159		ug/L			730524	729741	1	Standard
Tl	205	0.008	ug/L	0.001	15	951	1219	2	Standard
Pb	208	0.027	ug/L	0.003	10	86	1293	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:28:46

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	37611	1	Standard
Cl	37		ug/L			4319739	4508218	0	Standard
[> Sc	45		ug/L			534549	552404	1	Standard
Cr	52	203.000	ug/L	6.001	2	16833	3694700	2	Standard
Cr	53	202.272	ug/L	2.564	1	189	423143	0	Standard
Mn	55	198.656	ug/L	3.452	1	1126	5055583	0	Standard
[> Ge	72		ug/L			30905	29324	0	KED
Ni	60	193.231	ug/L	1.897	0	128	215354	1	KED
Ni	62	198.638	ug/L	3.179	1	22	36091	1	KED
Cu	63	191.239	ug/L	2.807	1	58	621108	1	KED
Cu	65	194.747	ug/L	6.347	3	30	312350	3	KED
Zn	66	193.074	ug/L	0.779	0	22	79422	0	KED
Zn	67	191.388	ug/L	0.252	0	4	13101	0	KED
As	75	198.856	ug/L	2.458	1	6	42609	1	KED
Se	78	190.074	ug/L	1.921	1	18	4588	1	KED
Y	89		ug/L			304032	310348	2	Standard
Kr	83		ug/L			53	125	9	Standard
[> In-1	115		ug/L			8638	8212	3	KED
Cd	111	190.838	ug/L	5.963	3	2	46255	0	KED
Cd	114	191.453	ug/L	6.634	3	5	114174	0	KED
[> In	115		ug/L			433939	407123	1	Standard
Ag	107	201.213	ug/L	6.033	2	219	2729885	2	Standard
Sb	121	205.677	ug/L	2.355	1	54	2158669	1	Standard
Sb	123	198.333	ug/L	5.263	2	38	1592184	1	Standard
Ba	135	200.954	ug/L	3.327	1	13	683767	0	Standard
Ba	137	202.902	ug/L	4.702	2	22	1225393	1	Standard
[> Tb	159		ug/L			730524	716714	1	Standard
Tl	205	193.967	ug/L	2.775	1	951	6607623	0	Standard
Pb	208	196.847	ug/L	3.641	1	86	8737823	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:33:36

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	37912	2	Standard
Cl	37		ug/L			4319739	4442321	0	Standard
[> Sc	45		ug/L			534549	533231	0	Standard
Cr	52	299.515	ug/L	4.032	1	16833	5255505	2	Standard
Cr	53	304.625	ug/L	2.690	0	189	615130	1	Standard
Mn	55	302.523	ug/L	3.311	1	1126	7431611	0	Standard
[> Ge	72		ug/L			30905	27807	1	KED
Ni	60	294.951	ug/L	13.811	4	128	311512	3	KED
Ni	62	299.460	ug/L	6.383	2	22	51575	1	KED
Cu	63	288.698	ug/L	3.306	1	58	888990	0	KED
Cu	65	286.543	ug/L	2.994	1	30	435750	1	KED
Zn	66	281.527	ug/L	9.192	3	22	109786	2	KED
Zn	67	281.576	ug/L	8.256	2	4	18270	1	KED
As	75	301.089	ug/L	7.869	2	6	61157	1	KED
[ Se	78	285.363	ug/L	2.715	0	18	6523	1	KED
Y	89		ug/L			304032	298518	1	Standard
Kr	83		ug/L			53	186	7	Standard
[> In-1	115		ug/L			8638	7846	1	KED
Cd	111	285.268	ug/L	6.161	2	2	66094	0	KED
[ Cd	114	282.414	ug/L	6.858	2	5	161005	1	KED
[> In	115		ug/L			433939	386876	0	Standard
Ag	107	303.850	ug/L	2.973	0	219	3918395	1	Standard
Sb	121	307.296	ug/L	2.127	0	54	3065149	0	Standard
Sb	123	308.189	ug/L	4.040	1	38	2351687	1	Standard
Ba	135	308.925	ug/L	5.294	1	13	999038	1	Standard
[ Ba	137	308.309	ug/L	3.549	1	22	1769732	0	Standard
[> Tb	159		ug/L			730524	679450	0	Standard
Tl	205	294.936	ug/L	1.383	0	951	9525635	0	Standard
[ Pb	208	296.500	ug/L	1.198	0	86	12479197	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:41:10

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	35308	1	Standard
Cl	37		ug/L			4319739	4463736	1	Standard
[> Sc	45		ug/L			534549	525918	2	Standard
Cr	52	0.011	ug/L	0.017	151	16833	16750	1	Standard
Cr	53	0.035	ug/L	0.003	8	189	255	0	Standard
Mn	55	0.004	ug/L	0.002	52	1126	1209	6	Standard
[> Ge	72		ug/L			30905	30557	2	KED
Ni	60	0.002	ug/L	0.017	1100	128	128	12	KED
Ni	62	0.011	ug/L	0.018	163	22	24	15	KED
Cu	63	0.005	ug/L	0.003	47	58	75	12	KED
Cu	65	0.005	ug/L	0.003	71	30	38	13	KED
Zn	66	0.016	ug/L	0.023	149	22	28	33	KED
Zn	67	-0.026	ug/L	0.016	63	4	2	43	KED
As	75	0.010	ug/L	0.002	17	6	8	6	KED
Se	78	-0.007	ug/L	0.064	894	18	17	9	KED
Y	89		ug/L			304032	298183	3	Standard
Kr	83		ug/L			53	42	24	Standard
[> In-1	115		ug/L			8638	8394	2	KED
Cd	111	0.003	ug/L	0.002	84	2	3	15	KED
Cd	114	-0.005	ug/L	0.005	103	5	2	123	KED
[> In	115		ug/L			433939	419075	2	Standard
Ag	107	-0.004	ug/L	0.001	18	219	156	9	Standard
Sb	121	0.187	ug/L	0.012	6	54	2078	8	Standard
Sb	123	0.181	ug/L	0.004	2	38	1531	2	Standard
Ba	135	0.008	ug/L	0.002	24	13	42	14	Standard
Ba	137	0.010	ug/L	0.000	3	22	81	2	Standard
[> Tb	159		ug/L			730524	706213	1	Standard
Tl	205	0.015	ug/L	0.001	8	951	1420	1	Standard
Pb	208	0.002	ug/L	0.000	20	86	181	10	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:47:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	35650	2	Standard
Cl	37		ug/L			4319739	4436713	0	Standard
[> Sc	45		ug/L			534549	538488	2	Standard
Cr	52	0.046	ug/L	0.110	240	16833	17731	8	Standard
Cr	53	0.080	ug/L	0.103	129	189	351	56	Standard
Mn	55	0.053	ug/L	0.092	175	1126	2401	91	Standard
[> Ge	72		ug/L			30905	30422	4	KED
Ni	60	0.000	ug/L	0.002	8342	128	126	6	KED
Ni	62	0.006	ug/L	0.040	655	22	23	28	KED
Cu	63	-0.003	ug/L	0.002	75	58	48	9	KED
Cu	65	0.002	ug/L	0.004	164	30	33	19	KED
Zn	66	0.007	ug/L	0.008	113	22	24	15	KED
Zn	67	-0.035	ug/L	0.046	131	4	1	173	KED
As	75	0.007	ug/L	0.009	122	6	7	22	KED
[ Se	78	0.069	ug/L	0.058	84	18	19	9	KED
Y	89		ug/L			304032	302900	2	Standard
Kr	83		ug/L			53	57	5	Standard
[> In-1	115		ug/L			8638	8547	1	KED
Cd	111	-0.001	ug/L	0.004	384	2	2	43	KED
Cd	114	-0.001	ug/L	0.005	603	5	4	57	KED
[> In	115		ug/L			433939	426582	0	Standard
Ag	107	0.029	ug/L	0.058	198	219	629	130	Standard
Sb	121	0.114	ug/L	0.102	89	54	1301	85	Standard
Sb	123	0.125	ug/L	0.113	89	38	1088	86	Standard
Ba	135	0.073	ug/L	0.121	164	13	273	156	Standard
[ Ba	137	0.065	ug/L	0.105	161	22	433	152	Standard
[> Tb	159		ug/L			730524	710638	1	Standard
Tl	205	0.066	ug/L	0.103	155	951	3177	110	Standard
[ Pb	208	0.062	ug/L	0.105	170	86	2828	165	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 15:52:46

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	31781	2	Standard
Cl	37		ug/L			4319739	4567992	0	Standard
[> Sc	45		ug/L			534549	547411	0	Standard
Cr	52	50.973	ug/L	0.208	0	16833	932410	0	Standard
Cr	53	52.217	ug/L	0.425	0	189	108404	1	Standard
Mn	55	51.786	ug/L	0.772	1	1126	1307049	1	Standard
[> Ge	72		ug/L			30905	31311	0	KED
Ni	60	48.558	ug/L	0.869	1	128	57882	2	KED
Ni	62	48.297	ug/L	0.925	1	22	9387	1	KED
Cu	63	49.226	ug/L	0.733	1	58	170750	1	KED
Cu	65	49.234	ug/L	1.165	2	30	84335	2	KED
Zn	66	49.553	ug/L	0.965	1	22	21781	1	KED
Zn	67	51.115	ug/L	1.179	2	4	3739	2	KED
As	75	49.259	ug/L	0.617	1	6	11274	1	KED
[ Se	78	49.418	ug/L	1.501	3	18	1287	3	KED
Y	89		ug/L			304032	310526	1	Standard
Kr	83		ug/L			53	74	20	Standard
[> In-1	115		ug/L			8638	8473	0	KED
Cd	111	50.347	ug/L	0.547	1	2	12602	0	KED
Cd	114	50.354	ug/L	0.509	1	5	31013	1	KED
[> In	115		ug/L			433939	422753	0	Standard
Ag	107	51.601	ug/L	0.701	1	219	727274	0	Standard
Sb	121	49.805	ug/L	0.745	1	54	542901	1	Standard
Sb	123	49.797	ug/L	0.270	0	38	415255	0	Standard
Ba	135	50.146	ug/L	0.603	1	13	177229	1	Standard
[ Ba	137	50.082	ug/L	0.697	1	22	314158	1	Standard
[> Tb	159		ug/L			730524	741690	2	Standard
Tl	205	47.921	ug/L	1.461	3	951	1689556	1	Standard
[ Pb	208	48.467	ug/L	1.106	2	86	2226098	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 16:00:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			29859	31463	2	Standard
Cl	37		ug/L			4319739	4432108	2	Standard
[> Sc	45		ug/L			534549	528091	0	Standard
Cr	52	0.007	ug/L	0.023	309	16833	16757	1	Standard
Cr	53	0.009	ug/L	0.005	51	189	205	3	Standard
Mn	55	0.004	ug/L	0.001	26	1126	1199	1	Standard
[> Ge	72		ug/L			30905	29552	0	KED
Ni	60	0.005	ug/L	0.019	380	128	128	16	KED
Ni	62	-0.015	ug/L	0.018	116	22	19	17	KED
Cu	63	0.003	ug/L	0.003	86	58	66	13	KED
Cu	65	-0.003	ug/L	0.006	232	30	24	40	KED
Zn	66	0.004	ug/L	0.004	114	22	22	8	KED
Zn	67	-0.025	ug/L	0.016	64	4	2	43	KED
As	75	0.014	ug/L	0.014	101	6	8	34	KED
Se	78	0.124	ug/L	0.186	150	18	20	21	KED
Y	89		ug/L			304032	292128	3	Standard
Kr	83		ug/L			53	50	21	Standard
[> In-1	115		ug/L			8638	8368	0	KED
Cd	111	0.017	ug/L	0.010	57	2	6	34	KED
Cd	114	-0.004	ug/L	0.002	49	5	3	35	KED
[> In	115		ug/L			433939	418683	0	Standard
Ag	107	-0.009	ug/L	0.000	3	219	85	4	Standard
Sb	121	0.070	ug/L	0.003	4	54	803	4	Standard
Sb	123	0.068	ug/L	0.002	3	38	600	3	Standard
Ba	135	0.001	ug/L	0.001	84	13	15	12	Standard
Ba	137	-0.000	ug/L	0.001	513	22	20	42	Standard
[> Tb	159		ug/L			730524	701949	0	Standard
Tl	205	0.004	ug/L	0.001	27	951	1034	2	Standard
Pb	208	0.000	ug/L	0.000	18	86	103	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**

**Sample Dil Factor:**

**Comments:**

**Sample Date/Time: Friday, April 07, 2023 16:09:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13	ug/L				30728	3	Standard
Cl	37	ug/L				4438068	1	Standard
[> Sc	45	ug/L				546109	0	Standard
Cr	52	ug/L				17159	1	Standard
Cr	53	ug/L				216	7	Standard
Mn	55	ug/L				1132	1	Standard
[> Ge	72	ug/L				29835	0	KED
Ni	60	ug/L				138	23	KED
Ni	62	ug/L				33	14	KED
Cu	63	ug/L				80	9	KED
Cu	65	ug/L				24	7	KED
Zn	66	ug/L				43	5	KED
Zn	67	ug/L				3	100	KED
As	75	ug/L				16	17	KED
Se	78	ug/L				19	20	KED
Y	89	ug/L				297640	2	Standard
Kr	83	ug/L				48	9	Standard
[> In-1	115	ug/L				8217	1	KED
Cd	111	ug/L				4	26	KED
Cd	114	ug/L				2	46	KED
[> In	115	ug/L				413136	2	Standard
Ag	107	ug/L				89	3	Standard
Ba	135	ug/L				37	10	Standard
Ba	137	ug/L				46	24	Standard
[> Tb	159	ug/L				720127	1	Standard
Pb	208	ug/L				200	11	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 16:14:17

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31157	1	Standard
Cl	37		ug/L			4438068	4572001	1	Standard
[> Sc	45		ug/L			546109	544643	5	Standard
Cr	52	51.263	ug/L	2.368	4	17159	931350	1	Standard
Cr	53	51.296	ug/L	2.226	4	216	105812	1	Standard
Mn	55	51.754	ug/L	1.933	3	1132	1297840	1	Standard
[> Ge	72		ug/L			29835	30870	1	KED
Ni	60	48.285	ug/L	0.879	1	138	56760	2	KED
Ni	62	49.093	ug/L	1.139	2	33	9417	0	KED
Cu	63	49.619	ug/L	1.790	3	80	169733	4	KED
Cu	65	49.203	ug/L	0.410	0	24	83081	0	KED
Zn	66	49.963	ug/L	0.420	0	43	21674	1	KED
Zn	67	49.348	ug/L	1.180	2	3	3558	2	KED
As	75	49.341	ug/L	0.266	0	16	11145	2	KED
Se	78	49.069	ug/L	1.009	2	19	1263	3	KED
Y	89		ug/L			297640	298566	5	Standard
Kr	83		ug/L			48	67	25	Standard
[> In-1	115		ug/L			8217	8586	0	KED
Cd	111	49.093	ug/L	1.063	2	4	12453	1	KED
Cd	114	48.650	ug/L	0.205	0	2	30361	1	KED
[> In	115		ug/L			413136	410741	6	Standard
Ag	107	51.750	ug/L	2.496	4	89	707012	2	Standard
Ba	135	52.477	ug/L	2.746	5	37	179787	1	Standard
Ba	137	50.876	ug/L	2.826	5	46	309312	1	Standard
[> Tb	159		ug/L			720127	707934	4	Standard
Pb	208	51.689	ug/L	2.224	4	200	2263987	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 16:21:45

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31020	3	Standard
Cl	37		ug/L			4438068	4512376	1	Standard
[> Sc	45		ug/L			546109	534788	1	Standard
Cr	52	-0.004	ug/L	0.008	211	17159	16737	1	Standard
Cr	53	-0.009	ug/L	0.014	150	216	193	13	Standard
Mn	55	-0.003	ug/L	0.001	34	1132	1041	2	Standard
[> Ge	72		ug/L			29835	30002	2	KED
Ni	60	-0.022	ug/L	0.012	55	138	114	12	KED
Ni	62	-0.032	ug/L	0.011	35	33	27	7	KED
Cu	63	-0.009	ug/L	0.001	10	80	52	4	KED
Cu	65	0.007	ug/L	0.008	119	24	35	35	KED
Zn	66	-0.044	ug/L	0.027	61	43	24	46	KED
Zn	67	0.018	ug/L	0.042	230	3	5	57	KED
As	75	-0.030	ug/L	0.007	23	16	9	15	KED
Se	78	-0.065	ug/L	0.118	180	19	18	17	KED
Y	89		ug/L			297640	305261	1	Standard
Kr	83		ug/L			48	43	18	Standard
[> In-1	115		ug/L			8217	8300	1	KED
Cd	111	-0.008	ug/L	0.002	29	4	2	24	KED
Cd	114	0.002	ug/L	0.003	138	2	3	50	KED
[> In	115		ug/L			413136	422142	2	Standard
Ag	107	-0.001	ug/L	0.001	35	89	70	9	Standard
Ba	135	-0.004	ug/L	0.002	60	37	24	33	Standard
Ba	137	-0.001	ug/L	0.002	142	46	40	28	Standard
[> Tb	159		ug/L			720127	705094	2	Standard
Pb	208	0.000	ug/L	0.000	58	200	210	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0180-BLK1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Friday, April 07, 2023 16:27:56**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	41310	1	Standard
Cl	37		ug/L			4438068	4438081	1	Standard
> Sc	45		ug/L			546109	540509	1	Standard
Cr	52	<b>0.090</b>	ug/L	0.033	36	17159	18580	2	Standard
Cr	53	<b>0.048</b>	ug/L	0.012	25	216	312	6	Standard
Mn	55	<b>0.061</b>	ug/L	0.004	5	1132	2650	2	Standard
> Ge	72		ug/L			29835	30773	1	KED
Ni	60	<b>0.024</b>	ug/L	0.018	73	138	170	10	KED
Ni	62	<b>-0.059</b>	ug/L	0.032	54	33	23	26	KED
Cu	63	<b>0.066</b>	ug/L	0.003	5	80	306	2	KED
Cu	65	<b>0.061</b>	ug/L	0.005	7	24	128	5	KED
Zn	66	<b>0.334</b>	ug/L	0.020	6	43	188	4	KED
Zn	67	<b>0.318</b>	ug/L	0.120	37	3	26	31	KED
As	75	<b>-0.035</b>	ug/L	0.005	15	16	8	12	KED
Se	78	<b>-0.037</b>	ug/L	0.194	525	19	19	24	KED
Y	89		ug/L			297640	301555	1	Standard
Kr	83		ug/L			48	52	26	Standard
> In-1	115		ug/L			8217	8547	2	KED
Cd	111	<b>-0.007</b>	ug/L	0.006	79	4	2	57	KED
Cd	114	<b>0.007</b>	ug/L	0.005	65	2	6	43	KED
> In	115		ug/L			413136	423762	0	Standard
Ag	107	<b>-0.002</b>	ug/L	0.000	18	89	67	7	Standard
Ba	135	<b>0.048</b>	ug/L	0.003	6	37	210	5	Standard
Ba	137	<b>0.050</b>	ug/L	0.002	3	46	360	3	Standard
> Tb	159		ug/L			720127	717516	1	Standard
Pb	208	<b>0.003</b>	ug/L	0.000	15	200	327	6	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0180-BS1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Friday, April 07, 2023 16:32:40**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	43066	0	Standard
Cl	37		ug/L			4438068	4539114	0	Standard
> Sc	45		ug/L			546109	565807	1	Standard
Cr	52	<b>25.748</b>	ug/L	0.801	3	17159	495453	1	Standard
Cr	53	<b>25.352</b>	ug/L	0.399	1	216	54517	0	Standard
Mn	55	<b>25.425</b>	ug/L	0.522	2	1132	663680	0	Standard
> Ge	72		ug/L			29835	30399	1	KED
Ni	60	<b>25.464</b>	ug/L	0.193	0	138	29541	1	KED
Ni	62	<b>24.902</b>	ug/L	0.431	1	33	4721	1	KED
Cu	63	<b>25.403</b>	ug/L	0.752	2	80	85576	1	KED
Cu	65	<b>25.783</b>	ug/L	0.130	0	24	42886	1	KED
Zn	66	<b>84.758</b>	ug/L	3.569	4	43	36162	2	KED
Zn	67	<b>77.500</b>	ug/L	1.469	1	3	5500	0	KED
As	75	<b>25.216</b>	ug/L	0.316	1	16	5616	1	KED
Se	78	<b>80.139</b>	ug/L	3.251	4	19	2017	2	KED
Y	89		ug/L			297640	307544	1	Standard
Kr	83		ug/L			48	54	21	Standard
> In-1	115		ug/L			8217	8465	3	KED
Cd	111	<b>25.351</b>	ug/L	0.738	2	4	6338	0	KED
Cd	114	<b>25.442</b>	ug/L	0.609	2	2	15646	1	KED
> In	115		ug/L			413136	424149	2	Standard
Ag	107	<b>26.002</b>	ug/L	0.643	2	89	367568	1	Standard
Ba	135	<b>26.011</b>	ug/L	0.317	1	37	92249	1	Standard
Ba	137	<b>25.650</b>	ug/L	0.267	1	46	161448	1	Standard
> Tb	159		ug/L			720127	732910	1	Standard
Pb	208	<b>25.481</b>	ug/L	0.678	2	200	1156665	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0087-01**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Friday, April 07, 2023 16:40:54**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	41612	3	Standard
Cl	37		ug/L			4438068	4677097	0	Standard
> Sc	45		ug/L			546109	548583	2	Standard
Cr	52	<b>0.147</b>	ug/L	0.019	12	17159	19873	1	Standard
Cr	53	<b>0.111</b>	ug/L	0.007	6	216	449	5	Standard
Mn	55	<b>11.718</b>	ug/L	0.420	3	1132	297108	1	Standard
> Ge	72		ug/L			29835	31456	0	KED
Ni	60	<b>0.468</b>	ug/L	0.043	9	138	704	6	KED
Ni	62	<b>0.437</b>	ug/L	0.080	18	33	120	13	KED
Cu	63	<b>4.180</b>	ug/L	0.039	0	80	14648	1	KED
Cu	65	<b>4.198</b>	ug/L	0.146	3	24	7245	2	KED
Zn	66	<b>1.988</b>	ug/L	0.068	3	43	922	2	KED
Zn	67	<b>1.883</b>	ug/L	0.093	4	3	142	4	KED
As	75	<b>0.007</b>	ug/L	0.029	407	16	18	35	KED
Se	78	<b>-0.092</b>	ug/L	0.162	176	19	18	22	KED
Y	89		ug/L			297640	310718	0	Standard
Kr	83		ug/L			48	57	8	Standard
> In-1	115		ug/L			8217	8601	1	KED
Cd	111	<b>-0.002</b>	ug/L	0.007	339	4	3	43	KED
Cd	114	<b>0.006</b>	ug/L	0.002	29	2	6	16	KED
> In	115		ug/L			413136	425290	2	Standard
Ag	107	<b>-0.002</b>	ug/L	0.001	41	89	67	14	Standard
Ba	135	<b>1.215</b>	ug/L	0.028	2	37	4356	2	Standard
Ba	137	<b>1.199</b>	ug/L	0.014	1	46	7612	1	Standard
> Tb	159		ug/L			720127	724330	0	Standard
Pb	208	<b>0.014</b>	ug/L	0.001	9	200	848	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0001-01**

Sample Dil Factor:

Comments:

Sample Date/Time: **Friday, April 07, 2023 16:50:22**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	59036	1	Standard
Cl	37		ug/L			4438068	4513825	1	Standard
> Sc	45		ug/L			546109	566898	1	Standard
Cr	52	1.072	ug/L	0.025	2	17159	37744	0	Standard
Cr	53	1.080	ug/L	0.007	0	216	2543	2	Standard
Mn	55	30.137	ug/L	0.705	2	1132	788028	1	Standard
> Ge	72		ug/L			29835	30760	1	KED
Ni	60	0.877	ug/L	0.025	2	138	1167	2	KED
Ni	62	0.831	ug/L	0.040	4	33	193	4	KED
Cu	63	10.974	ug/L	0.291	2	80	37459	1	KED
Cu	65	11.000	ug/L	0.184	1	24	18527	1	KED
Zn	66	153.299	ug/L	1.070	0	43	66171	0	KED
Zn	67	139.493	ug/L	1.494	1	3	10016	0	KED
As	75	0.323	ug/L	0.015	4	16	89	3	KED
Se	78	-0.026	ug/L	0.242	947	19	19	31	KED
Y	89		ug/L			297640	320336	1	Standard
Kr	83		ug/L			48	52	32	Standard
> In-1	115		ug/L			8217	8606	0	KED
Cd	111	0.083	ug/L	0.046	55	4	25	45	KED
Cd	114	0.108	ug/L	0.008	7	2	69	6	KED
> In	115		ug/L			413136	430522	1	Standard
Ag	107	0.028	ug/L	0.001	4	89	488	4	Standard
Ba	135	20.189	ug/L	0.450	2	37	72678	0	Standard
Ba	137	20.370	ug/L	0.591	2	46	130131	1	Standard
> Tb	159		ug/L			720127	721457	0	Standard
Pb	208	1.023	ug/L	0.008	0	200	45928	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0770-01**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 16:57:41**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	34992	1	Standard
Cl	37		ug/L			4438068	29491923	0	Standard
> Sc	45		ug/L			546109	509689	2	Standard
Cr	52	<b>0.570</b>	ug/L	0.040	7	17159	25526	0	Standard
Cr	53	<b>18.890</b>	ug/L	0.103	0	216	36647	1	Standard
Mn	55	<b>0.435</b>	ug/L	0.012	2	1132	11274	0	Standard
> Ge	72		ug/L			29835	24910	1	KED
Ni	60	<b>-0.044</b>	ug/L	0.008	18	138	74	9	KED
Ni	62	<b>0.869</b>	ug/L	0.117	13	33	161	9	KED
<b>Cu</b>	63	<b>0.161</b>	ug/L	0.006	3	80	512	2	KED
Cu	65	<b>0.112</b>	ug/L	0.012	10	24	173	10	KED
<b>Zn</b>	66	<b>0.173</b>	ug/L	0.012	7	43	96	6	KED
Zn	67	<b>0.361</b>	ug/L	0.089	24	3	24	19	KED
As	75	<b>0.097</b>	ug/L	0.014	14	16	31	7	KED
Se	78	<b>0.324</b>	ug/L	0.082	25	19	23	8	KED
Y	89		ug/L			297640	272605	2	Standard
Kr	83		ug/L			48	1158	5	Standard
> In-1	115		ug/L			8217	6968	2	KED
Cd	111	<b>0.008</b>	ug/L	0.006	76	4	5	21	KED
Cd	114	<b>0.008</b>	ug/L	0.004	49	2	6	34	KED
> In	115		ug/L			413136	349164	1	Standard
Ag	107	<b>-0.001</b>	ug/L	0.001	113	89	68	12	Standard
Ba	135	<b>0.585</b>	ug/L	0.026	4	37	1738	4	Standard
Ba	137	<b>0.599</b>	ug/L	0.003	0	46	3144	1	Standard
> Tb	159		ug/L			720127	659554	1	Standard
<b>Pb</b>	208	<b>0.006</b>	ug/L	0.000	6	200	447	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-01RE1**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:06:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	35337	1	Standard
Cl	37		ug/L			4438068	4491043	0	Standard
> Sc	45		ug/L			546109	552201	0	Standard
Cr	52	0.005	ug/L	0.015	310	17159	17440	2	Standard
Cr	53	0.236	ug/L	0.006	2	216	712	0	Standard
Mn	55	34.435	ug/L	0.703	2	1132	877161	2	Standard
> Ge	72		ug/L			29835	30551	0	KED
Ni	60	-0.053	ug/L	0.013	24	138	80	19	KED
Ni	62	-0.091	ug/L	0.037	40	33	17	40	KED
Cu	63	0.010	ug/L	0.007	66	80	116	19	KED
Cu	65	0.031	ug/L	0.011	35	24	77	23	KED
Zn	66	0.110	ug/L	0.020	18	43	91	9	KED
Zn	67	5.671	ug/L	0.350	6	3	408	6	KED
As	75	-0.005	ug/L	0.003	57	16	15	4	KED
Se	78	-0.118	ug/L	0.053	45	19	17	7	KED
Y	89		ug/L			297640	298775	3	Standard
Kr	83		ug/L			48	50	22	Standard
> In-1	115		ug/L			8217	8378	1	KED
Cd	111	0.004	ug/L	0.004	123	4	5	21	KED
Cd	114	0.004	ug/L	0.002	46	2	4	22	KED
> In	115		ug/L			413136	412295	1	Standard
Ag	107	-0.002	ug/L	0.001	24	89	57	12	Standard
Ba	135	57.744	ug/L	1.516	2	37	199005	1	Standard
Ba	137	57.627	ug/L	0.699	1	46	352534	1	Standard
> Tb	159		ug/L			720127	714623	1	Standard
Pb	208	0.000	ug/L	0.000	75	200	213	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-DUP3**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:11:39**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	36395	1	Standard
Cl	37		ug/L			4438068	4545602	1	Standard
> Sc	45		ug/L			546109	551673	1	Standard
Cr	52	-0.012	ug/L	0.012	98	17159	17114	0	Standard
Cr	53	0.131	ug/L	0.004	3	216	491	0	Standard
Mn	55	33.282	ug/L	0.624	1	1132	846749	0	Standard
> Ge	72		ug/L			29835	29989	1	KED
Ni	60	-0.043	ug/L	0.014	32	138	89	17	KED
Ni	62	-0.056	ug/L	0.024	42	33	23	20	KED
Cu	63	0.003	ug/L	0.005	188	80	89	16	KED
Cu	65	0.022	ug/L	0.004	16	24	60	11	KED
Zn	66	0.087	ug/L	0.021	24	43	80	12	KED
Zn	67	5.771	ug/L	0.100	1	3	407	1	KED
As	75	-0.010	ug/L	0.011	111	16	14	15	KED
Se	78	-0.045	ug/L	0.084	186	19	18	12	KED
Y	89		ug/L			297640	304207	2	Standard
Kr	83		ug/L			48	45	4	Standard
> In-1	115		ug/L			8217	8066	3	KED
Cd	111	0.006	ug/L	0.009	156	4	5	36	KED
Cd	114	0.002	ug/L	0.003	134	2	3	49	KED
> In	115		ug/L			413136	414333	2	Standard
Ag	107	-0.003	ug/L	0.000	13	89	42	16	Standard
Ba	135	55.567	ug/L	1.137	2	37	192430	0	Standard
Ba	137	55.900	ug/L	0.968	1	46	343595	1	Standard
> Tb	159		ug/L			720127	704876	1	Standard
Pb	208	-0.001	ug/L	0.000	21	200	170	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-MS3**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:16:23**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	35669	3	Standard
Cl	37		ug/L			4438068	4563265	1	Standard
[> Sc	45		ug/L			546109	535132	1	Standard
Cr	52	5.488	ug/L	0.112	2	17159	113121	0	Standard
Cr	53	5.639	ug/L	0.104	1	216	11634	1	Standard
Mn	55	37.671	ug/L	0.292	0	1132	929648	1	Standard
[> Ge	72		ug/L			29835	29678	1	KED
Ni	60	5.157	ug/L	0.083	1	138	5950	1	KED
Ni	62	5.429	ug/L	0.488	8	33	1031	8	KED
Cu	63	5.440	ug/L	0.095	1	80	17960	2	KED
Cu	65	5.542	ug/L	0.099	1	24	9018	1	KED
Zn	66	17.637	ug/L	0.379	2	43	7382	1	KED
Zn	67	21.698	ug/L	0.451	2	3	1506	3	KED
As	75	5.636	ug/L	0.098	1	16	1238	2	KED
[ Se	78	17.296	ug/L	0.164	0	19	440	0	KED
Y	89		ug/L			297640	295038	1	Standard
Kr	83		ug/L			48	52	13	Standard
[> In-1	115		ug/L			8217	8286	0	KED
Cd	111	5.356	ug/L	0.215	4	4	1314	4	KED
Cd	114	5.449	ug/L	0.155	2	2	3283	2	KED
[> In	115		ug/L			413136	405532	0	Standard
Ag	107	5.597	ug/L	0.048	0	89	75743	1	Standard
Ba	135	61.114	ug/L	0.288	0	37	207211	0	Standard
[ Ba	137	59.485	ug/L	0.929	1	46	357975	1	Standard
[> Tb	159		ug/L			720127	708193	2	Standard
[ Pb	208	5.415	ug/L	0.098	1	200	237675	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-MSD3**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:21:06**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	36105	1	Standard
Cl	37		ug/L			4438068	4486261	0	Standard
[> Sc	45		ug/L			546109	529193	3	Standard
Cr	52	5.509	ug/L	0.073	1	17159	112227	2	Standard
Cr	53	5.627	ug/L	0.108	1	216	11478	2	Standard
Mn	55	38.860	ug/L	0.107	0	1132	948347	2	Standard
[> Ge	72		ug/L			29835	29374	1	KED
Ni	60	5.298	ug/L	0.109	2	138	6046	1	KED
Ni	62	5.398	ug/L	0.273	5	33	1014	4	KED
Cu	63	5.423	ug/L	0.287	5	80	17718	5	KED
Cu	65	5.473	ug/L	0.143	2	24	8815	3	KED
Zn	66	17.820	ug/L	0.546	3	43	7380	1	KED
Zn	67	21.997	ug/L	0.469	2	3	1511	3	KED
As	75	5.458	ug/L	0.121	2	16	1187	1	KED
Se	78	18.050	ug/L	0.694	3	19	454	1	KED
Y	89		ug/L			297640	289805	2	Standard
Kr	83		ug/L			48	48	19	Standard
[> In-1	115		ug/L			8217	8181	2	KED
Cd	111	5.464	ug/L	0.246	4	4	1323	1	KED
Cd	114	5.406	ug/L	0.278	5	2	3214	4	KED
[> In	115		ug/L			413136	408280	3	Standard
Ag	107	5.461	ug/L	0.061	1	89	74405	3	Standard
<b>Ba</b> STL	135	<b>60.755</b>	ug/L	1.314	2	37	207293	1	Standard
Ba	137	60.426	ug/L	1.228	2	46	365943	1	Standard
[> Tb	159		ug/L			720127	700400	4	Standard
Pb	208	5.426	ug/L	0.145	2	200	235445	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 17:25:51

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	33050	2	Standard
Cl	37		ug/L			4438068	4431282	1	Standard
[> Sc	45		ug/L			546109	497176	3	Standard
Cr	52	0.037	ug/L	0.023	63	17159	16208	1	Standard
Cr	53	0.052	ug/L	0.014	27	216	294	7	Standard
Mn	55	-0.007	ug/L	0.007	97	1132	857	16	Standard
[> Ge	72		ug/L			29835	28780	1	KED
Ni	60	-0.097	ug/L	0.009	9	138	27	33	KED
Ni	62	-0.132	ug/L	0.031	23	33	8	61	KED
Cu	63	-0.005	ug/L	0.004	66	80	60	19	KED
Cu	65	0.002	ug/L	0.005	229	24	27	29	KED
Zn	66	-0.045	ug/L	0.007	15	43	23	12	KED
Zn	67	-0.007	ug/L	0.017	223	3	3	34	KED
As	75	-0.044	ug/L	0.001	2	16	6	4	KED
Se	78	-0.064	ug/L	0.075	116	19	17	10	KED
Y	89		ug/L			297640	281848	1	Standard
Kr	83		ug/L			48	57	10	Standard
[> In-1	115		ug/L			8217	7817	2	KED
Cd	111	-0.003	ug/L	0.009	275	4	3	69	KED
Cd	114	0.001	ug/L	0.007	478	2	3	129	KED
[> In	115		ug/L			413136	394647	1	Standard
Ag	107	-0.003	ug/L	0.001	24	89	43	24	Standard
Ba	135	0.002	ug/L	0.007	287	37	43	52	Standard
Ba	137	0.007	ug/L	0.006	87	46	82	41	Standard
[> Tb	159		ug/L			720127	668588	1	Standard
Pb	208	-0.001	ug/L	0.001	69	200	125	30	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 17:30:35

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30208	2	Standard
Cl	37		ug/L			4438068	4549164	2	Standard
[> Sc	45		ug/L			546109	536301	1	Standard
Cr	52	49.909	ug/L	0.562	1	17159	894754	1	Standard
Cr	53	51.385	ug/L	0.597	1	216	104544	2	Standard
Mn	55	50.893	ug/L	1.270	2	1132	1258690	3	Standard
[> Ge	72		ug/L			29835	29985	0	KED
Ni	60	48.242	ug/L	1.068	2	138	55085	2	KED
Ni	62	48.171	ug/L	1.009	2	33	8978	2	KED
Cu	63	48.501	ug/L	1.144	2	80	161137	2	KED
Cu	65	49.402	ug/L	0.413	0	24	81033	1	KED
Zn	66	49.498	ug/L	0.516	1	43	20857	1	KED
Zn	67	50.520	ug/L	1.753	3	3	3538	3	KED
As	75	49.272	ug/L	0.264	0	16	10810	0	KED
[ Se	78	49.217	ug/L	0.715	1	19	1230	1	KED
Y	89		ug/L			297640	303337	4	Standard
Kr	83		ug/L			48	51	32	Standard
[> In-1	115		ug/L			8217	8187	3	KED
Cd	111	50.126	ug/L	1.481	2	4	12118	2	KED
Cd	114	49.639	ug/L	0.188	0	2	29535	3	KED
[> In	115		ug/L			413136	405614	0	Standard
Ag	107	52.127	ug/L	2.285	4	89	704864	4	Standard
Ba	135	51.126	ug/L	0.114	0	37	173389	1	Standard
[ Ba	137	51.403	ug/L	0.595	1	46	309378	0	Standard
[> Tb	159		ug/L			720127	716504	0	Standard
[ Pb	208	48.968	ug/L	0.658	1	200	2173564	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 17:38:04

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30233	0	Standard
Cl	37		ug/L			4438068	4339894	1	Standard
[> Sc	45		ug/L			546109	502391	1	Standard
Cr	52	0.007	ug/L	0.035	471	17159	15899	1	Standard
Cr	53	0.028	ug/L	0.002	6	216	253	3	Standard
Mn	55	-0.012	ug/L	0.002	14	1132	775	3	Standard
[> Ge	72		ug/L			29835	28858	1	KED
Ni	60	-0.090	ug/L	0.010	10	138	34	31	KED
Ni	62	-0.122	ug/L	0.016	13	33	10	26	KED
Cu	63	-0.003	ug/L	0.003	85	80	67	11	KED
Cu	65	0.005	ug/L	0.005	84	24	32	20	KED
Zn	66	-0.034	ug/L	0.018	53	43	27	28	KED
Zn	67	0.002	ug/L	0.028	1444	3	3	50	KED
As	75	-0.044	ug/L	0.002	3	16	6	4	KED
[ Se	78	-0.088	ug/L	0.066	74	19	17	8	KED
Y	89		ug/L			297640	284795	0	Standard
Kr	83		ug/L			48	45	23	Standard
[> In-1	115		ug/L			8217	8086	0	KED
Cd	111	0.004	ug/L	0.002	54	4	5	10	KED
Cd	114	0.000	ug/L	0.005	8713	2	2	126	KED
[> In	115		ug/L			413136	394276	1	Standard
Ag	107	-0.002	ug/L	0.001	78	89	60	31	Standard
Ba	135	-0.006	ug/L	0.001	19	37	15	25	Standard
[ Ba	137	-0.001	ug/L	0.001	44	46	36	10	Standard
[> Tb	159		ug/L			720127	676533	0	Standard
[ Pb	208	0.001	ug/L	0.001	83	200	213	9	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-BLK1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:46:21**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	40998	3	Standard
Cl	37		ug/L			4438068	4375531	1	Standard
> Sc	45		ug/L			546109	522728	1	Standard
Cr	52	<b>0.028</b>	ug/L	0.015	52	17159	16911	1	Standard
Cr	53	<b>0.023</b>	ug/L	0.009	36	216	253	5	Standard
Mn	55	<b>-0.012</b>	ug/L	0.000	4	1132	800	1	Standard
> Ge	72		ug/L			29835	29468	0	KED
Ni	60	<b>-0.084</b>	ug/L	0.029	34	138	42	77	KED
Ni	62	<b>-0.123</b>	ug/L	0.016	13	33	10	26	KED
Cu	63	<b>0.005</b>	ug/L	0.010	191	80	97	34	KED
Cu	65	<b>0.019</b>	ug/L	0.028	150	24	54	82	KED
Zn	66	<b>0.098</b>	ug/L	0.028	28	43	83	13	KED
Zn	67	<b>0.185</b>	ug/L	0.057	30	3	16	24	KED
As	75	<b>-0.041</b>	ug/L	0.009	21	16	7	26	KED
Se	78	<b>-0.075</b>	ug/L	0.195	260	19	17	26	KED
Y	89		ug/L			297640	290009	2	Standard
Kr	83		ug/L			48	38	17	Standard
> In-1	115		ug/L			8217	7928	2	KED
Cd	111	<b>-0.002</b>	ug/L	0.002	95	4	3	15	KED
Cd	114	<b>0.000</b>	ug/L	0.005	1294	2	2	118	KED
> In	115		ug/L			413136	413209	1	Standard
Ag	107	<b>-0.003</b>	ug/L	0.001	31	89	50	24	Standard
Ba	135	<b>0.018</b>	ug/L	0.003	17	37	99	12	Standard
Ba	137	<b>0.016</b>	ug/L	0.005	28	46	145	19	Standard
> Tb	159		ug/L			720127	700360	0	Standard
Pb	208	<b>-0.000</b>	ug/L	0.001	254	200	182	16	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-BS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:51:05**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	37539	2	Standard
Cl	37		ug/L			4438068	4484934	1	Standard
> Sc	45		ug/L			546109	526769	0	Standard
Cr	52	<b>25.997</b>	ug/L	0.301	1	17159	465716	1	Standard
Cr	53	<b>26.170</b>	ug/L	0.391	1	216	52394	1	Standard
Mn	55	<b>26.697</b>	ug/L	0.585	2	1132	648906	2	Standard
> Ge	72		ug/L			29835	29528	1	KED
Ni	60	<b>25.245</b>	ug/L	0.848	3	138	28439	1	KED
Ni	62	<b>25.535</b>	ug/L	0.782	3	33	4701	2	KED
Cu	63	<b>25.908</b>	ug/L	0.550	2	80	84786	1	KED
Cu	65	<b>26.016</b>	ug/L	0.087	0	24	42034	1	KED
Zn	66	<b>81.091</b>	ug/L	3.492	4	43	33604	2	KED
Zn	67	<b>76.116</b>	ug/L	1.653	2	3	5247	0	KED
As	75	<b>24.657</b>	ug/L	0.576	2	16	5334	2	KED
Se	78	<b>77.457</b>	ug/L	1.373	1	19	1895	2	KED
Y	89		ug/L			297640	294909	2	Standard
Kr	83		ug/L			48	53	21	Standard
> In-1	115		ug/L			8217	8338	2	KED
Cd	111	<b>24.366</b>	ug/L	0.419	1	4	6002	0	KED
Cd	114	<b>24.273</b>	ug/L	0.413	1	2	14707	1	KED
> In	115		ug/L			413136	409309	1	Standard
Ag	107	<b>26.967</b>	ug/L	0.558	2	89	367945	1	Standard
Ba	135	<b>26.490</b>	ug/L	0.382	1	37	90662	0	Standard
Ba	137	<b>25.834</b>	ug/L	0.764	2	46	156904	2	Standard
> Tb	159		ug/L			720127	702792	2	Standard
Pb	208	<b>26.064</b>	ug/L	0.689	2	200	1134367	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-BLK1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 17:55:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	39637	0	Standard
Cl	37		ug/L			4438068	4377874	1	Standard
> Sc	45		ug/L			546109	515290	1	Standard
Cr	52	<b>0.030</b>	ug/L	0.008	26	17159	16692	1	Standard
Cr	53	<b>0.012</b>	ug/L	0.006	52	216	228	4	Standard
Mn	55	<b>-0.011</b>	ug/L	0.000	3	1132	807	2	Standard
> Ge	72		ug/L			29835	29670	0	KED
Ni	60	<b>-0.096</b>	ug/L	0.002	1	138	29	7	KED
Ni	62	<b>-0.123</b>	ug/L	0.016	13	33	10	26	KED
Cu	63	<b>-0.008</b>	ug/L	0.002	18	80	52	10	KED
Cu	65	<b>0.006</b>	ug/L	0.009	154	24	34	43	KED
Zn	66	<b>-0.006</b>	ug/L	0.021	365	43	40	21	KED
Zn	67	<b>0.073</b>	ug/L	0.056	76	3	8	44	KED
As	75	<b>-0.037</b>	ug/L	0.010	26	16	8	26	KED
Se	78	<b>-0.040</b>	ug/L	0.164	412	19	18	20	KED
Y	89		ug/L			297640	288601	3	Standard
Kr	83		ug/L			48	55	21	Standard
> In-1	115		ug/L			8217	8101	2	KED
Cd	111	<b>0.003</b>	ug/L	0.014	503	4	4	72	KED
Cd	114	<b>0.007</b>	ug/L	0.003	52	2	6	34	KED
> In	115		ug/L			413136	394744	2	Standard
Ag	107	<b>-0.001</b>	ug/L	0.001	59	89	66	17	Standard
Ba	135	<b>0.027</b>	ug/L	0.001	4	37	125	0	Standard
Ba	137	<b>0.032</b>	ug/L	0.002	5	46	229	3	Standard
> Tb	159		ug/L			720127	688433	1	Standard
Pb	208	<b>0.000</b>	ug/L	0.001	175	200	208	14	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-BS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:00:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	38240	2	Standard
Cl	37		ug/L			4438068	4410233	1	Standard
> Sc	45		ug/L			546109	520560	1	Standard
Cr	52	<b>26.914</b>	ug/L	0.331	1	17159	475804	0	Standard
Cr	53	<b>26.857</b>	ug/L	0.379	1	216	53125	1	Standard
Mn	55	<b>26.896</b>	ug/L	0.533	1	1132	645902	1	Standard
> Ge	72		ug/L			29835	29432	1	KED
Ni	60	<b>24.861</b>	ug/L	0.245	0	138	27926	0	KED
Ni	62	<b>25.353</b>	ug/L	0.145	0	33	4654	1	KED
Cu	63	<b>26.097</b>	ug/L	0.233	0	80	85147	2	KED
Cu	65	<b>25.487</b>	ug/L	0.736	2	24	41037	1	KED
Zn	66	<b>78.791</b>	ug/L	2.494	3	43	32555	2	KED
Zn	67	<b>74.527</b>	ug/L	1.802	2	3	5121	1	KED
As	75	<b>24.852</b>	ug/L	0.470	1	16	5359	1	KED
Se	78	<b>74.905</b>	ug/L	1.159	1	19	1827	0	KED
Y	89		ug/L			297640	286453	0	Standard
Kr	83		ug/L			48	45	12	Standard
> In-1	115		ug/L			8217	8111	1	KED
Cd	111	<b>25.034</b>	ug/L	0.196	0	4	6001	2	KED
Cd	114	<b>25.207</b>	ug/L	0.830	3	2	14855	1	KED
> In	115		ug/L			413136	405253	1	Standard
Ag	107	<b>27.780</b>	ug/L	0.411	1	89	375292	1	Standard
Ba	135	<b>26.713</b>	ug/L	0.157	0	37	90527	1	Standard
Ba	137	<b>25.934</b>	ug/L	0.909	3	46	155936	2	Standard
> Tb	159		ug/L			720127	692548	2	Standard
Pb	208	<b>26.598</b>	ug/L	0.605	2	200	1140760	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-01**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:05:16**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52767	0	Standard
Cl	37		ug/L			4438068	4428302	1	Standard
> Sc	45		ug/L			546109	636512	0	Standard
Cr	52	<b>13.994</b>	ug/L	0.123	0	17159	312157	0	Standard
Cr	53	<b>14.376</b>	ug/L	0.225	1	216	34893	1	Standard
Mn	55	<b>149.238</b>	ug/L	2.113	1	1132	4377017	1	Standard
> Ge	72		ug/L			29835	30014	2	KED
Ni	60	<b>11.515</b>	ug/L	0.442	3	138	13259	1	KED
Ni	62	<b>12.056</b>	ug/L	0.190	1	33	2274	2	KED
Cu	63	<b>23.397</b>	ug/L	0.805	3	80	77816	1	KED
Cu	65	<b>23.061</b>	ug/L	0.146	0	24	37872	1	KED
Zn	66	<b>47.762</b>	ug/L	1.511	3	43	20144	3	KED
Zn	67	<b>45.387</b>	ug/L	2.460	5	3	3180	3	KED
As	75	<b>5.309</b>	ug/L	0.056	1	16	1180	2	KED
Se	78	<b>0.990</b>	ug/L	0.246	24	19	44	11	KED
Y	89		ug/L			297640	520851	3	Standard
Kr	83		ug/L			48	105	15	Standard
> In-1	115		ug/L			8217	8078	1	KED
Cd	111	<b>0.127</b>	ug/L	0.015	11	4	34	9	KED
Cd	114	<b>0.123</b>	ug/L	0.027	21	2	74	21	KED
> In	115		ug/L			413136	408018	0	Standard
Ag	107	<b>0.102</b>	ug/L	0.004	3	89	1470	4	Standard
Ba	135	<b>27.753</b>	ug/L	0.348	1	37	94688	0	Standard
Ba	137	<b>27.631</b>	ug/L	0.214	0	46	167323	1	Standard
> Tb	159		ug/L			720127	723308	0	Standard
Pb	208	<b>12.019</b>	ug/L	0.047	0	200	538699	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-DUP1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:10:00**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	56036	1	Standard
Cl	37		ug/L			4438068	4364762	0	Standard
> Sc	45		ug/L			546109	641955	0	Standard
Cr	52	<b>12.982</b>	ug/L	0.157	1	17159	293496	0	Standard
Cr	53	<b>13.146</b>	ug/L	0.114	0	216	32201	0	Standard
Mn	55	<b>145.034</b>	ug/L	1.501	1	1132	4289928	0	Standard
> Ge	72		ug/L			29835	29768	1	KED
Ni	60	<b>11.273</b>	ug/L	0.288	2	138	12881	1	KED
Ni	62	<b>11.517</b>	ug/L	0.100	0	33	2156	1	KED
Cu	63	<b>22.359</b>	ug/L	0.500	2	80	73770	0	KED
Cu	65	<b>22.253</b>	ug/L	0.582	2	24	36238	0	KED
Zn	66	<b>47.882</b>	ug/L	1.140	2	43	20026	0	KED
Zn	67	<b>45.969</b>	ug/L	1.499	3	3	3195	1	KED
As	75	<b>5.208</b>	ug/L	0.277	5	16	1148	3	KED
Se	78	<b>1.100</b>	ug/L	0.263	23	19	46	11	KED
Y	89		ug/L			297640	527449	2	Standard
Kr	83		ug/L			48	97	9	Standard
> In-1	115		ug/L			8217	8246	2	KED
Cd	111	<b>0.145</b>	ug/L	0.038	25	4	39	25	KED
Cd	114	<b>0.137</b>	ug/L	0.039	28	2	84	28	KED
> In	115		ug/L			413136	410053	1	Standard
Ag	107	<b>0.100</b>	ug/L	0.003	2	89	1459	1	Standard
Ba	135	<b>28.542</b>	ug/L	0.538	1	37	97852	0	Standard
Ba	137	<b>29.049</b>	ug/L	0.318	1	46	176790	2	Standard
> Tb	159		ug/L			720127	732174	0	Standard
Pb	208	<b>9.453</b>	ug/L	0.117	1	200	428901	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-MS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:14:44**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	47364	0	Standard
Cl	37		ug/L			4438068	4332146	2	Standard
> Sc	45		ug/L			546109	644546	1	Standard
Cr	52	<b>34.869</b>	ug/L	0.765	2	17159	757223	0	Standard
Cr	53	<b>35.113</b>	ug/L	0.818	2	216	85922	2	Standard
Mn	55	<b>167.927</b>	ug/L	3.441	2	1132	4986160	0	Standard
> Ge	72		ug/L			29835	29623	1	KED
Ni	60	<b>37.043</b>	ug/L	0.579	1	138	41813	1	KED
Ni	62	<b>37.669</b>	ug/L	0.961	2	33	6943	2	KED
Cu	63	<b>48.418</b>	ug/L	1.061	2	80	158897	1	KED
Cu	65	<b>47.838</b>	ug/L	0.291	0	24	77518	1	KED
Zn	66	<b>128.901</b>	ug/L	1.525	1	43	53589	1	KED
Zn	67	<b>122.003</b>	ug/L	3.292	2	3	8436	2	KED
As	75	<b>29.862</b>	ug/L	0.575	1	16	6477	0	KED
Se	78	<b>75.909</b>	ug/L	1.002	1	19	1863	1	KED
Y	89		ug/L			297640	508777	2	Standard
Kr	83		ug/L			48	108	9	Standard
> In-1	115		ug/L			8217	8403	1	KED
Cd	111	<b>24.395</b>	ug/L	0.561	2	4	6058	2	KED
Cd	114	<b>24.393</b>	ug/L	0.703	2	2	14894	1	KED
> In	115		ug/L			413136	406763	0	Standard
Ag	107	<b>10.154</b>	ug/L	0.102	1	89	137765	1	Standard
Ba	135	<b>57.775</b>	ug/L	0.995	1	37	196470	0	Standard
Ba	137	<b>57.566</b>	ug/L	1.113	1	46	347442	1	Standard
> Tb	159		ug/L			720127	726977	0	Standard
Pb	208	<b>35.211</b>	ug/L	0.742	2	200	1585629	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-MSD1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:19:28**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	49616	2	Standard
Cl	37		ug/L			4438068	4470590	2	Standard
> Sc	45		ug/L			546109	646806	2	Standard
Cr	52	<b>34.564</b>	ug/L	0.234	0	17159	753501	1	Standard
Cr	53	<b>34.951</b>	ug/L	0.990	2	216	85801	1	Standard
Mn	55	<b>171.878</b>	ug/L	4.898	2	1132	5120393	0	Standard
> Ge	72		ug/L			29835	29628	1	KED
Ni	60	<b>35.899</b>	ug/L	1.931	5	138	40517	4	KED
Ni	62	<b>36.512</b>	ug/L	1.961	5	33	6728	3	KED
Cu	63	<b>46.922</b>	ug/L	0.607	1	80	154031	1	KED
Cu	65	<b>46.736</b>	ug/L	1.140	2	24	75731	1	KED
Zn	66	<b>124.057</b>	ug/L	0.999	0	43	51586	1	KED
Zn	67	<b>119.537</b>	ug/L	1.366	1	3	8267	0	KED
As	75	<b>28.948</b>	ug/L	0.630	2	16	6281	2	KED
Se	78	<b>74.561</b>	ug/L	0.538	0	19	1831	1	KED
Y	89		ug/L			297640	515834	4	Standard
Kr	83		ug/L			48	105	8	Standard
> In-1	115		ug/L			8217	8115	1	KED
Cd	111	<b>24.858</b>	ug/L	0.253	1	4	5961	0	KED
Cd	114	<b>24.856</b>	ug/L	0.354	1	2	14660	0	KED
> In	115		ug/L			413136	405169	2	Standard
Ag	107	<b>12.059</b>	ug/L	0.345	2	89	162869	0	Standard
Ba	135	<b>56.978</b>	ug/L	0.924	1	37	192968	0	Standard
Ba	137	<b>57.654</b>	ug/L	1.402	2	46	346503	0	Standard
> Tb	159		ug/L			720127	732338	1	Standard
Pb	208	<b>34.991</b>	ug/L	0.612	1	200	1587350	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0055-PS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:24:12**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	56650	0	Standard
Cl	37		ug/L			4438068	4358261	1	Standard
[> Sc	45		ug/L			546109	635294	0	Standard
Cr	52	35.555	ug/L	0.235	0	17159	760807	0	Standard
Cr	53	35.912	ug/L	0.964	2	216	86611	2	Standard
Mn	55	172.261	ug/L	4.582	2	1132	5042944	3	Standard
[> Ge	72		ug/L			29835	30148	0	KED
Ni	60	36.842	ug/L	0.750	2	138	42330	2	KED
Ni	62	37.654	ug/L	1.865	4	33	7063	5	KED
Cu	63	48.742	ug/L	1.635	3	80	162830	3	KED
Cu	65	49.256	ug/L	1.357	2	24	81234	2	KED
Zn	66	126.809	ug/L	2.634	2	43	53659	2	KED
Zn	67	118.114	ug/L	3.912	3	3	8314	3	KED
As	75	30.544	ug/L	0.452	1	16	6744	1	KED
[ Se	78	75.368	ug/L	0.803	1	19	1883	1	KED
Y	89		ug/L			297640	509859	0	Standard
Kr	83		ug/L			48	93	12	Standard
[> In-1	115		ug/L			8217	8283	3	KED
Cd	111	25.290	ug/L	0.719	2	4	6187	1	KED
Cd	114	25.133	ug/L	0.985	3	2	15118	0	KED
[> In	115		ug/L			413136	409245	1	Standard
Ag	107	25.948	ug/L	0.211	0	89	354001	1	Standard
Ba	135	53.084	ug/L	0.676	1	37	181613	0	Standard
[ Ba	137	53.945	ug/L	0.932	1	46	327541	0	Standard
[> Tb	159		ug/L			720127	727890	1	Standard
[ Pb	208	36.542	ug/L	0.822	2	200	1647536	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 18:28:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	33485	2	Standard
Cl	37		ug/L			4438068	4162305	2	Standard
[> Sc	45		ug/L			546109	499788	0	Standard
Cr	52	0.004	ug/L	0.026	653	17159	15769	2	Standard
Cr	53	0.011	ug/L	0.042	369	216	220	36	Standard
Mn	55	0.080	ug/L	0.158	196	1132	2879	125	Standard
[> Ge	72		ug/L			29835	28811	1	KED
Ni	60	-0.094	ug/L	0.010	10	138	31	35	KED
Ni	62	-0.118	ug/L	0.029	24	33	11	44	KED
Cu	63	-0.003	ug/L	0.000	13	80	69	3	KED
Cu	65	0.002	ug/L	0.001	81	24	26	7	KED
Zn	66	-0.054	ug/L	0.008	14	43	19	14	KED
Zn	67	-0.026	ug/L	0.029	108	3	1	100	KED
As	75	-0.042	ug/L	0.007	16	16	6	20	KED
Se	78	0.114	ug/L	0.199	175	19	22	22	KED
Y	89		ug/L			297640	278571	1	Standard
Kr	83		ug/L			48	45	19	Standard
[> In-1	115		ug/L			8217	7913	1	KED
Cd	111	0.005	ug/L	0.009	182	4	5	39	KED
Cd	114	0.001	ug/L	0.002	147	2	2	34	KED
[> In	115		ug/L			413136	394032	1	Standard
Ag	107	0.006	ug/L	0.014	222	89	168	109	Standard
Ba	135	0.020	ug/L	0.036	175	37	102	113	Standard
Ba	137	0.028	ug/L	0.046	166	46	204	130	Standard
[> Tb	159		ug/L			720127	669402	0	Standard
Pb	208	0.015	ug/L	0.028	182	200	813	140	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 18:33:41

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31529	0	Standard
Cl	37		ug/L			4438068	4401700	2	Standard
[> Sc	45		ug/L			546109	521470	1	Standard
Cr	52	50.206	ug/L	1.257	2	17159	874884	1	Standard
Cr	53	51.811	ug/L	1.402	2	216	102456	1	Standard
Mn	55	50.466	ug/L	1.123	2	1132	1213068	0	Standard
[> Ge	72		ug/L			29835	29461	1	KED
Ni	60	48.584	ug/L	0.698	1	138	54498	0	KED
Ni	62	49.653	ug/L	1.381	2	33	9089	1	KED
Cu	63	48.690	ug/L	0.190	0	80	158940	1	KED
Cu	65	49.720	ug/L	0.261	0	24	80127	1	KED
Zn	66	50.017	ug/L	2.197	4	43	20701	3	KED
Zn	67	49.972	ug/L	0.533	1	3	3439	0	KED
As	75	50.271	ug/L	0.373	0	16	10835	0	KED
[ Se	78	49.691	ug/L	0.786	1	19	1220	2	KED
Y	89		ug/L			297640	296704	2	Standard
Kr	83		ug/L			48	53	5	Standard
[> In-1	115		ug/L			8217	8321	3	KED
Cd	111	48.322	ug/L	1.292	2	4	11872	0	KED
Cd	114	48.935	ug/L	2.206	4	2	29564	1	KED
[> In	115		ug/L			413136	407349	1	Standard
Ag	107	50.709	ug/L	0.973	1	89	688560	1	Standard
Ba	135	51.123	ug/L	1.402	2	37	174129	3	Standard
[ Ba	137	51.018	ug/L	0.662	1	46	308372	0	Standard
[> Tb	159		ug/L			720127	704727	0	Standard
[ Pb	208	49.143	ug/L	0.617	1	200	2145289	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 18:41:09

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	29778	2	Standard
Cl	37		ug/L			4438068	4255792	1	Standard
[> Sc	45		ug/L			546109	490568	1	Standard
Cr	52	0.008	ug/L	0.017	216	17159	15541	2	Standard
Cr	53	-0.006	ug/L	0.002	39	216	183	2	Standard
Mn	55	-0.012	ug/L	0.001	6	1132	753	3	Standard
[> Ge	72		ug/L			29835	28616	1	KED
Ni	60	-0.098	ug/L	0.006	5	138	26	21	KED
Ni	62	-0.146	ug/L	0.027	18	33	6	75	KED
Cu	63	-0.008	ug/L	0.002	27	80	52	14	KED
Cu	65	0.001	ug/L	0.003	505	24	24	20	KED
Zn	66	-0.045	ug/L	0.023	51	43	23	40	KED
Zn	67	-0.008	ug/L	0.043	569	3	3	91	KED
As	75	-0.048	ug/L	0.002	4	16	5	8	KED
Se	78	-0.134	ug/L	0.101	75	19	16	16	KED
Y	89		ug/L			297640	280512	0	Standard
Kr	83		ug/L			48	50	10	Standard
[> In-1	115		ug/L			8217	7939	0	KED
Cd	111	-0.009	ug/L	0.007	77	4	1	86	KED
Cd	114	0.006	ug/L	0.006	100	2	5	59	KED
[> In	115		ug/L			413136	400459	0	Standard
Ag	107	-0.002	ug/L	0.000	1	89	62	0	Standard
Ba	135	-0.004	ug/L	0.002	61	37	24	31	Standard
Ba	137	-0.003	ug/L	0.001	47	46	29	24	Standard
[> Tb	159		ug/L			720127	667173	1	Standard
Pb	208	0.001	ug/L	0.001	107	200	212	12	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-14**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:48:05**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	54336	2	Standard
Cl	37		ug/L			4438068	4250036	0	Standard
> Sc	45		ug/L			546109	634890	0	Standard
Cr	52	<b>13.059</b>	ug/L	0.145	1	17159	291871	0	Standard
Cr	53	<b>13.218</b>	ug/L	0.213	1	216	32021	1	Standard
Mn	55	<b>147.796</b>	ug/L	2.702	1	1132	4323316	1	Standard
> Ge	72		ug/L			29835	29591	0	KED
Ni	60	<b>11.860</b>	ug/L	0.091	0	138	13467	0	KED
Ni	62	<b>12.234</b>	ug/L	0.263	2	33	2275	1	KED
Cu	63	<b>24.592</b>	ug/L	0.523	2	80	80667	1	KED
Cu	65	<b>24.482</b>	ug/L	0.266	1	24	39642	1	KED
Zn	66	<b>50.267</b>	ug/L	0.770	1	43	20902	1	KED
Zn	67	<b>48.360</b>	ug/L	0.300	0	3	3343	0	KED
As	75	<b>5.834</b>	ug/L	0.013	0	16	1277	0	KED
Se	78	<b>0.837</b>	ug/L	0.301	35	19	40	17	KED
Y	89		ug/L			297640	517140	1	Standard
Kr	83		ug/L			48	107	7	Standard
> In-1	115		ug/L			8217	8225	1	KED
Cd	111	<b>0.121</b>	ug/L	0.017	13	4	33	13	KED
Cd	114	<b>0.160</b>	ug/L	0.005	3	2	97	3	KED
> In	115		ug/L			413136	406996	1	Standard
Ag	107	<b>0.107</b>	ug/L	0.004	4	89	1544	4	Standard
Ba	135	<b>40.608</b>	ug/L	0.419	1	37	138203	2	Standard
Ba	137	<b>40.429</b>	ug/L	0.535	1	46	244162	0	Standard
> Tb	159		ug/L			720127	723597	2	Standard
Pb	208	<b>10.527</b>	ug/L	0.275	2	200	471856	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-15**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:52:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	55072	1	Standard
Cl	37		ug/L			4438068	4216566	0	Standard
> Sc	45		ug/L			546109	627183	1	Standard
Cr	52	<b>17.572</b>	ug/L	0.244	1	17159	381114	0	Standard
Cr	53	<b>17.527</b>	ug/L	0.405	2	216	41852	1	Standard
Mn	55	<b>238.744</b>	ug/L	7.900	3	1132	6896099	1	Standard
> Ge	72		ug/L			29835	29801	0	KED
Ni	60	<b>13.382</b>	ug/L	0.134	0	138	15285	0	KED
Ni	62	<b>13.654</b>	ug/L	0.316	2	33	2553	2	KED
Cu	63	<b>21.132</b>	ug/L	0.164	0	80	69824	1	KED
Cu	65	<b>21.222</b>	ug/L	0.381	1	24	34613	2	KED
Zn	66	<b>49.503</b>	ug/L	1.106	2	43	20730	1	KED
Zn	67	<b>48.132</b>	ug/L	2.346	4	3	3350	4	KED
As	75	<b>5.493</b>	ug/L	0.158	2	16	1212	3	KED
Se	78	<b>0.919</b>	ug/L	0.145	15	19	42	8	KED
Y	89		ug/L			297640	510759	1	Standard
Kr	83		ug/L			48	111	17	Standard
> In-1	115		ug/L			8217	8142	1	KED
Cd	111	<b>0.261</b>	ug/L	0.032	12	4	66	12	KED
Cd	114	<b>0.283</b>	ug/L	0.034	12	2	169	10	KED
> In	115		ug/L			413136	404655	2	Standard
Ag	107	<b>0.092</b>	ug/L	0.003	3	89	1322	4	Standard
Ba	135	<b>39.017</b>	ug/L	0.879	2	37	131966	1	Standard
Ba	137	<b>38.382</b>	ug/L	1.513	3	46	230318	1	Standard
> Tb	159		ug/L			720127	728455	3	Standard
Pb	208	<b>8.678</b>	ug/L	0.298	3	200	391448	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-16**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 18:57:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	55926	0	Standard
Cl	37		ug/L			4438068	4265247	1	Standard
> Sc	45		ug/L			546109	631851	1	Standard
Cr	52	<b>11.642</b>	ug/L	0.413	3	17159	261034	1	Standard
Cr	53	<b>11.892</b>	ug/L	0.192	1	216	28693	1	Standard
Mn	55	<b>150.094</b>	ug/L	2.940	1	1132	4369210	1	Standard
> Ge	72		ug/L			29835	29688	1	KED
Ni	60	<b>10.725</b>	ug/L	0.424	3	138	12228	2	KED
Ni	62	<b>10.969</b>	ug/L	0.181	1	33	2050	2	KED
Cu	63	<b>22.358</b>	ug/L	0.205	0	80	73586	1	KED
Cu	65	<b>22.323</b>	ug/L	0.256	1	24	36265	1	KED
Zn	66	<b>46.995</b>	ug/L	1.373	2	43	19605	2	KED
Zn	67	<b>46.394</b>	ug/L	1.106	2	3	3217	1	KED
As	75	<b>5.796</b>	ug/L	0.049	0	16	1273	2	KED
Se	78	<b>0.961</b>	ug/L	0.113	11	19	43	6	KED
Y	89		ug/L			297640	504567	1	Standard
Kr	83		ug/L			48	102	4	Standard
> In-1	115		ug/L			8217	8198	2	KED
Cd	111	<b>0.120</b>	ug/L	0.022	18	4	33	14	KED
Cd	114	<b>0.155</b>	ug/L	0.029	19	2	94	16	KED
> In	115		ug/L			413136	407763	0	Standard
Ag	107	<b>0.106</b>	ug/L	0.009	8	89	1527	7	Standard
Ba	135	<b>36.020</b>	ug/L	0.442	1	37	122820	1	Standard
Ba	137	<b>36.405</b>	ug/L	0.328	0	46	220295	1	Standard
> Tb	159		ug/L			720127	721293	1	Standard
Pb	208	<b>9.247</b>	ug/L	0.172	1	200	413290	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-02**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:02:17**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	51795	3	Standard
Cl	37		ug/L			4438068	4204755	1	Standard
> Sc	45		ug/L			546109	614973	1	Standard
Cr	52	<b>13.586</b>	ug/L	0.234	1	17159	293325	0	Standard
Cr	53	<b>13.872</b>	ug/L	0.306	2	216	32533	1	Standard
Mn	55	<b>145.105</b>	ug/L	4.700	3	1132	4111384	2	Standard
> Ge	72		ug/L			29835	28984	0	KED
Ni	60	<b>11.819</b>	ug/L	0.451	3	138	13143	3	KED
Ni	62	<b>11.861</b>	ug/L	0.592	4	33	2162	5	KED
Cu	63	<b>30.476</b>	ug/L	0.449	1	80	97897	0	KED
Cu	65	<b>30.585</b>	ug/L	0.661	2	24	48498	1	KED
Zn	66	<b>58.863</b>	ug/L	1.347	2	43	23969	2	KED
Zn	67	<b>56.219</b>	ug/L	1.246	2	3	3806	2	KED
As	75	<b>6.864</b>	ug/L	0.063	0	16	1469	1	KED
Se	78	<b>0.799</b>	ug/L	0.047	5	19	38	3	KED
Y	89		ug/L			297640	495443	1	Standard
Kr	83		ug/L			48	119	14	Standard
> In-1	115		ug/L			8217	8158	2	KED
Cd	111	<b>0.237</b>	ug/L	0.005	2	4	61	0	KED
Cd	114	<b>0.257</b>	ug/L	0.011	4	2	154	6	KED
> In	115		ug/L			413136	404978	2	Standard
Ag	107	<b>0.144</b>	ug/L	0.005	3	89	2027	4	Standard
Ba	135	<b>37.408</b>	ug/L	1.301	3	37	126633	2	Standard
Ba	137	<b>37.350</b>	ug/L	0.698	1	46	224416	0	Standard
> Tb	159		ug/L			720127	709784	3	Standard
Pb	208	<b>14.406</b>	ug/L	0.385	2	200	633281	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-01**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:07:01**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	54462	3	Standard
Cl	37		ug/L			4438068	4241651	2	Standard
> Sc	45		ug/L			546109	633361	1	Standard
Cr	52	<b>14.367</b>	ug/L	0.307	2	17159	318325	1	Standard
Cr	53	<b>14.502</b>	ug/L	0.253	1	216	35015	0	Standard
Mn	55	<b>152.349</b>	ug/L	3.710	2	1132	4444946	0	Standard
> Ge	72		ug/L			29835	29121	4	KED
Ni	60	<b>12.312</b>	ug/L	0.701	5	138	13730	1	KED
Ni	62	<b>12.779</b>	ug/L	0.791	6	33	2334	4	KED
Cu	63	<b>31.502</b>	ug/L	1.424	4	80	101550	2	KED
Cu	65	<b>31.127</b>	ug/L	1.692	5	24	49522	2	KED
Zn	66	<b>60.233</b>	ug/L	2.762	4	43	24607	0	KED
Zn	67	<b>57.958</b>	ug/L	4.389	7	3	3934	4	KED
As	75	<b>7.485</b>	ug/L	0.404	5	16	1605	0	KED
Se	78	<b>0.919</b>	ug/L	0.182	19	19	41	8	KED
Y	89		ug/L			297640	517192	1	Standard
Kr	83		ug/L			48	117	17	Standard
> In-1	115		ug/L			8217	8181	0	KED
Cd	111	<b>0.213</b>	ug/L	0.031	14	4	55	13	KED
Cd	114	<b>0.228</b>	ug/L	0.042	18	2	137	19	KED
> In	115		ug/L			413136	397775	1	Standard
Ag	107	<b>0.149</b>	ug/L	0.006	3	89	2065	2	Standard
Ba	135	<b>42.062</b>	ug/L	0.054	0	37	139894	1	Standard
Ba	137	<b>41.346</b>	ug/L	0.756	1	46	244016	0	Standard
> Tb	159		ug/L			720127	719203	1	Standard
Pb	208	<b>14.681</b>	ug/L	0.117	0	200	654202	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-DUP1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:11:44**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	54514	1	Standard
Cl	37		ug/L			4438068	4263581	4	Standard
> Sc	45		ug/L			546109	624401	0	Standard
Cr	52	<b>14.046</b>	ug/L	0.124	0	17159	307280	0	Standard
Cr	53	<b>14.364</b>	ug/L	0.167	1	216	34200	0	Standard
Mn	55	<b>156.535</b>	ug/L	1.335	0	1132	4503677	1	Standard
> Ge	72		ug/L			29835	28830	2	KED
Ni	60	<b>12.412</b>	ug/L	0.204	1	138	13729	4	KED
Ni	62	<b>12.594</b>	ug/L	1.080	8	33	2277	6	KED
Cu	63	<b>32.013</b>	ug/L	1.231	3	80	102224	1	KED
Cu	65	<b>31.189</b>	ug/L	0.450	1	24	49184	1	KED
Zn	66	<b>59.584</b>	ug/L	0.172	0	43	24131	2	KED
Zn	67	<b>57.337</b>	ug/L	1.125	1	3	3860	1	KED
As	75	<b>7.409</b>	ug/L	0.412	5	16	1574	2	KED
Se	78	<b>1.013</b>	ug/L	0.137	13	19	43	4	KED
Y	89		ug/L			297640	513920	2	Standard
Kr	83		ug/L			48	111	11	Standard
> In-1	115		ug/L			8217	8056	2	KED
Cd	111	<b>0.250</b>	ug/L	0.033	13	4	63	10	KED
Cd	114	<b>0.225</b>	ug/L	0.032	14	2	133	11	KED
> In	115		ug/L			413136	397768	0	Standard
Ag	107	<b>0.188</b>	ug/L	0.005	2	89	2577	2	Standard
Ba	135	<b>40.422</b>	ug/L	0.376	0	37	134439	0	Standard
Ba	137	<b>39.809</b>	ug/L	0.838	2	46	234980	1	Standard
> Tb	159		ug/L			720127	708142	2	Standard
Pb	208	<b>14.996</b>	ug/L	0.245	1	200	657889	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-MS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:16:28**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	50936	3	Standard
Cl	37		ug/L			4438068	4182338	2	Standard
> Sc	45		ug/L			546109	620294	0	Standard
Cr	52	<b>36.471</b>	ug/L	0.387	1	17159	761491	1	Standard
Cr	53	<b>36.404</b>	ug/L	0.468	1	216	85730	1	Standard
Mn	55	<b>178.936</b>	ug/L	1.054	0	1132	5114083	0	Standard
> Ge	72		ug/L			29835	29103	1	KED
Ni	60	<b>37.970</b>	ug/L	0.697	1	138	42100	0	KED
Ni	62	<b>38.222</b>	ug/L	1.495	3	33	6919	2	KED
Cu	63	<b>56.489</b>	ug/L	0.296	0	80	182145	1	KED
Cu	65	<b>57.737</b>	ug/L	1.385	2	24	91896	1	KED
Zn	66	<b>139.543</b>	ug/L	0.984	0	43	56992	1	KED
Zn	67	<b>134.368</b>	ug/L	2.188	1	3	9127	0	KED
As	75	<b>31.604</b>	ug/L	0.647	2	16	6734	0	KED
Se	78	<b>76.054</b>	ug/L	1.484	1	19	1834	0	KED
Y	89		ug/L			297640	514178	1	Standard
Kr	83		ug/L			48	111	6	Standard
> In-1	115		ug/L			8217	7997	3	KED
Cd	111	<b>24.933</b>	ug/L	0.703	2	4	5889	1	KED
Cd	114	<b>25.130</b>	ug/L	1.293	5	2	14589	1	KED
> In	115		ug/L			413136	395336	2	Standard
Ag	107	<b>19.305</b>	ug/L	0.608	3	89	254375	1	Standard
Ba	135	<b>67.258</b>	ug/L	1.996	2	37	222217	0	Standard
Ba	137	<b>67.230</b>	ug/L	2.441	3	46	394207	1	Standard
> Tb	159		ug/L			720127	707928	0	Standard
Pb	208	<b>39.766</b>	ug/L	0.081	0	200	1744023	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-MSD1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:21:12**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	54934	3	Standard
Cl	37		ug/L			4438068	4205744	0	Standard
> Sc	45		ug/L			546109	632000	2	Standard
Cr	52	<b>35.611</b>	ug/L	0.828	2	17159	757863	1	Standard
Cr	53	<b>35.755</b>	ug/L	0.413	1	216	85781	1	Standard
Mn	55	<b>173.155</b>	ug/L	4.765	2	1132	5040339	1	Standard
> Ge	72		ug/L			29835	28830	2	KED
Ni	60	<b>37.447</b>	ug/L	0.600	1	138	41131	0	KED
Ni	62	<b>37.363</b>	ug/L	0.787	2	33	6703	3	KED
Cu	63	<b>56.755</b>	ug/L	0.412	0	80	181264	1	KED
Cu	65	<b>55.874</b>	ug/L	1.792	3	24	88074	1	KED
Zn	66	<b>139.012</b>	ug/L	1.754	1	43	56235	0	KED
Zn	67	<b>131.456</b>	ug/L	3.067	2	3	8847	2	KED
As	75	<b>30.605</b>	ug/L	0.601	1	16	6460	0	KED
Se	78	<b>73.592</b>	ug/L	0.449	0	19	1758	1	KED
Y	89		ug/L			297640	517395	0	Standard
Kr	83		ug/L			48	110	10	Standard
> In-1	115		ug/L			8217	7870	0	KED
Cd	111	<b>25.061</b>	ug/L	0.127	0	4	5829	0	KED
Cd	114	<b>24.735</b>	ug/L	0.610	2	2	14148	2	KED
> In	115		ug/L			413136	398745	1	Standard
Ag	107	<b>20.832</b>	ug/L	0.449	2	89	276903	1	Standard
Ba	135	<b>68.134</b>	ug/L	1.556	2	37	227123	2	Standard
Ba	137	<b>67.967</b>	ug/L	1.998	2	46	402062	1	Standard
> Tb	159		ug/L			720127	710578	0	Standard
Pb	208	<b>39.669</b>	ug/L	0.260	0	200	1746294	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0123-PS1**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:25:55**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	62326	1	Standard
Cl	37		ug/L			4438068	4281311	3	Standard
> Sc	45		ug/L			546109	627013	0	Standard
Cr	52	<b>35.893</b>	ug/L	0.719	2	17159	757769	1	Standard
Cr	53	<b>37.123</b>	ug/L	0.312	0	216	88367	1	Standard
Mn	55	<b>173.853</b>	ug/L	0.430	0	1132	5022663	0	Standard
> Ge	72		ug/L			29835	29410	0	KED
Ni	60	<b>37.691</b>	ug/L	0.466	1	138	42240	1	KED
Ni	62	<b>37.909</b>	ug/L	0.912	2	33	6936	1	KED
Cu	63	<b>57.761</b>	ug/L	0.613	1	80	188217	1	KED
Cu	65	<b>57.093</b>	ug/L	0.673	1	24	91854	1	KED
Zn	66	<b>137.816</b>	ug/L	2.108	1	43	56881	1	KED
Zn	67	<b>130.851</b>	ug/L	4.134	3	3	8983	2	KED
As	75	<b>32.554</b>	ug/L	0.765	2	16	7010	1	KED
Se	78	<b>77.853</b>	ug/L	1.956	2	19	1897	3	KED
Y	89		ug/L			297640	520138	2	Standard
Kr	83		ug/L			48	102	11	Standard
> In-1	115		ug/L			8217	7997	1	KED
Cd	111	<b>26.087</b>	ug/L	0.739	2	4	6164	2	KED
Cd	114	<b>25.342</b>	ug/L	0.288	1	2	14729	1	KED
> In	115		ug/L			413136	397140	1	Standard
Ag	107	<b>26.963</b>	ug/L	0.282	1	89	357025	2	Standard
Ba	135	<b>66.149</b>	ug/L	2.111	3	37	219589	2	Standard
Ba	137	<b>66.659</b>	ug/L	1.451	2	46	392791	1	Standard
> Tb	159		ug/L			720127	709532	2	Standard
Pb	208	<b>40.470</b>	ug/L	1.067	2	200	1778285	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 19:30:40

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	32377	3	Standard
Cl	37		ug/L			4438068	4085098	1	Standard
[> Sc	45		ug/L			546109	489192	1	Standard
Cr	52	-0.031	ug/L	0.035	112	17159	14861	2	Standard
Cr	53	-0.012	ug/L	0.005	37	216	171	3	Standard
Mn	55	-0.003	ug/L	0.003	91	1132	944	7	Standard
[> Ge	72		ug/L			29835	28656	2	KED
Ni	60	-0.088	ug/L	0.001	1	138	36	2	KED
Ni	62	-0.125	ug/L	0.032	25	33	10	57	KED
Cu	63	0.031	ug/L	0.009	29	80	177	15	KED
Cu	65	0.041	ug/L	0.002	6	24	87	2	KED
Zn	66	0.003	ug/L	0.020	672	43	42	16	KED
Zn	67	0.060	ug/L	0.031	51	3	7	25	KED
As	75	-0.057	ug/L	0.004	6	16	3	19	KED
Se	78	-0.089	ug/L	0.139	156	19	17	20	KED
Y	89		ug/L			297640	277834	1	Standard
Kr	83		ug/L			48	45	14	Standard
[> In-1	115		ug/L			8217	7769	3	KED
Cd	111	-0.009	ug/L	0.004	51	4	1	50	KED
Cd	114	0.007	ug/L	0.004	55	2	6	34	KED
[> In	115		ug/L			413136	389818	0	Standard
Ag	107	-0.001	ug/L	0.001	64	89	68	14	Standard
Ba	135	0.003	ug/L	0.003	123	37	44	25	Standard
Ba	137	0.007	ug/L	0.001	10	46	83	4	Standard
[> Tb	159		ug/L			720127	669078	2	Standard
Pb	208	-0.000	ug/L	0.001	352	200	172	30	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 19:35:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30055	1	Standard
Cl	37		ug/L			4438068	4320009	0	Standard
[> Sc	45		ug/L			546109	504170	0	Standard
Cr	52	50.354	ug/L	0.712	1	17159	848541	2	Standard
Cr	53	51.120	ug/L	1.449	2	216	97782	3	Standard
Mn	55	50.325	ug/L	0.547	1	1132	1169865	1	Standard
[> Ge	72		ug/L			29835	28456	0	KED
Ni	60	48.069	ug/L	0.694	1	138	52086	0	KED
Ni	62	49.768	ug/L	1.718	3	33	8802	3	KED
Cu	63	49.625	ug/L	1.197	2	80	156452	1	KED
Cu	65	49.694	ug/L	0.415	0	24	77356	1	KED
Zn	66	50.168	ug/L	1.091	2	43	20061	1	KED
Zn	67	51.309	ug/L	1.762	3	3	3410	3	KED
As	75	49.865	ug/L	0.608	1	16	10382	0	KED
[ Se	78	49.798	ug/L	1.897	3	19	1181	3	KED
Y	89		ug/L			297640	286710	3	Standard
Kr	83		ug/L			48	54	23	Standard
[> In-1	115		ug/L			8217	7876	1	KED
Cd	111	50.030	ug/L	0.419	0	4	11640	1	KED
[ Cd	114	49.855	ug/L	1.063	2	2	28532	0	KED
[> In	115		ug/L			413136	387579	2	Standard
Ag	107	52.355	ug/L	0.193	0	89	676394	1	Standard
Ba	135	52.061	ug/L	0.419	0	37	168687	1	Standard
[ Ba	137	51.453	ug/L	0.770	1	46	295865	0	Standard
[> Tb	159		ug/L			720127	688907	1	Standard
[ Pb	208	49.121	ug/L	0.460	0	200	2096224	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 19:42:53

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	29722	0	Standard
Cl	37		ug/L			4438068	4242139	1	Standard
[> Sc	45		ug/L			546109	489017	0	Standard
Cr	52	-0.026	ug/L	0.027	103	17159	14950	2	Standard
Cr	53	-0.025	ug/L	0.008	31	216	147	8	Standard
Mn	55	-0.012	ug/L	0.001	8	1132	740	2	Standard
[> Ge	72		ug/L			29835	27734	0	KED
Ni	60	-0.090	ug/L	0.003	2	138	33	8	KED
Ni	62	-0.138	ug/L	0.033	23	33	7	75	KED
Cu	63	-0.007	ug/L	0.003	33	80	52	14	KED
Cu	65	0.001	ug/L	0.004	553	24	24	25	KED
Zn	66	-0.033	ug/L	0.025	74	43	27	35	KED
Zn	67	0.044	ug/L	0.095	218	3	6	96	KED
As	75	-0.043	ug/L	0.004	8	16	6	11	KED
Se	78	-0.106	ug/L	0.101	95	19	16	14	KED
Y	89		ug/L			297640	275683	2	Standard
Kr	83		ug/L			48	37	30	Standard
[> In-1	115		ug/L			8217	7716	1	KED
Cd	111	-0.006	ug/L	0.005	78	4	2	43	KED
Cd	114	0.003	ug/L	0.007	253	2	3	102	KED
[> In	115		ug/L			413136	391686	1	Standard
Ag	107	-0.001	ug/L	0.001	86	89	71	14	Standard
Ba	135	-0.004	ug/L	0.003	63	37	20	41	Standard
Ba	137	-0.001	ug/L	0.001	83	46	36	18	Standard
[> Tb	159		ug/L			720127	660183	1	Standard
Pb	208	-0.000	ug/L	0.001	1977	200	180	25	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-02**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:47:38**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52636	1	Standard
Cl	37		ug/L			4438068	4181363	1	Standard
> Sc	45		ug/L			546109	610427	0	Standard
Cr	52	<b>13.744</b>	ug/L	0.221	1	17159	294356	1	Standard
Cr	53	<b>13.951</b>	ug/L	0.194	1	216	32481	1	Standard
Mn	55	<b>137.044</b>	ug/L	0.825	0	1132	3854764	0	Standard
> Ge	72		ug/L			29835	28864	2	KED
Ni	60	<b>13.226</b>	ug/L	0.519	3	138	14624	1	KED
Ni	62	<b>13.195</b>	ug/L	0.712	5	33	2391	6	KED
Cu	63	<b>21.558</b>	ug/L	0.392	1	80	68968	1	KED
Cu	65	<b>21.385</b>	ug/L	0.519	2	24	33770	2	KED
Zn	66	<b>48.207</b>	ug/L	0.174	0	43	19554	2	KED
Zn	67	<b>44.501</b>	ug/L	0.348	0	3	3001	3	KED
As	75	<b>4.167</b>	ug/L	0.063	1	16	894	2	KED
Se	78	<b>0.932</b>	ug/L	0.241	25	19	41	13	KED
Y	89		ug/L			297640	525404	1	Standard
Kr	83		ug/L			48	100	15	Standard
> In-1	115		ug/L			8217	7884	1	KED
Cd	111	<b>0.126</b>	ug/L	0.038	30	4	33	26	KED
Cd	114	<b>0.157</b>	ug/L	0.027	16	2	92	16	KED
> In	115		ug/L			413136	390942	1	Standard
Ag	107	<b>0.093</b>	ug/L	0.003	2	89	1291	3	Standard
Ba	135	<b>30.433</b>	ug/L	0.109	0	37	99488	0	Standard
Ba	137	<b>31.030</b>	ug/L	0.531	1	46	180014	1	Standard
> Tb	159		ug/L			720127	713299	2	Standard
Pb	208	<b>9.067</b>	ug/L	0.188	2	200	400707	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-03**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:52:21**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	57249	1	Standard
Cl	37		ug/L			4438068	4180821	0	Standard
> Sc	45		ug/L			546109	616756	1	Standard
Cr	52	<b>13.727</b>	ug/L	0.057	0	17159	297054	0	Standard
Cr	53	<b>13.927</b>	ug/L	0.155	1	216	32763	2	Standard
Mn	55	<b>173.961</b>	ug/L	2.122	1	1132	4943334	1	Standard
> Ge	72		ug/L			29835	29060	1	KED
Ni	60	<b>12.103</b>	ug/L	0.203	1	138	13492	0	KED
Ni	62	<b>11.898</b>	ug/L	0.581	4	33	2172	3	KED
Cu	63	<b>24.250</b>	ug/L	0.211	0	80	78115	1	KED
Cu	65	<b>24.760</b>	ug/L	0.132	0	24	39371	1	KED
Zn	66	<b>49.568</b>	ug/L	0.831	1	43	20242	2	KED
Zn	67	<b>47.992</b>	ug/L	1.198	2	3	3257	1	KED
As	75	<b>6.569</b>	ug/L	0.196	2	16	1410	1	KED
Se	78	<b>0.935</b>	ug/L	0.169	18	19	41	11	KED
Y	89		ug/L			297640	511903	0	Standard
Kr	83		ug/L			48	83	31	Standard
> In-1	115		ug/L			8217	7912	2	KED
Cd	111	<b>0.141</b>	ug/L	0.038	26	4	36	23	KED
Cd	114	<b>0.158</b>	ug/L	0.015	9	2	93	10	KED
> In	115		ug/L			413136	400750	0	Standard
Ag	107	<b>0.108</b>	ug/L	0.007	6	89	1529	5	Standard
Ba	135	<b>35.193</b>	ug/L	0.223	0	37	117929	0	Standard
Ba	137	<b>34.432</b>	ug/L	0.440	1	46	204767	0	Standard
> Tb	159		ug/L			720127	710521	0	Standard
Pb	208	<b>10.432</b>	ug/L	0.125	1	200	459336	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-04**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 19:57:05**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	61889	4	Standard
Cl	37		ug/L			4438068	4193783	0	Standard
> Sc	45		ug/L			546109	624059	1	Standard
Cr	52	<b>13.565</b>	ug/L	0.277	2	17159	297195	0	Standard
Cr	53	<b>13.789</b>	ug/L	0.272	1	216	32816	0	Standard
Mn	55	<b>139.800</b>	ug/L	2.103	1	1132	4019463	0	Standard
> Ge	72		ug/L			29835	28883	0	KED
Ni	60	<b>11.934</b>	ug/L	0.344	2	138	13225	2	KED
Ni	62	<b>11.687</b>	ug/L	0.225	1	33	2122	1	KED
Cu	63	<b>23.193</b>	ug/L	0.258	1	80	74259	0	KED
Cu	65	<b>23.789</b>	ug/L	0.806	3	24	37596	3	KED
Zn	66	<b>47.525</b>	ug/L	0.382	0	43	19292	1	KED
Zn	67	<b>47.153</b>	ug/L	0.299	0	3	3181	1	KED
As	75	<b>4.853</b>	ug/L	0.061	1	16	1039	1	KED
Se	78	<b>0.904</b>	ug/L	0.128	14	19	40	7	KED
Y	89		ug/L			297640	509235	1	Standard
Kr	83		ug/L			48	123	17	Standard
> In-1	115		ug/L			8217	7901	4	KED
Cd	111	<b>0.136</b>	ug/L	0.033	23	4	35	20	KED
Cd	114	<b>0.138</b>	ug/L	0.022	15	2	81	15	KED
> In	115		ug/L			413136	395036	1	Standard
Ag	107	<b>0.099</b>	ug/L	0.004	3	89	1394	4	Standard
Ba	135	<b>36.287</b>	ug/L	1.070	2	37	119830	1	Standard
Ba	137	<b>36.009</b>	ug/L	0.877	2	46	211050	1	Standard
> Tb	159		ug/L			720127	701982	2	Standard
Pb	208	<b>10.090</b>	ug/L	0.192	1	200	438794	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-05**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:01:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	53291	1	Standard
Cl	37		ug/L			4438068	4187431	1	Standard
> Sc	45		ug/L			546109	570657	2	Standard
Cr	52	<b>9.835</b>	ug/L	0.246	2	17159	201934	1	Standard
Cr	53	<b>10.093</b>	ug/L	0.213	2	216	22024	1	Standard
Mn	55	<b>125.120</b>	ug/L	2.006	1	1132	3289349	1	Standard
> Ge	72		ug/L			29835	28575	2	KED
Ni	60	<b>8.281</b>	ug/L	0.257	3	138	9116	0	KED
Ni	62	<b>8.410</b>	ug/L	0.355	4	33	1519	1	KED
Cu	63	<b>27.763</b>	ug/L	0.370	1	80	87936	2	KED
Cu	65	<b>28.512</b>	ug/L	0.510	1	24	44567	0	KED
Zn	66	<b>35.124</b>	ug/L	0.985	2	43	14111	0	KED
Zn	67	<b>34.082</b>	ug/L	1.769	5	3	2275	3	KED
As	75	<b>4.398</b>	ug/L	0.108	2	16	933	0	KED
Se	78	<b>0.735</b>	ug/L	0.216	29	19	36	11	KED
Y	89		ug/L			297640	441818	1	Standard
Kr	83		ug/L			48	93	9	Standard
> In-1	115		ug/L			8217	7710	1	KED
Cd	111	<b>0.092</b>	ug/L	0.005	5	4	24	3	KED
Cd	114	<b>0.092</b>	ug/L	0.015	16	2	54	16	KED
> In	115		ug/L			413136	389715	3	Standard
Ag	107	<b>0.071</b>	ug/L	0.003	4	89	1003	5	Standard
Ba	135	<b>23.453</b>	ug/L	0.706	3	37	76383	0	Standard
Ba	137	<b>23.002</b>	ug/L	0.947	4	46	132919	0	Standard
> Tb	159		ug/L			720127	695866	3	Standard
Pb	208	<b>7.172</b>	ug/L	0.254	3	200	309101	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-06**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:06:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	57765	2	Standard
Cl	37		ug/L			4438068	4150372	1	Standard
> Sc	45		ug/L			546109	620344	1	Standard
Cr	52	<b>13.278</b>	ug/L	0.219	1	17159	289628	0	Standard
Cr	53	<b>13.638</b>	ug/L	0.378	2	216	32265	1	Standard
Mn	55	<b>147.446</b>	ug/L	2.240	1	1132	4214157	0	Standard
> Ge	72		ug/L			29835	28966	1	KED
Ni	60	<b>11.341</b>	ug/L	0.239	2	138	12609	0	KED
Ni	62	<b>11.496</b>	ug/L	0.129	1	33	2094	2	KED
Cu	63	<b>26.986</b>	ug/L	0.884	3	80	86614	1	KED
Cu	65	<b>27.359</b>	ug/L	0.349	1	24	43364	2	KED
Zn	66	<b>67.767</b>	ug/L	0.532	0	43	27568	1	KED
Zn	67	<b>65.855</b>	ug/L	3.828	5	3	4452	3	KED
As	75	<b>5.221</b>	ug/L	0.373	7	16	1119	5	KED
Se	78	<b>0.840</b>	ug/L	0.152	18	19	39	7	KED
Y	89		ug/L			297640	501422	0	Standard
Kr	83		ug/L			48	106	15	Standard
> In-1	115		ug/L			8217	7988	0	KED
Cd	111	<b>0.159</b>	ug/L	0.003	1	4	41	1	KED
Cd	114	<b>0.181</b>	ug/L	0.035	19	2	107	19	KED
> In	115		ug/L			413136	391825	1	Standard
Ag	107	<b>0.120</b>	ug/L	0.002	1	89	1652	1	Standard
Ba	135	<b>47.402</b>	ug/L	0.793	1	37	155274	1	Standard
Ba	137	<b>46.774</b>	ug/L	0.972	2	46	271902	0	Standard
> Tb	159		ug/L			720127	710526	1	Standard
Pb	208	<b>11.691</b>	ug/L	0.336	2	200	514577	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-07**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:11:17**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	49686	0	Standard
Cl	37		ug/L			4438068	4168698	1	Standard
> Sc	45		ug/L			546109	593374	1	Standard
Cr	52	<b>9.984</b>	ug/L	0.204	2	17159	212932	1	Standard
Cr	53	<b>10.122</b>	ug/L	0.187	1	216	22970	1	Standard
Mn	55	<b>90.594</b>	ug/L	1.036	1	1132	2477300	1	Standard
> Ge	72		ug/L			29835	28963	1	KED
Ni	60	<b>8.407</b>	ug/L	0.129	1	138	9382	1	KED
Ni	62	<b>8.245</b>	ug/L	0.292	3	33	1511	3	KED
Cu	63	<b>15.021</b>	ug/L	0.141	0	80	48258	2	KED
Cu	65	<b>15.578</b>	ug/L	0.267	1	24	24692	0	KED
Zn	66	<b>28.823</b>	ug/L	0.557	1	43	11746	0	KED
Zn	67	<b>26.764</b>	ug/L	0.886	3	3	1812	2	KED
As	75	<b>3.687</b>	ug/L	0.156	4	16	795	2	KED
Se	78	<b>0.696</b>	ug/L	0.127	18	19	35	7	KED
Y	89		ug/L			297640	474526	0	Standard
Kr	83		ug/L			48	100	4	Standard
> In-1	115		ug/L			8217	7829	0	KED
Cd	111	<b>0.053</b>	ug/L	0.018	34	4	16	26	KED
Cd	114	<b>0.047</b>	ug/L	0.001	2	2	28	3	KED
> In	115		ug/L			413136	398001	0	Standard
Ag	107	<b>0.056</b>	ug/L	0.001	2	89	823	2	Standard
Ba	135	<b>24.484</b>	ug/L	0.356	1	37	81492	1	Standard
Ba	137	<b>24.482</b>	ug/L	0.401	1	46	144607	1	Standard
> Tb	159		ug/L			720127	707107	0	Standard
Pb	208	<b>4.540</b>	ug/L	0.067	1	200	199032	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-08**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:16:01**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	58031	0	Standard
Cl	37		ug/L			4438068	4211433	1	Standard
> Sc	45		ug/L			546109	586630	1	Standard
Cr	52	<b>13.053</b>	ug/L	0.279	2	17159	269523	0	Standard
Cr	53	<b>13.405</b>	ug/L	0.148	1	216	30005	2	Standard
Mn	55	<b>141.264</b>	ug/L	4.271	3	1132	3817155	1	Standard
> Ge	72		ug/L			29835	28645	0	KED
Ni	60	<b>10.447</b>	ug/L	0.263	2	138	11499	2	KED
Ni	62	<b>11.100</b>	ug/L	0.230	2	33	2001	2	KED
Cu	63	<b>20.527</b>	ug/L	0.146	0	80	65195	1	KED
Cu	65	<b>20.773</b>	ug/L	0.196	0	24	32562	0	KED
Zn	66	<b>44.922</b>	ug/L	0.922	2	43	18086	1	KED
Zn	67	<b>42.415</b>	ug/L	2.451	5	3	2839	5	KED
As	75	<b>4.938</b>	ug/L	0.091	1	16	1049	2	KED
Se	78	<b>0.609</b>	ug/L	0.031	5	19	33	1	KED
Y	89		ug/L			297640	477015	0	Standard
Kr	83		ug/L			48	85	5	Standard
> In-1	115		ug/L			8217	8027	2	KED
Cd	111	<b>0.134</b>	ug/L	0.031	23	4	35	22	KED
Cd	114	<b>0.132</b>	ug/L	0.029	21	2	78	19	KED
> In	115		ug/L			413136	384321	3	Standard
Ag	107	<b>0.092</b>	ug/L	0.008	8	89	1262	5	Standard
Ba	135	<b>33.152</b>	ug/L	1.159	3	37	106452	0	Standard
Ba	137	<b>32.939</b>	ug/L	1.103	3	46	187724	0	Standard
> Tb	159		ug/L			720127	698904	2	Standard
Pb	208	<b>9.225</b>	ug/L	0.222	2	200	399411	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-09**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:20:45**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	62629	1	Standard
Cl	37		ug/L			4438068	4267319	0	Standard
> Sc	45		ug/L			546109	597616	0	Standard
Cr	52	<b>12.994</b>	ug/L	0.206	1	17159	273458	1	Standard
Cr	53	<b>13.558</b>	ug/L	0.170	1	216	30909	1	Standard
Mn	55	<b>156.834</b>	ug/L	2.443	1	1132	4318678	1	Standard
> Ge	72		ug/L			29835	28621	1	KED
Ni	60	<b>10.490</b>	ug/L	0.232	2	138	11534	0	KED
Ni	62	<b>10.443</b>	ug/L	0.278	2	33	1882	1	KED
Cu	63	<b>25.081</b>	ug/L	0.204	0	80	79574	1	KED
Cu	65	<b>24.927</b>	ug/L	0.129	0	24	39036	0	KED
Zn	66	<b>52.237</b>	ug/L	2.407	4	43	21000	3	KED
Zn	67	<b>49.963</b>	ug/L	0.986	1	3	3340	0	KED
As	75	<b>6.685</b>	ug/L	0.170	2	16	1413	1	KED
Se	78	<b>0.713</b>	ug/L	0.313	43	19	35	20	KED
Y	89		ug/L			297640	476118	3	Standard
Kr	83		ug/L			48	114	12	Standard
> In-1	115		ug/L			8217	7812	1	KED
Cd	111	<b>0.139</b>	ug/L	0.018	13	4	35	10	KED
Cd	114	<b>0.172</b>	ug/L	0.026	15	2	100	16	KED
> In	115		ug/L			413136	391948	0	Standard
Ag	107	<b>0.131</b>	ug/L	0.003	2	89	1789	2	Standard
Ba	135	<b>37.162</b>	ug/L	0.552	1	37	121786	1	Standard
Ba	137	<b>36.608</b>	ug/L	0.476	1	46	212926	1	Standard
> Tb	159		ug/L			720127	692511	0	Standard
Pb	208	<b>11.583</b>	ug/L	0.098	0	200	497038	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-10**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:25:29**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	56795	3	Standard
Cl	37		ug/L			4438068	4162115	2	Standard
> Sc	45		ug/L			546109	595458	1	Standard
Cr	52	<b>12.166</b>	ug/L	0.196	1	17159	256302	1	Standard
Cr	53	<b>12.533</b>	ug/L	0.140	1	216	28486	0	Standard
Mn	55	<b>134.074</b>	ug/L	2.154	1	1132	3678531	1	Standard
> Ge	72		ug/L			29835	27690	2	KED
Ni	60	<b>10.789</b>	ug/L	0.227	2	138	11473	0	KED
Ni	62	<b>11.407</b>	ug/L	0.692	6	33	1985	3	KED
Cu	63	<b>27.591</b>	ug/L	0.543	1	80	84668	1	KED
Cu	65	<b>27.455</b>	ug/L	0.465	1	24	41589	0	KED
Zn	66	<b>54.253</b>	ug/L	1.739	3	43	21100	1	KED
Zn	67	<b>52.540</b>	ug/L	0.887	1	3	3397	0	KED
As	75	<b>6.775</b>	ug/L	0.140	2	16	1385	0	KED
Se	78	<b>0.828</b>	ug/L	0.214	25	19	37	10	KED
Y	89		ug/L			297640	472114	4	Standard
Kr	83		ug/L			48	113	27	Standard
> In-1	115		ug/L			8217	7718	2	KED
Cd	111	<b>0.178</b>	ug/L	0.024	13	4	44	14	KED
Cd	114	<b>0.174</b>	ug/L	0.014	8	2	99	8	KED
> In	115		ug/L			413136	384313	1	Standard
Ag	107	<b>0.123</b>	ug/L	0.001	0	89	1660	1	Standard
Ba	135	<b>35.517</b>	ug/L	0.262	0	37	114129	0	Standard
Ba	137	<b>34.818</b>	ug/L	1.098	3	46	198524	1	Standard
> Tb	159		ug/L			720127	704574	1	Standard
Pb	208	<b>11.867</b>	ug/L	0.223	1	200	518020	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 20:30:13

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31700	1	Standard
Cl	37		ug/L			4438068	3955662	1	Standard
[> Sc	45		ug/L			546109	475846	1	Standard
Cr	52	-0.030	ug/L	0.002	8	17159	14476	1	Standard
Cr	53	-0.023	ug/L	0.006	25	216	146	5	Standard
Mn	55	-0.007	ug/L	0.004	56	1132	824	9	Standard
[> Ge	72		ug/L			29835	27184	1	KED
Ni	60	-0.101	ug/L	0.004	4	138	22	21	KED
Ni	62	-0.129	ug/L	0.029	22	33	8	53	KED
Cu	63	0.031	ug/L	0.008	26	80	168	15	KED
Cu	65	0.035	ug/L	0.006	16	24	74	12	KED
Zn	66	-0.007	ug/L	0.014	211	43	36	15	KED
Zn	67	0.126	ug/L	0.062	49	3	11	33	KED
As	75	-0.049	ug/L	0.006	11	16	5	23	KED
Se	78	-0.065	ug/L	0.159	245	19	16	22	KED
Y	89		ug/L			297640	268215	0	Standard
Kr	83		ug/L			48	44	17	Standard
[> In-1	115		ug/L			8217	7723	2	KED
Cd	111	0.008	ug/L	0.010	131	4	5	44	KED
Cd	114	-0.002	ug/L	0.002	100	2	1	94	KED
[> In	115		ug/L			413136	375112	0	Standard
Ag	107	-0.004	ug/L	0.000	6	89	33	8	Standard
Ba	135	0.004	ug/L	0.002	38	37	46	10	Standard
Ba	137	0.006	ug/L	0.002	30	46	73	13	Standard
[> Tb	159		ug/L			720127	638321	2	Standard
Pb	208	-0.001	ug/L	0.001	71	200	133	20	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 20:34:58

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30314	1	Standard
Cl	37		ug/L			4438068	4229055	3	Standard
[> Sc	45		ug/L			546109	487772	0	Standard
Cr	52	51.215	ug/L	1.395	2	17159	834716	3	Standard
Cr	53	51.869	ug/L	1.168	2	216	95975	2	Standard
Mn	55	50.580	ug/L	0.627	1	1132	1137482	1	Standard
[> Ge	72		ug/L			29835	28182	1	KED
Ni	60	48.359	ug/L	1.019	2	138	51887	1	KED
Ni	62	48.114	ug/L	0.776	1	33	8427	1	KED
Cu	63	48.204	ug/L	0.915	1	80	150498	1	KED
Cu	65	48.332	ug/L	1.303	2	24	74492	1	KED
Zn	66	49.938	ug/L	1.831	3	43	19770	2	KED
Zn	67	49.313	ug/L	1.131	2	3	3247	3	KED
As	75	49.272	ug/L	0.640	1	16	10159	0	KED
[ Se	78	48.617	ug/L	0.429	0	19	1142	1	KED
Y	89		ug/L			297640	273611	3	Standard
Kr	83		ug/L			48	41	12	Standard
[> In-1	115		ug/L			8217	7829	2	KED
Cd	111	49.138	ug/L	1.646	3	4	11360	1	KED
Cd	114	49.784	ug/L	1.408	2	2	28315	0	KED
[> In	115		ug/L			413136	378734	3	Standard
Ag	107	51.994	ug/L	1.201	2	89	656217	2	Standard
Ba	135	52.612	ug/L	1.892	3	37	166466	0	Standard
[ Ba	137	51.857	ug/L	2.262	4	46	291162	0	Standard
[> Tb	159		ug/L			720127	664425	1	Standard
[ Pb	208	50.285	ug/L	1.042	2	200	2069261	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 20:42:26

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30091	2	Standard
Cl	37		ug/L			4438068	4081874	1	Standard
[> Sc	45		ug/L			546109	455662	7	Standard
Cr	52	0.003	ug/L	0.050	1820	17159	14320	3	Standard
Cr	53	-0.023	ug/L	0.011	45	216	140	12	Standard
Mn	55	-0.008	ug/L	0.006	81	1132	776	8	Standard
[> Ge	72		ug/L			29835	26830	1	KED
Ni	60	-0.095	ug/L	0.005	5	138	27	17	KED
Ni	62	-0.121	ug/L	0.014	11	33	10	21	KED
Cu	63	-0.006	ug/L	0.003	39	80	53	12	KED
Cu	65	0.000	ug/L	0.003	867	24	22	22	KED
Zn	66	-0.043	ug/L	0.022	50	43	22	36	KED
Zn	67	0.006	ug/L	0.030	498	3	3	50	KED
As	75	-0.052	ug/L	0.001	2	16	4	6	KED
Se	78	-0.154	ug/L	0.115	74	19	14	18	KED
Y	89		ug/L			297640	256125	6	Standard
Kr	83		ug/L			48	43	33	Standard
[> In-1	115		ug/L			8217	7309	2	KED
Cd	111	0.005	ug/L	0.008	168	4	4	40	KED
Cd	114	0.003	ug/L	0.004	129	2	3	53	KED
[> In	115		ug/L			413136	367898	4	Standard
Ag	107	0.002	ug/L	0.004	201	89	102	41	Standard
Ba	135	-0.002	ug/L	0.003	155	37	26	31	Standard
Ba	137	-0.000	ug/L	0.005	1209	46	38	65	Standard
[> Tb	159		ug/L			720127	628462	8	Standard
Pb	208	0.003	ug/L	0.004	151	200	278	49	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-11**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:47:11**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	57804	2	Standard
Cl	37		ug/L			4438068	4137395	2	Standard
> Sc	45		ug/L			546109	610424	0	Standard
Cr	52	<b>13.129</b>	ug/L	0.164	1	17159	282031	1	Standard
Cr	53	<b>13.307</b>	ug/L	0.026	0	216	30991	0	Standard
Mn	55	<b>156.452</b>	ug/L	3.310	2	1132	4400394	1	Standard
> Ge	72		ug/L			29835	28517	3	KED
Ni	60	<b>11.708</b>	ug/L	0.650	5	138	12796	2	KED
Ni	62	<b>12.090</b>	ug/L	0.526	4	33	2166	5	KED
Cu	63	<b>28.948</b>	ug/L	0.397	1	80	91470	2	KED
Cu	65	<b>29.318</b>	ug/L	1.103	3	24	45706	1	KED
Zn	66	<b>53.920</b>	ug/L	1.420	2	43	21592	2	KED
Zn	67	<b>53.999</b>	ug/L	1.007	1	3	3596	3	KED
As	75	<b>6.031</b>	ug/L	0.274	4	16	1270	1	KED
Se	78	<b>0.861</b>	ug/L	0.152	17	19	39	5	KED
Y	89		ug/L			297640	484931	1	Standard
Kr	83		ug/L			48	99	9	Standard
> In-1	115		ug/L			8217	7700	1	KED
Cd	111	<b>0.168</b>	ug/L	0.014	8	4	42	9	KED
Cd	114	<b>0.182</b>	ug/L	0.017	9	2	104	7	KED
> In	115		ug/L			413136	393797	0	Standard
Ag	107	<b>0.133</b>	ug/L	0.004	3	89	1836	3	Standard
Ba	135	<b>40.122</b>	ug/L	0.792	1	37	132106	1	Standard
Ba	137	<b>40.243</b>	ug/L	0.312	0	46	235183	0	Standard
> Tb	159		ug/L			720127	704426	1	Standard
Pb	208	<b>12.352</b>	ug/L	0.176	1	200	539160	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0179-12**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:51:55**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	56180	2	Standard
Cl	37		ug/L			4438068	4123823	2	Standard
> Sc	45		ug/L			546109	600392	0	Standard
Cr	52	<b>12.563</b>	ug/L	0.082	0	17159	266260	1	Standard
Cr	53	<b>12.495</b>	ug/L	0.064	0	216	28637	0	Standard
Mn	55	<b>143.280</b>	ug/L	0.971	0	1132	3963837	0	Standard
> Ge	72		ug/L			29835	28415	1	KED
Ni	60	<b>10.894</b>	ug/L	0.201	1	138	11891	3	KED
Ni	62	<b>11.000</b>	ug/L	0.781	7	33	1966	5	KED
Cu	63	<b>25.345</b>	ug/L	0.503	1	80	79821	1	KED
Cu	65	<b>25.212</b>	ug/L	0.364	1	24	39195	0	KED
Zn	66	<b>49.542</b>	ug/L	1.036	2	43	19779	0	KED
Zn	67	<b>47.406</b>	ug/L	0.356	0	3	3147	1	KED
As	75	<b>5.273</b>	ug/L	0.221	4	16	1109	3	KED
Se	78	<b>0.636</b>	ug/L	0.133	20	19	33	8	KED
Y	89		ug/L			297640	480932	3	Standard
Kr	83		ug/L			48	85	5	Standard
> In-1	115		ug/L			8217	7605	2	KED
Cd	111	<b>0.156</b>	ug/L	0.025	16	4	38	14	KED
Cd	114	<b>0.170</b>	ug/L	0.010	5	2	96	6	KED
> In	115		ug/L			413136	389672	2	Standard
Ag	107	<b>0.127</b>	ug/L	0.004	2	89	1737	0	Standard
Ba	135	<b>35.504</b>	ug/L	0.565	1	37	115669	1	Standard
Ba	137	<b>36.185</b>	ug/L	0.855	2	46	209184	0	Standard
> Tb	159		ug/L			720127	687552	0	Standard
Pb	208	<b>12.244</b>	ug/L	0.046	0	200	521664	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0180-01**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 20:56:39**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	58755	2	Standard
Cl	37		ug/L			4438068	4187119	1	Standard
> Sc	45		ug/L			546109	614220	1	Standard
Cr	52	<b>15.218</b>	ug/L	0.233	1	17159	325879	1	Standard
Cr	53	<b>15.306</b>	ug/L	0.231	1	216	35832	1	Standard
Mn	55	<b>140.006</b>	ug/L	1.709	1	1132	3962242	0	Standard
> Ge	72		ug/L			29835	28255	1	KED
Ni	60	<b>12.559</b>	ug/L	0.328	2	138	13610	3	KED
Ni	62	<b>12.685</b>	ug/L	0.377	2	33	2250	2	KED
Cu	63	<b>34.908</b>	ug/L	0.361	1	80	109305	2	KED
Cu	65	<b>34.631</b>	ug/L	0.481	1	24	53527	1	KED
Zn	66	<b>65.298</b>	ug/L	2.239	3	43	25907	2	KED
Zn	67	<b>64.893</b>	ug/L	1.370	2	3	4281	0	KED
As	75	<b>5.951</b>	ug/L	0.254	4	16	1243	3	KED
Se	78	<b>0.992</b>	ug/L	0.118	11	19	41	6	KED
Y	89		ug/L			297640	510191	0	Standard
Kr	83		ug/L			48	113	9	Standard
> In-1	115		ug/L			8217	7790	0	KED
Cd	111	<b>0.259</b>	ug/L	0.026	10	4	63	9	KED
Cd	114	<b>0.255</b>	ug/L	0.034	13	2	146	13	KED
> In	115		ug/L			413136	388132	1	Standard
Ag	107	<b>0.206</b>	ug/L	0.003	1	89	2743	2	Standard
Ba	135	<b>45.476</b>	ug/L	0.974	2	37	147562	1	Standard
Ba	137	<b>45.766</b>	ug/L	1.002	2	46	263553	1	Standard
> Tb	159		ug/L			720127	696444	1	Standard
Pb	208	<b>20.703</b>	ug/L	0.297	1	200	893233	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0180-02**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:01:23**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	60249	0	Standard
Cl	37		ug/L			4438068	4148651	0	Standard
> Sc	45		ug/L			546109	626103	1	Standard
Cr	52	<b>14.692</b>	ug/L	0.220	1	17159	321375	1	Standard
Cr	53	<b>14.824</b>	ug/L	0.250	1	216	35377	0	Standard
Mn	55	<b>140.817</b>	ug/L	0.319	0	1132	4062698	1	Standard
> Ge	72		ug/L			29835	28067	0	KED
Ni	60	<b>13.181</b>	ug/L	0.024	0	138	14182	0	KED
Ni	62	<b>13.555</b>	ug/L	0.655	4	33	2387	4	KED
Cu	63	<b>34.547</b>	ug/L	0.844	2	80	107456	2	KED
Cu	65	<b>35.117</b>	ug/L	0.506	1	24	53925	1	KED
Zn	66	<b>66.433</b>	ug/L	1.254	1	43	26189	1	KED
Zn	67	<b>63.332</b>	ug/L	2.121	3	3	4151	3	KED
As	75	<b>6.564</b>	ug/L	0.189	2	16	1361	2	KED
Se	78	<b>1.022</b>	ug/L	0.162	15	19	42	9	KED
Y	89		ug/L			297640	514366	3	Standard
Kr	83		ug/L			48	93	7	Standard
> In-1	115		ug/L			8217	7900	2	KED
Cd	111	<b>0.246</b>	ug/L	0.040	16	4	61	17	KED
Cd	114	<b>0.231</b>	ug/L	0.040	17	2	135	19	KED
> In	115		ug/L			413136	382391	1	Standard
Ag	107	<b>0.240</b>	ug/L	0.007	2	89	3143	2	Standard
Ba	135	<b>46.457</b>	ug/L	0.084	0	37	148535	1	Standard
Ba	137	<b>45.863</b>	ug/L	0.858	1	46	260208	0	Standard
> Tb	159		ug/L			720127	689600	1	Standard
Pb	208	<b>20.930</b>	ug/L	0.037	0	200	894240	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0180-03**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:06:07**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	55168	3	Standard
Cl	37		ug/L			4438068	4174102	1	Standard
> Sc	45		ug/L			546109	607263	2	Standard
Cr	52	<b>13.816</b>	ug/L	0.541	3	17159	294090	1	Standard
Cr	53	<b>14.242</b>	ug/L	0.463	3	216	32964	1	Standard
Mn	55	<b>143.272</b>	ug/L	5.285	3	1132	4006901	1	Standard
> Ge	72		ug/L			29835	27817	3	KED
Ni	60	<b>12.254</b>	ug/L	0.204	1	138	13072	1	KED
Ni	62	<b>12.226</b>	ug/L	0.236	1	33	2137	3	KED
Cu	63	<b>29.776</b>	ug/L	0.978	3	80	91751	2	KED
Cu	65	<b>30.333</b>	ug/L	0.493	1	24	46151	2	KED
Zn	66	<b>57.888</b>	ug/L	1.864	3	43	22607	0	KED
Zn	67	<b>55.104</b>	ug/L	2.560	4	3	3576	1	KED
As	75	<b>5.994</b>	ug/L	0.080	1	16	1233	2	KED
Se	78	<b>0.877</b>	ug/L	0.110	12	19	38	9	KED
Y	89		ug/L			297640	515143	1	Standard
Kr	83		ug/L			48	101	13	Standard
> In-1	115		ug/L			8217	7752	0	KED
Cd	111	<b>0.187</b>	ug/L	0.012	6	4	46	6	KED
Cd	114	<b>0.200</b>	ug/L	0.008	4	2	114	4	KED
> In	115		ug/L			413136	390052	1	Standard
Ag	107	<b>0.148</b>	ug/L	0.012	8	89	2005	6	Standard
Ba	135	<b>37.630</b>	ug/L	0.782	2	37	122705	1	Standard
Ba	137	<b>37.654</b>	ug/L	0.424	1	46	217929	0	Standard
> Tb	159		ug/L			720127	689429	1	Standard
Pb	208	<b>15.142</b>	ug/L	0.097	0	200	646815	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0180-04**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:10:51**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	59622	1	Standard
Cl	37		ug/L			4438068	4190939	3	Standard
> Sc	45		ug/L			546109	630148	0	Standard
Cr	52	<b>15.629</b>	ug/L	0.101	0	17159	342826	0	Standard
Cr	53	<b>15.771</b>	ug/L	0.361	2	216	37870	1	Standard
Mn	55	<b>139.142</b>	ug/L	2.372	1	1132	4040061	1	Standard
> Ge	72		ug/L			29835	27748	1	KED
Ni	60	<b>14.094</b>	ug/L	0.096	0	138	14984	1	KED
Ni	62	<b>14.415</b>	ug/L	0.137	0	33	2508	0	KED
Cu	63	<b>31.356</b>	ug/L	0.142	0	80	96431	0	KED
Cu	65	<b>32.684</b>	ug/L	0.727	2	24	49621	2	KED
Zn	66	<b>63.141</b>	ug/L	1.005	1	43	24613	2	KED
Zn	67	<b>59.045</b>	ug/L	0.744	1	3	3827	2	KED
As	75	<b>5.417</b>	ug/L	0.124	2	16	1113	3	KED
Se	78	<b>1.043</b>	ug/L	0.255	24	19	42	13	KED
Y	89		ug/L			297640	548225	1	Standard
Kr	83		ug/L			48	125	4	Standard
> In-1	115		ug/L			8217	7577	1	KED
Cd	111	<b>0.228</b>	ug/L	0.049	21	4	54	21	KED
Cd	114	<b>0.234</b>	ug/L	0.011	4	2	131	6	KED
> In	115		ug/L			413136	384812	2	Standard
Ag	107	<b>0.180</b>	ug/L	0.004	1	89	2394	2	Standard
Ba	135	<b>46.541</b>	ug/L	1.081	2	37	149693	0	Standard
Ba	137	<b>46.592</b>	ug/L	1.450	3	46	265929	0	Standard
> Tb	159		ug/L			720127	697762	1	Standard
Pb	208	<b>18.594</b>	ug/L	0.203	1	200	803812	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-03**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:15:35**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	53084	0	Standard
Cl	37		ug/L			4438068	4169023	1	Standard
> Sc	45		ug/L			546109	603980	1	Standard
Cr	52	<b>13.866</b>	ug/L	0.305	2	17159	293589	0	Standard
Cr	53	<b>14.073</b>	ug/L	0.235	1	216	32412	0	Standard
Mn	55	<b>169.138</b>	ug/L	3.378	1	1132	4706223	1	Standard
> Ge	72		ug/L			29835	28148	0	KED
Ni	60	<b>11.904</b>	ug/L	0.025	0	138	12858	0	KED
Ni	62	<b>12.291</b>	ug/L	0.347	2	33	2174	3	KED
Cu	63	<b>29.623</b>	ug/L	0.752	2	80	92407	1	KED
Cu	65	<b>29.789</b>	ug/L	0.290	0	24	45880	1	KED
Zn	66	<b>58.036</b>	ug/L	0.896	1	43	22948	0	KED
Zn	67	<b>54.759</b>	ug/L	1.867	3	3	3600	3	KED
As	75	<b>6.444</b>	ug/L	0.151	2	16	1340	1	KED
Se	78	<b>0.933</b>	ug/L	0.136	14	19	40	8	KED
Y	89		ug/L			297640	498878	1	Standard
Kr	83		ug/L			48	105	26	Standard
> In-1	115		ug/L			8217	7533	0	KED
Cd	111	<b>0.186</b>	ug/L	0.025	13	4	45	12	KED
Cd	114	<b>0.187</b>	ug/L	0.017	9	2	104	9	KED
> In	115		ug/L			413136	385942	0	Standard
Ag	107	<b>0.133</b>	ug/L	0.009	6	89	1800	6	Standard
Ba	135	<b>36.617</b>	ug/L	0.514	1	37	118165	1	Standard
Ba	137	<b>36.298</b>	ug/L	0.517	1	46	207888	1	Standard
> Tb	159		ug/L			720127	690623	0	Standard
Pb	208	<b>14.103</b>	ug/L	0.204	1	200	603451	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-04**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:20:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	50485	2	Standard
Cl	37		ug/L			4438068	4104982	1	Standard
> Sc	45		ug/L			546109	580162	0	Standard
Cr	52	<b>12.588</b>	ug/L	0.047	0	17159	257762	0	Standard
Cr	53	<b>12.932</b>	ug/L	0.280	2	216	28630	1	Standard
Mn	55	<b>144.733</b>	ug/L	1.939	1	1132	3869191	1	Standard
> Ge	72		ug/L			29835	28094	1	KED
Ni	60	<b>10.106</b>	ug/L	0.105	1	138	10914	1	KED
Ni	62	<b>10.384</b>	ug/L	0.537	5	33	1837	4	KED
Cu	63	<b>25.272</b>	ug/L	0.474	1	80	78689	0	KED
Cu	65	<b>25.830</b>	ug/L	0.683	2	24	39700	2	KED
Zn	66	<b>51.560</b>	ug/L	1.758	3	43	20347	1	KED
Zn	67	<b>50.190</b>	ug/L	1.605	3	3	3293	1	KED
As	75	<b>6.141</b>	ug/L	0.142	2	16	1276	3	KED
Se	78	<b>0.613</b>	ug/L	0.199	32	19	32	14	KED
Y	89		ug/L			297640	455672	1	Standard
Kr	83		ug/L			48	85	3	Standard
> In-1	115		ug/L			8217	7595	4	KED
Cd	111	<b>0.166</b>	ug/L	0.022	13	4	40	8	KED
Cd	114	<b>0.172</b>	ug/L	0.010	5	2	97	8	KED
> In	115		ug/L			413136	388494	1	Standard
Ag	107	<b>0.108</b>	ug/L	0.004	3	89	1484	1	Standard
Ba	135	<b>31.878</b>	ug/L	0.415	1	37	103549	1	Standard
Ba	137	<b>32.032</b>	ug/L	1.146	3	46	184603	1	Standard
> Tb	159		ug/L			720127	681438	0	Standard
Pb	208	<b>11.520</b>	ug/L	0.123	1	200	486475	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-05**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:25:03**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52660	1	Standard
Cl	37		ug/L			4438068	4195273	1	Standard
> Sc	45		ug/L			546109	591605	0	Standard
Cr	52	<b>14.262</b>	ug/L	0.048	0	17159	295320	0	Standard
Cr	53	<b>14.694</b>	ug/L	0.425	2	216	33142	2	Standard
Mn	55	<b>145.119</b>	ug/L	0.449	0	1132	3956036	0	Standard
> Ge	72		ug/L			29835	27974	1	KED
Ni	60	<b>11.805</b>	ug/L	0.088	0	138	12672	1	KED
Ni	62	<b>11.642</b>	ug/L	0.278	2	33	2047	1	KED
Cu	63	<b>28.150</b>	ug/L	0.399	1	80	87283	2	KED
Cu	65	<b>28.139</b>	ug/L	0.363	1	24	43064	0	KED
Zn	66	<b>56.923</b>	ug/L	1.200	2	43	22367	0	KED
Zn	67	<b>55.388</b>	ug/L	2.742	4	3	3619	5	KED
As	75	<b>4.991</b>	ug/L	0.095	1	16	1035	0	KED
Se	78	<b>0.831</b>	ug/L	0.166	19	19	37	9	KED
Y	89		ug/L			297640	487769	0	Standard
Kr	83		ug/L			48	107	11	Standard
> In-1	115		ug/L			8217	7540	3	KED
Cd	111	<b>0.179</b>	ug/L	0.035	19	4	43	14	KED
Cd	114	<b>0.183</b>	ug/L	0.028	15	2	102	14	KED
> In	115		ug/L			413136	380188	0	Standard
Ag	107	<b>0.123</b>	ug/L	0.001	0	89	1639	1	Standard
Ba	135	<b>35.402</b>	ug/L	0.891	2	37	112528	1	Standard
Ba	137	<b>35.971</b>	ug/L	0.609	1	46	202953	1	Standard
> Tb	159		ug/L			720127	683695	0	Standard
Pb	208	<b>13.158</b>	ug/L	0.052	0	200	557435	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 21:29:47

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	32204	4	Standard
Cl	37		ug/L			4438068	3926310	1	Standard
[> Sc	45		ug/L			546109	462171	1	Standard
Cr	52	0.007	ug/L	0.015	227	17159	14620	1	Standard
Cr	53	-0.022	ug/L	0.016	73	216	145	17	Standard
Mn	55	0.028	ug/L	0.054	197	1132	1533	73	Standard
[> Ge	72		ug/L			29835	26794	1	KED
Ni	60	-0.100	ug/L	0.004	3	138	22	16	KED
Ni	62	-0.129	ug/L	0.017	12	33	8	32	KED
Cu	63	0.032	ug/L	0.003	10	80	167	7	KED
Cu	65	0.039	ug/L	0.011	28	24	79	20	KED
Zn	66	-0.005	ug/L	0.027	485	43	36	28	KED
Zn	67	0.098	ug/L	0.133	135	3	9	87	KED
As	75	-0.053	ug/L	0.006	11	16	4	29	KED
[ Se	78	-0.022	ug/L	0.116	527	19	17	12	KED
Y	89		ug/L			297640	260647	1	Standard
Kr	83		ug/L			48	43	24	Standard
[> In-1	115		ug/L			8217	7455	3	KED
Cd	111	-0.001	ug/L	0.003	257	4	3	15	KED
Cd	114	0.004	ug/L	0.005	134	2	4	68	KED
[> In	115		ug/L			413136	367962	2	Standard
Ag	107	-0.004	ug/L	0.001	33	89	31	49	Standard
Ba	135	0.010	ug/L	0.010	101	37	64	48	Standard
[ Ba	137	0.013	ug/L	0.010	77	46	114	48	Standard
[> Tb	159		ug/L			720127	638939	2	Standard
[ Pb	208	0.002	ug/L	0.003	184	200	248	51	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 21:34:32

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30768	1	Standard
Cl	37		ug/L			4438068	4131544	2	Standard
[> Sc	45		ug/L			546109	479815	0	Standard
Cr	52	51.397	ug/L	1.316	2	17159	823911	2	Standard
Cr	53	51.185	ug/L	2.069	4	216	93151	3	Standard
Mn	55	51.821	ug/L	0.953	1	1132	1146303	1	Standard
[> Ge	72		ug/L			29835	27164	1	KED
Ni	60	48.023	ug/L	0.678	1	138	49670	1	KED
Ni	62	50.407	ug/L	1.595	3	33	8508	2	KED
Cu	63	50.097	ug/L	0.338	0	80	150774	1	KED
Cu	65	49.855	ug/L	0.247	0	24	74080	1	KED
Zn	66	50.282	ug/L	0.274	0	43	19193	1	KED
Zn	67	49.882	ug/L	1.112	2	3	3166	3	KED
As	75	50.332	ug/L	0.642	1	16	10002	0	KED
[ Se	78	48.664	ug/L	0.430	0	19	1102	0	KED
Y	89		ug/L			297640	278382	2	Standard
Kr	83		ug/L			48	59	25	Standard
[> In-1	115		ug/L			8217	7519	1	KED
Cd	111	49.443	ug/L	1.239	2	4	10982	2	KED
Cd	114	49.715	ug/L	0.706	1	2	27169	2	KED
[> In	115		ug/L			413136	379598	1	Standard
Ag	107	50.018	ug/L	0.786	1	89	632844	0	Standard
Ba	135	51.091	ug/L	0.850	1	37	162132	0	Standard
[ Ba	137	51.302	ug/L	0.939	1	46	288947	1	Standard
[> Tb	159		ug/L			720127	654285	0	Standard
[ Pb	208	50.302	ug/L	0.322	0	200	2038832	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 21:42:00

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	29643	2	Standard
Cl	37		ug/L			4438068	4169253	0	Standard
[> Sc	45		ug/L			546109	461275	1	Standard
Cr	52	-0.030	ug/L	0.011	37	17159	14036	2	Standard
Cr	53	-0.028	ug/L	0.013	45	216	133	18	Standard
Mn	55	-0.013	ug/L	0.002	12	1132	685	3	Standard
[> Ge	72		ug/L			29835	26871	0	KED
Ni	60	-0.100	ug/L	0.003	3	138	22	14	KED
Ni	62	-0.136	ug/L	0.034	25	33	7	75	KED
Cu	63	-0.005	ug/L	0.007	136	80	56	39	KED
Cu	65	0.006	ug/L	0.001	22	24	30	6	KED
Zn	66	-0.029	ug/L	0.020	69	43	27	27	KED
Zn	67	-0.014	ug/L	0.046	327	3	2	114	KED
As	75	-0.046	ug/L	0.007	15	16	5	25	KED
Se	78	0.060	ug/L	0.039	65	19	19	4	KED
Y	89		ug/L			297640	261492	0	Standard
Kr	83		ug/L			48	38	17	Standard
[> In-1	115		ug/L			8217	7422	2	KED
Cd	111	0.009	ug/L	0.012	130	4	5	44	KED
Cd	114	-0.001	ug/L	0.004	472	2	1	113	KED
[> In	115		ug/L			413136	371106	1	Standard
Ag	107	-0.002	ug/L	0.001	70	89	57	28	Standard
Ba	135	-0.007	ug/L	0.001	9	37	10	20	Standard
Ba	137	-0.001	ug/L	0.001	94	46	36	13	Standard
[> Tb	159		ug/L			720127	640661	0	Standard
Pb	208	0.000	ug/L	0.000	244	200	182	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-06**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:46:45**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	50613	4	Standard
Cl	37		ug/L			4438068	4140118	1	Standard
> Sc	45		ug/L			546109	581929	1	Standard
Cr	52	<b>13.643</b>	ug/L	0.347	2	17159	278614	1	Standard
Cr	53	<b>14.109</b>	ug/L	0.157	1	216	31309	1	Standard
Mn	55	<b>134.606</b>	ug/L	1.337	0	1132	3609409	1	Standard
> Ge	72		ug/L			29835	27821	2	KED
Ni	60	<b>11.522</b>	ug/L	0.008	0	138	12305	2	KED
Ni	62	<b>11.537</b>	ug/L	0.480	4	33	2018	3	KED
Cu	63	<b>25.722</b>	ug/L	0.325	1	80	79314	1	KED
Cu	65	<b>25.845</b>	ug/L	0.935	3	24	39325	1	KED
Zn	66	<b>56.278</b>	ug/L	1.328	2	43	21993	1	KED
Zn	67	<b>53.054</b>	ug/L	1.002	1	3	3447	1	KED
As	75	<b>5.343</b>	ug/L	0.136	2	16	1100	0	KED
Se	78	<b>0.684</b>	ug/L	0.242	35	19	34	16	KED
Y	89		ug/L			297640	484054	1	Standard
Kr	83		ug/L			48	81	15	Standard
> In-1	115		ug/L			8217	7569	3	KED
Cd	111	<b>0.189</b>	ug/L	0.023	12	4	46	11	KED
Cd	114	<b>0.197</b>	ug/L	0.008	4	2	110	1	KED
> In	115		ug/L			413136	388096	1	Standard
Ag	107	<b>0.149</b>	ug/L	0.007	4	89	2005	5	Standard
Ba	135	<b>40.083</b>	ug/L	0.703	1	37	130048	0	Standard
Ba	137	<b>40.183</b>	ug/L	0.343	0	46	231437	2	Standard
> Tb	159		ug/L			720127	682294	1	Standard
Pb	208	<b>13.908</b>	ug/L	0.077	0	200	587971	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-07**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:51:29**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	51757	1	Standard
Cl	37		ug/L			4438068	4178315	1	Standard
> Sc	45		ug/L			546109	582435	0	Standard
Cr	52	<b>12.490</b>	ug/L	0.167	1	17159	256881	0	Standard
Cr	53	<b>12.473</b>	ug/L	0.199	1	216	27733	2	Standard
Mn	55	<b>126.322</b>	ug/L	0.232	0	1132	3390381	0	Standard
> Ge	72		ug/L			29835	27715	1	KED
Ni	60	<b>11.054</b>	ug/L	0.390	3	138	11762	2	KED
Ni	62	<b>11.515</b>	ug/L	0.650	5	33	2007	5	KED
Cu	63	<b>24.803</b>	ug/L	0.345	1	80	76196	1	KED
Cu	65	<b>25.357</b>	ug/L	1.008	3	24	38442	2	KED
Zn	66	<b>54.435</b>	ug/L	1.906	3	43	21195	3	KED
Zn	67	<b>52.856</b>	ug/L	1.204	2	3	3421	2	KED
As	75	<b>5.380</b>	ug/L	0.098	1	16	1104	2	KED
Se	78	<b>0.906</b>	ug/L	0.223	24	19	39	13	KED
Y	89		ug/L			297640	472695	2	Standard
Kr	83		ug/L			48	100	14	Standard
> In-1	115		ug/L			8217	7558	4	KED
Cd	111	<b>0.145</b>	ug/L	0.031	21	4	36	19	KED
Cd	114	<b>0.182</b>	ug/L	0.038	21	2	101	16	KED
> In	115		ug/L			413136	386116	0	Standard
Ag	107	<b>0.098</b>	ug/L	0.003	2	89	1341	2	Standard
Ba	135	<b>32.679</b>	ug/L	0.142	0	37	105512	0	Standard
Ba	137	<b>32.302</b>	ug/L	0.059	0	46	185097	0	Standard
> Tb	159		ug/L			720127	673278	0	Standard
Pb	208	<b>11.162</b>	ug/L	0.118	1	200	465672	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-08**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 21:56:13**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52531	2	Standard
Cl	37		ug/L			4438068	4079125	2	Standard
> Sc	45		ug/L			546109	585674	2	Standard
Cr	52	<b>12.979</b>	ug/L	0.109	0	17159	267714	2	Standard
Cr	53	<b>13.196</b>	ug/L	0.247	1	216	29482	0	Standard
Mn	55	<b>144.680</b>	ug/L	1.008	0	1132	3904647	2	Standard
> Ge	72		ug/L			29835	28278	2	KED
Ni	60	<b>11.266</b>	ug/L	0.319	2	138	12232	3	KED
Ni	62	<b>11.498</b>	ug/L	0.056	0	33	2045	1	KED
Cu	63	<b>25.678</b>	ug/L	0.194	0	80	80497	2	KED
Cu	65	<b>25.028</b>	ug/L	0.409	1	24	38723	1	KED
Zn	66	<b>50.819</b>	ug/L	0.930	1	43	20190	1	KED
Zn	67	<b>50.125</b>	ug/L	2.596	5	3	3310	5	KED
As	75	<b>6.878</b>	ug/L	0.237	3	16	1435	1	KED
Se	78	<b>0.642</b>	ug/L	0.254	39	19	33	19	KED
Y	89		ug/L			297640	479081	3	Standard
Kr	83		ug/L			48	111	3	Standard
> In-1	115		ug/L			8217	7478	1	KED
Cd	111	<b>0.181</b>	ug/L	0.010	5	4	43	5	KED
Cd	114	<b>0.183</b>	ug/L	0.024	12	2	101	10	KED
> In	115		ug/L			413136	383349	3	Standard
Ag	107	<b>0.107</b>	ug/L	0.005	4	89	1452	4	Standard
Ba	135	<b>38.100</b>	ug/L	1.025	2	37	122049	1	Standard
Ba	137	<b>38.066</b>	ug/L	0.779	2	46	216458	1	Standard
> Tb	159		ug/L			720127	683899	1	Standard
Pb	208	<b>11.429</b>	ug/L	0.138	1	200	484313	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-09**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:00:57**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	54790	1	Standard
Cl	37		ug/L			4438068	4140430	1	Standard
> Sc	45		ug/L			546109	587218	1	Standard
Cr	52	<b>13.057</b>	ug/L	0.116	0	17159	269905	0	Standard
Cr	53	<b>13.130</b>	ug/L	0.288	2	216	29414	0	Standard
Mn	55	<b>143.752</b>	ug/L	1.521	1	1132	3889342	0	Standard
> Ge	72		ug/L			29835	27622	2	KED
Ni	60	<b>10.870</b>	ug/L	0.570	5	138	11527	4	KED
Ni	62	<b>11.035</b>	ug/L	0.061	0	33	1918	2	KED
Cu	63	<b>29.396</b>	ug/L	0.492	1	80	89978	0	KED
Cu	65	<b>29.916</b>	ug/L	0.768	2	24	45204	2	KED
Zn	66	<b>53.188</b>	ug/L	0.793	1	43	20639	0	KED
Zn	67	<b>49.966</b>	ug/L	0.971	1	3	3224	3	KED
As	75	<b>8.612</b>	ug/L	0.225	2	16	1752	0	KED
Se	78	<b>0.806</b>	ug/L	0.198	24	19	36	12	KED
Y	89		ug/L			297640	467445	2	Standard
Kr	83		ug/L			48	94	5	Standard
> In-1	115		ug/L			8217	7504	2	KED
Cd	111	<b>0.191</b>	ug/L	0.033	17	4	46	13	KED
Cd	114	<b>0.193</b>	ug/L	0.012	6	2	107	8	KED
> In	115		ug/L			413136	377485	3	Standard
Ag	107	<b>0.135</b>	ug/L	0.004	2	89	1774	1	Standard
Ba	135	<b>36.978</b>	ug/L	1.258	3	37	116636	0	Standard
Ba	137	<b>36.958</b>	ug/L	0.743	2	46	206951	1	Standard
> Tb	159		ug/L			720127	682791	1	Standard
Pb	208	<b>13.700</b>	ug/L	0.261	1	200	579570	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-10**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:05:41**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	56839	1	Standard
Cl	37		ug/L			4438068	4120071	0	Standard
> Sc	45		ug/L			546109	596905	1	Standard
Cr	52	<b>13.537</b>	ug/L	0.181	1	17159	283761	1	Standard
Cr	53	<b>13.947</b>	ug/L	0.258	1	216	31757	3	Standard
Mn	55	<b>149.657</b>	ug/L	2.524	1	1132	4115458	0	Standard
> Ge	72		ug/L			29835	27477	1	KED
Ni	60	<b>11.483</b>	ug/L	0.214	1	138	12113	3	KED
Ni	62	<b>11.657</b>	ug/L	0.142	1	33	2014	0	KED
Cu	63	<b>32.306</b>	ug/L	0.933	2	80	98356	1	KED
Cu	65	<b>32.671</b>	ug/L	0.870	2	24	49103	1	KED
Zn	66	<b>531.960</b>	ug/L	11.814	2	43	205023	2	KED
Zn	67	<b>486.862</b>	ug/L	15.381	3	3	31213	1	KED
As	75	<b>8.407</b>	ug/L	0.116	1	16	1702	0	KED
Se	78	<b>0.785</b>	ug/L	0.149	19	19	36	8	KED
Y	89		ug/L			297640	482629	1	Standard
Kr	83		ug/L			48	126	13	Standard
> In-1	115		ug/L			8217	7520	2	KED
Cd	111	<b>0.205</b>	ug/L	0.024	11	4	49	9	KED
Cd	114	<b>0.202</b>	ug/L	0.015	7	2	112	6	KED
> In	115		ug/L			413136	385952	1	Standard
Ag	107	<b>0.150</b>	ug/L	0.001	0	89	2014	1	Standard
Ba	135	<b>39.918</b>	ug/L	0.221	0	37	128818	0	Standard
Ba	137	<b>39.120</b>	ug/L	0.879	2	46	224032	1	Standard
> Tb	159		ug/L			720127	684091	0	Standard
Pb	208	<b>14.469</b>	ug/L	0.101	0	200	613292	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-11**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:10:25**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	53359	3	Standard
Cl	37		ug/L			4438068	4092819	1	Standard
> Sc	45		ug/L			546109	589551	0	Standard
Cr	52	<b>12.063</b>	ug/L	0.260	2	17159	251741	1	Standard
Cr	53	<b>12.255</b>	ug/L	0.174	1	216	27585	2	Standard
Mn	55	<b>138.831</b>	ug/L	1.400	1	1132	3771306	0	Standard
> Ge	72		ug/L			29835	27806	1	KED
Ni	60	<b>9.818</b>	ug/L	0.155	1	138	10498	2	KED
Ni	62	<b>10.153</b>	ug/L	0.435	4	33	1779	4	KED
Cu	63	<b>27.344</b>	ug/L	0.335	1	80	84274	1	KED
Cu	65	<b>27.790</b>	ug/L	0.865	3	24	42273	2	KED
Zn	66	<b>48.586</b>	ug/L	0.550	1	43	18988	2	KED
Zn	67	<b>46.824</b>	ug/L	0.947	2	3	3041	1	KED
As	75	<b>7.829</b>	ug/L	0.079	1	16	1605	1	KED
Se	78	<b>0.461</b>	ug/L	0.056	12	19	29	4	KED
Y	89		ug/L			297640	459086	1	Standard
Kr	83		ug/L			48	85	15	Standard
> In-1	115		ug/L			8217	7443	4	KED
Cd	111	<b>0.170</b>	ug/L	0.014	8	4	41	11	KED
Cd	114	<b>0.158</b>	ug/L	0.013	8	2	87	4	KED
> In	115		ug/L			413136	379895	1	Standard
Ag	107	<b>0.132</b>	ug/L	0.006	4	89	1747	3	Standard
Ba	135	<b>32.121</b>	ug/L	0.663	2	37	102025	1	Standard
Ba	137	<b>32.158</b>	ug/L	0.521	1	46	181286	0	Standard
> Tb	159		ug/L			720127	681758	0	Standard
Pb	208	<b>13.411</b>	ug/L	0.262	1	200	566513	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-12**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:15:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52996	1	Standard
Cl	37		ug/L			4438068	4135770	2	Standard
> Sc	45		ug/L			546109	593850	1	Standard
Cr	52	<b>13.192</b>	ug/L	0.254	1	17159	275562	0	Standard
Cr	53	<b>13.599</b>	ug/L	0.266	1	216	30809	3	Standard
Mn	55	<b>144.803</b>	ug/L	2.276	1	1132	3961726	0	Standard
> Ge	72		ug/L			29835	27276	1	KED
Ni	60	<b>11.697</b>	ug/L	0.458	3	138	12239	2	KED
Ni	62	<b>11.595</b>	ug/L	0.773	6	33	1988	5	KED
Cu	63	<b>30.353</b>	ug/L	0.347	1	80	91754	1	KED
Cu	65	<b>30.072</b>	ug/L	0.729	2	24	44864	0	KED
Zn	66	<b>59.116</b>	ug/L	0.843	1	43	22656	3	KED
Zn	67	<b>59.030</b>	ug/L	0.413	0	3	3760	1	KED
As	75	<b>5.828</b>	ug/L	0.166	2	16	1175	0	KED
Se	78	<b>0.882</b>	ug/L	0.082	9	19	37	3	KED
Y	89		ug/L			297640	472610	0	Standard
Kr	83		ug/L			48	107	15	Standard
> In-1	115		ug/L			8217	7664	1	KED
Cd	111	<b>0.205</b>	ug/L	0.040	19	4	50	17	KED
Cd	114	<b>0.170</b>	ug/L	0.047	28	2	96	26	KED
> In	115		ug/L			413136	379633	2	Standard
Ag	107	<b>0.132</b>	ug/L	0.007	5	89	1748	3	Standard
Ba	135	<b>36.296</b>	ug/L	1.029	2	37	115158	0	Standard
Ba	137	<b>36.642</b>	ug/L	1.345	3	46	206308	1	Standard
> Tb	159		ug/L			720127	677035	0	Standard
Pb	208	<b>13.580</b>	ug/L	0.085	0	200	569692	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-13**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:19:53**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	50799	1	Standard
Cl	37		ug/L			4438068	4123661	2	Standard
> Sc	45		ug/L			546109	577486	1	Standard
Cr	52	<b>24.826</b>	ug/L	0.819	3	17159	488203	1	Standard
Cr	53	<b>24.855</b>	ug/L	0.300	1	216	54561	1	Standard
Mn	55	<b>122.399</b>	ug/L	4.208	3	1132	3256012	1	Standard
> Ge	72		ug/L			29835	27603	2	KED
Ni	60	<b>16.614</b>	ug/L	0.464	2	138	17538	0	KED
Ni	62	<b>17.293</b>	ug/L	0.921	5	33	2985	4	KED
Cu	63	<b>43.858</b>	ug/L	0.764	1	80	134132	2	KED
Cu	65	<b>44.393</b>	ug/L	0.588	1	24	67021	1	KED
Zn	66	<b>95.540</b>	ug/L	2.276	2	43	37010	1	KED
Zn	67	<b>88.821</b>	ug/L	1.188	1	3	5724	3	KED
As	75	<b>6.205</b>	ug/L	0.145	2	16	1265	1	KED
Se	78	<b>0.772</b>	ug/L	0.132	17	19	36	10	KED
Y	89		ug/L			297640	443001	1	Standard
Kr	83		ug/L			48	93	13	Standard
> In-1	115		ug/L			8217	7577	4	KED
Cd	111	<b>0.966</b>	ug/L	0.105	10	4	219	6	KED
Cd	114	<b>1.004</b>	ug/L	0.107	10	2	553	7	KED
> In	115		ug/L			413136	384133	1	Standard
Ag	107	<b>0.918</b>	ug/L	0.031	3	89	11834	2	Standard
Ba	135	<b>36.225</b>	ug/L	0.954	2	37	116326	1	Standard
Ba	137	<b>36.058</b>	ug/L	0.547	1	46	205527	0	Standard
> Tb	159		ug/L			720127	676577	1	Standard
Pb	208	<b>62.354</b>	ug/L	1.086	1	200	2613215	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-14**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:24:37**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	52626	3	Standard
Cl	37		ug/L			4438068	4149776	1	Standard
> Sc	45		ug/L			546109	584004	0	Standard
Cr	52	<b>14.801</b>	ug/L	0.318	2	17159	301819	1	Standard
Cr	53	<b>15.036</b>	ug/L	0.097	0	216	33471	0	Standard
Mn	55	<b>132.304</b>	ug/L	0.329	0	1132	3560441	0	Standard
> Ge	72		ug/L			29835	27314	1	KED
Ni	60	<b>12.239</b>	ug/L	0.067	0	138	12824	0	KED
Ni	62	<b>12.342</b>	ug/L	0.751	6	33	2117	5	KED
Cu	63	<b>35.854</b>	ug/L	0.910	2	80	108509	1	KED
Cu	65	<b>35.764</b>	ug/L	0.184	0	24	53443	1	KED
Zn	66	<b>76.060</b>	ug/L	3.172	4	43	29166	3	KED
Zn	67	<b>72.522</b>	ug/L	3.856	5	3	4624	4	KED
As	75	<b>6.295</b>	ug/L	0.276	4	16	1270	3	KED
Se	78	<b>0.944</b>	ug/L	0.186	19	19	39	10	KED
Y	89		ug/L			297640	468237	0	Standard
Kr	83		ug/L			48	90	6	Standard
> In-1	115		ug/L			8217	7609	1	KED
Cd	111	<b>0.281</b>	ug/L	0.017	6	4	66	7	KED
Cd	114	<b>0.296</b>	ug/L	0.019	6	2	166	5	KED
> In	115		ug/L			413136	381811	2	Standard
Ag	107	<b>0.211</b>	ug/L	0.003	1	89	2771	1	Standard
Ba	135	<b>36.629</b>	ug/L	0.415	1	37	116923	1	Standard
Ba	137	<b>36.597</b>	ug/L	0.656	1	46	207326	1	Standard
> Tb	159		ug/L			720127	682515	0	Standard
Pb	208	<b>16.066</b>	ug/L	0.212	1	200	679391	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 22:29:22

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31202	3	Standard
Cl	37		ug/L			4438068	4018551	2	Standard
[> Sc	45		ug/L			546109	451755	1	Standard
Cr	52	-0.004	ug/L	0.005	126	17159	14141	1	Standard
Cr	53	-0.031	ug/L	0.008	26	216	126	10	Standard
Mn	55	-0.006	ug/L	0.001	22	1132	802	4	Standard
[> Ge	72		ug/L			29835	26981	2	KED
Ni	60	-0.102	ug/L	0.005	4	138	20	24	KED
Ni	62	-0.160	ug/L	0.019	12	33	3	86	KED
Cu	63	0.030	ug/L	0.005	15	80	162	7	KED
Cu	65	0.037	ug/L	0.005	12	24	76	6	KED
Zn	66	0.006	ug/L	0.017	312	43	41	18	KED
Zn	67	0.036	ug/L	0.002	6	3	5	0	KED
As	75	-0.041	ug/L	0.004	10	16	6	14	KED
Se	78	-0.035	ug/L	0.061	171	19	17	8	KED
Y	89		ug/L			297640	255123	4	Standard
Kr	83		ug/L			48	45	27	Standard
[> In-1	115		ug/L			8217	7281	2	KED
Cd	111	-0.005	ug/L	0.007	123	4	2	57	KED
Cd	114	0.008	ug/L	0.008	98	2	6	64	KED
[> In	115		ug/L			413136	363887	3	Standard
Ag	107	-0.003	ug/L	0.000	7	89	45	4	Standard
Ba	135	0.004	ug/L	0.004	95	37	46	24	Standard
Ba	137	0.006	ug/L	0.002	26	46	71	7	Standard
[> Tb	159		ug/L			720127	619191	1	Standard
Pb	208	-0.001	ug/L	0.000	26	200	137	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 22:34:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30483	0	Standard
Cl	37		ug/L			4438068	4227808	0	Standard
[> Sc	45		ug/L			546109	480127	0	Standard
Cr	52	50.256	ug/L	0.148	0	17159	806485	0	Standard
Cr	53	51.647	ug/L	0.846	1	216	94056	1	Standard
Mn	55	51.670	ug/L	0.693	1	1132	1143726	1	Standard
[> Ge	72		ug/L			29835	25944	4	KED
Ni	60	50.056	ug/L	0.884	1	138	49427	2	KED
Ni	62	51.454	ug/L	2.255	4	33	8290	4	KED
Cu	63	50.836	ug/L	2.047	4	80	145993	2	KED
Cu	65	51.641	ug/L	2.283	4	24	73201	0	KED
Zn	66	51.537	ug/L	1.259	2	43	18777	2	KED
Zn	67	51.972	ug/L	1.982	3	3	3147	2	KED
As	75	51.244	ug/L	1.318	2	16	9720	1	KED
[ Se	78	51.590	ug/L	1.759	3	19	1114	2	KED
Y	89		ug/L			297640	275051	1	Standard
Kr	83		ug/L			48	52	20	Standard
[> In-1	115		ug/L			8217	7399	2	KED
Cd	111	50.053	ug/L	0.787	1	4	10939	0	KED
[ Cd	114	49.643	ug/L	0.342	0	2	26693	1	KED
[> In	115		ug/L			413136	380920	0	Standard
Ag	107	50.412	ug/L	1.396	2	89	640090	2	Standard
Ba	135	50.934	ug/L	0.601	1	37	162226	1	Standard
[ Ba	137	50.699	ug/L	1.406	2	46	286569	2	Standard
[> Tb	159		ug/L			720127	660923	1	Standard
[ Pb	208	49.923	ug/L	0.086	0	200	2044029	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 22:41:35

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	30613	1	Standard
Cl	37		ug/L			4438068	4130691	1	Standard
[> Sc	45		ug/L			546109	470123	0	Standard
Cr	52	0.001	ug/L	0.017	1718	17159	14786	1	Standard
Cr	53	-0.024	ug/L	0.008	34	216	143	10	Standard
Mn	55	-0.013	ug/L	0.002	15	1132	686	5	Standard
[> Ge	72		ug/L			29835	26336	3	KED
Ni	60	-0.104	ug/L	0.005	5	138	18	26	KED
Ni	62	-0.135	ug/L	0.032	23	33	7	66	KED
Cu	63	-0.010	ug/L	0.002	21	80	42	10	KED
Cu	65	-0.001	ug/L	0.005	471	24	20	35	KED
Zn	66	-0.033	ug/L	0.013	39	43	26	22	KED
Zn	67	0.027	ug/L	0.045	166	3	5	57	KED
As	75	-0.047	ug/L	0.004	9	16	5	18	KED
Se	78	0.012	ug/L	0.085	697	19	17	12	KED
Y	89		ug/L			297640	259006	0	Standard
Kr	83		ug/L			48	52	15	Standard
[> In-1	115		ug/L			8217	7229	4	KED
Cd	111	0.007	ug/L	0.006	86	4	5	21	KED
Cd	114	0.004	ug/L	0.004	99	2	4	50	KED
[> In	115		ug/L			413136	368706	2	Standard
Ag	107	-0.002	ug/L	0.001	37	89	53	15	Standard
Ba	135	-0.004	ug/L	0.003	89	37	21	48	Standard
Ba	137	-0.002	ug/L	0.001	50	46	31	18	Standard
[> Tb	159		ug/L			720127	626670	2	Standard
Pb	208	0.000	ug/L	0.001	140	200	191	15	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-05**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:46:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	42770	1	Standard
Cl	37		ug/L			4438068	4065756	1	Standard
[> Sc	45		ug/L			546109	513651	2	Standard
Cr	52	<b>5.893</b>	ug/L	0.113	1	17159	115398	0	Standard
Cr	53	<b>5.971</b>	ug/L	0.112	1	216	11811	0	Standard
Mn	55	<b>66.790</b>	ug/L	0.353	0	1132	1581487	2	Standard
[> Ge	72		ug/L			29835	27736	1	KED
Ni	60	<b>4.628</b>	ug/L	0.127	2	138	5004	1	KED
Ni	62	<b>4.502</b>	ug/L	0.066	1	33	804	0	KED
Cu	63	<b>11.056</b>	ug/L	0.356	3	80	34033	3	KED
Cu	65	<b>11.212</b>	ug/L	0.205	1	24	17026	0	KED
Zn	66	<b>22.011</b>	ug/L	1.287	5	43	8598	4	KED
Zn	67	<b>21.074</b>	ug/L	0.684	3	3	1367	3	KED
As	75	<b>2.547</b>	ug/L	0.035	1	16	531	2	KED
[ Se	78	<b>0.370</b>	ug/L	0.110	29	19	26	8	KED
Y	89		ug/L			297640	345771	0	Standard
Kr	83		ug/L			48	66	13	Standard
[> In-1	115		ug/L			8217	7576	1	KED
Cd	111	<b>0.065</b>	ug/L	0.018	28	4	18	21	KED
Cd	114	<b>0.083</b>	ug/L	0.022	26	2	48	24	KED
[> In	115		ug/L			413136	377281	4	Standard
Ag	107	<b>0.045</b>	ug/L	0.004	9	89	648	7	Standard
Ba	135	<b>14.413</b>	ug/L	0.690	4	37	45420	0	Standard
[ Ba	137	<b>14.311</b>	ug/L	0.688	4	46	80033	0	Standard
[> Tb	159		ug/L			720127	652430	5	Standard
[ Pb	208	<b>4.913</b>	ug/L	0.259	5	200	198345	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-06**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:51:03**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	42166	1	Standard
Cl	37		ug/L			4438068	4134510	0	Standard
> Sc	45		ug/L			546109	530966	1	Standard
Cr	52	<b>7.299</b>	ug/L	0.169	2	17159	143781	2	Standard
Cr	53	<b>7.368</b>	ug/L	0.123	1	216	15018	0	Standard
Mn	55	<b>54.747</b>	ug/L	0.504	0	1132	1340060	0	Standard
> Ge	72		ug/L			29835	28180	3	KED
Ni	60	<b>4.244</b>	ug/L	0.159	3	138	4669	1	KED
Ni	62	<b>4.337</b>	ug/L	0.298	6	33	787	2	KED
Cu	63	<b>10.759</b>	ug/L	0.224	2	80	33637	1	KED
Cu	65	<b>10.880</b>	ug/L	0.295	2	24	16780	1	KED
Zn	66	<b>23.621</b>	ug/L	0.611	2	43	9370	0	KED
Zn	67	<b>23.724</b>	ug/L	1.608	6	3	1561	5	KED
As	75	<b>2.423</b>	ug/L	0.055	2	16	514	1	KED
Se	78	<b>0.299</b>	ug/L	0.189	63	19	25	15	KED
Y	89		ug/L			297640	363192	1	Standard
Kr	83		ug/L			48	62	15	Standard
> In-1	115		ug/L			8217	7736	3	KED
Cd	111	<b>0.200</b>	ug/L	0.018	9	4	49	9	KED
Cd	114	<b>0.194</b>	ug/L	0.008	4	2	110	1	KED
> In	115		ug/L			413136	389355	2	Standard
Ag	107	<b>0.228</b>	ug/L	0.001	0	89	3046	2	Standard
Ba	135	<b>12.681</b>	ug/L	0.170	1	37	41302	0	Standard
Ba	137	<b>12.707</b>	ug/L	0.425	3	46	73417	1	Standard
> Tb	159		ug/L			720127	673859	1	Standard
Pb	208	<b>7.116</b>	ug/L	0.124	1	200	297160	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-07**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 22:55:47**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	43673	1	Standard
Cl	37		ug/L			4438068	4094241	1	Standard
[> Sc	45		ug/L			546109	538529	1	Standard
Cr	52	<b>6.145</b>	ug/L	0.084	1	17159	125453	0	Standard
Cr	53	<b>6.176</b>	ug/L	0.132	2	216	12801	0	Standard
Mn	55	<b>51.559</b>	ug/L	0.595	1	1132	1279989	0	Standard
[> Ge	72		ug/L			29835	27390	2	KED
Ni	60	<b>4.882</b>	ug/L	0.227	4	138	5202	1	KED
Ni	62	<b>5.184</b>	ug/L	0.221	4	33	910	5	KED
Cu	63	<b>9.120</b>	ug/L	0.187	2	80	27727	0	KED
Cu	65	<b>9.384</b>	ug/L	0.615	6	24	14067	5	KED
Zn	66	<b>20.018</b>	ug/L	1.225	6	43	7721	3	KED
Zn	67	<b>19.405</b>	ug/L	1.534	7	3	1242	6	KED
As	75	<b>2.923</b>	ug/L	0.049	1	16	599	1	KED
[ Se	78	<b>0.310</b>	ug/L	0.084	27	19	25	7	KED
Y	89		ug/L			297640	376411	3	Standard
Kr	83		ug/L			48	66	32	Standard
[> In-1	115		ug/L			8217	7727	1	KED
Cd	111	<b>0.088</b>	ug/L	0.039	44	4	23	36	KED
Cd	114	<b>0.086</b>	ug/L	0.005	5	2	50	4	KED
[> In	115		ug/L			413136	388603	0	Standard
Ag	107	<b>0.054</b>	ug/L	0.001	1	89	780	0	Standard
Ba	135	<b>14.474</b>	ug/L	0.078	0	37	47054	1	Standard
[ Ba	137	<b>14.533</b>	ug/L	0.077	0	46	83835	0	Standard
[> Tb	159		ug/L			720127	677917	0	Standard
[ Pb	208	<b>5.807</b>	ug/L	0.041	0	200	244037	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0158-10**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 23:00:31**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	43432	0	Standard
Cl	37		ug/L			4438068	4158038	1	Standard
[> Sc	45		ug/L			546109	549316	0	Standard
Cr	52	<b>6.711</b>	ug/L	0.203	3	17159	138157	2	Standard
Cr	53	<b>6.871</b>	ug/L	0.186	2	216	14504	1	Standard
Mn	55	<b>80.779</b>	ug/L	1.636	2	1132	2045103	2	Standard
[> Ge	72		ug/L			29835	27935	1	KED
Ni	60	<b>5.261</b>	ug/L	0.107	2	138	5712	3	KED
Ni	62	<b>5.284</b>	ug/L	0.083	1	33	945	0	KED
Cu	63	<b>12.427</b>	ug/L	0.113	0	80	38522	1	KED
Cu	65	<b>12.468</b>	ug/L	0.240	1	24	19069	2	KED
Zn	66	<b>24.255</b>	ug/L	0.561	2	43	9540	1	KED
Zn	67	<b>24.203</b>	ug/L	0.900	3	3	1581	4	KED
As	75	<b>3.186</b>	ug/L	0.027	0	16	665	0	KED
[ Se	78	<b>0.299</b>	ug/L	0.133	44	19	25	12	KED
Y	89		ug/L			297640	398849	1	Standard
Kr	83		ug/L			48	70	7	Standard
[> In-1	115		ug/L			8217	7714	0	KED
Cd	111	<b>0.175</b>	ug/L	0.022	12	4	43	11	KED
[ Cd	114	<b>0.195</b>	ug/L	0.050	25	2	111	24	KED
[> In	115		ug/L			413136	378907	0	Standard
Ag	107	<b>0.130</b>	ug/L	0.006	4	89	1725	5	Standard
Ba	135	<b>18.582</b>	ug/L	0.417	2	37	58883	1	Standard
[ Ba	137	<b>18.630</b>	ug/L	0.267	1	46	104768	0	Standard
[> Tb	159		ug/L			720127	671050	2	Standard
[ Pb	208	<b>7.707</b>	ug/L	0.210	2	200	320382	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-01**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 23:05:15**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	41530	2	Standard
Cl	37		ug/L			4438068	4082687	0	Standard
> Sc	45		ug/L			546109	542497	1	Standard
Cr	52	<b>6.585</b>	ug/L	0.136	2	17159	134184	0	Standard
Cr	53	<b>6.688</b>	ug/L	0.127	1	216	13947	1	Standard
Mn	55	<b>55.826</b>	ug/L	0.951	1	1132	1395997	0	Standard
> Ge	72		ug/L			29835	27863	1	KED
Ni	60	<b>4.959</b>	ug/L	0.173	3	138	5376	2	KED
Ni	62	<b>5.270</b>	ug/L	0.224	4	33	940	3	KED
Cu	63	<b>11.137</b>	ug/L	0.175	1	80	34438	0	KED
Cu	65	<b>11.049</b>	ug/L	0.116	1	24	16860	1	KED
Zn	66	<b>25.636</b>	ug/L	0.772	3	43	10055	1	KED
Zn	67	<b>24.580</b>	ug/L	1.336	5	3	1601	4	KED
As	75	<b>2.269</b>	ug/L	0.066	2	16	477	3	KED
Se	78	<b>0.122</b>	ug/L	0.112	91	19	21	12	KED
Y	89		ug/L			297640	367919	1	Standard
Kr	83		ug/L			48	66	24	Standard
> In-1	115		ug/L			8217	7772	3	KED
Cd	111	<b>0.119</b>	ug/L	0.033	28	4	31	22	KED
Cd	114	<b>0.109</b>	ug/L	0.021	19	2	63	16	KED
> In	115		ug/L			413136	388692	1	Standard
Ag	107	<b>0.108</b>	ug/L	0.003	3	89	1480	1	Standard
Ba	135	<b>15.739</b>	ug/L	0.564	3	37	51153	2	Standard
Ba	137	<b>15.587</b>	ug/L	0.093	0	46	89927	1	Standard
> Tb	159		ug/L			720127	676703	1	Standard
Pb	208	<b>7.642</b>	ug/L	0.124	1	200	320457	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0030-DUP2**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 23:09:59**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	42509	1	Standard
Cl	37		ug/L			4438068	4080520	1	Standard
[> Sc	45		ug/L			546109	517348	4	Standard
Cr	52	<b>7.064</b>	ug/L	0.334	4	17159	135925	0	Standard
Cr	53	<b>7.161</b>	ug/L	0.236	3	216	14216	2	Standard
Mn	55	<b>60.029</b>	ug/L	1.705	2	1132	1430513	3	Standard
[> Ge	72		ug/L			29835	27788	1	KED
Ni	60	<b>5.078</b>	ug/L	0.050	0	138	5489	2	KED
Ni	62	<b>5.267</b>	ug/L	0.316	6	33	937	4	KED
Cu	63	<b>11.541</b>	ug/L	0.269	2	80	35587	1	KED
Cu	65	<b>11.678</b>	ug/L	0.224	1	24	17768	2	KED
Zn	66	<b>29.204</b>	ug/L	0.585	2	43	11419	1	KED
Zn	67	<b>28.813</b>	ug/L	0.242	0	3	1871	0	KED
As	75	<b>2.503</b>	ug/L	0.056	2	16	523	0	KED
Se	78	<b>0.203</b>	ug/L	0.103	50	19	23	9	KED
Y	89		ug/L			297640	355832	5	Standard
Kr	83		ug/L			48	59	17	Standard
[> In-1	115		ug/L			8217	7603	3	KED
Cd	111	<b>0.132</b>	ug/L	0.035	26	4	33	20	KED
Cd	114	<b>0.118</b>	ug/L	0.027	22	2	67	19	KED
[> In	115		ug/L			413136	372461	7	Standard
Ag	107	<b>0.121</b>	ug/L	0.010	7	89	1581	1	Standard
Ba	135	<b>16.193</b>	ug/L	0.969	5	37	50297	2	Standard
Ba	137	<b>16.141</b>	ug/L	1.279	7	46	88878	0	Standard
[> Tb	159		ug/L			720127	649519	4	Standard
Pb	208	<b>9.116</b>	ug/L	0.411	4	200	366423	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0030-MS2**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 23:14:43**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	42549	2	Standard
Cl	37		ug/L			4438068	4145699	0	Standard
[> Sc	45		ug/L			546109	536133	1	Standard
Cr	52	<b>16.703</b>	ug/L	0.306	1	17159	310569	2	Standard
Cr	53	<b>16.753</b>	ug/L	0.470	2	216	34204	1	Standard
Mn	55	<b>71.174</b>	ug/L	0.846	1	1132	1758942	2	Standard
[> Ge	72		ug/L			29835	27636	1	KED
Ni	60	<b>15.758</b>	ug/L	0.333	2	138	16673	3	KED
Ni	62	<b>16.014</b>	ug/L	0.515	3	33	2771	3	KED
Cu	63	<b>21.916</b>	ug/L	0.363	1	80	67142	0	KED
Cu	65	<b>22.172</b>	ug/L	0.279	1	24	33535	2	KED
Zn	66	<b>60.468</b>	ug/L	0.413	0	43	23475	1	KED
Zn	67	<b>55.846</b>	ug/L	1.753	3	3	3605	3	KED
As	75	<b>12.431</b>	ug/L	0.207	1	16	2525	2	KED
[ Se	78	<b>32.037</b>	ug/L	1.258	3	19	744	4	KED
Y	89		ug/L			297640	375844	1	Standard
Kr	83		ug/L			48	81	14	Standard
[> In-1	115		ug/L			8217	7505	1	KED
Cd	111	<b>10.596</b>	ug/L	0.132	1	4	2352	1	KED
[ Cd	114	<b>10.852</b>	ug/L	0.110	1	2	5920	1	KED
[> In	115		ug/L			413136	387488	1	Standard
Ag	107	<b>7.355</b>	ug/L	0.179	2	89	95089	3	Standard
Ba	135	<b>27.790</b>	ug/L	0.479	1	37	90034	0	Standard
[ Ba	137	<b>27.961</b>	ug/L	0.519	1	46	160783	1	Standard
[> Tb	159		ug/L			720127	673668	0	Standard
[ Pb	208	<b>20.093</b>	ug/L	0.327	1	200	838617	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0030-MSD2**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Friday, April 07, 2023 23:19:27**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	40134	2	Standard
Cl	37		ug/L			4438068	4097465	0	Standard
[> Sc	45		ug/L			546109	538849	1	Standard
Cr	52	<b>16.289</b>	ug/L	0.419	2	17159	304726	0	Standard
Cr	53	<b>16.477</b>	ug/L	0.176	1	216	33826	2	Standard
Mn	55	<b>68.561</b>	ug/L	1.803	2	1132	1702506	1	Standard
[> Ge	72		ug/L			29835	27799	2	KED
Ni	60	<b>15.317</b>	ug/L	0.314	2	138	16296	0	KED
Ni	62	<b>15.286</b>	ug/L	0.818	5	33	2663	6	KED
Cu	63	<b>22.030</b>	ug/L	0.717	3	80	67871	2	KED
Cu	65	<b>22.235</b>	ug/L	0.655	2	24	33810	0	KED
Zn	66	<b>58.662</b>	ug/L	1.448	2	43	22905	2	KED
Zn	67	<b>55.623</b>	ug/L	0.748	1	3	3611	1	KED
As	75	<b>12.458</b>	ug/L	0.296	2	16	2544	0	KED
Se	78	<b>31.795</b>	ug/L	0.717	2	19	743	1	KED
Y	89		ug/L			297640	367687	2	Standard
Kr	83		ug/L			48	73	7	Standard
[> In-1	115		ug/L			8217	7696	1	KED
Cd	111	<b>10.181</b>	ug/L	0.052	0	4	2317	1	KED
Cd	114	<b>10.282</b>	ug/L	0.195	1	2	5753	2	KED
[> In	115		ug/L			413136	387905	1	Standard
Ag	107	<b>8.244</b>	ug/L	0.169	2	89	106660	1	Standard
Ba	135	<b>27.420</b>	ug/L	0.057	0	37	88947	0	Standard
Ba	137	<b>27.179</b>	ug/L	0.190	0	46	156473	1	Standard
[> Tb	159		ug/L			720127	676400	3	Standard
Pb	208	<b>18.382</b>	ug/L	0.541	2	200	769891	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0030-PS2

Sample Dil Factor: 50

DEL

Comments:

Sample Date/Time: Friday, April 07, 2023 23:24:11

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	40633	2	Standard
Cl	37		ug/L			4438068	4089392	1	Standard
> Sc	45		ug/L			546109	528364	6	Standard
Cr	52	24.692	ug/L	1.480	5	17159	443473	0	Standard
Cr	53	25.420	ug/L	0.989	3	216	50978	2	Standard
Mn	55	75.662	ug/L	2.511	3	1132	1840337	3	Standard
> Ge	72		ug/L			29835	27428	1	KED
Ni	60	24.195	ug/L	0.136	0	138	25333	1	KED
Ni	62	24.193	ug/L	0.605	2	33	4139	1	KED
Cu	63	30.872	ug/L	0.882	2	80	93837	2	KED
Cu	65	31.020	ug/L	1.015	3	24	46537	2	KED
Zn	66	89.418	ug/L	3.004	3	43	34423	1	KED
Zn	67	82.084	ug/L	2.079	2	3	5256	2	KED
As	75	21.604	ug/L	0.270	1	16	4343	0	KED
Se	78	59.111	ug/L	1.482	2	19	1347	1	KED
Y	89		ug/L			297640	363959	8	Standard
Kr	83		ug/L			48	69	4	Standard
> In-1	115		ug/L			8217	7626	1	KED
Cd	111	19.657	ug/L	0.633	3	4	4430	2	KED
Cd	114	19.554	ug/L	0.339	1	2	10837	0	KED
> In	115		ug/L			413136	379644	6	Standard
Ag	107	20.165	ug/L	1.094	5	89	254695	1	Standard
Ba	135	36.733	ug/L	1.612	4	37	116400	1	Standard
Ba	137	36.211	ug/L	2.554	7	46	203428	0	Standard
> Tb	159		ug/L			720127	653282	7	Standard
Pb	208	28.181	ug/L	1.762	6	200	1137098	2	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 23:28:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31576	3	Standard
Cl	37		ug/L			4438068	4026272	1	Standard
[> Sc	45		ug/L			546109	462798	0	Standard
Cr	52	-0.031	ug/L	0.014	46	17159	14076	1	Standard
Cr	53	-0.032	ug/L	0.003	10	216	127	4	Standard
Mn	55	-0.013	ug/L	0.001	3	1132	676	1	Standard
[> Ge	72		ug/L			29835	26530	2	KED
Ni	60	-0.098	ug/L	0.005	5	138	24	20	KED
Ni	62	-0.132	ug/L	0.025	18	33	8	48	KED
Cu	63	0.028	ug/L	0.006	23	80	152	9	KED
Cu	65	0.038	ug/L	0.009	23	24	77	17	KED
Zn	66	0.008	ug/L	0.018	229	43	41	14	KED
Zn	67	0.028	ug/L	0.067	235	3	5	78	KED
As	75	-0.042	ug/L	0.004	8	16	6	11	KED
Se	78	-0.049	ug/L	0.074	149	19	16	7	KED
Y	89		ug/L			297640	265431	0	Standard
Kr	83		ug/L			48	34	38	Standard
[> In-1	115		ug/L			8217	7342	2	KED
Cd	111	0.003	ug/L	0.009	257	4	4	44	KED
Cd	114	0.000	ug/L	0.002	497	2	2	46	KED
[> In	115		ug/L			413136	372303	0	Standard
Ag	107	-0.003	ug/L	0.001	27	89	46	20	Standard
Ba	135	0.004	ug/L	0.005	141	37	45	35	Standard
Ba	137	0.008	ug/L	0.003	42	46	86	21	Standard
[> Tb	159		ug/L			720127	640099	1	Standard
Pb	208	-0.001	ug/L	0.001	105	200	147	21	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 23:33:41

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31299	2	Standard
Cl	37		ug/L			4438068	4274200	0	Standard
[> Sc	45		ug/L			546109	487685	1	Standard
Cr	52	50.579	ug/L	1.067	2	17159	824256	1	Standard
Cr	53	50.707	ug/L	1.011	1	216	93798	1	Standard
Mn	55	50.528	ug/L	0.535	1	1132	1136045	0	Standard
[> Ge	72		ug/L			29835	26969	1	KED
Ni	60	49.486	ug/L	1.131	2	138	50808	1	KED
Ni	62	50.041	ug/L	1.607	3	33	8386	3	KED
Cu	63	50.258	ug/L	0.346	0	80	150168	1	KED
Cu	65	50.040	ug/L	0.597	1	24	73831	2	KED
Zn	66	50.156	ug/L	0.345	0	43	19008	1	KED
Zn	67	51.151	ug/L	1.955	3	3	3221	2	KED
As	75	50.586	ug/L	0.637	1	16	9980	0	KED
[ Se	78	50.617	ug/L	0.085	0	19	1137	1	KED
Y	89		ug/L			297640	279113	1	Standard
Kr	83		ug/L			48	48	9	Standard
[> In-1	115		ug/L			8217	7601	1	KED
Cd	111	49.561	ug/L	0.630	1	4	11130	1	KED
[ Cd	114	49.100	ug/L	1.523	3	2	27121	2	KED
[> In	115		ug/L			413136	381521	2	Standard
Ag	107	50.009	ug/L	1.624	3	89	635962	3	Standard
Ba	135	51.156	ug/L	2.353	4	37	163099	3	Standard
[ Ba	137	50.661	ug/L	1.786	3	46	286680	1	Standard
[> Tb	159		ug/L			720127	659754	0	Standard
[ Pb	208	50.500	ug/L	0.441	0	200	2063925	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 23:41:09

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30728	31490	1	Standard
Cl	37		ug/L			4438068	4110847	1	Standard
[> Sc	45		ug/L			546109	463837	1	Standard
Cr	52	-0.011	ug/L	0.035	310	17159	14398	1	Standard
Cr	53	-0.035	ug/L	0.002	6	216	122	4	Standard
Mn	55	-0.014	ug/L	0.002	11	1132	655	3	Standard
[> Ge	72		ug/L			29835	26634	1	KED
Ni	60	-0.106	ug/L	0.007	6	138	16	40	KED
Ni	62	-0.109	ug/L	0.006	5	33	12	9	KED
Cu	63	-0.007	ug/L	0.004	59	80	51	22	KED
Cu	65	0.003	ug/L	0.005	169	24	26	25	KED
Zn	66	-0.022	ug/L	0.021	97	43	30	25	KED
Zn	67	0.017	ug/L	0.017	99	3	4	24	KED
As	75	-0.044	ug/L	0.006	12	16	6	19	KED
[ Se	78	-0.039	ug/L	0.054	137	19	16	8	KED
Y	89		ug/L			297640	261052	1	Standard
Kr	83		ug/L			48	43	20	Standard
[> In-1	115		ug/L			8217	7420	1	KED
Cd	111	0.005	ug/L	0.009	187	4	4	40	KED
Cd	114	0.008	ug/L	0.002	26	2	6	18	KED
[> In	115		ug/L			413136	377722	0	Standard
Ag	107	-0.001	ug/L	0.000	23	89	64	6	Standard
Ba	135	-0.004	ug/L	0.001	32	37	21	18	Standard
[ Ba	137	-0.001	ug/L	0.001	109	46	35	21	Standard
[> Tb	159		ug/L			720127	632607	0	Standard
[ Pb	208	-0.000	ug/L	0.001	691	200	172	14	Standard

## ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**

**Sample Dil Factor:**

**Comments:**

**Sample Date/Time: Friday, April 07, 2023 23:45:53**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L				30779	2	Standard
Cl	37		ug/L				4052820	1	Standard
[> Sc	45		ug/L				457643	1	Standard
Cr	52		ug/L				14350	3	Standard
Cr	53		ug/L				118	5	Standard
Mn	55		ug/L				638	1	Standard
[> Ge	72		ug/L				26593	0	KED
Ni	60		ug/L				24	20	KED
Ni	62		ug/L				4	89	KED
Cu	63		ug/L				39	16	KED
Cu	65		ug/L				28	6	KED
Zn	66		ug/L				24	36	KED
Zn	67		ug/L				3	50	KED
As	75		ug/L				6	32	KED
Se	78		ug/L				20	16	KED
Y	89		ug/L				265146	1	Standard
Kr	83		ug/L				48	27	Standard
[> In-1	115		ug/L				7168	2	KED
Cd	111		ug/L				3	66	KED
Cd	114		ug/L				3	72	KED
[> In	115		ug/L				374013	1	Standard
Ag	107		ug/L				48	15	Standard
Ba	135		ug/L				24	7	Standard
Ba	137		ug/L				29	25	Standard
[> Tb	159		ug/L				624828	1	Standard
Pb	208		ug/L				160	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 23:50:38

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31113	3	Standard
Cl	37		ug/L			4052820	4217623	0	Standard
[> Sc	45		ug/L			457643	473497	0	Standard
Cr	52	51.408	ug/L	0.812	1	14350	813146	0	Standard
Cr	53	51.725	ug/L	0.960	1	118	92830	1	Standard
Mn	55	51.642	ug/L	0.257	0	638	1127010	0	Standard
[> Ge	72		ug/L			26593	26690	1	KED
Ni	60	48.951	ug/L	0.585	1	24	49645	0	KED
Ni	62	48.356	ug/L	0.627	1	4	7995	1	KED
Cu	63	49.568	ug/L	0.745	1	39	146531	0	KED
Cu	65	50.252	ug/L	0.960	1	28	73364	0	KED
Zn	66	50.337	ug/L	1.069	2	24	18861	0	KED
Zn	67	50.422	ug/L	0.490	0	3	3144	2	KED
As	75	50.641	ug/L	0.265	0	6	9881	1	KED
[ Se	78	50.193	ug/L	0.907	1	20	1119	3	KED
Y	89		ug/L			265146	270958	0	Standard
Kr	83		ug/L			48	51	9	Standard
[> In-1	115		ug/L			7168	7480	2	KED
Cd	111	50.296	ug/L	0.978	1	3	11112	0	KED
[ Cd	114	48.957	ug/L	2.643	5	3	26596	3	KED
[> In	115		ug/L			374013	374346	0	Standard
Ag	107	51.403	ug/L	0.502	0	48	641406	0	Standard
Ba	135	51.477	ug/L	0.982	1	24	161106	1	Standard
[ Ba	137	51.599	ug/L	0.207	0	29	286629	0	Standard
[> Tb	159		ug/L			624828	648333	1	Standard
[ Pb	208	50.752	ug/L	0.404	0	160	2038272	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB

Sample Dil Factor:

Comments:

Sample Date/Time: Friday, April 07, 2023 23:58:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	30542	2	Standard
Cl	37		ug/L			4052820	4147744	1	Standard
[> Sc	45		ug/L			457643	465460	1	Standard
Cr	52	-0.029	ug/L	0.019	64	14350	14144	0	Standard
Cr	53	-0.002	ug/L	0.008	349	118	116	10	Standard
Mn	55	-0.001	ug/L	0.001	133	638	634	2	Standard
[> Ge	72		ug/L			26593	26507	1	KED
Ni	60	-0.005	ug/L	0.014	286	24	19	73	KED
Ni	62	0.008	ug/L	0.042	546	4	5	120	KED
Cu	63	0.002	ug/L	0.003	124	39	46	19	KED
Cu	65	0.004	ug/L	0.003	75	28	33	13	KED
Zn	66	0.007	ug/L	0.028	388	24	26	37	KED
Zn	67	0.063	ug/L	0.082	131	3	7	66	KED
As	75	0.005	ug/L	0.005	109	6	7	15	KED
Se	78	-0.216	ug/L	0.162	74	20	16	21	KED
Y	89		ug/L			265146	263033	2	Standard
Kr	83		ug/L			48	43	34	Standard
[> In-1	115		ug/L			7168	7439	0	KED
Cd	111	-0.001	ug/L	0.009	1310	3	3	50	KED
Cd	114	0.010	ug/L	0.002	19	3	8	12	KED
[> In	115		ug/L			374013	371286	0	Standard
Ag	107	0.001	ug/L	0.001	97	48	62	20	Standard
Ba	135	-0.001	ug/L	0.003	300	24	20	50	Standard
Ba	137	0.002	ug/L	0.001	64	29	38	15	Standard
[> Tb	159		ug/L			624828	629424	2	Standard
Pb	208	0.000	ug/L	0.000	185	160	170	10	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0022-BLK3**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:02:51**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	42848	1	Standard
Cl	37		ug/L			4052820	4056450	1	Standard
> Sc	45		ug/L			457643	478236	0	Standard
Cr	52	0.012	ug/L	0.035	290	14350	15185	3	Standard
Cr	53	0.028	ug/L	0.002	8	118	173	2	Standard
Mn	55	0.009	ug/L	0.000	3	638	870	0	Standard
> Ge	72		ug/L			26593	26647	0	KED
Ni	60	-0.011	ug/L	0.003	27	24	13	20	KED
Ni	62	0.027	ug/L	0.024	89	4	8	44	KED
Cu	63	0.021	ug/L	0.003	16	39	100	9	KED
Cu	65	0.013	ug/L	0.003	26	28	47	10	KED
Zn	66	0.104	ug/L	0.029	27	24	62	16	KED
Zn	67	0.112	ug/L	0.063	56	3	10	36	KED
As	75	-0.004	ug/L	0.017	405	6	6	53	KED
Se	78	-0.295	ug/L	0.145	49	20	14	22	KED
Y	89		ug/L			265146	270287	1	Standard
Kr	83		ug/L			48	51	16	Standard
> In-1	115		ug/L			7168	7316	1	KED
Cd	111	-0.003	ug/L	0.009	288	3	3	62	KED
Cd	114	-0.000	ug/L	0.004	1182	3	2	72	KED
> In	115		ug/L			374013	384803	0	Standard
Ag	107	-0.000	ug/L	0.001	2059	48	49	30	Standard
Ba	135	0.056	ug/L	0.003	5	24	205	4	Standard
Ba	137	0.058	ug/L	0.004	6	29	361	6	Standard
> Tb	159		ug/L			624828	635459	1	Standard
Pb	208	-0.001	ug/L	0.000	31	160	133	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0022-BS3**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:07:35**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	45016	2	Standard
Cl	37		ug/L			4052820	4249359	1	Standard
[> Sc	45		ug/L			457643	478705	1	Standard
Cr	52	26.038	ug/L	0.414	1	14350	423855	2	Standard
Cr	53	26.161	ug/L	0.598	2	118	47521	0	Standard
Mn	55	25.495	ug/L	0.529	2	638	562749	0	Standard
[> Ge	72		ug/L			26593	26252	2	KED
Ni	60	25.590	ug/L	1.033	4	24	25525	1	KED
Ni	62	26.217	ug/L	0.654	2	4	4264	0	KED
Cu	63	25.600	ug/L	0.608	2	39	74439	0	KED
Cu	65	25.444	ug/L	0.391	1	28	36548	1	KED
Zn	66	84.802	ug/L	2.601	3	24	31231	1	KED
Zn	67	78.703	ug/L	1.778	2	3	4823	0	KED
As	75	26.283	ug/L	0.606	2	6	5045	0	KED
Se	78	84.539	ug/L	2.856	3	20	1839	0	KED
Y	89		ug/L			265146	269142	0	Standard
Kr	83		ug/L			48	42	9	Standard
[> In-1	115		ug/L			7168	7272	1	KED
Cd	111	25.785	ug/L	0.774	3	3	5540	1	KED
Cd	114	25.880	ug/L	0.321	1	3	13681	2	KED
[> In	115		ug/L			374013	370590	1	Standard
Ag	107	26.293	ug/L	0.697	2	48	324880	3	Standard
Ba	135	27.277	ug/L	0.374	1	24	84514	0	Standard
Ba	137	26.401	ug/L	0.146	0	29	145198	1	Standard
[> Tb	159		ug/L			624828	653237	2	Standard
Pb	208	25.738	ug/L	0.482	1	160	1041360	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-06**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:12:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	42760	1	Standard
Cl	37		ug/L			4052820	4061760	1	Standard
[> Sc	45		ug/L			457643	533058	0	Standard
Cr	52	<b>5.667</b>	ug/L	0.125	2	14350	115793	2	Standard
Cr	53	<b>5.860</b>	ug/L	0.105	1	118	11962	1	Standard
Mn	55	<b>70.597</b>	ug/L	1.010	1	638	1734218	1	Standard
[> Ge	72		ug/L			26593	27478	1	KED
Ni	60	<b>5.204</b>	ug/L	0.129	2	24	5458	3	KED
Ni	62	<b>5.409</b>	ug/L	0.185	3	4	925	4	KED
Cu	63	<b>12.046</b>	ug/L	0.256	2	39	36697	2	KED
Cu	65	<b>12.174</b>	ug/L	0.270	2	28	18324	2	KED
Zn	66	<b>19.749</b>	ug/L	0.323	1	24	7635	1	KED
Zn	67	<b>19.948</b>	ug/L	0.352	1	3	1283	2	KED
As	75	<b>2.383</b>	ug/L	0.088	3	6	485	4	KED
Se	78	<b>0.415</b>	ug/L	0.151	36	20	31	12	KED
Y	89		ug/L			265146	365548	2	Standard
Kr	83		ug/L			48	71	18	Standard
[> In-1	115		ug/L			7168	7598	0	KED
Cd	111	<b>0.037</b>	ug/L	0.008	20	3	12	13	KED
Cd	114	<b>0.046</b>	ug/L	0.006	11	3	28	10	KED
[> In	115		ug/L			374013	384692	4	Standard
Ag	107	<b>0.042</b>	ug/L	0.011	26	48	584	19	Standard
Ba	135	<b>16.742</b>	ug/L	0.330	1	24	53836	2	Standard
Ba	137	<b>16.546</b>	ug/L	0.713	4	29	94355	0	Standard
[> Tb	159		ug/L			624828	674654	1	Standard
Pb	208	<b>3.511</b>	ug/L	0.085	2	160	146857	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-07**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:17:04**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	43190	1	Standard
Cl	37		ug/L			4052820	4080317	1	Standard
> Sc	45		ug/L			457643	539441	0	Standard
Cr	52	<b>6.666</b>	ug/L	0.055	0	14350	134849	0	Standard
Cr	53	<b>6.790</b>	ug/L	0.132	1	118	14004	1	Standard
Mn	55	<b>57.837</b>	ug/L	0.446	0	638	1437988	1	Standard
> Ge	72		ug/L			26593	27700	0	KED
Ni	60	<b>5.103</b>	ug/L	0.167	3	24	5394	3	KED
Ni	62	<b>5.396</b>	ug/L	0.206	3	4	930	3	KED
Cu	63	<b>16.497</b>	ug/L	0.530	3	39	50648	3	KED
Cu	65	<b>16.666</b>	ug/L	0.398	2	28	25277	2	KED
Zn	66	<b>25.171</b>	ug/L	0.391	1	24	9802	1	KED
Zn	67	<b>23.376</b>	ug/L	0.276	1	3	1515	0	KED
As	75	<b>2.218</b>	ug/L	0.055	2	6	456	1	KED
Se	78	<b>0.167</b>	ug/L	0.084	50	20	25	7	KED
Y	89		ug/L			265146	375445	2	Standard
Kr	83		ug/L			48	87	13	Standard
> In-1	115		ug/L			7168	7539	0	KED
Cd	111	<b>0.086</b>	ug/L	0.006	6	3	23	6	KED
Cd	114	<b>0.090</b>	ug/L	0.008	9	3	52	9	KED
> In	115		ug/L			374013	382604	1	Standard
Ag	107	<b>0.078</b>	ug/L	0.002	3	48	1050	3	Standard
Ba	135	<b>15.753</b>	ug/L	0.250	1	24	50398	0	Standard
Ba	137	<b>15.947</b>	ug/L	0.509	3	29	90520	1	Standard
> Tb	159		ug/L			624828	670801	1	Standard
Pb	208	<b>6.748</b>	ug/L	0.030	0	160	280575	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-08**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:21:47**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	41628	4	Standard
Cl	37		ug/L			4052820	4024701	0	Standard
> Sc	45		ug/L			457643	525565	1	Standard
Cr	52	<b>6.274</b>	ug/L	0.214	3	14350	124598	1	Standard
Cr	53	<b>6.359</b>	ug/L	0.085	1	118	12786	1	Standard
Mn	55	<b>58.061</b>	ug/L	0.413	0	638	1406461	2	Standard
> Ge	72		ug/L			26593	27621	1	KED
Ni	60	<b>4.990</b>	ug/L	0.158	3	24	5259	2	KED
Ni	62	<b>5.155</b>	ug/L	0.036	0	4	886	1	KED
Cu	63	<b>16.273</b>	ug/L	0.255	1	39	49815	1	KED
Cu	65	<b>16.380</b>	ug/L	0.576	3	28	24764	2	KED
Zn	66	<b>24.675</b>	ug/L	0.604	2	24	9580	1	KED
Zn	67	<b>22.541</b>	ug/L	0.633	2	3	1456	2	KED
As	75	<b>2.095</b>	ug/L	0.032	1	6	430	1	KED
Se	78	<b>-0.028</b>	ug/L	0.232	826	20	21	24	KED
Y	89		ug/L			265146	358092	1	Standard
Kr	83		ug/L			48	67	18	Standard
> In-1	115		ug/L			7168	7494	0	KED
Cd	111	<b>0.075</b>	ug/L	0.010	12	3	20	10	KED
Cd	114	<b>0.087</b>	ug/L	0.011	12	3	50	11	KED
> In	115		ug/L			374013	383317	1	Standard
Ag	107	<b>0.069</b>	ug/L	0.003	4	48	935	3	Standard
Ba	135	<b>14.694</b>	ug/L	0.267	1	24	47115	3	Standard
Ba	137	<b>14.673</b>	ug/L	0.025	0	29	83480	1	Standard
> Tb	159		ug/L			624828	670083	2	Standard
Pb	208	<b>6.026</b>	ug/L	0.152	2	160	250220	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-10**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:26:31**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	43378	3	Standard
Cl	37		ug/L			4052820	4106283	2	Standard
> Sc	45		ug/L			457643	528331	2	Standard
Cr	52	<b>5.822</b>	ug/L	0.156	2	14350	117403	0	Standard
Cr	53	<b>6.069</b>	ug/L	0.213	3	118	12267	1	Standard
Mn	55	<b>55.965</b>	ug/L	1.783	3	638	1362057	0	Standard
> Ge	72		ug/L			26593	27935	1	KED
Ni	60	<b>4.742</b>	ug/L	0.121	2	24	5058	3	KED
Ni	62	<b>4.836</b>	ug/L	0.264	5	4	841	5	KED
Cu	63	<b>10.979</b>	ug/L	0.150	1	39	34009	2	KED
Cu	65	<b>11.025</b>	ug/L	0.090	0	28	16874	1	KED
Zn	66	<b>24.132</b>	ug/L	0.225	0	24	9478	0	KED
Zn	67	<b>24.189</b>	ug/L	0.440	1	3	1581	2	KED
As	75	<b>2.255</b>	ug/L	0.129	5	6	467	5	KED
Se	78	<b>0.117</b>	ug/L	0.016	13	20	24	2	KED
Y	89		ug/L			265146	359062	0	Standard
Kr	83		ug/L			48	59	11	Standard
> In-1	115		ug/L			7168	7669	3	KED
Cd	111	<b>0.054</b>	ug/L	0.035	64	3	16	46	KED
Cd	114	<b>0.083</b>	ug/L	0.004	4	3	49	7	KED
> In	115		ug/L			374013	384704	1	Standard
Ag	107	<b>0.074</b>	ug/L	0.003	4	48	994	5	Standard
Ba	135	<b>14.972</b>	ug/L	0.265	1	24	48163	0	Standard
Ba	137	<b>14.749</b>	ug/L	0.364	2	29	84191	0	Standard
> Tb	159		ug/L			624828	665886	1	Standard
Pb	208	<b>6.488</b>	ug/L	0.062	0	160	267760	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-12**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:31:15**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	43216	3	Standard
Cl	37		ug/L			4052820	4035076	0	Standard
> Sc	45		ug/L			457643	545867	1	Standard
Cr	52	<b>6.463</b>	ug/L	0.029	0	14350	132827	1	Standard
Cr	53	<b>6.739</b>	ug/L	0.247	3	118	14060	2	Standard
Mn	55	<b>67.921</b>	ug/L	1.698	2	638	1708144	1	Standard
> Ge	72		ug/L			26593	28190	2	KED
Ni	60	<b>5.221</b>	ug/L	0.060	1	24	5616	2	KED
Ni	62	<b>5.263</b>	ug/L	0.189	3	4	923	5	KED
Cu	63	<b>12.211</b>	ug/L	0.075	0	39	38163	2	KED
Cu	65	<b>11.961</b>	ug/L	0.522	4	28	18455	1	KED
Zn	66	<b>24.425</b>	ug/L	0.837	3	24	9678	2	KED
Zn	67	<b>24.498</b>	ug/L	0.366	1	3	1615	1	KED
As	75	<b>2.565</b>	ug/L	0.046	1	6	535	2	KED
Se	78	<b>0.125</b>	ug/L	0.204	164	20	25	16	KED
Y	89		ug/L			265146	369718	2	Standard
Kr	83		ug/L			48	63	12	Standard
> In-1	115		ug/L			7168	6728	8	KED
Cd	111	<b>0.126</b>	ug/L	0.021	16	3	28	16	KED
Cd	114	<b>0.122</b>	ug/L	0.017	13	3	62	8	KED
> In	115		ug/L			374013	381658	1	Standard
Ag	107	<b>0.096</b>	ug/L	0.006	6	48	1272	4	Standard
Ba	135	<b>19.481</b>	ug/L	0.533	2	24	62157	1	Standard
Ba	137	<b>19.570</b>	ug/L	0.511	2	29	110819	1	Standard
> Tb	159		ug/L			624828	668673	0	Standard
Pb	208	<b>8.585</b>	ug/L	0.061	0	160	355766	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0157-13**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:35:59**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	43634	3	Standard
Cl	37		ug/L			4052820	4015585	1	Standard
> Sc	45		ug/L			457643	532366	0	Standard
Cr	52	<b>6.564</b>	ug/L	0.077	1	14350	131308	1	Standard
Cr	53	<b>6.603</b>	ug/L	0.020	0	118	13445	0	Standard
Mn	55	<b>83.961</b>	ug/L	3.262	3	638	2059439	3	Standard
> Ge	72		ug/L			26593	27595	1	KED
Ni	60	<b>5.132</b>	ug/L	0.118	2	24	5403	0	KED
Ni	62	<b>5.198</b>	ug/L	0.238	4	4	892	4	KED
Cu	63	<b>13.776</b>	ug/L	0.362	2	39	42133	1	KED
Cu	65	<b>13.870</b>	ug/L	0.422	3	28	20955	1	KED
Zn	66	<b>26.882</b>	ug/L	0.355	1	24	10427	1	KED
Zn	67	<b>26.148</b>	ug/L	0.279	1	3	1687	1	KED
As	75	<b>3.450</b>	ug/L	0.196	5	6	702	4	KED
Se	78	<b>0.516</b>	ug/L	0.243	46	20	33	17	KED
Y	89		ug/L			265146	381848	2	Standard
Kr	83		ug/L			48	71	8	Standard
> In-1	115		ug/L			7168	7563	2	KED
Cd	111	<b>0.135</b>	ug/L	0.002	1	3	34	2	KED
Cd	114	<b>0.133</b>	ug/L	0.041	30	3	75	27	KED
> In	115		ug/L			374013	385172	1	Standard
Ag	107	<b>0.107</b>	ug/L	0.008	7	48	1424	6	Standard
Ba	135	<b>24.441</b>	ug/L	0.528	2	24	78707	1	Standard
Ba	137	<b>24.827</b>	ug/L	0.311	1	29	141907	1	Standard
> Tb	159		ug/L			624828	660783	0	Standard
Pb	208	<b>8.692</b>	ug/L	0.070	0	160	355945	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0644-01**

Sample Dil Factor: **20**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 00:40:37**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	52998	1	Standard
Cl	37		ug/L			4052820	4224368	1	Standard
> Sc	45		ug/L			457643	478303	0	Standard
Cr	52	<b>111.340</b>	ug/L	2.083	1	14350	1761595	1	Standard
Cr	53	<b>111.929</b>	ug/L	0.336	0	118	202789	0	Standard
Mn	55	<b>34.206</b>	ug/L	0.761	2	638	754244	1	Standard
> Ge	72		ug/L			26593	26640	1	KED
Ni	60	<b>0.874</b>	ug/L	0.032	3	24	909	2	KED
Ni	62	<b>0.978</b>	ug/L	0.060	6	4	165	5	KED
Cu	63	<b>0.974</b>	ug/L	0.018	1	39	2912	2	KED
Cu	65	<b>0.919</b>	ug/L	0.046	4	28	1367	6	KED
Zn	66	<b>42.992</b>	ug/L	0.190	0	24	16085	0	KED
Zn	67	<b>40.613</b>	ug/L	2.313	5	3	2528	5	KED
As	75	<b>0.113</b>	ug/L	0.012	10	6	29	8	KED
Se	78	<b>-0.267</b>	ug/L	0.195	72	20	15	29	KED
Y	89		ug/L			265146	270683	1	Standard
Kr	83		ug/L			48	35	8	Standard
> In-1	115		ug/L			7168	6910	<b>9</b>	KED
Cd	111	<b>0.357</b>	ug/L	<u>0.063</u>	17	3	77	23	KED
Cd	114	<b>0.346</b>	ug/L	<u>0.045</u>	13	3	176	14	KED
> In	115		ug/L			374013	376962	1	Standard
Ag	107	<b>0.072</b>	ug/L	0.004	5	48	956	5	Standard
Ba	135	<b>1.771</b>	ug/L	0.067	3	24	5604	3	Standard
Ba	137	<b>1.746</b>	ug/L	0.021	1	29	9797	1	Standard
> Tb	159		ug/L			624828	647254	2	Standard
Pb	208	<b>0.073</b>	ug/L	0.004	5	160	3097	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 00:45:16

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31008	2	Standard
Cl	37		ug/L			4052820	4236857	1	Standard
[> Sc	45		ug/L			457643	452366	1	Standard
Cr	52	-0.024	ug/L	0.019	79	14350	13820	0	Standard
Cr	53	0.006	ug/L	0.003	47	118	127	4	Standard
Mn	55	0.004	ug/L	0.001	27	638	712	1	Standard
[> Ge	72		ug/L			26593	25995	3	KED
Ni	60	-0.010	ug/L	0.008	88	24	14	52	KED
Ni	62	0.016	ug/L	0.029	183	4	6	68	KED
Cu	63	0.043	ug/L	0.001	2	39	161	4	KED
Cu	65	0.029	ug/L	0.005	17	28	69	6	KED
Zn	66	0.032	ug/L	0.033	101	24	35	36	KED
Zn	67	0.096	ug/L	0.054	56	3	9	34	KED
As	75	-0.007	ug/L	0.003	41	6	5	13	KED
Se	78	-0.223	ug/L	0.086	38	20	15	11	KED
Y	89		ug/L			265146	254468	1	Standard
Kr	83		ug/L			48	40	16	Standard
[> In-1	115		ug/L			7168	7328	1	KED
Cd	111	0.004	ug/L	0.005	111	3	4	20	KED
Cd	114	0.007	ug/L	0.008	107	3	6	57	KED
[> In	115		ug/L			374013	367115	2	Standard
Ag	107	-0.001	ug/L	0.000	45	48	34	15	Standard
Ba	135	0.007	ug/L	0.003	38	24	46	16	Standard
Ba	137	0.007	ug/L	0.003	45	29	68	24	Standard
[> Tb	159		ug/L			624828	607684	0	Standard
Pb	208	-0.001	ug/L	0.000	8	160	116	2	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 00:50:00

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31553	1	Standard
Cl	37		ug/L			4052820	4269216	1	Standard
[> Sc	45		ug/L			457643	479915	2	Standard
Cr	52	50.731	ug/L	1.519	2	14350	813127	0	Standard
Cr	53	51.111	ug/L	1.979	3	118	92913	1	Standard
Mn	55	50.278	ug/L	1.263	2	638	1111728	1	Standard
[> Ge	72		ug/L			26593	26886	0	KED
Ni	60	48.120	ug/L	1.115	2	24	49170	2	KED
Ni	62	50.051	ug/L	0.968	1	4	8337	2	KED
Cu	63	49.209	ug/L	0.216	0	39	146565	0	KED
Cu	65	49.394	ug/L	0.513	1	28	72650	0	KED
Zn	66	49.920	ug/L	0.667	1	24	18847	1	KED
Zn	67	50.881	ug/L	1.238	2	3	3196	2	KED
As	75	50.126	ug/L	0.530	1	6	9852	0	KED
[ Se	78	47.968	ug/L	0.232	0	20	1078	0	KED
Y	89		ug/L			265146	266397	0	Standard
Kr	83		ug/L			48	46	6	Standard
[> In-1	115		ug/L			7168	7410	2	KED
Cd	111	51.210	ug/L	1.903	3	3	11204	1	KED
Cd	114	50.590	ug/L	1.962	3	3	27228	1	KED
[> In	115		ug/L			374013	374814	2	Standard
Ag	107	52.193	ug/L	1.666	3	48	651904	2	Standard
Ba	135	51.680	ug/L	1.053	2	24	161901	0	Standard
[ Ba	137	52.188	ug/L	1.475	2	29	290139	0	Standard
[> Tb	159		ug/L			624828	648916	1	Standard
[ Pb	208	50.710	ug/L	0.820	1	160	2038229	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 00:57:29

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	29764	4	Standard
Cl	37		ug/L			4052820	4164987	1	Standard
[> Sc	45		ug/L			457643	463595	3	Standard
Cr	52	-0.044	ug/L	0.029	67	14350	13868	2	Standard
Cr	53	0.004	ug/L	0.006	142	118	127	9	Standard
Mn	55	0.004	ug/L	0.004	99	638	742	15	Standard
[> Ge	72		ug/L			26593	26088	0	KED
Ni	60	-0.008	ug/L	0.009	113	24	16	54	KED
Ni	62	0.000	ug/L	0.027	5646	4	4	98	KED
Cu	63	0.004	ug/L	0.005	104	39	51	25	KED
Cu	65	-0.002	ug/L	0.003	151	28	25	15	KED
Zn	66	-0.028	ug/L	0.014	48	24	13	37	KED
Zn	67	0.022	ug/L	0.048	217	3	5	57	KED
As	75	-0.007	ug/L	0.006	94	6	5	21	KED
Se	78	-0.078	ug/L	0.129	165	20	18	15	KED
Y	89		ug/L			265146	262848	2	Standard
Kr	83		ug/L			48	41	16	Standard
[> In-1	115		ug/L			7168	7392	3	KED
Cd	111	-0.005	ug/L	0.015	293	3	2	115	KED
Cd	114	-0.002	ug/L	0.004	142	3	1	104	KED
[> In	115		ug/L			374013	365595	2	Standard
Ag	107	0.004	ug/L	0.006	141	48	97	73	Standard
Ba	135	0.004	ug/L	0.008	185	24	38	68	Standard
Ba	137	0.005	ug/L	0.006	128	29	54	61	Standard
[> Tb	159		ug/L			624828	624641	2	Standard
Pb	208	0.002	ug/L	0.007	336	160	239	110	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-01RE1**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:02:13**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	33504	2	Standard
Cl	37		ug/L			4052820	4246839	1	Standard
[> Sc	45		ug/L			457643	475064	1	Standard
Cr	52	-0.033	ug/L	0.022	65	14350	14377	0	Standard
Cr	53	0.014	ug/L	0.006	44	118	148	5	Standard
Mn	55	<b>36.397</b>	ug/L	1.153	3	638	796969	2	Standard
[> Ge	72		ug/L			26593	27207	2	KED
Ni	60	0.060	ug/L	0.008	12	24	87	7	KED
Ni	62	0.090	ug/L	0.007	7	4	19	5	KED
Cu	63	0.026	ug/L	0.001	2	39	118	2	KED
Cu	65	0.019	ug/L	0.011	56	28	57	26	KED
Zn	66	0.468	ug/L	0.022	4	24	203	6	KED
Zn	67	0.648	ug/L	0.146	22	3	45	21	KED
As	75	0.076	ug/L	0.033	43	6	22	30	KED
Se	78	-0.339	ug/L	0.090	26	20	13	15	KED
Y	89		ug/L			265146	265351	2	Standard
Kr	83		ug/L			48	51	22	Standard
[> In-1	115		ug/L			7168	7404	1	KED
Cd	111	0.010	ug/L	0.011	115	3	6	39	KED
Cd	114	0.002	ug/L	0.004	195	3	4	51	KED
[> In	115		ug/L			374013	374859	0	Standard
Ag	107	-0.000	ug/L	0.001	9691	48	48	19	Standard
Ba	135	0.891	ug/L	0.011	1	24	2817	1	Standard
Ba	137	0.905	ug/L	0.007	0	29	5063	1	Standard
[> Tb	159		ug/L			624828	639992	0	Standard
Pb	208	0.016	ug/L	0.001	7	160	785	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-06**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:06:51**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	55134	0	Standard
Cl	37		ug/L			4052820	5044425	2	Standard
Sc	45		ug/L			457643	819671	1	Standard
Cr	52	-0.095	ug/L	0.016	16	14350	23146	1	Standard
Cr	53	0.668	ug/L	0.037	5	118	2284	3	Standard
Mn	55	6328.789	ug/L	82.640	1	638	238956197	1	Standard
Ge	72		ug/L			26593	24272	1	KED
Ni	60	36.923	ug/L	0.408	1	24	34062	1	KED
Ni	62	37.551	ug/L	0.817	2	4	5647	1	KED
Cu	63	1.899	ug/L	0.085	4	39	5141	5	KED
Cu	65	1.961	ug/L	0.046	2	28	2628	1	KED
Zn	66	2.013	ug/L	0.036	1	24	707	1	KED
Zn	67	4.940	ug/L	0.367	7	3	283	6	KED
As	75	4.810	ug/L	0.077	1	6	859	2	KED
Se	78	-0.047	ug/L	0.201	425	20	18	21	KED
Y	89		ug/L			265146	290034	3	Standard
Kr	83		ug/L			48	76	12	Standard
In-1	115		ug/L			7168	6694	0	KED
Cd	111	0.138	ug/L	0.025	18	3	30	15	KED
Cd	114	0.119	ug/L	0.016	13	3	60	12	KED
In	115		ug/L			374013	351203	1	Standard
Ag	107	0.002	ug/L	0.000	25	48	64	7	Standard
Ba	135	43.523	ug/L	0.458	1	24	127787	1	Standard
Ba	137	43.970	ug/L	0.547	1	29	229144	1	Standard
Tb	159		ug/L			624828	631825	0	Standard
Pb	208	0.014	ug/L	0.000	1	160	709	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-02**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:11:35**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	45765	1	Standard
Cl	37		ug/L			4052820	4876344	1	Standard
> Sc	45		ug/L			457643	851039	1	Standard
Cr	52	5.499	ug/L	0.045	0	14350	180185	1	Standard
Cr	53	7.089	ug/L	0.037	0	118	23059	1	Standard
Mn	55	3.281	ug/L	0.037	1	638	129801	1	Standard
> Ge	72		ug/L			26593	26310	1	KED
Ni	60	7.678	ug/L	0.116	1	24	7698	2	KED
Ni	62	8.100	ug/L	0.428	5	4	1323	4	KED
Cu	63	0.238	ug/L	0.008	3	39	733	3	KED
Cu	65	0.228	ug/L	0.011	4	28	355	3	KED
Zn	66	6.091	ug/L	0.193	3	24	2270	2	KED
Zn	67	7.673	ug/L	0.568	7	3	474	7	KED
As	75	0.516	ug/L	0.006	1	6	106	1	KED
Se	78	-0.022	ug/L	0.124	577	20	20	14	KED
Y	89		ug/L			265146	289546	2	Standard
Kr	83		ug/L			48	46	23	Standard
> In-1	115		ug/L			7168	7306	2	KED
Cd	111	0.031	ug/L	0.008	26	3	10	15	KED
Cd	114	0.033	ug/L	0.007	22	3	20	17	KED
> In	115		ug/L			374013	371366	0	Standard
Ag	107	0.004	ug/L	0.001	28	48	96	13	Standard
Ba	135	22.307	ug/L	0.904	4	24	69262	3	Standard
Ba	137	22.064	ug/L	0.304	1	29	121598	0	Standard
> Tb	159		ug/L			624828	653381	2	Standard
Pb	208	0.028	ug/L	0.002	6	160	1285	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-04**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:16:18**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	73187	1	Standard
Cl	37		ug/L			4052820	4299665	2	Standard
Sc	45		ug/L			457643	757329	0	Standard
Cr	52	1.135	ug/L	0.024	2	14350	51935	0	Standard
Cr	53	1.472	ug/L	0.014	0	118	4417	0	Standard
Mn	55	28447.966	ug/L	782.508	2	638	992483980	3	Standard
Ge	72		ug/L			26593	20969	1	KED
Ni	60	34.005	ug/L	1.073	3	24	27098	2	KED
Ni	62	34.232	ug/L	1.626	4	4	4447	3	KED
Cu	63	4.089	ug/L	0.007	0	39	9527	1	KED
Cu	65	4.029	ug/L	0.132	3	28	4642	2	KED
Zn	66	7.765	ug/L	0.172	2	24	2302	2	KED
Zn	67	11.763	ug/L	0.481	4	3	578	2	KED
As	75	0.573	ug/L	0.012	2	6	93	0	KED
Se	78	0.312	ug/L	0.240	77	20	21	18	KED
Y	89		ug/L			265146	395529	2	Standard
Kr	83		ug/L			48	84	5	Standard
In-1	115		ug/L			7168	6262	2	KED
Cd	111	0.489	ug/L	0.030	6	3	93	3	KED
Cd	114	0.413	ug/L	0.053	12	3	190	11	KED
In	115		ug/L			374013	317527	1	Standard
Ag	107	0.006	ug/L	0.001	14	48	108	7	Standard
Ba	135	103.669	ug/L	2.622	2	24	275116	1	Standard
Ba	137	101.715	ug/L	2.050	2	29	479128	0	Standard
Tb	159		ug/L			624828	589884	0	Standard
Pb	208	0.045	ug/L	0.000	1	160	1781	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-08**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:20:56**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	67071	0	Standard
Cl	37		ug/L			4052820	4523889	1	Standard
Sc	45		ug/L			457643	974889	1	Standard
Cr	52	-0.073	ug/L	0.015	20	14350	28236	0	Standard
Cr	53	0.551	ug/L	0.022	4	118	2284	2	Standard
Mn	55	1374.606	ug/L	21.900	1	638	61724706	0	Standard
Ge	72		ug/L			26593	24472	2	KED
Ni	60	55.596	ug/L	2.359	4	24	51667	2	KED
Ni	62	55.630	ug/L	2.864	5	4	8427	3	KED
Cu	63	4.858	ug/L	0.086	1	39	13202	2	KED
Cu	65	4.797	ug/L	0.258	5	28	6440	3	KED
Zn	66	3.940	ug/L	0.074	1	24	1374	4	KED
Zn	67	8.851	ug/L	0.467	5	3	508	2	KED
As	75	1.100	ug/L	0.080	7	6	202	5	KED
Se	78	0.137	ug/L	0.179	130	20	21	14	KED
Y	89		ug/L			265146	294772	1	Standard
Kr	83		ug/L			48	66	2	Standard
In-1	115		ug/L			7168	6774	0	KED
Cd	111	0.065	ug/L	0.028	43	3	16	33	KED
Cd	114	0.090	ug/L	0.020	22	3	47	21	KED
In	115		ug/L			374013	358286	1	Standard
Ag	107	0.004	ug/L	0.001	11	48	99	7	Standard
Ba	135	79.457	ug/L	0.473	0	24	238001	1	Standard
Ba	137	79.593	ug/L	0.110	0	29	423145	0	Standard
Tb	159		ug/L			624828	639096	0	Standard
Pb	208	0.084	ug/L	0.001	1	160	3500	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-10**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:25:34**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	46862	4	Standard
Cl	37		ug/L			4052820	4572665	1	Standard
Sc	45		ug/L			457643	915248	0	Standard
Cr	52	-0.135	ug/L	0.018	13	14350	24652	1	Standard
Cr	53	0.667	ug/L	0.013	1	118	2547	1	Standard
Mn	55	6229.371	ug/L	129.112	2	638	262614055	1	Standard
Ge	72		ug/L			26593	25312	2	KED
Ni	60	8.557	ug/L	0.473	5	24	8243	2	KED
Ni	62	8.645	ug/L	0.494	5	4	1358	3	KED
Cu	63	0.432	ug/L	0.007	1	39	1248	4	KED
Cu	65	0.418	ug/L	0.007	1	28	606	2	KED
Zn	66	2.917	ug/L	0.125	4	24	1059	6	KED
Zn	67	4.286	ug/L	0.402	9	3	256	7	KED
As	75	3.637	ug/L	0.076	2	6	678	0	KED
Se	78	-0.160	ug/L	0.028	17	20	16	1	KED
Y	89		ug/L			265146	293842	4	Standard
Kr	83		ug/L			48	60	6	Standard
In-1	115		ug/L			7168	7242	3	KED
Cd	111	0.012	ug/L	0.007	56	3	6	22	KED
Cd	114	0.016	ug/L	0.007	42	3	11	30	KED
In	115		ug/L			374013	369140	0	Standard
Ag	107	0.004	ug/L	0.000	11	48	99	5	Standard
Ba	135	20.368	ug/L	0.117	0	24	62873	0	Standard
Ba	137	19.781	ug/L	0.306	1	29	108372	1	Standard
Tb	159		ug/L			624828	662772	0	Standard
Pb	208	0.021	ug/L	0.001	6	160	1029	5	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0527-12**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:30:12**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	70795	3	Standard
Cl	37		ug/L			4052820	4259951	0	Standard
Sc	45		ug/L			457643	742003	1	Standard
Cr	52	0.889	ug/L	0.001	0	14350	44892	1	Standard
Cr	53	1.226	ug/L	0.039	3	118	3636	1	Standard
Mn	55	28806.114	ug/L	357.786	1	638	984467528	0	Standard
Ge	72		ug/L			26593	20642	1	KED
Ni	60	34.822	ug/L	0.296	0	24	27321	1	KED
Ni	62	35.907	ug/L	0.628	1	4	4593	2	KED
Cu	63	4.328	ug/L	0.104	2	39	9922	1	KED
Cu	65	4.336	ug/L	0.191	4	28	4915	3	KED
Zn	66	7.525	ug/L	0.265	3	24	2196	3	KED
Zn	67	13.002	ug/L	0.225	1	3	629	1	KED
As	75	0.548	ug/L	0.055	9	6	88	10	KED
Se	78	0.223	ug/L	0.271	121	20	20	23	KED
Y	89		ug/L			265146	393924	2	Standard
Kr	83		ug/L			48	91	11	Standard
In-1	115		ug/L			7168	6222	1	KED
Cd	111	0.495	ug/L	0.013	2	3	94	2	KED
Cd	114	0.437	ug/L	0.035	8	3	199	6	KED
In	115		ug/L			374013	321338	1	Standard
Ag	107	0.007	ug/L	0.003	43	48	111	27	Standard
Ba	135	101.063	ug/L	2.359	2	24	271428	0	Standard
Ba	137	101.590	ug/L	1.717	1	29	484304	0	Standard
Tb	159		ug/L			624828	589661	0	Standard
Pb	208	0.049	ug/L	0.001	2	160	1941	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0094-DUP1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:35:20**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	73060	1	Standard
Cl	37		ug/L			4052820	4273144	1	Standard
Sc	45		ug/L			457643	756930	1	Standard
Cr	52	0.897	ug/L	0.034	3	14350	45999	0	Standard
Cr	53	1.210	ug/L	0.042	3	118	3661	2	Standard
Mn	55	28930.101	ug/L	463.937	1	638	1008573660	0	Standard
Ge	72		ug/L			26593	20288	0	KED
Ni	60	34.628	ug/L	0.186	0	24	26704	0	KED
Ni	62	35.011	ug/L	0.940	2	4	4401	2	KED
Cu	63	4.946	ug/L	0.047	0	39	11142	1	KED
Cu	65	4.903	ug/L	0.118	2	28	5461	2	KED
Zn	66	6.666	ug/L	0.299	4	24	1915	4	KED
Zn	67	10.868	ug/L	1.415	13	3	517	12	KED
As	75	0.678	ug/L	0.039	5	6	105	5	KED
Se	78	0.591	ug/L	0.174	29	20	25	11	KED
Y	89		ug/L			265146	405872	0	Standard
Kr	83		ug/L			48	106	9	Standard
In-1	115		ug/L			7168	6101	2	KED
Cd	111	0.533	ug/L	0.046	8	3	99	9	KED
Cd	114	0.446	ug/L	0.039	8	3	200	10	KED
In	115		ug/L			374013	319772	1	Standard
Ag	107	0.013	ug/L	0.001	11	48	181	8	Standard
Ba	135	101.662	ug/L	1.266	1	24	271754	0	Standard
Ba	137	101.324	ug/L	2.499	2	29	480699	1	Standard
Tb	159		ug/L			624828	589061	0	Standard
Pb	208	0.057	ug/L	0.002	3	160	2214	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0094-MS1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 01:41:28**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	71460	1	Standard
Cl	37		ug/L			4052820	4263838	1	Standard
Sc	45		ug/L			457643	773381	1	Standard
Cr	52	16.723	ug/L	0.236	1	14350	448389	0	Standard
Cr	53	16.941	ug/L	0.344	2	118	49791	1	Standard
Mn	55	28170.447	ug/L	610.407	2	638	1003461438	1	Standard
Ge	72		ug/L			26593	19903	1	KED
Ni	60	60.364	ug/L	0.143	0	24	45652	0	KED
Ni	62	61.486	ug/L	0.989	1	4	7581	1	KED
Cu	63	29.131	ug/L	0.862	2	39	64225	1	KED
Cu	65	29.149	ug/L	0.626	2	28	31743	1	KED
Zn	66	70.606	ug/L	0.566	0	24	19724	0	KED
Zn	67	69.850	ug/L	2.000	2	3	3246	2	KED
As	75	23.655	ug/L	0.558	2	6	3444	1	KED
Se	78	61.657	ug/L	1.471	2	20	1021	1	KED
Y	89		ug/L			265146	403944	3	Standard
Kr	83		ug/L			48	93	22	Standard
In-1	115		ug/L			7168	5903	4	KED
Cd	111	22.063	ug/L	0.591	2	3	3847	2	KED
Cd	114	21.653	ug/L	0.713	3	3	9284	1	KED
In	115		ug/L			374013	314008	1	Standard
Ag	107	18.937	ug/L	0.059	0	48	198228	1	Standard
Ba	135	130.147	ug/L	1.731	1	24	341621	1	Standard
Ba	137	128.662	ug/L	2.390	1	29	599352	0	Standard
Tb	159		ug/L			624828	588412	1	Standard
Pb	208	25.131	ug/L	0.285	1	160	916076	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 01:46:07

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	33219	3	Standard
Cl	37		ug/L			4052820	4390119	0	Standard
> Sc	45		ug/L			457643	475202	0	Standard
Cr	52	0.005	ug/L	0.011	237	14350	14973	1	Standard
Cr	53	0.029	ug/L	0.008	26	118	175	8	Standard
Mn	55	0.857	ug/L	0.113	13	638	19407	12	Standard
> Ge	72		ug/L			26593	25856	0	KED
Ni	60	-0.014	ug/L	0.002	15	24	10	21	KED
Ni	62	0.005	ug/L	0.018	384	4	5	57	KED
Cu	63	0.037	ug/L	0.001	1	39	144	1	KED
Cu	65	0.034	ug/L	0.009	27	28	75	17	KED
Zn	66	0.089	ug/L	0.039	43	24	55	25	KED
Zn	67	0.096	ug/L	0.032	32	3	9	20	KED
As	75	-0.005	ug/L	0.005	106	6	5	16	KED
Se	78	-0.274	ug/L	0.066	24	20	14	9	KED
Y	89		ug/L			265146	271170	0	Standard
Kr	83		ug/L			48	36	20	Standard
> In-1	115		ug/L			7168	6980	3	KED
Cd	111	0.078	ug/L	0.106	135	3	20	112	KED
Cd	114	0.060	ug/L	0.081	135	3	34	125	KED
> In	115		ug/L			374013	371570	3	Standard
Ag	107	0.030	ug/L	0.002	7	48	419	4	Standard
Ba	135	0.009	ug/L	0.002	26	24	52	11	Standard
Ba	137	0.012	ug/L	0.005	36	29	97	24	Standard
> Tb	159		ug/L			624828	633669	0	Standard
Pb	208	-0.000	ug/L	0.000	128	160	157	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 01:50:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	33795	2	Standard
Cl	37		ug/L			4052820	4289967	2	Standard
[> Sc	45		ug/L			457643	492079	2	Standard
Cr	52	52.470	ug/L	1.655	3	14350	861942	1	Standard
Cr	53	52.538	ug/L	0.329	0	118	97987	1	Standard
Mn	55	52.631	ug/L	0.657	1	638	1193584	2	Standard
[> Ge	72		ug/L			26593	26446	2	KED
Ni	60	49.057	ug/L	0.947	1	24	49296	2	KED
Ni	62	48.967	ug/L	1.962	4	4	8018	1	KED
Cu	63	49.286	ug/L	0.827	1	39	144393	2	KED
Cu	65	50.437	ug/L	0.844	1	28	72955	0	KED
Zn	66	50.274	ug/L	0.604	1	24	18667	1	KED
Zn	67	49.520	ug/L	1.877	3	3	3058	2	KED
As	75	49.424	ug/L	1.092	2	6	9553	0	KED
[ Se	78	47.304	ug/L	0.515	1	20	1046	1	KED
Y	89		ug/L			265146	281638	1	Standard
Kr	83		ug/L			48	48	23	Standard
[> In-1	115		ug/L			7168	7087	3	KED
Cd	111	50.882	ug/L	1.523	2	3	10647	0	KED
Cd	114	50.358	ug/L	2.294	4	3	25915	1	KED
[> In	115		ug/L			374013	370898	1	Standard
Ag	107	51.112	ug/L	0.786	1	48	631959	2	Standard
Ba	135	52.004	ug/L	0.507	0	24	161245	0	Standard
[ Ba	137	51.971	ug/L	0.303	0	29	286036	1	Standard
[> Tb	159		ug/L			624828	654781	0	Standard
[ Pb	208	52.560	ug/L	0.648	1	160	2131895	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 01:58:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31628	0	Standard
Cl	37		ug/L			4052820	4193580	3	Standard
[> Sc	45		ug/L			457643	481189	1	Standard
Cr	52	-0.036	ug/L	0.032	88	14350	14508	2	Standard
Cr	53	0.000	ug/L	0.007	3519	118	125	9	Standard
Mn	55	0.192	ug/L	0.010	5	638	4926	3	Standard
[> Ge	72		ug/L			26593	25850	1	KED
Ni	60	-0.021	ug/L	0.002	9	24	3	50	KED
Ni	62	0.001	ug/L	0.007	886	4	4	24	KED
Cu	63	0.003	ug/L	0.002	67	39	46	12	KED
Cu	65	-0.004	ug/L	0.002	53	28	21	13	KED
Zn	66	-0.002	ug/L	0.018	1055	24	22	28	KED
Zn	67	0.002	ug/L	0.033	1590	3	3	50	KED
As	75	-0.011	ug/L	0.005	47	6	4	20	KED
[ Se	78	-0.192	ug/L	0.188	97	20	16	25	KED
Y	89		ug/L			265146	264466	0	Standard
Kr	83		ug/L			48	46	9	Standard
[> In-1	115		ug/L			7168	6895	0	KED
Cd	111	0.004	ug/L	0.007	187	3	4	32	KED
Cd	114	-0.001	ug/L	0.002	186	3	2	47	KED
[> In	115		ug/L			374013	369240	1	Standard
Ag	107	0.036	ug/L	0.001	2	48	490	3	Standard
Ba	135	-0.001	ug/L	0.001	78	24	21	10	Standard
[ Ba	137	-0.001	ug/L	0.001	166	29	26	22	Standard
[> Tb	159		ug/L			624828	640435	0	Standard
[ Pb	208	-0.002	ug/L	0.000	12	160	100	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0530-01**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:03:05**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	47934	0	Standard
Cl	37		ug/L			4052820	4036891	0	Standard
> Sc	45		ug/L			457643	542093	2	Standard
Cr	52	<b>1.038</b>	ug/L	0.039	3	14350	35453	3	Standard
Cr	53	<b>1.257</b>	ug/L	0.036	2	118	2720	2	Standard
Mn	55	<b>32.316</b>	ug/L	0.476	1	638	807554	0	Standard
> Ge	72		ug/L			26593	26501	1	KED
Ni	60	<b>1.237</b>	ug/L	0.021	1	24	1269	1	KED
Ni	62	<b>1.312</b>	ug/L	0.059	4	4	219	2	KED
Cu	63	<b>1.584</b>	ug/L	0.041	2	39	4685	1	KED
Cu	65	<b>1.588</b>	ug/L	0.046	2	28	2329	1	KED
Zn	66	<b>3.259</b>	ug/L	0.068	2	24	1235	3	KED
Zn	67	<b>3.408</b>	ug/L	0.064	1	3	214	3	KED
As	75	<b>0.148</b>	ug/L	0.035	23	6	35	17	KED
Se	78	<b>-0.199</b>	ug/L	0.037	18	20	16	6	KED
Y	89		ug/L			265146	309394	2	Standard
Kr	83		ug/L			48	48	2	Standard
> In-1	115		ug/L			7168	7216	0	KED
Cd	111	<b>0.004</b>	ug/L	0.005	104	3	4	20	KED
Cd	114	<b>0.016</b>	ug/L	0.012	72	3	11	52	KED
> In	115		ug/L			374013	379127	1	Standard
Ag	107	<b>0.038</b>	ug/L	0.005	12	48	524	12	Standard
Ba	135	<b>6.542</b>	ug/L	0.074	1	24	20758	1	Standard
Ba	137	<b>6.388</b>	ug/L	0.119	1	29	35961	1	Standard
> Tb	159		ug/L			624828	671980	1	Standard
Pb	208	<b>4.665</b>	ug/L	0.126	2	160	194303	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0530-02**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:07:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	42297	0	Standard
Cl	37		ug/L			4052820	4011806	2	Standard
> Sc	45		ug/L			457643	547268	0	Standard
Cr	52	<b>6.811</b>	ug/L	0.030	0	14350	139424	1	Standard
Cr	53	<b>7.092</b>	ug/L	0.105	1	118	14833	1	Standard
Mn	55	<b>66.484</b>	ug/L	0.644	0	638	1676838	1	Standard
> Ge	72		ug/L			26593	26830	1	KED
Ni	60	<b>2.370</b>	ug/L	0.131	5	24	2438	3	KED
Ni	62	<b>2.243</b>	ug/L	0.059	2	4	377	3	KED
Cu	63	<b>3.668</b>	ug/L	0.069	1	39	10940	3	KED
Cu	65	<b>3.657</b>	ug/L	0.134	3	28	5396	5	KED
Zn	66	<b>5.047</b>	ug/L	0.296	5	24	1922	4	KED
Zn	67	<b>5.744</b>	ug/L	0.483	8	3	363	6	KED
As	75	<b>0.334</b>	ug/L	0.031	9	6	72	9	KED
Se	78	<b>-0.016</b>	ug/L	0.217	1389	20	20	22	KED
Y	89		ug/L			265146	306360	1	Standard
Kr	83		ug/L			48	49	30	Standard
> In-1	115		ug/L			7168	7272	0	KED
Cd	111	<b>0.028</b>	ug/L	0.005	17	3	9	11	KED
Cd	114	<b>0.044</b>	ug/L	0.021	48	3	26	43	KED
> In	115		ug/L			374013	375730	0	Standard
Ag	107	<b>0.028</b>	ug/L	0.003	9	48	395	7	Standard
Ba	135	<b>9.839</b>	ug/L	0.086	0	24	30928	0	Standard
Ba	137	<b>9.666</b>	ug/L	0.048	0	29	53917	0	Standard
> Tb	159		ug/L			624828	654928	1	Standard
Pb	208	<b>30.868</b>	ug/L	0.545	1	160	1252271	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0513-01**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:12:27**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	38649	2	Standard
Cl	37		ug/L			4052820	4250781	0	Standard
> Sc	45		ug/L			457643	497873	1	Standard
Cr	52	0.020	ug/L	0.003	12	14350	15942	1	Standard
Cr	53	0.358	ug/L	0.029	8	118	803	7	Standard
Mn	55	48.052	ug/L	0.551	1	638	1102662	1	Standard
> Ge	72		ug/L			26593	26095	0	KED
Ni	60	0.544	ug/L	0.015	2	24	563	1	KED
Ni	62	0.519	ug/L	0.045	8	4	88	7	KED
Cu	63	0.117	ug/L	0.006	4	39	376	4	KED
Cu	65	0.093	ug/L	0.012	13	28	160	10	KED
Zn	66	0.671	ug/L	0.010	1	24	269	1	KED
Zn	67	0.763	ug/L	0.124	16	3	50	14	KED
As	75	0.106	ug/L	0.027	25	6	27	18	KED
Se	78	-0.319	ug/L	0.177	55	20	13	27	KED
Y	89		ug/L			265146	279138	1	Standard
Kr	83		ug/L			48	38	27	Standard
> In-1	115		ug/L			7168	7114	2	KED
Cd	111	-0.007	ug/L	0.005	73	3	2	49	KED
Cd	114	0.003	ug/L	0.002	54	3	4	21	KED
> In	115		ug/L			374013	374655	1	Standard
Ag	107	0.023	ug/L	0.003	13	48	340	10	Standard
Ba	135	3.979	ug/L	0.015	0	24	12485	1	Standard
Ba	137	3.885	ug/L	0.088	2	29	21620	1	Standard
> Tb	159		ug/L			624828	655302	1	Standard
Pb	208	0.006	ug/L	0.001	11	160	409	7	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0022-DUP3**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:17:11**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	37893	1	Standard
Cl	37		ug/L			4052820	4276340	4	Standard
[> Sc	45		ug/L			457643	493333	1	Standard
Cr	52	0.012	ug/L	0.032	264	14350	15659	1	Standard
Cr	53	0.329	ug/L	0.003	0	118	741	1	Standard
Mn	55	47.416	ug/L	0.905	1	638	1077972	0	Standard
[> Ge	72		ug/L			26593	26944	1	KED
Ni	60	0.507	ug/L	0.025	4	24	543	4	KED
Ni	62	0.502	ug/L	0.015	2	4	88	1	KED
Cu	63	0.096	ug/L	0.010	10	39	326	8	KED
Cu	65	0.091	ug/L	0.004	4	28	162	3	KED
Zn	66	0.698	ug/L	0.011	1	24	288	0	KED
Zn	67	0.858	ug/L	0.060	7	3	57	5	KED
As	75	0.120	ug/L	0.015	12	6	30	10	KED
Se	78	-0.405	ug/L	0.055	13	20	12	11	KED
Y	89		ug/L			265146	280281	1	Standard
Kr	83		ug/L			48	33	16	Standard
[> In-1	115		ug/L			7168	7114	2	KED
Cd	111	-0.006	ug/L	0.003	42	3	2	21	KED
Cd	114	0.005	ug/L	0.000	7	3	5	1	KED
[> In	115		ug/L			374013	375052	1	Standard
Ag	107	0.020	ug/L	0.001	5	48	304	4	Standard
Ba	135	3.840	ug/L	0.097	2	24	12060	1	Standard
Ba	137	3.899	ug/L	0.050	1	29	21723	0	Standard
[> Tb	159		ug/L			624828	653302	1	Standard
Pb	208	0.005	ug/L	0.001	18	160	362	9	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0022-MS3**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:21:49**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	38405	1	Standard
Cl	37		ug/L			4052820	4321052	2	Standard
> Sc	45		ug/L			457643	499128	0	Standard
Cr	52	5.181	ug/L	0.062	1	14350	100460	0	Standard
Cr	53	5.716	ug/L	0.068	1	118	10929	0	Standard
Mn	55	54.192	ug/L	0.637	1	638	1246643	1	Standard
> Ge	72		ug/L			26593	26050	1	KED
Ni	60	5.694	ug/L	0.319	5	24	5655	3	KED
Ni	62	5.818	ug/L	0.024	0	4	942	2	KED
Cu	63	5.318	ug/L	0.038	0	39	15380	2	KED
Cu	65	5.415	ug/L	0.120	2	28	7741	2	KED
Zn	66	18.164	ug/L	0.590	3	24	6658	2	KED
Zn	67	17.888	ug/L	1.103	6	3	1090	5	KED
As	75	5.588	ug/L	0.174	3	6	1070	3	KED
Se	78	16.397	ug/L	0.314	1	20	370	1	KED
Y	89		ug/L			265146	278636	1	Standard
Kr	83		ug/L			48	47	10	Standard
> In-1	115		ug/L			7168	7251	2	KED
Cd	111	5.215	ug/L	0.096	1	3	1120	2	KED
Cd	114	5.226	ug/L	0.231	4	3	2755	3	KED
> In	115		ug/L			374013	374232	0	Standard
Ag	107	5.330	ug/L	0.171	3	48	66538	3	Standard
Ba	135	9.439	ug/L	0.285	3	24	29550	2	Standard
Ba	137	9.360	ug/L	0.098	1	29	51999	0	Standard
> Tb	159		ug/L			624828	653422	1	Standard
Pb	208	5.489	ug/L	0.103	1	160	222283	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-01**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:27:57**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	44887	0	Standard
Cl	37		ug/L			4052820	4436280	1	Standard
> Sc	45		ug/L			457643	562620	2	Standard
Cr	52	-0.005	ug/L	0.035	729	14350	17557	4	Standard
Cr	53	0.152	ug/L	0.004	2	118	470	3	Standard
Mn	55	146.433	ug/L	3.440	2	638	3795067	1	Standard
> Ge	72		ug/L			26593	24680	0	KED
Ni	60	0.171	ug/L	0.016	9	24	182	8	KED
Ni	62	0.156	ug/L	0.031	19	4	27	17	KED
Cu	63	0.078	ug/L	0.017	22	39	250	19	KED
Cu	65	0.097	ug/L	0.016	16	28	158	13	KED
Zn	66	0.510	ug/L	0.032	6	24	198	5	KED
Zn	67	22.441	ug/L	1.077	4	3	1295	4	KED
As	75	0.193	ug/L	0.039	19	6	41	16	KED
Se	78	-0.094	ug/L	0.095	101	20	17	11	KED
Y	89		ug/L			265146	272807	1	Standard
Kr	83		ug/L			48	46	20	Standard
> In-1	115		ug/L			7168	6800	2	KED
Cd	111	0.011	ug/L	0.013	119	3	5	44	KED
Cd	114	0.003	ug/L	0.006	221	3	4	68	KED
> In	115		ug/L			374013	355422	0	Standard
Ag	107	0.018	ug/L	0.002	10	48	260	9	Standard
Ba	135	286.223	ug/L	5.046	1	24	850353	1	Standard
Ba	137	288.764	ug/L	6.584	2	29	1522814	2	Standard
> Tb	159		ug/L			624828	639701	2	Standard
Pb	208	0.005	ug/L	0.000	4	160	357	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-DUP2**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:32:34**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	45469	2	Standard
Cl	37		ug/L			4052820	4344634	1	Standard
> Sc	45		ug/L			457643	547798	7	Standard
Cr	52	0.004	ug/L	0.050	1128	14350	17211	2	Standard
Cr	53	0.141	ug/L	0.015	10	118	433	1	Standard
Mn	55	142.838	ug/L	11.340	7	638	3590790	0	Standard
> Ge	72		ug/L			26593	24184	2	KED
Ni	60	0.172	ug/L	0.022	12	24	180	10	KED
Ni	62	0.190	ug/L	0.063	33	4	32	26	KED
Cu	63	0.051	ug/L	0.007	13	39	172	11	KED
Cu	65	0.081	ug/L	0.008	9	28	133	5	KED
Zn	66	0.516	ug/L	0.042	8	24	196	4	KED
Zn	67	22.449	ug/L	1.773	7	3	1269	6	KED
As	75	0.156	ug/L	0.015	9	6	33	9	KED
Se	78	-0.083	ug/L	0.107	129	20	17	14	KED
Y	89		ug/L			265146	265555	3	Standard
Kr	83		ug/L			48	52	24	Standard
> In-1	115		ug/L			7168	6882	1	KED
Cd	111	0.001	ug/L	0.005	623	3	3	25	KED
Cd	114	0.005	ug/L	0.010	193	3	5	91	KED
> In	115		ug/L			374013	339961	5	Standard
Ag	107	0.016	ug/L	0.000	2	48	220	7	Standard
Ba	135	290.798	ug/L	9.427	3	24	825397	2	Standard
Ba	137	290.376	ug/L	9.785	3	29	1462844	2	Standard
> Tb	159		ug/L			624828	614536	4	Standard
Pb	208	0.004	ug/L	0.000	10	160	323	10	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-MS2**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:37:42**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	44381	1	Standard
Cl	37		ug/L			4052820	4335410	1	Standard
> Sc	45		ug/L			457643	549100	0	Standard
Cr	52	23.566	ug/L	0.171	0	14350	441623	0	Standard
Cr	53	23.978	ug/L	0.174	0	118	49986	1	Standard
Mn	55	160.005	ug/L	0.670	0	638	4047985	1	Standard
> Ge	72		ug/L			26593	23993	0	KED
Ni	60	26.750	ug/L	0.632	2	24	24399	2	KED
Ni	62	27.007	ug/L	0.394	1	4	4016	1	KED
Cu	63	26.201	ug/L	0.287	1	39	69657	1	KED
Cu	65	26.216	ug/L	0.592	2	28	34419	1	KED
Zn	66	78.151	ug/L	0.518	0	24	26317	0	KED
Zn	67	94.822	ug/L	4.747	5	3	5311	4	KED
As	75	26.761	ug/L	0.592	2	6	4696	1	KED
Se	78	79.449	ug/L	0.679	0	20	1582	1	KED
Y	89		ug/L			265146	266671	0	Standard
Kr	83		ug/L			48	60	15	Standard
> In-1	115		ug/L			7168	6596	3	KED
Cd	111	26.003	ug/L	0.374	1	3	5067	2	KED
Cd	114	26.202	ug/L	0.687	2	3	12555	1	KED
> In	115		ug/L			374013	345452	1	Standard
Ag	107	26.240	ug/L	0.354	1	48	302157	1	Standard
Ba	135	303.165	ug/L	5.260	1	24	875339	0	Standard
Ba	137	304.802	ug/L	1.819	0	29	1562229	0	Standard
> Tb	159		ug/L			624828	629886	1	Standard
Pb	208	26.356	ug/L	0.348	1	160	1028413	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0101-MSD2**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 02:43:50**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	45986	2	Standard
Cl	37		ug/L			4052820	4242288	1	Standard
> Sc	45		ug/L			457643	538114	0	Standard
Cr	52	23.257	ug/L	0.228	0	14350	427364	1	Standard
Cr	53	23.835	ug/L	0.126	0	118	48692	0	Standard
Mn	55	164.823	ug/L	1.874	1	638	4086335	1	Standard
> Ge	72		ug/L			26593	24304	2	KED
Ni	60	25.910	ug/L	1.131	4	24	23925	2	KED
Ni	62	26.567	ug/L	1.417	5	4	3999	3	KED
Cu	63	25.120	ug/L	0.696	2	39	67619	0	KED
Cu	65	25.113	ug/L	1.285	5	28	33383	3	KED
Zn	66	77.569	ug/L	3.094	3	24	26447	2	KED
Zn	67	91.850	ug/L	5.518	6	3	5208	4	KED
As	75	25.657	ug/L	0.547	2	6	4561	1	KED
Se	78	76.955	ug/L	1.368	1	20	1552	0	KED
Y	89		ug/L			265146	273355	1	Standard
Kr	83		ug/L			48	57	15	Standard
> In-1	115		ug/L			7168	6711	1	KED
Cd	111	25.542	ug/L	1.091	4	3	5064	3	KED
Cd	114	25.672	ug/L	0.743	2	3	12521	1	KED
> In	115		ug/L			374013	347389	0	Standard
Ag	107	26.639	ug/L	0.287	1	48	308477	0	Standard
Ba	135	311.107	ug/L	1.467	0	24	903463	0	Standard
Ba	137	307.727	ug/L	7.193	2	29	1586136	2	Standard
> Tb	159		ug/L			624828	626869	1	Standard
Pb	208	25.921	ug/L	0.635	2	160	1006404	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 02:48:29

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31844	1	Standard
Cl	37		ug/L			4052820	4344661	1	Standard
[> Sc	45		ug/L			457643	457283	2	Standard
Cr	52	0.015	ug/L	0.035	239	14350	14558	3	Standard
Cr	53	0.006	ug/L	0.002	32	118	128	4	Standard
Mn	55	0.097	ug/L	0.000	0	638	2675	2	Standard
[> Ge	72		ug/L			26593	25863	0	KED
Ni	60	-0.009	ug/L	0.007	79	24	15	45	KED
Ni	62	0.009	ug/L	0.000	3	4	5	0	KED
Cu	63	0.038	ug/L	0.008	20	39	147	14	KED
Cu	65	0.038	ug/L	0.004	11	28	81	7	KED
Zn	66	0.055	ug/L	0.053	96	24	43	43	KED
Zn	67	0.023	ug/L	0.091	400	3	5	108	KED
As	75	-0.011	ug/L	0.004	40	6	4	17	KED
Se	78	-0.349	ug/L	0.089	25	20	13	15	KED
Y	89		ug/L			265146	258686	3	Standard
Kr	83		ug/L			48	33	34	Standard
[> In-1	115		ug/L			7168	6973	3	KED
Cd	111	0.001	ug/L	0.010	1417	3	3	50	KED
Cd	114	0.002	ug/L	0.004	258	3	3	52	KED
[> In	115		ug/L			374013	363899	1	Standard
Ag	107	0.016	ug/L	0.002	10	48	243	10	Standard
Ba	135	0.012	ug/L	0.002	14	24	60	9	Standard
Ba	137	0.015	ug/L	0.001	8	29	111	7	Standard
[> Tb	159		ug/L			624828	622162	2	Standard
Pb	208	-0.001	ug/L	0.000	35	160	135	7	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 02:53:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31972	3	Standard
Cl	37		ug/L			4052820	4334435	1	Standard
[> Sc	45		ug/L			457643	481573	0	Standard
Cr	52	49.867	ug/L	0.314	0	14350	802745	0	Standard
Cr	53	51.408	ug/L	0.774	1	118	93845	1	Standard
Mn	55	50.782	ug/L	0.601	1	638	1127165	1	Standard
[> Ge	72		ug/L			26593	26461	1	KED
Ni	60	48.432	ug/L	0.788	1	24	48696	0	KED
Ni	62	49.287	ug/L	1.443	2	4	8079	2	KED
Cu	63	49.417	ug/L	0.485	0	39	144841	0	KED
Cu	65	49.696	ug/L	1.255	2	28	71934	2	KED
Zn	66	50.224	ug/L	2.124	4	24	18654	2	KED
Zn	67	50.612	ug/L	0.787	1	3	3129	2	KED
As	75	49.450	ug/L	0.864	1	6	9565	0	KED
Se	78	46.411	ug/L	1.062	2	20	1028	3	KED
Y	89		ug/L			265146	272289	2	Standard
Kr	83		ug/L			48	48	8	Standard
[> In-1	115		ug/L			7168	7234	3	KED
Cd	111	50.882	ug/L	1.720	3	3	10866	0	KED
Cd	114	51.262	ug/L	1.877	3	3	26934	2	KED
[> In	115		ug/L			374013	372120	3	Standard
Ag	107	50.943	ug/L	2.192	4	48	631288	0	Standard
Ba	135	51.431	ug/L	1.604	3	24	159898	0	Standard
Ba	137	50.438	ug/L	1.628	3	29	278310	0	Standard
[> Tb	159		ug/L			624828	653255	1	Standard
Pb	208	51.076	ug/L	0.827	1	160	2066714	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 03:00:42

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	31143	3	Standard
Cl	37		ug/L			4052820	4188772	1	Standard
[> Sc	45		ug/L			457643	458965	2	Standard
Cr	52	-0.002	ug/L	0.023	998	14350	14354	2	Standard
Cr	53	0.008	ug/L	0.007	91	118	133	7	Standard
Mn	55	0.084	ug/L	0.002	2	638	2425	1	Standard
[> Ge	72		ug/L			26593	25378	2	KED
Ni	60	-0.005	ug/L	0.007	143	24	19	36	KED
Ni	62	-0.007	ug/L	0.014	194	4	3	69	KED
Cu	63	0.003	ug/L	0.006	212	39	45	37	KED
Cu	65	0.000	ug/L	0.006	1339	28	27	31	KED
Zn	66	-0.006	ug/L	0.010	180	24	20	15	KED
Zn	67	-0.007	ug/L	0.049	661	3	3	91	KED
As	75	-0.005	ug/L	0.011	208	6	5	38	KED
[ Se	78	-0.082	ug/L	0.122	148	20	18	11	KED
Y	89		ug/L			265146	256524	0	Standard
Kr	83		ug/L			48	46	20	Standard
[> In-1	115		ug/L			7168	6821	4	KED
Cd	111	0.001	ug/L	0.009	793	3	3	43	KED
Cd	114	0.001	ug/L	0.007	449	3	3	92	KED
[> In	115		ug/L			374013	363828	0	Standard
Ag	107	0.014	ug/L	0.002	11	48	219	8	Standard
Ba	135	0.000	ug/L	0.001	220	24	25	11	Standard
[ Ba	137	0.004	ug/L	0.000	11	29	50	4	Standard
[> Tb	159		ug/L			624828	632328	0	Standard
[ Pb	208	-0.002	ug/L	0.000	5	160	102	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-04**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:05:27**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	72095	2	Standard
Cl	37		ug/L			4052820	4388683	1	Standard
[> Sc	45		ug/L			457643	481638	1	Standard
Cr	52	<b>0.237</b>	ug/L	0.011	4	14350	18848	1	Standard
Cr	53	<b>0.382</b>	ug/L	0.019	5	118	821	3	Standard
Mn	55	<b>5.634</b>	ug/L	0.122	2	638	125631	0	Standard
[> Ge	72		ug/L			26593	25759	0	KED
Ni	60	<b>0.391</b>	ug/L	0.028	7	24	406	7	KED
Ni	62	<b>0.451</b>	ug/L	0.003	0	4	76	0	KED
<b>Cu</b>	63	<b>7.218</b>	ug/L	0.130	1	39	20627	1	KED
Cu	65	<b>7.380</b>	ug/L	0.134	1	28	10423	2	KED
<b>Zn</b>	66	<b>41.397</b>	ug/L	1.064	2	24	14976	1	KED
Zn	67	<b>36.882</b>	ug/L	0.841	2	3	2220	1	KED
As	75	<b>0.086</b>	ug/L	0.006	6	6	23	4	KED
Se	78	<b>-0.159</b>	ug/L	0.021	13	20	16	2	KED
Y	89		ug/L			265146	272616	2	Standard
Kr	83		ug/L			48	49	15	Standard
[> In-1	115		ug/L			7168	7121	1	KED
Cd	111	<b>0.033</b>	ug/L	0.010	29	3	10	18	KED
Cd	114	<b>0.040</b>	ug/L	0.008	19	3	23	16	KED
[> In	115		ug/L			374013	367485	0	Standard
Ag	107	<b>0.017</b>	ug/L	0.001	4	48	250	3	Standard
Ba	135	<b>1.699</b>	ug/L	0.060	3	24	5240	2	Standard
Ba	137	<b>1.695</b>	ug/L	0.038	2	29	9271	1	Standard
[> Tb	159		ug/L			624828	643167	1	Standard
Pb	208	<b>0.181</b>	ug/L	0.002	1	160	7356	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-02**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:10:11**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	42851	1	Standard
Cl	37		ug/L			4052820	4280472	1	Standard
[> Sc	45		ug/L			457643	506874	1	Standard
Cr	52	<b>0.357</b>	ug/L	0.015	4	14350	21824	2	Standard
Cr	53	<b>0.488</b>	ug/L	0.009	1	118	1067	2	Standard
Mn	55	<b>55.047</b>	ug/L	1.364	2	638	1285751	1	Standard
[> Ge	72		ug/L			26593	26065	1	KED
Ni	60	<b>0.450</b>	ug/L	0.019	4	24	469	2	KED
Ni	62	<b>0.461</b>	ug/L	0.052	11	4	78	9	KED
<b>Cu</b>	63	<b>0.985</b>	ug/L	0.019	1	39	2881	0	KED
Cu	65	<b>1.002</b>	ug/L	0.036	3	28	1455	2	KED
<b>Zn</b>	66	<b>26.258</b>	ug/L	0.696	2	24	9619	0	KED
Zn	67	<b>24.687</b>	ug/L	0.461	1	3	1505	2	KED
As	75	<b>0.748</b>	ug/L	0.020	2	6	149	3	KED
Se	78	<b>-0.235</b>	ug/L	0.050	21	20	15	5	KED
Y	89		ug/L			265146	277640	1	Standard
Kr	83		ug/L			48	44	41	Standard
[> In-1	115		ug/L			7168	7009	1	KED
Cd	111	<b>0.028</b>	ug/L	0.013	45	3	9	26	KED
Cd	114	<b>0.029</b>	ug/L	0.002	5	3	17	6	KED
[> In	115		ug/L			374013	374039	0	Standard
Ag	107	<b>0.010</b>	ug/L	0.001	6	48	175	4	Standard
Ba	135	<b>11.522</b>	ug/L	0.115	1	24	36050	1	Standard
Ba	137	<b>11.499</b>	ug/L	0.180	1	29	63841	0	Standard
[> Tb	159		ug/L			624828	644401	1	Standard
Pb	208	<b>0.088</b>	ug/L	0.003	2	160	3687	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-05**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:14:55**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	48251	2	Standard
Cl	37		ug/L			4052820	5175730	0	Standard
[> Sc	45		ug/L			457643	500658	0	Standard
Cr	52	<b>0.511</b>	ug/L	0.020	3	14350	24093	1	Standard
Cr	53	<b>1.244</b>	ug/L	0.006	0	118	2487	0	Standard
Mn	55	<b>132.932</b>	ug/L	1.633	1	638	3066567	1	Standard
[> Ge	72		ug/L			26593	26089	0	KED
Ni	60	<b>0.870</b>	ug/L	0.019	2	24	887	2	KED
Ni	62	<b>0.838</b>	ug/L	0.053	6	4	139	6	KED
<b>Cu</b>	63	<b>2.025</b>	ug/L	0.027	1	39	5889	1	KED
Cu	65	<b>2.075</b>	ug/L	0.080	3	28	2987	3	KED
<b>Zn</b>	66	<b>39.110</b>	ug/L	1.000	2	24	14330	1	KED
Zn	67	<b>36.558</b>	ug/L	0.393	1	3	2229	0	KED
As	75	<b>0.654</b>	ug/L	0.034	5	6	131	4	KED
[ Se	78	<b>-0.212</b>	ug/L	0.116	54	20	16	14	KED
Y	89		ug/L			265146	272845	1	Standard
Kr	83		ug/L			48	34	15	Standard
[> In-1	115		ug/L			7168	6944	0	KED
Cd	111	<b>0.032</b>	ug/L	0.011	33	3	10	21	KED
Cd	114	<b>0.038</b>	ug/L	0.012	30	3	22	26	KED
[> In	115		ug/L			374013	369346	1	Standard
Ag	107	<b>0.014</b>	ug/L	0.002	15	48	215	13	Standard
Ba	135	<b>17.616</b>	ug/L	0.121	0	24	54409	0	Standard
[ Ba	137	<b>17.319</b>	ug/L	0.171	0	29	94938	1	Standard
[> Tb	159		ug/L			624828	648104	0	Standard
[ Pb	208	<b>0.186</b>	ug/L	0.001	0	160	7616	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-06**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:19:39**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	43676	3	Standard
Cl	37		ug/L			4052820	4534983	1	Standard
[> Sc	45		ug/L			457643	481023	1	Standard
Cr	52	<b>0.460</b>	ug/L	0.024	5	14350	22344	0	Standard
Cr	53	<b>0.665</b>	ug/L	0.024	3	118	1335	2	Standard
Mn	55	<b>51.943</b>	ug/L	0.736	1	638	1151707	2	Standard
[> Ge	72		ug/L			26593	26290	1	KED
Ni	60	<b>0.368</b>	ug/L	0.029	7	24	391	8	KED
Ni	62	<b>0.461</b>	ug/L	0.053	11	4	79	9	KED
<b>Cu</b>	63	<b>0.850</b>	ug/L	0.027	3	39	2512	4	KED
Cu	65	<b>0.859</b>	ug/L	0.029	3	28	1262	4	KED
<b>Zn</b>	66	<b>16.912</b>	ug/L	0.633	3	24	6256	2	KED
Zn	67	<b>15.739</b>	ug/L	0.294	1	3	969	3	KED
As	75	<b>0.261</b>	ug/L	0.020	7	6	56	7	KED
Se	78	<b>-0.191</b>	ug/L	0.165	86	20	16	22	KED
Y	89		ug/L			265146	272690	0	Standard
Kr	83		ug/L			48	47	31	Standard
[> In-1	115		ug/L			7168	7062	2	KED
Cd	111	<b>0.025</b>	ug/L	0.014	57	3	8	32	KED
Cd	114	<b>0.012</b>	ug/L	0.004	32	3	9	20	KED
[> In	115		ug/L			374013	366917	0	Standard
Ag	107	<b>0.010</b>	ug/L	0.002	20	48	171	15	Standard
Ba	135	<b>12.529</b>	ug/L	0.265	2	24	38456	2	Standard
Ba	137	<b>12.692</b>	ug/L	0.166	1	29	69128	1	Standard
[> Tb	159		ug/L			624828	649365	0	Standard
Pb	208	<b>0.116</b>	ug/L	0.004	3	160	4821	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-07**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:24:23**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	45131	3	Standard
Cl	37		ug/L			4052820	5182665	0	Standard
[> Sc	45		ug/L			457643	494785	2	Standard
Cr	52	<b>0.653</b>	ug/L	0.041	6	14350	26099	2	Standard
Cr	53	<b>1.301</b>	ug/L	0.012	0	118	2564	1	Standard
Mn	55	<b>108.749</b>	ug/L	2.235	2	638	2478481	0	Standard
[> Ge	72		ug/L			26593	25925	1	KED
Ni	60	<b>0.834</b>	ug/L	0.013	1	24	845	1	KED
Ni	62	<b>0.815</b>	ug/L	0.203	24	4	135	24	KED
<b>Cu</b>	63	<b>1.536</b>	ug/L	0.023	1	39	4447	1	KED
Cu	65	<b>1.588</b>	ug/L	0.025	1	28	2279	1	KED
<b>Zn</b>	66	<b>27.109</b>	ug/L	0.763	2	24	9878	2	KED
Zn	67	<b>26.472</b>	ug/L	1.470	5	3	1605	6	KED
As	75	<b>0.581</b>	ug/L	0.016	2	6	116	2	KED
[ Se	78	<b>-0.012</b>	ug/L	0.158	1278	20	20	16	KED
Y	89		ug/L			265146	276627	1	Standard
Kr	83		ug/L			48	50	5	Standard
[> In-1	115		ug/L			7168	7327	1	KED
Cd	111	<b>0.035</b>	ug/L	0.008	23	3	11	14	KED
Cd	114	<b>0.043</b>	ug/L	0.027	63	3	25	55	KED
[> In	115		ug/L			374013	375453	1	Standard
Ag	107	<b>0.011</b>	ug/L	0.003	26	48	190	19	Standard
Ba	135	<b>19.582</b>	ug/L	0.267	1	24	61476	0	Standard
[ Ba	137	<b>19.796</b>	ug/L	0.528	2	29	110288	1	Standard
[> Tb	159		ug/L			624828	653645	1	Standard
[ Pb	208	<b>0.231</b>	ug/L	0.004	1	160	9537	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-08**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:29:07**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	48404	4	Standard
Cl	37		ug/L			4052820	6371769	3	Standard
[> Sc	45		ug/L			457643	532069	1	Standard
Cr	52	<b>0.789</b>	ug/L	0.027	3	14350	30449	0	Standard
Cr	53	<b>3.056</b>	ug/L	0.027	0	118	6292	0	Standard
Mn	55	<b>53.636</b>	ug/L	0.986	1	638	1315136	0	Standard
[> Ge	72		ug/L			26593	25264	0	KED
Ni	60	<b>3.042</b>	ug/L	0.074	2	24	2943	2	KED
Ni	62	<b>2.948</b>	ug/L	0.120	4	4	465	3	KED
<b>Cu</b>	63	<b>5.366</b>	ug/L	0.036	0	39	15052	0	KED
Cu	65	<b>5.407</b>	ug/L	0.051	0	28	7497	1	KED
<b>Zn</b>	66	<b>37.441</b>	ug/L	0.515	1	24	13288	1	KED
Zn	67	<b>36.430</b>	ug/L	1.126	3	3	2151	2	KED
As	75	<b>0.784</b>	ug/L	0.071	9	6	151	8	KED
Se	78	<b>-0.189</b>	ug/L	0.098	52	20	16	13	KED
Y	89		ug/L			265146	278841	1	Standard
Kr	83		ug/L			48	38	22	Standard
[> In-1	115		ug/L			7168	7082	3	KED
Cd	111	<b>0.037</b>	ug/L	0.018	48	3	11	28	KED
Cd	114	<b>0.050</b>	ug/L	0.026	51	3	28	47	KED
[> In	115		ug/L			374013	366062	0	Standard
Ag	107	<b>0.016</b>	ug/L	0.002	9	48	248	7	Standard
Ba	135	<b>29.171</b>	ug/L	0.532	1	24	89281	1	Standard
Ba	137	<b>28.748</b>	ug/L	0.061	0	29	156169	0	Standard
[> Tb	159		ug/L			624828	644975	0	Standard
Pb	208	<b>0.819</b>	ug/L	0.009	1	160	32870	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-03RE1**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:34:15**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	39226	1	Standard
Cl	37		ug/L			4052820	4484256	1	Standard
> Sc	45		ug/L			457643	480506	1	Standard
Cr	52	<b>0.153</b>	ug/L	0.020	13	14350	17474	0	Standard
Cr	53	<b>0.559</b>	ug/L	0.026	4	118	1140	3	Standard
<b>Mn</b>	55	<b>52.386</b>	ug/L	0.848	1	638	1160126	1	Standard
> Ge	72		ug/L			26593	26152	1	KED
Ni	60	<b>0.132</b>	ug/L	0.022	16	24	154	13	KED
Ni	62	<b>0.188</b>	ug/L	0.039	20	4	34	19	KED
Cu	63	<b>0.245</b>	ug/L	0.006	2	39	749	1	KED
Cu	65	<b>0.252</b>	ug/L	0.015	5	28	388	6	KED
Zn	66	<b>4.505</b>	ug/L	0.111	2	24	1676	3	KED
Zn	67	<b>4.681</b>	ug/L	0.207	4	3	289	5	KED
As	75	<b>0.336</b>	ug/L	0.043	12	6	71	11	KED
Se	78	<b>-0.205</b>	ug/L	0.109	53	20	16	13	KED
Y	89		ug/L			265146	269344	1	Standard
Kr	83		ug/L			48	48	19	Standard
> In-1	115		ug/L			7168	7066	1	KED
Cd	111	<b>0.009</b>	ug/L	0.000	4	3	5	0	KED
Cd	114	<b>0.015</b>	ug/L	0.006	39	3	10	27	KED
> In	115		ug/L			374013	375608	1	Standard
Ag	107	<b>0.005</b>	ug/L	0.001	23	48	108	13	Standard
Ba	135	<b>4.410</b>	ug/L	0.027	0	24	13870	0	Standard
Ba	137	<b>4.367</b>	ug/L	0.070	1	29	24363	0	Standard
> Tb	159		ug/L			624828	641801	1	Standard
Pb	208	<b>0.018</b>	ug/L	0.000	2	160	890	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-03**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:38:58**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	48678	4	Standard
Cl	37		ug/L			4052820	4960445	4	Standard
> Sc	45		ug/L			457643	508885	0	Standard
Cr	52	<b>0.745</b>	ug/L	0.039	5	14350	28392	1	Standard
Cr	53	<b>1.477</b>	ug/L	0.030	2	118	2978	2	Standard
Mn	55	<b>241.495</b>	ug/L	3.145	1	638	5661974	1	Standard
> Ge	72		ug/L			26593	25832	0	KED
Ni	60	<b>0.597</b>	ug/L	0.024	4	24	609	3	KED
Ni	62	<b>0.569</b>	ug/L	0.045	7	4	95	6	KED
<b>Cu</b>	63	<b>1.176</b>	ug/L	0.056	4	39	3403	5	KED
Cu	65	<b>1.170</b>	ug/L	0.006	0	28	1680	0	KED
<b>Zn</b>	66	<b>20.427</b>	ug/L	0.667	3	24	7422	2	KED
Zn	67	<b>20.046</b>	ug/L	0.492	2	3	1212	2	KED
As	75	<b>1.628</b>	ug/L	0.034	2	6	313	2	KED
Se	78	<b>-0.154</b>	ug/L	0.196	127	20	17	24	KED
Y	89		ug/L			265146	278635	0	Standard
Kr	83		ug/L			48	48	25	Standard
> In-1	115		ug/L			7168	7040	2	KED
Cd	111	<b>0.034</b>	ug/L	0.022	64	3	10	41	KED
Cd	114	<b>0.026</b>	ug/L	0.013	49	3	16	41	KED
> In	115		ug/L			374013	371061	1	Standard
Ag	107	<b>0.006</b>	ug/L	0.001	20	48	121	11	Standard
Ba	135	<b>21.840</b>	ug/L	0.763	3	24	67741	2	Standard
Ba	137	<b>21.848</b>	ug/L	0.575	2	29	120276	1	Standard
> Tb	159		ug/L			624828	643850	1	Standard
Pb	208	<b>0.095</b>	ug/L	0.003	3	160	3960	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0591-01**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 03:44:06**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	61270	0	Standard
Cl	37		ug/L			4052820	4466350	0	Standard
> Sc	45		ug/L			457643	515709	2	Standard
Cr	52	<b>0.321</b>	ug/L	0.026	8	14350	21589	0	Standard
Cr	53	<b>0.407</b>	ug/L	0.019	4	118	928	5	Standard
Mn	55	<b>857.141</b>	ug/L	33.578	3	638	20352061	2	Standard
> Ge	72		ug/L			26593	25982	1	KED
Ni	60	<b>1.655</b>	ug/L	0.149	9	24	1655	7	KED
Ni	62	<b>1.691</b>	ug/L	0.179	10	4	276	9	KED
<b>Cu</b>	63	<b>0.563</b>	ug/L	0.012	2	39	1657	3	KED
Cu	65	<b>0.569</b>	ug/L	0.043	7	28	835	6	KED
<b>Zn</b>	66	<b>11.207</b>	ug/L	0.140	1	24	4106	0	KED
Zn	67	<b>12.354</b>	ug/L	0.828	6	3	752	5	KED
As	75	<b>2.013</b>	ug/L	0.125	6	6	389	7	KED
Se	78	<b>-0.023</b>	ug/L	0.205	877	20	20	22	KED
Y	89		ug/L			265146	277490	0	Standard
Kr	83		ug/L			48	60	13	Standard
> In-1	115		ug/L			7168	7211	1	KED
Cd	111	<b>0.054</b>	ug/L	0.009	17	3	15	12	KED
Cd	114	<b>0.062</b>	ug/L	0.010	16	3	35	13	KED
> In	115		ug/L			374013	365979	1	Standard
Ag	107	<b>0.005</b>	ug/L	0.000	8	48	110	5	Standard
Ba	135	<b>21.638</b>	ug/L	0.406	1	24	66211	0	Standard
Ba	137	<b>21.618</b>	ug/L	0.363	1	29	117400	0	Standard
> Tb	159		ug/L			624828	647569	1	Standard
Pb	208	<b>0.360</b>	ug/L	0.009	2	160	14590	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 03:48:45

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	32990	5	Standard
Cl	37		ug/L			4052820	4340408	1	Standard
[> Sc	45		ug/L			457643	461873	1	Standard
Cr	52	-0.025	ug/L	0.007	26	14350	14098	1	Standard
Cr	53	0.046	ug/L	0.002	4	118	200	1	Standard
Mn	55	0.080	ug/L	0.009	11	638	2346	9	Standard
[> Ge	72		ug/L			26593	25733	3	KED
Ni	60	0.002	ug/L	0.007	420	24	25	22	KED
Ni	62	0.029	ug/L	0.005	17	4	8	12	KED
Cu	63	0.005	ug/L	0.006	117	39	52	31	KED
Cu	65	0.003	ug/L	0.004	137	28	31	18	KED
Zn	66	0.004	ug/L	0.003	63	24	24	0	KED
Zn	67	0.001	ug/L	0.082	6049	3	3	132	KED
As	75	0.005	ug/L	0.004	84	6	7	6	KED
Se	78	-0.225	ug/L	0.083	36	20	15	13	KED
Y	89		ug/L			265146	256333	1	Standard
Kr	83		ug/L			48	44	8	Standard
[> In-1	115		ug/L			7168	6934	2	KED
Cd	111	-0.009	ug/L	0.000	3	3	1		KED
Cd	114	0.003	ug/L	0.009	307	3	4	100	KED
[> In	115		ug/L			374013	366567	0	Standard
Ag	107	0.002	ug/L	0.001	63	48	74	21	Standard
Ba	135	0.002	ug/L	0.003	129	24	31	28	Standard
Ba	137	0.005	ug/L	0.001	22	29	55	10	Standard
[> Tb	159		ug/L			624828	616473	1	Standard
Pb	208	0.001	ug/L	0.000	12	160	213	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 03:53:30

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	32517	2	Standard
Cl	37		ug/L			4052820	4402553	1	Standard
[> Sc	45		ug/L			457643	482002	1	Standard
Cr	52	50.161	ug/L	0.682	1	14350	808046	1	Standard
Cr	53	50.466	ug/L	0.231	0	118	92212	1	Standard
Mn	55	51.009	ug/L	0.349	0	638	1133157	0	Standard
[> Ge	72		ug/L			26593	26216	0	KED
Ni	60	48.517	ug/L	1.174	2	24	48331	1	KED
Ni	62	48.945	ug/L	0.938	1	4	7950	2	KED
Cu	63	50.082	ug/L	0.994	1	39	145451	2	KED
Cu	65	49.096	ug/L	0.557	1	28	70411	0	KED
Zn	66	50.199	ug/L	0.620	1	24	18478	0	KED
Zn	67	49.463	ug/L	1.392	2	3	3030	3	KED
As	75	49.168	ug/L	1.226	2	6	9422	1	KED
[ Se	78	47.073	ug/L	1.874	3	20	1032	3	KED
Y	89		ug/L			265146	274238	2	Standard
Kr	83		ug/L			48	58	18	Standard
[> In-1	115		ug/L			7168	7133	1	KED
Cd	111	50.609	ug/L	0.663	1	3	10664	0	KED
Cd	114	50.472	ug/L	0.915	1	3	26170	3	KED
[> In	115		ug/L			374013	369383	0	Standard
Ag	107	50.638	ug/L	1.567	3	48	623378	2	Standard
Ba	135	50.672	ug/L	1.080	2	24	156473	1	Standard
[ Ba	137	51.210	ug/L	0.455	0	29	280681	0	Standard
[> Tb	159		ug/L			624828	644727	1	Standard
[ Pb	208	51.023	ug/L	0.651	1	160	2037696	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 04:00:58

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30779	32214	2	Standard
Cl	37		ug/L			4052820	4285375	1	Standard
[> Sc	45		ug/L			457643	460474	0	Standard
Cr	52	-0.019	ug/L	0.019	103	14350	14153	1	Standard
Cr	53	0.024	ug/L	0.008	33	118	161	9	Standard
Mn	55	0.068	ug/L	0.001	1	638	2091	1	Standard
[> Ge	72		ug/L			26593	25513	0	KED
Ni	60	-0.006	ug/L	0.008	132	24	17	43	KED
Ni	62	0.017	ug/L	0.018	106	4	6	41	KED
Cu	63	0.001	ug/L	0.003	463	39	39	18	KED
Cu	65	-0.001	ug/L	0.009	871	28	26	48	KED
Zn	66	-0.008	ug/L	0.025	311	24	20	44	KED
Zn	67	-0.029	ug/L	0.032	108	3	1	100	KED
As	75	-0.008	ug/L	0.008	101	6	5	27	KED
Se	78	-0.203	ug/L	0.110	54	20	15	15	KED
Y	89		ug/L			265146	255136	2	Standard
Kr	83		ug/L			48	41	18	Standard
[> In-1	115		ug/L			7168	7171	1	KED
Cd	111	0.000	ug/L	0.005	41016	3	3	25	KED
Cd	114	0.009	ug/L	0.008	88	3	7	51	KED
[> In	115		ug/L			374013	364732	1	Standard
Ag	107	0.005	ug/L	0.001	27	48	113	15	Standard
Ba	135	-0.002	ug/L	0.001	53	24	18	15	Standard
Ba	137	0.001	ug/L	0.001	99	29	35	17	Standard
[> Tb	159		ug/L			624828	623703	0	Standard
Pb	208	-0.002	ug/L	0.000	4	160	90	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 04:05:42

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L				33004	1	Standard
Cl	37		ug/L				4319075	0	Standard
[> Sc	45		ug/L				460811	4	Standard
Cr	52		ug/L				14116	3	Standard
Cr	53		ug/L				169	4	Standard
Mn	55		ug/L				2166	1	Standard
[> Ge	72		ug/L				25853	1	KED
Ni	60		ug/L				24	25	KED
Ni	62		ug/L				9	40	KED
Cu	63		ug/L				49	13	KED
Cu	65		ug/L				27	49	KED
Zn	66		ug/L				20	18	KED
Zn	67		ug/L				4	24	KED
As	75		ug/L				6	53	KED
Se	78		ug/L				19	9	KED
Y	89		ug/L				261932	2	Standard
Kr	83		ug/L				49	23	Standard
[> In-1	115		ug/L				7009	1	KED
Cd	111		ug/L				4	49	KED
Cd	114		ug/L				4	67	KED
[> In	115		ug/L				367469	1	Standard
Ag	107		ug/L				86	7	Standard
Ba	135		ug/L				23	12	Standard
Ba	137		ug/L				37	28	Standard
[> Tb	159		ug/L				619766	1	Standard
Pb	208		ug/L				178	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 04:10:27

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	32782	2	Standard
Cl	37		ug/L			4319075	4360848	2	Standard
[> Sc	45		ug/L			460811	473915	1	Standard
Cr	52	51.153	ug/L	0.689	1	14116	809544	1	Standard
Cr	53	51.603	ug/L	1.299	2	169	92752	3	Standard
Mn	55	51.017	ug/L	1.808	3	2166	1115889	3	Standard
[> Ge	72		ug/L			25853	26055	2	KED
Ni	60	49.670	ug/L	0.813	1	24	49174	1	KED
Ni	62	49.225	ug/L	1.447	2	9	7948	1	KED
Cu	63	49.591	ug/L	1.159	2	49	143094	0	KED
Cu	65	49.880	ug/L	2.041	4	27	71054	1	KED
Zn	66	50.574	ug/L	1.053	2	20	18495	0	KED
Zn	67	50.246	ug/L	2.763	5	4	3057	3	KED
As	75	50.182	ug/L	0.917	1	6	9556	0	KED
[ Se	78	48.336	ug/L	1.020	2	19	1052	1	KED
Y	89		ug/L			261932	275085	3	Standard
Kr	83		ug/L			49	45	24	Standard
[> In-1	115		ug/L			7009	7140	2	KED
Cd	111	51.327	ug/L	2.083	4	4	10820	1	KED
Cd	114	50.634	ug/L	1.051	2	4	26269	0	KED
[> In	115		ug/L			367469	367519	0	Standard
Ag	107	50.798	ug/L	0.518	1	86	622337	0	Standard
Ba	135	52.243	ug/L	1.323	2	23	160533	2	Standard
[ Ba	137	51.698	ug/L	0.504	0	37	281947	1	Standard
[> Tb	159		ug/L			619766	638912	0	Standard
[ Pb	208	51.639	ug/L	0.927	1	178	2043728	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 04:17:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	31747	0	Standard
Cl	37		ug/L			4319075	4268227	1	Standard
[> Sc	45		ug/L			460811	459880	0	Standard
Cr	52	-0.002	ug/L	0.010	459	14116	14054	0	Standard
Cr	53	-0.019	ug/L	0.009	45	169	135	10	Standard
Mn	55	-0.007	ug/L	0.003	38	2166	2007	3	Standard
[> Ge	72		ug/L			25853	25283	2	KED
Ni	60	-0.007	ug/L	0.004	55	24	17	19	KED
Ni	62	-0.019	ug/L	0.006	32	9	6	17	KED
Cu	63	-0.002	ug/L	0.003	123	49	42	14	KED
Cu	65	-0.005	ug/L	0.007	140	27	20	47	KED
Zn	66	-0.013	ug/L	0.011	85	20	15	24	KED
Zn	67	-0.009	ug/L	0.001	16	4	3	0	KED
As	75	-0.000	ug/L	0.011	39303	6	6	29	KED
Se	78	-0.265	ug/L	0.151	56	19	13	21	KED
Y	89		ug/L			261932	254481	0	Standard
Kr	83		ug/L			49	38	5	Standard
[> In-1	115		ug/L			7009	6987	2	KED
Cd	111	0.003	ug/L	0.003	86	4	5	10	KED
Cd	114	-0.002	ug/L	0.006	236	4	3	93	KED
[> In	115		ug/L			367469	360571	1	Standard
Ag	107	0.001	ug/L	0.001	44	86	102	8	Standard
Ba	135	-0.001	ug/L	0.003	257	23	19	52	Standard
Ba	137	0.001	ug/L	0.001	137	37	41	14	Standard
[> Tb	159		ug/L			619766	619374	1	Standard
Pb	208	-0.002	ug/L	0.000	7	178	93	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-05**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:22:40**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	41923	3	Standard
Cl	37		ug/L			4319075	4470454	0	Standard
Sc	45		ug/L			460811	614291	1	Standard
Cr	52	-0.051	ug/L	0.020	38	14116	17792	1	Standard
Cr	53	0.425	ug/L	0.027	6	169	1214	4	Standard
Mn	55	196.088	ug/L	0.763	0	2166	5551685	1	Standard
Ge	72		ug/L			25853	26529	0	KED
Ni	60	92.287	ug/L	0.482	0	24	93018	0	KED
Ni	62	92.367	ug/L	1.867	2	9	15184	2	KED
Cu	63	5.120	ug/L	0.106	2	49	15093	2	KED
Cu	65	5.207	ug/L	0.049	0	27	7582	0	KED
Zn	66	27.331	ug/L	0.352	1	20	10190	1	KED
Zn	67	24.278	ug/L	0.841	3	4	1507	2	KED
As	75	0.097	ug/L	0.031	31	6	25	23	KED
Se	78	0.030	ug/L	0.156	523	19	20	16	KED
Y	89		ug/L			261932	333991	2	Standard
Kr	83		ug/L			49	48	21	Standard
In-1	115		ug/L			7009	7158	1	KED
Cd	111	0.087	ug/L	0.020	22	4	22	19	KED
Cd	114	0.091	ug/L	0.012	13	4	51	11	KED
In	115		ug/L			367469	366931	1	Standard
Ag	107	0.002	ug/L	0.001	27	86	114	5	Standard
Ba	135	2.744	ug/L	0.051	1	23	8438	0	Standard
Ba	137	2.751	ug/L	0.017	0	37	15015	1	Standard
Tb	159		ug/L			619766	640493	0	Standard
Pb	208	0.026	ug/L	0.000	1	178	1231	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-04RE1**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:27:18**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	37663	2	Standard
Cl	37		ug/L			4319075	4101745	0	Standard
[> Sc	45		ug/L			460811	513678	0	Standard
Cr	52	-0.011	ug/L	0.012	104	14116	15546	1	Standard
Cr	53	0.253	ug/L	0.012	4	169	680	2	Standard
Mn	55	22.177	ug/L	0.368	1	2166	527155	1	Standard
[> Ge	72		ug/L			25853	27295	1	KED
Ni	60	65.646	ug/L	1.126	1	24	68085	2	KED
Ni	62	65.209	ug/L	1.570	2	9	11029	1	KED
Cu	63	0.380	ug/L	0.024	6	49	1201	4	KED
Cu	65	0.370	ug/L	0.003	0	27	580	1	KED
Zn	66	0.853	ug/L	0.108	12	20	348	11	KED
Zn	67	1.053	ug/L	0.019	1	4	71	3	KED
As	75	0.036	ug/L	0.003	9	6	14	3	KED
Se	78	-0.216	ug/L	0.068	31	19	15	9	KED
Y	89		ug/L			261932	279470	2	Standard
Kr	83		ug/L			49	53	8	Standard
[> In-1	115		ug/L			7009	7613	1	KED
Cd	111	-0.005	ug/L	0.004	96	4	3	25	KED
Cd	114	0.006	ug/L	0.005	87	4	8	35	KED
[> In	115		ug/L			367469	373477	1	Standard
Ag	107	-0.002	ug/L	0.001	45	86	62	16	Standard
Ba	135	0.537	ug/L	0.004	0	23	1699	1	Standard
Ba	137	0.555	ug/L	0.020	3	37	3112	2	Standard
[> Tb	159		ug/L			619766	639124	0	Standard
Pb	208	0.010	ug/L	0.001	5	178	590	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-02RE1**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:32:02**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36347	3	Standard
Cl	37		ug/L			4319075	4026516	1	Standard
> Sc	45		ug/L			460811	487723	1	Standard
Cr	52	0.178	ug/L	0.026	14	14116	17785	1	Standard
Cr	53	0.224	ug/L	0.011	4	169	593	4	Standard
Mn	55	3.017	ug/L	0.090	2	2166	70066	1	Standard
> Ge	72		ug/L			25853	26881	1	KED
Ni	60	82.656	ug/L	3.245	3	24	84403	3	KED
Ni	62	84.593	ug/L	2.269	2	9	14088	1	KED
Cu	63	0.318	ug/L	0.015	4	49	998	4	KED
Cu	65	0.287	ug/L	0.007	2	27	449	1	KED
Zn	66	1.539	ug/L	0.078	5	20	601	3	KED
Zn	67	1.537	ug/L	0.386	25	4	100	23	KED
As	75	-0.009	ug/L	0.005	57	6	5	19	KED
Se	78	-0.112	ug/L	0.103	91	19	17	12	KED
Y	89		ug/L			261932	274379	1	Standard
Kr	83		ug/L			49	50	12	Standard
> In-1	115		ug/L			7009	7510	0	KED
Cd	111	0.004	ug/L	0.012	264	4	5	44	KED
Cd	114	0.010	ug/L	0.017	178	4	10	95	KED
> In	115		ug/L			367469	367076	1	Standard
Ag	107	-0.002	ug/L	0.001	60	86	65	18	Standard
Ba	135	0.119	ug/L	0.002	1	23	388	2	Standard
Ba	137	0.130	ug/L	0.008	5	37	745	3	Standard
> Tb	159		ug/L			619766	622227	1	Standard
Pb	208	0.000	ug/L	0.001	562	178	185	19	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-19RE1**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:36:46**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36739	1	Standard
Cl	37		ug/L			4319075	4040779	1	Standard
> Sc	45		ug/L			460811	473775	1	Standard
Cr	52	0.007	ug/L	0.023	335	14116	14618	1	Standard
Cr	53	0.045	ug/L	0.001	2	169	254	0	Standard
Mn	55	3.327	ug/L	0.075	2	2166	74833	2	Standard
> Ge	72		ug/L			25853	26141	3	KED
Ni	60	91.807	ug/L	4.114	4	24	91094	1	KED
Ni	62	90.544	ug/L	4.069	4	9	14652	1	KED
Cu	63	0.192	ug/L	0.007	3	49	605	2	KED
Cu	65	0.198	ug/L	0.008	3	27	311	1	KED
Zn	66	0.614	ug/L	0.047	7	20	246	6	KED
Zn	67	0.587	ug/L	0.237	40	4	40	33	KED
As	75	-0.004	ug/L	0.008	229	6	6	24	KED
Se	78	-0.112	ug/L	0.063	56	19	17	9	KED
Y	89		ug/L			261932	277435	1	Standard
Kr	83		ug/L			49	41	13	Standard
> In-1	115		ug/L			7009	7331	1	KED
Cd	111	0.003	ug/L	0.009	266	4	5	36	KED
Cd	114	-0.005	ug/L	0.000	2	4	1	2	KED
> In	115		ug/L			367469	376919	1	Standard
Ag	107	-0.002	ug/L	0.001	68	86	67	22	Standard
Ba	135	0.062	ug/L	0.004	6	23	218	5	Standard
Ba	137	0.069	ug/L	0.005	6	37	426	5	Standard
> Tb	159		ug/L			619766	629393	1	Standard
Pb	208	0.001	ug/L	0.001	60	178	233	14	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-03RE1**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:41:30**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36667	1	Standard
Cl	37		ug/L			4319075	4049122	1	Standard
> Sc	45		ug/L			460811	481995	1	Standard
Cr	52	0.027	ug/L	0.024	88	14116	15194	3	Standard
Cr	53	0.043	ug/L	0.003	6	169	256	2	Standard
Mn	55	3.142	ug/L	0.079	2	2166	72038	3	Standard
> Ge	72		ug/L			25853	26383	0	KED
Ni	60	90.108	ug/L	2.293	2	24	90323	2	KED
Ni	62	91.352	ug/L	2.502	2	9	14934	2	KED
Cu	63	0.235	ug/L	0.017	7	49	738	6	KED
Cu	65	0.245	ug/L	0.041	16	27	381	15	KED
Zn	66	0.660	ug/L	0.095	14	20	265	13	KED
Zn	67	0.483	ug/L	0.295	61	4	34	52	KED
As	75	-0.008	ug/L	0.002	30	6	5	9	KED
Se	78	-0.214	ug/L	0.185	86	19	15	26	KED
Y	89		ug/L			261932	274168	4	Standard
Kr	83		ug/L			49	63	11	Standard
> In-1	115		ug/L			7009	7115	5	KED
Cd	111	0.007	ug/L	0.015	204	4	6	50	KED
Cd	114	-0.003	ug/L	0.002	78	4	3	37	KED
> In	115		ug/L			367469	372725	1	Standard
Ag	107	-0.002	ug/L	0.001	56	86	68	14	Standard
Ba	135	0.076	ug/L	0.012	15	23	260	13	Standard
Ba	137	0.070	ug/L	0.005	7	37	423	5	Standard
> Tb	159		ug/L			619766	635641	2	Standard
Pb	208	0.003	ug/L	0.000	11	178	312	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-DUP3**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:46:14**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36185	2	Standard
Cl	37		ug/L			4319075	4017075	1	Standard
[> Sc	45		ug/L			460811	475756	1	Standard
Cr	52	-0.001	ug/L	0.021	1936	14116	14554	1	Standard
Cr	53	0.031	ug/L	0.008	25	169	231	6	Standard
Mn	55	2.999	ug/L	0.074	2	2166	67951	2	Standard
[> Ge	72		ug/L			25853	26360	2	KED
Ni	60	<b>86.847</b>	ug/L	1.142	1	24	86962	1	KED
Ni	62	86.357	ug/L	1.949	2	9	14100	0	KED
Cu	63	0.225	ug/L	0.017	7	49	705	5	KED
Cu	65	0.221	ug/L	0.019	8	27	345	5	KED
Zn	66	0.563	ug/L	0.046	8	20	229	5	KED
Zn	67	0.536	ug/L	0.063	11	4	37	7	KED
As	75	0.008	ug/L	0.006	71	6	8	11	KED
Se	78	-0.234	ug/L	0.122	51	19	14	16	KED
Y	89		ug/L			261932	271424	0	Standard
Kr	83		ug/L			49	40	16	Standard
[> In-1	115		ug/L			7009	7171	1	KED
Cd	111	-0.003	ug/L	0.005	134	4	3	25	KED
Cd	114	0.001	ug/L	0.002	215	4	4	21	KED
[> In	115		ug/L			367469	367357	0	Standard
Ag	107	-0.002	ug/L	0.001	30	86	63	10	Standard
Ba	135	0.071	ug/L	0.011	15	23	241	13	Standard
Ba	137	0.066	ug/L	0.001	1	37	398	1	Standard
[> Tb	159		ug/L			619766	626814	2	Standard
Pb	208	0.002	ug/L	0.000	22	178	255	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-MS3**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:50:58**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36866	0	Standard
Cl	37		ug/L			4319075	4003855	3	Standard
[> Sc	45		ug/L			460811	472439	1	Standard
Cr	52	<b>0.286</b>	ug/L	0.016	5	14116	18903	2	Standard
Cr	53	<b>0.306</b>	ug/L	0.014	4	169	720	4	Standard
Mn	55	<b>3.379</b>	ug/L	0.051	1	2166	75753	1	Standard
[> Ge	72		ug/L			25853	25959	2	KED
<b>Ni</b> STL	60	<b>90.648</b>	ug/L	1.149	1	24	89421	3	KED
Ni	62	<b>90.586</b>	ug/L	2.265	2	9	14571	3	KED
Cu	63	<b>0.527</b>	ug/L	0.019	3	49	1564	3	KED
Cu	65	<b>0.508</b>	ug/L	0.028	5	27	747	4	KED
Zn	66	<b>1.532</b>	ug/L	0.079	5	20	578	3	KED
Zn	67	<b>1.397</b>	ug/L	0.223	15	4	88	12	KED
As	75	<b>0.268</b>	ug/L	0.021	7	6	57	8	KED
Se	78	<b>0.738</b>	ug/L	0.043	5	19	35	4	KED
Y	89		ug/L			261932	268181	1	Standard
Kr	83		ug/L			49	41	14	Standard
[> In-1	115		ug/L			7009	7167	1	KED
Cd	111	<b>0.255</b>	ug/L	0.043	16	4	58	13	KED
Cd	114	<b>0.278</b>	ug/L	0.018	6	4	149	4	KED
[> In	115		ug/L			367469	370778	2	Standard
Ag	107	<b>0.278</b>	ug/L	0.004	1	86	3522	1	Standard
Ba	135	<b>0.372</b>	ug/L	0.020	5	23	1174	3	Standard
Ba	137	<b>0.353</b>	ug/L	0.014	4	37	1976	2	Standard
[> Tb	159		ug/L			619766	630522	1	Standard
Pb	208	<b>0.293</b>	ug/L	0.002	0	178	11632	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-MSD3**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 04:55:36**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36586	4	Standard
Cl	37		ug/L			4319075	4024918	1	Standard
[> Sc	45		ug/L			460811	470193	1	Standard
Cr	52	<b>0.318</b>	ug/L	0.011	3	14116	19304	0	Standard
Cr	53	<b>0.318</b>	ug/L	0.008	2	169	738	1	Standard
Mn	55	<b>3.404</b>	ug/L	0.097	2	2166	75926	2	Standard
[> Ge	72		ug/L			25853	25434	3	KED
<b>Ni</b> STL	60	<b>89.149</b>	ug/L	1.403	1	24	86121	1	KED
Ni	62	<b>90.481</b>	ug/L	3.327	3	9	14254	3	KED
Cu	63	<b>0.514</b>	ug/L	0.016	3	49	1498	5	KED
Cu	65	<b>0.505</b>	ug/L	0.018	3	27	729	5	KED
Zn	66	<b>1.625</b>	ug/L	0.082	5	20	600	5	KED
Zn	67	<b>1.209</b>	ug/L	0.057	4	4	76	7	KED
As	75	<b>0.259</b>	ug/L	0.023	8	6	54	4	KED
Se	78	<b>0.828</b>	ug/L	0.338	40	19	36	16	KED
Y	89		ug/L			261932	271213	1	Standard
Kr	83		ug/L			49	40	25	Standard
[> In-1	115		ug/L			7009	7293	2	KED
Cd	111	<b>0.277</b>	ug/L	0.029	10	4	64	11	KED
Cd	114	<b>0.327</b>	ug/L	0.053	16	4	178	18	KED
[> In	115		ug/L			367469	374126	3	Standard
Ag	107	<b>0.256</b>	ug/L	0.012	4	86	3273	3	Standard
Ba	135	<b>0.346</b>	ug/L	0.017	4	23	1104	3	Standard
Ba	137	<b>0.345</b>	ug/L	0.020	5	37	1951	2	Standard
[> Tb	159		ug/L			619766	630786	0	Standard
Pb	208	<b>0.288</b>	ug/L	0.005	1	178	11433	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-04**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:00:44**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	51116	1	Standard
Cl	37		ug/L			4319075	4825591	0	Standard
Sc	45		ug/L			460811	646750	0	Standard
Cr	52	<b>0.164</b>	ug/L	0.017	10	14116	23298	1	Standard
Cr	53	<b>1.522</b>	ug/L	0.019	1	169	3965	1	Standard
Mn	55	<b>173.345</b>	ug/L	2.408	1	2166	5167081	0	Standard
Ge	72		ug/L			25853	25659	1	KED
Ni	60	<b>633.121</b>	ug/L	22.346	3	24	616890	2	KED
Ni	62	<b>650.090</b>	ug/L	8.706	1	9	103292	0	KED
Cu	63	<b>3.667</b>	ug/L	0.152	4	49	10468	3	KED
Cu	65	<b>3.667</b>	ug/L	0.060	1	27	5172	1	KED
Zn	66	<b>7.365</b>	ug/L	0.339	4	20	2670	3	KED
Zn	67	<b>7.308</b>	ug/L	0.828	11	4	441	10	KED
As	75	<b>0.328</b>	ug/L	0.007	2	6	68	1	KED
Se	78	<b>-0.110</b>	ug/L	0.095	86	19	17	13	KED
Y	89		ug/L			261932	286500	1	Standard
Kr	83		ug/L			49	44	6	Standard
In-1	115		ug/L			7009	7060	0	KED
Cd	111	<b>0.033</b>	ug/L	0.032	96	4	11	58	KED
Cd	114	<b>0.025</b>	ug/L	0.014	57	4	17	42	KED
In	115		ug/L			367469	355694	2	Standard
Ag	107	<b>-0.001</b>	ug/L	0.001	98	86	67	21	Standard
Ba	135	<b>5.589</b>	ug/L	0.197	3	23	16635	2	Standard
Ba	137	<b>5.645</b>	ug/L	0.084	1	37	29822	0	Standard
Tb	159		ug/L			619766	628451	0	Standard
Pb	208	<b>0.112</b>	ug/L	0.001	0	178	4559	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLH

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 05:05:53

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	34075	1	Standard
Cl	37		ug/L			4319075	4063507	0	Standard
[> Sc	45		ug/L			460811	461242	1	Standard
Cr	52	0.023	ug/L	0.036	154	14116	14476	2	Standard
Cr	53	0.053	ug/L	0.011	21	169	261	6	Standard
Mn	55	-0.016	ug/L	0.001	7	2166	1824	0	Standard
[> Ge	72		ug/L			25853	24995	4	KED
Ni	60	0.003	ug/L	0.008	254	24	26	25	KED
Ni	62	-0.002	ug/L	0.025	1181	9	8	44	KED
Cu	63	0.003	ug/L	0.002	62	49	56	5	KED
Cu	65	-0.001	ug/L	0.000	55	27	25	4	KED
Zn	66	0.034	ug/L	0.006	18	20	32	10	KED
Zn	67	-0.009	ug/L	0.030	320	4	3	50	KED
As	75	-0.002	ug/L	0.007	347	6	6	19	KED
Se	78	-0.074	ug/L	0.105	143	19	17	9	KED
Y	89		ug/L			261932	257011	2	Standard
Kr	83		ug/L			49	43	19	Standard
[> In-1	115		ug/L			7009	7149	4	KED
Cd	111	-0.005	ug/L	0.013	253	4	3	83	KED
Cd	114	-0.003	ug/L	0.002	84	4	3	36	KED
[> In	115		ug/L			367469	357880	1	Standard
Ag	107	-0.003	ug/L	0.001	16	86	46	12	Standard
Ba	135	0.004	ug/L	0.005	119	23	36	44	Standard
Ba	137	0.004	ug/L	0.002	44	37	60	19	Standard
[> Tb	159		ug/L			619766	601879	1	Standard
Pb	208	0.001	ug/L	0.001	40	178	222	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 05:10:37

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	32551	0	Standard
Cl	37		ug/L			4319075	4275162	1	Standard
[> Sc	45		ug/L			460811	479626	0	Standard
Cr	52	51.362	ug/L	0.483	0	14116	822693	1	Standard
Cr	53	51.625	ug/L	0.607	1	169	93910	1	Standard
Mn	55	51.295	ug/L	0.961	1	2166	1135632	2	Standard
[> Ge	72		ug/L			25853	25769	0	KED
Ni	60	49.917	ug/L	0.627	1	24	48886	2	KED
Ni	62	50.714	ug/L	1.481	2	9	8100	2	KED
Cu	63	50.369	ug/L	1.026	2	49	143802	2	KED
Cu	65	51.012	ug/L	0.736	1	27	71918	2	KED
Zn	66	51.730	ug/L	1.180	2	20	18714	2	KED
Zn	67	51.604	ug/L	0.508	0	4	3107	1	KED
As	75	49.595	ug/L	0.487	0	6	9343	1	KED
[ Se	78	47.942	ug/L	0.956	1	19	1032	2	KED
Y	89		ug/L			261932	273486	2	Standard
Kr	83		ug/L			49	59	14	Standard
[> In-1	115		ug/L			7009	7011	1	KED
Cd	111	51.551	ug/L	1.064	2	4	10677	1	KED
Cd	114	51.306	ug/L	1.130	2	4	26139	0	KED
[> In	115		ug/L			367469	366167	1	Standard
Ag	107	50.660	ug/L	1.542	3	86	618190	1	Standard
Ba	135	51.293	ug/L	1.397	2	23	156982	1	Standard
[ Ba	137	50.773	ug/L	1.281	2	37	275811	1	Standard
[> Tb	159		ug/L			619766	631969	1	Standard
[ Pb	208	52.046	ug/L	1.150	2	178	2037080	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 05:18:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	32482	1	Standard
Cl	37		ug/L			4319075	4263500	2	Standard
[> Sc	45		ug/L			460811	460713	1	Standard
Cr	52	0.015	ug/L	0.004	30	14116	14336	1	Standard
Cr	53	0.012	ug/L	0.003	20	169	191	1	Standard
Mn	55	-0.027	ug/L	0.001	4	2166	1593	1	Standard
[> Ge	72		ug/L			25853	25100	1	KED
Ni	60	0.040	ug/L	0.059	148	24	61	93	KED
Ni	62	0.002	ug/L	0.048	3071	9	9	80	KED
Cu	63	0.009	ug/L	0.020	230	49	72	77	KED
Cu	65	0.013	ug/L	0.034	264	27	44	106	KED
Zn	66	0.023	ug/L	0.015	65	20	28	20	KED
Zn	67	0.002	ug/L	0.018	857	4	4	24	KED
As	75	0.019	ug/L	0.028	149	6	10	53	KED
Se	78	-0.088	ug/L	0.123	139	19	17	16	KED
Y	89		ug/L			261932	262957	4	Standard
Kr	83		ug/L			49	47	14	Standard
[> In-1	115		ug/L			7009	6823	2	KED
Cd	111	-0.009	ug/L	0.003	29	4	2	21	KED
Cd	114	-0.007	ug/L	0.002	32	4	0	237	KED
[> In	115		ug/L			367469	357348	2	Standard
Ag	107	0.000	ug/L	0.001	232	86	88	10	Standard
Ba	135	0.001	ug/L	0.004	297	23	27	49	Standard
Ba	137	0.001	ug/L	0.003	333	37	41	39	Standard
[> Tb	159		ug/L			619766	611681	1	Standard
Pb	208	-0.002	ug/L	0.000	4	178	85	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0512-07**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:22:50**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	43811	2	Standard
Cl	37		ug/L			4319075	4080520	2	Standard
> Sc	45		ug/L			460811	550677	0	Standard
Cr	52	0.107	ug/L	0.021	19	14116	18800	1	Standard
Cr	53	0.254	ug/L	0.006	2	169	733	1	Standard
Mn	55	18.538	ug/L	0.478	2	2166	472769	1	Standard
> Ge	72		ug/L			25853	25182	1	KED
Ni	60	0.064	ug/L	0.009	14	24	84	9	KED
Ni	62	-0.002	ug/L	0.026	1107	9	8	44	KED
Cu	63	0.102	ug/L	0.006	6	49	331	4	KED
Cu	65	0.117	ug/L	0.024	20	27	187	17	KED
Zn	66	0.530	ug/L	0.016	3	20	207	1	KED
Zn	67	9.757	ug/L	0.162	1	4	577	3	KED
As	75	0.014	ug/L	0.013	96	6	9	27	KED
Se	78	-0.203	ug/L	0.155	76	19	14	20	KED
Y	89		ug/L			261932	275929	2	Standard
Kr	83		ug/L			49	50	9	Standard
> In-1	115		ug/L			7009	7032	1	KED
Cd	111	-0.002	ug/L	0.012	784	4	4	58	KED
Cd	114	0.001	ug/L	0.006	515	4	4	58	KED
> In	115		ug/L			367469	361282	0	Standard
Ag	107	0.001	ug/L	0.001	86	86	102	14	Standard
Ba	135	108.408	ug/L	0.746	0	23	327421	0	Standard
Ba	137	107.040	ug/L	2.728	2	37	573795	2	Standard
> Tb	159		ug/L			619766	623401	0	Standard
Pb	208	0.009	ug/L	0.000	5	178	522	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0512-08**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:27:35**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	47768	1	Standard
Cl	37		ug/L			4319075	4164946	1	Standard
> Sc	45		ug/L			460811	547613	0	Standard
Cr	52	<b>0.068</b>	ug/L	0.025	36	14116	18003	2	Standard
Cr	53	<b>0.171</b>	ug/L	0.014	7	169	557	4	Standard
Mn	55	<b>582.983</b>	ug/L	6.242	1	2166	14708901	1	Standard
> Ge	72		ug/L			25853	22998	1	KED
Ni	60	<b>9.196</b>	ug/L	0.169	1	24	8053	0	KED
Ni	62	<b>9.111</b>	ug/L	0.355	3	9	1305	2	KED
Cu	63	<b>0.081</b>	ug/L	0.007	9	49	251	8	KED
Cu	65	<b>0.085</b>	ug/L	0.011	13	27	130	11	KED
Zn	66	<b>0.924</b>	ug/L	0.062	6	20	316	6	KED
Zn	67	<b>3.451</b>	ug/L	0.255	7	4	189	7	KED
As	75	<b>1.430</b>	ug/L	0.090	6	6	246	4	KED
Se	78	<b>-0.157</b>	ug/L	0.089	56	19	14	10	KED
Y	89		ug/L			261932	269890	0	Standard
Kr	83		ug/L			49	78	7	Standard
> In-1	115		ug/L			7009	6363	1	KED
Cd	111	<b>0.007</b>	ug/L	0.003	43	4	5	10	KED
Cd	114	<b>-0.005</b>	ug/L	0.004	87	4	1	106	KED
> In	115		ug/L			367469	326201	2	Standard
Ag	107	<b>-0.003</b>	ug/L	0.001	48	86	48	28	Standard
Ba	135	<b>42.055</b>	ug/L	1.105	2	23	114661	1	Standard
Ba	137	<b>41.375</b>	ug/L	1.093	2	37	200227	1	Standard
> Tb	159		ug/L			619766	591966	0	Standard
Pb	208	<b>0.009</b>	ug/L	0.002	16	178	513	10	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0512-09**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:32:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	48354	1	Standard
Cl	37		ug/L			4319075	4388967	0	Standard
Sc	45		ug/L			460811	580415	1	Standard
Cr	52	<b>0.089</b>	ug/L	0.013	14	14116	19480	2	Standard
Cr	53	<b>0.219</b>	ug/L	0.006	2	169	695	2	Standard
Mn	55	<b>337.174</b>	ug/L	7.794	2	2166	9015891	1	Standard
Ge	72		ug/L			25853	24540	1	KED
Ni	60	<b>0.249</b>	ug/L	0.023	9	24	255	7	KED
Ni	62	<b>0.254</b>	ug/L	0.037	14	9	47	10	KED
Cu	63	<b>0.078</b>	ug/L	0.006	8	49	257	6	KED
Cu	65	<b>0.097</b>	ug/L	0.006	6	27	155	4	KED
Zn	66	<b>1.847</b>	ug/L	0.090	4	20	655	3	KED
Zn	67	<b>15.965</b>	ug/L	0.685	4	4	918	2	KED
As	75	<b>3.212</b>	ug/L	0.190	5	6	581	4	KED
Se	78	<b>-0.210</b>	ug/L	0.162	77	19	14	22	KED
Y	89		ug/L			261932	280208	1	Standard
Kr	83		ug/L			49	55	24	Standard
In-1	115		ug/L			7009	6688	4	KED
Cd	111	<b>0.003</b>	ug/L	0.006	207	4	4	20	KED
Cd	114	<b>0.001</b>	ug/L	0.005	629	4	4	49	KED
In	115		ug/L			367469	348399	1	Standard
Ag	107	<b>-0.002</b>	ug/L	0.000	21	86	57	8	Standard
Ba	135	<b>191.211</b>	ug/L	1.460	0	23	556919	1	Standard
Ba	137	<b>192.356</b>	ug/L	3.133	1	37	994261	0	Standard
Tb	159		ug/L			619766	616198	0	Standard
Pb	208	<b>0.054</b>	ug/L	0.002	4	178	2238	4	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0512-10**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:37:03**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	51624	2	Standard
Cl	37		ug/L			4319075	4478676	1	Standard
> Sc	45		ug/L			460811	561764	0	Standard
Cr	52	<b>0.175</b>	ug/L	0.006	3	14116	20433	0	Standard
Cr	53	<b>0.278</b>	ug/L	0.011	3	169	799	2	Standard
Mn	55	<b>154.249</b>	ug/L	4.631	3	2166	3994066	2	Standard
> Ge	72		ug/L			25853	24273	2	KED
Ni	60	<b>0.207</b>	ug/L	0.004	1	24	213	1	KED
Ni	62	<b>0.199</b>	ug/L	0.062	30	9	38	22	KED
Cu	63	<b>0.022</b>	ug/L	0.006	27	49	105	17	KED
Cu	65	<b>0.073</b>	ug/L	0.015	20	27	122	15	KED
Zn	66	<b>0.273</b>	ug/L	0.049	17	20	112	13	KED
Zn	67	<b>25.527</b>	ug/L	1.532	6	4	1448	3	KED
As	75	<b>8.435</b>	ug/L	0.087	1	6	1501	1	KED
Se	78	<b>-0.165</b>	ug/L	<u>0.233</u>	141	19	14	28	KED
Y	89		ug/L			261932	277910	0	Standard
Kr	83		ug/L			49	50	12	Standard
> In-1	115		ug/L			7009	6615	2	KED
Cd	111	<b>-0.005</b>	ug/L	0.005	102	4	3	34	KED
Cd	114	<b>-0.006</b>	ug/L	0.002	37	4	1	99	KED
> In	115		ug/L			367469	350721	0	Standard
Ag	107	<b>-0.003</b>	ug/L	0.001	22	86	53	12	Standard
Ba	135	<b>321.821</b>	ug/L	4.367	1	23	943491	0	Standard
Ba	137	<b>321.092</b>	ug/L	0.935	0	37	1670916	0	Standard
> Tb	159		ug/L			619766	613978	0	Standard
Pb	208	<b>0.001</b>	ug/L	0.000	31	178	215	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0512-11**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:41:47**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	48792	4	Standard
Cl	37		ug/L			4319075	4357448	3	Standard
[> Sc	45		ug/L			460811	559700	1	Standard
Cr	52	<b>0.372</b>	ug/L	0.016	4	14116	23980	1	Standard
Cr	53	<b>0.511</b>	ug/L	0.011	2	169	1288	2	Standard
Mn	55	<b>138.174</b>	ug/L	1.582	1	2166	3564680	0	Standard
[> Ge	72		ug/L			25853	24319	0	KED
Ni	60	<b>0.400</b>	ug/L	0.005	1	24	392	1	KED
Ni	62	<b>0.379</b>	ug/L	0.065	17	9	66	14	KED
Cu	63	<b>0.048</b>	ug/L	0.007	13	49	175	9	KED
Cu	65	<b>0.111</b>	ug/L	0.021	19	27	172	15	KED
Zn	66	<b>0.458</b>	ug/L	0.060	13	20	175	11	KED
Zn	67	<b>37.885</b>	ug/L	1.293	3	4	2153	2	KED
<b>As</b>	75	<b>2.105</b>	ug/L	0.045	2	6	380	1	KED
<b>Se</b>	78	<b>-0.251</b>	ug/L	0.039	15	19	13	5	KED
Y	89		ug/L			261932	278209	1	Standard
Kr	83		ug/L			49	59	20	Standard
[> In-1	115		ug/L			7009	6253	10	KED
Cd	111	<b>-0.004</b>	ug/L	0.007	168	4	3	45	KED
Cd	114	<b>0.001</b>	ug/L	0.002	255	4	4	27	KED
[> In	115		ug/L			367469	345516	2	Standard
Ag	107	<b>-0.002</b>	ug/L	0.001	24	86	55	11	Standard
Ba	135	<b>509.020</b>	ug/L	18.982	3	23	1469345	1	Standard
Ba	137	<b>526.071</b>	ug/L	2.695	0	37	2696749	1	Standard
[> Tb	159		ug/L			619766	622628	0	Standard
<b>Pb</b>	208	<b>0.005</b>	ug/L	0.000	6	178	365	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-02**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:46:25**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	49055	2	Standard
Cl	37		ug/L			4319075	4263107	2	Standard
> Sc	45		ug/L			460811	549154	1	Standard
Cr	52	<b>0.319</b>	ug/L	0.023	7	14116	22569	2	Standard
Cr	53	<b>0.365</b>	ug/L	0.022	6	169	961	3	Standard
Mn	55	<b>21.278</b>	ug/L	0.535	2	2166	540704	1	Standard
> Ge	72		ug/L			25853	25493	3	KED
Ni	60	<b>0.551</b>	ug/L	0.042	7	24	557	8	KED
Ni	62	<b>0.568</b>	ug/L	0.005	0	9	99	3	KED
Cu	63	<b>0.391</b>	ug/L	0.023	5	49	1153	6	KED
Cu	65	<b>0.392</b>	ug/L	0.033	8	27	574	10	KED
Zn	66	<b>1.659</b>	ug/L	0.076	4	20	613	3	KED
Zn	67	<b>5.933</b>	ug/L	0.240	4	4	357	5	KED
As	75	<b>0.604</b>	ug/L	0.007	1	6	119	2	KED
Se	78	<b>-0.259</b>	ug/L	0.100	38	19	13	12	KED
Y	89		ug/L			261932	275926	1	Standard
Kr	83		ug/L			49	55	23	Standard
> In-1	115		ug/L			7009	6903	3	KED
Cd	111	<b>-0.001</b>	ug/L	0.007	635	4	4	35	KED
Cd	114	<b>0.014</b>	ug/L	0.007	53	4	11	30	KED
> In	115		ug/L			367469	357816	1	Standard
Ag	107	<b>0.087</b>	ug/L	0.007	7	86	1125	7	Standard
Ba	135	<b>60.107</b>	ug/L	1.553	2	23	179765	1	Standard
Ba	137	<b>61.027</b>	ug/L	0.486	0	37	324037	1	Standard
> Tb	159		ug/L			619766	626123	0	Standard
Pb	208	<b>0.026</b>	ug/L	0.001	4	178	1200	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-03**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:51:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	49292	2	Standard
Cl	37		ug/L			4319075	4327392	1	Standard
> Sc	45		ug/L			460811	524705	1	Standard
Cr	52	0.041	ug/L	0.022	52	14116	16776	1	Standard
Cr	53	0.122	ug/L	0.013	10	169	435	5	Standard
Mn	55	169.299	ug/L	2.033	1	2166	4094484	1	Standard
> Ge	72		ug/L			25853	23927	1	KED
Ni	60	0.176	ug/L	0.029	16	24	182	13	KED
Ni	62	0.112	ug/L	0.012	11	9	25	8	KED
Cu	63	0.074	ug/L	0.010	13	49	241	9	KED
Cu	65	0.088	ug/L	0.013	15	27	140	11	KED
Zn	66	0.609	ug/L	0.041	6	20	223	5	KED
Zn	67	19.238	ug/L	1.051	5	4	1078	5	KED
As	75	0.067	ug/L	0.008	12	6	17	10	KED
Se	78	-0.210	ug/L	0.151	72	19	13	22	KED
Y	89		ug/L			261932	264544	2	Standard
Kr	83		ug/L			49	50	16	Standard
> In-1	115		ug/L			7009	6744	1	KED
Cd	111	-0.009	ug/L	0.003	30	4	2	21	KED
Cd	114	0.001	ug/L	0.008	586	4	4	81	KED
> In	115		ug/L			367469	332323	0	Standard
Ag	107	-0.002	ug/L	0.000	21	86	58	6	Standard
Ba	135	242.332	ug/L	1.438	0	23	673232	1	Standard
Ba	137	240.629	ug/L	2.620	1	37	1186461	0	Standard
> Tb	159		ug/L			619766	586275	2	Standard
Pb	208	0.009	ug/L	0.001	8	178	502	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-04**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 05:55:53**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	48899	0	Standard
Cl	37		ug/L			4319075	4523212	0	Standard
> Sc	45		ug/L			460811	542411	1	Standard
Cr	52	<b>0.079</b>	ug/L	0.008	10	14116	18031	2	Standard
Cr	53	<b>0.197</b>	ug/L	0.012	6	169	605	3	Standard
Mn	55	<b>324.579</b>	ug/L	8.028	2	2166	8110487	1	Standard
> Ge	72		ug/L			25853	24766	0	KED
Ni	60	<b>0.195</b>	ug/L	0.014	7	24	206	6	KED
Ni	62	<b>0.172</b>	ug/L	0.029	17	9	35	12	KED
Cu	63	<b>0.047</b>	ug/L	0.001	2	49	175	1	KED
Cu	65	<b>0.056</b>	ug/L	0.009	16	27	102	12	KED
Zn	66	<b>0.536</b>	ug/L	0.029	5	20	206	4	KED
Zn	67	<b>3.474</b>	ug/L	0.092	2	4	205	3	KED
As	75	<b>2.115</b>	ug/L	0.075	3	6	389	2	KED
Se	78	<b>0.015</b>	ug/L	0.116	760	19	18	12	KED
Y	89		ug/L			261932	282762	3	Standard
Kr	83		ug/L			49	58	16	Standard
> In-1	115		ug/L			7009	6902	3	KED
Cd	111	<b>-0.001</b>	ug/L	0.010	989	4	4	48	KED
Cd	114	<b>0.005</b>	ug/L	0.002	50	4	6	15	KED
> In	115		ug/L			367469	357347	0	Standard
Ag	107	<b>-0.003</b>	ug/L	0.000	2	86	45	2	Standard
Ba	135	<b>31.688</b>	ug/L	0.548	1	23	94682	1	Standard
Ba	137	<b>31.226</b>	ug/L	0.272	0	37	165601	0	Standard
> Tb	159		ug/L			619766	630586	1	Standard
Pb	208	<b>0.007</b>	ug/L	0.001	19	178	464	11	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0539-05**

Sample Dil Factor:

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:01:00**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	45077	2	Standard
Cl	37		ug/L			4319075	4430821	0	Standard
> Sc	45		ug/L			460811	468954	1	Standard
Cr	52	<b>0.353</b>	ug/L	0.010	2	14116	19787	0	Standard
Cr	53	<b>0.318</b>	ug/L	0.007	2	169	737	0	Standard
Mn	55	<b>0.512</b>	ug/L	0.010	1	2166	13258	0	Standard
> Ge	72		ug/L			25853	25379	2	KED
Ni	60	<b>0.727</b>	ug/L	0.071	9	24	723	7	KED
Ni	62	<b>0.726</b>	ug/L	0.113	15	9	123	12	KED
Cu	63	<b>1.419</b>	ug/L	0.065	4	49	4034	2	KED
Cu	65	<b>1.518</b>	ug/L	0.053	3	27	2133	3	KED
Zn	66	<b>10.101</b>	ug/L	0.384	3	20	3613	1	KED
Zn	67	<b>9.078</b>	ug/L	0.477	5	4	541	2	KED
As	75	<b>0.005</b>	ug/L	0.016	318	6	7	38	KED
Se	78	<b>-0.247</b>	ug/L	0.156	63	19	13	23	KED
Y	89		ug/L			261932	263017	1	Standard
Kr	83		ug/L			49	45	16	Standard
> In-1	115		ug/L			7009	7246	2	KED
Cd	111	<b>-0.002</b>	ug/L	0.007	354	4	4	35	KED
Cd	114	<b>0.013</b>	ug/L	0.009	67	4	11	43	KED
> In	115		ug/L			367469	360383	1	Standard
Ag	107	<b>0.017</b>	ug/L	0.001	3	86	288	1	Standard
Ba	135	<b>3.706</b>	ug/L	0.038	1	23	11189	1	Standard
Ba	137	<b>3.688</b>	ug/L	0.071	1	37	19753	0	Standard
> Tb	159		ug/L			619766	618295	2	Standard
Pb	208	<b>0.221</b>	ug/L	0.007	3	178	8632	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 06:05:39

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	32700	2	Standard
Cl	37		ug/L			4319075	4345298	0	Standard
[> Sc	45		ug/L			460811	455074	0	Standard
Cr	52	-0.001	ug/L	0.015	1747	14116	13929	2	Standard
Cr	53	-0.025	ug/L	0.005	18	169	124	6	Standard
Mn	55	-0.055	ug/L	0.002	2	2166	984	2	Standard
[> Ge	72		ug/L			25853	24756	2	KED
Ni	60	-0.007	ug/L	0.001	21	24	16	6	KED
Ni	62	-0.026	ug/L	0.039	149	9	5	114	KED
Cu	63	0.001	ug/L	0.002	353	49	48	11	KED
Cu	65	-0.000	ug/L	0.010	2289	27	25	49	KED
Zn	66	0.008	ug/L	0.013	167	20	22	22	KED
Zn	67	-0.018	ug/L	0.070	384	4	3	124	KED
As	75	0.002	ug/L	0.006	354	6	6	14	KED
Se	78	-0.218	ug/L	0.093	42	19	14	15	KED
Y	89		ug/L			261932	257267	1	Standard
Kr	83		ug/L			49	48	11	Standard
[> In-1	115		ug/L			7009	6906	2	KED
Cd	111	-0.004	ug/L	0.003	73	4	3	15	KED
Cd	114	-0.001	ug/L	0.004	286	4	3	50	KED
[> In	115		ug/L			367469	343903	1	Standard
Ag	107	-0.004	ug/L	0.000	13	86	40	12	Standard
Ba	135	0.001	ug/L	0.000	54	23	24	4	Standard
Ba	137	0.004	ug/L	0.004	97	37	55	36	Standard
[> Tb	159		ug/L			619766	599542	0	Standard
Pb	208	0.001	ug/L	0.001	64	178	202	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 06:10:24

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	33491	1	Standard
Cl	37		ug/L			4319075	4288626	1	Standard
[> Sc	45		ug/L			460811	473770	1	Standard
Cr	52	50.139	ug/L	1.071	2	14116	793633	2	Standard
Cr	53	51.369	ug/L	0.894	1	169	92312	2	Standard
Mn	55	51.114	ug/L	0.771	1	2166	1117847	2	Standard
[> Ge	72		ug/L			25853	25762	0	KED
Ni	60	49.334	ug/L	1.513	3	24	48299	3	KED
Ni	62	49.491	ug/L	0.847	1	9	7904	1	KED
Cu	63	50.174	ug/L	0.298	0	49	143195	0	KED
Cu	65	49.944	ug/L	0.117	0	27	70389	0	KED
Zn	66	49.877	ug/L	0.675	1	20	18040	1	KED
Zn	67	50.732	ug/L	0.986	1	4	3054	1	KED
As	75	49.424	ug/L	0.359	0	6	9308	0	KED
[ Se	78	48.689	ug/L	1.533	3	19	1047	2	KED
Y	89		ug/L			261932	273445	0	Standard
Kr	83		ug/L			49	60	7	Standard
[> In-1	115		ug/L			7009	7018	2	KED
Cd	111	50.641	ug/L	1.237	2	4	10497	0	KED
Cd	114	50.759	ug/L	2.011	3	4	25876	1	KED
[> In	115		ug/L			367469	357535	1	Standard
Ag	107	50.702	ug/L	1.721	3	86	604153	2	Standard
Ba	135	51.700	ug/L	0.478	0	23	154527	0	Standard
[ Ba	137	51.011	ug/L	1.502	2	37	270581	1	Standard
[> Tb	159		ug/L			619766	628525	1	Standard
[ Pb	208	52.322	ug/L	0.333	0	178	2037185	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 06:17:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	32193	4	Standard
Cl	37		ug/L			4319075	4315932	2	Standard
[> Sc	45		ug/L			460811	464727	1	Standard
Cr	52	0.020	ug/L	0.009	44	14116	14534	2	Standard
Cr	53	-0.020	ug/L	0.010	52	169	136	14	Standard
Mn	55	-0.049	ug/L	0.011	22	2166	1141	21	Standard
[> Ge	72		ug/L			25853	25049	3	KED
Ni	60	-0.010	ug/L	0.004	42	24	13	28	KED
Ni	62	-0.018	ug/L	0.020	108	9	6	45	KED
Cu	63	-0.001	ug/L	0.001	221	49	46	10	KED
Cu	65	-0.004	ug/L	0.004	93	27	20	24	KED
Zn	66	-0.009	ug/L	0.012	141	20	17	22	KED
Zn	67	-0.018	ug/L	0.050	272	4	3	91	KED
As	75	-0.008	ug/L	0.008	106	6	5	30	KED
Se	78	-0.135	ug/L	0.130	96	19	16	13	KED
Y	89		ug/L			261932	267058	1	Standard
Kr	83		ug/L			49	38	5	Standard
[> In-1	115		ug/L			7009	6744	2	KED
Cd	111	-0.009	ug/L	0.010	121	4	2	78	KED
Cd	114	0.000	ug/L	0.005	968	4	4	49	KED
[> In	115		ug/L			367469	358576	1	Standard
Ag	107	0.004	ug/L	0.009	270	86	127	90	Standard
Ba	135	0.008	ug/L	0.008	93	23	48	50	Standard
Ba	137	0.007	ug/L	0.008	111	37	76	58	Standard
[> Tb	159		ug/L			619766	607323	1	Standard
Pb	208	0.002	ug/L	0.008	328	178	260	108	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0544-01**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:22:37**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	36195	1	Standard
Cl	37		ug/L			4319075	13340577	3	Standard
> Sc	45		ug/L			460811	466367	1	Standard
Cr	52	<b>0.370</b>	ug/L	0.038	10	14116	19945	3	Standard
Cr	53	<b>7.403</b>	ug/L	0.270	3	169	13240	2	Standard
Mn	55	<b>4.646</b>	ug/L	0.119	2	2166	101978	1	Standard
> Ge	72		ug/L			25853	23924	0	KED
Ni	60	<b>1.899</b>	ug/L	0.028	1	24	1748	2	KED
Ni	62	<b>2.023</b>	ug/L	0.088	4	9	308	4	KED
<b>Cu</b>	63	<b>0.335</b>	ug/L	0.024	7	49	934	7	KED
Cu	65	<b>0.358</b>	ug/L	0.010	2	27	493	2	KED
Zn	66	<b>107.689</b>	ug/L	1.633	1	20	36150	1	KED
<b>Zn</b>	<b>67</b>	<b>98.416</b>	ug/L	1.879	1	4	5498	1	KED
As	75	<b>0.044</b>	ug/L	0.015	34	6	13	19	KED
Se	78	<b>-0.013</b>	ug/L	0.045	334	19	17	5	KED
Y	89		ug/L			261932	260486	1	Standard
Kr	83		ug/L			49	57	12	Standard
> In-1	115		ug/L			7009	6485	1	KED
Cd	111	<b>0.547</b>	ug/L	0.061	11	4	108	10	KED
Cd	114	<b>0.570</b>	ug/L	0.003	0	4	272	1	KED
> In	115		ug/L			367469	333878	1	Standard
Ag	107	<b>0.001</b>	ug/L	0.002	309	86	87	30	Standard
Ba	135	<b>5.275</b>	ug/L	0.095	1	23	14742	1	Standard
Ba	137	<b>5.332</b>	ug/L	0.065	1	37	26444	0	Standard
> Tb	159		ug/L			619766	608424	0	Standard
Pb	208	<b>0.014</b>	ug/L	0.002	12	178	692	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0544-02**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:27:15**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	37670	1	Standard
Cl	37		ug/L			4319075	16205702	1	Standard
> Sc	45		ug/L			460811	471114	1	Standard
Cr	52	<b>0.662</b>	ug/L	0.034	5	14116	24661	1	Standard
Cr	53	<b>12.898</b>	ug/L	0.358	2	169	23179	3	Standard
Mn	55	<b>4.943</b>	ug/L	0.038	0	2166	109482	0	Standard
> Ge	72		ug/L			25853	23008	2	KED
Ni	60	<b>1.692</b>	ug/L	0.087	5	24	1499	3	KED
Ni	62	<b>1.906</b>	ug/L	0.228	11	9	280	11	KED
<b>Cu</b>	63	<b>0.220</b>	ug/L	0.011	4	49	605	3	KED
Cu	65	<b>0.222</b>	ug/L	0.010	4	27	304	3	KED
Zn	66	<b>98.265</b>	ug/L	2.048	2	20	31716	0	KED
<b>Zn</b>	<b>67</b>	<b>89.685</b>	ug/L	1.898	2	4	4818	2	KED
As	75	<b>0.032</b>	ug/L	0.021	64	6	11	33	KED
Se	78	<b>0.060</b>	ug/L	0.258	430	19	18	28	KED
Y	89		ug/L			261932	261323	1	Standard
Kr	83		ug/L			49	49	17	Standard
> In-1	115		ug/L			7009	6316	0	KED
Cd	111	<b>0.683</b>	ug/L	0.042	6	4	131	6	KED
Cd	114	<b>0.679</b>	ug/L	0.055	8	4	315	7	KED
> In	115		ug/L			367469	328258	2	Standard
Ag	107	<b>0.002</b>	ug/L	0.001	88	86	95	14	Standard
Ba	135	<b>2.138</b>	ug/L	0.069	3	23	5884	2	Standard
Ba	137	<b>2.109</b>	ug/L	0.098	4	37	10301	3	Standard
> Tb	159		ug/L			619766	599777	1	Standard
Pb	208	<b>0.019</b>	ug/L	0.001	7	178	874	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0544-03**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:32:23**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	39745	2	Standard
Cl	37		ug/L			4319075	19023149	1	Standard
> Sc	45		ug/L			460811	471926	1	Standard
Cr	52	<b>0.493</b>	ug/L	0.067	13	14116	22076	3	Standard
Cr	53	<b>15.199</b>	ug/L	0.240	1	169	27323	0	Standard
Mn	55	<b>29.177</b>	ug/L	0.336	1	2166	636461	1	Standard
> Ge	72		ug/L			25853	23194	0	KED
Ni	60	<b>2.302</b>	ug/L	0.046	2	24	2049	2	KED
Ni	62	<b>2.186</b>	ug/L	0.184	8	9	322	8	KED
<b>Cu</b>	63	<b>0.186</b>	ug/L	0.012	6	49	521	5	KED
Cu	65	<b>0.179</b>	ug/L	0.012	6	27	252	5	KED
Zn	66	<b>105.408</b>	ug/L	1.883	1	20	34305	1	KED
<b>Zn</b>	<b>67</b>	<b>95.311</b>	ug/L	1.592	1	4	5162	1	KED
As	75	<b>0.027</b>	ug/L	0.010	38	6	10	16	KED
Se	78	<b>0.075</b>	ug/L	0.207	278	19	18	20	KED
Y	89		ug/L			261932	262898	0	Standard
Kr	83		ug/L			49	81	3	Standard
> In-1	115		ug/L			7009	6525	1	KED
Cd	111	<b>0.578</b>	ug/L	0.033	5	4	115	4	KED
Cd	114	<b>0.601</b>	ug/L	0.029	4	4	288	3	KED
> In	115		ug/L			367469	336954	1	Standard
Ag	107	<b>0.007</b>	ug/L	0.001	12	86	162	6	Standard
Ba	135	<b>19.495</b>	ug/L	0.587	3	23	54919	1	Standard
Ba	137	<b>19.460</b>	ug/L	0.343	1	37	97309	0	Standard
> Tb	159		ug/L			619766	614585	2	Standard
Pb	208	<b>0.006</b>	ug/L	0.001	14	178	400	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-02**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:38:31**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	37695	1	Standard
Cl	37		ug/L			4319075	4322976	3	Standard
> Sc	45		ug/L			460811	501216	4	Standard
Cr	52	1.834	ug/L	0.114	6	14116	45442	0	Standard
Cr	53	2.828	ug/L	0.121	4	169	5543	0	Standard
Mn	55	30.224	ug/L	1.305	4	2166	699456	2	Standard
> Ge	72		ug/L			25853	26481	0	KED
Ni	60	861.284	ug/L	20.226	2	24	866377	2	KED
Ni	62	866.049	ug/L	34.552	3	9	142014	3	KED
Cu	63	3.136	ug/L	0.052	1	49	9246	1	KED
Cu	65	3.140	ug/L	0.017	0	27	4575	0	KED
Zn	66	14.888	ug/L	0.535	3	20	5550	3	KED
Zn	67	13.365	ug/L	0.689	5	4	830	5	KED
As	75	0.018	ug/L	0.009	52	6	10	17	KED
Se	78	-0.013	ug/L	0.093	709	19	19	10	KED
Y	89		ug/L			261932	276707	2	Standard
Kr	83		ug/L			49	50	13	Standard
> In-1	115		ug/L			7009	7216	0	KED
Cd	111	0.114	ug/L	0.019	16	4	28	14	KED
Cd	114	0.148	ug/L	0.030	20	4	81	19	KED
> In	115		ug/L			367469	364427	4	Standard
Ag	107	-0.002	ug/L	0.001	47	86	57	27	Standard
Ba	135	1.321	ug/L	0.062	4	23	4043	4	Standard
Ba	137	1.282	ug/L	0.007	0	37	6967	3	Standard
> Tb	159		ug/L			619766	621220	4	Standard
Pb	208	0.018	ug/L	0.003	13	178	885	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-19**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:43:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	39121	2	Standard
Cl	37		ug/L			4319075	4213695	1	Standard
> Sc	45		ug/L			460811	503441	1	Standard
Cr	52	<b>0.046</b>	ug/L	0.023	50	14116	16178	0	Standard
Cr	53	<b>0.679</b>	ug/L	0.033	4	169	1478	2	Standard
Mn	55	<b>31.248</b>	ug/L	0.179	0	2166	727020	1	Standard
> Ge	72		ug/L			25853	25973	2	KED
Ni	60	<b>926.426</b>	ug/L	32.969	3	24	913542	1	KED
Ni	62	<b>939.080</b>	ug/L	24.132	2	9	151013	2	KED
Cu	63	<b>1.952</b>	ug/L	0.009	0	49	5663	1	KED
Cu	65	<b>1.993</b>	ug/L	0.105	5	27	2856	3	KED
Zn	66	<b>6.141</b>	ug/L	0.168	2	20	2258	4	KED
Zn	67	<b>5.400</b>	ug/L	0.472	8	4	331	7	KED
As	75	<b>0.031</b>	ug/L	0.019	60	6	12	26	KED
Se	78	<b>-0.102</b>	ug/L	0.139	135	19	17	19	KED
Y	89		ug/L			261932	285406	1	Standard
Kr	83		ug/L			49	47	22	Standard
> In-1	115		ug/L			7009	7229	0	KED
Cd	111	<b>0.011</b>	ug/L	0.023	203	4	6	69	KED
Cd	114	<b>0.023</b>	ug/L	0.008	33	4	16	24	KED
> In	115		ug/L			367469	369695	1	Standard
Ag	107	<b>-0.002</b>	ug/L	0.000	21	86	66	8	Standard
Ba	135	<b>0.633</b>	ug/L	0.021	3	23	1978	1	Standard
Ba	137	<b>0.624</b>	ug/L	0.021	3	37	3460	2	Standard
> Tb	159		ug/L			619766	631574	2	Standard
Pb	208	<b>0.031</b>	ug/L	0.002	7	178	1381	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23C0540-03**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:47:47**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	39834	0	Standard
Cl	37		ug/L			4319075	4162237	0	Standard
> Sc	45		ug/L			460811	508818	1	Standard
Cr	52	0.075	ug/L	0.028	37	14116	16836	3	Standard
Cr	53	0.532	ug/L	0.011	1	169	1212	0	Standard
Mn	55	30.303	ug/L	0.416	1	2166	712598	1	Standard
> Ge	72		ug/L			25853	26812	1	KED
Ni	60	905.920	ug/L	13.970	1	24	922547	0	KED
Ni	62	917.988	ug/L	16.858	1	9	152421	2	KED
Cu	63	2.373	ug/L	0.059	2	49	7097	1	KED
Cu	65	2.366	ug/L	0.042	1	27	3497	1	KED
Zn	66	5.942	ug/L	0.160	2	20	2256	3	KED
Zn	67	5.562	ug/L	0.556	9	4	352	8	KED
As	75	0.055	ug/L	0.008	14	6	17	8	KED
Se	78	-0.112	ug/L	0.104	93	19	17	12	KED
Y	89		ug/L			261932	296972	1	Standard
Kr	83		ug/L			49	46	34	Standard
> In-1	115		ug/L			7009	7211	1	KED
Cd	111	0.017	ug/L	0.015	89	4	8	40	KED
Cd	114	0.013	ug/L	0.016	122	4	11	73	KED
> In	115		ug/L			367469	368779	1	Standard
Ag	107	0.001	ug/L	0.000	56	86	93	3	Standard
Ba	135	0.693	ug/L	0.009	1	23	2158	1	Standard
Ba	137	0.680	ug/L	0.026	3	37	3756	2	Standard
> Tb	159		ug/L			619766	630997	1	Standard
Pb	208	0.042	ug/L	0.001	1	178	1838	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-DUP2**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:52:25**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	38588	2	Standard
Cl	37		ug/L			4319075	4156494	0	Standard
[> Sc	45		ug/L			460811	509776	2	Standard
Cr	52	0.087	ug/L	0.029	33	14116	17071	1	Standard
Cr	53	0.482	ug/L	0.007	1	169	1117	3	Standard
Mn	55	29.166	ug/L	0.936	3	2166	687073	2	Standard
[> Ge	72		ug/L			25853	26668	0	KED
Ni	60	884.249	ug/L	22.016	2	24	895758	2	KED
Ni	62	885.653	ug/L	27.996	3	9	146278	3	KED
Cu	63	2.249	ug/L	0.054	2	49	6694	2	KED
Cu	65	2.210	ug/L	0.020	0	27	3251	0	KED
Zn	66	5.956	ug/L	0.050	0	20	2249	0	KED
Zn	67	5.690	ug/L	0.419	7	4	358	7	KED
As	75	0.043	ug/L	0.009	20	6	15	11	KED
Se	78	-0.043	ug/L	0.129	300	19	19	14	KED
Y	89		ug/L			261932	297189	2	Standard
Kr	83		ug/L			49	48	9	Standard
[> In-1	115		ug/L			7009	7109	1	KED
Cd	111	0.009	ug/L	0.003	33	4	6	8	KED
Cd	114	0.023	ug/L	0.002	8	4	16	6	KED
[> In	115		ug/L			367469	369868	1	Standard
Ag	107	0.001	ug/L	0.000	41	86	100	5	Standard
Ba	135	0.693	ug/L	0.015	2	23	2165	2	Standard
Ba	137	0.653	ug/L	0.008	1	37	3623	3	Standard
[> Tb	159		ug/L			619766	635810	1	Standard
Pb	208	0.040	ug/L	0.001	2	178	1765	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-MS2**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 06:57:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	38657	2	Standard
Cl	37		ug/L			4319075	4085843	1	Standard
> Sc	45		ug/L			460811	500054	1	Standard
Cr	52	2.839	ug/L	0.073	2	14116	61858	0	Standard
Cr	53	3.203	ug/L	0.033	1	169	6246	1	Standard
Mn	55	32.829	ug/L	1.001	3	2166	758392	2	Standard
> Ge	72		ug/L			25853	26269	3	KED
Ni	60	907.692	ug/L	28.471	3	24	905276	2	KED
Ni	62	918.816	ug/L	49.867	5	9	149304	2	KED
Cu	63	5.148	ug/L	0.164	3	49	15016	1	KED
Cu	65	5.206	ug/L	0.116	2	27	7502	0	KED
Zn	66	15.449	ug/L	0.484	3	20	5709	0	KED
Zn	67	13.936	ug/L	1.361	9	4	857	6	KED
As	75	2.733	ug/L	0.109	4	6	530	1	KED
Se	78	8.833	ug/L	0.705	7	19	209	5	KED
Y	89		ug/L			261932	292180	2	Standard
Kr	83		ug/L			49	54	29	Standard
> In-1	115		ug/L			7009	7320	2	KED
Cd	111	2.703	ug/L	0.054	2	4	588	1	KED
Cd	114	2.848	ug/L	0.108	3	4	1518	1	KED
> In	115		ug/L			367469	365077	0	Standard
Ag	107	2.837	ug/L	0.050	1	86	34611	2	Standard
Ba	135	3.549	ug/L	0.067	1	23	10852	1	Standard
Ba	137	3.486	ug/L	0.017	0	37	18921	0	Standard
> Tb	159		ug/L			619766	625315	2	Standard
Pb	208	3.036	ug/L	0.071	2	178	117761	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0102-MSD2**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Saturday, April 08, 2023 07:03:41**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	38679	0	Standard
Cl	37		ug/L			4319075	4114938	0	Standard
> Sc	45		ug/L			460811	511894	1	Standard
Cr	52	2.675	ug/L	0.083	3	14116	60589	1	Standard
Cr	53	3.078	ug/L	0.080	2	169	6152	1	Standard
Mn	55	31.300	ug/L	0.658	2	2166	740330	0	Standard
> Ge	72		ug/L			25853	26204	2	KED
Ni	60	900.873	ug/L	9.707	1	24	896640	2	KED
Ni	62	907.430	ug/L	35.402	3	9	147165	2	KED
Cu	63	5.137	ug/L	0.159	3	49	14954	3	KED
Cu	65	5.108	ug/L	0.086	1	27	7344	0	KED
Zn	66	15.371	ug/L	0.293	1	20	5669	2	KED
Zn	67	13.914	ug/L	0.678	4	4	854	2	KED
As	75	2.848	ug/L	0.141	4	6	551	2	KED
Se	78	8.961	ug/L	0.454	5	19	212	5	KED
Y	89		ug/L			261932	292505	0	Standard
Kr	83		ug/L			49	53	10	Standard
> In-1	115		ug/L			7009	7210	2	KED
Cd	111	2.801	ug/L	0.195	6	4	600	5	KED
Cd	114	2.770	ug/L	0.110	3	4	1455	2	KED
> In	115		ug/L			367469	368376	1	Standard
Ag	107	2.571	ug/L	0.070	2	86	31646	1	Standard
Ba	135	3.458	ug/L	0.106	3	23	10668	1	Standard
Ba	137	3.381	ug/L	0.054	1	37	18520	2	Standard
> Tb	159		ug/L			619766	625888	1	Standard
Pb	208	3.014	ug/L	0.071	2	178	117024	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLJ

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:08:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	33828	2	Standard
Cl	37		ug/L			4319075	4028033	1	Standard
[> Sc	45		ug/L			460811	460507	0	Standard
Cr	52	-0.001	ug/L	0.032	4647	14116	14094	2	Standard
Cr	53	0.107	ug/L	0.008	7	169	355	3	Standard
Mn	55	-0.060	ug/L	0.002	3	2166	890	4	Standard
[> Ge	72		ug/L			25853	25565	1	KED
Ni	60	0.007	ug/L	0.009	130	24	30	27	KED
Ni	62	-0.007	ug/L	0.019	264	9	8	35	KED
Cu	63	0.002	ug/L	0.003	138	49	54	13	KED
Cu	65	-0.000	ug/L	0.001	600	27	26	7	KED
Zn	66	0.024	ug/L	0.012	49	20	29	13	KED
Zn	67	-0.020	ug/L	0.019	91	4	3	34	KED
As	75	-0.010	ug/L	0.005	49	6	4	20	KED
Se	78	-0.185	ug/L	0.026	14	19	15	4	KED
Y	89		ug/L			261932	261866	3	Standard
Kr	83		ug/L			49	43	15	Standard
[> In-1	115		ug/L			7009	6748	1	KED
Cd	111	-0.002	ug/L	0.008	330	4	3	43	KED
Cd	114	0.000	ug/L	0.012	2876	4	4	139	KED
[> In	115		ug/L			367469	356822	1	Standard
Ag	107	-0.003	ug/L	0.001	27	86	43	26	Standard
Ba	135	0.002	ug/L	0.001	52	23	29	13	Standard
Ba	137	0.004	ug/L	0.002	40	37	57	16	Standard
[> Tb	159		ug/L			619766	599751	0	Standard
Pb	208	0.002	ug/L	0.000	8	178	248	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVJ

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:13:04

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	33881	1	Standard
Cl	37		ug/L			4319075	4259558	0	Standard
[> Sc	45		ug/L			460811	480147	0	Standard
Cr	52	50.916	ug/L	0.666	1	14116	816569	1	Standard
Cr	53	50.908	ug/L	0.767	1	169	92701	0	Standard
Mn	55	52.214	ug/L	1.257	2	2166	1157006	1	Standard
[> Ge	72		ug/L			25853	26096	0	KED
Ni	60	48.710	ug/L	0.952	1	24	48301	1	KED
Ni	62	48.618	ug/L	0.319	0	9	7865	0	KED
Cu	63	50.737	ug/L	0.601	1	49	146685	1	KED
Cu	65	50.736	ug/L	0.930	1	27	72438	2	KED
Zn	66	50.084	ug/L	1.071	2	20	18348	1	KED
Zn	67	49.719	ug/L	0.981	1	4	3032	1	KED
As	75	50.254	ug/L	1.007	2	6	9586	1	KED
[ Se	78	48.127	ug/L	0.246	0	19	1049	0	KED
Y	89		ug/L			261932	274405	0	Standard
Kr	83		ug/L			49	62	28	Standard
[> In-1	115		ug/L			7009	7072	0	KED
Cd	111	51.301	ug/L	0.601	1	4	10720	0	KED
Cd	114	50.411	ug/L	0.708	1	4	25914	0	KED
[> In	115		ug/L			367469	363199	0	Standard
Ag	107	51.106	ug/L	1.963	3	86	618652	3	Standard
Ba	135	51.457	ug/L	0.511	0	23	156246	0	Standard
[ Ba	137	50.481	ug/L	1.041	2	37	272055	1	Standard
[> Tb	159		ug/L			619766	634708	2	Standard
[ Pb	208	52.450	ug/L	1.624	3	178	2061414	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBJ

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:20:32

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	33133	0	Standard
Cl	37		ug/L			4319075	4189070	0	Standard
[> Sc	45		ug/L			460811	458634	2	Standard
Cr	52	-0.009	ug/L	0.005	55	14116	13907	1	Standard
Cr	53	0.059	ug/L	0.009	14	169	271	4	Standard
Mn	55	-0.061	ug/L	0.002	2	2166	871	2	Standard
[> Ge	72		ug/L			25853	25051	0	KED
Ni	60	-0.011	ug/L	0.007	66	24	13	49	KED
Ni	62	-0.035	ug/L	0.012	35	9	3	50	KED
Cu	63	-0.001	ug/L	0.003	170	49	43	15	KED
Cu	65	-0.002	ug/L	0.002	75	27	23	9	KED
Zn	66	0.002	ug/L	0.014	776	20	20	24	KED
Zn	67	-0.052	ug/L	0.038	72	4	1	173	KED
As	75	-0.001	ug/L	0.008	1235	6	6	22	KED
Se	78	-0.005	ug/L	<u>0.284</u>	5193	19	18	30	KED
Y	89		ug/L			261932	254978	1	Standard
Kr	83		ug/L			49	49	31	Standard
[> In-1	115		ug/L			7009	6975	3	KED
Cd	111	-0.006	ug/L	0.016	270	4	3	96	KED
Cd	114	-0.006	ug/L	0.004	67	4	1	201	KED
[> In	115		ug/L			367469	348767	1	Standard
Ag	107	-0.003	ug/L	0.001	34	86	49	23	Standard
Ba	135	0.001	ug/L	0.002	173	23	25	21	Standard
Ba	137	0.001	ug/L	0.003	211	37	42	34	Standard
[> Tb	159		ug/L			619766	598042	0	Standard
Pb	208	-0.002	ug/L	0.000	11	178	116	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:25:17

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	39943	2	Standard
Cl	37		ug/L			4319075	4308726	0	Standard
[> Sc	45		ug/L			460811	555656	0	Standard
Cr	52	0.063	ug/L	0.015	23	14116	18167	0	Standard
Cr	53	0.038	ug/L	0.002	4	169	284	1	Standard
Mn	55	-0.033	ug/L	0.002	4	2166	1767	2	Standard
[> Ge	72		ug/L			25853	27474	2	KED
Ni	60	-0.011	ug/L	0.004	41	24	14	30	KED
Ni	62	-0.037	ug/L	0.012	31	9	3	50	KED
Cu	63	0.002	ug/L	0.003	145	49	59	18	KED
Cu	65	0.003	ug/L	0.004	113	27	33	14	KED
Zn	66	0.016	ug/L	0.008	51	20	28	13	KED
Zn	67	-0.024	ug/L	0.017	72	4	3	34	KED
As	75	-0.018	ug/L	0.008	45	6	3	47	KED
Se	78	-0.209	ug/L	0.108	51	19	16	16	KED
Y	89		ug/L			261932	310184	2	Standard
Kr	83		ug/L			49	48	25	Standard
[> In-1	115		ug/L			7009	7751	1	KED
Cd	111	-0.003	ug/L	0.005	135	4	4	26	KED
Cd	114	0.001	ug/L	0.006	419	4	5	58	KED
[> In	115		ug/L			367469	404795	2	Standard
Ag	107	-0.002	ug/L	0.001	33	86	69	15	Standard
Ba	135	-0.004	ug/L	0.001	34	23	11	44	Standard
Ba	137	-0.002	ug/L	0.000	6	37	31	3	Standard
[> Tb	159		ug/L			619766	672425	0	Standard
Pb	208	-0.002	ug/L	0.000	26	178	125	13	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:30:01

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	40364	0	Standard
Cl	37		ug/L			4319075	4363259	1	Standard
[> Sc	45		ug/L			460811	565038	2	Standard
Cr	52	0.016	ug/L	0.017	103	14116	17604	1	Standard
Cr	53	0.037	ug/L	0.002	6	169	287	3	Standard
Mn	55	-0.034	ug/L	0.002	4	2166	1782	2	Standard
[> Ge	72		ug/L			25853	27372	1	KED
Ni	60	-0.009	ug/L	0.009	102	24	15	59	KED
Ni	62	-0.041	ug/L	0.013	33	9	3	69	KED
Cu	63	0.004	ug/L	0.005	114	49	65	23	KED
Cu	65	-0.001	ug/L	0.005	724	27	27	23	KED
Zn	66	-0.005	ug/L	0.007	140	20	20	10	KED
Zn	67	-0.005	ug/L	0.061	1268	4	4	89	KED
As	75	-0.012	ug/L	0.004	29	6	4	15	KED
Se	78	-0.295	ug/L	0.243	82	19	13	37	KED
Y	89		ug/L			261932	307041	0	Standard
Kr	83		ug/L			49	52	2	Standard
[> In-1	115		ug/L			7009	7767	2	KED
Cd	111	-0.005	ug/L	0.011	233	4	3	66	KED
Cd	114	0.001	ug/L	0.006	483	4	5	61	KED
[> In	115		ug/L			367469	398721	1	Standard
Ag	107	-0.004	ug/L	0.000	5	86	40	8	Standard
Ba	135	0.001	ug/L	0.002	429	23	27	28	Standard
Ba	137	-0.000	ug/L	0.001	185	37	38	10	Standard
[> Tb	159		ug/L			619766	680369	0	Standard
Pb	208	-0.002	ug/L	0.000	17	178	106	15	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:34:46

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	40364	1	Standard
Cl	37		ug/L			4319075	4353046	1	Standard
[> Sc	45		ug/L			460811	556774	1	Standard
Cr	52	0.045	ug/L	0.044	97	14116	17875	2	Standard
Cr	53	0.033	ug/L	0.009	26	169	274	5	Standard
Mn	55	-0.033	ug/L	0.002	5	2166	1759	0	Standard
[> Ge	72		ug/L			25853	27232	0	KED
Ni	60	-0.011	ug/L	0.005	42	24	13	34	KED
Ni	62	-0.029	ug/L	0.017	59	9	5	57	KED
Cu	63	0.002	ug/L	0.005	264	49	57	25	KED
Cu	65	-0.001	ug/L	0.004	716	27	27	20	KED
Zn	66	0.000	ug/L	0.008	1920	20	22	13	KED
Zn	67	0.026	ug/L	0.063	237	4	6	62	KED
As	75	-0.014	ug/L	0.006	46	6	4	29	KED
Se	78	-0.073	ug/L	0.192	262	19	18	22	KED
Y	89		ug/L			261932	307782	1	Standard
Kr	83		ug/L			49	33	18	Standard
[> In-1	115		ug/L			7009	7539	1	KED
Cd	111	-0.009	ug/L	0.007	82	4	2	57	KED
Cd	114	0.002	ug/L	0.004	214	4	5	33	KED
[> In	115		ug/L			367469	395033	0	Standard
Ag	107	-0.004	ug/L	0.000	8	86	43	9	Standard
Ba	135	-0.001	ug/L	0.003	210	23	20	51	Standard
Ba	137	-0.000	ug/L	0.003	690	37	38	39	Standard
[> Tb	159		ug/L			619766	675344	1	Standard
Pb	208	-0.002	ug/L	0.000	6	178	91	8	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:39:30

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	33567	0	Standard
Cl	37		ug/L			4319075	3864233	0	Standard
[> Sc	45		ug/L			460811	405568	0	Standard
Cr	52	0.041	ug/L	0.018	42	14116	12974	2	Standard
Cr	53	0.033	ug/L	0.007	21	169	200	5	Standard
Mn	55	-0.031	ug/L	0.001	1	2166	1324	0	Standard
[> Ge	72		ug/L			25853	24235	0	KED
Ni	60	-0.013	ug/L	0.004	34	24	10	36	KED
Ni	62	-0.021	ug/L	0.013	58	9	5	33	KED
Cu	63	-0.005	ug/L	0.000	6	49	33	3	KED
Cu	65	-0.007	ug/L	0.003	45	27	16	24	KED
Zn	66	-0.006	ug/L	0.011	204	20	17	22	KED
Zn	67	-0.051	ug/L	0.039	75	4	1	173	KED
As	75	-0.008	ug/L	0.009	108	6	4	34	KED
[ Se	78	-0.208	ug/L	0.052	25	19	14	6	KED
Y	89		ug/L			261932	242430	2	Standard
Kr	83		ug/L			49	37	17	Standard
[> In-1	115		ug/L			7009	6584	2	KED
Cd	111	0.006	ug/L	0.015	250	4	5	56	KED
Cd	114	-0.002	ug/L	0.002	94	4	3	32	KED
[> In	115		ug/L			367469	332071	3	Standard
Ag	107	-0.004	ug/L	0.001	19	86	34	27	Standard
Ba	135	-0.006	ug/L	0.001	17	23	5	57	Standard
[ Ba	137	-0.006	ug/L	0.001	13	37	5	66	Standard
[> Tb	159		ug/L			619766	576763	2	Standard
[ Pb	208	-0.004	ug/L	0.000	7	178	40	23	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:44:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	34177	1	Standard
Cl	37		ug/L			4319075	3920106	2	Standard
[> Sc	45		ug/L			460811	418563	1	Standard
Cr	52	0.025	ug/L	0.028	112	14116	13167	2	Standard
Cr	53	0.025	ug/L	0.004	16	169	193	2	Standard
Mn	55	-0.042	ug/L	0.001	3	2166	1160	1	Standard
[> Ge	72		ug/L			25853	23874	1	KED
Ni	60	-0.013	ug/L	0.006	50	24	10	53	KED
Ni	62	-0.034	ug/L	0.000	0	9	3	0	KED
Cu	63	-0.004	ug/L	0.003	67	49	35	20	KED
Cu	65	-0.011	ug/L	0.003	27	27	10	36	KED
Zn	66	-0.025	ug/L	0.013	52	20	10	40	KED
Zn	67	-0.051	ug/L	0.020	39	4	1	86	KED
As	75	0.000	ug/L	0.002	1315	6	6	7	KED
Se	78	0.013	ug/L	0.045	344	19	18	3	KED
Y	89		ug/L			261932	239325	2	Standard
Kr	83		ug/L			49	43	18	Standard
[> In-1	115		ug/L			7009	6563	1	KED
Cd	111	0.003	ug/L	0.000	14	4	4	0	KED
Cd	114	0.001	ug/L	0.010	1270	4	4	101	KED
[> In	115		ug/L			367469	337531	1	Standard
Ag	107	-0.004	ug/L	0.000	7	86	36	7	Standard
Ba	135	-0.006	ug/L	0.001	19	23	5	57	Standard
Ba	137	-0.006	ug/L	0.001	13	37	5	78	Standard
[> Tb	159		ug/L			619766	563396	1	Standard
Pb	208	-0.004	ug/L	0.000	5	178	27	25	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, April 08, 2023 07:48:59

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\040723A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			33004	34374	2	Standard
Cl	37		ug/L			4319075	3906439	0	Standard
[> Sc	45		ug/L			460811	423964	2	Standard
Cr	52	0.000	ug/L	0.047	61488	14116	12978	2	Standard
Cr	53	0.039	ug/L	0.013	32	169	219	11	Standard
Mn	55	-0.048	ug/L	0.001	1	2166	1058	3	Standard
[> Ge	72		ug/L			25853	24542	0	KED
Ni	60	-0.018	ug/L	0.001	6	24	6	17	KED
Ni	62	-0.009	ug/L	0.044	475	9	7	86	KED
Cu	63	-0.009	ug/L	0.001	12	49	23	12	KED
Cu	65	-0.010	ug/L	0.003	30	27	12	31	KED
Zn	66	-0.043	ug/L	0.013	29	20	5	86	KED
Zn	67	-0.007	ug/L	0.034	477	4	3	50	KED
As	75	-0.008	ug/L	0.006	73	6	4	20	KED
Se	78	-0.342	ug/L	0.068	20	19	11	11	KED
Y	89		ug/L			261932	240577	0	Standard
Kr	83		ug/L			49	42	16	Standard
[> In-1	115		ug/L			7009	6528	1	KED
Cd	111	0.010	ug/L	0.017	173	4	6	55	KED
Cd	114	-0.002	ug/L	0.002	110	4	3	34	KED
[> In	115		ug/L			367469	333818	1	Standard
Ag	107	-0.004	ug/L	0.001	32	86	39	31	Standard
Ba	135	-0.006	ug/L	0.001	10	23	3	50	Standard
Ba	137	-0.006	ug/L	0.000	6	37	5	33	Standard
[> Tb	159		ug/L			619766	572239	1	Standard
Pb	208	-0.004	ug/L	0.000	4	178	26	23	Standard



## INITIAL CALIBRATION DATA

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GD00029

Instrument: ICPMS2

Calibration Date: 04/11/2023 17:50

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Cadmium-111	0	0	0.1	260	10	172.8	20	170.7	50	173.44	100	161.9
Cadmium-114	0	0	0.1	410	10	438	20	425.55	50	425.08	100	403.95
Zinc-66	0	0	6	275.6667	10	288.4	20	277	50	279.2	100	262.73
Zinc-67	0	0	6	42.33333	10	48.1	20	47.65	50	44.6	100	43.47



**INITIAL CALIBRATION DATA**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC  
Calibration: GD00029

Instrument: ICPMS2  
Calibration Date: 4/11/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Cadmium-111	156.4733	54.2	0.9988		0.998	
Cadmium-114	350.43	49.1	0.9993		0.998	
Zinc-66	230.4994	49.1	0.9991		0.998	
Zinc-67	37.69222	49.4	0.9995		0.998	



# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 9/11/23 Analyst: SD Sequence: SLD0147 Cal: G000029

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L3725		
		-CAL2	L3806		
		-CAL3	L3807		
		-CAL4	L3808		
		-CAL5	L3722		
		-CAL6	L3809		
		-IBL1	—		
	✓	-ICV1			Fe <sup>57</sup> ↑
	↓	-ICB1			Ni↓
	↓	-CAL1			
		-ICV1	L3575		Fe <sup>57</sup> ↑-NO Fe dil run
		-ICB1	L3725		
		-CCV1	L3722		
		-CCB1	L3725		
		-CRU1	L3806		
		-TEA1	L3578		Cr <sup>53</sup> ↑
		-IFB1	L3579		
		-HCV1	L3671		Cr <sup>52</sup> & Mn↓
		-HCV2	L3672		↓
		-IBL2			In-1 NOISY
		-CCV2			
		↓ -CCB2			
		BLD0249-BU4	REN		Genl. noisy-%R & analytes OK
		↓ -BS1	↓		





Analytical Resources,  
Incorporated  
Analytical Chemists and  
Consultants

# ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 4/11/23 Analyst: SD Sequence: — Cal: —

All corrections made by analyst unless otherwise noted. 4/11/23 SD

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23D0043-01	REN	2	
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		23D0164-01		5	Cd noisy-value matches Cr↑ Cr↑P
		↓ -01REI	↓	10	Cr ONLY
		SEQ-TBL3			
		↓ -CCV3			
		↓ -CCB3			
		23D0165-02	REN		No Fe
		↓ -04	↓		Mn↑
		↓ -05	↓		No Fe/Mn
		↓ -06	↓		
		↓ -01	↓		Ge sl. noisy-values matching parent
		BLD0249-DUP1			
		↓ -MS1	↓	↓	
		23A0206-13	SWN	50	Cd ONLY
		↓ -10	↓	100	Zn ONLY
		SEQ-TBL4			
		↓ -CCV4			
		↓ -CCB4			
		23D0080-02	REN	2	
		23D0040-01	↓		
		23D0165-07	↓		No Fe
		↓ -08	↓		↓





## Performance Check Report

### Sample ID: STD Performance Check

Sample Date/Time: Tuesday, April 11, 2023 16:57:55

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\DataSet\Default\STD Performance Check.5635

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		6471.9		6471.932		49.407		0.8	Standard	
In	114.9		49456.2		49456.200		533.758		1.1	Standard	
U	238.1		44573.8		44573.770		470.546		1.1	Standard	
[	CeO	155.9		768.8		0.015		0.001		3.9	Standard
>	Ce	139.9		52218.1		52218.068		496.776		1.0	Standard
[	Ce++	70.0		1272.8		0.024		0.001		2.2	Standard
	Bkgd	220.0		0.3		0.300		0.247		82.4	Standard

### Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: STD Performance Check

Report Date/Time: Tuesday, April 11, 2023 16:59:59

Page 1

## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/11/2023 4:57:50 PM

End Time: 4/11/2023 5:04:14 PM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 6471.93

Obtained Intensity (In 115): 49456.20

Obtained Intensity (U 238): 44573.77

Obtained Intensity (Bkgd 220): 0.30

Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1272.79 / 52218.07)

Obtained Formula (CeO 156 / Ce 140): 0.015 (=768.82 / 52218.07)

Obtained RSD (Be 9): 0.0076

Obtained RSD (In 115): 0.0108

Obtained RSD (U 238): 0.0106

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.56 mm	0.38 mm	56797.69

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.04

Obtained Intensity (In 115): 57097.88

Obtained Formula (CeO 156 / Ce 140): 0.0182 (=941.03 / 51625.11)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.703)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.718)

Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.704)

Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.703)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.971; Intercept = -12.87

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/11/2023 4:57:50 PM

### STD Performance Check

#### Optimization Settings:

Method: STD Performance Check.mth.  
Intensity Criterion: Be 9 > 2000  
Intensity Criterion: In 115 > 40000  
Intensity Criterion: U 238 > 30000  
Intensity Criterion: Bkgd 220 <= 1  
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03  
Formula Criterion: CeO 156 / Ce 140 <= 0.025  
RSD Criterion: Be 9.0122 < 0.05  
RSD Criterion: In 114.904 < 0.05  
RSD Criterion: U 238.05 < 0.05

#### Optimization Results:

##### Initial Try

Obtained Intensity (Be 9): 6471.93  
Obtained Intensity (In 115): 49456.20  
Obtained Intensity (U 238): 44573.77  
Obtained Intensity (Bkgd 220): 0.30  
Obtained Formula (Ce++ 70 / Ce 140): 0.024 (=1272.79 / 52218.07)  
Obtained Formula (CeO 156 / Ce 140): 0.015 (=768.82 / 52218.07)  
Obtained RSD (Be 9): 0.0076  
Obtained RSD (In 115): 0.0108  
Obtained RSD (U 238): 0.0106

[Passed] Optimum value(s): N/A

### Torch Alignment

#### Optimization Settings:

Method: Torch Alignment.mth.  
Intensity Criterion: In 115 Maximum

#### Optimization Results:

	Vertical	Horizontal	Intensity
[Passed]	0.56 mm	0.38 mm	56797.69

### Nebulizer Gas Flow STD/KED [NEB]

#### Optimization Settings:

Method: Optimize.mth.  
Initial Try - Start/End/Step: 1.02/1.06/0.01.  
Intensity Criterion: In 115 Maximum  
Formula Criterion: CeO 156 / Ce 140 <= 0.025

#### Optimization Results:

##### Initial Try

Obtained Intensity (In 115): 57097.88  
Obtained Formula (CeO 156 / Ce 140): 0.0182 (=941.03 / 51625.11)

[Passed] Optimum value(s): 1.04

Mass Calibration and Resolution

Optimization Settings:

Method: Tuning.mth.  
MassCal File: Default.tun  
Iterations: 6  
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution  
Peak height (%) for Res. Opt.: 10

Optimization Results:

Initial Try

Target/Obtained mass (7.016/7.075), Target/Obtained resolution (0.7/0.677) - <Target not achieved>  
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.661) - <Target not achieved>  
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.702)  
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.697)  
[Failed]

Retry 1

Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.703)  
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.718)  
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.704)  
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.703)

[Passed] Optimum value(s): N/A

QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.  
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.971; Intercept = -12.87

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	36065.5
Mg	24	41	-12.5	41343.7
In	115	41	-10.5	61849.6
Ce	140	41	-8.5	56832.8
Pb	208	41	-8	27033.6
U	238	41	-8	46595.9

End Time: 4/11/2023 5:04:14 PM

## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/11/2023 5:04:17 PM

End Time: 4/11/2023 5:05:24 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.89

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/11/2023 5:04:17 PM

### QID STD/DRC

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.89

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	35728.6
Mg	24	41	-13	38864.8
In	115	41	-10	59909.4
Ce	140	41	-9	58957.4
Pb	208	41	-7.5	27346.1
U	238	41	-7.5	47422.6

End Time: 4/11/2023 5:05:24 PM

## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/11/2023 5:08:15 PM

End Time: 4/11/2023 5:09:31 PM

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.77

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/11/2023 5:08:15 PM

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -12.77

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	25246.3
Mg	24	41	-13.5	23018.5
In	115	41	-11	43815.1
Ce	140	41	-9.5	49529.7
Pb	208	41	-6	22906.3
U	238	41	-7	35824.9

End Time: 4/11/2023 5:09:31 PM



## Performance Check Report

### Sample ID: STD Performance Check

Sample Date/Time: Tuesday, April 11, 2023 17:17:38

Sample Description:

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\STD Performance Check.mth

Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\DataSet\Default\STD Performance Check.5648

MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Dual Detector Mode: Pulse

Acq. Dead Time (ns): 35

Current Dead Time (ns): 35

Torch Z position (mm): 0.00

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD	Mode	
Be	9.0		5178.5		5178.539		65.024		1.3	Standard	
In	114.9		41708.7		41708.742		622.159		1.5	Standard	
U	238.1		38961.5		38961.526		266.703		0.7	Standard	
[	CeO	155.9		576.6		0.012		0.000		3.6	Standard
>	Ce	139.9		46813.3		46813.311		161.677		0.3	Standard
[	Ce++	70.0		1288.7		0.028		0.001		4.2	Standard
	Bkgd	220.0		0.3		0.267		0.190		71.3	Standard

### Current Conditions File Data

Current Value	Description
1.02	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Sample ID: STD Performance Check

Report Date/Time: Tuesday, April 11, 2023 17:19:42

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## SmartTune Wizard - Summary

### Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

Start Time: 4/11/2023 5:17:36 PM

End Time: 4/11/2023 5:19:42 PM

STD Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9): 5178.54

Obtained Intensity (In 115): 41708.74

Obtained Intensity (U 238): 38961.53

Obtained Intensity (Bkgd 220): 0.27

Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1288.66 / 46813.31)

Obtained Formula (CeO 156 / Ce 140): 0.012 (=576.61 / 46813.31)

Obtained RSD (Be 9): 0.0126

Obtained RSD (In 115): 0.0149

Obtained RSD (U 238): 0.0068

## SmartTune Wizard - Details

### Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\wizard\SmartTune\ARIdaily\_UCT.swz

### Optimization Status

Start Time: 4/11/2023 5:17:36 PM

### STD Performance Check

#### Optimization Settings:

Method: STD Performance Check.mth.  
Intensity Criterion: Be 9 > 2000  
Intensity Criterion: In 115 > 40000  
Intensity Criterion: U 238 > 30000  
Intensity Criterion: Bkgd 220 <= 1  
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03  
Formula Criterion: CeO 156 / Ce 140 <= 0.025  
RSD Criterion: Be 9.0122 < 0.05  
RSD Criterion: In 114.904 < 0.05  
RSD Criterion: U 238.05 < 0.05

#### Optimization Results:

##### Initial Try

Obtained Intensity (Be 9): 5178.54  
Obtained Intensity (In 115): 41708.74  
Obtained Intensity (U 238): 38961.53  
Obtained Intensity (Bkgd 220): 0.27  
Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1288.66 / 46813.31)  
Obtained Formula (CeO 156 / Ce 140): 0.012 (=576.61 / 46813.31)  
Obtained RSD (Be 9): 0.0126  
Obtained RSD (In 115): 0.0149  
Obtained RSD (U 238): 0.0068

[Passed] Optimum value(s): N/A

End Time: 4/11/2023 5:19:42 PM

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 17:50:55

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L				24613	2	Standard
Cl	37		ug/L				3402266	1	Standard
> Sc	45		ug/L				326207	3	Standard
Cr	52		ug/L				9082	0	Standard
Cr	53		ug/L				181	7	Standard
Fe	54		ug/L				38572	0	Standard
Fe	57		ug/L				7926	1	Standard
Mn	55		ug/L				7961	0	Standard
> Ge	72		ug/L				20956	1	KED
Ni	60		ug/L				589	2	KED
Ni	62		ug/L				104	6	KED
Cu	63		ug/L				38	35	KED
Cu	65		ug/L				21	35	KED
Zn	66		ug/L				15	36	KED
Zn	67		ug/L				1	100	KED
As	75		ug/L				6	31	KED
Y	89		ug/L				195462	2	Standard
Kr	83		ug/L				66	16	Standard
> In-1	115		ug/L				5721	5	KED
Cd	111		ug/L				6	15	KED
Cd	114		ug/L				7	26	KED
> In	115		ug/L				254216	1	Standard
Ag	107		ug/L				13	15	Standard
> Tb	159		ug/L				436097	1	Standard
Pb	208		ug/L				54	24	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 17:55:28

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	26071	1	Standard
Cl	37		ug/L			3402266	3337629	1	Standard
Sc	45		ug/L			326207	333774	1	Standard
Cr	52	0.500	ug/L	0.011	2	9082	14869	1	Standard
Cr	53	0.500	ug/L	0.019	3	181	907	1	Standard
Fe	54	36.000	ug/L	0.891	2	38572	70660	2	Standard
Fe	57	36.000	ug/L	1.518	4	7926	20807	2	Standard
Mn	55	0.500	ug/L	0.027	5	7961	16611	0	Standard
Ge	72		ug/L			20956	20724	0	KED
Ni	60	0.500	ug/L	0.052	10	589	1031	3	KED
Ni	62	0.500	ug/L	0.100	20	104	191	10	KED
Cu	63	0.500	ug/L	0.018	3	38	1021	4	KED
Cu	65	0.500	ug/L	0.017	3	21	529	3	KED
Zn	66	6.000	ug/L	0.214	3	15	1654	4	KED
Zn	67	6.000	ug/L	0.284	4	1	254	5	KED
As	75	0.200	ug/L	0.021	10	6	41	8	KED
Y	89		ug/L			195462	199500	1	Standard
Kr	83		ug/L			66	76	4	Standard
In-1	115		ug/L			5721	6070	3	KED
Cd	111	0.100	ug/L	0.029	28	6	26	18	KED
Cd	114	0.100	ug/L	0.010	9	7	41	4	KED
In	115		ug/L			254216	257216	2	Standard
Ag	107	0.200	ug/L	0.003	1	13	1789	1	Standard
Tb	159		ug/L			436097	444864	2	Standard
Pb	208	0.100	ug/L	0.004	4	54	3050	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:00:01

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	26403	2	Standard
Cl	37		ug/L			3402266	3351229	2	Standard
Sc	45		ug/L			326207	345066	1	Standard
Cr	52	10.001	ug/L	0.243	2	9082	130903	1	Standard
Cr	53	9.999	ug/L	0.082	0	181	14742	1	Standard
Fe	54	1000.033	ug/L	12.908	1	38572	960005	1	Standard
Fe	57	1000.014	ug/L	5.335	0	7926	377032	1	Standard
Mn	55	10.000	ug/L	0.112	1	7961	185394	1	Standard
Ge	72		ug/L			20956	21671	1	KED
Ni	60	9.995	ug/L	0.264	2	589	8533	1	KED
Ni	62	9.989	ug/L	0.677	6	104	1369	7	KED
Cu	63	10.001	ug/L	0.021	0	38	21323	1	KED
Cu	65	10.000	ug/L	0.070	0	21	10565	1	KED
Zn	66	10.012	ug/L	0.193	1	15	2884	1	KED
Zn	67	10.222	ug/L	0.879	8	1	481	9	KED
As	75	10.000	ug/L	0.224	2	6	1643	2	KED
Y	89		ug/L			195462	198792	1	Standard
Kr	83		ug/L			66	59	17	Standard
In-1	115		ug/L			5721	6337	2	KED
Cd	111	10.000	ug/L	0.035	0	6	1728	2	KED
Cd	114	10.000	ug/L	0.316	3	7	4380	2	KED
In	115		ug/L			254216	263470	1	Standard
Ag	107	10.000	ug/L	0.184	1	13	90676	1	Standard
Tb	159		ug/L			436097	457670	0	Standard
Pb	208	10.000	ug/L	0.083	0	54	309968	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:04:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	26987	3	Standard
Cl	37		ug/L			3402266	3359857	0	Standard
Sc	45		ug/L			326207	335486	1	Standard
Cr	52	20.097	ug/L	0.455	2	9082	250951	0	Standard
Cr	53	20.063	ug/L	0.252	1	181	28928	0	Standard
Fe	54	2001.131	ug/L	16.880	0	38572	1831866	0	Standard
Fe	57	1999.924	ug/L	44.018	2	7926	724637	0	Standard
Mn	55	20.042	ug/L	0.393	1	7961	355899	1	Standard
Ge	72		ug/L			20956	21122	0	KED
Ni	60	19.872	ug/L	0.116	0	589	15570	0	KED
Ni	62	19.901	ug/L	0.212	1	104	2506	0	KED
Cu	63	20.022	ug/L	0.436	2	38	41755	3	KED
Cu	65	19.986	ug/L	0.289	1	21	20499	0	KED
Zn	66	19.946	ug/L	0.698	3	15	5540	3	KED
Zn	67	20.196	ug/L	0.763	3	1	953	3	KED
As	75	20.041	ug/L	0.245	1	6	3231	1	KED
Y	89		ug/L			195462	204750	1	Standard
Kr	83		ug/L			66	80	10	Standard
In-1	115		ug/L			5721	6126	2	KED
Cd	111	20.097	ug/L	1.019	5	6	3414	2	KED
Cd	114	20.023	ug/L	0.991	4	7	8511	3	KED
In	115		ug/L			254216	265226	1	Standard
Ag	107	19.901	ug/L	0.278	1	13	178121	0	Standard
Tb	159		ug/L			436097	455510	2	Standard
Pb	208	19.973	ug/L	0.190	0	54	612713	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:09:45

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	25615	2	Standard
Cl	37		ug/L			3402266	3427379	0	Standard
> Sc	45		ug/L			326207	338746	2	Standard
Cr	52	49.957	ug/L	1.158	2	9082	613123	0	Standard
Cr	53	49.888	ug/L	0.670	1	181	71550	2	Standard
Fe	54	4868.330	ug/L	148.754	3	38572	3929352	2	Standard
Fe	57	4989.074	ug/L	127.882	2	7926	1794111	4	Standard
Mn	55	49.992	ug/L	0.140	0	7961	883509	3	Standard
> Ge	72		ug/L			20956	21083	1	KED
Ni	60	49.675	ug/L	1.327	2	589	36780	1	KED
Ni	62	49.826	ug/L	2.131	4	104	6004	4	KED
Cu	63	50.096	ug/L	1.319	2	38	105196	1	KED
Cu	65	49.980	ug/L	0.630	1	21	51035	0	KED
Zn	66	50.077	ug/L	0.379	0	15	13960	0	KED
Zn	67	49.521	ug/L	1.818	3	1	2230	3	KED
As	75	50.027	ug/L	1.053	2	6	8061	0	KED
Y	89		ug/L			195462	203169	2	Standard
Kr	83		ug/L			66	73	23	Standard
> In-1	115		ug/L			5721	6101	0	KED
Cd	111	50.211	ug/L	1.149	2	6	8672	1	KED
Cd	114	50.035	ug/L	0.355	0	7	21254	0	KED
> In	115		ug/L			254216	261133	2	Standard
Ag	107	49.923	ug/L	2.180	4	13	436288	2	Standard
> Tb	159		ug/L			436097	459886	1	Standard
Pb	208	49.920	ug/L	0.425	0	54	1533820	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:16:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	25324	2	Standard
Cl	37		ug/L			3402266	3406181	1	Standard
Sc	45		ug/L			326207	334966	1	Standard
Cr	52	99.391	ug/L	1.561	1	9082	1173853	2	Standard
Cr	53	99.143	ug/L	0.574	0	181	136543	1	Standard
Fe	54	9859.310	ug/L	65.020	0	38572	7482109	1	Standard
Fe	57	9716.519	ug/L	279.401	2	7926	3149304	1	Standard
Mn	55	99.496	ug/L	1.426	1	7961	1701908	1	Standard
Ge	72		ug/L			20956	20832	0	KED
Ni	60	99.035	ug/L	2.667	2	589	69661	2	KED
Ni	62	99.266	ug/L	1.318	1	104	11440	1	KED
Cu	63	99.183	ug/L	0.170	0	38	200348	0	KED
Cu	65	99.303	ug/L	1.095	1	21	97904	1	KED
Zn	66	98.896	ug/L	2.156	2	15	26273	1	KED
Zn	67	99.461	ug/L	1.784	1	1	4347	1	KED
As	75	99.290	ug/L	1.186	1	6	15441	1	KED
Y	89		ug/L			195462	198518	2	Standard
Kr	83		ug/L			66	113	13	Standard
In-1	115		ug/L			5721	5990	0	KED
Cd	111	98.927	ug/L	0.889	0	6	16190	0	KED
Cd	114	99.261	ug/L	1.161	1	7	40395	1	KED
In	115		ug/L			254216	259999	1	Standard
Ag	107	98.620	ug/L	2.159	2	13	820751	0	Standard
Tb	159		ug/L			436097	450799	1	Standard
Pb	208	99.880	ug/L	1.910	1	54	2995674	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:23:38

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	24769	0	Standard
Cl	37		ug/L			3402266	3332333	1	Standard
[> Sc	45		ug/L			326207	324212	2	Standard
Cr	52	-0.005	ug/L	0.007	144	9082	8966	1	Standard
Cr	53	-0.007	ug/L	0.003	45	181	171	0	Standard
Fe	54	-0.602	ug/L	1.202	199	38572	37885	0	Standard
Fe	57	-0.322	ug/L	0.358	110	7926	7775	0	Standard
Mn	55	-0.175	ug/L	0.008	4	7961	5030	1	Standard
[> Ge	72		ug/L			20956	19976	1	KED
Ni	60	-0.346	ug/L	0.089	25	589	329	16	KED
Ni	62	-0.432	ug/L	0.094	21	104	52	21	KED
Cu	63	0.009	ug/L	0.006	58	38	54	20	KED
Cu	65	0.013	ug/L	0.003	24	21	33	8	KED
Zn	66	0.025	ug/L	0.012	48	15	21	13	KED
Zn	67	0.108	ug/L	0.024	22	1	6	17	KED
As	75	0.022	ug/L	0.014	61	6	9	20	KED
Y	89		ug/L			195462	190099	1	Standard
Kr	83		ug/L			66	75	25	Standard
[> In-1	115		ug/L			5721	5799	2	KED
Cd	111	-0.007	ug/L	0.007	100	6	6	18	KED
Cd	114	-0.015	ug/L	0.000	1	7	1	8	KED
[> In	115		ug/L			254216	255475	1	Standard
Ag	107	0.005	ug/L	0.000	5	13	54	4	Standard
[> Tb	159		ug/L			436097	431457	1	Standard
Pb	208	0.003	ug/L	0.001	24	54	146	14	Standard

## Sample Information

Sample Date/Time: Tuesday, April 11, 2023 18:16:21

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED

Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123.cal

## Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	<b>0.9999</b>	0.035	0.50	10	20	50	100
Cr	53	<b>0.9999</b>	0.004	0.50	10	20	50	100
Fe	54	<b>0.9992</b>	0.002	36.00	1000	2000	5000	10000
Fe	57	<b>0.9987</b>	0.001	36.00	1000	2000	5000	10000
Mn	55	<b>1.0000</b>	0.051	0.50	10	20	50	100
Ge	72							
Ni	60	<b>0.9998</b>	0.033	0.50	10	20	50	100
Ni	62	<b>0.9999</b>	0.005	0.50	10	20	50	100
Cu	63	<b>0.9999</b>	0.097	0.50	10	20	50	100
Cu	65	<b>0.9999</b>	0.047	0.50	10	20	50	100
Zn	66	<b>0.9998</b>	0.013	6.00	10	20	50	100
Zn	67	<b>0.9999</b>	0.002	6.00	10	20	50	100
As	75	<b>0.9999</b>	0.007	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	<b>0.9998</b>	0.027	0.10	10	20	50	100
Cd	114	<b>0.9999</b>	0.068	0.10	10	20	50	100
In	115							
Ag	107	<b>0.9997</b>	0.032	0.20	10	20	50	100
Tb	159							
Pb	208	<b>1.0000</b>	0.067	0.10	10	20	50	100

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:30:56

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	27383	1	Standard
Cl	37		ug/L			3402266	3386662	1	Standard
> Sc	45		ug/L			326207	342464	0	Standard
Cr	52	51.114	ug/L	1.188	2	9082	621842	2	Standard
Cr	53	52.321	ug/L	0.613	1	181	73762	0	Standard
Fe	54	5150.342	ug/L	104.920	2	38572	4015130	1	Standard
Fe	57	5620.726	ug/L	84.369	1	7926	1866514	1	Standard
Mn	55	51.516	ug/L	0.641	1	7961	905078	1	Standard
> Ge	72		ug/L			20956	20878	1	KED
Ni	60	53.327	ug/L	0.696	1	589	37861	0	KED
Ni	62	52.492	ug/L	0.921	1	104	6111	0	KED
Cu	63	52.559	ug/L	0.584	1	38	106419	1	KED
Cu	65	52.092	ug/L	0.989	1	21	51476	1	KED
Zn	66	50.275	ug/L	1.261	2	15	13394	3	KED
Zn	67	49.810	ug/L	0.520	1	1	2183	2	KED
As	75	48.654	ug/L	0.560	1	6	7586	1	KED
Y	89		ug/L			195462	205103	2	Standard
Kr	83		ug/L			66	76	10	Standard
> In-1	115		ug/L			5721	6026	2	KED
Cd	111	51.944	ug/L	1.579	3	6	8552	1	KED
Cd	114	52.554	ug/L	0.716	1	7	21515	1	KED
> In	115		ug/L			254216	261375	1	Standard
Ag	107	54.288	ug/L	0.936	1	13	454236	0	Standard
> Tb	159		ug/L			436097	453878	0	Standard
Pb	208	52.250	ug/L	0.917	1	54	1578073	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:38:13

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24613	22932	2	Standard
Cl	37		ug/L			3402266	3268983	1	Standard
Sc	45		ug/L			326207	311503	0	Standard
Cr	52	0.004	ug/L	0.007	185	9082	8716	0	Standard
Cr	53	-0.003	ug/L	0.008	252	181	168	5	Standard
Fe	54	0.139	ug/L	2.196	1576	38572	36927	3	Standard
Fe	57	0.402	ug/L	0.130	32	7926	7689	0	Standard
Mn	55	-0.226	ug/L	0.001	0	7961	4025	1	Standard
Ge	72		ug/L			20956	20055	2	KED
Ni	60	-0.461	ug/L	0.036	7	589	253	7	KED
Ni	62	-0.436	ug/L	0.132	30	104	51	25	KED
Cu	63	0.003	ug/L	0.003	117	38	41	11	KED
Cu	65	-0.001	ug/L	0.006	572	21	19	33	KED
Zn	66	0.013	ug/L	0.017	131	15	18	21	KED
Zn	67	0.033	ug/L	0.070	210	1	3	91	KED
As	75	0.020	ug/L	0.015	75	6	9	22	KED
Y	89		ug/L			195462	186211	1	Standard
Kr	83		ug/L			66	64	16	Standard
In-1	115		ug/L			5721	5896	0	KED
Cd	111	-0.001	ug/L	0.015	1043	6	6	34	KED
Cd	114	-0.004	ug/L	0.010	259	7	6	62	KED
In	115		ug/L			254216	251940	1	Standard
Ag	107	0.005	ug/L	0.002	34	13	52	24	Standard
Tb	159		ug/L			436097	424657	2	Standard
Pb	208	0.001	ug/L	0.001	69	54	76	22	Standard

## ICP-MS Quantitative Analysis - Summary Report

**Sample ID: SEQ-CAL1**

**Sample Dil Factor:**

**Comments:**

**Sample Date/Time: Tuesday, April 11, 2023 18:43:45**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123.cal

	Analyte Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13	ug/L				23126	1	Standard
	Cl	37	ug/L				3243830	1	Standard
[>	Sc	45	ug/L				315446	1	Standard
	Cr	52	ug/L				8780	2	Standard
	Cr	53	ug/L				147	7	Standard
	Fe	54	ug/L				36655	1	Standard
	Fe	57	ug/L				7652	1	Standard
	Mn	55	ug/L				3853	0	Standard
[>	Ge	72	ug/L				20373	1	KED
	Ni	60	ug/L				245	2	KED
	Ni	62	ug/L				46	12	KED
	Cu	63	ug/L				39	27	KED
	Cu	65	ug/L				19	36	KED
	Zn	66	ug/L				16	56	KED
	Zn	67	ug/L				5	114	KED
	As	75	ug/L				7	32	KED
	Y	89	ug/L				184534	0	Standard
	Kr	83	ug/L				71	17	Standard
[>	In-1	115	ug/L				5626	2	KED
	Cd	111	ug/L				5	20	KED
	Cd	114	ug/L				11	16	KED
[>	In	115	ug/L				246182	1	Standard
	Ag	107	ug/L				24	27	Standard
[>	Tb	159	ug/L				417046	1	Standard
	Pb	208	ug/L				62	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:48:18

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	26392	4	Standard
Cl	37		ug/L			3243830	3318693	1	Standard
> Sc	45		ug/L			315446	327947	2	Standard
Cr	52	52.209	ug/L	1.199	2	8780	607867	0	Standard
Cr	53	52.804	ug/L	0.057	0	147	71258	1	Standard
Fe	54	5156.152	ug/L	113.910	2	36655	3847940	1	Standard
Fe	57	5674.937	ug/L	40.459	0	7652	1804727	2	Standard
Mn	55	52.746	ug/L	0.366	0	3853	883154	1	Standard
> Ge	72		ug/L			20373	20627	3	KED
Ni	60	52.647	ug/L	1.754	3	245	36578	0	KED
Ni	62	52.412	ug/L	2.023	3	46	5968	0	KED
Cu	63	51.659	ug/L	2.526	4	39	103216	1	KED
Cu	65	53.363	ug/L	1.469	2	19	52079	3	KED
Zn	66	50.533	ug/L	1.153	2	16	13294	1	KED
Zn	67	54.046	ug/L	2.942	5	5	2339	1	KED
As	75	49.188	ug/L	1.429	2	7	7573	1	KED
Y	89		ug/L			184534	194756	4	Standard
Kr	83		ug/L			71	89	9	Standard
> In-1	115		ug/L			5626	5723	2	KED
Cd	111	53.668	ug/L	2.233	4	5	8387	1	KED
Cd	114	53.461	ug/L	2.311	4	11	20777	1	KED
> In	115		ug/L			246182	253518	0	Standard
Ag	107	54.941	ug/L	1.503	2	24	445982	2	Standard
> Tb	159		ug/L			417046	446201	2	Standard
Pb	208	52.822	ug/L	1.362	2	62	1568023	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 18:55:34

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22449	3	Standard
Cl	37		ug/L			3243830	3219788	1	Standard
Sc	45		ug/L			315446	315309	1	Standard
Cr	52	0.003	ug/L	0.011	422	8780	8805	0	Standard
Cr	53	0.011	ug/L	0.009	82	147	161	7	Standard
Fe	54	-0.475	ug/L	0.651	136	36655	36305	2	Standard
Fe	57	-0.351	ug/L	0.430	122	7652	7542	2	Standard
Mn	55	-0.019	ug/L	0.005	26	3853	3548	1	Standard
Ge	72		ug/L			20373	19249	2	KED
Ni	60	0.008	ug/L	0.030	385	245	236	5	KED
Ni	62	0.048	ug/L	0.106	221	46	49	24	KED
Cu	63	0.004	ug/L	0.005	140	39	43	18	KED
Cu	65	0.006	ug/L	0.003	53	19	24	12	KED
Zn	66	-0.014	ug/L	0.013	92	16	12	24	KED
Zn	67	0.007	ug/L	0.053	796	5	5	43	KED
As	75	-0.003	ug/L	0.017	603	7	6	38	KED
Y	89		ug/L			184534	184650	0	Standard
Kr	83		ug/L			71	69	8	Standard
In-1	115		ug/L			5626	5611	2	KED
Cd	111	0.004	ug/L	0.010	233	5	6	24	KED
Cd	114	-0.007	ug/L	0.011	160	11	8	46	KED
In	115		ug/L			246182	243760	1	Standard
Ag	107	0.002	ug/L	0.000	16	24	38	5	Standard
Tb	159		ug/L			417046	421397	1	Standard
Pb	208	0.001	ug/L	0.000	58	62	79	12	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:00:07

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	24075	1	Standard
Cl	37		ug/L			3243830	3319831	1	Standard
> Sc	45		ug/L			315446	323705	3	Standard
Cr	52	50.484	ug/L	2.220	4	8780	580021	0	Standard
Cr	53	52.019	ug/L	2.336	4	147	69222	1	Standard
Fe	54	5106.666	ug/L	212.778	4	36655	3759057	0	Standard
Fe	57	5425.999	ug/L	230.263	4	7652	1701830	1	Standard
Mn	55	51.691	ug/L	1.523	2	3853	853829	1	Standard
> Ge	72		ug/L			20373	20254	1	KED
Ni	60	51.425	ug/L	1.731	3	245	35106	1	KED
Ni	62	51.182	ug/L	1.527	2	46	5730	3	KED
Cu	63	50.575	ug/L	0.528	1	39	99335	0	KED
Cu	65	51.056	ug/L	1.374	2	19	48936	1	KED
Zn	66	51.069	ug/L	1.459	2	16	13201	3	KED
Zn	67	50.963	ug/L	1.550	3	5	2170	4	KED
As	75	51.145	ug/L	1.327	2	7	7735	1	KED
Y	89		ug/L			184534	193403	2	Standard
Kr	83		ug/L			71	66	13	Standard
> In-1	115		ug/L			5626	5838	0	KED
Cd	111	51.192	ug/L	0.177	0	5	8168	1	KED
Cd	114	50.755	ug/L	0.424	0	11	20139	1	KED
> In	115		ug/L			246182	253542	1	Standard
Ag	107	52.118	ug/L	1.879	3	24	422955	2	Standard
> Tb	159		ug/L			417046	441608	1	Standard
Pb	208	51.659	ug/L	0.163	0	62	1518133	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:07:04

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22619	1	Standard
Cl	37		ug/L			3243830	3242570	1	Standard
Sc	45		ug/L			315446	307187	1	Standard
Cr	52	-0.007	ug/L	0.008	106	8780	8470	1	Standard
Cr	53	0.007	ug/L	0.011	152	147	152	10	Standard
Fe	54	0.246	ug/L	1.894	770	36655	35855	2	Standard
Fe	57	-0.145	ug/L	0.536	370	7652	7408	1	Standard
Mn	55	-0.048	ug/L	0.003	6	3853	2997	0	Standard
Ge	72		ug/L			20373	20051	2	KED
Ni	60	-0.077	ug/L	0.030	39	245	189	8	KED
Ni	62	-0.102	ug/L	0.076	74	46	34	22	KED
Cu	63	0.000	ug/L	0.004	1469	39	39	21	KED
Cu	65	0.009	ug/L	0.005	55	19	27	17	KED
Zn	66	-0.001	ug/L	0.031	2991	16	15	48	KED
Zn	67	-0.073	ug/L	0.080	109	5	1	173	KED
As	75	-0.009	ug/L	0.012	137	7	6	26	KED
Y	89		ug/L			184534	184149	2	Standard
Kr	83		ug/L			71	52	5	Standard
In-1	115		ug/L			5626	5677	1	KED
Cd	111	0.008	ug/L	0.016	205	5	6	37	KED
Cd	114	-0.003	ug/L	0.007	214	11	10	29	KED
In	115		ug/L			246182	246931	1	Standard
Ag	107	0.002	ug/L	0.002	87	24	43	35	Standard
Tb	159		ug/L			417046	419435	0	Standard
Pb	208	0.000	ug/L	0.000	49	62	76	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:11:39

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	20831	0	Standard
Cl	37		ug/L			3243830	3219314	0	Standard
> Sc	45		ug/L			315446	314765	1	Standard
Cr	52	0.463	ug/L	0.017	3	8780	13854	1	Standard
Cr	53	0.509	ug/L	0.014	2	147	804	0	Standard
Fe	54	42.337	ug/L	2.702	6	36655	66582	0	Standard
Fe	57	38.753	ug/L	1.118	2	7652	19408	1	Standard
Mn	55	0.443	ug/L	0.014	3	3853	10934	1	Standard
> Ge	72		ug/L			20373	19839	1	KED
Ni	60	0.432	ug/L	0.066	15	245	525	7	KED
Ni	62	0.444	ug/L	0.049	11	46	93	4	KED
Cu	63	0.538	ug/L	0.024	4	39	1073	5	KED
Cu	65	0.523	ug/L	0.040	7	19	509	5	KED
Zn	66	6.472	ug/L	0.187	2	16	1652	3	KED
Zn	67	6.301	ug/L	0.624	9	5	267	11	KED
As	75	0.171	ug/L	0.009	5	7	32	3	KED
Y	89		ug/L			184534	186422	2	Standard
Kr	83		ug/L			71	55	5	Standard
> In-1	115		ug/L			5626	5731	3	KED
Cd	111	0.077	ug/L	0.027	34	5	17	22	KED
Cd	114	0.071	ug/L	0.028	39	11	39	30	KED
> In	115		ug/L			246182	253134	1	Standard
Ag	107	0.207	ug/L	0.012	5	24	1703	4	Standard
> Tb	159		ug/L			417046	418371	2	Standard
Pb	208	0.107	ug/L	0.005	4	62	3040	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:16:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	90583	0	Standard
Cl	37		ug/L			3243830	6824255	0	Standard
> Sc	45		ug/L			315446	334859	2	Standard
Cr	52	0.745	ug/L	0.037	4	8780	18044	0	Standard
Cr	53	2.757	ug/L	0.100	3	147	3945	1	Standard
Fe	54	19128.842	ug/L	298.685	1	36655	14470832	1	Standard
Fe	57	18854.571	ug/L	268.501	1	7652	6101956	1	Standard
Mn	55	0.042	ug/L	0.006	14	3853	4801	1	Standard
> Ge	72		ug/L			20373	19745	1	KED
Ni	60	-0.011	ug/L	0.037	318	245	230	10	KED
Ni	62	0.048	ug/L	0.085	176	46	50	18	KED
Cu	63	0.053	ug/L	0.005	9	39	139	6	KED
Cu	65	0.058	ug/L	0.009	15	19	73	11	KED
Zn	66	0.249	ug/L	0.022	8	16	78	6	KED
Zn	67	0.173	ug/L	0.073	42	5	12	24	KED
As	75	0.031	ug/L	0.011	36	7	11	14	KED
Y	89		ug/L			184534	194893	2	Standard
Kr	83		ug/L			71	118	7	Standard
> In-1	115		ug/L			5626	5660	0	KED
Cd	111	0.096	ug/L	0.017	17	5	20	13	KED
Cd	114	0.066	ug/L	0.016	23	11	36	16	KED
> In	115		ug/L			246182	248455	0	Standard
Ag	107	0.012	ug/L	0.003	23	24	122	18	Standard
> Tb	159		ug/L			417046	441717	1	Standard
Pb	208	0.041	ug/L	0.001	2	62	1274	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:20:54

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	94032	3	Standard
Cl	37		ug/L			3243830	7231635	5	Standard
Sc	45		ug/L			315446	346087	0	Standard
Cr	52	20.409	ug/L	0.365	1	8780	256726	2	Standard
Cr	53	23.324	ug/L	0.198	0	147	33305	0	Standard
Fe	54	19546.683	ug/L	415.698	2	36655	15284045	1	Standard
Fe	57	19330.767	ug/L	760.352	3	7652	6465490	3	Standard
Mn	55	19.795	ug/L	0.073	0	3853	352424	0	Standard
Ge	72		ug/L			20373	20644	1	KED
Ni	60	19.953	ug/L	0.218	1	245	14040	1	KED
Ni	62	20.317	ug/L	0.910	4	46	2346	3	KED
Cu	63	19.899	ug/L	0.167	0	39	39869	2	KED
Cu	65	19.880	ug/L	0.519	2	19	19437	2	KED
Zn	66	18.506	ug/L	0.769	4	16	4884	2	KED
Zn	67	17.004	ug/L	0.444	2	5	741	4	KED
As	75	19.564	ug/L	0.576	2	7	3020	1	KED
Y	89		ug/L			184534	202087	2	Standard
Kr	83		ug/L			71	115	9	Standard
In-1	115		ug/L			5626	5750	2	KED
Cd	111	19.641	ug/L	0.731	3	5	3087	1	KED
Cd	114	19.525	ug/L	0.806	4	11	7632	2	KED
In	115		ug/L			246182	258482	1	Standard
Ag	107	19.050	ug/L	0.379	1	24	157692	2	Standard
Tb	159		ug/L			417046	456249	4	Standard
Pb	208	0.033	ug/L	0.002	6	62	1056	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:25:20

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	26899	3	Standard
Cl	37		ug/L			3243830	3362038	0	Standard
Sc	45		ug/L			315446	330768	3	Standard
Cr	52	176.744	ug/L	4.448	2	8780	2053422	2	Standard
Cr	53	204.946	ug/L	7.431	3	147	278306	0	Standard
Fe	54	19623.634	ug/L	739.806	3	36655	14654992	1	Standard
Fe	57	19233.232	ug/L	393.661	2	7652	6147326	1	Standard
Mn	55	179.098	ug/L	1.462	0	3853	3014547	2	Standard
Ge	72		ug/L			20373	20291	1	KED
Ni	60	200.801	ug/L	4.617	2	245	136645	1	KED
Ni	62	201.044	ug/L	3.005	1	46	22409	0	KED
Cu	63	197.045	ug/L	1.886	0	39	387631	0	KED
Cu	65	196.555	ug/L	4.712	2	19	188696	0	KED
Zn	66	192.109	ug/L	3.719	1	16	49700	2	KED
Zn	67	191.684	ug/L	4.500	2	5	8161	1	KED
As	75	198.744	ug/L	3.732	1	7	30097	0	KED
Y	89		ug/L			184534	194593	2	Standard
Kr	83		ug/L			71	126	5	Standard
In-1	115		ug/L			5626	5670	3	KED
Cd	111	196.795	ug/L	4.379	2	5	30466	1	KED
Cd	114	195.903	ug/L	4.769	2	11	75428	1	KED
In	115		ug/L			246182	249376	0	Standard
Ag	107	196.336	ug/L	4.308	2	24	1567507	1	Standard
Tb	159		ug/L			417046	440466	1	Standard
Pb	208	194.623	ug/L	3.029	1	62	5704052	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:29:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	26683	2	Standard
Cl	37		ug/L			3243830	3331832	2	Standard
Sc	45		ug/L			315446	322805	2	Standard
Cr	52	265.710	ug/L	8.976	3	8780	3007623	1	Standard
Cr	53	301.175	ug/L	8.806	2	147	399158	0	Standard
Fe	54	28809.371	ug/L	271.935	0	36655	20991887	1	Standard
Fe	57	28788.399	ug/L	476.376	1	7652	8976625	0	Standard
Mn	55	262.676	ug/L	6.755	2	3853	4311896	0	Standard
Ge	72		ug/L			20373	19275	1	KED
Ni	60	302.639	ug/L	4.621	1	245	195519	0	KED
Ni	62	299.098	ug/L	4.728	1	46	31647	1	KED
Cu	63	294.280	ug/L	9.539	3	39	549777	2	KED
Cu	65	291.541	ug/L	4.714	1	19	265871	0	KED
Zn	66	277.604	ug/L	5.583	2	16	68198	0	KED
Zn	67	277.098	ug/L	3.469	1	5	11205	0	KED
As	75	297.199	ug/L	4.817	1	7	42748	0	KED
Y	89		ug/L			184534	184975	2	Standard
Kr	83		ug/L			71	173	10	Standard
In-1	115		ug/L			5626	5450	2	KED
Cd	111	296.326	ug/L	8.012	2	5	44094	0	KED
Cd	114	296.110	ug/L	8.272	2	11	109594	1	KED
In	115		ug/L			246182	241714	1	Standard
Ag	107	275.791	ug/L	8.991	3	24	2133704	1	Standard
Tb	159		ug/L			417046	438579	0	Standard
Pb	208	279.219	ug/L	4.139	1	62	8148677	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:37:08

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	23808	1	Standard
Cl	37		ug/L			3243830	3338158	0	Standard
> Sc	45		ug/L			315446	318688	1	Standard
Cr	52	-0.045	ug/L	0.009	20	8780	8367	2	Standard
Cr	53	0.089	ug/L	0.013	14	147	265	7	Standard
Fe	54	-0.327	ug/L	0.664	202	36655	36794	0	Standard
Fe	57	0.354	ug/L	0.149	42	7652	7840	1	Standard
Mn	55	-0.100	ug/L	0.003	3	3853	2268	2	Standard
> Ge	72		ug/L			20373	19521	1	KED
Ni	60	-0.144	ug/L	0.014	9	245	141	6	KED
Ni	62	-0.094	ug/L	0.010	10	46	34	3	KED
Cu	63	0.009	ug/L	0.004	41	39	55	11	KED
Cu	65	0.008	ug/L	0.005	63	19	26	18	KED
Zn	66	0.034	ug/L	0.030	89	16	24	29	KED
Zn	67	-0.011	ug/L	0.096	884	5	4	89	KED
As	75	0.010	ug/L	0.033	347	7	8	56	KED
Y	89		ug/L			184534	184403	2	Standard
Kr	83		ug/L			71	82	24	Standard
> In-1	115		ug/L			5626	5004	13	KED
Cd	111	0.043	ug/L	0.010	23	5	10	22	KED
Cd	114	0.013	ug/L	0.002	17	11	14	8	KED
> In	115		ug/L			246182	245086	0	Standard
Ag	107	0.011	ug/L	0.002	18	24	107	13	Standard
> Tb	159		ug/L			417046	412230	1	Standard
Pb	208	0.005	ug/L	0.001	26	62	186	19	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:43:35

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	23966	3	Standard
Cl	37		ug/L			3243830	3319018	0	Standard
Sc	45		ug/L			315446	326587	1	Standard
Cr	52	51.088	ug/L	0.948	1	8780	592586	0	Standard
Cr	53	51.642	ug/L	1.649	3	147	69377	1	Standard
Fe	54	5047.542	ug/L	99.738	1	36655	3751884	0	Standard
Fe	57	5520.656	ug/L	135.224	2	7652	1748097	1	Standard
Mn	55	50.811	ug/L	2.158	4	3853	846962	2	Standard
Ge	72		ug/L			20373	19921	0	KED
Ni	60	51.771	ug/L	1.149	2	245	34768	1	KED
Ni	62	50.251	ug/L	1.638	3	46	5533	2	KED
Cu	63	50.666	ug/L	1.088	2	39	97878	1	KED
Cu	65	51.196	ug/L	0.557	1	19	48280	1	KED
Zn	66	52.385	ug/L	0.662	1	16	13316	0	KED
Zn	67	51.817	ug/L	1.868	3	5	2169	3	KED
As	75	50.672	ug/L	0.197	0	7	7540	1	KED
Y	89		ug/L			184534	190037	2	Standard
Kr	83		ug/L			71	71	19	Standard
In-1	115		ug/L			5626	5835	0	KED
Cd	111	50.489	ug/L	0.015	0	5	8051	0	KED
Cd	114	50.288	ug/L	0.665	1	11	19944	1	KED
In	115		ug/L			246182	251895	1	Standard
Ag	107	53.767	ug/L	1.263	2	24	433566	1	Standard
Tb	159		ug/L			417046	439104	1	Standard
Pb	208	51.677	ug/L	1.095	2	62	1509734	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 19:50:52

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22271	5	Standard
Cl	37		ug/L			3243830	3272952	3	Standard
> Sc	45		ug/L			315446	308824	2	Standard
Cr	52	-0.032	ug/L	0.003	10	8780	8246	1	Standard
Cr	53	0.043	ug/L	0.003	6	147	199	3	Standard
Fe	54	-1.867	ug/L	0.771	41	36655	34594	3	Standard
Fe	57	0.946	ug/L	0.784	82	7652	7772	2	Standard
Mn	55	-0.096	ug/L	0.003	2	3853	2262	0	Standard
> Ge	72		ug/L			20373	18456	0	KED
Ni	60	-0.112	ug/L	0.014	12	245	153	5	KED
Ni	62	-0.126	ug/L	0.060	47	46	29	20	KED
Cu	63	-0.000	ug/L	0.003	5610	39	35	16	KED
Cu	65	-0.002	ug/L	0.003	147	19	15	18	KED
Zn	66	-0.004	ug/L	0.019	444	16	13	31	KED
Zn	67	-0.021	ug/L	0.085	412	5	3	86	KED
As	75	0.001	ug/L	0.010	1696	7	6	19	KED
Y	89		ug/L			184534	179065	1	Standard
Kr	83		ug/L			71	58	25	Standard
> In-1	115		ug/L			5626	5522	1	KED
Cd	111	0.001	ug/L	0.013	2142	5	5	36	KED
Cd	114	-0.011	ug/L	0.010	89	11	6	57	KED
> In	115		ug/L			246182	239893	1	Standard
Ag	107	0.004	ug/L	0.000	5	24	57	1	Standard
> Tb	159		ug/L			417046	409090	1	Standard
Pb	208	0.001	ug/L	0.000	18	62	88	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0249-BLK1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 19:55:36**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	31720	4	Standard
Cl	37		ug/L			3243830	3208044	0	Standard
> Sc	45		ug/L			315446	310290	3	Standard
Cr	52	<b>0.032</b>	ug/L	0.031	96	8780	8976	2	Standard
Cr	53	<b>0.048</b>	ug/L	0.016	33	147	206	6	Standard
Fe	54	<b>-2.070</b>	ug/L	1.719	83	36655	34586	1	Standard
Fe	57	<b>0.881</b>	ug/L	1.247	141	7652	7783	1	Standard
Mn	55	<b>-0.057</b>	ug/L	0.005	8	3853	2894	1	Standard
> Ge	72		ug/L			20373	18562	6	KED
Ni	60	<b>-0.086</b>	ug/L	0.051	59	245	168	12	KED
Ni	62	<b>-0.109</b>	ug/L	0.081	74	46	31	28	KED
Cu	63	<b>0.025</b>	ug/L	0.005	21	39	80	10	KED
Cu	65	<b>0.026</b>	ug/L	0.013	49	19	40	26	KED
Zn	66	<b>0.534</b>	ug/L	0.033	6	16	141	10	KED
Zn	67	<b>0.641</b>	ug/L	0.209	32	5	29	32	KED
As	75	<b>-0.021</b>	ug/L	0.011	51	7	3	34	KED
Y	89		ug/L			184534	181866	1	Standard
Kr	83		ug/L			71	51	16	Standard
> In-1	115		ug/L			5626	5400	2	KED
Cd	111	<b>0.017</b>	ug/L	0.014	83	5	7	25	KED
Cd	114	<b>-0.011</b>	ug/L	0.012	112	11	6	66	KED
> In	115		ug/L			246182	248178	2	Standard
Ag	107	<b>0.002</b>	ug/L	0.001	37	24	40	16	Standard
> Tb	159		ug/L			417046	416434	1	Standard
Pb	208	<b>0.007</b>	ug/L	0.000	4	62	248	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0249-BS1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:00:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	35028	0	Standard
Cl	37		ug/L			3243830	3325019	2	Standard
> Sc	45		ug/L			315446	326059	1	Standard
Cr	52	<b>25.829</b>	ug/L	0.575	2	8780	303608	1	Standard
Cr	53	<b>25.917</b>	ug/L	0.566	2	147	34843	0	Standard
Fe	54	<b>5057.035</b>	ug/L	129.495	2	36655	3752791	1	Standard
Fe	57	<b>5597.551</b>	ug/L	243.871	4	7652	1769020	2	Standard
Mn	55	<b>25.357</b>	ug/L	0.354	1	3853	424171	1	Standard
> Ge	72		ug/L			20373	19883	1	KED
Ni	60	<b>25.934</b>	ug/L	0.346	1	245	17503	0	KED
Ni	62	<b>26.128</b>	ug/L	0.339	1	46	2894	2	KED
Cu	63	<b>26.302</b>	ug/L	0.411	1	39	50734	1	KED
Cu	65	<b>25.814</b>	ug/L	0.759	2	19	24303	2	KED
Zn	66	<b>82.379</b>	ug/L	2.819	3	16	20887	2	KED
Zn	67	<b>82.039</b>	ug/L	2.548	3	5	3425	1	KED
As	75	<b>25.625</b>	ug/L	0.152	0	7	3809	0	KED
Y	89		ug/L			184534	192519	0	Standard
Kr	83		ug/L			71	61	24	Standard
> In-1	115		ug/L			5626	5549	2	KED
Cd	111	<b>27.047</b>	ug/L	0.800	2	5	4102	2	KED
Cd	114	<b>26.406</b>	ug/L	0.776	2	11	9959	0	KED
> In	115		ug/L			246182	247457	1	Standard
Ag	107	<b>26.973</b>	ug/L	0.434	1	24	213679	0	Standard
> Tb	159		ug/L			417046	438382	1	Standard
Pb	208	<b>26.442</b>	ug/L	0.315	1	62	771375	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0043-01**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:04:41**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	40939	2	Standard
Cl	37		ug/L			3243830	3449660	0	Standard
> Sc	45		ug/L			315446	354460	0	Standard
Cr	52	<b>19.685</b>	ug/L	0.079	0	8780	253934	0	Standard
Cr	53	<b>19.846</b>	ug/L	0.124	0	147	29049	0	Standard
Fe	54	<b>37.365</b>	ug/L	3.870	10	36655	71025	3	Standard
Fe	57	<b>78.304</b>	ug/L	1.950	2	7652	35390	1	Standard
Mn	55	<b>6.731</b>	ug/L	0.206	3	3853	125575	2	Standard
> Ge	72		ug/L			20373	20228	1	KED
Ni	60	<b>0.509</b>	ug/L	0.048	9	245	588	4	KED
Ni	62	<b>0.674</b>	ug/L	0.122	18	46	121	10	KED
Cu	63	<b>4.715</b>	ug/L	0.145	3	39	9284	3	KED
Cu	65	<b>4.703</b>	ug/L	0.067	1	19	4520	0	KED
Zn	66	<b>2.546</b>	ug/L	0.065	2	16	673	3	KED
Zn	67	<b>2.502</b>	ug/L	0.256	10	5	111	8	KED
As	75	<b>0.074</b>	ug/L	0.020	27	7	18	17	KED
Y	89		ug/L			184534	197653	0	Standard
Kr	83		ug/L			71	67	20	Standard
> In-1	115		ug/L			5626	5396	4	KED
Cd	111	<b>0.036</b>	ug/L	0.022	60	5	10	32	KED
Cd	114	<b>-0.008</b>	ug/L	0.004	52	11	7	14	KED
> In	115		ug/L			246182	254089	1	Standard
Ag	107	<b>0.003</b>	ug/L	0.001	31	24	51	16	Standard
> Tb	159		ug/L			417046	433555	2	Standard
Pb	208	<b>0.024</b>	ug/L	0.002	8	62	761	5	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0043-02**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:09:36**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	40345	1	Standard
Cl	37		ug/L			3243830	3423031	1	Standard
> Sc	45		ug/L			315446	350990	1	Standard
Cr	52	<b>5.823</b>	ug/L	0.075	1	8780	81255	0	Standard
Cr	53	<b>5.987</b>	ug/L	0.039	0	147	8792	1	Standard
Fe	54	<b>21.174</b>	ug/L	0.413	1	36655	57536	1	Standard
Fe	57	<b>66.247</b>	ug/L	1.335	2	7652	30957	0	Standard
Mn	55	<b>5.276</b>	ug/L	0.035	0	3853	98411	0	Standard
> Ge	72		ug/L			20373	20271	1	KED
Ni	60	<b>0.445</b>	ug/L	0.035	7	245	546	4	KED
Ni	62	<b>0.470</b>	ug/L	0.034	7	46	99	5	KED
Cu	63	<b>2.849</b>	ug/L	0.045	1	39	5639	2	KED
Cu	65	<b>2.845</b>	ug/L	0.112	3	19	2748	3	KED
Zn	66	<b>2.346</b>	ug/L	0.112	4	16	622	3	KED
Zn	67	<b>2.106</b>	ug/L	0.195	9	5	94	9	KED
As	75	<b>0.091</b>	ug/L	0.014	15	7	21	11	KED
Y	89		ug/L			184534	195577	0	Standard
Kr	83		ug/L			71	60	13	Standard
> In-1	115		ug/L			5626	5449	3	KED
Cd	111	<b>0.001</b>	ug/L	0.021	1406	5	5	53	KED
Cd	114	<b>-0.010</b>	ug/L	0.013	137	11	7	68	KED
> In	115		ug/L			246182	253268	1	Standard
Ag	107	<b>0.002</b>	ug/L	0.001	30	24	45	14	Standard
> Tb	159		ug/L			417046	439235	3	Standard
Pb	208	<b>0.013</b>	ug/L	0.001	5	62	453	6	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0043-03**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:14:09**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	36086	1	Standard
Cl	37		ug/L			3243830	3358137	0	Standard
> Sc	45		ug/L			315446	347496	2	Standard
Cr	52	<b>4.767</b>	ug/L	0.103	2	8780	67596	0	Standard
Cr	53	<b>4.831</b>	ug/L	0.177	3	147	7054	3	Standard
Fe	54	<b>11.902</b>	ug/L	0.779	6	36655	49694	1	Standard
Fe	57	<b>58.302</b>	ug/L	2.782	4	7652	27976	1	Standard
Mn	55	<b>4.632</b>	ug/L	0.135	2	3853	86023	1	Standard
> Ge	72		ug/L			20373	20335	2	KED
Ni	60	<b>0.126</b>	ug/L	0.056	44	245	330	9	KED
Ni	62	<b>0.215</b>	ug/L	0.173	80	46	70	24	KED
Cu	63	<b>1.659</b>	ug/L	0.041	2	39	3308	1	KED
Cu	65	<b>1.646</b>	ug/L	0.103	6	19	1603	6	KED
Zn	66	<b>1.063</b>	ug/L	0.170	16	16	291	13	KED
Zn	67	<b>0.977</b>	ug/L	0.328	33	5	46	32	KED
As	75	<b>0.063</b>	ug/L	0.025	39	7	17	22	KED
Y	89		ug/L			184534	191376	3	Standard
Kr	83		ug/L			71	67	14	Standard
> In-1	115		ug/L			5626	5426	1	KED
Cd	111	<b>0.018</b>	ug/L	0.019	103	5	7	36	KED
Cd	114	<b>-0.013</b>	ug/L	0.008	63	11	5	49	KED
> In	115		ug/L			246182	251003	0	Standard
Ag	107	<b>0.001</b>	ug/L	0.001	61	24	35	17	Standard
> Tb	159		ug/L			417046	434307	2	Standard
Pb	208	<b>0.009</b>	ug/L	0.001	11	62	314	8	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0164-01**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:18:55**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	143321	2	Standard
Cl	37		ug/L			3243830	3424020	1	Standard
Sc	45		ug/L			315446	346755	1	Standard
Cr	52	<b>113.859</b>	ug/L	3.144	2	8780	1390499	2	Standard
Cr	53	<b>115.507</b>	ug/L	2.431	2	147	164605	1	Standard
Fe	54	<b>2812.768</b>	ug/L	43.776	1	36655	2238043	0	Standard
Fe	57	<b>3326.045</b>	ug/L	91.528	2	7652	1121737	2	Standard
Mn	55	<b>65.070</b>	ug/L	1.105	1	3853	1150965	1	Standard
Ge	72		ug/L			20373	20136	2	KED
Ni	60	<b>3.642</b>	ug/L	0.135	3	245	2697	1	KED
Ni	62	<b>3.494</b>	ug/L	0.141	4	46	432	5	KED
Cu	63	<b>2.717</b>	ug/L	0.042	1	39	5340	1	KED
Cu	65	<b>2.706</b>	ug/L	0.132	4	19	2598	5	KED
Zn	66	<b>103.316</b>	ug/L	0.199	0	16	26531	2	KED
Zn	67	<b>91.612</b>	ug/L	1.904	2	5	3874	4	KED
As	75	<b>0.140</b>	ug/L	0.030	21	7	28	13	KED
Y	89		ug/L			184534	197655	1	Standard
Kr	83		ug/L			71	53	25	Standard
In-1	115		ug/L			5626	5454	0	KED
Cd	111	<b>0.971</b>	ug/L	<b>0.155</b>	15	5	149	14	KED
Cd	114	<b>0.981</b>	ug/L	0.039	4	11	374	3	KED
In	115		ug/L			246182	256235	3	Standard
Ag	107	<b>0.113</b>	ug/L	0.009	7	24	950	4	Standard
Tb	159		ug/L			417046	433822	0	Standard
Pb	208	<b>0.121</b>	ug/L	0.001	1	62	3568	0	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0164-01RE1**

Sample Dil Factor: **10**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:26:56**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	80322	1	Standard
Cl	37		ug/L			3243830	3354574	1	Standard
Sc	45		ug/L			315446	336038	0	Standard
Cr	52	<b>58.372</b>	ug/L	2.087	3	8780	695337	2	Standard
Cr	53	<b>59.047</b>	ug/L	0.487	0	147	81630	1	Standard
Fe	54	<b>1682.814</b>	ug/L	31.471	1	36655	1313291	1	Standard
Fe	57	<b>1616.673</b>	ug/L	45.839	2	7652	532552	2	Standard
Mn	55	<b>33.099</b>	ug/L	0.407	1	3853	569410	0	Standard
Ge	72		ug/L			20373	19559	2	KED
Ni	60	<b>1.793</b>	ug/L	0.199	11	245	1407	6	KED
Ni	62	<b>1.707</b>	ug/L	0.152	8	46	227	5	KED
Cu	63	<b>1.405</b>	ug/L	0.059	4	39	2699	1	KED
Cu	65	<b>1.374</b>	ug/L	0.066	4	19	1290	6	KED
Zn	66	<b>52.423</b>	ug/L	2.337	4	16	13074	2	KED
Zn	67	<b>47.484</b>	ug/L	1.842	3	5	1951	1	KED
As	75	<b>0.084</b>	ug/L	0.023	27	7	19	15	KED
Y	89		ug/L			184534	191587	0	Standard
Kr	83		ug/L			71	41	21	Standard
In-1	115		ug/L			5626	5392	2	KED
Cd	111	<b>0.506</b>	ug/L	0.025	4	5	79	3	KED
Cd	114	<b>0.484</b>	ug/L	0.071	14	11	187	11	KED
In	115		ug/L			246182	252412	0	Standard
Ag	107	<b>0.059</b>	ug/L	0.003	4	24	504	4	Standard
Tb	159		ug/L			417046	426408	0	Standard
Pb	208	<b>0.060</b>	ug/L	0.003	4	62	1772	4	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 20:31:29

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	25796	1	Standard
Cl	37		ug/L			3243830	3333972	1	Standard
> Sc	45		ug/L			315446	307244	2	Standard
Cr	52	-0.004	ug/L	0.007	201	8780	8513	1	Standard
Cr	53	0.030	ug/L	0.006	21	147	182	6	Standard
Fe	54	-0.102	ug/L	2.015	1984	36655	35613	1	Standard
Fe	57	-0.105	ug/L	0.362	344	7652	7422	2	Standard
Mn	55	-0.146	ug/L	0.002	1	3853	1472	0	Standard
> Ge	72		ug/L			20373	18663	0	KED
Ni	60	-0.183	ug/L	0.033	18	245	111	19	KED
Ni	62	-0.167	ug/L	0.094	56	46	26	37	KED
Cu	63	0.013	ug/L	0.006	44	39	59	17	KED
Cu	65	0.009	ug/L	0.009	105	19	26	32	KED
Zn	66	0.041	ug/L	0.032	79	16	24	30	KED
Zn	67	0.059	ug/L	0.074	125	5	6	41	KED
As	75	0.002	ug/L	0.007	305	7	7	13	KED
Y	89		ug/L			184534	173686	0	Standard
Kr	83		ug/L			71	43	23	Standard
> In-1	115		ug/L			5626	5300	2	KED
Cd	111	0.002	ug/L	0.008	370	5	5	20	KED
Cd	114	-0.012	ug/L	0.003	26	11	6	17	KED
> In	115		ug/L			246182	240214	0	Standard
Ag	107	-0.000	ug/L	0.001	918	24	23	26	Standard
> Tb	159		ug/L			417046	397179	2	Standard
Pb	208	0.002	ug/L	0.000	21	62	104	9	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 20:36:02

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	24875	2	Standard
Cl	37		ug/L			3243830	3368268	0	Standard
Sc	45		ug/L			315446	322469	0	Standard
Cr	52	50.269	ug/L	1.292	2	8780	575943	1	Standard
Cr	53	49.854	ug/L	0.665	1	147	66158	0	Standard
Fe	54	4811.179	ug/L	32.128	0	36655	3533821	1	Standard
Fe	57	5406.728	ug/L	117.929	2	7652	1691004	2	Standard
Mn	55	49.590	ug/L	0.935	1	3853	816702	1	Standard
Ge	72		ug/L			20373	19314	1	KED
Ni	60	51.778	ug/L	1.371	2	245	33710	1	KED
Ni	62	51.953	ug/L	1.708	3	46	5544	2	KED
Cu	63	52.260	ug/L	1.035	1	39	97876	0	KED
Cu	65	52.522	ug/L	1.194	2	19	48009	1	KED
Zn	66	51.721	ug/L	0.824	1	16	12747	2	KED
Zn	67	53.156	ug/L	1.122	2	5	2157	0	KED
As	75	51.264	ug/L	0.897	1	7	7394	0	KED
Y	89		ug/L			184534	186769	0	Standard
Kr	83		ug/L			71	47	30	Standard
In-1	115		ug/L			5626	5492	3	KED
Cd	111	51.372	ug/L	1.509	2	5	7706	0	KED
Cd	114	52.545	ug/L	2.509	4	11	19594	1	KED
In	115		ug/L			246182	242827	1	Standard
Ag	107	52.447	ug/L	2.220	4	24	407605	3	Standard
Tb	159		ug/L			417046	417454	0	Standard
Pb	208	53.118	ug/L	1.199	2	62	1475752	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 20:43:19

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22492	4	Standard
Cl	37		ug/L			3243830	3273453	1	Standard
> Sc	45		ug/L			315446	302352	0	Standard
Cr	52	-0.043	ug/L	0.015	33	8780	7958	2	Standard
Cr	53	0.004	ug/L	0.007	169	147	146	5	Standard
Fe	54	-1.226	ug/L	1.217	99	36655	34295	1	Standard
Fe	57	-1.220	ug/L	0.434	35	7652	6978	1	Standard
Mn	55	-0.155	ug/L	0.003	1	3853	1313	4	Standard
> Ge	72		ug/L			20373	18872	0	KED
Ni	60	-0.206	ug/L	0.026	12	245	97	17	KED
Ni	62	-0.194	ug/L	0.041	21	46	23	18	KED
Cu	63	0.002	ug/L	0.006	289	39	40	25	KED
Cu	65	-0.005	ug/L	0.002	41	19	13	14	KED
Zn	66	-0.000	ug/L	0.029	17015	16	15	45	KED
Zn	67	-0.006	ug/L	0.029	443	5	4	24	KED
As	75	-0.003	ug/L	0.009	321	7	6	18	KED
Y	89		ug/L			184534	176014	2	Standard
Kr	83		ug/L			71	39	2	Standard
> In-1	115		ug/L			5626	5356	1	KED
Cd	111	0.017	ug/L	0.017	102	5	7	33	KED
Cd	114	-0.002	ug/L	0.013	791	11	10	46	KED
> In	115		ug/L			246182	232555	0	Standard
Ag	107	0.002	ug/L	0.002	91	24	38	35	Standard
> Tb	159		ug/L			417046	392005	1	Standard
Pb	208	0.001	ug/L	0.000	49	62	73	9	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-02**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:48:14**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	36997	1	Standard
Cl	37		ug/L			3243830	3312422	0	Standard
> Sc	45		ug/L			315446	331374	0	Standard
Cr	52	<b>0.748</b>	ug/L	0.059	7	8780	17895	4	Standard
Cr	53	<b>0.974</b>	ug/L	0.014	1	147	1480	0	Standard
Fe	54	<b>80.890</b>	ug/L	2.511	3	36655	98917	2	Standard
Fe	57	<b>176.197</b>	ug/L	4.086	2	7652	64406	2	Standard
Mn	55	<b>43.703</b>	ug/L	0.444	1	3853	740147	1	Standard
> Ge	72		ug/L			20373	18690	1	KED
Ni	60	<b>0.538</b>	ug/L	0.037	6	245	561	4	KED
Ni	62	<b>0.490</b>	ug/L	0.107	21	46	93	12	KED
Cu	63	<b>1.923</b>	ug/L	0.043	2	39	3520	2	KED
Cu	65	<b>1.997</b>	ug/L	0.093	4	19	1783	4	KED
Zn	66	<b>45.035</b>	ug/L	0.821	1	16	10741	1	KED
Zn	67	<b>41.528</b>	ug/L	1.279	3	5	1632	3	KED
As	75	<b>0.897</b>	ug/L	0.103	11	7	132	11	KED
Y	89		ug/L			184534	184271	3	Standard
Kr	83		ug/L			71	41	2	Standard
> In-1	115		ug/L			5626	5502	1	KED
Cd	111	<b>0.088</b>	ug/L	0.033	37	5	18	25	KED
Cd	114	<b>0.061</b>	ug/L	0.019	30	11	33	20	KED
> In	115		ug/L			246182	241300	1	Standard
Ag	107	<b>0.002</b>	ug/L	0.000	20	24	39	7	Standard
> Tb	159		ug/L			417046	410460	2	Standard
Pb	208	<b>0.169</b>	ug/L	0.005	2	62	4670	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-04**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:52:46**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	38203	1	Standard
Cl	37		ug/L			3243830	4358653	1	Standard
> Sc	45		ug/L			315446	336716	0	Standard
Cr	52	<b>0.872</b>	ug/L	0.014	1	8780	19647	1	Standard
Cr	53	<b>2.674</b>	ug/L	0.039	1	147	3854	0	Standard
Fe	54	<b>1273.523</b>	ug/L	10.585	0	36655	1005533	1	Standard
Fe	57	<b>1335.057</b>	ug/L	16.806	1	7652	442172	2	Standard
Mn	55	<b>188.923</b>	ug/L	1.955	1	3853	3237197	0	Standard
> Ge	72		ug/L			20373	18804	1	KED
Ni	60	<b>1.392</b>	ug/L	0.038	2	245	1102	0	KED
Ni	62	<b>1.367</b>	ug/L	0.145	10	46	184	6	KED
<b>Cu</b>	63	<b>2.551</b>	ug/L	0.070	2	39	4687	4	KED
Cu	65	<b>2.581</b>	ug/L	0.078	3	19	2313	2	KED
<b>Zn</b>	66	<b>46.348</b>	ug/L	0.641	1	16	11121	0	KED
Zn	67	<b>45.335</b>	ug/L	1.496	3	5	1791	1	KED
As	75	<b>1.165</b>	ug/L	0.047	4	7	170	5	KED
Y	89		ug/L			184534	185064	1	Standard
Kr	83		ug/L			71	50	14	Standard
> In-1	115		ug/L			5626	5225	0	KED
Cd	111	<b>0.083</b>	ug/L	0.007	8	5	16	6	KED
Cd	114	<b>0.033</b>	ug/L	0.014	42	11	22	23	KED
> In	115		ug/L			246182	238935	0	Standard
Ag	107	<b>0.005</b>	ug/L	0.001	15	24	60	9	Standard
> Tb	159		ug/L			417046	414672	3	Standard
Pb	208	<b>0.321</b>	ug/L	0.008	2	62	8904	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-05**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 20:57:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	41872	0	Standard
Cl	37		ug/L			3243830	4325211	0	Standard
> Sc	45		ug/L			315446	329877	0	Standard
Cr	52	1.313	ug/L	0.010	0	8780	24329	0	Standard
Cr	53	3.172	ug/L	0.050	1	147	4450	2	Standard
Fe	54	1424.914	ug/L	26.741	1	36655	1097519	1	Standard
Fe	57	1487.539	ug/L	46.118	3	7652	481697	2	Standard
Mn	55	194.610	ug/L	2.842	1	3853	3267213	2	Standard
> Ge	72		ug/L			20373	18588	1	KED
Ni	60	1.656	ug/L	0.097	5	245	1254	3	KED
Ni	62	1.518	ug/L	0.232	15	46	197	11	KED
Cu	63	3.521	ug/L	0.104	2	39	6379	2	KED
Cu	65	3.523	ug/L	0.037	1	19	3117	2	KED
Zn	66	58.192	ug/L	1.063	1	16	13800	1	KED
Zn	67	56.882	ug/L	1.666	2	5	2221	2	KED
As	75	1.309	ug/L	0.062	4	7	188	4	KED
Y	89		ug/L			184534	183628	3	Standard
Kr	83		ug/L			71	36	24	Standard
> In-1	115		ug/L			5626	5422	0	KED
Cd	111	0.096	ug/L	0.032	33	5	19	25	KED
Cd	114	0.097	ug/L	0.034	34	11	46	26	KED
> In	115		ug/L			246182	238898	3	Standard
Ag	107	0.006	ug/L	0.001	17	24	72	13	Standard
> Tb	159		ug/L			417046	414114	0	Standard
Pb	208	0.609	ug/L	0.014	2	62	16832	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-06**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:01:53**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	42650	1	Standard
Cl	37		ug/L			3243830	6943532	1	Standard
Sc	45		ug/L			315446	324369	1	Standard
Cr	52	0.714	ug/L	0.030	4	8780	17130	0	Standard
Cr	53	7.627	ug/L	0.177	2	147	10309	2	Standard
Fe	54	1074.532	ug/L	18.454	1	36655	823039	1	Standard
Fe	57	1159.965	ug/L	8.474	0	7652	371117	2	Standard
Mn	55	201.156	ug/L	3.409	1	3853	3320417	2	Standard
Ge	72		ug/L			20373	17844	0	KED
Ni	60	2.461	ug/L	0.167	6	245	1685	5	KED
Ni	62	2.773	ug/L	0.182	6	46	312	5	KED
Cu	63	4.402	ug/L	0.368	8	39	7649	8	KED
Cu	65	4.095	ug/L	0.152	3	19	3474	3	KED
Zn	66	125.418	ug/L	2.082	1	16	28537	1	KED
Zn	67	119.012	ug/L	5.170	4	5	4457	3	KED
As	75	0.497	ug/L	0.018	3	7	72	4	KED
Y	89		ug/L			184534	178693	2	Standard
Kr	83		ug/L			71	70	2	Standard
In-1	115		ug/L			5626	5098	2	KED
Cd	111	0.026	ug/L	0.036	140	5	8	61	KED
Cd	114	0.024	ug/L	0.011	43	11	18	19	KED
In	115		ug/L			246182	231155	0	Standard
Ag	107	0.006	ug/L	0.000	6	24	64	3	Standard
Tb	159		ug/L			417046	416713	1	Standard
Pb	208	0.212	ug/L	0.005	2	62	5949	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-01**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:06:26**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	57576	0	Standard
Cl	37		ug/L			3243830	3658850	0	Standard
Sc	45		ug/L			315446	344548	1	Standard
Cr	52	<b>1.108</b>	ug/L	0.051	4	8780	22949	3	Standard
Cr	53	<b>1.474</b>	ug/L	0.045	3	147	2246	3	Standard
Fe	54	<b>2632.337</b>	ug/L	31.011	1	36655	2083793	1	Standard
Fe	57	<b>3078.307</b>	ug/L	34.082	1	7652	1032152	0	Standard
Mn	55	<b>1054.689</b>	ug/L	11.460	1	3853	18473341	1	Standard
Ge	72		ug/L			20373	17875	7	KED
Ni	60	<b>2.533</b>	ug/L	0.126	4	245	1727	3	KED
Ni	62	<b>2.373</b>	ug/L	0.284	11	46	273	8	KED
Cu	63	<b>2.478</b>	ug/L	0.087	3	39	4320	4	KED
Cu	65	<b>2.522</b>	ug/L	0.196	7	19	2143	4	KED
Zn	66	<b>69.684</b>	ug/L	3.967	5	16	15845	2	KED
Zn	67	<b>66.867</b>	ug/L	4.270	6	5	2504	3	KED
As	75	<b>4.578</b>	ug/L	0.149	3	7	616	4	KED
Y	89		ug/L			184534	183756	1	Standard
Kr	83		ug/L			71	41	9	Standard
In-1	115		ug/L			5626	5374	0	KED
Cd	111	<b>0.140</b>	ug/L	0.021	15	5	25	12	KED
Cd	114	<b>0.084</b>	ug/L	0.010	11	11	41	7	KED
In	115		ug/L			246182	240305	1	Standard
Ag	107	<b>0.001</b>	ug/L	0.001	79	24	31	18	Standard
Tb	159		ug/L			417046	418243	1	Standard
Pb	208	<b>0.276</b>	ug/L	0.007	2	62	7755	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0249-DUP1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:10:59**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	58677	2	Standard
Cl	37		ug/L			3243830	3710226	1	Standard
> Sc	45		ug/L			315446	346339	1	Standard
Cr	52	<b>1.148</b>	ug/L	0.066	5	8780	23544	2	Standard
Cr	53	<b>1.503</b>	ug/L	0.015	1	147	2299	2	Standard
Fe	54	<b>2668.476</b>	ug/L	101.524	3	36655	2121966	1	Standard
Fe	57	<b>3148.968</b>	ug/L	101.106	3	7652	1060940	2	Standard
Mn	55	<b>1047.482</b>	ug/L	37.089	3	3853	18435473	1	Standard
> Ge	72		ug/L			20373	18721	0	KED
Ni	60	<b>2.309</b>	ug/L	0.067	2	245	1673	2	KED
Ni	62	<b>2.536</b>	ug/L	0.059	2	46	303	1	KED
Cu	63	<b>2.488</b>	ug/L	0.124	4	39	4551	5	KED
Cu	65	<b>2.427</b>	ug/L	0.057	2	19	2167	2	KED
Zn	66	<b>67.404</b>	ug/L	0.487	0	16	16098	1	KED
Zn	67	<b>63.440</b>	ug/L	1.559	2	5	2495	2	KED
As	75	<b>4.415</b>	ug/L	0.068	1	7	623	1	KED
Y	89		ug/L			184534	181655	0	Standard
Kr	83		ug/L			71	43	0	Standard
> In-1	115		ug/L			5626	5373	3	KED
Cd	111	<b>0.092</b>	ug/L	0.025	27	5	18	20	KED
Cd	114	<b>0.076</b>	ug/L	0.028	36	11	38	23	KED
> In	115		ug/L			246182	237894	0	Standard
Ag	107	<b>0.003</b>	ug/L	0.002	55	24	48	28	Standard
> Tb	159		ug/L			417046	414946	1	Standard
Pb	208	<b>0.286</b>	ug/L	0.008	2	62	7967	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **BLD0249-MS1**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:15:33**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	62764	5	Standard
Cl	37		ug/L			3243830	3637151	1	Standard
Sc	45		ug/L			315446	336278	1	Standard
Cr	52	<b>24.932</b>	ug/L	0.103	0	8780	302618	1	Standard
Cr	53	<b>25.432</b>	ug/L	0.568	2	147	35265	0	Standard
Fe	54	<b>7392.324</b>	ug/L	99.187	1	36655	5640370	0	Standard
Fe	57	<b>7629.169</b>	ug/L	178.244	2	7652	2484229	0	Standard
Mn	55	<b>1098.747</b>	ug/L	2.966	0	3853	18783817	1	Standard
Ge	72		ug/L			20373	18512	1	KED
Ni	60	<b>28.595</b>	ug/L	0.874	3	245	17942	1	KED
Ni	62	<b>28.953</b>	ug/L	0.587	2	46	2980	0	KED
Cu	63	<b>29.083</b>	ug/L	0.536	1	39	52224	1	KED
Cu	65	<b>29.336</b>	ug/L	0.384	1	19	25711	0	KED
Zn	66	<b>144.178</b>	ug/L	1.777	1	16	34029	0	KED
Zn	67	<b>134.930</b>	ug/L	5.442	4	5	5241	2	KED
As	75	<b>30.238</b>	ug/L	0.653	2	7	4183	0	KED
Y	89		ug/L			184534	179911	3	Standard
Kr	83		ug/L			71	53	32	Standard
In-1	115		ug/L			5626	5169	4	KED
Cd	111	<b>26.051</b>	ug/L	1.119	4	5	3678	1	KED
Cd	114	<b>26.046</b>	ug/L	1.059	4	11	9145	0	KED
In	115		ug/L			246182	232858	1	Standard
Ag	107	<b>26.067</b>	ug/L	0.855	3	24	194274	1	Standard
Tb	159		ug/L			417046	416558	1	Standard
Pb	208	<b>26.553</b>	ug/L	0.323	1	62	736024	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-13**

Sample Dil Factor: **50**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:20:07**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	31084	0	Standard
Cl	37		ug/L			3243830	3330586	0	Standard
Sc	45		ug/L			315446	339080	0	Standard
Cr	52	<b>10.585</b>	ug/L	0.166	1	8780	134996	2	Standard
Cr	53	<b>11.131</b>	ug/L	0.179	1	147	15656	1	Standard
Fe	54	<b>5883.337</b>	ug/L	31.305	0	36655	4535090	0	Standard
Fe	57	<b>5887.683</b>	ug/L	111.133	1	7652	1935619	2	Standard
Mn	55	<b>52.488</b>	ug/L	0.646	1	3853	908692	0	Standard
Ge	72		ug/L			20373	19031	1	KED
Ni	60	<b>7.455</b>	ug/L	0.427	5	245	4976	3	KED
Ni	62	<b>7.495</b>	ug/L	0.153	2	46	826	3	KED
Cu	63	<b>19.567</b>	ug/L	0.742	3	39	36133	3	KED
Cu	65	<b>19.287</b>	ug/L	0.449	2	19	17381	1	KED
Zn	66	<b>42.923</b>	ug/L	0.440	1	16	10425	0	KED
Zn	67	<b>39.497</b>	ug/L	2.590	6	5	1580	5	KED
As	75	<b>2.620</b>	ug/L	0.188	7	7	378	5	KED
Y	89		ug/L			184534	225932	1	Standard
Kr	83		ug/L			71	60	16	Standard
In-1	115		ug/L			5626	5427	4	KED
<b>Cd</b>	111	<b>0.476</b>	ug/L	<u>0.094</u>	19	5	75	18	KED
Cd	114	<b>0.442</b>	ug/L	0.023	5	11	174	7	KED
In	115		ug/L			246182	248183	1	Standard
Ag	107	<b>0.388</b>	ug/L	0.008	2	24	3107	0	Standard
Tb	159		ug/L			417046	425267	3	Standard
Pb	208	<b>27.184</b>	ug/L	1.242	4	62	768447	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23A0206-10**

Sample Dil Factor: **100**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:24:40**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	29072	1	Standard
Cl	37		ug/L			3243830	3181509	1	Standard
Sc	45		ug/L			315446	321531	1	Standard
Cr	52	3.031	ug/L	0.038	1	8780	43037	1	Standard
Cr	53	3.177	ug/L	0.102	3	147	4344	1	Standard
Fe	54	3304.261	ug/L	72.838	2	36655	2431157	1	Standard
Fe	57	3506.498	ug/L	184.004	5	7652	1095652	3	Standard
Mn	55	32.700	ug/L	0.949	2	3853	538179	1	Standard
Ge	72		ug/L			20373	19017	2	KED
Ni	60	2.248	ug/L	0.050	2	245	1660	1	KED
Ni	62	2.012	ug/L	0.214	10	46	253	6	KED
Cu	63	6.839	ug/L	0.139	2	39	12642	0	KED
Cu	65	6.750	ug/L	0.147	2	19	6090	0	KED
Zn	66	115.122	ug/L	1.491	1	16	27921	3	KED
Zn	67	105.182	ug/L	3.520	3	5	4198	1	KED
As	75	1.707	ug/L	0.170	9	7	249	7	KED
Y	89		ug/L			184534	201444	0	Standard
Kr	83		ug/L			71	51	23	Standard
In-1	115		ug/L			5626	5439	1	KED
Cd	111	0.055	ug/L	0.037	66	5	13	39	KED
Cd	114	0.046	ug/L	0.007	14	11	27	7	KED
In	115		ug/L			246182	244661	1	Standard
Ag	107	0.028	ug/L	0.003	12	24	246	9	Standard
Tb	159		ug/L			417046	412725	1	Standard
Pb	208	3.109	ug/L	0.083	2	62	85423	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 21:29:14

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	24220	2	Standard
Cl	37		ug/L			3243830	3196693	3	Standard
Sc	45		ug/L			315446	297074	3	Standard
Cr	52	-0.038	ug/L	0.041	108	8780	7872	3	Standard
Cr	53	0.051	ug/L	0.013	24	147	201	5	Standard
Fe	54	-1.266	ug/L	1.561	123	36655	33650	0	Standard
Fe	57	-0.596	ug/L	0.687	115	7652	7035	3	Standard
Mn	55	-0.105	ug/L	0.003	3	3853	2043	1	Standard
Ge	72		ug/L			20373	18169	4	KED
Ni	60	-0.202	ug/L	0.022	10	245	95	8	KED
Ni	62	-0.247	ug/L	0.046	18	46	17	22	KED
Cu	63	0.017	ug/L	0.005	31	39	64	10	KED
Cu	65	0.013	ug/L	0.006	50	19	28	17	KED
Zn	66	0.028	ug/L	0.043	154	16	20	45	KED
Zn	67	-0.018	ug/L	0.105	598	5	3	100	KED
As	75	-0.008	ug/L	0.006	73	7	5	16	KED
Y	89		ug/L			184534	169967	1	Standard
Kr	83		ug/L			71	38	10	Standard
In-1	115		ug/L			5626	5060	1	KED
Cd	111	0.022	ug/L	0.020	89	5	7	34	KED
Cd	114	-0.019	ug/L	0.006	30	11	3	54	KED
In	115		ug/L			246182	229060	2	Standard
Ag	107	0.000	ug/L	0.001	1228	24	23	24	Standard
Tb	159		ug/L			417046	399723	2	Standard
Pb	208	0.002	ug/L	0.001	24	62	120	12	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 21:33:48

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	23198	0	Standard
Cl	37		ug/L			3243830	3325764	3	Standard
Sc	45		ug/L			315446	310860	2	Standard
Cr	52	49.074	ug/L	0.375	0	8780	542231	2	Standard
Cr	53	49.646	ug/L	2.172	4	147	63467	1	Standard
Fe	54	4836.890	ug/L	106.280	2	36655	3423378	1	Standard
Fe	57	5309.402	ug/L	89.935	1	7652	1600419	0	Standard
Mn	55	48.729	ug/L	0.857	1	3853	773492	1	Standard
Ge	72		ug/L			20373	18595	1	KED
Ni	60	51.858	ug/L	0.779	1	245	32516	3	KED
Ni	62	51.160	ug/L	2.034	3	46	5256	2	KED
Cu	63	51.382	ug/L	1.312	2	39	92640	1	KED
Cu	65	51.012	ug/L	0.686	1	19	44898	1	KED
Zn	66	51.748	ug/L	0.914	1	16	12277	1	KED
Zn	67	52.370	ug/L	2.181	4	5	2046	3	KED
As	75	51.786	ug/L	0.711	1	7	7192	0	KED
Y	89		ug/L			184534	176546	1	Standard
Kr	83		ug/L			71	54	16	Standard
In-1	115		ug/L			5626	5167	0	KED
Cd	111	53.600	ug/L	0.904	1	5	7569	1	KED
Cd	114	52.539	ug/L	0.617	1	11	18452	1	KED
In	115		ug/L			246182	234741	2	Standard
Ag	107	51.271	ug/L	1.318	2	24	385217	0	Standard
Tb	159		ug/L			417046	406966	1	Standard
Pb	208	53.696	ug/L	0.787	1	62	1453982	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 21:41:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	21668	1	Standard
Cl	37		ug/L			3243830	3253027	1	Standard
Sc	45		ug/L			315446	297281	1	Standard
Cr	52	-0.061	ug/L	0.016	26	8780	7635	1	Standard
Cr	53	0.028	ug/L	0.005	16	147	172	2	Standard
Fe	54	-2.213	ug/L	0.857	38	36655	33060	1	Standard
Fe	57	-1.786	ug/L	0.438	24	7652	6698	0	Standard
Mn	55	-0.122	ug/L	0.004	3	3853	1787	2	Standard
Ge	72		ug/L			20373	17525	1	KED
Ni	60	-0.197	ug/L	0.036	18	245	95	20	KED
Ni	62	-0.276	ug/L	0.028	10	46	13	20	KED
Cu	63	0.004	ug/L	0.003	90	39	40	12	KED
Cu	65	0.005	ug/L	0.006	116	19	20	24	KED
Zn	66	0.016	ug/L	0.047	290	16	17	59	KED
Zn	67	-0.085	ug/L	0.030	35	5	1	86	KED
As	75	-0.006	ug/L	0.007	110	7	5	14	KED
Y	89		ug/L			184534	165447	2	Standard
Kr	83		ug/L			71	38	5	Standard
In-1	115		ug/L			5626	5042	2	KED
Cd	111	0.013	ug/L	0.021	157	5	6	42	KED
Cd	114	-0.021	ug/L	0.011	53	11	3	129	KED
In	115		ug/L			246182	231878	1	Standard
Ag	107	0.003	ug/L	0.002	61	24	48	33	Standard
Tb	159		ug/L			417046	381857	2	Standard
Pb	208	0.001	ug/L	0.001	77	62	85	25	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0080-02**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:45:40**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	62767	2	Standard
Cl	37		ug/L			3243830	3305893	1	Standard
> Sc	45		ug/L			315446	324666	3	Standard
Cr	52	<b>0.870</b>	ug/L	0.069	7	8780	18895	1	Standard
Cr	53	<b>0.842</b>	ug/L	0.054	6	147	1274	6	Standard
Fe	54	<b>1003.500</b>	ug/L	43.576	4	36655	771195	1	Standard
Fe	57	<b>1004.598</b>	ug/L	32.399	3	7652	322496	0	Standard
Mn	55	<b>81.547</b>	ug/L	2.341	2	3853	1348947	2	Standard
> Ge	72		ug/L			20373	18380	1	KED
Ni	60	<b>1.598</b>	ug/L	0.099	6	245	1205	4	KED
Ni	62	<b>1.639</b>	ug/L	0.167	10	46	207	8	KED
Cu	63	<b>8.219</b>	ug/L	0.073	0	39	14680	1	KED
Cu	65	<b>8.264</b>	ug/L	0.119	1	19	7204	0	KED
Zn	66	<b>55.245</b>	ug/L	1.531	2	16	12957	3	KED
Zn	67	<b>53.587</b>	ug/L	1.841	3	5	2070	4	KED
As	75	<b>0.749</b>	ug/L	0.073	9	7	109	8	KED
Y	89		ug/L			184534	181655	0	Standard
Kr	83		ug/L			71	47	46	Standard
> In-1	115		ug/L			5626	5265	3	KED
Cd	111	<b>0.268</b>	ug/L	0.044	16	5	43	12	KED
Cd	114	<b>0.222</b>	ug/L	0.028	12	11	90	13	KED
> In	115		ug/L			246182	241414	1	Standard
Ag	107	<b>0.006</b>	ug/L	0.001	18	24	74	11	Standard
> Tb	159		ug/L			417046	407630	2	Standard
Pb	208	<b>0.848</b>	ug/L	0.030	3	62	23062	2	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0040-01**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:50:13**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	44701	2	Standard
Cl	37		ug/L			3243830	6648142	2	Standard
> Sc	45		ug/L			315446	356924	1	Standard
Cr	52	<b>0.408</b>	ug/L	0.008	2	8780	15026	1	Standard
Cr	53	<b>7.707</b>	ug/L	0.188	2	147	11458	1	Standard
Fe	54	<b>11.891</b>	ug/L	1.600	13	36655	51025	1	Standard
Fe	57	<b>128.434</b>	ug/L	0.522	0	7652	52911	1	Standard
Mn	55	<b>2.469</b>	ug/L	0.073	2	3853	49139	0	Standard
> Ge	72		ug/L			20373	17556	3	KED
Ni	60	<b>2.324</b>	ug/L	0.094	4	245	1576	0	KED
Ni	62	<b>2.244</b>	ug/L	0.048	2	46	256	4	KED
Cu	63	<b>0.454</b>	ug/L	0.014	3	39	807	5	KED
Cu	65	<b>0.436</b>	ug/L	0.001	0	19	379	3	KED
Zn	66	<b>4.886</b>	ug/L	0.285	5	16	1107	5	KED
Zn	67	<b>9.985</b>	ug/L	0.764	7	5	371	4	KED
As	75	<b>7.530</b>	ug/L	0.140	1	7	992	1	KED
Y	89		ug/L			184534	175574	1	Standard
Kr	83		ug/L			71	62	19	Standard
> In-1	115		ug/L			5626	4965	3	KED
Cd	111	<b>0.042</b>	ug/L	0.007	15	5	10	9	KED
Cd	114	<b>0.015</b>	ug/L	0.018	116	11	15	37	KED
> In	115		ug/L			246182	224108	3	Standard
Ag	107	<b>0.002</b>	ug/L	0.000	6	24	36	5	Standard
> Tb	159		ug/L			417046	399754	1	Standard
Pb	208	<b>0.045</b>	ug/L	0.001	2	62	1269	3	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-07**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:54:46**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	41824	6	Standard
Cl	37		ug/L			3243830	3437077	2	Standard
> Sc	45		ug/L			315446	329964	0	Standard
Cr	52	<b>3.889</b>	ug/L	0.217	5	8780	54068	4	Standard
Cr	53	<b>4.598</b>	ug/L	0.163	3	147	6383	2	Standard
Fe	54	<b>422.057</b>	ug/L	14.498	3	36655	352149	2	Standard
Fe	57	<b>441.138</b>	ug/L	13.430	3	7652	148510	2	Standard
Mn	55	<b>39.536</b>	ug/L	0.813	2	3853	667042	1	Standard
> Ge	72		ug/L			20373	18380	3	KED
Ni	60	<b>0.872</b>	ug/L	0.082	9	245	757	5	KED
Ni	62	<b>0.843</b>	ug/L	0.256	30	46	126	18	KED
Cu	63	<b>6.088</b>	ug/L	0.119	1	39	10879	1	KED
Cu	65	<b>6.114</b>	ug/L	0.382	6	19	5331	5	KED
Zn	66	<b>71.186</b>	ug/L	3.728	5	16	16675	2	KED
Zn	67	<b>67.303</b>	ug/L	3.374	5	5	2596	2	KED
As	75	<b>2.220</b>	ug/L	0.085	3	7	311	1	KED
Y	89		ug/L			184534	180128	0	Standard
Kr	83		ug/L			71	48	24	Standard
> In-1	115		ug/L			5626	5121	1	KED
Cd	111	<b>0.142</b>	ug/L	0.020	14	5	24	13	KED
Cd	114	<b>0.124</b>	ug/L	0.023	18	11	53	13	KED
> In	115		ug/L			246182	243211	0	Standard
Ag	107	<b>0.008</b>	ug/L	0.003	33	24	89	23	Standard
> Tb	159		ug/L			417046	414985	1	Standard
Pb	208	<b>0.764</b>	ug/L	0.009	1	62	21171	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-08**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 21:59:19**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	42582	2	Standard
Cl	37		ug/L			3243830	3338442	0	Standard
Sc	45		ug/L			315446	320654	0	Standard
Cr	52	<b>2.639</b>	ug/L	0.019	0	8780	38529	0	Standard
Cr	53	<b>3.087</b>	ug/L	0.010	0	147	4213	0	Standard
Fe	54	<b>225.351</b>	ug/L	2.349	1	36655	200097	0	Standard
Fe	57	<b>230.986</b>	ug/L	6.666	2	7652	79277	2	Standard
Mn	55	<b>11.845</b>	ug/L	0.188	1	3853	196950	0	Standard
Ge	72		ug/L			20373	18824	2	KED
Ni	60	<b>1.201</b>	ug/L	0.087	7	245	983	3	KED
Ni	62	<b>1.161</b>	ug/L	0.078	6	46	163	4	KED
Cu	63	<b>8.529</b>	ug/L	0.160	1	39	15596	0	KED
Cu	65	<b>8.685</b>	ug/L	0.252	2	19	7751	1	KED
Zn	66	<b>113.275</b>	ug/L	3.049	2	16	27182	1	KED
Zn	67	<b>103.361</b>	ug/L	4.099	3	5	4083	3	KED
As	75	<b>0.957</b>	ug/L	0.069	7	7	141	6	KED
Y	89		ug/L			184534	181721	1	Standard
Kr	83		ug/L			71	40	46	Standard
In-1	115		ug/L			5626	5354	2	KED
Cd	111	<b>0.199</b>	ug/L	0.008	3	5	34	5	KED
Cd	114	<b>0.207</b>	ug/L	0.013	6	11	86	7	KED
In	115		ug/L			246182	241006	2	Standard
Ag	107	<b>0.008</b>	ug/L	0.000	2	24	84	3	Standard
Tb	159		ug/L			417046	409607	3	Standard
Pb	208	<b>1.358</b>	ug/L	0.036	2	62	37066	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0166-01**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 22:03:53**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	42276	2	Standard
Cl	37		ug/L			3243830	5524474	0	Standard
> Sc	45		ug/L			315446	332974	1	Standard
Cr	52	7.332	ug/L	0.074	1	8780	94661	1	Standard
Cr	53	11.031	ug/L	0.248	2	147	15234	0	Standard
Fe	54	1042.619	ug/L	26.212	2	36655	820843	0	Standard
Fe	57	1109.923	ug/L	26.009	2	7652	364768	0	Standard
Mn	55	47.216	ug/L	0.310	0	3853	803108	1	Standard
> Ge	72		ug/L			20373	17821	1	KED
Ni	60	4.059	ug/L	0.256	6	245	2635	3	KED
Ni	62	4.240	ug/L	0.145	3	46	455	1	KED
Cu	63	25.524	ug/L	0.475	1	39	44122	0	KED
Cu	65	25.033	ug/L	0.626	2	19	21121	1	KED
Zn	66	83.820	ug/L	4.663	5	16	19041	3	KED
Zn	67	80.354	ug/L	1.742	2	5	3007	1	KED
As	75	2.125	ug/L	0.036	1	7	289	0	KED
Y	89		ug/L			184534	181894	3	Standard
Kr	83		ug/L			71	55	7	Standard
> In-1	115		ug/L			5626	5095	2	KED
Cd	111	0.116	ug/L	0.026	22	5	20	15	KED
Cd	114	0.071	ug/L	0.010	13	11	34	11	KED
> In	115		ug/L			246182	230223	1	Standard
Ag	107	0.024	ug/L	0.004	17	24	199	13	Standard
> Tb	159		ug/L			417046	402408	1	Standard
Pb	208	5.072	ug/L	0.142	2	62	135843	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0166-03**

Sample Dil Factor:

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 22:08:26**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	42058	0	Standard
Cl	37		ug/L			3243830	5651431	0	Standard
Sc	45		ug/L			315446	328393	2	Standard
Cr	52	<b>4.404</b>	ug/L	0.072	1	8780	59714	1	Standard
Cr	53	<b>8.280</b>	ug/L	0.266	3	147	11313	1	Standard
Fe	54	<b>445.566</b>	ug/L	12.986	2	36655	367781	1	Standard
Fe	57	<b>554.658</b>	ug/L	6.253	1	7652	183777	1	Standard
Mn	55	<b>22.312</b>	ug/L	0.737	3	3853	376240	1	Standard
Ge	72		ug/L			20373	17833	2	KED
Ni	60	<b>7.117</b>	ug/L	0.335	4	245	4462	4	KED
Ni	62	<b>7.654</b>	ug/L	0.335	4	46	789	6	KED
Cu	63	<b>13.206</b>	ug/L	0.249	1	39	22861	1	KED
Cu	65	<b>13.078</b>	ug/L	0.515	3	19	11046	1	KED
Zn	66	<b>22.543</b>	ug/L	0.748	3	16	5135	1	KED
Zn	67	<b>23.954</b>	ug/L	2.110	8	5	899	6	KED
As	75	<b>0.780</b>	ug/L	0.008	1	7	110	2	KED
Y	89		ug/L			184534	174155	0	Standard
Kr	83		ug/L			71	52	30	Standard
In-1	115		ug/L			5626	5142	2	KED
Cd	111	<b>0.035</b>	ug/L	0.026	72	5	9	33	KED
Cd	114	<b>0.019</b>	ug/L	0.019	101	11	16	41	KED
In	115		ug/L			246182	226359	1	Standard
Ag	107	<b>0.012</b>	ug/L	0.001	6	24	109	5	Standard
Tb	159		ug/L			417046	396844	2	Standard
Pb	208	<b>1.753</b>	ug/L	0.053	2	62	46342	0	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-03**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 22:12:59**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	29358	2	Standard
Cl	37		ug/L			3243830	3440003	1	Standard
> Sc	45		ug/L			315446	310158	1	Standard
Cr	52	1.044	ug/L	0.045	4	8780	19964	2	Standard
Cr	53	1.898	ug/L	0.054	2	147	2562	1	Standard
Fe	54	436.635	ug/L	3.337	0	36655	341216	0	Standard
Fe	57	415.117	ug/L	12.653	3	7652	131815	2	Standard
Mn	55	35.155	ug/L	0.147	0	3853	557990	1	Standard
> Ge	72		ug/L			20373	18500	1	KED
Ni	60	0.976	ug/L	0.067	6	245	827	6	KED
Ni	62	1.032	ug/L	0.067	6	46	147	3	KED
Cu	63	4.239	ug/L	0.081	1	39	7640	2	KED
Cu	65	4.223	ug/L	0.055	1	19	3714	1	KED
Zn	66	40.207	ug/L	0.205	0	16	9495	0	KED
Zn	67	37.081	ug/L	0.495	1	5	1443	0	KED
As	75	0.248	ug/L	0.048	19	7	41	16	KED
Y	89		ug/L			184534	174124	0	Standard
Kr	83		ug/L			71	48	21	Standard
> In-1	115		ug/L			5626	5166	2	KED
Cd	111	0.023	ug/L	0.025	108	5	8	43	KED
Cd	114	0.035	ug/L	0.013	38	11	22	22	KED
> In	115		ug/L			246182	236714	0	Standard
Ag	107	0.003	ug/L	0.001	22	24	48	11	Standard
> Tb	159		ug/L			417046	404551	1	Standard
Pb	208	0.626	ug/L	0.013	2	62	16912	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: **23D0165-09**

Sample Dil Factor: **5**

Comments:

Sample Date/Time: **Tuesday, April 11, 2023 22:17:32**

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	29113	4	Standard
Cl	37		ug/L			3243830	3350077	1	Standard
> Sc	45		ug/L			315446	304823	2	Standard
Cr	52	<b>0.868</b>	ug/L	0.026	2	8780	17740	0	Standard
Cr	53	<b>1.546</b>	ug/L	0.049	3	147	2076	1	Standard
Fe	54	<b>436.451</b>	ug/L	6.486	1	36655	335213	2	Standard
Fe	57	<b>418.118</b>	ug/L	8.744	2	7652	130417	2	Standard
Mn	55	<b>18.119</b>	ug/L	0.313	1	3853	284379	1	Standard
> Ge	72		ug/L			20373	18537	1	KED
Ni	60	<b>1.817</b>	ug/L	0.103	5	245	1350	3	KED
Ni	62	<b>1.741</b>	ug/L	0.076	4	46	219	3	KED
Cu	63	<b>4.762</b>	ug/L	0.027	0	39	8593	1	KED
Cu	65	<b>4.728</b>	ug/L	0.110	2	19	4163	0	KED
Zn	66	<b>16.143</b>	ug/L	0.494	3	16	3829	4	KED
Zn	67	<b>15.759</b>	ug/L	0.399	2	5	617	1	KED
As	75	<b>0.257</b>	ug/L	0.053	20	7	42	15	KED
Y	89		ug/L			184534	175865	2	Standard
Kr	83		ug/L			71	38	18	Standard
> In-1	115		ug/L			5626	5177	1	KED
Cd	111	<b>0.050</b>	ug/L	0.014	27	5	12	16	KED
Cd	114	<b>-0.000</b>	ug/L	0.016	22114	11	10	52	KED
> In	115		ug/L			246182	235791	2	Standard
Ag	107	<b>0.009</b>	ug/L	0.000	4	24	90	3	Standard
> Tb	159		ug/L			417046	401180	2	Standard
Pb	208	<b>0.982</b>	ug/L	0.033	3	62	26258	1	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5

Sample Dil Factor:

Comments:

EMPTY TUBE

Sample Date/Time: Tuesday, April 11, 2023 22:22:06

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	13099	22	Standard
Cl	37		ug/L			3243830	1336214	22	Standard
> Sc	45		ug/L			315446	271952	46	Standard
Cr	52	-0.521	ug/L	0.047	9	8780	2487	29	Standard
Cr	53	0.133	ug/L	0.084	63	147	247	6	Standard
Fe	54	56.377	ug/L	28.304	50	36655	64293	43	Standard
Fe	57	-15.952	ug/L	2.047	12	7652	2244	20	Standard
Mn	55	-0.084	ug/L	0.040	46	3853	1990	17	Standard
> Ge	72		ug/L			20373	28072	97	KED
Ni	60	0.281	ug/L	0.938	333	245	117	0	KED
Ni	62	0.718	ug/L	1.706	237	46	29	25	KED
Cu	63	0.020	ug/L	0.042	203	39	43	52	KED
Cu	65	0.022	ug/L	0.050	223	19	19	43	KED
Zn	66	0.032	ug/L	0.110	344	16	12	60	KED
Zn	67	0.078	ug/L	0.224	288	5	3	50	KED
As	75	0.063	ug/L	0.149	234	7	6	27	KED
Y	89		ug/L			184534	162527	45	Standard
Kr	83		ug/L			71	162	20	Standard
> In-1	115		ug/L			5626	1998	110	KED
Cd	111	0.416	ug/L	0.451	108	5	11	27	KED
Cd	114	0.162	ug/L	0.220	136	11	9	53	KED
> In	115		ug/L			246182	244332	49	Standard
Ag	107	-0.001	ug/L	0.001	58	24	13	15	Standard
> Tb	159		ug/L			417046	423050	43	Standard
Pb	208	-0.000	ug/L	0.001	187	62	52	26	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:26:40

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22714	6	Standard
Cl	37		ug/L			3243830	3342167	1	Standard
[> Sc	45		ug/L			315446	313476	1	Standard
Cr	52	49.145	ug/L	0.844	1	8780	547542	0	Standard
Cr	53	50.190	ug/L	0.514	1	147	64748	1	Standard
Fe	54	4788.873	ug/L	93.774	1	36655	3418882	0	Standard
Fe	57	5176.284	ug/L	216.390	4	7652	1574082	4	Standard
Mn	55	48.806	ug/L	0.829	1	3853	781397	1	Standard
[> Ge	72		ug/L			20373	19206	1	KED
Ni	60	52.337	ug/L	1.032	1	245	33885	1	KED
Ni	62	51.570	ug/L	0.850	1	46	5474	1	KED
Cu	63	51.143	ug/L	1.251	2	39	95276	3	KED
Cu	65	52.830	ug/L	1.031	1	19	48029	2	KED
Zn	66	51.224	ug/L	0.801	1	16	12553	0	KED
Zn	67	52.987	ug/L	1.551	2	5	2139	3	KED
[ As	75	51.216	ug/L	0.427	0	7	7348	1	KED
Y	89		ug/L			184534	175144	0	Standard
Kr	83		ug/L			71	48	21	Standard
[> In-1	115		ug/L			5626	5339	3	KED
Cd	111	52.245	ug/L	1.890	3	5	7615	0	KED
Cd	114	52.310	ug/L	3.290	6	11	18951	2	KED
[> In	115		ug/L			246182	243345	2	Standard
Ag	107	49.035	ug/L	1.421	2	24	381906	1	Standard
[> Tb	159		ug/L			417046	417026	2	Standard
[ Pb	208	52.467	ug/L	1.171	2	62	1455659	1	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:33:58

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	21932	2	Standard
Cl	37		ug/L			3243830	3287878	2	Standard
Sc	45		ug/L			315446	295352	1	Standard
Cr	52	-0.051	ug/L	0.011	21	8780	7697	1	Standard
Cr	53	0.076	ug/L	0.015	19	147	230	6	Standard
Fe	54	-3.554	ug/L	1.803	50	36655	31945	2	Standard
Fe	57	-2.216	ug/L	0.332	14	7652	6533	2	Standard
Mn	55	-0.092	ug/L	0.006	6	3853	2227	2	Standard
Ge	72		ug/L			20373	17559	3	KED
Ni	60	-0.105	ug/L	0.010	9	245	149	3	KED
Ni	62	-0.189	ug/L	0.134	71	46	22	58	KED
Cu	63	0.008	ug/L	0.006	80	39	46	24	KED
Cu	65	0.006	ug/L	0.003	59	19	21	13	KED
Zn	66	-0.004	ug/L	0.007	176	16	13	14	KED
Zn	67	0.002	ug/L	0.061	2589	5	4	49	KED
As	75	-0.012	ug/L	0.016	128	7	4	39	KED
Y	89		ug/L			184534	168694	2	Standard
Kr	83		ug/L			71	45	12	Standard
In-1	115		ug/L			5626	5048	0	KED
Cd	111	-0.005	ug/L	0.008	150	5	4	26	KED
Cd	114	-0.019	ug/L	0.005	28	11	3	49	KED
In	115		ug/L			246182	232525	2	Standard
Ag	107	0.003	ug/L	0.001	57	24	41	22	Standard
Tb	159		ug/L			417046	385289	4	Standard
Pb	208	0.000	ug/L	0.000	121	62	64	15	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:38:31

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	29979	4	Standard
Cl	37		ug/L			3243830	3351676	1	Standard
> Sc	45		ug/L			315446	338896	3	Standard
Cr	52	0.016	ug/L	0.017	103	8780	9621	1	Standard
Cr	53	0.055	ug/L	0.026	46	147	235	13	Standard
Fe	54	114.883	ug/L	6.046	5	36655	127020	0	Standard
Fe	57	-3.160	ug/L	0.616	19	7652	7183	1	Standard
Mn	55	-0.077	ug/L	0.003	4	3853	2805	1	Standard
> Ge	72		ug/L			20373	18933	2	KED
Ni	60	-0.156	ug/L	0.019	12	245	129	7	KED
Ni	62	-0.213	ug/L	0.094	44	46	21	45	KED
Cu	63	-0.001	ug/L	0.003	584	39	35	17	KED
Cu	65	0.008	ug/L	0.008	100	19	25	28	KED
Zn	66	-0.013	ug/L	0.047	359	16	12	91	KED
Zn	67	-0.007	ug/L	0.028	402	5	4	24	KED
As	75	-0.002	ug/L	0.018	859	7	6	38	KED
Y	89		ug/L			184534	191660	1	Standard
Kr	83		ug/L			71	41	46	Standard
> In-1	115		ug/L			5626	5513	1	KED
Cd	111	-0.014	ug/L	0.009	67	5	3	45	KED
Cd	114	-0.006	ug/L	0.019	305	11	8	83	KED
> In	115		ug/L			246182	260619	2	Standard
Ag	107	0.002	ug/L	0.001	60	24	45	27	Standard
> Tb	159		ug/L			417046	432697	2	Standard
Pb	208	0.002	ug/L	0.002	97	62	126	49	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:43:05

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	30235	1	Standard
Cl	37		ug/L			3243830	3312693	1	Standard
> Sc	45		ug/L			315446	337384	1	Standard
Cr	52	-0.008	ug/L	0.037	453	8780	9291	3	Standard
Cr	53	0.047	ug/L	0.017	35	147	223	10	Standard
Fe	54	119.260	ug/L	4.038	3	36655	129894	3	Standard
Fe	57	-3.653	ug/L	0.508	13	7652	6993	1	Standard
Mn	55	-0.071	ug/L	0.005	6	3853	2898	1	Standard
> Ge	72		ug/L			20373	18771	3	KED
Ni	60	-0.129	ug/L	0.048	37	245	145	20	KED
Ni	62	-0.193	ug/L	0.042	21	46	23	20	KED
Cu	63	0.003	ug/L	0.004	129	39	41	13	KED
Cu	65	0.012	ug/L	0.003	25	19	29	9	KED
Zn	66	0.013	ug/L	0.018	136	16	18	26	KED
Zn	67	0.012	ug/L	0.105	868	5	5	78	KED
As	75	-0.007	ug/L	0.013	178	7	6	31	KED
Y	89		ug/L			184534	189464	2	Standard
Kr	83		ug/L			71	41	29	Standard
> In-1	115		ug/L			5626	5603	2	KED
Cd	111	0.021	ug/L	0.001	6	5	8	0	KED
Cd	114	-0.011	ug/L	0.011	98	11	6	57	KED
> In	115		ug/L			246182	254017	2	Standard
Ag	107	-0.000	ug/L	0.001	382	24	23	30	Standard
> Tb	159		ug/L			417046	422775	1	Standard
Pb	208	0.001	ug/L	0.001	86	62	82	21	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:47:39

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	29902	2	Standard
Cl	37		ug/L			3243830	3231071	0	Standard
> Sc	45		ug/L			315446	335826	1	Standard
Cr	52	0.012	ug/L	0.006	52	8780	9487	1	Standard
Cr	53	0.043	ug/L	0.003	7	147	216	2	Standard
Fe	54	117.981	ug/L	3.917	3	36655	128310	2	Standard
Fe	57	-3.947	ug/L	0.511	12	7652	6866	1	Standard
Mn	55	-0.066	ug/L	0.001	1	3853	2973	1	Standard
> Ge	72		ug/L			20373	18977	2	KED
Ni	60	-0.132	ug/L	0.013	9	245	144	5	KED
Ni	62	-0.140	ug/L	0.050	35	46	29	16	KED
Cu	63	0.004	ug/L	0.004	124	39	43	18	KED
Cu	65	0.011	ug/L	0.007	61	19	28	24	KED
Zn	66	0.002	ug/L	0.010	472	16	15	13	KED
Zn	67	-0.086	ug/L	0.056	65	5	1	173	KED
As	75	-0.015	ug/L	0.021	146	7	5	62	KED
Y	89		ug/L			184534	185720	0	Standard
Kr	83		ug/L			71	38	5	Standard
> In-1	115		ug/L			5626	5021	13	KED
Cd	111	0.003	ug/L	0.016	501	5	5	28	KED
Cd	114	-0.003	ug/L	0.029	922	11	8	97	KED
> In	115		ug/L			246182	250142	0	Standard
Ag	107	0.000	ug/L	0.001	340	24	26	18	Standard
> Tb	159		ug/L			417046	419466	1	Standard
Pb	208	0.001	ug/L	0.000	18	62	102	7	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:52:12

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	21551	2	Standard
Cl	37		ug/L			3243830	3085353	2	Standard
[> Sc	45		ug/L			315446	264040	2	Standard
Cr	52	-0.042	ug/L	0.025	60	8780	6959	2	Standard
Cr	53	0.044	ug/L	0.011	25	147	171	7	Standard
Fe	54	-30.956	ug/L	0.468	1	36655	12258	1	Standard
Fe	57	-1.099	ug/L	0.481	43	7652	6124	1	Standard
Mn	55	-0.034	ug/L	0.002	6	3853	2771	3	Standard
[> Ge	72		ug/L			20373	16942	1	KED
Ni	60	-0.060	ug/L	0.046	77	245	170	14	KED
Ni	62	-0.134	ug/L	0.051	37	46	26	18	KED
Cu	63	-0.009	ug/L	0.005	50	39	17	44	KED
Cu	65	-0.007	ug/L	0.004	53	19	10	26	KED
Zn	66	0.139	ug/L	0.039	27	16	43	18	KED
Zn	67	0.151	ug/L	0.190	126	5	9	69	KED
As	75	-0.008	ug/L	0.011	152	7	5	28	KED
Y	89		ug/L			184534	149989	3	Standard
Kr	83		ug/L			71	38	8	Standard
[> In-1	115		ug/L			5626	4847	0	KED
Cd	111	0.013	ug/L	0.008	62	5	6	17	KED
Cd	114	-0.012	ug/L	0.010	79	11	5	57	KED
[> In	115		ug/L			246182	215242	1	Standard
Ag	107	-0.001	ug/L	0.001	51	24	13	28	Standard
[> Tb	159		ug/L			417046	366862	0	Standard
Pb	208	-0.001	ug/L	0.000	25	62	32	17	Standard

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 22:56:46

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22187	3	Standard
Cl	37		ug/L			3243830	3119582	1	Standard
> Sc	45		ug/L			315446	263099	1	Standard
Cr	52	-0.052	ug/L	0.023	45	8780	6847	1	Standard
Cr	53	0.039	ug/L	0.024	61	147	164	14	Standard
Fe	54	-31.398	ug/L	0.333	1	36655	11956	2	Standard
Fe	57	-1.464	ug/L	0.991	67	7652	6010	3	Standard
Mn	55	-0.037	ug/L	0.003	8	3853	2719	2	Standard
> Ge	72		ug/L			20373	17101	1	KED
Ni	60	-0.067	ug/L	0.025	38	245	168	9	KED
Ni	62	-0.183	ug/L	0.099	54	46	22	40	KED
Cu	63	-0.006	ug/L	0.002	43	39	23	16	KED
Cu	65	-0.001	ug/L	0.006	709	19	15	30	KED
Zn	66	0.038	ug/L	0.006	15	16	22	4	KED
Zn	67	-0.012	ug/L	0.092	763	5	3	86	KED
As	75	0.002	ug/L	0.026	1303	7	6	50	KED
Y	89		ug/L			184534	151231	3	Standard
Kr	83		ug/L			71	41	12	Standard
> In-1	115		ug/L			5626	4712	2	KED
Cd	111	0.026	ug/L	0.016	59	5	7	27	KED
Cd	114	-0.020	ug/L	0.003	16	11	2	36	KED
> In	115		ug/L			246182	211543	1	Standard
Ag	107	-0.001	ug/L	0.001	58	24	13	31	Standard
> Tb	159		ug/L			417046	358490	2	Standard
Pb	208	-0.001	ug/L	0.000	28	62	29	24	Standard



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, April 11, 2023 23:01:19

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Method\200.8\_DailyMethod\_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS\_metals\System\041123A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23126	22567	1	Standard
Cl	37		ug/L			3243830	3105644	2	Standard
Sc	45		ug/L			315446	269262	0	Standard
Cr	52	-0.041	ug/L	0.014	35	8780	7112	1	Standard
Cr	53	0.036	ug/L	0.011	30	147	166	6	Standard
Fe	54	-31.513	ug/L	0.224	0	36655	12167	1	Standard
Fe	57	-1.876	ug/L	0.408	21	7652	6044	1	Standard
Mn	55	-0.047	ug/L	0.002	4	3853	2639	0	Standard
Ge	72		ug/L			20373	16642	1	KED
Ni	60	-0.021	ug/L	0.069	326	245	189	21	KED
Ni	62	-0.101	ug/L	0.048	47	46	29	16	KED
Cu	63	-0.006	ug/L	0.007	106	39	22	47	KED
Cu	65	-0.007	ug/L	0.004	51	19	10	28	KED
Zn	66	0.038	ug/L	0.014	37	16	21	13	KED
Zn	67	-0.046	ug/L	0.127	279	5	2	173	KED
As	75	-0.001	ug/L	0.007	439	7	6	12	KED
Y	89		ug/L			184534	150655	1	Standard
Kr	83		ug/L			71	43	21	Standard
In-1	115		ug/L			5626	4730	1	KED
Cd	111	0.021	ug/L	0.004	18	5	7	7	KED
Cd	114	-0.008	ug/L	0.024	308	11	6	113	KED
In	115		ug/L			246182	213840	1	Standard
Ag	107	-0.001	ug/L	0.000	43	24	17	11	Standard
Tb	159		ug/L			417046	362295	1	Standard
Pb	208	-0.001	ug/L	0.000	11	62	33	6	Standard



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-ICV1	Arsenic-75a	50.000	46.5	93.1	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.6	97.3	ug/L	PA 6020B UCT-KE
	SLD0127-CCV1	Arsenic-75a	50.000	49.6	99.3	ug/L
Cadmium-111		50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
Cadmium-114		50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
Copper-63		50.000	50.1	100	ug/L	PA 6020B UCT-KE
Copper-65		50.000	50.2	100	ug/L	PA 6020B UCT-KE
Zinc-66		50.000	50.7	101	ug/L	PA 6020B UCT-KE
Zinc-67		50.000	50.6	101	ug/L	PA 6020B UCT-KE
SLD0127-CCV2		Arsenic-75a	50.000	49.3	98.5	ug/L
	Cadmium-111	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	SLD0127-CCV3	Arsenic-75a	50.000	49.3	98.7	ug/L
Cadmium-111		50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
Cadmium-114		50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
Copper-63		50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
Copper-65		50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
Zinc-66		50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
Zinc-67		50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
SLD0127-CCV4		Arsenic-75a	50.000	49.3	98.5	ug/L
	Cadmium-111	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-CCV4	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLD0127-CCV5	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.3	96.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
SLD0127-CCV6	Arsenic-75a	50.000	49.9	99.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.3	103	ug/L	PA 6020B UCT-KE
SLD0127-CCV7	Arsenic-75a	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
SLD0127-CCV8	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.9	99.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLD0127-CCV9	Arsenic-75a	50.000	51.2	102	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.6	103	ug/L	PA 6020B UCT-KE



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method	
SLD0127-CCV9	Zinc-66	50.000	51.5	103	ug/L	PA 6020B UCT-KE	
	Zinc-67	50.000	52.0	104	ug/L	PA 6020B UCT-KE	
SLD0127-CCVA	Arsenic-75a	50.000	50.6	101	ug/L	PA 6020B UCT-KE	
	Cadmium-111	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE	
	Cadmium-114	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE	
	Copper-63	50.000	50.3	101	ug/L	PA 6020B UCT-KE	
	Copper-65	50.000	50.0	100	ug/L	PA 6020B UCT-KE	
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE	
	Zinc-67	50.000	51.2	102	ug/L	PA 6020B UCT-KE	
	SLD0127-CCVB	Arsenic-75a	50.000	50.6	101	ug/L	PA 6020B UCT-KE
SLD0127-CCVC	Cadmium-111	50.000	50.3	101	ug/L	PA 6020B UCT-KE	
	Cadmium-114	50.000	49.0	97.9	ug/L	PA 6020B UCT-KE	
	Copper-63	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE	
	Copper-65	50.000	50.3	101	ug/L	PA 6020B UCT-KE	
	Zinc-66	50.000	50.3	101	ug/L	PA 6020B UCT-KE	
	Zinc-67	50.000	50.4	101	ug/L	PA 6020B UCT-KE	
	SLD0127-CCVD	Arsenic-75a	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	SLD0127-CCVE	Cadmium-111	50.000	51.2	102	ug/L	PA 6020B UCT-KE
Cadmium-114		50.000	50.6	101	ug/L	PA 6020B UCT-KE	
Copper-63		50.000	49.2	98.4	ug/L	PA 6020B UCT-KE	
Copper-65		50.000	49.4	98.8	ug/L	PA 6020B UCT-KE	
Zinc-66		50.000	49.9	99.8	ug/L	PA 6020B UCT-KE	
Zinc-67		50.000	50.9	102	ug/L	PA 6020B UCT-KE	
SLD0127-CCVD		Arsenic-75a	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
SLD0127-CCVD		Cadmium-111	50.000	50.9	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.4	101	ug/L	PA 6020B UCT-KE	
	Copper-63	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE	
	Copper-65	50.000	50.4	101	ug/L	PA 6020B UCT-KE	
	Zinc-66	50.000	50.3	101	ug/L	PA 6020B UCT-KE	
	Zinc-67	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE	
	SLD0127-CCVE	Arsenic-75a	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
	SLD0127-CCVE	Cadmium-111	50.000	50.9	102	ug/L	PA 6020B UCT-KE
Cadmium-114		50.000	51.3	103	ug/L	PA 6020B UCT-KE	
Copper-63		50.000	49.4	98.8	ug/L	PA 6020B UCT-KE	



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-CCVE	Copper-65	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.6	101	ug/L	PA 6020B UCT-KE
SLD0127-CCVF	Arsenic-75a	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLD0127-CCVG	Zinc-67	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.3	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLD0127-CCVH	Zinc-66	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.6	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.3	103	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.4	101	ug/L	PA 6020B UCT-KE
SLD0127-CCVI	Copper-65	50.000	51.0	102	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.7	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.6	103	ug/L	PA 6020B UCT-KE
	Arsenic-75a	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.8	102	ug/L	PA 6020B UCT-KE
SLD0127-CCVJ	Copper-63	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.3	103	ug/L	PA 6020B UCT-KE
SLD0127-CCVJ	Cadmium-114	50.000	50.4	101	ug/L	PA 6020B UCT-KE



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Control Limit: +/- 10.00%

Sequence: SLD0127

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0127-CCVJ	Copper-63	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE

\* Values outside of QC limits



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Control Limit: +/- 10.00%

Sequence: SLD0147

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0147-ICV1	Cadmium-111	50.000	53.7	107	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	53.5	107	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	54.0	108	ug/L	PA 6020B UCT-KE
SLD0147-CCV1	Cadmium-111	50.000	51.2	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.0	102	ug/L	PA 6020B UCT-KE
SLD0147-CCV2	Cadmium-111	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	52.4	105	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.8	104	ug/L	PA 6020B UCT-KE
SLD0147-CCV3	Cadmium-111	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	52.5	105	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.7	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	53.2	106	ug/L	PA 6020B UCT-KE
SLD0147-CCV4	Cadmium-111	50.000	53.6	107	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	52.5	105	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.7	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	52.4	105	ug/L	PA 6020B UCT-KE
SLD0147-CCV5	Cadmium-111	50.000	52.2	104	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	52.3	105	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.2	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	53.0	106	ug/L	PA 6020B UCT-KE

\* Values outside of QC limits



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 14:35

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBL1	Arsenic-75a	0.0110	0.0373	0.200	ug/L	
SLD0127-IBL1	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLD0127-IBL1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0127-IBL1	Copper-63	0.00	0.173	0.500	ug/L	
SLD0127-IBL1	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-IBL1	Zinc-66	0.0050	2.92	6.00	ug/L	
SLD0127-IBL1	Zinc-67	0.0100	0.94	6.00	ug/L	
SLD0127-ICB1	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLD0127-ICB1	Cadmium-111	0.0100	0.03	0.100	ug/L	
SLD0127-ICB1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0127-ICB1	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0127-ICB1	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-ICB1	Zinc-66	-0.0050	2.92	6.00	ug/L	
SLD0127-ICB1	Zinc-67	0.0270	0.94	6.00	ug/L	
SLD0127-CCB1	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLD0127-CCB1	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLD0127-CCB1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0127-CCB1	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0127-CCB1	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0127-CCB1	Zinc-66	-0.0050	2.92	6.00	ug/L	
SLD0127-CCB1	Zinc-67	0.0100	0.94	6.00	ug/L	
SLD0127-IBL2	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLD0127-IBL2	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLD0127-IBL2	Cadmium-114	-0.00500	0.04	0.100	ug/L	
SLD0127-IBL2	Copper-63	0.00500	0.173	0.500	ug/L	
SLD0127-IBL2	Copper-65	0.00500	0.35	0.500	ug/L	
SLD0127-IBL2	Zinc-66	0.0160	2.92	6.00	ug/L	
SLD0127-IBL2	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLD0127-IBL3	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLD0127-IBL3	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLD0127-IBL3	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0127-IBL3	Copper-63	-0.00300	0.173	0.500	ug/L	
SLD0127-IBL3	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0127-IBL3	Zinc-66	0.0070	2.92	6.00	ug/L	
SLD0127-IBL3	Zinc-67	-0.0350	0.94	6.00	ug/L	





**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 16:00

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCB2	Arsenic-75a	0.0140	0.0373	0.200	ug/L	
SLD0127-CCB2	Cadmium-111	0.0170	0.03	0.100	ug/L	
SLD0127-CCB2	Cadmium-114	-0.00400	0.04	0.100	ug/L	
SLD0127-CCB2	Copper-63	0.00300	0.173	0.500	ug/L	
SLD0127-CCB2	Copper-65	-0.00300	0.35	0.500	ug/L	
SLD0127-CCB2	Zinc-66	0.0040	2.92	6.00	ug/L	
SLD0127-CCB2	Zinc-67	-0.0250	0.94	6.00	ug/L	
SLD0127-CCB3	Arsenic-75a	-0.0300	0.0373	0.200	ug/L	
SLD0127-CCB3	Cadmium-111	-0.00800	0.03	0.100	ug/L	
SLD0127-CCB3	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0127-CCB3	Copper-63	-0.00900	0.173	0.500	ug/L	
SLD0127-CCB3	Copper-65	0.00700	0.35	0.500	ug/L	
SLD0127-CCB3	Zinc-66	-0.0440	2.92	6.00	ug/L	
SLD0127-CCB3	Zinc-67	0.0180	0.94	6.00	ug/L	
SLD0127-IBL4	Arsenic-75a	-0.0440	0.0373	0.200	ug/L	
SLD0127-IBL4	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLD0127-IBL4	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0127-IBL4	Copper-63	-0.00500	0.173	0.500	ug/L	
SLD0127-IBL4	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0127-IBL4	Zinc-66	-0.0450	2.92	6.00	ug/L	
SLD0127-IBL4	Zinc-67	-0.0070	0.94	6.00	ug/L	
SLD0127-CCB4	Arsenic-75a	-0.0440	0.0373	0.200	ug/L	
SLD0127-CCB4	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLD0127-CCB4	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0127-CCB4	Copper-63	-0.00300	0.173	0.500	ug/L	
SLD0127-CCB4	Copper-65	0.00500	0.35	0.500	ug/L	
SLD0127-CCB4	Zinc-66	-0.0340	2.92	6.00	ug/L	
SLD0127-CCB4	Zinc-67	0.0020	0.94	6.00	ug/L	
SLD0127-IBL5	Arsenic-75a	-0.0420	0.0373	0.200	ug/L	
SLD0127-IBL5	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0127-IBL5	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0127-IBL5	Copper-63	-0.00300	0.173	0.500	ug/L	
SLD0127-IBL5	Copper-65	0.00200	0.35	0.500	ug/L	
SLD0127-IBL5	Zinc-66	-0.0540	2.92	6.00	ug/L	
SLD0127-IBL5	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLD0127-CCB5	Arsenic-75a	-0.0480	0.0373	0.200	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 18:41

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCB5	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0127-CCB5	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLD0127-CCB5	Copper-63	-0.00800	0.173	0.500	ug/L	
SLD0127-CCB5	Copper-65	0.00100	0.35	0.500	ug/L	
SLD0127-CCB5	Zinc-66	-0.0450	2.92	6.00	ug/L	
SLD0127-CCB5	Zinc-67	-0.0080	0.94	6.00	ug/L	
SLD0127-IBL6	Arsenic-75a	-0.0570	0.0373	0.200	ug/L	
SLD0127-IBL6	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0127-IBL6	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLD0127-IBL6	Copper-63	0.0310	0.173	0.500	ug/L	
SLD0127-IBL6	Copper-65	0.0410	0.35	0.500	ug/L	
SLD0127-IBL6	Zinc-66	0.0030	2.92	6.00	ug/L	
SLD0127-IBL6	Zinc-67	0.0600	0.94	6.00	ug/L	
SLD0127-CCB6	Arsenic-75a	-0.0430	0.0373	0.200	ug/L	
SLD0127-CCB6	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLD0127-CCB6	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0127-CCB6	Copper-63	-0.00700	0.173	0.500	ug/L	
SLD0127-CCB6	Copper-65	0.00100	0.35	0.500	ug/L	
SLD0127-CCB6	Zinc-66	-0.0330	2.92	6.00	ug/L	
SLD0127-CCB6	Zinc-67	0.0440	0.94	6.00	ug/L	
SLD0127-IBL7	Arsenic-75a	-0.0490	0.0373	0.200	ug/L	
SLD0127-IBL7	Cadmium-111	0.00800	0.03	0.100	ug/L	
SLD0127-IBL7	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0127-IBL7	Copper-63	0.0310	0.173	0.500	ug/L	
SLD0127-IBL7	Copper-65	0.0350	0.35	0.500	ug/L	
SLD0127-IBL7	Zinc-66	-0.0070	2.92	6.00	ug/L	
SLD0127-IBL7	Zinc-67	0.126	0.94	6.00	ug/L	
SLD0127-CCB7	Arsenic-75a	-0.0520	0.0373	0.200	ug/L	
SLD0127-CCB7	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0127-CCB7	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0127-CCB7	Copper-63	-0.00600	0.173	0.500	ug/L	
SLD0127-CCB7	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-CCB7	Zinc-66	-0.0430	2.92	6.00	ug/L	
SLD0127-CCB7	Zinc-67	0.0060	0.94	6.00	ug/L	
SLD0127-IBL8	Arsenic-75a	-0.0530	0.0373	0.200	ug/L	
SLD0127-IBL8	Cadmium-111	-0.00100	0.03	0.100	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 21:29

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBL8	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0127-IBL8	Copper-63	0.0320	0.173	0.500	ug/L	
SLD0127-IBL8	Copper-65	0.0390	0.35	0.500	ug/L	
SLD0127-IBL8	Zinc-66	-0.0050	2.92	6.00	ug/L	
SLD0127-IBL8	Zinc-67	0.0980	0.94	6.00	ug/L	
SLD0127-CCB8	Arsenic-75a	-0.0460	0.0373	0.200	ug/L	
SLD0127-CCB8	Cadmium-111	0.00900	0.03	0.100	ug/L	
SLD0127-CCB8	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0127-CCB8	Copper-63	-0.00500	0.173	0.500	ug/L	
SLD0127-CCB8	Copper-65	0.00600	0.35	0.500	ug/L	
SLD0127-CCB8	Zinc-66	-0.0290	2.92	6.00	ug/L	
SLD0127-CCB8	Zinc-67	-0.0140	0.94	6.00	ug/L	
SLD0127-IBL9	Arsenic-75a	-0.0410	0.0373	0.200	ug/L	
SLD0127-IBL9	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0127-IBL9	Cadmium-114	0.00800	0.04	0.100	ug/L	
SLD0127-IBL9	Copper-63	0.0300	0.173	0.500	ug/L	
SLD0127-IBL9	Copper-65	0.0370	0.35	0.500	ug/L	
SLD0127-IBL9	Zinc-66	0.0060	2.92	6.00	ug/L	
SLD0127-IBL9	Zinc-67	0.0360	0.94	6.00	ug/L	
SLD0127-CCB9	Arsenic-75a	-0.0470	0.0373	0.200	ug/L	
SLD0127-CCB9	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLD0127-CCB9	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLD0127-CCB9	Copper-63	-0.0100	0.173	0.500	ug/L	
SLD0127-CCB9	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0127-CCB9	Zinc-66	-0.0330	2.92	6.00	ug/L	
SLD0127-CCB9	Zinc-67	0.0270	0.94	6.00	ug/L	
SLD0127-IBLA	Arsenic-75a	-0.0420	0.0373	0.200	ug/L	
SLD0127-IBLA	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLD0127-IBLA	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0127-IBLA	Copper-63	0.0280	0.173	0.500	ug/L	
SLD0127-IBLA	Copper-65	0.0380	0.35	0.500	ug/L	
SLD0127-IBLA	Zinc-66	0.0080	2.92	6.00	ug/L	
SLD0127-IBLA	Zinc-67	0.0280	0.94	6.00	ug/L	
SLD0127-CCBA	Arsenic-75a	-0.0440	0.0373	0.200	ug/L	
SLD0127-CCBA	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLD0127-CCBA	Cadmium-114	0.00800	0.04	0.100	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/07/23 23:41

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCBA	Copper-63	-0.00700	0.173	0.500	ug/L	
SLD0127-CCBA	Copper-65	0.00300	0.35	0.500	ug/L	
SLD0127-CCBA	Zinc-66	-0.0220	2.92	6.00	ug/L	
SLD0127-CCBA	Zinc-67	0.0170	0.94	6.00	ug/L	
SLD0127-CCBB	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0127-CCBB	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLD0127-CCBB	Cadmium-114	0.0100	0.04	0.100	ug/L	
SLD0127-CCBB	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0127-CCBB	Copper-65	0.00400	0.35	0.500	ug/L	
SLD0127-CCBB	Zinc-66	0.0070	2.92	6.00	ug/L	
SLD0127-CCBB	Zinc-67	0.0630	0.94	6.00	ug/L	
SLD0127-IBLC	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLD0127-IBLC	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLD0127-IBLC	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLD0127-IBLC	Copper-63	0.0430	0.173	0.500	ug/L	
SLD0127-IBLC	Copper-65	0.0290	0.35	0.500	ug/L	
SLD0127-IBLC	Zinc-66	0.0320	2.92	6.00	ug/L	
SLD0127-IBLC	Zinc-67	0.0960	0.94	6.00	ug/L	
SLD0127-CCBC	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLD0127-CCBC	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0127-CCBC	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0127-CCBC	Copper-63	0.00400	0.173	0.500	ug/L	
SLD0127-CCBC	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0127-CCBC	Zinc-66	-0.0280	2.92	6.00	ug/L	
SLD0127-CCBC	Zinc-67	0.0220	0.94	6.00	ug/L	
SLD0127-IBLD	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLD0127-IBLD	Cadmium-111	0.0780	0.03	0.100	ug/L	
SLD0127-IBLD	Cadmium-114	0.0600	0.04	0.100	ug/L	
SLD0127-IBLD	Copper-63	0.0370	0.173	0.500	ug/L	
SLD0127-IBLD	Copper-65	0.0340	0.35	0.500	ug/L	
SLD0127-IBLD	Zinc-66	0.0890	2.92	6.00	ug/L	
SLD0127-IBLD	Zinc-67	0.0960	0.94	6.00	ug/L	
SLD0127-CCBD	Arsenic-75a	-0.0110	0.0373	0.200	ug/L	
SLD0127-CCBD	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLD0127-CCBD	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0127-CCBD	Copper-63	0.00300	0.173	0.500	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/08/23 01:58

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCBD	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0127-CCBD	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLD0127-CCBD	Zinc-67	0.0020	0.94	6.00	ug/L	
SLD0127-IBL	Arsenic-75a	-0.0110	0.0373	0.200	ug/L	
SLD0127-IBL	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0127-IBL	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLD0127-IBL	Copper-63	0.0380	0.173	0.500	ug/L	
SLD0127-IBL	Copper-65	0.0380	0.35	0.500	ug/L	
SLD0127-IBL	Zinc-66	0.0550	2.92	6.00	ug/L	
SLD0127-IBL	Zinc-67	0.0230	0.94	6.00	ug/L	
SLD0127-CCBE	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLD0127-CCBE	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0127-CCBE	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLD0127-CCBE	Copper-63	0.00300	0.173	0.500	ug/L	
SLD0127-CCBE	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-CCBE	Zinc-66	-0.0060	2.92	6.00	ug/L	
SLD0127-CCBE	Zinc-67	-0.0070	0.94	6.00	ug/L	
SLD0127-IBLF	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLD0127-IBLF	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0127-IBLF	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLD0127-IBLF	Copper-63	0.00500	0.173	0.500	ug/L	
SLD0127-IBLF	Copper-65	0.00300	0.35	0.500	ug/L	
SLD0127-IBLF	Zinc-66	0.0040	2.92	6.00	ug/L	
SLD0127-IBLF	Zinc-67	0.0010	0.94	6.00	ug/L	
SLD0127-CCBF	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SLD0127-CCBF	Cadmium-111	0.00	0.03	0.100	ug/L	
SLD0127-CCBF	Cadmium-114	0.00900	0.04	0.100	ug/L	
SLD0127-CCBF	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0127-CCBF	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0127-CCBF	Zinc-66	-0.0080	2.92	6.00	ug/L	
SLD0127-CCBF	Zinc-67	-0.0290	0.94	6.00	ug/L	
SLD0127-CCBG	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0127-CCBG	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLD0127-CCBG	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0127-CCBG	Copper-63	-0.00200	0.173	0.500	ug/L	
SLD0127-CCBG	Copper-65	-0.00500	0.35	0.500	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/08/23 04:17

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-CCBG	Zinc-66	-0.0130	2.92	6.00	ug/L	
SLD0127-CCBG	Zinc-67	-0.0090	0.94	6.00	ug/L	
SLD0127-IBLH	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLD0127-IBLH	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0127-IBLH	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0127-IBLH	Copper-63	0.00300	0.173	0.500	ug/L	
SLD0127-IBLH	Copper-65	-0.00100	0.35	0.500	ug/L	
SLD0127-IBLH	Zinc-66	0.0340	2.92	6.00	ug/L	
SLD0127-IBLH	Zinc-67	-0.0090	0.94	6.00	ug/L	
SLD0127-CCBH	Arsenic-75a	0.0190	0.0373	0.200	ug/L	
SLD0127-CCBH	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0127-CCBH	Cadmium-114	-0.00700	0.04	0.100	ug/L	
SLD0127-CCBH	Copper-63	0.00900	0.173	0.500	ug/L	
SLD0127-CCBH	Copper-65	0.0130	0.35	0.500	ug/L	
SLD0127-CCBH	Zinc-66	0.0230	2.92	6.00	ug/L	
SLD0127-CCBH	Zinc-67	0.0020	0.94	6.00	ug/L	
SLD0127-IBLI	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLD0127-IBLI	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLD0127-IBLI	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLD0127-IBLI	Copper-63	0.00100	0.173	0.500	ug/L	
SLD0127-IBLI	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-IBLI	Zinc-66	0.0080	2.92	6.00	ug/L	
SLD0127-IBLI	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0127-CCBI	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SLD0127-CCBI	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLD0127-CCBI	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0127-CCBI	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0127-CCBI	Copper-65	-0.00400	0.35	0.500	ug/L	
SLD0127-CCBI	Zinc-66	-0.0090	2.92	6.00	ug/L	
SLD0127-CCBI	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0127-IBLJ	Arsenic-75a	-0.0100	0.0373	0.200	ug/L	
SLD0127-IBLJ	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLD0127-IBLJ	Cadmium-114	0.00	0.04	0.100	ug/L	
SLD0127-IBLJ	Copper-63	0.00200	0.173	0.500	ug/L	
SLD0127-IBLJ	Copper-65	0.00	0.35	0.500	ug/L	
SLD0127-IBLJ	Zinc-66	0.0240	2.92	6.00	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Date Analyzed: 04/08/23 07:08

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0127-IBLJ	Zinc-67	-0.0200	0.94	6.00	ug/L	
SLD0127-CCBJ	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLD0127-CCBJ	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLD0127-CCBJ	Cadmium-114	-0.00600	0.04	0.100	ug/L	
SLD0127-CCBJ	Copper-63	-0.00100	0.173	0.500	ug/L	
SLD0127-CCBJ	Copper-65	-0.00200	0.35	0.500	ug/L	
SLD0127-CCBJ	Zinc-66	0.0020	2.92	6.00	ug/L	
SLD0127-CCBJ	Zinc-67	-0.0520	0.94	6.00	ug/L	



**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Sequence: SLD0147

Date Analyzed: 04/11/23 18:23

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0147-IBL1	Cadmium-111	-0.00700	0.03	0.100	ug/L	
SLD0147-IBL1	Cadmium-114	-0.0150	0.04	0.100	ug/L	
SLD0147-IBL1	Zinc-66	0.0250	2.92	6.00	ug/L	
SLD0147-IBL1	Zinc-67	0.108	0.94	6.00	ug/L	
SLD0147-ICB1	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLD0147-ICB1	Cadmium-114	-0.00700	0.04	0.100	ug/L	
SLD0147-ICB1	Zinc-66	-0.0140	2.92	6.00	ug/L	
SLD0147-ICB1	Zinc-67	0.0070	0.94	6.00	ug/L	
SLD0147-CCB1	Cadmium-111	0.00800	0.03	0.100	ug/L	
SLD0147-CCB1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLD0147-CCB1	Zinc-66	-0.0010	2.92	6.00	ug/L	
SLD0147-CCB1	Zinc-67	-0.0730	0.94	6.00	ug/L	
SLD0147-IBL2	Cadmium-111	0.0430	0.03	0.100	ug/L	
SLD0147-IBL2	Cadmium-114	0.0130	0.04	0.100	ug/L	
SLD0147-IBL2	Zinc-66	0.0340	2.92	6.00	ug/L	
SLD0147-IBL2	Zinc-67	-0.0110	0.94	6.00	ug/L	
SLD0147-CCB2	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLD0147-CCB2	Cadmium-114	-0.0110	0.04	0.100	ug/L	
SLD0147-CCB2	Zinc-66	-0.0040	2.92	6.00	ug/L	
SLD0147-CCB2	Zinc-67	-0.0210	0.94	6.00	ug/L	
SLD0147-IBL3	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLD0147-IBL3	Cadmium-114	-0.0120	0.04	0.100	ug/L	
SLD0147-IBL3	Zinc-66	0.0410	2.92	6.00	ug/L	
SLD0147-IBL3	Zinc-67	0.0590	0.94	6.00	ug/L	
SLD0147-CCB3	Cadmium-111	0.0170	0.03	0.100	ug/L	
SLD0147-CCB3	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLD0147-CCB3	Zinc-66	0.00	2.92	6.00	ug/L	
SLD0147-CCB3	Zinc-67	-0.0060	0.94	6.00	ug/L	
SLD0147-IBL4	Cadmium-111	0.0220	0.03	0.100	ug/L	
SLD0147-IBL4	Cadmium-114	-0.0190	0.04	0.100	ug/L	
SLD0147-IBL4	Zinc-66	0.0280	2.92	6.00	ug/L	
SLD0147-IBL4	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLD0147-CCB4	Cadmium-111	0.0130	0.03	0.100	ug/L	
SLD0147-CCB4	Cadmium-114	-0.0210	0.04	0.100	ug/L	
SLD0147-CCB4	Zinc-66	0.0160	2.92	6.00	ug/L	





**INSTRUMENT BLANKS**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Sequence: SLD0147

Date Analyzed: 04/11/23 21:41

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0147-CCB4	Zinc-67	-0.0850	0.94	6.00	ug/L	
SLD0147-IBL5	Cadmium-111	0.416	0.03	0.100	ug/L	
SLD0147-IBL5	Cadmium-114	0.162	0.04	0.100	ug/L	
SLD0147-IBL5	Zinc-66	0.0320	2.92	6.00	ug/L	
SLD0147-IBL5	Zinc-67	0.0780	0.94	6.00	ug/L	
SLD0147-CCB5	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLD0147-CCB5	Cadmium-114	-0.0190	0.04	0.100	ug/L	
SLD0147-CCB5	Zinc-66	-0.0040	2.92	6.00	ug/L	
SLD0147-CCB5	Zinc-67	0.0020	0.94	6.00	ug/L	



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0127-CAL1	XDT_m2230407-006	NA	04/07/23 14:00
CAL 1 - LOW CHECK	SLD0127-CAL2	XDT_m2230407-007	NA	04/07/23 14:05
CAL 2	SLD0127-CAL3	XDT_m2230407-008	NA	04/07/23 14:10
CAL 3	SLD0127-CAL4	XDT_m2230407-009	NA	04/07/23 14:15
CAL 4	SLD0127-CAL5	XDT_m2230407-010	NA	04/07/23 14:20
CAL 5	SLD0127-CAL6	XDT_m2230407-011	NA	04/07/23 14:27
RINSE	SLD0127-IBL1	XDT_m2230407-012	NA	04/07/23 14:35
Initial Cal Check	SLD0127-ICV1	XDT_m2230407-014	NA	04/07/23 14:43
Initial Cal Blank	SLD0127-ICB1	XDT_m2230407-015	NA	04/07/23 14:51
Calibration Check	SLD0127-CCV1	XDT_m2230407-016	NA	04/07/23 14:56
Calibration Blank	SLD0127-CCB1	XDT_m2230407-017	NA	04/07/23 15:05
Instrument RL Check	SLD0127-CRL1	XDT_m2230407-018	NA	04/07/23 15:11
Interference Check A	SLD0127-IFA1	XDT_m2230407-019	NA	04/07/23 15:19
Interference Check B	SLD0127-IFB1	XDT_m2230407-020	NA	04/07/23 15:24
LR200	SLD0127-HCV1	XDT_m2230407-021	NA	04/07/23 15:28
LR300	SLD0127-HCV2	XDT_m2230407-022	NA	04/07/23 15:33
Instrument Blank	SLD0127-IBL2	XDT_m2230407-023	NA	04/07/23 15:41
Instrument Blank	SLD0127-IBL3	XDT_m2230407-024	NA	04/07/23 15:47
Calibration Check	SLD0127-CCV2	XDT_m2230407-025	NA	04/07/23 15:52
Calibration Blank	SLD0127-CCB2	XDT_m2230407-026	NA	04/07/23 16:00
Calibration Check	SLD0127-CCV3	XDT_m2230407-028	NA	04/07/23 16:14
Calibration Blank	SLD0127-CCB3	XDT_m2230407-029	NA	04/07/23 16:21
ZZZZZ	BLD0180-BLK1	XDT_m2230407-030	Water	04/07/23 16:27
ZZZZZ	BLD0180-BS1	XDT_m2230407-031	Water	04/07/23 16:32
Instrument Blank	SLD0127-IBL4	XDT_m2230407-039	NA	04/07/23 17:25
Calibration Check	SLD0127-CCV4	XDT_m2230407-040	NA	04/07/23 17:30
Calibration Blank	SLD0127-CCB4	XDT_m2230407-041	NA	04/07/23 17:38
ZZZZZ	BLD0055-BLK1	XDT_m2230407-042	Solid	04/07/23 17:46
ZZZZZ	BLD0055-BS1	XDT_m2230407-043	Solid	04/07/23 17:51



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Blank	BLD0123-BLK1	XDT_m2230407-044	Solid	04/07/23 17:55
LCS	BLD0123-BS1	XDT_m2230407-045	Solid	04/07/23 18:00
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	23A0179-01	XDT_m2230407-046	Solid	04/07/23 18:05
ZZZZZ	BLD0055-DUP1	XDT_m2230407-047	Solid	04/07/23 18:10
ZZZZZ	BLD0055-MS1	XDT_m2230407-048	Solid	04/07/23 18:14
ZZZZZ	BLD0055-MSD1	XDT_m2230407-049	Solid	04/07/23 18:19
Instrument Blank	SLD0127-IBL5	XDT_m2230407-051	NA	04/07/23 18:28
Calibration Check	SLD0127-CCV5	XDT_m2230407-052	NA	04/07/23 18:33
Calibration Blank	SLD0127-CCB5	XDT_m2230407-053	NA	04/07/23 18:41
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-14	XDT_m2230407-054	Solid	04/07/23 18:48
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-15	XDT_m2230407-055	Solid	04/07/23 18:52
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
ZZZZZ	23A0158-16	XDT_m2230407-056	Solid	04/07/23 18:57
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1015	23A0206-02	XDT_m2230407-057	Solid	04/07/23 19:02
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	23A0206-01	XDT_m2230407-058	Solid	04/07/23 19:07
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-DUP1	XDT_m2230407-059	Solid	04/07/23 19:11
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MS1	XDT_m2230407-060	Solid	04/07/23 19:16
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
LDW23-SS1021	BLD0123-MSD1	XDT_m2230407-061	Solid	04/07/23 19:21
Instrument Blank	SLD0127-IBL6	XDT_m2230407-063	NA	04/07/23 19:30
Calibration Check	SLD0127-CCV6	XDT_m2230407-064	NA	04/07/23 19:35
Calibration Blank	SLD0127-CCB6	XDT_m2230407-065	NA	04/07/23 19:42
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-02	XDT_m2230407-066	Solid	04/07/23 19:47
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-03	XDT_m2230407-067	Solid	04/07/23 19:52
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-04	XDT_m2230407-068	Solid	04/07/23 19:57
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-05	XDT_m2230407-069	Solid	04/07/23 20:01
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-06	XDT_m2230407-070	Solid	04/07/23 20:06
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-07	XDT_m2230407-071	Solid	04/07/23 20:11
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-08	XDT_m2230407-072	Solid	04/07/23 20:16
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0179-09	XDT_m2230407-073	Solid	04/07/23 20:20
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
ZZZZZ	23A0179-10	XDT_m2230407-074	Solid	04/07/23 20:25
Instrument Blank	SLD0127-IBL7	XDT_m2230407-075	NA	04/07/23 20:30
Calibration Check	SLD0127-CCV7	XDT_m2230407-076	NA	04/07/23 20:34
Calibration Blank	SLD0127-CCB7	XDT_m2230407-077	NA	04/07/23 20:42
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-11	XDT_m2230407-078	Solid	04/07/23 20:47
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0179-12	XDT_m2230407-079	Solid	04/07/23 20:51
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-01	XDT_m2230407-080	Solid	04/07/23 20:56
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-02	XDT_m2230407-081	Solid	04/07/23 21:01
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-03	XDT_m2230407-082	Solid	04/07/23 21:06
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
ZZZZZ	23A0180-04	XDT_m2230407-083	Solid	04/07/23 21:10
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1164	23A0206-03	XDT_m2230407-084	Solid	04/07/23 21:15
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1158	23A0206-04	XDT_m2230407-085	Solid	04/07/23 21:20
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
LDW23-SS1151	23A0206-05	XDT_m2230407-086	Solid	04/07/23 21:25
Instrument Blank	SLD0127-IBL8	XDT_m2230407-087	NA	04/07/23 21:29
Calibration Check	SLD0127-CCV8	XDT_m2230407-088	NA	04/07/23 21:34
Calibration Blank	SLD0127-CCB8	XDT_m2230407-089	NA	04/07/23 21:42
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1145	23A0206-06	XDT_m2230407-090	Solid	04/07/23 21:46
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1139	23A0206-07	XDT_m2230407-091	Solid	04/07/23 21:51
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1117	23A0206-08	XDT_m2230407-092	Solid	04/07/23 21:56
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1103	23A0206-09	XDT_m2230407-093	Solid	04/07/23 22:00
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1100	23A0206-10	XDT_m2230407-094	Solid	04/07/23 22:05
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1096	23A0206-11	XDT_m2230407-095	Solid	04/07/23 22:10
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1094	23A0206-12	XDT_m2230407-096	Solid	04/07/23 22:15
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1066	23A0206-13	XDT_m2230407-097	Solid	04/07/23 22:19
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
LDW23-SS1061	23A0206-14	XDT_m2230407-098	Solid	04/07/23 22:24
Instrument Blank	SLD0127-IBL9	XDT_m2230407-099	NA	04/07/23 22:29
Calibration Check	SLD0127-CCV9	XDT_m2230407-100	NA	04/07/23 22:34
Calibration Blank	SLD0127-CCB9	XDT_m2230407-101	NA	04/07/23 22:41
Instrument Blank	SLD0127-IBLA	XDT_m2230407-111	NA	04/07/23 23:28
Calibration Check	SLD0127-CCVA	XDT_m2230407-112	NA	04/07/23 23:33
Calibration Blank	SLD0127-CCBA	XDT_m2230407-113	NA	04/07/23 23:41





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0127

Instrument: ICPMS2

Calibration: GD00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLD0127-CCVB	XDT_m2230407-115	NA	04/07/23 23:50
Calibration Blank	SLD0127-CCBB	XDT_m2230407-116	NA	04/07/23 23:58
Instrument Blank	SLD0127-IBLC	XDT_m2230407-126	NA	04/08/23 00:45
Calibration Check	SLD0127-CCVC	XDT_m2230407-127	NA	04/08/23 00:50
Calibration Blank	SLD0127-CCBC	XDT_m2230407-128	NA	04/08/23 00:57
Instrument Blank	SLD0127-IBLD	XDT_m2230407-138	NA	04/08/23 01:46
Calibration Check	SLD0127-CCVD	XDT_m2230407-139	NA	04/08/23 01:50
Calibration Blank	SLD0127-CCBD	XDT_m2230407-140	NA	04/08/23 01:58
Instrument Blank	SLD0127-IBLE	XDT_m2230407-150	NA	04/08/23 02:48
Calibration Check	SLD0127-CCVE	XDT_m2230407-151	NA	04/08/23 02:53
Calibration Blank	SLD0127-CCBE	XDT_m2230407-152	NA	04/08/23 03:00
Instrument Blank	SLD0127-IBLF	XDT_m2230407-162	NA	04/08/23 03:48
Calibration Check	SLD0127-CCVF	XDT_m2230407-163	NA	04/08/23 03:53
Calibration Blank	SLD0127-CCBF	XDT_m2230407-164	NA	04/08/23 04:00
Calibration Check	SLD0127-CCVG	XDT_m2230407-166	NA	04/08/23 04:10
Calibration Blank	SLD0127-CCBG	XDT_m2230407-167	NA	04/08/23 04:17
Instrument Blank	SLD0127-IBLH	XDT_m2230407-177	NA	04/08/23 05:05
Calibration Check	SLD0127-CCVH	XDT_m2230407-178	NA	04/08/23 05:10
Calibration Blank	SLD0127-CCBH	XDT_m2230407-179	NA	04/08/23 05:18
Instrument Blank	SLD0127-IBLI	XDT_m2230407-189	NA	04/08/23 06:05
Calibration Check	SLD0127-CCVI	XDT_m2230407-190	NA	04/08/23 06:10
Calibration Blank	SLD0127-CCBI	XDT_m2230407-191	NA	04/08/23 06:17
Instrument Blank	SLD0127-IBLJ	XDT_m2230407-201	NA	04/08/23 07:08
Calibration Check	SLD0127-CCVJ	XDT_m2230407-202	NA	04/08/23 07:13
Calibration Blank	SLD0127-CCBJ	XDT_m2230407-203	NA	04/08/23 07:20



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0147

Instrument: ICPMS2

Calibration: GD00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0147-CAL1	XDT_m2230411-006	NA	04/11/23 17:50
CAL 1 - LOW CHECK	SLD0147-CAL2	XDT_m2230411-007	NA	04/11/23 17:55
CAL 2	SLD0147-CAL3	XDT_m2230411-008	NA	04/11/23 18:00
CAL 3	SLD0147-CAL4	XDT_m2230411-009	NA	04/11/23 18:04
CAL 4	SLD0147-CAL5	XDT_m2230411-010	NA	04/11/23 18:09
CAL 5	SLD0147-CAL6	XDT_m2230411-011	NA	04/11/23 18:16
RINSE	SLD0147-IBL1	XDT_m2230411-012	NA	04/11/23 18:23
Initial Cal Check	SLD0147-ICV1	XDT_m2230411-017	NA	04/11/23 18:48
Initial Cal Blank	SLD0147-ICB1	XDT_m2230411-018	NA	04/11/23 18:55
Calibration Check	SLD0147-CCV1	XDT_m2230411-019	NA	04/11/23 19:00
Calibration Blank	SLD0147-CCB1	XDT_m2230411-020	NA	04/11/23 19:07
Instrument RL Check	SLD0147-CRL1	XDT_m2230411-021	NA	04/11/23 19:11
Interference Check A	SLD0147-IFA1	XDT_m2230411-022	NA	04/11/23 19:16
Interference Check B	SLD0147-IFB1	XDT_m2230411-023	NA	04/11/23 19:20
LR200	SLD0147-HCV1	XDT_m2230411-024	NA	04/11/23 19:25
LR300	SLD0147-HCV2	XDT_m2230411-025	NA	04/11/23 19:29
Instrument Blank	SLD0147-IBL2	XDT_m2230411-026	NA	04/11/23 19:37
Calibration Check	SLD0147-CCV2	XDT_m2230411-027	NA	04/11/23 19:43
Calibration Blank	SLD0147-CCB2	XDT_m2230411-028	NA	04/11/23 19:50
ZZZZZ	BLD0249-BLK1	XDT_m2230411-029	Water	04/11/23 19:55
ZZZZZ	BLD0249-BS1	XDT_m2230411-030	Water	04/11/23 20:00
Instrument Blank	SLD0147-IBL3	XDT_m2230411-036	NA	04/11/23 20:31
Calibration Check	SLD0147-CCV3	XDT_m2230411-037	NA	04/11/23 20:36
Calibration Blank	SLD0147-CCB3	XDT_m2230411-038	NA	04/11/23 20:43
ZZZZZ	23D0165-01	XDT_m2230411-043	Water	04/11/23 21:06
ZZZZZ	23D0165-01	XDT_m2230411-043	Water	04/11/23 21:06
ZZZZZ	23D0165-01	XDT_m2230411-043	Water	04/11/23 21:06
ZZZZZ	23D0165-01	XDT_m2230411-043	Water	04/11/23 21:06
ZZZZZ	23D0165-01	XDT_m2230411-043	Water	04/11/23 21:06



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0147

Instrument: ICPMS2

Calibration: GD00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLD0249-DUP1	XDT_m2230411-044	Water	04/11/23 21:10
ZZZZZ	BLD0249-MS1	XDT_m2230411-045	Water	04/11/23 21:15
LDW23-SS1066	23A0206-13	XDT_m2230411-046	Solid	04/11/23 21:20
LDW23-SS1100	23A0206-10	XDT_m2230411-047	Solid	04/11/23 21:24
Instrument Blank	SLD0147-IBL4	XDT_m2230411-048	NA	04/11/23 21:29
Calibration Check	SLD0147-CCV4	XDT_m2230411-049	NA	04/11/23 21:33
Calibration Blank	SLD0147-CCB4	XDT_m2230411-050	NA	04/11/23 21:41
Instrument Blank	SLD0147-IBL5	XDT_m2230411-059	NA	04/11/23 22:22
Calibration Check	SLD0147-CCV5	XDT_m2230411-060	NA	04/11/23 22:26
Calibration Blank	SLD0147-CCB5	XDT_m2230411-061	NA	04/11/23 22:33



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0127-IFA1	Arsenic-75a	0	0.0250		ug/L
	Cadmium-111	0	0.0610		ug/L
	Cadmium-114	0	0.0530		ug/L
	Copper-63	0	0.0630		ug/L
	Copper-65	0	0.0620		ug/L
	Zinc-66	0	0.2430		ug/L
	Zinc-67	0	0.2000		ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0127-IFB1	Arsenic-75a	20.000	18.948	94.7	ug/L
	Cadmium-111	20.000	19.241	96.2	ug/L
	Cadmium-114	20.000	18.956	94.8	ug/L
	Copper-63	20.000	19.582	97.9	ug/L
	Copper-65	20.000	19.715	98.6	ug/L
	Zinc-66	20.000	18.334	91.7	ug/L
	Zinc-67	20.000	16.308	81.5	ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Sequence: SLD0147

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0147-IFA1	Cadmium-111	0	0.0960		ug/L
	Cadmium-114	0	0.0660		ug/L
	Zinc-66	0	0.2490		ug/L
	Zinc-67	0	0.1730		ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**ICP INTERFERENCE CHECK SAMPLE**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Sequence: SLD0147

Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0147-IFB1	Cadmium-111	20.000	19.641	98.2	ug/L
	Cadmium-114	20.000	19.525	97.6	ug/L
	Zinc-66	20.000	18.506	92.5	ug/L
	Zinc-67	20.000	17.004	85.0	ug/L

\* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.



**DETECTION LEVEL STANDARD**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00024

Sequence: SLD0127

Lab Sample ID: SLD0127-CRL1

Analyte	True	Found	%R	Units	QC Limits
Arsenic-75a	0.20000	0.219	110	ug/L	50 - 150
Cadmium-111	0.10000	0.113	113	ug/L	50 - 150
Cadmium-114	0.10000	0.112	112	ug/L	50 - 150
Copper-63	0.50000	0.503	101	ug/L	50 - 150
Copper-65	0.50000	0.538	108	ug/L	50 - 150
Zinc-66	6.0000	6.13	102	ug/L	50 - 150
Zinc-67	6.0000	5.58	93.1	ug/L	50 - 150

\* Values outside of QC limits





**DETECTION LEVEL STANDARD**  
**EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: ICPMS2

Calibration: GD00029

Sequence: SLD0147

Lab Sample ID: SLD0147-CRL1

Analyte	True	Found	%R	Units	QC Limits
Cadmium-111	0.10000	0.0770	77.0	ug/L	50 - 150
Cadmium-114	0.10000	0.0710	71.0	ug/L	50 - 150
Zinc-66	6.0000	6.47	108	ug/L	50 - 150
Zinc-67	6.0000	6.30	105	ug/L	50 - 150

\* Values outside of QC limits



## HIGH-CONCENTRATION CALIBRATION VERIFICATION

### EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00024

**Laboratory ID:** SLD0127-HCV1

**Sequence:** SLD0127

**Standard ID:** L003671

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Arsenic-75a	200.00	199	-0.6	10.00
Cadmium-111	200.00	191	-4.6	10.00
Cadmium-114	200.00	191	-4.3	10.00
Copper-63	200.00	191	-4.4	10.00
Copper-65	200.00	195	-2.6	10.00
Zinc-66	200.00	193	-3.5	10.00
Zinc-67	200.00	191	-4.3	10.00

\* Values outside of QC limits



## HIGH-CONCENTRATION CALIBRATION VERIFICATION

### EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00024

**Laboratory ID:** SLD0127-HCV2

**Sequence:** SLD0127

**Standard ID:** L003672

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	301	0.4	10.00
Cadmium-111	300.00	285	-4.9	10.00
Cadmium-114	300.00	282	-5.9	10.00
Copper-63	300.00	289	-3.8	10.00
Copper-65	300.00	287	-4.5	10.00
Zinc-66	300.00	282	-6.2	10.00
Zinc-67	300.00	282	-6.1	10.00

\* Values outside of QC limits



**HIGH-CONCENTRATION  
CALIBRATION VERIFICATION  
EPA 6020B UCT-KED**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00029

**Laboratory ID:** SLD0147-HCV1

**Sequence:** SLD0147

**Standard ID:** L003671

<b>ANALYTE</b>	<b>EXPECTED (ug/L)</b>	<b>FOUND (ug/L)</b>	<b>% DRIFT</b>	<b>QC LIMIT</b>
Cadmium-111	200.00	197	-1.6	10.00
Cadmium-114	200.00	196	-2.0	10.00
Zinc-66	200.00	192	-3.9	10.00
Zinc-67	200.00	192	-4.2	10.00

\* Values outside of QC limits



## HIGH-CONCENTRATION CALIBRATION VERIFICATION

### EPA 6020B UCT-KED

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Calibration:** GD00029

**Laboratory ID:** SLD0147-HCV2

**Sequence:** SLD0147

**Standard ID:** L003672

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Cadmium-111	300.00	296	-1.2	10.00
Cadmium-114	300.00	296	-1.3	10.00
Zinc-66	300.00	278	-7.5	10.00
Zinc-67	300.00	277	-7.6	10.00

\* Values outside of QC limits



## HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:07	86	180	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:02	86	180	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:15	86	180	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:20	86	180	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:25	86	180	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:46	86	180	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:51	86	180	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 21:56	86	180	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:00	86	180	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	04/06/23 16:05	85	180	04/11/23 21:24	90	180	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:05	86	180	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:10	86	180	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:15	86	180	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:19	86	180	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	04/06/23 16:05	85	180	04/11/23 21:20	90	180	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 22:24	86	180	
Duplicate BLD0123-DUP1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:11	86	180	
Matrix Spike BLD0123-MS1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:16	86	180	
Matrix Spike Dup BLD0123-MSD1	01/11/23 08:25	01/11/23 17:05	04/06/23 16:05	85	180	04/07/23 19:21	86	180	

\* Indicates hold time exceedance.



**METHOD DETECTION  
AND REPORTING LIMITS  
EPA 6020B UCT-KED**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: ICPMS2

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Arsenic-75a	0.04	0.20	mg/kg
Cadmium-111	0.03	0.10	mg/kg
Cadmium-114	0.04	0.10	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCU10  
Lot Number: P2-CU682108  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Copper  
Starting Material: Cu Metal  
Starting Material Lot#: 2095  
Starting Material Purity: 99.9996%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10013 ± 30 µg/mL  
**Density:** 1.032 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9977 ± 50 µg/mL</b> ICP Assay NIST SRM 3114 Lot Number: 121207
<b>Assay Method #2</b>	<b>10024 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10007 ± 46 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/(u_{char\ i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.007542	M Eu < 0.000942	O Na < 0.001434	M Se < 0.016971	M Zn < 0.005657
O Al < 0.000609	O Fe < 0.008700	M Nb < 0.000942	O Si < 0.003052	M Zr < 0.000942
M As < 0.010371	M Ga < 0.000942	M Nd < 0.000942	M Sm < 0.000942	
M Au < 0.001885	M Gd < 0.000942	M Ni < 0.003781	M Sn < 0.005657	
O B < 0.003663	M Ge < 0.005657	M Os < 0.000942	M Sr < 0.000942	
M Ba < 0.004253	M Hf < 0.000942	O P < 0.031668	M Ta < 0.000942	
M Be < 0.000942	O Hg < 0.007064	M Pb < 0.005789	M Tb < 0.000942	
M Bi < 0.000942	M Ho < 0.000942	M Pd < 0.000942	M Te < 0.004714	
O Ca < 0.002304	M In < 0.000942	M Pr < 0.000942	M Th < 0.000942	
M Cd < 0.000942	M Ir < 0.000942	M Pt < 0.000942	O Ti < 0.002801	
M Ce < 0.000942	O K < 0.000763	M Rb < 0.000942	M Tl < 0.000942	
M Co < 0.001890	M La < 0.000942	M Re < 0.000942	M Tm < 0.000942	
M Cr < 0.005657	O Li < 0.000243	i Rh <	M U < 0.000942	
M Cs < 0.000942	M Lu < 0.000942	M Ru < 0.039588	M V < 0.003771	
s Cu <	O Mg < 0.000320	O S < 0.007174	M W < 0.005657	
M Dy < 0.000942	O Mn < 0.000793	M Sb < 0.001885	M Y < 0.000942	
M Er < 0.000942	M Mo < 0.005657	M Sc < 0.000942	M Yb < 0.000942	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 63.55 +2 6 Cu(H<sub>2</sub>O)<sub>6</sub>2+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Cu Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub> ); Oxides ( Soluble in HCl ); Ores ( Dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



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Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGPB10  
Lot Number: S2-PB713228  
Matrix: 0.5% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Lead  
Starting Material: Lead Nitrate  
Starting Material Lot#: 2343  
Starting Material Purity: 99.9995%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10042 ± 31 µg/mL  
**Density:** 1.015 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10024 ± 41 µg/mL**  
ICP Assay NIST SRM 3128 Lot Number: 101026

**Assay Method #2**      **10054 ± 32 µg/mL**  
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000310	M Eu < 0.000310	M Na < 0.001470	M Se < 0.009100	O Zn < 0.006155
O Al < 0.017098	O Fe < 0.002496	M Nb < 0.000310	O Si < 0.003761	O Zr < 0.001700
M As < 0.003100	M Ga < 0.000310	M Nd < 0.000310	M Sm < 0.000310	
M Au < 0.000910	M Gd < 0.000310	O Ni < 0.001709	M Sn < 0.001300	
O B < 0.005600	M Ge < 0.002200	M Os < 0.000310	O Sr < 0.000444	
O Ba < 0.007865	M Hf < 0.000310	O P < 0.038000	M Ta < 0.000310	
O Be < 0.000320	M Hg < 0.002200	s Pb < 0.000610	M Tb < 0.000610	
M Bi < 0.028000	M Ho < 0.000310	M Pd < 0.000610	M Te < 0.000310	
O Ca < 0.019834	M In < 0.000310	M Pr < 0.000310	M Th < 0.000310	
O Cd < 0.000630	M Ir < 0.000310	M Pt < 0.000910	O Ti < 0.005129	
M Ce < 0.004787	O K < 0.008207	M Rb < 0.006700	M Tl < 0.016000	
M Co < 0.000610	M La < 0.001900	M Re < 0.000310	M Tm < 0.000310	
O Cr < 0.001500	O Li < 0.000110	O Rh < 0.007700	M U < 0.000310	
M Cs < 0.006100	M Lu < 0.000310	M Ru < 0.001300	M V < 0.001600	
M Cu < 0.001600	O Mg < 0.003317	O S < 0.052000	M W < 0.000910	
M Dy < 0.000310	O Mn < 0.001600	O Sb < 0.015000	M Y < 0.000310	
M Er < 0.000310	M Mo < 0.000610	O Sc < 0.000630	M Yb < 0.000310	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 207.20 +2 6 Pb(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl, HF and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Pb Containing Samples (Preparation and Solution)** -Metal (Best dissolved in 1:1 H<sub>2</sub>O / HNO<sub>3</sub> ); Oxides (The many different Pb oxides are soluble in HNO<sub>3</sub> with the exception of PbO<sub>2</sub> which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H<sub>2</sub>O / HNO<sub>3</sub> ); Organic Matrices (Dry ash and dissolve in dilute HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGZN10  
Lot Number: S2-ZN711249  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Zinc  
Starting Material: Zinc Metal  
Starting Material Lot#: 2349  
Starting Material Purity: 99.9988%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL  
**Density:** 1.029 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9981 ± 56 µg/mL</b> ICP Assay NIST SRM 3168a Lot Number: 120629
<b>Assay Method #2</b>	<b>9987 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10002 ± 32 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.002000	M Eu < 0.000500	O Na < 0.008713	M Se < 0.048000	s Zn <
O Al < 0.011000	O Fe < 0.015467	M Nb < 0.000500	O Si < 0.007842	M Zr < 0.000500
O As < 0.012000	M Ga < 0.004900	M Nd < 0.000500	M Sm < 0.000500	
M Au < 0.006500	M Gd < 0.000500	O Ni < 0.003049	M Sn < 0.002614	
O B < 0.019000	M Ge < 0.009100	M Os < 0.000500	M Sr < 0.000500	
M Ba < 0.000500	M Hf < 0.000500	O P < 0.059000	M Ta < 0.000500	
O Be < 0.000230	O Hg < 0.003800	M Pb < 0.016774	M Tb < 0.000500	
M Bi < 0.002400	M Ho < 0.000500	M Pd < 0.001000	M Te < 0.017000	
O Ca < 0.052283	M In < 0.003500	M Pr < 0.000500	M Th < 0.000500	
O Cd < 0.000588	M Ir < 0.001000	M Pt < 0.000500	M Ti < 0.002000	
M Ce < 0.000500	O K < 0.017209	M Rb < 0.002500	M Tl < 0.000500	
M Co < 0.000653	M La < 0.000500	M Re < 0.000500	M Tm < 0.000500	
O Cr < 0.001089	O Li < 0.000230	M Rh < 0.000500	M U < 0.000500	
M Cs < 0.000500	M Lu < 0.000500	M Ru < 0.005000	M V < 0.000500	
O Cu < 0.001938	O Mg < 0.000871	O S < 0.048000	M W < 0.001000	
M Dy < 0.000500	O Mn < 0.000172	M Sb < 0.004300	M Y < 0.000500	
M Er < 0.000500	M Mo < 0.001500	O Sc < 0.000900	M Yb < 0.000500	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 65.39 +2 4 Zn(OH)(aq)1+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Zn Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO<sub>3</sub>); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGSE10  
Lot Number: S2-SE711004  
Matrix: 3% (v/v) HNO3  
Value / Analyte(s): 10 000 µg/mL ea:  
Selenium  
Starting Material: Se Metal  
Starting Material Lot#: 1962  
Starting Material Purity: 99.9991%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9955 ± 61 µg/mL  
**Density:** 1.035 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **9955 ± 50 µg/mL**  
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char\ i}^2) / (\sum(1/(u_{char\ i}^2)))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char}$  =  $[\sum((w_i)^2 (u_{char\ i})^2)]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char\ a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{Its}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.002242	M	Eu <	0.000373	O Na	0.013654	s	Se <		O Zn	0.002374
M Al	0.004450	M	Fe	0.008478	O Nb <	0.002975	O Si	0.006249	M Zr <	0.001868	
O As <	0.022040	M	Ga <	0.000373	M Nd <	0.000373	M Sm <	0.000373			
M Au <	0.000373	M	Gd <	0.000373	O Ni	0.001843	M Sn	0.000847			
O B <	0.007714	M	Ge <	0.002616	M Os <	0.000373	M Sr <	0.001121			
M Ba <	0.001495	M	Hf <	0.000373	O P <	0.022040	M Ta <	0.000373			
M Be <	0.001495	M	Hg <	0.002240	M Pb	0.006358	M Tb <	0.006353			
M Bi <	0.000373	M	Ho <	0.000373	M Pd <	0.000373	M Te <	0.012707			
O Ca	0.006530	M	In <	0.000373	M Pr <	0.001495	M Th <	0.002990			
M Cd	0.001165	M	Ir <	0.000373	M Pt <	0.000373	M Ti <	0.003363			
M Ce <	0.000373	O K	0.001999	M Rb <	0.001868	M Tl	0.008584				
M Co <	0.000373	M La <	0.001121	M Re <	0.000373	M Tm <	0.000373				
M Cr	0.002861	O Li	0.000062	M Rh <	0.000373	M U <	0.000373				
M Cs <	0.001121	M Lu <	0.000373	M Ru <	0.001493	M V <	0.000747				
M Cu <	0.000747	O Mg	0.001156	O S	0.024591	M W <	0.002242				
M Dy <	0.000373	M Mn <	0.000373	M Sb <	0.002242	M Y <	0.000373				
M Er <	0.000373	O Mo <	0.003195	M Sc <	0.001121	M Yb <	0.000373				

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 78.96 +4 6 H<sub>2</sub>SeO<sub>3</sub>

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>,H<sub>3</sub>PO<sub>4</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

**Stability** - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Se Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides ( readily soluble in water); Minerals and alloys (acid digestion with HNO<sub>3</sub>or HNO<sub>3</sub> / HF ); Organic Matrices (acid digestion with hot concentrated H<sub>2</sub>SO<sub>4</sub> accompanied by the careful dropwise addition of H<sub>2</sub>O<sub>2</sub> until clear).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Uyen Truong  
Supervisor, Product Documentation



**Certificate Approved By:**

Michael Booth  
Director, Technical



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMO10  
Lot Number: S2-MO706255  
Matrix: H2O  
tr. NH4OH  
Value / Analyte(s): 10 000 µg/mL ea:  
Molybdenum  
Starting Material: Ammonium Molybdate  
Starting Material Lot#: 2361  
Starting Material Purity: 99.9893%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10026 ± 47 µg/mL  
**Density:** 1.011 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10032 ± 68 µg/mL**  
ICP Assay NIST SRM 3134 Lot Number: 130418

**Assay Method #2**      **10020 ± 65 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000590	M Eu < 0.000300	M Na < 0.008739	M Se < 0.008000	M Zn < 0.005942
M Al < 0.005592	M Fe < 0.006500	M Nb < 0.029000	i Si < 0.001800	M Zr < 0.001800
M As < 0.002100	M Ga < 0.000300	i Nd < 0.000300	M Sm < 0.000300	
M Au < 0.000300	M Gd < 0.000300	M Ni < 0.008000	M Sn < 0.008900	
M B < 0.003300	M Ge < 0.000300	M Os < 0.000590	M Sr < 0.001747	
M Ba < 0.016778	M Hf < 0.001800	i P < 0.004200	M Ta < 0.004200	
M Be < 0.000890	M Hg < 0.003300	M Pb < 0.000300	M Tb < 0.000300	
M Bi < 0.000890	M Ho < 0.000300	M Pd < 0.001800	M Te < 0.021000	
O Ca < 0.062920	M In < 0.032000	M Pr < 0.013000	M Th < 0.000300	
O Cd < 0.026000	M Ir < 0.000300	M Pt < 0.000300	O Ti < 0.032000	
M Ce < 0.008300	M K < 1.293372	M Rb < 0.045442	M Tl < 0.012584	
M Co < 0.005942	M La < 0.000300	M Re < 0.000300	M Tm < 0.000300	
M Cr < 0.005243	O Li < 0.000594	M Rh < 0.000300	M U < 0.005300	
M Cs < 0.005243	M Lu < 0.000300	M Ru < 0.079000	M V < 0.000890	
M Cu < 0.022371	M Mg < 0.005592	i S < 0.873900	M W < 0.873900	
M Dy < 0.000300	M Mn < 0.005900	M Sb < 0.015031	M Y < 0.000300	
M Er < 0.000300	s Mo < 0.001200	M Sc < 0.001200	M Yb < 0.000300	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 95.94 +6 6,7,8,9

[MoO4]-2(chemical form as received)

**Chemical Compatibility** -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

**Stability** - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

**Mo Containing Samples (Preparation and Solution)** -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl ).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGTL10  
Lot Number: T2-TL714687  
Matrix: 5% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Thallium  
Starting Material: TINO<sub>3</sub>  
Starting Material Lot#: 2118  
Starting Material Purity: 99.9998%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10030 ± 42 µg/mL  
**Density:** 1.036 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10040 ± 43 µg/mL**  
ICP Assay NIST SRM 3158 Lot Number: 151215

**Assay Method #2**      **10010 ± 65 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000200	M Eu < 0.000200	O Na < 0.002489	M Se < 0.011019	O Zn < 0.002298
O Al < 0.004184	O Fe < 0.002824	M Nb < 0.000200	O Si < 0.003760	M Zr < 0.000200
M As < 0.002003	M Ga < 0.000200	M Nd < 0.000200	M Sm < 0.000200	
O Au < 0.002824	M Gd < 0.000200	M Ni < 0.001724	M Sn < 0.000601	
O B < 0.004184	M Ge < 0.000801	M Os < 0.000198	O Sr < 0.000313	
M Ba < 0.000400	M Hf < 0.000200	O P < 0.010460	M Ta < 0.000200	
O Be < 0.000104	M Hg < 0.000794	M Pb < 0.000811	M Tb < 0.000200	
M Bi < 0.005209	M Ho < 0.000200	M Pd < 0.000400	M Te < 0.005008	
O Ca < 0.002436	M In < 0.000200	M Pr < 0.000200	M Th < 0.000200	
M Cd < 0.001318	M Ir < 0.000198	M Pt < 0.000801	O Ti < 0.001255	
M Ce < 0.000200	O K < 0.006175	M Rb < 0.000200	s Tl <	
M Co < 0.000601	M La < 0.000200	M Re < 0.000200	M Tm < 0.000200	
M Cr < 0.000801	O Li < 0.000177	M Rh < 0.000200	M U < 0.000200	
M Cs < 0.003606	M Lu < 0.000200	M Ru < 0.000397	M V < 0.002203	
M Cu < 0.001001	O Mg < 0.000529	O S < 0.015690	M W < 0.000601	
M Dy < 0.000200	M Mn < 0.000801	M Sb < 0.000400	M Y < 0.000200	
M Er < 0.000200	M Mo < 0.001202	O Sc < 0.000711	M Yb < 0.000200	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 204.38 +1 6 Ti(H<sub>2</sub>O)<sub>6</sub><sup>1+</sup>  
**Chemical Compatibility** - Soluble in HCl, HNO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub>. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Ti Containing Samples )Preparation and Solution)** -Metal (Best dissolved in HNO<sub>3</sub> which forms chiefly the Ti<sup>1+</sup> ion.); Oxide (The thalious oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt<sub>0</sub> followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCD10  
Lot Number: S2-CD710508  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Cadmium  
Starting Material: Cd Metal  
Starting Material Lot#: 1953  
Starting Material Purity: 99.9995%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10008 ± 30 µg/mL  
**Density:** 1.029 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10010 ± 32 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #2</b>	<b>10011 ± 30 µg/mL</b> ICP Assay NIST SRM 3108 Lot Number: 130116
<b>Assay Method #3</b>	<b>10003 ± 30 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

O Ag < 0.003200	O Eu < 0.002500	O Na < 0.005499	M Se < 0.005700	O Zn < 0.001100
O Al < 0.008903	O Fe < 0.000602	M Nb < 0.000400	O Si < 0.016758	O Zr < 0.002600
M As < 0.003600	M Ga < 0.001200	M Nd < 0.000800	M Sm < 0.000400	
M Au < 0.000810	M Gd < 0.000400	M Ni < 0.003600	M Sn < 0.003200	
O B < 0.004189	O Ge < 0.012000	M Os < 0.000810	O Sr < 0.000330	
M Ba < 0.002400	M Hf < 0.000400	O P < 0.022000	M Ta < 0.000800	
M Be < 0.000400	M Hg < 0.001700	M Pb < 0.002400	M Tb < 0.000400	
M Bi < 0.000400	M Ho < 0.000400	M Pd < 0.001200	M Te < 0.008000	
O Ca < 0.011259	O In < 0.013000	M Pr < 0.000400	M Th < 0.000400	
s Cd < 0.000400	M Ir < 0.000410	M Pt < 0.000400	O Ti < 0.000602	
M Ce < 0.000400	O K < 0.005237	M Rb < 0.004400	M Tl < 0.000523	
M Co < 0.000400	M La < 0.000400	M Re < 0.000400	M Tm < 0.000400	
O Cr < 0.005100	O Li < 0.000054	M Rh < 0.000400	M U < 0.000400	
M Cs < 0.002400	M Lu < 0.000400	M Ru < 0.002500	M V < 0.002000	
O Cu < 0.004800	O Mg < 0.000288	O S < 0.022000	M W < 0.000400	
M Dy < 0.000400	O Mn < 0.000860	O Sb < 0.018000	M Y < 0.000400	
M Er < 0.000400	M Mo < 0.001600	O Sc < 0.000430	M Yb < 0.000400	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 112.41 +2 4 Cd<sub>2</sub>(OH)<sub>3</sub><sup>+</sup> and Cd(OH)<sub>2</sub>(aq)

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, and HF. Avoid basic media forming insoluble carbonate and hydroxide.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO<sub>3</sub> / LDPE container.

**Cd Containing Samples (Preparation and Solution)** -Metal (soluble in HNO<sub>3</sub>); Oxides (soluble in HCl or HNO<sub>3</sub>); Ores (dissolve in HCl /HNO<sub>3</sub> then take to fumes with H<sub>2</sub>SO<sub>4</sub>. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMN10  
Lot Number: S2-MN704240  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Manganese  
Starting Material: Mn Metal  
Starting Material Lot#: 2275  
Starting Material Purity: 99.9909%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10011 ± 30 µg/mL  
**Density:** 1.035 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9989 ± 69 µg/mL</b> ICP Assay NIST SRM 3132 Lot Number: 050429
<b>Assay Method #2</b>	<b>10011 ± 25 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10024 ± 47 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.001500	M Eu < 0.000730	O Na 0.176097	M Se < 0.006600	M Zn 0.009925
O Al 0.004322	M Fe < 0.650000	M Nb < 0.000730	O Si 0.097654	M Zr < 0.000730
M As < 0.008000	M Ga 0.004322	M Nd < 0.001500	M Sm < 0.000730	
M Au < 0.000730	M Gd < 0.000730	M Ni 0.024013	M Sn < 0.002200	
M B 0.068838	M Ge < 0.004400	M Os < 0.000730	O Sr 0.000928	
M Ba < 0.001500	M Hf < 0.000730	i P <	M Ta < 0.000730	
M Be < 0.000730	M Hg < 0.002200	M Pb 0.007364	M Tb < 0.000730	
M Bi < 0.003000	M Ho < 0.000730	M Pd < 0.000730	M Te < 0.019000	
O Ca 0.062434	M In < 0.003000	M Pr < 0.000730	M Th < 0.000730	
M Cd < 0.001500	M Ir < 0.000730	M Pt < 0.000730	O Ti < 0.006500	
M Ce < 0.007300	O K 0.006403	M Rb < 0.006600	M Tl < 0.000730	
O Co 0.014728	M La < 0.003000	M Re < 0.000730	M Tm < 0.000730	
O Cr 0.272151	O Li 0.000416	M Rh < 0.003000	M U < 0.001500	
M Cs < 0.000730	M Lu < 0.000730	M Ru < 0.004400	M V < 0.000730	
O Cu 0.007684	O Mg 0.320177	i S <	M W < 0.004400	
M Dy < 0.001500	s Mn <	M Sb < 0.021000	O Y 0.001360	
M Er < 0.001500	M Mo 0.010245	O Sc < 0.004100	M Yb < 0.000730	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 54.94 +2 6 Mn(H<sub>2</sub>O)<sub>6</sub>2+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO<sub>3</sub>/LDPE container.

**Mn Containing Samples (Preparation and Solution)** -Metal (Soluble in dilute acids ); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H<sub>2</sub>SO<sub>4</sub> and heat to SO<sub>3</sub> fumes - dense white fumes).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16 O,37Cl18O,40Ar15 N,38Ar17O,36Ar18O 1H ,38Ar16O1H,37Cl17 O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



**1.0 ACCREDITATION / REGISTRATION**

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



**2.0 PRODUCT DESCRIPTION**

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGSB10  
 Lot Number: R2-SB688559  
 Matrix: 3% (v/v) HNO3  
 3% (w/v) tartaric acid  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Antimony  
 Starting Material: Antimony Metal  
 Starting Material Lot#: 1857  
 Starting Material Purity: 99.9894%

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

**Certified Value:** 10003 ± 47 µg/mL  
**Density:** 1.061 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

**Assay Method #1 10003 ± 41 µg/mL**  
 ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

**Characterization of CRM/RM by Two or More Methods**

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$   
 $w_i$  = the weighting factors for each method calculated using the inverse square of the variance:  
 $w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char} = [\sum((w_i)^2 (u_{char i})^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty

**Characterization of CRM/RM by One Method**

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with  
 $u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2  
 $u_{char a}$  = the errors from characterization  
 $u_{bb}$  = bottle to bottle homogeneity standard uncertainty  
 $u_{lts}$  = long term stability standard uncertainty (storage)  
 $u_{ts}$  = transport stability standard uncertainty



#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.000200	M Eu <	0.000300	O Na	0.140000	M Se <	0.007300	O Zn	0.005000
M Al	0.003200	O Fe	0.060000	M Nb <	0.000100	O Si	0.150000	O Zr <	0.006300
M As <	0.004400	M Ga <	0.000400	M Nd <	0.000100	M Sm <	0.000100		
M Au <	0.000210	M Gd <	0.000100	O Ni	0.004800	M Sn <	0.001800		
M B <	0.011000	M Ge <	0.000600	M Os <	0.000110	O Sr	0.000750		
O Ba <	0.004900	M Hf <	0.000100	O P	0.540000	M Ta	0.003300		
M Be <	0.000400	M Hg <	0.000110	M Pb <	0.000400	M Tb <	0.000100		
M Bi <	0.000200	M Ho <	0.000100	M Pd <	0.000210	M Te <	0.000600		
O Ca	0.110000	M In <	0.000100	M Pr <	0.001600	M Th <	0.000100		
M Cd <	0.000200	M Ir <	0.000110	M Pt <	0.000600	M Ti <	0.002800		
M Ce	0.006500	O K	0.020000	M Rb <	0.001000	M Tl <	0.000100		
M Co <	0.000200	O La <	0.016000	M Re <	0.000100	M Tm <	0.000100		
M Cr	0.006900	O Li <	0.000430	M Rh <	0.000300	M U <	0.000100		
M Cs <	0.000200	M Lu <	0.000100	M Ru <	0.000310	M V <	0.000800		
M Cu <	0.000600	O Mg	0.021000	n S <		M W <	0.000200		
M Dy <	0.000100	O Mn	0.001900	s Sb <		M Y <	0.000100		
M Er <	0.000100	M Mo <	0.000500	O Sc <	0.002300	M Yb <	0.000100		

M - Checked by ICP-MS      O - Checked by ICP-OES      i - Spectral Interference  
n - Not Checked For      s - Solution Standard Element

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 121.75 +3 6 Sb(O)C4H4O6-1

**Chemical Compatibility** -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

**Stability** - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

**Sb Containing Samples (Preparation and Solution)** -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides ( Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences (underlined indicates severe)</b>
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAS10  
Lot Number: T2-AS718260  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Arsenic  
Starting Material: As Metal  
Starting Material Lot#: 2208  
Starting Material Purity: 99.9971%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10060 ± 40 µg/mL  
**Density:** 1.037 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10062 ± 46 µg/mL**  
ICP Assay NIST SRM 3103a Lot Number: 100818

**Assay Method #2**      **10055 ± 76 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.003200	M Eu < 0.000530	O Na < 0.032544	M Se < 0.006300	O Zn < 0.001952
M Al < 0.007593	O Fe < 0.001475	O Nb < 0.012000	O Si < 0.238658	O Zr < 0.004100
s As < 0.000530	M Ga < 0.000530	M Nd < 0.000530	M Sm < 0.000530	
M Au < 0.003100	M Gd < 0.000530	M Ni < 0.002100	M Sn < 0.000530	
M B < 0.026035	M Ge < 0.001600	M Os < 0.000520	M Sr < 0.000530	
M Ba < 0.000530	M Hf < 0.000530	O P < 0.043000	M Ta < 0.000530	
O Be < 0.000360	M Hg < 0.001600	M Pb < 0.002100	M Tb < 0.000530	
M Bi < 0.000530	M Ho < 0.000530	M Pd < 0.001100	M Te < 0.004700	
O Ca < 0.004339	M In < 0.023000	M Pr < 0.005300	M Th < 0.000530	
M Cd < 0.001100	M Ir < 0.000520	M Pt < 0.000530	O Ti < 0.002300	
M Ce < 0.000530	O K < 0.002061	M Rb < 0.000530	M Tl < 0.000530	
M Co < 0.000530	M La < 0.001100	M Re < 0.000530	M Tm < 0.000530	
O Cr < 0.001800	O Li < 0.000120	M Rh < 0.000530	M U < 0.000530	
M Cs < 0.005300	M Lu < 0.000530	M Ru < 0.000520	M V < 0.002700	
M Cu < 0.001600	O Mg < 0.000154	O S < 0.028205	M W < 0.012000	
M Dy < 0.000530	O Mn < 0.000154	M Sb < 0.000530	M Y < 0.000530	
M Er < 0.000530	M Mo < 0.000530	O Sc < 0.001700	M Yb < 0.000530	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

**Chemical Compatibility** - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3, H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

**Stability** - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

**As Containing Samples (Preparation and Solution)** - Metal (soluble in 1:1 H2O / HNO3 ); Oxides (the oxide exists in crystalline and amorphous forms where the amorphous form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powdered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37C I,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

## 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

## 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Prepared By:

Uyen Truong  
Supervisor, Product Documentation



### Certificate Approved By:

Michael Booth  
Director, Technical



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGBA10  
Lot Number: R2-BA692576  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Barium  
Starting Material: Barium Nitrate  
Starting Material Lot#: 1969  
Starting Material Purity: 99.9982%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10022 ± 30 µg/mL  
**Density:** 1.025 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10018 ± 50 µg/mL</b> ICP Assay NIST SRM 3104a Lot Number: 140909
<b>Assay Method #2</b>	<b>10023 ± 31 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #3</b>	<b>10023 ± 30 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char\ i})^2)]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UPLA-Filtered Clean Room. An UPLA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000410	O Eu < 0.005200	O Na 0.004610	M Se < 0.003700	O Zn 0.000658
M Al < 0.003100	O Fe 0.015707	M Nb < 0.000210	O Si 0.005573	M Zr < 0.001300
M As < 0.001300	M Ga < 0.000210	M Nd < 0.000210	O Sm < 0.021000	
M Au < 0.001300	M Gd < 0.000210	M Ni < 0.000810	M Sn < 0.000410	
O B < 0.005200	M Ge < 0.002500	M Os < 0.000410	O Sr 0.003850	
s Ba <	M Hf < 0.000810	O P < 0.026000	M Ta < 0.000410	
O Be < 0.000320	M Hg < 0.000210	M Pb < 0.002300	M Tb < 0.000210	
M Bi < 0.000210	M Ho < 0.000210	M Pd < 0.000210	M Te < 0.001900	
O Ca 0.007093	M In < 0.000210	M Pr < 0.000210	M Th < 0.000210	
M Cd < 0.000210	M Ir < 0.000210	M Pt < 0.000210	M Ti < 0.002100	
M Ce < 0.001300	O K 0.035467	M Rb < 0.002100	M Tl < 0.000210	
M Co < 0.000410	O La < 0.005200	M Re < 0.000210	M Tm < 0.000410	
M Cr < 0.001700	O Li < 0.000630	M Rh < 0.000210	M U < 0.000210	
M Cs < 0.003300	M Lu < 0.001700	M Ru < 0.000210	O V < 0.005200	
M Cu < 0.001300	O Mg 0.000861	O S 0.268539	M W < 0.000410	
M Dy < 0.000210	M Mn < 0.000410	M Sb < 0.001300	O Y < 0.005200	
M Er < 0.001300	M Mo < 0.000410	M Sc < 0.000410	M Yb < 0.001300	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 137.33 +2 6 Ba(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl, and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO<sub>3</sub> / LDPE container.

**Ba Containing Samples (Preparation and Solution)** -Metal(is best dissolved in diluted HNO<sub>3</sub> ); Ores( Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent BaSO<sub>4</sub> precipitate ); Organic Matrices (dry ash and dissolve in dilute HCl.)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences (underlined indicates severe)</b>
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGBE10  
 Lot Number: R2-BE692992  
 Matrix: 6% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Beryllium  
 Starting Material: Beryllium Acetate  
 Starting Material Lot#: 2281  
 Starting Material Purity: 99.9998%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10032 ± 41 µg/mL  
**Density:** 1.128 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10042 ± 67 µg/mL</b> ICP Assay NIST SRM 3105a Lot Number: 090514
<b>Assay Method #2</b>	<b>10025 ± 51 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.001100	M Eu < 0.000270	O Na < 0.040962	M Se < 0.005000	M Zn < 0.013054
O Al < 0.016205	O Fe < 0.015754	M Nb < 0.000270	O Si < 0.024307	O Zr < 0.001900
M As < 0.002900	M Ga < 0.000270	M Nd < 0.000270	M Sm < 0.000270	
M Au < 0.000520	M Gd < 0.000270	M Ni < 0.003700	M Sn < 0.000790	
M B < 0.091000	M Ge < 0.000270	M Os < 0.000260	M Sr < 0.000630	
M Ba < 0.002700	M Hf < 0.000270	O P < 0.066000	M Ta < 0.000270	
s Be < 0.000530	M Hg < 0.000520	M Pb < 0.000270	M Tb < 0.000270	
M Bi < 0.072022	M Ho < 0.000270	M Pd < 0.000520	M Te < 0.003700	
O Ca < 0.000790	M In < 0.000790	M Pr < 0.000270	M Th < 0.000270	
M Cd < 0.000270	M Ir < 0.000260	M Pt < 0.000270	O Ti < 0.000400	
M Ce < 0.000270	O K < 0.045014	M Rb < 0.000270	M Tl < 0.000790	
O Co < 0.003200	M La < 0.000270	M Re < 0.000270	M Tm < 0.000270	
O Cr < 0.001800	O Li < 0.000660	M Rh < 0.001100	M U < 0.000270	
M Cs < 0.001440	M Lu < 0.000270	M Ru < 0.000260	M V < 0.000790	
M Cu < 0.002100	O Mg < 0.016205	i S < 0.000270	M W < 0.000530	
M Dy < 0.000270	M Mn < 0.001215	M Sb < 0.000270	M Y < 0.000270	
M Er < 0.000270	M Mo < 0.000530	O Sc < 0.000930	M Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 9.01 +2 4 Be(H<sub>2</sub>O)<sub>4</sub>+2

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability** - 2-100 ppb levels stable for months in 1 % HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO<sub>3</sub> / LDPE container.

**Be Containing Samples (Preparation and Solution)** - Meta I(is best dissolved in diluted H<sub>2</sub>SO<sub>4</sub> ); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO<sub>4</sub> fusion); Ores (H<sub>2</sub>SO<sub>4</sub>/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

**11.1 Certification Issue Date**

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**11.4 Revision Status**

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



**1.0 ACCREDITATION / REGISTRATION**

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



**2.0 PRODUCT DESCRIPTION**

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGCO10  
 Lot Number: R2-CO695285  
 Matrix: 3% (v/v) HNO3  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Cobalt  
 Starting Material: Co Metal  
 Starting Material Lot#: 2326  
 Starting Material Purity: 99.9934%

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

**Certified Value:** 10012 ± 31 µg/mL  
**Density:** 1.056 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

- Assay Method #1**      **10031 ± 67 µg/mL**  
 ICP Assay NIST SRM 3113 Lot Number: 190630
  
- Assay Method #2**      **10019 ± 32 µg/mL**  
 EDTA NIST SRM 928 Lot Number: 928
  
- Assay Method #3**      **10000 ± 35 µg/mL**  
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/CRM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) X_i$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UPLA-Filtered Clean Room. An UPLA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	0.014660	M Eu	<	0.000590	O Na	0.007534	M Se	<	0.019000	M Zn	0.003461	
M Al	<	0.024000	M Fe	0.050905	M Nb	<	0.000590	O Si	0.075340	M Zr	<	0.001200
i As	<		M Ga	<	0.000590	M Nd	<	0.000590	M Sm	<	0.000590	
M Au	<	0.004100	M Gd	<	0.000590	O Ni	0.427608	M Sn	<	0.001200		
M B	<	0.031000	M Ge	<	0.003000	M Os	<	0.000590	O Sr	<	0.000260	
M Ba	<	0.000590	M Hf	<	0.000590	n P	<		M Ta	<	0.001200	
O Be	<	0.001300	M Hg	<	0.001800	M Pb	0.003257	M Tb	<	0.000590		
M Bi	<	0.003000	M Ho	<	0.000590	M Pd	<	0.000590	M Te	<	0.005300	
O Ca	0.010588	M In	<	0.001200	M Pr	<	0.000590	M Th	<	0.000590		
M Cd	<	0.004700	M Ir	<	0.001200	M Pt	<	0.002400	M Ti	<	0.014000	
M Ce	<	0.000590	O K	0.008144	M Rb	<	0.000590	M Tl	0.002647			
s Co	<		M La	<	0.000590	M Re	<	0.000590	M Tm	<	0.000590	
M Cr	<	0.021000	O Li	<	0.000130	M Rh	<	0.000590	M U	<	0.000590	
M Cs	<	0.002400	M Lu	<	0.000590	M Ru	<	0.007100	O V	<	0.000880	
M Cu	0.189369	O Mg	0.001893	n S	<			M W	<	0.000590		
M Dy	<	0.000590	M Mn	<	0.001800	M Sb	<	0.003600	M Y	<	0.000590	
M Er	<	0.000590	M Mo	<	0.002400	O Sc	<	0.001600	M Yb	<	0.000590	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 58.93 +2 6 Co(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup>

**Chemical Compatibility** - Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Co Containing Samples (Preparation and Solution)** - Metal (soluble in HNO<sub>3</sub>); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAG10  
Lot Number: S2-AG712977  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Silver  
Starting Material: Ag Shot  
Starting Material Lot#: 2289  
Starting Material Purity: 99.9951%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10051 ± 30 µg/mL  
**Density:** 1.056 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10051 ± 52 µg/mL</b> ICP Assay NIST SRM 3151 Lot Number: 160729
<b>Assay Method #2</b>	<b>10051 ± 19 µg/mL</b> Volhard NIST SRM 999c Lot Number: 999c
<b>Assay Method #3</b>	<b>10049 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s Ag <	M Eu <	0.000260	O Na	0.003811	M Se <	0.003900	O Zn	0.048146	
M Al	0.002688	O Fe	0.006419	M Nb <	0.000260	O Si	0.005215	M Zr <	0.000260
M As <	0.001100	M Ga <	0.000260	M Nd <	0.000260	M Sm <	0.000260		
M Au <	0.000260	M Gd <	0.000260	O Ni	0.001765	M Sn	0.020060		
O B <	0.004300	M Ge <	0.002300	M Os <	0.001100	O Sr <	0.000110		
M Ba <	0.000520	M Hf <	0.000260	O P <	0.017000	M Ta <	0.000260		
O Be <	0.001100	M Hg <	0.000770	M Pb <	0.003600	M Tb <	0.000260		
M Bi	0.004814	M Ho <	0.000260	M Pd	0.044134	M Te <	0.009000		
O Ca	0.005215	M In	0.003691	M Pr <	0.000260	M Th <	0.000260		
M Cd <	0.000260	M Ir <	0.000520	M Pt <	0.001100	O Ti <	0.000440		
M Ce <	0.002100	O K <	0.008700	M Rb <	0.001100	M Tl <	0.004100		
O Co <	0.000330	M La <	0.000260	M Re <	0.000260	M Tm <	0.000260		
O Cr <	0.002500	O Li <	0.000110	M Rh <	0.000520	M U <	0.000260		
M Cs <	0.002600	M Lu <	0.000260	M Ru <	0.000260	M V <	0.000260		
O Cu	0.357085	O Mg	0.001203	O S <	0.017000	M W <	0.000260		
M Dy <	0.000260	O Mn <	0.000220	M Sb <	0.014000	M Y <	0.000260		
M Er <	0.000260	M Mo <	0.000260	O Sc <	0.000220	M Yb <	0.000260		

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 107.87 +1 6 Ag(H<sub>2</sub>O)<sub>6</sub><sup>+</sup>  
**Chemical Compatibility** - Stable in HNO<sub>3</sub>, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [ AgCl<sub>x</sub>1-x] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite, bromide, chloride, iodide, carbonate, chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

**Stability** - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Ag Containing Samples (Preparation and Solution)** - Metal (Soluble in HNO<sub>3</sub>); Oxides (Soluble in HNO<sub>3</sub>); Ores (Digestion with conc. HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Uyen Truong  
Supervisor, Product Documentation



**Certificate Approved By:**

Michael Booth  
Director, Technical



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCR(3)10  
Lot Number: S2-CR709784  
Matrix: 10% (v/v) HNO3  
Value / Analyte(s): 10 000 µg/mL ea:  
Chromium  
Starting Material: Cr Metal  
Starting Material Lot#: 2328  
Starting Material Purity: 99.9951%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10027 ± 41 µg/mL  
**Density:** 1.072 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10027 ± 40 µg/mL**  
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/(u_{char\ i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char}$  =  $[\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty



**4.0 TRACEABILITY TO NIST**

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

**4.1 Thermometer Calibration**

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

**4.2 Balance Calibration**

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

**4.3 Glassware Calibration**

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

**5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)**

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.001700	M	Eu <	0.003400	O	Na	0.090372	M	Se <	0.012000	O	Zn <	0.006100
M Al	0.034916	O	Fe	0.246471	M	Nb <	0.017000	n	Si <		M	Zr <	0.007800
M As <	0.028000	O	Ga <	0.013000	M	Nd <	0.013000	M	Sm <	0.006900			
M Au <	0.001700	M	Gd <	0.000560	M	Ni	0.016020	M	Sn	0.006983			
O B <	0.025000	O	Ge <	0.014000	M	Os <	0.000560	M	Sr	0.006367			
M Ba <	0.008900	M	Hf <	0.000560	i	P <		M	Ta <	0.000560			
M Be <	0.013000	M	Hg <	0.001700	M	Pb	0.010064	M	Tb <	0.000560			
M Bi <	0.002300	M	Ho <	0.000560	M	Pd <	0.021000	M	Te <	0.010000			
O Ca	0.075995	M	In <	0.000560	M	Pr <	0.001700	M	Th <	0.000560			
M Cd <	0.000560	M	Ir <	0.000560	M	Pt <	0.001200	O	Ti	0.013555			
M Ce <	0.001200	O	K	0.043132	i	Rb <		M	Tl <	0.000560			
M Co <	0.002600	M	La <	0.001200	M	Re <	0.001200	O	Tm <	0.013000			
s Cr <		O	Li	0.000390	M	Rh <	0.095000	M	U <	0.000560			
M Cs <	0.007800	M	Lu <	0.000560	M	Ru <	0.087000	O	V	0.014993			
O Cu	0.007599	O	Mg	0.000883	i	S <		M	W <	0.049000			
M Dy <	0.000560	M	Mn	0.008626	M	Sb <	0.003400	M	Y <	0.001700			
M Er <	0.019000	M	Mo <	0.032000	M	Sc	0.003080	M	Yb <	0.000560			

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

**6.0 INTENDED USE**

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

**7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**

**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 52.00 +3 6 Cr(H<sub>2</sub>O)<sub>6</sub>3+

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Cr<sub>3</sub> Containing Samples (Preparation and Solution)** -Metal (soluble in HCl ); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with KHSO<sub>4</sub> and extraction with hot KCl. The residue fused with Na<sub>2</sub>CO<sub>3</sub> and KClO<sub>3</sub>, 3:1. B. Fusion with NaKSO<sub>4</sub> and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na<sub>2</sub>O<sub>2</sub> or NaOH and KNO<sub>3</sub> or NaOH and Na<sub>2</sub>O<sub>2</sub>. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Approved By:

Michael Booth  
Director, Quality Control



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



**1.0 ACCREDITATION / REGISTRATION**

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



**2.0 PRODUCT DESCRIPTION**

Product Code: Single Analyte Custom Grade Solution  
 Catalog Number: CGNI10  
 Lot Number: P2-NI686384  
 Matrix: 3% (v/v) HNO3  
 Value / Analyte(s): 10 000 µg/mL ea:  
 Nickel  
 Starting Material: Ni Metal  
 Starting Material Lot#: 2277 and 2282  
 Starting Material Purity: 99.9992%

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

**Certified Value:** 9979 ± 30 µg/mL  
**Density:** 1.038 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

- Assay Method #1**      **9971 ± 54 µg/mL**  
 ICP Assay NIST SRM 3136 Lot Number: 120619
  
- Assay Method #2**      **9970 ± 32 µg/mL**  
 EDTA NIST SRM 928 Lot Number: 928
  
- Assay Method #3**      **9993 ± 33 µg/mL**  
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	0.002606	M Eu	<	0.001100	O Na	0.004965	O Se	<	0.067000	M Zn	0.006578	
M Al	<	0.013000	O Fe	0.018618	M Nb	<	0.001100	O Si	0.010923	M Zr	<	0.001100
O As	<	0.067000	M Ga	<	0.001100	M Nd	<	0.001100	M Sm	<	0.001100	
M Au	<	0.002100	M Gd	<	0.001100	s Ni	<		M Sn	<	0.016000	
M B	<	0.017000	M Ge	<	0.004200	M Os	0.002110	O Sr	<	0.000940		
M Ba	<	0.001100	M Hf	<	0.001100	i P	<		M Ta	<	0.001100	
O Be	<	0.000410	M Hg	0.014895	M Pb	0.006578	M Tb	<	0.001100			
M Bi	<	0.004200	M Ho	<	0.001100	M Pd	<	0.001100	M Te	<	0.015000	
O Ca	0.003351	M In	<	0.001100	M Pr	<	0.001100	M Th	<	0.001100		
M Cd	0.001365	M Ir	0.004716	M Pt	<	0.001100	M Ti	<	0.004200			
M Ce	<	0.001100	O K	0.004716	M Rb	<	0.001100	M Tl	<	0.001100		
O Co	0.017377	M La	<	0.001100	M Re	0.001737	M Tm	<	0.001100			
O Cr	<	0.006700	O Li	<	0.000140	M Rh	<	0.006300	M U	<	0.001100	
M Cs	<	0.007300	M Lu	<	0.001100	M Ru	<	0.019000	M V	<	0.002100	
M Cu	0.004096	O Mg	0.000372	i S	<			M W	<	0.006300		
M Dy	<	0.001100	O Mn	<	0.001900	M Sb	0.005833	O Y	<	0.000540		
M Er	<	0.001100	M Mo	<	0.008400	M Sc	<	0.002100	M Yb	<	0.001100	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 58.69 +2 6 Ni(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup>

**Chemical Compatibility** -Stable in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub>. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Ni Containing Samples (Preparation and Solution)** -Metal (Soluble in HNO<sub>3</sub>); Oxides ( Soluble in HCl ); Ores (Dissolve in HCl / HNO<sub>3</sub>).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
CEO, Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGV10  
Lot Number: S2-V711005  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Vanadium  
Starting Material: Vanadium Pentoxide  
Starting Material Lot#: 1782  
Starting Material Purity: 99.9877%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10014 ± 30 µg/mL  
**Density:** 1.104 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **10017 ± 42 µg/mL**  
ICP Assay NIST SRM 3165 Lot Number: 160906

**Assay Method #2**      **10013 ± 30 µg/mL**  
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.000110	M Eu < 0.000110	O Na 0.120000	M Se < 0.009400	M Zn 0.009400
O Al 0.120000	O Fe 0.460000	M Nb < 0.001300	O Si 0.270000	M Zr < 0.002900
M As < 0.000210	M Ga < 0.009300	M Nd < 0.000610	M Sm < 0.000110	
M Au < 0.004700	M Gd < 0.000110	M Ni 0.012000	M Sn 0.003900	
M B 0.051000	M Ge < 0.000410	M Os < 0.000110	O Sr 0.007100	
M Ba 0.003600	M Hf < 0.000110	O P < 0.034000	M Ta < 0.000110	
O Be < 0.000560	M Hg < 0.000410	M Pb 0.001400	M Tb < 0.000110	
M Bi < 0.000210	M Ho < 0.000110	M Pd < 0.000410	M Te < 0.000110	
O Ca 0.730000	M In < 0.000110	M Pr < 0.000110	M Th < 0.000210	
M Cd < 0.000610	M Ir < 0.000110	M Pt < 0.000110	M Ti 0.017000	
M Ce < 0.000610	M K 0.052000	M Rb < 0.000310	M Tl < 0.000110	
M Co < 0.001300	M La < 0.000410	M Re 0.001700	M Tm < 0.000110	
O Cr 0.170000	M Li < 0.000810	M Rh < 0.000110	M U < 0.000410	
M Cs 0.005600	M Lu < 0.000110	M Ru < 0.000110	s V <	
M Cu < 0.001300	M Mg 0.053000	i S <	M W 0.002000	
M Dy < 0.000110	M Mn 0.007900	M Sb 0.078000	M Y < 0.000110	
M Er < 0.000110	M Mo 0.094000	M Sc < 0.000410	M Yb < 0.000110	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 50.94 +5 6 H<sub>2</sub>V<sub>10</sub>O<sub>28</sub>4-

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, HF, H<sub>3</sub>PO<sub>4</sub> and strong basic media. Stable with most metals and inorganic anions in acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**V Containing Samples (Preparation and Solution)** -Metal (Fusion with NaOH or KOH in NiO or Na<sub>2</sub>CO<sub>3</sub> / KNO<sub>3</sub>); Oxides (V<sub>2</sub>O<sub>3</sub> - use HCl, V<sub>2</sub>O<sub>4</sub> - use HCl or HNO<sub>3</sub>, V<sub>2</sub>O<sub>5</sub> - use concentrated acids); Ores (Na<sub>2</sub>CO<sub>3</sub> / KNO<sub>3</sub> in PtO caution - nitrates attack PtO followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V<sub>2</sub>O<sub>5</sub> above) .

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<u>Technique/Line</u>	<u>Estimated D.L.</u>	<u>Order</u>	<u>Interferences</u> (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGAL10  
Lot Number: T2-AL716102  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Aluminum  
Starting Material: Aluminum Nitrate Nonahydrate  
Starting Material Lot#: 2460  
Starting Material Purity: 99.9938%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10049 ± 31 µg/mL  
**Density:** 1.087 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10059 ± 40 µg/mL</b> ICP Assay NIST SRM 3101a Lot Number: 140903
<b>Assay Method #2</b>	<b>10044 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10049 ± 35 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.002100	M Eu < 0.002100	O Na 0.352819	M Se < 0.005200	M Zn 0.006018
s Al < 0.002100	O Fe 0.074714	M Nb < 0.000520	O Si 0.017848	O Zr 0.004358
M As 0.008716	O Ga 0.112072	M Nd < 0.000520	M Sm < 0.000520	
M Au < 0.008400	M Gd < 0.001100	O Ni < 0.006000	M Sn 0.000747	
O B < 0.014000	M Ge < 0.005200	M Os < 0.000650	O Sr 0.000518	
O Ba 0.012867	M Hf < 0.004100	n P < 0.000520	M Ta < 0.000520	
O Be < 0.000270	M Hg < 0.002000	M Pb 0.002282	M Tb < 0.000520	
M Bi 0.001930	M Ho < 0.000520	M Pd < 0.000520	M Te < 0.001100	
O Ca 0.076790	M In < 0.002100	M Pr < 0.000520	M Th < 0.000520	
M Cd < 0.000520	M Ir < 0.000650	M Pt < 0.000520	O Ti 0.001930	
M Ce < 0.001100	O K 0.043583	M Rb < 0.000520	M Tl < 0.000520	
O Co < 0.005400	M La < 0.002100	M Re < 0.000520	M Tm < 0.000520	
O Cr 0.006018	O Li 0.000112	M Rh < 0.000520	M U < 0.000520	
M Cs 0.000643	M Lu < 0.000520	M Ru < 0.002000	M V 0.001286	
O Cu < 0.008300	O Mg 0.068488	i S < 0.000520	M W < 0.009800	
M Dy < 0.002100	O Mn 0.000913	M Sb < 0.003100	M Y < 0.001100	
M Er < 0.000520	M Mo 0.005396	O Sc < 0.000950	M Yb < 0.000520	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 26.98 +3 6 Al(H<sub>2</sub>O)<sub>6</sub>+3

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, vF and v<sub>2</sub>SO<sub>4</sub>. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub><sup>-</sup> species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Al Containing Samples (Preparation and Solution)** -Metal (Best dissolved in HCl / HNO<sub>3</sub> ); a- Al<sub>2</sub>O<sub>3</sub> (Na<sub>2</sub>CO<sub>3</sub> fusion in PtO);

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGK10  
Lot Number: S2-K711973  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Potassium  
Starting Material: KNO<sub>3</sub>  
Starting Material Lot#: 2313  
Starting Material Purity: 99.9971%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9992 ± 30 µg/mL  
**Density:** 1.024 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9987 ± 24 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #2</b>	<b>10004 ± 84 µg/mL</b> ICP Assay NIST SRM 3141a Lot Number: 140813
<b>Assay Method #3</b>	<b>10007 ± 45 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.001400	M Eu < 0.000660	O Na < 0.246220	M Se < 0.007900	O Zn < 0.018056
O Al < 0.001592	O Fe < 0.005909	M Nb < 0.000660	O Si < 0.011490	O Zr < 0.001600
M As < 0.005300	M Ga < 0.000660	M Nd < 0.000660	M Sm < 0.000660	
M Au < 0.002000	M Gd < 0.000660	O Ni < 0.004900	M Sn < 0.000660	
O B < 0.005600	M Ge < 0.002000	M Os < 0.003300	O Sr < 0.000055	
O Ba < 0.000860	M Hf < 0.000660	O P < 0.032000	M Ta < 0.000660	
O Be < 0.000082	M Hg < 0.002000	M Pb < 0.002300	M Tb < 0.000660	
M Bi < 0.006600	M Ho < 0.000660	M Pd < 0.000660	M Te < 0.017000	
O Ca < 0.031187	M In < 0.000660	M Pr < 0.000660	M Th < 0.000660	
O Cd < 0.000450	M Ir < 0.000660	M Pt < 0.002700	M Ti < 0.000660	
M Ce < 0.000660	s K <	M Rb < 0.476026	M Tl < 0.000660	
O Co < 0.000780	M La < 0.000660	M Re < 0.000660	M Tm < 0.000660	
O Cr < 0.000541	O Li < 0.000084	M Rh < 0.000660	M U < 0.000660	
M Cs < 0.000660	M Lu < 0.000660	M Ru < 0.000660	O V < 0.001100	
M Cu < 0.002700	O Mg < 0.006237	O S < 0.027905	M W < 0.000660	
M Dy < 0.000660	O Mn < 0.000476	M Sb < 0.000660	M Y < 0.000660	
M Er < 0.000660	M Mo < 0.000660	O Sc < 0.000340	O Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 39.10 +1 (6) K+(aq)

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Avoid use of HClO<sub>4</sub> due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO<sub>4</sub><sup>-</sup>.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**K Containing Samples (Preparation and Solution)** - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion )

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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F: 540-585-3012  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGMG10  
Lot Number: S2-MG704239  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Magnesium  
Starting Material: Magnesium Metal  
Starting Material Lot#: 2168  
Starting Material Purity: 99.9984%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10053 ± 30 µg/mL  
**Density:** 1.053 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10022 ± 62 µg/mL</b> ICP Assay NIST SRM 3131a Lot Number: 140110
<b>Assay Method #2</b>	<b>10078 ± 26 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10033 ± 26 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag	0.002106	M	Eu <	0.000910	O Na	0.071075	O Se <	0.048000	O Zn	0.003299
M Al	0.003553	M	Fe	0.002538	M Nb <	0.000460	O Si <	0.032000	O Zr <	0.002700
M As <	0.001400	M	Ga <	0.000460	M Nd <	0.000910	M Sm <	0.000460		
M Au <	0.001400	M	Gd <	0.000460	O Ni <	0.001600	M Sn <	0.002300		
O B	0.006853	M	Ge <	0.001400	M Os <	0.000460	O Sr	0.000279		
O Ba	0.000964	M	Hf <	0.000460	O P	0.015230	M Ta <	0.000460		
O Be <	0.000120	M	Hg <	0.000460	M Pb <	0.000460	M Tb <	0.000460		
M Bi <	0.000460	M	Ho <	0.000460	M Pd <	0.003200	M Te <	0.007300		
O Ca	0.053306	M	In <	0.000460	M Pr <	0.000460	M Th <	0.000460		
O Cd <	0.000360	M	Ir <	0.000460	M Pt <	0.001900	O Ti <	0.001700		
M Ce <	0.002300	M	K	0.048229	M Rb	0.002411	M Tl	0.003046		
M Co <	0.000910	M	La <	0.002800	M Re <	0.000460	M Tm <	0.000460		
M Cr <	0.002300	O	Li	0.027922	M Rh <	0.000460	M U <	0.000460		
M Cs	0.001040	M	Lu <	0.000460	M Ru <	0.000460	M V <	0.000460		
O Cu <	0.003000	s	Mg <		O S <	0.190000	M W <	0.000460		
M Dy <	0.000460	O	Mn	0.015230	M Sb	0.020814	O Y <	0.000720		
M Er <	0.000460	M	Mo <	0.000910	O Sc <	0.000480	M Yb <	0.000460		

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 24.31 +2 6 Mg(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub> avoid HF, H<sub>3</sub>PO<sub>4</sub> and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO<sub>3</sub> / LDPE container.

**Mg Containing Samples (Preparation and Solution)** -Metal (Best dissolved in diluted HNO<sub>3</sub> ); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

**11.1 Certification Issue Date**

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGCA10  
Lot Number: T2-CA716103  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Calcium  
Starting Material: CaCO<sub>3</sub>  
Starting Material Lot#: 2472  
Starting Material Purity: 99.9950%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 10005 ± 30 µg/mL  
**Density:** 1.039 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>10005 ± 45 µg/mL</b> ICP Assay NIST SRM 3109a Lot Number: 130213
<b>Assay Method #2</b>	<b>10005 ± 25 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>10005 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3  $\mu\text{m}$ .

M Ag < 0.001200	M Eu < 0.001200	O Na < 0.006112	M Se < 0.024000	M Zn < 0.005362
M Al < 0.065419	O Fe < 0.009115	M Nb < 0.001200	O Si < 0.139417	O Zr < 0.006700
O As < 0.013000	M Ga < 0.015000	M Nd < 0.020000	M Sm < 0.001200	
M Au < 0.017000	M Gd < 0.004800	O Ni < 0.000793	M Sn < 0.003600	
O B < 0.001179	M Ge < 0.003600	M Os < 0.001200	M Sr < 0.081505	
O Ba < 0.002788	M Hf < 0.001200	O P < 0.041000	M Ta < 0.001200	
O Be < 0.000410	M Hg < 0.004800	M Pb < 0.001608	M Tb < 0.001200	
M Bi < 0.001608	M Ho < 0.001200	M Pd < 0.001200	M Te < 0.003600	
s Ca <	M In < 0.001200	M Pr < 0.000257	M Th < 0.001200	
O Cd < 0.001300	M Ir < 0.001200	M Pt < 0.003600	O Ti < 0.001900	
M Ce < 0.001029	O K < 0.009759	M Rb < 0.001200	M Tl < 0.001200	
O Co < 0.000418	M La < 0.001823	M Re < 0.001200	M Tm < 0.001200	
O Cr < 0.003324	O Li < 0.007300	M Rh < 0.001200	M U < 0.002144	
M Cs < 0.007399	M Lu < 0.000128	M Ru < 0.001200	M V < 0.001286	
O Cu < 0.011000	M Mg < 1.286934	O S < 0.055767	O W < 0.024000	
M Dy < 0.002400	O Mn < 0.004611	M Sb < 0.009600	O Y < 0.000536	
M Er < 0.002400	M Mo < 0.003539	O Sc < 0.001400	M Yb < 0.001200	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 40.08 +2 6 Ca(H<sub>2</sub>O)<sub>6</sub>+2

**Chemical Compatibility** - Soluble in HCl and HNO<sub>3</sub>. Avoid H<sub>2</sub>SO<sub>4</sub>, vF, v3PO<sub>4</sub> and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO<sub>3</sub> / LDPE container.

**Ca Containing Samples )Preparation and Solution** -Metal ( best dissolved in diluted HNO<sub>3</sub> ); Ores ( Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO<sub>2</sub>). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO<sub>3</sub>. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na<sub>2</sub>CO<sub>3</sub> followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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Christiansburg, VA 24073 USA  
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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGNA10  
Lot Number: T2-NA717221  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 10 000 µg/mL ea:  
Sodium  
Starting Material: Na<sub>2</sub>CO<sub>3</sub>  
Starting Material Lot#: 2358 and 2453  
Starting Material Purity: 99.9977%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 9977 ± 30 µg/mL  
**Density:** 1.033 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>9974 ± 18 µg/mL</b> Gravimetric NIST SRM Lot Number: See Sec. 4.2
<b>Assay Method #2</b>	<b>9977 ± 34 µg/mL</b> ICP Assay NIST SRM 3152a Lot Number: 200413
<b>Assay Method #3</b>	<b>9987 ± 31 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char\ i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char\ i})^2]^{1/2}$  where  $u_{char\ i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char\ a})$$

$X_a$  = mean of Assay Method A with

$u_{char\ a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char\ a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000930	M Eu < 0.000930	s Na <	M Se < 0.003800	O Zn < 0.000138
M Al < 0.004409	O Fe < 0.002393	M Nb < 0.000930	O Si < 0.056696	O Zr < 0.003200
O As < 0.023000	M Ga < 0.000930	M Nd < 0.000930	M Sm < 0.000930	
O Au < 0.004100	M Gd < 0.000930	O Ni < 0.003000	M Sn < 0.002800	
O B < 0.001385	M Ge < 0.004700	M Os < 0.000930	O Sr < 0.000251	
M Ba < 0.004031	M Hf < 0.000930	O P < 0.010205	M Ta < 0.000930	
O Be < 0.000130	M Hg < 0.000930	M Pb < 0.000930	M Tb < 0.000930	
M Bi < 0.000930	M Ho < 0.000930	M Pd < 0.000930	M Te < 0.001900	
O Ca < 0.176388	M In < 0.000930	M Pr < 0.000930	M Th < 0.000352	
O Cd < 0.000860	M Ir < 0.000930	M Pt < 0.000930	O Ti < 0.000592	
M Ce < 0.001900	O K < 0.302380	M Rb < 0.000930	M Tl < 0.000930	
O Co < 0.001800	O La < 0.002100	M Re < 0.000930	M Tm < 0.000930	
M Cr < 0.002800	O Li < 0.000031	M Rh < 0.000930	M U < 0.000930	
M Cs < 0.000930	M Lu < 0.000930	M Ru < 0.001900	O V < 0.001600	
O Cu < 0.003900	O Mg < 0.026458	O S < 0.040317	O W < 0.028000	
M Dy < 0.000930	O Mn < 0.000740	M Sb < 0.000930	O Y < 0.000860	
M Er < 0.000930	O Mo < 0.003600	O Sc < 0.000610	O Yb < 0.000250	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 22.99 +1 (6) Na+(aq) largely ionic in nature

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and HF aqueous matrices. Stable with all metals and inorganic anions.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO<sub>3</sub> / LDPE container.

**Na Containing Samples (Preparation and Solution)** - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

<b>Technique/Line</b>	<b>Estimated D.L.</b>	<b>Order</b>	<b>Interferences</b> (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGU1  
Lot Number: S2-U707914  
Matrix: 2% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 1 000 µg/mL ea:  
Uranium  
Starting Material: Uranyl Nitrate Hexahydrate  
Starting Material Lot#: P2-2322  
Starting Material Purity: 99.9997%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 999 ± 5 µg/mL  
**Density:** 1.010 g/mL (measured at 20 ± 4 °C)

### Assay Information:

**Assay Method #1**      **998 ± 5 µg/mL**  
ICP Assay NIST SRM 3164 Lot Number: 080521

**Assay Method #2**      **1001 ± 6 µg/mL**  
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Certified Abundance:

#### IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000270	M Eu < 0.000270	M Na < 0.011000	M Se < 0.009300	M Zn < 0.002358
M Al < 0.011000	M Fe < 0.003222	M Nb < 0.000270	M Si < 0.160000	M Zr < 0.001100
M As < 0.002400	M Ga < 0.000270	M Nd < 0.000270	M Sm < 0.000270	
M Au < 0.000270	M Gd < 0.000270	M Ni < 0.020000	M Sn < 0.011000	
M B < 0.000270	M Ge < 0.000800	M Os < 0.001900	M Sr < 0.000270	
M Ba < 0.003800	M Hf < 0.000270	i P <	M Ta < 0.000270	
M Be < 0.000270	M Hg < 0.000540	M Pb < 0.002200	M Tb < 0.000270	
M Bi < 0.000270	M Ho < 0.000270	M Pd < 0.000540	M Te < 0.003800	
M Ca < 0.140000	M In < 0.000270	M Pr < 0.000270	M Th < 0.000129	
M Cd < 0.000270	M Ir < 0.000270	M Pt < 0.000270	M Ti < 0.002700	
M Ce < 0.000540	O K < 0.250000	M Rb < 0.000800	M Tl < 0.000270	
M Co < 0.000800	M La < 0.000117	M Re < 0.064000	M Tm < 0.000270	
M Cr < 0.000943	M Li < 0.003000	M Rh < 0.000270	s U <	
M Cs < 0.000106	M Lu < 0.000270	M Ru < 0.000540	M V < 0.000540	
M Cu < 0.001100	M Mg < 0.003000	i S <	M W < 0.000540	
M Dy < 0.000270	M Mn < 0.006900	M Sb < 0.000270	M Y < 0.000270	
M Er < 0.000270	M Mo < 0.006400	M Sc < 0.000540	M Yb < 0.000270	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 238.03 +6 8 UO<sub>2</sub><sup>2+</sup>(uranyl)

**Chemical Compatibility** - Soluble in HCl and HNO<sub>3</sub>. Avoid H<sub>3</sub>PO<sub>4</sub>. H<sub>2</sub>SO<sub>4</sub> and HF matrices should not be a problem depending upon [U]. Although the UO<sub>2</sub><sup>2+</sup> ion is distinctly basic, any U+4 will precipitate in basic media. UO<sub>2</sub><sup>2+</sup>salts are generally soluble in water and UO<sub>2</sub><sup>2+</sup> is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF<sub>4</sub> and UF<sub>6</sub> are water soluble.

**Stability** - 2-100 ppb levels stable for months in 1% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**U Containing Samples (Preparation and Solution)** -Metal (Dissolves rapidly in HCl and HNO<sub>3</sub>); Oxide (Soluble in HNO<sub>3</sub>); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO<sub>3</sub>. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H<sub>2</sub>SO<sub>4</sub>.)

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

**10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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**11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

**11.1 Certification Issue Date**

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Michael Booth  
Director, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director

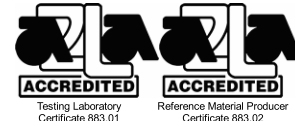


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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: AR-ICVMS-2  
Lot Number: T2-MEB719895  
Matrix: 3% (v/v) HNO3  
tr. HF  
Value / Analyte(s): 2.5 µg/mL ea:  
Molybdenum, Antimony

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	2.499 ± 0.015 µg/mL	Molybdenum, Mo	2.500 ± 0.017 µg/mL

Density: 1.014 g/mL (measured at 20 ± 4 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i}^2))]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

#### 10.0 QUALITY STANDARD DOCUMENTATION

##### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

##### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity


- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Approved By:

Thomas Kozikowski  
Manager, Quality Control



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



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## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution	
Catalog Number:	AR-ICVMS-3	
Lot Number:	T2-MEB719896	
Matrix:	7% (v/v) HNO3	
Value / Analyte(s):	250 µg/mL ea:	
	Aluminum,	Calcium,
	Iron,	Potassium,
	Magnesium,	Sodium,
	4 µg/mL ea:	
	Selenium,	
	2.5 µg/mL ea:	
	Thorium,	Thallium,
	Uranium,	Vanadium,
	Zinc,	Manganese,
	Cadmium,	Cobalt,
	Chromium,	Copper,
	Arsenic,	Barium,
	Beryllium,	Nickel,
	Lead,	Silver

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>	<b>ANALYTE</b>	<b>CERTIFIED VALUE</b>
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

**Density:** 1.042 g/mL (measured at 20 ± 4 °C)

**Assay Information:**



ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } j}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Certified Abundance:

##### IV's Certified Abundance

<u>Isotope</u>	<u>Atom %</u>
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Note:** This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
 Catalog Number: AR-6020ICS-0A10  
 Lot Number: T2-MEB719898  
 Matrix: 1.4% (v/v) HNO3  
 Value / Analyte(s):  
 1 000 µg/mL ea:  
 Chloride,  
 200 µg/mL ea:  
 Carbon,  
 100 µg/mL ea:  
 Calcium, Aluminum,  
 Iron, Potassium,  
 Magnesium, Sodium,  
 Phosphorus, Sulfur,  
 2 µg/mL ea:  
 Titanium, Molybdenum

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Calcium, Ca	100.0 ± 0.5 µg/mL
Carbon, C	200.1 ± 0.5 µg/mL	Chloride, Cl	1 000 ± 5 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Magnesium, Mg	100.0 ± 0.5 µg/mL
Molybdenum, Mo	2.001 ± 0.014 µg/mL	Phosphorus, P	100.0 ± 0.6 µg/mL
Potassium, K	100.0 ± 0.5 µg/mL	Sodium, Na	100.0 ± 0.5 µg/mL
Sulfur, S	100.0 ± 0.5 µg/mL	Titanium, Ti	2.001 ± 0.015 µg/mL

**Density:** 1.009 g/mL (measured at 20 ± 4 °C)

**Assay Information:**

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char}$  =  $[\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

N/A

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

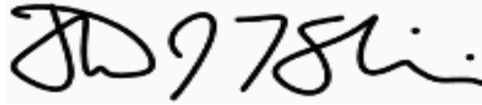
- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Approved By:**

Thomas Kozikowski  
Manager, Quality Control



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director







**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1021
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-01 D      SDG: 23A0206  
 Sampled: 01/11/23 08:25      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-078  
 % Solids: 47.26      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:36  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.246 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.206	1	0.00903	0.0430	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1015
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-02 D      SDG: 23A0206  
 Sampled: 01/11/23 08:37      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-082  
 % Solids: 47.15      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:45  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.21 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.212	1	0.0106	0.0505	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1164
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-03 D      SDG: 23A0206  
 Sampled: 01/11/23 09:18      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-083  
 % Solids: 49.38      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:47  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.201 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.144	1	0.0106	0.0504	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1158
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-04 D      SDG: 23A0206  
 Sampled: 01/11/23 09:35      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-084  
 % Solids: 48.66      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:50  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.205 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.140	1	0.0105	0.0501	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**

LDW23-SS1151

**EPA 7471B**

Total Metals

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-05 D      SDG: 23A0206  
 Sampled: 01/11/23 09:50      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-085  
 % Solids: 52.44      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:52  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.226 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.170	1	0.00886	0.0422	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1145
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-06 D      SDG: 23A0206  
 Sampled: 01/11/23 10:07      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-086  
 % Solids: 53.98      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:54  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.253 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.161	1	0.00769	0.0366	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**

**LDW23-SS1139**

**EPA 7471B**

Total Metals

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-07 D      SDG: 23A0206  
 Sampled: 01/11/23 10:20      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-087  
 % Solids: 58.12      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 15:57  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.281 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.112	1	0.00643	0.0306	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1117
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-08 D      SDG: 23A0206  
 Sampled: 01/11/23 10:40      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-090  
 % Solids: 51.15      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:04  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.247 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.141	1	0.00831	0.0396	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>LDW23-SS1103</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-09 D      SDG: 23A0206  
 Sampled: 01/11/23 11:15      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-091  
 % Solids: 40.33      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:06  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.248 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.211	1	0.0105	0.0500	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>LDW23-SS1100</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206  
 Sampled: 01/11/23 11:28      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-092  
 % Solids: 39.49      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:08  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.215 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.221	1	0.0124	0.0589	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

LDW23-SS1096
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-11 D      SDG: 23A0206  
 Sampled: 01/11/23 11:43      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-093  
 % Solids: 38.38      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:11  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.225 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.252	1	0.0122	0.0579	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>LDW23-SS1094</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-12 D      SDG: 23A0206  
 Sampled: 01/11/23 12:19      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-094  
 % Solids: 45.91      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:13  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.225 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.188	1	0.0102	0.0484	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>LDW23-SS1066</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206  
 Sampled: 01/11/23 12:40      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-095  
 % Solids: 57.96      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:15  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.217 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.324	1	0.00835	0.0398	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>LDW23-SS1061</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-14 D      SDG: 23A0206  
 Sampled: 01/11/23 13:03      Prepared: 04/05/23 17:50      File ID: SMM 04-06-23-096  
 % Solids: 48.61      Preparation: SMM EPA 7471B      Analyzed: 04/06/23 16:18  
 Batch: BLD0124      Sequence: SLD0102      Initial/Final: 0.247 g Wet / 50 mL  
 Instrument: HYDRA      Calibration: GD00018

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.171	1	0.00875	0.0416	



## PREPARATION BATCH SUMMARY

### EPA 7471B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLD0124 Batch Matrix: Solid

Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	SMM 04-06-23-078	04/05/23 17:50	Store frozen
LDW23-SS1015	23A0206-02	SMM 04-06-23-082	04/05/23 17:50	Store frozen
LDW23-SS1164	23A0206-03	SMM 04-06-23-083	04/05/23 17:50	Store frozen
LDW23-SS1158	23A0206-04	SMM 04-06-23-084	04/05/23 17:50	Store frozen
LDW23-SS1151	23A0206-05	SMM 04-06-23-085	04/05/23 17:50	Store frozen
LDW23-SS1145	23A0206-06	SMM 04-06-23-086	04/05/23 17:50	Store frozen
LDW23-SS1139	23A0206-07	SMM 04-06-23-087	04/05/23 17:50	Store frozen
LDW23-SS1117	23A0206-08	SMM 04-06-23-090	04/05/23 17:50	Store frozen
LDW23-SS1103	23A0206-09	SMM 04-06-23-091	04/05/23 17:50	Store frozen
LDW23-SS1100	23A0206-10	SMM 04-06-23-092	04/05/23 17:50	Store frozen
LDW23-SS1096	23A0206-11	SMM 04-06-23-093	04/05/23 17:50	Store frozen
LDW23-SS1094	23A0206-12	SMM 04-06-23-094	04/05/23 17:50	Store frozen
LDW23-SS1066	23A0206-13	SMM 04-06-23-095	04/05/23 17:50	Store frozen
LDW23-SS1061	23A0206-14	SMM 04-06-23-096	04/05/23 17:50	Store frozen
Blank	BLD0124-BLK1	SMM 04-06-23-074	04/05/23 17:50	
LCS	BLD0124-BS1	SMM 04-06-23-075	04/05/23 17:50	
LDW23-SS1021	BLD0124-DUP1	SMM 04-06-23-079	04/05/23 17:50	
LDW23-SS1021	BLD0124-MS1	SMM 04-06-23-080	04/05/23 17:50	
LDW23-SS1021	BLD0124-MSD1	SMM 04-06-23-081	04/05/23 17:50	



# Mercury Digestion Log

Prep Code: SMM Balance ID: BAL10 Matrix: soil  
 Analyst: AR Block ID: 9 Date: 04/05/23  
 Bath Temp: 95C Start Time: 1645 End Time: 1850

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# KMnO <sub>4</sub> Aliquots	CLP	Comments
23A206-01	D		0.246	90	1		
-02			0.210				
-03			0.201				
-04			0.205				
-05			0.226				
-06			0.253				
-07			0.281				
-08			0.247				
-09			0.248				
-10			0.215				
-11			0.225				
-12			0.225				
-13			0.217				
-14			0.247				
BLD24-bk	—		—				23A206-01
-b5	—		—				
-dup	—		0.243				
-MS	—		0.248				
-MS1	—		0.243				
				AR 4/5/23			
<del>_____</del>							

Chemical/Reagent ID:

HNO<sub>3</sub>: L2678 H<sub>2</sub>SO<sub>4</sub>: L922 HCl: —  
 5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: L3356 5% KMnO<sub>4</sub>: K11727 Digest Tube Lot: 240117





**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 7471B**  
Total Metals

<b>Blank</b>
--------------

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLD0124

Laboratory ID: BLD0124-BLK1

Prepared: 04/05/23 17:50

Matrix: Solid

Preparation: SMM EPA 7471B

Analyzed: 04/06/23 15:26

Sequence: SLD0102

Calibration: GD00018

Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U



**LCS / LCS DUPLICATE RECOVERY**

**EPA 7471B**

Total Metals

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/06/23 15:29</u>
Batch:	<u>BLD0124</u>	Laboratory ID:	<u>BLD0124-BS1</u>
Preparation:	<u>SMM EPA 7471B</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>0.2 g / 50 mL</u>		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.459		91.8	80 - 120

\* Indicates values outside of QC limits



**DUPLICATES**

**EPA 7471B**

Total Metals

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLD0124-DUP1

Batch: BLD0124

Lab Source ID: 23A0206-01

Preparation: SMM EPA 7471B

Initial/Final: 0.243 g / 50 mL

Source Sample Name: LDW23-SS1021

% Solids: 47.26

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Mercury	20	0.206	0.279	30.2	*

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/-RL instead of 20% RPD



**MS / MS DUPLICATE RECOVERY**  
**EPA 7471B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/06/23 15:40</u>
Batch:	<u>BLD0124</u>	Laboratory ID:	<u>BLD0124-MS1</u>
Preparation:	<u>SMM EPA 7471B</u>	Sequence Name:	<u>Matrix Spike</u>
Initial/Final:	<u>0.248 g / 50 mL</u>	Source Sample:	<u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.427	0.206		0.667		108	75 - 125

\* Values outside of QC limits



**MS / MS DUPLICATE RECOVERY**  
**EPA 7471B**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>04/06/23 15:43</u>
Batch:	<u>BLD0124</u>	Laboratory ID:	<u>BLD0124-MSD1</u>
Preparation:	<u>SMM EPA 7471B</u>	Sequence Name:	<u>Matrix Spike Dup</u>
Initial/Final:	<u>0.243 g / 50 mL</u>	Source Sample:	<u>LDW23-SS1021</u>

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Mercury	0.435	0.665		105	0.383	20	75 - 125

\* Values outside of QC limits



### INITIAL CALIBRATION DATA

#### EPA 7471B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: GD00018

Instrument: HYDRA

Calibration Date: 04/06/2023 16:32

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	6630000	0.0005	6044000	0.001	5974000	0.002	6052500	0.005	5912000



Sample ID	Mean	Units	Date	Method
SEQ-CAL1	71	PPB	06 Apr 2023 10:35:37	ARI 5 ppb (NO 0.05)
SEQ-CAL2	663	PPB	06 Apr 2023 10:37:59	ARI 5 ppb (NO 0.05)
SEQ-CAL3	3022	PPB	06 Apr 2023 10:40:20	ARI 5 ppb (NO 0.05)
SEQ-CAL4	5974	PPB	06 Apr 2023 10:42:40	ARI 5 ppb (NO 0.05)
SEQ-CAL5	12105	PPB	06 Apr 2023 10:45:01	ARI 5 ppb (NO 0.05)
SEQ-CAL6	29560	PPB	06 Apr 2023 10:47:21	ARI 5 ppb (NO 0.05)
SEQ-ICV	101.2% 4.0478	PPB ✓	06 Apr 2023 11:04:52	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0120	PPB ✓	06 Apr 2023 11:07:11	ARI 5 ppb (NO 0.05)
SEQ-CRL	89.2% 0.0892	PPB ✓	06 Apr 2023 11:09:33	ARI 5 ppb (NO 0.05)
SEQ-CCV	102.2% 4.0892	PPB ✓	06 Apr 2023 11:11:53	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0142	PPB ✓	06 Apr 2023 11:14:12	ARI 5 ppb (NO 0.05)
BLD0031-BLK1	-0.0024	PPB	06 Apr 2023 11:16:33	ARI 5 ppb (NO 0.05)
BLD0031-BS1	1.8433	PPB ✓	06 Apr 2023 11:18:52	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.1% 4.0433	PPB ✓	06 Apr 2023 11:21:11	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0126	PPB ✓	06 Apr 2023 11:23:29	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.7% 4.0294	PPB ✓	06 Apr 2023 13:11:35	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0115	PPB ✓	06 Apr 2023 13:13:53	ARI 5 ppb (NO 0.05)
23A0157-01	0.3997	PPB	06 Apr 2023 13:16:15	ARI 5 ppb (NO 0.05)
BLD0031-DUP1	0.3594	PPB	06 Apr 2023 13:18:34	ARI 5 ppb (NO 0.05)
BLD0031-MS1	0.7552	PPB ✗	06 Apr 2023 13:20:53	ARI 5 ppb (NO 0.05)
BLD0031-MSD1	1.5273	PPB ✓	06 Apr 2023 13:23:12	ARI 5 ppb (NO 0.05)
23A0157-03	0.0613	PPB	06 Apr 2023 13:25:31	ARI 5 ppb (NO 0.05)
23A0157-06	0.3954	PPB	06 Apr 2023 13:27:49	ARI 5 ppb (NO 0.05)
23A0157-07	0.3579	PPB	06 Apr 2023 13:30:08	ARI 5 ppb (NO 0.05)
23A0157-08	0.4123	PPB	06 Apr 2023 13:32:28	ARI 5 ppb (NO 0.05)
23A0157-09	0.2981	PPB	06 Apr 2023 13:34:48	ARI 5 ppb (NO 0.05)
23A0157-10	0.3399	PPB	06 Apr 2023 13:37:08	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.8% 4.0729	PPB ✓	06 Apr 2023 13:39:29	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0130	PPB ✓	06 Apr 2023 13:41:47	ARI 5 ppb (NO 0.05)
23A0157-11	0.1242	PPB	06 Apr 2023 13:44:09	ARI 5 ppb (NO 0.05)
23A0157-12	0.3643	PPB	06 Apr 2023 13:46:30	ARI 5 ppb (NO 0.05)
23A0157-13	0.4764	PPB	06 Apr 2023 13:48:50	ARI 5 ppb (NO 0.05)
23A0158-04	0.5078	PPB	06 Apr 2023 13:51:09	ARI 5 ppb (NO 0.05)
23A0158-05	0.4074	PPB	06 Apr 2023 13:53:28	ARI 5 ppb (NO 0.05)
23A0158-06	0.8240	PPB	06 Apr 2023 13:55:47	ARI 5 ppb (NO 0.05)
23A0158-07	0.5818	PPB	06 Apr 2023 13:58:06	ARI 5 ppb (NO 0.05)
23A0158-08	0.1469	PPB	06 Apr 2023 14:00:25	ARI 5 ppb (NO 0.05)
23A0158-09	0.1853	PPB	06 Apr 2023 14:02:43	ARI 5 ppb (NO 0.05)
23A0158-10	0.6164	PPB	06 Apr 2023 14:05:03	ARI 5 ppb (NO 0.05)
SEQ-CCV	89.3% 3.5716	PPB ✓	06 Apr 2023 14:07:23	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0188	PPB ✓	06 Apr 2023 14:09:42	ARI 5 ppb (NO 0.05)
23A0158-11	0.3216	PPB	06 Apr 2023 14:12:04	ARI 5 ppb (NO 0.05)
23A0158-12	0.2713	PPB	06 Apr 2023 14:14:25	ARI 5 ppb (NO 0.05)
23A0158-13	0.3788	PPB	06 Apr 2023 14:16:45	ARI 5 ppb (NO 0.05)
BLD0031-PS1	1.2435	PPB ✓	06 Apr 2023 14:19:06	ARI 5 ppb (NO 0.05)
BLD0056-BLK1	-0.0087	PPB	06 Apr 2023 14:21:27	ARI 5 ppb (NO 0.05)
BLD0056-BS1	1.7797	PPB ✓	06 Apr 2023 14:23:46	ARI 5 ppb (NO 0.05)
23A0179-01	0.3078	PPB	06 Apr 2023 14:26:06	ARI 5 ppb (NO 0.05)
BLD0056-DUP1	0.2533	PPB	06 Apr 2023 14:28:26	ARI 5 ppb (NO 0.05)
BLD0056-MS1	1.2159	PPB ✓	06 Apr 2023 14:30:45	ARI 5 ppb (NO 0.05)
BLD0056-MSD1	1.1927	PPB ✓	06 Apr 2023 14:33:05	ARI 5 ppb (NO 0.05)
SEQ-CCV	97.9% 3.9156	PPB ✓	06 Apr 2023 14:35:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0142	PPB ✓	06 Apr 2023 14:37:43	ARI 5 ppb (NO 0.05)
23A0158-14	0.3319	PPB	06 Apr 2023 14:40:05	ARI 5 ppb (NO 0.05)
23A0158-15	0.2772	PPB	06 Apr 2023 14:42:24	ARI 5 ppb (NO 0.05)
23A0158-16	0.2542	PPB	06 Apr 2023 14:44:45	ARI 5 ppb (NO 0.05)
23A0179-02	0.2049	PPB	06 Apr 2023 14:47:05	ARI 5 ppb (NO 0.05)
23A0179-03	0.2545	PPB	06 Apr 2023 14:49:25	ARI 5 ppb (NO 0.05)
23A0179-04	0.3590	PPB	06 Apr 2023 14:51:46	ARI 5 ppb (NO 0.05)
23A0179-05	0.1709	PPB	06 Apr 2023 14:54:06	ARI 5 ppb (NO 0.05)



# SMM 04-06-23

Method: ARI 5 ppb (NO 0.05)

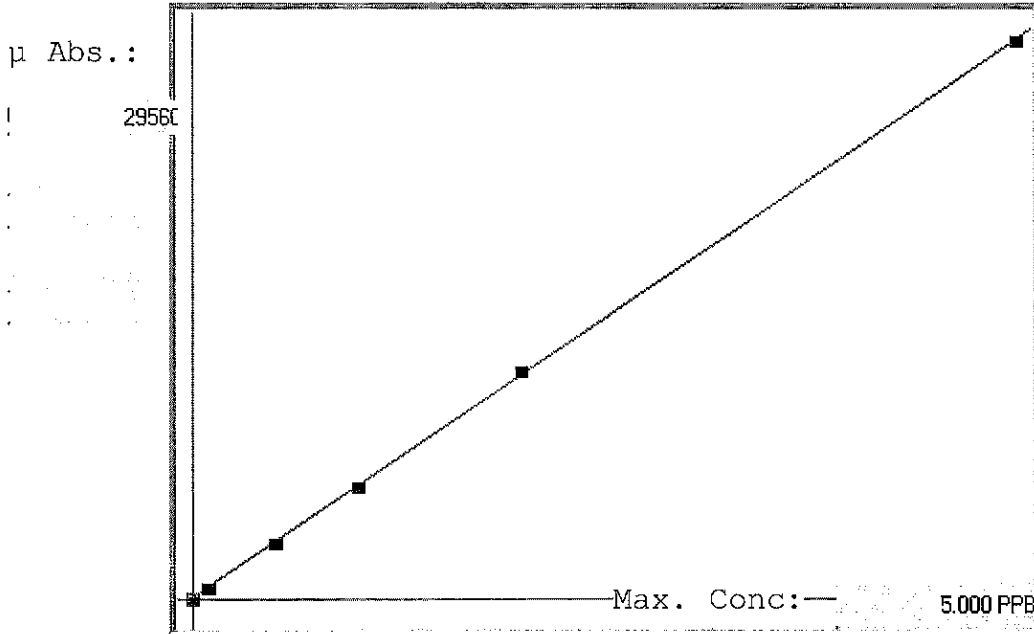
Operator: Admin

Date of Analysis: 06 Apr 2023 10:35:23

Sample ID	Mean	Units	Date	Method
23A0179-06	0.3370	PPB	06 Apr 2023 14:56:26	ARI 5 ppb (NO 0.05)
23A0179-07	0.2042	PPB	06 Apr 2023 14:58:46	ARI 5 ppb (NO 0.05)
23A0179-08	0.2854	PPB	06 Apr 2023 15:01:05	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.0% 3.9991	PPB ✓	06 Apr 2023 15:03:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0128	PPB ✓	06 Apr 2023 15:05:43	ARI 5 ppb (NO 0.05)
23A0179-09	0.4487	PPB	06 Apr 2023 15:08:05	ARI 5 ppb (NO 0.05)
23A0179-10	0.4658	PPB	06 Apr 2023 15:10:24	ARI 5 ppb (NO 0.05)
23A0179-11	0.3784	PPB	06 Apr 2023 15:12:44	ARI 5 ppb (NO 0.05)
23A0179-12	0.3981	PPB	06 Apr 2023 15:15:03	ARI 5 ppb (NO 0.05)
23A0180-01	0.5586	PPB	06 Apr 2023 15:17:23	ARI 5 ppb (NO 0.05)
23A0180-02	0.5061	PPB	06 Apr 2023 15:19:43	ARI 5 ppb (NO 0.05)
23A0180-03	0.5103	PPB	06 Apr 2023 15:22:04	ARI 5 ppb (NO 0.05)
23A0180-04	0.4028	PPB	06 Apr 2023 15:24:25	ARI 5 ppb (NO 0.05)
BLD0124-BLK1	-0.0074	PPB	06 Apr 2023 15:26:46	ARI 5 ppb (NO 0.05)
BLD0124-BS1	1.8358	PPB ✓	06 Apr 2023 15:29:06	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.6% 4.0655	PPB ✓	06 Apr 2023 15:31:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0126	PPB ✓	06 Apr 2023 15:33:44	ARI 5 ppb (NO 0.05)
23A0206-01	0.4785	PPB	06 Apr 2023 15:36:06	ARI 5 ppb (NO 0.05)
BLD0124-DUP1	0.6405	PPB	06 Apr 2023 15:38:25	ARI 5 ppb (NO 0.05)
BLD0124-MS1	1.5643	PPB ✓	06 Apr 2023 15:40:45	ARI 5 ppb (NO 0.05)
BLD0124-MSD1	1.5269	PPB ✓	06 Apr 2023 15:43:04	ARI 5 ppb (NO 0.05)
23A0206-02	0.4202	PPB	06 Apr 2023 15:45:24	ARI 5 ppb (NO 0.05)
23A0206-03	0.2849	PPB	06 Apr 2023 15:47:43	ARI 5 ppb (NO 0.05)
23A0206-04	0.2801	PPB	06 Apr 2023 15:50:02	ARI 5 ppb (NO 0.05)
23A0206-05	0.4032	PPB	06 Apr 2023 15:52:22	ARI 5 ppb (NO 0.05)
23A0206-06	0.4391	PPB	06 Apr 2023 15:54:43	ARI 5 ppb (NO 0.05)
23A0206-07	0.3668	PPB	06 Apr 2023 15:57:04	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.1% 4.0451	PPB ✓	06 Apr 2023 15:59:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0123	PPB ✓	06 Apr 2023 16:01:44	ARI 5 ppb (NO 0.05)
23A0206-08	0.3552	PPB	06 Apr 2023 16:04:05	ARI 5 ppb (NO 0.05)
23A0206-09	0.4224	PPB	06 Apr 2023 16:06:25	ARI 5 ppb (NO 0.05)
23A0206-10	0.3758	PPB	06 Apr 2023 16:08:45	ARI 5 ppb (NO 0.05)
23A0206-11	0.4351	PPB	06 Apr 2023 16:11:04	ARI 5 ppb (NO 0.05)
23A0206-12	0.3878	PPB	06 Apr 2023 16:13:25	ARI 5 ppb (NO 0.05)
23A0206-13	0.8163	PPB	06 Apr 2023 16:15:46	ARI 5 ppb (NO 0.05)
23A0206-14	0.4115	PPB	06 Apr 2023 16:18:05	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.4% 3.9769	PPB ✓	06 Apr 2023 16:20:25	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0132	PPB ✓	06 Apr 2023 16:22:44	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)

Linear



A= 0.0000e+000

B= 1.6934e-004

C= -1.7179e-002

Rho= 0.9999635

Accept=Accepted

Accepted Date=

04/06/23 10:50

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.005	-0.005	71	2.449	68	74	71		
SEQ-CAL2 - 0.1 PPB	0.100	0.095	-0.005	663	1.1 %	661	656	673		
SEQ-CAL3 - 0.5 PPB	0.500	0.494	-0.006	3021	1.2 %	2976	3022	3067		
SEQ-CAL4 - 1.0 PPB	1.000	0.994	-0.006	5974	0.9 %	5902	5994	6026		
SEQ-CAL5 - 2.0 PPB	2.000	2.033	0.033	12105	0.6 %	12003	12128	12184		
SEQ-CAL6 - 5.0 PPB	5.000	4.988	-0.012	29560	0.6 %	29404	29830	29447		

# Mercury Analysis Log

Analyst: ML  
 Instrument: HYDRA

Date: 04/06/23  
 Page: 1 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -C011	Smm	1X		
-C012				
-C013				
-C014				
-C015				
-C016				
-ICV			4.04	
-ICB			-0.012	
-CRL			0.089	
-CCV			4.08	
↓ -C03			-0.014	
BLD0031 -B1K1				
↓ -B51			✓ 1.843	92.1 J.R
SEQ -CCV			✓ 4.04	
-C03			✓ -0.012	
-C04			✓ 4.02	
↓ -C03			✓ -0.011	
23A0157 -01				
BLD0031 -DUP1				
-M51			✗ 0.755	35.5 J.R
↓ -M5D1			✓ 1.527	112.7 J.R
23A0157 -03				
-06				
-07				
-08				
-09				
↓ -10				
SEQ -CCV			✓ 4.07	
↓ -C03			✓ -0.013	
23A0157 -11				

Chemical/Reagent ID:  
 10% SnCl<sub>2</sub>: L3565

14% NH<sub>2</sub>OH/NaCl: L3351

Standard ID:  
 Standard: L3630 - L3635

ICV/CCV: L3627

### Mercury Analysis Log

Analyst:           

Date:           

Instrument:           

Page: 2 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
↓ -12				
↓ -13				
23A0158 -04				
↓ -05				
↓ -06				
↓ -07				
↓ -08				
↓ -09				
↓ -10				
SEA -CCV			√ 3.57	
↓ -CCB			√ -0.018	
73A0158 -11				
↓ -12				
↓ -13				
BLD0031 -PS1			√ 1.243	84.3 IR
BLD0056 -BIK1				
↓ -BS1			√ 1.779	88.9 IR
23A0179 -01				
BLD0056 -DVP1				
↓ -MS1			√ 1.215	90.8 IR
↓ -MSD1			√ 1.192	88.4 IR
SEA -CCV			√ 3.91	
↓ -CCB			√ -0.014	
23A0158 -14				
↓ -15				
↓ -16				
23A0179 -02				
↓ -03				
↓ -04				
↓ -05				

Chemical/Reagent ID:  
10% SnCl<sub>2</sub>:           

14% NH<sub>2</sub>OH/NaCl:           

Standard ID:  
Standard:           

ICV/CCV:

### Mercury Analysis Log

Analyst:             
 Instrument:           

Date:             
 Page: 3 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-06				
↓          -07				
↓          -08				
SEA          -CCV			√3.99	
↓          -CCB			√-0.012	
23A0179 -09				
-10				
-11				
↓          -12				
23A0180-01- <del>13</del>				
-02				
↓          -03				
↓          -04				
BLD0124 -B1K1				
↓          -B31			√1.835	91.7%R
SEA          -CCV			√4.06	
↓          -CCB			√-0.012	
23A0206 -01				
BLD0124 -DVP1				RPD=28.95
-MS1			√1.564	108.5%R
↓          -MSD1			√1.526	104.8%R
23A0206 -02				
-03				
-04				
-05				
-06				
↓          -07				
SEA          -CCV			√4.04	
-CCB			√-0.012	
23A0206 -08				

Chemical/Reagent ID:  
 10% SnCl<sub>2</sub>:             
 Standard ID:             
 Standard:           

14% NH<sub>2</sub>OH/NaCl:             
 ICV/CCV:

## Mercury Analysis Log

Analyst:                           
 Instrument:                         

Date:                           
 Page: 4 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-09				
-10				
-11				
-12				
-13				
↓ -14				
SEA -CCV			√3.97	
↓ -CCB			√-0.013	
MI 04106123				

Chemical/Reagent ID:  
 10% SnCl<sub>2</sub>:                           
 Standard ID:                           
 Standard:                         

14% NH<sub>2</sub>OH/NaCl:                           
 ICV/CCV:



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 7471B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: HYDRA

Calibration: GD00018

Control Limit: +/- 20.00%

Sequence: SLD0102

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0102-ICV1	Mercury	0.0040000	0.00405	101	mg/L	EPA 7471B
SLD0102-CCV1	Mercury	0.0040000	0.00409	102	mg/L	EPA 7471B
SLD0102-CCV2	Mercury	0.0040000	0.00404	101	mg/L	EPA 7471B
SLD0102-CCV3	Mercury	0.0040000	0.00403	101	mg/L	EPA 7471B
SLD0102-CCV4	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLD0102-CCV5	Mercury	0.0040000	0.00357	89.3	mg/L	EPA 7471B
SLD0102-CCV6	Mercury	0.0040000	0.00392	97.9	mg/L	EPA 7471B
SLD0102-CCV7	Mercury	0.0040000	0.00400	100	mg/L	EPA 7471B
SLD0102-CCV8	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLD0102-CCV9	Mercury	0.0040000	0.00405	101	mg/L	EPA 7471B
SLD0102-CCVA	Mercury	0.0040000	0.00398	99.4	mg/L	EPA 7471B

\* Values outside of QC limits



**INSTRUMENT BLANKS**  
**EPA 7471B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: HYDRA

Calibration: GD00018

Sequence: SLD0102

Date Analyzed: 04/06/23 11:07

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0102-ICB1	Mercury	-0.000012	0.000021	0.000100	mg/L	
SLD0102-CCB1	Mercury	-0.000014	0.000021	0.000100	mg/L	
SLD0102-CCB2	Mercury	-0.000013	0.000021	0.000100	mg/L	
SLD0102-CCB3	Mercury	-0.000012	0.000021	0.000100	mg/L	
SLD0102-CCB4	Mercury	-0.000013	0.000021	0.000100	mg/L	
SLD0102-CCB5	Mercury	-0.000019	0.000021	0.000100	mg/L	
SLD0102-CCB6	Mercury	-0.000014	0.000021	0.000100	mg/L	
SLD0102-CCB7	Mercury	-0.000013	0.000021	0.000100	mg/L	
SLD0102-CCB8	Mercury	-0.000013	0.000021	0.000100	mg/L	
SLD0102-CCB9	Mercury	-0.000012	0.000021	0.000100	mg/L	
SLD0102-CCBA	Mercury	-0.000013	0.000021	0.000100	mg/L	





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 7471B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0102

Instrument: HYDRA

Calibration: GD00018

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLD0102-CAL1	SMM 04-06-23-001	NA	04/06/23 10:35
Cal Standard	SLD0102-CAL2	SMM 04-06-23-002	NA	04/06/23 10:37
Cal Standard	SLD0102-CAL3	SMM 04-06-23-003	NA	04/06/23 10:40
Cal Standard	SLD0102-CAL4	SMM 04-06-23-004	NA	04/06/23 10:42
Cal Standard	SLD0102-CAL5	SMM 04-06-23-005	NA	04/06/23 10:45
Cal Standard	SLD0102-CAL6	SMM 04-06-23-006	NA	04/06/23 10:47
Initial Cal Check	SLD0102-ICV1	SMM 04-06-23-007	NA	04/06/23 11:04
Initial Cal Blank	SLD0102-ICB1	SMM 04-06-23-008	NA	04/06/23 11:07
Instrument RL Check	SLD0102-CRL1	SMM 04-06-23-009	NA	04/06/23 11:09
Calibration Check	SLD0102-CCV1	SMM 04-06-23-010	NA	04/06/23 11:11
Calibration Blank	SLD0102-CCB1	SMM 04-06-23-011	NA	04/06/23 11:14
Calibration Check	SLD0102-CCV2	SMM 04-06-23-014	NA	04/06/23 11:21
Calibration Blank	SLD0102-CCB2	SMM 04-06-23-015	NA	04/06/23 11:23
Calibration Check	SLD0102-CCV3	SMM 04-06-23-016	NA	04/06/23 13:11
Calibration Blank	SLD0102-CCB3	SMM 04-06-23-017	NA	04/06/23 13:13
Calibration Check	SLD0102-CCV4	SMM 04-06-23-028	NA	04/06/23 13:39
Calibration Blank	SLD0102-CCB4	SMM 04-06-23-029	NA	04/06/23 13:41
Calibration Check	SLD0102-CCV5	SMM 04-06-23-040	NA	04/06/23 14:07
Calibration Blank	SLD0102-CCB5	SMM 04-06-23-041	NA	04/06/23 14:09
Calibration Check	SLD0102-CCV6	SMM 04-06-23-052	NA	04/06/23 14:35
Calibration Blank	SLD0102-CCB6	SMM 04-06-23-053	NA	04/06/23 14:37
Calibration Check	SLD0102-CCV7	SMM 04-06-23-064	NA	04/06/23 15:03
Calibration Blank	SLD0102-CCB7	SMM 04-06-23-065	NA	04/06/23 15:05
Blank	BLD0124-BLK1	SMM 04-06-23-074	Solid	04/06/23 15:26
LCS	BLD0124-BS1	SMM 04-06-23-075	Solid	04/06/23 15:29
Calibration Check	SLD0102-CCV8	SMM 04-06-23-076	NA	04/06/23 15:31
Calibration Blank	SLD0102-CCB8	SMM 04-06-23-077	NA	04/06/23 15:33
LDW23-SS1021	23A0206-01	SMM 04-06-23-078	Solid	04/06/23 15:36
LDW23-SS1021	BLD0124-DUP1	SMM 04-06-23-079	Solid	04/06/23 15:38



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 7471B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLD0102

Instrument: HYDRA

Calibration: GD00018

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1021	BLD0124-MS1	SMM 04-06-23-080	Solid	04/06/23 15:40
LDW23-SS1021	BLD0124-MSD1	SMM 04-06-23-081	Solid	04/06/23 15:43
LDW23-SS1015	23A0206-02	SMM 04-06-23-082	Solid	04/06/23 15:45
LDW23-SS1164	23A0206-03	SMM 04-06-23-083	Solid	04/06/23 15:47
LDW23-SS1158	23A0206-04	SMM 04-06-23-084	Solid	04/06/23 15:50
LDW23-SS1151	23A0206-05	SMM 04-06-23-085	Solid	04/06/23 15:52
LDW23-SS1145	23A0206-06	SMM 04-06-23-086	Solid	04/06/23 15:54
LDW23-SS1139	23A0206-07	SMM 04-06-23-087	Solid	04/06/23 15:57
Calibration Check	SLD0102-CCV9	SMM 04-06-23-088	NA	04/06/23 15:59
Calibration Blank	SLD0102-CCB9	SMM 04-06-23-089	NA	04/06/23 16:01
LDW23-SS1117	23A0206-08	SMM 04-06-23-090	Solid	04/06/23 16:04
LDW23-SS1103	23A0206-09	SMM 04-06-23-091	Solid	04/06/23 16:06
LDW23-SS1100	23A0206-10	SMM 04-06-23-092	Solid	04/06/23 16:08
LDW23-SS1096	23A0206-11	SMM 04-06-23-093	Solid	04/06/23 16:11
LDW23-SS1094	23A0206-12	SMM 04-06-23-094	Solid	04/06/23 16:13
LDW23-SS1066	23A0206-13	SMM 04-06-23-095	Solid	04/06/23 16:15
LDW23-SS1061	23A0206-14	SMM 04-06-23-096	Solid	04/06/23 16:18
Calibration Check	SLD0102-CCVA	SMM 04-06-23-097	NA	04/06/23 16:20
Calibration Blank	SLD0102-CCBA	SMM 04-06-23-098	NA	04/06/23 16:22



**DETECTION LEVEL STANDARD**  
**EPA 7471B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: HYDRA

Calibration: GD00018

Sequence: SLD0102

Lab Sample ID: SLD0102-CRL1

Analyte	True	Found	%R	Units	QC Limits
Mercury	0.000100	0.000089	89.2	mg/L	70 - 130

\* Values outside of QC limits



## HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:36	85	180	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:45	85	180	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:47	85	180	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:50	85	180	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:52	85	180	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:54	85	180	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:57	85	180	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:04	85	180	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:06	85	180	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:08	85	180	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:11	85	180	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:13	85	180	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:15	85	180	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 16:18	85	180	
Duplicate BLD0124-DUP1	01/11/23 08:25	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:38	85	180	
Matrix Spike BLD0124-MS1	01/11/23 08:25	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:40	85	180	
Matrix Spike Dup BLD0124-MSD1	01/11/23 08:25	01/11/23 17:05	04/05/23 17:50	84	180	04/06/23 15:43	85	180	

\* Indicates hold time exceedance.



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**METHOD DETECTION  
AND REPORTING LIMITS**

**EPA 7471B**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: HYDRA

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Mercury	0.00525	0.0250	mg/kg

300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGHG1  
Lot Number: S2-HG711246  
Matrix: 5% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 1 000 µg/mL ea:  
Mercury  
Starting Material: Hg Metal  
Starting Material Lot#: 1959  
Starting Material Purity: 99.9993%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

**Certified Value:** 1000 ± 3 µg/mL  
**Density:** 1.026 g/mL (measured at 20 ± 4 °C)

### Assay Information:

<b>Assay Method #1</b>	<b>1004 ± 6 µg/mL</b> ICP Assay NIST SRM 3133 Lot Number: 160921
<b>Assay Method #2</b>	<b>998 ± 3 µg/mL</b> EDTA NIST SRM 928 Lot Number: 928
<b>Assay Method #3</b>	<b>1001 ± 3 µg/mL</b> Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char j}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000210	M Eu < 0.000210	O Na < 0.000626	M Se < 0.008100	M Zn < 0.000810
M Al < 0.000161	O Fe < 0.001600	M Nb < 0.000410	O Si < 0.000626	M Zr < 0.000410
M As < 0.002500	M Ga < 0.000210	M Nd < 0.000210	M Sm < 0.000210	
O Au < 0.001700	M Gd < 0.000210	O Ni < 0.001400	M Sn < 0.000410	
M B < 0.008500	M Ge < 0.000410	M Os < 0.003900	O Sr < 0.000110	
M Ba < 0.000210	M Hf < 0.000210	O P < 0.029000	M Ta < 0.000210	
O Be < 0.000110	s Hg < 0.000210	M Pb < 0.000210	M Tb < 0.000210	
M Bi < 0.001100	M Ho < 0.000210	M Pd < 0.003500	M Te < 0.005700	
O Ca < 0.004754	M In < 0.000210	M Pr < 0.000210	M Th < 0.000210	
M Cd < 0.000210	M Ir < 0.000210	M Pt < 0.000210	O Ti < 0.000430	
M Ce < 0.000210	O K < 0.000731	M Rb < 0.000210	O Tl < 0.005400	
M Co < 0.000210	M La < 0.000210	M Re < 0.000210	M Tm < 0.000210	
O Cr < 0.003300	O Li < 0.000110	M Rh < 0.001100	M U < 0.000410	
M Cs < 0.000410	M Lu < 0.000210	M Ru < 0.000810	M V < 0.000210	
M Cu < 0.000810	O Mg < 0.000104	O S < 0.022000	M W < 0.001100	
M Dy < 0.000210	O Mn < 0.000430	M Sb < 0.000210	M Y < 0.000210	
M Er < 0.000210	M Mo < 0.000210	M Sc < 0.000210	M Yb < 0.000210	

M - Checked by ICP-MS    O - Checked by ICP-OES    i - Spectral Interference  
n - Not Checked For    s - Solution Standard Element

## 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

### 7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form in Solution** - 200.59 +2 4 Hg(OH)(aq) 1+  
**Chemical Compatibility** - Stable in HNO<sub>3</sub>. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

**Stability** - 2-100 ppb levels not stable in 1% HNO<sub>3</sub> / LDPE container, stable in 10% HNO<sub>3</sub> packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO<sub>3</sub> packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO<sub>3</sub> / LDPE container.

**Hg Containing Samples (Preparation and Solution)** - Metal (soluble in HNO<sub>3</sub>); Oxide (Soluble in HNO<sub>3</sub>); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th, Rh, Fe, U

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY



**11.1 Certification Issue Date**

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

**11.2 Lot Expiration Date**

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

**11.3 Period of Validity**

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:**

Uyen Truong  
Supervisor, Product Documentation



**Certificate Approved By:**

Michael Booth  
Director, Technical



**Certifying Officer:**

Paul Gaines  
Chairman / Senior Technical Director



## 1.0 ACCREDITATION / REGISTRATION

**INORGANIC VENTURES** is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
 Catalog Number: QCP-QCS-4  
 Lot Number: R2-MEB695951  
 Matrix: 7% (v/v) HNO<sub>3</sub>  
 Value / Analyte(s): 5 µg/mL ea:  
 Mercury

**Second Source:** Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	5.011 ± 0.023 µg/mL		

**Density:** 1.035 g/mL (measured at 20 ± 4 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

#### Characterization of CRM/RM by Two or More Methods

Certified Value,  $X_{CRM/RM}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method i with standard uncertainty  $u_{char i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u^2_{char} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i})^2]^{1/2}$  where  $u_{char i}$  are the errors from each characterization method

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{CRM/RM}$ , where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char a})$$

$X_a$  = mean of Assay Method A with

$u_{char a}$  = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u^2_{char a} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{Its}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

#### **4.0 TRACEABILITY TO NIST**

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### **4.1 Thermometer Calibration**

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### **4.2 Balance Calibration**

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### **4.3 Glassware Calibration**

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### **5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)**

N/A

#### **6.0 INTENDED USE**

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### **7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**

##### **7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit [www.inorganicventures.com/TCT](http://www.inorganicventures.com/TCT)

#### **8.0 HAZARDOUS INFORMATION**

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### **9.0 HOMOGENEITY**

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

#### **10.0 QUALITY STANDARD DOCUMENTATION**

##### **10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

##### **10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"**

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Approved By:

Michael Booth  
Director, Quality Control



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1021
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-01 D      SDG: 23A0206

Sampled: 01/11/23 08:25      Prepared: 01/13/23 14:40      File ID:

% Solids: 47.26      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.26	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1015
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-02 D      SDG: 23A0206

Sampled: 01/11/23 08:37      Prepared: 01/13/23 14:40      File ID:

% Solids: 47.15      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.15	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1164
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-03 D      SDG: 23A0206

Sampled: 01/11/23 09:18      Prepared: 01/13/23 14:40      File ID:

% Solids: 49.38      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:

Instrument: BAL2      Calibration: 5 g Wet / 5 g

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	49.38	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
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LDW23-SS1158
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-04 D      SDG: 23A0206

Sampled: 01/11/23 09:35      Prepared: 01/13/23 14:40      File ID:

% Solids: 48.66      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.66	1	0.04	0.04	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1151
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-05 D      SDG: 23A0206

Sampled: 01/11/23 09:50      Prepared: 01/13/23 14:40      File ID:

% Solids: 52.44      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	52.44	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1145
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-06 D      SDG: 23A0206

Sampled: 01/11/23 10:07      Prepared: 01/13/23 14:40      File ID:

% Solids: 53.98      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	53.98	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

<b>LDW23-SS1139</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-07 D      SDG: 23A0206  
 Sampled: 01/11/23 10:20      Prepared: 01/13/23 14:40      File ID:  
 % Solids: 58.12      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41  
 Batch: BLA0346      Sequence:  
 Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	58.12	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1117
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-08 D      SDG: 23A0206  
 Sampled: 01/11/23 10:40      Prepared: 01/13/23 14:40      File ID:  
 % Solids: 51.15      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41  
 Batch: BLA0346      Sequence:  
 Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	51.15	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1103
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-09 D      SDG: 23A0206

Sampled: 01/11/23 11:15      Prepared: 01/13/23 14:40      File ID:

% Solids: 40.33      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:      Initial/Final: 5 g Wet / 5 g

Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	40.33	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

<b>LDW23-SS1100</b>
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206

Sampled: 01/11/23 11:28      Prepared: 01/13/23 14:40      File ID:

% Solids: 39.49      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:

Instrument: BAL2      Calibration: 5 g Wet / 5 g

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	39.49	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1096
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-11 D      SDG: 23A0206

Sampled: 01/11/23 11:43      Prepared: 01/13/23 14:40      File ID:

% Solids: 38.38      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:

Instrument: BAL2      Calibration: 5 g Wet / 5 g

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	38.38	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1094
--------------

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-12 D      SDG: 23A0206

Sampled: 01/11/23 12:19      Prepared: 01/13/23 14:40      File ID:

% Solids: 45.91      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:

Instrument: BAL2      Calibration: 5 g Wet / 5 g

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	45.91	1	0.04	0.04	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

LDW23-SS1066
--------------

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206

Sampled: 01/11/23 12:40      Prepared: 01/13/23 14:40      File ID:

% Solids: 57.96      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41

Batch: BLA0346      Sequence:

Instrument: BAL2      Calibration: 5 g Wet / 5 g

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	57.96	1	0.04	0.04	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**SM 2540 G-97**

<b>LDW23-SS1061</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-14 D      SDG: 23A0206  
 Sampled: 01/11/23 13:03      Prepared: 01/13/23 14:40      File ID:  
 % Solids: 48.61      Preparation: No Prep Wet Chem      Analyzed: 01/13/23 14:41  
 Batch: BLA0346      Sequence:  
 Instrument: BAL2      Calibration:

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.61	1	0.04	0.04	



## PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0346 Batch Matrix: Solid Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01		01/13/23 14:40	
LDW23-SS1015	23A0206-02		01/13/23 14:40	
LDW23-SS1164	23A0206-03		01/13/23 14:40	
LDW23-SS1158	23A0206-04		01/13/23 14:40	
LDW23-SS1151	23A0206-05		01/13/23 14:40	
LDW23-SS1145	23A0206-06		01/13/23 14:40	
LDW23-SS1139	23A0206-07		01/13/23 14:40	
LDW23-SS1117	23A0206-08		01/13/23 14:40	
LDW23-SS1103	23A0206-09		01/13/23 14:40	
LDW23-SS1100	23A0206-10		01/13/23 14:40	
LDW23-SS1096	23A0206-11		01/13/23 14:40	
LDW23-SS1094	23A0206-12		01/13/23 14:40	
LDW23-SS1066	23A0206-13		01/13/23 14:40	
LDW23-SS1061	23A0206-14		01/13/23 14:40	
Blank	BLA0346-BLK1		01/13/23 14:40	
LDW23-SS1021	BLA0346-DUP1		01/13/23 14:40	
LDW23-SS1021	BLA0346-DUP2		01/13/23 14:40	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples											Batch: BLA0346					
Method: PSEP 1986, SM2540, EPA 160.1											Date: 1/13/2023 14:41					
(dry at 104 (12-24 hr) then combust at 550 (30 min))											Analyst: UW					
Instrumentation			Drying Ovens: 12			Analytical Balance: BAL2										
			Muffle Furnace: 2													
Batch drying time				Oven Temps, °C				TVS (mg/kg dry wt) calculated as:								
record times as mm/dd/yy hh:mm				TS (%) calculated as:				Final ash wt (g) = (min ash wt - tare wt)								
date/time in oven: 1/13/2023 15:00				Final dry wt (g) = (Dry Wt - Tare Wt)				TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000								
date/time out: 1/14/2023 14:14				TS = (Final Dry Wt)/ (grams Sample-Tare)				if ash wt > dry wt, "Chk for Err"								
elapsed hrs = 23.2 OK				Dry Cycle 1: 103				if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000								
Dry Cycle 2:				Dry Cycle 3:												
Balance Calibration Check																
Record weights to 4 places											CV-02					
Cal Weight ID:		CV-02	CV-02	CV-02	CV-02	CV-02						CV-02	CV-02	CV-02		
Date & Time:		1/13/23 14:40	1/13/23 14:50	1/14/23 15:05												
Cal Wt (g):		10.0000	10.0000	10.0000												
		Cal OK!	Cal OK!	Cal OK!												
Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams)			dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams)			Ash Wt (g)	TVS		Notes
				1	2	3				1	2	3		(mg/kg)	(%)	
BLA0346-BLK1	24	0.7952	0.0000	0.7949			-0.0003	0.04%								
23A0206-01	25	0.8066	7.7468	4.0862			3.2796	47.26%								
BLA0346-DUP1	26	0.8228	7.2246	3.8602			3.0374	47.45%	RPD=0.4							
BLA0346-DUP2	27	0.7930	7.6274	3.9773			3.1843	46.59%	RSD=1							
23A0206-02	28	0.8131	7.0722	3.7640			2.9509	47.15%								
23A0206-03	29	0.7777	7.8720	4.2812			3.5035	49.38%								
23A0206-04	30	0.7788	7.5455	4.0712			3.2924	48.66%								
23A0206-05	31	0.7724	8.0702	4.5996			3.8272	52.44%								
23A0206-06	32	0.8132	9.0011	5.2329			4.4197	53.98%								
23A0206-07	33	0.8031	9.4411	5.8233			5.0202	58.12%								
23A0206-08	34	0.8353	8.5330	4.7729			3.9376	51.15%								
23A0206-09	35	0.8342	8.3432	3.8625			3.0283	40.33%								
23A0206-10	36	0.8207	7.9404	3.6326			2.8119	39.49%								
23A0206-11	37	0.8278	8.4340	3.7471			2.9193	38.38%								
23A0206-12	38	0.8344	8.6728	4.4331			3.5987	45.91%								
23A0206-13	39	0.8087	9.9499	6.1072			5.2985	57.96%								
23A0206-14	40	0.8323	8.5575	4.5872			3.7549	48.61%								



**Form I**  
**METHOD BLANK DATA SHEET**  
**SM 2540 G-97**  
TotalAnalytes

<b>Blank</b>
--------------

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLA0346

Laboratory ID: BLA0346-BLK1

Prepared: 01/13/23 14:40

Matrix: Solid

Preparation: No Prep Wet Chem

Analyzed: 01/13/23 14:41

Sequence:

Calibration:

Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U



**DUPLICATES**  
**SM 2540 G-97**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLA0346-DUP1

Batch: BLA0346

Lab Source ID: 23A0206-01

Preparation: No Prep Wet Chem

Initial/Final: 5 g / 5 g

Source Sample Name: LDW23-SS1021

% Solids: 47.26

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	47.26	47.45	0.403	

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD



**DUPLICATES**  
**SM 2540 G-97**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLA0346-DUP2

Batch: BLA0346

Lab Source ID: 23A0206-01

Preparation: No Prep Wet Chem

Initial/Final: 5 g / 5 g

Source Sample Name: LDW23-SS1021

% Solids: 47.26

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	47.26	46.59	1.41	

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD



## HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
Duplicate BLA0346-DUP1	01/11/23 08:25	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	
Duplicate BLA0346-DUP2	01/11/23 08:25	01/11/23 17:05	01/13/23 14:40	2	180	01/13/23 14:41	2	180	

\* Indicates hold time exceedance.





**Analytical Resources, LLC**  
Analytical Chemists and Consultants

## METHOD DETECTION AND REPORTING LIMITS

**SM 2540 G-97**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument:

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Total Solids	0.04	0.04	%



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1021
--------------

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-01 D      SDG: 23A0206

Sampled: 01/11/23 08:25      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-099

% Solids: 47.26      Preparation: Plumb 1981      Analyzed: 01/16/23 22:09

Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5389 g Wet / 0.5389 g

Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.51	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1015</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-02 D      SDG: 23A0206  
 Sampled: 01/11/23 08:37      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-100  
 % Solids: 47.15      Preparation: Plumb 1981      Analyzed: 01/16/23 22:40  
 Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5957 g Wet / 0.5957 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.82	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1164
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-03 D      SDG: 23A0206  
 Sampled: 01/11/23 09:18      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-103  
 % Solids: 49.38      Preparation: Plumb 1981      Analyzed: 01/17/23 00:11  
 Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5276 g Wet / 0.5276 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.23	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1158</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-04 D      SDG: 23A0206  
 Sampled: 01/11/23 09:35      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-104  
 % Solids: 48.66      Preparation: Plumb 1981      Analyzed: 01/17/23 00:41  
 Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5655 g Wet / 0.5655 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.89	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1151
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-05 D      SDG: 23A0206

Sampled: 01/11/23 09:50      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-105

% Solids: 52.44      Preparation: Plumb 1981      Analyzed: 01/17/23 01:12

Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5346 g Wet / 0.5346 g

Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.77	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1145
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Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Sediment      Laboratory ID: 23A0206-06 D      SDG: 23A0206

Sampled: 01/11/23 10:07      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-106

% Solids: 53.98      Preparation: Plumb 1981      Analyzed: 01/17/23 01:42

Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.546 g Wet / 0.546 g

Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.70	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1139</b>
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-07 D      SDG: 23A0206  
 Sampled: 01/11/23 10:20      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-107  
 % Solids: 58.12      Preparation: Plumb 1981      Analyzed: 01/17/23 02:12  
 Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5414 g Wet / 0.5414 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.40	1	0.02	0.02	





**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1117
--------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-08 D      SDG: 23A0206  
 Sampled: 01/11/23 10:40      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-108  
 % Solids: 51.15      Preparation: Plumb 1981      Analyzed: 01/17/23 02:43  
 Batch: BLA0320      Sequence: SLA0148      Initial/Final: 0.5426 g Wet / 0.5426 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.14	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1103</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-09 D      SDG: 23A0206  
 Sampled: 01/11/23 11:15      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-115  
 % Solids: 40.33      Preparation: Plumb 1981      Analyzed: 01/17/23 06:15  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.5355 g Wet / 0.5355 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	3.23	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1100</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-10 D      SDG: 23A0206  
 Sampled: 01/11/23 11:28      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-118  
 % Solids: 39.49      Preparation: Plumb 1981      Analyzed: 01/17/23 07:46  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.53 g Wet / 0.53 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.94	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1096</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-11 D      SDG: 23A0206  
 Sampled: 01/11/23 11:43      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-119  
 % Solids: 38.38      Preparation: Plumb 1981      Analyzed: 01/17/23 08:16  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.503 g Wet / 0.503 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.97	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1094</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-12 D      SDG: 23A0206  
 Sampled: 01/11/23 12:19      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-120  
 % Solids: 45.91      Preparation: Plumb 1981      Analyzed: 01/17/23 08:47  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.5219 g Wet / 0.5219 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.49	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

LDW23-SS1066
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Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-13 D      SDG: 23A0206  
 Sampled: 01/11/23 12:40      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-121  
 % Solids: 57.96      Preparation: Plumb 1981      Analyzed: 01/17/23 09:17  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.5941 g Wet / 0.5941 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.69	1	0.02	0.02	



**Form I**  
**INORGANIC ANALYSIS DATA SHEET**  
**EPA 9060A m**

<b>LDW23-SS1061</b>
---------------------

Laboratory: Analytical Resources, LLC  
 Client: Anchor QEA, LLC  
 Project: AOC5 MR Phase 1  
 Matrix: Sediment      Laboratory ID: 23A0206-14 D      SDG: 23A0206  
 Sampled: 01/11/23 13:03      Prepared: 01/13/23 09:35      File ID: CubeData\_01182023@1339-126  
 % Solids: 48.61      Preparation: Plumb 1981      Analyzed: 01/17/23 12:20  
 Batch: BLA0321      Sequence: SLA0148      Initial/Final: 0.5058 g Wet / 0.5058 g  
 Instrument: TOC Cube      Calibration: FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.56	1	0.02	0.02	



## PREPARATION BATCH SUMMARY

### EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0320 Batch Matrix: Solid Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1021	23A0206-01	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1015	23A0206-02	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1164	23A0206-03	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1158	23A0206-04	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1151	23A0206-05	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1145	23A0206-06	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1139	23A0206-07	eData_01182023@1339-	01/13/23 09:35	
LDW23-SS1117	23A0206-08	eData_01182023@1339-	01/13/23 09:35	
Blank	BLA0320-BLK1	eData_01182023@1339-	01/13/23 09:35	
LCS	BLA0320-BS1	eData_01182023@1339-	01/13/23 09:35	
MRL Check	BLA0320-MRL1	eData_01182023@1339-	01/13/23 09:35	
Reference	BLA0320-SRM1	eData_01182023@1339-	01/13/23 09:35	





## PREPARATION BATCH SUMMARY

### EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 23A0206  
Client: Anchor QEA, LLC Project: AOC5 MR Phase 1  
Batch: BLA0321 Batch Matrix: Solid Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1103	23A0206-09	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1100	23A0206-10	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1096	23A0206-11	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1094	23A0206-12	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1066	23A0206-13	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1061	23A0206-14	eData_01182023@1339	01/13/23 09:35	
Blank	BLA0321-BLK1	eData_01182023@1339	01/13/23 09:35	
LCS	BLA0321-BS1	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1103	BLA0321-DUP1	eData_01182023@1339	01/13/23 09:35	
MRL Check	BLA0321-MRL1	eData_01182023@1339	01/13/23 09:35	
LDW23-SS1103	BLA0321-MS1	eData_01182023@1339	01/13/23 09:35	
Reference	BLA0321-SRM1	eData_01182023@1339	01/13/23 09:35	



**Form I**  
**METHOD BLANK DATA SHEET**  
**EPA 9060A m**  
TotalAnalytes

<b>Blank</b>
--------------

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLA0320

Laboratory ID: BLA0320-BLK1

Prepared: 01/13/23 09:35

Matrix: Solid

Preparation: Plumb 1981

Analyzed: 01/16/23 12:33

Sequence: SLA0148

Calibration: FD00070

Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U



Form I  
METHOD BLANK DATA SHEET  
EPA 9060A m  
TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Batch: BLA0321

Laboratory ID: BLA0321-BLK1

Prepared: 01/13/23 09:35

Matrix: Solid

Preparation: Plumb 1981

Analyzed: 01/17/23 03:43

Sequence: SLA0148

Calibration: FD00070

Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U



**LCS / LCS DUPLICATE RECOVERY**  
**EPA 9060A m**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>01/16/23 13:03</u>
Batch:	<u>BLA0320</u>	Laboratory ID:	<u>BLA0320-BS1</u>
Preparation:	<u>Plumb 1981</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>0.0197 g / 0.0197 g</u>		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.9		101	80 - 120

\* Indicates values outside of QC limits



**LCS / LCS DUPLICATE RECOVERY**  
**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Analyzed: 01/17/23 04:14

Batch: BLA0321

Laboratory ID: BLA0321-BS1

Preparation: Plumb 1981

Sequence Name: LCS

Initial/Final: 0.0185 g / 0.0185 g

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	43.9		98.8	80 - 120

\* Indicates values outside of QC limits



**DUPLICATES**

**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Laboratory ID: BLA0321-DUP1

Batch: BLA0321

Lab Source ID: 23A0206-09

Preparation: Plumb 1981

Initial/Final: 0.5404 g / 0.5404 g

Source Sample Name: LDW23-SS1103

% Solids: 40.33

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Organic Carbon	20	3.23	2.96	8.74	

\*: Values outside of QC limits

L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD



**MS / MS DUPLICATE RECOVERY**  
**EPA 9060A m**

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23A0206</u>
Client:	<u>Anchor OEA, LLC</u>	Project:	<u>AOC5 MR Phase 1</u>
Matrix:	<u>Solid</u>	Analyzed:	<u>01/17/23 07:16</u>
Batch:	<u>BLA0321</u>	Laboratory ID:	<u>BLA0321-MS1</u>
Preparation:	<u>Plumb 1981</u>	Sequence Name:	<u>Matrix Spike</u>
Initial/Final:	<u>0.5312 g / 0.5312 g</u>	Source Sample:	<u>LDW23-SS1103</u>

COMPOUND	SPIKE ADDED (% dry)	SAMPLE CONCENTRATION (% dry)	Q	MS CONCENTRATION (% dry)	Q	MS % REC. #	QC LIMITS REC.
Total Organic Carbon	1.78	3.23		4.91		94.2	75 - 125

\* Values outside of QC limits



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SKD0371

Instrument: TOC Cube

Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09





## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLA0148

Instrument: TOC Cube

Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLA0148-ICV1	CubeData_01182023@1339-019	NA	01/16/23 11:02
Initial Cal Blank	SLA0148-ICB1	CubeData_01182023@1339-026	NA	01/16/23 11:32
MRL Check	BLA0320-MRL1	CubeData_01182023@1339-033	Solid	01/16/23 12:03
Blank	BLA0320-BLK1	CubeData_01182023@1339-040	Solid	01/16/23 12:33
LCS	BLA0320-BS1	CubeData_01182023@1339-047	Solid	01/16/23 13:03
Reference	BLA0320-SRM1	CubeData_01182023@1339-052	Solid	01/16/23 13:34
Calibration Check	SLA0148-CCV1	CubeData_01182023@1339-089	NA	01/16/23 17:06
Calibration Blank	SLA0148-CCB1	CubeData_01182023@1339-090	NA	01/16/23 17:36
LDW23-SS1021	23A0206-01	CubeData_01182023@1339-099	Solid	01/16/23 22:09
LDW23-SS1015	23A0206-02	CubeData_01182023@1339-100	Solid	01/16/23 22:40
Calibration Check	SLA0148-CCV2	CubeData_01182023@1339-101	NA	01/16/23 23:10
Calibration Blank	SLA0148-CCB2	CubeData_01182023@1339-102	NA	01/16/23 23:40
LDW23-SS1164	23A0206-03	CubeData_01182023@1339-103	Solid	01/17/23 00:11
LDW23-SS1158	23A0206-04	CubeData_01182023@1339-104	Solid	01/17/23 00:41
LDW23-SS1151	23A0206-05	CubeData_01182023@1339-105	Solid	01/17/23 01:12
LDW23-SS1145	23A0206-06	CubeData_01182023@1339-106	Solid	01/17/23 01:42
LDW23-SS1139	23A0206-07	CubeData_01182023@1339-107	Solid	01/17/23 02:12
LDW23-SS1117	23A0206-08	CubeData_01182023@1339-108	Solid	01/17/23 02:43
MRL Check	BLA0321-MRL1	CubeData_01182023@1339-109	Solid	01/17/23 03:13
Blank	BLA0321-BLK1	CubeData_01182023@1339-110	Solid	01/17/23 03:43
LCS	BLA0321-BS1	CubeData_01182023@1339-111	Solid	01/17/23 04:14
Reference	BLA0321-SRM1	CubeData_01182023@1339-112	Solid	01/17/23 04:44
Calibration Check	SLA0148-CCV3	CubeData_01182023@1339-113	NA	01/17/23 05:15
Calibration Blank	SLA0148-CCB3	CubeData_01182023@1339-114	NA	01/17/23 05:45
LDW23-SS1103	23A0206-09	CubeData_01182023@1339-115	Solid	01/17/23 06:15
LDW23-SS1103	BLA0321-DUP1	CubeData_01182023@1339-116	Solid	01/17/23 06:45
LDW23-SS1103	BLA0321-MS1	CubeData_01182023@1339-117	Solid	01/17/23 07:16
LDW23-SS1100	23A0206-10	CubeData_01182023@1339-118	Solid	01/17/23 07:46
LDW23-SS1096	23A0206-11	CubeData_01182023@1339-119	Solid	01/17/23 08:16



## ANALYSIS BATCH (SEQUENCE) SUMMARY

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sequence: SLA0148

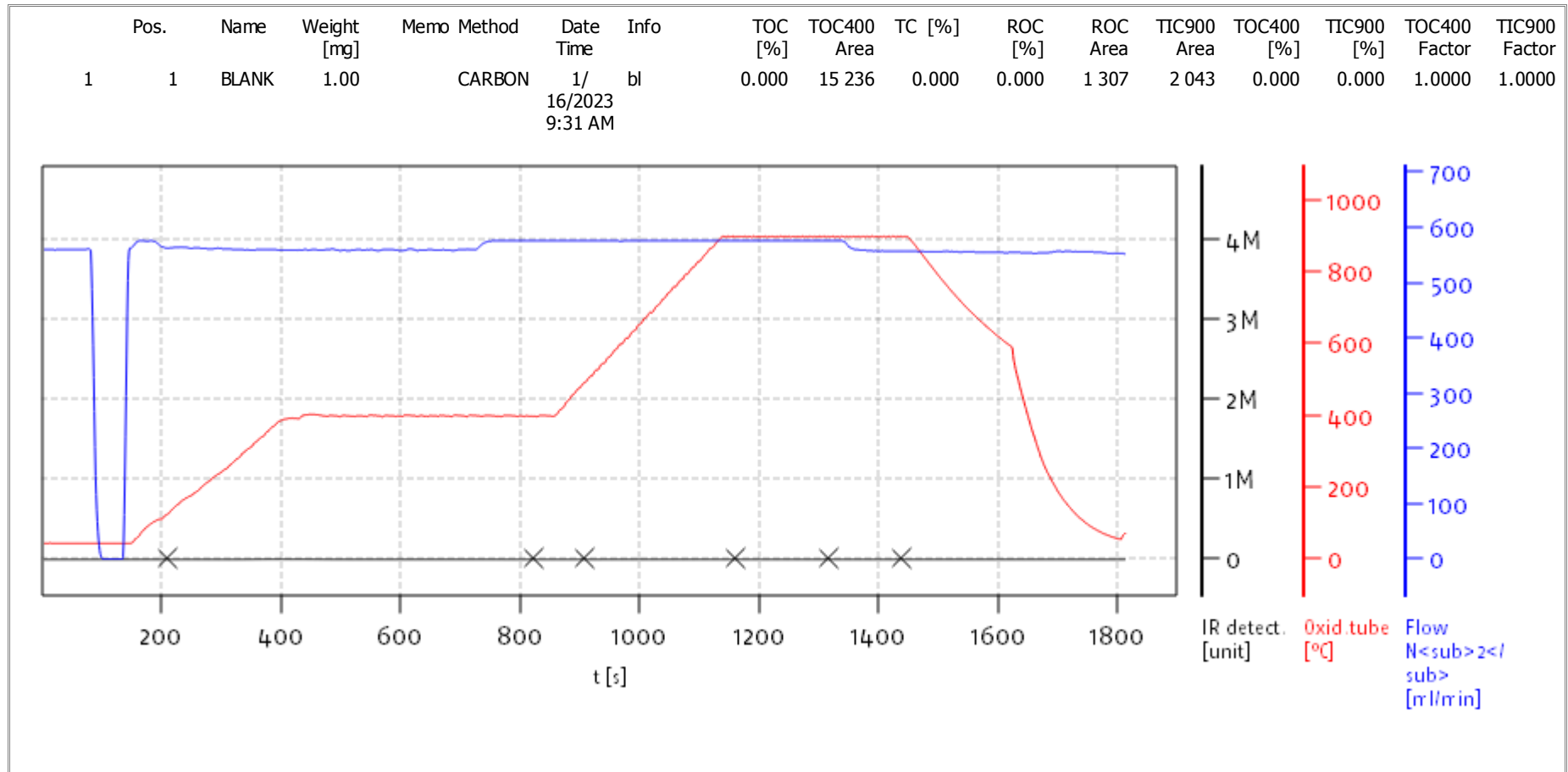
Instrument: TOC Cube

Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1094	23A0206-12	CubeData_01182023@1339-120	Solid	01/17/23 08:47
LDW23-SS1066	23A0206-13	CubeData_01182023@1339-121	Solid	01/17/23 09:17
Calibration Check	SLA0148-CCV4	CubeData_01182023@1339-124	NA	01/17/23 11:19
Calibration Blank	SLA0148-CCB4	CubeData_01182023@1339-125	NA	01/17/23 11:49
LDW23-SS1061	23A0206-14	CubeData_01182023@1339-126	Solid	01/17/23 12:20
Calibration Check	SLA0148-CCV5	CubeData_01182023@1339-136	NA	01/17/23 17:22
Calibration Blank	SLA0148-CCB5	CubeData_01182023@1339-137	NA	01/17/23 17:52
Calibration Check	SLA0148-CCV6	CubeData_01182023@1339-148	NA	01/17/23 23:27
Calibration Blank	SLA0148-CCB6	CubeData_01182023@1339-149	NA	01/17/23 23:57
Calibration Check	SLA0148-CCV7	CubeData_01182023@1339-160	NA	01/18/23 05:31
Calibration Blank	SLA0148-CCB7	CubeData_01182023@1339-161	NA	01/18/23 06:02
Calibration Check	SLA0148-CCV8	CubeData_01182023@1339-064	NA	01/18/23 11:35
Calibration Blank	SLA0148-CCB8	CubeData_01182023@1339-070	NA	01/18/23 12:05
Calibration Check	SLA0148-CCV9	CubeData_01182023@1339-082	NA	01/18/23 13:06
Calibration Blank	SLA0148-CCB9	CubeData_01182023@1339-088	NA	01/18/23 13:36



**Soli TOC Cube, Carbon**  
**Balance: BAL3**  
**Analyst: DOE**



Name:

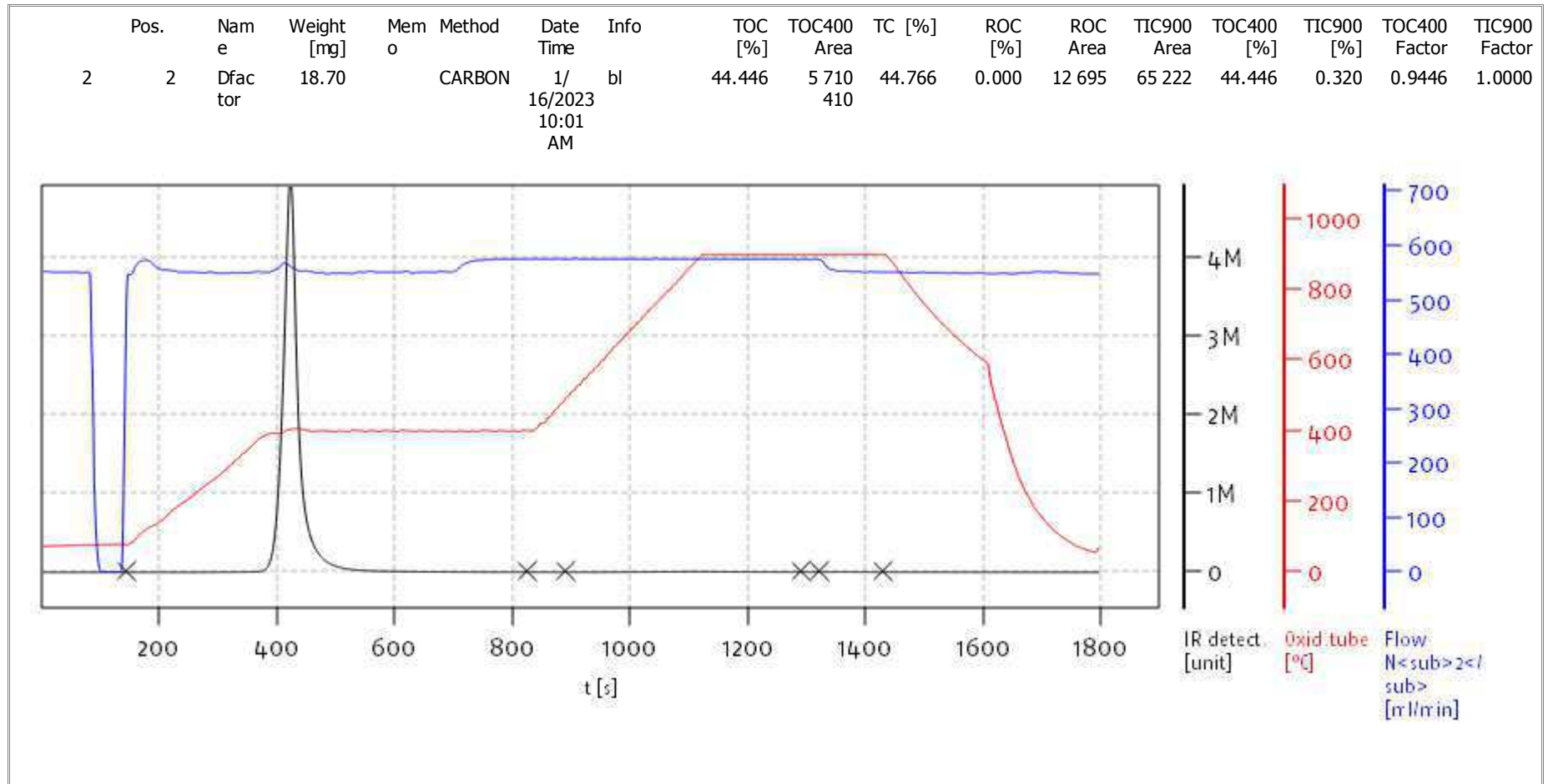
Access: solITOC superuser

Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

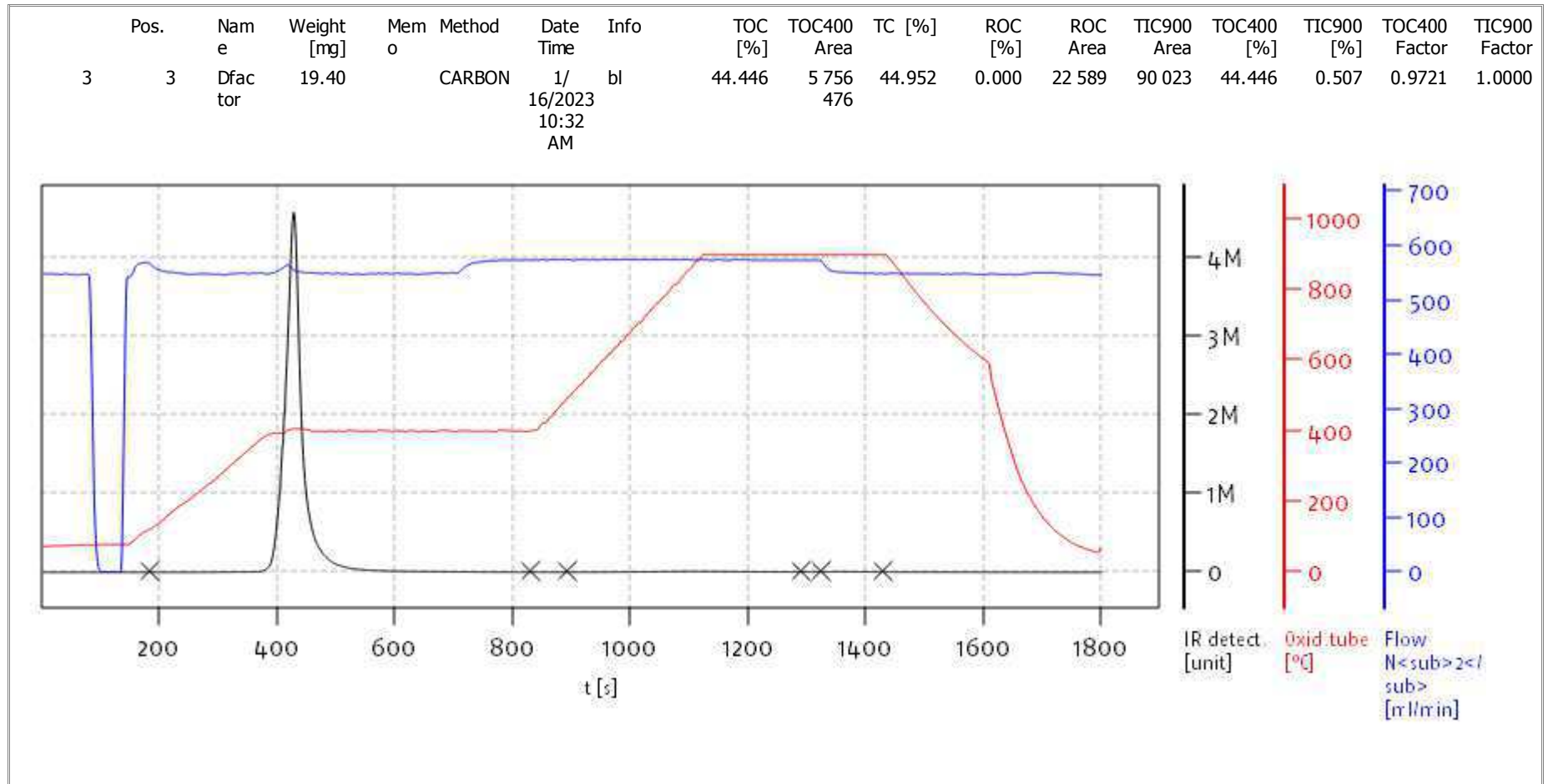
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Date: Wed Jan 18 13:37:19 2023



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 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

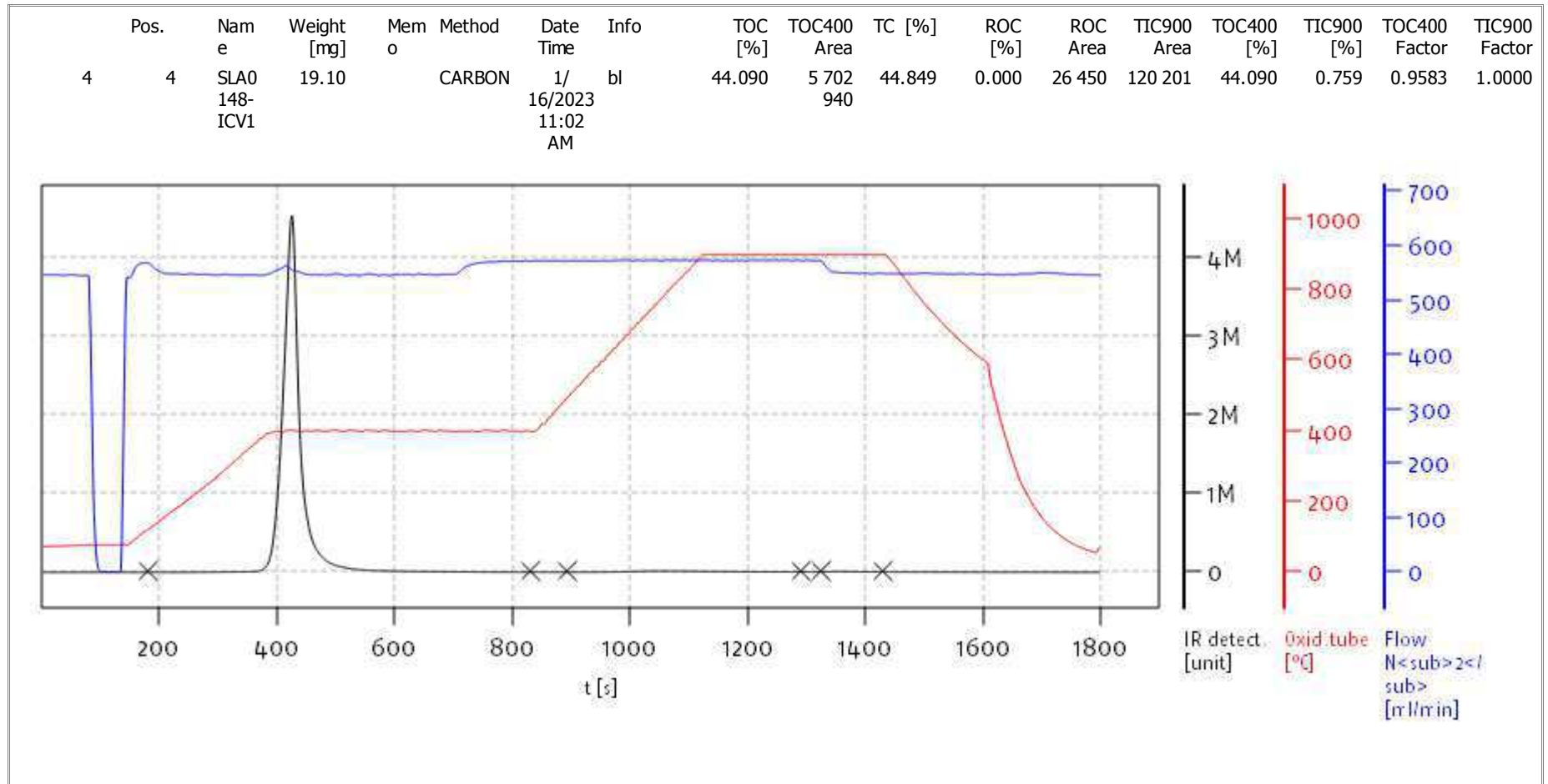
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

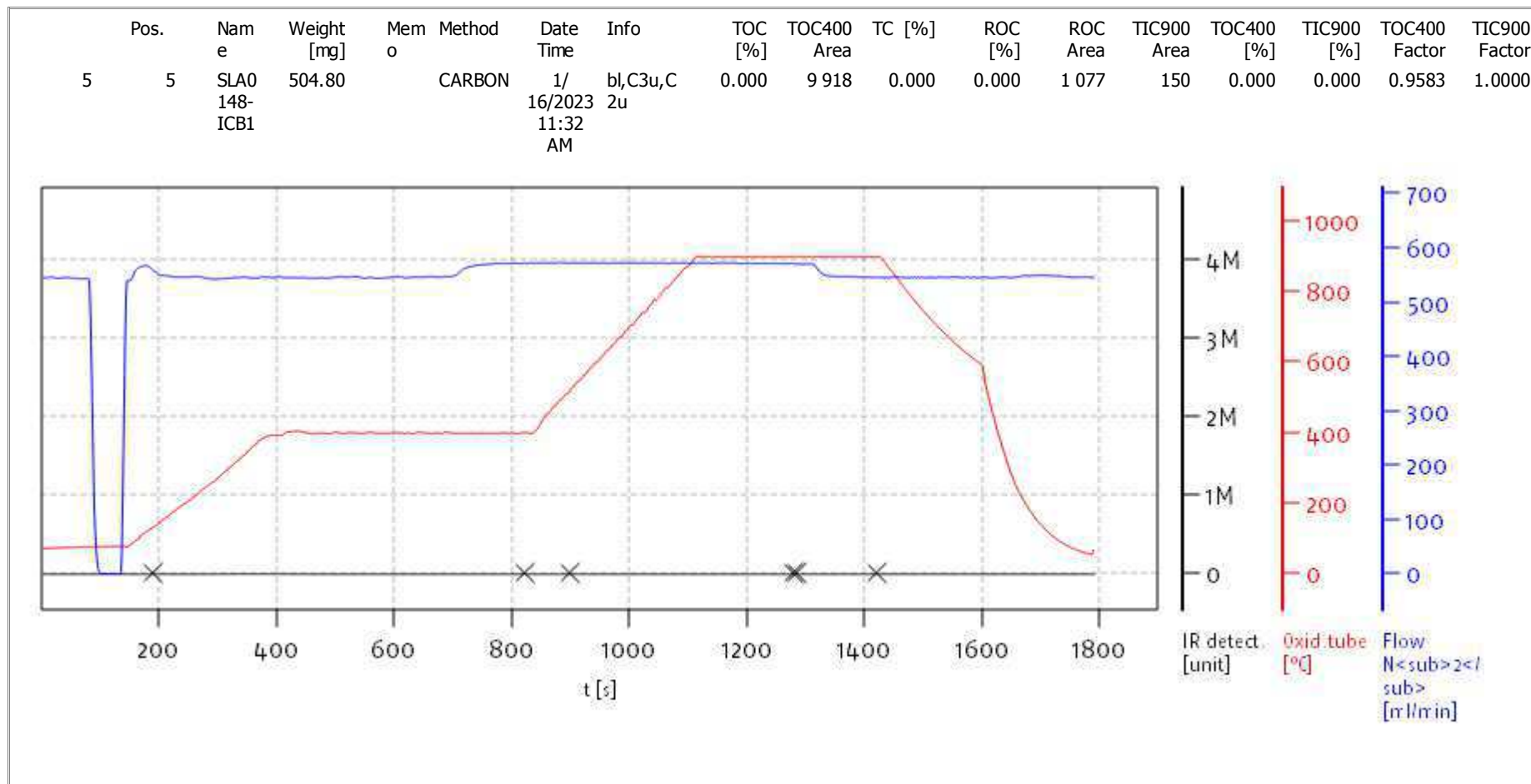
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

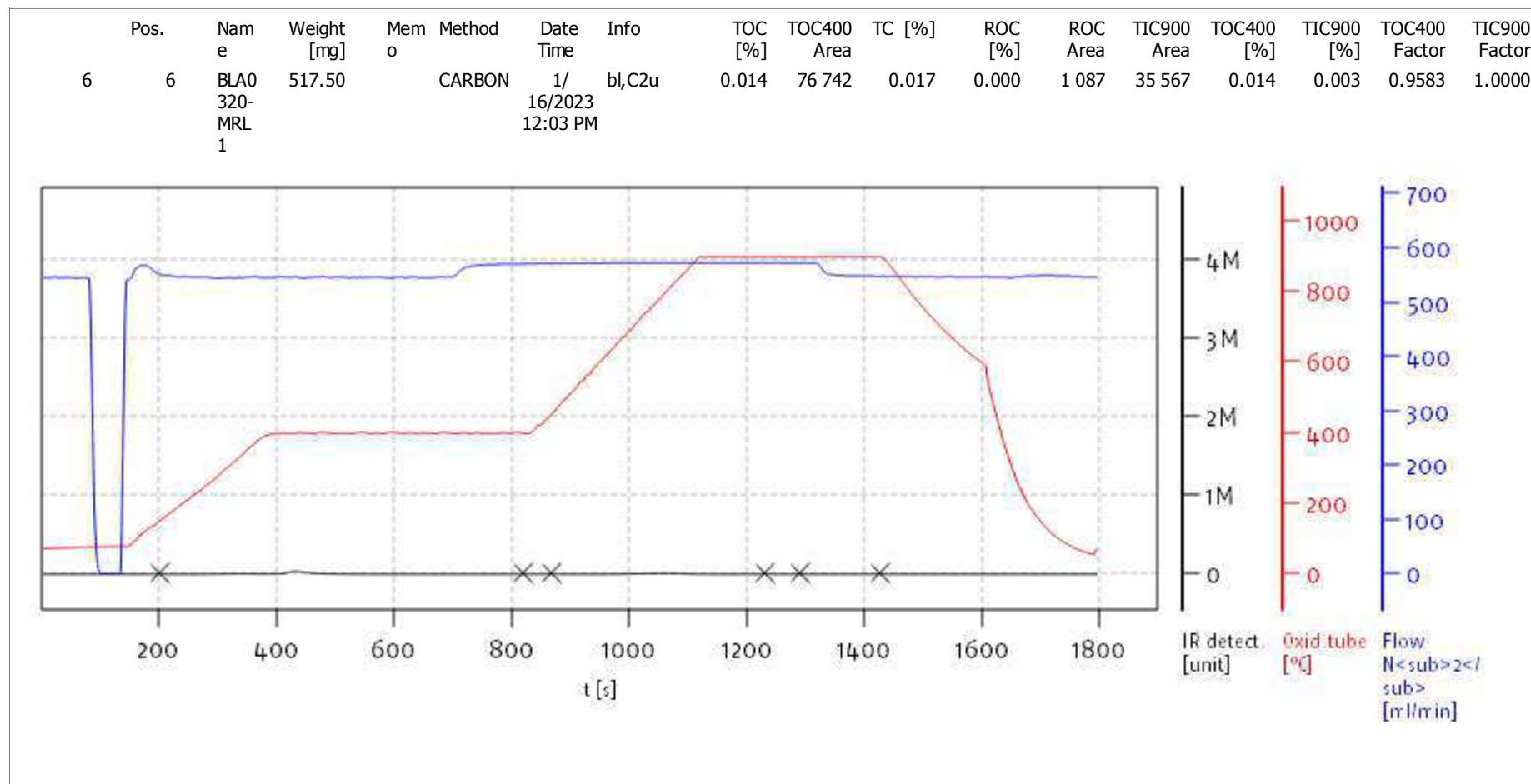
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

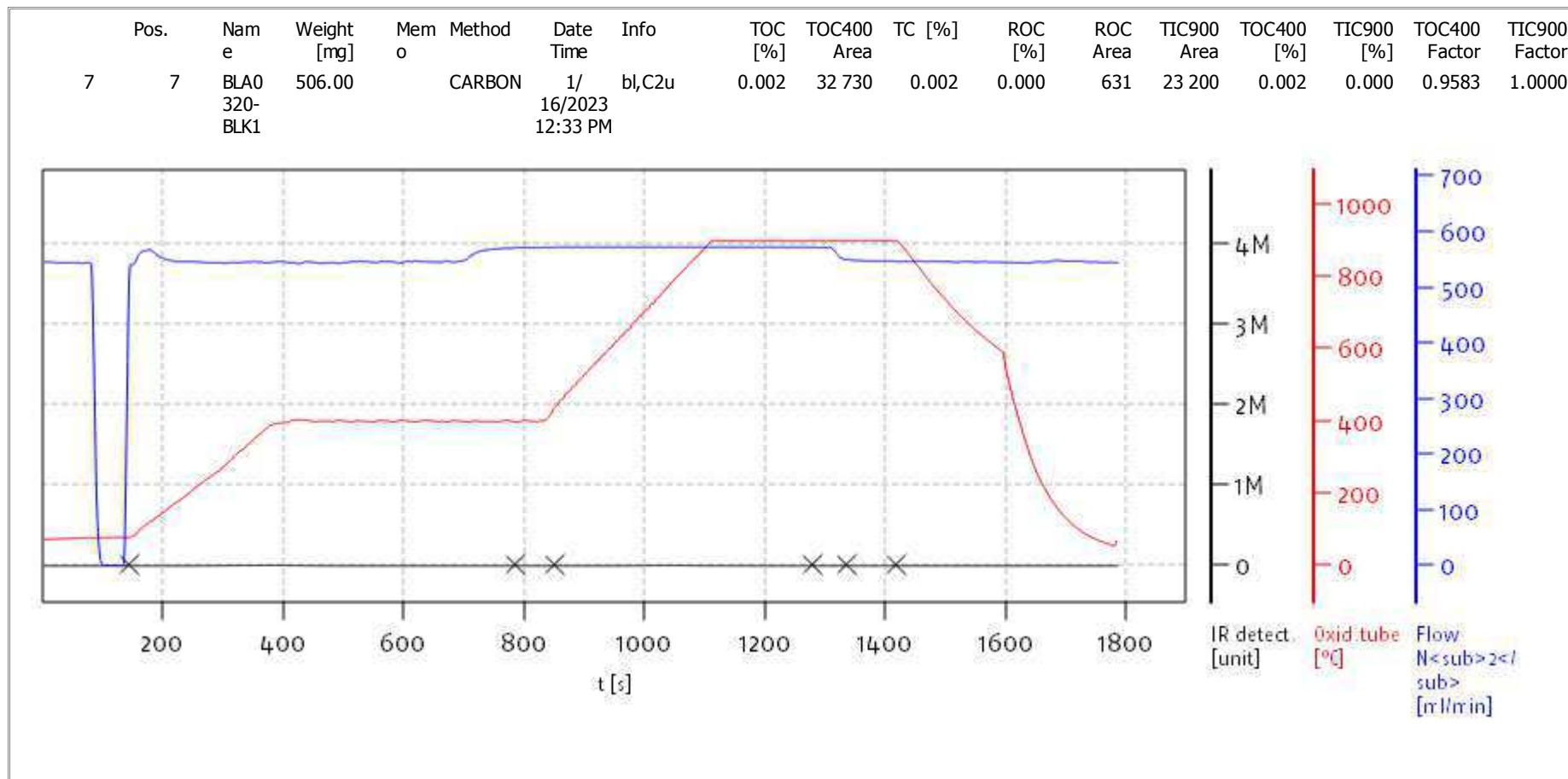
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solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

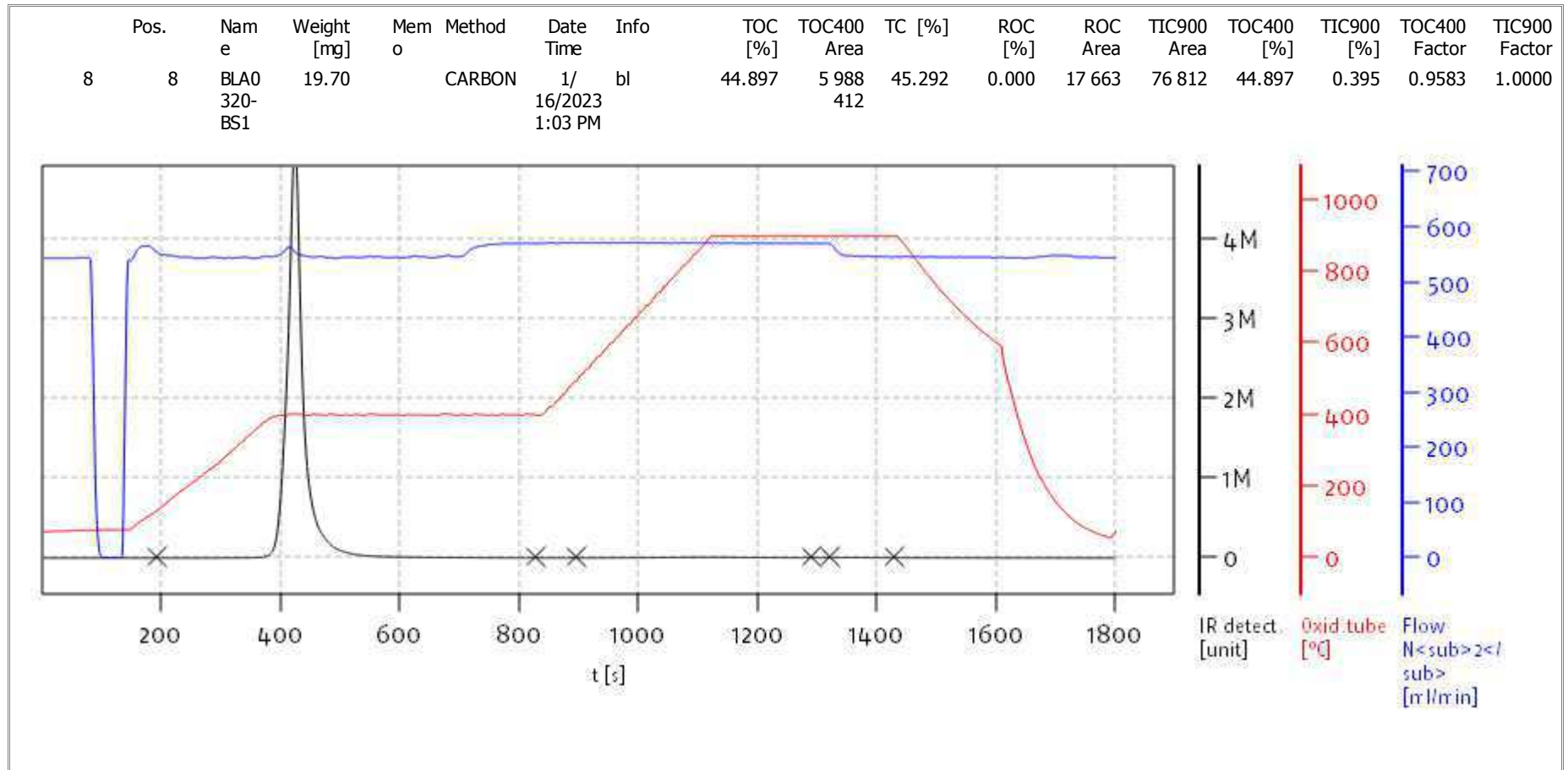
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solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

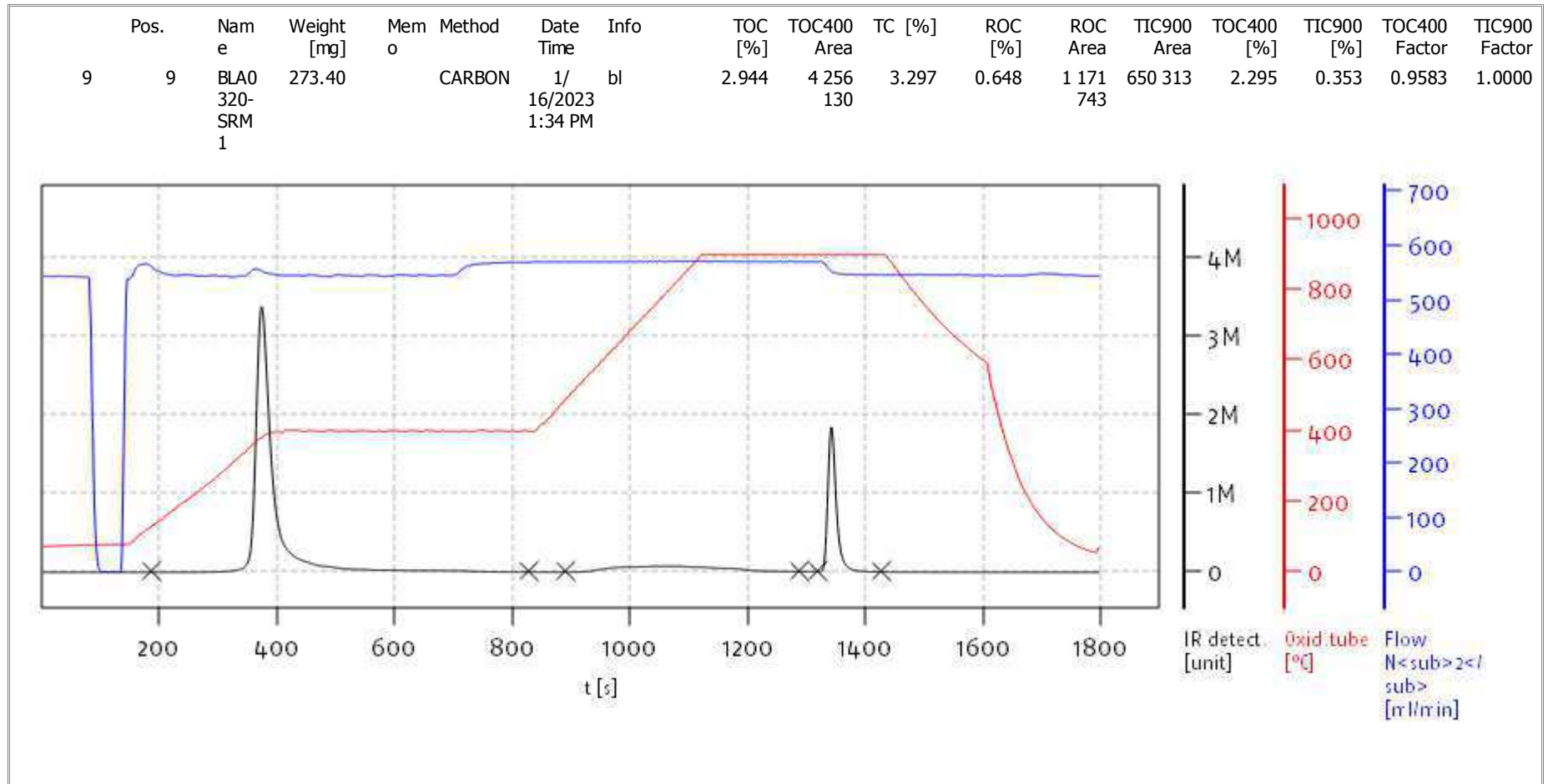
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solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

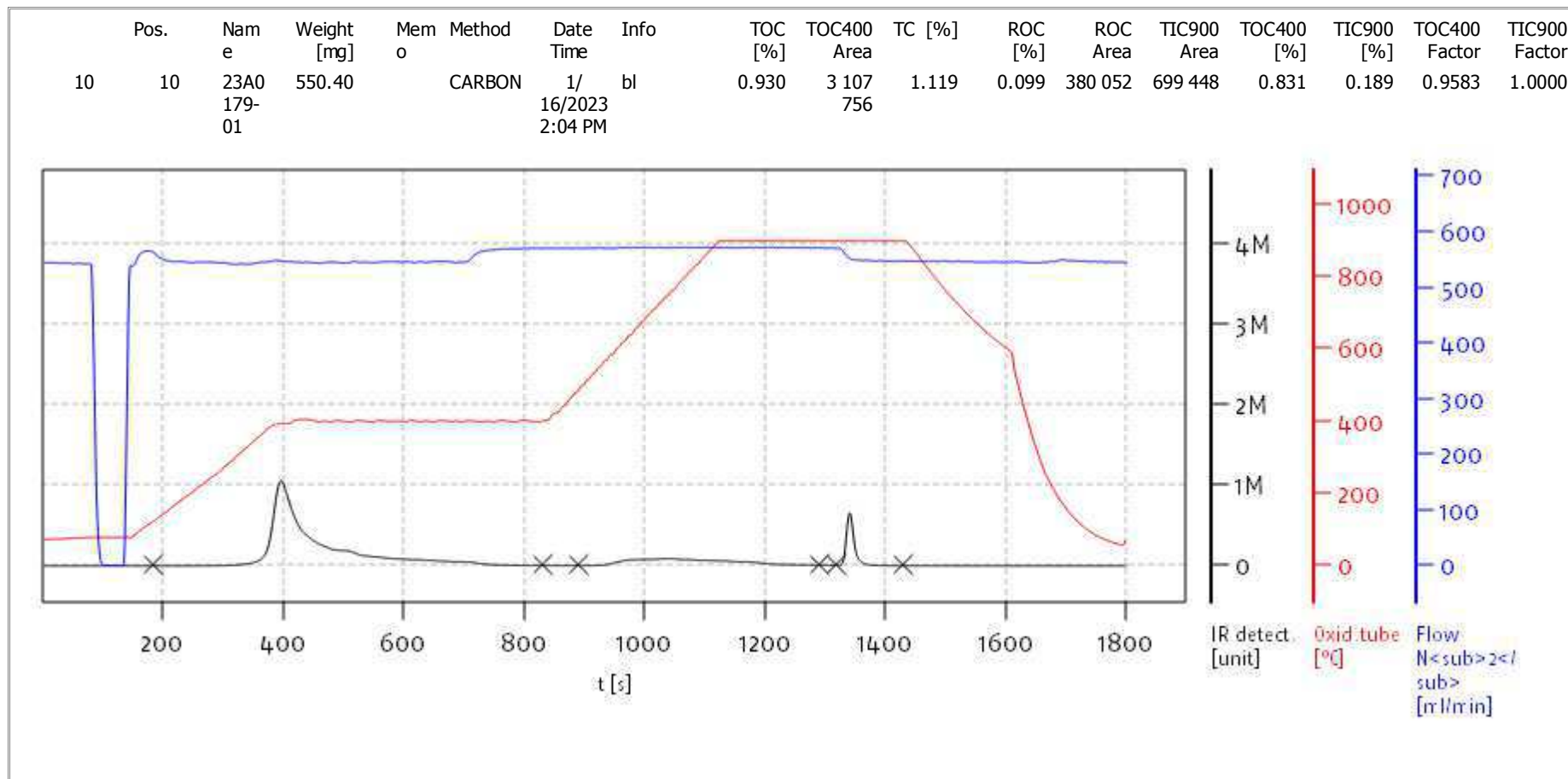
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.18107  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

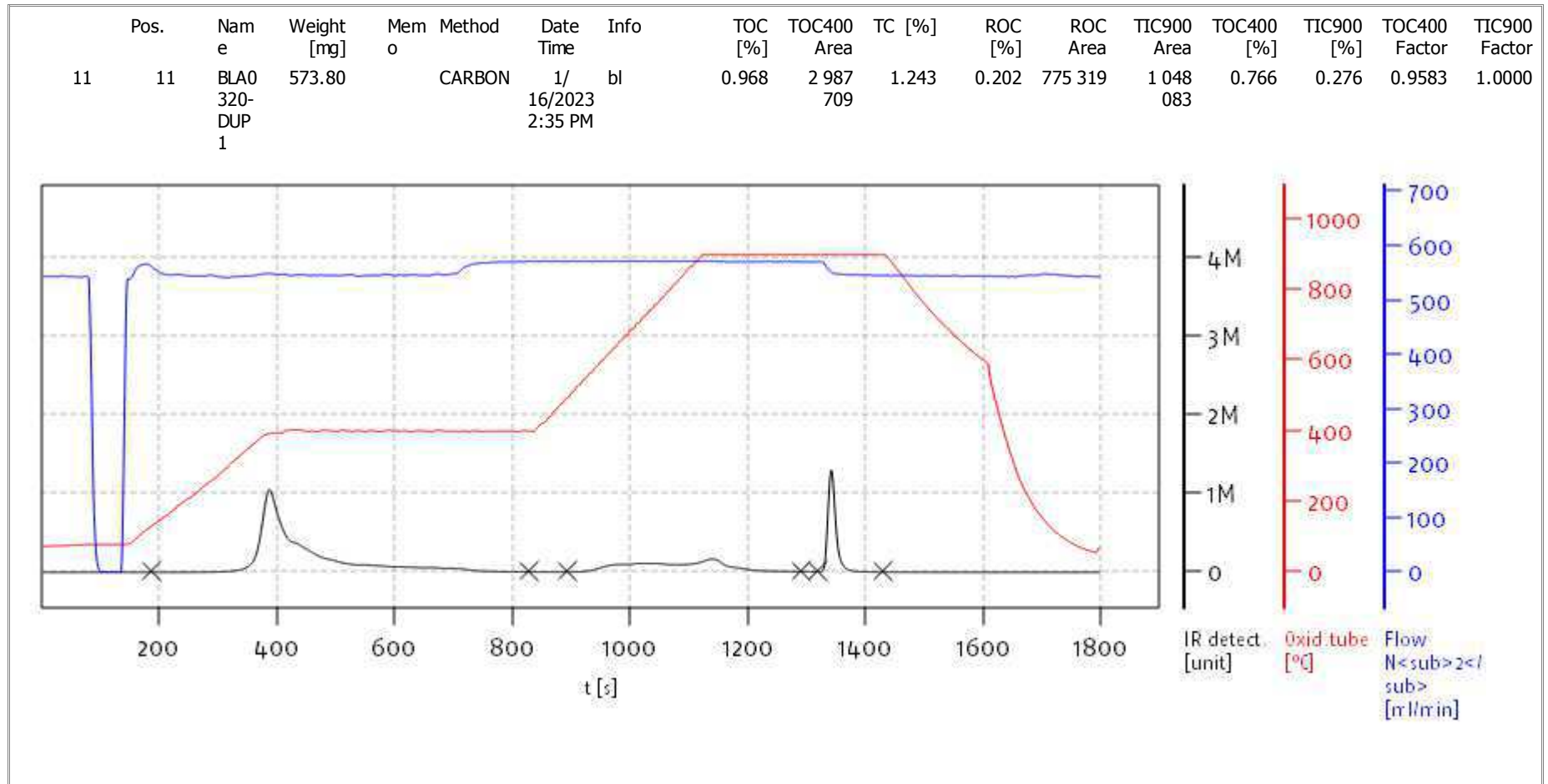
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023



soliTOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

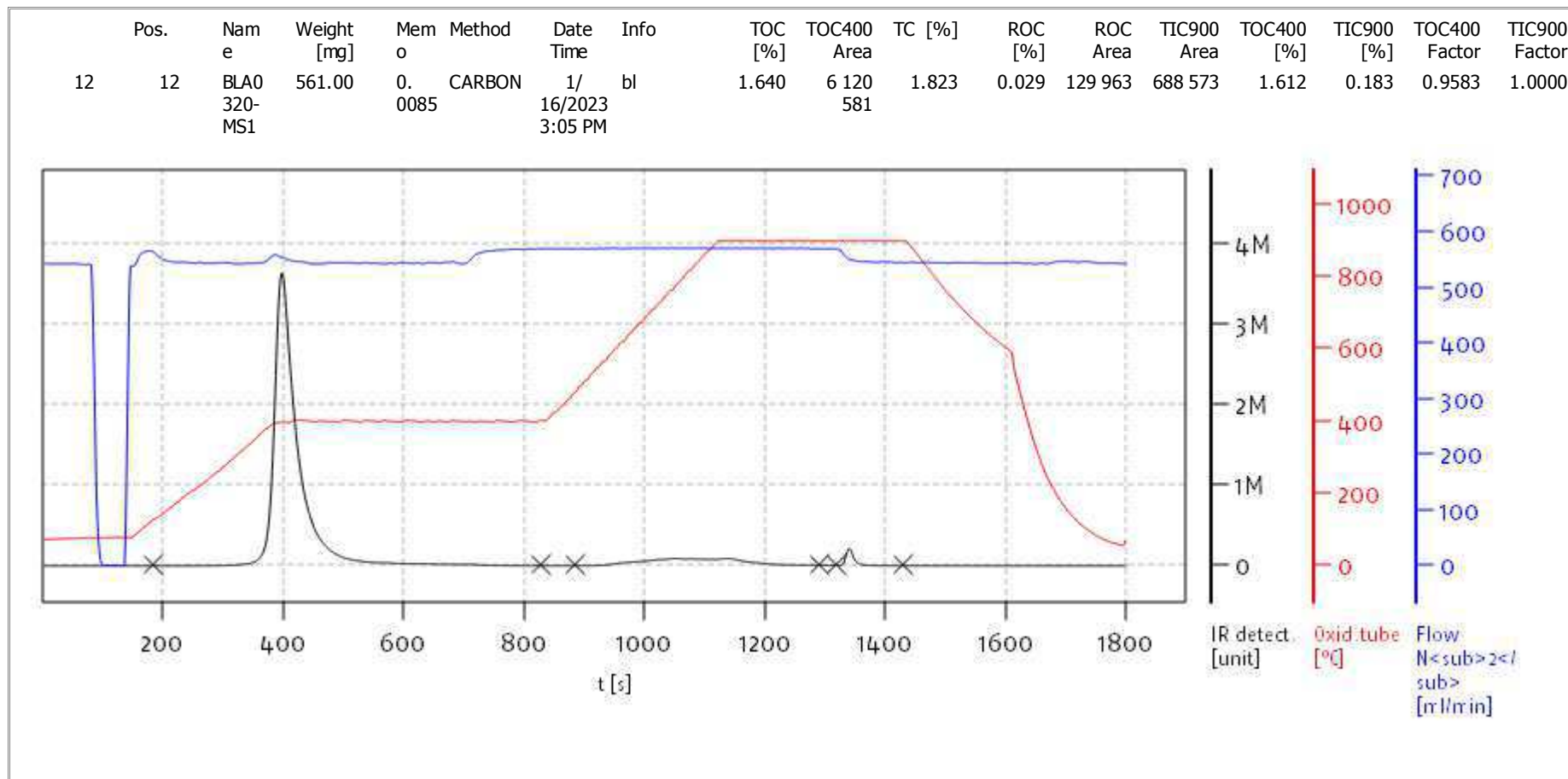
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

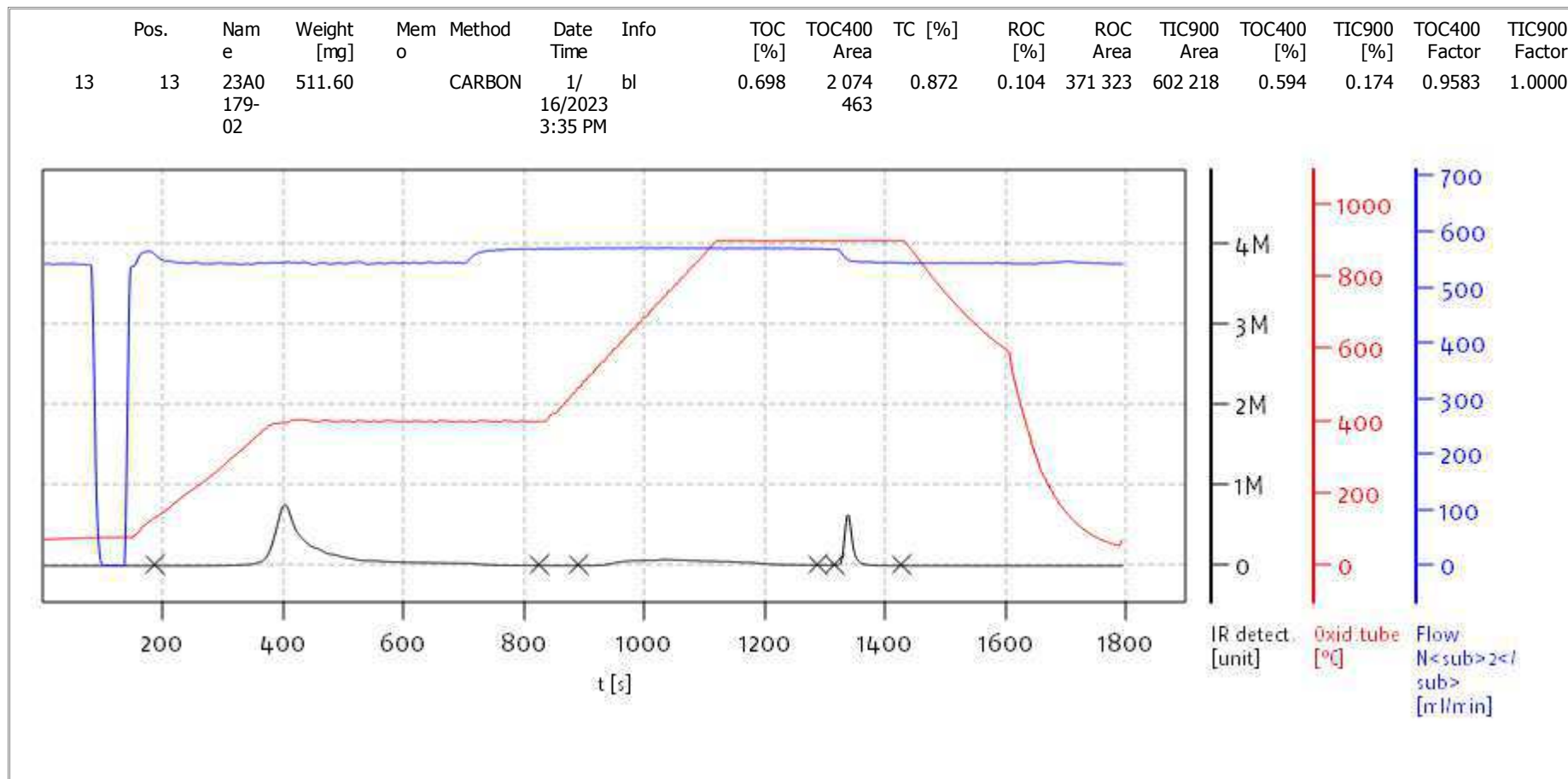
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: soliTOC superuser

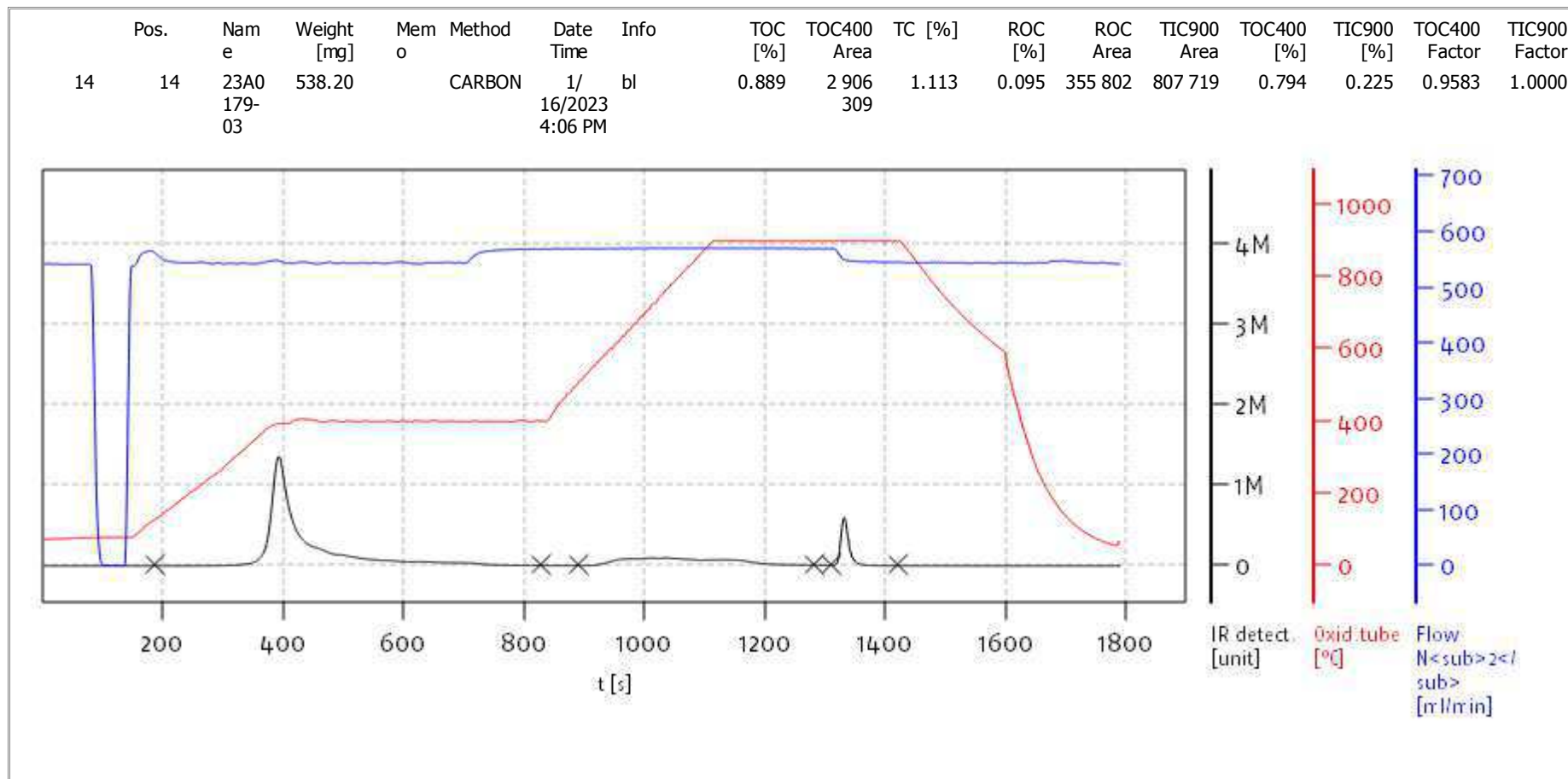
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soliTOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

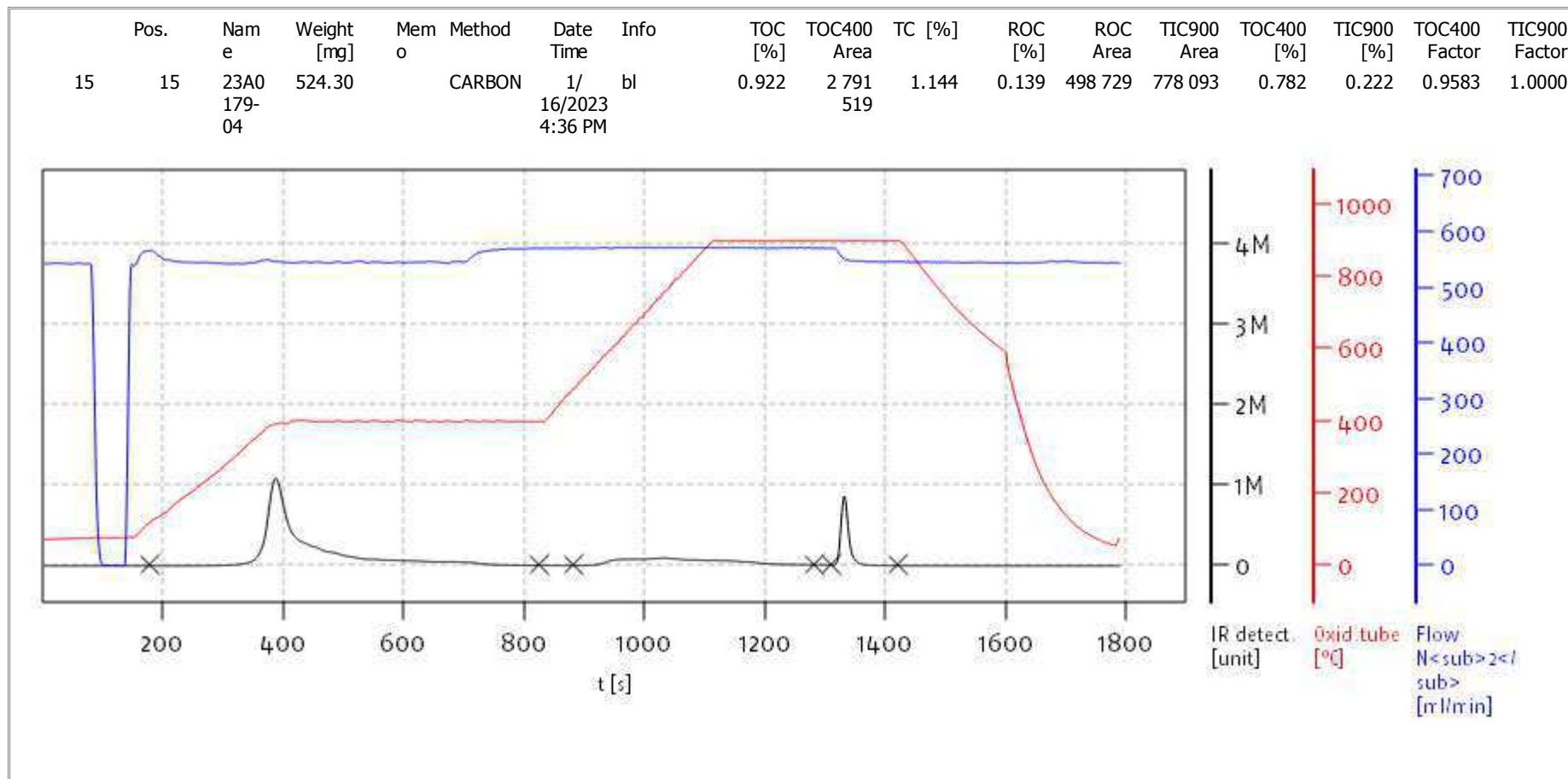
Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

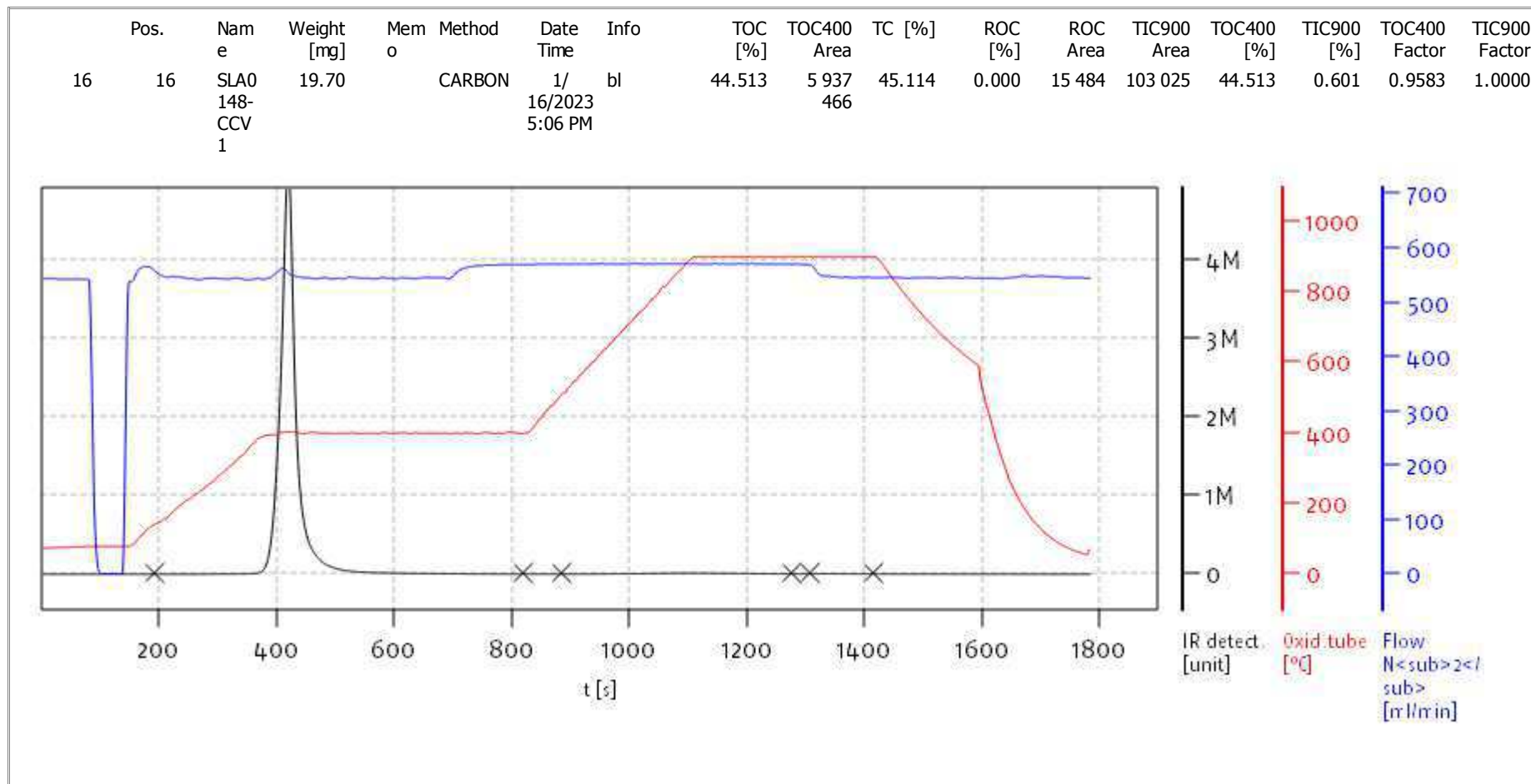
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023



soliTOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

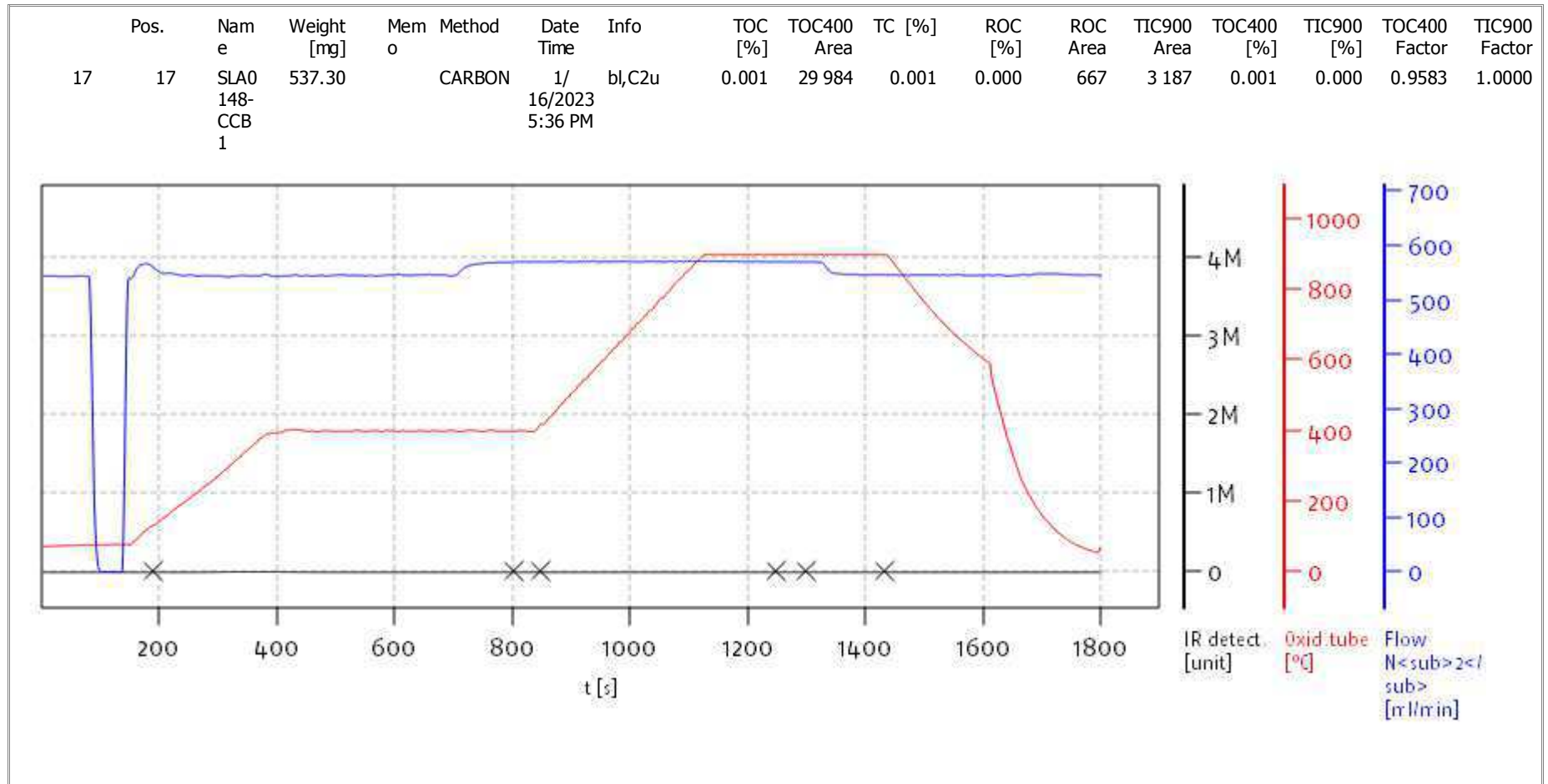
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solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

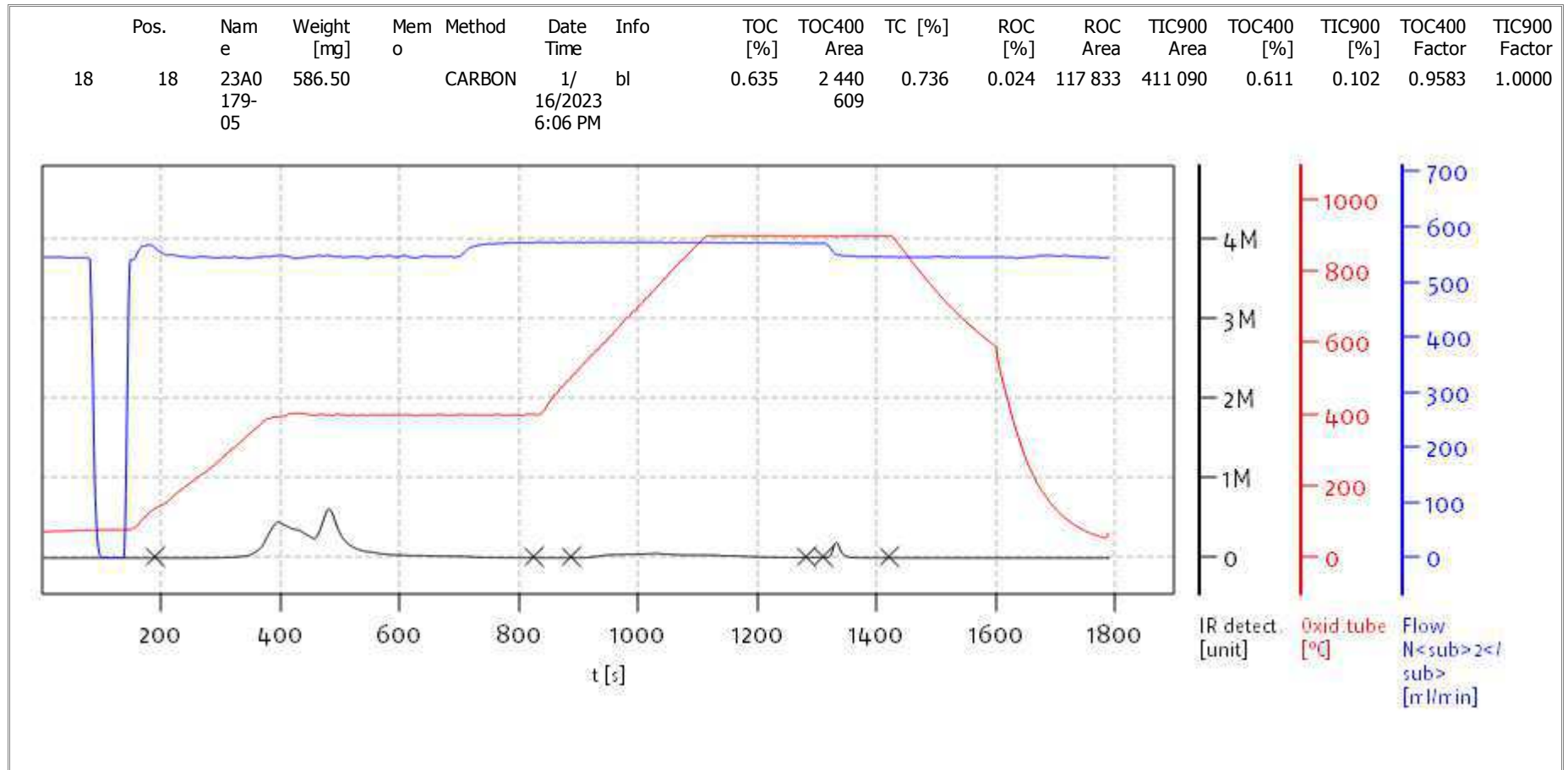
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

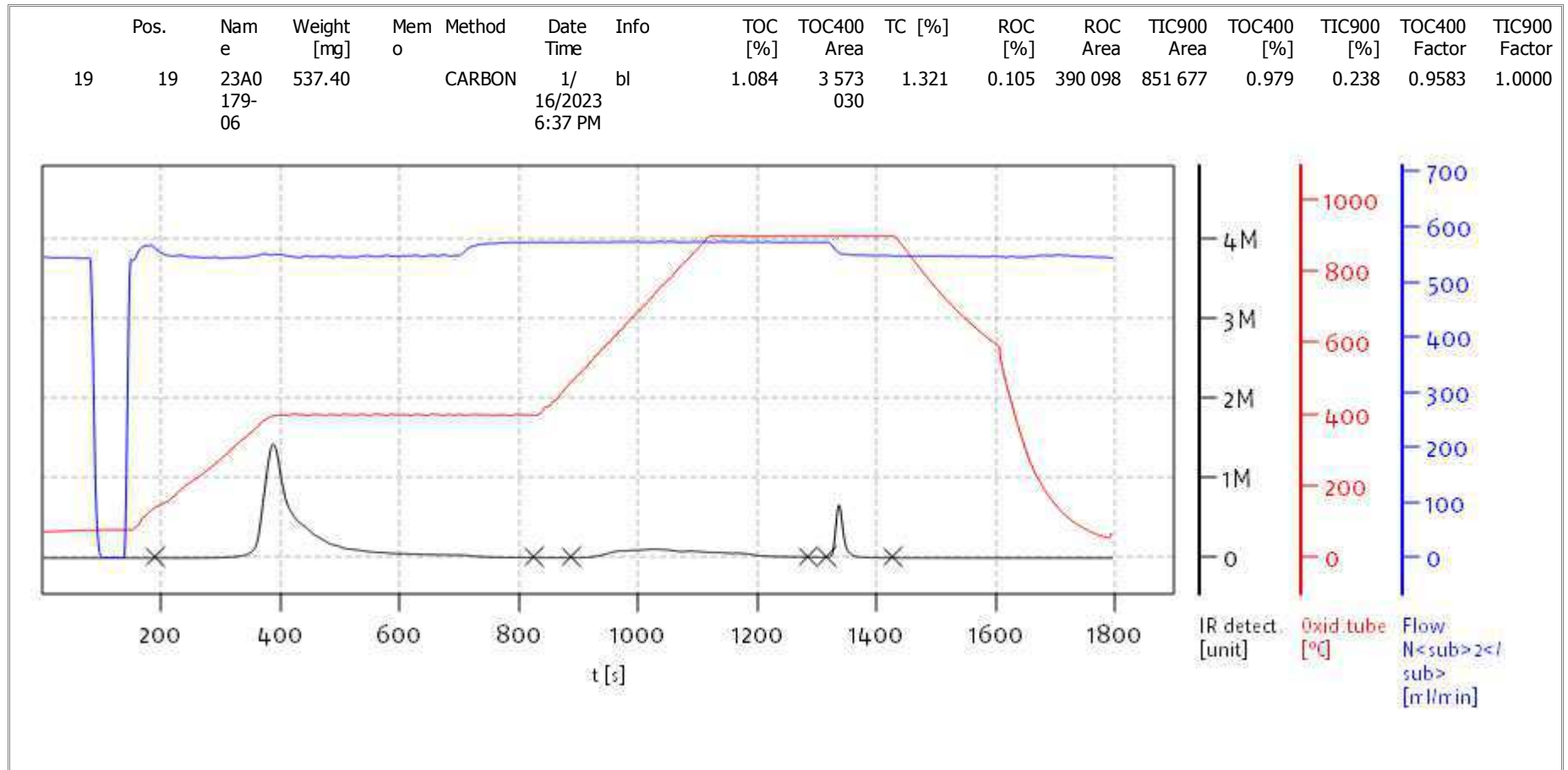
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

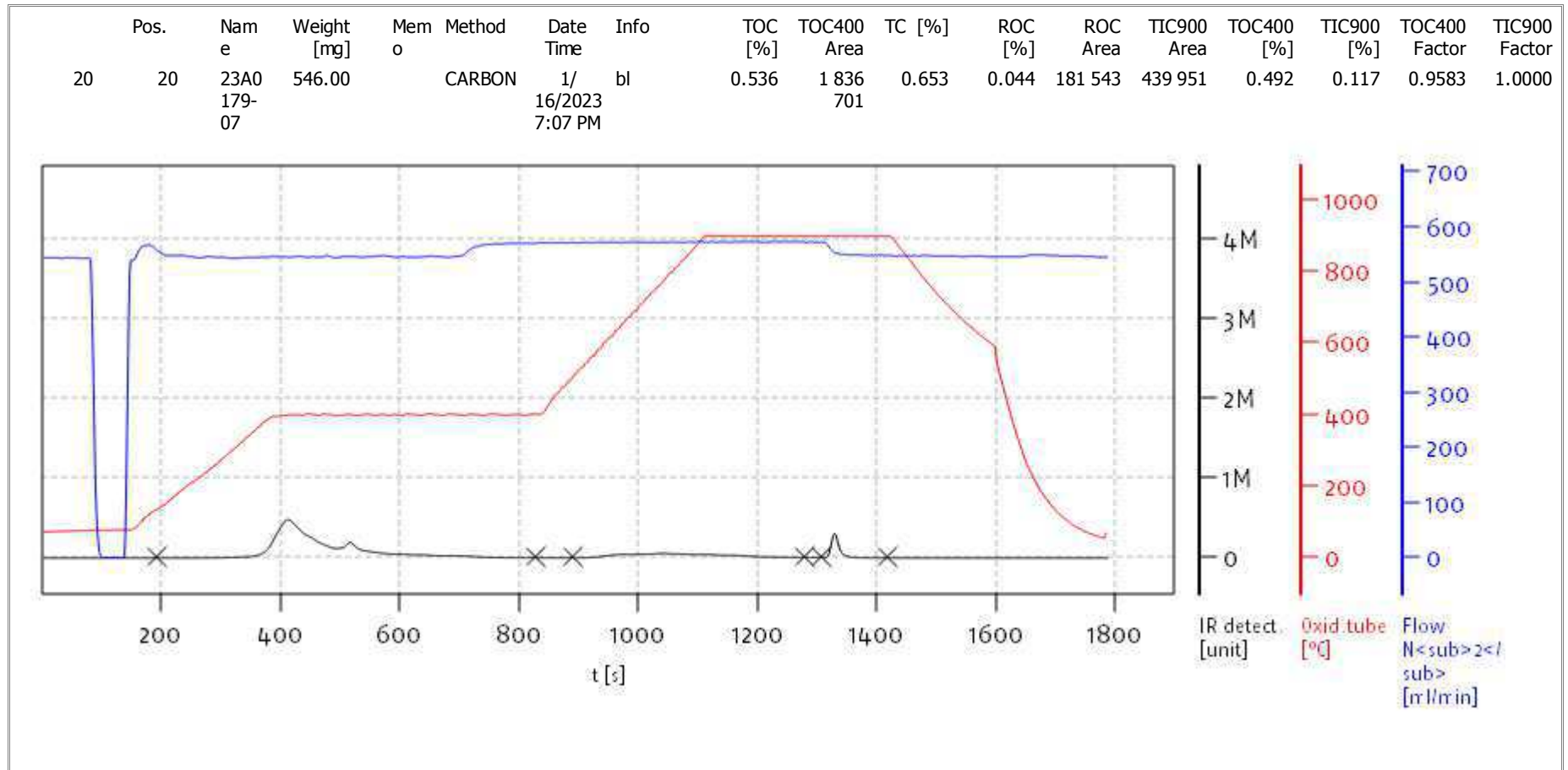
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

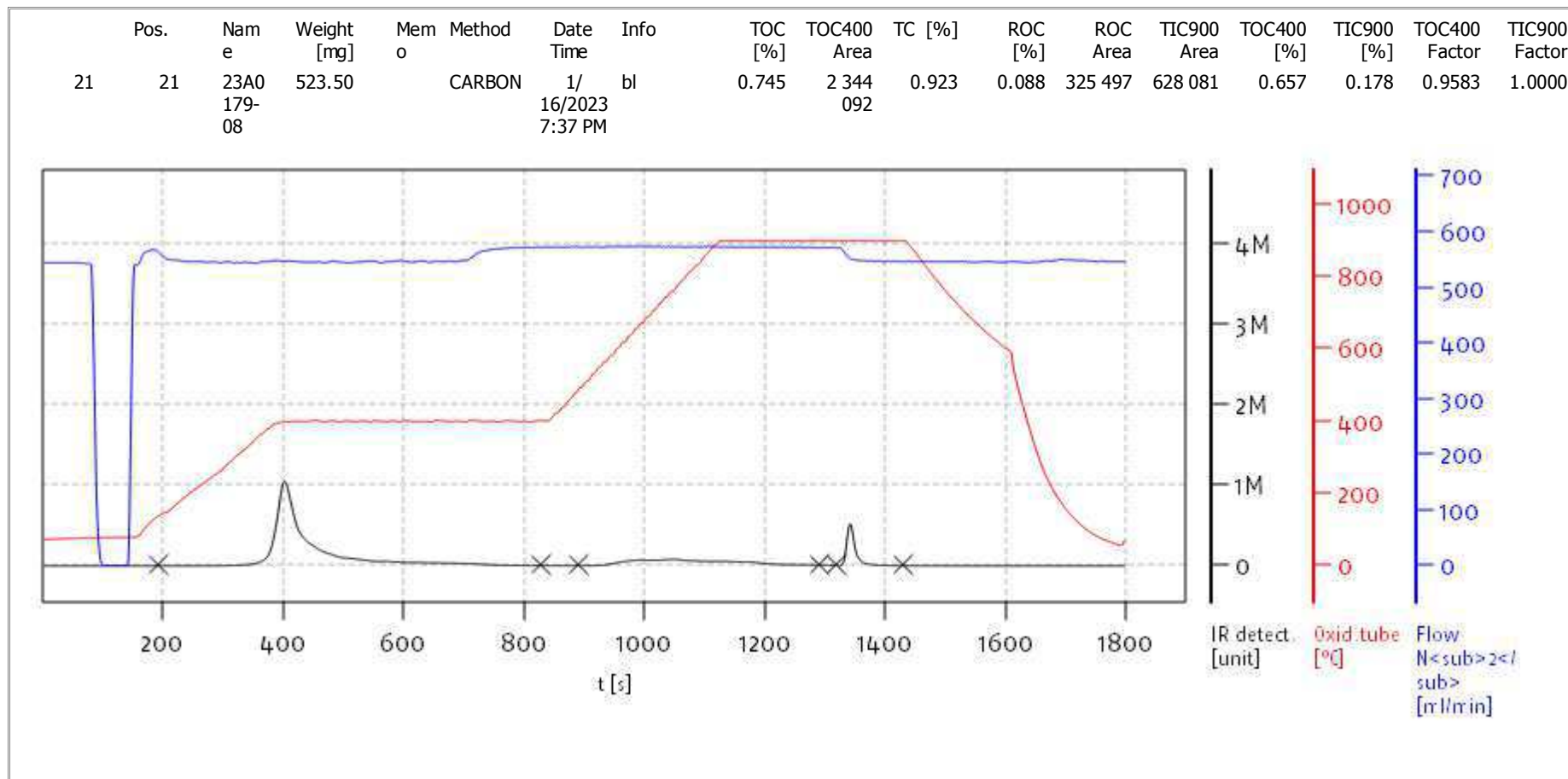
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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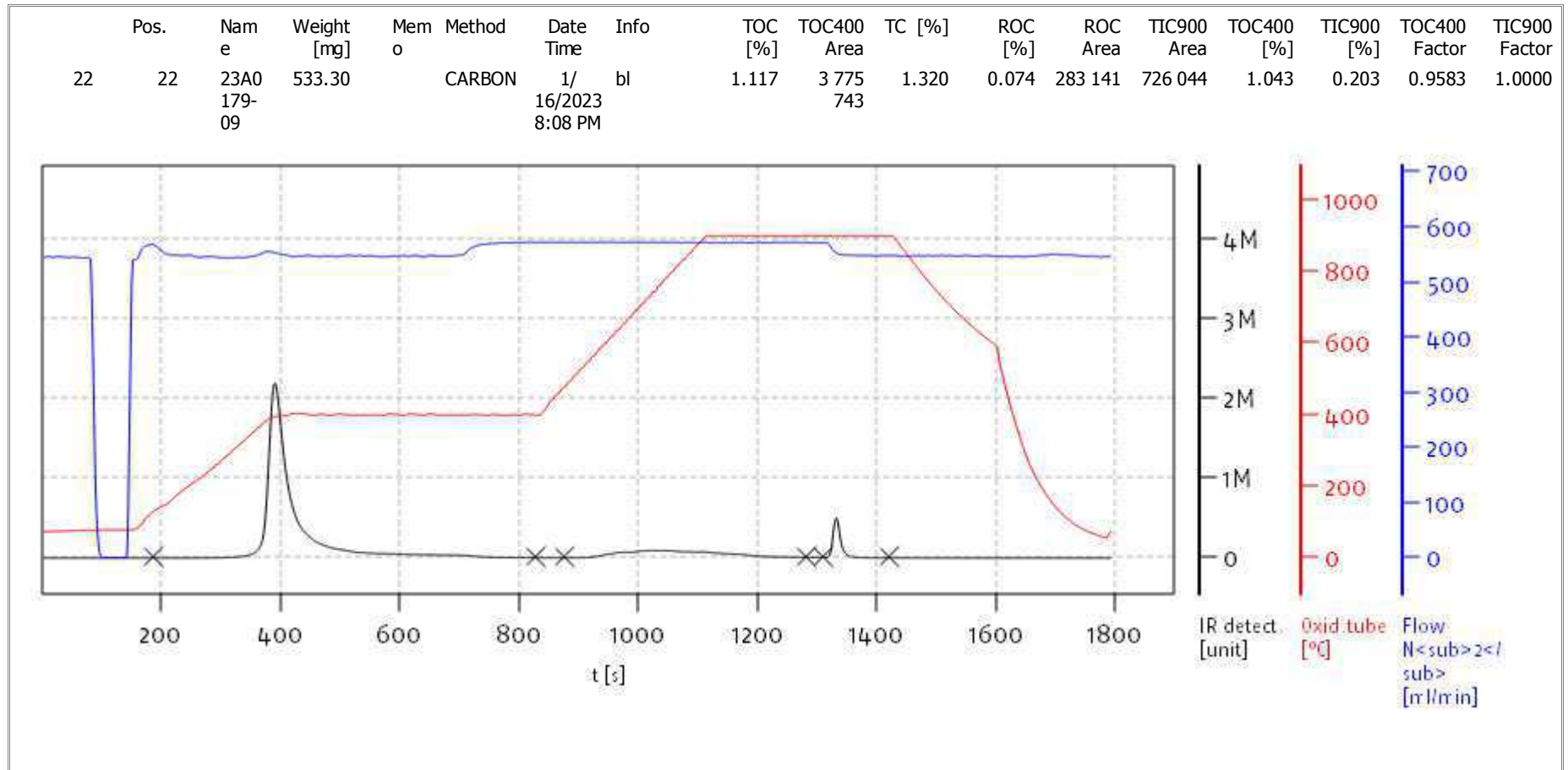
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Soli TOC Cube, Carbon  
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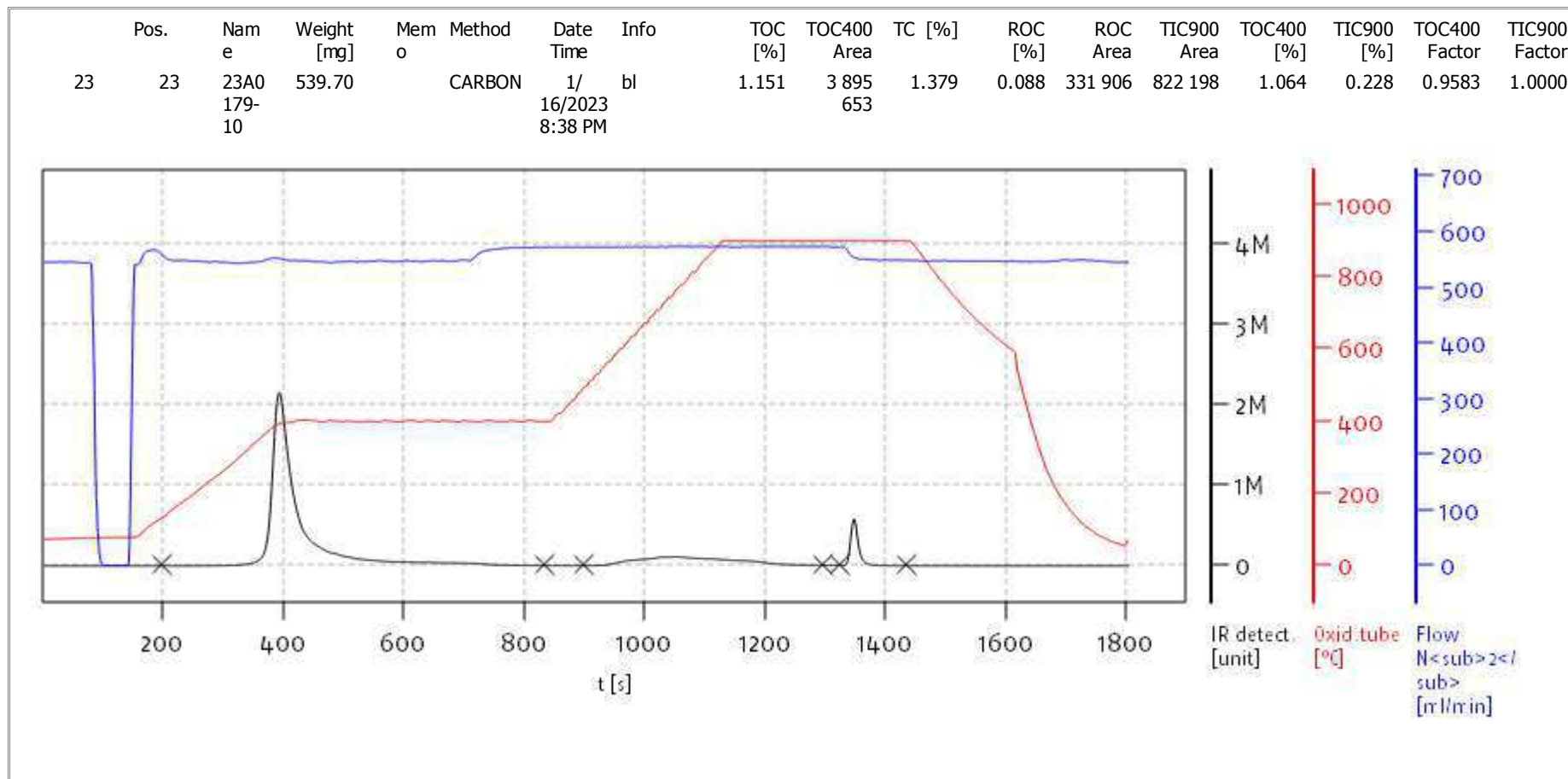
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Soli TOC Cube, Carbon  
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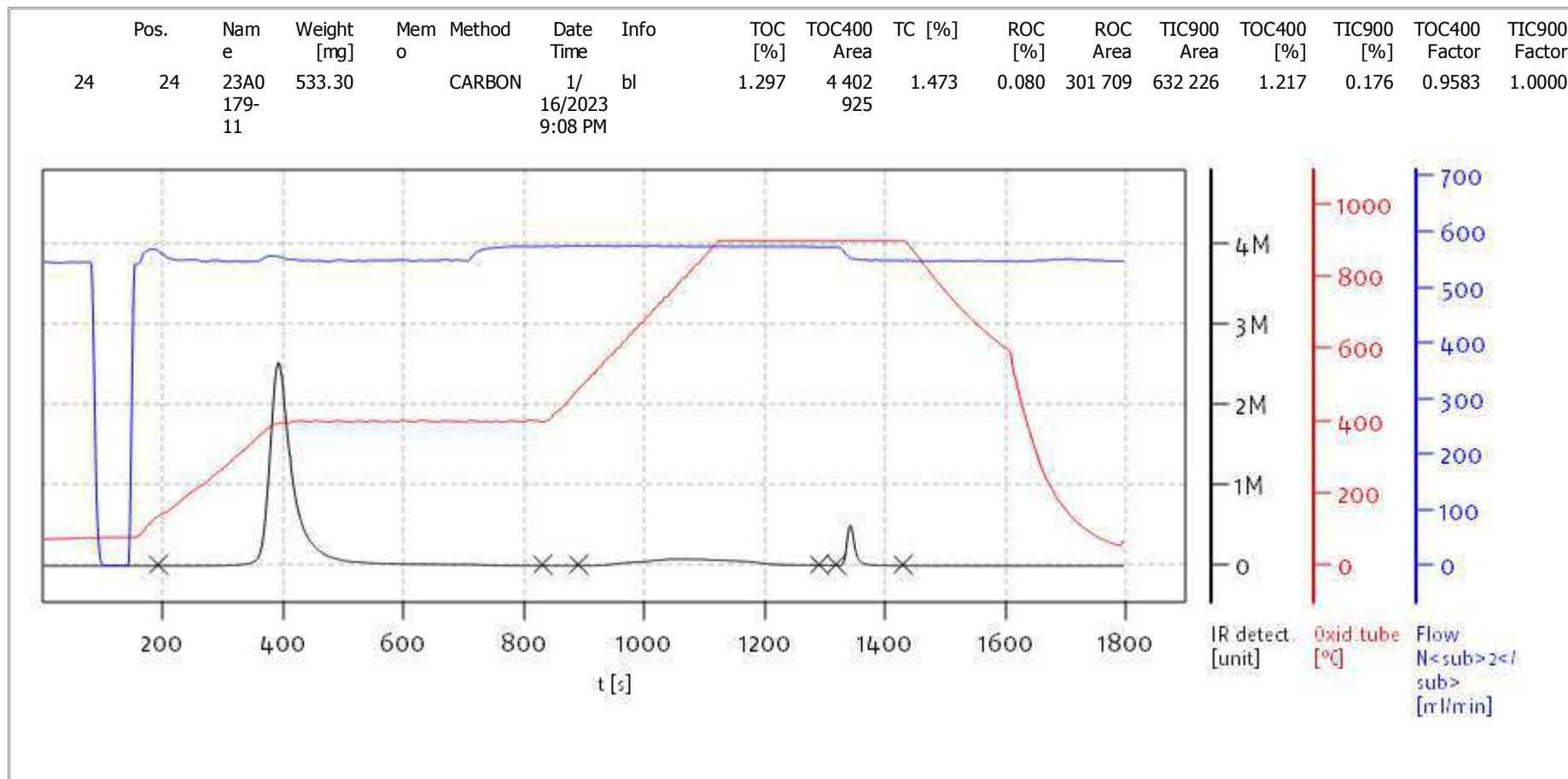
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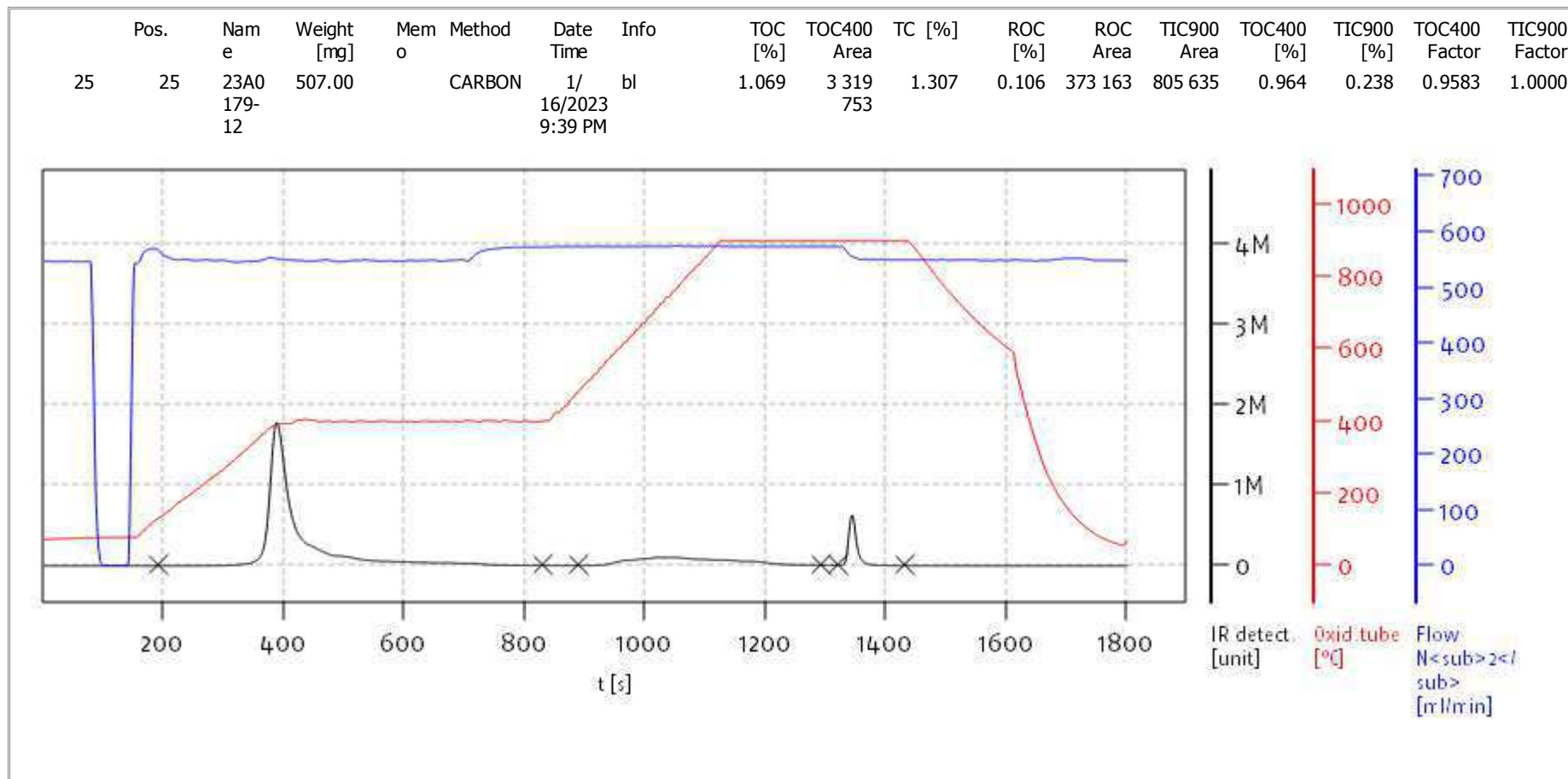
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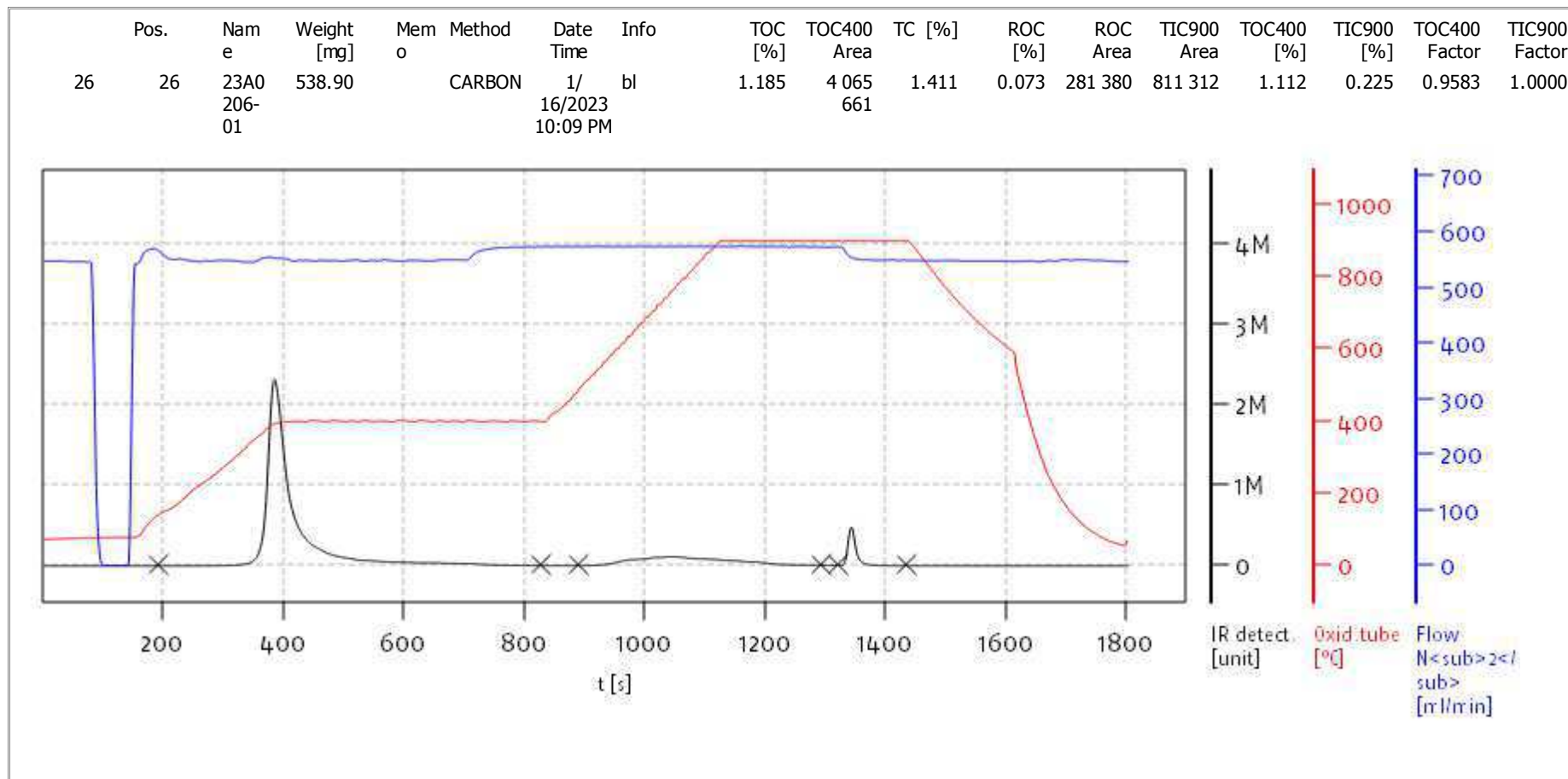
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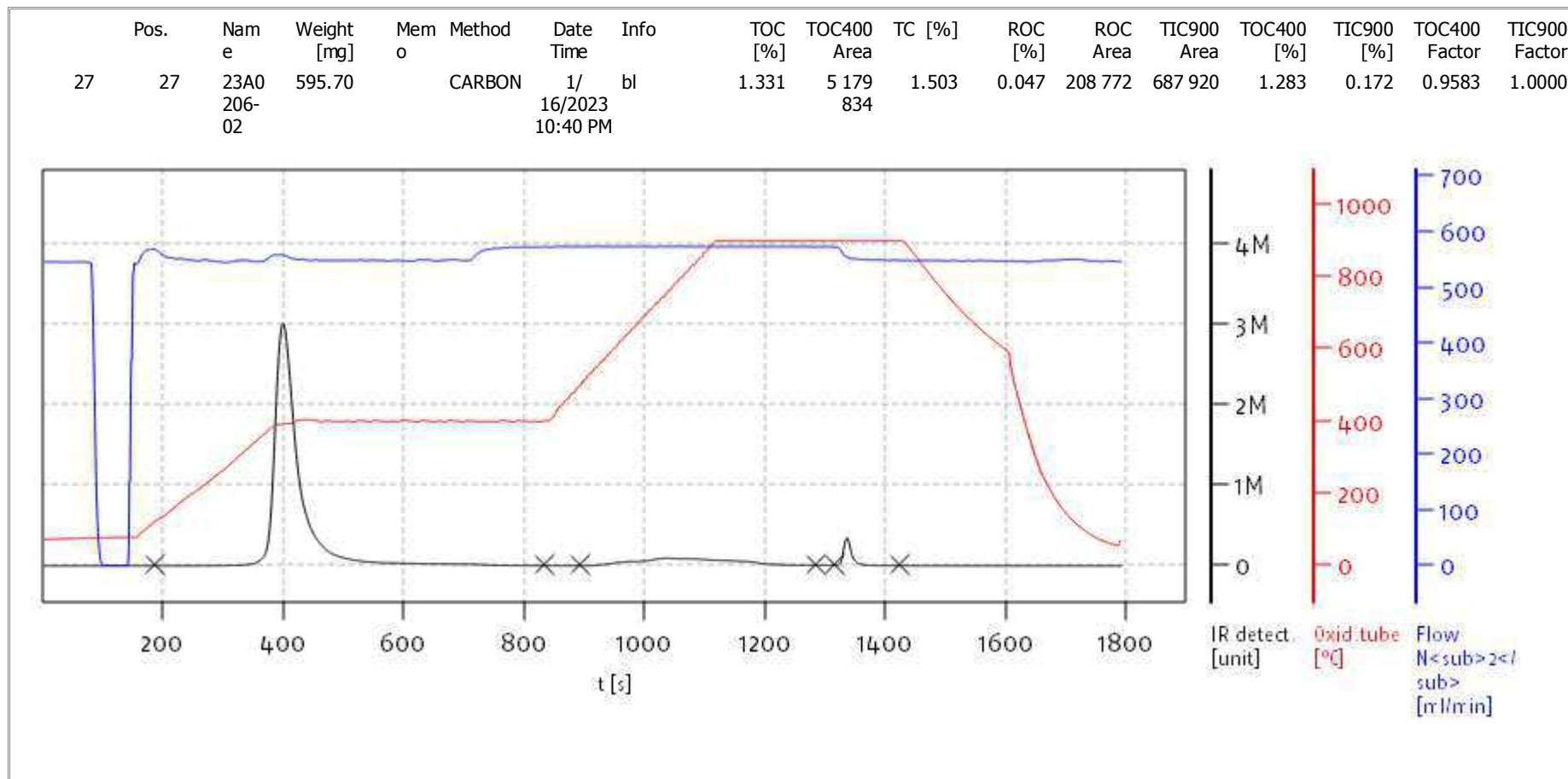
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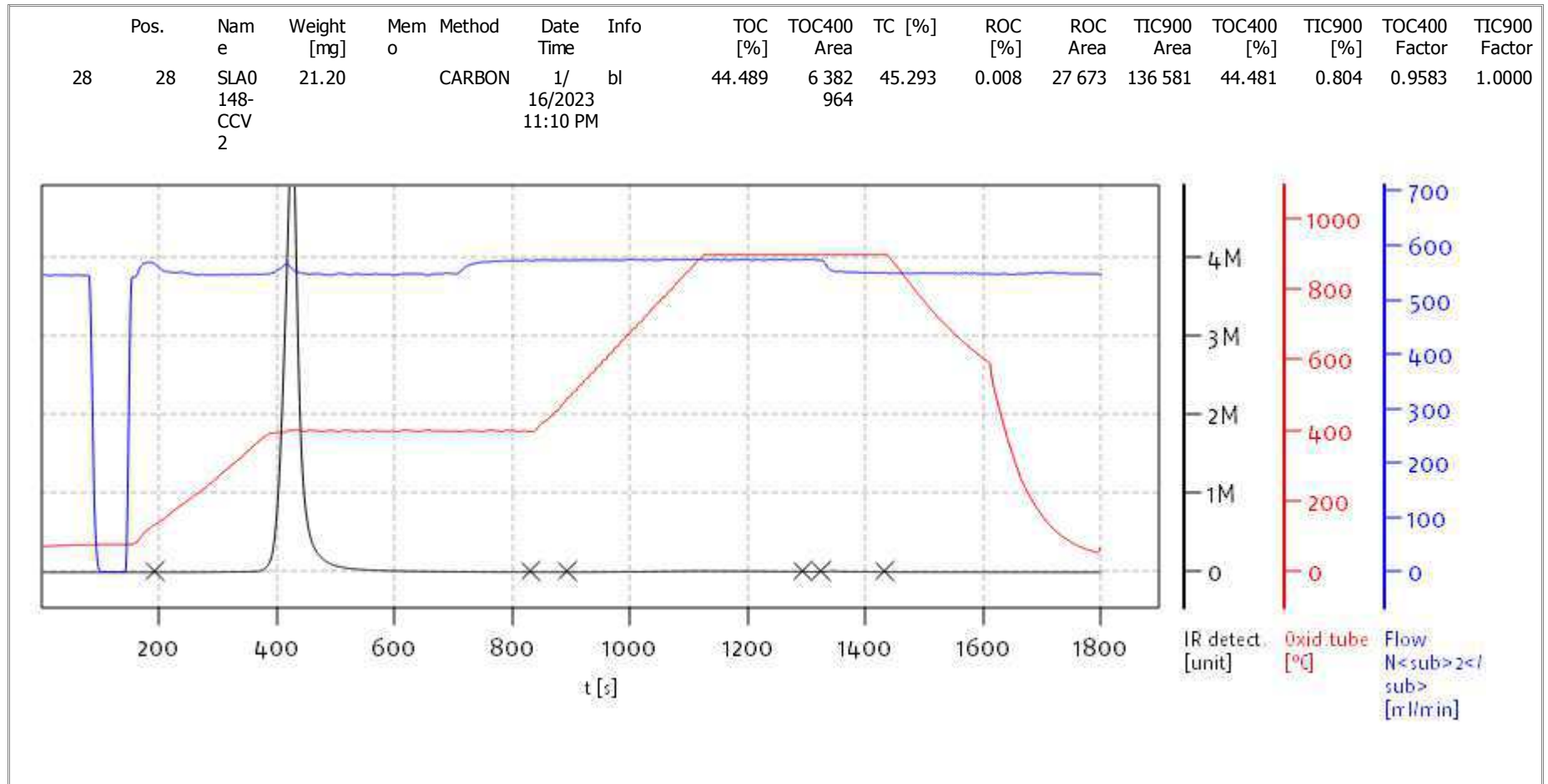
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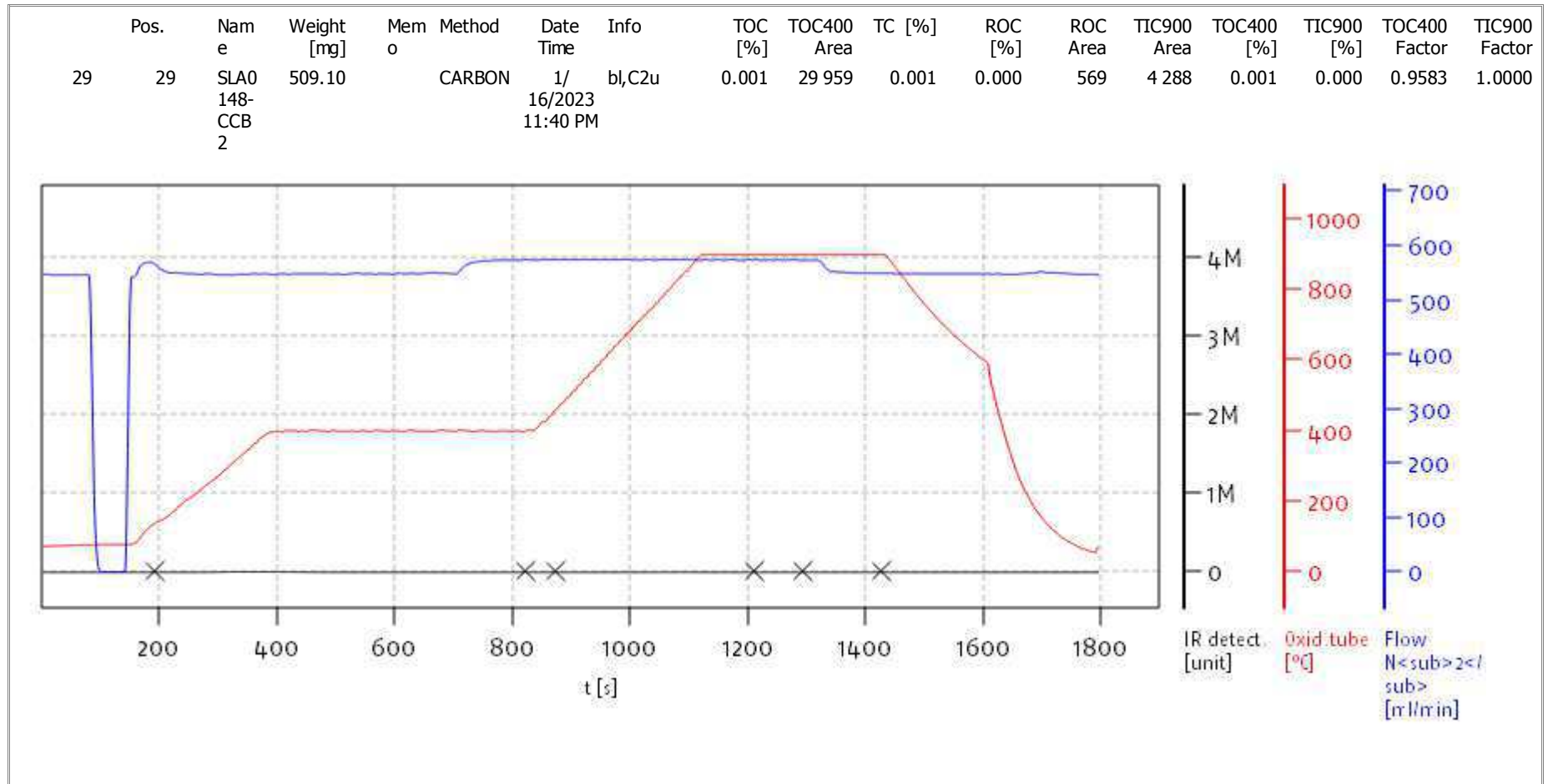
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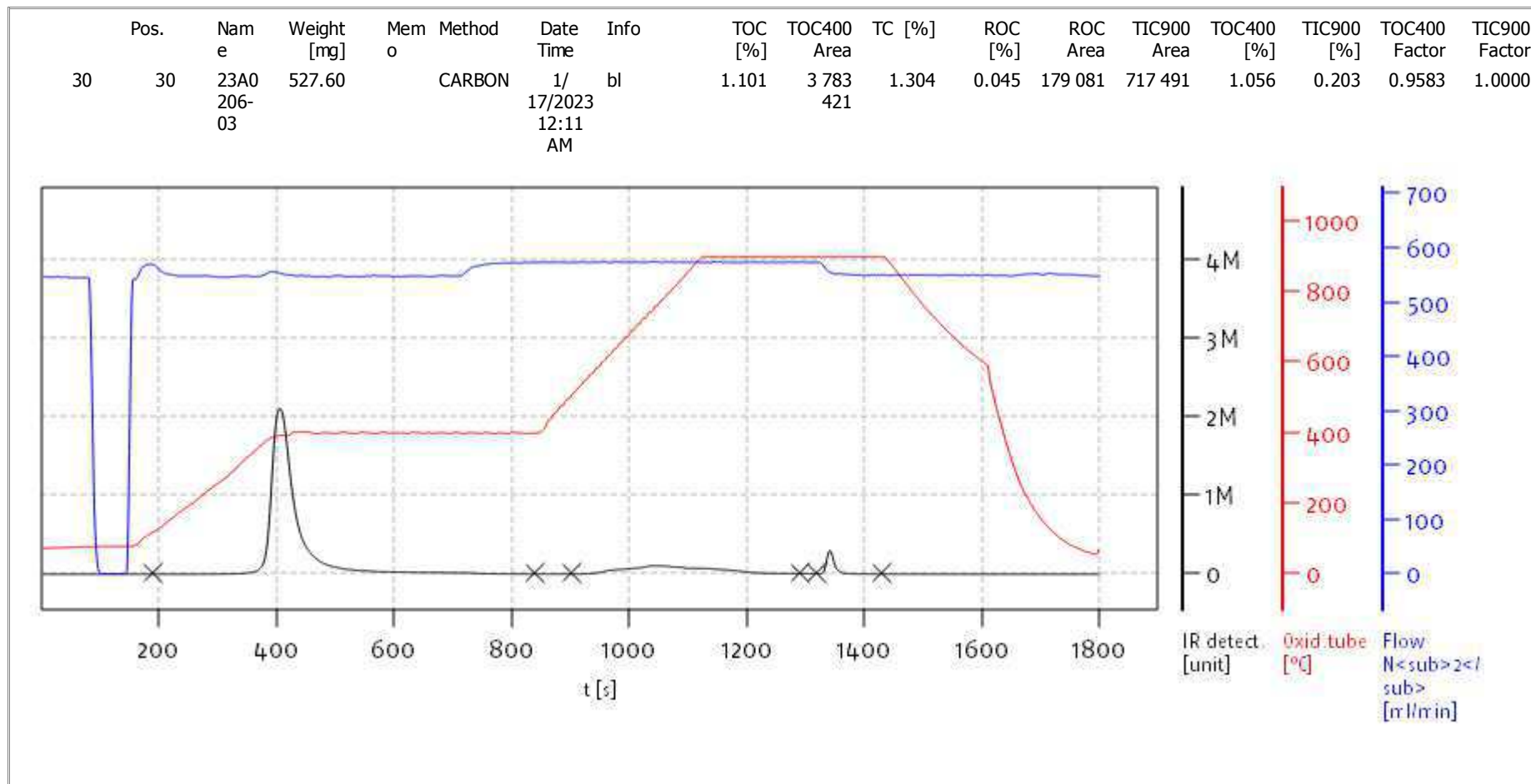
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Soli TOC Cube, Carbon  
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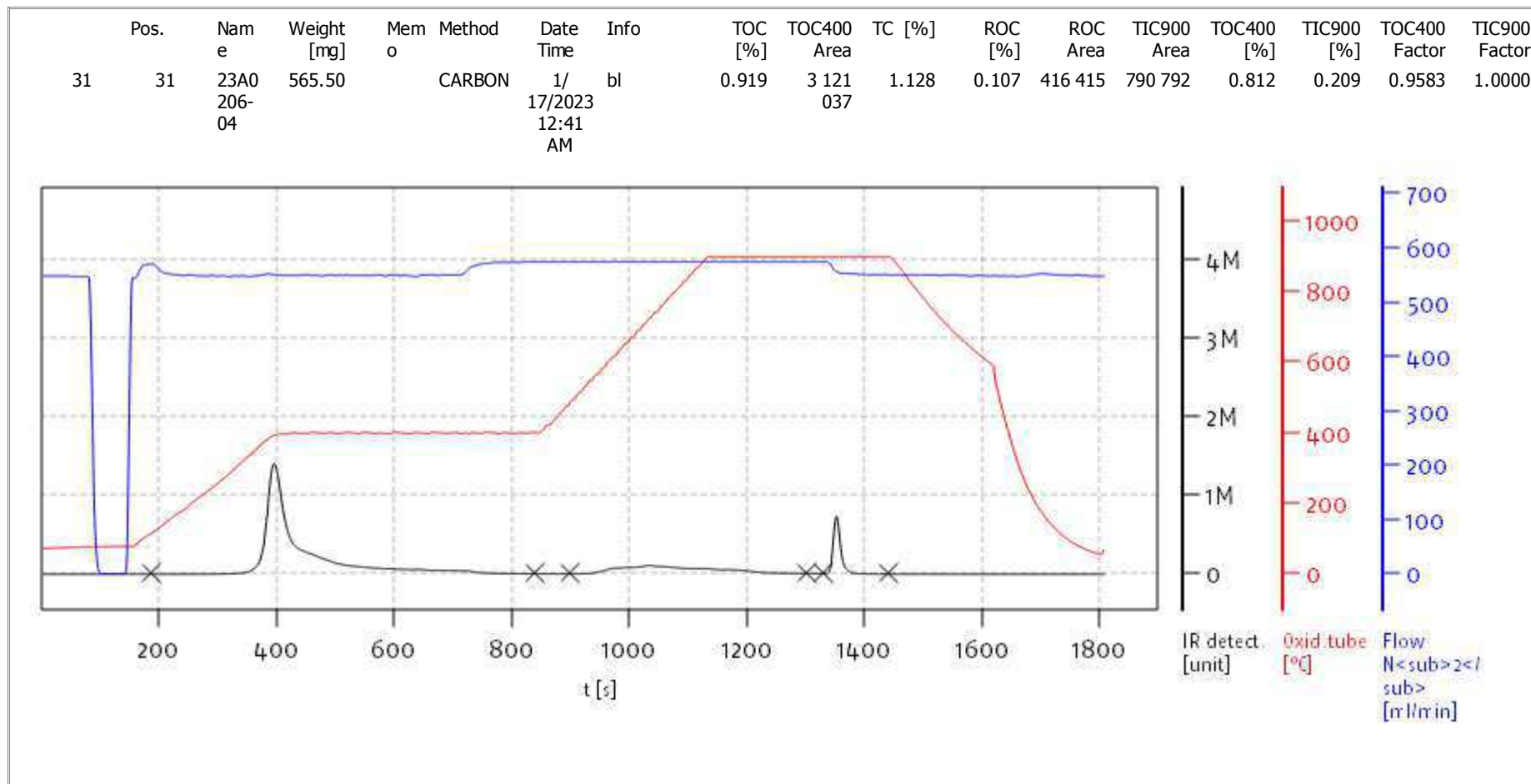
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Soli TOC Cube, Carbon  
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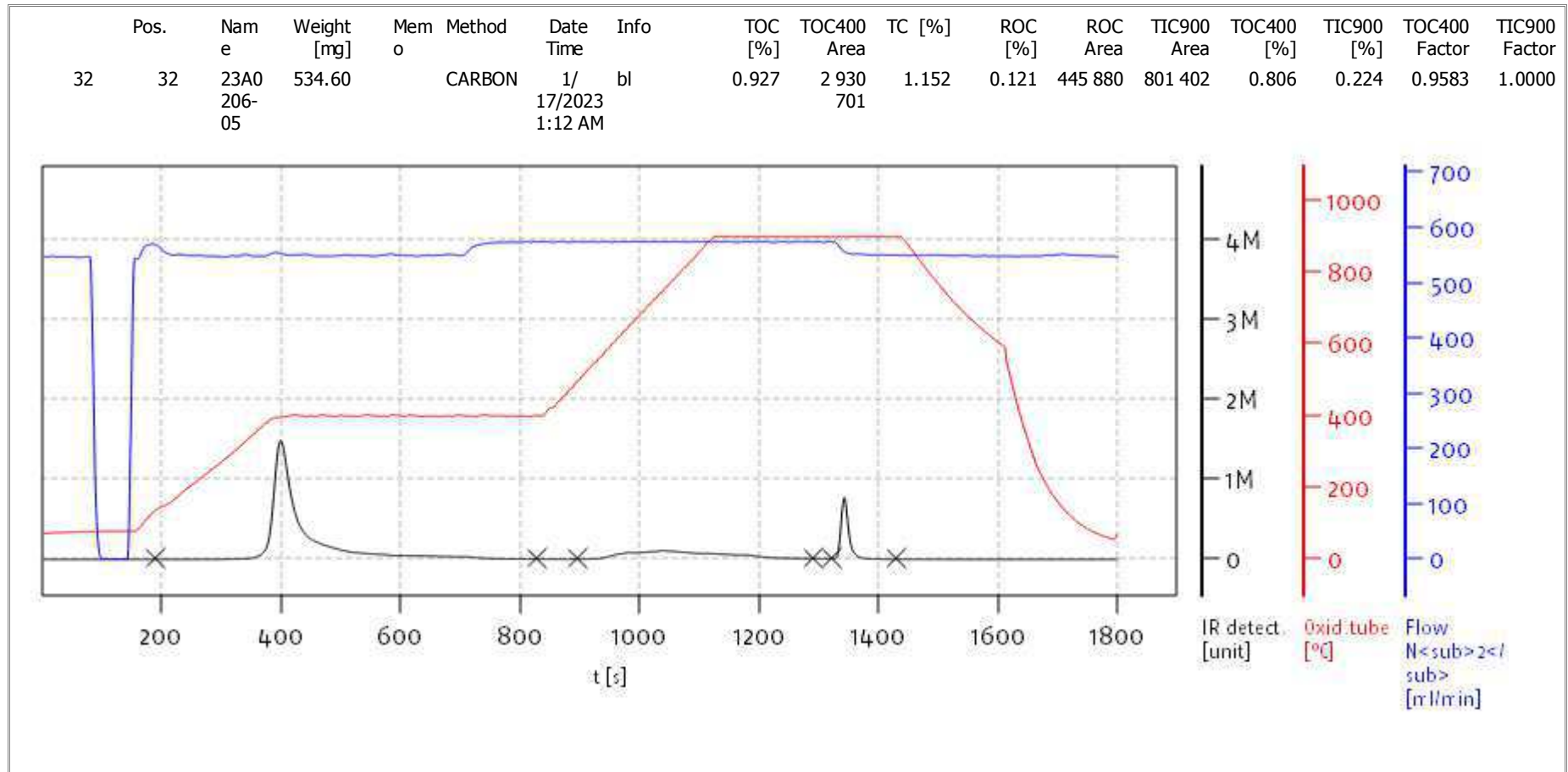
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**Soli TOC Cube, Carbon**  
**Balance: BAL3**  
**Analyst: DOE**



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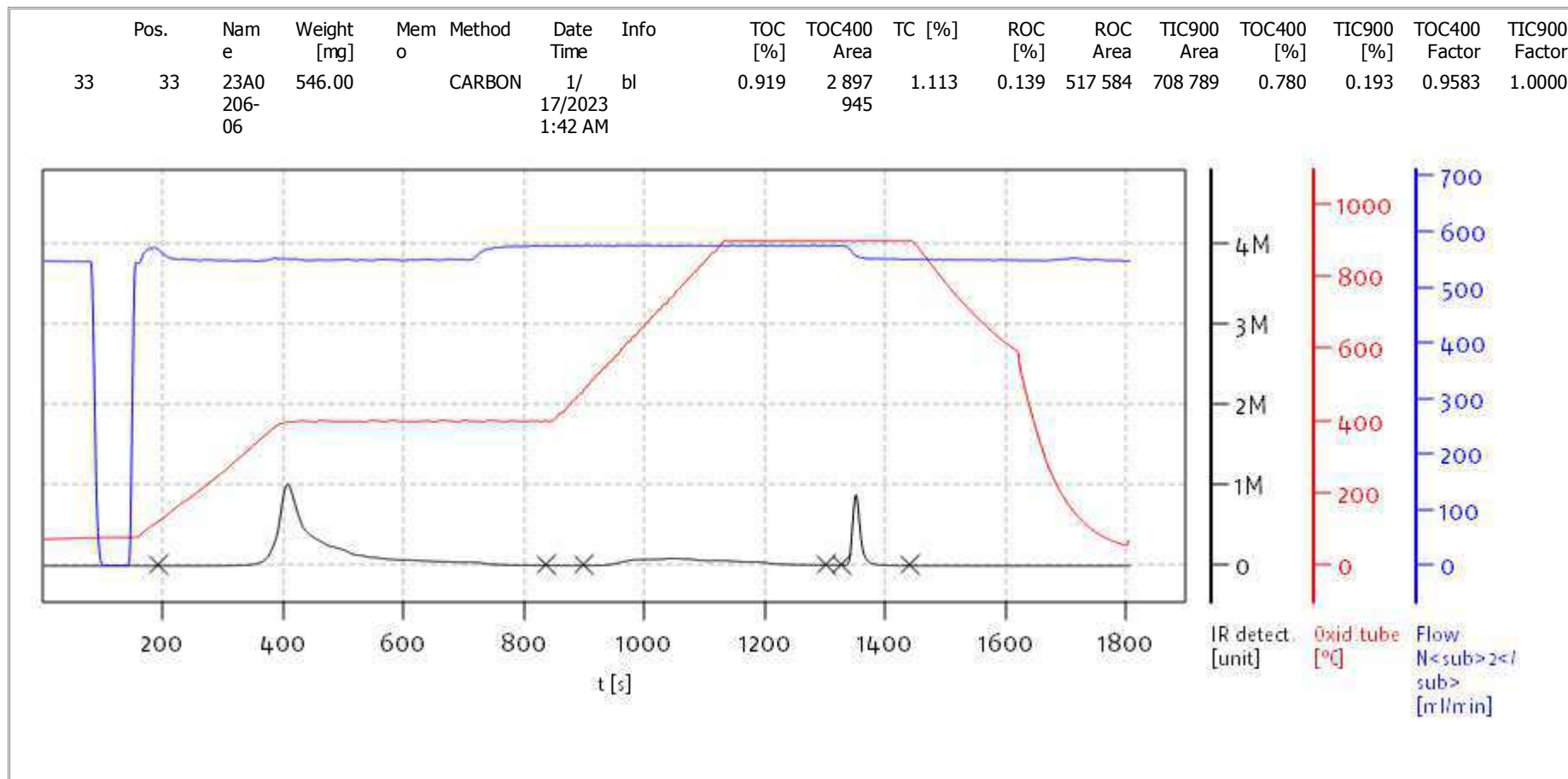
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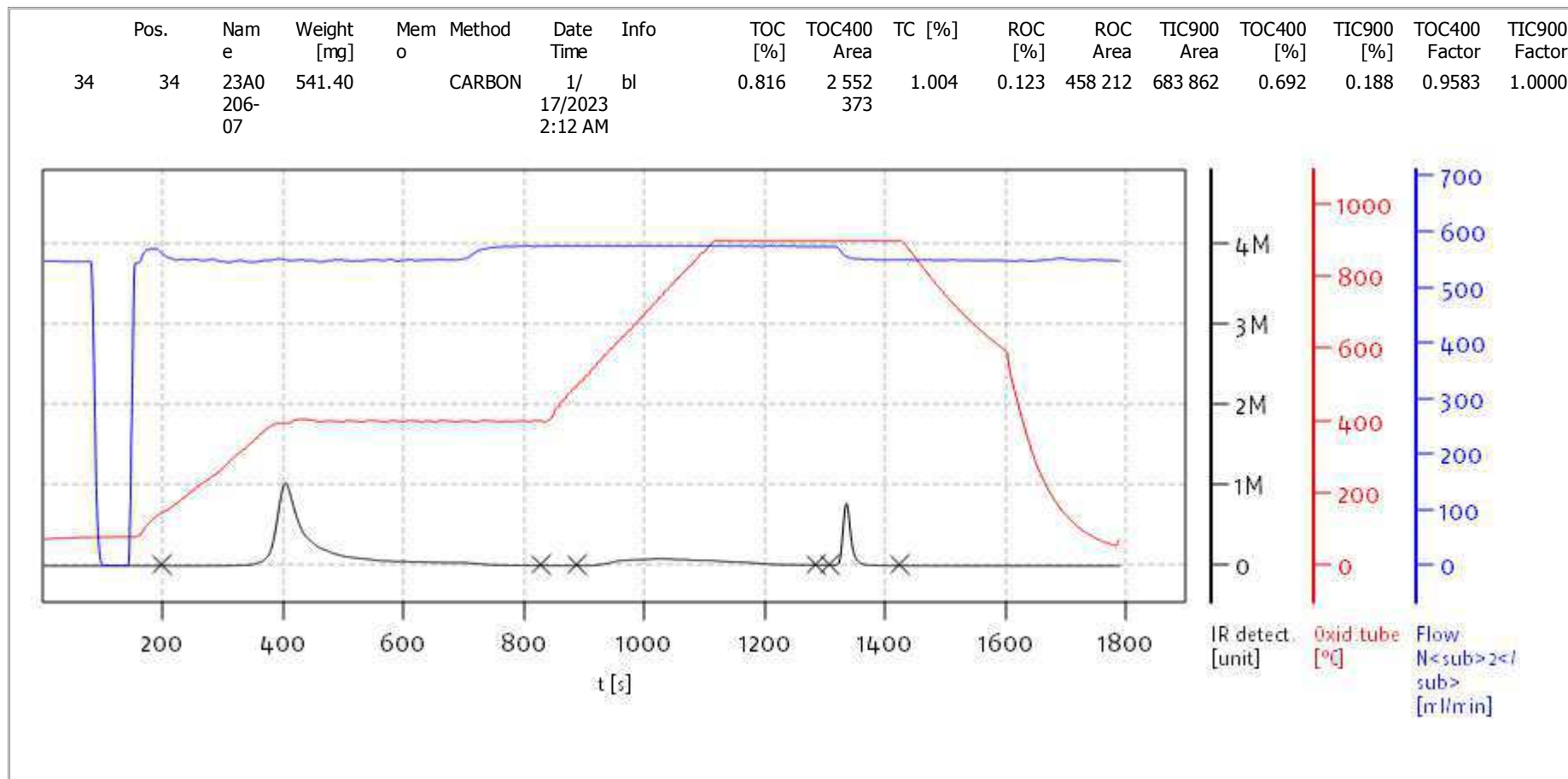
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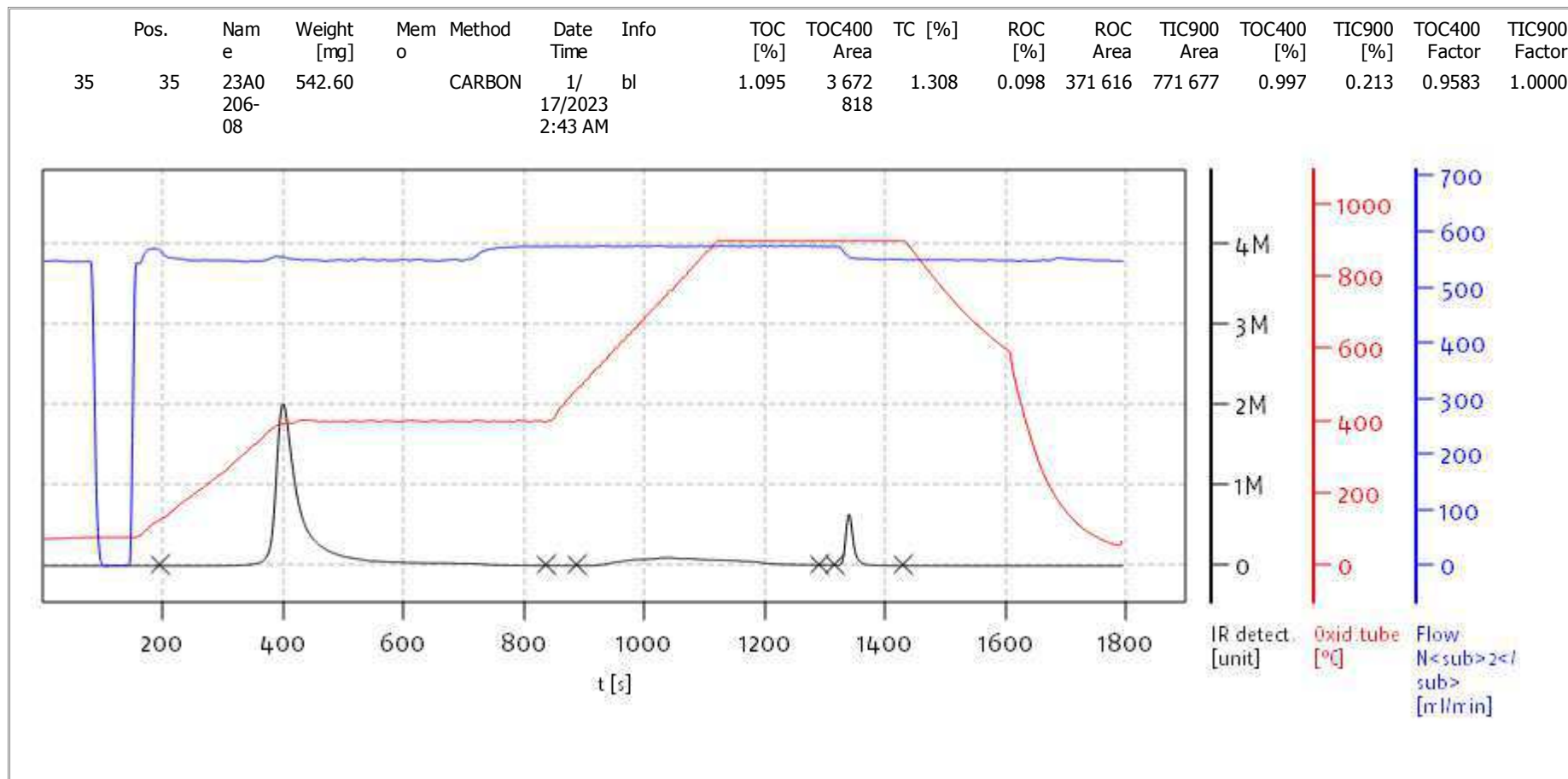
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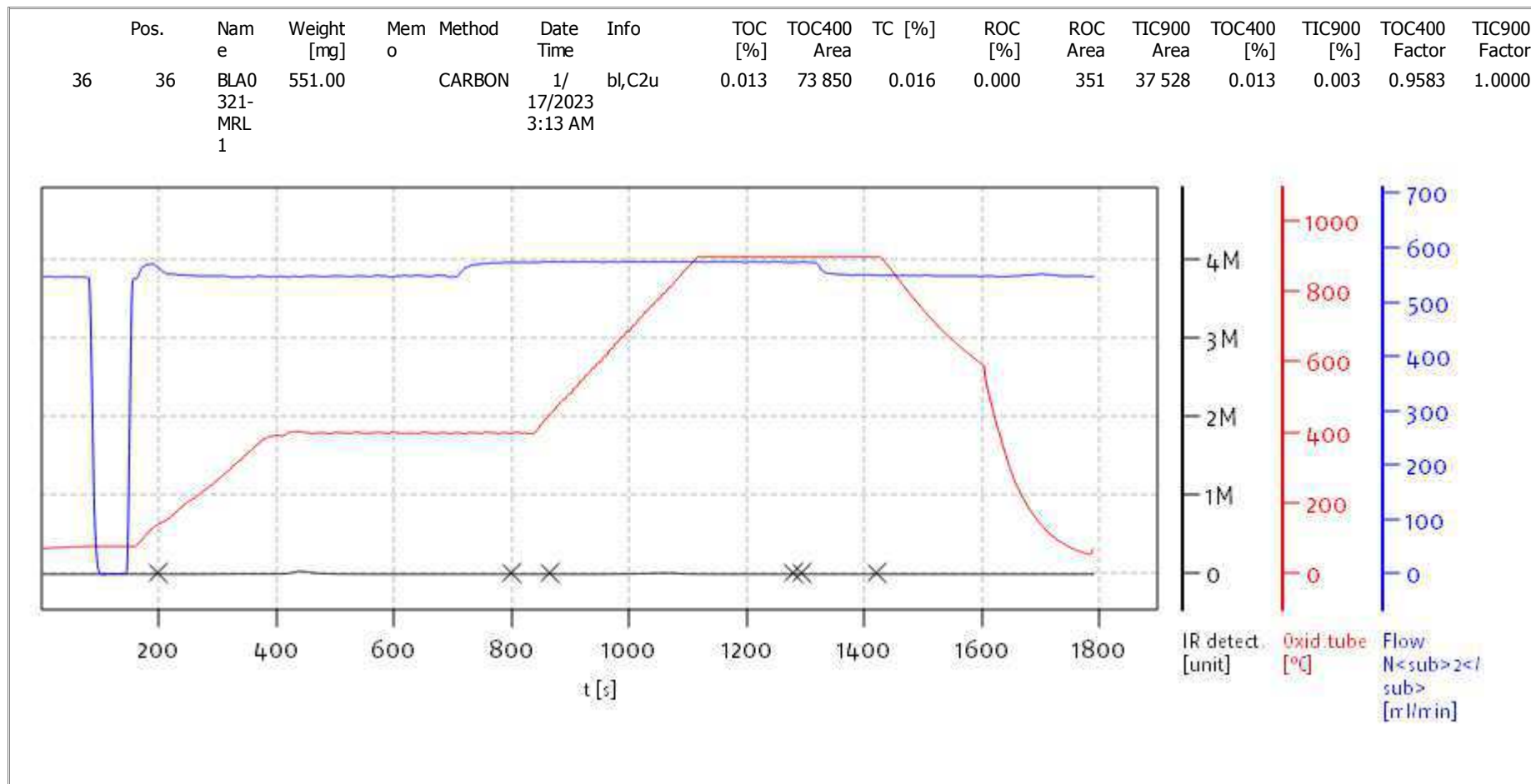
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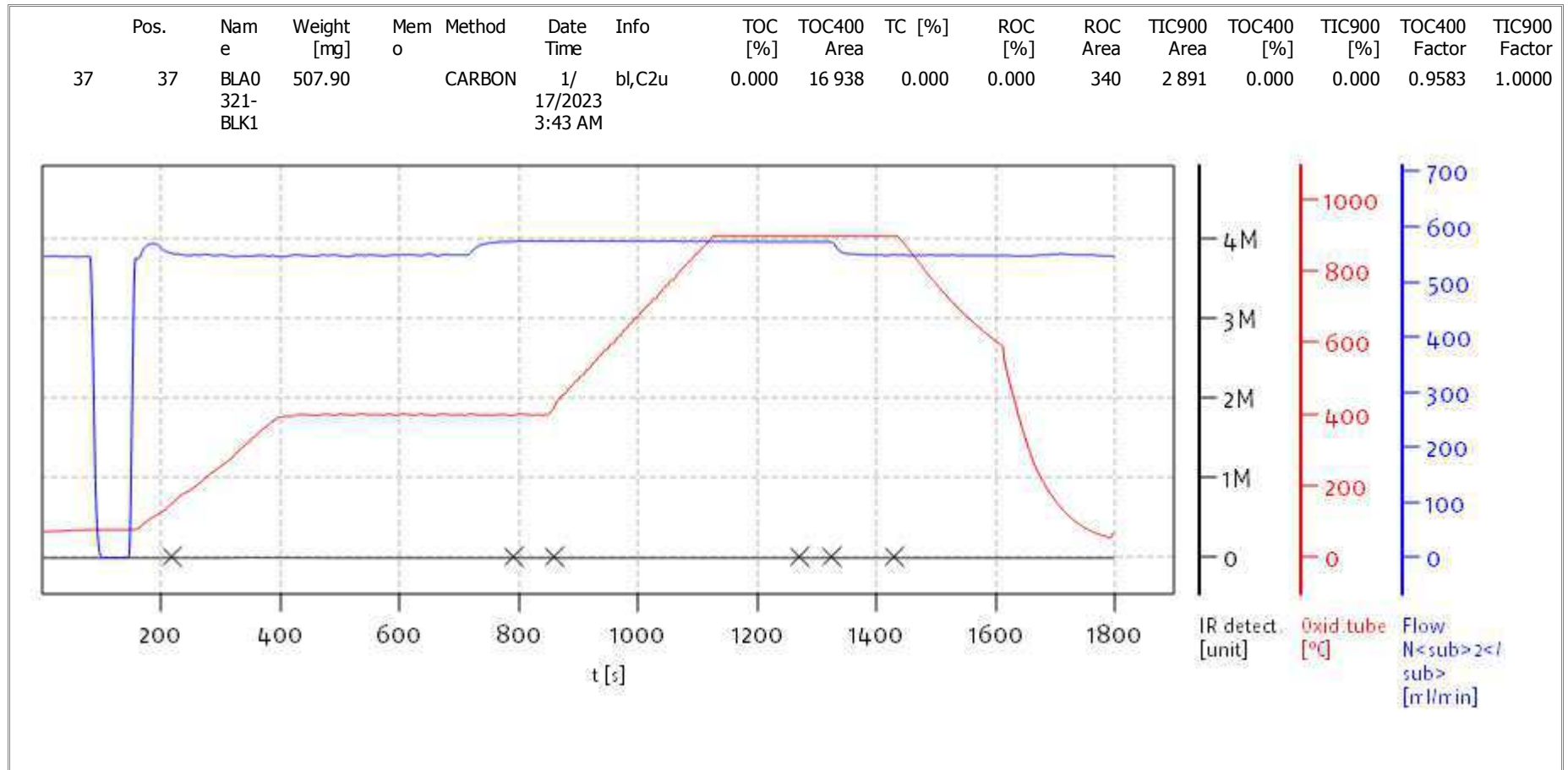
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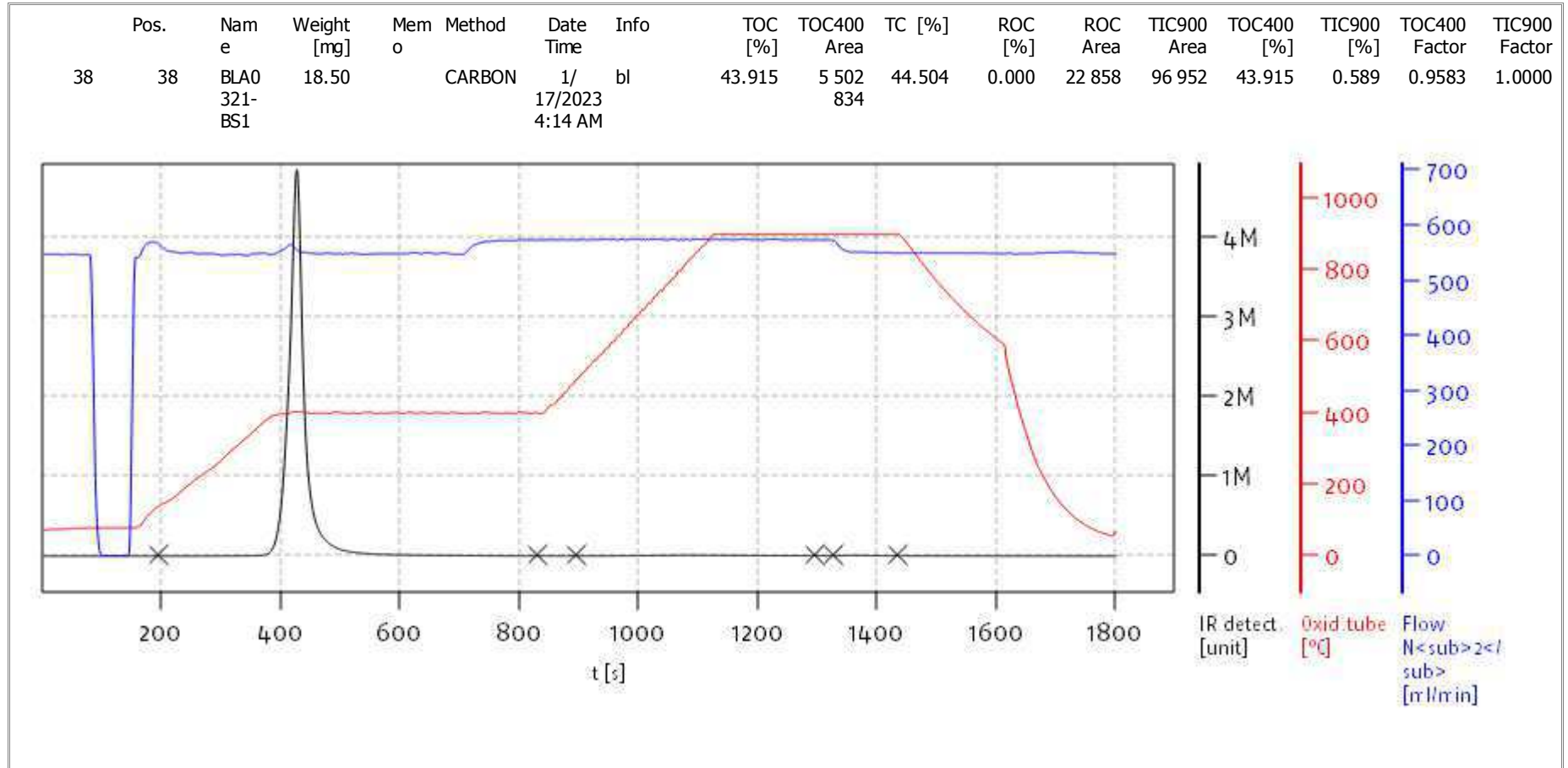


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**Soli TOC Cube, Carbon**  
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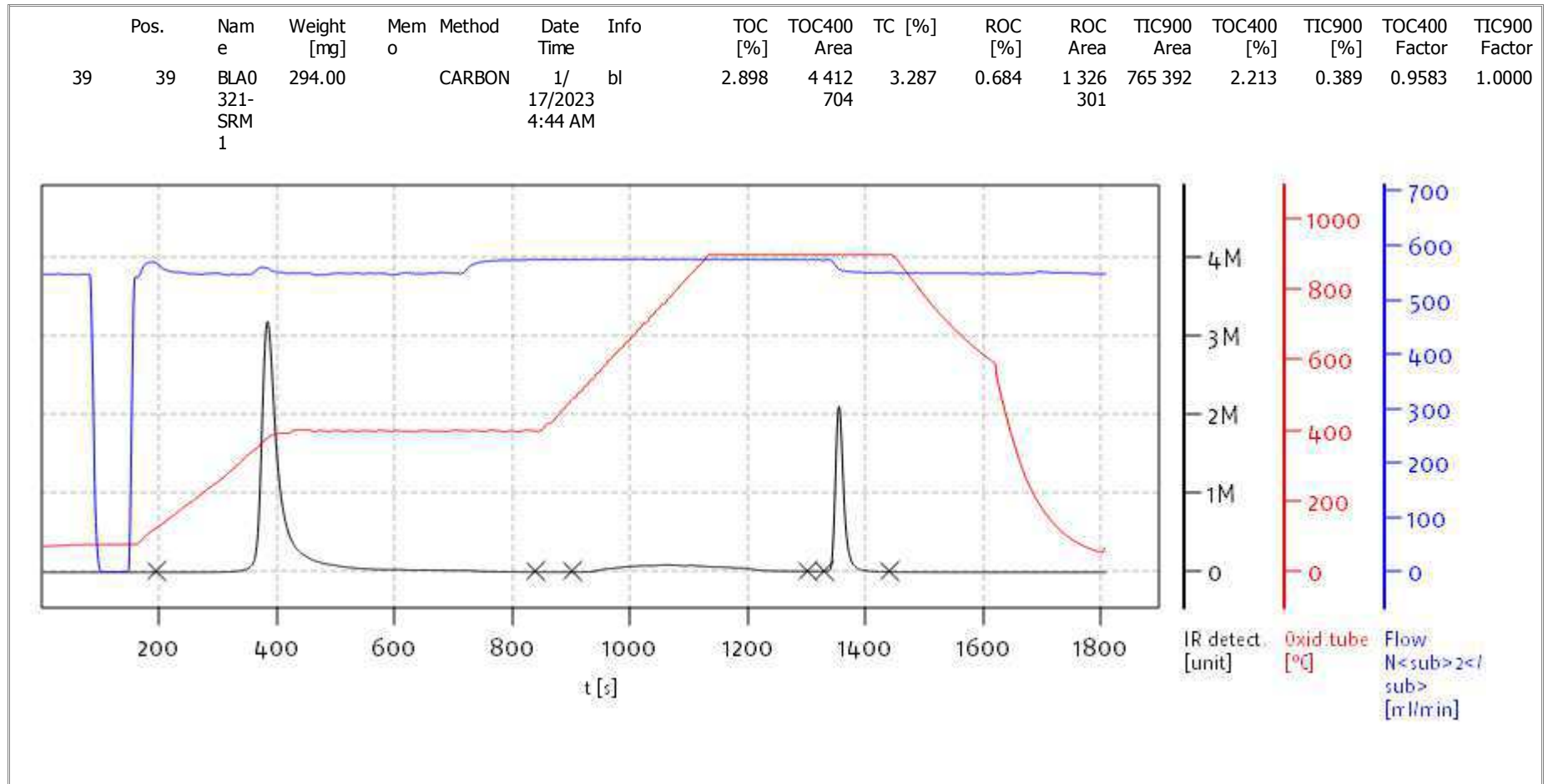


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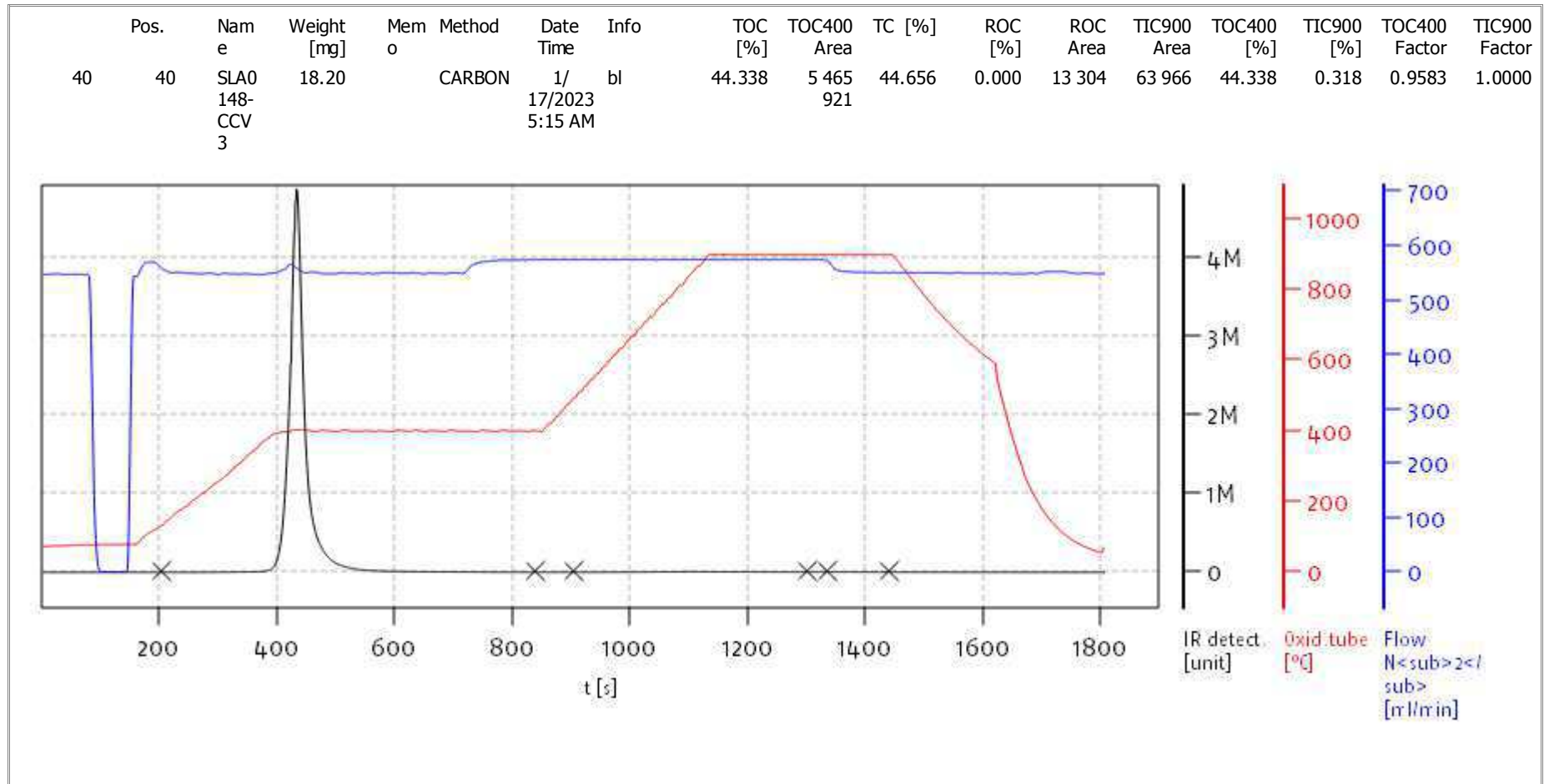
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**Balance: BAL3**  
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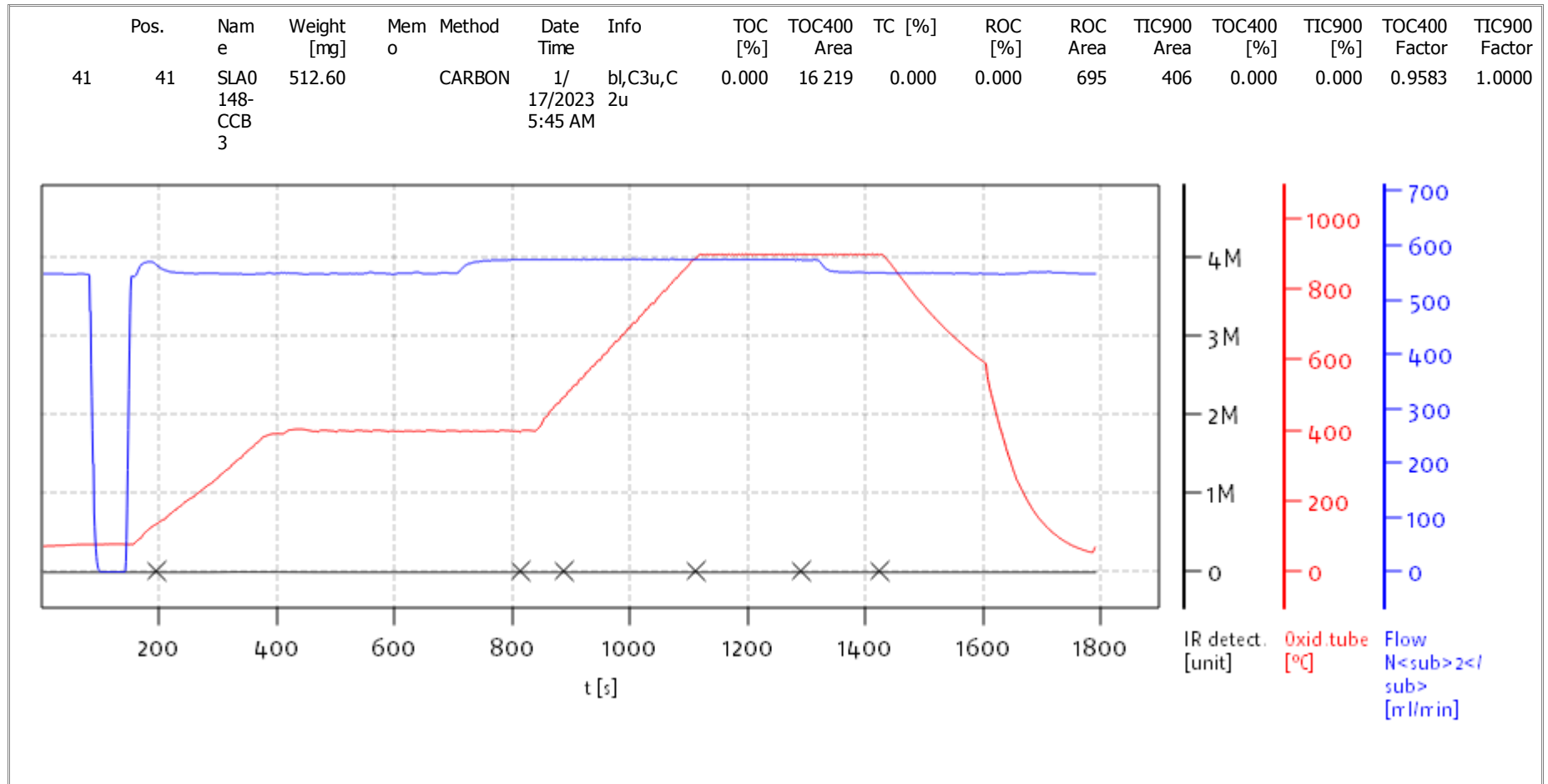
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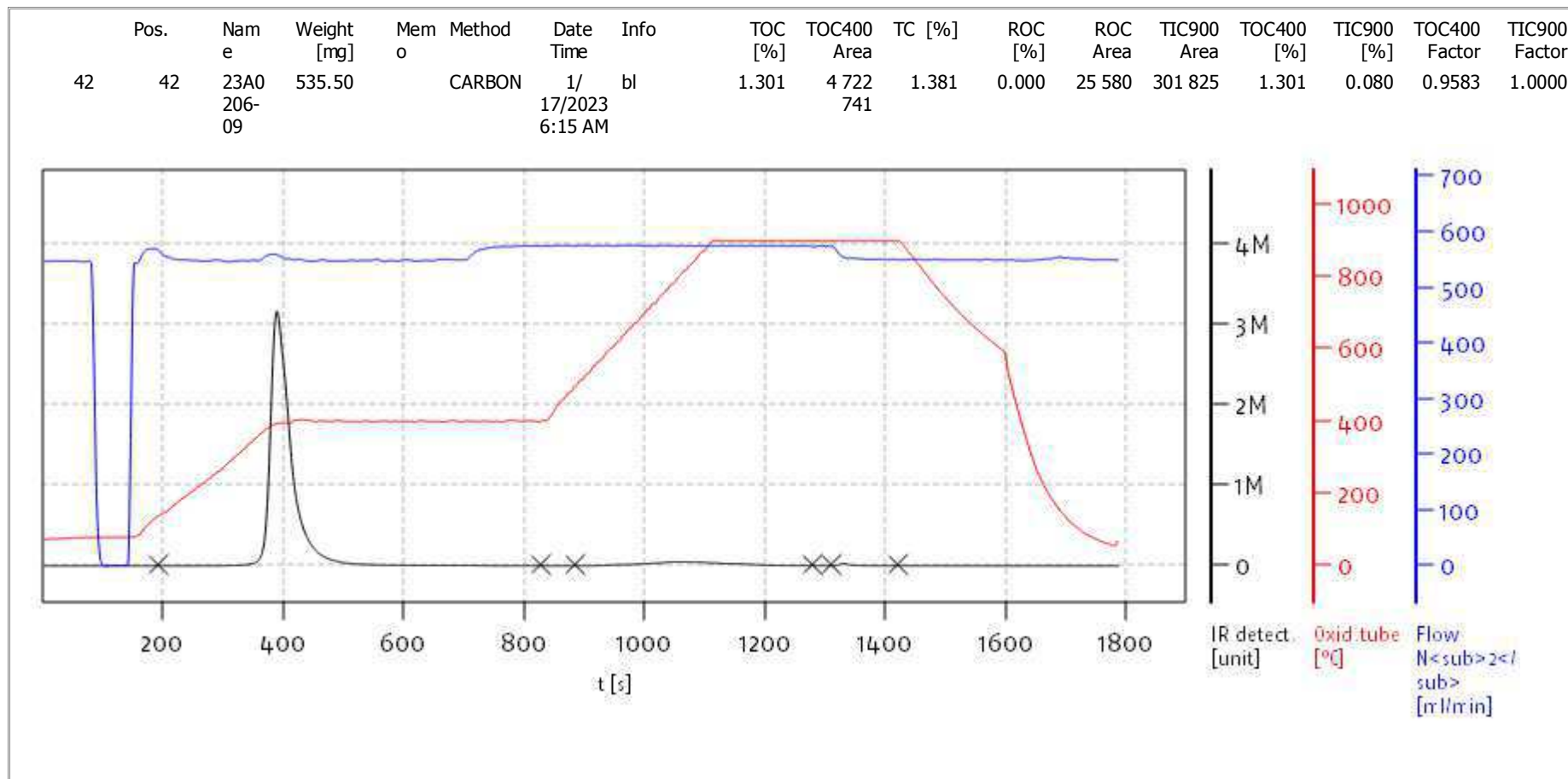
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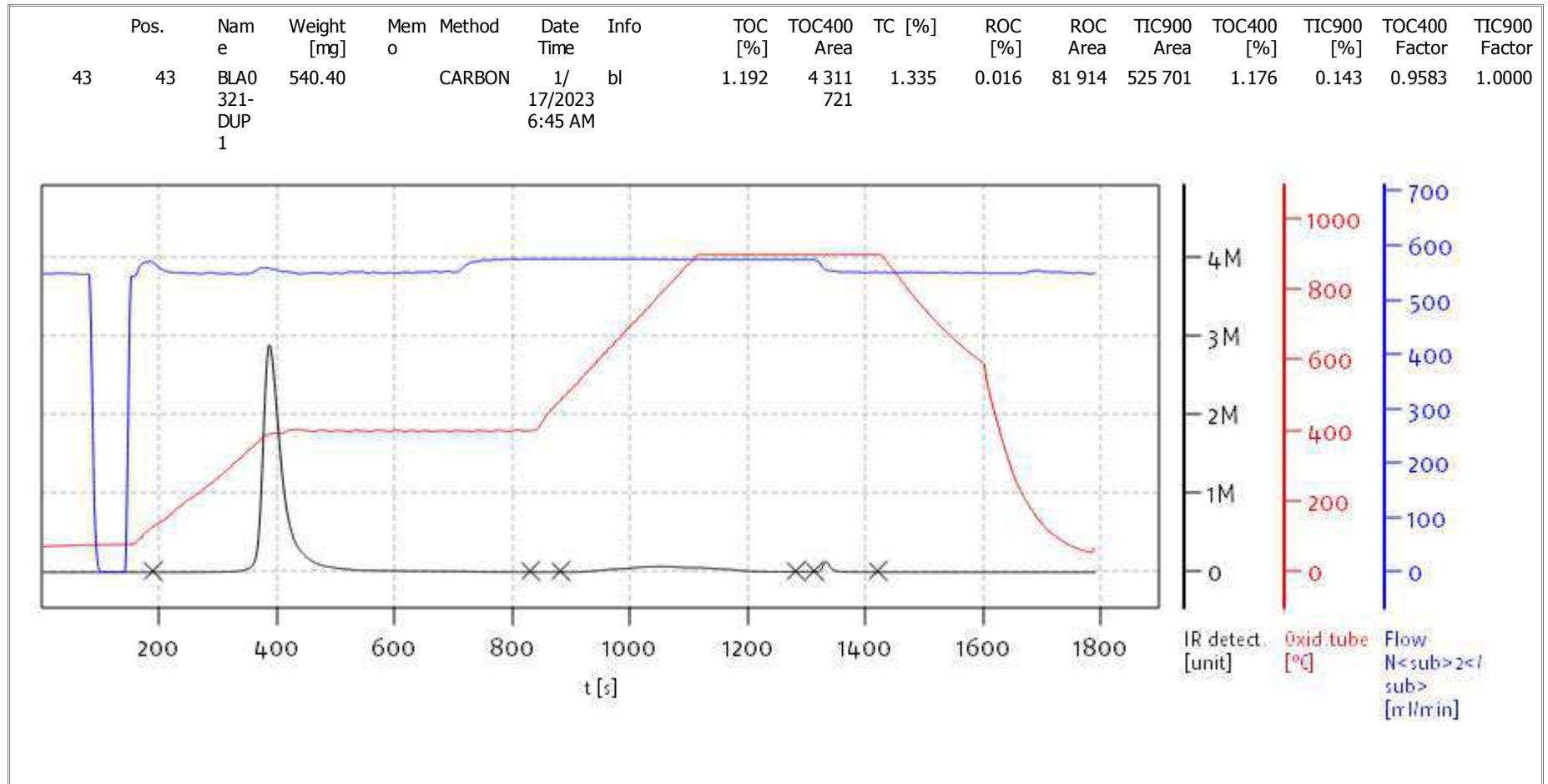
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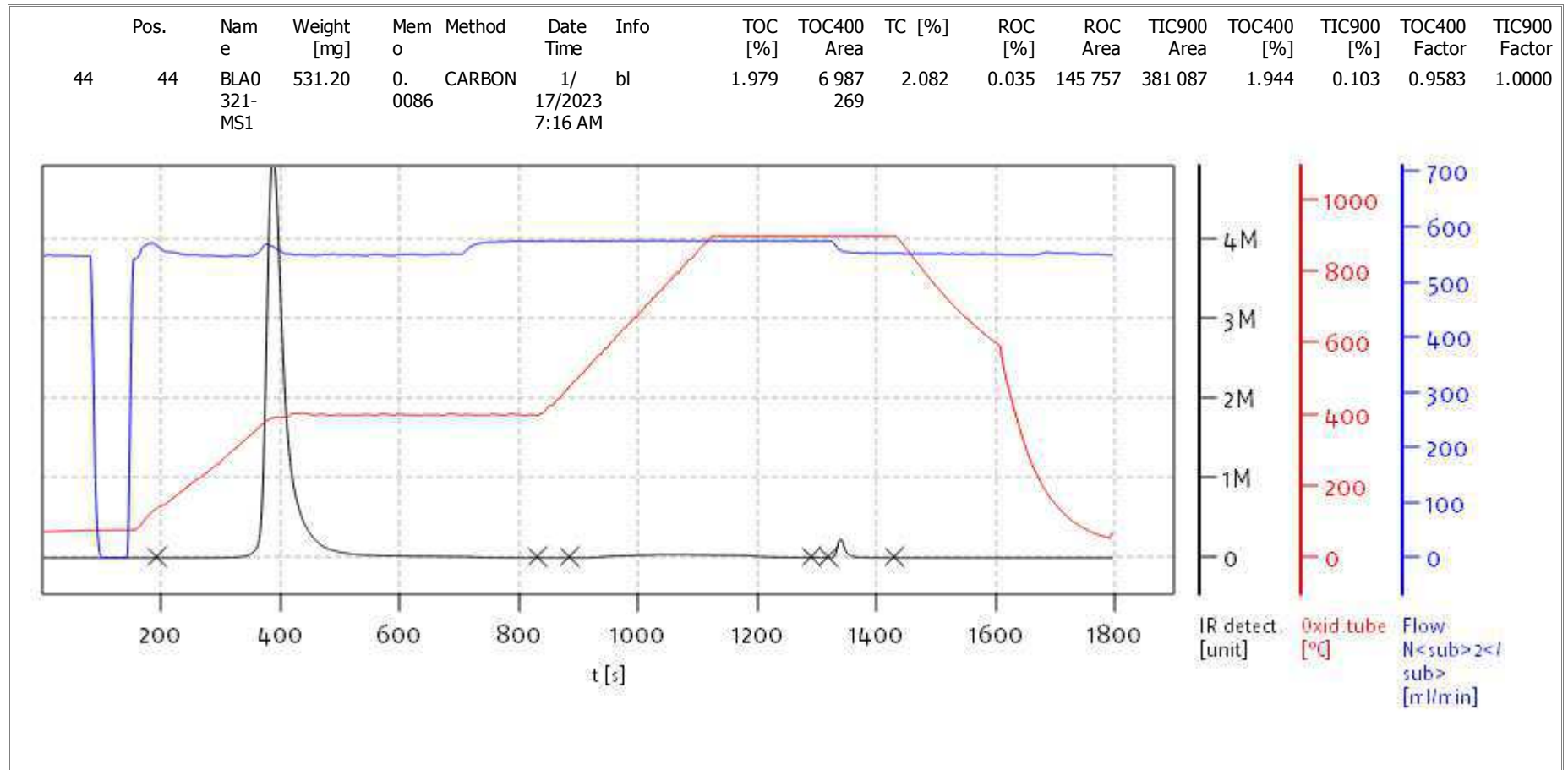
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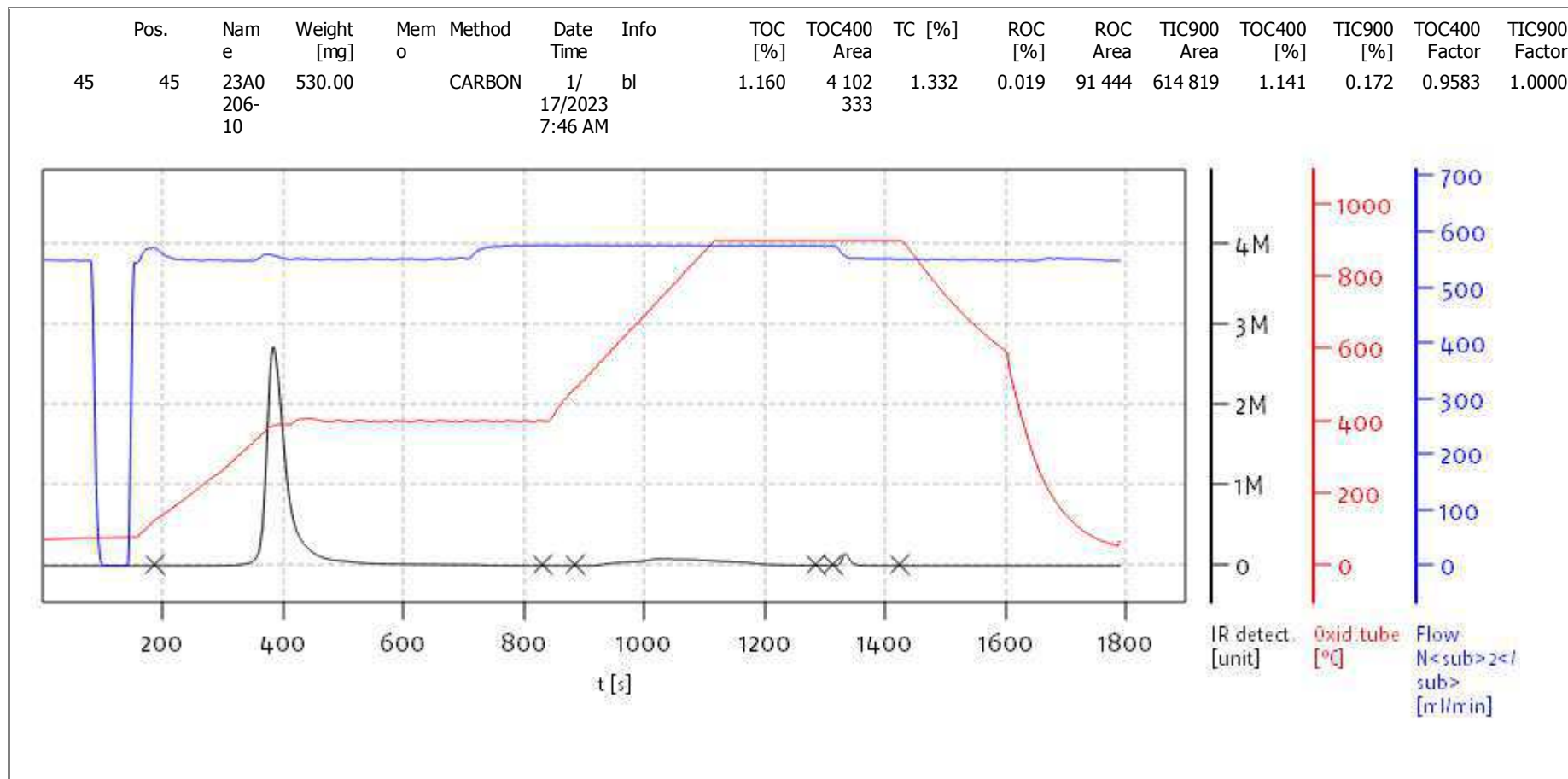
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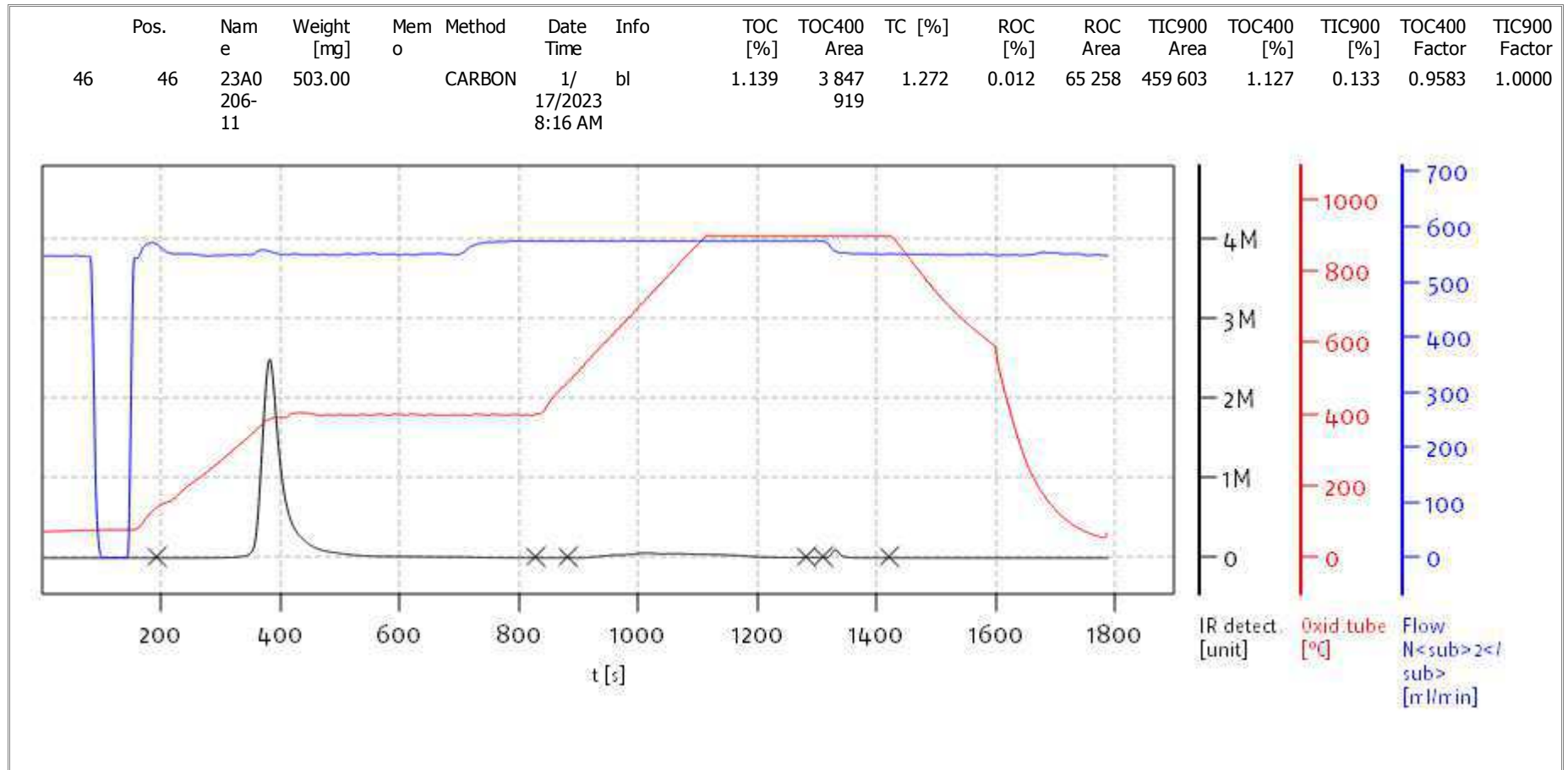
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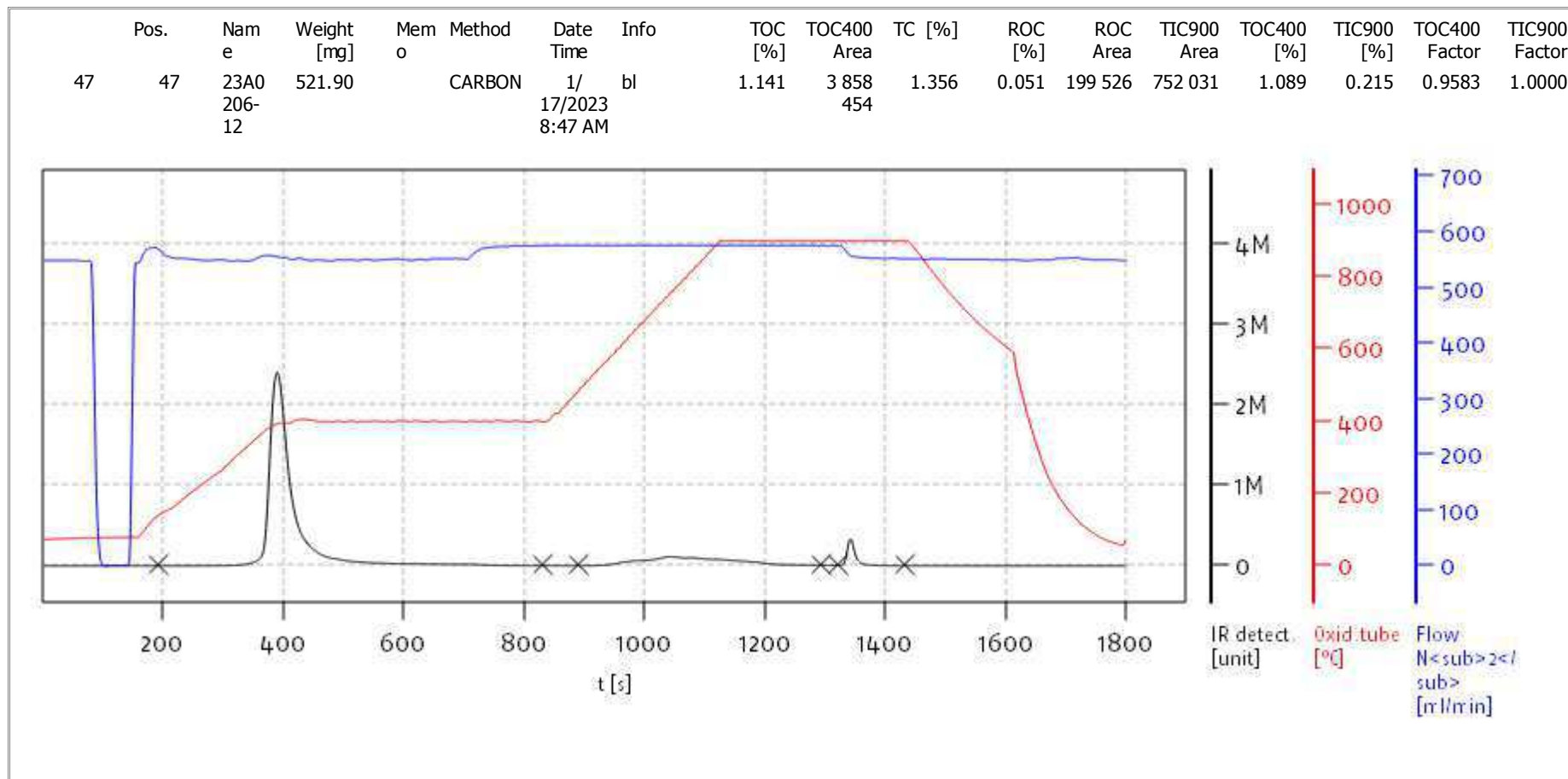
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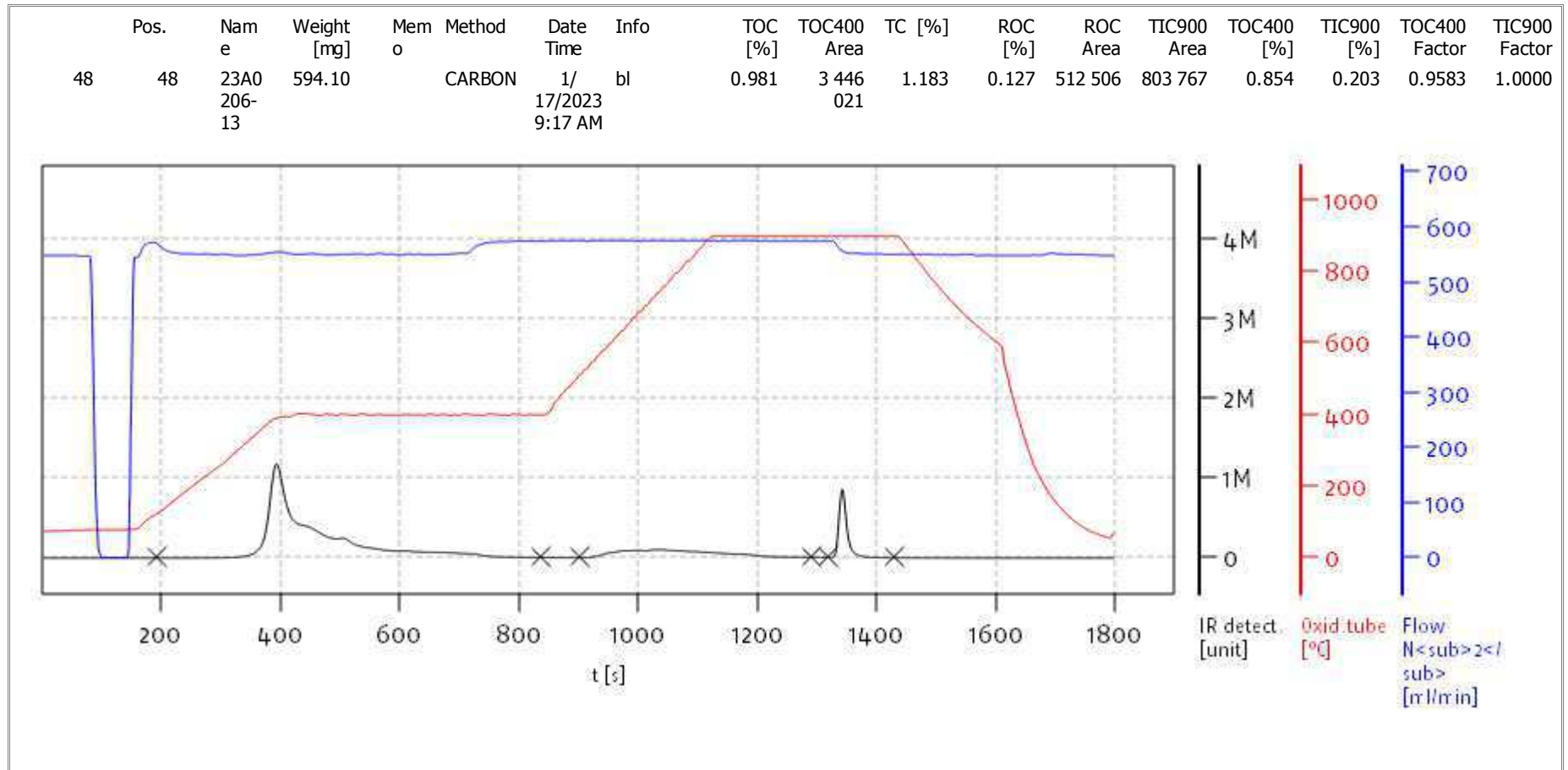
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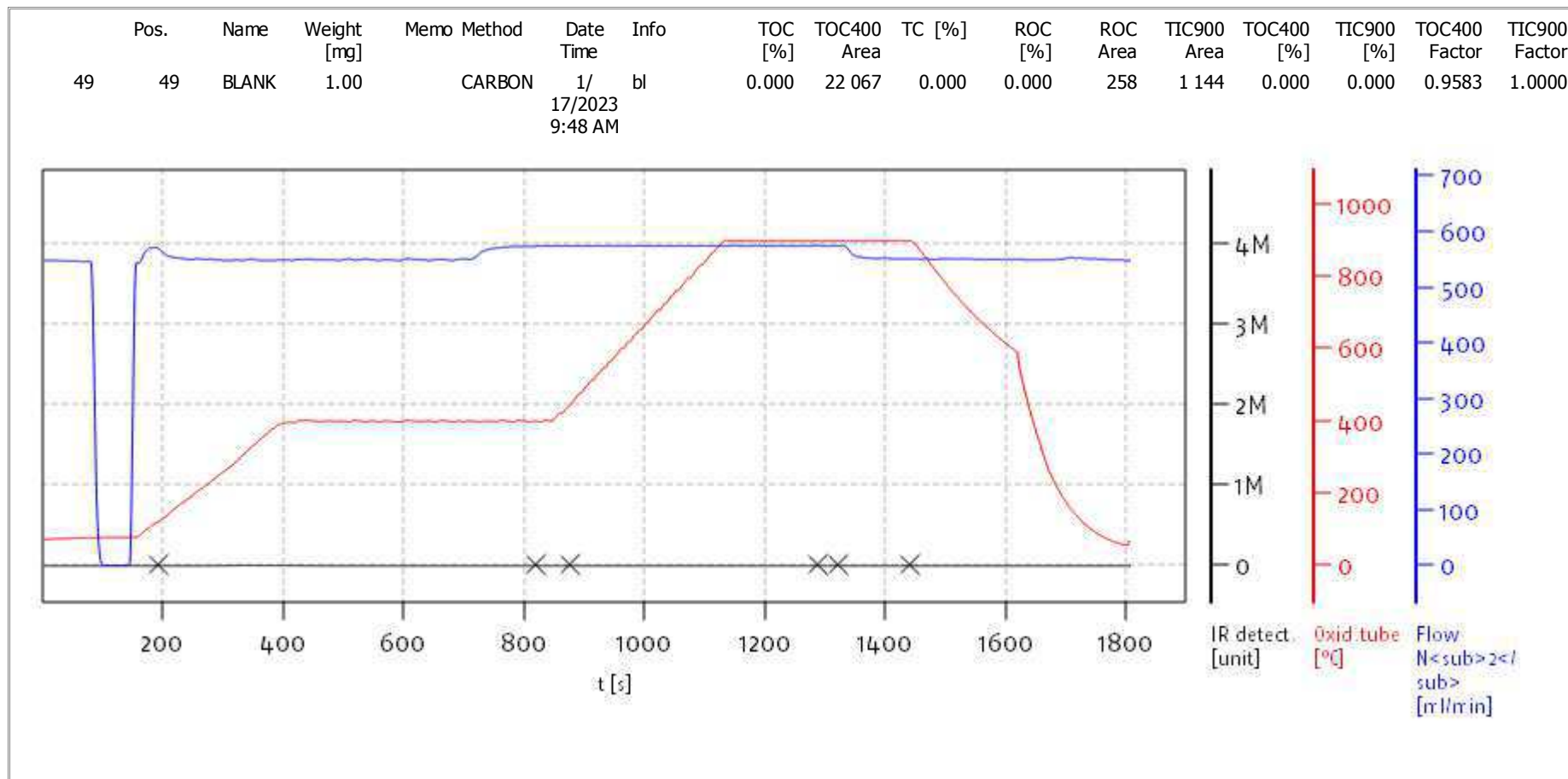
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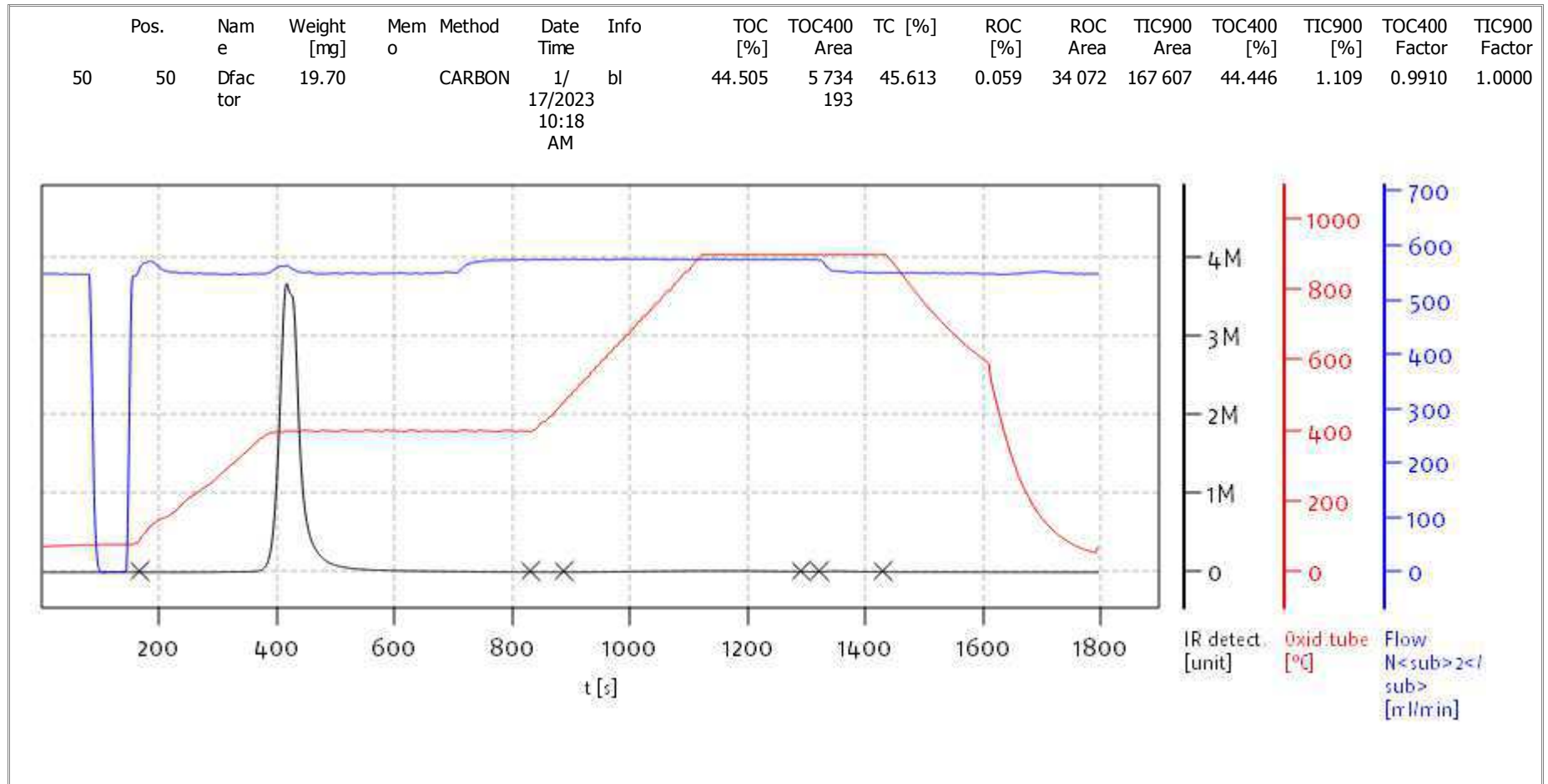
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**Balance: BAL3**  
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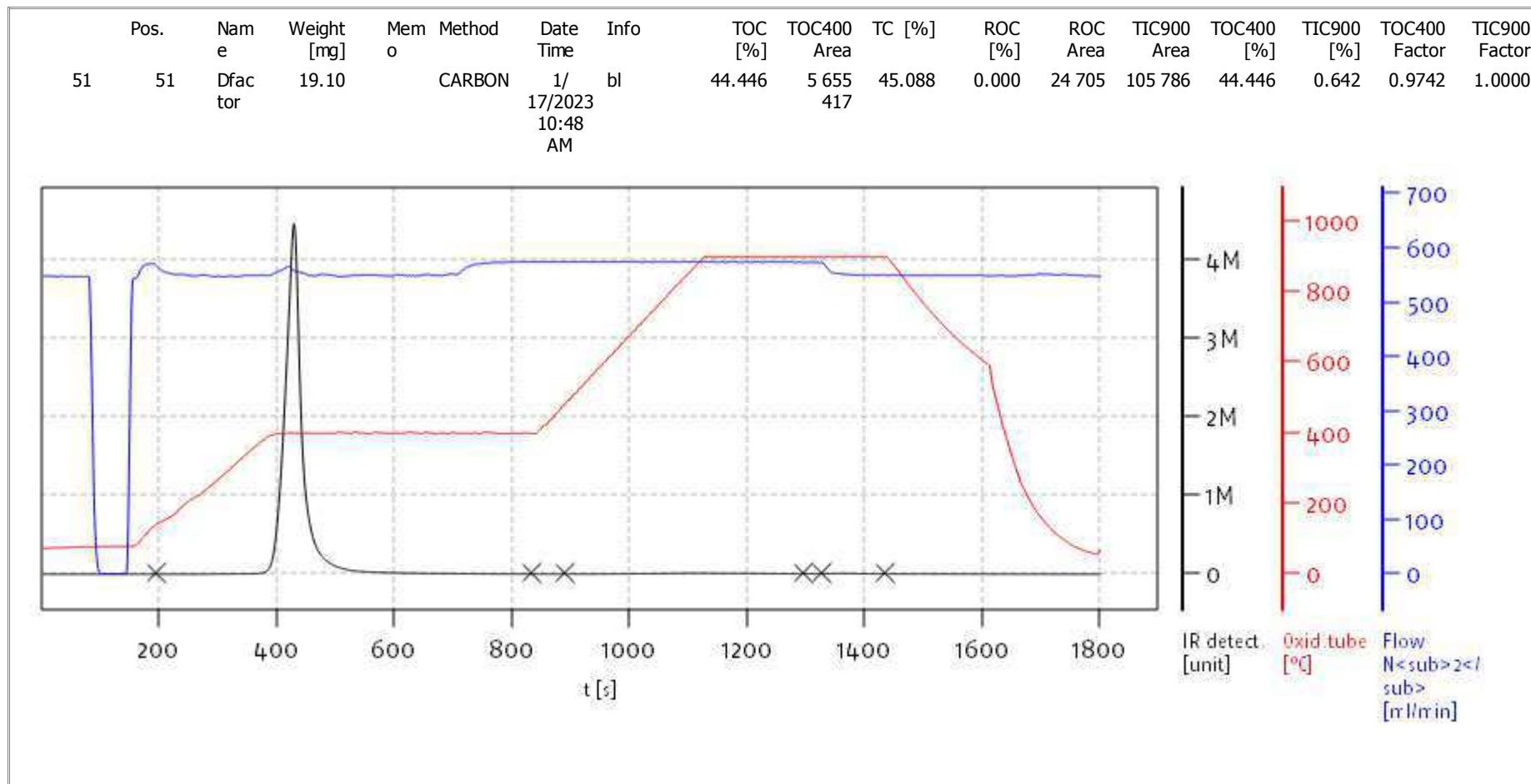
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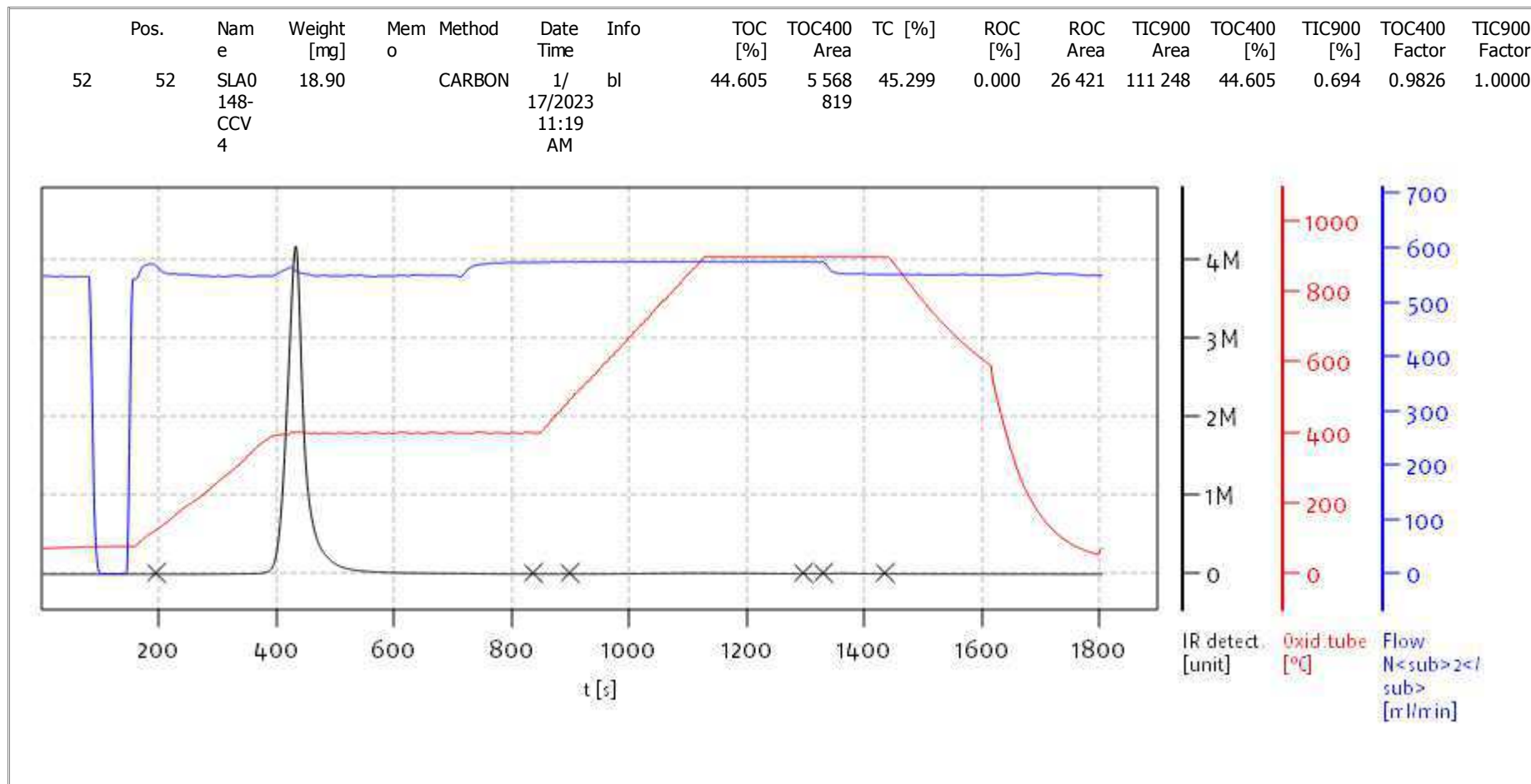
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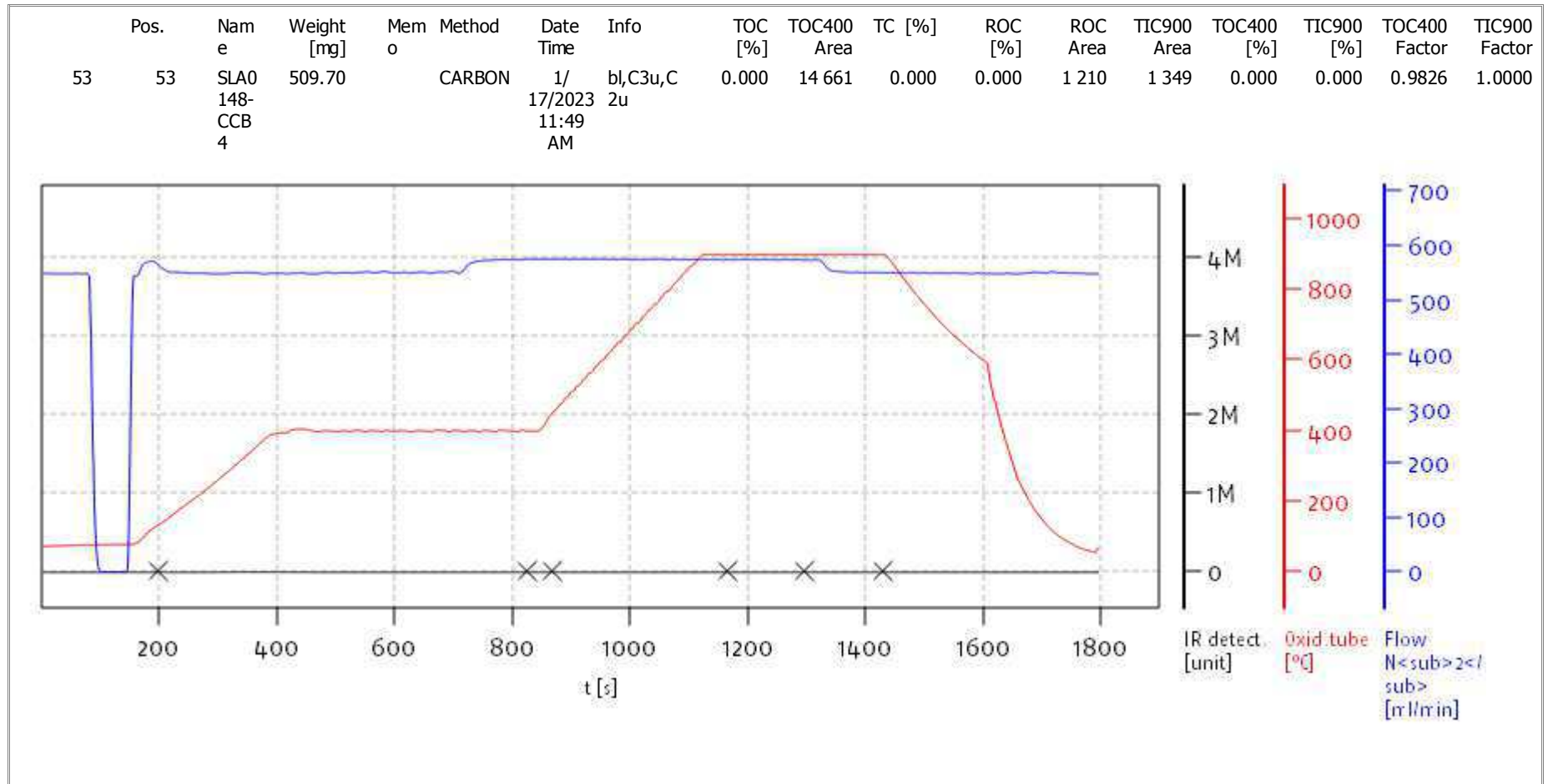
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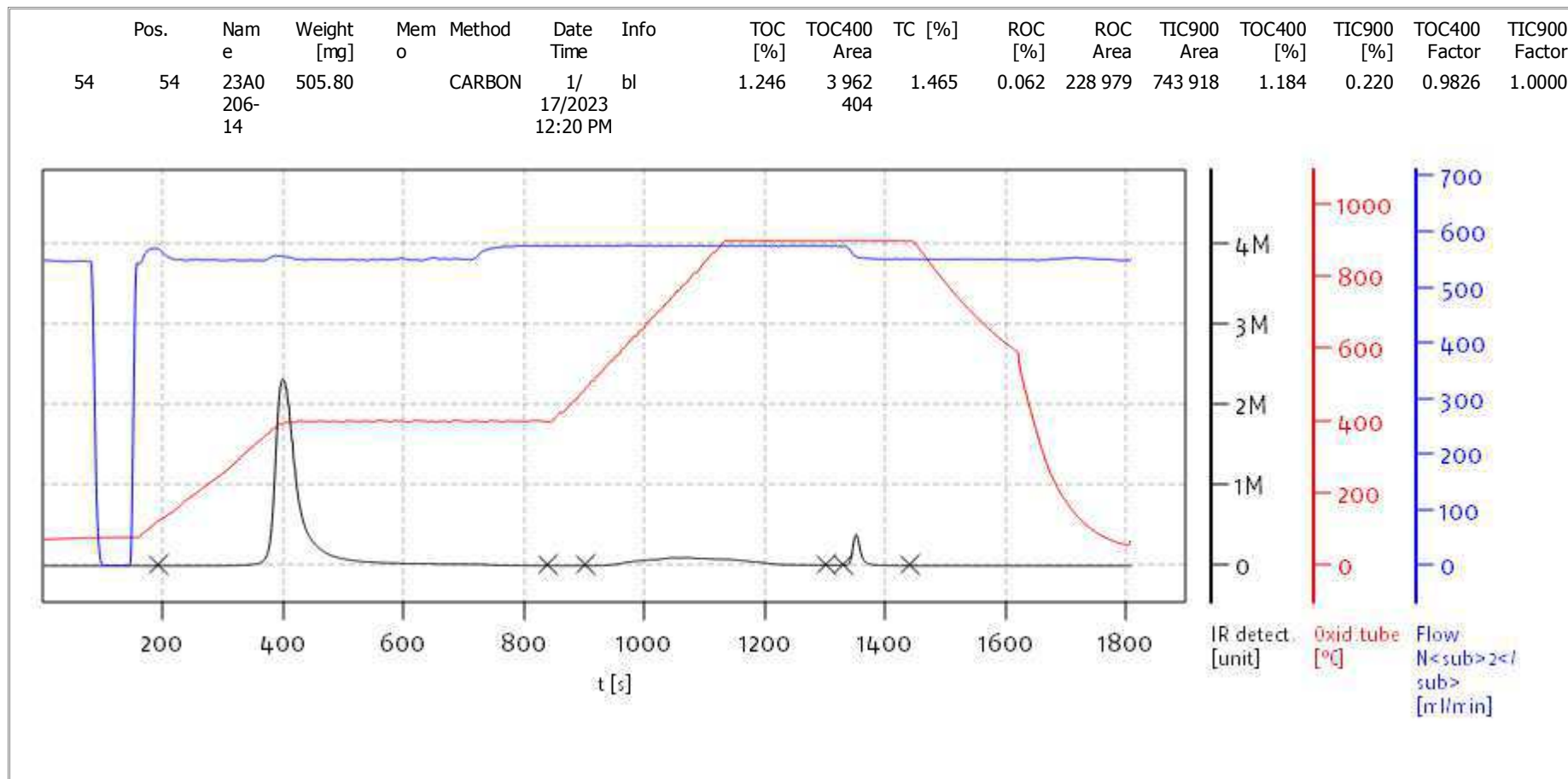
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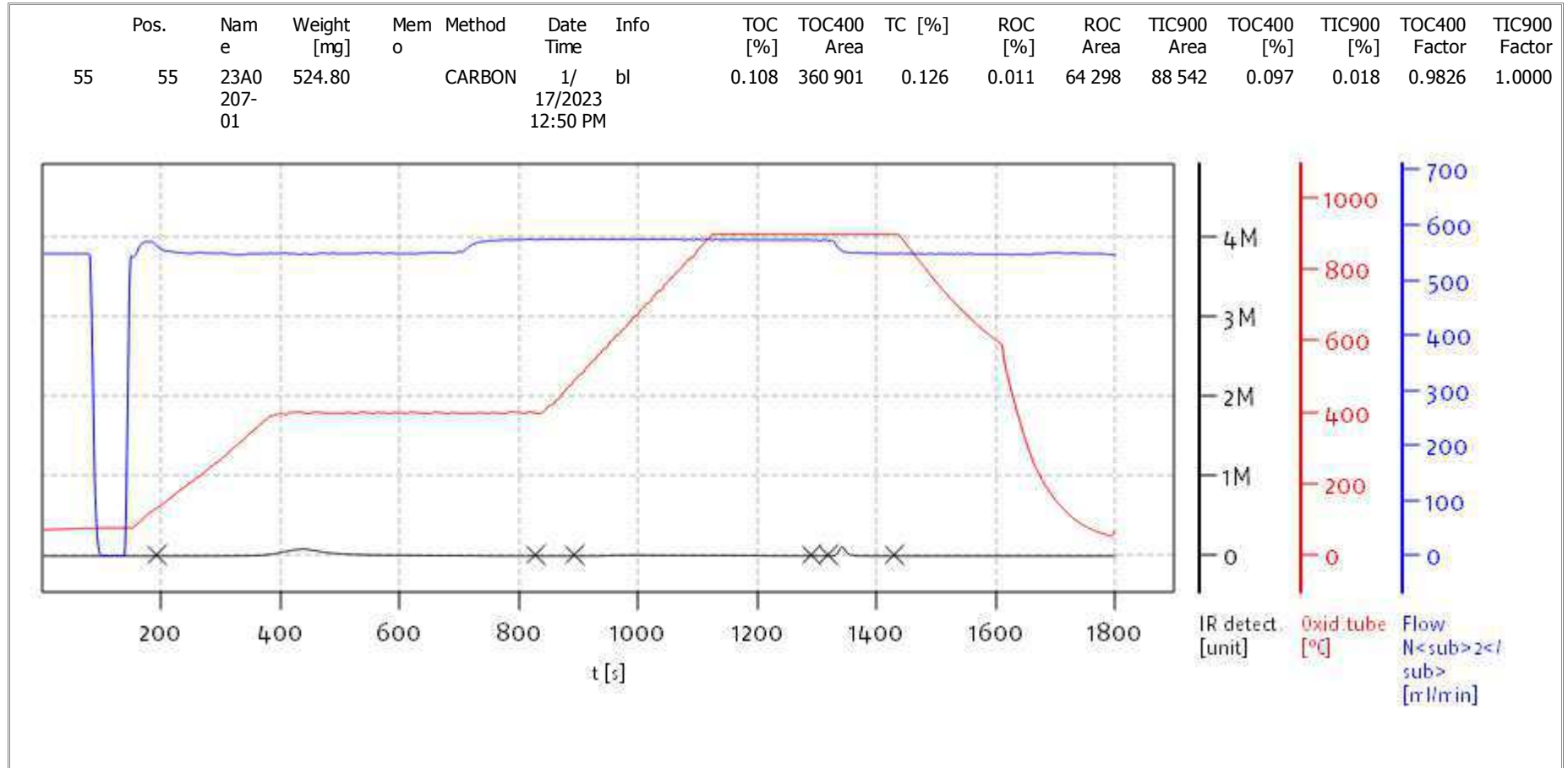


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**Balance: BAL3**  
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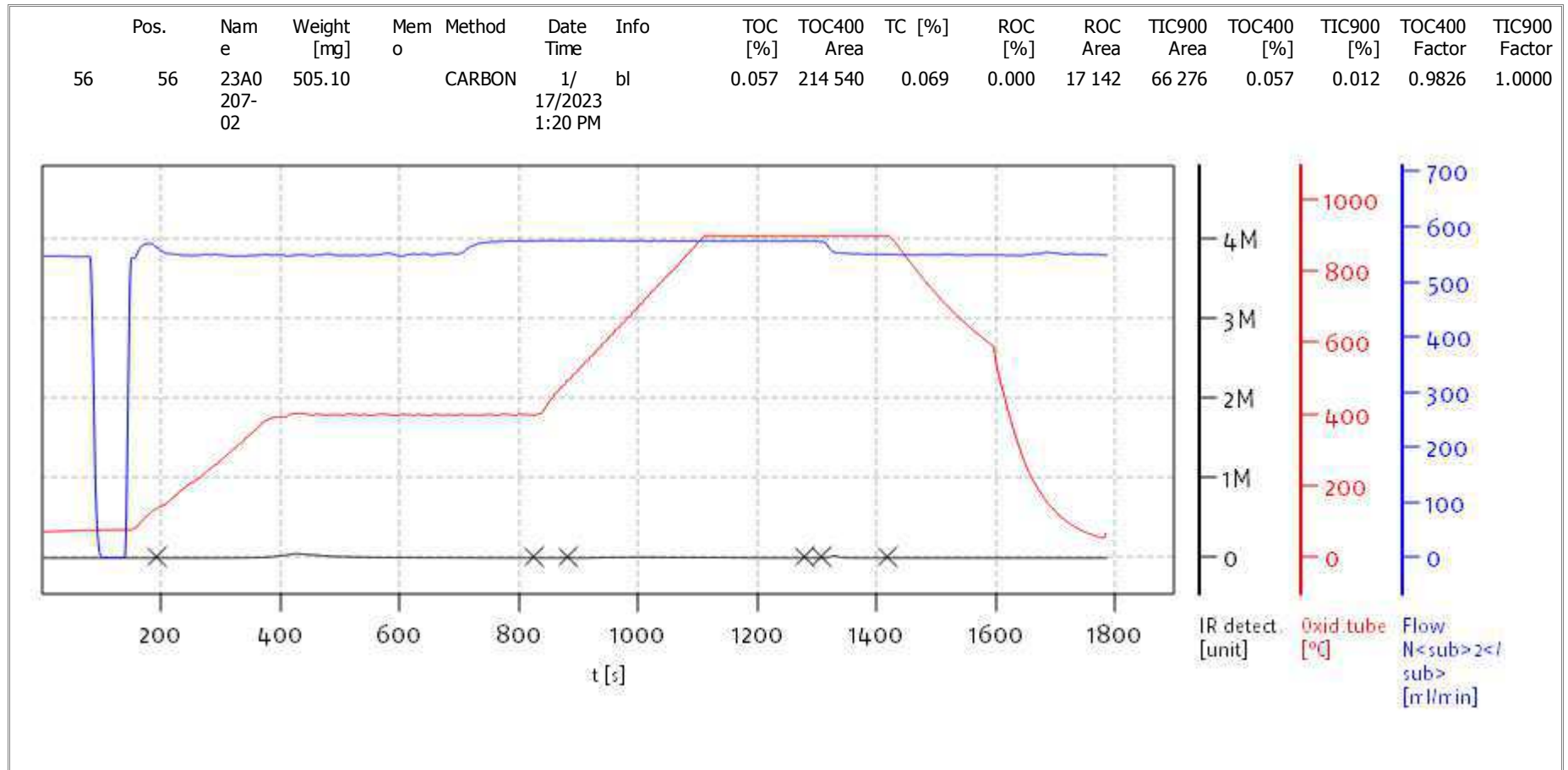
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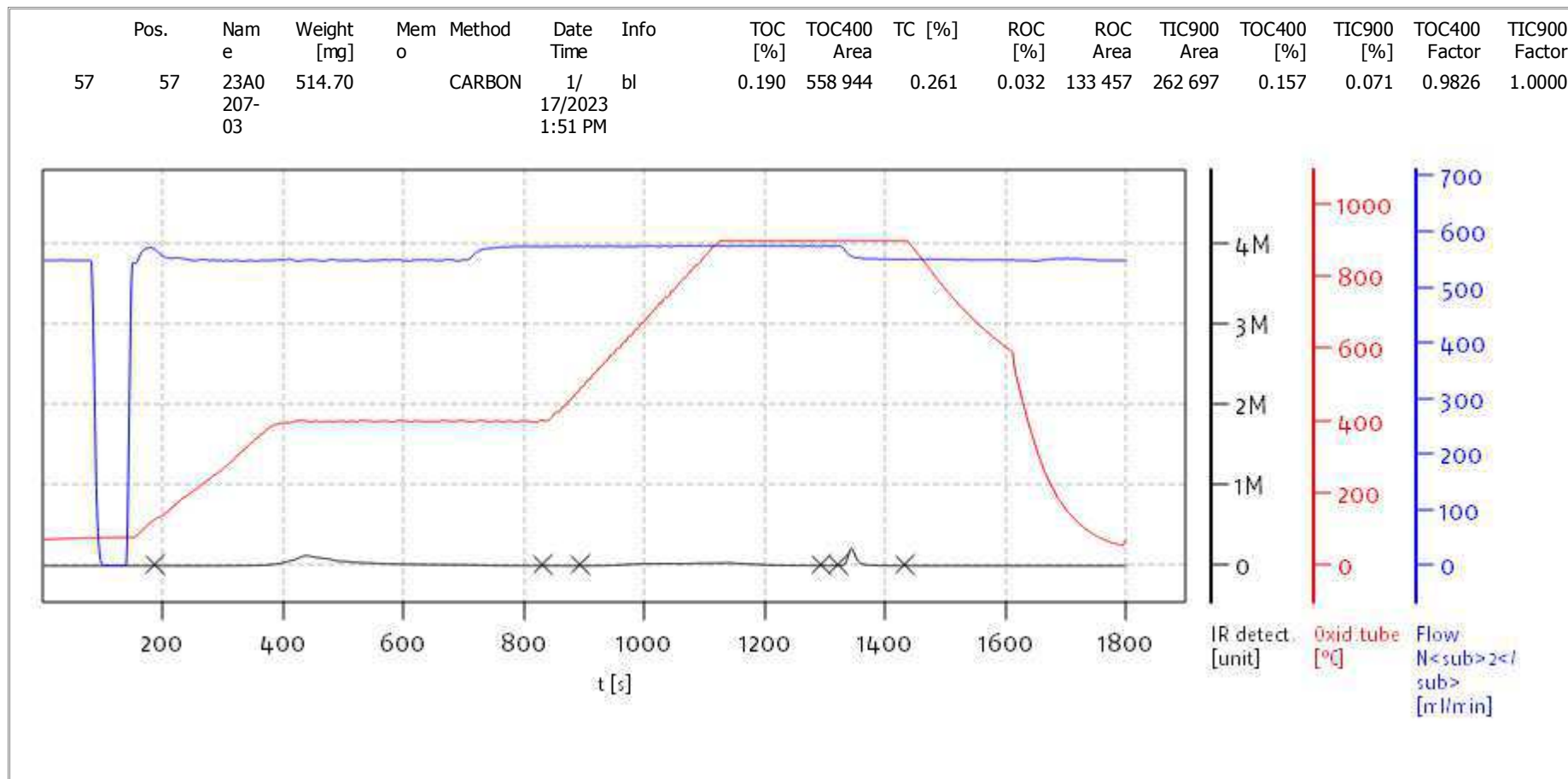
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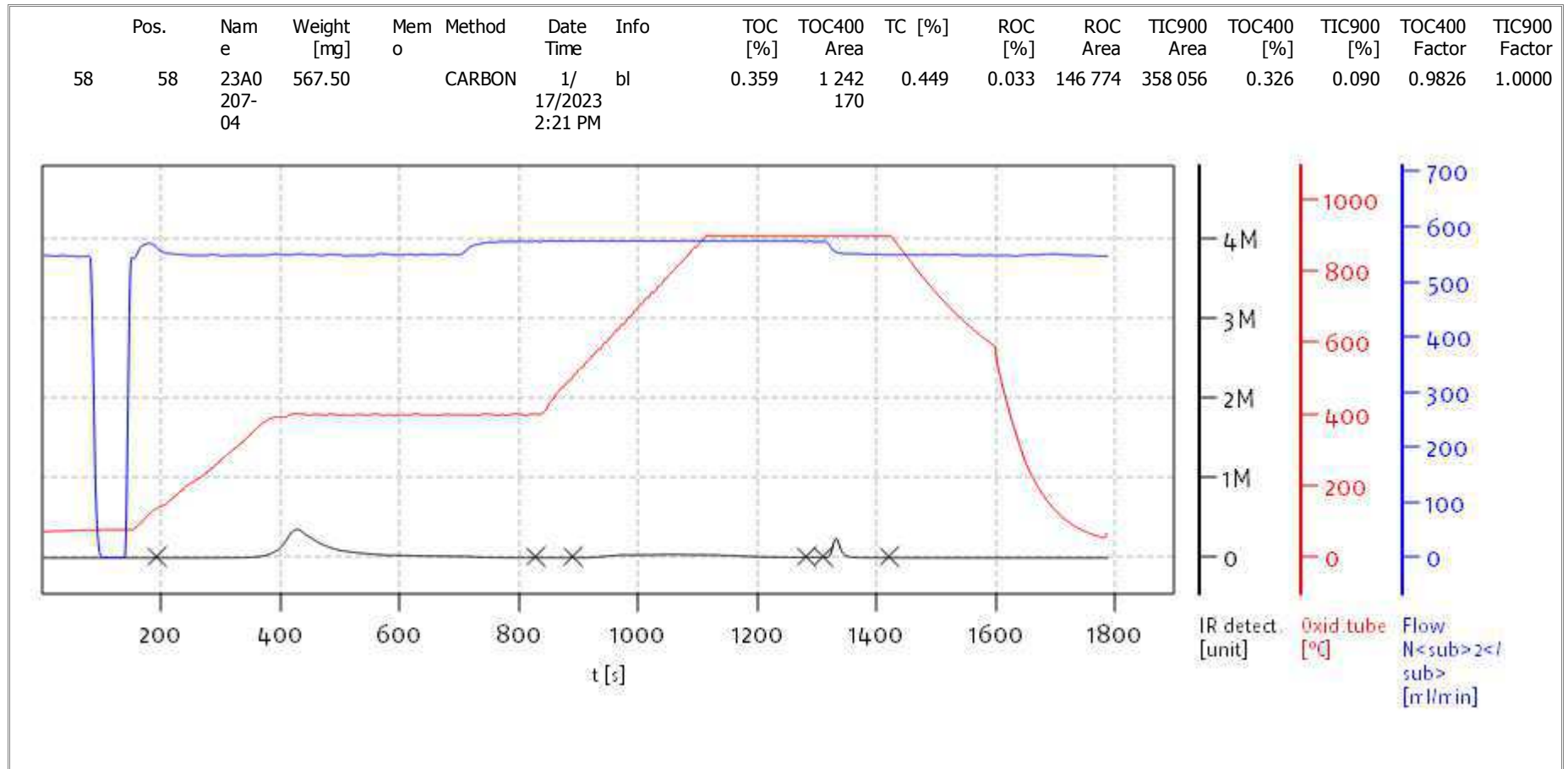
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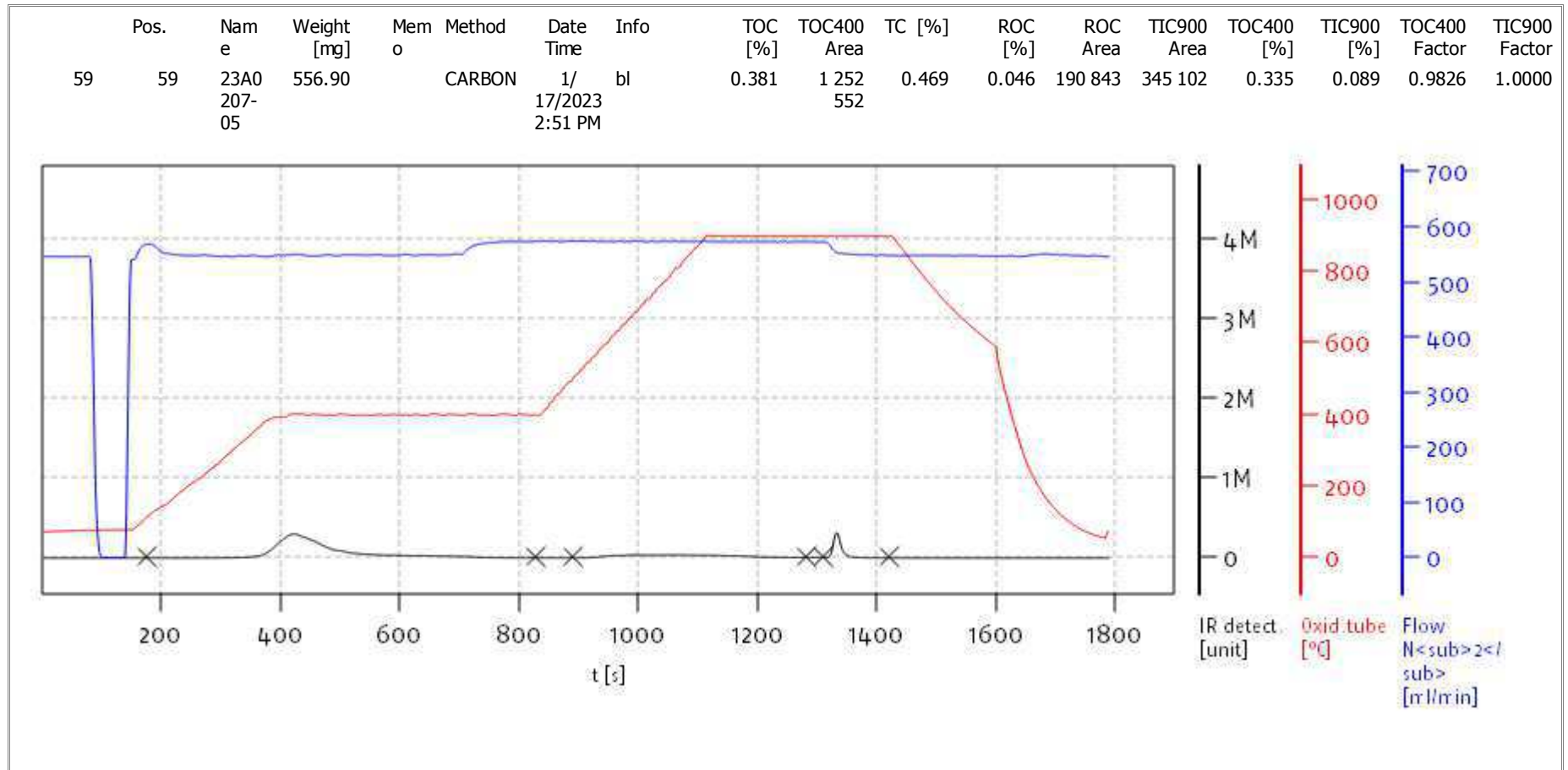
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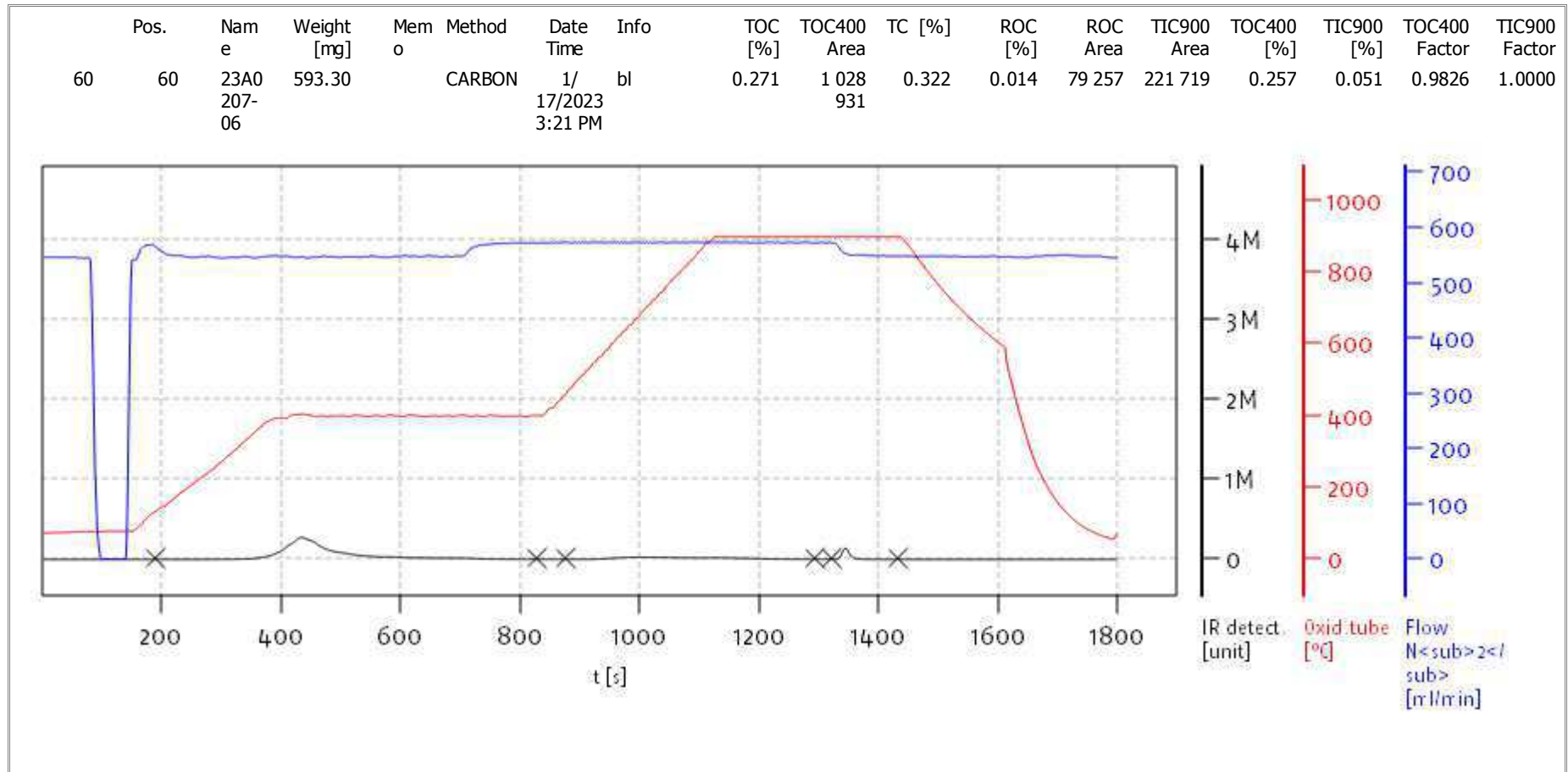
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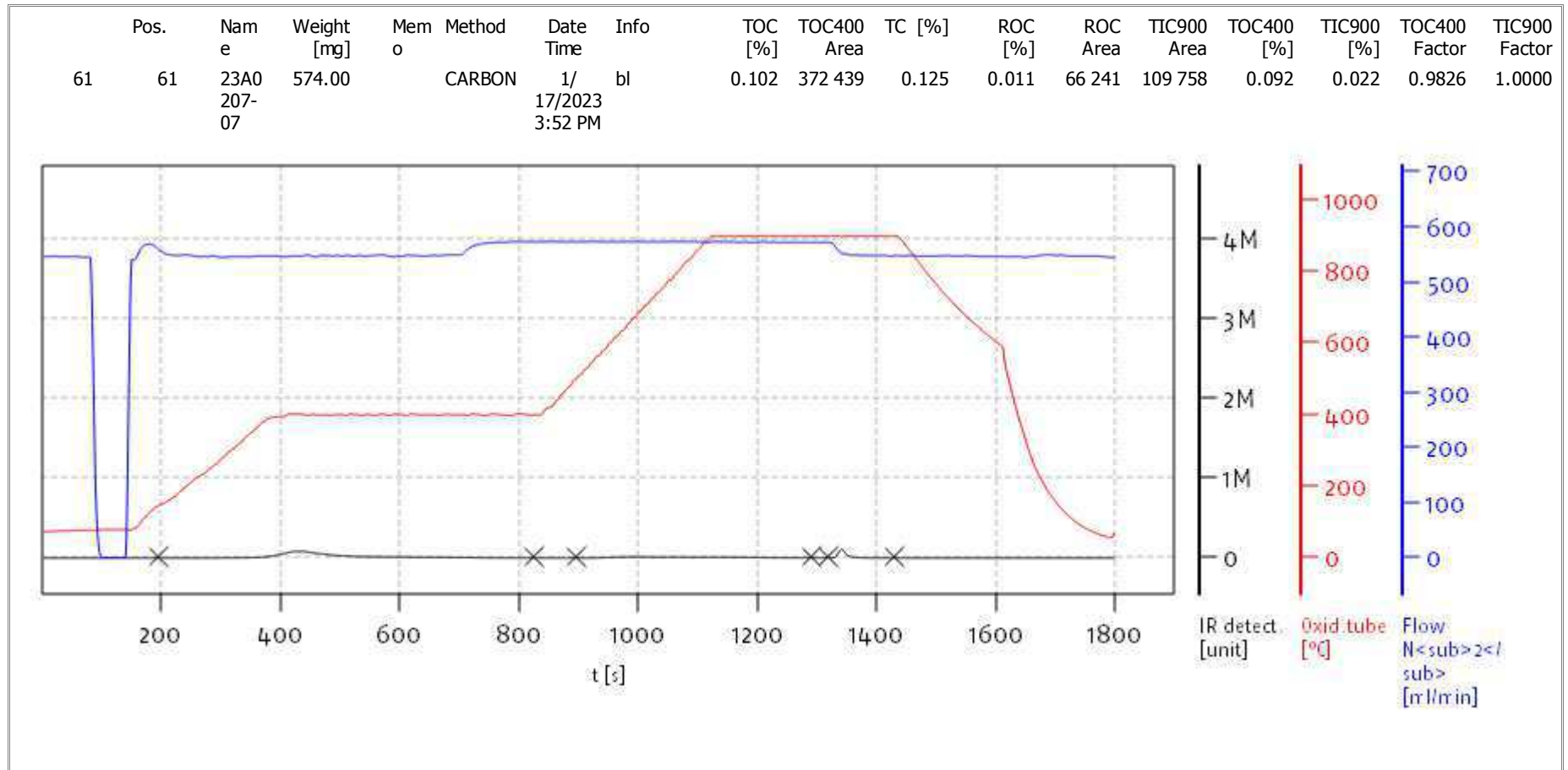
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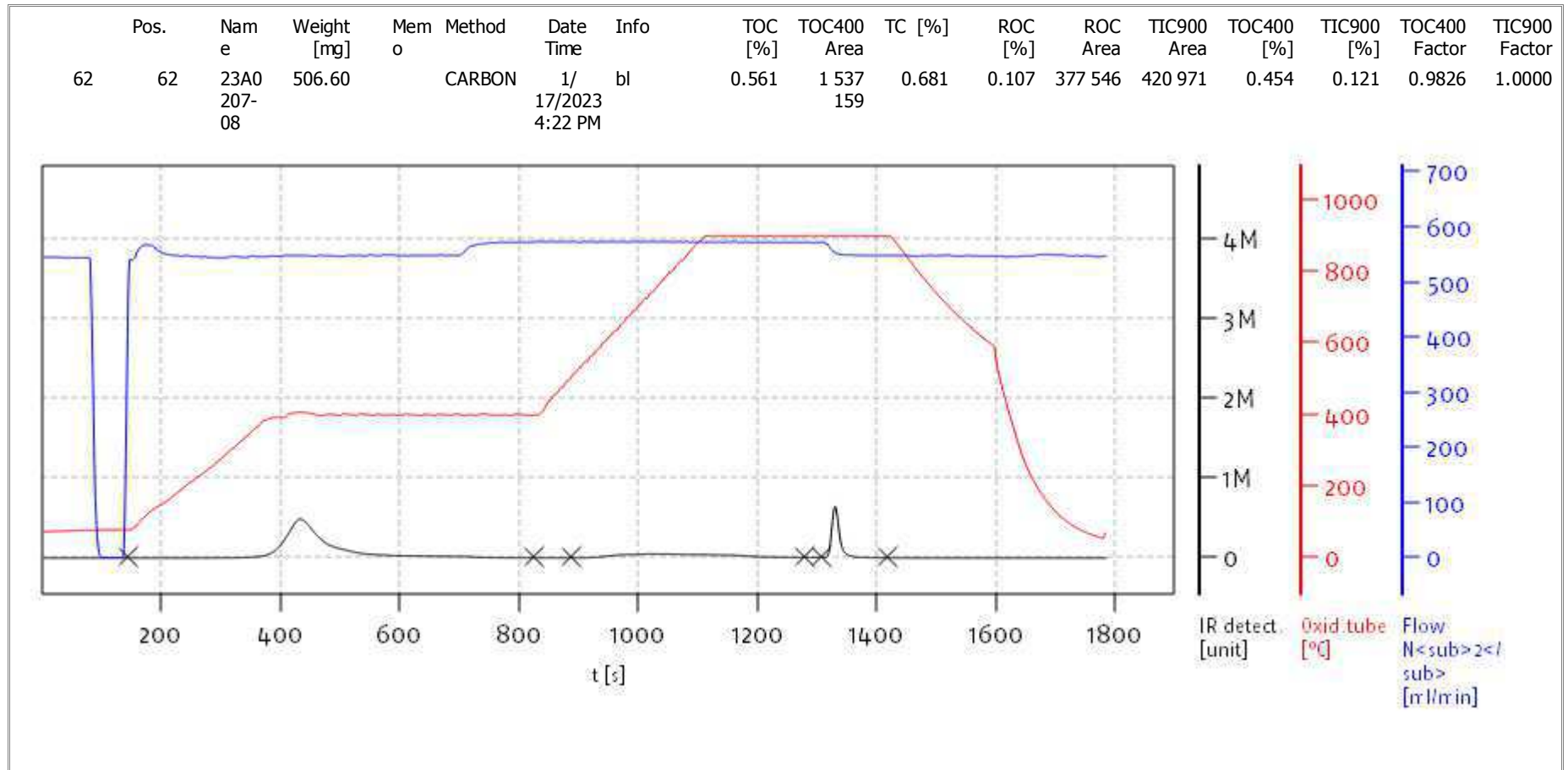
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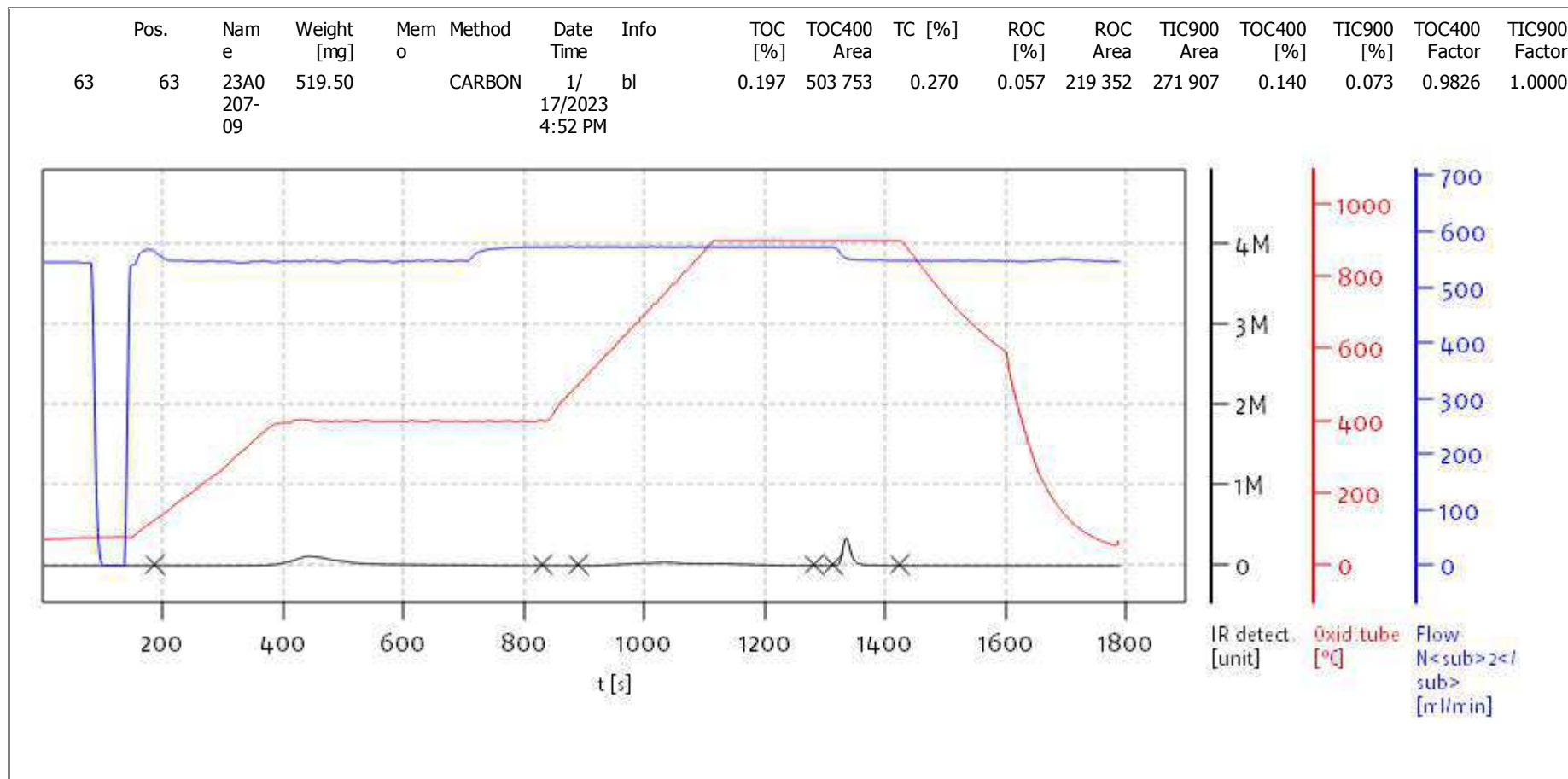
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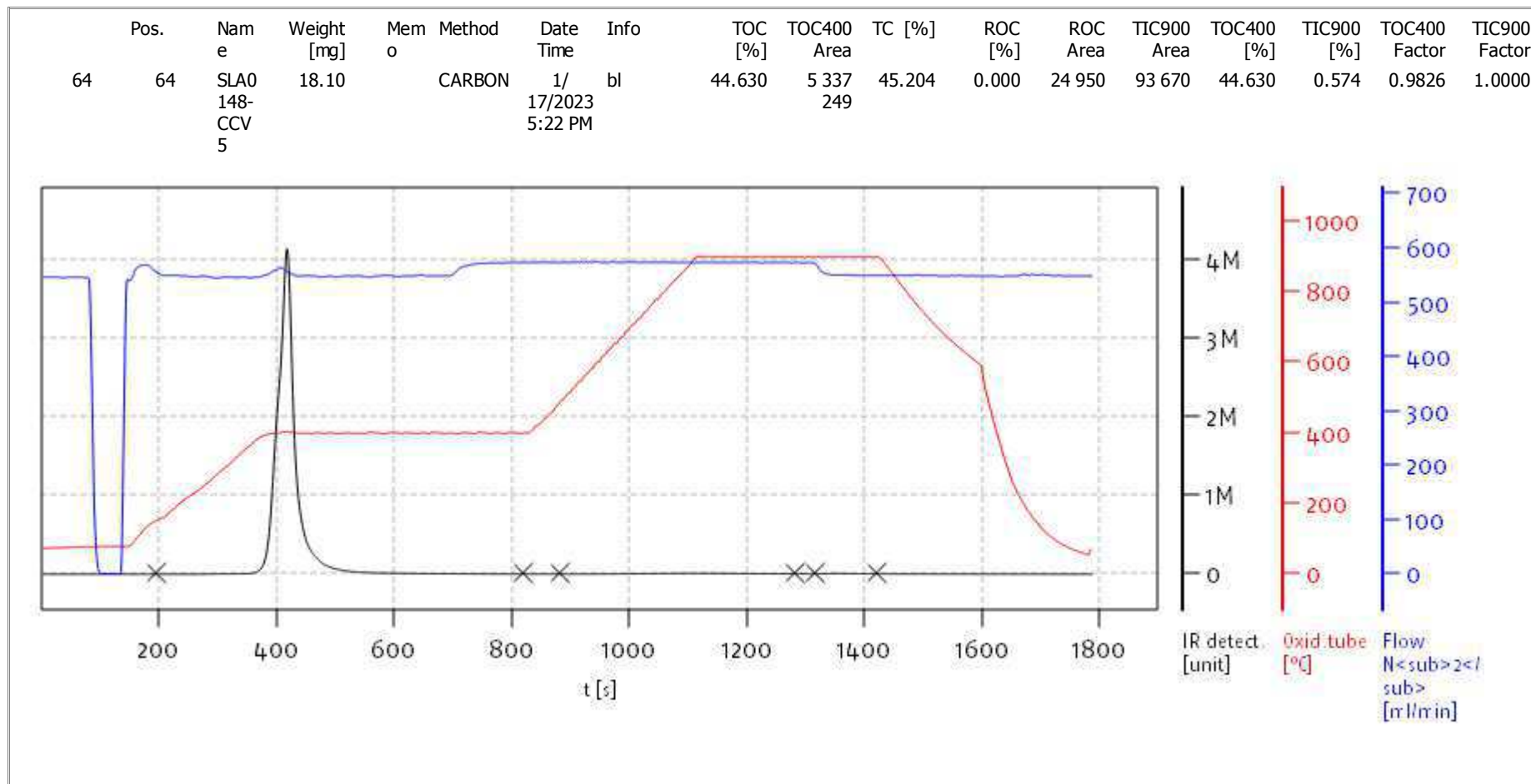
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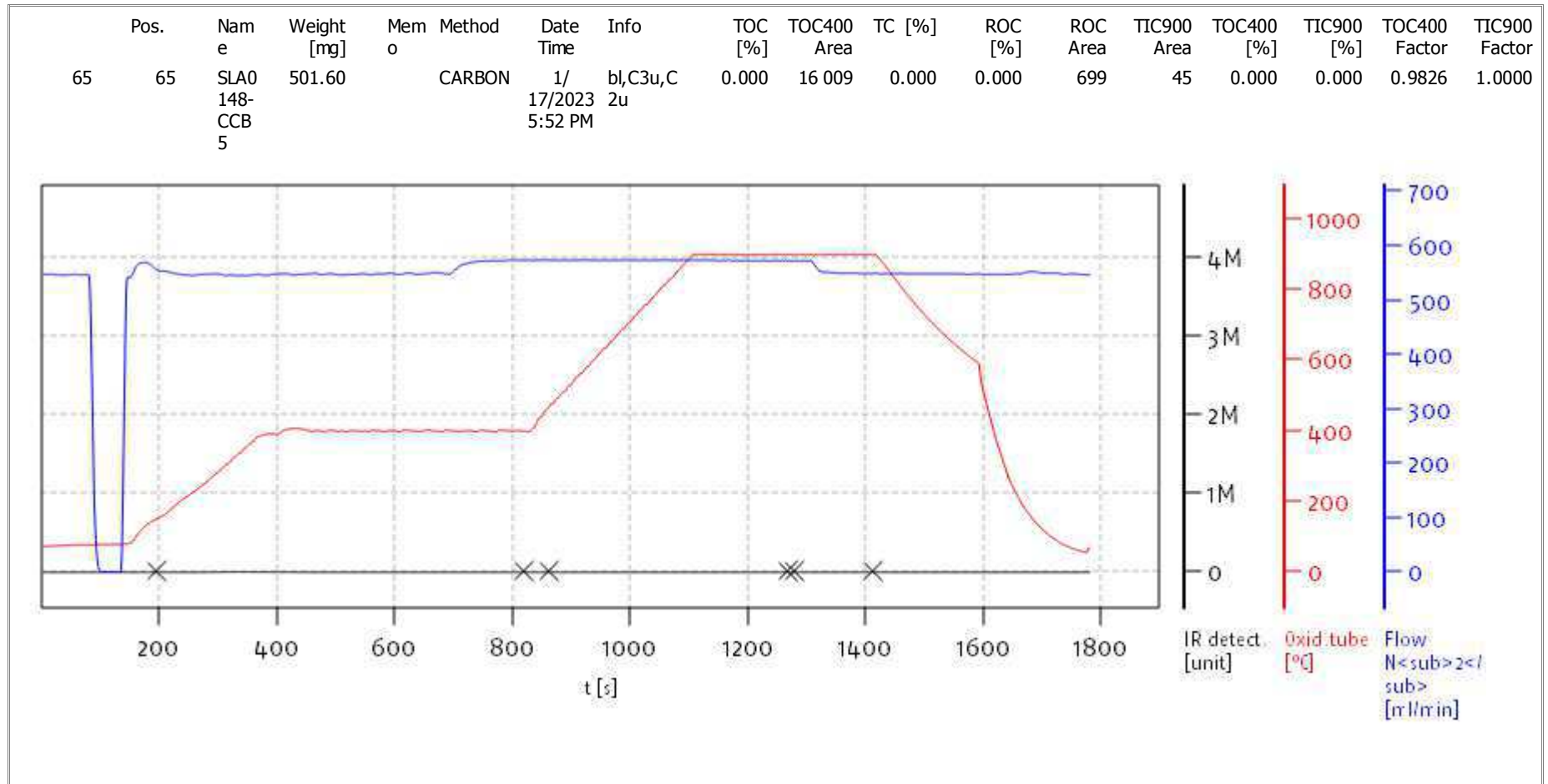
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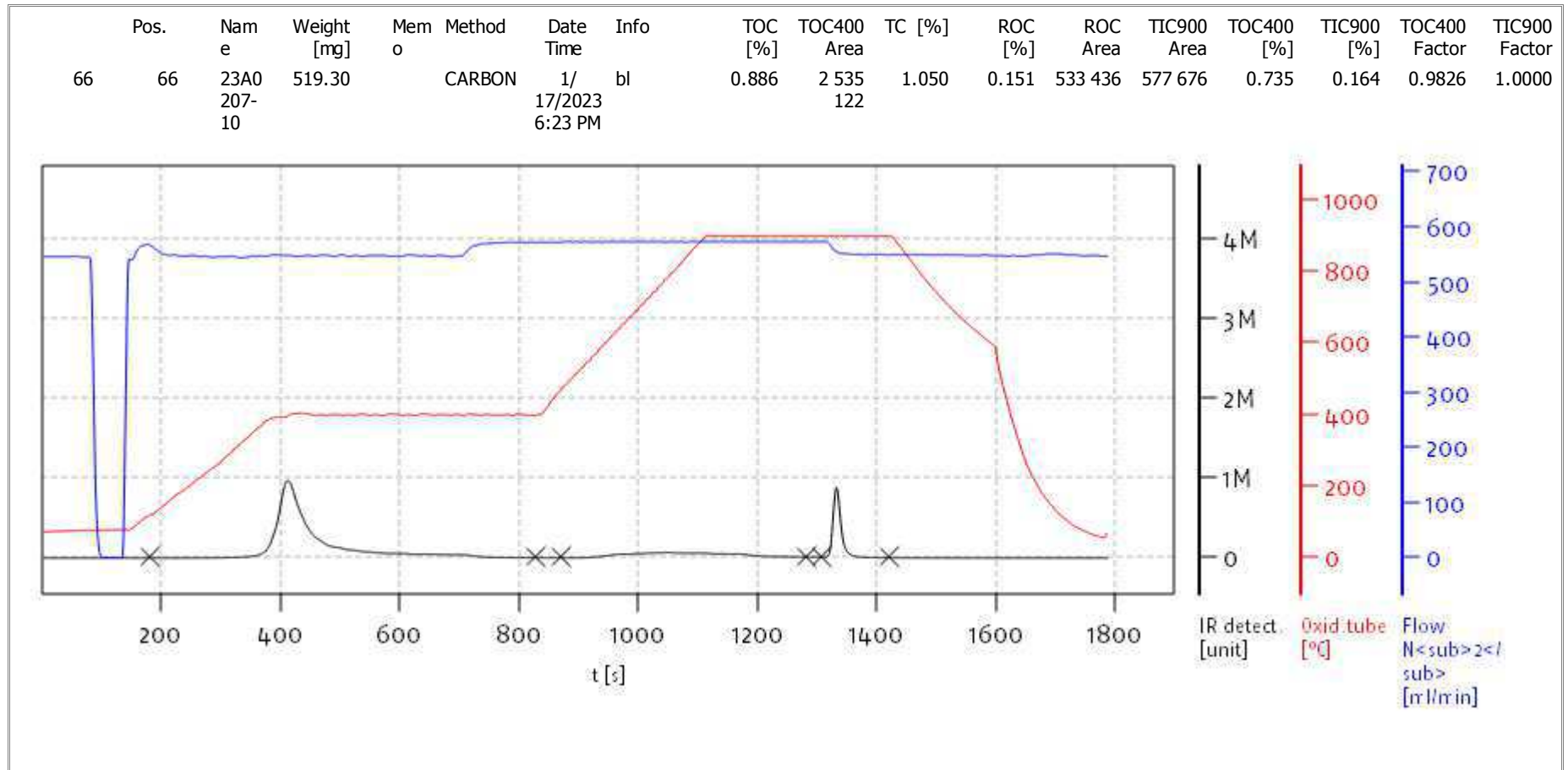
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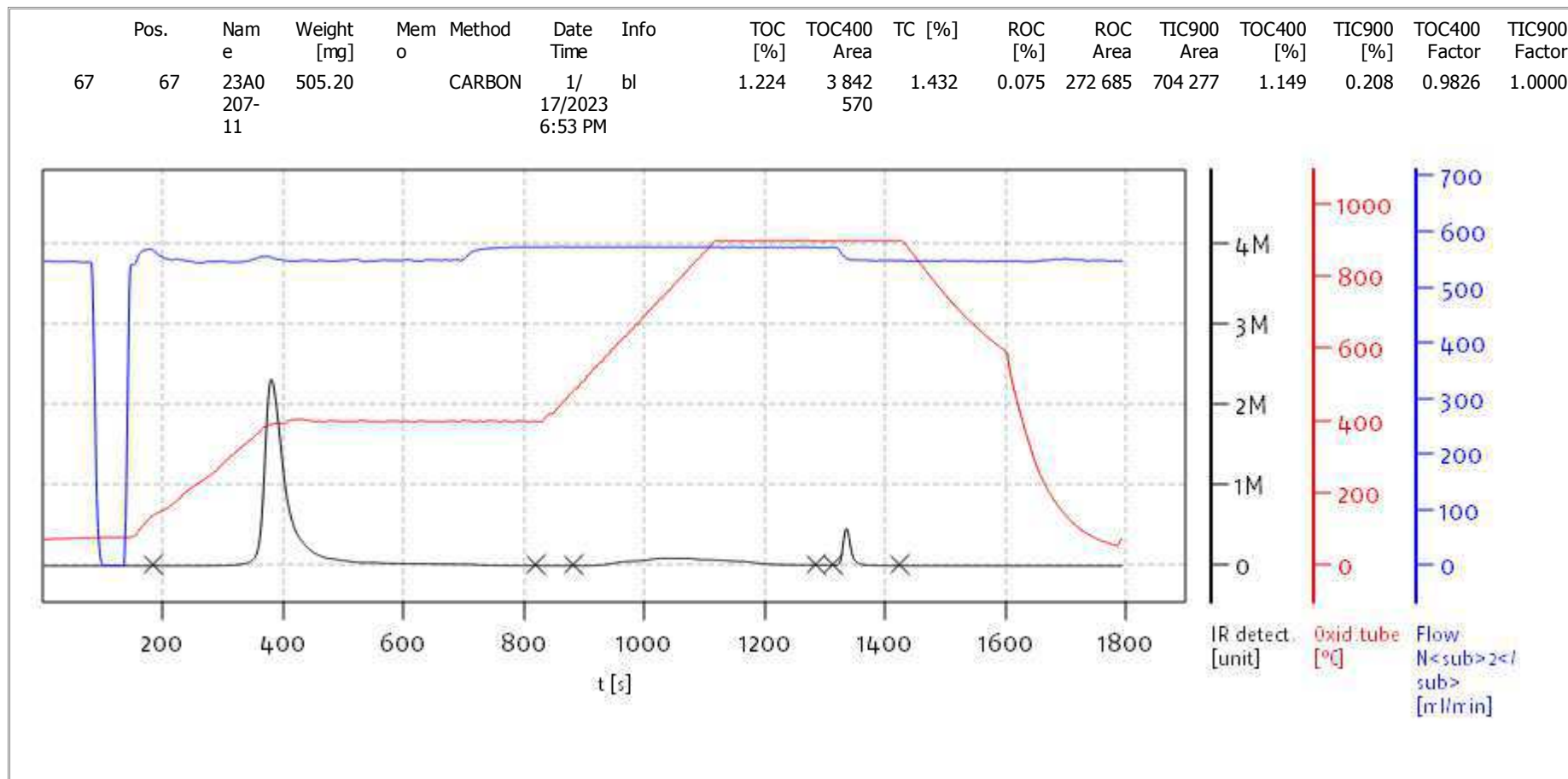
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Date: Wed Jan 18 13:37:19 2023



soliTOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

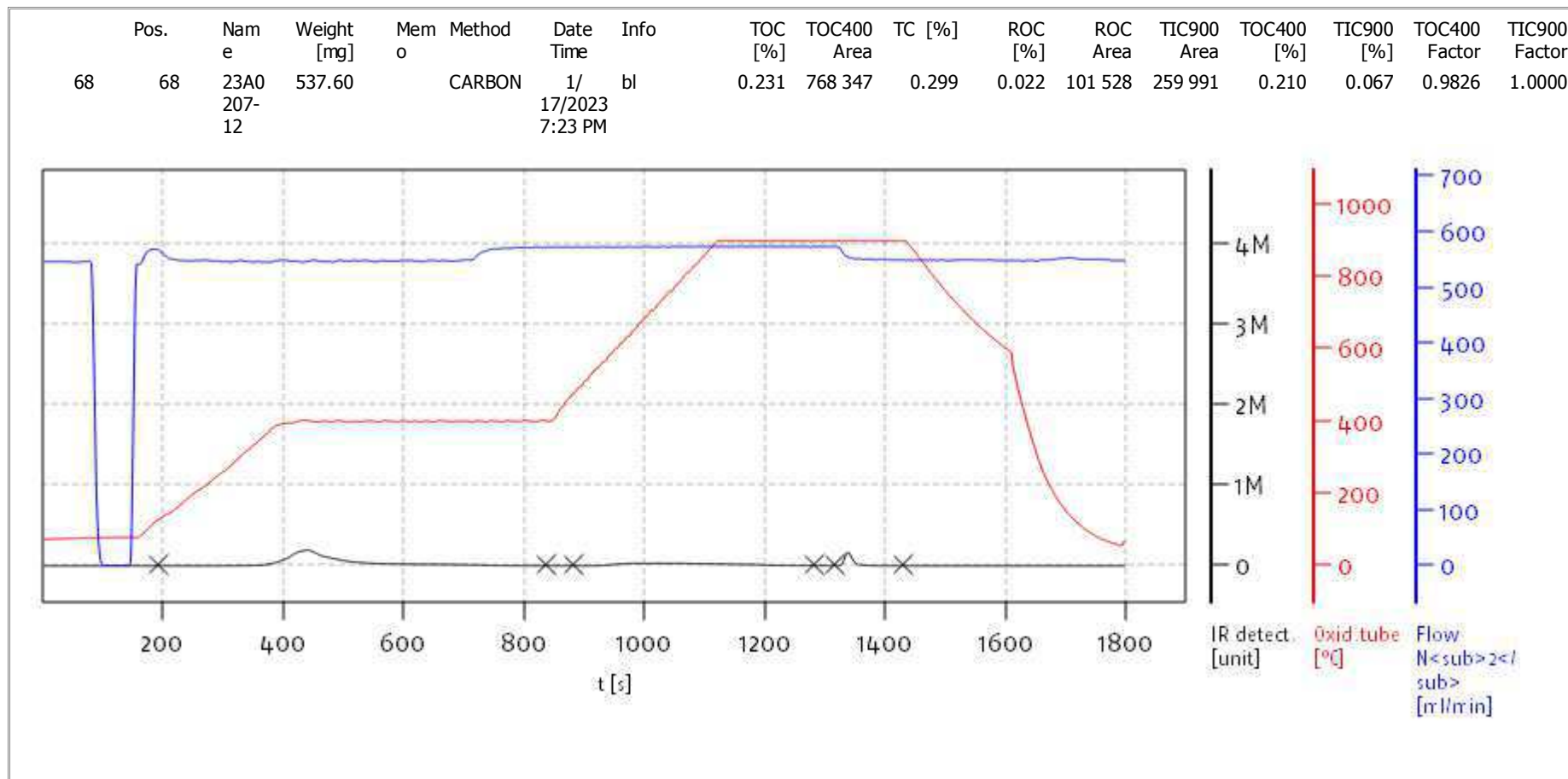
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solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

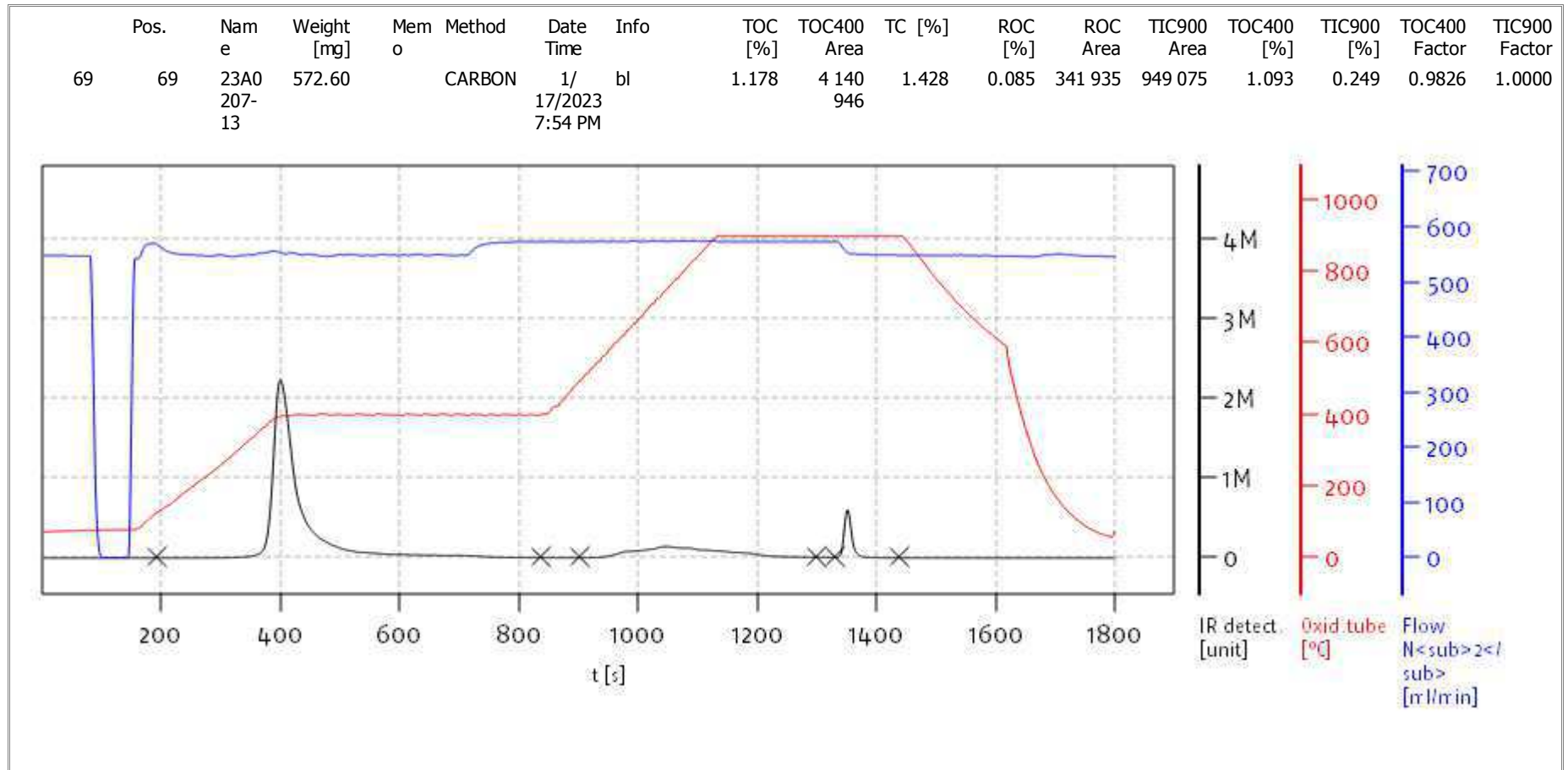
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Date: Wed Jan 18 13:37:19 2023



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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

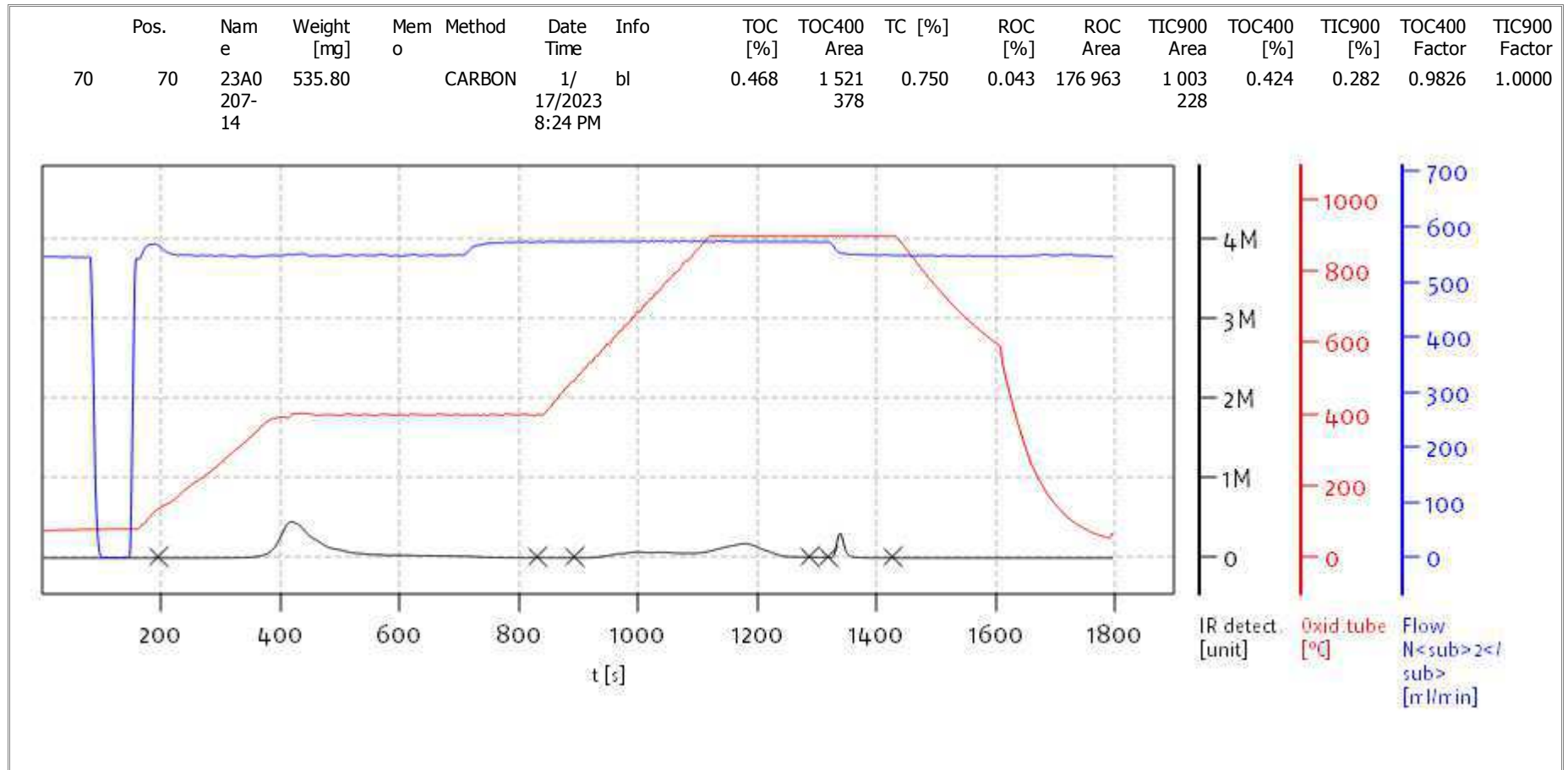
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

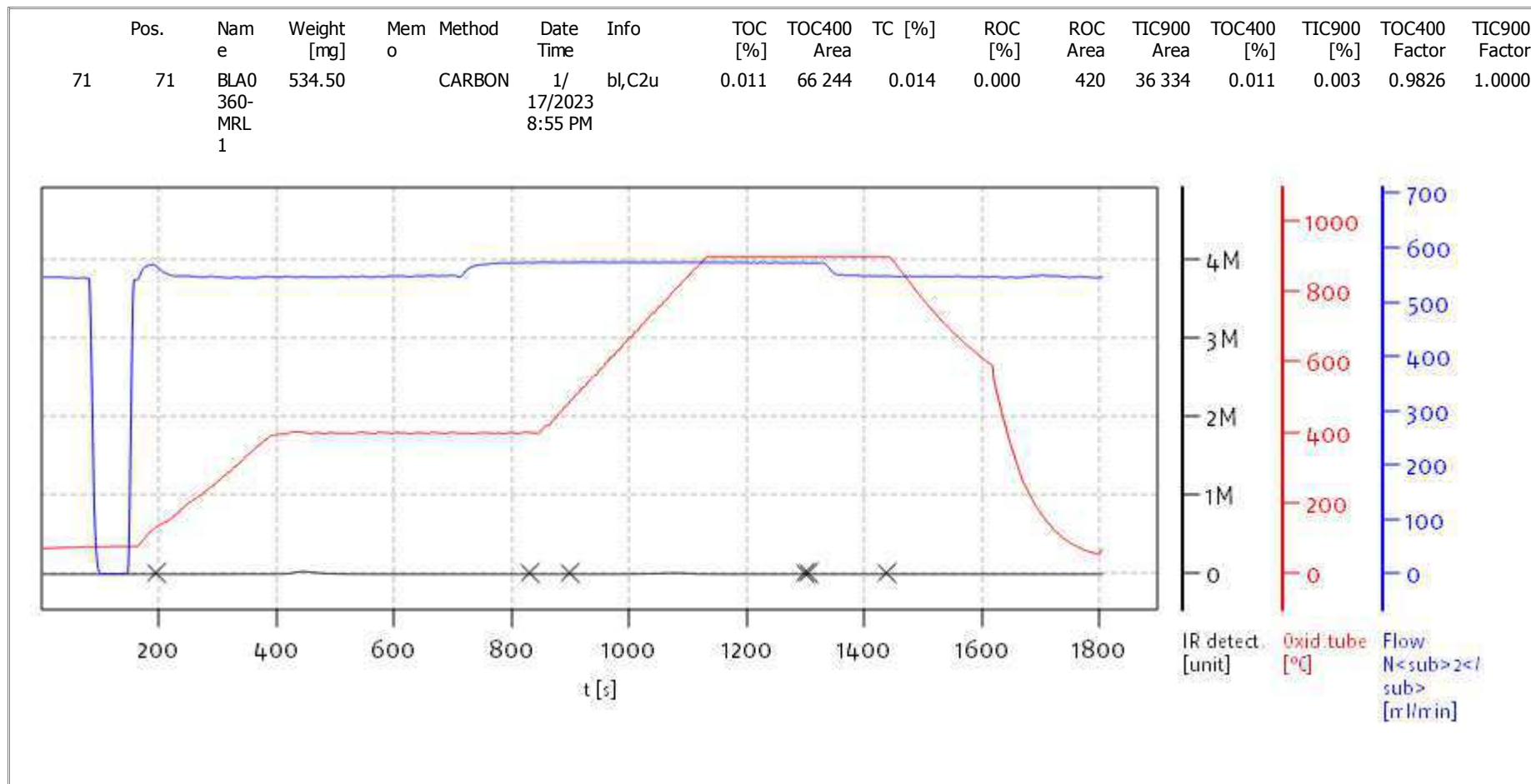
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

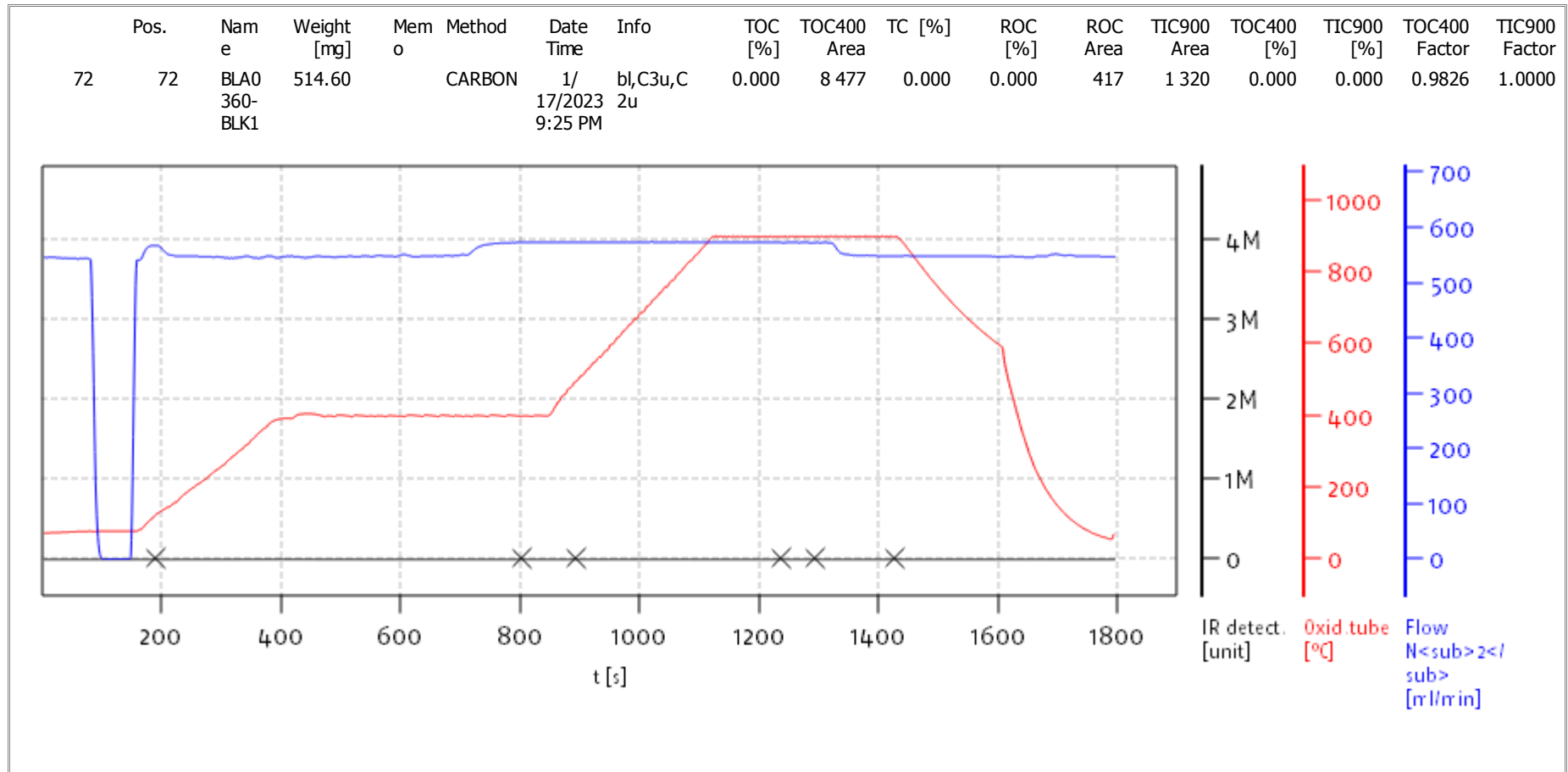
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solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC



**Soli TOC Cube, Carbon**  
**Balance: BAL3**  
**Analyst: DOE**



Name:

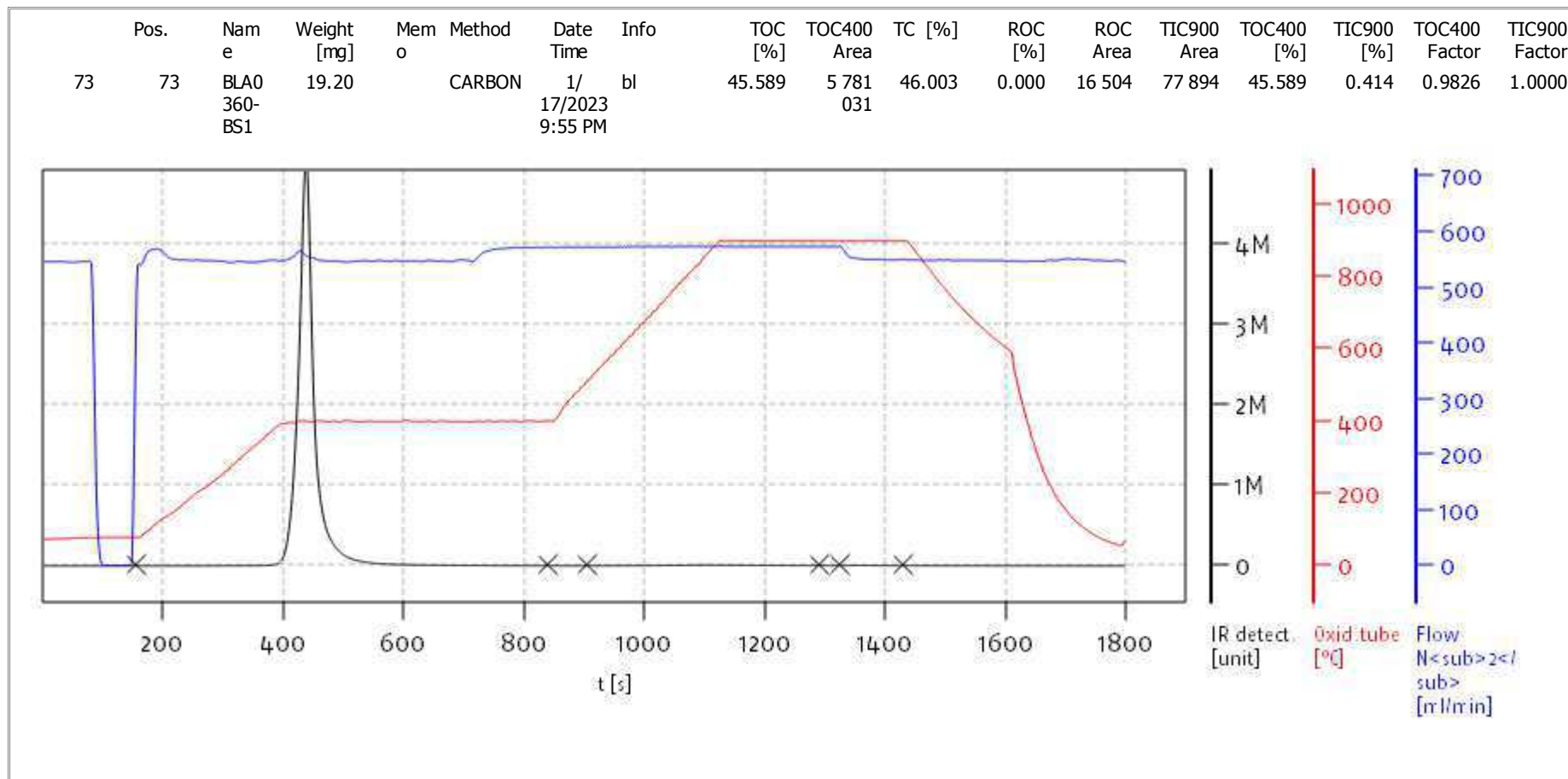
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solITOC V2.0.2 (31015f9) 2018-11-19  
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Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

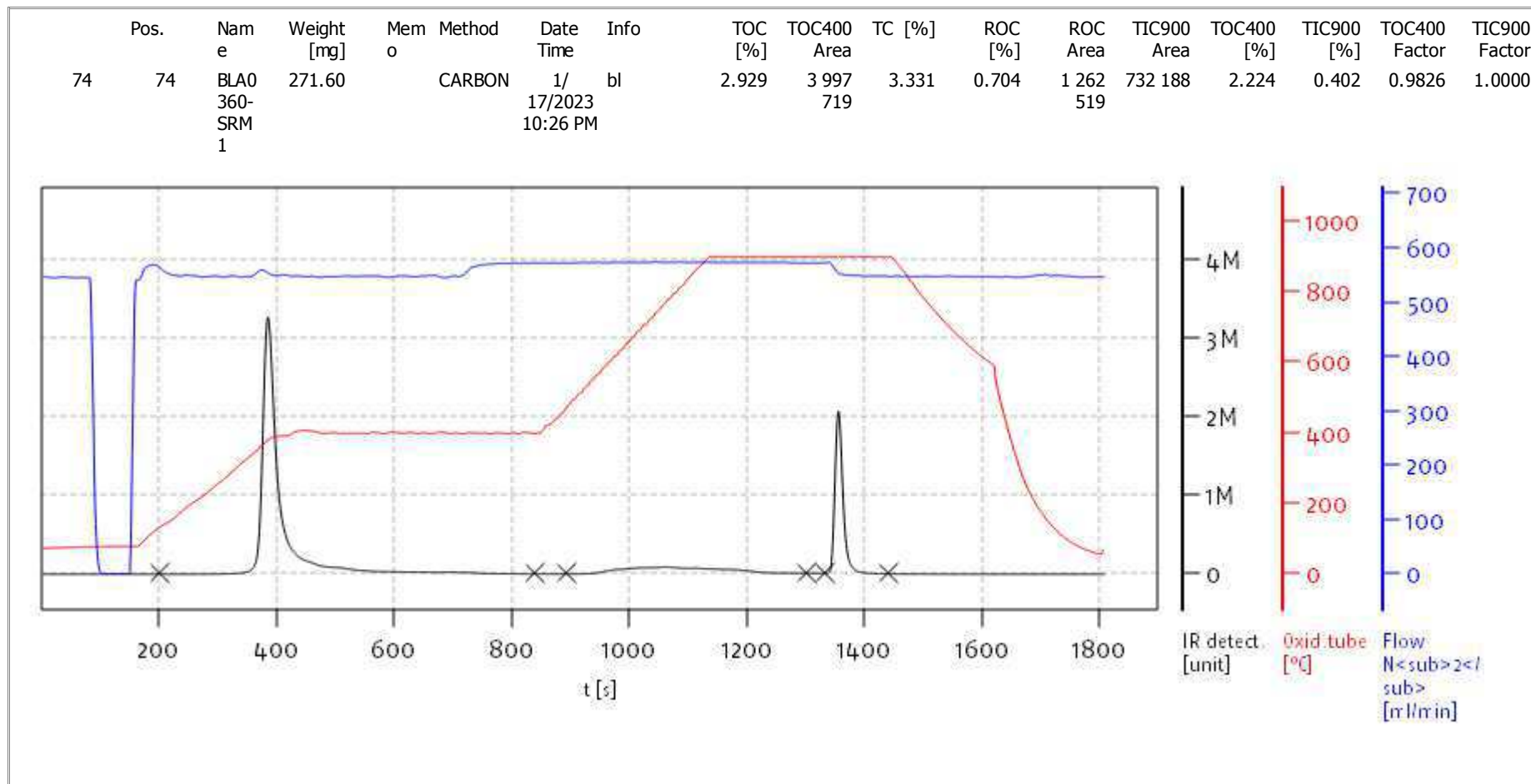
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

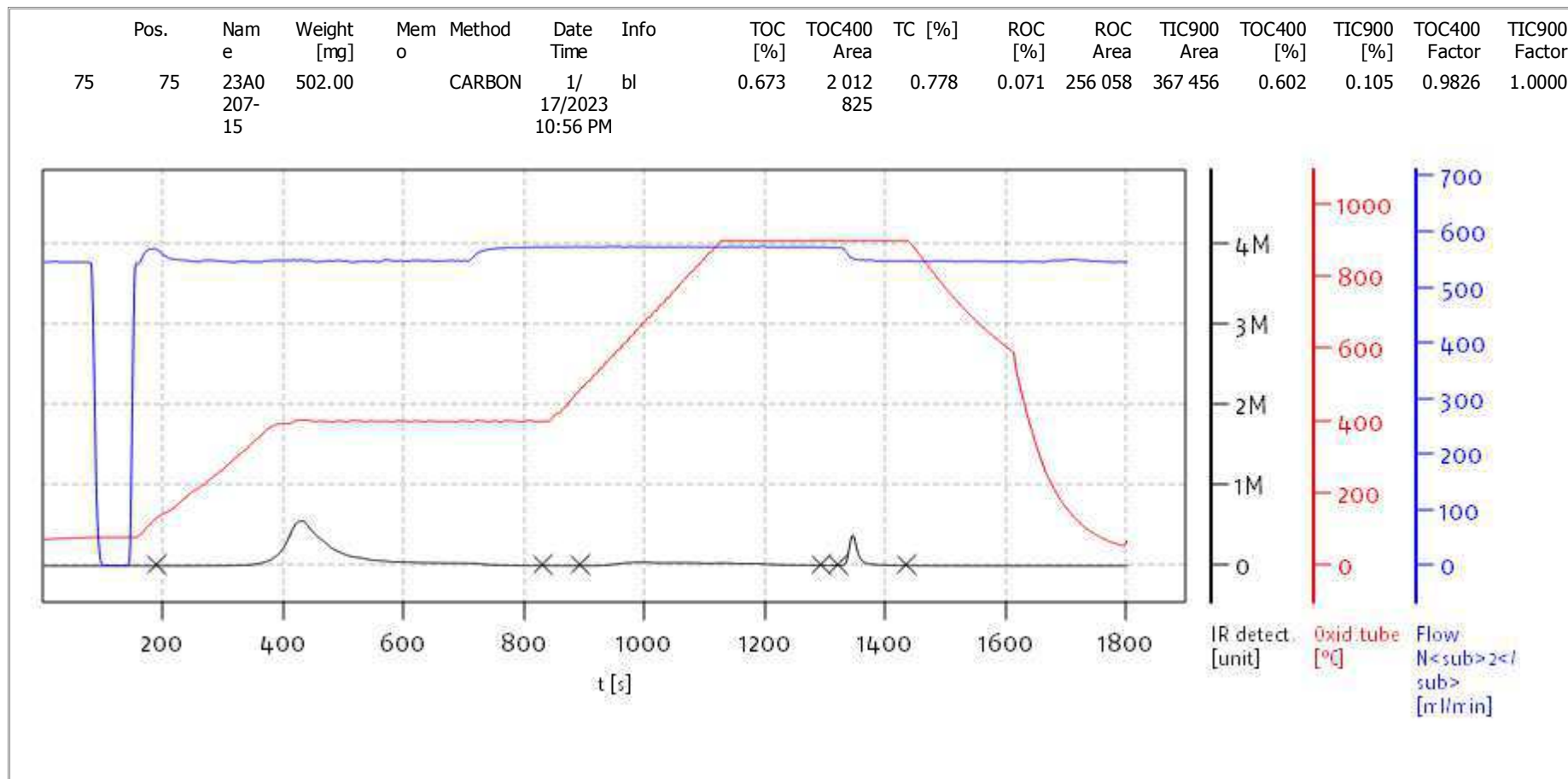
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

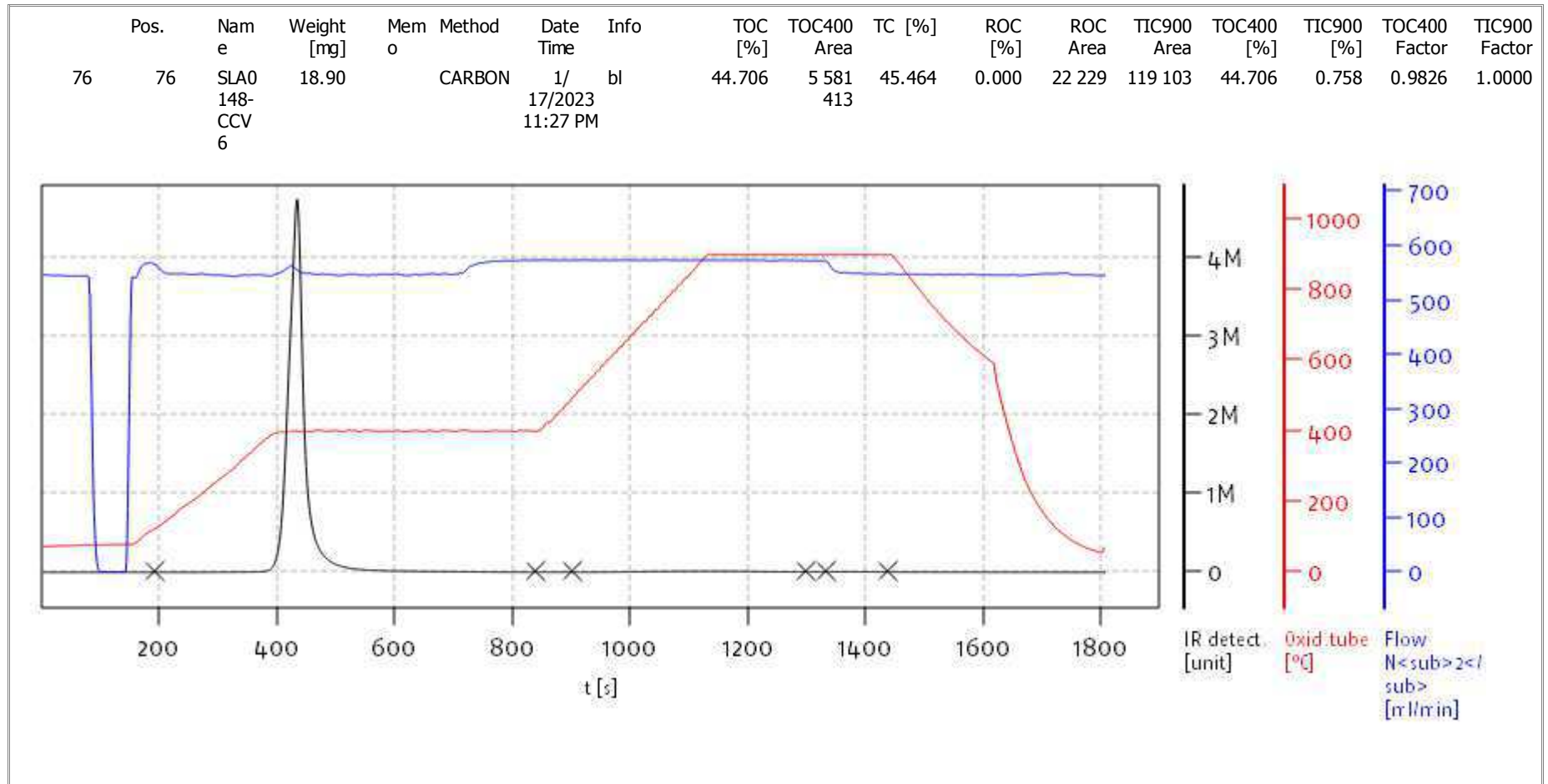
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solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

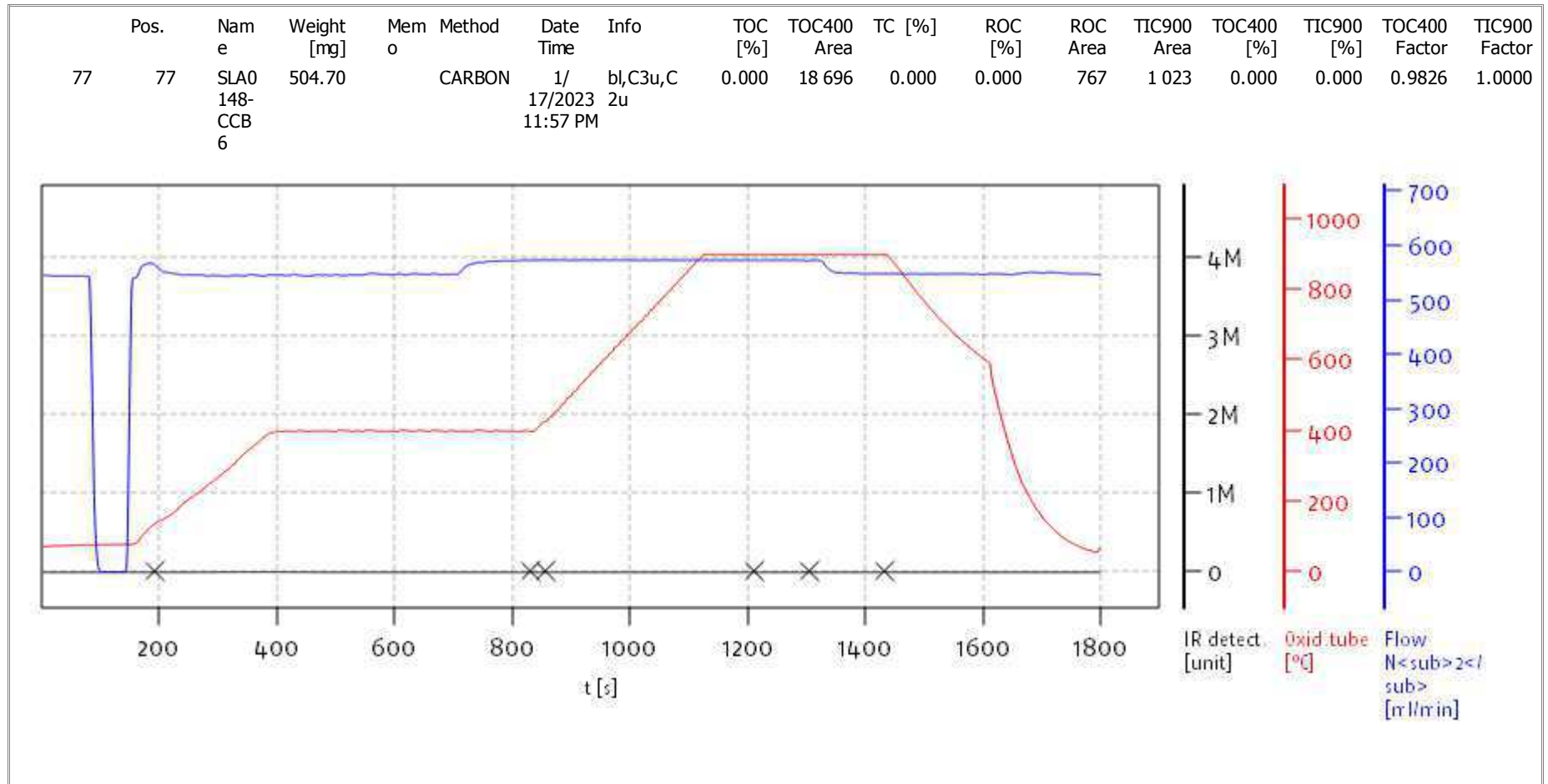
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

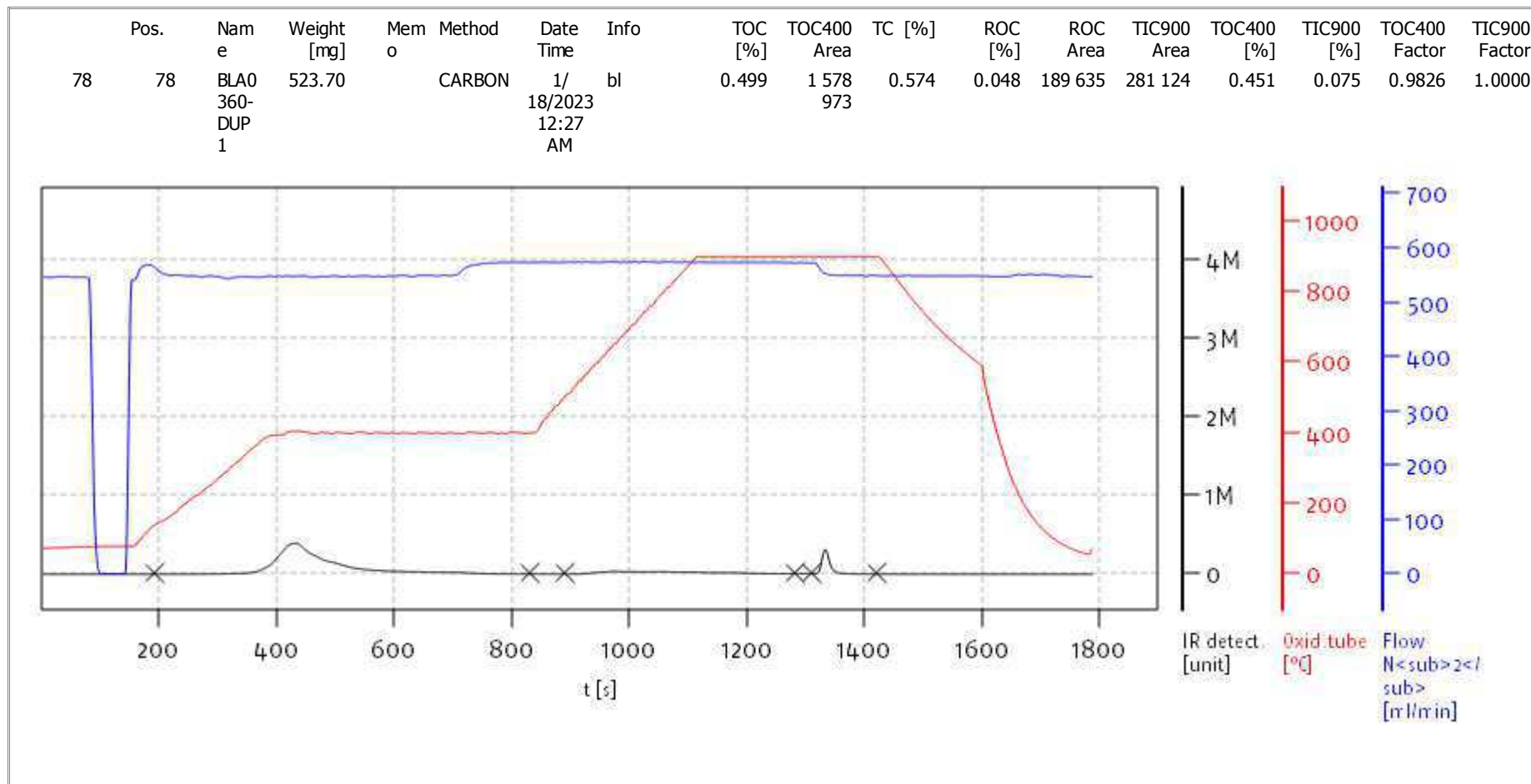
Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Jan 18 13:37:19 2023

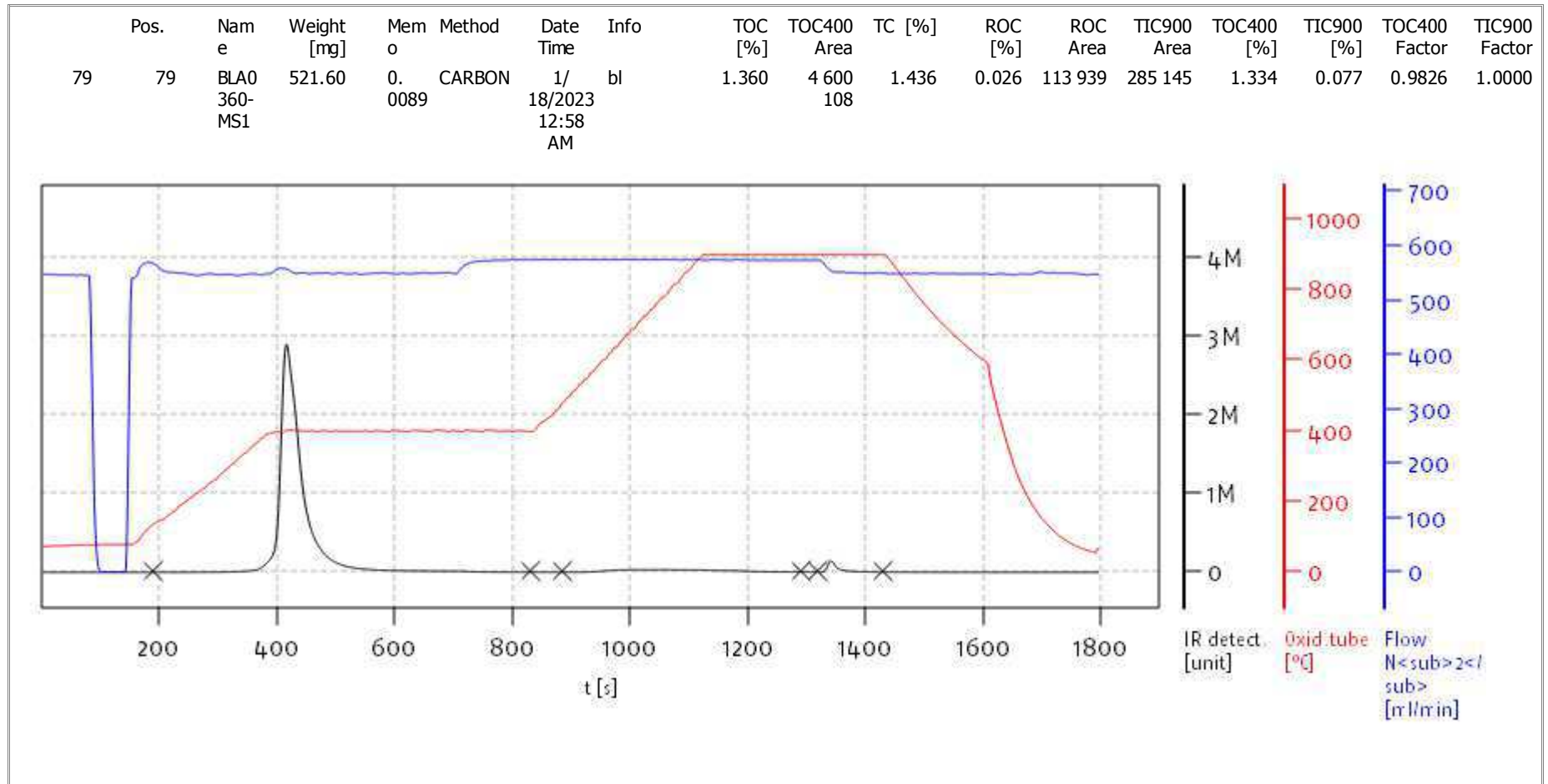


solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC





**Soli TOC Cube, Carbon**  
**Balance: BAL3**  
**Analyst: DOE**



Name:

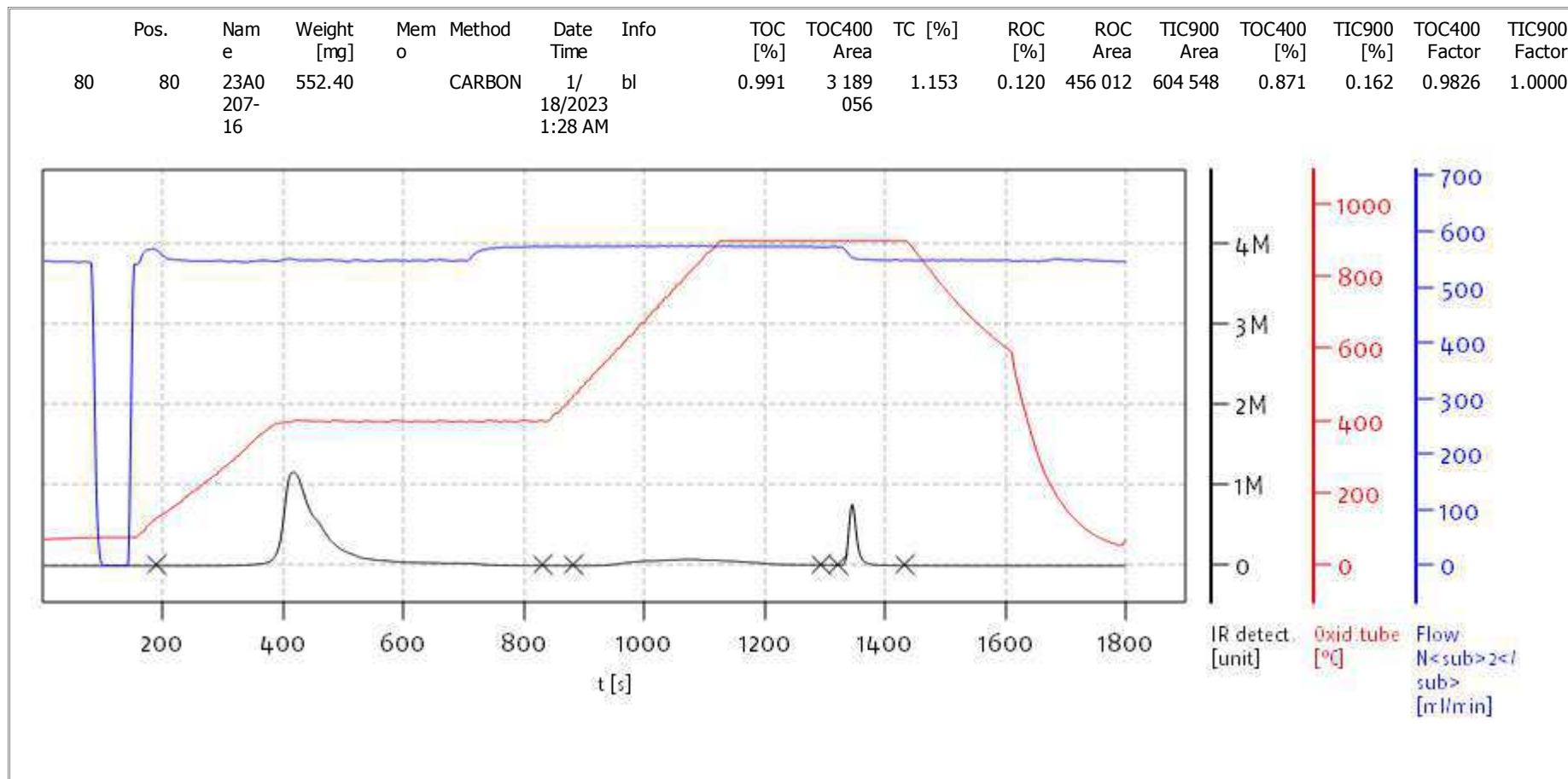
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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

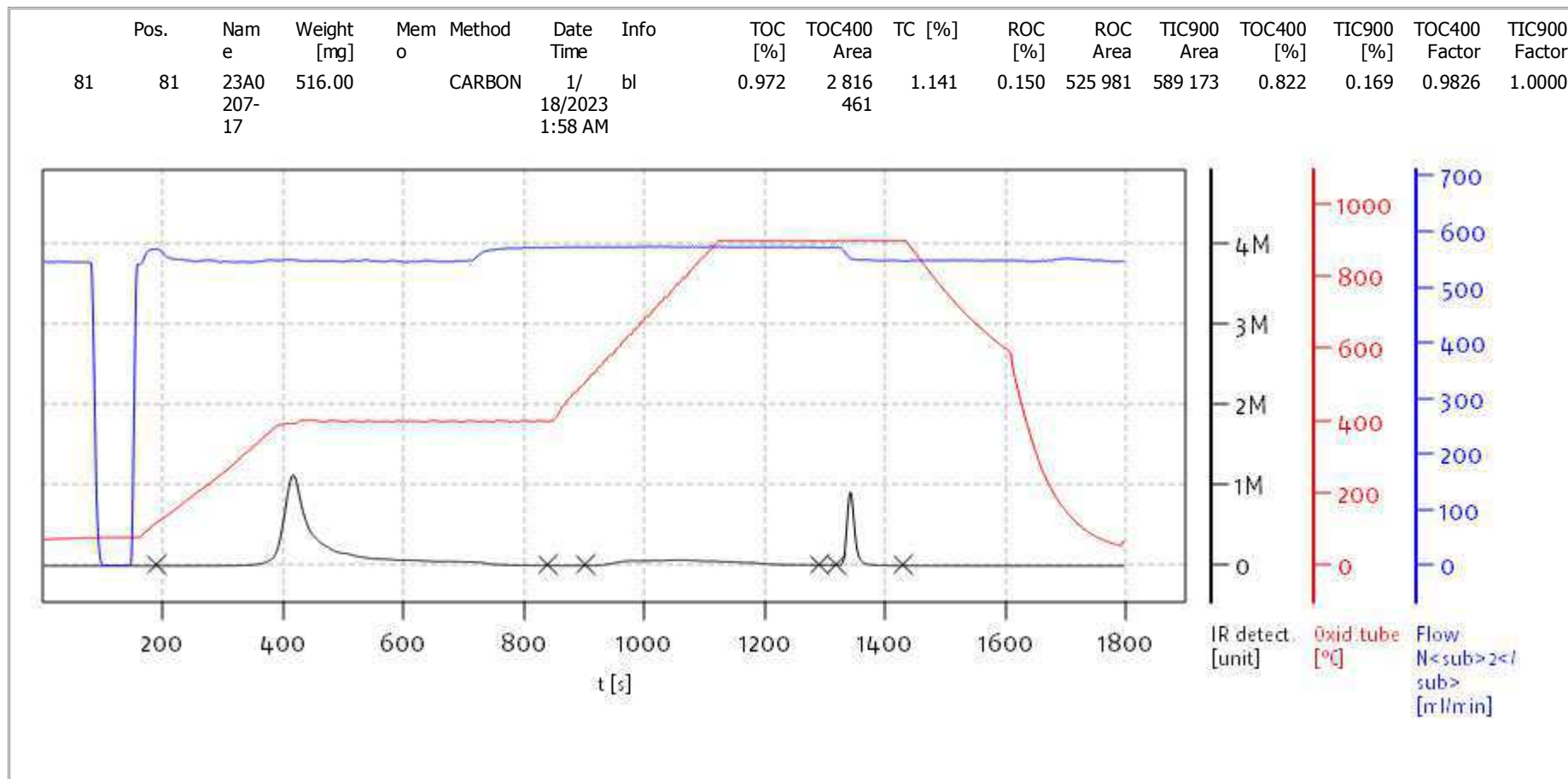
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solITOC V2.0.2 (31015f9) 2018-11-19  
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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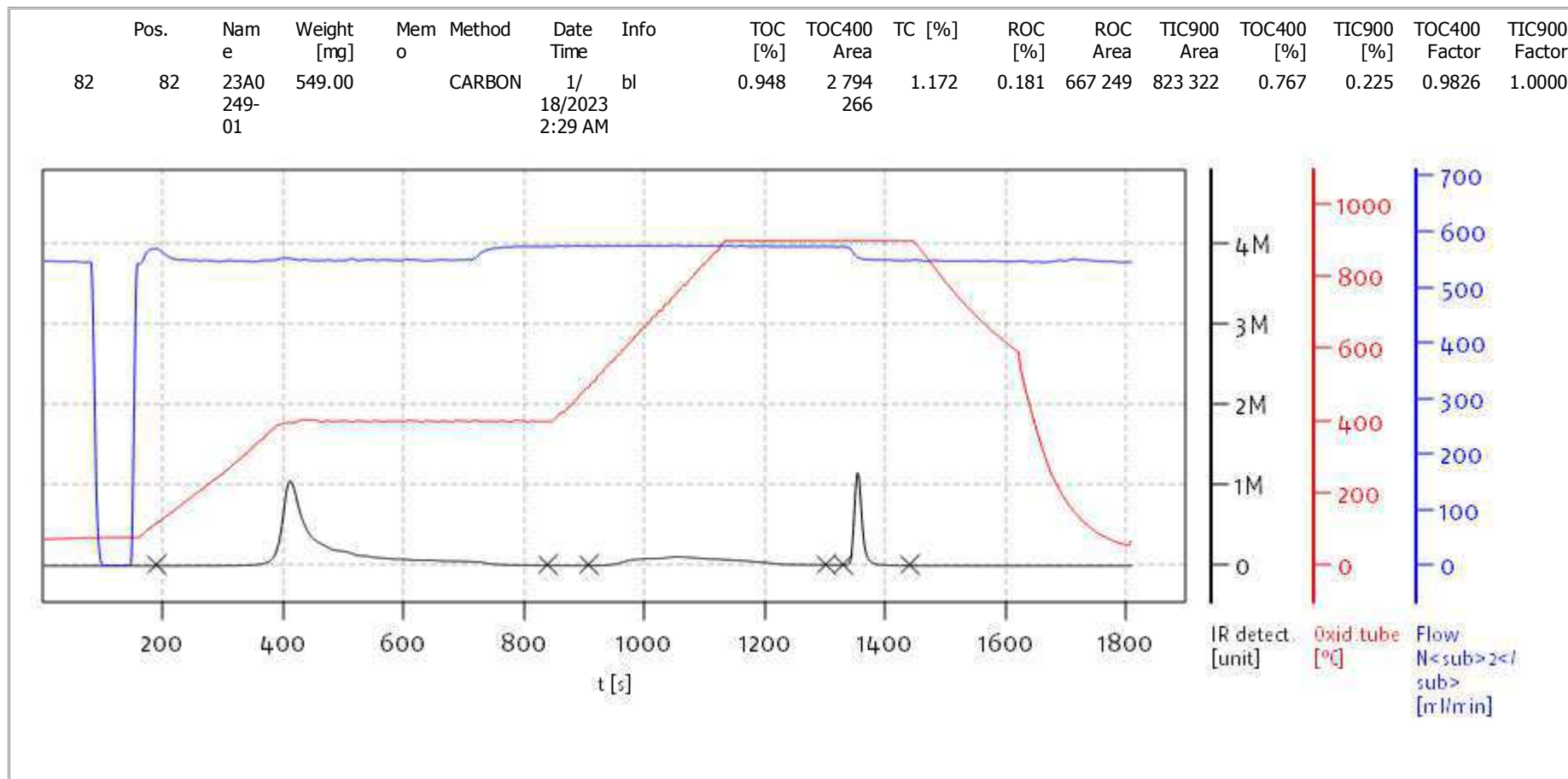
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soliTOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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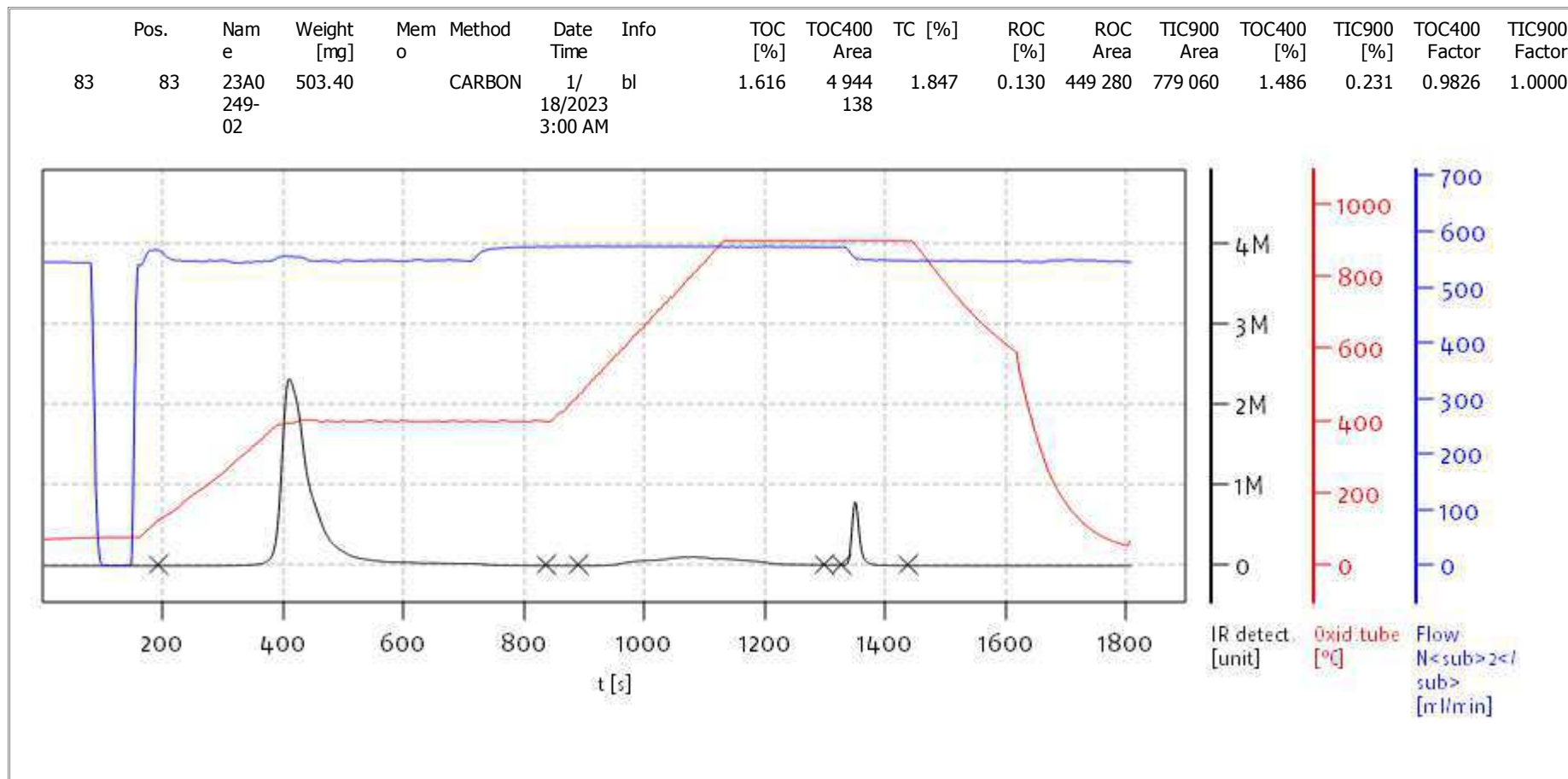
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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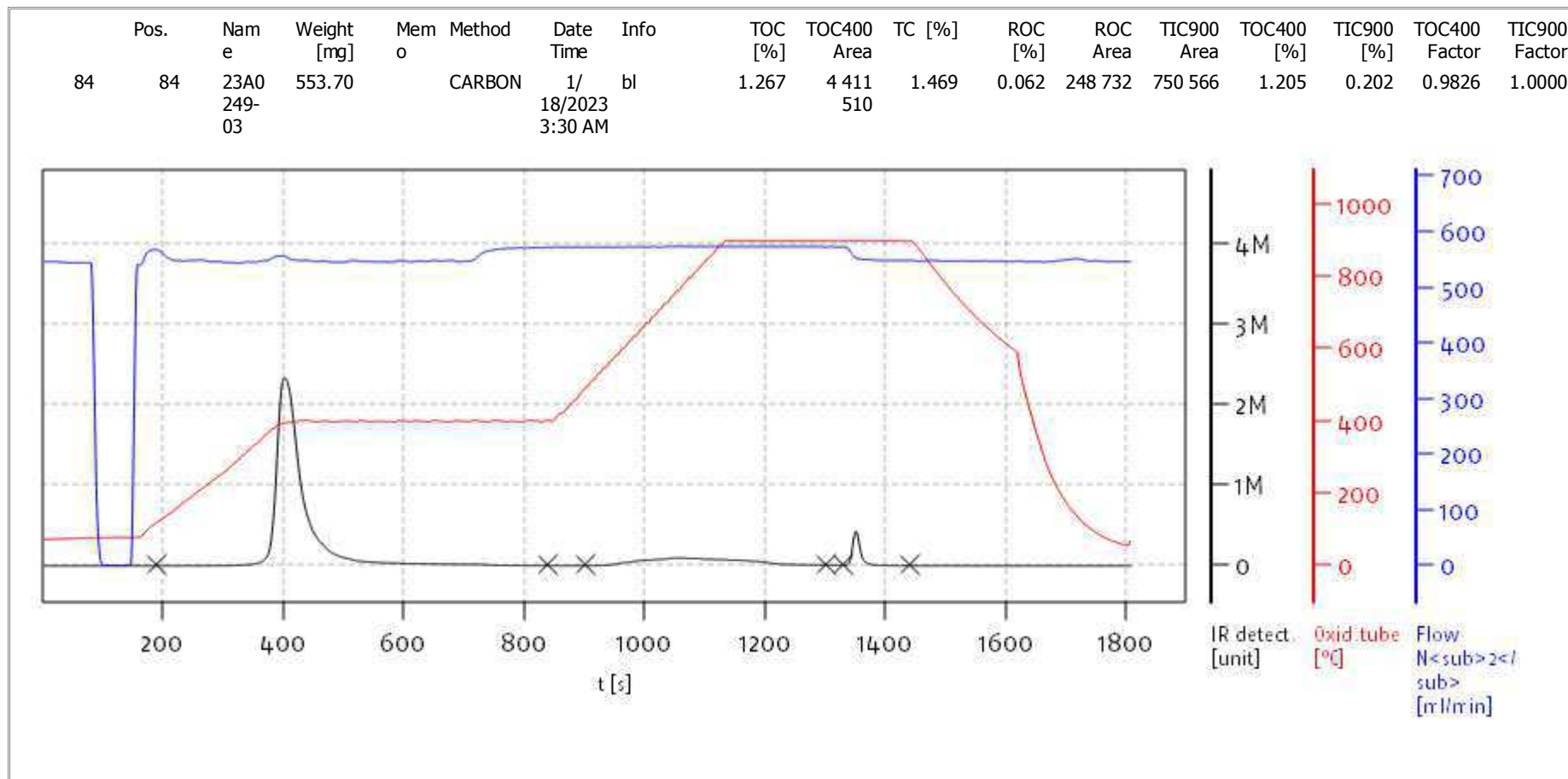
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solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

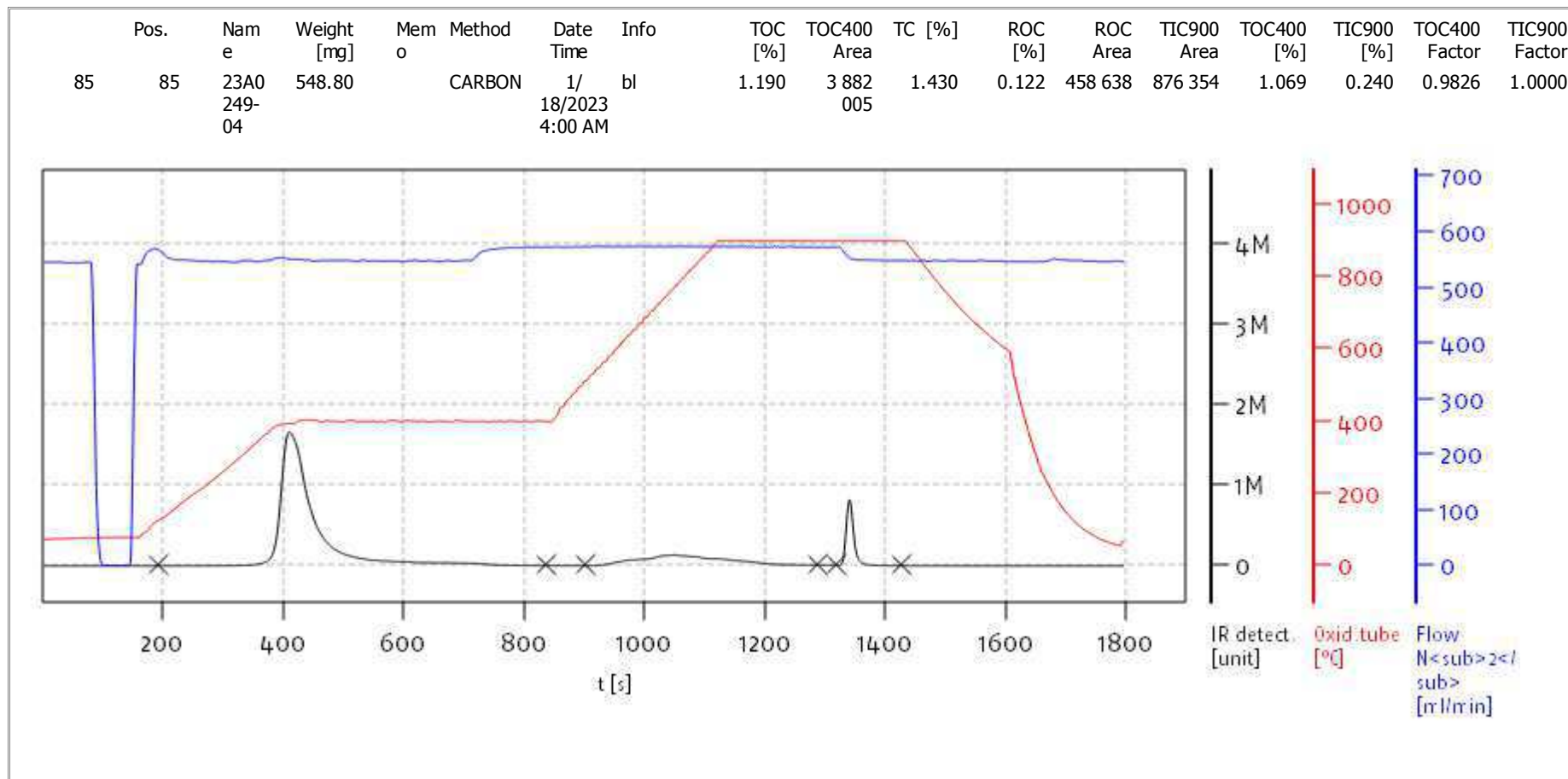
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soliTOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

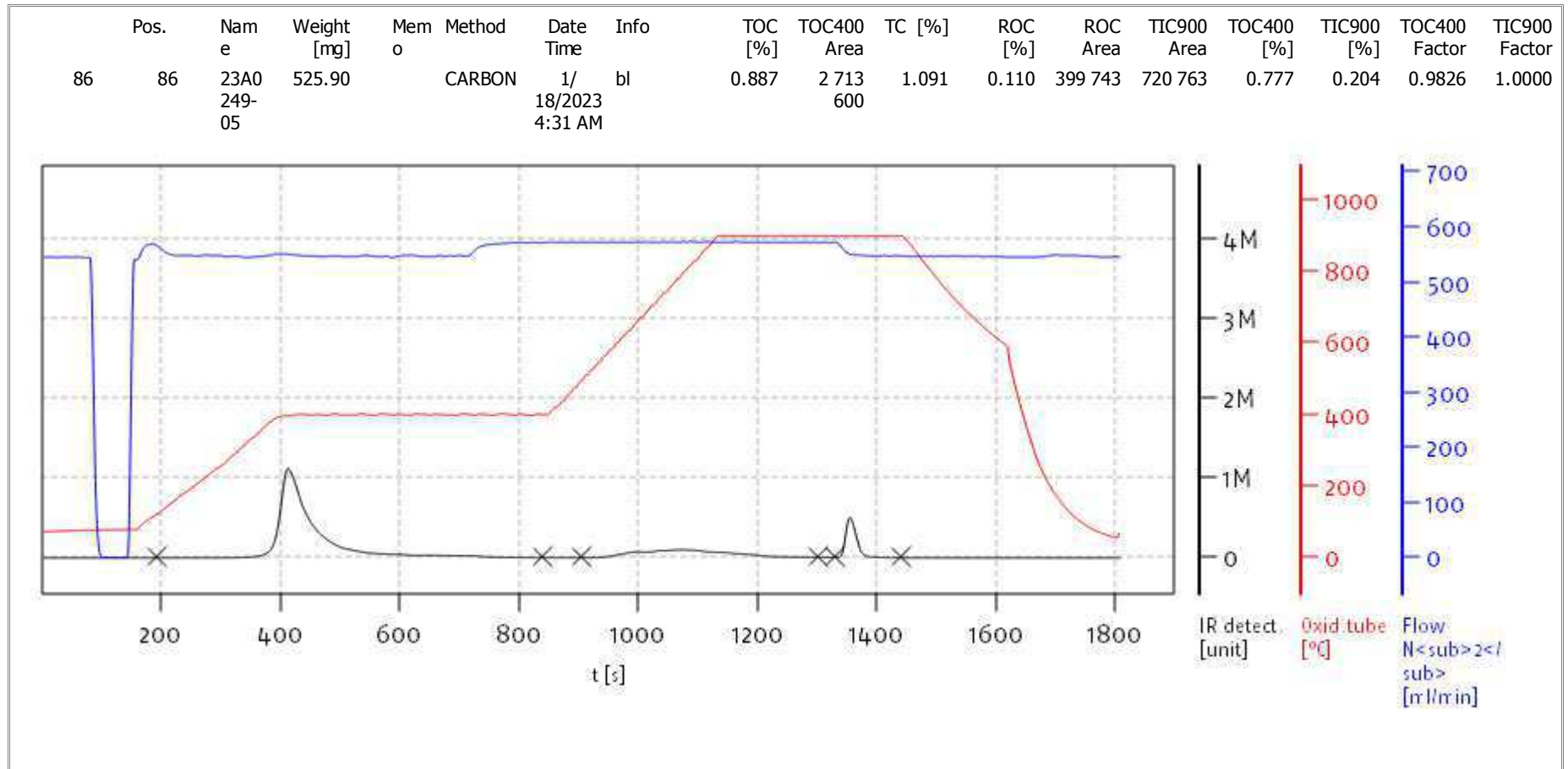
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 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
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Name:

Access: solITOC superuser

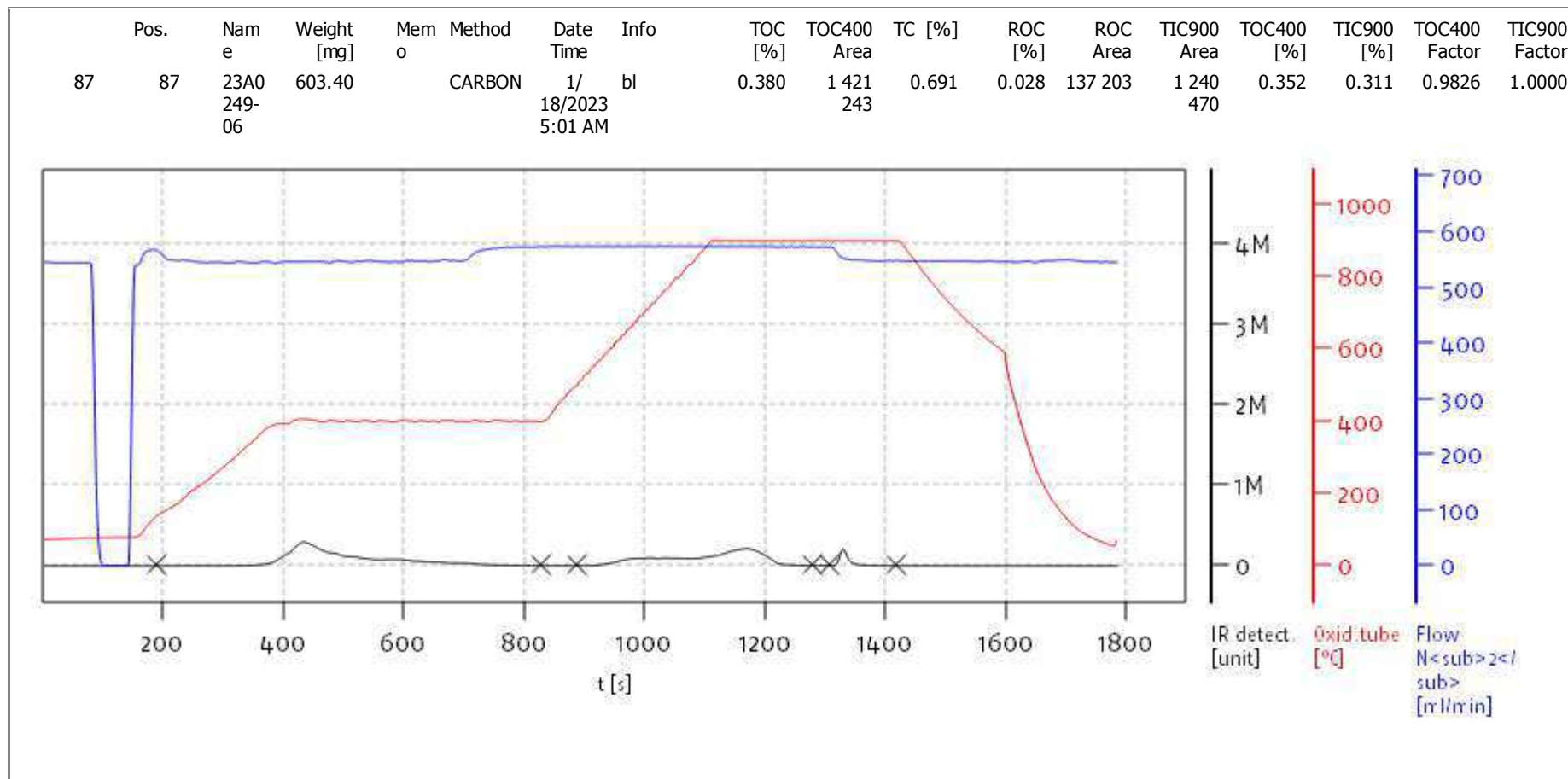
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 Serial No: 0300.181017  
 Mode CCC



Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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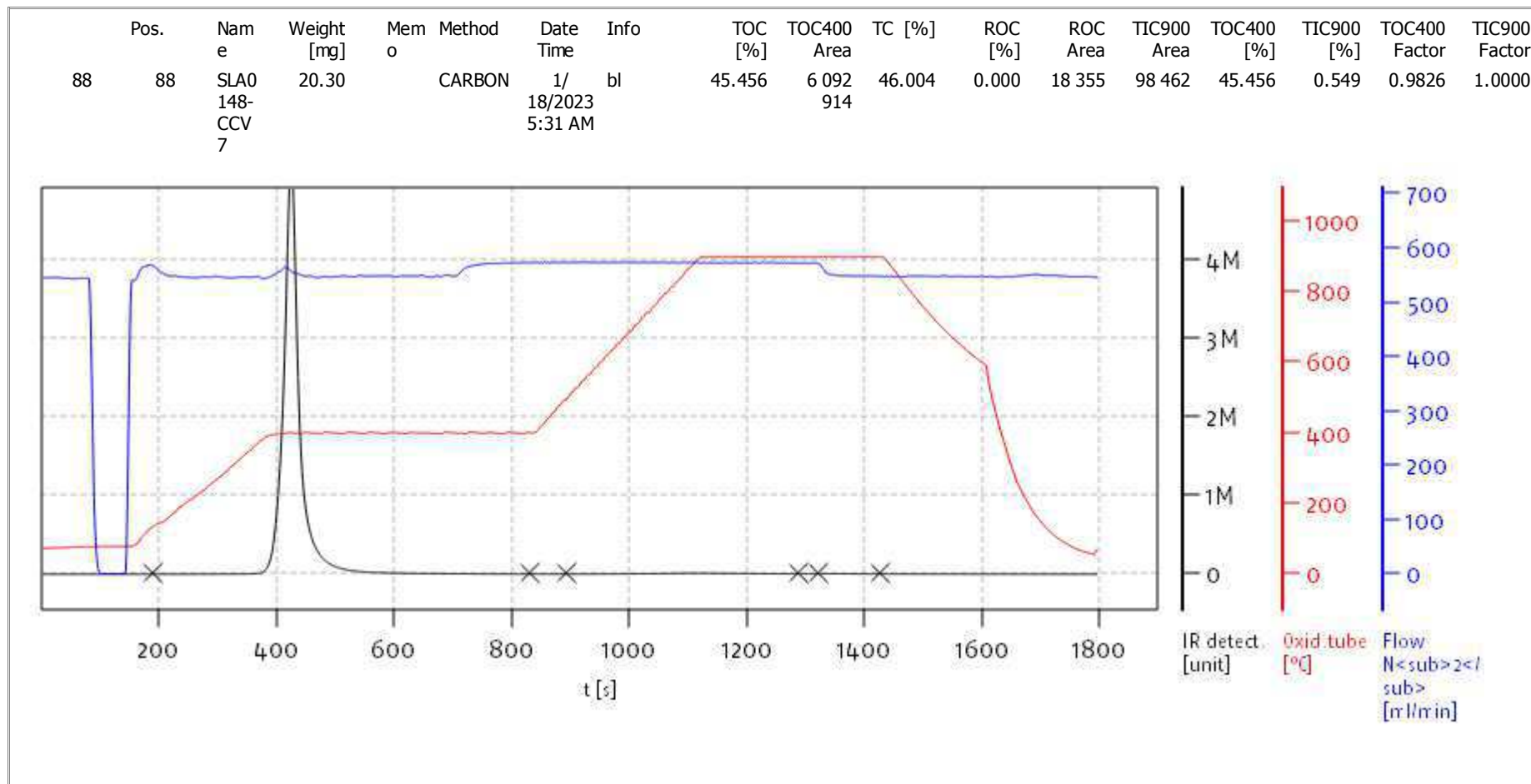
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Soli TOC Cube, Carbon  
 Balance: BAL3  
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Name:

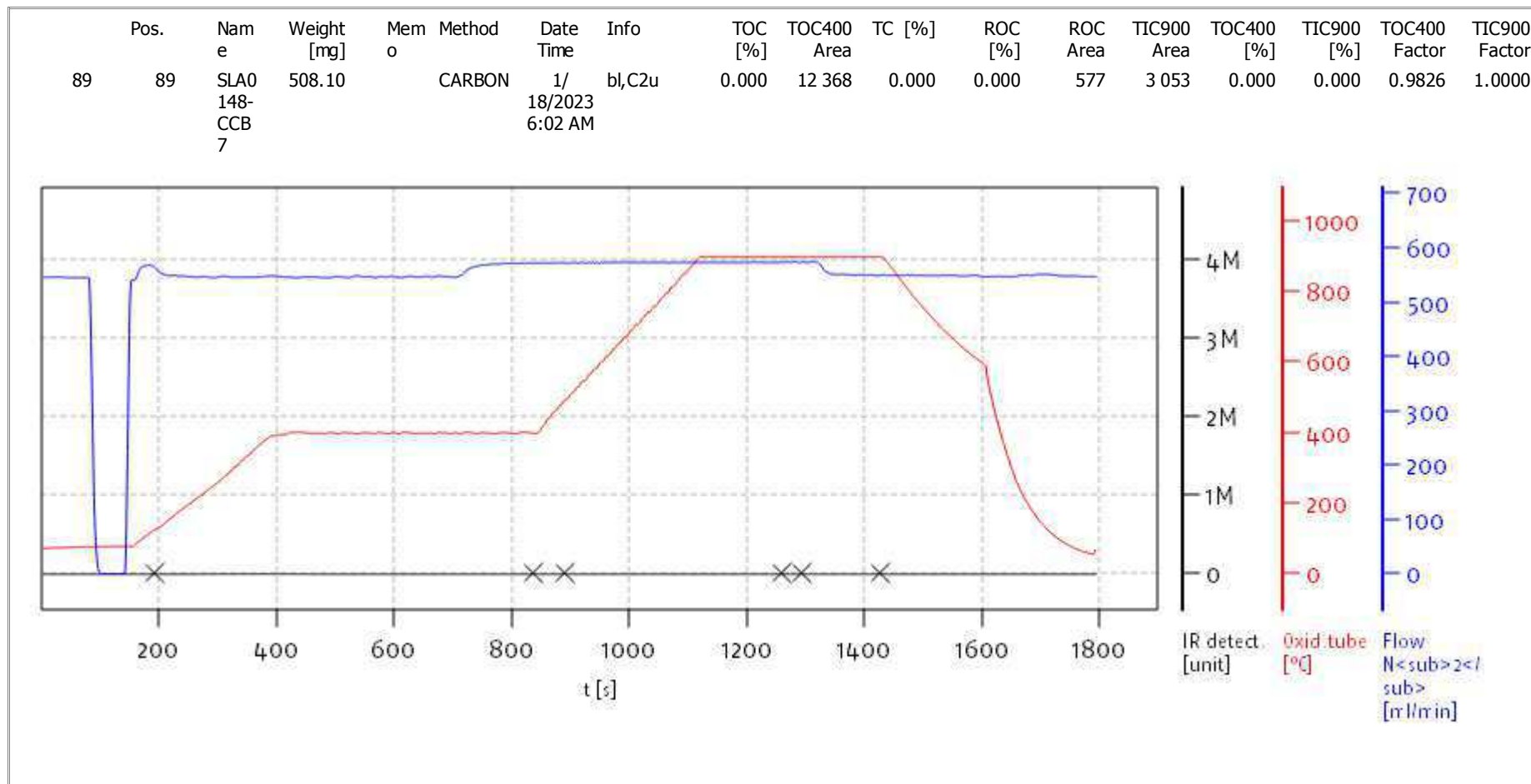
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

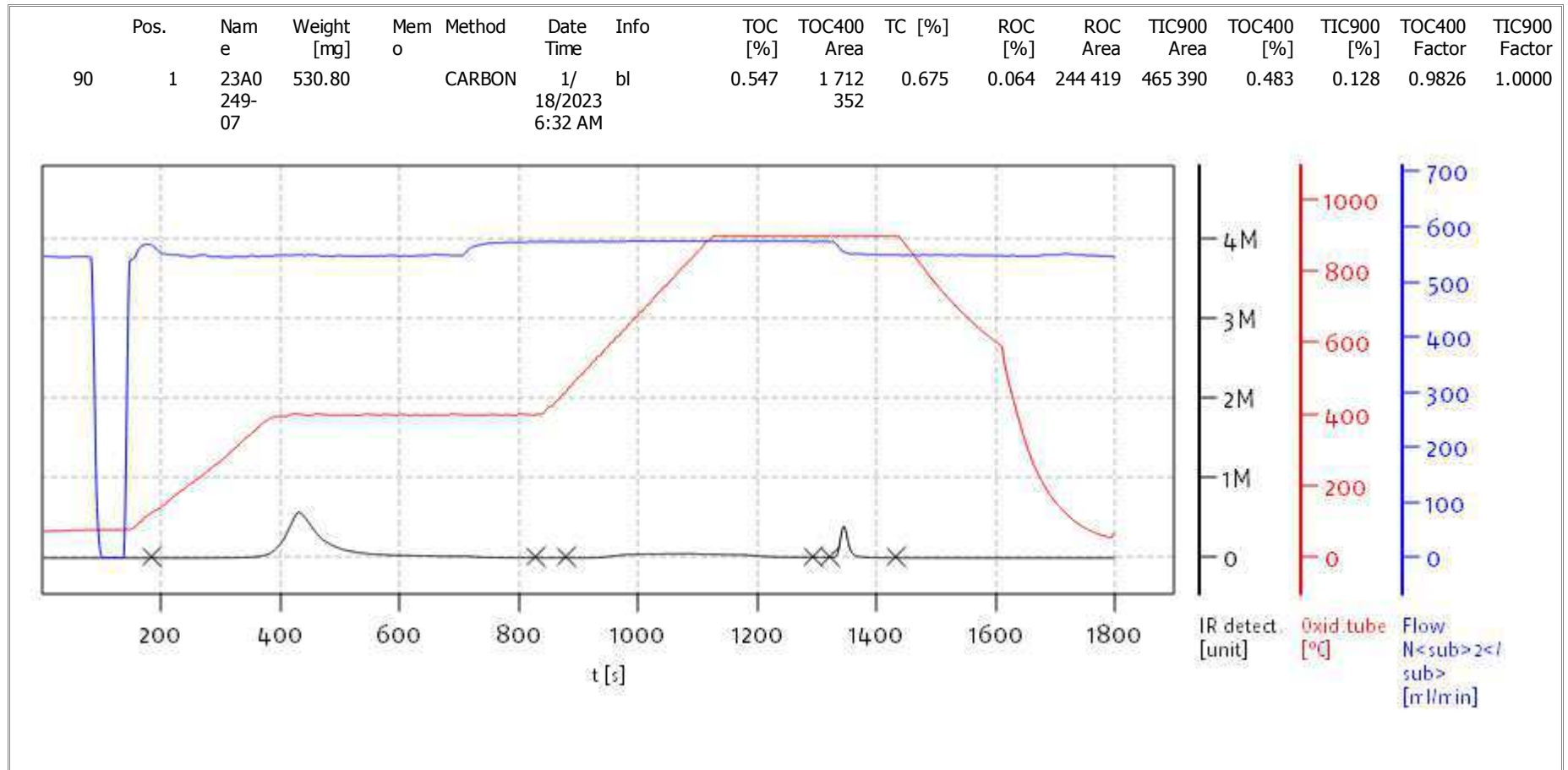
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

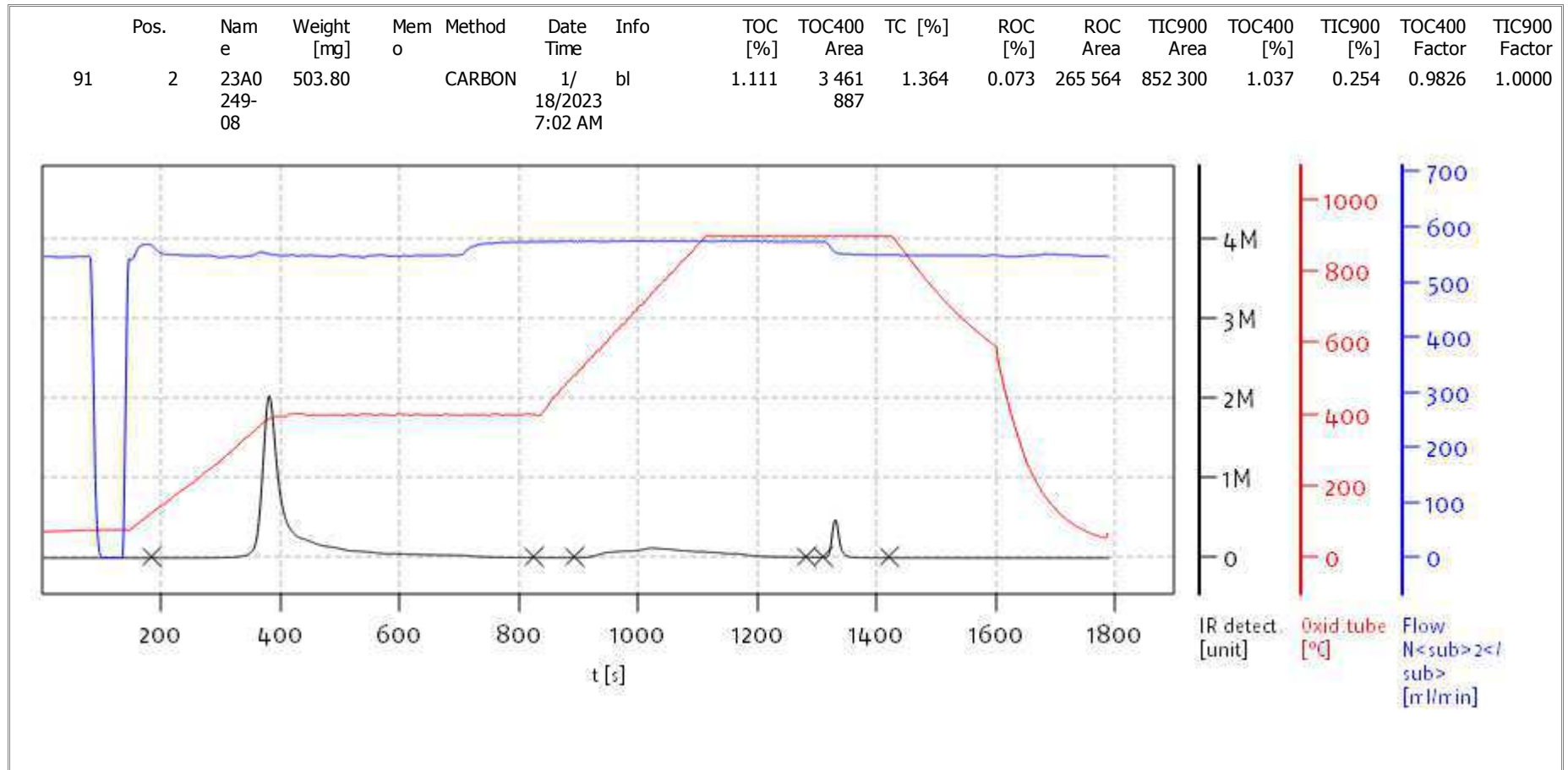
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 Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

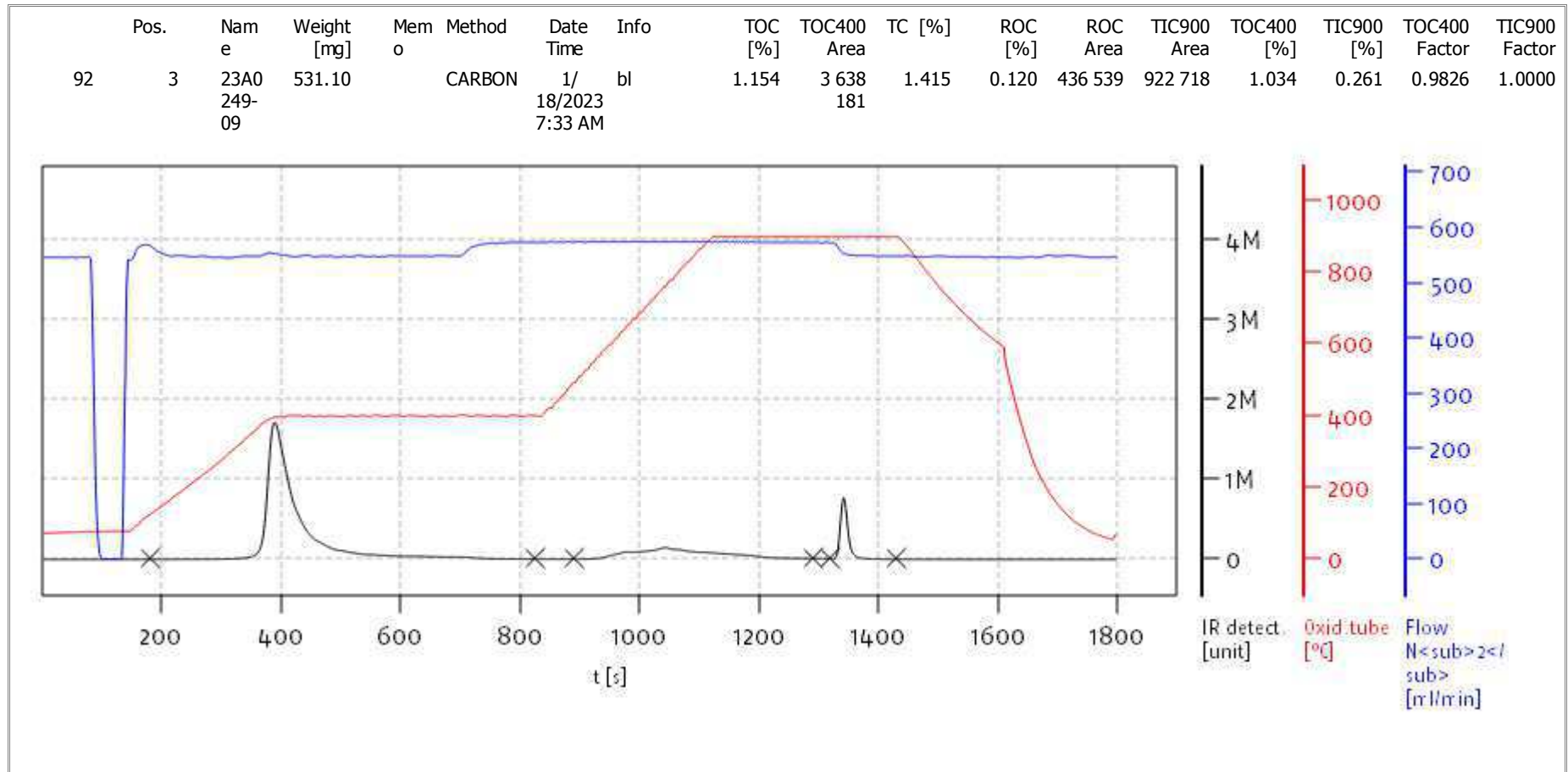
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solITOC V2.0.2 (31015f9) 2018-11-19  
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 Mode CCC



**Soli TOC Cube, Carbon**  
**Balance: BAL3**  
**Analyst: DOE**



Name:

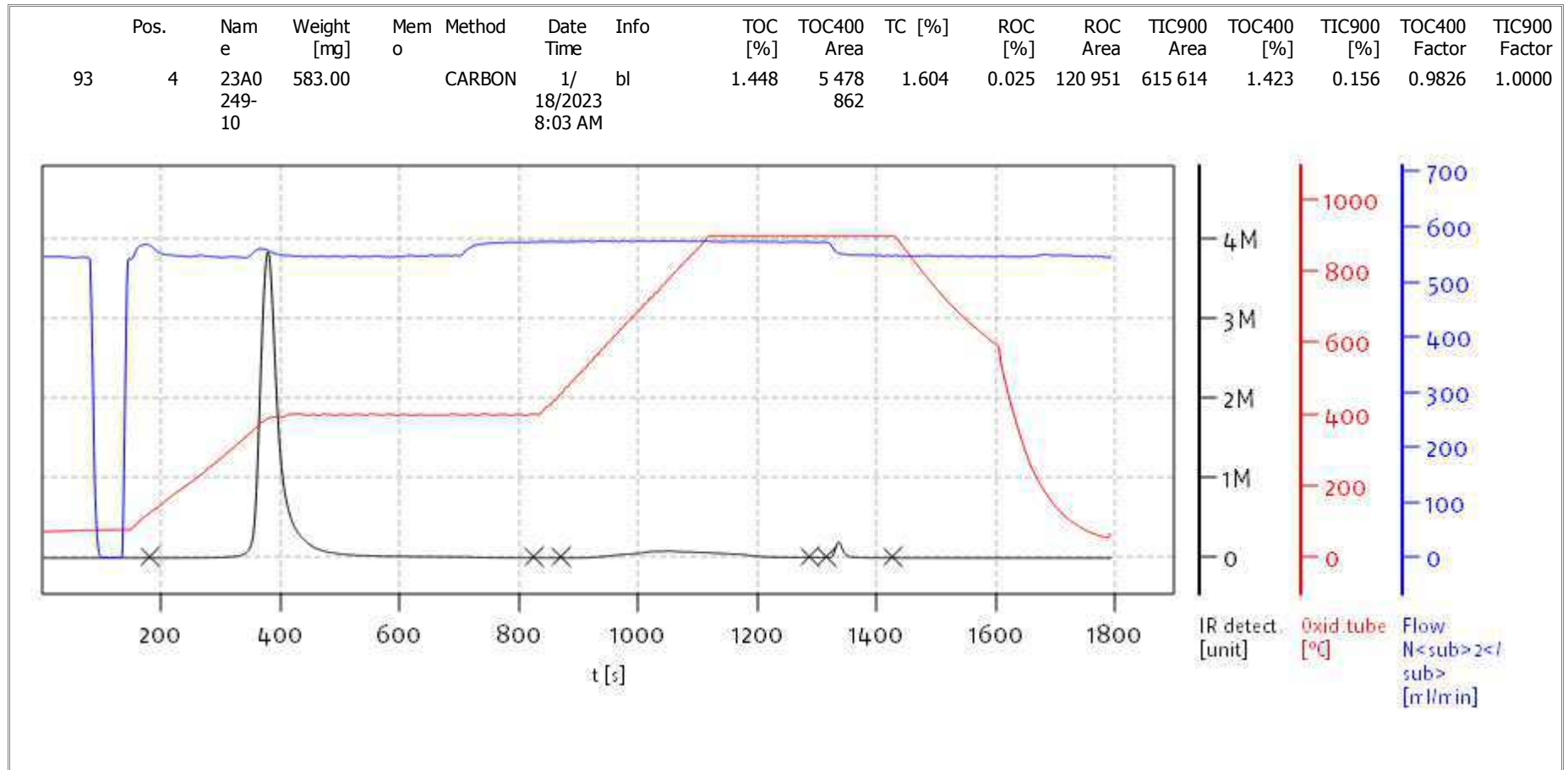
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Mode CCC

Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

Access: solITOC superuser

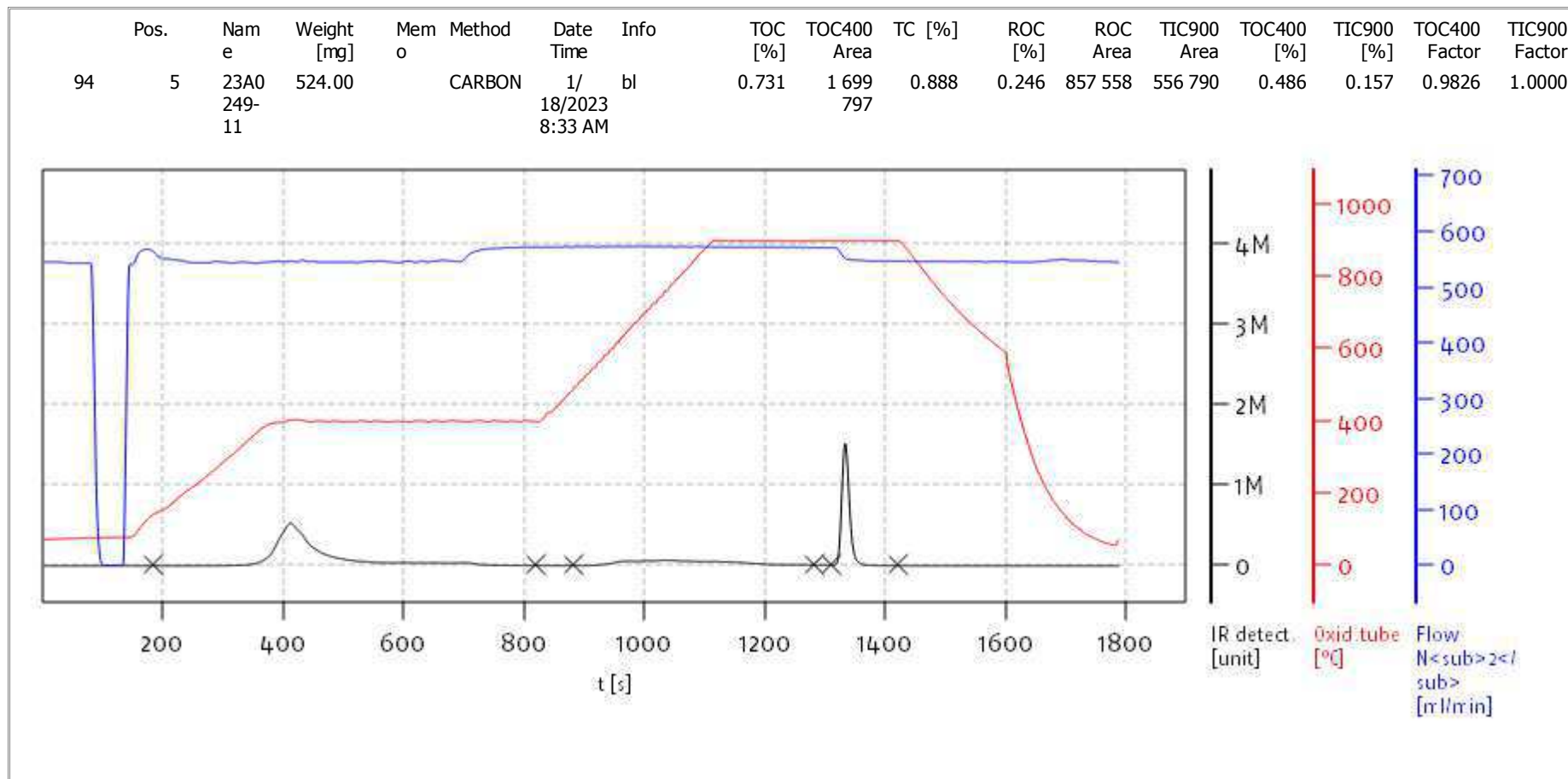
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Soli TOC Cube, Carbon  
 Balance: BAL3  
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Name:

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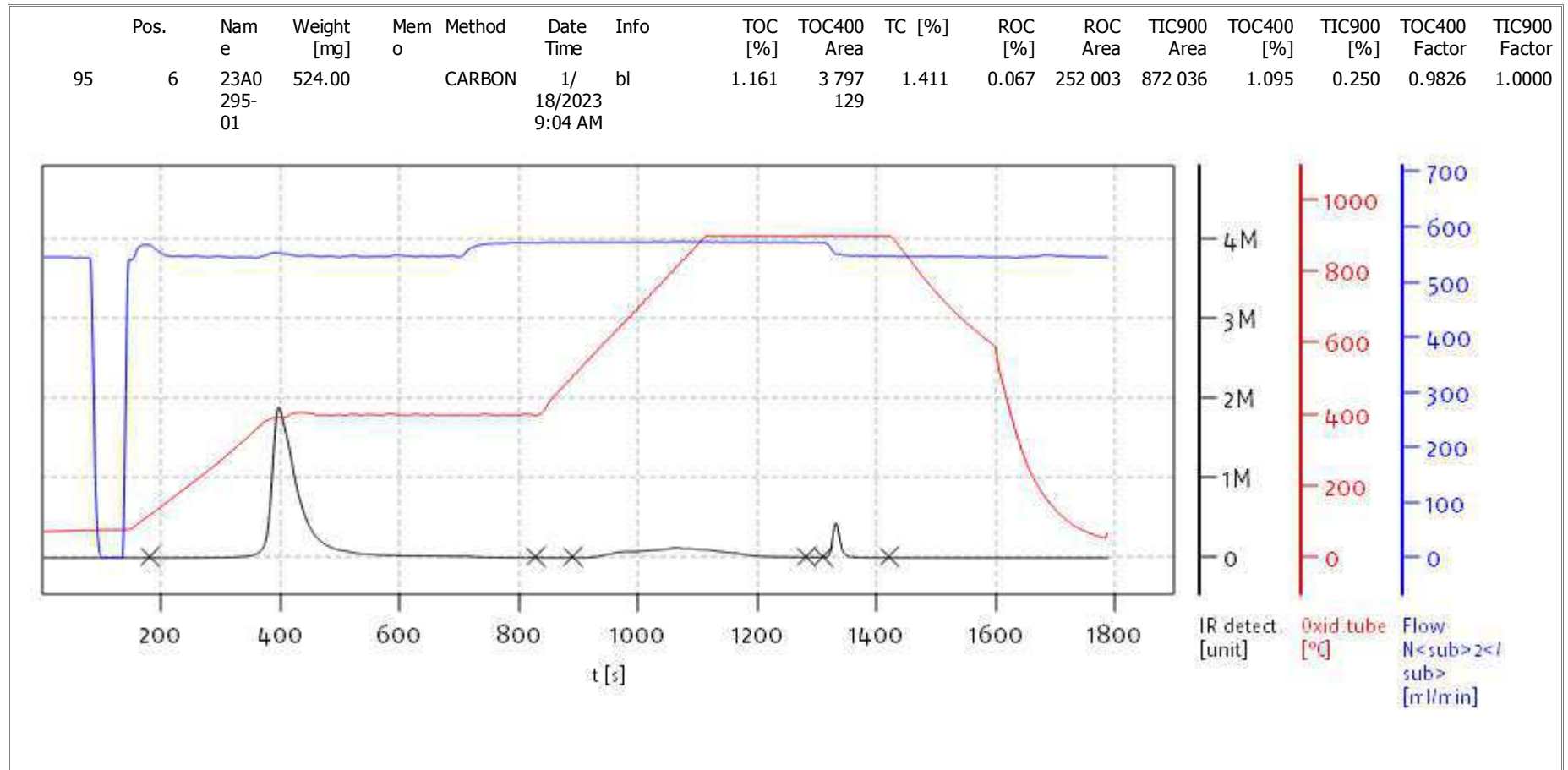
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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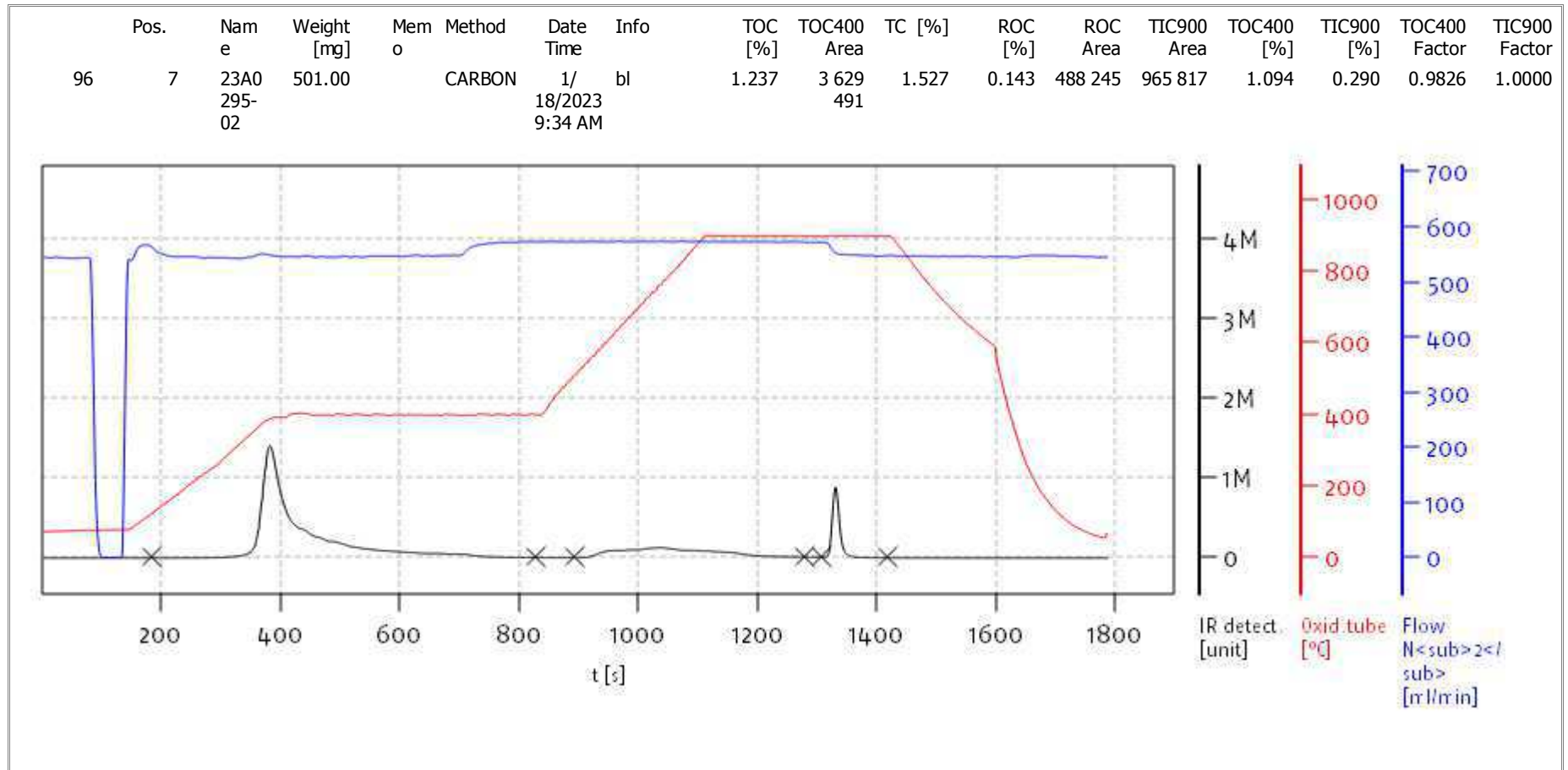
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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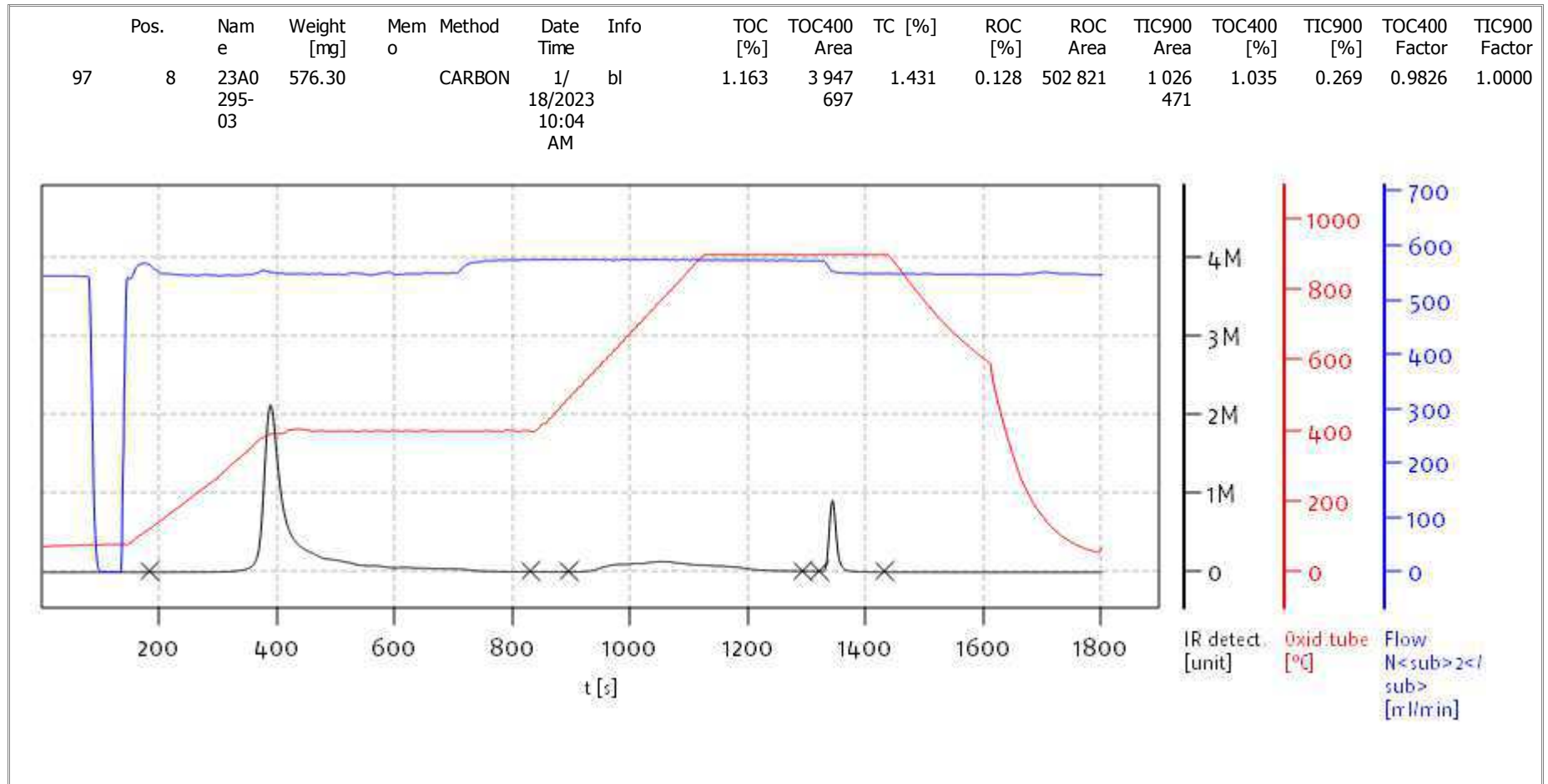
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



Name:

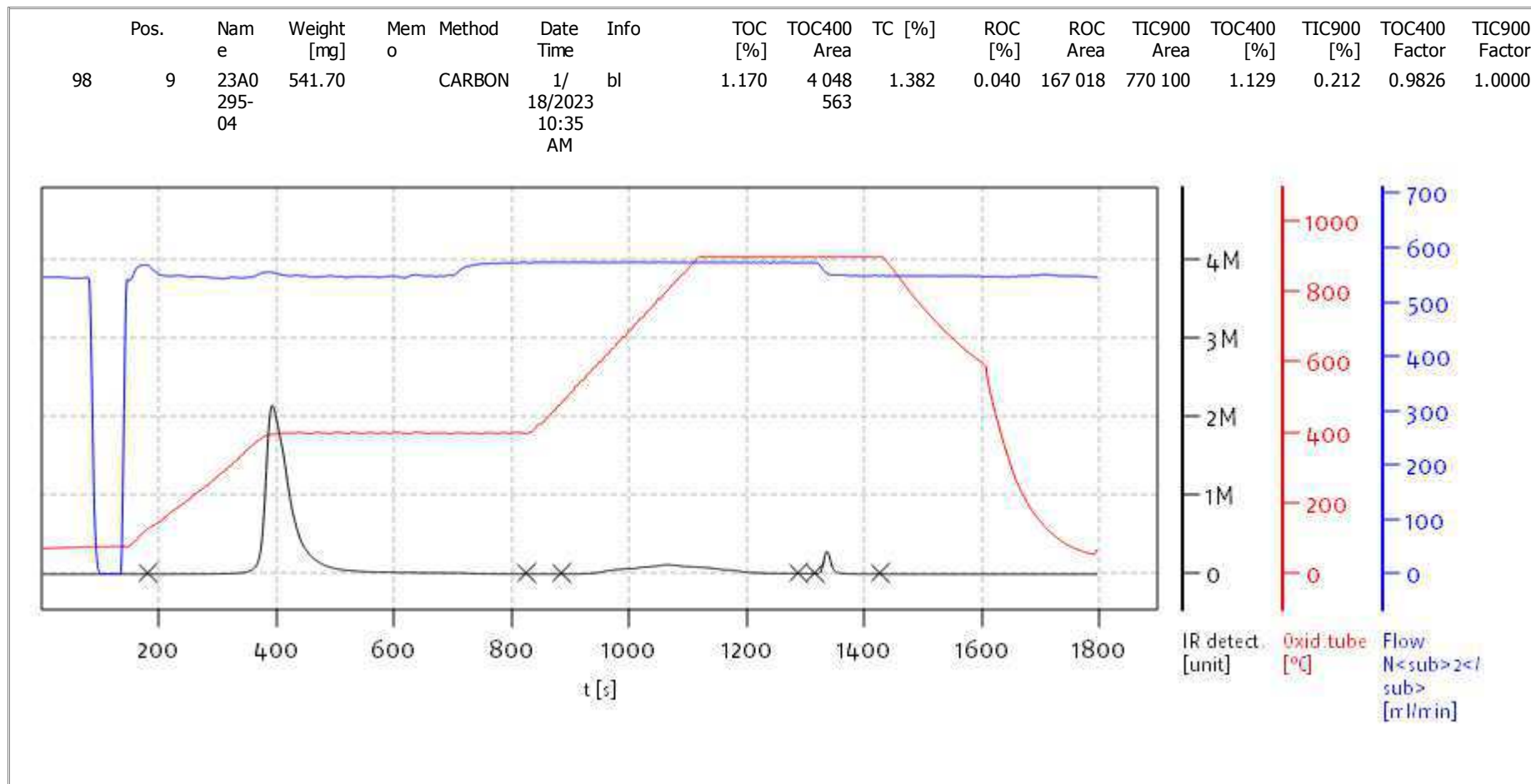
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Soli TOC Cube, Carbon  
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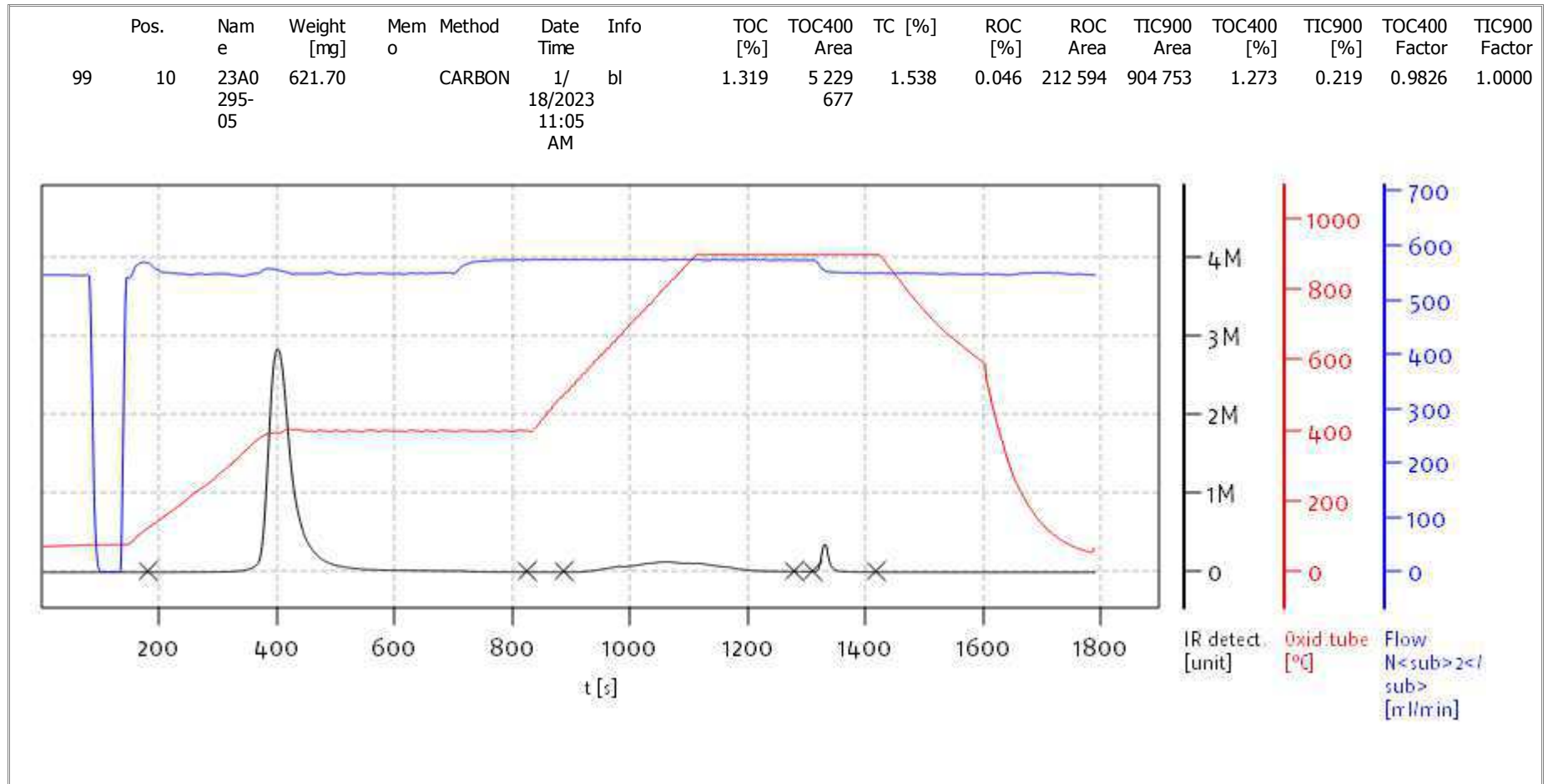
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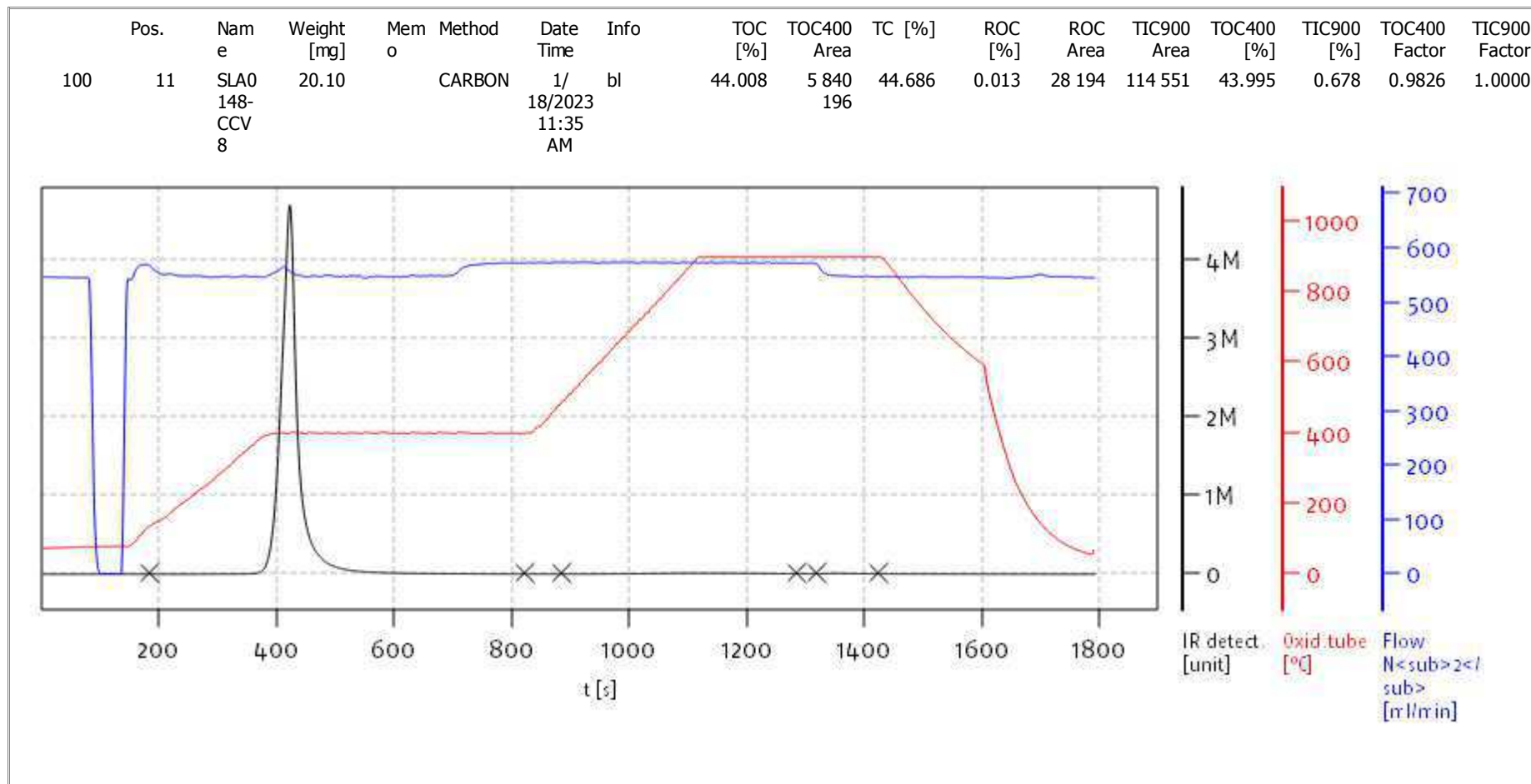
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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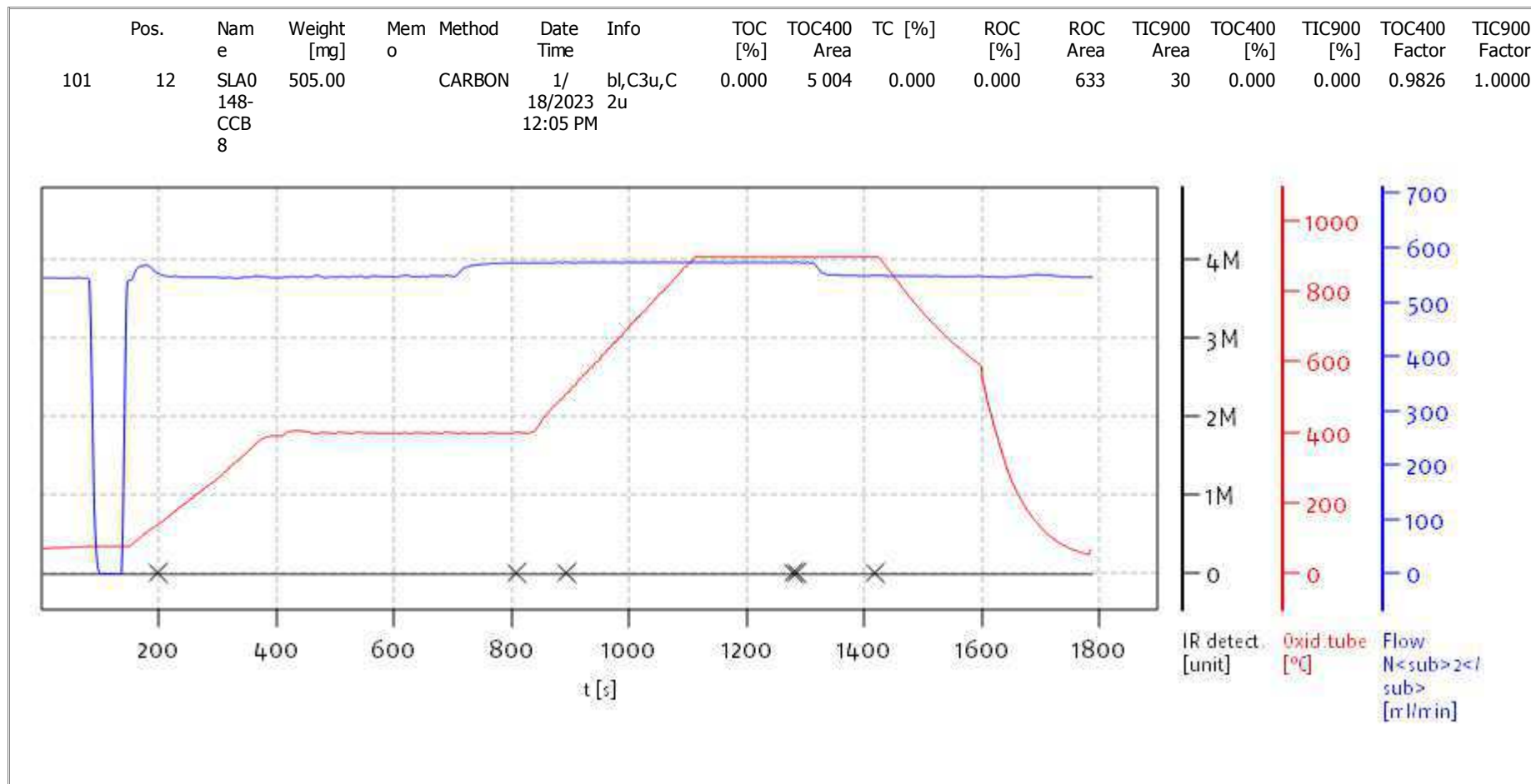
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Soli TOC Cube, Carbon  
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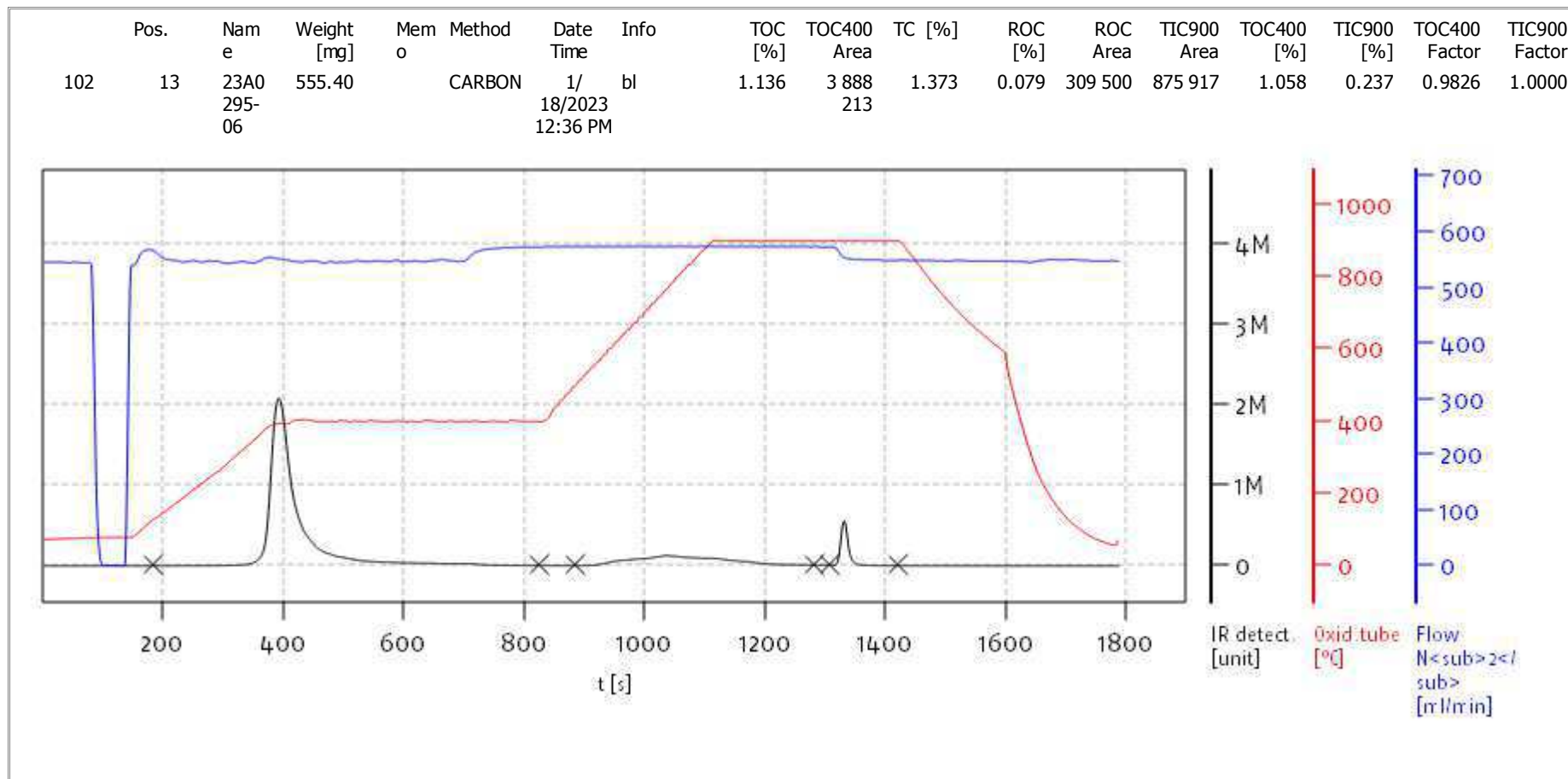
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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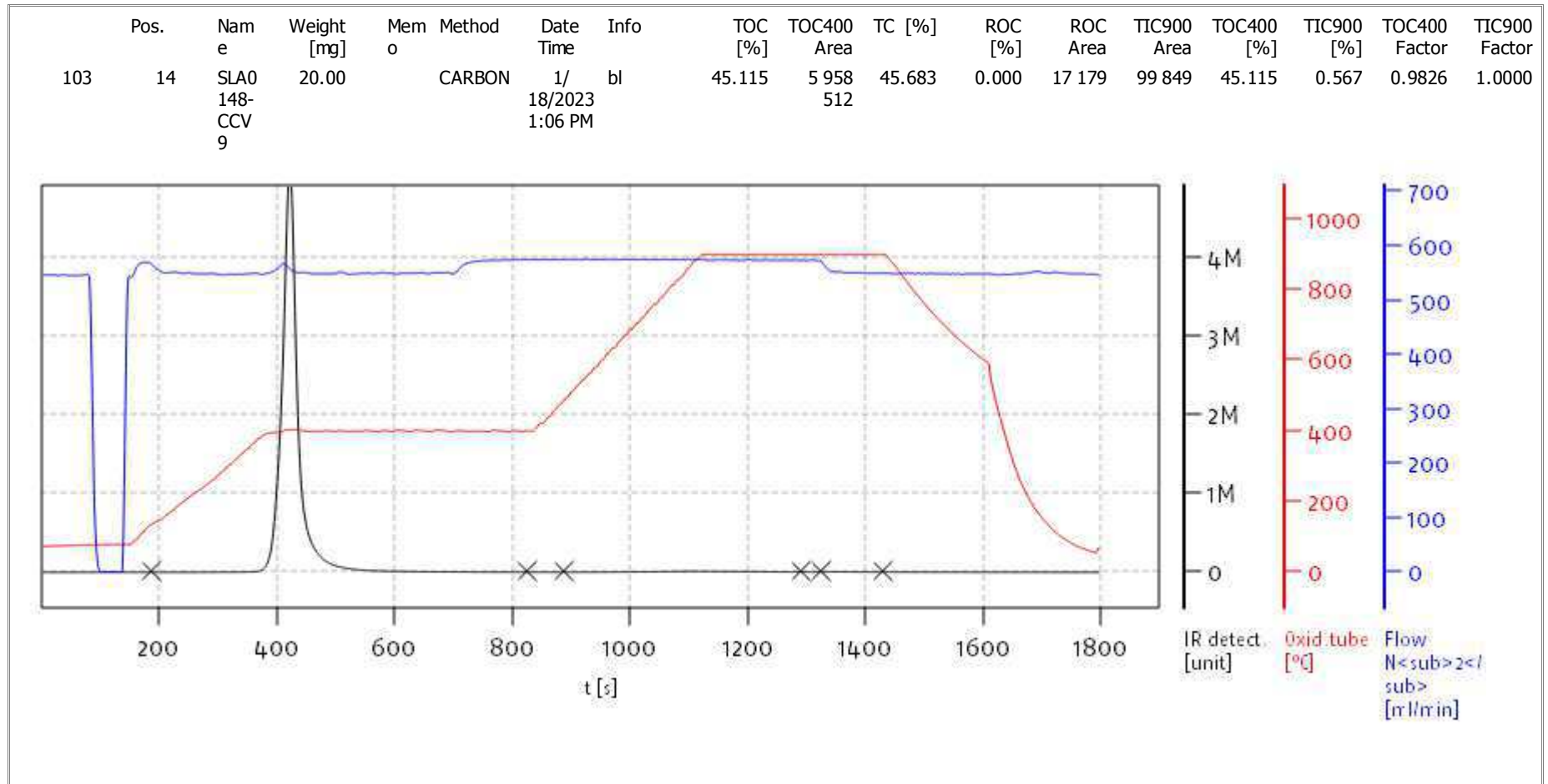
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Soli TOC Cube, Carbon  
 Balance: BAL3  
 Analyst: DOE



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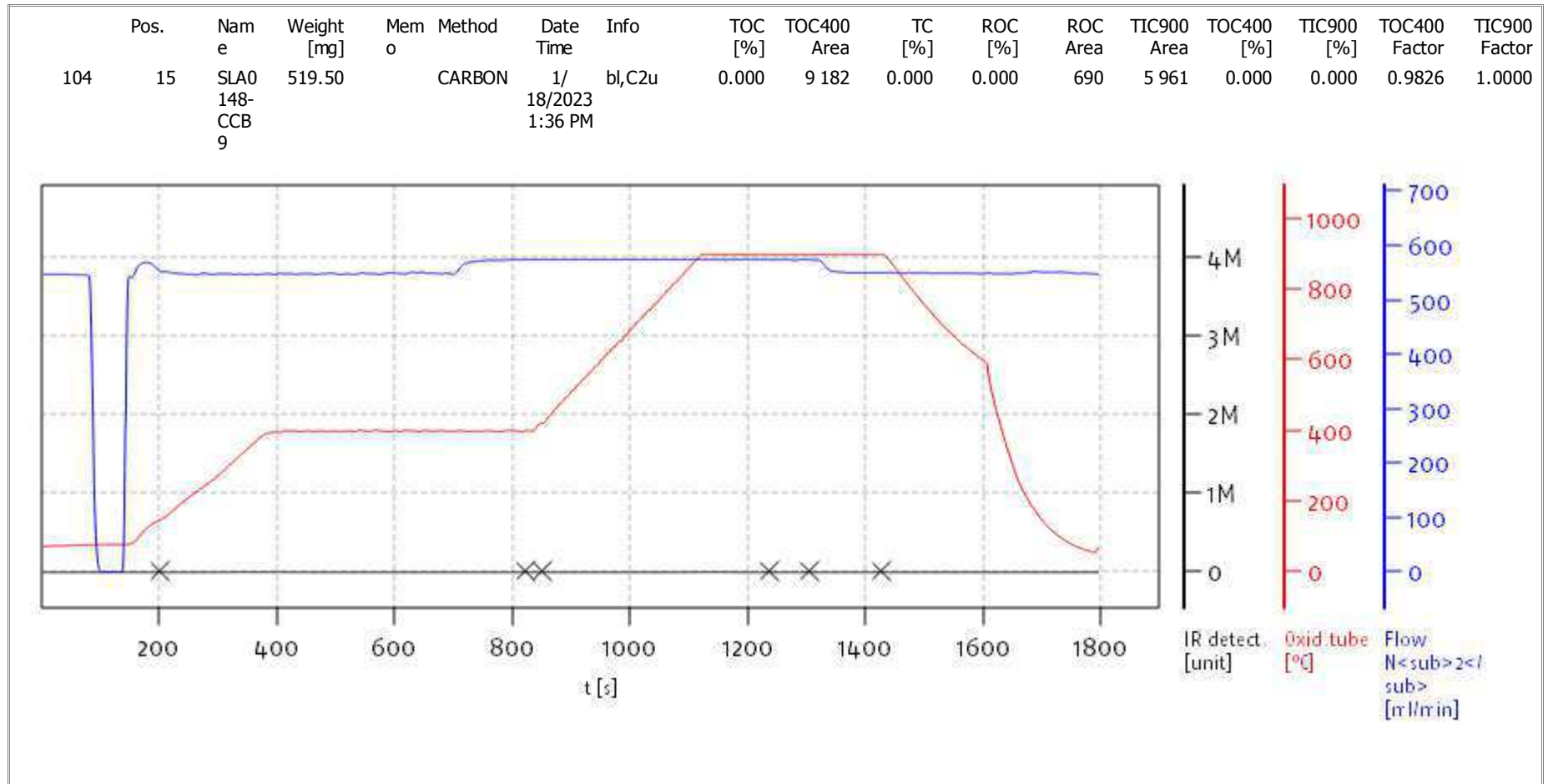
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solITOC V2.0.2 (31015f9) 2018-11-19  
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Name:

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Date: Wed Jan 18 13:37:19 2023



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



## INITIAL CALIBRATION DATA

### EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0206
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085



### INITIAL CALIBRATION DATA

#### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: FD00070

Instrument: TOC Cube

Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135



## INITIAL CALIBRATION DATA

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: FD00070

Instrument: TOC Cube

Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882



## INITIAL CALIBRATION DATA

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: FD00070

Instrument: TOC Cube

Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408



## INITIAL CALIBRATION DATA

### EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Calibration: FD00070

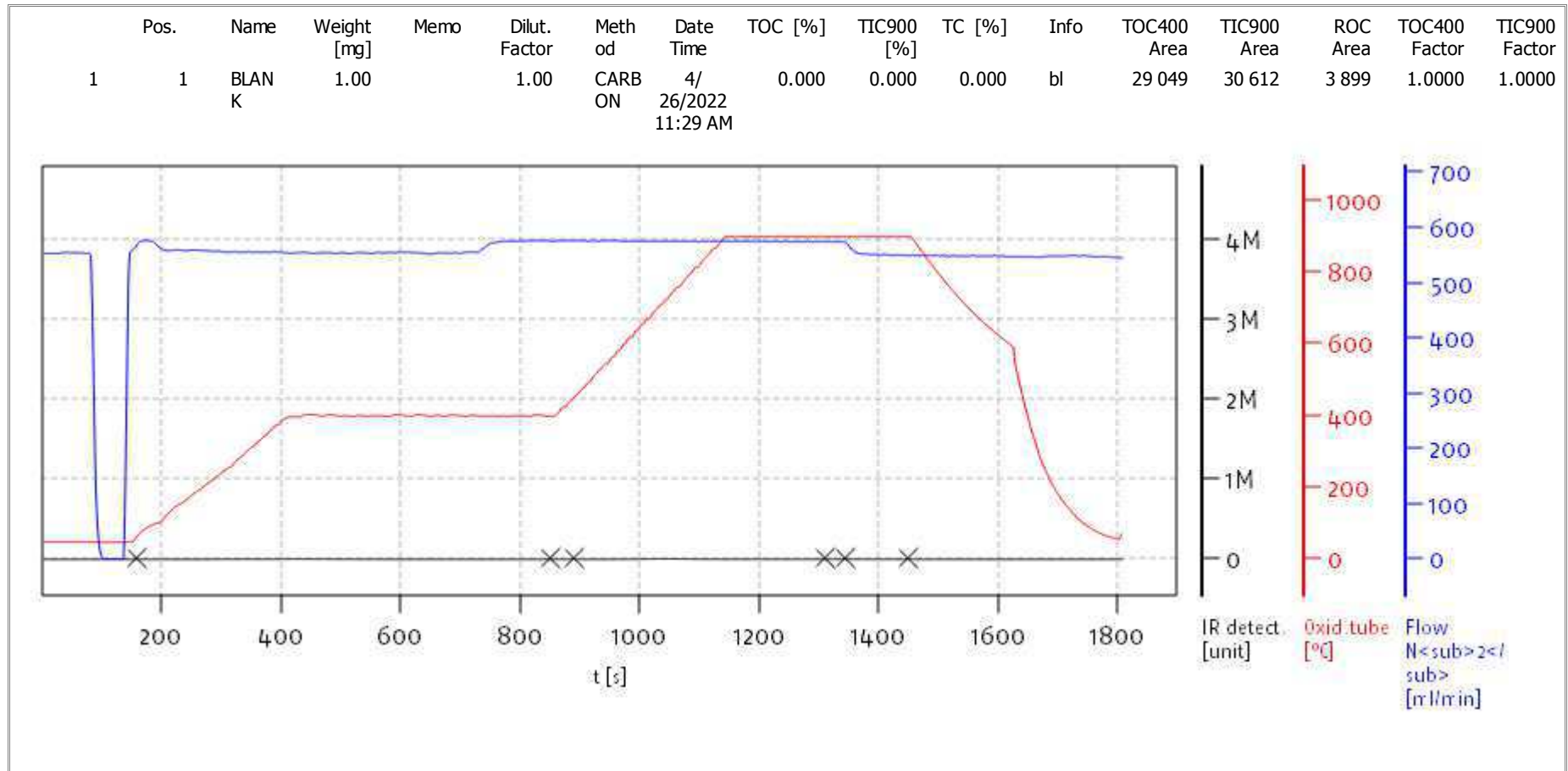
Instrument: TOC Cube

Calibration Date: 04/26/2022 11:29

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

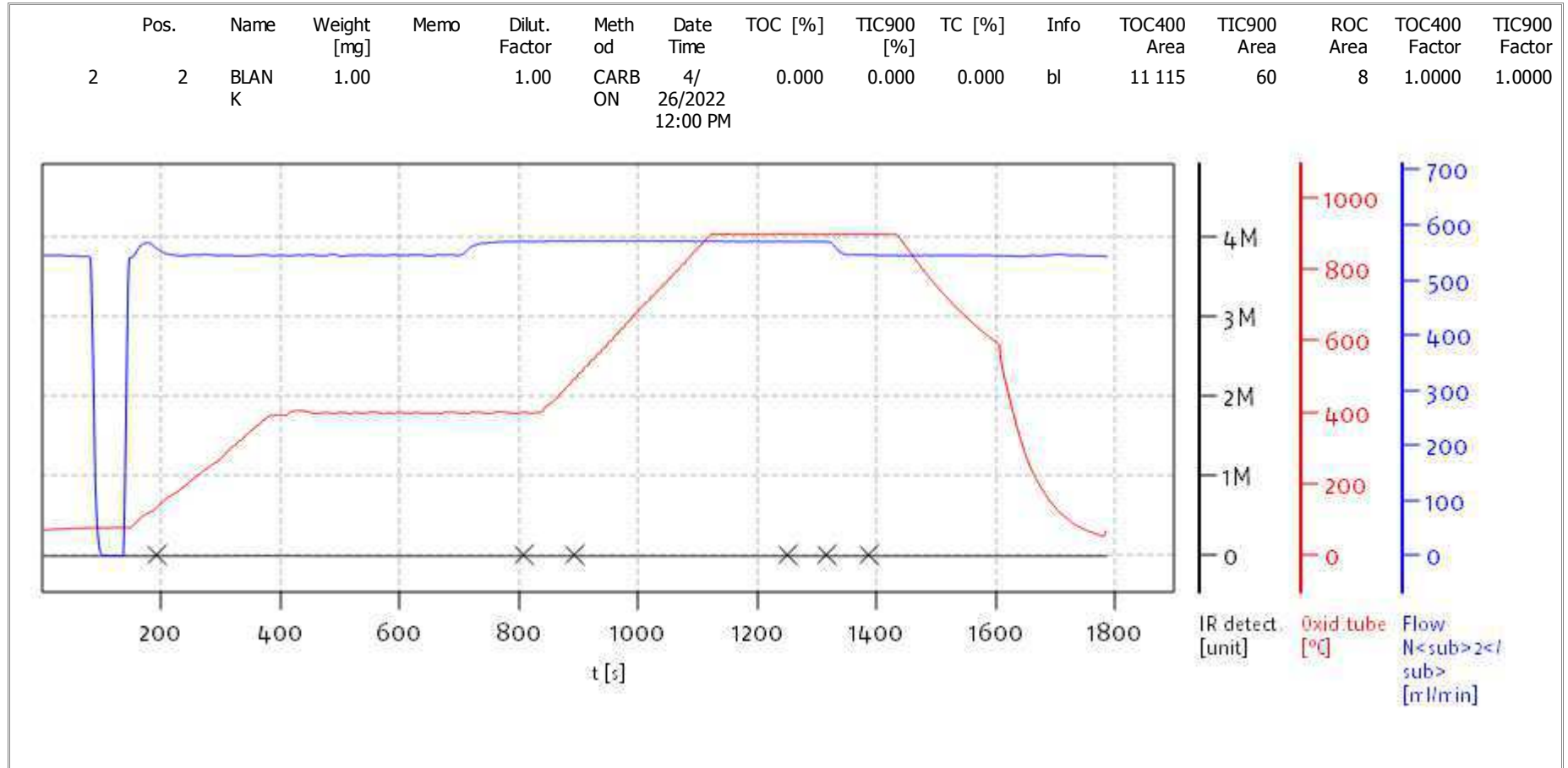


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

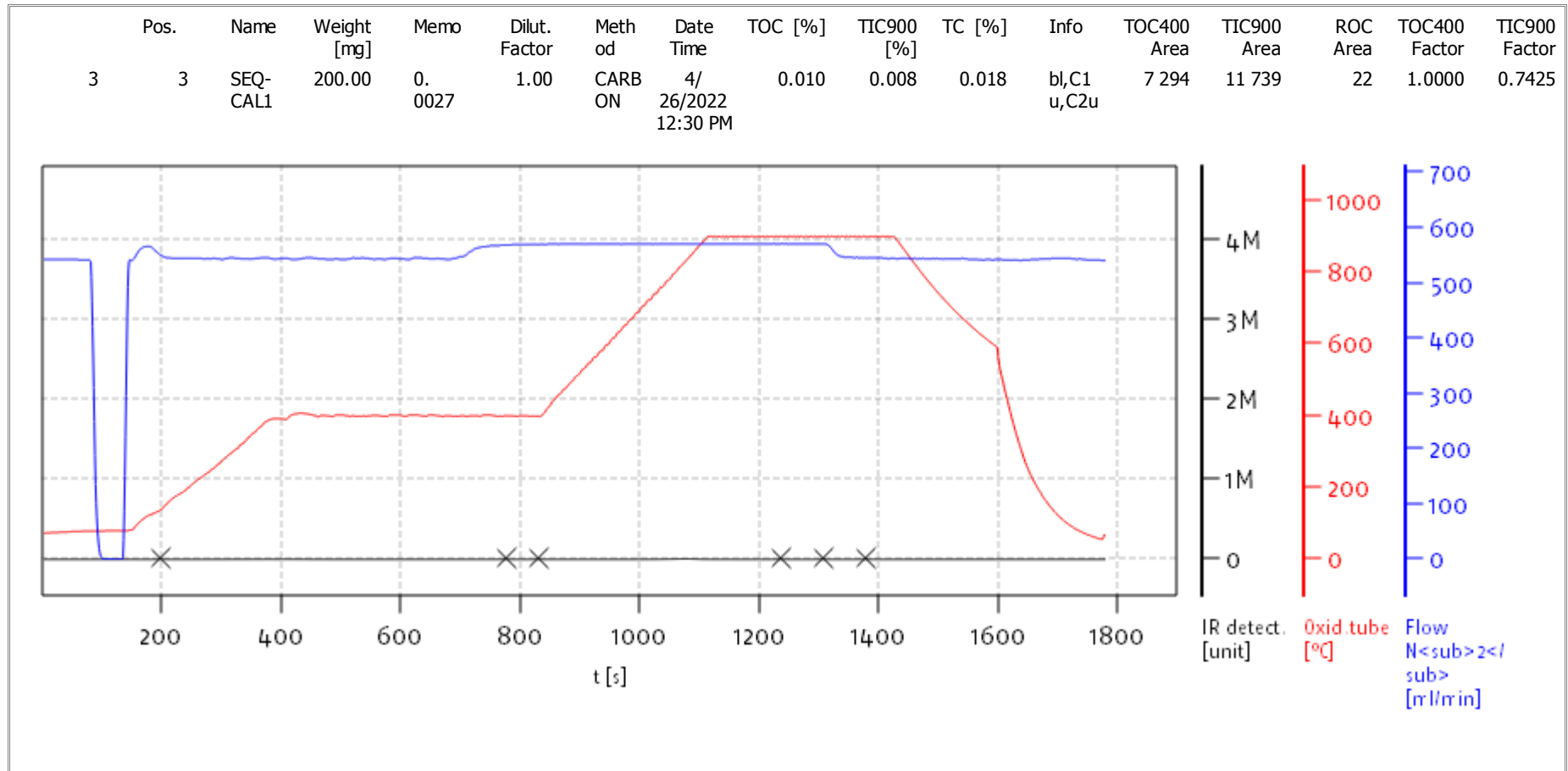
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

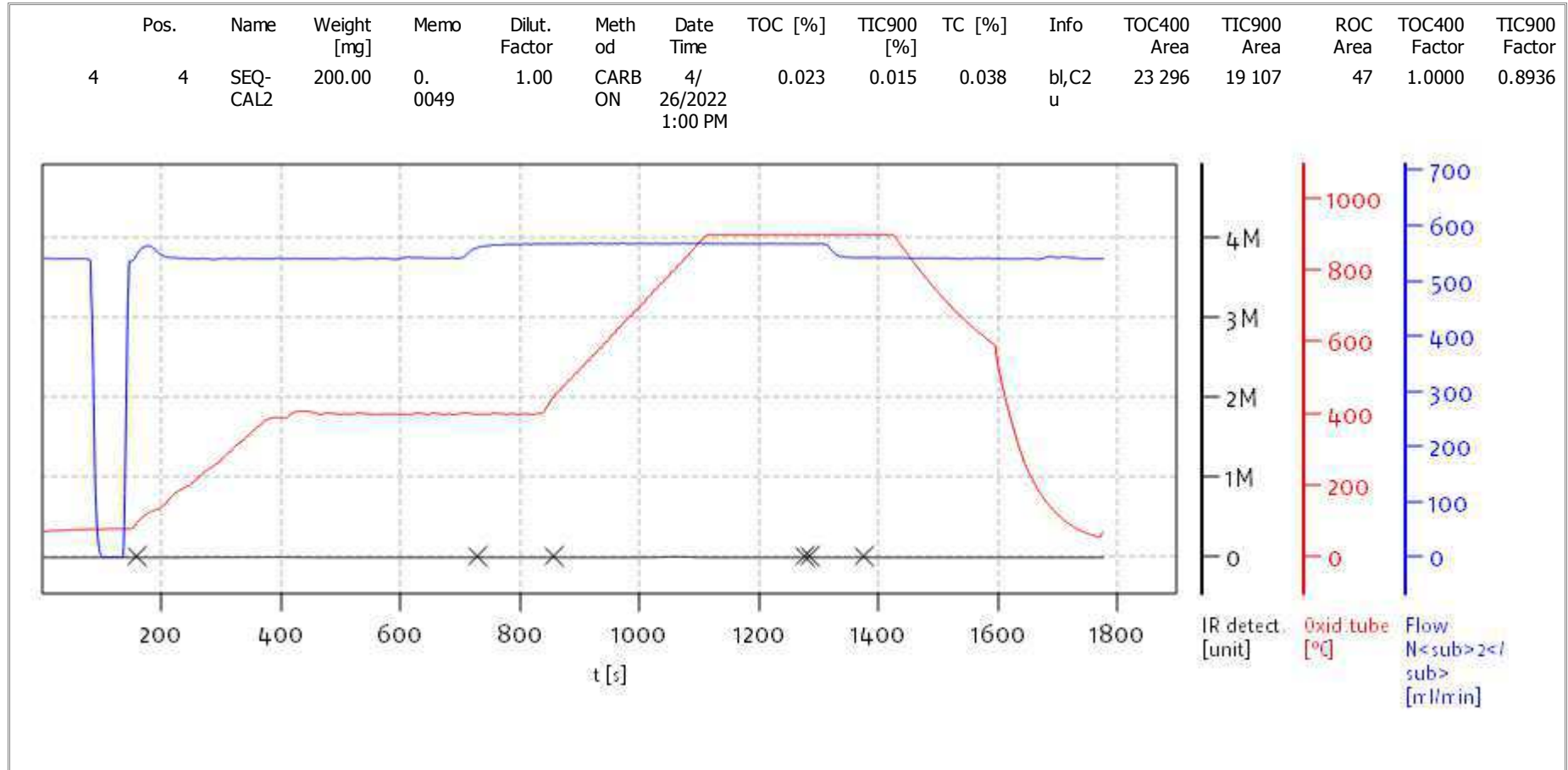
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

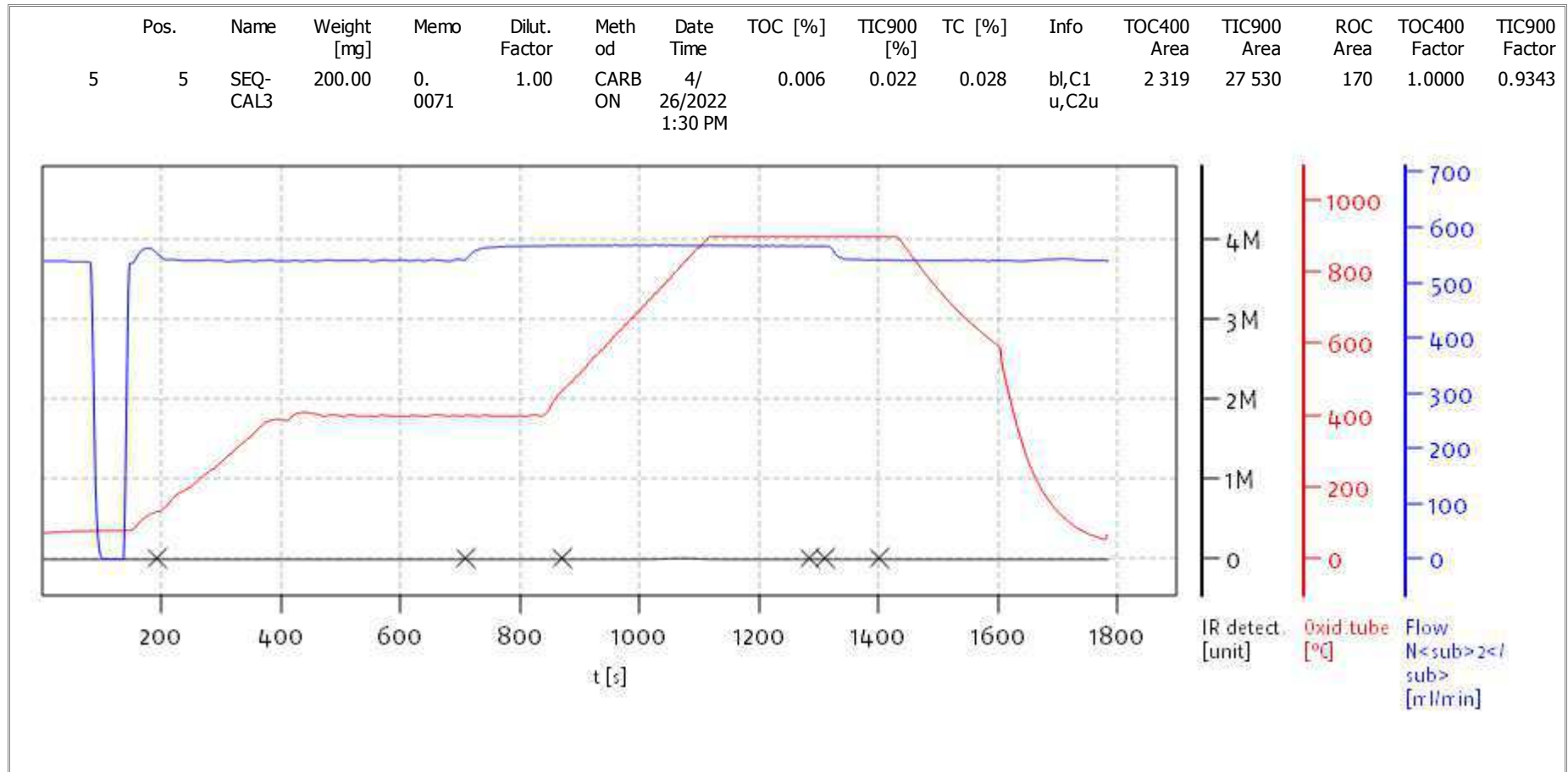
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

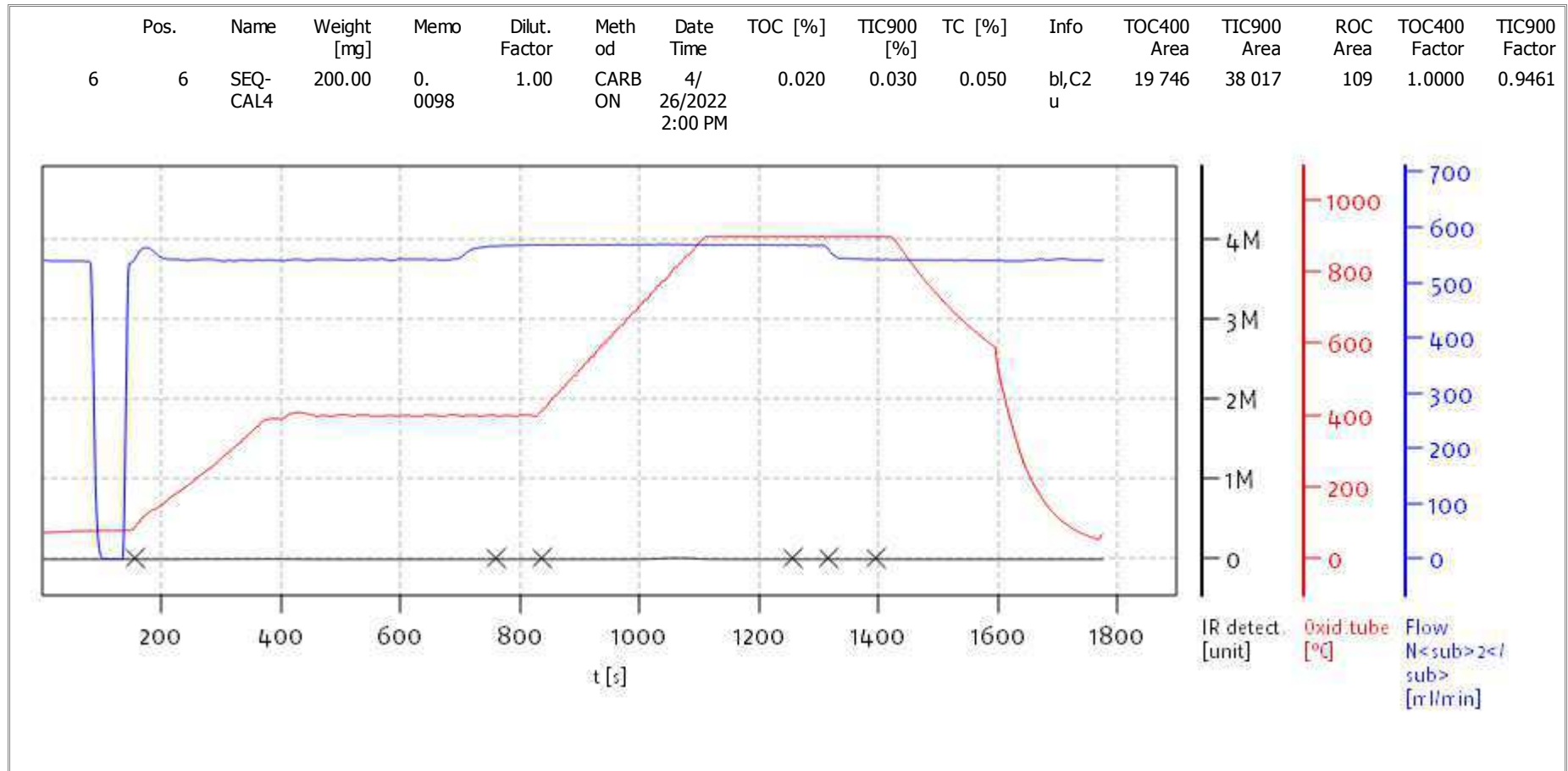
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

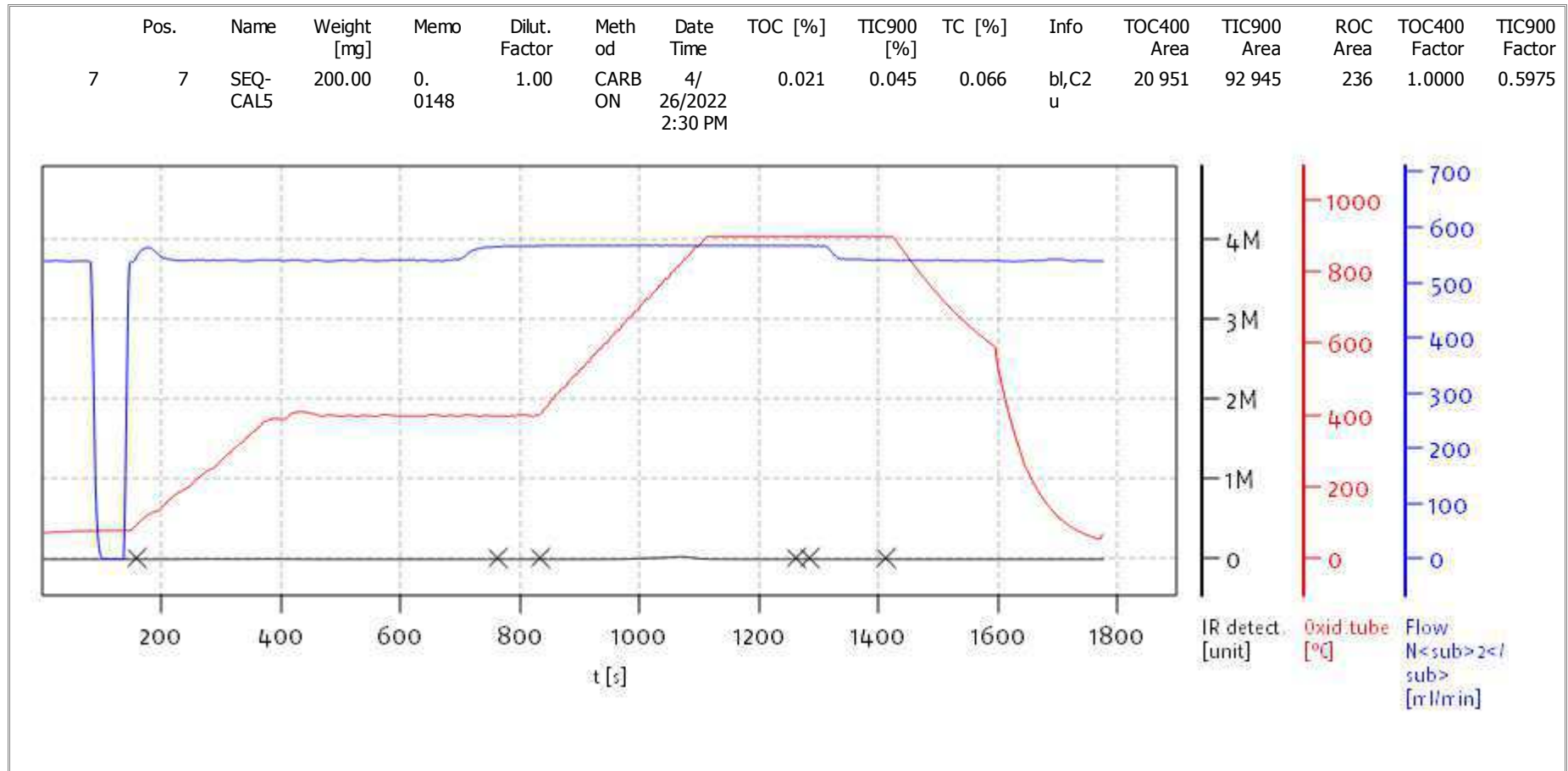
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

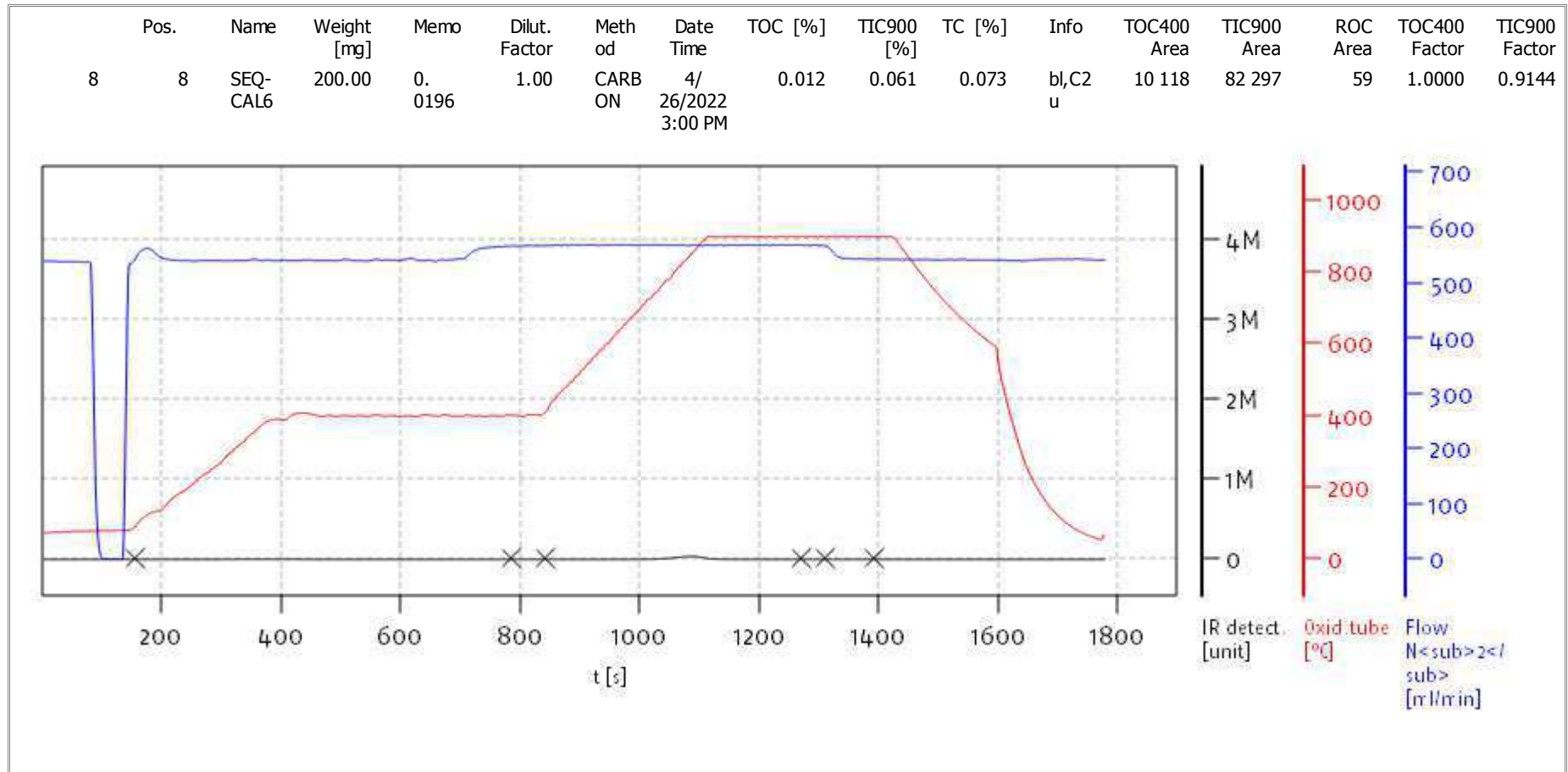
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

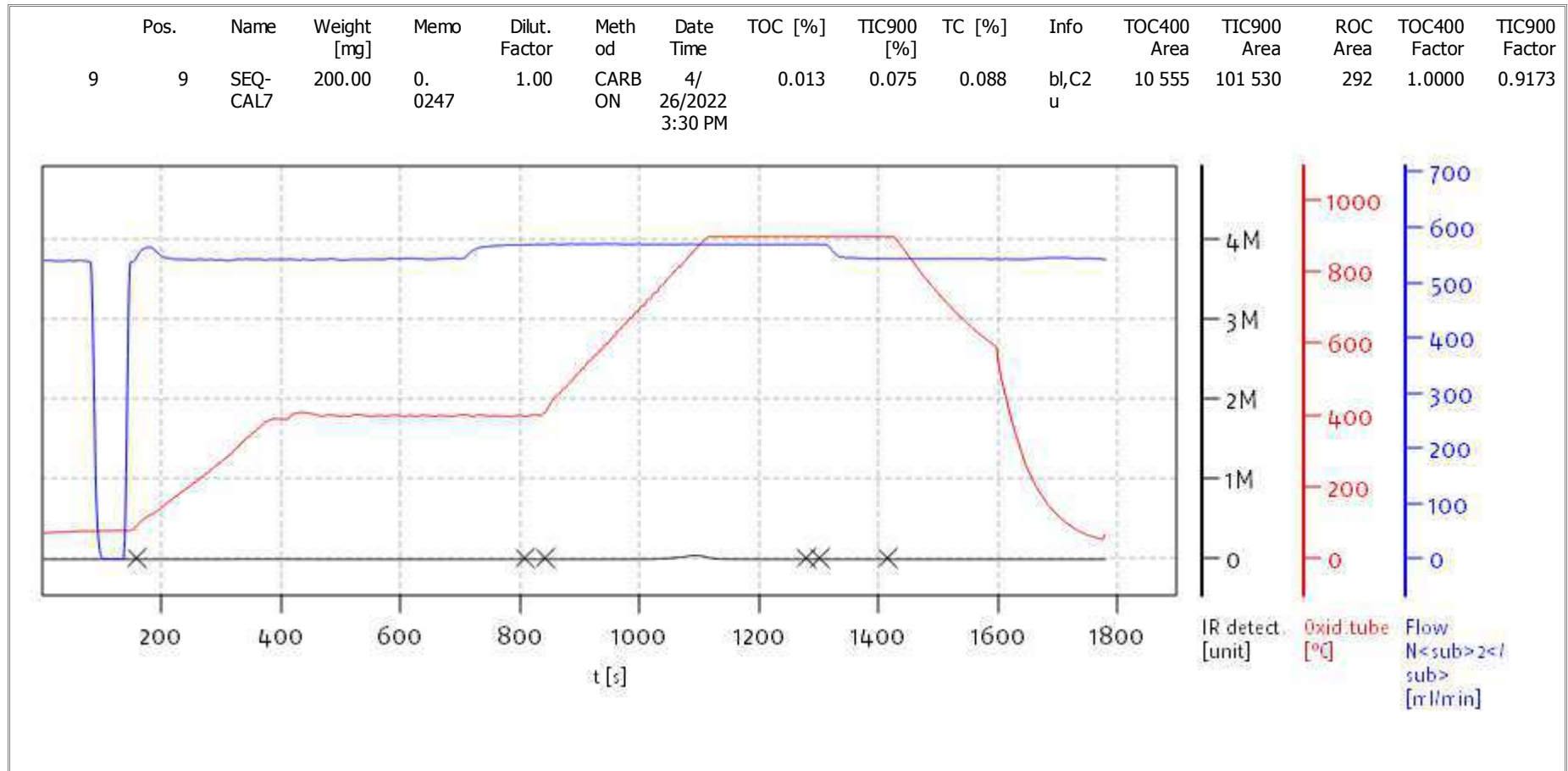


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

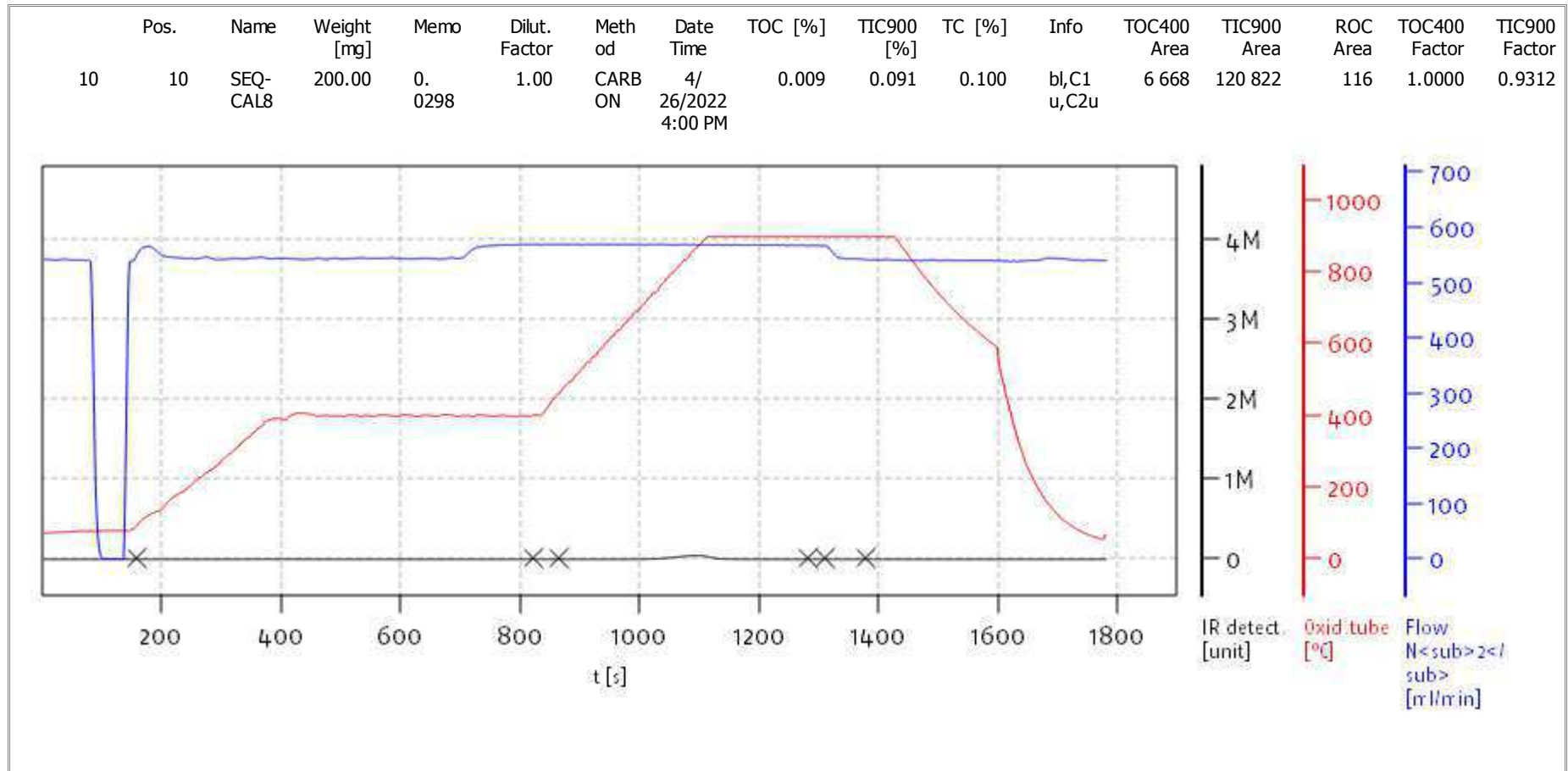


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

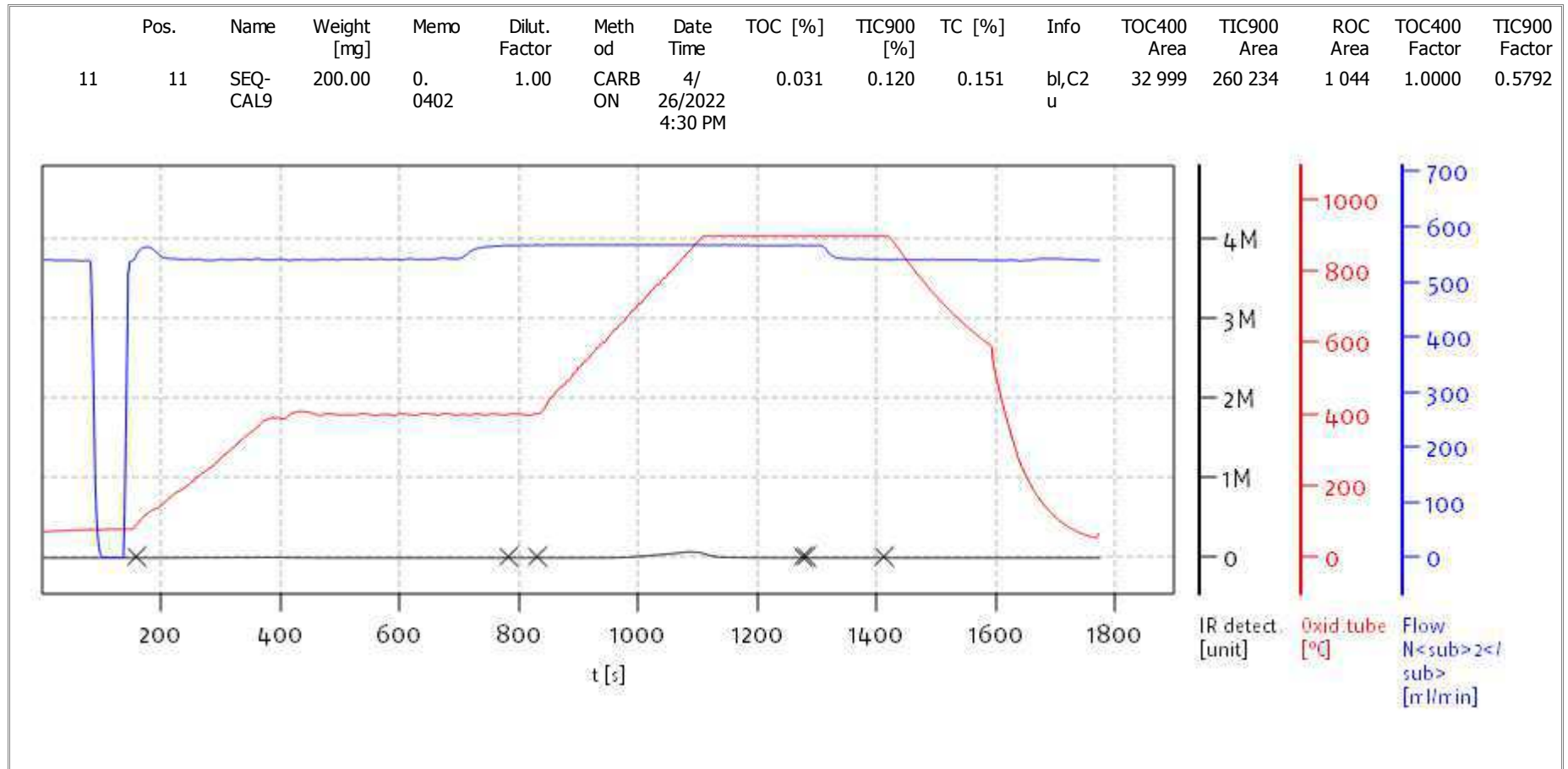
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

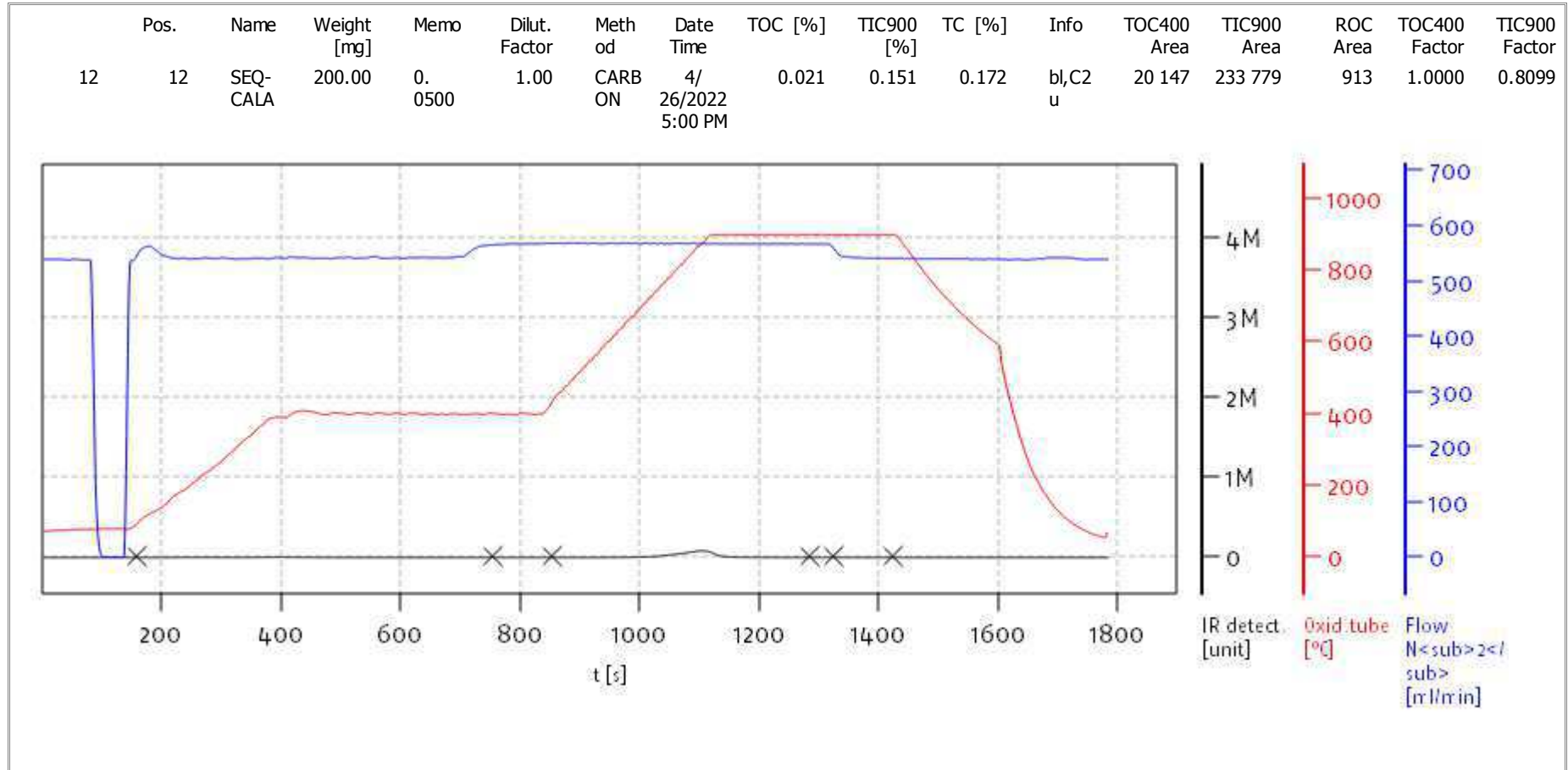
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

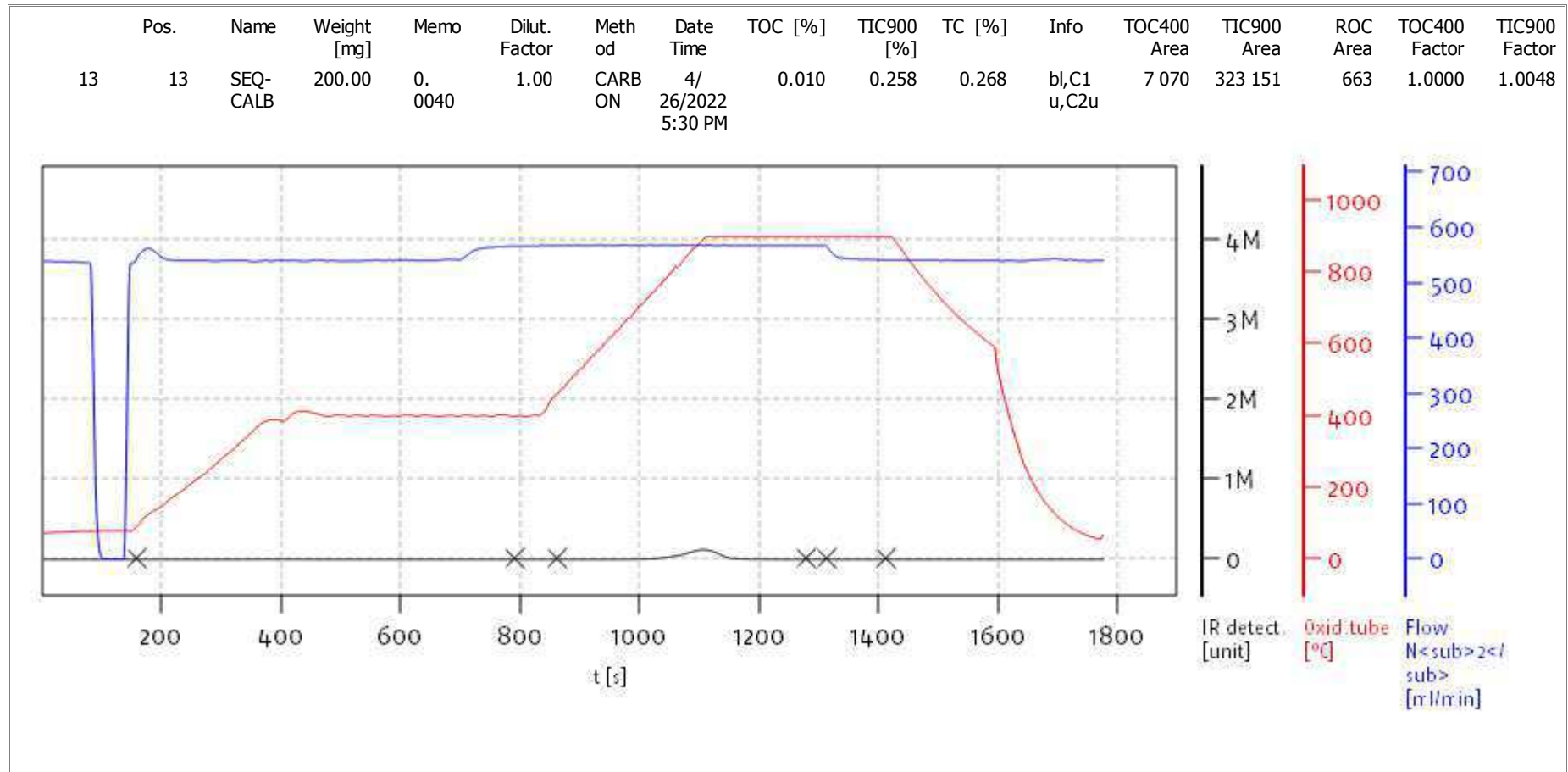
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

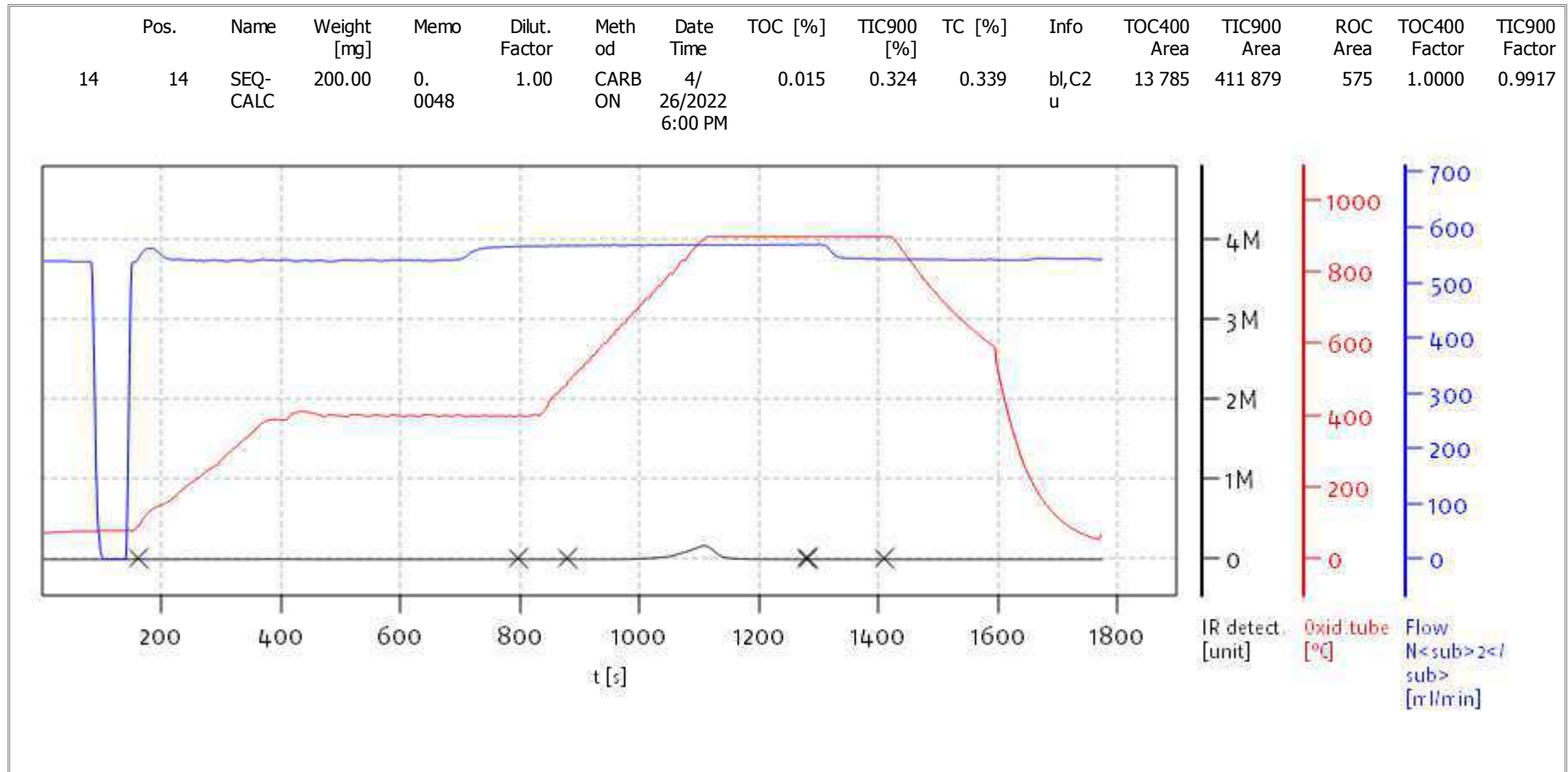
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

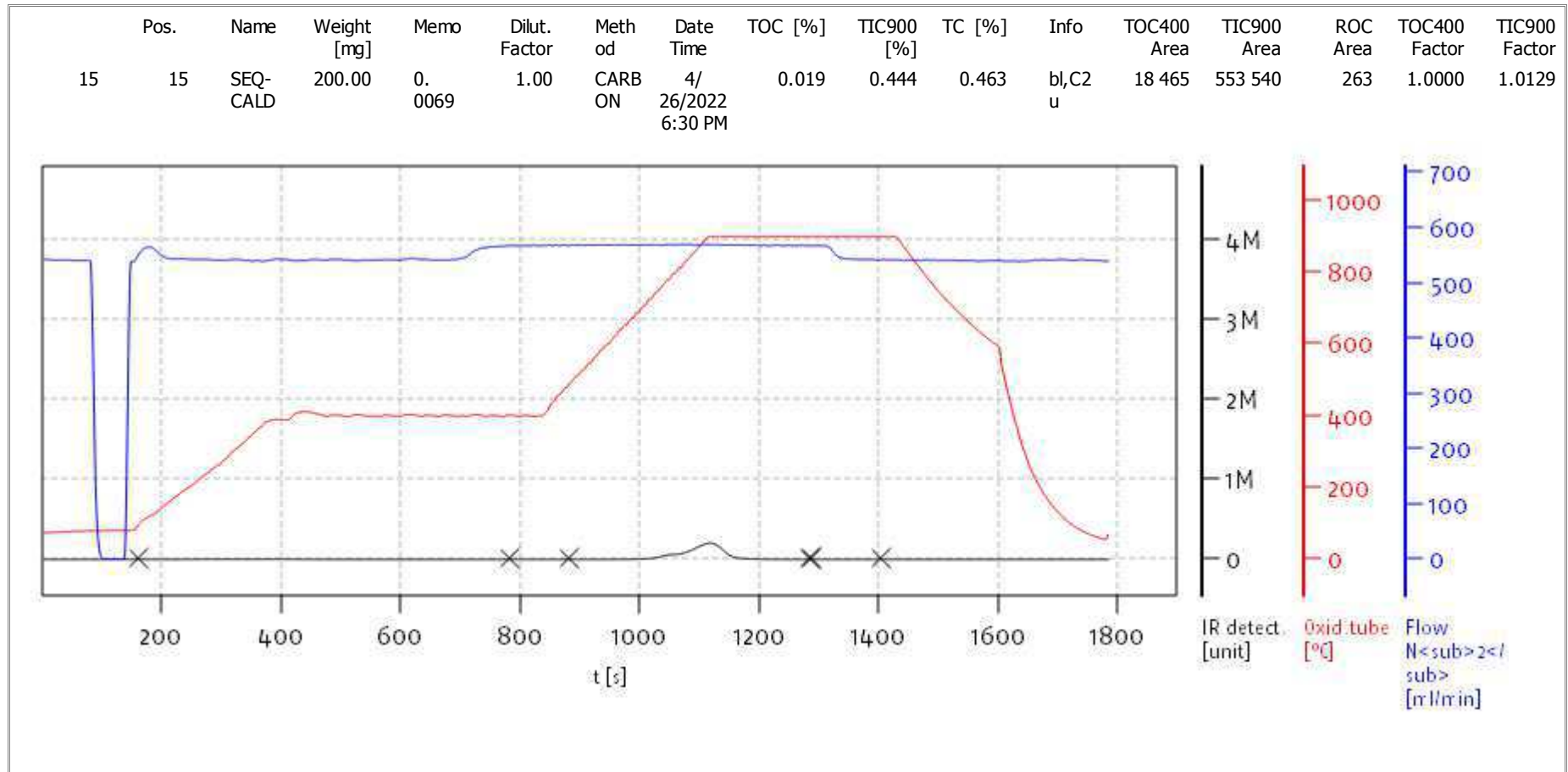
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

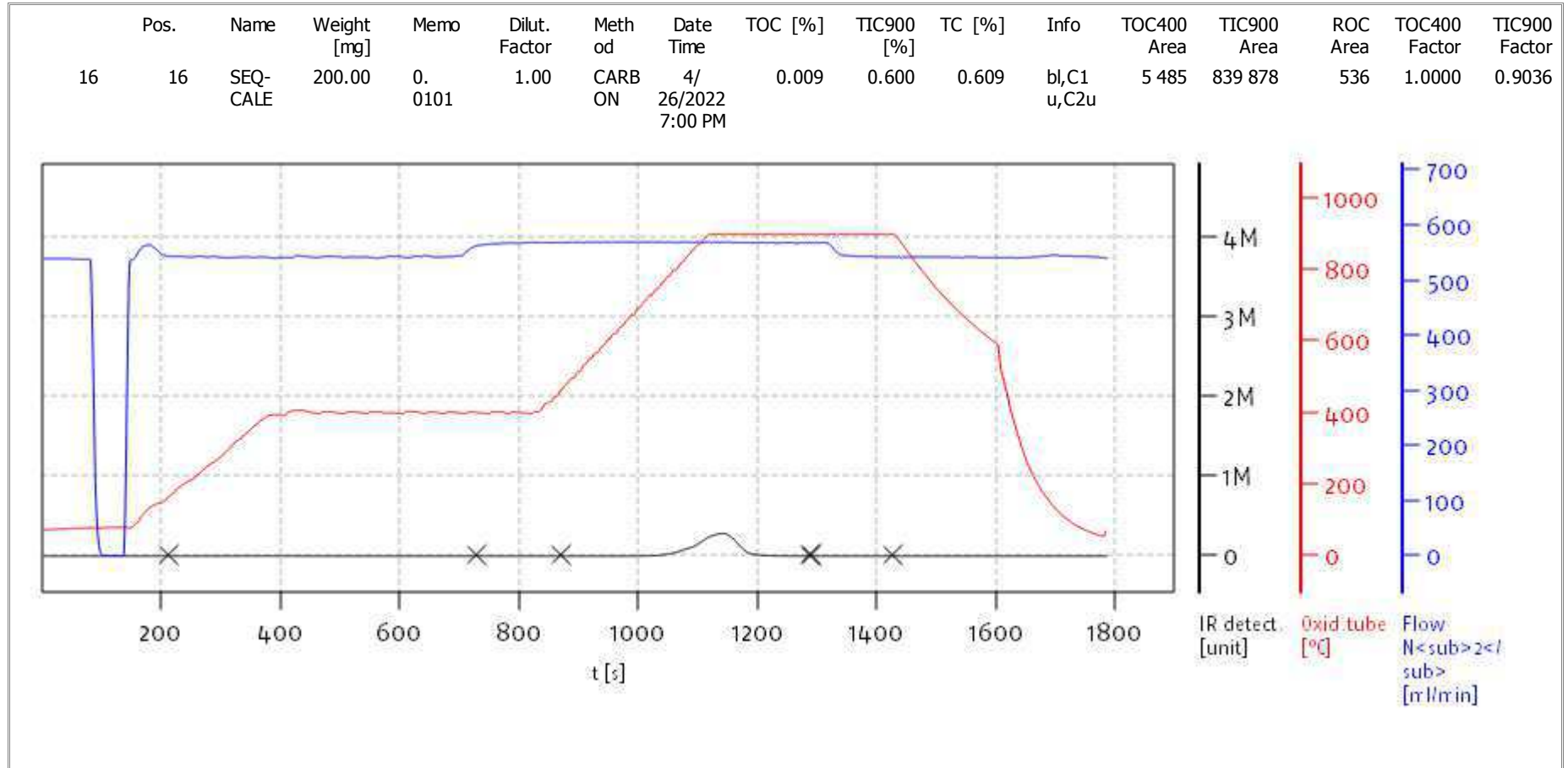


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

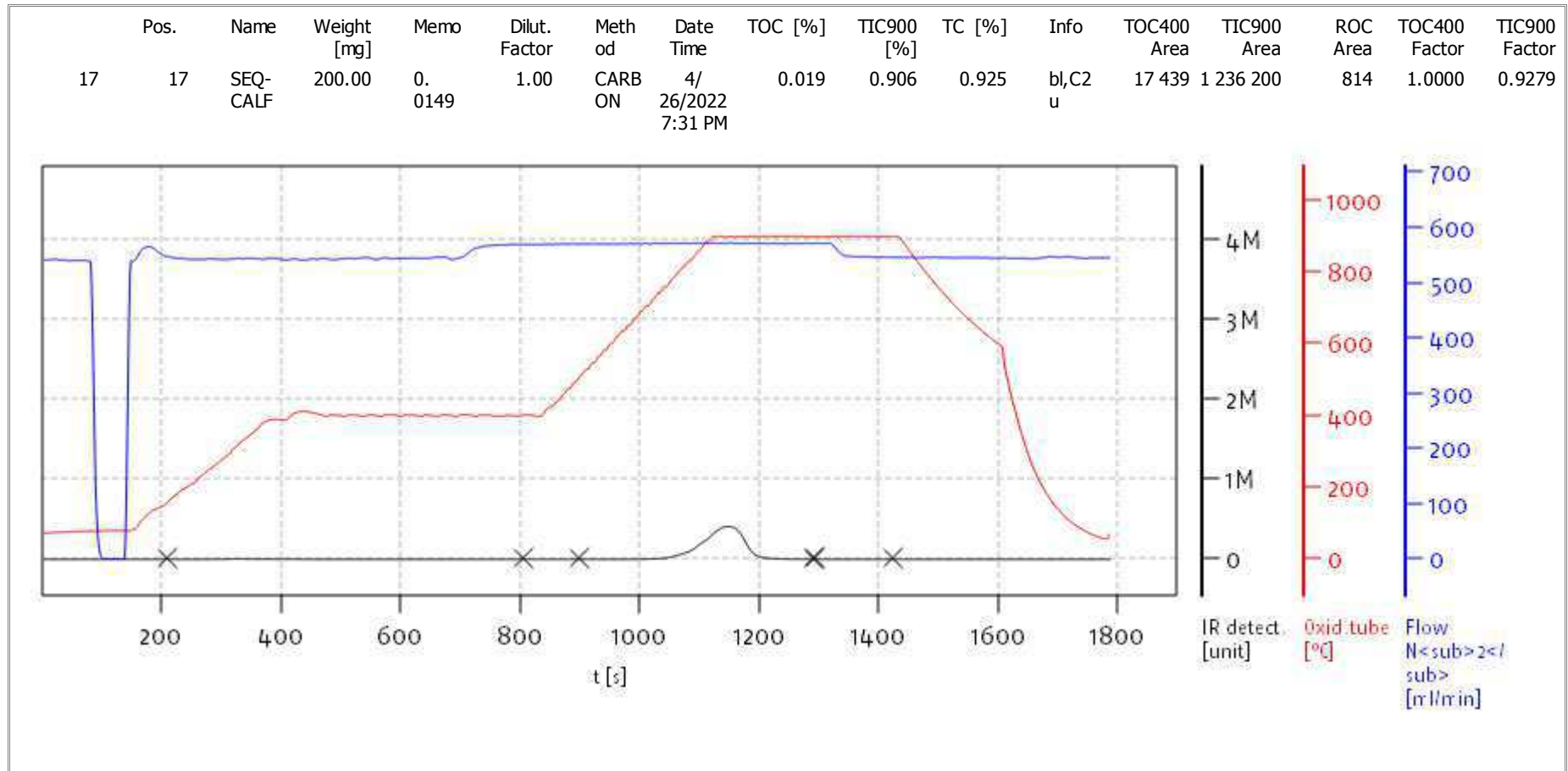
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

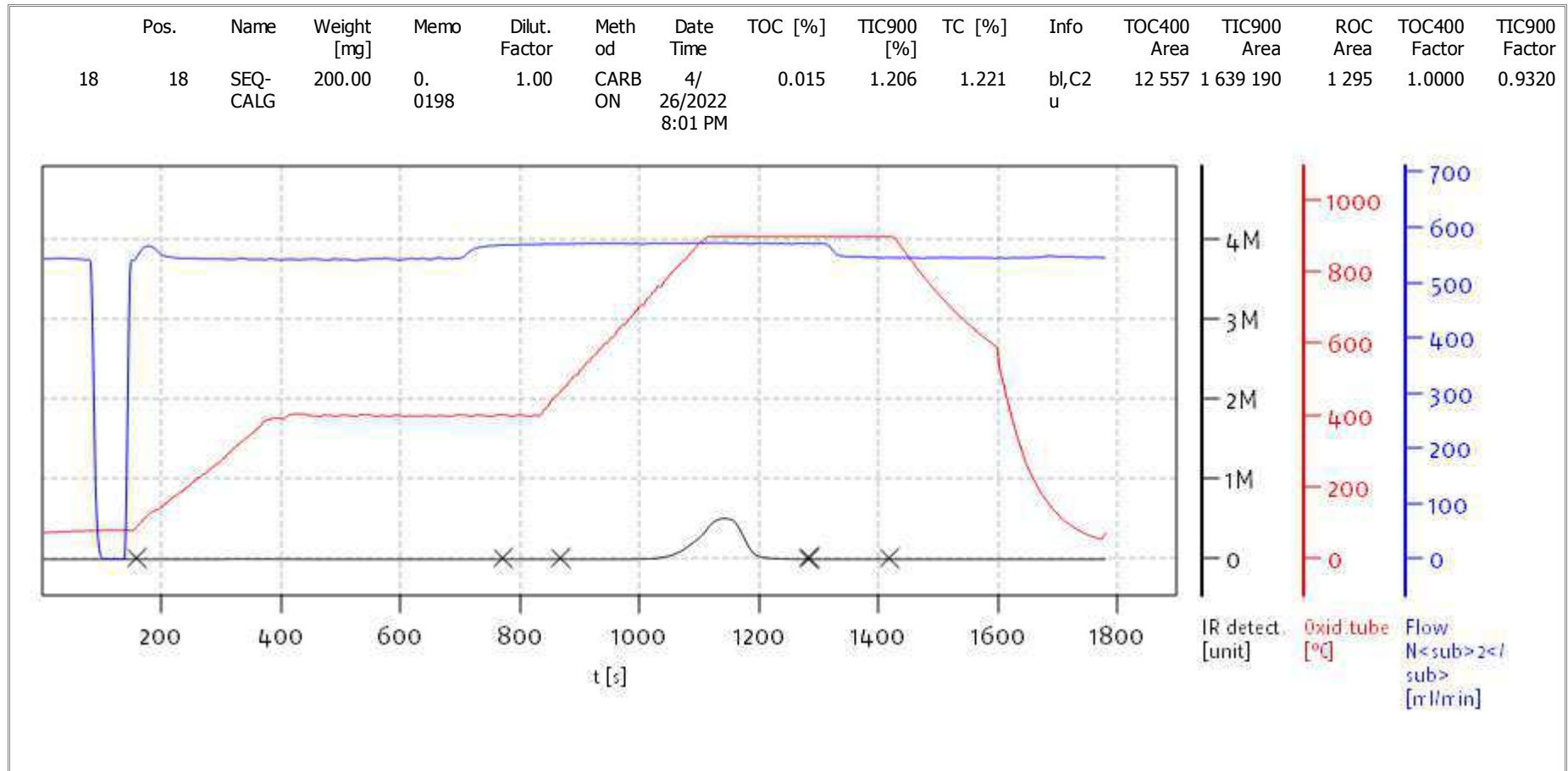


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

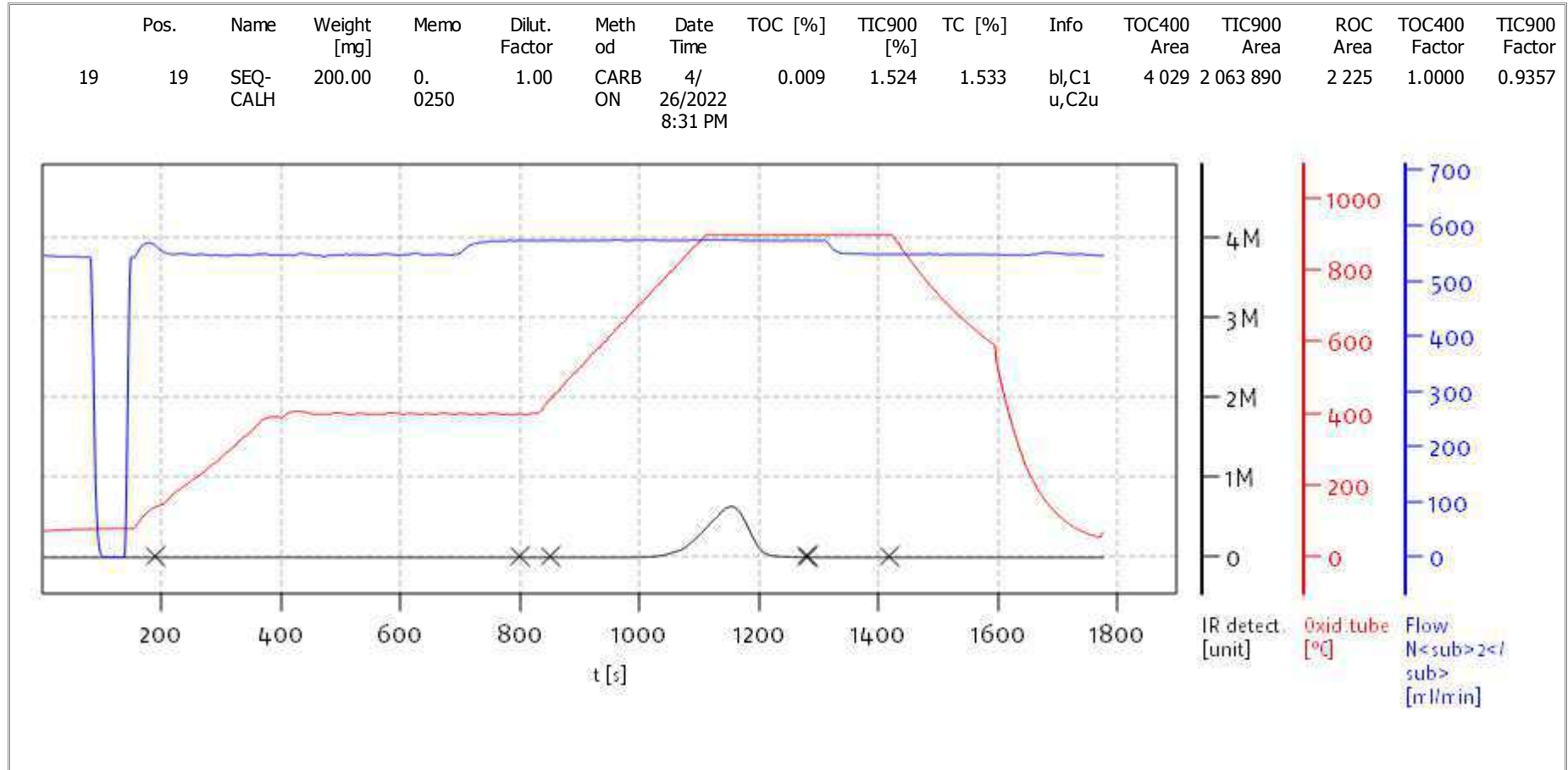
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

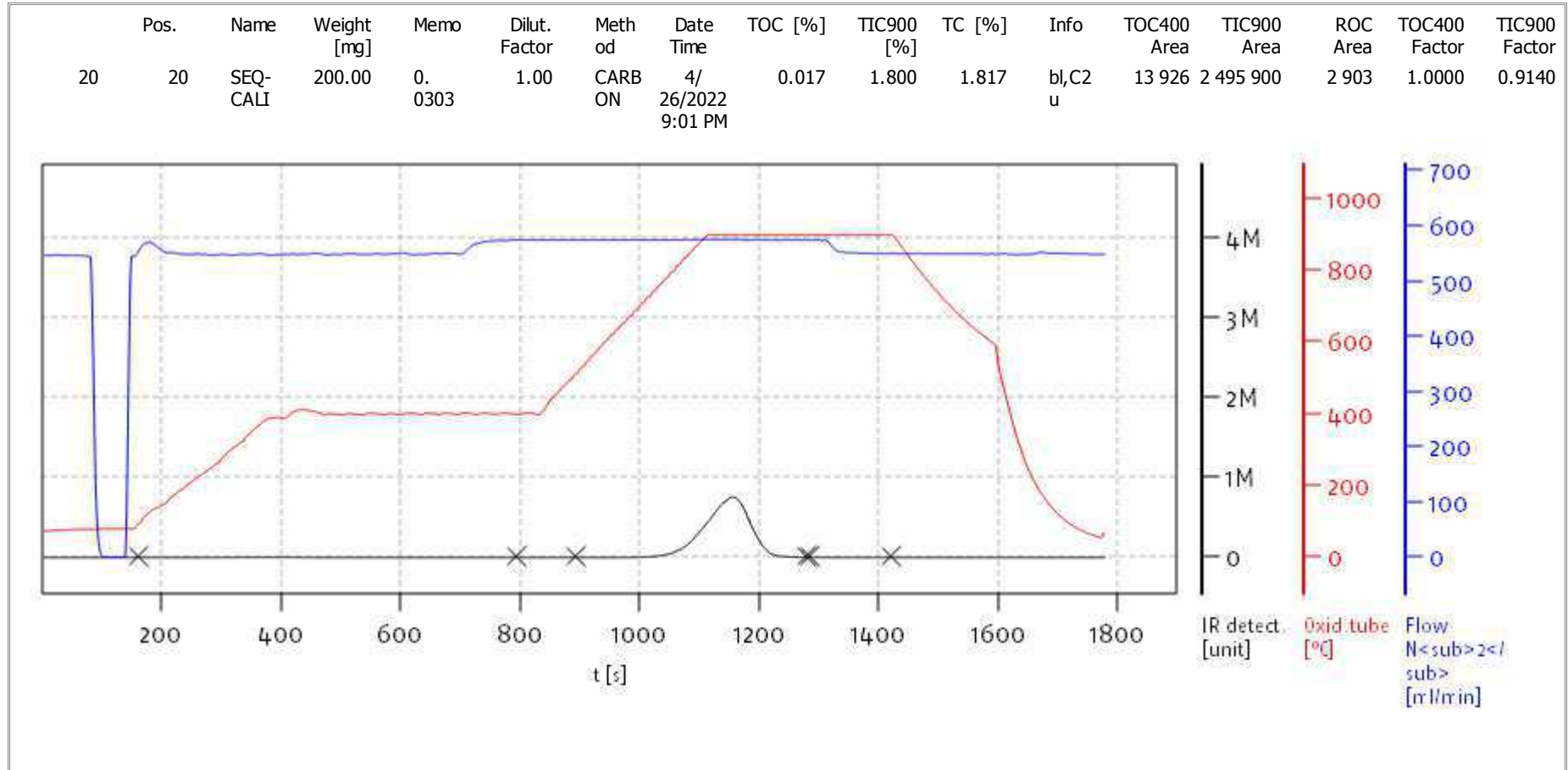
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

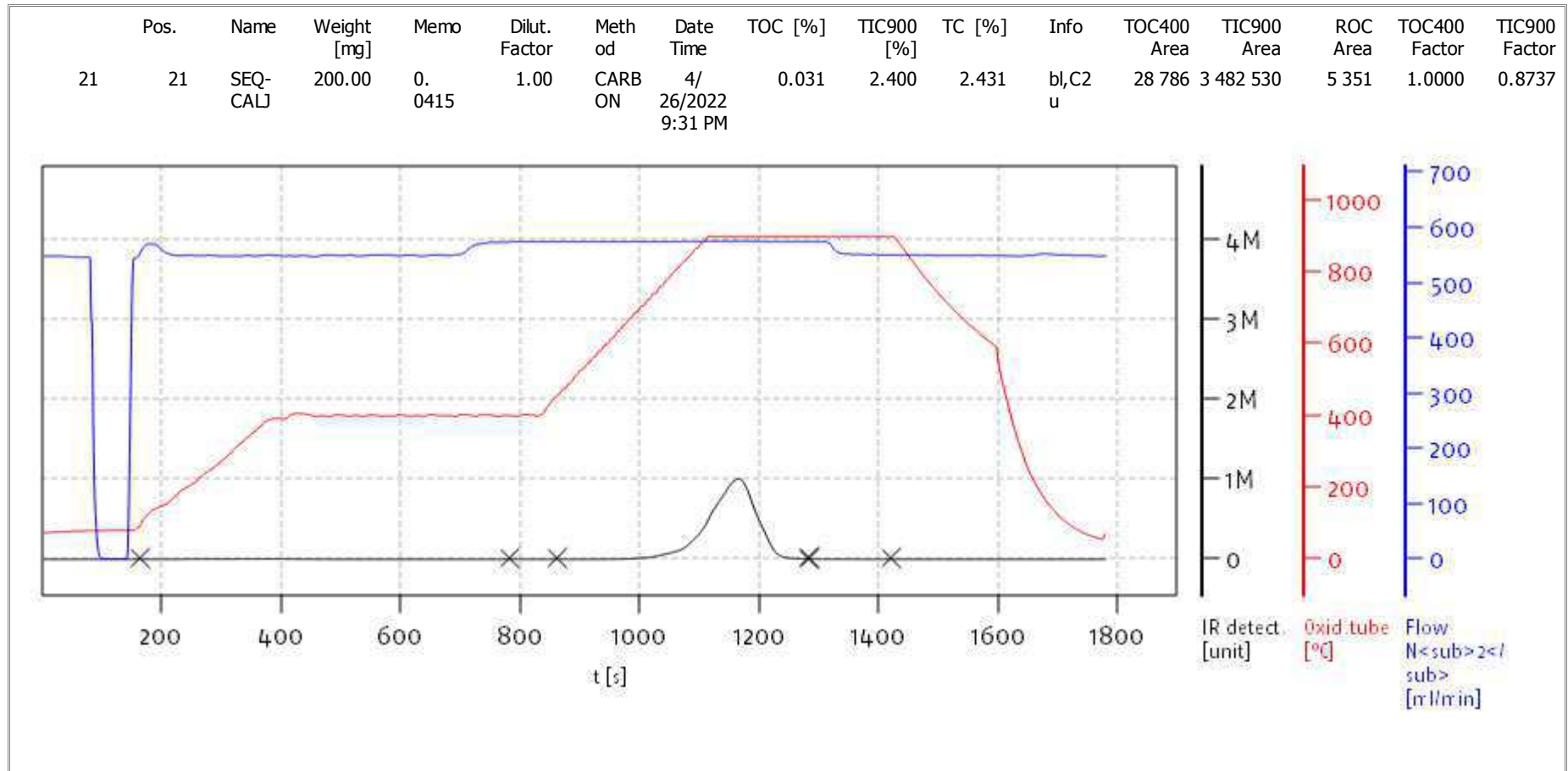
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

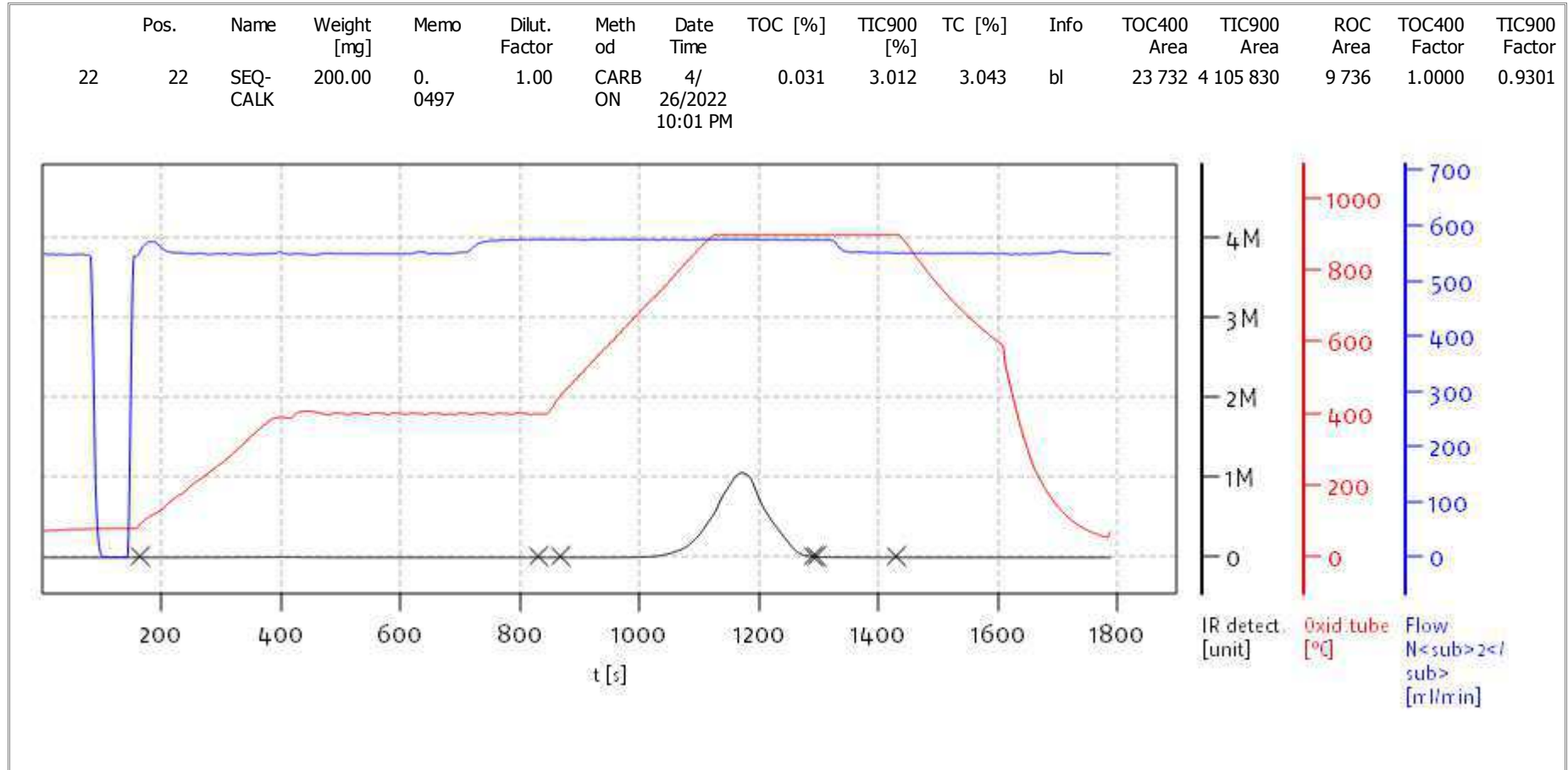
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

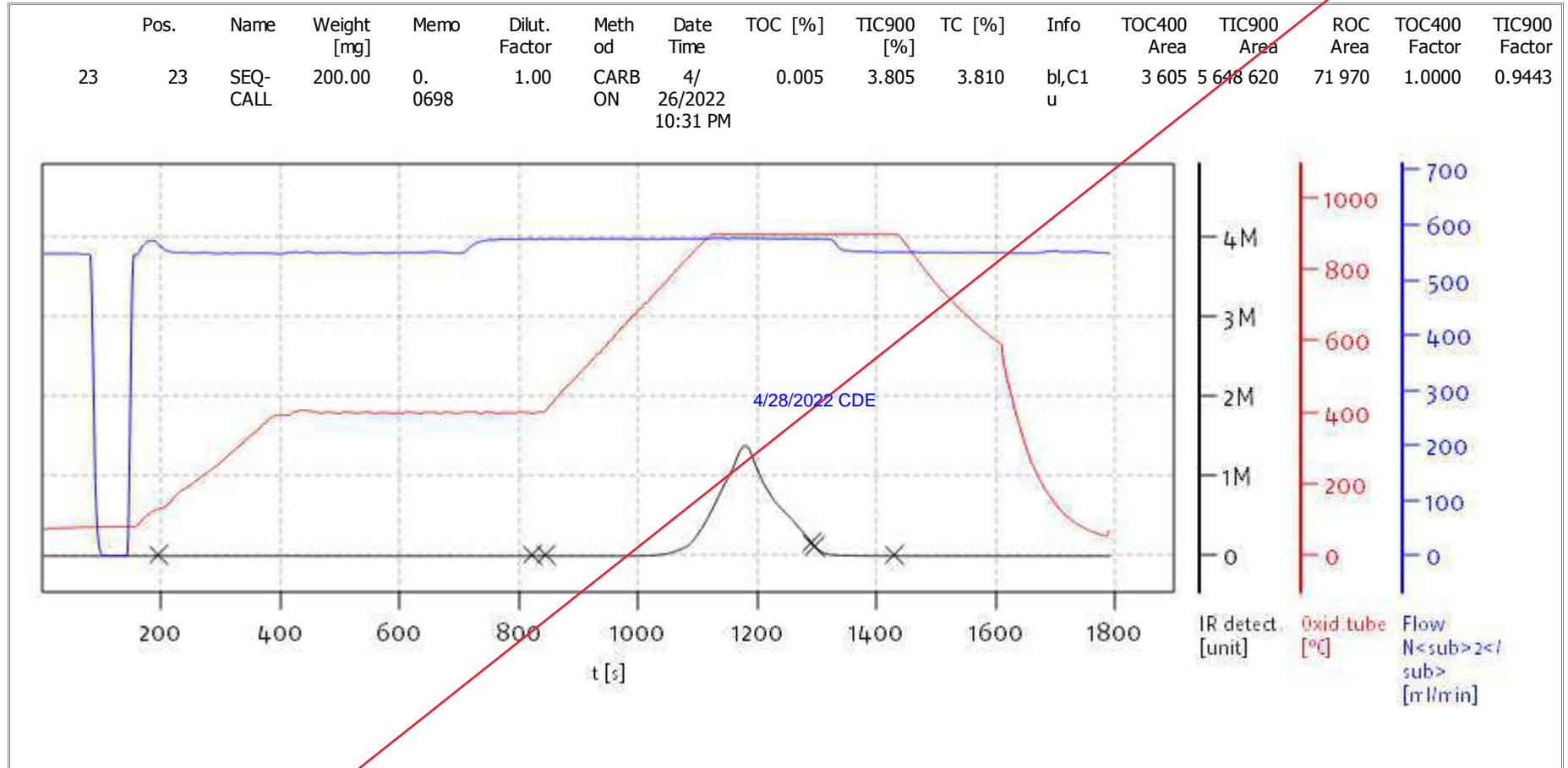
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

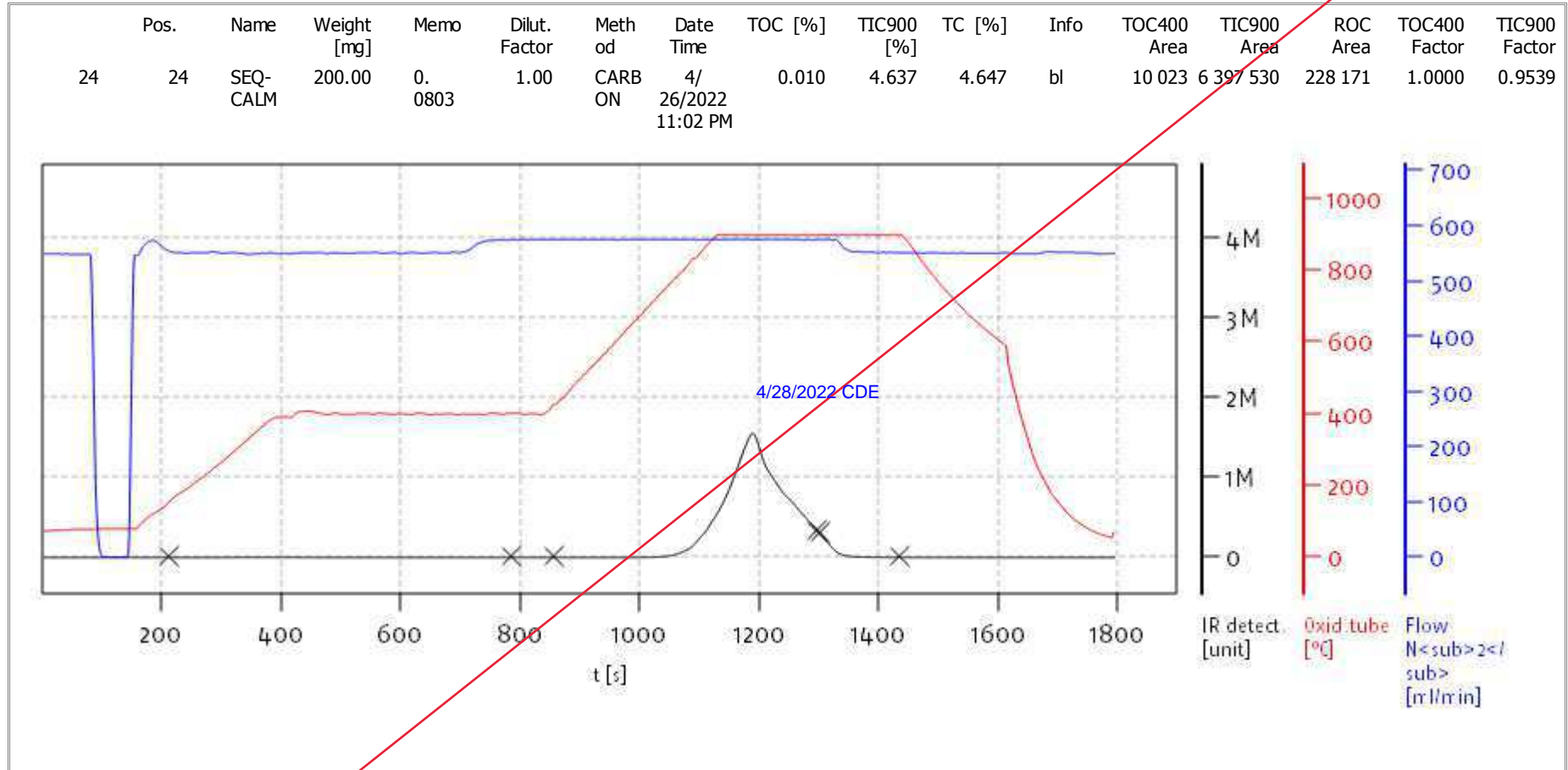


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

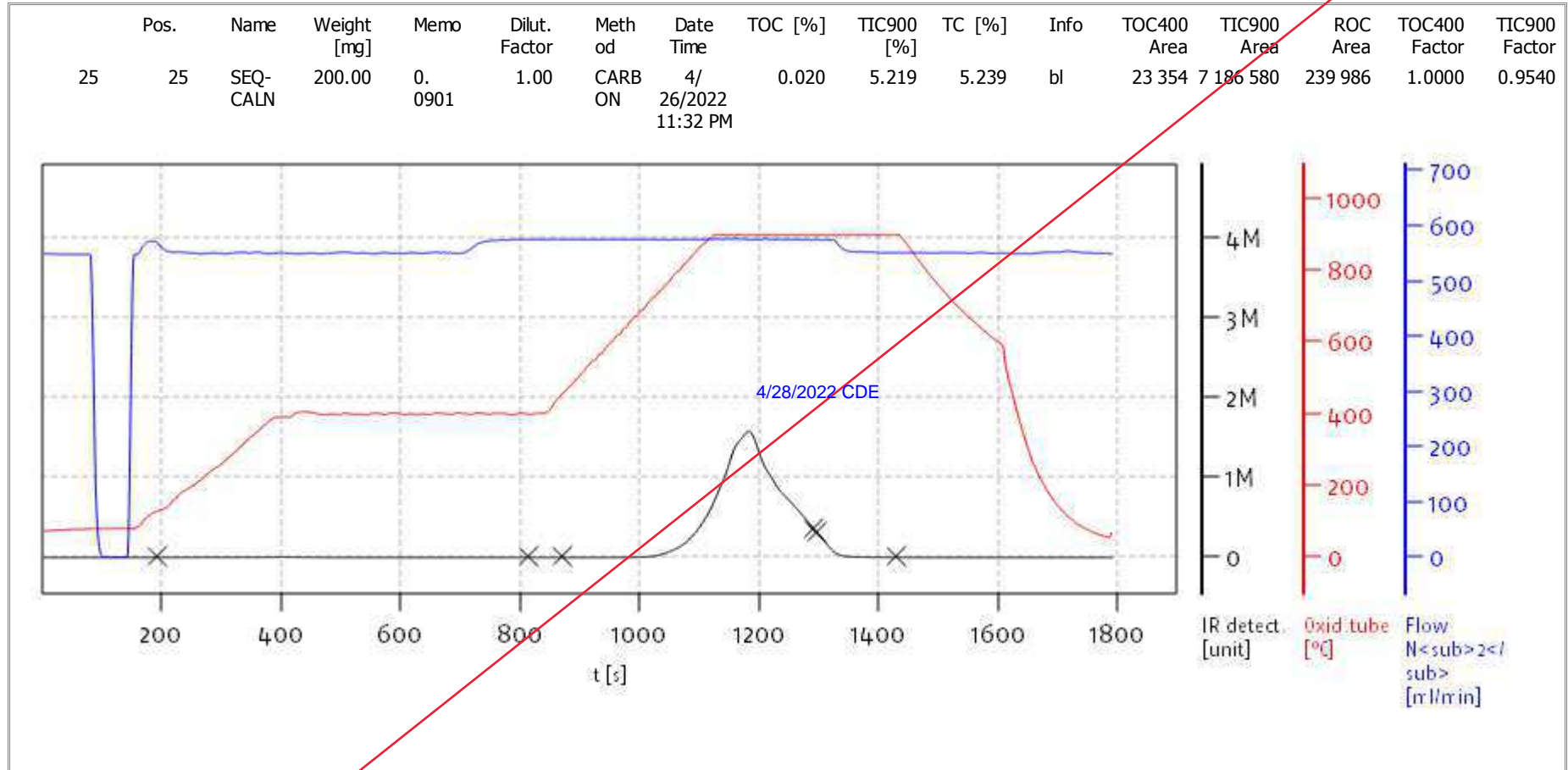
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

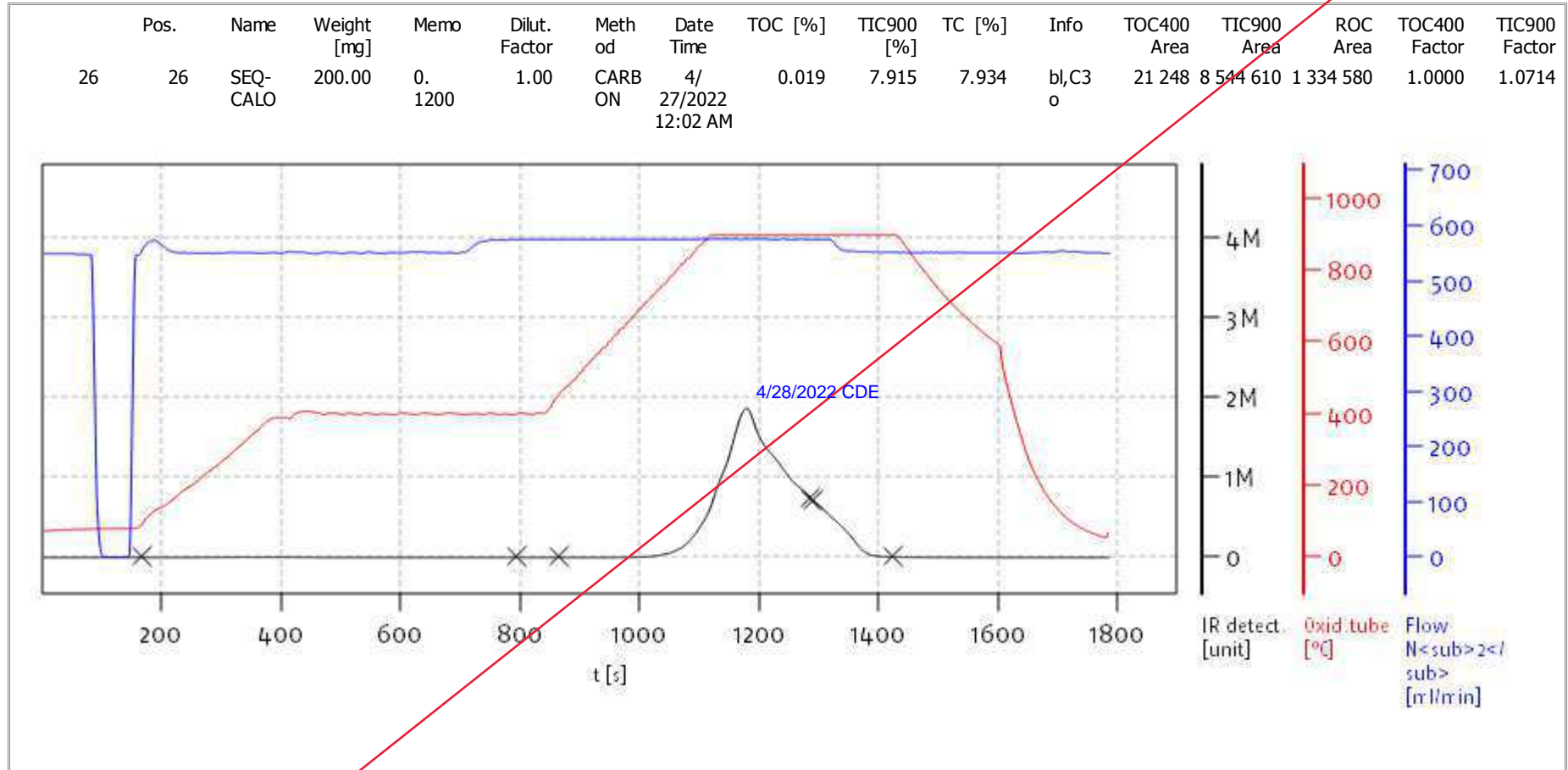


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

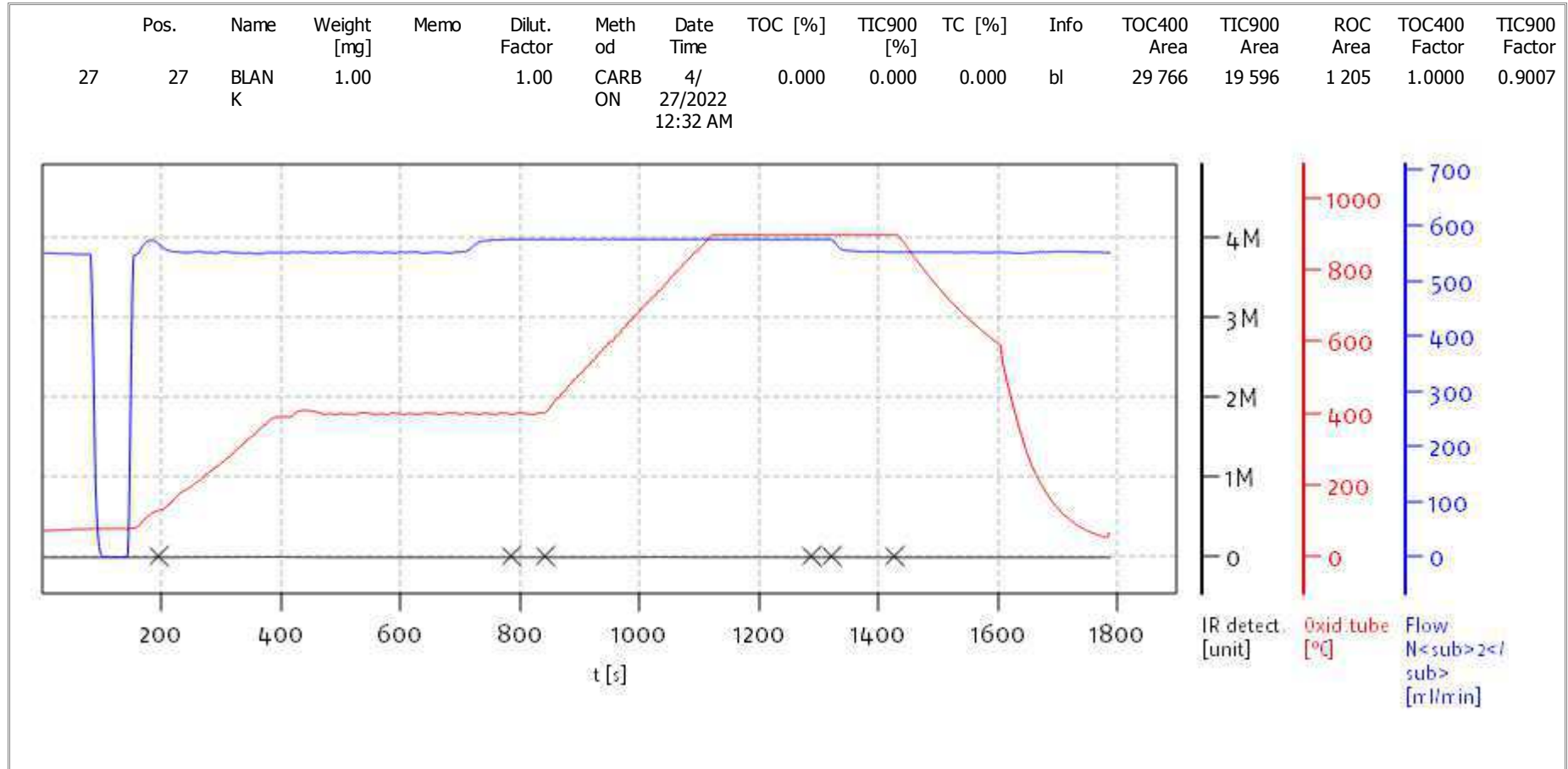
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

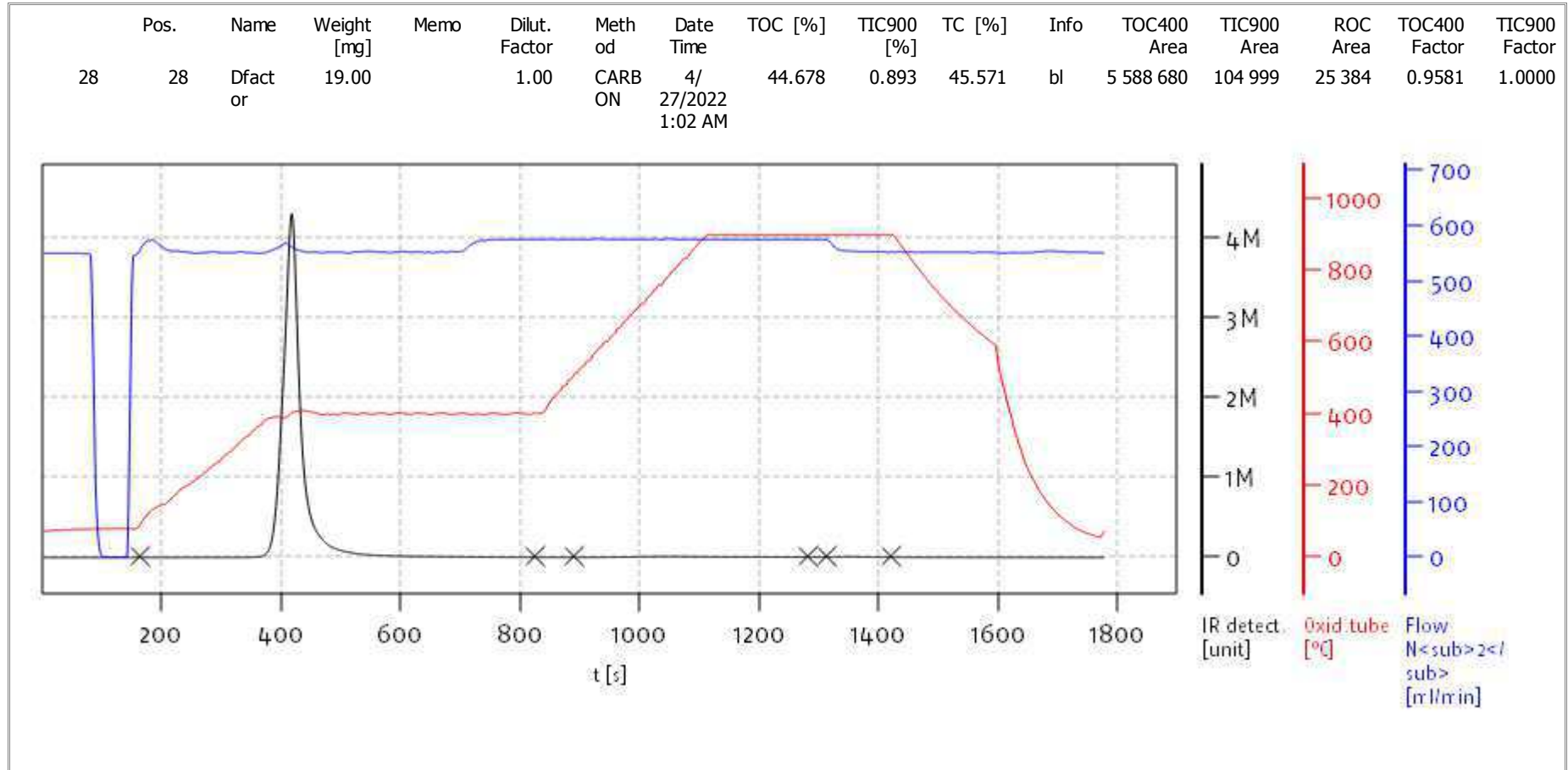
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

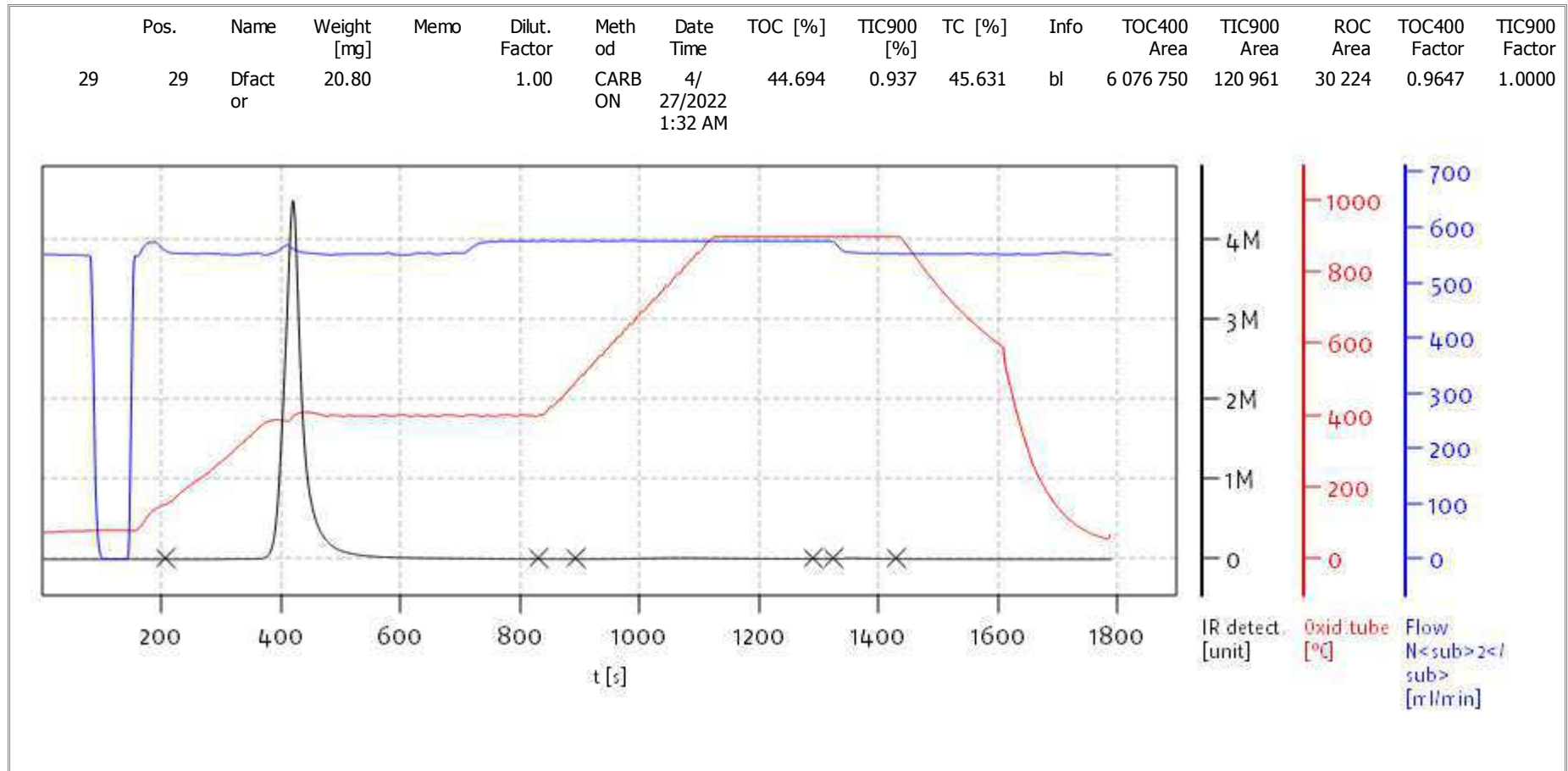
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

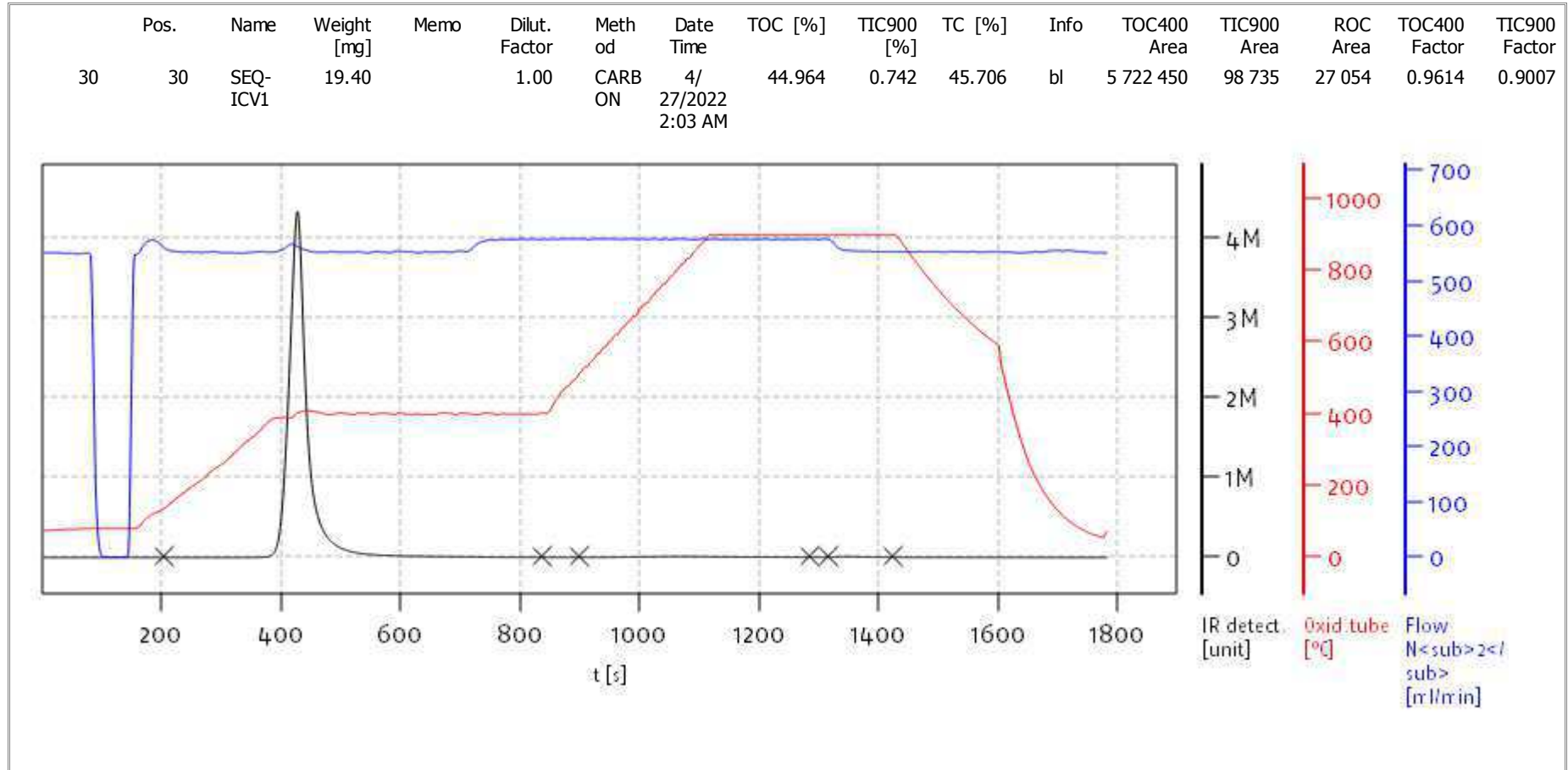
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

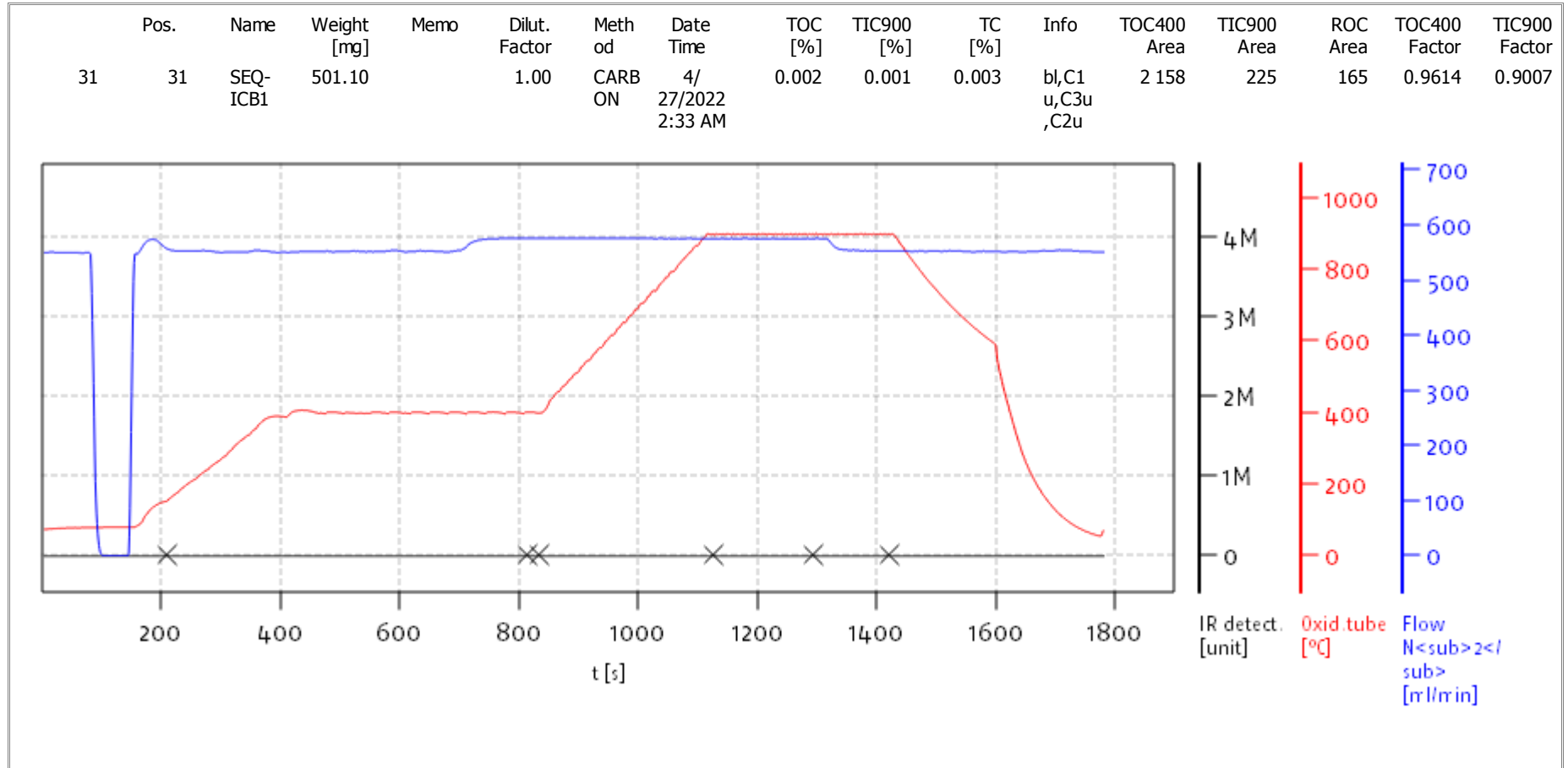
Date: Wed Apr 27 11:07:12 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:07:12 2022

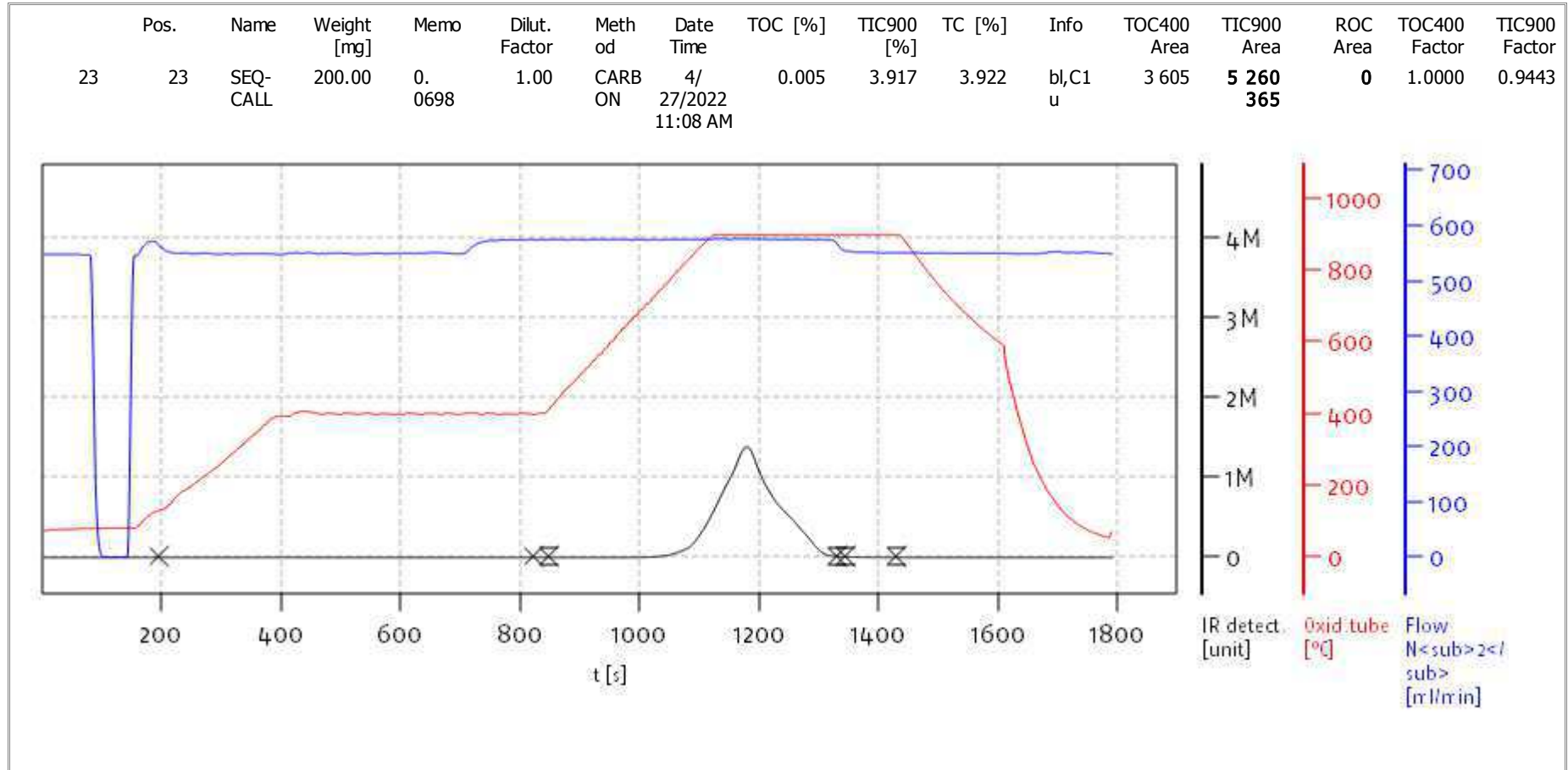


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

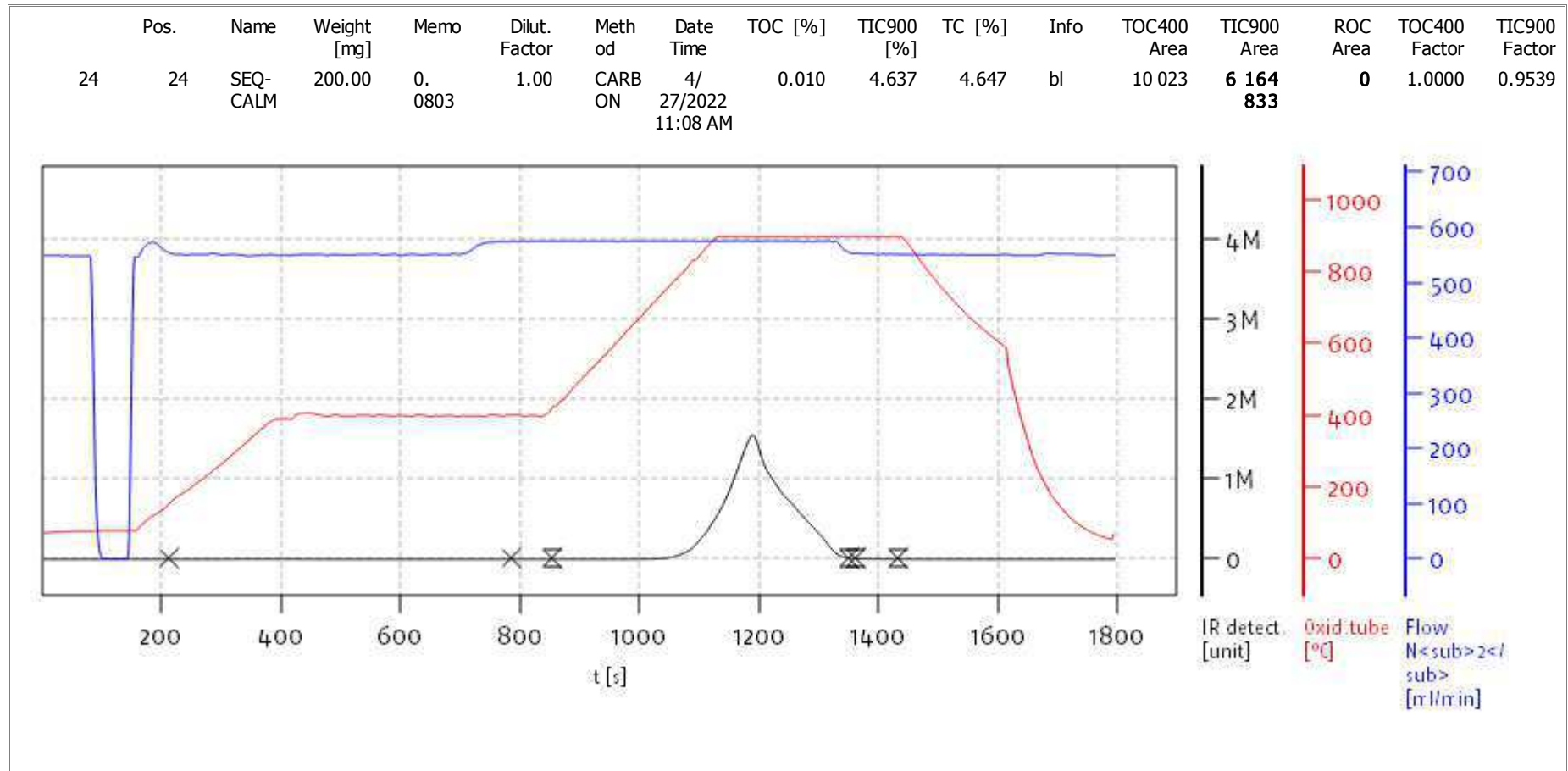
Date: Wed Apr 27 11:10:16 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:10:16 2022

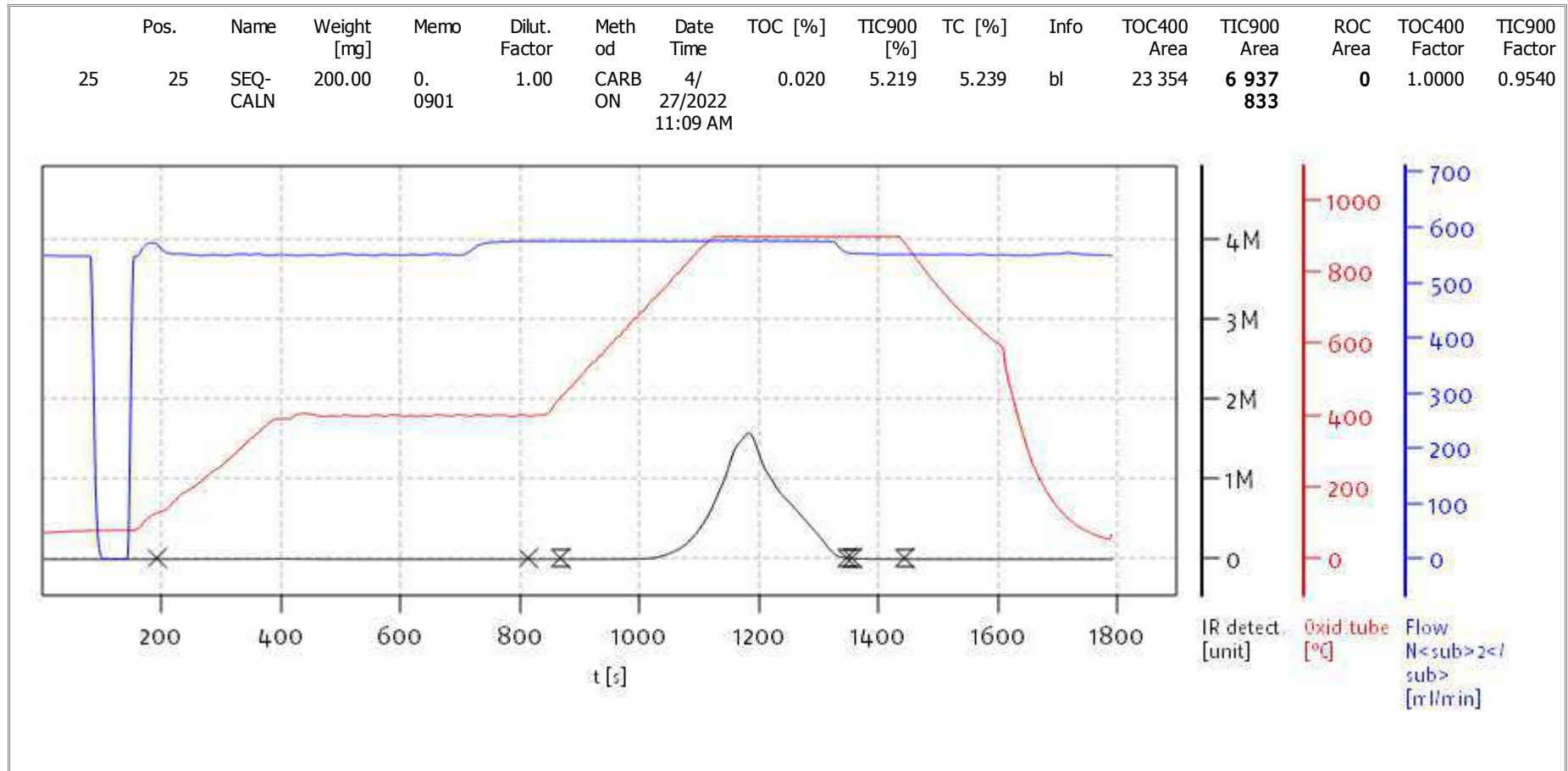


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC





Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

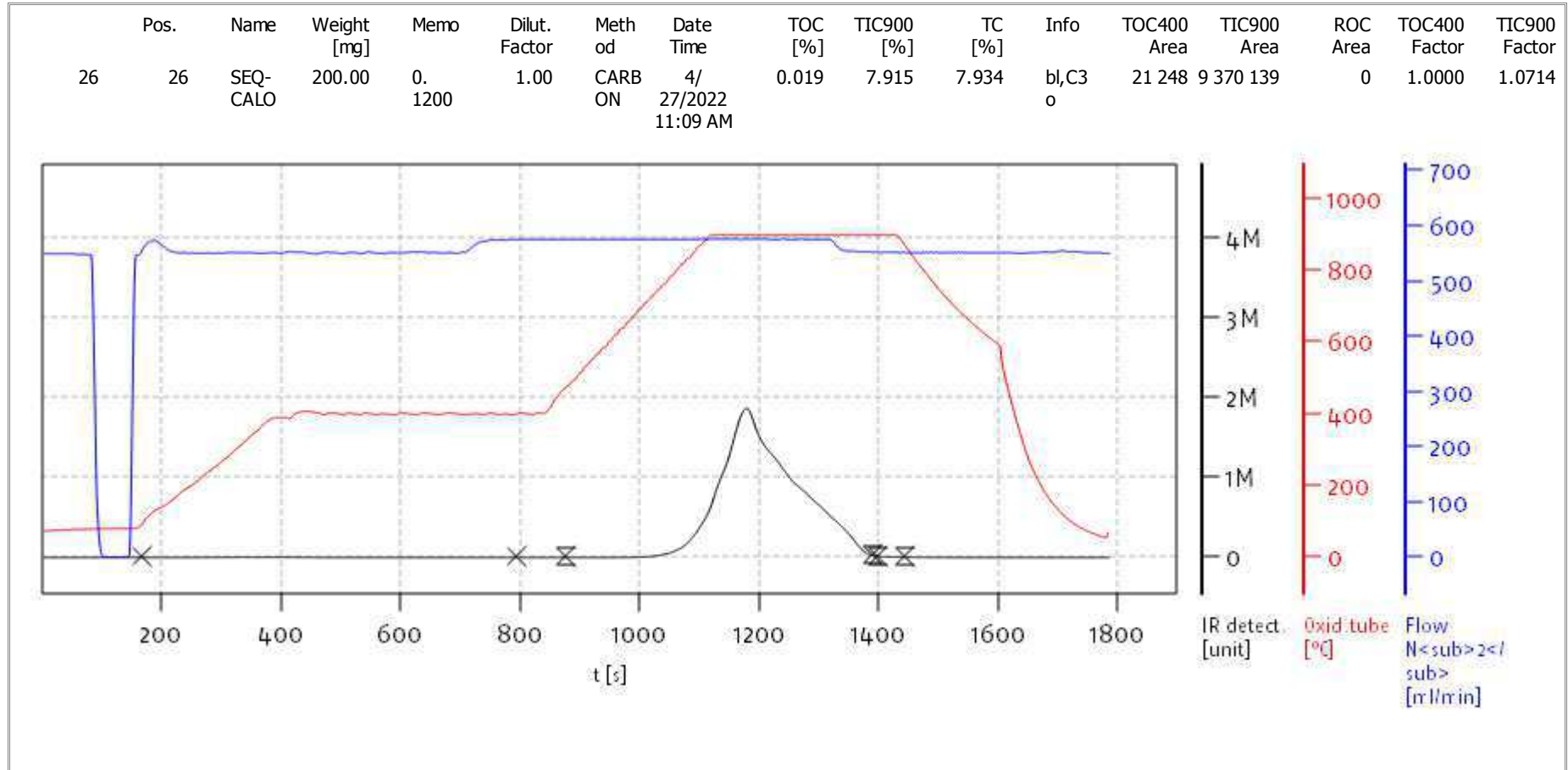
Date: Wed Apr 27 11:10:16 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC



Soli TOC Cube, Carbon  
Balance: BAL3  
Analyst: DOE



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:10:16 2022

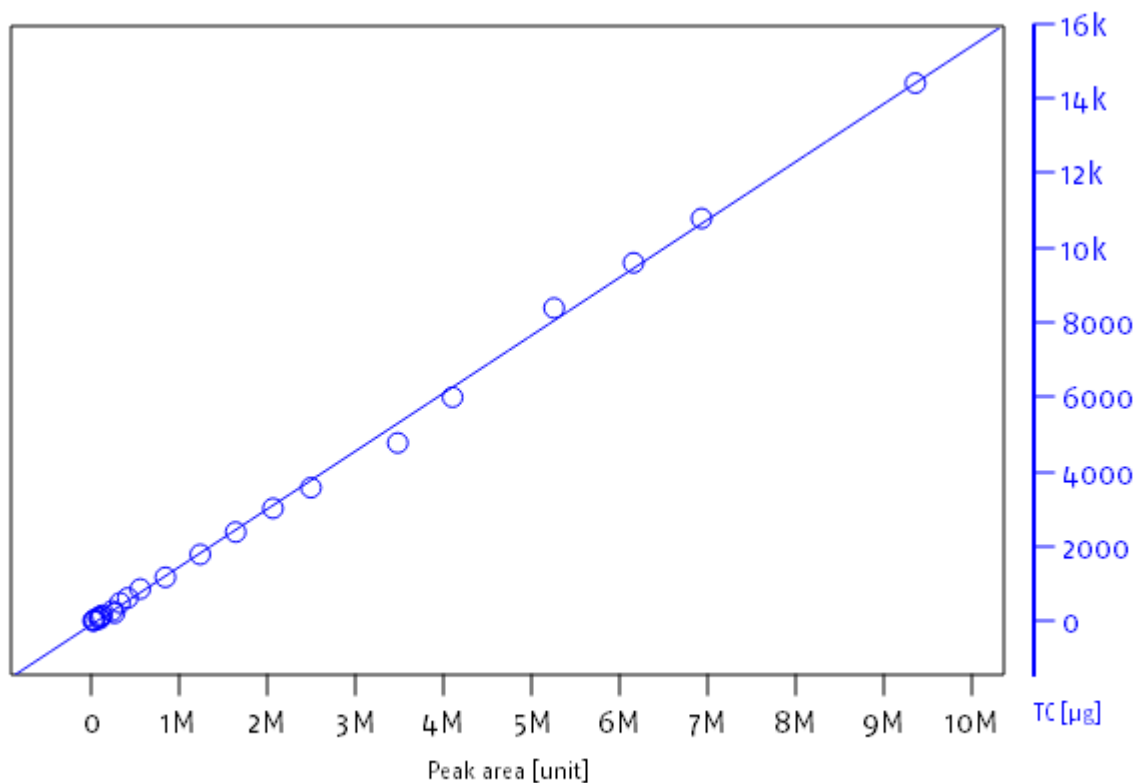


solITOC V2.0.2 (31015f9) 2018-11-19  
Serial No: 0300.181017  
Mode CCC

### Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



Name:

Access: solITOC superuser

Date: Wed Apr 27 11:19:56 2022



solITOC V2.0.2 (31015f9) 2018-11-19  
 Serial No: 0300.181017  
 Mode CCC



**INSTRUMENT BLANKS**  
**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: TOC Cube

Calibration: FD00070

Sequence: SKD0371

Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	



**INSTRUMENT BLANKS**  
**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: TOC Cube

Calibration: FD00070

Sequence: SLA0148

Date Analyzed: 01/16/23 11:32

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLA0148-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB1	Total Organic Carbon	0.001	0.02	0.02	%	
SLA0148-CCB2	Total Organic Carbon	0.001	0.02	0.02	%	
SLA0148-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	



**INITIAL AND CONTINUING  
CALIBRATION CHECK**  
**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: TOC Cube

Calibration: FD00070

Control Limit: +/- 10.00%

Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

\* Values outside of QC limits



**INITIAL AND CONTINUING  
CALIBRATION CHECK  
EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Instrument ID: TOC Cube

Calibration: FD00070

Control Limit: +/- 10.00%

Sequence: SLA0148

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLA0148-ICV1	Total Organic Carbon	44.446	44.1	99.2	%	EPA 9060A m
SLA0148-CCV1	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLA0148-CCV2	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLA0148-CCV3	Total Organic Carbon	44.446	44.3	99.8	%	EPA 9060A m
SLA0148-CCV4	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SLA0148-CCV5	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SLA0148-CCV6	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SLA0148-CCV7	Total Organic Carbon	44.446	45.5	102	%	EPA 9060A m
SLA0148-CCV8	Total Organic Carbon	44.446	44.0	99.0	%	EPA 9060A m
SLA0148-CCV9	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m

\* Values outside of QC limits



**STANDARD REFERENCE MATERIAL RECOVERY**

**EPA 9060A m**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Matrix:** Solid

**Laboratory ID:** BLA0320-SRM1

**Batch:** BLA0320

**Initial/Final:** 0.2734 g / 0.2734 g

**Preparation:** Plumb 1981

**Analyzed:** 01/16/2023 13:34

**Standard ID:** L000299

**Expires:** 01/11/2024

**Standard Lot#:** NA

**Description:** 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.94	0.02	0.02		98.5	80 - 120

\* Values outside of QC limits





**STANDARD REFERENCE MATERIAL RECOVERY**

**EPA 9060A m**

**Laboratory:** Analytical Resources, LLC

**SDG:** 23A0206

**Client:** Anchor QEA, LLC

**Project:** AOC5 MR Phase 1

**Matrix:** Solid

**Laboratory ID:** BLA0321-SRM1

**Batch:** BLA0321

**Initial/Final:** 0.294 g / 0.294 g

**Preparation:** Plumb 1981

**Analyzed:** 01/17/2023 4:44

**Standard ID:** L000299

**Expires:** 01/11/2024

**Standard Lot#:** NA

**Description:** 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.90	0.02	0.02		96.9	80 - 120

\* Values outside of QC limits



## HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1021 23A0206-01	01/11/23 08:25	01/11/23 17:05	01/13/23 09:35	2	180	01/16/23 22:09			
LDW23-SS1015 23A0206-02	01/11/23 08:37	01/11/23 17:05	01/13/23 09:35	2	180	01/16/23 22:40			
LDW23-SS1164 23A0206-03	01/11/23 09:18	01/11/23 17:05	01/13/23 09:35	2	180	01/17/23 00:11			
LDW23-SS1158 23A0206-04	01/11/23 09:35	01/11/23 17:05	01/13/23 09:35	2	180	01/17/23 00:41			
LDW23-SS1151 23A0206-05	01/11/23 09:50	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 01:12			
LDW23-SS1145 23A0206-06	01/11/23 10:07	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 01:42			
LDW23-SS1139 23A0206-07	01/11/23 10:20	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 02:12			
LDW23-SS1117 23A0206-08	01/11/23 10:40	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 02:43			
LDW23-SS1103 23A0206-09	01/11/23 11:15	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 06:15			
LDW23-SS1100 23A0206-10	01/11/23 11:28	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 07:46			
LDW23-SS1096 23A0206-11	01/11/23 11:43	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 08:16			
LDW23-SS1094 23A0206-12	01/11/23 12:19	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 08:47			
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 09:17			
LDW23-SS1061 23A0206-14	01/11/23 13:03	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 12:20			
Duplicate BLA0321-DUP1	01/11/23 11:15	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 06:45			
Matrix Spike BLA0321-MS1	01/11/23 11:15	01/11/23 17:05	01/13/23 09:35	1	180	01/17/23 07:16			

\* Indicates hold time exceedance.



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

## METHOD DETECTION AND REPORTING LIMITS

**EPA 9060A m**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument: TOC Cube

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Total Organic Carbon	0.02	0.02	%



# National Institute of Standards & Technology

## Certificate of Analysis

### Standard Reference Material® 1941b

#### Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

**Certified Mass Fraction Values:** Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

**Reference Mass Fraction Values:** Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

**Information Mass Fraction Values:** Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

**Expiration of Certification:** The certification of SRM 1941b is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

**Maintenance of SRM Certification:** NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief  
Chemical Sciences Division

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

## INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

**Handling:** This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

**Storage:** SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

**Use:** Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

## PREPARATION AND ANALYSIS<sup>(1)</sup>

**Sample Collection and Preparation:** The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 µm (100 % passing), homogenized in a cone blender, radiation sterilized (<sup>60</sup>Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

**Conversion to Dry-Mass Basis:** The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a -10 °C shelf temperature and a -50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

**Polycyclic Aromatic Hydrocarbons:** The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

<sup>(1)</sup> Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards and Technology.

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH<sub>2</sub>, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C<sub>18</sub>) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

**Homogeneity Assessment for PAHs:** The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

**PAH Isomers of Molecular Mass 300 and 302:** For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

**PCBs and Chlorinated Pesticides:** The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture, 23A0206 CLPLIKE (Rev2) - Page 5783 of 5812

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-*d*<sub>4</sub>, 4,4'-DDE-*d*<sub>8</sub>, 4,4'-DD-*d*<sub>8</sub>, and 4,4'-DDT-*d*<sub>8</sub> were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

**Alkylated PAH Groups, Hopanes, and Steranes:** SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

**Total Organic Carbon (TOC):** Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions <sup>(a)</sup> ( $\mu\text{g}/\text{kg}$ )	
Naphthalene <sup>(b,c,d,e,f,g)</sup>	848	$\pm 95^{(h)}$
Fluorene <sup>(b,c,d,e,f,g)</sup>	85	$\pm 15^{(h)}$
Phenanthrene <sup>(b,c,d,e,f,g)</sup>	406	$\pm 44^{(h)}$
Anthracene <sup>(b,c,d,e,f,g)</sup>	184	$\pm 18^{(h)}$
3-Methylphenanthrene <sup>(b,c,d)</sup>	105	$\pm 13^{(h)}$
2-Methylphenanthrene <sup>(b,c,d)</sup>	128	$\pm 14^{(h)}$
1-Methylphenanthrene <sup>(b,c,d,g)</sup>	73.2	$\pm 5.9^{(h)}$
Fluoranthene <sup>(b,c,d,e,f,g)</sup>	651	$\pm 50^{(h)}$
Pyrene <sup>(b,c,d,e,f,g)</sup>	581	$\pm 39^{(h)}$
Benz[ <i>a</i> ]anthracene <sup>(b,c,d,e,f,g)</sup>	335	$\pm 25^{(h)}$
Chrysene <sup>(d,f)</sup>	291	$\pm 31^{(h)}$
Triphenylene <sup>(d,f)</sup>	108	$\pm 5^{(i)}$
Benzo[ <i>b</i> ]fluoranthene <sup>(c,e)</sup>	453	$\pm 21^{(h)}$
Benzo[ <i>k</i> ]fluoranthene <sup>(b,c,d,e)</sup>	225	$\pm 18^{(h)}$
Benzo[ <i>e</i> ]pyrene <sup>(b,c,d,g)</sup>	325	$\pm 25^{(h)}$
Benzo[ <i>a</i> ]pyrene <sup>(b,c,d,f,g)</sup>	358	$\pm 17^{(h)}$
Perylene <sup>(b,c,d,f,g)</sup>	397	$\pm 45^{(h)}$
Benzo[ <i>ghi</i> ]perylene <sup>(b,c,d,f,g)</sup>	307	$\pm 45^{(h)}$
Indeno[1,2,3- <i>cd</i> ]pyrene <sup>(b,c,d,f,g)</sup>	341	$\pm 57^{(h)}$
Dibenz[ <i>a,j</i> ]anthracene <sup>(b,c,d,f)</sup>	48.9	$\pm 4.6^{(h)}$
Dibenz[ <i>a,c</i> ]anthracene <sup>(c,f)</sup>	36.7	$\pm 5.2^{(h)}$
Dibenz[ <i>a,h</i> ]anthracene <sup>(c,f)</sup>	53	$\pm 10^{(h)}$
Benzo[ <i>b</i> ]chrysene <sup>(b,c,d,f)</sup>	53	$\pm 12^{(h)}$
Picene <sup>(b,c,d)</sup>	46.6	$\pm 4.7^{(h)}$

<sup>(a)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(b)</sup> GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

<sup>(c)</sup> GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

<sup>(d)</sup> GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

<sup>(e)</sup> LC-FL (total) of total PAH fraction after PFE with DCM.

<sup>(f)</sup> LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.

<sup>(g)</sup> 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.

<sup>(h)</sup> Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(i)</sup> The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.



Table 2. Certified Mass Fraction Values for PCB Congeners<sup>(a)</sup> in SRM 1941b

PCB Congeners		Mass Fractions <sup>(b)</sup> ( $\mu\text{g}/\text{kg}$ )
PCB	8 (2,4'-Dichlorobiphenyl) <sup>(c,d,e,f,g)</sup>	1.65 $\pm$ 0.19 <sup>(h)</sup>
PCB	18 (2,2',5-Trichlorobiphenyl) <sup>(c,d,e,f,g)</sup>	2.39 $\pm$ 0.29 <sup>(h)</sup>
PCB	28 (2,4,4'-Trichlorobiphenyl) <sup>(c,d,e,f,g)</sup>	4.52 $\pm$ 0.57 <sup>(h)</sup>
PCB	31 (2,4',5-Trichlorobiphenyl) <sup>(c,e,f)</sup>	3.18 $\pm$ 0.41 <sup>(h)</sup>
PCB	44 (2,2',3,5'-Tetrachlorobiphenyl) <sup>(c,d,e,f,g)</sup>	3.85 $\pm$ 0.20 <sup>(i)</sup>
PCB	49 (2,2',4,5'-Tetrachlorobiphenyl) <sup>(c,d,e,f)</sup>	4.34 $\pm$ 0.28 <sup>(i)</sup>
PCB	52 (2,2',5,5'-Tetrachlorobiphenyl) <sup>(c,d,e,f,g)</sup>	5.24 $\pm$ 0.28 <sup>(i)</sup>
PCB	66 (2,3',4,4'-Tetrachlorobiphenyl) <sup>(c,e,f,g,j)</sup>	4.96 $\pm$ 0.53 <sup>(i)</sup>
PCB	87 (2,2',3,4,5'-Pentachlorobiphenyl) <sup>(c,d,f,j)</sup>	1.14 $\pm$ 0.16 <sup>(h)</sup>
PCB	95 (2,2',3,5',6-Pentachlorobiphenyl) <sup>(c,e,f,g)</sup>	3.93 $\pm$ 0.62 <sup>(i)</sup>
PCB	99 (2,2',4,4',5-Pentachlorobiphenyl) <sup>(c,d,e,f,g)</sup>	2.90 $\pm$ 0.36 <sup>(i)</sup>
PCB	101 (2,2',4,5,5'-Pentachlorobiphenyl) <sup>(c,e,f,g,j)</sup>	5.11 $\pm$ 0.34 <sup>(i)</sup>
PCB	105 (2,3,3',4,4'-Pentachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	1.43 $\pm$ 0.10 <sup>(i)</sup>
PCB	110 (2,3,3',4',6-Pentachlorobiphenyl) <sup>(c,e,f,j)</sup>	4.62 $\pm$ 0.36 <sup>(i)</sup>
PCB	118 (2,3',4,4',5-Pentachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	4.23 $\pm$ 0.19 <sup>(i)</sup>
PCB	128 (2,2',3,3',4,4'-Hexachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	0.696 $\pm$ 0.044 <sup>(i)</sup>
PCB	138 (2,2',3,4,4',5'-Hexachlorobiphenyl) <sup>(c,e,f,j)</sup>	3.60 $\pm$ 0.28 <sup>(i)</sup>
PCB	149 (2,2',3,4',5,6-Hexachlorobiphenyl) <sup>(c,d,e,j)</sup>	4.35 $\pm$ 0.26 <sup>(h)</sup>
PCB	153 (2,2',4,4',5,5'-Hexachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	5.47 $\pm$ 0.32 <sup>(i)</sup>
PCB	156 (2,3,3',4,4',5-Hexachlorobiphenyl) <sup>(c,d,e,f,j)</sup>	0.507 $\pm$ 0.090 <sup>(h)</sup>
PCB	170 (2,2',3,3',4,4',5-Heptachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	1.35 $\pm$ 0.09 <sup>(i)</sup>
PCB	180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	3.24 $\pm$ 0.51 <sup>(i)</sup>
PCB	183 (2,2',3,4,4',5,6-Heptachlorobiphenyl) <sup>(c,d,e,j)</sup>	0.979 $\pm$ 0.087 <sup>(h)</sup>
PCB	187 (2,2',3,4',5,5',6-Heptachlorobiphenyl) <sup>(c,d,e,f,g,j)</sup>	2.17 $\pm$ 0.22 <sup>(i)</sup>
PCB	194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl) <sup>(c,d,e,j)</sup>	1.04 $\pm$ 0.06 <sup>(h)</sup>
PCB	195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl) <sup>(c,e,g,j)</sup>	0.645 $\pm$ 0.060 <sup>(i)</sup>
PCB	201 (2,2',3,3',4,5',6'-Octachlorobiphenyl) <sup>(c,e,j)</sup>	0.777 $\pm$ 0.034 <sup>(h)</sup>
PCB	206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl) <sup>(c,e,f,g,j)</sup>	2.42 $\pm$ 0.19 <sup>(i)</sup>
PCB	209 Decachlorobiphenyl <sup>(c,d,e,f,g,j)</sup>	4.86 $\pm$ 0.45 <sup>(i)</sup>

<sup>(a)</sup> PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

<sup>(b)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(c)</sup> GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

<sup>(d)</sup> GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

<sup>(e)</sup> GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

<sup>(f)</sup> GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

<sup>(g)</sup> 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

<sup>(h)</sup> Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(i)</sup> Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(j)</sup> GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions <sup>(a)</sup> ( $\mu\text{g}/\text{kg}$ )
Hexachlorobenzene <sup>(b,c,d,e)</sup>	5.83 $\pm$ 0.38 <sup>(f)</sup>
<i>cis</i> -Chlordane <sup>(b,c,d,e,g)</sup>	0.85 $\pm$ 0.11 <sup>(h)</sup>
<i>trans</i> -Chlordane <sup>(b,c,e)</sup>	0.566 $\pm$ 0.093 <sup>(f)</sup>
<i>cis</i> -Nonachlor <sup>(b,e,g)</sup>	0.378 $\pm$ 0.053 <sup>(h)</sup>
<i>trans</i> -Nonachlor <sup>(b,c,d,e,g)</sup>	0.438 $\pm$ 0.073 <sup>(f)</sup>
4,4'-DDE <sup>(b,d,e,g)</sup>	3.22 $\pm$ 0.28 <sup>(h)</sup>
4,4'-DDD <sup>(b,d,e,g)</sup>	4.66 $\pm$ 0.46 <sup>(h)</sup>

<sup>(a)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(b)</sup> GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

<sup>(c)</sup> GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

<sup>(d)</sup> GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

<sup>(e)</sup> 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.

<sup>(f)</sup> Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(g)</sup> GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

<sup>(h)</sup> Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions <sup>(a)</sup>		
	(µg/kg)		
1-Methylnaphthalene <sup>(b,c,d,e)</sup>	127	±	14 <sup>(f)</sup>
2-Methylnaphthalene <sup>(b,c,d,e)</sup>	276	±	53 <sup>(f)</sup>
2,6-Dimethylnaphthalene <sup>(b,c,d,e)</sup>	75.9	±	4.5 <sup>(f)</sup>
2,3,5-Trimethylnaphthalene <sup>(b,c,d,e)</sup>	25.5	±	5.1 <sup>(f)</sup>
Biphenyl <sup>(b,c,d,e)</sup>	74.0	±	8.0 <sup>(f)</sup>
Acenaphthylene <sup>(b,c,d,e)</sup>	53.3	±	6.4 <sup>(f)</sup>
Acenaphthene <sup>(b,c,d,e)</sup>	38.4	±	5.2 <sup>(f)</sup>
9-Methylphenanthrene <sup>(c)</sup>	63.5	±	2.5 <sup>(g)</sup>
4-Methylphenanthrene and 9-Methylphenanthrene <sup>(b,d)</sup>	80.1	±	4.8 <sup>(f)</sup>
2-Methylanthracene <sup>(c,d)</sup>	36	±	15 <sup>(f)</sup>
8-Methylfluoranthene <sup>(b)</sup>	49.5	±	2.7 <sup>(g)</sup>
7-Methylfluoranthene <sup>(b)</sup>	45.4	±	1.5 <sup>(g)</sup>
1-Methylfluoranthene <sup>(b)</sup>	42.4	±	2.1 <sup>(g)</sup>
3-Methylfluoranthene <sup>(b)</sup>	28.8	±	1.3 <sup>(g)</sup>
2-Methylpyrene <sup>(b)</sup>	78.7	±	4.0 <sup>(g)</sup>
4-Methylpyrene <sup>(b)</sup>	66.4	±	2.6 <sup>(g)</sup>
1-Methylpyrene <sup>(b)</sup>	52.5	±	2.3 <sup>(g)</sup>
Acephenanthrene <sup>(d)</sup>	30.5	±	1.9 <sup>(g)</sup>
Benzo[ <i>c</i> ]phenanthrene <sup>(b,c,d)</sup>	58	±	15 <sup>(f)</sup>
Benzo[ <i>a</i> ]fluoranthene <sup>(b,c,d)</sup>	73	±	18 <sup>(f)</sup>
Benzo[ <i>j</i> ]fluoranthene <sup>(c)</sup>	217	±	5 <sup>(g)</sup>
Indeno[1,2,3- <i>cd</i> ]fluoranthene <sup>(d)</sup>	9.63	±	0.34 <sup>(g)</sup>
Pentaphene <sup>(d)</sup>	25.3	±	1.0 <sup>(g)</sup>

<sup>(a)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(b)</sup> GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

<sup>(c)</sup> GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

<sup>(d)</sup> GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

<sup>(e)</sup> 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.

<sup>(f)</sup> Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicated. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(g)</sup> Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty,  $U$ , is calculated as  $U = k u_c$ , where  $u_c$  is one standard deviation of the analyte mean, and the coverage factor,  $k$ , is determined from the Student's  $t$ -distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicated. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions <sup>(a,b,c)</sup> ( $\mu\text{g}/\text{kg}$ )
Coronene	72.6 $\pm$ 4.7
Dibenzo[ <i>b,e</i> ]fluoranthene	10.3 $\pm$ 0.3
Naphtho[1,2- <i>b</i> ]fluoranthene	91.0 $\pm$ 3.1
Naphtho[1,2- <i>k</i> ]fluoranthene and Naphtho[2,3- <i>j</i> ]fluoranthene	79.8 $\pm$ 2.5
Naphtho[2,3- <i>b</i> ]fluoranthene	23.5 $\pm$ 0.3
Dibenzo[ <i>b,k</i> ]fluoranthene	95.6 $\pm$ 3.1
Dibenzo[ <i>a,k</i> ]fluoranthene	26.6 $\pm$ 0.4
Dibenzo[ <i>j,l</i> ]fluoranthene	63.8 $\pm$ 1.8
Dibenzo[ <i>a,l</i> ]pyrene	11.1 $\pm$ 1.0
Naphtho[2,3- <i>k</i> ]fluoranthene	10.7 $\pm$ 0.6
Naphtho[1,2- <i>a</i> ]pyrene	16.7 $\pm$ 1.4
Naphtho[2,3- <i>e</i> ]pyrene	33.2 $\pm$ 2.3
Dibenzo[ <i>a,e</i> ]pyrene	76.1 $\pm$ 3.6
Naphtho[2,1- <i>a</i> ]pyrene	59.2 $\pm$ 1.8
Dibenzo[ <i>e,i</i> ]pyrene	35.0 $\pm$ 2.4
Naphtho[2,3- <i>a</i> ]pyrene	16.5 $\pm$ 0.6
Benzo[ <i>b</i> ]perylene	38.2 $\pm$ 1.2
Dibenzo[ <i>a,i</i> ]pyrene	25.5 $\pm$ 1.0
Dibenzo[ <i>a,h</i> ]pyrene	6.94 $\pm$ 0.29

<sup>(a)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(b)</sup> Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty,  $U$ , is calculated as  $U = k u_c$ , where  $u_c$  is one standard deviation of the analyte mean, and the coverage factor,  $k$ , is determined from the Student's  $t$ -distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicated. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(c)</sup> GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners<sup>(a)</sup> in SRM 1941b

PCB Congeners			Mass Fractions <sup>(b,c)</sup> ( $\mu\text{g}/\text{kg}$ )		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl) <sup>(d,e)</sup>	0.73	$\pm$	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl) <sup>(d,f,g)</sup>	1.21	$\pm$	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl) <sup>(e,f,g)</sup>	0.213	$\pm$	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl) <sup>(e,f,g)</sup>	4.99	$\pm$	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl) <sup>(e,f,g)</sup>	2.04	$\pm$	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl) <sup>(h)</sup>	0.31	$\pm$	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl) <sup>(d,e,f,g)</sup>	0.628	$\pm$	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl) <sup>(d,f,g)</sup>	1.28	$\pm$	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl) <sup>(e,f,g)</sup>	1.22	$\pm$	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl) <sup>(d,e,f,g)</sup>	0.65	$\pm$	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl) <sup>(e,f,g)</sup>	1.28	$\pm$	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl) <sup>(d,e,f,g)</sup>	1.51	$\pm$	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl) <sup>(d,e,f,g)</sup>	0.292	$\pm$	0.075

<sup>(a)</sup> PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

<sup>(b)</sup> Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(c)</sup> For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty,  $U$ , is calculated as  $U = kuc$ , where  $u_c$  is one standard deviation of the analyte mean, and the coverage factor,  $k$ , is determined from the Student's  $t$ -distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicated. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

<sup>(d)</sup> GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

<sup>(e)</sup> GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

<sup>(f)</sup> GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

<sup>(g)</sup> GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

<sup>(h)</sup> GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions <sup>(a,b)</sup> ( $\mu\text{g}/\text{kg}$ )
2,4'-DDE <sup>(c,d)</sup>	0.38 $\pm$ 0.12
4,4'-DDT <sup>(e,f)</sup>	1.12 $\pm$ 0.42

<sup>(a)</sup> Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

<sup>(b)</sup> The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicated. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(c)</sup> GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

<sup>(d)</sup> GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

<sup>(e)</sup> GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

<sup>(f)</sup> 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction <sup>(a,b)</sup> ( $\mu\text{g}/\text{kg}$ )
C2-decalins	18 $\pm$ 5
C4-decalins	41 $\pm$ 4
C2-naphthalenes	187 $\pm$ 53
C3-naphthalenes	158 $\pm$ 42
C1-benzothiophenes	25 $\pm$ 14
C2-benzothiophenes	20 $\pm$ 11
C3-benzothiophenes	22 $\pm$ 13
C4-benzothiophenes	18 $\pm$ 5
C1-fluorenes	57 $\pm$ 18
C2-fluorenes	122 $\pm$ 43
C3-fluorenes	128 $\pm$ 31
C1-phenanthrenes/anthracenes	313 $\pm$ 99
C2-phenanthrenes/anthracenes	247 $\pm$ 62
C3-phenanthrenes/anthracenes	165 $\pm$ 46
C4-phenanthrenes/anthracenes	87 $\pm$ 36
C1-dibenzothiophenes	54 $\pm$ 13
C2-dibenzothiophenes	91 $\pm$ 18
C3-dibenzothiophenes	84 $\pm$ 15
C4-dibenzothiophenes	57 $\pm$ 13
C1-fluoranthenes/pyrenes	252 $\pm$ 48
C2-fluoranthenes/pyrenes	205 $\pm$ 38
C3-fluoranthenes/pyrenes	102 $\pm$ 22
C4-fluoranthenes/pyrenes	121 $\pm$ 59
C1-benzanthracenes/chrysenes/triphenylenes	208 $\pm$ 43
C2-benzanthracenes/chrysenes/triphenylenes	120 $\pm$ 24
C3-benzanthracenes/chrysenes/triphenylenes	73 $\pm$ 31
C4-benzanthracenes/chrysenes/triphenylenes	41 $\pm$ 11

<sup>(a)</sup> The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty,  $U$ , is calculated as  $U = ku_c$ , where  $u_c$  is one standard deviation of the median, and the coverage factor,  $k = 2$ . The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.

<sup>(b)</sup> Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction <sup>(a,b)</sup> (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

- <sup>(a)</sup> The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty,  $U$ , is calculated as  $U = k u_c$ , where  $u_c$  is one standard deviation of the median, and the coverage factor,  $k = 2$ . The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
- <sup>(b)</sup> Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 % <sup>(a,b)</sup>
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- <sup>(a)</sup> Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
- <sup>(b)</sup> The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicated. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions <sup>(a)</sup> (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

- <sup>(a)</sup> Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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**Certificate Revision History:** 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail [srminfo@nist.gov](mailto:srminfo@nist.gov); or via the Internet at <http://www.nist.gov/srm>.



## APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA  
Axys Analytical Services; Sidney, BC, Canada  
B & B Laboratories; College Station, TX  
Battelle Ocean Sciences; Duxbury, MA  
Bedford Institute of Oceanography; Dartmouth, NS, Canada  
California Department of Fish and Game; Rancho Cordova, CA  
Central Contra Costa Sanitary District; Martinez, CA  
Chesapeake Biological Laboratory; Solomons, MD  
Centro de Investigaciones Energeticas Medioambientales y Tecnologicas; Madrid, Spain  
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA  
City of San Jose Environmental Services Department; San Jose, CA  
Columbia Analytical Services; Kelso, WA  
East Bay Municipal Utility District; Oakland, CA  
Florida Department of Environmental Protection; Tallahassee, FL  
Manchester Environmental Laboratory; Port Orchard, WA  
Murray State University; Murray, KY  
Massachusetts Water Resources Authority Central Lab; Winthrop, MA  
National Research Council of Canada; Ottawa, Ontario, Canada  
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK  
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC  
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ  
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA  
Orange County Sanitation District; Fountain Valley, CA  
Philip Analytical Services; Burlington, Ontario, Canada  
Serv de Hidrografia Naval; Buenos Aires, Argentina  
Skidaway Institute of Technology; Savannah, GA  
Southwest Laboratory of Oklahoma; Broken Arrow, OK  
Severn Trent Knoxville Laboratory; Knoxville, TN  
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX  
Texas Parks and Wildlife Department; San Marcos, TX  
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA  
University of Connecticut, Environmental Research Institute; Storrs, CT  
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI  
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD  
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI  
US Geological Survey, National Water Quality Laboratory; Denver, CO  
Woods Hole Group Environmental Lab; Raynham, MA  
Wright State University; Dayton, OH

## APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA  
Analytical Resources, Inc.; Tukwila, WA  
Axy's Analytical Services; Sydney, BC, Canada  
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA  
Center for Laboratory Sciences; Pasco, WA  
Columbia Analytical Services; Jacksonville, FL  
Columbia Analytical Services; Rochester, NY  
Columbia Analytical Services, Kelso, WA  
Florida Department of Environmental Protection; Tallahassee, FL  
Florida International University; North Miami, FL  
Michigan Department of Natural Resources and Environment; Lansing, MI  
Mississippi State Chemical Laboratory; Mississippi State, MS  
NIST; Charleston, SC  
NIST; Gaithersburg, MD  
NOAA/NCCOS/NOS; Charleston, SC  
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK  
NY State Department of Health; Albany, NY  
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN  
RJ Lee Group, Inc; Monroeville, PA  
TDI/B&B Laboratories, Inc.; College Station, TX  
TestAmerica Laboratories; Mobile, AL  
TestAmerica Laboratories; West Sacramento, CA  
TestAmerica Laboratories; University Park, IL  
TestAmerica Laboratories; Schriever, LA  
TestAmerica Laboratories; Edison, NJ  
TestAmerica Laboratories; Knoxville, TN  
TestAmerica Laboratories; Pittsburgh, PA  
TestAmerica Laboratories; South Burlington, VT  
TestAmerica Laboratories; Tacoma, WA  
US Army Engineer Research and Development Center; Vicksburg, MS  
USGS Columbia Environmental Research Center; Columbia, MO  
University of Iowa, State Hygienic Laboratory; Iowa City, IO  
Washington State Public Health Laboratories; Shoreline, WA



Date of Issue:  
31 March 2014

## SAFETY DATA SHEET

### 1. SUBSTANCE AND SOURCE IDENTIFICATION

#### Product Identifier

**SRM Number:** 1941b  
**SRM Name:** Organics in Marine Sediment  
**Other Means of Identification:** Not applicable.

#### Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

#### Company Information

National Institute of Standards and Technology  
Standard Reference Materials Program  
100 Bureau Drive, Stop 2300  
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200  
FAX: 301-948-3730  
E-mail: SRMMSDS@nist.gov  
Website: <http://www.nist.gov/srm>

Emergency Telephone ChemTrec:  
1-800-424-9300 (North America)  
+1-703-527-3887 (International)

### 2. HAZARDS IDENTIFICATION

#### Classification

**Physical Hazard:** Not classified.  
**Health Hazard:** Not classified.

#### Label Elements

**Symbol**  
No Symbol/Pictogram

**Signal Word**  
Not applicable.

**Hazard Statement(s):** Not applicable.

**Precautionary Statement(s):** Not applicable.

**Hazards Not Otherwise Classified:** Not applicable.

**Ingredients(s) with Unknown Acute Toxicity:** Not applicable.

### 3. COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

**Substance:** Marine sediment

**Other Designations:** Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	23A0206 CLPLIKE (Rev2) - Page 5796 of 5812 100

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#### 4. FIRST AID MEASURES

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##### Description of First Aid Measures:

**Inhalation:** If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

**Skin Contact:** Wash skin with soap and water.

**Eye Contact:** Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

**Ingestion:** If adverse effects occur after ingestion, seek medical treatment.

**Most Important Symptoms/Effects, Acute and Delayed:** May cause irritation.

**Indication of any immediate medical attention and special treatment needed, if necessary:** If any of the above symptoms are present, seek medical attention if needed.

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#### 5. FIRE FIGHTING MEASURES

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**Fire and Explosion Hazards:** Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

##### Extinguishing Media:

Suitable: Use extinguishing media appropriate for surrounding fire.

Unsuitable: None listed.

**Specific Hazards Arising from the Chemical:** None listed.

**Special Protective Equipment and Precautions for Fire-Fighters:** Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

**NFPA Ratings** (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1

Fire = 0

Reactivity = 0

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#### 6. ACCIDENTAL RELEASE MEASURES

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**Personal Precautions, Protective Equipment and Emergency Procedures:** Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

**Methods and Materials for Containment and Clean up:** Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

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#### 7. HANDLING AND STORAGE

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**Safe Handling Precautions:** Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

**Storage:** Store and handling in accordance with all current regulations and standards.

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#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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**Exposure Limits:** No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m<sup>3</sup> (TWA, total particulates not otherwise regulated)

OSHA (PEL) 5 mg/m<sup>3</sup> (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m<sup>3</sup> (TWA, total particulates not otherwise regulated, 8 h)

NIOSH (REL): 5 mg/m<sup>3</sup> (TWA, respirable particulates not otherwise regulated)

**Engineering Controls:** Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

**Personal Protection:** In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

**Respiratory Protection:** If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

**Eye/Face Protection:** Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

**Skin and Body Protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Descriptive Properties:

<b>Appearance</b> (physical state, color, etc.):	amorphous powder
<b>Molecular Formula:</b>	not applicable
<b>Molar Mass (g/mol):</b>	not applicable
<b>Odor:</b>	not available
<b>Odor threshold:</b>	not available
<b>pH:</b>	not available
<b>Evaporation rate:</b>	not applicable
<b>Melting point/freezing point (°C):</b>	not available
<b>Specific Gravity (water=1)</b>	not available
<b>Vapor Pressure (mmHg):</b>	not applicable
<b>Vapor Density (air = 1):</b>	not applicable
<b>Viscosity (cP):</b>	not applicable
<b>Solubility(ies):</b>	not available
<b>Partition coefficient (n-octanol/water):</b>	not available
<b>Particle Size:</b>	<150 µm

### Thermal Stability Properties:

<b>Autoignition Temperature (°C):</b>	not available
<b>Thermal Decomposition (°C):</b>	not available
<b>Initial boiling point and boiling range (°C):</b>	not available
<b>Explosive Limits, LEL (Volume %):</b>	not available
<b>Explosive Limits, UEL (Volume %):</b>	not available
<b>Flash Point (°C):</b>	not available
<b>Flammability (solid, gas):</b>	not available

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Stable at normal temperatures and pressure.

**Stability:**   X   Stable        Unstable

**Possible Hazardous Reactions:** None listed.

**Conditions to Avoid:** Avoid generating dust.

**Incompatible Materials:** None listed.

**Fire/Explosion Information:** See Section 5, "Fire Fighting Measures".

**Hazardous Decomposition:** Thermal decomposition will produce oxides of carbon.

**Hazardous Polymerization:**        Will Occur   X   Will Not Occur

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## 11. TOXICOLOGICAL INFORMATION

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Route of Exposure:  Inhalation  Skin  Ingestion

**Symptoms Related to the Physical, Chemical and Toxicological Characteristics:** Generated dust may cause irritation if inhaled.

**Potential Health Effects (Acute, Chronic and Delayed):**

**Inhalation:** Generated dust may cause irritation.

**Skin Contact:** May cause mechanical irritation.

**Eye Contact:** May cause mechanical irritation.

**Ingestion:** No data available.

**Numerical Measures of Toxicity:**

**Acute Toxicity:** Not classified; no data available.

**Skin Corrosion/Irritation:** Not classified; no data available.

**Serious Eye damage/ Eye irritation:** Not classified; no data available.

**Respiratory Sensitization:** Not classified; no data available.

**Skin Sensitization:** Not classified; no data available.

**Germ Cell Mutagenicity:** Not classified; no data available.

**Carcinogenicity:** Not classified.

**Listed as a Carcinogen/Potential Carcinogen**  Yes  No  
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

**Reproductive Toxicity:** Not classified; no data available.

**Specific Target Organ Toxicity, Single Exposure:** Not classified; no data available.

**Specific Target Organ Toxicity, Repeated Exposure:** Not classified; no data available.

**Aspiration Hazard:** Not classified; no data available.

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## 12. ECOLOGICAL INFORMATION

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**Ecotoxicity Data:** No data available.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse effects:** No data available.

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## 13. DISPOSAL CONSIDERATIONS

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**Waste Disposal:** Dispose of waste in accordance with all applicable federal, state, and local regulations.

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## 14. TRANSPORTATION INFORMATION

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**U.S. DOT and IATA:** Not regulated by DOT or IATA.

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## 15. REGULATORY INFORMATION

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**U.S. Regulations:**

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH: No.  
CHRONIC HEALTH: No.  
FIRE: No.  
REACTIVE: No.  
PRESSURE: No.

**State Regulations:**

California Proposition 65: Not listed.

**U.S. TSCA Inventory:** Not listed.

**TSCA 12(b), Export Notification:** Not listed.

**Canadian Regulations:**

WHMIS Information: Not provided for this material.

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**16. OTHER INFORMATION**

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**Issue Date:** 31 March 2014

**Sources:** 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9992](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992) (accessed Mar 2014).

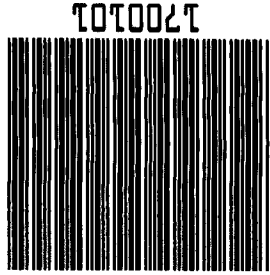
Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at <http://www.cdc.gov/niosh/npg/npgd0480.html> (accessed Mar 2014).

**Key of Acronyms:**

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

**Disclaimer:** Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3732. <http://www.nist.gov/srm>



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Packed by	
Picked by	

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
<b>NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.</b>							

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MP Biomedicals, LLC

29525 Fountain Parkway  
Solon, Ohio 44139

Telephone: 440/337-1200  
Toll Free: 800/854-0530

Fax: 440/337-1180  
web: www.mpbio.com

## Certificate of Analysis

**Product Description:** Microcrystalline Cellulose Powder\_  
**Catalog Number:** 191499\_  
**Lot:** Q9483\_

**Formula:** (C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>)<sub>n</sub>  
**CAS #:** 9004-34-6  
**Physical Description:** White Powder

**Formula Weight:** N/A  
**Storage:** 15 - 30°C


Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh	Wt %	
+60 mesh	<8%	<1%
+200 mesh	>45%	55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

**H001822**

Microcrystalline Cellulose Powder (TOC)  
Expires 11/30/2022  
*Prepared By Casey English 2/22/2019*

Identification A & B: Passes  
Bulk Density: 0.29 g/ml  
Bulk Density (graduated cylinder): 0.31 g/ml  
Conductivity: 18 µS/cm  
Starch: Negative  
Ether Soluble Substances: 0.01%  
Total Aerobic microbial Count: 100 cfu/g  
Total Mold and Yeast Count: 20 cfu/g  
Staphylococcus aureus: Absent/1 g  
Pseudomonas aeruginosa: Absent/1 g  
E. coli: Absent/1 g  
Salmonella: Absent/10 g  
Particle size:

- 450 mesh: 77%  
- d10: 37 um  
- d50: 139 um  
- d90: 271 um  
TUP: <9/600 cm<sup>2</sup>  
Degree of brightness: >88%  
Powder flow-angle of repose: <42°  
Recommended Retest Date: 11/30/2022



07/26/2018 - John Huang, PhD  
MP Biomedicals, LLC.  
Quality Control Manager

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Telephone: 440/337-1200  
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Fax: 440/337-1180  
web: www.mpbio.com

## Certificate of Analysis

**Product Description:** Microcrystalline Cellulose Powder\_  
**Catalog Number:** 191499\_  
**Lot:** Q9483\_

**Formula:** (C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>)<sub>n</sub>

**CAS #:** 9004-34-6

**Physical Description:** White Powder

**Formula Weight:** N/A

**Storage:** 15 - 30°C

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh	Wt %	
+60 mesh	<8%	<1%
+200 mesh	>45%	55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

**H001822**

Microcrystalline Cellulose Powder (TOC)

Expires 11/30/2022

Prepared By Casey English 2/22/2019

Identification A & B: Passes

Bulk Density: 0.29 g/ml

Bulk Density (graduated cylinder): 0.31 g/ml

Conductivity: 18 µS/cm

Starch: Negative

Ether Soluble Substances: 0.01%

Total Aerobic microbial Count: 100 cfu/g

Total Mold and Yeast Count: 20 cfu/g

Staphylococcus aureus: Absent/1 g

Pseudomonas aeruginosa: Absent/1 g

E. coli: Absent/1 g

Salmonella: Absent/10 g

Particle size:

- 450 mesh: 77%  
- d10: 37 um  
- d50: 139 um  
- d90: 271 um  
TUP: <9/600 cm<sup>2</sup>  
Degree of brightness: >88%  
Powder flow-angle of repose: <42°  
Recommended Retest Date: 11/30/2022



07/26/2018 - John Huang, PhD  
MP Biomedicals, LLC.  
Quality Control Manager

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## Certificate of Analysis

**Product Description:** Microcrystalline Cellulose Powder\_  
**Catalog Number:** 191499\_  
**Lot:** Q9483\_


<b>Formula:</b> (C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub> <b>CAS #:</b> 9004-34-6 <b>Physical Description:</b> White Powder	<b>Formula Weight:</b> N/A <b>Storage:</b> 15 - 30°C
---	---

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh	Wt %	
+60 mesh	<8%	<1%
+200 mesh	>45%	55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

**H001822**  
Microcrystalline Cellulose Powder (TOC)  
Expires 11/30/2022  
*Prepared By Casey English 2/22/2019*

Identification A & B: Passes  
Bulk Density: 0.29 g/ml  
Bulk Density (graduated cylinder): 0.31 g/ml  
Conductivity: 18 µS/cm  
Starch: Negative  
Ether Soluble Substances: 0.01%  
Total Aerobic microbial Count: 100 cfu/g  
Total Mold and Yeast Count: 20 cfu/g  
Staphylococcus aureus: Absent/1 g  
Pseudomonas aeruginosa: Absent/1 g  
E. coli: Absent/1 g  
Salmonella: Absent/10 g  
Particle size:

- 450 mesh: 77%  
- d10: 37 um  
- d50: 139 um  
- d90: 271 um  
TUP: <9/600 cm<sup>2</sup>  
Degree of brightness: >88%  
Powder flow-angle of repose: <42°  
Recommended Retest Date: 11/30/2022



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**PREPARATION BATCH SUMMARY**  
**ASTM D2216**

Laboratory: Analytical Resources, LLC    SDG: 23A0206  
Client: Anchor QEA, LLC    Project: AOC5 MR Phase 1  
Batch: BLA0257    Batch Matrix: Solid    Preparation: No Prep-Organics

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1066	23A0206-13		01/16/23 13:20	



## HOLDING TIME SUMMARY

**Analysis: ASTM D2216**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1066 23A0206-13	01/11/23 12:40	01/11/23 17:05	01/16/23 13:20	5	180	01/17/23 05:11	6	180	

\* Indicates hold time exceedance.





**Analytical Resources, LLC**  
Analytical Chemists and Consultants

**METHOD DETECTION  
AND REPORTING LIMITS**  
**ASTM D2216**

Laboratory: Analytical Resources, LLC

SDG: 23A0206

Client: Anchor QEA, LLC

Project: AOC5 MR Phase 1

Matrix: Solid

Instrument:

<b>Analyte</b>	<b>MDL</b>	<b>RL</b>	<b>Units</b>
Total Solids		0.01	%

<b>TOTAL SOLIDS BENCHSHEET</b>		Batch:	BLA0562
Method: PSEP 1986		Date:	1/24/2023 9:46
(dry at 103-105 C)		Analyst:	DP
<b>Instrumentation</b>		Drying Oven:	15
		Analytical Balance:	B334705934

<b>Batch drying time</b>		Oven Temp, C	TS (%) calculated as:	<b>Oven Temps, °C</b>	
Record times as mm/dd/yy hh:mm				Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:
Date/time in oven:	1/25/2023 11:59	104	TS = (Final Dry Wt X 100)/(sample & dish -dish tare)	End Temp:	104
Date/time out:	1/26/2023 9:19	104			
Elapsed hrs:	21.3				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0206-01	0.8200	11.4000	5.9200	5.10	48.20%	Yes
23A0206-02	0.8000	11.1800	5.6900	4.89	47.11%	Yes
23A0206-03	0.8000	11.6400	6.0400	5.24	48.34%	Yes
23A0206-04	0.7900	11.3300	5.9900	5.20	49.34%	Yes
23A0206-05	0.7900	11.6900	6.5600	5.77	52.94%	Yes
23A0206-06	0.8000	11.5500	6.7300	5.93	55.16%	Yes
23A0206-07	0.8000	11.4700	7.2200	6.42	60.17%	Yes
23A0206-08	0.8000	11.7300	6.4800	5.68	51.97%	Yes
23A0206-09	0.8000	11.7600	5.3900	4.59	41.88%	Yes
23A0206-10	0.8100	11.6200	5.4500	4.64	42.92%	Yes
23A0206-11	0.8100	11.2400	5.2900	4.48	42.95%	Yes
23A0206-12	0.8100	11.0700	5.7400	4.93	48.05%	Yes
23A0206-13	0.8100	11.8700	7.4600	6.65	60.13%	Yes
23A0206-14	0.8100	11.8100	6.4400	5.63	51.18%	No

<b>TOTAL SOLIDS BENCHSHEET</b>			Batch:	BLA0562
Method: PSEP 1986			Date:	1/24/2023 9:46
(dry at 103-105 C)			Analyst:	DP
<b>Instrumentation</b>			Drying Oven:	015
			Analytical Balance:	B334705934
<b>Batch drying time</b>				
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	
Date/time in oven:	01/25/23 11:59	104	Final dry wt (g) = (Dry Wt - Tare Wt)	
Date/time out:	1/26/23 9:19	104	TS = (Final Dry Wt X 100)/(sample & dish -dish tare)	
Elapsed hrs:	0.0			
				Oven Temps, °C
				Start Temp: 104
				End Temp: 104

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0206-01 B	0.82	11.40	5.92			No <del>yes</del>
23A0206-02	0.80	11.18	5.69			<del>No</del> yes
23A0206-03	0.80	11.64	6.04			<del>No</del> yes
23A0206-04	0.79	11.33	5.99			No <del>yes</del>
23A0206-05	0.79	11.69	6.56			No <del>yes</del>
23A0206-06	0.80	11.55	6.73			<del>No</del> yes
23A0206-07	0.81	11.47	7.22			<del>No</del> yes
23A0206-08	0.80	11.73	6.48			No <del>yes</del>
23A0206-09	0.80	11.76	5.39			<del>No</del> yes
23A0206-10	0.81	11.62	5.45			<del>No</del> yes
23A0206-11	0.81	11.24	5.29			<del>No</del> yes
23A0206-12	0.81	11.07	5.74			No <del>yes</del>
23A0206-13	0.81	11.87	7.46			<del>No</del> yes
23A0206-14 ↓	0.81	11.81	6.44			No

T/S + Screens  
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